2024 Annual Groundwater Summary

Brickhaven No. 2 Mine Tract "A" Structural Fill Permit 1910-STRUT-2015

The Brickhaven No.2 Mine Tract "A" Structural Fill groundwater monitoring system is designed to meet the requirements of the North Carolina Coal Ash Management Act of 2014 (CAMA) and North Carolina Department of Environmental Quality Rule 15A NCAC 13B Section .1631.

HDR conducted the required 2024 semi-annual sampling events on July 24 – 27, and October 28 – 31, 2024. Groundwater monitoring and sampling at the site is governed by the following:

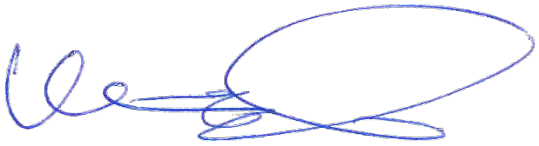
- North Carolina - Coal Ash Management Act (CAMA) of 2014 (Senate Bill 729)
- Water Quality Monitoring Plan Brickhaven No.2 Mine Tract "A" Structural Fill, approved March 2015
- North Carolina Department of Environmental Quality (NCDEQ) Permit No. 1910-STRUC-2015, issued June 5, 2015
- NCDEQ Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling, April 2008
- NCDEQ Division of Water Management memorandum concerning electronic document submittal for routine groundwater and surface water monitoring, November 5, 2014
- U.S. Environmental Protection Agency (EPA) Region I, *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*, revised September 19, 2017
- EPA 2009, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Unified Guidance and CFR 40 257.93 (f)(3)

The First and Second 2024 Semi-Annual Reports with an EPA method of statistical analyses were submitted to the NCDEQ Division of Waste Management on June 27, 2024, and January 27, 2025, respectively. The reports are attached for reference and can be found on the NCDEQ website at this location https://deq.nc.gov/about/divisions/waste-management/laserfiche. The following information has been provided in those reports:

- Status of the groundwater monitoring for the structural fill
- Site conditions and key actions completed during the reporting period
- Key activities proposed for the upcoming year
- A map showing the background (or upgradient) and downgradient monitoring wells
- Monitoring data obtained from sampling of wells, including information on the samples collected

The findings of the groundwater sampling and laboratory testing conducted in 2024 indicate the presence of naturally occurring constituents that were detected at various concentrations both prior to and after placement of coal combustion products.

As HDR's authorized representative, I have prepared or supervised the preparation of the referenced documents above; which have been prepared in general accordance with industry standards and practices; and the information contained therein is truthful and accurate to the best of my knowledge.



Mark P. Filardi, LG
Senior Geologist

HDR Engineering, Inc. of the Carolinas
440 South Church St, Suite 1200
Charlotte, NC 28202-2075
704.338.6700
NC License F0116

A

Attachment A – 2024 First Semi-Annual Detection Monitoring Report

DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Green Meadow - Charah Solutions, inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Mark Filardi Phone: 704-338-6787

E-mail: mark.filardi@hdrinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Charah, LLC Brichaven No. 2 Mine Tract "A"	1271 Moncure-Flatwood Road Chatham County Moncure, NC	1910- STRUT-2015	CAMA	January 22-26, 2024 & April 1-4, 2024

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☒ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Mark Filardi | Senior Geologist | 704-338-6787

Facility Representative Name (Print) | Title | (Area Code) Telephone Number

Filardi, Mark Digitally signed by Filardi, Mark Date: 2024.06.27 09:32:30 -04'00' | 6/27/2024

Signature | Date

Affix NC Licensed/ Professional Geologist Seal

HDR Engineering, Inc. of the Carolinas, 440 S. Church St., Ste. 1200, Charlotte, NC 28202

Facility Representative Address

F0116

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009

This page intentionally left blank.

2024 First Semi-Annual Detection Monitoring Report

Brickhaven No.2 Mine Tract “A” Structural Fill

Charah Solutions, Inc.

Facility Permit #1910-STRUT-2015

Moncure, Chatham County, North Carolina

July 1, 2024

Mark Filardi, L.G. #1886: _____

HDR Engineering, Inc. of the Carolinas
440 S. Church Street, Suite 1200, Charlotte, NC 28202
704.338.6700
NC License F01116

This page intentionally left blank.

Contents

Select Acronyms iii
1 Introduction 5
2 Background 6
2.1 Site Location and Operation 6
2.2 Groundwater Monitoring System 7
2.3 Surface Water Monitoring System 8
2.4 Leachate Monitoring System 8
2.5 Site Topography and Geographical Setting 8
2.6 Geologic and Hydrogeologic Setting 8
2.6.1 Regional Geology 8
2.6.2 Site Geology 9
2.6.3 Regional Hydrogeology 10
3 Detection Monitoring 11
3.1 Well Gauging 11
3.1.1 January 2024 Event 11
3.1.2 April 2024 Event 11
3.1.3 Horizontal Hydraulic Gradients 12
3.1.4 Groundwater Flow Velocity 12
4 Sampling Activities 13
4.1 Groundwater Sampling 13
4.1.1 January 2024 Event 13
4.1.2 April 2024 Event 14
4.2 Surface Water Sampling 14
4.3 Leachate Sampling 14
5 Water Quality 15
5.1 Background Site Conditions 15
5.2 Groundwater Analytical Results 15
5.2.1 January 2024 Event 15
5.2.2 April 2024 Event 17
5.3 Surface Water Analytical Results 18
5.3.1 January 2024 Event 18
5.3.2 April 2024 Event 19
5.4 Leachate Analytical Results 19
6 Statistics 19
6.1 Methodology 19
6.1.1 Statistical Analysis 20
6.1.2 Outliers 20
6.1.3 Data Distribution 21
6.1.4 Trends 21
6.1.5 Spatial Variability 22
6.2 Evaluation for SSIs over Background 23

6.3 Statistical Summary 23
7 Summary and Conclusions 24
7.1 Summary 24
7.1.1 Groundwater 25
7.1.2 Surface Water 25
7.1.3 Leachate 26
7.2 Conclusions 26
8 Recommendations 27
9 References 28

Tables

Table 1. January 2024 Groundwater Elevations
Table 2. April 2024 Groundwater Elevations
Table 3. Horizontal Hydraulic Gradients and Seepage Velocity
Table 4. Analytical Results – January 2024 and April 2024

Figures

Figure 1. Regional Site Location Map
Figure 2. Sample Location Map
Figure 3. Regional Topographic Map
Figure 4. Historical Groundwater Elevations
Figure 5. Potentiometric Surface Map – January 2024
Figure 6. Potentiometric Surface Map – April 2024

Appendices

Appendix A – Field Data Sheets
Appendix B – Laboratory Results, Chains of Custody, and Quality Control Data
Appendix C – Electronic Data Deliverables (electronic only)
Appendix D – Statistical Analysis Memo

Select Acronyms

µg/L	micrograms per liter
BGS	below ground surface
BTOC	below top of casing
BTV	background threshold value
CAMA	North Carolina Coal Ash Management Act of 2014
CCP	coal combustion products
CFR	Code of Federal Regulations
DO	dissolved oxygen
DQR	double quantification rule
DTW	depth-to-water
GOF	Goodness-of-fit-test
MDL	method detection limit
MLE	maximum likelihood estimate
MRL	method reporting limit
MSL	mean sea level
NCDENR	North Carolina Department of Environment and Natural Resources
NCDEQ	North Carolina Department of Environmental Quality
ND	Non-detects
NTU	Nephelometric turbidity unit
ORP	oxidation-reduction potential
SSI	statistically significant increase
SU	scientific unit
TD	total depth
TDS	total dissolved solids
TOC	top of casing
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

This page intentionally left blank.

1 Introduction

The purpose of this *2024 First Semi-Annual Detection Monitoring Report* is to summarize the first and second quarterly detection monitoring results conducted at the Brickhaven No. 2 Mine Tract "A" Structural Fill site in Moncure, Chatham County, North Carolina. The sampling events were conducted between January 22 and 26, 2024 and between April 1 and 4, 2024, respectively.

Operating under Facility Permit #1910-STRUT-2015, Charah is required to monitor groundwater and surface water quality at designated locations, in accordance with the following rules, regulations, and guidelines:

- North Carolina – Coal Ash Management Act (CAMA) of 2014 (Senate Bill 729).
- Water Quality Monitoring Plan, Brickhaven No.2 Mine Tract "A" Structural Fill, approved March 2015 (Buxton 2015a).
- North Carolina Department of Environment and Natural Resources (NCDENR)[1] Permit No. 1910-STRUC-2015, issued June 5, 2015.
- NCDENR Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling, April 2008 including Groundwater Rules .1600.
- NCDENR Division of Water Management memorandum concerning electronic document submittal for routine groundwater and surface water monitoring, November 5, 2014.
- U.S. Environmental Protection Agency (USEPA) Region 1, *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*, revised September 19, 2017.

Groundwater monitoring and sampling at the site is also conducted in general accordance with the USEPA's "Disposal of Coal Combustion Residuals from Electric Utilities" rule (CCR Rule).

On June 21, 2019, Charah received correspondence from the North Carolina Department of Environmental Quality (NCDEQ) Solid Waste Section requesting that Charah submit an assessment work plan in accordance with 15A NCAC 02L .0106 and 15A NCAC 02B .0211 and .0216. NCDEQ cited exceedances of North Carolina 2L Groundwater Protection Standards (2L Standards) for barium, chloride, chromium, cobalt, total dissolved solids (TDS), and vanadium, and exceedances of North Carolina Surface Water & Wetland Standards established under T15A NCAC 02B (2B Standards) for arsenic, cobalt, copper, lead, TDS, and zinc as cause for the plan. On behalf of Charah, HDR submitted a *Groundwater and Surface Water Assessment Monitoring Plan* to NCDEQ on August 16, 2019 (HDR 2019). The plan was approved by NCDEQ in correspondence dated September 16, 2019, and amended on October 4, 2019. Between November 2019 and July 2020, Charah implemented the monitoring plan, which was documented in an Assessment Monitoring Report dated July 24, 2020 (HDR 2020).

[1] On September 18, 2015, the North Carolina Department of Environment and Natural Resources (NCDENR) became the North Carolina Department of Environmental Quality (NCDEQ). Both naming conventions are used in this report, as appropriate.

On April 9, 2021, Charah received a response letter to the Assessment Monitoring Report from NCDEQ requiring additional activities. During the first and second quarters of 2021, HDR addressed these requirements on behalf of Charah, as summarized below, and provided responses to NCDEQ comments in a Response Letter dated May 7, 2021.

NCDEQ Comment	Charah Response	Date of Action
Redevelop (or replace) monitoring wells MW-2 and MW-3 to improve recharge into the wells	Wells MW-2 and MW-3 were redeveloped for 6 to 7 hours via surging	March 18 and 19, 2021
Collect a surface water sample (SW-6) upstream of SW-1 to delineate off-site impacts to surface water	Collected surface water sample SW-6 upstream of SW-1 at the Charah property line	Initial sample collected 2Q2021 and each quarterly event thereafter
Reinstall previously dry monitoring wells MW-9 and MW-10 as close to the original locations as practicable	Reinstalled wells MW-9 and MW-10 at top of bedrock (36 feet and 47 feet bgs, respectively)	March 17, 2021
Install bedrock monitoring wells adjacent to MW-2 and at a second location approved by NCDEQ	Installed well MW-2D to 144 feet bgs and well MW-11D to 65 feet bgs	March 19, 2021 (MW-2D) March 22, 2021 (MW-11D)

Per the approved Water Quality Monitoring Plan, and additional requirements set forth by NCDEQ since 2015, Charah is required to monitor the following network and report the results semi-annually.

Sampling Locations	Date Initiated	Purpose
MW-1 through MW-6, MW-7R, MW-8, and BG-1; SW-1 and SW-2; leachate	2015	Detection Monitoring
BG-2	2018	Detection Monitoring
MW-11; SW-3, SW-4, and SW-5	2020	Detection Monitoring
MW-2D, MW-9, MW-10, MW-11D; SW-6	2021	Detection Monitoring

Samples are analyzed for constituents listed in NCDEQ Solid Waste Appendix I (except volatile organic compounds [VOCs]) and II, 40 CFR 257 Appendix III, and 40 CFR 257 Appendix IV. On January 8, 2020, NCDEQ approved the discontinuation of Appendix I VOC analysis based on historical non-detection of VOC constituents. Per the Water Quality Monitoring Plan, if sampling results indicate impacts to groundwater or surface water, Charah must notify NCDEQ within 14 days. If no impacts are observed, Charah must submit a report of the sampling results to NCDEQ within 120 days of the semi-annual sampling event.

2 Background

2.1 Site Location and Operation

The site is located approximately four miles southeast of Moncure, in Chatham County North Carolina (**Figure 1**). The owner of the site is Green Meadow, LLC (Green Meadow) and Charah Solutions, Inc. (Charah) is responsible for the operation and maintenance of the site. The mine property is approximately 301 acres in total; of which 145 acres is permitted for structural fill placement of coal combustion products (CCP).

The property located within the structural fill area was previously owned by General Shale Brick, Inc., which operated the site and an adjacent property as a mine beginning in 1985 for their off-site brick manufacturing facility. Mined material was stockpiled and then transported approximately 3.5 miles south to Brickhaven, North Carolina for brick manufacturing.

The area immediately surrounding the site primarily consists of rural residential, commercial, industrial, wooded, and agricultural property. According to information obtained from the Chatham County GIS website (October 2015), municipal water is available to the surrounding area.

Charah began CCP placement in the first composite liner containment system (Cell 1, Sub Cell 1A) on October 23, 2015. CCP placement has occurred in Cell 1, Cell 2, Cell 6A and Cell 6B. Charah has placed just over 7.3 million tons of CCP material in the structural fill. CCP materials (including fly ash, bottom ash, boiler slag, and/or flue gas desulfurization materials) were initially brought to the site by truck through October 2015 until transportation was changed to rail in January 2016. The site ceased accepting CCP on July 11, 2019, and closure of the structural fill concluded in January 2020. The CCP originated at the Duke Energy Carolinas Riverbend Steam Station and Duke Energy Progress L.V. Sutton Energy Complex (Sutton Plant) sites.

Leachate (i.e., product generated from the liquids present in the fill at the time of placement and/or stormwater that infiltrates the fill) is managed on-site through the collection, storage, and disposal of the resultant liquid. Green Meadow has approved pump and haul permits to dispose of leachate at the City of Sanford's Big Buffalo Creek Wastewater Treatment Plant and the Town of Spring Lake's South Harnett Regional Wastewater Treatment Plant.

2.2 Groundwater Monitoring System

The groundwater monitoring system was designed to provide background groundwater quality data prior to the placement of CCP in the structural fill and early detection of potential CCP constituents subsequent to CCP placement to be protective of human health and the environment. The groundwater monitoring system was originally comprised of 10 wells: eight wells are located downgradient/cross-gradient (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7R and MW-8) and two wells are considered to represent background groundwater quality (BG-1 and BG-2). Since 2015, the NCDEQ has required installation of five additional monitoring wells (MW-9, MW-10, MW-11, MW-2D, and MW-11D) to further evaluate groundwater quality conditions.

Background monitoring well BG-1 was installed in July of 2015 near the entrance of the site along Moncure-Flatwood Road. This location was selected to provide groundwater quality data in an area of the site presumed to not be affected by historical or current usage of the property. Upon statistical analysis of groundwater quality data collected pre- and post-CCP placement, concentrations of target constituents in well BG-1 appear to be anomalously low when compared to pre-CCP conditions elsewhere on-site. With approval from NCDEQ, Charah installed a second background well (BG-2) southwest of the structural fill in December 2018 to evaluate spatial variability of inorganic concentrations across the site.

Well MW-7R was installed in April of 2017 as a replacement for monitoring well MW-7, as documented and approved in a memorandum submitted to the NCDEQ Solid Waste Section on May 25, 2017. Well MW-7 has remained onsite for water level gauging purposes only.

Well MW-11, located downgradient/cross-gradient of the structural fill, was installed in March 2020 during assessment monitoring. Monitoring wells MW-2D, MW-9, MW-10, and MW-11D, located downgradient/cross-gradient, were installed in March 2021. Monitoring well locations are shown on **Figure 2**.

2.3 Surface Water Monitoring System

Surface water locations SW-1 and SW-2 were sampled in the original sampling event in August 2015. Surface water locations SW-3 (background location) and SW-4 (on-site location) were proposed by Charah in the Groundwater and Surface Water Assessment Work Plan (dated August 16, 2019) in response to NCDEQ's request to delineate exceedances of surface water standards at surface water location SW-1. Based on additional discussions with NCDEQ, surface water locations SW-5 and SW-6 were added to the monitoring program in 2020 to evaluate potential contribution of contaminants from off-site sources north and east of the structural fill. Surface water monitoring locations are shown on **Figure 2**.

2.4 Leachate Monitoring System

The leachate sample is collected from the on-site holding tank located just north of wells MW-11 and MW-11D.

2.5 Site Topography and Geographical Setting

Based on review of the 1993 USGS topographic quadrangle (**Figure 3**) and GIS mapping, the topography of the site and immediately surrounding area can be characterized by moderately rolling hills, which are dissected by dendritic creeks. Prior to mining by General Shale, a topographic ridge was present within the site, extending from the northwestern corner of the present-day structural fill toward the southeast. Thus, historical drainage was assumed to be to the north/northwest/west and to the northeast/east/southeast away from the ridge.

2.6 Geologic and Hydrogeologic Setting

2.6.1 Regional Geology

The site is located within the Piedmont physiographical province of North Carolina, which is a northeast-southwest trending region extending from New York to Alabama.

According to the 1985 North Carolina Geologic Map prepared by the North Carolina Geological Survey, the site is located in the Triassic Basin Belt of the Piedmont physiographic province. The basement rocks of the Triassic Basin Belt include conglomerate, sandstone, mudstone, limestone, coal, and shale. The majority of the site is located within the Sanford Formation which contains conglomerate, fanglomerate, sandstone, and mudstone. The far western portion of the site is located in the Cummock Formation, which contains sandstone, mudstone, gray and black coal, and carbonaceous shale. The Triassic Basin is bounded by felsic metavolcanic rock within the Carolina Slate Belt approximately 6.5 miles to the northwest; and is contacted by

metamorphosed granite and biotite gneiss and schist of the Raleigh Belt along a normal fault approximately 2.5 miles to the southeast. The Triassic Basin formations have been intruded by north northwest-south southeast trending igneous diabase dikes during the Jurassic Period (~144 to 208 Ma) and contain northeast-southwest trending normal faults. However, none of these faults were indicated to exist at the subject site on the 1985 geologic map (NCDENR 1985).

In the Piedmont, the bedrock is typically overlain by a mantle of weathered rock (residuum/saprolite), which has an average thickness of approximately 25 feet. The residuum/saprolite consists of varying amounts of unconsolidated clays, silts, and sands, with lesser amounts of rock fragments. Due to the range of the parent rock composition and the variable susceptibility to weathering of each rock type, the residuum/saprolite range widely in color, texture, and thickness. Generally, the residuum/saprolite is thickest near inter-stream divides (ridges) and thins toward stream beds. In profile, the residuum/saprolite normally grades from clayey soils near the land surface to sandier, partially weathered rock above competent bedrock (Buxton 2015a).

2.6.2 Site Geology

The geology of the site can be subdivided into six units which include fill, flood plain, soil horizon, residuum, partially weathered rock, and layered rock. These units generally grade downward from a soil horizon, to residuum, to partially weathered rock and finally layered rock. Fill materials were limited to the road bed and berm located around the east and west sides of MW-4. Flood plain sediments were only identified at MW-4 on the southeast corner of the site. The following summary of site-specific units is based on boring logs originally included in the *Design Hydrogeologic Report* (Buxton 2016).

2.6.2.1 FILL

Fill materials were primarily identified in the road bed and berm located around the east and west sides near MW-4 and generally consisted of mottled reddish yellow, orange, brown, and light gray sandy silty clay with quartz gravel.

2.6.2.2 FLOOD PLAIN

Flood plain sediments were only located adjacent to MW-4 on the southeast corner of the site. Sediments were associated with a former adjacent intermittent tributary creek and can be generally characterized as mottled light gray fine sandy silty clay. The flood plain sediments were approximately five feet thick in this area and had been deposited above residuum. Based on geotechnical laboratory data, the flood plain sediments were identified as lean clay under the Unified Soil Classification System (USCS).

2.6.2.3 RESIDUUM

Residuum is characterized as mottled yellowish, brown, orange, and red silty clay and clayey silt. Root structures were common. Residuum was formed from the continued weathering and biologic reworking of saprolite, and ranges from two to 15 feet in thickness, when present. Based on geotechnical laboratory data, the residuum is comprised of clayey sand, elastic silt, and lean clay and had a calculated hydraulic conductivity of 2.86×10^{-7} cm/sec.

2.6.2.4 SAPROLITE

Saprolite is characterized as mottled (black and gray) red and reddish brown sandy silty clay with infrequent quartz gravel and cobbles. Saprolite is characteristically fissile, often breaking in horizontal sheets. Saprolite generally retains the remnant texture, structure, and mineral content of the rock from which it was formed and ranged from five to 15 feet in thickness. Saprolite had a standard penetration resistance of less than 100 blows per foot. Based on geotechnical laboratory data, the saprolite consisted of lean clay with hydraulic conductivities ranging from 7.69×10^{-8} cm/sec to 3.69×10^{-9} cm/sec.

2.6.2.5 PARTIALLY WEATHERED ROCK

Partially weathered rock is characterized as mottled (light green and purple) brown, reddish gray, and weak red silty clay and weathered mudstone, which are often fissile. Partially weathered rock generally retains the remnant texture, structure, and mineral content of the rock from which it was formed, and ranges from five to 40 feet in thickness. Partially weathered rock has a standard penetration resistance value of 100 blows per foot or greater and can generally be drilled with standard hollow-stem auger drilling technology. Based on geotechnical laboratory data, partially weathered rock consisted of lean clay. Hydraulic conductivity ranged from 2.433×10^{-4} cm/sec to 7.154×10^{-8} cm/sec, according to slug or recovery test data (for wells screened solely in partially weathered rock).

2.6.2.6 BEDROCK

Based on rock coring activities conducted near MW-7/MW-7R, visual inspection of the rock exposed on the north side of the MW-4 area, and rock fragments produced during installation of wells MW-2D and MW-11D, bedrock at the site is primarily composed of reddish to light tan gray mudstone, cross-bedded muddy sandstone, muddy sandy conglomerate (rounded quartz gravel and cobbles), and gray to brown siltstone. Bedrock generally occurs as horizontally oriented and relatively thin intermittent layers (especially within the upper 15 feet of contacting layered rock) across the site. Bedrock contained horizontal to near vertical fracturing. Large fractures, oriented approximately N 40° to 60° E at 70 ° northwest, were observed in weathered mudstone immediately northeast of well MW-8. The occurrence of layered rock at the site was generally defined by auger refusal.

2.6.3 Regional Hydrogeology

The occurrence and movement of groundwater in the Piedmont physiographic province are within two separate but interconnected water-bearing zones that typically comprise one aquifer. A shallow water-bearing zone typically occurs within the residuum/saprolite and a deeper zone within the underlying bedrock.

Groundwater in the residuum/saprolite zone occurs in the interstitial pore spaces between the individual sediment grains. Groundwater in this zone generally flows from topographic highs to topographic lows. The occurrence and movement of groundwater in the underlying bedrock zone are controlled by joints and fractures within the bedrock. Groundwater within this deeper zone may occur under confined or semi-confined conditions, depending on the extent of fracturing at the saprolite/bedrock interface. Deeper groundwater movement is typically controlled by the distribution of openings in the bedrock and can be variable.

3 Detection Monitoring

On behalf of Charah, HDR conducted two detection monitoring events in January and April 2024 that included monitoring well gauging and sampling, surface water sampling, and leachate sampling.

3.1 Well Gauging

3.1.1 January 2024 Event

On January 22, 2024, depth to groundwater in shallow wells ranged from 5.95 feet below ground surface (bgs) in well MW-3 to 58.30 feet bgs in well MW-1. Groundwater elevations calculated from these measurements ranged from 180.59 feet (BG-2) to 225.62 feet (MW-10) in shallow wells. Depth to water in deep wells ranged from 6.17 feet bgs (MW-11D) to 138.82 feet bgs (MW-2D). Corresponding groundwater elevations ranged from 210.85 feet (MW-11D) to 90.91 feet (MW-2D). Groundwater gauging data and elevations for the January 2024 event are presented in **Table 1**. Historical and current groundwater elevations are shown in **Figure 4**.

During the assessment monitoring phase of work, HDR developed a groundwater model using the groundwater modeling pre- and post-processing software Groundwater Modeling System (GMS) 10.3.4 (Aquaveo; https://www.aquaveo.com/software/gms-groundwater-modeling-system-introduction) as well as ArcMap 10.4.1 (ESRI; https://www.esri.com/en-us/arcgis/products/index). For the groundwater flow model, MODFLOW-2005 (Harbaugh 2005; https://pubs.usgs.gov/tm/2005/tm6A16/) was used to solve the groundwater-flow equations that quantify the flow of groundwater in three dimensions.

A potentiometric surface map was created using the Kriging method of interpolating groundwater contours (**Figure 5**) and groundwater measurements collected on January 22, 2024. Regional groundwater flow near the site generally flows northeast to southwest. The Kriging results indicated groundwater highs at MW-5, MW-6, and MW-10, and groundwater lows at wells MW-4, MW-8, and BG-2. Groundwater elevations for wells MW-2D and MW-11D were not used to generate potentiometric contours for the surficial aquifer during the January 2024 event as MW-2D and MW-11D were installed to monitor groundwater in the bedrock aquifer, thus, potentially not representative of groundwater conditions.

3.1.2 April 2024 Event

On April 1, 2024, depth to groundwater in shallow wells ranged from 5.48 feet bgs in well MW-3 to 58.39 feet in well MW-1. Groundwater elevations calculated from these measurements ranged from 182.84 feet (BG-2) to 226.34 feet (MW-10) in shallow wells. Depth to water in deep wells ranged from 4.33 feet bgs in well MW-11D to 138.60 feet in well MW-2D. Corresponding groundwater elevations ranged from 212.69 feet (MW-11D) to 91.13 feet (MW-2D). Well gauging data and groundwater elevations for the April 1, 2024, event are presented in **Table 2**. Historical and current groundwater elevations are shown on **Figure 4**.

A potentiometric surface map was created using groundwater measurements collected on April 1, 2024, via the Kriging method of interpolating groundwater contours (**Figure 6**). Regional groundwater flow near the site generally flows northeast to southwest. The results indicated

groundwater highs at MW-5, MW-6, and MW-10, and groundwater lows at wells MW-4, MW-8, and BG-2. Groundwater elevations from wells MW-2D, MW-9, and MW-11D were not used to generate potentiometric contours for the surficial aquifer as MW-2D and MW-11D were installed to monitor groundwater in the bedrock aquifer and MW-9 was nearly dry at the time of gauging, thus, potentially not representative of groundwater conditions.

3.1.3 Horizontal Hydraulic Gradients

Horizontal hydraulic gradient is calculated by taking the difference in hydraulic head over the length of the flow path between two wells of similar construction and (generally) perpendicular to flow. Since groundwater flow direction can vary slightly between gauging events, it is difficult to install permanent monitoring wells in locations consistently perpendicular to groundwater flow. Horizontal hydraulic gradient was calculated between well pairs MW-5/MW-4 and MW-6/BG-2, recognizing that these well pairs are not truly perpendicular to flow, as shown on **Figure 5** and **Figure 6**. Groundwater monitoring wells from the northern portion of the site were not used to calculate the hydraulic gradient on site because they are most likely to have significant alterations to natural groundwater recharge caused by the structural fill cap. Hydraulic gradients calculated from data obtained during the January 2024 and April 2024 sampling events are presented in **Table 3**.

3.1.4 Groundwater Flow Velocity

The average linear velocity, or seepage velocity, of groundwater between wells at the site was calculated using Darcy's Law, as follows:

$$V_S = \frac{Ki}{P_e}$$

Where:

V_s = seepage velocity
K = horizontal hydraulic conductivity
i = horizontal hydraulic gradient
P_e = effective porosity

Seepage velocities for groundwater were calculated using horizontal hydraulic gradients, as referenced above, average horizontal hydraulic conductivity and average effective porosity values. Average horizontal hydraulic conductivity (9.79×10^{-5} cm/sec) was calculated during geotechnical testing from on-site wells, except BG-2, MW-7R, and MW-11. Average effective porosity (0.093) values were calculated from geotechnical testing and from the literature where geotechnical data was not available (Buxton 2014; Sinhal and Gupta 2010).

Seepage velocity varies on a well-by-well basis and was calculated between the MW-5/MW-4 and MW-6/BG-2 well pairs, representing the two well pairs that are approximately perpendicular to the direction of groundwater flow and located farthest from the effects of the structural fill cap. Seepage velocity was calculated at 17.1 feet per year between MW-5 and MW-4, and 14.8 feet per year between MW-6 and BG-2 for the January 2024 sampling event. For the April 2024 sampling event, seepage velocity was calculated at 16.7 feet per year between MW-5 and MW-4 and 14.5 feet per year between MW-6 and BG-2. Flow rates listed above are estimations;

actual rates will vary across the site with local hydrogeologic conditions. Seepage velocities are shown in **Table 3**.

4 Sampling Activities

4.1 Groundwater Sampling

4.1.1 January 2024 Event

HDR collected groundwater samples from monitoring wells MW-1, MW-2, MW-2D, MW-3, MW-4, MW-5, MW-7R, MW-8, MW-9, MW-10, MW-11, MW-11D, BG-1, and BG-2 between January 22 and 26, 2024.

Purging was conducted via low-flow methods, except for MW-2D and MW-9 where hand bailing was conducted and was considered complete when the depth to water and field parameters had stabilized in accordance with the targets specified below.

- Turbidity (10 percent for values greater than 10 nephelometric turbidity units (NTUs) (if three turbidity values are less than 10 NTU, the values are considered stabilized)
- Dissolved oxygen (DO) (10 percent for values greater than 2.0 mg/L, if DO values are below 2.0 mg/L, values are considered stable if three readings are within +/- 0.2 mg/L. If three DO values are less than 0.5 mg/L, the values are considered stabilized)
- Specific conductance (5 percent)
- Temperature (3 percent)
- pH (± 0.1 unit)
- Oxygen reduction potential (ORP) (± 20 millivolts)

In cases where water level in the well would not stabilize, the well was pumped for as long as possible leaving enough water in the water column to fill groundwater sample bottles. Field data sheets are provided in **Appendix A**.

Non-disposable sampling equipment was decontaminated after each use by washing in a Liquinox® detergent solution followed by a tap-water rinse. Purge water was discharged to the ground surface adjacent to each well.

One equipment blank sample and one duplicate sample were collected in the field to evaluate effectiveness of field decontamination and consistency of laboratory analytical methods, respectively.

Samples were transferred under chain-of-custody procedures to Pace Analytical Services, LLC (Pace) for analysis. Sample handling and custody were performed in accordance with the USEPA Guidance for Field Samplers.

4.1.2 April 2024 Event

HDR collected groundwater samples from monitoring wells MW-1, MW-2, MW-2D, MW-3, MW-4, MW-5, MW-6, MW-7R, MW-8, MW-9, MW-10, MW-11, MW-11D, BG-1, and BG-2 between April 1 and 4 2024, via the low-flow sampling method. Wells MW-2D and MW-9 were purged dry using a new, disposable bailer per well on April 1, then sampled on April 4 once the wells recharged.

One equipment blank sample and one duplicate sample were collected in the field to evaluate effectiveness of field decontamination and consistency of laboratory analytical methods, respectively.

Purging and sampling methods were consistent with the methods described in **Section 4.1.1**. Field data sheets are provided in **Appendix A**.

4.2 Surface Water Sampling

Surface water samples were collected from locations outside of the structural fill boundary to evaluate potential groundwater to surface water interaction. Surface water locations SW-1, SW-2, SW-3, SW-4, SW-5, and SW-6 were sampled during the January and April 2024 sampling events. Surface water sampling locations are described as follows:

- SW-1 was sampled approximately 500 feet south of MW-4, outside of the property boundary, from an unnamed tributary of Gulf Creek.
- SW-2 was sampled south and adjacent to the rail spur west of the structural fill from an unnamed tributary of Shaddox Creek.
- SW-3 was sampled approximately 1,100 feet southwest of SW-2, outside of the property boundary, from an unnamed tributary of Shaddox Creek.
- SW-4 was sampled approximately 850 feet south of MW-11 from an unnamed tributary of Gulf Creek.
- SW-5 was sampled approximately 1,600 feet southeast of SW-4, outside the property boundary, west of Moncure-Flatwood Road, from an unnamed tributary of Gulf Creek.
- SW-6 was sampled approximately 350 feet north of MW-4 from an unnamed tributary of Gulf Creek.

Prior to sample collection, field parameters (temperature, specific conductance, DO, pH, turbidity, and ORP) were measured with a water quality meter and recorded on field data sheets (**Appendix A**). Surface water sampling locations are shown on **Figure 2**.

4.3 Leachate Sampling

One leachate grab sample (leachate) was collected directly from the on-site holding tanks via a built-in spigot (**Figure 2**) during the January and April 2024 sampling events.

5 Water Quality

5.1 Background Site Conditions

Two groundwater sampling events were conducted prior to CCP placement (August and October 2015). The background sampling events consisted of sample collection and analysis from nine monitoring wells (MW-1 through MW-8 and BG-1) and two surface water sample locations (SW-1 and SW-2).

During these initial background monitoring events, chloride, pH, TDS, and vanadium were detected at concentrations that exceeded their 2L Standard or interim maximum allowable concentration (IMAC) in groundwater samples collected from background monitoring well BG-1. Antimony, barium, chloride, chromium, cobalt, pH, TDS, and vanadium were detected at concentrations that exceeded their respective 2L Standards or IMACs in other monitoring wells prior to ash placement. Additional target constituents were detected in the samples from well BG-1 and other wells; however, these concentrations did not exceed applicable standards.

Copper and cobalt concentrations that exceeded their respective 2B Standards were reported in surface water samples collected during the initial background monitoring events, prior to CCP placement. Additionally, all USEPA Appendix III constituents were detected in the surface water samples collected prior to CCP material placement, but at concentrations below their respective 2B Standards (if applicable).

During the first monitoring event (August 2015), bromodichloromethane and dibromochloromethane were detected at concentrations above their respective 2L Standards in groundwater samples collected from MW-2, MW-3, and MW-7. VOCs, including trihalomethanes, are not present naturally at the site. These detections are attributed to the use of municipal water during previous well development activities. VOCs were not detected above laboratory method detection limits (MDLs) in any subsequent (second through eighth) background sampling events.

A detailed discussion of background groundwater conditions can be found in the *2016 Background Sampling Report* (HDR 2016b). Additional discussion of the statistical results can be found in **Section 6** of this report for a better understanding of predictive limits for the background well locations (BG-1 and BG-2), as well as interwell interactions.

5.2 Groundwater Analytical Results

5.2.1 January 2024 Event

5.2.1.1 COMPARISON TO GROUNDWATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2L Standards, as established in 15A NCAC 02L .0202 (effective April 1, 2022), in samples collected from one or more monitoring wells during the January 2024 sampling event:

- Arsenic exceeded the 2L Standard (10 µg /L) in the sample collected from MW-2D.

- Barium exceeded the 2L Standard (700 µg/L) in the samples collected from MW-3 and MW-8.
- Chloride exceeded the 2L Standard (250 mg/L) in the samples collected from MW-2, MW-3, MW-4, MW-7R, and MW-8.
- Chromium exceeded the 2L Standard (10 µg/L) in the sample collected from MW-2D.
- Fluoride exceeded the 2L Standard (2 mg/L) in the sample collected from MW-2D.
- Field-measured pH values did not fall within the 2L Standard range (6.5 – 8.5 standard units [SU]) while collecting samples from MW-2, MW-4, MW-6, and MW-11.
- TDS exceeded the 2L Standard (500 mg/L) in the samples collected from BG-1, BG-2, MW-1, MW-2, MW-2D, MW-3, MW-4, MW-6, MW-7R, MW-8, and MW-9.

Note that antimony and cobalt results were reported with method reporting limits (MRLs) that exceeded the 2L Standard.

5.2.1.2 COMPARISON TO SITE-SPECIFIC BACKGROUD THRESHOLD VALUES

Concentration of the following constituents exceeded the background threshold values (BTVs), in samples collected from one or more of the monitoring wells during the January 2024 sampling event:

- Arsenic exceeded the BTV (8.80 µg/L) in the sample collected from MW-2D.
- Barium exceeded the BTV (377 µg/L) in the samples collected from MW-3 and MW-8.
- Chloride exceeded the BTV (325 mg/L) in the samples collected from MW-2, MW-3, and MW-8.
- Calcium exceeded the BTV (124,000 µg/L) in the sample collected from MW-3.
- Cobalt exceeded the BTV (2.30 µg/L) in the sample collected from MW-4 (the reported result was an estimated value, less than the MRL).
- Chromium exceeded the BTV (7.20 µg/L) in the samples collected from MW-2D and MW-9 (the reported result for MW-9 was an estimated value, less than the MRL).
- Fluoride exceeded the BTV (0.334 mg/L) in the samples collected from BG-2, MW-2D, MW-4, MW-5, MW-6, MW-10, and MW-11D.
- Lithium exceeded the BTV (43.7 µg/L) in the samples collected from BG-1, MW-2D, and MW-3.
- Molybdenum exceeded the BTV (13.6 µg/L) in the samples collected from MW-2D, MW-9, and MW-10 (the reported result from MW-9 was an estimated value, less than the MRL).
- Selenium exceeded BTV (6.00 µg/L) in the sample collected from MW-2D.
- Nickel exceeded the BTV (4.20 µg/L) in the samples collected from MW-1, MW-2D, MW-4, and MW-9 (the reported results for MW-2D and MW-9 were estimated values, less than the MRL).
- Field-measured pH values did not fall within the BTV range of 5.59 – 7.59 SU while collecting samples from MW-2, MW-10, MW-11, and MW-11D.
- Radium-228 exceeded the BTV (1.35 pCi/L) in the sample collected from MW-9.
- Vanadium exceeded the BTV (8.30 µg/L) in the samples collected from MW-1 and MW-2D.
- Zinc exceeded the BTV (0.0160 mg/L) in the sample collected from MW-1.

Note that 10 constituents were reported with MRLs that exceeded the BTV (antimony, arsenic, beryllium, boron, cadmium, cobalt, mercury, nickel, selenium, and silver). Analytical results are presented in **Table 4**. The laboratory report for the January 2024 sampling event is provided in **Appendix B**. Electronic data deliverables are provided in **Appendix C**.

5.2.2 April 2024 Event

5.2.2.1 COMPARISON TO GROUNDWATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2L Standards in samples collected from one or more of the monitoring wells during the April 2024 sampling event:

- Arsenic exceeded the 2L Standard (10 µg/L) in the sample collected from MW-2D.
- Barium exceeded the 2L Standard (700 µg/L) in the samples collected from MW-3 and MW-8.
- Chloride exceeded the 2L Standard (250 mg/L) in the samples collected from BG-2, MW-2, MW-3, MW-4, MW-7R, and MW-8.
- Chromium exceeded the 2L Standard (10 µg/L) in the samples collected from MW-2D and MW-9.
- Field measured pH values did not fall within the 2L Standard range (6.5 – 8.5 SU) in groundwater while collecting samples from BG-1, MW-4, and MW-6.
- Fluoride exceeded the 2L Standard (2 mg/L) in the sample collected from MW-2D.
- TDS exceeded the 2L Standard (500 mg/L) in the samples collected from each monitoring well except for MW-1, MW-5, MW-10, MW-11, and MW-11D.
- Vanadium exceeded the 2L Standard (7 µg/L) in the sample collected from MW-2D.

Note that antimony and cobalt results were reported with MRLs that exceeded the 2L Standard. Radium samples were not collected from MW-9 due to low water volume in the well.

5.2.2.2 COMPARISON TO SITE-SPECIFIC BTVs

Concentrations of the following constituents exceeded the BTVs in samples collected from one or more of the monitoring wells during the April 2024 sampling event:

- Arsenic exceeded the BTV (8.80 µg/L) in the sample collected from MW-2D.
- Barium exceeded the BTV (377 µg/L) in the samples collected from MW-3 and MW-8.
- Chloride exceeded the BTV (325 mg/L) in the samples collected from MW-2, MW-3, and MW-4.
- Calcium exceeded the BTV (124,000 µg/L) in the sample collected from MW-3.
- Chromium exceeded the BTV (7.20 µg/L) in the samples collected from MW-2D and MW-9.
- Fluoride exceeded the BTV (0.334 mg/L) in the samples collected from MW-2D, MW-5, MW-10, and MW-11D.
- Lithium exceeded the BTV (43.7 µg/L) in the samples collected from MW-2, MW-2D, and MW-3.
- Molybdenum exceeded the BTV (13.6 µg/L) in the samples collected from MW-2D, MW-9, and MW-10.
- Selenium exceeded BTV (6.00 µg/L) in the samples collected from MW-2D and MW-9 (the reported result for MW-2D was an estimated value, less than the MRL).

- Nickel exceeded the BTV (4.20 µg/L) in the samples collected from MW-2D and MW-4.
- Field-measured pH values did not fall within the BTV range of 5.59 – 7.59 SU while collecting samples from MW-10 and MW-11D.
- Radium-226 exceeded the BTV (0.80 pCi/L) in the sample collected from MW-2.
- Radium-228 exceeded the BTV (1.35 pCi/L) in the samples collected from MW-3.
- Combined Radium exceeded the BTV (2.09 pCi/L) in the samples collected from MW-2 and MW-3.
- TDS exceeded the BTV (1,270 µg/L) in the samples collected from MW-2 and MW-3.
- Vanadium exceeded the BTV (8.30 µg/L) in the sample collected from MW-2D.

Note that 10 constituents were reported with MRLs that exceeded the BTV (antimony, arsenic, beryllium, boron, cadmium, chromium, cobalt, mercury, nickel, selenium, and silver). Analytical results are presented in **Table 4**. The laboratory report for the April 2024 sampling event is provided in **Appendix B**. Electronic data deliverables are provided in **Appendix C**.

The presence of naturally occurring inorganic constituents above regulatory criteria is common in North Carolina due to various geologic conditions. The presence of naturally occurring metals is discussed in more detail in the *Initial Background Groundwater & Surface Water Monitoring Event* (Buxton 2015c).

5.3 Surface Water Analytical Results

Surface water sample results were compared to the 2B Standards or the USEPA National Criteria Standard (used by the North Carolina Division of Water Quality as default standards for parameters not listed in 15A NCAC 02B).

5.3.1 January 2024 Event

5.3.1.1 COMPARISON TO SURFACE WATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples during the January 2024 event:

- Copper exceeded the 2B Standard (0.007 mg/L) in the surface water sample collected from SW-1.
- TDS exceeded the 2B Standard (500 mg/L) in surface water sample SW-1.
- Field measured pH values did not fall within the 2B Standard range (6.0 – 9.0 SU) in the surface water samples collected from SW-1, SW-4, and SW-5.

Note that four constituents (cobalt, mercury, selenium, and silver) were reported with MRLs that exceeded the 2B Standards. Standards have not been established under T15A NCAC 02B for the following constituents detected: calcium, lithium, radium-226, radium-228, combined radium, and vanadium. No exceedances of 2B Standards were reported among the constituents analyzed in surface water samples from SW-2, SW-3, and SW-6. Laboratory results are presented in **Table 4**.

5.3.2 April 2024 Event

5.3.2.1 COMPARISON TO SURFACE WATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples during the April 2024 event:

- Cobalt exceeded the 2B Standard (3 µg/L) in the surface water samples collected from SW-5 and SW-6 (the reported result for SW-5 was an estimated value, less than the MRL).
- Copper exceeded the 2B Standard (0.007 mg/L) in the surface water samples collected from SW-1 and SW-6.

Note that four constituents (cobalt, mercury, selenium, and silver) were reported with MRLs that exceeded the 2B Standards. Standards have not been established under T15A NCAC 02B for the following constituents detected: calcium, lithium, radium-226, radium-228, combined radium, and vanadium.

No exceedances of 2B Standards were reported among the constituents analyzed in surface water samples from SW-2 and SW-3. Laboratory results are presented in **Table 4**.

5.4 Leachate Analytical Results

Leachate generated on-site was collected and analyzed during the January 2024 and April 2024 monitoring events. Analytical results (**Table 1**) were generally within range of historical concentrations, with some minor fluctuations observed.

6 Statistics

6.1 Methodology

Background groundwater quality was evaluated to establish statistically derived background concentrations for the site. Groundwater quality in downgradient wells was then compared to background concentrations to evaluate if a statistically significant increase (SSI) over background has occurred, as required by Section .1600 of the North Carolina Solid Waste Management Rules 15A NCAC 13B.

Sampling results used to establish BTVs were obtained during 37 monitoring events performed between October 2015 and April 2024. Downgradient sampling results from the detection monitoring event in April 2024 were used to evaluate the potential for SSIs. Software packages R and SPSS were used in the production of the statistics (R is a free software tool; SPSS is a licensed software package).

Groundwater samples collected as part of the 15A NCAC 13B .1600 monitoring program were analyzed for NCDEQ Solid Waste Appendix I (except VOCs), 40 CFR 257 Appendix III, and 40 CFR 257 Appendix IV constituents. Only non-filtered sample results were utilized for the statistical analysis of monitored constituents.

6.1.1 Statistical Analysis

The background sample size (i.e., quantity of qualifying samples) was evaluated per constituent. Descriptive statistics were calculated for the background data set including and excluding non-detect (ND) values. When NDs were included in the dataset, the MDL was substituted as the ND value for simple descriptive statistics. The analysis was performed with NDs removed to better understand the central tendency and range of the detected values. Note that for the trend analyses in **Section 6.1.4** and for the establishment of statistically derived background concentration levels in **Section 6.2**, imputation methods using the maximum likelihood method (MLE) for NDs, regression on order statistics or Kaplan-Meier methods were used, where appropriate.

Following the calculation of descriptive statistics, statistical analyses for the background data set were performed to evaluate for outliers, data distributions, trends, and spatial variability between the background wells for Appendix I metals, Appendix III and Appendix IV constituents, where data quantity and quality permit. A total of 59 samples (37 monitoring events from BG-1 and 22 monitoring events from BG-2) were included for the descriptive analysis of the background monitoring well results for the monitored constituents. The first sampling event conducted in August 2015 was not included in the analysis as data obtained during this event were not consistent with data from subsequent rounds; sample analyses for the August 2015 event were performed by a different laboratory, possibly accounting for the disparity in results. The sample collected April 3, 2017, for TDS in well BG-1 is considered an outlier and was removed from the analysis. January 2020 samples for boron were removed from the analysis as they were diluted and could not be properly detected.

For downgradient monitoring results, the analysis included the calculation of descriptive statistics for Appendix I metals, Appendix III and Appendix IV constituents, (for the data sets including and excluding ND values), followed by an evaluation of outliers and trends. A total of up to 37 monitoring events performed between November 2015 and April 2024 were included for the descriptive analysis of the downgradient monitoring well results for the monitored constituents.

6.1.2 Outliers

Outliers are values that are not representative of the population from which they are sampled. The background and downgradient datasets were screened for outliers using the Dixon's and Rosner's outlier tests. Dixon's outlier test is suitable for datasets containing less than 25 samples, while Rosner's test is suitable for datasets with 25 or more samples. Since all current background samples have greater than 25 observations based on the pooling of data from BG-1 and BG-2, Rosner's test was used. For downgradient data, since sample sizes vary by well both Dixon's and Rosner's tests were used depending on the well-constituent pair sample size. The outlier test was conducted using a significance of one percent. For constituents that had NDs, the NDs were removed prior to testing for outliers.

Statistical outliers were identified in the background dataset evaluated for one Appendix III constituent (boron) in BG-1 and BG-2, five Appendix IV constituents (chromium, lithium, selenium, thallium, and total radium) in BG-1, and two Appendix I constituents (nickel in BG-1

and BG-2 as well as vanadium in BG-2). A statistical outlier was identified in the background dataset from the January and April 2024 data for selenium (April 2024).

The statistical outliers were investigated as possible data entry or measurement errors. The remaining values were all within one order of magnitude of other observations and deemed correct. Given the variable nature of groundwater samples and that it is common for groundwater quality samples to have very low or very high concentrations over time, statistical outliers are expected but do not necessarily signify that the outliers are from different distributions. As additional background samples are collected over time, outlier test results may change, and earlier observations thought to be outliers may no longer be outliers.

Statistical outliers were identified for Appendix I metals, Appendix III, and Appendix IV constituents in the data sets evaluated for downgradient monitoring wells throughout the monitoring period. Results of the outlier test of the background data set is listed in **Table 3** of **Appendix D** and results of the downgradient data set is listed in **Table 4** of **Appendix D.**

6.1.3 Data Distribution

Groundwater data was fitted to known distribution models using Goodness-of-Fit (GOF) tests. The Shapiro-Wilk and Lilliefors tests is used to test for normal distribution. Note that these two tests can be used to test for lognormal distributions after the data are transformed using the natural log function. The empirical distribution function (EDF) based methods, the Kolmogorov-Smirnov (K-S) and Anderson-Darling (A-D) test, are used to test for a gamma distribution. Normal, lognormal and gamma distributions are parametric distributions. If a dataset cannot be fit with any of these three parametric distributions, it is considered to follow a nonparametric distribution. In addition, if more than 50 percent of the observations are non-detects, then the dataset is assumed to follow a nonparametric distribution. Finally, the data distributions for radium 226, radium 228, and total radium are set to nonparametric distributions due to the occurrence of negative values. Data distributions are listed in **Table 5** of **Appendix D**.

6.1.4 Trends

Background constituent concentrations in groundwater should demonstrate stationary conditions through time, free of trends. Constituents were analyzed for trends within the dataset using a maximum likelihood estimate (MLE) regression for constituents which followed parametric distributions and Mann-Kendall tests for those that were treated under nonparametric distributional assumptions. The MLE regression can be applied to datasets that can be fitted to a specific distribution model and that contain NDs with multiple MDLs. The Mann-Kendall test is suitable for data series with no discernable distributions and only one MDL value for NDs.

Constituents treated under nonparametric data assumptions (either tested as nonparametric or having more than 50 percent NDs) and with multiple MDLs or with less than three detected values were not assessed for trends. A summary of the trend analysis results for constituents with sufficient detected values in the background data set is provided in **Table 6** of **Appendix D**. A one-percent significance level was used to detect statistically significant trends.

The background well regression analysis showed a potential increasing trend for fluoride and sulfate, and potential decreasing trends for chloride, barium, and radium-226. There were no increasing or decreasing trends identified for other monitoring constituents with sufficient data quantity and quality for testing with the MLE analysis or Mann-Kendall test.

Trends were also evaluated for constituents in each downgradient well using the same methods as described above for the background data set. Trends identified for select constituents at select monitoring well locations should be monitored as additional downgradient groundwater data are collected at the site. A summary of the statistical trends identified within the downgradient dataset is provided in **Table 7** of **Appendix D**. As with the background datasets, one-percent significance level was used to detect statistically significant trends. No trends were detected for constituents with sufficient data at MW-3. Trends observed in the downgradient dataset for the current monitoring period are as follows:

- Arsenic: Decreasing trend observed at MW-11D.
- Barium: Increasing trends observed at MW-2, MW-7R, and MW-10. Decreasing trends observed in MW-6 and MW-8.
- Calcium: Increasing trends observed in MW-3, MW-7R, and MW-10. Decreasing trends observed in MW-5 and MW-8.
- Chloride: Decreasing trends observed in MW-6, MW-8, and MW-11D.
- Lithium: Increasing trends observed at MW-4 and MW-10. Decreasing trends observed in MW-6 and MW-11D.
- Molybdenum: Decreasing trends observed in MW-2, MW-10, and MW-11D.
- Nickel: Increasing trend observed in MW-4.
- pH (field): Increasing trend observed in MW-8. Decreasing trends observed in MW-2, MW-4, and MW-11D.
- Sulfate: Increasing trend observed in MW-8. Decreasing trends observed in MW-1, MW-2, MW-3, MW-6, MW-7R and MW-10.
- TDS: Increasing trend observed in MW-7R. Decreasing trend observed in MW-11D.
- Total Radium: Decreasing trend observed in MW-11D.

6.1.5 Spatial Variability

Spatial variability refers to identifying whether or not there are statistically identifiable differences in mean concentrations or variance levels across the well field (i.e., the pooled background data). Parametric and nonparametric analysis of variance (ANOVA) tests and visual aids (i.e., side-by-side box plots and scatter plots), as needed, were used to evaluate for spatial variability within the background dataset to check that results from background wells BG-1 and BG-2 were appropriate for pooling and calculating background concentrations for constituents.

Statistical tests at the one percent level of statistical significance indicated that six Appendix III constituents (boron, calcium, fluoride, pH [field], sulfate, and total dissolved solids) exhibited spatial variability. Statistical spatial variability was also identified for two Appendix IV

constituents (barium and fluoride), and one Appendix I metal (vanadium). Review of side-by-side box plots for the constituents listed above indicated that the statistically-identified variability in concentrations are reasonable and the mean concentrations calculated for the monitoring wells are generally within the natural variability of concentrations of the well field conditions for Appendix III and IV constituents or within or close to one order of magnitude of the other (See **Figure 5** through **Figure 12** in **Appendix D**). In general, the concentration distribution across the background wells should be considered reflective of the hydrogeological regime at the site and the background results are appropriate for pooling and calculating background concentrations at this time. Spatial variability will continue to be monitored with each background update and downgradient assessment.

6.2 Evaluation for SSIs over Background

Based on the statistical evaluations performed, BTVs were calculated for the detection monitoring program at the site for Appendix I metals, as well as Appendix III and Appendix IV constituents. For constituents that have all ND background values, the maximum MDL is chosen to represent background and the double quantification rule (DQR) is used to evaluate whether there is an SSI. The BTV provided for detection monitoring constituents is the statistically derived background concentration (i.e., upper prediction limit [UPL]), the maximum detected value or the maximum MDL depending on the level of censorship in each of the background samples.

Downgradient sampling results from the April 2024 detection monitoring event were used to test for SSIs. For constituents that have all ND background values, the DQR is applied; that is, an SSI is registered for the well-constituent pair if the downgradient concentrations exhibit detects in two consecutive sampling events. Downgradient sampling results from the January 2024 and April 2024 sampling events were used to test for SSIs for constituents that have all ND background values. Downgradient concentrations were compared to the BTVs and are summarized in **Table 11** through **Table 13** of **Appendix D**.

SSIs were found for one Appendix I metal (nickel), six Appendix III constituents (boron, calcium, chloride, fluoride, pH [field], and TDS), and eight Appendix IV constituents (barium, cobalt, fluoride, lithium, molybdenum, radium-226, radium-228, and total radium).

6.3 Statistical Summary

A summary of the statistical analysis results is provided in **Table 11** through **Table 13** of **Appendix D** and discussed below.

- The statistical outliers identified for nickel, vanadium, boron, chromium, lithium, selenium, thallium and total radium are considered representative of background. During the next BTV update with the additional 2024 samples, the full datasets will be re-assessed for statistical outliers.
- For the background data set, there are currently sufficient data to fit the Appendix III constituents to known parametric distribution models (e.g., gamma, lognormal, or

normal) using GOF test, except for boron, calcium, sulfate, and TDS, which are nonparametric.

- For the background data set, 11 of the 17 Appendix IV constituents exhibited high percentages of NDs and will be treated under nonparametric distribution assumptions with the maximum detected value selected to represent background, until additional results can be included in the data sets. The data sets for radium-226, radium-228, and total radium are set to nonparametric distribution for inferential purposes. This is because the NDs were not indicated based on the analytical protocols used by the laboratory and some observations had negative values. Currently, the background datasets for fluoride and lithium can be fit to known parametric models using GOF test.
- As of April 2024, downgradient samples were used to establish SSIs. The statistically derived background concentrations and the evaluation for SSIs over background for Appendix I metals, Appendix III, and Appendix IV constituents are included in **Section 4** of **Appendix D**.
- While multiple statistical outliers have been flagged at the downgradient wells for various constituents, the outliers can indicate contamination from the structural fill or alternative sources. Unless an alternative source can be confirmed, the values remain in the sample as representing groundwater quality at the time of measurement.
- SSIs were found for one Appendix I metal (nickel), six Appendix III constituents (boron, calcium, chloride, fluoride, pH [field], and TDS), and eight Appendix IV constituents (barium, cobalt, fluoride, lithium, molybdenum, radium-226, radium-228, and total radium).

When the April 2024 sampling event results are compared to the pre-ash sampling results from the eight downgradient wells, current downgradient groundwater constituent concentrations are generally similar to concentrations reported prior to ash placement. Depending on the data distribution of the constituent, the BTVs have been computed to allow for one to two verification samples. The validity of the initial exceedance can be confirmed by verification sampling; however, for practical purposes, should the initial sampling event of interest exceed the respective BTV, the event is considered an SSI. Additional details regarding statistical methodology and results are provided in **Appendix D**.

7 Summary and Conclusions

7.1 Summary

The first and second quarterly groundwater monitoring events in 2024 were conducted at the Brickhaven No. 2 Mine Tract “A” Structural Fill site from January 23 - 26, 2024, and April 1 - 4, 2024, respectively. A summary of the findings from these events is provided below**.**

7.1.1 Groundwater

7.1.1.1 JANUARY 2024 EVENT

- Concentrations of the following constituents exceeded 2L Standards in samples collected from one or more of the monitoring wells: arsenic, barium, chloride, chromium, fluoride, pH (field), and TDS.
- Concentrations of the following constituents exceeded BTVs in samples from one or more of the monitoring wells: arsenic, barium, boron (estimated values less than MRL), calcium, chloride, chromium, cobalt (estimated value less than MRL), fluoride, lithium, molybdenum, nickel, pH (field), radium-228, selenium, TDS, vanadium, and zinc.

7.1.1.2 APRIL 2024 EVENT

- Concentrations of the following constituents exceeded 2L Standards in samples collected from one or more of the monitoring wells: arsenic, barium, chloride, chromium, fluoride, pH (field), TDS, and vanadium.
- Concentrations of the following constituents exceeded the BTVs in samples collected from one or more of the monitoring wells: arsenic, barium, boron (estimated values less than MRL), calcium, chloride, chromium, combined radium, fluoride, lithium, molybdenum, nickel, pH (field), radium-226, radium-228, selenium, TDS, and vanadium.
- Comparing the results of the April 2024 monitoring event to the pre-ash sampling results from the eight downgradient wells, current downgradient groundwater constituent concentrations are generally similar to concentrations reported prior to ash placement.

7.1.1.3 STATISTICAL EVALUATION

- Statistical outliers were identified in the background dataset evaluated for one Appendix III constituent (boron) in BG-1 and BG-2, four Appendix IV constituents (chromium, lithium, selenium, and total radium) in BG-1, and two Appendix I constituents (nickel and vanadium) in BG-1, as well as vanadium in BG-2.
- The statistical outliers were identified intermittently for nickel, boron, lithium, and total radium are considered representative of background. During the next BTV update with the additional 2024 samples, the full dataset will be re-assessed for statistical outliers.
- Groundwater quality in wells was compared to background concentrations to determine if an SSI over background has occurred:
  - The following constituents (15) were found to have SSIs: barium, boron, calcium, chloride, chromium, cobalt, fluoride, lithium, molybdenum, nickel, pH (field), radium-226, radium-228, TDS, and total radium.

7.1.2 Surface Water

7.1.2.1 JANUARY 2024 EVENT

- Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples: copper, pH (field), and TDS.

- No exceedances of 2B Standards were reported in the samples collected from SW-2, SW-3, or SW-6.

7.1.2.2 APRIL 2024 EVENT

- Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples: cobalt, copper, and pH (field).
- No exceedances of 2B Standards were reported in the samples collected from SW-2 and SW-3.

7.1.3 Leachate

Concentrations of the analyzed constituents (**Table 1**) were generally within range of historical results, with some minor fluctuations observed.

7.2 Conclusions

Based upon the data analyzed during this event and historical events, HDR has made the following conclusions:

- The presence of SSIs is largely the result of low background concentrations that may not represent data collected prior to CCP placement (August and October 2015 sampling events) and is influenced by natural and seasonal variations at the site. In general, the SSIs reported during this sampling event are either consistent with those evaluated in the Alternate Source Demonstration (March 29, 2019) or are potential SSIs to be verified during the next sampling event.
- Groundwater modeling during assessment monitoring in 2020 calculated that, due to the low hydraulic conductivity of the clay-rich soil of the former clay mine, groundwater and constituents found in the groundwater will move slowly through the aquifer materials. Model-estimated groundwater velocities are too low for constituents to have been transported from the structural fill to the monitoring wells or surface waters where they have been detected at the time of first detection. It was calculated that a hypothetical plume would have migrated approximately 250 feet in six years between 2014 and 2020. Continuing these calculations through present day, the total potential migration distance of a plume since the placement of structural fill would be approximately 600 feet or less. Therefore, tracer constituents would have reached downgradient monitoring wells within 600 feet of the fill boundary if a plume were migrating from the unit.
- Tracer constituents, such as boron, are not present at significant concentrations in either the groundwater or the surface water. Boron is a conservative tracer, so its ratio to the less mobile constituents (e.g., arsenic) should increase down-gradient of the structural fill. However, boron is at low concentrations or not present in down-gradient groundwater. This shows that the ash and leachate, which are a source of boron, are not the source of the other constituents in groundwater and/or surface water.
- Results of surface water sampling indicate exceedances of 2B Standards in the sample collected from SW-6 in April 2024. This location is immediately downstream of the General Shale property and away from ash handling activities performed on the

Brickhaven site prior to closure of the structural fill. Thus, it appears that the presence of inorganics in surface water samples collected downstream (locations SW-1 and SW-5) are likely the result of off-site impacts, and not from activities on the Brickhaven site.

- The structural fill is engineered and lined with an active leachate collection system. By collecting and disposing of the leachate off-site, the likelihood that leachate escaped the liner is greatly reduced.

8 Recommendations

Based on the findings, HDR makes the following recommendations:

- Continue semi-annual detection monitoring and reporting, and laboratory electronic data deliverables during non-reporting quarters, in accordance with permit requirements.
- Evaluate the validity of SSIs by further assessing sampling protocols/performance, spatial variability, and seasonality of constituent concentrations as additional sampling rounds are conducted.

9 References

Buxton Environmental. 2015a. Water Quality Monitoring Plan for Brickhaven No.2 Mine Tract "A" Structural Fill.

Buxton Environmental. 2015b. Compliance Groundwater Well Installation, Development, Surveying and Hydraulic Conductivity Determination Activities Report for Brickhaven No.2 Mine Tract "A" Structural Fill.

Buxton Environmental. 2015c. Initial Background Groundwater & Surface Water Monitoring Event. October 2015.

Buxton Environmental. 2016. Design Hydrogeologic Report for Brickhaven No.2 Mine Tract "A" Structural Fill. Addendum 2, March 2016.

HDR. 2016a. 2016 First Semi-Annual Groundwater, Surface Water, and Leachate Sampling Report. May 2016.

HDR. 2016b. Background Sampling Report. November 2016.

HDR. 2019. Groundwater and Surface Water Assessment Work Plan. August 2019.

HDR. 2020. Assessment Monitoring Report. July 2020.

NCSS, LLC. 2013. NCSS 9 Statistical Software. Kaysville, Utah, USA, ncss.com/software/ncss.

NCDEQ. 2008. Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling.

North Carolina Department of Natural Resources and Community Development. 1985. North Carolina Geologic Map.

North Carolina General Assembly. Coal Ash Management Act (CAMA) of 2014 (Senate Bill 729). Ratified.

R Core Team. 2018. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

Singh, A. and Ashok Singh. 2015. ProUCL 5.1.002 Technical Guide Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. EPA/600/R07/041.

Singhal, B. B.S. and R. P. Gupta. 2010. Applied Hydrogeology of Fractured Rocks: Springer, 2nd Edition, 408p. (Table 8-1, p. 140) United States Geological Survey. 2004. Arsenic, Nitrate, and Chloride in Groundwater, Oakland County, Michigan.

Tables

Table 1. January 2024 Groundwater Elevations
Table 2. April 2024 Groundwater Elevations
Table 3. Horizontal Hydraulic Gradients and Seepage Velocity
Table 4. Analytical Results – January 2024 and April 2024

This page intentionally left blank.

Table 1
Well Construction Details & Groundwater Elevations
January 22, 2024
Charah Solutions, Inc. - Brickhaven No.2 Mine Tract "A" Structural Fill
Moncure, Chatham County, North Carolina

Well ID	*Northing*	*Easting*	*TOC elev. (ft)*	*TD BGS (ft)*	*TD BTOC (ft)*	*Screen length (ft)*	*Screen Interval (ft)*	*DTW (ft BTOC)*	*GW Elevation (ft MSL)*	*Lithologic Unit*
BG-1	670898.50	1996348.25	228.19	41.00	43.55	15	26 - 41	13.80	214.39	Layered Rock/PWR*
BG-2	669278.99	1990476.10	194.23	23.00	25.82	10	13 -23	13.64	180.59	Layered Rock/PWR*
MW-1	674737.98	1993417.69	280.08	72.00	74.80	15	57 - 72	61.10	218.98	Layered Rock/PWR*
MW-2	673677.07	1994537.54	231.76	48.00	50.49	15	33 - 48	18.29	213.47	Layered Rock/PWR*
MW-2D	673650.31	1994535.97	232.87	144.00	147.14	15	129 - 144	141.96	90.91	Layered Rock/PWR*
MW-3	672474.63	1994834.76	222.56	40.00	42.56	15	25 - 40	8.51	214.05	PWR
MW-4	671326.48	1994974.40	217.13	22.70	25.34	10	13 - 23	15.18	201.95	Residuum/PWR
MW-5	671081.19	1993779.03	244.86	44.00	46.14	10	34 - 44	23.69	221.17	PWR
MW-6	671267.71	1992793.49	230.95	27.00	29.33	15	12 - 27	8.84	222.11	Residuum/PWR
MW-7	672306.28	1992642.35	231.71	15.00	17.18	10	5 - 15	15.49	216.22	Residuum/PWR
MW-7R	672221.96	1992702.98	242.22	36.00	38.23	10	26 - 36	23.91	218.31	Residuum/PWR
MW-8	673304.83	1992200.37	236.47	46.00	49.06	15	31 - 46	32.81	203.66	PWR
MW-9	672747.21	1993936.20	240.36	36.00	39.03	10	26 - 36	36.45	203.91	PWR
MW-10	672421.01	1993269.14	257.74	47.00	50.00	10	37 - 47	32.12	225.62	PWR
MW-11	670446.25	1993476.57	219.23	40.00	42.70	15	25 - 40	12.40	206.83	PWR
MW-11D	670447.41	1993466.72	219.40	65.00	67.38	15	50 - 65	8.55	210.85	Layered Rock/PWR*

Created by: CWG, QC'd by: CSH

Notes:

1. Wells MW-4 (PZM-1), MW-5 (MZM-22), and MW-7 (PZM-27) were surveyed by Lawrence Surveying of Monroe, NC. Wells BG-1, BG-2, MW-1, MW-2, MW-2D MW-3, MW-6, MW-7R, MW-8, MW-9, MW-10, MW-11, and MW-11D were surveyed by McAdams of Durham, NC. Well Locations and elevations based on NAD 83 horizontal datum and NGVD88 vertical datum.

2. TD = Total Depth; BGS = Below Ground Surface; TOC = Top of Casing; DTW = Depth to Water; BTOC = Below Top of Casing; GW = Groundwater; MSL = Mean Sea Level

3. DTW measurements obtained on January 22, 2024, to the nearest 0.01 foot with a water-level meter.

4. * = Interpreted lithologic unit based on relative drilling hardness and geologic judgment during well installation.

Table 2
Well Construction Details & Groundwater Elevations
April 1, 2024
Charah Solutions, Inc. - Brickhaven No.2 Mine Tract "A" Structural Fill
Moncure, Chatham County, North Carolina

Well ID	*Northing*	*Easting*	*TOC elev. (ft)*	*TD BGS (ft)*	*TD BTOC (ft)*	*Screen length (ft)*	*Screen Interval (ft)*	*DTW (ft BTOC)*	*GW Elevation (ft MSL)*	*Lithologic Unit*
BG-1	670898.50	1996348.25	228.19	41.00	43.55	15	26 - 41	10.80	217.39	Layered Rock/PWR*
BG-2	669278.99	1990476.10	194.23	23.00	25.82	10	13 -23	11.39	182.84	Layered Rock/PWR*
MW-1	674737.98	1993417.69	280.08	72.00	74.80	15	57 - 72	61.19	218.89	Layered Rock/PWR*
MW-2	673677.07	1994537.54	231.76	48.00	50.49	15	33 - 48	19.89	211.87	Layered Rock/PWR*
MW-2D	673650.31	1994535.97	232.87	144.00	147.14	15	129 - 144	141.74	91.13	Layered Rock/PWR*
MW-3	672474.63	1994834.76	222.56	40.00	42.56	15	25 - 40	8.04	214.52	PWR
MW-4	671326.48	1994974.40	217.13	22.70	25.34	10	13 - 23	13.11	204.02	Residuum/PWR
MW-5	671081.19	1993779.03	244.86	44.00	46.14	10	34 - 44	22.08	222.78	PWR
MW-6	671267.71	1992793.49	230.95	27.00	29.33	15	12 - 27	7.42	223.53	Residuum/PWR
MW-7	672306.28	1992642.35	231.71	15.00	17.18	10	5 - 15	16.25	215.46	Residuum/PWR
MW-7R	672221.96	1992702.98	242.22	36.00	38.23	10	26 - 36	22.19	220.03	Residuum/PWR
MW-8	673304.83	1992200.37	236.47	46.00	49.06	15	31 - 46	31.56	204.91	PWR
MW-9	672747.21	1993936.20	240.36	36.00	39.03	10	26 - 36	37.28	203.08	PWR
MW-10	672421.01	1993269.14	257.74	47.00	50.00	10	37 - 47	31.40	226.34	PWR
MW-11	670446.25	1993476.57	219.23	40.00	42.70	15	25 - 40	10.14	209.09	PWR
MW-11D	670447.41	1993466.72	219.40	65.00	67.38	15	50 - 65	6.71	212.69	Layered Rock/PWR*

Created by: CSH; QC'd by: BJS

Notes:

1. Wells MW-4 (PZM-1), MW-5 (MZM-22), and MW-7 (PZM-27) were surveyed by Lawrence Surveying of Monroe, NC. Wells BG-1, BG-2, MW-1, MW-2, MW-2D MW-3, MW-6, MW-7R, MW-8, MW-9, MW-10, MW-11, and MW-11D were surveyed by McAdams of Durham, NC. Well Locations and elevations based on NAD 83 horizontal datum and NGVD88 vertical datum.
2. TD = Total Depth; BGS = Below Ground Surface; TOC = Top of Casing; DTW = Depth to Water; BTOC = Below Top of Casing; GW = Groundwater; MSL = Mean Sea Level
3. DTW measurements obtained on April 1, 2024 to the nearest 0.01 foot with a water-level meter.
4. * = Interpreted lithologic unit based on relative drilling hardness and geologic judgment during well installation.

Table 3
Horizontal Hydraulic Gradient & Groundwater Flow Velocity
January 24, 2024 & April 1, 2024
Charah Solutions, Inc. - Brickhaven No.2 Mine Tract "A" Structural Fill
Moncure, Chatham County, North Carolina

Sampling Event	Upgradient Well	Downgradient Well	Upgradient Groundwater Elevation (ft)	Downgradient Groundwater Elevation (ft)	Linear Flow Distance (ft)	Hydraulic Gradient	Seepage Velocity (ft/yr)
Jan-24	MW-5	MW-4	221.17	201.95	1,220	0.016	17.1
	MW-6	BG-2	222.11	180.59	3,054	0.014	14.8
Apr-24	MW-5	MW-4	222.78	204.02	1,220	0.015	16.7
	MW-6	BG-2	222.53	182.84	3,054	0.013	14.5

Created by: CSH; QC'd by: BJS

Notes:

1. Horizontal hydraulic gradients calculated by dividing the difference in hydraulic head between a well pair by the length of the flow path between the well pair. (i= dh/dl).

2. All well pairs assumed to be screened in same surficial aquifer unit.

3. Groundwater elevations calculated using measurements obtained on January 24, 2024 (Jan-24) and April 1, 2024 (Apr-01).

4. The average linear velocity, or seepage velocity, of groundwater between wells at the site was calculated using Darcy's Law, as follows: Vs = (Ki)/Pe

V = Seepage Velocity (ft/yr) i = Horizontal Hydraulic Gradient

K = Horizontal Hydraulic Conductivity Pe = Effective Porosity

This page intentionally left blank.

Table 4: Analytical Results January 2024 and April 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Groundwater Analysis															
				BG-1		BG-2		MW-1		MW-2		MW-2D		MW-3		MW-4		MW-5	
				Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24
EPA APPENDIX III																			
Boron (µg/l)	7440-42-8	*700*	*36.2*	<50.0	<50.0	11.4 J	16.4 J	<50.0	9.0 J	<50.0	**42.5 J**	29.8 J	**38.5 J**	**46.5 J**	**40.4 J**	<50.0	<50.0	9.0 J	7.7 J
Calcium (µg/l)	7440-70-2	*NE*	*124,000*	26,300	23,000	107,000	121,000	73,700	55,600	34,300	38.5	10,200	20,100	**186,000**	**203,000**	54,400	46,400	8,030	9,420
Chloride (mg/l)	16887-00-6	*250*	*325*	202	187	247	265	176	132	**489**	**1,030**	168	173	**1,070**	**1,070**	312	**326**	18.1	19.2
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	0.20	0.19	**0.34**	0.24	0.17	0.16	0.15	0.19	**2.4**	**2.2**	0.27	0.24	**0.44**	0.33	**0.59**	**0.53**
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	6.77	6.41	6.87	6.87	7.18	7.07	**9.29**	7.36	NA	6.66	7.48	7.40	6.15	6.08	6.64	6.71
Sulfate (mg/l)	14808-79-8	*250*	*204*	20.9	22.3	131	152	5.7	4.8	51.7	63	52.5	46.6	13	12.3	13.1	13.4	3.9	3.3
Total Dissolved Solids (mg/l)	TDS	*500*	*1,270*	566	550	1,040	1,010	506	361	**1,270**	**2,440**	640	586	**2,120**	**2,500**	1,080	986	203	213
EPA APPENDIX IV																			
Antimony (µg/l)	7440-36-0	*1*	*0.79*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Arsenic (µg/l)	7440-38-2	*10*	*8.80*	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	3.7 J	**20.8**	**13.6**	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Barium (µg/l)	7440-39-3	*700*	*377*	297	277	51.8	78.8	102	52.2	90.8	365	137	202	**753**	**818**	277	276	90.6	89.7
Beryllium (µg/l)	7440-41-7	*4*	*0.700*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium (µg/l)	7440-43-9	*2*	*0.500*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (µg/l)	7440-47-3	*10*	*7.20*	1.5 J	<5.0	0.67 J	2.0 J	8.6	<5.0	2.2 J	1.8 J	**12.4**	**11.0**	1.2 J	2.3 J	0.74 J	<5.0	1.5 J	<5.0
Cobalt (µg/l)	7440-48-4	*1*	*2.30*	<5.0	<5.0	0.75 J	1.9 J	<5.0	<5.0	<5.0	0.89 J	<5.0	<5.0	<5.0	0.62 J	**3.9 J**	13.0	<5.0	<5.0
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	0.20	0.19	**0.34**	0.24	0.17	0.16	0.15	0.19	**2.4**	**2.2**	0.27	0.24	**0.44**	0.33	**0.59**	**0.53**
Lead (µg/l)	7439-92-1	*15*	*14.1*	<5.0	<5.0	<5.0	<5.0	1.6 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Lithium (µg/l)	7439-93-2	*NE*	*43.7*	**51.1**	15.8	18.1	17.8	25.0	22.8	41.2	**115**	**136**	**128**	**85.3**	**81.2**	36.9	33.6	10.0	9.4
Mercury (µg/l)	7439-97-6	*1*	*0.170*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Molybdenum (µg/l)	7439-98-7	*NE*	*13.6*	<5.0	<5.0	4.7 J	3.7 J	<5.0	<5.0	<5.0	4.7 J	**333**	**231**	8.5	8.0	<5.0	<5.0	<5.0	<5.0
Selenium (µg/l)	7782-49-2	*20*	*6.00*	<10.0	6.0 J	<10.0	<10.0	<10.0	<10.0	<10.0	4.8 J	**16.7**	**8.3 J**	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Thallium (µg/l)	7440-28-0	*2*	*13.7*	<0.20	0.057 J	<0.20	0.060 J	<0.20	<0.20	0.11 J	0.037 J	<0.20	0.24	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Radium 226 (pCi/l)	13982-63-3	*NE*	*0.80*	-0.780	0.0642	-0.236	0.000	0.191	-0.247	0.242	**1.31**	-0.0607	0.0741	0.664	0.552	0.422	0.111	-0.640	0.36
Radium 228 (pCi/l)	15262-20-1	*NE*	*1.35*	0.171	0.432	-0.271	0.546	0.648	0.678	0.863	1.35	0.520	0.255	0.924	**1.55**	0.344	0.323	0.201	0.274
Combined Radium (pCi/l)	7440-14-4	*NE**	*2.09*	0.171	0.50	0.000	0.55	0.839	0.678	1.11	**2.66**	0.520	0.329	1.59	**2.10**	0.766	0.434	0.201	0.634
EPA APPENDIX I METALS																			
Copper (mg/l)	7440-50-8	*1*	*0.0071*	<0.0050	<0.0050	<0.0050	<0.0050	0.0016 J	<0.0050	0.00095 J	<0.0050	0.0045 J	0.0043 J	<0.0050	<0.0050	0.00090 J	<0.0050	0.0011J	<0.0050
Nickel (µg/l)	7440-02-0	*100*	*4.20*	1.6 J	<5.0	2.4 J	2.0 J	**7.4**	<5.0	2.3 J	2.5 J	**4.5 J**	**6.0**	1.8 J	2.3 J	**5.3**	**7.5**	1.3 J	<5.0
Silver (µg/l)	7440-22-4	*20*	*2.50*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vanadium (µg/l)	7440-62-2	*7*	*8.30*	6.1	5.8	<5.0	<5.0	**9.8**	3.0 J	<5.0	<5.0	**61.0**	**71.5**	2.7 J	1.9 J	<5.0	<5.0	<5.0	<5.0
Zinc (µg/l)	7440-66-6	*1,000*	*32.4*	8.4 J	4.6 J	<10.0	9.9 J	**35.3**	<10.0	3.6 J	4.4 J	3.1 J	4.6 J	4.3 J	<10.0	8.8 J	10.8	5.2 J	3.8 J

Notes:

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for April 2024

NE = not established

NA = not analyzed

µg/l = micrograms per liter

pCi/l = picocuries per liter

mg/l = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Shaded = concentration reported above (or below for pH) established 2L Standard, IMAC, or 2B Standard

Bold = concentration exceeded BTV

2L Standard = North Carolina Groundwater Protection Standard (T15A NCAC 02L .0202)

IMAC = Interim Allowable Maximum Concentration

2B Standard = North Carolina Surface Water and Wetland Standards (15A NCAC 02B) for Gulf Creek (SW-1) and Shaddox Creek (SW-2) which are both Class WS-IV Waters or are National Criteria per EPA

pH was field tested

Groundwater, surface water, and leachate samples collected for **January 2024 from January 24-27** and for **April 2024 from April 1-4** and analyzed for above parameters by Pace Analytical Services, LLC

Constituents are only considered exceeding the BTV if the sampling event in question and the previous sampling event had detections for that constituent

Secondary USEPA Maximun Contaminant Levels (MCL) used where other regulatory criteria not established.

Table 4: Analytical Results January 2024 and April 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Groundwater Analysis													
				MW-6		MW-7R		MW-8		MW-9		MW-10		MW-11		MW-11D	
				Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24
EPA APPENDIX III																	
Boron (µg/l)	7440-42-8	*700*	*36.2*	<50.0	<50.0	9.4 J	8.1 J	10.5 J	8.7 J	33.6 J	28.5 J	21.4 J	26.9 J	<50.0	14.6 J	**41.7 J**	**43.0 J**
Calcium (µg/l)	7440-70-2	*NE*	*124,000*	32,400	35,900	93,600	99,900	119,000	101,000	35,700	37,300	23,200	21,900	69,400	24,100	16,500	16,100
Chloride (mg/l)	16887-00-6	*250*	*325*	188	193	277	280	**441**	313	11.0	11.1	29.0	29.5	74.5	121	55.4	55.5
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	**0.38**	0.32	0.13	0.12	0.073 J	0.087 J	0.22	0.25	**0.44**	**0.40**	<0.10	0.16	**0.46**	**0.42**
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	6.30	6.31	7.24	7.32	6.96	7.00	7.46	NA	**7.69**	**7.72**	**11.71**	6.82	**8.39**	**8.19**
Sulfate (mg/l)	14808-79-8	*250*	*204*	28.3	27.2	15.2	13.7	6.8	7.0	72.5	69.7	2.6	2	2.4	2.1	16.1	14.6
Total Dissolved Solids (mg/l)	TDS	*500*	*1,270*	618	595	872	900	1,120	1,050	529	505	350	353	296	361	332	312
EPA APPENDIX IV																	
Antimony (µg/l)	7440-36-0	*1*	*0.79*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25.0	<5.0	<5.0	<5.0	**3.8 J**	<5.0	<5.0	<5.0
Arsenic (µg/l)	7440-38-2	*10*	*8.80*	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<50.0	<10.0	<10.0	2.6 J	<10.0	<10.0	3.2 J	<10.0
Barium (µg/l)	7440-39-3	*700*	*377*	63.8	56.5	308	346	**1,070**	**1,120**	194	228	89.7	87.4	130	45.2	116	115
Beryllium (µg/l)	7440-41-7	*4*	*0.700*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium (µg/l)	7440-43-9	*2*	*0.500*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (µg/l)	7440-47-3	*10*	*7.20*	0.64 J	<5.0	2.5 J	2.7 J	1.6 J	1.6 J	**21.6 J**	**16.2**	1.0 J	<5.0	7.9	1.3 J	<5.0	<5.0
Cobalt (µg/l)	7440-48-4	*1*	*2.30*	<5.0	<5.0	<5.0	0.71 J	<5.0	0.82 J	<25.0	0.66 J	<5.0	<5.0	0.80 J	1.1 J	<5.0	<5.0
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	**0.38**	0.32	0.13	0.12	0.073 J	0.087 J	0.22	0.25	**0.44**	**0.40**	<0.10	0.16	**0.46**	**0.42**
Lead (µg/l)	7439-92-1	*15*	*14.1*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Lithium (µg/l)	7439-93-2	*NE*	*43.7*	25.7	23.0	27.0	26.0	33.6	21.6	3.5	4.6	5.0	4.6	19.5	10.7	19.3	17.8
Mercury (µg/l)	7439-97-6	*1*	*0.170*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Molybdenum (µg/l)	7439-98-7	*NE*	*13.6*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**22.2 J**	**25.0**	**15.6**	**17.5**	<5.0	<5.0	4.1 J	4.4 J
Selenium (µg/l)	7782-49-2	*20*	*6.00*	<10.0	<10.0	<10.0	<10.0	<10.0	4.3 J	<50.0	**16.8**	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Thallium (µg/l)	7440-28-0	*2*	*13.7*	<0.20	0.030 J	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.085 J	<0.20	0.094 J
Radium 226 (pCi/l)	13982-63-3	*NE*	*0.80*	0.207	-0.178	0.0664	-0.0611	-0.0627	-0.357	0.000	NA	0.189	-0.0599	-0.0642	-0.0625	-0.0638	0.067
Radium 228 (pCi/l)	15262-20-1	*NE*	*1.35*	0.573	0.0513	-0.134	0.268	0.825	-0.351	**1.87**	NA	0.962	0.32	0.811	0.513	0.208	0.0582
Combined Radium (pCi/l)	7440-14-4	*NE**	*2.09*	0.78	0.0513	0.0664	0.268	0.83	0.00	1.87	NA	1.15	0.32	0.811	0.513	0.208	0.125
EPA APPENDIX I METALS																	
Copper (mg/l)	7440-50-8	*1*	*0.0071*	<0.0050	<0.0050	0.00074 J	<0.0050	0.0012 J	<0.0050	<0.0250	0.0016 J	<0.0050	<0.0050	0.0053	<0.0050	<0.0050	<0.0050
Nickel (µg/l)	7440-02-0	*100*	*4.20*	0.92 J	1.5 J	1.4 J	1.7 J	1.4 J	1.5 J	**13.7 J**	7.8	<5.0	0.94 J	3.7 J	1.7 J	1.2 J	<5.0
Silver (µg/l)	7440-22-4	*20*	*2.50*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<25.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vanadium (µg/l)	7440-62-2	*7*	*8.30*	<5.0	<5.0	2.9 J	3.4 J	1.8 J	<5.0	<25.0	2.0 J	1.7 J	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc (µg/l)	7440-66-6	*1,000*	*32.4*	4.8 J	4.4 J	<10.0	4.1 J	10.5	3.7 J	<5.0	11.1	<10.0	<10.0	<10.0	5.5 J	4.6 J	<10.0

Notes:

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for April 2024

NE = not established

NA = not analyzed

µg/l = micrograms per liter

pCi/l = picocuries per liter

mg/l = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Shaded = concentration reported above (or below for pH) established 2L Standard, IMAC, or 2B Standard

Bold = concentration exceeded BTV

2L Standard = North Carolina Groundwater Protection Standard (T15A NCAC 02L .0202)

IMAC = Interim Allowable Maximum Concentration

2B Standard = North Carolina Surface Water and Wetland Standards (15A NCAC 02B) for Gulf Creek (SW-1) and Shaddox Creek (SW-2) which are both Class WS-IV Waters or are National Criteria per EPA

pH was field tested

Groundwater,

Constituents are only considered exceeding the BTV if the sampling event in question and the previous sampling event had detections for that constituent

Secondary USEPA Maximun Contaminant Levels (MCL) used where other regulatory criteria not established.

Table 4: Analytical Results January 2024 and April 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Quality Control			
				EQBL		DUP (MW-6)	DUP (MW-8)
				Jan-24	Apr-24	Jan-24	Apr-24
EPA APPENDIX III							
Boron (µg/l)	7440-42-8	*700*	*36.2*	<50.0	<50.0	<50.0	8.8 J
Calcium (µg/l)	7440-70-2	*NE*	*124,000*	<100	18.2 J	33,800	109,000
Chloride (mg/l)	16887-00-6	*250*	*325*	<1.0	<1.0	187	312
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	<0.10	<0.10	**0.37**	0.086 J
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	NA	NA	6.46	6.46
Sulfate (mg/l)	14808-79-8	*250*	*204*	<0.10	<1.0	28.4	6.9
Total Dissolved Solids (mg/l)	TDS	*500*	*1,270*	<25.0	<25.0	594	944
EPA APPENDIX IV							
Antimony (µg/l)	7440-36-0	*1*	*0.79*	<5.0	<5.0	<5.0	<5.0
Arsenic (µg/l)	7440-38-2	*10*	*8.80*	<10.0	<10.0	<10.0	<10.0
Barium (µg/l)	7440-39-3	*700*	*377*	<5.0	<5.0	62.7	**1,130**
Beryllium (µg/l)	7440-41-7	*4*	*0.700*	<1.0	<1.0	<1.0	<1.0
Cadmium (µg/l)	7440-43-9	*2*	*0.500*	<1.0	<1.0	<1.0	<1.0
Chromium (µg/l)	7440-47-3	*10*	*7.20*	<5.0	<5.0	0.77 J	1.1 J
Cobalt (µg/l)	7440-48-4	*1*	*2.30*	<5.0	<5.0	<5.0	0.60 J
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	<0.10	<0.10	**0.37**	0.086 J
Lead (µg/l)	7439-92-1	*15*	*14.1*	<5.0	<5.0	<5.0	<5.0
Lithium (µg/l)	7439-93-2	*NE*	*43.7*	<2.5	<2.5	27.3	22.1
Mercury (µg/l)	7439-97-6	*1*	*0.170*	<0.20	<0.20	<0.20	<0.20
Molybdenum (µg/l)	7439-98-7	*NE*	*13.6*	<5.0	<5.0	<5.0	<5.0
Selenium (µg/l)	7782-49-2	*20*	*6.00*	<10.0	<10.0	<10.0	<10.0
Thallium (µg/l)	7440-28-0	*2*	*13.7*	<0.20	0.070 J	<0.20	<0.20
Radium 226 (pCi/l)	13982-63-3	*NE*	*0.80*	-0.0584	0.311	0.191	-0.0637
Radium 228 (pCi/l)	15262-20-1	*NE*	*1.35*	0.337	0.651	0.696	0.43
Combined Radium (pCi/l)	7440-14-4	*NE**	*2.09*	0.337	0.962	0.887	0.43
EPA APPENDIX I METALS							
Copper (mg/l)	7440-50-8	*1*	*0.0071*	<0.0050	<0.0050	<0.0050	<0.0050
Nickel (µg/l)	7440-02-0	*100*	*4.20*	<5.0	<5.0	2.0 J	1.1 J
Silver (µg/l)	7440-22-4	*20*	*2.50*	<5.0	<5.0	<5.0	<5.0
Vanadium (µg/l)	7440-62-2	*7*	*8.30*	<5.0	<5.0	<5.0	<5.0
Zinc (µg/l)	7440-66-6	*1,000*	*32.4*	<10.0	<10.0	7.9 J	7.2 J

Notes:

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for April 2024

NE = not established

NA = not analyzed

µg/l = micrograms per liter

pCi/l = picocuries per liter

mg/l = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Table 4: Analytical Results January 2024 and April 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Surface Water Analysis													Leachate Analysis	
				SW-1		SW-2		SW-3		SW-4		SW-5		SW-6		2B Standard	LEACHATE	
				Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24	Jan-24	Apr-24		Jan-24	Apr-24
EPA APPENDIX III																		
Boron (µg/l)	7440-42-8	*700*	*36.2*	<100	7.8 J	<50.0	11.0 J	<50.0	11.1 J	<50.0	13.6 J	<50.0	8.4 J	<50.0	8.6 J	*7,300*	3,340	3,040
Calcium (µg/l)	7440-70-2	*NE*	*124,000*	3,680	2,380	15,000	5,560	13,200	5,970	2,200	3,080	2,220	2,850	1,010	3,890	*NE*	349,000	308,000
Chloride (mg/l)	16887-00-6	*250*	*325*	4.3	4.9	75.6	27.7	73.8	30.2	8.6	12.4	5.1	6.6	2.2	6.2	*250*	19.4	17.8
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	0.14	0.18	<0.10	0.076 J	<0.10	0.087 J	<0.10	0.077 J	0.050 J	0.20	0.051 J	0.22	*1.8*	0.36	0.22
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	5.87	6.22	6.25	6.64	6.38	6.59	5.48	5.57	5.56	6.68	6.56	6.02	*6.0-9.0*	8.69	7.34
Sulfate (mg/l)	14808-79-8	*250*	*204*	1.9	1.3	7.8	3.5	7.8	4.0	4.9	5.7	1.8	2.1	1.3	1.4	*250*	494	438
Total Dissolved Solids (mg/l)	TDS	*500*	*1,270*	997	310	176	117	185	130	102	137	345	380	73.0	468	*500*	1,550	1,260
EPA APPENDIX IV																		
Antimony (µg/l)	7440-36-0	*1*	*0.79*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	*5.6*	3.9 J	<5.0
Arsenic (µg/l)	7440-38-2	*10*	*8.80*	6.1 J	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	2.9 J	<10.0	<10.0	2.5 J	*10*	62.1	10.4
Barium (µg/l)	7440-39-3	*700*	*377*	330	150	86.2	55.2	90.9	59.9	40.8	56.7	137	193	21.5	464	*1,000*	58.8	42.8
Beryllium (µg/l)	7440-41-7	*4*	*0.700*	1.1	0.40 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.42 J	0.44 J	<1.0	0.66 J	*6.5*	<1.0	<1.0
Cadmium (µg/l)	7440-43-9	*2*	*0.500*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	*2*	<1.0	<1.0
Chromium (µg/l)	7440-47-3	*10*	*7.20*	12	5.2	0.73 J	1.6 J	0.98 J	1.8 J	2.0 J	2.9 J	4.9 J	6.8	1.7 J	8.4	*50*	0.93 J	<5.0
Cobalt (µg/l)	7440-48-4	*1*	*2.30*	0.74 J	2.3 J	<5.0	0.49 J	<5.0	0.48 J	1.7 J	2.2 J	<5.0	3.9 J	<5.0	9.2	*3*	<5.0	<5.0
Fluoride (mg/l)	16984-48-8	*2*	*0.334*	0.14	0.18	<0.10	0.076 J	<0.10	0.087 J	<0.10	0.077 J	0.050 J	0.20	0.051 J	0.22	*1.8*	0.36	0.22
Lead (µg/l)	7439-92-1	*15*	*14.1*	23.6	9.7	<5.0	<5.0	<5.0	1.5 J	2.1 J	4.4 J	9.4	13.4	<5.0	16.6	*25*	<5.0	<5.0
Lithium (µg/l)	7439-93-2	*NE*	*43.7*	5.9	2.3 J	<2.5	0.70 J	<2.5	0.81 J	0.85 J	1.2 J	2.7	3.0	0.52 J	3.7	*NE*	51.3	49.4
Mercury (µg/l)	7439-97-6	*1*	*0.170*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	*0.012*	<0.20	<0.20
Molybdenum (µg/l)	7439-98-7	*NE*	*13.6*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	*160*	183	185
Selenium (µg/l)	7782-49-2	*20*	*6.00*	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	*5*	<10.0	<10.0
Thallium (µg/l)	7440-28-0	*2*	*13.7*	0.14 J	0.066 J	0.089 J	<0.20	<0.20	<0.20	<0.20	<0.20	0.071 J	0.072 J	<0.20	0.081 J	*2*	0.091 J	0.12 J
Radium 226 (pCi/l)	13982-63-3	*NE*	*0.80*	0.480	0.000	0.000	-0.274	-0.450	0.138	0.592	0.202	-0.301	0.449	-0.207	0.116	*NE*	-0.211	-0.123
Radium 228 (pCi/l)	15262-20-1	*NE*	*1.35*	1.08	0.652	0.237	0.496	1.29	0.238	0.150	0.086	0.259	1.01	0.474	0.511	*NE*	0.434	0.542
Combined Radium (pCi/l)	7440-14-4	*NE**	*2.09*	1.56	0.652	0.237	0.496	1.29	0.376	0.742	0.288	0.259	1.46	0.474	0.627	*NE*	0.434	0.542
EPA APPENDIX I METALS																		
Copper (mg/l)	7440-50-8	*1*	*0.0071*	0.0116	0.0072	0.00073 J	0.0020 J	0.0014 J	0.0022 J	0.0023 J	0.0052	0.0045 J	0.0070	0.0022 J	0.0095	*0.007*	<0.0050	0.0024 J
Nickel (µg/l)	7440-02-0	*100*	*4.20*	7.6	4.0 J	1.6 J	1.7 J	2.3 J	2.2 J	1.6 J	2.3 J	3.4 J	4.6 J	1.5 J	6.2	*25*	4.5 J	2.3 J
Silver (µg/l)	7440-22-4	*20*	*2.50*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	*0.06*	<5.0	<5.0
Vanadium (µg/l)	7440-62-2	*7*	*8.30*	45.3	18.3	<5.0	1.8 J	<5.0	<5.0	3.5 J	6.2	17.4	24.3	2.8 J	31.7	*NE*	5.3	<5.0
Zinc (µg/l)	7440-66-6	*1,000*	*32.4*	48.1	21.0	<10.0	5.0 J	4.1 J	6.5 J	7.2 J	10.2	19.9	25.8	3.4 J	41.3	*5,000*	71.2	8.2 J

Notes:

Prepared by: CH/ZH; Checked by: BS

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for April 2024

NE = not established

NA = not analyzed

µg/l = micrograms per liter

pCi/l = picocuries per liter

mg/l = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Shaded = concentration reported above (or below for pH) established 2L Standard, IMAC, or 2B Standard

Bold = concentration exceeded BTV

2L Standard = North Carolina Groundwater Protection Standard (T15A NCAC 02L .0202)

IMAC = Interim Allowable Maximum Concentration

2B Standard = North Carolina Surface Water and Wetland Standards (15A NCAC 02B) for Gulf Creek (SW-1) and Shaddox Creek (SW-2) which are both Class WS-IV Waters or are National Criteria per EPA

pH was field tested

Groundwater, surface water, and leachate samples collected for **January 2024 from January 24-27** and for **April 2024 from April 1-4** and analyzed for above parameters by Pace Analytical Services, LLC

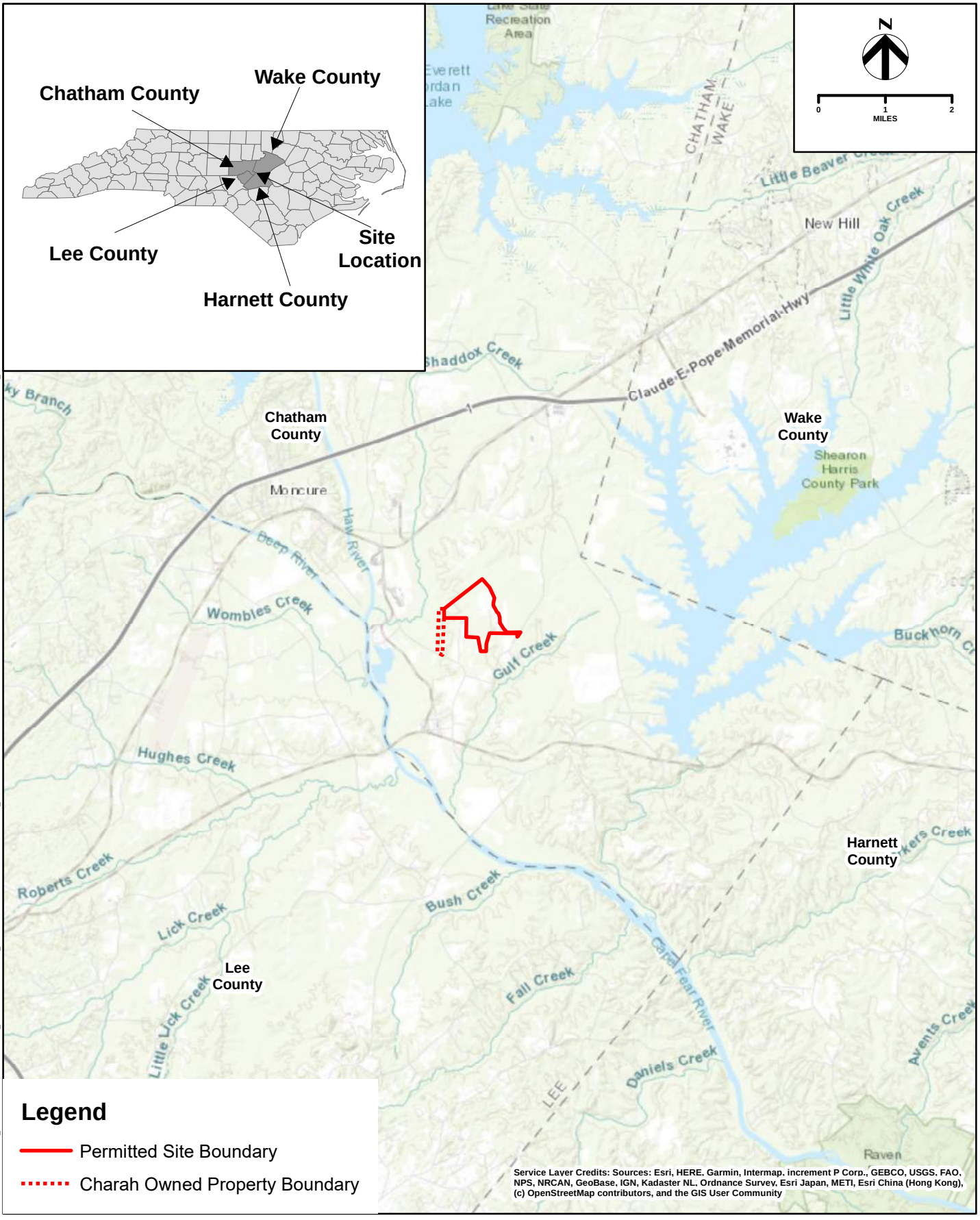
Constituents are only considered exceeding the BTV if the sampling event in question and the previous sampling event had detections for that constituent

Secondary USEPA Maximun Contaminant Levels (MCL) used where other regulatory criteria not established.

Figures

Figure 1. Regional Site Location Map
Figure 2. Sample Location Map
Figure 3. Regional Topographic Map
Figure 4. Historical Groundwater Elevations
Figure 5. Potentiometric Surface Map – January 2024
Figure 6. Potentiometric Surface Map – April 2024

This page intentionally left blank.



PATH: \\CLTSMAIN\GIS_DATA\GIS\PROJECTS\453925_CHARAH\NC\0237673_MONCURE\MINERECLAMATION\P-DIMAP_DOCS\MXD\GROUNDWATER MONITORING REPORT FIGURES\2021.04 SEMI-ANNUAL REPORT\FIGURE 1 REGIONAL MAP_BRICKHAVEN.MXD - USER: CGRUENBERG - DATE: 7/9/2021

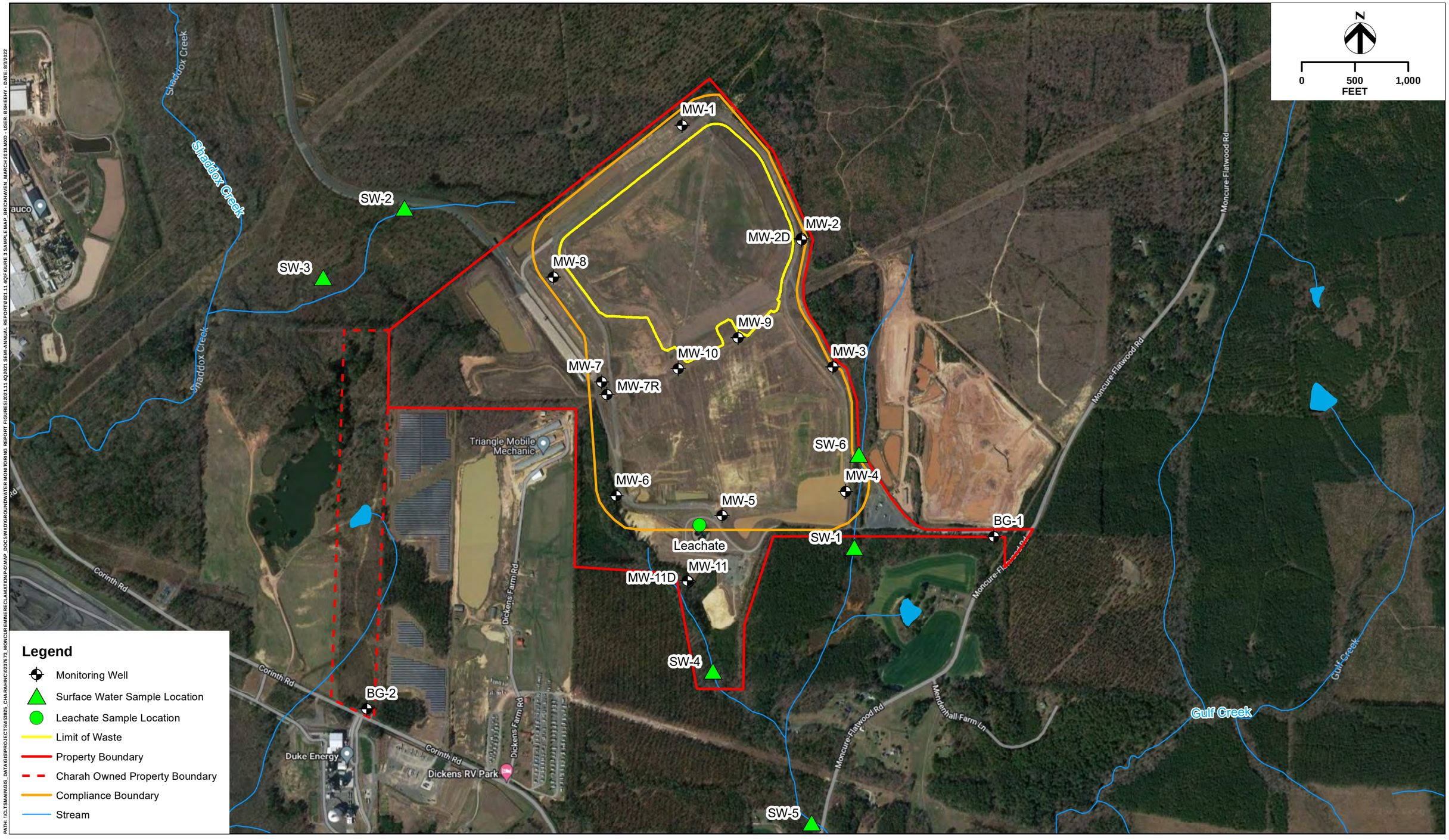
REGIONAL SITE LOCATION MAP
CHARAH SOLUTIONS, INC
MONCURE, NORTH CAROLINA

BRICKHAVEN NO. 2 MINE TRACT "A"

DATE
July 2024

FIGURE
1

This page intentionally left blank.



PATH: \\CLT\SMAINGIS_DATA\GIS\PROJECTS\415\925_CHARAH\NC\02376\73_MONCURE\MINERECLAMATION\P-D\MAP_DOCS\MXD\GROUNDWATER MONITORING REPORT FIGURES\2021.11 4Q\2021 SEMI-ANNUAL REPORT\2021.11 4Q\FIGURE 3 SAMPLE MAP_BRICKHAVEN_MARCH-2019.MXD - USER: BSHEEHY - DATE: 6/3/2022

SAMPLE LOCATION MAP
CHARAH SOLUTIONS, INC.
MONCURE, NORTH CAROLINA

BRICKHAVEN NO. 2 MINE TRACT "A"

DATE
July 2024

FIGURE
2

This page intentionally left blank.

Legend

- Permitted Site Boundary
- Charah Owned Property Boundary

PATH: \\CLTSMAIN\GIS_DATA\GIS\PROJECTS\453925_CHARAH\NC\02370\73_MONCURE\MINEREC\LAMATION\P-DIMAP_DOCS\MXD\GROUNDWATER MONITORING REPORT FIGURES\2021.04 SEMI-ANNUAL REPORT\FIGURE 2 USGS TOPO MAP_BRICKHAVEN.MXD - USER: CGRUENBERG - DATE: 7/9/2021

REGIONAL TOPOGRAPHIC MAP
CHARAH SOLUTIONS, INC
MONCURE, NORTH CAROLINA

BRICKHAVEN NO. 2 MINE TRACT "A"

DATE

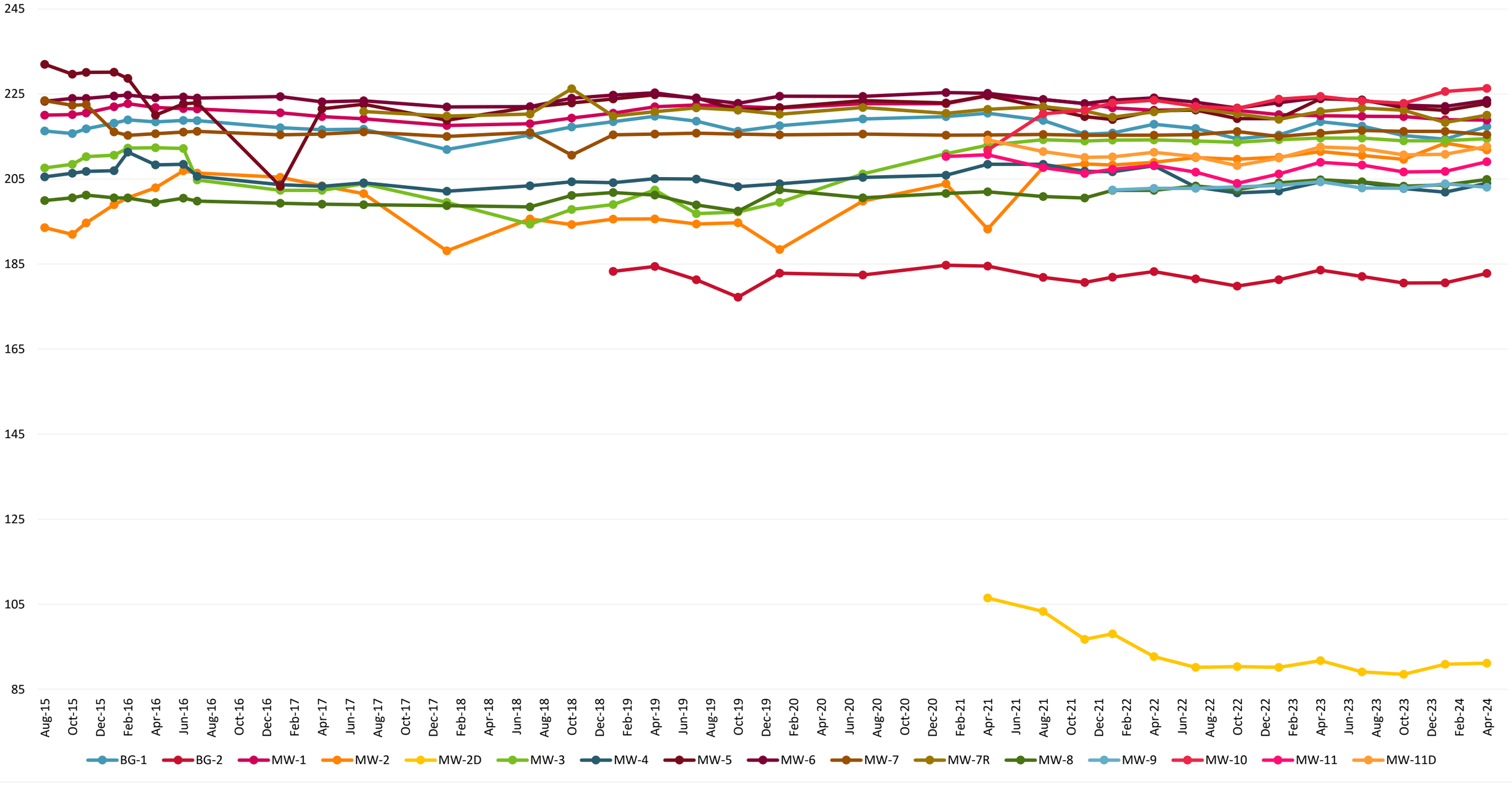
July 2024

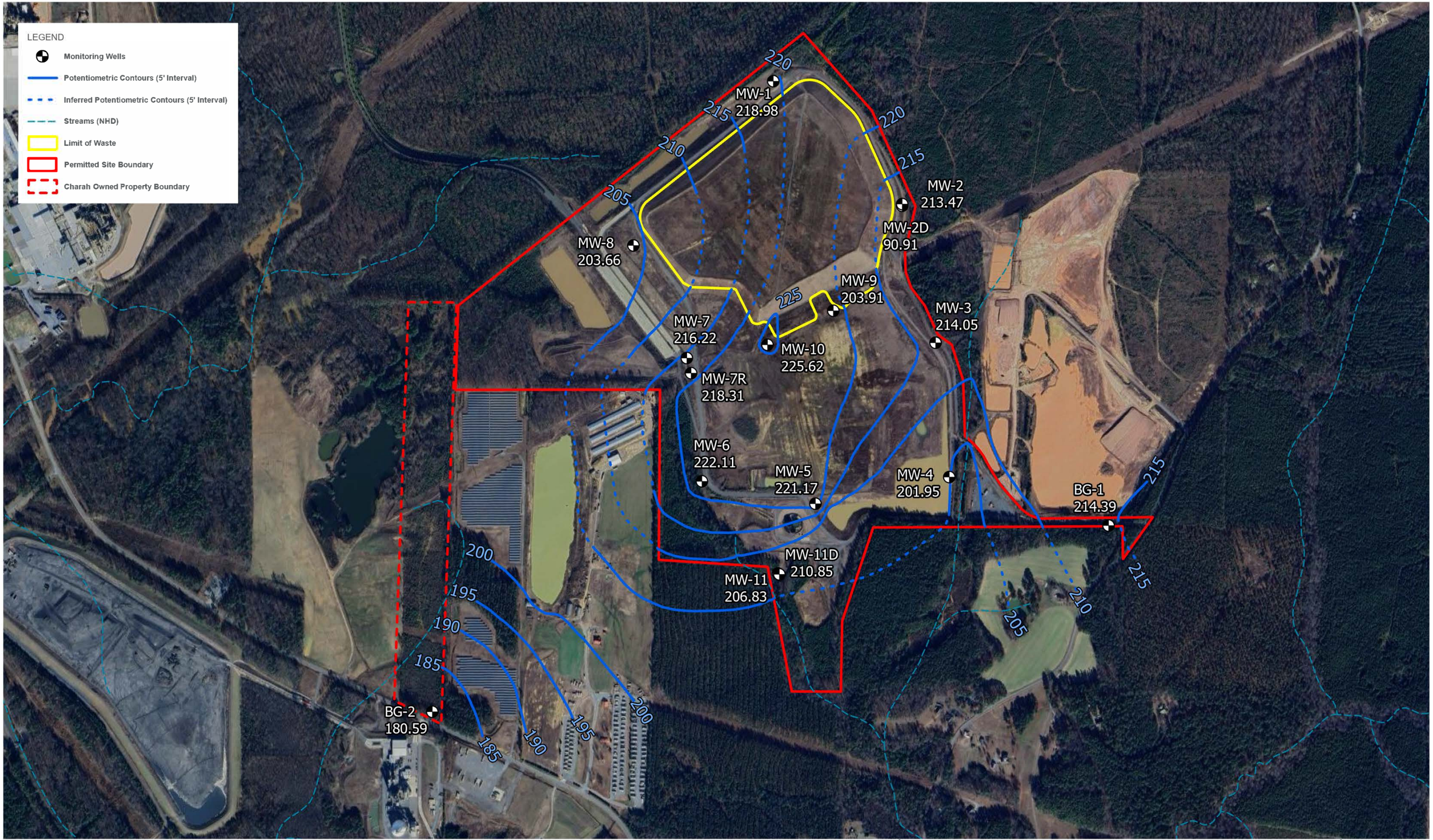
FIGURE

3

This page intentionally left blank.

Figure 4: Historical Groundwater Elevations





PATH: C:\USERS\VRIOSPEREZ\DOCUMENTS\ARCGIS\PROJECTS\1610353498_BRICKHAVEN\2_WIP\MAP_DOCS\BRICKHAVEN_GW2023_WIP-APRIX - USER: VRIOSPEREZ - DATE: 5/20/2024

0 800 1,600 2,400 3,200 Feet

1" = 800'

HDR Engineering, Inc. of the Carolinas License Number: F-0116
440 S Church Street, Suite 1000 Charlotte, NC 28202-2075

NOTES:
1. GROUNDWATER ELEVATIONS DERIVED FROM DEPTH TO WATER MEASUREMENTS COLLECTED ON JANUARY 22, 2024.
2. MONITORING WELLS MW-2D, MW-9, AND MW-11D WERE NOT USED FOR CONTOURS AS THEY SCREENED IN BEDROCK.
3. TOPOGRAPHY DATA FOR THE SITE WAS OBTAINED FROM NC ONEMAP GEOGRAPHIC INFORMATION SYSTEM (GIS) WEBSITE (DATED 2020)
4. AERIAL IMAGERY OBTAINED FROM MICROSOFT BING WEB SERVICE VIA ESRI ARCGIS ONLINE.

GROUNDWATER CONTOUR MAP - JANUARY 22, 2024
BRICKHAVEN NO. 2 MINE TRACT "A"
CHARAH SOLUTIONS, INC.
MONCURE, NORTH CAROLINA

DATE
MAY 2024

FIGURE
5

LEGEND

- Monitoring Wells
- Potentiometric Contours (5' Interval)
- Inferred Potentiometric Contours (5' Interval)
- Streams (NHD)
- Limit of Waste
- Permitted Site Boundary
- Charah Owned Property Boundary

MW-1 218.89
MW-2 211.87
MW-2D 91.13
MW-3 214.52
MW-4 204.02
MW-5 222.78
MW-6 223.53
MW-7 215.46
MW-7R 220.03
MW-8 204.91
MW-9 203.08
MW-10 226.34
MW-11 209.09
MW-11D 212.69
BG-1 217.39
BG-2 182.84

220 215 210 205 225 200 195 190 185

0 800 1,600 2,400 3,200 Feet

1" = 800'

NOTES:
1. GROUNDWATER ELEVATIONS DERIVED FROM DEPTH TO WATER MEASUREMENTS COLLECTED ON APRIL 1, 2024.
2. MONITORING WELLS MW-2D, MW-9, AND MW-11D WERE NOT USED FOR CONTOURS AS THEY SCREENED IN BEDROCK.
3. TOPOGRAPHY DATA FOR THE SITE WAS OBTAINED FROM NC ONEMAP GEOGRAPHIC INFORMATION SYSTEM (GIS) WEBSITE (DATED 2020).
4. AERIAL IMAGERY OBTAINED FROM MICROSOFT BING WEB SERVICE VIA ESRI ARCGIS ONLINE.

HDR Engineering, Inc. of the Carolinas License Number: F-0116
440 S Church Street, Suite 1000 Charlotte, NC 28202-2075

GROUNDWATER CONTOUR MAP - APRIL 1, 2024
BRICKHAVEN NO. 2 MINE TRACT "A"
CHARAH SOLUTIONS, INC.
MONCURE, NORTH CAROLINA

DATE
MAY 2024

FIGURE
6

PATH: C:\USERS\VROSPEREZ\DOCUMENTS\ARCGIS\PROJECTS\1105X3498_BRICKHAVEN\7.2_WIPMAP_DOCS\BRICKHAVEN_GW2023_WIP.APRX - USER: VROSPEREZ - DATE: 5/28/2024

This page intentionally left blank.

A

Appendix A – Field Data Sheets

This page intentionally left blank.

GROUNDWATER DEPTH

Project Name: Charah – Brickhaven
Project Address: Moncure 127 Moncure Flatwood Rd
Time Started: 8:45AM
Personnel: Cameron Hosmer

Date: 1/22/24
Project No:
Time Finished: ~~12:15 PM~~ 12:15 PM

Well ID	Depth to Water	Total Depth
BG-1	13.80	43.05
BG-2	13.64	26.11
MW-1	61.10	75.30
MW-2	18.29	50.15
MW-2D	141.96	145
MW-3	8.51	43.36
MW-4	15.18	25.34
MW-5	23.69	46.14
MW-6	8.64	29.47
MW-7	15.49	17.18
MW-7R	23.91	39.94
MW-8	32.81	49.06
MW-9	36.45	38.9
MW-10	32.12	47
MW-11	12.40	43.5
MW-11D	46.55	68.1

Well ID	Depth to Water	Total Depth

Groundwater Sampling Form

Sample ID: SW-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/22/24	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
12:40	—	—	<5	—	~~5.87~~ 5.87	13.8	41.4	6.55	-93.5	719	brown/muddy

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-1	12:45	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:**
Date Sampled: 1/22/24	**Sampler Signature:** Cam Hos

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/22/24	**Weather:** 39 °F

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
B20	—	—	—	—	6.25	3.9	314.9	9.57	-63.4	19.1	Clear
			25								

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-2	B:25	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By:	**Sample Time:** B:25
Date Sampled:	**Sampler Signature:**

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-3

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/22/24	**Weather:** 49°F

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
13:45	—	—	52	—	6.38	3.9	306.2	9.77	-65.6	19.4	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-3	13:50	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 13:50
Date Sampled: 1/22/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-4

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:**
Date:	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:05					5.46	1.6	58.4	9.73	-62.1	56.3	Clear/N

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-4	15:10	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 15:10
Date Sampled: 1/22/24	**Sampler Signature:** Cam Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-15

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:**
Date:	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:55					5.56	3.9	39.1	12.81	-46.8	263	tan

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-15	16:00	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 16:00
Date Sampled: 1/22/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-16

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/22/24	**Weather:** 52°F

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:30					6.56	6.5	28.1	10.74	-78.6	78.1	brown

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-16	15:35	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 15:35
Date Sampled: 1/22/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Water Speed 0.5 mph

Groundwater Sampling Form

Sample ID: LEACHATE

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/22/24	**Weather:** 50°F

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
12:20	—	—	—	—	8.69	—	4.22	— —	-89.9	—	tan
								not reading			

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
LEACHATE	12:20	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 2:25
Date Sampled: 1/22/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: BG-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/23/24	**Weather:** 36°F

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 26' - 41'	**Pump Type:** ESP
Well Depth (ft): 43.05'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC):	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge@8:50

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
8:50	.5	.5	100	13.80	6.77	12.5	1030	4.53	7.3	8.92	clear
8:55	.5	1.0	100	13.81	6.77	11.7	1029	4.47	-3.7	7.61	Clear
9:00	.5	1.5	100	13.81	6.77	11.5	1027	4.39	-6.8	7.60	clear
9:05	.5	2.0	100	13.81	6.77	11.5	1030	4.40	-6.9	8.10	clear
9:10	.5	2.5	100	13.82	6.77	11.5	1029	4.38	-7.1	7.41	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-1	9:15	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 9:15
Date Sampled: 1/23/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: BG-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmn
Date:	**Weather:**

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): 26.11'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 13.64	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge@8:50

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
8:50	.5	1.0	100	13.64	6.88	13.3	1891	4.19	-19.0	7.11	Clear
8:55	.5	1.0	100	13.66	6.88	13.3	1874	4.01	-19.1	6.92	clear
9:00	.5	1.5	100	13.66	6.89	13.3	1876	3.79	-19.2	6.90	clear
9:05	.5	2.0	100	13.69	6.87	13.3	1875	3.76	-19.4	6.77	clear
9:10	.5	2.5	100	13.71	6.87	13.0	1869	3.74	-20.5	6.42	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-2	9:15	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 9:15

Date Sampled: 1/24/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/23/24	**Weather:** 40°F Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 57' - 72'	**Pump Type:** ESP
Well Depth (ft): 75.30'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 61.10	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10:25	.5	15	100	61.10	7.14	13.9	742	2.18	-67.1	402	Clear
10:30	.5	1.0	100	61.20	7.14	14.7	747	1.96	-69.9	400	Clear/tan
10:35	.5	1.5	100	61.30	7.13	14.7	746	1.84	-72.1	980	Murky-silt
10:40	.5	2.0	100	61.35	7.13	13.7	739	1.79	-75.4	212	murky
10:45	.5	2.5	100	61.40	7.13	13.3	730	1.82	-77.1	160	murky
10:50	.5	3.0	100	61.50	7.13	13.3	732	1.79	-79.0	131	less murky
10:55	.5	3.5	100	61.55	7.12	12.9	760	1.80	-80.2	122	murky
11:00	.5	4.0	100	61.60	7.10	13.0	850	1.80	-81.0	126	murky
11:05	.5	4.5	100	61.70	7.11	13.1	780	1.84	-87.3	130	murky
11:10	.5	5.0	100	61.70	7.11	13.3	777	1.85	-89.1	120	murky

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-1	12:25	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 12:25
Date Sampled: 1/23/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-1

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
11:15	.5	5.5	100	61.75	7.20	15.4	752	2.19	-106.1	242	murky
11:20	.5	6.0	100	61.80	7.22	15.6	734	2.41	-107.6	228	murky
11:25	.5	6.5	100	61.86	7.21	15.9	702	2.70	-107.7	214	murky
11:30	.5	7.0	100	61.90	7.21	16.0	684	2.78	-107.1	222	murky
11:35	.5	7.5	100	61.95	7.22	16.4	656	2.77	-107.1	310	murky
11:40	.5	8.0	100	62.00	7.22	16.3	654	2.78	-107.7	249	murky
11:45	.5	8.5	100	62.05	7.22	16.4	654	2.80	-107.1	255	
11:50	.5	9.0	100	62.10	7.22	16.4	654	2.86	-107.4	401	
11:55	.5	9.5	100	62.15	7.22	16.4	653	2.87	-108.4	355	murkier
12:00	.5	10.0	100	62.20	7.21	16.3	654	2.84	-108.2	350	murky
12:05	.5	10.5	100	62.21	7.20	16.7	689	2.50	-106.6	406	murkier
12:10	.5	11.0	100	62.24	7.20	16.8	690	2.49	-108.8	346	murk
12:15	.5	11.5	100	62.30	7.19	16.9	691	2.47	-108.8	260	murky
12:20	.5	12.0	100	62.40	7.20	16.9	701	2.39	-108.8	239	murky
12:25	.5	12.5	100	62.50	7.18	16.9	699	2.45	-109.1	247	murky

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

murky = biased highs

Groundwater Sampling Form

Sample ID: MW-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/26/24	**Weather:** 65°F Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 32' - 47'	**Pump Type:** ESP
Well Depth (ft): 50.15'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 16.30	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 8:40

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
8:40	.5	.5	100	16.30	9.30	18.6	140.1	6.65	-140.2	31.1	Clear
8:45	.5	1.0	100	16.41	9.25	18.1	129.7	6.59	-110.6	30.0	Clear
8:50	.5	1.5	100	16.52	9.25	19.0	129.0	6.55	-132.2	22.6	Clear
		Pump Malfunction? Loss of water?									
9:05	.5	2.0	100	18.64	9.29	18.6	130.2	6.41	-134.2	34.1	Cloudy
9:10	.5	2.5	100	18.72	9.29	18.7	129.9	6.39	-134.8	22.1	Clear
9:15	.5	3.0	100	18.84	9.29	18.6	129.6	6.30	-135.1	11.4	Clear
9:20	.5	3.5	100	18.91	9.29	18.6	129.5	6.29	-134.2	10.04*	Clear
9:25	.5	4.0	100	19.04	9.29	18.5	128.1		-129.6	9.61	Clear
		Sample									

Flow Regained

*11.4

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2	~~8:25~~	Radium 226/228	2 - 1 L Poly	HNO3
	9:30	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer — **Sample Time:** 9:30

Date Sampled: 1/26/24 — **Sampler Signature:** Cameron Hosmer

Notes: Pumprate= * While Sampling, Small black flecks appeared in water, and NTU Fluctuated between 6.74 NTU, and 20.9 NTU.

Groundwater Sampling Form

Sample ID: MW-2D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/16/24	**Weather:** 69°F Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 129' - 144'	**Pump Type:** ESP
Well Depth (ft): 147.4'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 141.96	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 10:25

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10:15				141.96	close to dry, using bailer						
				Bailed							
				Dry @ 10:55							

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2D	10:55	Full Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		3/4 Full TDS	1 - 500 mL Poly	N/A

Sampled By:	**Sample Time:** 10:55
Date Sampled: 1/16/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

* Bailed until dry, All bottles full except TDS. some bottles contain murky brown water

Groundwater Sampling Form

Sample ID: MW-3

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/24/24	**Weather:** 60°F Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 25' - 40'	**Pump Type:** ESP
Well Depth (ft): 43.36'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 8.51	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 15:05

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:05	.5	.5	100	8.51	7.30	16.1	4275	7.65	-96.8	2.07	Clear
15:10	.5	1.0	100	8.53	7.45	17.9	4244	6.21	-97.1	2.09	Clear
15:15	.5	1.5	100	8.55	7.46	17.9	4249	6.20	-94.7	2.03	Clear
15:20	.5	2.0	100	8.58	7.46	18.0	4252	6.19	-94.6	1.97	Clear
Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-3	15:25	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 15:25

Date Sampled: 1/24/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-4

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/24/24	**Weather:** 48°F Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): 25.34'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC):	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 12:30

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
12:30	.5	.5	100	15.18	6.15	18.6	2106	2.64	-72.6	51.9	clear
12:35	.5	1.0	100	15.19	6.16	18.7	2106	2.63	-72.4	55.4	clear
12:40	.5	1.5	100	15.21	6.09	18.7	2106	2.18	-74.9	61.0	clear
12:45	.5	2.0	100	15.23	6.01	18.6	2103	2.02	-78.9	43.3	clear
12:50	.5	2.5	100	15.25	6.00	19.0	2101	1.68	-82.6	37.6	clear
12:55	.5	3.0	100	15.27	5.99	19.1	2103	1.70	-83.0	32.1	clear
13:00	.5	3.5	100	15.30	5.98	19.4	2110	1.45	-87.8	32.1	clear
13:05	.5	4.0	100	15.32	5.98	19.9	2105	1.54	-90.0	23.9	clear
13:10	.5	4.5	100	15.34	5.98	20.1	2105	1.59	-90.4	22.5	clear
13:15	.5	5.0	100	15.36	5.98	20.1	2109	1.30	-91.3	22.0	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-4	14:35	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** @ 14:35
Date Sampled: 1/24/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-4

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)	
13:20	1.5	5.5	100	15.38	5.97	20.2	2126	1.30	-94.2	20.1	clear	
13:25	.5	6.0	100	15.40	5.97	20.1	2180	1.32	-94.3	19.2	clear	
13:30	.5	6.5	100	15.43	5.97	19.9	2094	1.29	-94.6	19.0	clear	
13:35	.5	7.0	100	15.46	6.00	19.8	2027	0.63	-100.1	16.0	clear	
13:40	.5	7.5	100	15.48	6.02	19.8	2023	0.60	-101.2	19.4	clear	
13:45	.5	8.0	100	15.50	6.13	19.7	1960	0.40	-105.1	13.0	clear	
13:50	.5	8.5	100	15.53	6.14	19.6	1956	0.29	-105.4	14.4	clear	
13:55	.5	9.0	100	15.55	6.13	19.5	1957	0.27	-105.1	16.1	clear	
14:00	.5	9.5	100	15.57	6.14	19.4	1954	0.25	-105.2	15.0	clear	
14:05	.5	10.0	100	15.60	6.14	19.4	1953	0.21	-105.3	12.6	clear	
14:10	.5	10.5	100	15.62	6.14	19.3	1949	0.10	-105.9	50.6*	darker	*What?
14:15	.5	11.0	100	15.64	6.14	19.2	1930	0.15	-106.0	51.6	cloudy	
14:20	.5	11.5	100	15.66	6.15	19.1	1926	0.09	-106.0	35.8	less cloudy	
14:25	.5	12.0	100	15.69	6.15	19.1	1921	0.08	-106.1	24.6	clearer	
14:30	.5	12.5	100	15.71	6.15	19.1	1924	0.09	-106.0	20.8	clearer	
Sample												

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Groundwater Sampling Form

Sample ID: MW-5

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosner
Date: 1/25/24	**Weather:** 64° F Drizzling

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 34' - 44'	**Pump Type:** ESP
Well Depth (ft): 46.14'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 23.69	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 8:35

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
8:35	.5	.5	100	23.69	6.69	18.9	420.4	3.101	-40.1	4.97	Clear
8:40	.5	1.0	100	23.71	6.67	18.5	379.1	2.67	-38.2	4.71	Clear
8:45	.5	1.5	100	23.74	6.67	18.7	340.4	2.59	-35.6	4.34	Clear
8:50	.5	2.0	100	23.76	6.66	18.7	329.4	2.67	-35.2	4.31	Clear
8:55	.5	2.5	100	23.79	6.64	18.9	325.5	2.69	-32.0	4.29	Clear
9:00	.5	3.0	100	23.81	6.63	18.9	325.1	2.59	-39.4	7.21	Clear
9:05	.5	3.5	100	23.83	6.63	18.9	325.0	2.60	-40.1	5.63	clear
9:10	.5	4.0	100	23.86	6.64	18.9	324.9	2.28	-42.1	4.69	Clear
9:15	.5	4.5	100	23.88	6.64	18.9	324.9	2.27	-44.4	6.09	Clear
9:20	.5	5.0	100	23.90	6.64	18.9	324.3	2.27	-46.1	7.47	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-5	~~9:10~~	9:25 Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosner	**Sample Time:** ~~9:10~~ 9:25
Date Sampled: 1/25/24	**Sampler Signature:** Cameron Hosner

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-6

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/23/24	**Weather:** 41°F Drizzling

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 12' - 27'	**Pump Type:** ESP
Well Depth (ft): 29.47'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 8.84	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purge @ 13:05

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
13:05	.5	0.5	100	8.84	6.48	12.6	1027	2.88	-88.2	12.2	Clear
13:10	.5	1.0	100	8.85	6.47	12.4	1031	3.01	-89.0	11.1	Clear
13:15	.5	1.5	100	8.86	6.47	12.4	1034	3.29	-89.0	9.53	Clear
13:20	.5	2.0	100	8.87	6.47	12.4	1032	3.40	-89.1	8.49	Clear
13:25	.5	2.5	100	8.88	6.46	12.4	1034	3.35	-89.2	8.21	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-6 (DUP)	13:30	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample ~~Time~~:** Cameron Hosmer
Date Sampled: 1/23/24	**Sampler ~~Signature~~:** Time: 13:30

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-7R

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/25/24	**Weather:** 65°F Heavy Rain

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 26' - 36'	**Pump Type:** ESP
Well Depth (ft): 39.94'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 23.99*	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 14:45

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
14:45	.5	.5	100	23.99	7.24	18.6	1560	2.34	-103.9	7.99	clear
14:50	.5	1.0	100	24.01	7.25	18.8	1575	2.33	-102.9	7.66	clear
14:55	.5	1.5	100	24.02	7.24	18.7	1576	2.29	-104.1	9.02	clear
15:00	.5	2.0	100	24.05	7.24	18.6	1571	2.28	-107.5	6.25	clear
~~15:05~~			~~100~~								
Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-7R	15:05	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 15:05

Date Sampled: 1/25/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

*Changed from 23.91 to 23.99 in 2 days.

Groundwater Sampling Form

Sample ID: MW-8

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/23/24	**Weather:** 41°F Drizzling

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 31' - 46'	**Pump Type:** ESP
Well Depth (ft): 49.06'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 32.81	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 14:30

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1430	.5	.5	100	32.81	6.89	~~15.3~~ 15.3	2582	2.72	-97.1	267	tan
14:35	.5	1.0	100	32.85	6.88	15.4	2582	2.61	-89.1	239	tan
14:40	.5	1.5	100	32.90	6.88	15.6	2582	2.50	-98.2	221	murky
14:45	.5	2.0	100	32.94	6.88	15.6	2582	2.47	-98.7	212	murky
14:50	.5	2.5	100	32.99	6.88	15.9	2578	2.19	-99.9	198	murky
14:55	.5	3.0	100	33.00	6.89	15.9	2583	2.01	-101.1	190	murky
15:00	.5	3.5	100	33.05	6.88	15.9	2592	1.97	-101.7	188	murky
15:05	.5	4.0	100	33.12	6.88	15.8	2589	1.79	-102.3	189	murky
15:10	.5	4.5	100	33.17	6.88	15.8	2569	1.41	-104.2	167	murky
15:15	.5	5.0	100	33.20	6.885	15.8	2538	1.16	-105.5	166	murky

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-8	16:35	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 16:35
Date Sampled: 1/23/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-8

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:20	.5	5.5	100	33.25	6.89	16.6	2521	1.04	-106.9	130	murky
15:25	.5	6.0	100	33.45	6.88	16.7	2503	0.98	-107.4	122	Cloudy
15:30	.5	6.5	100	33.52	6.89	16.7	2490	0.95	-107.8	94.5	Cloudy
15:35	.5	7.0	100	33.60	6.90	16.2	2435	0.81	-108.9	90.1	Cloudy
15:40	.5	7.5	100	33.64	6.40	16.6	2395	0.80	-109.1	74.2	cloudy
15:45	.5	8.0	100	33.67	6.90	16.6	2391	0.77	-109.9	96.1	Cloudier
15:50	.5	8.5	100	33.69	6.90	16.9	2305	0.66	-111.6	103.0	Cloudier
15:55	.5	9.0	100	33.72	6.91	16.9	2239	0.58	-112.4	91.7	Cloudy
16:00	.5	9.5	100	33.79	6.92	16.9	2230	0.54	-113.2	89.0	Cloudy
16:05	.5	10.0	100	33.83	6.93	16.9	2190	0.50	-113.8	72.8	Cloudy
16:10	.5	10.5	100	33.87	6.94	16.9	2148	0.47	-114.2	66.4	Cloudy
16:15	.5	11.0	100	33.91	6.95	17.0	2098	0.42	-115.4	34.4	Cloudy (less)
16:20	.5	11.5	100	33.99	6.96	17.1	2037	0.39	-116.2	26.2	Less Cloudy
16:25	.5	12.0	100	34.03	6.96	17.2	2005	0.36	-116.6	19.9	Clearer
16:30	.5	12.5	100	34.09	6.96	17.2	1989	0.35	-117.1	20.1	Clear
Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Groundwater Sampling Form

Sample ID: MW-9

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/25/24	**Weather:** 69°F Cloudy Drizzling

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 26' - 36'	**Pump Type:** ESP
Well Depth (ft): ~~36~~ 39?	**Pump Depth (ft-bTOC):** ? I am struggling to tell.
Depth-to-Water (ft-bTOC): 36.45	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 11:25

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
11:25	.5	.5	100	~~36~~45	7.36	19.2	861	3.86	-69.0	77.5	Cloudy
11:30	.5	1.0	100	36.47	7.36	19.3	850	3.84	-66.8	77.1	Cloudy
11:35	.5	1.5	100	36.49	7.42	19.4	840	3.62	-70.2	60.1	Cloudy
11:40	.5	2.0	100	36.51	7.58	19.4	799	3.60	-70.0	22.7	Clearer
11:45	.5	2.5	100	36.54	7.42	19.4	802	3.59	-69.8	19.1	clear
11:50	.5	3.0	100	36.56	7.46	19.3	809	3.57	-69.1	7.99	clear
~~11:55~~											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-9	11:55	Radium 226/228	2 - 1 L Poly	HNO3
		☒ 6010/6020/7470	1 - 250 mL Poly	HNO3
		☒ Cl, F, SO4	1 - 250 mL Poly	N/A
		☐ TDS	1 - 500 mL Poly	N/A
		☒ Filled 250mL then lost water		
		☐ Bailed half liter, then couldn't get more		

Sampled By: ~~1/25/24~~ Cameron Hosmer	**Sample Time:** 11:55
Date Sampled: 1/25/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-10

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: ~~1/24/24~~ 1/25/24	**Weather:** 68°F Drizzling

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 37' - 47'	**Pump Type:** ESP
Well Depth (ft): 49.91	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 32.12	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purged @ 10:10

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10:10	.5	1.5	1000	32.12	7.79	18.4	6094	5.00	-72.3	4.49	Clear
10:15	.5	1.0	1000	32.15	7.75	18.6	6122	4.99	-71.8	6.60	clear
10:20	.5	1.5	1000	32.18	7.74	18.4	6100	4.94	-71.6	3.40	clear
10:25	.5	2.0	1000	32.20	7.70	18.5	6100	3.03	-71.5	2.23	Clear
10:30	.5	2.5	1000	32.22	7.69	18.6	6100	3.01	-71.5	3.47	clear
10:35	.5	3.0	1000	32.25	7.69	18.6	6100	3.03	-71.6	4.04	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-10	10:40	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer ✓ **Sample Time:** 10:40

Date Sampled: 1/25/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-11

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/24/24	**Weather:** Cloudy 45°F

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 28.50' - 43.50'	**Pump Type:** ESP
Well Depth (ft): 43.50'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 12.40	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 10:10

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10:10	.5	.5	100	12.40	11.65	14.5	940	5.89	-131.7	6.09	clear
10:15	.5	1.0	100	12.42	11.65	14.5	929	5.84	-131.7	6.14	clear
10:20	.5	1.5	100	12.44	11.65	14.4	920	5.81	-131.8	6.05	clear
10:25	.5	2.0	100	12.46	11.70	14.2	940	5.78	-128.8	6.09	clear
10:30	.5	2.5	100	12.48	11.70	14.2	942	5.76	-128.9	5.79	clear
10:35	.5	3.0	100	12.50	11.71	14.1	946	5.74	-128.8	5.81	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11	10:40	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 10:40

Date Sampled: 1/24/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-11D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 1/24/24	**Weather:** 45° Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 50' - 65'	**Pump Type:** ESP
Well Depth (ft): 68.18'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 8.55	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Purge @ 10:55

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10:55	.5	.5	100	8.55	8.47	15.0	591.2	4.37	-89.9	3.55	Clear
11:00	.5	1.0	110	8.57	8.46	14.8	583.9	4.36	-89.3	3.29	clear
11:05	.5	1.5	100	8.60	8.43	14.6	583.5	4.29	-88.6	3.34	clear
11:10	.5	2.0	100	8.62	8.40	14.8	582.1	4.01	-88.4	3.41	clear
11:15	.5	2.5	100	8.64	8.39	14.9	581.1	4.29	-88.4	3.33	Clear
11:20	.5	3.0	100	8.66	8.39	15.0	580.7	4.30	-88.4	3.30	clear
11:25	.5	3.5	100	8.69	8.39	15.0	581.2	4.32	-89.1	3.27	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11D	11:30	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 11:30

Date Sampled: 1/24/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

GROUNDWATER DEPTH

Project Name: Charah – Brickhaven
Project Address: Moncure
Time Started: 0659
Personnel: C. Greenberg

Date: 4/1/2024
Project No:
Time Finished: 0857

Well ID	Depth to Water	Total Depth	Total Depth
BG-1	10.80'	~~43.05~~	43.74'
BG-2	11.39'	26.11	26.06'
MW-1	61.19'	75.30	75.55'
MW-2	19.89'	50.15	50.01'
* MW-2D	141.74'	145	147.27'
MW-3	8.04'	43.36	43.63'
MW-4	13.11'	25.34	30.95'
MW-5	22.08'	~~46.14~~	46.92'
MW-6	7.42'	~~29.47~~	27.76'
MW-7	16.25'	17.18	17.64'
MW-7R	22.19'	39.94	39.85'
MW-8	31.56'	49.06	49.75'
* MW-9	37.28'	38.9	38.91'
MW-10	31.40'	47	49.89'
MW-11	10.14'	43.5	43.50'
MW-11D	6.71'	68.1	68.14'

Well ID	Depth to Water	Total Depth
No well cap, stick up attached from [illegible]		
[illegible] stick up right by [illegible] cell Total Depth [illegible]		
Very [illegible]	[illegible]	[illegible]
well cap on but could [illegible]		

* MW-9 water column = 1.63' Purge dry Sample Thursday / Friday

* MW-2D water column = 5.53' Purge dry Sample Thursday / Friday

Version: 07/30/2020

Leachate

Groundwater Sampling Form

Sample ID: LEACHATE

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/4/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s): YSI Pro, Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0825	—	—	—	—	7.34	11.1	1733	8.93	191.5	6.62	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
LEACHATE	0825	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg	**Sample Time:** 0825
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

Version: 07/30/2020

BG-1

Groundwater Sampling Form

Sample ID: BG-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/1/2024	**Weather:** Cloudy / Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 26' - 41'	**Pump Type:** ESP
Well Depth (ft): ~~43.05'~~ 43.74'	**Pump Depth (ft-bTOC):** ~36.7'
Depth-to-Water (ft-bTOC): 10.80'	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 32.94	**Well Volume (ft^3):** 5.2704
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YST Pro, Hanna Turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1813	0.0	0.0	200	10.20	6.51	16.3	1008	3.37	97.3	250	lt Brown
1818	1.0	1.0	200	11.80	6.51	16.3	1009	2.67	103.1	372	lt Brown
1823	0.75	1.75	150	11.94	6.53	16.2	1010	2.02	104.4	227	lt Brown
1828	1.0	2.75	200	12.65	6.52	16.9	1006	1.47	103.8	331	lt Brown
1833	1.0	3.75	200	12.54	6.47	16.0	1003	1.08	105.5	126	lt Brown
1843	2.0	5.75	200	12.43	6.45	16.0	999	0.46	101.6	32.5	Clear
1853	2.0	7.75	200	12.44	6.42	16.0	987	0.30	98.1	30.2	Clear
1903	2.0	9.75	200	12.91	6.45	16.2	990	0.76	97.7	171	lt Brown
1913	2.0	11.75	200	12.68	6.42	16.0	969	0.17	94.8	12.4	Clear
		Next	Page								

Purge sediment out of tubing

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-1	1958	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg	**Sample Time:** 1958
Date Sampled: 4/1/2024	**Sampler Signature:**

Notes: Pumprate=

1813 - 200ml/min
1818 - Purge sediment out of tubing
1819 - 150ml/min
1828 - Purged sediment out of well
1829 - 200ml/min
1858 - Purged to remove sediment out of tube
1859 - 200ml/min

Groundwater Sampling Form

Sample ID: BG-1

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1918	1.0	12.75	200	12.75	6.42	16.0	955	0.12	92.8	15.6	Clear
1923	1.0	13.75	200	12.80	6.42	16.0	947	0.13	91.1	17.7	Clear
1928	1.0	14.75	200	12.81	6.42	16.0	943	0.12	91.5	15.5	Clear
1933	1.0	15.75	200	12.92	6.42	16.0	938	0.11	89.7	14.5	Clear
1938	1.0	16.75	200	12.63	6.42	16.1	934	0.11	88.6	20.2	Clear
1943	1.0	17.75	200	12.32	6.41	15.8	928	0.11	87.9	8.19	Clear
1948	1.0	18.75	200	12.24	6.41	15.7	923	0.09	87.1	5.01	Clear
1953	1.0	19.75	200	12.18	6.41	15.8	920	0.09	86.4	5.43	clear
	SAMPLE @		1958								

Pump speed up slightly

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

2013 = 2 hours

Groundwater Sampling Form

Sample ID: BG-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grubby
Date: 4/1/24	**Weather:** Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): 26.11' 26.06'	**Pump Depth (ft-bTOC):** ~21.5'
Depth-to-Water (ft-bTOC): 11.28'	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 14.78'	**Well Volume (ft^3):** 2.3648
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro plus; Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0925	0.0	0.0	200	11.99	6.86	15.2	2479	3.12	76.8	103	Sl Cloudy
0930	1.0	1.0	200	12.23	6.85	16.2	2489	1.46	74.8	92.0	Sl Cloudy
0935	1.0	2.0	200	12.35	6.85	17.0	2450	0.78	66.5	147.0	Cloudy
~~0940~~	1.										
0958	1.0	3.0	200	12.62	6.83	16.1	2401	1.98	83.2	142.0	Cloudy
1003	~~0.75~~ 0.75	3.75	150	12.31	6.84	16.1	2352	1.95	73.5	327	Cloudy
1008	0.75	4.50	150	12.31	6.84	16.2	2274	1.68	66.9	288	Cloudy
1013	0.75	5.25	150	12.34	6.95	16.3	2192	1.38	60.1	188	Sl Cloudy
1018	0.75	6.00	150	12.39	6.86	16.3	2107	1.25	55.1	116	Sl Cloudy
1023	0.75	6.75	150	12.41	6.86	16.3	2088	1.10	53.2	102	Sl Cloudy

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-2	1208	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grubby **Sample Time:** 1208

Date Sampled: 4/1/24 **Sampler Signature:**

Notes: Pumprate=

0925= 200 ml/min (Pump started & cloudy)

0938= Pump stopped working
- Pump not working at all
- Ecotech DO not functioning
- Bubbles at meter.
- Replaced meter

Between 1013 = Purging well 150ml/min

Groundwater Sampling Form

Sample ID: BG-2

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1028	0.75	7.50	150	12.43	6.86	16.3	2047	0.77	50.6	96.5	Sl Cloudy
1033	0.75	8.25	150	12.47	6.96	16.4	2009	0.45	48.2	66.7	Clear
1038	0.75	9.00	150	12.49	6.86	16.4	1984	0.39	46.8	61.4	Clear
1043	0.75	9.75	150	12.52	6.87	16.4	1958	0.30	45.1	49.1	Clear
1048	0.75	10.50	150	12.54	6.86	16.4	1944	0.26	44.0	43.1	Clear
1053	0.75	11.25	150	12.56	6.87	16.3	1929	0.22	42.6	33.5	Clear
1058	0.75	12.00	150	12.59	6.86	16.3	1919	0.20	41.3	33.1	Clear
1103	0.75	12.75	150	12.61	6.87	16.4	1910	0.17	40.0	29.3	Clear
1108	0.75	13.25	150	12.63	6.86	16.4	1905	0.17	38.6	23.6	Clear
1113	0.75	14.00	150	12.65	6.87	16.6	1893	0.15	37.4	17.5	Clear
1118	0.75	14.75	150	12.68	6.87	16.7	1884	0.15	36.3	16.1	Clear
1123	0.75	15.50	150	12.69	6.87	16.7	1880	0.14	35.3	14.3	Clear
1128	0.75	16.25	150	12.71	6.87	16.7	1874	0.14	34.0	13.5	Clear
1133	0.75	17.00	150	12.73	6.87	16.7	1868	0.13	32.9	13.2	Clear
1138	0.75	17.75	150	12.73	6.87	16.7	1850	0.13	31.7	14.1	Clear
1143	0.75	18.50	150	12.75	6.87	16.8	1836	0.12	30.3	15.2	Clear
1148	0.75	19.25	150	12.77	6.87	17.0	1830	0.12	29.2	14.7	Clear
1153	0.75	20.00	150	12.79	6.87	17.0	1838	0.12	28.8	17.2	Clear
1158	0.75	20.75	150	12.81	6.87	17.2	1839	0.12	27.9	18.7	Clear
1203	0.75	21.50	150	12.83	6.87	17.2	1840	0.12	27.4	18.9	Clear
		SAMPLE	@	1208							
			Turbidity w/in 10% but not					Below	10	NTUs	

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

1203 = 2 hours

Version: 07/30/2020

Sheet 1 of 2

MW-1

Groundwater Sampling Form

Sample ID: MW-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Gramley
Date: 4/3/2024	**Weather:** Cloudy windy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 57' - 72'	**Pump Type:** ESP
Well Depth (ft): ~~75.30'~~ 75.55'	**Pump Depth (ft-bTOC):** ~70'
Depth-to-Water (ft-bTOC): 61.03	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 14.52	**Well Volume (ft^3):** 2.3232
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro, Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0915	0.0	0.0	100	61.07	7.05	18.1	734	2.86	183.1	23.2	Clear
0920	0.5	0.5	100	61.06	7.06	18.0	738	2.13	170.4	28.6	Clear
0925	0.5	1.0	100	61.07	7.07	18.0	739	1.90	159.2	31.3	Clear
0930	0.5	1.5	100	61.07	7.08	18.0	739	1.88	146.8	29.7	Clear
~~0935~~	~~0.5~~	~~2.0~~	~~100~~								
0940	0.5	2.5	100	61.07	7.08	18.1	739	1.72	137.2	31.0	Clear
0945	0.5	3.0	100	61.07	7.08	18.4	739	1.68	131.7	28.5	Clear
0950	0.5	3.5	100	61.06	7.08	18.3	739	2.16	127.9	29.5	Clear
0955	0.5	4.0	100	61.05	7.08	18.4	739	2.14	125.7	27.2	Clear
1000	0.5	4.5	100	61.14	7.08	19.2	739	1.29	122.6	21.3	Clear

Purge 2 volumes → 0.5 gal/min 0.5 gal

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-1	1035	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Gramley **Sample Time:** 1035

Date Sampled: 4/3/2024 **Sampler Signature:**

Notes: Pumprate= 100 ml/min @ 0915

MW-1

Groundwater Sampling Form

Sample ID: MW-1

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1005	0.75	5.50	150	61.13	7.08	19.5	740	1.71	119.1	35.0	Clear
1010	0.75	6.25	150	61.13	7.07	19.3	741	1.72	117.3	16.8	Clear
1015	0.75	7.00	150	61.13	7.07	18.9	741	1.51	117.4	14.1	Clear
1020	0.75	7.75	150	61.13	7.07	18.9	741	1.52	115.2	9.06	Clear
1025	0.75	8.50	150	61.14	7.08	18.9	745	1.61	113.4	9.07	Clear
1030	0.75	9.25	150	61.14	7.07	19.0	749	1.47	111.8	7.75	Clear
			SAMPLE	@	1035						

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

1115 = 2 hours

Groundwater Sampling Form

Sample ID: MW-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/3/2024	**Weather:** Cloudy, windy, drizzling

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 32' - 47'	**Pump Type:** ESP
Well Depth (ft): ~~50.15'~~ 50.01'	**Pump Depth (ft-bTOC):** ~43
Depth-to-Water (ft-bTOC): 19.78	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 30.23	**Well Volume (ft^3):** 4.8366
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro, Hanna turbidity Meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1148	0.0	0.0	100	19.88	7.46	17.9	4682	5.41	141.3	20.4	Clear
1153	0.5	0.5	100	20.46	7.36	17.9	4999	4.83	140.8	57.8	sl Cloudy / Clear
1158	0.5	1.0	100	20.86	7.35	17.8	5054	4.70	134.2	71.3	sl Cloudy
1203	0.5	1.5	100	21.31	7.35	17.8	5076	4.53	129.0	47.7	sl Cloudy / Clear
1208	0.5	2.0	100	21.78	7.35	18.1	5083	4.39	125.4	45.1	sl Cloudy / Clear
1213	0.5	2.5	100	22.05	7.35	18.4	5081	4.26	122.4	43.0	sl Cloudy / Clear
1218	0.5	3.0	100	22.39	7.35	18.2	5086	4.32	120.2	39.0	Clear
1228	1.0	4.0	100	23.14	7.35	18.7	5090	4.02	112.2	30.9	Clear
1238	1.0	5.0	100	24.08	7.35	18.3	5064	3.85	106.9	30.2	Clear
1248	1.0	6.0	100	25.19	7.36	18.2	5066	3.92	107.5	19.7	Clear

Pump shut down & adjust tubing

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2	1338	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg **Sample Time:** 1338

Date Sampled: 4/3/2024 **Sampler Signature:**

Notes: Pumprate= 100ml/min @ 1148

Stick up not attached to pvc. Can be fixed.

MW-2

Groundwater Sampling Form

Sample ID: MW-2

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1253	0.5	6.5	100	25.72	7.36	18.1	5064	3.94	108.3	18.6	Clear
1258	0.5	7.0	100	26.17	7.36	18.1	5052	4.01	103.7	16.9	Clear
1303	0.5	7.5	100	26.85	7.36	18.2	5039	4.01	109.0	15.8	Clear
1308	0.5	8.0	100	27.38	7.36	18.5	5035	4.02	108.9	13.4	Clear
1313	0.5	8.5	100	27.76	7.36	18.4	5039	4.07	108.9	12.1	Clear
1318	0.5	9.0	100	28.20	7.36	18.3	5053	4.08	109.0	11.7	Clear
1323	0.5	9.5	100	28.75	7.36	18.2	5031	3.97	109.4	9.94	Clear
1328	0.5	10.0	100	29.25	7.36	18.4	5022	4.01	109.8	9.08	Clear
1333	0.5	10.5	100	29.72	7.36	18.4	5023	3.88	110.0	8.59	Clear
			SAMPLED @ 1338								

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

1348 = 2hrs

MW-2D

Groundwater Sampling Form

Sample ID: MW-2D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grimsley
Date: 4/1/24 & 4/4/24	**Weather:** Cloudy / Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** ~~Mega Monsoon Pro~~
Screened Interval (ft): 129' - 144'	**Pump Type:** ~~ESP~~ Bailer
Well Depth (ft): ~~147.4~~ 147.27	**Pump Depth (ft-bTOC):** —
Depth-to-Water (ft-bTOC): 141.74 / 142.81	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 5.53 / 4.46	**Well Volume (ft^3):** 0.8848 / 0.7136
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro Horiba turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
4/1/24 1256				141.74	—	Bailed	Dry				
4/4/24 1055	—	—	—	142.81	6.66	20.1	1396	1.96	-20.1	65.7	Cloudy

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2D	1165	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
	↓	Cl, F, SO4	1 - 250 mL Poly	N/A
	↓	TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grimsley	**Sample Time:** 1165
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

MW-3

Groundwater Sampling Form

Sample ID: MW-3

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/3/2024	**Weather:** Raining

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 25' - 40'	**Pump Type:** ESP
Well Depth (ft): ~~43.36'~~ 43.63'	**Pump Depth (ft-bTOC):** ~35.5
Depth-to-Water (ft-bTOC): 7.91	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 35.72	**Well Volume (ft^3):** 5.712
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro, Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1513	0.0	0.0	100	7.65	7.47	17.3	4903	4.97	121.2	2.40	Clear
1518	0.5	0.5	100	8.19	7.34	17.0	4907	3.02	97.1	5.13	Clear
1523	0.5	1.0	100	8.78	7.35	16.9	4900	2.40	86.7	4.74	Clear
1528	0.5	1.5	100	9.51	7.37	17.1	4888	2.46	84.9	3.87	Clear
1533	0.5	2.0	100	10.12	7.37	16.9	4882	2.66	85.6	5.62	Clear
1538	0.5	2.5	100	10.57	7.39	17.0	4879	2.73	87.1	2.85	Clear
1543	0.5	3.0	100	11.03	7.40	17.1	4861	2.75	88.8	6.91	Clear
		SAMPLE @			1548						

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-3	1548	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg	**Sample Time:** 1548
Date Sampled: 4/3/2024	**Sampler Signature:**

Notes: Pumprate= 100ml/min @ 1513

MW-4

Groundwater Sampling Form

Sample ID: MW-4

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Gruenberg
Date: 4/3/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): ~~25.34'~~ 30.95'	**Pump Depth (ft-bTOC):** ~26'
Depth-to-Water (ft-bTOC): 12.67'	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 18.28	**Well Volume (ft^3):** 2.9248
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro, Hanna Turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1713	0.0	0.0	100	13.44	6.04	18.8	2235	3.29	50.4	94.2	Cloudy
1718	0.5	0.5	100	13.42	6.03	19.3	2259	3.37	56.3	102	Cloudy
1723	0.5	1.0	100	13.42	6.03	19.2	2253	2.99	59.2	67.2	Cloudy, SI
1728	0.5	1.5	100	13.42	6.03	19.1	2238	2.42	61.9	49.8	SI cloudy
1733	0.5	2.0	100	13.42	6.04	19.1	2221	1.48	60.9	39.4	Clear
1738	0.5	2.5	100	13.42	6.05	19.8	2210	0.99	62.4	32.4	Clear
1743	0.5	3.0	100	13.42	6.04	19.3	2199	0.89	61.7	28.8	Clear
1753	1.0	4.0	100	13.42	6.05	19.2	2168	0.73	60.3	23.2	Clear
1803	1.0	5.0	100	13.42	6.07	19.7	2127	0.60	59.2	21.0	Clear
1813	1.0	6.0	100	13.45	6.09	19.7	2114	0.52	58.9	17.6	Clear

Slow -> speed up

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-4	1858	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Gruenberg	**Sample Time:** 1858
Date Sampled: 4/3/2024	**Sampler Signature:**

Notes: Pumprate= 100 ml/min @ 1713

Version: 07/30/2020

MW-4

Groundwater Sampling Form

Sample ID: MW-4

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1818	0.5	6.5	100	13.46	6.08	19.8	2110	0.48	58.2	16.6	Clear
1823	0.5	7.0	100	13.47	6.08	19.6	2102	0.44	57.5	14.3	Clear
1828	0.5	7.5	100	13.48	6.08	19.4	2103	0.41	59.2	13.3	Clear
1833	0.5	8.0	100	13.48	6.08	19.4	2097	0.37	58.1	12.0	Clear
1838	0.5	8.5	100	13.48	6.09	19.2	2097	0.33	58.7	11.4	Clear
1843	0.5	9.0	100	13.49	6.08	19.4	2094	0.32	58.7	10.5	Clear
1848	0.5	9.5	100	13.49	6.08	19.1	2091	0.30	58.7	10.0	Clear
1853	0.5	10.0	100	13.49	6.08	19.0	2090	0.28	58.6	9.48	Clear
			SAMPLE	@ 1858							

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

1913 is 2hrs

Groundwater Sampling Form

Sample ID: MW-5

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grumbos
Date: 4/2/24	**Weather:** Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 34' - 44'	**Pump Type:** ESP
Well Depth (ft): ~~46.14'~~ 46.92	**Pump Depth (ft-bTOC):** ~40
Depth-to-Water (ft-bTOC): 21.95'	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 24.97	**Well Volume (ft^3):** 3.9952
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro1 Horiba U-52 meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1823	0.0	0.0	150	22.86	6.58	19.1	377.5	3.62	103.0	11.4	Clear
1828	0.75	0.75	150	23.78	6.62	18.6	379.5	3.09	103.0	10.0	Clear
1833	0.5	1.25	100	24.11	6.68	19.2	393.0	2.65	102.0	8.01	Clear
1838	0.5	1.75	100	24.76	6.67	18.8	387.0	2.51	105.4	5.94	Clear
1843	0.5	2.25	100	24.91	6.66	18.7	384.4	2.35	107.1	8.49	Clear
1848	0.5	2.75	100	25.22	6.67	18.6	386.0	2.24	108.1	7.70	Clear
1853	0.5	3.25	100	25.83	6.66	18.1	383.6	2.10	109.9	4.85	Clear
1858	0.5	3.75	100	26.15	6.68	18.2	383.7	1.99	110.4	6.01	Clear
1903	0.5	4.25	100	26.91	6.69	18.3	384.7	1.76	111.5	8.10	Clear
1908	0.5	4.75	100	27.56	6.70	18.5	384.2	1.78	112.1	4.51	Clear
1913	0.5	5.25	100	28.01	6.71	18.6	385.6	1.79	114.2	4.28	Clear

Purge stopped, sample collected

Purge stopped

Purge stopped

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-5	1918	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grumbos	**Sample Time:** 1918
Date Sampled: 4/2/24	**Sampler Signature:**

Notes: Pumprate= 150ml/min @ 1823
100ml/min @ 1828
Depth to water not stable; all other parameter stable

Version: 07/30/2020

MW-6

Groundwater Sampling Form

Sample ID: MW-6

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grunberg
Date: 4/2/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 12' - 27'	**Pump Type:** ESP
Well Depth (ft): ~~29.47'~~ 27.76	**Pump Depth (ft-bTOC):** ~20'
Depth-to-Water (ft-bTOC): 7.31'	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 20.45	**Well Volume (ft^3):** 3.272
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro ; Hanna turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1325	0.0	0.0	150	7.28	6.36	16.7	1172	8.00	91.9	6.05	Clear
1335	1.5	1.5	150	7.91	6.35	16.9	1163	2.49	92.7	23.3	Clear
1340	0.75	2.25	150	7.96	6.36	16.8	1172	2.18	92.0	21.0	Clear
1345	1.0	3.25	200	8.10	6.34	16.9	1165	2.14	92.3	19.2	Clear
1350	1.0	4.25	200	8.10	6.33	16.9	1163	2.12	92.2	14.7	Clear
1355	1.0	5.25	200	8.10	6.31	16.9	1159	1.85	93.0	10.6	Clear
1400	1.0	6.25	200	8.10	6.31	16.9	1156	1.67	91.1	8.94	Clear
1405	1.0	7.25	200	8.08	6.31	17.0	1153	1.48	89.8	8.62	Clear
1410	1.0	8.25	200	8.08	6.31	17.1	1154	1.34	89.5	7.22	Clear
1415	1.0	9.25	200	8.07	6.31	17.1	1152	1.15	63.6	5.41	Clear

Flow stopped → Flow restarted

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-6 (DUP)	1435	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grunberg **Sample Time:** 1435

Date Sampled: 4/2/2024 **Sampler Signature:** Charles Grunberg

Notes: Pumprate= 150 mL/min @ 1325

200 mL/min @ 1345

Groundwater Sampling Form

Sample ID: MW-6

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC) ✓	pH (SU) ✓ (±0.1)	TEMP. (C°) ✓	COND. (µS/cm) (5%) ✓	DISSOLVED OXYGEN (mg/L) (10%)* ✓	ORP (mV) ✓ (±20mV)	TURBIDITY (NTUs) (≤10 or 10%) ✓	COLOR/ ODOR (describe)
1420	1.0	10.25	200	8.14	6.30	16.7	1153	1.02	(0)2.4	5.60	Clear
1425	1.0	11.25	200	8.13	(6.31)	17.0	1150	0.89	58.2	9.50	Clear
1430	1.0	12.25	200	8.30	6.30	16.8	1150	0.84	51.7	6.44	Clear
		SAMPLE @			1435						

flow speed up →

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Version: 07/30/2020

MW-7R

Groundwater Sampling Form

Sample ID: MW-7R

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/2/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 26' - 36'	**Pump Type:** ESP
Well Depth (ft): ~~39.94'~~ 39.85	**Pump Depth (ft-bTOC):** ~ 34'
Depth-to-Water (ft-bTOC): 22.02	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 17.83	**Well Volume (ft^3):** 2.8528
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro, Manual turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1542	0.0	0.0	100	22.49	7.28	20.6	1790	5.58	166.3	32.9	Clear
1547	0.5	0.5	100	22.71	7.30	21.8	1794	4.21	84.1	41.5	Clear
1552	0.5	1.0	100	22.87	7.31	21.6	1798	4.03	73.7	50.5	Clear
1557	0.5	1.5	100	23.08	7.32	21.3	1801	4.12	62.2	48.3	Clear
1602	0.5	2.0	100	23.27	7.32	21.4	1793	3.79	53.9	40.8	Clear
1607	0.5	2.5	100	23.60	7.32	19.9	1802	4.36	47.5	38.1	Clear
1612	0.5	3.0	100	23.90	7.33	20.9	1784	4.08	50.9	32.1	Clear
1617	0.5	3.5	100	24.09	7.32	20.3	1787	4.14	50.2	28.3	Clear
1622	0.5	4.0	100	24.38	7.32	20.4	1794	4.00	51.8	21.3	Clear
1627	0.5	4.5	100	24.54	7.32	20.8	1787	3.78	58.6	19.4	Clear

Pump stops will be sped up

Pump slowed down

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-7R	1717	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg	**Sample Time:** 1717
Date Sampled: 4/2/2024	**Sampler Signature:**

Notes: Pumprate= 1542 = 100ml/min

1702 = 150ml/min pump would shut off after a while @ 100ml/min moved to 150 to keep flow consistent

Must sample before ~29'

Groundwater Sampling Form

Sample ID: MW-7R

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1) ✓	TEMP. (C°) ✓	COND. (µS/cm) (5%) ✓	DISSOLVED OXYGEN (mg/L) (10%)* ✓	ORP (mV) (±20mV) ✓	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1632	0.5	5.0	100	24.84	7.32	20.0	1779	3.89	64.8	18.0	Clear
1637	0.5	5.5	100	25.09	7.32	20.5	1792	3.72	70.6	15.6	Clear
1642	0.5	6.0	100	25.27	7.32	20.4	1790	3.58	75.5	12.6	Clear
1647	0.5	6.5	100	25.43	7.32	20.3	1799	3.55	79.3	11.3	Clear
1652	0.5	7.0	100	25.56	7.32	20.7	1785	3.54	82.6	10.8	Clear
1657	0.5	7.5	100	25.68	7.31	19.9	1796	3.69	85.9	10.3	Clear
1702	0.75	8.25	150	25.96	7.31	19.8	1781	3.72	88.2	9.68	Clear
1707	0.75	9.00	150	26.33	7.32	20.1	1782	3.75	88.8	9.56	Clear
1712	0.75	9.75	150	26.61	7.32	20.2	1782	3.72	89.3	9.89	Clear
		SAMPLE @		1717							

Pump stopped → can't keep pump stable @ (sample) need to 150

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

1742 = 2 hrs

Sample by time ~29'

Version: 07/30/2020

MW-8

Groundwater Sampling Form

Sample ID: MW-8

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grimsley
Date: 4/2/24	**Weather:** Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 31' - 46'	**Pump Type:** ESP
Well Depth (ft): ~~49.06'~~ 49.75	**Pump Depth (ft-bTOC):** ~40.5
Depth-to-Water (ft-bTOC): 31.61	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 18.14	**Well Volume (ft^3):** 2.902

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s): YSI Rae Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0800	0.0	0.0	150	31.45	6.89	17.5	1911	1.45	178.4	499	Brown
0805	0.75	0.75	150	32.11	6.90	17.3	1916	1.16	171.4	541	Brown
0810	0.75	1.50	150	32.17	6.92	17.7	1927	0.76	154.2	209	Cloudy
0820	1.50	3.00	150	32.23	6.92	18.2	1929	0.48	136.5	167	cloudy
0825	1.10	4.00	200	32.51	6.93	18.9	1921	0.12	165.7	324	Cloudy
0835	2.0	6.00	200	32.50	6.94	18.5	1852	0.10	165.2	128	SI Cloudy
0845	2.0	8.00	200	32.51	6.96	18.6	1793	0.08	89.4	95.8	SI Cloudy
0855	2.0	10.00	200	32.51	6.92	18.8	1736	0.07	76.4	80.8	SI Cloudy
0905	2.0	12.00	200	32.51	6.98	18.9	1703	0.14	69.6	55.6	Clear
0915	2.0	14.00	200	32.51	6.98	19.0	1681	0.11	56.2	33.5	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-8 Dup	1005	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grimsley **Sample Time:** 1005

Date Sampled: 4/2/24 **Sampler Signature:**

Notes: Pumprate= 0800 - 150mL/min

0820 Purge rate increased to 200mL/min

Groundwater Sampling Form

Sample ID: MW-8

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0925	2.0	16.00	200	32.50	6.99	19.2	1661	0.10	47.5	19.2	Clear
0930	1.0	17.00	200	32.50	6.99	19.1	1653	0.09	42.3	17.2	Clear
0935	1.0	18.00	200	32.51	6.99	19.3	1648	0.08	38.4	14.7	Clear
0940	1.0	19.00	200	32.52	6.99	19.2	1648	0.08	35.1	12.4	Clear
0945	1.0	20.00	200	32.52	7.00	19.1	1644	0.07	31.6	11.9	Clear
0950	1.0	21.00	200	32.53	7.00	19.4	1639	0.07	29.0	10.3	Clear
0955	1.0	22.00	200	32.53	7.00	19.4	1634	0.06	25.7	7.73	Clear
1000	1.0	23.00	200	32.54	7.00	19.5	1633	0.06	24.1	9.61	Clear
		SAMPLE @ 1005									

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

1000 = 2 hours

Version: 07/30/2020

MW-9

Groundwater Sampling Form

Sample ID: MW-9

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grumbey
Date: 4/1/2024 & 4/4/2024	**Weather:** Cloudy / Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 26' - 36'	**Pump Type:** ~~ESP~~ Bailer
Well Depth (ft): ~~36'~~ 38.91'	**Pump Depth (ft-bTOC):** —
Depth-to-Water (ft-bTOC): 37.28 / 37.94	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 1.63 / 0.97	**Well Volume (ft^3):** 0.2608 / 0.1552
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI pH Hanna turbidity meter

	TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
4/1/24	1330	—	—	—	37.28	—	—	—	Boiled	Dry		
4/4/24	1144	—	—	—	37.94	—	—	—	—	—	27.5	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-9	—	Radium 226/228	2 - 1 L Poly	HNO3
	1200	6010/6020/7470	1 - 250 mL Poly	HNO3
	1200	Cl, F, SO4	1 - 250 mL Poly	N/A
	1200	TDS	1 - 500 mL Poly	N/A
		↑ ~200ml		

Sampled By: Charles Grumbey	**Sample Time:** 1200
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

Version: 07/30/2020

MW-10

Groundwater Sampling Form

Sample ID: MW-10

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Giveans
Date: 4/2/2024	**Weather:** cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 37' - 47'	**Pump Type:** ESP
Well Depth (ft): ~~49.91~~ 49.89'	**Pump Depth (ft-bTOC):** ~ 46
Depth-to-Water (ft-bTOC): 31.34	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 18.55	**Well Volume (ft^3):** 2.968
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro + Hanna turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1) ✓	TEMP. (C°) ✓	COND. (µS/cm) (5%) ✓	DISSOLVED OXYGEN (mg/L) (10%)* ✓	ORP (mV) (±20mV) ✓	TURBIDITY (NTUs) (≤10 or 10%) ✓	COLOR/ ODOR (describe)
1140	0.0	0.0	100	32.12	7.71	19.3	694	4.84	-72.6	13.1	clear
1145	0.5	0.5	100	32.43	7.68	19.3	693	5.06	-84.3	9.45	Clear
1150	0.5	1.0	100	32.90	7.71	19.2	690	4.71	-97.4	9.58	Clear
1155	0.5	1.5	100	33.31	7.72	19.2	690	4.47	-106.2	6.96	Clear
1200	0.5	2.0	100	33.80	7.72	19.4	686	4.32	-108.8	6.05	Clear
[illegible]		SAMPLE	@		1205						

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-10	1205	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Giveans	**Sample Time:** 1205
Date Sampled: 4/2/2024	**Sampler Signature:**

Notes: Pumprate= 1140 = 100ml/min

DTW would not stabilize @ 100ml/min

Must Sample ~5' above pump. @ 41'

Version: 07/30/2020

MW-11

Groundwater Sampling Form

Sample ID: MW-11

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Gruenberg
Date: 4/1/2024	**Weather:** Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 28.50' - 43.50'	**Pump Type:** ESP
Well Depth (ft): 43.50'	**Pump Depth (ft-bTOC):** ~34'
Depth-to-Water (ft-bTOC): 10.14	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 33.36	**Well Volume (ft^3):** 5.3376
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro, Horiba Turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1410	0.0	0.0	100	9.15	6.73	17.2	710	1.92	78.8	152	SI Cloudy
1415	0.5	0.5	100	11.20	6.66	17.4	743	1.31	65.8	229	Cloudy
1420	0.5	1.0	100	11.40'	6.70	17.2	741	1.05	55.2	205	Cloudy
1430	1.0	2.0	100	11.65	6.73	17.3	735	0.94	46.5	166	Cloudy
1435	0.625	2.625	125	12.33	6.73	17.6	724	1.54	39.1	148	SI Cloudy
1445	1.25	3.875	125	12.47	6.79	17.1	704	1.75	28.6	105	SI cloudy
1455	1.25	5.125	125	12.48	6.82	17.0	692	1.73	29.1	47.5	clear
1505	1.25	6.375	125	12.75	6.83	17.0	687	1.75	31.3	29.3	Clear
1515	1.25	7.625	125	12.95	6.84	17.2	683	1.71	29.7	15.4	Clear
		Next	Page								

adj-stop flow

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11	1550	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Gruenberg	**Sample Time:** 1550
Date Sampled: 4/1/2024	**Sampler Signature:**

Notes: Pumprate= 1410 = 100ml/min

@ 1430 Pump speed up & slow tubing of sediment

@ 1431 125ml/min

Version: 07/30/2020

MW-11

Groundwater Sampling Form

Sample ID: MW-11

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1520	0.625	8.25	125	13.06	6.83	17.1	684	1.72	23.4	12.9	Clear
1525	0.625	8.875	125	13.11	6.82	17.2	686	1.68	21.3	12.0	Clear
1530	0.625	9.5	125	13.14	6.82	17.1	697	1.65	20.6	11.4	Clear
→ 1535	0.625	10.125	125	13.09	6.82	17.2	687	1.60	26.2	10.4	Clear
1540	0.625	10.75	125	13.08	6.82	17.2	690	1.57	28.3	10.2	Clear
1545	0.625	11.375	125	13.09	6.82	17.3	689	1.54	28.6	9.70	Clear
		Sample	MW-11		@ 1550						

Flow slowed down (buggy pump) to 125

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Version: 07/30/2020

MW-11D

Groundwater Sampling Form

Sample ID: MW-11D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grunberg
Date: 4/1/24	**Weather:** Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 50' - 65'	**Pump Type:** ESP
Well Depth (ft): ~~68.18'~~ 68.14	**Pump Depth (ft-bTOC):** 58.1'
Depth-to-Water (ft-bTOC): 6.71	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft): 61.43'	**Well Volume (ft^3):** 9.8268
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro ; Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1635	0.0	0.0	150	5.61	8.16	16.7	563	4.88	44.0	1.74	Clear
1640	0.75	0.75	150	7.44	8.11	16.4	562	3.13	48.7	3.65	Clear
1645	0.75	1.5	150	7.76	8.14	16.3	561	2.29	44.1	5.70	Clear
1650	0.5	2.0	100	7.70	8.19	16.8	560	2.02	40.1	6.91	Clear
1655	0.5	2.5	100	7.68	8.19	16.8	560	1.81	39.4	4.26	Clear
1700	0.5	3.0	100	7.68	8.19	16.5	561	1.71	38.8	6.68	Clear
1705	0.5	3.5	100	7.71	8.19	16.3	562	1.69	37.3	5.36	Clear
		SAMPLED @		1710							

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11D	1710	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grunberg **Sample Time:** 1710

Date Sampled: 4/1/24 **Sampler Signature:**

Notes: Pumprate= 150 mL/m @ 1635

Version: 07/30/2020

SW-1

Groundwater Sampling Form

Sample ID: SW-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenbag
Date: 4/4/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1025	—	—	—	—	6.22	15.3	60.1	8.02	89.9	241	Reddish Brown

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-1	1020	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenbag	**Sample Time:** 1020
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

Stream is Flowing

Version: 07/30/2020

SW-2

Groundwater Sampling Form

Sample ID: SW-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grimsley
Date: 4/4/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro Horiba turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0902	—	—	—	—	6.64	12.3	226.0	7.98	107.5	32.4	lt tan

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-2	0905	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grimsley	**Sample Time:** 0905
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

Stream is flowing

Version: 07/30/2020

SW-3

Groundwater Sampling Form

Sample ID: SW-3

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/4/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI 810 Horiba Turbidity probe

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0920	—	—	—	—	6.59	12.5	168.0	8.64	85.1	46.3	Light tan

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-3	0924	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg	**Sample Time:** 0924
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

Stream is flowing

SW-4

Groundwater Sampling Form

Sample ID: SW-4

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Grumbey
Date: 4/4/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro Horiba Turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1065	—	—	—	—	5.57	15.2	104.1	9.86	109.2	99.6	Hazy

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-4	1080	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
	↓	Cl, F, SO4	1 - 250 mL Poly	N/A
	↓	TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Grumbey	**Sample Time:** 1080
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

Stream is flowing

Version: 07/30/2020

SW-5

Groundwater Sampling Form

Sample ID: SW-5

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/4/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pig Horiba Turbidity Meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1300	—	—	—	—	6.69	14.8	101.3	9.32	42.7	823	Brown

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-5	1255	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg **Sample Time:** 1255

Date Sampled: 4/4/2024 **Sampler Signature:**

Notes: Pumprate= N/A

Stream is flowing

Version: 07/30/2020

SW-6

Groundwater Sampling Form

Sample ID: SW-6

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Charles Greenberg
Date: 4/4/2024	**Weather:** Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI Pro Hanna turbidity meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1616	—	—	—	—	6.02	15.9	35.4	6.98	95.4	404	Brown

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-6	1635	Radium 226/228	2 - 1 L Poly	HNO3
	↓	6010/6020/7470	1 - 250 mL Poly	HNO3
	↓	Cl, F, SO4	1 - 250 mL Poly	N/A
	↓	TDS	1 - 500 mL Poly	N/A

Sampled By: Charles Greenberg	**Sample Time:** 1635
Date Sampled: 4/4/2024	**Sampler Signature:**

Notes: Pumprate= N/A

Stagnant water

B

Appendix B – Laboratory Results, Chains of Custody, and Quality Control Data

This page intentionally left blank.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

February 20, 2024

Mark Filardi
HDR
440 S. Church St
Suite 900
Charlotte, NC 28202

RE: Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Dear Mark Filardi:

Enclosed are the analytical results for sample(s) received by the laboratory on January 26, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angela M. Baioni

Angela Baioni
angela.baioni@pacelabs.com
612-473-6801
Project Manager

Enclosures

cc: Charles Gruenberg
Zach Hector, HDR
Cameron Hosmer
Alexandra Lefitz, HDR Engineering
Brian Spillane, HDR
Ben Weiserbs, HDR

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92710460001	**BG-1**	Water	01/23/24 09:15	01/26/24 15:47
92710460002	**BG-2**	Water	01/24/24 09:15	01/26/24 15:47
92710460003	**DUP**	Water	01/23/24 13:40	01/26/24 15:47
92710460004	**EQBL**	Water	01/26/24 11:20	01/26/24 15:47
92710460005	**LEACHATE**	Water	01/22/24 14:25	01/26/24 15:47
92710460006	**MW-1**	Water	01/23/24 12:25	01/26/24 15:47
92710460007	**MW-10**	Water	01/25/24 10:40	01/26/24 15:47
92710460008	**MW-11**	Water	01/24/24 10:40	01/26/24 15:47
92710460009	**MW-11D**	Water	01/24/24 11:30	01/26/24 15:47
92710460010	**MW-2**	Water	01/26/24 09:30	01/26/24 15:47
92710460011	**MW-2D**	Water	01/26/24 10:55	01/26/24 15:47
92710460012	**MW-3**	Water	01/24/24 15:25	01/26/24 15:47
92710460013	**MW-4**	Water	01/24/24 14:35	01/26/24 15:47
92710460014	**MW-5**	Water	01/25/24 09:25	01/26/24 15:47
92710460015	**MW-6**	Water	01/23/24 13:30	01/26/24 15:47
92710460016	**MW-7R**	Water	01/25/24 15:05	01/26/24 15:47
92710460017	**MW-8**	Water	01/23/24 16:35	01/26/24 15:47
92710460018	**MW-9**	Water	01/25/24 11:55	01/26/24 15:47
92710460019	**SW-1**	Water	01/22/24 12:45	01/26/24 15:47
92710460020	**SW-2**	Water	01/22/24 13:25	01/26/24 15:47
92710460021	**SW-3**	Water	01/22/24 13:50	01/26/24 15:47
92710460022	**SW-4**	Water	01/22/24 15:10	01/26/24 15:47
92710460023	**SW-5**	Water	01/22/24 16:00	01/26/24 15:47
92710460024	**SW-6**	Water	01/22/24 15:35	01/26/24 15:47

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92710460001	**BG-1**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460002	**BG-2**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460003	**DUP**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460004	**EQBL**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	RVS	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460005	**LEACHATE**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460006	**MW-1**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460007	**MW-10**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	RVS	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460008	**MW-11**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460009	**MW-11D**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460010	**MW-2**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	RVS	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460011	**MW-2D**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	RVS	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460012	**MW-3**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KML	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460013	**MW-4**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460014	**MW-5**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	RVS	1	PASI-A

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460015	**MW-6**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460016	**MW-7R**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	RVS	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460017	**MW-8**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460018	**MW-9**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	RVS	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460019	**SW-1**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460020	**SW-2**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460021	**SW-3**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460022	**SW-4**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460023	**SW-5**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92710460024	**SW-6**	EPA 6010D	DBB1	16	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JAY	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-PA = Pace Analytical Services - Greensburg

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460001	**BG-1**					
EPA 6010D	Barium	297	ug/L	5.0	02/01/24 20:04	
EPA 6010D	Calcium	26300	ug/L	100	02/01/24 20:04	
EPA 6010D	Chromium	1.5J	ug/L	5.0	02/01/24 15:09	
EPA 6010D	Nickel	1.6J	ug/L	5.0	02/01/24 15:09	
EPA 6010D	Vanadium	6.1	ug/L	5.0	02/01/24 15:09	
EPA 6010D	Zinc	8.4J	ug/L	10.0	02/01/24 15:09	
EPA 6020B	Lithium	51.1	ug/L	2.5	01/29/24 20:41	
EPA 903.1	Radium-226	-0.780 ± 0.631 (1.46) C:NA T:90%	pCi/L		02/12/24 14:48	
EPA 904.0	Radium-228	0.171 ± 0.311 (0.683) C:84% T:85%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	0.171 ± 0.942 (2.14)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	566	mg/L	50.0	01/28/24 13:51	
EPA 300.0 Rev 2.1 1993	Chloride	202	mg/L	4.0	01/28/24 04:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	01/27/24 14:24	
EPA 300.0 Rev 2.1 1993	Sulfate	20.9	mg/L	1.0	01/27/24 14:24	
92710460002	**BG-2**					
EPA 6010D	Barium	51.8	ug/L	10.0	02/01/24 20:21	
EPA 6010D	Calcium	107000	ug/L	200	02/01/24 20:21	
EPA 6010D	Chromium	0.67J	ug/L	5.0	02/01/24 15:21	
EPA 6010D	Cobalt	0.75J	ug/L	5.0	02/01/24 15:21	
EPA 6010D	Molybdenum	4.7J	ug/L	5.0	02/01/24 15:21	
EPA 6010D	Nickel	2.4J	ug/L	5.0	02/01/24 15:21	
EPA 6020B	Boron	11.4J	ug/L	50.0	01/30/24 14:04	
EPA 6020B	Lithium	18.1	ug/L	2.5	01/30/24 14:04	
EPA 903.1	Radium-226	-0.236 ± 0.434 (0.985) C:NA T:89%	pCi/L		02/12/24 14:48	
EPA 904.0	Radium-228	-0.271 ± 0.229 (0.611) C:87% T:88%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	0.000 ± 0.663 (1.60)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	1040	mg/L	50.0	01/29/24 11:46	
EPA 300.0 Rev 2.1 1993	Chloride	247	mg/L	5.0	01/28/24 04:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.34	mg/L	0.10	01/27/24 14:39	
EPA 300.0 Rev 2.1 1993	Sulfate	131	mg/L	5.0	01/28/24 04:43	
92710460003	**DUP**					
EPA 6010D	Barium	62.7	ug/L	5.0	02/01/24 20:24	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460003	**DUP**					
EPA 6010D	Calcium	33800	ug/L	100	02/01/24 20:24	
EPA 6010D	Chromium	0.77J	ug/L	5.0	02/01/24 15:24	
EPA 6010D	Nickel	2.0J	ug/L	5.0	02/01/24 15:24	
EPA 6010D	Zinc	7.9J	ug/L	10.0	02/01/24 15:24	
EPA 6020B	Lithium	27.3	ug/L	2.5	01/30/24 14:29	
EPA 903.1	Radium-226	0.191 ± 0.571 (1.06) C:NA T:93%	pCi/L		02/12/24 14:48	
EPA 904.0	Radium-228	0.696 ± 0.379 (0.666) C:80% T:85%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	0.887 ± 0.950 (1.73)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	594	mg/L	50.0	01/28/24 13:52	
EPA 300.0 Rev 2.1 1993	Chloride	187	mg/L	4.0	01/28/24 04:57	
EPA 300.0 Rev 2.1 1993	Fluoride	0.37	mg/L	0.10	01/27/24 14:54	
EPA 300.0 Rev 2.1 1993	Sulfate	28.4	mg/L	1.0	01/27/24 14:54	
92710460004	**EQBL**					
EPA 903.1	Radium-226	-0.0584 ± 0.549 (1.10) C:NA T:91%	pCi/L		02/12/24 14:48	
EPA 904.0	Radium-228	0.337 ± 0.304 (0.611) C:87% T:86%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	0.337 ± 0.853 (1.71)	pCi/L		02/20/24 15:42	
92710460005	**LEACHATE**					
EPA 6010D	Antimony	3.9J	ug/L	5.0	02/01/24 15:35	
EPA 6010D	Arsenic	62.1	ug/L	10.0	02/01/24 15:35	
EPA 6010D	Barium	58.8	ug/L	5.0	02/01/24 15:35	
EPA 6010D	Calcium	349000	ug/L	1000	02/01/24 20:30	
EPA 6010D	Chromium	0.93J	ug/L	5.0	02/01/24 15:35	
EPA 6010D	Molybdenum	183	ug/L	5.0	02/01/24 15:35	
EPA 6010D	Nickel	4.5J	ug/L	5.0	02/01/24 15:35	
EPA 6010D	Vanadium	5.3	ug/L	5.0	02/01/24 15:35	
EPA 6010D	Zinc	71.2	ug/L	10.0	02/01/24 15:35	
EPA 6020B	Boron	3340	ug/L	2500	01/30/24 14:48	
EPA 6020B	Lithium	51.3	ug/L	2.5	01/29/24 21:28	
EPA 6020B	Thallium	0.091J	ug/L	0.20	01/29/24 21:28	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460005	**LEACHATE**					
EPA 903.1	Radium-226	-0.211 ± 0.533 (1.17) C:NA T:80%	pCi/L		02/12/24 14:48	
EPA 904.0	Radium-228	0.434 ± 0.430 (0.893) C:87% T:83%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	0.434 ± 0.963 (2.06)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	1550	mg/L	50.0	01/28/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	19.4	mg/L	1.0	01/27/24 15:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.36	mg/L	0.10	01/27/24 15:24	
EPA 300.0 Rev 2.1 1993	Sulfate	494	mg/L	11.0	01/28/24 05:11	
92710460006	**MW-1**					
EPA 6010D	Barium	102	ug/L	5.0	02/01/24 15:38	
EPA 6010D	Calcium	73700	ug/L	100	02/01/24 15:38	
EPA 6010D	Chromium	8.6	ug/L	5.0	02/01/24 15:38	
EPA 6010D	Copper	1.6J	ug/L	5.0	02/01/24 15:38	
EPA 6010D	Lead	1.6J	ug/L	5.0	02/01/24 15:38	
EPA 6010D	Nickel	7.4	ug/L	5.0	02/01/24 15:38	
EPA 6010D	Vanadium	9.8	ug/L	5.0	02/01/24 15:38	
EPA 6010D	Zinc	35.3	ug/L	10.0	02/01/24 15:38	
EPA 6020B	Lithium	25.0	ug/L	2.5	01/29/24 21:33	
EPA 903.1	Radium-226	0.191 ± 0.717 (1.32) C:NA T:94%	pCi/L		02/12/24 14:48	
EPA 904.0	Radium-228	0.648 ± 0.400 (0.751) C:89% T:87%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	0.839 ± 1.12 (2.07)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	506	mg/L	50.0	01/28/24 13:52	
EPA 300.0 Rev 2.1 1993	Chloride	176	mg/L	4.0	01/28/24 05:25	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	01/27/24 16:09	
EPA 300.0 Rev 2.1 1993	Sulfate	5.7	mg/L	1.0	01/27/24 16:09	
92710460007	**MW-10**					
EPA 6010D	Barium	89.7	ug/L	5.0	02/01/24 15:40	
EPA 6010D	Calcium	23200	ug/L	100	02/01/24 15:40	
EPA 6010D	Chromium	1.0J	ug/L	5.0	02/01/24 15:40	
EPA 6010D	Molybdenum	15.6	ug/L	5.0	02/01/24 15:40	
EPA 6010D	Vanadium	1.7J	ug/L	5.0	02/01/24 15:40	
EPA 6020B	Boron	21.4J	ug/L	50.0	01/30/24 14:58	
EPA 6020B	Lithium	5.0	ug/L	2.5	01/29/24 21:37	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460007	**MW-10**					
EPA 903.1	Radium-226	0.189 ± 0.711 (1.31) C:NA T:91%	pCi/L		02/12/24 14:48	
EPA 904.0	Radium-228	0.962 ± 0.405 (0.630) C:86% T:84%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	1.15 ± 1.12 (1.94)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	350	mg/L	25.0	01/29/24 21:01	
EPA 300.0 Rev 2.1 1993	Chloride	29.0	mg/L	1.0	01/27/24 16:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.10	01/27/24 16:24	
EPA 300.0 Rev 2.1 1993	Sulfate	2.6	mg/L	1.0	01/27/24 16:24	
92710460008	**MW-11**					
EPA 6010D	Antimony	3.8J	ug/L	5.0	02/01/24 15:43	
EPA 6010D	Barium	130	ug/L	5.0	02/01/24 15:43	
EPA 6010D	Calcium	69400	ug/L	100	02/01/24 15:43	
EPA 6010D	Chromium	7.9	ug/L	5.0	02/01/24 15:43	
EPA 6010D	Cobalt	0.80J	ug/L	5.0	02/01/24 15:43	
EPA 6010D	Copper	5.3	ug/L	5.0	02/01/24 15:43	
EPA 6010D	Nickel	3.7J	ug/L	5.0	02/01/24 15:43	
EPA 6020B	Lithium	19.5	ug/L	2.5	01/29/24 21:42	
EPA 903.1	Radium-226	-0.0642 ± 0.519 (1.07) C:NA T:90%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.811 ± 0.468 (0.880) C:85% T:87%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	0.811 ± 0.987 (1.95)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	296	mg/L	50.0	01/29/24 11:46	
EPA 300.0 Rev 2.1 1993	Chloride	74.5	mg/L	1.0	01/27/24 16:39	
EPA 300.0 Rev 2.1 1993	Sulfate	2.4	mg/L	1.0	01/27/24 16:39	
92710460009	**MW-11D**					
EPA 6010D	Arsenic	3.2J	ug/L	10.0	02/01/24 15:46	
EPA 6010D	Barium	116	ug/L	5.0	02/01/24 15:46	
EPA 6010D	Calcium	16500	ug/L	100	02/01/24 15:46	
EPA 6010D	Molybdenum	4.1J	ug/L	5.0	02/01/24 15:46	
EPA 6010D	Nickel	1.2J	ug/L	5.0	02/01/24 15:46	
EPA 6010D	Zinc	4.6J	ug/L	10.0	02/01/24 15:46	
EPA 6020B	Boron	41.7J	ug/L	50.0	01/30/24 15:08	
EPA 6020B	Lithium	19.3	ug/L	2.5	01/29/24 21:47	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460009	**MW-11D**					
EPA 903.1	Radium-226	-0.0638 ± 0.484 (1.01) C:NA T:89%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.208 ± 0.334 (0.724) C:88% T:86%	pCi/L		02/09/24 15:41	
Total Radium Calculation	Total Radium	0.208 ± 0.818 (1.73)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	332	mg/L	25.0	01/29/24 11:46	
EPA 300.0 Rev 2.1 1993	Chloride	55.4	mg/L	1.0	01/27/24 16:54	
EPA 300.0 Rev 2.1 1993	Fluoride	0.46	mg/L	0.10	01/27/24 16:54	
EPA 300.0 Rev 2.1 1993	Sulfate	16.1	mg/L	1.0	01/27/24 16:54	
92710460010	**MW-2**					
EPA 6010D	Barium	90.8	ug/L	5.0	02/01/24 15:49	
EPA 6010D	Calcium	34300	ug/L	100	02/01/24 15:49	
EPA 6010D	Chromium	2.2J	ug/L	5.0	02/01/24 15:49	
EPA 6010D	Copper	0.95J	ug/L	5.0	02/01/24 15:49	
EPA 6010D	Nickel	2.3J	ug/L	5.0	02/01/24 15:49	
EPA 6010D	Zinc	3.6J	ug/L	10.0	02/01/24 15:49	
EPA 6020B	Lithium	41.2	ug/L	2.5	01/29/24 21:51	
EPA 6020B	Thallium	0.11J	ug/L	0.20	01/29/24 21:51	
EPA 903.1	Radium-226	0.242 ± 0.504 (0.908) C:NA T:89%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.863 ± 0.391 (0.628) C:85% T:84%	pCi/L		02/09/24 15:39	
Total Radium Calculation	Total Radium	1.11 ± 0.895 (1.54)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	1270	mg/L	167	01/29/24 21:04	
EPA 300.0 Rev 2.1 1993	Chloride	489	mg/L	11.0	01/28/24 05:39	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	01/27/24 17:09	M1
EPA 300.0 Rev 2.1 1993	Sulfate	51.7	mg/L	1.0	01/27/24 17:09	M1
92710460011	**MW-2D**					
EPA 6010D	Arsenic	20.8	ug/L	10.0	02/01/24 15:52	
EPA 6010D	Barium	137	ug/L	5.0	02/01/24 15:52	
EPA 6010D	Calcium	10200	ug/L	100	02/01/24 15:52	
EPA 6010D	Chromium	12.4	ug/L	5.0	02/01/24 15:52	
EPA 6010D	Copper	4.5J	ug/L	5.0	02/01/24 15:52	
EPA 6010D	Molybdenum	333	ug/L	5.0	02/01/24 15:52	
EPA 6010D	Nickel	4.5J	ug/L	5.0	02/01/24 15:52	
EPA 6010D	Selenium	16.7	ug/L	10.0	02/01/24 15:52	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460011	**MW-2D**					
EPA 6010D	Vanadium	61.0	ug/L	5.0	02/01/24 15:52	
EPA 6010D	Zinc	3.1J	ug/L	10.0	02/01/24 15:52	
EPA 6020B	Boron	29.8J	ug/L	50.0	01/30/24 15:18	
EPA 6020B	Lithium	136	ug/L	2.5	01/29/24 21:56	
EPA 903.1	Radium-226	-0.0607 ± 0.429 (0.912) C:NA T:86%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.520 ± 0.314 (0.563) C:86% T:85%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	0.520 ± 0.743 (1.48)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	640	mg/L	50.0	01/29/24 21:04	
EPA 300.0 Rev 2.1 1993	Chloride	168	mg/L	4.0	01/28/24 06:50	
EPA 300.0 Rev 2.1 1993	Fluoride	2.4	mg/L	0.10	01/27/24 17:53	
EPA 300.0 Rev 2.1 1993	Sulfate	52.5	mg/L	1.0	01/27/24 17:53	
92710460012	**MW-3**					
EPA 6010D	Barium	753	ug/L	5.0	02/01/24 15:55	
EPA 6010D	Calcium	186000	ug/L	1000	02/01/24 20:33	
EPA 6010D	Chromium	1.2J	ug/L	5.0	02/01/24 15:55	
EPA 6010D	Molybdenum	8.5	ug/L	5.0	02/01/24 15:55	
EPA 6010D	Nickel	1.8J	ug/L	5.0	02/01/24 15:55	
EPA 6010D	Vanadium	2.7J	ug/L	5.0	02/01/24 15:55	
EPA 6010D	Zinc	4.3J	ug/L	10.0	02/01/24 15:55	
EPA 6020B	Boron	46.5J	ug/L	50.0	01/30/24 15:23	
EPA 6020B	Lithium	85.3	ug/L	2.5	01/29/24 22:01	
EPA 903.1	Radium-226	0.664 ± 0.620 (0.958) C:NA T:89%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.924 ± 0.424 (0.707) C:85% T:85%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	1.59 ± 1.04 (1.67)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	2120	mg/L	125	01/29/24 11:46	
EPA 300.0 Rev 2.1 1993	Chloride	1070	mg/L	24.0	01/28/24 07:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.27	mg/L	0.10	01/27/24 18:08	
EPA 300.0 Rev 2.1 1993	Sulfate	13.0	mg/L	1.0	01/27/24 18:08	
92710460013	**MW-4**					
EPA 6010D	Barium	277	ug/L	25.0	01/31/24 14:47	
EPA 6010D	Calcium	54400	ug/L	500	01/31/24 14:47	
EPA 6010D	Chromium	0.74J	ug/L	5.0	01/30/24 19:54	
EPA 6010D	Cobalt	3.9J	ug/L	5.0	01/30/24 19:54	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460013	**MW-4**					
EPA 6010D	Copper	0.90J	ug/L	5.0	01/30/24 19:54	
EPA 6010D	Nickel	5.3	ug/L	5.0	01/30/24 19:54	
EPA 6010D	Zinc	8.8J	ug/L	10.0	01/30/24 19:54	
EPA 6020B	Lithium	36.9	ug/L	2.5	01/29/24 22:38	
EPA 903.1	Radium-226	0.422 ± 0.518 (0.851) C:NA T:88%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.344 ± 0.352 (0.728) C:87% T:83%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	0.766 ± 0.870 (1.58)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	1080	mg/L	50.0	01/29/24 11:46	
EPA 300.0 Rev 2.1 1993	Chloride	312	mg/L	7.0	01/28/24 07:19	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.10	01/27/24 18:23	
EPA 300.0 Rev 2.1 1993	Sulfate	13.1	mg/L	1.0	01/27/24 18:23	
92710460014	**MW-5**					
EPA 6010D	Barium	90.6	ug/L	25.0	01/31/24 14:59	
EPA 6010D	Calcium	8030	ug/L	500	01/31/24 14:59	
EPA 6010D	Chromium	1.5J	ug/L	5.0	01/30/24 20:05	
EPA 6010D	Copper	1.1J	ug/L	5.0	01/30/24 20:05	
EPA 6010D	Nickel	1.3J	ug/L	5.0	01/30/24 20:05	
EPA 6010D	Zinc	5.2J	ug/L	10.0	01/30/24 20:05	
EPA 6020B	Boron	9.0J	ug/L	50.0	01/30/24 15:34	
EPA 6020B	Lithium	10	ug/L	2.5	01/29/24 22:43	
EPA 903.1	Radium-226	-0.640 ± 0.552 (1.27) C:NA T:91%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.201 ± 0.287 (0.616) C:84% T:87%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	0.201 ± 0.839 (1.89)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	203	mg/L	25.0	01/29/24 21:01	
EPA 300.0 Rev 2.1 1993	Chloride	18.1	mg/L	1.0	01/27/24 19:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.59	mg/L	0.10	01/27/24 19:21	
EPA 300.0 Rev 2.1 1993	Sulfate	3.9	mg/L	1.0	01/27/24 19:21	
92710460015	**MW-6**					
EPA 6010D	Barium	63.8	ug/L	25.0	01/31/24 15:01	
EPA 6010D	Calcium	32400	ug/L	500	01/31/24 15:01	
EPA 6010D	Chromium	0.64J	ug/L	5.0	01/30/24 20:09	
EPA 6010D	Nickel	0.92J	ug/L	5.0	01/30/24 20:09	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460015	**MW-6**					
EPA 6010D	Zinc	4.8J	ug/L	10.0	01/30/24 20:09	
EPA 6020B	Lithium	25.7	ug/L	2.5	01/29/24 23:08	
EPA 903.1	Radium-226	0.207 ± 0.823 (1.51) C:NA T:88%	pCi/L		02/12/24 15:01	
EPA 904.0	Radium-228	0.573 ± 0.353 (0.650) C:85% T:84%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	0.780 ± 1.18 (2.16)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	618	mg/L	50.0	01/28/24 13:52	
EPA 300.0 Rev 2.1 1993	Chloride	188	mg/L	4.0	01/28/24 07:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.38	mg/L	0.10	01/27/24 19:35	
EPA 300.0 Rev 2.1 1993	Sulfate	28.3	mg/L	1.0	01/27/24 19:35	
92710460016	**MW-7R**					
EPA 6010D	Barium	308	ug/L	25.0	01/31/24 15:04	
EPA 6010D	Calcium	93600	ug/L	500	01/31/24 15:04	
EPA 6010D	Chromium	2.5J	ug/L	5.0	01/30/24 20:12	
EPA 6010D	Copper	0.74J	ug/L	5.0	01/30/24 20:12	
EPA 6010D	Nickel	1.4J	ug/L	5.0	01/30/24 20:12	
EPA 6010D	Vanadium	2.9J	ug/L	5.0	01/30/24 20:12	
EPA 6020B	Boron	9.4J	ug/L	50.0	01/30/24 16:02	
EPA 6020B	Lithium	27.0	ug/L	2.5	01/29/24 23:22	
EPA 903.1	Radium-226	0.0664 ± 0.504 (0.998) C:NA T:88%	pCi/L		02/12/24 15:15	
EPA 904.0	Radium-228	-0.134 ± 0.247 (0.616) C:87% T:92%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	0.0664 ± 0.751 (1.61)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	872	mg/L	50.0	01/29/24 21:01	
EPA 300.0 Rev 2.1 1993	Chloride	277	mg/L	6.0	01/28/24 07:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	01/27/24 19:50	
EPA 300.0 Rev 2.1 1993	Sulfate	15.2	mg/L	1.0	01/27/24 19:50	
92710460017	**MW-8**					
EPA 6010D	Barium	1070	ug/L	25.0	01/31/24 15:13	
EPA 6010D	Calcium	119000	ug/L	500	01/31/24 15:13	
EPA 6010D	Chromium	1.6J	ug/L	5.0	01/30/24 20:14	
EPA 6010D	Copper	1.2J	ug/L	5.0	01/30/24 20:14	
EPA 6010D	Nickel	1.4J	ug/L	5.0	01/30/24 20:14	
EPA 6010D	Vanadium	1.8J	ug/L	5.0	01/30/24 20:14	
EPA 6010D	Zinc	10.5	ug/L	10.0	01/30/24 20:14	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460017	**MW-8**					
EPA 6020B	Boron	10.5J	ug/L	50.0	01/30/24 16:21	
EPA 6020B	Lithium	33.6	ug/L	2.5	01/29/24 23:27	
EPA 903.1	Radium-226	-0.0627 ± 0.408 (0.884) C:NA T:90%	pCi/L		02/12/24 15:15	
EPA 904.0	Radium-228	0.825 ± 0.491 (0.931) C:82% T:84%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	0.825 ± 0.899 (1.82)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	1120	mg/L	50.0	01/28/24 13:52	
EPA 300.0 Rev 2.1 1993	Chloride	441	mg/L	10.0	01/28/24 08:01	
EPA 300.0 Rev 2.1 1993	Fluoride	0.073J	mg/L	0.10	01/27/24 20:04	
EPA 300.0 Rev 2.1 1993	Sulfate	6.8	mg/L	1.0	01/27/24 20:04	
92710460018	**MW-9**					
EPA 6010D	Barium	194	ug/L	5.0	01/31/24 14:07	
EPA 6010D	Calcium	35700	ug/L	100	01/31/24 14:07	
EPA 6010D	Chromium	21.6J	ug/L	25.0	01/31/24 15:16	
EPA 6010D	Molybdenum	22.2J	ug/L	25.0	01/31/24 15:16	
EPA 6010D	Nickel	13.7J	ug/L	25.0	01/31/24 15:16	
EPA 6020B	Boron	33.6J	ug/L	50.0	01/30/24 16:26	
EPA 6020B	Lithium	3.5	ug/L	2.5	01/29/24 23:32	
EPA 903.1	Radium-226	0.000 ± 1.77 (3.74) C:NA T:92%	pCi/L		02/12/24 15:15	
EPA 904.0	Radium-228	1.87 ± 1.61 (3.27) C:87% T:87%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	1.87 ± 3.38 (7.01)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	529	mg/L	25.0	01/29/24 21:01	
EPA 300.0 Rev 2.1 1993	Chloride	11.0	mg/L	1.0	01/27/24 20:18	
EPA 300.0 Rev 2.1 1993	Fluoride	0.22	mg/L	0.10	01/27/24 20:18	
EPA 300.0 Rev 2.1 1993	Sulfate	72.5	mg/L	1.0	01/27/24 20:18	
92710460019	**SW-1**					
EPA 6010D	Arsenic	6.1J	ug/L	10.0	01/31/24 14:15	
EPA 6010D	Barium	330	ug/L	5.0	01/31/24 14:15	
EPA 6010D	Beryllium	1.1	ug/L	1.0	01/31/24 14:15	
EPA 6010D	Calcium	3680	ug/L	100	01/31/24 14:15	
EPA 6010D	Chromium	12.0	ug/L	5.0	01/31/24 14:15	
EPA 6010D	Cobalt	0.74J	ug/L	5.0	01/31/24 14:15	
EPA 6010D	Copper	11.6	ug/L	5.0	01/31/24 14:15	
EPA 6010D	Lead	23.6	ug/L	5.0	01/31/24 14:15	
EPA 6010D	Nickel	7.6	ug/L	5.0	01/31/24 14:15	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460019	**SW-1**					
EPA 6010D	Vanadium	45.3	ug/L	5.0	01/31/24 14:15	
EPA 6010D	Zinc	48.1	ug/L	10.0	01/31/24 14:15	
EPA 6020B	Lithium	5.9	ug/L	2.5	01/29/24 23:37	
EPA 6020B	Thallium	0.14J	ug/L	0.20	01/29/24 23:37	
EPA 903.1	Radium-226	0.480 ± 0.528 (0.845) C:NA T:94%	pCi/L		02/12/24 15:15	
EPA 904.0	Radium-228	1.08 ± 0.481 (0.814) C:85% T:87%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	1.56 ± 1.01 (1.66)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	997	mg/L	25.0	01/28/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	01/27/24 20:33	
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	01/27/24 20:33	
EPA 300.0 Rev 2.1 1993	Sulfate	1.9	mg/L	1.0	01/27/24 20:33	
92710460020	**SW-2**					
EPA 6010D	Barium	86.2	ug/L	5.0	01/31/24 14:18	
EPA 6010D	Calcium	15000	ug/L	100	01/31/24 14:18	
EPA 6010D	Chromium	0.73J	ug/L	5.0	01/31/24 14:18	
EPA 6010D	Copper	0.73J	ug/L	5.0	01/31/24 14:18	
EPA 6010D	Nickel	1.6J	ug/L	5.0	01/31/24 14:18	
EPA 6020B	Thallium	0.089J	ug/L	0.20	01/29/24 23:42	
EPA 903.1	Radium-226	0.000 ± 0.371 (0.784) C:NA T:91%	pCi/L		02/12/24 15:15	
EPA 904.0	Radium-228	0.237 ± 0.383 (0.831) C:84% T:90%	pCi/L		02/09/24 15:40	
Total Radium Calculation	Total Radium	0.237 ± 0.754 (1.62)	pCi/L		02/20/24 15:42	
SM 2540C-2015	Total Dissolved Solids	176	mg/L	25.0	01/28/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	75.6	mg/L	1.0	01/27/24 21:16	M1
EPA 300.0 Rev 2.1 1993	Sulfate	7.8	mg/L	1.0	01/27/24 21:16	
92710460021	**SW-3**					
EPA 6010D	Barium	90.9	ug/L	5.0	01/31/24 14:21	
EPA 6010D	Calcium	13200	ug/L	100	01/31/24 14:21	
EPA 6010D	Chromium	0.98J	ug/L	5.0	01/31/24 14:21	
EPA 6010D	Copper	1.4J	ug/L	5.0	01/31/24 14:21	
EPA 6010D	Nickel	2.3J	ug/L	5.0	01/31/24 14:21	
EPA 6010D	Zinc	4.1J	ug/L	10.0	01/31/24 14:21	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460021	**SW-3**					
EPA 903.1	Radium-226	-0.450 ± 0.771 (1.69) C:NA T:90%	pCi/L		02/06/24 13:00	
EPA 904.0	Radium-228	1.29 ± 0.450 (0.613) C:79% T:86%	pCi/L		02/09/24 12:16	
Total Radium Calculation	Total Radium	1.29 ± 1.22 (2.30)	pCi/L		02/12/24 15:38	
SM 2540C-2015	Total Dissolved Solids	185	mg/L	25.0	01/28/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	73.8	mg/L	1.0	01/27/24 22:28	
EPA 300.0 Rev 2.1 1993	Sulfate	7.8	mg/L	1.0	01/27/24 22:28	
92710460022	**SW-4**					
EPA 6010D	Barium	40.8	ug/L	5.0	01/31/24 14:24	
EPA 6010D	Calcium	2200	ug/L	100	01/31/24 14:24	
EPA 6010D	Chromium	2.0J	ug/L	5.0	01/31/24 14:24	
EPA 6010D	Cobalt	1.7J	ug/L	5.0	01/31/24 14:24	
EPA 6010D	Copper	2.3J	ug/L	5.0	01/31/24 14:24	
EPA 6010D	Lead	2.1J	ug/L	5.0	01/31/24 14:24	
EPA 6010D	Nickel	1.6J	ug/L	5.0	01/31/24 14:24	
EPA 6010D	Vanadium	3.5J	ug/L	5.0	01/31/24 14:24	
EPA 6010D	Zinc	7.2J	ug/L	10.0	01/31/24 14:24	
EPA 6020B	Lithium	0.85J	ug/L	2.5	01/29/24 23:52	
EPA 903.1	Radium-226	0.592 ± 0.868 (1.48) C:NA T:82%	pCi/L		02/06/24 13:00	
EPA 904.0	Radium-228	0.150 ± 0.378 (0.841) C:79% T:90%	pCi/L		02/09/24 12:16	
Total Radium Calculation	Total Radium	0.742 ± 1.25 (2.32)	pCi/L		02/12/24 15:38	
SM 2540C-2015	Total Dissolved Solids	102	mg/L	25.0	01/28/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	8.6	mg/L	1.0	01/27/24 22:42	
EPA 300.0 Rev 2.1 1993	Sulfate	4.9	mg/L	1.0	01/27/24 22:42	
92710460023	**SW-5**					
EPA 6010D	Arsenic	2.9J	ug/L	10.0	01/31/24 14:27	
EPA 6010D	Barium	137	ug/L	5.0	01/31/24 14:27	
EPA 6010D	Beryllium	0.42J	ug/L	1.0	01/31/24 14:27	
EPA 6010D	Calcium	2220	ug/L	100	01/31/24 14:27	
EPA 6010D	Chromium	4.9J	ug/L	5.0	01/31/24 14:27	
EPA 6010D	Copper	4.5J	ug/L	5.0	01/31/24 14:27	
EPA 6010D	Lead	9.4	ug/L	5.0	01/31/24 14:27	
EPA 6010D	Nickel	3.4J	ug/L	5.0	01/31/24 14:27	
EPA 6010D	Vanadium	17.4	ug/L	5.0	01/31/24 14:27	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92710460023	**SW-5**					
EPA 6010D	Zinc	19.9	ug/L	10.0	01/31/24 14:27	
EPA 6020B	Lithium	2.7	ug/L	2.5	01/29/24 23:57	
EPA 6020B	Thallium	0.071J	ug/L	0.20	01/29/24 23:57	
EPA 903.1	Radium-226	-0.301 ± 0.709 (1.59) C:NA T:81%	pCi/L		02/06/24 13:00	
EPA 904.0	Radium-228	0.259 ± 0.323 (0.686) C:81% T:89%	pCi/L		02/09/24 12:16	
Total Radium Calculation	Total Radium	0.259 ± 1.03 (2.28)	pCi/L		02/12/24 15:38	
SM 2540C-2015	Total Dissolved Solids	345	mg/L	25.0	01/28/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	5.1	mg/L	1.0	01/27/24 22:57	
EPA 300.0 Rev 2.1 1993	Fluoride	0.050J	mg/L	0.10	01/27/24 22:57	
EPA 300.0 Rev 2.1 1993	Sulfate	1.8	mg/L	1.0	01/27/24 22:57	
92710460024	**SW-6**					
EPA 6010D	Barium	21.5	ug/L	5.0	01/31/24 14:29	
EPA 6010D	Calcium	1010	ug/L	100	01/31/24 14:29	
EPA 6010D	Chromium	1.7J	ug/L	5.0	01/31/24 14:29	
EPA 6010D	Copper	2.2J	ug/L	5.0	01/31/24 14:29	
EPA 6010D	Nickel	1.5J	ug/L	5.0	01/31/24 14:29	
EPA 6010D	Vanadium	2.8J	ug/L	5.0	01/31/24 14:29	
EPA 6010D	Zinc	3.4J	ug/L	10.0	01/31/24 14:29	
EPA 6020B	Lithium	0.52J	ug/L	2.5	01/30/24 00:02	
EPA 903.1	Radium-226	-0.207 ± 0.758 (1.64) C:NA T:79%	pCi/L		02/06/24 13:00	
EPA 904.0	Radium-228	0.474 ± 0.303 (0.561) C:82% T:88%	pCi/L		02/09/24 12:16	
Total Radium Calculation	Total Radium	0.474 ± 1.06 (2.20)	pCi/L		02/12/24 15:38	
SM 2540C-2015	Total Dissolved Solids	73.0	mg/L	25.0	01/28/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	01/27/24 23:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.10	01/27/24 23:11	
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	01/27/24 23:11	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: BG-1 **Lab ID: 92710460001** Collected: 01/23/24 09:15 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:09	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:09	7440-38-2	
Barium	**297**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 20:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:09	7440-43-9	
Calcium	**26300**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 20:04	7440-70-2	
Chromium	**1.5J**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:09	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:09	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:09	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:09	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:09	7439-98-7	
Nickel	**1.6J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:09	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:09	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:09	7440-22-4	
Vanadium	**6.1**	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:09	7440-62-2	
Zinc	**8.4J**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:09	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 13:59	7440-42-8	
Lithium	**51.1**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 20:41	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 20:41	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:27	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**566**	mg/L	50.0	50.0	1		01/28/24 13:51		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**202**	mg/L	4.0	2.4	4		01/28/24 04:29	16887-00-6	
Fluoride	**0.20**	mg/L	0.10	0.050	1		01/27/24 14:24	16984-48-8	
Sulfate	**20.9**	mg/L	1.0	0.50	1		01/27/24 14:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: BG-2 **Lab ID: 92710460002** Collected: 01/24/24 09:15 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:21	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:21	7440-38-2	
Barium	**51.8**	ug/L	10.0	1.6	2	01/29/24 11:30	02/01/24 20:21	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:21	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:21	7440-43-9	
Calcium	**107000**	ug/L	200	29.5	2	01/29/24 11:30	02/01/24 20:21	7440-70-2	
Chromium	**0.67J**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:21	7440-47-3	
Cobalt	**0.75J**	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:21	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:21	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:21	7439-92-1	
Molybdenum	**4.7J**	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:21	7439-98-7	
Nickel	**2.4J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:21	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:21	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:21	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:21	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:21	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**11.4J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 14:04	7440-42-8	
Lithium	**18.1**	ug/L	2.5	0.50	1	01/29/24 11:25	01/30/24 14:04	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 20:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1040**	mg/L	50.0	50.0	1		01/29/24 11:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**247**	mg/L	5.0	3.0	5		01/28/24 04:43	16887-00-6	
Fluoride	**0.34**	mg/L	0.10	0.050	1		01/27/24 14:39	16984-48-8	
Sulfate	**131**	mg/L	5.0	2.5	5		01/28/24 04:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: DUP **Lab ID: 92710460003** Collected: 01/23/24 13:40 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:24	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:24	7440-38-2	
Barium	**62.7**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 20:24	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:24	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:24	7440-43-9	
Calcium	**33800**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 20:24	7440-70-2	
Chromium	**0.77J**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:24	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:24	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:24	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:24	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:24	7439-98-7	
Nickel	**2.0J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:24	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:24	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:24	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:24	7440-62-2	
Zinc	**7.9J**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:24	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 14:29	7440-42-8	
Lithium	**27.3**	ug/L	2.5	0.50	1	01/29/24 11:25	01/30/24 14:29	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**594**	mg/L	50.0	50.0	1		01/28/24 13:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**187**	mg/L	4.0	2.4	4		01/28/24 04:57	16887-00-6	
Fluoride	**0.37**	mg/L	0.10	0.050	1		01/27/24 14:54	16984-48-8	
Sulfate	**28.4**	mg/L	1.0	0.50	1		01/27/24 14:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: EQBL **Lab ID: 92710460004** Collected: 01/26/24 11:20 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:26	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:26	7440-38-2	
Barium	ND	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 20:27	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:26	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:26	7440-43-9	
Calcium	ND	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 20:27	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:26	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:26	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:26	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:26	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:26	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:26	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:26	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:26	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:26	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:26	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 14:34	7440-42-8	
Lithium	ND	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:23	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		01/29/24 21:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		01/27/24 15:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/27/24 15:09	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		01/27/24 15:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: LEACHATE **Lab ID: 92710460005** Collected: 01/22/24 14:25 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	**3.9J**	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:35	7440-36-0	
Arsenic	**62.1**	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:35	7440-38-2	
Barium	**58.8**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:35	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:35	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:35	7440-43-9	
Calcium	**349000**	ug/L	1000	147	10	01/29/24 11:30	02/01/24 20:30	7440-70-2	
Chromium	**0.93J**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:35	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:35	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:35	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:35	7439-92-1	
Molybdenum	**183**	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:35	7439-98-7	
Nickel	**4.5J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:35	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:35	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:35	7440-22-4	
Vanadium	**5.3**	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:35	7440-62-2	
Zinc	**71.2**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:35	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**3340**	ug/L	2500	425	50	01/29/24 11:25	01/30/24 14:48	7440-42-8	
Lithium	**51.3**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:28	7439-93-2	
Thallium	**0.091J**	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:39	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1550**	mg/L	50.0	50.0	1		01/28/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**19.4**	mg/L	1.0	0.60	1		01/27/24 15:24	16887-00-6	
Fluoride	**0.36**	mg/L	0.10	0.050	1		01/27/24 15:24	16984-48-8	
Sulfate	**494**	mg/L	11.0	5.5	11		01/28/24 05:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-1 **Lab ID: 92710460006** Collected: 01/23/24 12:25 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:38	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:38	7440-38-2	
Barium	**102**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:38	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:38	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:38	7440-43-9	
Calcium	**73700**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 15:38	7440-70-2	
Chromium	**8.6**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:38	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:38	7440-48-4	
Copper	**1.6J**	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:38	7440-50-8	
Lead	**1.6J**	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:38	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:38	7439-98-7	
Nickel	**7.4**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:38	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:38	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:38	7440-22-4	
Vanadium	**9.8**	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:38	7440-62-2	
Zinc	**35.3**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:38	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 14:53	7440-42-8	
Lithium	**25.0**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:33	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:46	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**506**	mg/L	50.0	50.0	1		01/28/24 13:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**176**	mg/L	4.0	2.4	4		01/28/24 05:25	16887-00-6	
Fluoride	**0.17**	mg/L	0.10	0.050	1		01/27/24 16:09	16984-48-8	
Sulfate	**5.7**	mg/L	1.0	0.50	1		01/27/24 16:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-10 **Lab ID: 92710460007** Collected: 01/25/24 10:40 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:40	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:40	7440-38-2	
Barium	**89.7**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:40	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:40	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:40	7440-43-9	
Calcium	**23200**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 15:40	7440-70-2	
Chromium	**1.0J**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:40	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:40	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:40	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:40	7439-92-1	
Molybdenum	**15.6**	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:40	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:40	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:40	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:40	7440-22-4	
Vanadium	**1.7J**	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:40	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:40	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**21.4J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 14:58	7440-42-8	
Lithium	**5.0**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:37	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:48	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**350**	mg/L	25.0	25.0	1		01/29/24 21:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**29.0**	mg/L	1.0	0.60	1		01/27/24 16:24	16887-00-6	
Fluoride	**0.44**	mg/L	0.10	0.050	1		01/27/24 16:24	16984-48-8	
Sulfate	**2.6**	mg/L	1.0	0.50	1		01/27/24 16:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-11 **Lab ID: 92710460008** Collected: 01/24/24 10:40 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	**3.8J**	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:43	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:43	7440-38-2	
Barium	**130**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:43	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:43	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:43	7440-43-9	
Calcium	**69400**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 15:43	7440-70-2	
Chromium	**7.9**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:43	7440-47-3	
Cobalt	**0.80J**	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:43	7440-48-4	
Copper	**5.3**	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:43	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:43	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:43	7439-98-7	
Nickel	**3.7J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:43	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:43	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:43	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:43	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:43	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 15:03	7440-42-8	
Lithium	**19.5**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:42	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:50	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**296**	mg/L	50.0	50.0	1		01/29/24 11:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**74.5**	mg/L	1.0	0.60	1		01/27/24 16:39	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/27/24 16:39	16984-48-8	
Sulfate	**2.4**	mg/L	1.0	0.50	1		01/27/24 16:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-11D **Lab ID: 92710460009** Collected: 01/24/24 11:30 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:46	7440-36-0	
Arsenic	**3.2J**	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:46	7440-38-2	
Barium	**116**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:46	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:46	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:46	7440-43-9	
Calcium	**16500**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 15:46	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:46	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:46	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:46	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:46	7439-92-1	
Molybdenum	**4.1J**	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:46	7439-98-7	
Nickel	**1.2J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:46	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:46	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:46	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:46	7440-62-2	
Zinc	**4.6J**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:46	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**41.7J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 15:08	7440-42-8	
Lithium	**19.3**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:47	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:52	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**332**	mg/L	25.0	25.0	1		01/29/24 11:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**55.4**	mg/L	1.0	0.60	1		01/27/24 16:54	16887-00-6	
Fluoride	**0.46**	mg/L	0.10	0.050	1		01/27/24 16:54	16984-48-8	
Sulfate	**16.1**	mg/L	1.0	0.50	1		01/27/24 16:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-2 **Lab ID: 92710460010** Collected: 01/26/24 09:30 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:49	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:49	7440-38-2	
Barium	**90.8**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:49	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:49	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:49	7440-43-9	
Calcium	**34300**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 15:49	7440-70-2	
Chromium	**2.2J**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:49	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:49	7440-48-4	
Copper	**0.95J**	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:49	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:49	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:49	7439-98-7	
Nickel	**2.3J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:49	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:49	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:49	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:49	7440-62-2	
Zinc	**3.6J**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:49	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 15:13	7440-42-8	
Lithium	**41.2**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:51	7439-93-2	
Thallium	**0.11J**	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:51	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1270**	mg/L	167	167	1		01/29/24 21:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**489**	mg/L	11.0	6.6	11		01/28/24 05:39	16887-00-6	M1
Fluoride	**0.15**	mg/L	0.10	0.050	1		01/27/24 17:09	16984-48-8	M1
Sulfate	**51.7**	mg/L	1.0	0.50	1		01/27/24 17:09	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-2D **Lab ID: 92710460011** Collected: 01/26/24 10:55 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:52	7440-36-0	
Arsenic	**20.8**	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:52	7440-38-2	
Barium	**137**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:52	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:52	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:52	7440-43-9	
Calcium	**10200**	ug/L	100	14.7	1	01/29/24 11:30	02/01/24 15:52	7440-70-2	
Chromium	**12.4**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:52	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:52	7440-48-4	
Copper	**4.5J**	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:52	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:52	7439-92-1	
Molybdenum	**333**	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:52	7439-98-7	
Nickel	**4.5J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:52	7440-02-0	
Selenium	**16.7**	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:52	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:52	7440-22-4	
Vanadium	**61.0**	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:52	7440-62-2	
Zinc	**3.1J**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:52	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**29.8J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 15:18	7440-42-8	
Lithium	**136**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 21:56	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 21:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:56	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**640**	mg/L	50.0	50.0	1		01/29/24 21:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**168**	mg/L	4.0	2.4	4		01/28/24 06:50	16887-00-6	
Fluoride	**2.4**	mg/L	0.10	0.050	1		01/27/24 17:53	16984-48-8	
Sulfate	**52.5**	mg/L	1.0	0.50	1		01/27/24 17:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-3 **Lab ID: 92710460012** Collected: 01/24/24 15:25 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	02/01/24 15:55	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	02/01/24 15:55	7440-38-2	
Barium	**753**	ug/L	5.0	0.79	1	01/29/24 11:30	02/01/24 15:55	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	02/01/24 15:55	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	02/01/24 15:55	7440-43-9	
Calcium	**186000**	ug/L	1000	147	10	01/29/24 11:30	02/01/24 20:33	7440-70-2	
Chromium	**1.2J**	ug/L	5.0	0.63	1	01/29/24 11:30	02/01/24 15:55	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	02/01/24 15:55	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	02/01/24 15:55	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	02/01/24 15:55	7439-92-1	
Molybdenum	**8.5**	ug/L	5.0	2.6	1	01/29/24 11:30	02/01/24 15:55	7439-98-7	
Nickel	**1.8J**	ug/L	5.0	0.88	1	01/29/24 11:30	02/01/24 15:55	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	02/01/24 15:55	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	02/01/24 15:55	7440-22-4	
Vanadium	**2.7J**	ug/L	5.0	1.6	1	01/29/24 11:30	02/01/24 15:55	7440-62-2	
Zinc	**4.3J**	ug/L	10.0	3.0	1	01/29/24 11:30	02/01/24 15:55	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**46.5J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 15:23	7440-42-8	
Lithium	**85.3**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 22:01	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 22:01	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:58	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**2120**	mg/L	125	125	1		01/29/24 11:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1070**	mg/L	24.0	14.4	24		01/28/24 07:04	16887-00-6	
Fluoride	**0.27**	mg/L	0.10	0.050	1		01/27/24 18:08	16984-48-8	
Sulfate	**13.0**	mg/L	1.0	0.50	1		01/27/24 18:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-4 **Lab ID: 92710460013** Collected: 01/24/24 14:35 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/30/24 19:54	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/30/24 19:54	7440-38-2	
Barium	**277**	ug/L	25.0	4.0	5	01/29/24 11:30	01/31/24 14:47	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/30/24 19:54	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/30/24 19:54	7440-43-9	
Calcium	**54400**	ug/L	500	73.7	5	01/29/24 11:30	01/31/24 14:47	7440-70-2	
Chromium	**0.74J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/30/24 19:54	7440-47-3	
Cobalt	**3.9J**	ug/L	5.0	0.44	1	01/29/24 11:30	01/30/24 19:54	7440-48-4	
Copper	**0.90J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/30/24 19:54	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/30/24 19:54	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/30/24 19:54	7439-98-7	
Nickel	**5.3**	ug/L	5.0	0.88	1	01/29/24 11:30	01/30/24 19:54	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/30/24 19:54	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/30/24 19:54	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	01/30/24 19:54	7440-62-2	
Zinc	**8.8J**	ug/L	10.0	3.0	1	01/29/24 11:30	01/30/24 19:54	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 15:30	7440-42-8	
Lithium	**36.9**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 22:38	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 22:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1080**	mg/L	50.0	50.0	1		01/29/24 11:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**312**	mg/L	7.0	4.2	7		01/28/24 07:19	16887-00-6	
Fluoride	**0.44**	mg/L	0.10	0.050	1		01/27/24 18:23	16984-48-8	
Sulfate	**13.1**	mg/L	1.0	0.50	1		01/27/24 18:23	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-5 **Lab ID: 92710460014** Collected: 01/25/24 09:25 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/30/24 20:05	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/30/24 20:05	7440-38-2	
Barium	**90.6**	ug/L	25.0	4.0	5	01/29/24 11:30	01/31/24 14:59	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/30/24 20:05	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/30/24 20:05	7440-43-9	
Calcium	**8030**	ug/L	500	73.7	5	01/29/24 11:30	01/31/24 14:59	7440-70-2	
Chromium	**1.5J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/30/24 20:05	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/30/24 20:05	7440-48-4	
Copper	**1.1J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/30/24 20:05	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/30/24 20:05	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/30/24 20:05	7439-98-7	
Nickel	**1.3J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/30/24 20:05	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/30/24 20:05	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/30/24 20:05	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	01/30/24 20:05	7440-62-2	
Zinc	**5.2J**	ug/L	10.0	3.0	1	01/29/24 11:30	01/30/24 20:05	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**9.0J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 15:34	7440-42-8	
Lithium	**10**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 22:43	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 22:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:02	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**203**	mg/L	25.0	25.0	1		01/29/24 21:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**18.1**	mg/L	1.0	0.60	1		01/27/24 19:21	16887-00-6	
Fluoride	**0.59**	mg/L	0.10	0.050	1		01/27/24 19:21	16984-48-8	
Sulfate	**3.9**	mg/L	1.0	0.50	1		01/27/24 19:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-6 **Lab ID: 92710460015** Collected: 01/23/24 13:30 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/30/24 20:09	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/30/24 20:09	7440-38-2	
Barium	**63.8**	ug/L	25.0	4.0	5	01/29/24 11:30	01/31/24 15:01	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/30/24 20:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/30/24 20:09	7440-43-9	
Calcium	**32400**	ug/L	500	73.7	5	01/29/24 11:30	01/31/24 15:01	7440-70-2	
Chromium	**0.64J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/30/24 20:09	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/30/24 20:09	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	01/29/24 11:30	01/30/24 20:09	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/30/24 20:09	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/30/24 20:09	7439-98-7	
Nickel	**0.92J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/30/24 20:09	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/30/24 20:09	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/30/24 20:09	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	01/30/24 20:09	7440-62-2	
Zinc	**4.8J**	ug/L	10.0	3.0	1	01/29/24 11:30	01/30/24 20:09	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 18:04	7440-42-8	
Lithium	**25.7**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:08	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:08	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**618**	mg/L	50.0	50.0	1		01/28/24 13:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**188**	mg/L	4.0	2.4	4		01/28/24 07:33	16887-00-6	
Fluoride	**0.38**	mg/L	0.10	0.050	1		01/27/24 19:35	16984-48-8	
Sulfate	**28.3**	mg/L	1.0	0.50	1		01/27/24 19:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-7R **Lab ID: 92710460016** Collected: 01/25/24 15:05 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/30/24 20:12	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/30/24 20:12	7440-38-2	
Barium	**308**	ug/L	25.0	4.0	5	01/29/24 11:30	01/31/24 15:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/30/24 20:12	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/30/24 20:12	7440-43-9	
Calcium	**93600**	ug/L	500	73.7	5	01/29/24 11:30	01/31/24 15:04	7440-70-2	
Chromium	**2.5J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/30/24 20:12	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/30/24 20:12	7440-48-4	
Copper	**0.74J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/30/24 20:12	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/30/24 20:12	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/30/24 20:12	7439-98-7	
Nickel	**1.4J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/30/24 20:12	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/30/24 20:12	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/30/24 20:12	7440-22-4	
Vanadium	**2.9J**	ug/L	5.0	1.6	1	01/29/24 11:30	01/30/24 20:12	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	01/29/24 11:30	01/30/24 20:12	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**9.4J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:02	7440-42-8	
Lithium	**27.0**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:22	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:11	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**872**	mg/L	50.0	50.0	1		01/29/24 21:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**277**	mg/L	6.0	3.6	6		01/28/24 07:47	16887-00-6	
Fluoride	**0.13**	mg/L	0.10	0.050	1		01/27/24 19:50	16984-48-8	
Sulfate	**15.2**	mg/L	1.0	0.50	1		01/27/24 19:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-8 **Lab ID: 92710460017** Collected: 01/23/24 16:35 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/30/24 20:14	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/30/24 20:14	7440-38-2	
Barium	**1070**	ug/L	25.0	4.0	5	01/29/24 11:30	01/31/24 15:13	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/30/24 20:14	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/30/24 20:14	7440-43-9	
Calcium	**119000**	ug/L	500	73.7	5	01/29/24 11:30	01/31/24 15:13	7440-70-2	
Chromium	**1.6J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/30/24 20:14	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/30/24 20:14	7440-48-4	
Copper	**1.2J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/30/24 20:14	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/30/24 20:14	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/30/24 20:14	7439-98-7	
Nickel	**1.4J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/30/24 20:14	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/30/24 20:14	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/30/24 20:14	7440-22-4	
Vanadium	**1.8J**	ug/L	5.0	1.6	1	01/29/24 11:30	01/30/24 20:14	7440-62-2	
Zinc	**10.5**	ug/L	10.0	3.0	1	01/29/24 11:30	01/30/24 20:14	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**10.5J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:21	7440-42-8	
Lithium	**33.6**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:27	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:13	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1120**	mg/L	50.0	50.0	1		01/28/24 13:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**441**	mg/L	10.0	6.0	10		01/28/24 08:01	16887-00-6	
Fluoride	**0.073J**	mg/L	0.10	0.050	1		01/27/24 20:04	16984-48-8	
Sulfate	**6.8**	mg/L	1.0	0.50	1		01/27/24 20:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-9 **Lab ID: 92710460018** Collected: 01/25/24 11:55 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	25.0	17.9	5	01/29/24 11:30	01/31/24 15:16	7440-36-0	
Arsenic	ND	ug/L	50.0	12.3	5	01/29/24 11:30	01/31/24 15:16	7440-38-2	
Barium	**194**	ug/L	5.0	0.79	1	01/29/24 11:30	01/31/24 14:07	7440-39-3	
Beryllium	ND	ug/L	5.0	0.80	5	01/29/24 11:30	01/31/24 15:16	7440-41-7	
Cadmium	ND	ug/L	5.0	1.5	5	01/29/24 11:30	01/31/24 15:16	7440-43-9	
Calcium	**35700**	ug/L	100	14.7	1	01/29/24 11:30	01/31/24 14:07	7440-70-2	
Chromium	**21.6J**	ug/L	25.0	3.2	5	01/29/24 11:30	01/31/24 15:16	7440-47-3	
Cobalt	ND	ug/L	25.0	2.2	5	01/29/24 11:30	01/31/24 15:16	7440-48-4	
Copper	ND	ug/L	25.0	3.1	5	01/29/24 11:30	01/31/24 15:16	7440-50-8	
Lead	ND	ug/L	25.0	6.8	5	01/29/24 11:30	01/31/24 15:16	7439-92-1	
Molybdenum	**22.2J**	ug/L	25.0	13.2	5	01/29/24 11:30	01/31/24 15:16	7439-98-7	
Nickel	**13.7J**	ug/L	25.0	4.4	5	01/29/24 11:30	01/31/24 15:16	7440-02-0	
Selenium	ND	ug/L	50.0	20.6	5	01/29/24 11:30	01/31/24 15:16	7782-49-2	
Silver	ND	ug/L	25.0	2.5	5	01/29/24 11:30	01/31/24 15:16	7440-22-4	
Vanadium	ND	ug/L	25.0	7.8	5	01/29/24 11:30	01/31/24 15:16	7440-62-2	
Zinc	ND	ug/L	50.0	15.2	5	01/29/24 11:30	01/31/24 15:16	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**33.6J**	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:26	7440-42-8	
Lithium	**3.5**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:32	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:15	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**529**	mg/L	25.0	25.0	1		01/29/24 21:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**11.0**	mg/L	1.0	0.60	1		01/27/24 20:18	16887-00-6	
Fluoride	**0.22**	mg/L	0.10	0.050	1		01/27/24 20:18	16984-48-8	
Sulfate	**72.5**	mg/L	1.0	0.50	1		01/27/24 20:18	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-1 **Lab ID: 92710460019** Collected: 01/22/24 12:45 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/31/24 14:15	7440-36-0	
Arsenic	**6.1J**	ug/L	10.0	2.5	1	01/29/24 11:30	01/31/24 14:15	7440-38-2	
Barium	**330**	ug/L	5.0	0.79	1	01/29/24 11:30	01/31/24 14:15	7440-39-3	
Beryllium	**1.1**	ug/L	1.0	0.16	1	01/29/24 11:30	01/31/24 14:15	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/31/24 14:15	7440-43-9	
Calcium	**3680**	ug/L	100	14.7	1	01/29/24 11:30	01/31/24 14:15	7440-70-2	
Chromium	**12.0**	ug/L	5.0	0.63	1	01/29/24 11:30	01/31/24 14:15	7440-47-3	
Cobalt	**0.74J**	ug/L	5.0	0.44	1	01/29/24 11:30	01/31/24 14:15	7440-48-4	
Copper	**11.6**	ug/L	5.0	0.62	1	01/29/24 11:30	01/31/24 14:15	7440-50-8	
Lead	**23.6**	ug/L	5.0	1.4	1	01/29/24 11:30	01/31/24 14:15	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/31/24 14:15	7439-98-7	
Nickel	**7.6**	ug/L	5.0	0.88	1	01/29/24 11:30	01/31/24 14:15	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/31/24 14:15	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/31/24 14:15	7440-22-4	
Vanadium	**45.3**	ug/L	5.0	1.6	1	01/29/24 11:30	01/31/24 14:15	7440-62-2	
Zinc	**48.1**	ug/L	10.0	3.0	1	01/29/24 11:30	01/31/24 14:15	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	100	17.0	2	01/29/24 11:25	01/30/24 18:14	7440-42-8	D3
Lithium	**5.9**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:37	7439-93-2	
Thallium	**0.14J**	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:17	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**997**	mg/L	25.0	25.0	1		01/28/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.3**	mg/L	1.0	0.60	1		01/27/24 20:33	16887-00-6	
Fluoride	**0.14**	mg/L	0.10	0.050	1		01/27/24 20:33	16984-48-8	
Sulfate	**1.9**	mg/L	1.0	0.50	1		01/27/24 20:33	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-2 **Lab ID: 92710460020** Collected: 01/22/24 13:25 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/31/24 14:18	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/31/24 14:18	7440-38-2	
Barium	**86.2**	ug/L	5.0	0.79	1	01/29/24 11:30	01/31/24 14:18	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/31/24 14:18	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/31/24 14:18	7440-43-9	
Calcium	**15000**	ug/L	100	14.7	1	01/29/24 11:30	01/31/24 14:18	7440-70-2	
Chromium	**0.73J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/31/24 14:18	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/31/24 14:18	7440-48-4	
Copper	**0.73J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/31/24 14:18	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/31/24 14:18	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/31/24 14:18	7439-98-7	
Nickel	**1.6J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/31/24 14:18	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/31/24 14:18	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/31/24 14:18	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	01/31/24 14:18	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	01/29/24 11:30	01/31/24 14:18	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:35	7440-42-8	
Lithium	ND	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:42	7439-93-2	
Thallium	**0.089J**	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 15:19	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**176**	mg/L	25.0	25.0	1		01/28/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**75.6**	mg/L	1.0	0.60	1		01/27/24 21:16	16887-00-6	M1
Fluoride	ND	mg/L	0.10	0.050	1		01/27/24 21:16	16984-48-8	M1
Sulfate	**7.8**	mg/L	1.0	0.50	1		01/27/24 21:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-3 **Lab ID: 92710460021** Collected: 01/22/24 13:50 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/31/24 14:21	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/31/24 14:21	7440-38-2	
Barium	**90.9**	ug/L	5.0	0.79	1	01/29/24 11:30	01/31/24 14:21	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/31/24 14:21	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/31/24 14:21	7440-43-9	
Calcium	**13200**	ug/L	100	14.7	1	01/29/24 11:30	01/31/24 14:21	7440-70-2	
Chromium	**0.98J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/31/24 14:21	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/31/24 14:21	7440-48-4	
Copper	**1.4J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/31/24 14:21	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/31/24 14:21	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/31/24 14:21	7439-98-7	
Nickel	**2.3J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/31/24 14:21	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/31/24 14:21	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/31/24 14:21	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	01/29/24 11:30	01/31/24 14:21	7440-62-2	
Zinc	**4.1J**	ug/L	10.0	3.0	1	01/29/24 11:30	01/31/24 14:21	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:40	7440-42-8	
Lithium	ND	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:47	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:08	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**185**	mg/L	25.0	25.0	1		01/28/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**73.8**	mg/L	1.0	0.60	1		01/27/24 22:28	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/27/24 22:28	16984-48-8	
Sulfate	**7.8**	mg/L	1.0	0.50	1		01/27/24 22:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-4 **Lab ID: 92710460022** Collected: 01/22/24 15:10 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/31/24 14:24	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/31/24 14:24	7440-38-2	
Barium	**40.8**	ug/L	5.0	0.79	1	01/29/24 11:30	01/31/24 14:24	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/31/24 14:24	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/31/24 14:24	7440-43-9	
Calcium	**2200**	ug/L	100	14.7	1	01/29/24 11:30	01/31/24 14:24	7440-70-2	
Chromium	**2.0J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/31/24 14:24	7440-47-3	
Cobalt	**1.7J**	ug/L	5.0	0.44	1	01/29/24 11:30	01/31/24 14:24	7440-48-4	
Copper	**2.3J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/31/24 14:24	7440-50-8	
Lead	**2.1J**	ug/L	5.0	1.4	1	01/29/24 11:30	01/31/24 14:24	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/31/24 14:24	7439-98-7	
Nickel	**1.6J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/31/24 14:24	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/31/24 14:24	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/31/24 14:24	7440-22-4	
Vanadium	**3.5J**	ug/L	5.0	1.6	1	01/29/24 11:30	01/31/24 14:24	7440-62-2	
Zinc	**7.2J**	ug/L	10.0	3.0	1	01/29/24 11:30	01/31/24 14:24	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:44	7440-42-8	
Lithium	**0.85J**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:52	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**102**	mg/L	25.0	25.0	1		01/28/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**8.6**	mg/L	1.0	0.60	1		01/27/24 22:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		01/27/24 22:42	16984-48-8	
Sulfate	**4.9**	mg/L	1.0	0.50	1		01/27/24 22:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-5 **Lab ID: 92710460023** Collected: 01/22/24 16:00 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/31/24 14:27	7440-36-0	
Arsenic	**2.9J**	ug/L	10.0	2.5	1	01/29/24 11:30	01/31/24 14:27	7440-38-2	
Barium	**137**	ug/L	5.0	0.79	1	01/29/24 11:30	01/31/24 14:27	7440-39-3	
Beryllium	**0.42J**	ug/L	1.0	0.16	1	01/29/24 11:30	01/31/24 14:27	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/31/24 14:27	7440-43-9	
Calcium	**2220**	ug/L	100	14.7	1	01/29/24 11:30	01/31/24 14:27	7440-70-2	
Chromium	**4.9J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/31/24 14:27	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/31/24 14:27	7440-48-4	
Copper	**4.5J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/31/24 14:27	7440-50-8	
Lead	**9.4**	ug/L	5.0	1.4	1	01/29/24 11:30	01/31/24 14:27	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/31/24 14:27	7439-98-7	
Nickel	**3.4J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/31/24 14:27	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/31/24 14:27	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/31/24 14:27	7440-22-4	
Vanadium	**17.4**	ug/L	5.0	1.6	1	01/29/24 11:30	01/31/24 14:27	7440-62-2	
Zinc	**19.9**	ug/L	10.0	3.0	1	01/29/24 11:30	01/31/24 14:27	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:49	7440-42-8	
Lithium	**2.7**	ug/L	2.5	0.50	1	01/29/24 11:25	01/29/24 23:57	7439-93-2	
Thallium	**0.071J**	ug/L	0.20	0.050	1	01/29/24 11:25	01/29/24 23:57	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:12	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**345**	mg/L	25.0	25.0	1		01/28/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**5.1**	mg/L	1.0	0.60	1		01/27/24 22:57	16887-00-6	
Fluoride	**0.050J**	mg/L	0.10	0.050	1		01/27/24 22:57	16984-48-8	
Sulfate	**1.8**	mg/L	1.0	0.50	1		01/27/24 22:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-6 **Lab ID: 92710460024** Collected: 01/22/24 15:35 Received: 01/26/24 15:47 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	01/29/24 11:30	01/31/24 14:29	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	01/29/24 11:30	01/31/24 14:29	7440-38-2	
Barium	**21.5**	ug/L	5.0	0.79	1	01/29/24 11:30	01/31/24 14:29	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	01/29/24 11:30	01/31/24 14:29	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	01/29/24 11:30	01/31/24 14:29	7440-43-9	
Calcium	**1010**	ug/L	100	14.7	1	01/29/24 11:30	01/31/24 14:29	7440-70-2	
Chromium	**1.7J**	ug/L	5.0	0.63	1	01/29/24 11:30	01/31/24 14:29	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	01/29/24 11:30	01/31/24 14:29	7440-48-4	
Copper	**2.2J**	ug/L	5.0	0.62	1	01/29/24 11:30	01/31/24 14:29	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	01/29/24 11:30	01/31/24 14:29	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	01/29/24 11:30	01/31/24 14:29	7439-98-7	
Nickel	**1.5J**	ug/L	5.0	0.88	1	01/29/24 11:30	01/31/24 14:29	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	01/29/24 11:30	01/31/24 14:29	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	01/29/24 11:30	01/31/24 14:29	7440-22-4	
Vanadium	**2.8J**	ug/L	5.0	1.6	1	01/29/24 11:30	01/31/24 14:29	7440-62-2	
Zinc	**3.4J**	ug/L	10.0	3.0	1	01/29/24 11:30	01/31/24 14:29	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	8.5	1	01/29/24 11:25	01/30/24 16:54	7440-42-8	
Lithium	**0.52J**	ug/L	2.5	0.50	1	01/29/24 11:25	01/30/24 00:02	7439-93-2	
Thallium	ND	ug/L	0.20	0.050	1	01/29/24 11:25	01/30/24 00:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	01/27/24 15:02	01/31/24 14:14	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**73.0**	mg/L	25.0	25.0	1		01/28/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**2.2**	mg/L	1.0	0.60	1		01/27/24 23:11	16887-00-6	
Fluoride	**0.051J**	mg/L	0.10	0.050	1		01/27/24 23:11	16984-48-8	
Sulfate	**1.3**	mg/L	1.0	0.50	1		01/27/24 23:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828365 | Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A | Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460021, 92710460022, 92710460023, 92710460024

METHOD BLANK: 4282698 Matrix: Water
Associated Lab Samples: 92710460021, 92710460022, 92710460023, 92710460024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	01/31/24 13:30	

LABORATORY CONTROL SAMPLE: 4282699

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282700 4282701

Parameter	Units	92709971004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.5	101	100	75-125	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828366 | Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A | Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020

METHOD BLANK: 4282702 Matrix: Water

Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	01/31/24 14:23	

LABORATORY CONTROL SAMPLE: 4282703

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282704 4282705

Parameter	Units	92710460001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.5	2.4	97	96	75-125	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828494
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012

METHOD BLANK: 4282981 Matrix: Water
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.6	02/01/24 15:04	
Arsenic	ug/L	ND	10.0	2.5	02/01/24 15:04	
Barium	ug/L	ND	5.0	0.79	02/01/24 19:58	
Beryllium	ug/L	ND	1.0	0.16	02/01/24 15:04	
Cadmium	ug/L	ND	1.0	0.29	02/01/24 15:04	
Calcium	ug/L	ND	100	14.7	02/01/24 19:58	
Chromium	ug/L	ND	5.0	0.63	02/01/24 15:04	
Cobalt	ug/L	ND	5.0	0.44	02/01/24 15:04	
Copper	ug/L	ND	5.0	0.62	02/01/24 15:04	
Lead	ug/L	ND	5.0	1.4	02/01/24 15:04	
Molybdenum	ug/L	ND	5.0	2.6	02/01/24 15:04	
Nickel	ug/L	ND	5.0	0.88	02/01/24 15:04	
Selenium	ug/L	ND	10.0	4.1	02/01/24 15:04	
Silver	ug/L	ND	5.0	0.49	02/01/24 15:04	
Vanadium	ug/L	ND	5.0	1.6	02/01/24 15:04	
Zinc	ug/L	ND	10.0	3.0	02/01/24 15:04	

LABORATORY CONTROL SAMPLE: 4282982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	498	100	80-120	
Arsenic	ug/L	500	495	99	80-120	
Barium	ug/L	500	512	102	80-120	
Beryllium	ug/L	500	494	99	80-120	
Cadmium	ug/L	500	493	99	80-120	
Calcium	ug/L	5000	5170	103	80-120	
Chromium	ug/L	500	490	98	80-120	
Cobalt	ug/L	500	495	99	80-120	
Copper	ug/L	500	502	100	80-120	
Lead	ug/L	500	490	98	80-120	
Molybdenum	ug/L	500	494	99	80-120	
Nickel	ug/L	500	490	98	80-120	
Selenium	ug/L	500	488	98	80-120	
Silver	ug/L	250	248	99	80-120	
Vanadium	ug/L	500	489	98	80-120	
Zinc	ug/L	500	486	97	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282983 4282984

Parameter	Units	92710460001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	527	524	105	105	75-125	0	20	
Arsenic	ug/L	ND	500	500	531	526	106	105	75-125	1	20	
Barium	ug/L	297	500	500	800	795	101	100	75-125	1	20	
Beryllium	ug/L	ND	500	500	525	522	105	104	75-125	1	20	
Cadmium	ug/L	ND	500	500	504	499	101	100	75-125	1	20	
Calcium	ug/L	26300	5000	5000	31700	31500	107	104	75-125	1	20	
Chromium	ug/L	1.5J	500	500	504	499	100	100	75-125	1	20	
Cobalt	ug/L	ND	500	500	507	503	101	101	75-125	1	20	
Copper	ug/L	ND	500	500	529	526	106	105	75-125	1	20	
Lead	ug/L	ND	500	500	491	487	98	97	75-125	1	20	
Molybdenum	ug/L	ND	500	500	505	504	101	101	75-125	0	20	
Nickel	ug/L	1.6J	500	500	500	493	100	98	75-125	1	20	
Selenium	ug/L	ND	500	500	525	529	105	106	75-125	1	20	
Silver	ug/L	ND	250	250	260	259	104	103	75-125	0	20	
Vanadium	ug/L	6.1	500	500	516	511	102	101	75-125	1	20	
Zinc	ug/L	8.4J	500	500	514	507	101	100	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828495
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

METHOD BLANK: 4282985 Matrix: Water
Associated Lab Samples: 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.6	01/30/24 19:48	
Arsenic	ug/L	ND	10.0	2.5	01/30/24 19:48	
Barium	ug/L	ND	5.0	0.79	01/31/24 14:01	
Beryllium	ug/L	ND	1.0	0.16	01/30/24 19:48	
Cadmium	ug/L	ND	1.0	0.29	01/30/24 19:48	
Calcium	ug/L	16.3J	100	14.7	01/31/24 14:01	
Chromium	ug/L	ND	5.0	0.63	01/30/24 19:48	
Cobalt	ug/L	ND	5.0	0.44	01/30/24 19:48	
Copper	ug/L	ND	5.0	0.62	01/30/24 19:48	
Lead	ug/L	ND	5.0	1.4	01/30/24 19:48	
Molybdenum	ug/L	ND	5.0	2.6	01/30/24 19:48	
Nickel	ug/L	ND	5.0	0.88	01/30/24 19:48	
Selenium	ug/L	ND	10.0	4.1	01/30/24 19:48	
Silver	ug/L	ND	5.0	0.49	01/30/24 19:48	
Vanadium	ug/L	ND	5.0	1.6	01/30/24 19:48	
Zinc	ug/L	ND	10.0	3.0	01/30/24 19:48	

LABORATORY CONTROL SAMPLE: 4282986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	503	101	80-120	
Arsenic	ug/L	500	503	101	80-120	
Barium	ug/L	500	477	95	80-120	
Beryllium	ug/L	500	509	102	80-120	
Cadmium	ug/L	500	497	99	80-120	
Calcium	ug/L	5000	4840	97	80-120	
Chromium	ug/L	500	503	101	80-120	
Cobalt	ug/L	500	505	101	80-120	
Copper	ug/L	500	503	101	80-120	
Lead	ug/L	500	494	99	80-120	
Molybdenum	ug/L	500	507	101	80-120	
Nickel	ug/L	500	503	101	80-120	
Selenium	ug/L	500	499	100	80-120	
Silver	ug/L	250	250	100	80-120	
Vanadium	ug/L	500	503	101	80-120	
Zinc	ug/L	500	501	100	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282987 4282988

Parameter	Units	92710460013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	509	528	102	106	75-125	4	20	
Arsenic	ug/L	ND	500	500	511	530	102	106	75-125	4	20	
Barium	ug/L	277	500	500	772	783	99	101	75-125	1	20	
Beryllium	ug/L	ND	500	500	514	534	103	107	75-125	4	20	
Cadmium	ug/L	ND	500	500	476	495	95	99	75-125	4	20	
Calcium	ug/L	54400	5000	5000	59200	59900	96	111	75-125	1	20	
Chromium	ug/L	0.74J	500	500	492	512	98	102	75-125	4	20	
Cobalt	ug/L	3.9J	500	500	493	513	98	102	75-125	4	20	
Copper	ug/L	0.90J	500	500	537	557	107	111	75-125	4	20	
Lead	ug/L	ND	500	500	481	501	96	100	75-125	4	20	
Molybdenum	ug/L	ND	500	500	496	517	99	103	75-125	4	20	
Nickel	ug/L	5.3	500	500	488	508	96	100	75-125	4	20	
Selenium	ug/L	ND	500	500	524	544	105	109	75-125	4	20	
Silver	ug/L	ND	250	250	261	271	104	108	75-125	4	20	
Vanadium	ug/L	ND	500	500	503	523	100	104	75-125	4	20	
Zinc	ug/L	8.8J	500	500	487	506	96	99	75-125	4	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828497
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012

METHOD BLANK: 4282989 Matrix: Water
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	50.0	8.5	01/30/24 13:49	
Lithium	ug/L	ND	2.5	0.50	01/29/24 20:32	
Thallium	ug/L	ND	0.20	0.050	01/29/24 20:32	

LABORATORY CONTROL SAMPLE: 4282990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	50	44.9J	90	80-120	
Lithium	ug/L	50	49.0	98	80-120	
Thallium	ug/L	25	24.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282991 4282992

Parameter	Units	92710460002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	11.4J	50	50	64.5	66.0	106	109	75-125	2	20	
Lithium	ug/L	18.1	50	50	64.2	67.9	92	100	75-125	6	20	
Thallium	ug/L	ND	25	25	25.3	25.3	101	101	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828498
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

METHOD BLANK: 4282993 Matrix: Water
Associated Lab Samples: 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	50.0	8.5	01/30/24 15:20	
Lithium	ug/L	ND	2.5	0.50	01/29/24 22:28	
Thallium	ug/L	ND	0.20	0.050	01/29/24 22:28	

LABORATORY CONTROL SAMPLE: 4282994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	50	52.1	104	80-120	
Lithium	ug/L	50	50.4	101	80-120	
Thallium	ug/L	25	24.6	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282995 4282996

Parameter	Units	92710460014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	9.0J	50	50	62.3	61.4	106	105	75-125	1	20	
Lithium	ug/L	10	50	50	59.5	57.1	99	94	75-125	4	20	
Thallium	ug/L	ND	25	25	24.7	23.9	99	95	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828409
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460001, 92710460003, 92710460005, 92710460006, 92710460015, 92710460017, 92710460019, 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

METHOD BLANK: 4282786 Matrix: Water
Associated Lab Samples: 92710460001, 92710460003, 92710460005, 92710460006, 92710460015, 92710460017, 92710460019, 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	01/28/24 13:50	

LABORATORY CONTROL SAMPLE: 4282787

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	262	105	90-110	

SAMPLE DUPLICATE: 4282788

Parameter	Units	92710460005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1550	1570	1	25	

SAMPLE DUPLICATE: 4282789

Parameter	Units	92710259003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	101	107	6	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828510 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460002, 92710460008, 92710460009, 92710460012, 92710460013

METHOD BLANK: 4283045 Matrix: Water
Associated Lab Samples: 92710460002, 92710460008, 92710460009, 92710460012, 92710460013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	01/29/24 11:45	

LABORATORY CONTROL SAMPLE: 4283046

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	264	106	90-110	

SAMPLE DUPLICATE: 4283048

Parameter	Units	92709974009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	483	455	6	25	

SAMPLE DUPLICATE: 4283049

Parameter	Units	92709930001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	122	129	6	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828691 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460004, 92710460007, 92710460010, 92710460011, 92710460014, 92710460016, 92710460018

METHOD BLANK: 4283604 Matrix: Water
Associated Lab Samples: 92710460004, 92710460007, 92710460010, 92710460011, 92710460014, 92710460016, 92710460018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	01/29/24 20:50	

LABORATORY CONTROL SAMPLE: 4283605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	262	105	90-110	

SAMPLE DUPLICATE: 4283627

Parameter	Units	92710406004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	78.0	73.0	7	25	

SAMPLE DUPLICATE: 4283628

Parameter	Units	92710406005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	210	208	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828358
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019

METHOD BLANK: 4282669 Matrix: Water
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/27/24 13:10	
Fluoride	mg/L	ND	0.10	0.050	01/27/24 13:10	
Sulfate	mg/L	ND	1.0	0.50	01/27/24 13:10	

LABORATORY CONTROL SAMPLE: 4282670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.0	98	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	49.0	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282671 4282672

Parameter	Units	92710121002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	13.2	50	50	61.4	63.5	97	101	90-110	3	10	
Fluoride	mg/L	0.47	2.5	2.5	3.2	3.4	110	115	90-110	4	10	M1
Sulfate	mg/L	22.9	50	50	71.1	72.8	96	100	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282673 4282674

Parameter	Units	92710460010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	489	50	50	528	525	77	71	90-110	1	10	M1
Fluoride	mg/L	0.15	2.5	2.5	3.0	3.0	113	115	90-110	1	10	M1
Sulfate	mg/L	51.7	50	50	89.2	88.1	75	73	90-110	1	10	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 828359
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

METHOD BLANK: 4282679 Matrix: Water
Associated Lab Samples: 92710460020, 92710460021, 92710460022, 92710460023, 92710460024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	01/27/24 20:47	
Fluoride	mg/L	ND	0.10	0.050	01/27/24 20:47	
Sulfate	mg/L	ND	1.0	0.50	01/27/24 20:47	

LABORATORY CONTROL SAMPLE: 4282680

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.3	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282681 4282682

Parameter	Units	92710460020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	75.6	50	50	115	117	79	82	90-110	1	10	M1
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	109	112	90-110	3	10	M1
Sulfate	mg/L	7.8	50	50	58.1	59.4	101	103	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4282683 4282684

Parameter	Units	92710325002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	27.2	50	50	76.6	76.5	99	99	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	4.2	4.2	167	167	90-110	0	10	M1
Sulfate	mg/L	ND	50	50	52.3	52.2	104	104	90-110	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: BG-1 **Lab ID: 92710460001** Collected: 01/23/24 09:15 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.780 ± 0.631 (1.46) C:NA T:90%**	pCi/L	02/12/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.171 ± 0.311 (0.683) C:84% T:85%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.171 ± 0.942 (2.14)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: BG-2 **Lab ID: 92710460002** Collected: 01/24/24 09:15 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.236 ± 0.434 (0.985) C:NA T:89%**	pCi/L	02/12/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.271 ± 0.229 (0.611) C:87% T:88%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.663 (1.60)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: DUP **Lab ID: 92710460003** Collected: 01/23/24 13:40 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.191 ± 0.571 (1.06) C:NA T:93%**	pCi/L	02/12/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.696 ± 0.379 (0.666) C:80% T:85%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.887 ± 0.950 (1.73)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: EQBL **Lab ID: 92710460004** Collected: 01/26/24 11:20 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0584 ± 0.549 (1.10) C:NA T:91%**	pCi/L	02/12/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.337 ± 0.304 (0.611) C:87% T:86%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.337 ± 0.853 (1.71)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: LEACHATE **Lab ID: 92710460005** Collected: 01/22/24 14:25 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.211 ± 0.533 (1.17) C:NA T:80%**	pCi/L	02/12/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.434 ± 0.430 (0.893) C:87% T:83%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.434 ± 0.963 (2.06)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-1 **Lab ID: 92710460006** Collected: 01/23/24 12:25 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.191 ± 0.717 (1.32) C:NA T:94%**	pCi/L	02/12/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.648 ± 0.400 (0.751) C:89% T:87%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.839 ± 1.12 (2.07)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-10 **Lab ID: 92710460007** Collected: 01/25/24 10:40 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.189 ± 0.711 (1.31) C:NA T:91%**	pCi/L	02/12/24 14:48	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.962 ± 0.405 (0.630) C:86% T:84%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.15 ± 1.12 (1.94)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-11 **Lab ID: 92710460008** Collected: 01/24/24 10:40 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0642 ± 0.519 (1.07) C:NA T:90%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.811 ± 0.468 (0.880) C:85% T:87%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.811 ± 0.987 (1.95)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-11D **Lab ID: 92710460009** Collected: 01/24/24 11:30 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0638 ± 0.484 (1.01) C:NA T:89%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.208 ± 0.334 (0.724) C:88% T:86%**	pCi/L	02/09/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.208 ± 0.818 (1.73)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-2 **Lab ID: 92710460010** Collected: 01/26/24 09:30 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.242 ± 0.504 (0.908) C:NA T:89%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.863 ± 0.391 (0.628) C:85% T:84%**	pCi/L	02/09/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.11 ± 0.895 (1.54)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-2D **Lab ID: 92710460011** Collected: 01/26/24 10:55 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0607 ± 0.429 (0.912) C:NA T:86%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.520 ± 0.314 (0.563) C:86% T:85%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.520 ± 0.743 (1.48)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-3 **Lab ID: 92710460012** Collected: 01/24/24 15:25 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.664 ± 0.620 (0.958) C:NA T:89%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.924 ± 0.424 (0.707) C:85% T:85%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.59 ± 1.04 (1.67)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-4 **Lab ID: 92710460013** Collected: 01/24/24 14:35 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.422 ± 0.518 (0.851) C:NA T:88%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.344 ± 0.352 (0.728) C:87% T:83%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.766 ± 0.870 (1.58)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-5 **Lab ID: 92710460014** Collected: 01/25/24 09:25 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.640 ± 0.552 (1.27) C:NA T:91%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.201 ± 0.287 (0.616) C:84% T:87%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.201 ± 0.839 (1.89)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-6 **Lab ID: 92710460015** Collected: 01/23/24 13:30 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.207 ± 0.823 (1.51) C:NA T:88%**	pCi/L	02/12/24 15:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.573 ± 0.353 (0.650) C:85% T:84%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.780 ± 1.18 (2.16)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-7R **Lab ID: 92710460016** Collected: 01/25/24 15:05 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0664 ± 0.504 (0.998) C:NA T:88%**	pCi/L	02/12/24 15:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.134 ± 0.247 (0.616) C:87% T:92%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0664 ± 0.751 (1.61)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-8 **Lab ID: 92710460017** Collected: 01/23/24 16:35 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0627 ± 0.408 (0.884) C:NA T:90%**	pCi/L	02/12/24 15:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.825 ± 0.491 (0.931) C:82% T:84%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.825 ± 0.899 (1.82)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: MW-9 **Lab ID: 92710460018** Collected: 01/25/24 11:55 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 1.77 (3.74) C:NA T:92%**	pCi/L	02/12/24 15:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.87 ± 1.61 (3.27) C:87% T:87%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.87 ± 3.38 (7.01)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-1 **Lab ID: 92710460019** Collected: 01/22/24 12:45 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.480 ± 0.528 (0.845) C:NA T:94%**	pCi/L	02/12/24 15:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.08 ± 0.481 (0.814) C:85% T:87%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.56 ± 1.01 (1.66)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-2 **Lab ID: 92710460020** Collected: 01/22/24 13:25 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.371 (0.784) C:NA T:91%**	pCi/L	02/12/24 15:15	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.237 ± 0.383 (0.831) C:84% T:90%**	pCi/L	02/09/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.237 ± 0.754 (1.62)**	pCi/L	02/20/24 15:42	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-3 **Lab ID: 92710460021** Collected: 01/22/24 13:50 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.450 ± 0.771 (1.69) C:NA T:90%**	pCi/L	02/06/24 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.29 ± 0.450 (0.613) C:79% T:86%**	pCi/L	02/09/24 12:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.29 ± 1.22 (2.30)**	pCi/L	02/12/24 15:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-4 **Lab ID: 92710460022** Collected: 01/22/24 15:10 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.592 ± 0.868 (1.48) C:NA T:82%**	pCi/L	02/06/24 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.150 ± 0.378 (0.841) C:79% T:90%**	pCi/L	02/09/24 12:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.742 ± 1.25 (2.32)**	pCi/L	02/12/24 15:38	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-5 **Lab ID: 92710460023** Collected: 01/22/24 16:00 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.301 ± 0.709 (1.59) C:NA T:81%**	pCi/L	02/06/24 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.259 ± 0.323 (0.686) C:81% T:89%**	pCi/L	02/09/24 12:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.259 ± 1.03 (2.28)**	pCi/L	02/12/24 15:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Sample: SW-6 **Lab ID: 92710460024** Collected: 01/22/24 15:35 Received: 01/26/24 15:47 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.207 ± 0.758 (1.64) C:NA T:79%**	pCi/L	02/06/24 13:00	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.474 ± 0.303 (0.561) C:82% T:88%**	pCi/L	02/09/24 12:16	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.474 ± 1.06 (2.20)**	pCi/L	02/12/24 15:38	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 646092 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92710460021, 92710460022, 92710460023, 92710460024

METHOD BLANK: 3148085 Matrix: Water
Associated Lab Samples: 92710460021, 92710460022, 92710460023, 92710460024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.241 ± 0.265 (0.547) C:78% T:88%	pCi/L	02/09/24 12:17	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 646089 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020

METHOD BLANK: 3148081 Matrix: Water
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.176 ± 0.268 (0.577) C:81% T:90%	pCi/L	02/09/24 12:14	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 646090
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92710460021, 92710460022, 92710460023, 92710460024

METHOD BLANK: 3148082 Matrix: Water
Associated Lab Samples: 92710460021, 92710460022, 92710460023, 92710460024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.164 ± 0.395 (0.764) C:NA T:74%	pCi/L	02/06/24 13:00	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

QC Batch: 646088 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020

METHOD BLANK: 3148080 Matrix: Water
Associated Lab Samples: 92710460001, 92710460002, 92710460003, 92710460004, 92710460005, 92710460006, 92710460007, 92710460008, 92710460009, 92710460010, 92710460011, 92710460012, 92710460013, 92710460014, 92710460015, 92710460016, 92710460017, 92710460018, 92710460019, 92710460020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.231 ± 0.241 (0.340) C:NA T:89%	pCi/L	02/12/24 14:48	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92710460001	**BG-1**	EPA 3010A	828494	EPA 6010D	829482
92710460002	**BG-2**	EPA 3010A	828494	EPA 6010D	829482
92710460003	**DUP**	EPA 3010A	828494	EPA 6010D	829482
92710460004	**EQBL**	EPA 3010A	828494	EPA 6010D	829482
92710460005	**LEACHATE**	EPA 3010A	828494	EPA 6010D	829482
92710460006	**MW-1**	EPA 3010A	828494	EPA 6010D	829482
92710460007	**MW-10**	EPA 3010A	828494	EPA 6010D	829482
92710460008	**MW-11**	EPA 3010A	828494	EPA 6010D	829482
92710460009	**MW-11D**	EPA 3010A	828494	EPA 6010D	829482
92710460010	**MW-2**	EPA 3010A	828494	EPA 6010D	829482
92710460011	**MW-2D**	EPA 3010A	828494	EPA 6010D	829482
92710460012	**MW-3**	EPA 3010A	828494	EPA 6010D	829482
92710460013	**MW-4**	EPA 3010A	828495	EPA 6010D	828989
92710460014	**MW-5**	EPA 3010A	828495	EPA 6010D	828989
92710460015	**MW-6**	EPA 3010A	828495	EPA 6010D	828989
92710460016	**MW-7R**	EPA 3010A	828495	EPA 6010D	828989
92710460017	**MW-8**	EPA 3010A	828495	EPA 6010D	828989
92710460018	**MW-9**	EPA 3010A	828495	EPA 6010D	828989
92710460019	**SW-1**	EPA 3010A	828495	EPA 6010D	828989
92710460020	**SW-2**	EPA 3010A	828495	EPA 6010D	828989
92710460021	**SW-3**	EPA 3010A	828495	EPA 6010D	828989
92710460022	**SW-4**	EPA 3010A	828495	EPA 6010D	828989
92710460023	**SW-5**	EPA 3010A	828495	EPA 6010D	828989
92710460024	**SW-6**	EPA 3010A	828495	EPA 6010D	828989
92710460001	**BG-1**	EPA 3010A	828497	EPA 6020B	828703
92710460002	**BG-2**	EPA 3010A	828497	EPA 6020B	828703
92710460003	**DUP**	EPA 3010A	828497	EPA 6020B	828703
92710460004	**EQBL**	EPA 3010A	828497	EPA 6020B	828703
92710460005	**LEACHATE**	EPA 3010A	828497	EPA 6020B	828703
92710460006	**MW-1**	EPA 3010A	828497	EPA 6020B	828703
92710460007	**MW-10**	EPA 3010A	828497	EPA 6020B	828703
92710460008	**MW-11**	EPA 3010A	828497	EPA 6020B	828703
92710460009	**MW-11D**	EPA 3010A	828497	EPA 6020B	828703
92710460010	**MW-2**	EPA 3010A	828497	EPA 6020B	828703
92710460011	**MW-2D**	EPA 3010A	828497	EPA 6020B	828703
92710460012	**MW-3**	EPA 3010A	828497	EPA 6020B	828703
92710460013	**MW-4**	EPA 3010A	828498	EPA 6020B	828704
92710460014	**MW-5**	EPA 3010A	828498	EPA 6020B	828704
92710460015	**MW-6**	EPA 3010A	828498	EPA 6020B	828704
92710460016	**MW-7R**	EPA 3010A	828498	EPA 6020B	828704
92710460017	**MW-8**	EPA 3010A	828498	EPA 6020B	828704
92710460018	**MW-9**	EPA 3010A	828498	EPA 6020B	828704
92710460019	**SW-1**	EPA 3010A	828498	EPA 6020B	828704
92710460020	**SW-2**	EPA 3010A	828498	EPA 6020B	828704
92710460021	**SW-3**	EPA 3010A	828498	EPA 6020B	828704
92710460022	**SW-4**	EPA 3010A	828498	EPA 6020B	828704
92710460023	**SW-5**	EPA 3010A	828498	EPA 6020B	828704

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92710460024	**SW-6**	EPA 3010A	828498	EPA 6020B	828704
92710460001	**BG-1**	EPA 7470A	828366	EPA 7470A	828397
92710460002	**BG-2**	EPA 7470A	828366	EPA 7470A	828397
92710460003	**DUP**	EPA 7470A	828366	EPA 7470A	828397
92710460004	**EQBL**	EPA 7470A	828366	EPA 7470A	828397
92710460005	**LEACHATE**	EPA 7470A	828366	EPA 7470A	828397
92710460006	**MW-1**	EPA 7470A	828366	EPA 7470A	828397
92710460007	**MW-10**	EPA 7470A	828366	EPA 7470A	828397
92710460008	**MW-11**	EPA 7470A	828366	EPA 7470A	828397
92710460009	**MW-11D**	EPA 7470A	828366	EPA 7470A	828397
92710460010	**MW-2**	EPA 7470A	828366	EPA 7470A	828397
92710460011	**MW-2D**	EPA 7470A	828366	EPA 7470A	828397
92710460012	**MW-3**	EPA 7470A	828366	EPA 7470A	828397
92710460013	**MW-4**	EPA 7470A	828366	EPA 7470A	828397
92710460014	**MW-5**	EPA 7470A	828366	EPA 7470A	828397
92710460015	**MW-6**	EPA 7470A	828366	EPA 7470A	828397
92710460016	**MW-7R**	EPA 7470A	828366	EPA 7470A	828397
92710460017	**MW-8**	EPA 7470A	828366	EPA 7470A	828397
92710460018	**MW-9**	EPA 7470A	828366	EPA 7470A	828397
92710460019	**SW-1**	EPA 7470A	828366	EPA 7470A	828397
92710460020	**SW-2**	EPA 7470A	828366	EPA 7470A	828397
92710460021	**SW-3**	EPA 7470A	828365	EPA 7470A	828398
92710460022	**SW-4**	EPA 7470A	828365	EPA 7470A	828398
92710460023	**SW-5**	EPA 7470A	828365	EPA 7470A	828398
92710460024	**SW-6**	EPA 7470A	828365	EPA 7470A	828398
92710460001	**BG-1**	EPA 903.1	646088		
92710460002	**BG-2**	EPA 903.1	646088		
92710460003	**DUP**	EPA 903.1	646088		
92710460004	**EQBL**	EPA 903.1	646088		
92710460005	**LEACHATE**	EPA 903.1	646088		
92710460006	**MW-1**	EPA 903.1	646088		
92710460007	**MW-10**	EPA 903.1	646088		
92710460008	**MW-11**	EPA 903.1	646088		
92710460009	**MW-11D**	EPA 903.1	646088		
92710460010	**MW-2**	EPA 903.1	646088		
92710460011	**MW-2D**	EPA 903.1	646088		
92710460012	**MW-3**	EPA 903.1	646088		
92710460013	**MW-4**	EPA 903.1	646088		
92710460014	**MW-5**	EPA 903.1	646088		
92710460015	**MW-6**	EPA 903.1	646088		
92710460016	**MW-7R**	EPA 903.1	646088		
92710460017	**MW-8**	EPA 903.1	646088		
92710460018	**MW-9**	EPA 903.1	646088		
92710460019	**SW-1**	EPA 903.1	646088		
92710460020	**SW-2**	EPA 903.1	646088		
92710460021	**SW-3**	EPA 903.1	646090		
92710460022	**SW-4**	EPA 903.1	646090		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92710460023	**SW-5**	EPA 903.1	646090		
92710460024	**SW-6**	EPA 903.1	646090		
92710460001	**BG-1**	EPA 904.0	646089		
92710460002	**BG-2**	EPA 904.0	646089		
92710460003	**DUP**	EPA 904.0	646089		
92710460004	**EQBL**	EPA 904.0	646089		
92710460005	**LEACHATE**	EPA 904.0	646089		
92710460006	**MW-1**	EPA 904.0	646089		
92710460007	**MW-10**	EPA 904.0	646089		
92710460008	**MW-11**	EPA 904.0	646089		
92710460009	**MW-11D**	EPA 904.0	646089		
92710460010	**MW-2**	EPA 904.0	646089		
92710460011	**MW-2D**	EPA 904.0	646089		
92710460012	**MW-3**	EPA 904.0	646089		
92710460013	**MW-4**	EPA 904.0	646089		
92710460014	**MW-5**	EPA 904.0	646089		
92710460015	**MW-6**	EPA 904.0	646089		
92710460016	**MW-7R**	EPA 904.0	646089		
92710460017	**MW-8**	EPA 904.0	646089		
92710460018	**MW-9**	EPA 904.0	646089		
92710460019	**SW-1**	EPA 904.0	646089		
92710460020	**SW-2**	EPA 904.0	646089		
92710460021	**SW-3**	EPA 904.0	646092		
92710460022	**SW-4**	EPA 904.0	646092		
92710460023	**SW-5**	EPA 904.0	646092		
92710460024	**SW-6**	EPA 904.0	646092		
92710460001	**BG-1**	Total Radium Calculation	649988		
92710460002	**BG-2**	Total Radium Calculation	649988		
92710460003	**DUP**	Total Radium Calculation	649988		
92710460004	**EQBL**	Total Radium Calculation	649988		
92710460005	**LEACHATE**	Total Radium Calculation	649988		
92710460006	**MW-1**	Total Radium Calculation	649988		
92710460007	**MW-10**	Total Radium Calculation	649988		
92710460008	**MW-11**	Total Radium Calculation	649988		
92710460009	**MW-11D**	Total Radium Calculation	649988		
92710460010	**MW-2**	Total Radium Calculation	649988		
92710460011	**MW-2D**	Total Radium Calculation	649988		
92710460012	**MW-3**	Total Radium Calculation	649988		
92710460013	**MW-4**	Total Radium Calculation	649988		
92710460014	**MW-5**	Total Radium Calculation	649988		
92710460015	**MW-6**	Total Radium Calculation	649988		
92710460016	**MW-7R**	Total Radium Calculation	649988		
92710460017	**MW-8**	Total Radium Calculation	649988		
92710460018	**MW-9**	Total Radium Calculation	649988		
92710460019	**SW-1**	Total Radium Calculation	649988		
92710460020	**SW-2**	Total Radium Calculation	649988		
92710460021	**SW-3**	Total Radium Calculation	648133		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92710460022	**SW-4**	Total Radium Calculation	648133		
92710460023	**SW-5**	Total Radium Calculation	648133		
92710460024	**SW-6**	Total Radium Calculation	648133		
92710460001	**BG-1**	SM 2540C-2015	828409		
92710460002	**BG-2**	SM 2540C-2015	828510		
92710460003	**DUP**	SM 2540C-2015	828409		
92710460004	**EQBL**	SM 2540C-2015	828691		
92710460005	**LEACHATE**	SM 2540C-2015	828409		
92710460006	**MW-1**	SM 2540C-2015	828409		
92710460007	**MW-10**	SM 2540C-2015	828691		
92710460008	**MW-11**	SM 2540C-2015	828510		
92710460009	**MW-11D**	SM 2540C-2015	828510		
92710460010	**MW-2**	SM 2540C-2015	828691		
92710460011	**MW-2D**	SM 2540C-2015	828691		
92710460012	**MW-3**	SM 2540C-2015	828510		
92710460013	**MW-4**	SM 2540C-2015	828510		
92710460014	**MW-5**	SM 2540C-2015	828691		
92710460015	**MW-6**	SM 2540C-2015	828409		
92710460016	**MW-7R**	SM 2540C-2015	828691		
92710460017	**MW-8**	SM 2540C-2015	828409		
92710460018	**MW-9**	SM 2540C-2015	828691		
92710460019	**SW-1**	SM 2540C-2015	828409		
92710460020	**SW-2**	SM 2540C-2015	828409		
92710460021	**SW-3**	SM 2540C-2015	828409		
92710460022	**SW-4**	SM 2540C-2015	828409		
92710460023	**SW-5**	SM 2540C-2015	828409		
92710460024	**SW-6**	SM 2540C-2015	828409		
92710460001	**BG-1**	EPA 300.0 Rev 2.1 1993	828358		
92710460002	**BG-2**	EPA 300.0 Rev 2.1 1993	828358		
92710460003	**DUP**	EPA 300.0 Rev 2.1 1993	828358		
92710460004	**EQBL**	EPA 300.0 Rev 2.1 1993	828358		
92710460005	**LEACHATE**	EPA 300.0 Rev 2.1 1993	828358		
92710460006	**MW-1**	EPA 300.0 Rev 2.1 1993	828358		
92710460007	**MW-10**	EPA 300.0 Rev 2.1 1993	828358		
92710460008	**MW-11**	EPA 300.0 Rev 2.1 1993	828358		
92710460009	**MW-11D**	EPA 300.0 Rev 2.1 1993	828358		
92710460010	**MW-2**	EPA 300.0 Rev 2.1 1993	828358		
92710460011	**MW-2D**	EPA 300.0 Rev 2.1 1993	828358		
92710460012	**MW-3**	EPA 300.0 Rev 2.1 1993	828358		
92710460013	**MW-4**	EPA 300.0 Rev 2.1 1993	828358		
92710460014	**MW-5**	EPA 300.0 Rev 2.1 1993	828358		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q1 2024 CHARAH GW
Pace Project No.: 92710460

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92710460015	**MW-6**	EPA 300.0 Rev 2.1 1993	828358		
92710460016	**MW-7R**	EPA 300.0 Rev 2.1 1993	828358		
92710460017	**MW-8**	EPA 300.0 Rev 2.1 1993	828358		
92710460018	**MW-9**	EPA 300.0 Rev 2.1 1993	828358		
92710460019	**SW-1**	EPA 300.0 Rev 2.1 1993	828358		
92710460020	**SW-2**	EPA 300.0 Rev 2.1 1993	828359		
92710460021	**SW-3**	EPA 300.0 Rev 2.1 1993	828359		
92710460022	**SW-4**	EPA 300.0 Rev 2.1 1993	828359		
92710460023	**SW-5**	EPA 300.0 Rev 2.1 1993	828359		
92710460024	**SW-6**	EPA 300.0 Rev 2.1 1993	828359		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

Client Name: HDR

Project # **WO# : 92710460**

92710460

Courier: ☐ Commercial ☐ Fed Ex ☐ Pace ☐ UPS ☐ USPS ☐ Other:____ ☑ Client

Custody Seal Present? ☐ Yes ☐ No Seals Intact? ☐ Yes ☐ No ☑ N/A

Date/Initials Person Examining Contents: ABR 1-26-24

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 92 TO 70

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 3.1, 0.3, 1.1, 4.7, 1.4, 0.9 Correction Factor: Add/Subtract (°C) -0.1

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): ~~3.1, 0.3, 1.1, 4.7, 1.4, 0.9~~ 3.0, 0.2, 1.0, 4.6, 1.3, 0.8

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: W T	☑ Yes	☐ No	☐ N/A	9.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project # (1)

WO#: 92710460

PM: AMB **Due Date: 02/05/24**

CLIENT: 92-HDR

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AGDU-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1		1		1	✓																		2				
2		1		1		1	✓																		2				
3		1		1		1	✓																		2				
4		1		1		1	✓																		2				
5		1		1		1	✓																		2				
6		1		1		1	✓																		2				
7		1		1		1	✓																		2				
8		1		1		1	✓																		2				
9		1		1		1	✓																		2				
10		1		1		1	✓																		2				
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # **WO#: 92710460**
PM: AMB Due Date: 02/05/24
CLIENT: 92-HDR

(2)

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BPIN	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1		1		1	✓																		2				
2		1		1		1	✓																		2				
3		1		1		1	✓																		2				
4		1		1		1	✓																		2				
5		1		1		1	✓																		2				
6		1		1		1	✓																		2				
7		1		1		1	✓																		2				
8		1		1		1	✓																		1				
9		1		1		1	✓																		2				
10		1		1		1	✓																		2				
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project # **WO# : 92710460**

PM: AMB **Due Date: 02/05/24**

CLIENT: 92-HDR

(3)

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1		1		1																			2				
2		1		1		1																			2				
3		1		1		1																			2				
4		1		1		1																			2				
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

9270 0460

Scan QR Code for instructions

Company Name:	HDR	Contact/Report To:	Brian Spillane
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	brian.spillane@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Q1 2024 Charah GW	Invoice To:	
		Invoice E-Mail:	
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	
Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [✓] ET		County / State origin of sample(s):	North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 3 3 1 1

Identify Container Preservative Type***: 2 2 2 1

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: Angela Baioni; AcctNum / Client ID:; Table #:; Profile / Template: 7672-1; Prelog / Bottle Ord. ID: 1163839

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	300.0 Anions-Cl, Fl, SO4	6010, 6020, 7470-metals	Radium 226/228, total radium	Total Dissolved Solids (TDS)	Sample Comment	Preservation non-conformance identified for sample.
BG-1	WT	Grab	X		1/23/24	9:15	5			X	X	X	X	001	
BG-2	WT	Grab			1/24/24	9:15	5			X	X	X	X	002	
DUP	WT	Grab			1/23/24	13:40	5			X	X	X	X	003	
EQBL	WT	Grab			1/26/24	11:20	5			X	X	X	X	004	
LEACHATE	WT	Grab			1/22/24	14:25	5			X	X	X	X	009	
MW-1	WT	Grab			1/23/24	12:25	5			X	X	X	X	Biased high NTU 006	
MW-10	WT	Grab			1/25/24	10:40	5			X	X	X	X	007	
MW-11	WT	Grab			1/24/24	10:40	5			X	X	X	X	008	
MW-11D	WT	Grab			1/24/24	11:30	5			X	X	X	X	009	
MW-2	WT	Grab			1/26/24	9:30	5			X	X	X	X	010	

Additional Instructions from Pace®:
6020-B, Li, Thallium; 6010-Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn; 7470-Hg

Collected By: (Printed Name) Cameron Hosmer

Signature: Cameron Hosmer

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Cameron Hosmer	1/26/24 15:47	GMH Pace HM	1/26/24 1547	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

92710460

Scan QR Code for instructions

Company Name:	HDR	Contact/Report To:	Brian Spillane
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	brian.spillane@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Q1 2024 Charah GW	Invoice To:	
Site Collection Info/Facility ID (as applicable):		Invoice E-Mail:	
		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [✓] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 3 3 1 1

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

Identify Container Preservative Type***: 2 2 2 1

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	300.0 Anions-Cl, Fl, SO4	6010, 6020, 7470-metals	Radium 226/228, total radium	Total Dissolved Solids (TDS)	Sample Comment	Preservation non-conformance identified for sample.
MW-2D	WT	G			1/26/24	10:55	5			X	X	X	X	Biased high NTU	011
MW-3	WT	G			1/24/24	15:25	5			X	X	X	X		012
MW-4	WT	G			1/24/24	14:35	5			X	X	X	X		013
MW-5	WT	G			1/25/24	9:25	5			X	X	X	X		014
MW-6	WT	G			1/23/24	13:30	5			X	X	X	X		015
MW-7R	WT	G			1/25/24	15:05	5			X	X	X	X		016
MW-8	WT	G			1/23/24	16:35	5			X	X	X	X		017
MW-9	WT	G			1/25/24	11:55	5			X	X	X	X	Biased high NTU, Not calibrated	018 Was filled
SW-1	WT	G			1/22/24	12:45	5			X	X	X	X	Biased high NTU	019
SW-2	WT	G			1/22/24	13:25	5			X	X	X	X		020

Lab Use Only

Proj. Mgr: Angela Baioni

AcctNum / Client ID:

Table #:

Profile / Template: 7672-1

Prelog / Bottle Ord. ID: 1163839

Additional Instructions from Pace®:
6020-B, Li, Thallium; 6010-Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn; 7470-Hg

Collected By: (Printed Name) Cameron Hosmer

Signature: Cameron Hosmer

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Cameron Hosmer	1/26/24 15:52	GHA Pace Htn	1/26/24 1[illegible]	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

92710460

Scan QR Code for instructions

Company Name:	HDR	Contact/Report To:	Brian Spillane
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	brian.spillane@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Q1 2024 Charah GW	Invoice To:	
		Invoice E-Mail:	
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [V] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 3 3 1 1

Identify Container Preservative Type***: 2 2 2 1

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	300.0 Anions-Cl, Fl, SO4	6010, 6020, 7470-metals	Radium 226/228, total radium	Total Dissolved Solids (TDS)	Sample Comment
SW-3	WT	G			1/22/24	13:50				X	X	X	X	021
SW-4	WT	G			1/22/24	15:40				X	X	X	X	022
SW-5	WT	G			1/22/24	16:00				X	X	X	X	023
SW-6	WT	G			1/22/24	15:35				X	X	X	X	024

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) ~~250mL~~, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Angela Baioni

AcctNum / Client ID:

Table #:

Profile / Template: 7672-1

Prelog / Bottle Ord. ID: 1163839

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
6020-B, Li, Thallium; 6010-Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn; 7470-Hg

Collected By: (Printed Name) Cameron Hosmer

Signature: Cameron Hosmer

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Cameron Hosmer	1/26/24 15:58	Cameron Pace HR	1/24/24 1547	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 3 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace Analytical

Sample Receiving Non-Conformance Form (NCF)

Date: 1-26-24	Evaluated by: AMC
Client: HPR	

Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here

1. If Chain-of-Custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.

2. If COC is incomplete, check applicable issues below and add details where appropriate:

	Collection date/time missing or incorrect		Analyses or analytes: missing or clarification needed		Samples listed on COC do not match samples received (missing, additional, etc.)
	Sample IDs on COC do not match sample labels		Required trip blanks were not received		Required signatures are missing

Comments/Details/Other Issues not listed above:

Sample MW-7 1x BP1N, and 1x BP1V on sample MW-7 with low volume.
1x BP1N on sample MW-7 received empty.

3. Sample integrity issues: check applicable issues below and add details where appropriate:

	Samples: Past holding time		Samples: Condition needs to be brought to lab personnel's attention (details below)		Preservation: Improper
	Samples: Not field filtered		Containers: Broken or compromised		Temperature: not within acceptance criteria (typically 0-6C)
	Samples: Insufficient volume received		Containers: Incorrect		Temperature: Samples arrived frozen
	Samples: Cooler damaged or compromised		Custody Seals: Missing or compromised on samples, trip blanks or coolers		Vials received with improper headspace
	Samples: contain chlorine or sulfides		Packing Material: Insufficient/Improper		Other:

Comments/Details:

4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:

Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:

5. Client Contact: If client is contacted for any issue listed above, fill in details below:

Client:	Contacted per:	
PM Initials:	Date/Time:	

Client Comments/Instructions:

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

April 29, 2024

Mark Filardi
HDR
440 S. Church St
Suite 900
Charlotte, NC 28202

RE: Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Dear Mark Filardi:

Enclosed are the analytical results for sample(s) received by the laboratory on April 04, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angela M. Baioni

Angela Baioni
angela.baioni@pacelabs.com
612-473-6801
Project Manager

Enclosures

cc: Charles Gruenberg
Zach Hector, HDR
Cameron Hosmer
Alexandra Lefitz, HDR Engineering
Brian Spillane, HDR

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92723368001	**BG-1**	Water	04/01/24 19:58	04/04/24 16:04
92723368002	**BG-2**	Water	04/01/24 12:08	04/04/24 16:04
92723368003	**DUP**	Water	04/02/24 10:27	04/04/24 16:04
92723368004	**EQBL**	Water	04/04/24 12:35	04/04/24 16:04
92723368005	**LEACHATE**	Water	04/04/24 08:25	04/04/24 16:04
92723368006	**MW-1**	Water	04/03/24 10:35	04/04/24 16:04
92723368007	**MW-10**	Water	04/02/24 12:05	04/04/24 16:04
92723368008	**MW-11**	Water	04/01/24 15:50	04/04/24 16:04
92723368009	**MW-11D**	Water	04/01/24 17:10	04/04/24 16:04
92723368010	**MW-2**	Water	04/03/24 13:38	04/04/24 16:04
92723368011	**MW-2D**	Water	04/04/24 11:05	04/04/24 16:04
92723368012	**MW-3**	Water	04/03/24 15:48	04/04/24 16:04
92723368013	**MW-4**	Water	04/03/24 18:58	04/04/24 16:04
92723368014	**MW-5**	Water	04/02/24 19:18	04/04/24 16:04
92723368015	**MW-6**	Water	04/02/24 14:35	04/04/24 16:04
92723368016	**MW-7R**	Water	04/02/24 17:17	04/04/24 16:04
92723368017	**MW-8**	Water	04/02/24 10:05	04/04/24 16:04
92723368018	**MW-9**	Water	04/04/24 12:00	04/04/24 16:04
92723368019	**SW-1**	Water	04/04/24 10:20	04/04/24 16:04
92723368020	**SW-2**	Water	04/04/24 09:05	04/04/24 16:04
92723368021	**SW-3**	Water	04/04/24 09:24	04/04/24 16:04
92723368022	**SW-4**	Water	04/04/24 10:00	04/04/24 16:04
92723368023	**SW-5**	Water	04/04/24 12:55	04/04/24 16:04
92723368024	**SW-6**	Water	04/04/24 10:35	04/04/24 16:04

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92723368001	**BG-1**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368002	**BG-2**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368003	**DUP**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	MJP	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368004	**EQBL**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368005	**LEACHATE**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368006	**MW-1**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368007	**MW-10**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	MJP	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368008	**MW-11**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368009	**MW-11D**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368010	**MW-2**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368011	**MW-2D**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368012	**MW-3**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368013	**MW-4**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368014	**MW-5**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	MJP	1	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368015	**MW-6**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	MJP	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368016	**MW-7R**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	MJP	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368017	**MW-8**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	MJP	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368018	**MW-9**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368019	**SW-1**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368020	**SW-2**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368021	**SW-3**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368022	**SW-4**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368023	**SW-5**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92723368024	**SW-6**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	BM	1	PASI-A
		EPA 903.1	CLM	1	PASI-PA

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	JMH1	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-PA = Pace Analytical Services - Greensburg

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368001	**BG-1**					
EPA 6010D	Barium	277	ug/L	5.0	04/25/24 16:31	
EPA 6010D	Calcium	23000	ug/L	100	04/24/24 15:08	M1
EPA 6010D	Selenium	6.0J	ug/L	10.0	04/24/24 15:08	
EPA 6010D	Vanadium	5.8	ug/L	5.0	04/24/24 15:08	
EPA 6010D	Zinc	4.6J	ug/L	10.0	04/24/24 15:08	
EPA 6020B	Lithium	15.8	ug/L	2.5	04/08/24 19:48	
EPA 6020B	Thallium	0.057J	ug/L	0.20	04/08/24 19:48	
EPA 903.1	Radium-226	0.0642 ± 0.487 (0.963) C:NA T:85%	pCi/L		04/18/24 13:34	
EPA 904.0	Radium-228	0.432 ± 0.365 (0.733) C:91% T:80%	pCi/L		04/16/24 15:40	
Total Radium Calculation	Total Radium	0.496 ± 0.852 (1.70)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	550	mg/L	25.0	04/05/24 15:05	
EPA 300.0 Rev 2.1 1993	Chloride	187	mg/L	4.0	04/06/24 02:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	04/05/24 18:02	
EPA 300.0 Rev 2.1 1993	Sulfate	22.3	mg/L	1.0	04/05/24 18:02	
92723368002	**BG-2**					
EPA 6010D	Barium	78.8	ug/L	5.0	04/25/24 16:58	
EPA 6010D	Calcium	121000	ug/L	1000	04/25/24 17:02	
EPA 6010D	Chromium	2.0J	ug/L	5.0	04/24/24 15:25	
EPA 6010D	Cobalt	1.9J	ug/L	5.0	04/24/24 15:25	
EPA 6010D	Molybdenum	3.7J	ug/L	5.0	04/24/24 15:25	
EPA 6010D	Nickel	2.0J	ug/L	5.0	04/24/24 15:25	
EPA 6010D	Zinc	9.9J	ug/L	10.0	04/24/24 15:25	
EPA 6020B	Boron	16.4J	ug/L	50.0	04/08/24 20:15	
EPA 6020B	Lithium	17.8	ug/L	2.5	04/08/24 20:15	
EPA 6020B	Thallium	0.060J	ug/L	0.20	04/08/24 20:15	
EPA 903.1	Radium-226	0.000 ± 0.349 (0.563) C:NA T:84%	pCi/L		04/18/24 13:34	
EPA 904.0	Radium-228	0.546 ± 0.428 (0.840) C:87% T:79%	pCi/L		04/16/24 15:40	
Total Radium Calculation	Total Radium	0.546 ± 0.777 (1.40)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	1010	mg/L	50.0	04/05/24 15:05	
EPA 300.0 Rev 2.1 1993	Chloride	265	mg/L	6.0	04/06/24 02:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	04/05/24 18:17	
EPA 300.0 Rev 2.1 1993	Sulfate	152	mg/L	6.0	04/06/24 02:37	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368003	**DUP**					
EPA 6010D	Barium	1130	ug/L	5.0	04/25/24 17:06	
EPA 6010D	Calcium	109000	ug/L	1000	04/25/24 17:11	
EPA 6010D	Chromium	1.1J	ug/L	5.0	04/24/24 15:30	
EPA 6010D	Cobalt	0.60J	ug/L	5.0	04/24/24 15:30	
EPA 6010D	Nickel	1.1J	ug/L	5.0	04/24/24 15:30	
EPA 6010D	Zinc	7.2J	ug/L	10.0	04/24/24 15:30	
EPA 6020B	Boron	8.8J	ug/L	50.0	04/08/24 20:19	
EPA 6020B	Lithium	22.1	ug/L	2.5	04/08/24 20:19	
EPA 903.1	Radium-226	-0.0637 ± 0.573 (1.16) C:NA T:90%	pCi/L		04/18/24 13:34	
EPA 904.0	Radium-228	0.430 ± 0.358 (0.714) C:84% T:82%	pCi/L		04/16/24 15:40	
Total Radium Calculation	Total Radium	0.430 ± 0.931 (1.87)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	944	mg/L	50.0	04/09/24 19:58	
EPA 300.0 Rev 2.1 1993	Chloride	312	mg/L	7.0	04/06/24 02:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.086J	mg/L	0.10	04/05/24 18:59	
EPA 300.0 Rev 2.1 1993	Sulfate	6.9	mg/L	1.0	04/05/24 18:59	
92723368004	**EQBL**					
EPA 6010D	Calcium	18.2J	ug/L	100	04/24/24 15:34	
EPA 6020B	Thallium	0.070J	ug/L	0.20	04/08/24 20:23	
EPA 903.1	Radium-226	0.311 ± 0.887 (1.65) C:NA T:95%	pCi/L		04/29/24 12:57	
EPA 904.0	Radium-228	0.651 ± 0.387 (0.714) C:85% T:86%	pCi/L		04/25/24 15:58	
Total Radium Calculation	Total Radium	0.962 ± 1.27 (2.36)	pCi/L		04/29/24 15:07	
92723368005	**LEACHATE**					
EPA 6010D	Arsenic	10.4	ug/L	10.0	04/24/24 15:38	
EPA 6010D	Barium	42.8	ug/L	5.0	04/25/24 17:19	
EPA 6010D	Calcium	308000	ug/L	1000	04/25/24 17:24	
EPA 6010D	Copper	2.4J	ug/L	5.0	04/24/24 15:38	B
EPA 6010D	Molybdenum	185	ug/L	5.0	04/24/24 15:38	
EPA 6010D	Nickel	2.3J	ug/L	5.0	04/24/24 15:38	
EPA 6010D	Selenium	6.7J	ug/L	10.0	04/24/24 15:38	
EPA 6010D	Zinc	8.2J	ug/L	10.0	04/24/24 15:38	
EPA 6020B	Boron	3040	ug/L	2500	04/08/24 20:27	
EPA 6020B	Lithium	49.4	ug/L	7.5	04/08/24 23:13	
EPA 6020B	Thallium	0.12J	ug/L	0.60	04/08/24 23:13	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368005	**LEACHATE**					
EPA 903.1	Radium-226	-0.123 ± 0.419 (0.925) C:NA T:87%	pCi/L		04/18/24 13:34	
EPA 904.0	Radium-228	0.542 ± 0.395 (0.761) C:80% T:79%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	0.542 ± 0.814 (1.69)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	1260	mg/L	50.0	04/11/24 08:32	
EPA 300.0 Rev 2.1 1993	Chloride	17.8	mg/L	1.0	04/05/24 19:14	
EPA 300.0 Rev 2.1 1993	Fluoride	0.22	mg/L	0.10	04/05/24 19:14	
EPA 300.0 Rev 2.1 1993	Sulfate	438	mg/L	10.0	04/06/24 03:34	
92723368006	**MW-1**					
EPA 6010D	Barium	52.2	ug/L	5.0	04/25/24 17:28	
EPA 6010D	Calcium	55600	ug/L	100	04/24/24 16:00	
EPA 6010D	Vanadium	3.0J	ug/L	5.0	04/24/24 16:00	
EPA 6020B	Boron	9.0J	ug/L	50.0	04/08/24 20:31	
EPA 6020B	Lithium	22.8	ug/L	2.5	04/08/24 20:31	
EPA 903.1	Radium-226	-0.247 ± 0.514 (1.12) C:NA T:91%	pCi/L		04/18/24 13:34	
EPA 904.0	Radium-228	0.678 ± 0.411 (0.742) C:75% T:78%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	0.678 ± 0.925 (1.86)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	361	mg/L	25.0	04/10/24 08:29	
EPA 300.0 Rev 2.1 1993	Chloride	132	mg/L	3.0	04/06/24 03:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	04/05/24 19:28	
EPA 300.0 Rev 2.1 1993	Sulfate	4.8	mg/L	1.0	04/05/24 19:28	
92723368007	**MW-10**					
EPA 6010D	Arsenic	2.6J	ug/L	10.0	04/24/24 16:05	
EPA 6010D	Barium	87.4	ug/L	5.0	04/25/24 17:32	
EPA 6010D	Calcium	21900	ug/L	100	04/24/24 16:05	
EPA 6010D	Molybdenum	17.5	ug/L	5.0	04/24/24 16:05	
EPA 6010D	Nickel	0.94J	ug/L	5.0	04/24/24 16:05	
EPA 6020B	Boron	26.9J	ug/L	50.0	04/08/24 20:34	
EPA 6020B	Lithium	4.6	ug/L	2.5	04/08/24 20:34	
EPA 903.1	Radium-226	-0.0599 ± 0.512 (1.04) C:NA T:89%	pCi/L		04/18/24 13:34	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368007	**MW-10**					
EPA 904.0	Radium-228	0.320 ± 0.360 (0.752) C:79% T:80%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	0.320 ± 0.872 (1.79)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	353	mg/L	25.0	04/09/24 19:58	
EPA 300.0 Rev 2.1 1993	Chloride	29.5	mg/L	1.0	04/05/24 19:42	
EPA 300.0 Rev 2.1 1993	Fluoride	0.40	mg/L	0.10	04/05/24 19:42	
EPA 300.0 Rev 2.1 1993	Sulfate	2.0	mg/L	1.0	04/05/24 19:42	
92723368008	**MW-11**					
EPA 6010D	Barium	45.2	ug/L	5.0	04/25/24 17:37	
EPA 6010D	Calcium	24100	ug/L	100	04/24/24 16:09	
EPA 6010D	Chromium	1.3J	ug/L	5.0	04/24/24 16:09	
EPA 6010D	Cobalt	1.1J	ug/L	5.0	04/24/24 16:09	
EPA 6010D	Nickel	1.7J	ug/L	5.0	04/24/24 16:09	
EPA 6010D	Zinc	5.5J	ug/L	10.0	04/24/24 16:09	
EPA 6020B	Boron	14.6J	ug/L	50.0	04/08/24 20:38	
EPA 6020B	Lithium	10.7	ug/L	2.5	04/08/24 20:38	
EPA 6020B	Thallium	0.085J	ug/L	0.20	04/08/24 20:38	
EPA 903.1	Radium-226	-0.0625 ± 0.534 (1.09) C:NA T:90%	pCi/L		04/18/24 13:34	
EPA 904.0	Radium-228	0.513 ± 0.375 (0.725) C:83% T:79%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	0.513 ± 0.909 (1.82)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	361	mg/L	25.0	04/05/24 15:05	
EPA 300.0 Rev 2.1 1993	Chloride	121	mg/L	3.0	04/06/24 04:02	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	04/05/24 19:57	
EPA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	04/05/24 19:57	
92723368009	**MW-11D**					
EPA 6010D	Barium	115	ug/L	5.0	04/25/24 17:50	
EPA 6010D	Calcium	16100	ug/L	100	04/24/24 16:13	
EPA 6010D	Molybdenum	4.4J	ug/L	5.0	04/24/24 16:13	
EPA 6020B	Boron	43.0J	ug/L	50.0	04/08/24 20:42	
EPA 6020B	Lithium	17.8	ug/L	2.5	04/08/24 20:42	
EPA 6020B	Thallium	0.094J	ug/L	0.20	04/08/24 20:42	
EPA 903.1	Radium-226	0.0670 ± 0.541 (1.06) C:NA T:90%	pCi/L		04/18/24 13:46	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368009	**MW-11D**					
EPA 904.0	Radium-228	0.0582 ± 0.496 (1.13) C:79% T:75%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	0.125 ± 1.04 (2.19)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	312	mg/L	25.0	04/05/24 15:05	
EPA 300.0 Rev 2.1 1993	Chloride	55.5	mg/L	1.0	04/05/24 20:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.42	mg/L	0.10	04/05/24 20:40	
EPA 300.0 Rev 2.1 1993	Sulfate	14.6	mg/L	1.0	04/05/24 20:40	
92723368010	**MW-2**					
EPA 6010D	Arsenic	3.7J	ug/L	10.0	04/24/24 16:18	
EPA 6010D	Barium	365	ug/L	5.0	04/25/24 17:54	
EPA 6010D	Calcium	191000	ug/L	1000	04/25/24 17:59	
EPA 6010D	Chromium	1.8J	ug/L	5.0	04/24/24 16:18	
EPA 6010D	Cobalt	0.89J	ug/L	5.0	04/24/24 16:18	
EPA 6010D	Molybdenum	4.7J	ug/L	5.0	04/24/24 16:18	
EPA 6010D	Nickel	2.5J	ug/L	5.0	04/24/24 16:18	
EPA 6010D	Selenium	4.8J	ug/L	10.0	04/25/24 17:54	
EPA 6010D	Zinc	4.4J	ug/L	10.0	04/24/24 16:18	
EPA 6020B	Boron	42.5J	ug/L	50.0	04/08/24 20:46	
EPA 6020B	Lithium	115	ug/L	2.5	04/08/24 20:46	
EPA 6020B	Thallium	0.037J	ug/L	0.20	04/08/24 20:46	
EPA 903.1	Radium-226	1.31 ± 0.678 (0.752) C:NA T:87%	pCi/L		04/18/24 13:46	
EPA 904.0	Radium-228	1.35 ± 0.602 (1.01) C:77% T:78%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	2.66 ± 1.28 (1.76)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	2440	mg/L	125	04/10/24 08:29	
EPA 300.0 Rev 2.1 1993	Chloride	1030	mg/L	100	04/06/24 04:44	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	04/05/24 20:54	
EPA 300.0 Rev 2.1 1993	Sulfate	63.0	mg/L	1.0	04/05/24 20:54	
92723368011	**MW-2D**					
EPA 6010D	Arsenic	13.6	ug/L	10.0	04/24/24 16:22	
EPA 6010D	Barium	202	ug/L	5.0	04/25/24 18:03	
EPA 6010D	Calcium	20100	ug/L	100	04/24/24 16:22	
EPA 6010D	Chromium	11.0	ug/L	5.0	04/24/24 16:22	
EPA 6010D	Copper	4.3J	ug/L	5.0	04/24/24 16:22	B
EPA 6010D	Molybdenum	231	ug/L	5.0	04/24/24 16:22	
EPA 6010D	Nickel	6.0	ug/L	5.0	04/24/24 16:22	
EPA 6010D	Selenium	8.3J	ug/L	10.0	04/25/24 18:03	
EPA 6010D	Vanadium	71.5	ug/L	5.0	04/24/24 16:22	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368011	**MW-2D**					
EPA 6010D	Zinc	4.6J	ug/L	10.0	04/24/24 16:22	
EPA 6020B	Boron	38.5J	ug/L	50.0	04/08/24 21:02	
EPA 6020B	Lithium	128	ug/L	2.5	04/08/24 21:02	
EPA 6020B	Thallium	0.24	ug/L	0.20	04/08/24 21:02	
EPA 903.1	Radium-226	0.0741 ± 0.384 (0.797) C:NA T:82%	pCi/L		04/18/24 13:46	
EPA 904.0	Radium-228	0.255 ± 0.492 (1.08) C:75% T:81%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	0.329 ± 0.876 (1.88)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	586	mg/L	50.0	04/11/24 08:32	
EPA 300.0 Rev 2.1 1993	Chloride	173	mg/L	4.0	04/06/24 04:58	
EPA 300.0 Rev 2.1 1993	Fluoride	2.2	mg/L	0.10	04/05/24 21:08	
EPA 300.0 Rev 2.1 1993	Sulfate	46.6	mg/L	1.0	04/05/24 21:08	
92723368012	**MW-3**					
EPA 6010D	Barium	818	ug/L	5.0	04/25/24 18:07	
EPA 6010D	Calcium	203000	ug/L	1000	04/25/24 18:12	
EPA 6010D	Chromium	2.3J	ug/L	5.0	04/24/24 16:26	
EPA 6010D	Cobalt	0.62J	ug/L	5.0	04/24/24 16:26	
EPA 6010D	Molybdenum	8.0	ug/L	5.0	04/24/24 16:26	
EPA 6010D	Nickel	2.3J	ug/L	5.0	04/24/24 16:26	
EPA 6010D	Vanadium	1.9J	ug/L	5.0	04/24/24 16:26	
EPA 6020B	Boron	40.4J	ug/L	50.0	04/08/24 21:06	
EPA 6020B	Lithium	81.2	ug/L	2.5	04/08/24 21:06	
EPA 903.1	Radium-226	0.552 ± 0.666 (1.10) C:NA T:82%	pCi/L		04/18/24 13:46	
EPA 904.0	Radium-228	1.55 ± 0.545 (0.784) C:78% T:90%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	2.10 ± 1.21 (1.88)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	2500	mg/L	125	04/10/24 08:29	
EPA 300.0 Rev 2.1 1993	Chloride	1070	mg/L	100	04/06/24 05:12	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	04/05/24 21:51	
EPA 300.0 Rev 2.1 1993	Sulfate	12.3	mg/L	1.0	04/05/24 21:51	
92723368013	**MW-4**					
EPA 6010D	Barium	276	ug/L	5.0	04/25/24 18:16	
EPA 6010D	Calcium	46400	ug/L	100	04/24/24 16:31	
EPA 6010D	Cobalt	13.0	ug/L	5.0	04/24/24 16:31	
EPA 6010D	Nickel	7.5	ug/L	5.0	04/24/24 16:31	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368013	**MW-4**					
EPA 6010D	Zinc	10.8	ug/L	10.0	04/24/24 16:31	
EPA 6020B	Lithium	33.6	ug/L	2.5	04/08/24 21:09	
EPA 903.1	Radium-226	0.111 ± 0.406 (0.780) C:NA T:90%	pCi/L		04/18/24 13:46	
EPA 904.0	Radium-228	0.323 ± 0.303 (0.611) C:82% T:89%	pCi/L		04/16/24 15:41	
Total Radium Calculation	Total Radium	0.434 ± 0.709 (1.39)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	986	mg/L	50.0	04/10/24 08:31	
EPA 300.0 Rev 2.1 1993	Chloride	326	mg/L	7.0	04/06/24 05:26	
EPA 300.0 Rev 2.1 1993	Fluoride	0.33	mg/L	0.10	04/05/24 22:06	
EPA 300.0 Rev 2.1 1993	Sulfate	13.4	mg/L	1.0	04/05/24 22:06	
92723368014	**MW-5**					
EPA 6010D	Barium	89.7	ug/L	5.0	04/25/24 18:20	
EPA 6010D	Calcium	9420	ug/L	100	04/24/24 16:35	
EPA 6010D	Zinc	3.8J	ug/L	10.0	04/24/24 16:35	
EPA 6020B	Boron	7.7J	ug/L	50.0	04/08/24 21:13	
EPA 6020B	Lithium	9.4	ug/L	2.5	04/08/24 21:13	
EPA 903.1	Radium-226	0.360 ± 0.706 (1.25) C:NA T:89%	pCi/L		04/18/24 13:46	
EPA 904.0	Radium-228	0.274 ± 0.351 (0.744) C:79% T:82%	pCi/L		04/16/24 15:42	
Total Radium Calculation	Total Radium	0.634 ± 1.06 (1.99)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	213	mg/L	25.0	04/09/24 19:58	
EPA 300.0 Rev 2.1 1993	Chloride	19.2	mg/L	1.0	04/05/24 22:20	
EPA 300.0 Rev 2.1 1993	Fluoride	0.53	mg/L	0.10	04/05/24 22:20	
EPA 300.0 Rev 2.1 1993	Sulfate	3.3	mg/L	1.0	04/05/24 22:20	
92723368015	**MW-6**					
EPA 6010D	Barium	56.6	ug/L	5.0	04/25/24 18:25	
EPA 6010D	Calcium	35900	ug/L	100	04/24/24 16:39	
EPA 6010D	Nickel	1.5J	ug/L	5.0	04/24/24 16:39	
EPA 6010D	Zinc	4.4J	ug/L	10.0	04/24/24 16:39	
EPA 6020B	Lithium	23.0	ug/L	2.5	04/08/24 21:17	
EPA 6020B	Thallium	0.030J	ug/L	0.20	04/08/24 21:17	
EPA 903.1	Radium-226	-0.178 ± 0.386 (0.890) C:NA T:89%	pCi/L		04/18/24 13:46	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368015	**MW-6**					
EPA 904.0	Radium-228	0.0513 ± 0.328 (0.754) C:77% T:88%	pCi/L		04/16/24 15:42	
Total Radium Calculation	Total Radium	0.0513 ± 0.714 (1.64)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	595	mg/L	25.0	04/09/24 19:58	
EPA 300.0 Rev 2.1 1993	Chloride	193	mg/L	4.0	04/06/24 05:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.32	mg/L	0.10	04/05/24 22:34	
EPA 300.0 Rev 2.1 1993	Sulfate	27.2	mg/L	1.0	04/05/24 22:34	
92723368016	**MW-7R**					
EPA 6010D	Barium	346	ug/L	5.0	04/24/24 17:01	
EPA 6010D	Calcium	99900	ug/L	1000	04/26/24 15:29	M1
EPA 6010D	Chromium	2.7J	ug/L	5.0	04/24/24 17:01	
EPA 6010D	Cobalt	0.71J	ug/L	5.0	04/24/24 17:01	
EPA 6010D	Nickel	1.7J	ug/L	5.0	04/24/24 17:01	
EPA 6010D	Vanadium	3.4J	ug/L	5.0	04/24/24 17:01	
EPA 6010D	Zinc	4.1J	ug/L	10.0	04/24/24 17:01	
EPA 6020B	Boron	8.1J	ug/L	50.0	04/08/24 21:52	
EPA 6020B	Lithium	26.0	ug/L	2.5	04/08/24 21:52	
EPA 903.1	Radium-226	-0.0611 ± 0.747 (1.44) C:NA T:85%	pCi/L		04/18/24 13:46	
EPA 904.0	Radium-228	0.268 ± 0.338 (0.717) C:77% T:87%	pCi/L		04/16/24 15:42	
Total Radium Calculation	Total Radium	0.268 ± 1.09 (2.16)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	900	mg/L	50.0	04/09/24 19:59	
EPA 300.0 Rev 2.1 1993	Chloride	280	mg/L	6.0	04/06/24 06:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	04/05/24 22:49	
EPA 300.0 Rev 2.1 1993	Sulfate	13.7	mg/L	1.0	04/05/24 22:49	
92723368017	**MW-8**					
EPA 6010D	Barium	1120	ug/L	5.0	04/24/24 17:19	
EPA 6010D	Calcium	101000	ug/L	1000	04/26/24 15:46	
EPA 6010D	Chromium	1.6J	ug/L	5.0	04/24/24 17:19	
EPA 6010D	Cobalt	0.82J	ug/L	5.0	04/24/24 17:19	
EPA 6010D	Nickel	1.5J	ug/L	5.0	04/24/24 17:19	
EPA 6010D	Selenium	4.3J	ug/L	10.0	04/25/24 19:30	
EPA 6010D	Zinc	3.7J	ug/L	10.0	04/24/24 17:19	
EPA 6020B	Boron	8.7J	ug/L	50.0	04/08/24 22:23	
EPA 6020B	Lithium	21.6	ug/L	2.5	04/08/24 22:23	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368017	**MW-8**					
EPA 903.1	Radium-226	-0.357 ± 0.543 (1.24) C:NA T:88%	pCi/L		04/18/24 13:59	
EPA 904.0	Radium-228	-0.351 ± 0.454 (1.10) C:74% T:85%	pCi/L		04/16/24 15:42	
Total Radium Calculation	Total Radium	0.000 ± 0.997 (2.34)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	1050	mg/L	50.0	04/09/24 19:59	
EPA 300.0 Rev 2.1 1993	Chloride	313	mg/L	7.0	04/06/24 06:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.087J	mg/L	0.10	04/05/24 23:03	
EPA 300.0 Rev 2.1 1993	Sulfate	7.0	mg/L	1.0	04/05/24 23:03	
92723368018	**MW-9**					
EPA 6010D	Barium	228	ug/L	5.0	04/24/24 17:23	
EPA 6010D	Calcium	37300	ug/L	100	04/24/24 17:23	
EPA 6010D	Chromium	16.2	ug/L	5.0	04/24/24 17:23	
EPA 6010D	Cobalt	0.66J	ug/L	5.0	04/24/24 17:23	
EPA 6010D	Copper	1.6J	ug/L	5.0	04/24/24 17:23	
EPA 6010D	Molybdenum	25.0	ug/L	5.0	04/24/24 17:23	
EPA 6010D	Nickel	7.8	ug/L	5.0	04/24/24 17:23	
EPA 6010D	Selenium	16.8	ug/L	10.0	04/25/24 19:43	
EPA 6010D	Vanadium	2.0J	ug/L	5.0	04/24/24 17:23	
EPA 6010D	Zinc	11.1	ug/L	10.0	04/24/24 17:23	
EPA 6020B	Boron	28.5J	ug/L	50.0	04/08/24 22:27	
EPA 6020B	Lithium	4.6	ug/L	2.5	04/08/24 22:27	
SM 2540C-2015	Total Dissolved Solids	505	mg/L	25.0	04/11/24 08:33	
EPA 300.0 Rev 2.1 1993	Chloride	11.1	mg/L	1.0	04/05/24 23:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25	mg/L	0.10	04/05/24 23:46	
EPA 300.0 Rev 2.1 1993	Sulfate	69.7	mg/L	1.0	04/05/24 23:46	M1
92723368019	**SW-1**					
EPA 6010D	Barium	150	ug/L	5.0	04/24/24 17:27	
EPA 6010D	Beryllium	0.40J	ug/L	1.0	04/24/24 17:27	
EPA 6010D	Calcium	2380	ug/L	100	04/24/24 17:27	
EPA 6010D	Chromium	5.2	ug/L	5.0	04/24/24 17:27	
EPA 6010D	Cobalt	2.3J	ug/L	5.0	04/24/24 17:27	
EPA 6010D	Copper	7.2	ug/L	5.0	04/24/24 17:27	
EPA 6010D	Lead	9.7	ug/L	5.0	04/24/24 17:27	
EPA 6010D	Nickel	4.0J	ug/L	5.0	04/24/24 17:27	
EPA 6010D	Vanadium	18.3	ug/L	5.0	04/24/24 17:27	
EPA 6010D	Zinc	21.0	ug/L	10.0	04/24/24 17:27	
EPA 6020B	Boron	7.8J	ug/L	50.0	04/08/24 22:31	
EPA 6020B	Lithium	2.3J	ug/L	2.5	04/08/24 22:31	
EPA 6020B	Thallium	0.066J	ug/L	0.20	04/10/24 22:24	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368019	**SW-1**					
EPA 903.1	Radium-226	0.000 ± 0.479 (0.970) C:NA T:90%	pCi/L		04/18/24 13:59	
EPA 904.0	Radium-228	0.652 ± 0.504 (1.01) C:77% T:79%	pCi/L		04/16/24 15:42	
Total Radium Calculation	Total Radium	0.652 ± 0.983 (1.98)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	310	mg/L	25.0	04/11/24 08:33	
EPA 300.0 Rev 2.1 1993	Chloride	4.9	mg/L	1.0	04/06/24 00:57	
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L	0.10	04/06/24 00:57	
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	04/06/24 00:57	
92723368020	**SW-2**					
EPA 6010D	Barium	55.2	ug/L	5.0	04/24/24 17:32	
EPA 6010D	Calcium	5560	ug/L	100	04/24/24 17:32	
EPA 6010D	Chromium	1.6J	ug/L	5.0	04/24/24 17:32	
EPA 6010D	Cobalt	0.49J	ug/L	5.0	04/24/24 17:32	
EPA 6010D	Copper	2.0J	ug/L	5.0	04/24/24 17:32	
EPA 6010D	Nickel	1.7J	ug/L	5.0	04/24/24 17:32	
EPA 6010D	Vanadium	1.8J	ug/L	5.0	04/24/24 17:32	
EPA 6010D	Zinc	5.0J	ug/L	10.0	04/24/24 17:32	
EPA 6020B	Boron	11.0J	ug/L	50.0	04/08/24 22:35	
EPA 6020B	Lithium	0.70J	ug/L	2.5	04/08/24 22:35	
EPA 903.1	Radium-226	-0.274 ± 0.631 (1.33) C:NA T:78%	pCi/L		04/18/24 13:59	
EPA 904.0	Radium-228	0.496 ± 0.521 (1.09) C:77% T:72%	pCi/L		04/16/24 15:42	
Total Radium Calculation	Total Radium	0.496 ± 1.15 (2.42)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	117	mg/L	25.0	04/11/24 08:33	
EPA 300.0 Rev 2.1 1993	Chloride	27.7	mg/L	1.0	04/06/24 01:12	
EPA 300.0 Rev 2.1 1993	Fluoride	0.076J	mg/L	0.10	04/06/24 01:12	
EPA 300.0 Rev 2.1 1993	Sulfate	3.5	mg/L	1.0	04/06/24 01:12	
92723368021	**SW-3**					
EPA 6010D	Barium	59.9	ug/L	5.0	04/24/24 17:53	
EPA 6010D	Calcium	5970	ug/L	100	04/24/24 17:53	
EPA 6010D	Chromium	1.8J	ug/L	5.0	04/24/24 17:53	
EPA 6010D	Cobalt	0.48J	ug/L	5.0	04/24/24 17:53	
EPA 6010D	Copper	2.2J	ug/L	5.0	04/24/24 17:53	
EPA 6010D	Lead	1.5J	ug/L	5.0	04/24/24 17:53	
EPA 6010D	Nickel	2.2J	ug/L	5.0	04/24/24 17:53	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368021	**SW-3**					
EPA 6010D	Vanadium	2.5J	ug/L	5.0	04/24/24 17:53	
EPA 6010D	Zinc	6.5J	ug/L	10.0	04/24/24 17:53	
EPA 6020B	Boron	11.1J	ug/L	50.0	04/08/24 22:39	
EPA 6020B	Lithium	0.81J	ug/L	2.5	04/08/24 22:39	
EPA 903.1	Radium-226	0.138 ± 0.692 (1.30) C:NA T:75%	pCi/L		04/18/24 13:59	
EPA 904.0	Radium-228	0.238 ± 0.562 (1.25) C:73% T:73%	pCi/L		04/16/24 15:42	
Total Radium Calculation	Total Radium	0.376 ± 1.25 (2.55)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	130	mg/L	25.0	04/11/24 08:33	
EPA 300.0 Rev 2.1 1993	Chloride	30.2	mg/L	1.0	04/06/24 01:26	
EPA 300.0 Rev 2.1 1993	Fluoride	0.087J	mg/L	0.10	04/06/24 01:26	
EPA 300.0 Rev 2.1 1993	Sulfate	4.0	mg/L	1.0	04/06/24 01:26	
92723368022	**SW-4**					
EPA 6010D	Barium	56.7	ug/L	5.0	04/24/24 17:58	
EPA 6010D	Calcium	3080	ug/L	100	04/24/24 17:58	
EPA 6010D	Chromium	2.9J	ug/L	5.0	04/24/24 17:58	
EPA 6010D	Cobalt	2.2J	ug/L	5.0	04/24/24 17:58	
EPA 6010D	Copper	5.2	ug/L	5.0	04/24/24 17:58	
EPA 6010D	Lead	4.4J	ug/L	5.0	04/24/24 17:58	
EPA 6010D	Nickel	2.3J	ug/L	5.0	04/24/24 17:58	
EPA 6010D	Vanadium	6.2	ug/L	5.0	04/24/24 17:58	
EPA 6010D	Zinc	10.2	ug/L	10.0	04/24/24 17:58	
EPA 6020B	Boron	13.6J	ug/L	50.0	04/08/24 22:42	
EPA 6020B	Lithium	1.2J	ug/L	2.5	04/08/24 22:42	
EPA 6020B	Thallium	0.034J	ug/L	0.20	04/10/24 22:36	
EPA 903.1	Radium-226	0.202 ± 0.885 (1.62) C:NA T:79%	pCi/L		04/18/24 13:59	
EPA 904.0	Radium-228	0.0860 ± 0.379 (0.866) C:77% T:70%	pCi/L		04/16/24 15:39	
Total Radium Calculation	Total Radium	0.288 ± 1.26 (2.49)	pCi/L		04/24/24 12:47	
SM 2540C-2015	Total Dissolved Solids	137	mg/L	25.0	04/11/24 08:33	
EPA 300.0 Rev 2.1 1993	Chloride	12.4	mg/L	1.0	04/06/24 01:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.077J	mg/L	0.10	04/06/24 01:40	
EPA 300.0 Rev 2.1 1993	Sulfate	5.7	mg/L	1.0	04/06/24 01:40	
92723368023	**SW-5**					
EPA 6010D	Barium	193	ug/L	5.0	04/24/24 18:02	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368023	**SW-5**					
EPA 6010D	Beryllium	0.44J	ug/L	1.0	04/24/24 18:02	
EPA 6010D	Calcium	2850	ug/L	100	04/24/24 18:02	
EPA 6010D	Chromium	6.8	ug/L	5.0	04/24/24 18:02	
EPA 6010D	Cobalt	3.9J	ug/L	5.0	04/24/24 18:02	
EPA 6010D	Copper	7.0	ug/L	5.0	04/24/24 18:02	
EPA 6010D	Lead	13.4	ug/L	5.0	04/24/24 18:02	
EPA 6010D	Nickel	4.6J	ug/L	5.0	04/24/24 18:02	
EPA 6010D	Vanadium	24.3	ug/L	5.0	04/24/24 18:02	
EPA 6010D	Zinc	25.8	ug/L	10.0	04/24/24 18:02	
EPA 6020B	Boron	8.4J	ug/L	50.0	04/08/24 22:46	
EPA 6020B	Lithium	3.0	ug/L	2.5	04/08/24 22:46	
EPA 6020B	Thallium	0.072J	ug/L	0.20	04/10/24 22:40	
EPA 903.1	Radium-226	0.449 ± 0.511 (0.806) C:NA T:82%	pCi/L		04/18/24 14:23	
EPA 904.0	Radium-228	1.01 ± 0.513 (0.893) C:65% T:79%	pCi/L		04/16/24 12:09	
Total Radium Calculation	Total Radium	1.46 ± 1.02 (1.70)	pCi/L		04/19/24 13:28	
SM 2540C-2015	Total Dissolved Solids	380	mg/L	25.0	04/11/24 08:34	
EPA 300.0 Rev 2.1 1993	Chloride	6.6	mg/L	1.0	04/06/24 01:55	
EPA 300.0 Rev 2.1 1993	Fluoride	0.20	mg/L	0.10	04/06/24 01:55	
EPA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	04/06/24 01:55	
92723368024	**SW-6**					
EPA 6010D	Arsenic	2.5J	ug/L	10.0	04/24/24 18:07	
EPA 6010D	Barium	464	ug/L	5.0	04/24/24 18:07	
EPA 6010D	Beryllium	0.66J	ug/L	1.0	04/24/24 18:07	
EPA 6010D	Calcium	3890	ug/L	100	04/24/24 18:07	
EPA 6010D	Chromium	8.4	ug/L	5.0	04/24/24 18:07	
EPA 6010D	Cobalt	9.2	ug/L	5.0	04/24/24 18:07	
EPA 6010D	Copper	9.5	ug/L	5.0	04/24/24 18:07	
EPA 6010D	Lead	16.6	ug/L	5.0	04/24/24 18:07	
EPA 6010D	Nickel	6.2	ug/L	5.0	04/24/24 18:07	
EPA 6010D	Vanadium	31.7	ug/L	5.0	04/24/24 18:07	
EPA 6010D	Zinc	41.3	ug/L	10.0	04/24/24 18:07	
EPA 6020B	Boron	8.6J	ug/L	50.0	04/08/24 22:50	
EPA 6020B	Lithium	3.7	ug/L	2.5	04/08/24 22:50	
EPA 6020B	Thallium	0.081J	ug/L	0.20	04/10/24 22:43	
EPA 903.1	Radium-226	0.116 ± 0.425 (0.816) C:NA T:88%	pCi/L		04/18/24 14:23	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92723368024	**SW-6**					
EPA 904.0	Radium-228	0.511 ± 0.461 (0.948) C:81% T:81%	pCi/L		04/16/24 12:12	
Total Radium Calculation	Total Radium	0.627 ± 0.886 (1.76)	pCi/L		04/19/24 13:28	
SM 2540C-2015	Total Dissolved Solids	468	mg/L	25.0	04/11/24 08:34	
EPA 300.0 Rev 2.1 1993	Chloride	6.2	mg/L	1.0	04/06/24 02:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.22	mg/L	0.10	04/06/24 02:09	
EPA 300.0 Rev 2.1 1993	Sulfate	1.4	mg/L	1.0	04/06/24 02:09	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: BG-1 **Lab ID: 92723368001** Collected: 04/01/24 19:58 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 16:31	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 15:08	7440-38-2	
Barium	**277**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 16:31	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 15:08	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 15:08	7440-43-9	
Calcium	**23000**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 15:08	7440-70-2	M1
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 15:08	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 15:08	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 15:08	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 15:08	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 15:08	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 15:08	7440-02-0	
Selenium	**6.0J**	ug/L	10.0	4.1	1	04/08/24 11:40	04/24/24 15:08	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 15:08	7440-22-4	
Vanadium	**5.8**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 15:08	7440-62-2	
Zinc	**4.6J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 15:08	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 19:48	7440-42-8	
Lithium	**15.8**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 19:48	7439-93-2	
Thallium	**0.057J**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 19:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:10	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**550**	mg/L	25.0	25.0	1		04/05/24 15:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**187**	mg/L	4.0	2.4	4		04/06/24 02:23	16887-00-6	
Fluoride	**0.19**	mg/L	0.10	0.050	1		04/05/24 18:02	16984-48-8	
Sulfate	**22.3**	mg/L	1.0	0.50	1		04/05/24 18:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: BG-2 **Lab ID: 92723368002** Collected: 04/01/24 12:08 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 16:58	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 15:25	7440-38-2	
Barium	**78.8**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 16:58	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 15:25	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 15:25	7440-43-9	
Calcium	**121000**	ug/L	1000	147	10	04/08/24 11:40	04/25/24 17:02	7440-70-2	
Chromium	**2.0J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 15:25	7440-47-3	
Cobalt	**1.9J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 15:25	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 15:25	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 15:25	7439-92-1	
Molybdenum	**3.7J**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 15:25	7439-98-7	
Nickel	**2.0J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 15:25	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/24/24 15:25	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 15:25	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 15:25	7440-62-2	
Zinc	**9.9J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 15:25	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**16.4J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:15	7440-42-8	
Lithium	**17.8**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:15	7439-93-2	
Thallium	**0.060J**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:15	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:17	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1010**	mg/L	50.0	50.0	1		04/05/24 15:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**265**	mg/L	6.0	3.6	6		04/06/24 02:37	16887-00-6	
Fluoride	**0.24**	mg/L	0.10	0.050	1		04/05/24 18:17	16984-48-8	
Sulfate	**152**	mg/L	6.0	3.0	6		04/06/24 02:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: DUP **Lab ID: 92723368003** Collected: 04/02/24 10:27 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:06	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 15:30	7440-38-2	
Barium	**1130**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:06	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 15:30	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 15:30	7440-43-9	
Calcium	**109000**	ug/L	1000	147	10	04/08/24 11:40	04/25/24 17:11	7440-70-2	
Chromium	**1.1J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 15:30	7440-47-3	
Cobalt	**0.60J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 15:30	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 15:30	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 15:30	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 15:30	7439-98-7	
Nickel	**1.1J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 15:30	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/24/24 15:30	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 15:30	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 15:30	7440-62-2	
Zinc	**7.2J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 15:30	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.8J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:19	7440-42-8	
Lithium	**22.1**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:19	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:19	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:19	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**944**	mg/L	50.0	50.0	1		04/09/24 19:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**312**	mg/L	7.0	4.2	7		04/06/24 02:51	16887-00-6	
Fluoride	**0.086J**	mg/L	0.10	0.050	1		04/05/24 18:59	16984-48-8	
Sulfate	**6.9**	mg/L	1.0	0.50	1		04/05/24 18:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: EQBL **Lab ID: 92723368004** Collected: 04/04/24 12:35 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:15	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 15:34	7440-38-2	
Barium	ND	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:15	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 15:34	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 15:34	7440-43-9	
Calcium	**18.2J**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 15:34	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 15:34	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 15:34	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 15:34	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 15:34	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 15:34	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 15:34	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/24/24 15:34	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 15:34	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 15:34	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 15:34	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:23	7440-42-8	
Lithium	ND	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:23	7439-93-2	
Thallium	**0.070J**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:23	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:22	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		04/11/24 08:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		04/05/24 16:36	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		04/05/24 16:36	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		04/05/24 16:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: LEACHATE **Lab ID: 92723368005** Collected: 04/04/24 08:25 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:19	7440-36-0	
Arsenic	**10.4**	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 15:38	7440-38-2	
Barium	**42.8**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:19	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 15:38	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 15:38	7440-43-9	
Calcium	**308000**	ug/L	1000	147	10	04/08/24 11:40	04/25/24 17:24	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 15:38	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 15:38	7440-48-4	
Copper	**2.4J**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 15:38	7440-50-8	B
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 15:38	7439-92-1	
Molybdenum	**185**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 15:38	7439-98-7	
Nickel	**2.3J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 15:38	7440-02-0	
Selenium	**6.7J**	ug/L	10.0	4.1	1	04/08/24 11:40	04/24/24 15:38	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 15:38	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 15:38	7440-62-2	
Zinc	**8.2J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 15:38	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**3040**	ug/L	2500	375	50	04/08/24 11:50	04/08/24 20:27	7440-42-8	
Lithium	**49.4**	ug/L	7.5	1.0	3	04/08/24 11:50	04/08/24 23:13	7439-93-2	
Thallium	**0.12J**	ug/L	0.60	0.082	3	04/08/24 11:50	04/08/24 23:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:24	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1260**	mg/L	50.0	50.0	1		04/11/24 08:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**17.8**	mg/L	1.0	0.60	1		04/05/24 19:14	16887-00-6	
Fluoride	**0.22**	mg/L	0.10	0.050	1		04/05/24 19:14	16984-48-8	
Sulfate	**438**	mg/L	10.0	5.0	10		04/06/24 03:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-1 **Lab ID: 92723368006** Collected: 04/03/24 10:35 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:28	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:00	7440-38-2	
Barium	**52.2**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:28	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:00	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:00	7440-43-9	
Calcium	**55600**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:00	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:00	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:00	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:00	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:00	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:00	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:00	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 17:28	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:00	7440-22-4	
Vanadium	**3.0J**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:00	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:00	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**9.0J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:31	7440-42-8	
Lithium	**22.8**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:31	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:31	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**361**	mg/L	25.0	25.0	1		04/10/24 08:29		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**132**	mg/L	3.0	1.8	3		04/06/24 03:48	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	0.050	1		04/05/24 19:28	16984-48-8	
Sulfate	**4.8**	mg/L	1.0	0.50	1		04/05/24 19:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-10 **Lab ID: 92723368007** Collected: 04/02/24 12:05 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:32	7440-36-0	
Arsenic	**2.6J**	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:05	7440-38-2	
Barium	**87.4**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:32	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:05	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:05	7440-43-9	
Calcium	**21900**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:05	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:05	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:05	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:05	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:05	7439-92-1	
Molybdenum	**17.5**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:05	7439-98-7	
Nickel	**0.94J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:05	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 17:32	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:05	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:05	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:05	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**26.9J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:34	7440-42-8	
Lithium	**4.6**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:34	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**353**	mg/L	25.0	25.0	1		04/09/24 19:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**29.5**	mg/L	1.0	0.60	1		04/05/24 19:42	16887-00-6	
Fluoride	**0.40**	mg/L	0.10	0.050	1		04/05/24 19:42	16984-48-8	
Sulfate	**2.0**	mg/L	1.0	0.50	1		04/05/24 19:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-11 **Lab ID: 92723368008** Collected: 04/01/24 15:50 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:37	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:09	7440-38-2	
Barium	**45.2**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:37	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:09	7440-43-9	
Calcium	**24100**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:09	7440-70-2	
Chromium	**1.3J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:09	7440-47-3	
Cobalt	**1.1J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:09	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:09	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:09	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:09	7439-98-7	
Nickel	**1.7J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:09	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 17:37	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:09	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:09	7440-62-2	
Zinc	**5.5J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:09	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**14.6J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:38	7440-42-8	
Lithium	**10.7**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:38	7439-93-2	
Thallium	**0.085J**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:38	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:35	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**361**	mg/L	25.0	25.0	1		04/05/24 15:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**121**	mg/L	3.0	1.8	3		04/06/24 04:02	16887-00-6	M1
Fluoride	**0.16**	mg/L	0.10	0.050	1		04/05/24 19:57	16984-48-8	
Sulfate	**2.1**	mg/L	1.0	0.50	1		04/05/24 19:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-11D **Lab ID: 92723368009** Collected: 04/01/24 17:10 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:50	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:13	7440-38-2	
Barium	**115**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:50	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:13	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:13	7440-43-9	
Calcium	**16100**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:13	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:13	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:13	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:13	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:13	7439-92-1	
Molybdenum	**4.4J**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:13	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:13	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 17:50	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:13	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:13	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:13	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**43.0J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:42	7440-42-8	
Lithium	**17.8**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:42	7439-93-2	
Thallium	**0.094J**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**312**	mg/L	25.0	25.0	1		04/05/24 15:05		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**55.5**	mg/L	1.0	0.60	1		04/05/24 20:40	16887-00-6	
Fluoride	**0.42**	mg/L	0.10	0.050	1		04/05/24 20:40	16984-48-8	
Sulfate	**14.6**	mg/L	1.0	0.50	1		04/05/24 20:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-2 **Lab ID: 92723368010** Collected: 04/03/24 13:38 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 17:54	7440-36-0	
Arsenic	**3.7J**	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:18	7440-38-2	
Barium	**365**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 17:54	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:18	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:18	7440-43-9	
Calcium	**191000**	ug/L	1000	147	10	04/08/24 11:40	04/25/24 17:59	7440-70-2	
Chromium	**1.8J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:18	7440-47-3	
Cobalt	**0.89J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:18	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:18	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:18	7439-92-1	
Molybdenum	**4.7J**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:18	7439-98-7	
Nickel	**2.5J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:18	7440-02-0	
Selenium	**4.8J**	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 17:54	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:18	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:18	7440-62-2	
Zinc	**4.4J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:18	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**42.5J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 20:46	7440-42-8	
Lithium	**115**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 20:46	7439-93-2	
Thallium	**0.037J**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 20:46	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:40	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**2440**	mg/L	125	125	1		04/10/24 08:29		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1030**	mg/L	100	60.0	100		04/06/24 04:44	16887-00-6	
Fluoride	**0.19**	mg/L	0.10	0.050	1		04/05/24 20:54	16984-48-8	
Sulfate	**63.0**	mg/L	1.0	0.50	1		04/05/24 20:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-2D **Lab ID: 92723368011** Collected: 04/04/24 11:05 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 18:03	7440-36-0	
Arsenic	**13.6**	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:22	7440-38-2	
Barium	**202**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 18:03	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:22	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:22	7440-43-9	
Calcium	**20100**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:22	7440-70-2	
Chromium	**11.0**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:22	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:22	7440-48-4	
Copper	**4.3J**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:22	7440-50-8	B
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:22	7439-92-1	
Molybdenum	**231**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:22	7439-98-7	
Nickel	**6.0**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:22	7440-02-0	
Selenium	**8.3J**	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 18:03	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:22	7440-22-4	
Vanadium	**71.5**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:22	7440-62-2	
Zinc	**4.6J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:22	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**38.5J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 21:02	7440-42-8	
Lithium	**128**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 21:02	7439-93-2	
Thallium	**0.24**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 21:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:42	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**586**	mg/L	50.0	50.0	1		04/11/24 08:32		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**173**	mg/L	4.0	2.4	4		04/06/24 04:58	16887-00-6	
Fluoride	**2.2**	mg/L	0.10	0.050	1		04/05/24 21:08	16984-48-8	
Sulfate	**46.6**	mg/L	1.0	0.50	1		04/05/24 21:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-3 **Lab ID: 92723368012** Collected: 04/03/24 15:48 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 18:07	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:26	7440-38-2	
Barium	**818**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 18:07	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:26	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:26	7440-43-9	
Calcium	**203000**	ug/L	1000	147	10	04/08/24 11:40	04/25/24 18:12	7440-70-2	
Chromium	**2.3J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:26	7440-47-3	
Cobalt	**0.62J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:26	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:26	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:26	7439-92-1	
Molybdenum	**8.0**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:26	7439-98-7	
Nickel	**2.3J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:26	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 18:07	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:26	7440-22-4	
Vanadium	**1.9J**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:26	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:26	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**40.4J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 21:06	7440-42-8	
Lithium	**81.2**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 21:06	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 21:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:44	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**2500**	mg/L	125	125	1		04/10/24 08:29		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1070**	mg/L	100	60.0	100		04/06/24 05:12	16887-00-6	
Fluoride	**0.24**	mg/L	0.10	0.050	1		04/05/24 21:51	16984-48-8	
Sulfate	**12.3**	mg/L	1.0	0.50	1		04/05/24 21:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-4 **Lab ID: 92723368013** Collected: 04/03/24 18:58 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 18:16	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:31	7440-38-2	
Barium	**276**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 18:16	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:31	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:31	7440-43-9	
Calcium	**46400**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:31	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:31	7440-47-3	
Cobalt	**13.0**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:31	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:31	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:31	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:31	7439-98-7	
Nickel	**7.5**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:31	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 18:16	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:31	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:31	7440-62-2	
Zinc	**10.8**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:31	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 21:09	7440-42-8	
Lithium	**33.6**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 21:09	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 21:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:46	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**986**	mg/L	50.0	50.0	1		04/10/24 08:31		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**326**	mg/L	7.0	4.2	7		04/06/24 05:26	16887-00-6	
Fluoride	**0.33**	mg/L	0.10	0.050	1		04/05/24 22:06	16984-48-8	
Sulfate	**13.4**	mg/L	1.0	0.50	1		04/05/24 22:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-5 **Lab ID: 92723368014** Collected: 04/02/24 19:18 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 18:20	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:35	7440-38-2	
Barium	**89.7**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 18:20	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:35	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:35	7440-43-9	
Calcium	**9420**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:35	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:35	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:35	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:35	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:35	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:35	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:35	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 18:20	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:35	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:35	7440-62-2	
Zinc	**3.8J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:35	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**7.7J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 21:13	7440-42-8	
Lithium	**9.4**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 21:13	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 21:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:49	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**213**	mg/L	25.0	25.0	1		04/09/24 19:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**19.2**	mg/L	1.0	0.60	1		04/05/24 22:20	16887-00-6	
Fluoride	**0.53**	mg/L	0.10	0.050	1		04/05/24 22:20	16984-48-8	
Sulfate	**3.3**	mg/L	1.0	0.50	1		04/05/24 22:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-6 **Lab ID: 92723368015** Collected: 04/02/24 14:35 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 18:25	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 16:39	7440-38-2	
Barium	**56.6**	ug/L	5.0	0.79	1	04/08/24 11:40	04/25/24 18:25	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 16:39	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 16:39	7440-43-9	
Calcium	**35900**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 16:39	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 16:39	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 16:39	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 16:39	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 16:39	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 16:39	7439-98-7	
Nickel	**1.5J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 16:39	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 18:25	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 16:39	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 16:39	7440-62-2	
Zinc	**4.4J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 16:39	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 21:17	7440-42-8	
Lithium	**23.0**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 21:17	7439-93-2	
Thallium	**0.030J**	ug/L	0.20	0.028	1	04/08/24 11:50	04/08/24 21:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:51	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**595**	mg/L	25.0	25.0	1		04/09/24 19:58		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**193**	mg/L	4.0	2.4	4		04/06/24 05:40	16887-00-6	
Fluoride	**0.32**	mg/L	0.10	0.050	1		04/05/24 22:34	16984-48-8	
Sulfate	**27.2**	mg/L	1.0	0.50	1		04/05/24 22:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-7R **Lab ID: 92723368016** Collected: 04/02/24 17:17 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 18:55	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 17:01	7440-38-2	
Barium	**346**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 17:01	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 17:01	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 17:01	7440-43-9	
Calcium	**99900**	ug/L	1000	147	10	04/08/24 11:40	04/26/24 15:29	7440-70-2	M1
Chromium	**2.7J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 17:01	7440-47-3	
Cobalt	**0.71J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 17:01	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 17:01	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 17:01	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 17:01	7439-98-7	
Nickel	**1.7J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 17:01	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 18:55	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 17:01	7440-22-4	
Vanadium	**3.4J**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 17:01	7440-62-2	
Zinc	**4.1J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 17:01	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.1J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 21:52	7440-42-8	
Lithium	**26.0**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 21:52	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 13:53	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**900**	mg/L	50.0	50.0	1		04/09/24 19:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**280**	mg/L	6.0	3.6	6		04/06/24 06:23	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.050	1		04/05/24 22:49	16984-48-8	
Sulfate	**13.7**	mg/L	1.0	0.50	1		04/05/24 22:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-8 **Lab ID: 92723368017** Collected: 04/02/24 10:05 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 19:30	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 17:19	7440-38-2	
Barium	**1120**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 17:19	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 17:19	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 17:19	7440-43-9	
Calcium	**101000**	ug/L	1000	147	10	04/08/24 11:40	04/26/24 15:46	7440-70-2	
Chromium	**1.6J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 17:19	7440-47-3	
Cobalt	**0.82J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 17:19	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 17:19	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 17:19	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 17:19	7439-98-7	
Nickel	**1.5J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 17:19	7440-02-0	
Selenium	**4.3J**	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 19:30	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 17:19	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 17:19	7440-62-2	
Zinc	**3.7J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 17:19	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.7J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:23	7440-42-8	
Lithium	**21.6**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:23	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 14:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1050**	mg/L	50.0	50.0	1		04/09/24 19:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**313**	mg/L	7.0	4.2	7		04/06/24 06:37	16887-00-6	
Fluoride	**0.087J**	mg/L	0.10	0.050	1		04/05/24 23:03	16984-48-8	
Sulfate	**7.0**	mg/L	1.0	0.50	1		04/05/24 23:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-9 **Lab ID: 92723368018** Collected: 04/04/24 12:00 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 19:43	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 17:23	7440-38-2	
Barium	**228**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 17:23	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 17:23	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 17:23	7440-43-9	
Calcium	**37300**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 17:23	7440-70-2	
Chromium	**16.2**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 17:23	7440-47-3	
Cobalt	**0.66J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 17:23	7440-48-4	
Copper	**1.6J**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 17:23	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 17:23	7439-92-1	
Molybdenum	**25.0**	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 17:23	7439-98-7	
Nickel	**7.8**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 17:23	7440-02-0	
Selenium	**16.8**	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 19:43	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 17:23	7440-22-4	
Vanadium	**2.0J**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 17:23	7440-62-2	
Zinc	**11.1**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 17:23	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**28.5J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:27	7440-42-8	
Lithium	**4.6**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:27	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:20	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 14:02	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**505**	mg/L	25.0	25.0	1		04/11/24 08:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**11.1**	mg/L	1.0	0.60	1		04/05/24 23:46	16887-00-6	
Fluoride	**0.25**	mg/L	0.10	0.050	1		04/05/24 23:46	16984-48-8	
Sulfate	**69.7**	mg/L	1.0	0.50	1		04/05/24 23:46	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-1 **Lab ID: 92723368019** Collected: 04/04/24 10:20 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 19:47	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 17:27	7440-38-2	
Barium	**150**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 17:27	7440-39-3	
Beryllium	**0.40J**	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 17:27	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 17:27	7440-43-9	
Calcium	**2380**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 17:27	7440-70-2	
Chromium	**5.2**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 17:27	7440-47-3	
Cobalt	**2.3J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 17:27	7440-48-4	
Copper	**7.2**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 17:27	7440-50-8	
Lead	**9.7**	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 17:27	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 17:27	7439-98-7	
Nickel	**4.0J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 17:27	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 19:47	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 17:27	7440-22-4	
Vanadium	**18.3**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 17:27	7440-62-2	
Zinc	**21.0**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 17:27	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**7.8J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:31	7440-42-8	
Lithium	**2.3J**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:31	7439-93-2	
Thallium	**0.066J**	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:24	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 14:05	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**310**	mg/L	25.0	25.0	1		04/11/24 08:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.9**	mg/L	1.0	0.60	1		04/06/24 00:57	16887-00-6	
Fluoride	**0.18**	mg/L	0.10	0.050	1		04/06/24 00:57	16984-48-8	
Sulfate	**1.3**	mg/L	1.0	0.50	1		04/06/24 00:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-2 **Lab ID: 92723368020** Collected: 04/04/24 09:05 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 19:52	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 17:32	7440-38-2	
Barium	**55.2**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 17:32	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 17:32	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 17:32	7440-43-9	
Calcium	**5560**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 17:32	7440-70-2	
Chromium	**1.6J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 17:32	7440-47-3	
Cobalt	**0.49J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 17:32	7440-48-4	
Copper	**2.0J**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 17:32	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 17:32	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 17:32	7439-98-7	
Nickel	**1.7J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 17:32	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 19:52	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 17:32	7440-22-4	
Vanadium	**1.8J**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 17:32	7440-62-2	
Zinc	**5.0J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 17:32	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**11.0J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:35	7440-42-8	
Lithium	**0.70J**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:35	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/14/24 16:50	04/16/24 14:07	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**117**	mg/L	25.0	25.0	1		04/11/24 08:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**27.7**	mg/L	1.0	0.60	1		04/06/24 01:12	16887-00-6	
Fluoride	**0.076J**	mg/L	0.10	0.050	1		04/06/24 01:12	16984-48-8	
Sulfate	**3.5**	mg/L	1.0	0.50	1		04/06/24 01:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-3 **Lab ID: 92723368021** Collected: 04/04/24 09:24 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 19:57	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 17:53	7440-38-2	
Barium	**59.9**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 17:53	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 17:53	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 17:53	7440-43-9	
Calcium	**5970**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 17:53	7440-70-2	
Chromium	**1.8J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 17:53	7440-47-3	
Cobalt	**0.48J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 17:53	7440-48-4	
Copper	**2.2J**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 17:53	7440-50-8	
Lead	**1.5J**	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 17:53	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 17:53	7439-98-7	
Nickel	**2.2J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 17:53	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 19:57	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 17:53	7440-22-4	
Vanadium	**2.5J**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 17:53	7440-62-2	
Zinc	**6.5J**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 17:53	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**11.1J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:39	7440-42-8	
Lithium	**0.81J**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:39	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/11/24 11:01	04/11/24 14:58	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**130**	mg/L	25.0	25.0	1		04/11/24 08:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**30.2**	mg/L	1.0	0.60	1		04/06/24 01:26	16887-00-6	
Fluoride	**0.087J**	mg/L	0.10	0.050	1		04/06/24 01:26	16984-48-8	
Sulfate	**4.0**	mg/L	1.0	0.50	1		04/06/24 01:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-4 **Lab ID: 92723368022** Collected: 04/04/24 10:00 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 20:02	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 17:58	7440-38-2	
Barium	**56.7**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 17:58	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 17:58	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 17:58	7440-43-9	
Calcium	**3080**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 17:58	7440-70-2	
Chromium	**2.9J**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 17:58	7440-47-3	
Cobalt	**2.2J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 17:58	7440-48-4	
Copper	**5.2**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 17:58	7440-50-8	
Lead	**4.4J**	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 17:58	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 17:58	7439-98-7	
Nickel	**2.3J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 17:58	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 20:02	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 17:58	7440-22-4	
Vanadium	**6.2**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 17:58	7440-62-2	
Zinc	**10.2**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 17:58	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**13.6J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:42	7440-42-8	
Lithium	**1.2J**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:42	7439-93-2	
Thallium	**0.034J**	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:36	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/11/24 11:01	04/11/24 15:00	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**137**	mg/L	25.0	25.0	1		04/11/24 08:33		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**12.4**	mg/L	1.0	0.60	1		04/06/24 01:40	16887-00-6	
Fluoride	**0.077J**	mg/L	0.10	0.050	1		04/06/24 01:40	16984-48-8	
Sulfate	**5.7**	mg/L	1.0	0.50	1		04/06/24 01:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-5 **Lab ID: 92723368023** Collected: 04/04/24 12:55 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 20:06	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 18:02	7440-38-2	
Barium	**193**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 18:02	7440-39-3	
Beryllium	**0.44J**	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 18:02	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 18:02	7440-43-9	
Calcium	**2850**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 18:02	7440-70-2	
Chromium	**6.8**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 18:02	7440-47-3	
Cobalt	**3.9J**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 18:02	7440-48-4	
Copper	**7.0**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 18:02	7440-50-8	
Lead	**13.4**	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 18:02	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 18:02	7439-98-7	
Nickel	**4.6J**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 18:02	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 20:06	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 18:02	7440-22-4	
Vanadium	**24.3**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 18:02	7440-62-2	
Zinc	**25.8**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 18:02	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.4J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:46	7440-42-8	
Lithium	**3.0**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:46	7439-93-2	
Thallium	**0.072J**	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/11/24 11:01	04/11/24 15:06	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**380**	mg/L	25.0	25.0	1		04/11/24 08:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.6**	mg/L	1.0	0.60	1		04/06/24 01:55	16887-00-6	
Fluoride	**0.20**	mg/L	0.10	0.050	1		04/06/24 01:55	16984-48-8	
Sulfate	**2.1**	mg/L	1.0	0.50	1		04/06/24 01:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-6 **Lab ID: 92723368024** Collected: 04/04/24 10:35 Received: 04/04/24 16:04 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	04/08/24 11:40	04/25/24 20:10	7440-36-0	
Arsenic	**2.5J**	ug/L	10.0	2.5	1	04/08/24 11:40	04/24/24 18:07	7440-38-2	
Barium	**464**	ug/L	5.0	0.79	1	04/08/24 11:40	04/24/24 18:07	7440-39-3	
Beryllium	**0.66J**	ug/L	1.0	0.16	1	04/08/24 11:40	04/24/24 18:07	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	04/08/24 11:40	04/24/24 18:07	7440-43-9	
Calcium	**3890**	ug/L	100	14.7	1	04/08/24 11:40	04/24/24 18:07	7440-70-2	
Chromium	**8.4**	ug/L	5.0	0.63	1	04/08/24 11:40	04/24/24 18:07	7440-47-3	
Cobalt	**9.2**	ug/L	5.0	0.44	1	04/08/24 11:40	04/24/24 18:07	7440-48-4	
Copper	**9.5**	ug/L	5.0	0.62	1	04/08/24 11:40	04/24/24 18:07	7440-50-8	
Lead	**16.6**	ug/L	5.0	1.4	1	04/08/24 11:40	04/24/24 18:07	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	04/08/24 11:40	04/24/24 18:07	7439-98-7	
Nickel	**6.2**	ug/L	5.0	0.88	1	04/08/24 11:40	04/24/24 18:07	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	04/08/24 11:40	04/25/24 20:10	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	04/08/24 11:40	04/24/24 18:07	7440-22-4	
Vanadium	**31.7**	ug/L	5.0	1.6	1	04/08/24 11:40	04/24/24 18:07	7440-62-2	
Zinc	**41.3**	ug/L	10.0	3.0	1	04/08/24 11:40	04/24/24 18:07	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.6J**	ug/L	50.0	7.5	1	04/08/24 11:50	04/08/24 22:50	7440-42-8	
Lithium	**3.7**	ug/L	2.5	0.33	1	04/08/24 11:50	04/08/24 22:50	7439-93-2	
Thallium	**0.081J**	ug/L	0.20	0.028	1	04/10/24 12:40	04/10/24 22:43	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	04/11/24 11:01	04/11/24 15:08	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**468**	mg/L	25.0	25.0	1		04/11/24 08:34		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.2**	mg/L	1.0	0.60	1		04/06/24 02:09	16887-00-6	
Fluoride	**0.22**	mg/L	0.10	0.050	1		04/06/24 02:09	16984-48-8	
Sulfate	**1.4**	mg/L	1.0	0.50	1		04/06/24 02:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 846061
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368021, 92723368022, 92723368023, 92723368024

METHOD BLANK: 4368544 Matrix: Water
Associated Lab Samples: 92723368021, 92723368022, 92723368023, 92723368024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	04/11/24 14:24	

LABORATORY CONTROL SAMPLE: 4368545

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4368546 4368547

Parameter	Units	92723061001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.12	2.5	2.5	2.3	2.2	86	84	75-125	3	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 846821 | Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A | Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017, 92723368018, 92723368019, 92723368020

METHOD BLANK: 4372406 Matrix: Water

Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017, 92723368018, 92723368019, 92723368020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	04/16/24 13:06	

LABORATORY CONTROL SAMPLE: 4372407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.6	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4372408 4372409

Parameter	Units	92723368001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.6	2.6	102	103	75-125	0	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845075
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015

METHOD BLANK: 4364046 Matrix: Water
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.6	04/25/24 16:23	
Arsenic	ug/L	ND	10.0	2.5	04/24/24 14:59	
Barium	ug/L	ND	5.0	0.79	04/25/24 16:23	
Beryllium	ug/L	ND	1.0	0.16	04/24/24 14:59	
Cadmium	ug/L	ND	1.0	0.29	04/24/24 14:59	
Calcium	ug/L	ND	100	14.7	04/24/24 14:59	
Chromium	ug/L	ND	5.0	0.63	04/24/24 14:59	
Cobalt	ug/L	ND	5.0	0.44	04/24/24 14:59	
Copper	ug/L	9.3	5.0	0.62	04/25/24 16:23	
Lead	ug/L	ND	5.0	1.4	04/24/24 14:59	
Molybdenum	ug/L	ND	5.0	2.6	04/24/24 14:59	
Nickel	ug/L	ND	5.0	0.88	04/24/24 14:59	
Selenium	ug/L	ND	10.0	4.1	04/24/24 14:59	
Silver	ug/L	ND	5.0	0.49	04/24/24 14:59	
Vanadium	ug/L	ND	5.0	1.6	04/24/24 14:59	
Zinc	ug/L	ND	10.0	3.0	04/24/24 14:59	

LABORATORY CONTROL SAMPLE: 4364047

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	520	104	80-120	
Arsenic	ug/L	500	474	95	80-120	
Barium	ug/L	500	556	111	80-120	
Beryllium	ug/L	500	476	95	80-120	
Cadmium	ug/L	500	475	95	80-120	
Calcium	ug/L	5000	5170	103	80-120	
Chromium	ug/L	500	488	98	80-120	
Cobalt	ug/L	500	484	97	80-120	
Copper	ug/L	500	507	101	80-120	
Lead	ug/L	500	479	96	80-120	
Molybdenum	ug/L	500	495	99	80-120	
Nickel	ug/L	500	480	96	80-120	
Selenium	ug/L	500	453	91	80-120	
Silver	ug/L	250	243	97	80-120	
Vanadium	ug/L	500	493	99	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

LABORATORY CONTROL SAMPLE: 4364047

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Zinc	ug/L	500	468	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4364048 4364049

Parameter	Units	92723368001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	507	510	101	102	75-125	1	20	
Arsenic	ug/L	ND	500	500	517	521	103	104	75-125	1	20	
Barium	ug/L	277	500	500	782	803	101	105	75-125	3	20	
Beryllium	ug/L	ND	500	500	518	524	104	105	75-125	1	20	
Cadmium	ug/L	ND	500	500	491	498	98	100	75-125	1	20	
Calcium	ug/L	23000	5000	5000	26600	26900	72	78	75-125	1	20	M1
Chromium	ug/L	ND	500	500	498	504	99	101	75-125	1	20	
Cobalt	ug/L	ND	500	500	495	501	99	100	75-125	1	20	
Copper	ug/L	ND	500	500	531	620	106	124	75-125	16	20	
Lead	ug/L	ND	500	500	482	489	96	98	75-125	1	20	
Molybdenum	ug/L	ND	500	500	502	511	100	102	75-125	2	20	
Nickel	ug/L	ND	500	500	488	495	98	99	75-125	1	20	
Selenium	ug/L	6.0J	500	500	521	531	103	105	75-125	2	20	
Silver	ug/L	ND	250	250	259	262	104	105	75-125	1	20	
Vanadium	ug/L	5.8	500	500	514	520	102	103	75-125	1	20	
Zinc	ug/L	4.6J	500	500	499	506	99	100	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845076
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368016, 92723368017, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

METHOD BLANK: 4364051 Matrix: Water
Associated Lab Samples: 92723368016, 92723368017, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.6	04/25/24 18:29	
Arsenic	ug/L	ND	10.0	2.5	04/24/24 16:53	
Barium	ug/L	ND	5.0	0.79	04/24/24 16:53	
Beryllium	ug/L	ND	1.0	0.16	04/24/24 16:53	
Cadmium	ug/L	ND	1.0	0.29	04/24/24 16:53	
Calcium	ug/L	ND	100	14.7	04/24/24 16:53	
Chromium	ug/L	ND	5.0	0.63	04/24/24 16:53	
Cobalt	ug/L	ND	5.0	0.44	04/24/24 16:53	
Copper	ug/L	ND	5.0	0.62	04/24/24 16:53	
Lead	ug/L	ND	5.0	1.4	04/24/24 16:53	
Molybdenum	ug/L	ND	5.0	2.6	04/24/24 16:53	
Nickel	ug/L	ND	5.0	0.88	04/24/24 16:53	
Selenium	ug/L	ND	10.0	4.1	04/25/24 18:29	
Silver	ug/L	ND	5.0	0.49	04/24/24 16:53	
Vanadium	ug/L	ND	5.0	1.6	04/24/24 16:53	
Zinc	ug/L	ND	10.0	3.0	04/24/24 16:53	

LABORATORY CONTROL SAMPLE: 4364052

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	574	115	80-120	
Arsenic	ug/L	500	533	107	80-120	
Barium	ug/L	500	561	112	80-120	
Beryllium	ug/L	500	527	105	80-120	
Cadmium	ug/L	500	530	106	80-120	
Calcium	ug/L	5000	5370	107	80-120	
Chromium	ug/L	500	537	107	80-120	
Cobalt	ug/L	500	532	106	80-120	
Copper	ug/L	500	548	110	80-120	
Lead	ug/L	500	531	106	80-120	
Molybdenum	ug/L	500	545	109	80-120	
Nickel	ug/L	500	530	106	80-120	
Selenium	ug/L	500	556	111	80-120	
Silver	ug/L	250	267	107	80-120	
Vanadium	ug/L	500	539	108	80-120	
Zinc	ug/L	500	525	105	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4364053 4364054

Parameter	Units	92723368016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	537	515	107	103	75-125	4	20	
Arsenic	ug/L	ND	500	500	560	551	112	110	75-125	2	20	
Barium	ug/L	346	500	500	880	867	107	104	75-125	1	20	
Beryllium	ug/L	ND	500	500	555	544	111	109	75-125	2	20	
Cadmium	ug/L	ND	500	500	520	509	104	102	75-125	2	20	
Calcium	ug/L	99900	5000	5000	116000	112000	329	249	75-125	4	20	M1
Chromium	ug/L	2.7J	500	500	527	518	105	103	75-125	2	20	
Cobalt	ug/L	0.71J	500	500	518	508	103	101	75-125	2	20	
Copper	ug/L	ND	500	500	559	552	112	110	75-125	1	20	
Lead	ug/L	ND	500	500	508	499	102	100	75-125	2	20	
Molybdenum	ug/L	ND	500	500	535	526	107	105	75-125	2	20	
Nickel	ug/L	1.7J	500	500	512	502	102	100	75-125	2	20	
Selenium	ug/L	ND	500	500	546	522	109	104	75-125	4	20	
Silver	ug/L	ND	250	250	278	272	111	109	75-125	2	20	
Vanadium	ug/L	3.4J	500	500	536	530	107	105	75-125	1	20	
Zinc	ug/L	4.1J	500	500	520	511	103	101	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845077
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015

METHOD BLANK: 4364058 Matrix: Water
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	50.0	7.5	04/08/24 19:40	
Lithium	ug/L	ND	2.5	0.33	04/08/24 19:40	
Thallium	ug/L	ND	0.20	0.028	04/08/24 19:40	

LABORATORY CONTROL SAMPLE: 4364059

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	50	51.4	103	80-120	
Lithium	ug/L	50	51.3	103	80-120	
Thallium	ug/L	25	26.5	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4364060 4364061

Parameter	Units	92723368001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	50	50	55.0	56.3	99	102	75-125	2	20	
Lithium	ug/L	15.8	50	50	65.3	64.9	99	98	75-125	1	20	
Thallium	ug/L	0.057J	25	25	26.9	26.9	107	107	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845078
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368016, 92723368017, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

METHOD BLANK: 4364062 Matrix: Water
Associated Lab Samples: 92723368016, 92723368017, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	50.0	7.5	04/08/24 21:44	
Lithium	ug/L	ND	2.5	0.33	04/08/24 21:44	

LABORATORY CONTROL SAMPLE: 4364063

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	50	51.7	103	80-120	
Lithium	ug/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4364064 4364065

Parameter	Units	92723368016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	8.1J	50	50	58.1	56.1	100	96	75-125	4	20	
Lithium	ug/L	26.0	50	50	74.0	72.9	96	94	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845732 | Analysis Method: EPA 6020B
QC Batch Method: EPA 3010A | Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368016, 92723368017, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

METHOD BLANK: 4366802 Matrix: Water
Associated Lab Samples: 92723368016, 92723368017, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Thallium	ug/L	ND	0.20	0.028	04/10/24 21:03	

LABORATORY CONTROL SAMPLE: 4366803

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Thallium	ug/L	25	26.5	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4366806 4366807

Parameter	Units	92723953005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Thallium	ug/L	ND	25	25	27.3	26.6	109	106	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 844631 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368001, 92723368002, 92723368008, 92723368009

METHOD BLANK: 4362069 Matrix: Water
Associated Lab Samples: 92723368001, 92723368002, 92723368008, 92723368009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	04/05/24 15:05	

LABORATORY CONTROL SAMPLE: 4362070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	272	109	90-110	

SAMPLE DUPLICATE: 4362071

Parameter	Units	92722450012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	39.0	ND		25	

SAMPLE DUPLICATE: 4362072

Parameter	Units	92723357001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	73.0	74.0	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845483 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368003, 92723368007, 92723368014, 92723368015, 92723368016, 92723368017

METHOD BLANK: 4365630 Matrix: Water
Associated Lab Samples: 92723368003, 92723368007, 92723368014, 92723368015, 92723368016, 92723368017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	04/09/24 19:55	

LABORATORY CONTROL SAMPLE: 4365631

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	256	102	90-110	

SAMPLE DUPLICATE: 4365632

Parameter	Units	92722831002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	808	818	1	25	

SAMPLE DUPLICATE: 4365633

Parameter	Units	92723368015 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	595	593	0	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845630 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368006, 92723368010, 92723368012

METHOD BLANK: 4366427 Matrix: Water
Associated Lab Samples: 92723368006, 92723368010, 92723368012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	04/10/24 08:26	

LABORATORY CONTROL SAMPLE: 4366428

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	266	106	90-110	

SAMPLE DUPLICATE: 4366429

Parameter	Units	92723073001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	666	676	1	25	

SAMPLE DUPLICATE: 4366430

Parameter	Units	92722733010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	269	278	3	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845631
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368013

METHOD BLANK: 4366431 Matrix: Water
Associated Lab Samples: 92723368013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	04/10/24 08:31	

LABORATORY CONTROL SAMPLE: 4366432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	252	101	90-110	

SAMPLE DUPLICATE: 4366433

Parameter	Units	92723368013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	986	966	2	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 845869 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368004, 92723368005, 92723368011, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

METHOD BLANK: 4367534 Matrix: Water
Associated Lab Samples: 92723368004, 92723368005, 92723368011, 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	04/11/24 08:31	

LABORATORY CONTROL SAMPLE: 4367535

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	268	107	90-110	

SAMPLE DUPLICATE: 4367536

Parameter	Units	92723294001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	707	673	5	25	

SAMPLE DUPLICATE: 4367537

Parameter	Units	92723368019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	310	296	5	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 844599
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017

METHOD BLANK: 4361976 Matrix: Water
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368004, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/05/24 16:08	
Fluoride	mg/L	ND	0.10	0.050	04/05/24 16:08	
Sulfate	mg/L	ND	1.0	0.50	04/05/24 16:08	

LABORATORY CONTROL SAMPLE: 4361977

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.8	106	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	50	52.9	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4361978 4361979

Parameter	Units	92723371002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.9	50	50	56.5	57.2	103	105	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.4	2.4	93	95	90-110	2	10	
Sulfate	mg/L	27.3	50	50	79.4	80.0	104	105	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4361980 4361981

Parameter	Units	92723368008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	121	50	50	169	166	94	89	90-110	2	10	M1
Fluoride	mg/L	0.16	2.5	2.5	2.5	2.5	95	95	90-110	1	10	
Sulfate	mg/L	2.1	50	50	53.8	54.1	103	104	90-110	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 844602
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

METHOD BLANK: 4361988 Matrix: Water
Associated Lab Samples: 92723368018, 92723368019, 92723368020, 92723368021, 92723368022, 92723368023, 92723368024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/05/24 23:17	
Fluoride	mg/L	ND	0.10	0.050	04/05/24 23:17	
Sulfate	mg/L	ND	1.0	0.50	04/05/24 23:17	

LABORATORY CONTROL SAMPLE: 4361989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	54.6	109	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	54.7	109	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4361990 4361991

Parameter	Units	92723368018 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	11.1	50	50	61.9	62.4	102	103	90-110	1	10	
Fluoride	mg/L	0.25	2.5	2.5	2.6	2.6	93	94	90-110	1	10	
Sulfate	mg/L	69.7	50	50	108	109	77	78	90-110	0	10	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: BG-1 **Lab ID: 92723368001** Collected: 04/01/24 19:58 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0642 ± 0.487 (0.963) C:NA T:85%**	pCi/L	04/18/24 13:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.432 ± 0.365 (0.733) C:91% T:80%**	pCi/L	04/16/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.496 ± 0.852 (1.70)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: BG-2 **Lab ID: 92723368002** Collected: 04/01/24 12:08 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.349 (0.563) C:NA T:84%**	pCi/L	04/18/24 13:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.546 ± 0.428 (0.840) C:87% T:79%**	pCi/L	04/16/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.546 ± 0.777 (1.40)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: DUP **Lab ID: 92723368003** Collected: 04/02/24 10:27 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0637 ± 0.573 (1.16) C:NA T:90%**	pCi/L	04/18/24 13:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.430 ± 0.358 (0.714) C:84% T:82%**	pCi/L	04/16/24 15:40	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.430 ± 0.931 (1.87)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: EQBL **Lab ID: 92723368004** Collected: 04/04/24 12:35 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.311 ± 0.887 (1.65) C:NA T:95%**	pCi/L	04/29/24 12:57	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.651 ± 0.387 (0.714) C:85% T:86%**	pCi/L	04/25/24 15:58	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.962 ± 1.27 (2.36)**	pCi/L	04/29/24 15:07	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: LEACHATE **Lab ID: 92723368005** Collected: 04/04/24 08:25 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.123 ± 0.419 (0.925) C:NA T:87%**	pCi/L	04/18/24 13:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.542 ± 0.395 (0.761) C:80% T:79%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.542 ± 0.814 (1.69)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-1 **Lab ID: 92723368006** Collected: 04/03/24 10:35 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.247 ± 0.514 (1.12) C:NA T:91%**	pCi/L	04/18/24 13:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.678 ± 0.411 (0.742) C:75% T:78%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.678 ± 0.925 (1.86)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-10 **Lab ID: 92723368007** Collected: 04/02/24 12:05 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0599 ± 0.512 (1.04) C:NA T:89%**	pCi/L	04/18/24 13:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.320 ± 0.360 (0.752) C:79% T:80%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.320 ± 0.872 (1.79)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-11 **Lab ID: 92723368008** Collected: 04/01/24 15:50 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0625 ± 0.534 (1.09) C:NA T:90%**	pCi/L	04/18/24 13:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.513 ± 0.375 (0.725) C:83% T:79%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.513 ± 0.909 (1.82)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-11D **Lab ID: 92723368009** Collected: 04/01/24 17:10 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0670 ± 0.541 (1.06) C:NA T:90%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0582 ± 0.496 (1.13) C:79% T:75%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.125 ± 1.04 (2.19)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-2 **Lab ID: 92723368010** Collected: 04/03/24 13:38 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.31 ± 0.678 (0.752) C:NA T:87%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.35 ± 0.602 (1.01) C:77% T:78%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.66 ± 1.28 (1.76)**	pCi/L	04/24/24 12:47	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-2D **Lab ID: 92723368011** Collected: 04/04/24 11:05 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0741 ± 0.384 (0.797) C:NA T:82%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.255 ± 0.492 (1.08) C:75% T:81%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.329 ± 0.876 (1.88)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-3 **Lab ID: 92723368012** Collected: 04/03/24 15:48 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.552 ± 0.666 (1.10) C:NA T:82%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.55 ± 0.545 (0.784) C:78% T:90%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.10 ± 1.21 (1.88)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-4 **Lab ID: 92723368013** Collected: 04/03/24 18:58 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.111 ± 0.406 (0.780) C:NA T:90%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.323 ± 0.303 (0.611) C:82% T:89%**	pCi/L	04/16/24 15:41	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.434 ± 0.709 (1.39)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-5 **Lab ID: 92723368014** Collected: 04/02/24 19:18 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.360 ± 0.706 (1.25) C:NA T:89%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.274 ± 0.351 (0.744) C:79% T:82%**	pCi/L	04/16/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.634 ± 1.06 (1.99)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-6 **Lab ID: 92723368015** Collected: 04/02/24 14:35 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.178 ± 0.386 (0.890) C:NA T:89%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0513 ± 0.328 (0.754) C:77% T:88%**	pCi/L	04/16/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0513 ± 0.714 (1.64)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-7R **Lab ID: 92723368016** Collected: 04/02/24 17:17 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0611 ± 0.747 (1.44) C:NA T:85%**	pCi/L	04/18/24 13:46	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.268 ± 0.338 (0.717) C:77% T:87%**	pCi/L	04/16/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.268 ± 1.09 (2.16)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: MW-8 **Lab ID: 92723368017** Collected: 04/02/24 10:05 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.357 ± 0.543 (1.24) C:NA T:88%**	pCi/L	04/18/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.351 ± 0.454 (1.10) C:74% T:85%**	pCi/L	04/16/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.000 ± 0.997 (2.34)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-1 **Lab ID: 92723368019** Collected: 04/04/24 10:20 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.000 ± 0.479 (0.970) C:NA T:90%**	pCi/L	04/18/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.652 ± 0.504 (1.01) C:77% T:79%**	pCi/L	04/16/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.652 ± 0.983 (1.98)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-2 **Lab ID: 92723368020** Collected: 04/04/24 09:05 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.274 ± 0.631 (1.33) C:NA T:78%**	pCi/L	04/18/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.496 ± 0.521 (1.09) C:77% T:72%**	pCi/L	04/16/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.496 ± 1.15 (2.42)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-3 **Lab ID: 92723368021** Collected: 04/04/24 09:24 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.138 ± 0.692 (1.30) C:NA T:75%**	pCi/L	04/18/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.238 ± 0.562 (1.25) C:73% T:73%**	pCi/L	04/16/24 15:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.376 ± 1.25 (2.55)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-4 **Lab ID: 92723368022** Collected: 04/04/24 10:00 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.202 ± 0.885 (1.62) C:NA T:79%**	pCi/L	04/18/24 13:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0860 ± 0.379 (0.866) C:77% T:70%**	pCi/L	04/16/24 15:39	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.288 ± 1.26 (2.49)**	pCi/L	04/24/24 12:47	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-5 **Lab ID: 92723368023** Collected: 04/04/24 12:55 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.449 ± 0.511 (0.806) C:NA T:82%**	pCi/L	04/18/24 14:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.01 ± 0.513 (0.893) C:65% T:79%**	pCi/L	04/16/24 12:09	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.46 ± 1.02 (1.70)**	pCi/L	04/19/24 13:28	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Sample: SW-6 **Lab ID: 92723368024** Collected: 04/04/24 10:35 Received: 04/04/24 16:04 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.116 ± 0.425 (0.816) C:NA T:88%**	pCi/L	04/18/24 14:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.511 ± 0.461 (0.948) C:81% T:81%**	pCi/L	04/16/24 12:12	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.627 ± 0.886 (1.76)**	pCi/L	04/19/24 13:28	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 662852
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92723368004

METHOD BLANK: 3228435 Matrix: Water
Associated Lab Samples: 92723368004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0418 ± 0.191 (0.388) C:NA T:97%	pCi/L	04/29/24 12:45	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 660438 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017, 92723368019, 92723368020, 92723368021, 92723368022

METHOD BLANK: 3216588 Matrix: Water
Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017, 92723368019, 92723368020, 92723368021, 92723368022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.387 ± 0.384 (0.787) C:81% T:67%	pCi/L	04/19/24 11:49	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 662854
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92723368004

METHOD BLANK: 3228438
Matrix: Water
Associated Lab Samples: 92723368004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.676 ± 0.416 (0.783) C:89% T:85%	pCi/L	04/25/24 15:58	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 660436 | Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 | Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017, 92723368019, 92723368020, 92723368021, 92723368022

METHOD BLANK: 3216582 Matrix: Water

Associated Lab Samples: 92723368001, 92723368002, 92723368003, 92723368005, 92723368006, 92723368007, 92723368008, 92723368009, 92723368010, 92723368011, 92723368012, 92723368013, 92723368014, 92723368015, 92723368016, 92723368017, 92723368019, 92723368020, 92723368021, 92723368022

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.144 ± 0.220 (0.354) C:NA T:94%	pCi/L	04/18/24 13:34	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 660635
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92723368023, 92723368024

METHOD BLANK: 3217489
Matrix: Water
Associated Lab Samples: 92723368023, 92723368024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.206 ± 0.301 (0.762) C:75% T:74%	pCi/L	04/16/24 12:09	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

QC Batch: 660633
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92723368023, 92723368024

METHOD BLANK: 3217486 Matrix: Water
Associated Lab Samples: 92723368023, 92723368024

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.0524 ± 0.239 (0.564) C:NA T:83%	pCi/L	04/18/24 14:23	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92723368001	**BG-1**	EPA 3010A	845075	EPA 6010D	845183
92723368002	**BG-2**	EPA 3010A	845075	EPA 6010D	845183
92723368003	**DUP**	EPA 3010A	845075	EPA 6010D	845183
92723368004	**EQBL**	EPA 3010A	845075	EPA 6010D	845183
92723368005	**LEACHATE**	EPA 3010A	845075	EPA 6010D	845183
92723368006	**MW-1**	EPA 3010A	845075	EPA 6010D	845183
92723368007	**MW-10**	EPA 3010A	845075	EPA 6010D	845183
92723368008	**MW-11**	EPA 3010A	845075	EPA 6010D	845183
92723368009	**MW-11D**	EPA 3010A	845075	EPA 6010D	845183
92723368010	**MW-2**	EPA 3010A	845075	EPA 6010D	845183
92723368011	**MW-2D**	EPA 3010A	845075	EPA 6010D	845183
92723368012	**MW-3**	EPA 3010A	845075	EPA 6010D	845183
92723368013	**MW-4**	EPA 3010A	845075	EPA 6010D	845183
92723368014	**MW-5**	EPA 3010A	845075	EPA 6010D	845183
92723368015	**MW-6**	EPA 3010A	845075	EPA 6010D	845183
92723368016	**MW-7R**	EPA 3010A	845076	EPA 6010D	845186
92723368017	**MW-8**	EPA 3010A	845076	EPA 6010D	845186
92723368018	**MW-9**	EPA 3010A	845076	EPA 6010D	845186
92723368019	**SW-1**	EPA 3010A	845076	EPA 6010D	845186
92723368020	**SW-2**	EPA 3010A	845076	EPA 6010D	845186
92723368021	**SW-3**	EPA 3010A	845076	EPA 6010D	845186
92723368022	**SW-4**	EPA 3010A	845076	EPA 6010D	845186
92723368023	**SW-5**	EPA 3010A	845076	EPA 6010D	845186
92723368024	**SW-6**	EPA 3010A	845076	EPA 6010D	845186
92723368001	**BG-1**	EPA 3010A	845077	EPA 6020B	845189
92723368002	**BG-2**	EPA 3010A	845077	EPA 6020B	845189
92723368003	**DUP**	EPA 3010A	845077	EPA 6020B	845189
92723368004	**EQBL**	EPA 3010A	845077	EPA 6020B	845189
92723368005	**LEACHATE**	EPA 3010A	845077	EPA 6020B	845189
92723368006	**MW-1**	EPA 3010A	845077	EPA 6020B	845189
92723368007	**MW-10**	EPA 3010A	845077	EPA 6020B	845189
92723368008	**MW-11**	EPA 3010A	845077	EPA 6020B	845189
92723368009	**MW-11D**	EPA 3010A	845077	EPA 6020B	845189
92723368010	**MW-2**	EPA 3010A	845077	EPA 6020B	845189
92723368011	**MW-2D**	EPA 3010A	845077	EPA 6020B	845189
92723368012	**MW-3**	EPA 3010A	845077	EPA 6020B	845189
92723368013	**MW-4**	EPA 3010A	845077	EPA 6020B	845189
92723368014	**MW-5**	EPA 3010A	845077	EPA 6020B	845189
92723368015	**MW-6**	EPA 3010A	845077	EPA 6020B	845189
92723368016	**MW-7R**	EPA 3010A	845078	EPA 6020B	845191
92723368016	**MW-7R**	EPA 3010A	845732	EPA 6020B	845860
92723368017	**MW-8**	EPA 3010A	845078	EPA 6020B	845191
92723368017	**MW-8**	EPA 3010A	845732	EPA 6020B	845860
92723368018	**MW-9**	EPA 3010A	845078	EPA 6020B	845191
92723368018	**MW-9**	EPA 3010A	845732	EPA 6020B	845860

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92723368019	**SW-1**	EPA 3010A	845078	EPA 6020B	845191
92723368019	**SW-1**	EPA 3010A	845732	EPA 6020B	845860
92723368020	**SW-2**	EPA 3010A	845078	EPA 6020B	845191
92723368020	**SW-2**	EPA 3010A	845732	EPA 6020B	845860
92723368021	**SW-3**	EPA 3010A	845078	EPA 6020B	845191
92723368021	**SW-3**	EPA 3010A	845732	EPA 6020B	845860
92723368022	**SW-4**	EPA 3010A	845078	EPA 6020B	845191
92723368022	**SW-4**	EPA 3010A	845732	EPA 6020B	845860
92723368023	**SW-5**	EPA 3010A	845078	EPA 6020B	845191
92723368023	**SW-5**	EPA 3010A	845732	EPA 6020B	845860
92723368024	**SW-6**	EPA 3010A	845078	EPA 6020B	845191
92723368024	**SW-6**	EPA 3010A	845732	EPA 6020B	845860
92723368001	**BG-1**	EPA 7470A	846821	EPA 7470A	846824
92723368002	**BG-2**	EPA 7470A	846821	EPA 7470A	846824
92723368003	**DUP**	EPA 7470A	846821	EPA 7470A	846824
92723368004	**EQBL**	EPA 7470A	846821	EPA 7470A	846824
92723368005	**LEACHATE**	EPA 7470A	846821	EPA 7470A	846824
92723368006	**MW-1**	EPA 7470A	846821	EPA 7470A	846824
92723368007	**MW-10**	EPA 7470A	846821	EPA 7470A	846824
92723368008	**MW-11**	EPA 7470A	846821	EPA 7470A	846824
92723368009	**MW-11D**	EPA 7470A	846821	EPA 7470A	846824
92723368010	**MW-2**	EPA 7470A	846821	EPA 7470A	846824
92723368011	**MW-2D**	EPA 7470A	846821	EPA 7470A	846824
92723368012	**MW-3**	EPA 7470A	846821	EPA 7470A	846824
92723368013	**MW-4**	EPA 7470A	846821	EPA 7470A	846824
92723368014	**MW-5**	EPA 7470A	846821	EPA 7470A	846824
92723368015	**MW-6**	EPA 7470A	846821	EPA 7470A	846824
92723368016	**MW-7R**	EPA 7470A	846821	EPA 7470A	846824
92723368017	**MW-8**	EPA 7470A	846821	EPA 7470A	846824
92723368018	**MW-9**	EPA 7470A	846821	EPA 7470A	846824
92723368019	**SW-1**	EPA 7470A	846821	EPA 7470A	846824
92723368020	**SW-2**	EPA 7470A	846821	EPA 7470A	846824
92723368021	**SW-3**	EPA 7470A	846061	EPA 7470A	846125
92723368022	**SW-4**	EPA 7470A	846061	EPA 7470A	846125
92723368023	**SW-5**	EPA 7470A	846061	EPA 7470A	846125
92723368024	**SW-6**	EPA 7470A	846061	EPA 7470A	846125
92723368001	**BG-1**	EPA 903.1	660436		
92723368002	**BG-2**	EPA 903.1	660436		
92723368003	**DUP**	EPA 903.1	660436		
92723368004	**EQBL**	EPA 903.1	662852		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92723368005	**LEACHATE**	EPA 903.1	660436		
92723368006	**MW-1**	EPA 903.1	660436		
92723368007	**MW-10**	EPA 903.1	660436		
92723368008	**MW-11**	EPA 903.1	660436		
92723368009	**MW-11D**	EPA 903.1	660436		
92723368010	**MW-2**	EPA 903.1	660436		
92723368011	**MW-2D**	EPA 903.1	660436		
92723368012	**MW-3**	EPA 903.1	660436		
92723368013	**MW-4**	EPA 903.1	660436		
92723368014	**MW-5**	EPA 903.1	660436		
92723368015	**MW-6**	EPA 903.1	660436		
92723368016	**MW-7R**	EPA 903.1	660436		
92723368017	**MW-8**	EPA 903.1	660436		
92723368019	**SW-1**	EPA 903.1	660436		
92723368020	**SW-2**	EPA 903.1	660436		
92723368021	**SW-3**	EPA 903.1	660436		
92723368022	**SW-4**	EPA 903.1	660436		
92723368023	**SW-5**	EPA 903.1	660633		
92723368024	**SW-6**	EPA 903.1	660633		
92723368001	**BG-1**	EPA 904.0	660438		
92723368002	**BG-2**	EPA 904.0	660438		
92723368003	**DUP**	EPA 904.0	660438		
92723368004	**EQBL**	EPA 904.0	662854		
92723368005	**LEACHATE**	EPA 904.0	660438		
92723368006	**MW-1**	EPA 904.0	660438		
92723368007	**MW-10**	EPA 904.0	660438		
92723368008	**MW-11**	EPA 904.0	660438		
92723368009	**MW-11D**	EPA 904.0	660438		
92723368010	**MW-2**	EPA 904.0	660438		
92723368011	**MW-2D**	EPA 904.0	660438		
92723368012	**MW-3**	EPA 904.0	660438		
92723368013	**MW-4**	EPA 904.0	660438		
92723368014	**MW-5**	EPA 904.0	660438		
92723368015	**MW-6**	EPA 904.0	660438		
92723368016	**MW-7R**	EPA 904.0	660438		
92723368017	**MW-8**	EPA 904.0	660438		
92723368019	**SW-1**	EPA 904.0	660438		
92723368020	**SW-2**	EPA 904.0	660438		
92723368021	**SW-3**	EPA 904.0	660438		
92723368022	**SW-4**	EPA 904.0	660438		
92723368023	**SW-5**	EPA 904.0	660635		
92723368024	**SW-6**	EPA 904.0	660635		
92723368001	**BG-1**	Total Radium Calculation	664321		
92723368002	**BG-2**	Total Radium Calculation	664321		
92723368003	**DUP**	Total Radium Calculation	664321		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92723368004	**EQBL**	Total Radium Calculation	665223		
92723368005	**LEACHATE**	Total Radium Calculation	664321		
92723368006	**MW-1**	Total Radium Calculation	664321		
92723368007	**MW-10**	Total Radium Calculation	664321		
92723368008	**MW-11**	Total Radium Calculation	664321		
92723368009	**MW-11D**	Total Radium Calculation	664321		
92723368010	**MW-2**	Total Radium Calculation	664321		
92723368011	**MW-2D**	Total Radium Calculation	664321		
92723368012	**MW-3**	Total Radium Calculation	664321		
92723368013	**MW-4**	Total Radium Calculation	664321		
92723368014	**MW-5**	Total Radium Calculation	664321		
92723368015	**MW-6**	Total Radium Calculation	664321		
92723368016	**MW-7R**	Total Radium Calculation	664321		
92723368017	**MW-8**	Total Radium Calculation	664321		
92723368019	**SW-1**	Total Radium Calculation	664321		
92723368020	**SW-2**	Total Radium Calculation	664321		
92723368021	**SW-3**	Total Radium Calculation	664321		
92723368022	**SW-4**	Total Radium Calculation	664321		
92723368023	**SW-5**	Total Radium Calculation	663361		
92723368024	**SW-6**	Total Radium Calculation	663361		
92723368001	**BG-1**	SM 2540C-2015	844631		
92723368002	**BG-2**	SM 2540C-2015	844631		
92723368003	**DUP**	SM 2540C-2015	845483		
92723368004	**EQBL**	SM 2540C-2015	845869		
92723368005	**LEACHATE**	SM 2540C-2015	845869		
92723368006	**MW-1**	SM 2540C-2015	845630		
92723368007	**MW-10**	SM 2540C-2015	845483		
92723368008	**MW-11**	SM 2540C-2015	844631		
92723368009	**MW-11D**	SM 2540C-2015	844631		
92723368010	**MW-2**	SM 2540C-2015	845630		
92723368011	**MW-2D**	SM 2540C-2015	845869		
92723368012	**MW-3**	SM 2540C-2015	845630		
92723368013	**MW-4**	SM 2540C-2015	845631		
92723368014	**MW-5**	SM 2540C-2015	845483		
92723368015	**MW-6**	SM 2540C-2015	845483		
92723368016	**MW-7R**	SM 2540C-2015	845483		
92723368017	**MW-8**	SM 2540C-2015	845483		
92723368018	**MW-9**	SM 2540C-2015	845869		
92723368019	**SW-1**	SM 2540C-2015	845869		
92723368020	**SW-2**	SM 2540C-2015	845869		
92723368021	**SW-3**	SM 2540C-2015	845869		
92723368022	**SW-4**	SM 2540C-2015	845869		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Q2 2024 CHARAH GW
Pace Project No.: 92723368

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92723368023	**SW-5**	SM 2540C-2015	845869		
92723368024	**SW-6**	SM 2540C-2015	845869		
92723368001	**BG-1**	EPA 300.0 Rev 2.1 1993	844599		
92723368002	**BG-2**	EPA 300.0 Rev 2.1 1993	844599		
92723368003	**DUP**	EPA 300.0 Rev 2.1 1993	844599		
92723368004	**EQBL**	EPA 300.0 Rev 2.1 1993	844599		
92723368005	**LEACHATE**	EPA 300.0 Rev 2.1 1993	844599		
92723368006	**MW-1**	EPA 300.0 Rev 2.1 1993	844599		
92723368007	**MW-10**	EPA 300.0 Rev 2.1 1993	844599		
92723368008	**MW-11**	EPA 300.0 Rev 2.1 1993	844599		
92723368009	**MW-11D**	EPA 300.0 Rev 2.1 1993	844599		
92723368010	**MW-2**	EPA 300.0 Rev 2.1 1993	844599		
92723368011	**MW-2D**	EPA 300.0 Rev 2.1 1993	844599		
92723368012	**MW-3**	EPA 300.0 Rev 2.1 1993	844599		
92723368013	**MW-4**	EPA 300.0 Rev 2.1 1993	844599		
92723368014	**MW-5**	EPA 300.0 Rev 2.1 1993	844599		
92723368015	**MW-6**	EPA 300.0 Rev 2.1 1993	844599		
92723368016	**MW-7R**	EPA 300.0 Rev 2.1 1993	844599		
92723368017	**MW-8**	EPA 300.0 Rev 2.1 1993	844599		
92723368018	**MW-9**	EPA 300.0 Rev 2.1 1993	844602		
92723368019	**SW-1**	EPA 300.0 Rev 2.1 1993	844602		
92723368020	**SW-2**	EPA 300.0 Rev 2.1 1993	844602		
92723368021	**SW-3**	EPA 300.0 Rev 2.1 1993	844602		
92723368022	**SW-4**	EPA 300.0 Rev 2.1 1993	844602		
92723368023	**SW-5**	EPA 300.0 Rev 2.1 1993	844602		
92723368024	**SW-6**	EPA 300.0 Rev 2.1 1993	844602		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace	DC#_Title: ENV-FRM-HUN1-0083 v03_Sample Condition Upon Receipt
	Effective Date: 11/29/2023 4:16:30 PM

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☒ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

Client Name: HDR

Project #: WO# : 92723368

92723368

Courier: ☐ Commercial ☐ Fed Ex ☐ Pace ☐ UPS ☐ USPS ☐ Other:____ ☒ Client

Custody Seal Present? ☐ Yes ☒ No Seals Intact? ☐ Yes ☐ No ☒ N/A

Date/Initials Person Examining Contents: A 4/4/24

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☒ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☒ N/A

Thermometer: ☒ IR Gun ID: 92720

Type of Ice: ☒ Wet ☐ Blue ☐ None

Cooler Temp: 2.5 2.1 2.2 2.7 2.8 1.9 Correction Factor: Add/Subtract (°C) 0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1 2.2 2.7 2.5 2.8 1.9

USDA Regulated Soil (☒ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

				Comments/Discrepancy:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☐ No	☒ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☐ No	☒ N/A	4.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☒ N/A	8.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☒ Yes	☐ No	☐ N/A	9.
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☒ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ **Date:** _____

Project Manager SRF Review: _____ **Date:** _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project # WO#:92723368

PM: AMB Due Date: 04/30/24

CLIENT: 92-HDR

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1		1		1																			2				
2		1		1		1																			2				
3		1		1		1																			2				
4		1		1		1																			2				
5		1		1		1																			2				
6		1		1		1																			2				
7		1		1		1																			2				
8		1		1		1																			2				
9		1		1		1																			2				
10		1		1		1																			2				
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1		1		1																			2				
2		1		1		1																			2				
3		1		1		1																			2				
4		1		1		1																			2				
5		1		1		1																			2				
6		1		1		1																			2				
7		1		1		1																			2				
8		1		1		1																							
9		1		1		1																			2				
10		1		1		1																			2				
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK-3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)	BP1V	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
1		1		1		1																			2				
2		1		1		1																			2				
3		1		1		1																			2				
4		1		1		1																			2				
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR	Contact/Report To:	Brian Spillane
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	brian.spillane@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Q2 2024 Charah GW	Invoice To:	
		Invoice E-Mail:	
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 3 3 1 1

Identify Container Preservative Type***: 1 2 2 1

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: Angela Baioni; AcctNum / Client ID:; Table #:; Profile / Template: 7672-1; Prelog / Bottle Ord. ID: 1172257

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	300.0 Anions-Cl, Fl, SO4	6010, 6020, 7470-metals	Radium 226/228, total radium	Total Dissolved Solids (TDS)	Sample Comment	Preservation non-conformance identified for sample
BG-1	WT	Grab			4/1/24	1958	5			X	X	X	X	92723368001	
BG-2	WT	Grab			4/1/24	1208	5			X	X	X	X	002	
DUP	WT	Grab			4/2/24	1027	5			X	X	X	X	003	
EQBL	WT	Grab			4/4/24	1235	5			X	X	X	X	004	
LEACHATE	WT	Grab			4/4/24	0825	5			X	X	X	X	005	
MW-1	WT	Grab			4/3/24	1035	5			X	X	X	X	006	
MW-10	WT	Grab			4/2/24	1205	5			X	X	X	X	007	
MW-11	WT	Grab			4/1/24	1550	5			X	X	X	X	008	
MW-11D	WT	Grab			4/1/24	1710	5			X	X	X	X	009	
MW-2	WT	Grab			4/3/24	1338	5			X	X	X	X	010	

Additional Instructions from Pace®:
6020-B, Li, Thallium; 6010-Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn; 7470-Hg
HDR #10393250 Task 002

Collected By: (Printed Name) Charles Greenberg
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
(HDR)	4/4/2024 1604		4/4/24 1604	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR	Contact/Report To:	Brian Spillane
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	brian.spillane@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Q2 2024 Charah GW	Invoice To:	
		Invoice E-Mail:	
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	300.0 Anions-Cl, Fl, SO4	6010, 6020, 7470-metals	Radium 226/228, total radium	Total Dissolved Solids (TDS)	Sample Comment
MW-2D	WT	Grab			4/4/24	1105	5			X	X	X	X	92723368041
MW-3	WT	Grab			4/3/24	1548	5			X	X	X	X	012
MW-4	WT	Grab			4/3/24	1858	5			X	X	X	X	013
MW-5	WT	Grab			4/2/24	1918	5			X	X	X	X	014
MW-6	WT	Grab			4/2/24	1435	5			X	X	X	X	015
MW-7R	WT	Grab			4/2/24	1717	5			X	X	X	X	016
MW-8	WT	Grab			4/2/24	1005	5			X	X	X	X	017
MW-9	WT	Grab			4/4/24	1200	3			X	X	X	X	200ml in TDS No Radium 018
SW-1	WT	Grab			4/4/24	1020	5			X	X	X	X	019
SW-2	WT	Grab			4/4/24	0905	5			X	X	X	X	020

Specify Container Size **: 3 3 1 1

Identify Container Preservative Type***: 1 2 2 1

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Angela Baioni

AcctNum / Client ID:

Table #:

Profile / Template: 7672-1

Prelog / Bottle Ord. ID: 1172257

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
6020-B, Li, Thallium; 6010-Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn; 7470-Hg
HDR #10393250 Task 002

Collected By: (Printed Name) Charles Greenberg

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

Coolers: | Thermometer ID: | Correction Factor (°C): | Obs. Temp. (°C) | Corrected Temp. (°C) | On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
(HDR)	4/4/24 1604	HDR	4/4/24 1604	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR	Contact/Report To:	Brian Spillane
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	brian.spillane@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Q2 2024 Charah GW	Invoice To:	
		Invoice E-Mail:	
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): North Carolina

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 3 3 1 1

Identify Container Preservative Type***: 1 2 2 1

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Analysis Requested

Lab Use Only

Proj. Mgr: **Angela Baioni**
AcctNum / Client ID:
Table #:
Profile / Template: **7672-1**
Prelog / Bottle Ord. ID: **1172257**

Preservation non-conformance identified for sample.

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	300.0 Anions-Cl, Fl, SO4	6010, 6020, 7470-metals	Radium 226/228, total radium	Total Dissolved Solids (TDS)	Sample Comment
SW-3	WT	Grab			4/4/24	0924	5			X	X	X	X	4272336802 1
SW-4	WT	Grab			4/4/24	1000	5			X	X	X	X	022
SW-5	WT	Grab			4/4/24	1255	5			X	X	X	X	023
SW-6	WT	Grab			4/4/24	1035	5			X	X	X	X	024

Additional Instructions from Pace®:
6020-B, Li, Thallium; 6010-Ca, Sb, As, Ba, Be, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn; 7470-Hg
HDR #10393250 Task 002

Collected By:
(Printed Name) Charles Grunberg
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
(HDR)	4/4/24 1604		4/4/24 1604	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 3 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

C

Appendix C – Electronic Data Deliverables (electronic only)

This page intentionally left blank.

D

Appendix D – Statistical Analysis Memo

This page intentionally left blank.

Summary of Statistical Analysis and Evaluation for SSIs for 2024: First Semi-Annual Report

Background and Downgradient Wells

Charah Solutions, Inc.

Moncure, Chatham County, North Carolina

May 30, 2024

This page intentionally left blank.

Contents

1 Introduction 1
2 Statistical Analysis 2
2.1 Outliers 3
2.1.1 Background 3
2.1.2 Downgradient 9
2.2 Data Distribution 11
2.3 Trends 13
2.3.1 Background 13
2.3.2 Downgradient 13
2.4 Spatial Variability 14
3 Summary of Statistical Analysis 19
4 Evaluation for SSIs over Background 26

Tables

Table 1. Brickhaven Mine Monitoring Well Network 1
Table 2. Brickhaven Mine Monitored Constituents 2
Table 3. Outlier Test Results – Background 4
Table 4. Outlier Test Results – Downgradient 9
Table 5. Data Distributions – Background 12
Table 6. Summary of Trend Analysis Results – Background 13
Table 7. Summary of Trend Analysis Results – Downgradient 14
Table 8. Summary of Background Preliminary Data Analysis 20
Table 9. Summary of Downgradient Preliminary Data Analysis 21
Table 10. Background Concentrations for Detection Monitoring Constituents 27
Table 11. Summary of Evaluation for SSIs over Background for Appendix I Metals (Detection Monitoring) 28
Table 12. Summary of Evaluation for SSIs over Background for Appendix III Constituents (Detection Monitoring) 28
Table 13. Summary of Evaluation for SSIs over Background for Appendix IV Constituents (Detection Monitoring) 29

Figures

Figure 1. Nickel Concentrations (ug/L) vs Time 5
Figure 2. Vanadium Concentrations (ug/L) vs. Time 5
Figure 3. Boron Concentrations (ug/L) vs. Time 6
Figure 4. Chromium Concentrations (ug/L) vs. Time 6
Figure 5. Lithium Concentrations (ug/L) vs. Time 7
Figure 6. Selenium Concentrations (ug/L) vs. Time 7
Figure 7. Thallium Concentrations (ug/L) vs. Time 8
Figure 8. Total Radium Concentrations (pCi/L) vs. Time 8
Figure 9. Boron Concentrations (ug/L) Side-by-Side Box Plots by Background Well 15
Figure 10. Calcium Concentrations (ug/L) Side-by-Side Box Plots by Background Well 15
Figure 11. Fluoride Concentrations (mg/L) Side-by-Side Box Plots by Background Well 16
Figure 12. pH (Field) Concentrations (S.U.) Side-by-Side Box Plots by Background Well 16
Figure 13. Sulfate Concentrations (mg/L) Side-by-Side Box Plots by Background Well 17
Figure 14. Total Dissolved Solids Concentration (mg/L) Side-by-Side Box Plots by Background Well 17
Figure 15. Barium Concentration (ug/L) Side-by-Side Box Plots by Background Well 18
Figure 16. Vanadium Concentration (ug/L) Side-by-Side Box Plots by Background Well 18

Appendices

Appendix A – BG Tables
Appendix B – DG Tables
Appendix C – BG Plots
Appendix D – DG Plots
Appendix E – AM UPLs
Appendix F – DM UPLs

1 Introduction

This report summarizes the statistical analysis of background and downgradient groundwater quality for the Charah, LLC Brickhaven No. Mine Tract 'A' Site (Brickhaven Mine) and operating under the Facility Permit #1910-STRUC-2015 as a municipal solid waste landfill (MSWLF). Background groundwater quality was evaluated such that statistically-derived background concentrations could be established for the site. Groundwater quality in downgradient wells was then compared to background concentrations to determine if a statistically significant increase (SSI) over background has occurred, as required by Section .1600 rules of the North Carolina Solid Waste Management Rules 15A NCAC 13B .1600. Sampling results used to establish background threshold values (BTVs) were obtained during 37 monitoring events performed between October 2015 and April 2024. The BTVs for the Appendix III, Appendix IV and Appendix I constituents were developed based on the pooling of data from the site's two background wells, BG-1, and BG-2. The assumption for pooling groundwater data is that the constituent concentrations sampled at multiple background wells, when pooled, serve as an estimate of overall well field conditions for the Appendix I, III, and IV constituents.

Downgradient sampling results from the detection monitoring round in April 2024 were used to evaluate for SSIs. The current Brickhaven Mine groundwater monitoring network is presented in **Table 1**.

Software packages R [1] and SPSS [2] were used in the production of the statistics. R is a free software environment and SPSS is a licensed software package.

Table 1. Brickhaven Mine Monitoring Well Network

Background	Downgradient
BG-1	MW-1
BG-2	MW-2
	MW-3
	MW-4
	MW-5
	MW-6
	MW-7R
	MW-8
	MW-10
	MW-11
	MW-11D

Groundwater samples collected as part of the 15A NCAC 13B .1600 monitoring program were analyzed for EPA Appendix III and Appendix IV constituents, and Appendix I metals. Only non-filtered sample results were utilized for the statistical analysis of monitored constituents. A summary of constituents included in the data analysis is provided in **Table 2**.

Table 2. Brickhaven Mine Monitored Constituents

Appendix I Metals	Appendix III Constituents	Appendix IV Constituents
Copper	Boron	Antimony
Nickel	Calcium	Arsenic
Silver	Chloride	Barium
Vanadium	Fluoride	Beryllium
Zinc	pH (Field)	Cadmium
	Sulfate	Chromium
	Total Dissolved Solids	Cobalt
		Fluoride
		Lead
		Lithium
		Mercury
		Molybdenum
		Radium-226
		Radium-228
		Selenium
		Thallium
		Total Radium

2 Statistical Analysis

The background sample size (i.e., quantity of qualifying samples) was evaluated per constituent. Descriptive statistics were calculated for the background data set including non-detect (ND) values and excluding ND values. When NDs were included in the data set, the method detection limit (MDL) was substituted as the ND value for simple descriptive statistics. The analysis was performed with NDs removed to better understand the central tendency and range of the detected values. A summary of the descriptive statistics for the background data set is provided in **Appendix A**. Note that for the trend analyses in Section 2.3 and for the establishment of statistically-derived background concentration levels in Section 4, imputation methods using the maximum likelihood method (MLE) for NDs, regression on order statistics (ROS) or Kaplan-Meier (KM) methods, where appropriate, were used.

Following the calculation of descriptive statistics, the statistical analysis for the background data set was performed to evaluate for outliers, data distributions, trends, and spatial variability between the background wells for Appendix I metals, Appendix III and IV constituents, where data quantity and quality permit. The establishment of background is based on the pooled observations from BG-1 and BG-2. Spatial variability between the background wells was evaluated for each constituent having at least fifty percent detected data to assess whether the data can be pooled for establishing background concentrations. Analysis of variance tests for spatial variability can be found in **Appendix A**. A total of up to 59 samples (37 monitoring events from well BG-1 and 22 monitoring events from well BG-2) were included for the descriptive analysis of the background monitoring well results for the monitored constituents.

The first monitoring round sampled in August 2015 was not included in the analysis as it was deemed not representative of the other monitoring events as the samples were tested at a different lab. The sample collected April 3, 2017 for total dissolved solids in well BG-1 is considered an outlier and removed from the analysis. The January 2020 samples for boron were removed from the analysis as they were diluted and could not be properly detected.

For downgradient monitoring results, the data analysis included the calculation of descriptive statistics for Appendix I metals, Appendix III and IV constituents (for the data sets including and excluding ND values), followed by an evaluation of outliers and trends. A total of up to 37 monitoring events performed between November 2015 and April 2024 were included for the descriptive analysis of the downgradient monitoring well results for the monitored constituents. A summary of the descriptive statistics for each downgradient constituent-well pair is provided in **Appendix B**.

2.1 Outliers

Outliers are values that are not representative of the population from which they are sampled. The background and downgradient data sets were screened for outliers using Dixon's and Rosner's outlier tests. Dixon's outlier test is suitable for datasets containing less than 25 samples, while Rosner's test is suitable for datasets with 25 or more samples. Since all current background samples based on the pooling of data from BG-1 and BG-2 have greater than 25 observations, Rosner's test was used. For downgradient data, since sample sizes vary by well both Dixon's and Rosner's tests were used depending on the well-constituent pair sample size. With respect to Rosner's test, the test can detect up to 10 potential outliers. Note that these outlier tests assume the underlying distributions are normally distributed. Applying these tests on data that are not normally distributed may results in false positives; however; the flagged values are worth questioning as part of data quality. All outlier tests were conducted using a significance of one percent. For constituents that had NDs, the NDs were removed prior to testing for outliers.

2.1.1 Background

The statistical outliers identified in the pooled background data set are listed in **Table 3**. Ten concentrations from background well BG-1, Appendix I Metals constituents nickel and vanadium, Appendix III constituent boron, and Appendix IV constituents chromium, lithium, selenium, thallium, and total radium were identified as statistical outliers. Five concentrations from background well BG-2, Appendix I Metals constituent vanadium, and Appendix III constituent boron were identified as statistical outliers.

Table 3. Outlier Test Results – Background

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution Factor	Potential Outlier Value
BG-1	App. I Metals	Nickel	ug/L	59	81%	10/17/2022	1	14.1
BG-2	App. I Metals	Vanadium	ug/L	59	56%	4/24/2023	1	0.810
BG-2	App. I Metals	Vanadium	ug/L	59	56%	1/24/2023	1	1.10
BG-2	App. I Metals	Vanadium	ug/L	59	56%	7/11/2022	1	1.40
BG-1	App. I Metals	Vanadium	ug/L	59	56%	1/24/2023	1	8.40
BG-2	App. I Metals	Vanadium	ug/L	59	56%	10/14/2019	1	8.30
BG-1	App. III	Boron	ug/L	58	50%	4/12/2021	1	56.5
BG-2	App. III	Boron	ug/L	58	50%	4/12/2021	1	36.2
BG-1	App. IV	Chromium	ug/L	59	86%	10/17/2022	1	26.5
BG-1	App. IV	Lithium	ug/L	59	5%	1/23/2024	1	51.1
BG-1	App. IV	Lithium	ug/L	59	5%	4/27/2023	1	43.7
BG-1	App. IV	Lithium	ug/L	59	5%	4/5/2016		36.8
BG-1	App. IV	Selenium	ug/L	59	95%	4/1/2024	1	6.00
BG-1	App. IV	Thallium	ug/L	59	95%	2/16/2016		13.7
BG-1	App. IV	Total Radium	pCi/L	56	0%	7/11/2022	1	2.59

A visual inspection of concentration vs. time scatter plots for nickel (**Figure 1**), vanadium (**Figure 2**), boron (**Figure 3**), chromium (**Figure 4**), lithium (**Figure 5**), selenium (**Figure 6**), thallium (**Figure 7**), and total radium (**Figure 8**) reveal the presence of the potential outliers. The statistical outliers were investigated as possible data entry or measurement errors. The remaining values were all within one order of magnitude of other observations and deemed correct. Although the elevated values appear as statistical outliers, it is within a reasonable range of the remaining concentrations throughout the monitoring period and should not be removed from the data set at this time for purposes of determining background concentrations. Given the variable nature of groundwater samples and that it is common for groundwater quality samples to have very low or very high concentrations over time, statistical outliers are expected but do not necessarily signify that the outliers are from different distributions. As additional background samples are collected over time, the variability in concentrations will be better understood. Outlier test results may change, and earlier observations thought to be outliers may no longer be outliers. **Appendix C** contains additional visualizations of the background data.

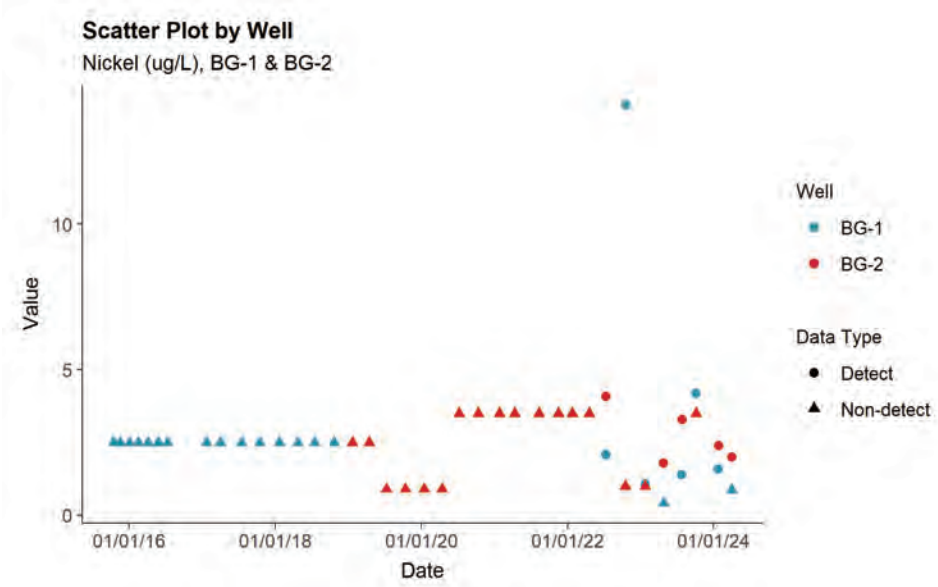


Figure 1. Nickel Concentrations (ug/L) vs Time

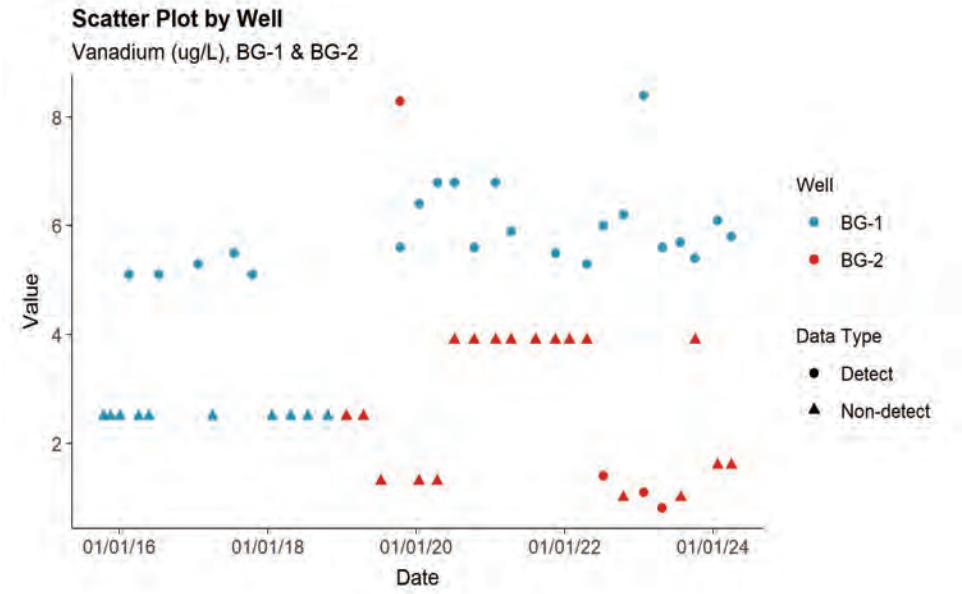


Figure 2. Vanadium Concentrations (ug/L) vs. Time

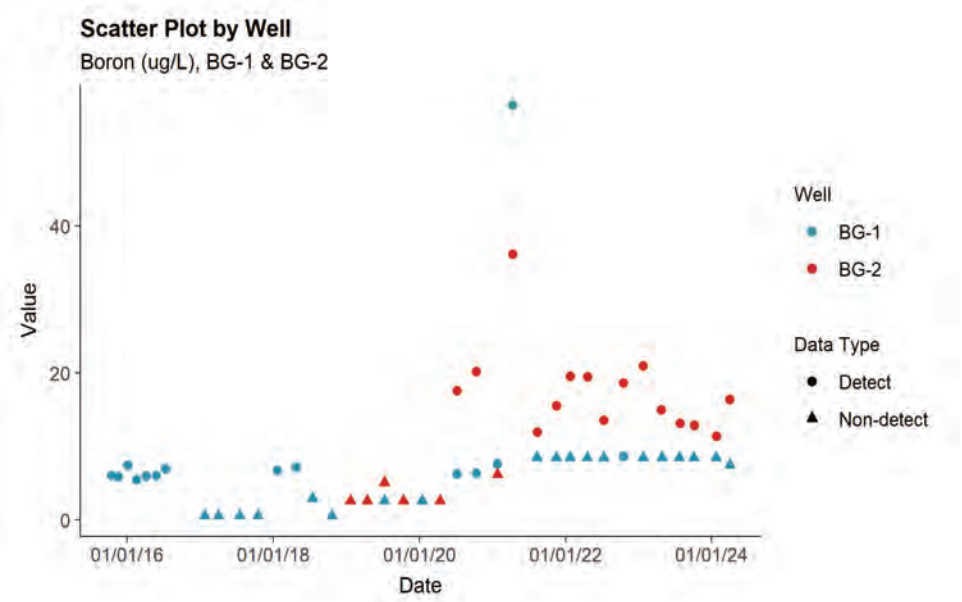


Figure 3. Boron Concentrations (ug/L) vs. Time

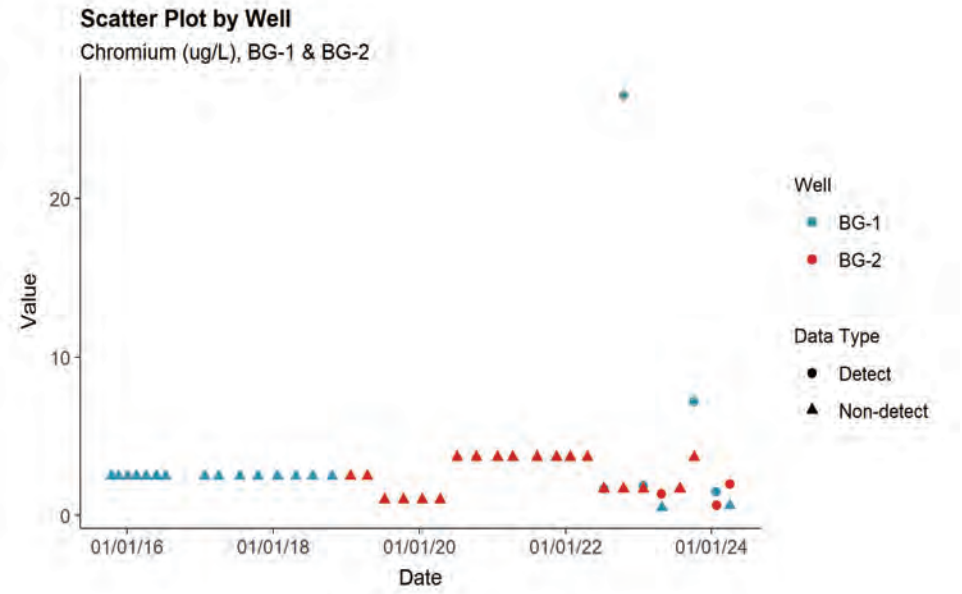


Figure 4. Chromium Concentrations (ug/L) vs. Time

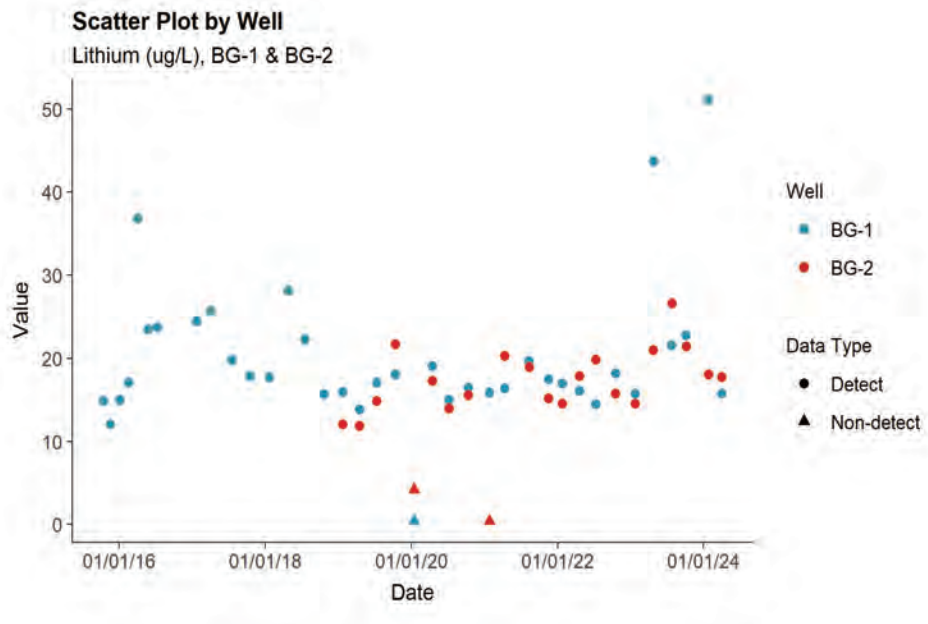


Figure 5. Lithium Concentrations (ug/L) vs. Time

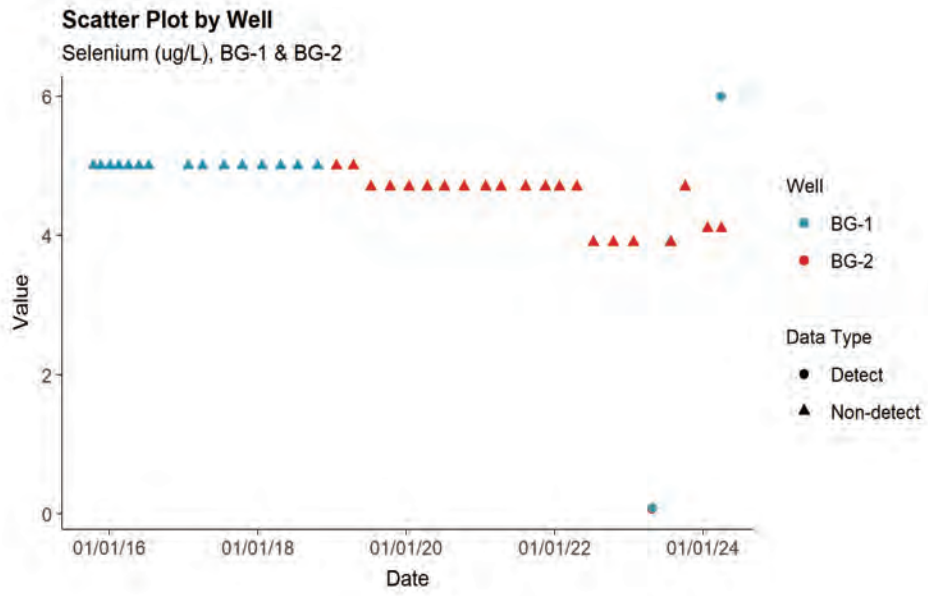


Figure 6. Selenium Concentrations (ug/L) vs. Time

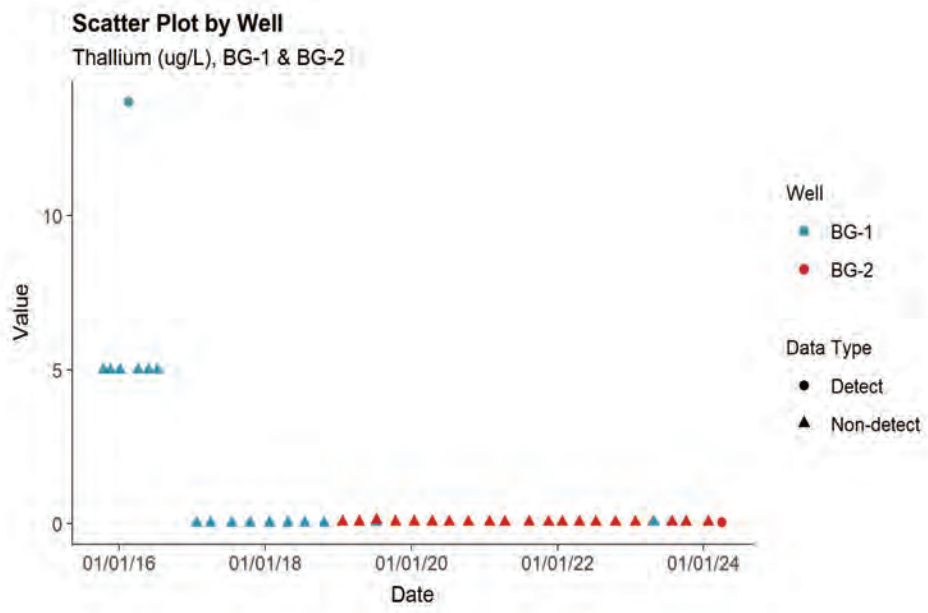


Figure 7. Thallium Concentrations (ug/L) vs. Time

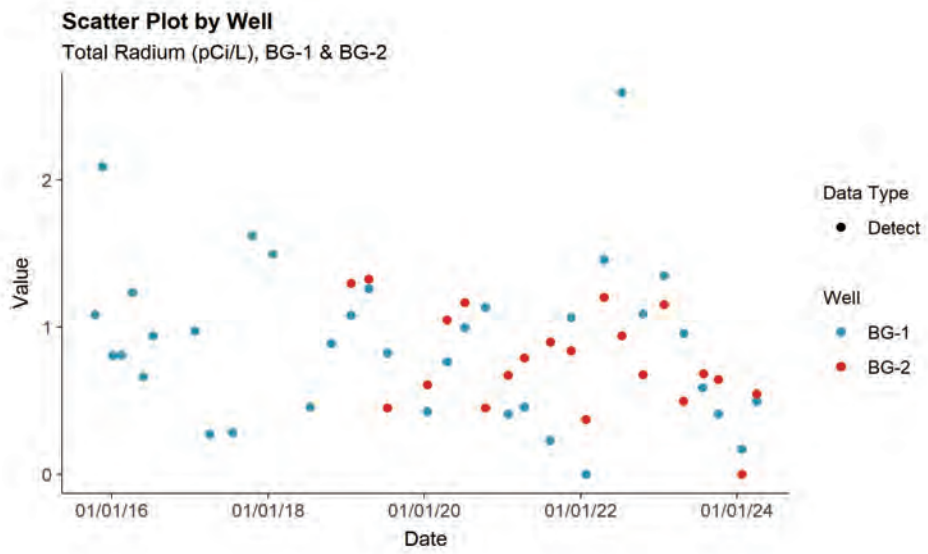


Figure 8. Total Radium Concentrations (pCi/L) vs. Time

2.1.2 Downgradient

Statistical outliers were identified for Appendix I metals, Appendix III and Appendix IV constituents in the data sets evaluated for downgradient monitoring wells throughout the monitoring period and are listed in **Table 4**.

Table 4. Outlier Test Results – Downgradient

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution	Value
MW-7R	App. I Metals	Copper	ug/L	26	77%	7/10/2019	1	79.3
MW-7R	App. I Metals	Nickel	ug/L	26	46%	7/10/2019	1	880
MW-7R	App. III	Chloride	mg/L	26	0%	7/14/2022	7	194
MW-7R	App. III	Fluoride	mg/L	26	4%	7/20/2017		0.320
MW-7R	App. III	pH (Field)	S.U.	26	0%	7/20/2017		9.60
MW-7R	App. III	Sulfate	mg/L	26	0%	7/20/2017		51.2
MW-7R	App. IV	Barium	ug/L	26	0%	7/20/2017		50.1
MW-7R	App. IV	Chromium	ug/L	26	31%	7/10/2019	1	1940
MW-7R	App. IV	Fluoride	mg/L	26	4%	7/20/2017		0.320
MW-7R	App. IV	Lithium	ug/L	26	0%	7/20/2017		5.60
MW-8	App. I Metals	Copper	ug/L	36	83%	4/27/2023	1	116
MW-8	App. I Metals	Nickel	ug/L	36	53%	4/27/2023	1	157
MW-8	App. I Metals	Vanadium	ug/L	36	83%	4/27/2023	1	9.50
MW-8	App. III	Calcium	ug/L	36	0%	1/27/2021	10	4170
MW-8	App. III	Chloride	mg/L	36	0%	11/20/2015		939
MW-8	App. IV	Barium	ug/L	36	0%	4/27/2023	10	1880
MW-8	App. IV	Radium-226	pCi/L	34	0%	4/27/2023	1	2.51
MW-8	App. IV	Radium-228	pCi/L	34	0%	4/27/2023	1	4.72
MW-8	App. IV	Total Radium	pCi/L	34	0%	4/27/2023	1	7.23
MW-1	App. III	Boron	ug/L	35	63%	10/4/2023	1	44.6
MW-1	App. IV	Cadmium	ug/L	36	92%	10/14/2020	1	0.670
MW-1	App. IV	Total Radium	pCi/L	34	0%	7/10/2019	1	2.48
MW-10	App. I Metals	Copper	ug/L	12	67%	4/21/2022	1	103
MW-10	App. I Metals	Nickel	ug/L	12	33%	10/4/2023	1	27.9
MW-10	App. I Metals	Vanadium	ug/L	12	42%	10/4/2023	1	18.2
MW-10	App. III	Boron	ug/L	12	0%	10/4/2023	1	43.4
MW-10	App. IV	Barium	ug/L	12	0%	10/4/2023	1	195
MW-10	App. IV	Chromium	ug/L	12	25%	10/4/2023	1	56.7
MW-11	App. III	Boron	ug/L	15	7%	10/2/2023	1	25.2
MW-11	App. III	Calcium	ug/L	15	0%	1/24/2024	1	69400
MW-11	App. III	pH (Field)	S.U.	14	0%	1/24/2024		11.7
MW-11	App. III	Total Dissolved Solids	mg/L	15	0%	1/29/2021	1	2760
MW-11	App. IV	Barium	ug/L	15	0%	1/24/2024	1	130
MW-11	App. IV	Lithium	ug/L	15	0%	1/24/2024	1	19.5
MW-11	App. IV	Radium-228	pCi/L	15	0%	4/13/2021	1	2.13

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution	Value
MW-11	App. IV	Total Radium	pCi/L	15	0%	4/13/2021	1	2.39
MW-11D	App. I Metals	Nickel	ug/L	13	69%	7/13/2022	1	6.20
MW-11D	App. III	Boron	ug/L	13	0%	8/12/2021	2	109
MW-11D	App. III	Calcium	ug/L	13	0%	8/12/2021	1	94400
MW-11D	App. III	Chloride	mg/L	13	0%	8/12/2021	12	530
MW-11D	App. III	Fluoride	mg/L	13	0%	4/24/2023	1	0.640
MW-11D	App. III	Sulfate	mg/L	13	8%	8/12/2021	12	523
MW-11D	App. III	Total Dissolved Solids	mg/L	13	0%	8/12/2021	1	1740
MW-11D	App. IV	Fluoride	mg/L	13	0%	4/24/2023	1	0.640
MW-11D	App. IV	Lithium	ug/L	13	0%	8/12/2021	2	80.7
MW-11D	App. IV	Molybdenum	ug/L	13	0%	8/12/2021	1	127
MW-2	App. I Metals	Copper	ug/L	31	48%	11/18/2021	1	294
MW-2	App. I Metals	Vanadium	ug/L	31	71%	10/4/2023	1	37.2
MW-2	App. I Metals	Zinc	ug/L	31	52%	10/4/2023	1	225
MW-2	App. III	Calcium	ug/L	31	0%	1/26/2024	1	34300
MW-2	App. III	Chloride	mg/L	31	0%	1/26/2024	11	489
MW-2	App. III	Chloride	mg/L	31	0%	7/12/2022	26	552
MW-2	App. III	Fluoride	mg/L	31	6%	7/18/2017		0.400
MW-2	App. III	pH (Field)	S.U.	27	0%	1/24/2024		9.29
MW-2	App. III	pH (Field)	S.U.	27	0%	7/12/2016		8.50
MW-2	App. III	Total Dissolved Solids	mg/L	31	0%	1/17/2020	1	11700
MW-2	App. III	Total Dissolved Solids	mg/L	31	0%	11/19/2015		257
MW-2	App. III	Total Dissolved Solids	mg/L	31	0%	1/28/2021	1	428
MW-2	App. IV	Chromium	ug/L	31	19%	10/19/2022	1	130
MW-2	App. IV	Chromium	ug/L	31	19%	10/25/2018	1	84.0
MW-2	App. IV	Chromium	ug/L	31	19%	1/25/2018		56.8
MW-2	App. IV	Chromium	ug/L	31	19%	4/5/2017		48.8
MW-2	App. IV	Chromium	ug/L	31	19%	10/4/2023	1	46.2
MW-2	App. IV	Cobalt	ug/L	31	84%	10/4/2023	1	34.8
MW-2	App. IV	Fluoride	mg/L	31	6%	7/18/2017		0.400
MW-2	App. IV	Lithium	ug/L	31	0%	8/10/2021	5	512
MW-2	App. IV	Lithium	ug/L	31	0%	7/12/2016		356
MW-2	App. IV	Lithium	ug/L	31	0%	5/27/2016		350
MW-2	App. IV	Molybdenum	ug/L	31	16%	1/17/2020	1	41.0
MW-2	App. IV	Thallium	ug/L	31	74%	2/17/2016		10.3
MW-3	App. I Metals	Copper	ug/L	34	62%	4/20/2022	1	137
MW-3	App. I Metals	Nickel	ug/L	34	56%	1/25/2019	1	86.0
MW-3	App. III	Chloride	mg/L	34	0%	7/12/2022	25	565
MW-3	App. III	pH (Field)	S.U.	30	0%	7/7/2020		6.18
MW-3	App. III	Total Dissolved Solids	mg/L	34	0%	11/19/2015		256
MW-3	App. III	Total Dissolved Solids	mg/L	34	0%	1/24/2017		303

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution	Value
MW-3	App. III	Total Dissolved Solids	mg/L	34	0%	1/24/2018		1060
MW-3	App. IV	Chromium	ug/L	34	50%	1/25/2019	1	179
MW-3	App. IV	Lithium	ug/L	34	3%	10/18/2017		236
MW-3	App. IV	Lithium	ug/L	34	3%	4/7/2016		217
MW-3	App. IV	Lithium	ug/L	34	3%	7/17/2018		36.7
MW-3	App. IV	Lithium	ug/L	34	3%	4/5/2017		129
MW-3	App. IV	Lithium	ug/L	34	3%	11/19/2015		128
MW-3	App. IV	Molybdenum	ug/L	34	0%	1/16/2020	1	35.7
MW-4	App. I Metals	Zinc	ug/L	35	69%	4/17/2020	1	47.2
MW-4	App. III	Boron	ug/L	34	65%	10/17/2017		165
MW-4	App. III	Calcium	ug/L	35	0%	4/7/2016		17900
MW-4	App. III	Calcium	ug/L	35	0%	5/25/2016		18600
MW-4	App. III	Total Dissolved Solids	mg/L	35	0%	11/19/2015		395
MW-4	App. III	Total Dissolved Solids	mg/L	35	0%	5/25/2016		486
MW-4	App. III	Total Dissolved Solids	mg/L	35	0%	4/7/2016		513
MW-4	App. IV	Lithium	ug/L	35	0%	8/12/2021	5	98.0
MW-5	App. I Metals	Nickel	ug/L	36	81%	7/13/2022	1	120
MW-5	App. III	Boron	ug/L	35	43%	1/23/2017		39.3
MW-5	App. III	pH (Field)	S.U.	33	0%	4/15/2020		8.54
MW-5	App. III	pH (Field)	S.U.	33	0%	7/7/2020		5.50
MW-5	App. III	pH (Field)	S.U.	33	0%	1/16/2020		5.62
MW-5	App. III	Total Dissolved Solids	mg/L	36	0%	10/17/2017		1160
MW-5	App. IV	Chromium	ug/L	36	78%	7/13/2022	1	260
MW-5	App. IV	Lithium	ug/L	36	3%	8/9/2021	1	28.6
MW-6	App. III	Chloride	mg/L	35	0%	4/5/2016		15.3
MW-6	App. III	Chloride	mg/L	35	0%	4/15/2021	4	80.3
MW-6	App. IV	Thallium	ug/L	35	91%	1/5/2016		6.20

A visual inspection of concentration vs. time scatter plots for constituents included in the outliers listed in **Table 4** reveal the presence of the potential outliers. See **Appendix D** for scatter plots of constituents with downgradient statistically-derived outliers as well as other downgradient data visualizations. Following review of the sampling protocols and field sampling records, there were no obvious reasons for the outliers noted on the sampling dates. The value for each statistical outlier for the other constituents listed above is within a reasonable range of the remaining concentrations for each constituent throughout the monitoring period. The variability in concentrations will be better understood as additional samples are obtained.

2.2 Data Distribution

Groundwater data was fitted to known distribution models using Goodness-of-Fit (GOF) tests. The Shapiro-Wilk and Lilliefors tests is used to test for normal distribution. Note that these two tests can be used to test for lognormal distributions after the data are transformed using the

natural log function. The empirical distribution function (EDF) based methods, the Kolmogorov-Smirnov (K-S) and Anderson-Darling (A-D) test, are used to test for a gamma distribution. Normal, lognormal and gamma distributions are parametric distributions. If a data set cannot be fit with any of these three parametric distributions, it is considered to follow a nonparametric distribution. In addition, if more than 50 percent of the observations are non-detects, then the dataset is assumed to follow a nonparametric distribution. Finally, the data distributions for radium 226, radium 226, and total radium are set to nonparametric for evaluation purposes as non-detect values were not flagged by the laboratory. Data distributions are listed in **Table 5**. Downgradient data distributions for each constituent-well pair are reported in **Appendix B**.

Table 5. Data Distributions – Background

Constituent	Sample Size	No. of NDs	Distribution Fit[1]
Appendix I Metals			
Copper	59	53	Nonparametric
Nickel	59	48	Nonparametric
Silver	59	59	Nonparametric
Vanadium	59	33	Nonparametric
Zinc	59	48	Nonparametric
Appendix III Constituents			
Boron	58	29	Nonparametric
Calcium	59	0	Nonparametric
Chloride	59	0	Normal
Fluoride	59	0	Gamma
pH (Field)	57	0	Normal
Sulfate	59	0	Nonparametric
Total Dissolved Solids	58	0	Nonparametric
Appendix IV Constituents			
Antimony	59	58	Nonparametric
Arsenic	59	54	Nonparametric
Barium	59	0	Nonparametric
Beryllium	59	59	Nonparametric
Cadmium	59	57	Nonparametric
Chromium	59	51	Nonparametric
Cobalt	59	51	Nonparametric
Fluoride	59	0	Gamma
Lead	59	56	Nonparametric
Lithium	59	3	Nonparametric
Mercury	59	51	Nonparametric
Molybdenum	59	47	Nonparametric
Radium-226	56	0	Nonparametric
Radium-228	56	0	Nonparametric
Selenium	59	56	Nonparametric
Thallium	59	56	Nonparametric
Total Radium	56	0	Nonparametric

[1]Distribution fit is based on detected data.

2.3 Trends

2.3.1 Background

Background constituent concentrations in groundwater should demonstrate stationary conditions through time, free of trends. Constituents were analyzed for trends within the dataset using a maximum likelihood estimate (MLE) regression for constituents which followed parametric distributions and Mann-Kendall tests for those that were treated under nonparametric distributional assumptions. The MLE regression can be applied to datasets that can be fitted to a specific distribution model and that contain NDs with multiple MDLs. The Mann-Kendall test is suitable for data series with no discernable distributions and only one MDL value for NDs.

Constituents treated under nonparametric data assumptions (either tested as nonparametric or having more than 50 percent NDs) and with multiple MDLs or with less than three detected values were not assessed for trends. A summary of the trend analysis results for constituents with sufficient detected values in the background data set is provided in **Table 6**. A one percent significance level was used to detect statistically significant trends.

The background well regression analysis showed a potential increasing trend for fluoride (an Appendix III and Appendix IV constituent) and sulfate (Appendix III). A potential decreasing trend for chloride (Appendix III) and two Appendix IV constituents, barium and radium-226. There were no increasing or decreasing trends identified for other monitoring constituents with sufficient data quantity and quality for testing with the MLE analysis or Mann-Kendall test.

Table 6. Summary of Trend Analysis Results – Background

Constituent	Trend
Appendix III Constituents	
Chloride	↓
Fluoride	↑
Sulfate	↑
Appendix IV Constituents	
Barium	↓
Fluoride	↑
Radium-226	↓

2.3.2 Downgradient

Trends were also evaluated for constituents in each downgradient well using the same methods as described above for the background data set. Trends identified for select constituents at select monitoring well locations should be monitored as additional downgradient groundwater data are collected at the site. A summary of the statistical trends identified within the downgradient data set is provided in **Table 7**. As with the background data sets, one percent significance level was used to detect statistically significant trends.

Table 7. Summary of Trend Analysis Results – Downgradient

Constituent	Downgradient Well with Increasing or Decreasing Trend										
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7R	MW-8	MW-10	MW-11	MW-11D
Appendix I Metals											
Nickel				↑							
Appendix III Constituents											
Calcium			↑		↓		↑	↓	↑		
Chloride						↓		↓			↓
pH (Field)		↓		↓				↑			↓
Sulfate	↓	↓	↓			↓	↓	↑	↓		
TDS							↑				↓
Appendix IV Constituents											
Arsenic											↓
Barium		↑				↓	↑	↓	↑		
Lithium				↑		↓			↑		↓
Molybdenum		↓							↓		↓
Total Radium											↓

2.4 Spatial Variability

Spatial variability refers to identifying whether or not there are statistically identifiable differences in mean concentrations or variance levels across the well field (i.e., the pooled background data). Parametric and nonparametric analysis of variance (ANOVA) tests and visual aids (i.e., side-by-side box plots and scatter plots), as needed, were used to evaluate for spatial variability within the background data set to check that results from background wells BG-1 and BG-2 were appropriate for pooling and calculating background concentrations for constituents.

Statistical tests at the one percent level of statistical significance indicated that six Appendix III constituents (boron, calcium, fluoride, pH, sulfate, and total dissolved solids) exhibited spatial variability. Statistical spatial variability was also identified for two Appendix IV constituent (barium and fluoride), and one Appendix I metal (vanadium). Review of side-by-side box plots for the constituents listed above indicated that the statistically-identified variability in concentrations are reasonable and the mean concentrations calculated for the monitoring wells are generally within the natural variability of concentrations of the well field conditions for Appendix III and IV constituents or within or close to one order of magnitude of the other (See **Figure 9** to **Figure 16**). Therefore, the concentration distribution across the background wells should be considered reflective of the hydrogeological regime at the site and the background results are appropriate for pooling and calculating background concentrations at this time. Note that this spatial variability analysis is updated to include data up to April 2024. Spatial variability will continue to be monitored with each background update and downgradient assessment.

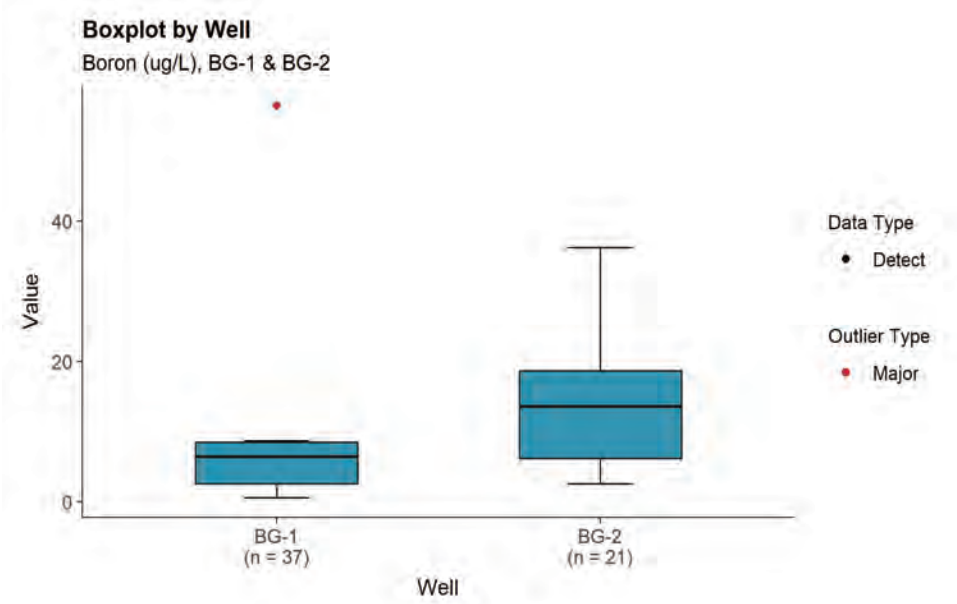


Figure 9. Boron Concentrations (ug/L) Side-by-Side Box Plots by Background Well

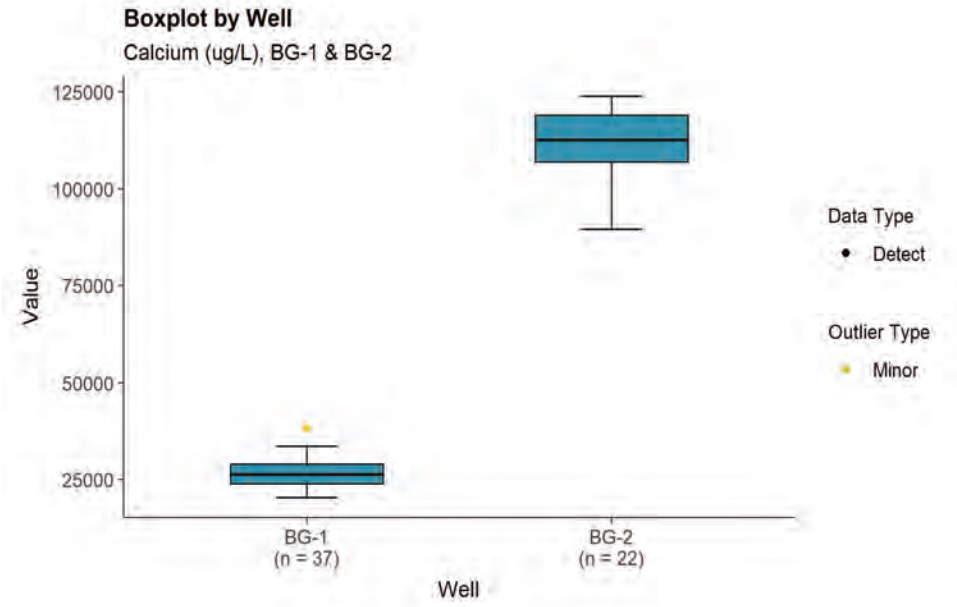


Figure 10. Calcium Concentrations (ug/L) Side-by-Side Box Plots by Background Well

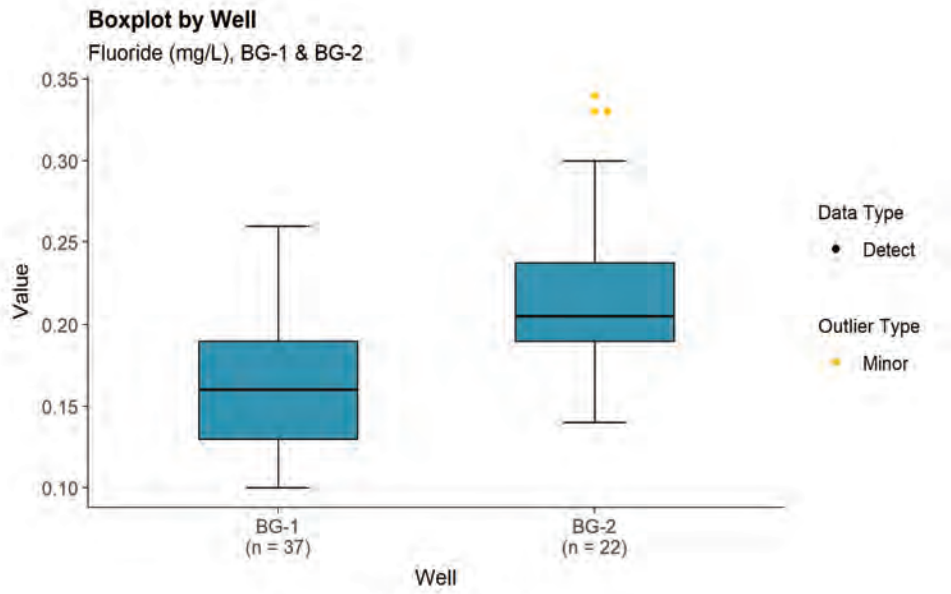


Figure 11. Fluoride Concentrations (mg/L) Side-by-Side Box Plots by Background Well

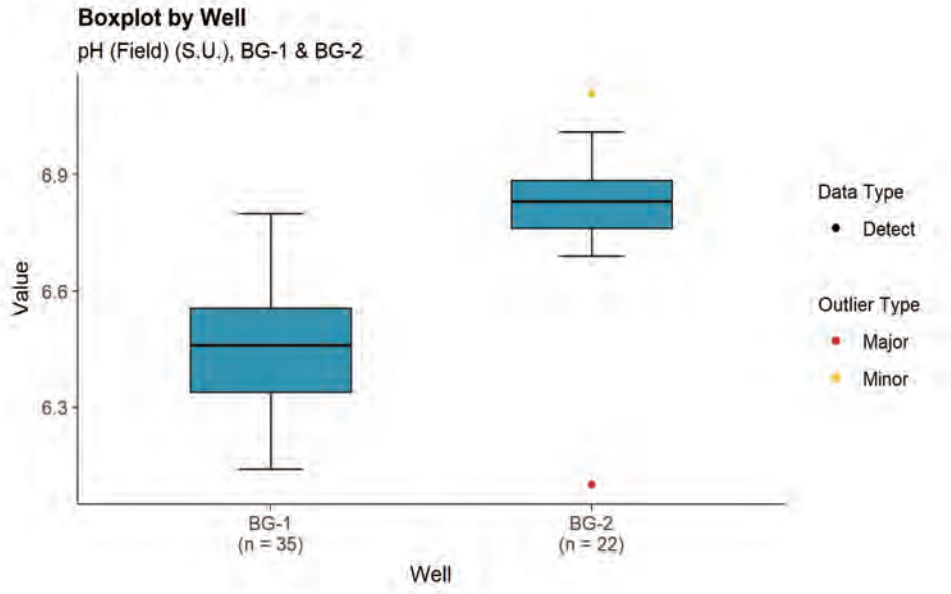


Figure 12. pH (Field) Concentrations (S.U.) Side-by-Side Box Plots by Background Well

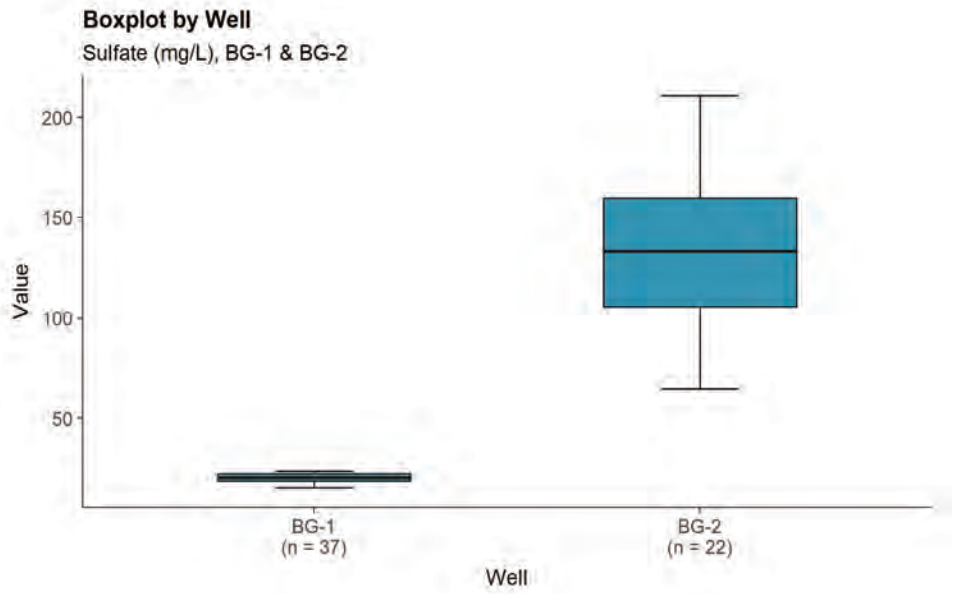


Figure 13. Sulfate Concentrations (mg/L) Side-by-Side Box Plots by Background Well

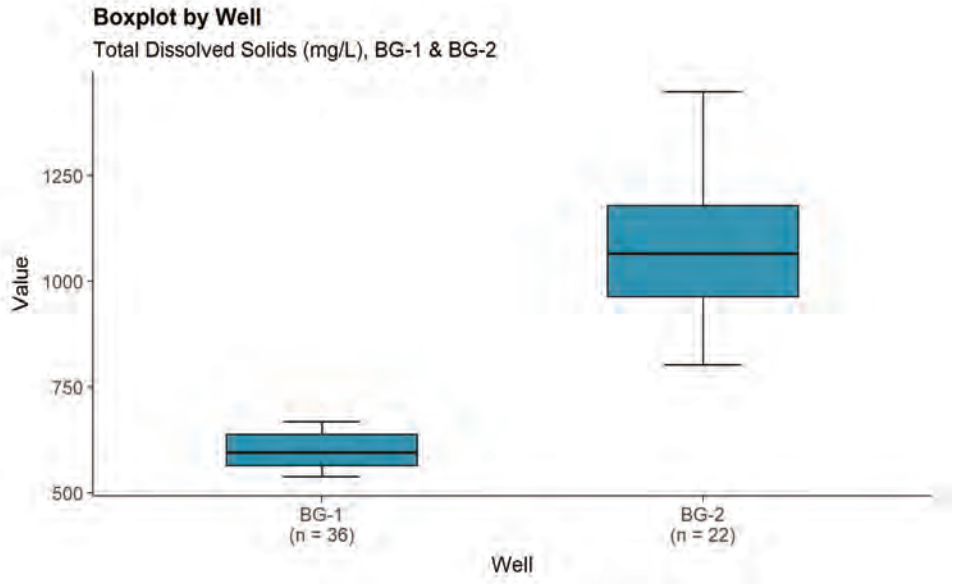


Figure 14. Total Dissolved Solids Concentration (mg/L) Side-by-Side Box Plots by Background Well

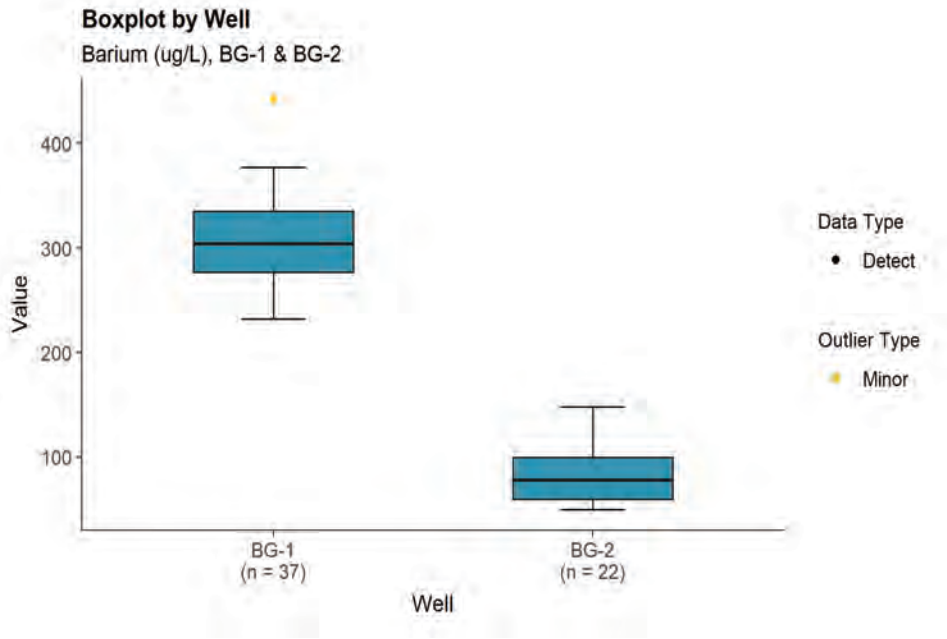


Figure 15. Barium Concentration (ug/L) Side-by-Side Box Plots by Background Well

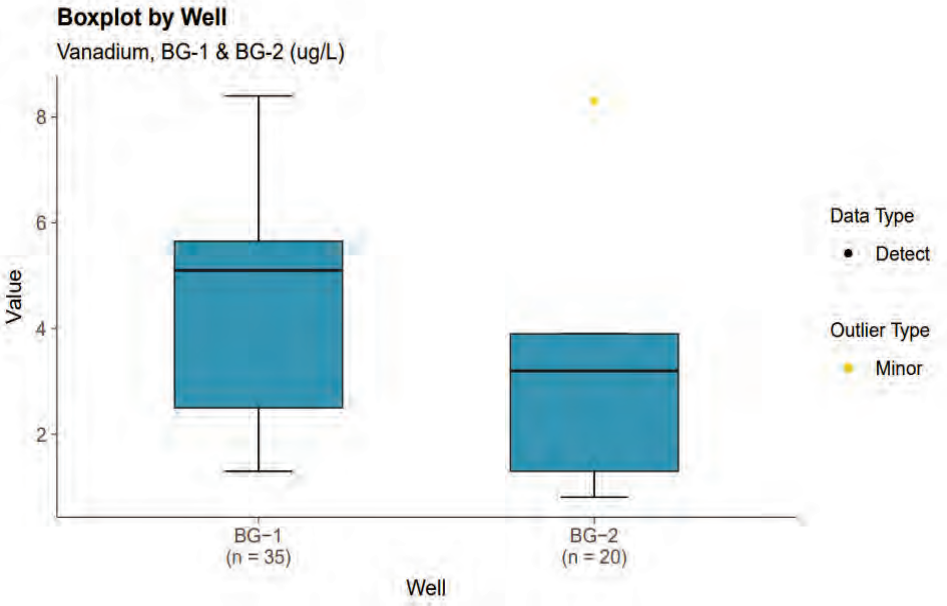


Figure 16. Vanadium Concentration (ug/L) Side-by-Side Box Plots by Background Well

3 Summary of Statistical Analysis

A summary of the statistical analysis results is provided in **Table 8** and **Table 9**, and discussed below.

- Note that for the purposes of the SSI analysis, the BTVs used include samples up to April 2024. The PDA results for background statistics have been updated using the Q1 and Q2 sampling results for information purposes.
- The statistical outliers identified for nickel, vanadium, boron, chromium, lithium, selenium, thallium, and total radium are considered representative of background. During the next BTV update with the additional 2024 samples, the full datasets will be re-assessed for statistical outliers.
- For the background data set, there are currently sufficient data to fit the Appendix III constituents to known parametric distribution models (e.g., gamma, lognormal, or normal) using GOF tests, except for boron, calcium, sulfate, and TDS, which are nonparametric.
- For the background data set, 11 of the 17 Appendix IV constituents exhibited high percentages of NDs and will be treated under nonparametric distribution assumptions with the maximum detected value chosen to represent background, until additional results can be included in the datasets. The datasets for radium-226, radium-228 and total radium are set to nonparametric distribution for inferential purposes. This is because the NDs were not indicated based on the analytical protocols used by the laboratory and some observations had negative values. Currently, the background datasets for fluoride can be fit to known parametric distribution models using GOF tests.
- Downgradient samples as of April 2024 were used to establish SSIs. The statistically-derived background concentrations and the evaluation for SSIs over background for Appendix I metals, Appendix III and Appendix IV constituents are included in **Section 4**.
- While multiple statistical outliers have been flagged at the downgradient wells for various constituents, the outliers can indicate contamination from the solid waste landfill or alternative sources. Unless an alternative source can be confirmed, the values remain in the sample as representing groundwater quality at the time of measurement.

Table 8. Summary of Background Preliminary Data Analysis

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend	Spatial Variability
Appendix I Metals				
Copper		✓		
Nickel	✓	✓		
Silver		✓		
Vanadium	✓	✓		✓
Zinc		✓		
Appendix III Constituents				
Boron	✓	✓		✓
Calcium		✓		✓
Chloride			✓	
Fluoride			✓	✓
pH (field)				✓
Sulfate		✓	✓	✓
Total Dissolved Solids		✓		✓
Appendix IV Constituents				
Antimony		✓		
Arsenic		✓		
Barium		✓	✓	✓
Beryllium		✓		
Cadmium		✓		
Chromium	✓	✓		
Cobalt		✓		
Fluoride			✓	✓
Lead		✓		
Lithium	✓	✓		
Mercury		✓		
Molybdenum		✓		
Radium-226		✓	✓	
Radium-228		✓		
Selenium	✓	✓		
Thallium	✓	✓		
Total Radium	✓	✓		

✓Constituent was flagged during the statistical analysis of pooled wells BG-1 and BG-2

Table 9. Summary of Downgradient Preliminary Data Analysis

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Appendix I Metals			
Copper	MW-2 MW-3 MW-7R MW-8 MW-10	MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Nickel	MW-3 MW-5 MW-7R MW-8 MW-10 MW-11D	MW-1 MW-10 MW-11 MW-11D MW-3 MW-5 MW-6 MW-7R MW-8	MW-4 (↑)
Silver		MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Vanadium	MW-2 MW-8 MW-10	MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Zinc	MW-2 MW-4	MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Appendix III Constituents			
Boron	MW-1, MW-4, MW-5, MW-10, MW-11, MW-11D	MW-1 MW-11 MW-11D MW-4 MW-5 MW-6	
Calcium	MW-2 MW-4 MW-8 MW-11 MW-11D	MW-2 MW-4 MW-8	MW-3 (↑) MW-5 (↓) MW-7R (↑) MW-8 (↓) MW-10 (↑)
Chloride	MW-2 MW-3 MW-6 MW-7R MW-8 MW-11D	MW-2 MW-3 MW-4 MW-6 MW-7R MW-8	MW-6 (↓) **MW-8 (↓)** **MW-11D (↓)**
Fluoride	MW-2 MW-7R MW-11D	MW-7R MW-8	
pH (field)	MW-2 MW-3 MW-5 MW-7R MW-11	MW-11 MW-2 MW-3 MW-5 MW-6 MW-7R	MW-2 (↓) MW-4 (↓) MW-8 (↑) MW-11D (↓)
Sulfate	MW-7R MW-11D	MW-2 MW-3 MW-4 MW-6 MW-7R	MW-1 (↓) MW-2 (↓) MW-3 (↓) MW-6 (↓) MW-7R (↓) MW-8 (↑) MW-10 (↓)

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Total Dissolved Solids	MW-2 MW-3 MW-4 MW-5 MW-11 MW-11D	MW-11 MW-2 MW-3 MW-4 MW-5 MW-8	MW-7R (↑) MW-11D (↓)
Appendix IV Constituents			
Antimony		MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Arsenic		MW-1 MW-10 MW-11 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	MW-11D (↓)
Barium	MW-7R MW-8 MW-10 MW-11	MW-11 MW-2 MW-4 MW-6 MW-8	MW-2 (↑) MW-6 (↓) MW-7R (↑) MW-8 (↓) MW-10 (↑)
Beryllium		MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Cadmium	MW-1	MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Chromium	MW-2 MW-3 MW-5 MW-7R MW-10	MW-1 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Cobalt	MW-2	MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Fluoride	MW-2 MW-7R MW-11D	MW-7R MW-8	
Lead		MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Lithium	MW-2 MW-3 MW-4 MW-5 MW-7R MW-11 MW-11D	MW-11 MW-2 MW-3 MW-4 MW-5	MW-4 (↑) MW-6 (↓) MW-10 (↑) MW-11D (↓)
Mercury		MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Molybdenum	MW-2 MW-3 MW-11D	MW-1 MW-11 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	MW-2 (↓) MW-10 (↓) MW-11D (↓)
Radium-226	MW-8	MW-7R	
Radium-228	MW-8 MW-11	MW-8 MW-11	
Selenium		MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Thallium	MW-2 MW-6	MW-1 MW-10 MW-11 MW-11D MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8	
Total Radium	MW-1 MW-8 MW-11	MW-8	MW-11D (↓)

4 Evaluation for SSIs over Background

The background threshold values (BTVs) developed using data available as of April 2024 for Appendix I metals, Appendix III and Appendix IV constituents at the site are used to determine if concentrations for Appendix I metals, Appendix III and Appendix IV constituents as of the April 2024 sampling round are SSIs.

For constituents that have all ND background values, the maximum MDL is chosen to represent background and the double quantification rule (DQR) is used to evaluate whether or not there is an SSI. The BTV provided for detection monitoring constituents is the statistically-derived background concentration (i.e., upper prediction limit [UPL]), or the maximum detected value or the maximum MDL depending on the level of censorship in each of the background samples. For pH (field), both the UPL and the lower prediction limit (LPL) were computed as pH values above or below the prediction limits at the downgradient wells can be considered statistically significant. The test significance level per constituent has been estimated such that the cumulative false positive rate over all constituent-well pair comparisons is approximately ten percent.

The number of verification samples per constituent has been selected to provide sufficient statistical power to detect an SSI when an SSI has occurred conditional to the background sample size, its distributional properties, and the total number of statistical test comparisons. The calculated background concentrations, or BTVs, for each detection monitoring constituent is provided below in **Table 10**.

Table 10. Background Concentrations for Detection Monitoring Constituents

Constituent	Unit	No. of Verification Samples.	BTV (UPL)
Appendix I Metals			
Copper	ug/L	2	7.10
Nickel	ug/L	2	4.20
Silver	ug/L	DQR	*2.50*
Vanadium	ug/L	2	8.30
Zinc	ug/L	2	32.4
Appendix III Constituents			
Boron	ug/L	2	36.2
Calcium	ug/L	2	124,000
Chloride	mg/L	1	325
Fluoride	mg/L	1	0.334
pH (Field)	S.U.	1	5.59-7.59*
Sulfate	mg/L	2	204
Total Dissolved Solids	mg/L	2	1,270
Appendix IV Constituents			
Antimony	ug/L	2	0.790
Arsenic	ug/L	2	8.80
Barium	ug/L	2	377
Beryllium	ug/L	DQR	*0.700*
Cadmium	ug/L	2	0.500
Chromium	ug/L	2	7.20
Cobalt	ug/L	2	2.30
Fluoride	mg/L	1	0.334
Lead	ug/L	2	14.1
Lithium	ug/L	2	43.7
Mercury	ug/L	2	0.170
Molybdenum	ug/L	2	13.6
Radium-226	pCi/L	2	0.800
Radium-228	pCi/L	2	1.35
Selenium	ug/L	2	6.00
Thallium	ug/L	2	13.7
Total Radium	pCi/L	2	2.09

Note:
Values are recorded with three significant figures for the sake of consistency. The laboratory reported values with varying significant figures.
* indicates the lower bound of the pH range is the lower prediction limit (LPL). The upper bound is the UPL.
Italic concentration indicates a non-detect value and that the DQR is recommended for statistical evaluation.

Downgradient sampling results from the detection monitoring rounds in April 2024 were used to test for SSIs. For constituents that have all ND background values, the DQR is applied; that is, an SSI is registered for the well-constituent pair if the downgradient concentrations exhibit detects in two consecutive sampling events. Downgradient sampling results from the January 2024 and April 2024 sampling events were used to test for SSIs for constituents that have all ND background values. Downgradient concentrations were compared to the BTVs and are summarized below in **Table 11** through **Table 13.** Eleven monitoring wells (MW-1 through MW-8) were installed and sampled (October 2015) prior to ash placement, thus representing pre-ash

conditions at the site. The range of the concentrations of the pre-ash conditions are included in the tables below as a relative comparison to the current downgradient conditions.

Table 11. Summary of Evaluation for SSIs over Background for Appendix I Metals (Detection Monitoring)

	Appendix I Metals				
	Copper	**Nickel**	**Silver**	**Vanadium**	**Zinc**
Unit	ug/L	ug/L	ug/L	ug/L	ug/L
BTV (UPL)	7.10	4.20	*2.50 (DQR)*	8.30	32.4
Pre-Ash Range	2.50 - 16.4	2.50 - 18.2	2.50 - 2.50	2.50 - 9.90	5.00 - 106
Second Detection Monitoring Round Results					
MW-1	*0.620*	*0.880*	*0.500*	3.00	*3.00*
MW-10	*0.620*	0.940	*0.500*	*1.60*	*3.00*
MW-11	*0.620*	1.70	*0.500*	*1.60*	5.50
MW-11D	*0.620*	*0.880*	*0.500*	*1.60*	*3.00*
MW-2	*0.620*	2.50	*0.500*	*1.60*	4.40
MW-3	*0.620*	2.30	*0.500*	1.90	*3.00*
MW-4	*0.620*	**7.50**	*0.500*	*1.60*	10.80
MW-5	*0.620*	*0.880*	*0.500*	*1.60*	3.80
MW-6	*0.620*	1.50	*0.500*	*1.60*	4.40
MW-7R	*0.620*	1.70	*0.500*	3.40	4.10
MW-8	*0.620*	1.50	*0.500*	1.60	3.70

Notes:
Underlined concentration indicates a detect value for constituents with 100 percent background non-detects.
Bold and underlined concentration indicates an SSI over background.
Italic concentration indicates a non-detect value.

Table 12. Summary of Evaluation for SSIs over Background for Appendix III Constituents (Detection Monitoring)

	Appendix III Constituents						
	Boron	**Calcium**	**Chloride**	**Fluoride**	**pH (Field)**	**Sulfate**	**TDS**
Unit	ug/L	ug/L	mg/L	mg/L	S.U.	mg/L	mg/L
BTV (UPL)	36.2	124,000	325	0.334	5.59 - 7.59**	204	1,270
Pre-Ash Range	6.20 - 53.1	16,900 - 185,000	22.2 - 1,160	0.0200 - 0.590	6.17 - 7.70	3.70 - 199	296 - 2,770
Second Detection Monitoring Round Results							
MW-1	9.00	55600	132	0.160	7.07	4.80	361
MW-10	26.9	21900	30.0	**0.400**	**7.72**	2.00	353
MW-11	14.6	24100	121	0.160	6.82	2.10	361
MW-11D	**43.0**	16100	56.0	**0.420**	**8.19**	14.6	312
MW-2	**42.5**	**191000**	**1030**	0.190	7.36	63.0	**2440**
MW-3	**40.4**	**203000**	**1070**	0.240	7.40	12.3	**2500**
MW-4	*7.50*	46400	**326**	0.330	6.08	13.4	986
MW-5	7.70	9420	19.0	**0.530**	6.71	3.30	213
MW-6	*7.50*	35900	193	0.320	6.31	27.2	595
MW-7R	8.10	99900	280	0.120	7.32	13.7	900
MW-8	8.70	101000	313	0.0870	7.00	7.00	1050

Notes:
** indicates the lower bound of the pH range is the LPL. The upper bound is the UPL
Underlined concentration indicates a detect value for constituents with 100 percent background non-detects.
Bold and underlined concentration indicates an SSI over background.
Italic concentration indicates a non-detect value.

Table 13. Summary of Evaluation for SSIs over Background for Appendix IV Constituents (Detection Monitoring)

	Appendix IV Constituents															
	Antimony	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Fluoride**	**Lead**	**Lithium**	**Mercury**	**Molybdenum**	**Radium-226**	**Radium-228**	**Selenium**	**Thallium**	**Total Radium**
Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	ug/L	ug/L	pCi/L
BTV (UPL)	0.790	8.80	377	*0.700 (DQR)*	0.500	7.20	2.30	0.334	14.1	43.7	0.170	13.6	0.800	1.35	6.00	13.7	2.09
Pre-Ash Range	3.80 - 12.0	2.50 - 2.50	117 - 1,240	0.500 - 0.500	0.500 - 0.500	2.50 - 33.9	2.50 - 7.00	0.0200 - 0.590	2.50 - 6.30	7.50 - 70.4	0.100 - 0.100	2.50 - 20.6	0.0774 - 0.820	0.0230 - 1.56	5.00 - 5.00	5.00 - 5.00	0.304 - 2.93
Second Detection Monitoring Round Results																	
MW-1	*3.60*	*2.50*	52.2	*0.160*	*0.290*	*0.600*	*0.440*	0.160	*1.40*	22.8	*0.120*	*2.6*	-0.247	0.678	*4.10*	*0.0280*	0.678
MW-10	*3.60*	2.60	87.4	*0.160*	*0.290*	*0.600*	*0.440*	**0.400**	*1.40*	4.60	*0.120*	**17.5**	-0.060	0.320	*4.10*	*0.0280*	0.320
MW-11	*3.60*	*2.50*	45.2	*0.160*	*0.290*	1.30	1.10	0.160	*1.40*	10.7	*0.120*	*2.6*	-0.063	0.513	*4.10*	0.0850	0.513
MW-11D	*3.60*	*2.50*	115	*0.160*	*0.290*	*0.600*	*0.440*	**0.420**	*1.40*	17.8	*0.120*	4.4	0.067	0.058	*4.10*	0.0940	0.125
MW-2	*3.60*	3.70	365	*0.160*	*0.290*	1.80	0.890	0.190	*1.40*	**115**	*0.120*	4.7	**1.31**	1.35	4.80	0.0370	**2.66**
MW-3	*3.60*	*2.50*	**818**	*0.160*	*0.290*	2.30	0.620	0.240	*1.40*	**81.2**	*0.120*	8.0	0.552	**1.55**	*4.10*	*0.0280*	**2.10**
MW-4	*3.60*	*2.50*	276	*0.160*	*0.290*	*0.600*	**13.0**	0.330	*1.40*	33.6	*0.120*	*2.6*	0.111	0.323	*4.10*	*0.0280*	0.434
MW-5	*3.60*	*2.50*	89.7	*0.160*	*0.290*	*0.600*	*0.440*	**0.530**	*1.40*	9.40	*0.120*	*2.6*	0.360	0.274	*4.10*	*0.0280*	0.634
MW-6	*3.60*	*2.50*	56.6	*0.160*	*0.290*	*0.600*	*0.440*	0.320	*1.40*	23.0	*0.120*	*2.6*	-0.178	0.051	*4.10*	0.0300	0.051
MW-7R	*3.60*	*2.50*	346	*0.160*	*0.290*	2.70	0.710	0.120	*1.40*	26.0	*0.120*	*2.6*	-0.061	0.268	*4.10*	*0.0280*	0.268
MW-8	*3.60*	*2.50*	**1120**	*0.160*	*0.290*	1.60	0.820	0.087	*1.40*	21.6	*0.120*	*2.6*	-0.357	-0.351	4.30	*0.0280*	0.000

Notes:
Underlined concentration indicates a detect value for constituents with 100 percent background non-detects.
Bold and underlined concentration indicates an SSI over background.
Italic concentration indicates a non-detect value.

This page intentionally left blank.

SSIs were found for one Appendix I metals (nickel), six Appendix III constituents (boron, calcium, chloride, fluoride, field pH, and TDS), and eight Appendix IV constituents (barium, cobalt, fluoride, lithium, molybdenum, radium-226, radium-228 and total radium). Of the two constituents that use the DQR, neither silver nor beryllium had two consecutive detects.

When the April 2024 sampling event results are compared to the pre-ash sampling results from the eleven downgradient wells, current downgradient groundwater constituent concentrations are generally like concentrations reported prior to ash placement. In some cases, the BTV is not contained within the pre-ash placement range indicating that natural variability may lie beyond what was captured prior to the ash placement. Depending on the data distribution of the constituent, the BTVs have been computed to allow for one to two verification samples should an opportunity for additional sampling to take place. The validity of the initial exceedance can be confirmed by verification sampling. However, for practical purposes, should a sampling event of interest exceed the respective BTV, the event is considered an SSI.

This page intentionally left blank.

A

Appendix A – BG Tables

This page intentionally left blank.

Table 1: Summary Statistics, Non-Detects Included

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	59	53	90%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	3.09	2.50	0.620	11.4	1.71	0.552	0.593	2.29	9.11
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	59	48	81%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Nonparametric	2.64	2.50	0.420	14.1	1.83	0.692	1.48	4.25	26.8
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	59	59	100%	2015-10-15 to 2024-04-01		Nonparametric	2.08	2.50	0.0700	2.50	0.782	0.376	0	-1.45	0.428
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	3.90	3.90	0.810	8.40	1.98	0.507	2.07	0.250	-0.862
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	59	48	81%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Nonparametric	8.55	9.50	3.00	34.2	5.69	0.666	6.67	2.89	10.9
2_105	BG-1 & BG-2	App. III	Boron	ug/L	58	29	50%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	9.35	7.50	0.570	56.5	9.14	0.978	7.04	2.96	12.5
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	59	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	58463	29500	20300	124000	42171	0.721	9630	0.574	-1.64
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	237	239	149	311	37.2	0.157	41.5	-0.208	-0.520
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Gamma	0.185	0.180	0.100	0.340	0.0544	0.294	0.0444	1.03	1.21
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	57	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	6.59	6.60	6.10	7.11	0.247	0.0375	0.296	-0.0444	-0.904
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	62.9	22.5	15.1	211	60.8	0.965	6.22	1.00	-0.478
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	58	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	782	646	538	1450	256	0.327	141	0.911	-0.552
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	59	58	98%	2015-10-15 to 2024-04-01		Nonparametric	3.57	3.60	0.200	5.50	1.01	0.282	0.889	-0.122	2.43
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	59	54	92%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	4.64	4.70	0.360	34.0	4.10	0.885	0.444	6.49	47.0
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	59	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	225	265	49.5	443	117	0.520	117	-0.314	-1.45
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	59	59	100%	2015-10-15 to 2024-04-01		Nonparametric	0.437	0.500	0.0500	0.700	0.225	0.515	0.296	-0.203	-1.53
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	59	57	97%	2015-10-15 to 2024-04-01		Nonparametric	0.405	0.400	0.0600	0.500	0.0944	0.233	0.104	-1.59	4.31
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	59	51	86%	2015-10-15 to 2024-04-01	Lognormal	Nonparametric	2.90	2.50	0.500	26.5	3.34	1.15	1.78	6.26	44.4
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	59	51	86%	2015-10-15 to 2024-04-01	Gamma; Normal	Nonparametric	2.29	2.50	0.0650	3.60	1.10	0.480	1.63	-0.227	-1.29
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Gamma	0.185	0.180	0.100	0.340	0.0544	0.294	0.0444	1.03	1.21
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	59	56	95%	2015-10-15 to 2024-04-01		Nonparametric	3.11	2.50	0.0770	14.1	1.94	0.625	1.33	3.18	16.9
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	59	3	5%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	18.5	17.3	0.390	51.1	7.90	0.427	3.56	1.56	6.31
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	59	51	86%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	0.114	0.120	0.0900	0.200	0.0191	0.168	0.0296	2.16	7.01
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	59	47	80%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	3.85	2.60	0.170	16.0	2.99	0.776	1.93	2.38	6.08
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	56	0	0%	2015-10-15 to 2024-04-01	Normal	Nonparametric	0.217	0.191	-0.780	1.22	0.314	1.45	0.276	0.179	2.17
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	56	0	0%	2015-10-15 to 2024-04-01	Normal	Nonparametric	0.593	0.562	-0.271	1.96	0.397	0.670	0.390	0.722	1.50
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	59	56	95%	2015-10-15 to 2024-04-01		Nonparametric	4.52	4.70	0.0730	6.00	0.932	0.206	0.444	-3.79	16.7
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	59	56	95%	2015-10-15 to 2024-04-01		Nonparametric	0.784	0.0500	0.0200	13.7	2.28	2.91	0	3.89	17.9
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	56	0	0%	2015-10-15 to 2024-04-01	Normal	Nonparametric	0.851	0.816	0	2.59	0.480	0.564	0.472	0.990	2.33

[a] Non-detects are excluded from goodness-of-fit tests.

Table 2: Summary Statistics, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	59	53	90%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	5.40	5.60	1.30	11.4	3.88	0.718	4.22	0.463	-0.521
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	59	48	81%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Nonparametric	3.46	2.10	1.10	14.1	3.68	1.06	1.04	2.86	8.73
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	5.45	5.60	0.810	8.40	1.81	0.333	0.741	-1.38	2.44
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	59	48	81%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Nonparametric	14.7	13.0	3.30	34.2	10.1	0.687	4.59	1.20	0.693
2_105	BG-1 & BG-2	App. III	Boron	ug/L	58	29	50%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	14.0	12.0	5.50	56.5	10.7	0.763	8.30	2.61	8.62
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	59	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	58463	29500	20300	124000	42171	0.721	9630	0.574	-1.64
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	237	239	149	311	37.2	0.157	41.5	-0.208	-0.520
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Gamma	0.185	0.180	0.100	0.340	0.0544	0.294	0.0444	1.03	1.21
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	57	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	6.59	6.60	6.10	7.11	0.247	0.0375	0.296	-0.0444	-0.904
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	62.9	22.5	15.1	211	60.8	0.965	6.22	1.00	-0.478
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	58	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	782	646	538	1450	256	0.327	141	0.911	-0.552
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	59	58	98%	2015-10-15 to 2024-04-01		Nonparametric	0.790	0.790	0.790	0.790	NA	NA	0	NA	NA
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	59	54	92%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	4.03	4.80	0.360	8.80	3.54	0.876	5.93	0.241	-1.40
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	59	0	0%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	225	265	49.5	443	117	0.520	117	-0.314	-1.45
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	59	57	97%	2015-10-15 to 2024-04-01		Nonparametric	0.450	0.450	0.400	0.500	0.0707	0.157	0.0741	NA	NA
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	59	51	86%	2015-10-15 to 2024-04-01	Lognormal	Nonparametric	5.36	1.80	0.670	26.5	8.78	1.64	0.519	2.56	6.71
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	59	51	86%	2015-10-15 to 2024-04-01	Gamma; Normal	Nonparametric	1.17	1.10	0.0650	2.30	0.682	0.582	0.356	0.222	0.535
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	59	0	0%	2015-10-15 to 2024-04-01	Gamma; Lognormal	Gamma	0.185	0.180	0.100	0.340	0.0544	0.294	0.0444	1.03	1.21
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	59	56	95%	2015-10-15 to 2024-04-01		Nonparametric	6.89	5.60	0.970	14.1	6.66	0.967	6.86	0.839	NA
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	59	3	5%	2015-10-15 to 2024-04-01	Nonparametric	Nonparametric	19.4	17.6	11.9	51.1	7.02	0.362	3.78	2.74	9.13
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	59	51	86%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	0.144	0.140	0.0900	0.200	0.0325	0.226	0.0222	0.153	0.996
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	59	47	80%	2015-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	6.68	6.20	0.170	13.6	4.12	0.617	4.74	0.140	-0.967
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	56	0	0%	2015-10-15 to 2024-04-01	Normal	Nonparametric	0.217	0.191	-0.780	1.22	0.314	1.45	0.276	0.179	2.17
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	56	0	0%	2015-10-15 to 2024-04-01	Normal	Nonparametric	0.593	0.562	-0.271	1.96	0.397	0.670	0.390	0.722	1.50
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	59	56	95%	2015-10-15 to 2024-04-01		Nonparametric	2.05	0.0890	0.0730	6.00	3.42	1.66	0.0237	1.73	NA
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	59	56	95%	2015-10-15 to 2024-04-01		Nonparametric	4.61	0.0600	0.0570	13.7	7.88	1.71	0.00444	1.73	NA
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	56	0	0%	2015-10-15 to 2024-04-01	Normal	Nonparametric	0.851	0.816	0	2.59	0.480	0.564	0.472	0.990	2.33

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	59	53	90%	0.922	0.518	0.182	0.770	0.876	0.251	0.223	0.463	0.227	>= 0.10	0.387	>= 0.10	0.905	Gamma; Lognormal; Normal	Nonparametric
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	59	48	81%	0.601	0.000	0.330	0.001	0.892	0.147	0.180	0.406	0.224	>= 0.10	0.859	0.01 <= p < 0.05	0.705	Gamma; Lognormal	Nonparametric
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	59	59	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	0.796	0.000	0.309	0.000	0.607	0.000	0.414	0.000	0.389	< 0.01	3.801	< 0.01	0.578	Nonparametric	Nonparametric
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	59	48	81%	0.847	0.039	0.266	0.029	0.951	0.659	0.154	0.663	0.181	>= 0.10	0.331	>= 0.10	0.710	Gamma; Lognormal	Nonparametric
2_105	BG-1 & BG-2	App. III	Boron	ug/L	58	29	50%	0.712	0.000	0.213	0.002	0.911	0.019	0.166	0.040	0.169	0.01 <= p < 0.05	1.052	< 0.01	0.596	Nonparametric	Nonparametric
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	59	0	0%	0.719	0.000	0.332	0.000	0.759	0.000	0.282	0.000	0.305	< 0.01	7.042	< 0.01	0.716	Nonparametric	Nonparametric
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	59	0	0%	0.984	0.646	0.078	0.501	0.967	0.111	0.102	0.136	0.097	>= 0.10	0.460	>= 0.10	0.164	Gamma; Lognormal; Normal	Normal
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	59	0	0%	0.919	0.001	0.122	0.029	0.975	0.256	0.091	0.255	0.087	>= 0.10	0.613	>= 0.10	0.280	Gamma; Lognormal	Gamma
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	57	0	0%	0.976	0.312	0.095	0.227	0.975	0.291	0.099	0.174	0.099	>= 0.10	0.544	>= 0.10	0.038	Gamma; Lognormal; Normal	Normal
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	59	0	0%	0.739	0.000	0.369	0.000	0.759	0.000	0.346	0.000	0.363	< 0.01	6.873	< 0.01	0.929	Nonparametric	Nonparametric
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	58	0	0%	0.820	0.000	0.293	0.000	0.846	0.000	0.263	0.000	0.276	< 0.01	4.032	< 0.01	0.301	Nonparametric	Nonparametric
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	59	58	98%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	59	54	92%	0.916	0.501	0.226	0.544	0.866	0.249	0.303	0.136	0.296	>= 0.10	0.429	>= 0.10	1.407	Gamma; Lognormal; Normal	Nonparametric
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	59	0	0%	0.873	0.000	0.193	0.000	0.823	0.000	0.276	0.000	0.256	< 0.01	4.134	< 0.01	0.702	Nonparametric	Nonparametric
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	59	59	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	59	57	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.158		Nonparametric
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	59	51	86%	0.572	0.000	0.399	0.000	0.843	0.081	0.332	0.010	0.390	< 0.01	1.060	< 0.01	1.152	Lognormal	Nonparametric
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	59	51	86%	0.947	0.680	0.234	0.220	0.726	0.004	0.326	0.013	0.261	>= 0.10	0.676	0.05 <= p < 0.10	1.104	Gamma; Normal	Nonparametric
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	59	0	0%	0.919	0.001	0.122	0.029	0.975	0.256	0.091	0.255	0.087	>= 0.10	0.613	>= 0.10	0.280	Gamma; Lognormal	Gamma
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	59	56	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.360		Nonparametric
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	59	3	5%	0.717	0.000	0.193	0.000	0.885	0.000	0.151	0.003	0.169	< 0.01	2.415	< 0.01	0.283	Nonparametric	Nonparametric
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	59	51	86%	0.958	0.790	0.204	0.421	0.943	0.643	0.245	0.169	0.230	>= 0.10	0.324	>= 0.10	0.236	Gamma; Lognormal; Normal	Nonparametric
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	59	47	80%	0.974	0.946	0.116	0.927	0.769	0.004	0.238	0.059	0.163	>= 0.10	0.463	>= 0.10	1.187	Gamma; Lognormal; Normal	Nonparametric
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	56	0	0%	0.966	0.111	0.084	0.417	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	56	0	0%	0.969	0.156	0.071	0.685	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	59	56	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.490		Nonparametric
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	59	56	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		3.150		Nonparametric
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	56	0	0%	0.946	0.015	0.065	0.799	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 4: Autocorrelation Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	59	53	90%	0.060	0.853	
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	59	48	81%	-0.070	0.791	
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	0.135	0.466	
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	59	48	81%	-0.197	0.457	
2_105	BG-1 & BG-2	App. III	Boron	ug/L	58	29	50%	0.327	0.064	
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	59	0	0%	-0.554	0.000	***
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	59	0	0%	0.129	0.310	
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	59	0	0%	0.466	0.000	***
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	57	0	0%	-0.527	0.000	***
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	59	0	0%	-0.410	0.001	**
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	58	0	0%	-0.568	0.000	***
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	59	58	98%	NA	NA	
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	59	54	92%	0.056	0.868	
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	59	0	0%	-0.198	0.119	
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	59	57	97%	-0.500	0.157	
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	59	51	86%	-0.217	0.462	
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	59	51	86%	-0.210	0.479	
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	59	0	0%	0.466	0.000	***
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	59	56	95%	-0.019	0.959	
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	59	3	5%	0.248	0.057	
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	59	51	86%	0.029	0.923	
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	59	47	80%	0.591	0.021	*
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	56	0	0%	0.204	0.117	
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	56	0	0%	0.166	0.202	
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	59	56	95%	-0.165	0.651	
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	59	56	95%	-0.167	0.648	
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	56	0	0%	0.291	0.025	*

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 5: Outlier Counts by Date

Date	Count
2016-02-16	1
2016-04-05	1
2019-10-14	1
2021-04-12	2
2022-07-11	2
2022-10-17	2
2023-01-24	2
2023-04-24	1
2023-04-27	1
2024-01-23	1
2024-04-01	1

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
1_117	BG-1	App. I Metals	Nickel	ug/L	59	48	81%	11	2022-10-17	1	14.1
1_127	BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	26	2023-04-24	1	0.810
1_127	BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	26	2023-01-24	1	1.10
1_127	BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	26	2022-07-11	1	1.40
1_127	BG-1	App. I Metals	Vanadium	ug/L	59	33	56%	26	2023-01-24	1	8.40
1_127	BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	26	2019-10-14	1	8.30
2_105	BG-1	App. III	Boron	ug/L	58	29	50%	29	2021-04-12	1	56.5
2_105	BG-2	App. III	Boron	ug/L	58	29	50%	29	2021-04-12	1	36.2
3_109	BG-1	App. IV	Chromium	ug/L	59	51	86%	8	2022-10-17	1	26.5
3_114	BG-1	App. IV	Lithium	ug/L	59	3	5%	56	2024-01-23	1	51.1
3_114	BG-1	App. IV	Lithium	ug/L	59	3	5%	56	2023-04-27	1	43.7
3_114	BG-1	App. IV	Lithium	ug/L	59	3	5%	56	2016-04-05	NA	36.8
3_121	BG-1	App. IV	Selenium	ug/L	59	56	95%	3	2024-04-01	1	6.00
3_124	BG-1	App. IV	Thallium	ug/L	59	56	95%	3	2016-02-16	NA	13.7
3_126	BG-1	App. IV	Total Radium	pCi/L	56	0	0%	56	2022-07-11	1	2.59

Table 7: Seasonality Tests

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	90%	16	16	13	14	59	0.053	0.019 *	0.031 *	0	3	0	3	6	0.050 *	0.026 *	0.028 *
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	81%	16	16	13	14	59	0.368	0.244	0.469	3	2	4	2	11	0.133	0.079	0.050 *
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	100%	16	16	13	14	59	0.747	0.695	0.315	NA	NA	NA	NA	NA	NA	NA	NA
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	56%	16	16	13	14	59	0.706	0.627	0.619	7	6	6	7	26	0.949	0.786	0.776
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	81%	16	16	13	14	59	0.369	0.370	0.315	2	6	1	2	11	0.396	0.116	0.318
2_105	BG-1 & BG-2	App. III	Boron	ug/L	50%	15	16	13	14	58	0.986	0.489	0.930	7	8	6	8	29	0.842	0.283	0.556
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	0%	16	16	13	14	59	0.769	0.981	0.993	16	16	13	14	59	0.769	0.981	0.993
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	0%	16	16	13	14	59	0.660	0.555	0.499	16	16	13	14	59	0.660	0.555	0.499
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	0%	16	16	13	14	59	0.817	0.831	0.880	16	16	13	14	59	0.817	0.831	0.880
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	0%	16	15	13	13	57	0.175	0.185	0.183	16	15	13	13	57	0.175	0.185	0.183
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	0%	16	16	13	14	59	0.711	0.830	0.964	16	16	13	14	59	0.711	0.830	0.964
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	0%	16	15	13	14	58	0.615	0.791	0.847	16	15	13	14	58	0.615	0.791	0.847
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	98%	16	16	13	14	59	0.496	0.107	0.104	0	1	0	0	1	NA	NA	NA
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	92%	16	16	13	14	59	0.919	0.311	0.237	1	3	1	0	5	0.766	0.912	0.716
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	0%	16	16	13	14	59	0.626	0.858	0.931	16	16	13	14	59	0.626	0.858	0.931
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	100%	16	16	13	14	59	0.642	0.744	0.654	NA	NA	NA	NA	NA	NA	NA	NA
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	97%	16	16	13	14	59	0.840	0.608	0.298	1	0	0	1	2	0.317	NA	NA
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	86%	16	16	13	14	59	0.352	0.144	0.182	3	2	1	2	8	0.236	0.198	0.047 *
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	86%	16	16	13	14	59	0.799	0.791	0.688	2	3	3	0	8	0.529	0.663	0.619
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	0%	16	16	13	14	59	0.817	0.831	0.880	16	16	13	14	59	0.817	0.831	0.880
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	95%	16	16	13	14	59	0.180	0.119	0.093	0	1	1	1	3	0.368	NA	NA
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	5%	16	16	13	14	59	0.084	0.214	0.046 *	13	16	13	14	56	0.323	0.446	0.401
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	86%	16	16	13	14	59	0.889	0.860	0.901	3	1	3	1	8	0.529	0.843	0.845
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	80%	16	16	13	14	59	0.385	0.103	0.170	3	4	3	2	12	0.086	0.041 *	0.282
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	0%	16	15	13	12	56	0.014 *	0.020 *	NA	16	15	13	12	56	0.014 *	0.020 *	NA
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	0%	16	15	13	12	56	0.911	0.973	NA	16	15	13	12	56	0.911	0.973	NA
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	95%	16	16	13	14	59	0.670	0.649	0.226	0	3	0	0	3	NA	NA	NA
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	95%	16	16	13	14	59	0.747	0.830	0.973	1	2	0	0	3	0.221	0.000 ***	0.005 **
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	0%	16	15	13	12	56	0.559	0.537	NA	16	15	13	12	56	0.559	0.537	NA

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 8: Spatial Variability Tests

						Full									Without Non-Detects								
						Sample Size			p-Value						Sample Size			p-Value					
ID	Well	Constituent Type	Constituent	Unit	% NDs	BG-1	BG-2	Total	Kruskal-Wallis		ANOVA		Log ANOVA		BG-1	BG-2	Total	Kruskal-Wallis		ANOVA		Log ANOVA	
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	90%	37	22	59	0.214		0.156		0.484		3	3	6	0.513		0.523		0.695	
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	81%	37	22	59	0.663		0.735		0.925		6	5	11	0.584		0.569		0.997	
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	100%	37	22	59	0.269		0.280		0.362		NA	NA	NA	NA		NA		NA	
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	56%	37	22	59	0.000	***	0.000	***	0.000	***	22	4	26	0.101		0.001	***	0.000	***
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	81%	37	22	59	0.017	*	0.049	*	0.020	*	6	5	11	0.100		0.353		0.176	
2_105	BG-1 & BG-2	App. III	Boron	ug/L	50%	37	21	58	0.001	***	0.007	**	0.002	**	14	15	29	0.000	***	0.067		0.000	***
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	0%	37	22	59	0.000	***	0.000	***	0.000	***	37	22	59	0.000	***	0.000	***	0.000	***
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	0%	37	22	59	0.086		0.081		0.047	*	37	22	59	0.086		0.081		0.047	*
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	0%	37	22	59	0.000	***	0.000	***	0.000	***	37	22	59	0.000	***	0.000	***	0.000	***
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	0%	35	22	57	0.000	***	0.000	***	0.000	***	35	22	57	0.000	***	0.000	***	0.000	***
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	0%	37	22	59	0.000	***	0.000	***	0.000	***	37	22	59	0.000	***	0.000	***	0.000	***
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	0%	36	22	58	0.000	***	0.000	***	0.000	***	36	22	58	0.000	***	0.000	***	0.000	***
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	98%	37	22	59	0.168		0.527		0.316		1	0	1	NA		NA		NA	
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	92%	37	22	59	0.883		0.205		0.553		3	2	5	0.564		0.642		0.614	
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	0%	37	22	59	0.000	***	0.000	***	0.000	***	37	22	59	0.000	***	0.000	***	0.000	***
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	100%	37	22	59	0.808		0.579		0.349		NA	NA	NA	NA		NA		NA	
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	97%	37	22	59	0.024	*	0.059		0.208		1	1	2	0.317		NA		NA	
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	86%	37	22	59	0.686		0.400		0.459		5	3	8	0.180		0.357		0.187	
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	86%	37	22	59	1.000		0.938		0.810		3	5	8	0.549		0.243		0.206	
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	0%	37	22	59	0.000	***	0.000	***	0.000	***	37	22	59	0.000	***	0.000	***	0.000	***
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	95%	37	22	59	0.593		0.104		0.262		0	3	3	NA		NA		NA	
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	5%	37	22	59	0.123		0.072		0.223		36	20	56	0.215		0.130		0.123	
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	86%	37	22	59	0.184		0.316		0.282		7	1	8	0.118		0.053		0.111	
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	80%	37	22	59	0.007	**	0.016	*	0.017	*	4	8	12	0.865		0.896		0.516	
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	0%	35	21	56	0.436		0.766		NA		35	21	56	0.436		0.766		NA	
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	0%	35	21	56	0.754		0.450		NA		35	21	56	0.754		0.450		NA	
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	95%	37	22	59	0.005	**	0.193		0.510		2	1	3	0.221		0.665		0.641	
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	95%	37	22	59	0.767		0.058		0.119		2	1	3	1.000		0.667		0.672	
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	0%	35	21	56	0.582		0.362		NA		35	21	56	0.582		0.362		NA	

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 9: Trend Tests: Lognormal MLE and MK

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	59	0	0%	Nonparametric	MK	1.29	0.592	↔
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	59	0	0%	Parametric	Lognormal MLE	-0.0000852	0.000	↓
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	59	0	0%	Parametric	Lognormal MLE	0.000253	0.000	↑
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	57	0	0%	Parametric	Lognormal MLE	0.00000782	0.142	↔
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	59	0	0%	Nonparametric	MK	0.00417	0.000	↑
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	58	0	0%	Nonparametric	MK	0.0147	0.639	↔
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	59	0	0%	Nonparametric	MK	-0.0515	0.000	↓
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	59	0	0%	Parametric	Lognormal MLE	0.000253	0.000	↑
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	56	0	0%	Nonparametric	MK	-0.000124	0.004	↓
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	56	0	0%	Nonparametric	MK	-0.0000536	0.420	↔
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	56	0	0%	Nonparametric	MK	-0.000145	0.045	↔

Table 10: Trend Tests: Piecewise Linear-Linear

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	59	53	90%	0.00119	0.001	↑	-0.00393	0.003	↓	2021-11-17	0.309	↔
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	59	48	81%	0.000607	0.081	↔	-0.00334	0.342	↔	2022-10-17	0.076	↔
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	59	59	100%	0	1.000	↔	-0.00200	0.000	↓	2021-07-05	0.686	↔
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	0.000782	0.169	↔	-0.000687	0.556	↔	2021-03-02	0.045	↔
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	59	48	81%	0.00300	0.001	↑	-0.0268	0.232	↔	2023-07-24	0.192	↔
2_105	BG-1 & BG-2	App. III	Boron	ug/L	58	29	50%	0.00643	0.006	↑	-0.00174	0.759	↔	2021-04-12	0.189	↔
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	59	0	0%	28.4	0.049	↔	1.16	0.946	↔	2020-04-20	0.135	↔
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	59	0	0%	-0.0447	0.000	↓	0.00948	0.463	↔	2020-06-15	0.367	↔
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	59	0	0%	0.0000391	0.000	↑	0.0000742	0.018	↔	2022-01-23	0.601	↔
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	57	0	0%	0	0.945	↔	0.000123	0.292	↔	2020-10-13	0.050	↔
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	59	0	0%	0.0396	0.015	↔	0.00702	0.831	↔	2021-02-03	0.196	↔
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	58	0	0%	0.127	0.079	↔	0.00482	0.974	↔	2021-04-11	0.109	↔
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	59	58	98%	-0.000509	0.121	↔	0.000693	0.142	↔	2020-10-04	0.079	↔
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	59	54	92%	0.00168	0.037	↔	-0.00847	0.158	↔	2022-07-11	0.125	↔
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	59	0	0%	-0.107	0.001	↓	0.00573	0.912	↔	2021-01-25	0.327	↔
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	59	59	100%	0.0000528	0.279	↔	-0.000477	0.004	↓	2021-11-16	0.254	↔
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	59	57	97%	0	1.000	↔	-0.000102	0.000	↓	2018-04-13	0.631	↔
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	59	51	86%	-0.0000863	0.961	↔	0.000779	0.448	↔	2019-07-10	0.018	↔
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	59	51	86%	0.000327	0.182	↔	-0.00218	0.009	↓	2021-11-16	0.213	↔
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	59	0	0%	0.0000391	0.000	↑	0.0000742	0.018	↔	2022-01-23	0.601	↔
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	59	56	95%	0.00104	0.017	↔	-0.00374	0.020	↔	2022-01-18	0.186	↔
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	59	3	5%	-0.00465	0.038	↔	0.0110	0.005	↑	2021-01-25	0.206	↔
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	59	51	86%	0.0000166	0.000	↑	-0.0000160	0.228	↔	2021-11-16	0.303	↔
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	59	47	80%	0.00206	0.132	↔	-0.00138	0.155	↔	2019-10-13	0.078	↔
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	56	0	0%	0.000350	0.823	↔	-0.000151	0.008	↓	2016-05-26	0.172	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	56	0	0%	0.0000666	0.348	↔	-0.00125	0.217	↔	2023-01-24	0.103	↔
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	59	56	95%	-0.000629	0.000	↓	0.00308	0.304	↔	2023-04-27	0.281	↔
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	59	56	95%	-0.0132	0.000	↓	0	0.988	↔	2017-05-13	0.744	↔
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	56	0	0%	-0.00471	0.569	↔	-0.0000889	0.250	↔	2016-02-05	0.087	↔

Table 11: Trend Tests: Piecewise Linear-Linear-Linear

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	59	53	90%	-0.0000226	0.982	↔	0.00224	0.038	↔	-0.00462	0.000	↓	2018-11-15	2021-11-15	0.351	↔
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	59	48	81%	-0.000864	0.197	↔	0.00552	0.194	↔	-0.00210	0.076	↔	2020-01-18	2021-05-25	0.166	↔
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	59	59	100%	0	1.000	↔	0	1.000	↔	-0.00200	0.000	↓	2016-12-01	2021-07-05	0.686	↔
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	59	33	56%	-0.000651	0.517	↔	0.00570	0.396	↔	-0.00105	0.207	↔	2019-04-23	2020-05-23	0.106	↔
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	59	48	81%	-0.00330	0.744	↔	0.00403	0.005	↑	-0.0306	0.118	↔	2017-06-27	2023-07-23	0.214	↔
2_105	BG-1 & BG-2	App. III	Boron	ug/L	58	29	50%	-0.00230	0.428	↔	0.0452	0.066	↔	-0.0116	0.009	↓	2020-02-21	2021-04-11	0.420	↔
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	59	0	0%	-0.0496	0.007	↓	-0.0157	0.363	↔	0.0399	0.282	↔	2019-04-15	2022-06-21	0.390	↔
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	59	0	0%	0.0000368	0.000	↑	0.000107	0.020	↔	-0.000770	0.130	↔	2022-01-24	2024-01-13	0.637	↔
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	57	0	0%	0.00195	0.279	↔	-0.0000753	0.503	↔	0.000151	0.194	↔	2016-04-17	2020-10-10	0.100	↔
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	59	0	0%	0.000111	0.998	↔	0.140	0.560	↔	0.00926	0.615	↔	2018-08-25	2019-09-28	0.213	↔
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	58	0	0%	-0.0102	0.954	↔	0.690	0.641	↔	0.0152	0.852	↔	2018-12-16	2019-09-29	0.126	↔
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	59	54	92%	0.000686	0.484	↔	0.0134	0.598	↔	-0.0134	0.006	↓	2021-09-09	2022-07-10	0.173	↔
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	59	0	0%	-0.0373	0.723	↔	-0.173	0.152	↔	0.00131	0.975	↔	2018-01-22	2020-06-02	0.337	↔
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	59	59	100%	-0.000162	0.007	↓	0.00266	0.127	↔	-0.000529	0.000	↓	2020-04-14	2020-10-16	0.511	↔
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	59	57	97%	0	0.863	↔	-0.000119	0.000	↓	0.0000808	0.707	↔	2018-05-28	2023-04-27	0.650	↔
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	59	0	0%	0.0000368	0.000	↑	0.000107	0.020	↔	-0.000770	0.130	↔	2022-01-24	2024-01-13	0.637	↔
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	59	56	95%	0.000497	0.436	↔	0.00504	0.410	↔	-0.00347	0.006	↓	2020-04-14	2021-05-08	0.210	↔
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	59	3	5%	0.0997	0.050	↔	-0.0114	0.008	↓	0.00850	0.001	↑	2016-04-05	2020-01-14	0.312	↔
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	59	51	86%	0	1.000	↔	0.0000534	0.020	↔	-0.0000228	0.030	↔	2019-08-02	2021-05-23	0.409	↔
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	56	0	0%	-0.0000285	0.744	↔	0.00139	0.382	↔	-0.00197	0.010	↓	2022-01-24	2022-12-20	0.167	↔
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	59	56	95%	-0.0132	0.000	↓	0.0000675	0.969	↔	0	0.981	↔	2017-05-16	2019-06-30	0.744	↔
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	56	0	0%	-0.00177	0.350	↔	0.0000777	0.540	↔	-0.00163	0.070	↔	2016-08-29	2023-01-23	0.179	↔

This page intentionally left blank.

B

Appendix B – DG Tables

This page intentionally left blank.

Table 1: Summary Statistics, Non-Detects Included

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
10_1_111	MW-7R	App. I Metals	Copper	ug/L	26	20	77%	2017-07-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	6.60	2.60	0.620	79.3	15.2	2.30	2.22	4.78	23.5
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	26	12	46%	2017-07-20 to 2024-04-02	Lognormal	Nonparametric	39.2	3.50	0.900	880	172	4.38	2.22	5.09	25.9
10_1_122	MW-7R	App. I Metals	Silver	ug/L	26	26	100%	2017-07-20 to 2024-04-02		Nonparametric	2.02	2.50	0.0700	2.50	0.825	0.408	0	-1.29	-0.0139
10_1_127	MW-7R	App. I Metals	Vanadium	ug/L	26	15	58%	2017-07-20 to 2024-04-02	Lognormal	Nonparametric	5.04	3.90	1.30	18.8	4.73	0.939	1.78	2.34	4.37
10_1_128	MW-7R	App. I Metals	Zinc	ug/L	26	21	81%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	11	9.50	3.00	53.4	12.7	1.16	4.44	3.07	8.86
10_2_105	MW-7R	App. III	Boron	ug/L	25	12	48%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	9.61	9.30	0.570	25.3	5.32	0.553	3.11	0.777	2.09
10_2_107	MW-7R	App. III	Calcium	ug/L	26	0	0%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	91288	91350	74000	104000	6906	0.0757	6222	-0.388	0.403
10_2_108	MW-7R	App. III	Chloride	mg/L	26	0	0%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	284	284	194	313	21.7	0.0765	10.4	-2.79	11.8
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	0.130	0.120	0.0500	0.320	0.0456	0.350	0.0148	2.91	12.4
10_2_118	MW-7R	App. III	pH (Field)	S.U.	26	0	0%	2017-07-20 to 2024-04-01	Nonparametric	Nonparametric	7.46	7.35	7.13	9.60	0.462	0.0619	0.148	4.24	19.9
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	18	16.6	13.7	51.2	7.06	0.393	1.78	4.49	21.6
10_2_125	MW-7R	App. III	Total Dissolved Solids	mg/L	26	0	0%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	852	858	740	990	57.6	0.0676	63	0.251	0.0209
10_3_101	MW-7R	App. IV	Antimony	ug/L	26	25	96%	2017-07-20 to 2024-04-02		Nonparametric	3.97	3.60	0.200	13.6	2.25	0.567	0.889	3.19	14.0
10_3_102	MW-7R	App. IV	Arsenic	ug/L	26	24	92%	2017-07-20 to 2024-04-02		Nonparametric	4.28	4.70	0.770	5.00	1.04	0.243	0.444	-2.04	4.26
10_3_103	MW-7R	App. IV	Barium	ug/L	26	0	0%	2017-07-20 to 2024-04-02	Normal	Normal	290	300	50.1	423	70.6	0.243	41.5	-1.40	4.67
10_3_104	MW-7R	App. IV	Beryllium	ug/L	26	26	100%	2017-07-20 to 2024-04-02		Nonparametric	0.421	0.500	0.0500	0.700	0.236	0.559	0.296	-0.0547	-1.71
10_3_106	MW-7R	App. IV	Cadmium	ug/L	26	26	100%	2017-07-20 to 2024-04-02		Nonparametric	0.395	0.400	0.0600	0.500	0.0956	0.242	0.104	-1.62	4.94
10_3_109	MW-7R	App. IV	Chromium	ug/L	26	8	31%	2017-07-20 to 2024-04-02	Lognormal	Nonparametric	83.9	4.40	1.00	1940	379	4.51	2.96	5.09	25.9
10_3_110	MW-7R	App. IV	Cobalt	ug/L	26	21	81%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	3.13	2.50	0.160	20.4	3.81	1.22	1.63	3.99	18.3
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	0.130	0.120	0.0500	0.320	0.0456	0.350	0.0148	2.91	12.4
10_3_113	MW-7R	App. IV	Lead	ug/L	26	23	88%	2017-07-20 to 2024-04-02		Nonparametric	3.24	2.50	0.270	6.80	1.65	0.509	1.63	0.492	-0.290
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	2017-07-20 to 2024-04-02	Normal	Normal	26.2	27.3	5.60	33.8	5.73	0.218	3.63	-1.94	5.93
10_3_115	MW-7R	App. IV	Mercury	ug/L	26	26	100%	2017-07-20 to 2024-04-02		Nonparametric	0.110	0.120	0.0900	0.120	0.0108	0.0975	0	-0.290	-1.80
10_3_116	MW-7R	App. IV	Molybdenum	ug/L	26	22	85%	2017-07-20 to 2024-04-02		Nonparametric	5.40	2.55	0.900	49.5	9.74	1.80	2.00	4.13	18.2
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	24	0	0%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	0.231	0.154	-0.194	1.05	0.320	1.39	0.171	1.26	1.53
10_3_120	MW-7R	App. IV	Radium-228	pCi/L	24	0	0%	2017-07-20 to 2024-04-02	Normal	Normal	0.576	0.485	-0.454	2.13	0.514	0.893	0.312	1.07	2.99
10_3_121	MW-7R	App. IV	Selenium	ug/L	26	25	96%	2017-07-20 to 2024-04-02		Nonparametric	4.44	4.70	0.180	5.00	0.950	0.214	0.444	-3.87	17.2
10_3_124	MW-7R	App. IV	Thallium	ug/L	26	23	88%	2017-07-20 to 2024-04-02		Nonparametric	0.0687	0.0500	0.0200	0.480	0.0866	1.26	0	4.63	22.5
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	24	0	0%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.855	0.645	0.0664	2.31	0.608	0.711	0.418	1.01	0.288
11_1_111	MW-8	App. I Metals	Copper	ug/L	36	30	83%	2015-11-20 to 2024-04-02	Lognormal	Nonparametric	6.44	2.50	0.620	116	18.9	2.93	0.370	5.92	35.3
11_1_117	MW-8	App. I Metals	Nickel	ug/L	36	19	53%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	10.1	2.50	0.900	157	26.4	2.63	1.56	5.23	29.2
11_1_122	MW-8	App. I Metals	Silver	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	2.21	2.50	0.490	2.50	0.637	0.288	0	-1.95	2.18
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	36	30	83%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	2.81	2.50	1.30	9.50	1.44	0.512	0.815	2.90	12.8
11_1_128	MW-8	App. I Metals	Zinc	ug/L	36	24	67%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	13.4	9.50	3.70	62.0	13.5	1.01	6.67	2.48	5.86
11_2_105	MW-8	App. III	Boron	ug/L	35	15	43%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	7.89	8.90	0.570	14.0	4.11	0.521	2.37	-0.777	-0.656
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	112310	107500	4170	194000	30613	0.273	14074	-0.302	4.68
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	417	382	229	939	154	0.369	91.1	1.71	3.04
11_2_112	MW-8	App. III	Fluoride	mg/L	36	20	56%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	0.0591	0.0500	0.0200	0.140	0.0297	0.502	0.0341	0.543	0.194
11_2_118	MW-8	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-04-01	Gamma; Lognormal; Normal	Normal	7.03	7.01	6.70	7.31	0.145	0.0207	0.119	0.174	0.106
11_2_123	MW-8	App. III	Sulfate	mg/L	36	0	0%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	6.83	6.85	4.40	8.40	0.857	0.125	0.963	-0.567	0.437
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	967	917	224	1530	240	0.248	201	-0.0747	2.06
11_3_101	MW-8	App. IV	Antimony	ug/L	36	29	81%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	4.35	3.90	0.200	10.1	1.92	0.441	1.33	1.05	1.58

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
11_3_102	MW-8	App. IV	Arsenic	ug/L	36	32	89%	2015-11-20 to 2024-04-02		Nonparametric	4.38	4.70	2.50	7.40	1.34	0.306	0.444	0.244	0.0690
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	1149	1080	880	1880	196	0.170	88.9	1.95	4.67
11_3_104	MW-8	App. IV	Beryllium	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	0.489	0.500	0.160	1.50	0.261	0.534	0.296	1.40	5.19
11_3_106	MW-8	App. IV	Cadmium	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	0.461	0.400	0.290	1.50	0.191	0.415	0.148	4.76	26.4
11_3_109	MW-8	App. IV	Chromium	ug/L	36	19	53%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	12	2.50	1.00	87.6	20.6	1.72	1.78	2.76	7.63
11_3_110	MW-8	App. IV	Cobalt	ug/L	36	33	92%	2015-11-20 to 2024-04-02		Nonparametric	2.40	2.50	0.440	3.80	1.00	0.417	1.63	-0.340	-0.969
11_3_112	MW-8	App. IV	Fluoride	mg/L	36	20	56%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	0.0591	0.0500	0.0200	0.140	0.0297	0.502	0.0341	0.543	0.194
11_3_113	MW-8	App. IV	Lead	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	2.89	2.50	1.40	4.60	1.09	0.379	0.593	0.582	-1.11
11_3_114	MW-8	App. IV	Lithium	ug/L	36	1	3%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Gamma	27.2	25.9	4.20	50.1	8.11	0.298	5.78	0.406	2.31
11_3_115	MW-8	App. IV	Mercury	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	0.116	0.100	0.0900	0.370	0.0448	0.388	0	5.51	32
11_3_116	MW-8	App. IV	Molybdenum	ug/L	36	33	92%	2015-11-20 to 2024-04-02		Nonparametric	2.75	2.50	0.900	5.60	1.13	0.409	1.33	0.495	0.162
11_3_119	MW-8	App. IV	Radium-226	pCi/L	34	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.454	0.376	-0.357	2.51	0.526	1.16	0.418	1.79	6.01
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	0.860	0.676	-0.351	4.72	0.784	0.911	0.361	3.72	18.4
11_3_121	MW-8	App. IV	Selenium	ug/L	36	34	94%	2015-11-20 to 2024-04-02		Nonparametric	4.60	4.70	0.330	5.00	0.815	0.177	0.444	-4.37	22.3
11_3_124	MW-8	App. IV	Thallium	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	0.976	0.0500	0.0200	8.80	2.19	2.25	0.0148	2.24	4.19
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	1.35	1.23	0	7.23	1.15	0.854	0.630	4.15	21.5
1_1_111	MW-1	App. I Metals	Copper	ug/L	36	32	89%	2015-11-20 to 2024-04-03		Nonparametric	3.36	2.50	0.620	15.0	2.44	0.725	0.370	3.44	15
1_1_117	MW-1	App. I Metals	Nickel	ug/L	36	27	75%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	3.24	2.50	0.880	13.3	2.41	0.745	1.48	2.46	8.09
1_1_122	MW-1	App. I Metals	Silver	ug/L	36	32	89%	2015-11-20 to 2024-04-03		Nonparametric	2.17	2.50	0.200	2.50	0.703	0.324	0	-1.83	1.83
1_1_127	MW-1	App. I Metals	Vanadium	ug/L	36	24	67%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	3.40	2.50	1.30	9.80	1.78	0.524	1.70	1.80	4.24
1_1_128	MW-1	App. I Metals	Zinc	ug/L	36	25	69%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	10.4	9.50	2.70	35.3	7.53	0.724	6.67	1.84	3.44
1_2_105	MW-1	App. III	Boron	ug/L	35	22	63%	2015-11-20 to 2024-04-03	Nonparametric	Nonparametric	8.61	8.50	0.570	44.6	9.45	1.10	2.67	3.02	10.0
1_2_107	MW-1	App. III	Calcium	ug/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	163708	158000	43100	311000	77387	0.473	91852	0.184	-0.938
1_2_108	MW-1	App. III	Chloride	mg/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Normal	Normal	597	610	83.9	1240	278	0.465	301	-0.0299	-0.476
1_2_112	MW-1	App. III	Fluoride	mg/L	36	1	3%	2015-11-20 to 2024-04-03	Normal	Normal	0.146	0.150	0.0200	0.210	0.0323	0.220	0.0296	-1.51	5.70
1_2_118	MW-1	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-04-01	Gamma; Lognormal; Normal	Normal	6.74	6.70	6.41	7.30	0.228	0.0339	0.185	0.757	-0.0624
1_2_123	MW-1	App. III	Sulfate	mg/L	36	0	0%	2015-11-20 to 2024-04-03	Lognormal	Lognormal	7.10	6.70	4.50	11.2	1.64	0.232	0.889	1.06	0.649
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	1450	1290	346	3390	747	0.515	793	0.557	-0.266
1_3_101	MW-1	App. IV	Antimony	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	3.68	3.80	0.200	6.10	1.04	0.284	1.19	-0.190	3.29
1_3_102	MW-1	App. IV	Arsenic	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	4.08	4.70	1.70	5.20	1.09	0.268	0.444	-0.795	-1.06
1_3_103	MW-1	App. IV	Barium	ug/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	211	214	36.3	421	102	0.483	121	0.292	-0.662
1_3_104	MW-1	App. IV	Beryllium	ug/L	36	36	100%	2015-11-20 to 2024-04-03		Nonparametric	0.449	0.500	0.0500	0.700	0.207	0.461	0.296	-0.392	-1.14
1_3_106	MW-1	App. IV	Cadmium	ug/L	36	33	92%	2015-11-20 to 2024-04-03		Nonparametric	0.438	0.500	0.0600	0.670	0.107	0.243	0.126	-1.13	3.46
1_3_109	MW-1	App. IV	Chromium	ug/L	36	26	72%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	3.76	2.50	0.630	18.4	3.36	0.894	1.78	2.82	9.94
1_3_110	MW-1	App. IV	Cobalt	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	2.27	2.50	0.140	3.60	1.07	0.469	1.63	-0.388	-0.933
1_3_112	MW-1	App. IV	Fluoride	mg/L	36	1	3%	2015-11-20 to 2024-04-03	Normal	Normal	0.146	0.150	0.0200	0.210	0.0323	0.220	0.0296	-1.51	5.70
1_3_113	MW-1	App. IV	Lead	ug/L	36	33	92%	2015-11-20 to 2024-04-03		Nonparametric	2.87	2.50	0.250	6.80	1.31	0.458	0.593	0.886	0.922
1_3_114	MW-1	App. IV	Lithium	ug/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	32.7	32.9	19.2	47.5	6.02	0.184	4.07	0.0963	0.396
1_3_115	MW-1	App. IV	Mercury	ug/L	36	36	100%	2015-11-20 to 2024-04-03		Nonparametric	0.108	0.100	0.0900	0.120	0.0104	0.0960	0	0.250	-1.82
1_3_116	MW-1	App. IV	Molybdenum	ug/L	36	31	86%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	3.52	2.50	0.340	15.1	3.10	0.882	0.741	3.0	9.12
1_3_119	MW-1	App. IV	Radium-226	pCi/L	34	0	0%	2015-11-20 to 2024-04-03	Normal	Normal	0.270	0.246	-0.378	1.03	0.313	1.16	0.272	0.341	0.797
1_3_120	MW-1	App. IV	Radium-228	pCi/L	34	0	0%	2015-11-20 to 2024-04-03	Normal	Normal	0.593	0.600	-0.0467	1.45	0.285	0.480	0.209	0.446	1.91

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
1_3_121	MW-1	App. IV	Selenium	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	4.60	4.70	0.280	5.00	0.817	0.178	0.444	-4.49	23.4
1_3_124	MW-1	App. IV	Thallium	ug/L	36	36	100%	2015-11-20 to 2024-04-03		Nonparametric	0.891	0.0500	0.0200	5.00	1.87	2.10	0.0148	1.86	1.55
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.898	0.834	0.237	2.48	0.443	0.493	0.364	1.35	3.66
2_1_111	MW-10	App. I Metals	Copper	ug/L	12	8	67%	2021-08-09 to 2024-04-02		Nonparametric	14.1	3.45	0.620	103	28.6	2.03	2.73	3.20	10.6
2_1_117	MW-10	App. I Metals	Nickel	ug/L	12	4	33%	2021-08-09 to 2024-04-02	Lognormal	Nonparametric	4.88	3.00	0.880	27.9	7.37	1.51	0.741	3.27	11.0
2_1_122	MW-10	App. I Metals	Silver	ug/L	12	12	100%	2021-08-09 to 2024-04-02		Nonparametric	1.46	1.00	0.0700	2.50	0.957	0.654	1.07	0.0808	-1.87
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	12	5	42%	2021-08-09 to 2024-04-02	Nonparametric	Nonparametric	4.04	2.60	1.50	18.2	4.56	1.13	1.56	3.20	10.7
2_1_128	MW-10	App. I Metals	Zinc	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	15.7	9.50	3.00	94.2	24.9	1.58	2.22	3.38	11.6
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	24.4	23.8	17.8	43.4	6.50	0.266	3.93	2.54	7.70
2_2_107	MW-10	App. III	Calcium	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	21875	21800	17700	26500	2330	0.107	1926	-0.0295	0.856
2_2_108	MW-10	App. III	Chloride	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	29.7	29.6	28.0	32.4	1.20	0.0403	0.815	0.897	1.06
2_2_112	MW-10	App. III	Fluoride	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.472	0.465	0.400	0.540	0.0431	0.0912	0.0370	0.261	-0.591
2_2_118	MW-10	App. III	pH (Field)	S.U.	13	0	0%	2021-04-12 to 2024-04-01	Gamma; Lognormal; Normal	Normal	7.78	7.73	7.48	8.16	0.158	0.0202	0.0889	0.779	2.74
2_2_123	MW-10	App. III	Sulfate	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	4.08	3.40	2.00	8.00	1.77	0.435	1.19	1.07	0.596
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	349	351	318	368	12.9	0.0371	8.89	-1.10	2.13
2_3_101	MW-10	App. IV	Antimony	ug/L	12	11	92%	2021-08-09 to 2024-04-02		Nonparametric	3.75	3.30	0.760	5.50	1.48	0.395	0.444	-0.242	-0.112
2_3_102	MW-10	App. IV	Arsenic	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	3.62	3.40	1.20	4.70	1.14	0.314	1.63	-0.764	0.106
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	78.6	76.3	43.2	195	40.2	0.511	23.5	2.45	7.27
2_3_104	MW-10	App. IV	Beryllium	ug/L	12	12	100%	2021-08-09 to 2024-04-02		Nonparametric	0.379	0.170	0.0500	0.700	0.285	0.752	0.0963	0.338	-2.20
2_3_106	MW-10	App. IV	Cadmium	ug/L	12	12	100%	2021-08-09 to 2024-04-02		Nonparametric	0.330	0.330	0.0600	0.400	0.0956	0.290	0.0815	-2.26	6.21
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	8.79	4.15	0.630	56.7	15.4	1.75	3.11	3.20	10.6
2_3_110	MW-10	App. IV	Cobalt	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	2.26	0.960	0.440	7.60	2.18	0.964	0.770	1.41	2.0
2_3_112	MW-10	App. IV	Fluoride	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.472	0.465	0.400	0.540	0.0431	0.0912	0.0370	0.261	-0.591
2_3_113	MW-10	App. IV	Lead	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	3.64	3.30	0.760	11.2	2.80	0.771	1.78	1.87	4.66
2_3_114	MW-10	App. IV	Lithium	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	2.58	2.00	0.690	6.70	1.86	0.719	0.963	1.29	0.812
2_3_115	MW-10	App. IV	Mercury	ug/L	12	12	100%	2021-08-09 to 2024-04-02		Nonparametric	0.117	0.120	0.0900	0.120	0.00866	0.0737	0	-3.46	12.0
2_3_116	MW-10	App. IV	Molybdenum	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	23.4	21.9	15.4	36.2	6.80	0.291	6.59	0.667	-0.628
2_3_119	MW-10	App. IV	Radium-226	pCi/L	12	0	0%	2021-08-09 to 2024-04-02	Normal	Normal	0.132	0.146	-0.305	0.537	0.264	2.00	0.350	-0.106	-0.998
2_3_120	MW-10	App. IV	Radium-228	pCi/L	12	0	0%	2021-08-09 to 2024-04-02	Normal	Normal	0.588	0.499	-0.100	1.67	0.483	0.821	0.527	0.818	0.952
2_3_121	MW-10	App. IV	Selenium	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	4.03	4.10	0.500	5.20	1.19	0.297	0.593	-2.62	8.12
2_3_124	MW-10	App. IV	Thallium	ug/L	12	11	92%	2021-08-09 to 2024-04-02		Nonparametric	0.0540	0.0500	0.0280	0.120	0.0217	0.402	0	2.86	9.71
2_3_126	MW-10	App. IV	Total Radium	pCi/L	12	0	0%	2021-08-09 to 2024-04-02	Normal	Normal	0.784	0.817	0	1.74	0.461	0.587	0.379	0.283	0.666
3_1_111	MW-11	App. I Metals	Copper	ug/L	15	10	67%	2020-10-15 to 2024-04-01	Gamma; Lognormal	Nonparametric	4.65	4.30	0.620	20.1	4.51	0.968	2.37	3.20	11.5
3_1_117	MW-11	App. I Metals	Nickel	ug/L	15	9	60%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	3.08	3.50	0.790	7.60	1.65	0.535	0	1.15	3.40
3_1_122	MW-11	App. I Metals	Silver	ug/L	15	15	100%	2020-10-15 to 2024-04-01		Nonparametric	1.67	2.50	0.0700	2.50	0.951	0.569	0	-0.385	-1.75
3_1_127	MW-11	App. I Metals	Vanadium	ug/L	15	12	80%	2020-10-15 to 2024-04-01		Nonparametric	2.62	3.90	0.440	3.90	1.44	0.548	0	-0.266	-2.04
3_1_128	MW-11	App. I Metals	Zinc	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	8.91	9.50	3.00	11.0	2.41	0.271	0	-1.54	1.57
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	15.1	15.2	8.50	25.2	3.57	0.237	1.93	1.27	4.78
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	2020-10-15 to 2024-04-01	Lognormal	Lognormal	31560	26800	23200	69400	11537	0.366	3852	2.83	9.07
3_2_108	MW-11	App. III	Chloride	mg/L	15	0	0%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	129	132	74.5	149	20.4	0.158	19.3	-1.43	2.48
3_2_112	MW-11	App. III	Fluoride	mg/L	15	1	7%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.157	0.160	0.0500	0.220	0.0377	0.240	0.0296	-1.42	4.46
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	2021-01-29 to 2024-04-01	Nonparametric	Nonparametric	7.09	6.65	6.53	11.7	1.35	0.190	0.0889	3.58	13.1

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
3_2_123	MW-11	App. III	Sulfate	mg/L	15	0	0%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	2.21	2.10	1.80	3.00	0.307	0.139	0.296	1.07	1.95
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	569	416	296	2760	608	1.07	19.3	3.83	14.8
3_3_101	MW-11	App. IV	Antimony	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	3.58	3.00	0.320	5.50	1.42	0.396	0	-0.232	0.816
3_3_102	MW-11	App. IV	Arsenic	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	3.83	4.70	0.400	5.60	1.32	0.345	1.33	-1.26	1.95
3_3_103	MW-11	App. IV	Barium	ug/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	50.8	43.2	34.3	130	23.7	0.467	6.67	3.01	10.0
3_3_104	MW-11	App. IV	Beryllium	ug/L	15	15	100%	2020-10-15 to 2024-04-01		Nonparametric	0.443	0.700	0.0500	0.700	0.285	0.644	0	-0.187	-2.22
3_3_106	MW-11	App. IV	Cadmium	ug/L	15	15	100%	2020-10-15 to 2024-04-01		Nonparametric	0.344	0.400	0.0600	0.400	0.0896	0.260	0	-2.50	7.49
3_3_109	MW-11	App. IV	Chromium	ug/L	15	12	80%	2020-10-15 to 2024-04-01		Nonparametric	3.55	3.70	0.500	8.80	2.26	0.636	0	1.21	1.60
3_3_110	MW-11	App. IV	Cobalt	ug/L	15	11	73%	2020-10-15 to 2024-04-01		Nonparametric	2.36	3.60	0.450	3.60	1.39	0.589	0	-0.202	-2.19
3_3_112	MW-11	App. IV	Fluoride	mg/L	15	1	7%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.157	0.160	0.0500	0.220	0.0377	0.240	0.0296	-1.42	4.46
3_3_113	MW-11	App. IV	Lead	ug/L	15	14	93%	2020-10-15 to 2024-04-01		Nonparametric	3.33	4.50	0.190	4.60	1.57	0.471	0	-0.762	-1.06
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	10.9	10.4	9.10	19.5	2.61	0.239	1.63	2.82	9.07
3_3_115	MW-11	App. IV	Mercury	ug/L	15	15	100%	2020-10-15 to 2024-04-01		Nonparametric	0.118	0.120	0.0900	0.120	0.00775	0.0656	0	-3.87	15.0
3_3_116	MW-11	App. IV	Molybdenum	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	2.89	3.90	0.410	3.90	1.21	0.420	0	-0.692	-0.937
3_3_119	MW-11	App. IV	Radium-226	pCi/L	15	0	0%	2020-10-15 to 2024-04-01	Normal	Normal	0.0699	0.0556	-0.149	0.399	0.169	2.41	0.175	0.593	-0.784
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	0.452	0.500	-0.135	2.13	0.539	1.19	0.461	2.27	6.87
3_3_121	MW-11	App. IV	Selenium	ug/L	15	15	100%	2020-10-15 to 2024-04-01		Nonparametric	4.10	4.70	0.0720	4.70	1.17	0.286	0	-3.24	11.5
3_3_124	MW-11	App. IV	Thallium	ug/L	15	14	93%	2020-10-15 to 2024-04-01		Nonparametric	0.0523	0.0500	0.0500	0.0850	0.00904	0.173	0	3.87	15.0
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	2020-10-15 to 2024-04-01	Gamma; Lognormal	Gamma	0.568	0.500	0.124	2.39	0.543	0.957	0.268	2.97	10.2
4_1_111	MW-11D	App. I Metals	Copper	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	4.66	2.60	0.620	15.4	4.72	1.01	2.52	1.85	2.44
4_1_117	MW-11D	App. I Metals	Nickel	ug/L	13	9	69%	2021-04-13 to 2024-04-01		Nonparametric	2.64	3.50	0.880	6.20	1.59	0.603	2.67	0.703	0.313
4_1_122	MW-11D	App. I Metals	Silver	ug/L	13	13	100%	2021-04-13 to 2024-04-01		Nonparametric	1.54	1.00	0.0700	2.50	0.960	0.623	1.38	-0.0990	-1.89
4_1_127	MW-11D	App. I Metals	Vanadium	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	2.48	1.60	0.690	3.90	1.39	0.559	1.35	0.0510	-2.17
4_1_128	MW-11D	App. I Metals	Zinc	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	9.16	9.50	2.90	18.6	4.06	0.443	2.22	0.420	1.84
4_2_105	MW-11D	App. III	Boron	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Nonparametric	Nonparametric	55.7	52.4	41.7	109	18.0	0.323	6.37	2.49	6.92
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	27369	19100	14000	94400	21080	0.770	6815	3.08	10.2
4_2_108	MW-11D	App. III	Chloride	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	137	103	52.3	530	129	0.940	51.6	2.73	8.23
4_2_112	MW-11D	App. III	Fluoride	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.498	0.490	0.420	0.640	0.0531	0.107	0.0444	1.53	4.01
4_2_118	MW-11D	App. III	pH (Field)	S.U.	13	0	0%	2021-04-12 to 2024-04-01	Gamma; Lognormal; Normal	Normal	8.43	8.39	8.06	8.92	0.252	0.0299	0.237	0.663	-0.00131
4_2_123	MW-11D	App. III	Sulfate	mg/L	13	1	8%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	97.6	41.5	0.500	523	140	1.44	49.8	2.66	7.85
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	583	467	312	1740	386	0.662	194	2.56	7.31
4_3_101	MW-11D	App. IV	Antimony	ug/L	13	11	85%	2021-04-13 to 2024-04-01		Nonparametric	3.88	3.60	0.620	5.60	1.53	0.395	0.889	-0.436	-0.105
4_3_102	MW-11D	App. IV	Arsenic	ug/L	13	5	38%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	6.99	5.20	2.50	16.5	4.73	0.677	2.67	1.15	-0.0108
4_3_103	MW-11D	App. IV	Barium	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	103	108	65.7	124	18.9	0.183	17.8	-1.04	0.214
4_3_104	MW-11D	App. IV	Beryllium	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	0.408	0.170	0.110	0.700	0.281	0.689	0.0889	0.164	-2.35
4_3_106	MW-11D	App. IV	Cadmium	ug/L	13	13	100%	2021-04-13 to 2024-04-01		Nonparametric	0.335	0.330	0.0600	0.400	0.0936	0.279	0.104	-2.34	6.61
4_3_109	MW-11D	App. IV	Chromium	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	3.04	3.70	0.630	8.00	1.93	0.635	0.741	1.19	2.84
4_3_110	MW-11D	App. IV	Cobalt	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	2.04	0.960	0.210	3.60	1.52	0.745	1.11	0.0940	-2.24
4_3_112	MW-11D	App. IV	Fluoride	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.498	0.490	0.420	0.640	0.0531	0.107	0.0444	1.53	4.01
4_3_113	MW-11D	App. IV	Lead	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	3.27	4.50	1.40	4.60	1.42	0.434	0.148	-0.259	-2.16
4_3_114	MW-11D	App. IV	Lithium	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Lognormal	Lognormal	31.5	27.0	17.8	80.7	18.1	0.573	9.19	2.14	4.38
4_3_115	MW-11D	App. IV	Mercury	ug/L	13	13	100%	2021-04-13 to 2024-04-01		Nonparametric	0.118	0.120	0.0900	0.120	0.00832	0.0707	0	-3.61	13.0

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	25.5	17.0	4.10	127	33	1.30	17.8	2.77	8.56
4_3_119	MW-11D	App. IV	Radium-226	pCi/L	13	0	0%	2021-04-13 to 2024-04-01	Normal	Normal	0.179	0.0670	-0.101	0.641	0.249	1.39	0.206	0.527	-1.13
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Gamma	0.618	0.502	0.0582	2.23	0.584	0.944	0.387	1.90	4.48
4_3_121	MW-11D	App. IV	Selenium	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	4.02	4.10	0.230	4.70	1.20	0.298	0.889	-3.01	9.96
4_3_124	MW-11D	App. IV	Thallium	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	0.0534	0.0500	0.0500	0.0940	0.0122	0.229	0	3.61	13.0
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.821	0.714	0.125	2.27	0.587	0.715	0.616	1.17	1.94
5_1_111	MW-2	App. I Metals	Copper	ug/L	31	15	48%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	20.8	3.60	0.620	294	56.9	2.74	1.63	4.24	19.1
5_1_117	MW-2	App. I Metals	Nickel	ug/L	31	12	39%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Gamma	14.2	4.50	0.900	115	23.8	1.69	2.96	3.14	10.8
5_1_122	MW-2	App. I Metals	Silver	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	2.10	2.50	0.0730	2.50	0.769	0.366	0	-1.58	0.911
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	31	22	71%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	4.21	2.50	1.30	37.2	6.26	1.49	0.593	5.21	28.1
5_1_128	MW-2	App. I Metals	Zinc	ug/L	31	16	52%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Nonparametric	23.4	10.7	3.60	225	42.9	1.83	8.44	4.00	17.4
5_2_105	MW-2	App. III	Boron	ug/L	30	1	3%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	43.5	43.0	8.50	63.9	9.02	0.207	5.19	-1.62	7.77
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	184655	188000	34300	221000	34349	0.186	20741	-2.99	12.1
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1093	1160	489	1360	194	0.178	104	-1.74	3.45
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	2015-11-19 to 2024-04-03	Lognormal; Normal	Normal	0.208	0.220	0.0200	0.400	0.0706	0.339	0.0296	-0.300	2.41
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	2015-11-19 to 2024-04-01	Nonparametric	Nonparametric	7.71	7.60	7.35	9.29	0.402	0.0521	0.148	2.78	9.20
5_2_123	MW-2	App. III	Sulfate	mg/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	130	94.7	51.7	338	79.9	0.613	47	1.10	0.119
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	2698	2580	257	11700	1800	0.667	296	4.27	22.4
5_3_101	MW-2	App. IV	Antimony	ug/L	31	18	58%	2015-11-19 to 2024-04-03	Gamma; Normal	Nonparametric	6.20	4.60	0.610	30.0	5.18	0.836	2.07	3.46	15.1
5_3_102	MW-2	App. IV	Arsenic	ug/L	31	22	71%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	4.69	4.70	2.50	11.5	2.05	0.436	1.04	1.77	4.39
5_3_103	MW-2	App. IV	Barium	ug/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	298	308	90.8	565	87.5	0.293	57.8	0.628	2.68
5_3_104	MW-2	App. IV	Beryllium	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	0.487	0.500	0.160	1.10	0.216	0.444	0.148	0.268	0.885
5_3_106	MW-2	App. IV	Cadmium	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	0.424	0.480	0.0780	0.500	0.0975	0.230	0.0296	-1.66	3.82
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	18.4	7.20	1.00	130	28.3	1.54	6.96	2.71	7.98
5_3_110	MW-2	App. IV	Cobalt	ug/L	31	26	84%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Nonparametric	3.49	2.50	0.440	34.8	5.88	1.69	1.19	5.35	29.4
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	2015-11-19 to 2024-04-03	Lognormal; Normal	Normal	0.208	0.220	0.0200	0.400	0.0706	0.339	0.0296	-0.300	2.41
5_3_113	MW-2	App. IV	Lead	ug/L	31	27	87%	2015-11-19 to 2024-04-03		Nonparametric	3.74	2.50	1.40	27.5	4.58	1.22	0.593	4.96	26.3
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	156	133	41.2	512	93.4	0.597	31.1	2.46	7.05
5_3_115	MW-2	App. IV	Mercury	ug/L	31	31	100%	2015-11-19 to 2024-04-03		Nonparametric	0.109	0.100	0.0900	0.120	0.0106	0.0972	0	0.0915	-1.88
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	2015-11-19 to 2024-04-03	Lognormal	Lognormal	9.75	7.90	2.60	41.0	7.48	0.767	4.44	2.71	9.64
5_3_119	MW-2	App. IV	Radium-226	pCi/L	30	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.913	0.938	0.227	1.94	0.360	0.395	0.385	0.407	1.12
5_3_120	MW-2	App. IV	Radium-228	pCi/L	30	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	1.40	1.36	0.433	2.23	0.457	0.326	0.526	0.0820	-0.634
5_3_121	MW-2	App. IV	Selenium	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	4.60	4.80	0.940	5.00	0.777	0.169	0.296	-3.78	16.9
5_3_124	MW-2	App. IV	Thallium	ug/L	31	23	74%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1.22	0.0600	0.0200	10.3	2.49	2.04	0.0593	2.27	5.03
5_3_126	MW-2	App. IV	Total Radium	pCi/L	30	0	0%	2015-11-19 to 2024-04-03	Normal	Normal	2.31	2.38	1.10	3.35	0.663	0.286	0.654	-0.424	-0.764
6_1_111	MW-3	App. I Metals	Copper	ug/L	34	21	62%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	10.3	3.10	0.620	137	24.6	2.38	1.78	4.55	22.5
6_1_117	MW-3	App. I Metals	Nickel	ug/L	34	19	56%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	7.64	2.65	0.900	86.0	16.3	2.13	1.26	4.14	17.9
6_1_122	MW-3	App. I Metals	Silver	ug/L	34	33	97%	2015-11-19 to 2024-04-03		Nonparametric	2.15	2.50	0.0700	2.50	0.726	0.338	0	-1.83	1.90
6_1_127	MW-3	App. I Metals	Vanadium	ug/L	34	22	65%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	3.51	2.50	1.30	13.9	2.34	0.666	0.667	3.16	11.9
6_1_128	MW-3	App. I Metals	Zinc	ug/L	34	27	79%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	9.01	7.25	3.00	42.7	7.32	0.812	3.33	3.39	14
6_2_105	MW-3	App. III	Boron	ug/L	33	10	30%	2015-11-19 to 2024-04-03	Gamma; Normal	Normal	25.9	28.5	0.570	49.4	17.0	0.657	20.0	-0.371	-1.40
6_2_107	MW-3	App. III	Calcium	ug/L	34	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	172176	176000	117000	203000	19754	0.115	17778	-0.778	0.483

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1069	1080	565	1280	137	0.129	74.1	-1.54	4.71
6_2_112	MW-3	App. III	Fluoride	mg/L	34	1	3%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.356	0.350	0.0200	0.610	0.126	0.352	0.126	-0.0477	0.529
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	2015-11-19 to 2024-04-01	Nonparametric	Nonparametric	7.32	7.35	6.18	7.77	0.266	0.0363	0.0963	-2.67	11.8
6_2_123	MW-3	App. III	Sulfate	mg/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	50.3	25.1	9.10	174	47.2	0.939	18.9	1.25	0.614
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	2230	2390	256	3180	623	0.279	341	-1.94	4.50
6_3_101	MW-3	App. IV	Antimony	ug/L	34	23	68%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	5.31	3.90	1.30	15.0	3.15	0.593	1.33	1.50	1.62
6_3_102	MW-3	App. IV	Arsenic	ug/L	34	28	82%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	4.42	4.70	1.90	9.60	1.64	0.372	0.519	0.846	1.77
6_3_103	MW-3	App. IV	Barium	ug/L	34	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	646	662	353	855	107	0.166	98.5	-0.452	0.361
6_3_104	MW-3	App. IV	Beryllium	ug/L	34	34	100%	2015-11-19 to 2024-04-03		Nonparametric	0.463	0.500	0.0500	0.700	0.203	0.439	0.296	-0.550	-0.875
6_3_106	MW-3	App. IV	Cadmium	ug/L	34	33	97%	2015-11-19 to 2024-04-03		Nonparametric	0.423	0.405	0.0600	0.500	0.0957	0.226	0.141	-1.77	4.86
6_3_109	MW-3	App. IV	Chromium	ug/L	34	17	50%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	12.1	3.70	1.00	179	32.5	2.68	1.93	4.63	22.6
6_3_110	MW-3	App. IV	Cobalt	ug/L	34	30	88%	2015-11-19 to 2024-04-03		Nonparametric	2.47	2.50	0.0610	6.20	1.23	0.497	1.63	0.346	1.38
6_3_112	MW-3	App. IV	Fluoride	mg/L	34	1	3%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.356	0.350	0.0200	0.610	0.126	0.352	0.126	-0.0477	0.529
6_3_113	MW-3	App. IV	Lead	ug/L	34	31	91%	2015-11-19 to 2024-04-03		Nonparametric	3.05	2.50	0.190	7.30	1.46	0.480	0.593	0.879	0.938
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	90.8	86.7	0.390	236	40.9	0.450	15.6	1.99	6.86
6_3_115	MW-3	App. IV	Mercury	ug/L	34	34	100%	2015-11-19 to 2024-04-03		Nonparametric	0.109	0.100	0.0900	0.120	0.0105	0.0966	0	0.143	-1.87
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	9.09	8.05	5.10	35.7	5.10	0.561	1.48	4.55	23.8
6_3_119	MW-3	App. IV	Radium-226	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.906	0.816	0.213	1.92	0.370	0.408	0.406	0.396	0.227
6_3_120	MW-3	App. IV	Radium-228	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	1.44	1.49	0.326	2.86	0.578	0.400	0.607	0.0151	0.0661
6_3_121	MW-3	App. IV	Selenium	ug/L	34	33	97%	2015-11-19 to 2024-04-03		Nonparametric	4.58	4.70	0.270	5.00	0.850	0.186	0.444	-4.21	20.8
6_3_124	MW-3	App. IV	Thallium	ug/L	34	34	100%	2015-11-19 to 2024-04-03		Nonparametric	0.949	0.0500	0.0200	5.00	1.91	2.01	0.0326	1.76	1.20
6_3_126	MW-3	App. IV	Total Radium	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	2.35	2.31	0.857	3.92	0.731	0.311	0.711	0.0346	-0.215
7_1_111	MW-4	App. I Metals	Copper	ug/L	35	31	89%	2015-11-19 to 2024-04-03		Nonparametric	9.49	2.50	0.620	170	30.0	3.16	0.148	4.98	25.9
7_1_117	MW-4	App. I Metals	Nickel	ug/L	35	11	31%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	5.89	5.20	0.900	12.8	3.29	0.559	4.00	0.521	-0.763
7_1_122	MW-4	App. I Metals	Silver	ug/L	35	35	100%	2015-11-19 to 2024-04-03		Nonparametric	2.14	2.50	0.0700	2.50	0.739	0.345	0	-1.76	1.52
7_1_127	MW-4	App. I Metals	Vanadium	ug/L	35	31	89%	2015-11-19 to 2024-04-03		Nonparametric	2.74	2.50	0.250	10.7	1.72	0.629	1.33	2.92	13.2
7_1_128	MW-4	App. I Metals	Zinc	ug/L	35	24	69%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Nonparametric	9.80	8.80	3.90	47.2	8.27	0.844	5.63	3.25	12.6
7_2_105	MW-4	App. III	Boron	ug/L	34	22	65%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	11.8	7.00	0.570	165	28	2.36	2.22	5.31	29.4
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	55671	58900	17900	71600	13036	0.234	8000	-1.56	2.28
7_2_108	MW-4	App. III	Chloride	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	413	427	144	567	105	0.254	96.3	-1.06	0.545
7_2_112	MW-4	App. III	Fluoride	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.325	0.320	0.210	0.440	0.0541	0.167	0.0444	0.244	-0.221
7_2_118	MW-4	App. III	pH (Field)	S.U.	33	0	0%	2015-11-19 to 2024-04-01	Gamma; Lognormal; Normal	Normal	6.27	6.25	6.06	6.56	0.128	0.0204	0.119	0.458	-0.400
7_2_123	MW-4	App. III	Sulfate	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	10.1	10.7	3.40	13.4	2.40	0.239	1.19	-1.36	1.68
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1074	1130	395	1580	235	0.219	104	-1.31	2.72
7_3_101	MW-4	App. IV	Antimony	ug/L	35	30	86%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	3.77	3.80	0.200	7.00	1.13	0.299	1.04	0.119	3.50
7_3_102	MW-4	App. IV	Arsenic	ug/L	35	33	94%	2015-11-19 to 2024-04-03		Nonparametric	4.01	4.70	0.360	5.10	1.20	0.298	0.444	-1.15	0.693
7_3_103	MW-4	App. IV	Barium	ug/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	283	300	85.9	431	70.4	0.249	35.6	-1.25	2.34
7_3_104	MW-4	App. IV	Beryllium	ug/L	35	35	100%	2015-11-19 to 2024-04-03		Nonparametric	0.447	0.500	0.0500	0.700	0.209	0.468	0.296	-0.366	-1.21
7_3_106	MW-4	App. IV	Cadmium	ug/L	35	34	97%	2015-11-19 to 2024-04-03		Nonparametric	0.421	0.400	0.0600	0.500	0.0938	0.223	0.148	-1.78	5.07
7_3_109	MW-4	App. IV	Chromium	ug/L	35	27	77%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	2.97	2.50	0.580	9.90	1.95	0.655	1.78	1.99	5.30
7_3_110	MW-4	App. IV	Cobalt	ug/L	35	20	57%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	6.78	3.60	1.10	28.2	6.69	0.987	1.63	1.86	2.96
7_3_112	MW-4	App. IV	Fluoride	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.325	0.320	0.210	0.440	0.0541	0.167	0.0444	0.244	-0.221

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
7_3_113	MW-4	App. IV	Lead	ug/L	35	34	97%	2015-11-19 to 2024-04-03		Nonparametric	2.87	2.50	0.0770	6.80	1.35	0.470	0.593	0.785	0.805
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	30.8	28.0	15.8	98.0	13.0	0.424	3.85	4.21	21.7
7_3_115	MW-4	App. IV	Mercury	ug/L	35	35	100%	2015-11-19 to 2024-04-03		Nonparametric	0.108	0.100	0.0900	0.120	0.0104	0.0963	0	0.198	-1.85
7_3_116	MW-4	App. IV	Molybdenum	ug/L	35	30	86%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	4.32	2.50	0.480	20.9	5.0	1.16	1.33	2.75	6.58
7_3_119	MW-4	App. IV	Radium-226	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Normal	Normal	0.308	0.239	-0.259	0.913	0.292	0.949	0.274	0.245	-0.547
7_3_120	MW-4	App. IV	Radium-228	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.559	0.481	0.0190	1.57	0.370	0.662	0.339	0.874	0.602
7_3_121	MW-4	App. IV	Selenium	ug/L	35	33	94%	2015-11-19 to 2024-04-03		Nonparametric	4.61	4.70	0.140	5.90	0.884	0.192	0.444	-3.96	19.9
7_3_124	MW-4	App. IV	Thallium	ug/L	35	35	100%	2015-11-19 to 2024-04-03		Nonparametric	0.912	0.0500	0.0200	5.00	1.89	2.07	0.0296	1.81	1.38
7_3_126	MW-4	App. IV	Total Radium	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.884	0.766	0.146	2.26	0.502	0.569	0.443	1.02	0.692
8_1_111	MW-5	App. I Metals	Copper	ug/L	36	28	78%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	3.65	2.50	0.620	12.9	2.47	0.677	0.370	2.18	5.46
8_1_117	MW-5	App. I Metals	Nickel	ug/L	36	29	81%	2015-11-18 to 2024-04-02	Lognormal	Nonparametric	6.0	2.50	0.640	120	19.6	3.27	1.48	5.93	35.4
8_1_122	MW-5	App. I Metals	Silver	ug/L	36	36	100%	2015-11-18 to 2024-04-02		Nonparametric	2.15	2.50	0.0700	2.50	0.731	0.339	0	-1.80	1.69
8_1_127	MW-5	App. I Metals	Vanadium	ug/L	36	33	92%	2015-11-18 to 2024-04-02		Nonparametric	2.49	2.50	0.510	3.90	1.01	0.406	1.33	-0.0152	-0.835
8_1_128	MW-5	App. I Metals	Zinc	ug/L	36	25	69%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	9.09	9.50	3.80	36.1	6.07	0.668	6.52	2.81	10.8
8_2_105	MW-5	App. III	Boron	ug/L	35	15	43%	2015-11-18 to 2024-04-02	Nonparametric	Nonparametric	8.93	9.60	0.570	39.3	6.51	0.728	1.78	2.82	13.9
8_2_107	MW-5	App. III	Calcium	ug/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	11129	10550	8030	16900	2174	0.195	2430	0.658	-0.203
8_2_108	MW-5	App. III	Chloride	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	20.2	19.8	17.6	23.1	1.60	0.0792	2.15	0.125	-1.23
8_2_112	MW-5	App. III	Fluoride	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.546	0.555	0.410	0.690	0.0604	0.111	0.0519	0.0312	0.516
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	2015-11-18 to 2024-04-01	Nonparametric	Nonparametric	6.89	6.96	5.50	8.54	0.488	0.0709	0.237	-0.0683	5.97
8_2_123	MW-5	App. III	Sulfate	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	3.61	3.60	2.60	5.60	0.636	0.176	0.741	1.23	2.32
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Nonparametric	Nonparametric	256	228	194	1160	157	0.614	31.9	5.73	33.7
8_3_101	MW-5	App. IV	Antimony	ug/L	36	34	94%	2015-11-18 to 2024-04-02		Nonparametric	3.67	3.80	1.10	5.50	0.863	0.235	0.296	0.204	2.28
8_3_102	MW-5	App. IV	Arsenic	ug/L	36	34	94%	2015-11-18 to 2024-04-02		Nonparametric	4.03	4.70	0.170	5.00	1.21	0.299	0.444	-1.27	1.20
8_3_103	MW-5	App. IV	Barium	ug/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	103	102	75.0	153	15.8	0.153	16.1	0.816	1.34
8_3_104	MW-5	App. IV	Beryllium	ug/L	36	36	100%	2015-11-18 to 2024-04-02		Nonparametric	0.449	0.500	0.0500	0.700	0.207	0.461	0.296	-0.392	-1.14
8_3_106	MW-5	App. IV	Cadmium	ug/L	36	36	100%	2015-11-18 to 2024-04-02		Nonparametric	0.421	0.400	0.0600	0.500	0.0931	0.221	0.148	-1.76	5.07
8_3_109	MW-5	App. IV	Chromium	ug/L	36	28	78%	2015-11-18 to 2024-04-02	Lognormal	Nonparametric	10.5	2.50	0.500	260	42.9	4.08	1.78	5.94	35.5
8_3_110	MW-5	App. IV	Cobalt	ug/L	36	34	94%	2015-11-18 to 2024-04-02		Nonparametric	2.32	2.50	0.100	3.60	1.06	0.455	1.63	-0.513	-0.754
8_3_112	MW-5	App. IV	Fluoride	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.546	0.555	0.410	0.690	0.0604	0.111	0.0519	0.0312	0.516
8_3_113	MW-5	App. IV	Lead	ug/L	36	35	97%	2015-11-18 to 2024-04-02		Nonparametric	2.80	2.50	0.180	4.60	1.18	0.421	0.593	0.337	-0.654
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	2015-11-18 to 2024-04-02	Nonparametric	Nonparametric	9.47	9.30	4.20	28.6	3.57	0.377	1.04	4.50	24.9
8_3_115	MW-5	App. IV	Mercury	ug/L	36	36	100%	2015-11-18 to 2024-04-02		Nonparametric	0.108	0.100	0.0900	0.120	0.0104	0.0960	0	0.250	-1.82
8_3_116	MW-5	App. IV	Molybdenum	ug/L	36	33	92%	2015-11-18 to 2024-04-02		Nonparametric	3.31	2.50	0.520	25.3	4.02	1.21	0.741	4.96	27.1
8_3_119	MW-5	App. IV	Radium-226	pCi/L	34	0	0%	2015-11-18 to 2024-04-02	Normal	Normal	0.0818	0.0687	-0.640	0.778	0.266	3.25	0.224	0.207	1.51
8_3_120	MW-5	App. IV	Radium-228	pCi/L	34	0	0%	2015-11-18 to 2024-04-02	Normal	Normal	0.394	0.357	-0.0922	1.08	0.331	0.842	0.321	0.592	-0.484
8_3_121	MW-5	App. IV	Selenium	ug/L	36	35	97%	2015-11-18 to 2024-04-02		Nonparametric	4.59	4.70	0.260	5.00	0.828	0.180	0.444	-4.34	22.2
8_3_124	MW-5	App. IV	Thallium	ug/L	36	35	97%	2015-11-18 to 2024-04-02		Nonparametric	1.16	0.0500	0.0200	14.8	2.91	2.51	0.0148	3.42	13.7
8_3_126	MW-5	App. IV	Total Radium	pCi/L	34	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.541	0.526	0.0262	1.15	0.335	0.619	0.462	0.196	-1.20
9_1_111	MW-6	App. I Metals	Copper	ug/L	35	32	91%	2015-11-20 to 2024-04-02		Nonparametric	3.38	2.50	0.620	19.8	3.12	0.921	0.148	4.54	23.9
9_1_117	MW-6	App. I Metals	Nickel	ug/L	35	26	74%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	2.62	2.50	0.900	8.20	1.36	0.518	1.48	1.97	7.48
9_1_122	MW-6	App. I Metals	Silver	ug/L	35	35	100%	2015-11-20 to 2024-04-02		Nonparametric	2.19	2.50	0.0700	2.50	0.714	0.326	0	-2.01	2.53
9_1_127	MW-6	App. I Metals	Vanadium	ug/L	35	31	89%	2015-11-20 to 2024-04-02		Nonparametric	2.57	2.50	0.810	5.10	1.04	0.404	1.33	0.390	-0.331

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
9_1_128	MW-6	App. I Metals	Zinc	ug/L	35	26	74%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	8.19	5.00	3.90	27.5	4.85	0.592	1.63	2.11	6.35
9_2_105	MW-6	App. III	Boron	ug/L	34	23	68%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	6.14	7.70	0.570	10.8	3.26	0.532	1.48	-0.717	-1.12
9_2_107	MW-6	App. III	Calcium	ug/L	35	0	0%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	34800	34500	30300	40200	2327	0.0669	1926	0.349	-0.164
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	209	216	15.3	279	50.8	0.243	34.1	-2.08	6.08
9_2_112	MW-6	App. III	Fluoride	mg/L	35	1	3%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.367	0.370	0.0500	0.520	0.0825	0.225	0.0593	-1.73	6.06
9_2_118	MW-6	App. III	pH (Field)	S.U.	32	0	0%	2015-11-20 to 2024-04-01	Nonparametric	Nonparametric	6.41	6.37	6.15	7.00	0.197	0.0308	0.170	1.04	1.00
9_2_123	MW-6	App. III	Sulfate	mg/L	35	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	62.3	28.4	25.1	214	54.1	0.868	4.44	1.54	1.42
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	35	0	0%	2015-11-20 to 2024-04-02	Gamma; Normal	Normal	641	624	371	946	101	0.157	53.3	0.218	2.69
9_3_101	MW-6	App. IV	Antimony	ug/L	35	35	100%	2015-11-20 to 2024-04-02		Nonparametric	3.56	3.80	0.200	5.50	0.910	0.255	0.296	-0.748	5.49
9_3_102	MW-6	App. IV	Arsenic	ug/L	35	33	94%	2015-11-20 to 2024-04-02		Nonparametric	4.15	4.70	0.430	8.10	1.37	0.330	0.444	-0.222	1.72
9_3_103	MW-6	App. IV	Barium	ug/L	35	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	81.7	81.0	43.0	142	29.7	0.363	35.1	0.467	-1.01
9_3_104	MW-6	App. IV	Beryllium	ug/L	35	34	97%	2015-11-20 to 2024-04-02		Nonparametric	0.458	0.500	0.100	0.700	0.201	0.439	0.296	-0.423	-1.11
9_3_106	MW-6	App. IV	Cadmium	ug/L	35	35	100%	2015-11-20 to 2024-04-02		Nonparametric	0.424	0.400	0.0600	0.500	0.0931	0.220	0.148	-1.87	5.55
9_3_109	MW-6	App. IV	Chromium	ug/L	35	28	80%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	2.95	2.50	0.500	14.0	2.31	0.782	1.78	3.36	15.5
9_3_110	MW-6	App. IV	Cobalt	ug/L	35	34	97%	2015-11-20 to 2024-04-02		Nonparametric	2.33	2.50	0.440	3.60	1.03	0.443	1.63	-0.372	-0.990
9_3_112	MW-6	App. IV	Fluoride	mg/L	35	1	3%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.367	0.370	0.0500	0.520	0.0825	0.225	0.0593	-1.73	6.06
9_3_113	MW-6	App. IV	Lead	ug/L	35	33	94%	2015-11-20 to 2024-04-02		Nonparametric	2.88	2.50	0.890	5.80	1.22	0.425	0.593	0.679	-0.557
9_3_114	MW-6	App. IV	Lithium	ug/L	35	0	0%	2015-11-20 to 2024-04-02	Lognormal	Lognormal	33.3	29.9	10.1	60.5	11.8	0.354	8.89	0.714	-0.200
9_3_115	MW-6	App. IV	Mercury	ug/L	35	34	97%	2015-11-20 to 2024-04-02		Nonparametric	0.115	0.100	0.100	0.320	0.0371	0.323	0	5.26	29.7
9_3_116	MW-6	App. IV	Molybdenum	ug/L	35	30	86%	2015-11-20 to 2024-04-02	Normal	Nonparametric	3.17	2.50	0.200	8.30	1.66	0.522	1.33	1.46	3.03
9_3_119	MW-6	App. IV	Radium-226	pCi/L	33	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.185	0.212	-0.252	0.910	0.259	1.40	0.237	0.584	0.826
9_3_120	MW-6	App. IV	Radium-228	pCi/L	33	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.539	0.524	-0.243	1.12	0.336	0.624	0.364	-0.0968	-0.393
9_3_121	MW-6	App. IV	Selenium	ug/L	35	33	94%	2015-11-20 to 2024-04-02		Nonparametric	4.61	4.70	0.110	5.00	0.856	0.186	0.444	-4.55	23.6
9_3_124	MW-6	App. IV	Thallium	ug/L	35	32	91%	2015-11-20 to 2024-04-02		Nonparametric	0.928	0.0500	0.0200	6.20	1.98	2.13	0.0148	1.86	1.65
9_3_126	MW-6	App. IV	Total Radium	pCi/L	33	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.763	0.848	0.0513	1.47	0.409	0.536	0.425	-0.0570	-0.987

[a] Non-detects are excluded from goodness-of-fit tests.

Table 2: Summary Statistics, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
10_1_111	MW-7R	App. I Metals	Copper	ug/L	26	20	77%	2017-07-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	18.6	6.30	0.740	79.3	30.4	1.64	7.82	2.25	5.16
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	26	12	46%	2017-07-20 to 2024-04-02	Lognormal	Nonparametric	70.5	6.00	1.40	880	233	3.31	6.52	3.73	14
10_1_127	MW-7R	App. I Metals	Vanadium	ug/L	26	15	58%	2017-07-20 to 2024-04-02	Lognormal	Nonparametric	7.83	4.50	2.90	18.8	6.31	0.806	2.07	1.14	-0.661
10_1_128	MW-7R	App. I Metals	Zinc	ug/L	26	21	81%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	24.8	10.7	3.20	53.4	26	1.05	11.1	0.554	-3.26
10_2_105	MW-7R	App. III	Boron	ug/L	25	12	48%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	12.7	11.4	8.10	25.3	4.62	0.363	2.96	1.87	4.0
10_2_107	MW-7R	App. III	Calcium	ug/L	26	0	0%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	91288	91350	74000	104000	6906	0.0757	6222	-0.388	0.403
10_2_108	MW-7R	App. III	Chloride	mg/L	26	0	0%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	284	284	194	313	21.7	0.0765	10.4	-2.79	11.8
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	0.134	0.120	0.100	0.320	0.0435	0.325	0.0148	3.56	14.8
10_2_118	MW-7R	App. III	pH (Field)	S.U.	26	0	0%	2017-07-20 to 2024-04-01	Nonparametric	Nonparametric	7.46	7.35	7.13	9.60	0.462	0.0619	0.148	4.24	19.9
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	18	16.6	13.7	51.2	7.06	0.393	1.78	4.49	21.6
10_2_125	MW-7R	App. III	Total Dissolved Solids	mg/L	26	0	0%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	852	858	740	990	57.6	0.0676	63	0.251	0.0209
10_3_101	MW-7R	App. IV	Antimony	ug/L	26	25	96%	2017-07-20 to 2024-04-02		Nonparametric	13.6	13.6	13.6	13.6	NA	NA	0	NA	NA
10_3_102	MW-7R	App. IV	Arsenic	ug/L	26	24	92%	2017-07-20 to 2024-04-02		Nonparametric	2.29	2.29	0.770	3.80	2.14	0.938	2.24	NA	NA
10_3_103	MW-7R	App. IV	Barium	ug/L	26	0	0%	2017-07-20 to 2024-04-02	Normal	Normal	290	300	50.1	423	70.6	0.243	41.5	-1.40	4.67
10_3_109	MW-7R	App. IV	Chromium	ug/L	26	8	31%	2017-07-20 to 2024-04-02	Lognormal	Nonparametric	120	7.30	1.80	1940	454	3.79	6.96	4.24	18
10_3_110	MW-7R	App. IV	Cobalt	ug/L	26	21	81%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	5.89	1.50	0.160	20.4	8.52	1.44	1.99	1.78	3.04
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	0.134	0.120	0.100	0.320	0.0435	0.325	0.0148	3.56	14.8
10_3_113	MW-7R	App. IV	Lead	ug/L	26	23	88%	2017-07-20 to 2024-04-02		Nonparametric	4.59	6.70	0.270	6.80	3.74	0.815	0.148	-1.73	NA
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	2017-07-20 to 2024-04-02	Normal	Normal	26.2	27.3	5.60	33.8	5.73	0.218	3.63	-1.94	5.93
10_3_116	MW-7R	App. IV	Molybdenum	ug/L	26	22	85%	2017-07-20 to 2024-04-02		Nonparametric	20.2	15.1	1.10	49.5	20.9	1.04	13.6	1.26	1.76
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	24	0	0%	2017-07-20 to 2024-04-02	Nonparametric	Nonparametric	0.231	0.154	-0.194	1.05	0.320	1.39	0.171	1.26	1.53
10_3_120	MW-7R	App. IV	Radium-228	pCi/L	24	0	0%	2017-07-20 to 2024-04-02	Normal	Normal	0.576	0.485	-0.454	2.13	0.514	0.893	0.312	1.07	2.99
10_3_121	MW-7R	App. IV	Selenium	ug/L	26	25	96%	2017-07-20 to 2024-04-02		Nonparametric	0.180	0.180	0.180	0.180	NA	NA	0	NA	NA
10_3_124	MW-7R	App. IV	Thallium	ug/L	26	23	88%	2017-07-20 to 2024-04-02		Nonparametric	0.237	0.120	0.110	0.480	0.211	0.891	0.0148	1.73	NA
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	24	0	0%	2017-07-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.855	0.645	0.0664	2.31	0.608	0.711	0.418	1.01	0.288
11_1_111	MW-8	App. I Metals	Copper	ug/L	36	30	83%	2015-11-20 to 2024-04-02	Lognormal	Nonparametric	24.2	7.05	1.20	116	45.1	1.86	4.81	2.42	5.90
11_1_117	MW-8	App. I Metals	Nickel	ug/L	36	19	53%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	18.7	7.50	1.20	157	37.1	1.98	9.04	3.63	13.9
11_1_122	MW-8	App. I Metals	Silver	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	2.20	2.20	2.20	2.20	NA	NA	0	NA	NA
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	36	30	83%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	3.23	2.10	1.30	9.50	3.13	0.967	1.04	2.26	5.25
11_1_128	MW-8	App. I Metals	Zinc	ug/L	36	24	67%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	25.2	18.2	3.70	62.0	18.5	0.734	10.8	1.02	-0.163
11_2_105	MW-8	App. III	Boron	ug/L	35	15	43%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	10.4	10.2	8.60	14.0	1.54	0.148	1.48	0.953	0.375
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	112310	107500	4170	194000	30613	0.273	14074	-0.302	4.68
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	417	382	229	939	154	0.369	91.1	1.71	3.04
11_2_112	MW-8	App. III	Fluoride	mg/L	36	20	56%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	0.0854	0.0785	0.0610	0.140	0.0209	0.244	0.0170	1.24	1.66
11_2_118	MW-8	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-04-01	Gamma; Lognormal; Normal	Normal	7.03	7.01	6.70	7.31	0.145	0.0207	0.119	0.174	0.106
11_2_123	MW-8	App. III	Sulfate	mg/L	36	0	0%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	6.83	6.85	4.40	8.40	0.857	0.125	0.963	-0.567	0.437
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	967	917	224	1530	240	0.248	201	-0.0747	2.06
11_3_101	MW-8	App. IV	Antimony	ug/L	36	29	81%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	7.46	7.50	5.20	10.1	1.50	0.201	0.889	0.438	1.59
11_3_102	MW-8	App. IV	Arsenic	ug/L	36	32	89%	2015-11-20 to 2024-04-02		Nonparametric	6.75	7.20	5.20	7.40	1.04	0.154	0.222	-1.92	3.70
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	1149	1080	880	1880	196	0.170	88.9	1.95	4.67
11_3_104	MW-8	App. IV	Beryllium	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	1.50	1.50	1.50	1.50	NA	NA	0	NA	NA
11_3_106	MW-8	App. IV	Cadmium	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	1.50	1.50	1.50	1.50	NA	NA	0	NA	NA
11_3_109	MW-8	App. IV	Chromium	ug/L	36	19	53%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	22.7	8.60	1.60	87.6	26.4	1.16	10.4	1.68	2.18

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
11_3_110	MW-8	App. IV	Cobalt	ug/L	36	33	92%	2015-11-20 to 2024-04-02		Nonparametric	2.07	1.60	0.820	3.80	1.55	0.745	1.16	1.25	NA
11_3_112	MW-8	App. IV	Fluoride	mg/L	36	20	56%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	0.0854	0.0785	0.0610	0.140	0.0209	0.244	0.0170	1.24	1.66
11_3_113	MW-8	App. IV	Lead	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	3.40	3.40	3.40	3.40	NA	NA	0	NA	NA
11_3_114	MW-8	App. IV	Lithium	ug/L	36	1	3%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Gamma	27.9	26.5	18.7	50.1	7.19	0.258	4.74	1.33	1.78
11_3_115	MW-8	App. IV	Mercury	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	0.370	0.370	0.370	0.370	NA	NA	0	NA	NA
11_3_116	MW-8	App. IV	Molybdenum	ug/L	36	33	92%	2015-11-20 to 2024-04-02		Nonparametric	4.07	5.20	1.40	5.60	2.32	0.570	0.593	-1.67	NA
11_3_119	MW-8	App. IV	Radium-226	pCi/L	34	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.454	0.376	-0.357	2.51	0.526	1.16	0.418	1.79	6.01
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	0.860	0.676	-0.351	4.72	0.784	0.911	0.361	3.72	18.4
11_3_121	MW-8	App. IV	Selenium	ug/L	36	34	94%	2015-11-20 to 2024-04-02		Nonparametric	2.31	2.31	0.330	4.30	2.81	1.21	2.94	NA	NA
11_3_124	MW-8	App. IV	Thallium	ug/L	36	35	97%	2015-11-20 to 2024-04-02		Nonparametric	8.80	8.80	8.80	8.80	NA	NA	0	NA	NA
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	1.35	1.23	0	7.23	1.15	0.854	0.630	4.15	21.5
1_1_111	MW-1	App. I Metals	Copper	ug/L	36	32	89%	2015-11-20 to 2024-04-03		Nonparametric	7.78	7.25	1.60	15.0	5.50	0.708	4.22	0.565	1.68
1_1_117	MW-1	App. I Metals	Nickel	ug/L	36	27	75%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	5.62	5.60	1.50	13.3	3.75	0.666	3.41	0.911	1.12
1_1_122	MW-1	App. I Metals	Silver	ug/L	36	32	89%	2015-11-20 to 2024-04-03		Nonparametric	0.900	1.10	0.200	1.20	0.476	0.529	0.148	-1.78	3.13
1_1_127	MW-1	App. I Metals	Vanadium	ug/L	36	24	67%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	4.67	4.25	1.90	9.80	2.38	0.509	2.30	0.961	0.417
1_1_128	MW-1	App. I Metals	Zinc	ug/L	36	25	69%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	18.4	14.7	10.2	35.3	8.73	0.473	6.67	0.912	-0.533
1_2_105	MW-1	App. III	Boron	ug/L	35	22	63%	2015-11-20 to 2024-04-03	Nonparametric	Nonparametric	12.1	9.60	6.20	44.6	9.95	0.822	1.63	3.38	11.8
1_2_107	MW-1	App. III	Calcium	ug/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	163708	158000	43100	311000	77387	0.473	91852	0.184	-0.938
1_2_108	MW-1	App. III	Chloride	mg/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Normal	Normal	597	610	83.9	1240	278	0.465	301	-0.0299	-0.476
1_2_112	MW-1	App. III	Fluoride	mg/L	36	1	3%	2015-11-20 to 2024-04-03	Normal	Normal	0.150	0.150	0.110	0.210	0.0243	0.162	0.0296	0.262	-0.428
1_2_118	MW-1	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-04-01	Gamma; Lognormal; Normal	Normal	6.74	6.70	6.41	7.30	0.228	0.0339	0.185	0.757	-0.0624
1_2_123	MW-1	App. III	Sulfate	mg/L	36	0	0%	2015-11-20 to 2024-04-03	Lognormal	Lognormal	7.10	6.70	4.50	11.2	1.64	0.232	0.889	1.06	0.649
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	1450	1290	346	3390	747	0.515	793	0.557	-0.266
1_3_101	MW-1	App. IV	Antimony	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	5.85	5.85	5.60	6.10	0.354	0.0604	0.370	NA	NA
1_3_102	MW-1	App. IV	Arsenic	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	3.45	3.45	1.70	5.20	2.47	0.717	2.59	NA	NA
1_3_103	MW-1	App. IV	Barium	ug/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	211	214	36.3	421	102	0.483	121	0.292	-0.662
1_3_106	MW-1	App. IV	Cadmium	ug/L	36	33	92%	2015-11-20 to 2024-04-03		Nonparametric	0.603	0.570	0.570	0.670	0.0577	0.0957	0	1.73	NA
1_3_109	MW-1	App. IV	Chromium	ug/L	36	26	72%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	7.03	6.70	1.30	18.4	4.97	0.707	4.22	1.32	2.37
1_3_110	MW-1	App. IV	Cobalt	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	0.670	0.670	0.140	1.20	0.750	1.12	0.785	NA	NA
1_3_112	MW-1	App. IV	Fluoride	mg/L	36	1	3%	2015-11-20 to 2024-04-03	Normal	Normal	0.150	0.150	0.110	0.210	0.0243	0.162	0.0296	0.262	-0.428
1_3_113	MW-1	App. IV	Lead	ug/L	36	33	92%	2015-11-20 to 2024-04-03		Nonparametric	2.88	1.60	0.250	6.80	3.46	1.20	2.00	1.44	NA
1_3_114	MW-1	App. IV	Lithium	ug/L	36	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	32.7	32.9	19.2	47.5	6.02	0.184	4.07	0.0963	0.396
1_3_116	MW-1	App. IV	Molybdenum	ug/L	36	31	86%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	8.11	9.00	0.340	15.1	6.95	0.857	9.04	-0.175	-2.91
1_3_119	MW-1	App. IV	Radium-226	pCi/L	34	0	0%	2015-11-20 to 2024-04-03	Normal	Normal	0.270	0.246	-0.378	1.03	0.313	1.16	0.272	0.341	0.797
1_3_120	MW-1	App. IV	Radium-228	pCi/L	34	0	0%	2015-11-20 to 2024-04-03	Normal	Normal	0.593	0.600	-0.0467	1.45	0.285	0.480	0.209	0.446	1.91
1_3_121	MW-1	App. IV	Selenium	ug/L	36	34	94%	2015-11-20 to 2024-04-03		Nonparametric	2.34	2.34	0.280	4.40	2.91	1.24	3.05	NA	NA
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	2015-11-20 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.898	0.834	0.237	2.48	0.443	0.493	0.364	1.35	3.66
2_1_111	MW-10	App. I Metals	Copper	ug/L	12	8	67%	2021-08-09 to 2024-04-02		Nonparametric	37.3	17.4	11.4	103	43.9	1.18	5.11	1.97	3.92
2_1_117	MW-10	App. I Metals	Nickel	ug/L	12	4	33%	2021-08-09 to 2024-04-02	Lognormal	Nonparametric	5.89	2.90	0.940	27.9	9.00	1.53	1.48	2.70	7.42
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	12	5	42%	2021-08-09 to 2024-04-02	Nonparametric	Nonparametric	4.47	2.40	1.50	18.2	6.07	1.36	0.444	2.62	6.89
2_1_128	MW-10	App. I Metals	Zinc	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	50.4	50.4	6.50	94.2	62.0	1.23	65	NA	NA
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	24.4	23.8	17.8	43.4	6.50	0.266	3.93	2.54	7.70
2_2_107	MW-10	App. III	Calcium	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	21875	21800	17700	26500	2330	0.107	1926	-0.0295	0.856

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
2_2_108	MW-10	App. III	Chloride	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	29.7	29.6	28.0	32.4	1.20	0.0403	0.815	0.897	1.06
2_2_112	MW-10	App. III	Fluoride	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.472	0.465	0.400	0.540	0.0431	0.0912	0.0370	0.261	-0.591
2_2_118	MW-10	App. III	pH (Field)	S.U.	13	0	0%	2021-04-12 to 2024-04-01	Gamma; Lognormal; Normal	Normal	7.78	7.73	7.48	8.16	0.158	0.0202	0.0889	0.779	2.74
2_2_123	MW-10	App. III	Sulfate	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	4.08	3.40	2.00	8.00	1.77	0.435	1.19	1.07	0.596
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	349	351	318	368	12.9	0.0371	8.89	-1.10	2.13
2_3_101	MW-10	App. IV	Antimony	ug/L	12	11	92%	2021-08-09 to 2024-04-02		Nonparametric	0.760	0.760	0.760	0.760	NA	NA	0	NA	NA
2_3_102	MW-10	App. IV	Arsenic	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	1.90	1.90	1.20	2.60	0.990	0.521	1.04	NA	NA
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	78.6	76.3	43.2	195	40.2	0.511	23.5	2.45	7.27
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	11.1	5.40	1.00	56.7	17.4	1.58	2.67	2.80	8.08
2_3_110	MW-10	App. IV	Cobalt	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	4.02	4.02	0.440	7.60	5.06	1.26	5.30	NA	NA
2_3_112	MW-10	App. IV	Fluoride	mg/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.472	0.465	0.400	0.540	0.0431	0.0912	0.0370	0.261	-0.591
2_3_113	MW-10	App. IV	Lead	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	5.98	5.98	0.760	11.2	7.38	1.23	7.73	NA	NA
2_3_114	MW-10	App. IV	Lithium	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal	Gamma	2.58	2.00	0.690	6.70	1.86	0.719	0.963	1.29	0.812
2_3_116	MW-10	App. IV	Molybdenum	ug/L	12	0	0%	2021-08-09 to 2024-04-02	Gamma; Lognormal; Normal	Normal	23.4	21.9	15.4	36.2	6.80	0.291	6.59	0.667	-0.628
2_3_119	MW-10	App. IV	Radium-226	pCi/L	12	0	0%	2021-08-09 to 2024-04-02	Normal	Normal	0.132	0.146	-0.305	0.537	0.264	2.00	0.350	-0.106	-0.998
2_3_120	MW-10	App. IV	Radium-228	pCi/L	12	0	0%	2021-08-09 to 2024-04-02	Normal	Normal	0.588	0.499	-0.100	1.67	0.483	0.821	0.527	0.818	0.952
2_3_121	MW-10	App. IV	Selenium	ug/L	12	10	83%	2021-08-09 to 2024-04-02		Nonparametric	2.85	2.85	0.500	5.20	3.32	1.17	3.48	NA	NA
2_3_124	MW-10	App. IV	Thallium	ug/L	12	11	92%	2021-08-09 to 2024-04-02		Nonparametric	0.120	0.120	0.120	0.120	NA	NA	0	NA	NA
2_3_126	MW-10	App. IV	Total Radium	pCi/L	12	0	0%	2021-08-09 to 2024-04-02	Normal	Normal	0.784	0.817	0	1.74	0.461	0.587	0.379	0.283	0.666
3_1_111	MW-11	App. I Metals	Copper	ug/L	15	10	67%	2020-10-15 to 2024-04-01	Gamma; Lognormal	Nonparametric	7.46	5.30	1.50	20.1	7.27	0.974	1.19	1.92	4.06
3_1_117	MW-11	App. I Metals	Nickel	ug/L	15	9	60%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Nonparametric	2.87	1.95	0.790	7.60	2.53	0.883	1.41	1.69	2.83
3_1_127	MW-11	App. I Metals	Vanadium	ug/L	15	12	80%	2020-10-15 to 2024-04-01		Nonparametric	0.980	1.20	0.440	1.30	0.470	0.480	0.148	-1.64	NA
3_1_128	MW-11	App. I Metals	Zinc	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	5.30	5.30	5.10	5.50	0.283	0.0534	0.296	NA	NA
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	15.5	15.2	11.5	25.2	3.19	0.206	1.85	2.19	6.94
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	2020-10-15 to 2024-04-01	Lognormal	Lognormal	31560	26800	23200	69400	11537	0.366	3852	2.83	9.07
3_2_108	MW-11	App. III	Chloride	mg/L	15	0	0%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	129	132	74.5	149	20.4	0.158	19.3	-1.43	2.48
3_2_112	MW-11	App. III	Fluoride	mg/L	15	1	7%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.165	0.165	0.140	0.220	0.0241	0.146	0.0296	0.846	0.386
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	2021-01-29 to 2024-04-01	Nonparametric	Nonparametric	7.09	6.65	6.53	11.7	1.35	0.190	0.0889	3.58	13.1
3_2_123	MW-11	App. III	Sulfate	mg/L	15	0	0%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	2.21	2.10	1.80	3.00	0.307	0.139	0.296	1.07	1.95
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	569	416	296	2760	608	1.07	19.3	3.83	14.8
3_3_101	MW-11	App. IV	Antimony	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	2.06	2.06	0.320	3.80	2.46	1.19	2.58	NA	NA
3_3_102	MW-11	App. IV	Arsenic	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	3.00	3.00	0.400	5.60	3.68	1.23	3.85	NA	NA
3_3_103	MW-11	App. IV	Barium	ug/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	50.8	43.2	34.3	130	23.7	0.467	6.67	3.01	10.0
3_3_109	MW-11	App. IV	Chromium	ug/L	15	12	80%	2020-10-15 to 2024-04-01		Nonparametric	6.00	7.90	1.30	8.80	4.10	0.683	1.33	-1.64	NA
3_3_110	MW-11	App. IV	Cobalt	ug/L	15	11	73%	2020-10-15 to 2024-04-01		Nonparametric	0.912	0.950	0.450	1.30	0.371	0.406	0.370	-0.466	-1.17
3_3_112	MW-11	App. IV	Fluoride	mg/L	15	1	7%	2020-10-15 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.165	0.165	0.140	0.220	0.0241	0.146	0.0296	0.846	0.386
3_3_113	MW-11	App. IV	Lead	ug/L	15	14	93%	2020-10-15 to 2024-04-01		Nonparametric	0.190	0.190	0.190	0.190	NA	NA	0	NA	NA
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	10.9	10.4	9.10	19.5	2.61	0.239	1.63	2.82	9.07
3_3_116	MW-11	App. IV	Molybdenum	ug/L	15	13	87%	2020-10-15 to 2024-04-01		Nonparametric	1.10	1.10	0.410	1.80	0.983	0.889	1.03	NA	NA
3_3_119	MW-11	App. IV	Radium-226	pCi/L	15	0	0%	2020-10-15 to 2024-04-01	Normal	Normal	0.0699	0.0556	-0.149	0.399	0.169	2.41	0.175	0.593	-0.784
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	2020-10-15 to 2024-04-01	Nonparametric	Nonparametric	0.452	0.500	-0.135	2.13	0.539	1.19	0.461	2.27	6.87
3_3_124	MW-11	App. IV	Thallium	ug/L	15	14	93%	2020-10-15 to 2024-04-01		Nonparametric	0.0850	0.0850	0.0850	0.0850	NA	NA	0	NA	NA
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	2020-10-15 to 2024-04-01	Gamma; Lognormal	Gamma	0.568	0.500	0.124	2.39	0.543	0.957	0.268	2.97	10.2

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
4_1_111	MW-11D	App. I Metals	Copper	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	10.6	14.4	2.00	15.4	7.46	0.704	1.48	-1.70	NA
4_1_117	MW-11D	App. I Metals	Nickel	ug/L	13	9	69%	2021-04-13 to 2024-04-01		Nonparametric	2.60	1.50	1.20	6.20	2.41	0.927	0.370	1.95	3.83
4_1_127	MW-11D	App. I Metals	Vanadium	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	1.23	1.40	0.690	1.60	0.478	0.389	0.296	-1.40	NA
4_1_128	MW-11D	App. I Metals	Zinc	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	8.70	4.60	2.90	18.6	8.62	0.990	2.52	1.66	NA
4_2_105	MW-11D	App. III	Boron	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Nonparametric	Nonparametric	55.7	52.4	41.7	109	18.0	0.323	6.37	2.49	6.92
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	27369	19100	14000	94400	21080	0.770	6815	3.08	10.2
4_2_108	MW-11D	App. III	Chloride	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	137	103	52.3	530	129	0.940	51.6	2.73	8.23
4_2_112	MW-11D	App. III	Fluoride	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.498	0.490	0.420	0.640	0.0531	0.107	0.0444	1.53	4.01
4_2_118	MW-11D	App. III	pH (Field)	S.U.	13	0	0%	2021-04-12 to 2024-04-01	Gamma; Lognormal; Normal	Normal	8.43	8.39	8.06	8.92	0.252	0.0299	0.237	0.663	-0.00131
4_2_123	MW-11D	App. III	Sulfate	mg/L	13	1	8%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	106	58.3	14.6	523	143	1.36	62.0	2.59	7.41
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	583	467	312	1740	386	0.662	194	2.56	7.31
4_3_101	MW-11D	App. IV	Antimony	ug/L	13	11	85%	2021-04-13 to 2024-04-01		Nonparametric	3.11	3.11	0.620	5.60	3.52	1.13	3.69	NA	NA
4_3_102	MW-11D	App. IV	Arsenic	ug/L	13	5	38%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	9.19	7.30	3.20	16.5	4.87	0.530	4.59	0.498	-1.44
4_3_103	MW-11D	App. IV	Barium	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	103	108	65.7	124	18.9	0.183	17.8	-1.04	0.214
4_3_104	MW-11D	App. IV	Beryllium	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	0.110	0.110	0.110	0.110	NA	NA	0	NA	NA
4_3_109	MW-11D	App. IV	Chromium	ug/L	13	10	77%	2021-04-13 to 2024-04-01		Nonparametric	4.23	3.20	1.50	8.00	3.37	0.796	2.52	1.25	NA
4_3_110	MW-11D	App. IV	Cobalt	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	0.210	0.210	0.210	0.210	NA	NA	0	NA	NA
4_3_112	MW-11D	App. IV	Fluoride	mg/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.498	0.490	0.420	0.640	0.0531	0.107	0.0444	1.53	4.01
4_3_113	MW-11D	App. IV	Lead	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	1.80	1.80	1.80	1.80	NA	NA	0	NA	NA
4_3_114	MW-11D	App. IV	Lithium	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Lognormal	Lognormal	31.5	27.0	17.8	80.7	18.1	0.573	9.19	2.14	4.38
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal	Gamma	25.5	17.0	4.10	127	33	1.30	17.8	2.77	8.56
4_3_119	MW-11D	App. IV	Radium-226	pCi/L	13	0	0%	2021-04-13 to 2024-04-01	Normal	Normal	0.179	0.0670	-0.101	0.641	0.249	1.39	0.206	0.527	-1.13
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Gamma	0.618	0.502	0.0582	2.23	0.584	0.944	0.387	1.90	4.48
4_3_121	MW-11D	App. IV	Selenium	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	0.230	0.230	0.230	0.230	NA	NA	0	NA	NA
4_3_124	MW-11D	App. IV	Thallium	ug/L	13	12	92%	2021-04-13 to 2024-04-01		Nonparametric	0.0940	0.0940	0.0940	0.0940	NA	NA	0	NA	NA
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	13	0	0%	2021-04-13 to 2024-04-01	Gamma; Lognormal; Normal	Normal	0.821	0.714	0.125	2.27	0.587	0.715	0.616	1.17	1.94
5_1_111	MW-2	App. I Metals	Copper	ug/L	31	15	48%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	37.7	7.20	0.950	294	76.4	2.03	6.15	2.98	9.25
5_1_117	MW-2	App. I Metals	Nickel	ug/L	31	12	39%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Gamma	21.4	10.2	2.30	115	28.3	1.32	8.44	2.43	6.26
5_1_122	MW-2	App. I Metals	Silver	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	0.587	0.587	0.0730	1.10	0.726	1.24	0.761	NA	NA
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	31	22	71%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	7.93	4.20	2.10	37.2	11.1	1.40	2.52	2.87	8.40
5_1_128	MW-2	App. I Metals	Zinc	ug/L	31	16	52%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Nonparametric	40.3	15.8	3.60	225	57.8	1.43	16.9	2.77	8.04
5_2_105	MW-2	App. III	Boron	ug/L	30	1	3%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	44.8	43.3	34.5	63.9	6.23	0.139	5.33	1.10	1.88
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	184655	188000	34300	221000	34349	0.186	20741	-2.99	12.1
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1093	1160	489	1360	194	0.178	104	-1.74	3.45
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	2015-11-19 to 2024-04-03	Lognormal; Normal	Normal	0.220	0.220	0.130	0.400	0.0551	0.250	0.0296	1.04	3.04
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	2015-11-19 to 2024-04-01	Nonparametric	Nonparametric	7.71	7.60	7.35	9.29	0.402	0.0521	0.148	2.78	9.20
5_2_123	MW-2	App. III	Sulfate	mg/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	130	94.7	51.7	338	79.9	0.613	47	1.10	0.119
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	2698	2580	257	11700	1800	0.667	296	4.27	22.4
5_3_101	MW-2	App. IV	Antimony	ug/L	31	18	58%	2015-11-19 to 2024-04-03	Gamma; Normal	Nonparametric	7.39	6.90	0.610	12.3	3.12	0.423	2.96	-0.492	0.469
5_3_102	MW-2	App. IV	Arsenic	ug/L	31	22	71%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	6.38	5.40	3.70	11.5	2.79	0.438	2.07	1.08	0.0180
5_3_103	MW-2	App. IV	Barium	ug/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	298	308	90.8	565	87.5	0.293	57.8	0.628	2.68
5_3_104	MW-2	App. IV	Beryllium	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	0.750	0.750	0.400	1.10	0.495	0.660	0.519	NA	NA
5_3_106	MW-2	App. IV	Cadmium	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	0.279	0.279	0.0780	0.480	0.284	1.02	0.298	NA	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	22.2	9.30	1.80	130	30.4	1.37	7.70	2.41	6.19
5_3_110	MW-2	App. IV	Cobalt	ug/L	31	26	84%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Nonparametric	8.40	1.70	0.890	34.8	14.8	1.76	1.20	2.21	4.91
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	2015-11-19 to 2024-04-03	Lognormal; Normal	Normal	0.220	0.220	0.130	0.400	0.0551	0.250	0.0296	1.04	3.04
5_3_113	MW-2	App. IV	Lead	ug/L	31	27	87%	2015-11-19 to 2024-04-03		Nonparametric	10.2	5.75	1.80	27.5	11.7	1.15	3.63	1.82	3.45
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	156	133	41.2	512	93.4	0.597	31.1	2.46	7.05
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	2015-11-19 to 2024-04-03	Lognormal	Lognormal	10.5	9.10	4.40	41.0	7.67	0.734	4.44	2.82	9.81
5_3_119	MW-2	App. IV	Radium-226	pCi/L	30	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.913	0.938	0.227	1.94	0.360	0.395	0.385	0.407	1.12
5_3_120	MW-2	App. IV	Radium-228	pCi/L	30	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	1.40	1.36	0.433	2.23	0.457	0.326	0.526	0.0820	-0.634
5_3_121	MW-2	App. IV	Selenium	ug/L	31	29	94%	2015-11-19 to 2024-04-03		Nonparametric	2.87	2.87	0.940	4.80	2.73	0.951	2.86	NA	NA
5_3_124	MW-2	App. IV	Thallium	ug/L	31	23	74%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1.38	0.0960	0.0370	10.3	3.61	2.62	0.0741	2.83	8.0
5_3_126	MW-2	App. IV	Total Radium	pCi/L	30	0	0%	2015-11-19 to 2024-04-03	Normal	Normal	2.31	2.38	1.10	3.35	0.663	0.286	0.654	-0.424	-0.764
6_1_111	MW-3	App. I Metals	Copper	ug/L	34	21	62%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	22.5	5.70	2.60	137	37.5	1.67	4.59	2.77	8.17
6_1_117	MW-3	App. I Metals	Nickel	ug/L	34	19	56%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	13.9	5.50	1.40	86.0	23.4	1.69	4.00	2.62	6.75
6_1_122	MW-3	App. I Metals	Silver	ug/L	34	33	97%	2015-11-19 to 2024-04-03		Nonparametric	1.60	1.60	1.60	1.60	NA	NA	0	NA	NA
6_1_127	MW-3	App. I Metals	Vanadium	ug/L	34	22	65%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	4.63	2.95	1.90	13.9	3.63	0.783	1.56	1.76	3.11
6_1_128	MW-3	App. I Metals	Zinc	ug/L	34	27	79%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	16.4	12.5	4.30	42.7	13.6	0.828	11.9	1.44	1.92
6_2_105	MW-3	App. III	Boron	ug/L	33	10	30%	2015-11-19 to 2024-04-03	Gamma; Normal	Normal	34.4	35.8	9.70	49.4	10.3	0.300	10.8	-0.628	-0.0165
6_2_107	MW-3	App. III	Calcium	ug/L	34	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	172176	176000	117000	203000	19754	0.115	17778	-0.778	0.483
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1069	1080	565	1280	137	0.129	74.1	-1.54	4.71
6_2_112	MW-3	App. III	Fluoride	mg/L	34	1	3%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.367	0.350	0.210	0.610	0.112	0.306	0.119	0.535	-0.428
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	2015-11-19 to 2024-04-01	Nonparametric	Nonparametric	7.32	7.35	6.18	7.77	0.266	0.0363	0.0963	-2.67	11.8
6_2_123	MW-3	App. III	Sulfate	mg/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	50.3	25.1	9.10	174	47.2	0.939	18.9	1.25	0.614
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	2230	2390	256	3180	623	0.279	341	-1.94	4.50
6_3_101	MW-3	App. IV	Antimony	ug/L	34	23	68%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	7.54	8.70	1.30	11.4	3.36	0.446	3.11	-0.601	-0.852
6_3_102	MW-3	App. IV	Arsenic	ug/L	34	28	82%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	6.20	6.55	1.90	9.60	2.59	0.418	1.78	-0.669	1.19
6_3_103	MW-3	App. IV	Barium	ug/L	34	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	646	662	353	855	107	0.166	98.5	-0.452	0.361
6_3_106	MW-3	App. IV	Cadmium	ug/L	34	33	97%	2015-11-19 to 2024-04-03		Nonparametric	0.410	0.410	0.410	0.410	NA	NA	0	NA	NA
6_3_109	MW-3	App. IV	Chromium	ug/L	34	17	50%	2015-11-19 to 2024-04-03	Lognormal	Nonparametric	21.4	7.80	1.20	179	44.7	2.09	5.04	3.22	10.7
6_3_110	MW-3	App. IV	Cobalt	ug/L	34	30	88%	2015-11-19 to 2024-04-03		Nonparametric	2.17	1.21	0.0610	6.20	2.78	1.28	1.29	1.62	2.59
6_3_112	MW-3	App. IV	Fluoride	mg/L	34	1	3%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.367	0.350	0.210	0.610	0.112	0.306	0.119	0.535	-0.428
6_3_113	MW-3	App. IV	Lead	ug/L	34	31	91%	2015-11-19 to 2024-04-03		Nonparametric	4.50	6.00	0.190	7.30	3.79	0.842	1.93	-1.51	NA
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	93.5	87.5	36.7	236	38.2	0.409	14.2	2.72	8.38
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	9.09	8.05	5.10	35.7	5.10	0.561	1.48	4.55	23.8
6_3_119	MW-3	App. IV	Radium-226	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.906	0.816	0.213	1.92	0.370	0.408	0.406	0.396	0.227
6_3_120	MW-3	App. IV	Radium-228	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	1.44	1.49	0.326	2.86	0.578	0.400	0.607	0.0151	0.0661
6_3_121	MW-3	App. IV	Selenium	ug/L	34	33	97%	2015-11-19 to 2024-04-03		Nonparametric	0.270	0.270	0.270	0.270	NA	NA	0	NA	NA
6_3_126	MW-3	App. IV	Total Radium	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	2.35	2.31	0.857	3.92	0.731	0.311	0.711	0.0346	-0.215
7_1_111	MW-4	App. I Metals	Copper	ug/L	35	31	89%	2015-11-19 to 2024-04-03		Nonparametric	61.5	37.5	0.900	170	78.3	1.27	49.3	1.25	0.745
7_1_117	MW-4	App. I Metals	Nickel	ug/L	35	11	31%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	7.50	7.35	3.50	12.8	2.68	0.357	3.11	0.496	-0.808
7_1_127	MW-4	App. I Metals	Vanadium	ug/L	35	31	89%	2015-11-19 to 2024-04-03		Nonparametric	3.51	1.55	0.250	10.7	4.84	1.38	1.30	1.87	3.57
7_1_128	MW-4	App. I Metals	Zinc	ug/L	35	24	69%	2015-11-19 to 2024-04-03	Gamma; Lognormal	Nonparametric	16.9	13.0	8.70	47.2	11.7	0.692	5.78	2.09	4.41
7_2_105	MW-4	App. III	Boron	ug/L	34	22	65%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	20.1	7.00	5.70	165	45.6	2.27	1.04	3.46	12
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	55671	58900	17900	71600	13036	0.234	8000	-1.56	2.28

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
7_2_108	MW-4	App. III	Chloride	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	413	427	144	567	105	0.254	96.3	-1.06	0.545
7_2_112	MW-4	App. III	Fluoride	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.325	0.320	0.210	0.440	0.0541	0.167	0.0444	0.244	-0.221
7_2_118	MW-4	App. III	pH (Field)	S.U.	33	0	0%	2015-11-19 to 2024-04-01	Gamma; Lognormal; Normal	Normal	6.27	6.25	6.06	6.56	0.128	0.0204	0.119	0.458	-0.400
7_2_123	MW-4	App. III	Sulfate	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	10.1	10.7	3.40	13.4	2.40	0.239	1.19	-1.36	1.68
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	1074	1130	395	1580	235	0.219	104	-1.31	2.72
7_3_101	MW-4	App. IV	Antimony	ug/L	35	30	86%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	4.32	3.40	3.10	7.00	1.69	0.392	0.444	1.30	0.660
7_3_102	MW-4	App. IV	Arsenic	ug/L	35	33	94%	2015-11-19 to 2024-04-03		Nonparametric	2.73	2.73	0.360	5.10	3.35	1.23	3.51	NA	NA
7_3_103	MW-4	App. IV	Barium	ug/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	283	300	85.9	431	70.4	0.249	35.6	-1.25	2.34
7_3_106	MW-4	App. IV	Cadmium	ug/L	35	34	97%	2015-11-19 to 2024-04-03		Nonparametric	0.470	0.470	0.470	0.470	NA	NA	0	NA	NA
7_3_109	MW-4	App. IV	Chromium	ug/L	35	27	77%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	4.50	4.20	0.580	9.90	3.44	0.764	4.12	0.469	-0.979
7_3_110	MW-4	App. IV	Cobalt	ug/L	35	20	57%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	12.2	9.30	3.90	28.2	7.33	0.603	5.48	1.02	0.143
7_3_112	MW-4	App. IV	Fluoride	mg/L	35	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.325	0.320	0.210	0.440	0.0541	0.167	0.0444	0.244	-0.221
7_3_113	MW-4	App. IV	Lead	ug/L	35	34	97%	2015-11-19 to 2024-04-03		Nonparametric	6.80	6.80	6.80	6.80	NA	NA	0	NA	NA
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	2015-11-19 to 2024-04-03	Nonparametric	Nonparametric	30.8	28.0	15.8	98.0	13.0	0.424	3.85	4.21	21.7
7_3_116	MW-4	App. IV	Molybdenum	ug/L	35	30	86%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Nonparametric	13.7	18.7	0.480	20.9	8.81	0.642	3.26	-1.06	-0.553
7_3_119	MW-4	App. IV	Radium-226	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Normal	Normal	0.308	0.239	-0.259	0.913	0.292	0.949	0.274	0.245	-0.547
7_3_120	MW-4	App. IV	Radium-228	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.559	0.481	0.0190	1.57	0.370	0.662	0.339	0.874	0.602
7_3_121	MW-4	App. IV	Selenium	ug/L	35	33	94%	2015-11-19 to 2024-04-03		Nonparametric	3.02	3.02	0.140	5.90	4.07	1.35	4.27	NA	NA
7_3_126	MW-4	App. IV	Total Radium	pCi/L	33	0	0%	2015-11-19 to 2024-04-03	Gamma; Lognormal; Normal	Normal	0.884	0.766	0.146	2.26	0.502	0.569	0.443	1.02	0.692
8_1_111	MW-5	App. I Metals	Copper	ug/L	36	28	78%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	6.41	6.25	1.10	12.9	4.01	0.626	4.07	0.135	-0.443
8_1_117	MW-5	App. I Metals	Nickel	ug/L	36	29	81%	2015-11-18 to 2024-04-02	Lognormal	Nonparametric	20.6	3.20	0.640	120	44	2.14	3.79	2.61	6.87
8_1_127	MW-5	App. I Metals	Vanadium	ug/L	36	33	92%	2015-11-18 to 2024-04-02		Nonparametric	1.37	1.00	0.510	2.60	1.09	0.798	0.726	1.35	NA
8_1_128	MW-5	App. I Metals	Zinc	ug/L	36	25	69%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	13.7	11.7	3.80	36.1	8.90	0.650	4.89	1.72	3.78
8_2_105	MW-5	App. III	Boron	ug/L	35	15	43%	2015-11-18 to 2024-04-02	Nonparametric	Nonparametric	11.8	10.4	7.70	39.3	6.56	0.556	1.11	4.27	18.8
8_2_107	MW-5	App. III	Calcium	ug/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	11129	10550	8030	16900	2174	0.195	2430	0.658	-0.203
8_2_108	MW-5	App. III	Chloride	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	20.2	19.8	17.6	23.1	1.60	0.0792	2.15	0.125	-1.23
8_2_112	MW-5	App. III	Fluoride	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.546	0.555	0.410	0.690	0.0604	0.111	0.0519	0.0312	0.516
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	2015-11-18 to 2024-04-01	Nonparametric	Nonparametric	6.89	6.96	5.50	8.54	0.488	0.0709	0.237	-0.0683	5.97
8_2_123	MW-5	App. III	Sulfate	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	3.61	3.60	2.60	5.60	0.636	0.176	0.741	1.23	2.32
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Nonparametric	Nonparametric	256	228	194	1160	157	0.614	31.9	5.73	33.7
8_3_101	MW-5	App. IV	Antimony	ug/L	36	34	94%	2015-11-18 to 2024-04-02		Nonparametric	2.50	2.50	1.10	3.90	1.98	0.792	2.07	NA	NA
8_3_102	MW-5	App. IV	Arsenic	ug/L	36	34	94%	2015-11-18 to 2024-04-02		Nonparametric	2.58	2.58	0.170	5.00	3.42	1.32	3.58	NA	NA
8_3_103	MW-5	App. IV	Barium	ug/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	103	102	75.0	153	15.8	0.153	16.1	0.816	1.34
8_3_109	MW-5	App. IV	Chromium	ug/L	36	28	78%	2015-11-18 to 2024-04-02	Lognormal	Nonparametric	38.6	5.20	1.50	260	89.7	2.33	5.11	2.80	7.89
8_3_110	MW-5	App. IV	Cobalt	ug/L	36	34	94%	2015-11-18 to 2024-04-02		Nonparametric	1.50	1.50	0.100	2.90	1.98	1.32	2.07	NA	NA
8_3_112	MW-5	App. IV	Fluoride	mg/L	36	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.546	0.555	0.410	0.690	0.0604	0.111	0.0519	0.0312	0.516
8_3_113	MW-5	App. IV	Lead	ug/L	36	35	97%	2015-11-18 to 2024-04-02		Nonparametric	0.180	0.180	0.180	0.180	NA	NA	0	NA	NA
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	2015-11-18 to 2024-04-02	Nonparametric	Nonparametric	9.62	9.30	6.30	28.6	3.50	0.364	1.04	4.88	27.0
8_3_116	MW-5	App. IV	Molybdenum	ug/L	36	33	92%	2015-11-18 to 2024-04-02		Nonparametric	11.5	8.70	0.520	25.3	12.6	1.10	12.1	0.951	NA
8_3_119	MW-5	App. IV	Radium-226	pCi/L	34	0	0%	2015-11-18 to 2024-04-02	Normal	Normal	0.0818	0.0687	-0.640	0.778	0.266	3.25	0.224	0.207	1.51
8_3_120	MW-5	App. IV	Radium-228	pCi/L	34	0	0%	2015-11-18 to 2024-04-02	Normal	Normal	0.394	0.357	-0.0922	1.08	0.331	0.842	0.321	0.592	-0.484
8_3_121	MW-5	App. IV	Selenium	ug/L	36	35	97%	2015-11-18 to 2024-04-02		Nonparametric	0.260	0.260	0.260	0.260	NA	NA	0	NA	NA
8_3_124	MW-5	App. IV	Thallium	ug/L	36	35	97%	2015-11-18 to 2024-04-02		Nonparametric	14.8	14.8	14.8	14.8	NA	NA	0	NA	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	MAD/0.675	Skewness	Kurtosis
8_3_126	MW-5	App. IV	Total Radium	pCi/L	34	0	0%	2015-11-18 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.541	0.526	0.0262	1.15	0.335	0.619	0.462	0.196	-1.20
9_1_111	MW-6	App. I Metals	Copper	ug/L	35	32	91%	2015-11-20 to 2024-04-02		Nonparametric	10.6	6.60	5.50	19.8	7.96	0.748	1.63	1.69	NA
9_1_117	MW-6	App. I Metals	Nickel	ug/L	35	26	74%	2015-11-20 to 2024-04-02	Gamma; Lognormal	Nonparametric	3.01	1.60	0.920	8.20	2.36	0.784	1.01	1.48	2.09
9_1_127	MW-6	App. I Metals	Vanadium	ug/L	35	31	89%	2015-11-20 to 2024-04-02		Nonparametric	2.30	1.65	0.810	5.10	1.93	0.837	0.881	1.63	2.72
9_1_128	MW-6	App. I Metals	Zinc	ug/L	35	26	74%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	12.4	11.8	4.40	27.5	7.15	0.576	6.67	1.10	1.66
9_2_105	MW-6	App. III	Boron	ug/L	34	23	68%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	8.09	7.70	6.10	10.8	1.36	0.168	1.63	0.430	0.138
9_2_107	MW-6	App. III	Calcium	ug/L	35	0	0%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	34800	34500	30300	40200	2327	0.0669	1926	0.349	-0.164
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	209	216	15.3	279	50.8	0.243	34.1	-2.08	6.08
9_2_112	MW-6	App. III	Fluoride	mg/L	35	1	3%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.376	0.375	0.180	0.520	0.0623	0.166	0.0519	-0.390	2.28
9_2_118	MW-6	App. III	pH (Field)	S.U.	32	0	0%	2015-11-20 to 2024-04-01	Nonparametric	Nonparametric	6.41	6.37	6.15	7.00	0.197	0.0308	0.170	1.04	1.00
9_2_123	MW-6	App. III	Sulfate	mg/L	35	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	62.3	28.4	25.1	214	54.1	0.868	4.44	1.54	1.42
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	35	0	0%	2015-11-20 to 2024-04-02	Gamma; Normal	Normal	641	624	371	946	101	0.157	53.3	0.218	2.69
9_3_102	MW-6	App. IV	Arsenic	ug/L	35	33	94%	2015-11-20 to 2024-04-02		Nonparametric	4.26	4.26	0.430	8.10	5.42	1.27	5.68	NA	NA
9_3_103	MW-6	App. IV	Barium	ug/L	35	0	0%	2015-11-20 to 2024-04-02	Nonparametric	Nonparametric	81.7	81.0	43.0	142	29.7	0.363	35.1	0.467	-1.01
9_3_104	MW-6	App. IV	Beryllium	ug/L	35	34	97%	2015-11-20 to 2024-04-02		Nonparametric	0.100	0.100	0.100	0.100	NA	NA	0	NA	NA
9_3_109	MW-6	App. IV	Chromium	ug/L	35	28	80%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Nonparametric	5.09	4.70	0.640	14.0	4.36	0.857	2.52	1.63	3.37
9_3_110	MW-6	App. IV	Cobalt	ug/L	35	34	97%	2015-11-20 to 2024-04-02		Nonparametric	0.840	0.840	0.840	0.840	NA	NA	0	NA	NA
9_3_112	MW-6	App. IV	Fluoride	mg/L	35	1	3%	2015-11-20 to 2024-04-02	Gamma; Lognormal; Normal	Normal	0.376	0.375	0.180	0.520	0.0623	0.166	0.0519	-0.390	2.28
9_3_113	MW-6	App. IV	Lead	ug/L	35	33	94%	2015-11-20 to 2024-04-02		Nonparametric	3.35	3.35	0.890	5.80	3.47	1.04	3.64	NA	NA
9_3_114	MW-6	App. IV	Lithium	ug/L	35	0	0%	2015-11-20 to 2024-04-02	Lognormal	Lognormal	33.3	29.9	10.1	60.5	11.8	0.354	8.89	0.714	-0.200
9_3_115	MW-6	App. IV	Mercury	ug/L	35	34	97%	2015-11-20 to 2024-04-02		Nonparametric	0.320	0.320	0.320	0.320	NA	NA	0	NA	NA
9_3_116	MW-6	App. IV	Molybdenum	ug/L	35	30	86%	2015-11-20 to 2024-04-02	Normal	Nonparametric	5.50	5.80	0.200	8.30	3.21	0.584	2.96	-1.44	2.29
9_3_119	MW-6	App. IV	Radium-226	pCi/L	33	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.185	0.212	-0.252	0.910	0.259	1.40	0.237	0.584	0.826
9_3_120	MW-6	App. IV	Radium-228	pCi/L	33	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.539	0.524	-0.243	1.12	0.336	0.624	0.364	-0.0968	-0.393
9_3_121	MW-6	App. IV	Selenium	ug/L	35	33	94%	2015-11-20 to 2024-04-02		Nonparametric	2.50	2.50	0.110	4.90	3.39	1.35	3.55	NA	NA
9_3_124	MW-6	App. IV	Thallium	ug/L	35	32	91%	2015-11-20 to 2024-04-02		Nonparametric	2.10	0.0600	0.0300	6.20	3.55	1.69	0.0444	1.73	NA
9_3_126	MW-6	App. IV	Total Radium	pCi/L	33	0	0%	2015-11-20 to 2024-04-02	Normal	Normal	0.763	0.848	0.0513	1.47	0.409	0.536	0.425	-0.0570	-0.987

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
10_1_111	MW-7R	App. I Metals	Copper	ug/L	26	20	77%	0.661	0.002	0.349	0.022	0.970	0.890	0.151	0.938	0.227	>= 0.10	0.347	>= 0.10	1.706	Gamma; Lognormal	Nonparametric
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	26	12	46%	0.323	0.000	0.505	0.000	0.830	0.012	0.163	0.396	0.373	< 0.01	2.460	< 0.01	1.700	Lognormal	Nonparametric
10_1_122	MW-7R	App. I Metals	Silver	ug/L	26	26	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_1_127	MW-7R	App. I Metals	Vanadium	ug/L	26	15	58%	0.723	0.001	0.341	0.001	0.825	0.020	0.233	0.098	0.280	0.01 <= p < 0.05	1.114	< 0.01	0.715	Lognormal	Nonparametric
10_1_128	MW-7R	App. I Metals	Zinc	ug/L	26	21	81%	0.755	0.033	0.307	0.125	0.848	0.189	0.248	0.395	0.276	>= 0.10	0.540	>= 0.10	1.350	Gamma; Lognormal; Normal	Nonparametric
10_2_105	MW-7R	App. III	Boron	ug/L	25	12	48%	0.809	0.009	0.229	0.062	0.913	0.201	0.194	0.200	0.212	>= 0.10	0.602	>= 0.10	0.310	Gamma; Lognormal; Normal	Normal
10_2_107	MW-7R	App. III	Calcium	ug/L	26	0	0%	0.983	0.931	0.096	0.784	0.971	0.648	0.110	0.572	0.101	>= 0.10	0.217	>= 0.10	0.077	Gamma; Lognormal; Normal	Normal
10_2_108	MW-7R	App. III	Chloride	mg/L	26	0	0%	0.725	0.000	0.232	0.001	0.649	0.000	0.261	0.000	0.236	< 0.01	1.940	< 0.01	0.087	Nonparametric	Nonparametric
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	0.582	0.000	0.254	0.000	0.738	0.000	0.222	0.003	0.228	< 0.01	2.261	< 0.01	0.238	Nonparametric	Nonparametric
10_2_118	MW-7R	App. III	pH (Field)	S.U.	26	0	0%	0.495	0.000	0.290	0.000	0.535	0.000	0.267	0.000	0.272	< 0.01	3.626	< 0.01	0.056	Nonparametric	Nonparametric
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	0.437	0.000	0.328	0.000	0.620	0.000	0.260	0.000	0.284	< 0.01	3.421	< 0.01	0.249	Nonparametric	Nonparametric
10_2_125	MW-7R	App. III	Total Dissolved Solids	mg/L	26	0	0%	0.983	0.927	0.093	0.816	0.986	0.968	0.106	0.638	0.102	>= 0.10	0.218	>= 0.10	0.067	Gamma; Lognormal; Normal	Normal
10_3_101	MW-7R	App. IV	Antimony	ug/L	26	25	96%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_3_102	MW-7R	App. IV	Arsenic	ug/L	26	24	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.129		Nonparametric
10_3_103	MW-7R	App. IV	Barium	ug/L	26	0	0%	0.886	0.008	0.164	0.070	0.617	0.000	0.250	0.000	0.212	< 0.01	2.077	< 0.01	0.389	Normal	Normal
10_3_104	MW-7R	App. IV	Beryllium	ug/L	26	26	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_3_106	MW-7R	App. IV	Cadmium	ug/L	26	26	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_3_109	MW-7R	App. IV	Chromium	ug/L	26	8	31%	0.274	0.000	0.506	0.000	0.817	0.003	0.182	0.117	0.359	< 0.01	3.542	< 0.01	1.622	Lognormal	Nonparametric
10_3_110	MW-7R	App. IV	Cobalt	ug/L	26	21	81%	0.765	0.041	0.297	0.155	0.986	0.964	0.149	0.972	0.236	>= 0.10	0.247	>= 0.10	1.895	Gamma; Lognormal; Normal	Nonparametric
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	0.582	0.000	0.254	0.000	0.738	0.000	0.222	0.003	0.228	< 0.01	2.261	< 0.01	0.238	Nonparametric	Nonparametric
10_3_113	MW-7R	App. IV	Lead	ug/L	26	23	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.858		Nonparametric
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	0.848	0.001	0.153	0.124	0.605	0.000	0.264	0.000	0.226	< 0.01	2.090	< 0.01	0.342	Normal	Normal
10_3_115	MW-7R	App. IV	Mercury	ug/L	26	26	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_3_116	MW-7R	App. IV	Molybdenum	ug/L	26	22	85%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.620		Nonparametric
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	24	0	0%	0.882	0.009	0.187	0.030	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
10_3_120	MW-7R	App. IV	Radium-228	pCi/L	24	0	0%	0.912	0.038	0.168	0.080	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
10_3_121	MW-7R	App. IV	Selenium	ug/L	26	25	96%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_3_124	MW-7R	App. IV	Thallium	ug/L	26	23	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.827		Nonparametric
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	24	0	0%	0.902	0.023	0.168	0.080	0.911	0.037	0.141	0.250	0.091	>= 0.10	0.299	>= 0.10	0.890	Gamma; Lognormal; Normal	Normal
11_1_111	MW-8	App. I Metals	Copper	ug/L	36	30	83%	0.565	0.000	0.455	0.000	0.917	0.481	0.269	0.189	0.373	0.01 <= p < 0.05	0.739	0.01 <= p < 0.05	1.514	Lognormal	Nonparametric
11_1_117	MW-8	App. I Metals	Nickel	ug/L	36	19	53%	0.480	0.000	0.346	0.000	0.947	0.411	0.114	0.805	0.187	>= 0.10	0.887	0.01 <= p < 0.05	1.342	Gamma; Lognormal	Nonparametric
11_1_122	MW-8	App. I Metals	Silver	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	36	30	83%	0.669	0.003	0.376	0.008	0.852	0.165	0.247	0.299	0.299	>= 0.10	0.673	0.05 <= p < 0.10	0.721	Gamma; Lognormal	Nonparametric
11_1_128	MW-8	App. I Metals	Zinc	ug/L	36	24	67%	0.867	0.059	0.233	0.072	0.954	0.701	0.136	0.784	0.150	>= 0.10	0.335	>= 0.10	0.791	Gamma; Lognormal; Normal	Nonparametric
11_2_105	MW-8	App. III	Boron	ug/L	35	15	43%	0.910	0.063	0.143	0.350	0.934	0.185	0.114	0.710	0.122	>= 0.10	0.471	>= 0.10	0.142	Gamma; Lognormal; Normal	Normal
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	0.834	0.000	0.217	0.000	0.433	0.000	0.387	0.000	0.331	< 0.01	4.145	< 0.01	0.582	Nonparametric	Nonparametric
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	0.824	0.000	0.221	0.000	0.931	0.026	0.164	0.015	0.186	< 0.01	1.375	< 0.01	0.319	Nonparametric	Nonparametric
11_2_112	MW-8	App. III	Fluoride	mg/L	36	20	56%	0.883	0.043	0.191	0.125	0.930	0.245	0.177	0.195	0.189	>= 0.10	0.534	>= 0.10	0.227	Gamma; Lognormal; Normal	Nonparametric
11_2_118	MW-8	App. III	pH (Field)	S.U.	34	0	0%	0.962	0.273	0.113	0.332	0.963	0.298	0.109	0.387	0.109	>= 0.10	0.563	>= 0.10	0.021	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal			Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
11_2_123	MW-8	App. III	Sulfate	mg/L	36	0	0%	0.970	0.421	0.090	0.657	0.938	0.043	0.118	0.235	0.103	>= 0.10	0.461	>= 0.10	0.133	Gamma; Lognormal; Normal	Normal
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.925	0.018	0.148	0.044	0.759	0.000	0.214	0.000	0.183	< 0.01	1.181	< 0.01	0.312	Nonparametric	Nonparametric
11_3_101	MW-8	App. IV	Antimony	ug/L	36	29	81%	0.957	0.795	0.191	0.613	0.963	0.846	0.180	0.707	0.165	>= 0.10	0.265	>= 0.10	0.203	Gamma; Lognormal; Normal	Nonparametric
11_3_102	MW-8	App. IV	Arsenic	ug/L	36	32	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.168		Nonparametric
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	0.810	0.000	0.206	0.001	0.876	0.001	0.179	0.005	0.189	< 0.01	1.811	< 0.01	0.153	Nonparametric	Nonparametric
11_3_104	MW-8	App. IV	Beryllium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_3_106	MW-8	App. IV	Cadmium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_3_109	MW-8	App. IV	Chromium	ug/L	36	19	53%	0.761	0.001	0.233	0.015	0.947	0.409	0.141	0.487	0.184	>= 0.10	0.410	>= 0.10	1.284	Gamma; Lognormal	Nonparametric
11_3_110	MW-8	App. IV	Cobalt	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.769		Nonparametric
11_3_112	MW-8	App. IV	Fluoride	mg/L	36	20	56%	0.883	0.043	0.191	0.125	0.930	0.245	0.177	0.195	0.189	>= 0.10	0.534	>= 0.10	0.227	Gamma; Lognormal; Normal	Nonparametric
11_3_113	MW-8	App. IV	Lead	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_3_114	MW-8	App. IV	Lithium	ug/L	36	1	3%	0.889	0.002	0.197	0.001	0.954	0.146	0.147	0.053	0.164	0.01 <= p < 0.05	0.738	0.05 <= p < 0.10	0.236	Gamma; Lognormal	Gamma
11_3_115	MW-8	App. IV	Mercury	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_3_116	MW-8	App. IV	Molybdenum	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.780		Nonparametric
11_3_119	MW-8	App. IV	Radium-226	pCi/L	34	0	0%	0.872	0.001	0.121	0.237	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	0.624	0.000	0.244	0.000	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
11_3_121	MW-8	App. IV	Selenium	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.815		Nonparametric
11_3_124	MW-8	App. IV	Thallium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	0.572	0.000	0.274	0.000	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
1_1_111	MW-1	App. I Metals	Copper	ug/L	36	32	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.941		Nonparametric
1_1_117	MW-1	App. I Metals	Nickel	ug/L	36	27	75%	0.911	0.325	0.160	0.724	0.915	0.356	0.214	0.273	0.173	>= 0.10	0.341	>= 0.10	0.759	Gamma; Lognormal; Normal	Nonparametric
1_1_122	MW-1	App. I Metals	Silver	ug/L	36	32	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.870		Nonparametric
1_1_127	MW-1	App. I Metals	Vanadium	ug/L	36	24	67%	0.917	0.265	0.174	0.401	0.973	0.941	0.127	0.858	0.145	>= 0.10	0.235	>= 0.10	0.500	Gamma; Lognormal; Normal	Nonparametric
1_1_128	MW-1	App. I Metals	Zinc	ug/L	36	25	69%	0.857	0.052	0.242	0.070	0.900	0.187	0.174	0.465	0.203	>= 0.10	0.565	>= 0.10	0.446	Gamma; Lognormal; Normal	Nonparametric
1_2_105	MW-1	App. III	Boron	ug/L	35	22	63%	0.480	0.000	0.406	0.000	0.691	0.000	0.331	0.000	0.370	< 0.01	2.066	< 0.01	0.479	Nonparametric	Nonparametric
1_2_107	MW-1	App. III	Calcium	ug/L	36	0	0%	0.960	0.221	0.108	0.356	0.934	0.034	0.128	0.139	0.124	>= 0.10	0.481	>= 0.10	0.557	Gamma; Lognormal; Normal	Normal
1_2_108	MW-1	App. III	Chloride	mg/L	36	0	0%	0.978	0.686	0.074	0.884	0.883	0.001	0.160	0.020	0.126	>= 0.10	0.893	0.01 <= p < 0.05	0.629	Gamma; Normal	Normal
1_2_112	MW-1	App. III	Fluoride	mg/L	36	1	3%	0.936	0.043	0.146	0.058	0.936	0.041	0.169	0.013	0.164	0.01 <= p < 0.05	0.978	0.01 <= p < 0.05	0.162	Normal	Normal
1_2_118	MW-1	App. III	pH (Field)	S.U.	34	0	0%	0.936	0.046	0.145	0.067	0.942	0.069	0.139	0.092	0.142	0.05 <= p < 0.10	0.683	0.05 <= p < 0.10	0.033	Gamma; Lognormal; Normal	Normal
1_2_123	MW-1	App. III	Sulfate	mg/L	36	0	0%	0.894	0.002	0.226	0.000	0.947	0.084	0.181	0.004	0.196	< 0.01	1.059	< 0.01	0.218	Lognormal	Lognormal
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.959	0.203	0.111	0.312	0.965	0.314	0.096	0.550	0.086	>= 0.10	0.221	>= 0.10	0.577	Gamma; Lognormal; Normal	Normal
1_3_101	MW-1	App. IV	Antimony	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.060		Nonparametric
1_3_102	MW-1	App. IV	Arsenic	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.791		Nonparametric
1_3_103	MW-1	App. IV	Barium	ug/L	36	0	0%	0.973	0.514	0.085	0.730	0.937	0.042	0.129	0.137	0.103	>= 0.10	0.290	>= 0.10	0.588	Gamma; Lognormal; Normal	Normal
1_3_104	MW-1	App. IV	Beryllium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_3_106	MW-1	App. IV	Cadmium	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.093		Nonparametric
1_3_109	MW-1	App. IV	Chromium	ug/L	36	26	72%	0.897	0.205	0.176	0.510	0.966	0.850	0.191	0.377	0.153	>= 0.10	0.200	>= 0.10	0.780	Gamma; Lognormal; Normal	Nonparametric
1_3_110	MW-1	App. IV	Cobalt	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.519		Nonparametric
1_3_112	MW-1	App. IV	Fluoride	mg/L	36	1	3%	0.936	0.043	0.146	0.058	0.936	0.041	0.169	0.013	0.164	0.01 <= p < 0.05	0.978	0.01 <= p < 0.05	0.162	Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal			Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
1_3_113	MW-1	App. IV	Lead	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.656		Nonparametric
1_3_114	MW-1	App. IV	Lithium	ug/L	36	0	0%	0.982	0.796	0.112	0.302	0.968	0.373	0.145	0.054	0.128	>= 0.10	0.405	>= 0.10	0.191	Gamma; Lognormal; Normal	Normal
1_3_115	MW-1	App. IV	Mercury	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_3_116	MW-1	App. IV	Molybdenum	ug/L	36	31	86%	0.864	0.244	0.225	0.551	0.848	0.188	0.286	0.197	0.278	>= 0.10	0.454	>= 0.10	1.658	Gamma; Lognormal; Normal	Nonparametric
1_3_119	MW-1	App. IV	Radium-226	pCi/L	34	0	0%	0.965	0.345	0.082	0.817	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
1_3_120	MW-1	App. IV	Radium-228	pCi/L	34	0	0%	0.963	0.290	0.104	0.465	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
1_3_121	MW-1	App. IV	Selenium	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.948		Nonparametric
1_3_124	MW-1	App. IV	Thallium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	0.913	0.010	0.117	0.279	0.965	0.337	0.095	0.606	0.065	>= 0.10	0.231	>= 0.10	0.513	Gamma; Lognormal; Normal	Normal
2_1_111	MW-10	App. I Metals	Copper	ug/L	12	8	67%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.982		Nonparametric
2_1_117	MW-10	App. I Metals	Nickel	ug/L	12	4	33%	0.557	0.000	0.388	0.001	0.880	0.189	0.268	0.093	0.336	0.01 <= p < 0.05	0.922	0.01 <= p < 0.05	1.028	Lognormal	Nonparametric
2_1_122	MW-10	App. I Metals	Silver	ug/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	12	5	42%	0.522	0.000	0.472	0.000	0.692	0.003	0.391	0.002	0.446	< 0.01	1.388	< 0.01	0.838	Nonparametric	Nonparametric
2_1_128	MW-10	App. I Metals	Zinc	ug/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.891		Nonparametric
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	0.706	0.001	0.279	0.010	0.821	0.016	0.225	0.094	0.241	0.05 <= p < 0.10	0.968	0.01 <= p < 0.05	0.221	Gamma; Lognormal	Gamma
2_2_107	MW-10	App. III	Calcium	ug/L	12	0	0%	0.956	0.733	0.186	0.300	0.949	0.625	0.206	0.173	0.196	>= 0.10	0.362	>= 0.10	0.108	Gamma; Lognormal; Normal	Normal
2_2_108	MW-10	App. III	Chloride	mg/L	12	0	0%	0.946	0.575	0.181	0.345	0.955	0.705	0.173	0.408	0.176	>= 0.10	0.309	>= 0.10	0.040	Gamma; Lognormal; Normal	Normal
2_2_112	MW-10	App. III	Fluoride	mg/L	12	0	0%	0.945	0.564	0.142	0.723	0.951	0.648	0.146	0.687	0.135	>= 0.10	0.308	>= 0.10	0.091	Gamma; Lognormal; Normal	Normal
2_2_118	MW-10	App. III	pH (Field)	S.U.	13	0	0%	0.886	0.086	0.221	0.083	0.890	0.097	0.217	0.096	0.216	>= 0.10	0.762	0.01 <= p < 0.05	0.020	Gamma; Lognormal; Normal	Normal
2_2_123	MW-10	App. III	Sulfate	mg/L	12	0	0%	0.898	0.150	0.189	0.276	0.962	0.817	0.154	0.600	0.176	>= 0.10	0.356	>= 0.10	0.410	Gamma; Lognormal; Normal	Normal
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	12	0	0%	0.926	0.340	0.199	0.212	0.914	0.240	0.206	0.170	0.201	>= 0.10	0.439	>= 0.10	0.038	Gamma; Lognormal; Normal	Normal
2_3_101	MW-10	App. IV	Antimony	ug/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_3_102	MW-10	App. IV	Arsenic	ug/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.547		Nonparametric
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	0.713	0.001	0.308	0.003	0.888	0.111	0.212	0.143	0.238	0.05 <= p < 0.10	0.687	0.05 <= p < 0.10	0.404	Gamma; Lognormal	Gamma
2_3_104	MW-10	App. IV	Beryllium	ug/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_3_106	MW-10	App. IV	Cadmium	ug/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	0.561	0.000	0.365	0.001	0.945	0.635	0.197	0.400	0.282	0.05 <= p < 0.10	0.752	0.01 <= p < 0.05	1.117	Gamma; Lognormal	Gamma
2_3_110	MW-10	App. IV	Cobalt	ug/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.015		Nonparametric
2_3_112	MW-10	App. IV	Fluoride	mg/L	12	0	0%	0.945	0.564	0.142	0.723	0.951	0.648	0.146	0.687	0.135	>= 0.10	0.308	>= 0.10	0.091	Gamma; Lognormal; Normal	Normal
2_3_113	MW-10	App. IV	Lead	ug/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.902		Nonparametric
2_3_114	MW-10	App. IV	Lithium	ug/L	12	0	0%	0.839	0.027	0.269	0.016	0.962	0.805	0.161	0.529	0.205	>= 0.10	0.421	>= 0.10	0.684	Gamma; Lognormal	Gamma
2_3_115	MW-10	App. IV	Mercury	ug/L	12	12	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_3_116	MW-10	App. IV	Molybdenum	ug/L	12	0	0%	0.929	0.367	0.154	0.598	0.955	0.704	0.118	0.913	0.137	>= 0.10	0.266	>= 0.10	0.283	Gamma; Lognormal; Normal	Normal
2_3_119	MW-10	App. IV	Radium-226	pCi/L	12	0	0%	0.967	0.879	0.113	0.944	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
2_3_120	MW-10	App. IV	Radium-228	pCi/L	12	0	0%	0.944	0.552	0.160	0.540	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
2_3_121	MW-10	App. IV	Selenium	ug/L	12	10	83%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.656		Nonparametric
2_3_124	MW-10	App. IV	Thallium	ug/L	12	11	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
2_3_126	MW-10	App. IV	Total Radium	pCi/L	12	0	0%	0.974	0.951	0.130	0.836	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
3_1_111	MW-11	App. I Metals	Copper	ug/L	15	10	67%	0.764	0.040	0.385	0.015	0.940	0.668	0.255	0.353	0.307	>= 0.10	0.412	>= 0.10	0.923	Gamma; Lognormal	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
3_1_117	MW-11	App. I Metals	Nickel	ug/L	15	9	60%	0.821	0.090	0.270	0.184	0.980	0.949	0.156	0.918	0.207	>= 0.10	0.273	>= 0.10	0.811	Gamma; Lognormal; Normal	Nonparametric
3_1_122	MW-11	App. I Metals	Silver	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_1_127	MW-11	App. I Metals	Vanadium	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.604		Nonparametric
3_1_128	MW-11	App. I Metals	Zinc	ug/L	15	13	87%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.053		Nonparametric
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	0.767	0.002	0.297	0.002	0.861	0.031	0.252	0.016	0.261	0.01 <= p < 0.05	0.829	0.01 <= p < 0.05	0.182	Nonparametric	Nonparametric
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	0.649	0.000	0.242	0.018	0.783	0.002	0.206	0.086	0.223	0.01 <= p < 0.05	1.309	< 0.01	0.279	Lognormal	Lognormal
3_2_108	MW-11	App. III	Chloride	mg/L	15	0	0%	0.864	0.027	0.165	0.331	0.797	0.003	0.211	0.072	0.190	>= 0.10	0.820	0.01 <= p < 0.05	0.182	Gamma; Lognormal; Normal	Normal
3_2_112	MW-11	App. III	Fluoride	mg/L	15	1	7%	0.897	0.101	0.162	0.411	0.910	0.157	0.157	0.457	0.161	>= 0.10	0.468	>= 0.10	0.141	Gamma; Lognormal; Normal	Normal
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	0.420	0.000	0.396	0.000	0.458	0.000	0.374	0.000	0.384	< 0.01	3.292	< 0.01	0.151	Nonparametric	Nonparametric
3_2_123	MW-11	App. III	Sulfate	mg/L	15	0	0%	0.916	0.166	0.177	0.230	0.946	0.458	0.163	0.348	0.173	>= 0.10	0.370	>= 0.10	0.133	Gamma; Lognormal; Normal	Normal
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	0.348	0.000	0.467	0.000	0.486	0.000	0.401	0.000	0.435	< 0.01	3.847	< 0.01	0.506	Nonparametric	Nonparametric
3_3_101	MW-11	App. IV	Antimony	ug/L	15	13	87%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.750		Nonparametric
3_3_102	MW-11	App. IV	Arsenic	ug/L	15	13	87%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.866		Nonparametric
3_3_103	MW-11	App. IV	Barium	ug/L	15	0	0%	0.606	0.000	0.323	0.000	0.766	0.001	0.289	0.001	0.308	< 0.01	1.523	< 0.01	0.334	Nonparametric	Nonparametric
3_3_104	MW-11	App. IV	Beryllium	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_3_106	MW-11	App. IV	Cadmium	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_3_109	MW-11	App. IV	Chromium	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.074		Nonparametric
3_3_110	MW-11	App. IV	Cobalt	ug/L	15	11	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.467		Nonparametric
3_3_112	MW-11	App. IV	Fluoride	mg/L	15	1	7%	0.897	0.101	0.162	0.411	0.910	0.157	0.157	0.457	0.161	>= 0.10	0.468	>= 0.10	0.141	Gamma; Lognormal; Normal	Normal
3_3_113	MW-11	App. IV	Lead	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	0.655	0.000	0.268	0.005	0.752	0.001	0.235	0.026	0.248	0.01 <= p < 0.05	1.338	< 0.01	0.195	Nonparametric	Nonparametric
3_3_115	MW-11	App. IV	Mercury	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_3_116	MW-11	App. IV	Molybdenum	ug/L	15	13	87%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.046		Nonparametric
3_3_119	MW-11	App. IV	Radium-226	pCi/L	15	0	0%	0.915	0.163	0.237	0.023	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	0.763	0.001	0.224	0.041	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
3_3_121	MW-11	App. IV	Selenium	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_3_124	MW-11	App. IV	Thallium	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	0.640	0.000	0.306	0.001	0.936	0.330	0.179	0.222	0.213	0.05 <= p < 0.10	0.651	0.05 <= p < 0.10	0.741	Gamma; Lognormal	Gamma
4_1_111	MW-11D	App. I Metals	Copper	ug/L	13	10	77%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.160		Nonparametric
4_1_117	MW-11D	App. I Metals	Nickel	ug/L	13	9	69%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.764		Nonparametric
4_1_122	MW-11D	App. I Metals	Silver	ug/L	13	13	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_1_127	MW-11D	App. I Metals	Vanadium	ug/L	13	10	77%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.452		Nonparametric
4_1_128	MW-11D	App. I Metals	Zinc	ug/L	13	10	77%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.968		Nonparametric
4_2_105	MW-11D	App. III	Boron	ug/L	13	0	0%	0.695	0.000	0.324	0.001	0.808	0.009	0.264	0.014	0.284	< 0.01	1.087	< 0.01	0.261	Nonparametric	Nonparametric
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	0.576	0.000	0.327	0.000	0.809	0.009	0.199	0.172	0.229	0.05 <= p < 0.10	1.217	< 0.01	0.502	Gamma; Lognormal	Gamma
4_2_108	MW-11D	App. III	Chloride	mg/L	13	0	0%	0.650	0.000	0.269	0.011	0.899	0.128	0.143	0.666	0.195	>= 0.10	0.764	0.01 <= p < 0.05	0.663	Gamma; Lognormal	Gamma
4_2_112	MW-11D	App. III	Fluoride	mg/L	13	0	0%	0.873	0.057	0.183	0.271	0.913	0.202	0.161	0.469	0.165	>= 0.10	0.532	>= 0.10	0.101	Gamma; Lognormal; Normal	Normal
4_2_118	MW-11D	App. III	pH (Field)	S.U.	13	0	0%	0.946	0.544	0.176	0.331	0.951	0.619	0.171	0.374	0.175	>= 0.10	0.315	>= 0.10	0.030	Gamma; Lognormal; Normal	Normal
4_2_123	MW-11D	App. III	Sulfate	mg/L	13	1	8%	0.662	0.000	0.266	0.019	0.937	0.459	0.154	0.605	0.172	>= 0.10	0.497	>= 0.10	1.141	Gamma; Lognormal	Gamma

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal			Lognormal			Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	13	0	0%	0.684	0.000	0.241	0.037	0.870	0.053	0.162	0.463	0.182	>= 0.10	0.832	0.01 <= p < 0.05	0.486	Gamma; Lognormal	Gamma
4_3_101	MW-11D	App. IV	Antimony	ug/L	13	11	85%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.556		Nonparametric
4_3_102	MW-11D	App. IV	Arsenic	ug/L	13	5	38%	0.907	0.331	0.253	0.139	0.946	0.670	0.173	0.682	0.201	>= 0.10	0.322	>= 0.10	0.565	Gamma; Lognormal; Normal	Normal
4_3_103	MW-11D	App. IV	Barium	ug/L	13	0	0%	0.875	0.062	0.192	0.211	0.830	0.016	0.190	0.227	0.199	>= 0.10	0.797	0.01 <= p < 0.05	0.205	Gamma; Lognormal; Normal	Normal
4_3_104	MW-11D	App. IV	Beryllium	ug/L	13	12	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_3_106	MW-11D	App. IV	Cadmium	ug/L	13	13	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_3_109	MW-11D	App. IV	Chromium	ug/L	13	10	77%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.838		Nonparametric
4_3_110	MW-11D	App. IV	Cobalt	ug/L	13	12	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_3_112	MW-11D	App. IV	Fluoride	mg/L	13	0	0%	0.873	0.057	0.183	0.271	0.913	0.202	0.161	0.469	0.165	>= 0.10	0.532	>= 0.10	0.101	Gamma; Lognormal; Normal	Normal
4_3_113	MW-11D	App. IV	Lead	ug/L	13	12	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_3_114	MW-11D	App. IV	Lithium	ug/L	13	0	0%	0.706	0.001	0.299	0.002	0.847	0.026	0.223	0.075	0.252	0.01 <= p < 0.05	1.062	< 0.01	0.442	Lognormal	Lognormal
4_3_115	MW-11D	App. IV	Mercury	ug/L	13	13	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	0.645	0.000	0.259	0.018	0.945	0.520	0.141	0.687	0.172	>= 0.10	0.512	>= 0.10	1.029	Gamma; Lognormal	Gamma
4_3_119	MW-11D	App. IV	Radium-226	pCi/L	13	0	0%	0.899	0.129	0.212	0.112	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	13	0	0%	0.820	0.012	0.179	0.302	0.961	0.776	0.121	0.872	0.087	>= 0.10	0.160	>= 0.10	1.043	Gamma; Lognormal; Normal	Gamma
4_3_121	MW-11D	App. IV	Selenium	ug/L	13	12	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_3_124	MW-11D	App. IV	Thallium	ug/L	13	12	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	13	0	0%	0.911	0.192	0.127	0.816	0.959	0.734	0.145	0.646	0.112	>= 0.10	0.181	>= 0.10	0.831	Gamma; Lognormal; Normal	Normal
5_1_111	MW-2	App. I Metals	Copper	ug/L	31	15	48%	0.525	0.000	0.356	0.000	0.939	0.333	0.154	0.397	0.258	0.01 <= p < 0.05	1.339	< 0.01	1.503	Lognormal	Nonparametric
5_1_117	MW-2	App. I Metals	Nickel	ug/L	31	12	39%	0.671	0.000	0.289	0.000	0.965	0.679	0.102	0.866	0.171	>= 0.10	0.733	0.05 <= p < 0.10	1.092	Gamma; Lognormal	Gamma
5_1_122	MW-2	App. I Metals	Silver	ug/L	31	29	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.918		Nonparametric
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	31	22	71%	0.533	0.000	0.401	0.000	0.834	0.050	0.206	0.329	0.288	0.01 <= p < 0.05	1.116	< 0.01	0.852	Lognormal	Nonparametric
5_1_128	MW-2	App. I Metals	Zinc	ug/L	31	16	52%	0.608	0.000	0.316	0.000	0.956	0.630	0.151	0.472	0.199	>= 0.10	0.808	0.01 <= p < 0.05	1.088	Gamma; Lognormal	Nonparametric
5_2_105	MW-2	App. III	Boron	ug/L	30	1	3%	0.935	0.074	0.112	0.460	0.970	0.570	0.096	0.705	0.104	>= 0.10	0.362	>= 0.10	0.133	Gamma; Lognormal; Normal	Normal
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	0.714	0.000	0.211	0.001	0.467	0.000	0.301	0.000	0.275	< 0.01	3.968	< 0.01	0.326	Nonparametric	Nonparametric
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	0.829	0.000	0.204	0.002	0.719	0.000	0.242	0.000	0.231	< 0.01	2.481	< 0.01	0.223	Nonparametric	Nonparametric
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	0.906	0.013	0.155	0.072	0.939	0.094	0.186	0.011	0.171	0.01 <= p < 0.05	0.795	0.01 <= p < 0.05	0.245	Lognormal; Normal	Normal
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	0.692	0.000	0.247	0.000	0.721	0.000	0.238	0.000	0.240	< 0.01	2.443	< 0.01	0.049	Nonparametric	Nonparametric
5_2_123	MW-2	App. III	Sulfate	mg/L	31	0	0%	0.831	0.000	0.220	0.001	0.908	0.011	0.172	0.021	0.180	0.01 <= p < 0.05	1.458	< 0.01	0.560	Nonparametric	Nonparametric
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	0.474	0.000	0.365	0.000	0.647	0.000	0.330	0.000	0.292	< 0.01	4.288	< 0.01	0.616	Nonparametric	Nonparametric
5_3_101	MW-2	App. IV	Antimony	ug/L	31	18	58%	0.965	0.835	0.124	0.848	0.695	0.000	0.266	0.013	0.202	>= 0.10	0.828	0.01 <= p < 0.05	0.763	Gamma; Normal	Nonparametric
5_3_102	MW-2	App. IV	Arsenic	ug/L	31	22	71%	0.856	0.087	0.218	0.252	0.917	0.370	0.143	0.862	0.168	>= 0.10	0.424	>= 0.10	0.407	Gamma; Lognormal; Normal	Nonparametric
5_3_103	MW-2	App. IV	Barium	ug/L	31	0	0%	0.922	0.027	0.159	0.045	0.887	0.003	0.181	0.011	0.166	0.01 <= p < 0.05	0.929	0.01 <= p < 0.05	0.325	Nonparametric	Nonparametric
5_3_104	MW-2	App. IV	Beryllium	ug/L	31	29	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.715		Nonparametric
5_3_106	MW-2	App. IV	Cadmium	ug/L	31	29	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.285		Nonparametric
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	0.670	0.000	0.291	0.000	0.962	0.450	0.134	0.297	0.203	0.01 <= p < 0.05	1.016	0.01 <= p < 0.05	1.161	Lognormal	Nonparametric
5_3_110	MW-2	App. IV	Cobalt	ug/L	31	26	84%	0.608	0.001	0.432	0.003	0.834	0.150	0.259	0.326	0.358	0.05 <= p < 0.10	0.748	0.01 <= p < 0.05	1.471	Gamma; Lognormal	Nonparametric
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	0.906	0.013	0.155	0.072	0.939	0.094	0.186	0.011	0.171	0.01 <= p < 0.05	0.795	0.01 <= p < 0.05	0.245	Lognormal; Normal	Normal
5_3_113	MW-2	App. IV	Lead	ug/L	31	27	87%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.128		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal			Lognormal			Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	0.717	0.000	0.285	0.000	0.916	0.019	0.178	0.013	0.212	< 0.01	1.565	< 0.01	0.488	Nonparametric	Nonparametric
5_3_115	MW-2	App. IV	Mercury	ug/L	31	31	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	0.688	0.000	0.251	0.000	0.922	0.051	0.135	0.255	0.180	0.01 <= p < 0.05	1.003	0.01 <= p < 0.05	0.540	Lognormal	Lognormal
5_3_119	MW-2	App. IV	Radium-226	pCi/L	30	0	0%	0.961	0.330	0.106	0.534	0.899	0.008	0.153	0.071	0.133	>= 0.10	0.610	>= 0.10	0.472	Gamma; Lognormal; Normal	Normal
5_3_120	MW-2	App. IV	Radium-228	pCi/L	30	0	0%	0.976	0.705	0.094	0.717	0.943	0.108	0.091	0.757	0.080	>= 0.10	0.236	>= 0.10	0.367	Gamma; Lognormal; Normal	Normal
5_3_121	MW-2	App. IV	Selenium	ug/L	31	29	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.153		Nonparametric
5_3_124	MW-2	App. IV	Thallium	ug/L	31	23	74%	0.432	0.000	0.505	0.000	0.713	0.003	0.346	0.005	0.471	< 0.01	1.765	< 0.01	1.771	Nonparametric	Nonparametric
5_3_126	MW-2	App. IV	Total Radium	pCi/L	30	0	0%	0.943	0.109	0.133	0.196	0.891	0.005	0.194	0.005	0.175	0.01 <= p < 0.05	0.985	0.01 <= p < 0.05	0.329	Normal	Normal
6_1_111	MW-3	App. I Metals	Copper	ug/L	34	21	62%	0.584	0.000	0.325	0.001	0.891	0.101	0.211	0.115	0.275	0.01 <= p < 0.05	1.092	< 0.01	1.218	Lognormal	Nonparametric
6_1_117	MW-3	App. I Metals	Nickel	ug/L	34	19	56%	0.571	0.000	0.401	0.000	0.906	0.117	0.210	0.073	0.310	< 0.01	1.282	< 0.01	1.211	Lognormal	Nonparametric
6_1_122	MW-3	App. I Metals	Silver	ug/L	34	33	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
6_1_127	MW-3	App. I Metals	Vanadium	ug/L	34	22	65%	0.779	0.005	0.237	0.061	0.895	0.136	0.184	0.316	0.208	>= 0.10	0.653	0.05 <= p < 0.10	0.663	Gamma; Lognormal; Normal	Nonparametric
6_1_128	MW-3	App. I Metals	Zinc	ug/L	34	27	79%	0.841	0.101	0.298	0.060	0.928	0.531	0.196	0.571	0.217	>= 0.10	0.340	>= 0.10	0.836	Gamma; Lognormal; Normal	Nonparametric
6_2_105	MW-3	App. III	Boron	ug/L	33	10	30%	0.953	0.344	0.146	0.231	0.850	0.003	0.197	0.020	0.186	0.01 <= p < 0.05	0.728	0.05 <= p < 0.10	0.381	Gamma; Normal	Normal
6_2_107	MW-3	App. III	Calcium	ug/L	34	0	0%	0.955	0.177	0.116	0.293	0.924	0.021	0.129	0.160	0.127	>= 0.10	0.635	0.05 <= p < 0.10	0.122	Gamma; Lognormal; Normal	Normal
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	0.882	0.002	0.152	0.046	0.784	0.000	0.188	0.004	0.175	< 0.01	1.477	< 0.01	0.149	Nonparametric	Nonparametric
6_2_112	MW-3	App. III	Fluoride	mg/L	34	1	3%	0.949	0.123	0.084	0.797	0.967	0.405	0.077	0.886	0.081	>= 0.10	0.258	>= 0.10	0.307	Gamma; Lognormal; Normal	Normal
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	0.741	0.000	0.234	0.000	0.707	0.000	0.242	0.000	0.238	< 0.01	2.051	< 0.01	0.038	Nonparametric	Nonparametric
6_2_123	MW-3	App. III	Sulfate	mg/L	34	0	0%	0.803	0.000	0.221	0.000	0.910	0.008	0.168	0.016	0.198	< 0.01	1.517	< 0.01	0.918	Nonparametric	Nonparametric
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	0.798	0.000	0.199	0.001	0.538	0.000	0.319	0.000	0.290	< 0.01	4.614	< 0.01	0.540	Nonparametric	Nonparametric
6_3_101	MW-3	App. IV	Antimony	ug/L	34	23	68%	0.921	0.324	0.181	0.402	0.815	0.015	0.216	0.159	0.220	>= 0.10	0.600	>= 0.10	0.655	Gamma; Lognormal; Normal	Nonparametric
6_3_102	MW-3	App. IV	Arsenic	ug/L	34	28	82%	0.968	0.881	0.169	0.854	0.839	0.127	0.272	0.178	0.231	>= 0.10	0.425	>= 0.10	0.567	Gamma; Lognormal; Normal	Nonparametric
6_3_103	MW-3	App. IV	Barium	ug/L	34	0	0%	0.974	0.572	0.107	0.421	0.930	0.032	0.135	0.119	0.127	>= 0.10	0.492	>= 0.10	0.180	Gamma; Lognormal; Normal	Normal
6_3_104	MW-3	App. IV	Beryllium	ug/L	34	34	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
6_3_106	MW-3	App. IV	Cadmium	ug/L	34	33	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
6_3_109	MW-3	App. IV	Chromium	ug/L	34	17	50%	0.477	0.000	0.418	0.000	0.914	0.118	0.215	0.036	0.332	< 0.01	1.648	< 0.01	1.317	Lognormal	Nonparametric
6_3_110	MW-3	App. IV	Cobalt	ug/L	34	30	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.961		Nonparametric
6_3_112	MW-3	App. IV	Fluoride	mg/L	34	1	3%	0.949	0.123	0.084	0.797	0.967	0.405	0.077	0.886	0.081	>= 0.10	0.258	>= 0.10	0.307	Gamma; Lognormal; Normal	Normal
6_3_113	MW-3	App. IV	Lead	ug/L	34	31	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.052		Nonparametric
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	0.658	0.000	0.293	0.000	0.826	0.000	0.224	0.000	0.249	< 0.01	2.699	< 0.01	0.323	Nonparametric	Nonparametric
6_3_115	MW-3	App. IV	Mercury	ug/L	34	34	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	0.507	0.000	0.258	0.000	0.820	0.000	0.185	0.005	0.217	< 0.01	2.172	< 0.01	0.344	Nonparametric	Nonparametric
6_3_119	MW-3	App. IV	Radium-226	pCi/L	33	0	0%	0.959	0.248	0.133	0.144	0.938	0.058	0.131	0.163	0.135	>= 0.10	0.531	>= 0.10	0.467	Gamma; Lognormal; Normal	Normal
6_3_120	MW-3	App. IV	Radium-228	pCi/L	33	0	0%	0.982	0.856	0.061	0.990	0.888	0.003	0.150	0.057	0.115	>= 0.10	0.715	0.05 <= p < 0.10	0.508	Gamma; Lognormal; Normal	Normal
6_3_121	MW-3	App. IV	Selenium	ug/L	34	33	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
6_3_124	MW-3	App. IV	Thallium	ug/L	34	34	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
6_3_126	MW-3	App. IV	Total Radium	pCi/L	33	0	0%	0.986	0.937	0.083	0.822	0.947	0.107	0.137	0.118	0.117	>= 0.10	0.386	>= 0.10	0.349	Gamma; Lognormal; Normal	Normal
7_1_111	MW-4	App. I Metals	Copper	ug/L	35	31	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.344		Nonparametric
7_1_117	MW-4	App. I Metals	Nickel	ug/L	35	11	31%	0.939	0.155	0.136	0.296	0.964	0.531	0.119	0.508	0.129	>= 0.10	0.370	>= 0.10	0.361	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
7_1_122	MW-4	App. I Metals	Silver	ug/L	35	35	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
7_1_127	MW-4	App. I Metals	Vanadium	ug/L	35	31	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.554		Nonparametric
7_1_128	MW-4	App. I Metals	Zinc	ug/L	35	24	69%	0.723	0.001	0.295	0.008	0.867	0.071	0.177	0.432	0.218	>= 0.10	0.780	0.01 <= p < 0.05	0.539	Gamma; Lognormal	Nonparametric
7_2_105	MW-4	App. III	Boron	ug/L	34	22	65%	0.346	0.000	0.516	0.000	0.462	0.000	0.431	0.000	0.506	< 0.01	3.526	< 0.01	0.926	Nonparametric	Nonparametric
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	0.840	0.000	0.202	0.001	0.703	0.000	0.269	0.000	0.250	< 0.01	2.859	< 0.01	0.321	Nonparametric	Nonparametric
7_2_108	MW-4	App. III	Chloride	mg/L	35	0	0%	0.896	0.003	0.177	0.007	0.798	0.000	0.200	0.001	0.184	< 0.01	1.965	< 0.01	0.323	Nonparametric	Nonparametric
7_2_112	MW-4	App. III	Fluoride	mg/L	35	0	0%	0.976	0.615	0.112	0.329	0.979	0.740	0.095	0.591	0.105	>= 0.10	0.289	>= 0.10	0.168	Gamma; Lognormal; Normal	Normal
7_2_118	MW-4	App. III	pH (Field)	S.U.	33	0	0%	0.962	0.298	0.126	0.206	0.964	0.343	0.123	0.228	0.126	>= 0.10	0.414	>= 0.10	0.020	Gamma; Lognormal; Normal	Normal
7_2_123	MW-4	App. III	Sulfate	mg/L	35	0	0%	0.860	0.000	0.193	0.002	0.740	0.000	0.266	0.000	0.243	< 0.01	2.864	< 0.01	0.315	Nonparametric	Nonparametric
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	0.838	0.000	0.226	0.000	0.718	0.000	0.287	0.000	0.269	< 0.01	3.393	< 0.01	0.283	Nonparametric	Nonparametric
7_3_101	MW-4	App. IV	Antimony	ug/L	35	30	86%	0.812	0.100	0.307	0.127	0.834	0.150	0.296	0.158	0.322	>= 0.10	0.536	>= 0.10	0.359	Gamma; Lognormal; Normal	Nonparametric
7_3_102	MW-4	App. IV	Arsenic	ug/L	35	33	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.874		Nonparametric
7_3_103	MW-4	App. IV	Barium	ug/L	35	0	0%	0.866	0.001	0.209	0.000	0.717	0.000	0.284	0.000	0.262	< 0.01	3.031	< 0.01	0.340	Nonparametric	Nonparametric
7_3_104	MW-4	App. IV	Beryllium	ug/L	35	35	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
7_3_106	MW-4	App. IV	Cadmium	ug/L	35	34	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
7_3_109	MW-4	App. IV	Chromium	ug/L	35	27	77%	0.927	0.493	0.148	0.869	0.896	0.266	0.233	0.227	0.193	>= 0.10	0.307	>= 0.10	1.066	Gamma; Lognormal; Normal	Nonparametric
7_3_110	MW-4	App. IV	Cobalt	ug/L	35	20	57%	0.886	0.059	0.185	0.180	0.966	0.794	0.118	0.831	0.140	>= 0.10	0.343	>= 0.10	0.589	Gamma; Lognormal; Normal	Nonparametric
7_3_112	MW-4	App. IV	Fluoride	mg/L	35	0	0%	0.976	0.615	0.112	0.329	0.979	0.740	0.095	0.591	0.105	>= 0.10	0.289	>= 0.10	0.168	Gamma; Lognormal; Normal	Normal
7_3_113	MW-4	App. IV	Lead	ug/L	35	34	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	0.568	0.000	0.233	0.000	0.834	0.000	0.187	0.003	0.208	< 0.01	2.151	< 0.01	0.294	Nonparametric	Nonparametric
7_3_115	MW-4	App. IV	Mercury	ug/L	35	35	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
7_3_116	MW-4	App. IV	Molybdenum	ug/L	35	30	86%	0.843	0.172	0.313	0.109	0.702	0.010	0.326	0.088	0.344	0.05 <= p < 0.10	0.746	0.01 <= p < 0.05	1.611	Gamma; Lognormal; Normal	Nonparametric
7_3_119	MW-4	App. IV	Radium-226	pCi/L	33	0	0%	0.976	0.661	0.108	0.417	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
7_3_120	MW-4	App. IV	Radium-228	pCi/L	33	0	0%	0.942	0.075	0.099	0.568	0.903	0.006	0.140	0.100	0.094	>= 0.10	0.278	>= 0.10	0.893	Gamma; Lognormal; Normal	Normal
7_3_121	MW-4	App. IV	Selenium	ug/L	35	33	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.645		Nonparametric
7_3_124	MW-4	App. IV	Thallium	ug/L	35	35	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
7_3_126	MW-4	App. IV	Total Radium	pCi/L	33	0	0%	0.923	0.022	0.127	0.191	0.978	0.710	0.086	0.774	0.077	>= 0.10	0.191	>= 0.10	0.601	Gamma; Lognormal; Normal	Normal
8_1_111	MW-5	App. I Metals	Copper	ug/L	36	28	78%	0.957	0.783	0.150	0.857	0.853	0.103	0.293	0.041	0.251	>= 0.10	0.451	>= 0.10	0.897	Gamma; Lognormal; Normal	Nonparametric
8_1_117	MW-5	App. I Metals	Nickel	ug/L	36	29	81%	0.519	0.000	0.461	0.000	0.918	0.458	0.203	0.513	0.336	0.01 <= p < 0.05	0.804	0.01 <= p < 0.05	1.733	Lognormal	Nonparametric
8_1_122	MW-5	App. I Metals	Silver	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
8_1_127	MW-5	App. I Metals	Vanadium	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.818		Nonparametric
8_1_128	MW-5	App. I Metals	Zinc	ug/L	36	25	69%	0.849	0.042	0.236	0.088	0.977	0.949	0.129	0.875	0.161	>= 0.10	0.246	>= 0.10	0.620	Gamma; Lognormal; Normal	Nonparametric
8_2_105	MW-5	App. III	Boron	ug/L	35	15	43%	0.385	0.000	0.426	0.000	0.558	0.000	0.324	0.000	0.366	< 0.01	3.667	< 0.01	0.318	Nonparametric	Nonparametric
8_2_107	MW-5	App. III	Calcium	ug/L	36	0	0%	0.942	0.057	0.154	0.030	0.961	0.231	0.134	0.104	0.144	0.05 <= p < 0.10	0.596	>= 0.10	0.190	Gamma; Lognormal; Normal	Normal
8_2_108	MW-5	App. III	Chloride	mg/L	36	0	0%	0.946	0.080	0.114	0.275	0.948	0.092	0.111	0.321	0.114	>= 0.10	0.631	0.05 <= p < 0.10	0.079	Gamma; Lognormal; Normal	Normal
8_2_112	MW-5	App. III	Fluoride	mg/L	36	0	0%	0.974	0.544	0.093	0.592	0.970	0.432	0.111	0.316	0.107	>= 0.10	0.434	>= 0.10	0.112	Gamma; Lognormal; Normal	Normal
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	0.788	0.000	0.231	0.000	0.780	0.000	0.244	0.000	0.236	< 0.01	2.633	< 0.01	0.072	Nonparametric	Nonparametric
8_2_123	MW-5	App. III	Sulfate	mg/L	36	0	0%	0.901	0.004	0.123	0.185	0.950	0.101	0.132	0.116	0.133	>= 0.10	0.640	0.05 <= p < 0.10	0.166	Gamma; Lognormal; Normal	Normal
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.291	0.000	0.425	0.000	0.499	0.000	0.314	0.000	0.364	< 0.01	6.262	< 0.01	0.293	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal			Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
8_3_101	MW-5	App. IV	Antimony	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.895		Nonparametric
8_3_102	MW-5	App. IV	Arsenic	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.391		Nonparametric
8_3_103	MW-5	App. IV	Barium	ug/L	36	0	0%	0.955	0.152	0.119	0.217	0.982	0.809	0.094	0.580	0.100	>= 0.10	0.303	>= 0.10	0.148	Gamma; Lognormal; Normal	Normal
8_3_104	MW-5	App. IV	Beryllium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
8_3_106	MW-5	App. IV	Cadmium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
8_3_109	MW-5	App. IV	Chromium	ug/L	36	28	78%	0.474	0.000	0.471	0.000	0.866	0.136	0.216	0.331	0.346	0.01 <= p < 0.05	1.104	< 0.01	1.670	Lognormal	Nonparametric
8_3_110	MW-5	App. IV	Cobalt	ug/L	36	34	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.381		Nonparametric
8_3_112	MW-5	App. IV	Fluoride	mg/L	36	0	0%	0.974	0.544	0.093	0.592	0.970	0.432	0.111	0.316	0.107	>= 0.10	0.434	>= 0.10	0.112	Gamma; Lognormal; Normal	Normal
8_3_113	MW-5	App. IV	Lead	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	0.463	0.000	0.322	0.000	0.707	0.000	0.219	0.000	0.252	< 0.01	3.284	< 0.01	0.239	Nonparametric	Nonparametric
8_3_115	MW-5	App. IV	Mercury	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
8_3_116	MW-5	App. IV	Molybdenum	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.007		Nonparametric
8_3_119	MW-5	App. IV	Radium-226	pCi/L	34	0	0%	0.965	0.349	0.111	0.356	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
8_3_120	MW-5	App. IV	Radium-228	pCi/L	34	0	0%	0.939	0.057	0.109	0.380	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
8_3_121	MW-5	App. IV	Selenium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
8_3_124	MW-5	App. IV	Thallium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
8_3_126	MW-5	App. IV	Total Radium	pCi/L	34	0	0%	0.943	0.078	0.137	0.110	0.896	0.004	0.142	0.079	0.117	>= 0.10	0.682	0.05 <= p < 0.10	0.882	Gamma; Lognormal; Normal	Normal
9_1_111	MW-6	App. I Metals	Copper	ug/L	35	32	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.693		Nonparametric
9_1_117	MW-6	App. I Metals	Nickel	ug/L	35	26	74%	0.821	0.035	0.281	0.039	0.920	0.391	0.259	0.084	0.285	0.01 <= p < 0.05	0.519	>= 0.10	0.728	Gamma; Lognormal	Nonparametric
9_1_122	MW-6	App. I Metals	Silver	ug/L	35	35	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
9_1_127	MW-6	App. I Metals	Vanadium	ug/L	35	31	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.783		Nonparametric
9_1_128	MW-6	App. I Metals	Zinc	ug/L	35	26	74%	0.910	0.314	0.174	0.605	0.951	0.705	0.205	0.341	0.170	>= 0.10	0.250	>= 0.10	0.596	Gamma; Lognormal; Normal	Nonparametric
9_2_105	MW-6	App. III	Boron	ug/L	34	23	68%	0.955	0.708	0.159	0.612	0.964	0.826	0.140	0.792	0.146	>= 0.10	0.274	>= 0.10	0.167	Gamma; Lognormal; Normal	Nonparametric
9_2_107	MW-6	App. III	Calcium	ug/L	35	0	0%	0.979	0.729	0.106	0.414	0.985	0.893	0.093	0.619	0.098	>= 0.10	0.262	>= 0.10	0.066	Gamma; Lognormal; Normal	Normal
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	0.819	0.000	0.178	0.006	0.492	0.000	0.314	0.000	0.277	< 0.01	4.096	< 0.01	0.495	Nonparametric	Nonparametric
9_2_112	MW-6	App. III	Fluoride	mg/L	35	1	3%	0.953	0.154	0.094	0.627	0.875	0.001	0.114	0.312	0.103	>= 0.10	0.609	>= 0.10	0.184	Gamma; Lognormal; Normal	Normal
9_2_118	MW-6	App. III	pH (Field)	S.U.	32	0	0%	0.913	0.014	0.176	0.013	0.921	0.022	0.170	0.019	0.172	0.01 <= p < 0.05	0.851	0.01 <= p < 0.05	0.030	Nonparametric	Nonparametric
9_2_123	MW-6	App. III	Sulfate	mg/L	35	0	0%	0.726	0.000	0.305	0.000	0.790	0.000	0.322	0.000	0.326	< 0.01	3.316	< 0.01	0.725	Nonparametric	Nonparametric
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	35	0	0%	0.932	0.032	0.138	0.091	0.907	0.006	0.159	0.024	0.148	0.05 <= p < 0.10	0.944	0.01 <= p < 0.05	0.164	Gamma; Normal	Normal
9_3_101	MW-6	App. IV	Antimony	ug/L	35	35	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
9_3_102	MW-6	App. IV	Arsenic	ug/L	35	33	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.076		Nonparametric
9_3_103	MW-6	App. IV	Barium	ug/L	35	0	0%	0.911	0.008	0.186	0.004	0.925	0.020	0.155	0.032	0.168	0.01 <= p < 0.05	1.069	< 0.01	0.364	Nonparametric	Nonparametric
9_3_104	MW-6	App. IV	Beryllium	ug/L	35	34	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
9_3_106	MW-6	App. IV	Cadmium	ug/L	35	35	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
9_3_109	MW-6	App. IV	Chromium	ug/L	35	28	80%	0.852	0.128	0.275	0.113	0.959	0.811	0.178	0.721	0.174	>= 0.10	0.211	>= 0.10	0.974	Gamma; Lognormal; Normal	Nonparametric
9_3_110	MW-6	App. IV	Cobalt	ug/L	35	34	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
9_3_112	MW-6	App. IV	Fluoride	mg/L	35	1	3%	0.953	0.154	0.094	0.627	0.875	0.001	0.114	0.312	0.103	>= 0.10	0.609	>= 0.10	0.184	Gamma; Lognormal; Normal	Normal
9_3_113	MW-6	App. IV	Lead	ug/L	35	33	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.325		Nonparametric
9_3_114	MW-6	App. IV	Lithium	ug/L	35	0	0%	0.909	0.007	0.202	0.001	0.924	0.019	0.134	0.112	0.157	0.01 <= p < 0.05	1.005	0.01 <= p < 0.05	0.360	Lognormal	Lognormal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
9_3_115	MW-6	App. IV	Mercury	ug/L	35	34	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
9_3_116	MW-6	App. IV	Molybdenum	ug/L	35	30	86%	0.860	0.230	0.288	0.190	0.657	0.003	0.421	0.004	0.417	0.01 <= p < 0.05	0.880	0.01 <= p < 0.05	1.582	Normal	Nonparametric
9_3_119	MW-6	App. IV	Radium-226	pCi/L	33	0	0%	0.966	0.367	0.089	0.722	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
9_3_120	MW-6	App. IV	Radium-228	pCi/L	33	0	0%	0.981	0.809	0.075	0.907	NA	NA	NA	NA	NA		NA		NA	Normal	Normal
9_3_121	MW-6	App. IV	Selenium	ug/L	35	33	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.685		Nonparametric
9_3_124	MW-6	App. IV	Thallium	ug/L	35	32	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.899		Nonparametric
9_3_126	MW-6	App. IV	Total Radium	pCi/L	33	0	0%	0.964	0.342	0.097	0.592	0.834	0.000	0.178	0.010	0.164	0.01 <= p < 0.05	0.915	0.01 <= p < 0.05	0.844	Normal	Normal

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 4: Autocorrelation Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
10_1_111	MW-7R	App. I Metals	Copper	ug/L	26	20	77%	-0.047	0.883	
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	26	12	46%	-0.057	0.813	
10_1_127	MW-7R	App. I Metals	Vanadium	ug/L	26	15	58%	0.658	0.013	*
10_1_128	MW-7R	App. I Metals	Zinc	ug/L	26	21	81%	0.088	0.794	
10_2_105	MW-7R	App. III	Boron	ug/L	25	12	48%	0.291	0.240	
10_2_107	MW-7R	App. III	Calcium	ug/L	26	0	0%	0.455	0.014	*
10_2_108	MW-7R	App. III	Chloride	mg/L	26	0	0%	-0.083	0.655	
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	0.040	0.832	
10_2_118	MW-7R	App. III	pH (Field)	S.U.	26	0	0%	0.102	0.580	
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	0.199	0.284	
10_2_125	MW-7R	App. III	Total Dissolved Solids	mg/L	26	0	0%	0.017	0.926	
10_3_101	MW-7R	App. IV	Antimony	ug/L	26	25	96%	NA	NA	
10_3_102	MW-7R	App. IV	Arsenic	ug/L	26	24	92%	-0.500	0.157	
10_3_103	MW-7R	App. IV	Barium	ug/L	26	0	0%	0.365	0.049	*
10_3_109	MW-7R	App. IV	Chromium	ug/L	26	8	31%	-0.046	0.833	
10_3_110	MW-7R	App. IV	Cobalt	ug/L	26	21	81%	0.190	0.575	
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	0.040	0.832	
10_3_113	MW-7R	App. IV	Lead	ug/L	26	23	88%	-0.159	0.663	
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	0.222	0.232	
10_3_116	MW-7R	App. IV	Molybdenum	ug/L	26	22	85%	-0.089	0.800	
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	24	0	0%	0.015	0.936	
10_3_120	MW-7R	App. IV	Radium-228	pCi/L	24	0	0%	0.020	0.916	
10_3_121	MW-7R	App. IV	Selenium	ug/L	26	25	96%	NA	NA	
10_3_124	MW-7R	App. IV	Thallium	ug/L	26	23	88%	-0.153	0.675	
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	24	0	0%	0.032	0.867	
11_1_111	MW-8	App. I Metals	Copper	ug/L	36	30	83%	-0.306	0.343	
11_1_117	MW-8	App. I Metals	Nickel	ug/L	36	19	53%	-0.146	0.511	
11_1_122	MW-8	App. I Metals	Silver	ug/L	36	35	97%	NA	NA	
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	36	30	83%	-0.232	0.472	
11_1_128	MW-8	App. I Metals	Zinc	ug/L	36	24	67%	-0.296	0.247	
11_2_105	MW-8	App. III	Boron	ug/L	35	15	43%	0.408	0.050	*
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	0.191	0.233	
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	0.593	0.000	***
11_2_112	MW-8	App. III	Fluoride	mg/L	36	20	56%	0.596	0.009	**
11_2_118	MW-8	App. III	pH (Field)	S.U.	34	0	0%	0.265	0.107	
11_2_123	MW-8	App. III	Sulfate	mg/L	36	0	0%	0.590	0.000	***
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.103	0.518	
11_3_101	MW-8	App. IV	Antimony	ug/L	36	29	81%	0.016	0.957	
11_3_102	MW-8	App. IV	Arsenic	ug/L	36	32	89%	-0.181	0.609	
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	0.246	0.123	
11_3_104	MW-8	App. IV	Beryllium	ug/L	36	35	97%	NA	NA	
11_3_106	MW-8	App. IV	Cadmium	ug/L	36	35	97%	NA	NA	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
11_3_109	MW-8	App. IV	Chromium	ug/L	36	19	53%	-0.162	0.466	
11_3_110	MW-8	App. IV	Cobalt	ug/L	36	33	92%	-0.047	0.898	
11_3_112	MW-8	App. IV	Fluoride	mg/L	36	20	56%	0.596	0.009	**
11_3_113	MW-8	App. IV	Lead	ug/L	36	35	97%	NA	NA	
11_3_114	MW-8	App. IV	Lithium	ug/L	36	1	3%	0.446	0.006	**
11_3_115	MW-8	App. IV	Mercury	ug/L	36	35	97%	NA	NA	
11_3_116	MW-8	App. IV	Molybdenum	ug/L	36	33	92%	-0.120	0.743	
11_3_119	MW-8	App. IV	Radium-226	pCi/L	34	0	0%	0.028	0.863	
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	-0.098	0.552	
11_3_121	MW-8	App. IV	Selenium	ug/L	36	34	94%	-0.500	0.157	
11_3_124	MW-8	App. IV	Thallium	ug/L	36	35	97%	NA	NA	
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	-0.063	0.700	
1_1_111	MW-1	App. I Metals	Copper	ug/L	36	32	89%	-0.051	0.885	
1_1_117	MW-1	App. I Metals	Nickel	ug/L	36	27	75%	0.177	0.534	
1_1_122	MW-1	App. I Metals	Silver	ug/L	36	32	89%	0.074	0.835	
1_1_127	MW-1	App. I Metals	Vanadium	ug/L	36	24	67%	0.084	0.742	
1_1_128	MW-1	App. I Metals	Zinc	ug/L	36	25	69%	-0.407	0.124	
1_2_105	MW-1	App. III	Boron	ug/L	35	22	63%	-0.052	0.835	
1_2_107	MW-1	App. III	Calcium	ug/L	36	0	0%	0.612	0.000	***
1_2_108	MW-1	App. III	Chloride	mg/L	36	0	0%	0.420	0.009	**
1_2_112	MW-1	App. III	Fluoride	mg/L	36	1	3%	0.385	0.017	*
1_2_118	MW-1	App. III	pH (Field)	S.U.	34	0	0%	0.190	0.247	
1_2_123	MW-1	App. III	Sulfate	mg/L	36	0	0%	0.706	0.000	***
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.645	0.000	***
1_3_101	MW-1	App. IV	Antimony	ug/L	36	34	94%	-0.500	0.157	
1_3_102	MW-1	App. IV	Arsenic	ug/L	36	34	94%	-0.500	0.157	
1_3_103	MW-1	App. IV	Barium	ug/L	36	0	0%	0.517	0.001	**
1_3_106	MW-1	App. IV	Cadmium	ug/L	36	33	92%	-0.667	0.068	
1_3_109	MW-1	App. IV	Chromium	ug/L	36	26	72%	0.159	0.561	
1_3_110	MW-1	App. IV	Cobalt	ug/L	36	34	94%	-0.500	0.157	
1_3_112	MW-1	App. IV	Fluoride	mg/L	36	1	3%	0.385	0.017	*
1_3_113	MW-1	App. IV	Lead	ug/L	36	33	92%	-0.290	0.427	
1_3_114	MW-1	App. IV	Lithium	ug/L	36	0	0%	0.363	0.023	*
1_3_116	MW-1	App. IV	Molybdenum	ug/L	36	31	86%	0.489	0.148	
1_3_119	MW-1	App. IV	Radium-226	pCi/L	34	0	0%	0.149	0.364	
1_3_120	MW-1	App. IV	Radium-228	pCi/L	34	0	0%	-0.105	0.524	
1_3_121	MW-1	App. IV	Selenium	ug/L	36	34	94%	-0.500	0.157	
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	0.026	0.872	
2_1_111	MW-10	App. I Metals	Copper	ug/L	12	8	67%	-0.463	0.191	
2_1_117	MW-10	App. I Metals	Nickel	ug/L	12	4	33%	-0.297	0.315	
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	12	5	42%	-0.275	0.373	
2_1_128	MW-10	App. I Metals	Zinc	ug/L	12	10	83%	-0.500	0.157	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	-0.082	0.749	
2_2_107	MW-10	App. III	Calcium	ug/L	12	0	0%	0.201	0.433	
2_2_108	MW-10	App. III	Chloride	mg/L	12	0	0%	-0.537	0.036	*
2_2_112	MW-10	App. III	Fluoride	mg/L	12	0	0%	0.084	0.742	
2_2_118	MW-10	App. III	pH (Field)	S.U.	13	0	0%	-0.302	0.224	
2_2_123	MW-10	App. III	Sulfate	mg/L	12	0	0%	0.710	0.006	**
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	12	0	0%	0.309	0.227	
2_3_101	MW-10	App. IV	Antimony	ug/L	12	11	92%	NA	NA	
2_3_102	MW-10	App. IV	Arsenic	ug/L	12	10	83%	-0.500	0.157	
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	0.249	0.330	
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	-0.307	0.281	
2_3_110	MW-10	App. IV	Cobalt	ug/L	12	10	83%	-0.500	0.157	
2_3_112	MW-10	App. IV	Fluoride	mg/L	12	0	0%	0.084	0.742	
2_3_113	MW-10	App. IV	Lead	ug/L	12	10	83%	-0.500	0.157	
2_3_114	MW-10	App. IV	Lithium	ug/L	12	0	0%	0.573	0.025	*
2_3_116	MW-10	App. IV	Molybdenum	ug/L	12	0	0%	0.690	0.007	**
2_3_119	MW-10	App. IV	Radium-226	pCi/L	12	0	0%	0.166	0.516	
2_3_120	MW-10	App. IV	Radium-228	pCi/L	12	0	0%	-0.124	0.627	
2_3_121	MW-10	App. IV	Selenium	ug/L	12	10	83%	-0.500	0.157	
2_3_124	MW-10	App. IV	Thallium	ug/L	12	11	92%	NA	NA	
2_3_126	MW-10	App. IV	Total Radium	pCi/L	12	0	0%	-0.035	0.890	
3_1_111	MW-11	App. I Metals	Copper	ug/L	15	10	67%	-0.126	0.709	
3_1_117	MW-11	App. I Metals	Nickel	ug/L	15	9	60%	-0.143	0.658	
3_1_127	MW-11	App. I Metals	Vanadium	ug/L	15	12	80%	-0.109	0.764	
3_1_128	MW-11	App. I Metals	Zinc	ug/L	15	13	87%	-0.500	0.157	
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	-0.130	0.589	
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	-0.148	0.529	
3_2_108	MW-11	App. III	Chloride	mg/L	15	0	0%	0.035	0.882	
3_2_112	MW-11	App. III	Fluoride	mg/L	15	1	7%	0.401	0.096	
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	-0.100	0.677	
3_2_123	MW-11	App. III	Sulfate	mg/L	15	0	0%	-0.262	0.263	
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	-0.026	0.910	
3_3_101	MW-11	App. IV	Antimony	ug/L	15	13	87%	-0.500	0.157	
3_3_102	MW-11	App. IV	Arsenic	ug/L	15	13	87%	-0.500	0.157	
3_3_103	MW-11	App. IV	Barium	ug/L	15	0	0%	-0.053	0.821	
3_3_109	MW-11	App. IV	Chromium	ug/L	15	12	80%	-0.108	0.768	
3_3_110	MW-11	App. IV	Cobalt	ug/L	15	11	73%	-0.592	0.094	
3_3_112	MW-11	App. IV	Fluoride	mg/L	15	1	7%	0.401	0.096	
3_3_113	MW-11	App. IV	Lead	ug/L	15	14	93%	NA	NA	
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	-0.042	0.857	
3_3_116	MW-11	App. IV	Molybdenum	ug/L	15	13	87%	-0.500	0.157	
3_3_119	MW-11	App. IV	Radium-226	pCi/L	15	0	0%	-0.095	0.684	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	-0.346	0.139	
3_3_124	MW-11	App. IV	Thallium	ug/L	15	14	93%	NA	NA	
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	-0.164	0.483	
4_1_111	MW-11D	App. I Metals	Copper	ug/L	13	10	77%	-0.130	0.723	
4_1_117	MW-11D	App. I Metals	Nickel	ug/L	13	9	69%	-0.014	0.968	
4_1_127	MW-11D	App. I Metals	Vanadium	ug/L	13	10	77%	-0.063	0.863	
4_1_128	MW-11D	App. I Metals	Zinc	ug/L	13	10	77%	-0.660	0.071	
4_2_105	MW-11D	App. III	Boron	ug/L	13	0	0%	-0.051	0.838	
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	-0.069	0.782	
4_2_108	MW-11D	App. III	Chloride	mg/L	13	0	0%	0.183	0.460	
4_2_112	MW-11D	App. III	Fluoride	mg/L	13	0	0%	-0.165	0.507	
4_2_118	MW-11D	App. III	pH (Field)	S.U.	13	0	0%	0.562	0.023	*
4_2_123	MW-11D	App. III	Sulfate	mg/L	13	1	8%	0.337	0.188	
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	13	0	0%	0.187	0.450	
4_3_101	MW-11D	App. IV	Antimony	ug/L	13	11	85%	-0.500	0.157	
4_3_102	MW-11D	App. IV	Arsenic	ug/L	13	5	38%	-0.166	0.576	
4_3_103	MW-11D	App. IV	Barium	ug/L	13	0	0%	0.202	0.417	
4_3_104	MW-11D	App. IV	Beryllium	ug/L	13	12	92%	NA	NA	
4_3_109	MW-11D	App. IV	Chromium	ug/L	13	10	77%	-0.047	0.898	
4_3_110	MW-11D	App. IV	Cobalt	ug/L	13	12	92%	NA	NA	
4_3_112	MW-11D	App. IV	Fluoride	mg/L	13	0	0%	-0.165	0.507	
4_3_113	MW-11D	App. IV	Lead	ug/L	13	12	92%	NA	NA	
4_3_114	MW-11D	App. IV	Lithium	ug/L	13	0	0%	0.464	0.061	
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	0.137	0.581	
4_3_119	MW-11D	App. IV	Radium-226	pCi/L	13	0	0%	0.425	0.086	
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	13	0	0%	0.046	0.854	
4_3_121	MW-11D	App. IV	Selenium	ug/L	13	12	92%	NA	NA	
4_3_124	MW-11D	App. IV	Thallium	ug/L	13	12	92%	NA	NA	
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	13	0	0%	0.172	0.489	
5_1_111	MW-2	App. I Metals	Copper	ug/L	31	15	48%	0.245	0.283	
5_1_117	MW-2	App. I Metals	Nickel	ug/L	31	12	39%	-0.167	0.431	
5_1_122	MW-2	App. I Metals	Silver	ug/L	31	29	94%	-0.500	0.157	
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	31	22	71%	-0.073	0.799	
5_1_128	MW-2	App. I Metals	Zinc	ug/L	31	16	52%	-0.171	0.466	
5_2_105	MW-2	App. III	Boron	ug/L	30	1	3%	0.132	0.453	
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	0.064	0.708	
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	0.263	0.124	
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	0.040	0.821	
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	-0.137	0.451	
5_2_123	MW-2	App. III	Sulfate	mg/L	31	0	0%	0.827	0.000	***
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	0.000	0.999	
5_3_101	MW-2	App. IV	Antimony	ug/L	31	18	58%	0.474	0.056	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
5_3_102	MW-2	App. IV	Arsenic	ug/L	31	22	71%	-0.263	0.354	
5_3_103	MW-2	App. IV	Barium	ug/L	31	0	0%	-0.059	0.730	
5_3_104	MW-2	App. IV	Beryllium	ug/L	31	29	94%	-0.500	0.157	
5_3_106	MW-2	App. IV	Cadmium	ug/L	31	29	94%	-0.500	0.157	
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	-0.101	0.593	
5_3_110	MW-2	App. IV	Cobalt	ug/L	31	26	84%	-0.332	0.325	
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	0.040	0.821	
5_3_113	MW-2	App. IV	Lead	ug/L	31	27	87%	-0.236	0.505	
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	0.264	0.123	
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	0.025	0.892	
5_3_119	MW-2	App. IV	Radium-226	pCi/L	30	0	0%	-0.238	0.172	
5_3_120	MW-2	App. IV	Radium-228	pCi/L	30	0	0%	0.183	0.292	
5_3_121	MW-2	App. IV	Selenium	ug/L	31	29	94%	-0.500	0.157	
5_3_124	MW-2	App. IV	Thallium	ug/L	31	23	74%	-0.022	0.940	
5_3_126	MW-2	App. IV	Total Radium	pCi/L	30	0	0%	-0.132	0.449	
6_1_111	MW-3	App. I Metals	Copper	ug/L	34	21	62%	0.131	0.598	
6_1_117	MW-3	App. I Metals	Nickel	ug/L	34	19	56%	0.337	0.151	
6_1_122	MW-3	App. I Metals	Silver	ug/L	34	33	97%	NA	NA	
6_1_127	MW-3	App. I Metals	Vanadium	ug/L	34	22	65%	0.495	0.053	
6_1_128	MW-3	App. I Metals	Zinc	ug/L	34	27	79%	0.287	0.353	
6_2_105	MW-3	App. III	Boron	ug/L	33	10	30%	0.483	0.014	*
6_2_107	MW-3	App. III	Calcium	ug/L	34	0	0%	0.495	0.003	**
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	0.547	0.001	***
6_2_112	MW-3	App. III	Fluoride	mg/L	34	1	3%	0.668	0.000	***
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	-0.206	0.236	
6_2_123	MW-3	App. III	Sulfate	mg/L	34	0	0%	0.857	0.000	***
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	0.175	0.285	
6_3_101	MW-3	App. IV	Antimony	ug/L	34	23	68%	0.584	0.027	*
6_3_102	MW-3	App. IV	Arsenic	ug/L	34	28	82%	-0.186	0.564	
6_3_103	MW-3	App. IV	Barium	ug/L	34	0	0%	0.547	0.001	***
6_3_106	MW-3	App. IV	Cadmium	ug/L	34	33	97%	NA	NA	
6_3_109	MW-3	App. IV	Chromium	ug/L	34	17	50%	-0.088	0.692	
6_3_110	MW-3	App. IV	Cobalt	ug/L	34	30	88%	-0.308	0.384	
6_3_112	MW-3	App. IV	Fluoride	mg/L	34	1	3%	0.668	0.000	***
6_3_113	MW-3	App. IV	Lead	ug/L	34	31	91%	-0.079	0.829	
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	0.038	0.817	
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	-0.010	0.952	
6_3_119	MW-3	App. IV	Radium-226	pCi/L	33	0	0%	-0.293	0.078	
6_3_120	MW-3	App. IV	Radium-228	pCi/L	33	0	0%	0.319	0.055	
6_3_121	MW-3	App. IV	Selenium	ug/L	34	33	97%	NA	NA	
6_3_126	MW-3	App. IV	Total Radium	pCi/L	33	0	0%	0.083	0.619	
7_1_111	MW-4	App. I Metals	Copper	ug/L	35	31	89%	-0.302	0.392	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
7_1_117	MW-4	App. I Metals	Nickel	ug/L	35	11	31%	0.162	0.399	
7_1_127	MW-4	App. I Metals	Vanadium	ug/L	35	31	89%	0.009	0.979	
7_1_128	MW-4	App. I Metals	Zinc	ug/L	35	24	69%	-0.149	0.573	
7_2_105	MW-4	App. III	Boron	ug/L	34	22	65%	-0.104	0.684	
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	0.713	0.000	***
7_2_108	MW-4	App. III	Chloride	mg/L	35	0	0%	0.762	0.000	***
7_2_112	MW-4	App. III	Fluoride	mg/L	35	0	0%	0.482	0.003	**
7_2_118	MW-4	App. III	pH (Field)	S.U.	33	0	0%	0.312	0.061	
7_2_123	MW-4	App. III	Sulfate	mg/L	35	0	0%	0.693	0.000	***
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	0.611	0.000	***
7_3_101	MW-4	App. IV	Antimony	ug/L	35	30	86%	0.172	0.612	
7_3_102	MW-4	App. IV	Arsenic	ug/L	35	33	94%	-0.500	0.157	
7_3_103	MW-4	App. IV	Barium	ug/L	35	0	0%	0.721	0.000	***
7_3_106	MW-4	App. IV	Cadmium	ug/L	35	34	97%	NA	NA	
7_3_109	MW-4	App. IV	Chromium	ug/L	35	27	77%	0.050	0.865	
7_3_110	MW-4	App. IV	Cobalt	ug/L	35	20	57%	-0.130	0.580	
7_3_112	MW-4	App. IV	Fluoride	mg/L	35	0	0%	0.482	0.003	**
7_3_113	MW-4	App. IV	Lead	ug/L	35	34	97%	NA	NA	
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	0.134	0.408	
7_3_116	MW-4	App. IV	Molybdenum	ug/L	35	30	86%	-0.150	0.657	
7_3_119	MW-4	App. IV	Radium-226	pCi/L	33	0	0%	0.397	0.017	*
7_3_120	MW-4	App. IV	Radium-228	pCi/L	33	0	0%	0.198	0.235	
7_3_121	MW-4	App. IV	Selenium	ug/L	35	33	94%	-0.500	0.157	
7_3_126	MW-4	App. IV	Total Radium	pCi/L	33	0	0%	0.359	0.031	*
8_1_111	MW-5	App. I Metals	Copper	ug/L	36	28	78%	0.196	0.508	
8_1_117	MW-5	App. I Metals	Nickel	ug/L	36	29	81%	-0.150	0.628	
8_1_127	MW-5	App. I Metals	Vanadium	ug/L	36	33	92%	-0.057	0.875	
8_1_128	MW-5	App. I Metals	Zinc	ug/L	36	25	69%	0.393	0.137	
8_2_105	MW-5	App. III	Boron	ug/L	35	15	43%	-0.038	0.854	
8_2_107	MW-5	App. III	Calcium	ug/L	36	0	0%	0.543	0.001	***
8_2_108	MW-5	App. III	Chloride	mg/L	36	0	0%	0.501	0.002	**
8_2_112	MW-5	App. III	Fluoride	mg/L	36	0	0%	0.077	0.629	
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	-0.564	0.001	***
8_2_123	MW-5	App. III	Sulfate	mg/L	36	0	0%	0.300	0.060	
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	-0.001	0.996	
8_3_101	MW-5	App. IV	Antimony	ug/L	36	34	94%	-0.500	0.157	
8_3_102	MW-5	App. IV	Arsenic	ug/L	36	34	94%	-0.500	0.157	
8_3_103	MW-5	App. IV	Barium	ug/L	36	0	0%	0.246	0.124	
8_3_109	MW-5	App. IV	Chromium	ug/L	36	28	78%	-0.142	0.632	
8_3_110	MW-5	App. IV	Cobalt	ug/L	36	34	94%	-0.500	0.157	
8_3_112	MW-5	App. IV	Fluoride	mg/L	36	0	0%	0.077	0.629	
8_3_113	MW-5	App. IV	Lead	ug/L	36	35	97%	NA	NA	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	0.054	0.739	
8_3_116	MW-5	App. IV	Molybdenum	ug/L	36	33	92%	-0.025	0.946	
8_3_119	MW-5	App. IV	Radium-226	pCi/L	34	0	0%	-0.384	0.019	*
8_3_120	MW-5	App. IV	Radium-228	pCi/L	34	0	0%	-0.138	0.401	
8_3_121	MW-5	App. IV	Selenium	ug/L	36	35	97%	NA	NA	
8_3_124	MW-5	App. IV	Thallium	ug/L	36	35	97%	NA	NA	
8_3_126	MW-5	App. IV	Total Radium	pCi/L	34	0	0%	-0.043	0.792	
9_1_111	MW-6	App. I Metals	Copper	ug/L	35	32	91%	-0.663	0.069	
9_1_117	MW-6	App. I Metals	Nickel	ug/L	35	26	74%	0.227	0.425	
9_1_127	MW-6	App. I Metals	Vanadium	ug/L	35	31	89%	-0.213	0.547	
9_1_128	MW-6	App. I Metals	Zinc	ug/L	35	26	74%	-0.347	0.223	
9_2_105	MW-6	App. III	Boron	ug/L	34	23	68%	-0.521	0.049	*
9_2_107	MW-6	App. III	Calcium	ug/L	35	0	0%	0.311	0.055	
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	0.170	0.295	
9_2_112	MW-6	App. III	Fluoride	mg/L	35	1	3%	0.172	0.294	
9_2_118	MW-6	App. III	pH (Field)	S.U.	32	0	0%	0.417	0.014	*
9_2_123	MW-6	App. III	Sulfate	mg/L	35	0	0%	0.571	0.000	***
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	35	0	0%	-0.028	0.863	
9_3_102	MW-6	App. IV	Arsenic	ug/L	35	33	94%	-0.500	0.157	
9_3_103	MW-6	App. IV	Barium	ug/L	35	0	0%	0.727	0.000	***
9_3_104	MW-6	App. IV	Beryllium	ug/L	35	34	97%	NA	NA	
9_3_109	MW-6	App. IV	Chromium	ug/L	35	28	80%	0.172	0.578	
9_3_110	MW-6	App. IV	Cobalt	ug/L	35	34	97%	NA	NA	
9_3_112	MW-6	App. IV	Fluoride	mg/L	35	1	3%	0.172	0.294	
9_3_113	MW-6	App. IV	Lead	ug/L	35	33	94%	-0.500	0.157	
9_3_114	MW-6	App. IV	Lithium	ug/L	35	0	0%	0.698	0.000	***
9_3_115	MW-6	App. IV	Mercury	ug/L	35	34	97%	NA	NA	
9_3_116	MW-6	App. IV	Molybdenum	ug/L	35	30	86%	0.127	0.707	
9_3_119	MW-6	App. IV	Radium-226	pCi/L	33	0	0%	-0.064	0.701	
9_3_120	MW-6	App. IV	Radium-228	pCi/L	33	0	0%	-0.306	0.066	
9_3_121	MW-6	App. IV	Selenium	ug/L	35	33	94%	-0.500	0.157	
9_3_124	MW-6	App. IV	Thallium	ug/L	35	32	91%	-0.164	0.653	
9_3_126	MW-6	App. IV	Total Radium	pCi/L	33	0	0%	-0.135	0.418	

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 5: Outlier Counts by Date

Date	Count
2015-11-19	4
2015-11-20	1
2016-01-05	1
2016-02-17	1
2016-04-05	1
2016-04-07	3
2016-05-25	2
2016-05-27	1
2016-07-12	2
2017-01-23	1
2017-01-24	1
2017-04-05	2
2017-07-18	2
2017-07-20	6
2017-10-17	2
2017-10-18	1
2018-01-24	1
2018-01-25	1
2018-07-17	1
2018-10-25	1
2019-01-25	2
2019-07-10	4
2020-01-16	2
2020-01-17	2
2020-04-15	1
2020-04-17	1
2020-07-07	2
2020-10-14	1
2021-01-27	1
2021-01-28	1
2021-01-29	1
2021-04-13	2
2021-04-15	1
2021-08-09	1
2021-08-10	1
2021-08-12	8
2021-11-18	1
2022-04-20	1
2022-04-21	1
2022-07-12	2
2022-07-13	3
2022-07-14	1
2022-10-19	1

(Table continues on next page)

Table 5: Outlier Counts by Date *(continued)*

Date	Count
2023-04-24	2
2023-04-27	7
2023-10-02	1
2023-10-04	10
2024-01-24	5
2024-01-26	2

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
10_1_111	MW-7R	App. I Metals	Copper	ug/L	26	20	77%	6	2019-07-10	1	79.3
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	26	12	46%	14	2019-07-10	1	880
10_2_108	MW-7R	App. III	Chloride	mg/L	26	0	0%	26	2022-07-14	7	194
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	25	2017-07-20	NA	0.320
10_2_118	MW-7R	App. III	pH (Field)	S.U.	26	0	0%	26	2017-07-20	NA	9.60
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	26	2017-07-20	NA	51.2
10_3_103	MW-7R	App. IV	Barium	ug/L	26	0	0%	26	2017-07-20	NA	50.1
10_3_109	MW-7R	App. IV	Chromium	ug/L	26	8	31%	18	2019-07-10	1	1940
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	25	2017-07-20	NA	0.320
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	26	2017-07-20	NA	5.60
11_1_111	MW-8	App. I Metals	Copper	ug/L	36	30	83%	6	2023-04-27	1	116
11_1_117	MW-8	App. I Metals	Nickel	ug/L	36	19	53%	17	2023-04-27	1	157
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	36	30	83%	6	2023-04-27	1	9.50
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	36	2021-01-27	10	4170
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	36	2015-11-20	NA	939
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	36	2023-04-27	10	1880
11_3_119	MW-8	App. IV	Radium-226	pCi/L	34	0	0%	34	2023-04-27	1	2.51
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	34	2023-04-27	1	4.72
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	34	2023-04-27	1	7.23
1_2_105	MW-1	App. III	Boron	ug/L	35	22	63%	13	2023-10-04	1	44.6
1_3_106	MW-1	App. IV	Cadmium	ug/L	36	33	92%	3	2020-10-14	1	0.670
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	34	2019-07-10	1	2.48
2_1_111	MW-10	App. I Metals	Copper	ug/L	12	8	67%	4	2022-04-21	1	103
2_1_117	MW-10	App. I Metals	Nickel	ug/L	12	4	33%	8	2023-10-04	1	27.9
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	12	5	42%	7	2023-10-04	1	18.2
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	12	2023-10-04	1	43.4
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	12	2023-10-04	1	195
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	9	2023-10-04	1	56.7
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	14	2023-10-02	1	25.2
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	15	2024-01-24	1	69400
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	14	2024-01-24	NA	11.7
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	15	2021-01-29	1	2760

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
3_3_103	MW-11	App. IV	Barium	ug/L	15	0	0%	15	2024-01-24	1	130
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	15	2024-01-24	1	19.5
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	15	2021-04-13	1	2.13
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	15	2021-04-13	1	2.39
4_1_117	MW-11D	App. I Metals	Nickel	ug/L	13	9	69%	4	2022-07-13	1	6.20
4_2_105	MW-11D	App. III	Boron	ug/L	13	0	0%	13	2021-08-12	2	109
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	13	2021-08-12	1	94400
4_2_108	MW-11D	App. III	Chloride	mg/L	13	0	0%	13	2021-08-12	12	530
4_2_112	MW-11D	App. III	Fluoride	mg/L	13	0	0%	13	2023-04-24	1	0.640
4_2_123	MW-11D	App. III	Sulfate	mg/L	13	1	8%	12	2021-08-12	12	523
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	13	0	0%	13	2021-08-12	1	1740
4_3_112	MW-11D	App. IV	Fluoride	mg/L	13	0	0%	13	2023-04-24	1	0.640
4_3_114	MW-11D	App. IV	Lithium	ug/L	13	0	0%	13	2021-08-12	2	80.7
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	13	2021-08-12	1	127
5_1_111	MW-2	App. I Metals	Copper	ug/L	31	15	48%	16	2021-11-18	1	294
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	31	22	71%	9	2023-10-04	1	37.2
5_1_128	MW-2	App. I Metals	Zinc	ug/L	31	16	52%	15	2023-10-04	1	225
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	31	2024-01-26	1	34300
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	31	2024-01-26	11	489
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	31	2022-07-12	26	552
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	29	2017-07-18	NA	0.400
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	27	2024-01-24	NA	9.29
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	27	2016-07-12	NA	8.50
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	31	2020-01-17	1	11700
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	31	2015-11-19	NA	257
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	31	2021-01-28	1	428
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	25	2022-10-19	1	130
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	25	2018-10-25	1	84.0
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	25	2018-01-25	NA	56.8
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	25	2017-04-05	NA	48.8
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	25	2023-10-04	1	46.2
5_3_110	MW-2	App. IV	Cobalt	ug/L	31	26	84%	5	2023-10-04	1	34.8
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	29	2017-07-18	NA	0.400
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	31	2021-08-10	5	512
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	31	2016-07-12	NA	356
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	31	2016-05-27	NA	350
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	26	2020-01-17	1	41.0
5_3_124	MW-2	App. IV	Thallium	ug/L	31	23	74%	8	2016-02-17	NA	10.3
6_1_111	MW-3	App. I Metals	Copper	ug/L	34	21	62%	13	2022-04-20	1	137
6_1_117	MW-3	App. I Metals	Nickel	ug/L	34	19	56%	15	2019-01-25	1	86.0
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	34	2022-07-12	25	565
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	30	2020-07-07	NA	6.18
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	34	2015-11-19	NA	256

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	34	2017-01-24	NA	303
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	34	2018-01-24	NA	1060
6_3_109	MW-3	App. IV	Chromium	ug/L	34	17	50%	17	2019-01-25	1	179
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	33	2017-10-18	NA	236
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	33	2016-04-07	NA	217
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	33	2018-07-17	NA	36.7
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	33	2017-04-05	NA	129
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	33	2015-11-19	NA	128
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	34	2020-01-16	1	35.7
7_1_128	MW-4	App. I Metals	Zinc	ug/L	35	24	69%	11	2020-04-17	1	47.2
7_2_105	MW-4	App. III	Boron	ug/L	34	22	65%	12	2017-10-17	NA	165
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	35	2016-04-07	NA	17900
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	35	2016-05-25	NA	18600
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	35	2015-11-19	NA	395
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	35	2016-05-25	NA	486
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	35	2016-04-07	NA	513
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	35	2021-08-12	5	98.0
8_1_117	MW-5	App. I Metals	Nickel	ug/L	36	29	81%	7	2022-07-13	1	120
8_2_105	MW-5	App. III	Boron	ug/L	35	15	43%	20	2017-01-23	NA	39.3
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	33	2020-04-15	NA	8.54
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	33	2020-07-07	NA	5.50
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	33	2020-01-16	NA	5.62
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	36	2017-10-17	NA	1160
8_3_109	MW-5	App. IV	Chromium	ug/L	36	28	78%	8	2022-07-13	1	260
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	35	2021-08-09	1	28.6
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	35	2016-04-05	NA	15.3
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	35	2021-04-15	4	80.3
9_3_124	MW-6	App. IV	Thallium	ug/L	35	32	91%	3	2016-01-05	NA	6.20

Table 7: Seasonality Tests

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
10_1_111	MW-7R	App. I Metals	Copper	ug/L	77%	7	6	7	6	26	0.086	0.500	0.209	2	1	1	2	6	0.370	0.029 *	0.313
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	46%	7	6	7	6	26	0.041 *	0.453	0.170	3	3	5	3	14	0.343	0.669	0.483
10_1_122	MW-7R	App. I Metals	Silver	ug/L	100%	7	6	7	6	26	0.834	0.800	0.473	NA	NA	NA	NA	NA	NA	NA	NA
10_1_127	MW-7R	App. I Metals	Vanadium	ug/L	58%	7	6	7	6	26	0.042 *	0.126	0.054	2	2	5	2	11	0.203	0.508	0.373
10_1_128	MW-7R	App. I Metals	Zinc	ug/L	81%	7	6	7	6	26	0.061	0.339	0.087	1	2	1	1	5	0.284	0.016 *	0.083
10_2_105	MW-7R	App. III	Boron	ug/L	48%	6	6	7	6	25	0.249	0.165	0.201	5	3	3	2	13	0.271	0.173	0.200
10_2_107	MW-7R	App. III	Calcium	ug/L	0%	7	6	7	6	26	0.462	0.662	0.691	7	6	7	6	26	0.462	0.662	0.691
10_2_108	MW-7R	App. III	Chloride	mg/L	0%	7	6	7	6	26	0.197	0.293	0.299	7	6	7	6	26	0.197	0.293	0.299
10_2_112	MW-7R	App. III	Fluoride	mg/L	4%	7	6	7	6	26	0.258	0.276	0.249	7	5	7	6	25	0.313	0.338	0.299
10_2_118	MW-7R	App. III	pH (Field)	S.U.	0%	7	6	7	6	26	0.118	0.264	0.243	7	6	7	6	26	0.118	0.264	0.243
10_2_123	MW-7R	App. III	Sulfate	mg/L	0%	7	6	7	6	26	0.704	0.503	0.559	7	6	7	6	26	0.704	0.503	0.559
10_2_125	MW-7R	App. III	Total Dissolved Solids	mg/L	0%	7	6	7	6	26	0.323	0.265	0.286	7	6	7	6	26	0.323	0.265	0.286
10_3_101	MW-7R	App. IV	Antimony	ug/L	96%	7	6	7	6	26	0.324	0.194	0.198	0	0	1	0	1	NA	NA	NA
10_3_102	MW-7R	App. IV	Arsenic	ug/L	92%	7	6	7	6	26	0.990	0.600	0.412	0	1	1	0	2	0.317	NA	NA
10_3_103	MW-7R	App. IV	Barium	ug/L	0%	7	6	7	6	26	0.461	0.539	0.485	7	6	7	6	26	0.461	0.539	0.485
10_3_104	MW-7R	App. IV	Beryllium	ug/L	100%	7	6	7	6	26	0.669	0.796	0.701	NA	NA	NA	NA	NA	NA	NA	NA
10_3_106	MW-7R	App. IV	Cadmium	ug/L	100%	7	6	7	6	26	0.992	0.790	0.512	NA	NA	NA	NA	NA	NA	NA	NA
10_3_109	MW-7R	App. IV	Chromium	ug/L	31%	7	6	7	6	26	0.357	0.457	0.377	4	5	6	3	18	0.420	0.615	0.535
10_3_110	MW-7R	App. IV	Cobalt	ug/L	81%	7	6	7	6	26	0.253	0.404	0.210	0	2	2	1	5	0.223	0.616	0.314
10_3_112	MW-7R	App. IV	Fluoride	mg/L	4%	7	6	7	6	26	0.258	0.276	0.249	7	5	7	6	25	0.313	0.338	0.299
10_3_113	MW-7R	App. IV	Lead	ug/L	88%	7	6	7	6	26	0.091	0.085	0.065	0	1	1	1	3	0.368	NA	NA
10_3_114	MW-7R	App. IV	Lithium	ug/L	0%	7	6	7	6	26	0.278	0.137	0.168	7	6	7	6	26	0.278	0.137	0.168
10_3_115	MW-7R	App. IV	Mercury	ug/L	100%	7	6	7	6	26	0.767	0.785	0.771	NA	NA	NA	NA	NA	NA	NA	NA
10_3_116	MW-7R	App. IV	Molybdenum	ug/L	85%	7	6	7	6	26	0.326	0.237	0.183	0	1	2	1	4	0.259	0.585	0.235
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	0%	7	5	7	5	24	0.780	0.761	NA	7	5	7	5	24	0.780	0.761	NA
10_3_120	MW-7R	App. IV	Radium-228	pCi/L	0%	7	5	7	5	24	0.270	0.146	NA	7	5	7	5	24	0.270	0.146	NA
10_3_121	MW-7R	App. IV	Selenium	ug/L	96%	7	6	7	6	26	0.999	0.579	0.411	0	1	0	0	1	NA	NA	NA
10_3_124	MW-7R	App. IV	Thallium	ug/L	88%	7	6	7	6	26	0.891	0.547	0.658	1	0	1	1	3	0.368	NA	NA
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	0%	7	5	7	5	24	0.238	0.132	0.330	7	5	7	5	24	0.238	0.132	0.330
11_1_111	MW-8	App. I Metals	Copper	ug/L	83%	10	10	8	8	36	0.947	0.458	0.725	2	3	0	1	6	0.501	0.693	0.535
11_1_117	MW-8	App. I Metals	Nickel	ug/L	53%	10	10	8	8	36	0.901	0.554	0.825	6	4	4	3	17	0.539	0.392	0.543
11_1_122	MW-8	App. I Metals	Silver	ug/L	97%	10	10	8	8	36	0.941	0.921	0.930	0	1	0	0	1	NA	NA	NA
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	83%	10	10	8	8	36	0.946	0.716	0.904	2	1	2	1	6	0.312	0.035 *	0.145
11_1_128	MW-8	App. I Metals	Zinc	ug/L	67%	10	10	8	8	36	0.637	0.747	0.856	5	4	2	1	12	0.740	0.670	0.869
11_2_105	MW-8	App. III	Boron	ug/L	43%	9	10	8	8	35	0.698	0.692	0.754	7	6	3	4	20	0.969	0.902	0.916
11_2_107	MW-8	App. III	Calcium	ug/L	0%	10	10	8	8	36	0.554	0.836	0.690	10	10	8	8	36	0.554	0.836	0.690
11_2_108	MW-8	App. III	Chloride	mg/L	0%	10	10	8	8	36	0.262	0.399	0.302	10	10	8	8	36	0.262	0.399	0.302
11_2_112	MW-8	App. III	Fluoride	mg/L	56%	10	10	8	8	36	0.736	0.774	0.714	4	4	4	4	16	0.751	0.706	0.710
11_2_118	MW-8	App. III	pH (Field)	S.U.	0%	10	9	8	7	34	0.270	0.496	0.513	10	9	8	7	34	0.270	0.496	0.513

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
11_2_123	MW-8	App. III	Sulfate	mg/L	0%	10	10	8	8	36	0.969	0.993	0.984	10	10	8	8	36	0.969	0.993	0.984
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	0%	10	10	8	8	36	0.372	0.180	0.142	10	10	8	8	36	0.372	0.180	0.142
11_3_101	MW-8	App. IV	Antimony	ug/L	81%	10	10	8	8	36	0.968	0.997	0.777	2	3	1	1	7	0.508	0.364	0.504
11_3_102	MW-8	App. IV	Arsenic	ug/L	89%	10	10	8	8	36	0.896	0.904	0.954	1	2	0	1	4	0.259	0.078	0.067
11_3_103	MW-8	App. IV	Barium	ug/L	0%	10	10	8	8	36	0.101	0.331	0.306	10	10	8	8	36	0.101	0.331	0.306
11_3_104	MW-8	App. IV	Beryllium	ug/L	97%	10	10	8	8	36	0.815	0.625	0.764	0	1	0	0	1	NA	NA	NA
11_3_106	MW-8	App. IV	Cadmium	ug/L	97%	10	10	8	8	36	0.708	0.415	0.484	0	1	0	0	1	NA	NA	NA
11_3_109	MW-8	App. IV	Chromium	ug/L	53%	10	10	8	8	36	0.981	0.800	0.940	7	4	3	3	17	0.489	0.697	0.712
11_3_110	MW-8	App. IV	Cobalt	ug/L	92%	10	10	8	8	36	0.841	0.865	0.846	0	2	1	0	3	1.000	0.829	0.953
11_3_112	MW-8	App. IV	Fluoride	mg/L	56%	10	10	8	8	36	0.736	0.774	0.714	4	4	4	4	16	0.751	0.706	0.710
11_3_113	MW-8	App. IV	Lead	ug/L	97%	10	10	8	8	36	0.829	0.797	0.808	0	1	0	0	1	NA	NA	NA
11_3_114	MW-8	App. IV	Lithium	ug/L	3%	10	10	8	8	36	0.657	0.811	0.896	9	10	8	8	35	0.395	0.456	0.415
11_3_115	MW-8	App. IV	Mercury	ug/L	97%	10	10	8	8	36	0.791	0.468	0.490	1	0	0	0	1	NA	NA	NA
11_3_116	MW-8	App. IV	Molybdenum	ug/L	92%	10	10	8	8	36	0.950	0.863	0.909	1	1	1	0	3	0.368	NA	NA
11_3_119	MW-8	App. IV	Radium-226	pCi/L	0%	10	9	8	7	34	0.306	0.367	NA	10	9	8	7	34	0.306	0.367	NA
11_3_120	MW-8	App. IV	Radium-228	pCi/L	0%	10	9	8	7	34	0.172	0.177	NA	10	9	8	7	34	0.172	0.177	NA
11_3_121	MW-8	App. IV	Selenium	ug/L	94%	10	10	8	8	36	0.942	0.789	0.592	0	2	0	0	2	NA	NA	NA
11_3_124	MW-8	App. IV	Thallium	ug/L	97%	10	10	8	8	36	0.886	0.875	0.935	1	0	0	0	1	NA	NA	NA
11_3_126	MW-8	App. IV	Total Radium	pCi/L	0%	10	9	8	7	34	0.180	0.193	NA	10	9	8	7	34	0.180	0.193	NA
1_1_111	MW-1	App. I Metals	Copper	ug/L	89%	10	10	8	8	36	0.668	0.624	0.769	1	2	0	1	4	0.407	0.579	0.318
1_1_117	MW-1	App. I Metals	Nickel	ug/L	75%	10	10	8	8	36	0.649	0.581	0.714	2	2	3	2	9	0.311	0.241	0.425
1_1_122	MW-1	App. I Metals	Silver	ug/L	89%	10	10	8	8	36	0.921	0.889	0.721	1	1	1	1	4	0.392	NA	NA
1_1_127	MW-1	App. I Metals	Vanadium	ug/L	67%	10	10	8	8	36	0.986	0.854	0.952	3	4	3	2	12	0.788	0.684	0.790
1_1_128	MW-1	App. I Metals	Zinc	ug/L	69%	10	10	8	8	36	0.431	0.654	0.503	4	3	2	2	11	0.541	0.849	0.803
1_2_105	MW-1	App. III	Boron	ug/L	63%	9	10	8	8	35	0.601	0.594	0.902	4	5	1	3	13	0.277	0.249	0.187
1_2_107	MW-1	App. III	Calcium	ug/L	0%	10	10	8	8	36	0.515	0.589	0.604	10	10	8	8	36	0.515	0.589	0.604
1_2_108	MW-1	App. III	Chloride	mg/L	0%	10	10	8	8	36	0.546	0.542	0.758	10	10	8	8	36	0.546	0.542	0.758
1_2_112	MW-1	App. III	Fluoride	mg/L	3%	10	10	8	8	36	0.656	0.699	0.588	10	9	8	8	35	0.622	0.606	0.627
1_2_118	MW-1	App. III	pH (Field)	S.U.	0%	10	9	8	7	34	0.364	0.460	0.458	10	9	8	7	34	0.364	0.460	0.458
1_2_123	MW-1	App. III	Sulfate	mg/L	0%	10	10	8	8	36	0.974	0.951	0.962	10	10	8	8	36	0.974	0.951	0.962
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	0%	10	10	8	8	36	0.428	0.376	0.512	10	10	8	8	36	0.428	0.376	0.512
1_3_101	MW-1	App. IV	Antimony	ug/L	94%	10	10	8	8	36	0.532	0.219	0.329	0	0	2	0	2	NA	NA	NA
1_3_102	MW-1	App. IV	Arsenic	ug/L	94%	10	10	8	8	36	0.784	0.741	0.666	0	1	0	1	2	0.317	NA	NA
1_3_103	MW-1	App. IV	Barium	ug/L	0%	10	10	8	8	36	0.395	0.477	0.504	10	10	8	8	36	0.395	0.477	0.504
1_3_104	MW-1	App. IV	Beryllium	ug/L	100%	10	10	8	8	36	0.859	0.911	0.887	NA	NA	NA	NA	NA	NA	NA	NA
1_3_106	MW-1	App. IV	Cadmium	ug/L	92%	10	10	8	8	36	0.930	0.701	0.552	1	0	1	1	3	0.368	NA	NA
1_3_109	MW-1	App. IV	Chromium	ug/L	72%	10	10	8	8	36	0.620	0.463	0.547	3	3	2	2	10	0.421	0.396	0.454
1_3_110	MW-1	App. IV	Cobalt	ug/L	94%	10	10	8	8	36	0.875	0.881	0.747	0	1	1	0	2	0.317	NA	NA
1_3_112	MW-1	App. IV	Fluoride	mg/L	3%	10	10	8	8	36	0.656	0.699	0.588	10	9	8	8	35	0.622	0.606	0.627

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
1_3_113	MW-1	App. IV	Lead	ug/L	92%	10	10	8	8	36	0.709	0.490	0.410	1	1	1	0	3	0.368	NA	NA
1_3_114	MW-1	App. IV	Lithium	ug/L	0%	10	10	8	8	36	0.431	0.561	0.589	10	10	8	8	36	0.431	0.561	0.589
1_3_115	MW-1	App. IV	Mercury	ug/L	100%	10	10	8	8	36	0.900	0.921	0.911	NA	NA	NA	NA	NA	NA	NA	NA
1_3_116	MW-1	App. IV	Molybdenum	ug/L	86%	10	10	8	8	36	0.678	0.513	0.314	1	1	2	1	5	0.362	0.771	0.576
1_3_119	MW-1	App. IV	Radium-226	pCi/L	0%	10	9	8	7	34	0.751	0.786	NA	10	9	8	7	34	0.751	0.786	NA
1_3_120	MW-1	App. IV	Radium-228	pCi/L	0%	10	9	8	7	34	0.980	0.887	NA	10	9	8	7	34	0.980	0.887	NA
1_3_121	MW-1	App. IV	Selenium	ug/L	94%	10	10	8	8	36	0.967	0.734	0.555	0	1	1	0	2	0.317	NA	NA
1_3_124	MW-1	App. IV	Thallium	ug/L	100%	10	10	8	8	36	0.745	0.939	0.778	NA	NA	NA	NA	NA	NA	NA	NA
1_3_126	MW-1	App. IV	Total Radium	pCi/L	0%	10	9	8	7	34	0.915	0.775	0.922	10	9	8	7	34	0.915	0.775	0.922
2_1_111	MW-10	App. I Metals	Copper	ug/L	67%	3	3	3	3	12	0.512	0.368	0.502	0	2	0	2	4	0.439	0.410	0.385
2_1_117	MW-10	App. I Metals	Nickel	ug/L	33%	3	3	3	3	12	0.449	0.397	0.388	1	3	2	2	8	0.319	0.467	0.485
2_1_122	MW-10	App. I Metals	Silver	ug/L	100%	3	3	3	3	12	0.532	0.711	0.432	NA	NA	NA	NA	NA	NA	NA	NA
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	42%	3	3	3	3	12	0.579	0.392	0.398	2	1	2	2	7	0.658	0.588	0.556
2_1_128	MW-10	App. I Metals	Zinc	ug/L	83%	3	3	3	3	12	0.172	0.386	0.251	0	1	0	1	2	0.317	NA	NA
2_2_105	MW-10	App. III	Boron	ug/L	0%	3	3	3	3	12	0.303	0.404	0.390	3	3	3	3	12	0.303	0.404	0.390
2_2_107	MW-10	App. III	Calcium	ug/L	0%	3	3	3	3	12	0.361	0.351	0.352	3	3	3	3	12	0.361	0.351	0.352
2_2_108	MW-10	App. III	Chloride	mg/L	0%	3	3	3	3	12	0.895	0.921	0.922	3	3	3	3	12	0.895	0.921	0.922
2_2_112	MW-10	App. III	Fluoride	mg/L	0%	3	3	3	3	12	0.899	0.851	0.850	3	3	3	3	12	0.899	0.851	0.850
2_2_118	MW-10	App. III	pH (Field)	S.U.	0%	3	4	3	3	13	0.355	0.274	0.271	3	4	3	3	13	0.355	0.274	0.271
2_2_123	MW-10	App. III	Sulfate	mg/L	0%	3	3	3	3	12	0.766	0.892	0.873	3	3	3	3	12	0.766	0.892	0.873
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	0%	3	3	3	3	12	0.091	0.107	0.112	3	3	3	3	12	0.091	0.107	0.112
2_3_101	MW-10	App. IV	Antimony	ug/L	92%	3	3	3	3	12	0.478	0.343	0.310	0	1	0	0	1	NA	NA	NA
2_3_102	MW-10	App. IV	Arsenic	ug/L	83%	3	3	3	3	12	0.557	0.528	0.425	0	2	0	0	2	NA	NA	NA
2_3_103	MW-10	App. IV	Barium	ug/L	0%	3	3	3	3	12	0.691	0.561	0.629	3	3	3	3	12	0.691	0.561	0.629
2_3_104	MW-10	App. IV	Beryllium	ug/L	100%	3	3	3	3	12	0.532	0.834	0.738	NA	NA	NA	NA	NA	NA	NA	NA
2_3_106	MW-10	App. IV	Cadmium	ug/L	100%	3	3	3	3	12	0.532	0.437	0.410	NA	NA	NA	NA	NA	NA	NA	NA
2_3_109	MW-10	App. IV	Chromium	ug/L	25%	3	3	3	3	12	0.331	0.395	0.378	3	2	1	3	9	0.563	0.657	0.599
2_3_110	MW-10	App. IV	Cobalt	ug/L	83%	3	3	3	3	12	0.426	0.491	0.548	0	1	0	1	2	0.317	NA	NA
2_3_112	MW-10	App. IV	Fluoride	mg/L	0%	3	3	3	3	12	0.899	0.851	0.850	3	3	3	3	12	0.899	0.851	0.850
2_3_113	MW-10	App. IV	Lead	ug/L	83%	3	3	3	3	12	0.320	0.416	0.376	0	1	0	1	2	0.317	NA	NA
2_3_114	MW-10	App. IV	Lithium	ug/L	0%	3	3	3	3	12	0.816	0.755	0.797	3	3	3	3	12	0.816	0.755	0.797
2_3_115	MW-10	App. IV	Mercury	ug/L	100%	3	3	3	3	12	0.392	0.441	0.441	NA	NA	NA	NA	NA	NA	NA	NA
2_3_116	MW-10	App. IV	Molybdenum	ug/L	0%	3	3	3	3	12	0.910	0.891	0.903	3	3	3	3	12	0.910	0.891	0.903
2_3_119	MW-10	App. IV	Radium-226	pCi/L	0%	3	3	3	3	12	0.424	0.518	NA	3	3	3	3	12	0.424	0.518	NA
2_3_120	MW-10	App. IV	Radium-228	pCi/L	0%	3	3	3	3	12	0.238	0.301	NA	3	3	3	3	12	0.238	0.301	NA
2_3_121	MW-10	App. IV	Selenium	ug/L	83%	3	3	3	3	12	0.739	0.511	0.468	0	1	0	1	2	0.317	NA	NA
2_3_124	MW-10	App. IV	Thallium	ug/L	92%	3	3	3	3	12	0.300	0.373	0.338	0	0	0	1	1	NA	NA	NA
2_3_126	MW-10	App. IV	Total Radium	pCi/L	0%	3	3	3	3	12	0.536	0.628	NA	3	3	3	3	12	0.536	0.628	NA
3_1_111	MW-11	App. I Metals	Copper	ug/L	67%	4	4	3	4	15	0.377	0.329	0.235	1	2	0	2	5	0.165	0.499	0.397

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
3_1_117	MW-11	App. I Metals	Nickel	ug/L	60%	4	4	3	4	15	0.644	0.459	0.616	1	2	2	1	6	0.277	0.613	0.443
3_1_122	MW-11	App. I Metals	Silver	ug/L	100%	4	4	3	4	15	0.687	0.757	0.549	NA	NA	NA	NA	NA	NA	NA	NA
3_1_127	MW-11	App. I Metals	Vanadium	ug/L	80%	4	4	3	4	15	0.765	0.794	0.790	0	1	1	1	3	0.368	NA	NA
3_1_128	MW-11	App. I Metals	Zinc	ug/L	87%	4	4	3	4	15	0.195	0.302	0.403	0	2	0	0	2	NA	NA	NA
3_2_105	MW-11	App. III	Boron	ug/L	7%	4	4	3	4	15	0.142	0.244	0.310	3	4	3	4	14	0.028 *	0.135	0.083
3_2_107	MW-11	App. III	Calcium	ug/L	0%	4	4	3	4	15	0.083	0.181	0.124	4	4	3	4	15	0.083	0.181	0.124
3_2_108	MW-11	App. III	Chloride	mg/L	0%	4	4	3	4	15	0.334	0.341	0.357	4	4	3	4	15	0.334	0.341	0.357
3_2_112	MW-11	App. III	Fluoride	mg/L	7%	4	4	3	4	15	0.484	0.347	0.345	3	4	3	4	14	0.768	0.818	0.828
3_2_118	MW-11	App. III	pH (Field)	S.U.	0%	4	4	3	3	14	0.013 *	0.273	0.213	4	4	3	3	14	0.013 *	0.273	0.213
3_2_123	MW-11	App. III	Sulfate	mg/L	0%	4	4	3	4	15	0.755	0.709	0.749	4	4	3	4	15	0.755	0.709	0.749
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	0%	4	4	3	4	15	0.946	0.542	0.699	4	4	3	4	15	0.946	0.542	0.699
3_3_101	MW-11	App. IV	Antimony	ug/L	87%	4	4	3	4	15	0.363	0.240	0.300	1	1	0	0	2	0.317	NA	NA
3_3_102	MW-11	App. IV	Arsenic	ug/L	87%	4	4	3	4	15	0.721	0.602	0.466	1	1	0	0	2	0.317	NA	NA
3_3_103	MW-11	App. IV	Barium	ug/L	0%	4	4	3	4	15	0.055	0.222	0.148	4	4	3	4	15	0.055	0.222	0.148
3_3_104	MW-11	App. IV	Beryllium	ug/L	100%	4	4	3	4	15	0.687	0.797	0.761	NA	NA	NA	NA	NA	NA	NA	NA
3_3_106	MW-11	App. IV	Cadmium	ug/L	100%	4	4	3	4	15	0.687	0.536	0.480	NA	NA	NA	NA	NA	NA	NA	NA
3_3_109	MW-11	App. IV	Chromium	ug/L	80%	4	4	3	4	15	0.521	0.514	0.439	1	1	1	0	3	0.368	NA	NA
3_3_110	MW-11	App. IV	Cobalt	ug/L	73%	4	4	3	4	15	0.834	0.827	0.831	1	2	1	0	4	0.407	0.716	0.781
3_3_112	MW-11	App. IV	Fluoride	mg/L	7%	4	4	3	4	15	0.484	0.347	0.345	3	4	3	4	14	0.768	0.818	0.828
3_3_113	MW-11	App. IV	Lead	ug/L	93%	4	4	3	4	15	0.541	0.717	0.505	0	1	0	0	1	NA	NA	NA
3_3_114	MW-11	App. IV	Lithium	ug/L	0%	4	4	3	4	15	0.851	0.710	0.768	4	4	3	4	15	0.851	0.710	0.768
3_3_115	MW-11	App. IV	Mercury	ug/L	100%	4	4	3	4	15	0.261	0.277	0.277	NA	NA	NA	NA	NA	NA	NA	NA
3_3_116	MW-11	App. IV	Molybdenum	ug/L	87%	4	4	3	4	15	0.828	0.823	0.791	0	1	1	0	2	0.317	NA	NA
3_3_119	MW-11	App. IV	Radium-226	pCi/L	0%	4	4	3	4	15	0.869	0.868	NA	4	4	3	4	15	0.869	0.868	NA
3_3_120	MW-11	App. IV	Radium-228	pCi/L	0%	4	4	3	4	15	0.210	0.303	NA	4	4	3	4	15	0.210	0.303	NA
3_3_121	MW-11	App. IV	Selenium	ug/L	100%	4	4	3	4	15	0.753	0.599	0.503	NA	NA	NA	NA	NA	NA	NA	NA
3_3_124	MW-11	App. IV	Thallium	ug/L	93%	4	4	3	4	15	0.432	0.474	0.474	0	1	0	0	1	NA	NA	NA
3_3_126	MW-11	App. IV	Total Radium	pCi/L	0%	4	4	3	4	15	0.072	0.252	0.074	4	4	3	4	15	0.072	0.252	0.074
4_1_111	MW-11D	App. I Metals	Copper	ug/L	77%	3	4	3	3	13	0.639	0.623	0.646	0	2	0	1	3	0.221	0.624	0.648
4_1_117	MW-11D	App. I Metals	Nickel	ug/L	69%	3	4	3	3	13	0.670	0.644	0.723	1	1	1	1	4	0.392	NA	NA
4_1_122	MW-11D	App. I Metals	Silver	ug/L	100%	3	4	3	3	13	0.764	0.857	0.692	NA	NA	NA	NA	NA	NA	NA	NA
4_1_127	MW-11D	App. I Metals	Vanadium	ug/L	77%	3	4	3	3	13	0.898	0.875	0.882	0	1	1	1	3	0.368	NA	NA
4_1_128	MW-11D	App. I Metals	Zinc	ug/L	77%	3	4	3	3	13	0.164	0.159	0.177	1	1	1	0	3	0.368	NA	NA
4_2_105	MW-11D	App. III	Boron	ug/L	0%	3	4	3	3	13	0.972	0.671	0.791	3	4	3	3	13	0.972	0.671	0.791
4_2_107	MW-11D	App. III	Calcium	ug/L	0%	3	4	3	3	13	0.709	0.373	0.475	3	4	3	3	13	0.709	0.373	0.475
4_2_108	MW-11D	App. III	Chloride	mg/L	0%	3	4	3	3	13	0.941	0.582	0.832	3	4	3	3	13	0.941	0.582	0.832
4_2_112	MW-11D	App. III	Fluoride	mg/L	0%	3	4	3	3	13	0.928	0.972	0.984	3	4	3	3	13	0.928	0.972	0.984
4_2_118	MW-11D	App. III	pH (Field)	S.U.	0%	3	4	3	3	13	0.790	0.945	0.944	3	4	3	3	13	0.790	0.945	0.944
4_2_123	MW-11D	App. III	Sulfate	mg/L	8%	3	4	3	3	13	0.804	0.507	0.563	3	4	3	2	12	0.956	0.612	0.896

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	0%	3	4	3	3	13	0.799	0.550	0.660	3	4	3	3	13	0.799	0.550	0.660
4_3_101	MW-11D	App. IV	Antimony	ug/L	85%	3	4	3	3	13	0.085	0.060	0.179	0	1	1	0	2	0.317	NA	NA
4_3_102	MW-11D	App. IV	Arsenic	ug/L	38%	3	4	3	3	13	0.962	0.964	0.994	2	3	1	2	8	0.409	0.466	0.618
4_3_103	MW-11D	App. IV	Barium	ug/L	0%	3	4	3	3	13	0.929	0.996	0.977	3	4	3	3	13	0.929	0.996	0.977
4_3_104	MW-11D	App. IV	Beryllium	ug/L	92%	3	4	3	3	13	0.764	0.882	0.891	0	1	0	0	1	NA	NA	NA
4_3_106	MW-11D	App. IV	Cadmium	ug/L	100%	3	4	3	3	13	0.764	0.684	0.616	NA	NA	NA	NA	NA	NA	NA	NA
4_3_109	MW-11D	App. IV	Chromium	ug/L	77%	3	4	3	3	13	0.497	0.411	0.416	0	1	1	1	3	0.368	NA	NA
4_3_110	MW-11D	App. IV	Cobalt	ug/L	92%	3	4	3	3	13	0.764	0.875	0.800	0	1	0	0	1	NA	NA	NA
4_3_112	MW-11D	App. IV	Fluoride	mg/L	0%	3	4	3	3	13	0.928	0.972	0.984	3	4	3	3	13	0.928	0.972	0.984
4_3_113	MW-11D	App. IV	Lead	ug/L	92%	3	4	3	3	13	0.521	0.794	0.745	0	1	0	0	1	NA	NA	NA
4_3_114	MW-11D	App. IV	Lithium	ug/L	0%	3	4	3	3	13	0.925	0.677	0.791	3	4	3	3	13	0.925	0.677	0.791
4_3_115	MW-11D	App. IV	Mercury	ug/L	100%	3	4	3	3	13	0.343	0.379	0.379	NA	NA	NA	NA	NA	NA	NA	NA
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	0%	3	4	3	3	13	0.777	0.455	0.777	3	4	3	3	13	0.777	0.455	0.777
4_3_119	MW-11D	App. IV	Radium-226	pCi/L	0%	3	4	3	3	13	0.587	0.524	NA	3	4	3	3	13	0.587	0.524	NA
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	0%	3	4	3	3	13	0.134	0.365	0.283	3	4	3	3	13	0.134	0.365	0.283
4_3_121	MW-11D	App. IV	Selenium	ug/L	92%	3	4	3	3	13	0.890	0.746	0.635	0	1	0	0	1	NA	NA	NA
4_3_124	MW-11D	App. IV	Thallium	ug/L	92%	3	4	3	3	13	0.522	0.579	0.579	0	1	0	0	1	NA	NA	NA
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	0%	3	4	3	3	13	0.214	0.478	0.471	3	4	3	3	13	0.214	0.478	0.471
5_1_111	MW-2	App. I Metals	Copper	ug/L	48%	10	9	5	7	31	0.287	0.252	0.136	4	5	2	5	16	0.125	0.514	0.174
5_1_117	MW-2	App. I Metals	Nickel	ug/L	39%	10	9	5	7	31	0.557	0.056	0.346	7	4	3	5	19	0.564	0.086	0.372
5_1_122	MW-2	App. I Metals	Silver	ug/L	94%	10	9	5	7	31	0.850	0.851	0.706	0	1	1	0	2	0.317	NA	NA
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	71%	10	9	5	7	31	0.353	0.305	0.278	2	2	2	3	9	0.427	0.656	0.582
5_1_128	MW-2	App. I Metals	Zinc	ug/L	52%	10	9	5	7	31	0.623	0.454	0.680	5	4	2	4	15	0.767	0.539	0.657
5_2_105	MW-2	App. III	Boron	ug/L	3%	9	9	5	7	30	0.578	0.640	0.543	8	9	5	7	29	0.639	0.831	0.776
5_2_107	MW-2	App. III	Calcium	ug/L	0%	10	9	5	7	31	0.204	0.693	0.731	10	9	5	7	31	0.204	0.693	0.731
5_2_108	MW-2	App. III	Chloride	mg/L	0%	10	9	5	7	31	0.694	0.539	0.515	10	9	5	7	31	0.694	0.539	0.515
5_2_112	MW-2	App. III	Fluoride	mg/L	6%	10	9	5	7	31	0.884	0.650	0.746	9	9	5	6	29	0.917	0.598	0.713
5_2_118	MW-2	App. III	pH (Field)	S.U.	0%	10	7	5	5	27	0.567	0.657	0.653	10	7	5	5	27	0.567	0.657	0.653
5_2_123	MW-2	App. III	Sulfate	mg/L	0%	10	9	5	7	31	0.964	0.953	0.986	10	9	5	7	31	0.964	0.953	0.986
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	0%	10	9	5	7	31	0.150	0.726	0.517	10	9	5	7	31	0.150	0.726	0.517
5_3_101	MW-2	App. IV	Antimony	ug/L	58%	10	9	5	7	31	0.506	0.470	0.450	4	4	3	2	13	0.931	0.912	0.707
5_3_102	MW-2	App. IV	Arsenic	ug/L	71%	10	9	5	7	31	0.850	0.732	0.814	2	3	2	2	9	0.606	0.746	0.774
5_3_103	MW-2	App. IV	Barium	ug/L	0%	10	9	5	7	31	0.594	0.487	0.562	10	9	5	7	31	0.594	0.487	0.562
5_3_104	MW-2	App. IV	Beryllium	ug/L	94%	10	9	5	7	31	0.589	0.430	0.545	0	1	0	1	2	0.317	NA	NA
5_3_106	MW-2	App. IV	Cadmium	ug/L	94%	10	9	5	7	31	0.954	0.894	0.747	1	1	0	0	2	0.317	NA	NA
5_3_109	MW-2	App. IV	Chromium	ug/L	19%	10	9	5	7	31	0.558	0.120	0.359	7	8	4	6	25	0.285	0.123	0.198
5_3_110	MW-2	App. IV	Cobalt	ug/L	84%	10	9	5	7	31	0.216	0.232	0.113	0	2	1	2	5	0.165	0.563	0.318
5_3_112	MW-2	App. IV	Fluoride	mg/L	6%	10	9	5	7	31	0.884	0.650	0.746	9	9	5	6	29	0.917	0.598	0.713
5_3_113	MW-2	App. IV	Lead	ug/L	87%	10	9	5	7	31	0.549	0.311	0.286	0	2	1	1	4	0.259	0.105	0.355

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
5_3_114	MW-2	App. IV	Lithium	ug/L	0%	10	9	5	7	31	0.302	0.052	0.105	10	9	5	7	31	0.302	0.052	0.105
5_3_115	MW-2	App. IV	Mercury	ug/L	100%	10	9	5	7	31	0.827	0.854	0.840	NA	NA	NA	NA	NA	NA	NA	NA
5_3_116	MW-2	App. IV	Molybdenum	ug/L	16%	10	9	5	7	31	0.759	0.465	0.702	8	8	4	6	26	0.346	0.213	0.200
5_3_119	MW-2	App. IV	Radium-226	pCi/L	0%	10	8	5	7	30	0.039 *	0.026 *	0.024 *	10	8	5	7	30	0.039 *	0.026 *	0.024 *
5_3_120	MW-2	App. IV	Radium-228	pCi/L	0%	10	8	5	7	30	0.205	0.352	0.369	10	8	5	7	30	0.205	0.352	0.369
5_3_121	MW-2	App. IV	Selenium	ug/L	94%	10	9	5	7	31	0.817	0.880	0.751	0	2	0	0	2	NA	NA	NA
5_3_124	MW-2	App. IV	Thallium	ug/L	74%	10	9	5	7	31	0.680	0.912	0.860	2	3	1	2	8	0.335	0.477	0.431
5_3_126	MW-2	App. IV	Total Radium	pCi/L	0%	10	8	5	7	30	0.116	0.072	0.083	10	8	5	7	30	0.116	0.072	0.083
6_1_111	MW-3	App. I Metals	Copper	ug/L	62%	10	10	7	7	34	0.746	0.665	0.784	4	4	2	3	13	0.285	0.697	0.557
6_1_117	MW-3	App. I Metals	Nickel	ug/L	56%	10	10	7	7	34	0.311	0.788	0.757	3	6	4	2	15	0.831	0.567	0.855
6_1_122	MW-3	App. I Metals	Silver	ug/L	97%	10	10	7	7	34	0.956	0.944	0.713	0	0	1	0	1	NA	NA	NA
6_1_127	MW-3	App. I Metals	Vanadium	ug/L	65%	10	10	7	7	34	0.922	0.921	0.977	3	4	3	2	12	0.960	0.838	0.973
6_1_128	MW-3	App. I Metals	Zinc	ug/L	79%	10	10	7	7	34	0.848	0.933	0.999	2	4	0	1	7	0.875	0.752	0.986
6_2_105	MW-3	App. III	Boron	ug/L	30%	9	10	7	7	33	0.829	0.853	0.957	5	7	5	6	23	0.750	0.888	0.906
6_2_107	MW-3	App. III	Calcium	ug/L	0%	10	10	7	7	34	0.498	0.542	0.531	10	10	7	7	34	0.498	0.542	0.531
6_2_108	MW-3	App. III	Chloride	mg/L	0%	10	10	7	7	34	0.616	0.369	0.347	10	10	7	7	34	0.616	0.369	0.347
6_2_112	MW-3	App. III	Fluoride	mg/L	3%	10	10	7	7	34	0.323	0.218	0.234	9	10	7	7	33	0.506	0.455	0.509
6_2_118	MW-3	App. III	pH (Field)	S.U.	0%	10	8	7	5	30	0.458	0.190	0.188	10	8	7	5	30	0.458	0.190	0.188
6_2_123	MW-3	App. III	Sulfate	mg/L	0%	10	10	7	7	34	0.798	0.904	0.881	10	10	7	7	34	0.798	0.904	0.881
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	0%	10	10	7	7	34	0.821	0.564	0.505	10	10	7	7	34	0.821	0.564	0.505
6_3_101	MW-3	App. IV	Antimony	ug/L	68%	10	10	7	7	34	0.953	0.922	0.987	3	4	2	2	11	0.626	0.775	0.696
6_3_102	MW-3	App. IV	Arsenic	ug/L	82%	10	10	7	7	34	0.433	0.428	0.504	0	2	2	2	6	0.565	0.530	0.510
6_3_103	MW-3	App. IV	Barium	ug/L	0%	10	10	7	7	34	0.749	0.680	0.677	10	10	7	7	34	0.749	0.680	0.677
6_3_104	MW-3	App. IV	Beryllium	ug/L	100%	10	10	7	7	34	0.685	0.744	0.745	NA	NA	NA	NA	NA	NA	NA	NA
6_3_106	MW-3	App. IV	Cadmium	ug/L	97%	10	10	7	7	34	0.986	0.918	0.721	0	0	0	1	1	NA	NA	NA
6_3_109	MW-3	App. IV	Chromium	ug/L	50%	10	10	7	7	34	0.269	0.749	0.782	4	6	3	4	17	0.561	0.551	0.814
6_3_110	MW-3	App. IV	Cobalt	ug/L	88%	10	10	7	7	34	0.765	0.781	0.581	1	2	1	0	4	0.259	0.082	0.483
6_3_112	MW-3	App. IV	Fluoride	mg/L	3%	10	10	7	7	34	0.323	0.218	0.234	9	10	7	7	33	0.506	0.455	0.509
6_3_113	MW-3	App. IV	Lead	ug/L	91%	10	10	7	7	34	0.509	0.490	0.301	1	1	1	0	3	0.368	NA	NA
6_3_114	MW-3	App. IV	Lithium	ug/L	3%	10	10	7	7	34	0.259	0.140	0.336	9	10	7	7	33	0.297	0.198	0.115
6_3_115	MW-3	App. IV	Mercury	ug/L	100%	10	10	7	7	34	0.864	0.882	0.876	NA	NA	NA	NA	NA	NA	NA	NA
6_3_116	MW-3	App. IV	Molybdenum	ug/L	0%	10	10	7	7	34	0.684	0.293	0.271	10	10	7	7	34	0.684	0.293	0.271
6_3_119	MW-3	App. IV	Radium-226	pCi/L	0%	10	9	7	7	33	0.604	0.610	0.848	10	9	7	7	33	0.604	0.610	0.848
6_3_120	MW-3	App. IV	Radium-228	pCi/L	0%	10	9	7	7	33	0.873	0.780	0.787	10	9	7	7	33	0.873	0.780	0.787
6_3_121	MW-3	App. IV	Selenium	ug/L	97%	10	10	7	7	34	0.972	0.779	0.604	0	1	0	0	1	NA	NA	NA
6_3_124	MW-3	App. IV	Thallium	ug/L	100%	10	10	7	7	34	0.568	0.970	0.755	NA	NA	NA	NA	NA	NA	NA	NA
6_3_126	MW-3	App. IV	Total Radium	pCi/L	0%	10	9	7	7	33	0.684	0.613	0.564	10	9	7	7	33	0.684	0.613	0.564
7_1_111	MW-4	App. I Metals	Copper	ug/L	89%	10	9	8	8	35	0.776	0.451	0.570	1	2	0	1	4	0.259	0.312	0.380
7_1_117	MW-4	App. I Metals	Nickel	ug/L	31%	10	9	8	8	35	0.631	0.808	0.608	6	7	6	5	24	0.764	0.950	0.880

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
7_1_122	MW-4	App. I Metals	Silver	ug/L	100%	10	9	8	8	35	0.912	0.876	0.608	NA	NA	NA	NA	NA	NA	NA	NA
7_1_127	MW-4	App. I Metals	Vanadium	ug/L	89%	10	9	8	8	35	0.884	0.640	0.991	1	2	1	0	4	0.861	0.881	0.987
7_1_128	MW-4	App. I Metals	Zinc	ug/L	69%	10	9	8	8	35	0.890	0.704	0.779	4	4	1	2	11	0.893	0.949	0.972
7_2_105	MW-4	App. III	Boron	ug/L	65%	9	9	8	8	34	0.935	0.461	0.896	4	4	1	3	12	0.629	0.451	0.511
7_2_107	MW-4	App. III	Calcium	ug/L	0%	10	9	8	8	35	0.769	0.331	0.238	10	9	8	8	35	0.769	0.331	0.238
7_2_108	MW-4	App. III	Chloride	mg/L	0%	10	9	8	8	35	0.792	0.619	0.463	10	9	8	8	35	0.792	0.619	0.463
7_2_112	MW-4	App. III	Fluoride	mg/L	0%	10	9	8	8	35	0.800	0.600	0.573	10	9	8	8	35	0.800	0.600	0.573
7_2_118	MW-4	App. III	pH (Field)	S.U.	0%	10	8	8	7	33	0.387	0.471	0.469	10	8	8	7	33	0.387	0.471	0.469
7_2_123	MW-4	App. III	Sulfate	mg/L	0%	10	9	8	8	35	0.773	0.879	0.726	10	9	8	8	35	0.773	0.879	0.726
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	0%	10	9	8	8	35	0.187	0.338	0.388	10	9	8	8	35	0.187	0.338	0.388
7_3_101	MW-4	App. IV	Antimony	ug/L	86%	10	9	8	8	35	0.810	0.872	0.568	2	2	1	0	5	0.949	0.821	0.863
7_3_102	MW-4	App. IV	Arsenic	ug/L	94%	10	9	8	8	35	0.959	0.628	0.411	0	2	0	0	2	NA	NA	NA
7_3_103	MW-4	App. IV	Barium	ug/L	0%	10	9	8	8	35	0.593	0.587	0.405	10	9	8	8	35	0.593	0.587	0.405
7_3_104	MW-4	App. IV	Beryllium	ug/L	100%	10	9	8	8	35	0.854	0.902	0.849	NA	NA	NA	NA	NA	NA	NA	NA
7_3_106	MW-4	App. IV	Cadmium	ug/L	97%	10	9	8	8	35	0.988	0.823	0.583	0	0	1	0	1	NA	NA	NA
7_3_109	MW-4	App. IV	Chromium	ug/L	77%	10	9	8	8	35	0.875	0.546	0.987	3	4	1	0	8	0.757	0.607	0.883
7_3_110	MW-4	App. IV	Cobalt	ug/L	57%	10	9	8	8	35	0.760	0.939	0.800	3	4	5	3	15	0.686	0.806	0.779
7_3_112	MW-4	App. IV	Fluoride	mg/L	0%	10	9	8	8	35	0.800	0.600	0.573	10	9	8	8	35	0.800	0.600	0.573
7_3_113	MW-4	App. IV	Lead	ug/L	97%	10	9	8	8	35	0.688	0.505	0.371	0	0	1	0	1	NA	NA	NA
7_3_114	MW-4	App. IV	Lithium	ug/L	0%	10	9	8	8	35	0.992	0.452	0.560	10	9	8	8	35	0.992	0.452	0.560
7_3_115	MW-4	App. IV	Mercury	ug/L	100%	10	9	8	8	35	0.893	0.914	0.903	NA	NA	NA	NA	NA	NA	NA	NA
7_3_116	MW-4	App. IV	Molybdenum	ug/L	86%	10	9	8	8	35	0.601	0.632	0.330	2	1	1	1	5	0.532	0.588	0.237
7_3_119	MW-4	App. IV	Radium-226	pCi/L	0%	10	8	8	7	33	0.687	0.794	NA	10	8	8	7	33	0.687	0.794	NA
7_3_120	MW-4	App. IV	Radium-228	pCi/L	0%	10	8	8	7	33	0.932	0.975	0.953	10	8	8	7	33	0.932	0.975	0.953
7_3_121	MW-4	App. IV	Selenium	ug/L	94%	10	9	8	8	35	0.862	0.552	0.459	0	1	0	1	2	0.317	NA	NA
7_3_124	MW-4	App. IV	Thallium	ug/L	100%	10	9	8	8	35	0.768	0.923	0.820	NA	NA	NA	NA	NA	NA	NA	NA
7_3_126	MW-4	App. IV	Total Radium	pCi/L	0%	10	8	8	7	33	0.835	0.984	0.922	10	8	8	7	33	0.835	0.984	0.922
8_1_111	MW-5	App. I Metals	Copper	ug/L	78%	10	10	8	8	36	0.557	0.739	0.716	2	3	2	1	8	0.614	0.837	0.822
8_1_117	MW-5	App. I Metals	Nickel	ug/L	81%	10	10	8	8	36	0.413	0.362	0.528	3	1	1	2	7	0.258	0.000 ***	0.090
8_1_122	MW-5	App. I Metals	Silver	ug/L	100%	10	10	8	8	36	0.934	0.912	0.687	NA	NA	NA	NA	NA	NA	NA	NA
8_1_127	MW-5	App. I Metals	Vanadium	ug/L	92%	10	10	8	8	36	0.915	0.926	0.938	0	1	1	1	3	0.368	NA	NA
8_1_128	MW-5	App. I Metals	Zinc	ug/L	69%	10	10	8	8	36	0.058	0.160	0.071	2	5	4	0	11	0.580	0.701	0.603
8_2_105	MW-5	App. III	Boron	ug/L	43%	9	10	8	8	35	0.218	0.213	0.293	8	6	3	3	20	0.844	0.747	0.777
8_2_107	MW-5	App. III	Calcium	ug/L	0%	10	10	8	8	36	0.887	0.672	0.800	10	10	8	8	36	0.887	0.672	0.800
8_2_108	MW-5	App. III	Chloride	mg/L	0%	10	10	8	8	36	0.908	0.942	0.936	10	10	8	8	36	0.908	0.942	0.936
8_2_112	MW-5	App. III	Fluoride	mg/L	0%	10	10	8	8	36	0.684	0.636	0.613	10	10	8	8	36	0.684	0.636	0.613
8_2_118	MW-5	App. III	pH (Field)	S.U.	0%	10	9	8	6	33	0.614	0.307	0.319	10	9	8	6	33	0.614	0.307	0.319
8_2_123	MW-5	App. III	Sulfate	mg/L	0%	10	10	8	8	36	0.218	0.337	0.319	10	10	8	8	36	0.218	0.337	0.319
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	0%	10	10	8	8	36	0.620	0.295	0.300	10	10	8	8	36	0.620	0.295	0.300

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
8_3_101	MW-5	App. IV	Antimony	ug/L	94%	10	10	8	8	36	0.608	0.400	0.364	1	1	0	0	2	0.317	NA	NA
8_3_102	MW-5	App. IV	Arsenic	ug/L	94%	10	10	8	8	36	0.985	0.733	0.491	0	2	0	0	2	NA	NA	NA
8_3_103	MW-5	App. IV	Barium	ug/L	0%	10	10	8	8	36	0.437	0.362	0.368	10	10	8	8	36	0.437	0.362	0.368
8_3_104	MW-5	App. IV	Beryllium	ug/L	100%	10	10	8	8	36	0.859	0.911	0.887	NA	NA	NA	NA	NA	NA	NA	NA
8_3_106	MW-5	App. IV	Cadmium	ug/L	100%	10	10	8	8	36	0.980	0.928	0.715	NA	NA	NA	NA	NA	NA	NA	NA
8_3_109	MW-5	App. IV	Chromium	ug/L	78%	10	10	8	8	36	0.721	0.350	0.414	3	1	2	2	8	0.689	0.493	0.611
8_3_110	MW-5	App. IV	Cobalt	ug/L	94%	10	10	8	8	36	0.807	0.839	0.648	0	1	1	0	2	0.317	NA	NA
8_3_112	MW-5	App. IV	Fluoride	mg/L	0%	10	10	8	8	36	0.684	0.636	0.613	10	10	8	8	36	0.684	0.636	0.613
8_3_113	MW-5	App. IV	Lead	ug/L	97%	10	10	8	8	36	0.697	0.607	0.443	0	1	0	0	1	NA	NA	NA
8_3_114	MW-5	App. IV	Lithium	ug/L	3%	10	10	8	8	36	0.273	0.173	0.090	9	10	8	8	35	0.423	0.248	0.189
8_3_115	MW-5	App. IV	Mercury	ug/L	100%	10	10	8	8	36	0.900	0.921	0.911	NA	NA	NA	NA	NA	NA	NA	NA
8_3_116	MW-5	App. IV	Molybdenum	ug/L	92%	10	10	8	8	36	0.984	0.694	0.980	0	2	1	0	3	1.000	0.877	0.838
8_3_119	MW-5	App. IV	Radium-226	pCi/L	0%	10	9	8	7	34	0.108	0.113	NA	10	9	8	7	34	0.108	0.113	NA
8_3_120	MW-5	App. IV	Radium-228	pCi/L	0%	10	9	8	7	34	0.316	0.545	NA	10	9	8	7	34	0.316	0.545	NA
8_3_121	MW-5	App. IV	Selenium	ug/L	97%	10	10	8	8	36	0.941	0.755	0.566	0	1	0	0	1	NA	NA	NA
8_3_124	MW-5	App. IV	Thallium	ug/L	97%	10	10	8	8	36	0.863	0.708	0.827	1	0	0	0	1	NA	NA	NA
8_3_126	MW-5	App. IV	Total Radium	pCi/L	0%	10	9	8	7	34	0.267	0.225	0.460	10	9	8	7	34	0.267	0.225	0.460
9_1_111	MW-6	App. I Metals	Copper	ug/L	91%	10	10	7	8	35	0.272	0.348	0.284	0	1	1	1	3	0.368	NA	NA
9_1_117	MW-6	App. I Metals	Nickel	ug/L	74%	10	10	7	8	35	0.610	0.240	0.550	2	3	2	2	9	0.082	0.066	0.067
9_1_122	MW-6	App. I Metals	Silver	ug/L	100%	10	10	7	8	35	0.927	0.873	0.632	NA	NA	NA	NA	NA	NA	NA	NA
9_1_127	MW-6	App. I Metals	Vanadium	ug/L	89%	10	10	7	8	35	0.864	0.765	0.830	0	1	1	2	4	0.407	0.805	0.713
9_1_128	MW-6	App. I Metals	Zinc	ug/L	74%	10	10	7	8	35	0.799	0.542	0.726	3	3	1	2	9	0.314	0.289	0.395
9_2_105	MW-6	App. III	Boron	ug/L	68%	9	10	7	8	34	0.833	0.886	0.873	4	3	2	2	11	0.867	0.910	0.939
9_2_107	MW-6	App. III	Calcium	ug/L	0%	10	10	7	8	35	0.721	0.651	0.664	10	10	7	8	35	0.721	0.651	0.664
9_2_108	MW-6	App. III	Chloride	mg/L	0%	10	10	7	8	35	0.834	0.586	0.384	10	10	7	8	35	0.834	0.586	0.384
9_2_112	MW-6	App. III	Fluoride	mg/L	3%	10	10	7	8	35	0.847	0.837	0.578	10	9	7	8	34	0.670	0.839	0.911
9_2_118	MW-6	App. III	pH (Field)	S.U.	0%	10	8	7	7	32	0.451	0.360	0.365	10	8	7	7	32	0.451	0.360	0.365
9_2_123	MW-6	App. III	Sulfate	mg/L	0%	10	10	7	8	35	0.673	0.673	0.819	10	10	7	8	35	0.673	0.673	0.819
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	0%	10	10	7	8	35	0.105	0.028 *	0.024 *	10	10	7	8	35	0.105	0.028 *	0.024 *
9_3_101	MW-6	App. IV	Antimony	ug/L	100%	10	10	7	8	35	0.886	0.557	0.457	NA	NA	NA	NA	NA	NA	NA	NA
9_3_102	MW-6	App. IV	Arsenic	ug/L	94%	10	10	7	8	35	0.985	0.946	0.696	0	2	0	0	2	NA	NA	NA
9_3_103	MW-6	App. IV	Barium	ug/L	0%	10	10	7	8	35	0.833	0.820	0.857	10	10	7	8	35	0.833	0.820	0.857
9_3_104	MW-6	App. IV	Beryllium	ug/L	97%	10	10	7	8	35	0.857	0.930	0.935	0	1	0	0	1	NA	NA	NA
9_3_106	MW-6	App. IV	Cadmium	ug/L	100%	10	10	7	8	35	0.997	0.911	0.692	NA	NA	NA	NA	NA	NA	NA	NA
9_3_109	MW-6	App. IV	Chromium	ug/L	80%	10	10	7	8	35	0.895	0.503	0.687	2	2	2	1	7	0.543	0.667	0.635
9_3_110	MW-6	App. IV	Cobalt	ug/L	97%	10	10	7	8	35	0.859	0.899	0.877	0	1	0	0	1	NA	NA	NA
9_3_112	MW-6	App. IV	Fluoride	mg/L	3%	10	10	7	8	35	0.847	0.837	0.578	10	9	7	8	34	0.670	0.839	0.911
9_3_113	MW-6	App. IV	Lead	ug/L	94%	10	10	7	8	35	0.519	0.503	0.477	0	1	0	1	2	0.317	NA	NA
9_3_114	MW-6	App. IV	Lithium	ug/L	0%	10	10	7	8	35	0.420	0.581	0.360	10	10	7	8	35	0.420	0.581	0.360

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	
9_3_115	MW-6	App. IV	Mercury	ug/L	97%	10	10	7	8	35	0.927	0.521	0.576	1	0	0	0	1	NA	NA	NA	
9_3_116	MW-6	App. IV	Molybdenum	ug/L	86%	10	10	7	8	35	0.572	0.375	0.228	2	1	1	1	5	0.284	0.056	0.020	*
9_3_119	MW-6	App. IV	Radium-226	pCi/L	0%	10	9	7	7	33	0.261	0.528	NA	10	9	7	7	33	0.261	0.528	NA	
9_3_120	MW-6	App. IV	Radium-228	pCi/L	0%	10	9	7	7	33	0.244	0.294	NA	10	9	7	7	33	0.244	0.294	NA	
9_3_121	MW-6	App. IV	Selenium	ug/L	94%	10	10	7	8	35	0.987	0.704	0.541	0	1	1	0	2	0.317	NA	NA	
9_3_124	MW-6	App. IV	Thallium	ug/L	91%	10	10	7	8	35	0.948	0.953	0.958	1	1	0	1	3	0.368	NA	NA	
9_3_126	MW-6	App. IV	Total Radium	pCi/L	0%	10	9	7	7	33	0.220	0.207	0.247	10	9	7	7	33	0.220	0.207	0.247	

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 8: Trend Tests: Lognormal MLE and MK

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
10_2_105	MW-7R	App. III	Boron	ug/L	25	12	48%	Parametric	Lognormal MLE	-0.0000263	0.941	↔
10_2_107	MW-7R	App. III	Calcium	ug/L	26	0	0%	Parametric	Lognormal MLE	0.0000496	0.006	↑
10_2_108	MW-7R	App. III	Chloride	mg/L	26	0	0%	Nonparametric	MK	-0.00434	0.251	↔
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	Nonparametric	MK	0.00000684	0.136	↔
10_2_118	MW-7R	App. III	pH (Field)	S.U.	26	0	0%	Nonparametric	MK	-0.0000925	0.112	↔
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	Nonparametric	MK	-0.00238	0.000	↓
10_2_125	MW-7R	App. III	Total Dissolved Solids	mg/L	26	0	0%	Parametric	Lognormal MLE	0.0000432	0.006	↑
10_3_103	MW-7R	App. IV	Barium	ug/L	26	0	0%	Parametric	Lognormal MLE	0.000273	0.002	↑
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	Nonparametric	MK	0.00000684	0.136	↔
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	Parametric	Lognormal MLE	0.000202	0.014	↔
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	24	0	0%	Nonparametric	MK	-0.0000399	0.747	↔
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	24	0	0%	Parametric	Lognormal MLE	-0.000151	0.539	↔
11_2_105	MW-8	App. III	Boron	ug/L	35	15	43%	Parametric	Lognormal MLE	0.000263	0.334	↔
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	Nonparametric	MK	-10.2	0.009	↓
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	Nonparametric	MK	-0.0761	0.000	↓
11_2_118	MW-8	App. III	pH (Field)	S.U.	34	0	0%	Parametric	Lognormal MLE	0.0000104	0.001	↑
11_2_123	MW-8	App. III	Sulfate	mg/L	36	0	0%	Parametric	Lognormal MLE	0.0000655	0.001	↑
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	36	0	0%	Nonparametric	MK	-0.0228	0.549	↔
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	Nonparametric	MK	-0.0682	0.005	↓
11_3_114	MW-8	App. IV	Lithium	ug/L	36	1	3%	Parametric	Lognormal MLE	-0.0000944	0.162	↔
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	Nonparametric	MK	-0.0000133	0.859	↔
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	Nonparametric	MK	-0.000146	0.260	↔
1_2_107	MW-1	App. III	Calcium	ug/L	36	0	0%	Parametric	Lognormal MLE	0.000169	0.068	↔
1_2_108	MW-1	App. III	Chloride	mg/L	36	0	0%	Parametric	Lognormal MLE	0.0000669	0.539	↔
1_2_112	MW-1	App. III	Fluoride	mg/L	36	1	3%	Parametric	Lognormal MLE	0.000151	0.013	↔
1_2_118	MW-1	App. III	pH (Field)	S.U.	34	0	0%	Parametric	Lognormal MLE	0.00000700	0.223	↔
1_2_123	MW-1	App. III	Sulfate	mg/L	36	0	0%	Parametric	Lognormal MLE	-0.000194	0.000	↓
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	36	0	0%	Parametric	Lognormal MLE	0.000130	0.186	↔
1_3_103	MW-1	App. IV	Barium	ug/L	36	0	0%	Parametric	Lognormal MLE	0.0000542	0.594	↔
1_3_112	MW-1	App. IV	Fluoride	mg/L	36	1	3%	Parametric	Lognormal MLE	0.000151	0.013	↔
1_3_114	MW-1	App. IV	Lithium	ug/L	36	0	0%	Parametric	Lognormal MLE	0.0000482	0.135	↔
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	Parametric	Lognormal MLE	0.0000459	0.607	↔
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	Parametric	Lognormal MLE	0.000354	0.038	↔
2_2_107	MW-10	App. III	Calcium	ug/L	12	0	0%	Parametric	Lognormal MLE	0.000236	0.001	↑
2_2_108	MW-10	App. III	Chloride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00000333	0.926	↔
2_2_112	MW-10	App. III	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000155	0.024	↔
2_2_118	MW-10	App. III	pH (Field)	S.U.	13	0	0%	Parametric	Lognormal MLE	0.00000443	0.781	↔
2_2_123	MW-10	App. III	Sulfate	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.00120	0.000	↓
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	12	0	0%	Parametric	Lognormal MLE	0.0000670	0.017	↔
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	Parametric	Lognormal MLE	0.000997	0.000	↑
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	Parametric	Lognormal MLE	-0.00131	0.328	↔
2_3_112	MW-10	App. IV	Fluoride	mg/L	12	0	0%	Parametric	Lognormal MLE	-0.000155	0.024	↔
2_3_114	MW-10	App. IV	Lithium	ug/L	12	0	0%	Parametric	Lognormal MLE	0.00167	0.000	↑

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_3_116	MW-10	App. IV	Molybdenum	ug/L	12	0	0%	Parametric	Lognormal MLE	-0.000834	0.000	↓
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	Nonparametric	MK	-0.000735	0.843	↔
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	Parametric	Lognormal MLE	0.0000803	0.651	↔
3_2_108	MW-11	App. III	Chloride	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.000173	0.110	↔
3_2_112	MW-11	App. III	Fluoride	mg/L	15	1	7%	Parametric	Lognormal MLE	-0.000108	0.637	↔
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	Nonparametric	MK	-0.0000323	0.869	↔
3_2_123	MW-11	App. III	Sulfate	mg/L	15	0	0%	Parametric	Lognormal MLE	0.0000523	0.534	↔
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	Nonparametric	MK	-0.0531	0.197	↔
3_3_103	MW-11	App. IV	Barium	ug/L	15	0	0%	Nonparametric	MK	-0.000548	0.804	↔
3_3_112	MW-11	App. IV	Fluoride	mg/L	15	1	7%	Parametric	Lognormal MLE	-0.000108	0.637	↔
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	Nonparametric	MK	-0.000395	0.654	↔
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	Nonparametric	MK	0.000182	0.373	↔
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	Parametric	Lognormal MLE	0.0000856	0.857	↔
4_2_105	MW-11D	App. III	Boron	ug/L	13	0	0%	Nonparametric	MK	-0.0159	0.067	↔
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	Parametric	Lognormal MLE	-0.000808	0.015	↔
4_2_108	MW-11D	App. III	Chloride	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.00143	0.000	↓
4_2_112	MW-11D	App. III	Fluoride	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.0000930	0.223	↔
4_2_118	MW-11D	App. III	pH (Field)	S.U.	13	0	0%	Parametric	Lognormal MLE	-0.0000687	0.000	↓
4_2_123	MW-11D	App. III	Sulfate	mg/L	13	1	8%	Parametric	Lognormal MLE	-0.00122	0.389	↔
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.00108	0.000	↓
4_3_102	MW-11D	App. IV	Arsenic	ug/L	13	5	38%	Parametric	Lognormal MLE	-0.00177	0.002	↓
4_3_103	MW-11D	App. IV	Barium	ug/L	13	0	0%	Parametric	Lognormal MLE	0.000285	0.045	↔
4_3_112	MW-11D	App. IV	Fluoride	mg/L	13	0	0%	Parametric	Lognormal MLE	-0.0000930	0.223	↔
4_3_114	MW-11D	App. IV	Lithium	ug/L	13	0	0%	Parametric	Lognormal MLE	-0.00108	0.000	↓
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	Parametric	Lognormal MLE	-0.00234	0.000	↓
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	13	0	0%	Parametric	Lognormal MLE	-0.00162	0.020	↔
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	13	0	0%	Parametric	Lognormal MLE	-0.00192	0.000	↓
5_1_117	MW-2	App. I Metals	Nickel	ug/L	31	12	39%	Parametric	Lognormal MLE	0.000387	0.228	↔
5_2_105	MW-2	App. III	Boron	ug/L	30	1	3%	Parametric	Lognormal MLE	-0.0000870	0.128	↔
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	Nonparametric	MK	-5.39	0.196	↔
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	Nonparametric	MK	-0.0513	0.029	↔
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	Parametric	Lognormal MLE	0.0000252	0.804	↔
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	Nonparametric	MK	-0.0000752	0.008	↓
5_2_123	MW-2	App. III	Sulfate	mg/L	31	0	0%	Nonparametric	MK	-0.0545	0.000	↓
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	Nonparametric	MK	0.0343	0.646	↔
5_3_103	MW-2	App. IV	Barium	ug/L	31	0	0%	Nonparametric	MK	0.0370	0.004	↑
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	Parametric	Lognormal MLE	0.0000252	0.804	↔
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	Nonparametric	MK	0.00181	0.852	↔
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	Parametric	Lognormal MLE	-0.000438	0.000	↓
5_3_119	MW-2	App. IV	Radium-226	pCi/L	30	0	0%	Parametric	Lognormal MLE	-0.0000824	0.311	↔
5_3_120	MW-2	App. IV	Radium-228	pCi/L	30	0	0%	Parametric	Lognormal MLE	0.000112	0.065	↔
5_3_126	MW-2	App. IV	Total Radium	pCi/L	30	0	0%	Parametric	Lognormal MLE	0.0000306	0.594	↔
6_2_105	MW-3	App. III	Boron	ug/L	33	10	30%	Parametric	Lognormal MLE	0.000539	0.109	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
6_2_107	MW-3	App. III	Calcium	ug/L	34	0	0%	Parametric	Lognormal MLE	0.0000506	0.009	↑
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	Nonparametric	MK	-0.0250	0.218	↔
6_2_112	MW-3	App. III	Fluoride	mg/L	34	1	3%	Parametric	Lognormal MLE	0.000104	0.305	↔
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	Nonparametric	MK	0.0000286	0.203	↔
6_2_123	MW-3	App. III	Sulfate	mg/L	34	0	0%	Nonparametric	MK	-0.0312	0.000	↓
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	Nonparametric	MK	0.190	0.017	↔
6_3_103	MW-3	App. IV	Barium	ug/L	34	0	0%	Parametric	Lognormal MLE	0.0000574	0.053	↔
6_3_112	MW-3	App. IV	Fluoride	mg/L	34	1	3%	Parametric	Lognormal MLE	0.000104	0.305	↔
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	Nonparametric	MK	-0.00364	0.213	↔
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	Nonparametric	MK	-0.000415	0.373	↔
6_3_119	MW-3	App. IV	Radium-226	pCi/L	33	0	0%	Parametric	Lognormal MLE	0.0000548	0.498	↔
6_3_120	MW-3	App. IV	Radium-228	pCi/L	33	0	0%	Parametric	Lognormal MLE	0.0000186	0.834	↔
6_3_126	MW-3	App. IV	Total Radium	pCi/L	33	0	0%	Parametric	Lognormal MLE	0.0000177	0.772	↔
7_1_117	MW-4	App. I Metals	Nickel	ug/L	35	11	31%	Parametric	Lognormal MLE	0.000601	0.000	↑
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	Nonparametric	MK	-1.36	0.532	↔
7_2_108	MW-4	App. III	Chloride	mg/L	35	0	0%	Nonparametric	MK	-0.0420	0.024	↔
7_2_112	MW-4	App. III	Fluoride	mg/L	35	0	0%	Parametric	Lognormal MLE	0.0000305	0.291	↔
7_2_118	MW-4	App. III	pH (Field)	S.U.	33	0	0%	Parametric	Lognormal MLE	-0.0000126	0.000	↓
7_2_123	MW-4	App. III	Sulfate	mg/L	35	0	0%	Nonparametric	MK	0.00109	0.012	↔
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	Nonparametric	MK	0.0124	0.670	↔
7_3_103	MW-4	App. IV	Barium	ug/L	35	0	0%	Nonparametric	MK	0.0127	0.244	↔
7_3_112	MW-4	App. IV	Fluoride	mg/L	35	0	0%	Parametric	Lognormal MLE	0.0000305	0.291	↔
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	Nonparametric	MK	0.00447	0.000	↑
7_3_120	MW-4	App. IV	Radium-228	pCi/L	33	0	0%	Parametric	Lognormal MLE	0.000201	0.186	↔
7_3_126	MW-4	App. IV	Total Radium	pCi/L	33	0	0%	Parametric	Lognormal MLE	-0.0000169	0.872	↔
8_2_107	MW-5	App. III	Calcium	ug/L	36	0	0%	Parametric	Lognormal MLE	-0.000120	0.000	↓
8_2_108	MW-5	App. III	Chloride	mg/L	36	0	0%	Parametric	Lognormal MLE	-0.00000357	0.795	↔
8_2_112	MW-5	App. III	Fluoride	mg/L	36	0	0%	Parametric	Lognormal MLE	0.0000330	0.079	↔
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	Nonparametric	MK	-0.0000901	0.026	↔
8_2_123	MW-5	App. III	Sulfate	mg/L	36	0	0%	Parametric	Lognormal MLE	-0.0000145	0.615	↔
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	Nonparametric	MK	-0.0121	0.011	↔
8_3_103	MW-5	App. IV	Barium	ug/L	36	0	0%	Parametric	Lognormal MLE	-0.0000568	0.018	↔
8_3_112	MW-5	App. IV	Fluoride	mg/L	36	0	0%	Parametric	Lognormal MLE	0.0000330	0.079	↔
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	Nonparametric	MK	0.000564	0.010	↔
8_3_126	MW-5	App. IV	Total Radium	pCi/L	34	0	0%	Parametric	Lognormal MLE	0.0000861	0.575	↔
9_2_107	MW-6	App. III	Calcium	ug/L	35	0	0%	Parametric	Lognormal MLE	-0.00000951	0.419	↔
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	Nonparametric	MK	-0.0227	0.000	↓
9_2_112	MW-6	App. III	Fluoride	mg/L	35	1	3%	Parametric	Lognormal MLE	-0.0000640	0.360	↔
9_2_118	MW-6	App. III	pH (Field)	S.U.	32	0	0%	Nonparametric	MK	-0.0000799	0.012	↔
9_2_123	MW-6	App. III	Sulfate	mg/L	35	0	0%	Nonparametric	MK	-0.0262	0.000	↓
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	35	0	0%	Parametric	Lognormal MLE	-0.0000525	0.060	↔
9_3_103	MW-6	App. IV	Barium	ug/L	35	0	0%	Nonparametric	MK	-0.0221	0.000	↓
9_3_112	MW-6	App. IV	Fluoride	mg/L	35	1	3%	Parametric	Lognormal MLE	-0.0000640	0.360	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
9_3_114	MW-6	App. IV	Lithium	ug/L	35	0	0%	Parametric	Lognormal MLE	-0.000256	0.000	↓
9_3_126	MW-6	App. IV	Total Radium	pCi/L	33	0	0%	Parametric	Lognormal MLE	-0.000221	0.132	↔

Table 9: Trend Tests: Piecewise Linear-Linear

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
10_1_111	MW-7R	App. I Metals	Copper	ug/L	26	20	77%	0.0271	0.336	↔	-0.0112	0.088	↔	2019-07-09	0.159	↔
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	26	12	46%	0.261	0.422	↔	-0.108	0.153	↔	2019-07-09	0.115	↔
10_1_122	MW-7R	App. I Metals	Silver	ug/L	26	26	100%	0	1.000	↔	-0.00187	0.001	↓	2021-05-03	0.698	↔
10_1_127	MW-7R	App. I Metals	Vanadium	ug/L	26	15	58%	-0.0584	0.084	↔	-0.000367	0.781	↔	2018-02-15	0.282	↔
10_1_128	MW-7R	App. I Metals	Zinc	ug/L	26	21	81%	0.0316	0.169	↔	-0.0101	0.059	↔	2019-07-09	0.221	↔
10_2_105	MW-7R	App. III	Boron	ug/L	25	12	48%	-0.0417	0.005	↓	0.00197	0.138	↔	2018-10-23	0.595	↔
10_2_107	MW-7R	App. III	Calcium	ug/L	26	0	0%	14.1	0.240	↔	2.05	0.450	↔	2019-07-09	0.274	↔
10_2_108	MW-7R	App. III	Chloride	mg/L	26	0	0%	-0.0167	0.091	↔	0.0373	0.424	↔	2022-07-15	0.147	↔
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	-0.00103	0.000	↓	0.0000183	0.015	↔	2018-02-15	0.782	↔
10_2_118	MW-7R	App. III	pH (Field)	S.U.	26	0	0%	-0.0186	0.000	↓	-0.0000366	0.476	↔	2017-11-12	0.893	↔
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	-0.153	0.000	↓	-0.00171	0.000	↓	2018-02-19	0.977	↓
10_2_125	MW-7R	App. III	Total Dissolved Solids	mg/L	26	0	0%	0.123	0.087	↔	0.00848	0.743	↔	2019-10-14	0.302	↔
10_3_101	MW-7R	App. IV	Antimony	ug/L	26	25	96%	-0.000912	0.593	↔	0.000303	0.880	↔	2021-04-13	0.025	↔
10_3_102	MW-7R	App. IV	Arsenic	ug/L	26	24	92%	-0.000318	0.483	↔	-0.00211	0.005	↓	2021-07-27	0.604	↔
10_3_103	MW-7R	App. IV	Barium	ug/L	26	0	0%	0.306	0.001	↑	-0.00899	0.631	↔	2019-07-09	0.667	↔
10_3_104	MW-7R	App. IV	Beryllium	ug/L	26	26	100%	0.000126	0.321	↔	-0.000461	0.068	↔	2021-08-11	0.278	↔
10_3_106	MW-7R	App. IV	Cadmium	ug/L	26	26	100%	-0.000116	0.000	↓	0.0000972	0.761	↔	2023-04-25	0.635	↔
10_3_109	MW-7R	App. IV	Chromium	ug/L	26	8	31%	0.572	0.427	↔	-0.238	0.154	↔	2019-07-09	0.114	↔
10_3_110	MW-7R	App. IV	Cobalt	ug/L	26	21	81%	0.00747	0.270	↔	-0.00348	0.031	↔	2019-07-09	0.231	↔
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	-0.00103	0.000	↓	0.0000183	0.015	↔	2018-02-15	0.782	↔
10_3_113	MW-7R	App. IV	Lead	ug/L	26	23	88%	0.00165	0.094	↔	-0.00333	0.028	↔	2021-07-13	0.303	↔
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	0.0270	0.001	↑	-0.00177	0.280	↔	2019-06-07	0.619	↔
10_3_115	MW-7R	App. IV	Mercury	ug/L	26	26	100%	0.0000171	0.001	↑	0	0.491	↔	2021-10-31	0.557	↔
10_3_116	MW-7R	App. IV	Molybdenum	ug/L	26	22	85%	-0.0527	0.482	↔	-0.00263	0.388	↔	2018-02-15	0.117	↔
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	24	0	0%	0.00132	0.140	↔	-0.000216	0.075	↔	2018-10-26	0.230	↔
10_3_120	MW-7R	App. IV	Radium-228	pCi/L	24	0	0%	0.000234	0.250	↔	-0.00255	0.179	↔	2023-04-24	0.165	↔
10_3_121	MW-7R	App. IV	Selenium	ug/L	26	25	96%	-0.000341	0.574	↔	-0.00106	0.148	↔	2021-01-27	0.310	↔
10_3_124	MW-7R	App. IV	Thallium	ug/L	26	23	88%	-0.00201	0.000	↓	0	0.960	↔	2018-02-15	0.916	↔
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	24	0	0%	0.00173	0.219	↔	-0.000312	0.226	↔	2019-01-24	0.140	↔
11_1_111	MW-8	App. I Metals	Copper	ug/L	36	30	83%	0.000733	0.919	↔	0.0115	0.421	↔	2020-10-27	0.069	↔
11_1_117	MW-8	App. I Metals	Nickel	ug/L	36	19	53%	-0.00127	0.921	↔	0.0118	0.429	↔	2020-01-17	0.047	↔
11_1_122	MW-8	App. I Metals	Silver	ug/L	36	35	97%	0	1.000	↔	-0.00174	0.000	↓	2021-07-31	0.657	↔
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	36	30	83%	0.000671	0.026	↔	-0.00671	0.349	↔	2023-04-27	0.175	↔
11_1_128	MW-8	App. I Metals	Zinc	ug/L	36	24	67%	-0.0150	0.067	↔	0.00664	0.236	↔	2019-05-17	0.160	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
11_2_105	MW-8	App. III	Boron	ug/L	35	15	43%	-0.0152	0.416	↔	0.00282	0.002	↑	2017-01-23	0.285	↔
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	-91.0	0.006	↓	2.34	0.723	↔	2017-12-22	0.494	↔
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	-0.539	0.000	↓	-0.00754	0.774	↔	2017-11-03	0.681	↔
11_2_112	MW-8	App. III	Fluoride	mg/L	36	20	56%	0.0000314	0.000	↑	-0.0000729	0.241	↔	2023-06-04	0.855	↔
11_2_118	MW-8	App. III	pH (Field)	S.U.	34	0	0%	0.000403	0.014	↔	0	0.943	↔	2017-11-18	0.431	↔
11_2_123	MW-8	App. III	Sulfate	mg/L	36	0	0%	0.00308	0.000	↑	-0.000218	0.182	↔	2017-12-16	0.613	↔
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	36	0	0%	-0.204	0.218	↔	0.0818	0.394	↔	2019-03-10	0.083	↔
11_3_101	MW-8	App. IV	Antimony	ug/L	36	29	81%	-0.0111	0.001	↓	-0.0000537	0.843	↔	2017-03-16	0.695	↔
11_3_102	MW-8	App. IV	Arsenic	ug/L	36	32	89%	0.00584	0.014	↔	-0.000428	0.125	↔	2017-06-14	0.424	↔
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	-0.416	0.016	↔	0.0614	0.265	↔	2018-06-23	0.330	↔
11_3_104	MW-8	App. IV	Beryllium	ug/L	36	35	97%	0.0000472	0.392	↔	-0.00122	0.368	↔	2023-04-27	0.102	↔
11_3_106	MW-8	App. IV	Cadmium	ug/L	36	35	97%	-0.0000608	0.416	↔	0.0000573	0.696	↔	2021-01-21	0.031	↔
11_3_109	MW-8	App. IV	Chromium	ug/L	36	19	53%	0.00425	0.344	↔	-0.0615	0.575	↔	2023-04-27	0.049	↔
11_3_110	MW-8	App. IV	Cobalt	ug/L	36	33	92%	0.000294	0.297	↔	-0.00198	0.103	↔	2021-12-25	0.157	↔
11_3_112	MW-8	App. IV	Fluoride	mg/L	36	20	56%	0.0000314	0.000	↑	-0.0000729	0.241	↔	2023-06-04	0.855	↔
11_3_113	MW-8	App. IV	Lead	ug/L	36	35	97%	0.000864	0.002	↑	-0.00308	0.026	↔	2022-04-19	0.351	↔
11_3_114	MW-8	App. IV	Lithium	ug/L	36	1	3%	-0.0152	0.000	↓	0.00497	0.073	↔	2019-04-17	0.446	↔
11_3_115	MW-8	App. IV	Mercury	ug/L	36	35	97%	0	0.766	↔	0	0.911	↔	2021-12-17	0.004	↔
11_3_116	MW-8	App. IV	Molybdenum	ug/L	36	33	92%	0.000207	0.561	↔	-0.00115	0.359	↔	2021-11-15	0.046	↔
11_3_119	MW-8	App. IV	Radium-226	pCi/L	34	0	0%	0	0.943	↔	-0.00363	0.369	↔	2023-07-26	0.139	↔
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	-0.00150	0.851	↔	0.000146	0.401	↔	2016-05-25	0.025	↔
11_3_121	MW-8	App. IV	Selenium	ug/L	36	34	94%	-0.000182	0.484	↔	-0.00104	0.049	↔	2020-12-26	0.349	↔
11_3_124	MW-8	App. IV	Thallium	ug/L	36	35	97%	-0.0136	0.000	↓	0	0.973	↔	2017-04-16	0.893	↔
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	0.000281	0.255	↔	-0.00541	0.368	↔	2023-05-14	0.102	↔
1_1_111	MW-1	App. I Metals	Copper	ug/L	36	32	89%	0.00166	0.006	↑	-0.00617	0.108	↔	2022-04-20	0.269	↔
1_1_117	MW-1	App. I Metals	Nickel	ug/L	36	27	75%	0.00285	0.392	↔	-0.000742	0.296	↔	2018-01-24	0.067	↔
1_1_122	MW-1	App. I Metals	Silver	ug/L	36	32	89%	0	1.000	↔	-0.00202	0.000	↓	2021-08-03	0.723	↔
1_1_127	MW-1	App. I Metals	Vanadium	ug/L	36	24	67%	-0.000401	0.665	↔	0.00109	0.234	↔	2020-01-15	0.069	↔
1_1_128	MW-1	App. I Metals	Zinc	ug/L	36	25	69%	0.000728	0.655	↔	0.0163	0.680	↔	2023-04-25	0.049	↔
1_2_105	MW-1	App. III	Boron	ug/L	35	22	63%	-0.0262	0.136	↔	0.00739	0.001	↑	2017-05-13	0.324	↔
1_2_107	MW-1	App. III	Calcium	ug/L	36	0	0%	81.0	0.000	↑	-407	0.000	↓	2022-08-23	0.721	↔
1_2_108	MW-1	App. III	Chloride	mg/L	36	0	0%	0.237	0.000	↑	-1.66	0.002	↓	2022-10-19	0.609	↔
1_2_112	MW-1	App. III	Fluoride	mg/L	36	1	3%	-0.000240	0.191	↔	0.0000241	0.000	↑	2016-06-18	0.376	↔
1_2_118	MW-1	App. III	pH (Field)	S.U.	34	0	0%	-0.0000658	0.190	↔	0.000886	0.011	↔	2022-06-20	0.369	↔
1_2_123	MW-1	App. III	Sulfate	mg/L	36	0	0%	-0.00687	0.003	↓	-0.000937	0.000	↓	2017-01-28	0.813	↓
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.791	0.000	↑	-3.78	0.000	↓	2022-07-14	0.742	↔
1_3_101	MW-1	App. IV	Antimony	ug/L	36	34	94%	-0.000667	0.118	↔	0.000662	0.339	↔	2020-09-16	0.107	↔
1_3_102	MW-1	App. IV	Arsenic	ug/L	36	34	94%	0.00537	0.000	↑	-0.000961	0.000	↓	2017-09-04	0.717	↔
1_3_103	MW-1	App. IV	Barium	ug/L	36	0	0%	0.0869	0.000	↑	-0.549	0.001	↓	2022-09-15	0.571	↔
1_3_104	MW-1	App. IV	Beryllium	ug/L	36	36	100%	0.0000401	0.459	↔	-0.000470	0.047	↔	2021-11-16	0.261	↔
1_3_106	MW-1	App. IV	Cadmium	ug/L	36	33	92%	0	0.781	↔	-0.000188	0.001	↓	2020-10-14	0.572	↔
1_3_109	MW-1	App. IV	Chromium	ug/L	36	26	72%	0.00499	0.267	↔	-0.00170	0.080	↔	2018-01-24	0.130	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
1_3_110	MW-1	App. IV	Cobalt	ug/L	36	34	94%	0.000282	0.302	↔	-0.00266	0.026	↔	2021-11-16	0.301	↔
1_3_112	MW-1	App. IV	Fluoride	mg/L	36	1	3%	-0.000240	0.191	↔	0.0000241	0.000	↑	2016-06-18	0.376	↔
1_3_113	MW-1	App. IV	Lead	ug/L	36	33	92%	0.000885	0.005	↑	-0.00436	0.032	↔	2022-06-26	0.315	↔
1_3_114	MW-1	App. IV	Lithium	ug/L	36	0	0%	0.00493	0.000	↑	-0.0334	0.001	↓	2022-10-18	0.541	↔
1_3_115	MW-1	App. IV	Mercury	ug/L	36	36	100%	0	0.000	↑	0	0.713	↔	2022-05-22	0.563	↔
1_3_116	MW-1	App. IV	Molybdenum	ug/L	36	31	86%	0.00351	0.030	↔	-0.00319	0.018	↔	2019-10-13	0.263	↔
1_3_119	MW-1	App. IV	Radium-226	pCi/L	34	0	0%	0.000258	0.142	↔	-0.000366	0.006	↓	2019-07-09	0.304	↔
1_3_120	MW-1	App. IV	Radium-228	pCi/L	34	0	0%	0.000237	0.143	↔	-0.0000469	0.739	↔	2019-07-10	0.122	↔
1_3_121	MW-1	App. IV	Selenium	ug/L	36	34	94%	-0.000185	0.446	↔	-0.00115	0.053	↔	2021-04-03	0.350	↔
1_3_124	MW-1	App. IV	Thallium	ug/L	36	36	100%	-0.0116	0.000	↓	0	0.965	↔	2017-04-25	0.941	↔
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	0.000459	0.090	↔	-0.000349	0.077	↔	2019-07-09	0.178	↔
2_1_111	MW-10	App. I Metals	Copper	ug/L	12	8	67%	0.160	0.530	↔	-0.0621	0.174	↔	2022-04-20	0.252	↔
2_1_117	MW-10	App. I Metals	Nickel	ug/L	12	4	33%	0.000688	0.983	↔	0.00481	0.799	↔	2022-07-15	0.026	↔
2_1_122	MW-10	App. I Metals	Silver	ug/L	12	12	100%	-0.00399	0.092	↔	-0.000114	0.957	↔	2022-11-30	0.551	↔
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	12	5	42%	-0.00335	0.871	↔	0.00375	0.749	↔	2022-07-29	0.023	↔
2_1_128	MW-10	App. I Metals	Zinc	ug/L	12	10	83%	0.0487	0.150	↔	-0.219	0.681	↔	2023-10-04	0.285	↔
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	0.0158	0.071	↔	-0.0365	0.781	↔	2023-10-04	0.357	↔
2_2_107	MW-10	App. III	Calcium	ug/L	12	0	0%	7.67	0.004	↑	-19.1	0.573	↔	2023-10-27	0.672	↔
2_2_108	MW-10	App. III	Chloride	mg/L	12	0	0%	0.00189	0.424	↔	-0.00458	0.509	↔	2023-04-27	0.151	↔
2_2_112	MW-10	App. III	Fluoride	mg/L	12	0	0%	0.0000215	0.729	↔	-0.000281	0.150	↔	2023-04-27	0.533	↔
2_2_118	MW-10	App. III	pH (Field)	S.U.	13	0	0%	0.000431	0.126	↔	-0.000625	0.279	↔	2023-01-23	0.322	↔
2_2_123	MW-10	App. III	Sulfate	mg/L	12	0	0%	-0.00790	0.034	↔	-0.00262	0.175	↔	2022-10-23	0.845	↔
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	12	0	0%	0.173	0.027	↔	-0.00241	0.832	↔	2022-03-09	0.745	↔
2_3_101	MW-10	App. IV	Antimony	ug/L	12	11	92%	0.00598	0.336	↔	-0.00294	0.401	↔	2022-09-10	0.204	↔
2_3_102	MW-10	App. IV	Arsenic	ug/L	12	10	83%	-0.00370	0.107	↔	0.00110	0.759	↔	2023-04-26	0.490	↔
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	0.121	0.014	↔	-0.228	0.734	↔	2023-10-04	0.562	↔
2_3_104	MW-10	App. IV	Beryllium	ug/L	12	12	100%	-0.00141	0.047	↔	0.000214	0.730	↔	2022-11-17	0.576	↔
2_3_106	MW-10	App. IV	Cadmium	ug/L	12	12	100%	-0.000312	0.073	↔	0.000269	0.563	↔	2023-04-27	0.395	↔
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	0.0268	0.209	↔	-0.128	0.706	↔	2023-10-04	0.238	↔
2_3_110	MW-10	App. IV	Cobalt	ug/L	12	10	83%	-0.00649	0.482	↔	0.00140	0.787	↔	2022-10-23	0.169	↔
2_3_112	MW-10	App. IV	Fluoride	mg/L	12	0	0%	0.0000215	0.729	↔	-0.000281	0.150	↔	2023-04-27	0.533	↔
2_3_113	MW-10	App. IV	Lead	ug/L	12	10	83%	-0.00405	0.659	↔	0.00154	0.864	↔	2023-01-26	0.060	↔
2_3_114	MW-10	App. IV	Lithium	ug/L	12	0	0%	-0.00325	0.610	↔	0.00713	0.007	↑	2022-06-15	0.723	↔
2_3_115	MW-10	App. IV	Mercury	ug/L	12	12	100%	-0.0000190	0.169	↔	0.0000480	0.498	↔	2023-07-25	0.261	↔
2_3_116	MW-10	App. IV	Molybdenum	ug/L	12	0	0%	-0.0257	0.002	↓	-0.00911	0.372	↔	2023-03-13	0.890	↔
2_3_119	MW-10	App. IV	Radium-226	pCi/L	12	0	0%	-0.000714	0.156	↔	0.000541	0.698	↔	2023-04-27	0.278	↔
2_3_120	MW-10	App. IV	Radium-228	pCi/L	12	0	0%	-0.0131	0.048	↔	0.000336	0.498	↔	2021-11-18	0.531	↔
2_3_121	MW-10	App. IV	Selenium	ug/L	12	10	83%	-0.00427	0.087	↔	0.00570	0.164	↔	2023-04-26	0.469	↔
2_3_124	MW-10	App. IV	Thallium	ug/L	12	11	92%	0.0000420	0.132	↔	-0.000324	0.463	↔	2023-11-09	0.371	↔
2_3_126	MW-10	App. IV	Total Radium	pCi/L	12	0	0%	-0.00726	0.245	↔	0.000112	0.825	↔	2022-01-06	0.450	↔
3_1_111	MW-11	App. I Metals	Copper	ug/L	15	10	67%	-0.00452	0.386	↔	-0.000791	0.975	↔	2023-04-24	0.117	↔
3_1_117	MW-11	App. I Metals	Nickel	ug/L	15	9	60%	0.000180	0.960	↔	-0.00273	0.380	↔	2022-07-12	0.133	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
3_1_122	MW-11	App. I Metals	Silver	ug/L	15	15	100%	0	1.000	↔	-0.00201	0.012	↔	2021-07-09	0.564	↔
3_1_127	MW-11	App. I Metals	Vanadium	ug/L	15	12	80%	-0.00381	0.012	↔	0.00291	0.460	↔	2023-04-20	0.583	↔
3_1_128	MW-11	App. I Metals	Zinc	ug/L	15	13	87%	-0.0000351	0.984	↔	-0.0256	0.103	↔	2023-08-20	0.526	↔
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	0.00308	0.326	↔	-0.0310	0.691	↔	2023-10-02	0.177	↔
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	-21.1	0.387	↔	27.7	0.190	↔	2022-06-11	0.216	↔
3_2_108	MW-11	App. III	Chloride	mg/L	15	0	0%	-0.00580	0.755	↔	-0.159	0.318	↔	2023-09-20	0.259	↔
3_2_112	MW-11	App. III	Fluoride	mg/L	15	1	7%	0.0000681	0.069	↔	-0.000280	0.119	↔	2023-05-22	0.423	↔
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	-0.000333	0.838	↔	0.00830	0.242	↔	2023-06-20	0.282	↔
3_2_123	MW-11	App. III	Sulfate	mg/L	15	0	0%	-0.000343	0.690	↔	0.000374	0.451	↔	2022-04-18	0.068	↔
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	-2.36	0.397	↔	-0.0843	0.896	↔	2021-11-12	0.269	↔
3_3_101	MW-11	App. IV	Antimony	ug/L	15	13	87%	0.00259	0.322	↔	-0.00214	0.512	↔	2022-10-23	0.150	↔
3_3_102	MW-11	App. IV	Arsenic	ug/L	15	13	87%	-0.00272	0.041	↔	0.000365	0.951	↔	2023-04-24	0.435	↔
3_3_103	MW-11	App. IV	Barium	ug/L	15	0	0%	-0.0227	0.358	↔	0.144	0.239	↔	2023-05-10	0.286	↔
3_3_104	MW-11	App. IV	Beryllium	ug/L	15	15	100%	-0.000731	0.015	↔	0.000148	0.850	↔	2023-03-01	0.573	↔
3_3_106	MW-11	App. IV	Cadmium	ug/L	15	15	100%	-0.000191	0.044	↔	0.000168	0.690	↔	2023-04-24	0.371	↔
3_3_109	MW-11	App. IV	Chromium	ug/L	15	12	80%	-0.00205	0.443	↔	0.00504	0.697	↔	2023-04-27	0.068	↔
3_3_110	MW-11	App. IV	Cobalt	ug/L	15	11	73%	-0.00363	0.014	↔	0.000493	0.898	↔	2023-01-25	0.565	↔
3_3_112	MW-11	App. IV	Fluoride	mg/L	15	1	7%	0.0000681	0.069	↔	-0.000280	0.119	↔	2023-05-22	0.423	↔
3_3_113	MW-11	App. IV	Lead	ug/L	15	14	93%	0	1.000	↔	-0.00364	0.015	↔	2021-11-06	0.554	↔
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	-0.00229	0.393	↔	0.0171	0.204	↔	2023-05-23	0.302	↔
3_3_115	MW-11	App. IV	Mercury	ug/L	15	15	100%	0	1.000	↔	0	0.546	↔	2021-11-22	0.069	↔
3_3_116	MW-11	App. IV	Molybdenum	ug/L	15	13	87%	-0.00341	0.003	↓	0.00491	0.298	↔	2023-04-24	0.591	↔
3_3_119	MW-11	App. IV	Radium-226	pCi/L	15	0	0%	-0.000115	0.443	↔	-0.000593	0.874	↔	2023-10-02	0.147	↔
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	-0.000982	0.426	↔	0.000479	0.643	↔	2022-04-19	0.080	↔
3_3_121	MW-11	App. IV	Selenium	ug/L	15	15	100%	-0.00259	0.068	↔	0.00469	0.246	↔	2023-04-23	0.364	↔
3_3_124	MW-11	App. IV	Thallium	ug/L	15	14	93%	0	0.163	↔	0.000514	0.000	↑	2024-01-23	1.000	↔
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	-0.00116	0.438	↔	0.000388	0.648	↔	2022-04-18	0.112	↔
4_1_111	MW-11D	App. I Metals	Copper	ug/L	13	10	77%	0.0290	0.553	↔	-0.0115	0.026	↔	2021-11-16	0.454	↔
4_1_117	MW-11D	App. I Metals	Nickel	ug/L	13	9	69%	0.000165	0.973	↔	-0.00451	0.091	↔	2022-07-12	0.431	↔
4_1_122	MW-11D	App. I Metals	Silver	ug/L	13	13	100%	-0.00294	0.044	↔	0.0000620	0.982	↔	2023-03-01	0.560	↔
4_1_127	MW-11D	App. I Metals	Vanadium	ug/L	13	10	77%	-0.00521	0.015	↔	0.00234	0.541	↔	2023-02-11	0.601	↔
4_1_128	MW-11D	App. I Metals	Zinc	ug/L	13	10	77%	0.00330	0.480	↔	-0.0365	0.229	↔	2023-07-31	0.387	↔
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	-76.6	0.439	↔	-12.7	0.674	↔	2022-04-18	0.297	↔
4_2_108	MW-11D	App. III	Chloride	mg/L	13	0	0%	-0.644	0.220	↔	-0.0763	0.626	↔	2022-04-18	0.496	↔
4_2_112	MW-11D	App. III	Fluoride	mg/L	13	0	0%	0.0000727	0.300	↔	-0.000355	0.168	↔	2023-04-24	0.431	↔
4_2_118	MW-11D	App. III	pH (Field)	S.U.	13	0	0%	-0.00142	0.057	↔	-0.000273	0.206	↔	2022-04-21	0.772	↔
4_2_123	MW-11D	App. III	Sulfate	mg/L	13	1	8%	-0.674	0.263	↔	-0.0680	0.706	↔	2022-04-18	0.435	↔
4_2_125	MW-11D	App. III	Total Dissolved Solids	mg/L	13	0	0%	-1.66	0.157	↔	-0.288	0.603	↔	2022-06-02	0.515	↔
4_3_101	MW-11D	App. IV	Antimony	ug/L	13	11	85%	0.00211	0.656	↔	-0.00256	0.500	↔	2022-10-23	0.073	↔
4_3_103	MW-11D	App. IV	Barium	ug/L	13	0	0%	0.0502	0.226	↔	-0.00591	0.909	↔	2022-12-15	0.297	↔
4_3_104	MW-11D	App. IV	Beryllium	ug/L	13	12	92%	-0.00104	0.046	↔	0.000153	0.798	↔	2022-12-20	0.572	↔
4_3_106	MW-11D	App. IV	Cadmium	ug/L	13	13	100%	-0.000260	0.060	↔	0.000229	0.610	↔	2023-04-24	0.387	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
4_3_109	MW-11D	App. IV	Chromium	ug/L	13	10	77%	0.00330	0.446	↔	-0.00697	0.064	↔	2022-07-13	0.524	↔
4_3_110	MW-11D	App. IV	Cobalt	ug/L	13	12	92%	-0.00518	0.062	↔	-0.0000531	0.987	↔	2022-12-25	0.571	↔
4_3_112	MW-11D	App. IV	Fluoride	mg/L	13	0	0%	0.0000727	0.300	↔	-0.000355	0.168	↔	2023-04-24	0.431	↔
4_3_113	MW-11D	App. IV	Lead	ug/L	13	12	92%	0	1.000	↔	-0.00349	0.025	↔	2021-11-30	0.582	↔
4_3_114	MW-11D	App. IV	Lithium	ug/L	13	0	0%	-0.119	0.038	↔	-0.0126	0.426	↔	2022-03-30	0.744	↔
4_3_115	MW-11D	App. IV	Mercury	ug/L	13	13	100%	-0.0000155	0.229	↔	0.0000442	0.331	↔	2023-07-24	0.238	↔
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	-0.148	0.163	↔	-0.0249	0.619	↔	2022-04-19	0.455	↔
4_3_119	MW-11D	App. IV	Radium-226	pCi/L	13	0	0%	0.00365	0.101	↔	-0.000652	0.006	↓	2021-08-17	0.648	↔
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	13	0	0%	-0.0122	0.017	↔	-0.000203	0.611	↔	2021-08-27	0.716	↔
4_3_121	MW-11D	App. IV	Selenium	ug/L	13	12	92%	-0.00346	0.049	↔	0.00536	0.353	↔	2023-04-24	0.406	↔
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	13	0	0%	-0.00858	0.056	↔	-0.000783	0.057	↔	2021-09-02	0.755	↔
5_1_111	MW-2	App. I Metals	Copper	ug/L	31	15	48%	0.0337	0.053	↔	-0.0699	0.304	↔	2021-11-18	0.167	↔
5_1_117	MW-2	App. I Metals	Nickel	ug/L	31	12	39%	0.00115	0.908	↔	0.0114	0.578	↔	2021-01-28	0.044	↔
5_1_122	MW-2	App. I Metals	Silver	ug/L	31	29	94%	0	1.000	↔	-0.00198	0.000	↓	2021-07-06	0.688	↔
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	31	22	71%	0.000850	0.611	↔	0.00817	0.450	↔	2022-06-30	0.106	↔
5_1_128	MW-2	App. I Metals	Zinc	ug/L	31	16	52%	-0.0607	0.304	↔	0.0166	0.231	↔	2017-12-10	0.092	↔
5_2_105	MW-2	App. III	Boron	ug/L	30	1	3%	0.0275	0.249	↔	-0.00550	0.014	↔	2017-04-04	0.247	↔
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	21.3	0.307	↔	-34.6	0.073	↔	2019-08-25	0.199	↔
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	0.638	0.190	↔	-0.141	0.002	↓	2017-01-31	0.326	↔
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	-0.000667	0.337	↔	0	0.647	↔	2016-05-07	0.113	↔
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	-0.0000992	0.253	↔	0.00273	0.192	↔	2023-07-24	0.148	↔
5_2_123	MW-2	App. III	Sulfate	mg/L	31	0	0%	-0.120	0.000	↓	-0.0202	0.405	↔	2019-07-27	0.753	↔
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	1.55	0.174	↔	-1.53	0.139	↔	2020-01-16	0.140	↔
5_3_101	MW-2	App. IV	Antimony	ug/L	31	18	58%	-0.00589	0.070	↔	0.00417	0.151	↔	2019-09-16	0.183	↔
5_3_102	MW-2	App. IV	Arsenic	ug/L	31	22	71%	0.00581	0.143	↔	0.000241	0.630	↔	2017-04-11	0.278	↔
5_3_103	MW-2	App. IV	Barium	ug/L	31	0	0%	0.0639	0.038	↔	-0.0332	0.665	↔	2021-04-15	0.236	↔
5_3_104	MW-2	App. IV	Beryllium	ug/L	31	29	94%	0.0000707	0.311	↔	-0.000363	0.114	↔	2021-08-10	0.171	↔
5_3_106	MW-2	App. IV	Cadmium	ug/L	31	29	94%	0	1.000	↔	-0.000118	0.000	↓	2019-01-10	0.719	↔
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	0.0337	0.689	↔	-0.00325	0.666	↔	2017-04-04	0.024	↔
5_3_110	MW-2	App. IV	Cobalt	ug/L	31	26	84%	0.000310	0.836	↔	0.00826	0.519	↔	2022-07-12	0.079	↔
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	-0.000667	0.337	↔	0	0.647	↔	2016-05-07	0.113	↔
5_3_113	MW-2	App. IV	Lead	ug/L	31	27	87%	0	1.000	↔	0.00229	0.390	↔	2019-07-09	0.097	↔
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	0.0195	0.543	↔	-0.0905	0.385	↔	2021-08-18	0.055	↔
5_3_115	MW-2	App. IV	Mercury	ug/L	31	31	100%	0	0.000	↑	0	0.549	↔	2022-04-12	0.618	↔
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	-0.0730	0.286	↔	-0.00208	0.163	↔	2016-04-06	0.236	↔
5_3_119	MW-2	App. IV	Radium-226	pCi/L	30	0	0%	-0.000118	0.269	↔	0.000312	0.558	↔	2022-01-27	0.059	↔
5_3_120	MW-2	App. IV	Radium-228	pCi/L	30	0	0%	-0.00654	0.337	↔	0.000214	0.020	↔	2016-03-17	0.222	↔
5_3_121	MW-2	App. IV	Selenium	ug/L	31	29	94%	0	1.000	↔	-0.000730	0.065	↔	2019-07-12	0.341	↔
5_3_124	MW-2	App. IV	Thallium	ug/L	31	23	74%	-0.0143	0.000	↓	0.0000296	0.917	↔	2017-04-12	0.843	↔
5_3_126	MW-2	App. IV	Total Radium	pCi/L	30	0	0%	-0.00434	0.339	↔	0.000201	0.195	↔	2016-05-27	0.097	↔
6_1_111	MW-3	App. I Metals	Copper	ug/L	34	21	62%	0.0132	0.038	↔	-0.0485	0.237	↔	2022-04-20	0.173	↔
6_1_117	MW-3	App. I Metals	Nickel	ug/L	34	19	56%	0.0190	0.115	↔	-0.0118	0.068	↔	2019-01-24	0.172	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
6_1_122	MW-3	App. I Metals	Silver	ug/L	34	33	97%	0	1.000	↔	-0.00188	0.000	↓	2021-06-30	0.663	↔
6_1_127	MW-3	App. I Metals	Vanadium	ug/L	34	22	65%	0.00344	0.011	↔	-0.00209	0.054	↔	2019-04-18	0.275	↔
6_1_128	MW-3	App. I Metals	Zinc	ug/L	34	27	79%	0.00971	0.045	↔	-0.00485	0.123	↔	2019-03-21	0.199	↔
6_2_105	MW-3	App. III	Boron	ug/L	33	10	30%	-0.0395	0.000	↓	0.0224	0.000	↑	2018-10-01	0.608	↔
6_2_107	MW-3	App. III	Calcium	ug/L	34	0	0%	-51.3	0.299	↔	15.0	0.001	↑	2017-04-04	0.319	↔
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	-0.486	0.060	↔	0.0298	0.341	↔	2017-07-03	0.328	↔
6_2_112	MW-3	App. III	Fluoride	mg/L	34	1	3%	0.000403	0.000	↑	-0.000115	0.000	↓	2018-03-30	0.583	↔
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	-0.00403	0.628	↔	0.0000541	0.316	↔	2016-01-23	0.054	↔
6_2_123	MW-3	App. III	Sulfate	mg/L	34	0	0%	0.355	0.004	↑	-0.0524	0.000	↓	2016-12-10	0.792	↔
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	19.2	0.245	↔	0.176	0.096	↔	2016-02-01	0.323	↔
6_3_101	MW-3	App. IV	Antimony	ug/L	34	23	68%	-0.0134	0.059	↔	-0.000234	0.694	↔	2017-04-04	0.472	↔
6_3_102	MW-3	App. IV	Arsenic	ug/L	34	28	82%	0.00196	0.001	↑	-0.00270	0.004	↓	2020-10-14	0.429	↔
6_3_103	MW-3	App. IV	Barium	ug/L	34	0	0%	-0.611	0.002	↓	0.105	0.000	↑	2017-04-04	0.669	↔
6_3_104	MW-3	App. IV	Beryllium	ug/L	34	34	100%	0.0000558	0.308	↔	-0.000511	0.010	↓	2021-10-17	0.344	↔
6_3_106	MW-3	App. IV	Cadmium	ug/L	34	33	97%	0	1.000	↔	-0.000111	0.000	↓	2018-08-20	0.716	↔
6_3_109	MW-3	App. IV	Chromium	ug/L	34	17	50%	0.0376	0.081	↔	-0.0254	0.073	↔	2019-01-25	0.185	↔
6_3_110	MW-3	App. IV	Cobalt	ug/L	34	30	88%	0.000417	0.224	↔	-0.00275	0.024	↔	2021-08-19	0.300	↔
6_3_112	MW-3	App. IV	Fluoride	mg/L	34	1	3%	0.000403	0.000	↑	-0.000115	0.000	↓	2018-03-30	0.583	↔
6_3_113	MW-3	App. IV	Lead	ug/L	34	31	91%	0.000961	0.010	↑	-0.00410	0.032	↔	2022-03-03	0.312	↔
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	-0.0296	0.062	↔	0.0237	0.416	↔	2021-01-27	0.176	↔
6_3_115	MW-3	App. IV	Mercury	ug/L	34	34	100%	0	0.000	↑	0	0.657	↔	2022-04-20	0.587	↔
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	-0.00641	0.671	↔	-0.0000886	0.946	↔	2017-01-24	0.028	↔
6_3_119	MW-3	App. IV	Radium-226	pCi/L	33	0	0%	0.000457	0.074	↔	-0.000255	0.115	↔	2019-01-25	0.175	↔
6_3_120	MW-3	App. IV	Radium-228	pCi/L	33	0	0%	-0.00347	0.377	↔	0.000101	0.441	↔	2016-07-10	0.090	↔
6_3_121	MW-3	App. IV	Selenium	ug/L	34	33	97%	-0.000160	0.570	↔	-0.00110	0.044	↔	2020-12-12	0.362	↔
6_3_124	MW-3	App. IV	Thallium	ug/L	34	34	100%	-0.0116	0.000	↓	0	0.939	↔	2017-04-24	0.940	↔
6_3_126	MW-3	App. IV	Total Radium	pCi/L	33	0	0%	0.000535	0.308	↔	-0.000372	0.265	↔	2019-04-17	0.076	↔
7_1_111	MW-4	App. I Metals	Copper	ug/L	35	31	89%	0.0164	0.060	↔	-0.0398	0.272	↔	2021-11-17	0.140	↔
7_1_117	MW-4	App. I Metals	Nickel	ug/L	35	11	31%	0.00238	0.000	↑	-0.0175	0.742	↔	2023-10-05	0.425	↔
7_1_122	MW-4	App. I Metals	Silver	ug/L	35	35	100%	0	1.000	↔	-0.00200	0.000	↓	2021-07-07	0.701	↔
7_1_127	MW-4	App. I Metals	Vanadium	ug/L	35	31	89%	0.000989	0.093	↔	-0.00260	0.061	↔	2021-03-20	0.193	↔
7_1_128	MW-4	App. I Metals	Zinc	ug/L	35	24	69%	0.00734	0.061	↔	-0.00299	0.485	↔	2020-04-16	0.194	↔
7_2_105	MW-4	App. III	Boron	ug/L	34	22	65%	0.0320	0.499	↔	-0.00804	0.317	↔	2017-10-16	0.053	↔
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	75.5	0.000	↑	-6.00	0.005	↓	2017-05-25	0.682	↔
7_2_108	MW-4	App. III	Chloride	mg/L	35	0	0%	0.688	0.000	↑	-0.0753	0.000	↓	2017-04-18	0.721	↔
7_2_112	MW-4	App. III	Fluoride	mg/L	35	0	0%	-0.0000428	0.013	↔	0.000114	0.001	↑	2020-12-06	0.435	↔
7_2_118	MW-4	App. III	pH (Field)	S.U.	33	0	0%	-0.0000553	0.118	↔	-0.000158	0.118	↔	2021-08-11	0.400	↔
7_2_123	MW-4	App. III	Sulfate	mg/L	35	0	0%	0.00993	0.000	↑	0.0000173	0.964	↔	2017-08-18	0.704	↔
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	0.986	0.000	↑	-0.101	0.015	↔	2017-11-17	0.704	↔
7_3_101	MW-4	App. IV	Antimony	ug/L	35	30	86%	-0.000274	0.481	↔	0.000307	0.782	↔	2021-04-27	0.021	↔
7_3_102	MW-4	App. IV	Arsenic	ug/L	35	33	94%	0.00535	0.000	↑	-0.00102	0.000	↓	2017-09-08	0.616	↔
7_3_103	MW-4	App. IV	Barium	ug/L	35	0	0%	0.369	0.001	↑	-0.00809	0.498	↔	2017-04-29	0.619	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
7_3_104	MW-4	App. IV	Beryllium	ug/L	35	35	100%	0.0000399	0.498	↔	-0.000470	0.027	↔	2021-11-16	0.259	↔
7_3_106	MW-4	App. IV	Cadmium	ug/L	35	34	97%	0	1.000	↔	-0.000101	0.000	↓	2018-04-09	0.690	↔
7_3_109	MW-4	App. IV	Chromium	ug/L	35	27	77%	0.000949	0.049	↔	-0.00516	0.104	↔	2022-04-21	0.218	↔
7_3_110	MW-4	App. IV	Cobalt	ug/L	35	20	57%	0.00185	0.262	↔	0.0115	0.102	↔	2021-11-17	0.359	↔
7_3_112	MW-4	App. IV	Fluoride	mg/L	35	0	0%	-0.0000428	0.013	↔	0.000114	0.001	↑	2020-12-06	0.435	↔
7_3_113	MW-4	App. IV	Lead	ug/L	35	34	97%	0.000890	0.006	↑	-0.00448	0.031	↔	2022-06-20	0.321	↔
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	0.0141	0.684	↔	0.00537	0.081	↔	2017-01-25	0.210	↔
7_3_115	MW-4	App. IV	Mercury	ug/L	35	35	100%	0	0.000	↑	0	0.705	↔	2022-05-02	0.569	↔
7_3_116	MW-4	App. IV	Molybdenum	ug/L	35	30	86%	0.00558	0.045	↔	-0.00553	0.011	↔	2019-10-13	0.274	↔
7_3_119	MW-4	App. IV	Radium-226	pCi/L	33	0	0%	0.000355	0.092	↔	-0.000318	0.005	↓	2019-01-21	0.311	↔
7_3_120	MW-4	App. IV	Radium-228	pCi/L	33	0	0%	0.000118	0.136	↔	-0.00209	0.273	↔	2023-06-29	0.126	↔
7_3_121	MW-4	App. IV	Selenium	ug/L	35	33	94%	-0.000187	0.432	↔	-0.00155	0.067	↔	2021-11-16	0.320	↔
7_3_124	MW-4	App. IV	Thallium	ug/L	35	35	100%	-0.0116	0.000	↓	0	0.969	↔	2017-04-24	0.941	↔
7_3_126	MW-4	App. IV	Total Radium	pCi/L	33	0	0%	0.000673	0.082	↔	-0.000399	0.045	↔	2019-01-21	0.212	↔
8_1_111	MW-5	App. I Metals	Copper	ug/L	36	28	78%	0.00176	0.002	↑	-0.00912	0.015	↔	2022-07-12	0.364	↔
8_1_117	MW-5	App. I Metals	Nickel	ug/L	36	29	81%	0.00140	0.911	↔	0.00450	0.604	↔	2019-07-08	0.025	↔
8_1_122	MW-5	App. I Metals	Silver	ug/L	36	36	100%	0	1.000	↔	-0.00200	0.000	↓	2021-07-07	0.704	↔
8_1_127	MW-5	App. I Metals	Vanadium	ug/L	36	33	92%	0.000451	0.104	↔	-0.00222	0.061	↔	2021-11-16	0.217	↔
8_1_128	MW-5	App. I Metals	Zinc	ug/L	36	25	69%	-0.00623	0.301	↔	0.00132	0.507	↔	2018-07-17	0.077	↔
8_2_105	MW-5	App. III	Boron	ug/L	35	15	43%	-0.00544	0.280	↔	0.00193	0.442	↔	2019-01-19	0.073	↔
8_2_107	MW-5	App. III	Calcium	ug/L	36	0	0%	0.494	0.559	↔	-2.94	0.001	↓	2019-10-14	0.477	↔
8_2_108	MW-5	App. III	Chloride	mg/L	36	0	0%	0.00156	0.013	↔	-0.00231	0.008	↓	2020-05-25	0.324	↔
8_2_112	MW-5	App. III	Fluoride	mg/L	36	0	0%	-0.000480	0.402	↔	0.0000267	0.034	↔	2016-05-08	0.151	↔
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	-0.000140	0.498	↔	0	1.000	↔	2020-07-07	0.033	↔
8_2_123	MW-5	App. III	Sulfate	mg/L	36	0	0%	-0.000188	0.513	↔	0.0000930	0.814	↔	2020-07-06	0.023	↔
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.231	0.363	↔	-0.0841	0.051	↔	2017-10-16	0.134	↔
8_3_101	MW-5	App. IV	Antimony	ug/L	36	34	94%	-0.000453	0.203	↔	0.000571	0.327	↔	2020-07-07	0.077	↔
8_3_102	MW-5	App. IV	Arsenic	ug/L	36	34	94%	0.00535	0.000	↑	-0.00104	0.000	↓	2017-09-10	0.614	↔
8_3_103	MW-5	App. IV	Barium	ug/L	36	0	0%	0.0158	0.045	↔	-0.0217	0.000	↓	2019-07-08	0.428	↔
8_3_104	MW-5	App. IV	Beryllium	ug/L	36	36	100%	0.0000401	0.459	↔	-0.000470	0.046	↔	2021-11-16	0.261	↔
8_3_106	MW-5	App. IV	Cadmium	ug/L	36	36	100%	0	1.000	↔	-0.000102	0.000	↓	2018-04-05	0.699	↔
8_3_109	MW-5	App. IV	Chromium	ug/L	36	28	78%	0.00333	0.903	↔	0.00973	0.608	↔	2019-07-08	0.026	↔
8_3_110	MW-5	App. IV	Cobalt	ug/L	36	34	94%	0.000331	0.214	↔	-0.00309	0.009	↓	2022-01-25	0.326	↔
8_3_112	MW-5	App. IV	Fluoride	mg/L	36	0	0%	-0.000480	0.402	↔	0.0000267	0.034	↔	2016-05-08	0.151	↔
8_3_113	MW-5	App. IV	Lead	ug/L	36	35	97%	0.000840	0.005	↑	-0.00332	0.029	↔	2022-02-28	0.323	↔
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	0.00204	0.066	↔	-0.00270	0.476	↔	2021-08-09	0.125	↔
8_3_115	MW-5	App. IV	Mercury	ug/L	36	36	100%	0	0.000	↑	0	0.709	↔	2022-05-24	0.563	↔
8_3_116	MW-5	App. IV	Molybdenum	ug/L	36	33	92%	0.00210	0.044	↔	-0.00679	0.316	↔	2022-04-19	0.145	↔
8_3_119	MW-5	App. IV	Radium-226	pCi/L	34	0	0%	0.000145	0.442	↔	-0.000155	0.168	↔	2019-04-17	0.085	↔
8_3_120	MW-5	App. IV	Radium-228	pCi/L	34	0	0%	0.0000219	0.765	↔	-0.000863	0.628	↔	2023-07-21	0.017	↔
8_3_121	MW-5	App. IV	Selenium	ug/L	36	35	97%	-0.000185	0.448	↔	-0.00112	0.060	↔	2021-02-01	0.361	↔
8_3_124	MW-5	App. IV	Thallium	ug/L	36	35	97%	-0.0165	0.001	↓	0	0.998	↔	2017-04-03	0.716	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
8_3_126	MW-5	App. IV	Total Radium	pCi/L	34	0	0%	-0.00519	0.619	↔	0.0000279	0.676	↔	2016-01-31	0.040	↔
9_1_111	MW-6	App. I Metals	Copper	ug/L	35	32	91%	0.00213	0.014	↔	-0.00637	0.080	↔	2021-11-17	0.248	↔
9_1_117	MW-6	App. I Metals	Nickel	ug/L	35	26	74%	0.000527	0.152	↔	-0.00287	0.144	↔	2022-04-01	0.138	↔
9_1_122	MW-6	App. I Metals	Silver	ug/L	35	35	100%	0	1.000	↔	-0.00201	0.000	↓	2021-07-08	0.681	↔
9_1_127	MW-6	App. I Metals	Vanadium	ug/L	35	31	89%	0.000427	0.182	↔	-0.00160	0.162	↔	2021-11-16	0.116	↔
9_1_128	MW-6	App. I Metals	Zinc	ug/L	35	26	74%	0.00268	0.004	↑	-0.0511	0.567	↔	2023-10-03	0.260	↔
9_2_105	MW-6	App. III	Boron	ug/L	34	23	68%	-0.0188	0.005	↓	0.00318	0.000	↑	2017-02-10	0.603	↔
9_2_107	MW-6	App. III	Calcium	ug/L	35	0	0%	-0.739	0.262	↔	1.76	0.613	↔	2022-01-25	0.049	↔
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	0.0899	0.517	↔	-0.0297	0.020	↔	2017-04-03	0.174	↔
9_2_112	MW-6	App. III	Fluoride	mg/L	35	1	3%	0.0000857	0.444	↔	-0.0000406	0.105	↔	2018-01-23	0.099	↔
9_2_118	MW-6	App. III	pH (Field)	S.U.	32	0	0%	-0.000166	0.037	↔	0.0000228	0.851	↔	2020-09-21	0.286	↔
9_2_123	MW-6	App. III	Sulfate	mg/L	35	0	0%	-0.0804	0.000	↓	0.00155	0.933	↔	2020-01-27	0.670	↔
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	35	0	0%	2.30	0.422	↔	-0.0530	0.006	↓	2016-02-04	0.240	↔
9_3_101	MW-6	App. IV	Antimony	ug/L	35	35	100%	-0.000460	0.222	↔	0.000353	0.578	↔	2020-10-07	0.072	↔
9_3_102	MW-6	App. IV	Arsenic	ug/L	35	33	94%	0.00537	0.004	↑	-0.000910	0.004	↓	2017-09-04	0.459	↔
9_3_103	MW-6	App. IV	Barium	ug/L	35	0	0%	-0.0401	0.000	↓	0.0237	0.106	↔	2021-04-05	0.712	↔
9_3_104	MW-6	App. IV	Beryllium	ug/L	35	34	97%	0.0000406	0.482	↔	-0.000442	0.038	↔	2021-11-16	0.221	↔
9_3_106	MW-6	App. IV	Cadmium	ug/L	35	35	100%	0	1.000	↔	-0.000105	0.000	↓	2018-04-17	0.693	↔
9_3_109	MW-6	App. IV	Chromium	ug/L	35	28	80%	0.000981	0.193	↔	-0.00317	0.156	↔	2021-05-04	0.131	↔
9_3_110	MW-6	App. IV	Cobalt	ug/L	35	34	97%	0.000289	0.285	↔	-0.00254	0.034	↔	2021-11-17	0.268	↔
9_3_112	MW-6	App. IV	Fluoride	mg/L	35	1	3%	0.0000857	0.444	↔	-0.0000406	0.105	↔	2018-01-23	0.099	↔
9_3_113	MW-6	App. IV	Lead	ug/L	35	33	94%	0.000841	0.009	↑	-0.00278	0.092	↔	2022-03-13	0.260	↔
9_3_114	MW-6	App. IV	Lithium	ug/L	35	0	0%	-0.0132	0.000	↓	0.00548	0.479	↔	2021-07-15	0.590	↔
9_3_115	MW-6	App. IV	Mercury	ug/L	35	34	97%	0	0.612	↔	0	1.000	↔	2022-05-22	0.013	↔
9_3_116	MW-6	App. IV	Molybdenum	ug/L	35	30	86%	0.00145	0.081	↔	-0.00147	0.081	↔	2019-10-14	0.175	↔
9_3_119	MW-6	App. IV	Radium-226	pCi/L	33	0	0%	-0.0000363	0.499	↔	-0.00170	0.752	↔	2023-11-16	0.065	↔
9_3_120	MW-6	App. IV	Radium-228	pCi/L	33	0	0%	0.000112	0.775	↔	-0.000112	0.347	↔	2018-01-24	0.048	↔
9_3_121	MW-6	App. IV	Selenium	ug/L	35	33	94%	-0.000186	0.472	↔	-0.00124	0.055	↔	2021-04-02	0.339	↔
9_3_124	MW-6	App. IV	Thallium	ug/L	35	32	91%	-0.0125	0.000	↓	0	0.950	↔	2017-04-16	0.951	↔
9_3_126	MW-6	App. IV	Total Radium	pCi/L	33	0	0%	-0.0000604	0.468	↔	-0.00355	0.670	↔	2023-11-16	0.096	↔

Table 10: Trend Tests: Piecewise Linear-Linear-Linear

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
10_1_111	MW-7R	App. I Metals	Copper	ug/L	26	20	77%	0.0476	0.089	↔	-0.0570	0.265	↔	0.00107	0.911	↔	2019-07-09	2020-09-16	0.285	↔
10_1_117	MW-7R	App. I Metals	Nickel	ug/L	26	12	46%	0.445	0.173	↔	-0.436	0.221	↔	0.0537	0.709	↔	2019-07-09	2021-03-02	0.220	↔
10_1_122	MW-7R	App. I Metals	Silver	ug/L	26	26	100%	0	0.978	↔	-0.00180	0.003	↓	-0.00289	0.787	↔	2021-04-09	2023-12-27	0.698	↔
10_1_127	MW-7R	App. I Metals	Vanadium	ug/L	26	15	58%	-0.0839	0.012	↔	0.0144	0.316	↔	-0.00279	0.117	↔	2018-02-15	2019-07-09	0.428	↔
10_2_105	MW-7R	App. III	Boron	ug/L	25	12	48%	-0.0428	0.000	↓	0.00961	0.061	↔	-0.00207	0.478	↔	2018-12-23	2021-01-26	0.674	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
10_2_107	MW-7R	App. III	Calcium	ug/L	26	0	0%	20.2	0.045	↔	-21.4	0.323	↔	7.76	0.098	↔	2019-10-13	2020-11-02	0.390	↔
10_2_112	MW-7R	App. III	Fluoride	mg/L	26	1	4%	-0.00105	0.000	↓	0.0000236	0.012	↔	-0.000109	0.544	↔	2018-02-15	2023-08-19	0.799	↔
10_2_123	MW-7R	App. III	Sulfate	mg/L	26	0	0%	-0.153	0.000	↓	-0.00161	0.001	↓	-0.00982	0.694	↔	2018-02-20	2023-12-27	0.978	↔
10_3_101	MW-7R	App. IV	Antimony	ug/L	26	25	96%	0.00482	0.191	↔	-0.00760	0.350	↔	0.00130	0.448	↔	2019-07-10	2020-10-26	0.189	↔
10_3_102	MW-7R	App. IV	Arsenic	ug/L	26	24	92%	-0.000392	0.599	↔	0	1.000	↔	-0.00211	0.007	↓	2020-05-11	2021-06-11	0.605	↔
10_3_104	MW-7R	App. IV	Beryllium	ug/L	26	26	100%	0	0.998	↔	-0.0000637	0.465	↔	-0.00136	0.792	↔	2018-04-25	2023-10-03	0.130	↔
10_3_106	MW-7R	App. IV	Cadmium	ug/L	26	26	100%	0	0.977	↔	-0.000125	0.000	↓	0.000119	0.721	↔	2018-07-10	2023-04-25	0.644	↔
10_3_109	MW-7R	App. IV	Chromium	ug/L	26	8	31%	0.817	0.190	↔	-0.586	0.274	↔	0.202	0.699	↔	2019-07-10	2021-12-25	0.178	↔
10_3_110	MW-7R	App. IV	Cobalt	ug/L	26	21	81%	0.0138	0.017	↔	-0.0440	0.395	↔	-0.00122	0.513	↔	2019-08-19	2020-01-16	0.375	↔
10_3_112	MW-7R	App. IV	Fluoride	mg/L	26	1	4%	-0.00105	0.000	↓	0.0000236	0.012	↔	-0.000109	0.544	↔	2018-02-15	2023-08-19	0.799	↔
10_3_113	MW-7R	App. IV	Lead	ug/L	26	23	88%	0.00145	0.056	↔	-0.0128	0.241	↔	0.00130	0.812	↔	2022-05-17	2023-02-02	0.355	↔
10_3_114	MW-7R	App. IV	Lithium	ug/L	26	0	0%	0.0684	0.020	↔	0.0164	0.105	↔	-0.00140	0.406	↔	2018-02-15	2019-07-31	0.685	↔
10_3_115	MW-7R	App. IV	Mercury	ug/L	26	26	100%	0	0.726	↔	0.0000315	0.016	↔	0	0.256	↔	2019-05-11	2021-06-19	0.645	↔
10_3_116	MW-7R	App. IV	Molybdenum	ug/L	26	22	85%	-0.0515	0.514	↔	-0.00300	0.510	↔	0.00181	0.962	↔	2018-02-15	2023-04-24	0.118	↔
10_3_119	MW-7R	App. IV	Radium-226	pCi/L	24	0	0%	0.00176	0.048	↔	-0.00280	0.270	↔	-0.0000791	0.592	↔	2019-01-23	2019-07-25	0.354	↔
10_3_121	MW-7R	App. IV	Selenium	ug/L	26	25	96%	0.0000195	0.974	↔	-0.00244	0.015	↔	0.00487	0.220	↔	2021-01-12	2023-04-25	0.503	↔
10_3_124	MW-7R	App. IV	Thallium	ug/L	26	23	88%	-0.00233	0.000	↓	0.000251	0.096	↔	-0.0000190	0.011	↔	2018-02-15	2019-01-23	0.964	↔
10_3_126	MW-7R	App. IV	Total Radium	pCi/L	24	0	0%	0.00143	0.418	↔	-0.0000736	0.819	↔	-0.00249	0.434	↔	2019-01-23	2023-04-25	0.220	↔
11_1_111	MW-8	App. I Metals	Copper	ug/L	36	30	83%	-0.000722	0.846	↔	0.209	0.337	↔	-0.209	0.001	↓	2022-08-11	2023-04-26	0.448	↔
11_1_117	MW-8	App. I Metals	Nickel	ug/L	36	19	53%	-0.00301	0.669	↔	0.116	0.073	↔	-0.213	0.098	↔	2022-01-02	2023-04-27	0.283	↔
11_1_122	MW-8	App. I Metals	Silver	ug/L	36	35	97%	0	0.969	↔	-0.00118	0.007	↓	-0.00592	0.450	↔	2021-03-10	2023-10-05	0.691	↔
11_1_127	MW-8	App. I Metals	Vanadium	ug/L	36	30	83%	-0.000359	0.629	↔	0.00191	0.034	↔	-0.00966	0.167	↔	2019-10-11	2023-04-27	0.278	↔
11_1_128	MW-8	App. I Metals	Zinc	ug/L	36	24	67%	-0.0203	0.046	↔	0.0101	0.125	↔	-0.0471	0.484	↔	2018-11-21	2023-04-27	0.222	↔
11_2_105	MW-8	App. III	Boron	ug/L	35	15	43%	-0.00363	0.163	↔	0.0103	0.198	↔	-0.00208	0.460	↔	2019-02-10	2021-01-26	0.288	↔
11_2_107	MW-8	App. III	Calcium	ug/L	36	0	0%	-83.9	0.010	↔	-14.9	0.487	↔	19.9	0.245	↔	2017-10-19	2021-01-26	0.527	↔
11_2_108	MW-8	App. III	Chloride	mg/L	36	0	0%	-2.06	0.012	↔	-0.160	0.025	↔	0.0121	0.719	↔	2016-05-25	2019-06-04	0.776	↔
11_2_112	MW-8	App. III	Fluoride	mg/L	36	20	56%	0	1.000	↔	0.0000327	0.000	↑	-0.0000729	0.252	↔	2016-07-11	2023-05-24	0.858	↔
11_2_118	MW-8	App. III	pH (Field)	S.U.	34	0	0%	0.000394	0.018	↔	0.0000184	0.657	↔	-0.000846	0.728	↔	2017-10-19	2023-10-18	0.461	↔
11_2_123	MW-8	App. III	Sulfate	mg/L	36	0	0%	0.00219	0.000	↑	-0.00170	0.073	↔	0.000576	0.212	↔	2019-03-12	2021-04-14	0.652	↔
11_2_125	MW-8	App. III	Total Dissolved Solids	mg/L	36	0	0%	12.1	0.045	↔	-0.700	0.012	↔	0.0704	0.238	↔	2016-02-07	2018-02-08	0.449	↔
11_3_101	MW-8	App. IV	Antimony	ug/L	36	29	81%	-0.0110	0.002	↓	-0.000550	0.417	↔	0.000575	0.542	↔	2017-02-14	2021-01-27	0.705	↔
11_3_102	MW-8	App. IV	Arsenic	ug/L	36	32	89%	0.00599	0.036	↔	0.0000922	0.767	↔	-0.00793	0.031	↔	2017-03-23	2023-04-26	0.561	↔
11_3_103	MW-8	App. IV	Barium	ug/L	36	0	0%	-0.420	0.039	↔	0.000122	0.999	↔	0.183	0.461	↔	2018-03-25	2022-01-26	0.343	↔
11_3_104	MW-8	App. IV	Beryllium	ug/L	36	35	97%	-0.000147	0.187	↔	0.00249	0.495	↔	-0.000349	0.070	↔	2020-04-15	2020-10-14	0.202	↔
11_3_106	MW-8	App. IV	Cadmium	ug/L	36	35	97%	-0.0000853	0.075	↔	0.00104	0.208	↔	-0.00179	0.007	↓	2022-03-04	2023-04-26	0.322	↔
11_3_109	MW-8	App. IV	Chromium	ug/L	36	19	53%	-0.000789	0.916	↔	0.0235	0.446	↔	-0.0949	0.396	↔	2021-03-16	2023-04-27	0.082	↔
11_3_110	MW-8	App. IV	Cobalt	ug/L	36	33	92%	-0.000680	0.086	↔	0.0126	0.056	↔	-0.00226	0.001	↓	2020-04-14	2020-10-20	0.427	↔
11_3_112	MW-8	App. IV	Fluoride	mg/L	36	20	56%	0	1.000	↔	0.0000327	0.000	↑	-0.0000729	0.252	↔	2016-07-11	2023-05-24	0.858	↔
11_3_113	MW-8	App. IV	Lead	ug/L	36	35	97%	-0.000428	0.178	↔	0.0154	0.005	↑	-0.00262	0.000	↓	2020-04-02	2020-10-31	0.686	↔
11_3_114	MW-8	App. IV	Lithium	ug/L	36	1	3%	-0.0161	0.000	↓	0.0428	0.112	↔	-0.00448	0.343	↔	2020-02-01	2021-01-27	0.588	↔
11_3_115	MW-8	App. IV	Mercury	ug/L	36	35	97%	0.0000644	0.230	↔	-0.0000277	0.471	↔	0.0000155	0.725	↔	2018-01-23	2021-06-09	0.079	↔
11_3_116	MW-8	App. IV	Molybdenum	ug/L	36	33	92%	-0.000619	0.228	↔	0.00741	0.381	↔	-0.00187	0.025	↔	2020-04-14	2021-01-09	0.222	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
11_3_119	MW-8	App. IV	Radium-226	pCi/L	34	0	0%	-0.000171	0.169	↔	0.00374	0.096	↔	-0.00542	0.033	↔	2022-07-12	2023-04-27	0.330	↔
11_3_120	MW-8	App. IV	Radium-228	pCi/L	34	0	0%	-0.000408	0.568	↔	0.000625	0.113	↔	-0.00486	0.089	↔	2018-08-05	2023-04-26	0.211	↔
11_3_121	MW-8	App. IV	Selenium	ug/L	36	34	94%	0.000214	0.637	↔	-0.00111	0.004	↓	0.00302	0.384	↔	2019-02-14	2023-04-27	0.434	↔
11_3_124	MW-8	App. IV	Thallium	ug/L	36	35	97%	-0.0136	0.000	↓	0.0000609	0.956	↔	0	0.981	↔	2017-04-18	2019-07-11	0.893	↔
11_3_126	MW-8	App. IV	Total Radium	pCi/L	34	0	0%	-0.000147	0.475	↔	0.0249	0.080	↔	-0.0159	0.001	↓	2022-12-01	2023-04-27	0.514	↔
1_1_117	MW-1	App. I Metals	Nickel	ug/L	36	27	75%	0.00442	0.015	↔	-0.0251	0.514	↔	0.00102	0.295	↔	2018-10-23	2019-04-22	0.247	↔
1_1_122	MW-1	App. I Metals	Silver	ug/L	36	32	89%	0	0.999	↔	-0.0153	0.011	↔	-0.000449	0.536	↔	2022-04-19	2022-07-17	0.803	↔
1_2_105	MW-1	App. III	Boron	ug/L	35	22	63%	-0.00994	0.126	↔	0.0118	0.016	↔	-0.00533	0.861	↔	2018-12-02	2023-01-26	0.334	↔
1_2_108	MW-1	App. III	Chloride	mg/L	36	0	0%	0.309	0.000	↑	0.0504	0.819	↔	-1.44	0.007	↓	2020-06-28	2022-10-19	0.631	↔
1_2_112	MW-1	App. III	Fluoride	mg/L	36	1	3%	-0.000245	0.074	↔	0.000282	0.596	↔	0.0000196	0.006	↑	2016-12-10	2017-07-06	0.441	↔
1_2_118	MW-1	App. III	pH (Field)	S.U.	34	0	0%	-0.000170	0.262	↔	0.0000453	0.746	↔	0.000925	0.032	↔	2019-01-24	2022-09-23	0.393	↔
1_2_123	MW-1	App. III	Sulfate	mg/L	36	0	0%	-0.00471	0.000	↓	0.00396	0.711	↔	-0.00118	0.000	↓	2018-04-25	2019-01-21	0.836	↔
1_2_125	MW-1	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.483	0.117	↔	1.02	0.001	↑	-4.06	0.000	↓	2018-11-10	2022-07-13	0.759	↔
1_3_102	MW-1	App. IV	Arsenic	ug/L	36	34	94%	0.00582	0.000	↑	-0.000222	0.454	↔	-0.00222	0.001	↓	2017-05-07	2021-08-22	0.791	↔
1_3_103	MW-1	App. IV	Barium	ug/L	36	0	0%	0.0110	0.872	↔	0.131	0.001	↑	-0.549	0.001	↓	2018-06-08	2022-07-31	0.607	↔
1_3_104	MW-1	App. IV	Beryllium	ug/L	36	36	100%	-0.000148	0.038	↔	0.00257	0.267	↔	-0.000527	0.000	↓	2020-04-16	2020-10-16	0.503	↔
1_3_106	MW-1	App. IV	Cadmium	ug/L	36	33	92%	0	0.867	↔	-0.000275	0.003	↓	0.000238	0.509	↔	2020-11-05	2023-04-25	0.632	↔
1_3_109	MW-1	App. IV	Chromium	ug/L	36	26	72%	0.00637	0.011	↔	-0.0244	0.642	↔	0.000788	0.553	↔	2018-10-25	2019-07-09	0.274	↔
1_3_110	MW-1	App. IV	Cobalt	ug/L	36	34	94%	-0.000682	0.054	↔	0.0129	0.265	↔	-0.00290	0.000	↓	2020-04-16	2020-10-25	0.534	↔
1_3_112	MW-1	App. IV	Fluoride	mg/L	36	1	3%	-0.000245	0.074	↔	0.000282	0.596	↔	0.0000196	0.006	↑	2016-12-10	2017-07-06	0.441	↔
1_3_113	MW-1	App. IV	Lead	ug/L	36	33	92%	-0.000428	0.355	↔	0.0155	0.049	↔	-0.00303	0.000	↓	2020-04-03	2020-11-11	0.532	↔
1_3_114	MW-1	App. IV	Lithium	ug/L	36	0	0%	0.0273	0.215	↔	0.00396	0.007	↑	-0.0316	0.011	↔	2016-07-13	2022-10-19	0.573	↔
1_3_115	MW-1	App. IV	Mercury	ug/L	36	36	100%	0	0.678	↔	0.0000125	0.000	↑	-0.0000177	0.492	↔	2017-10-10	2023-01-27	0.607	↔
1_3_116	MW-1	App. IV	Molybdenum	ug/L	36	31	86%	-0.00121	0.635	↔	0.0160	0.219	↔	-0.00415	0.001	↓	2018-06-23	2019-07-09	0.399	↔
1_3_119	MW-1	App. IV	Radium-226	pCi/L	34	0	0%	-0.00161	0.719	↔	0.000345	0.127	↔	-0.000372	0.006	↓	2016-03-26	2019-06-02	0.321	↔
1_3_121	MW-1	App. IV	Selenium	ug/L	36	34	94%	0	1.000	↔	-0.000366	0.579	↔	-0.00114	0.097	↔	2018-06-03	2021-07-23	0.353	↔
1_3_124	MW-1	App. IV	Thallium	ug/L	36	36	100%	-0.0116	0.000	↓	0.000156	0.794	↔	-0.0000665	0.786	↔	2017-05-01	2020-01-15	0.942	↔
1_3_126	MW-1	App. IV	Total Radium	pCi/L	34	0	0%	-0.00209	0.762	↔	0.000578	0.098	↔	-0.000367	0.070	↔	2016-04-05	2019-06-24	0.197	↔
2_1_111	MW-10	App. I Metals	Copper	ug/L	12	8	67%	0.245	0.363	↔	-0.203	0.403	↔	0.0197	0.817	↔	2022-04-20	2023-01-18	0.414	↔
2_1_117	MW-10	App. I Metals	Nickel	ug/L	12	4	33%	-0.00679	0.624	↔	0.114	0.286	↔	-0.123	0.041	↔	2023-04-18	2023-10-03	0.622	↔
2_1_122	MW-10	App. I Metals	Silver	ug/L	12	12	100%	0.0000508	0.994	↔	-0.0119	0.401	↔	0.000193	0.913	↔	2022-04-09	2022-08-27	0.624	↔
2_1_127	MW-10	App. I Metals	Vanadium	ug/L	12	5	42%	-0.00627	0.464	↔	0.0749	0.254	↔	-0.0755	0.040	↔	2023-04-19	2023-10-03	0.633	↔
2_1_128	MW-10	App. I Metals	Zinc	ug/L	12	10	83%	-0.0155	0.710	↔	0.407	0.216	↔	-0.434	0.023	↔	2023-04-21	2023-10-03	0.698	↔
2_2_105	MW-10	App. III	Boron	ug/L	12	0	0%	-0.000150	0.993	↔	0.0431	0.246	↔	-0.0663	0.631	↔	2022-12-03	2023-10-13	0.489	↔
2_2_108	MW-10	App. III	Chloride	mg/L	12	0	0%	0.00242	0.366	↔	-0.00989	0.740	↔	0.0107	0.730	↔	2023-04-27	2023-12-16	0.223	↔
2_2_112	MW-10	App. III	Fluoride	mg/L	12	0	0%	0.0000355	0.683	↔	-0.000430	0.254	↔	-0.000104	0.901	↔	2023-04-26	2023-10-14	0.561	↔
2_2_125	MW-10	App. III	Total Dissolved Solids	mg/L	12	0	0%	0.165	0.050	↔	0.0195	0.627	↔	-0.0284	0.369	↔	2022-02-17	2023-04-26	0.789	↔
2_3_102	MW-10	App. IV	Arsenic	ug/L	12	10	83%	-0.0000303	0.997	↔	-0.00460	0.401	↔	0.00159	0.699	↔	2022-02-01	2023-04-26	0.510	↔
2_3_103	MW-10	App. IV	Barium	ug/L	12	0	0%	0.0473	0.423	↔	0.542	0.233	↔	-0.479	0.053	↔	2023-04-23	2023-10-03	0.777	↔
2_3_104	MW-10	App. IV	Beryllium	ug/L	12	12	100%	-0.00157	0.033	↔	0.00153	0.213	↔	-0.00198	0.661	↔	2023-01-03	2023-10-04	0.714	↔
2_3_109	MW-10	App. IV	Chromium	ug/L	12	3	25%	-0.0126	0.671	↔	0.226	0.322	↔	-0.251	0.049	↔	2023-04-12	2023-10-03	0.601	↔
2_3_110	MW-10	App. IV	Cobalt	ug/L	12	10	83%	-0.00754	0.068	↔	0.0347	0.047	↔	-0.0341	0.340	↔	2023-04-14	2023-10-04	0.713	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
2_3_112	MW-10	App. IV	Fluoride	mg/L	12	0	0%	0.0000355	0.683	↔	-0.000430	0.254	↔	-0.000104	0.901	↔	2023-04-26	2023-10-14	0.561	↔
2_3_113	MW-10	App. IV	Lead	ug/L	12	10	83%	-0.00778	0.142	↔	0.0466	0.049	↔	-0.0466	0.337	↔	2023-04-19	2023-10-04	0.681	↔
2_3_114	MW-10	App. IV	Lithium	ug/L	12	0	0%	-0.00257	0.599	↔	0.0103	0.061	↔	-0.00588	0.825	↔	2022-08-31	2023-11-28	0.762	↔
2_3_115	MW-10	App. IV	Mercury	ug/L	12	12	100%	0.0000163	0.752	↔	-0.0000417	0.229	↔	0.0000644	0.401	↔	2022-06-18	2023-07-25	0.382	↔
2_3_116	MW-10	App. IV	Molybdenum	ug/L	12	0	0%	-0.0260	0.054	↔	-0.0192	0.116	↔	0.0279	0.657	↔	2022-10-15	2023-12-27	0.902	↔
3_1_122	MW-11	App. I Metals	Silver	ug/L	15	15	100%	0	1.000	↔	-0.0176	0.128	↔	-0.000161	0.908	↔	2022-04-18	2022-07-13	0.715	↔
3_1_127	MW-11	App. I Metals	Vanadium	ug/L	15	12	80%	0	1.000	↔	-0.0139	0.074	↔	0.00282	0.290	↔	2022-03-13	2022-10-28	0.739	↔
3_2_105	MW-11	App. III	Boron	ug/L	15	1	7%	-0.000235	0.952	↔	0.0419	0.587	↔	-0.0546	0.489	↔	2023-05-08	2023-10-02	0.335	↔
3_2_107	MW-11	App. III	Calcium	ug/L	15	0	0%	-60.1	0.552	↔	3.42	0.924	↔	29.8	0.404	↔	2021-06-21	2022-11-24	0.251	↔
3_2_118	MW-11	App. III	pH (Field)	S.U.	14	0	0%	-0.00122	0.552	↔	0.0114	0.369	↔	-0.0144	0.629	↔	2023-03-13	2023-12-18	0.357	↔
3_2_123	MW-11	App. III	Sulfate	mg/L	15	0	0%	-0.000514	0.479	↔	0.00167	0.515	↔	-0.000926	0.475	↔	2022-07-01	2023-04-23	0.201	↔
3_2_125	MW-11	App. III	Total Dissolved Solids	mg/L	15	0	0%	-2.37	0.443	↔	-0.0113	0.992	↔	-0.444	0.931	↔	2021-11-16	2023-09-05	0.270	↔
3_3_113	MW-11	App. IV	Lead	ug/L	15	14	93%	0	1.000	↔	-0.0130	0.138	↔	0.00148	0.721	↔	2022-06-21	2023-02-04	0.681	↔
3_3_114	MW-11	App. IV	Lithium	ug/L	15	0	0%	0.00788	0.715	↔	-0.00353	0.469	↔	0.0184	0.211	↔	2021-04-13	2023-05-24	0.329	↔
3_3_115	MW-11	App. IV	Mercury	ug/L	15	15	100%	0	0.684	↔	-0.0000789	0.172	↔	0.0000802	0.159	↔	2022-12-04	2023-07-25	0.505	↔
3_3_116	MW-11	App. IV	Molybdenum	ug/L	15	13	87%	0	1.000	↔	-0.0270	0.053	↔	0.00333	0.062	↔	2022-04-18	2022-08-07	0.769	↔
3_3_120	MW-11	App. IV	Radium-228	pCi/L	15	0	0%	0.00587	0.446	↔	-0.00469	0.223	↔	0.000633	0.374	↔	2021-04-12	2021-12-20	0.323	↔
3_3_121	MW-11	App. IV	Selenium	ug/L	15	15	100%	0.000699	0.791	↔	-0.00571	0.268	↔	0.00689	0.097	↔	2022-02-01	2023-04-23	0.510	↔
3_3_126	MW-11	App. IV	Total Radium	pCi/L	15	0	0%	0.00730	0.089	↔	-0.00546	0.464	↔	0.000622	0.327	↔	2021-04-13	2021-12-30	0.477	↔
4_1_128	MW-11D	App. I Metals	Zinc	ug/L	13	10	77%	-0.00290	0.644	↔	0.0544	0.347	↔	-0.0527	0.092	↔	2023-03-22	2023-07-25	0.565	↔
4_2_107	MW-11D	App. III	Calcium	ug/L	13	0	0%	-80.9	0.346	↔	-3.80	0.982	↔	-22.8	0.794	↔	2022-04-19	2023-04-09	0.299	↔
4_2_118	MW-11D	App. III	pH (Field)	S.U.	13	0	0%	-0.00132	0.105	↔	-0.000446	0.293	↔	0.000332	0.785	↔	2022-04-21	2023-09-03	0.789	↔
4_3_109	MW-11D	App. IV	Chromium	ug/L	13	10	77%	0.00604	0.180	↔	-0.0175	0.470	↔	-0.00130	0.818	↔	2022-07-13	2023-02-18	0.646	↔
4_3_115	MW-11D	App. IV	Mercury	ug/L	13	13	100%	0.0000135	0.751	↔	-0.0000311	0.213	↔	0.0000584	0.419	↔	2022-03-25	2023-07-25	0.341	↔
4_3_116	MW-11D	App. IV	Molybdenum	ug/L	13	0	0%	-0.153	0.333	↔	-0.0141	0.928	↔	-0.0384	0.750	↔	2022-04-18	2023-04-22	0.456	↔
4_3_119	MW-11D	App. IV	Radium-226	pCi/L	13	0	0%	0.00365	0.107	↔	-0.000873	0.009	↓	0.00192	0.601	↔	2021-09-02	2023-12-06	0.732	↔
4_3_120	MW-11D	App. IV	Radium-228	pCi/L	13	0	0%	-0.0126	0.012	↔	0.000555	0.352	↔	-0.00292	0.279	↔	2021-09-09	2023-07-25	0.821	↔
4_3_121	MW-11D	App. IV	Selenium	ug/L	13	12	92%	0.000639	0.904	↔	-0.00641	0.257	↔	0.00700	0.123	↔	2022-03-29	2023-04-23	0.508	↔
4_3_126	MW-11D	App. IV	Total Radium	pCi/L	13	0	0%	-0.00914	0.052	↔	-0.000252	0.734	↔	-0.00274	0.155	↔	2021-09-12	2023-07-24	0.810	↔
5_1_111	MW-2	App. I Metals	Copper	ug/L	31	15	48%	0.0345	0.029	↔	-0.246	0.761	↔	0.00368	0.981	↔	2022-04-19	2022-12-02	0.187	↔
5_1_117	MW-2	App. I Metals	Nickel	ug/L	31	12	39%	0.0227	0.354	↔	-0.0973	0.630	↔	0.0176	0.223	↔	2018-10-24	2019-08-13	0.108	↔
5_1_122	MW-2	App. I Metals	Silver	ug/L	31	29	94%	0	1.000	↔	0	1.000	↔	-0.00198	0.000	↓	2016-02-01	2021-07-06	0.688	↔
5_1_127	MW-2	App. I Metals	Vanadium	ug/L	31	22	71%	0	1.000	↔	0.000960	0.696	↔	0.00817	0.467	↔	2016-12-23	2022-07-11	0.106	↔
5_1_128	MW-2	App. I Metals	Zinc	ug/L	31	16	52%	-0.0686	0.465	↔	0.00273	0.888	↔	0.0638	0.404	↔	2017-05-22	2022-06-05	0.123	↔
5_2_105	MW-2	App. III	Boron	ug/L	30	1	3%	0.0268	0.251	↔	-0.00352	0.150	↔	-0.0587	0.353	↔	2017-02-23	2023-07-25	0.340	↔
5_2_107	MW-2	App. III	Calcium	ug/L	31	0	0%	26.9	0.467	↔	-12.8	0.378	↔	-163	0.331	↔	2018-04-23	2023-04-26	0.267	↔
5_2_108	MW-2	App. III	Chloride	mg/L	31	0	0%	0.600	0.496	↔	-0.119	0.025	↔	-0.570	0.521	↔	2017-01-25	2023-05-26	0.347	↔
5_2_112	MW-2	App. III	Fluoride	mg/L	31	2	6%	-0.000774	0.009	↓	0.00189	0.100	↔	-0.0000303	0.047	↔	2017-01-07	2017-06-01	0.514	↔
5_2_118	MW-2	App. III	pH (Field)	S.U.	27	0	0%	-0.000233	0.508	↔	0.0000235	0.944	↔	0.00242	0.456	↔	2019-06-29	2023-07-25	0.160	↔
5_2_123	MW-2	App. III	Sulfate	mg/L	31	0	0%	0.186	0.018	↔	-0.653	0.002	↓	-0.0217	0.014	↔	2017-03-30	2018-01-14	0.912	↔
5_2_125	MW-2	App. III	Total Dissolved Solids	mg/L	31	0	0%	-0.371	0.854	↔	4.08	0.545	↔	-2.14	0.044	↔	2018-03-18	2020-01-16	0.196	↔
5_3_101	MW-2	App. IV	Antimony	ug/L	31	18	58%	-0.0111	0.303	↔	-0.000420	0.860	↔	0.00795	0.276	↔	2017-06-28	2022-02-27	0.220	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
5_3_102	MW-2	App. IV	Arsenic	ug/L	31	22	71%	0.00482	0.208	↔	0.000602	0.268	↔	-0.0212	0.571	↔	2017-05-13	2023-10-28	0.373	↔
5_3_103	MW-2	App. IV	Barium	ug/L	31	0	0%	-0.437	0.282	↔	0.162	0.103	↔	-0.0210	0.643	↔	2016-09-17	2019-10-15	0.326	↔
5_3_106	MW-2	App. IV	Cadmium	ug/L	31	29	94%	0.0000143	0.752	↔	-0.000136	0.000	↓	0.0000753	0.789	↔	2018-12-07	2023-04-26	0.738	↔
5_3_109	MW-2	App. IV	Chromium	ug/L	31	6	19%	0.0367	0.133	↔	-0.204	0.675	↔	0.0157	0.350	↔	2018-10-25	2019-06-09	0.132	↔
5_3_110	MW-2	App. IV	Cobalt	ug/L	31	26	84%	-0.000520	0.740	↔	0.0203	0.088	↔	-0.0794	0.493	↔	2022-03-16	2023-10-04	0.275	↔
5_3_112	MW-2	App. IV	Fluoride	mg/L	31	2	6%	-0.000774	0.009	↓	0.00189	0.100	↔	-0.0000303	0.047	↔	2017-01-07	2017-06-01	0.514	↔
5_3_113	MW-2	App. IV	Lead	ug/L	31	27	87%	-0.0000234	0.995	↔	0.00174	0.590	↔	0.00429	0.744	↔	2018-12-10	2023-01-25	0.099	↔
5_3_114	MW-2	App. IV	Lithium	ug/L	31	0	0%	-0.0807	0.176	↔	0.177	0.411	↔	-0.156	0.125	↔	2019-05-16	2021-08-10	0.195	↔
5_3_115	MW-2	App. IV	Mercury	ug/L	31	31	100%	0	0.999	↔	0.0000734	0.019	↔	0	0.216	↔	2020-01-16	2020-11-03	0.765	↔
5_3_116	MW-2	App. IV	Molybdenum	ug/L	31	5	16%	-0.0863	0.206	↔	0.00343	0.497	↔	-0.00674	0.149	↔	2016-04-28	2020-01-17	0.304	↔
5_3_119	MW-2	App. IV	Radium-226	pCi/L	30	0	0%	0.00127	0.834	↔	-0.000142	0.268	↔	0.000334	0.545	↔	2016-03-24	2022-01-27	0.068	↔
5_3_120	MW-2	App. IV	Radium-228	pCi/L	30	0	0%	-0.00448	0.280	↔	0.000293	0.006	↑	-0.00495	0.572	↔	2016-05-09	2023-11-09	0.313	↔
5_3_121	MW-2	App. IV	Selenium	ug/L	31	29	94%	-0.000110	0.447	↔	-0.00462	0.001	↓	0.00686	0.008	↑	2022-01-22	2023-04-26	0.695	↔
5_3_124	MW-2	App. IV	Thallium	ug/L	31	23	74%	0.0383	0.073	↔	-0.0222	0.000	↓	0.0000766	0.665	↔	2016-02-16	2017-02-06	0.935	↔
5_3_126	MW-2	App. IV	Total Radium	pCi/L	30	0	0%	-0.00550	0.418	↔	0.000558	0.444	↔	0.0000515	0.878	↔	2016-05-26	2019-01-23	0.116	↔
6_1_111	MW-3	App. I Metals	Copper	ug/L	34	21	62%	0.0152	0.020	↔	-0.139	0.690	↔	-0.00119	0.986	↔	2022-04-20	2022-11-12	0.202	↔
6_1_117	MW-3	App. I Metals	Nickel	ug/L	34	19	56%	0.0268	0.014	↔	-0.0349	0.348	↔	0.00303	0.789	↔	2019-01-25	2021-01-15	0.256	↔
6_1_122	MW-3	App. I Metals	Silver	ug/L	34	33	97%	0	0.962	↔	-0.00168	0.006	↓	-0.00402	0.664	↔	2021-06-04	2023-10-29	0.669	↔
6_1_127	MW-3	App. I Metals	Vanadium	ug/L	34	22	65%	-0.00263	0.533	↔	0.00898	0.092	↔	-0.00257	0.003	↓	2017-06-18	2019-01-24	0.388	↔
6_1_128	MW-3	App. I Metals	Zinc	ug/L	34	27	79%	-0.00559	0.433	↔	0.0468	0.335	↔	-0.00783	0.004	↓	2018-02-06	2019-01-24	0.389	↔
6_2_105	MW-3	App. III	Boron	ug/L	33	10	30%	-0.0414	0.000	↓	0.0267	0.005	↑	0.0137	0.410	↔	2018-10-07	2022-01-27	0.618	↔
6_2_107	MW-3	App. III	Calcium	ug/L	34	0	0%	-83.8	0.013	↔	75.9	0.020	↔	0.0755	0.991	↔	2017-06-21	2019-03-08	0.508	↔
6_2_108	MW-3	App. III	Chloride	mg/L	34	0	0%	-0.439	0.003	↓	0.515	0.577	↔	-0.0120	0.803	↔	2018-03-16	2019-01-24	0.365	↔
6_2_112	MW-3	App. III	Fluoride	mg/L	34	1	3%	0.000425	0.000	↑	-0.000245	0.112	↔	-0.0000542	0.290	↔	2018-06-04	2020-07-06	0.620	↔
6_2_118	MW-3	App. III	pH (Field)	S.U.	30	0	0%	-0.00335	0.698	↔	0	0.993	↔	0.0000839	0.513	↔	2016-01-26	2019-01-23	0.057	↔
6_2_123	MW-3	App. III	Sulfate	mg/L	34	0	0%	0.395	0.000	↑	-0.120	0.000	↓	-0.0245	0.008	↓	2017-01-24	2019-07-08	0.885	↔
6_2_125	MW-3	App. III	Total Dissolved Solids	mg/L	34	0	0%	34	0.018	↔	-3.52	0.397	↔	0.411	0.000	↑	2016-02-01	2017-01-23	0.564	↔
6_3_102	MW-3	App. IV	Arsenic	ug/L	34	28	82%	0.00535	0.153	↔	0.00112	0.205	↔	-0.00233	0.020	↔	2017-03-12	2020-10-15	0.482	↔
6_3_103	MW-3	App. IV	Barium	ug/L	34	0	0%	-0.725	0.000	↓	0.231	0.172	↔	0.0736	0.008	↑	2017-04-05	2019-01-19	0.702	↔
6_3_104	MW-3	App. IV	Beryllium	ug/L	34	34	100%	-0.0000985	0.195	↔	0.00187	0.405	↔	-0.000544	0.000	↓	2020-04-16	2020-11-18	0.496	↔
6_3_106	MW-3	App. IV	Cadmium	ug/L	34	33	97%	0.0000306	0.619	↔	-0.000119	0.000	↓	0.0000754	0.786	↔	2018-02-21	2023-04-26	0.731	↔
6_3_109	MW-3	App. IV	Chromium	ug/L	34	17	50%	0.0541	0.024	↔	-0.0723	0.118	↔	0.00825	0.742	↔	2019-01-24	2021-02-23	0.282	↔
6_3_112	MW-3	App. IV	Fluoride	mg/L	34	1	3%	0.000425	0.000	↑	-0.000245	0.112	↔	-0.0000542	0.290	↔	2018-06-04	2020-07-06	0.620	↔
6_3_113	MW-3	App. IV	Lead	ug/L	34	31	91%	0.000342	0.578	↔	0.00633	0.480	↔	-0.00339	0.003	↓	2020-04-19	2021-03-28	0.348	↔
6_3_114	MW-3	App. IV	Lithium	ug/L	34	1	3%	0.0763	0.124	↔	-0.342	0.548	↔	0.0130	0.292	↔	2017-10-18	2018-07-09	0.351	↔
6_3_115	MW-3	App. IV	Mercury	ug/L	34	34	100%	0	0.997	↔	0.000242	0.013	↔	0	0.179	↔	2020-04-15	2020-07-13	0.783	↔
6_3_116	MW-3	App. IV	Molybdenum	ug/L	34	0	0%	-0.00746	0.194	↔	0.0118	0.500	↔	-0.00515	0.046	↔	2018-03-06	2020-01-15	0.197	↔
6_3_119	MW-3	App. IV	Radium-226	pCi/L	33	0	0%	0.000434	0.146	↔	-0.000215	0.248	↔	-0.00122	0.670	↔	2019-01-24	2023-09-14	0.184	↔
6_3_120	MW-3	App. IV	Radium-228	pCi/L	33	0	0%	-0.00440	0.126	↔	0.00216	0.260	↔	-0.000188	0.324	↔	2016-11-16	2018-05-26	0.233	↔
6_3_121	MW-3	App. IV	Selenium	ug/L	34	33	97%	0	0.995	↔	-0.000416	0.651	↔	-0.00109	0.084	↔	2018-10-10	2021-04-13	0.366	↔
6_3_124	MW-3	App. IV	Thallium	ug/L	34	34	100%	-0.0116	0.000	↓	0.000203	0.813	↔	-0.0000886	0.728	↔	2017-05-01	2020-01-15	0.940	↔
6_3_126	MW-3	App. IV	Total Radium	pCi/L	33	0	0%	0.000725	0.118	↔	-0.00260	0.295	↔	0.000439	0.468	↔	2020-01-15	2021-04-09	0.177	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
7_1_111	MW-4	App. I Metals	Copper	ug/L	35	31	89%	-0.00482	0.693	↔	0.0944	0.289	↔	-0.0760	0.014	↔	2020-04-22	2021-11-16	0.295	↔
7_1_117	MW-4	App. I Metals	Nickel	ug/L	35	11	31%	0.000732	0.685	↔	0.0168	0.666	↔	0.000226	0.865	↔	2019-06-08	2020-01-15	0.450	↔
7_1_122	MW-4	App. I Metals	Silver	ug/L	35	35	100%	0	1.000	↔	-0.0183	0.005	↓	-0.000150	0.842	↔	2022-04-20	2022-07-12	0.806	↔
7_1_128	MW-4	App. I Metals	Zinc	ug/L	35	24	69%	0.00974	0.008	↑	-0.0267	0.622	↔	0.00375	0.563	↔	2020-04-17	2021-03-03	0.250	↔
7_2_105	MW-4	App. III	Boron	ug/L	34	22	65%	0.0931	0.014	↔	-0.222	0.600	↔	0.00611	0.500	↔	2017-10-17	2018-06-22	0.248	↔
7_2_107	MW-4	App. III	Calcium	ug/L	35	0	0%	76.8	0.001	↑	3.98	0.696	↔	-9.73	0.010	↓	2017-03-10	2019-10-07	0.705	↔
7_2_108	MW-4	App. III	Chloride	mg/L	35	0	0%	0.684	0.000	↑	-0.0696	0.000	↓	-0.330	0.785	↔	2017-04-13	2023-10-05	0.727	↔
7_2_112	MW-4	App. III	Fluoride	mg/L	35	0	0%	-0.000217	0.291	↔	0	0.760	↔	0.000103	0.004	↑	2017-01-24	2021-02-12	0.534	↔
7_2_118	MW-4	App. III	pH (Field)	S.U.	33	0	0%	-0.000101	0.231	↔	0	0.987	↔	-0.000185	0.076	↔	2019-01-22	2021-08-01	0.412	↔
7_2_123	MW-4	App. III	Sulfate	mg/L	35	0	0%	0.00889	0.000	↑	-0.00114	0.038	↔	0.00567	0.101	↔	2018-01-20	2022-10-18	0.778	↔
7_2_125	MW-4	App. III	Total Dissolved Solids	mg/L	35	0	0%	1.34	0.001	↑	0.177	0.214	↔	-0.191	0.005	↓	2017-01-25	2020-01-03	0.749	↔
7_3_101	MW-4	App. IV	Antimony	ug/L	35	30	86%	-0.000159	0.879	↔	-0.000408	0.791	↔	0.000359	0.722	↔	2018-10-17	2021-04-12	0.022	↔
7_3_102	MW-4	App. IV	Arsenic	ug/L	35	33	94%	0.00580	0.001	↑	-0.000284	0.474	↔	-0.00249	0.003	↓	2017-05-10	2021-10-24	0.689	↔
7_3_103	MW-4	App. IV	Barium	ug/L	35	0	0%	-0.730	0.042	↔	3.40	0.002	↑	-0.00817	0.330	↔	2016-05-18	2016-07-31	0.783	↔
7_3_104	MW-4	App. IV	Beryllium	ug/L	35	35	100%	-0.000160	0.047	↔	0.00268	0.040	↔	-0.000528	0.000	↓	2020-04-16	2020-10-15	0.512	↔
7_3_106	MW-4	App. IV	Cadmium	ug/L	35	34	97%	0	0.996	↔	-0.0000889	0.023	↔	-0.000124	0.049	↔	2018-01-18	2021-11-16	0.693	↔
7_3_109	MW-4	App. IV	Chromium	ug/L	35	27	77%	-0.000782	0.934	↔	0.00118	0.093	↔	-0.00543	0.097	↔	2017-01-23	2022-04-21	0.226	↔
7_3_110	MW-4	App. IV	Cobalt	ug/L	35	20	57%	0.00136	0.344	↔	0.0376	0.040	↔	-0.0365	0.182	↔	2022-04-20	2023-05-19	0.486	↔
7_3_112	MW-4	App. IV	Fluoride	mg/L	35	0	0%	-0.000217	0.291	↔	0	0.760	↔	0.000103	0.004	↑	2017-01-24	2021-02-12	0.534	↔
7_3_113	MW-4	App. IV	Lead	ug/L	35	34	97%	-0.000479	0.338	↔	0.00863	0.079	↔	-0.00342	0.000	↓	2020-01-31	2021-03-01	0.519	↔
7_3_114	MW-4	App. IV	Lithium	ug/L	35	0	0%	0.00290	0.809	↔	0.0134	0.252	↔	-0.00586	0.615	↔	2018-07-15	2021-08-11	0.250	↔
7_3_115	MW-4	App. IV	Mercury	ug/L	35	35	100%	0	1.000	↔	0.000250	0.011	↔	0	0.171	↔	2020-04-16	2020-07-12	0.787	↔
7_3_116	MW-4	App. IV	Molybdenum	ug/L	35	30	86%	0.00664	0.009	↑	-0.00916	0.090	↔	0.00265	0.730	↔	2019-10-14	2022-06-26	0.325	↔
7_3_119	MW-4	App. IV	Radium-226	pCi/L	33	0	0%	0.000451	0.003	↑	-0.00153	0.056	↔	0.000120	0.529	↔	2019-10-22	2021-02-18	0.491	↔
7_3_120	MW-4	App. IV	Radium-228	pCi/L	33	0	0%	0.0000407	0.707	↔	0.00158	0.234	↔	-0.00192	0.051	↔	2021-10-24	2022-10-18	0.269	↔
7_3_121	MW-4	App. IV	Selenium	ug/L	35	33	94%	-0.0000198	0.910	↔	-0.00524	0.002	↓	0.00668	0.040	↔	2022-01-08	2023-04-26	0.601	↔
7_3_124	MW-4	App. IV	Thallium	ug/L	35	35	100%	-0.0116	0.000	↓	0.000176	0.782	↔	-0.0000921	0.712	↔	2017-05-02	2020-01-15	0.941	↔
7_3_126	MW-4	App. IV	Total Radium	pCi/L	33	0	0%	0.000846	0.014	↔	-0.00135	0.312	↔	0.0000360	0.917	↔	2019-05-18	2021-01-26	0.284	↔
8_1_111	MW-5	App. I Metals	Copper	ug/L	36	28	78%	0.000918	0.162	↔	0.0119	0.266	↔	-0.0115	0.002	↓	2021-05-27	2022-04-19	0.463	↔
8_1_117	MW-5	App. I Metals	Nickel	ug/L	36	29	81%	-0.00357	0.638	↔	0.0469	0.226	↔	-0.0637	0.056	↔	2020-08-26	2022-07-12	0.219	↔
8_1_122	MW-5	App. I Metals	Silver	ug/L	36	36	100%	0	1.000	↔	0	1.000	↔	-0.00200	0.000	↓	2016-10-25	2021-07-07	0.704	↔
8_1_127	MW-5	App. I Metals	Vanadium	ug/L	36	33	92%	-0.000569	0.122	↔	0.0139	0.027	↔	-0.00253	0.000	↓	2020-04-14	2020-10-16	0.508	↔
8_1_128	MW-5	App. I Metals	Zinc	ug/L	36	25	69%	-0.00694	0.191	↔	0.00372	0.227	↔	-0.0176	0.434	↔	2018-10-13	2023-02-21	0.136	↔
8_2_105	MW-5	App. III	Boron	ug/L	35	15	43%	0.0130	0.699	↔	-0.0163	0.236	↔	0.00255	0.278	↔	2017-01-22	2018-09-14	0.130	↔
8_2_107	MW-5	App. III	Calcium	ug/L	36	0	0%	0.764	0.321	↔	-6.57	0.115	↔	-0.722	0.680	↔	2020-03-09	2021-09-12	0.525	↔
8_2_108	MW-5	App. III	Chloride	mg/L	36	0	0%	-0.0191	0.001	↓	0.00468	0.000	↑	-0.00226	0.000	↓	2016-08-09	2019-08-19	0.665	↔
8_2_112	MW-5	App. III	Fluoride	mg/L	36	0	0%	-0.000467	0.424	↔	0.0000335	0.033	↔	-0.000104	0.734	↔	2016-05-24	2023-04-26	0.173	↔
8_2_118	MW-5	App. III	pH (Field)	S.U.	33	0	0%	-0.000111	0.449	↔	0.000700	0.864	↔	-0.000779	0.587	↔	2022-04-07	2023-01-22	0.041	↔
8_2_123	MW-5	App. III	Sulfate	mg/L	36	0	0%	-0.00399	0.692	↔	0.00227	0.265	↔	-0.000285	0.090	↔	2016-03-23	2017-04-28	0.142	↔
8_2_125	MW-5	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.384	0.134	↔	-0.318	0.231	↔	-0.0110	0.876	↔	2017-10-16	2019-08-18	0.200	↔
8_3_102	MW-5	App. IV	Arsenic	ug/L	36	34	94%	0.00582	0.001	↑	-0.000288	0.473	↔	-0.00249	0.003	↓	2017-05-10	2021-10-09	0.684	↔
8_3_103	MW-5	App. IV	Barium	ug/L	36	0	0%	0.00898	0.356	↔	0.0523	0.809	↔	-0.0239	0.000	↓	2018-10-24	2019-06-17	0.444	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
8_3_104	MW-5	App. IV	Beryllium	ug/L	36	36	100%	-0.000147	0.055	↔	0.00257	0.045	↔	-0.000527	0.000	↓	2020-04-15	2020-10-16	0.503	↔
8_3_106	MW-5	App. IV	Cadmium	ug/L	36	36	100%	0	0.891	↔	-0.000118	0.000	↓	0.0000847	0.759	↔	2018-05-17	2023-04-26	0.716	↔
8_3_109	MW-5	App. IV	Chromium	ug/L	36	28	78%	-0.0135	0.718	↔	0.0349	0.183	↔	-0.0901	0.337	↔	2018-08-12	2022-07-13	0.125	↔
8_3_110	MW-5	App. IV	Cobalt	ug/L	36	34	94%	-0.000681	0.045	↔	0.0131	0.232	↔	-0.00299	0.000	↓	2020-04-16	2020-11-02	0.566	↔
8_3_112	MW-5	App. IV	Fluoride	mg/L	36	0	0%	-0.000467	0.424	↔	0.0000335	0.033	↔	-0.000104	0.734	↔	2016-05-24	2023-04-26	0.173	↔
8_3_113	MW-5	App. IV	Lead	ug/L	36	35	97%	-0.000427	0.261	↔	0.0155	0.019	↔	-0.00302	0.000	↓	2020-04-02	2020-11-02	0.609	↔
8_3_114	MW-5	App. IV	Lithium	ug/L	36	1	3%	-0.000588	0.865	↔	0.00403	0.224	↔	-0.00398	0.240	↔	2018-07-02	2021-08-08	0.162	↔
8_3_115	MW-5	App. IV	Mercury	ug/L	36	36	100%	0	1.000	↔	0.000244	0.010	↑	0	0.165	↔	2020-04-15	2020-07-13	0.791	↔
8_3_116	MW-5	App. IV	Molybdenum	ug/L	36	33	92%	-0.00126	0.459	↔	0.00953	0.111	↔	-0.0126	0.020	↔	2020-01-16	2022-04-18	0.319	↔
8_3_119	MW-5	App. IV	Radium-226	pCi/L	34	0	0%	-0.00842	0.280	↔	0.000359	0.210	↔	-0.000160	0.085	↔	2016-01-31	2018-10-23	0.228	↔
8_3_120	MW-5	App. IV	Radium-228	pCi/L	34	0	0%	0.00104	0.295	↔	-0.00246	0.596	↔	0.0000796	0.423	↔	2017-01-23	2017-08-09	0.085	↔
8_3_121	MW-5	App. IV	Selenium	ug/L	36	35	97%	-0.000137	0.355	↔	-0.00568	0.033	↔	0.00677	0.002	↑	2022-03-17	2023-04-25	0.640	↔
8_3_124	MW-5	App. IV	Thallium	ug/L	36	35	97%	-0.0166	0.000	↓	0.000160	0.928	↔	-0.0000827	0.928	↔	2017-04-07	2020-01-16	0.717	↔
8_3_126	MW-5	App. IV	Total Radium	pCi/L	34	0	0%	-0.00534	0.622	↔	0.0000376	0.617	↔	-0.000821	0.912	↔	2016-01-31	2023-11-11	0.044	↔
9_1_111	MW-6	App. I Metals	Copper	ug/L	35	32	91%	-0.0000446	0.971	↔	0.00948	0.072	↔	-0.0100	0.005	↓	2020-03-24	2021-11-17	0.397	↔
9_1_117	MW-6	App. I Metals	Nickel	ug/L	35	26	74%	-0.000787	0.145	↔	0.0164	0.403	↔	-0.00276	0.001	↓	2020-02-06	2020-08-25	0.418	↔
9_1_122	MW-6	App. I Metals	Silver	ug/L	35	35	100%	0	1.000	↔	-0.0176	0.005	↓	-0.000160	0.833	↔	2022-04-18	2022-07-13	0.792	↔
9_1_127	MW-6	App. I Metals	Vanadium	ug/L	35	31	89%	-0.000580	0.166	↔	0.0132	0.387	↔	-0.00207	0.002	↓	2020-04-09	2020-10-11	0.398	↔
9_2_105	MW-6	App. III	Boron	ug/L	34	23	68%	-0.00498	0.001	↓	0.0125	0.015	↔	-0.000472	0.813	↔	2019-05-28	2021-01-25	0.574	↔
9_2_108	MW-6	App. III	Chloride	mg/L	35	0	0%	0.0306	0.346	↔	-0.118	0.086	↔	0.0394	0.396	↔	2019-03-30	2021-04-15	0.263	↔
9_2_112	MW-6	App. III	Fluoride	mg/L	35	1	3%	0.000143	0.115	↔	-0.000117	0.075	↔	0.0000909	0.238	↔	2018-02-04	2021-07-26	0.238	↔
9_2_123	MW-6	App. III	Sulfate	mg/L	35	0	0%	-0.0330	0.371	↔	-0.179	0.119	↔	0.000621	0.965	↔	2018-01-24	2019-04-30	0.699	↔
9_2_125	MW-6	App. III	Total Dissolved Solids	mg/L	35	0	0%	2.60	0.372	↔	-0.0765	0.022	↔	0.0220	0.831	↔	2016-02-04	2021-08-11	0.271	↔
9_3_102	MW-6	App. IV	Arsenic	ug/L	35	33	94%	0.00572	0.009	↑	-0.000114	0.798	↔	-0.00374	0.013	↔	2017-05-01	2022-04-18	0.572	↔
9_3_103	MW-6	App. IV	Barium	ug/L	35	0	0%	-0.0219	0.022	↔	-0.281	0.204	↔	0.0163	0.042	↔	2019-05-03	2019-10-20	0.787	↔
9_3_104	MW-6	App. IV	Beryllium	ug/L	35	34	97%	-0.000146	0.040	↔	0.00240	0.292	↔	-0.000515	0.000	↓	2020-04-15	2020-10-27	0.484	↔
9_3_106	MW-6	App. IV	Cadmium	ug/L	35	35	100%	-0.0000504	0.006	↓	-0.000253	0.010	↓	0.000237	0.561	↔	2021-06-29	2023-04-25	0.730	↔
9_3_109	MW-6	App. IV	Chromium	ug/L	35	28	80%	0.000915	0.209	↔	-0.00524	0.415	↔	-0.00113	0.900	↔	2021-10-03	2023-02-13	0.134	↔
9_3_110	MW-6	App. IV	Cobalt	ug/L	35	34	97%	-0.000682	0.049	↔	0.0130	0.244	↔	-0.00278	0.000	↓	2020-04-15	2020-10-21	0.526	↔
9_3_112	MW-6	App. IV	Fluoride	mg/L	35	1	3%	0.000143	0.115	↔	-0.000117	0.075	↔	0.0000909	0.238	↔	2018-02-04	2021-07-26	0.238	↔
9_3_113	MW-6	App. IV	Lead	ug/L	35	33	94%	-0.000428	0.328	↔	0.00871	0.052	↔	-0.00277	0.001	↓	2020-02-07	2021-01-27	0.520	↔
9_3_114	MW-6	App. IV	Lithium	ug/L	35	0	0%	0.00551	0.480	↔	-0.0582	0.020	↔	0.00118	0.695	↔	2018-04-14	2019-06-11	0.716	↔
9_3_115	MW-6	App. IV	Mercury	ug/L	35	34	97%	0.0000771	0.130	↔	-0.0000761	0.239	↔	0.0000190	0.324	↔	2018-01-23	2019-10-23	0.162	↔
9_3_116	MW-6	App. IV	Molybdenum	ug/L	35	30	86%	-0.00145	0.313	↔	0.00854	0.237	↔	-0.00207	0.003	↓	2018-06-11	2019-07-08	0.347	↔
9_3_119	MW-6	App. IV	Radium-226	pCi/L	33	0	0%	-0.000104	0.150	↔	0.000697	0.250	↔	-0.00446	0.398	↔	2022-04-18	2023-11-16	0.169	↔
9_3_120	MW-6	App. IV	Radium-228	pCi/L	33	0	0%	-0.000129	0.175	↔	0.000940	0.416	↔	-0.00233	0.380	↔	2022-01-25	2023-06-12	0.145	↔
9_3_121	MW-6	App. IV	Selenium	ug/L	35	33	94%	0.000279	0.613	↔	-0.00108	0.005	↓	0.00269	0.632	↔	2018-11-30	2023-05-01	0.393	↔
9_3_124	MW-6	App. IV	Thallium	ug/L	35	32	91%	-0.0125	0.000	↓	0.0000603	0.929	↔	0	0.974	↔	2017-04-18	2019-07-09	0.951	↔
9_3_126	MW-6	App. IV	Total Radium	pCi/L	33	0	0%	0.000362	0.437	↔	-0.000752	0.140	↔	0.000218	0.486	↔	2018-07-16	2020-10-13	0.174	↔

This page intentionally left blank.

C

Appendix C – BG Plots

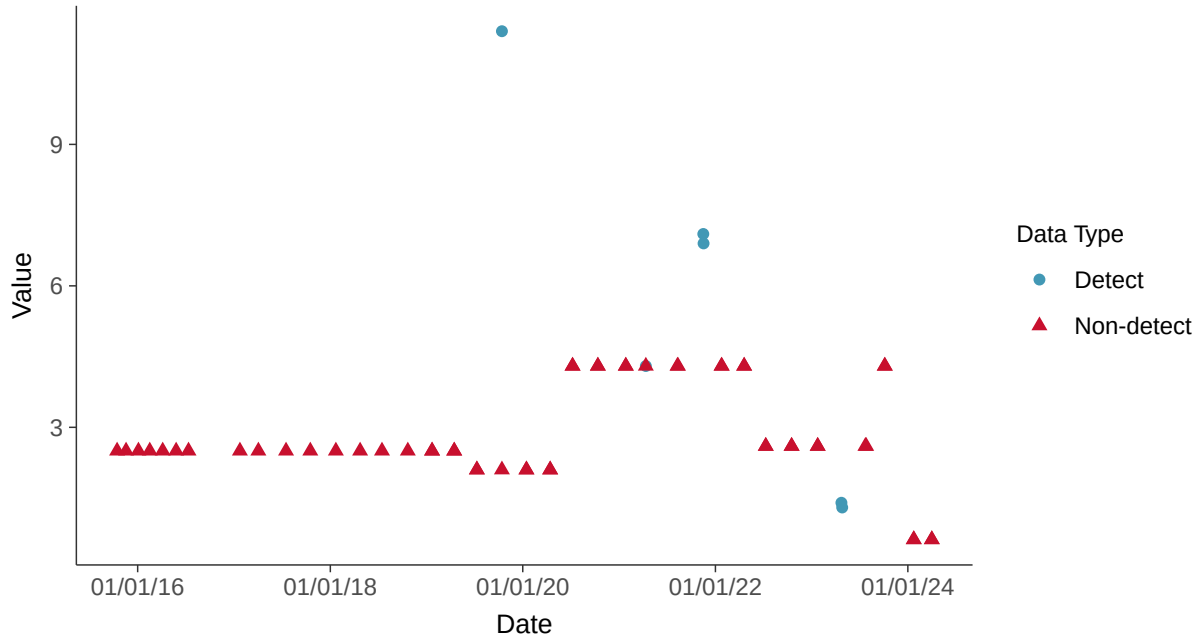
This page intentionally left blank.

App. I Metals: Copper, BG-1 & BG-2

ID: 1_111

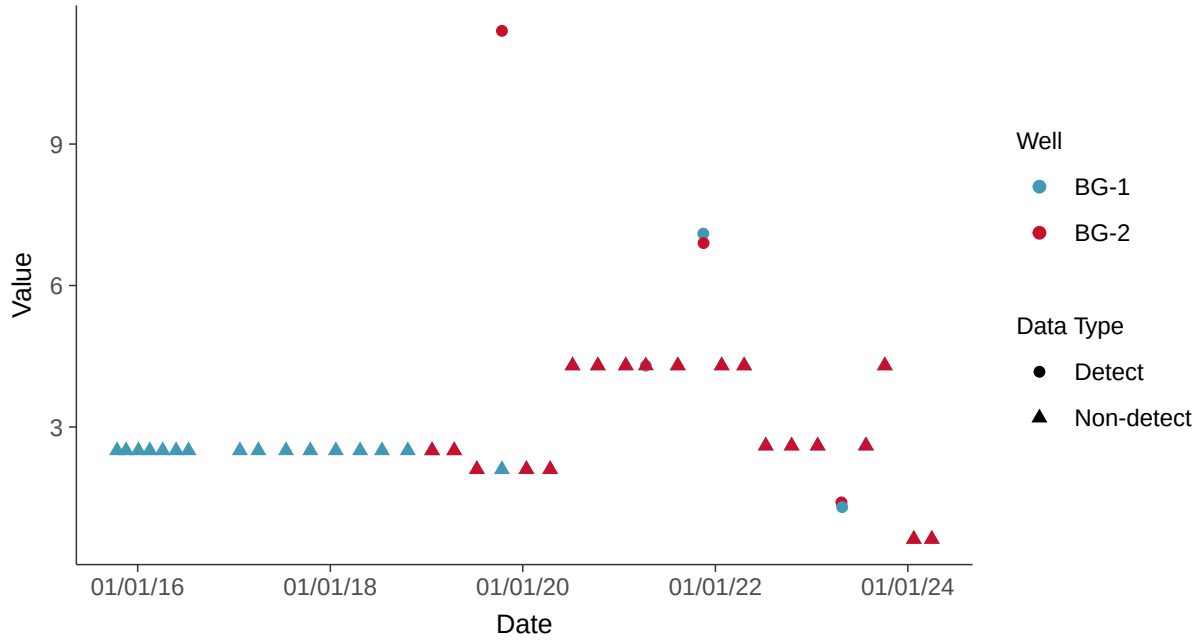
Scatter Plot

Copper, BG-1 & BG-2 (ug/L)



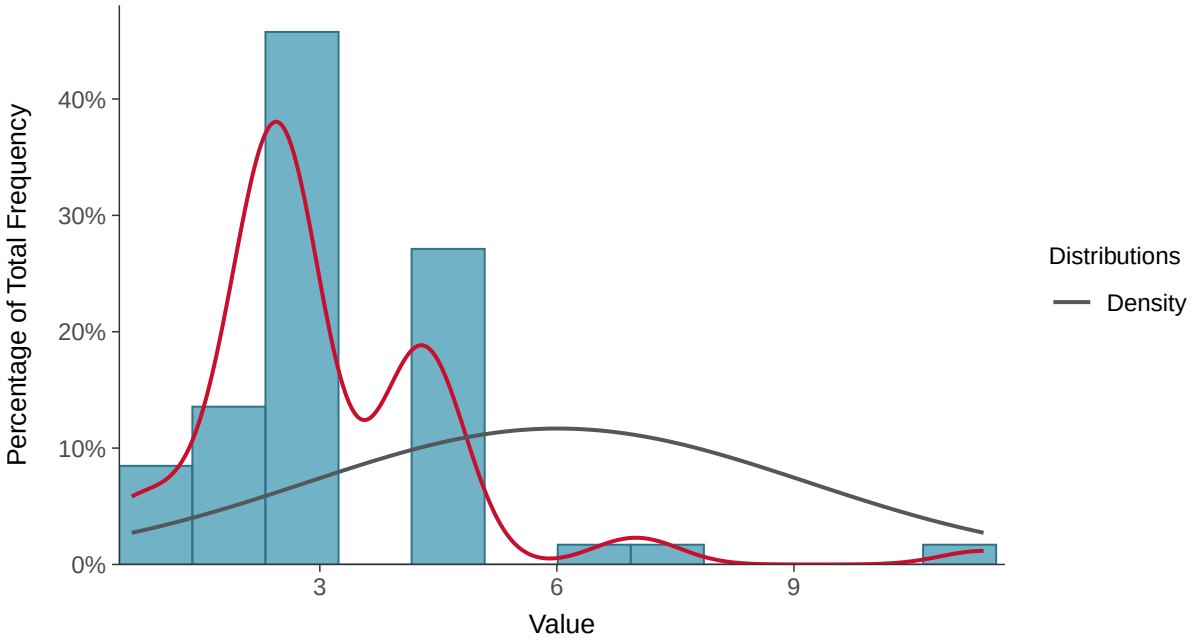
Scatter Plot by Well

Copper, BG-1 & BG-2 (ug/L)



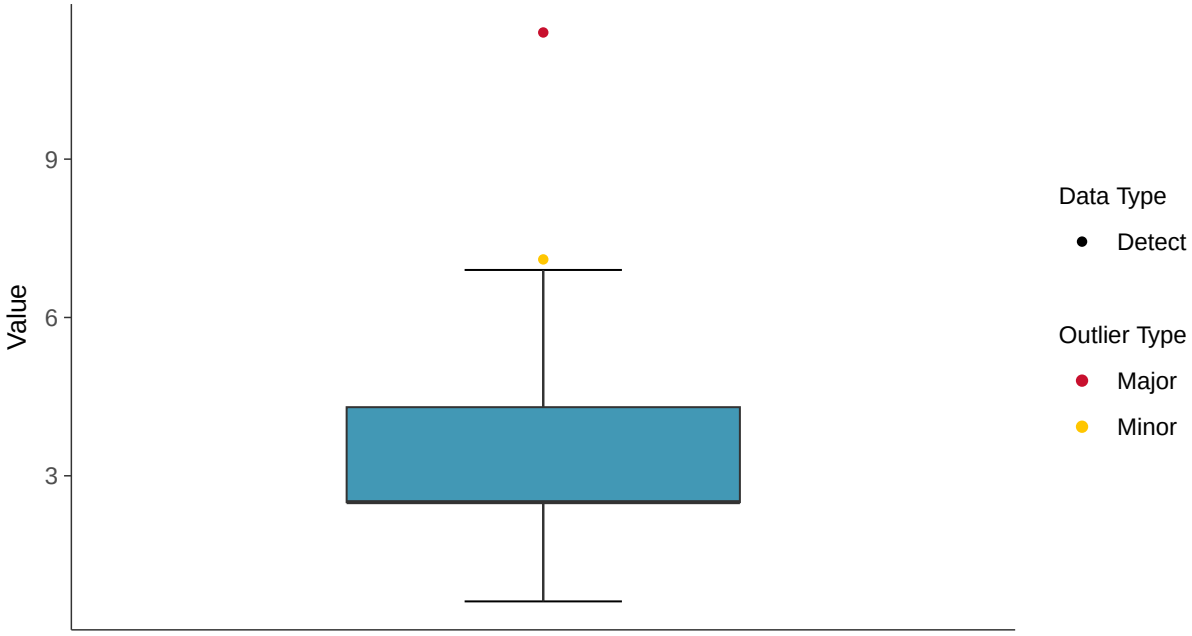
Histogram

Copper, BG-1 & BG-2 (ug/L)



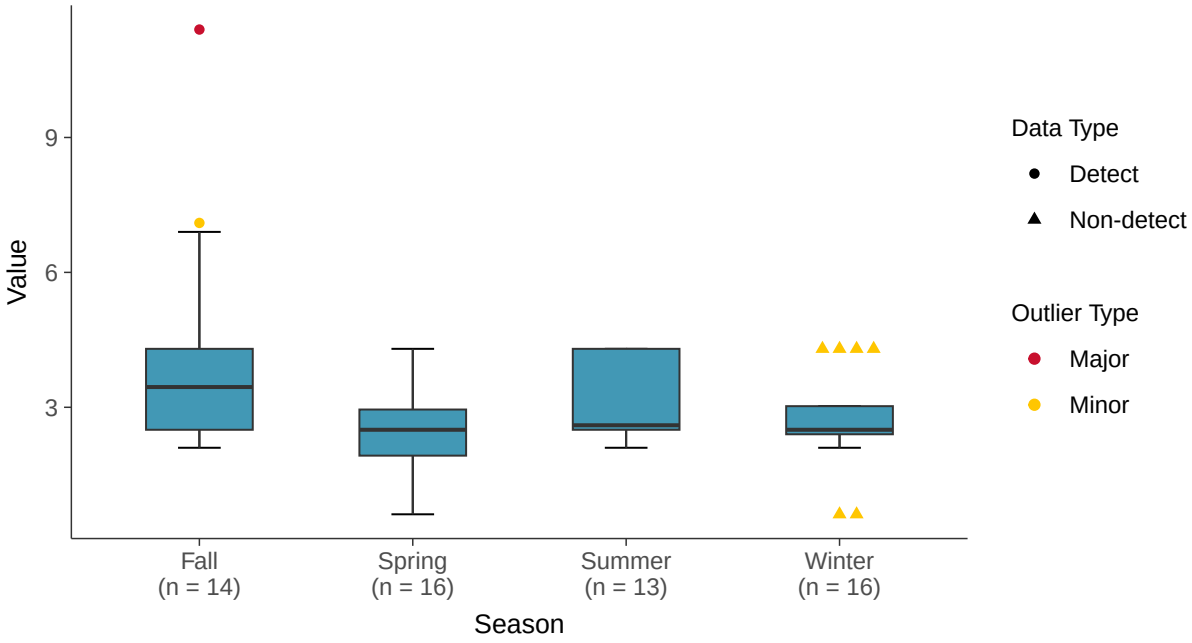
Boxplot

Copper, BG-1 & BG-2 (ug/L)



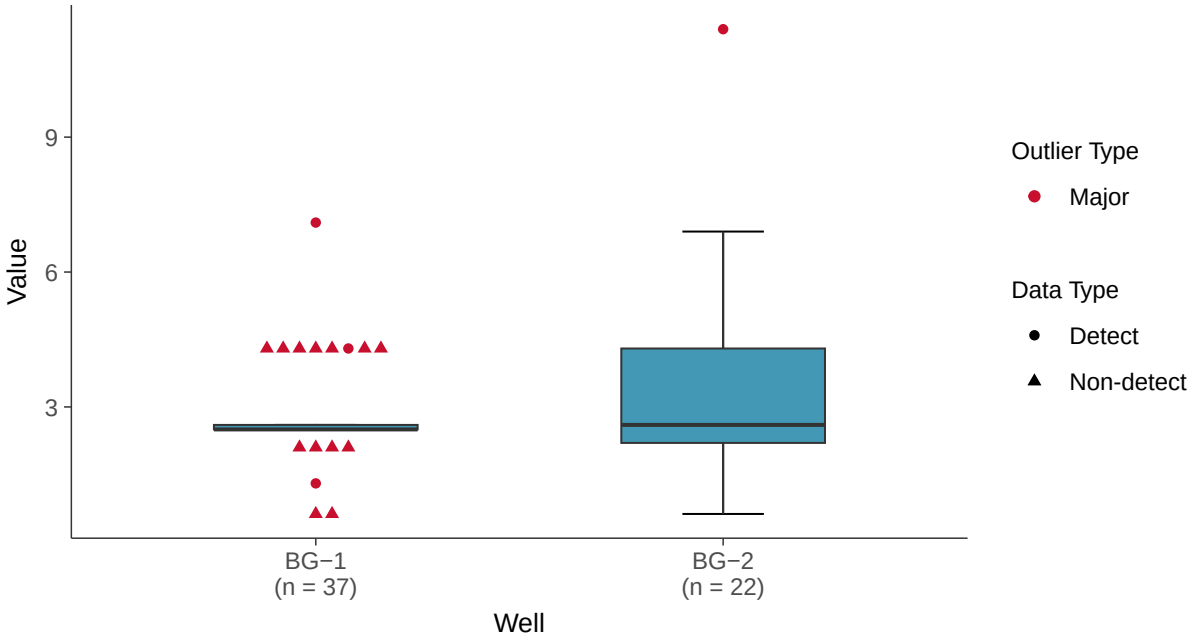
Boxplot by Season

Copper, BG-1 & BG-2 (ug/L)



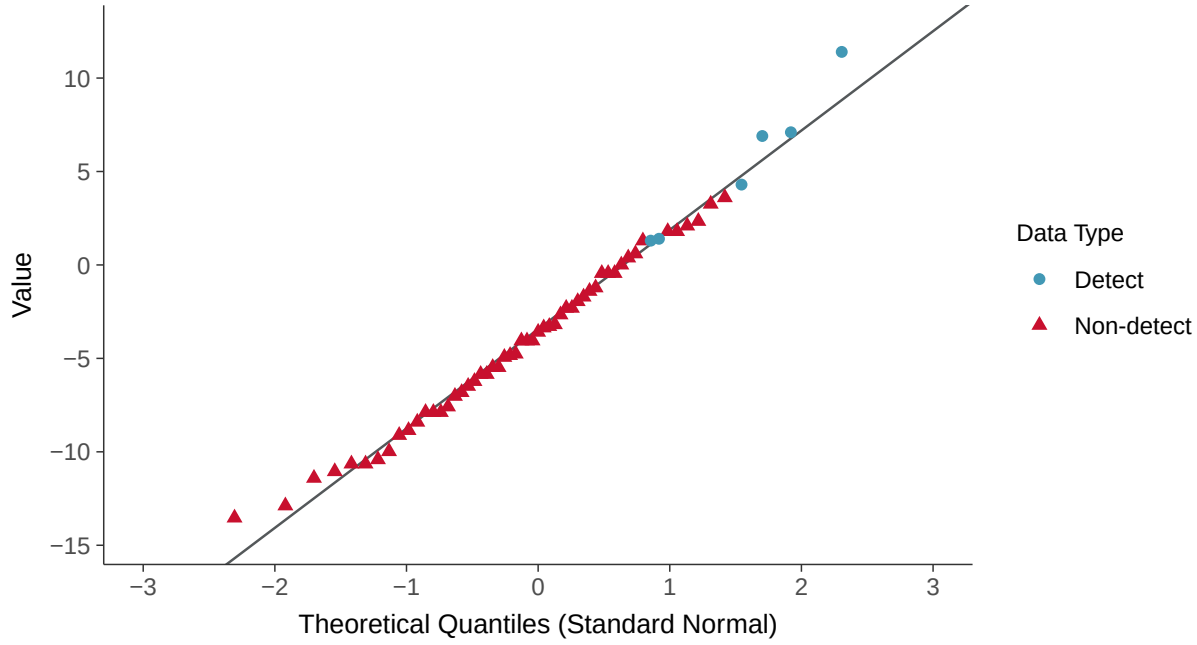
Boxplot by Well

Copper, BG-1 & BG-2 (ug/L)



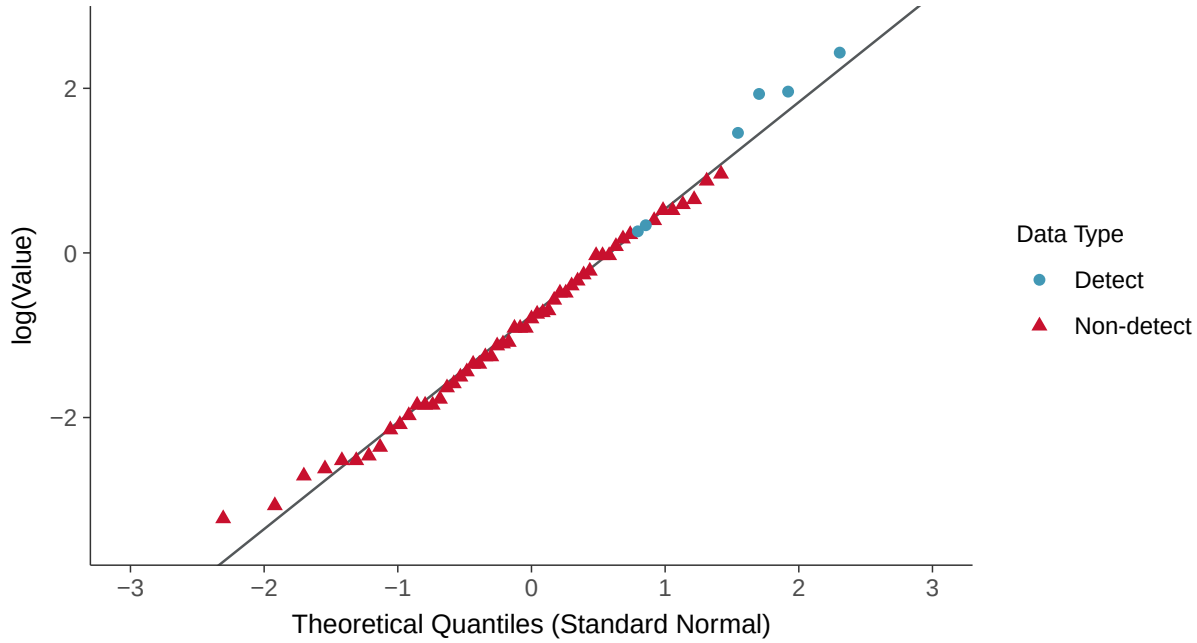
Normal Q-Q plot using ROS Imputed Estimates

Copper, BG-1 & BG-2 (ug/L)



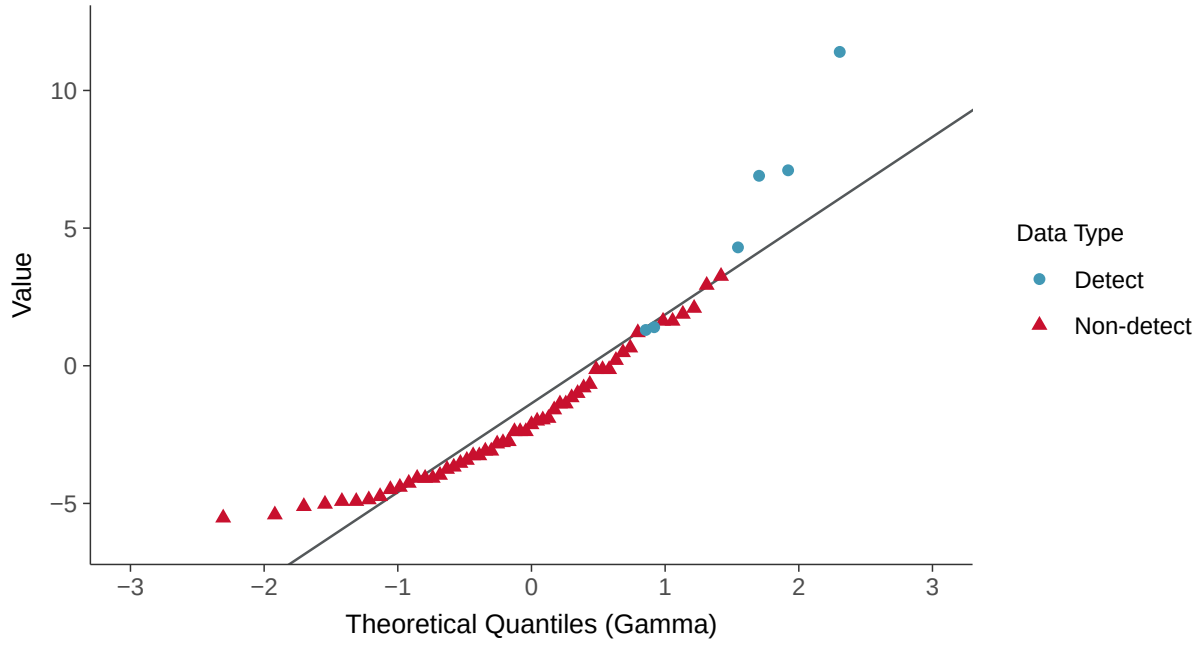
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, BG-1 & BG-2 (ug/L)



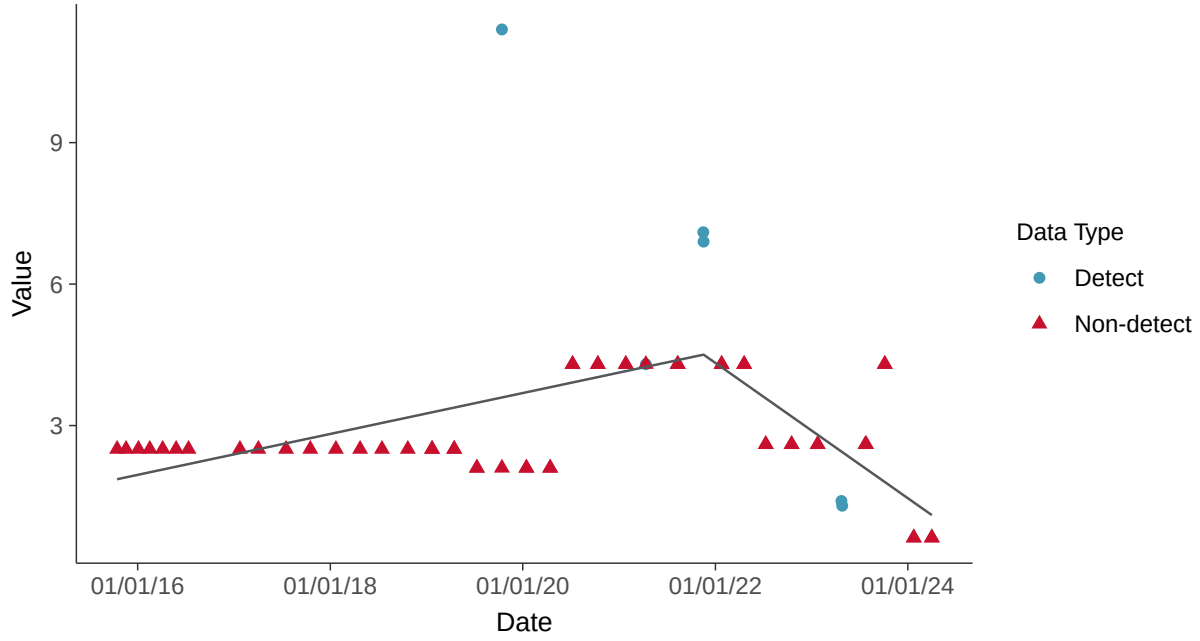
Gamma Q-Q plot using ROS Imputed Estimates

Copper, BG-1 & BG-2 (ug/L)



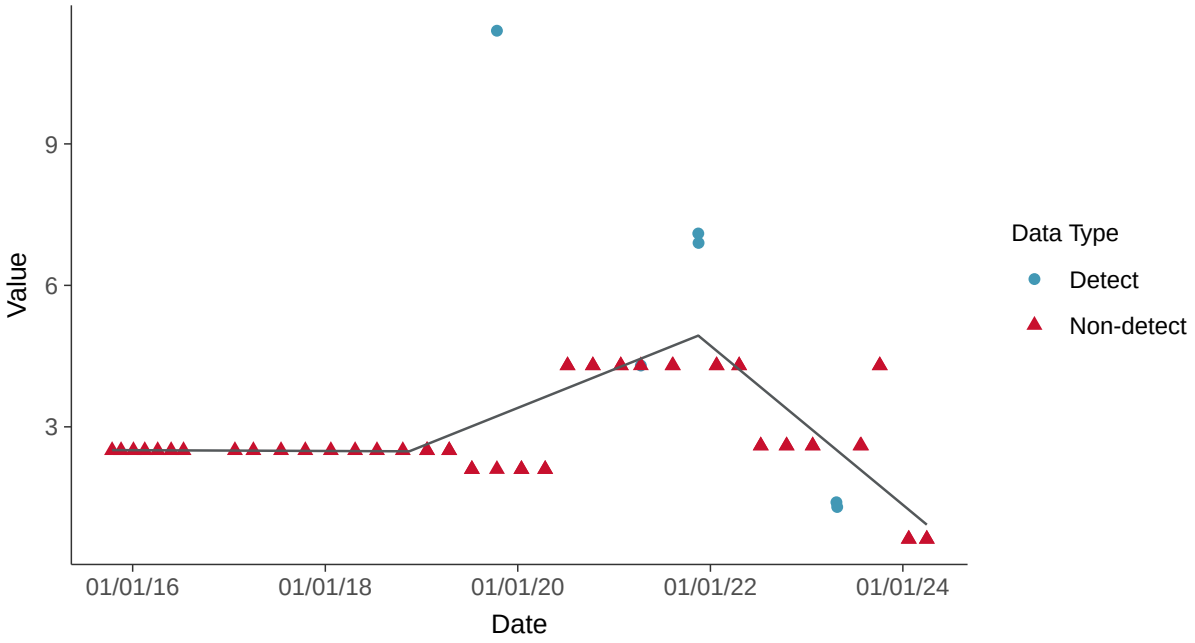
Trend Regression: Piecewise Linear-Linear

Copper, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, BG-1 & BG-2 (ug/L)

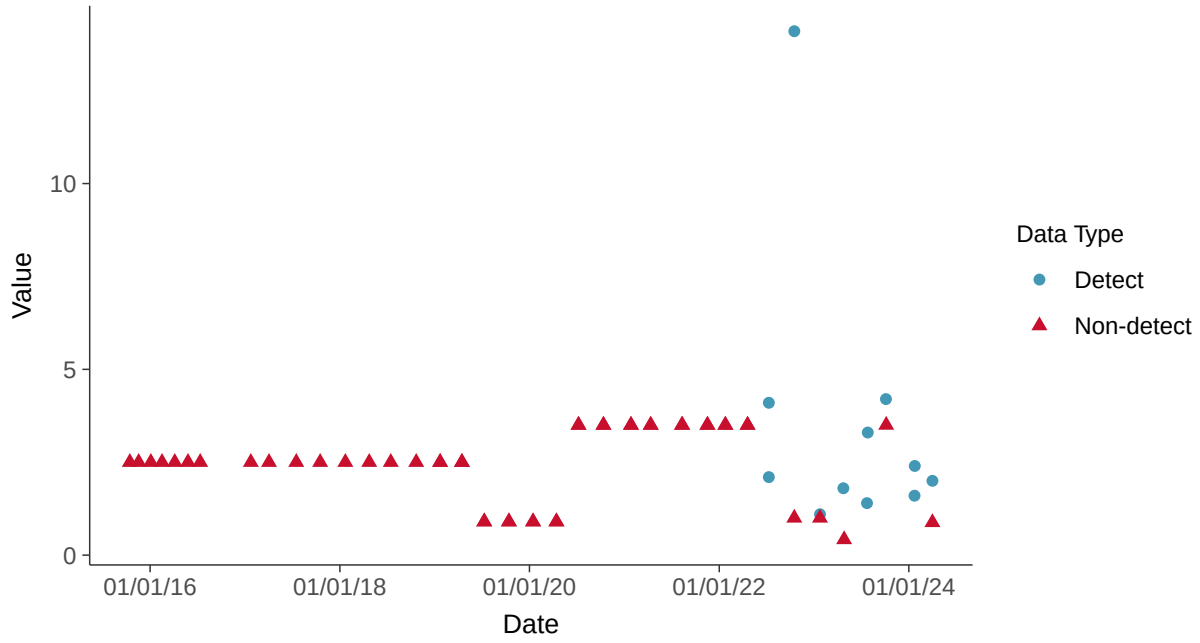


App. I Metals: Nickel, BG-1 & BG-2

ID: 1_117

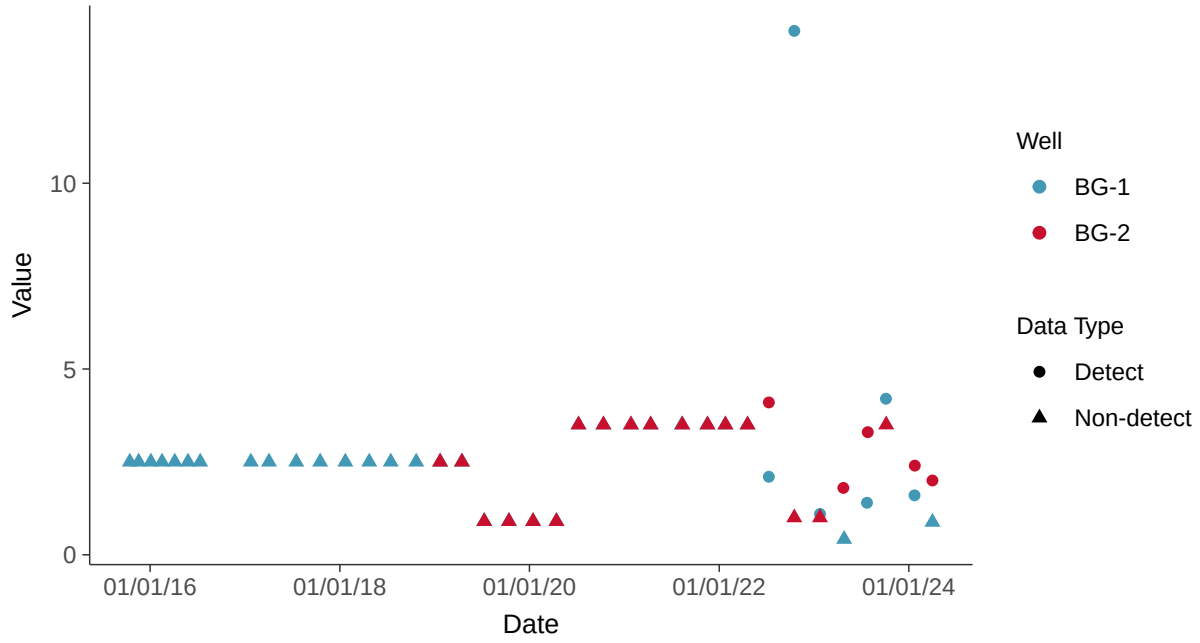
Scatter Plot

Nickel, BG-1 & BG-2 (ug/L)



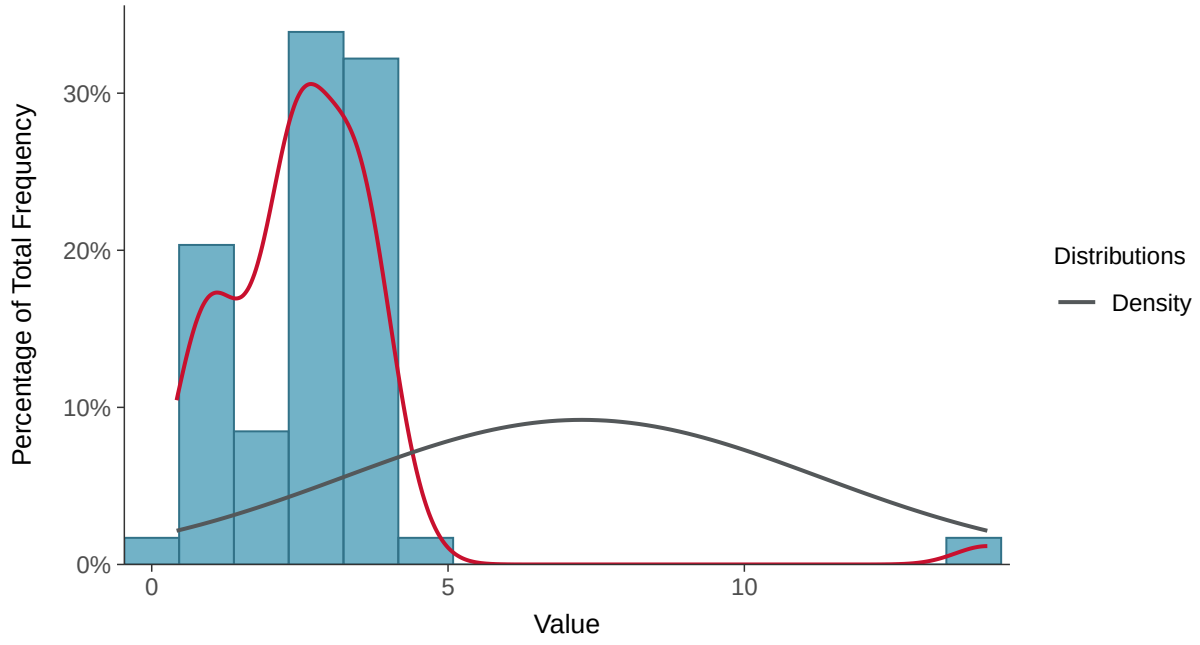
Scatter Plot by Well

Nickel, BG-1 & BG-2 (ug/L)



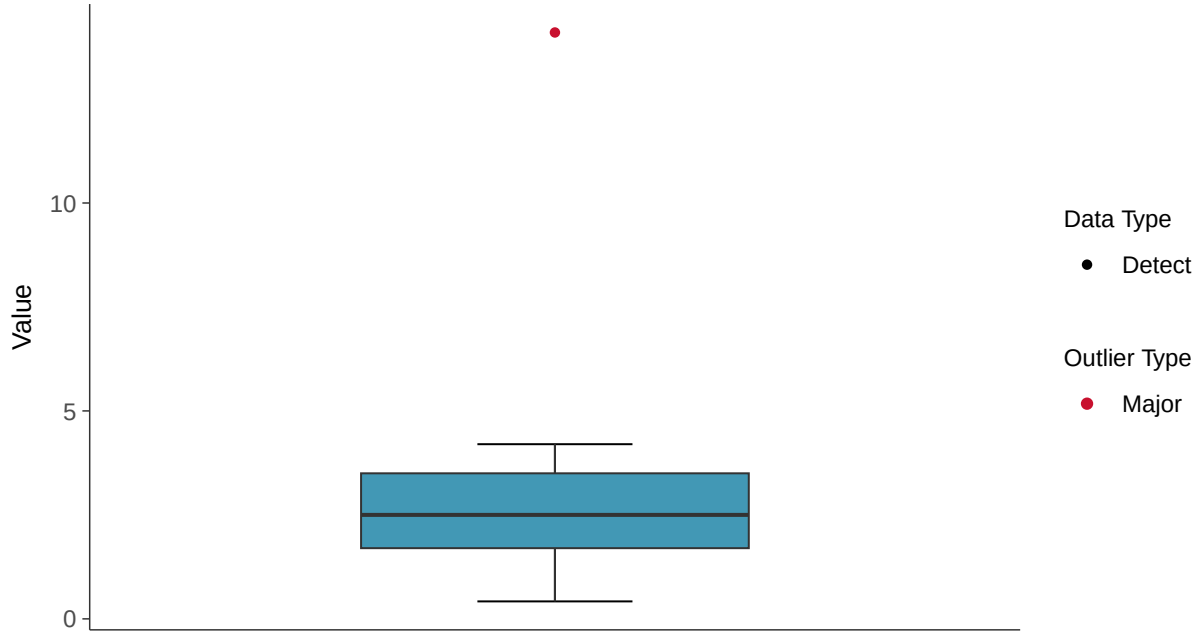
Histogram

Nickel, BG-1 & BG-2 (ug/L)



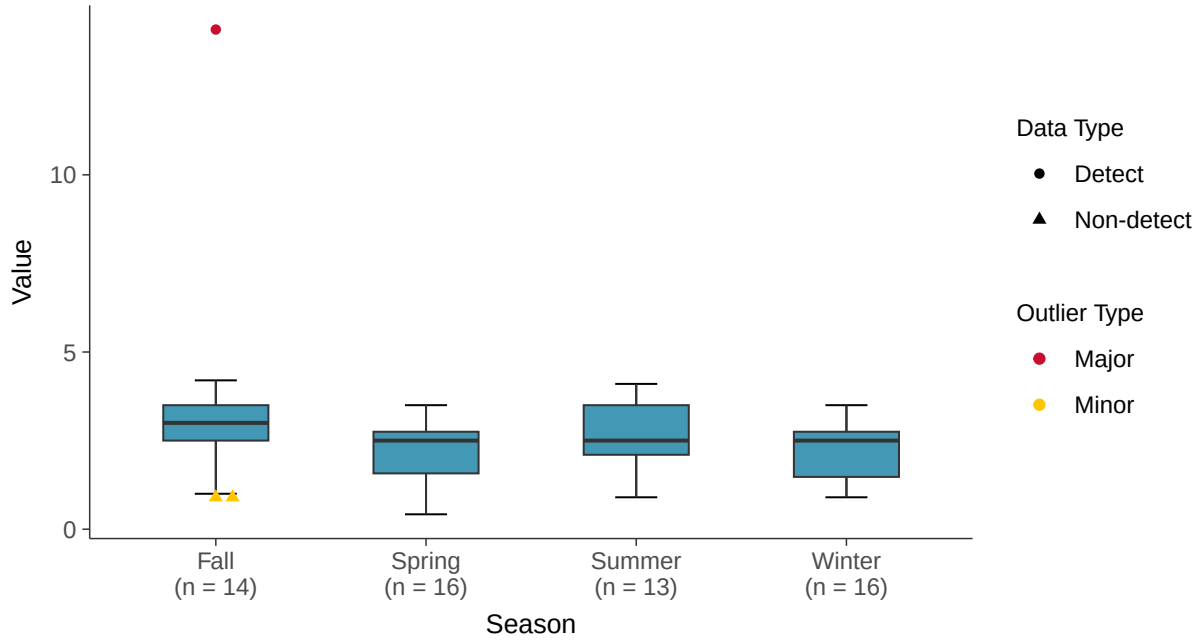
Boxplot

Nickel, BG-1 & BG-2 (ug/L)



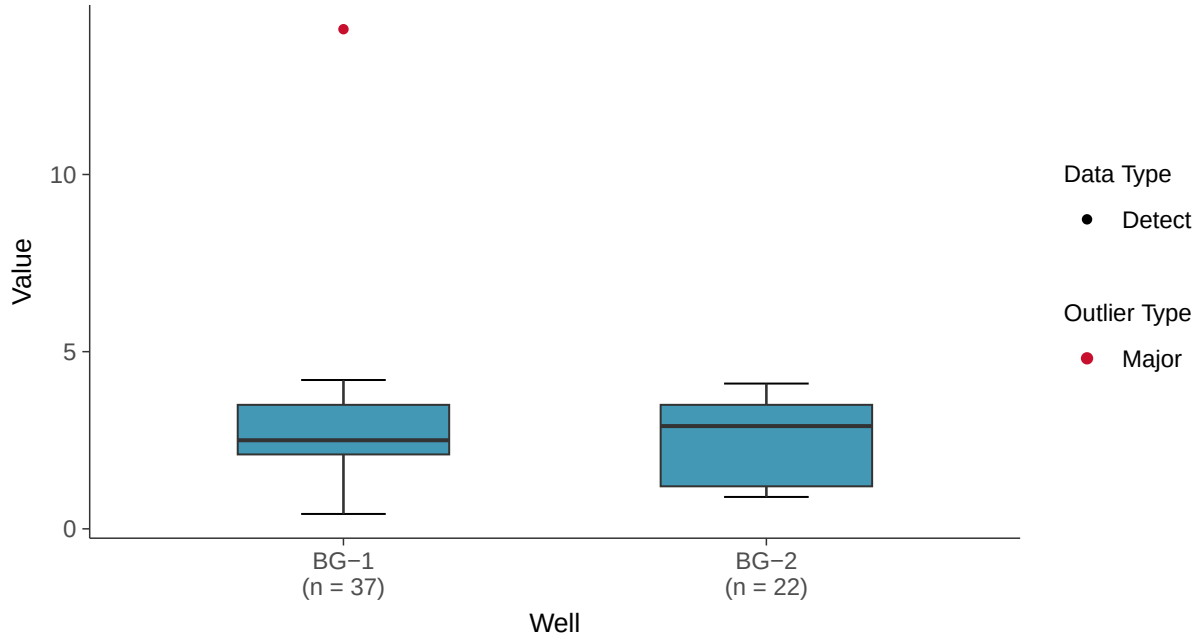
Boxplot by Season

Nickel, BG-1 & BG-2 (ug/L)



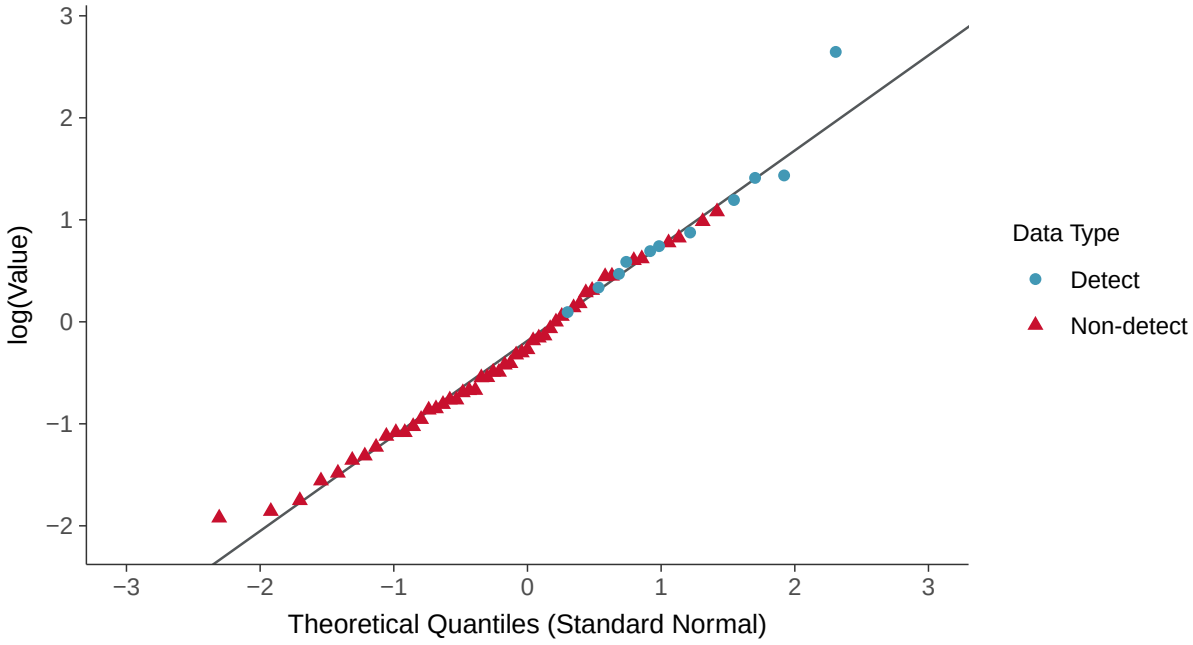
Boxplot by Well

Nickel, BG-1 & BG-2 (ug/L)



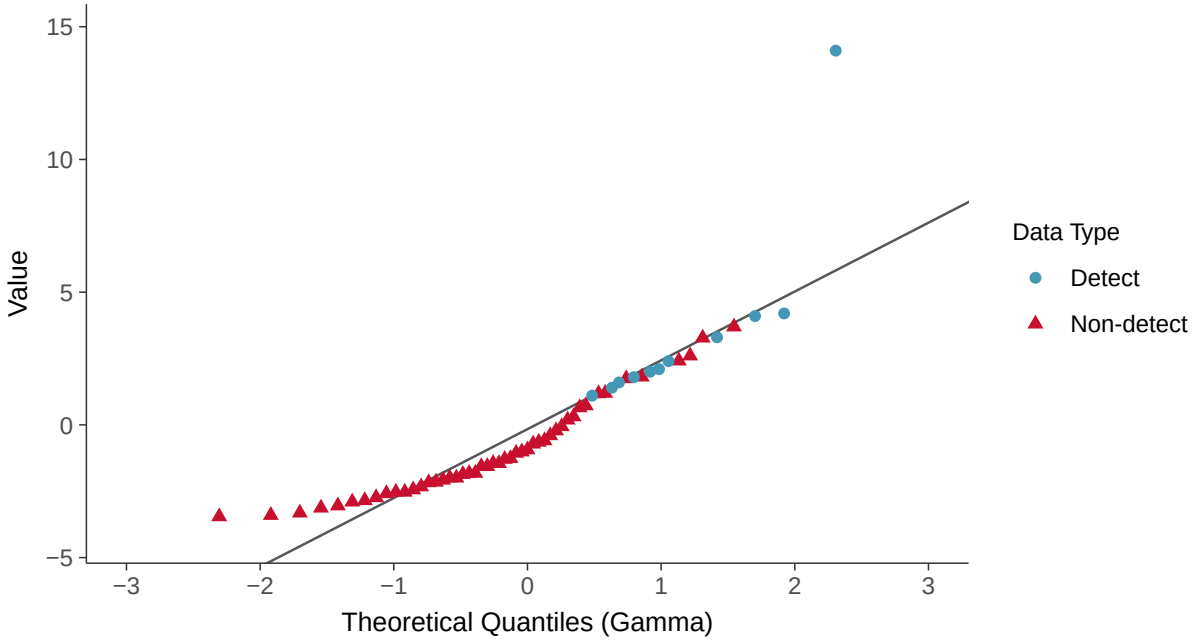
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, BG-1 & BG-2 (ug/L)



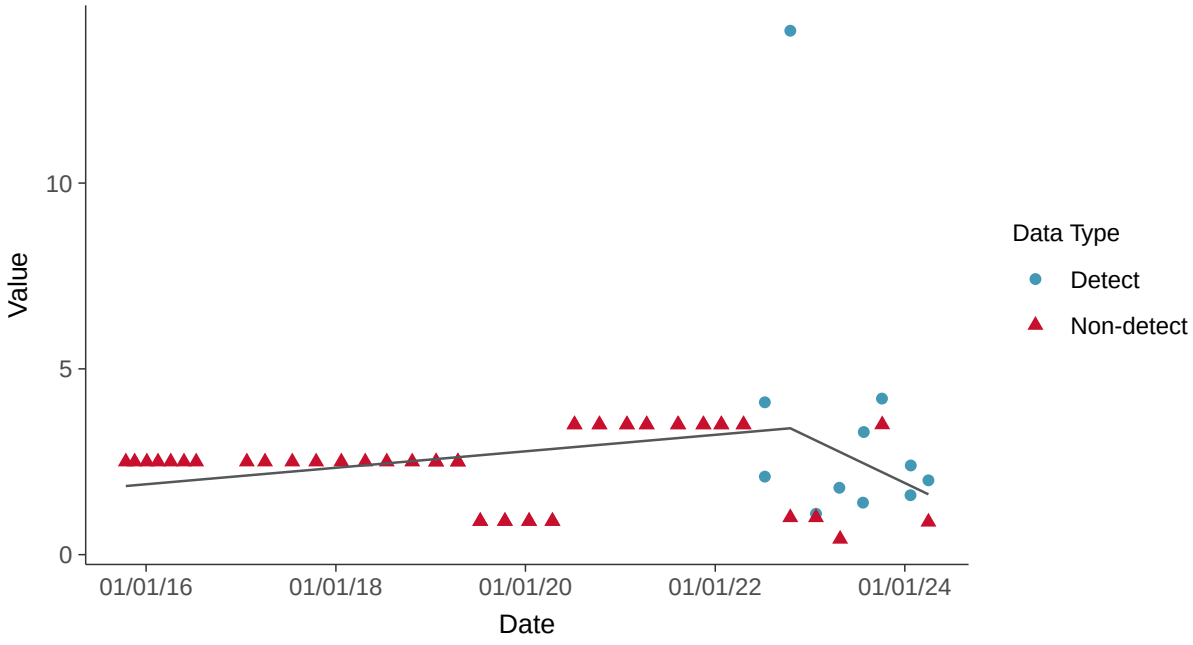
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, BG-1 & BG-2 (ug/L)



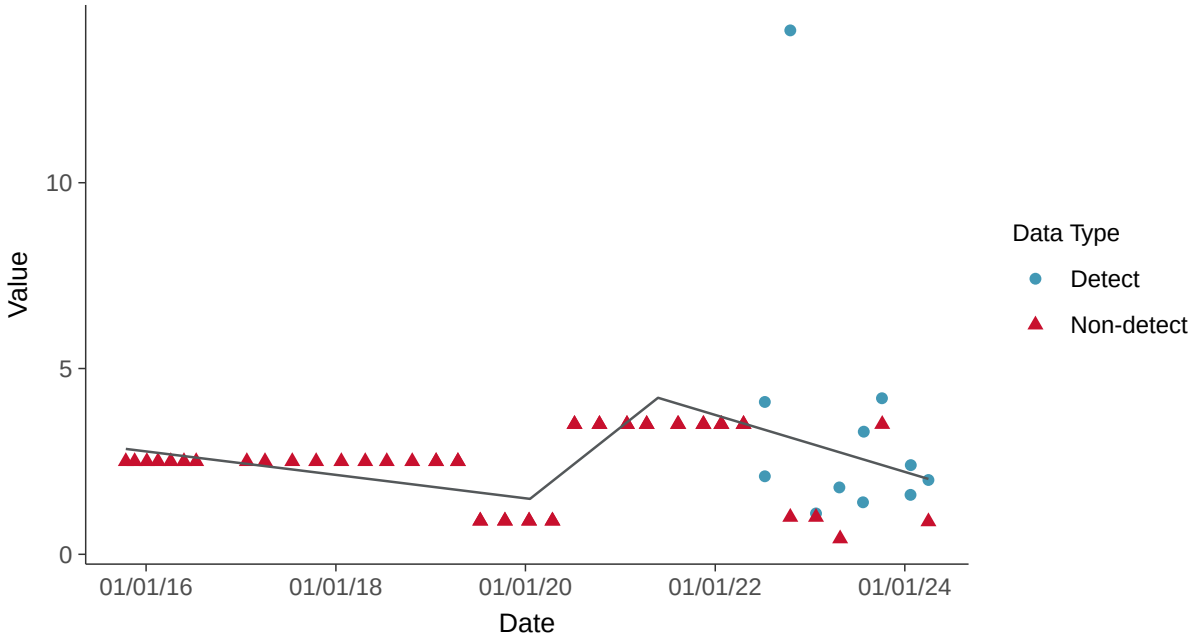
Trend Regression: Piecewise Linear-Linear

Nickel, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Nickel, BG-1 & BG-2 (ug/L)

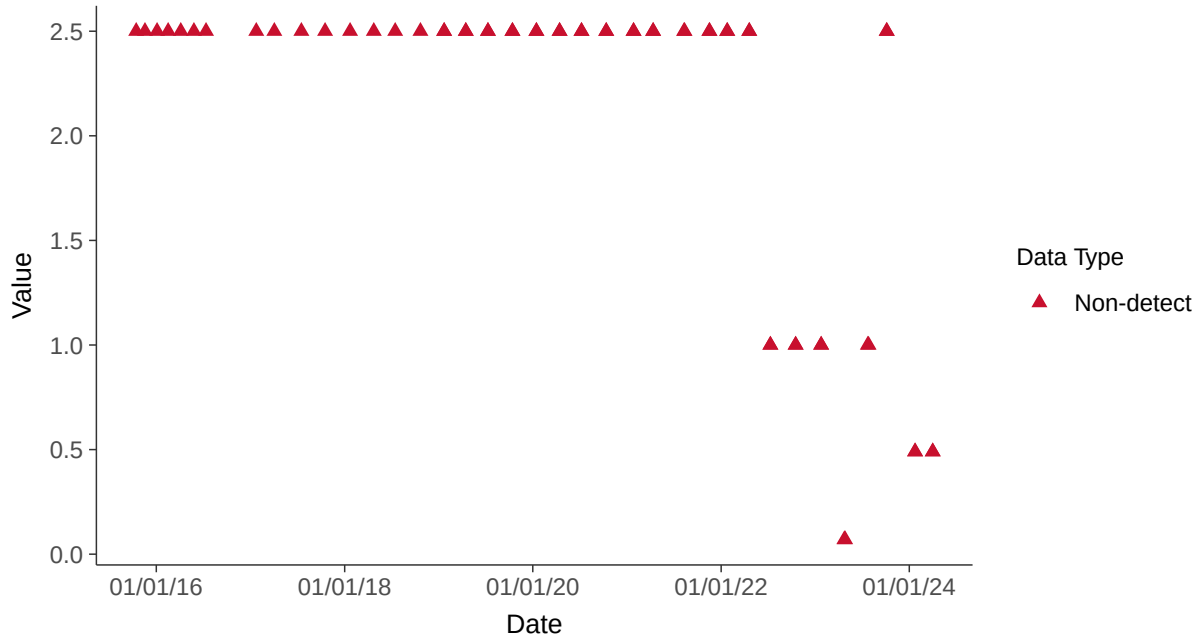


App. I Metals: Silver, BG-1 & BG-2

ID: 1_122

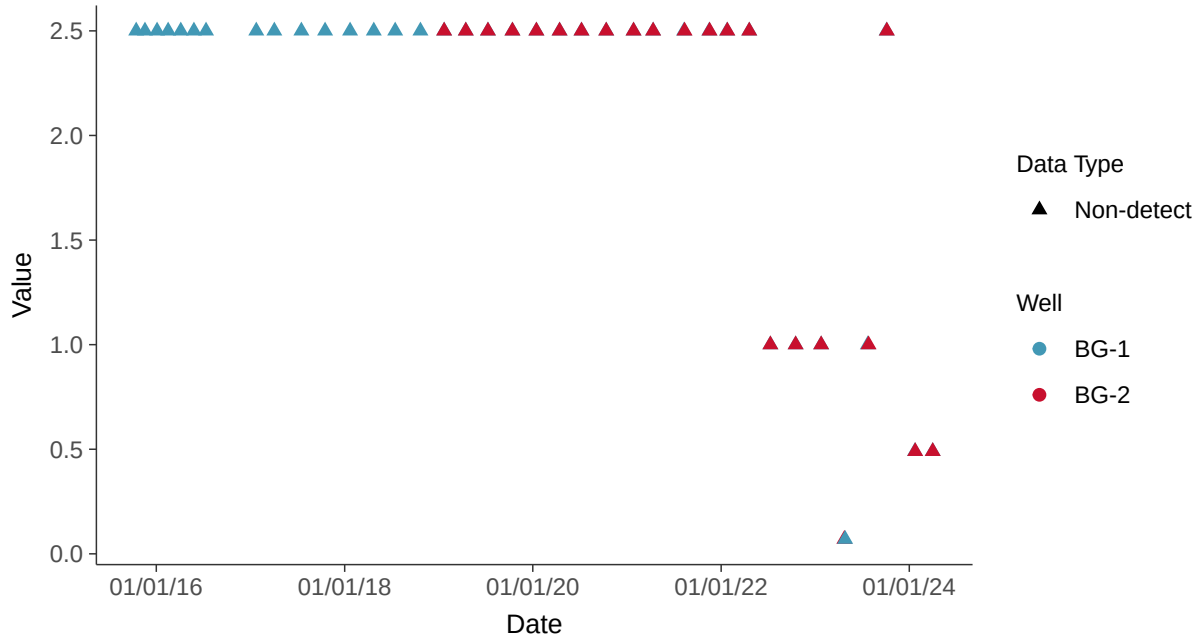
Scatter Plot

Silver, BG-1 & BG-2 (ug/L)



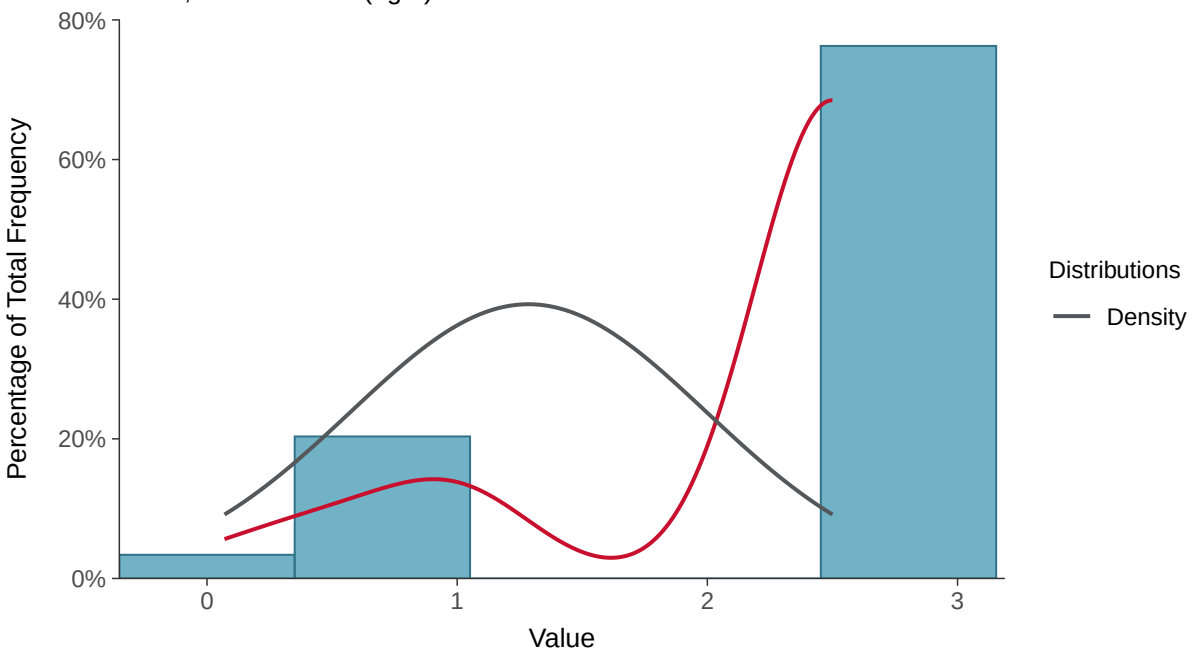
Scatter Plot by Well

Silver, BG-1 & BG-2 (ug/L)



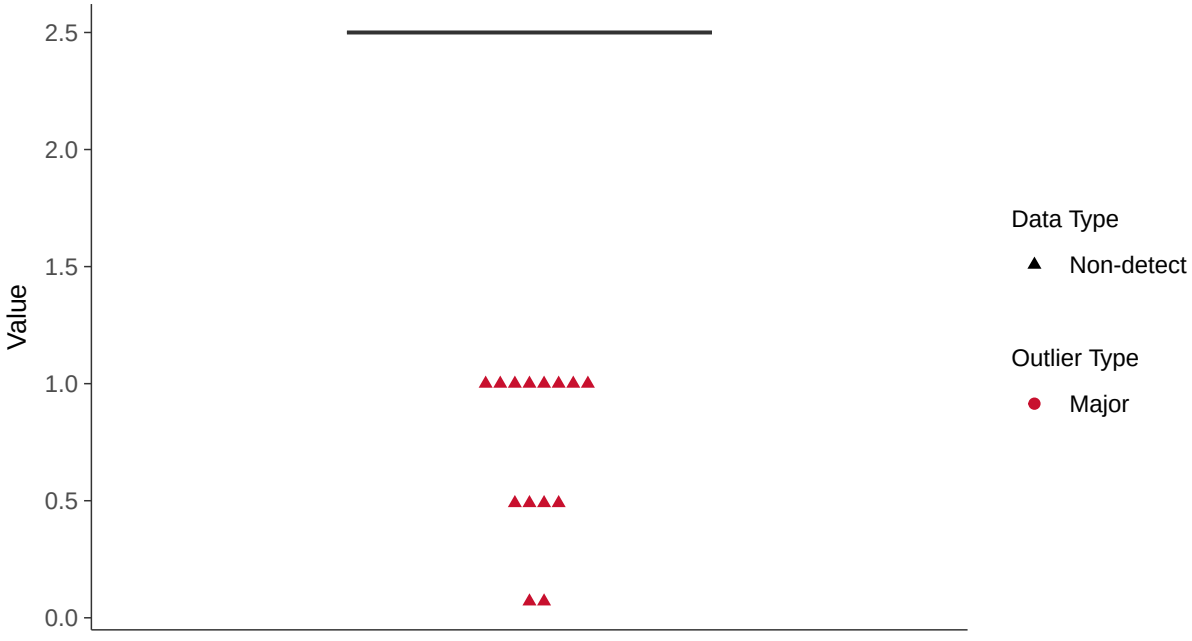
Histogram

Silver, BG-1 & BG-2 (ug/L)



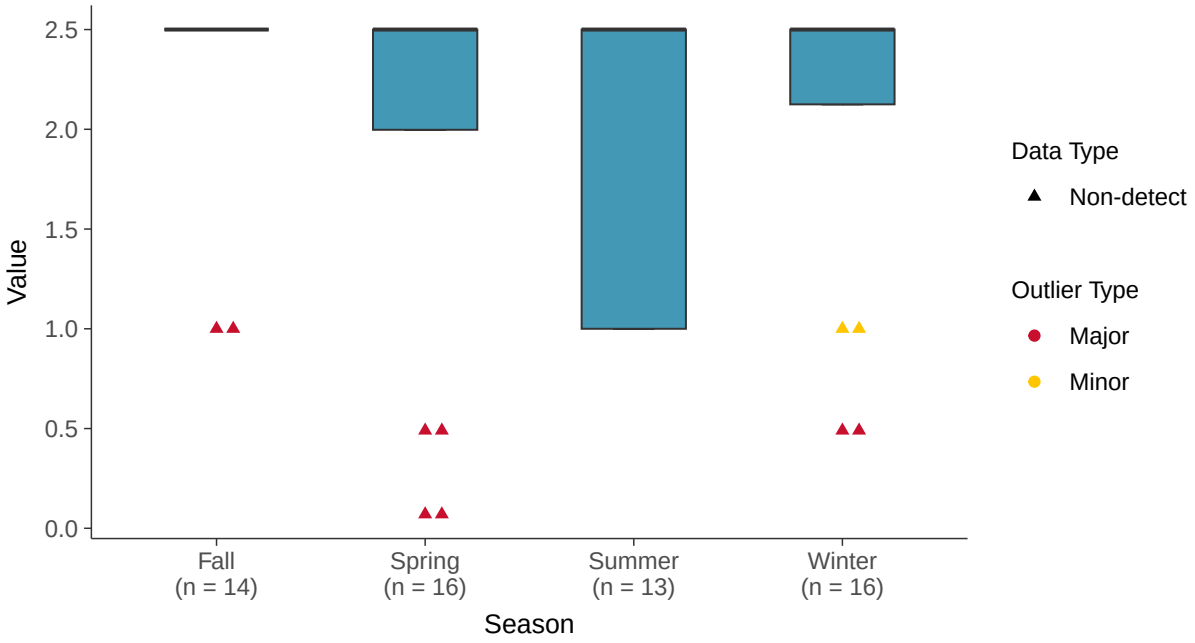
Boxplot

Silver, BG-1 & BG-2 (ug/L)



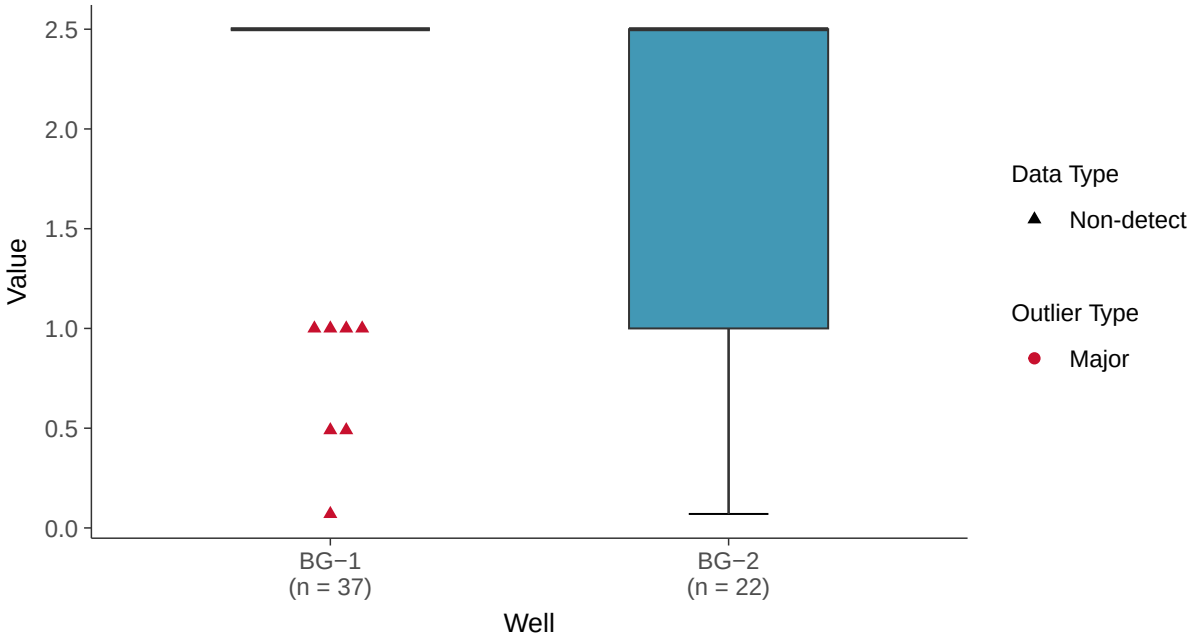
Boxplot by Season

Silver, BG-1 & BG-2 (ug/L)



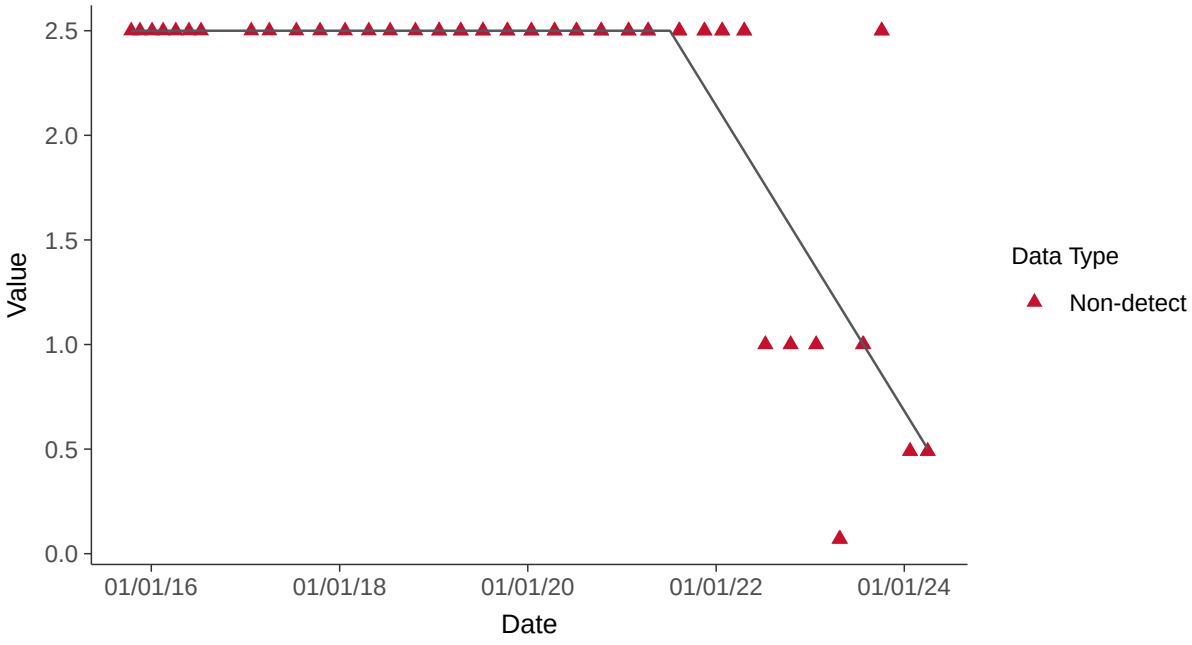
Boxplot by Well

Silver, BG-1 & BG-2 (ug/L)



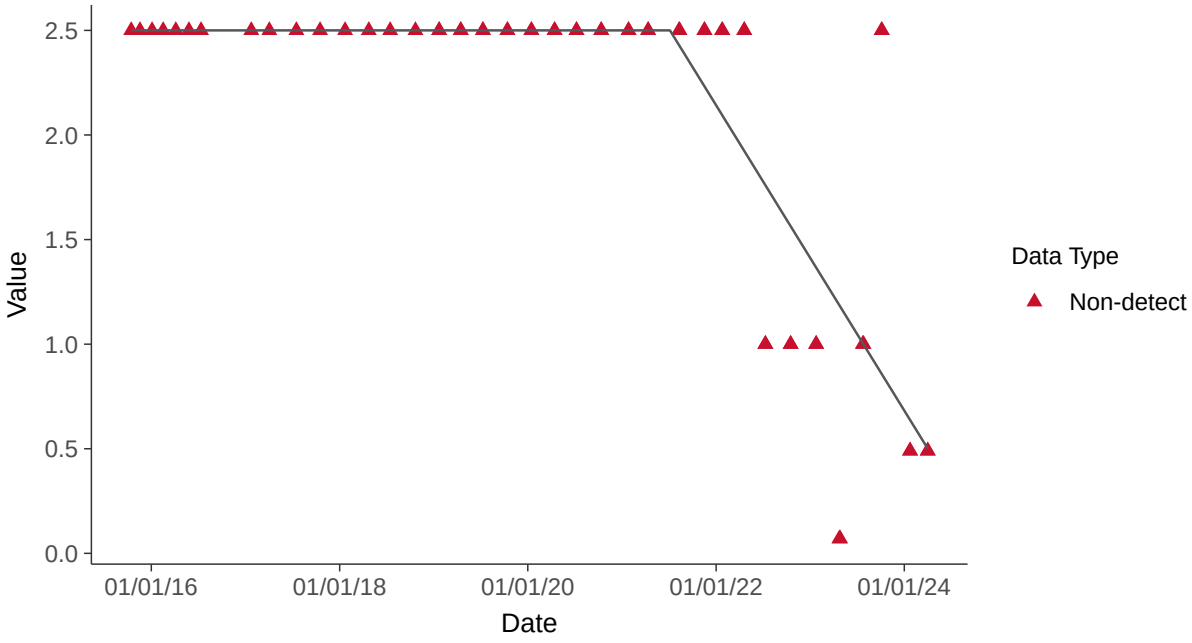
Trend Regression: Piecewise Linear-Linear

Silver, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, BG-1 & BG-2 (ug/L)

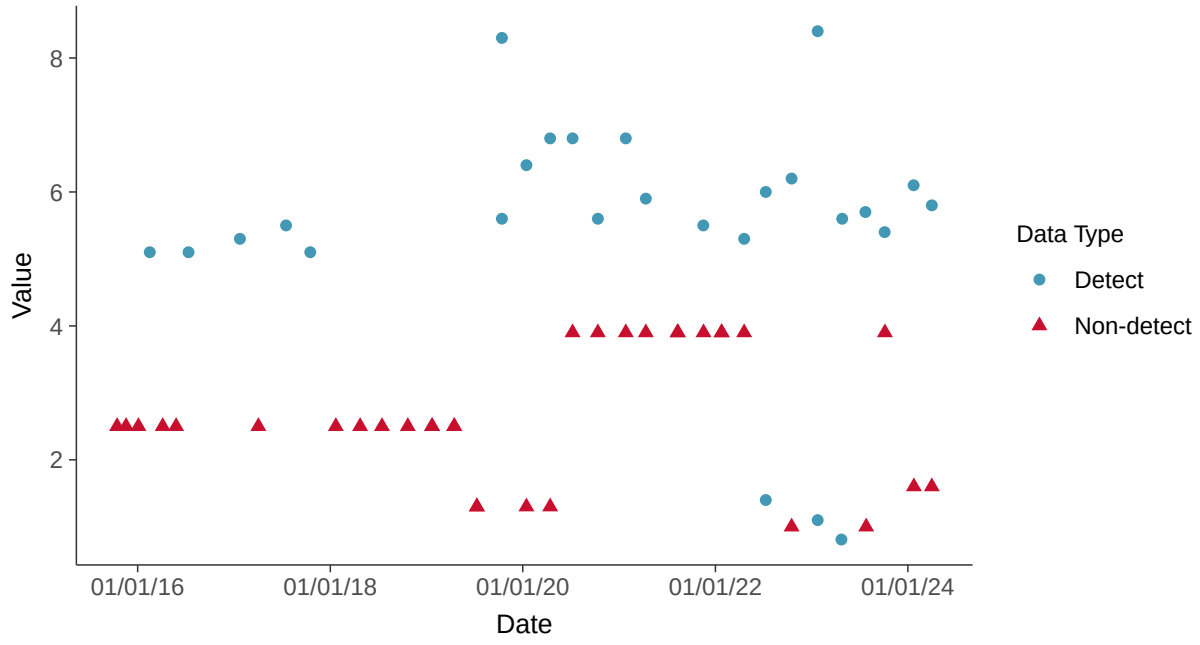


App. I Metals: Vanadium, BG-1 & BG-2

ID: 1_127

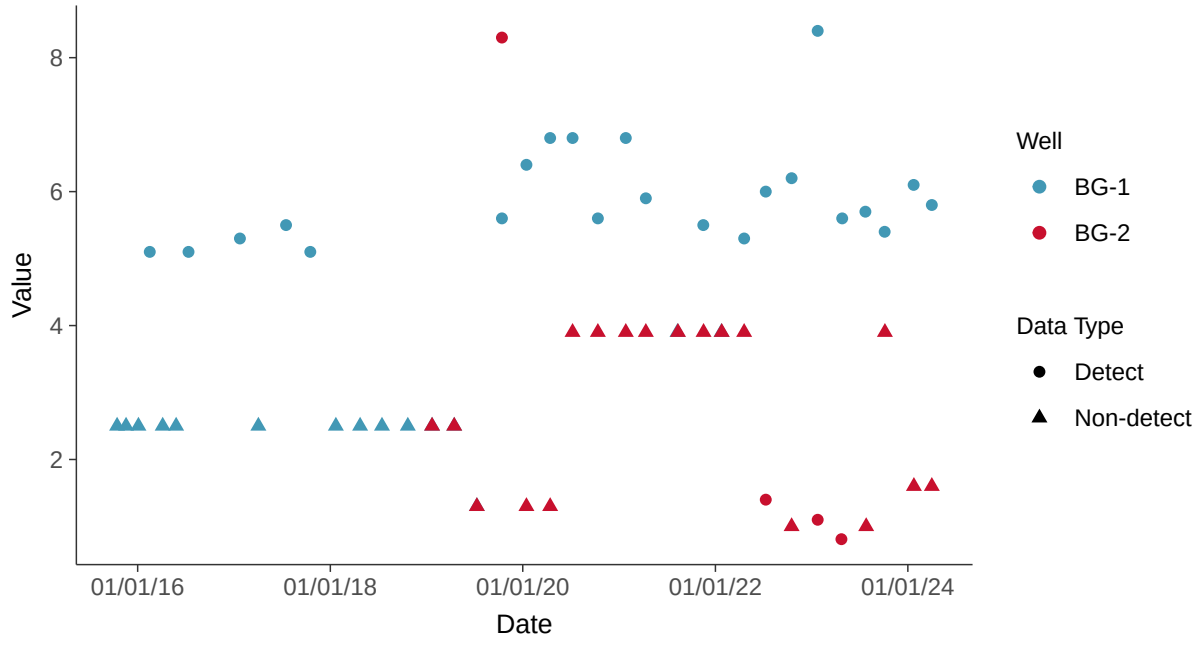
Scatter Plot

Vanadium, BG-1 & BG-2 (ug/L)



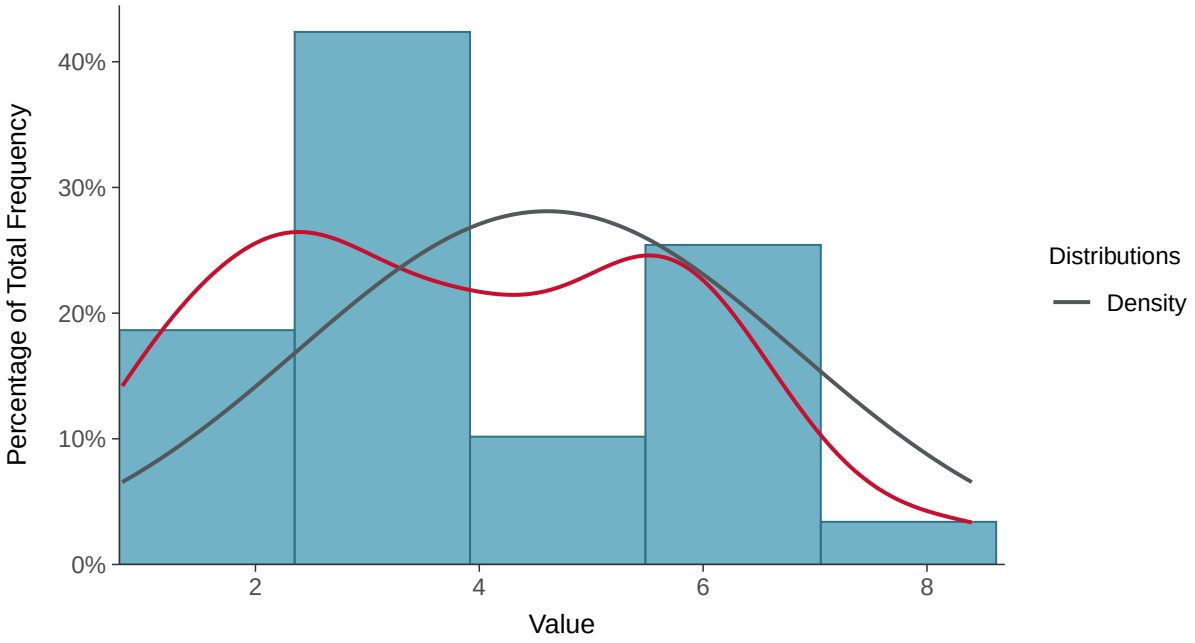
Scatter Plot by Well

Vanadium, BG-1 & BG-2 (ug/L)



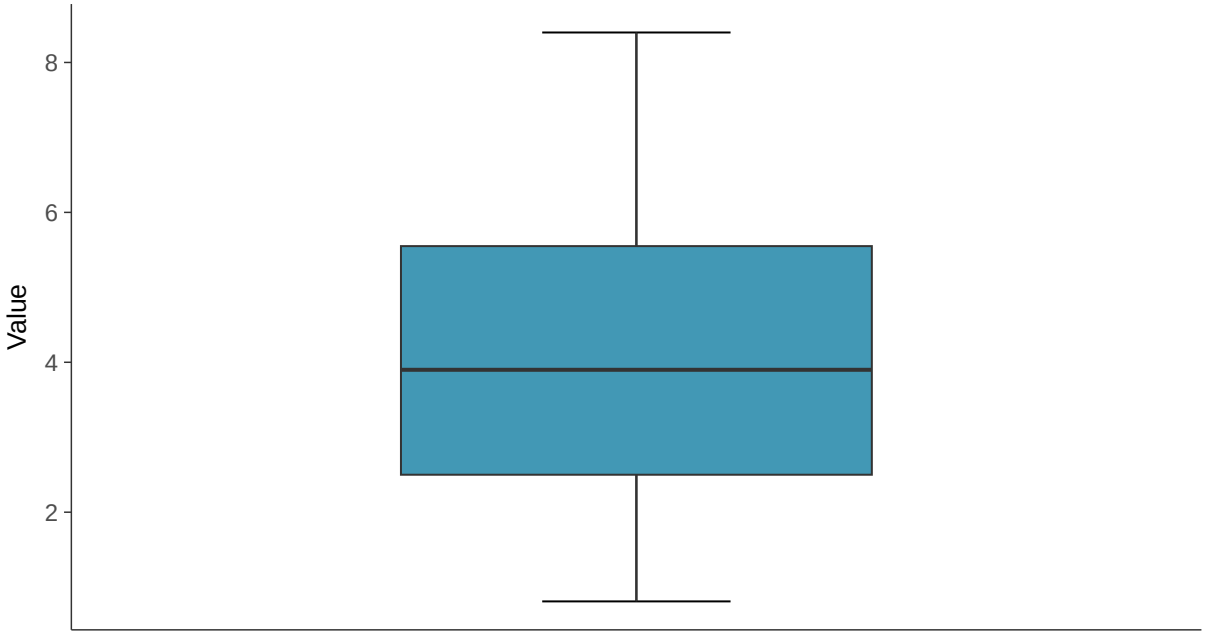
Histogram

Vanadium, BG-1 & BG-2 (ug/L)



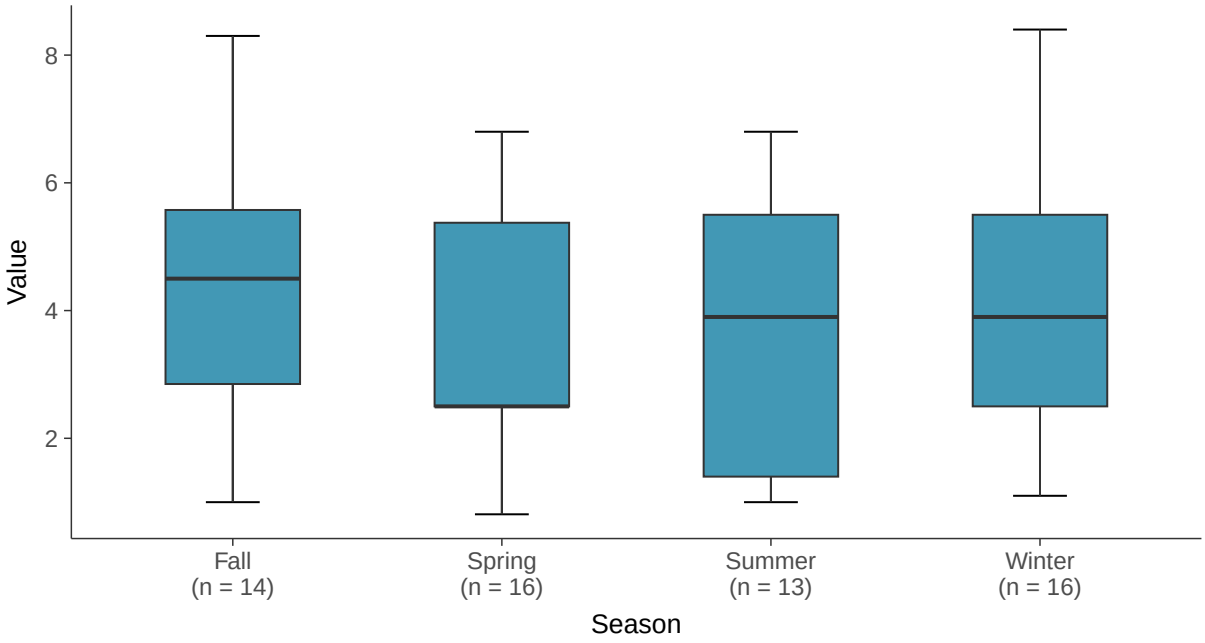
Boxplot

Vanadium, BG-1 & BG-2 (ug/L)



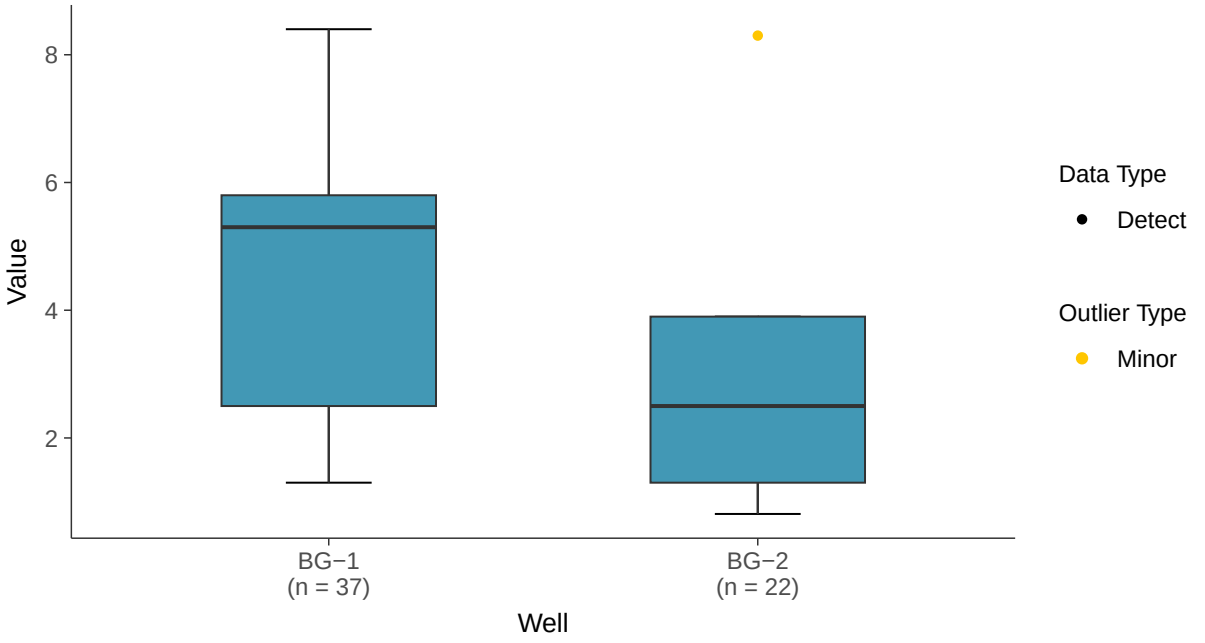
Boxplot by Season

Vanadium, BG-1 & BG-2 (ug/L)



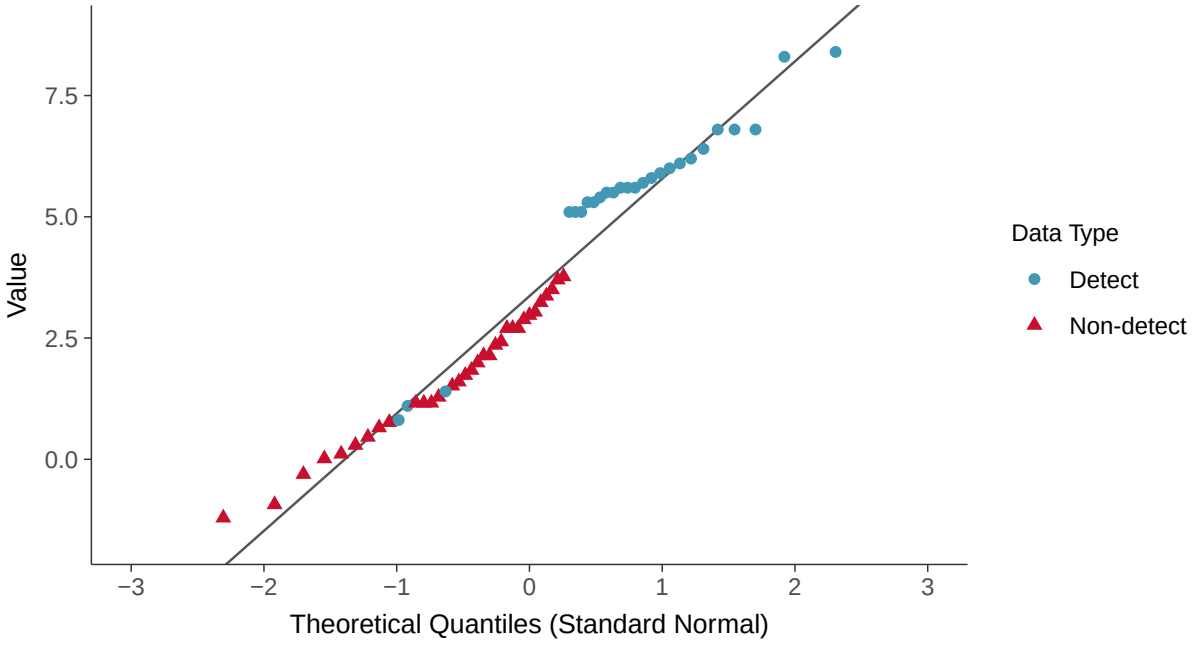
Boxplot by Well

Vanadium, BG-1 & BG-2 (ug/L)



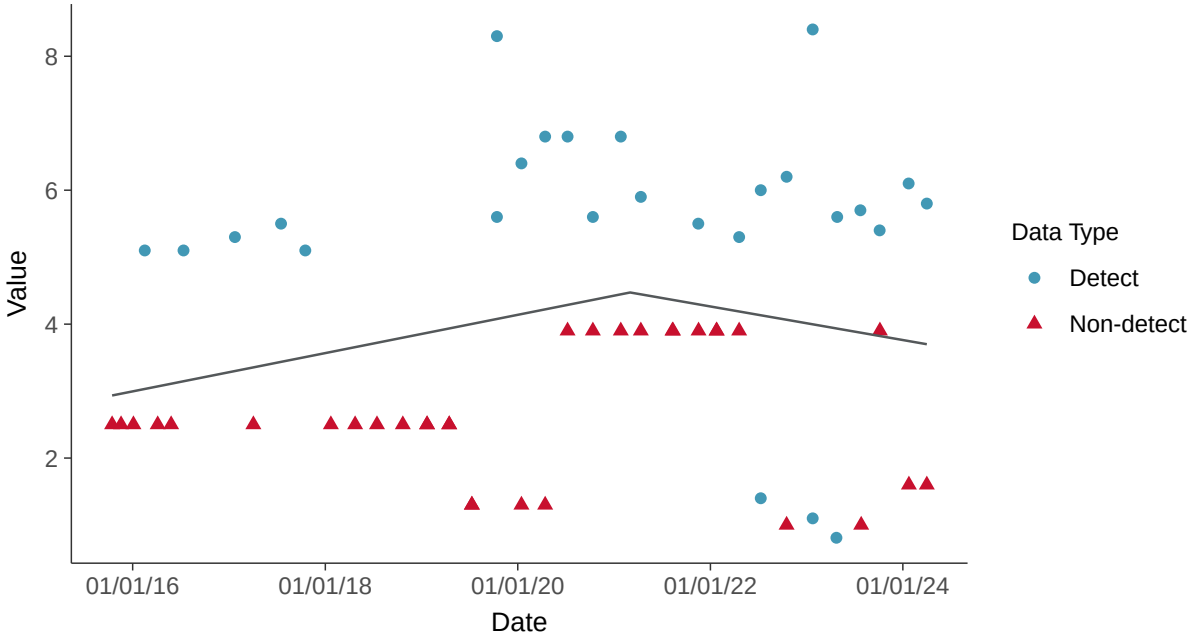
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, BG-1 & BG-2 (ug/L)



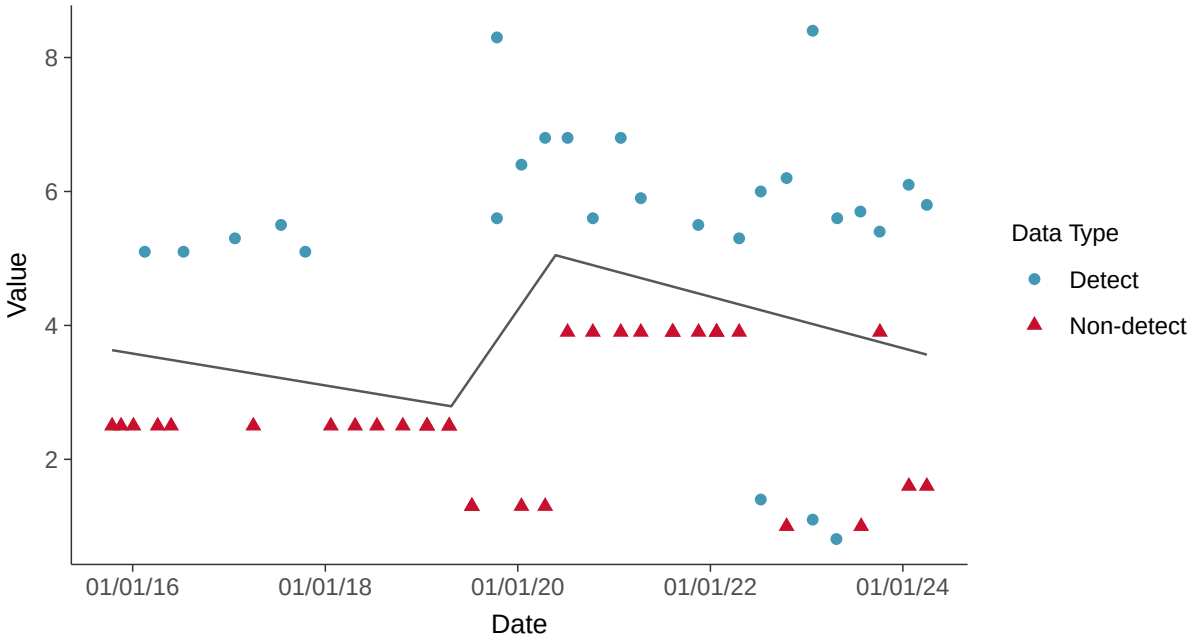
Trend Regression: Piecewise Linear-Linear

Vanadium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, BG-1 & BG-2 (ug/L)

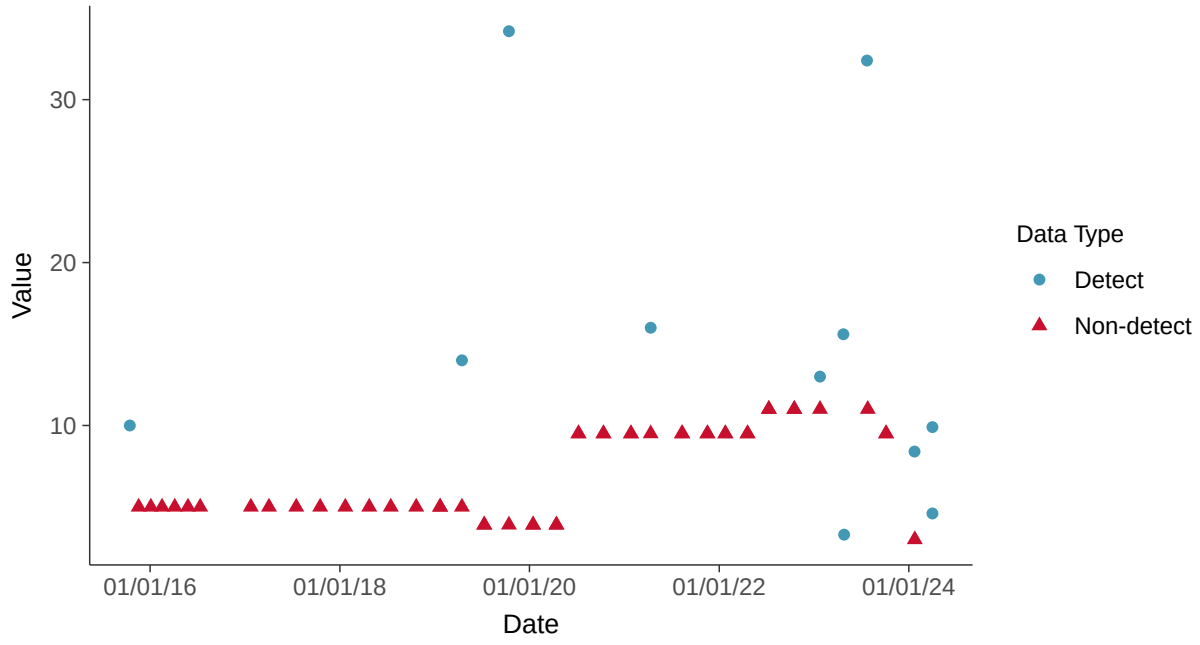


App. I Metals: Zinc, BG-1 & BG-2

ID: 1_128

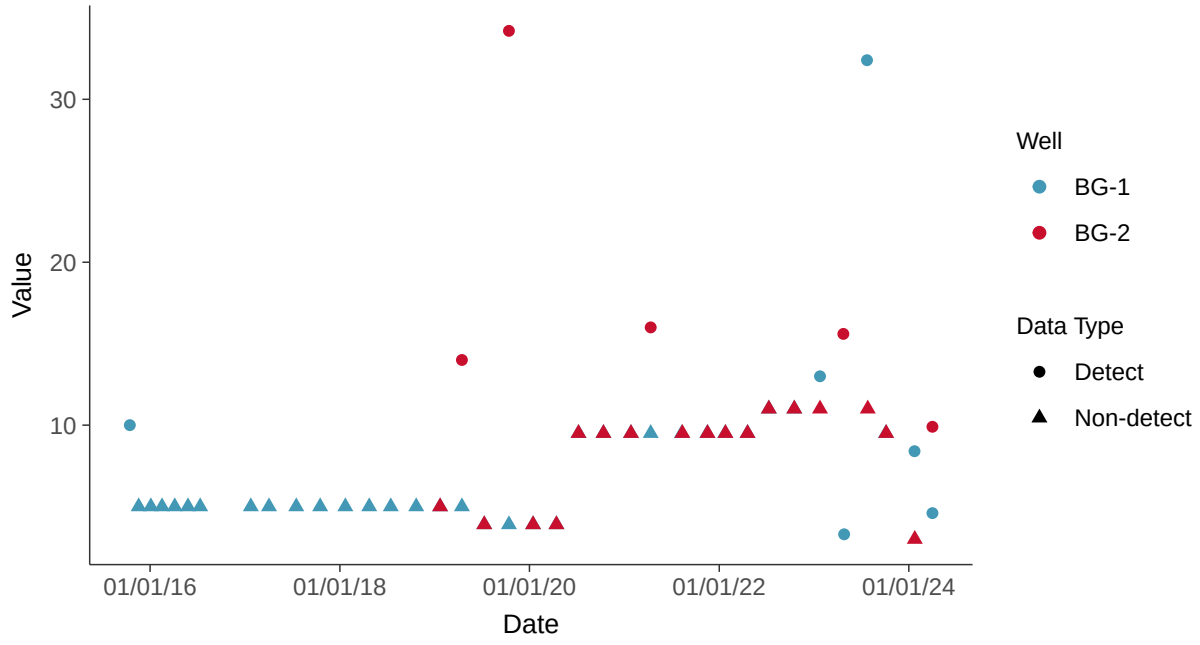
Scatter Plot

Zinc, BG-1 & BG-2 (ug/L)



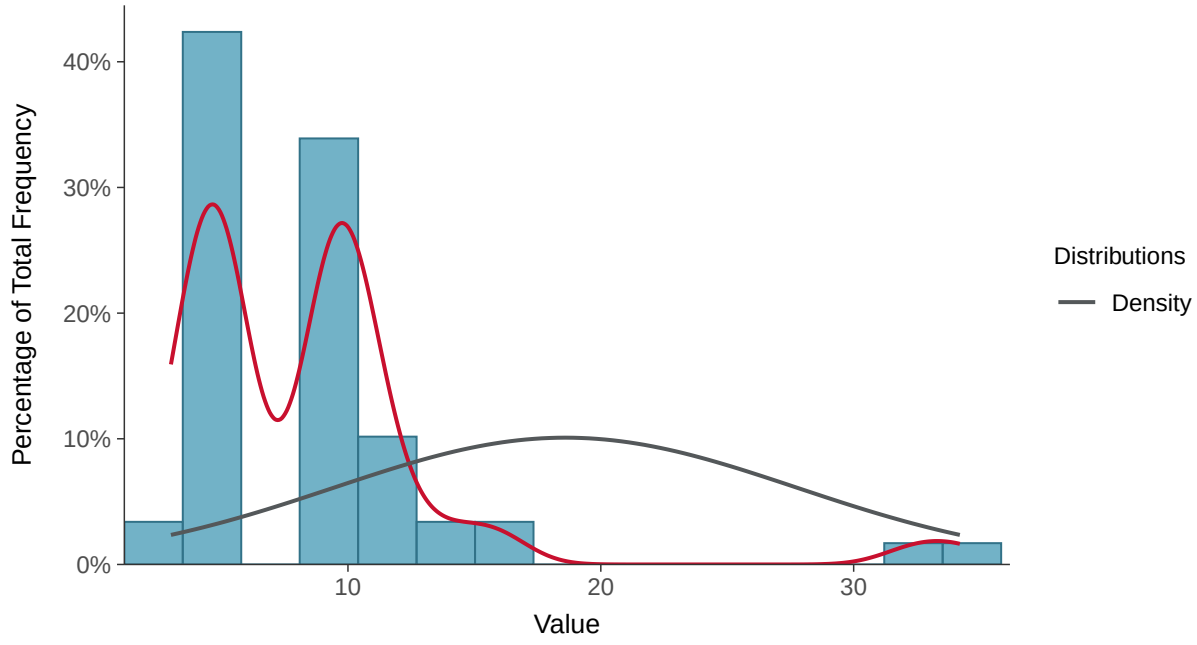
Scatter Plot by Well

Zinc, BG-1 & BG-2 (ug/L)



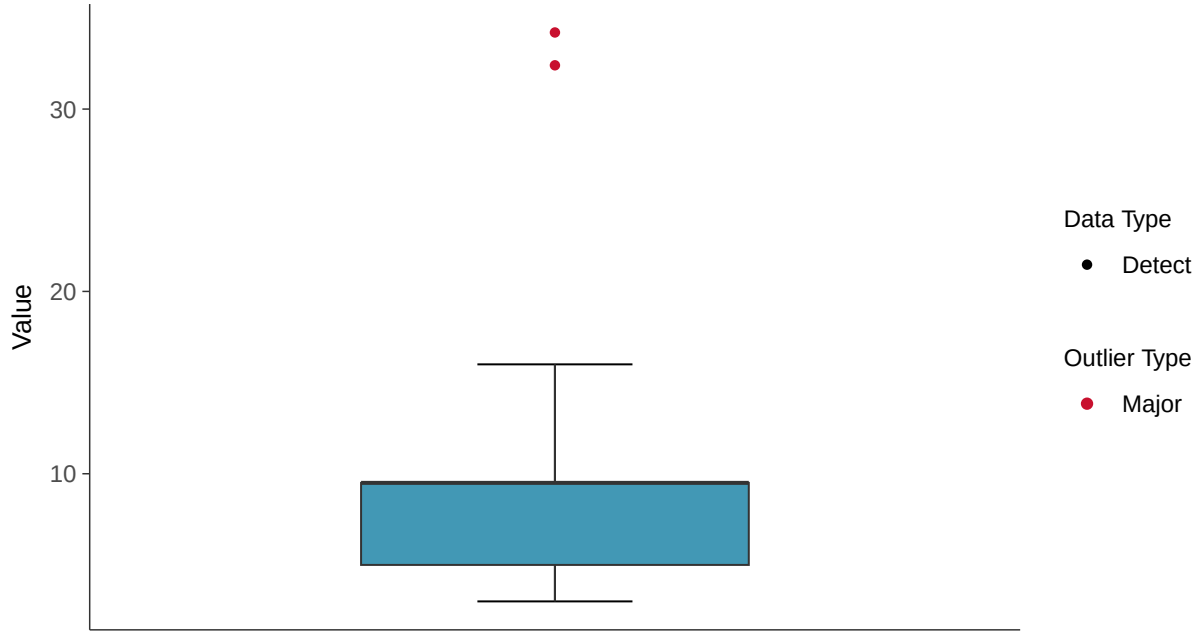
Histogram

Zinc, BG-1 & BG-2 (ug/L)



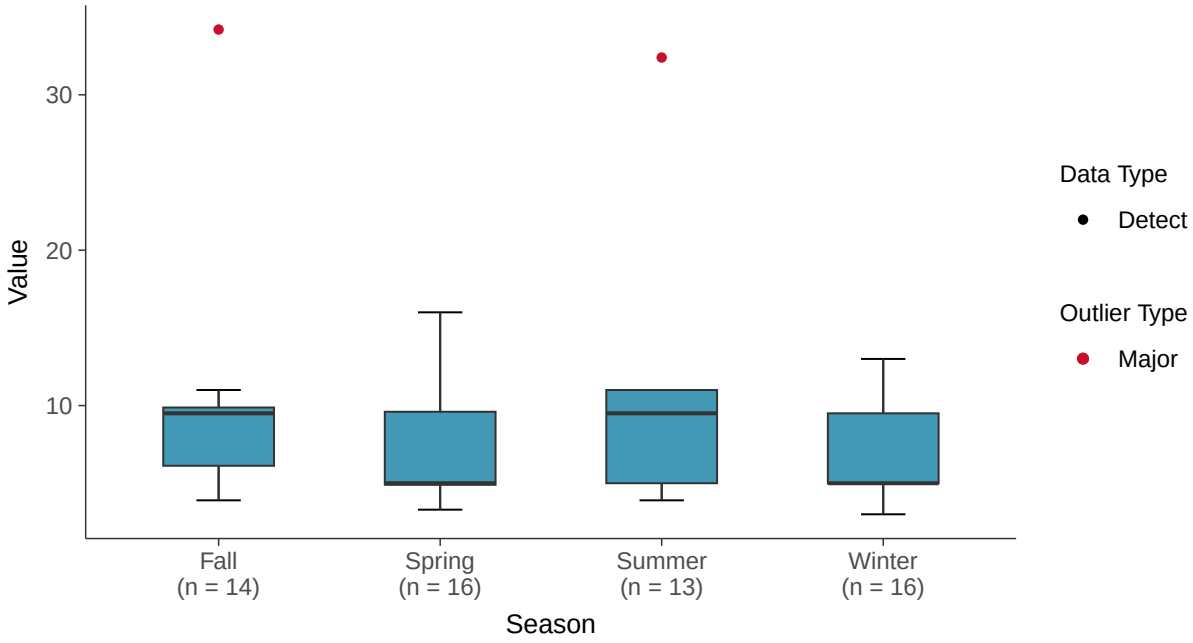
Boxplot

Zinc, BG-1 & BG-2 (ug/L)



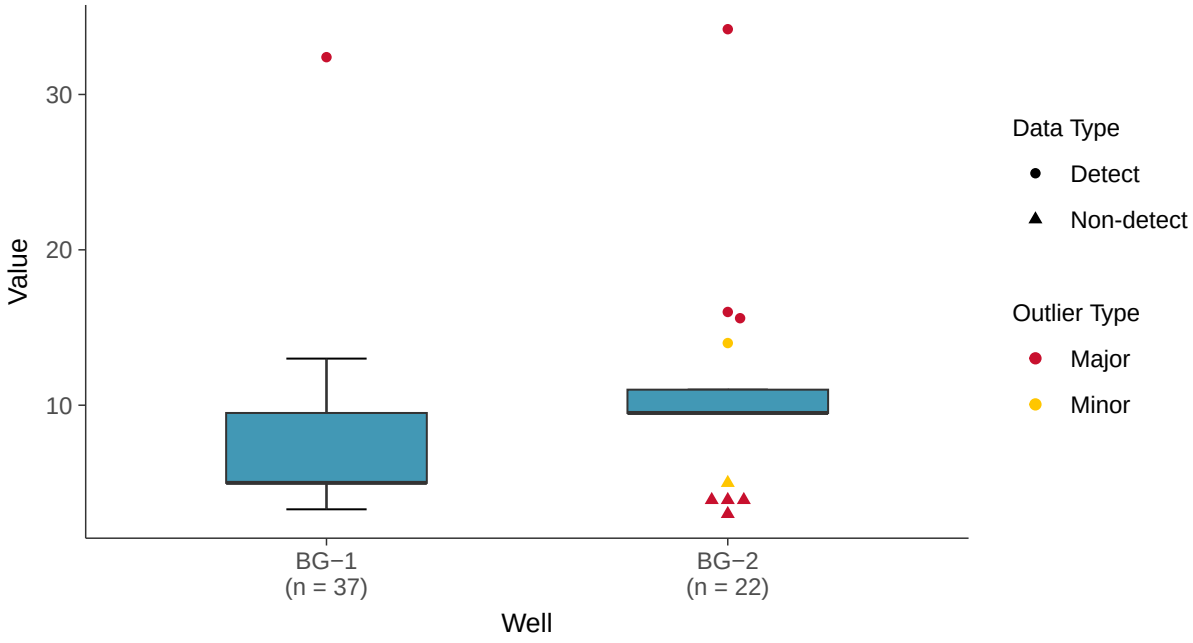
Boxplot by Season

Zinc, BG-1 & BG-2 (ug/L)



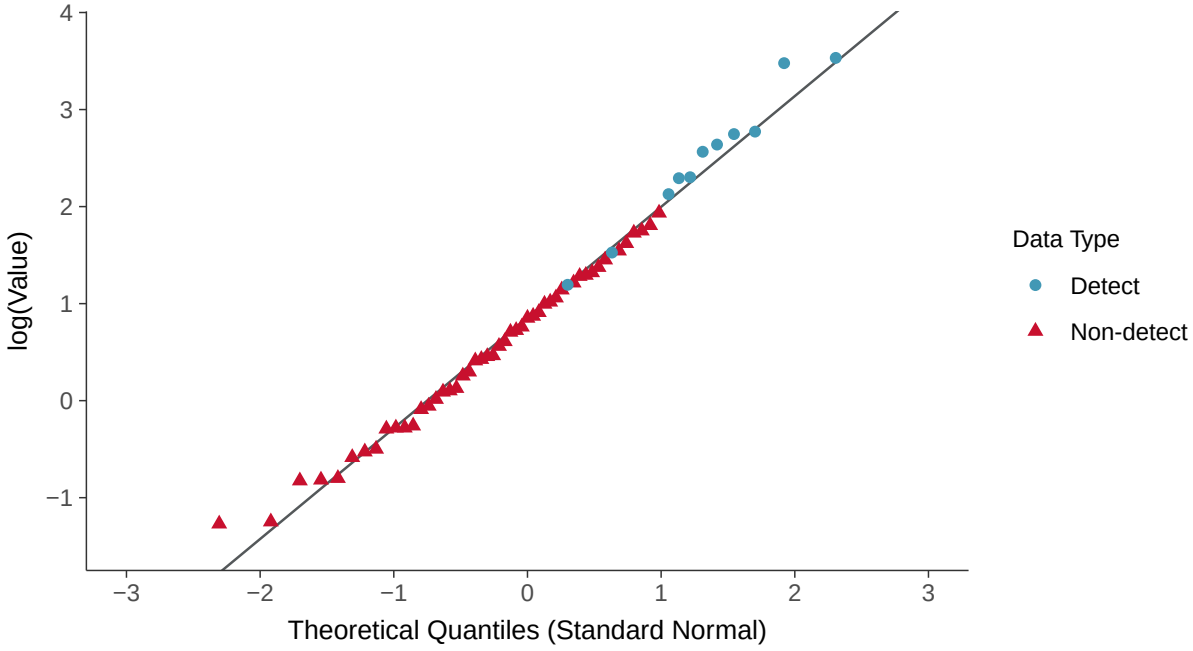
Boxplot by Well

Zinc, BG-1 & BG-2 (ug/L)



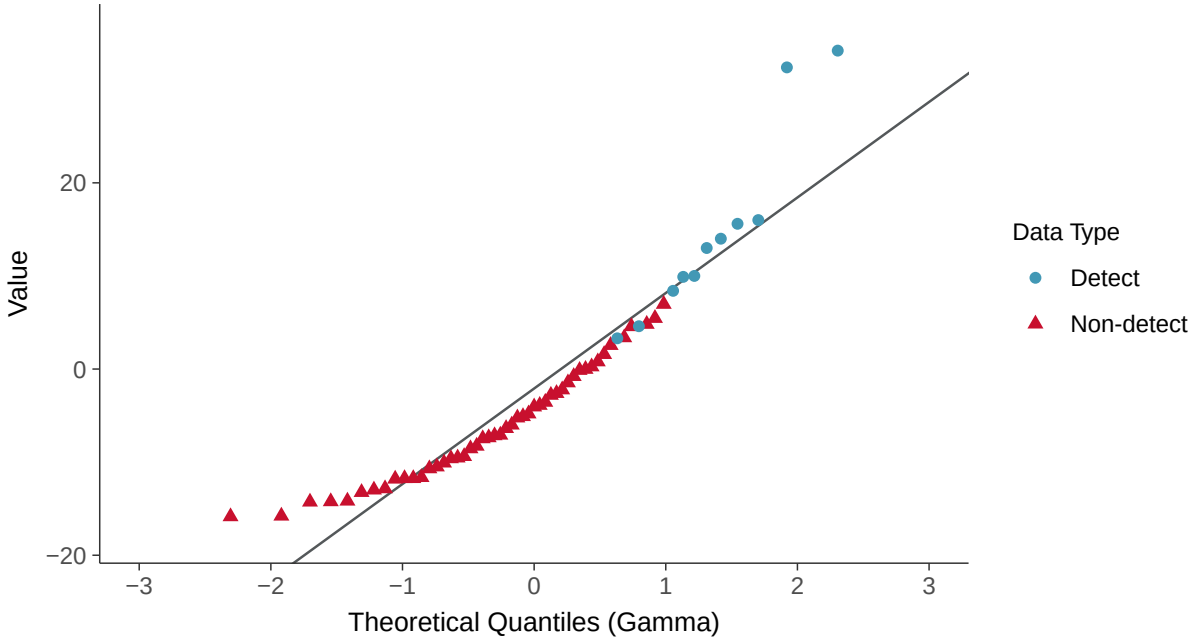
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, BG-1 & BG-2 (ug/L)



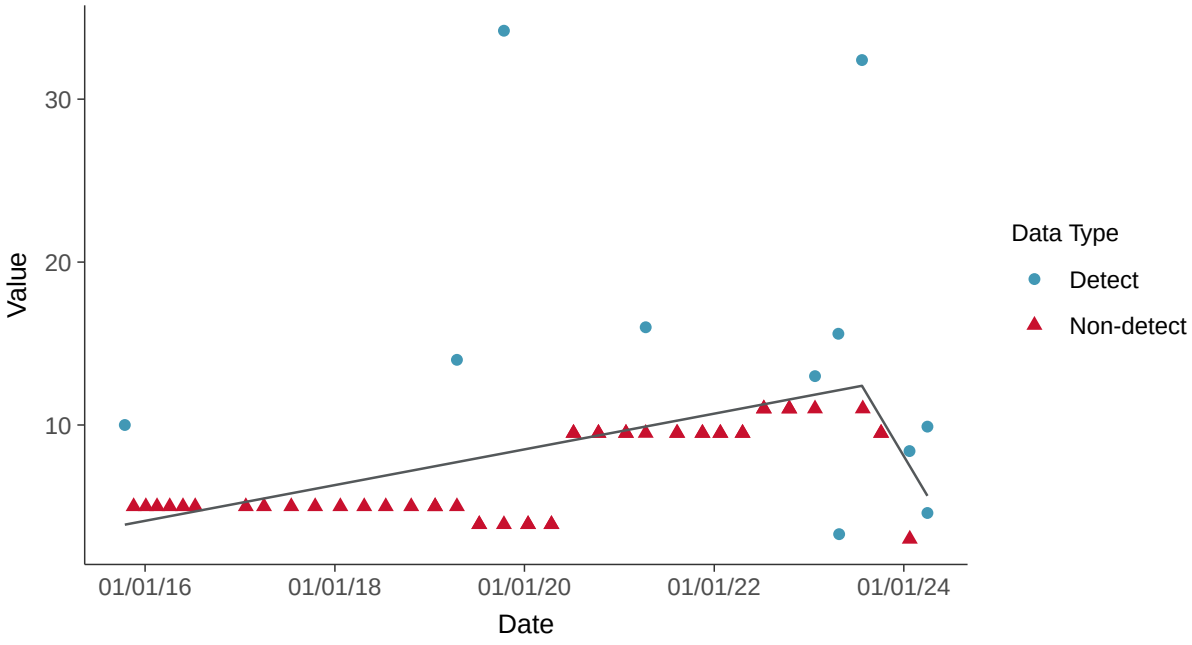
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, BG-1 & BG-2 (ug/L)



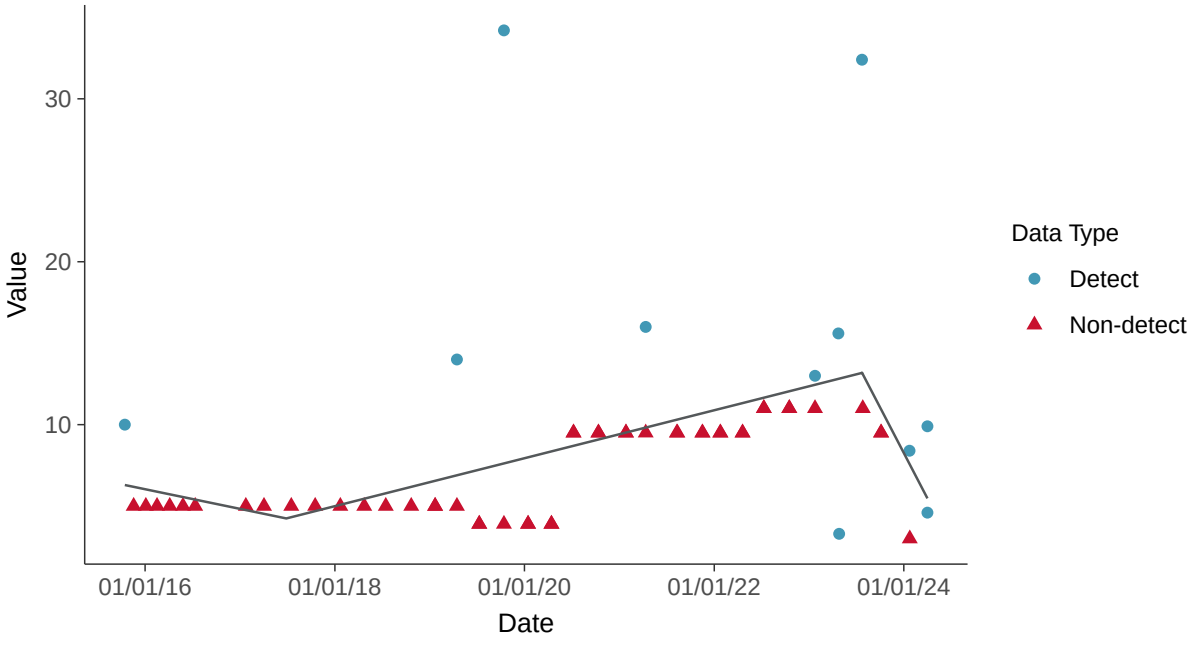
Trend Regression: Piecewise Linear-Linear

Zinc, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Zinc, BG-1 & BG-2 (ug/L)

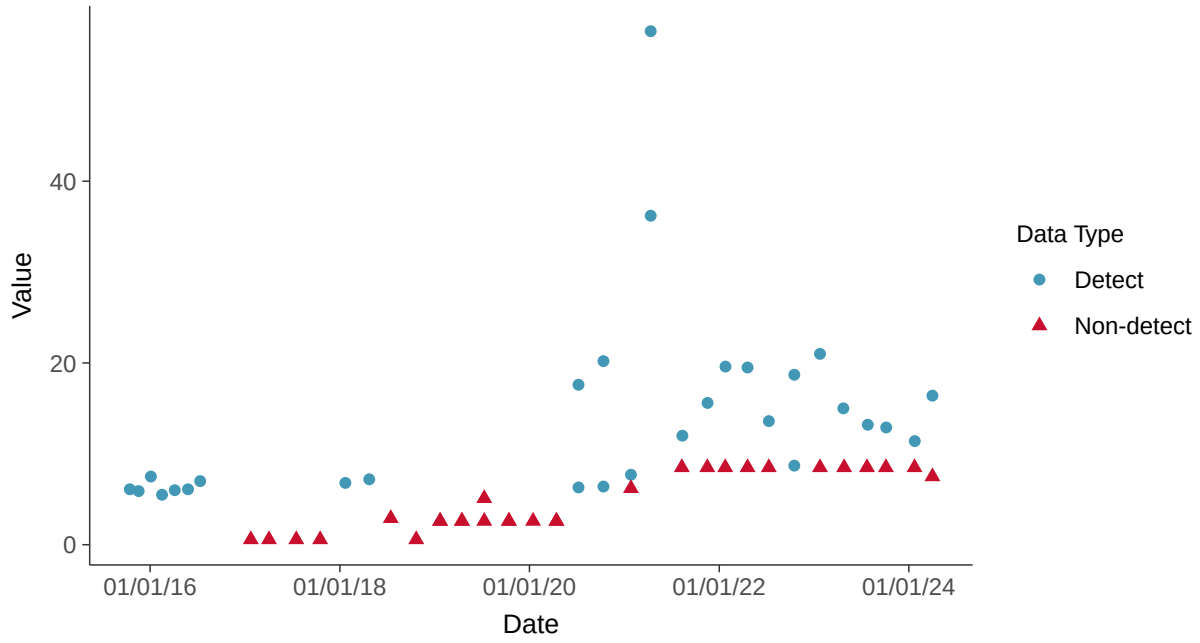


App. III: Boron, BG-1 & BG-2

ID: 2_105

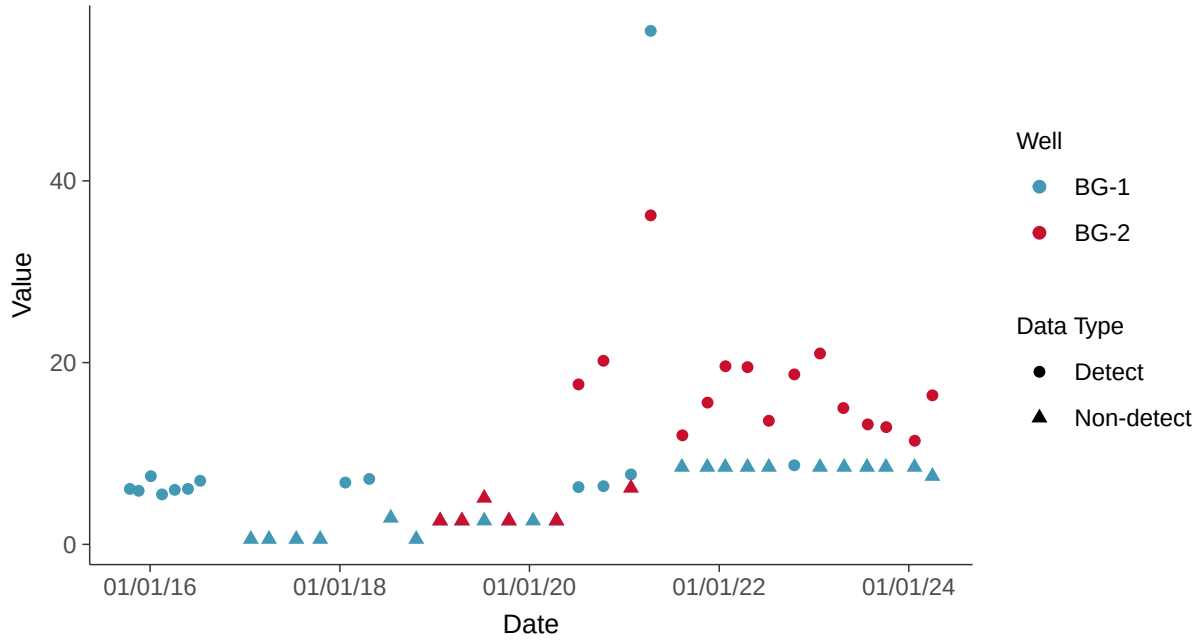
Scatter Plot

Boron, BG-1 & BG-2 (ug/L)



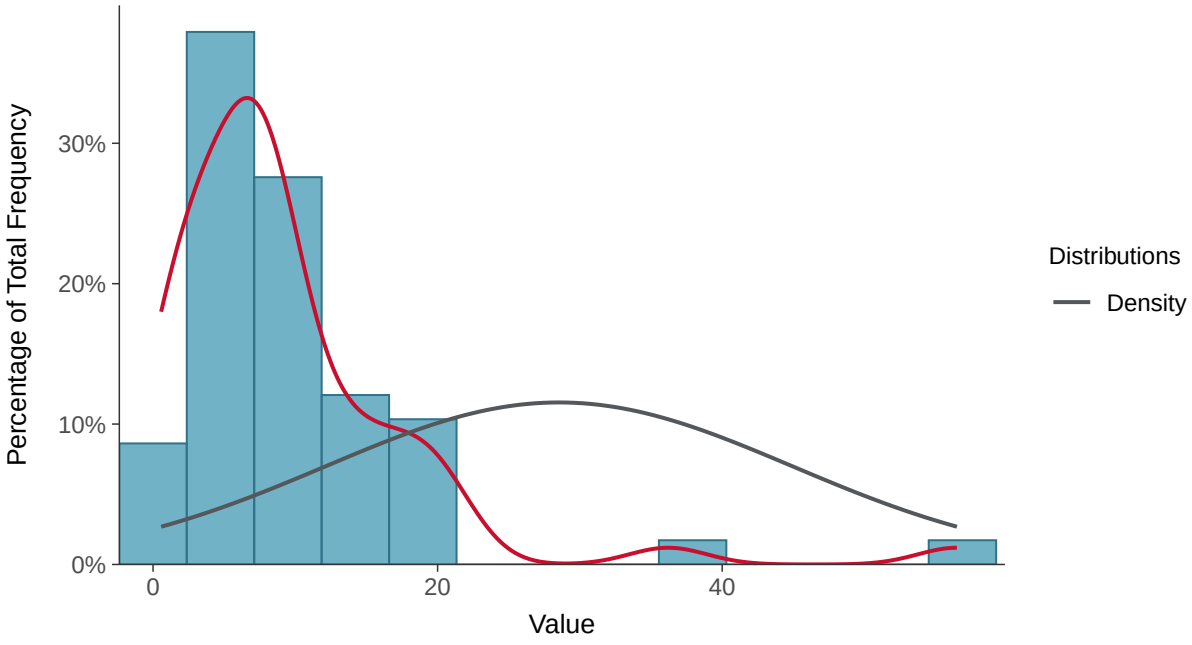
Scatter Plot by Well

Boron, BG-1 & BG-2 (ug/L)



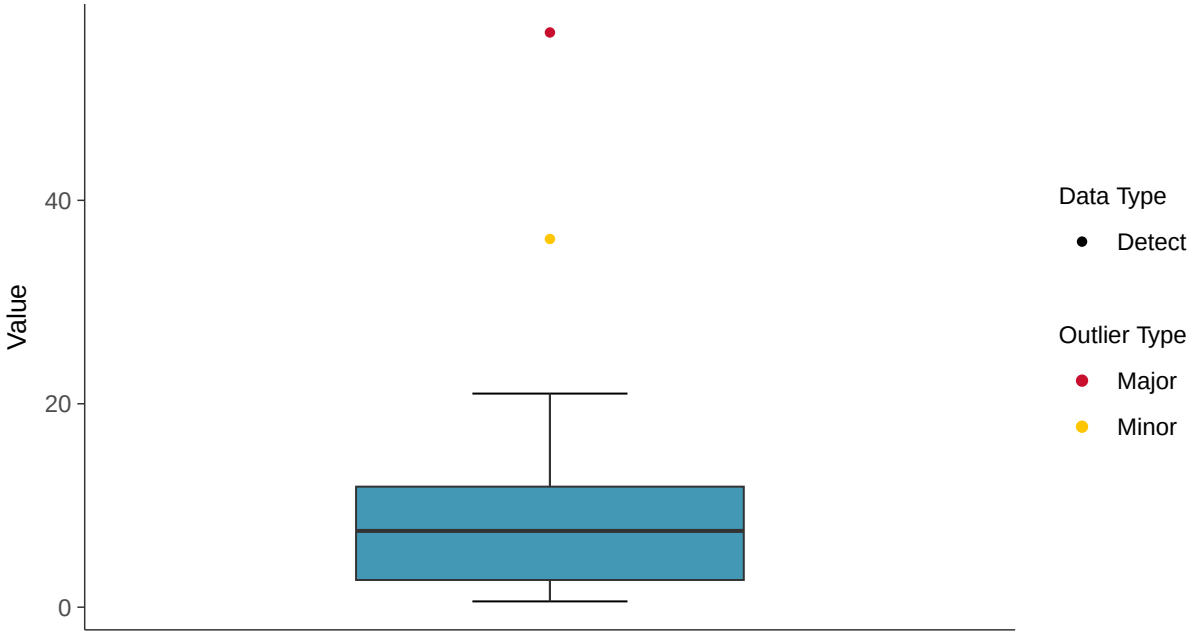
Histogram

Boron, BG-1 & BG-2 (ug/L)



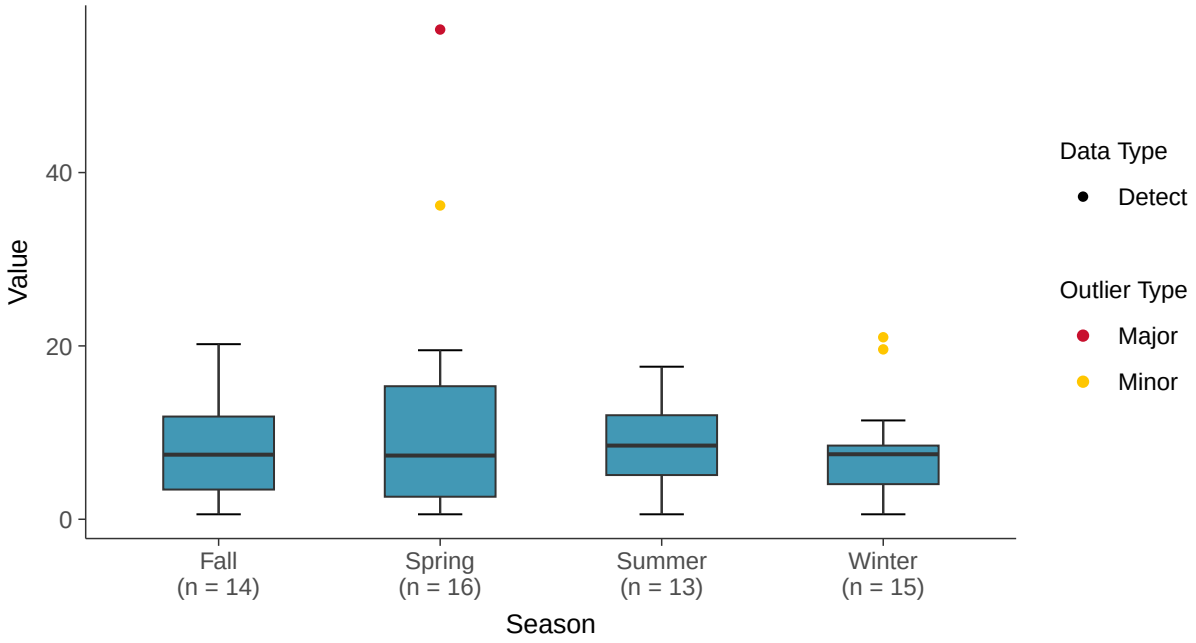
Boxplot

Boron, BG-1 & BG-2 (ug/L)



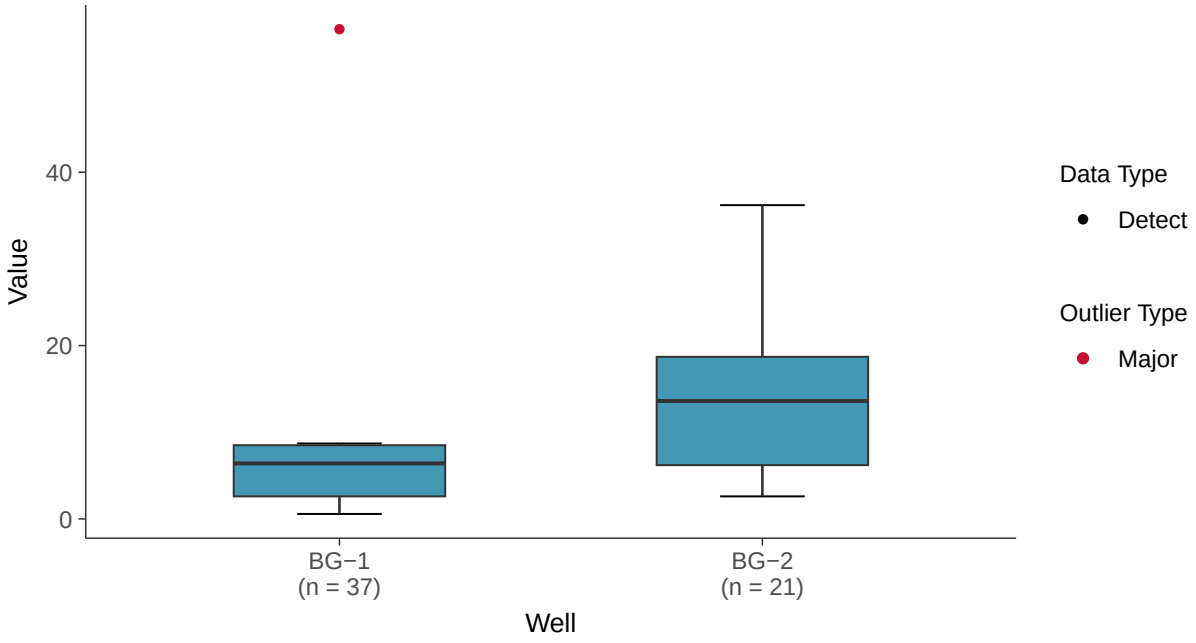
Boxplot by Season

Boron, BG-1 & BG-2 (ug/L)



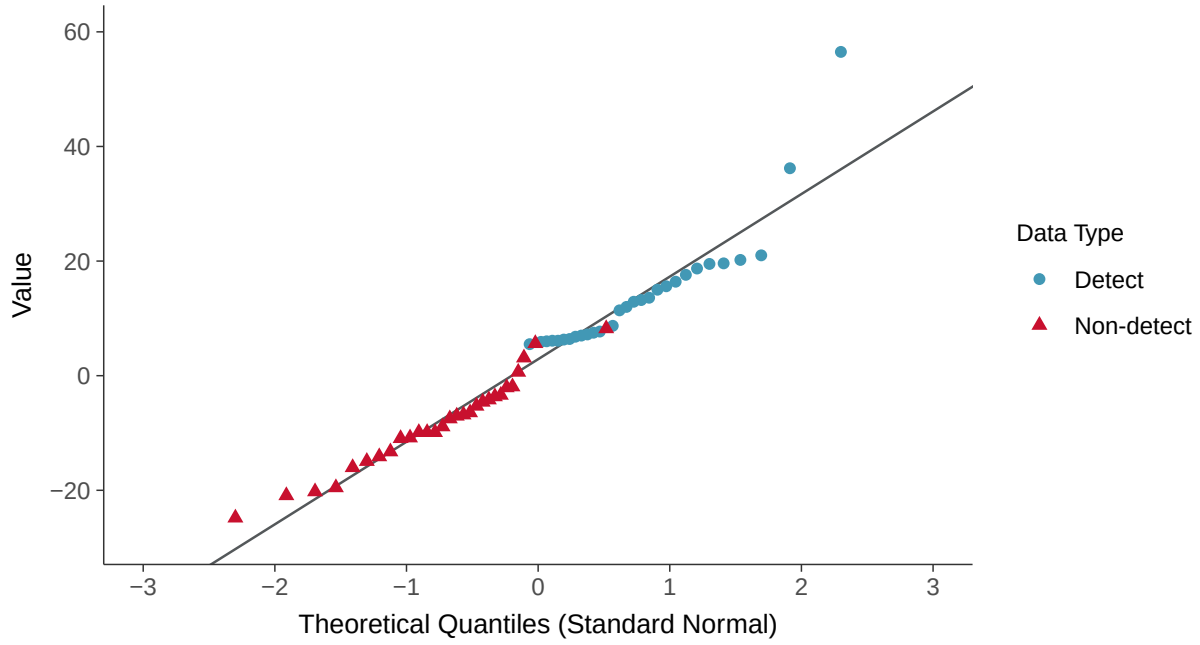
Boxplot by Well

Boron, BG-1 & BG-2 (ug/L)



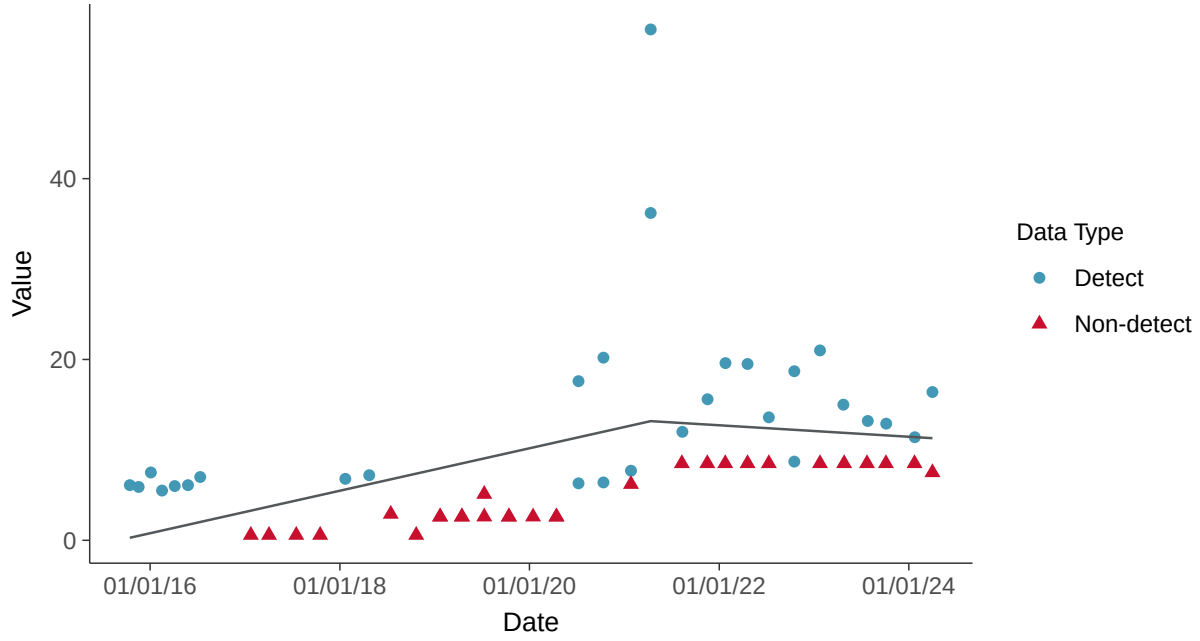
Normal Q-Q plot using ROS Imputed Estimates

Boron, BG-1 & BG-2 (ug/L)



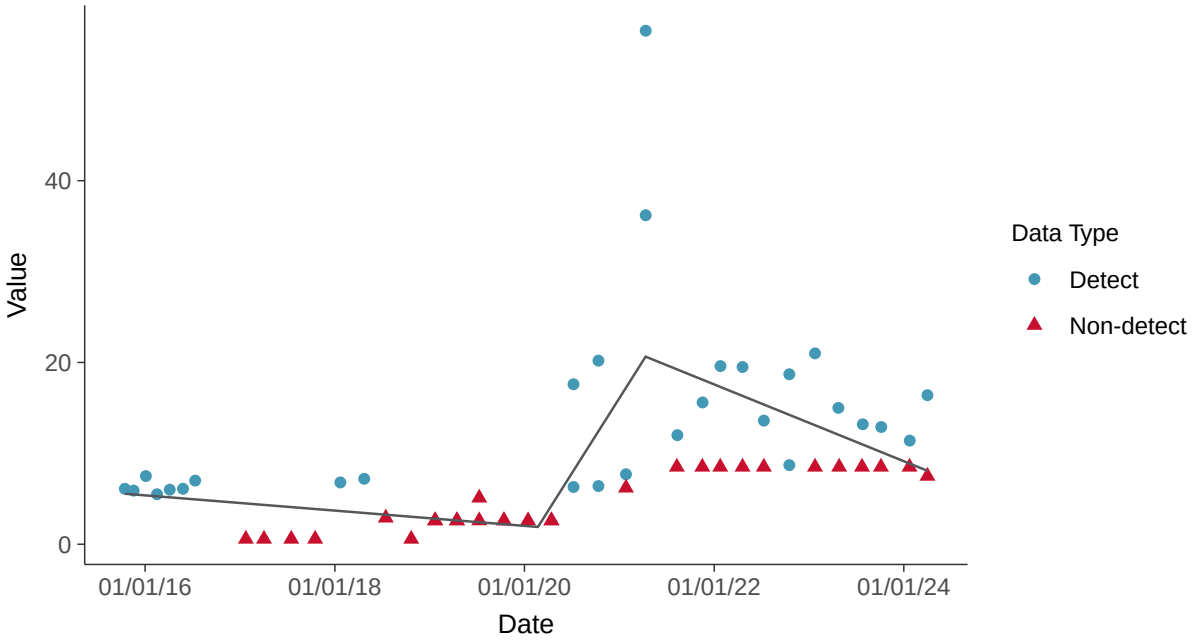
Trend Regression: Piecewise Linear-Linear

Boron, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, BG-1 & BG-2 (ug/L)

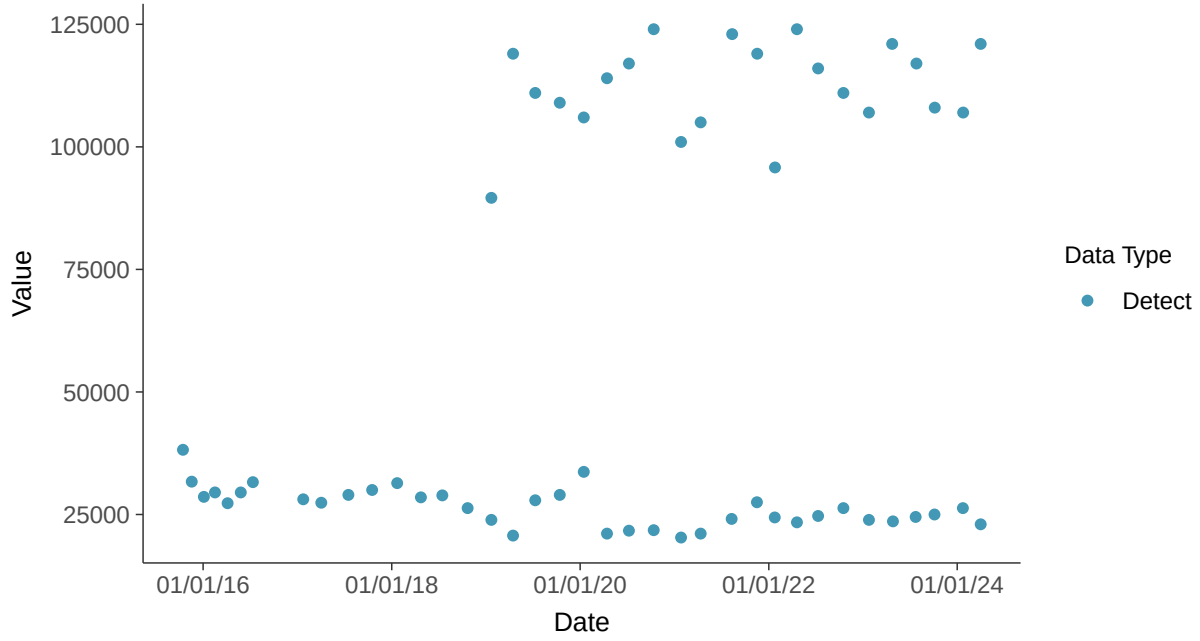


App. III: Calcium, BG-1 & BG-2

ID: 2_107

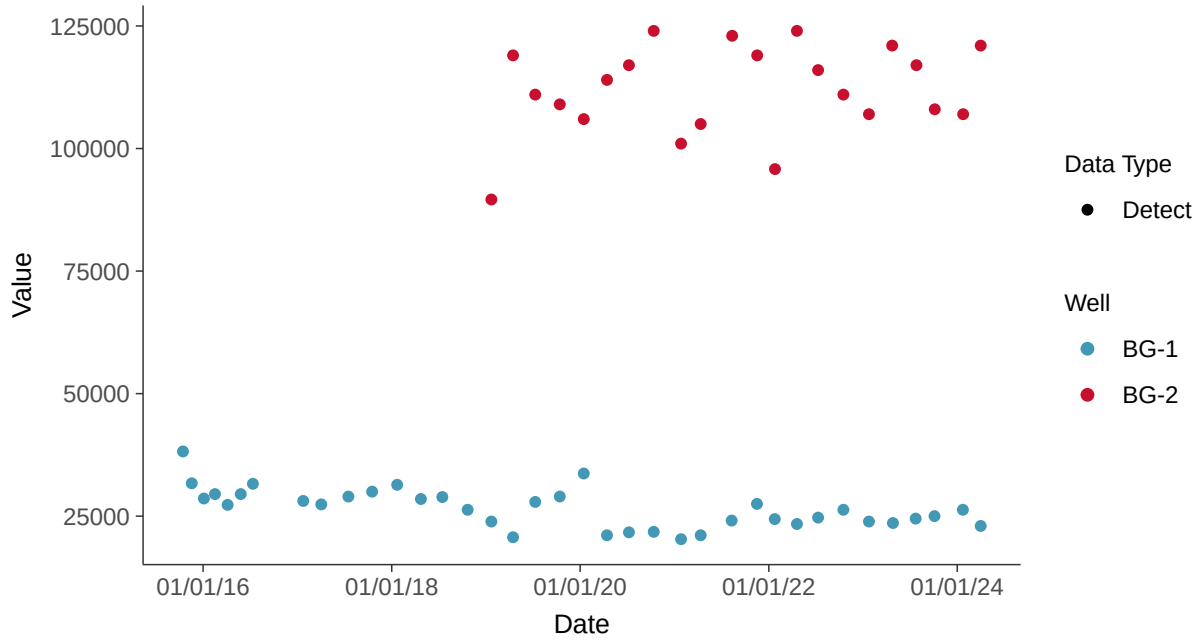
Scatter Plot

Calcium, BG-1 & BG-2 (ug/L)



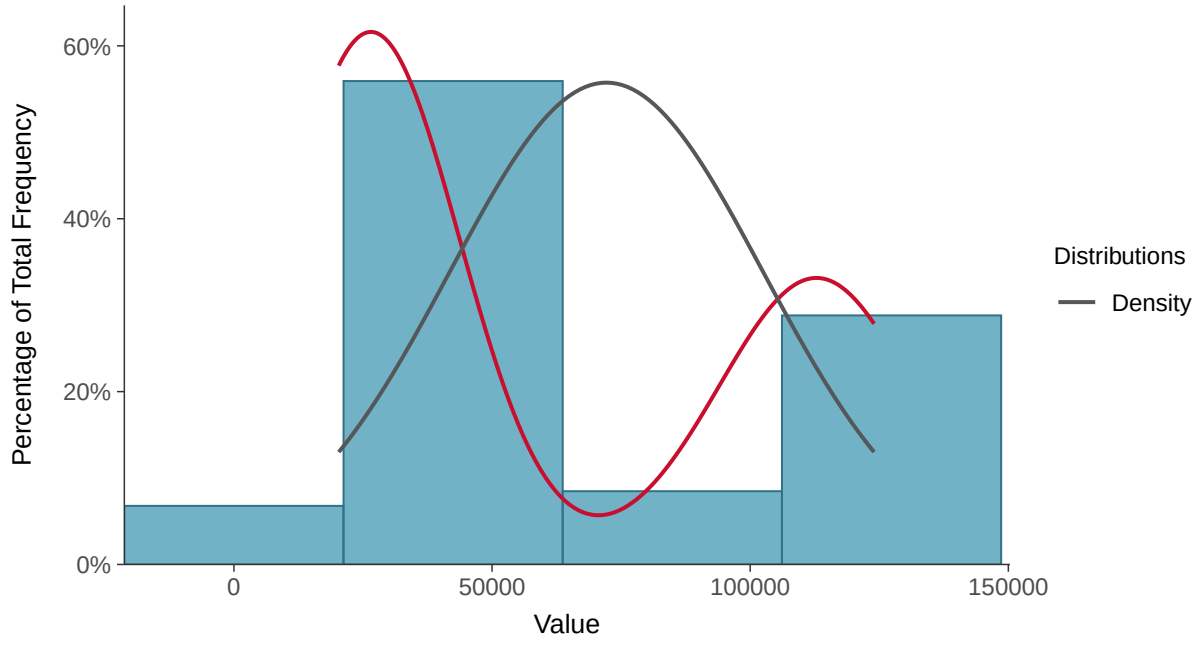
Scatter Plot by Well

Calcium, BG-1 & BG-2 (ug/L)



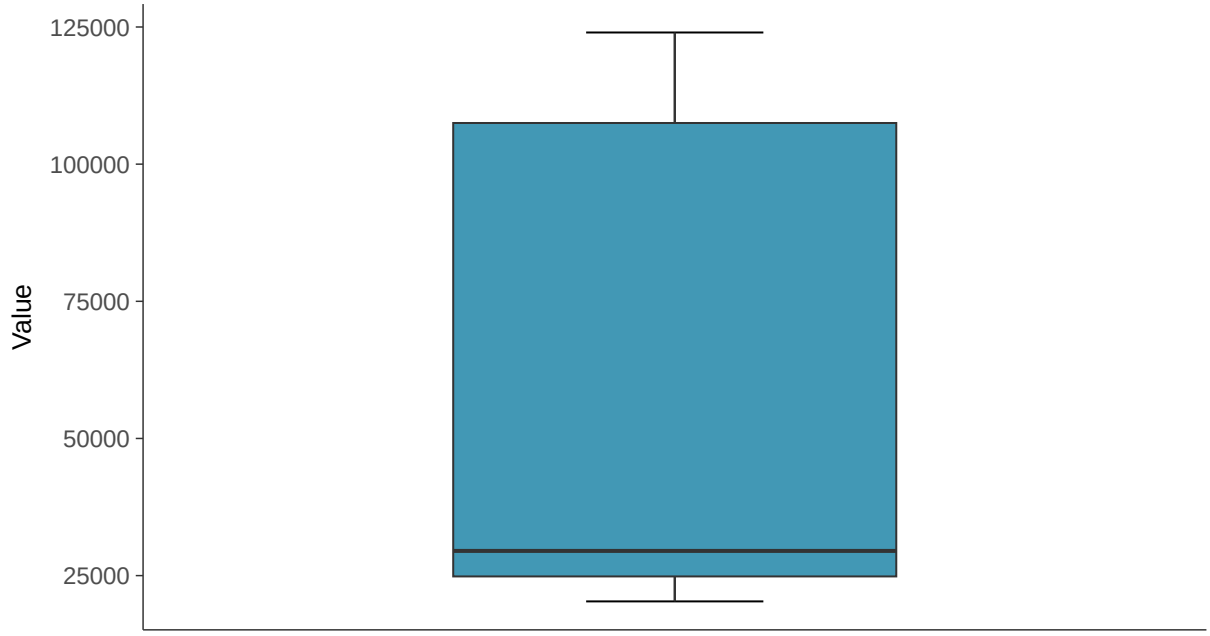
Histogram

Calcium, BG-1 & BG-2 (ug/L)



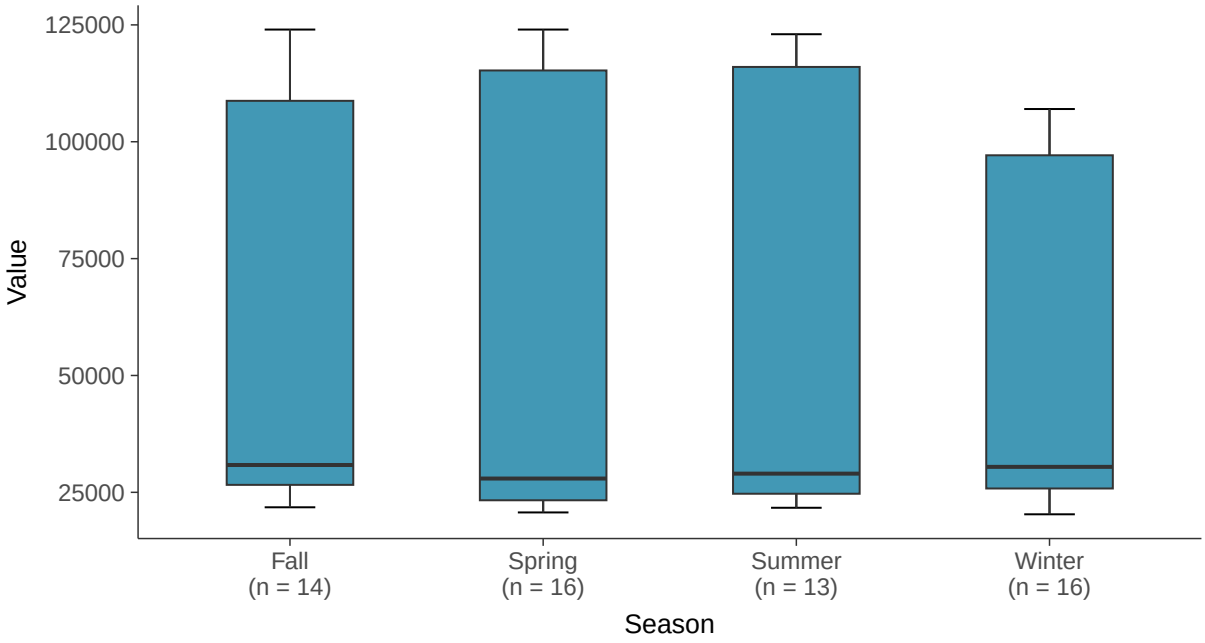
Boxplot

Calcium, BG-1 & BG-2 (ug/L)



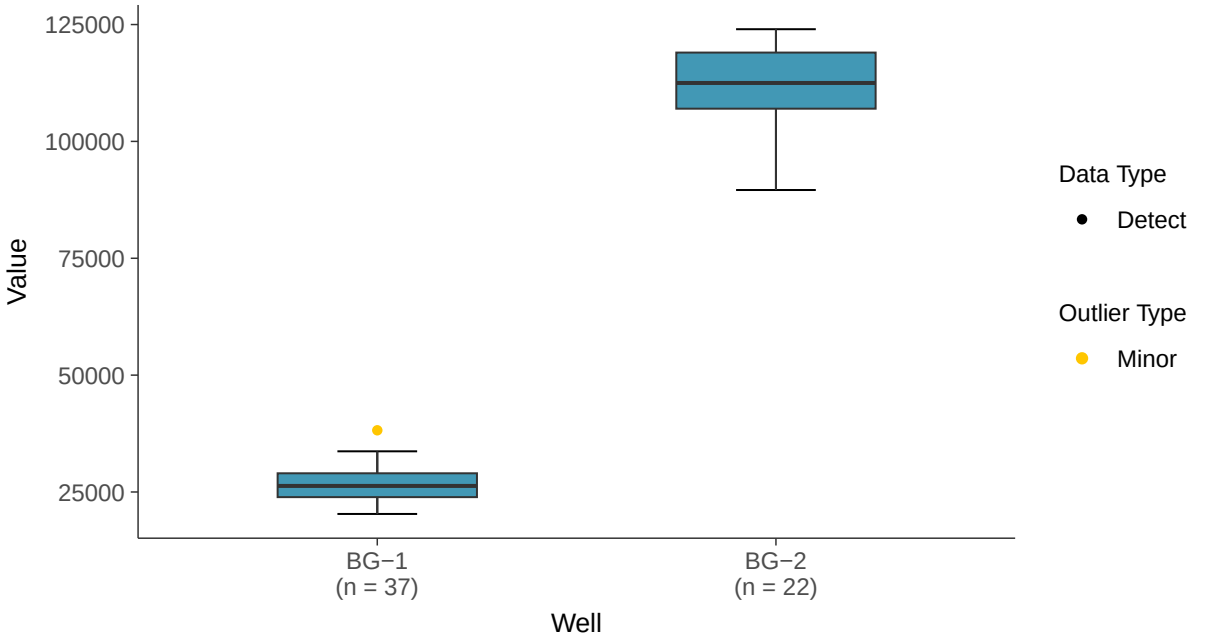
Boxplot by Season

Calcium, BG-1 & BG-2 (ug/L)



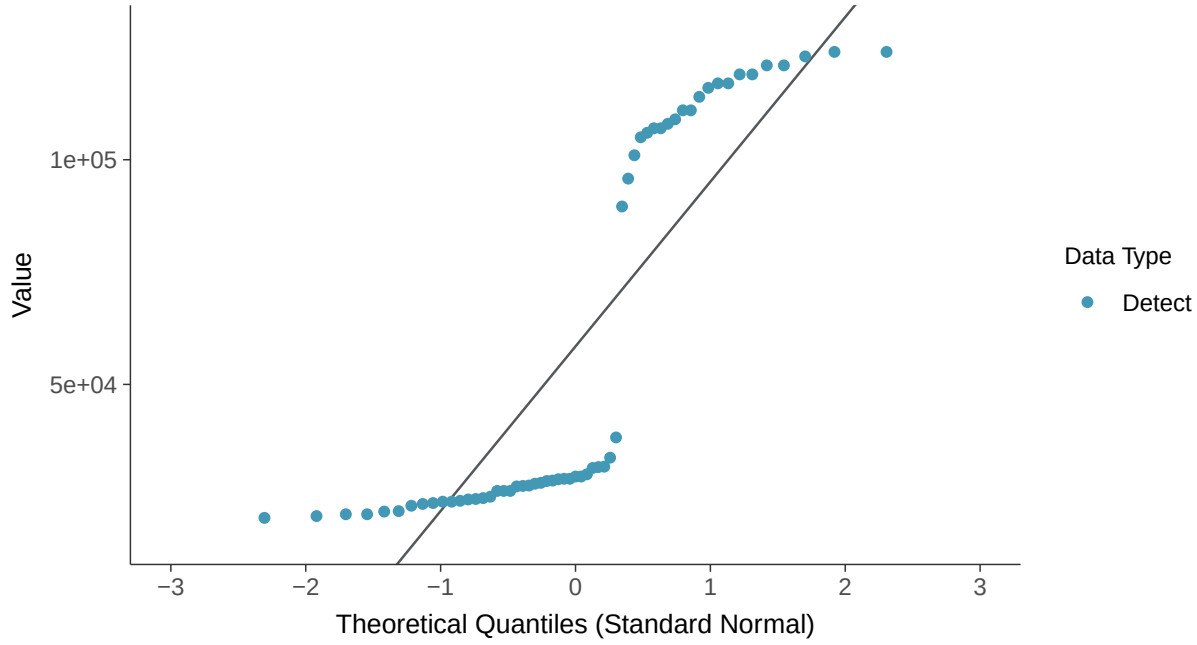
Boxplot by Well

Calcium, BG-1 & BG-2 (ug/L)



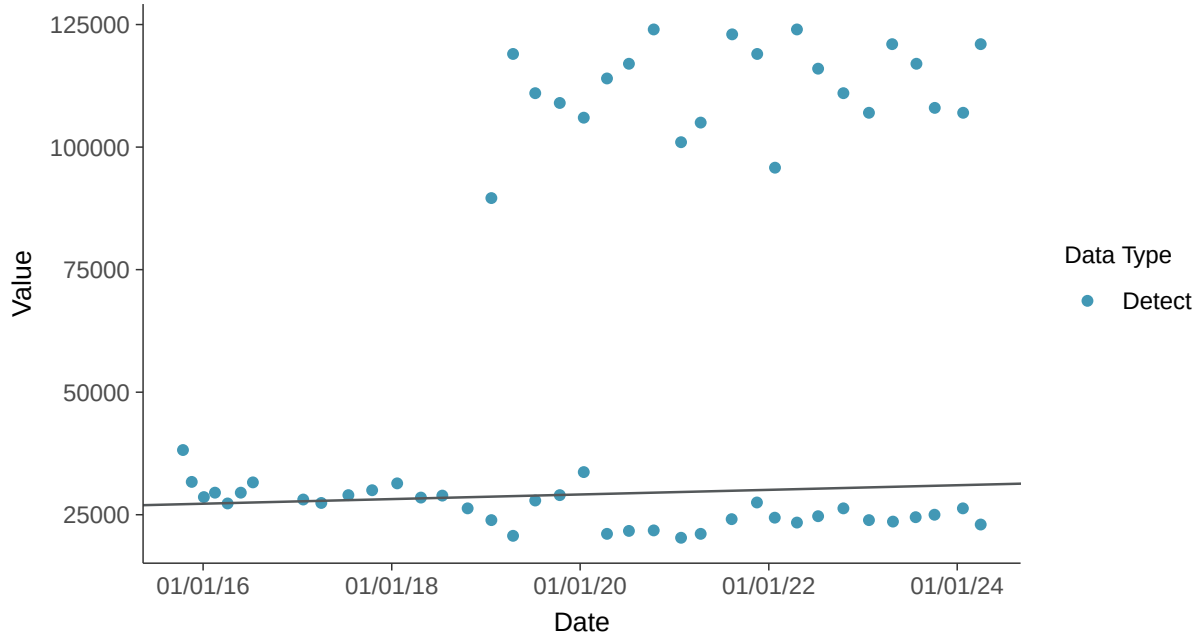
Normal Q-Q plot

Calcium, BG-1 & BG-2 (ug/L)



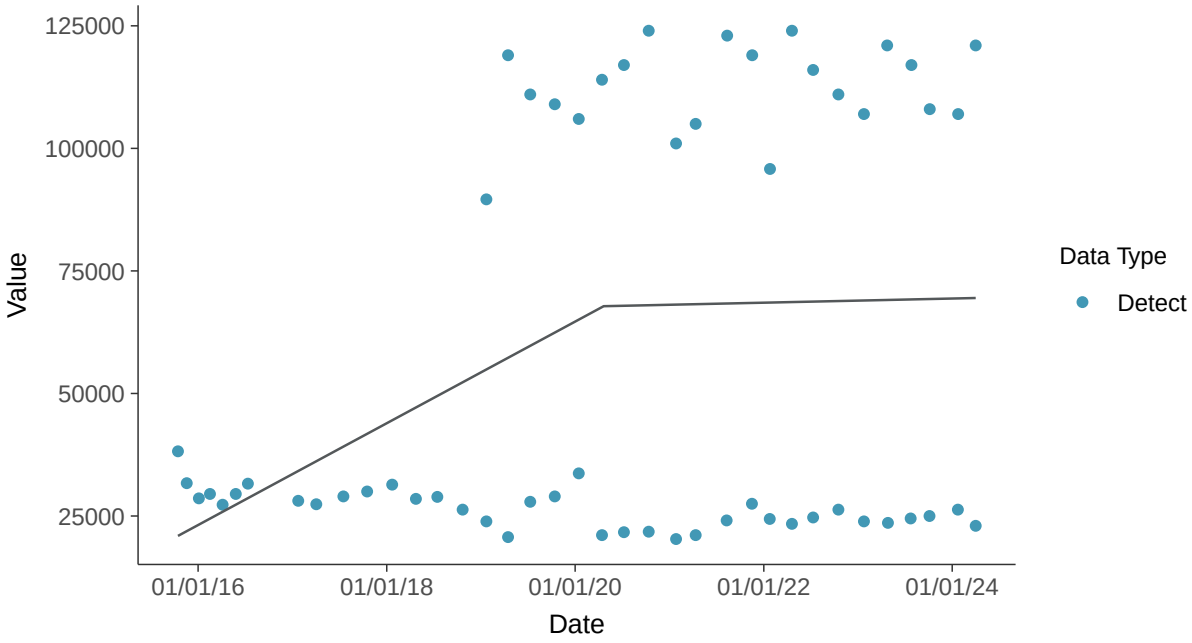
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, BG-1 & BG-2 (ug/L)

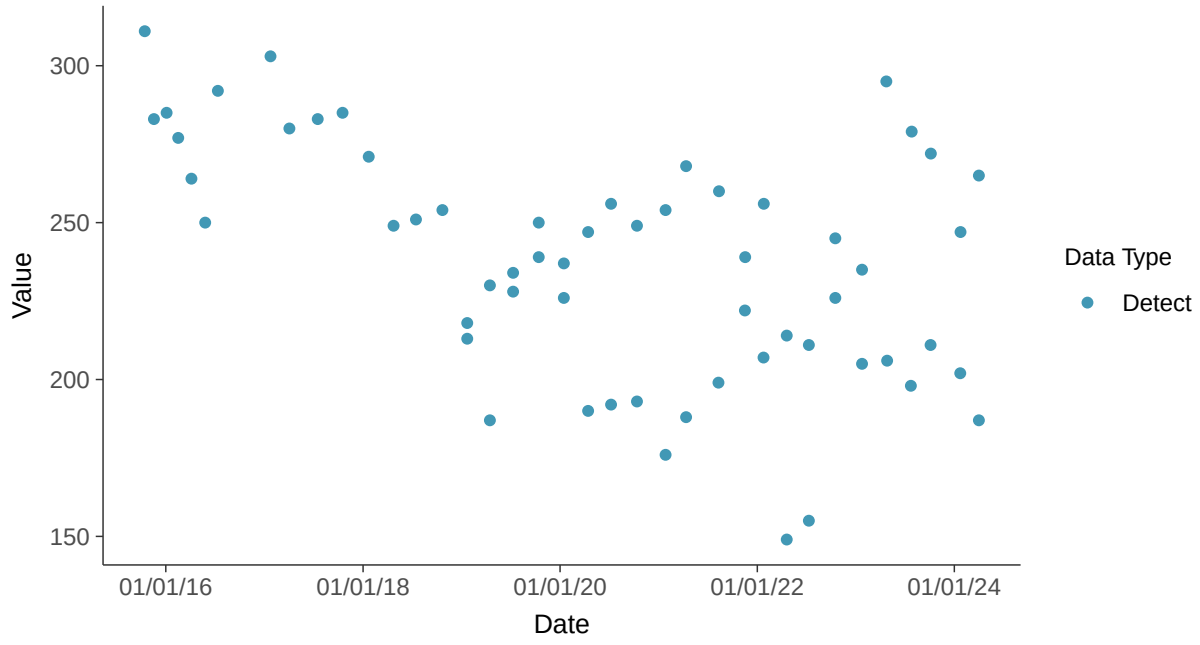


App. III: Chloride, BG-1 & BG-2

ID: 2_108

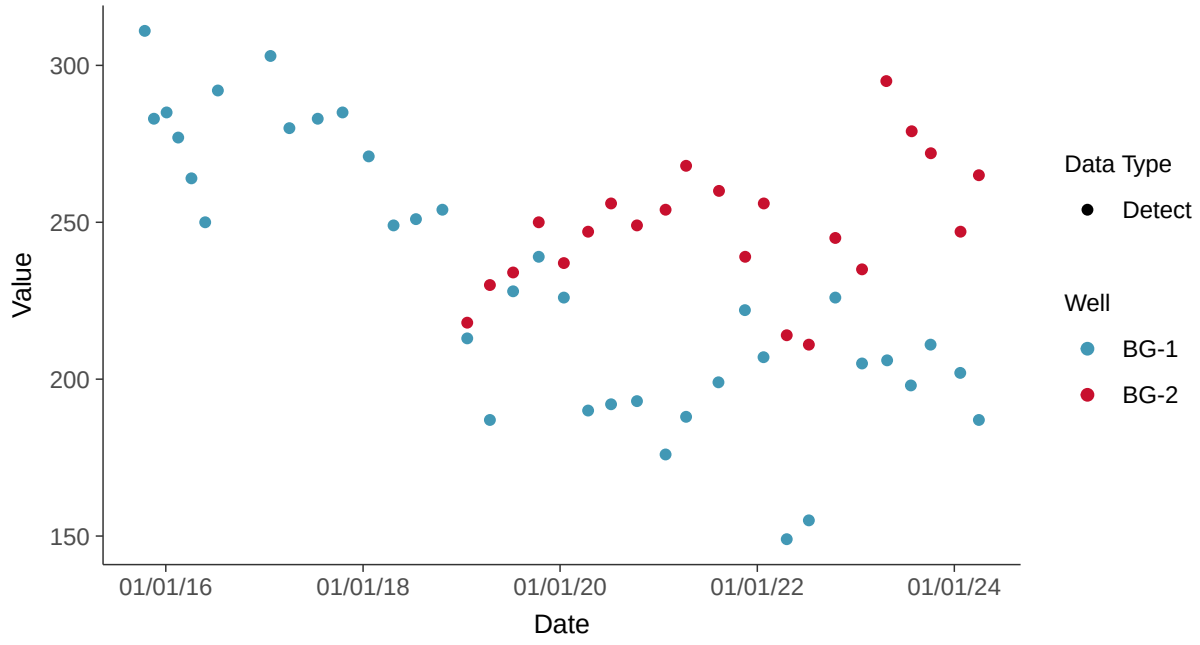
Scatter Plot

Chloride, BG-1 & BG-2 (mg/L)



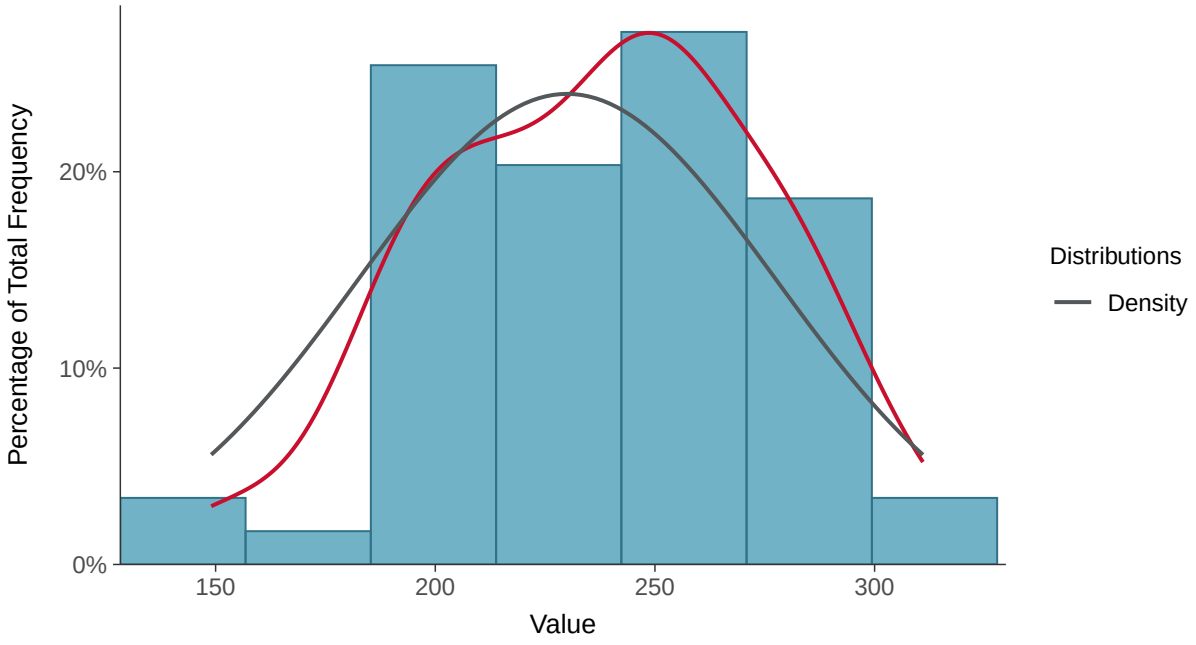
Scatter Plot by Well

Chloride, BG-1 & BG-2 (mg/L)



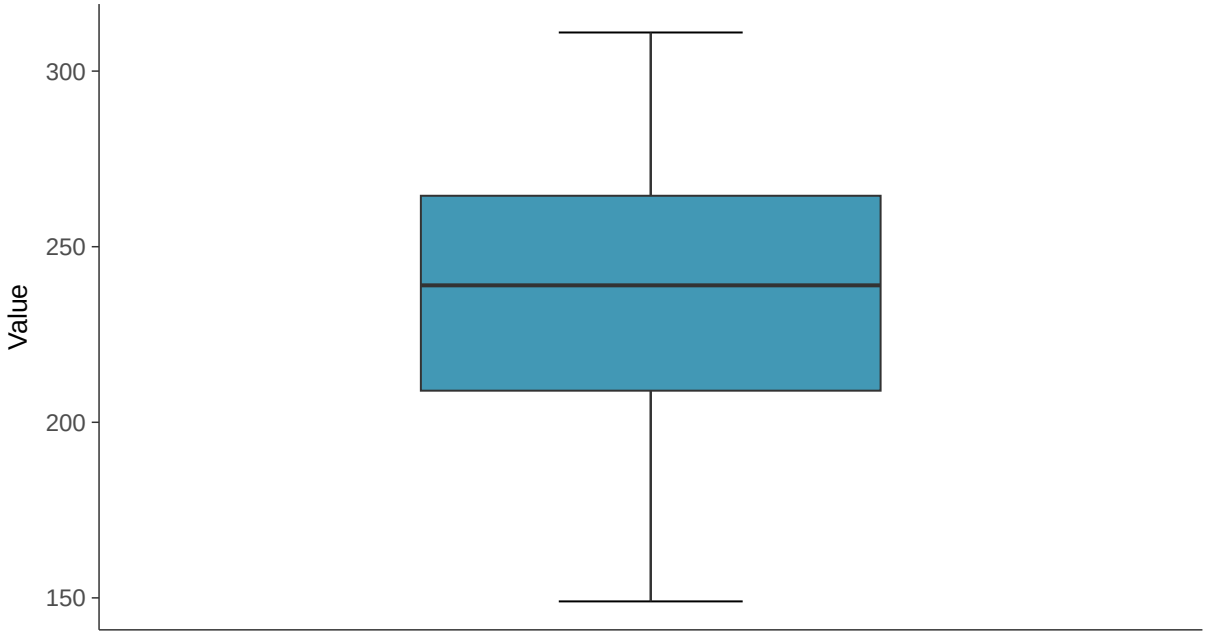
Histogram

Chloride, BG-1 & BG-2 (mg/L)



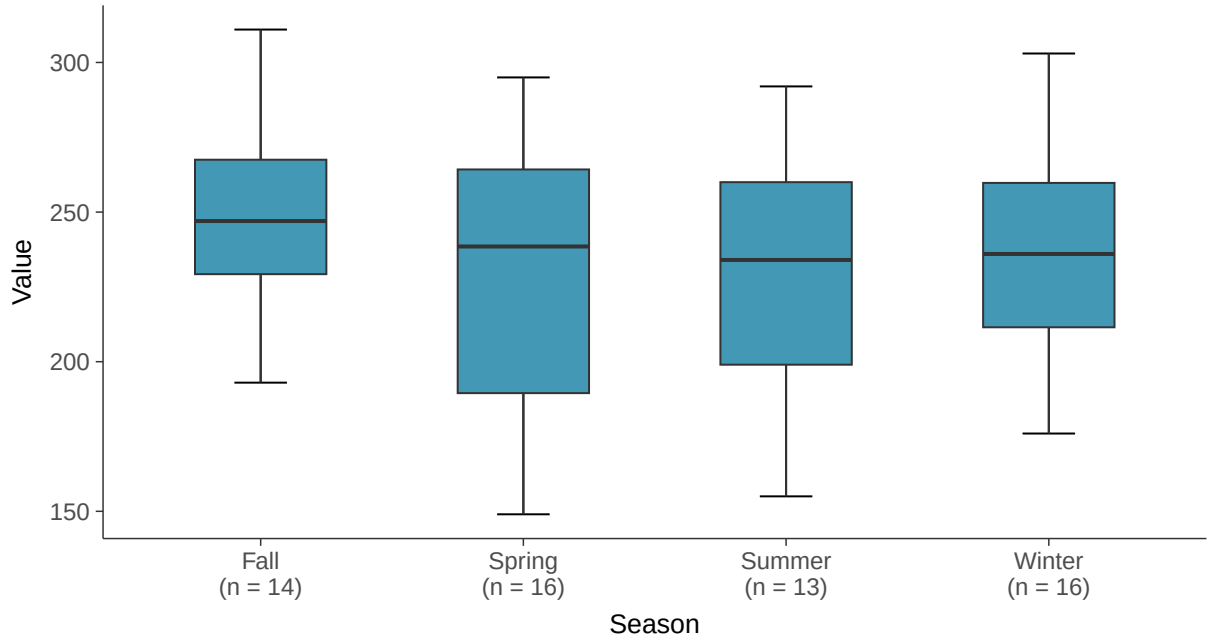
Boxplot

Chloride, BG-1 & BG-2 (mg/L)



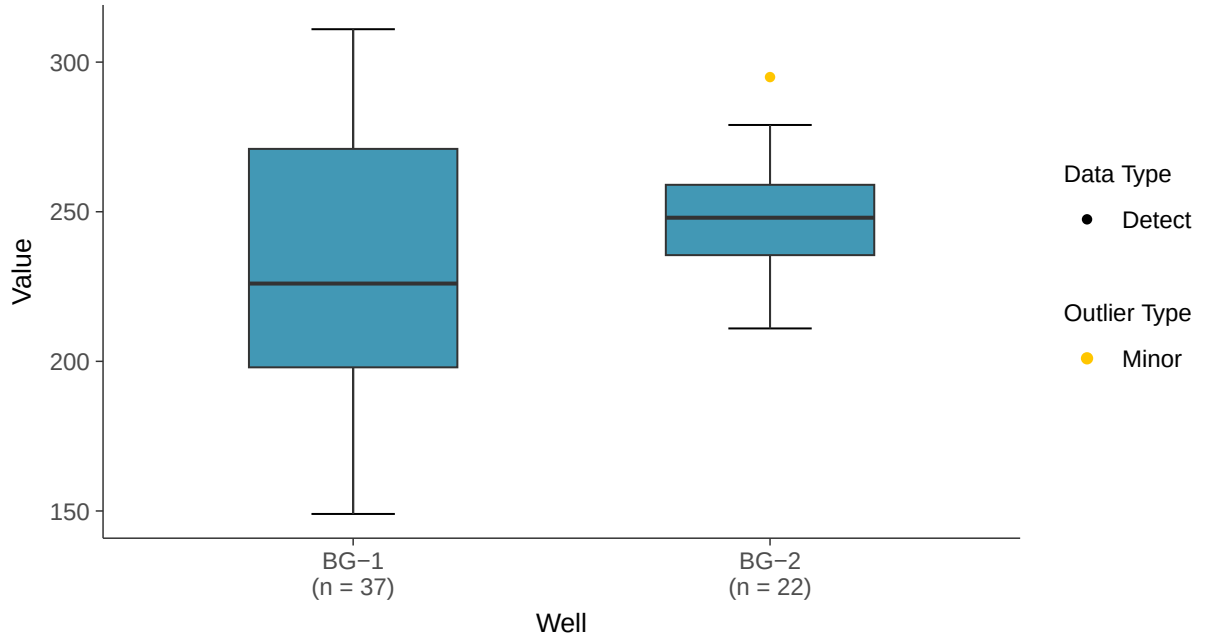
Boxplot by Season

Chloride, BG-1 & BG-2 (mg/L)



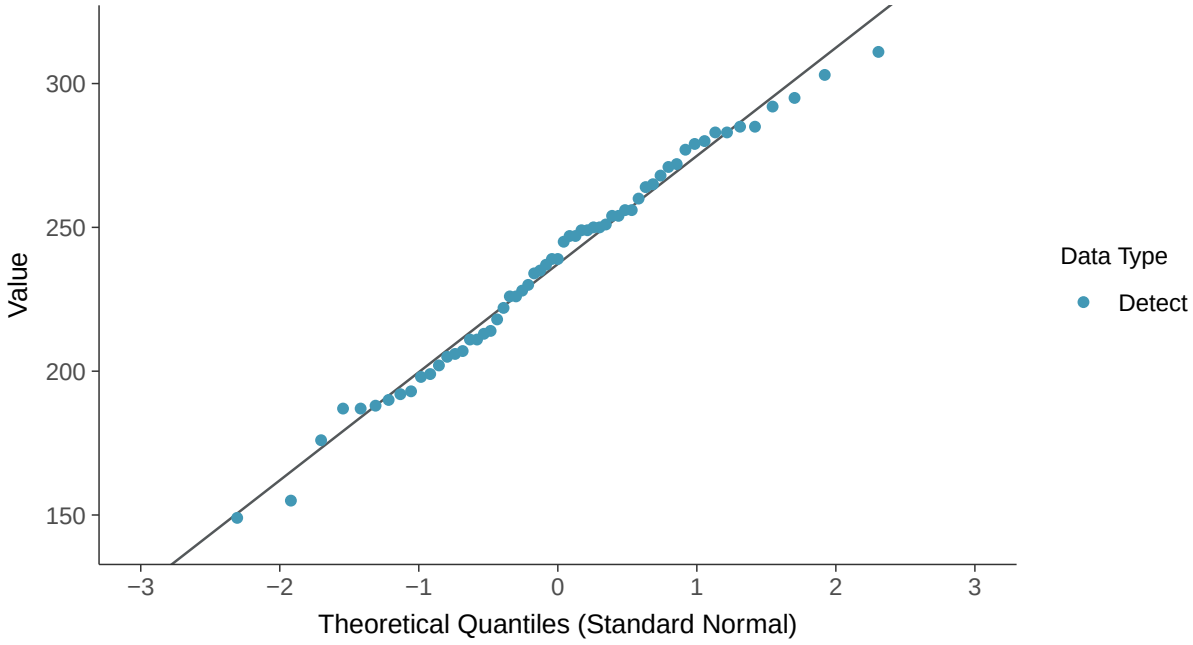
Boxplot by Well

Chloride, BG-1 & BG-2 (mg/L)



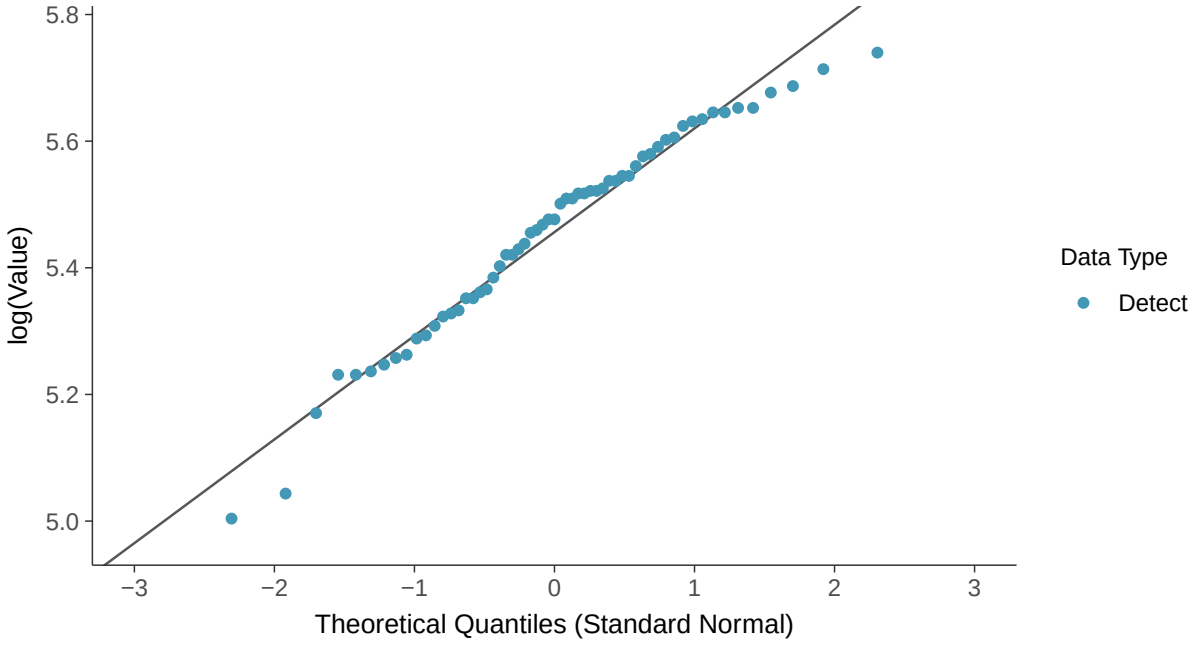
Normal Q-Q plot

Chloride, BG-1 & BG-2 (mg/L)



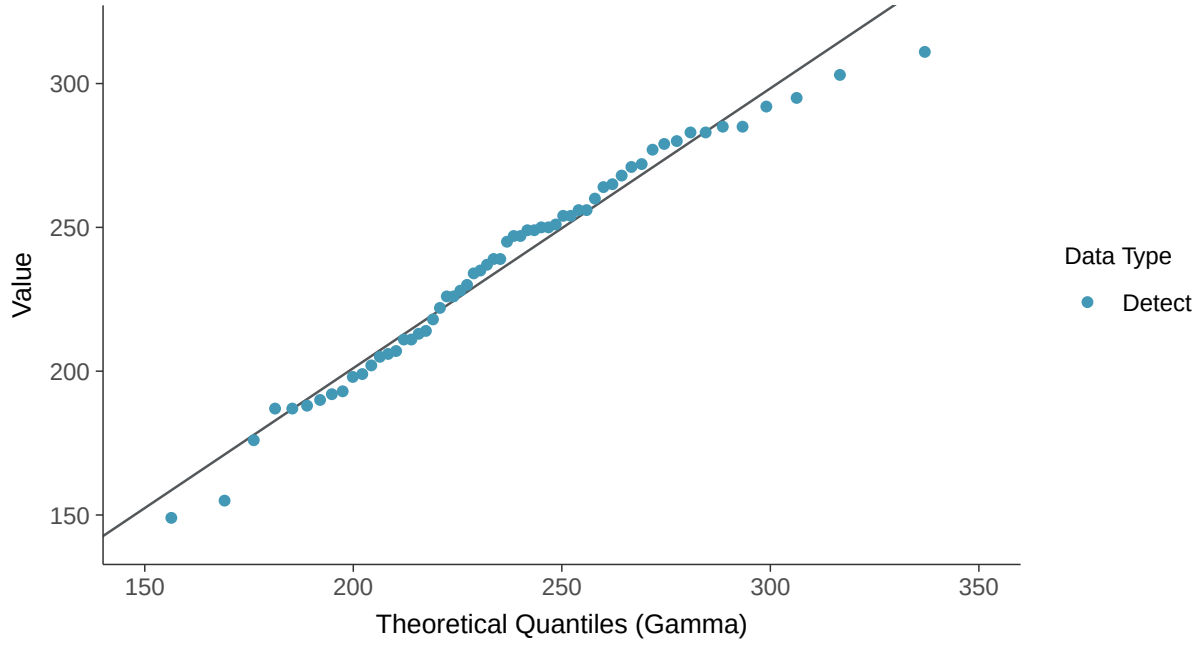
Lognormal Q-Q plot

Chloride, BG-1 & BG-2 (mg/L)



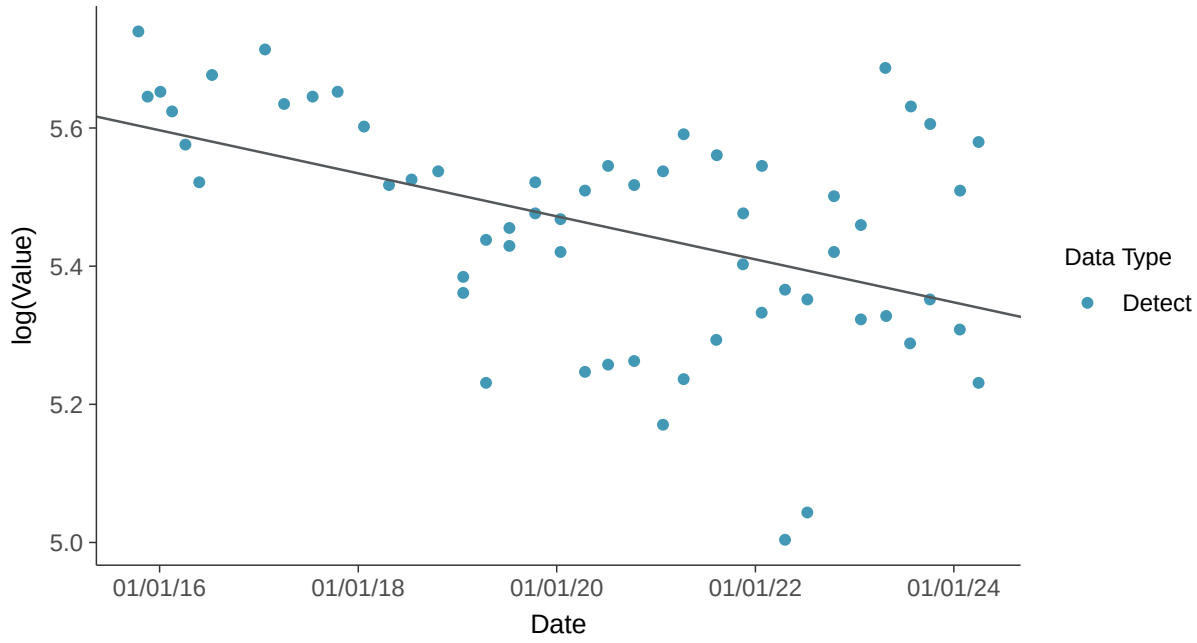
Gamma Q-Q plot

Chloride, BG-1 & BG-2 (mg/L)



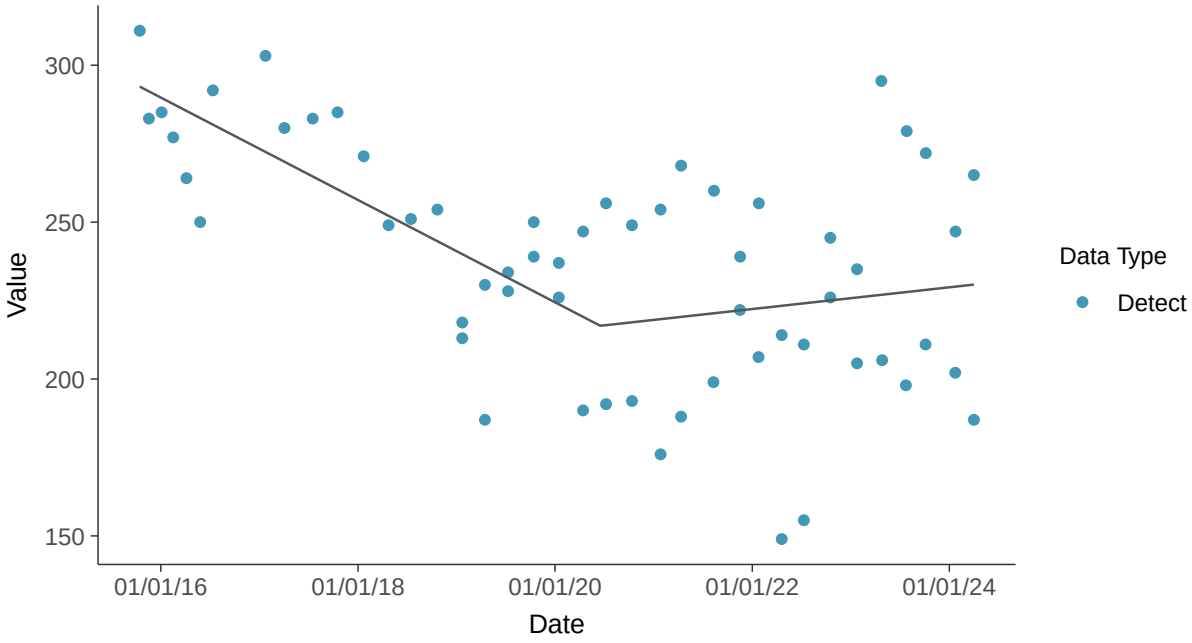
Trend Regression: Lognormal MLE

Chloride, BG-1 & BG-2 (mg/L)



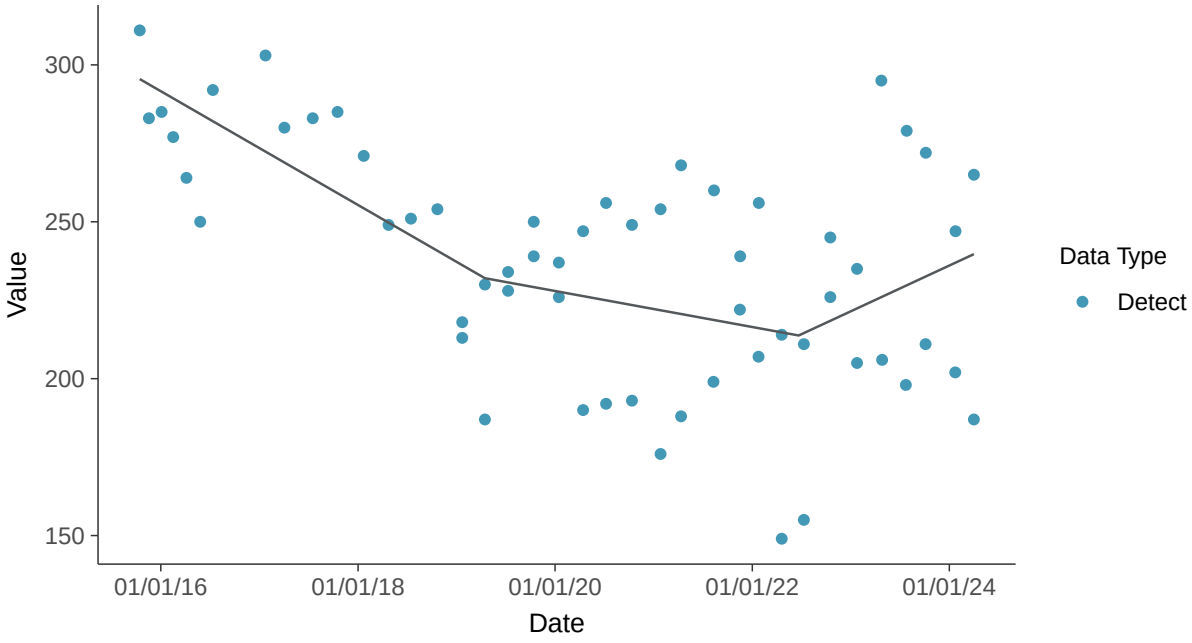
Trend Regression: Piecewise Linear-Linear

Chloride, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride, BG-1 & BG-2 (mg/L)

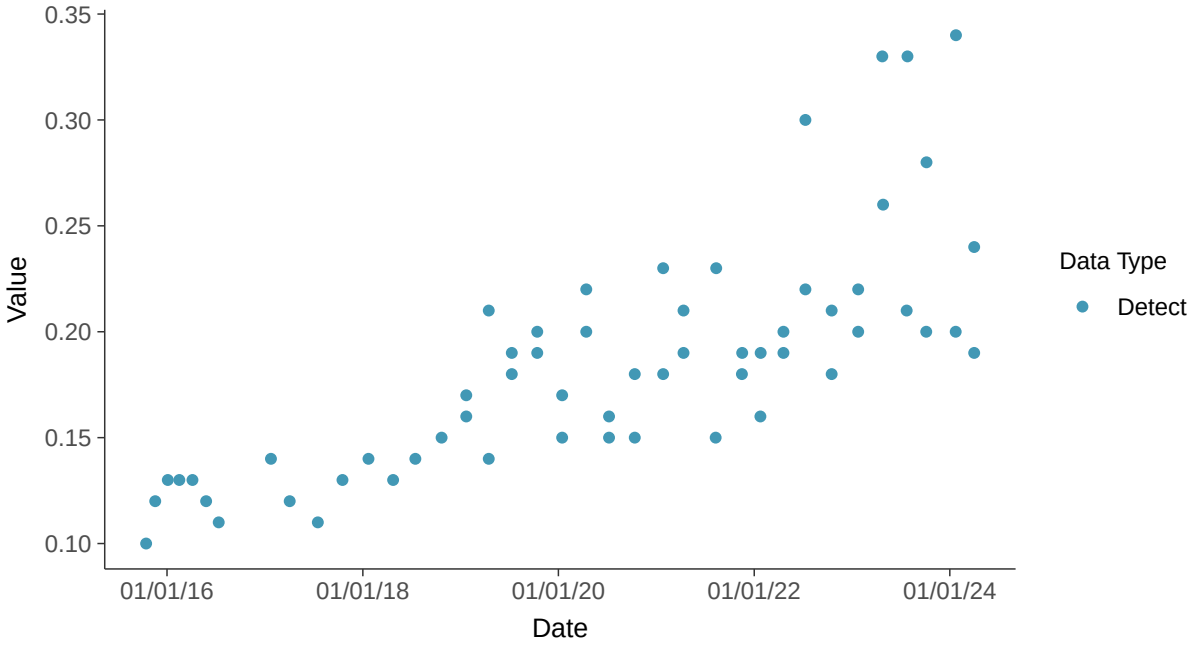


App. III: Fluoride, BG-1 & BG-2

ID: 2_112

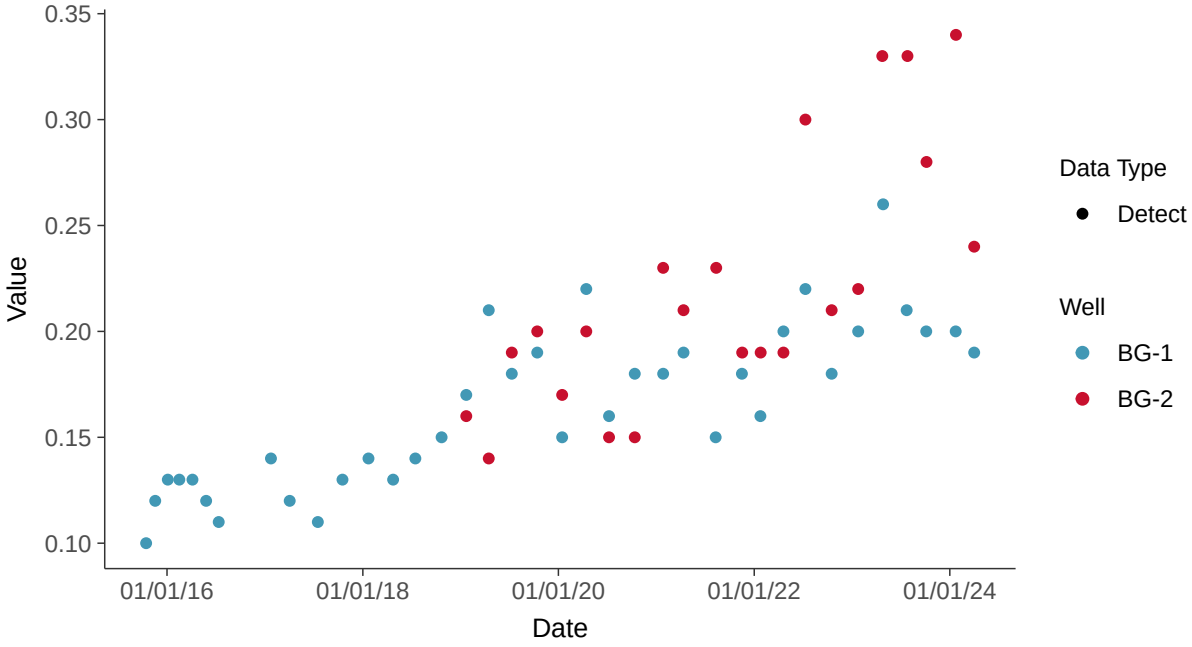
Scatter Plot

Fluoride, BG-1 & BG-2 (mg/L)



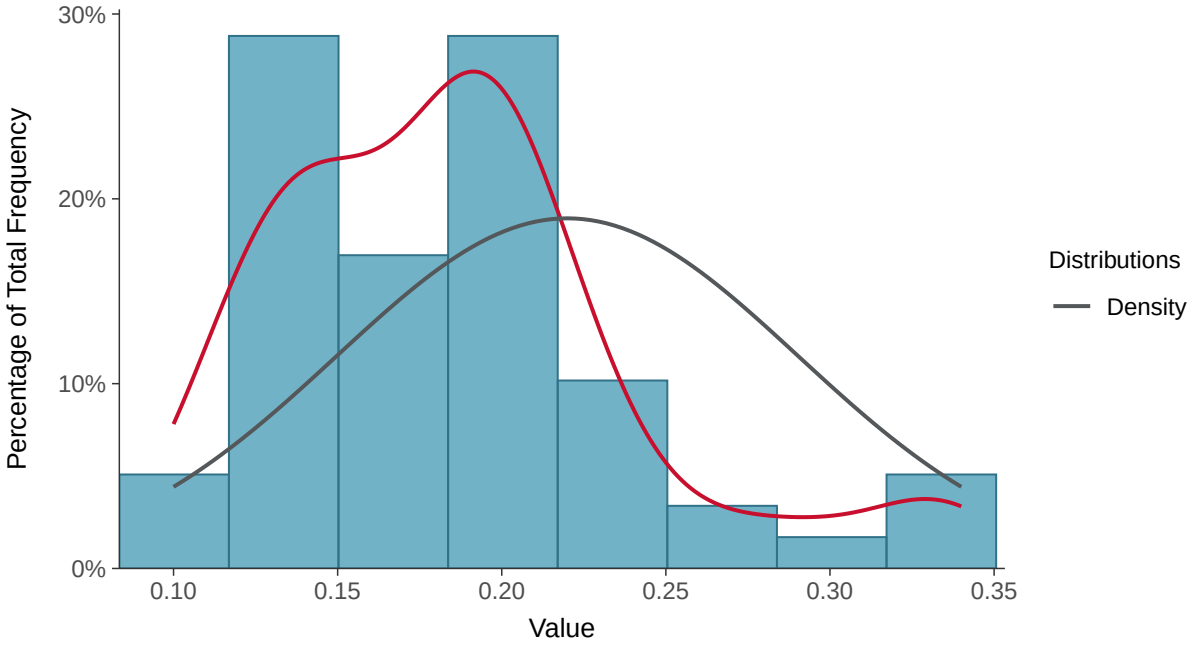
Scatter Plot by Well

Fluoride, BG-1 & BG-2 (mg/L)



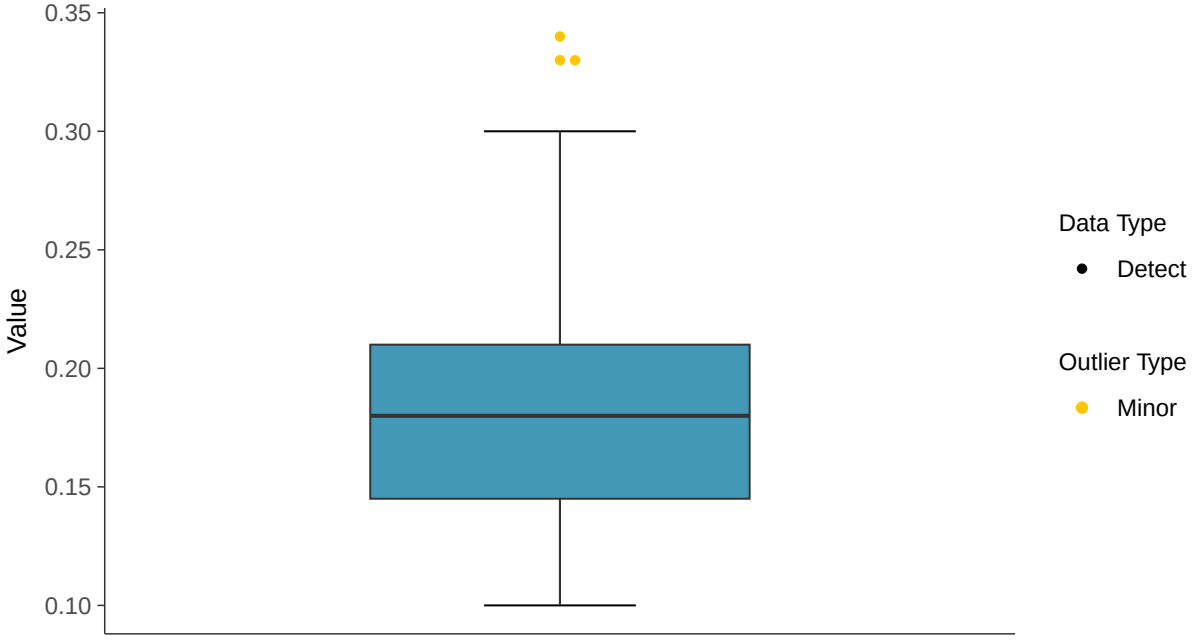
Histogram

Fluoride, BG-1 & BG-2 (mg/L)



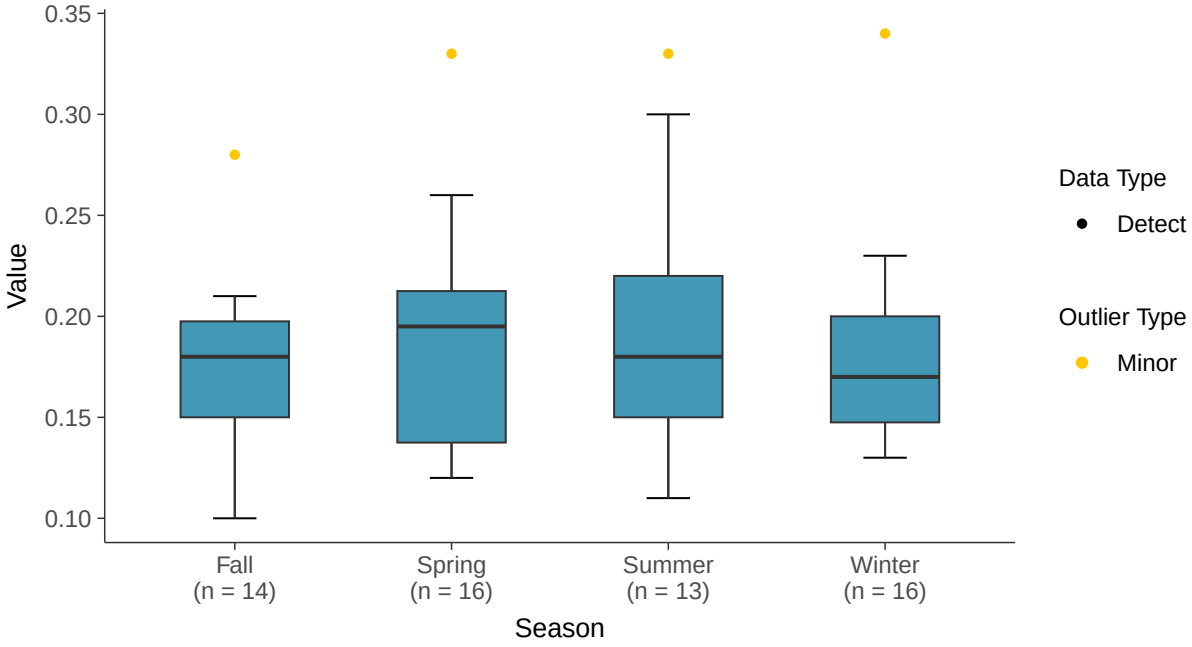
Boxplot

Fluoride, BG-1 & BG-2 (mg/L)



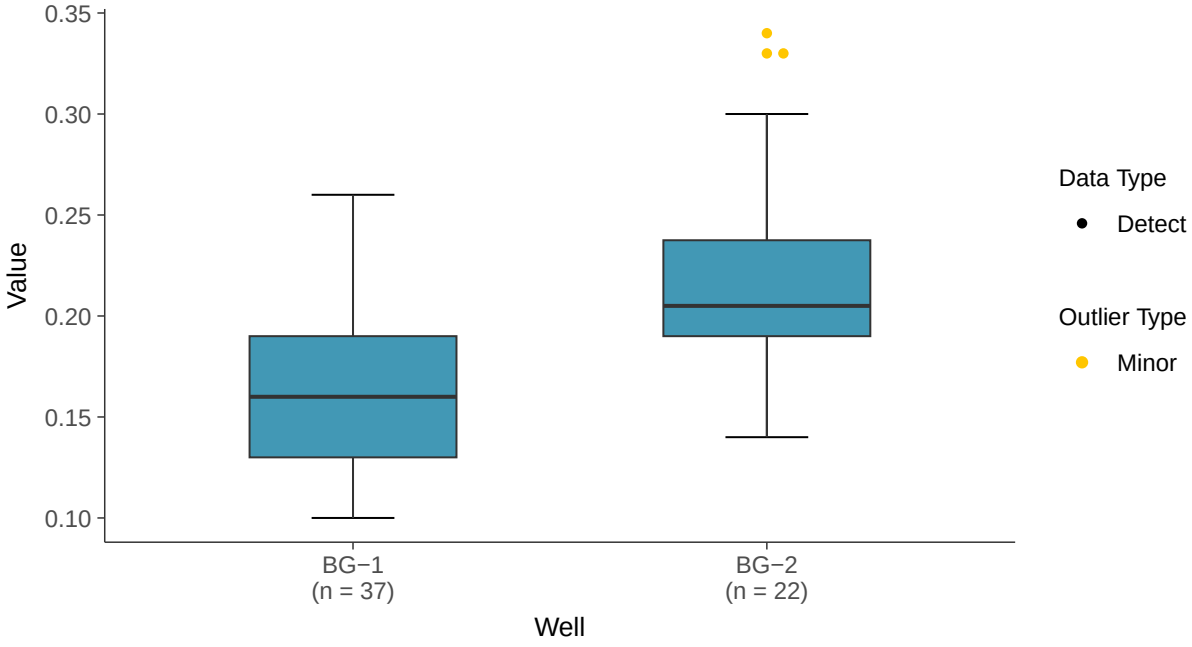
Boxplot by Season

Fluoride, BG-1 & BG-2 (mg/L)



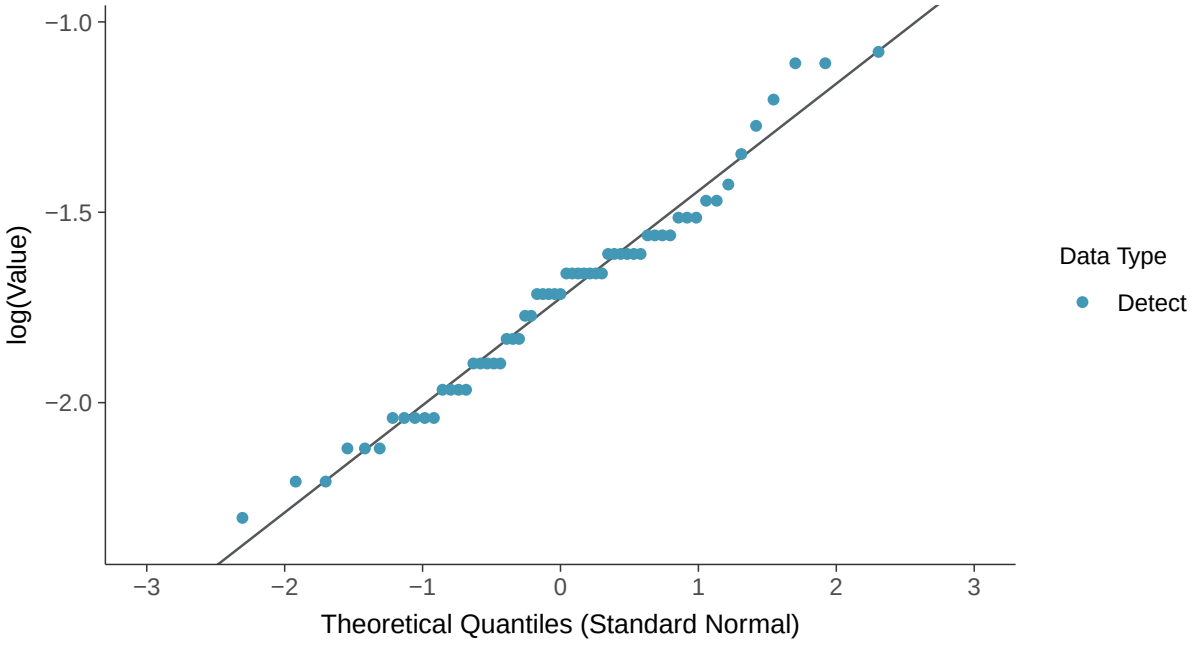
Boxplot by Well

Fluoride, BG-1 & BG-2 (mg/L)



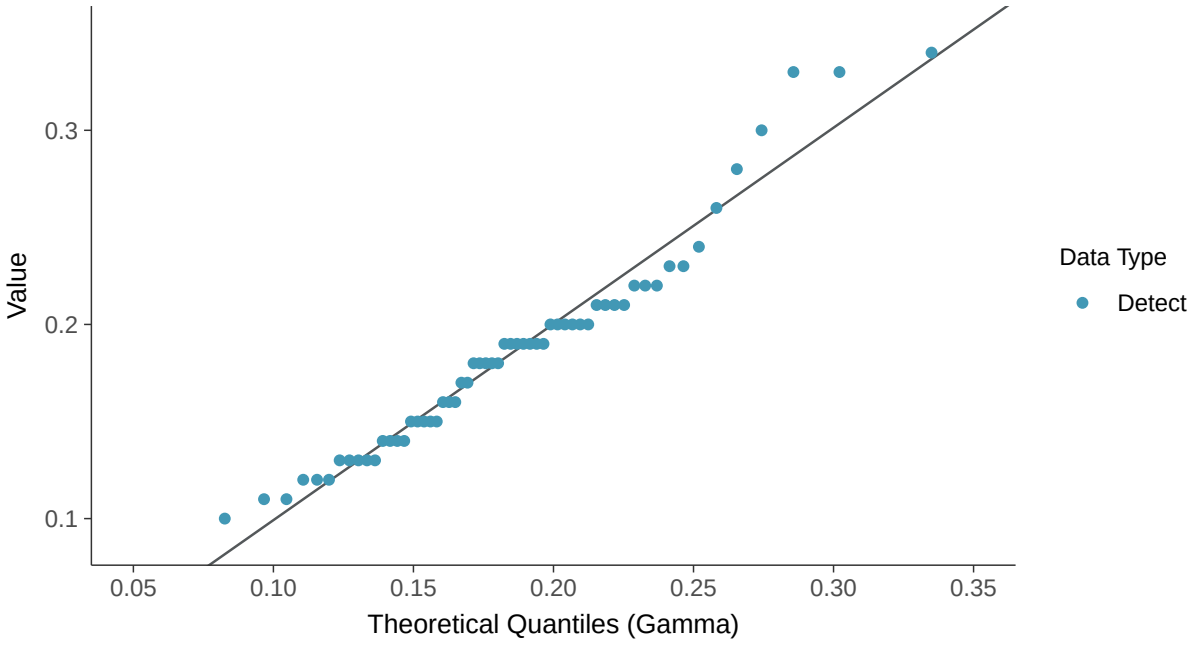
Lognormal Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



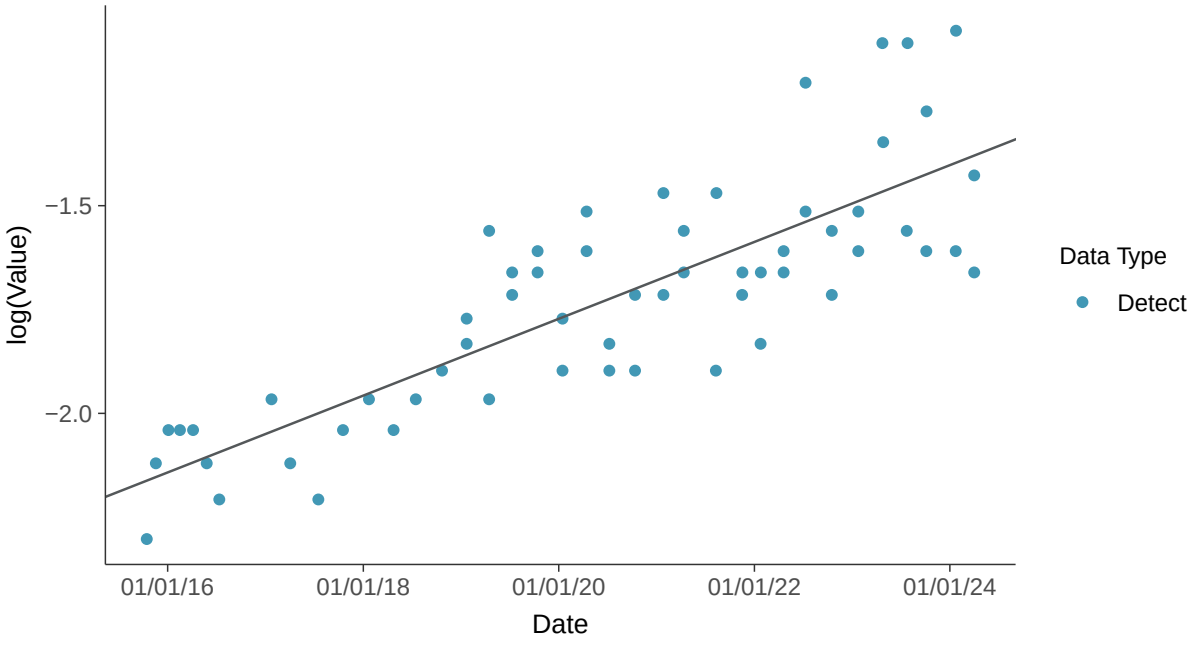
Gamma Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



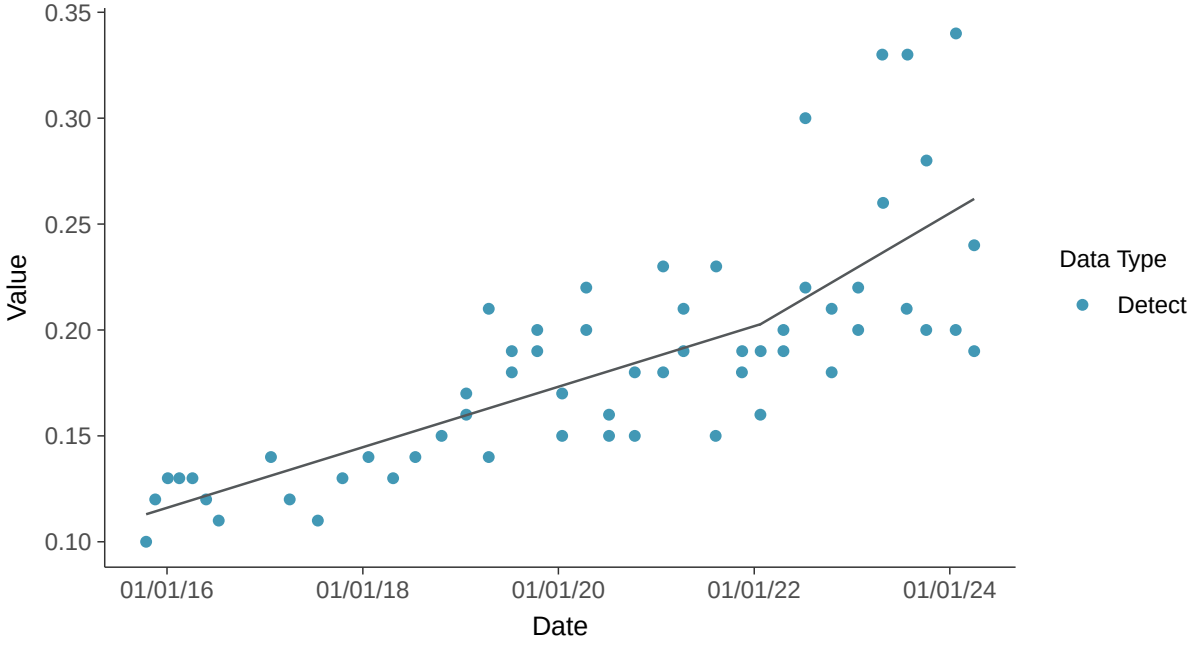
Trend Regression: Lognormal MLE

Fluoride, BG-1 & BG-2 (mg/L)



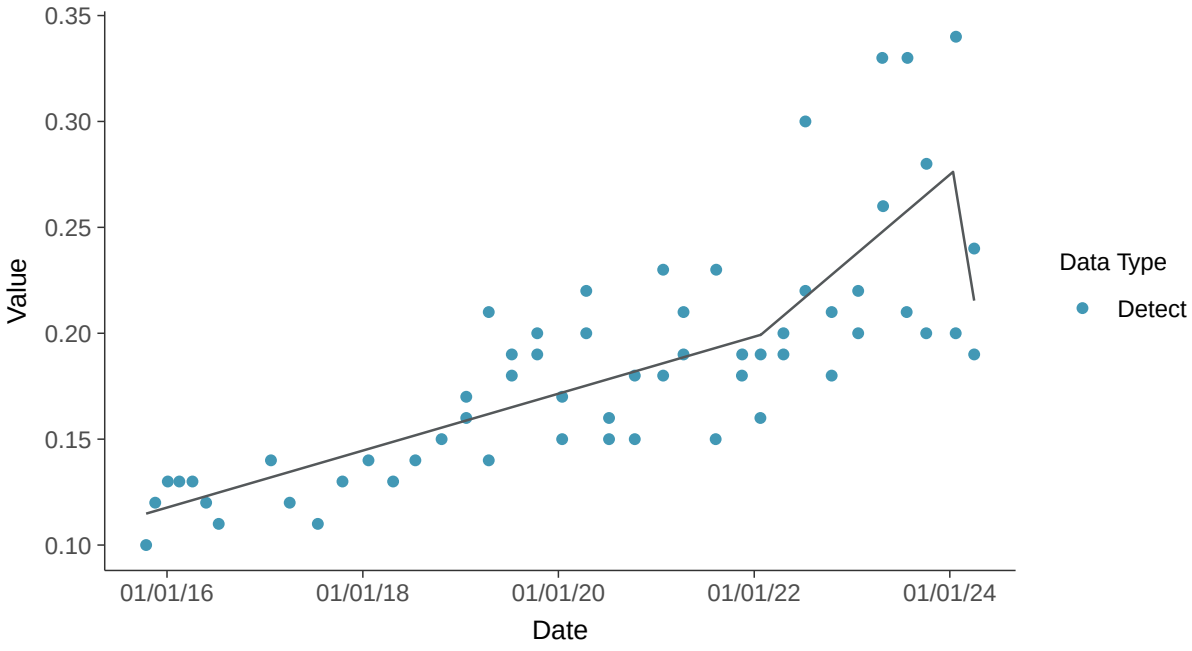
Trend Regression: Piecewise Linear-Linear

Fluoride, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, BG-1 & BG-2 (mg/L)

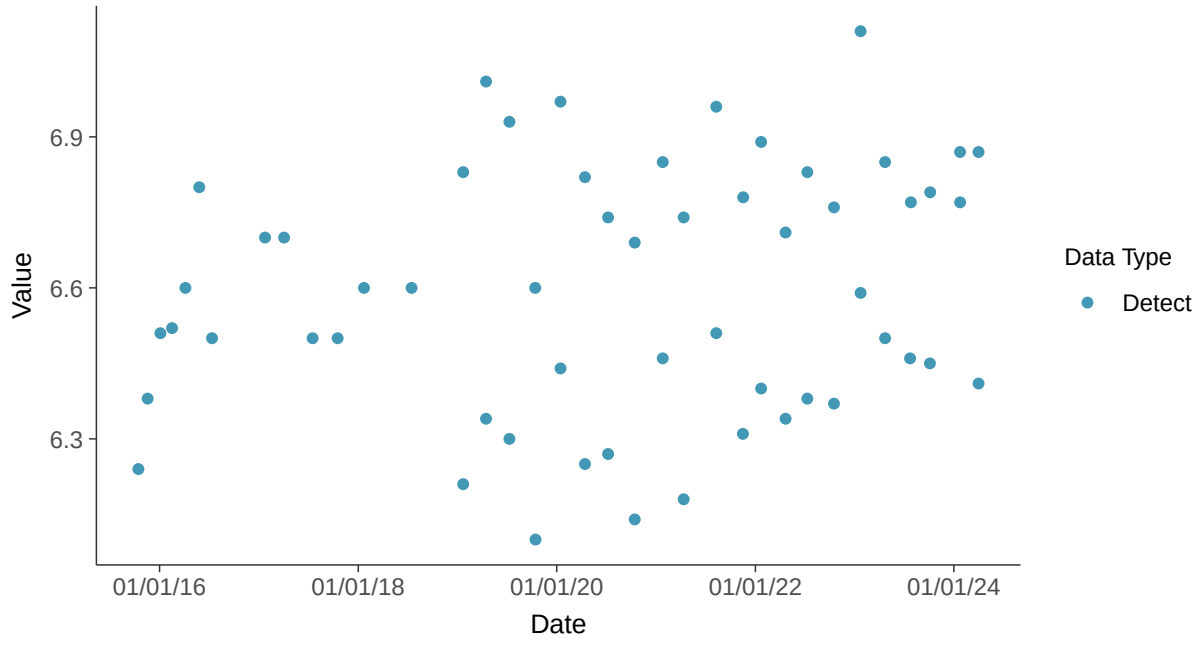


App. III: pH (Field), BG-1 & BG-2

ID: 2_118

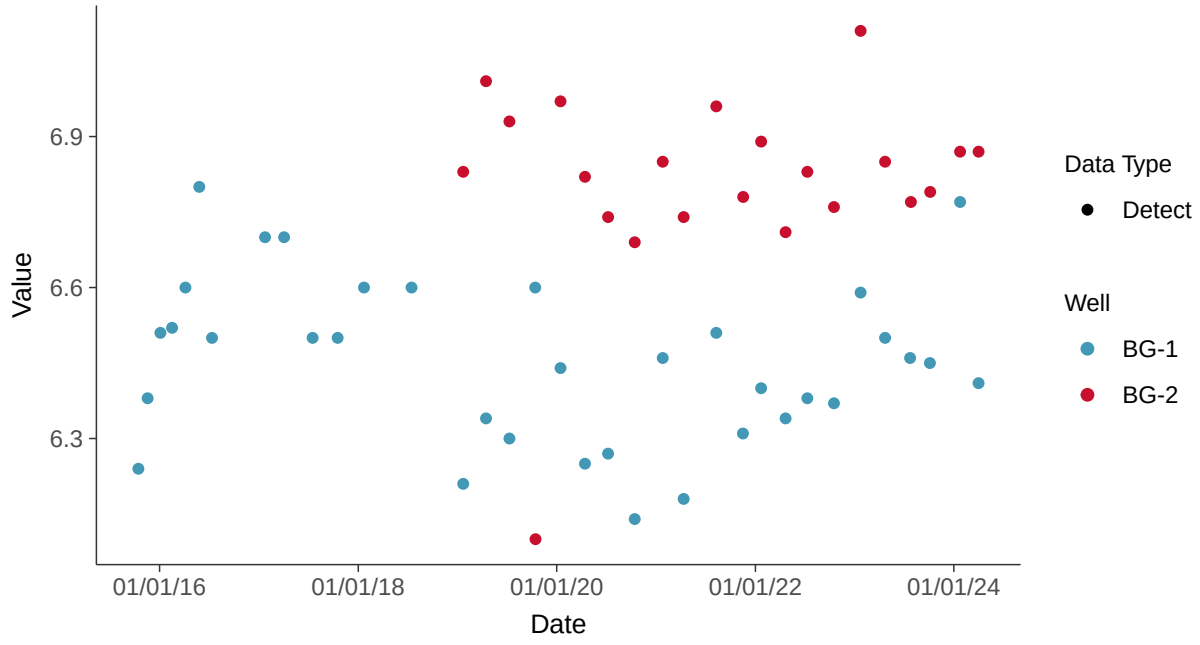
Scatter Plot

pH (Field), BG-1 & BG-2 (S.U.)



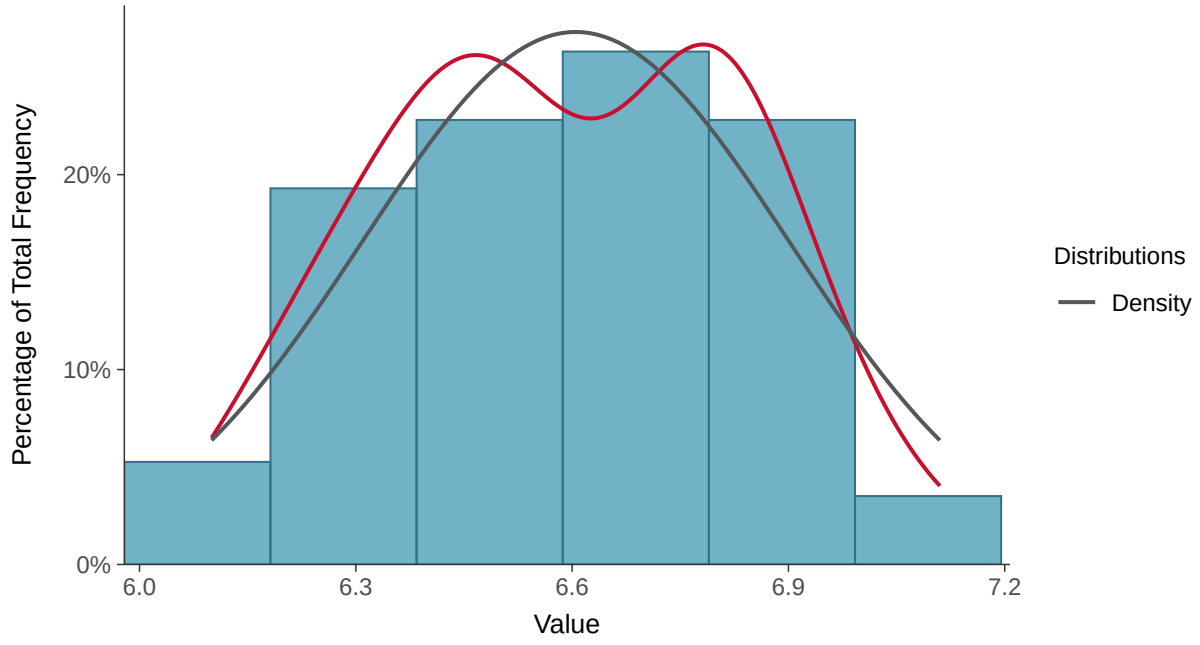
Scatter Plot by Well

pH (Field), BG-1 & BG-2 (S.U.)



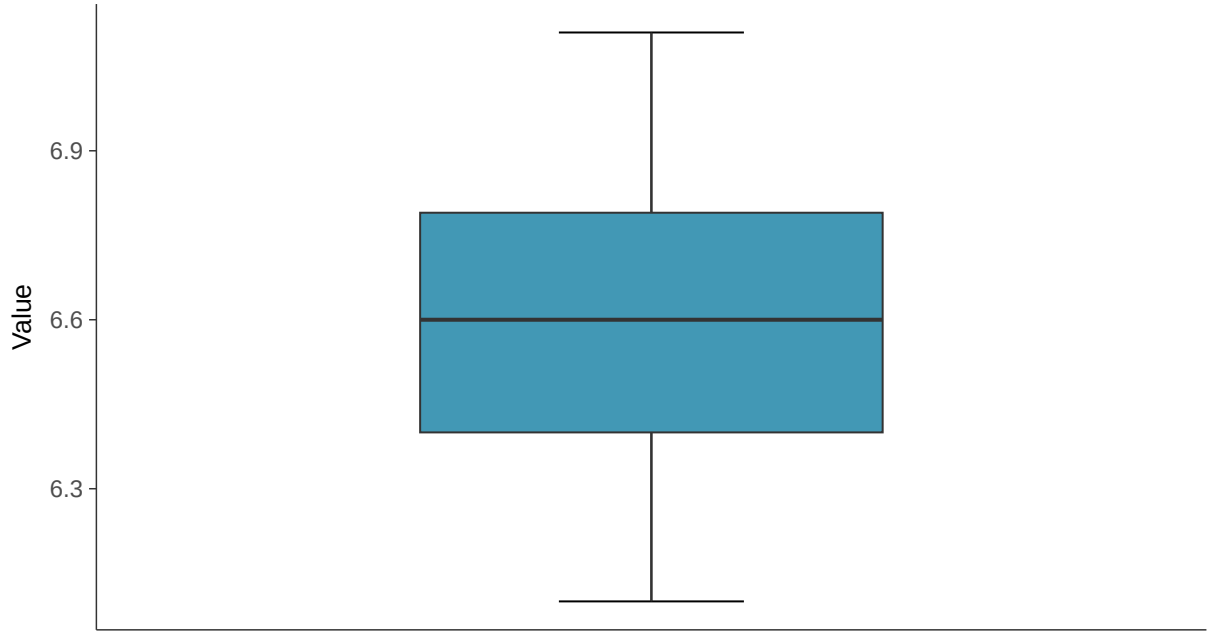
Histogram

pH (Field), BG-1 & BG-2 (S.U.)



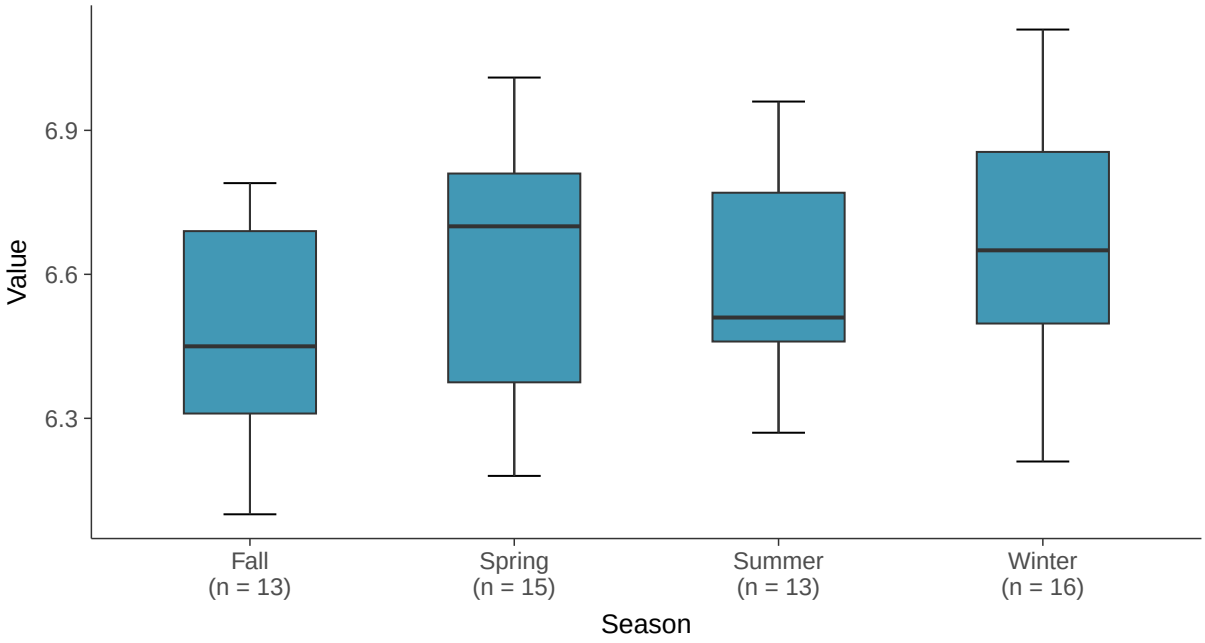
Boxplot

pH (Field), BG-1 & BG-2 (S.U.)



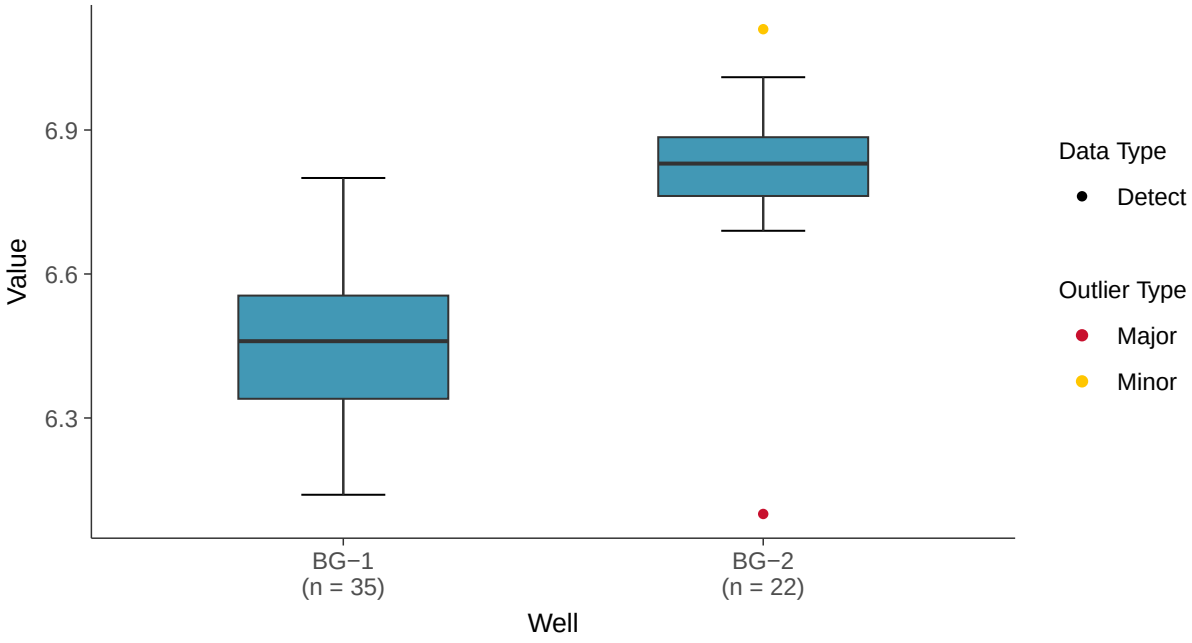
Boxplot by Season

pH (Field), BG-1 & BG-2 (S.U.)



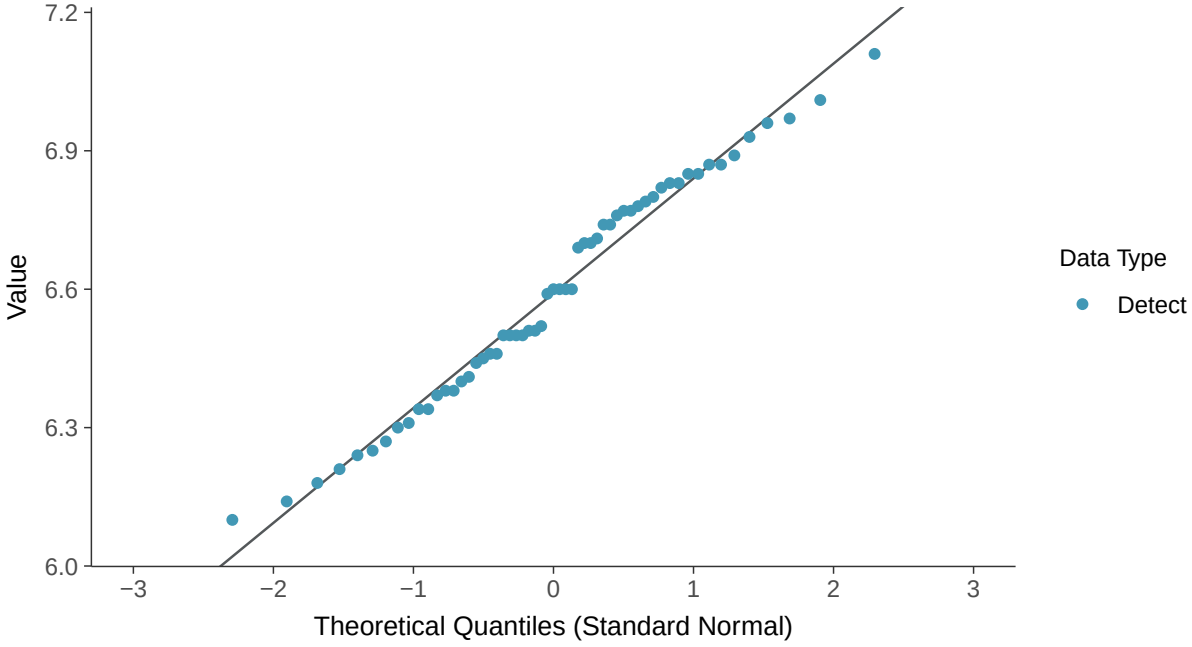
Boxplot by Well

pH (Field), BG-1 & BG-2 (S.U.)



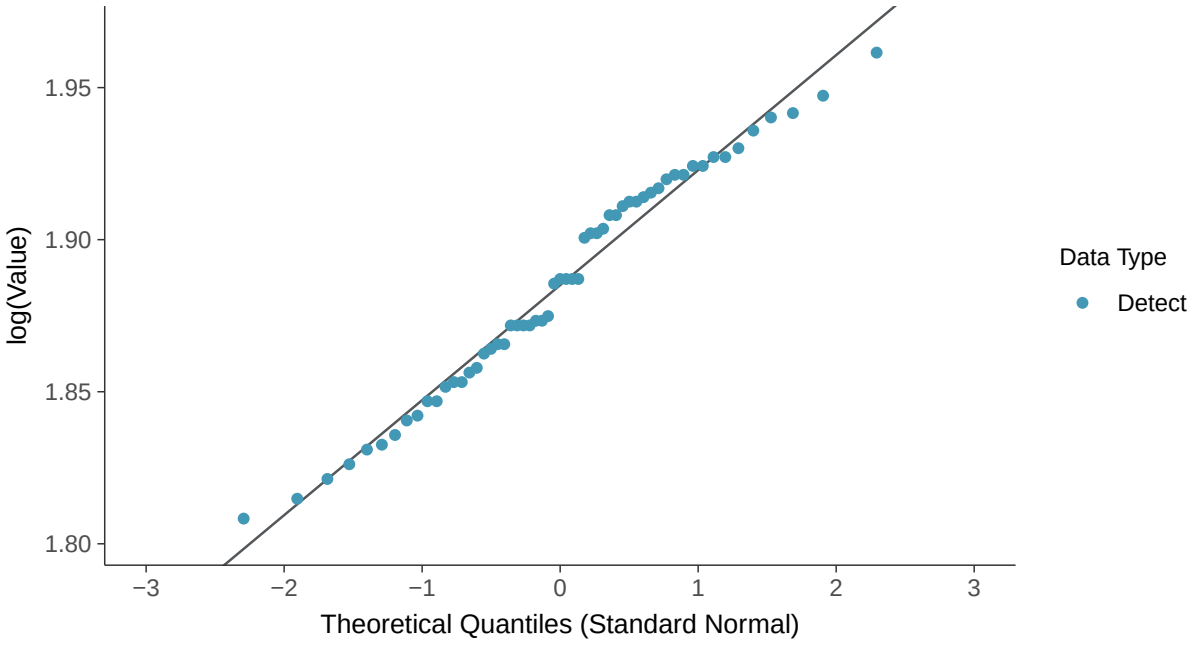
Normal Q-Q plot

pH (Field), BG-1 & BG-2 (S.U.)



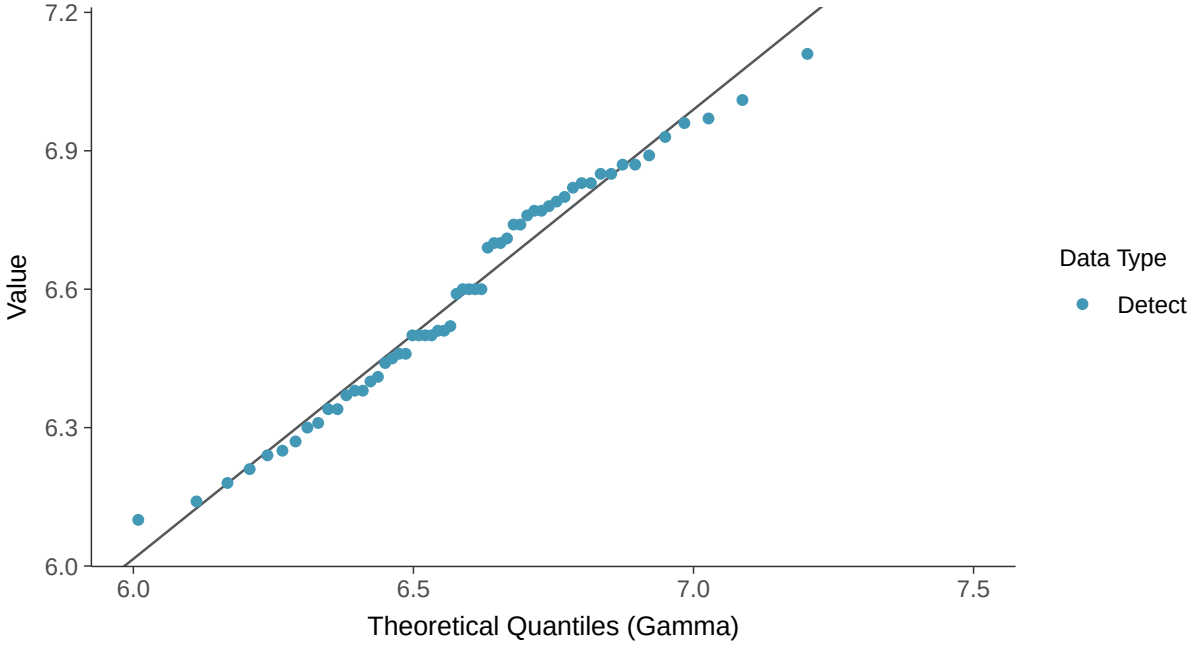
Lognormal Q-Q plot

pH (Field), BG-1 & BG-2 (S.U.)



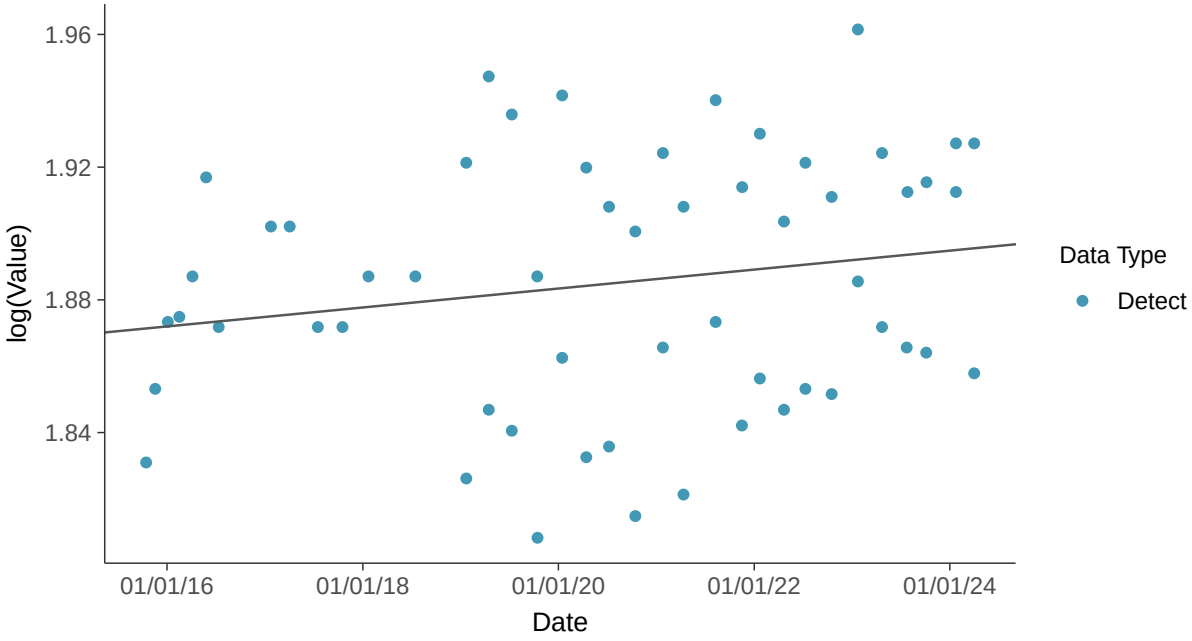
Gamma Q-Q plot

pH (Field), BG-1 & BG-2 (S.U.)



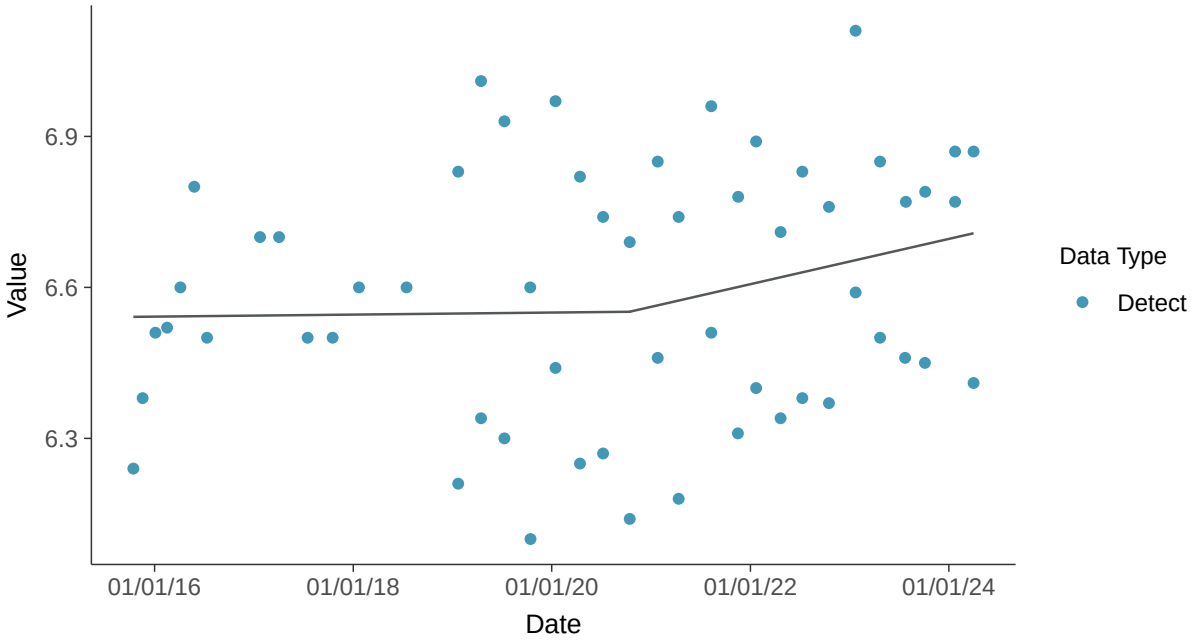
Trend Regression: Lognormal MLE

pH (Field), BG-1 & BG-2 (S.U.)



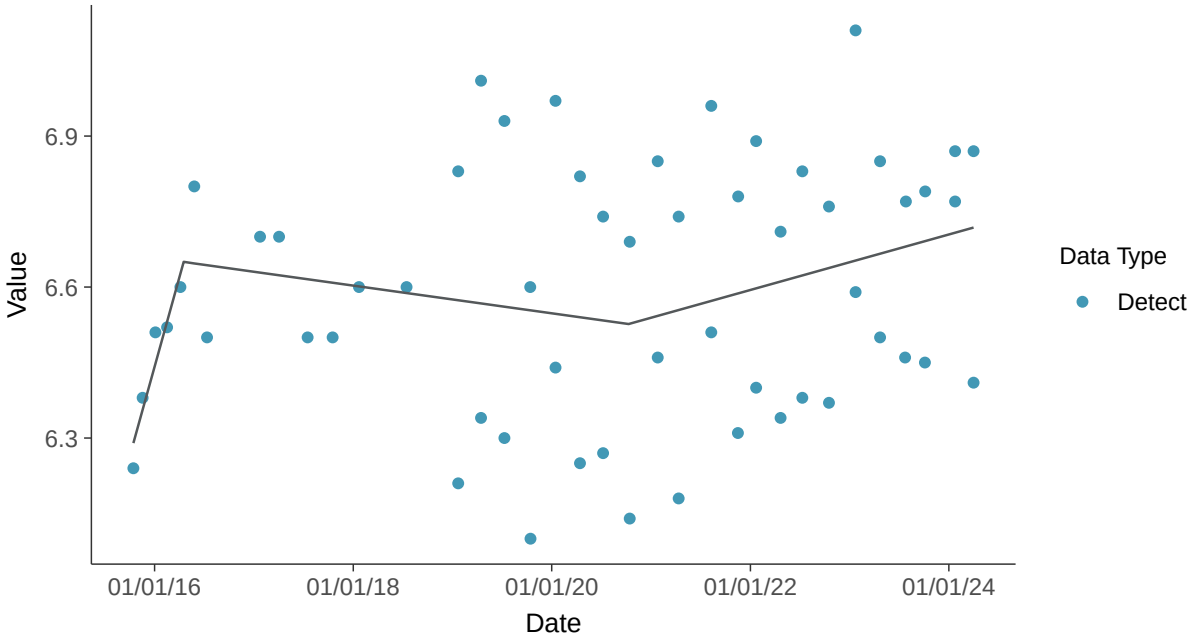
Trend Regression: Piecewise Linear-Linear

pH (Field), BG-1 & BG-2 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), BG-1 & BG-2 (S.U.)

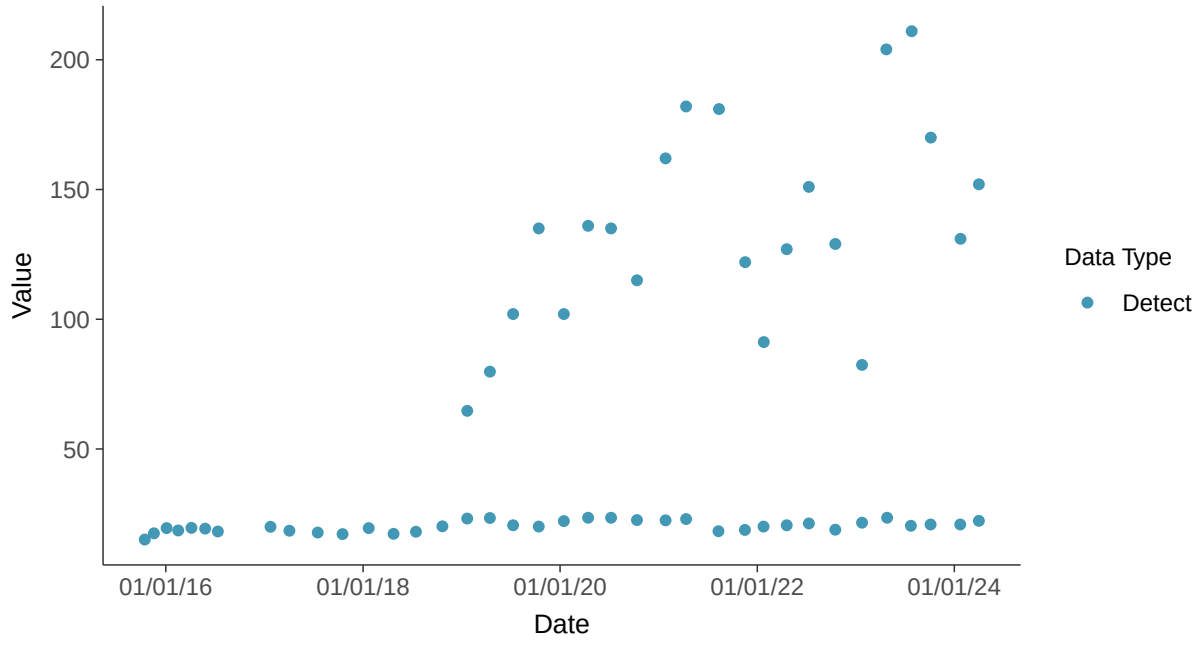


App. III: Sulfate, BG-1 & BG-2

ID: 2_123

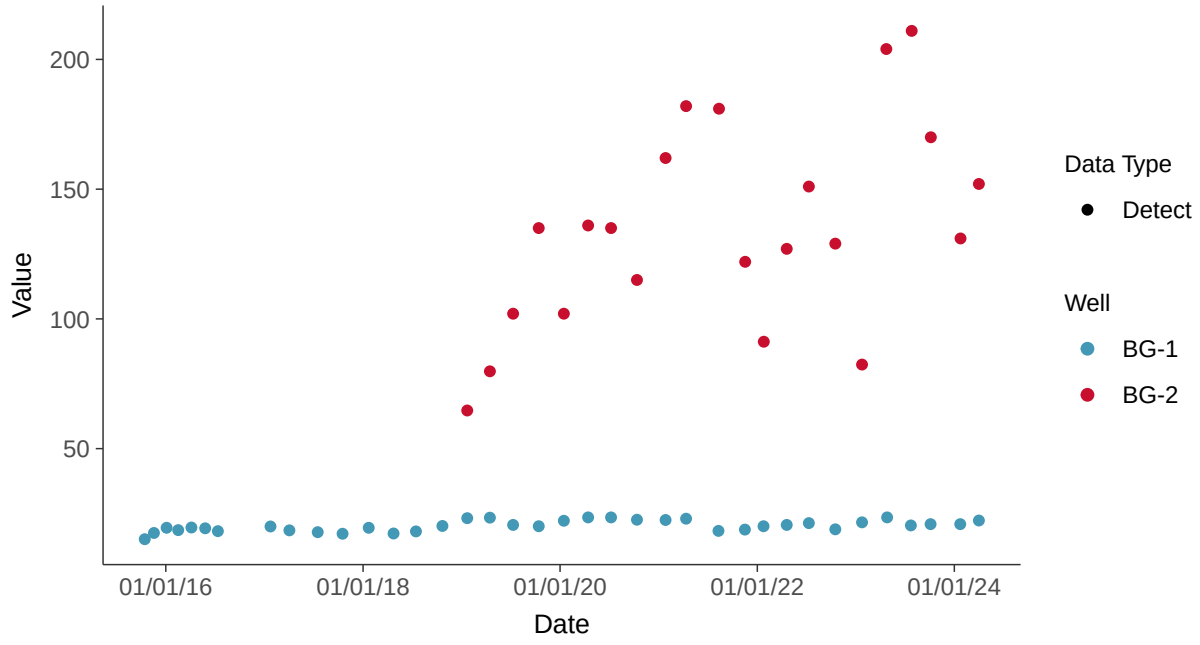
Scatter Plot

Sulfate, BG-1 & BG-2 (mg/L)



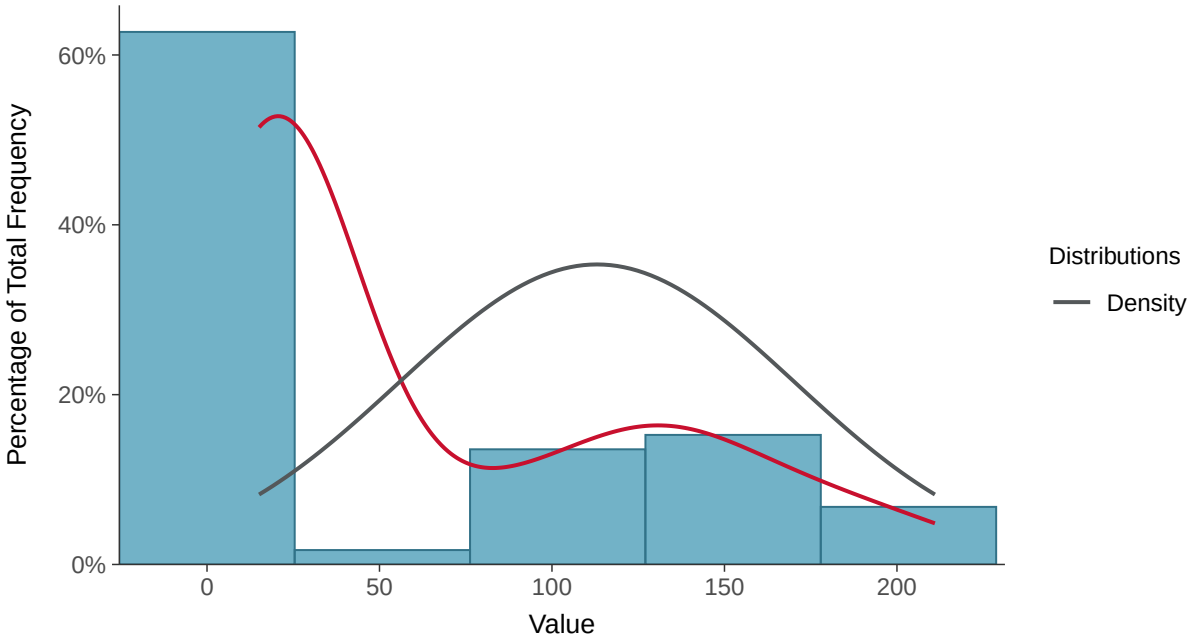
Scatter Plot by Well

Sulfate, BG-1 & BG-2 (mg/L)



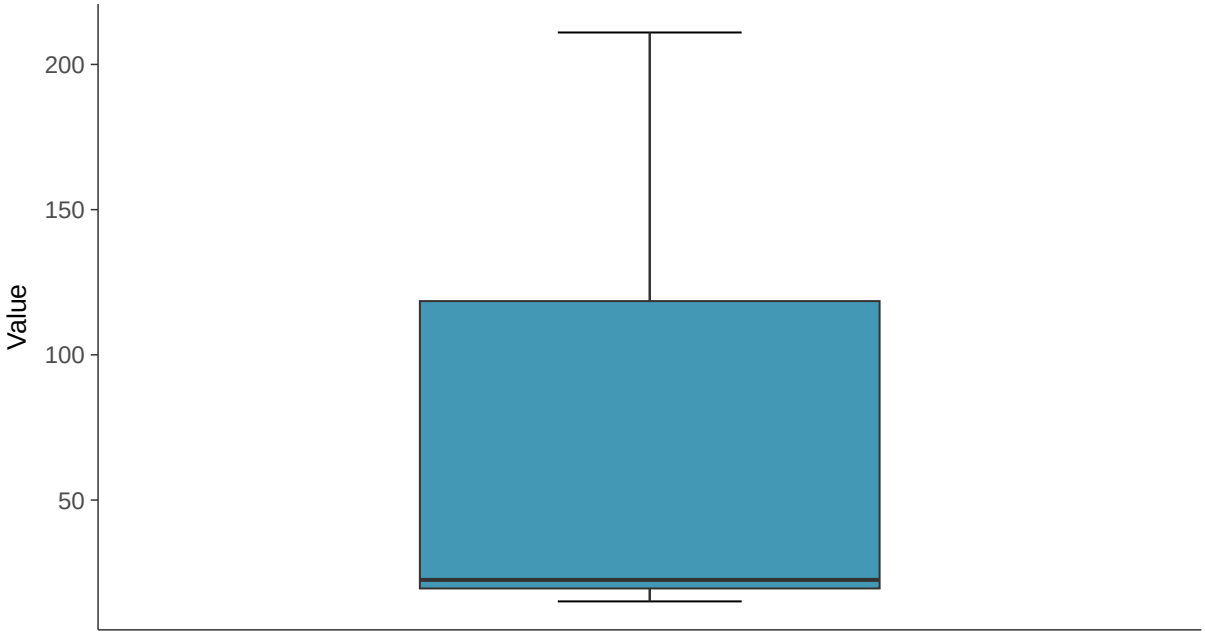
Histogram

Sulfate, BG-1 & BG-2 (mg/L)



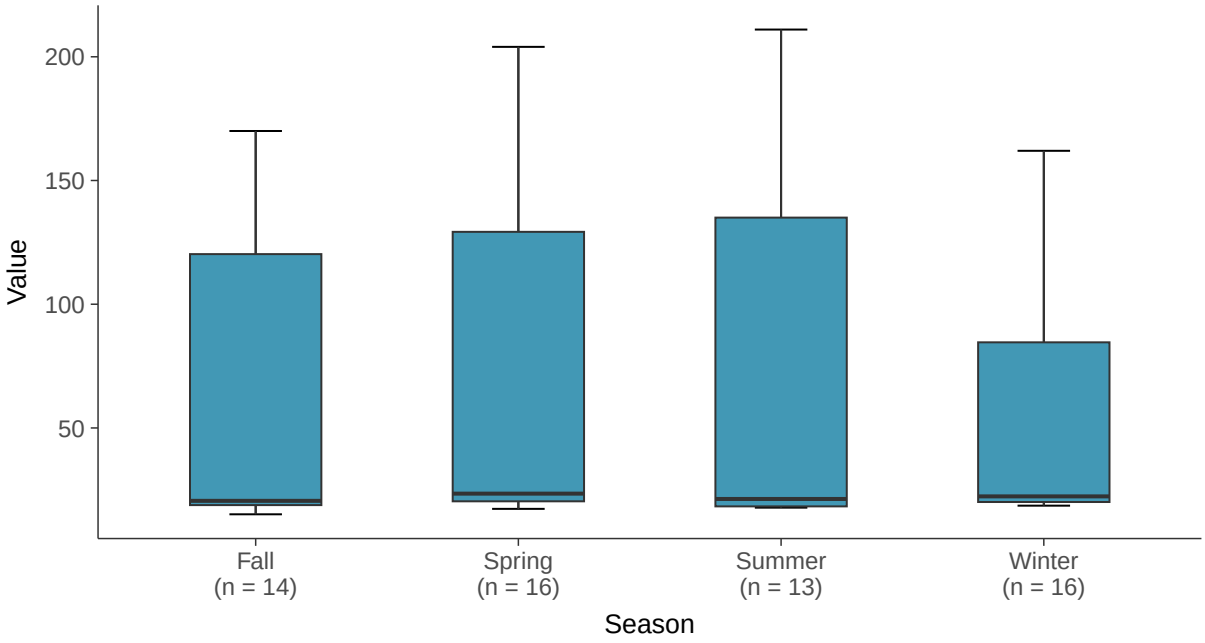
Boxplot

Sulfate, BG-1 & BG-2 (mg/L)



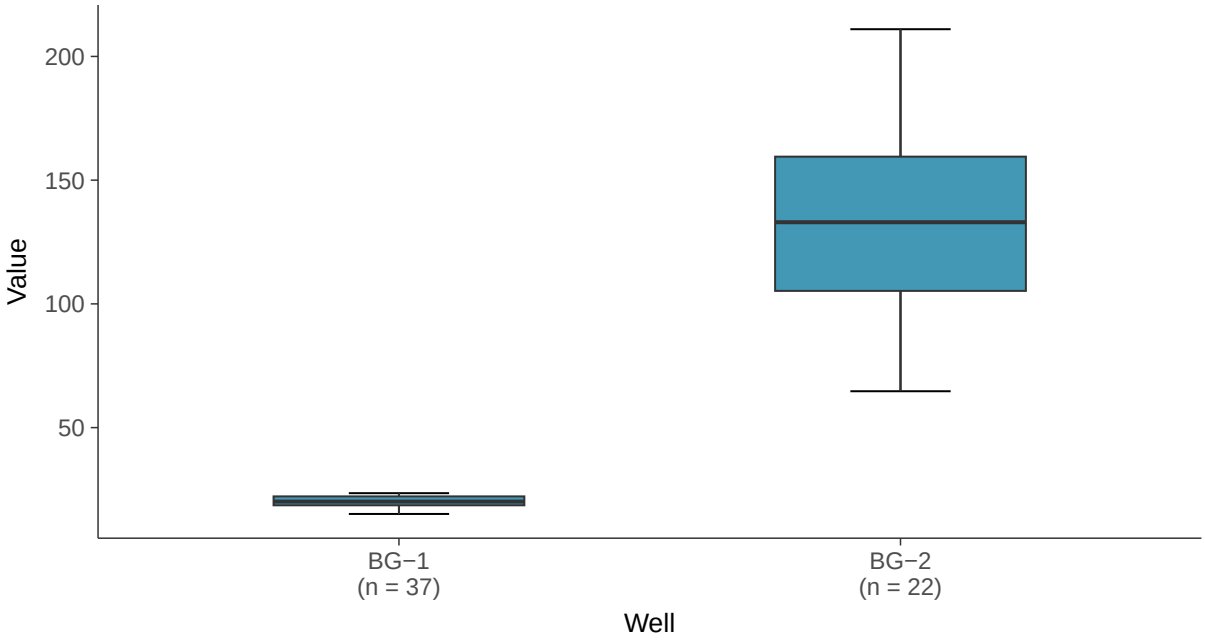
Boxplot by Season

Sulfate, BG-1 & BG-2 (mg/L)



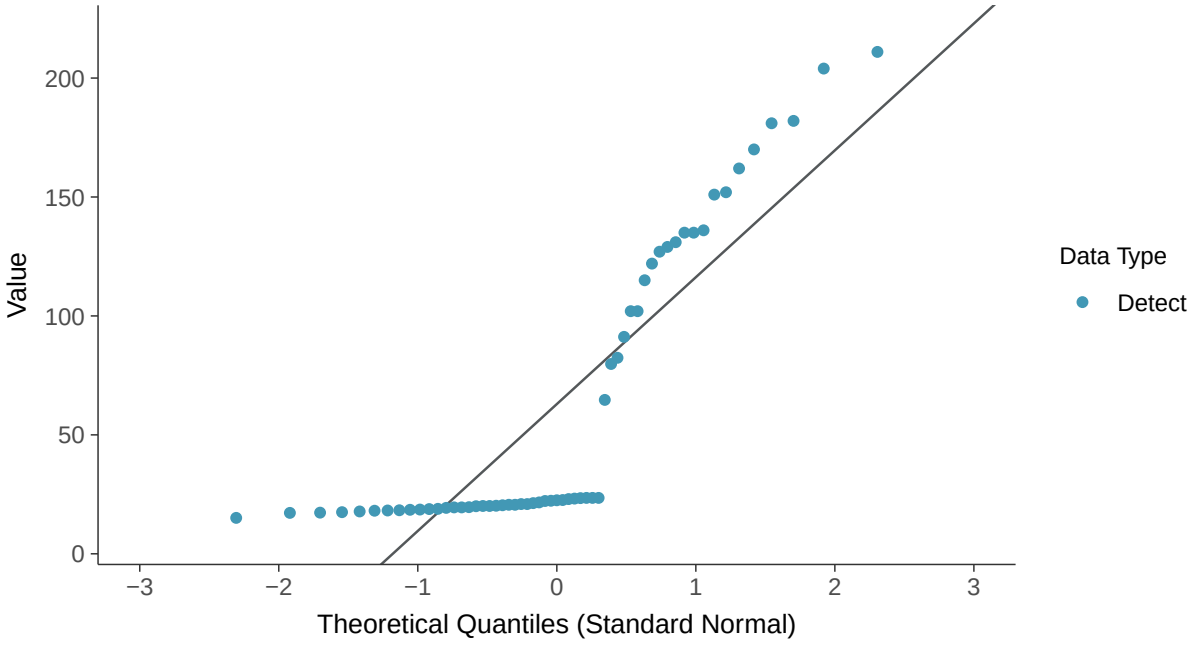
Boxplot by Well

Sulfate, BG-1 & BG-2 (mg/L)



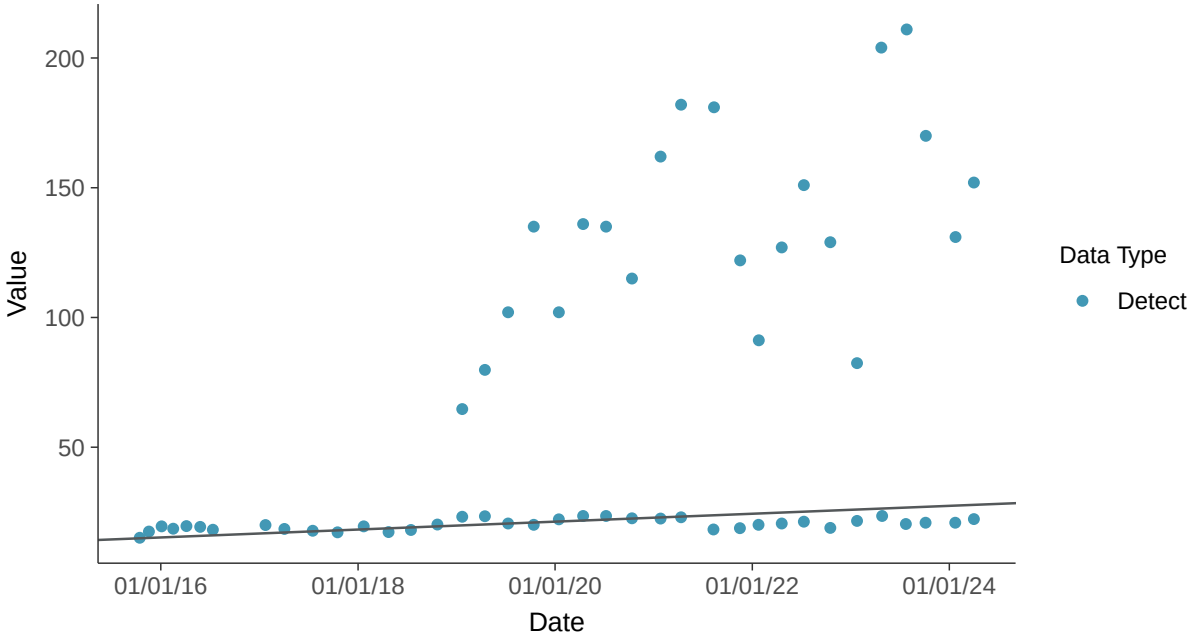
Normal Q-Q plot

Sulfate, BG-1 & BG-2 (mg/L)



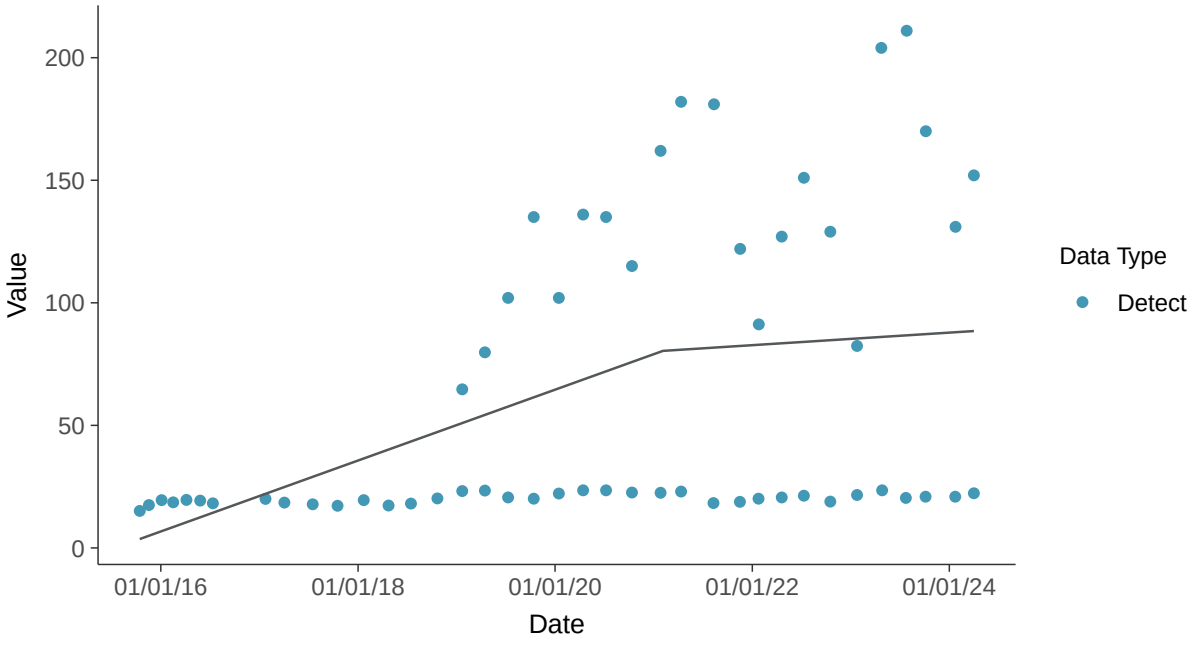
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, BG-1 & BG-2 (mg/L)



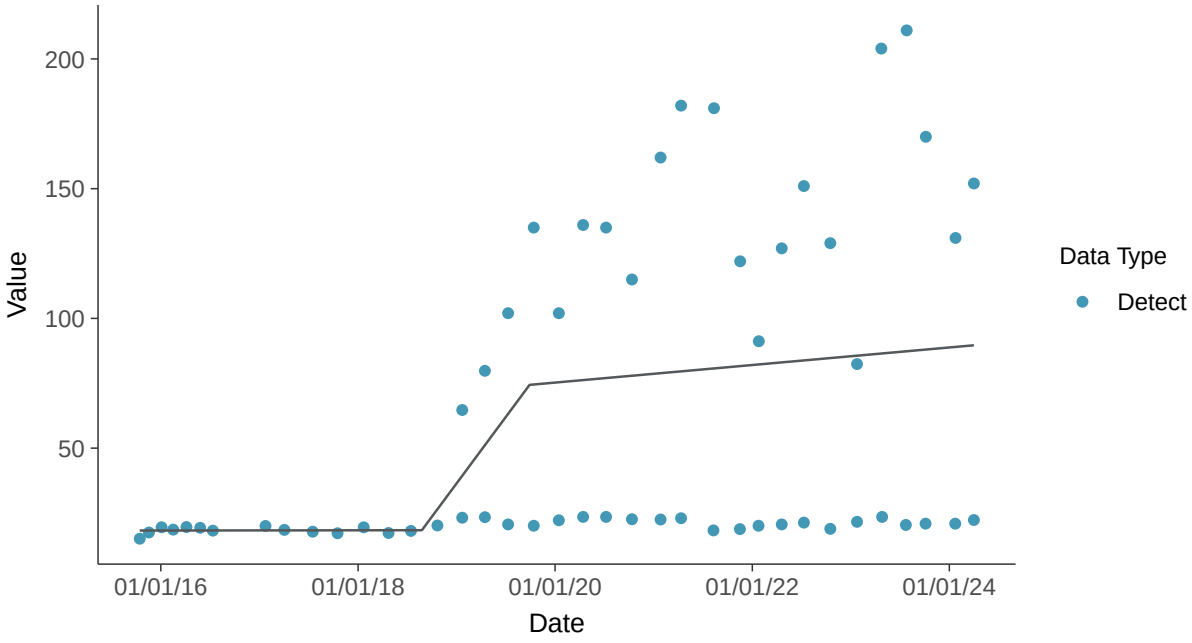
Trend Regression: Piecewise Linear-Linear

Sulfate, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, BG-1 & BG-2 (mg/L)

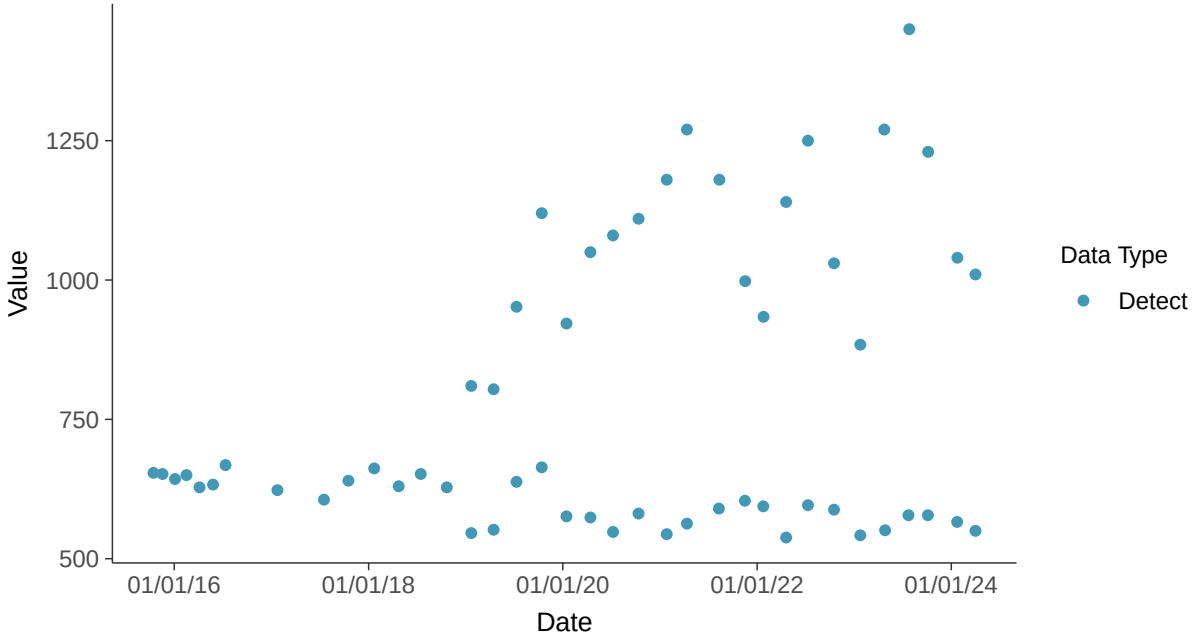


App. III: Total Dissolved Solids, BG-1 & BG-2

ID: 2_125

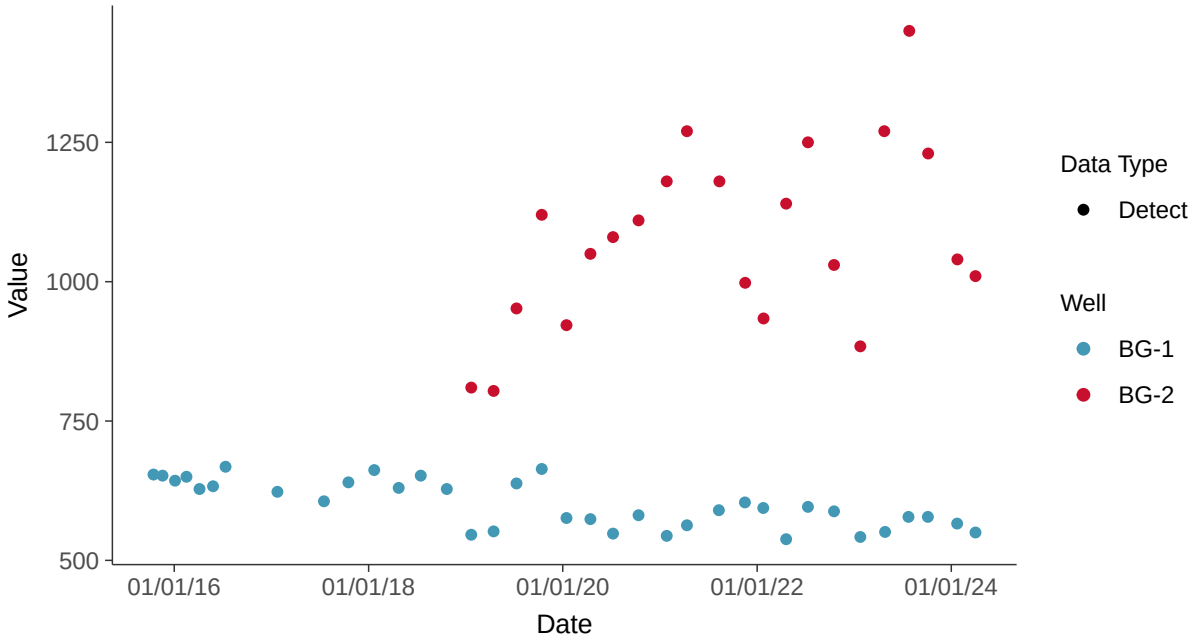
Scatter Plot

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



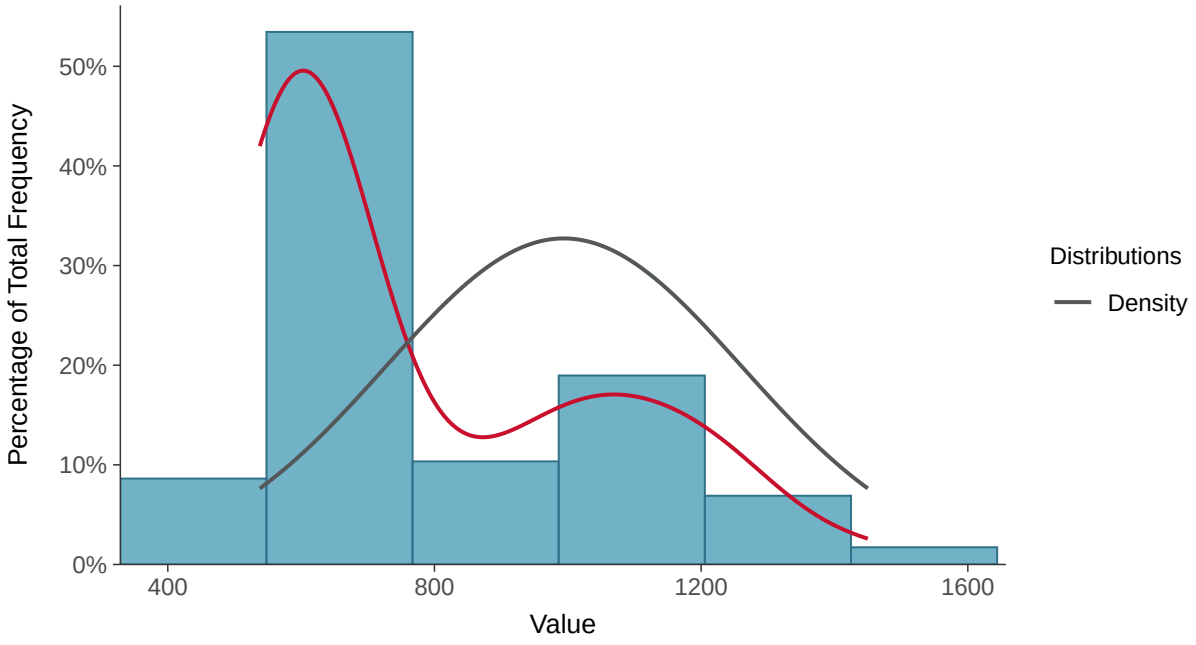
Scatter Plot by Well

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



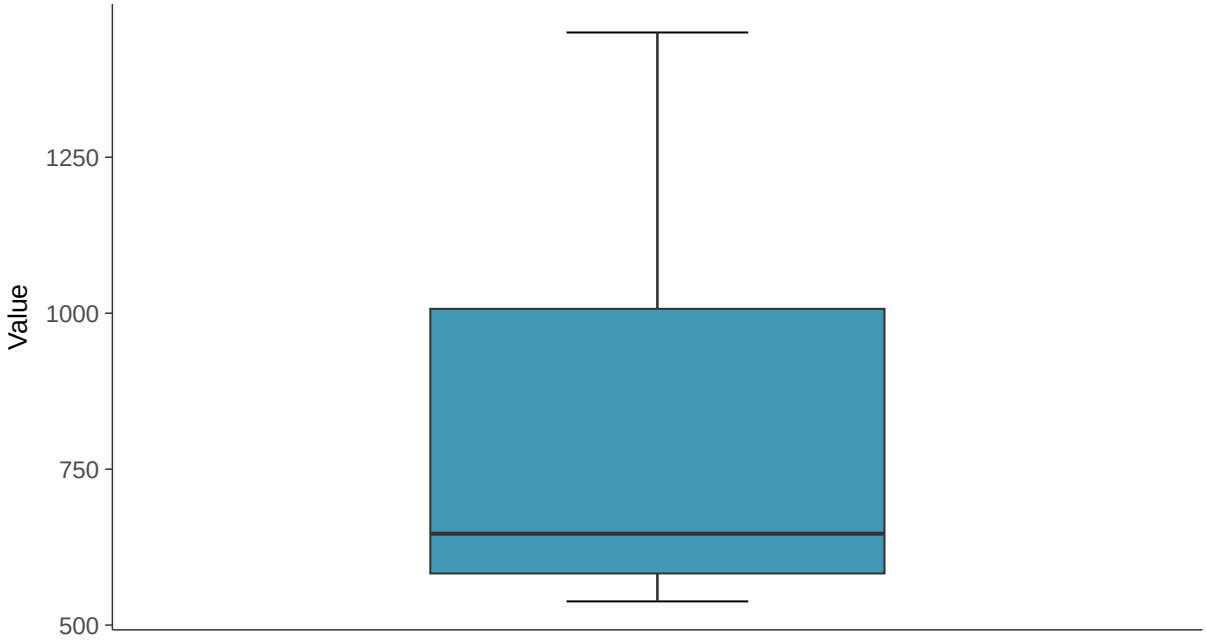
Histogram

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



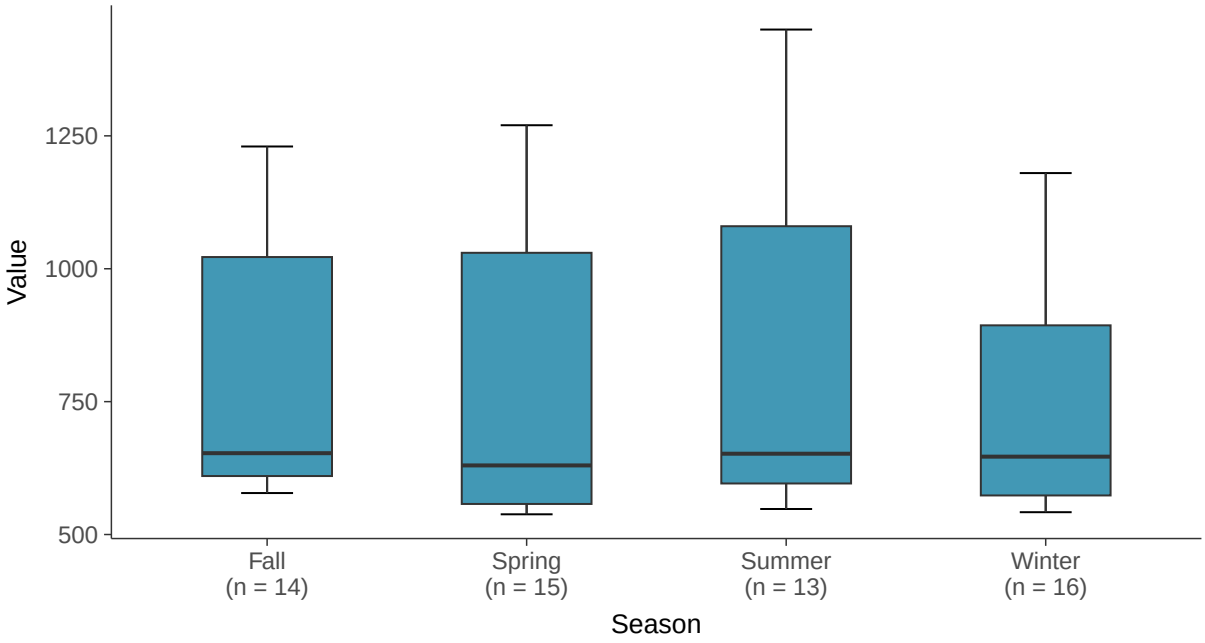
Boxplot

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



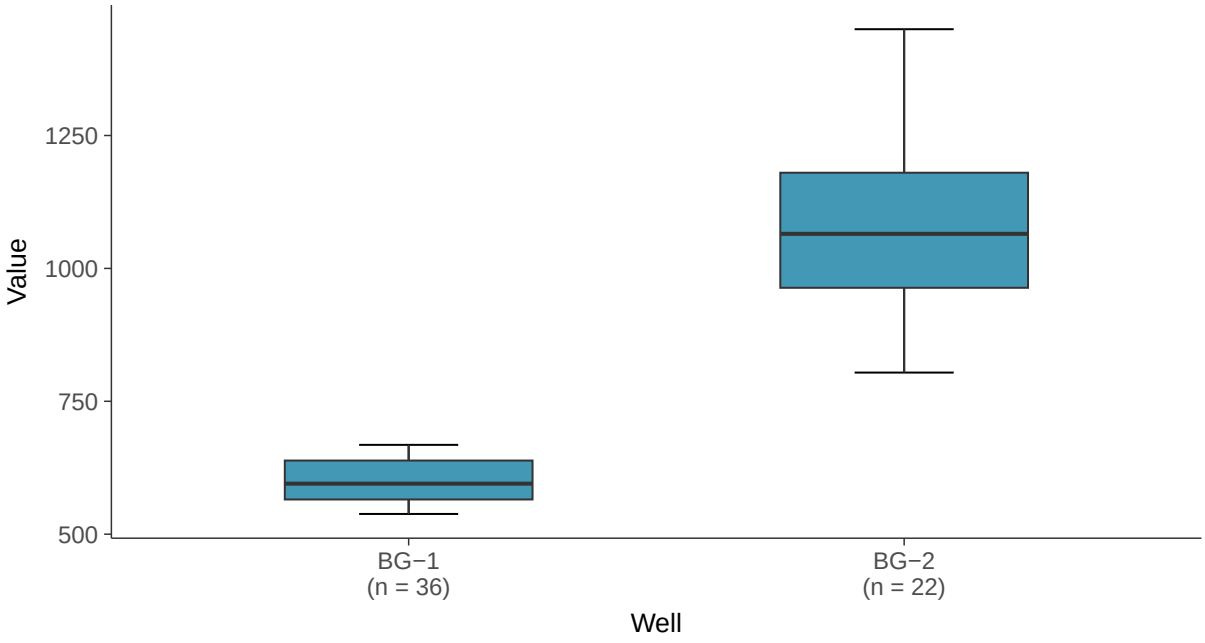
Boxplot by Season

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



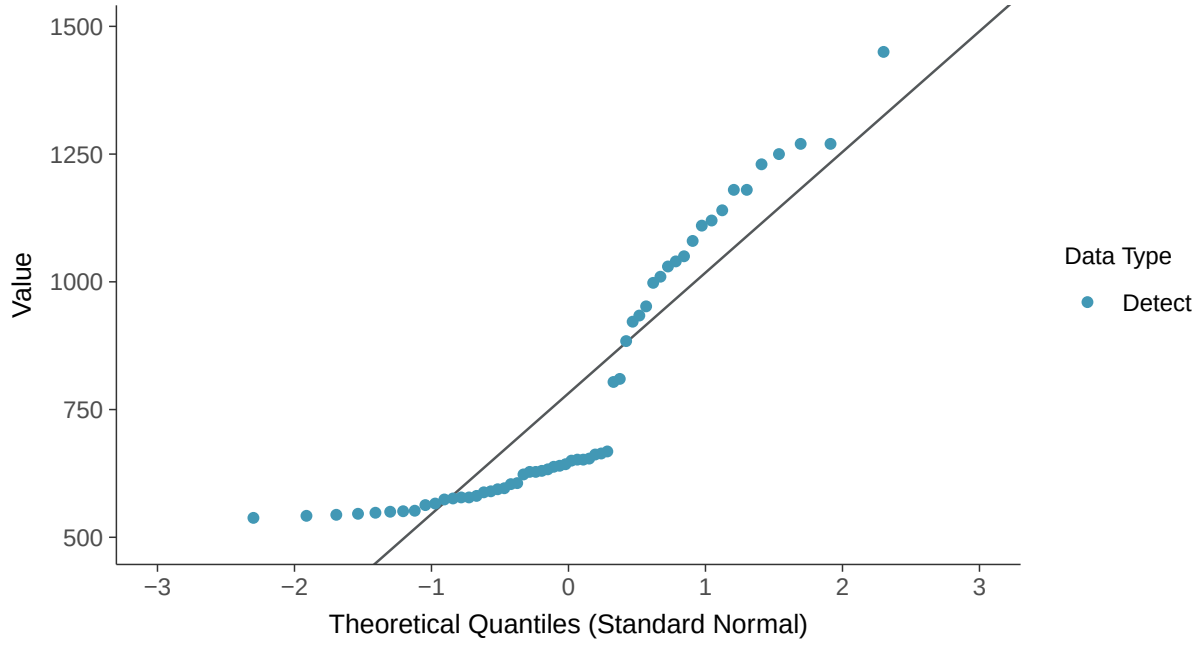
Boxplot by Well

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



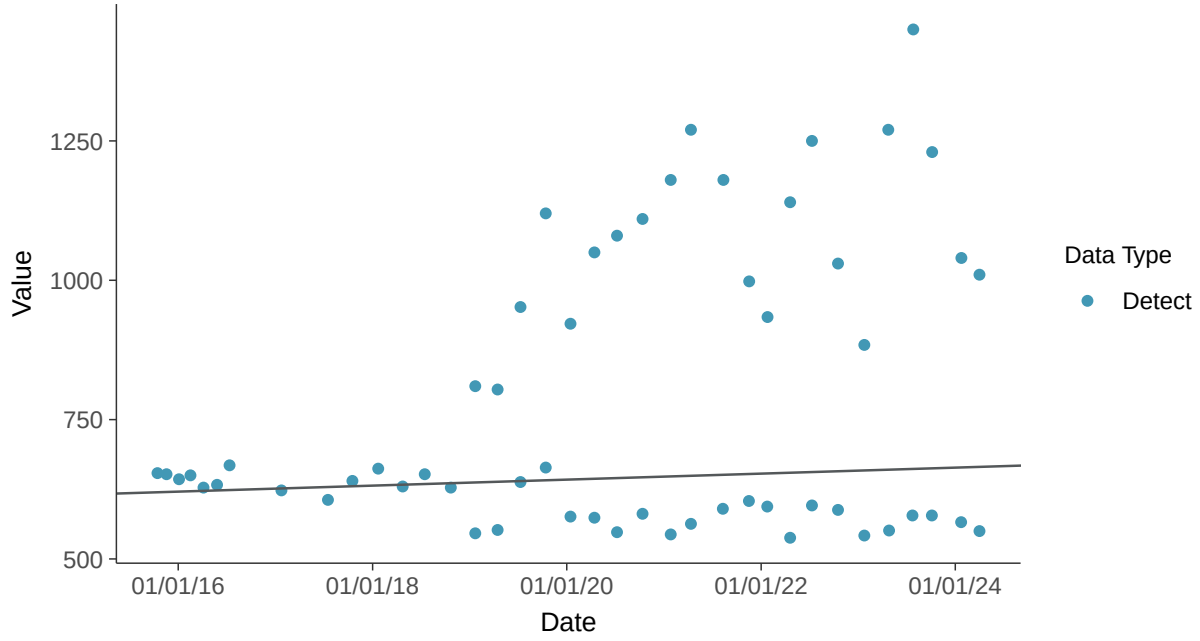
Normal Q-Q plot

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



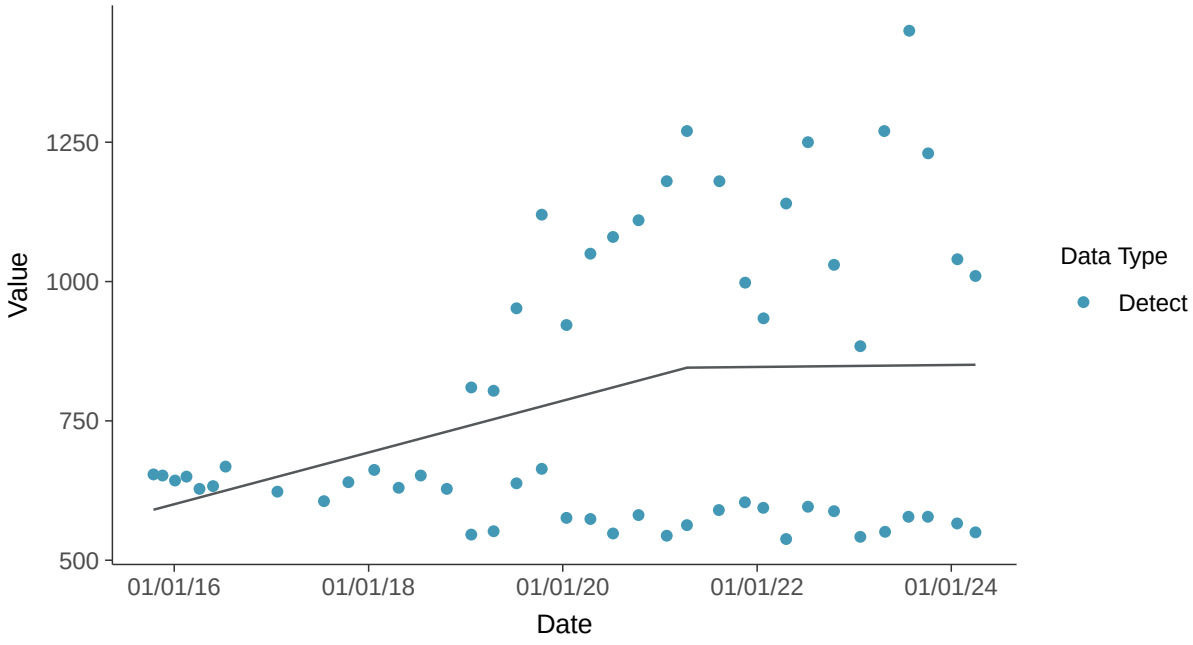
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



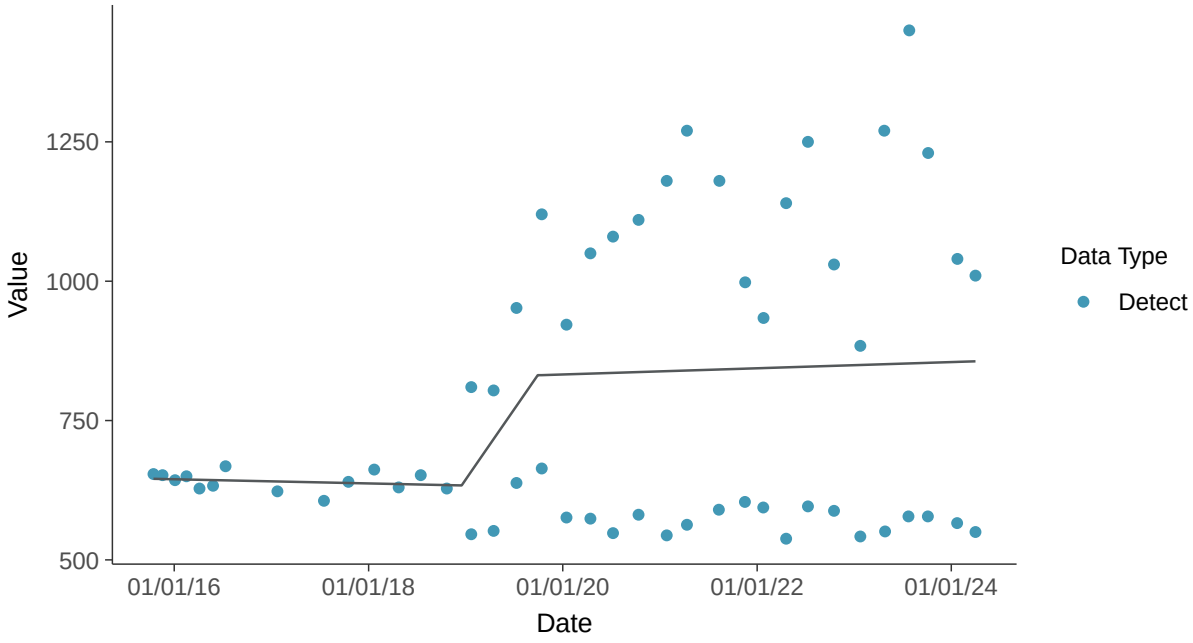
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, BG-1 & BG-2 (mg/L)

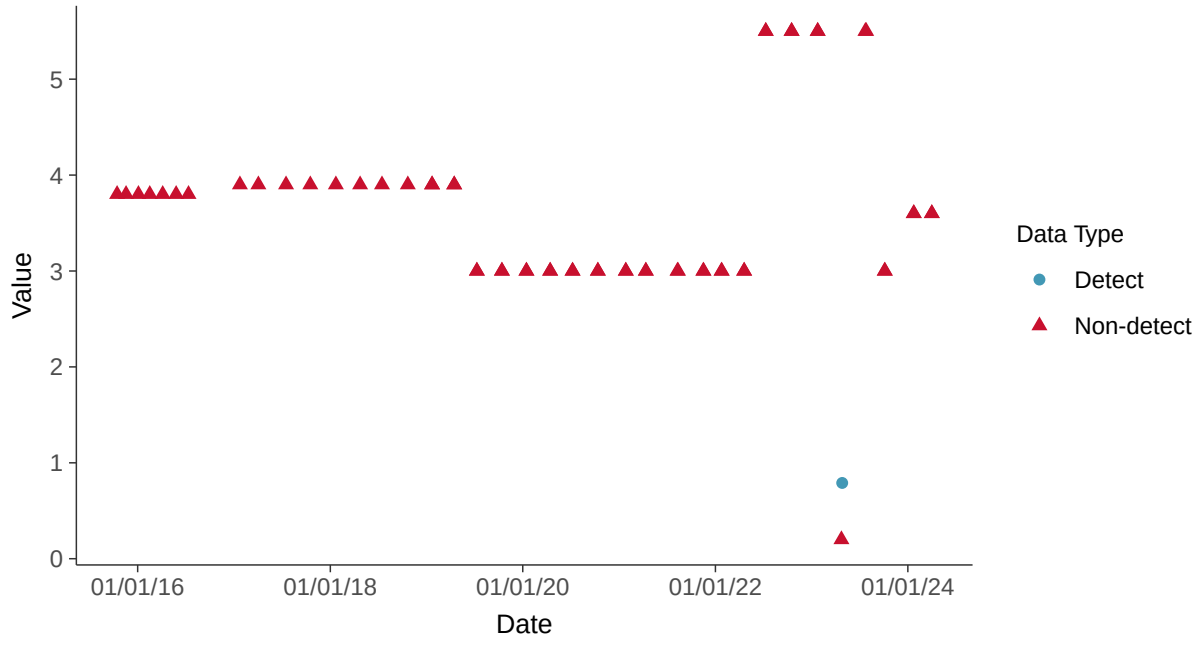


App. IV: Antimony, BG-1 & BG-2

ID: 3_101

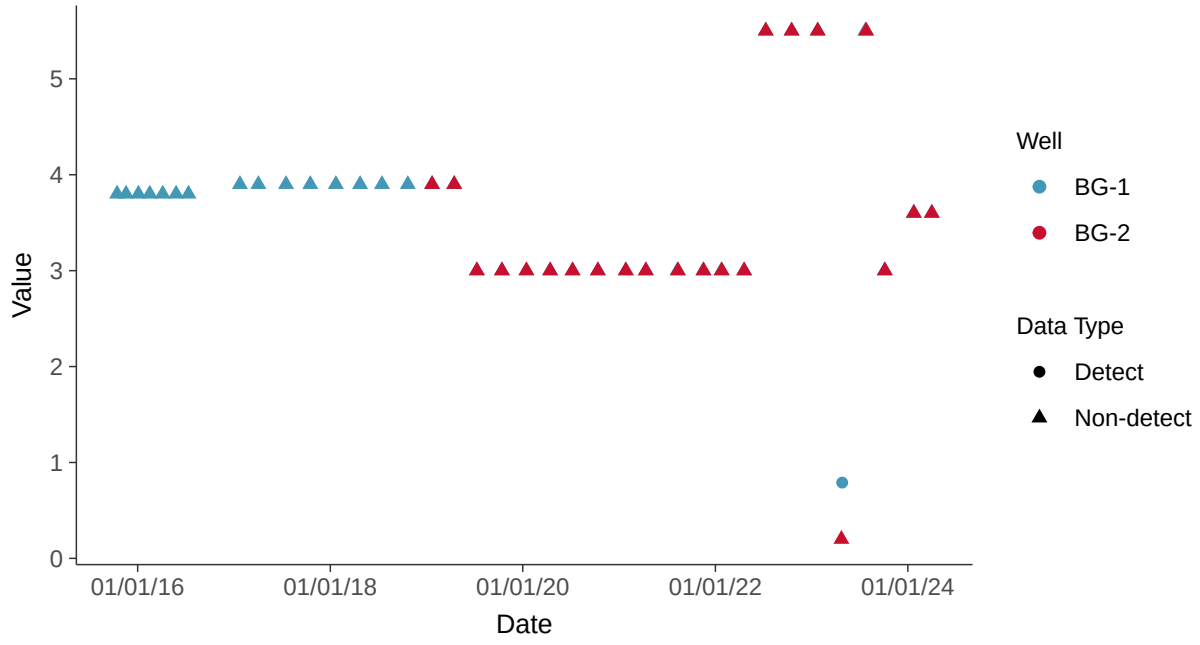
Scatter Plot

Antimony, BG-1 & BG-2 (ug/L)



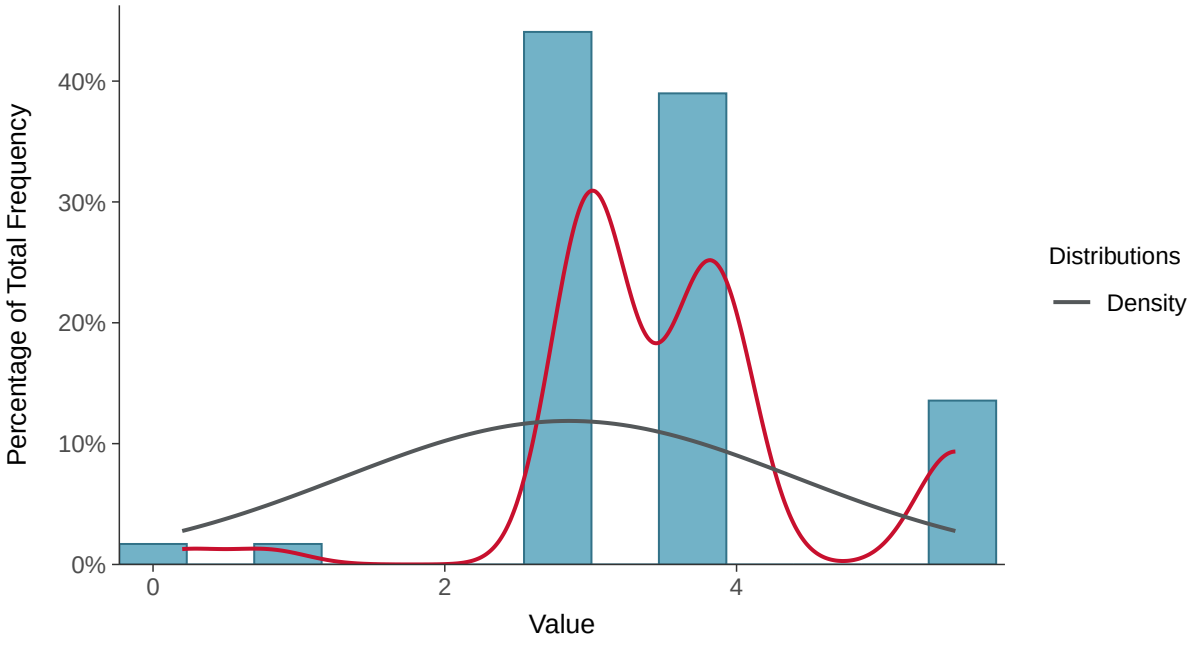
Scatter Plot by Well

Antimony, BG-1 & BG-2 (ug/L)



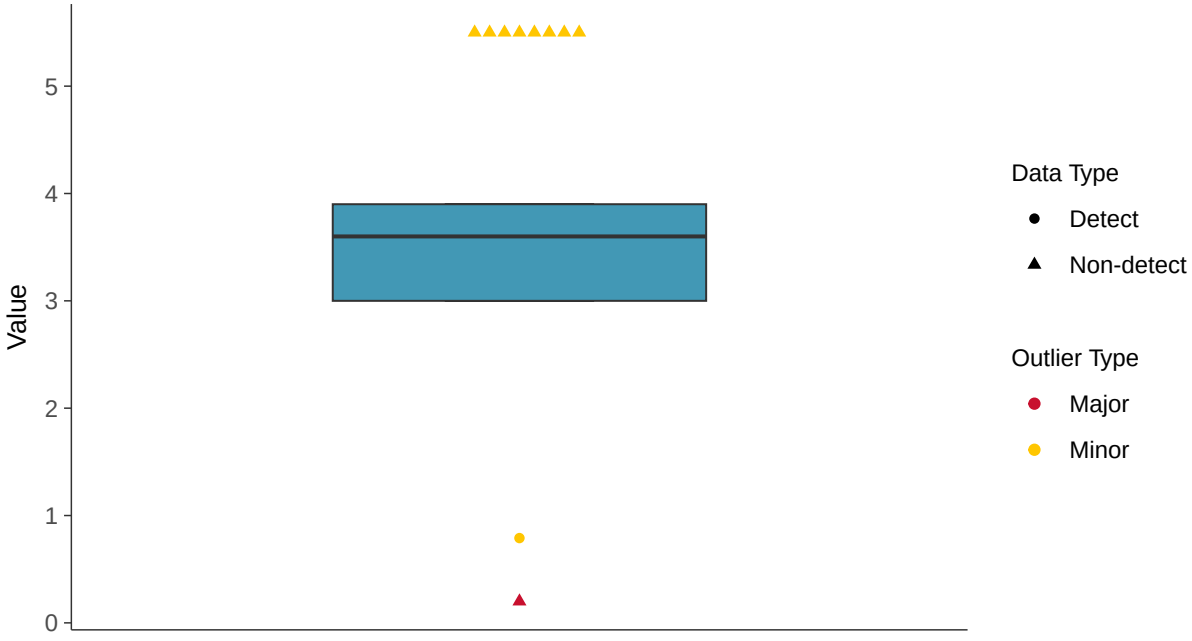
Histogram

Antimony, BG-1 & BG-2 (ug/L)



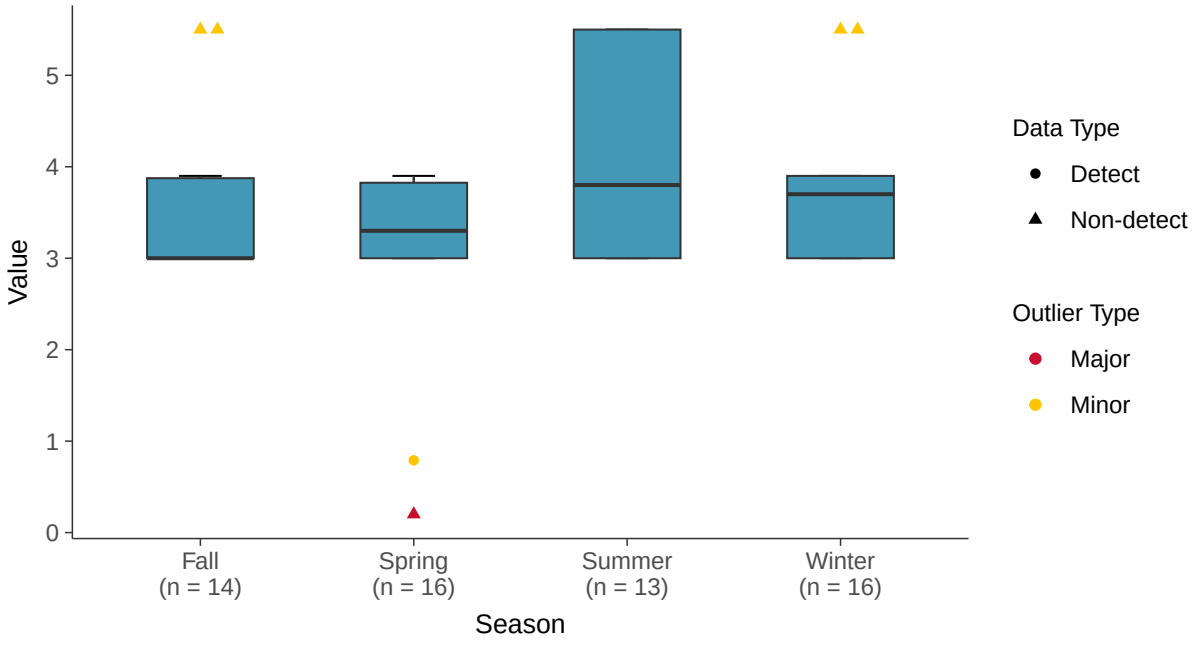
Boxplot

Antimony, BG-1 & BG-2 (ug/L)



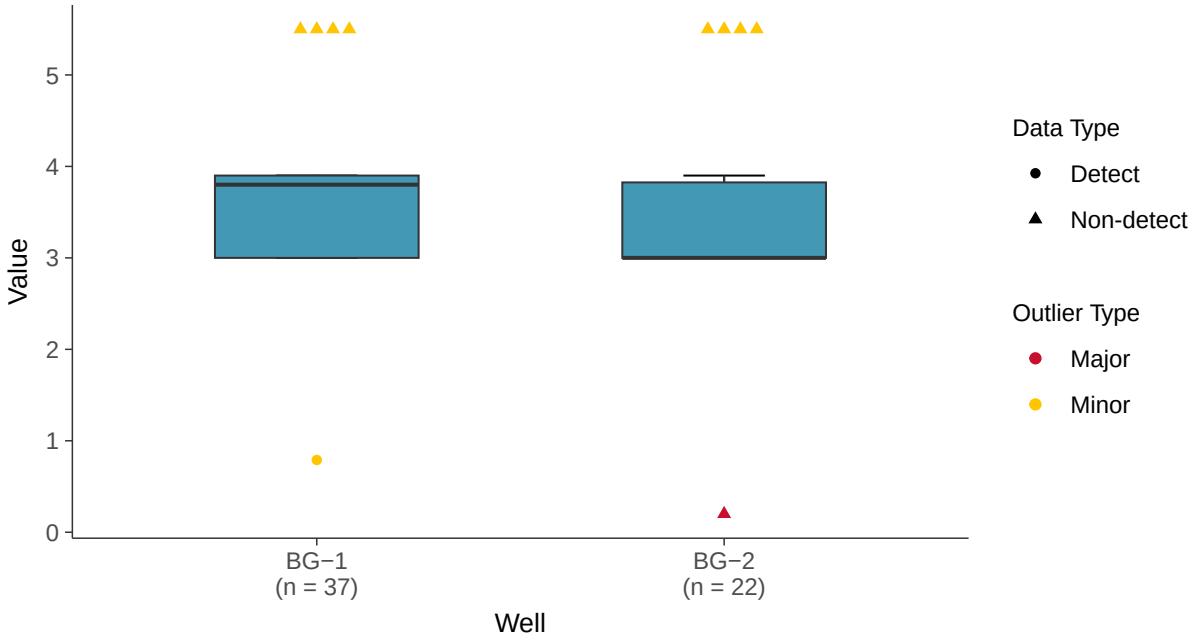
Boxplot by Season

Antimony, BG-1 & BG-2 (ug/L)



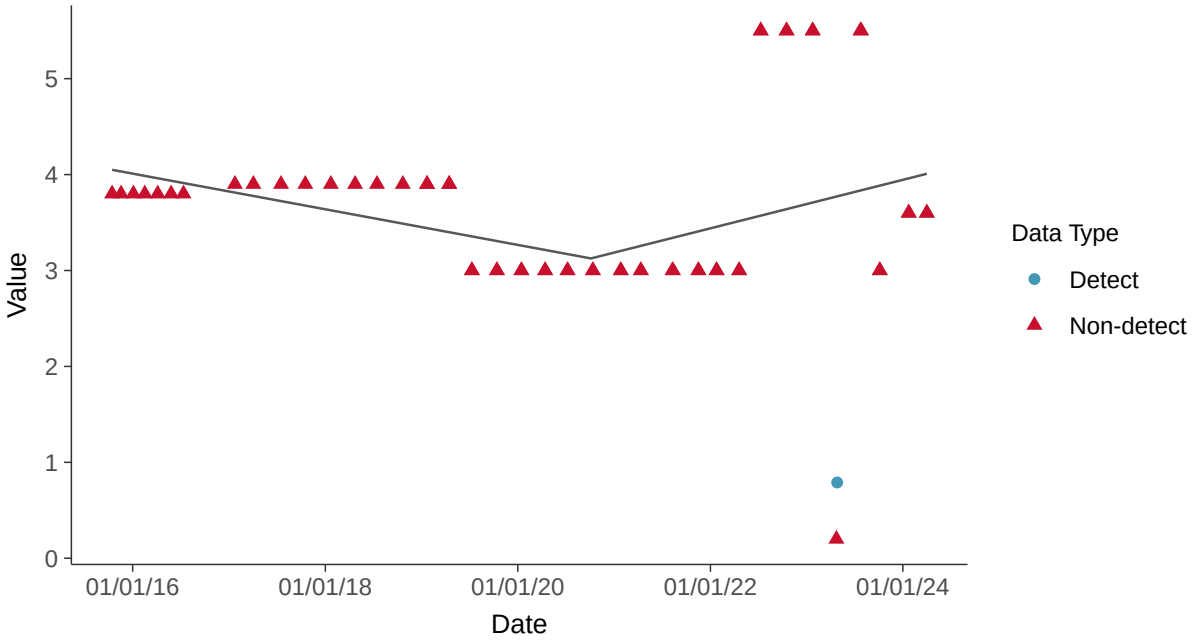
Boxplot by Well

Antimony, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Antimony, BG-1 & BG-2 (ug/L)

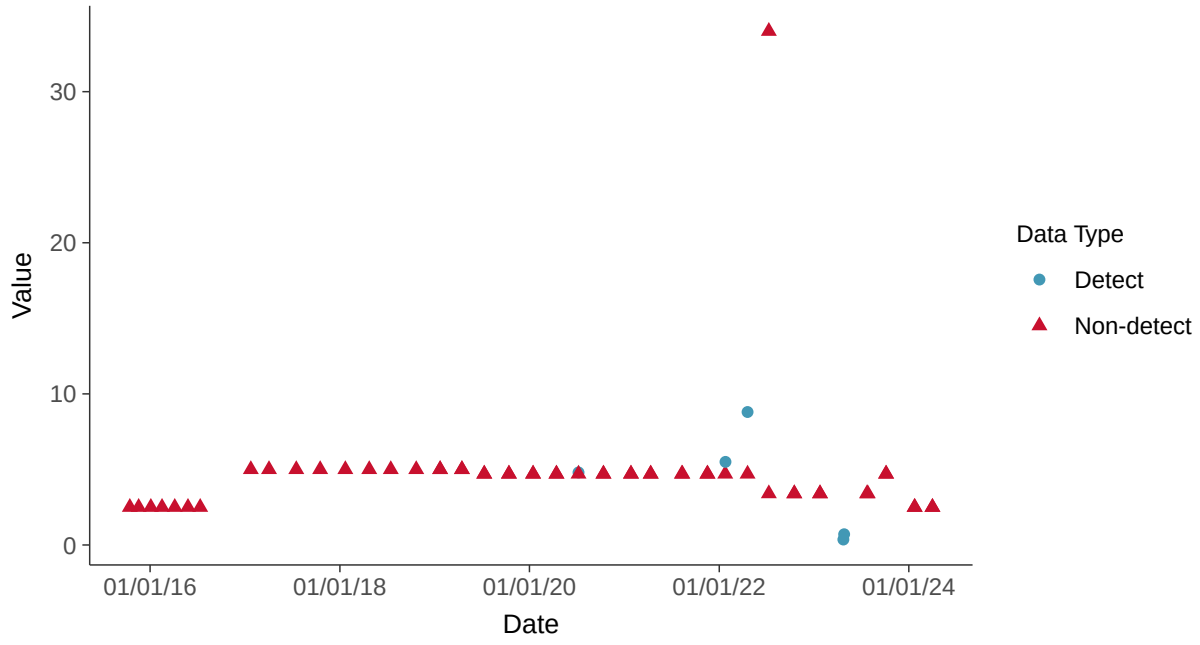


App. IV: Arsenic, BG-1 & BG-2

ID: 3_102

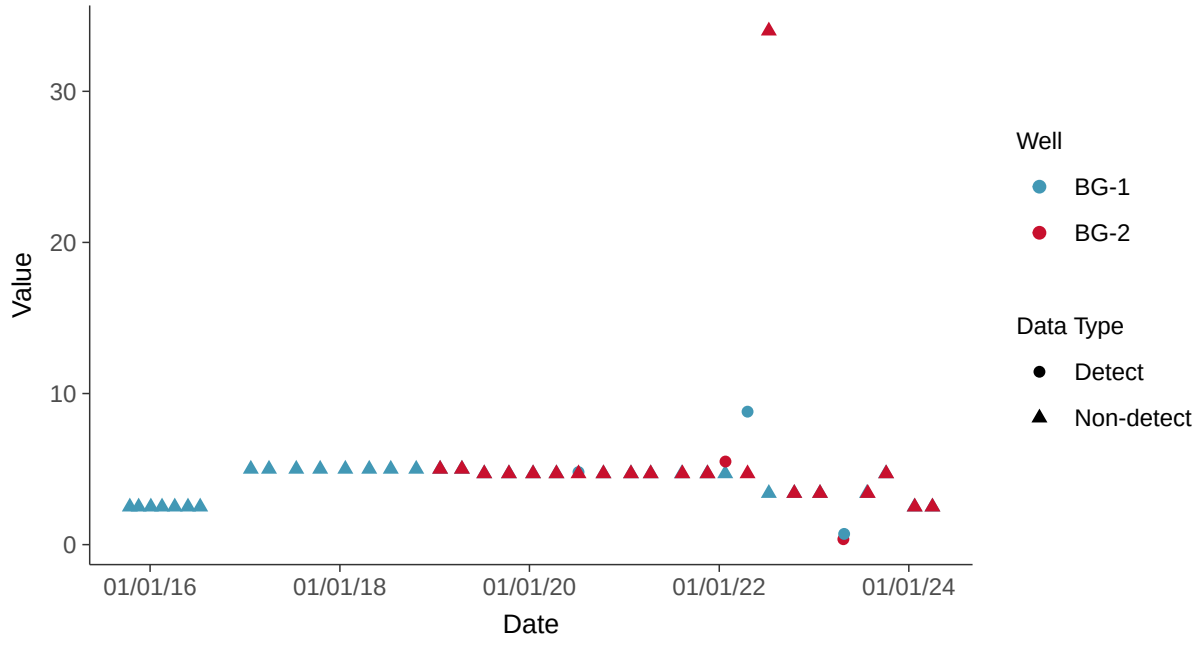
Scatter Plot

Arsenic, BG-1 & BG-2 (ug/L)



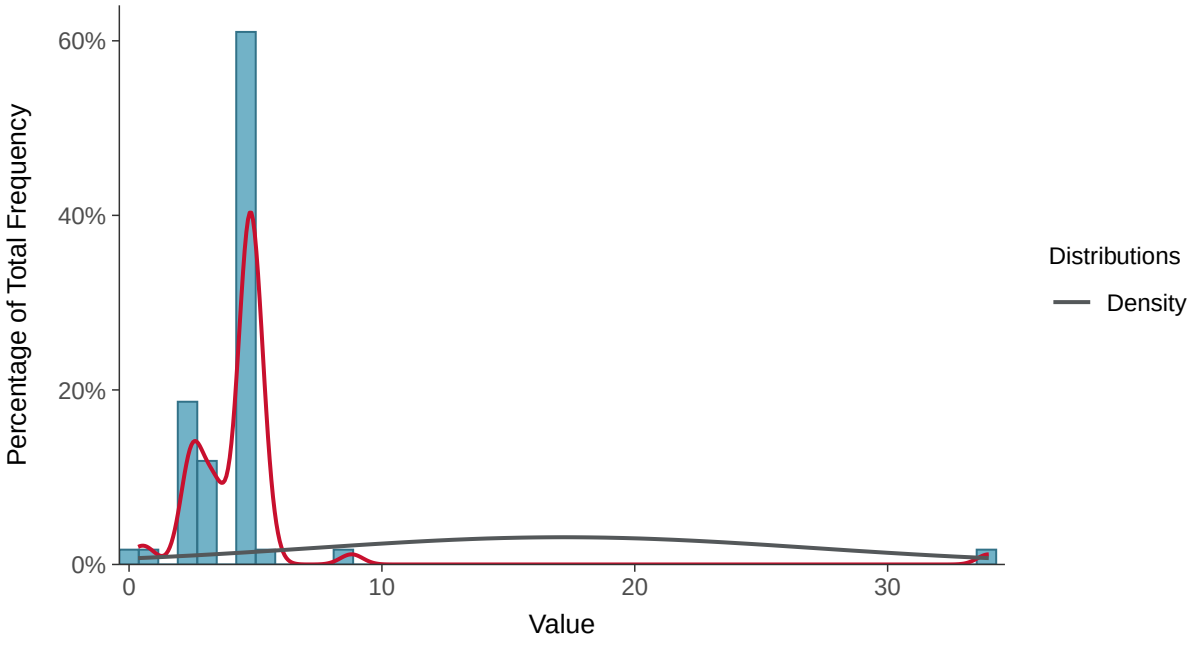
Scatter Plot by Well

Arsenic, BG-1 & BG-2 (ug/L)



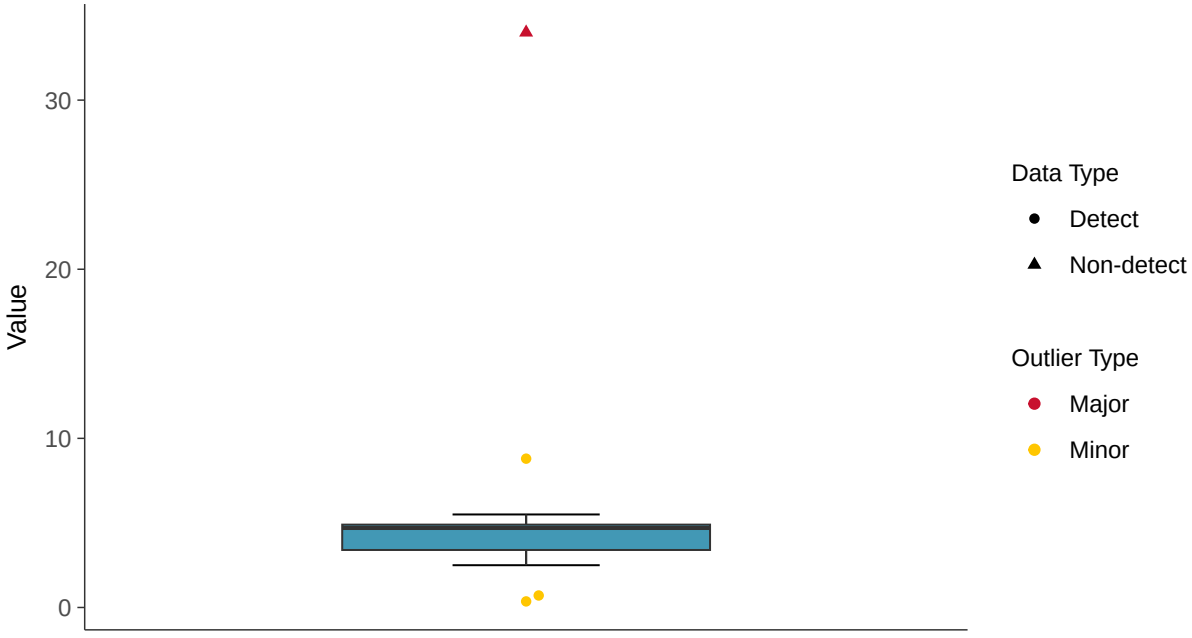
Histogram

Arsenic, BG-1 & BG-2 (ug/L)



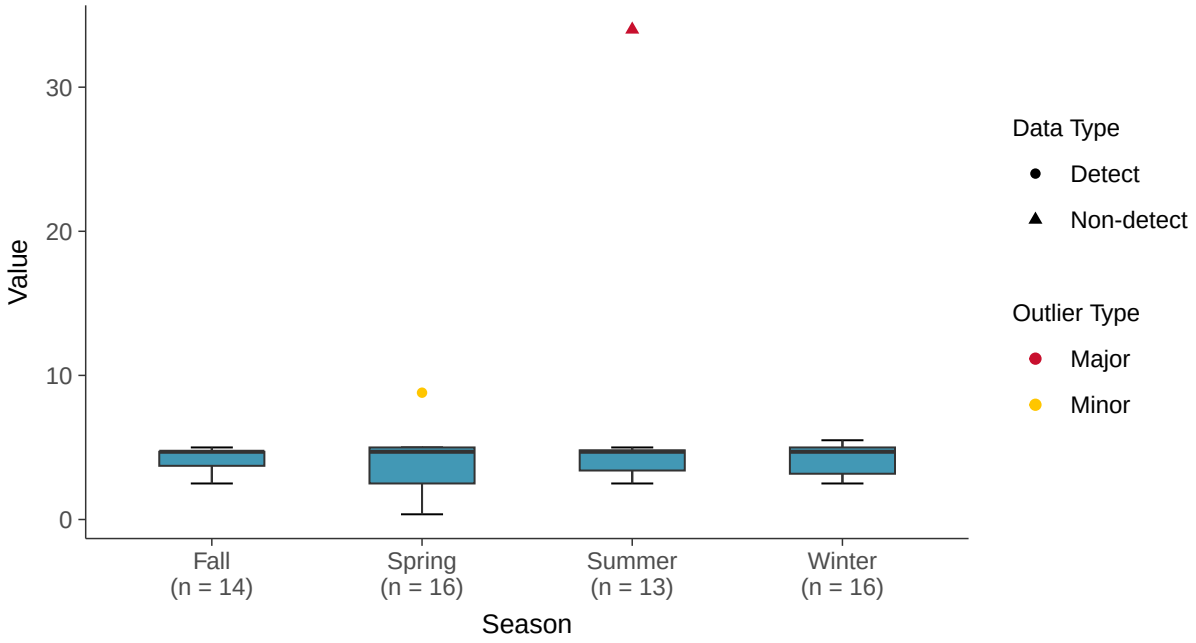
Boxplot

Arsenic, BG-1 & BG-2 (ug/L)



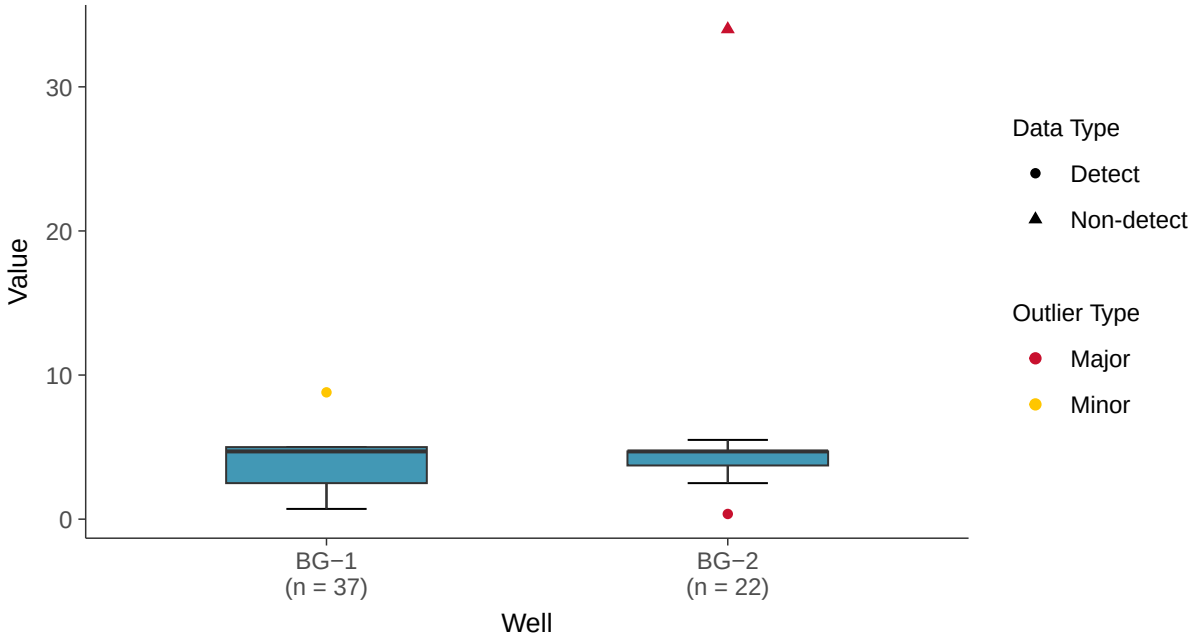
Boxplot by Season

Arsenic, BG-1 & BG-2 (ug/L)



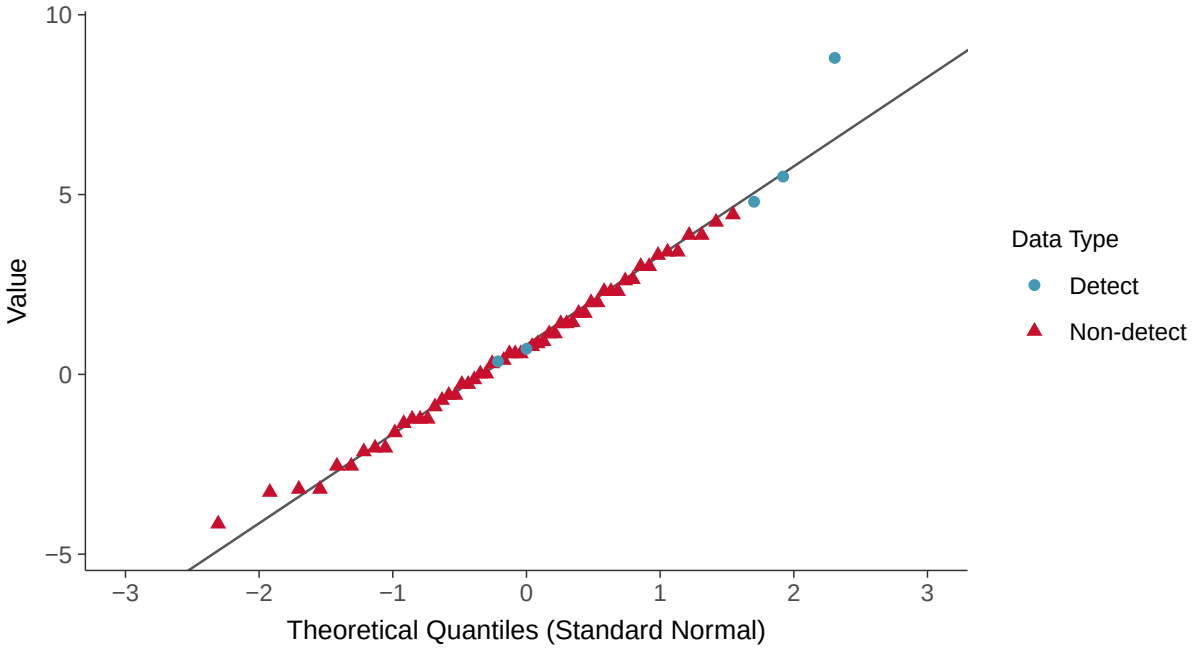
Boxplot by Well

Arsenic, BG-1 & BG-2 (ug/L)



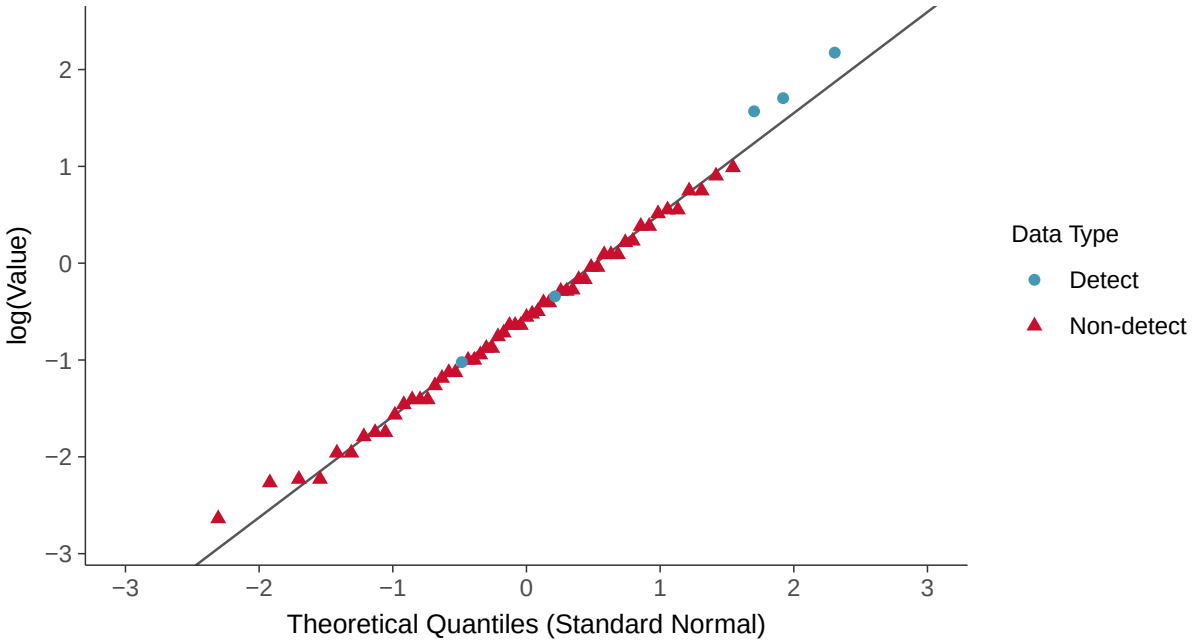
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, BG-1 & BG-2 (ug/L)



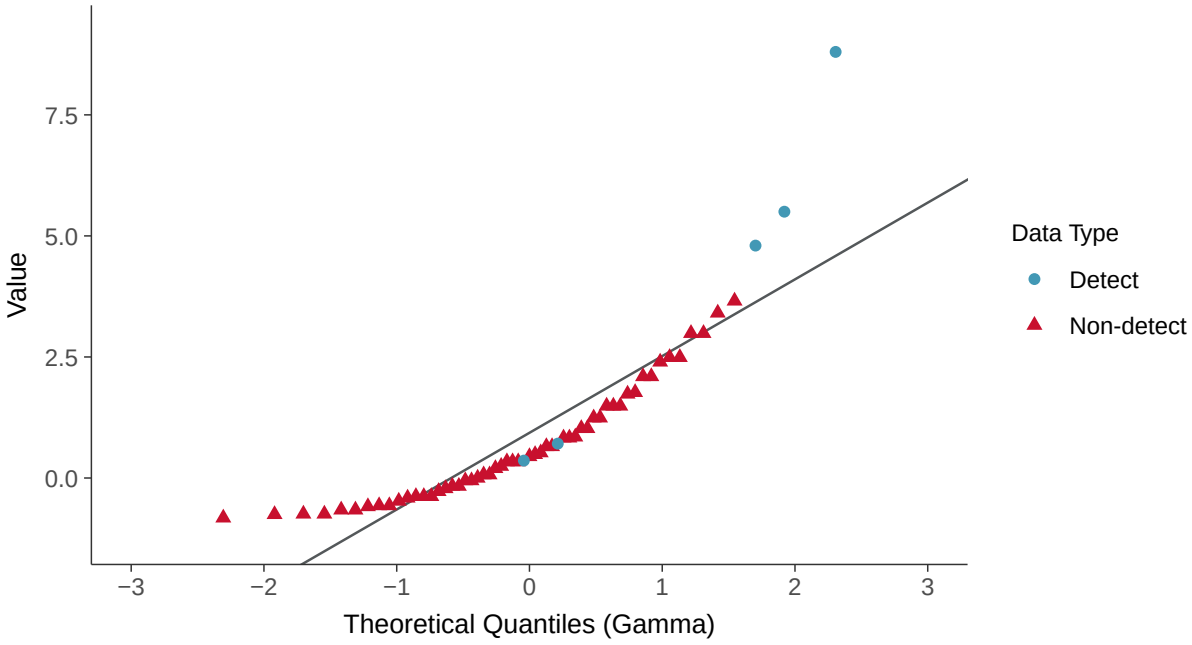
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, BG-1 & BG-2 (ug/L)



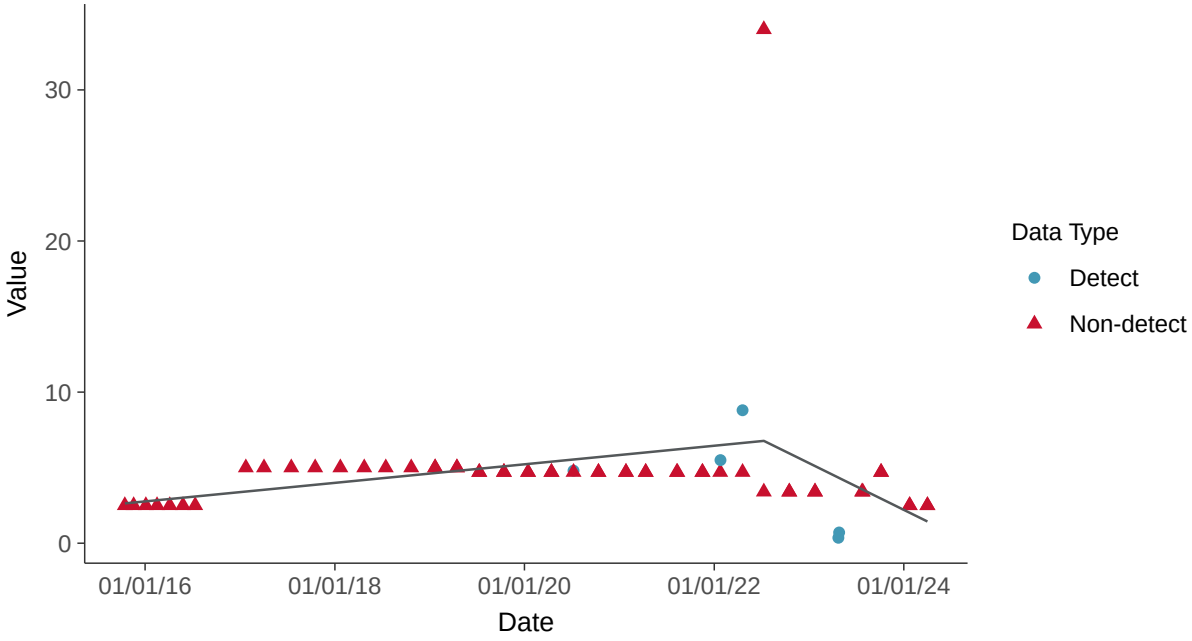
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, BG-1 & BG-2 (ug/L)



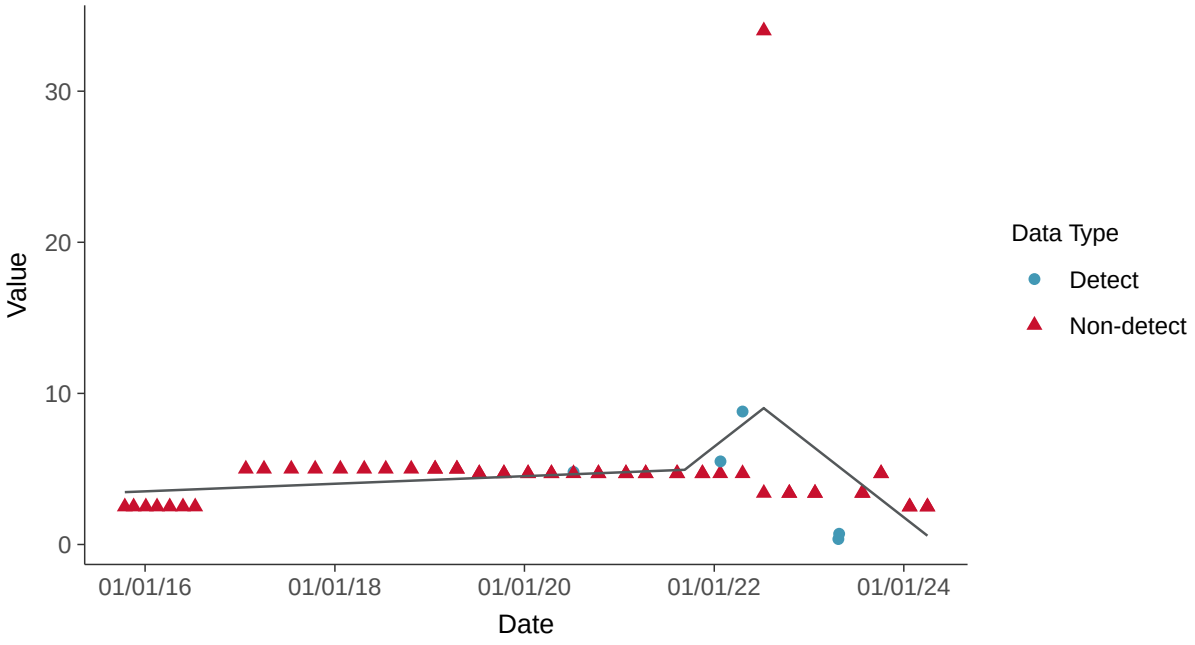
Trend Regression: Piecewise Linear-Linear

Arsenic, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, BG-1 & BG-2 (ug/L)

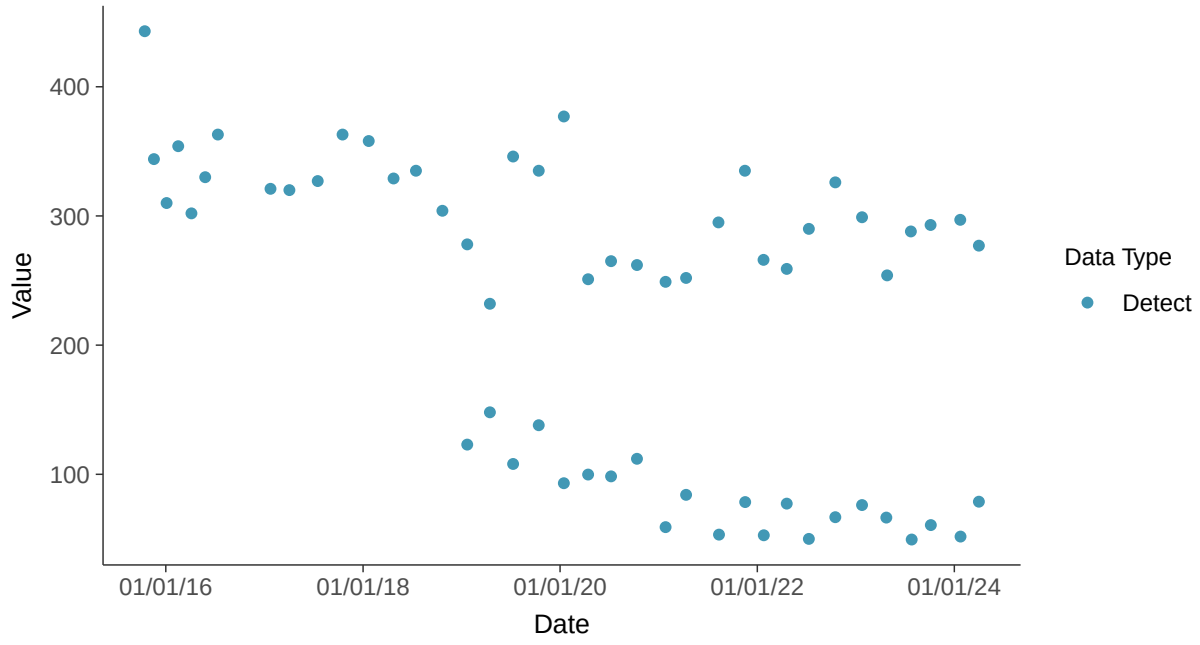


App. IV: Barium, BG-1 & BG-2

ID: 3_103

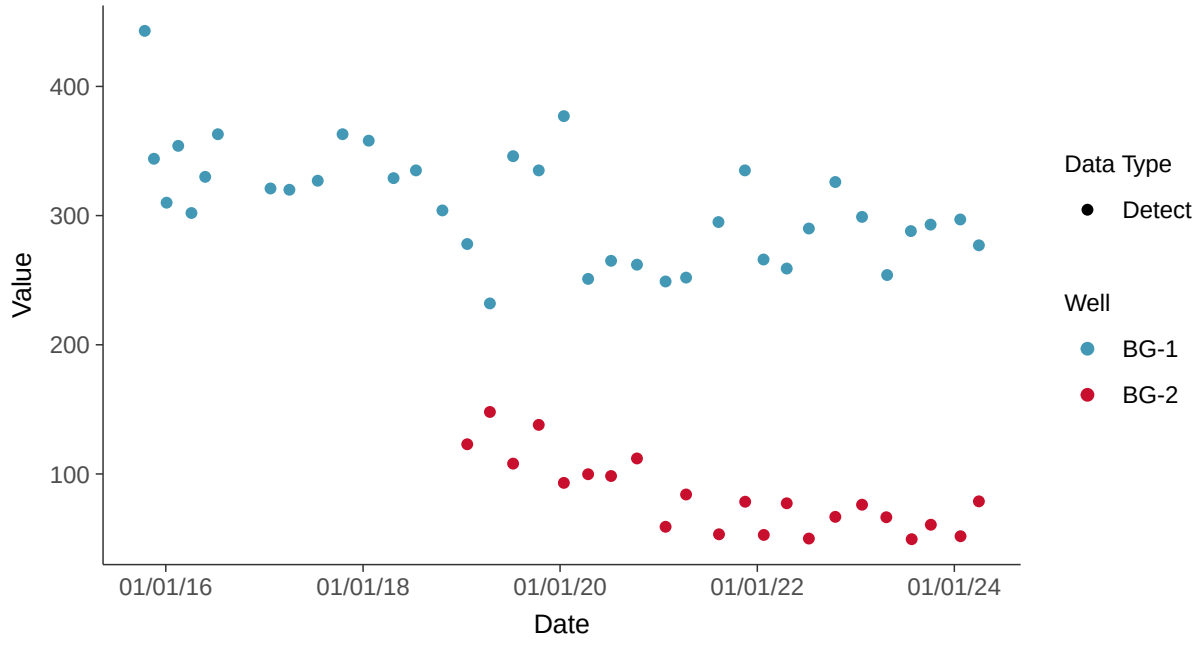
Scatter Plot

Barium, BG-1 & BG-2 (ug/L)



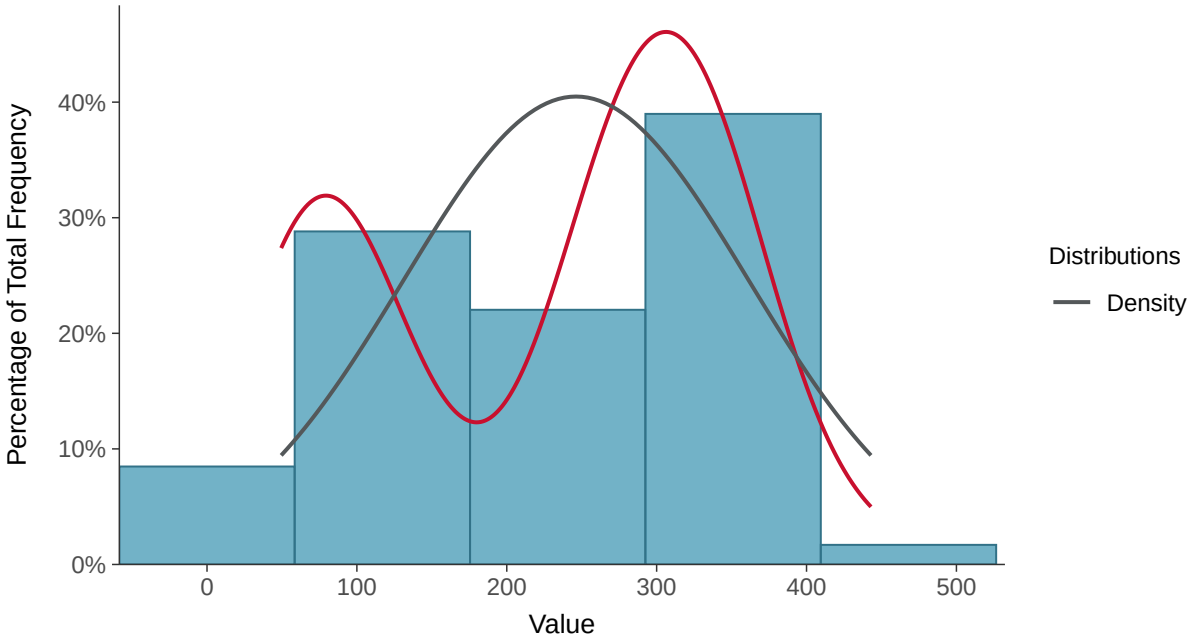
Scatter Plot by Well

Barium, BG-1 & BG-2 (ug/L)



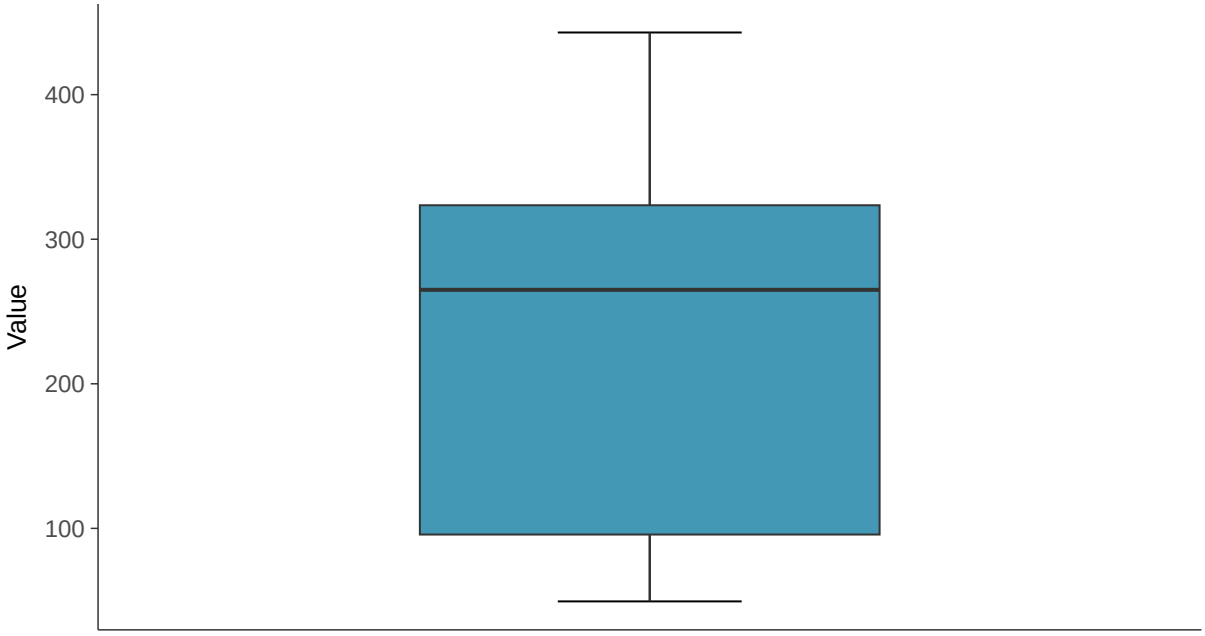
Histogram

Barium, BG-1 & BG-2 (ug/L)



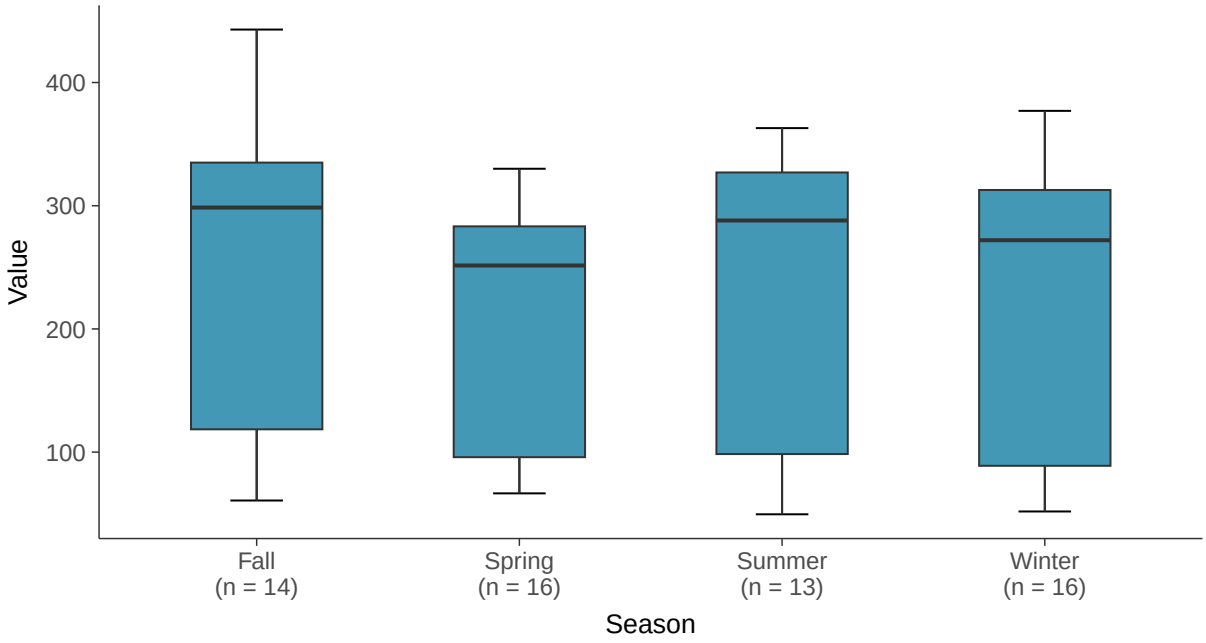
Boxplot

Barium, BG-1 & BG-2 (ug/L)



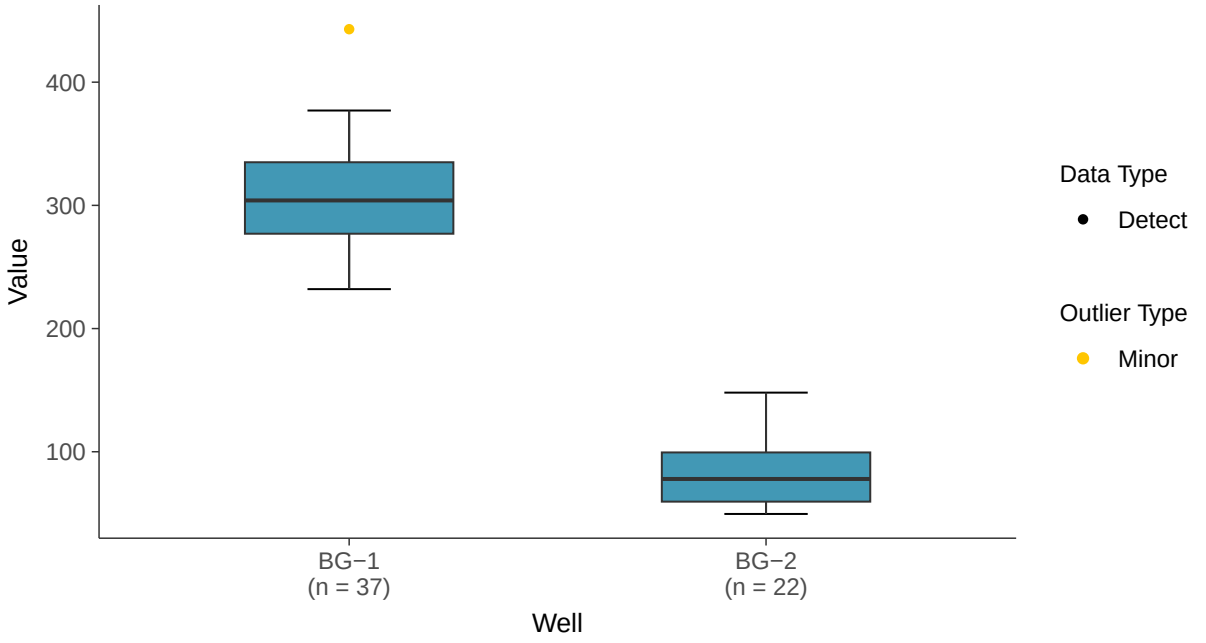
Boxplot by Season

Barium, BG-1 & BG-2 (ug/L)



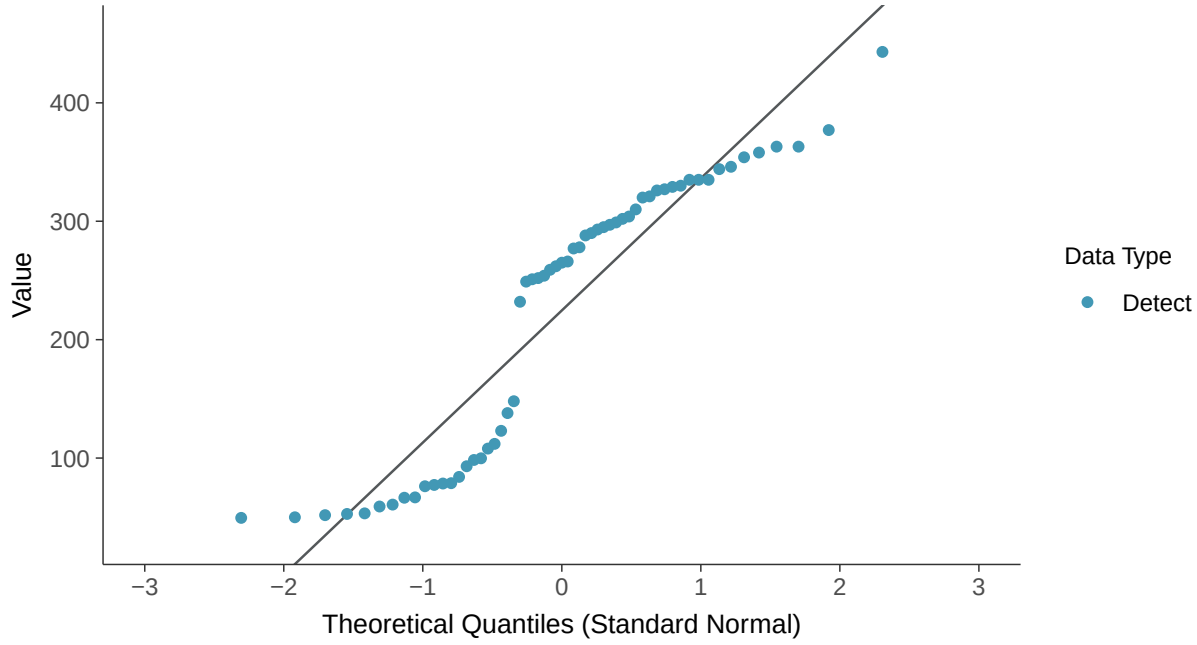
Boxplot by Well

Barium, BG-1 & BG-2 (ug/L)



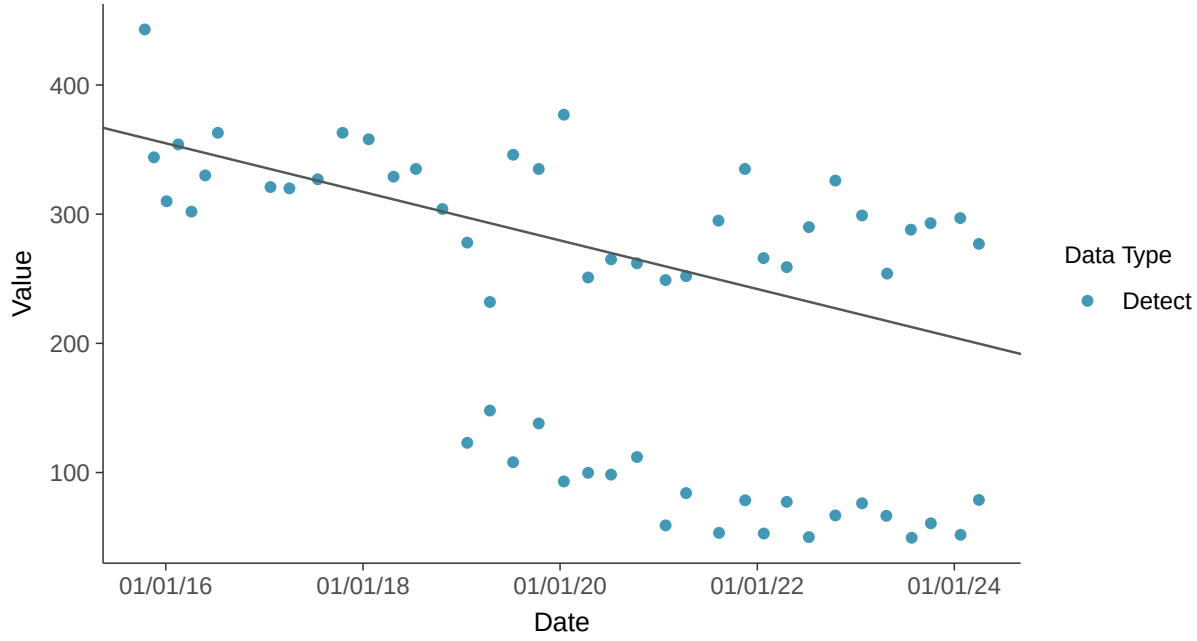
Normal Q-Q plot

Barium, BG-1 & BG-2 (ug/L)



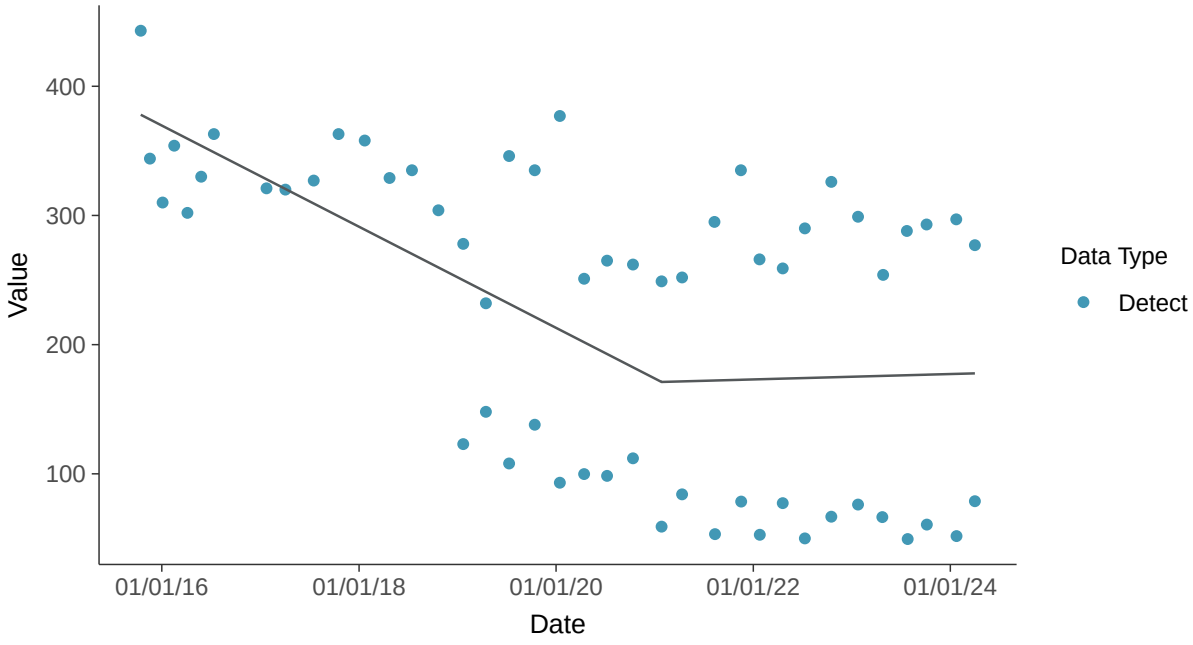
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, BG-1 & BG-2 (ug/L)



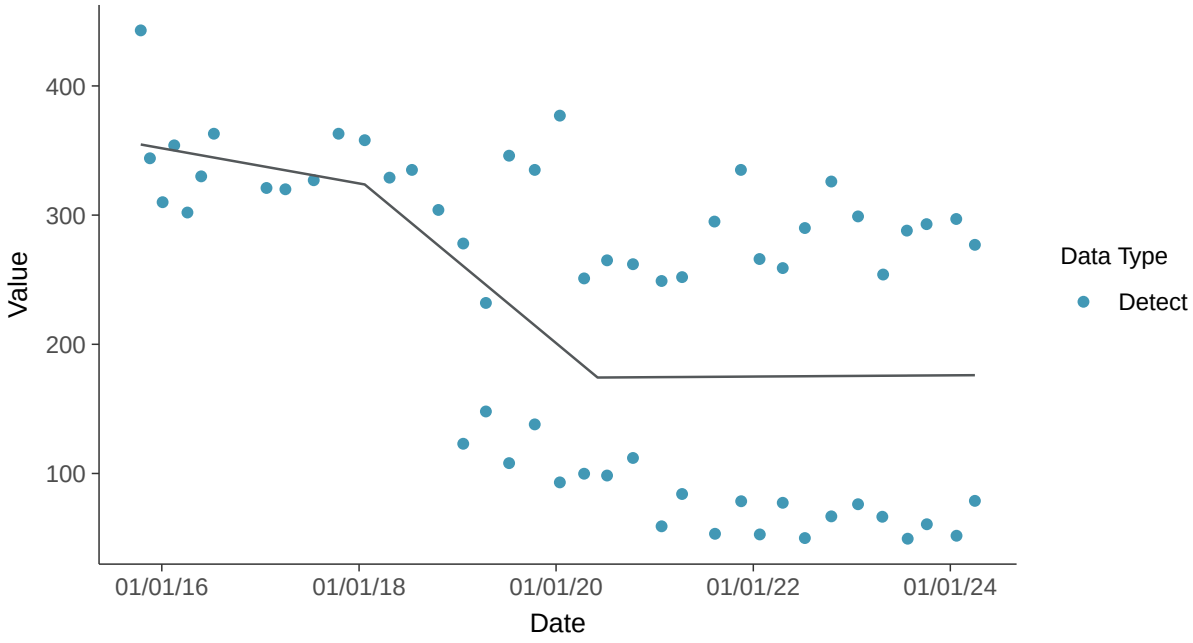
Trend Regression: Piecewise Linear-Linear

Barium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, BG-1 & BG-2 (ug/L)

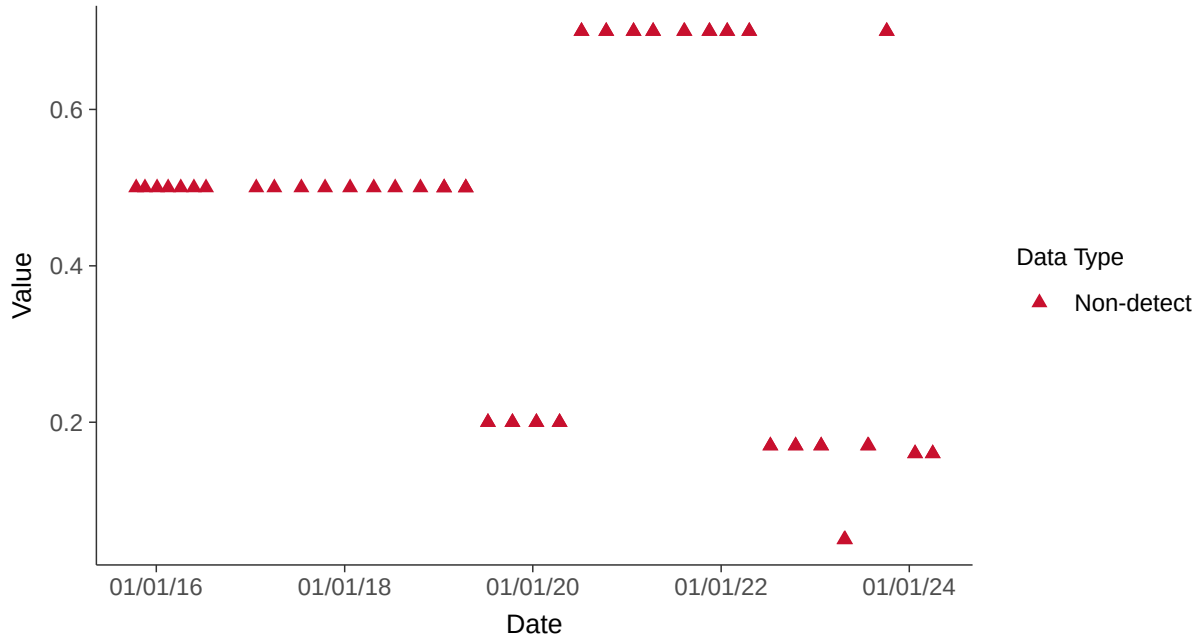


App. IV: Beryllium, BG-1 & BG-2

ID: 3_104

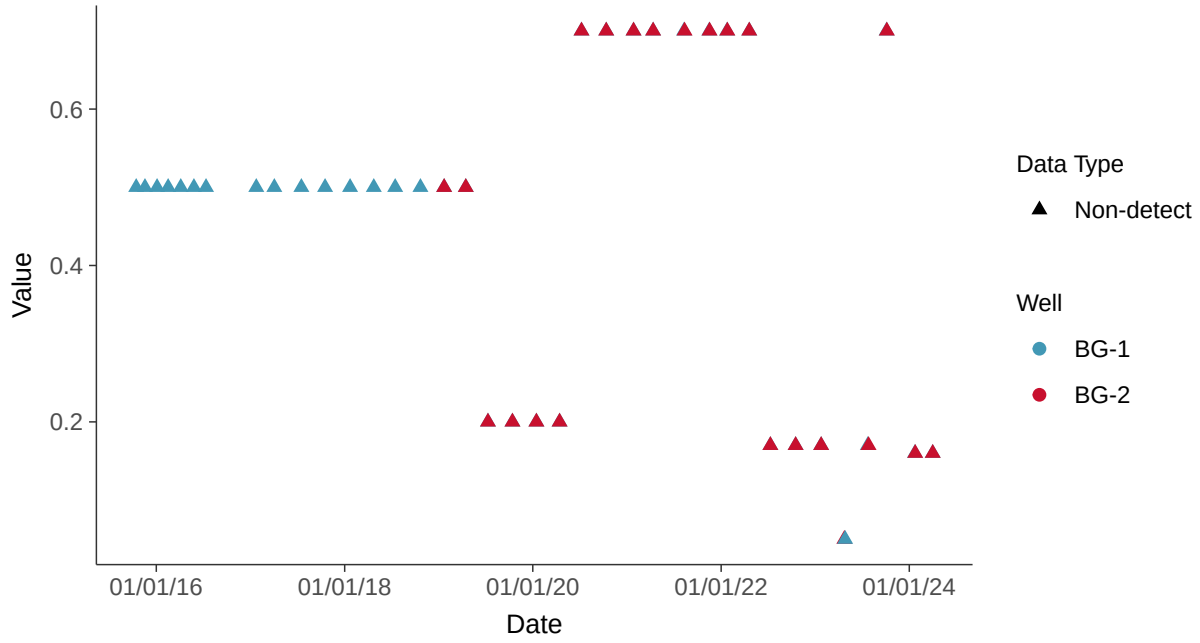
Scatter Plot

Beryllium, BG-1 & BG-2 (ug/L)



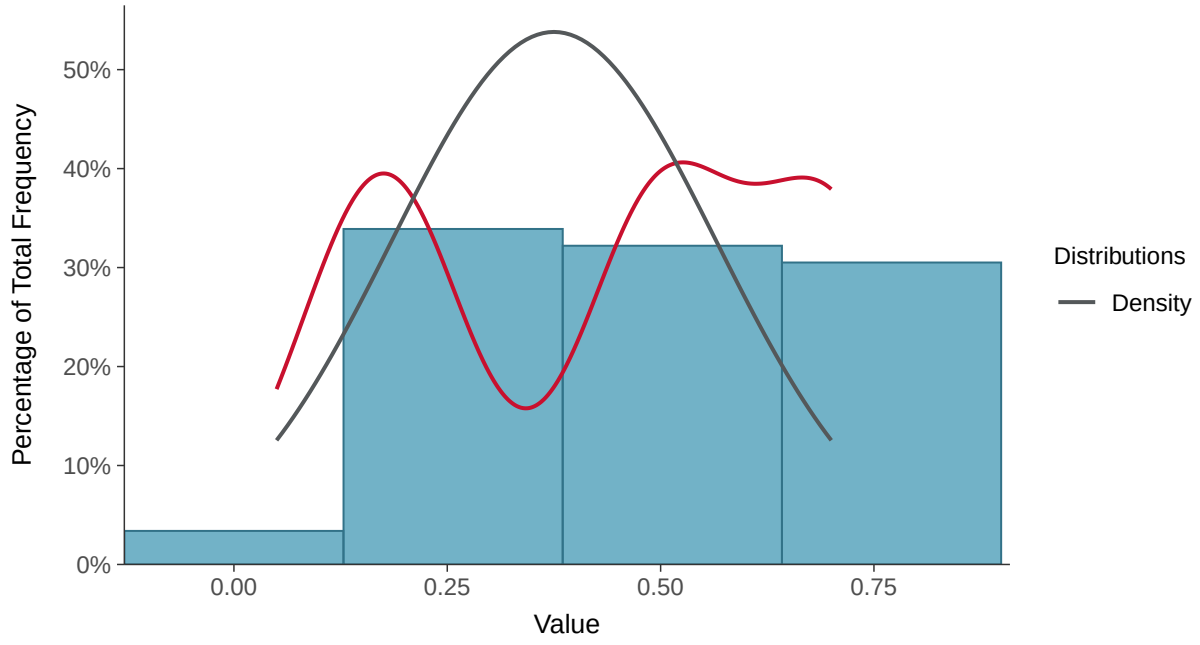
Scatter Plot by Well

Beryllium, BG-1 & BG-2 (ug/L)



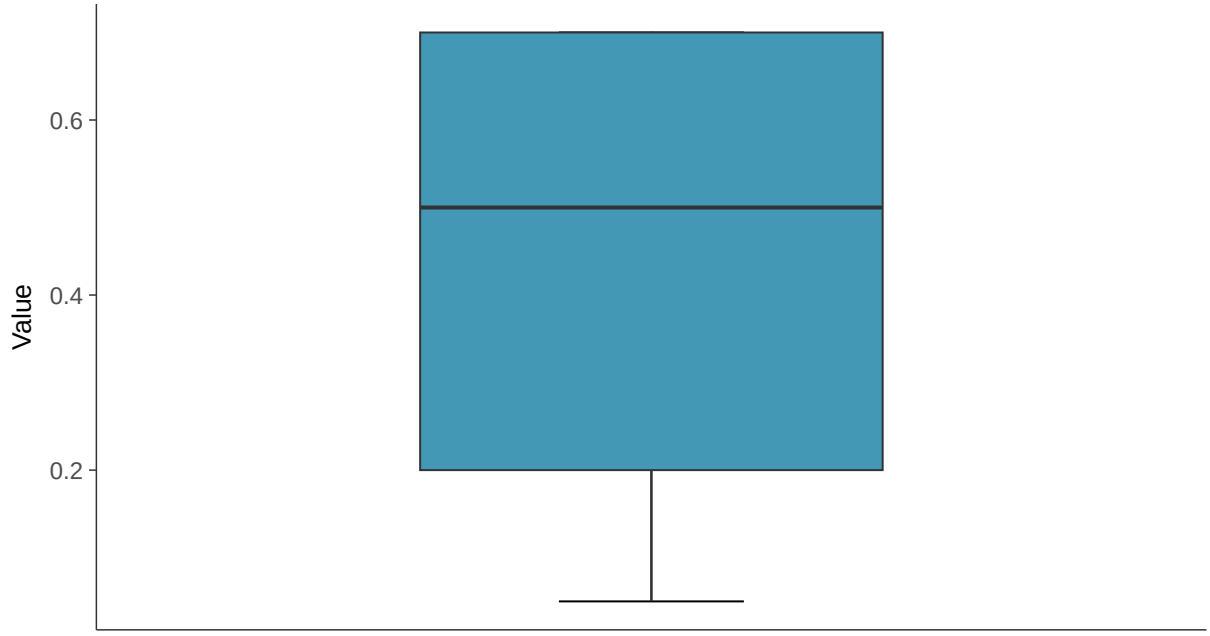
Histogram

Beryllium, BG-1 & BG-2 (ug/L)



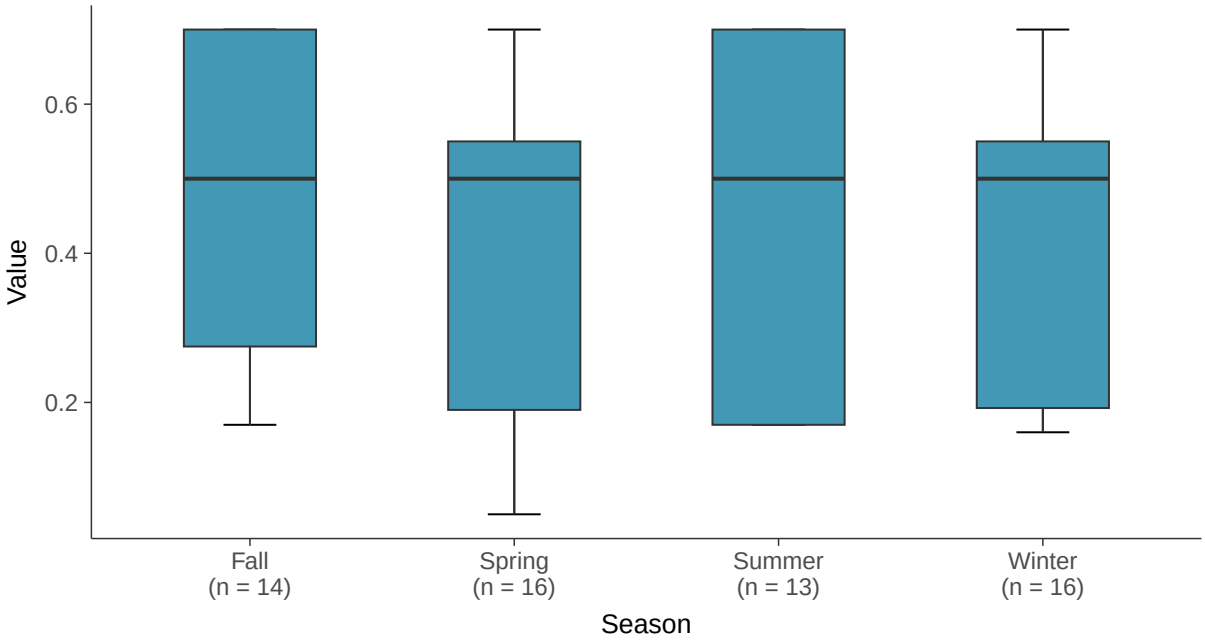
Boxplot

Beryllium, BG-1 & BG-2 (ug/L)



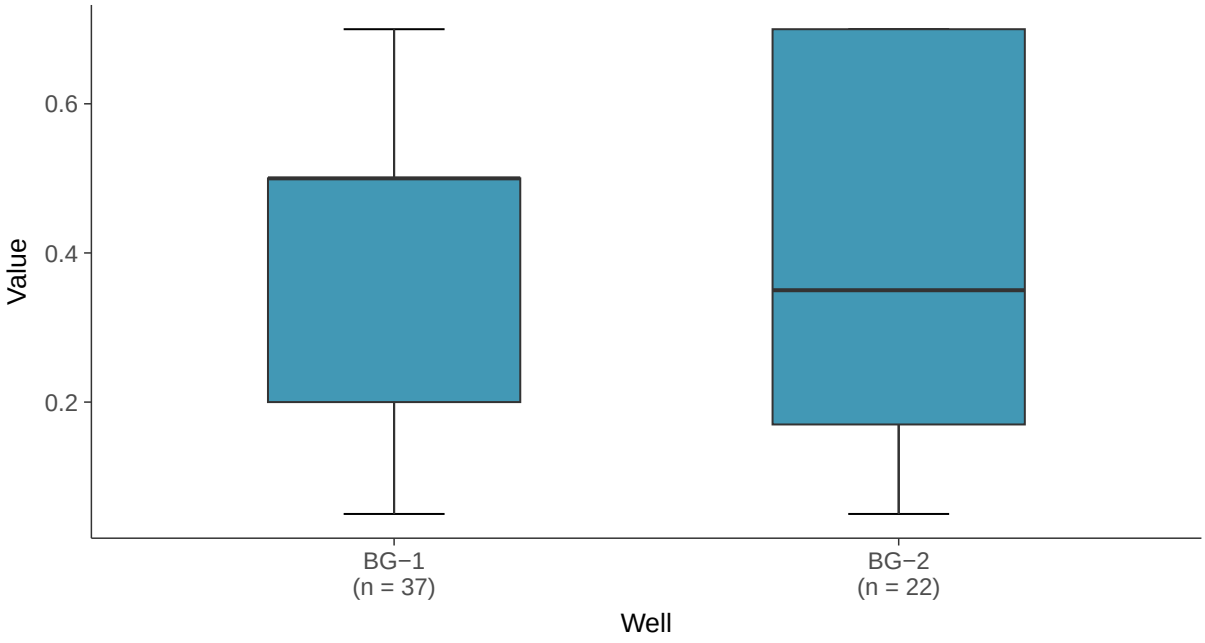
Boxplot by Season

Beryllium, BG-1 & BG-2 (ug/L)



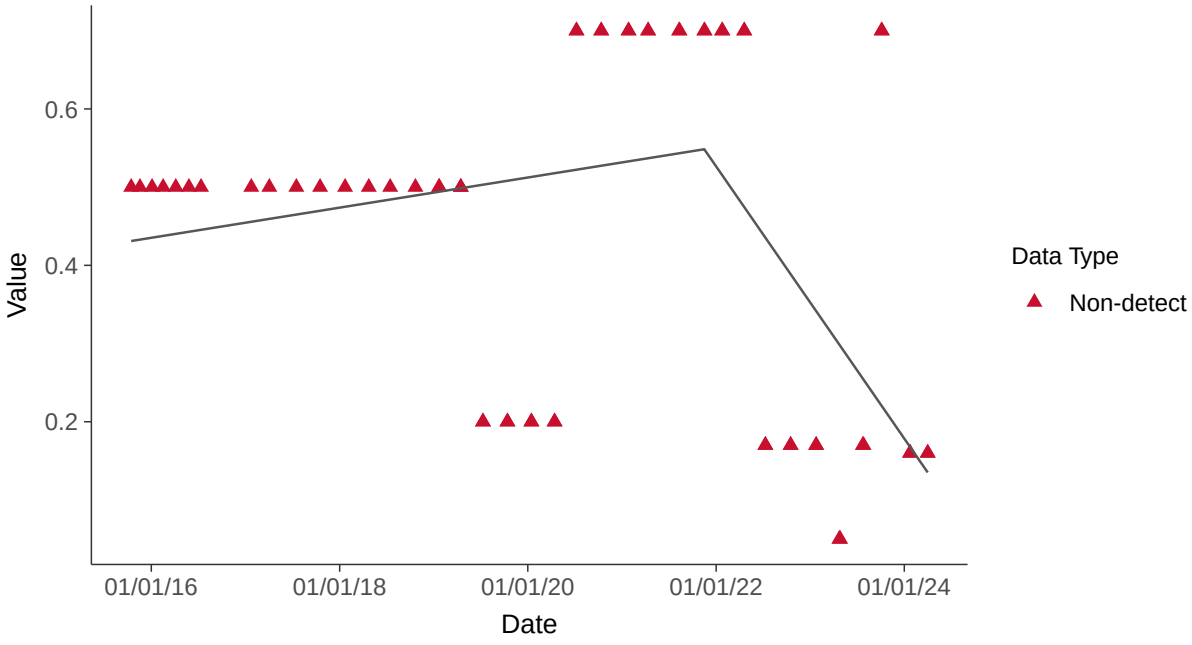
Boxplot by Well

Beryllium, BG-1 & BG-2 (ug/L)



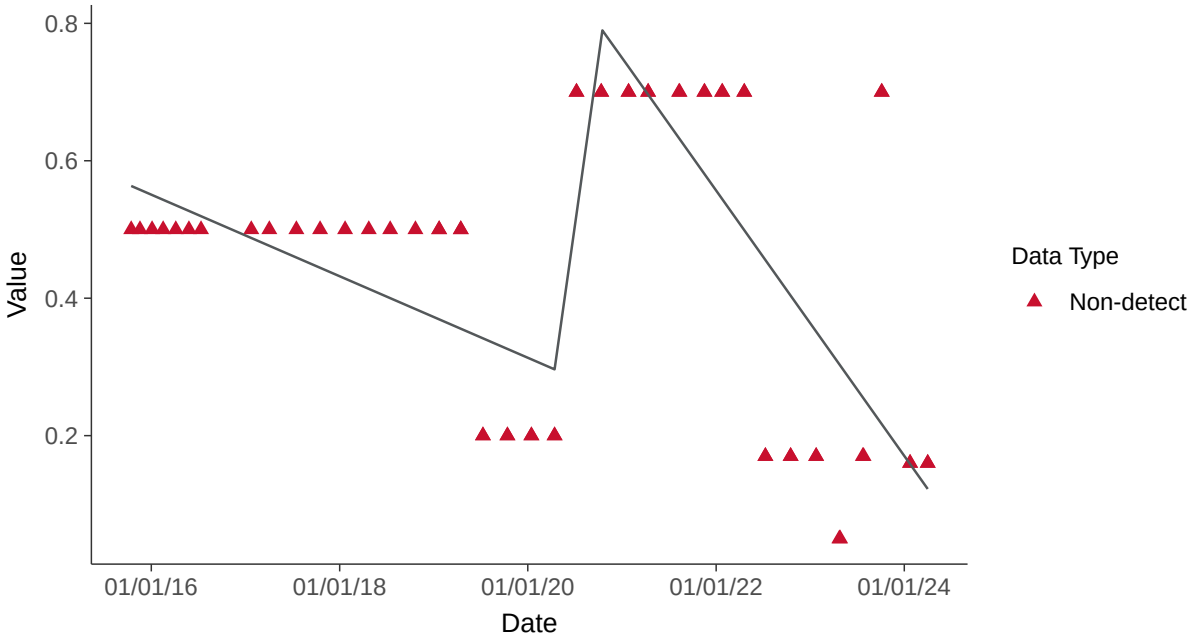
Trend Regression: Piecewise Linear-Linear

Beryllium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, BG-1 & BG-2 (ug/L)

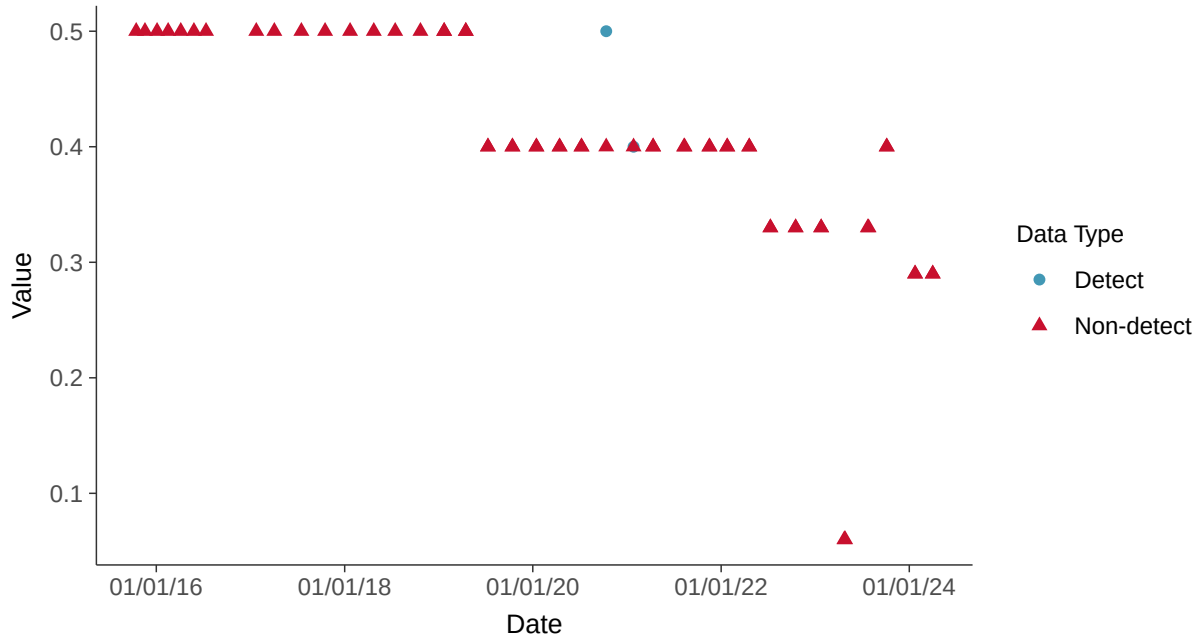


App. IV: Cadmium, BG-1 & BG-2

ID: 3_106

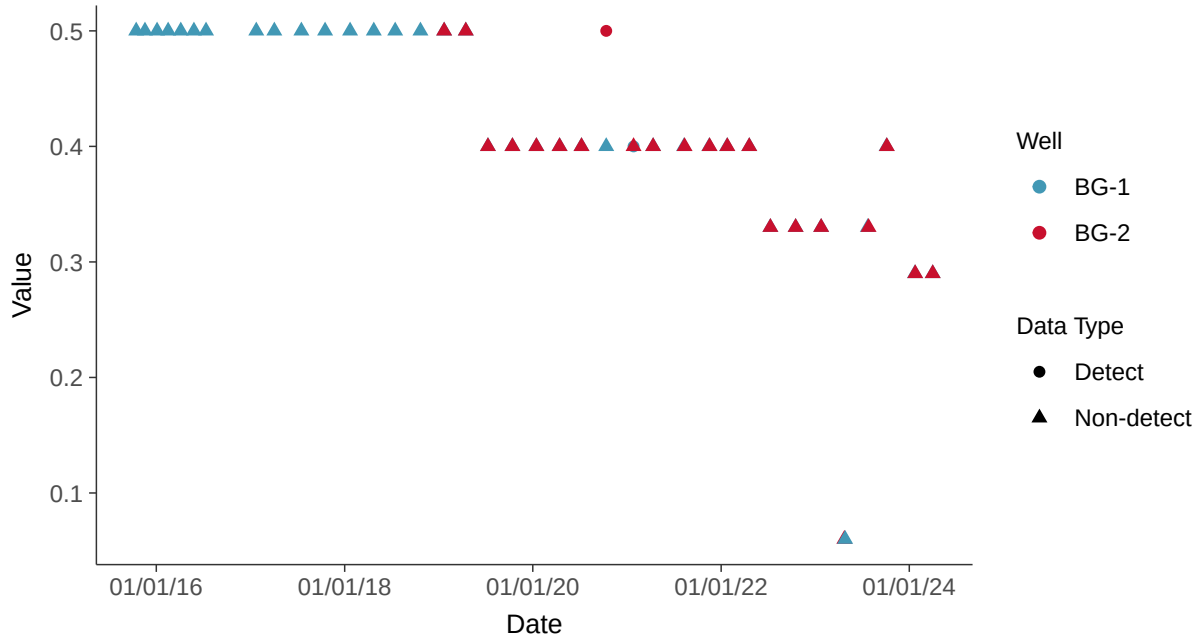
Scatter Plot

Cadmium, BG-1 & BG-2 (ug/L)



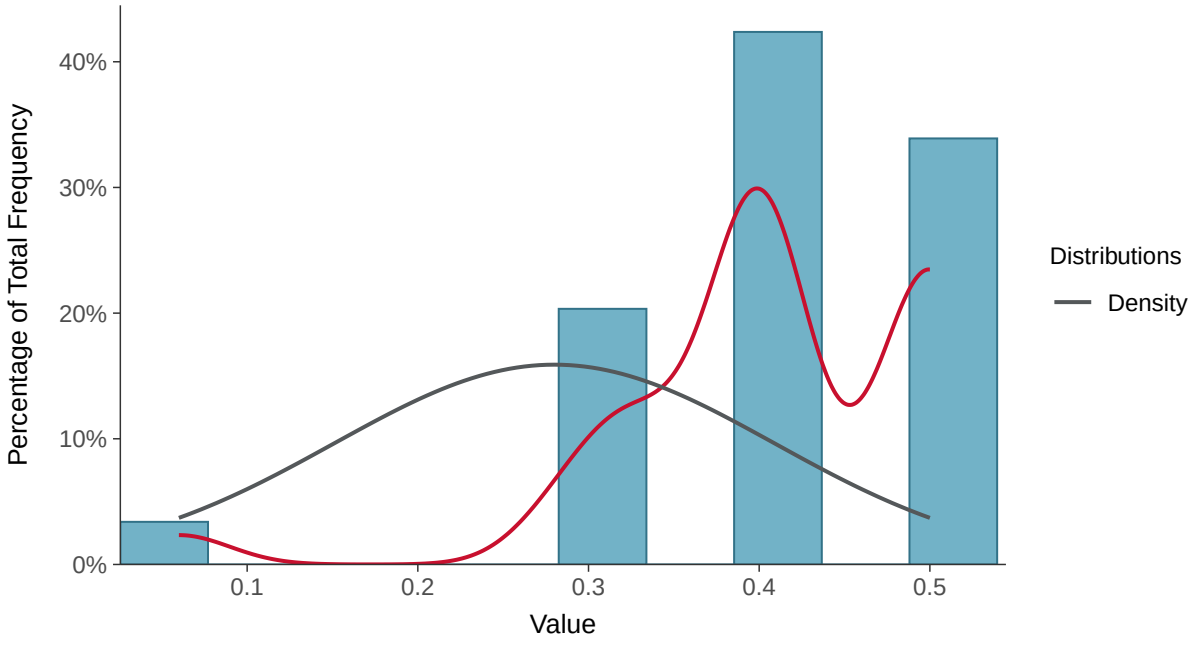
Scatter Plot by Well

Cadmium, BG-1 & BG-2 (ug/L)



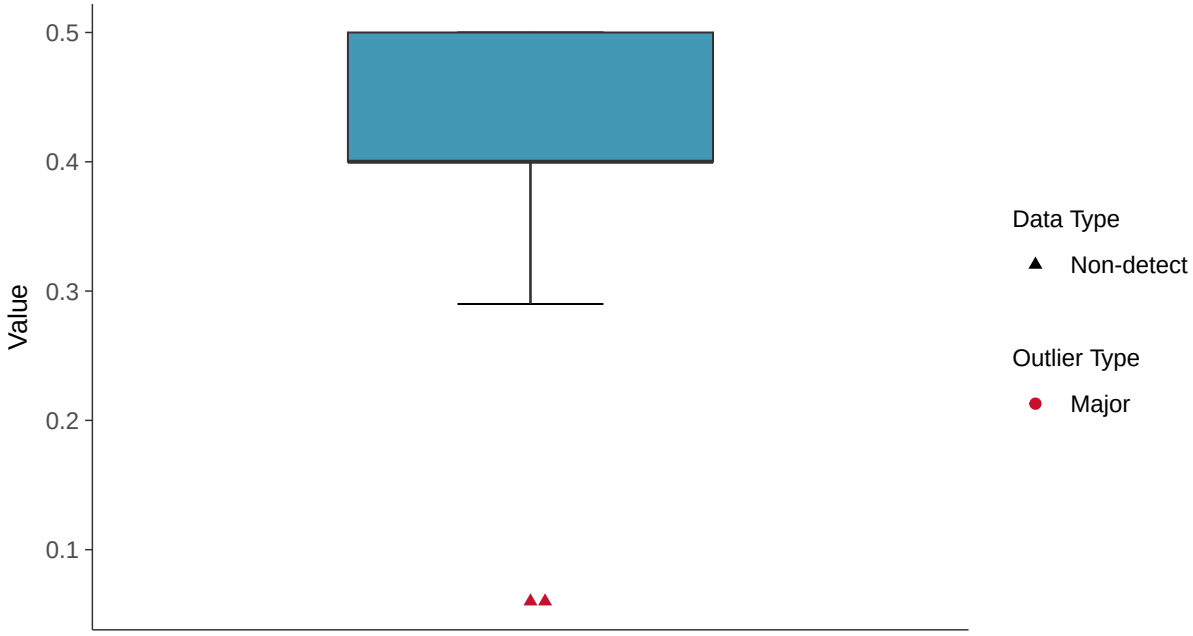
Histogram

Cadmium, BG-1 & BG-2 (ug/L)



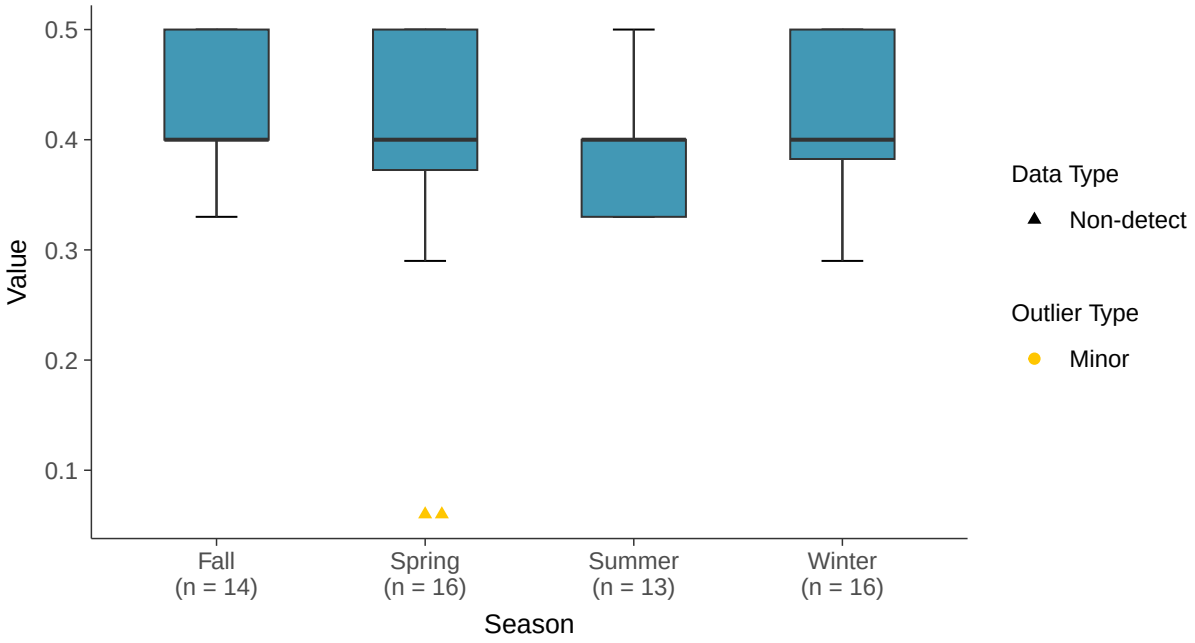
Boxplot

Cadmium, BG-1 & BG-2 (ug/L)



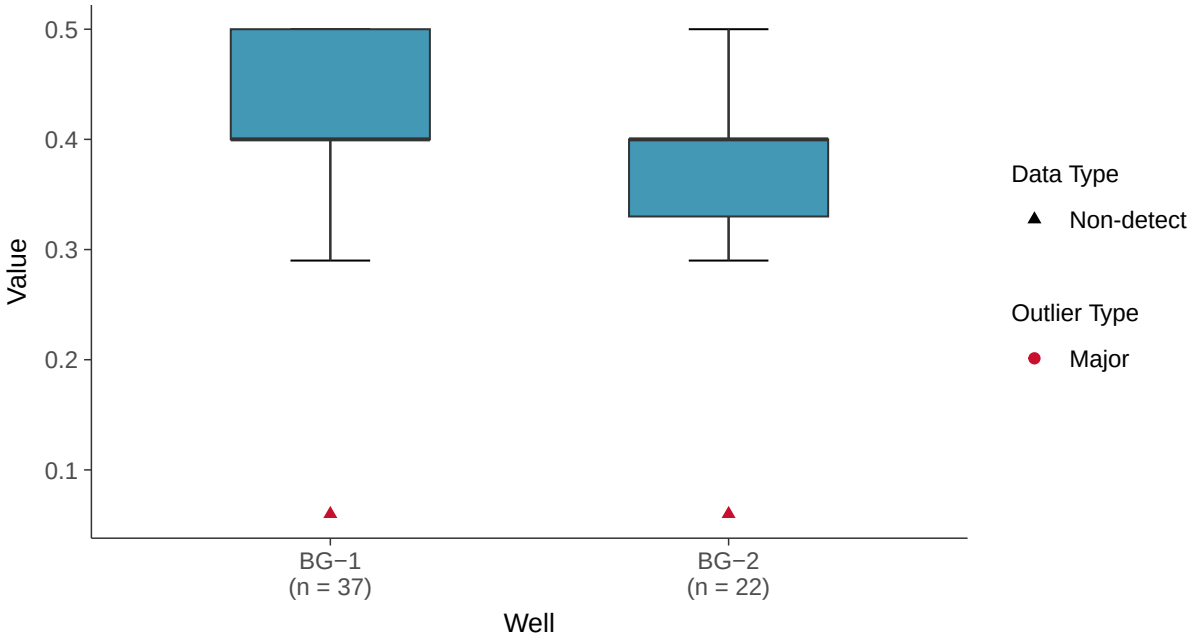
Boxplot by Season

Cadmium, BG-1 & BG-2 (ug/L)



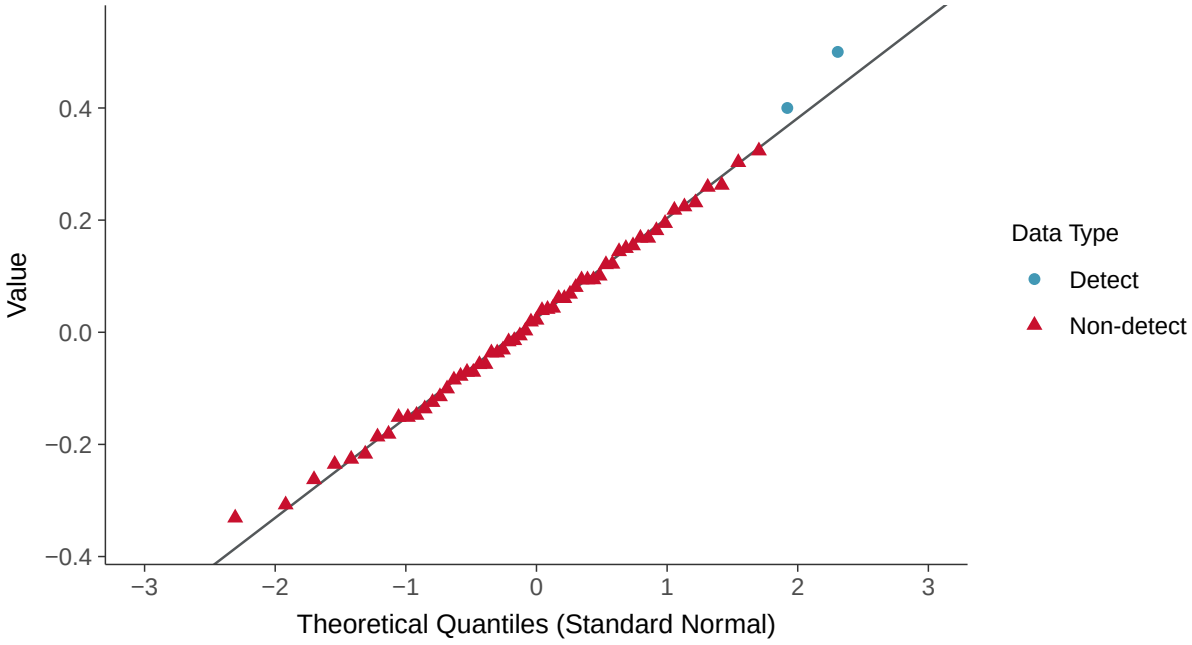
Boxplot by Well

Cadmium, BG-1 & BG-2 (ug/L)



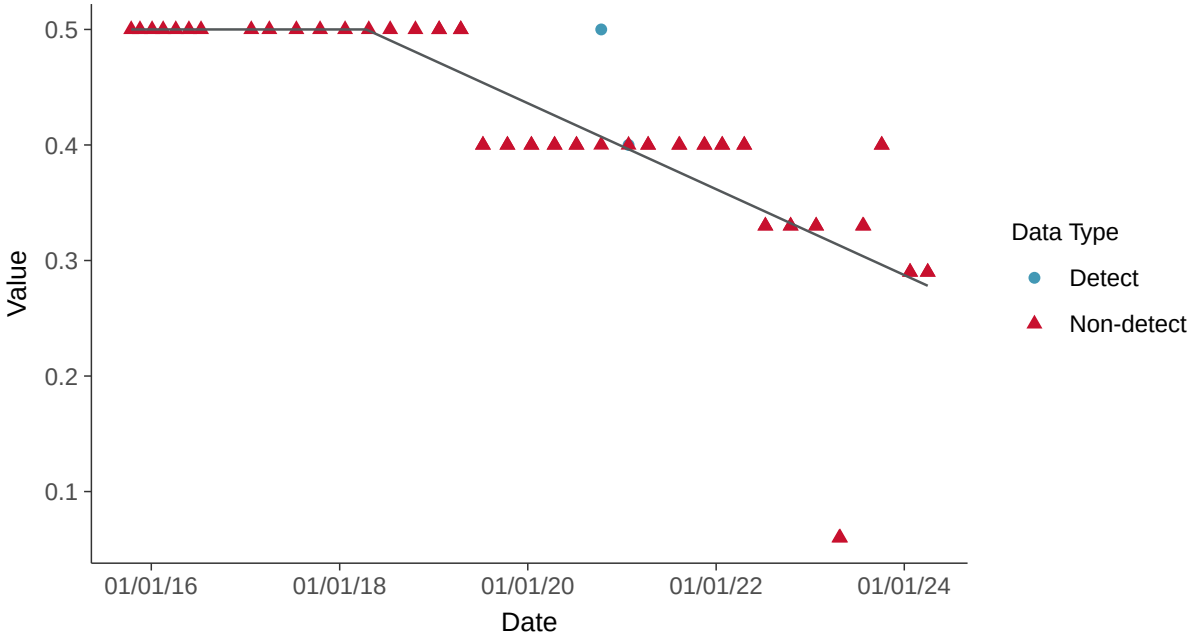
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, BG-1 & BG-2 (ug/L)



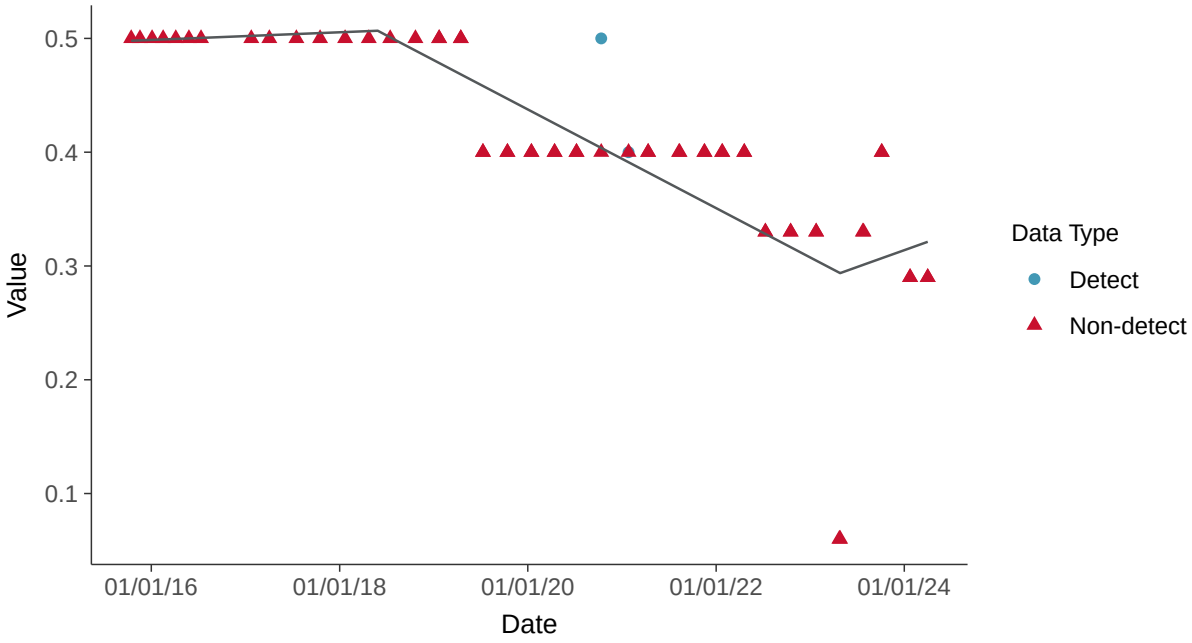
Trend Regression: Piecewise Linear-Linear

Cadmium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, BG-1 & BG-2 (ug/L)

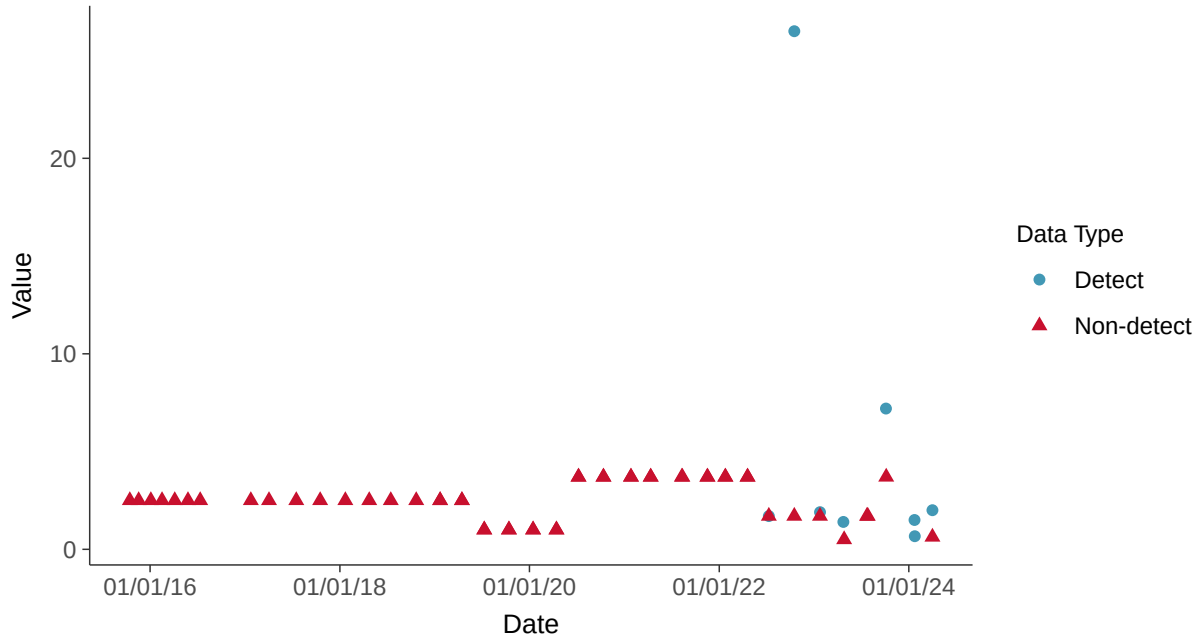


App. IV: Chromium, BG-1 & BG-2

ID: 3_109

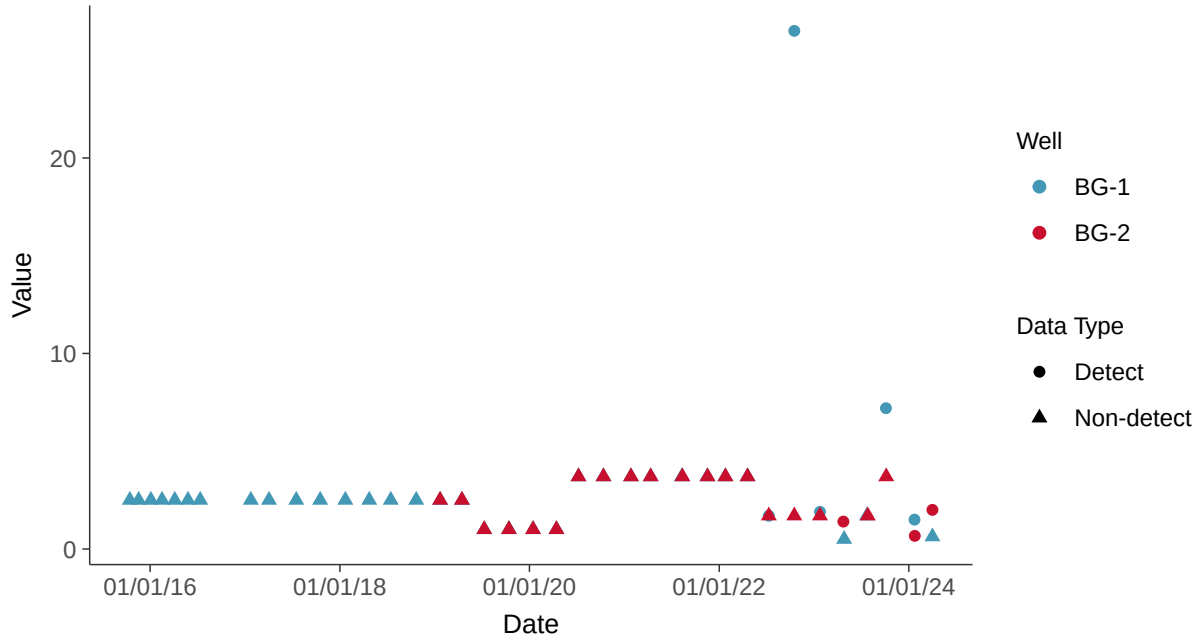
Scatter Plot

Chromium, BG-1 & BG-2 (ug/L)



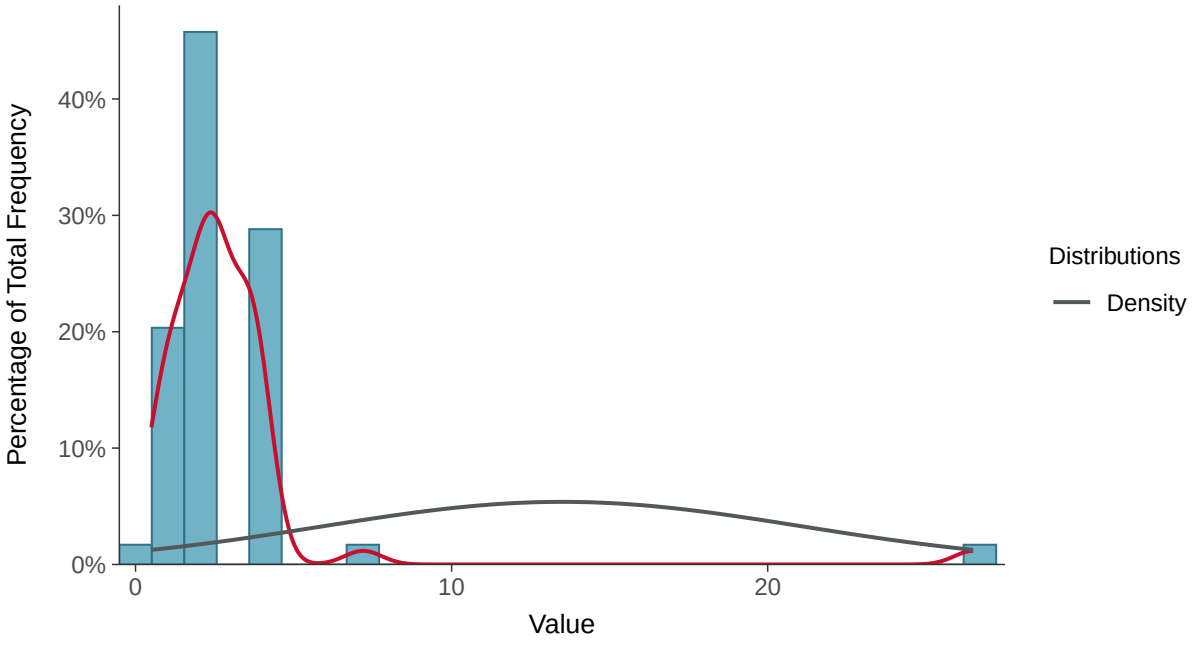
Scatter Plot by Well

Chromium, BG-1 & BG-2 (ug/L)



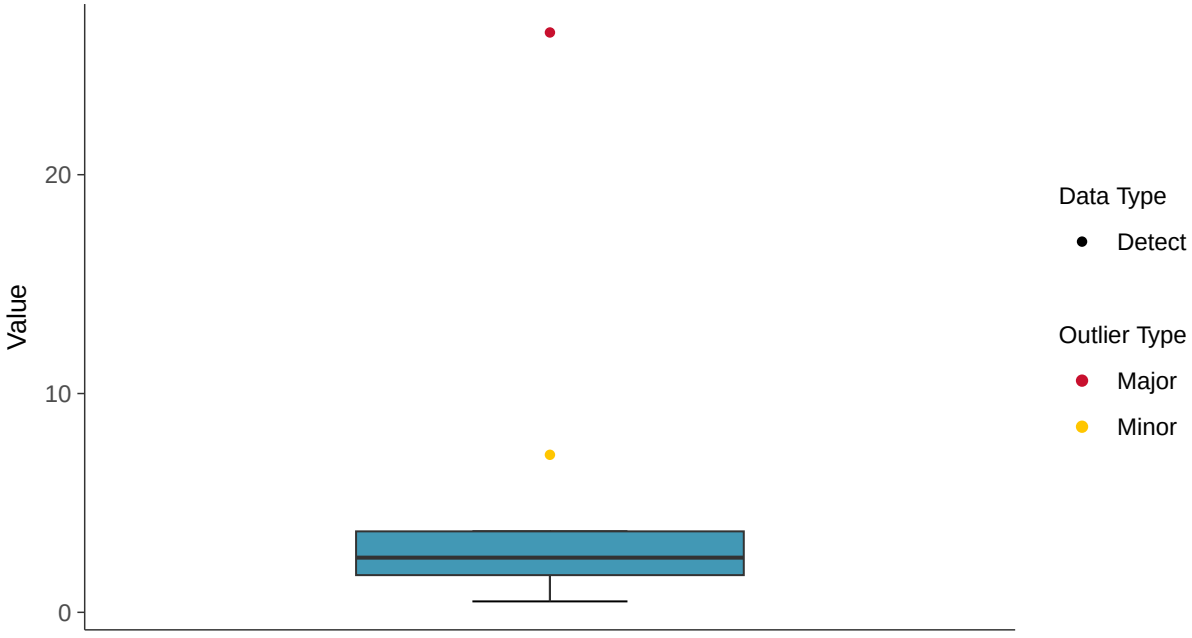
Histogram

Chromium, BG-1 & BG-2 (ug/L)



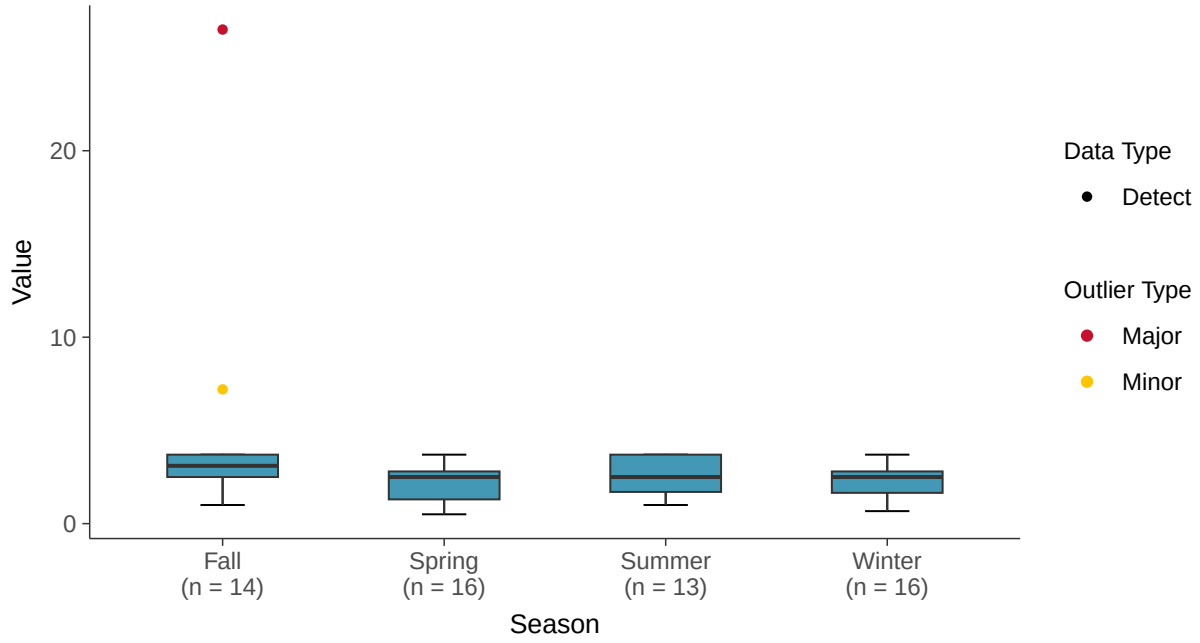
Boxplot

Chromium, BG-1 & BG-2 (ug/L)



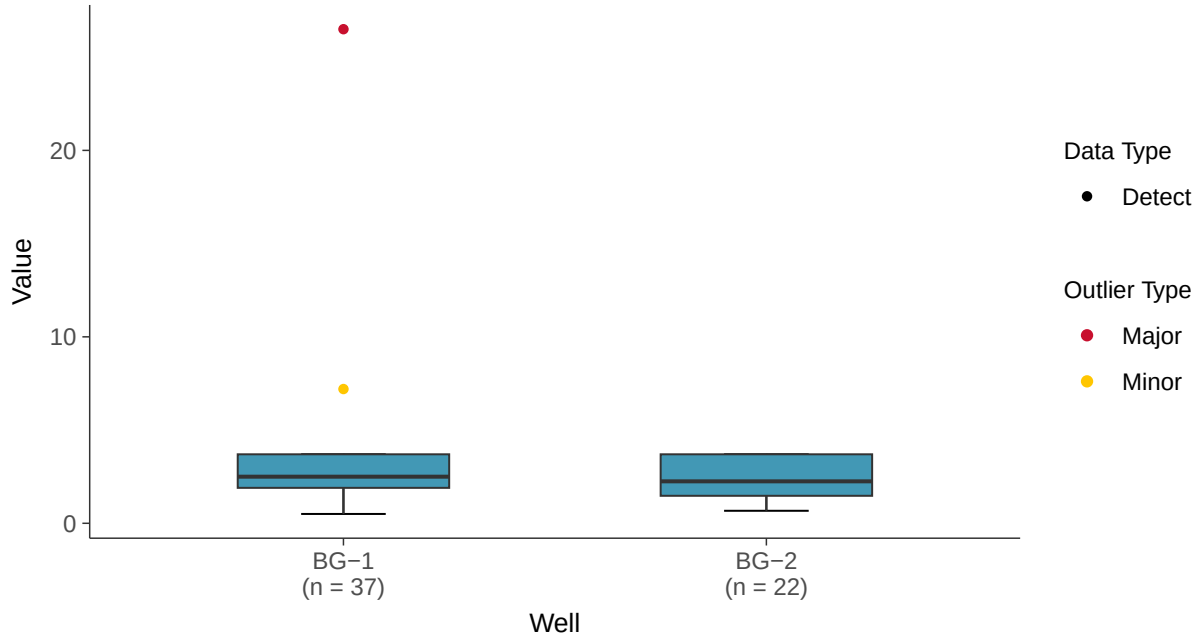
Boxplot by Season

Chromium, BG-1 & BG-2 (ug/L)



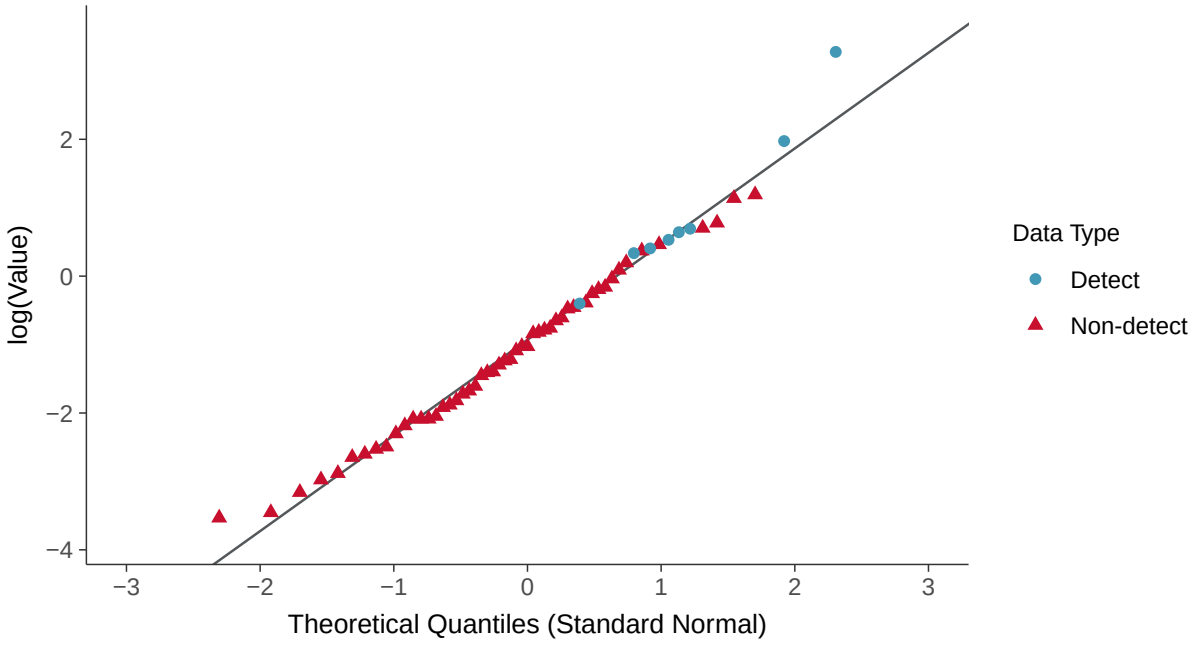
Boxplot by Well

Chromium, BG-1 & BG-2 (ug/L)



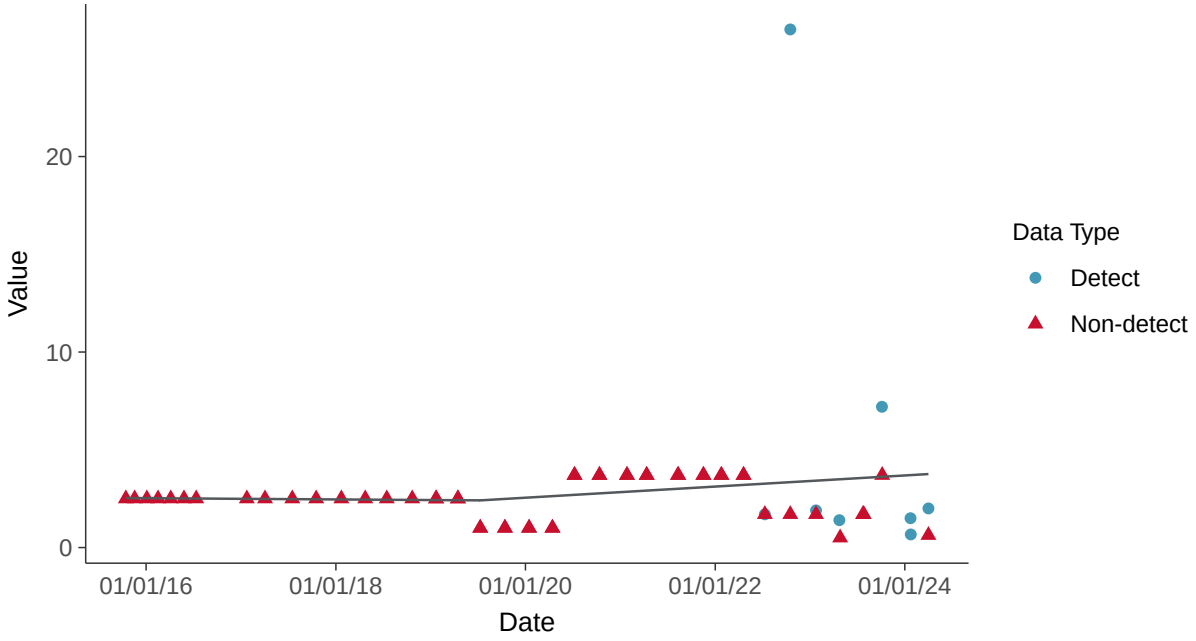
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Chromium, BG-1 & BG-2 (ug/L)

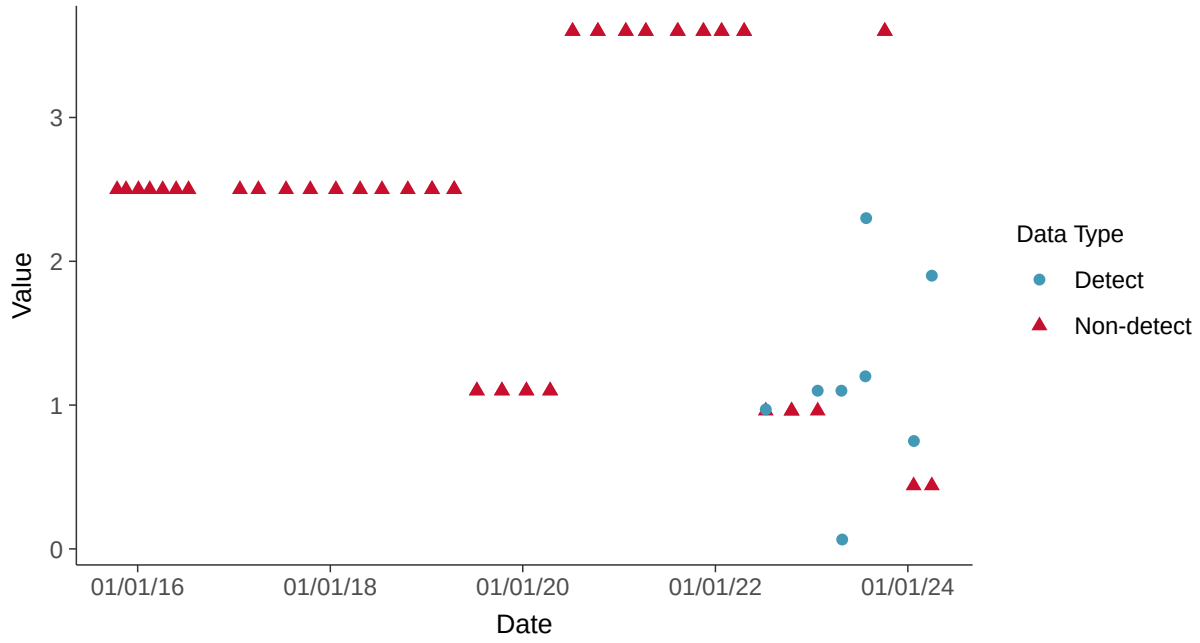


App. IV: Cobalt, BG-1 & BG-2

ID: 3_110

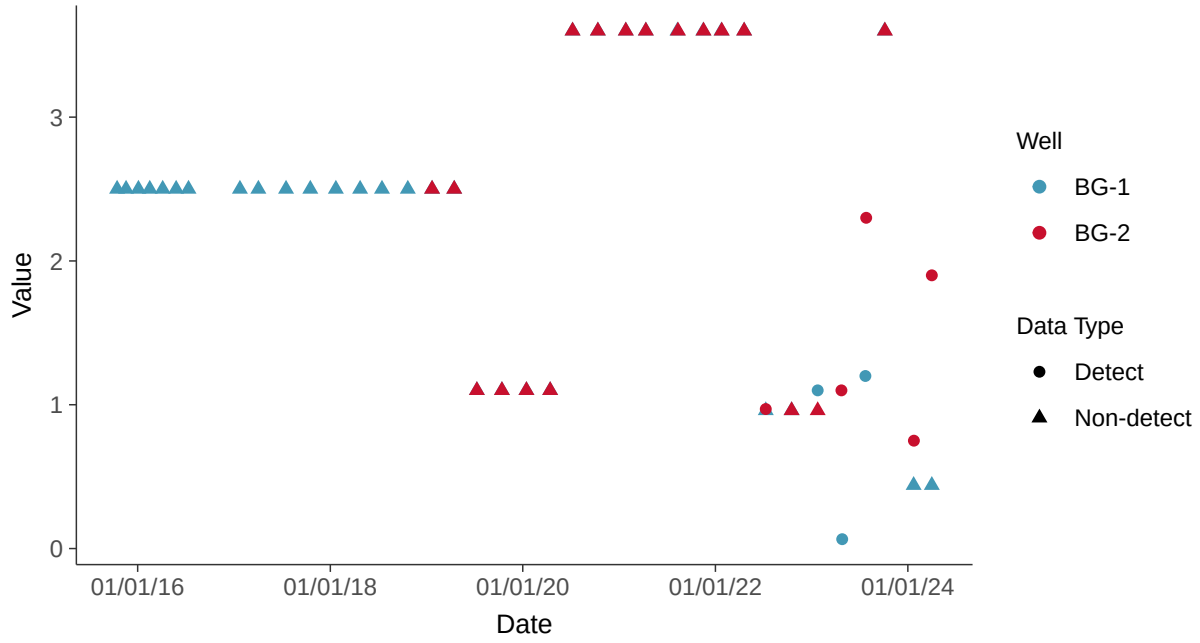
Scatter Plot

Cobalt, BG-1 & BG-2 (ug/L)



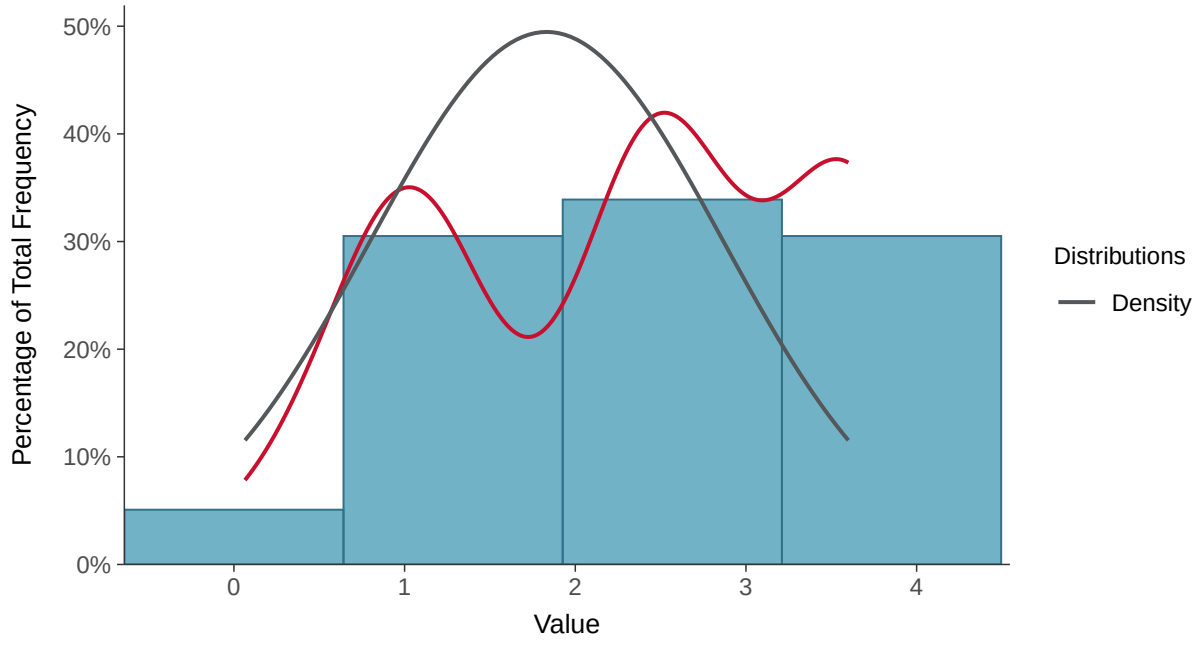
Scatter Plot by Well

Cobalt, BG-1 & BG-2 (ug/L)



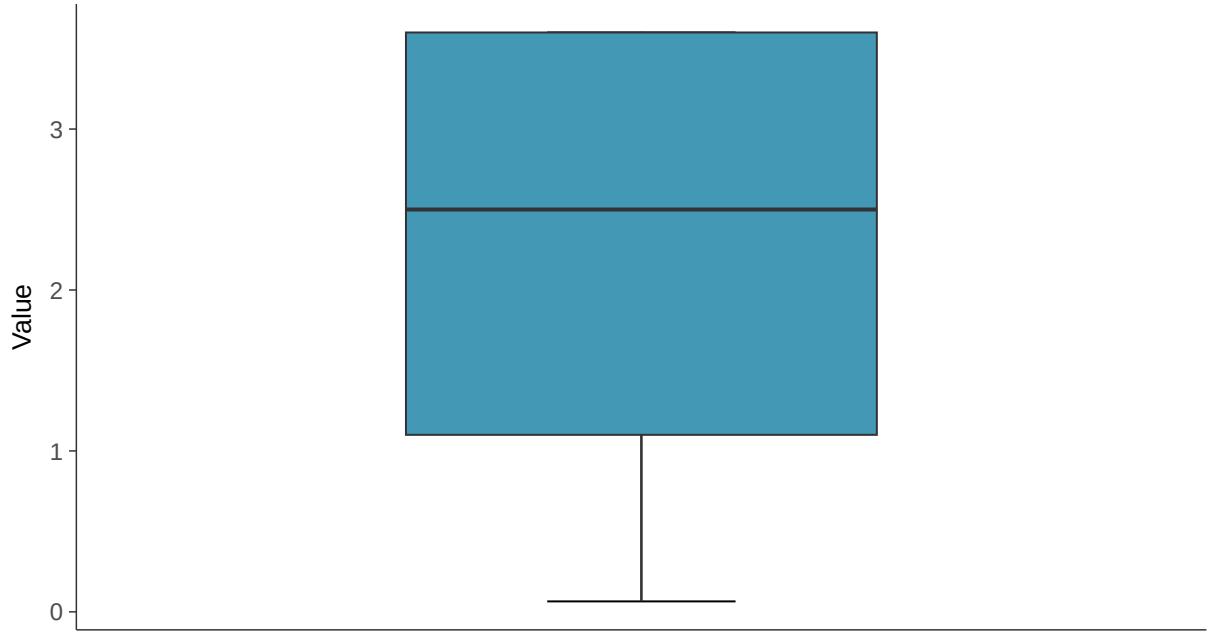
Histogram

Cobalt, BG-1 & BG-2 (ug/L)



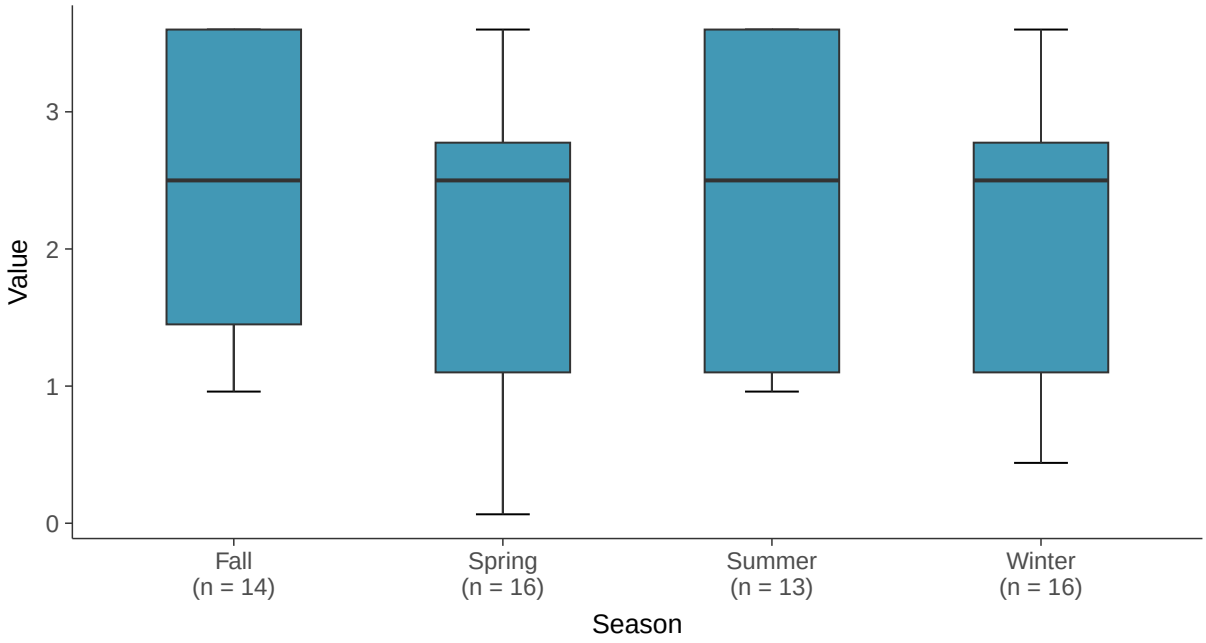
Boxplot

Cobalt, BG-1 & BG-2 (ug/L)



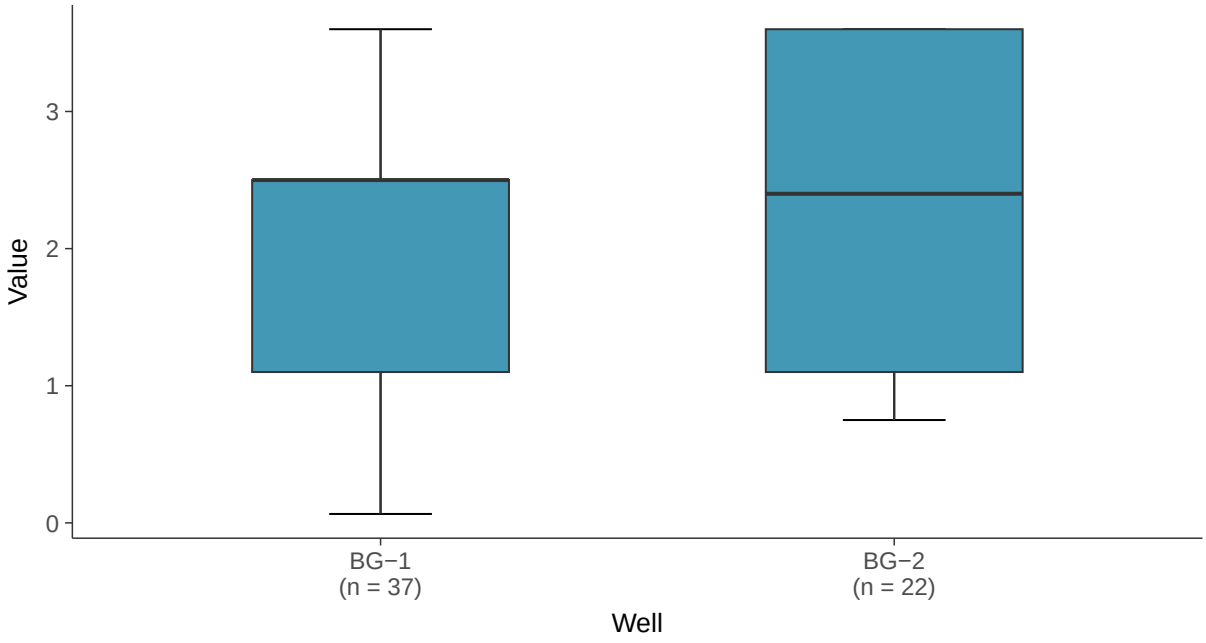
Boxplot by Season

Cobalt, BG-1 & BG-2 (ug/L)



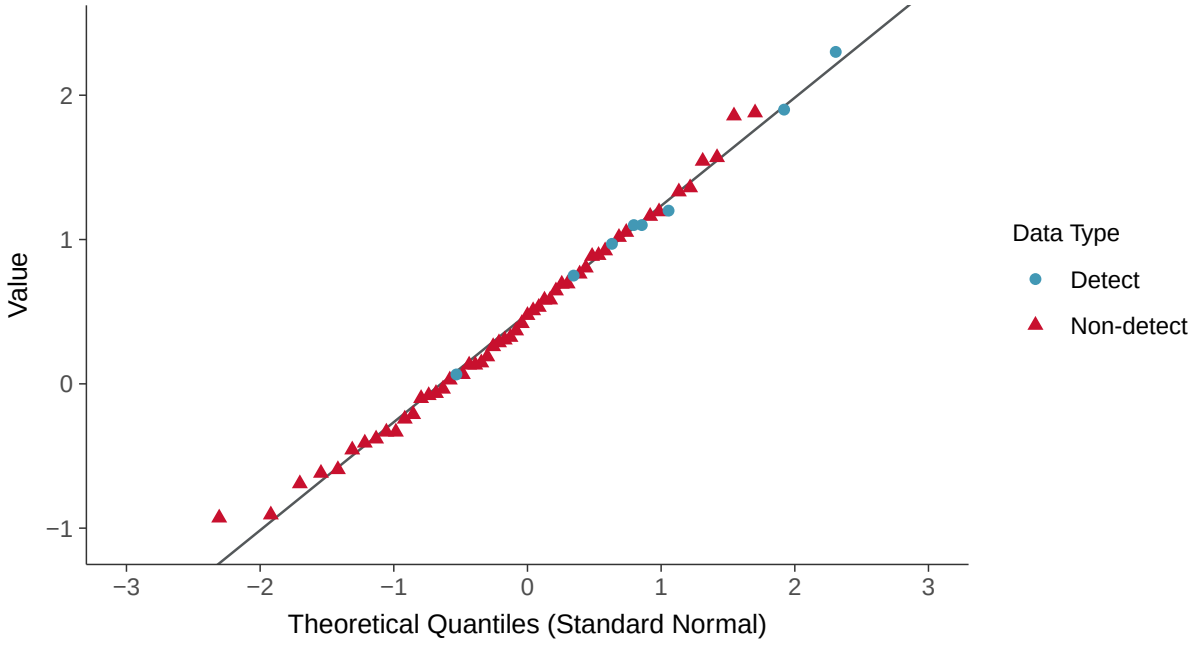
Boxplot by Well

Cobalt, BG-1 & BG-2 (ug/L)



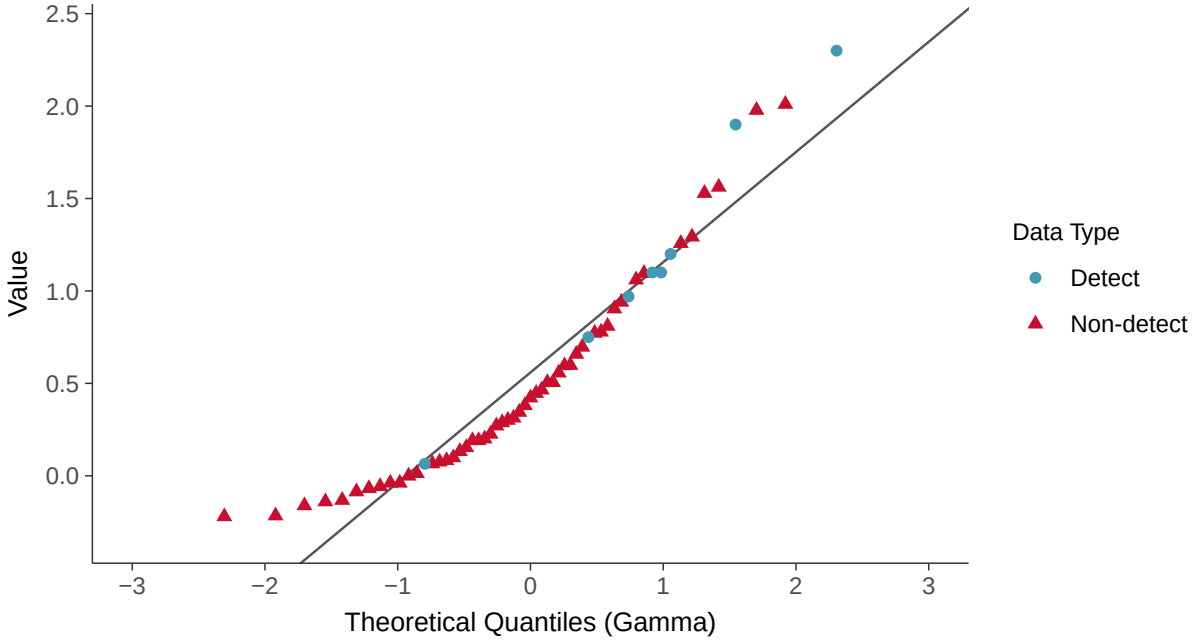
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, BG-1 & BG-2 (ug/L)



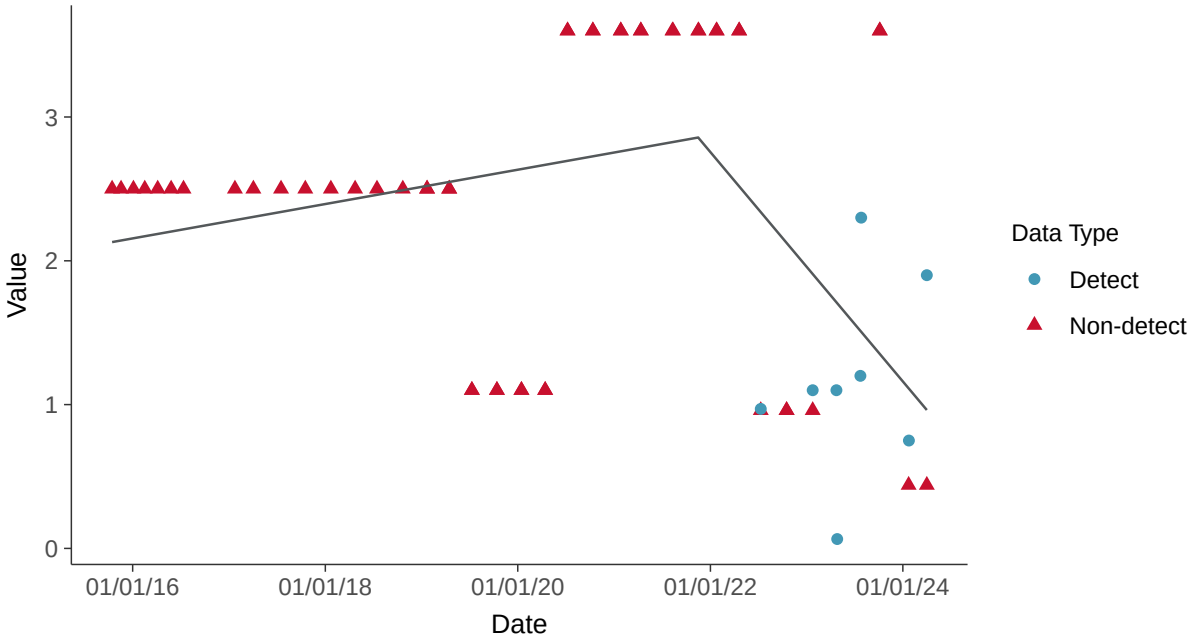
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, BG-1 & BG-2 (ug/L)

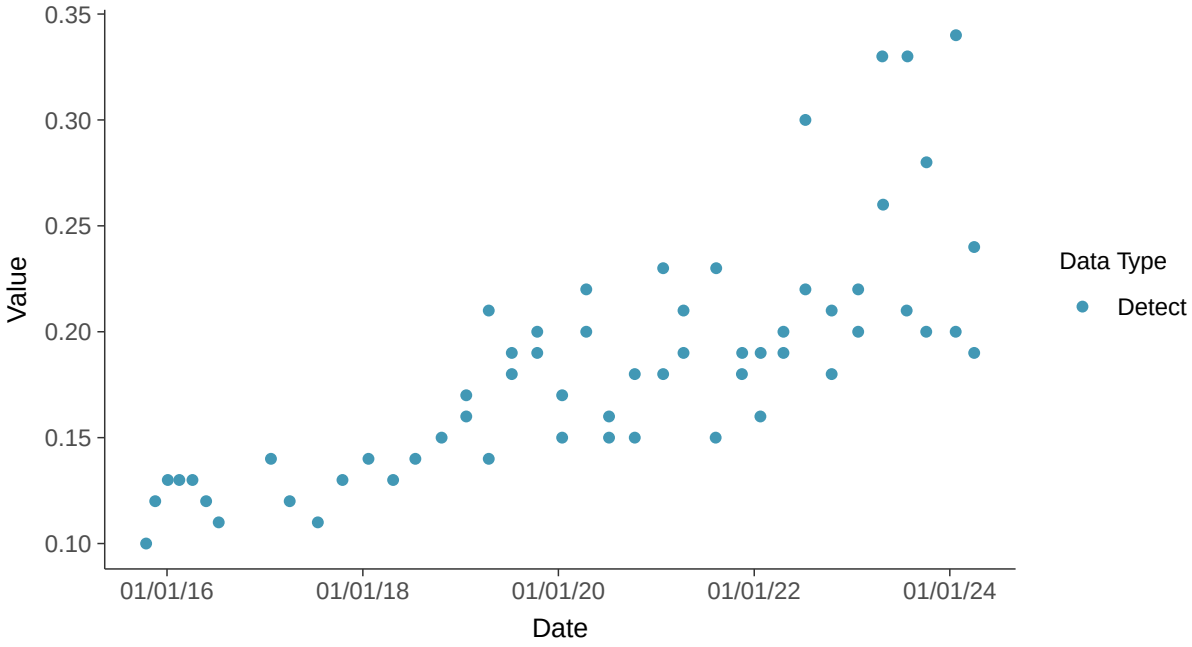


App. IV: Fluoride, BG-1 & BG-2

ID: 3_112

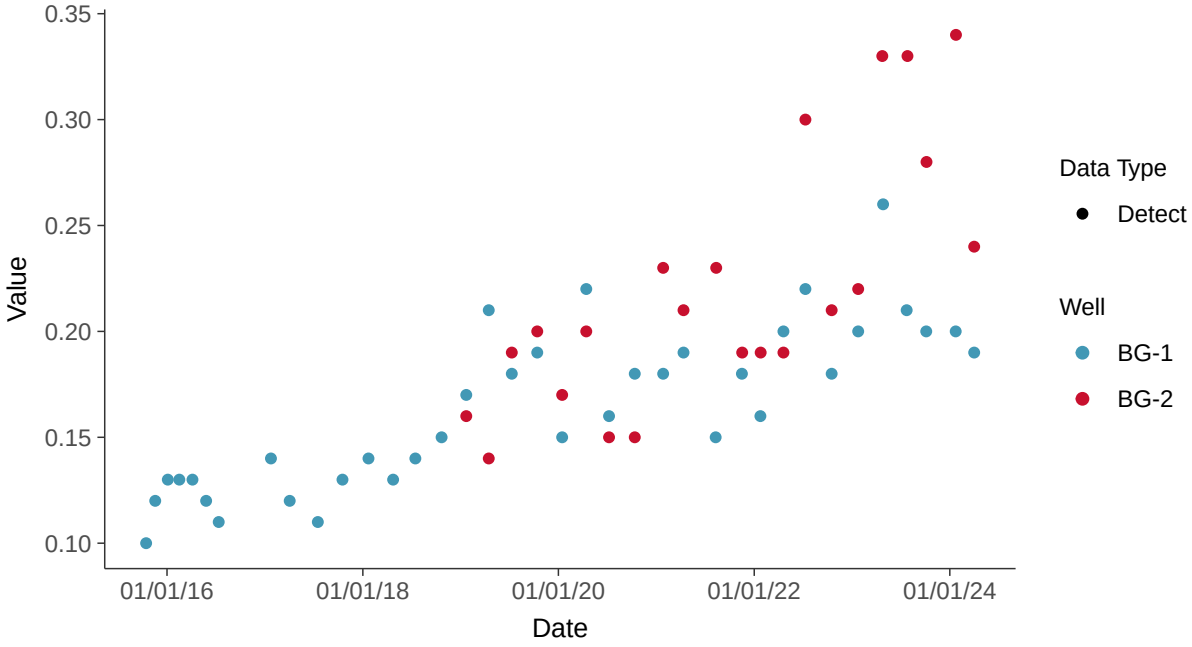
Scatter Plot

Fluoride, BG-1 & BG-2 (mg/L)



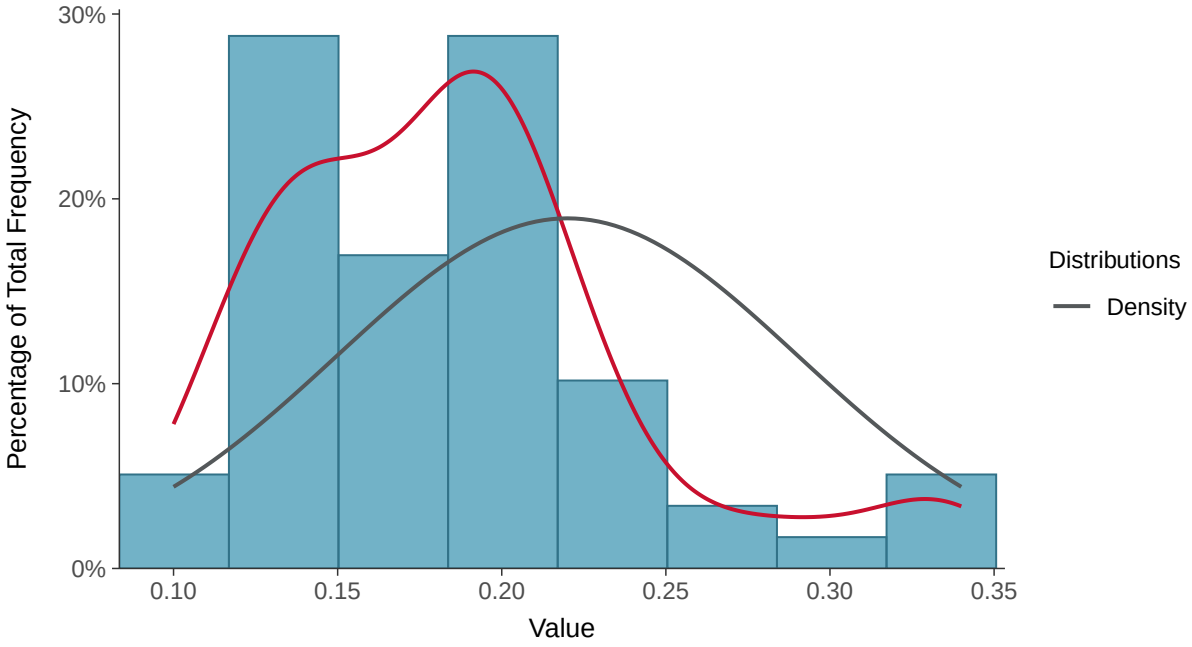
Scatter Plot by Well

Fluoride, BG-1 & BG-2 (mg/L)



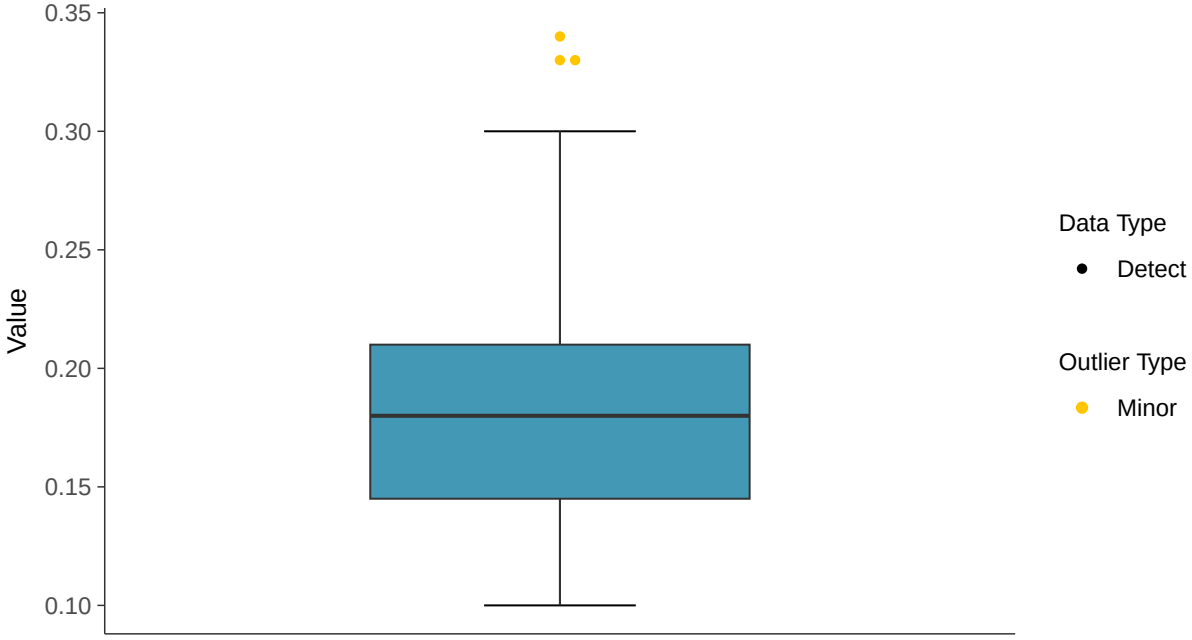
Histogram

Fluoride, BG-1 & BG-2 (mg/L)



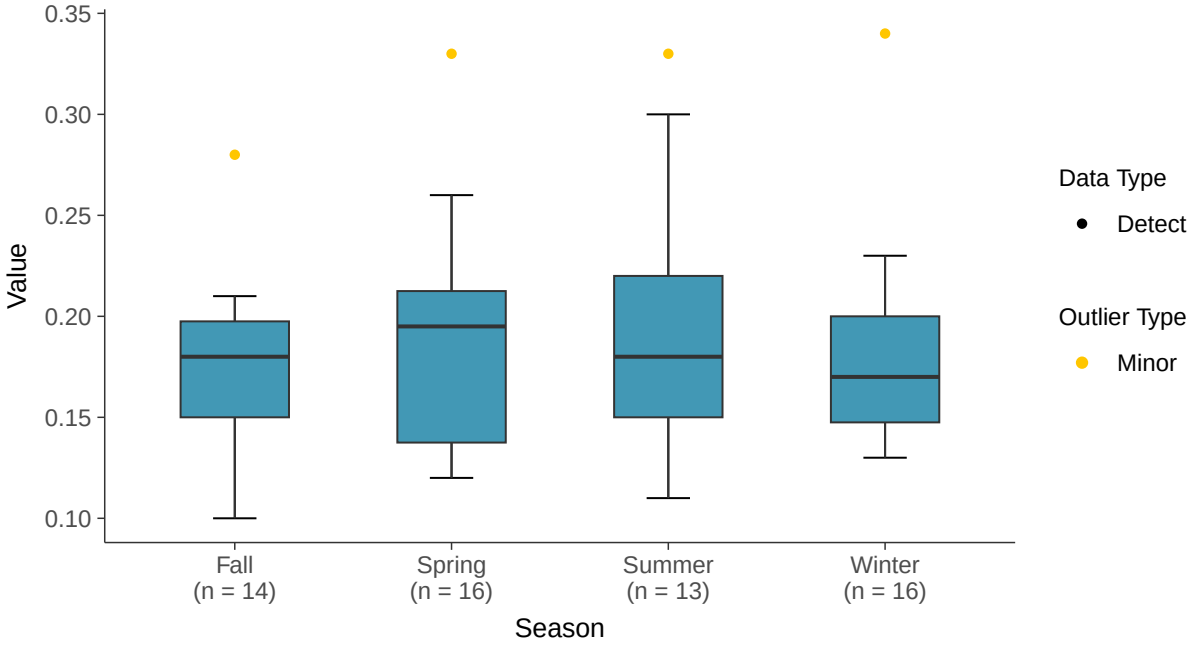
Boxplot

Fluoride, BG-1 & BG-2 (mg/L)



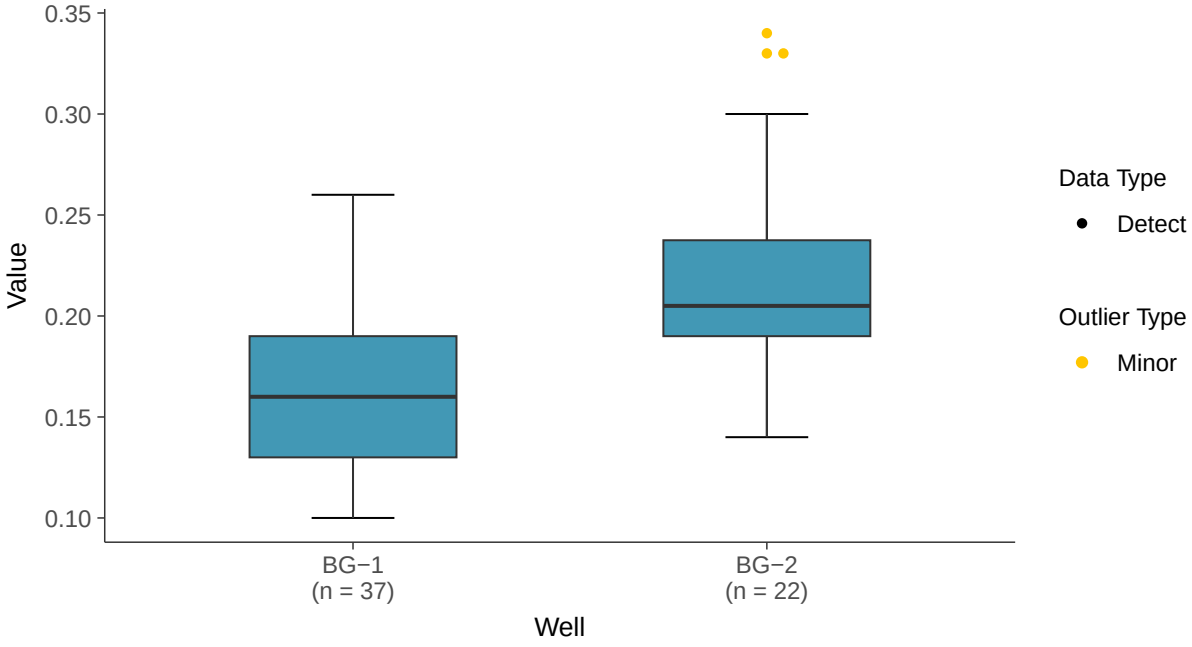
Boxplot by Season

Fluoride, BG-1 & BG-2 (mg/L)



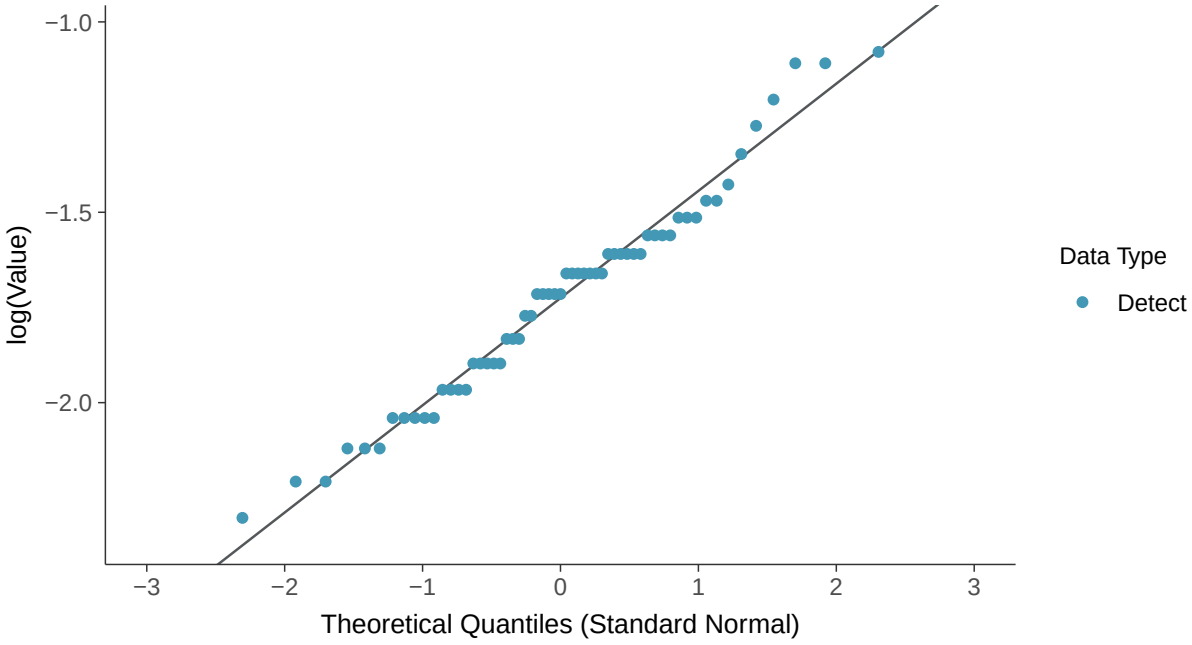
Boxplot by Well

Fluoride, BG-1 & BG-2 (mg/L)



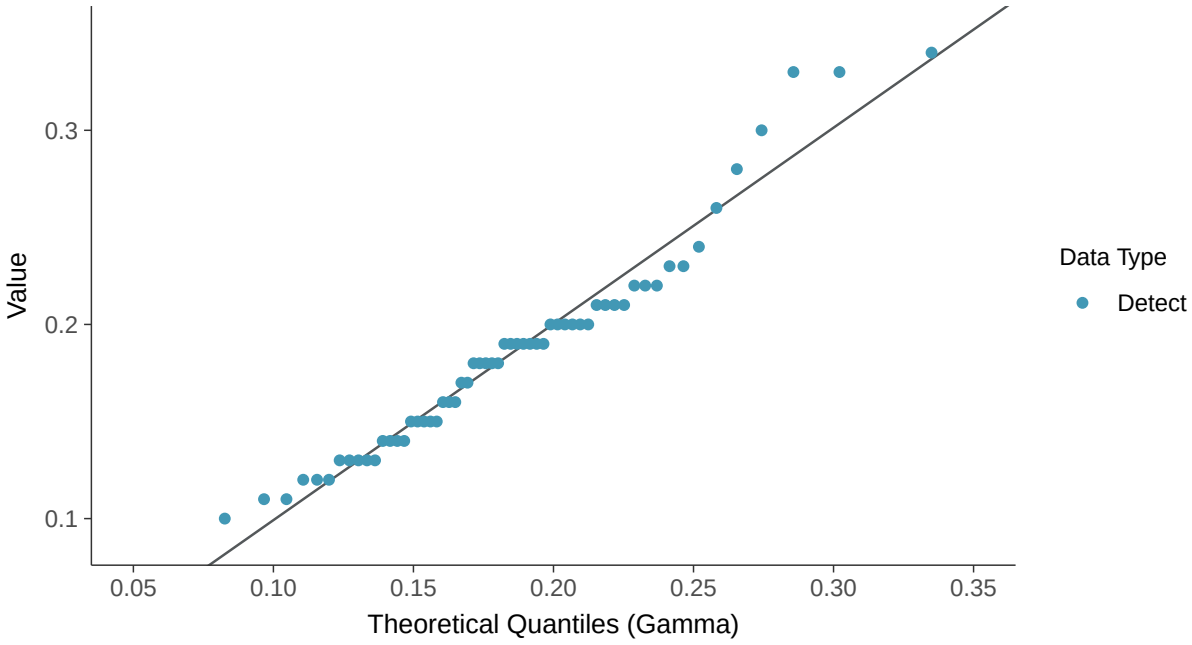
Lognormal Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



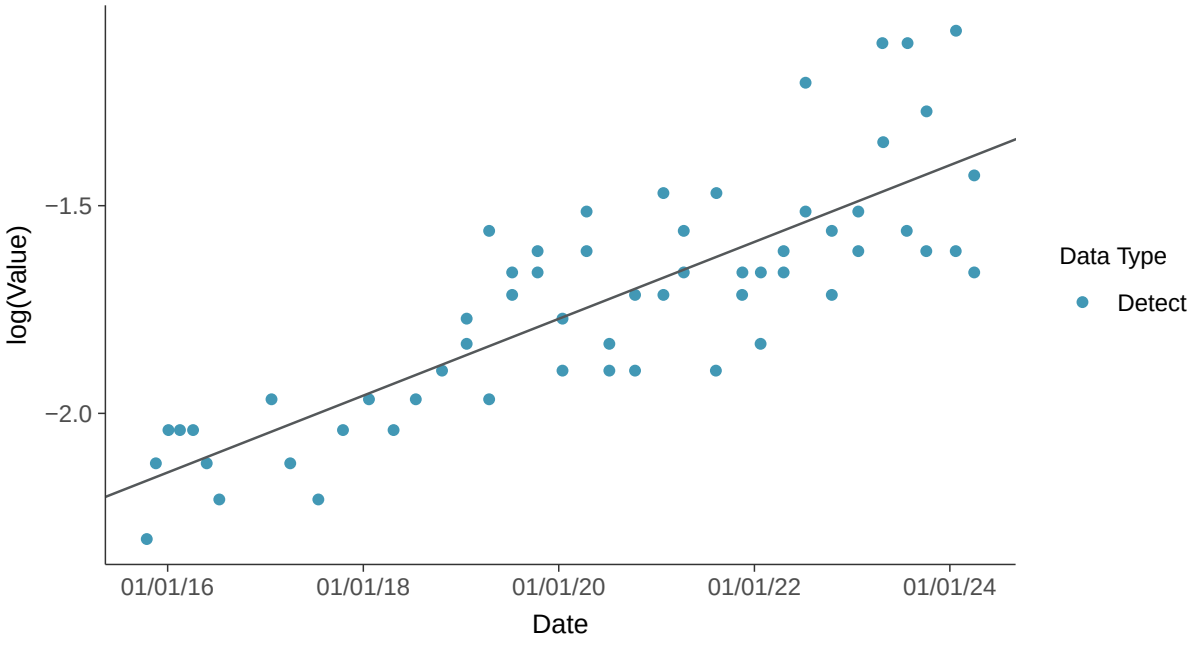
Gamma Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



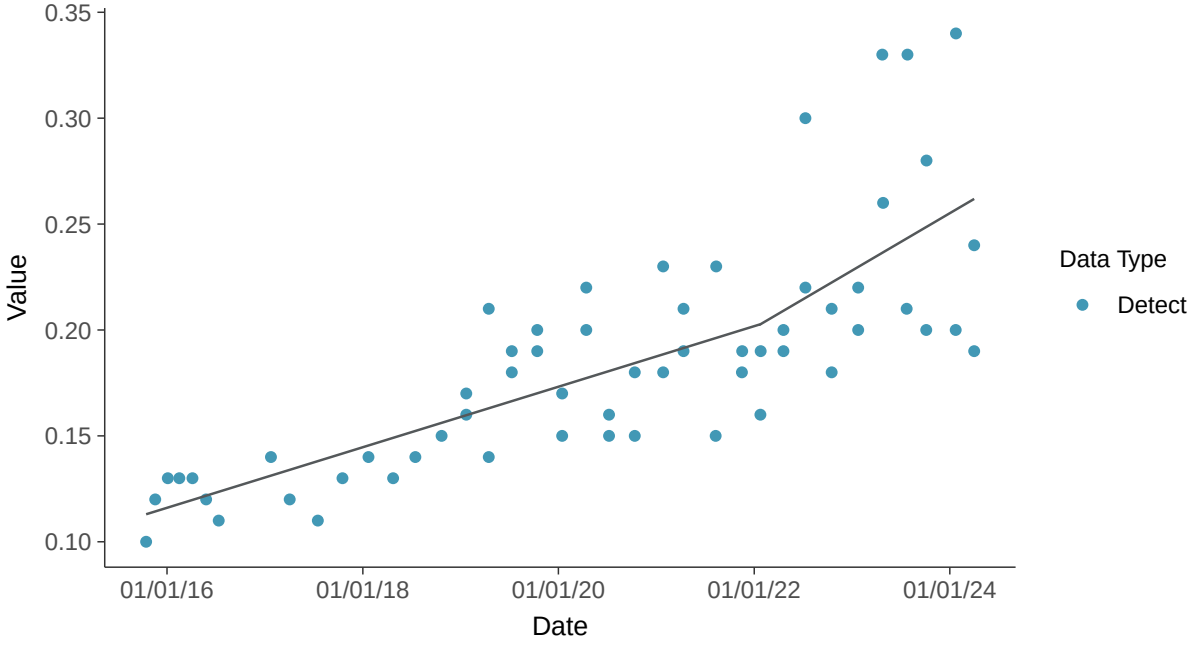
Trend Regression: Lognormal MLE

Fluoride, BG-1 & BG-2 (mg/L)



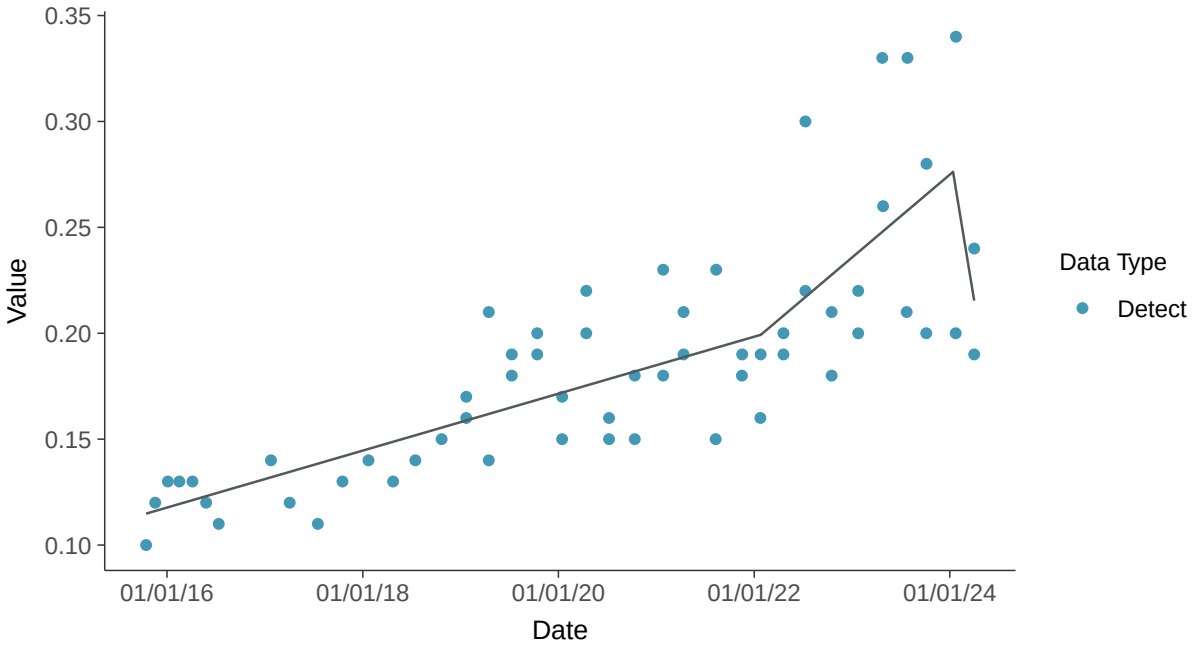
Trend Regression: Piecewise Linear-Linear

Fluoride, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, BG-1 & BG-2 (mg/L)

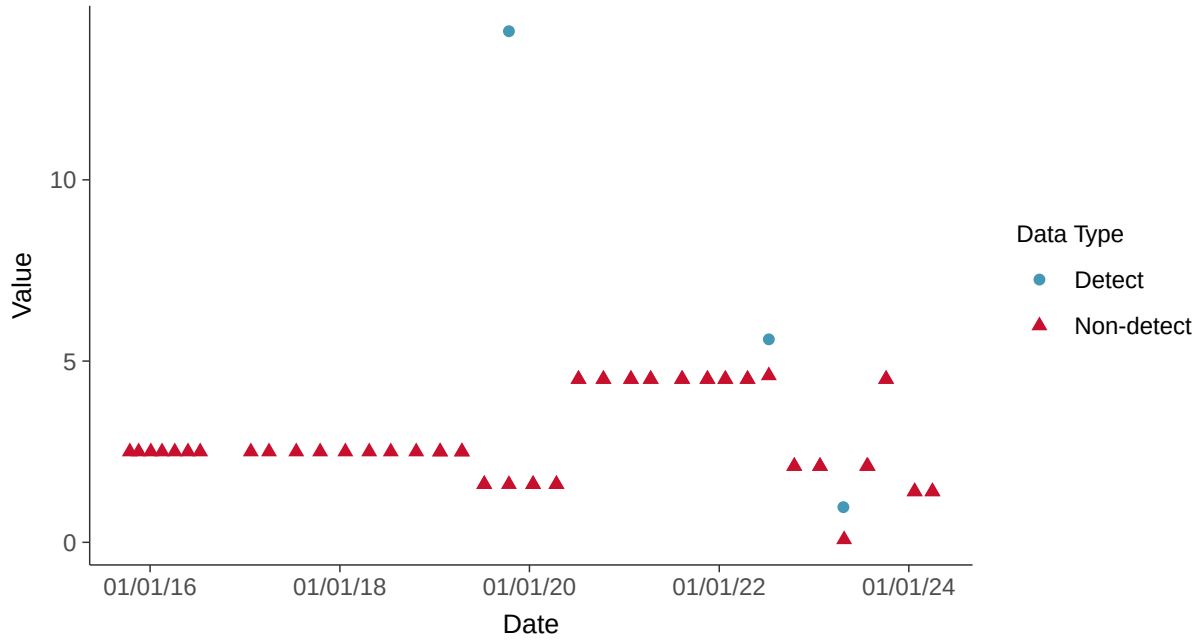


App. IV: Lead, BG-1 & BG-2

ID: 3_113

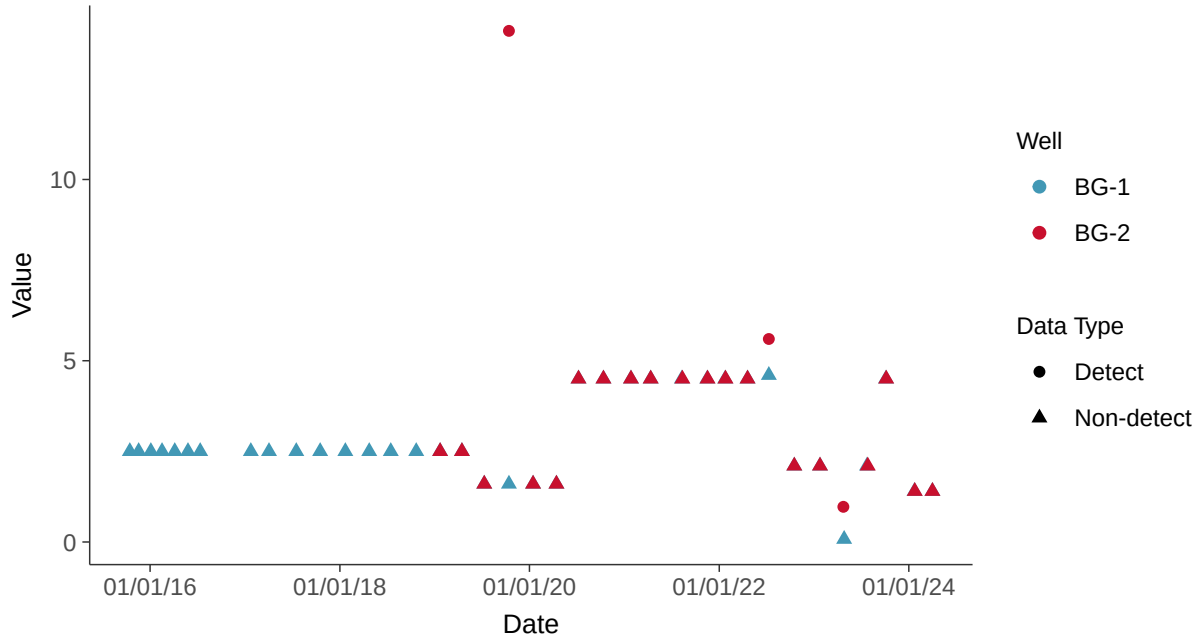
Scatter Plot

Lead, BG-1 & BG-2 (ug/L)



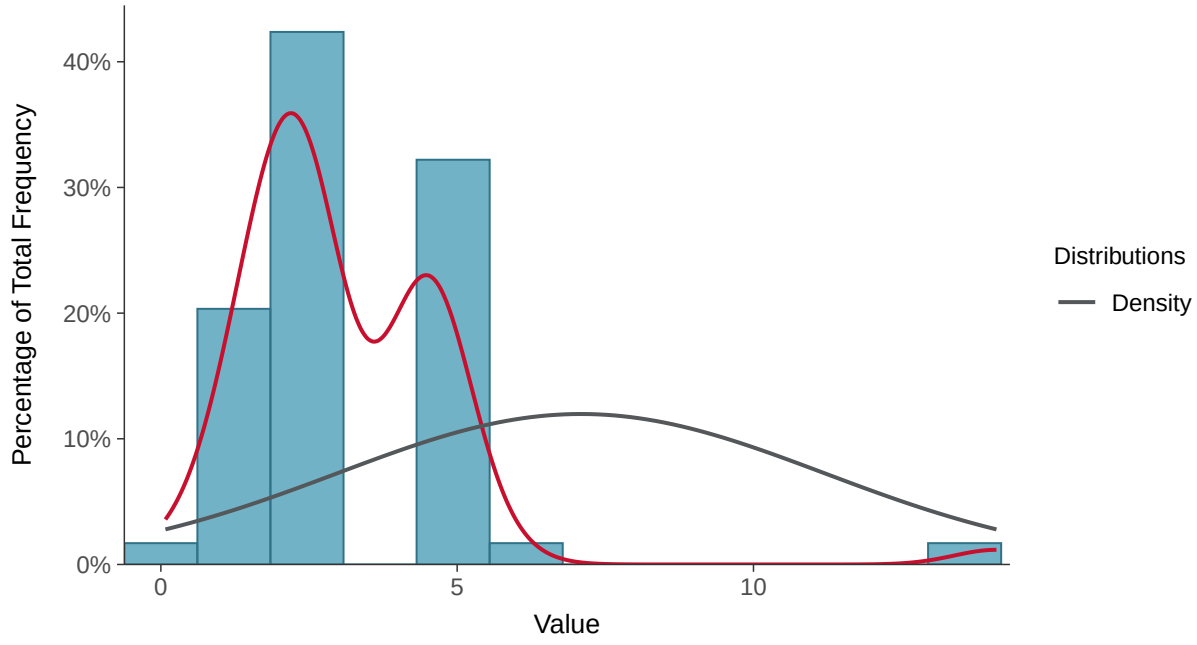
Scatter Plot by Well

Lead, BG-1 & BG-2 (ug/L)



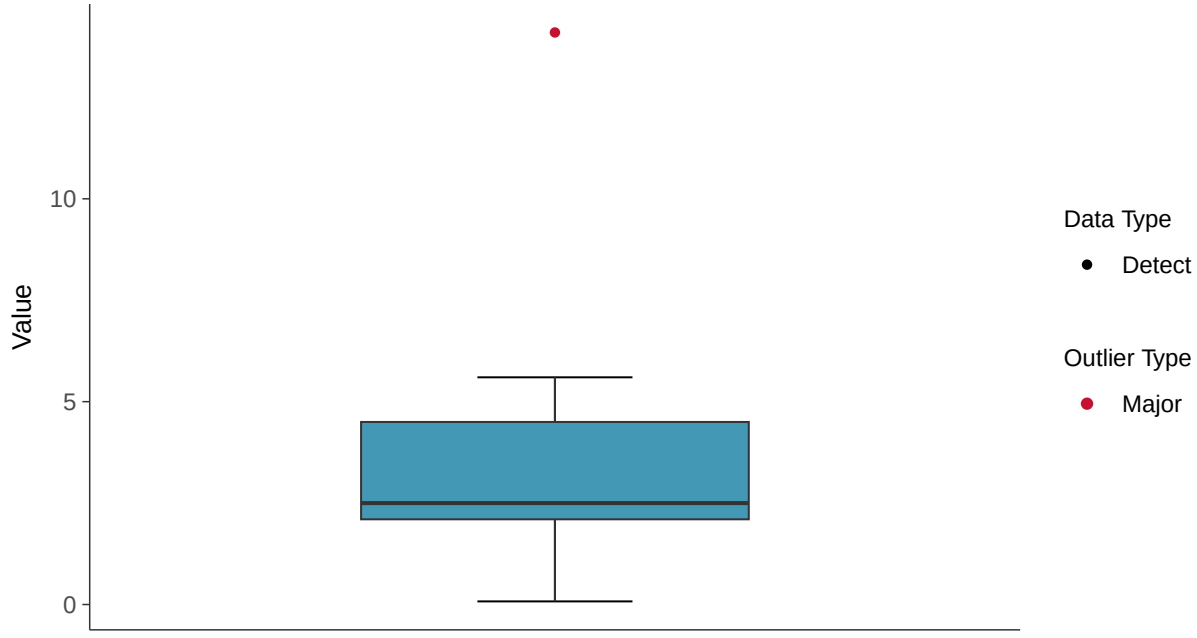
Histogram

Lead, BG-1 & BG-2 (ug/L)



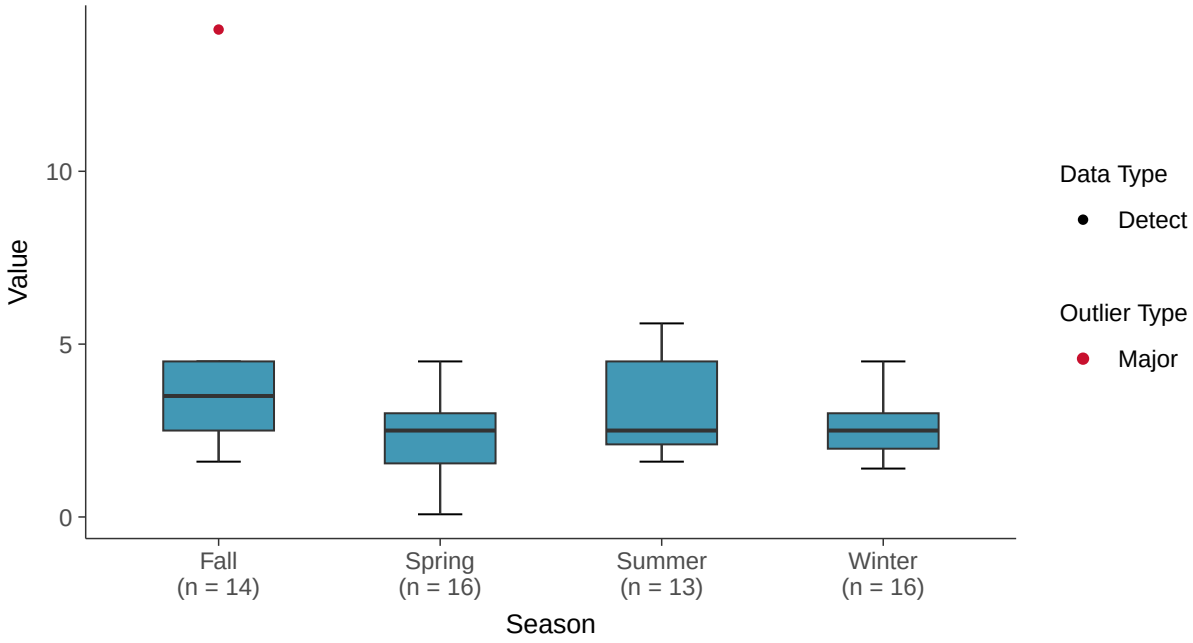
Boxplot

Lead, BG-1 & BG-2 (ug/L)



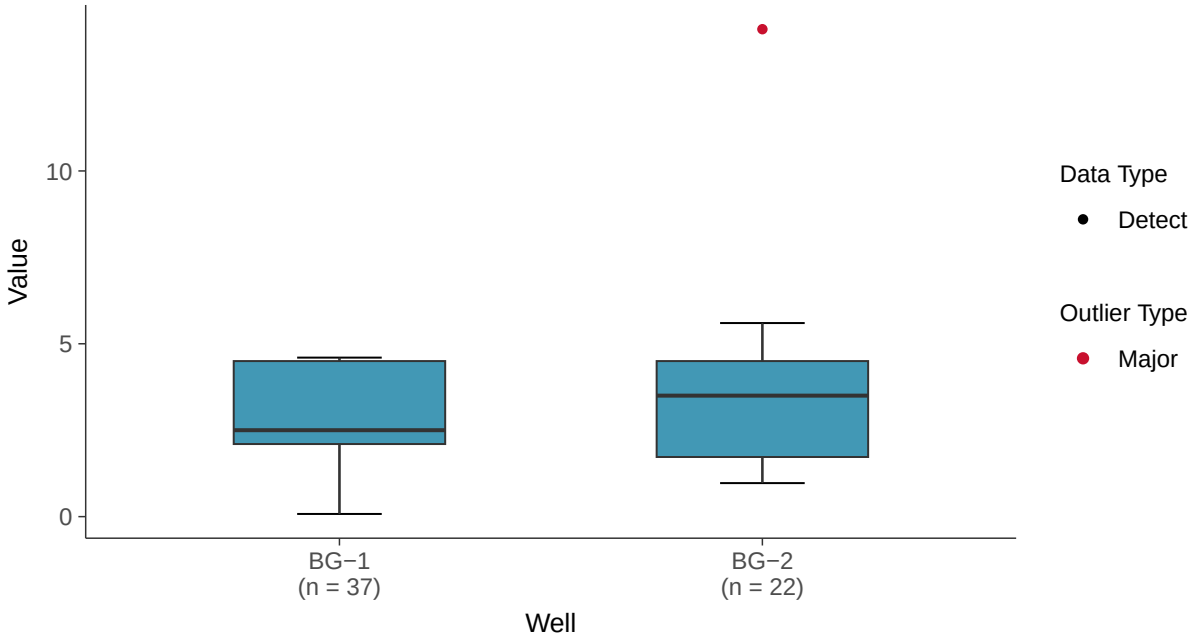
Boxplot by Season

Lead, BG-1 & BG-2 (ug/L)



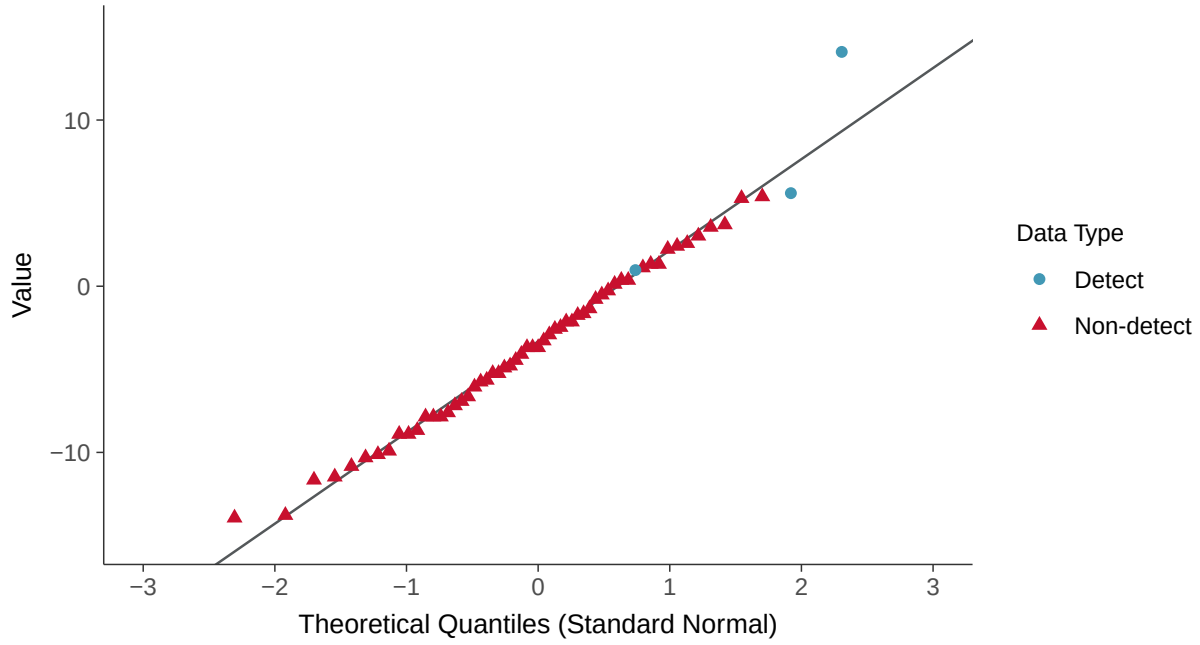
Boxplot by Well

Lead, BG-1 & BG-2 (ug/L)



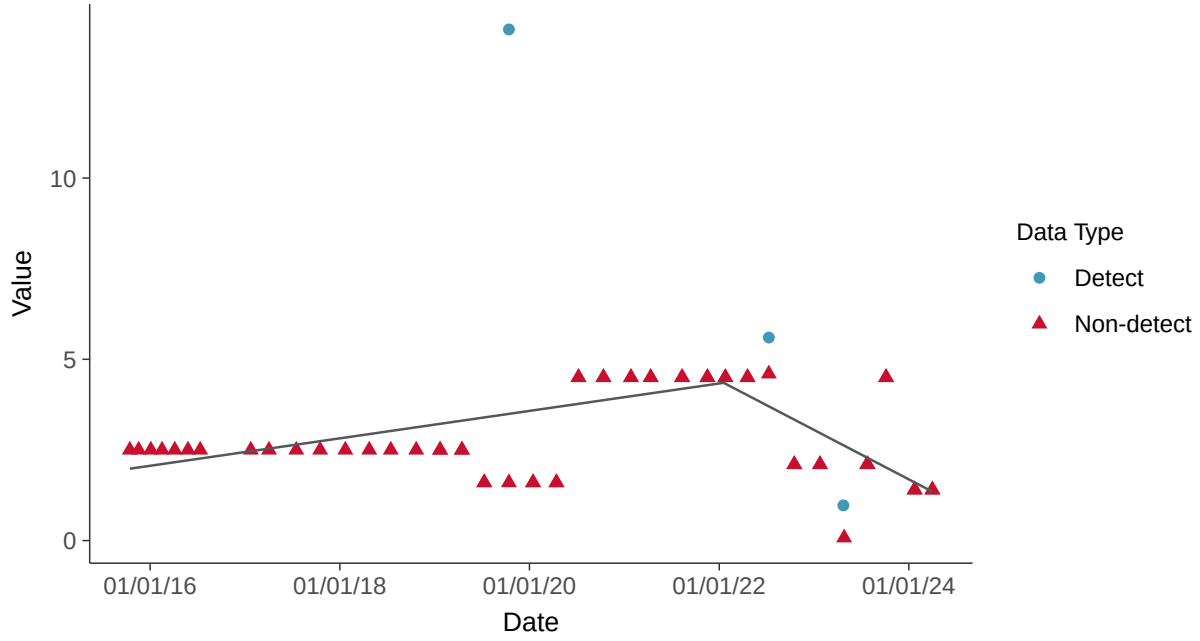
Normal Q-Q plot using ROS Imputed Estimates

Lead, BG-1 & BG-2 (ug/L)



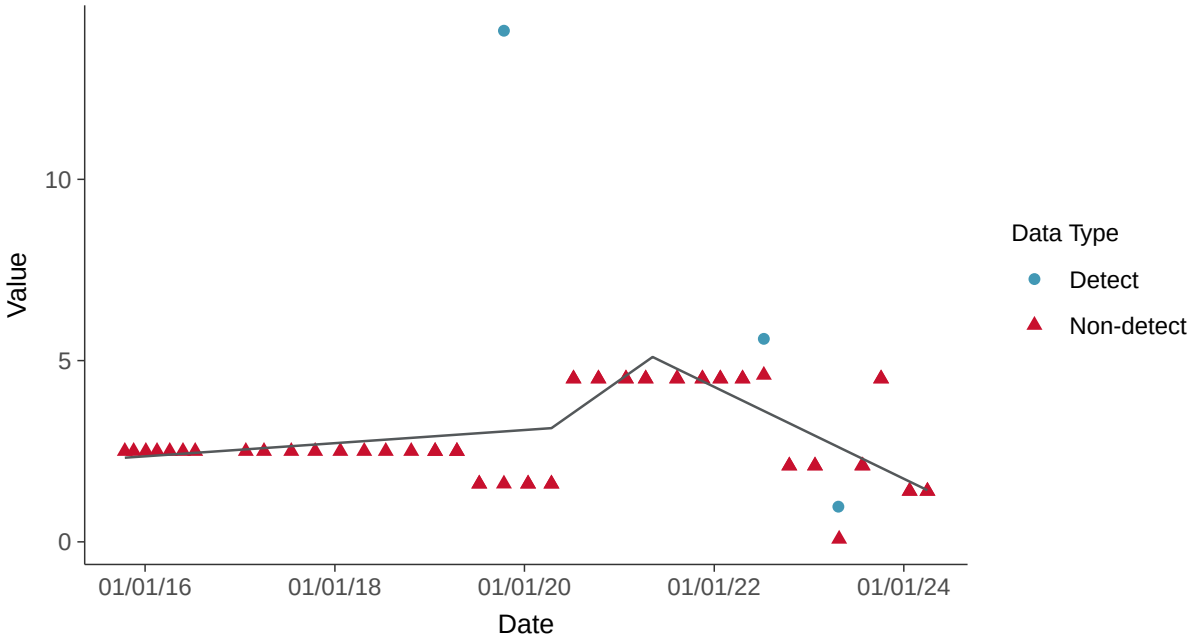
Trend Regression: Piecewise Linear-Linear

Lead, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, BG-1 & BG-2 (ug/L)

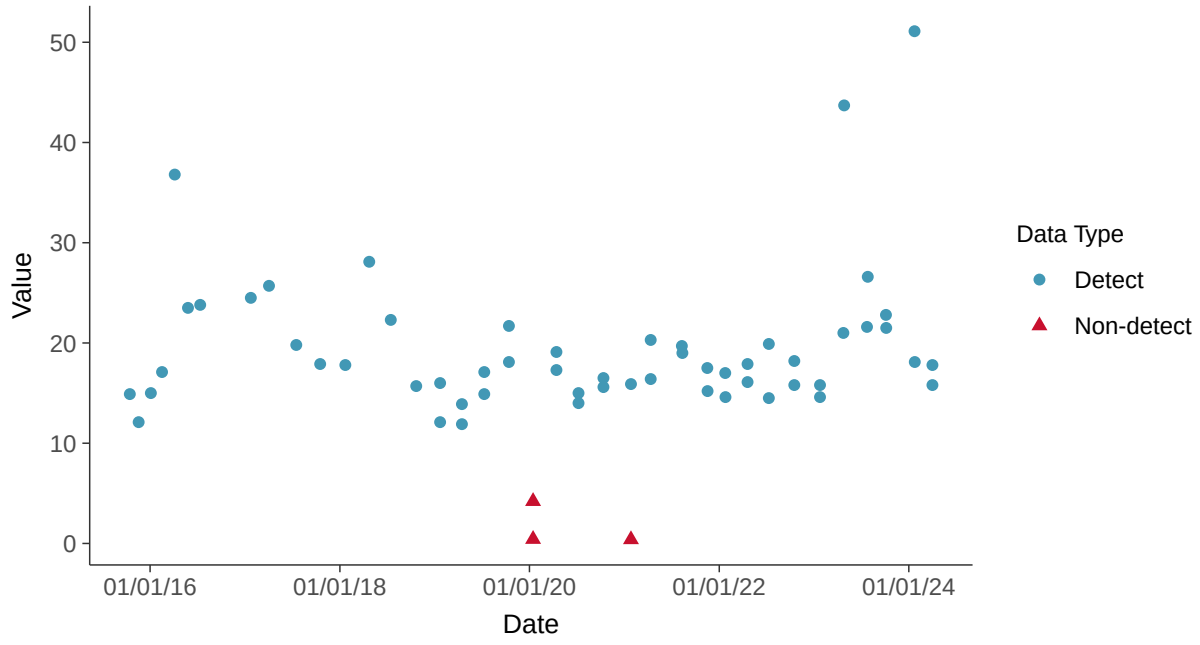


App. IV: Lithium, BG-1 & BG-2

ID: 3_114

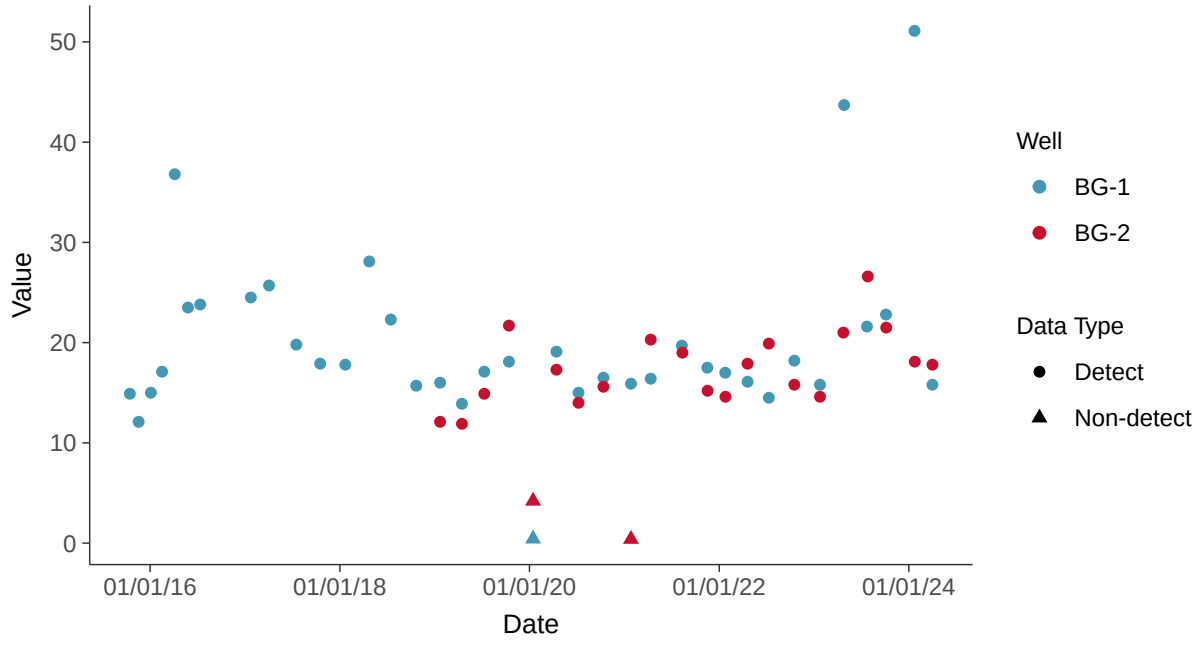
Scatter Plot

Lithium, BG-1 & BG-2 (ug/L)



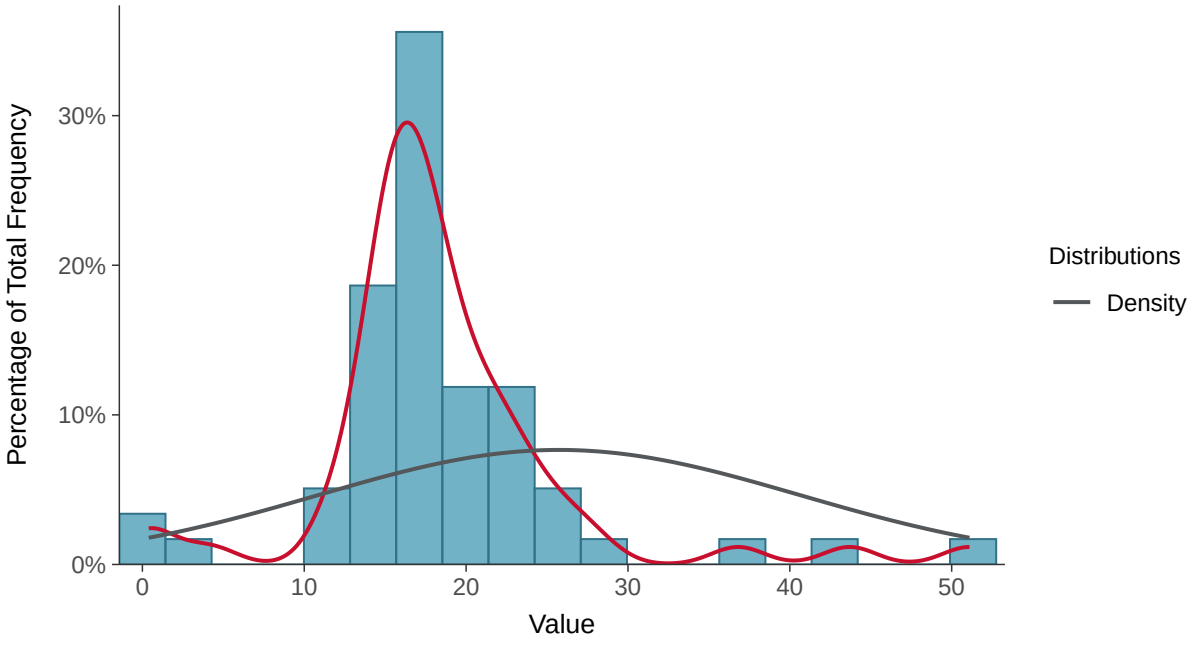
Scatter Plot by Well

Lithium, BG-1 & BG-2 (ug/L)



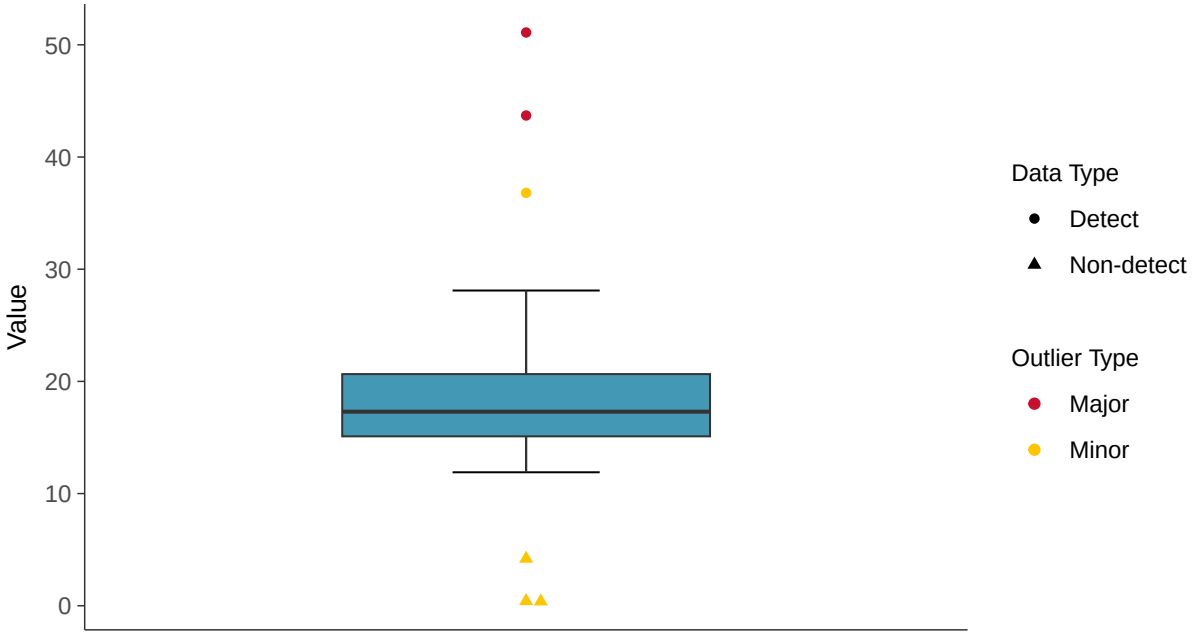
Histogram

Lithium, BG-1 & BG-2 (ug/L)



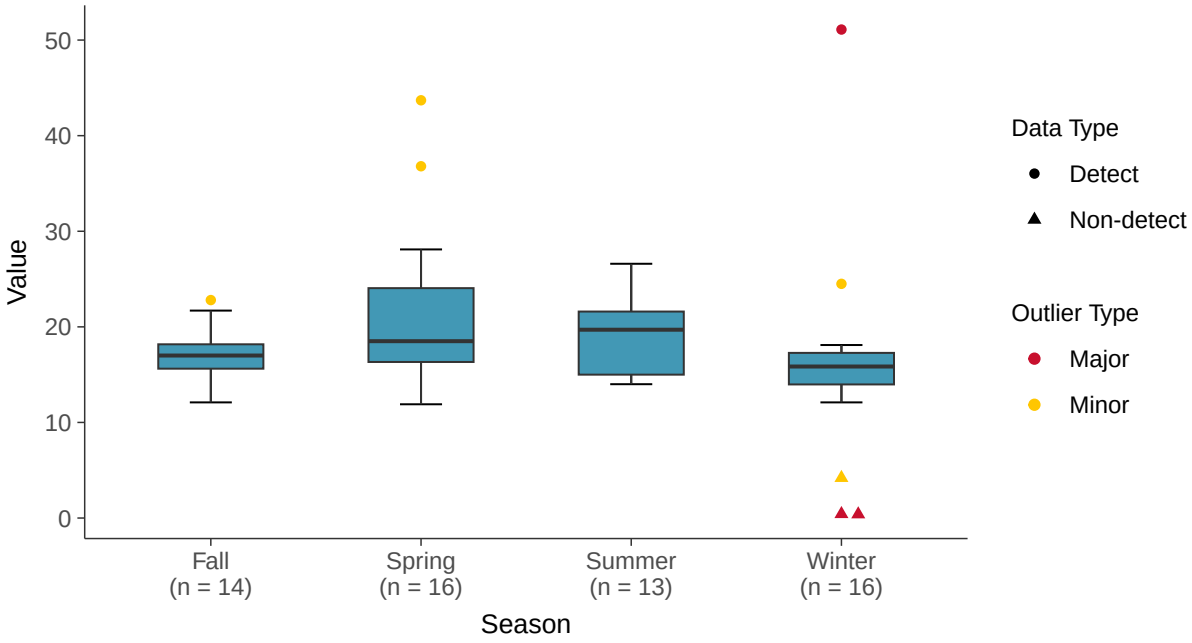
Boxplot

Lithium, BG-1 & BG-2 (ug/L)



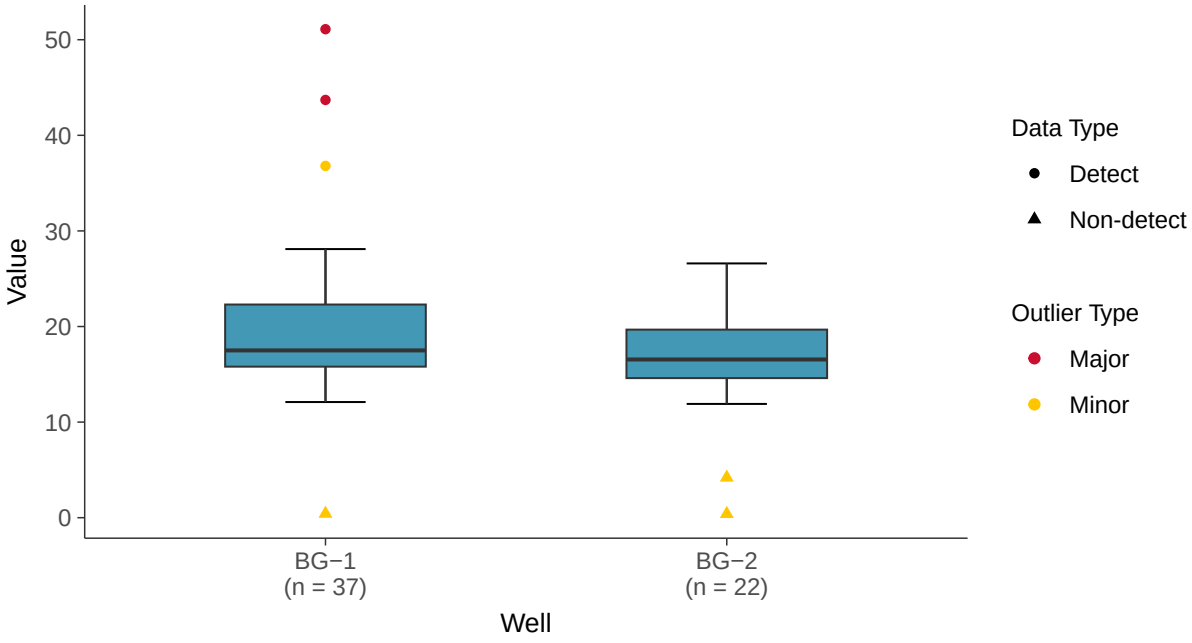
Boxplot by Season

Lithium, BG-1 & BG-2 (ug/L)



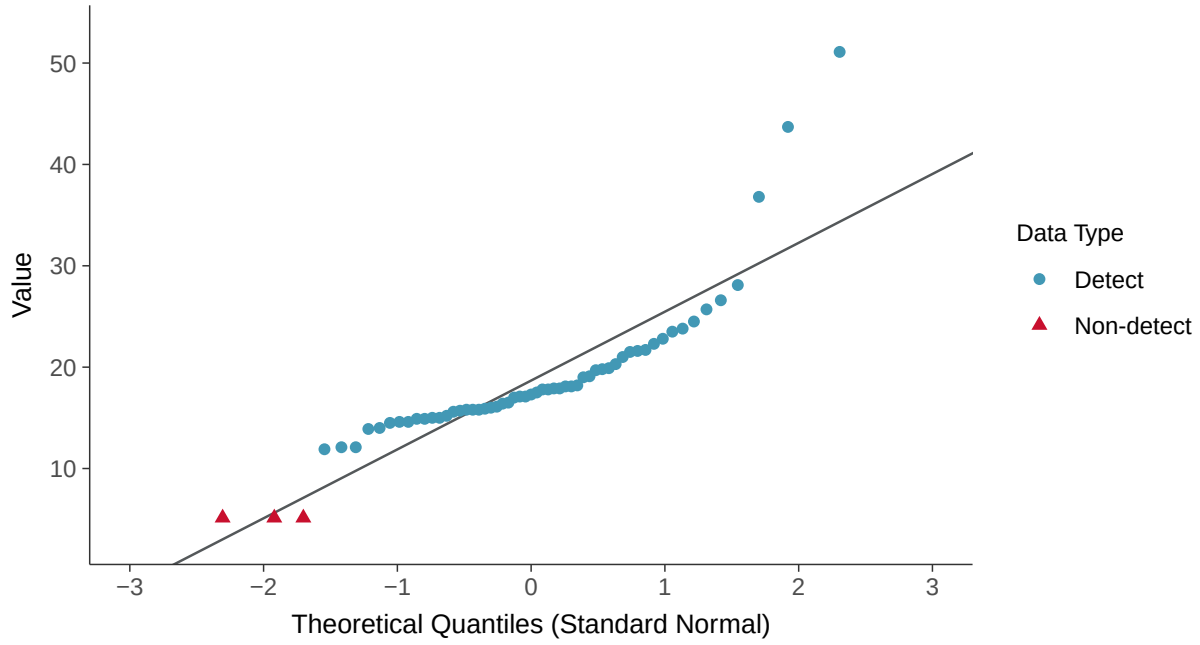
Boxplot by Well

Lithium, BG-1 & BG-2 (ug/L)



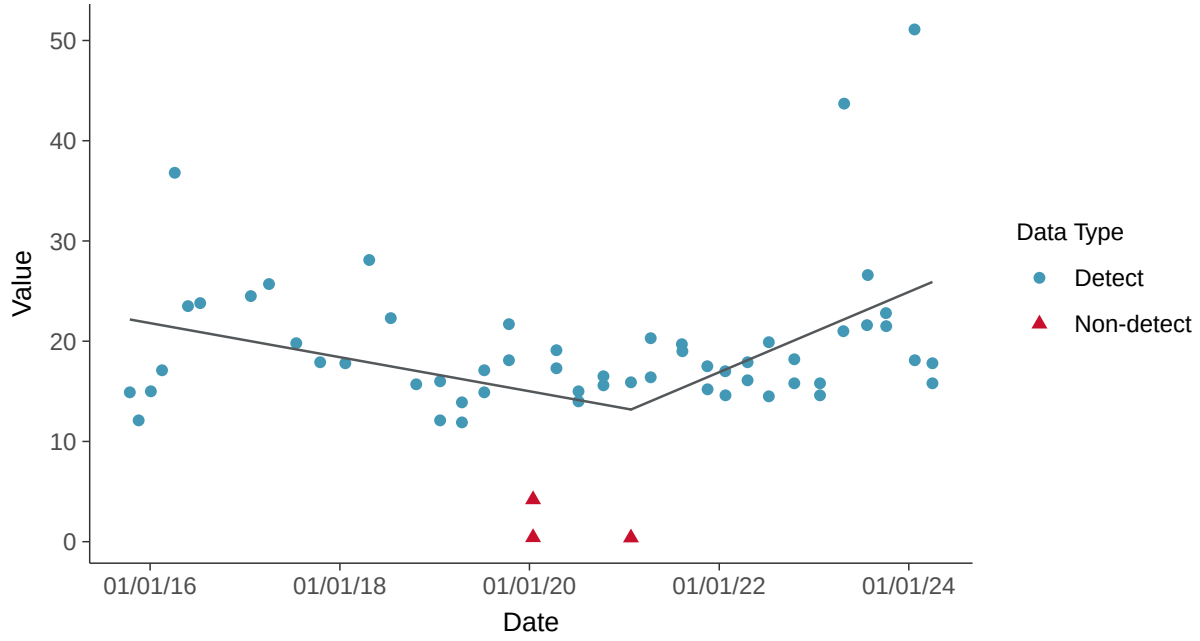
Normal Q-Q plot using ROS Imputed Estimates

Lithium, BG-1 & BG-2 (ug/L)



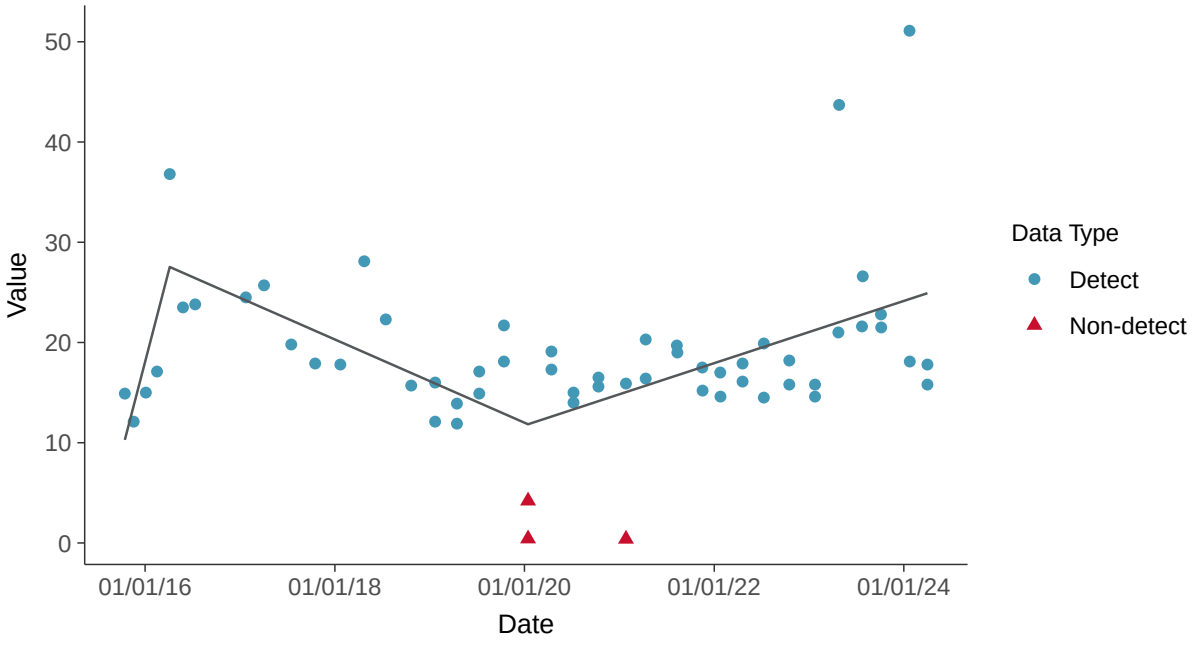
Trend Regression: Piecewise Linear-Linear

Lithium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lithium, BG-1 & BG-2 (ug/L)

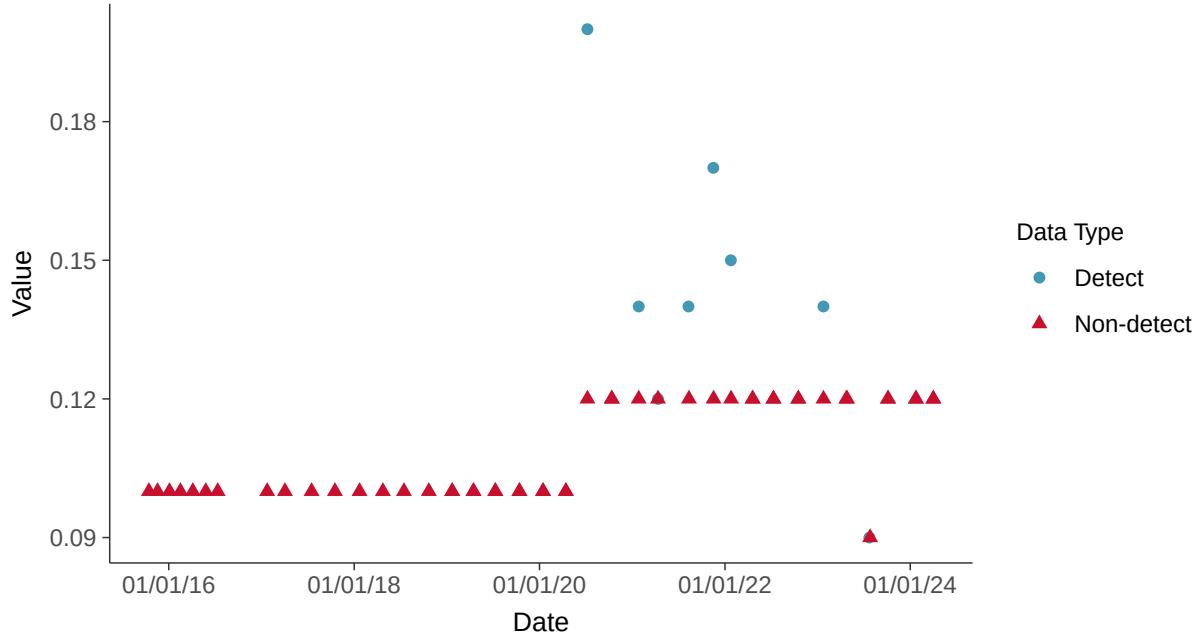


App. IV: Mercury, BG-1 & BG-2

ID: 3_115

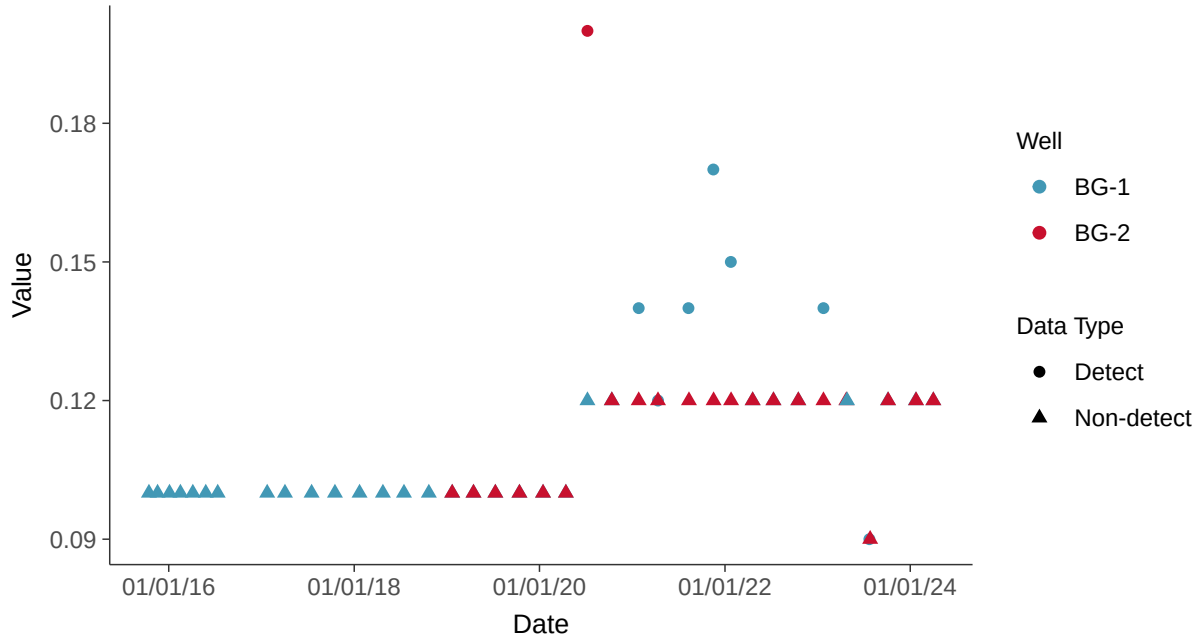
Scatter Plot

Mercury, BG-1 & BG-2 (ug/L)



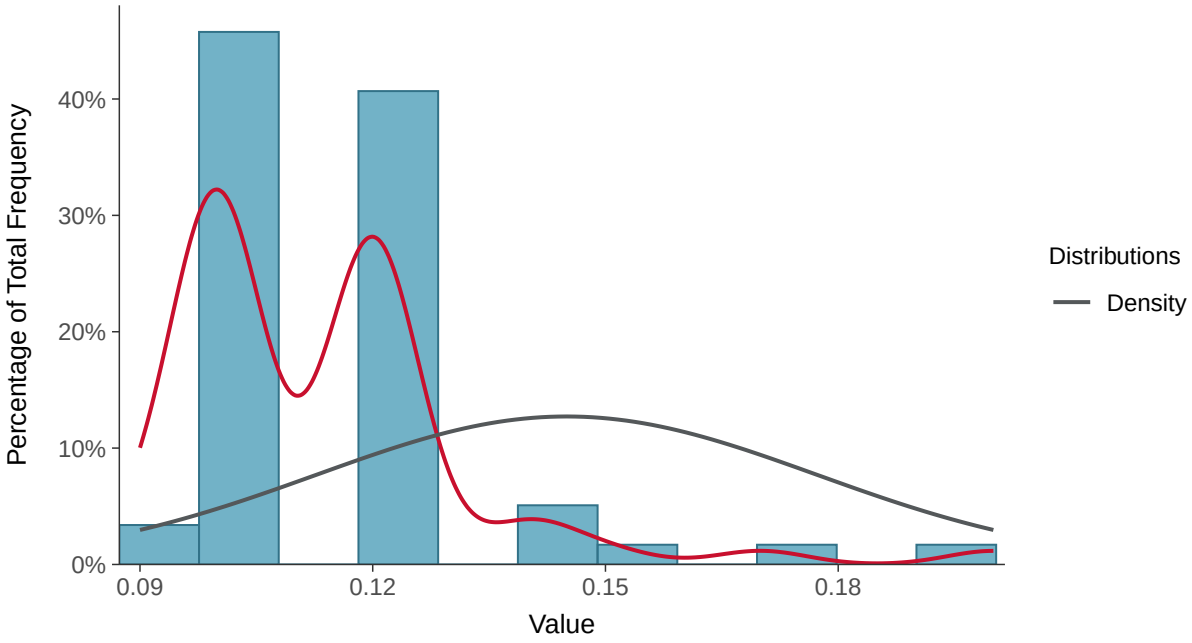
Scatter Plot by Well

Mercury, BG-1 & BG-2 (ug/L)



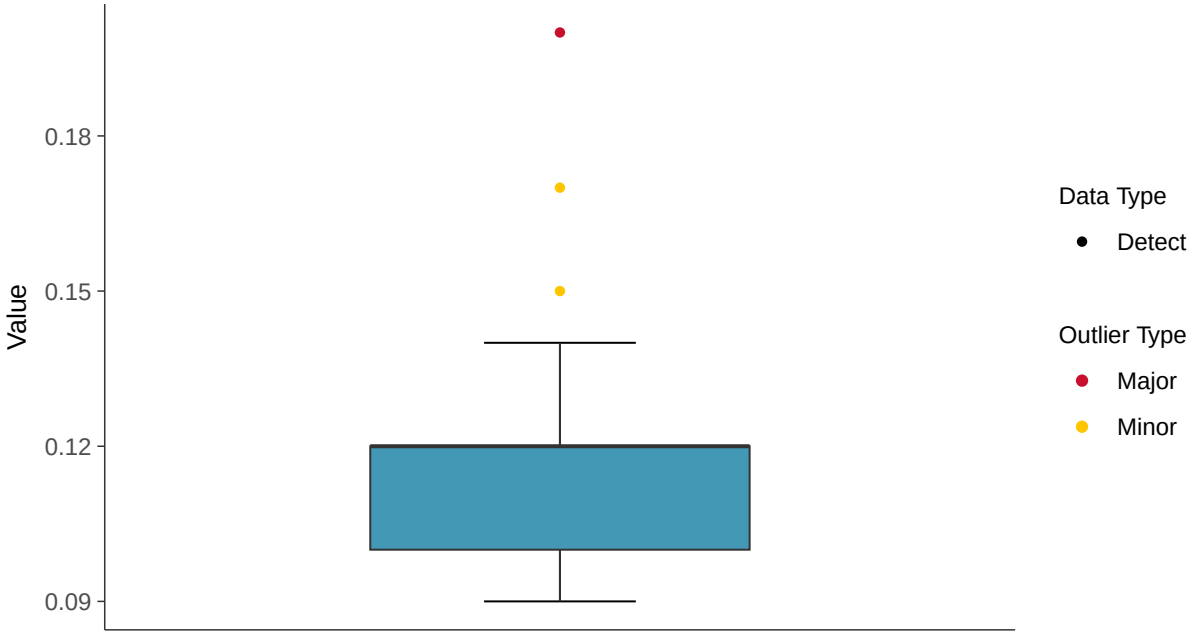
Histogram

Mercury, BG-1 & BG-2 (ug/L)



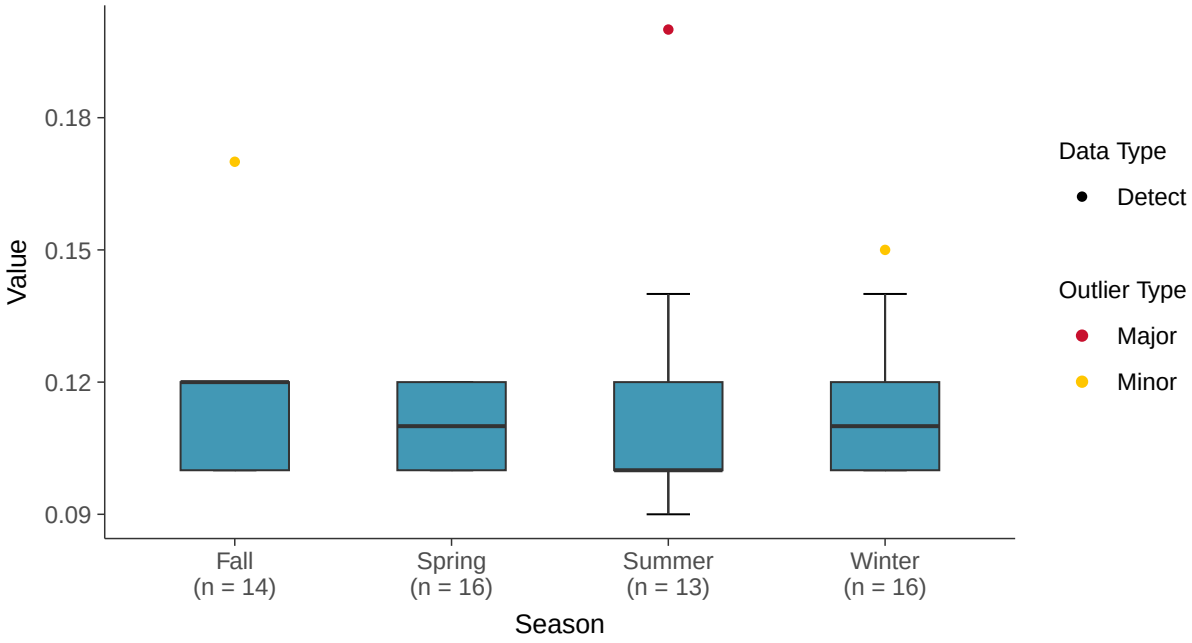
Boxplot

Mercury, BG-1 & BG-2 (ug/L)



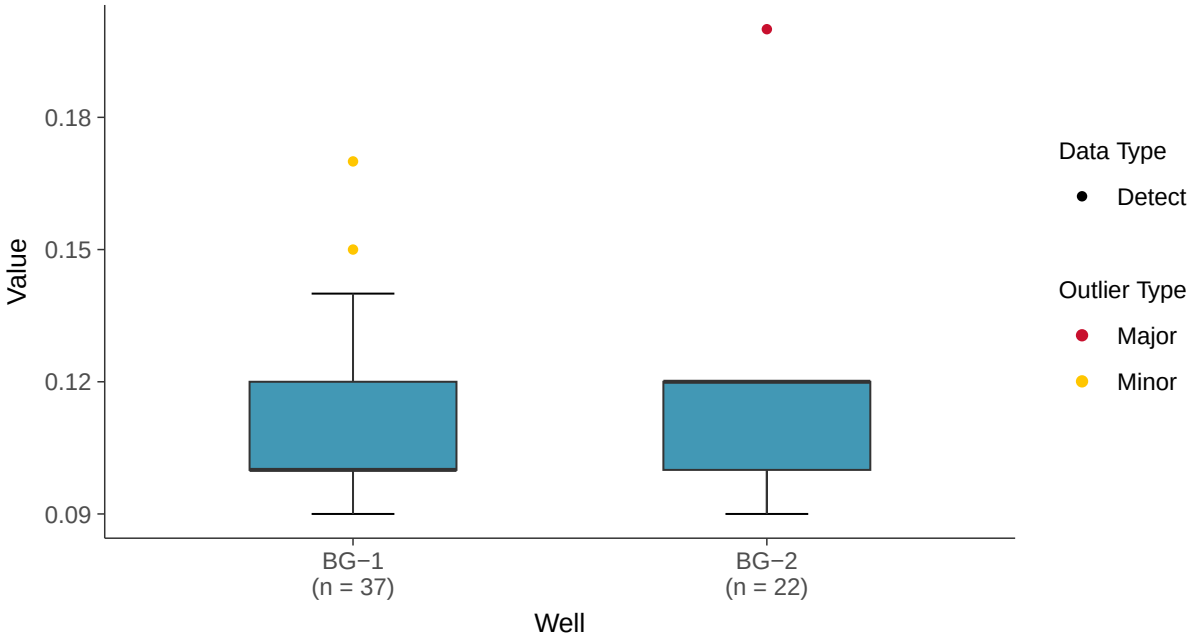
Boxplot by Season

Mercury, BG-1 & BG-2 (ug/L)



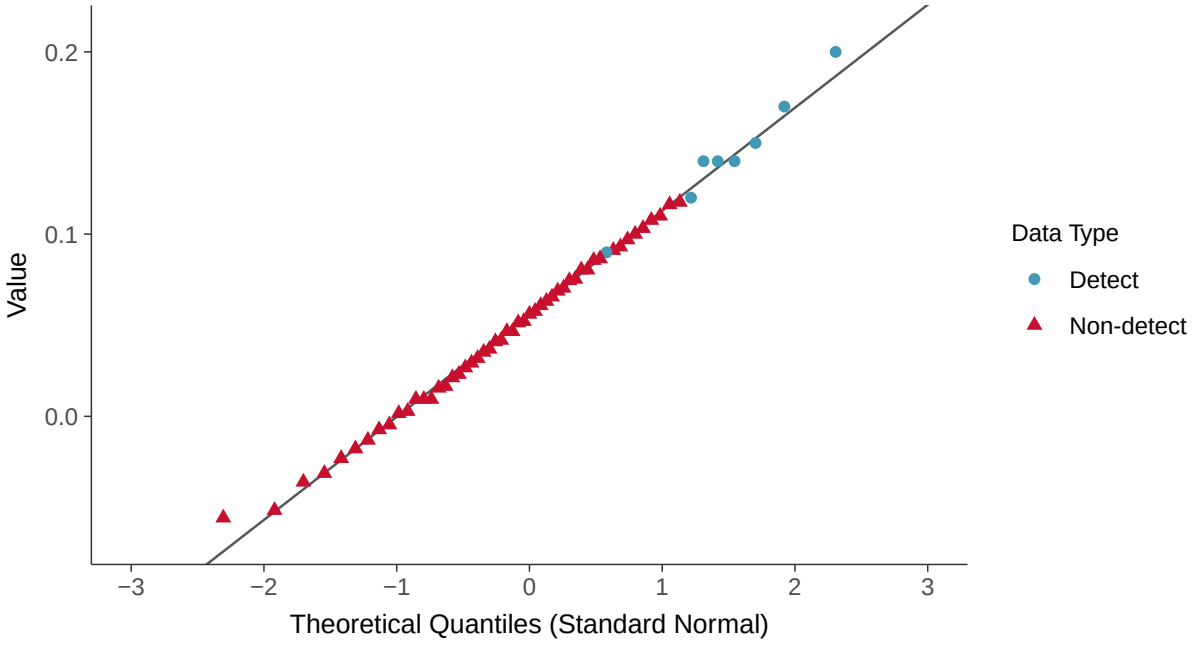
Boxplot by Well

Mercury, BG-1 & BG-2 (ug/L)



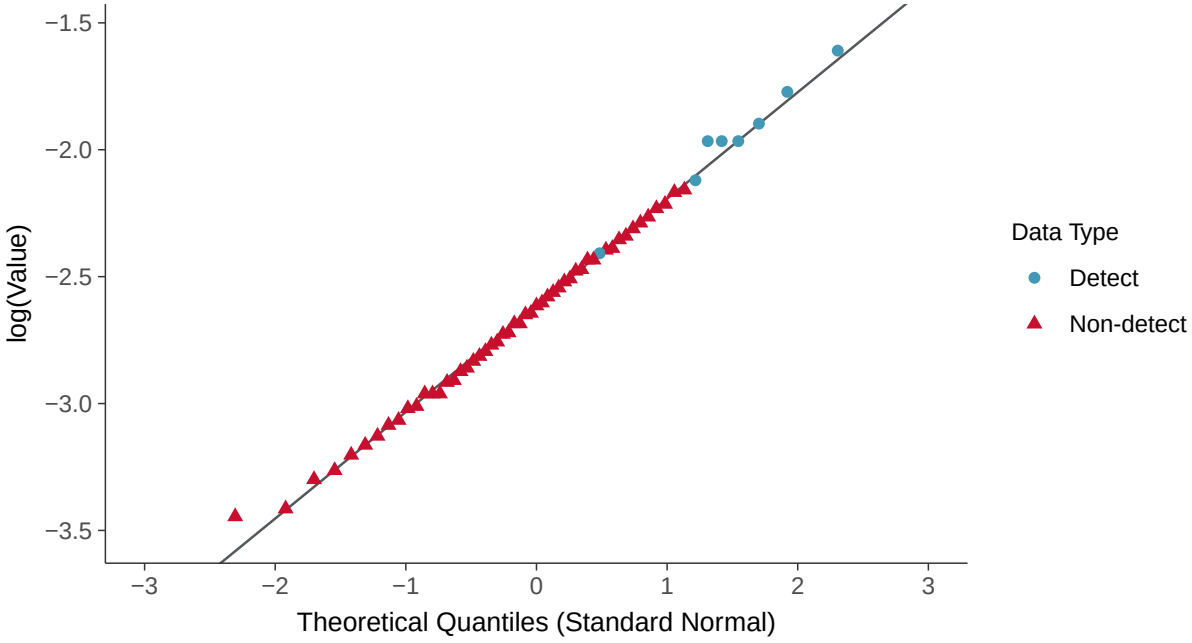
Normal Q-Q plot using ROS Imputed Estimates

Mercury, BG-1 & BG-2 (ug/L)



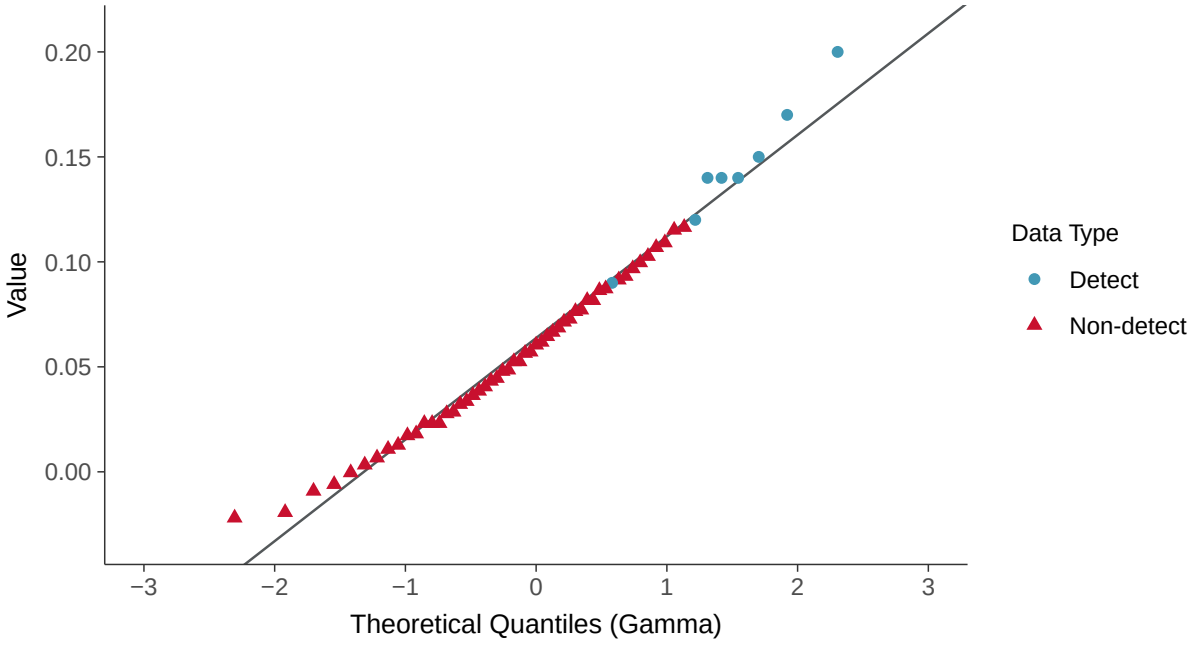
Lognormal Q-Q plot using ROS Imputed Estimates

Mercury, BG-1 & BG-2 (ug/L)



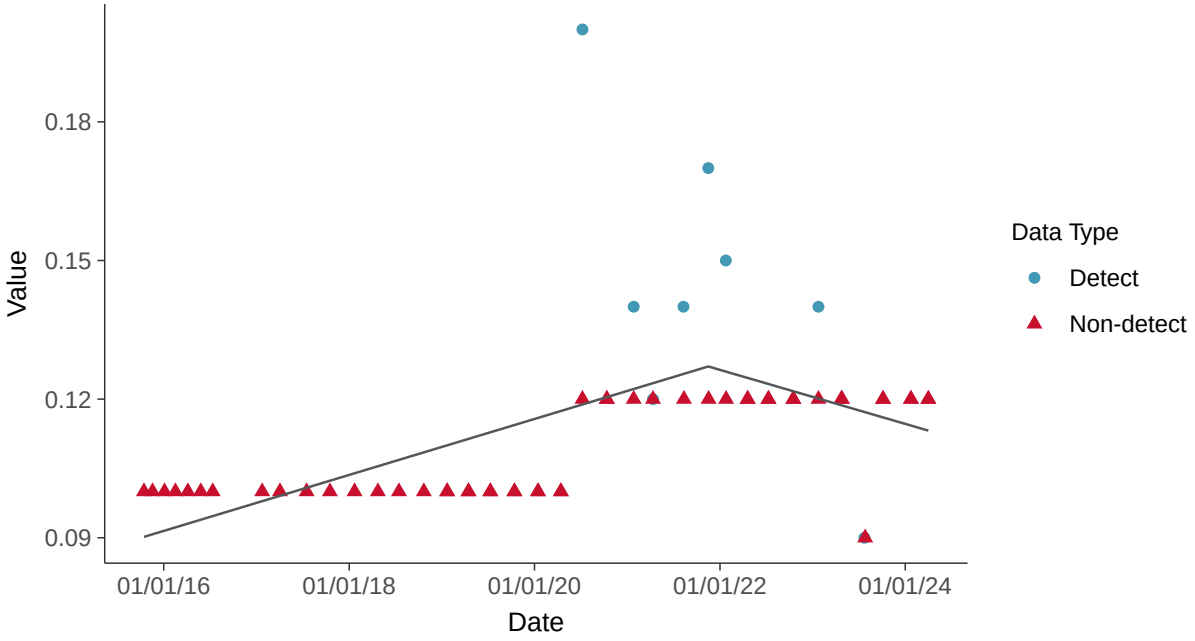
Gamma Q-Q plot using ROS Imputed Estimates

Mercury, BG-1 & BG-2 (ug/L)



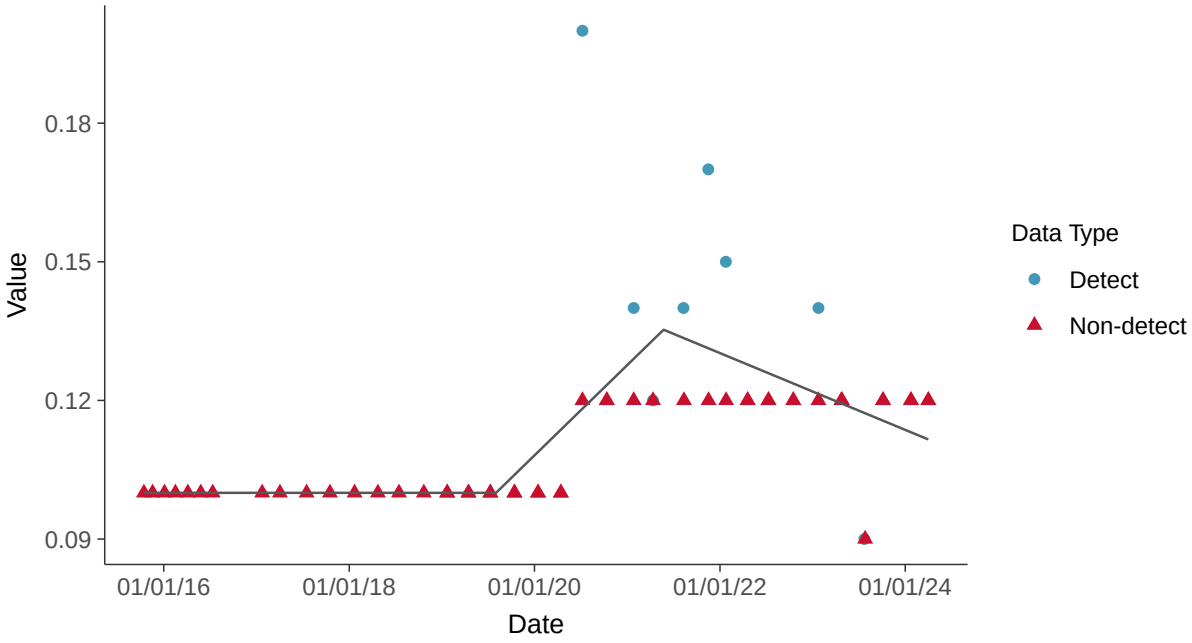
Trend Regression: Piecewise Linear-Linear

Mercury, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, BG-1 & BG-2 (ug/L)

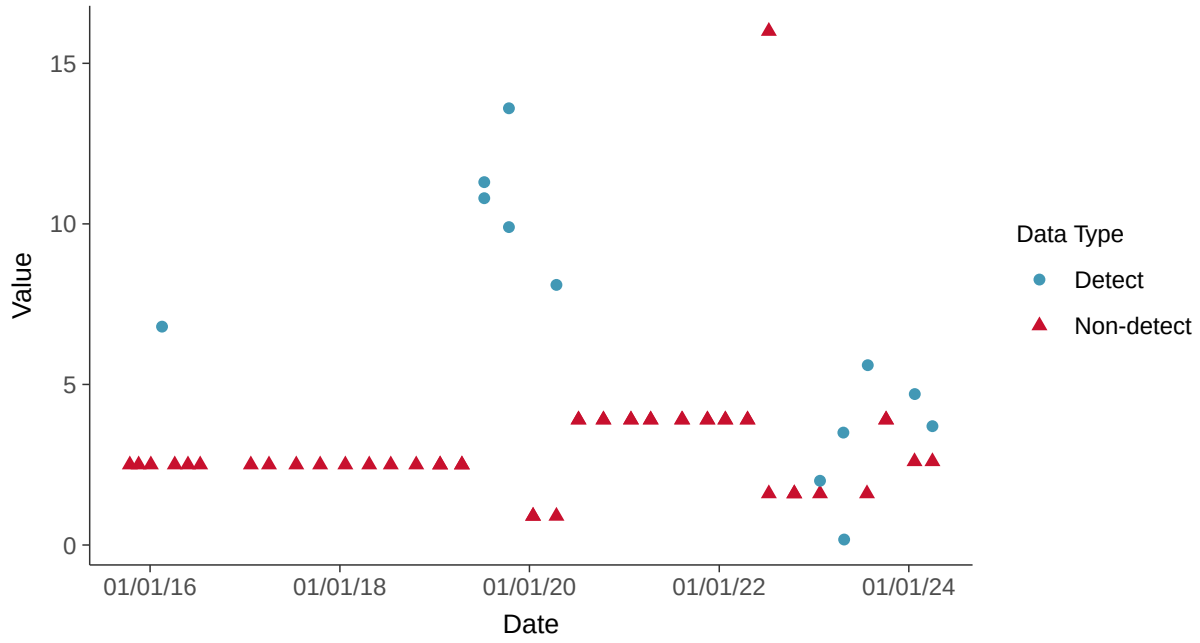


App. IV: Molybdenum, BG-1 & BG-2

ID: 3_116

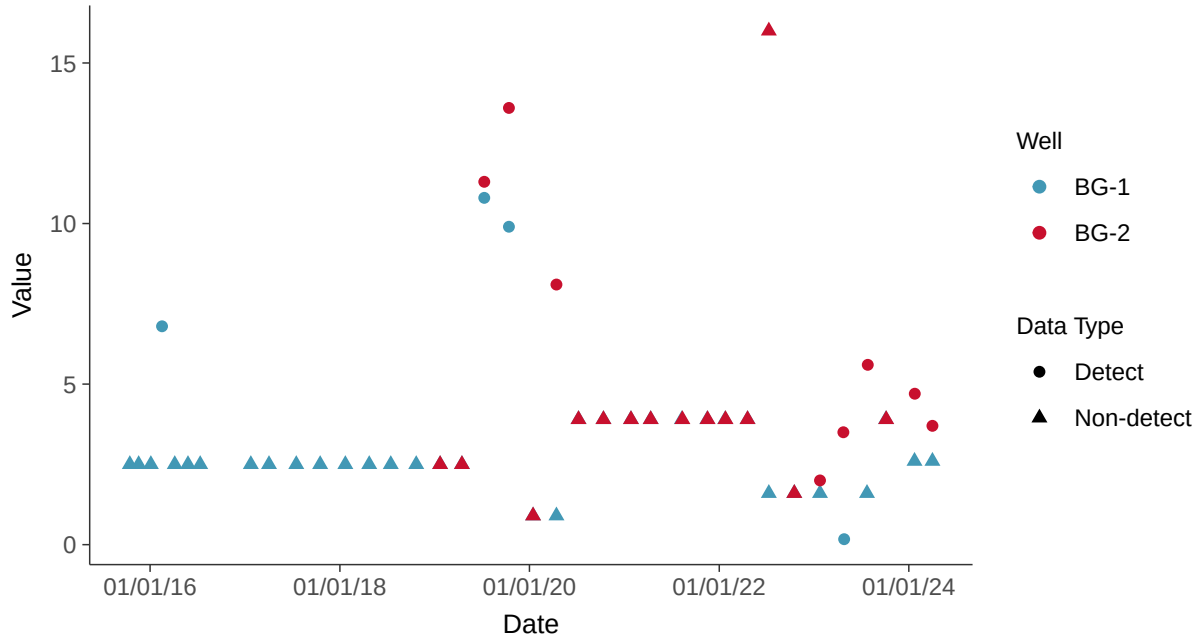
Scatter Plot

Molybdenum, BG-1 & BG-2 (ug/L)



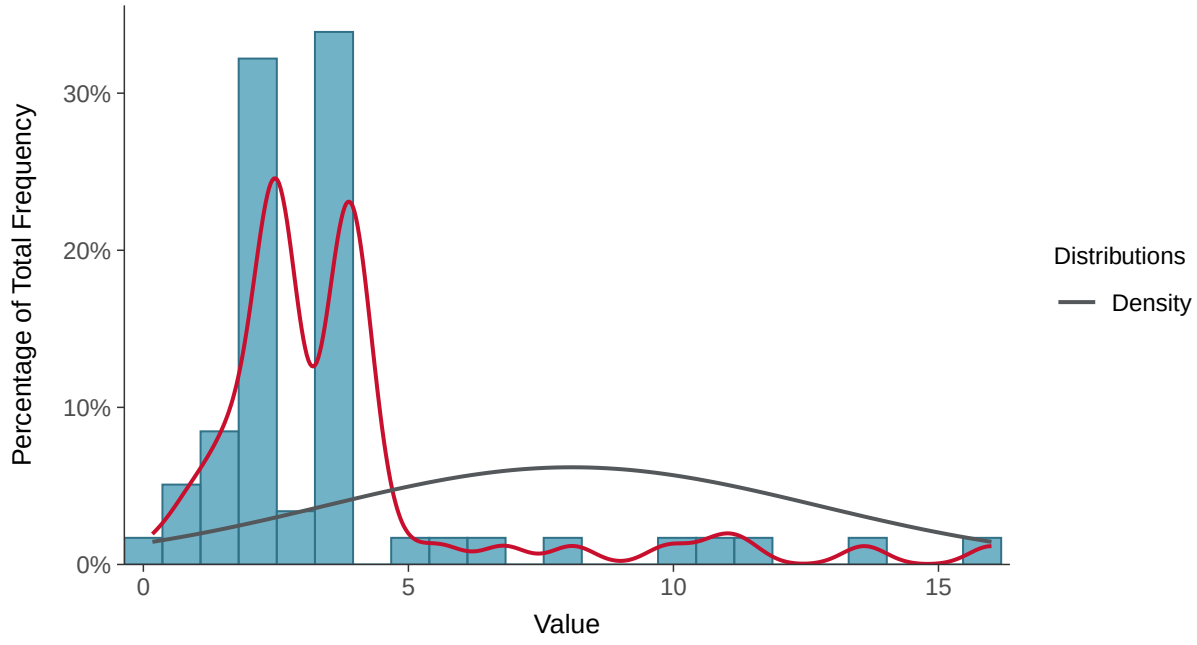
Scatter Plot by Well

Molybdenum, BG-1 & BG-2 (ug/L)



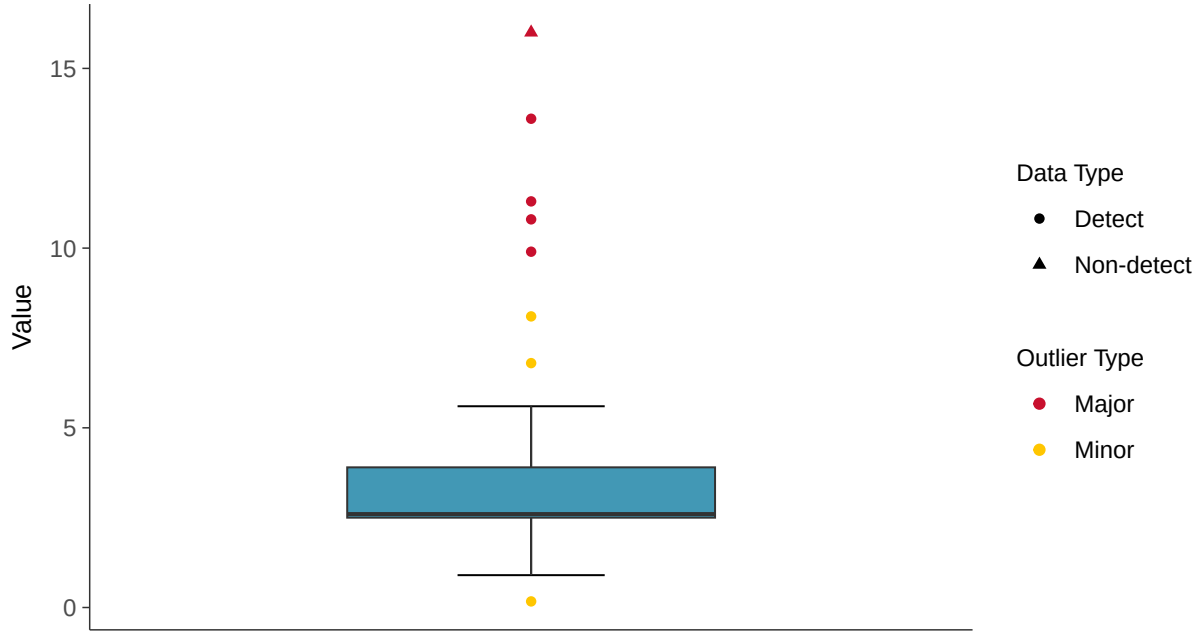
Histogram

Molybdenum, BG-1 & BG-2 (ug/L)



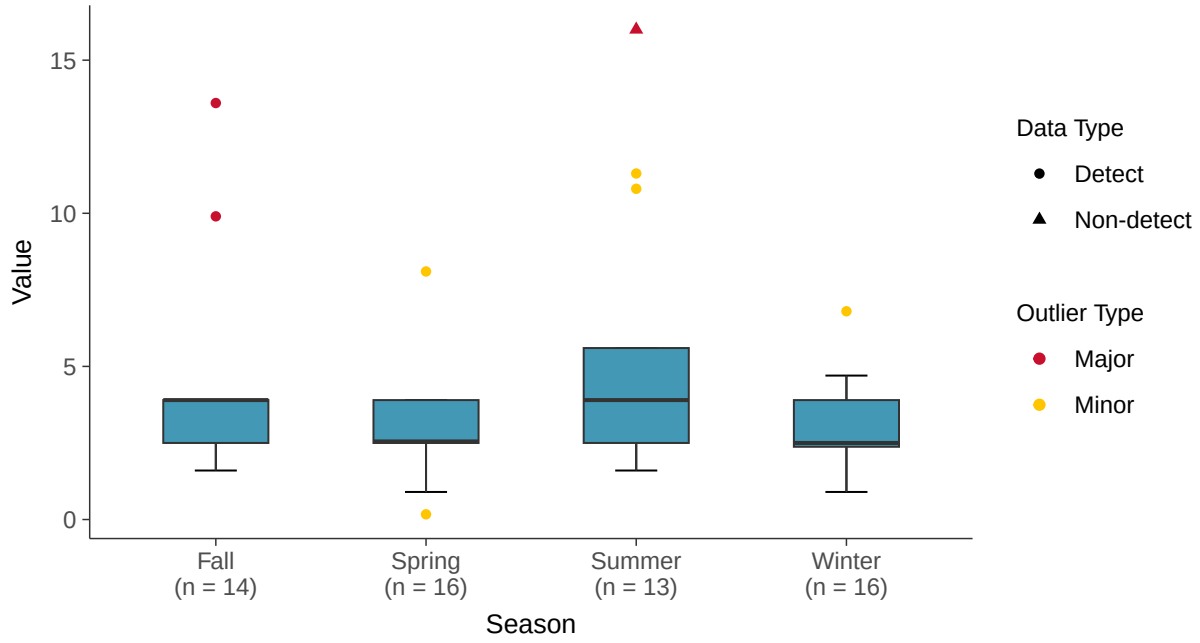
Boxplot

Molybdenum, BG-1 & BG-2 (ug/L)



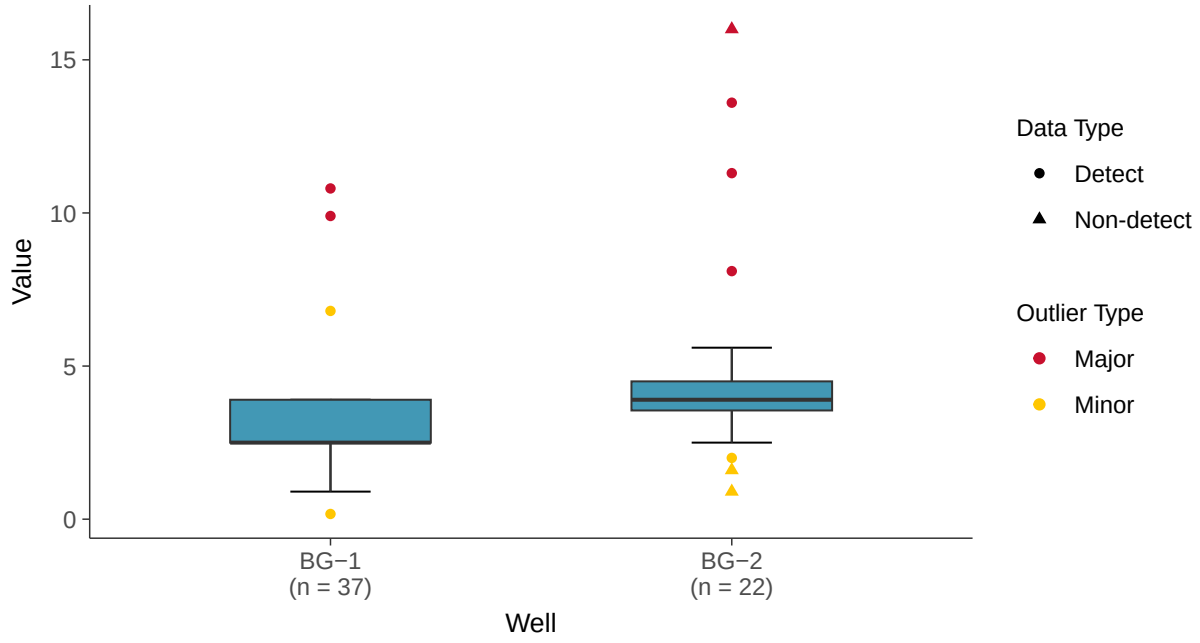
Boxplot by Season

Molybdenum, BG-1 & BG-2 (ug/L)



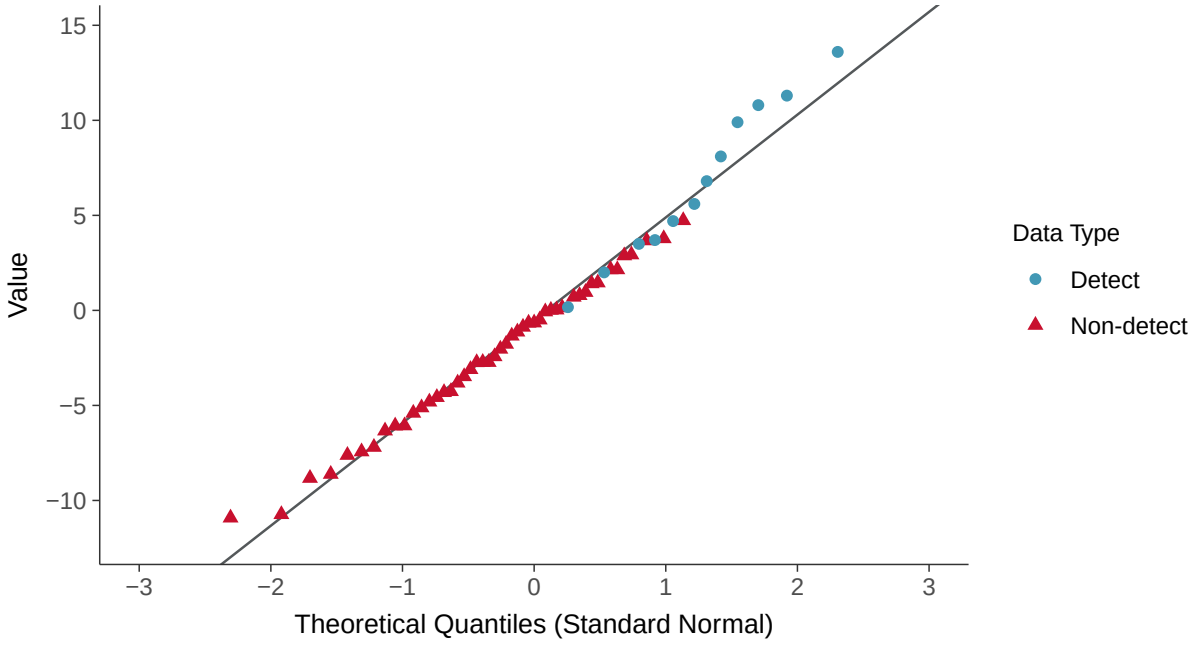
Boxplot by Well

Molybdenum, BG-1 & BG-2 (ug/L)



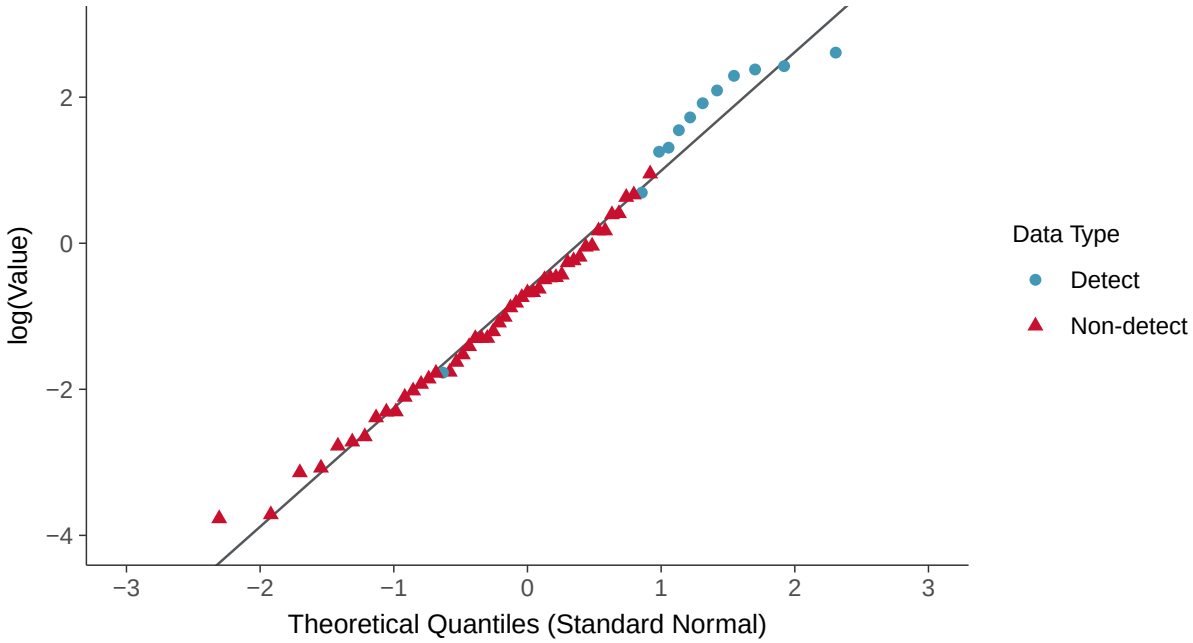
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, BG-1 & BG-2 (ug/L)



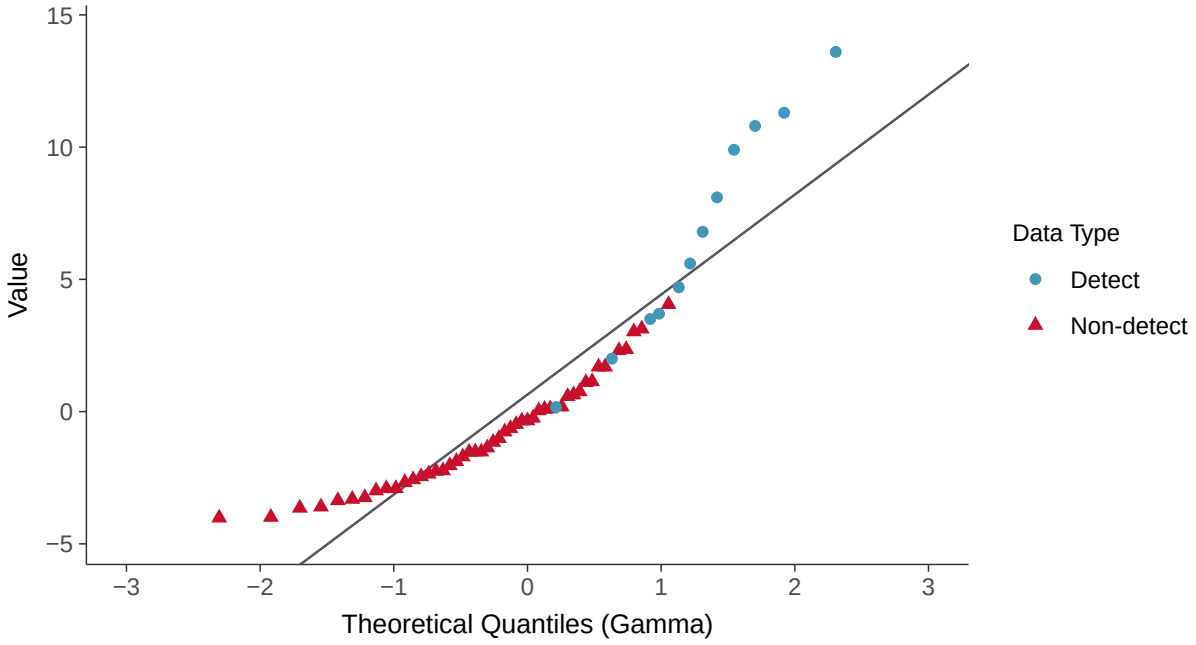
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, BG-1 & BG-2 (ug/L)



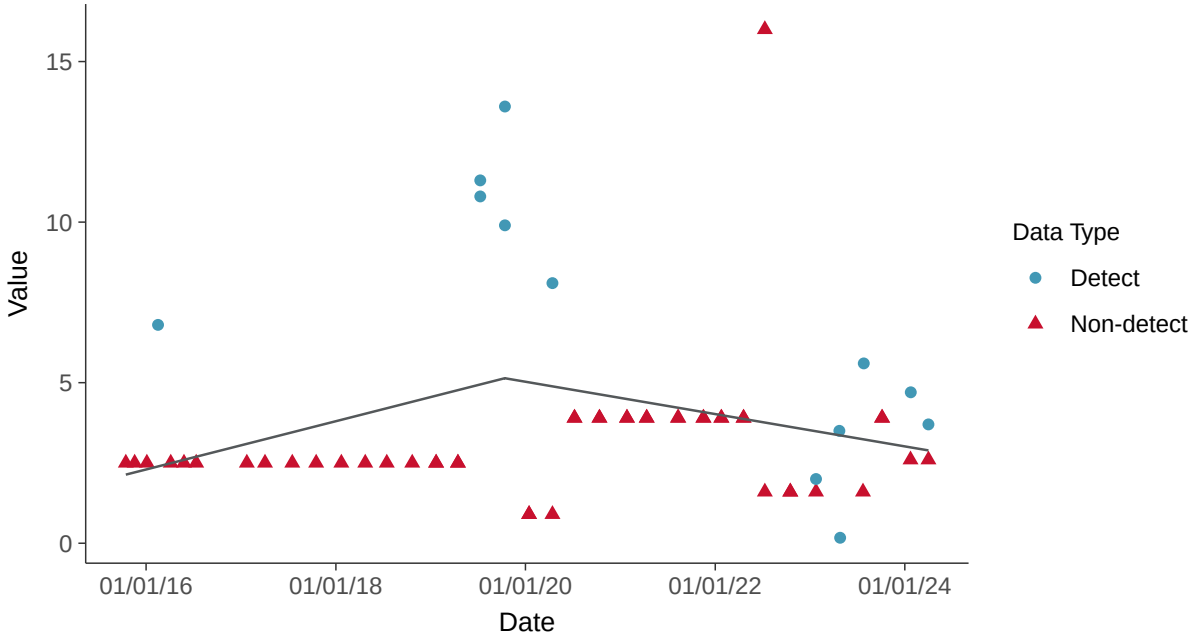
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, BG-1 & BG-2 (ug/L)



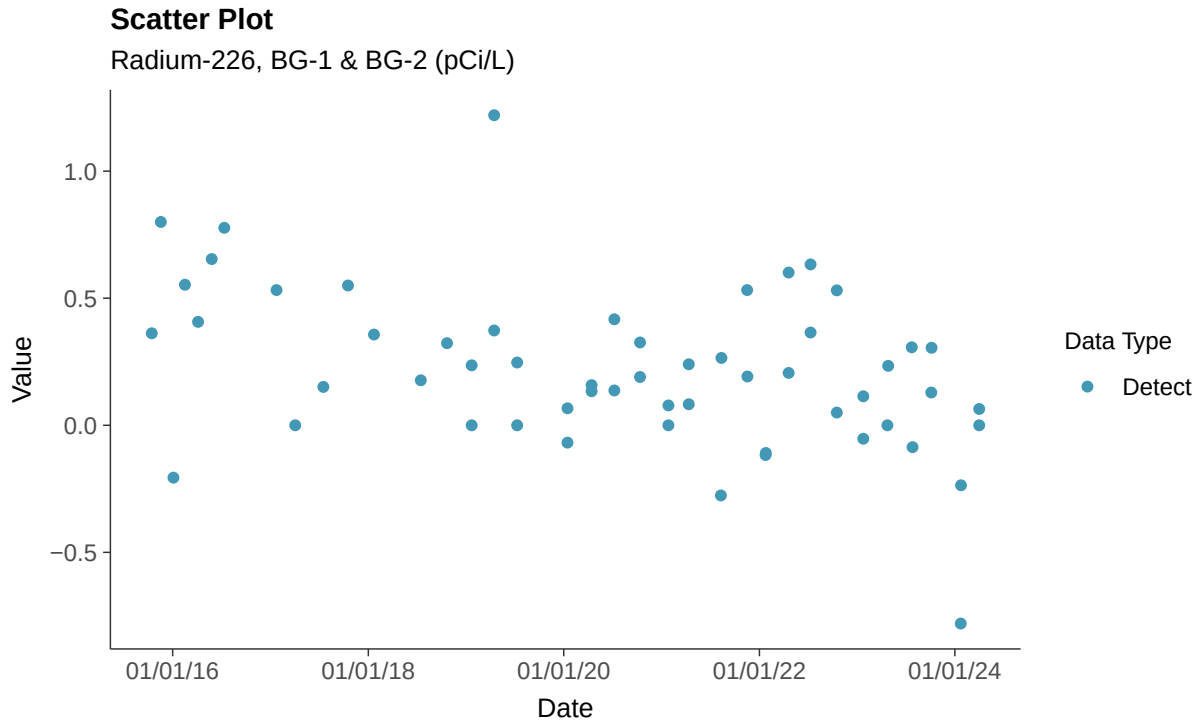
Trend Regression: Piecewise Linear-Linear

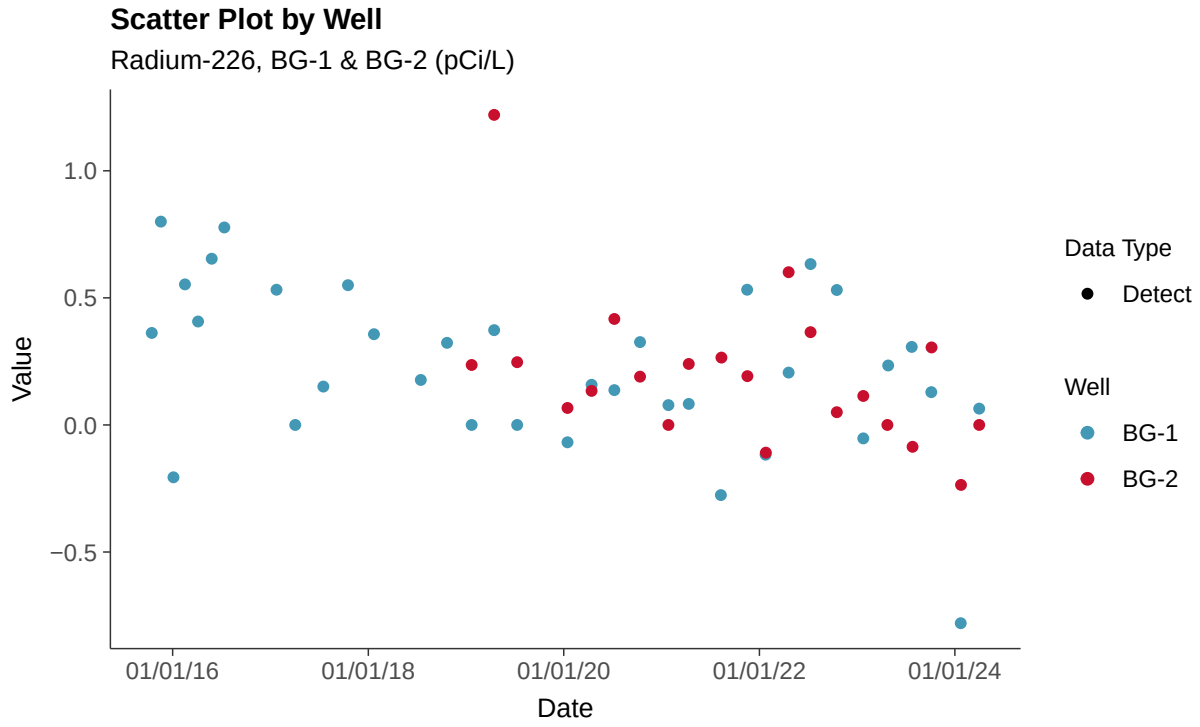
Molybdenum, BG-1 & BG-2 (ug/L)



App. IV: Radium-226, BG-1 & BG-2

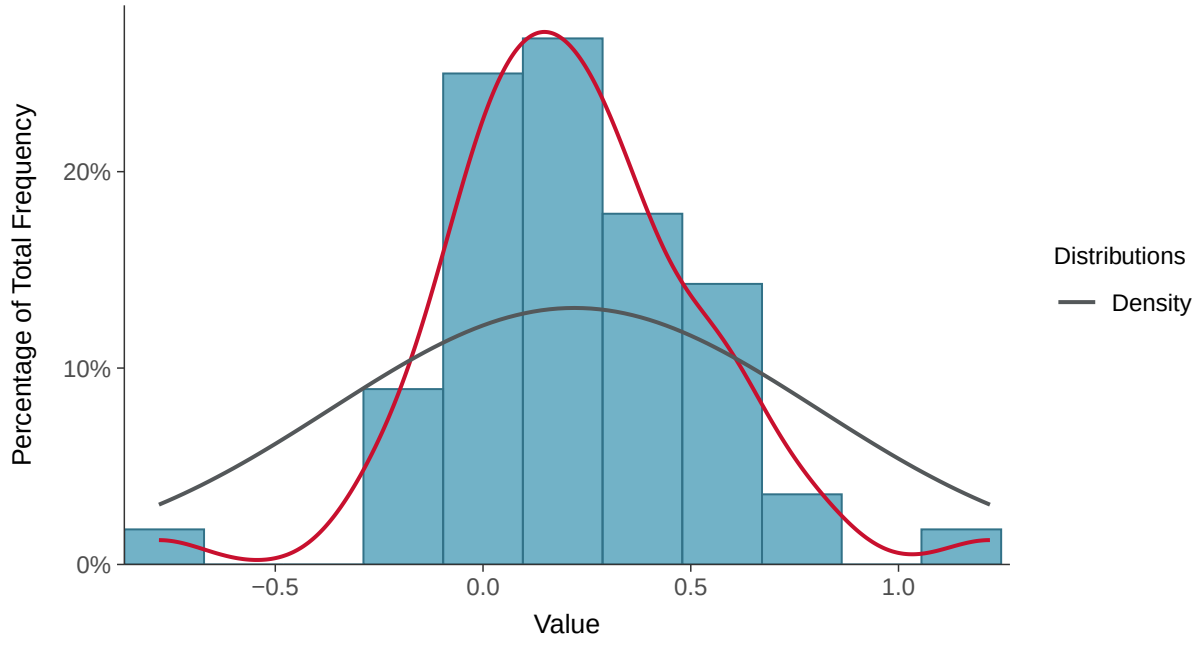
ID: 3_119





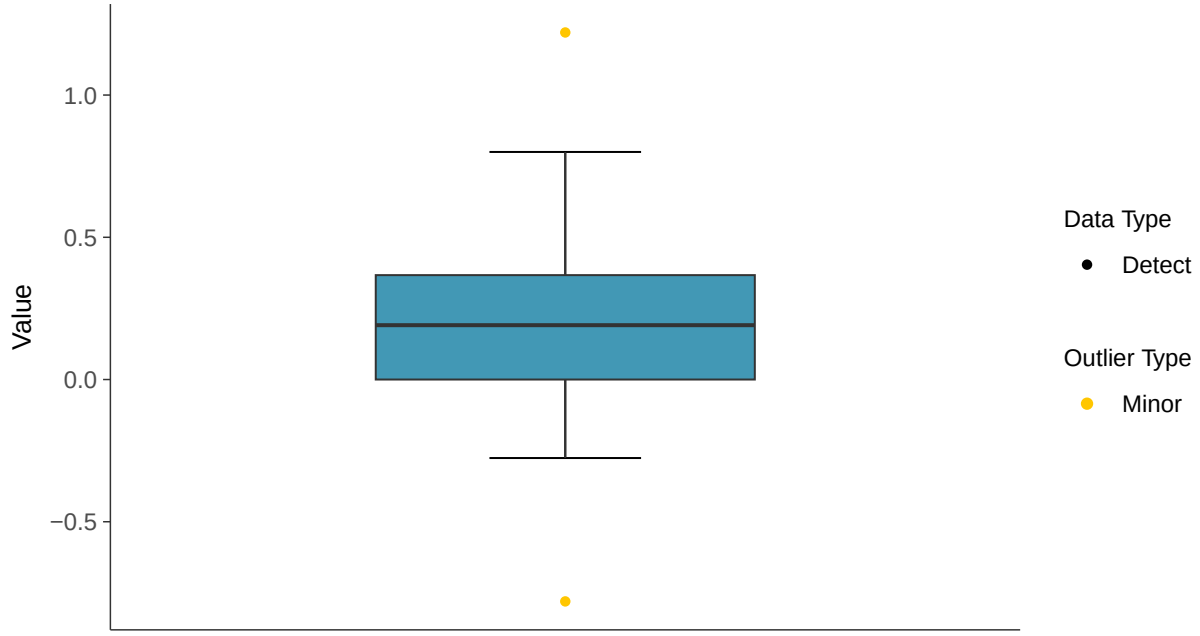
Histogram

Radium-226, BG-1 & BG-2 (pCi/L)



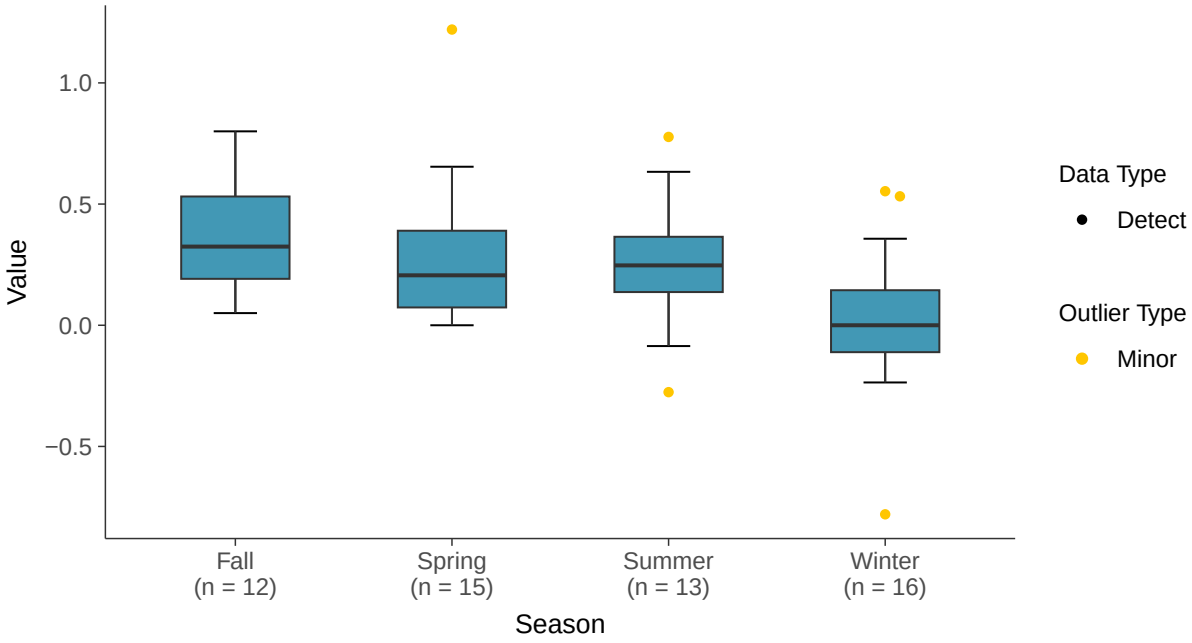
Boxplot

Radium-226, BG-1 & BG-2 (pCi/L)



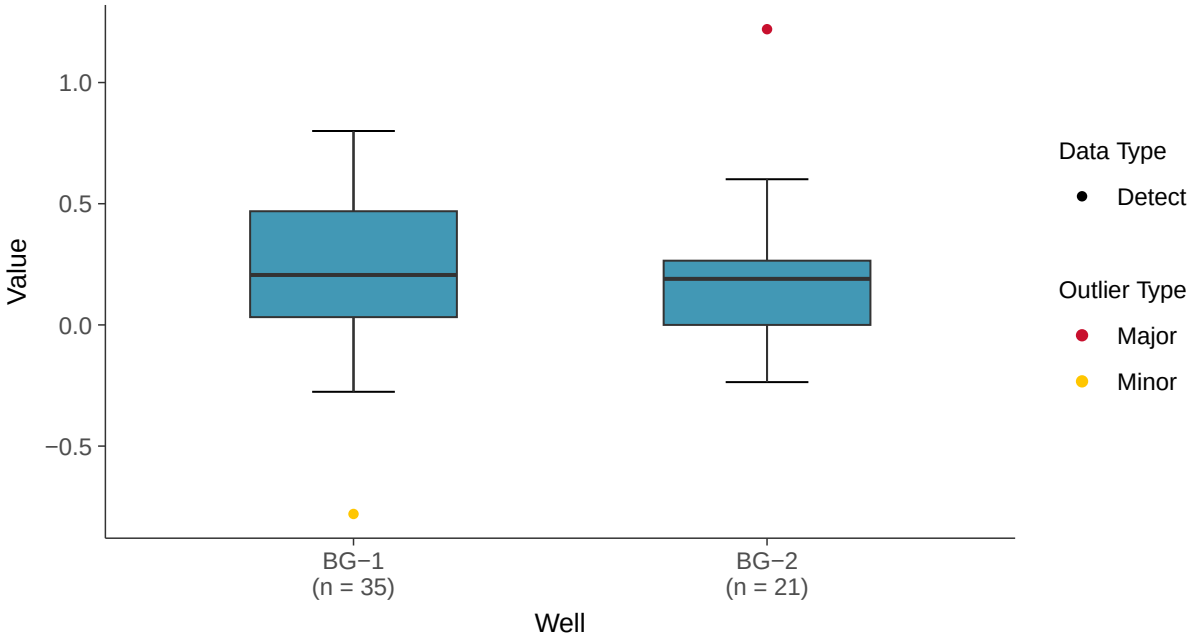
Boxplot by Season

Radium-226, BG-1 & BG-2 (pCi/L)



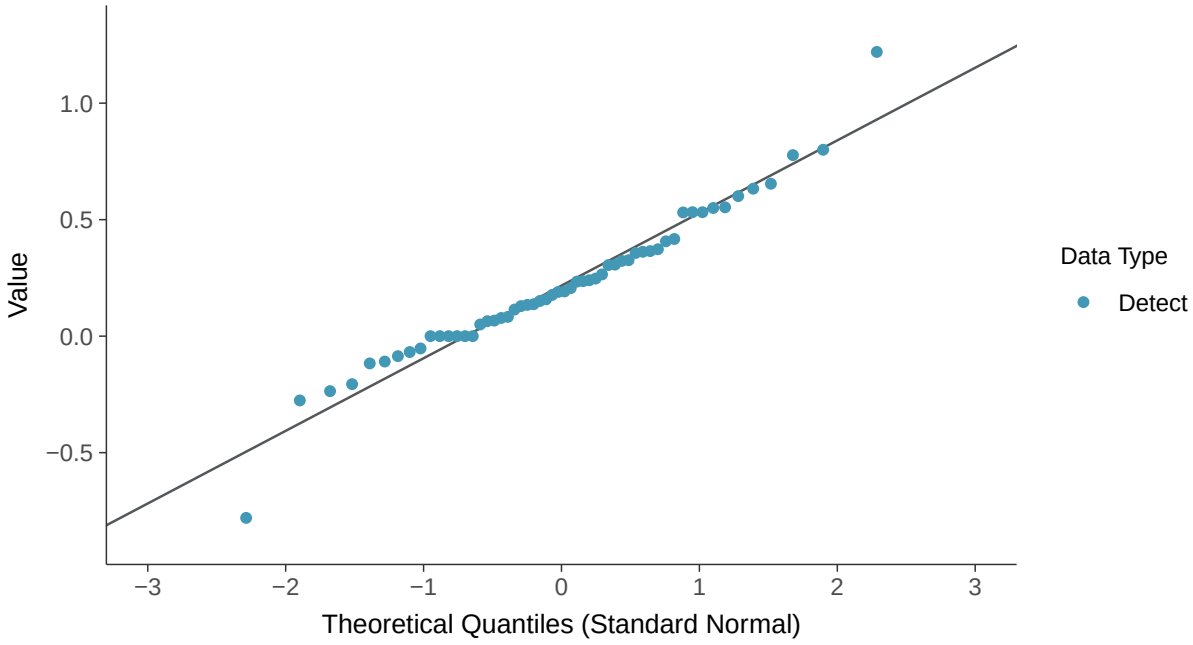
Boxplot by Well

Radium-226, BG-1 & BG-2 (pCi/L)



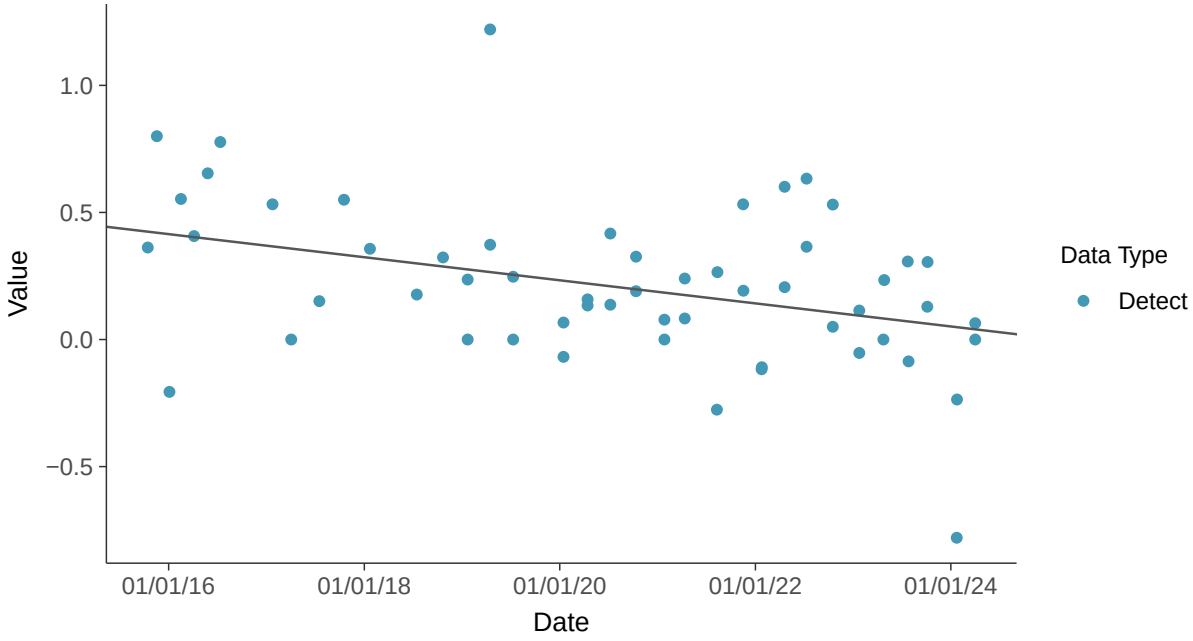
Normal Q-Q plot

Radium-226, BG-1 & BG-2 (pCi/L)



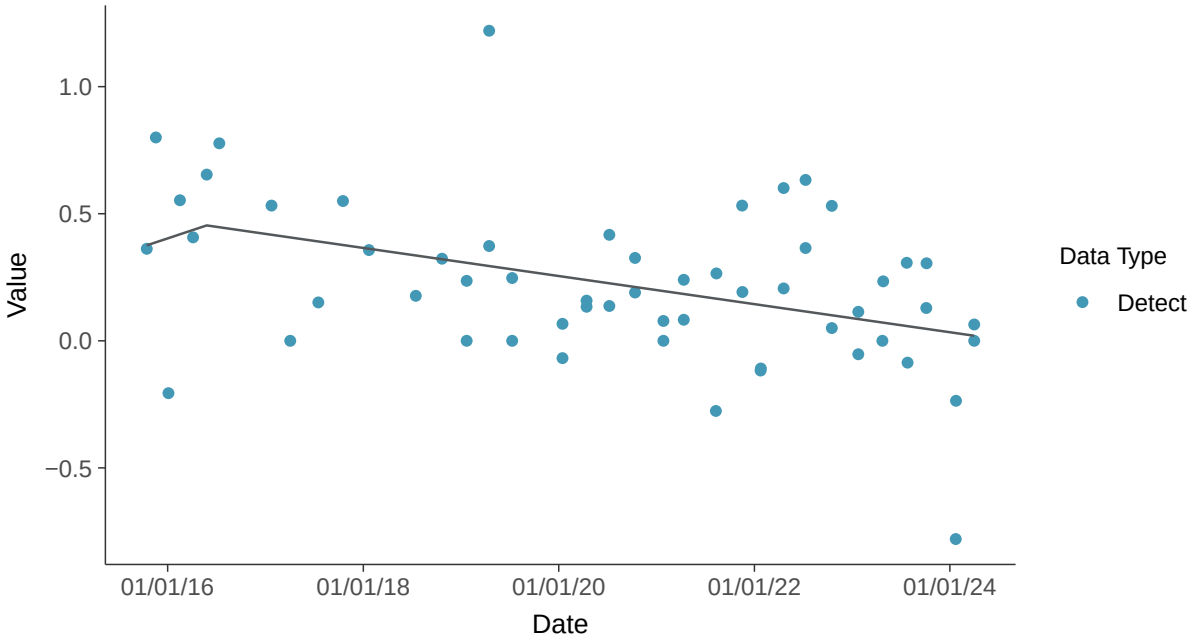
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, BG-1 & BG-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, BG-1 & BG-2 (pCi/L)

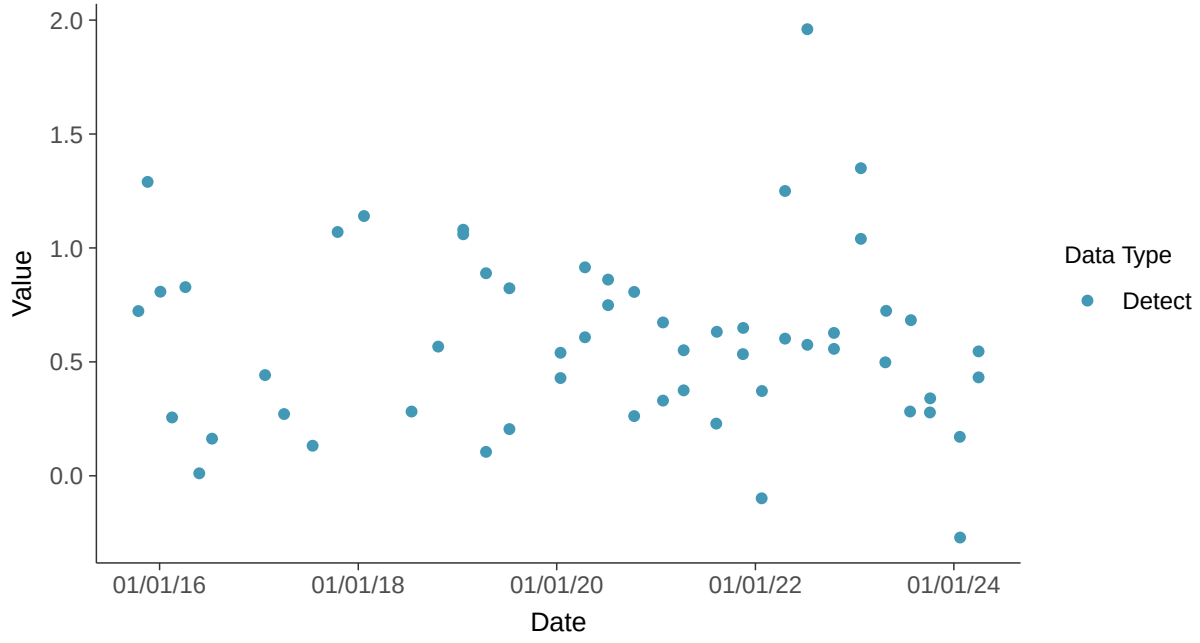


App. IV: Radium-228, BG-1 & BG-2

ID: 3_120

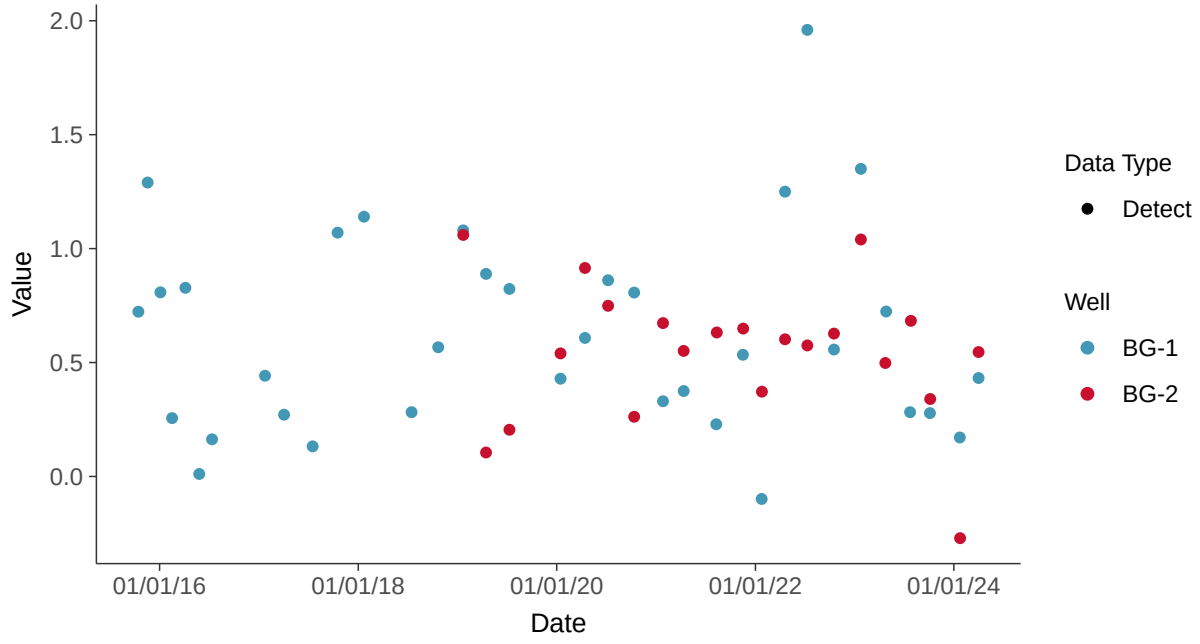
Scatter Plot

Radium-228, BG-1 & BG-2 (pCi/L)



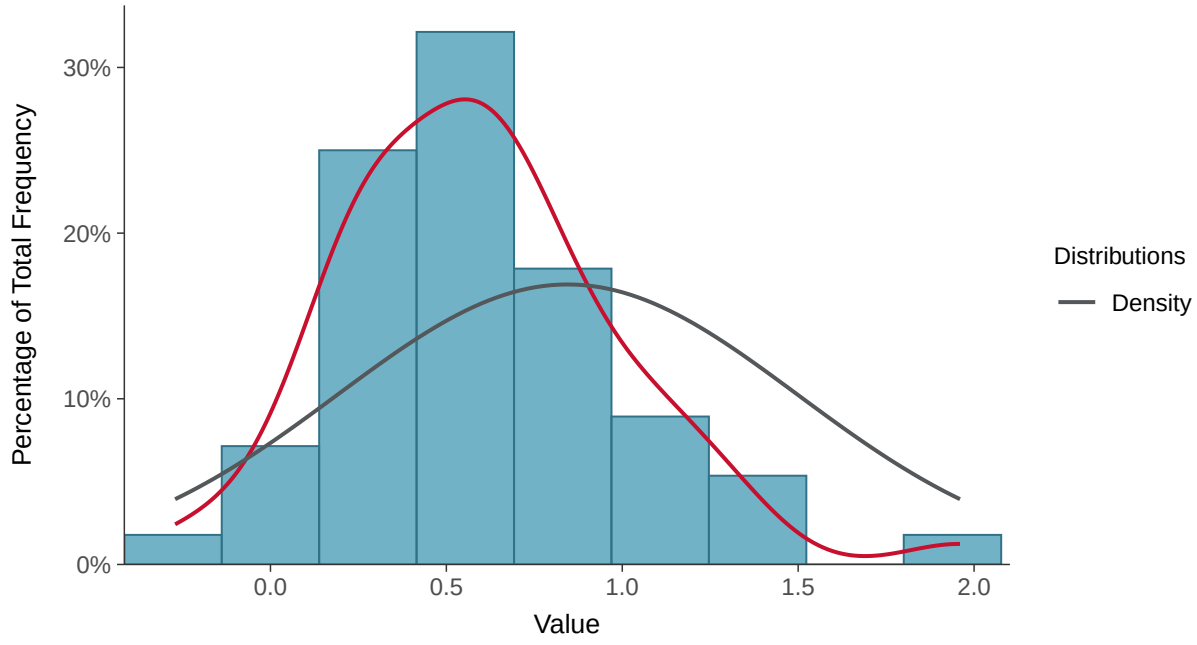
Scatter Plot by Well

Radium-228, BG-1 & BG-2 (pCi/L)



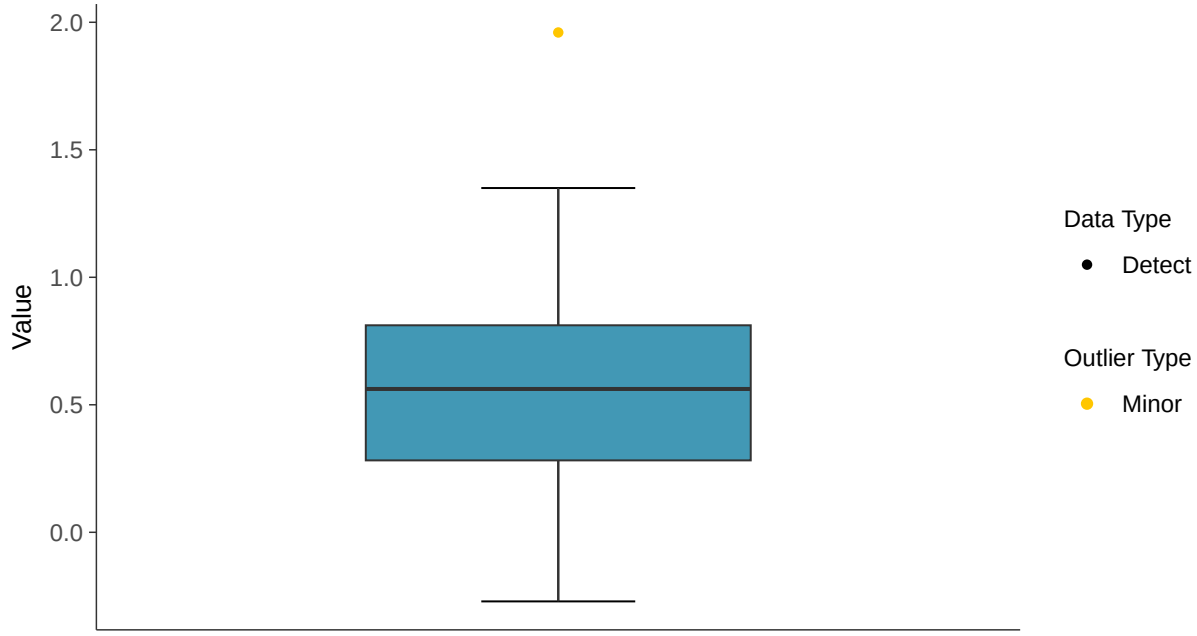
Histogram

Radium-228, BG-1 & BG-2 (pCi/L)



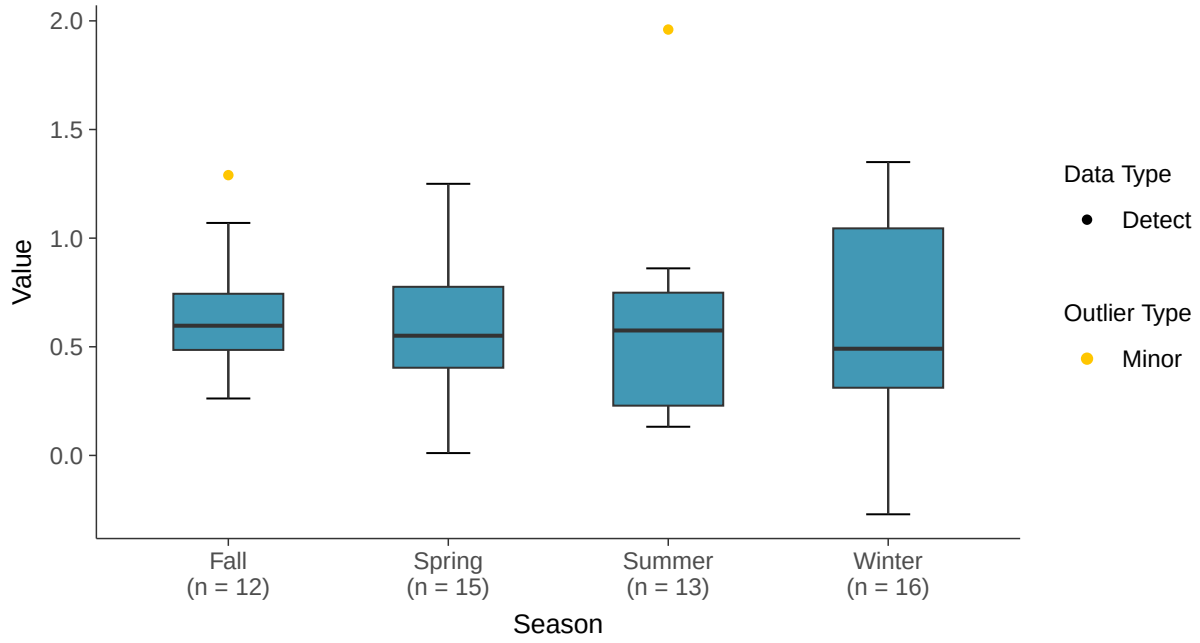
Boxplot

Radium-228, BG-1 & BG-2 (pCi/L)



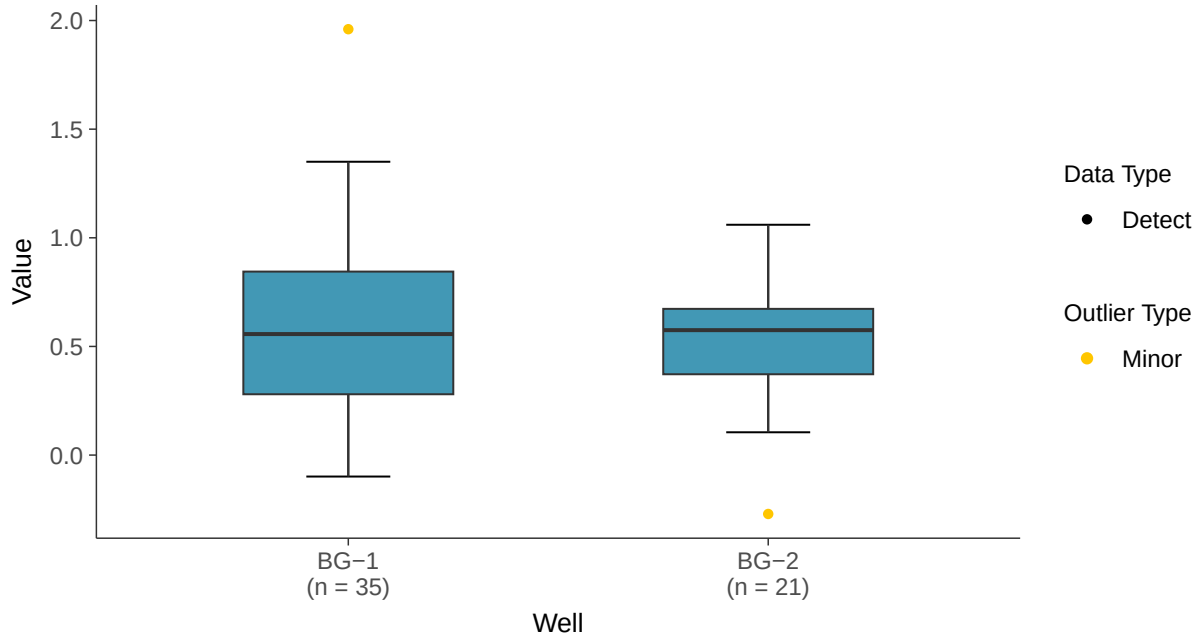
Boxplot by Season

Radium-228, BG-1 & BG-2 (pCi/L)



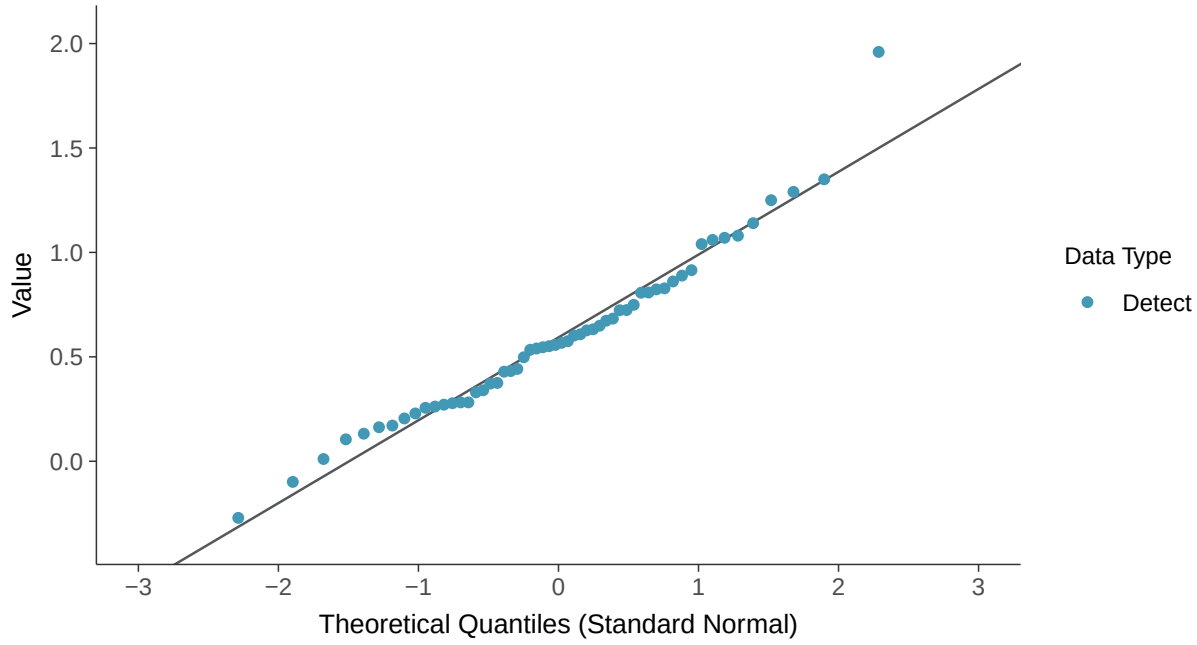
Boxplot by Well

Radium-228, BG-1 & BG-2 (pCi/L)



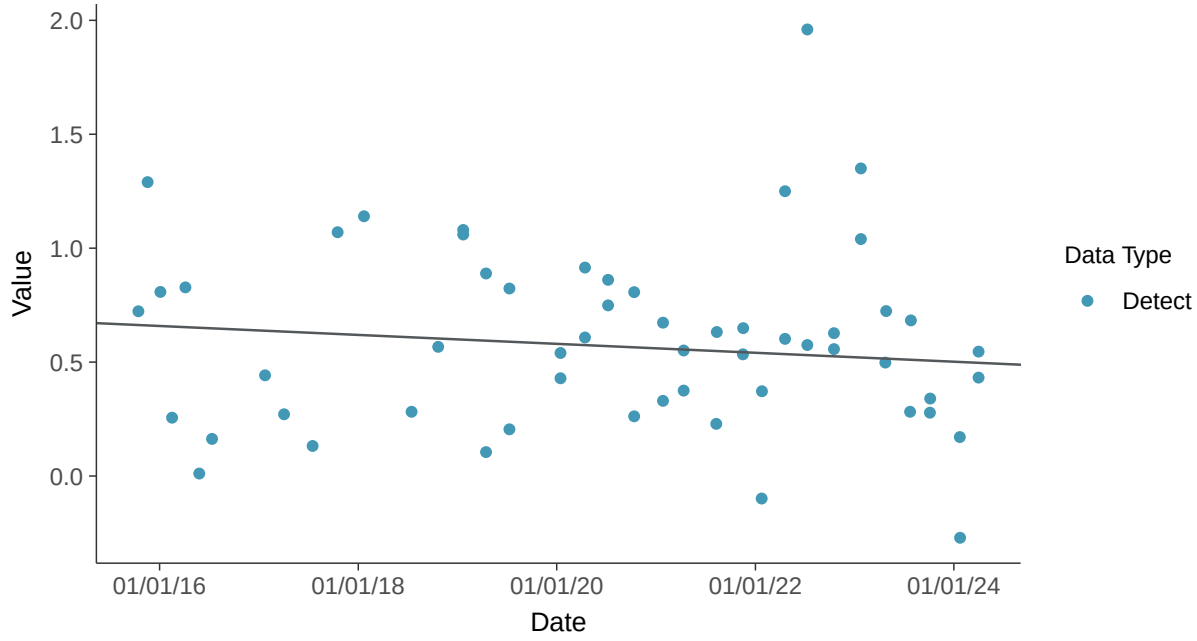
Normal Q-Q plot

Radium-228, BG-1 & BG-2 (pCi/L)



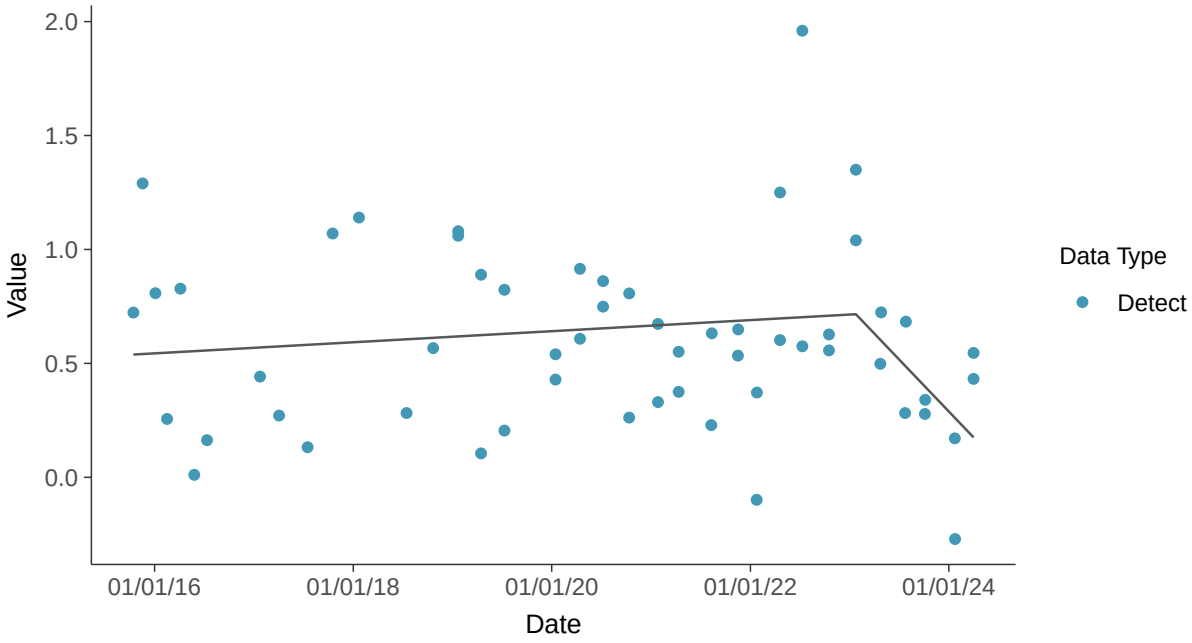
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, BG-1 & BG-2 (pCi/L)



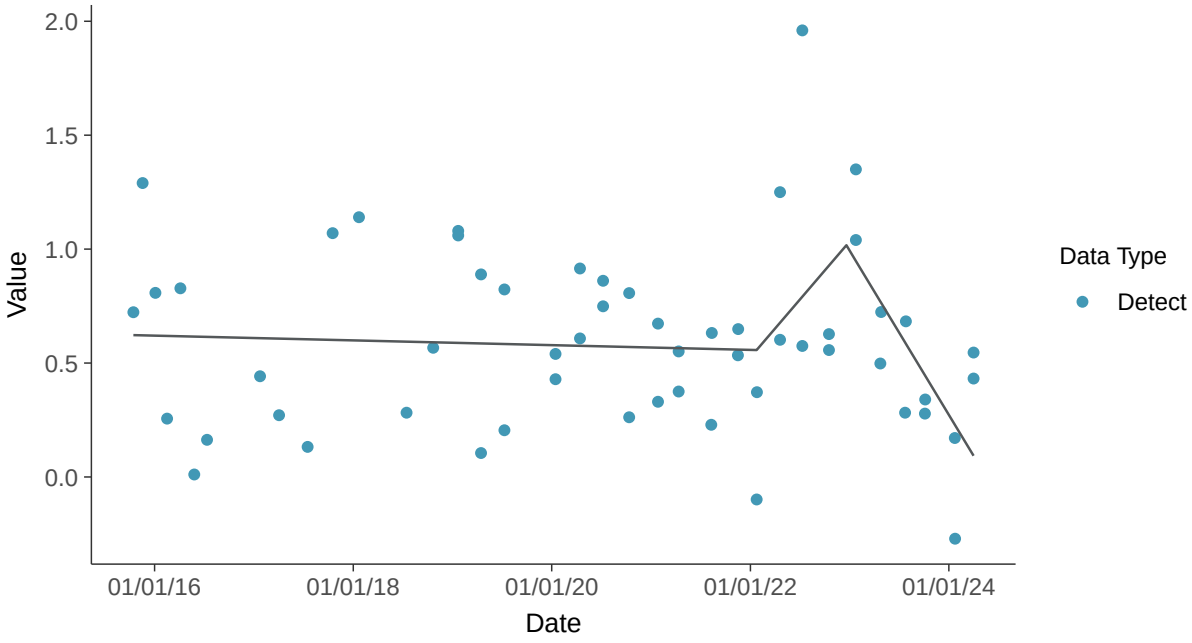
Trend Regression: Piecewise Linear-Linear

Radium-228, BG-1 & BG-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-228, BG-1 & BG-2 (pCi/L)

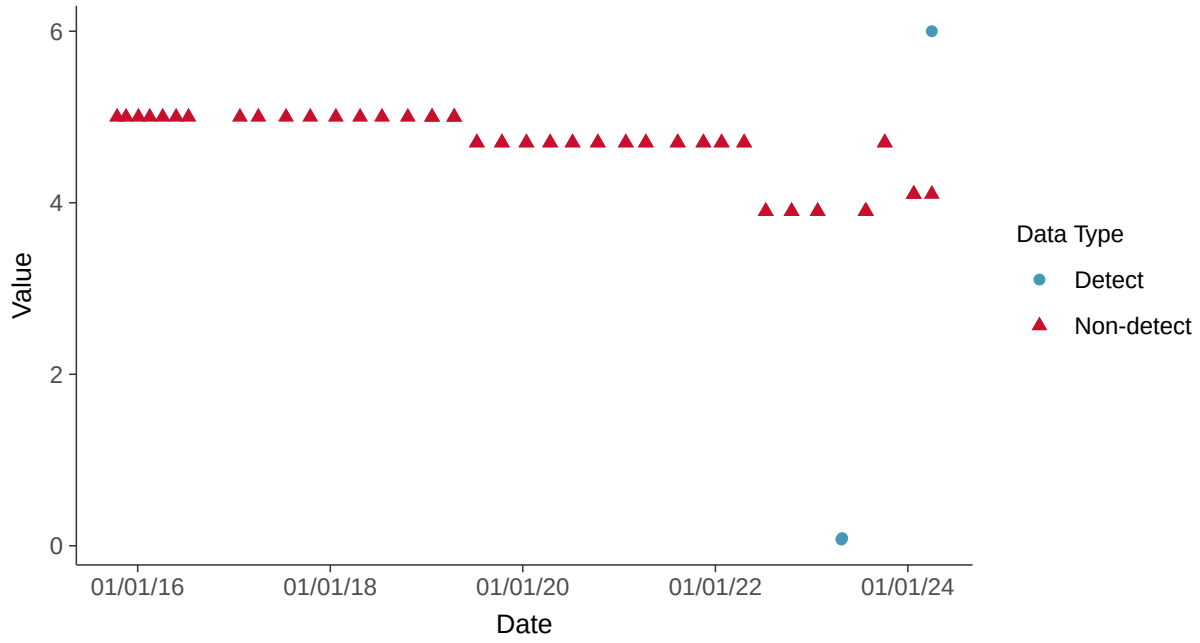


App. IV: Selenium, BG-1 & BG-2

ID: 3_121

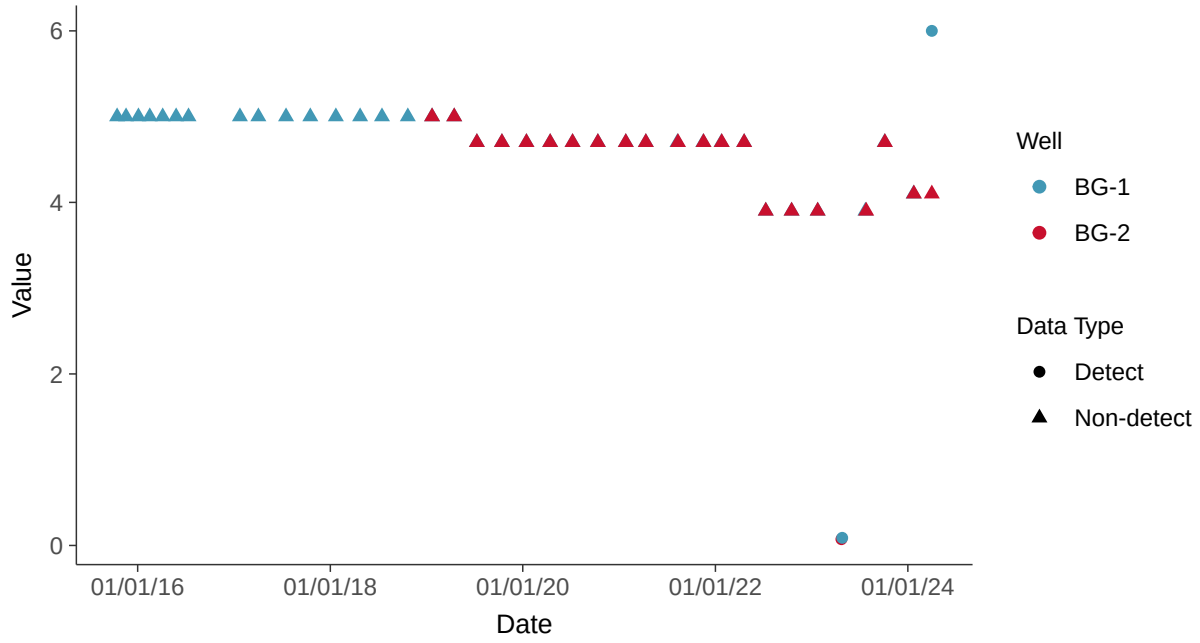
Scatter Plot

Selenium, BG-1 & BG-2 (ug/L)



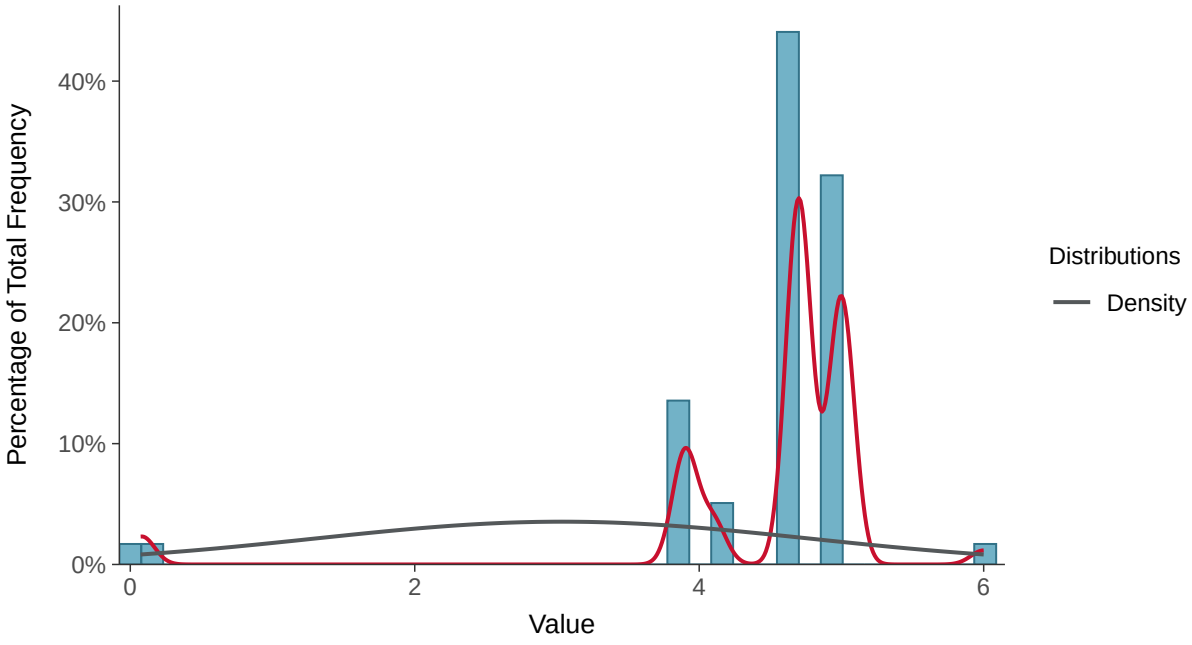
Scatter Plot by Well

Selenium, BG-1 & BG-2 (ug/L)



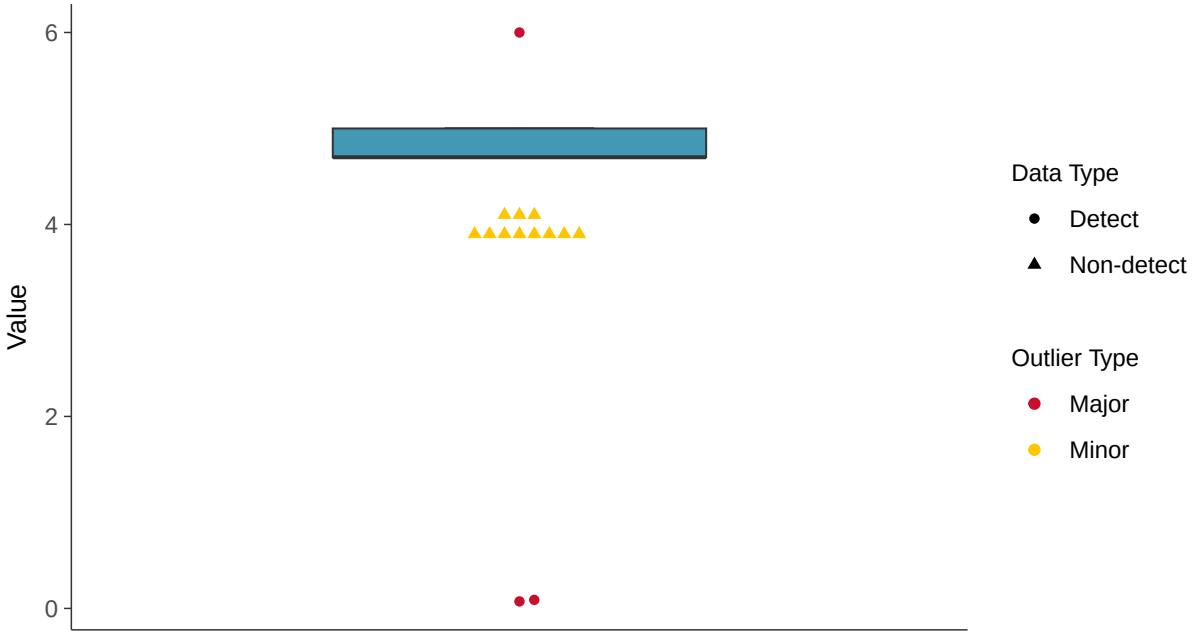
Histogram

Selenium, BG-1 & BG-2 (ug/L)



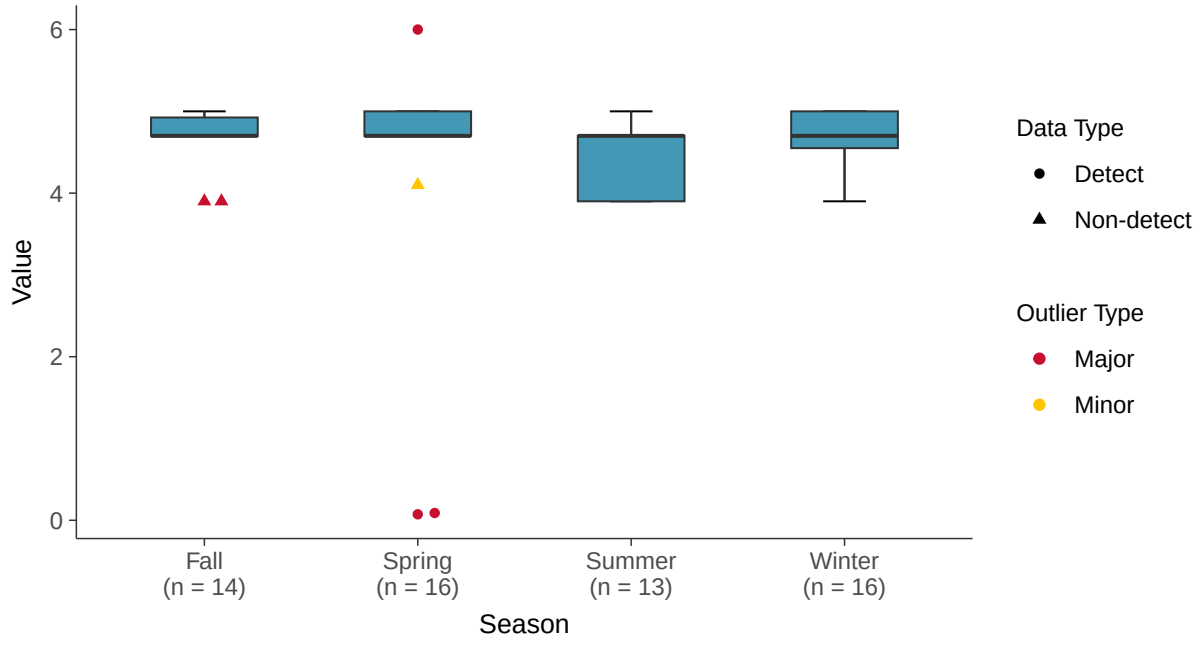
Boxplot

Selenium, BG-1 & BG-2 (ug/L)



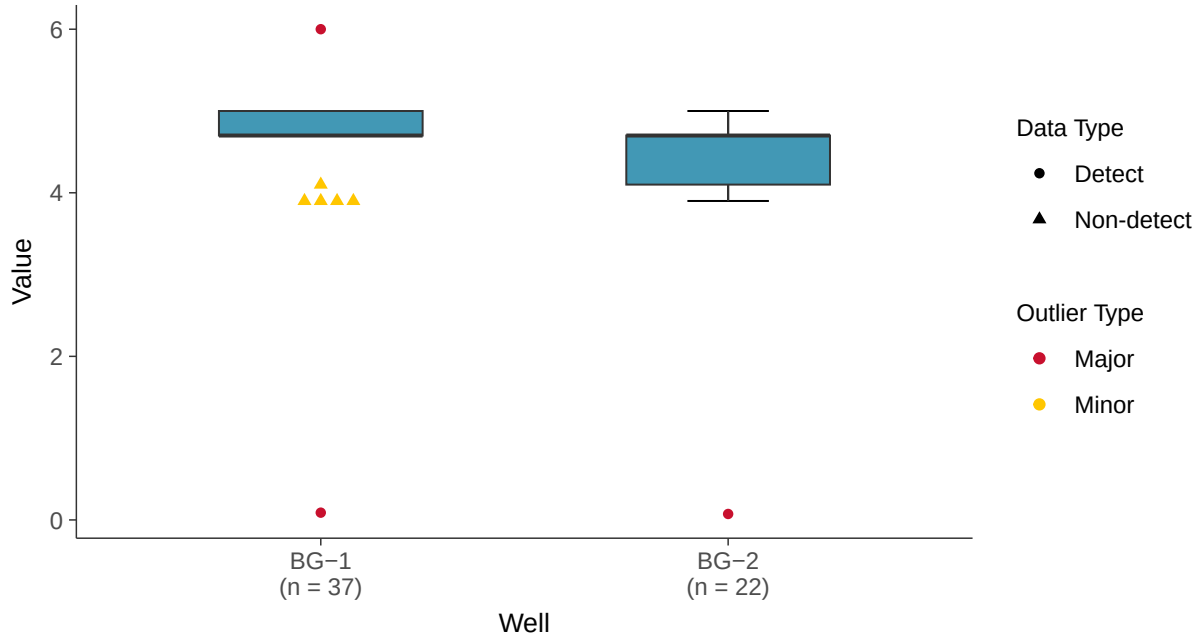
Boxplot by Season

Selenium, BG-1 & BG-2 (ug/L)



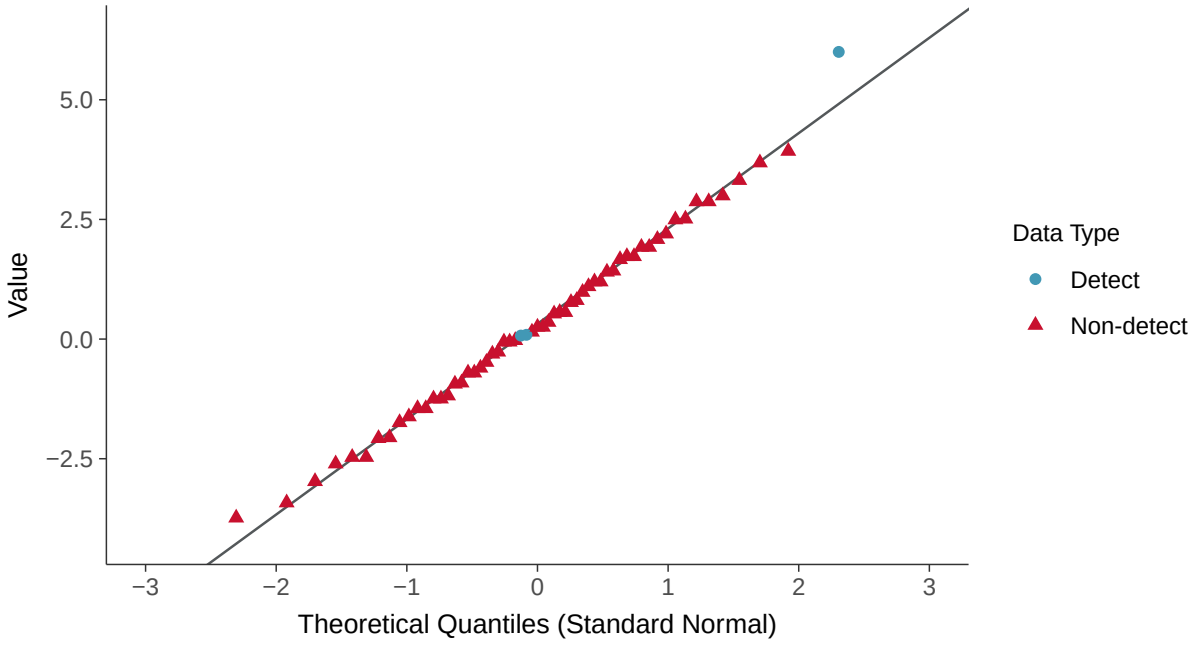
Boxplot by Well

Selenium, BG-1 & BG-2 (ug/L)



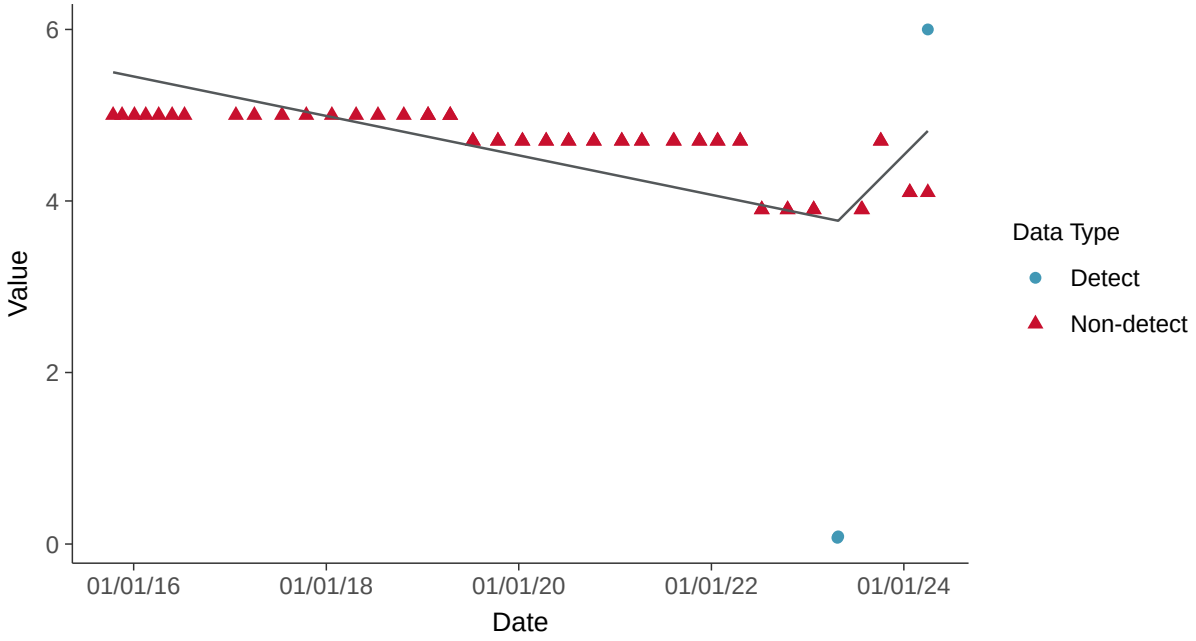
Normal Q-Q plot using ROS Imputed Estimates

Selenium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Selenium, BG-1 & BG-2 (ug/L)

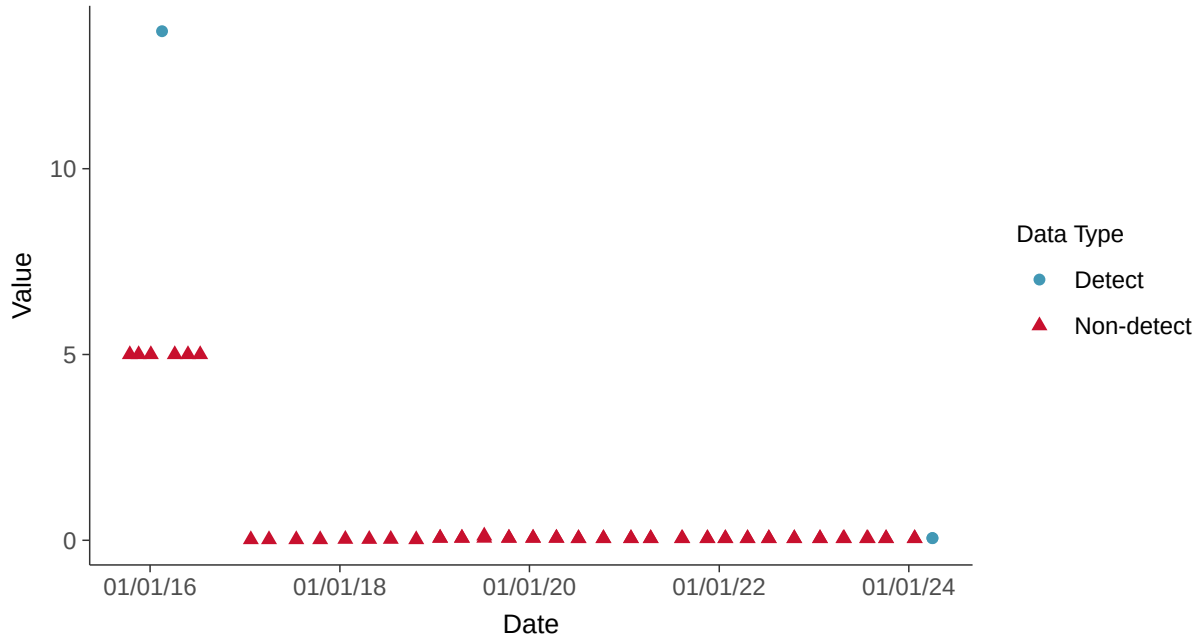


App. IV: Thallium, BG-1 & BG-2

ID: 3_124

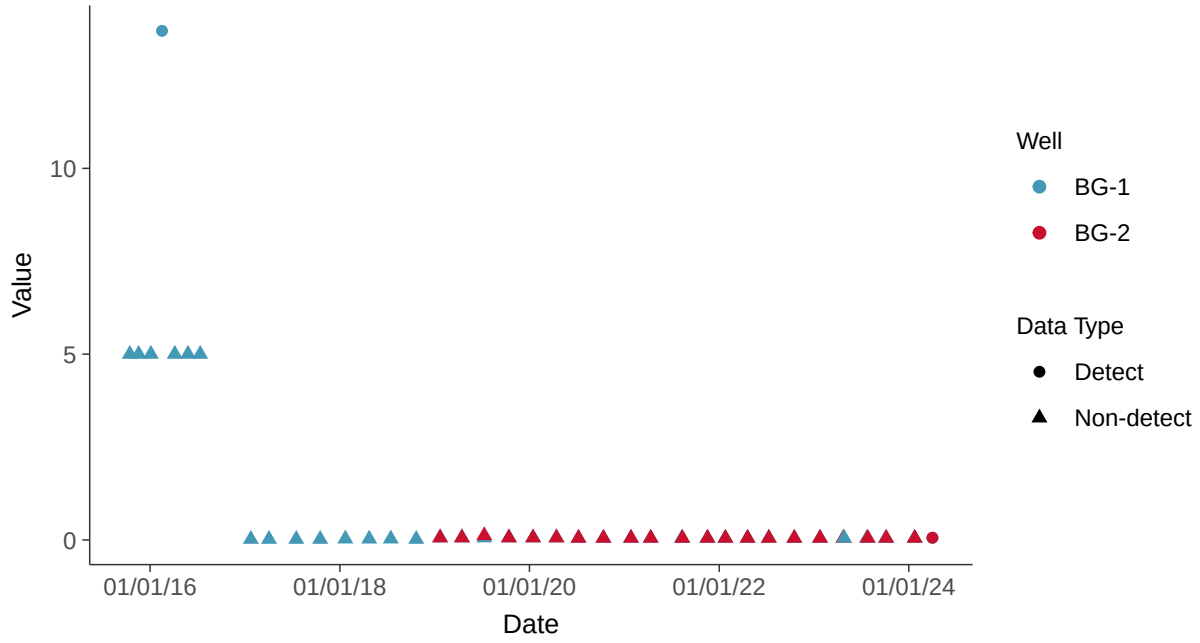
Scatter Plot

Thallium, BG-1 & BG-2 (ug/L)



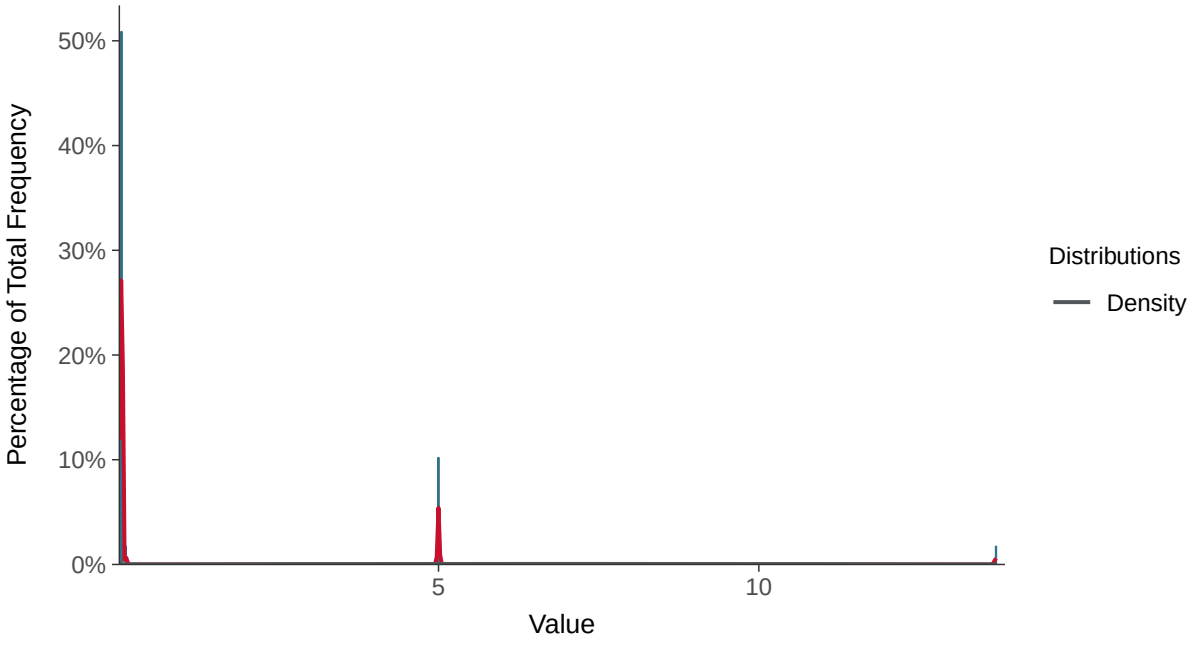
Scatter Plot by Well

Thallium, BG-1 & BG-2 (ug/L)



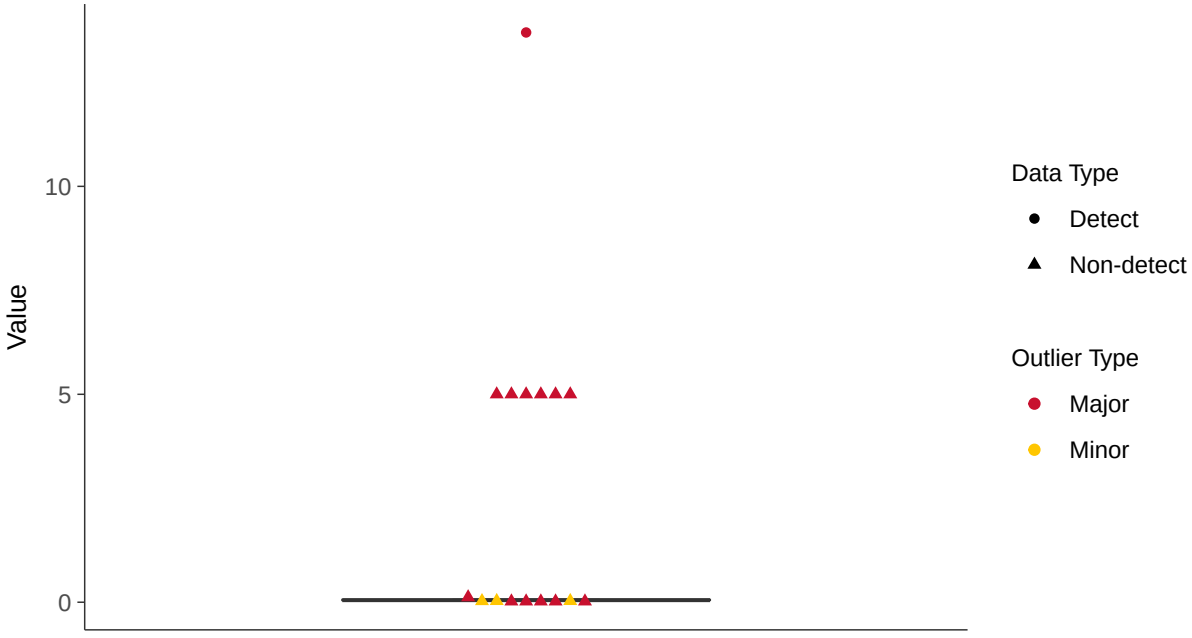
Histogram

Thallium, BG-1 & BG-2 (ug/L)



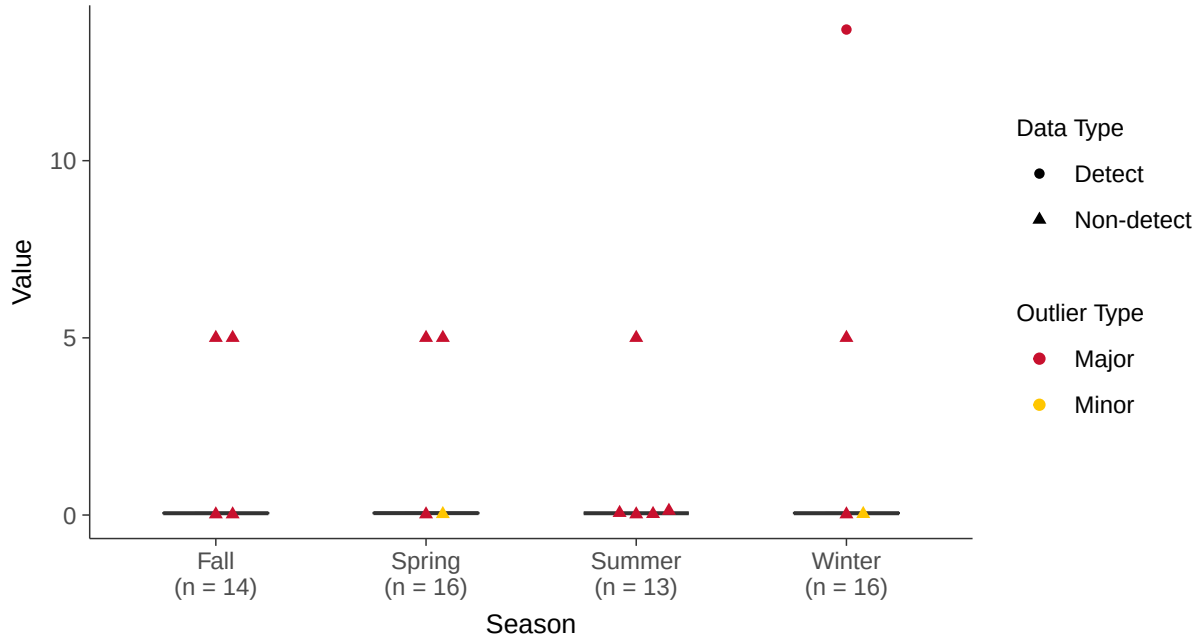
Boxplot

Thallium, BG-1 & BG-2 (ug/L)



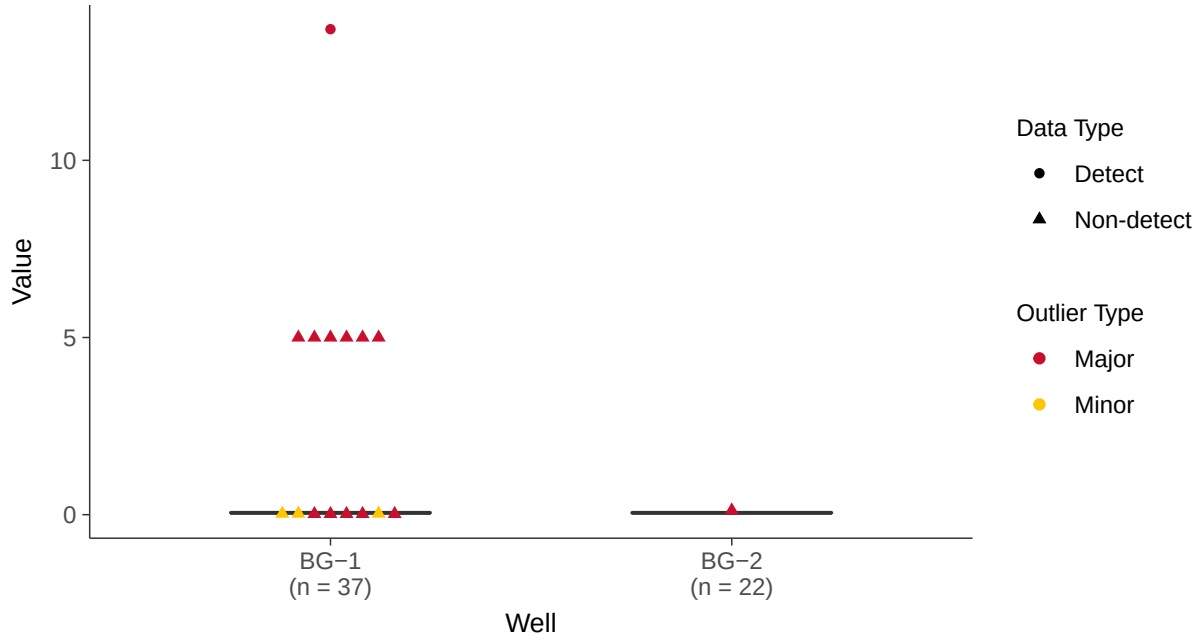
Boxplot by Season

Thallium, BG-1 & BG-2 (ug/L)



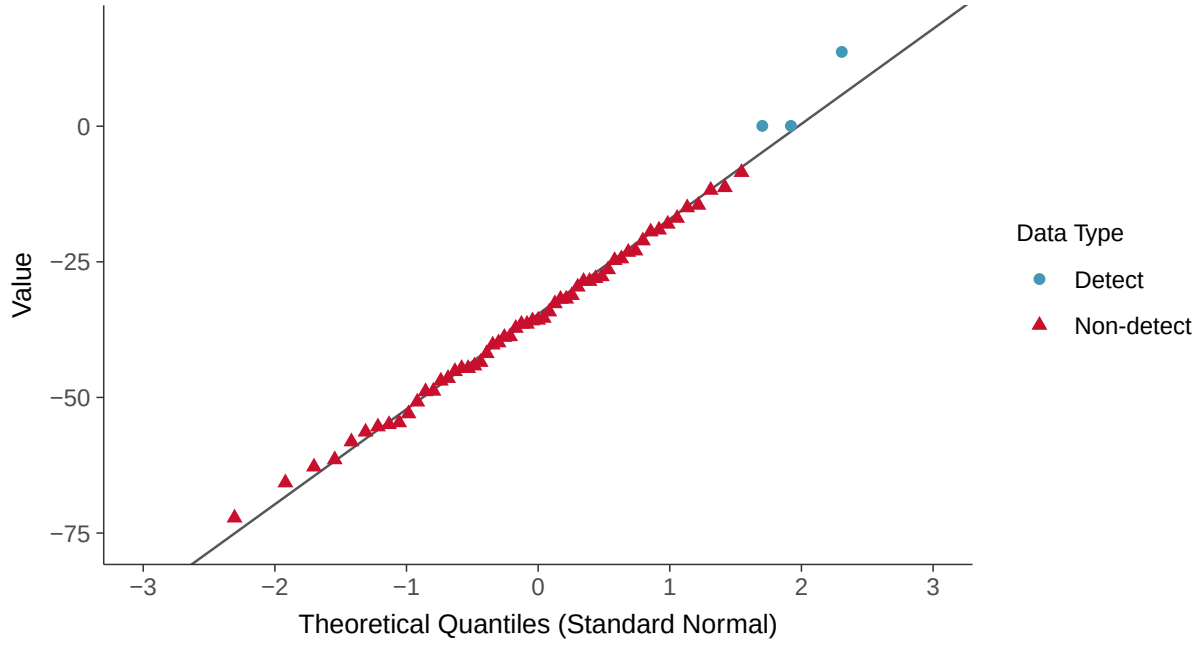
Boxplot by Well

Thallium, BG-1 & BG-2 (ug/L)



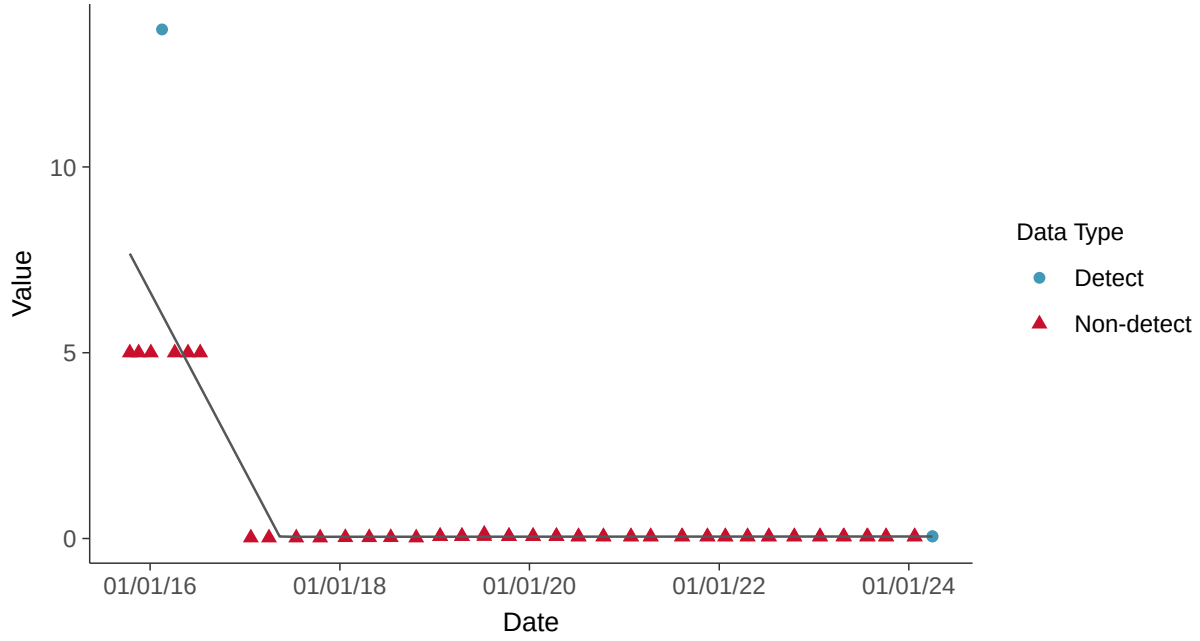
Normal Q-Q plot using ROS Imputed Estimates

Thallium, BG-1 & BG-2 (ug/L)



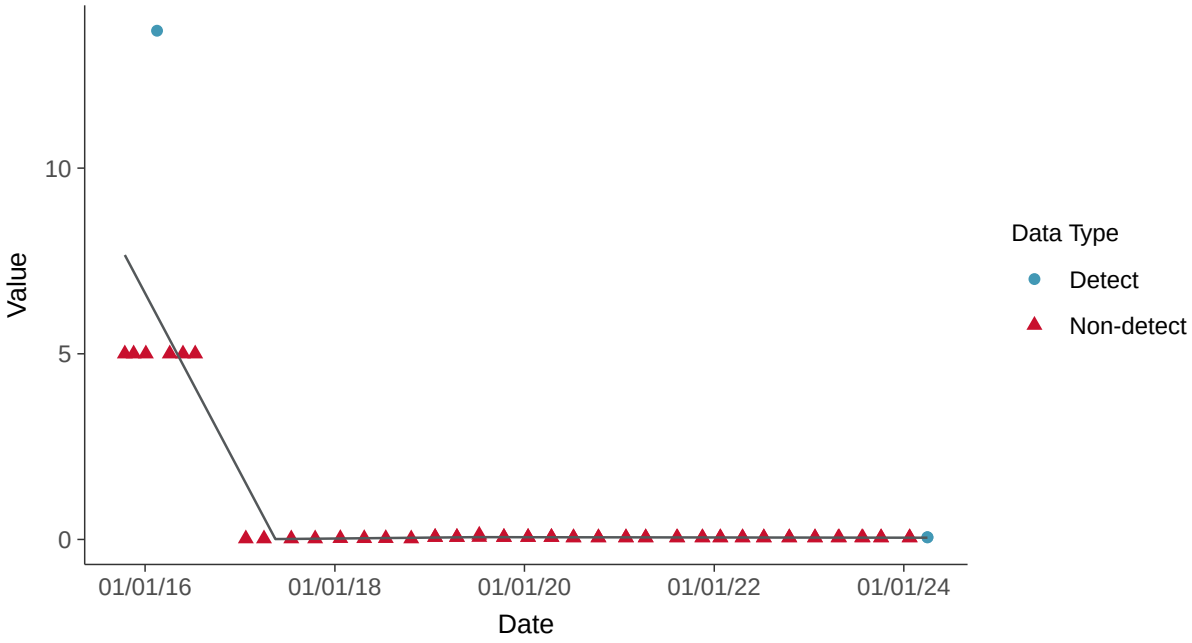
Trend Regression: Piecewise Linear-Linear

Thallium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, BG-1 & BG-2 (ug/L)

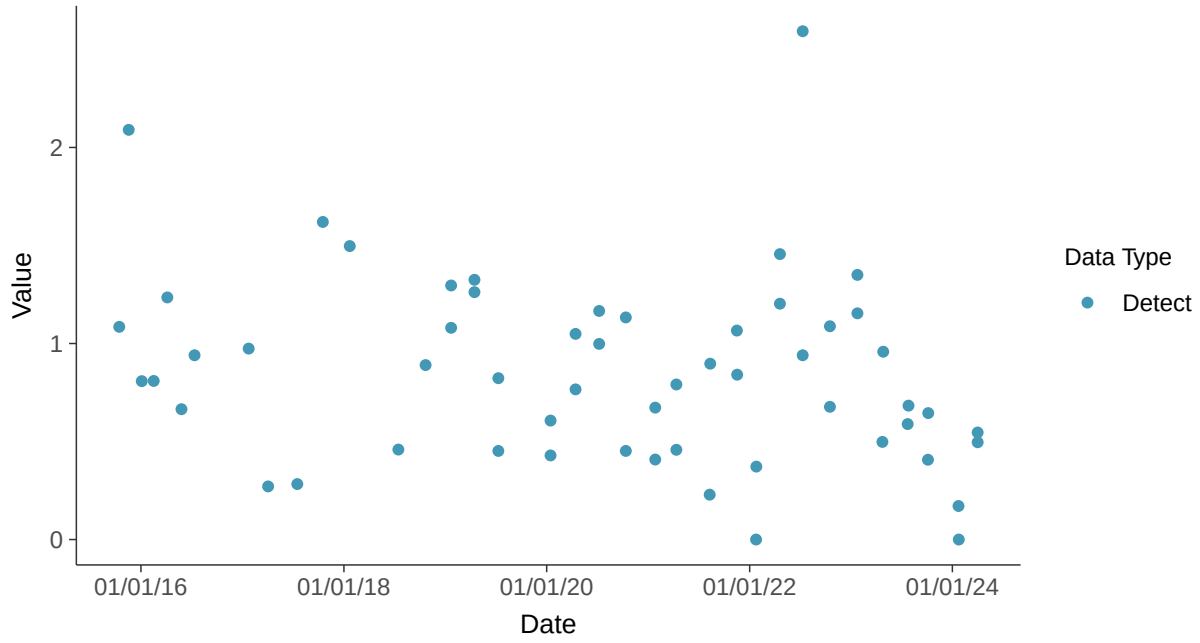


App. IV: Total Radium, BG-1 & BG-2

ID: 3_126

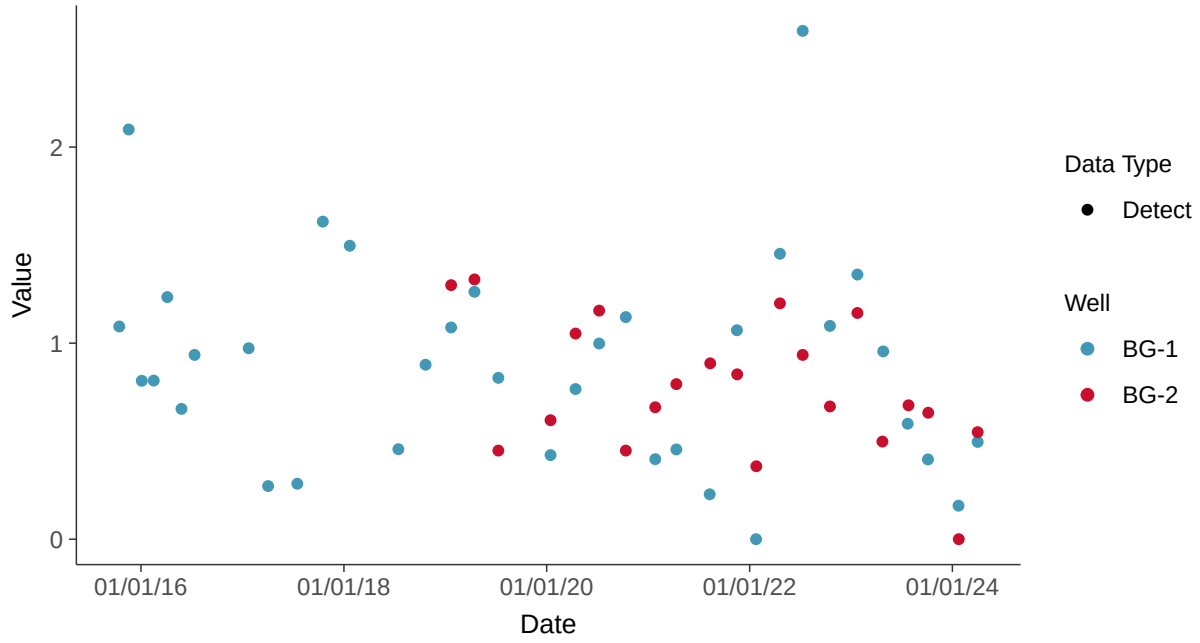
Scatter Plot

Total Radium, BG-1 & BG-2 (pCi/L)



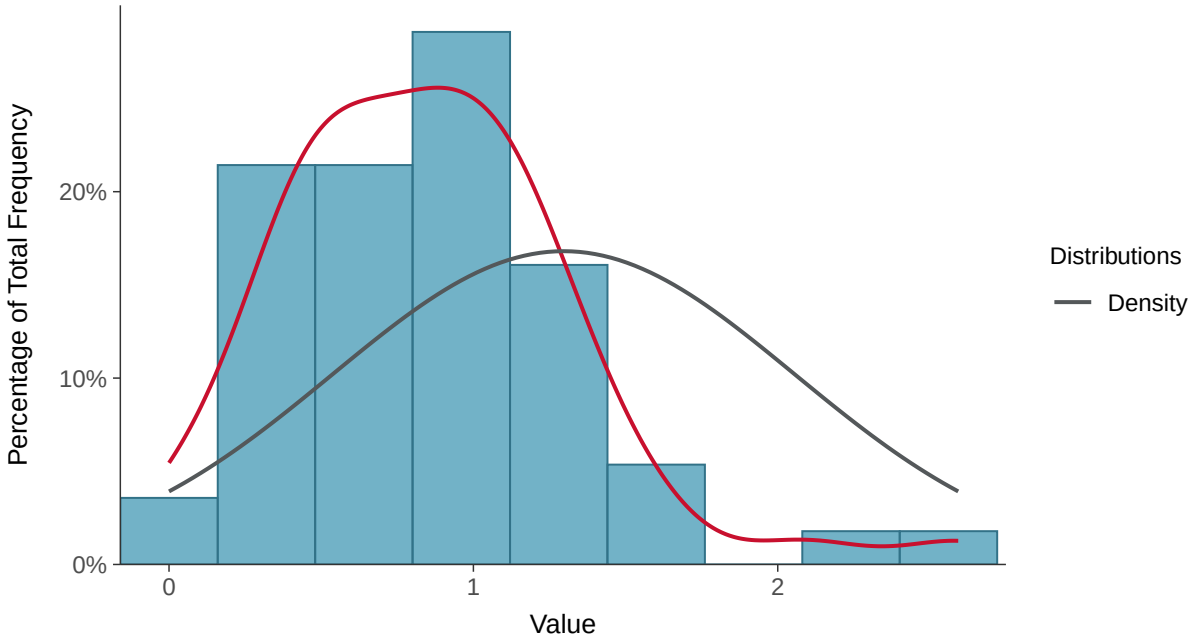
Scatter Plot by Well

Total Radium, BG-1 & BG-2 (pCi/L)



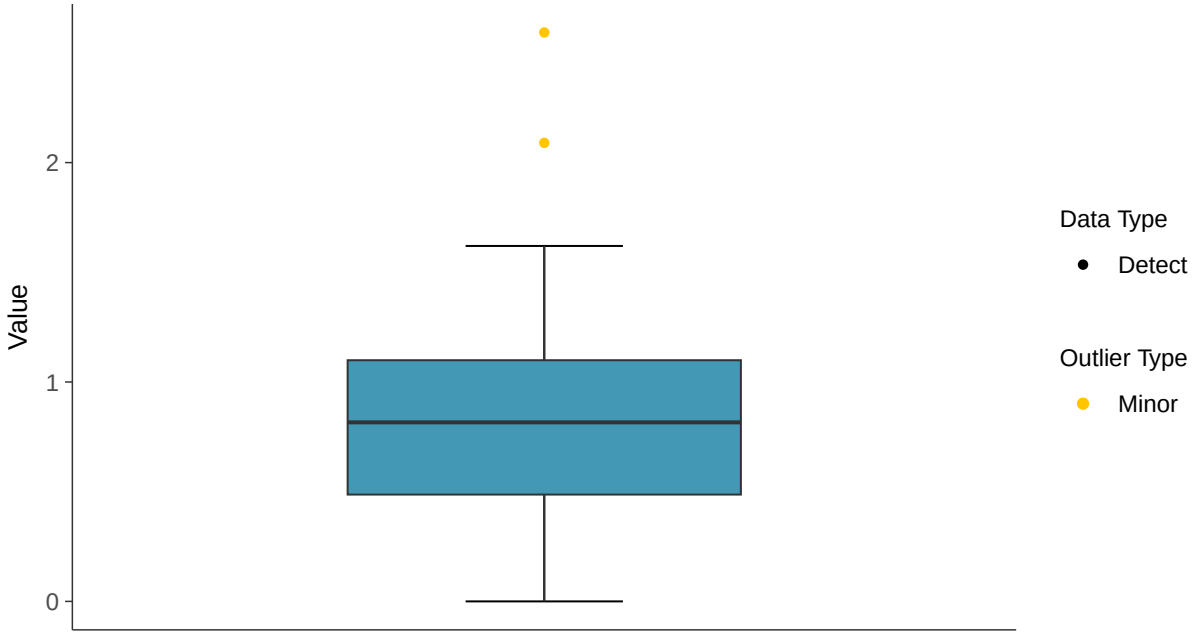
Histogram

Total Radium, BG-1 & BG-2 (pCi/L)



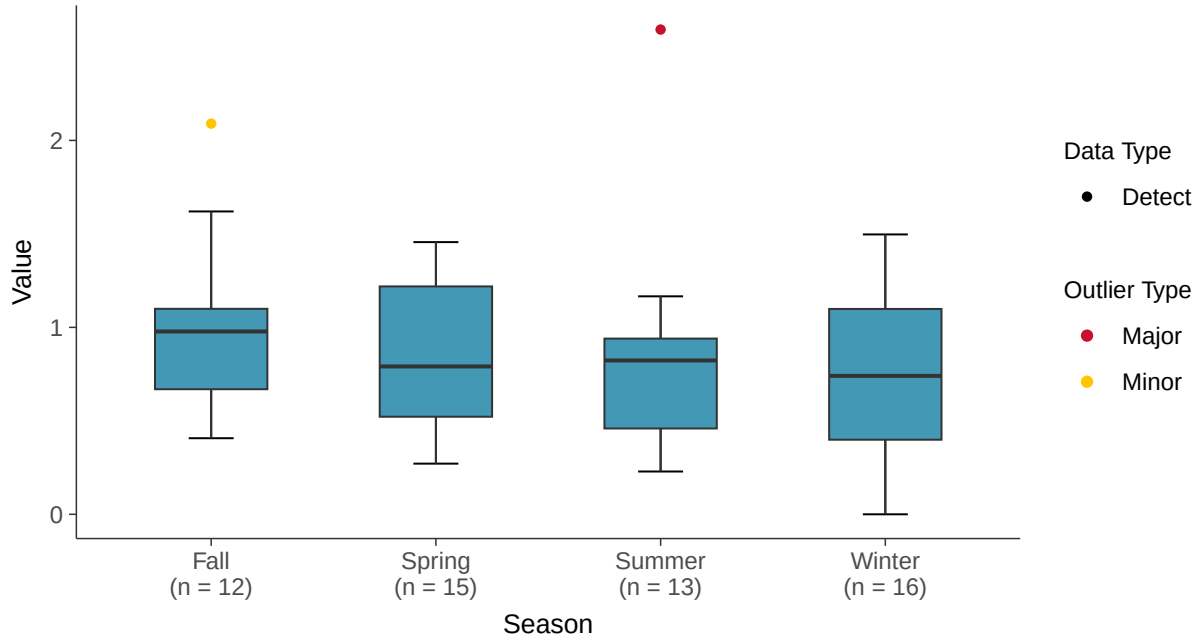
Boxplot

Total Radium, BG-1 & BG-2 (pCi/L)



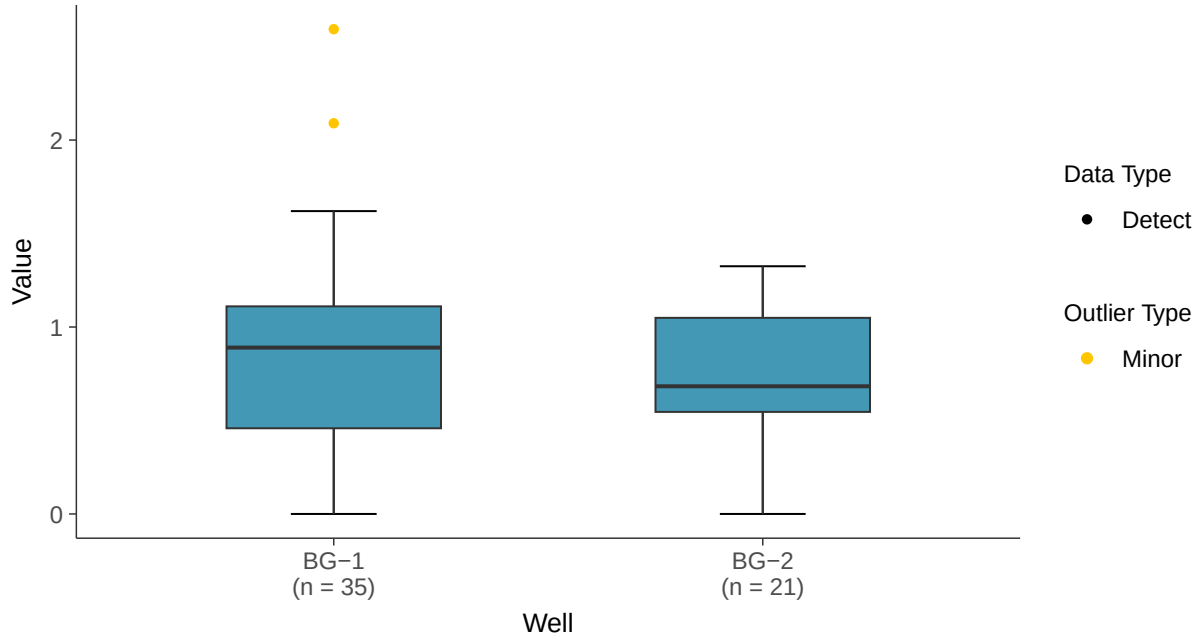
Boxplot by Season

Total Radium, BG-1 & BG-2 (pCi/L)



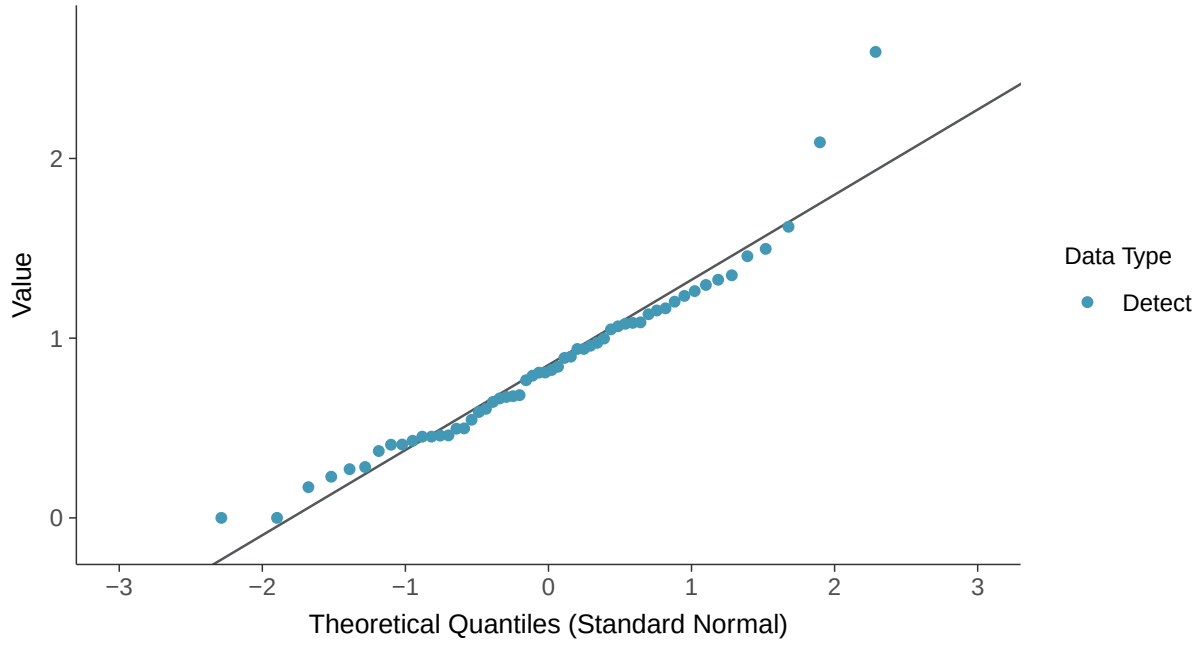
Boxplot by Well

Total Radium, BG-1 & BG-2 (pCi/L)



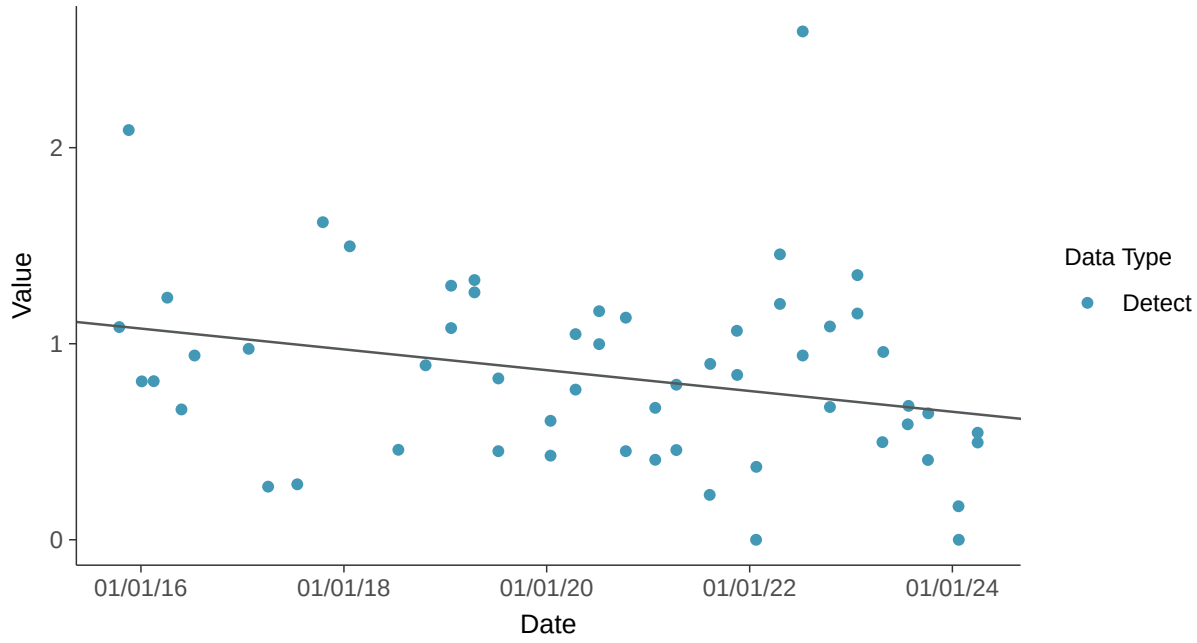
Normal Q-Q plot

Total Radium, BG-1 & BG-2 (pCi/L)



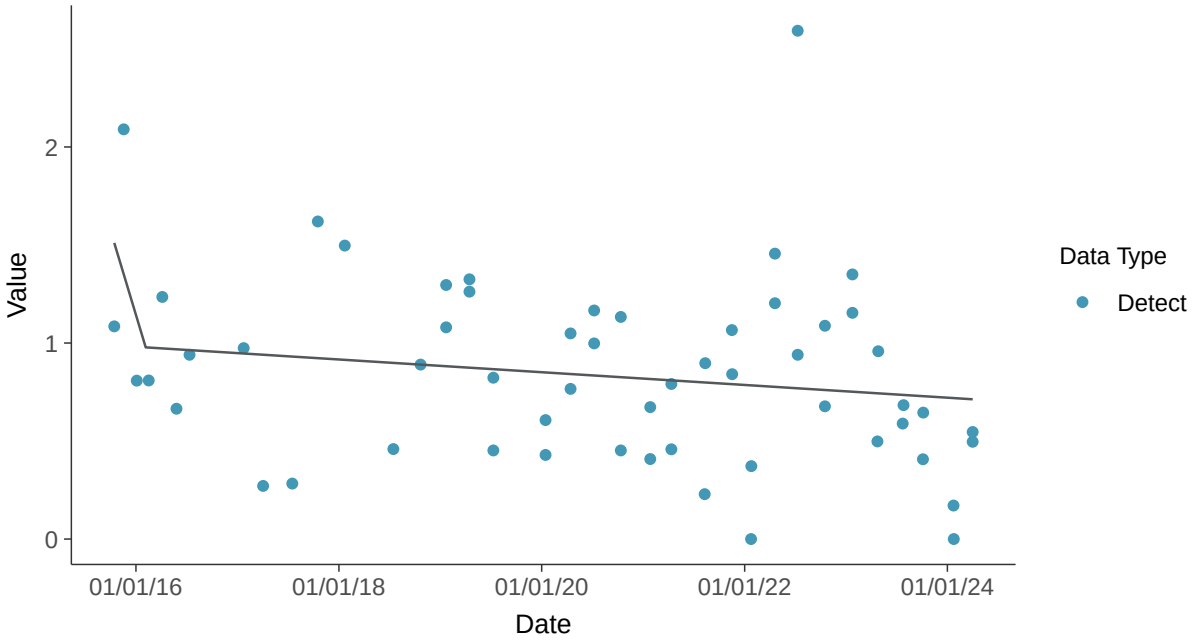
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, BG-1 & BG-2 (pCi/L)



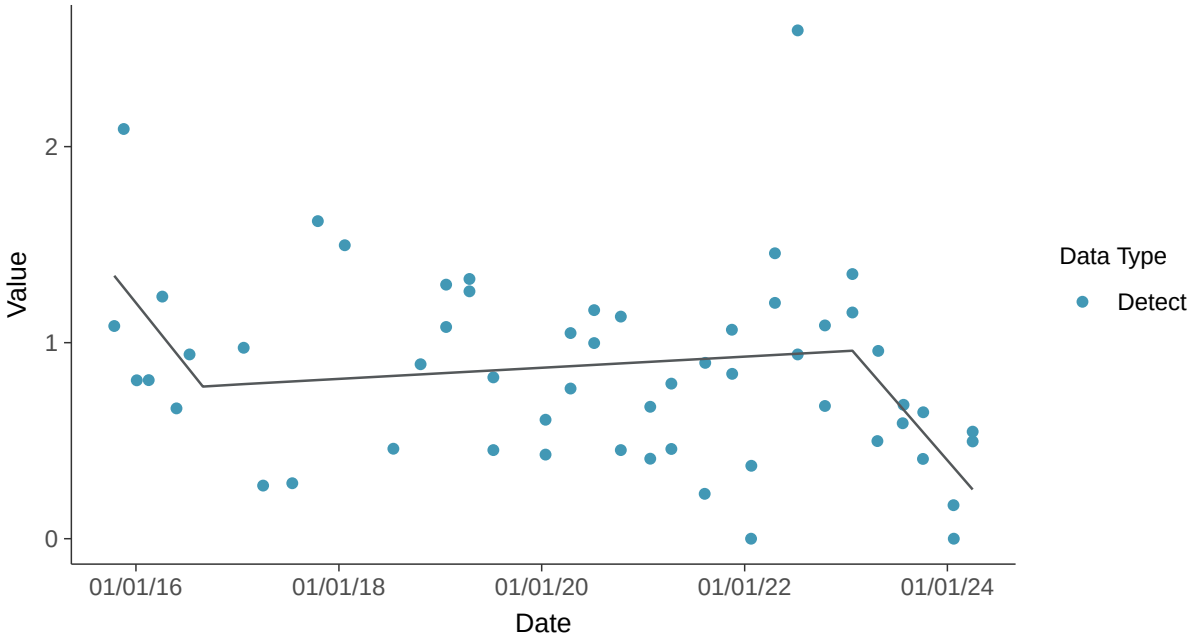
Trend Regression: Piecewise Linear-Linear

Total Radium, BG-1 & BG-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, BG-1 & BG-2 (pCi/L)



This page intentionally left blank.

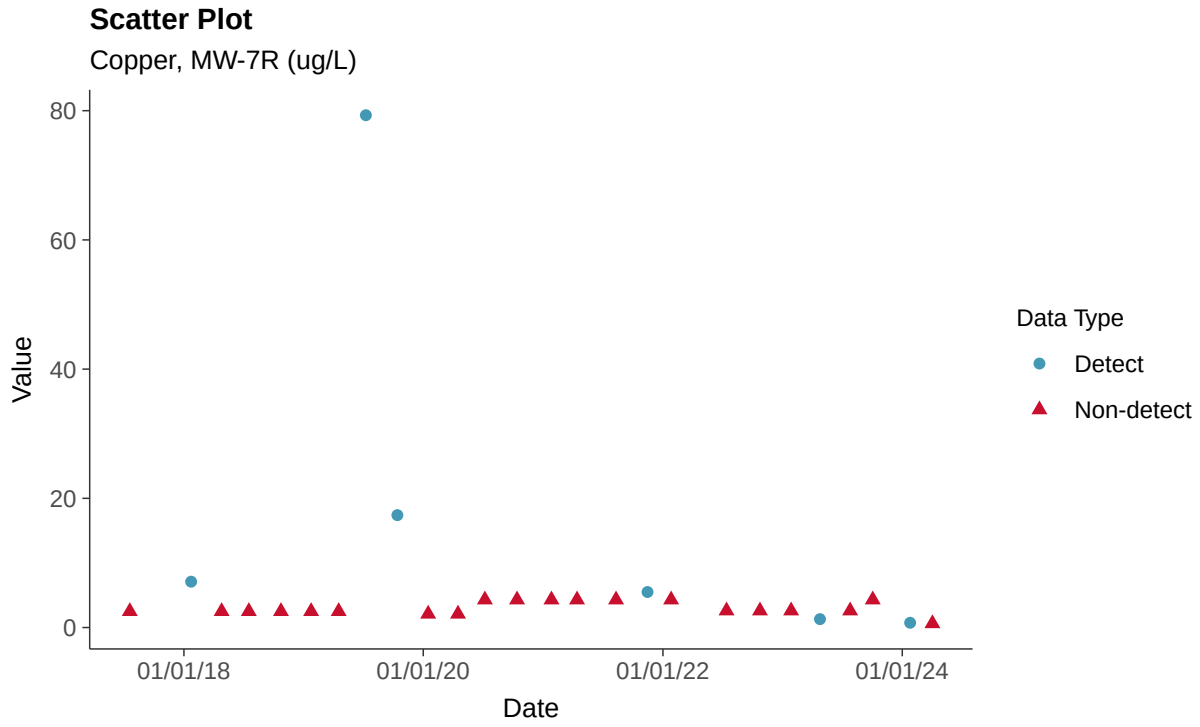
D

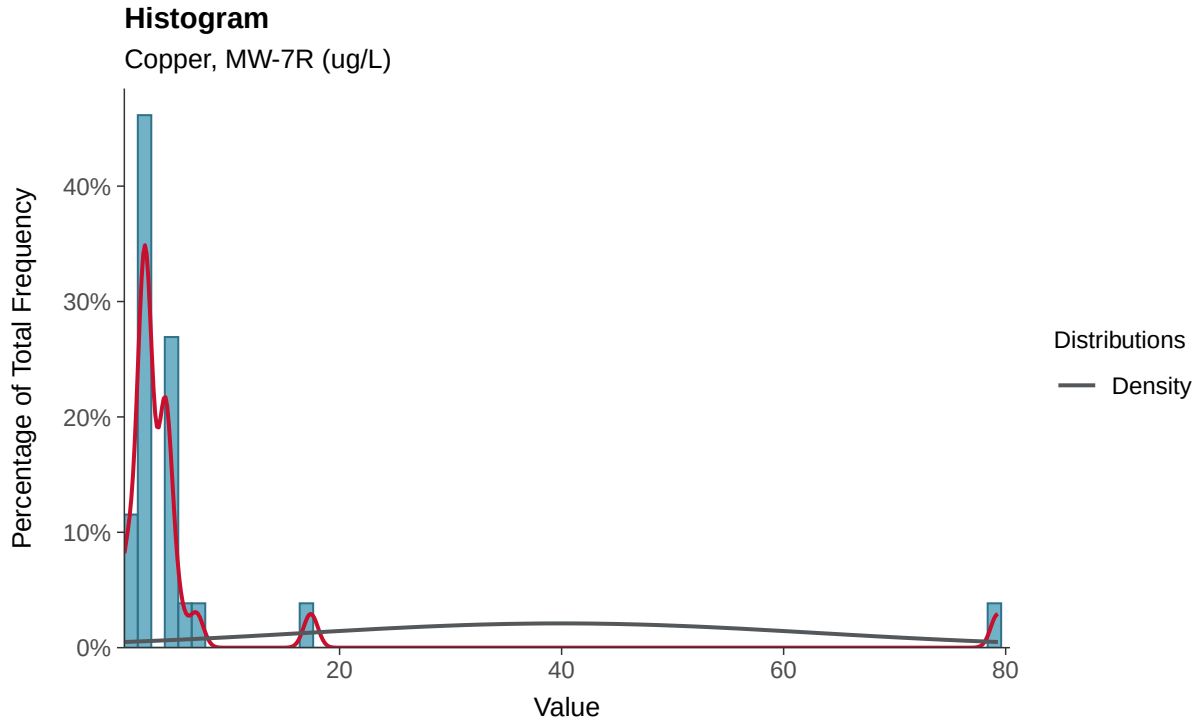
Appendix D – DG Plots

This page intentionally left blank.

App. I Metals: Copper, MW-7R

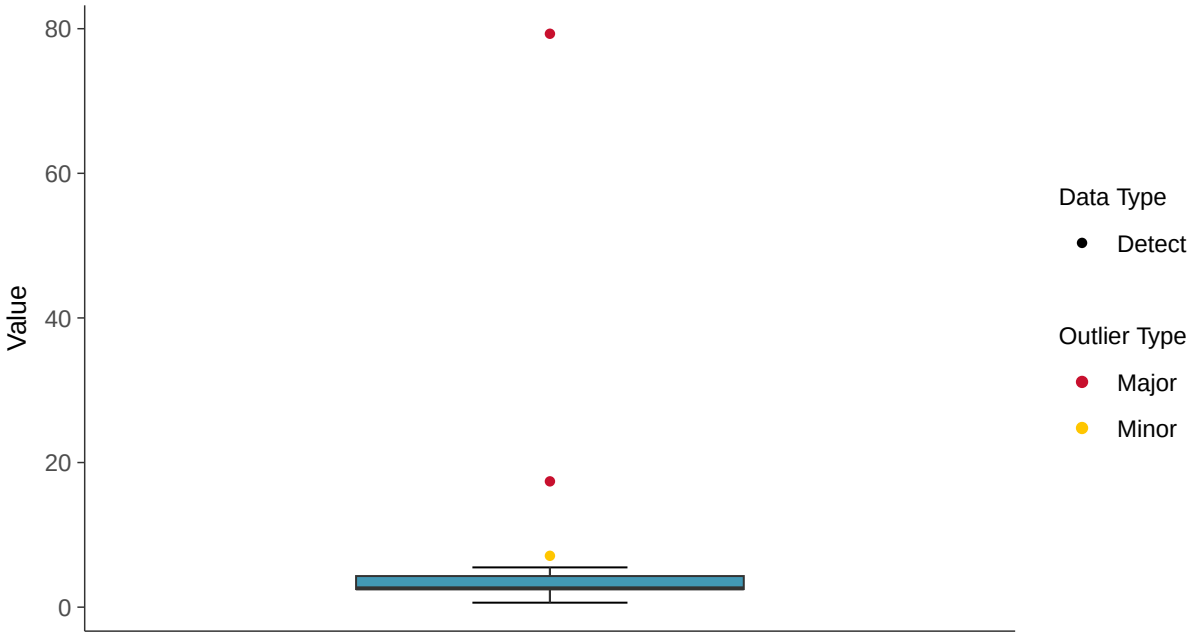
ID: 10_1_111





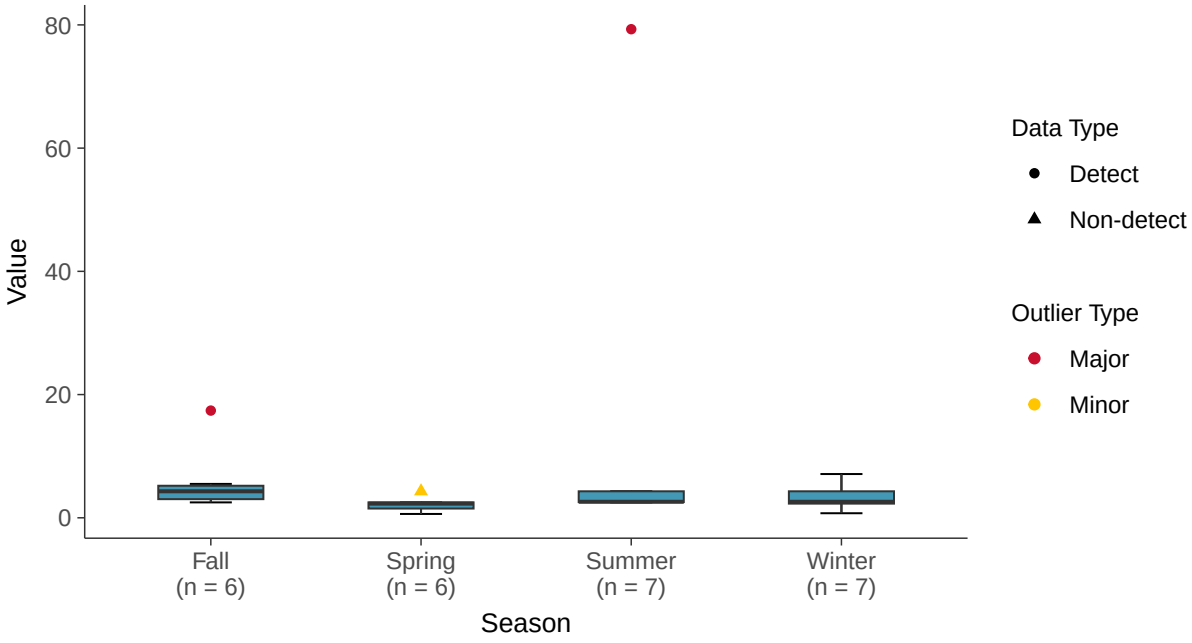
Boxplot

Copper, MW-7R (ug/L)



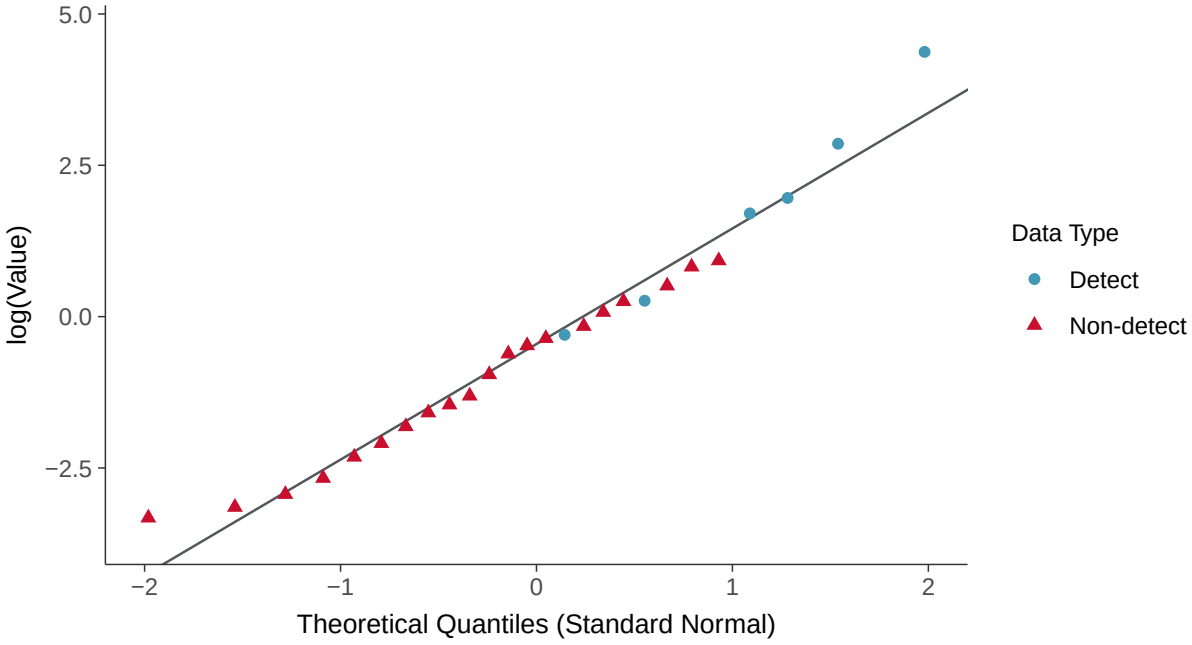
Boxplot by Season

Copper, MW-7R (ug/L)



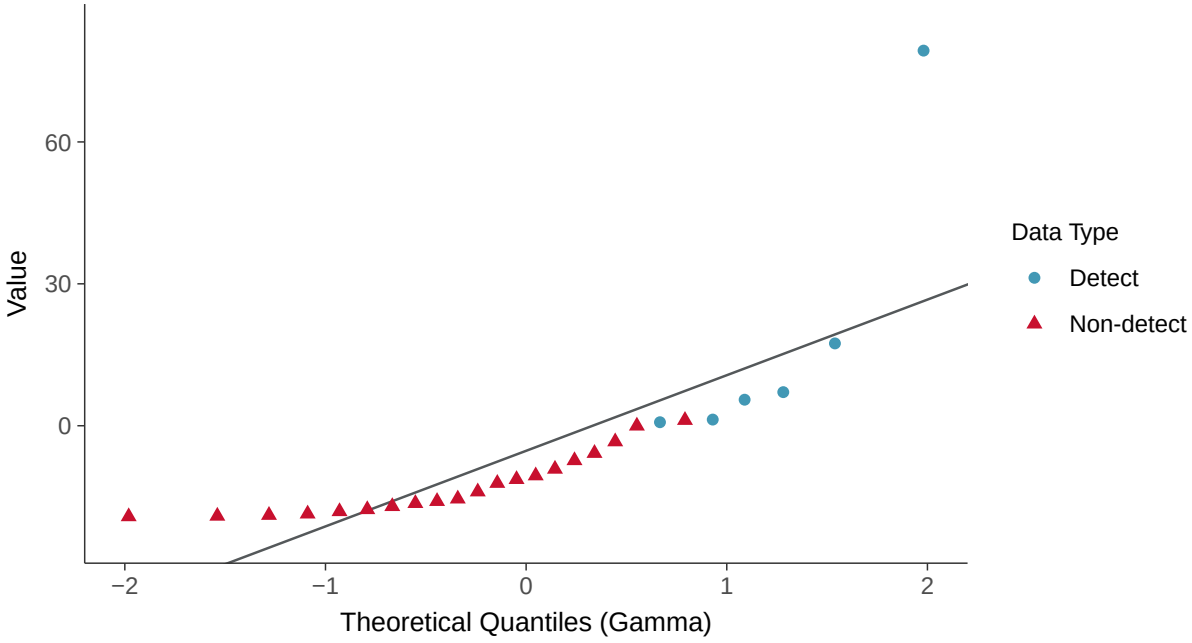
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-7R (ug/L)



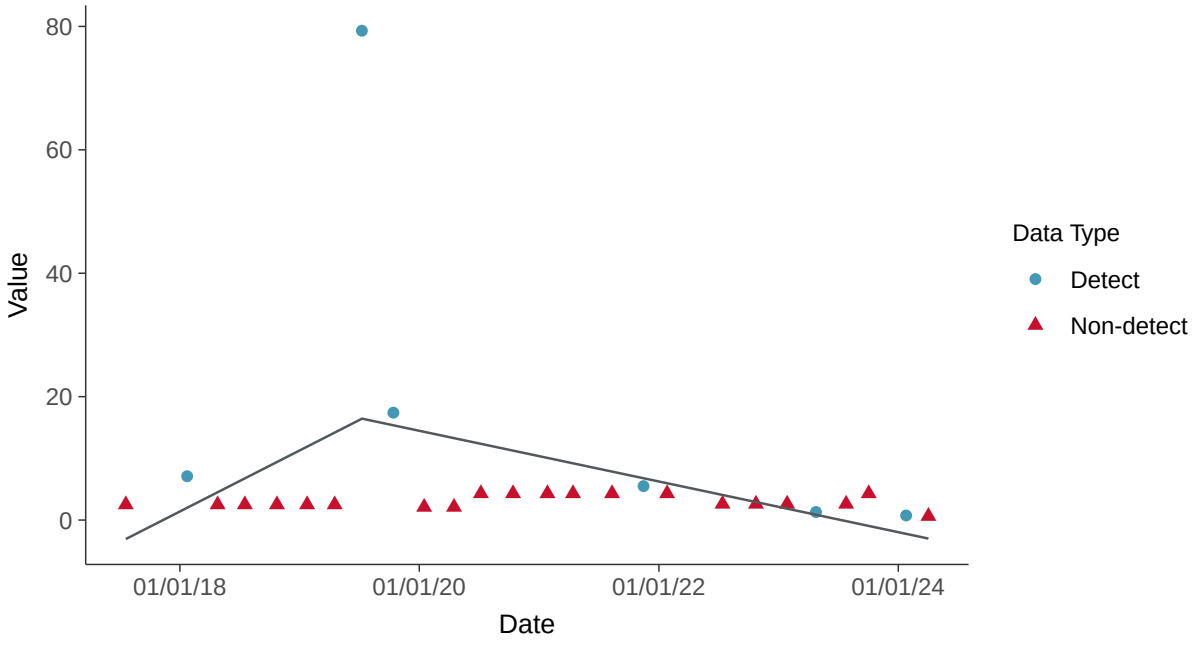
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-7R (ug/L)



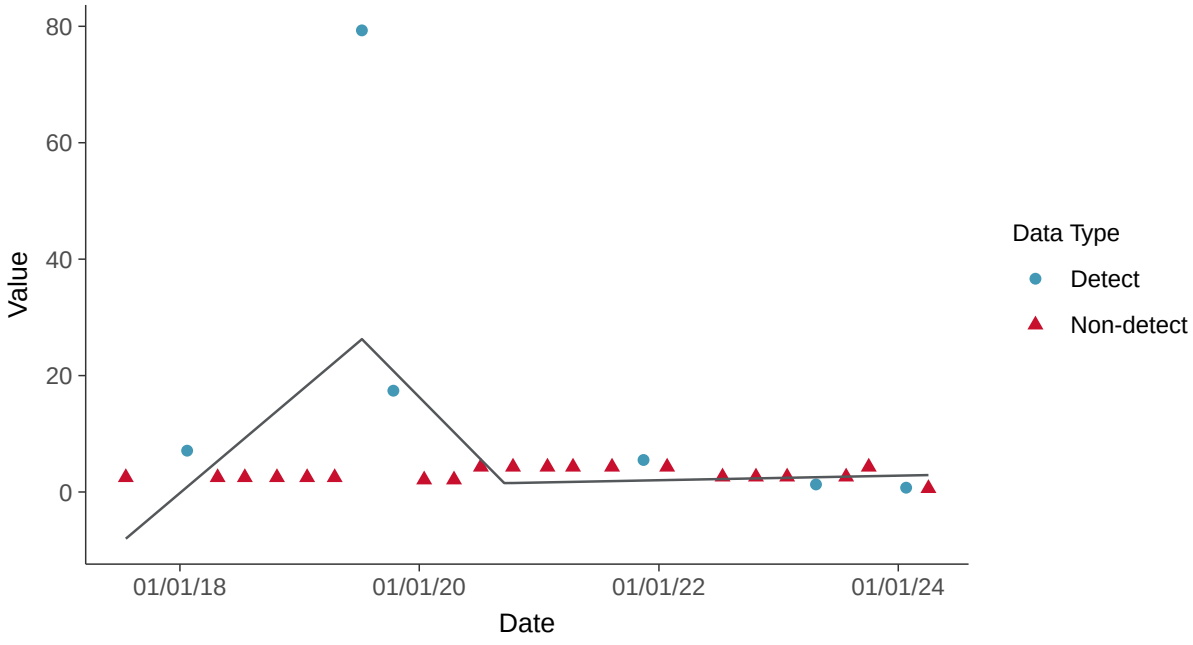
Trend Regression: Piecewise Linear-Linear

Copper, MW-7R (ug/L)



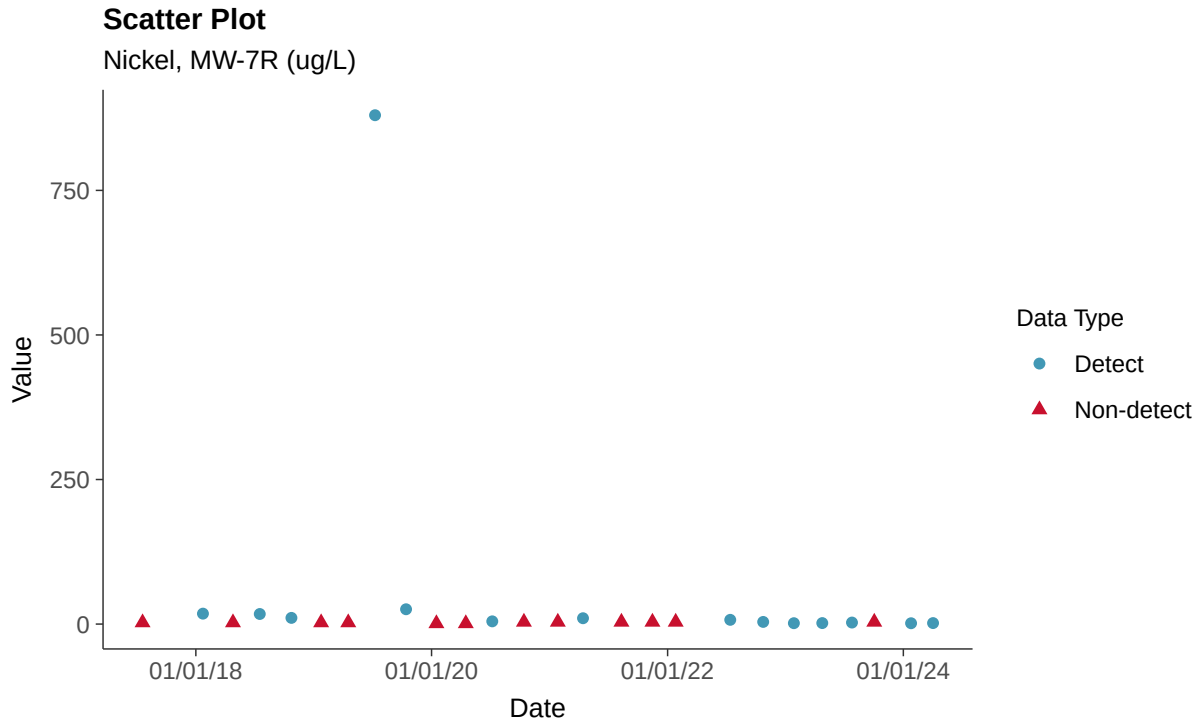
Trend Regression: Piecewise Linear-Linear-Linear

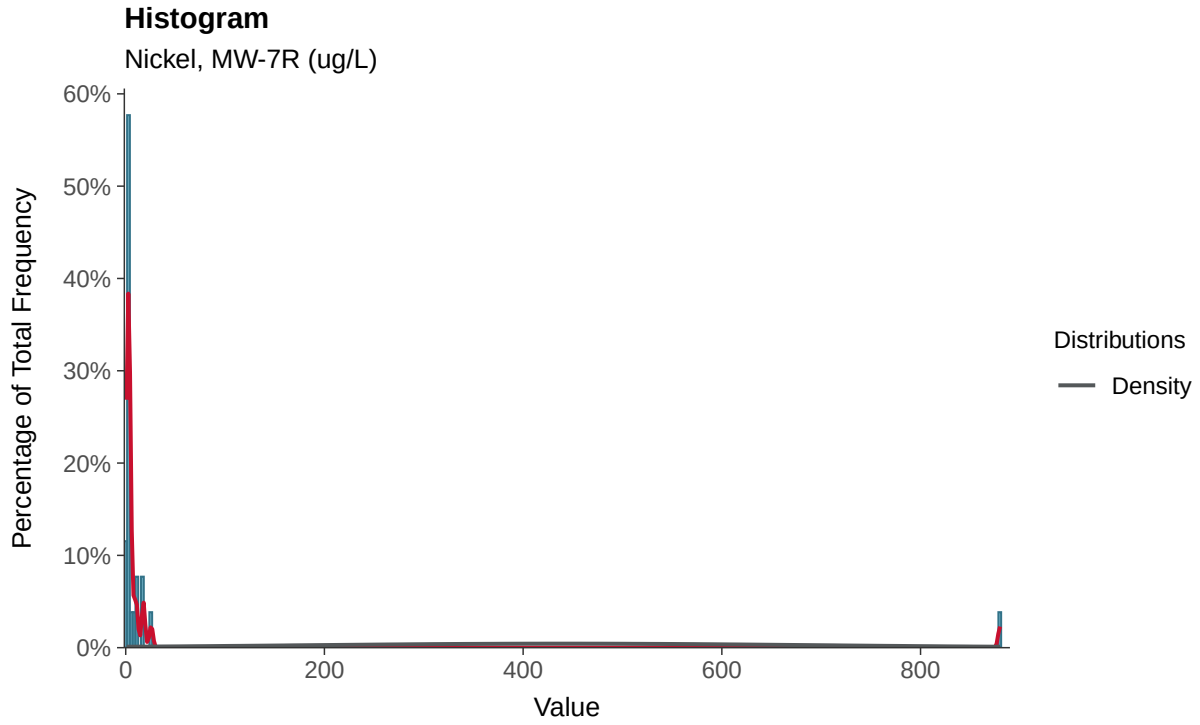
Copper, MW-7R (ug/L)



App. I Metals: Nickel, MW-7R

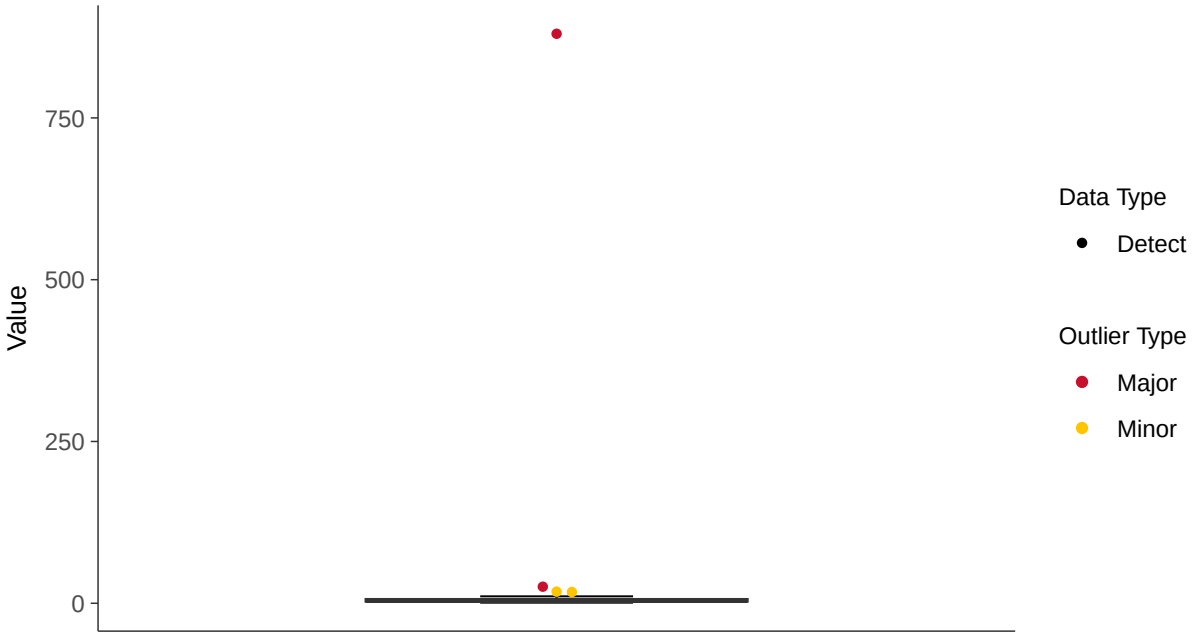
ID: 10_1_117





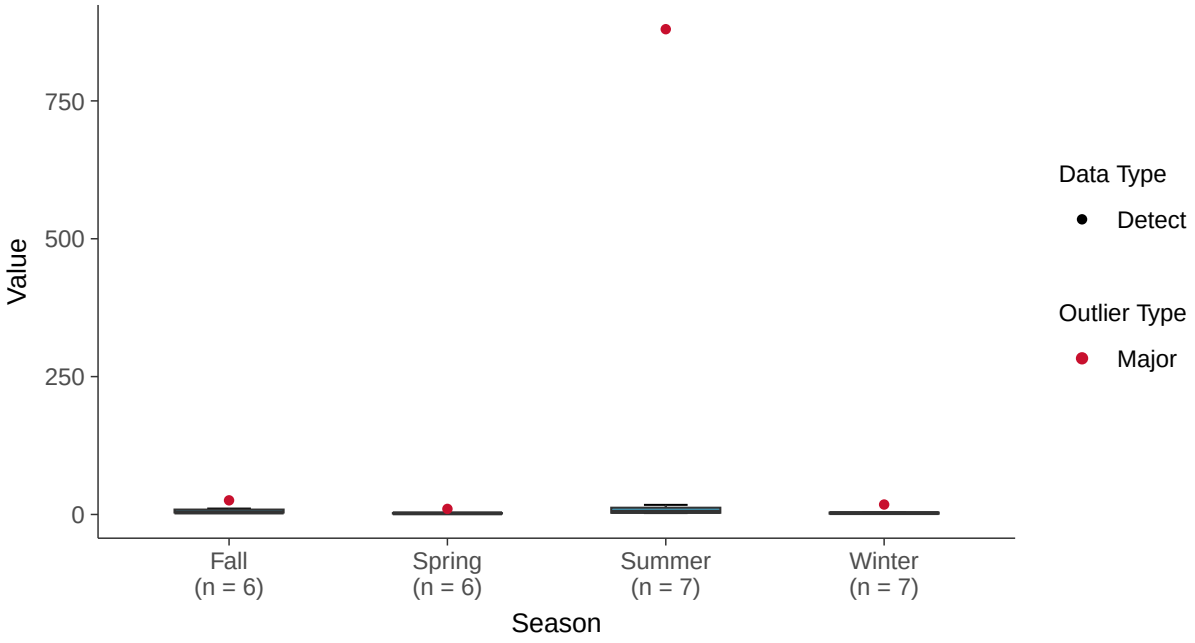
Boxplot

Nickel, MW-7R (ug/L)



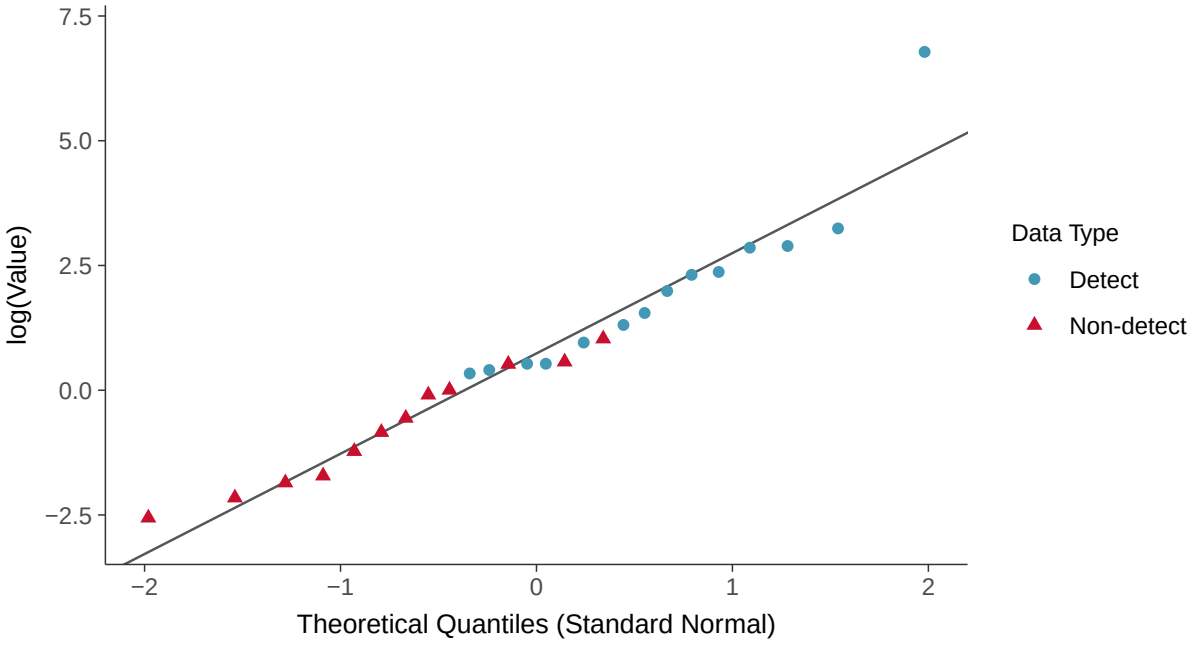
Boxplot by Season

Nickel, MW-7R (ug/L)



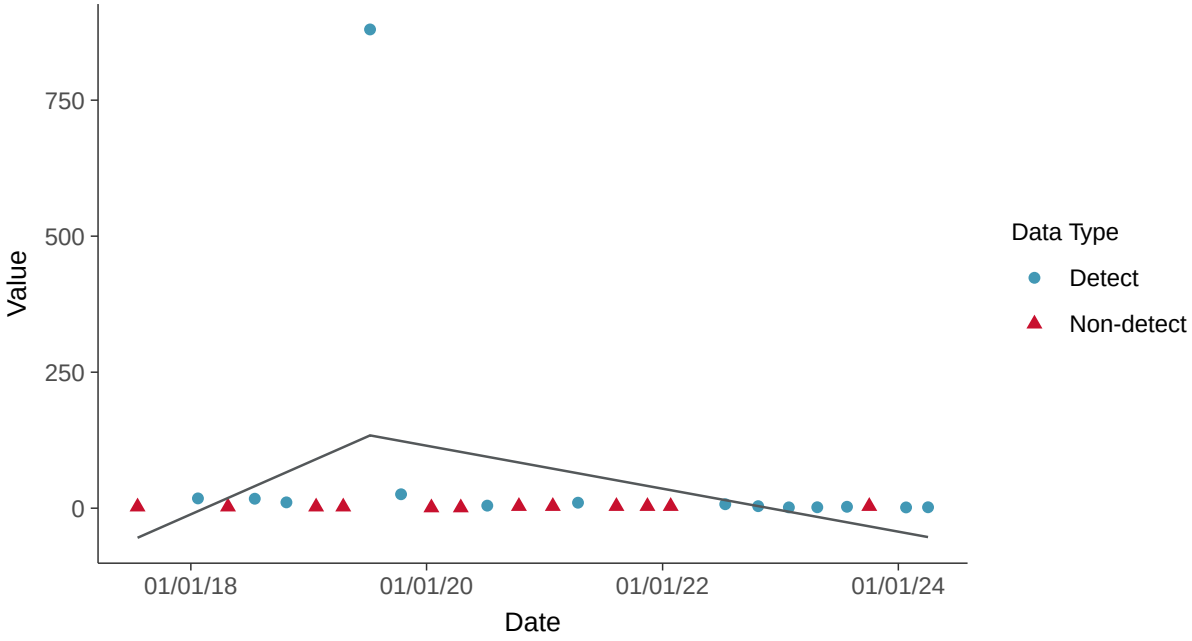
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-7R (ug/L)



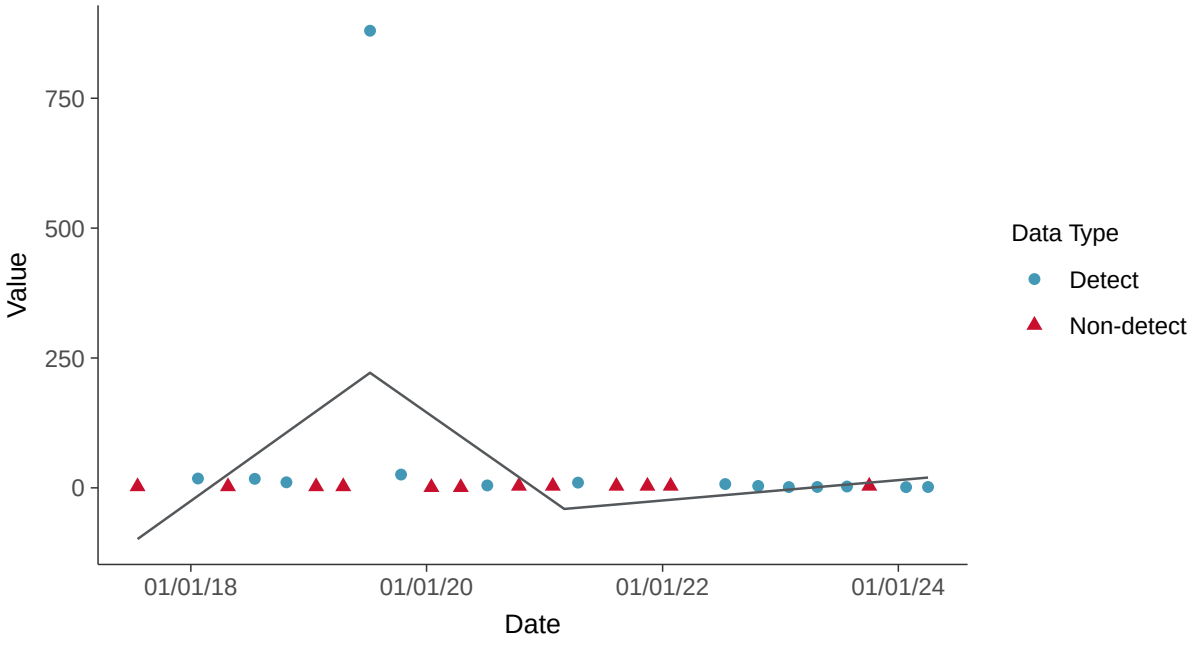
Trend Regression: Piecewise Linear-Linear

Nickel, MW-7R (ug/L)



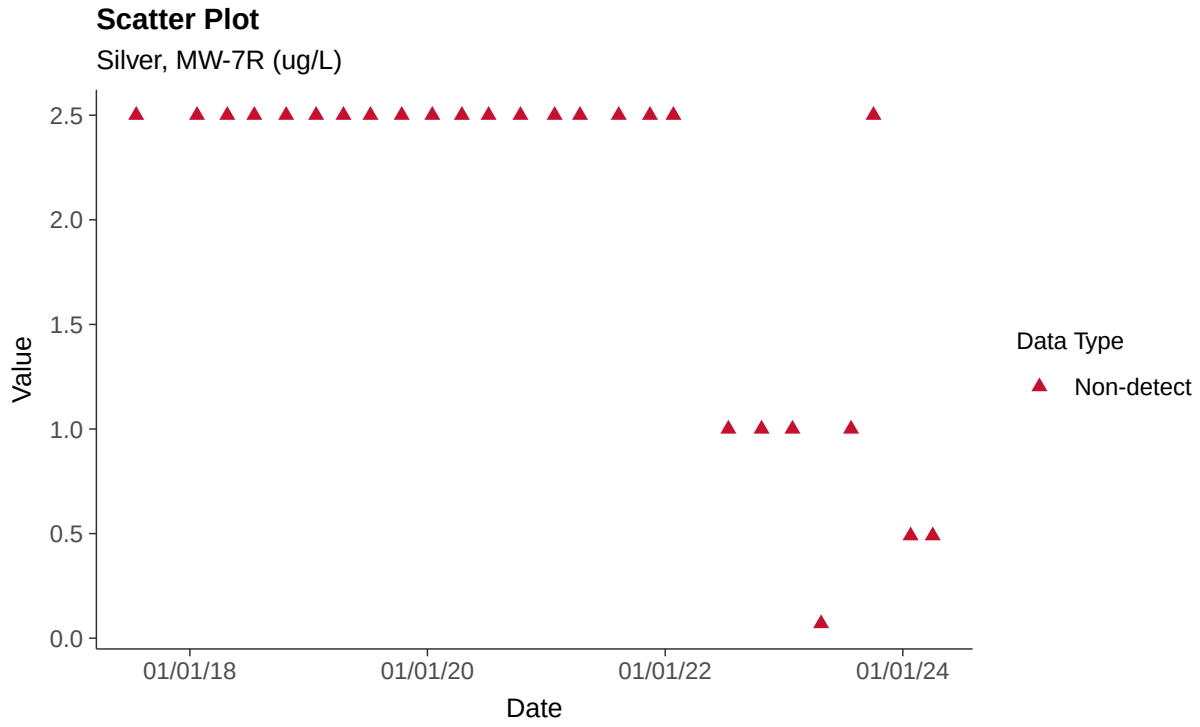
Trend Regression: Piecewise Linear-Linear-Linear

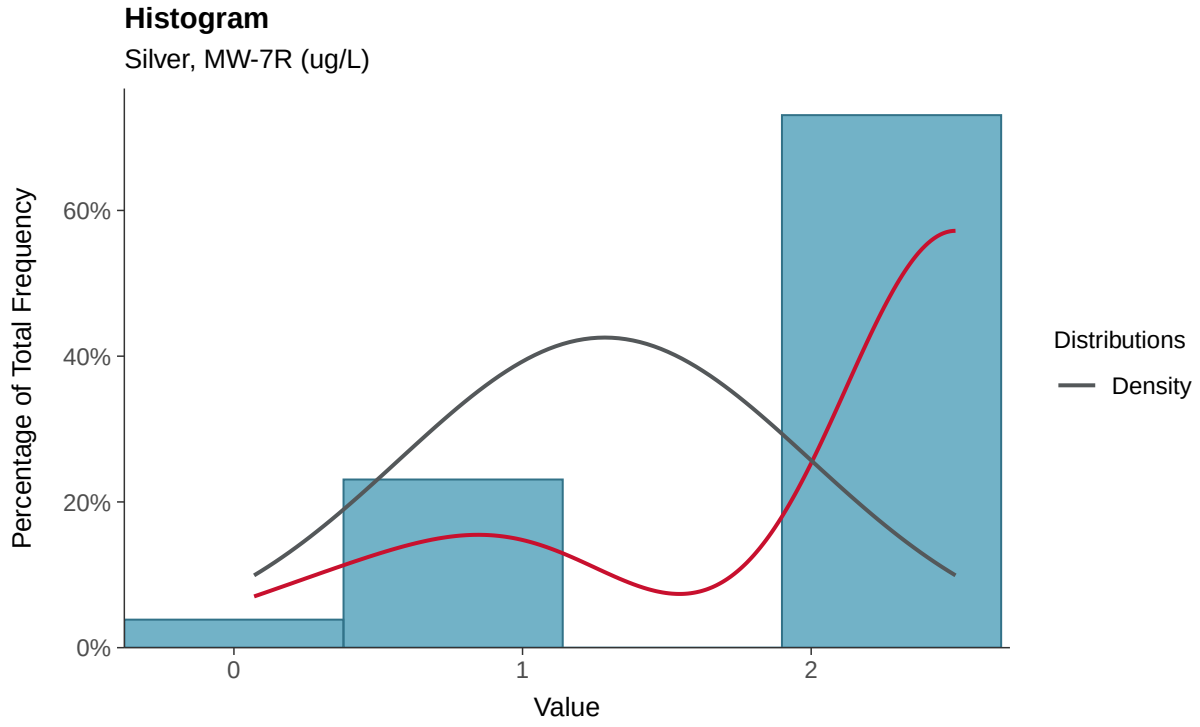
Nickel, MW-7R (ug/L)



App. I Metals: Silver, MW-7R

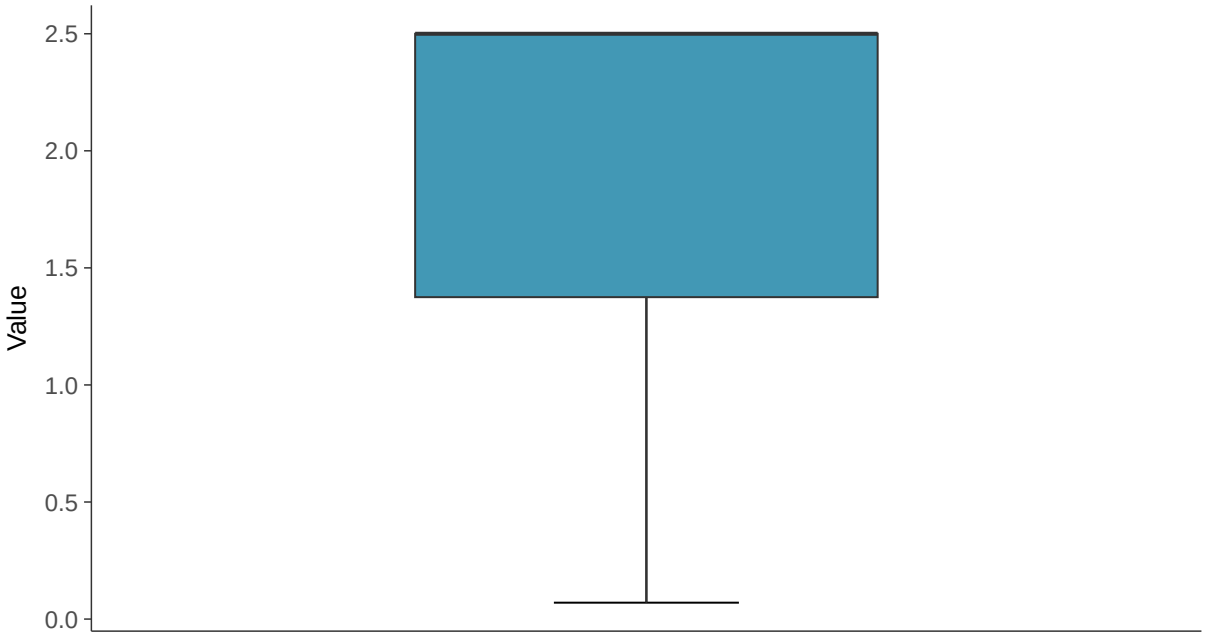
ID: 10_1_122





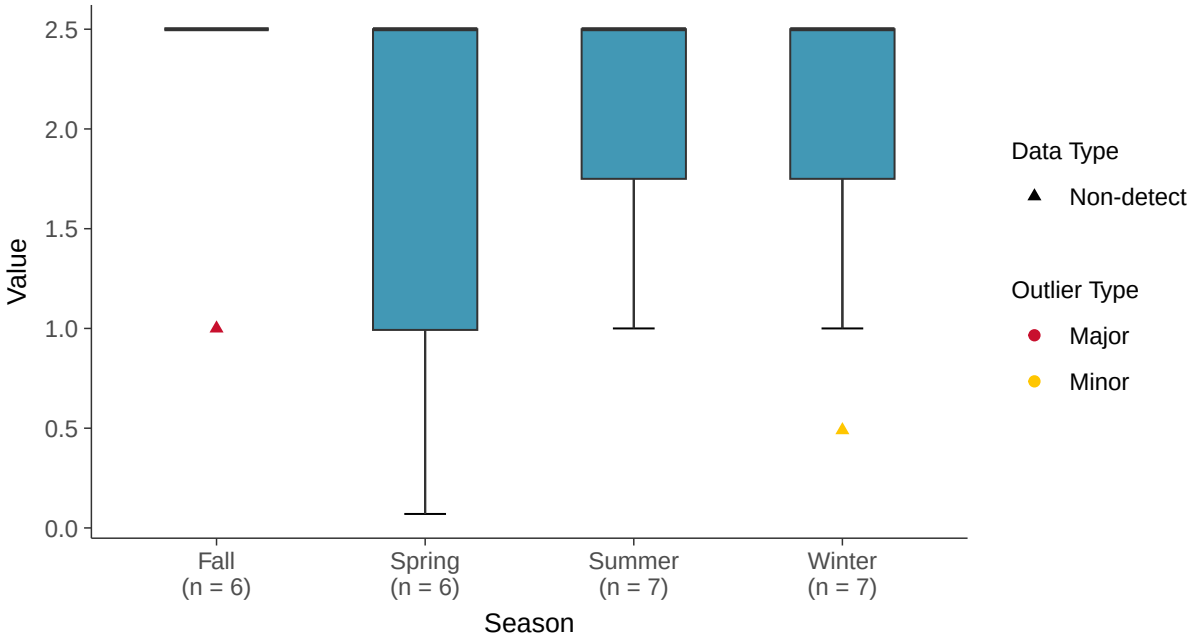
Boxplot

Silver, MW-7R (ug/L)



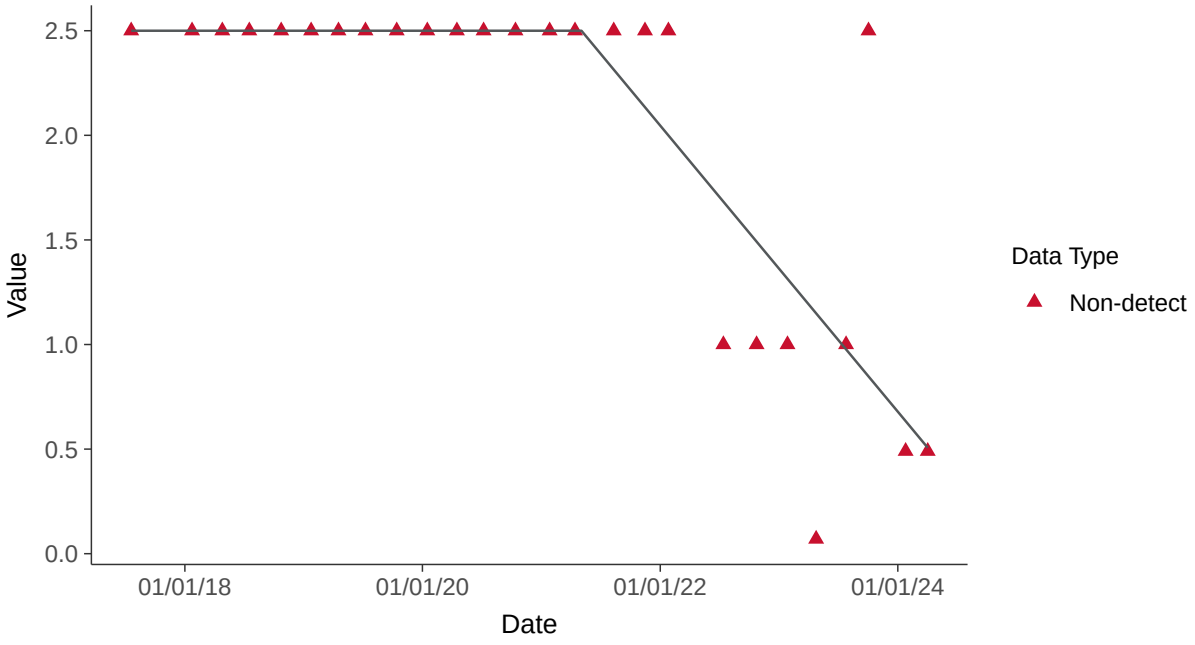
Boxplot by Season

Silver, MW-7R (ug/L)



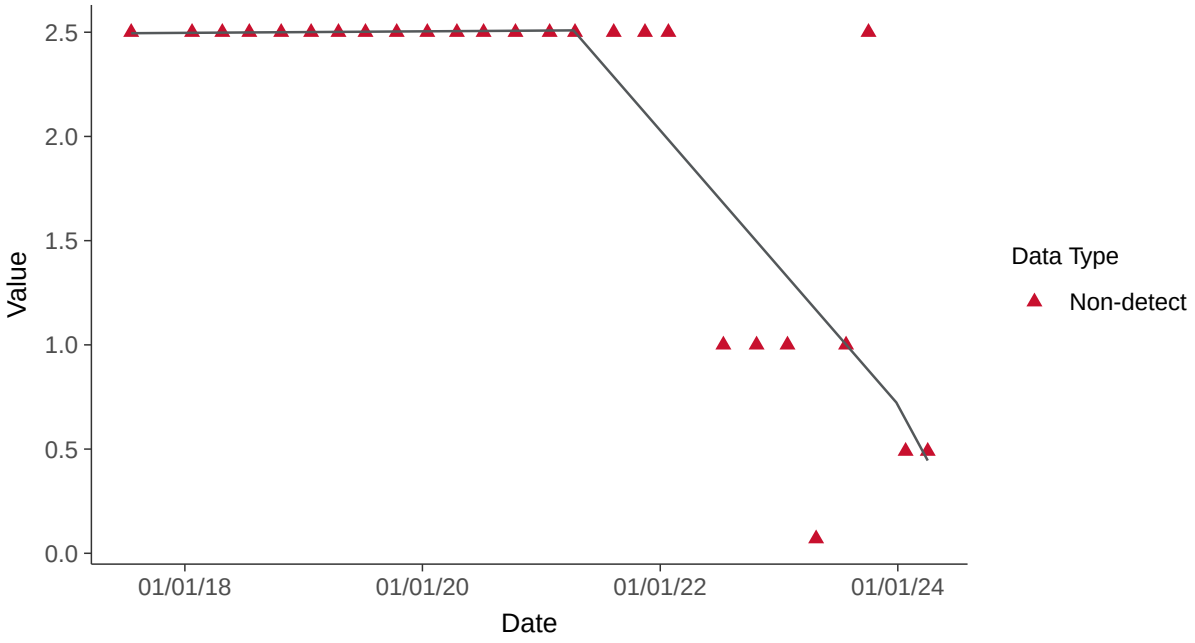
Trend Regression: Piecewise Linear-Linear

Silver, MW-7R (ug/L)



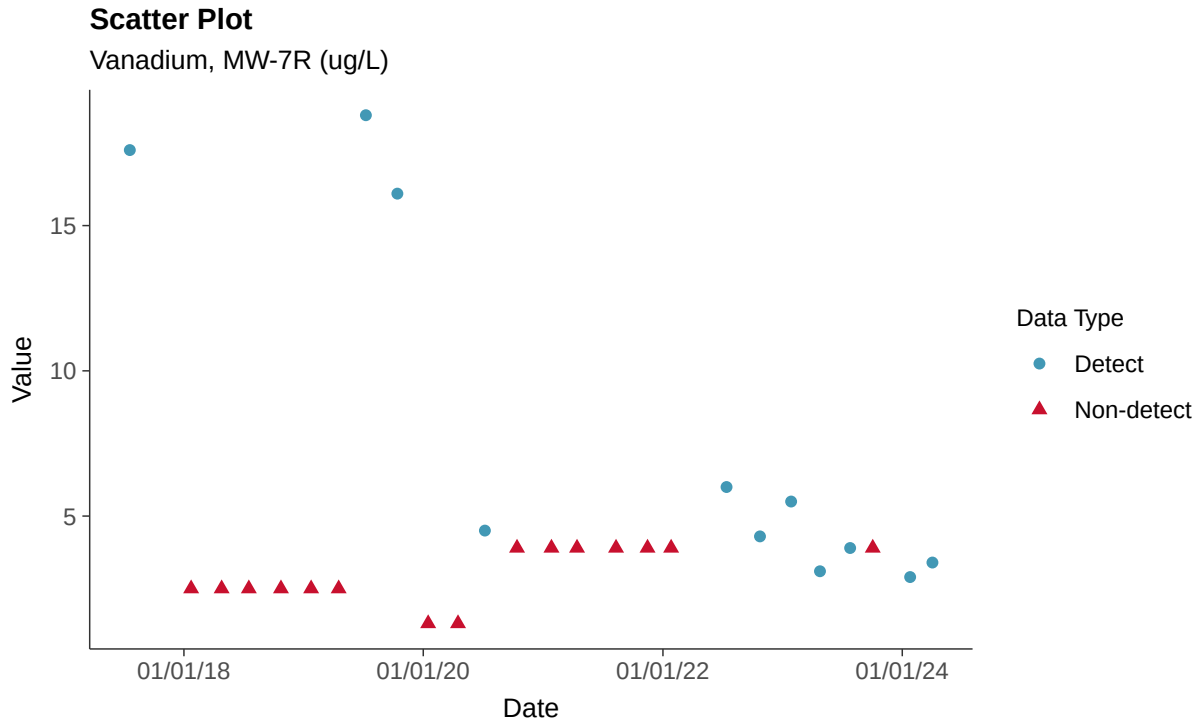
Trend Regression: Piecewise Linear-Linear-Linear

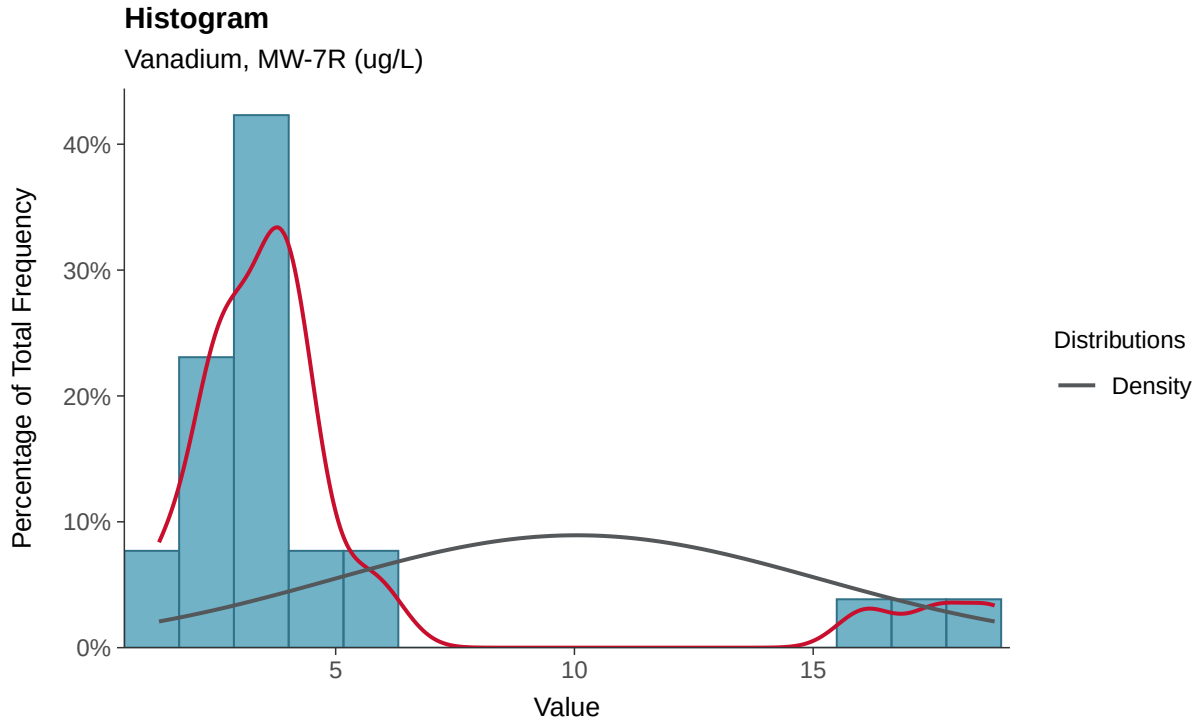
Silver, MW-7R (ug/L)



App. I Metals: Vanadium, MW-7R

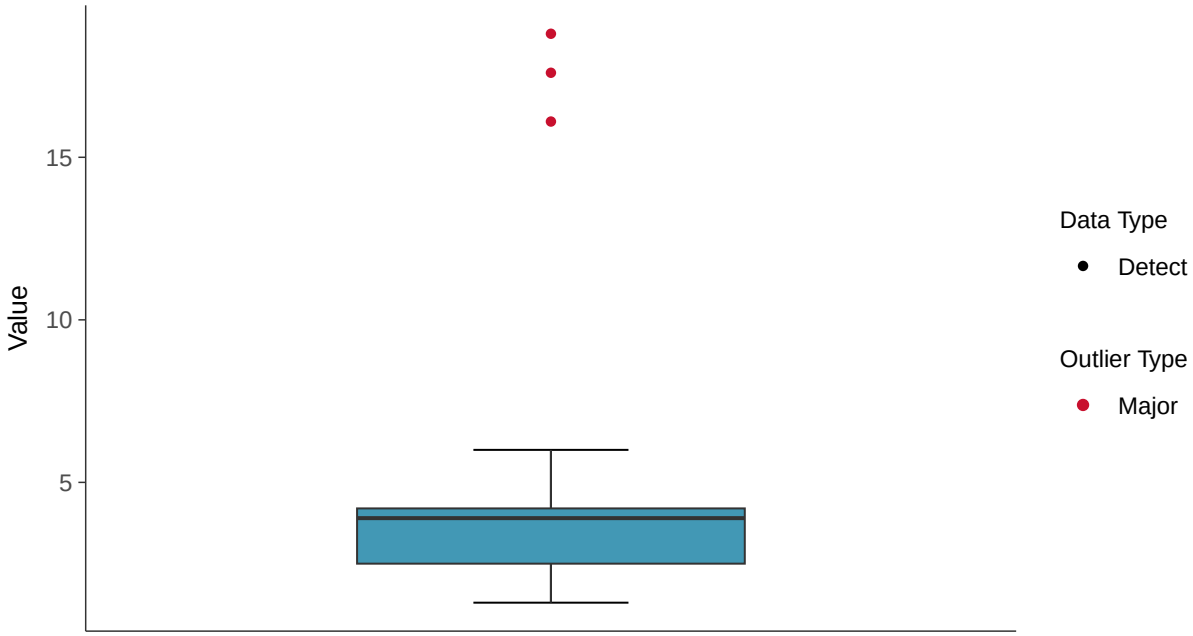
ID: 10_1_127





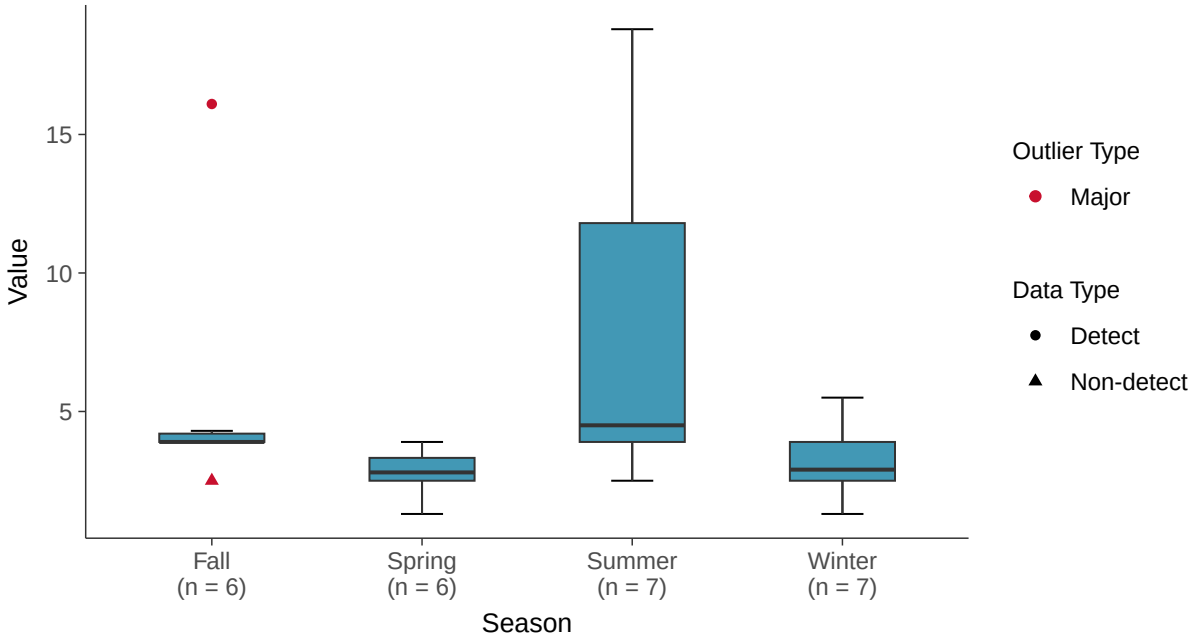
Boxplot

Vanadium, MW-7R (ug/L)



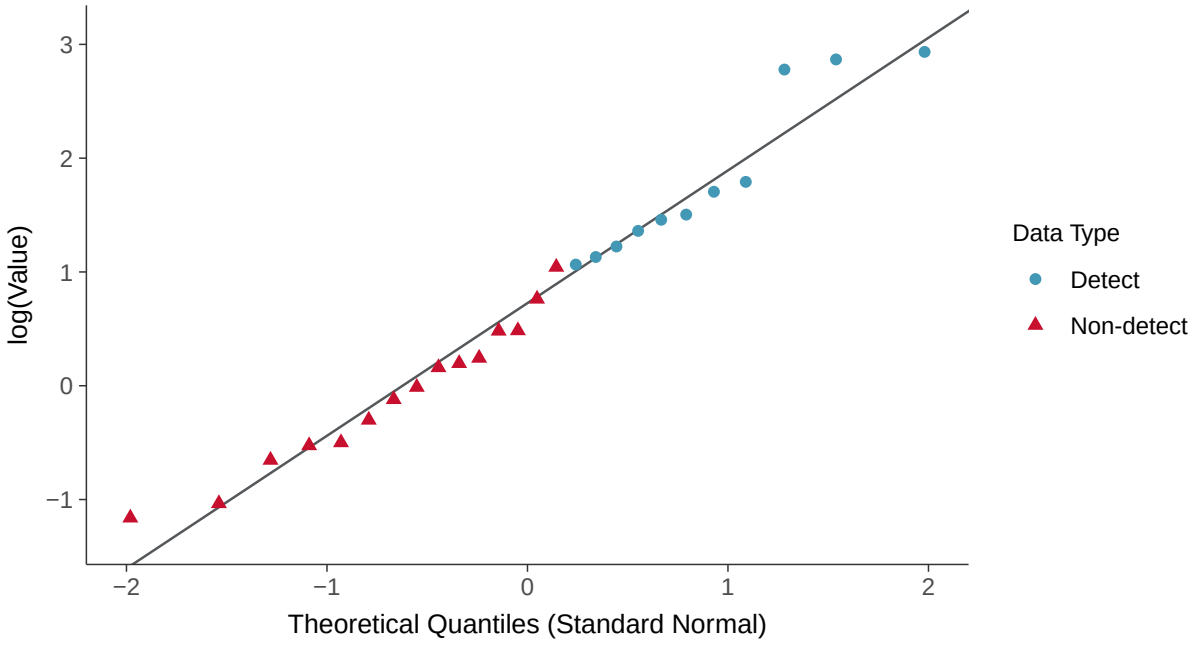
Boxplot by Season

Vanadium, MW-7R (ug/L)



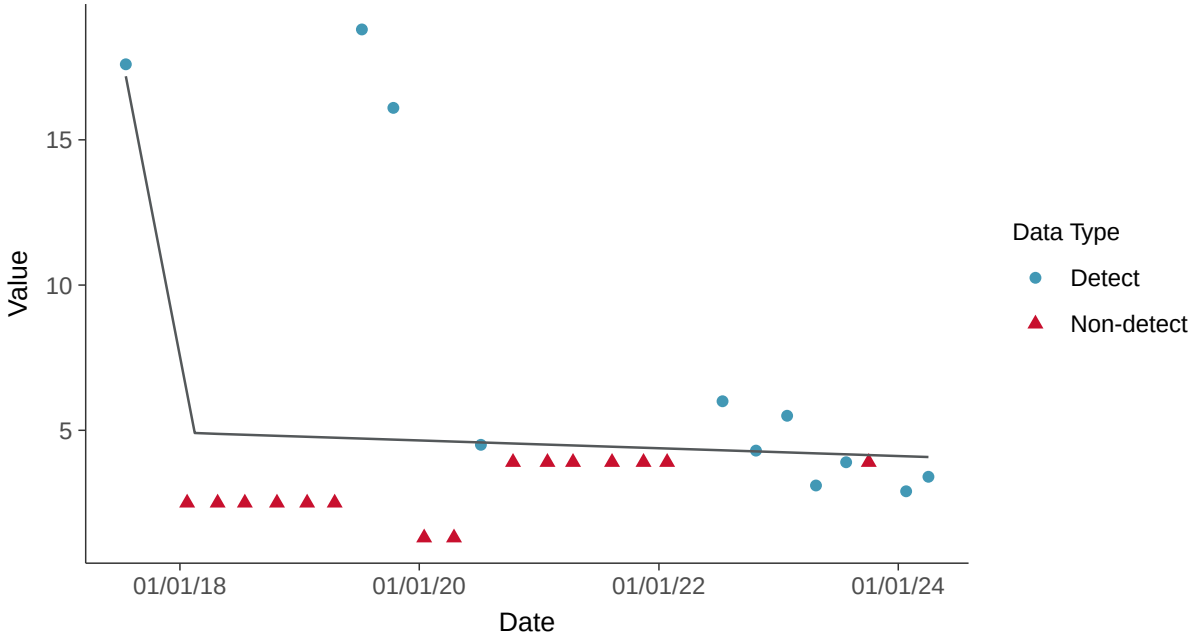
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-7R (ug/L)



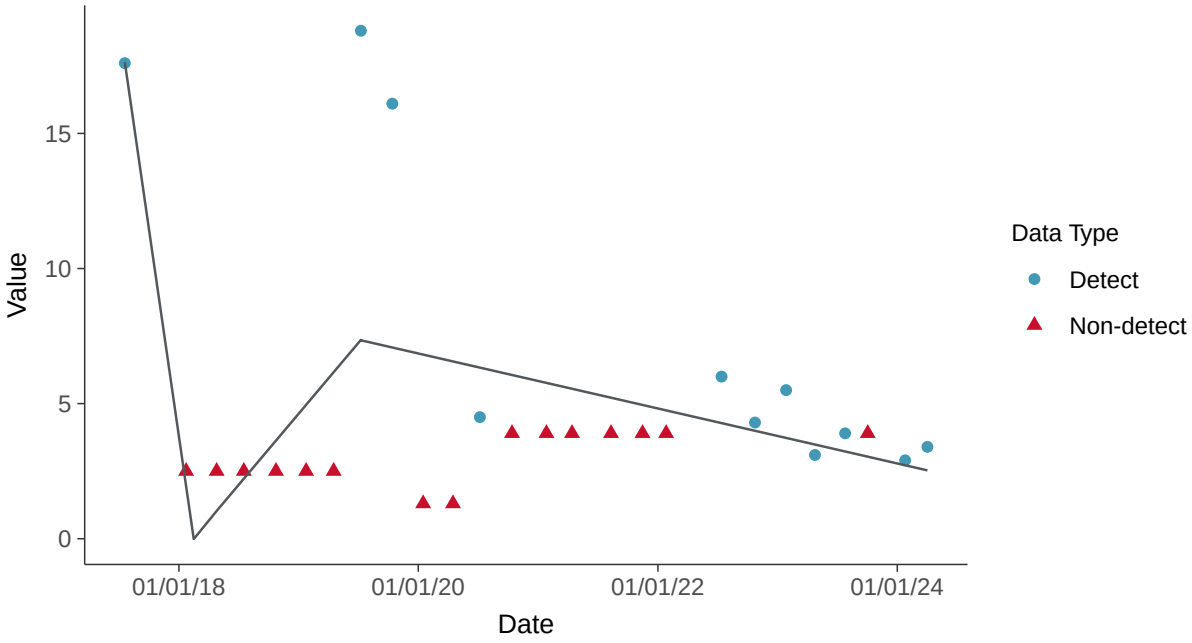
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-7R (ug/L)



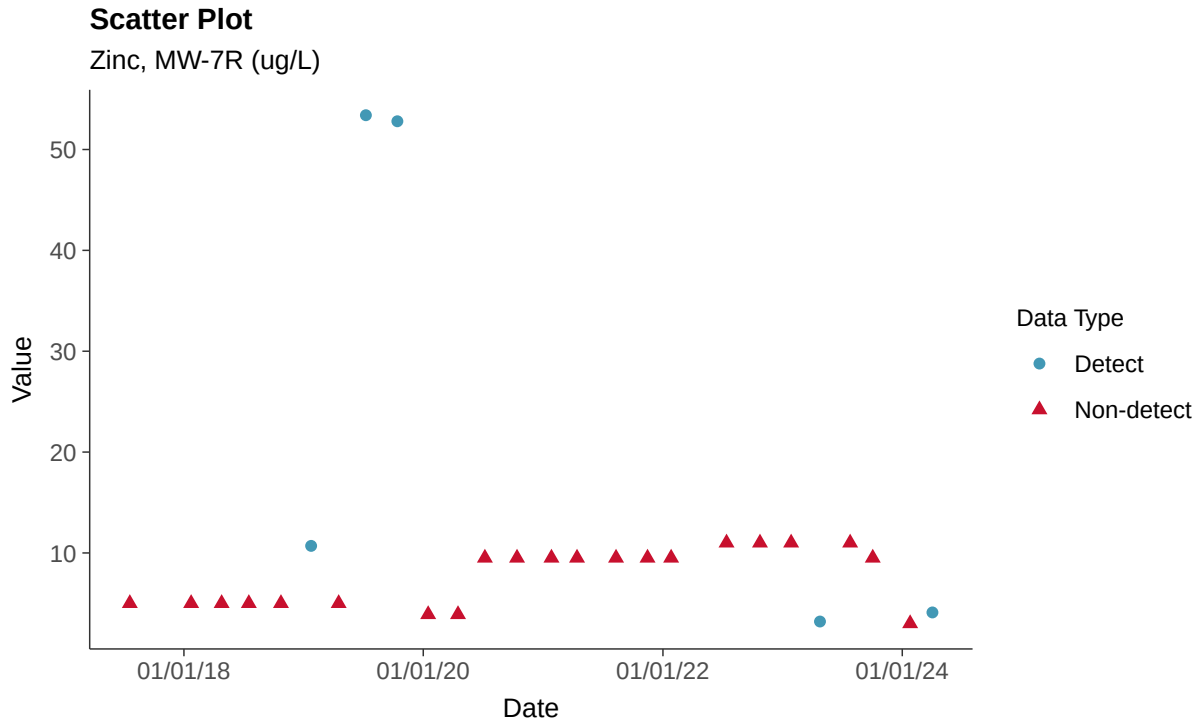
Trend Regression: Piecewise Linear-Linear-Linear

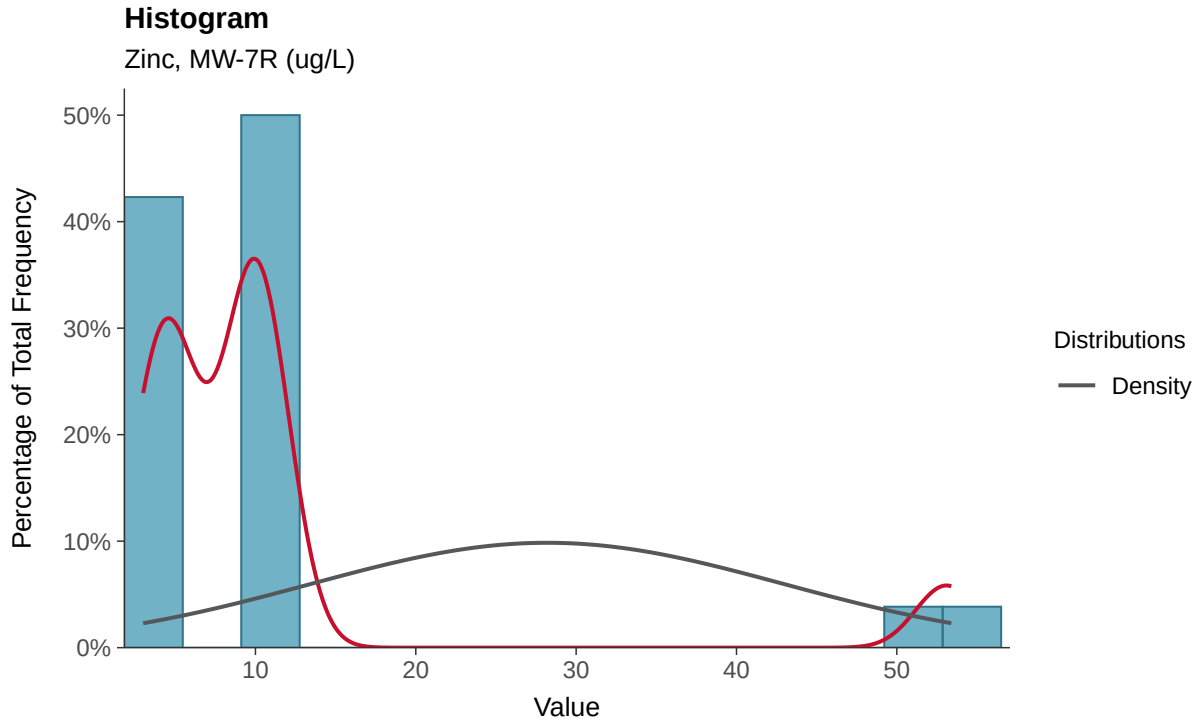
Vanadium, MW-7R (ug/L)



App. I Metals: Zinc, MW-7R

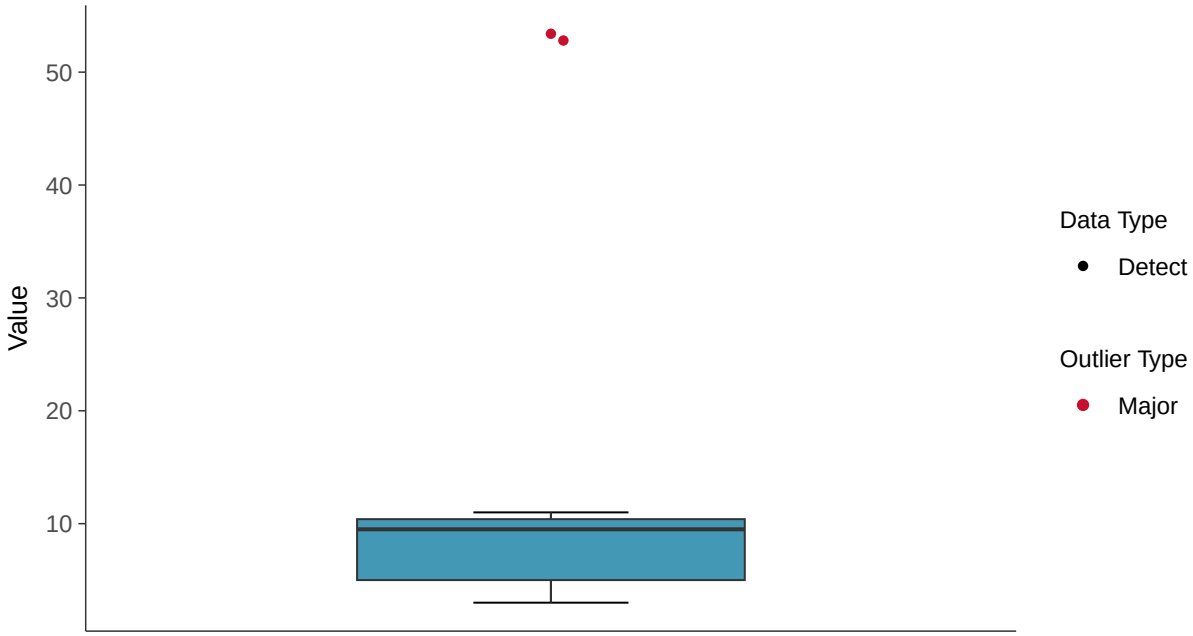
ID: 10_1_128





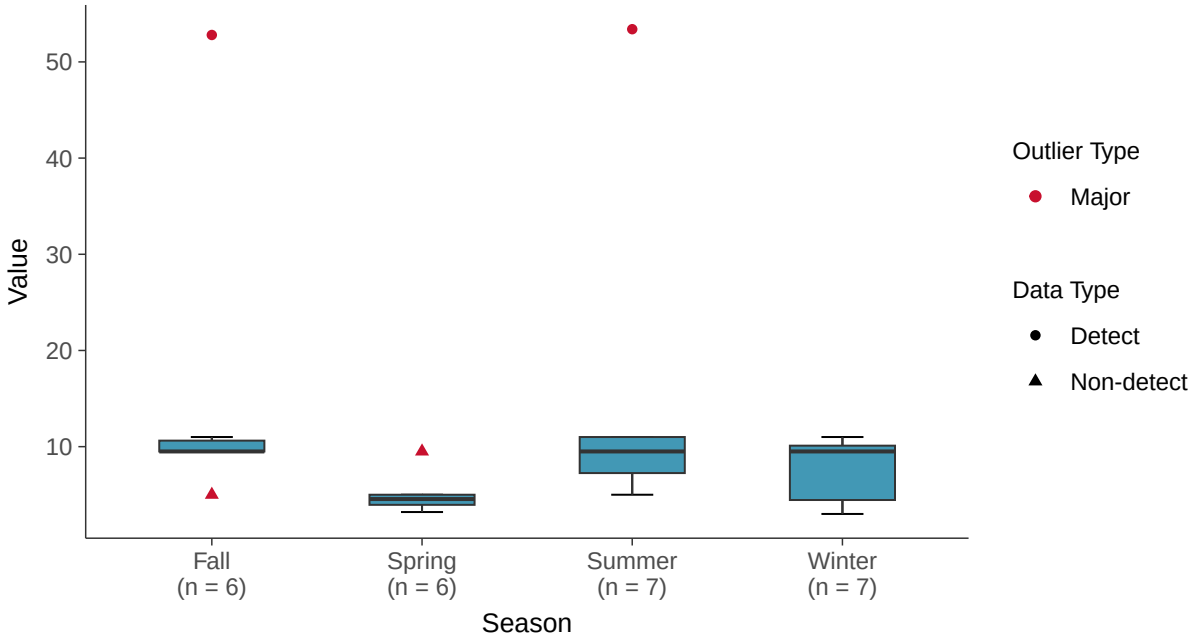
Boxplot

Zinc, MW-7R (ug/L)



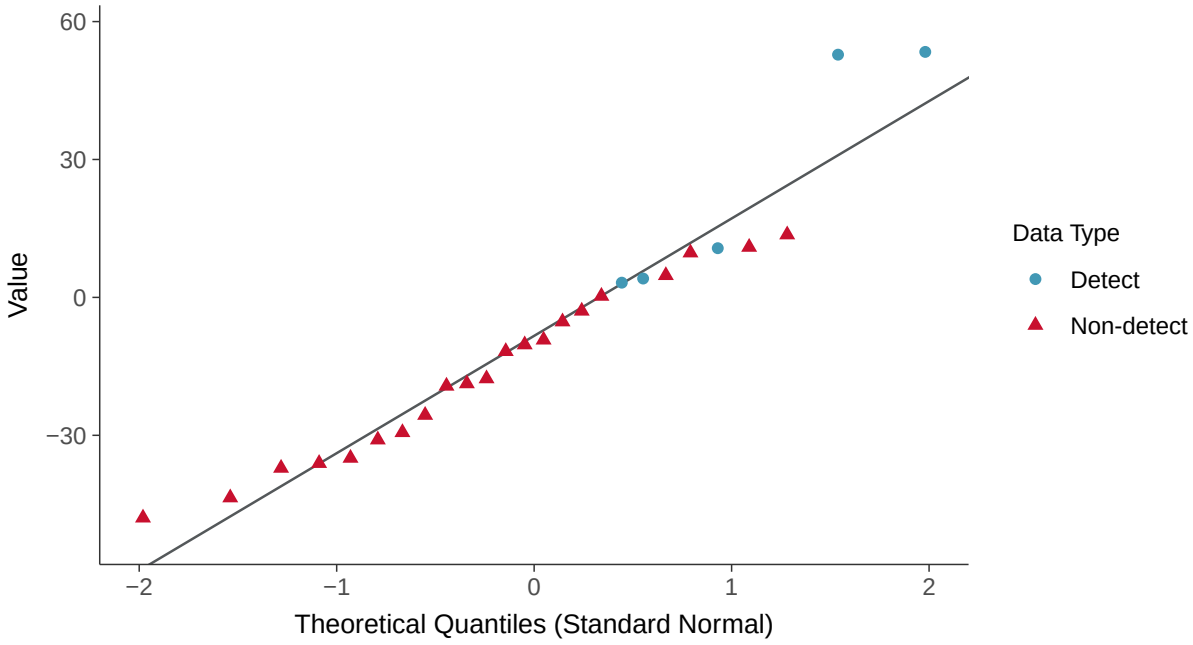
Boxplot by Season

Zinc, MW-7R (ug/L)



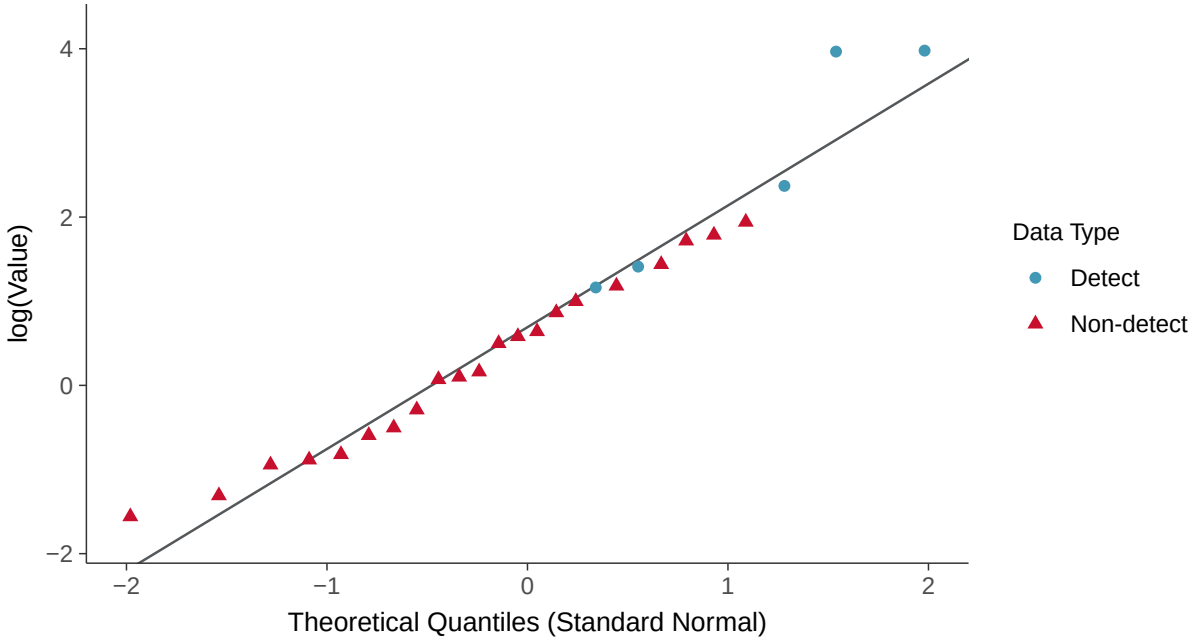
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-7R (ug/L)



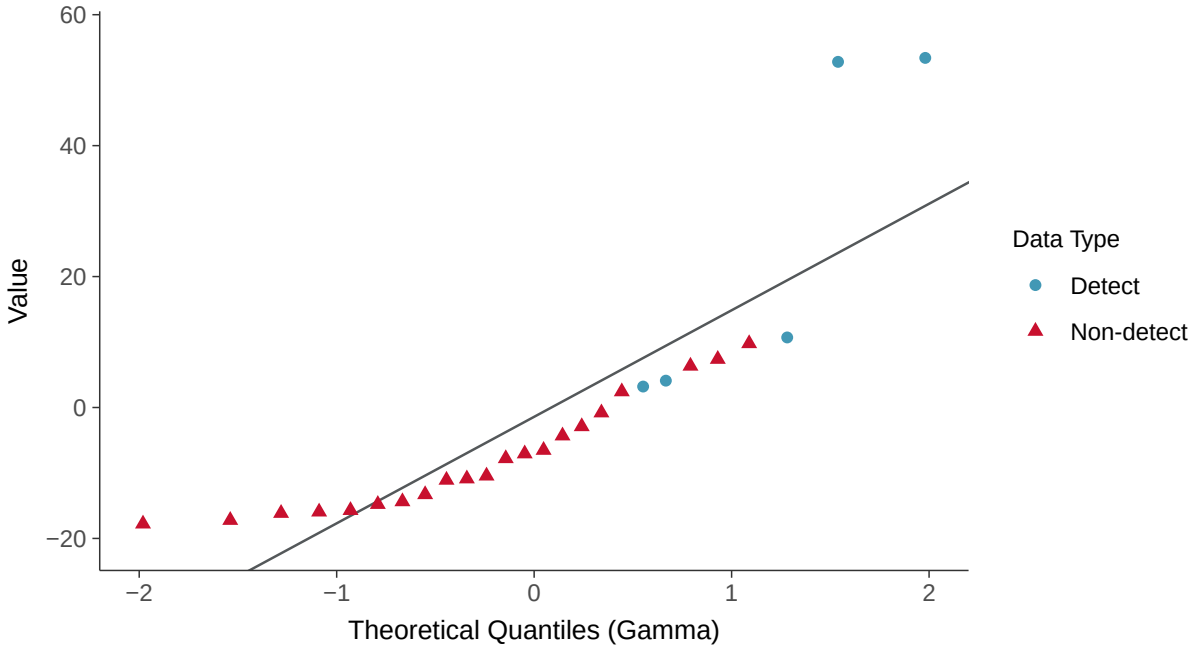
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-7R (ug/L)



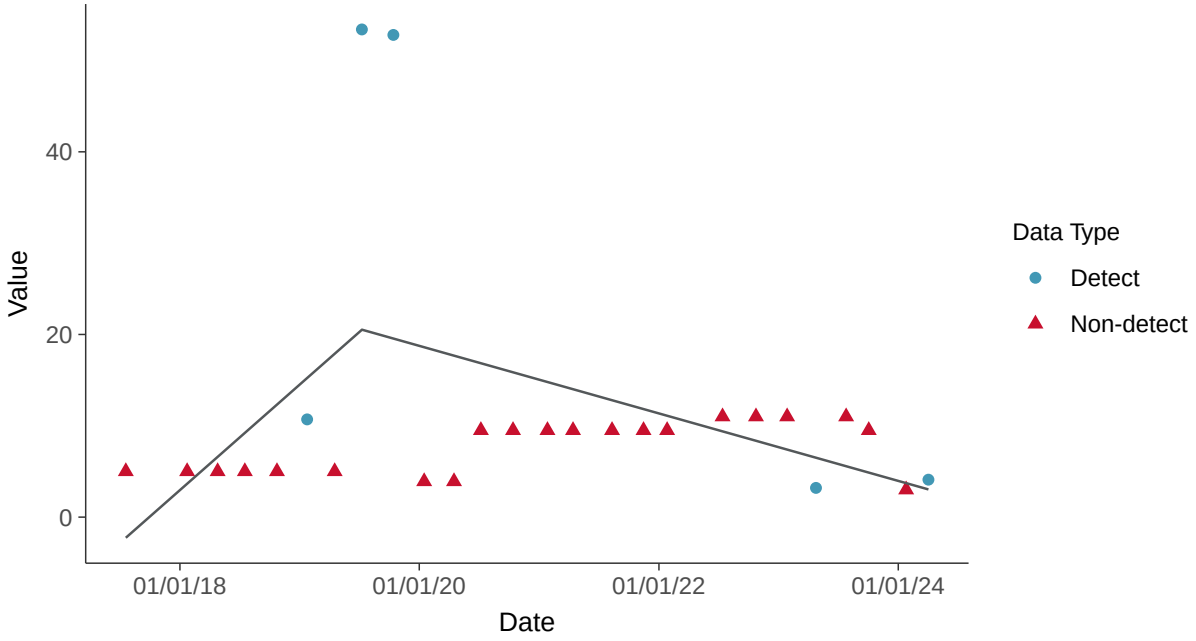
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-7R (ug/L)

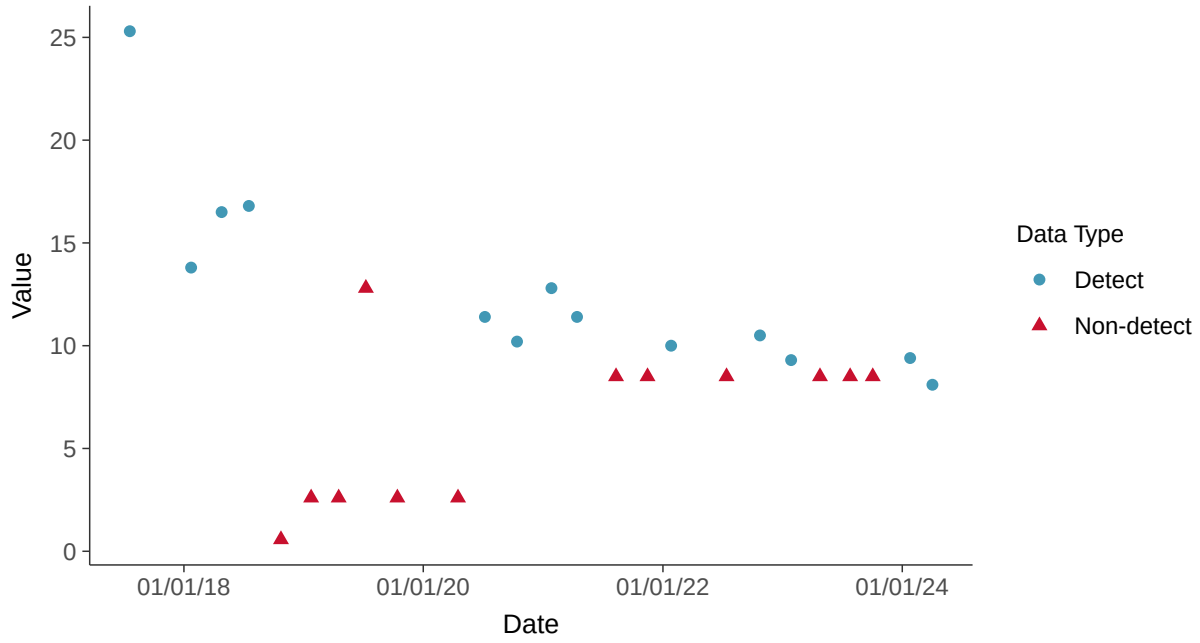


App. III: Boron, MW-7R

ID: 10_2_105

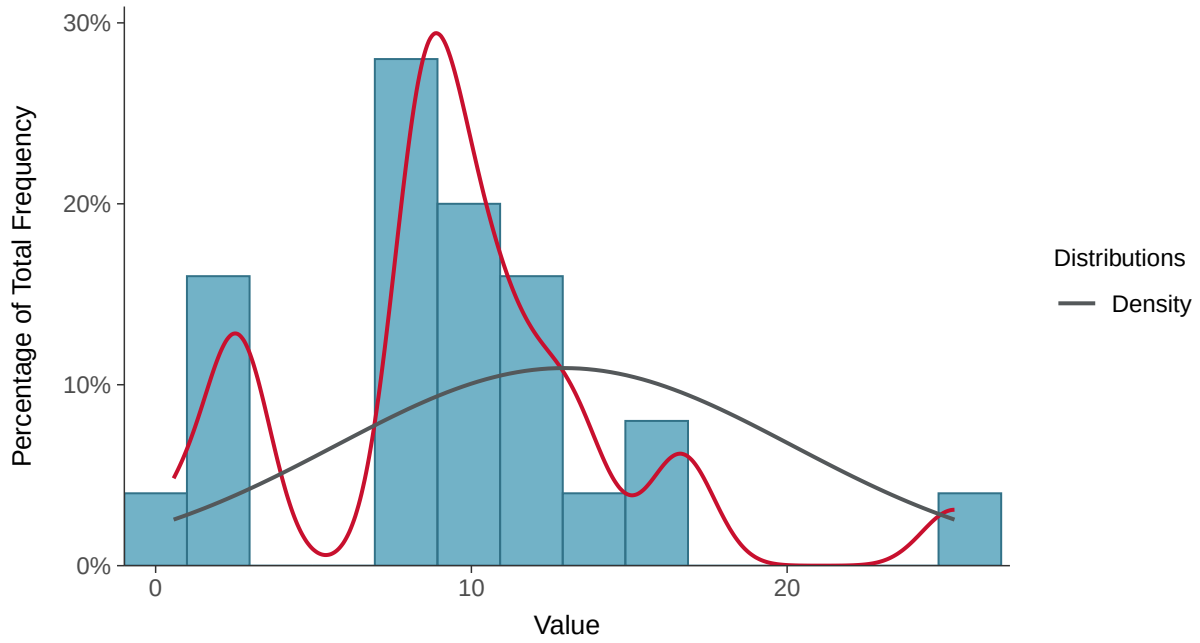
Scatter Plot

Boron, MW-7R (ug/L)



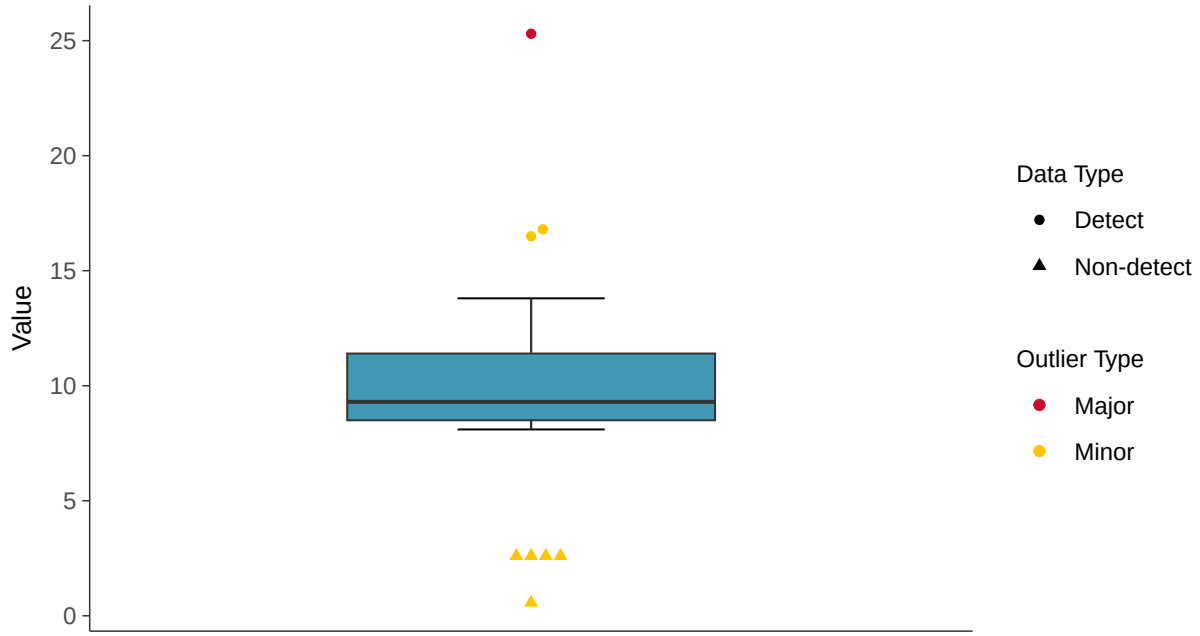
Histogram

Boron, MW-7R (ug/L)



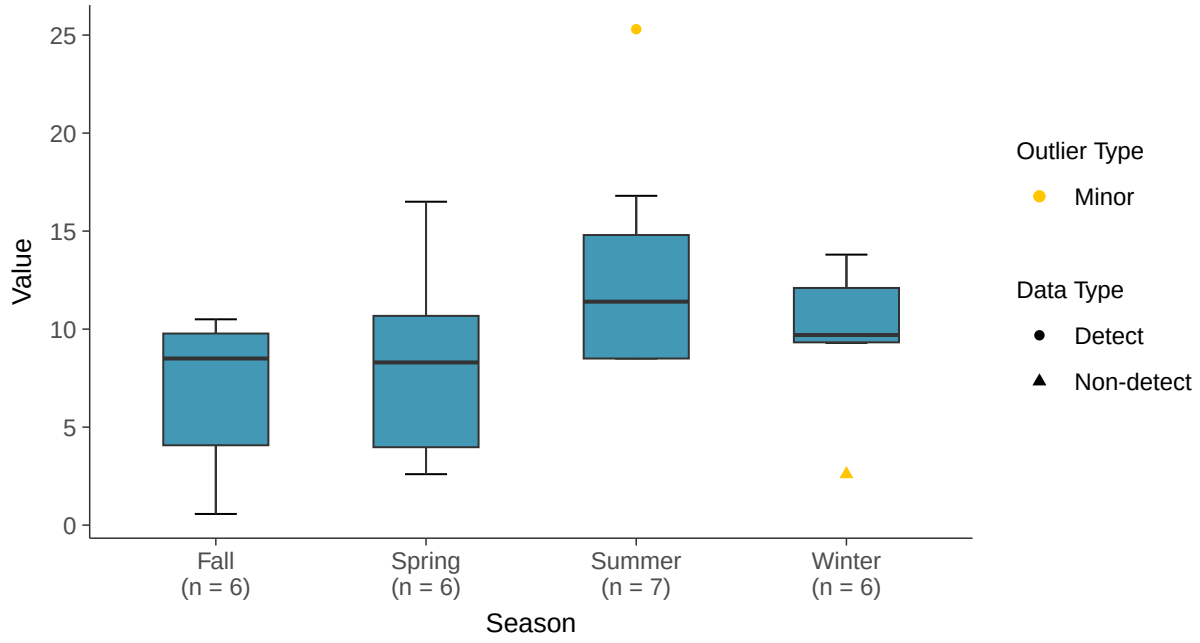
Boxplot

Boron, MW-7R (ug/L)



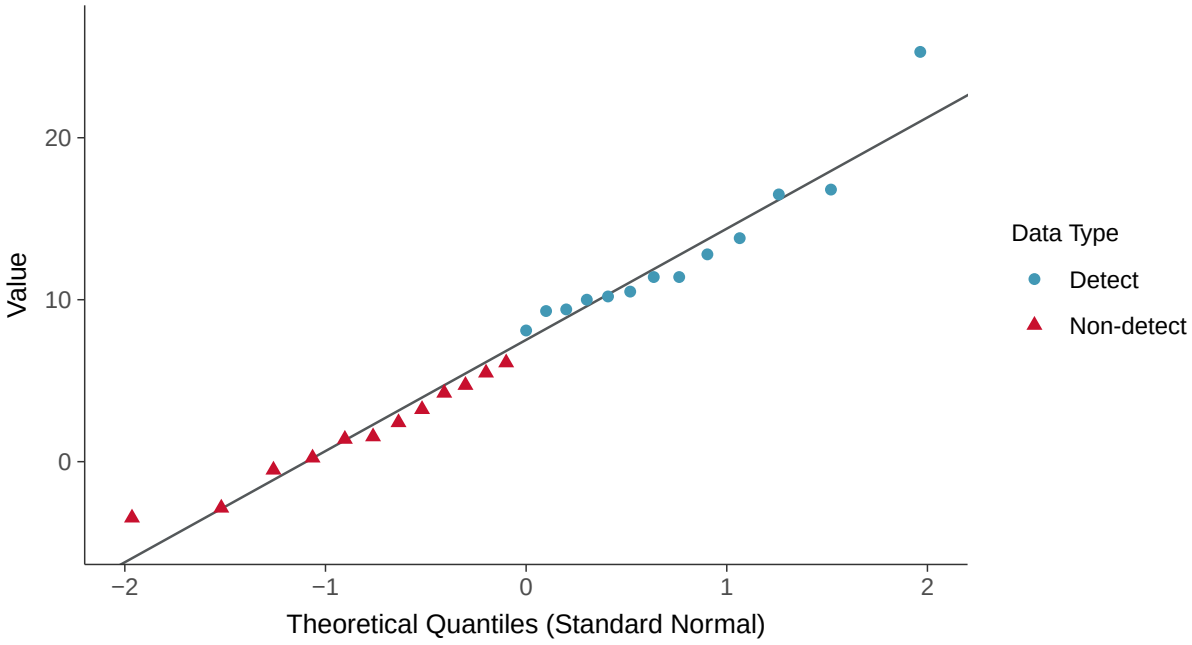
Boxplot by Season

Boron, MW-7R (ug/L)



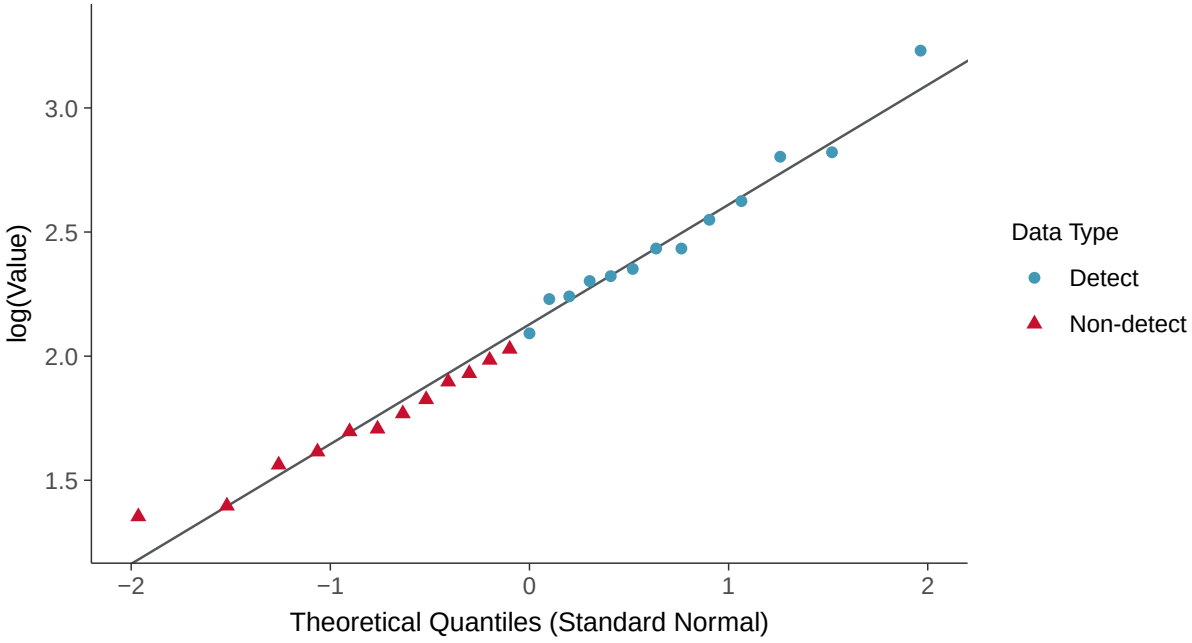
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-7R (ug/L)



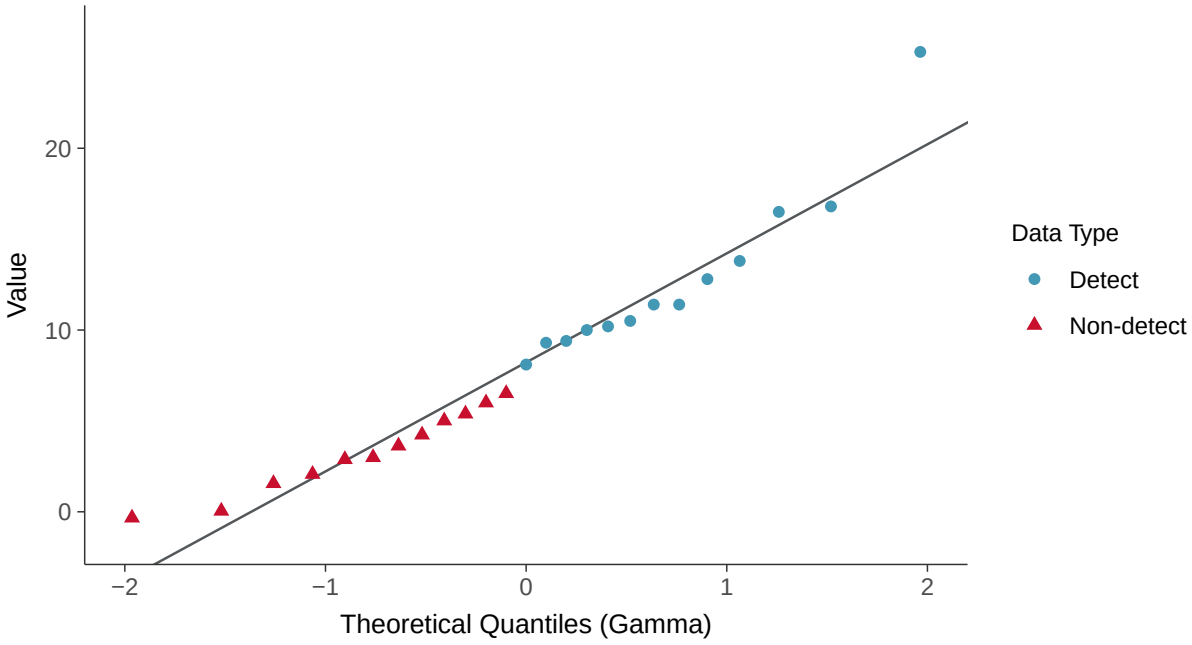
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-7R (ug/L)



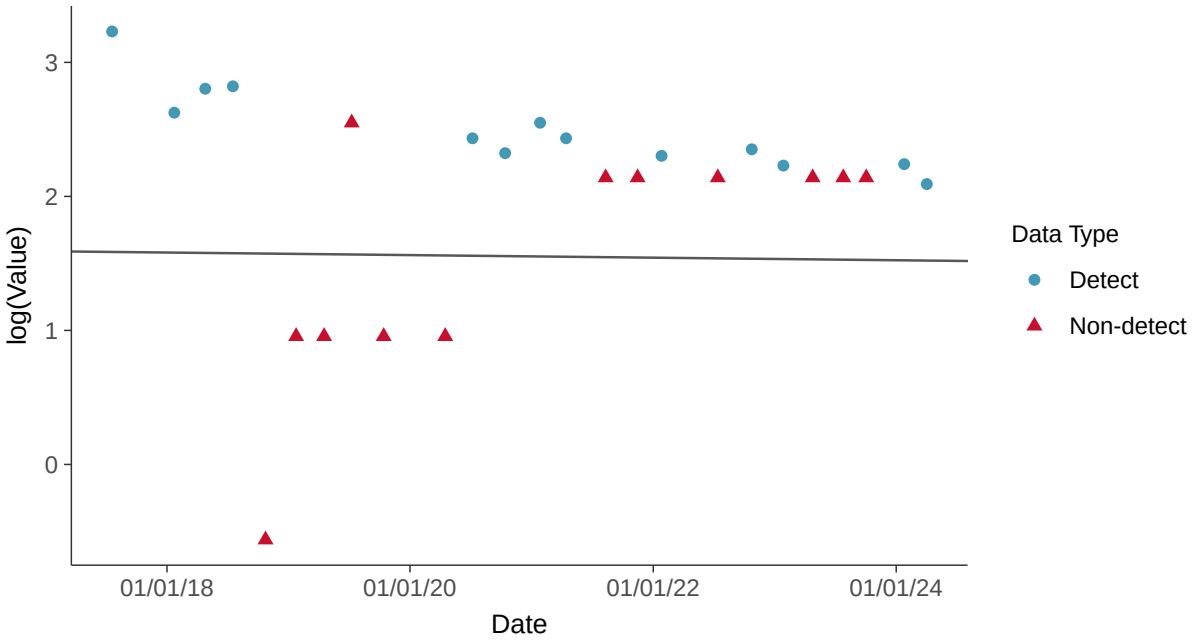
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-7R (ug/L)



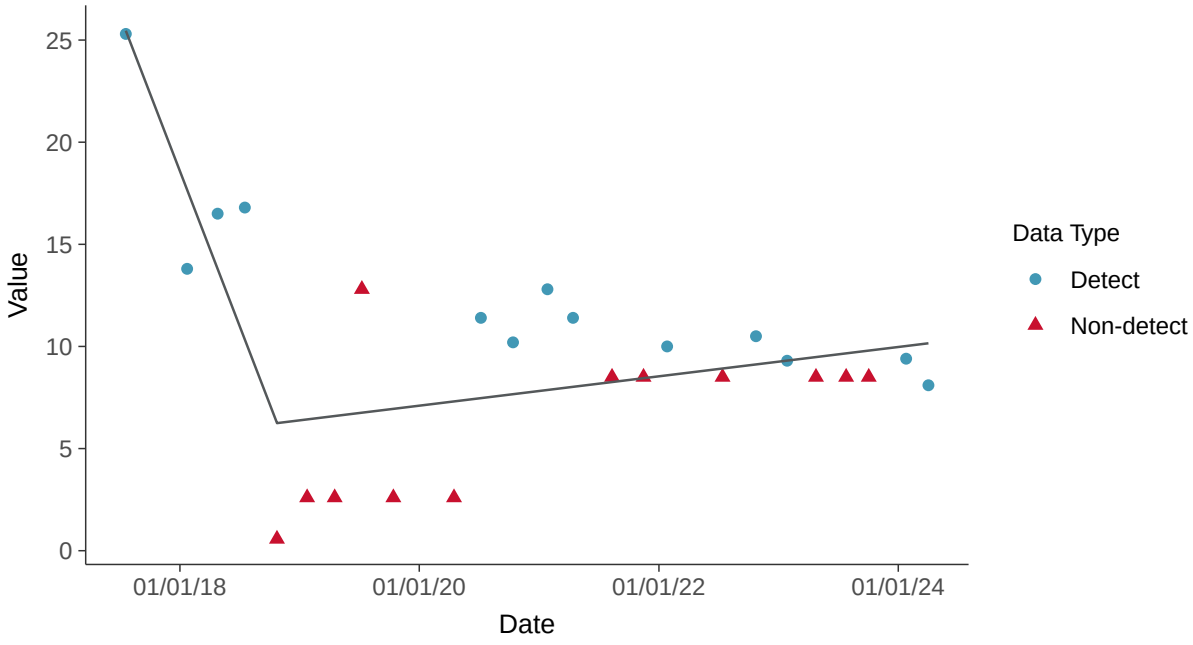
Trend Regression: Lognormal MLE

Boron, MW-7R (ug/L)



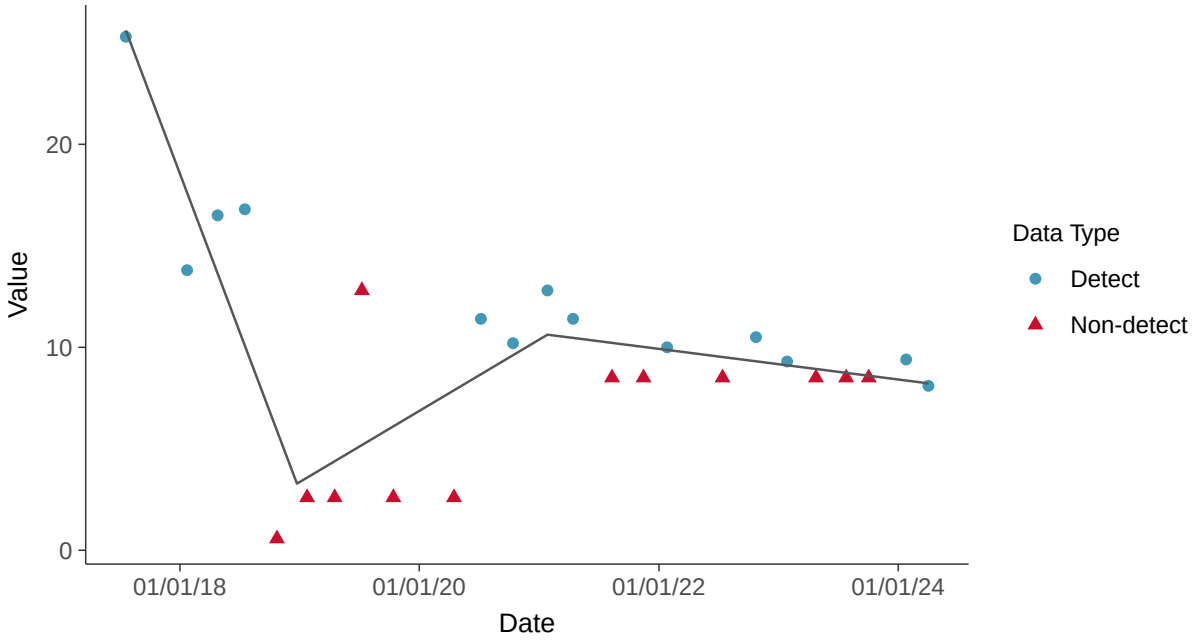
Trend Regression: Piecewise Linear-Linear

Boron, MW-7R (ug/L)



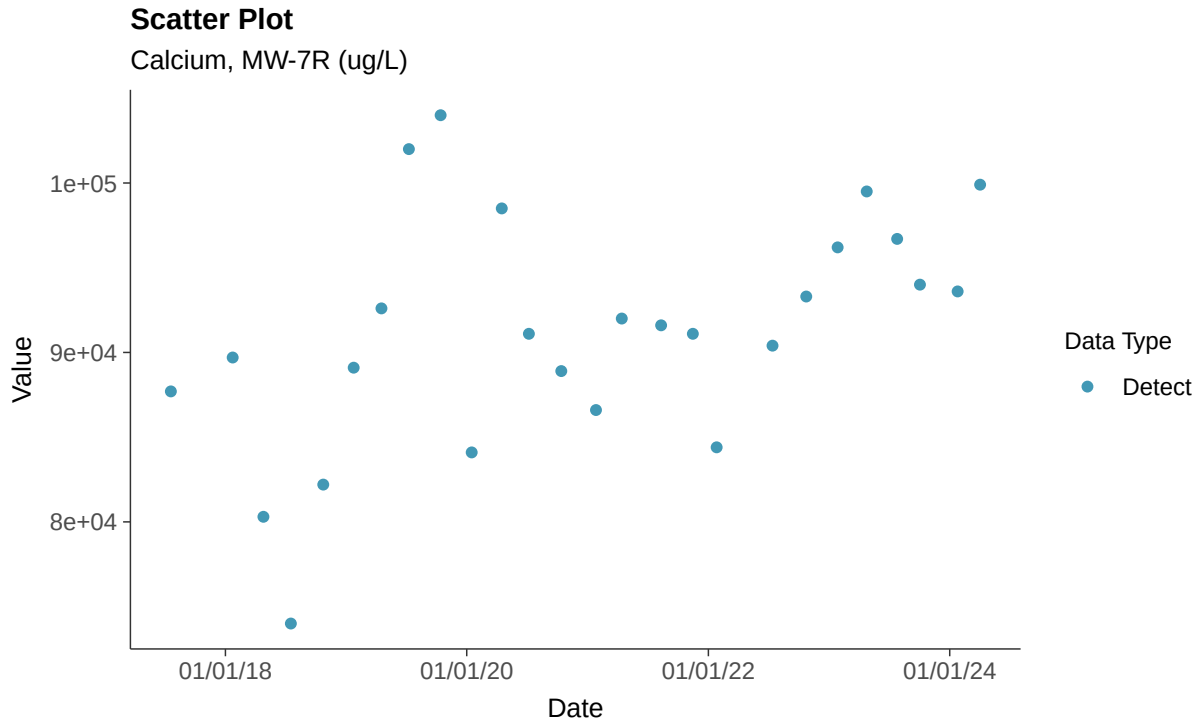
Trend Regression: Piecewise Linear-Linear-Linear

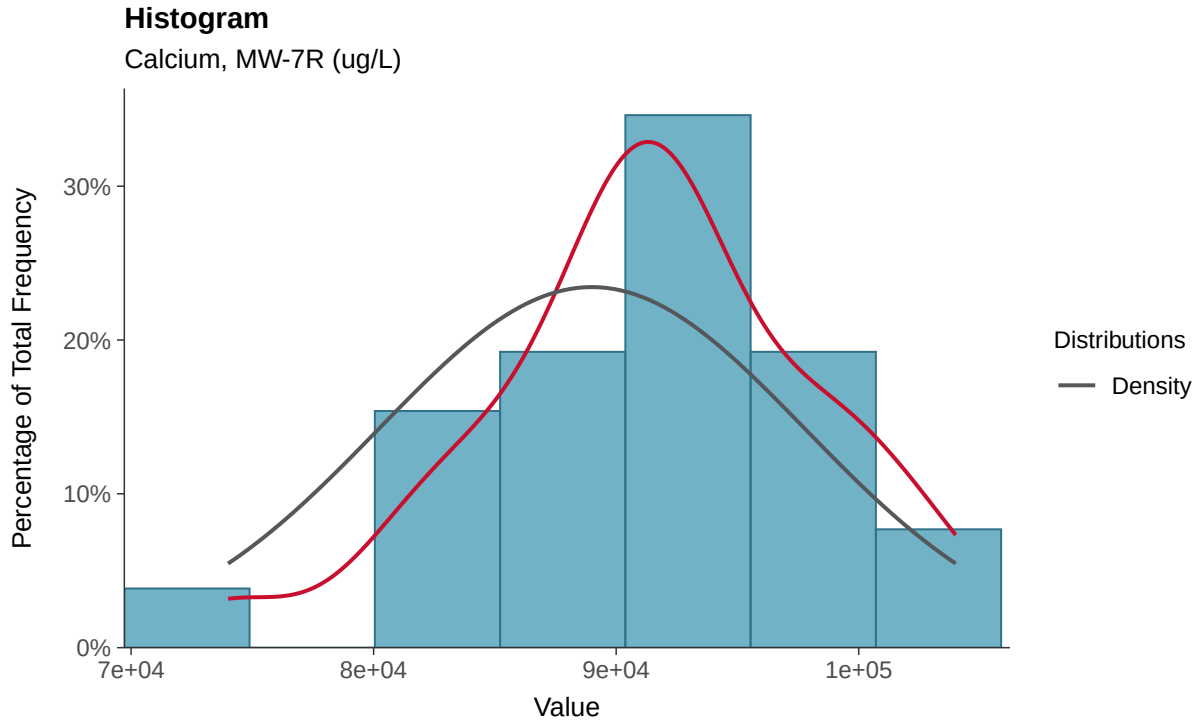
Boron, MW-7R (ug/L)



App. III: Calcium, MW-7R

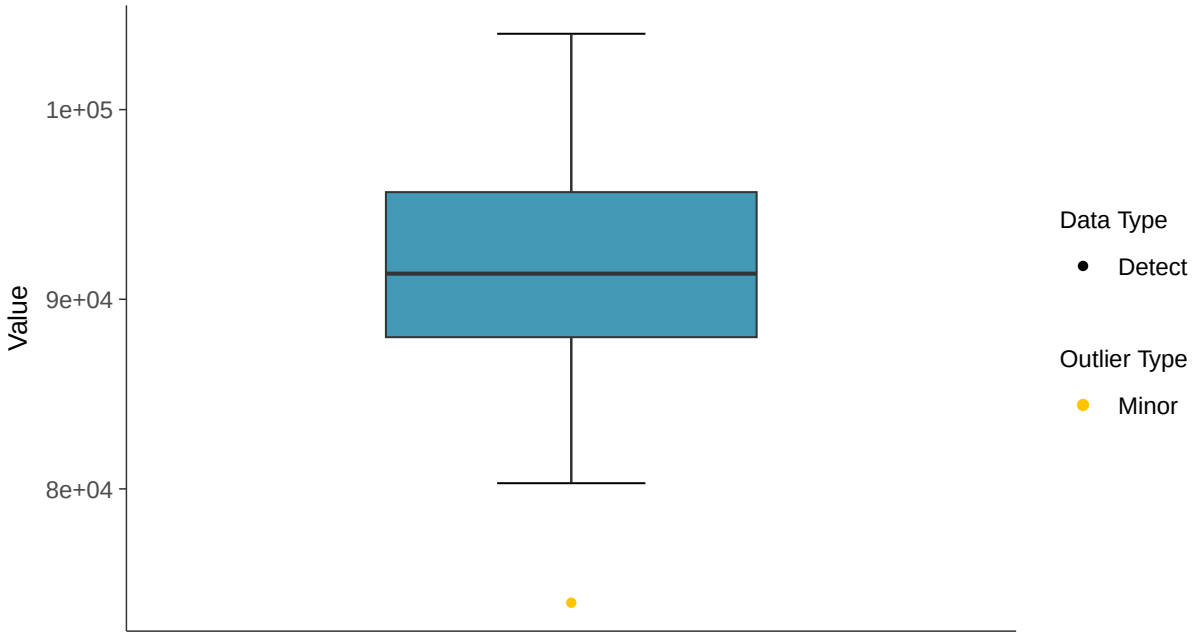
ID: 10_2_107





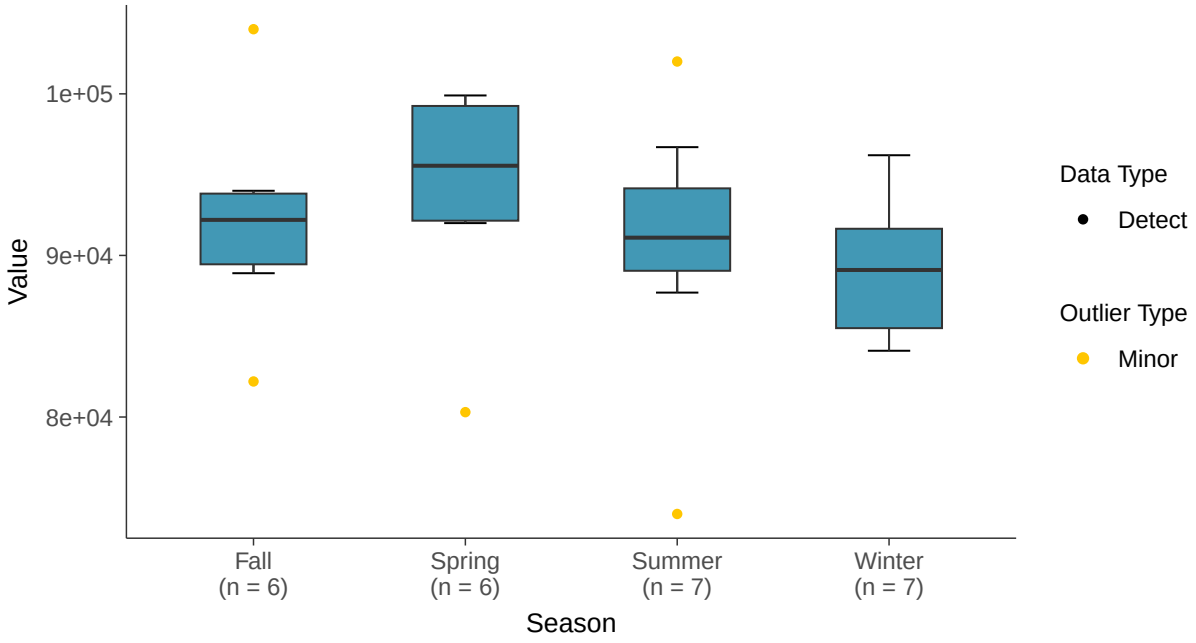
Boxplot

Calcium, MW-7R (ug/L)



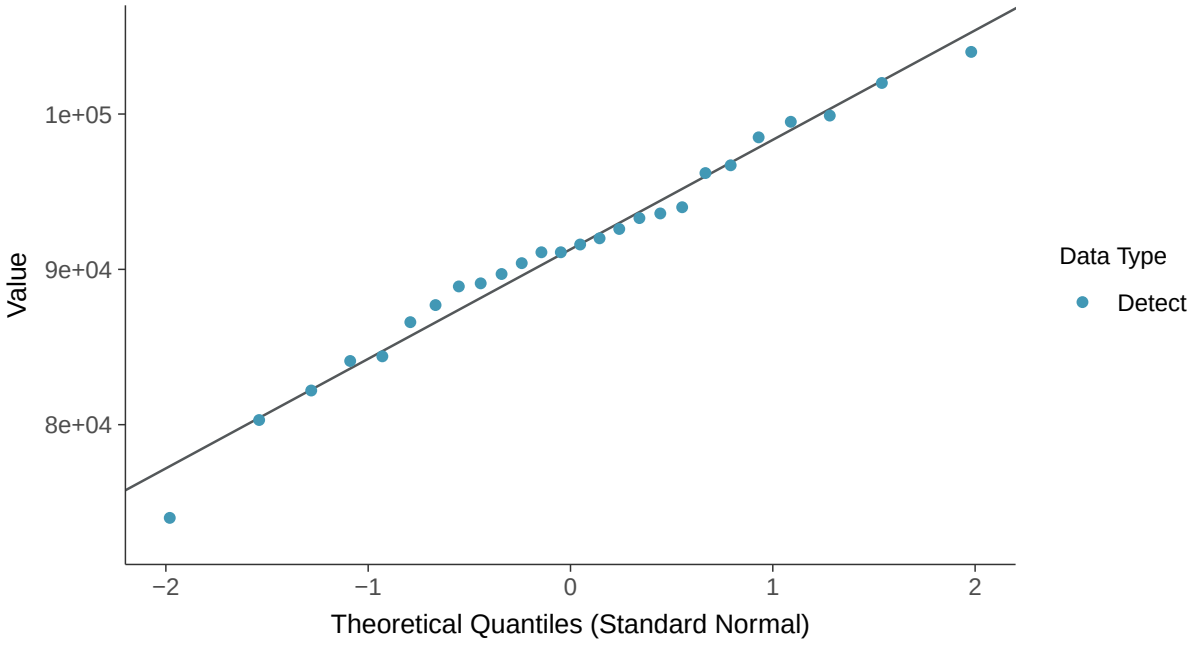
Boxplot by Season

Calcium, MW-7R (ug/L)



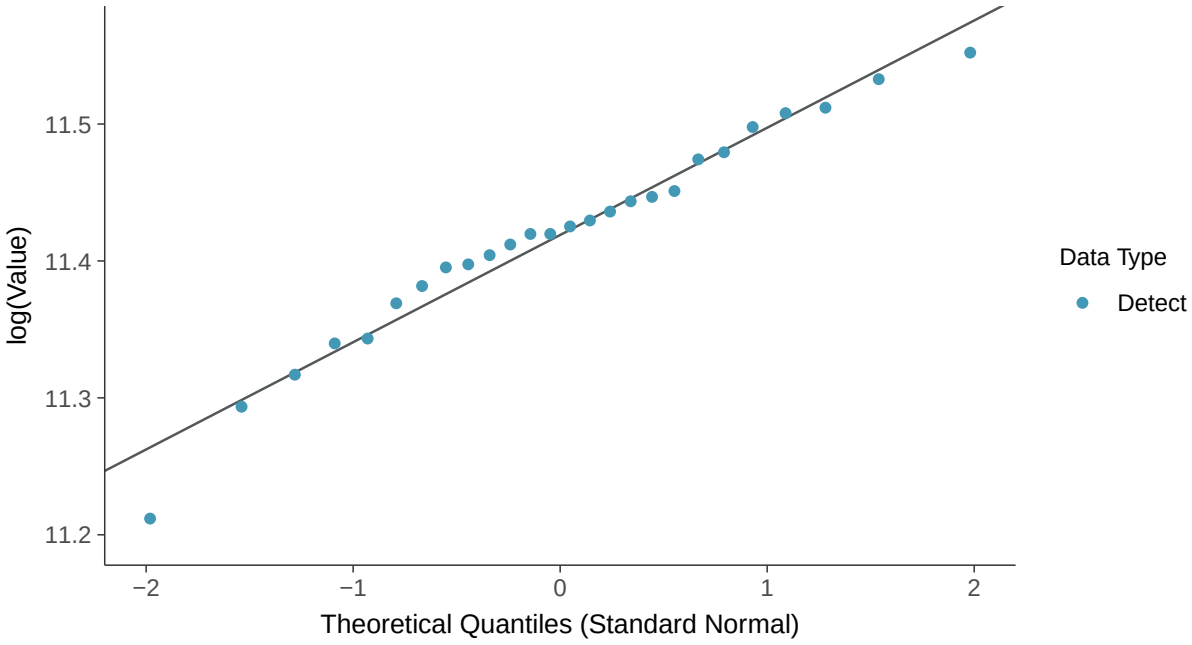
Normal Q-Q plot

Calcium, MW-7R (ug/L)



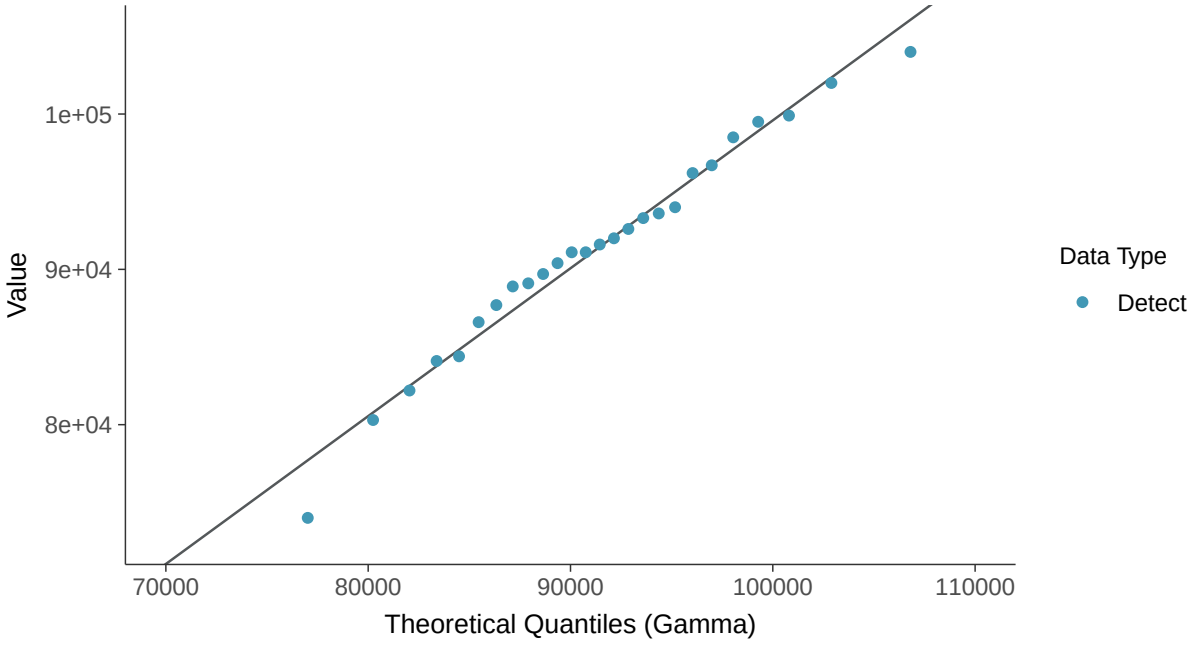
Lognormal Q-Q plot

Calcium, MW-7R (ug/L)



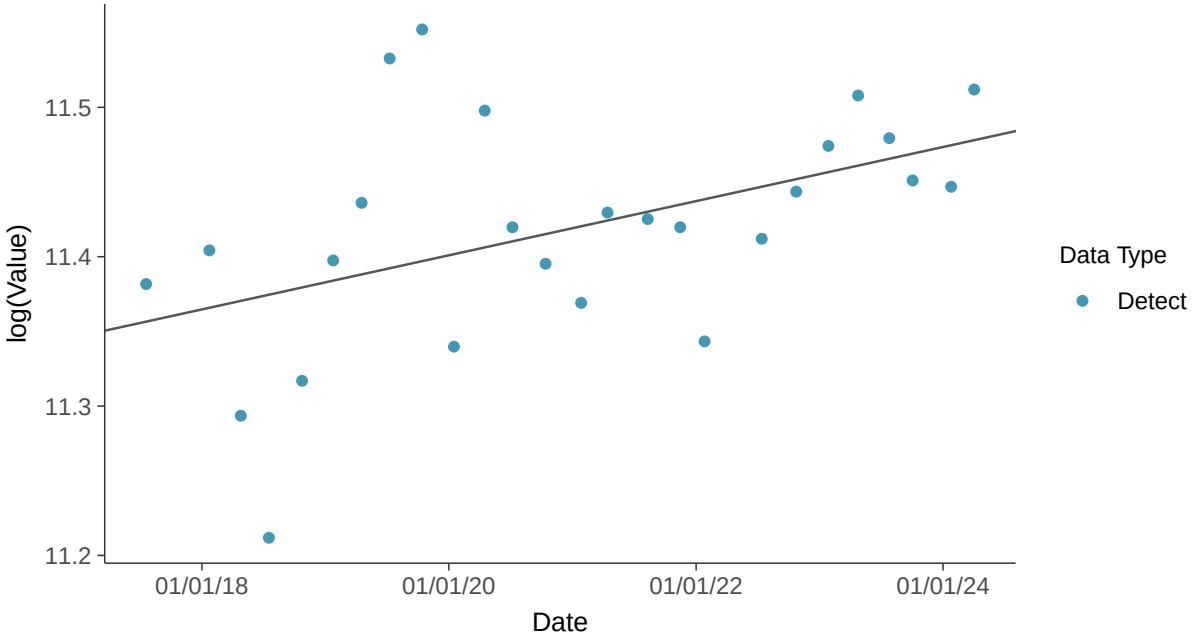
Gamma Q-Q plot

Calcium, MW-7R (ug/L)



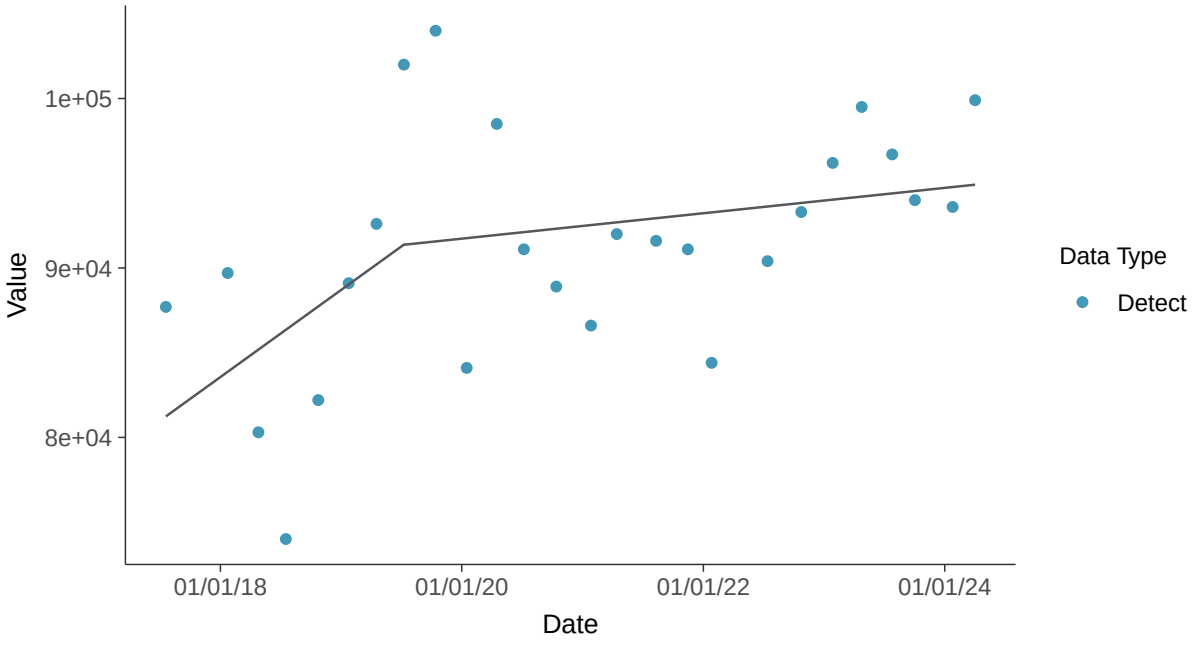
Trend Regression: Lognormal MLE

Calcium, MW-7R (ug/L)



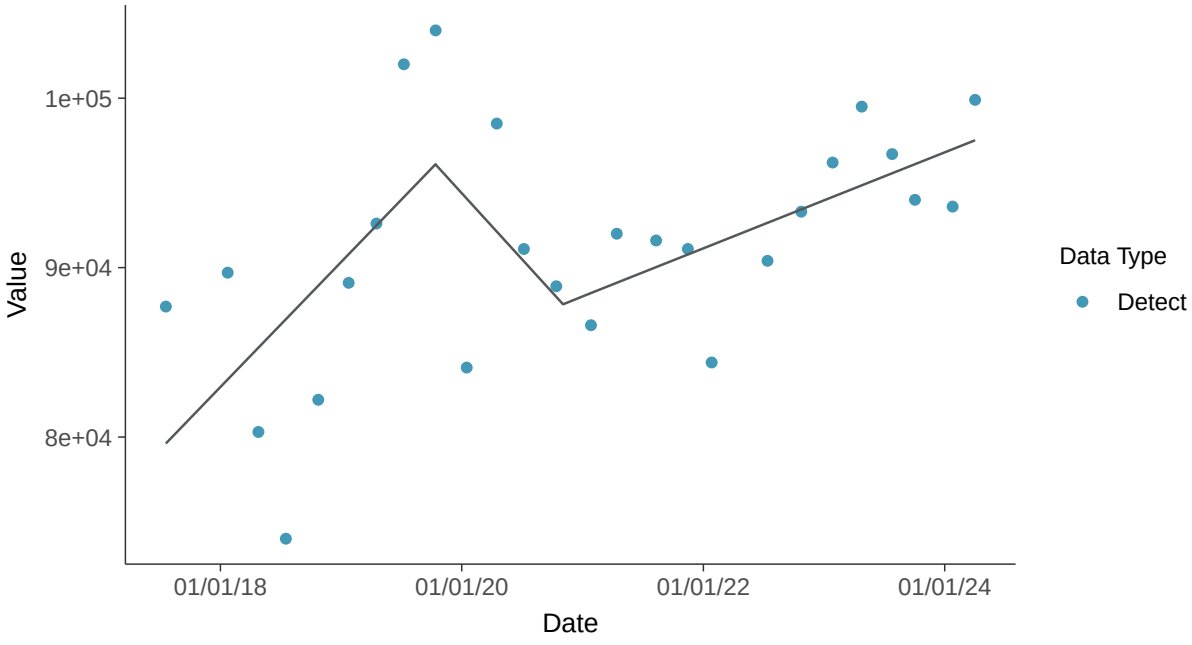
Trend Regression: Piecewise Linear-Linear

Calcium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-7R (ug/L)

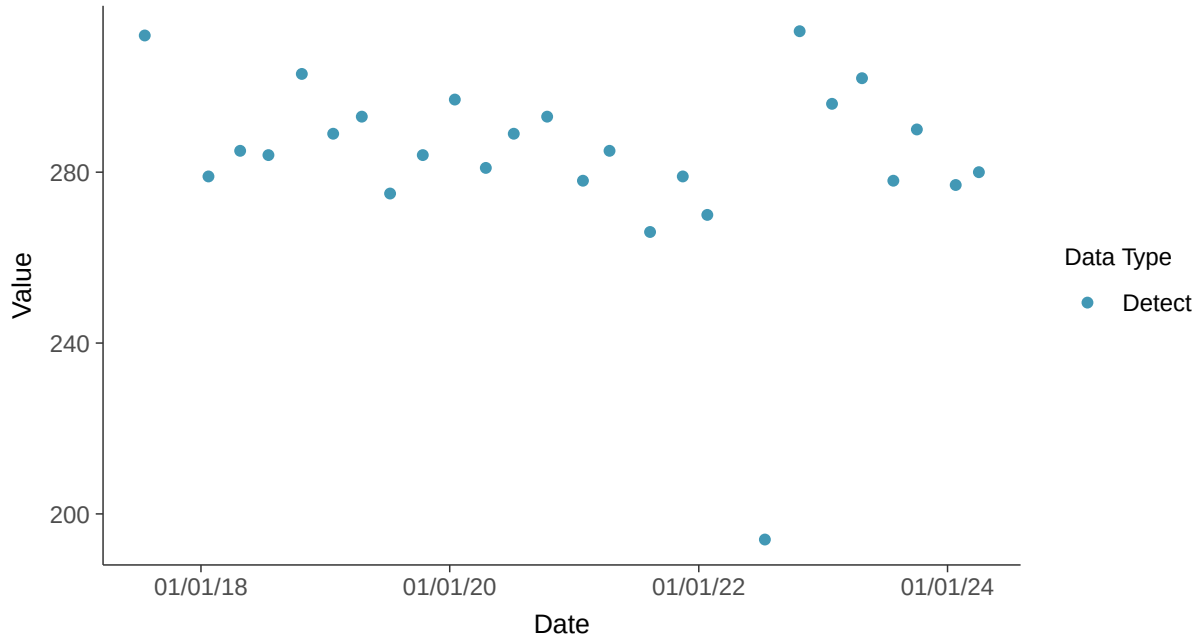


App. III: Chloride, MW-7R

ID: 10_2_108

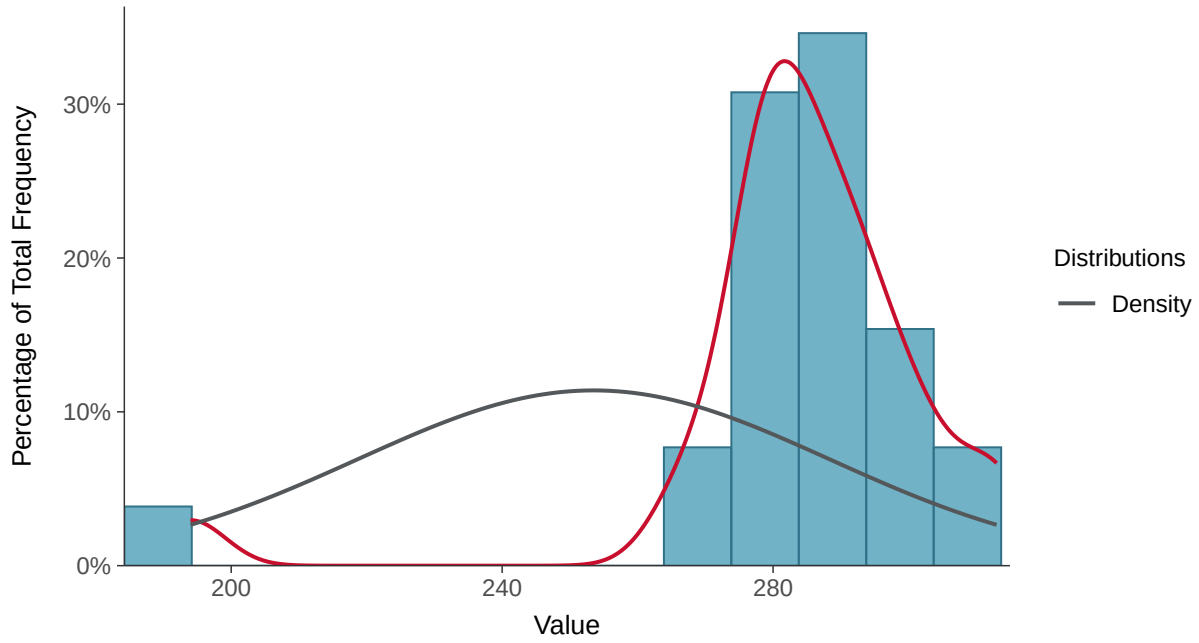
Scatter Plot

Chloride, MW-7R (mg/L)



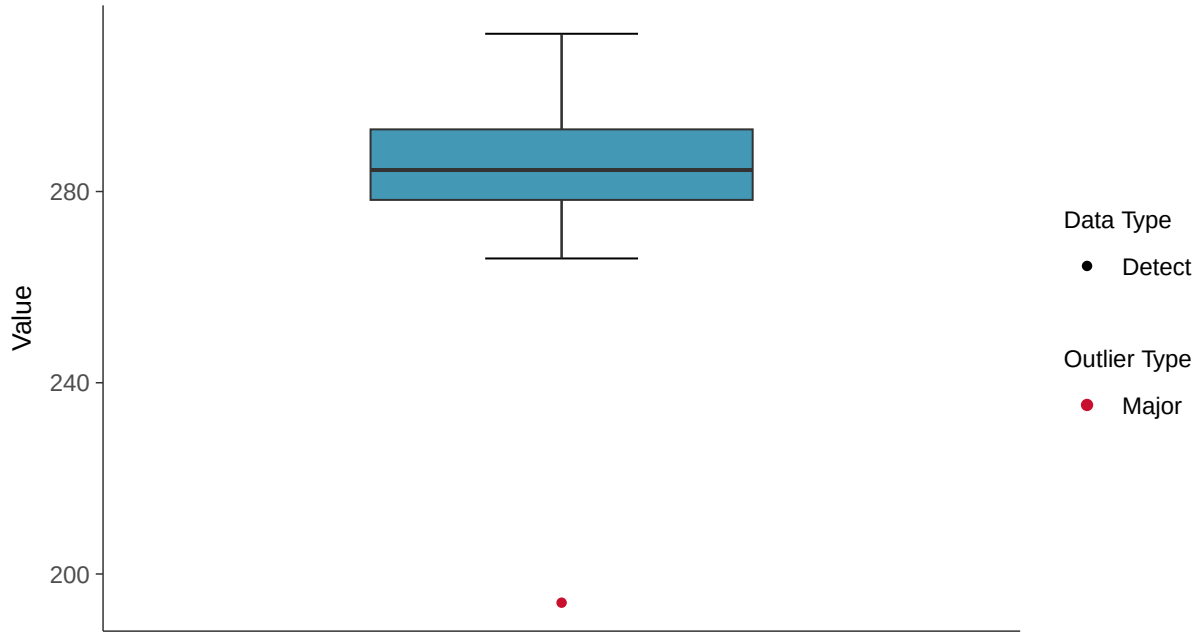
Histogram

Chloride, MW-7R (mg/L)



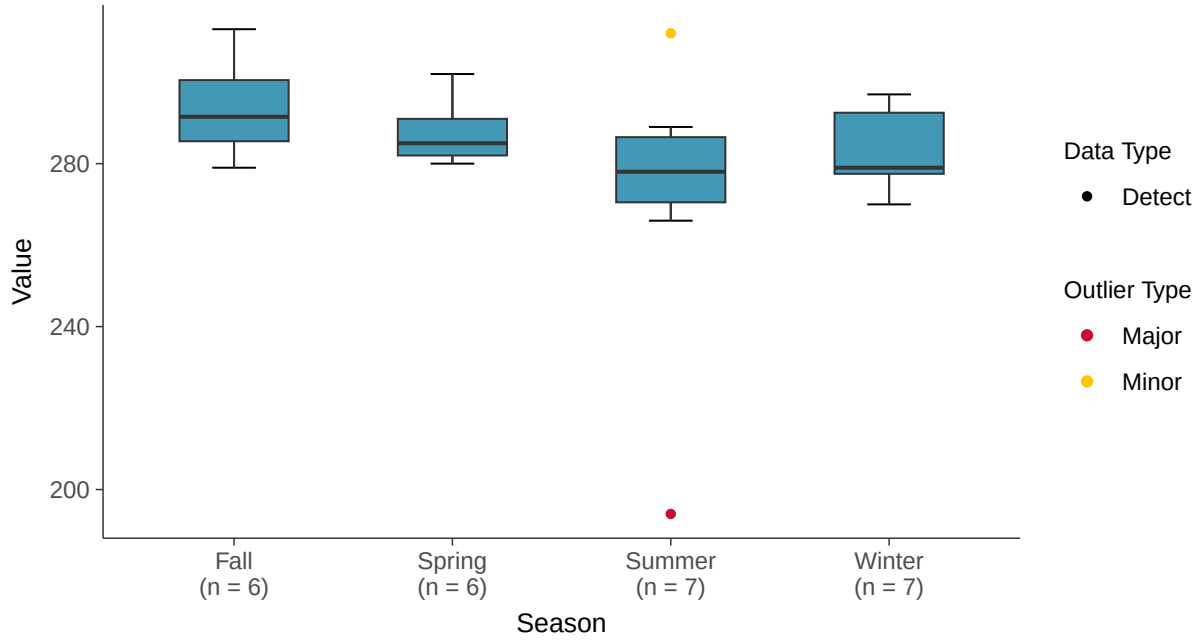
Boxplot

Chloride, MW-7R (mg/L)



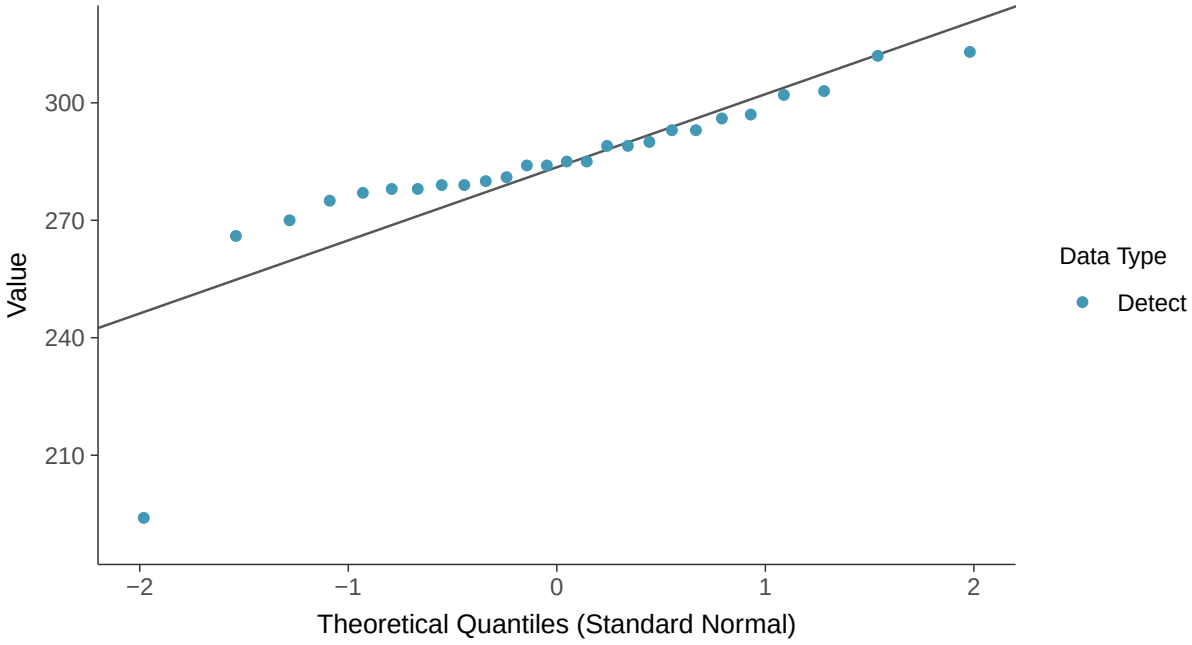
Boxplot by Season

Chloride, MW-7R (mg/L)



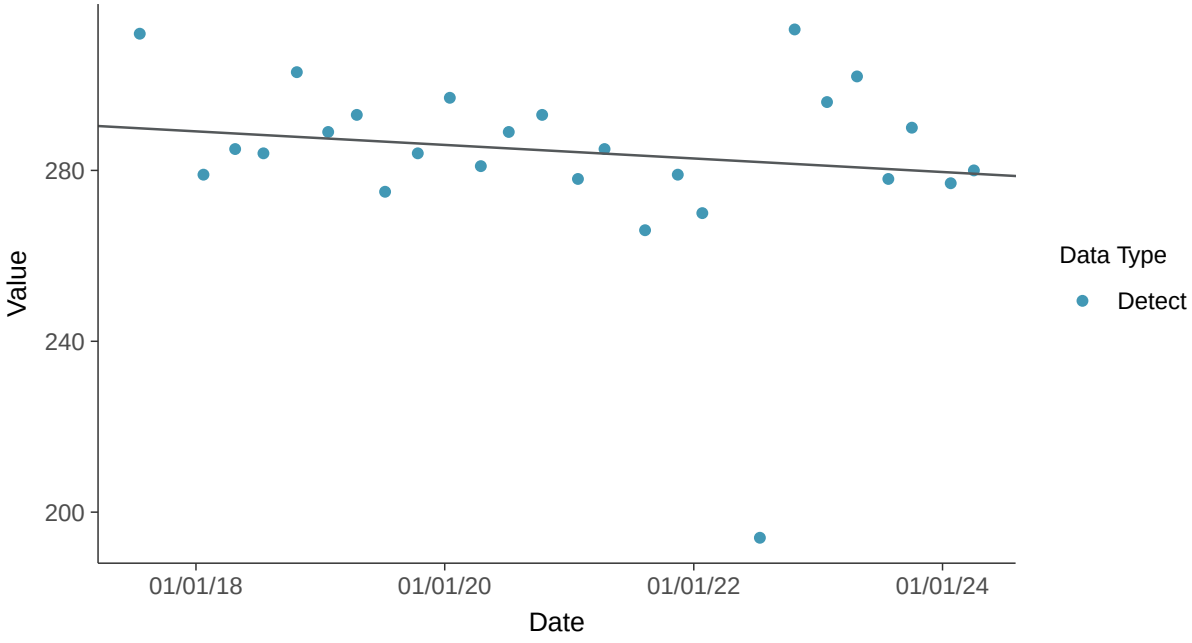
Normal Q-Q plot

Chloride, MW-7R (mg/L)



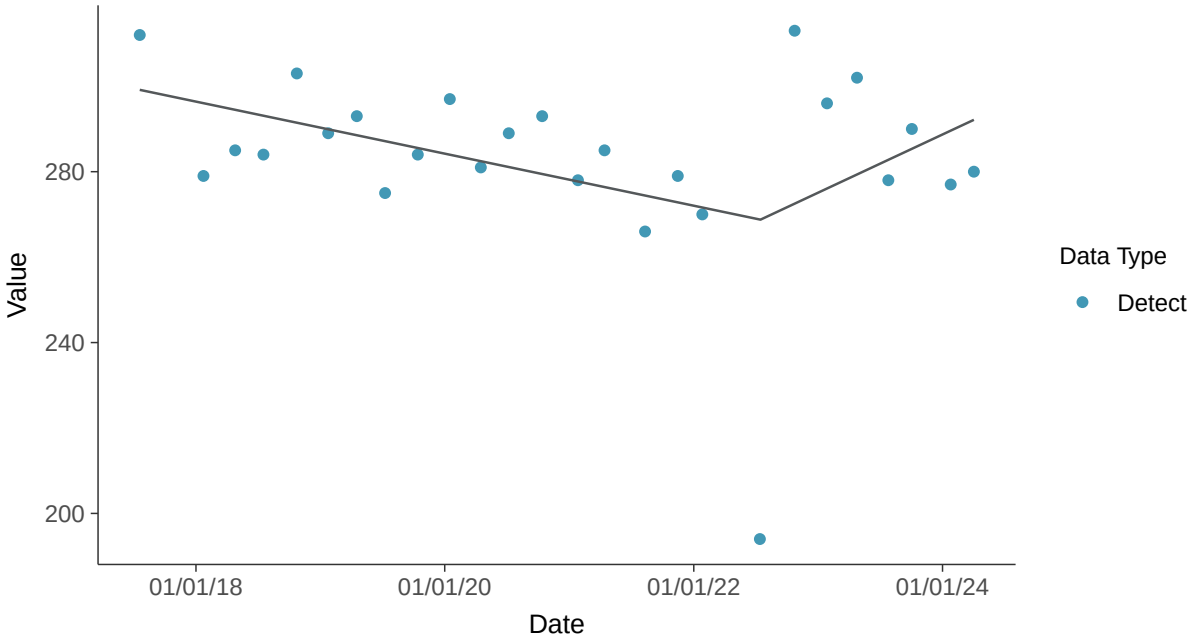
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear

Chloride, MW-7R (mg/L)

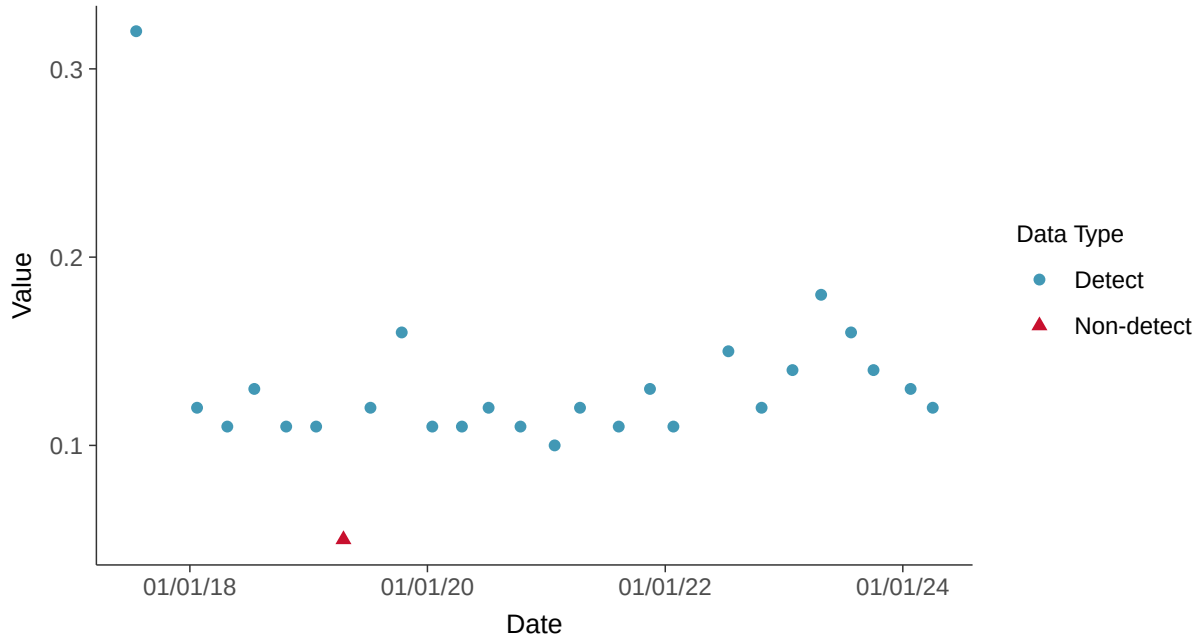


App. III: Fluoride, MW-7R

ID: 10_2_112

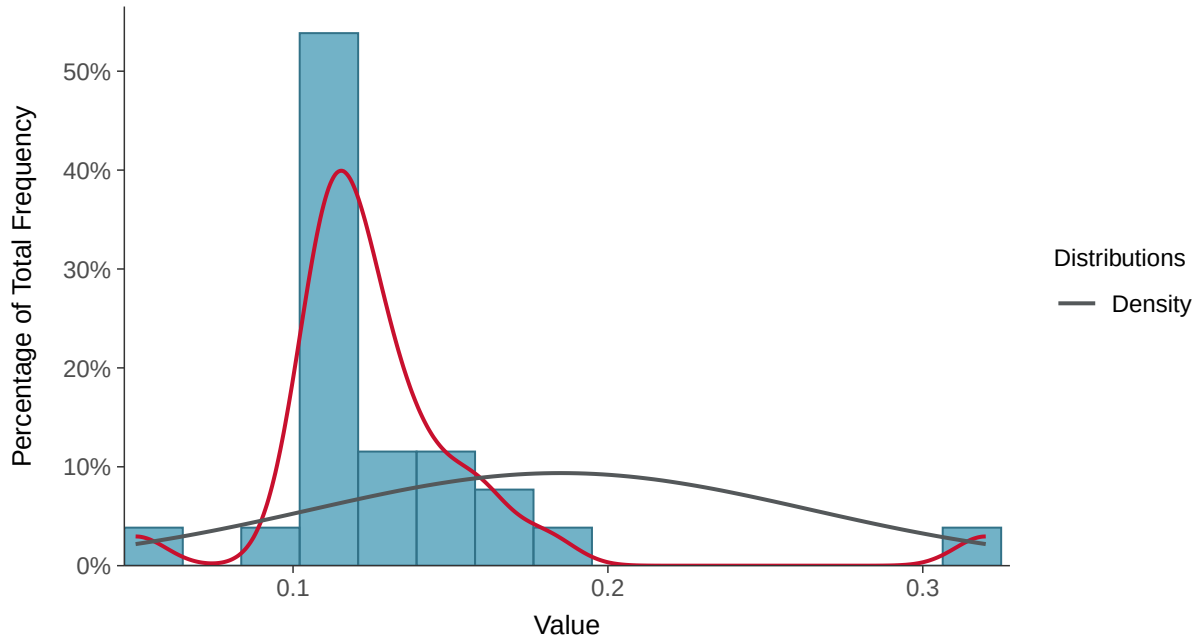
Scatter Plot

Fluoride, MW-7R (mg/L)



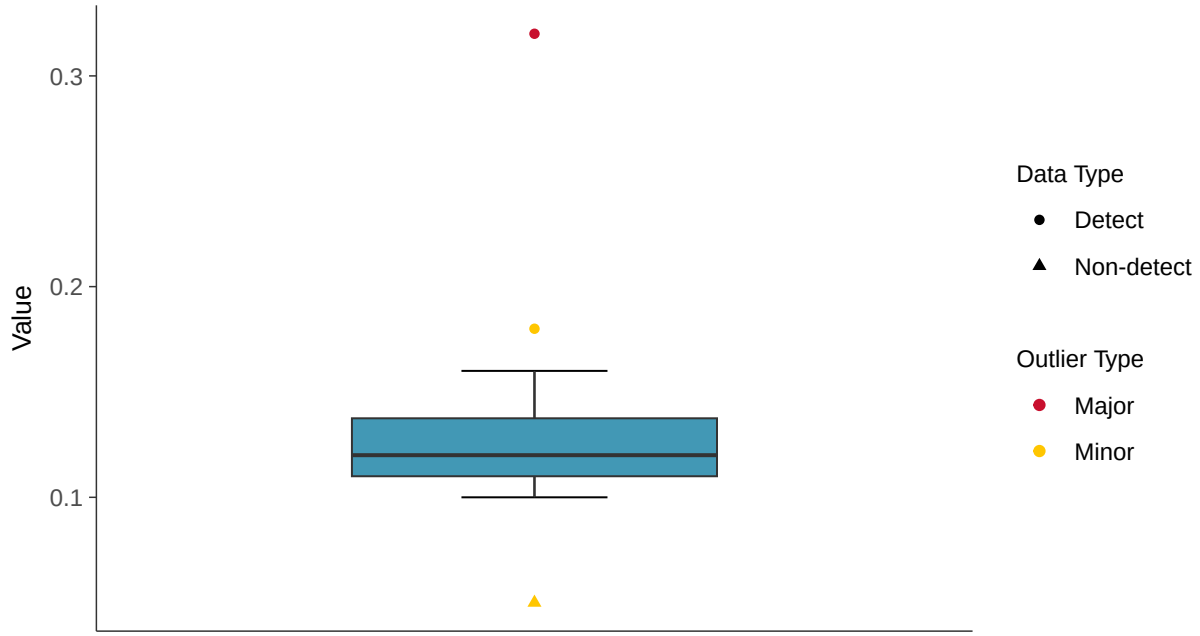
Histogram

Fluoride, MW-7R (mg/L)



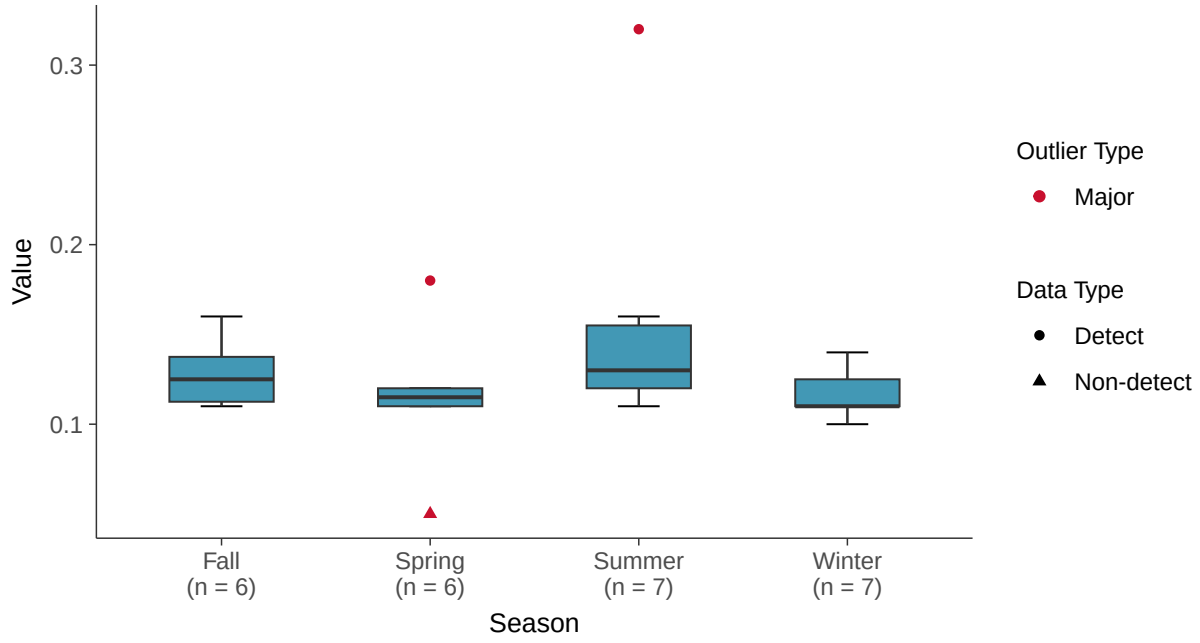
Boxplot

Fluoride, MW-7R (mg/L)



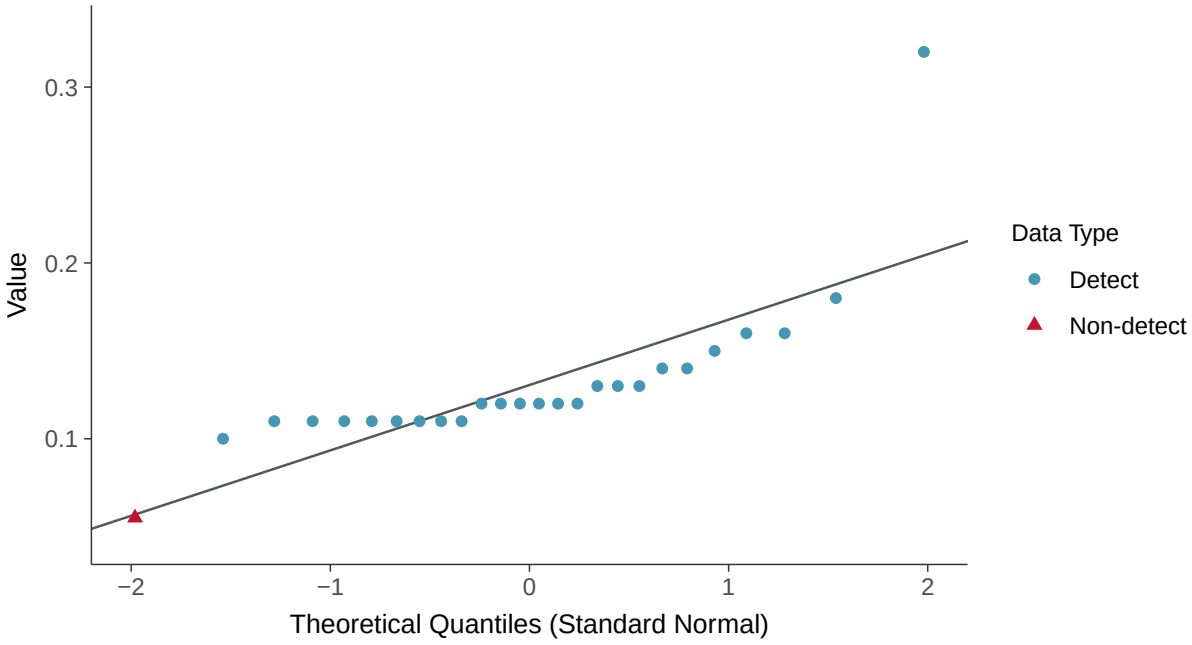
Boxplot by Season

Fluoride, MW-7R (mg/L)



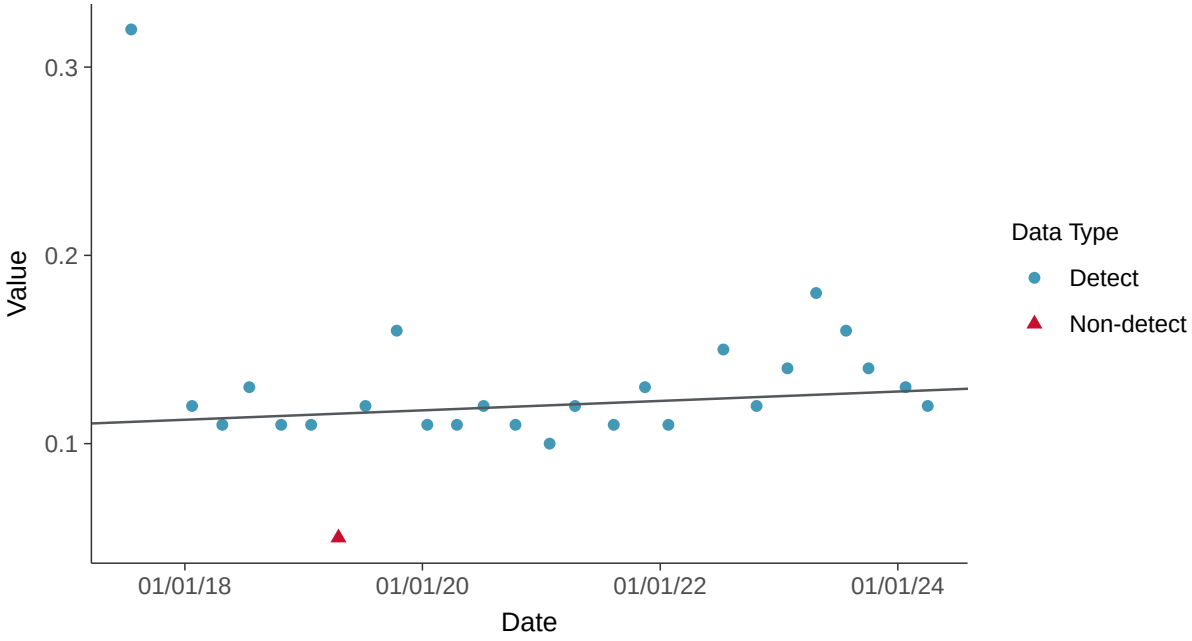
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-7R (mg/L)



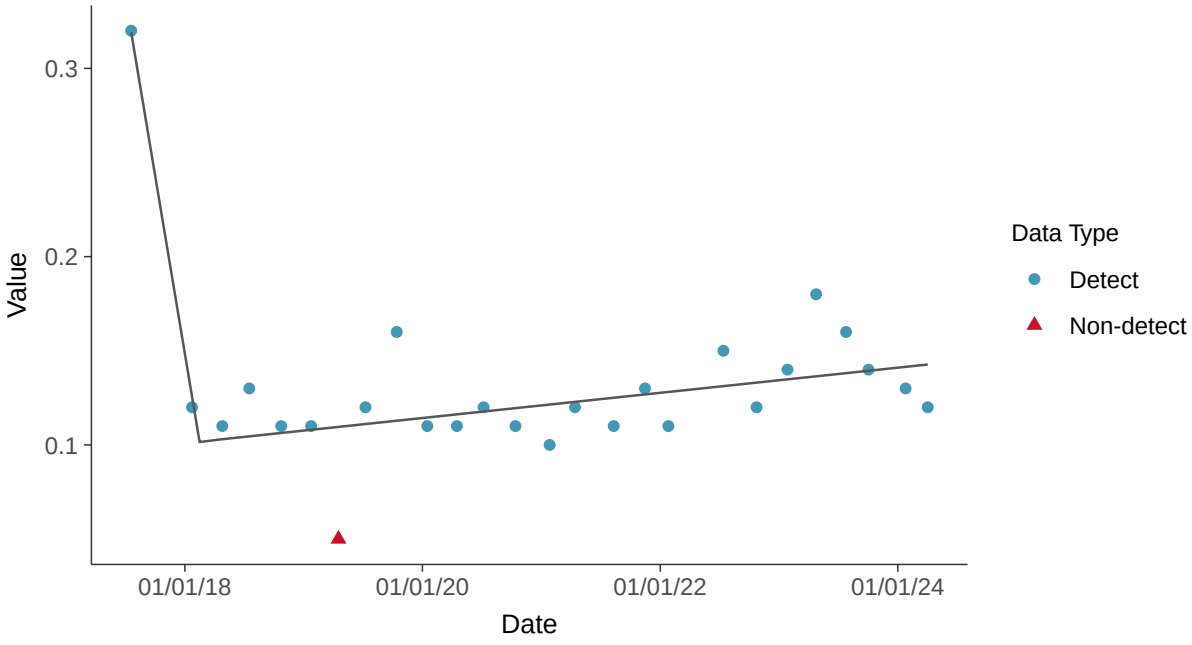
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-7R (mg/L)



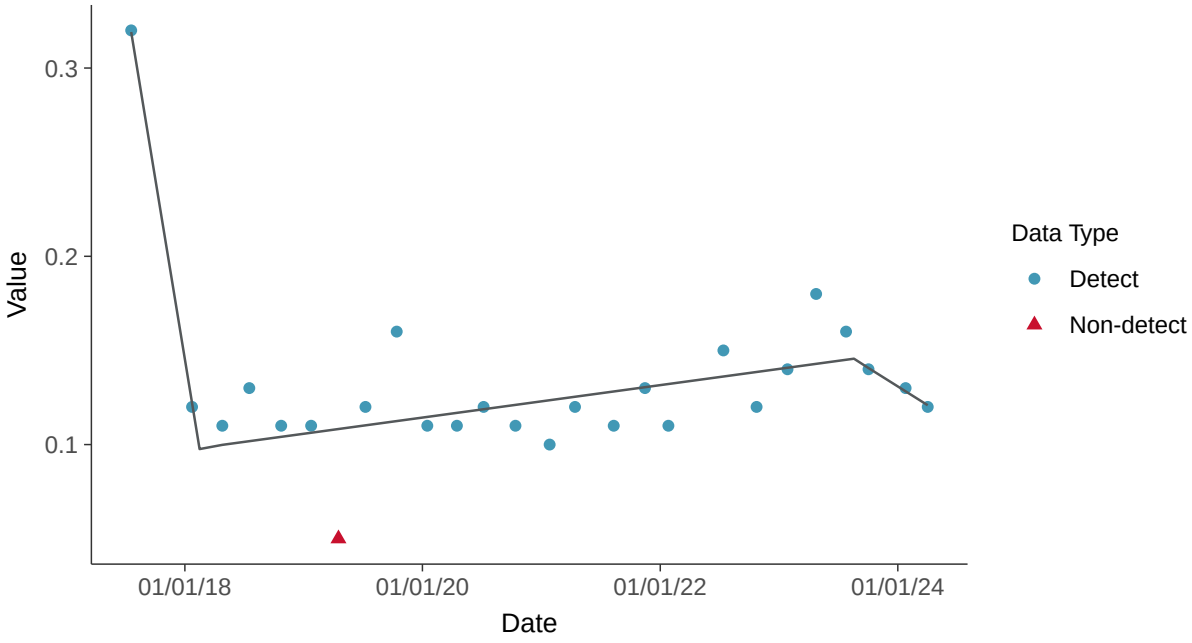
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-7R (mg/L)



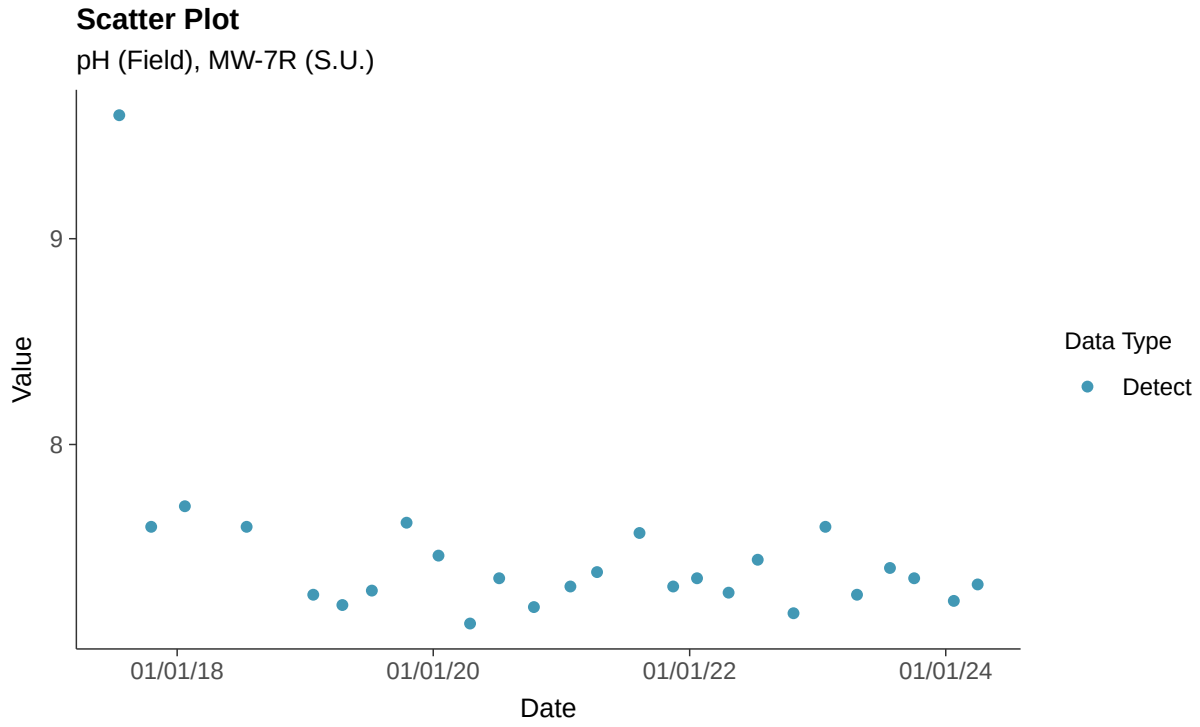
Trend Regression: Piecewise Linear-Linear-Linear

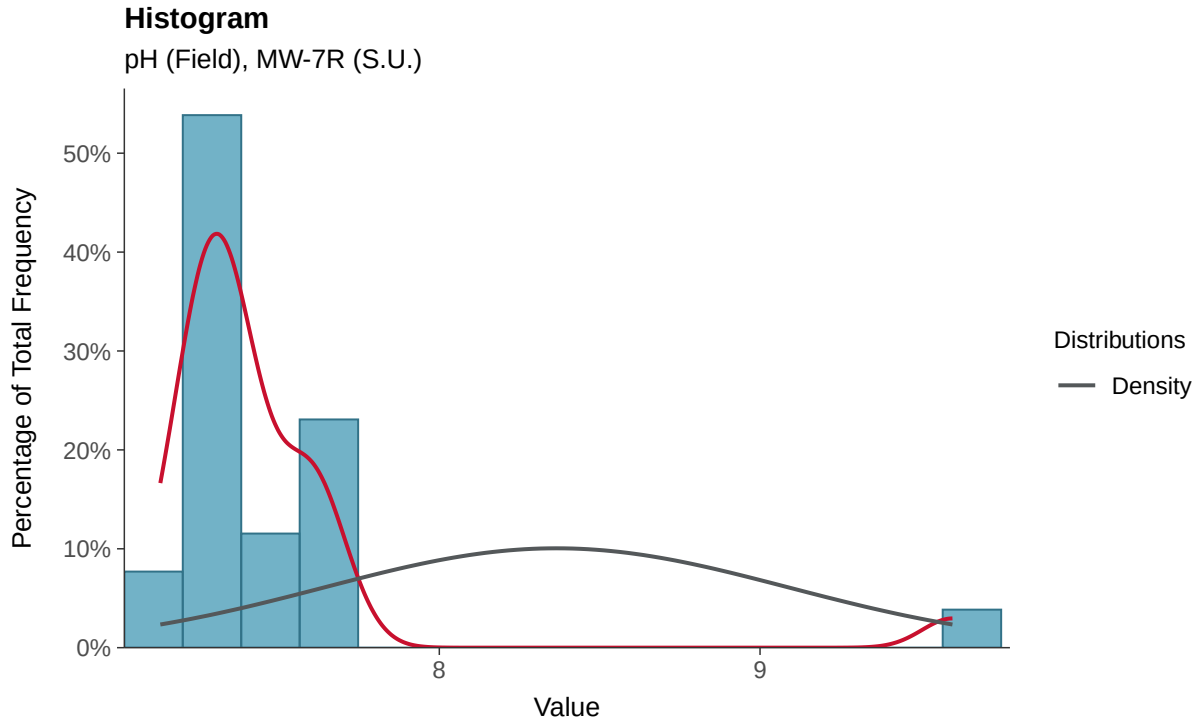
Fluoride, MW-7R (mg/L)



App. III: pH (Field), MW-7R

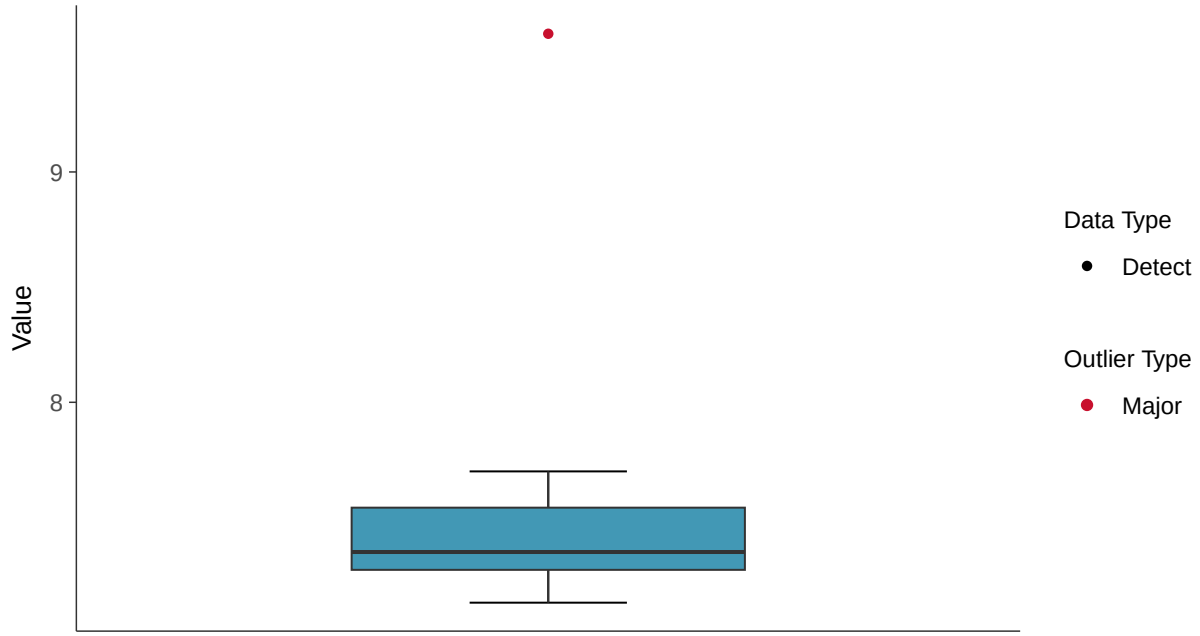
ID: 10_2_118





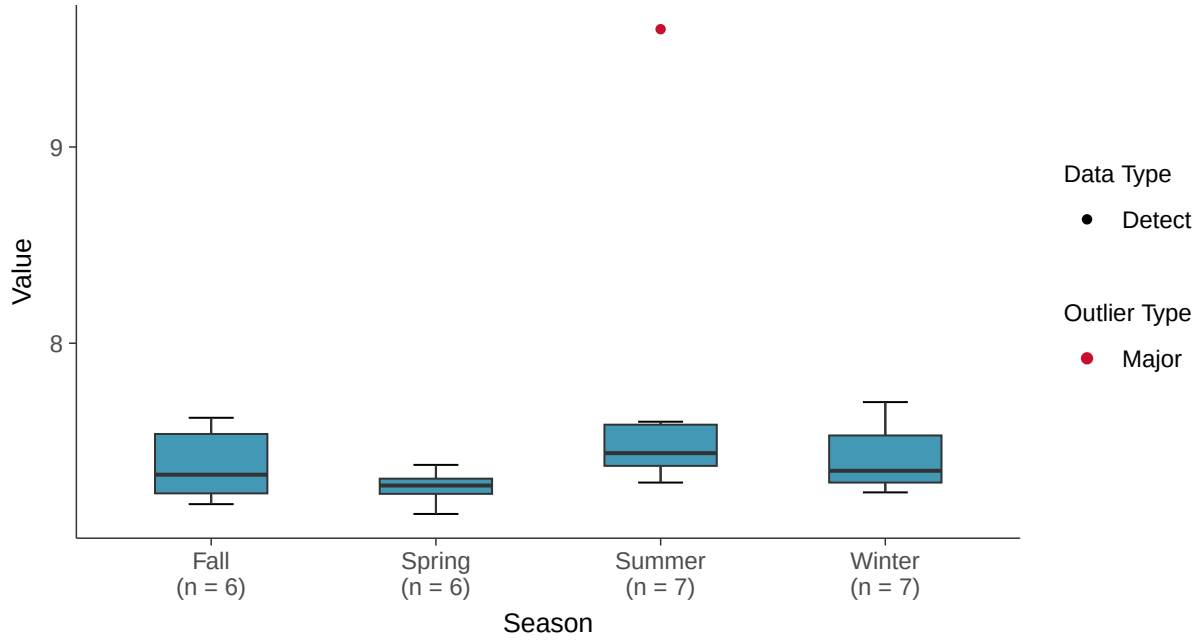
Boxplot

pH (Field), MW-7R (S.U.)



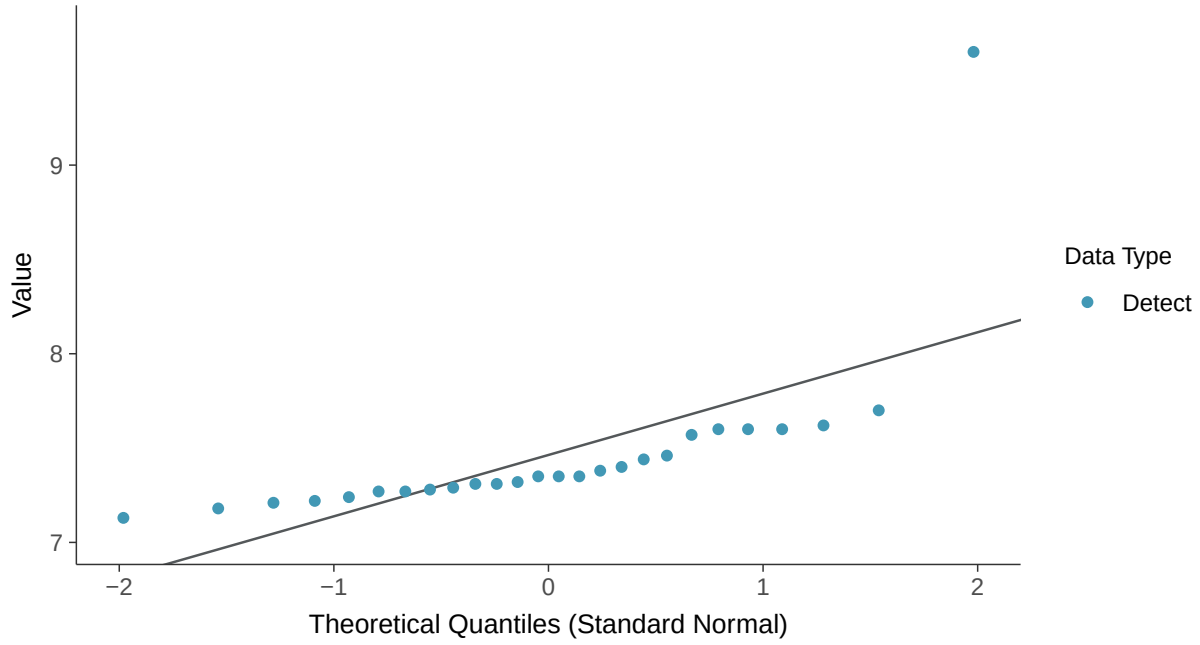
Boxplot by Season

pH (Field), MW-7R (S.U.)



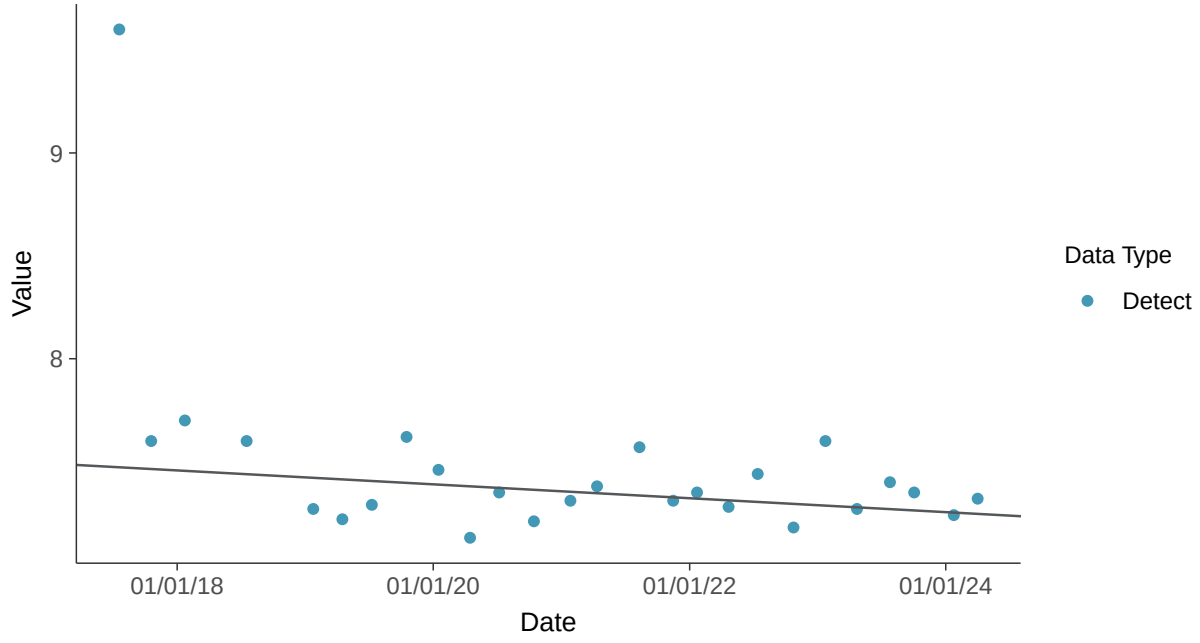
Normal Q-Q plot

pH (Field), MW-7R (S.U.)



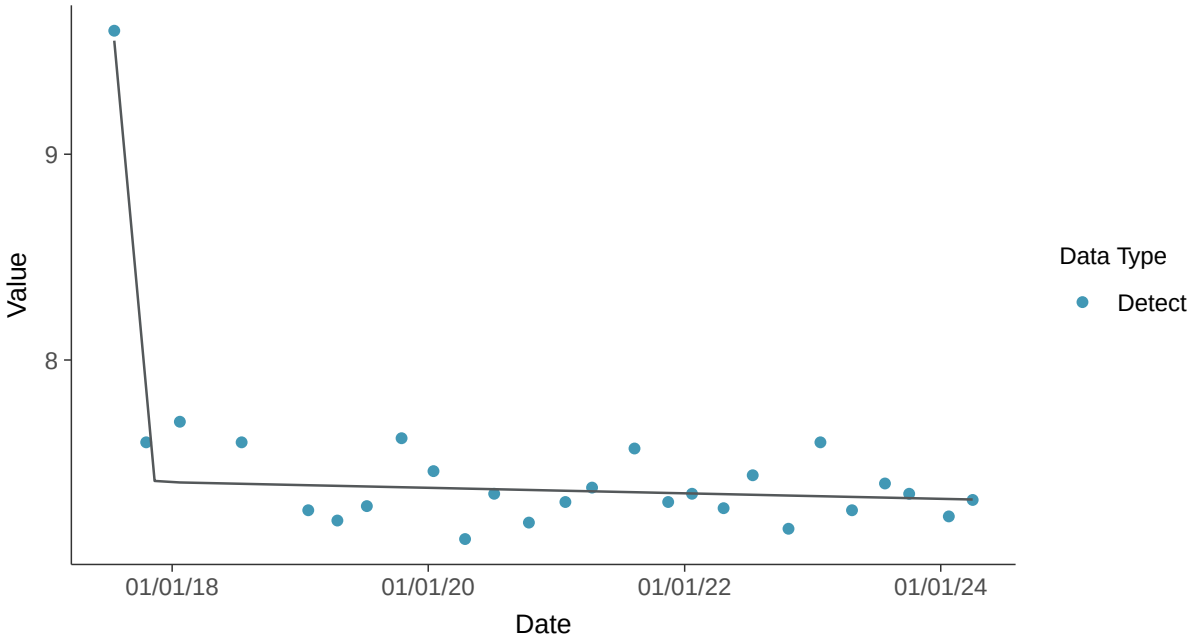
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-7R (S.U.)



Trend Regression: Piecewise Linear-Linear

pH (Field), MW-7R (S.U.)

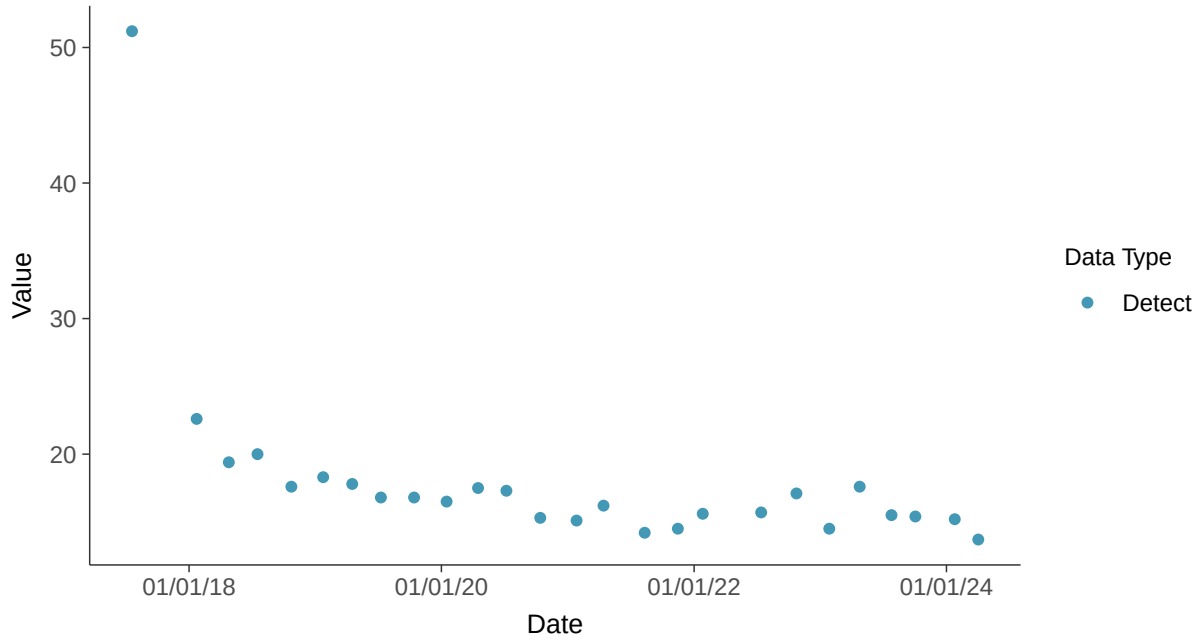


App. III: Sulfate, MW-7R

ID: 10_2_123

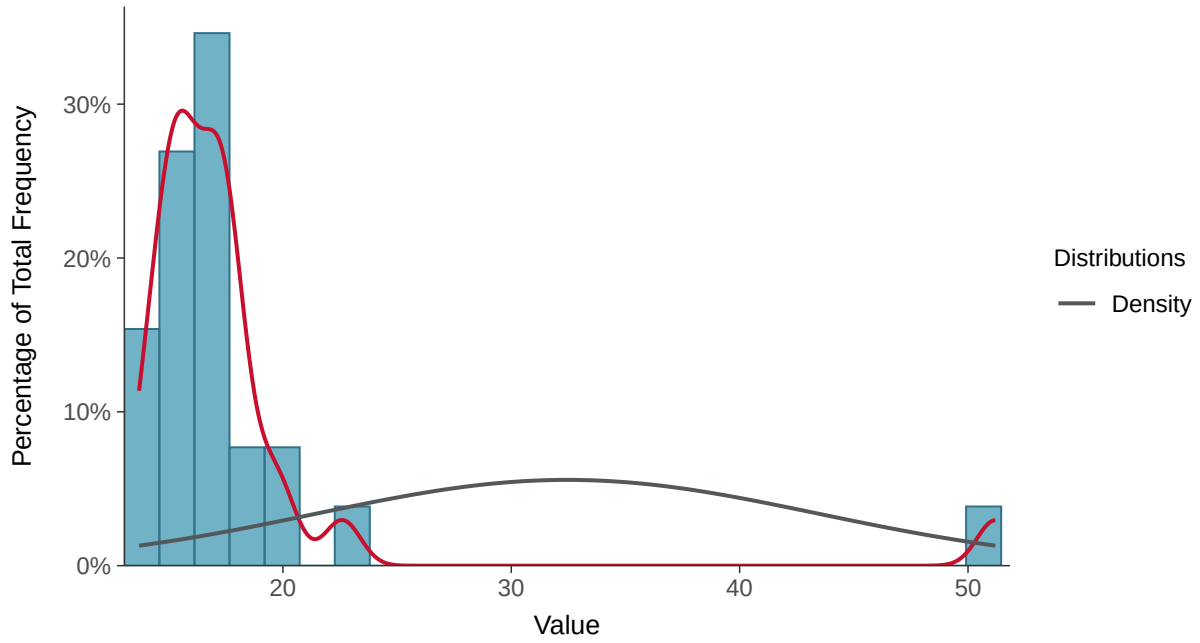
Scatter Plot

Sulfate, MW-7R (mg/L)



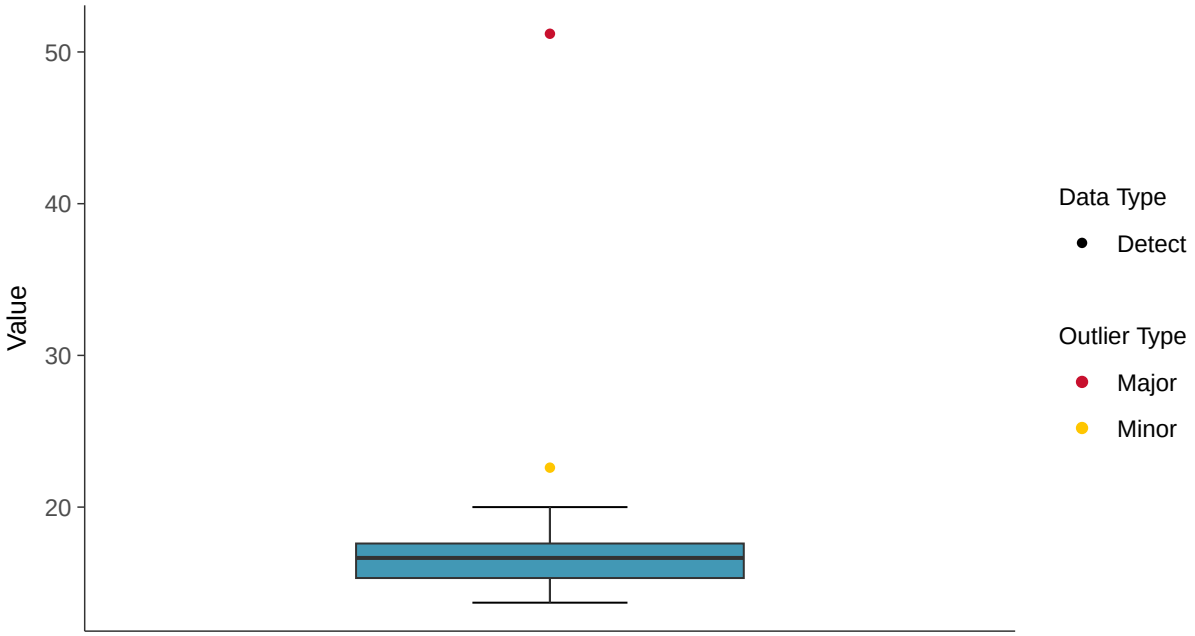
Histogram

Sulfate, MW-7R (mg/L)



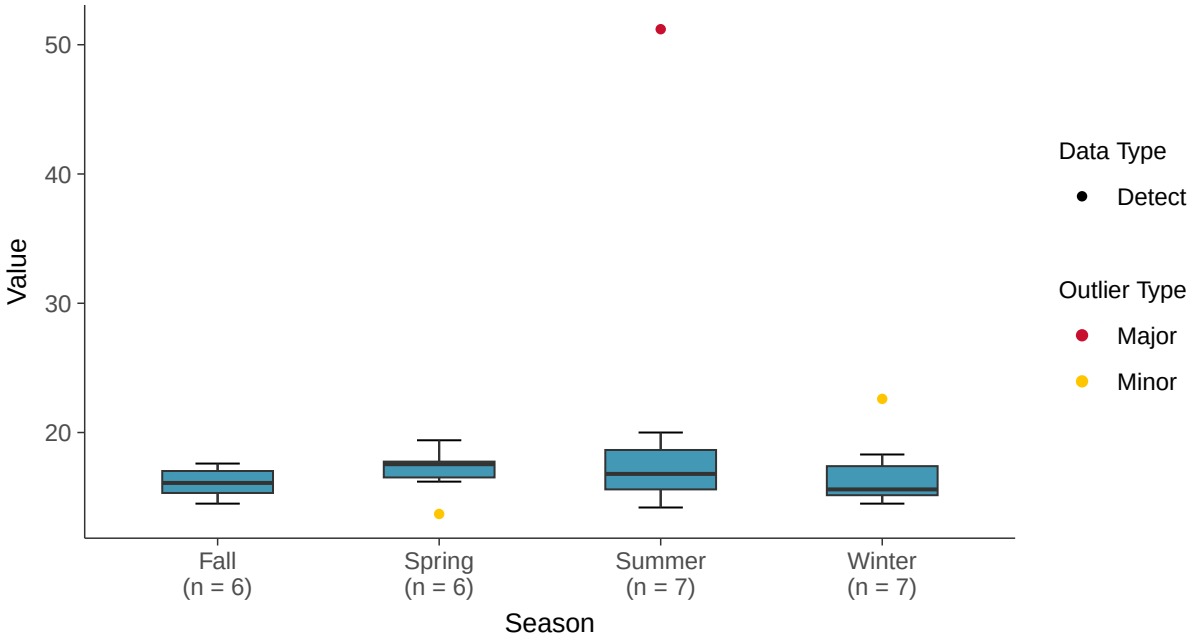
Boxplot

Sulfate, MW-7R (mg/L)



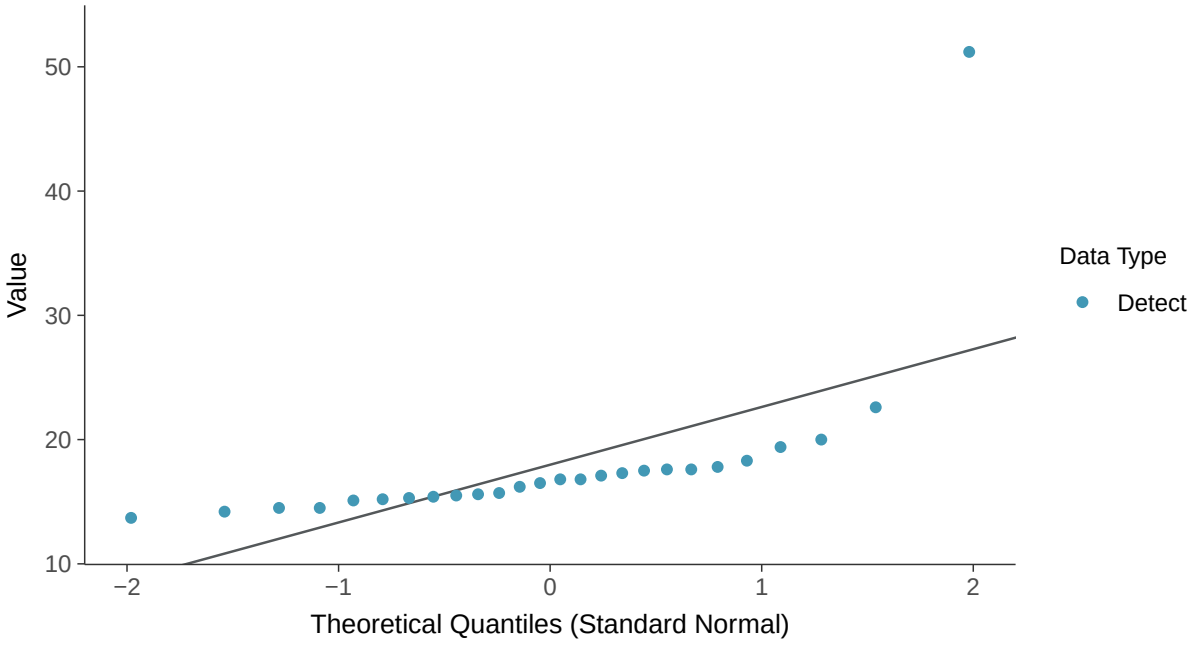
Boxplot by Season

Sulfate, MW-7R (mg/L)



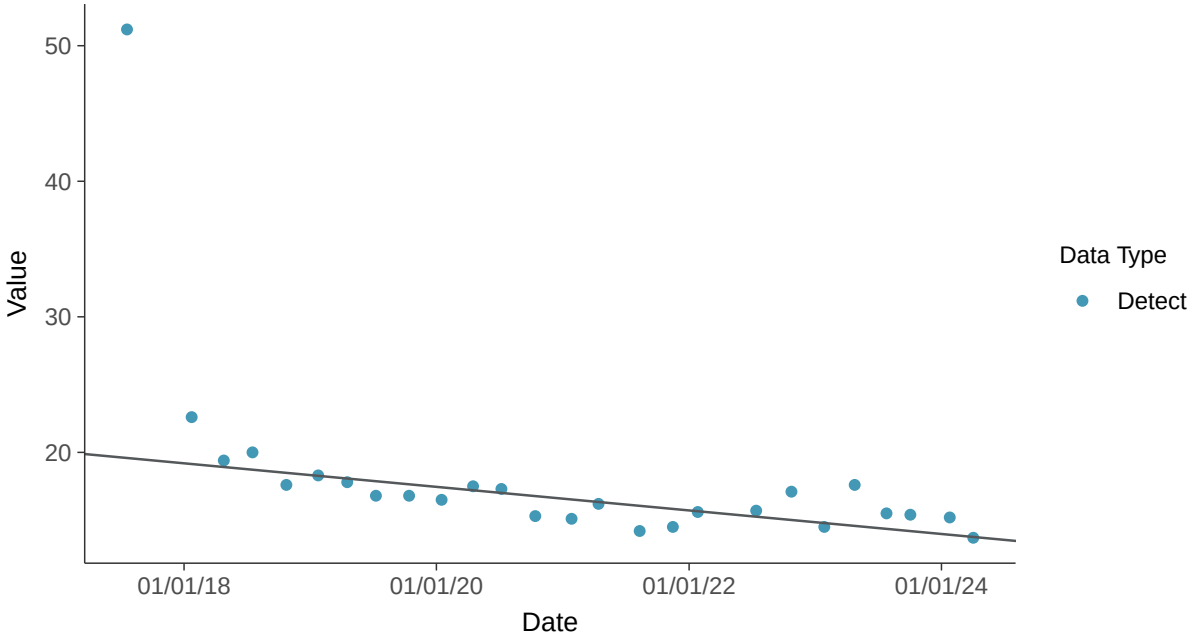
Normal Q-Q plot

Sulfate, MW-7R (mg/L)



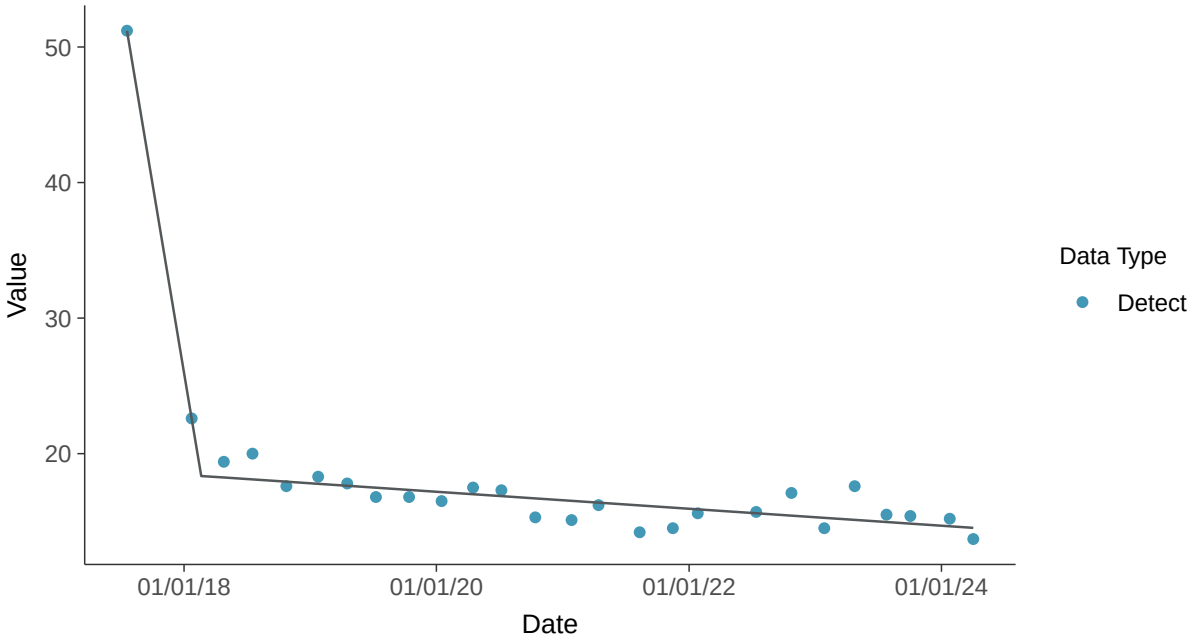
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-7R (mg/L)



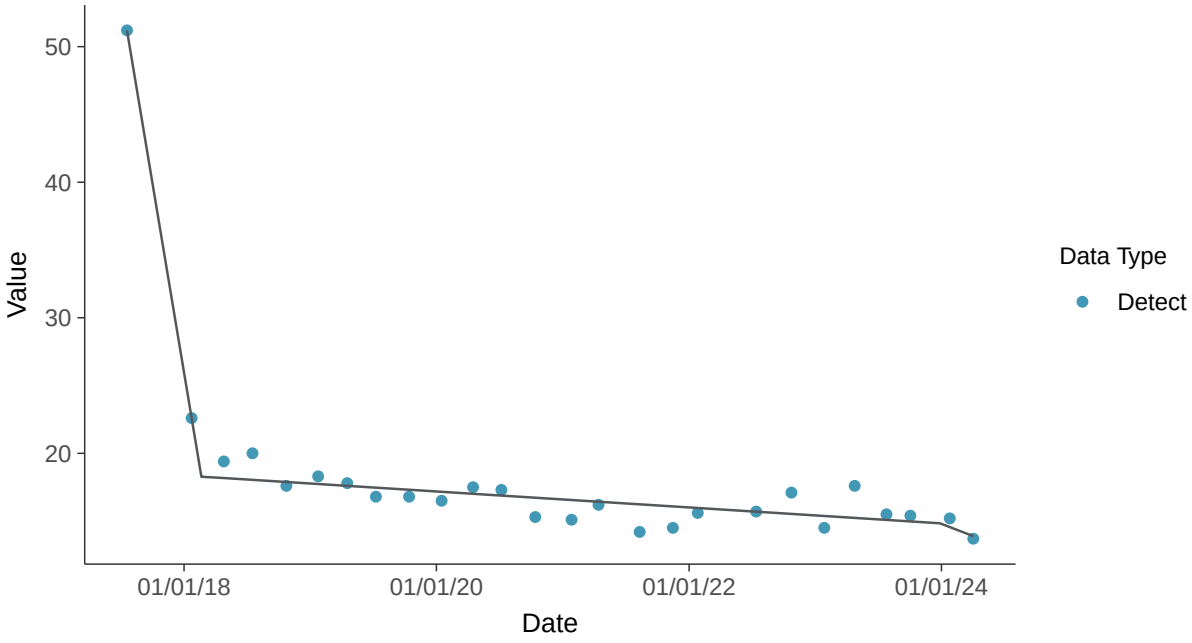
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-7R (mg/L)



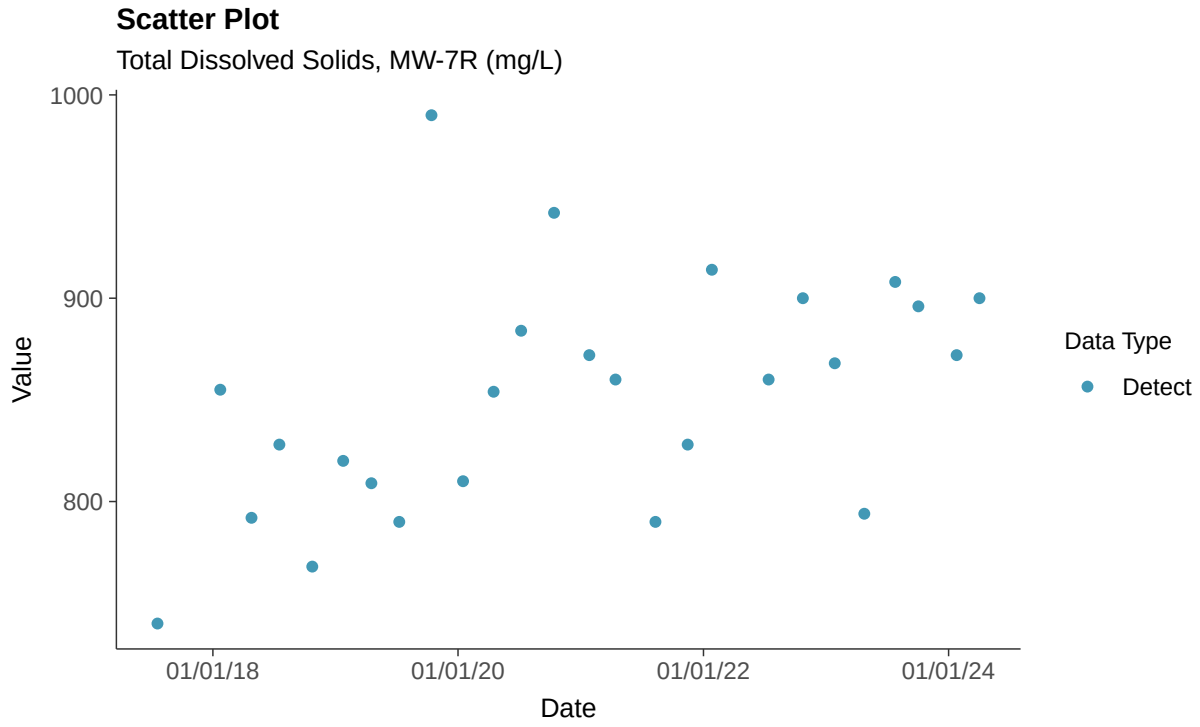
Trend Regression: Piecewise Linear-Linear-Linear

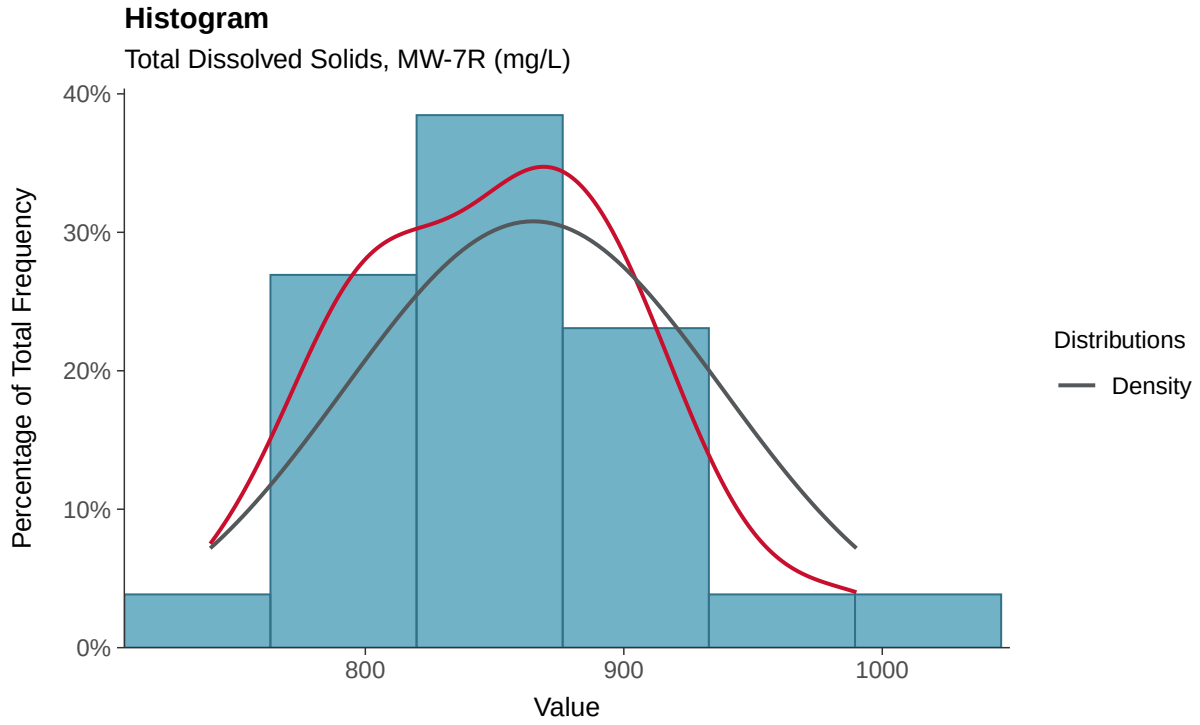
Sulfate, MW-7R (mg/L)



App. III: Total Dissolved Solids, MW-7R

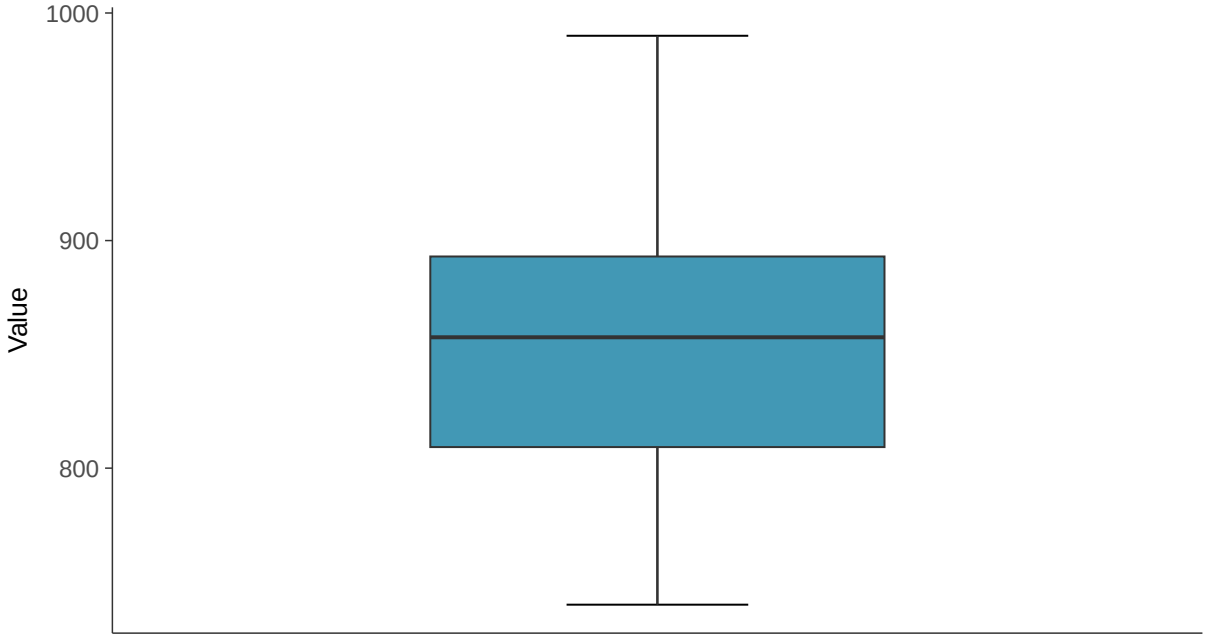
ID: 10_2_125





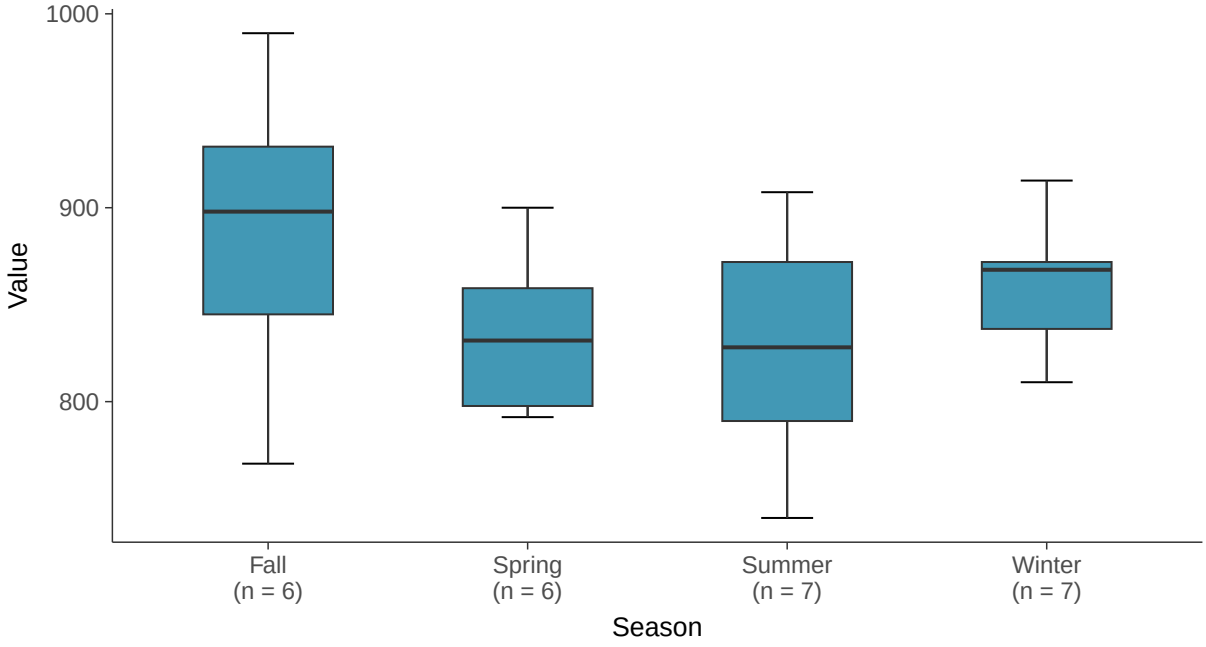
Boxplot

Total Dissolved Solids, MW-7R (mg/L)



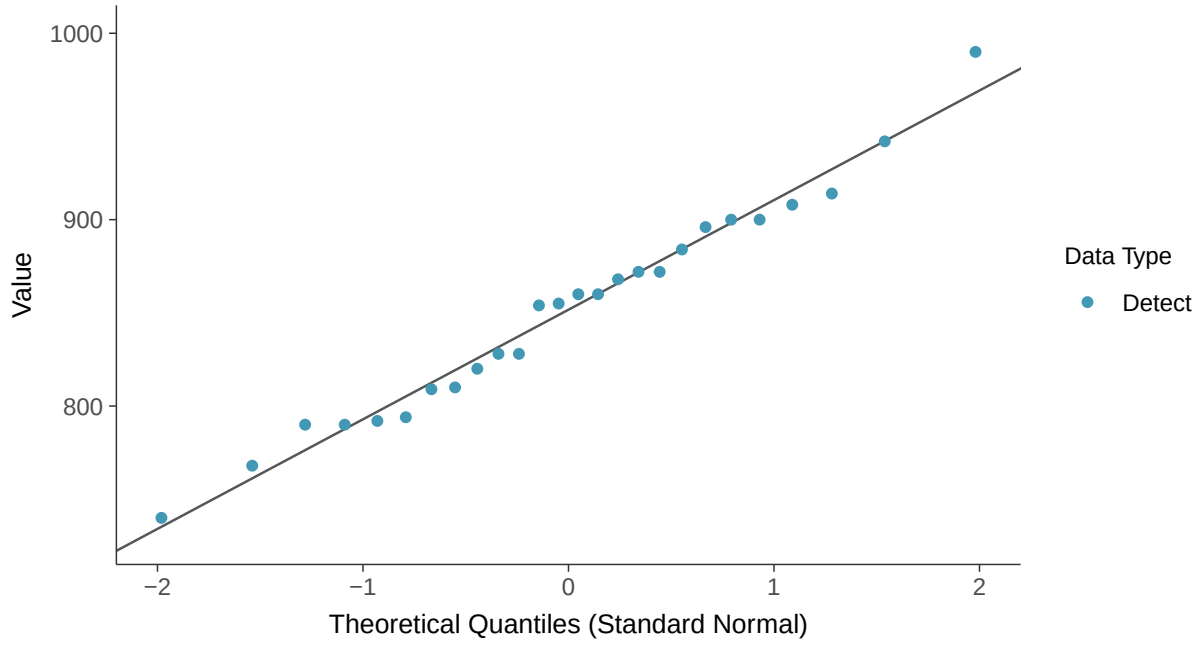
Boxplot by Season

Total Dissolved Solids, MW-7R (mg/L)



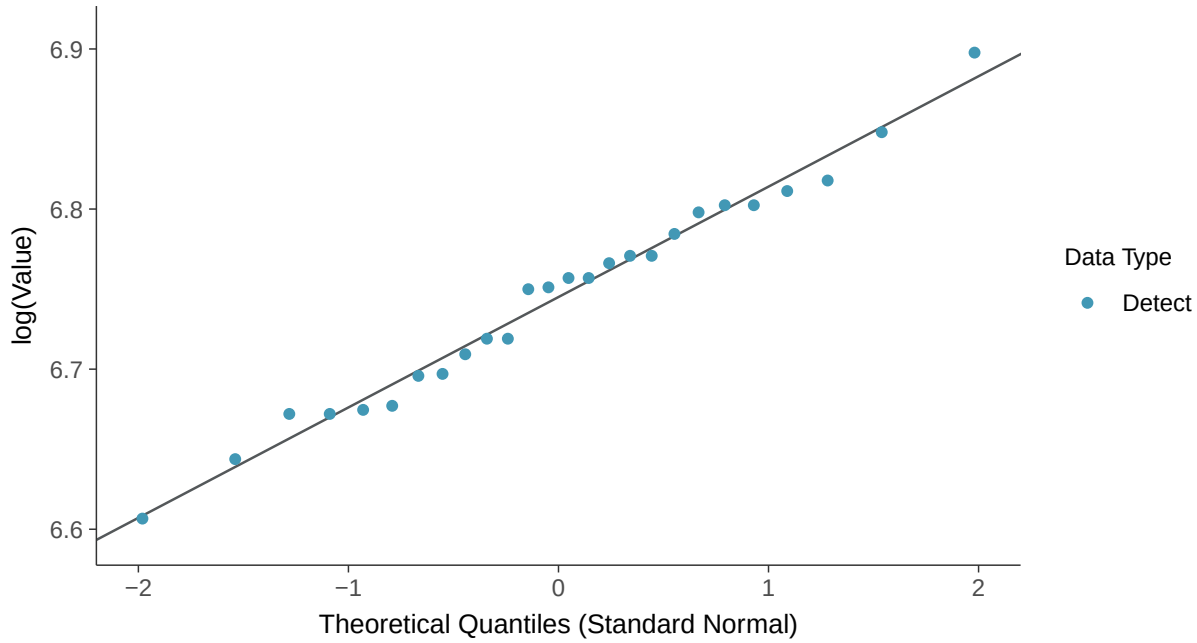
Normal Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



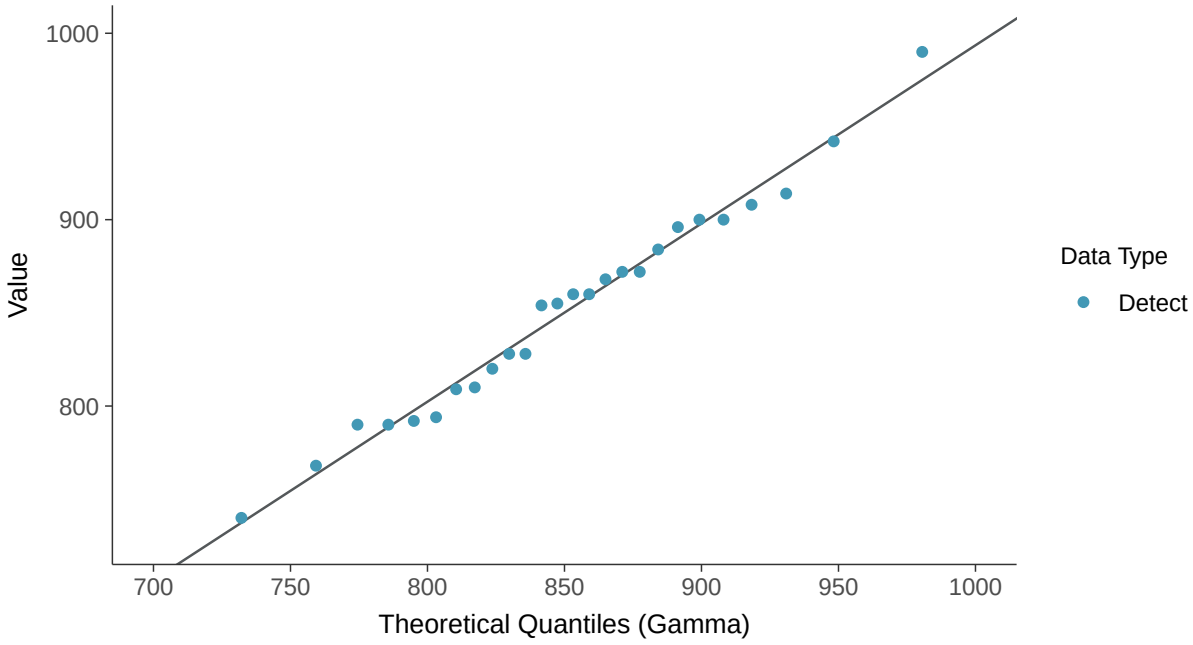
Lognormal Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



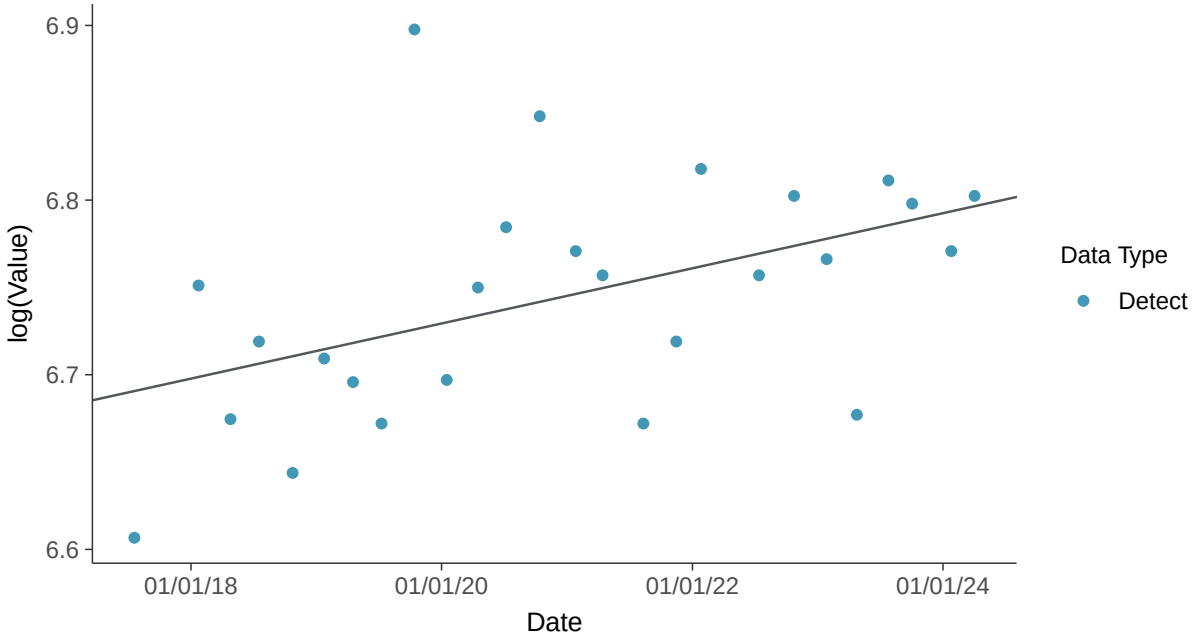
Gamma Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



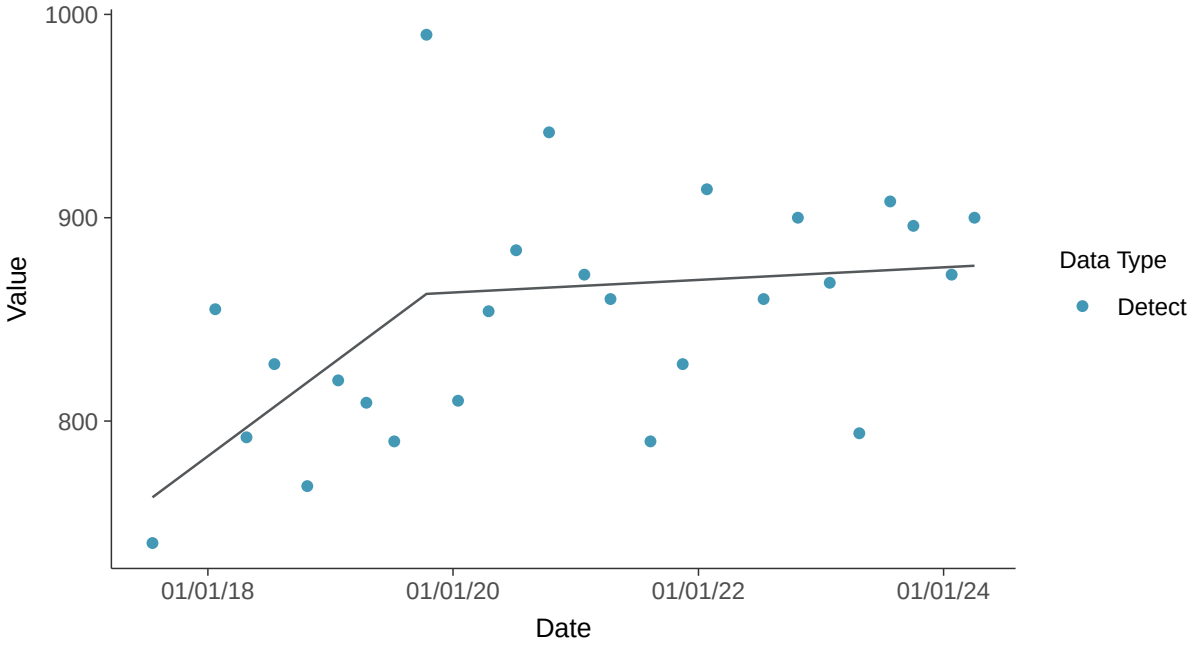
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-7R (mg/L)

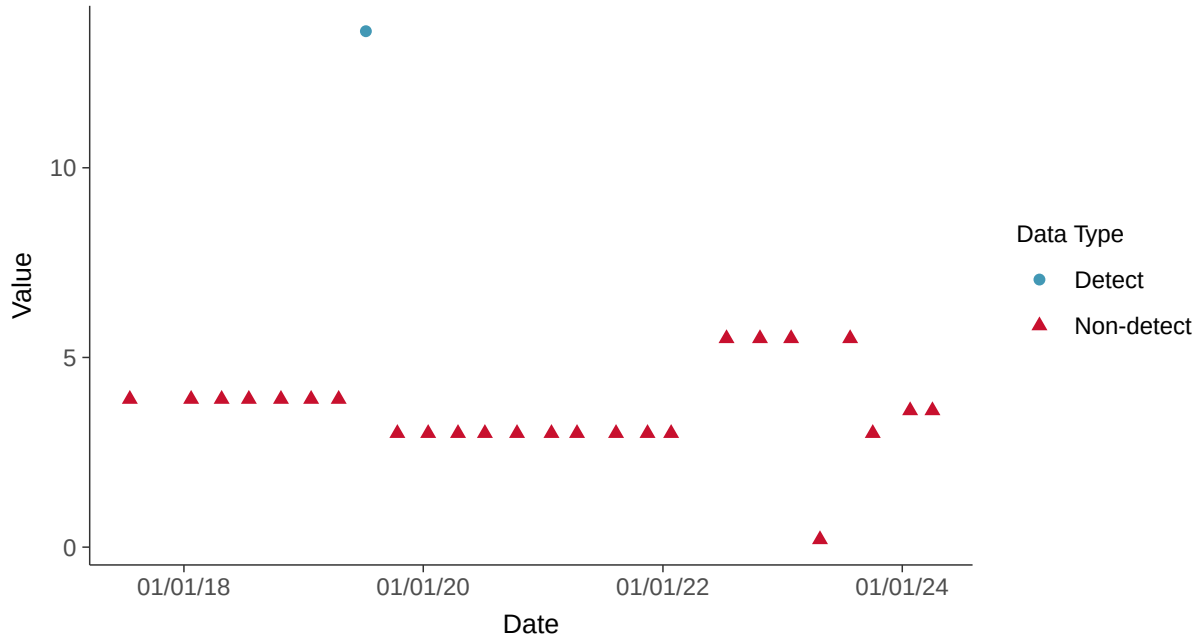


App. IV: Antimony, MW-7R

ID: 10_3_101

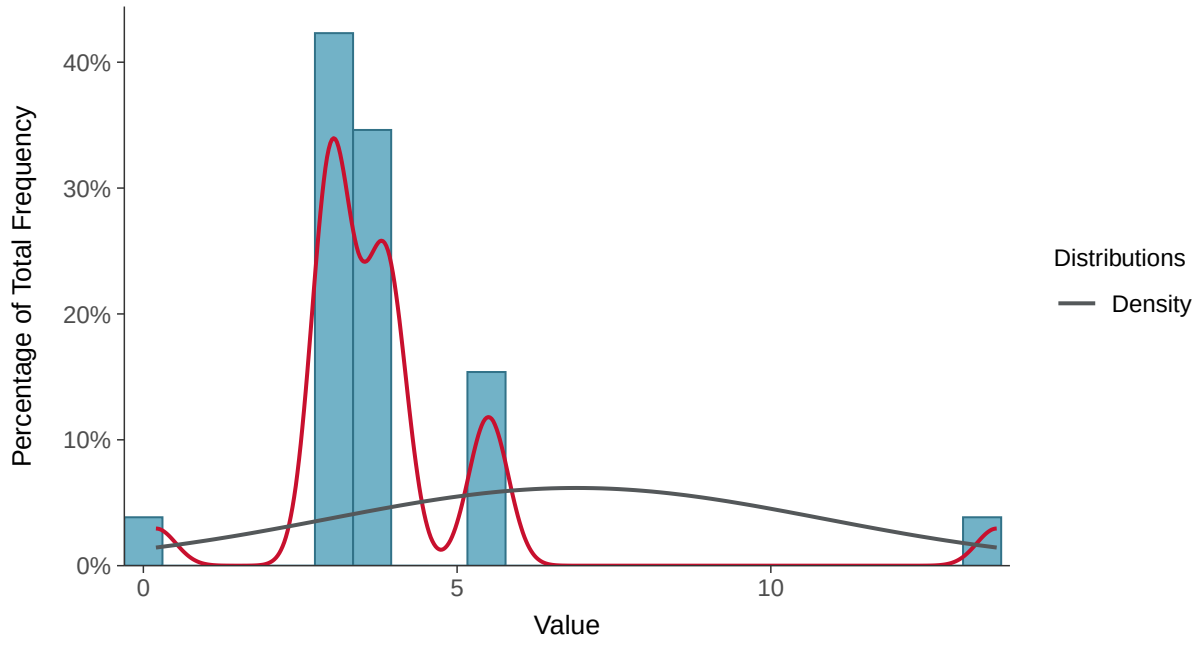
Scatter Plot

Antimony, MW-7R (ug/L)



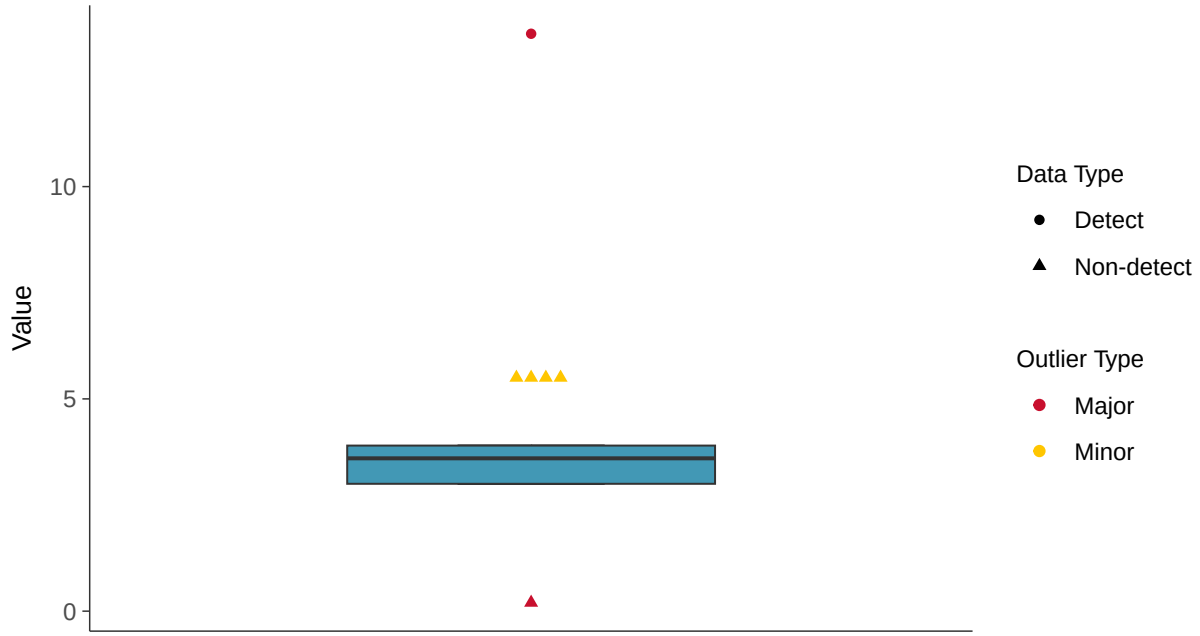
Histogram

Antimony, MW-7R (ug/L)



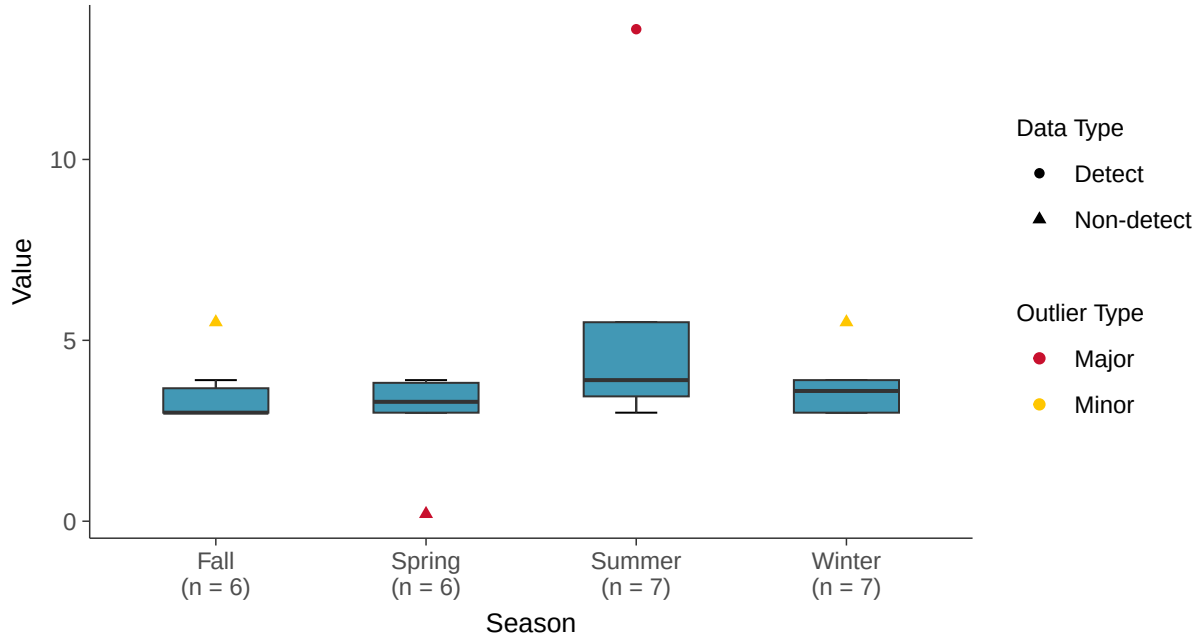
Boxplot

Antimony, MW-7R (ug/L)



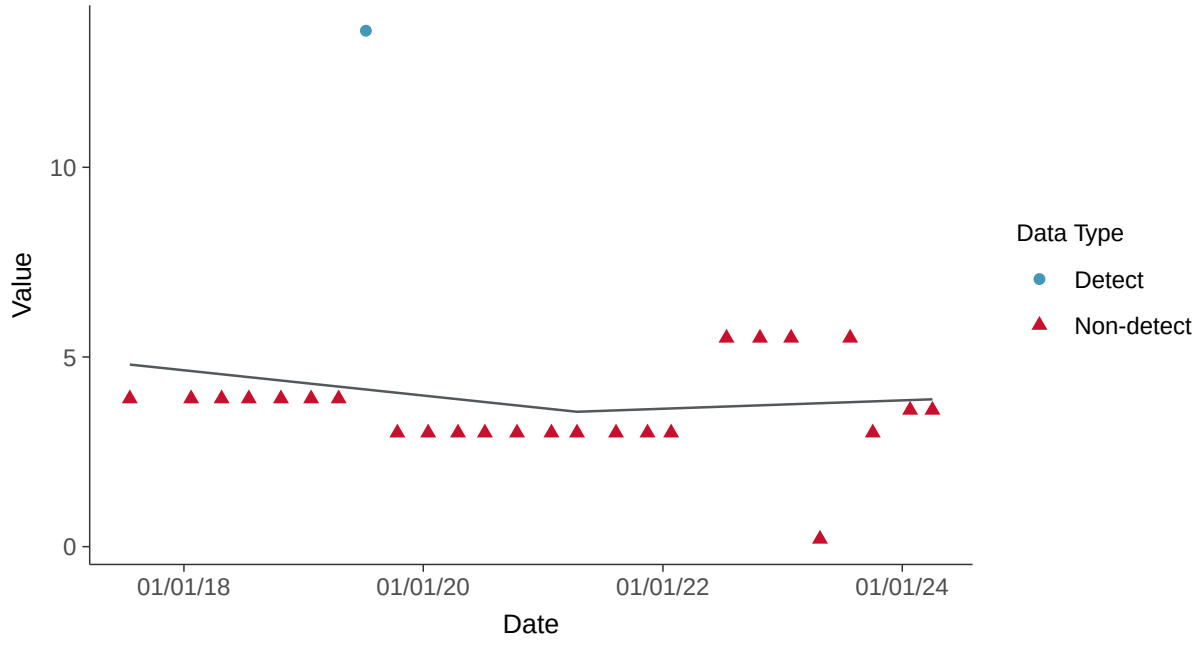
Boxplot by Season

Antimony, MW-7R (ug/L)



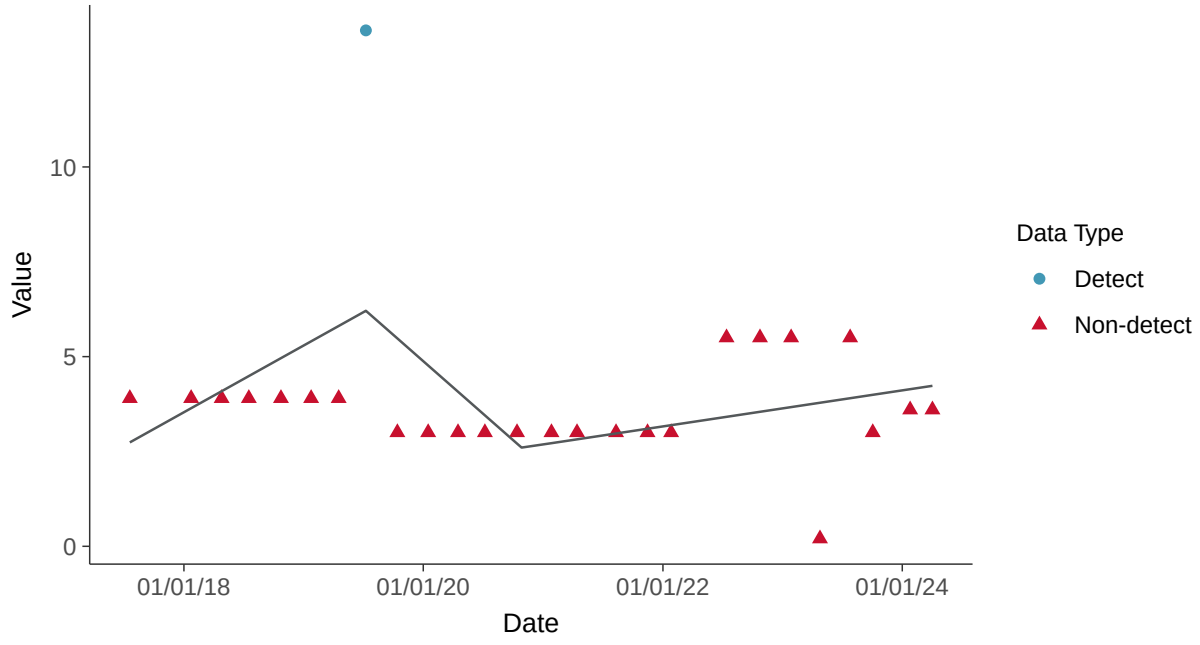
Trend Regression: Piecewise Linear-Linear

Antimony, MW-7R (ug/L)



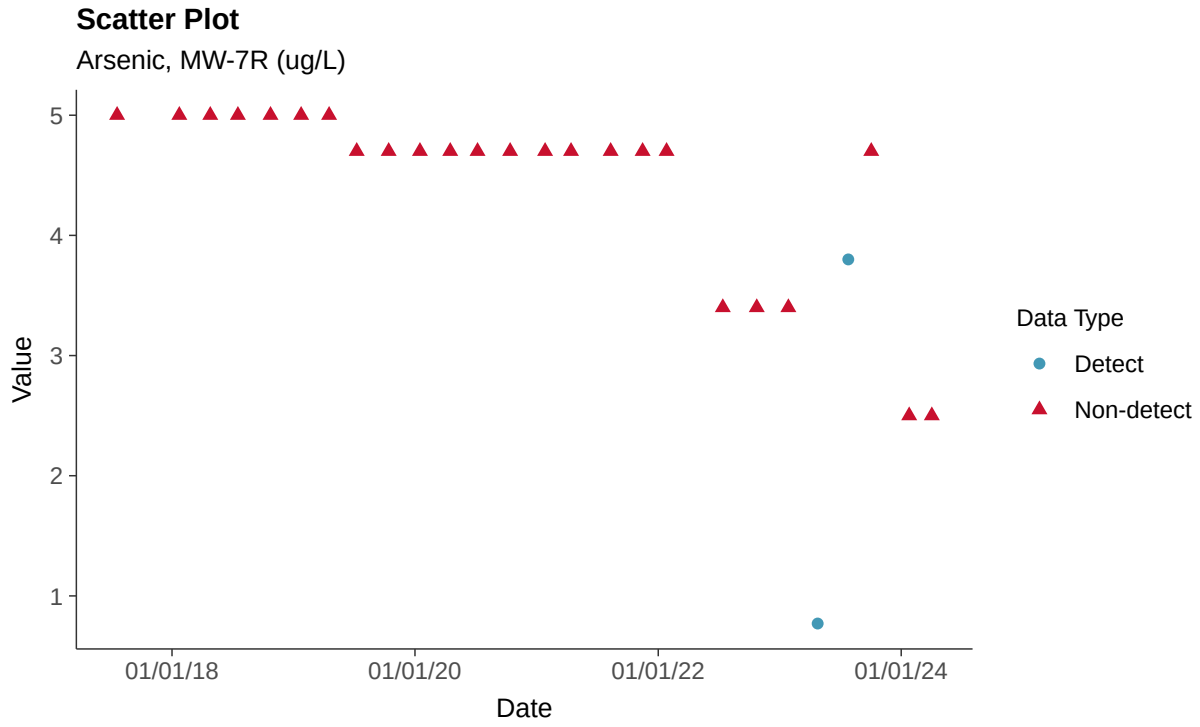
Trend Regression: Piecewise Linear-Linear-Linear

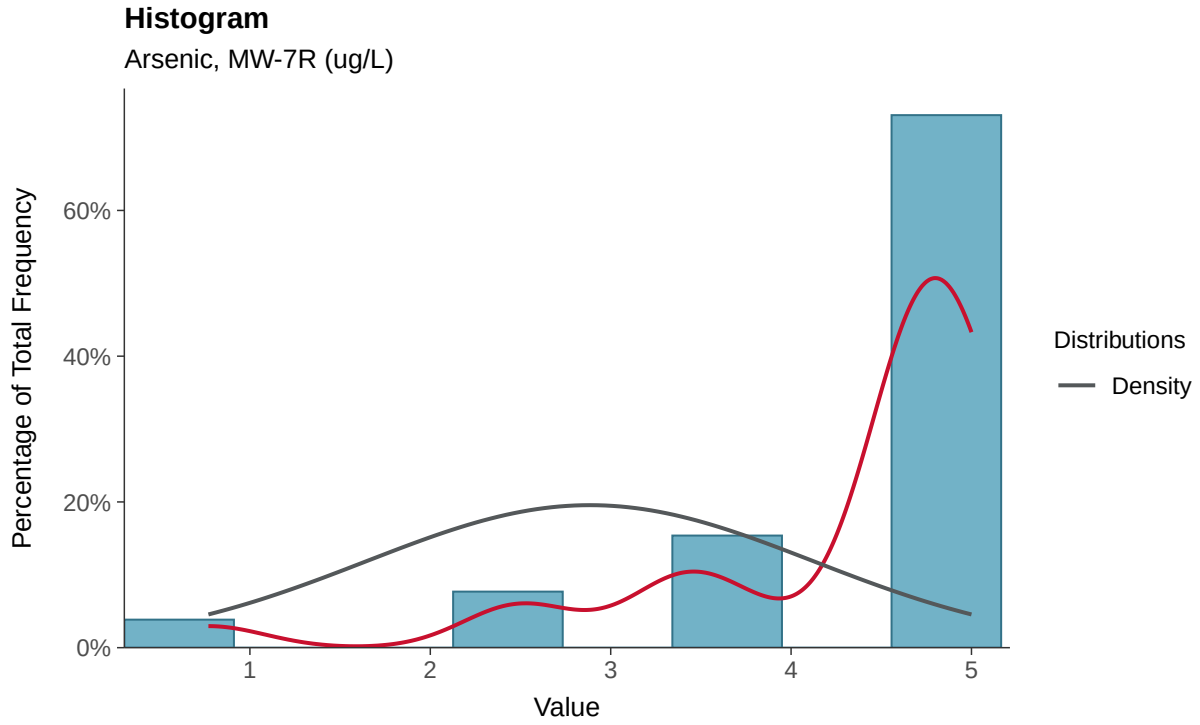
Antimony, MW-7R (ug/L)



App. IV: Arsenic, MW-7R

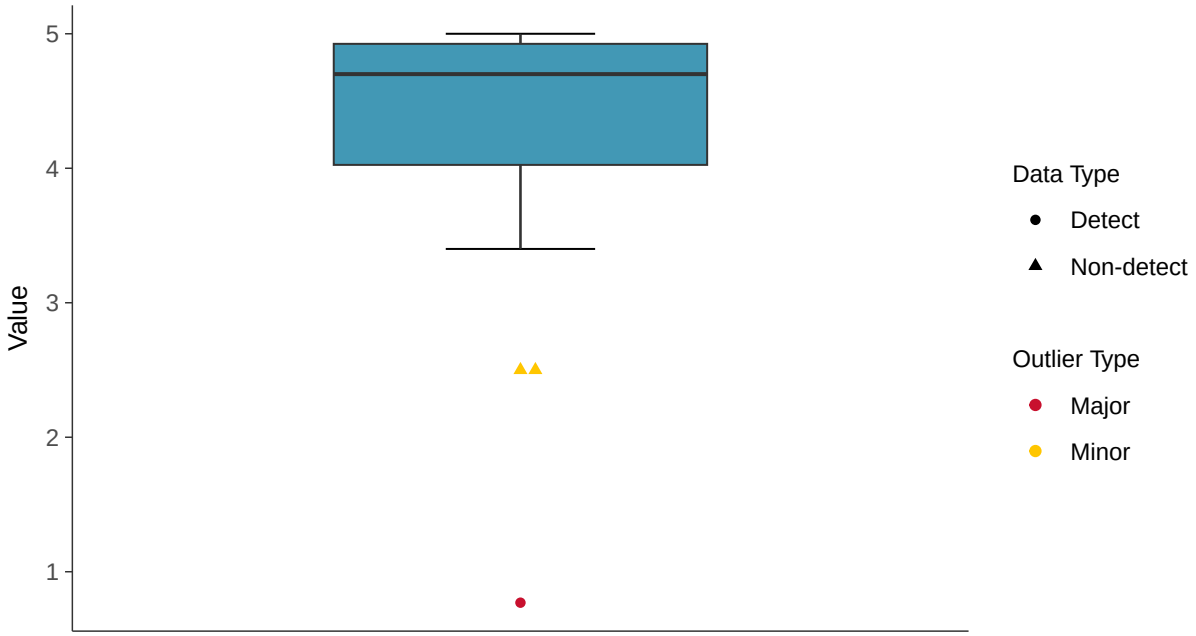
ID: 10_3_102





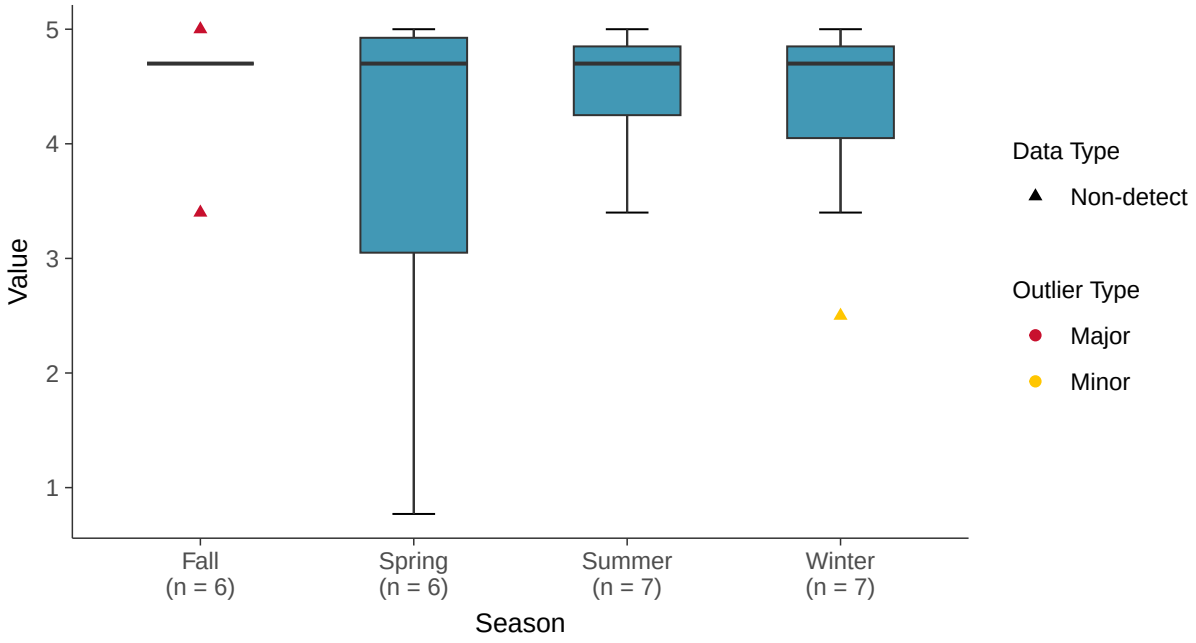
Boxplot

Arsenic, MW-7R (ug/L)



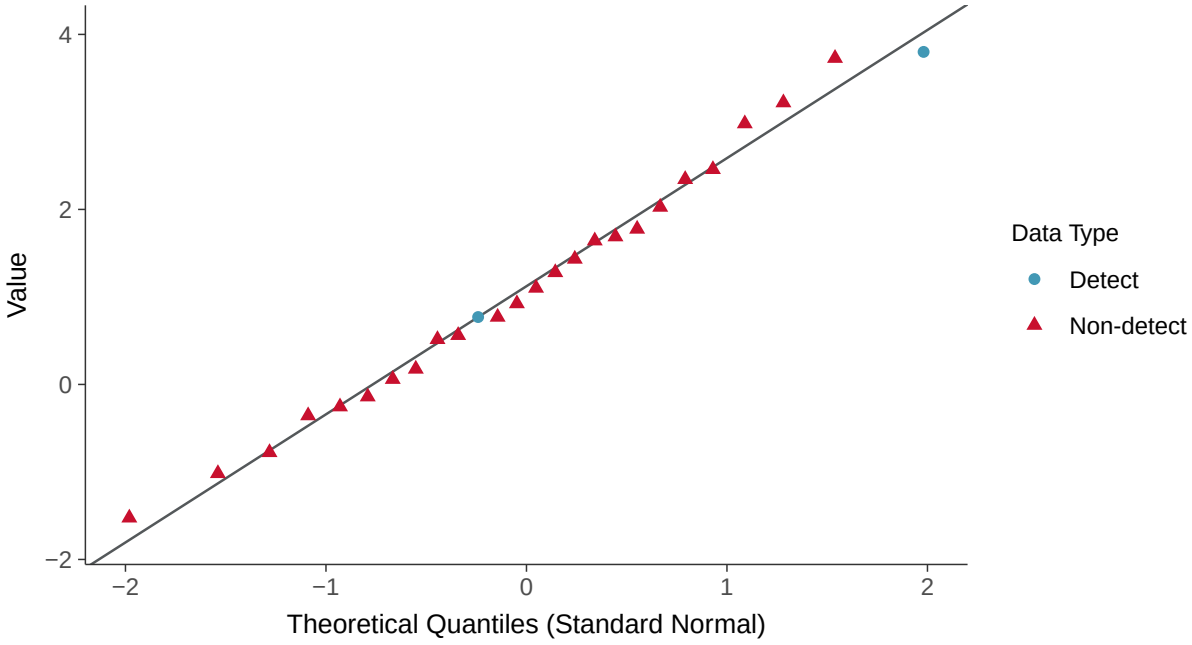
Boxplot by Season

Arsenic, MW-7R (ug/L)



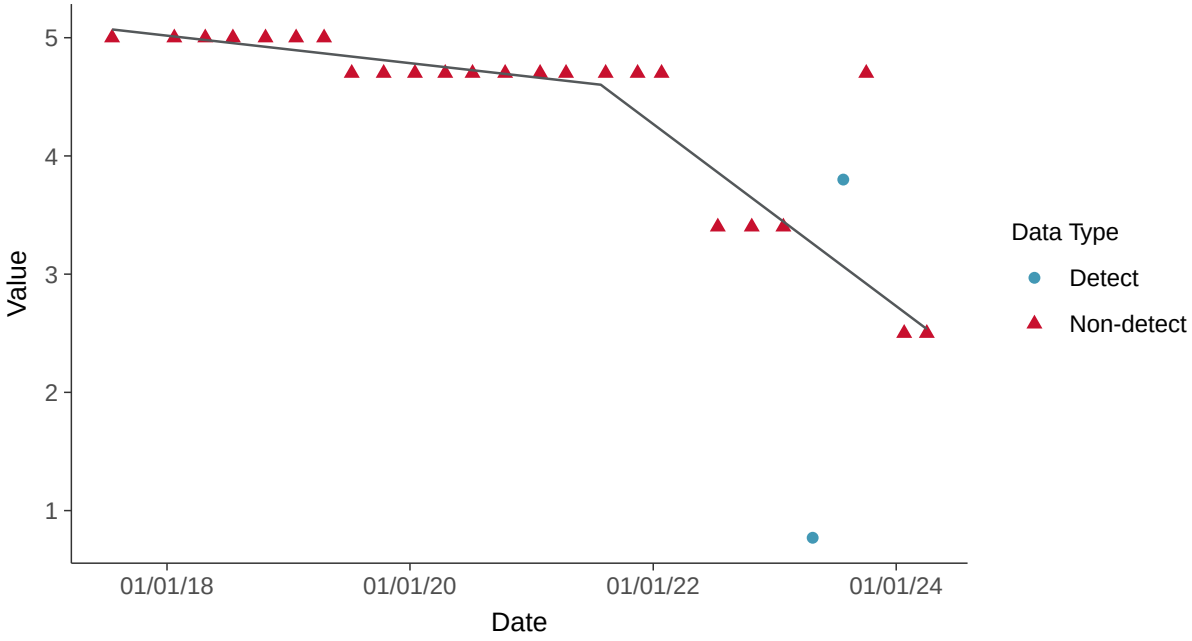
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-7R (ug/L)



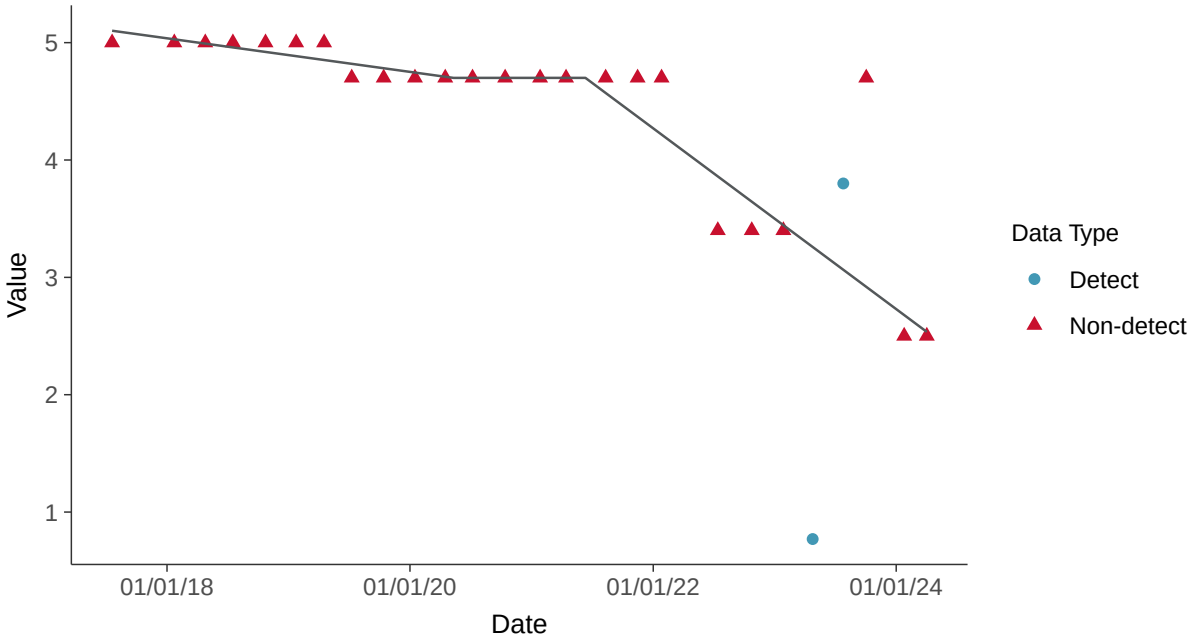
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-7R (ug/L)



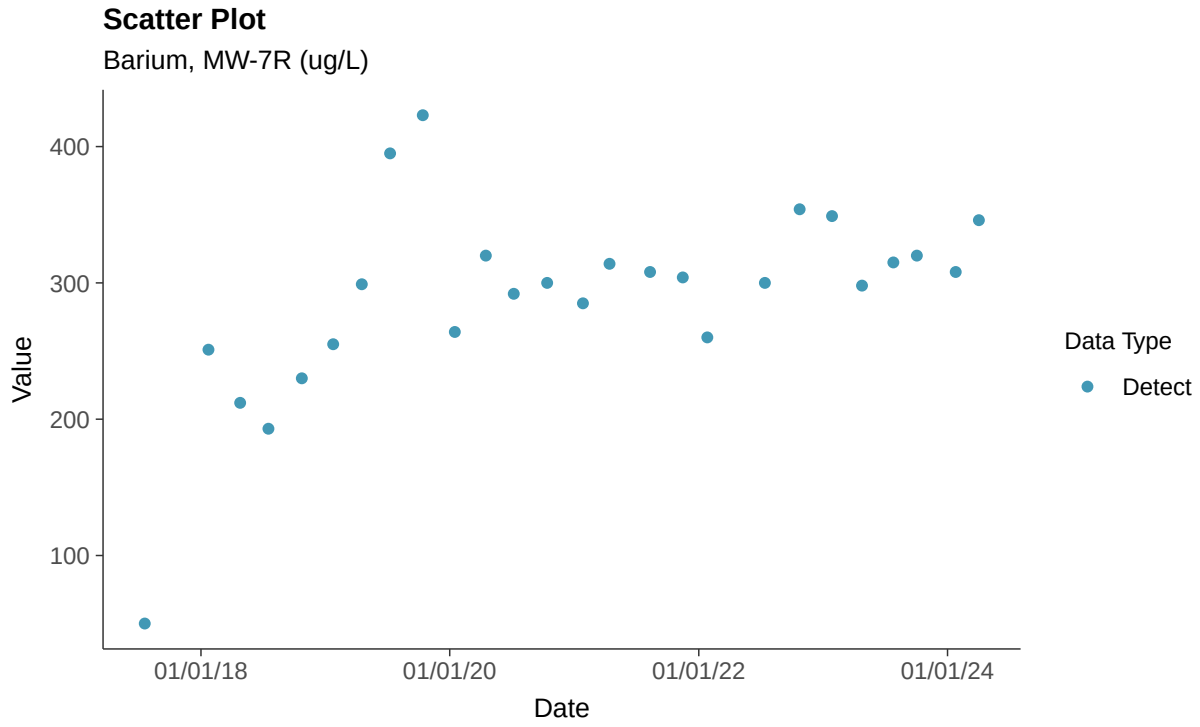
Trend Regression: Piecewise Linear-Linear-Linear

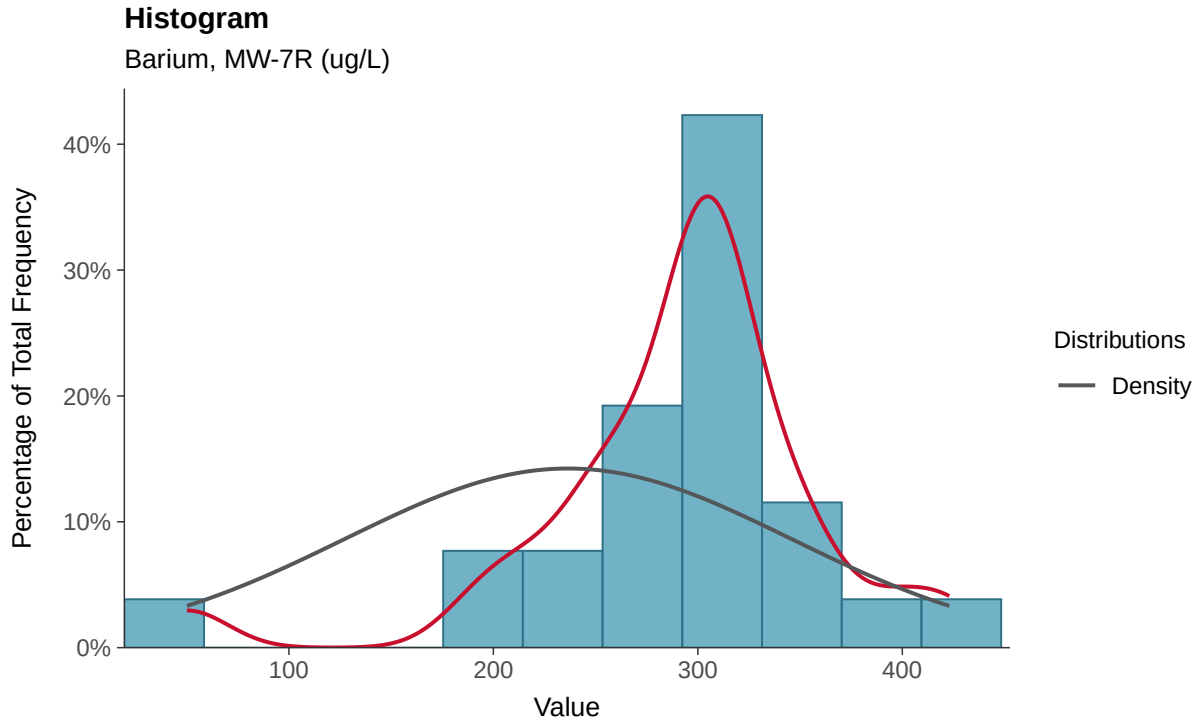
Arsenic, MW-7R (ug/L)



App. IV: Barium, MW-7R

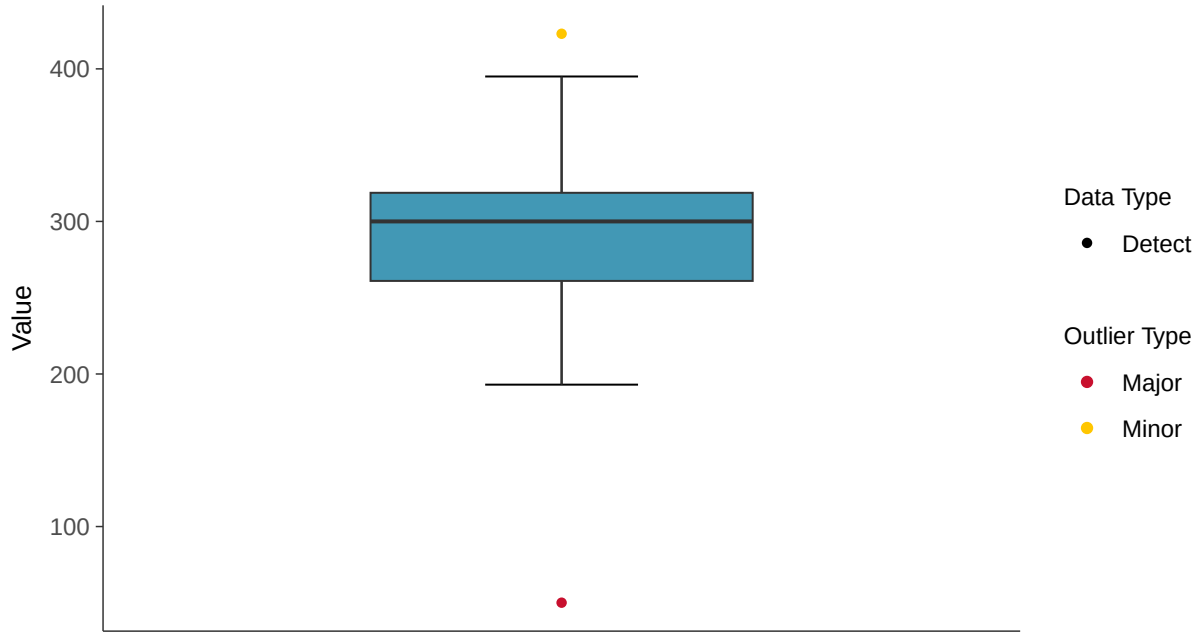
ID: 10_3_103





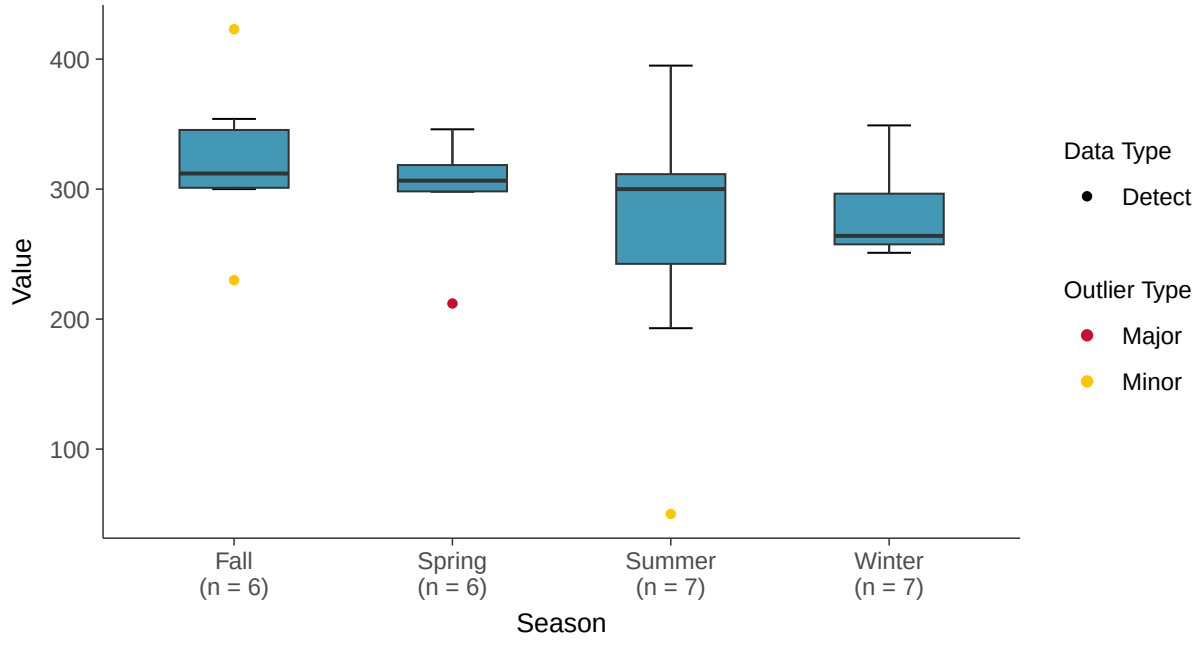
Boxplot

Barium, MW-7R (ug/L)



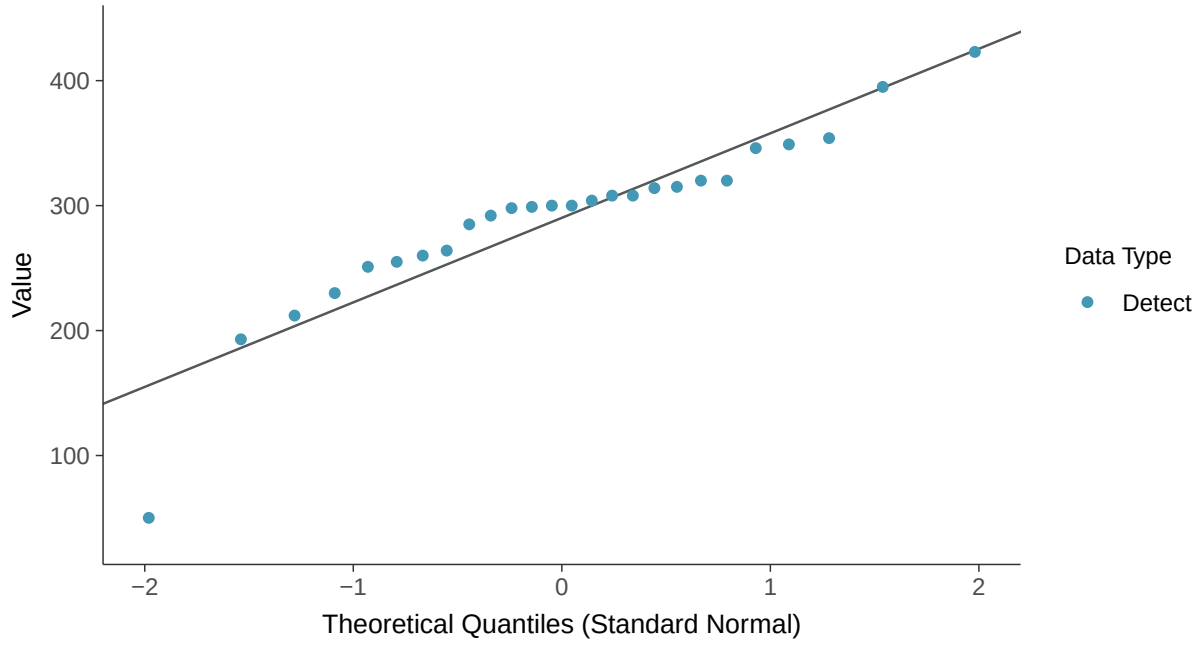
Boxplot by Season

Barium, MW-7R (ug/L)



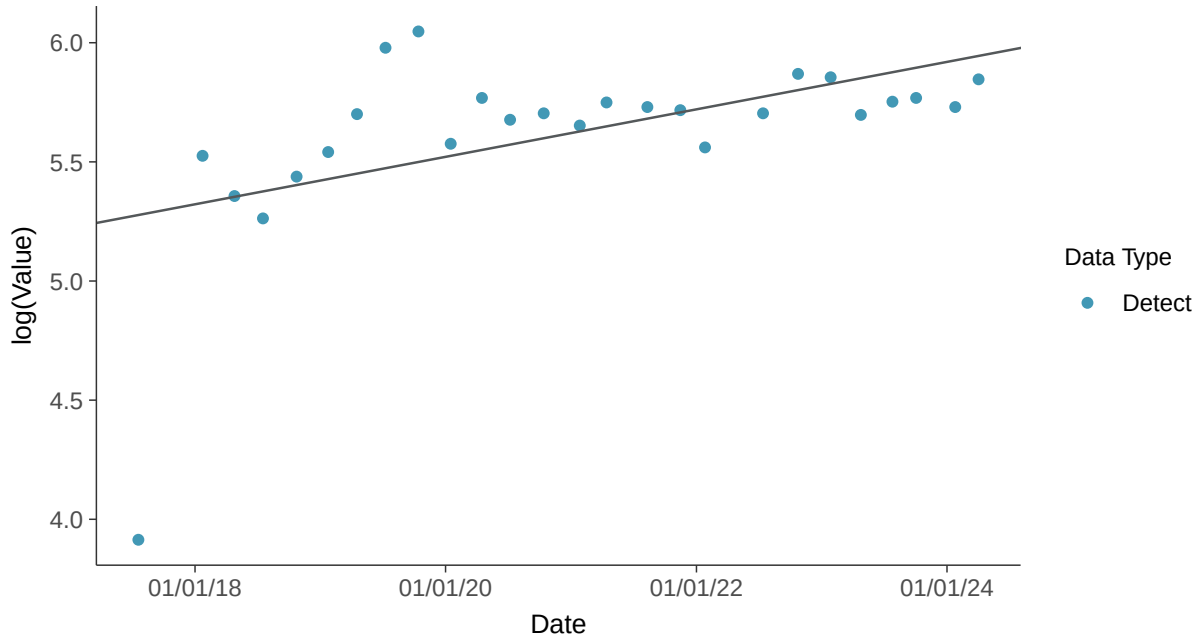
Normal Q-Q plot

Barium, MW-7R (ug/L)



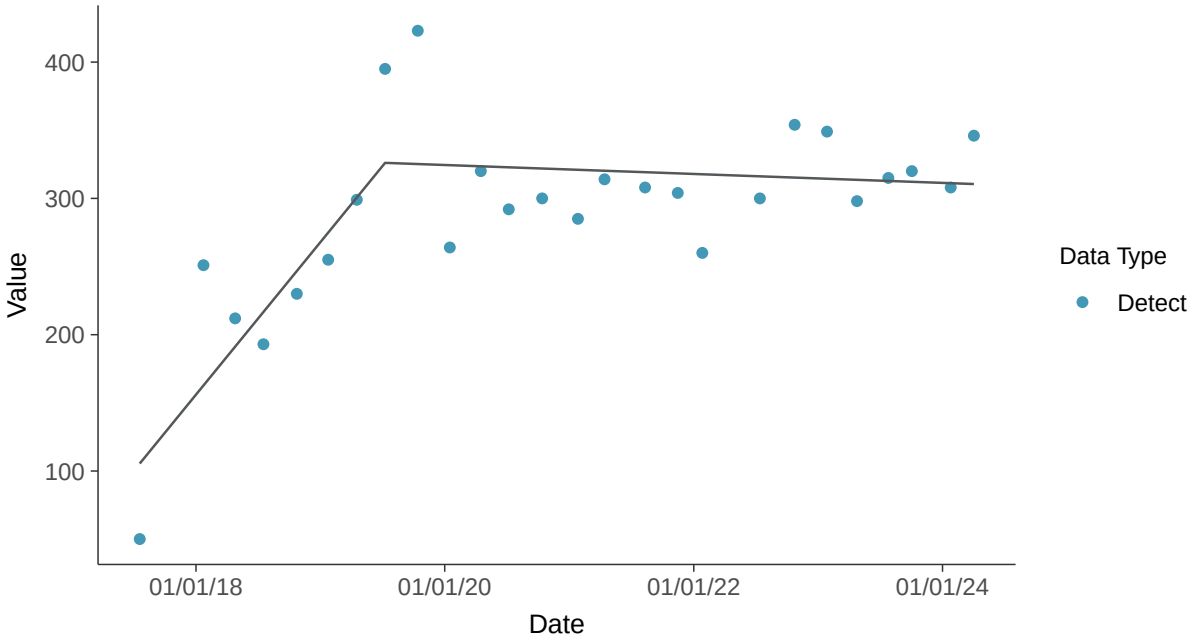
Trend Regression: Lognormal MLE

Barium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Barium, MW-7R (ug/L)

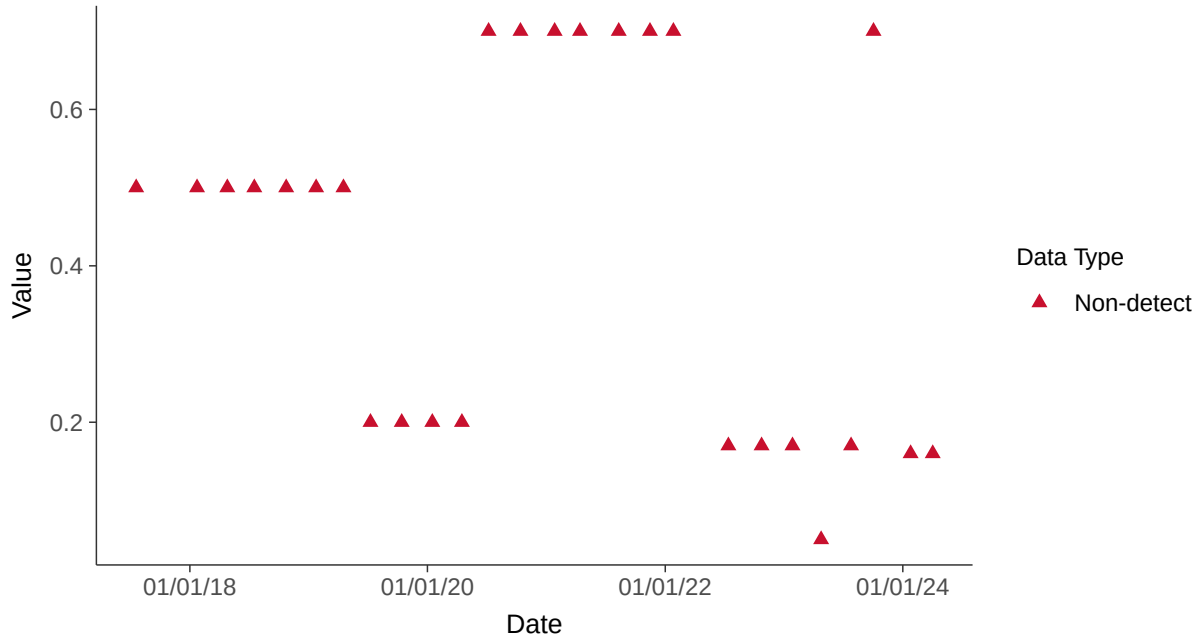


App. IV: Beryllium, MW-7R

ID: 10_3_104

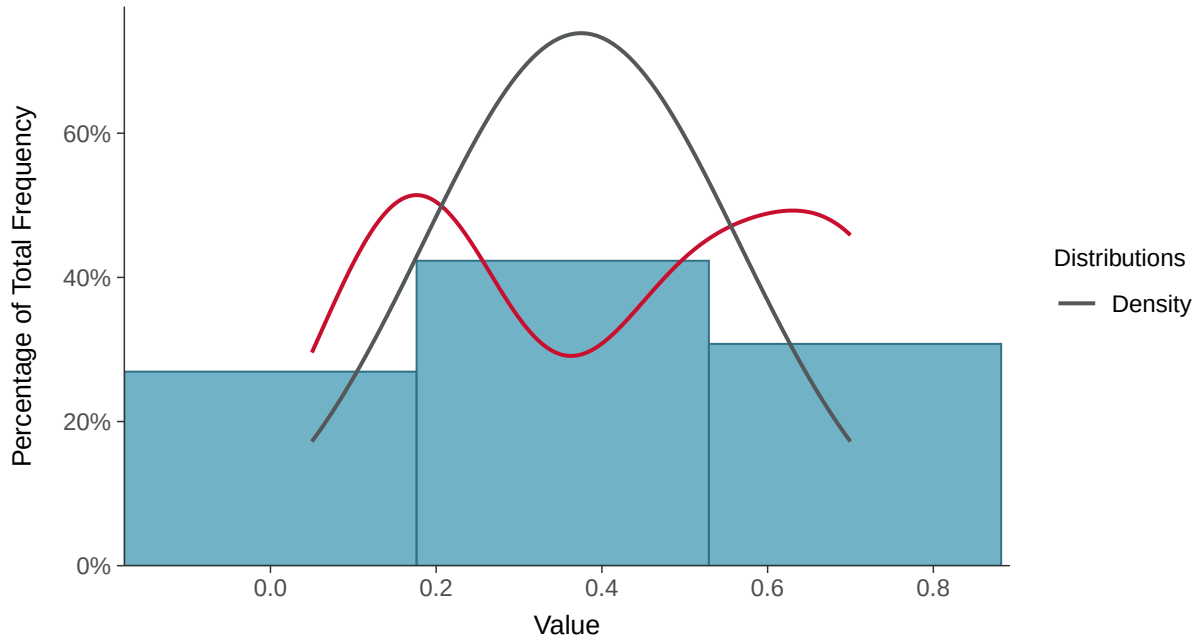
Scatter Plot

Beryllium, MW-7R (ug/L)



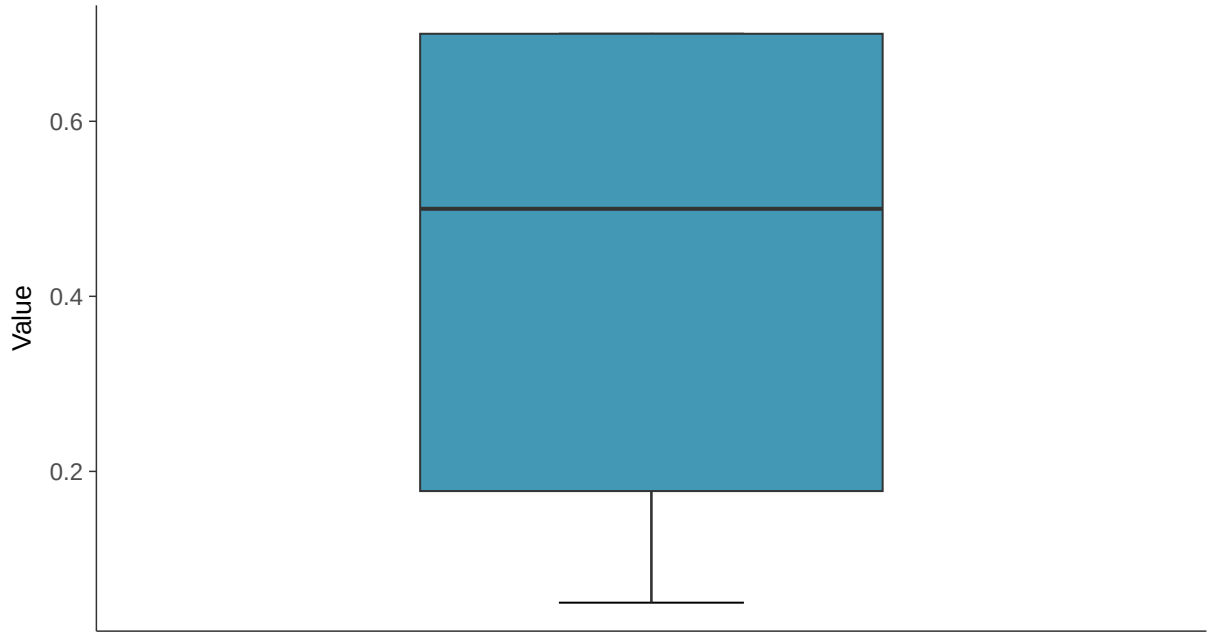
Histogram

Beryllium, MW-7R (ug/L)



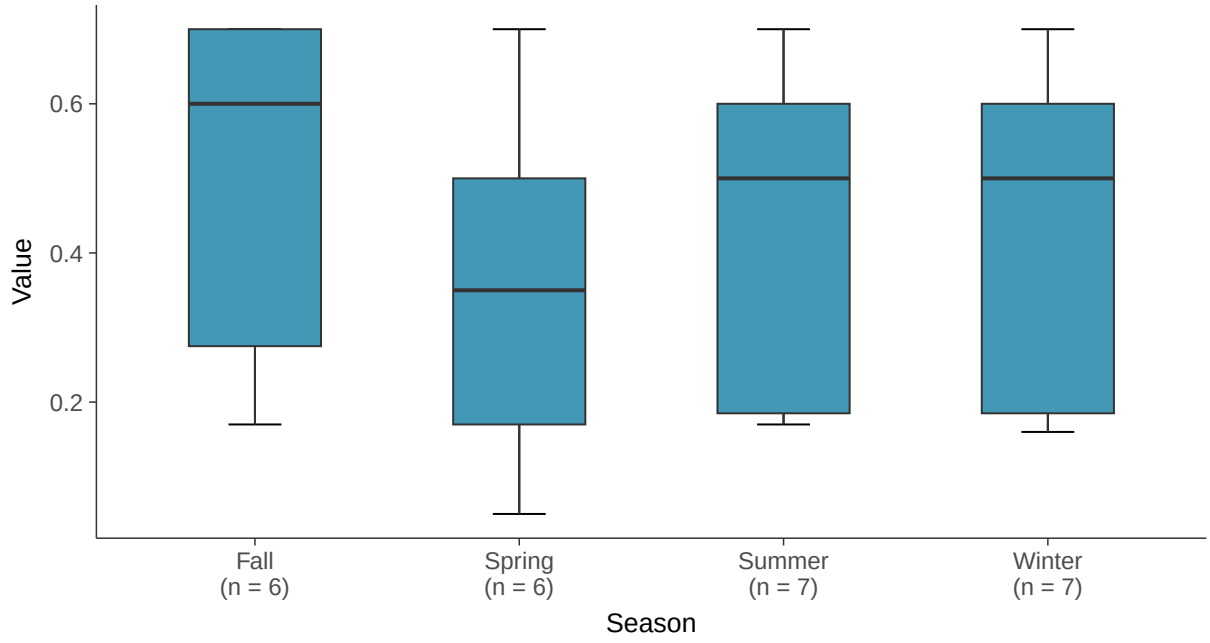
Boxplot

Beryllium, MW-7R (ug/L)



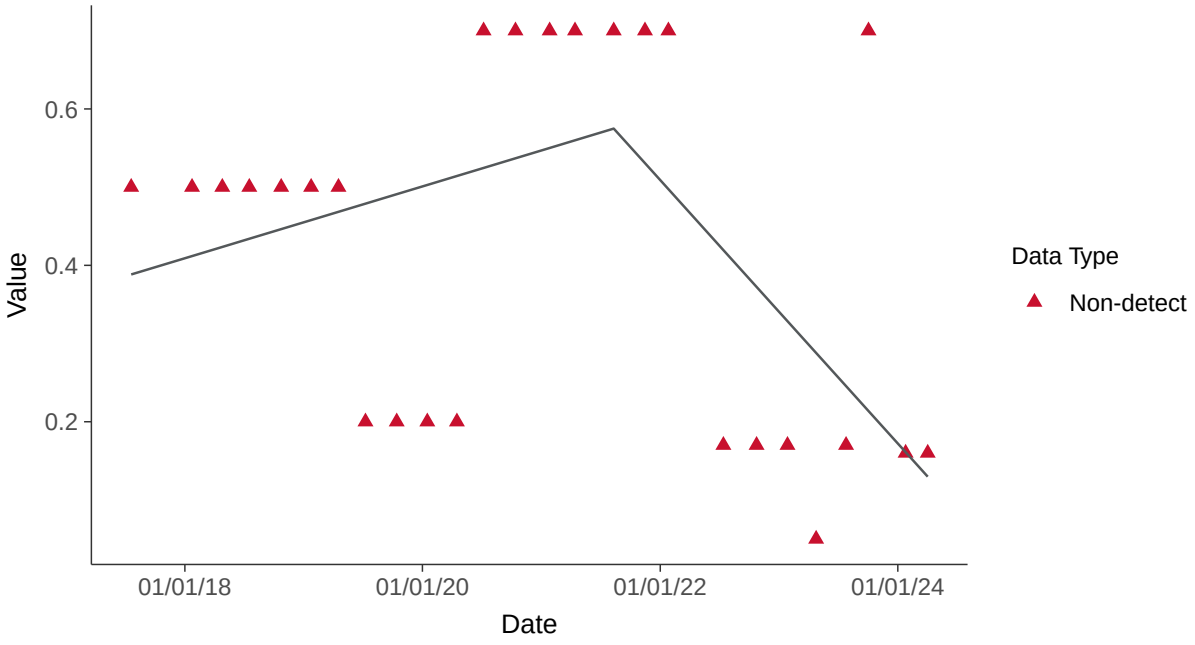
Boxplot by Season

Beryllium, MW-7R (ug/L)



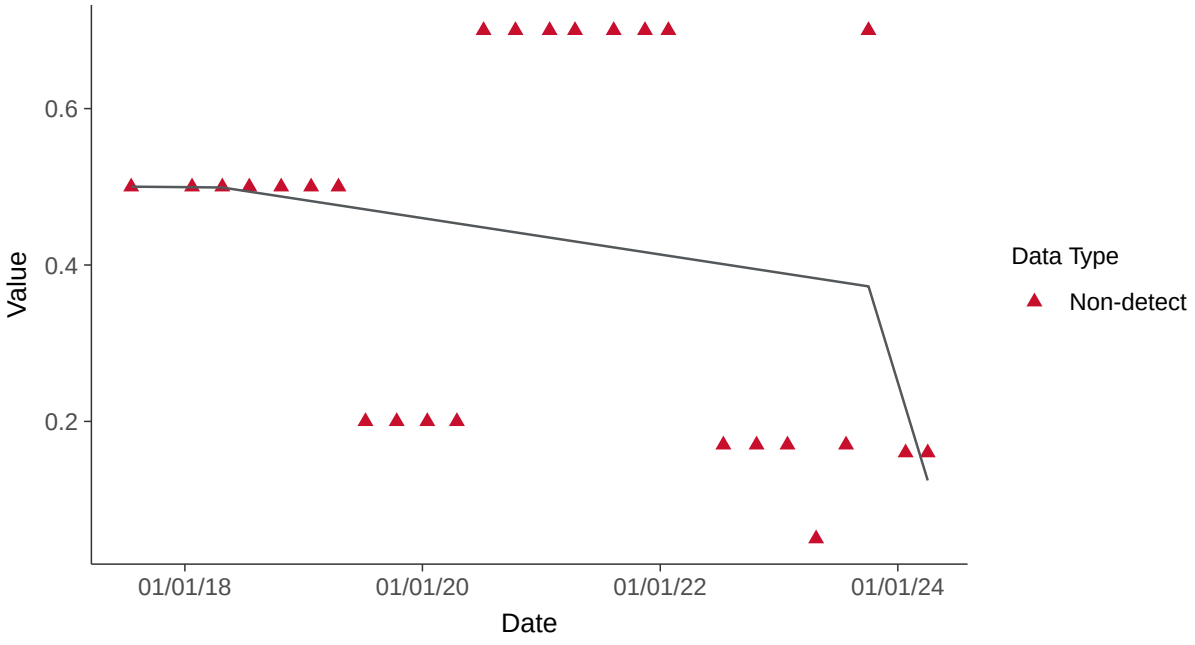
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-7R (ug/L)



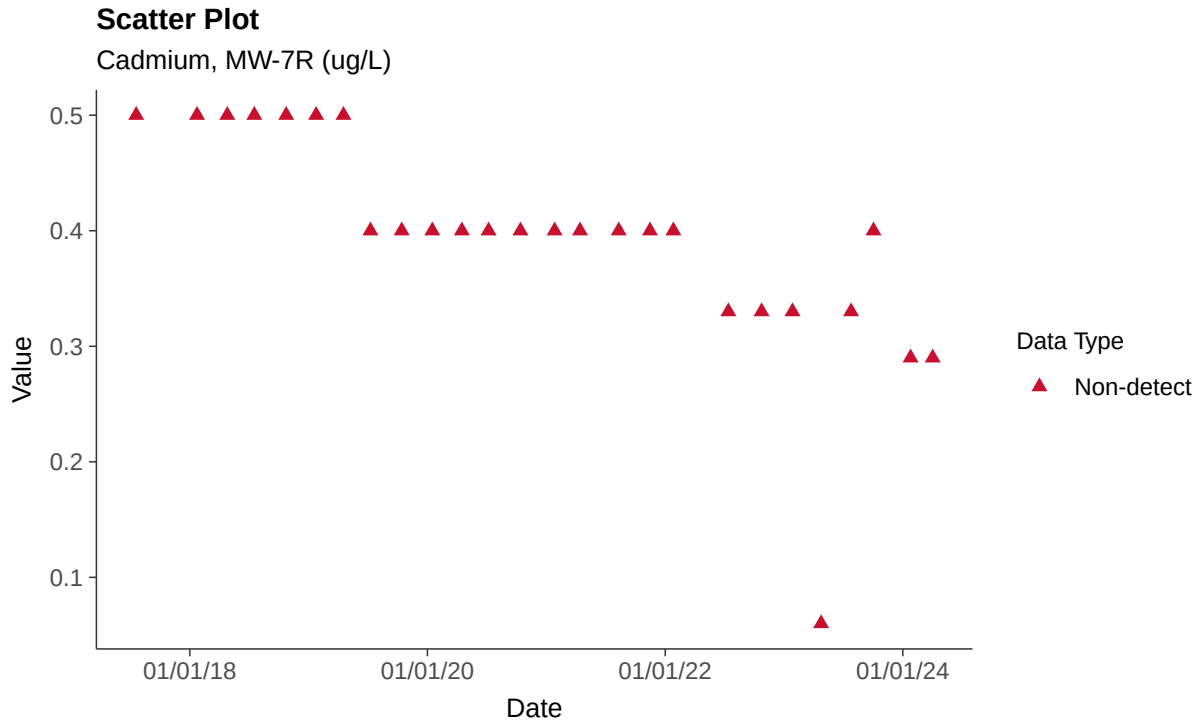
Trend Regression: Piecewise Linear-Linear-Linear

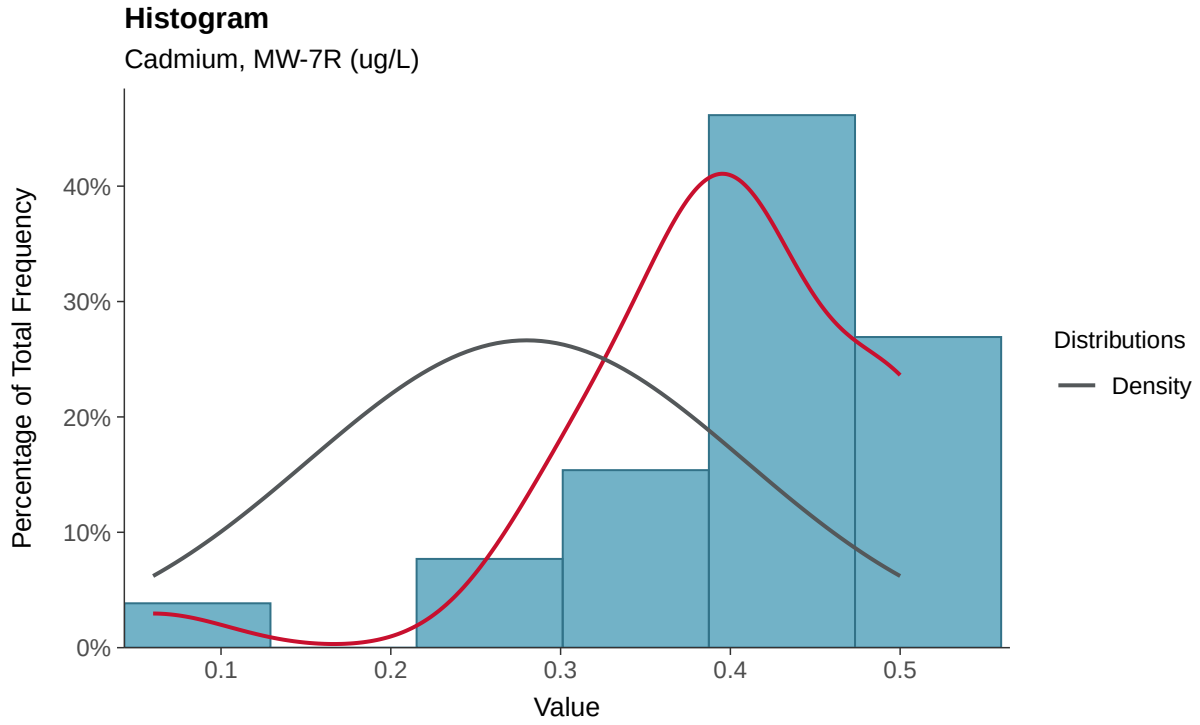
Beryllium, MW-7R (ug/L)



App. IV: Cadmium, MW-7R

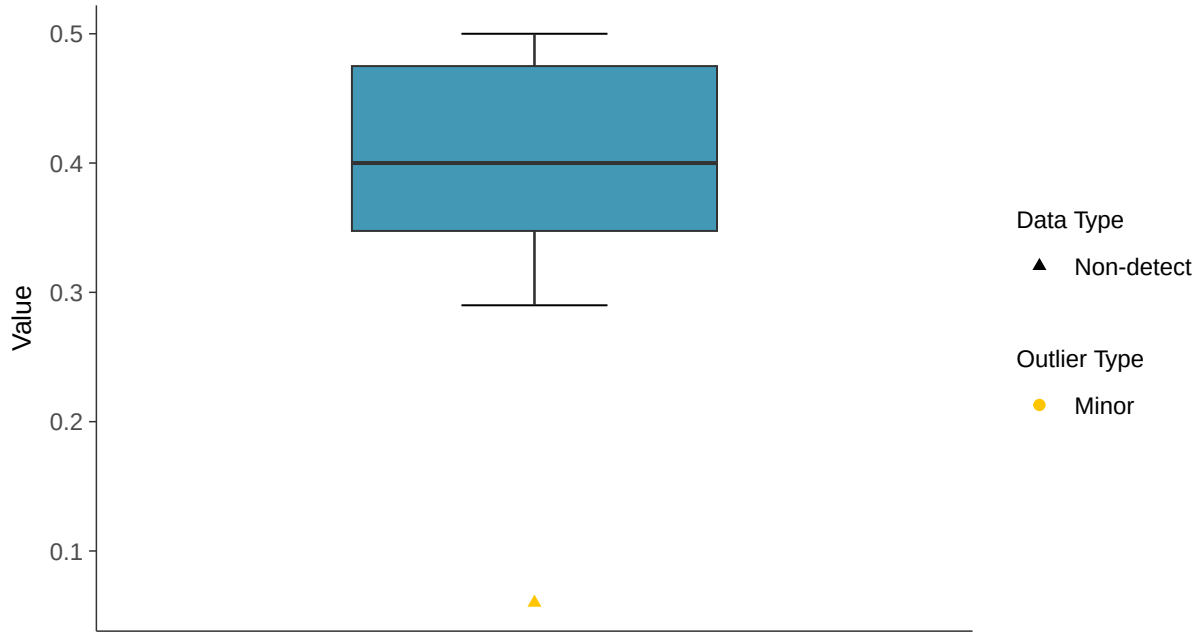
ID: 10_3_106





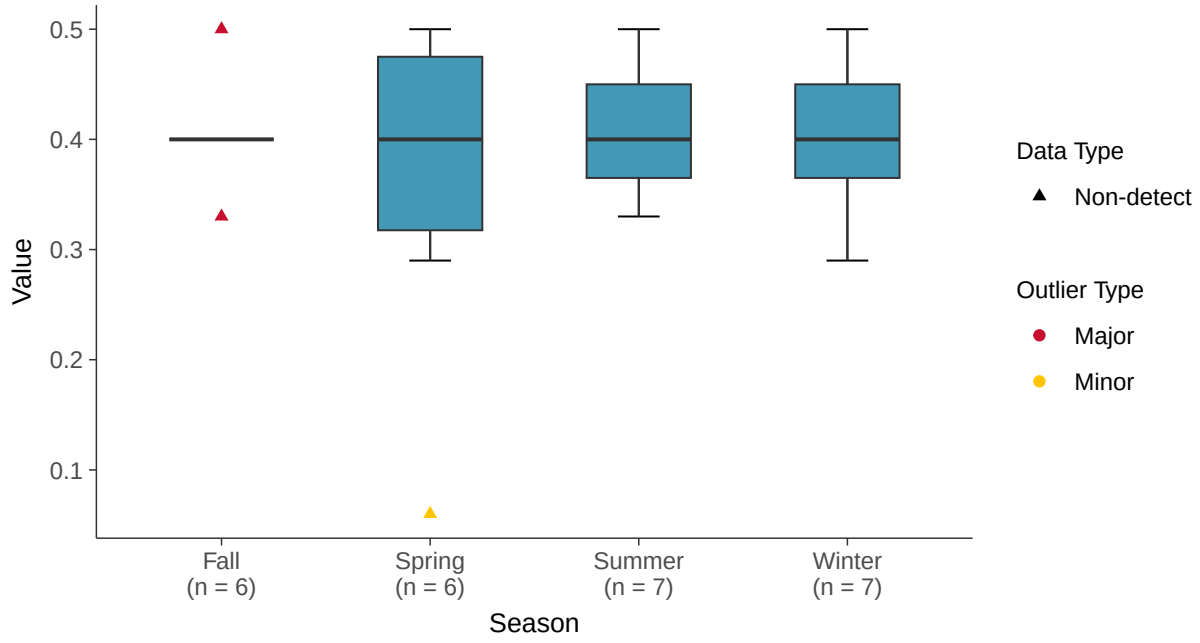
Boxplot

Cadmium, MW-7R (ug/L)



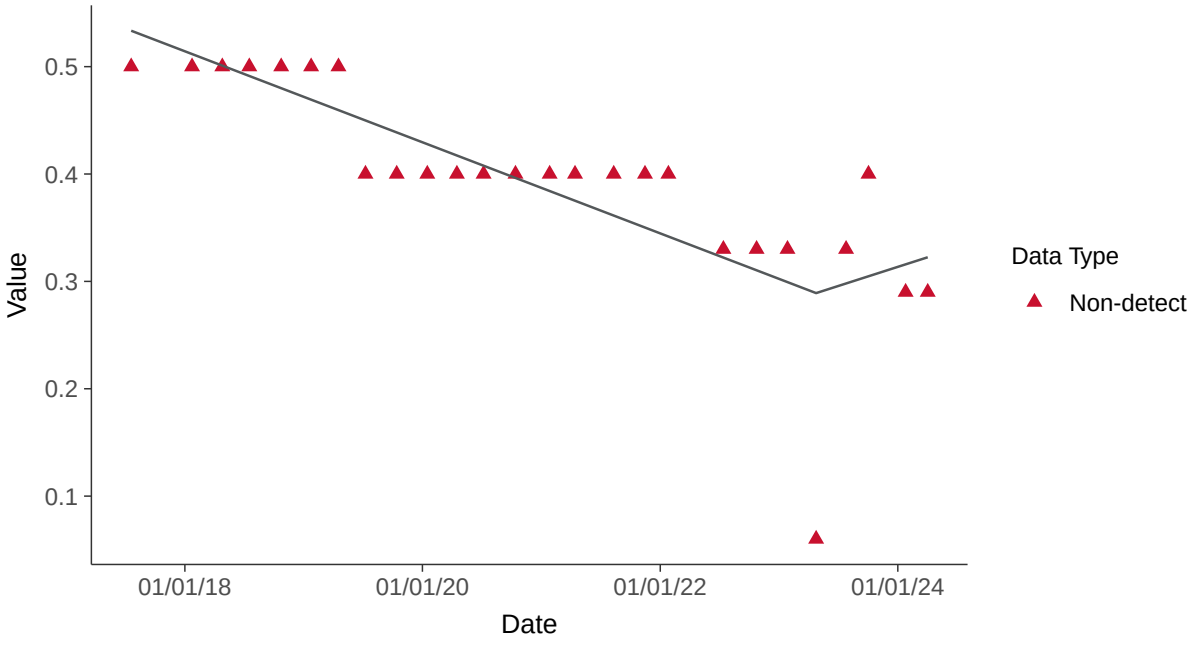
Boxplot by Season

Cadmium, MW-7R (ug/L)



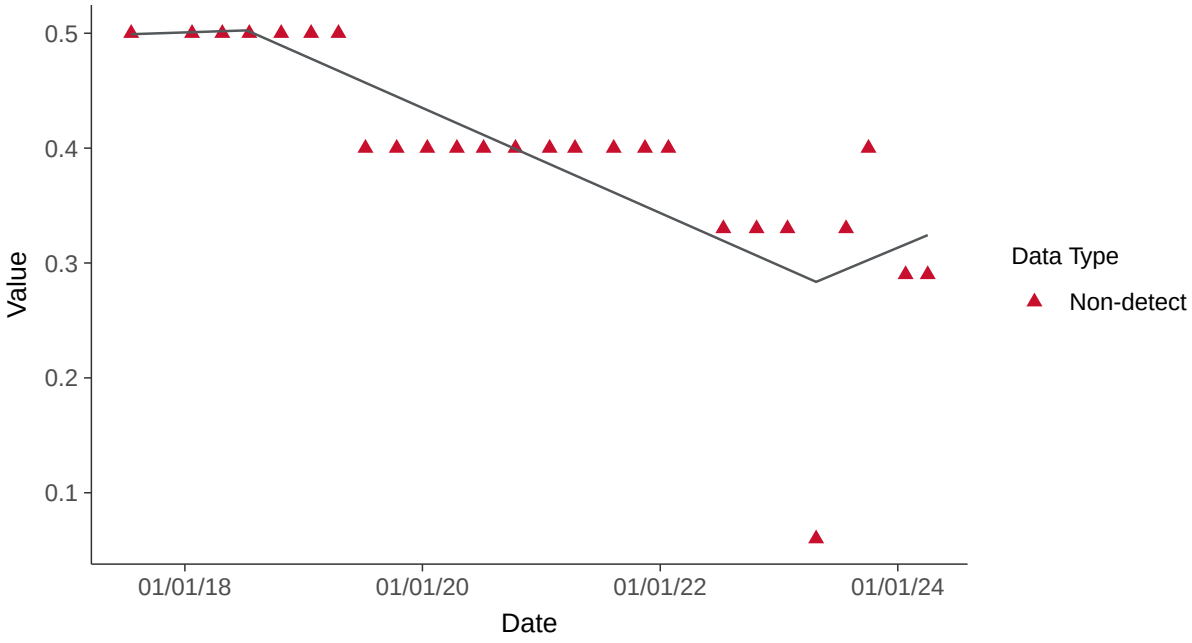
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-7R (ug/L)



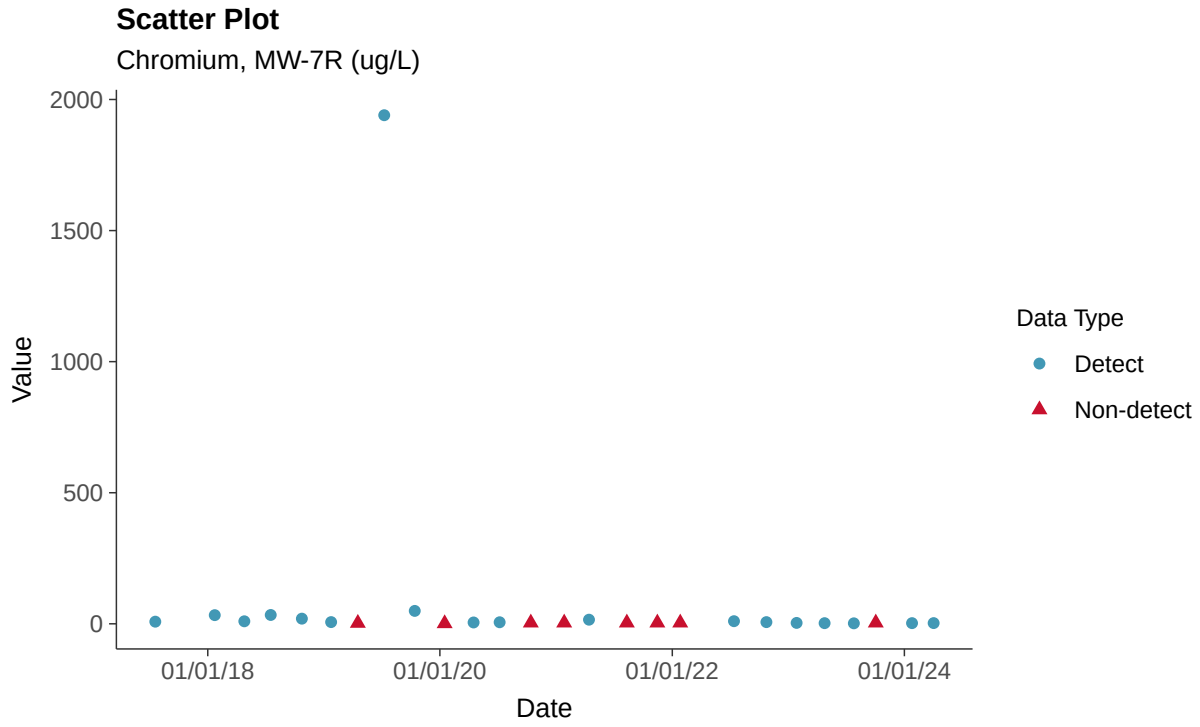
Trend Regression: Piecewise Linear-Linear-Linear

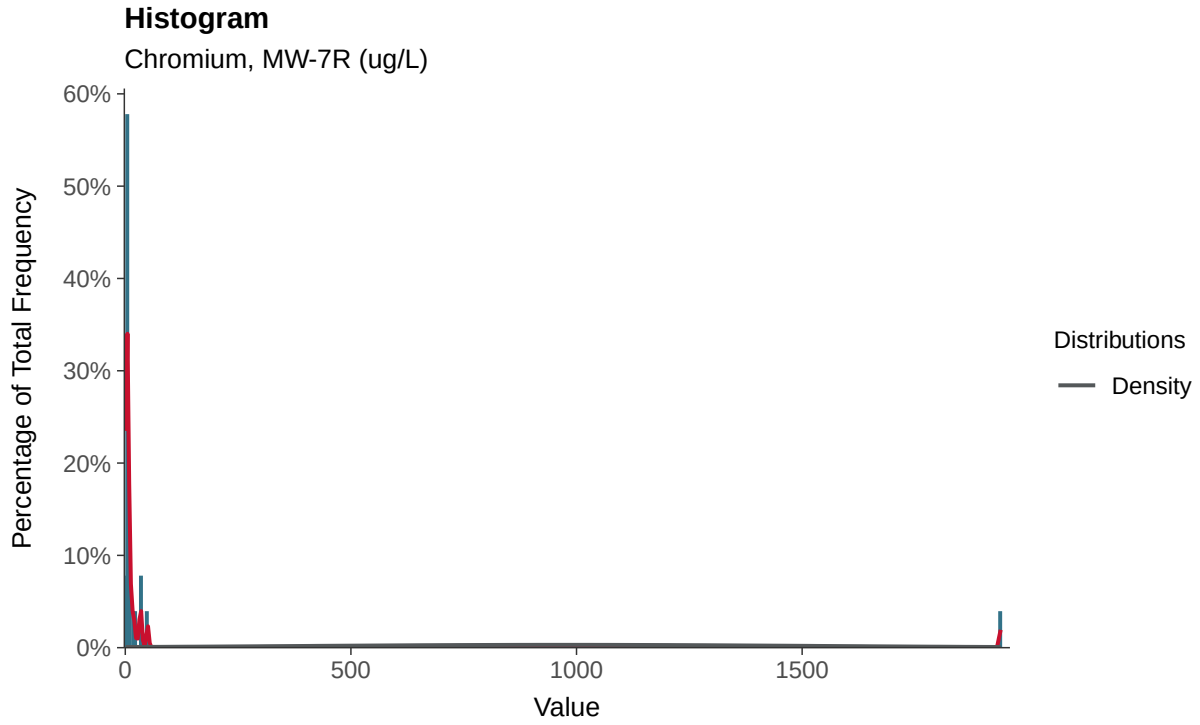
Cadmium, MW-7R (ug/L)



App. IV: Chromium, MW-7R

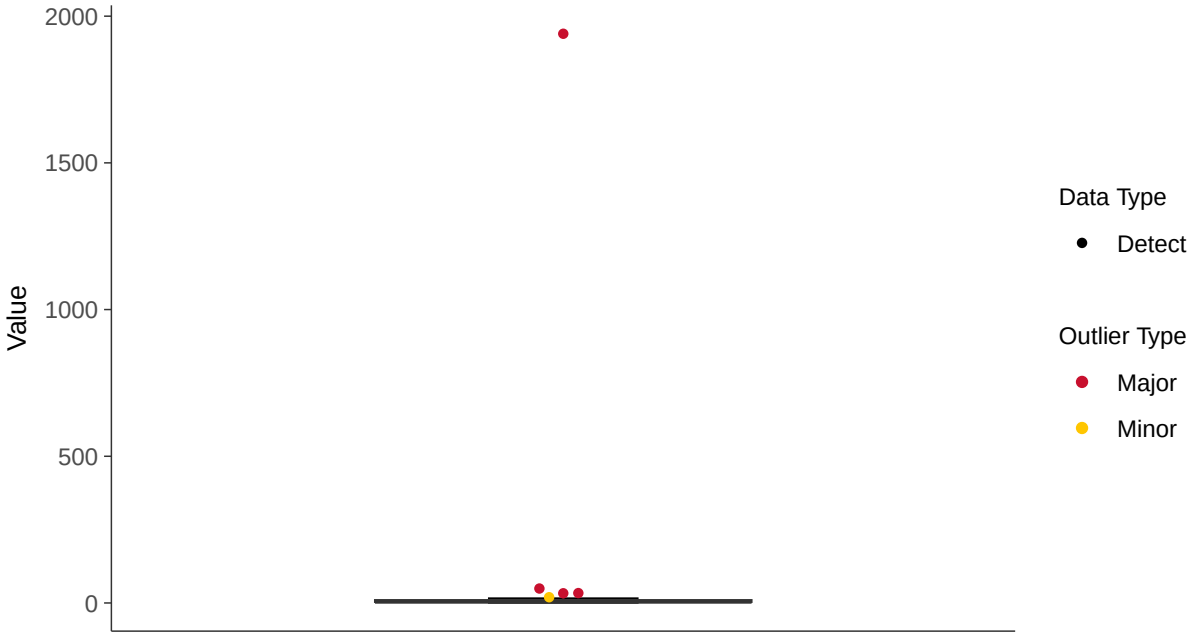
ID: 10_3_109





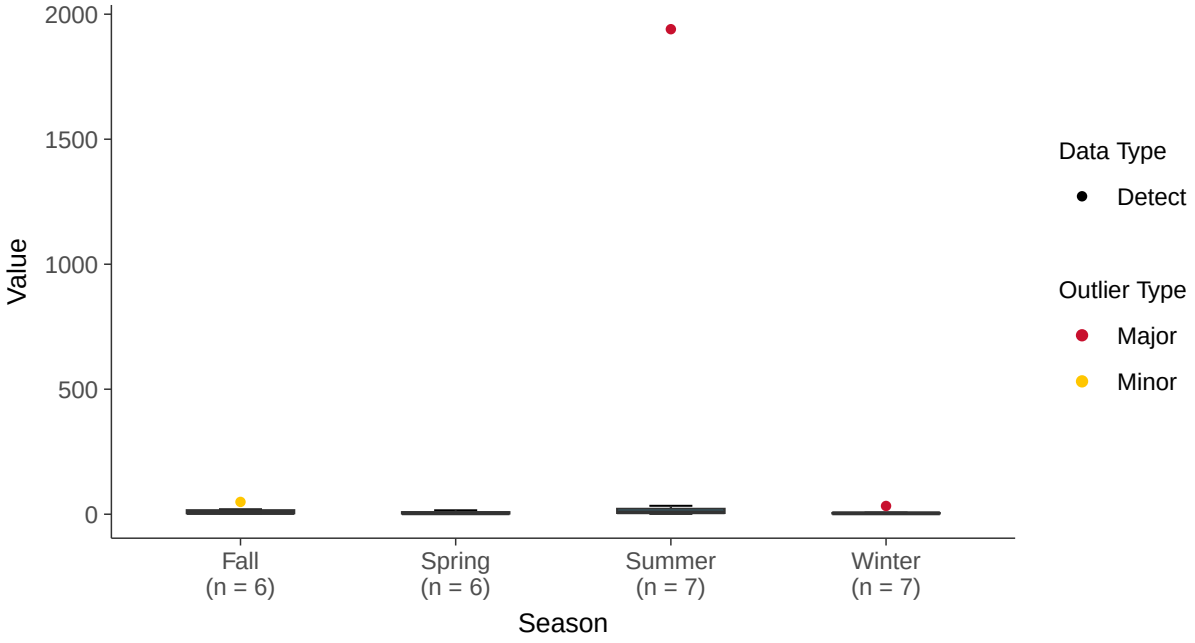
Boxplot

Chromium, MW-7R (ug/L)



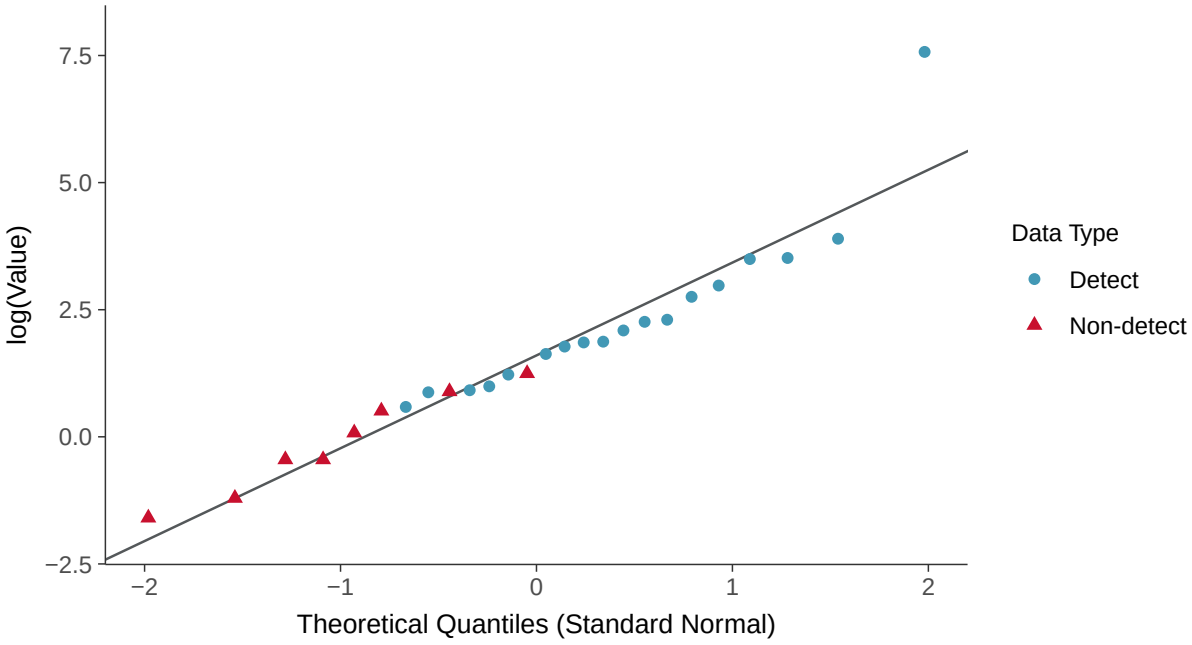
Boxplot by Season

Chromium, MW-7R (ug/L)



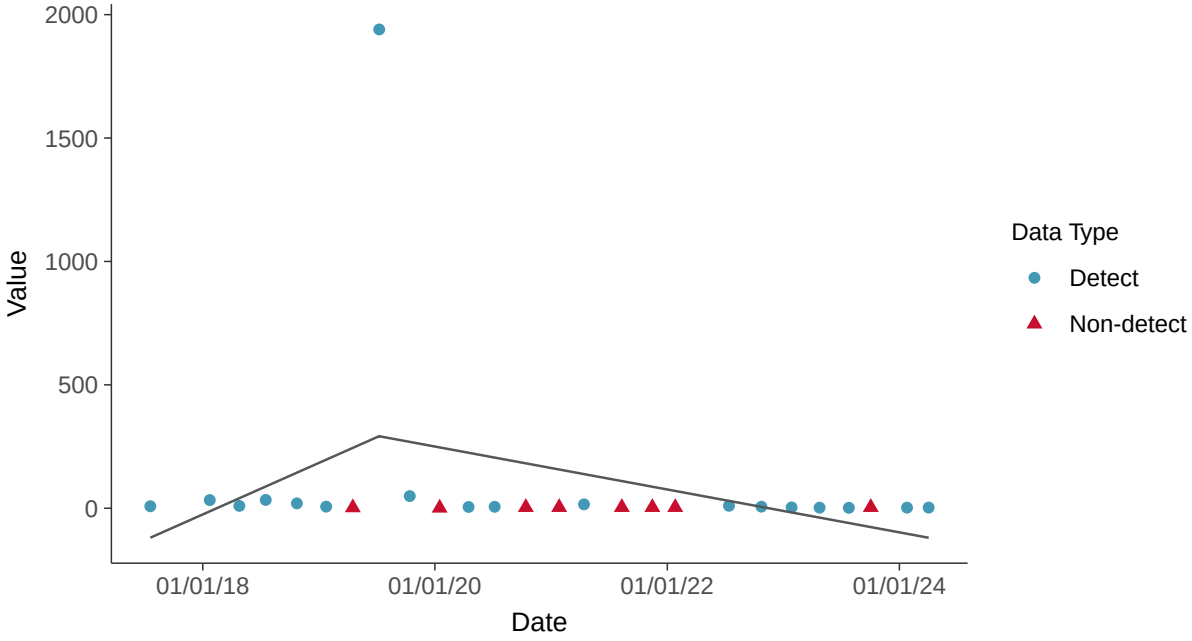
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-7R (ug/L)



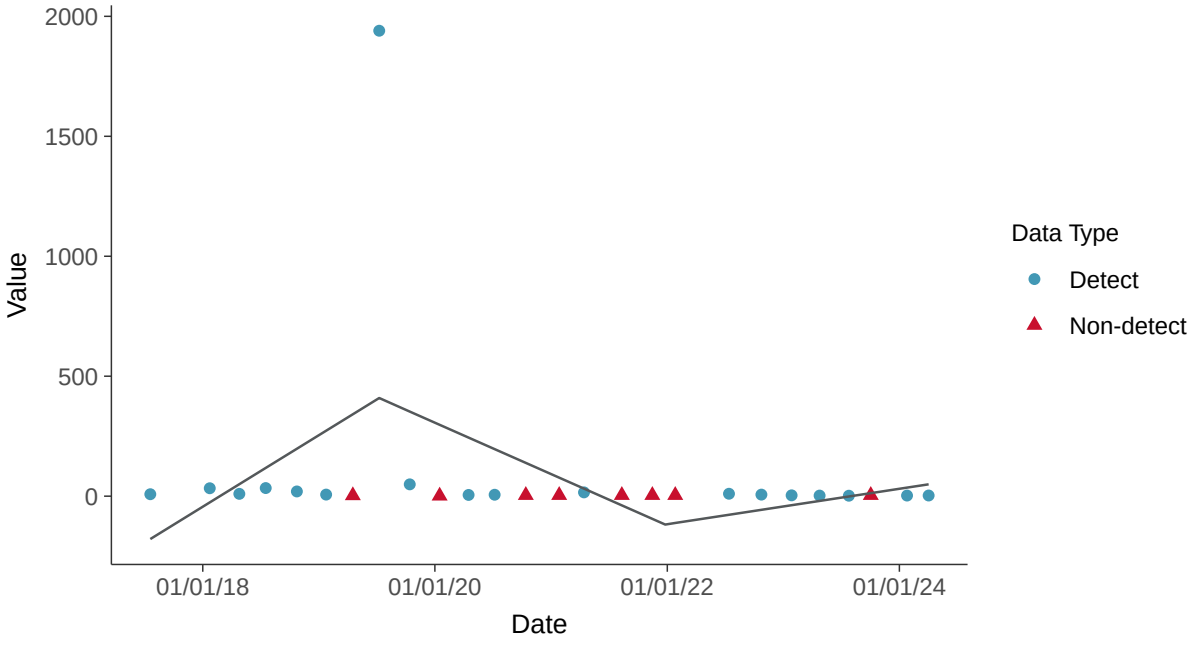
Trend Regression: Piecewise Linear-Linear

Chromium, MW-7R (ug/L)



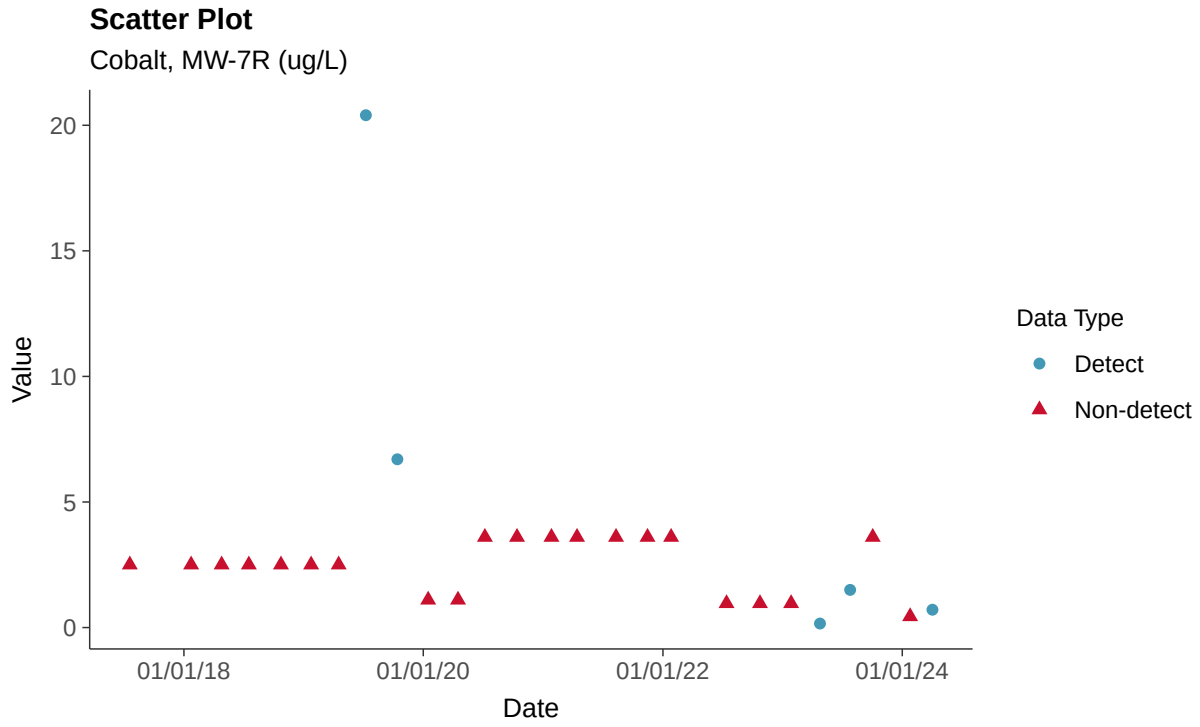
Trend Regression: Piecewise Linear-Linear-Linear

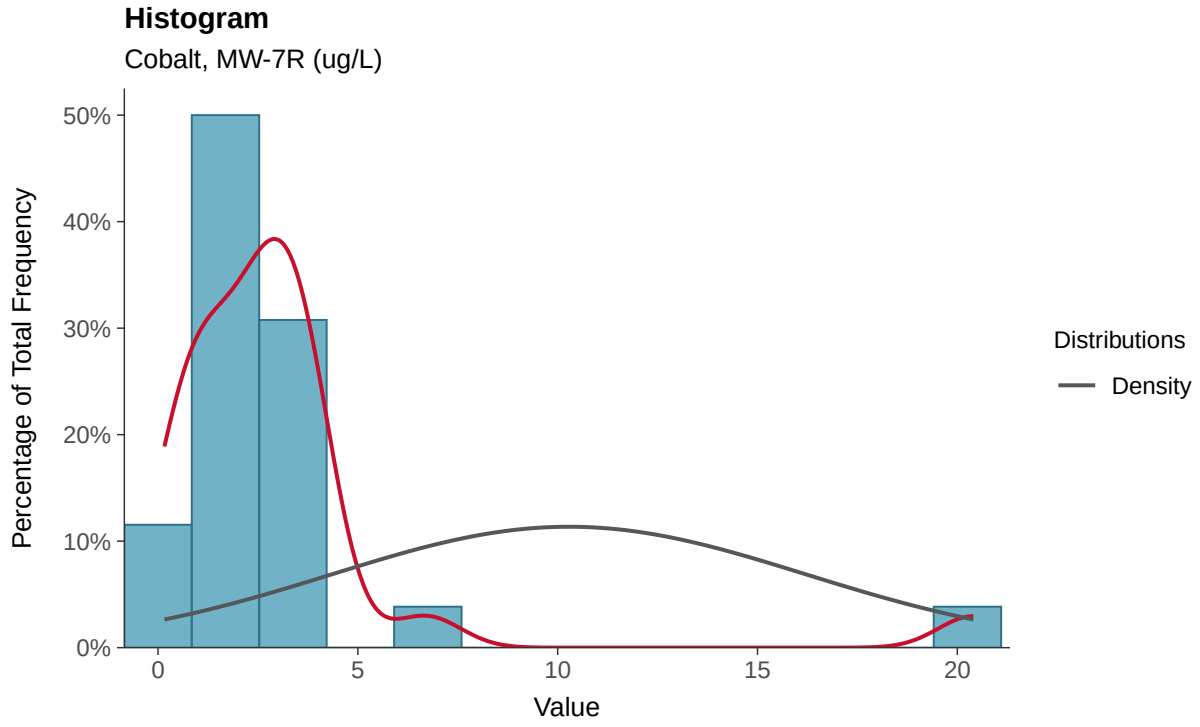
Chromium, MW-7R (ug/L)



App. IV: Cobalt, MW-7R

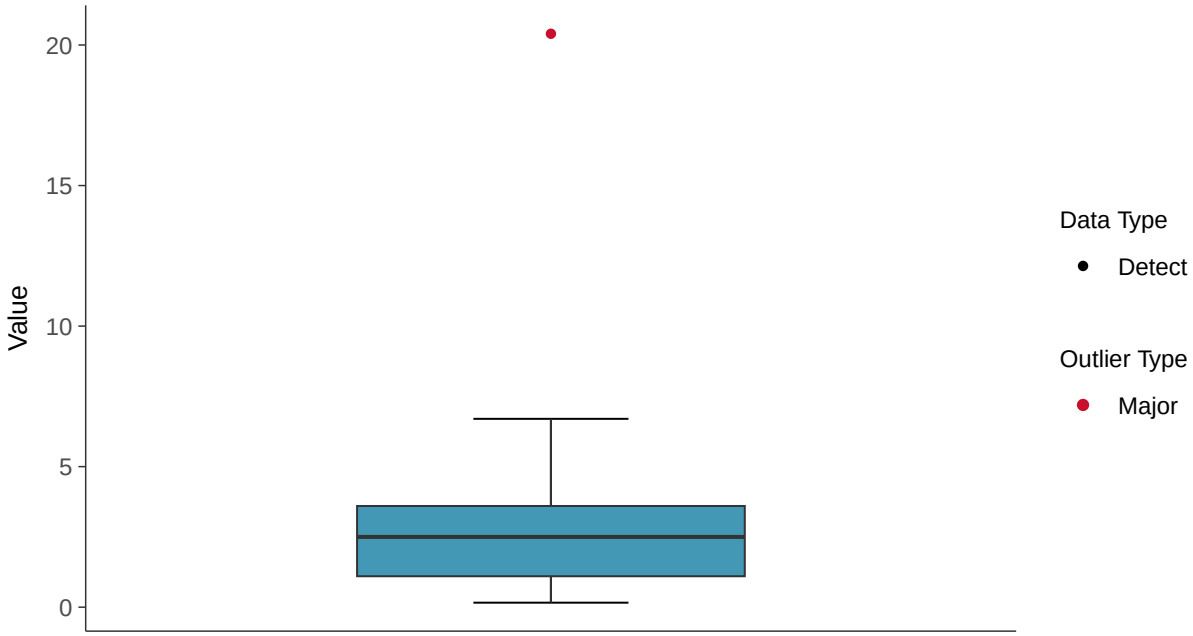
ID: 10_3_110





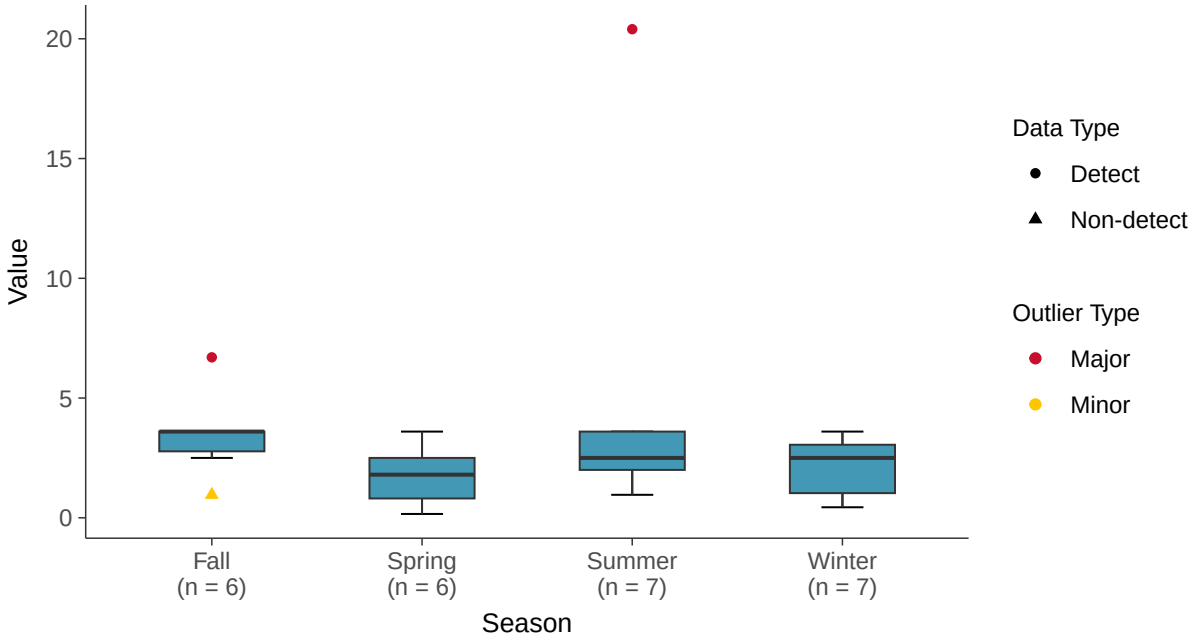
Boxplot

Cobalt, MW-7R (ug/L)



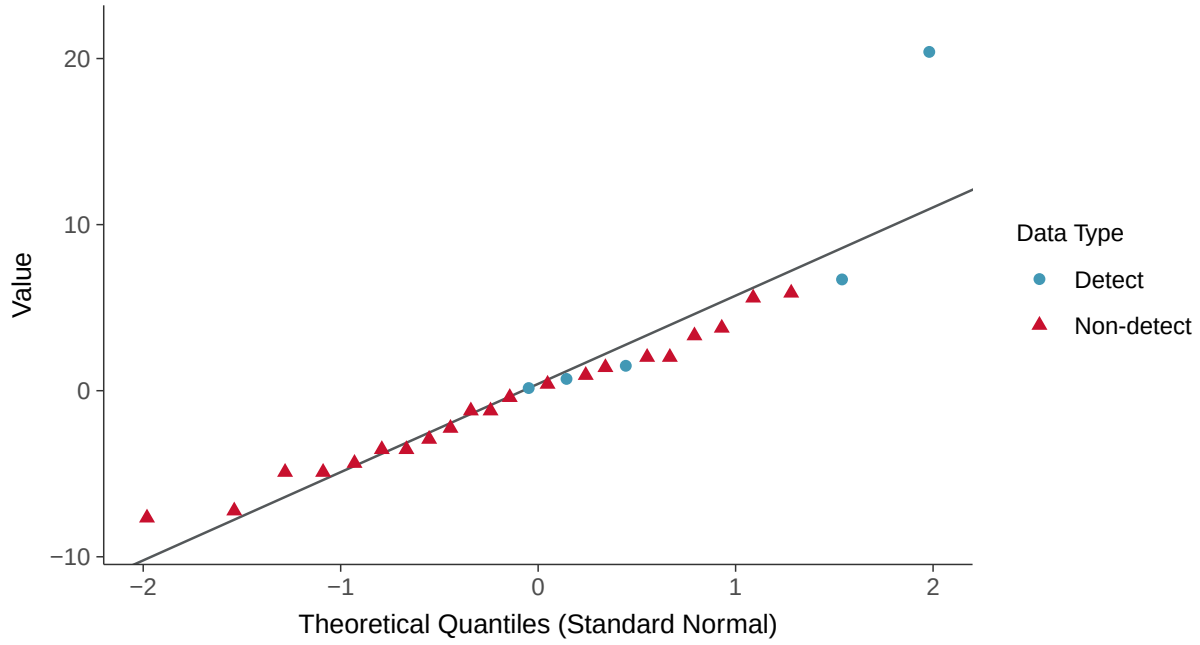
Boxplot by Season

Cobalt, MW-7R (ug/L)



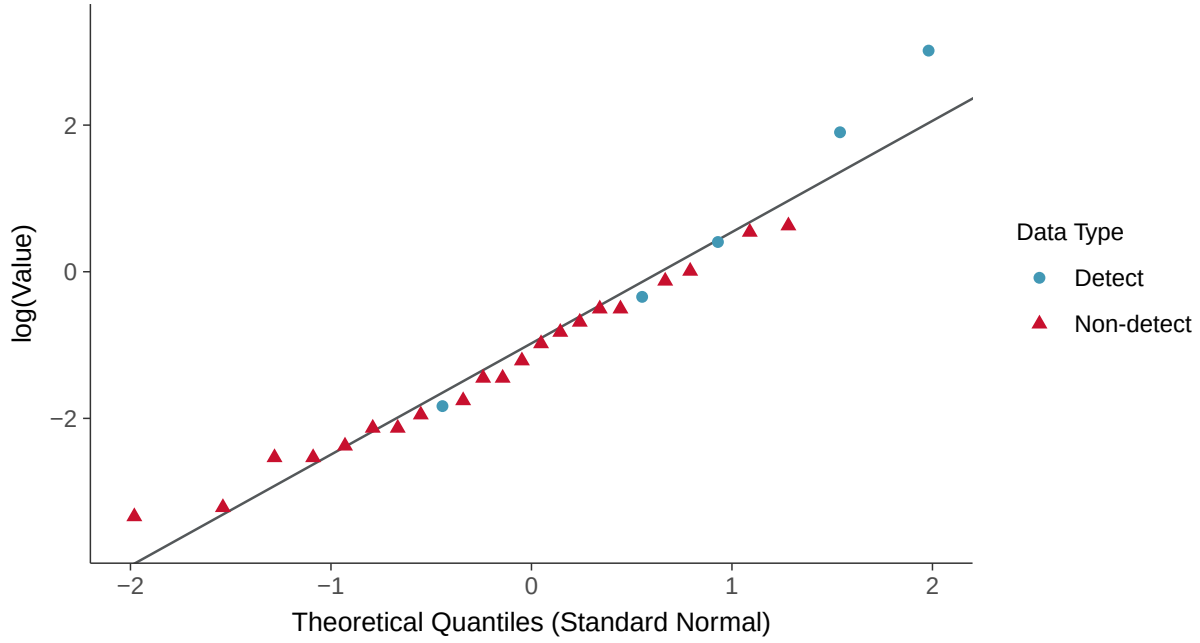
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



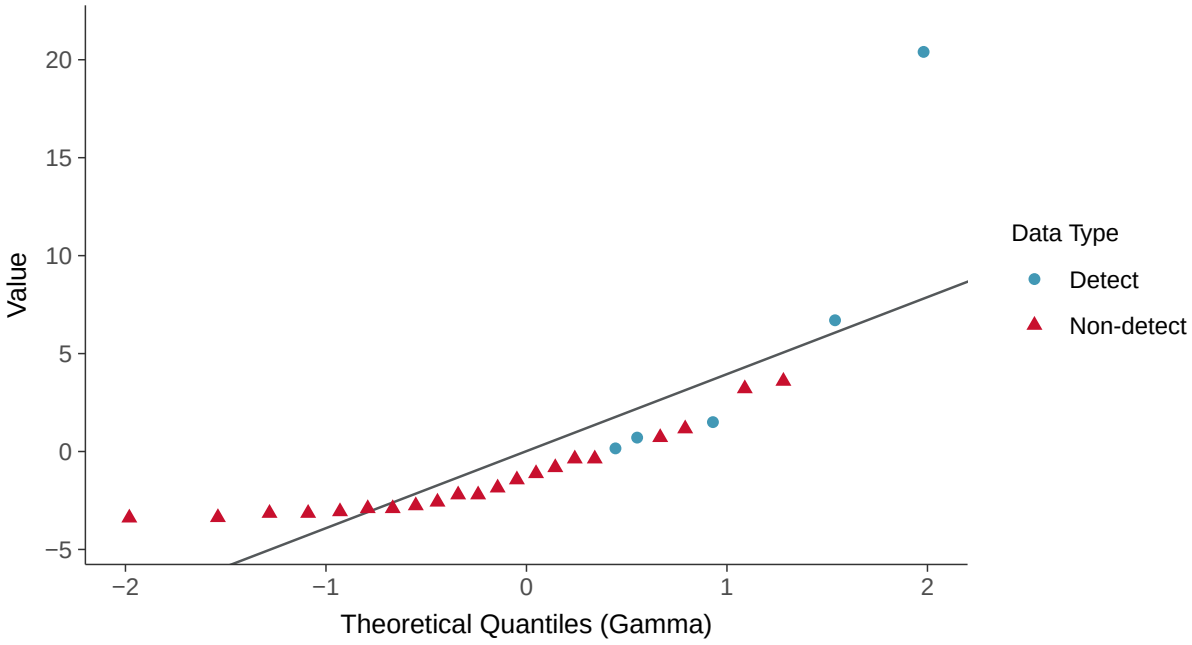
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



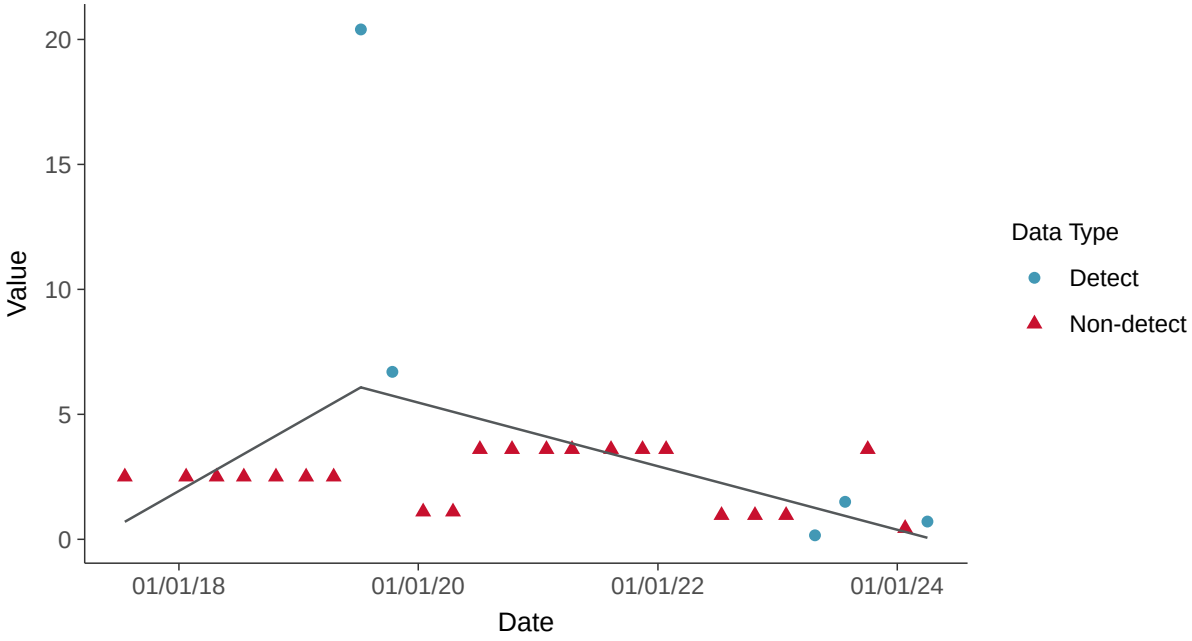
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



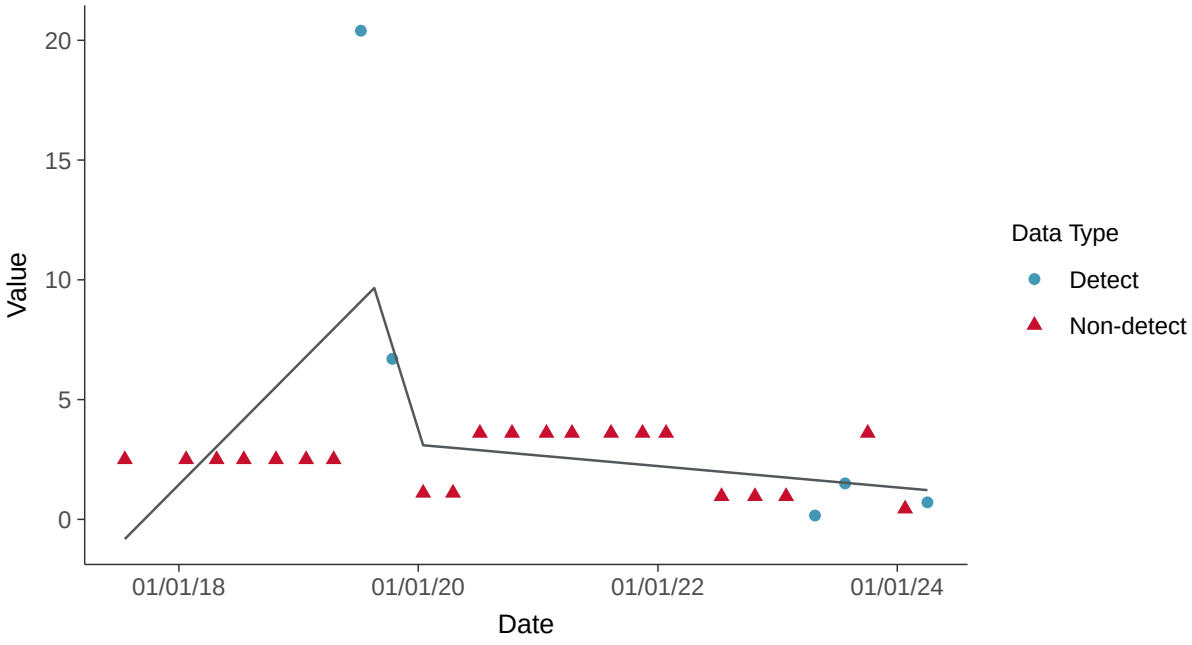
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-7R (ug/L)

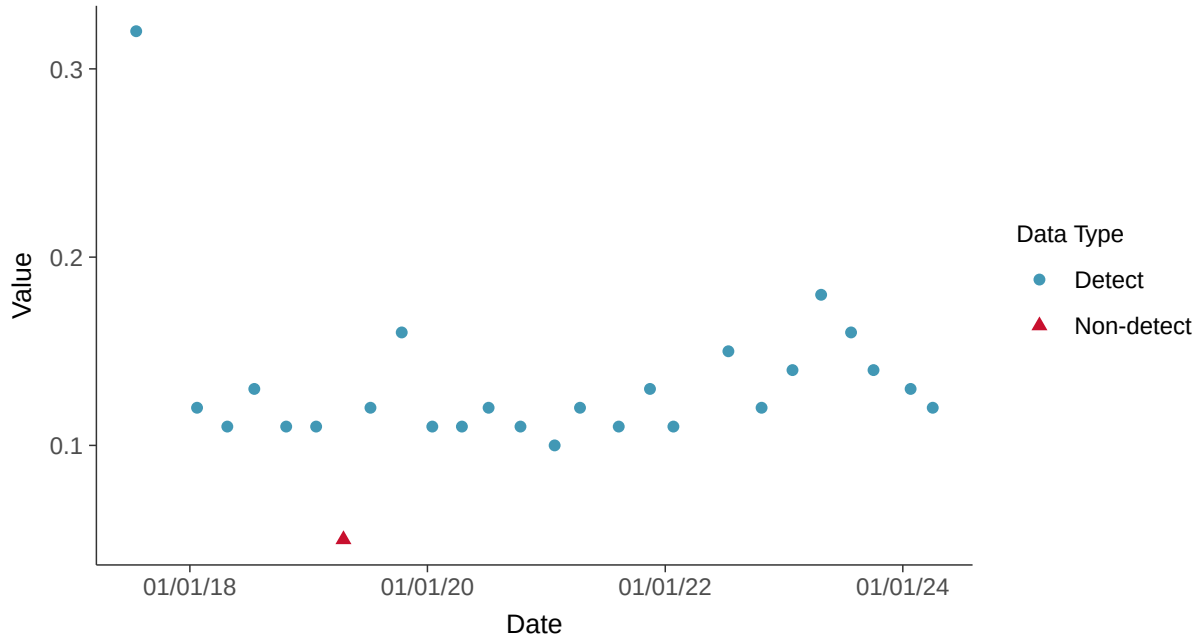


App. IV: Fluoride, MW-7R

ID: 10_3_112

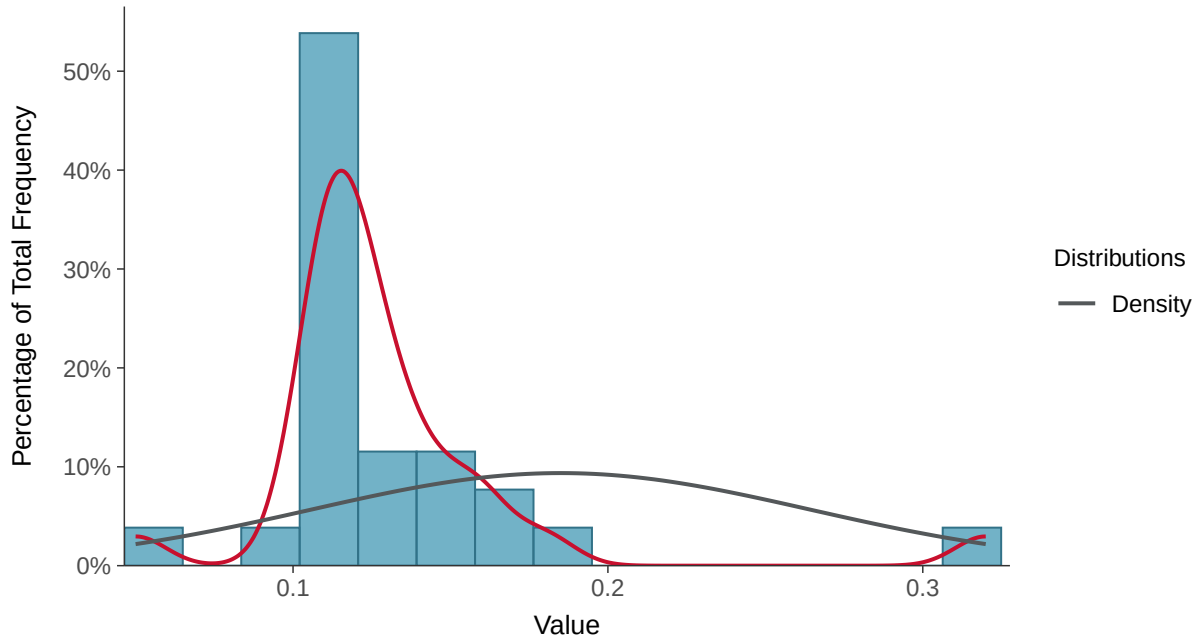
Scatter Plot

Fluoride, MW-7R (mg/L)



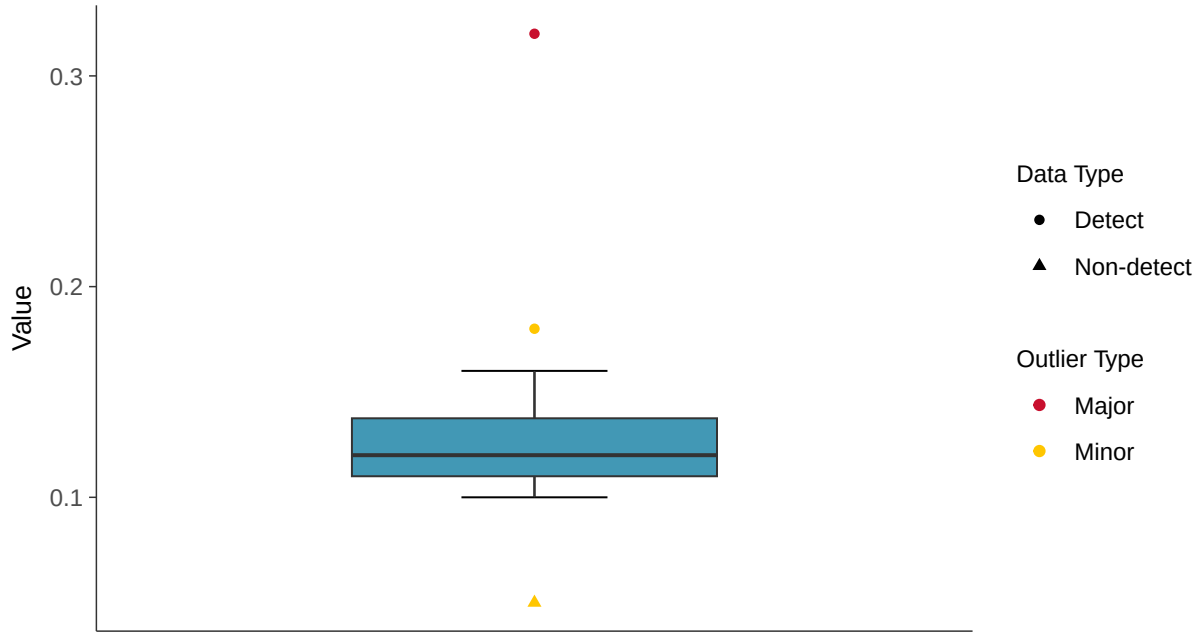
Histogram

Fluoride, MW-7R (mg/L)



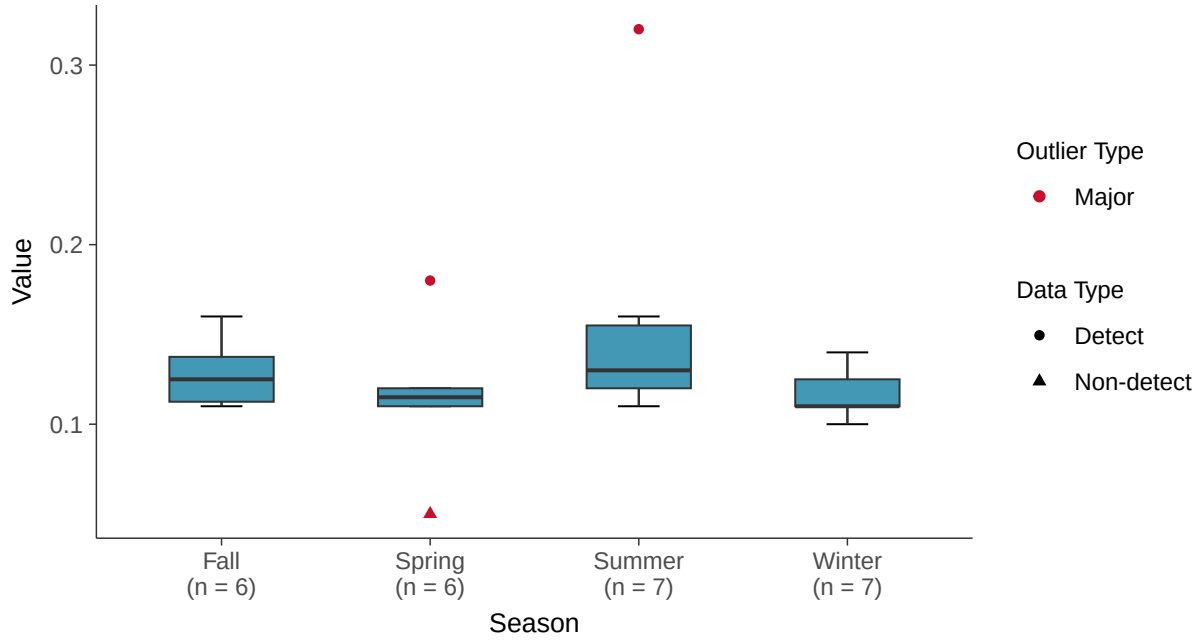
Boxplot

Fluoride, MW-7R (mg/L)



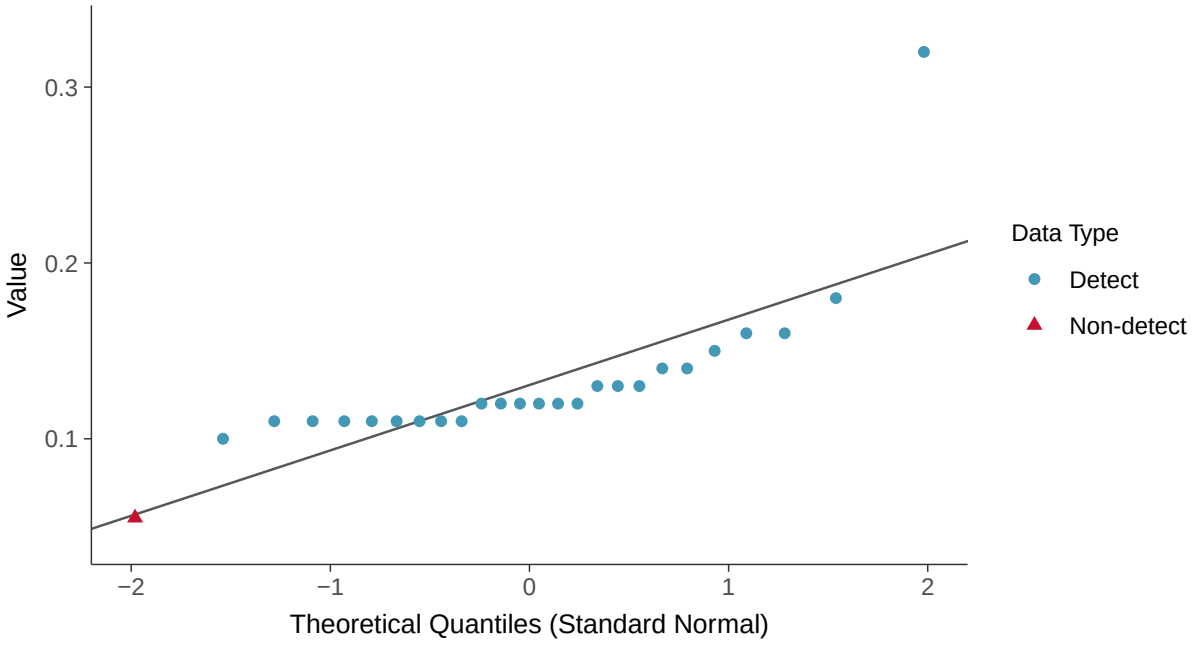
Boxplot by Season

Fluoride, MW-7R (mg/L)



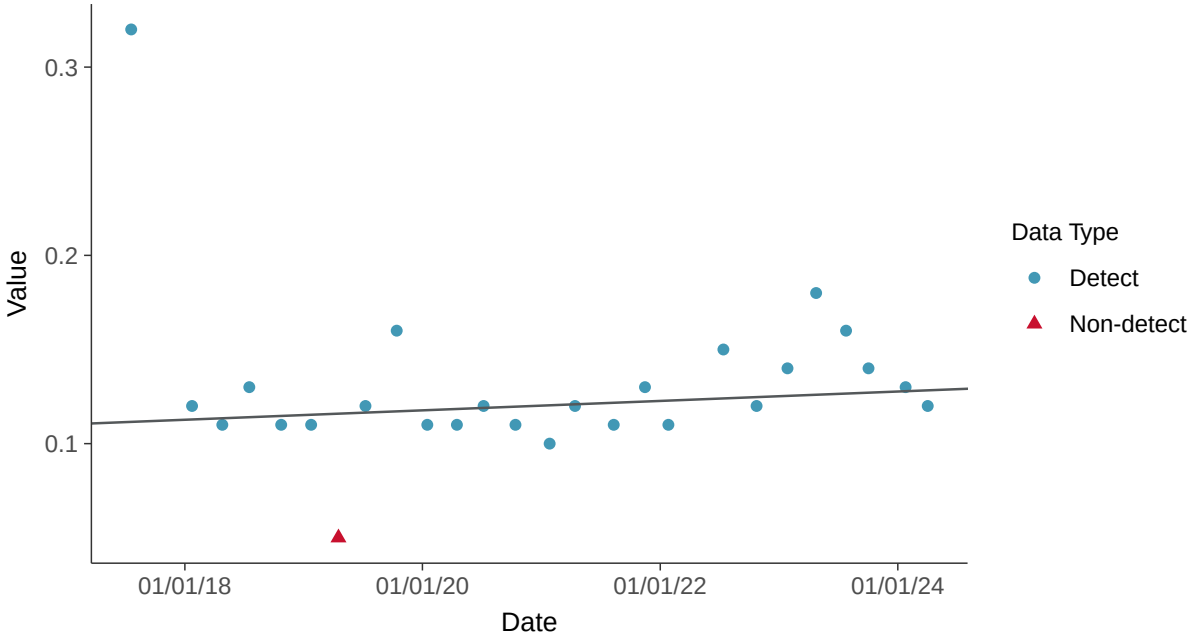
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-7R (mg/L)



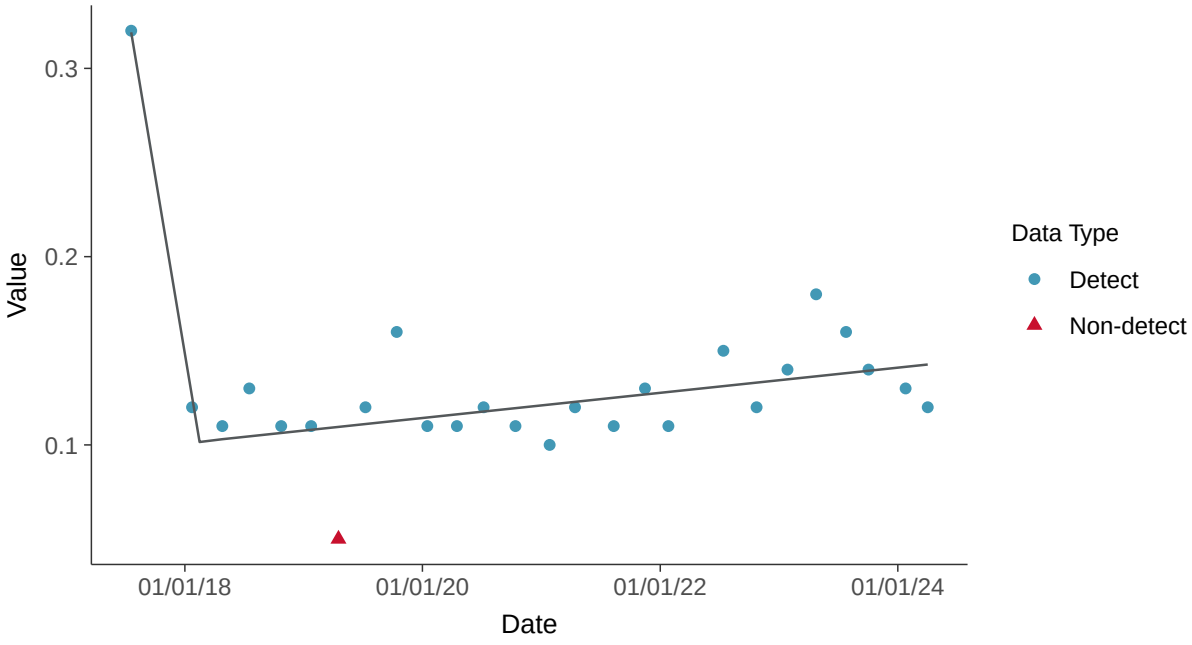
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-7R (mg/L)



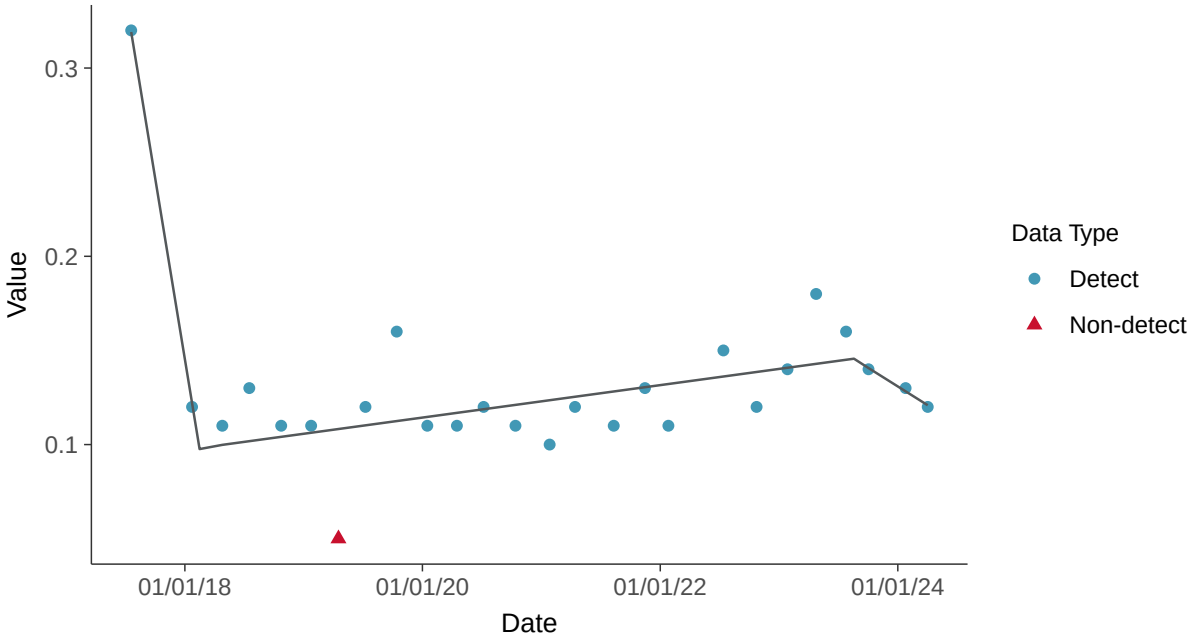
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-7R (mg/L)



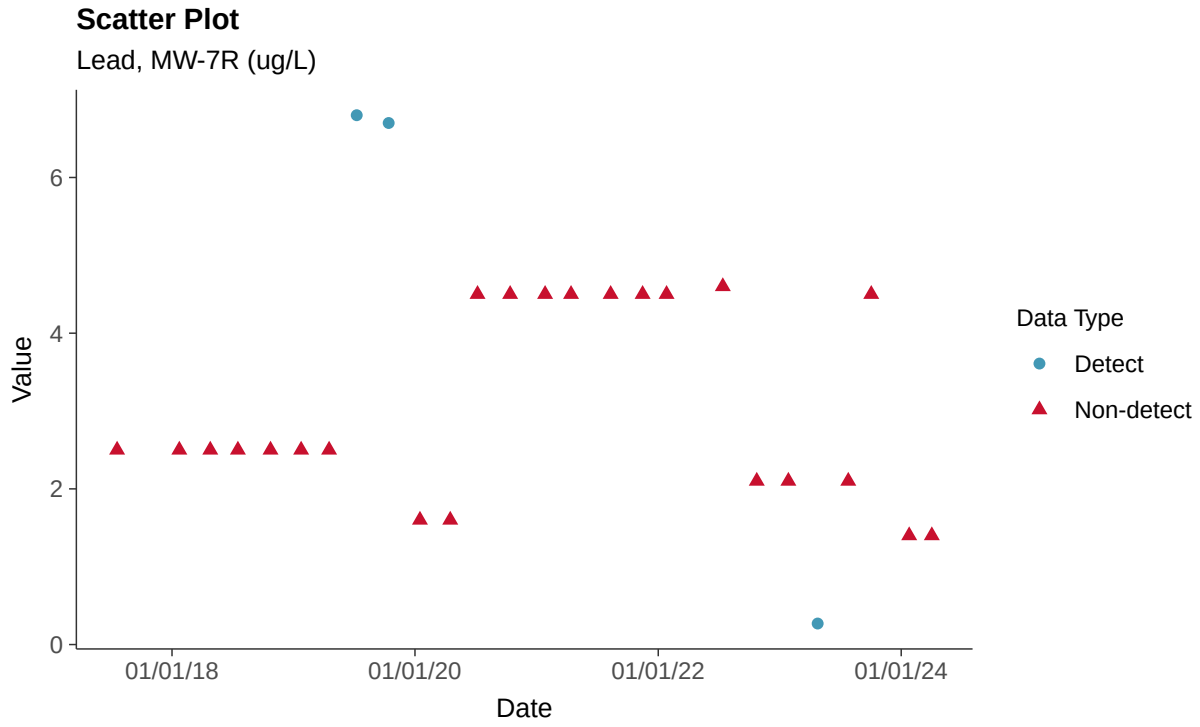
Trend Regression: Piecewise Linear-Linear-Linear

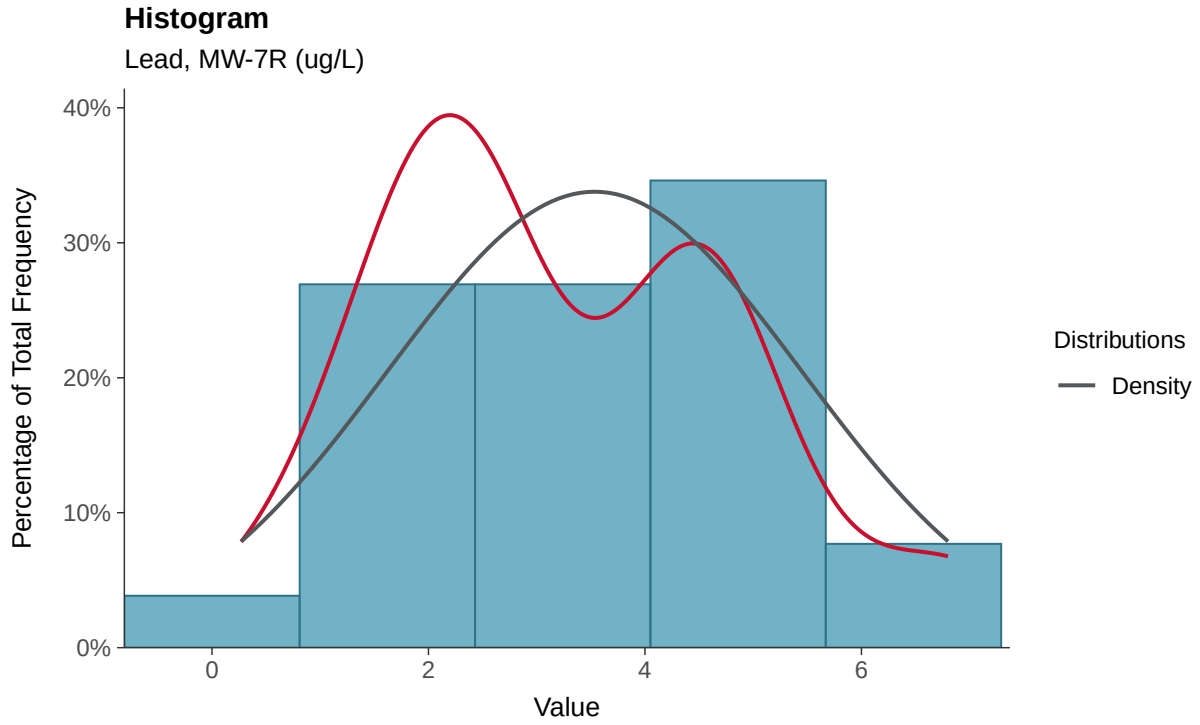
Fluoride, MW-7R (mg/L)



App. IV: Lead, MW-7R

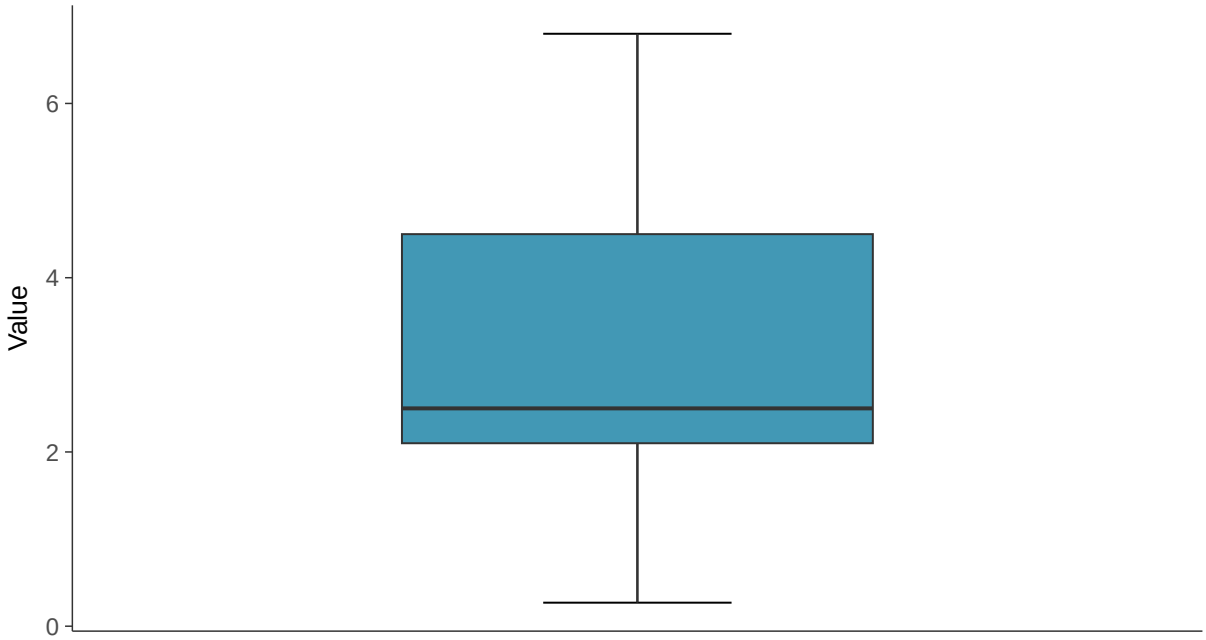
ID: 10_3_113





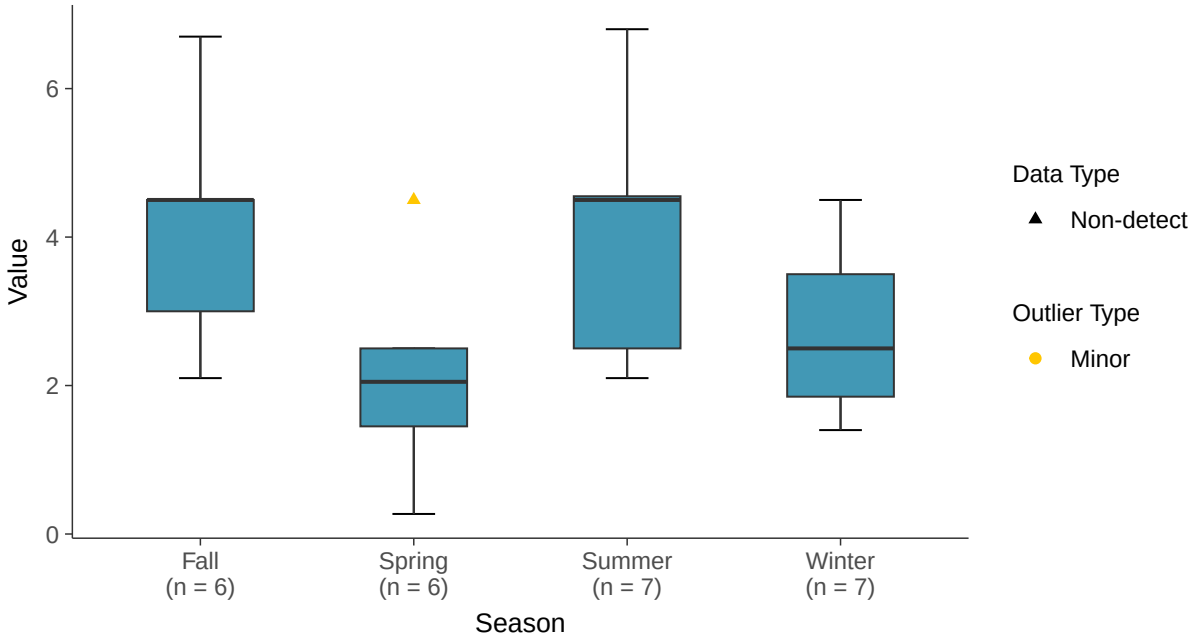
Boxplot

Lead, MW-7R (ug/L)



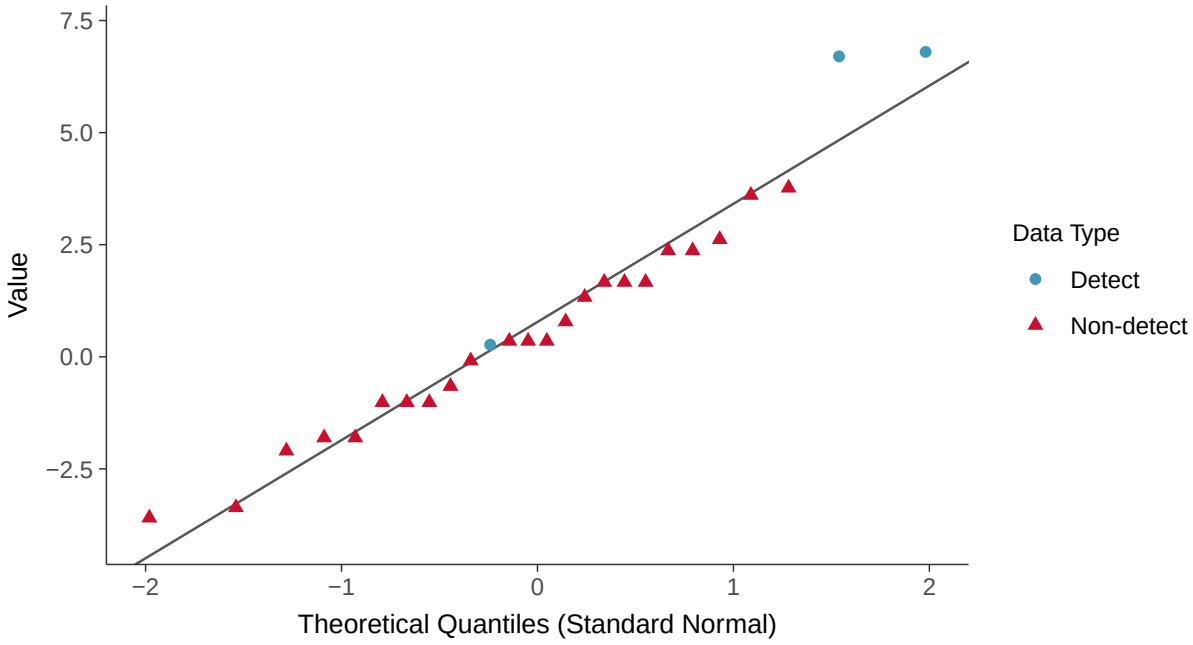
Boxplot by Season

Lead, MW-7R (ug/L)



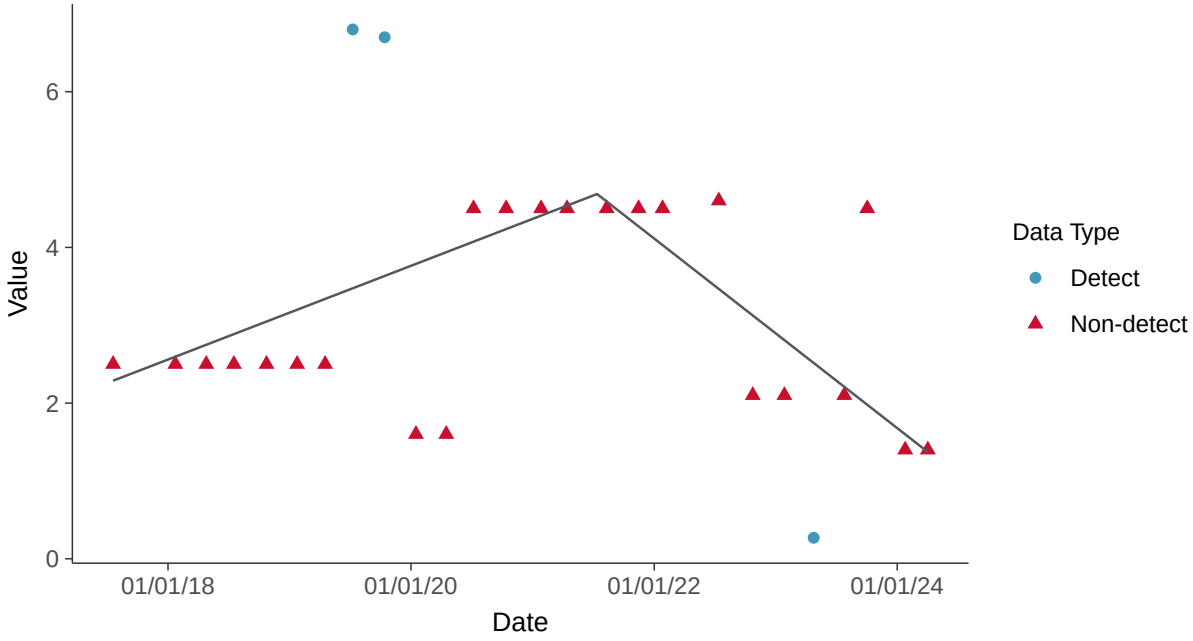
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-7R (ug/L)



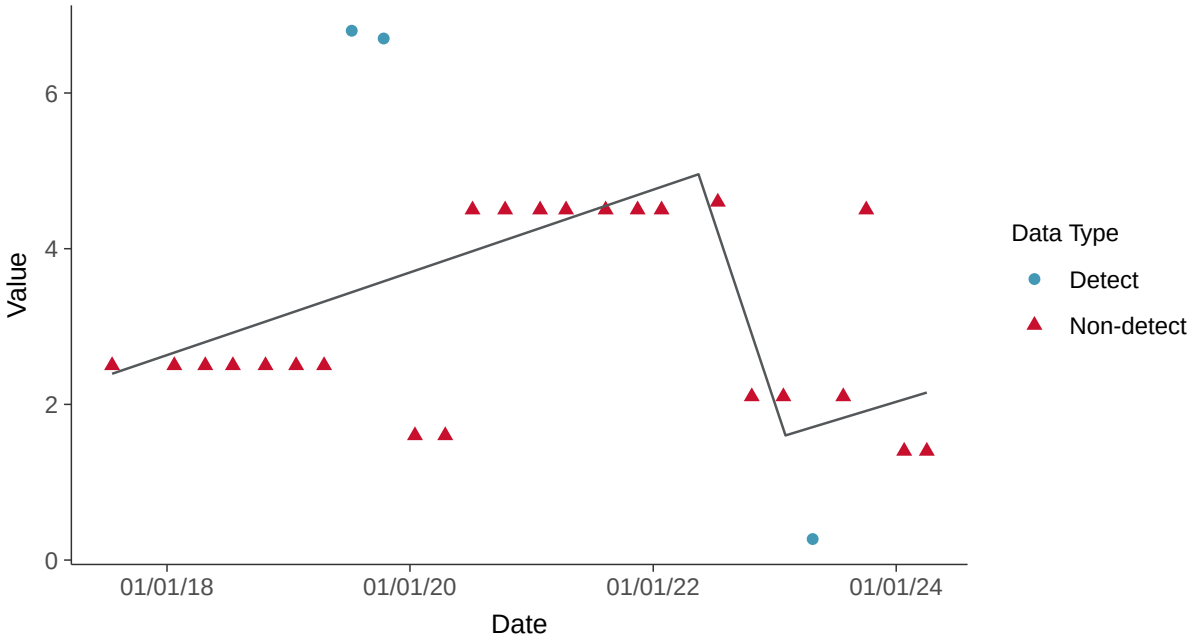
Trend Regression: Piecewise Linear-Linear

Lead, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-7R (ug/L)

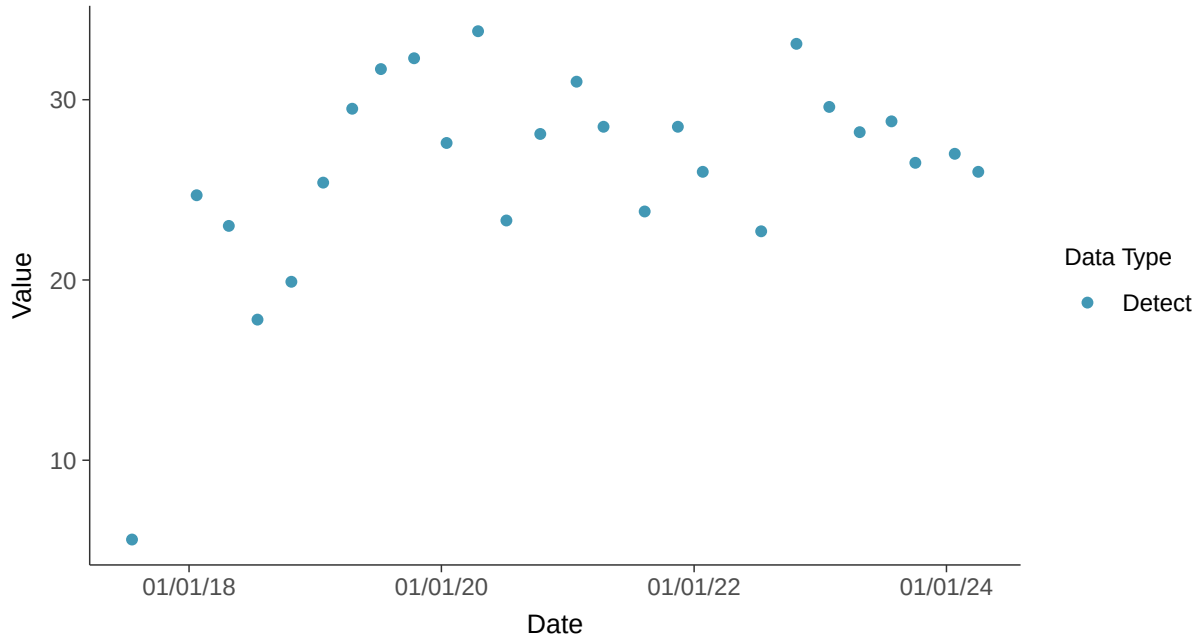


App. IV: Lithium, MW-7R

ID: 10_3_114

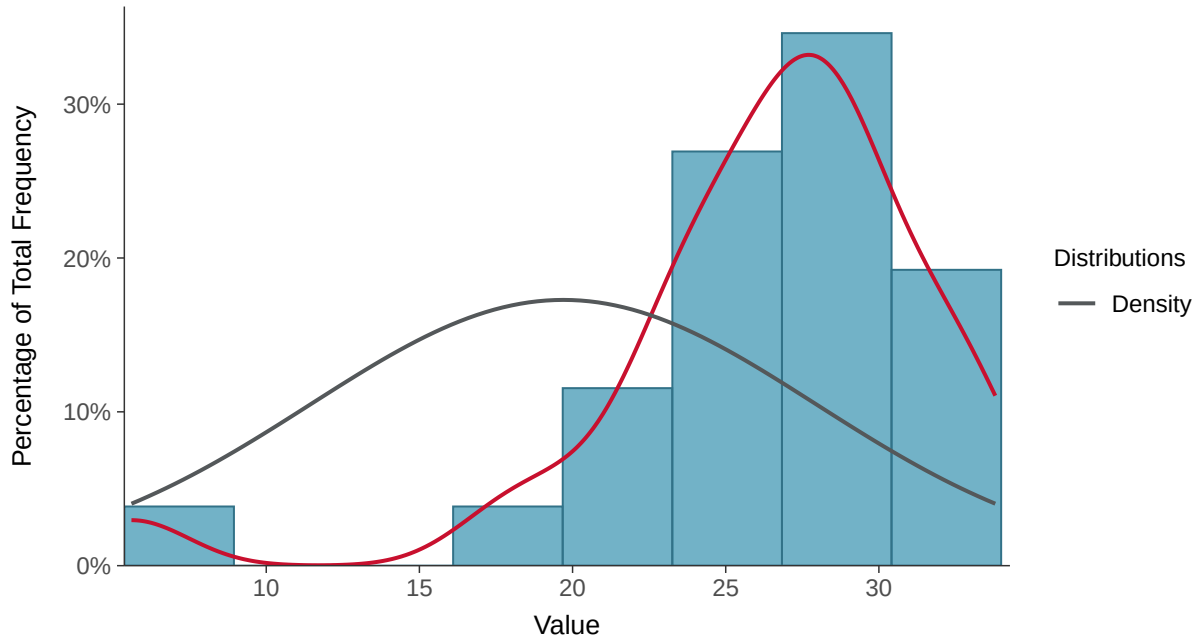
Scatter Plot

Lithium, MW-7R (ug/L)



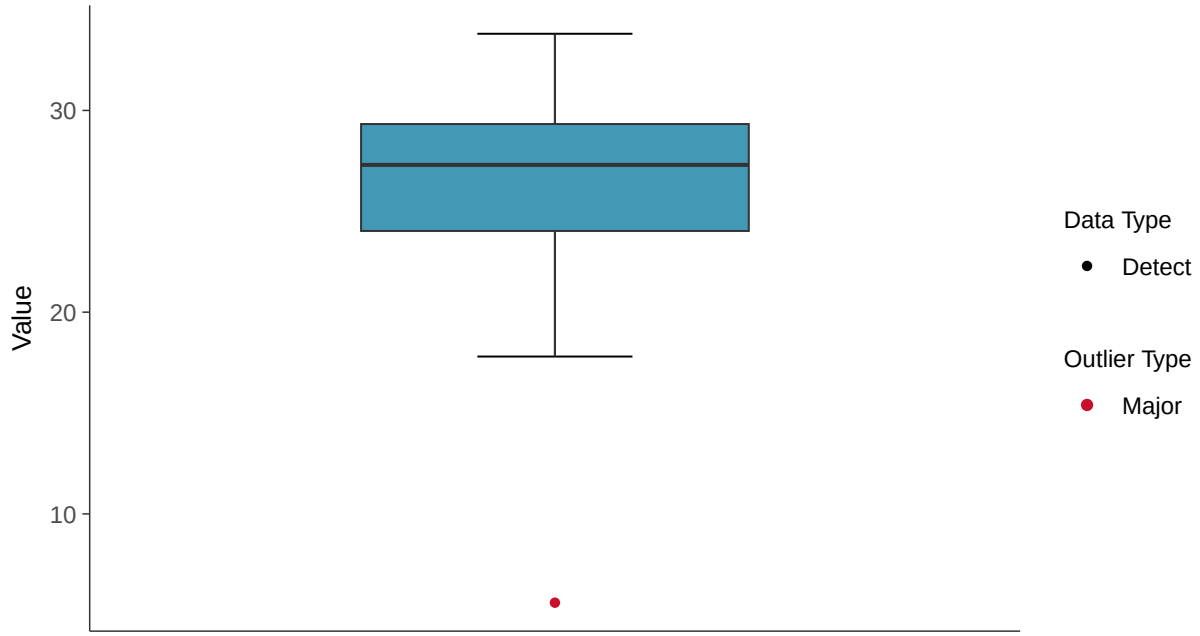
Histogram

Lithium, MW-7R (ug/L)



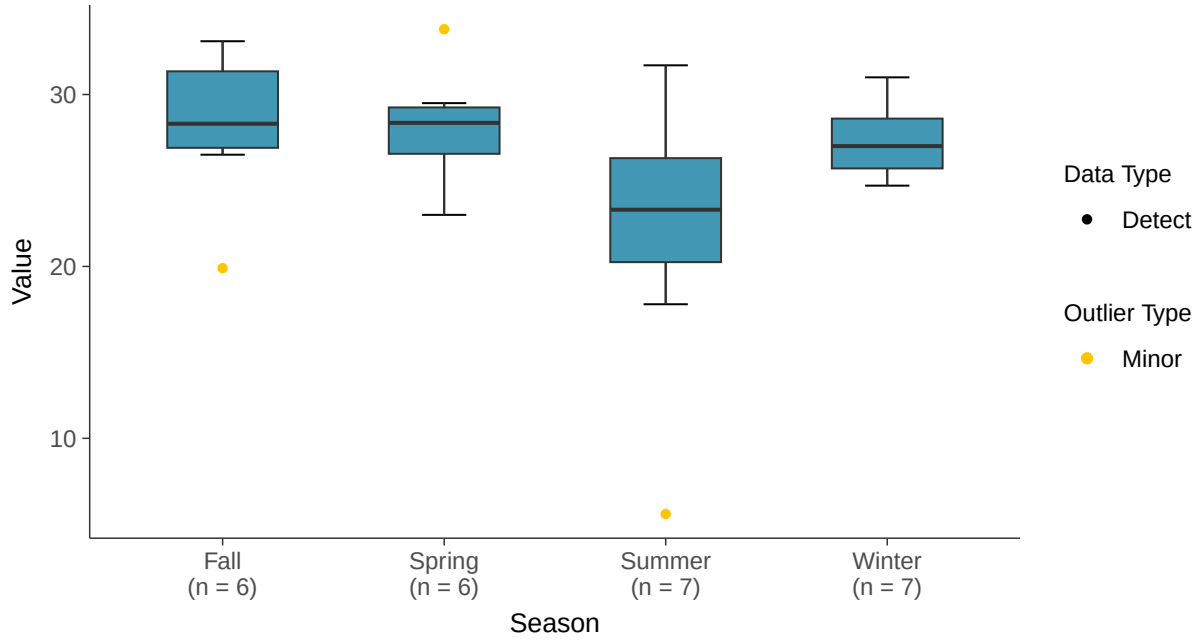
Boxplot

Lithium, MW-7R (ug/L)



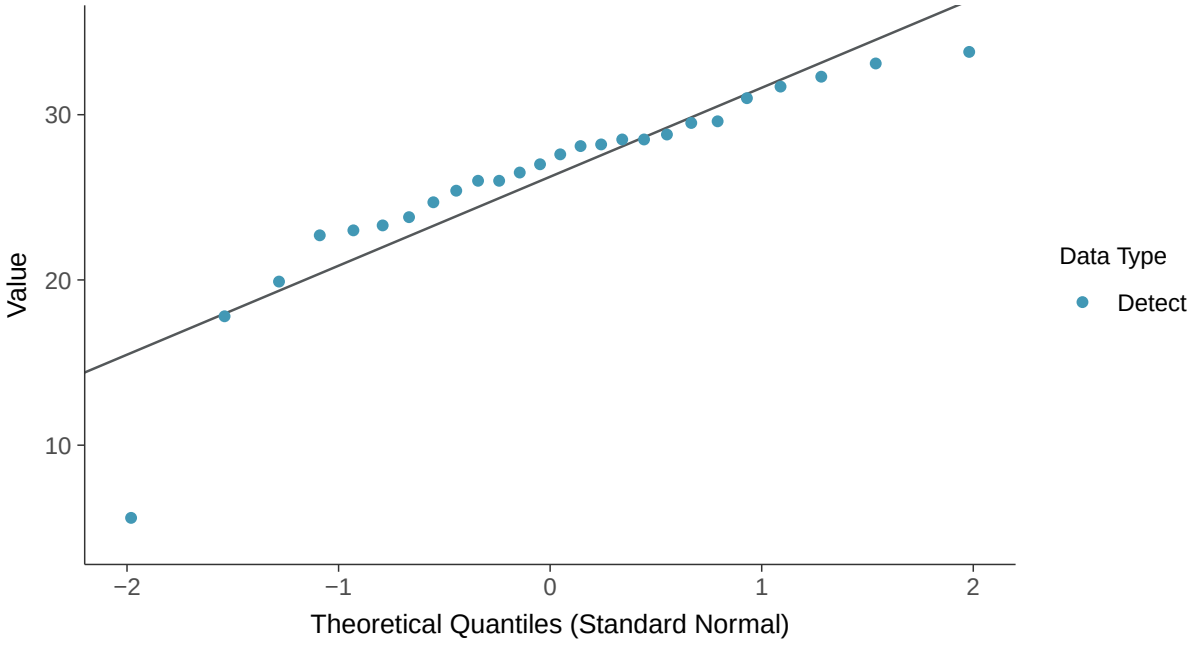
Boxplot by Season

Lithium, MW-7R (ug/L)



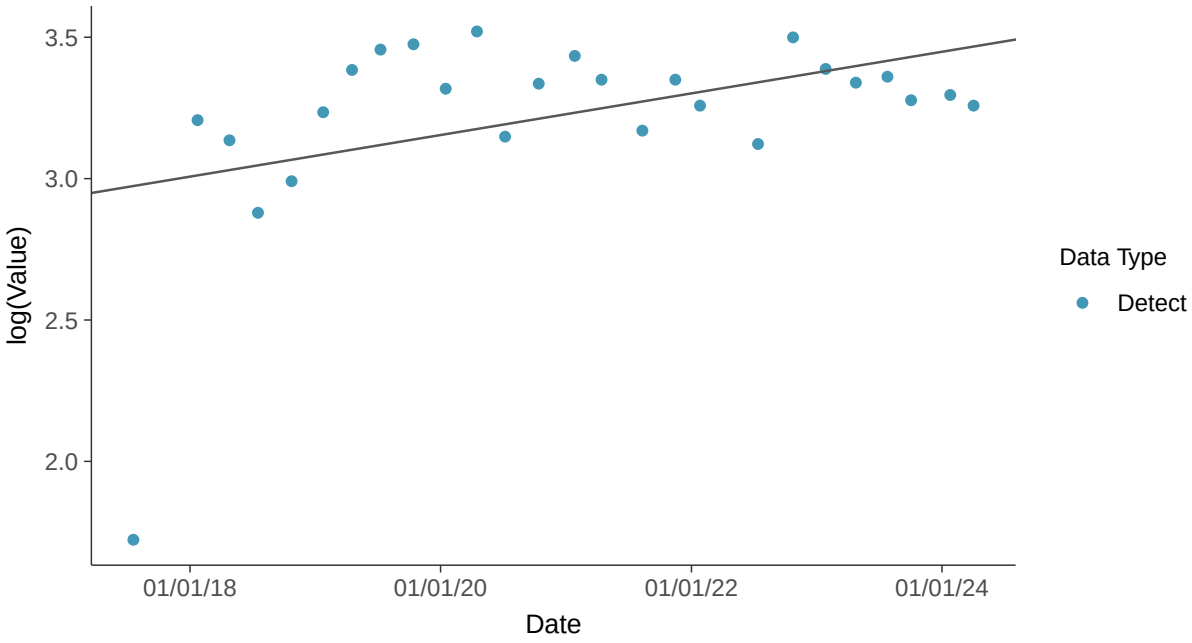
Normal Q-Q plot

Lithium, MW-7R (ug/L)



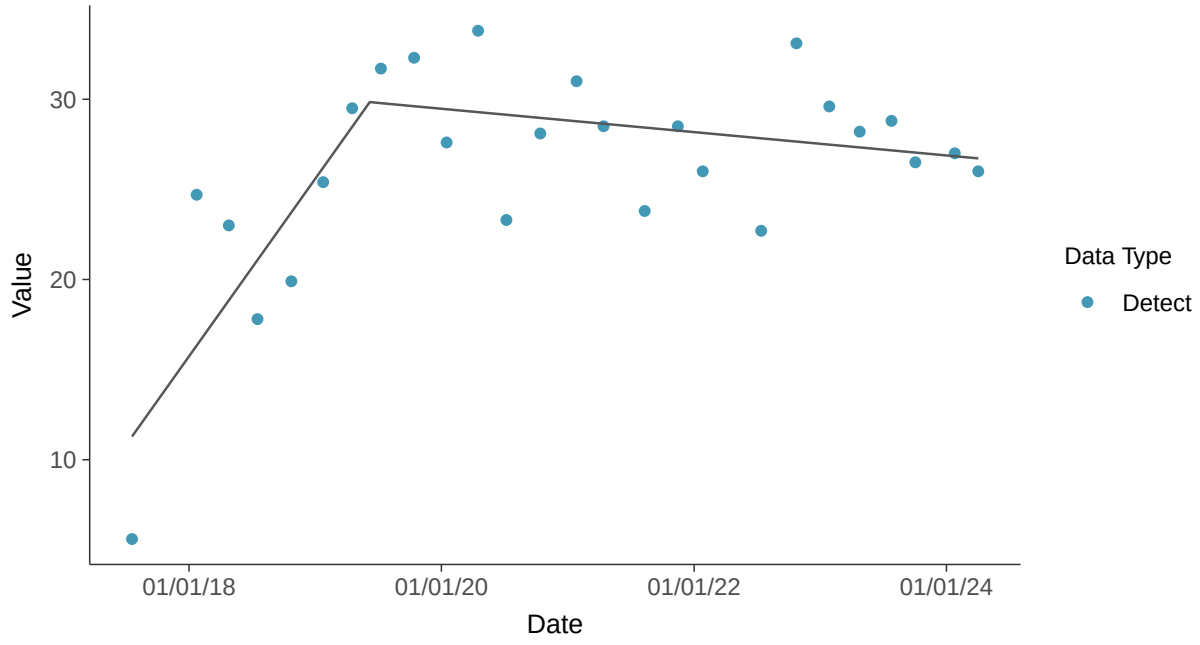
Trend Regression: Lognormal MLE

Lithium, MW-7R (ug/L)



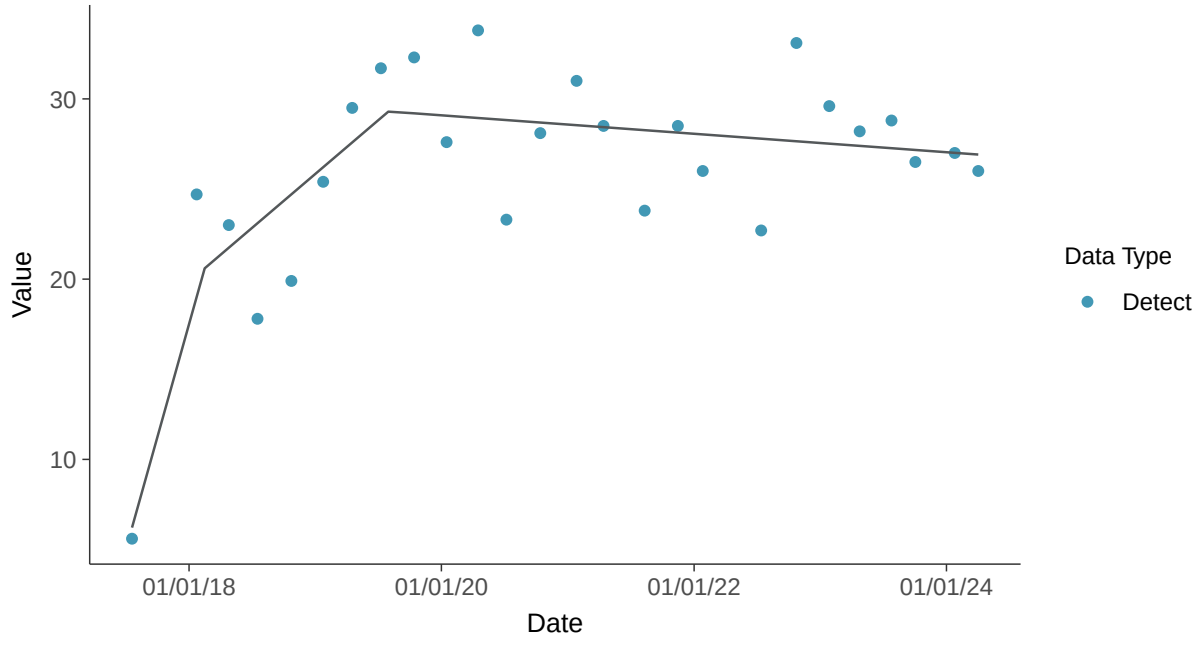
Trend Regression: Piecewise Linear-Linear

Lithium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lithium, MW-7R (ug/L)

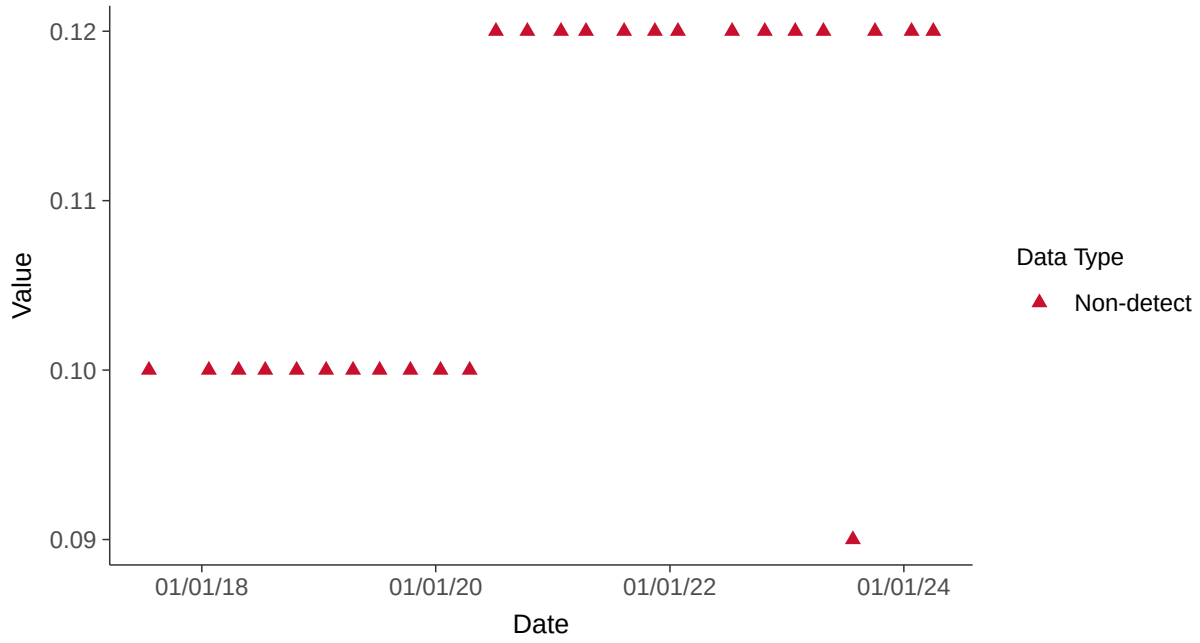


App. IV: Mercury, MW-7R

ID: 10_3_115

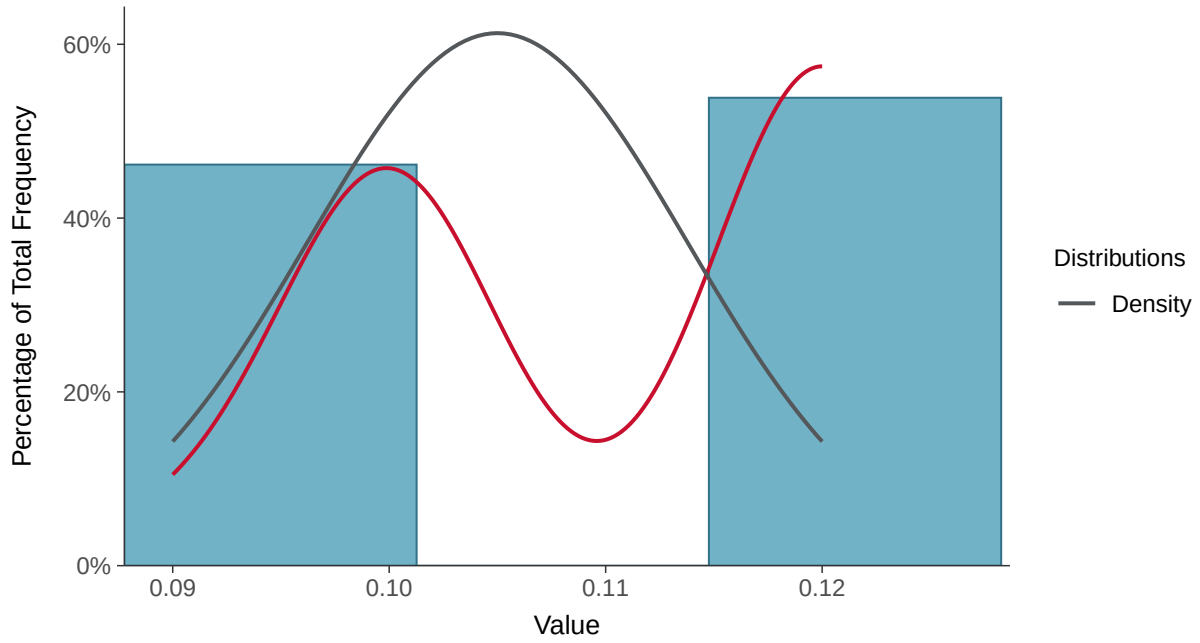
Scatter Plot

Mercury, MW-7R (ug/L)



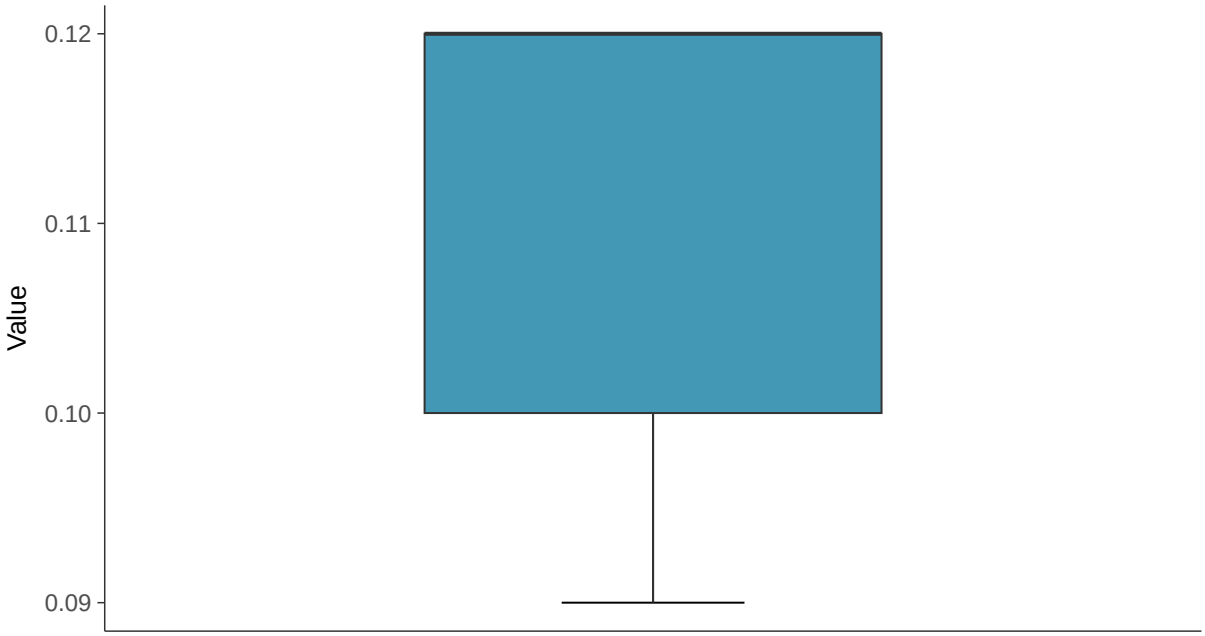
Histogram

Mercury, MW-7R (ug/L)



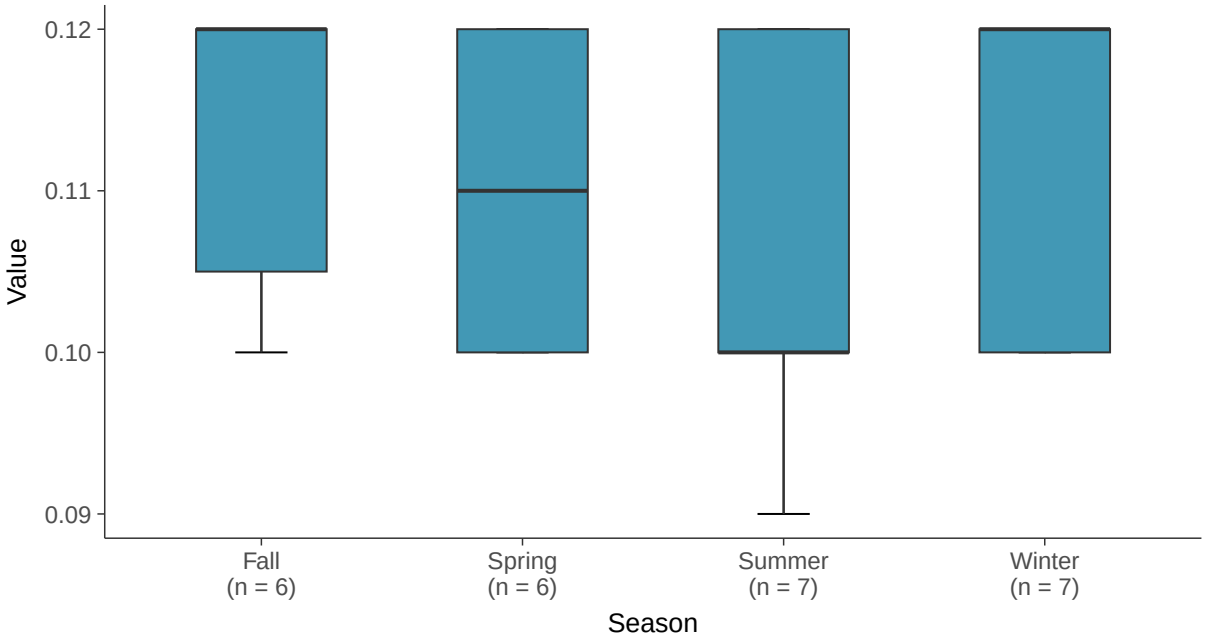
Boxplot

Mercury, MW-7R (ug/L)



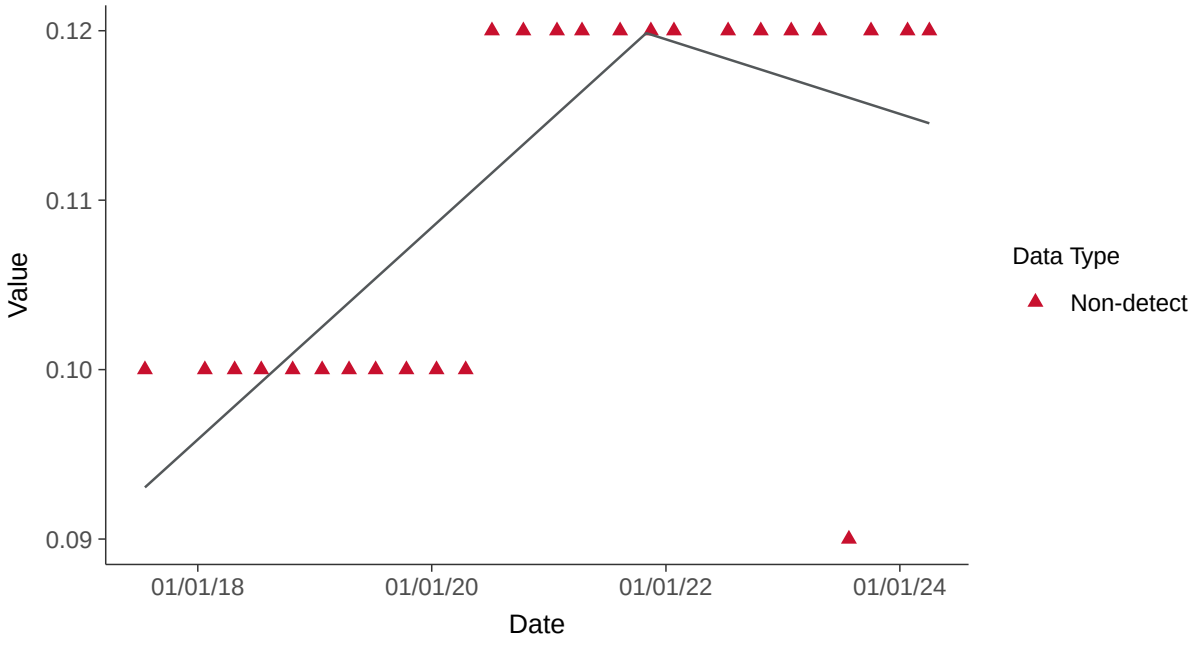
Boxplot by Season

Mercury, MW-7R (ug/L)



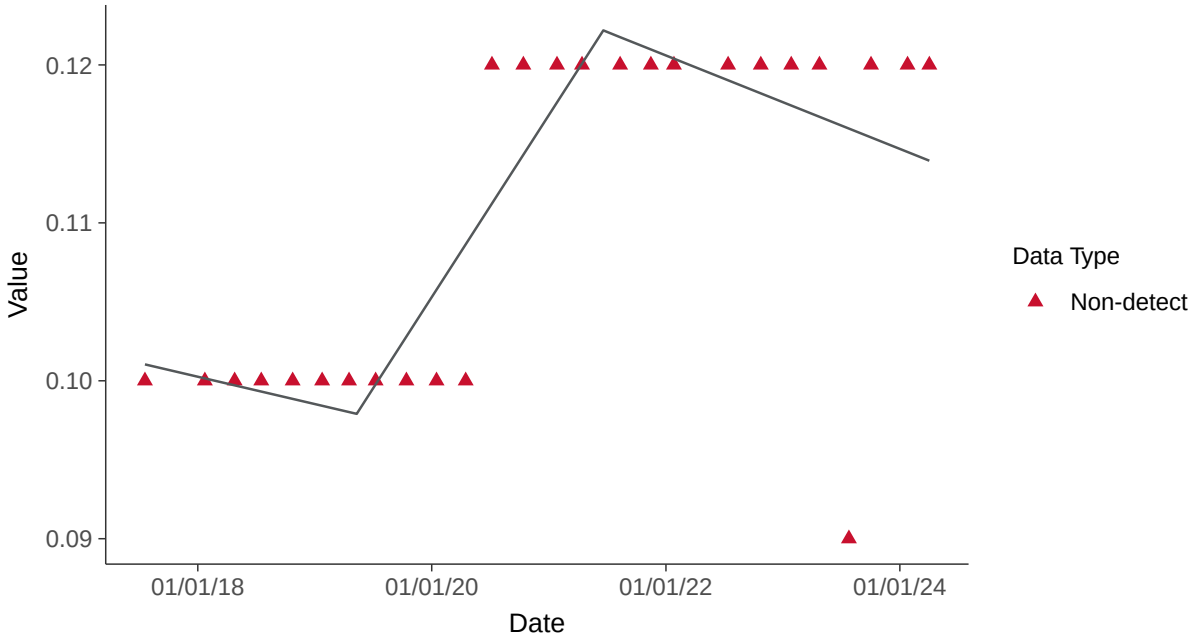
Trend Regression: Piecewise Linear-Linear

Mercury, MW-7R (ug/L)



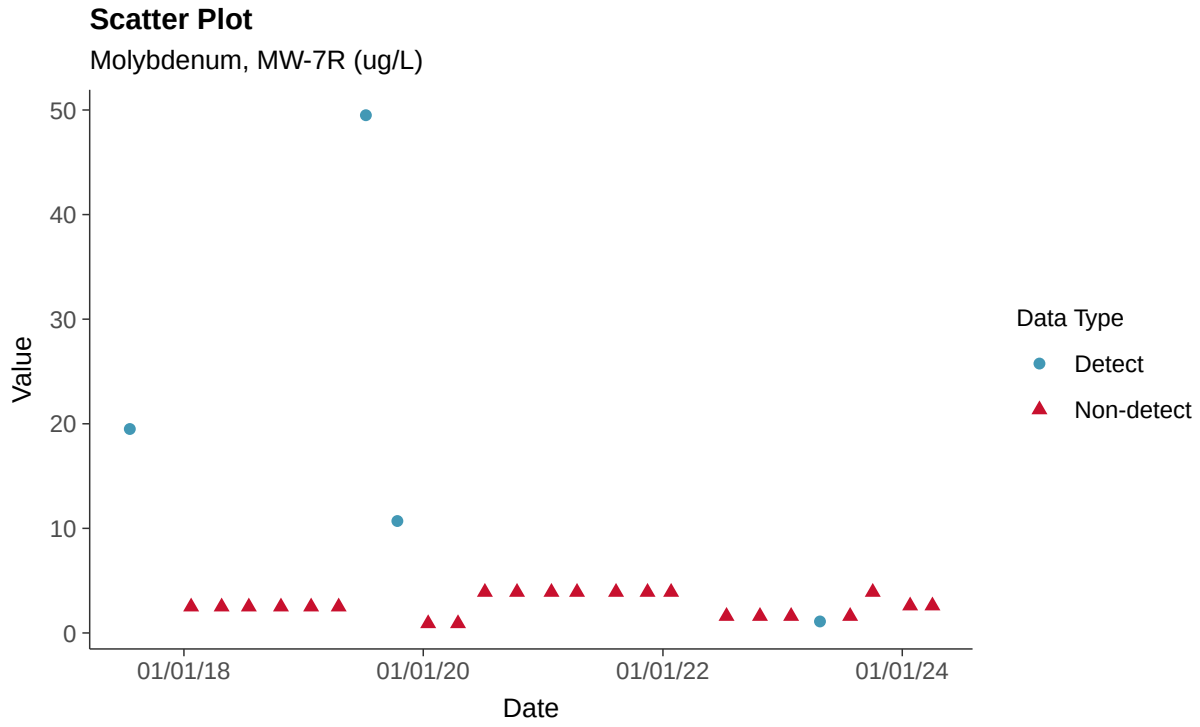
Trend Regression: Piecewise Linear-Linear-Linear

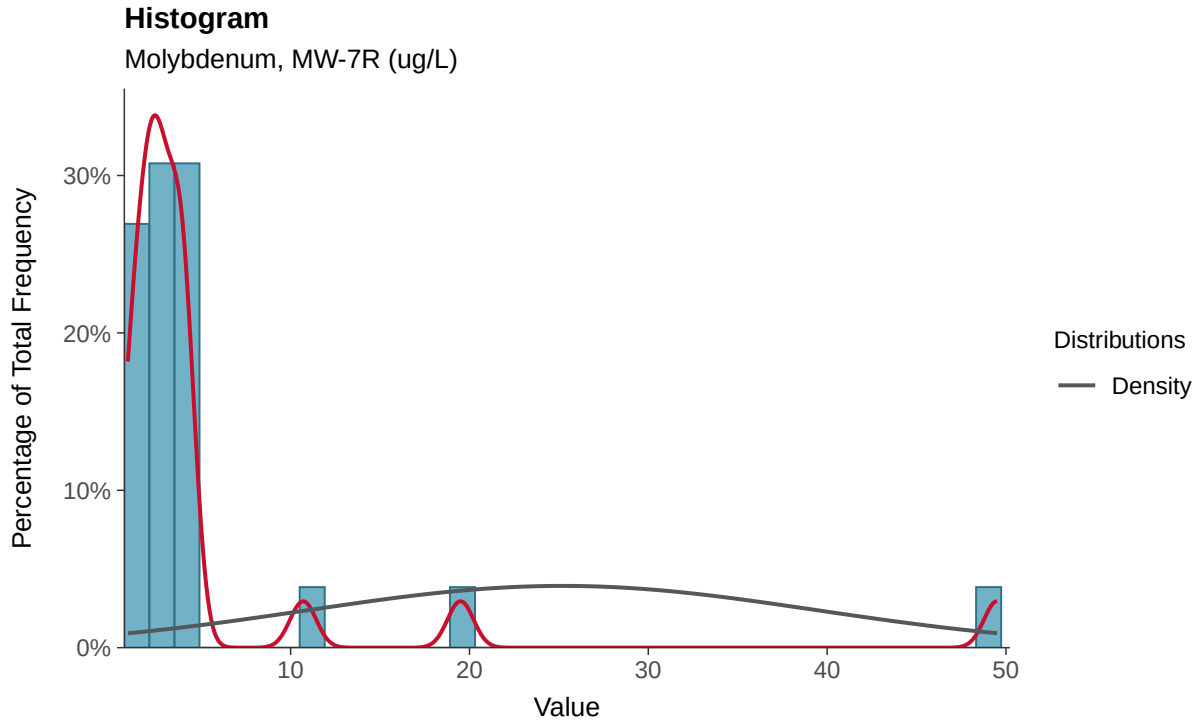
Mercury, MW-7R (ug/L)



App. IV: Molybdenum, MW-7R

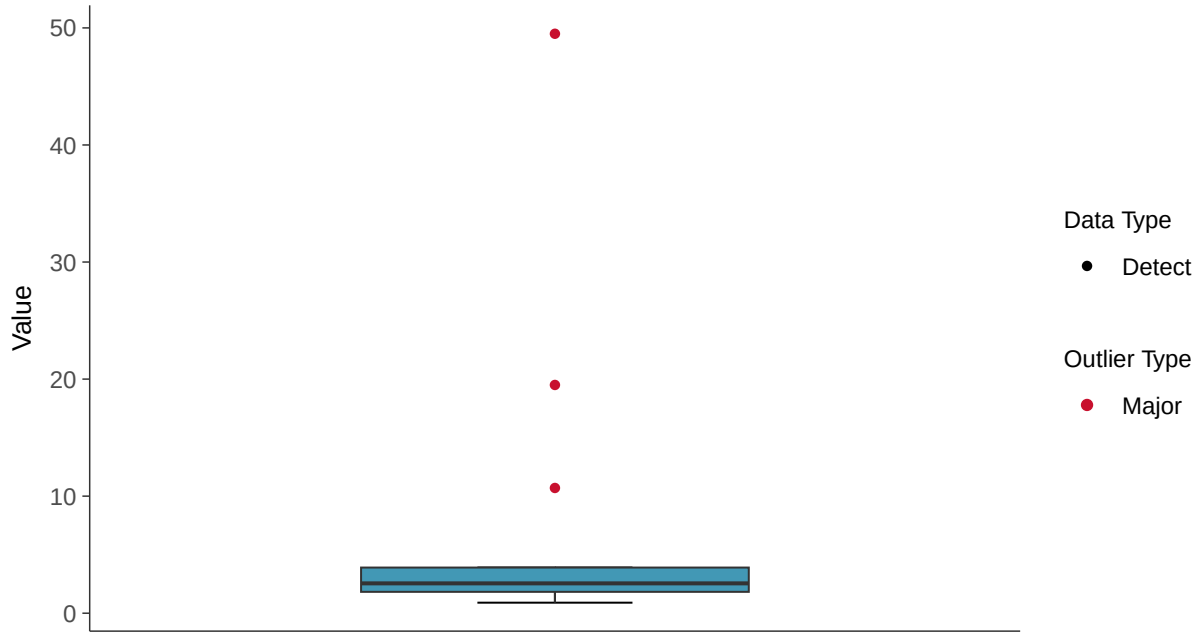
ID: 10_3_116





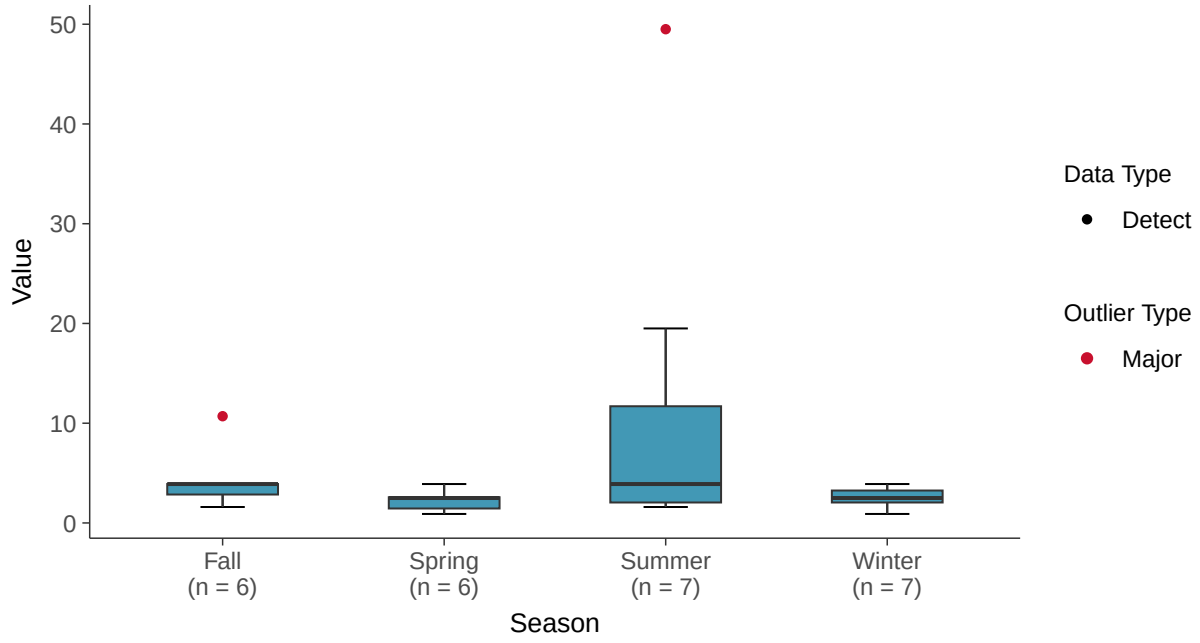
Boxplot

Molybdenum, MW-7R (ug/L)



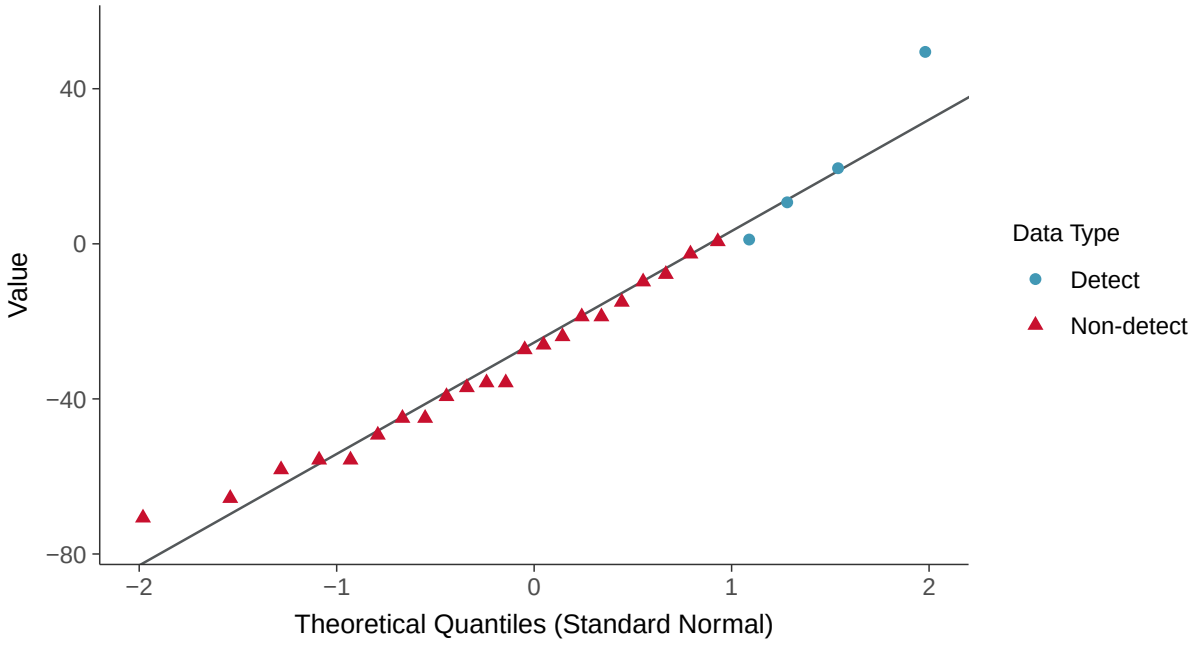
Boxplot by Season

Molybdenum, MW-7R (ug/L)



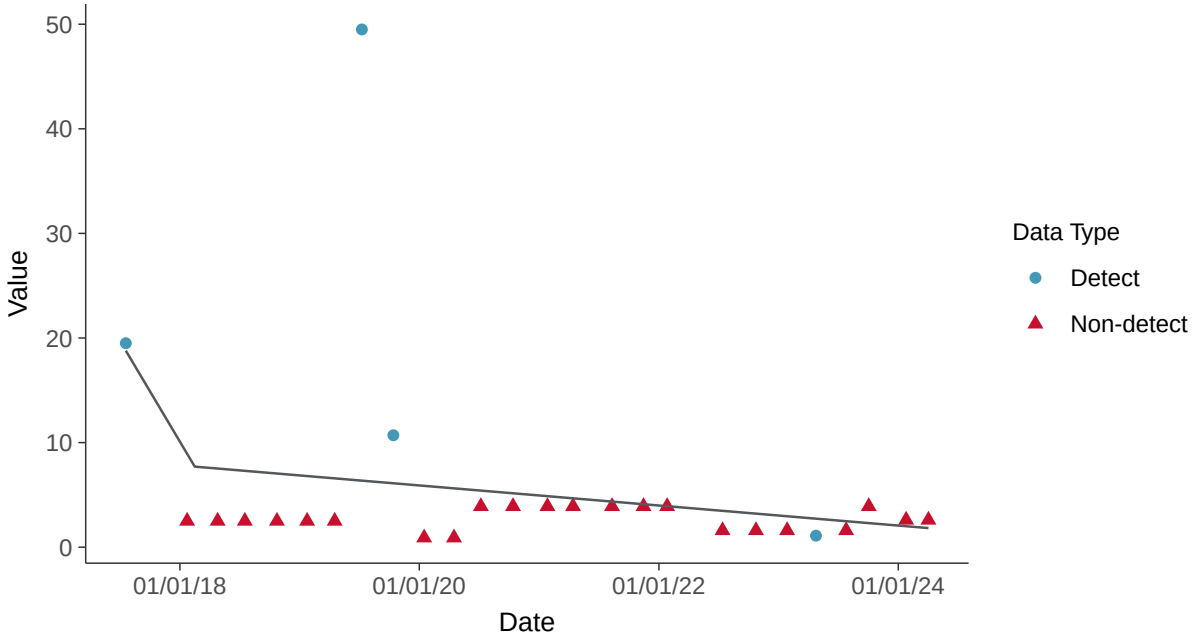
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-7R (ug/L)



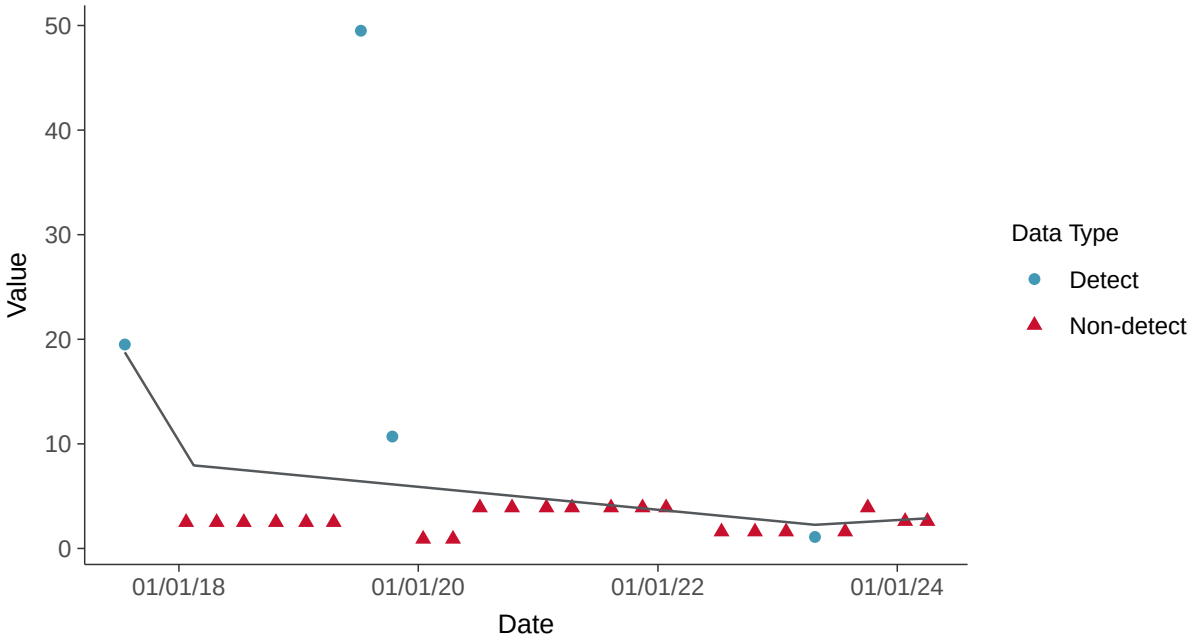
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-7R (ug/L)

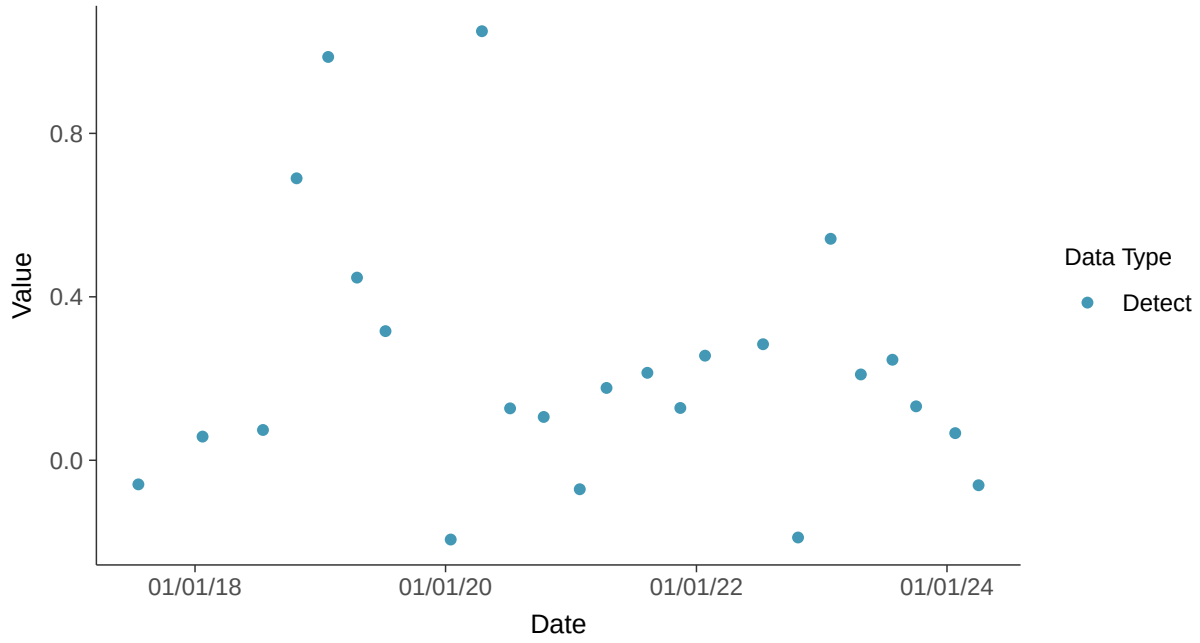


App. IV: Radium-226, MW-7R

ID: 10_3_119

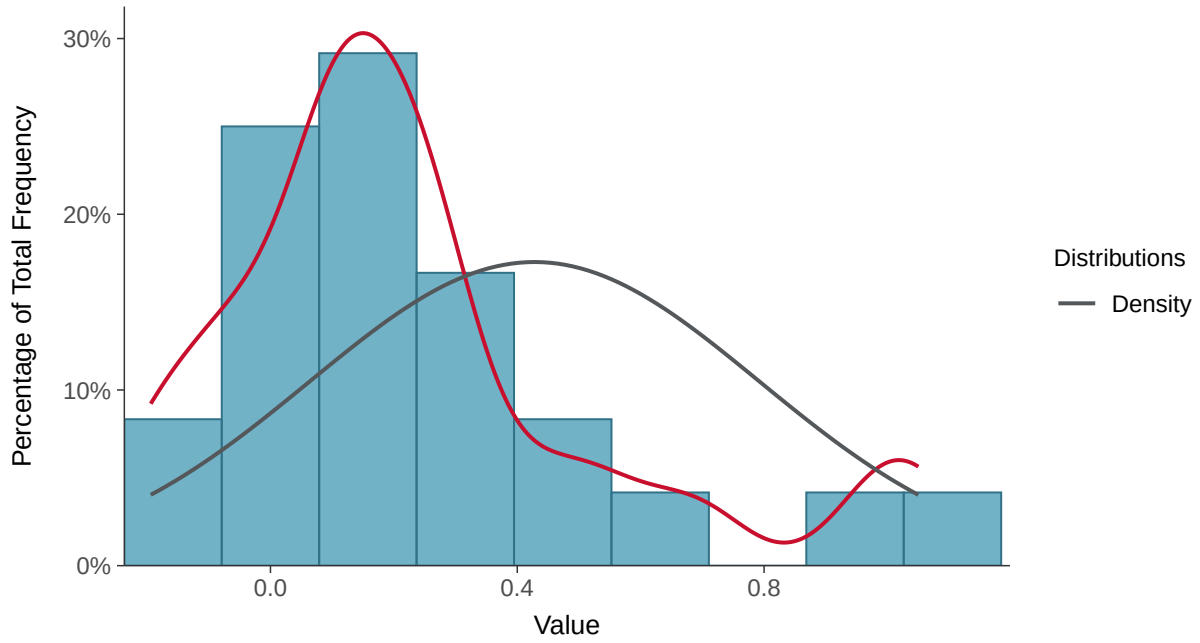
Scatter Plot

Radium-226, MW-7R (pCi/L)



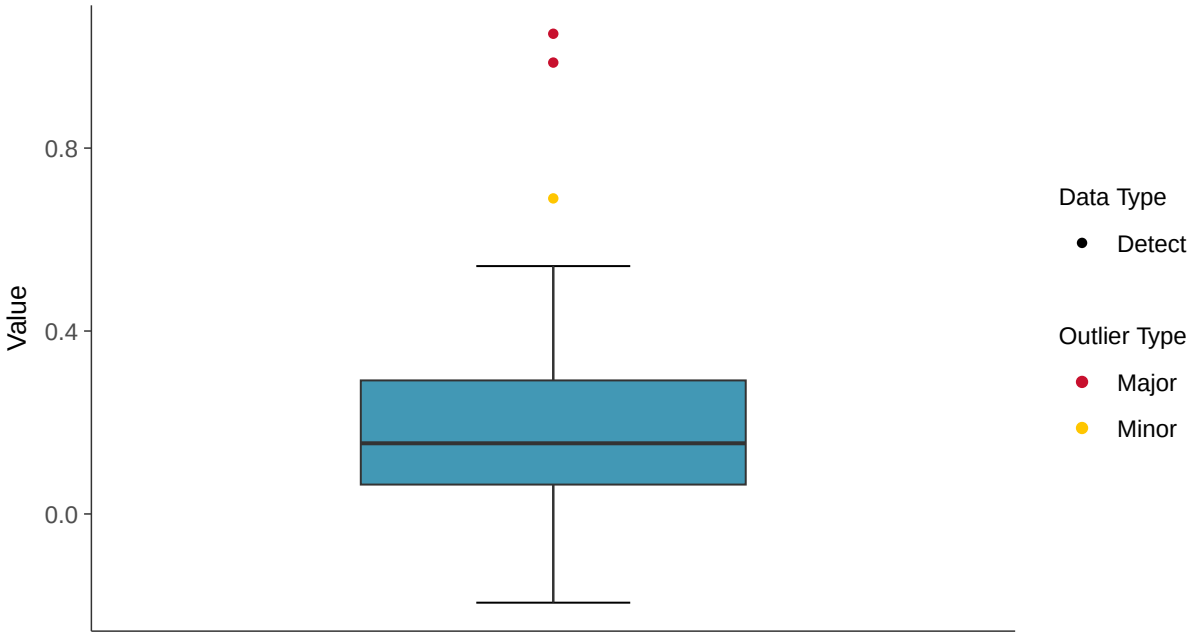
Histogram

Radium-226, MW-7R (pCi/L)



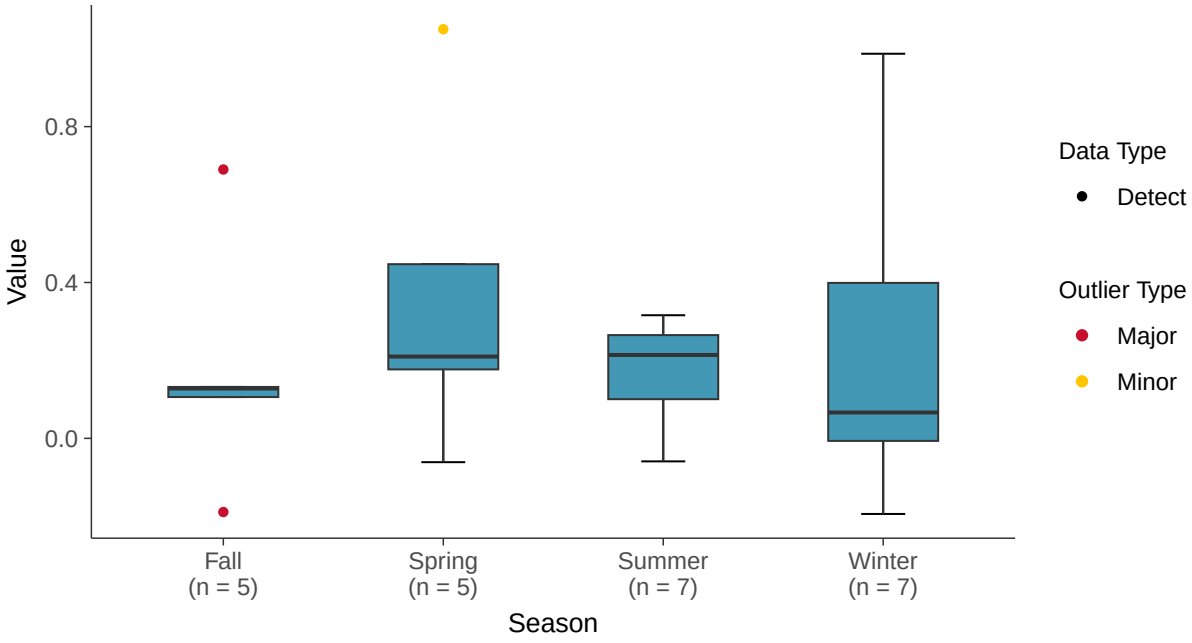
Boxplot

Radium-226, MW-7R (pCi/L)



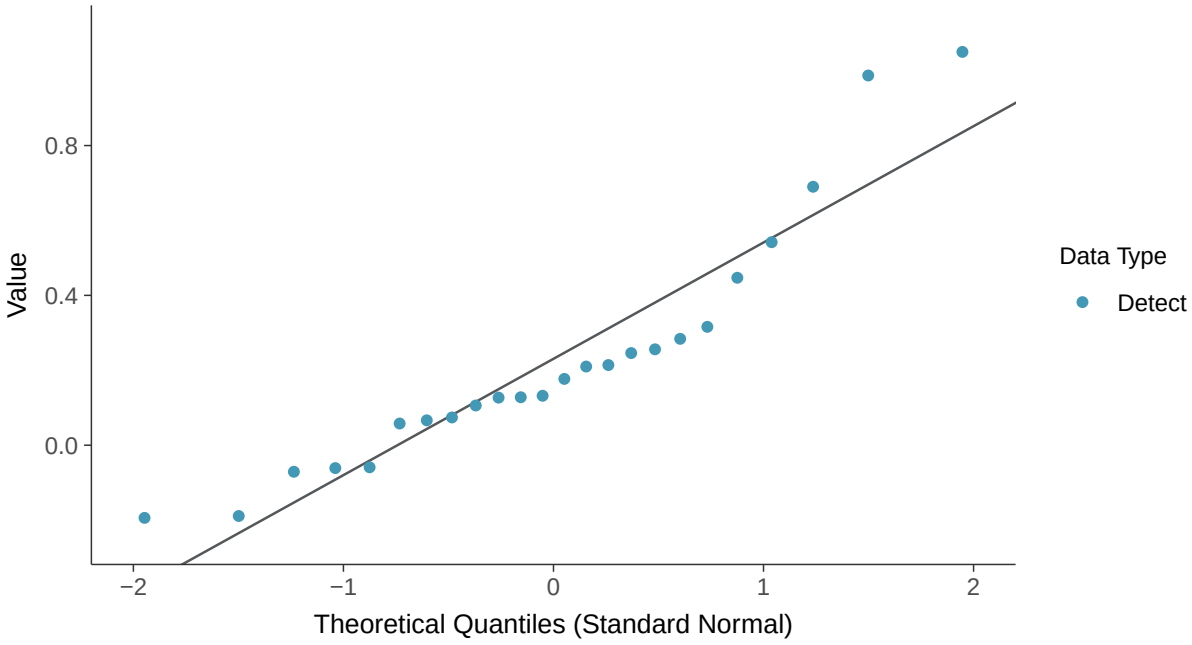
Boxplot by Season

Radium-226, MW-7R (pCi/L)



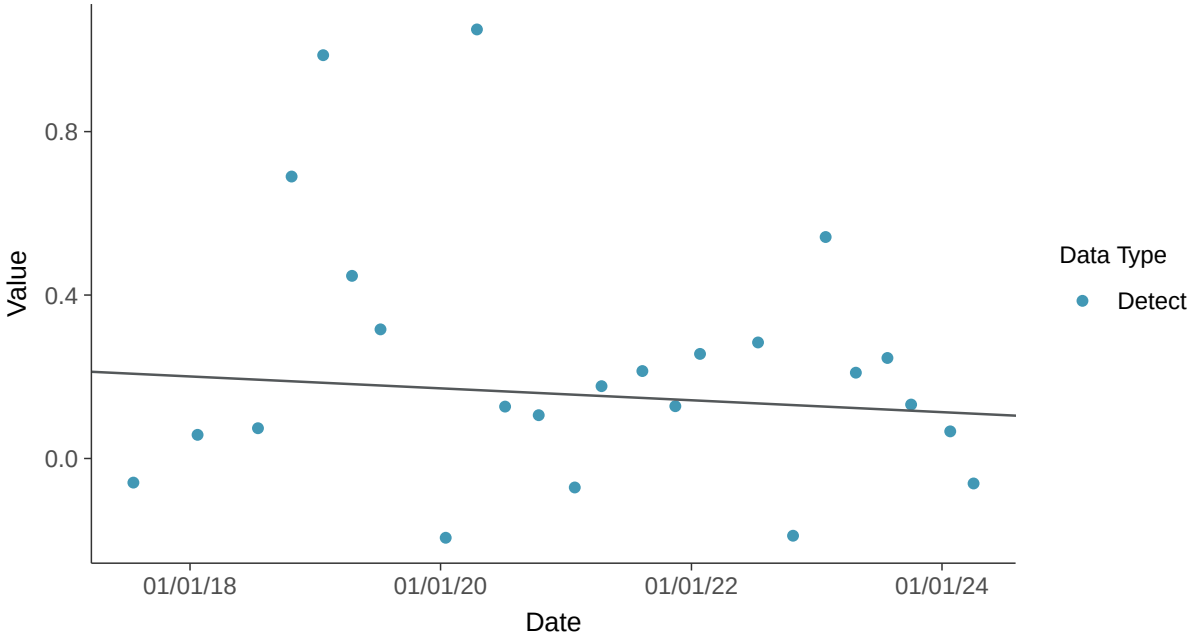
Normal Q-Q plot

Radium-226, MW-7R (pCi/L)



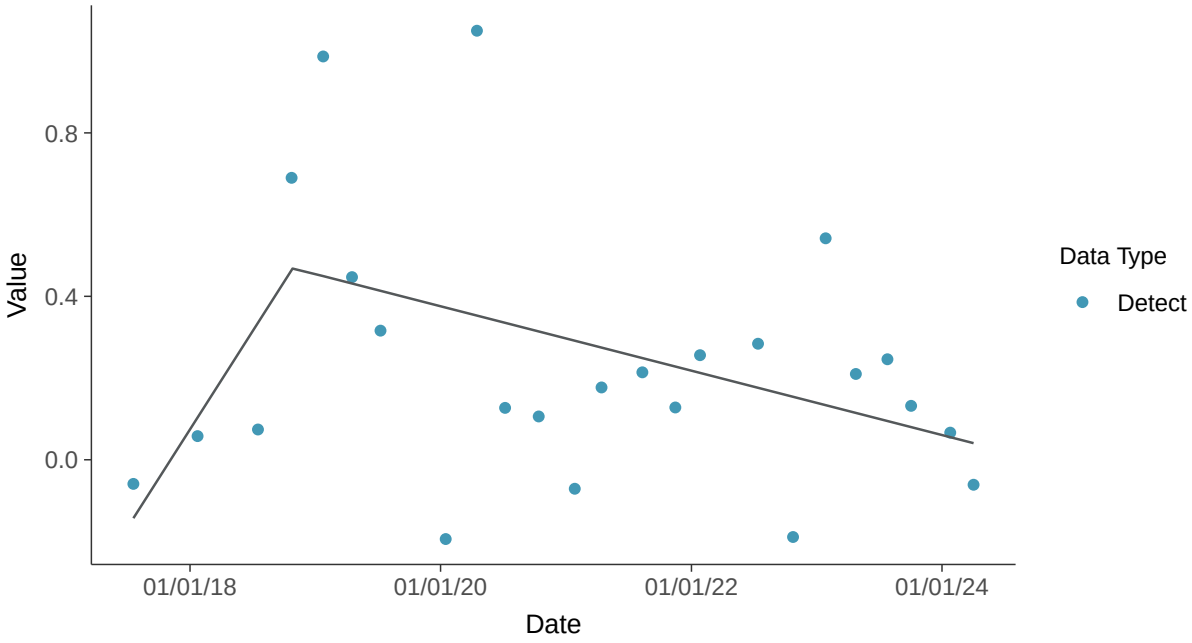
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-7R (pCi/L)



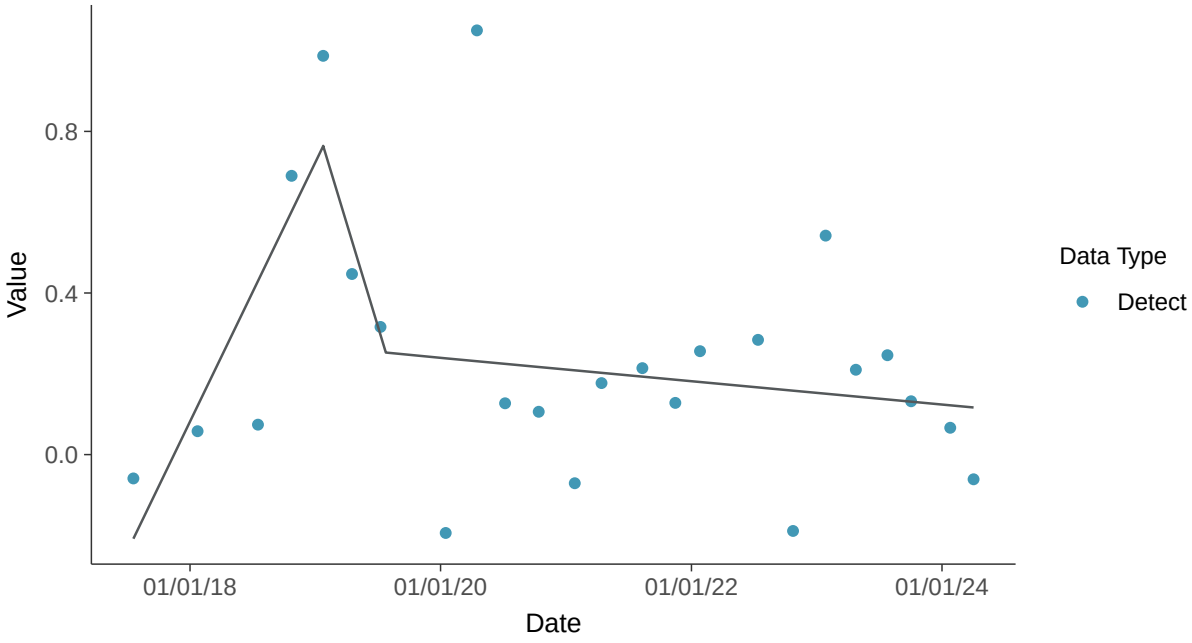
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-7R (pCi/L)



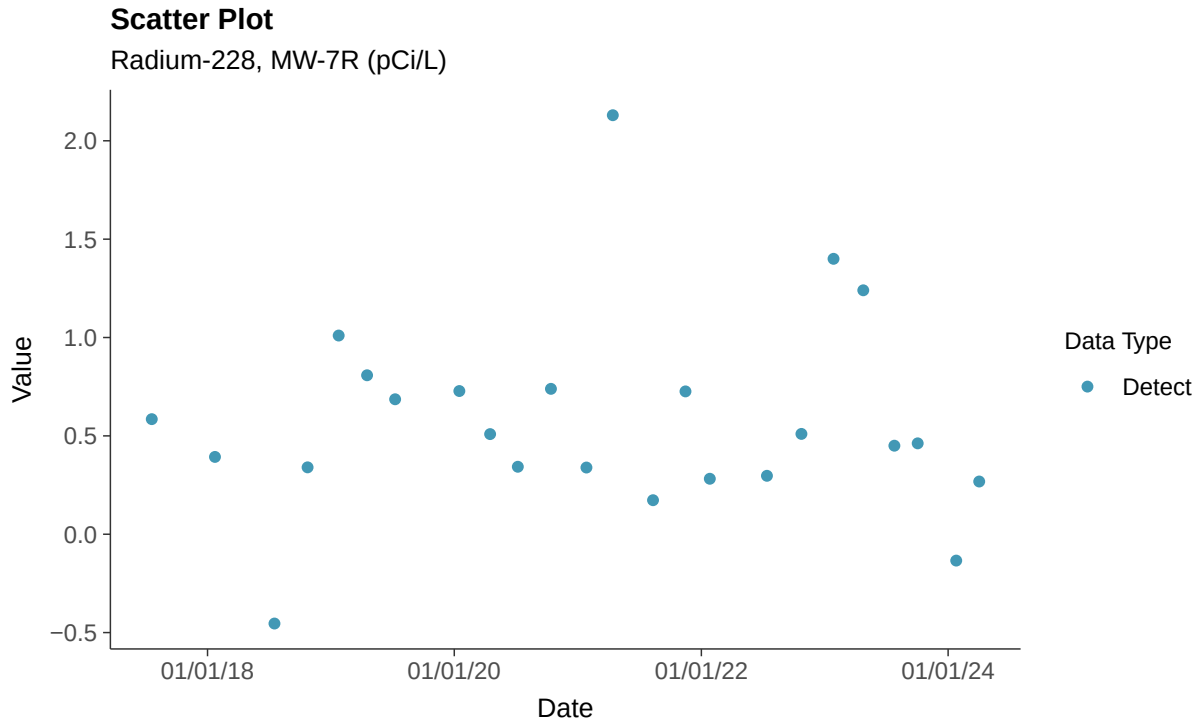
Trend Regression: Piecewise Linear-Linear-Linear

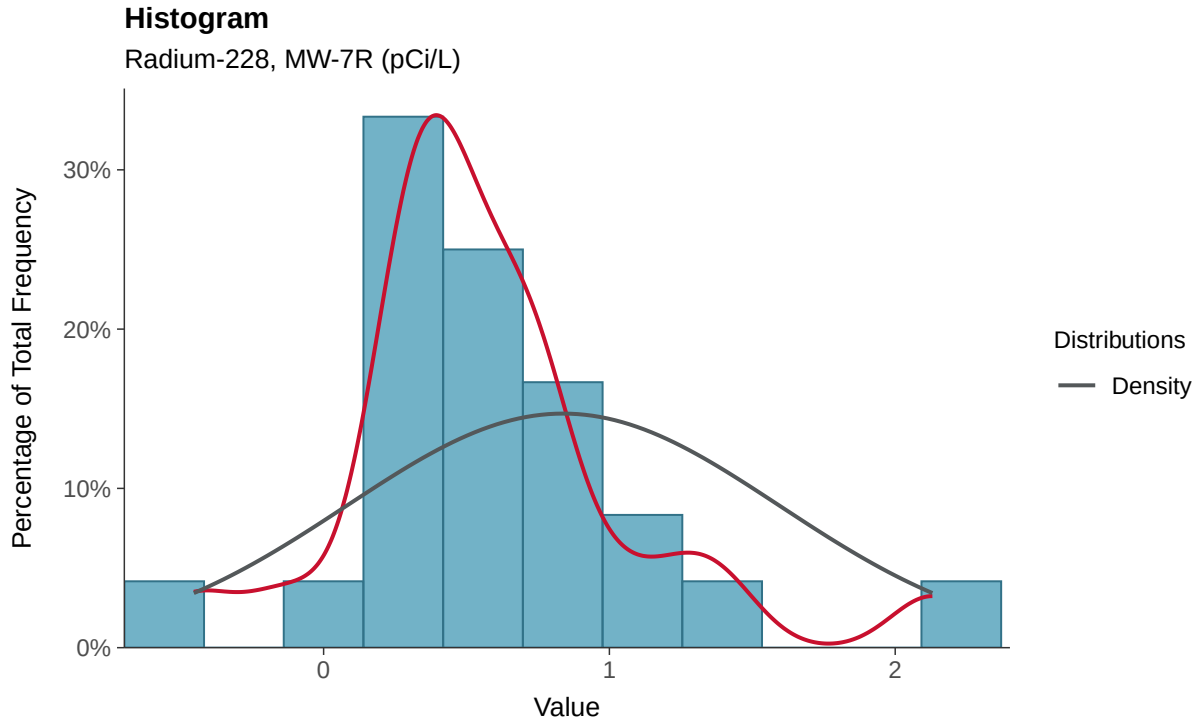
Radium-226, MW-7R (pCi/L)



App. IV: Radium-228, MW-7R

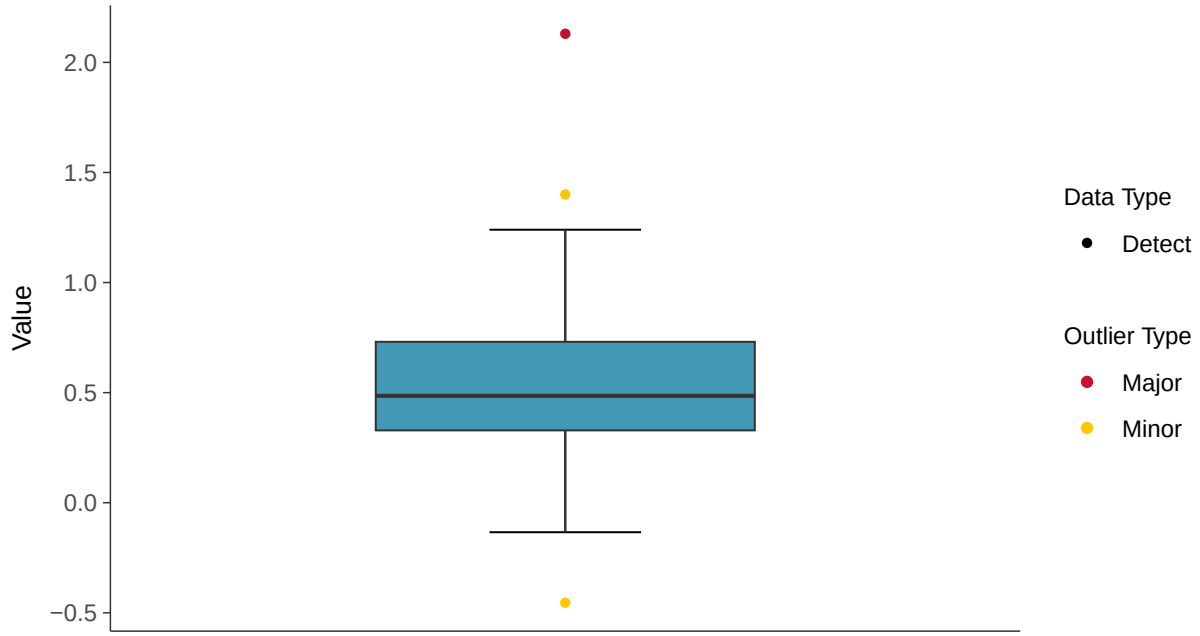
ID: 10_3_120





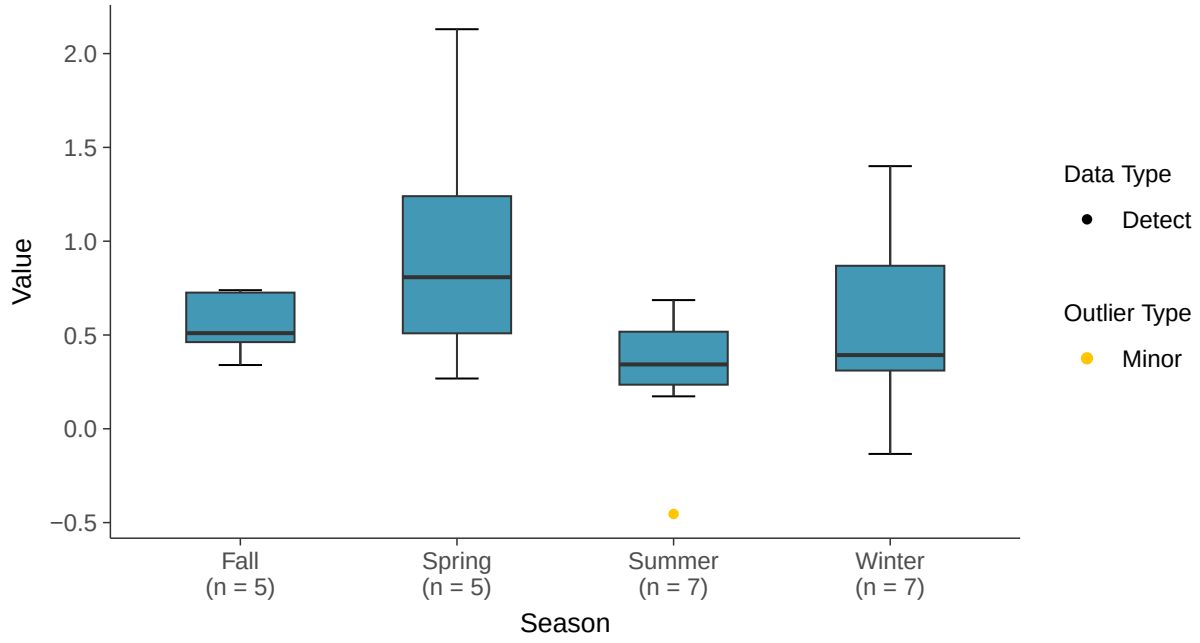
Boxplot

Radium-228, MW-7R (pCi/L)



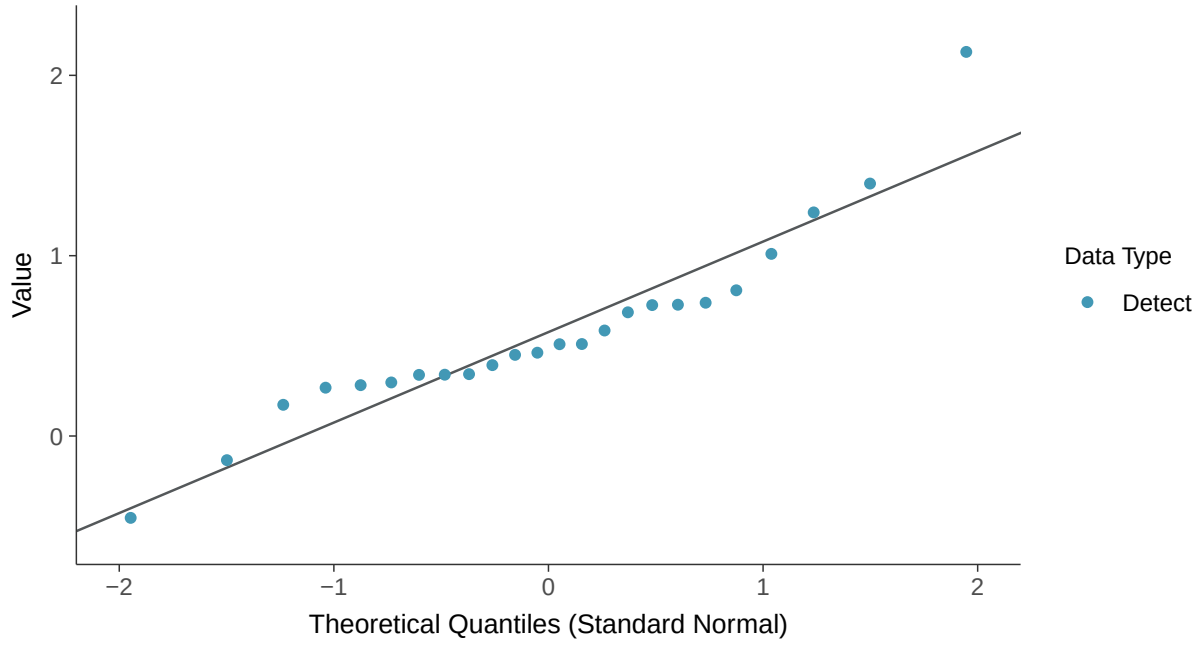
Boxplot by Season

Radium-228, MW-7R (pCi/L)



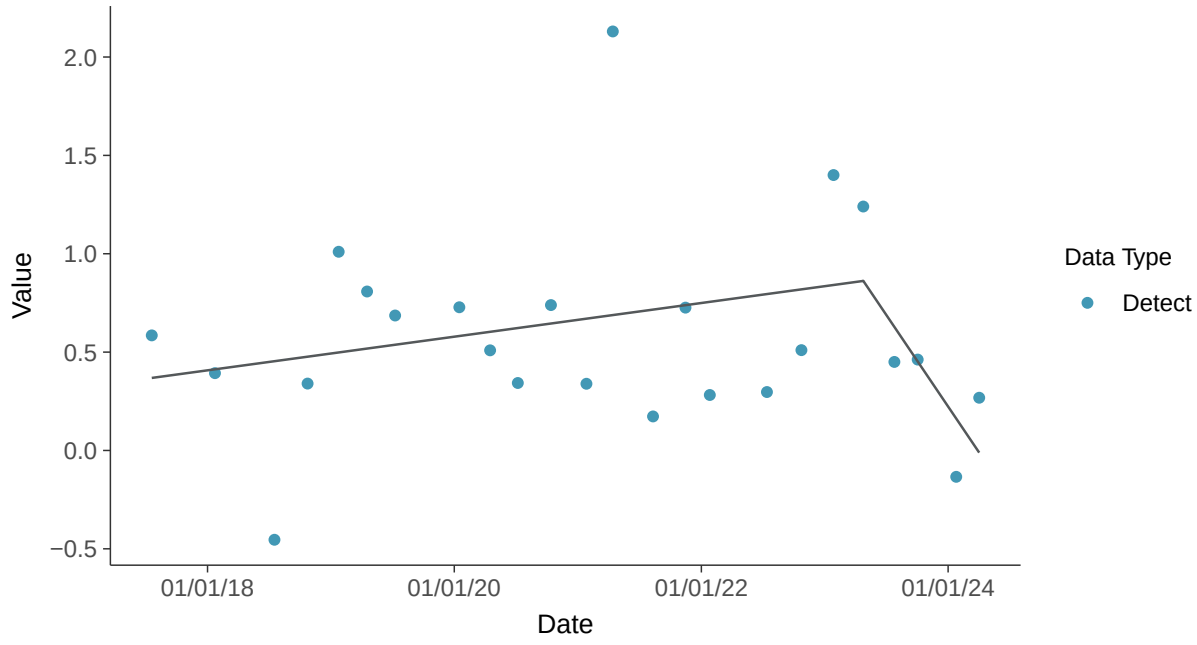
Normal Q-Q plot

Radium-228, MW-7R (pCi/L)



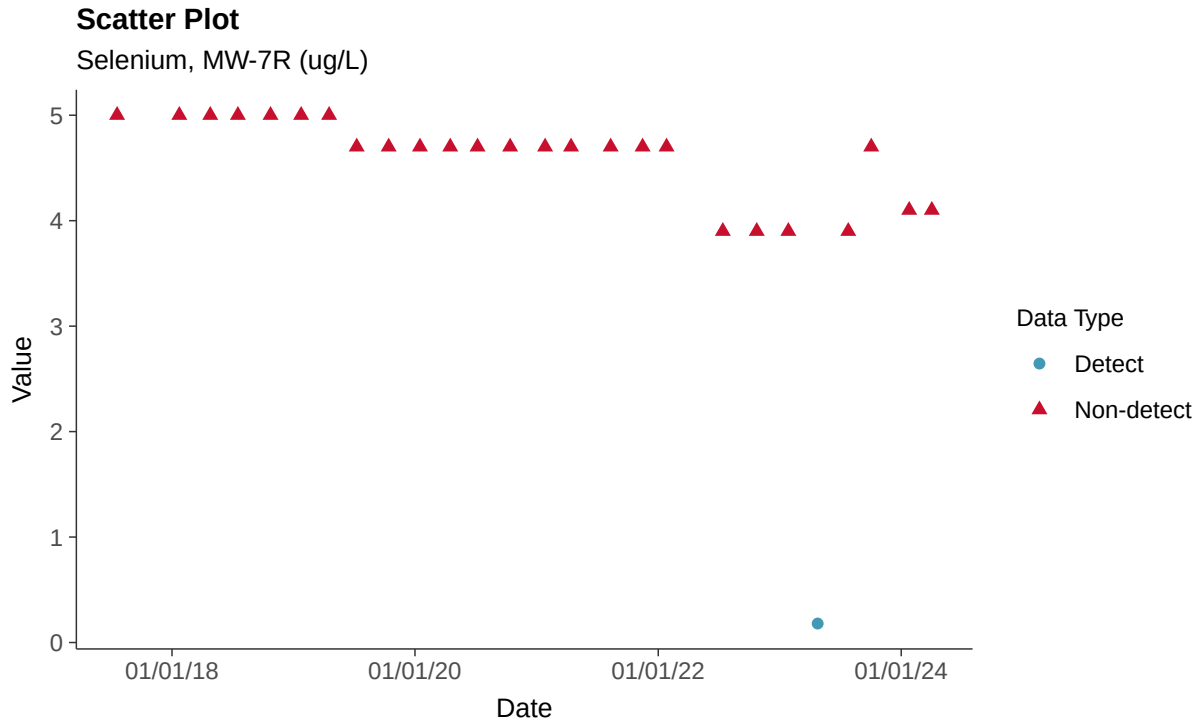
Trend Regression: Piecewise Linear-Linear

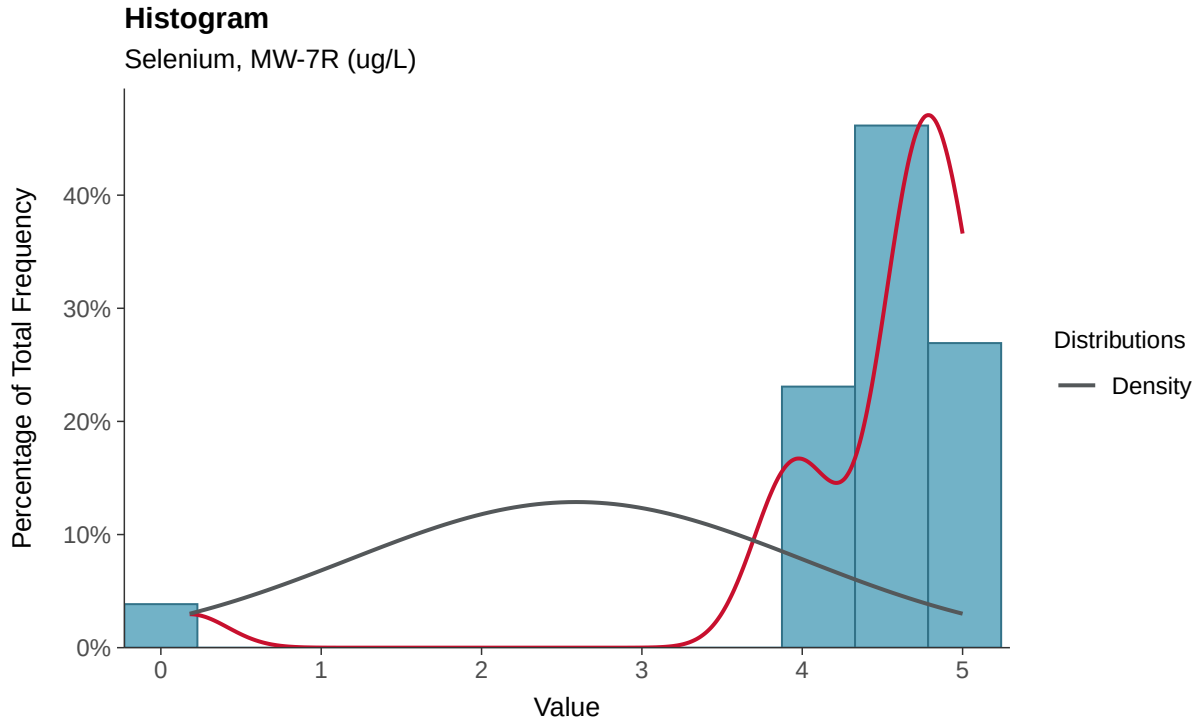
Radium-228, MW-7R (pCi/L)



App. IV: Selenium, MW-7R

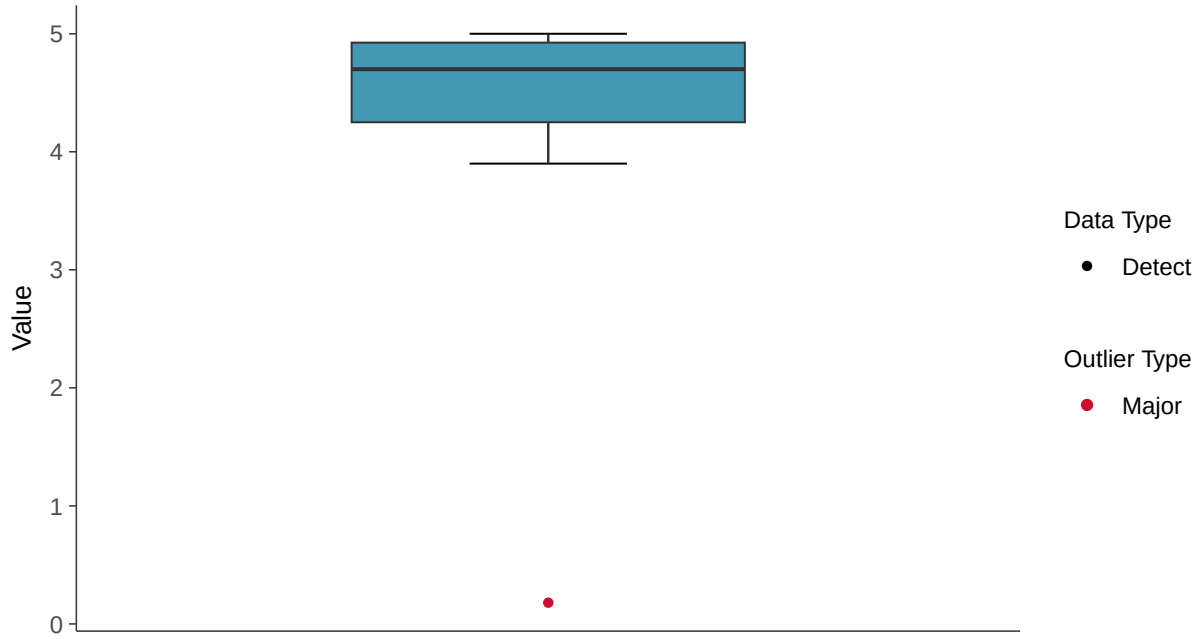
ID: 10_3_121





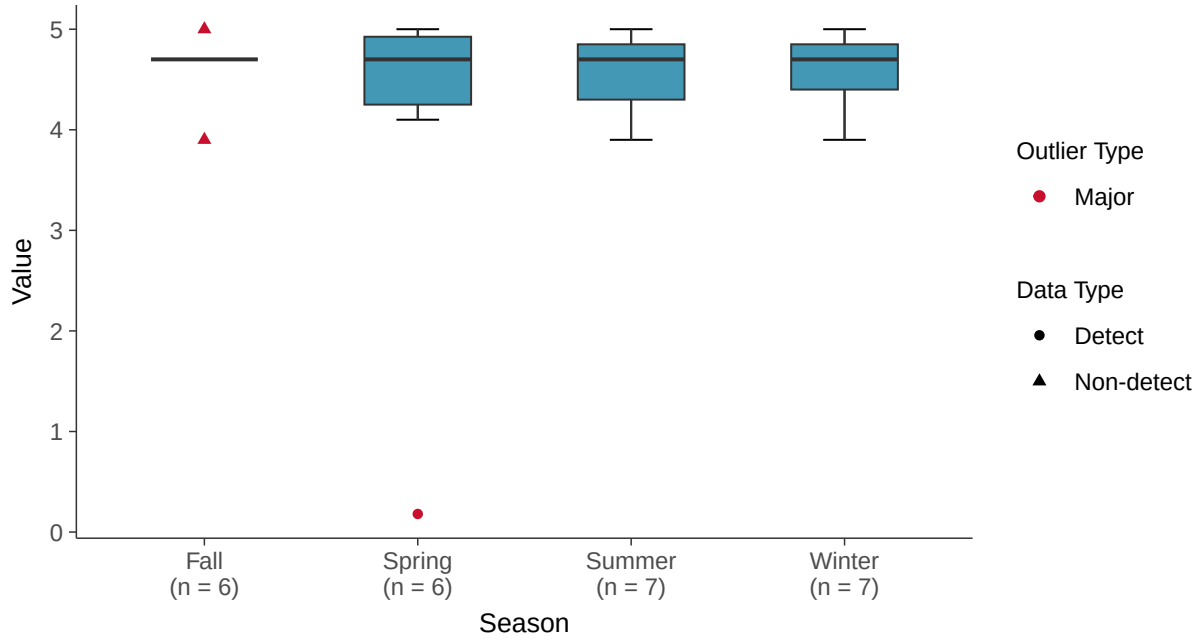
Boxplot

Selenium, MW-7R (ug/L)



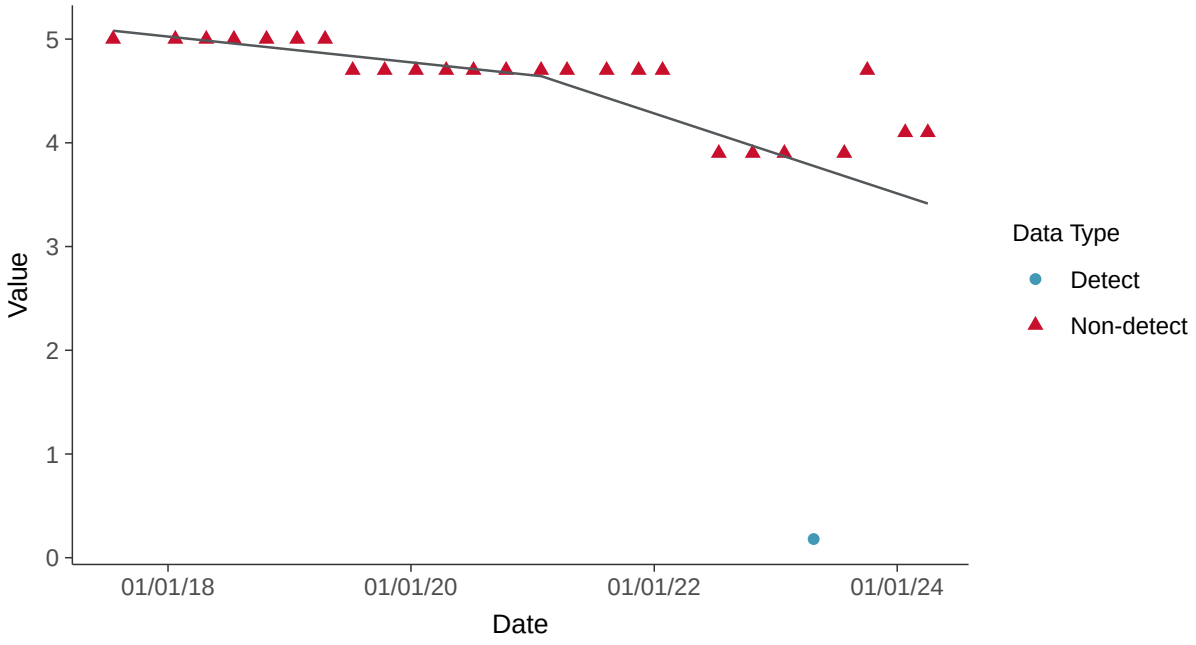
Boxplot by Season

Selenium, MW-7R (ug/L)



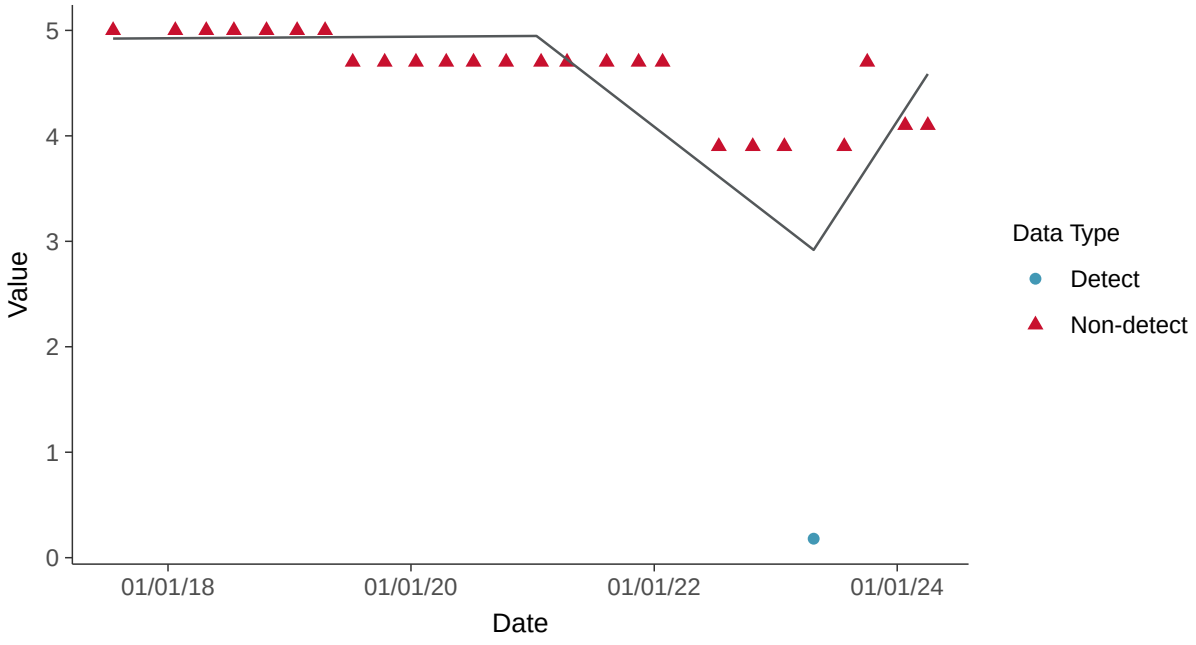
Trend Regression: Piecewise Linear-Linear

Selenium, MW-7R (ug/L)



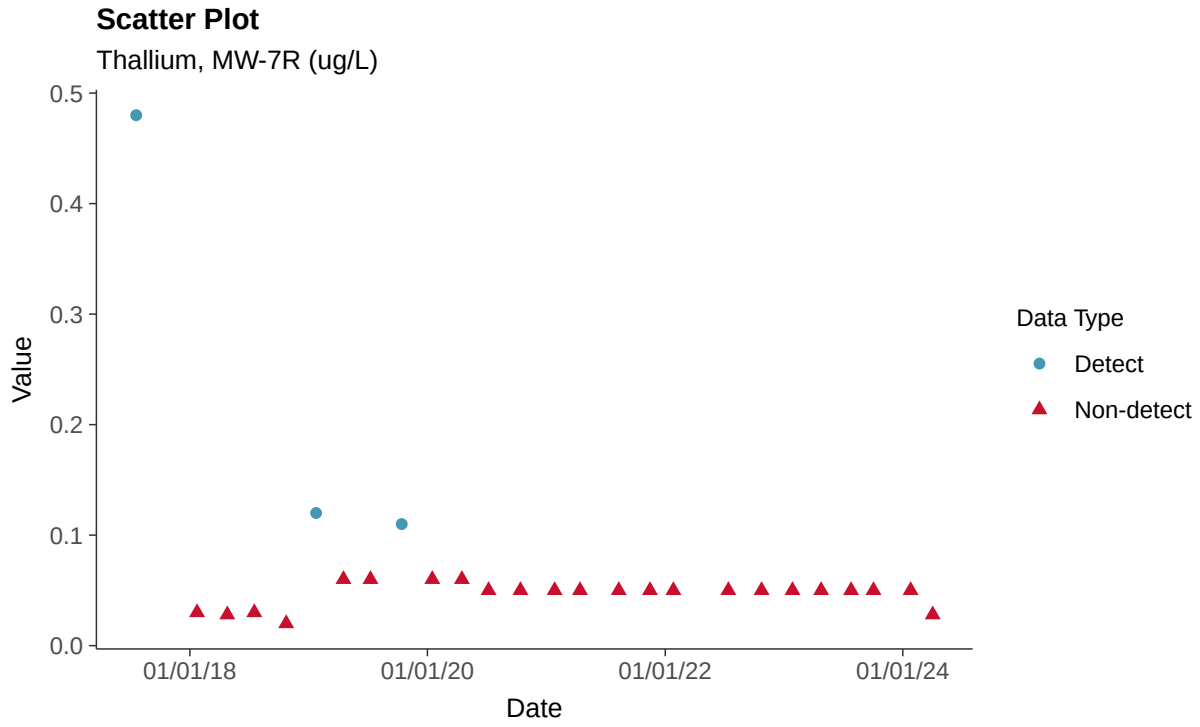
Trend Regression: Piecewise Linear-Linear-Linear

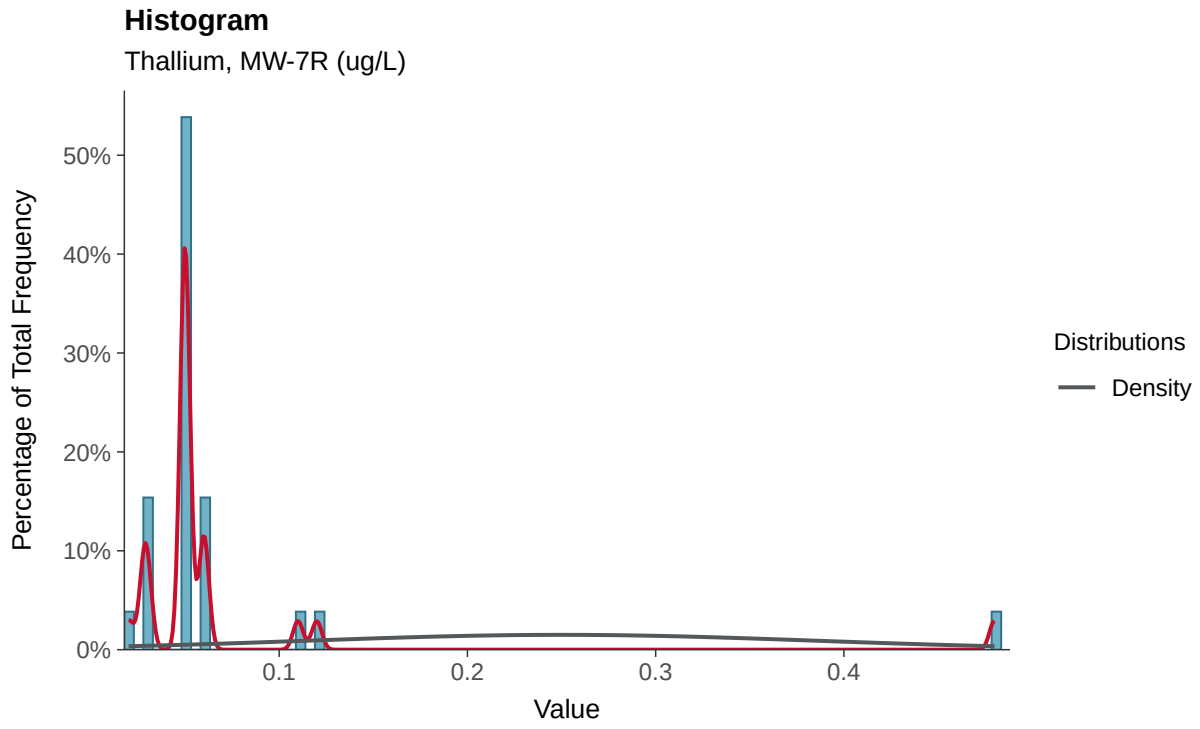
Selenium, MW-7R (ug/L)



App. IV: Thallium, MW-7R

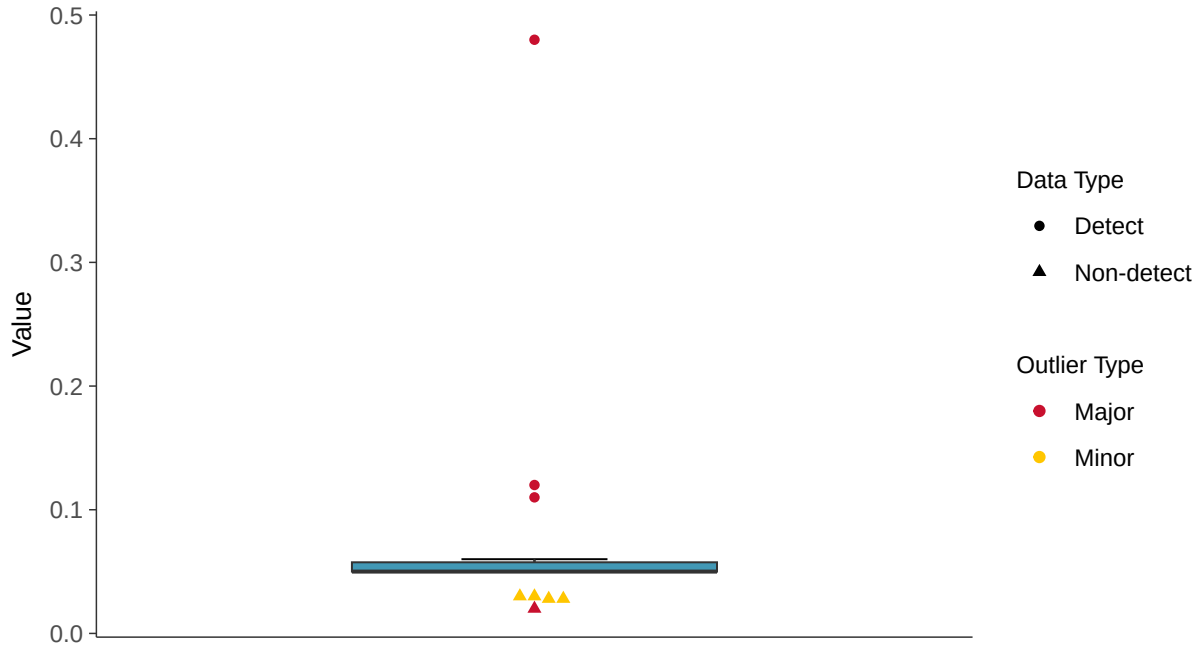
ID: 10_3_124





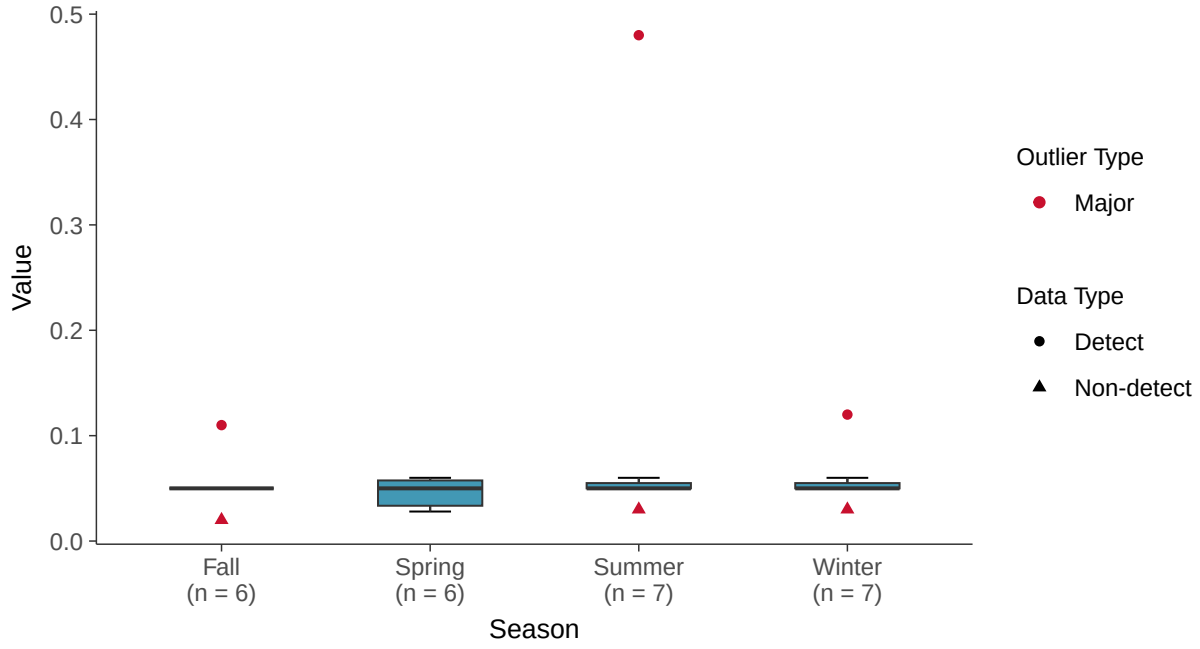
Boxplot

Thallium, MW-7R (ug/L)



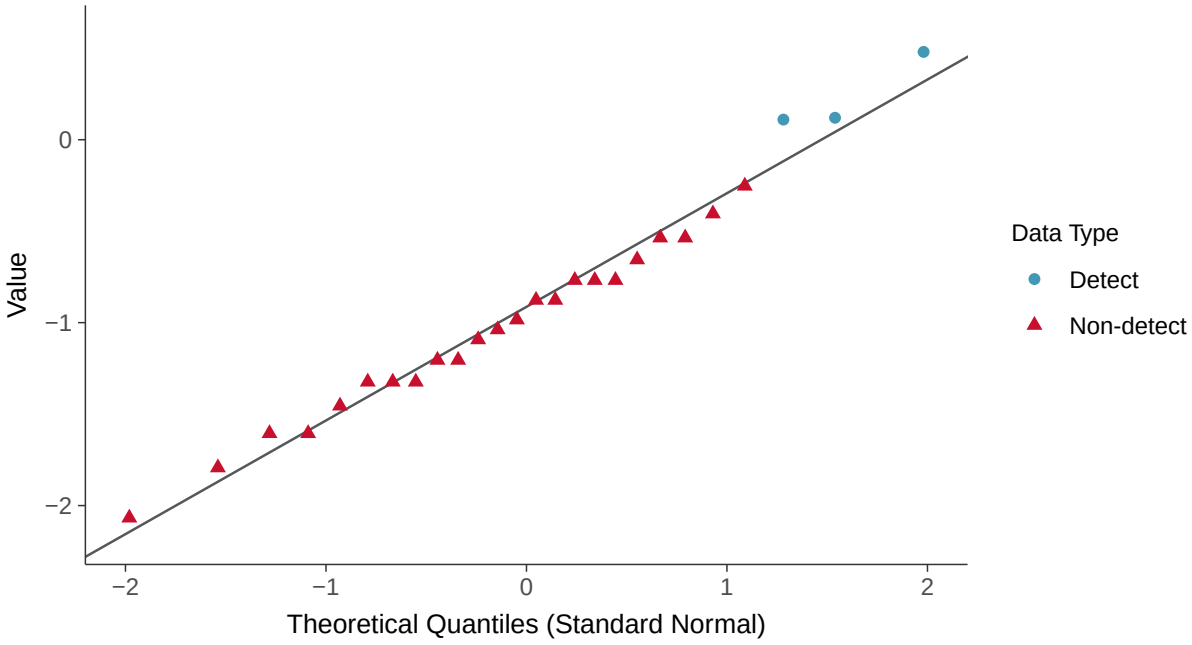
Boxplot by Season

Thallium, MW-7R (ug/L)



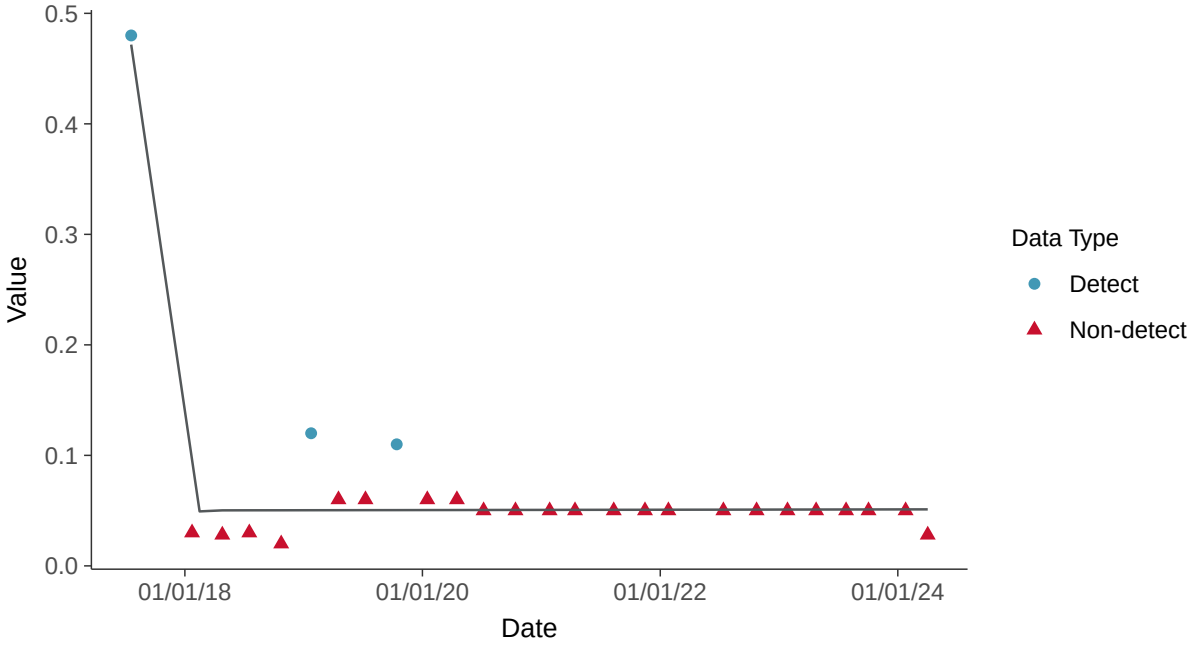
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-7R (ug/L)



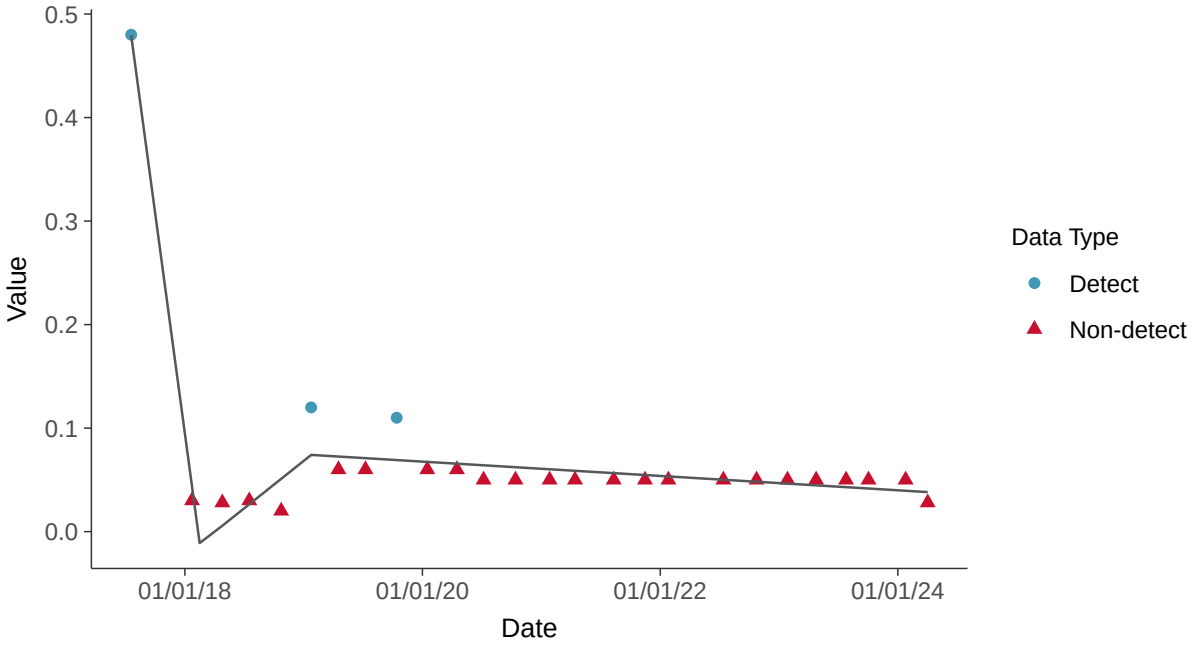
Trend Regression: Piecewise Linear-Linear

Thallium, MW-7R (ug/L)



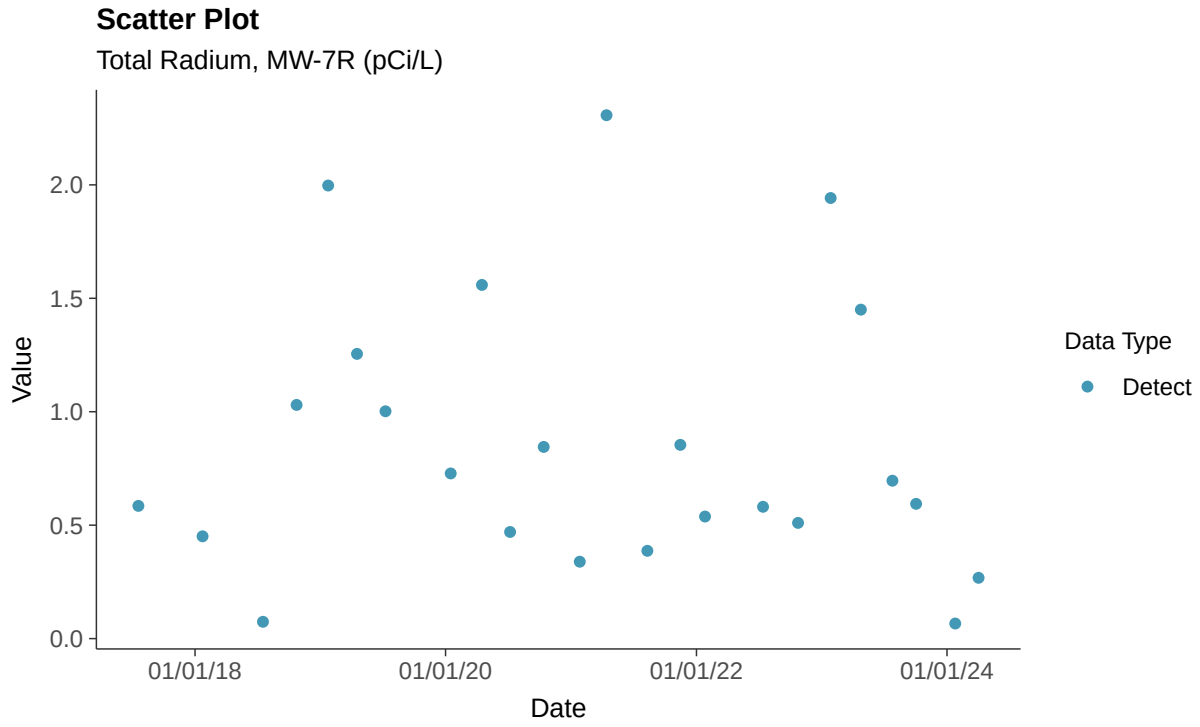
Trend Regression: Piecewise Linear-Linear-Linear

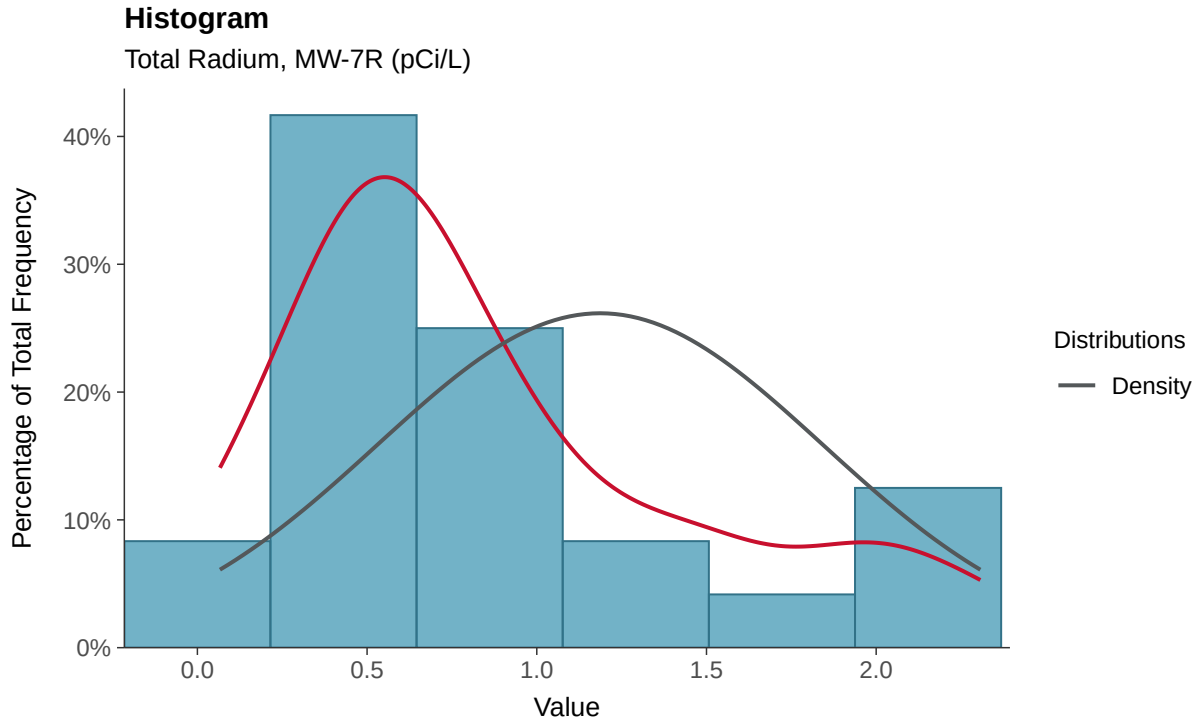
Thallium, MW-7R (ug/L)



App. IV: Total Radium, MW-7R

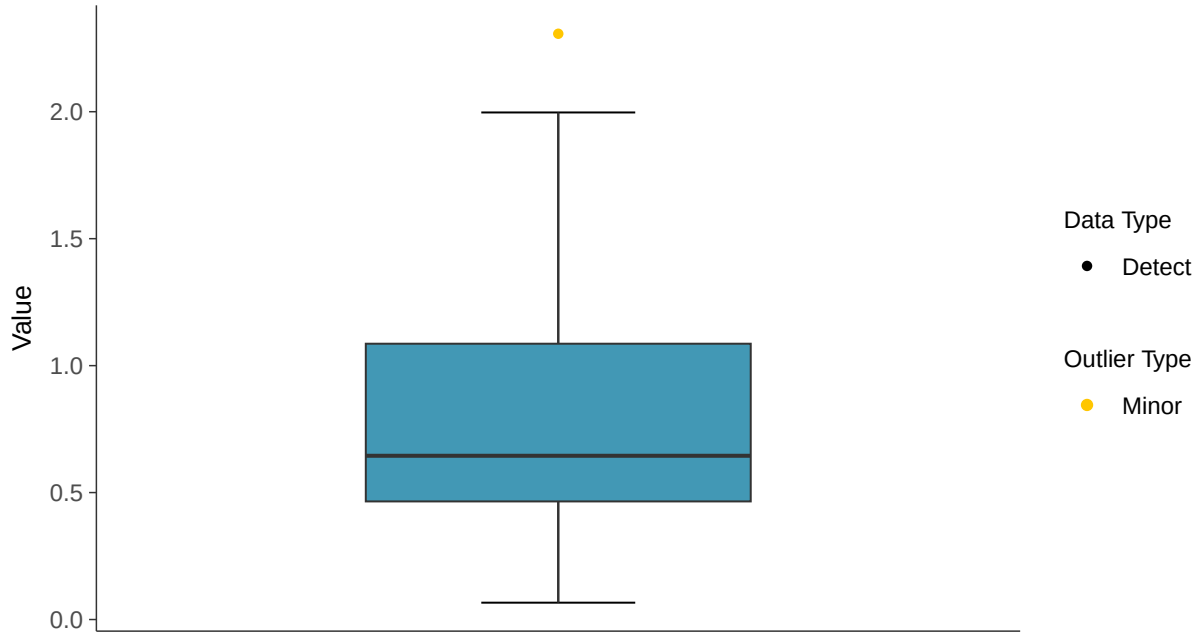
ID: 10_3_126





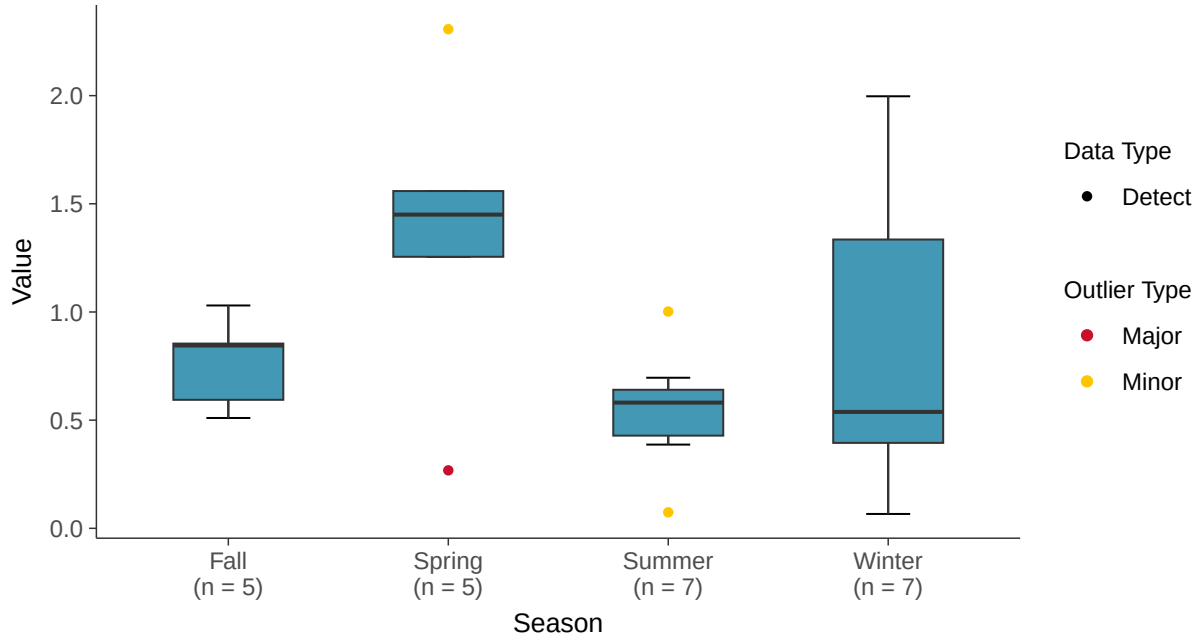
Boxplot

Total Radium, MW-7R (pCi/L)



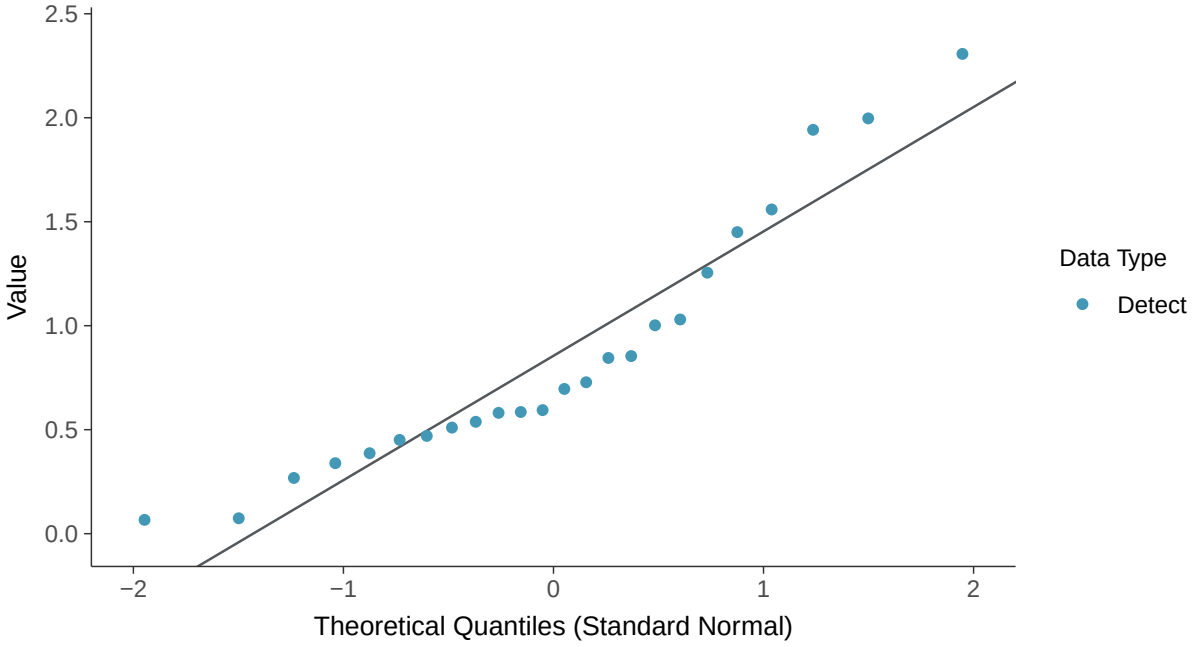
Boxplot by Season

Total Radium, MW-7R (pCi/L)



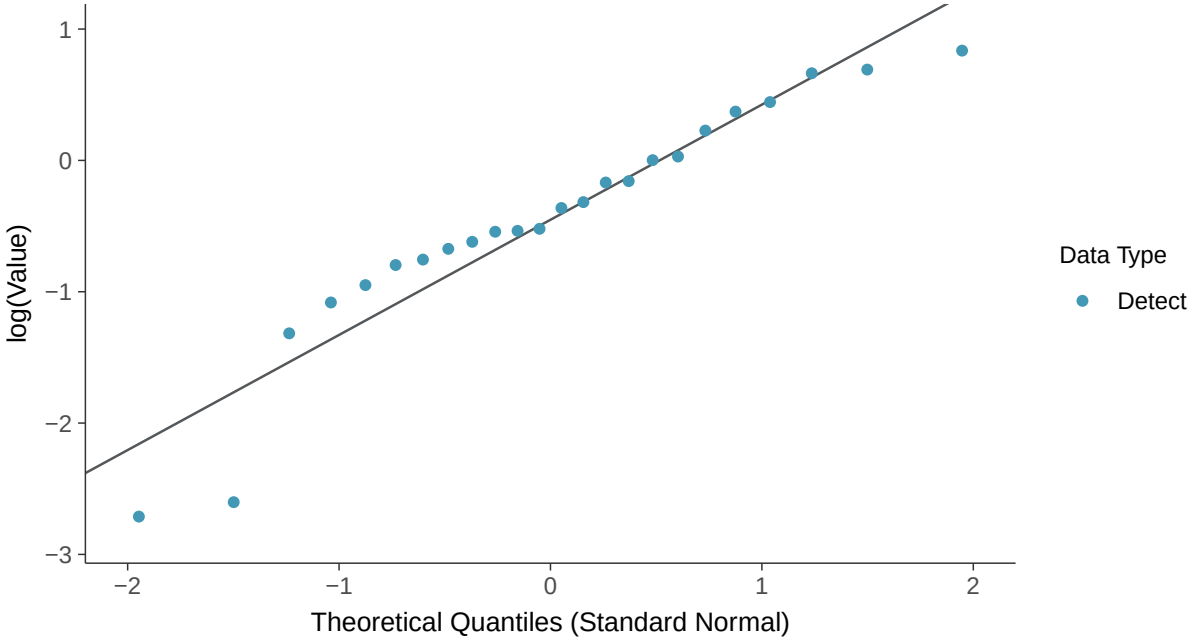
Normal Q-Q plot

Total Radium, MW-7R (pCi/L)



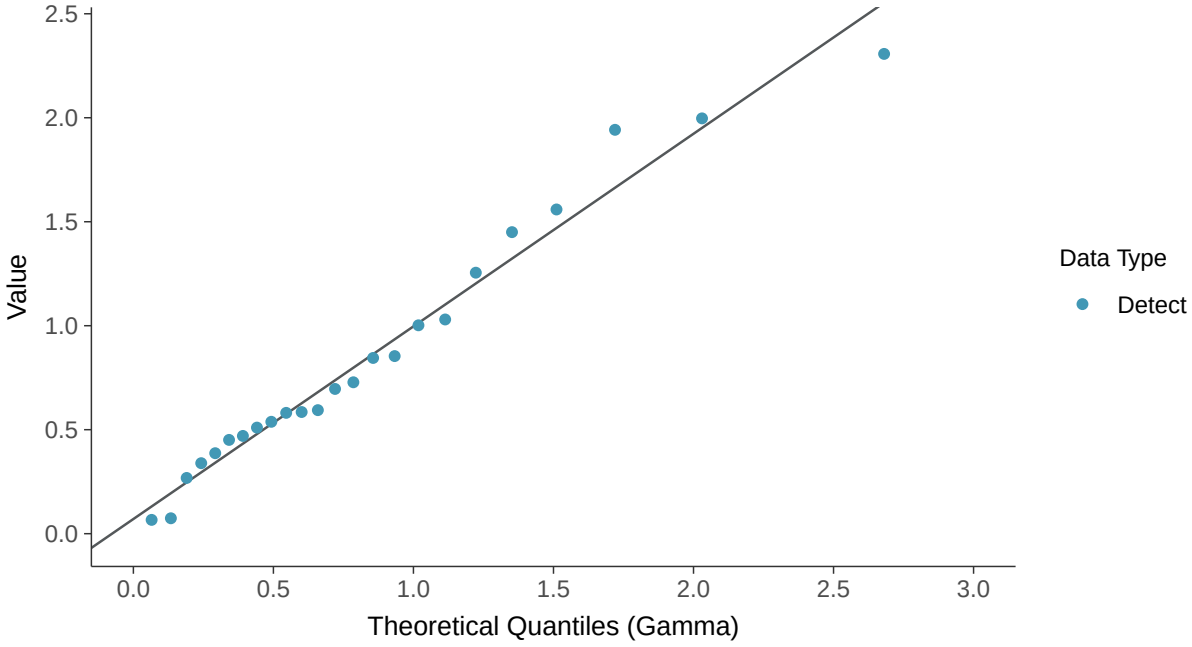
Lognormal Q-Q plot

Total Radium, MW-7R (pCi/L)



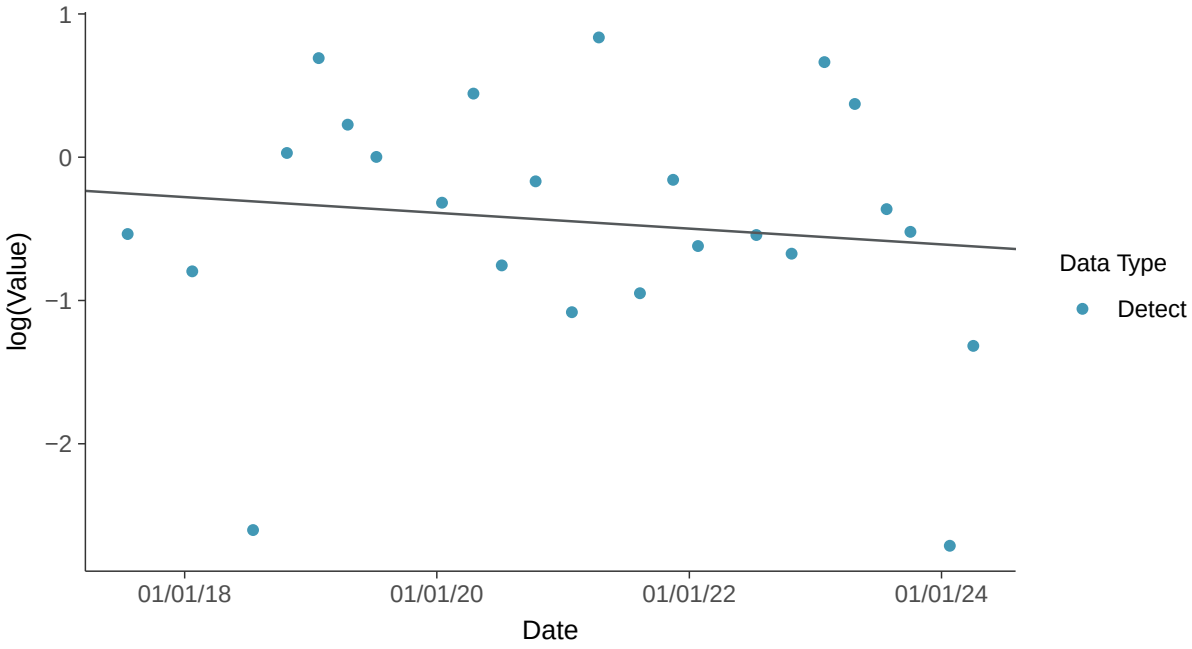
Gamma Q-Q plot

Total Radium, MW-7R (pCi/L)



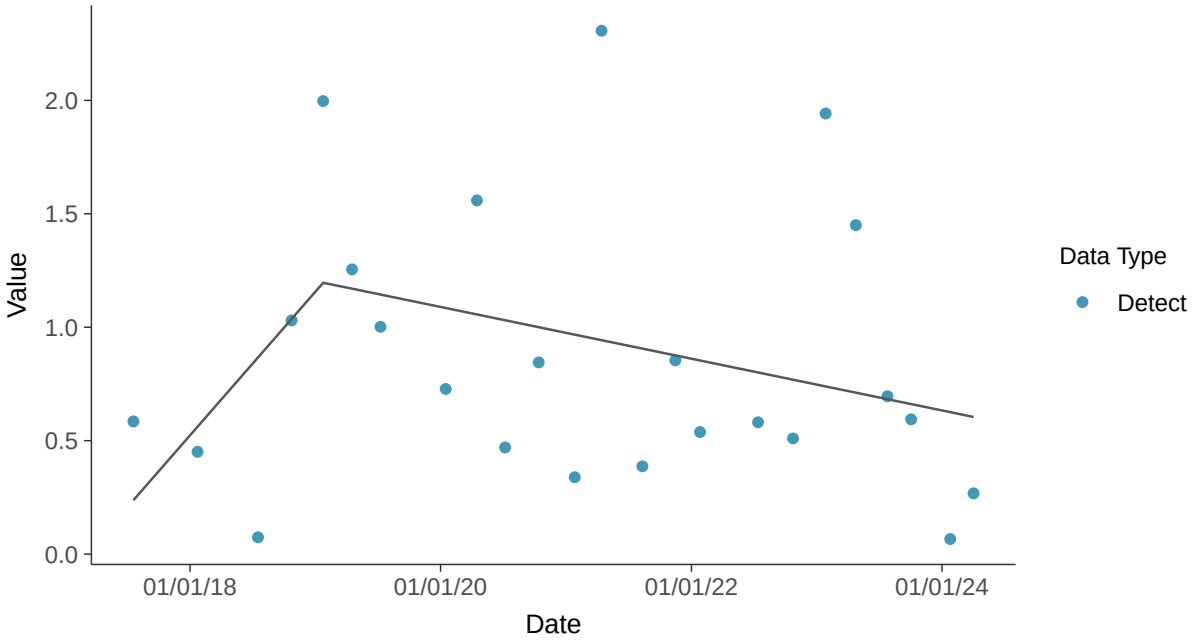
Trend Regression: Lognormal MLE

Total Radium, MW-7R (pCi/L)



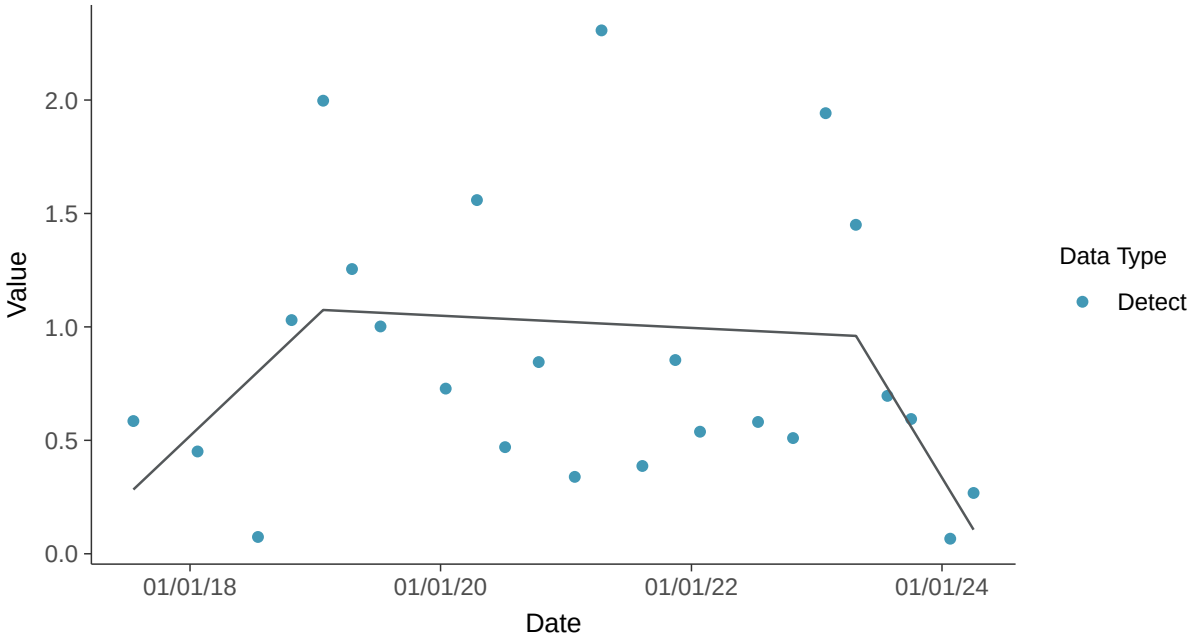
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-7R (pCi/L)



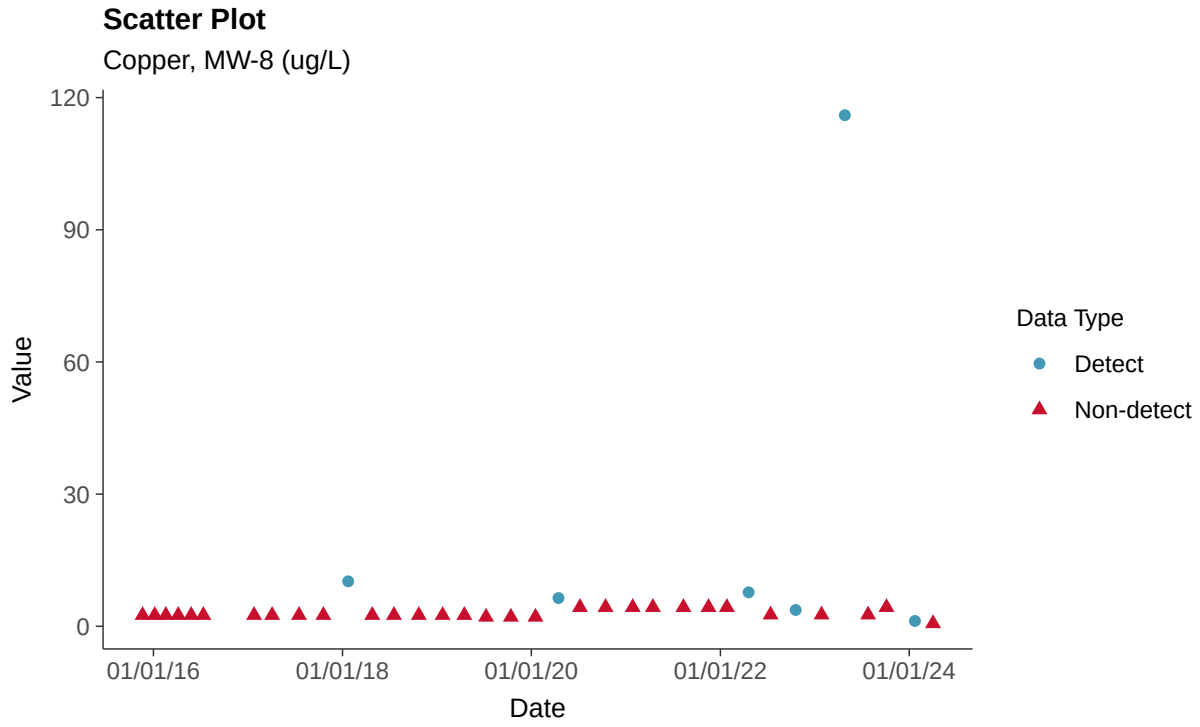
Trend Regression: Piecewise Linear-Linear-Linear

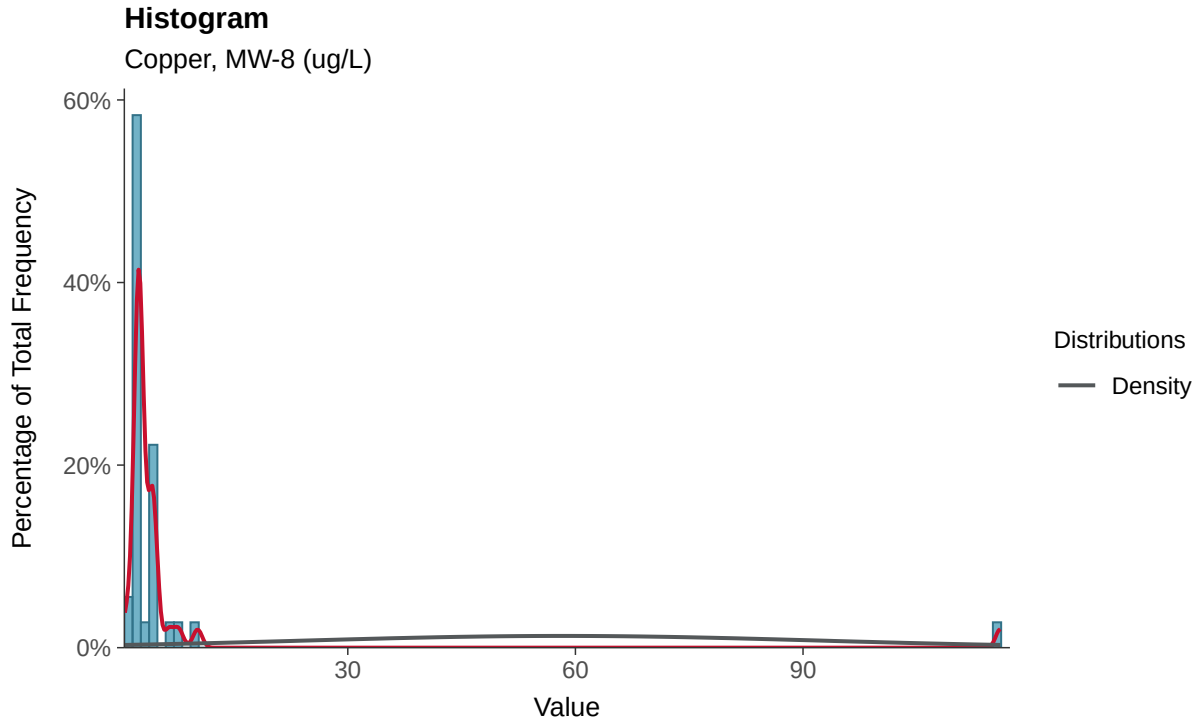
Total Radium, MW-7R (pCi/L)



App. I Metals: Copper, MW-8

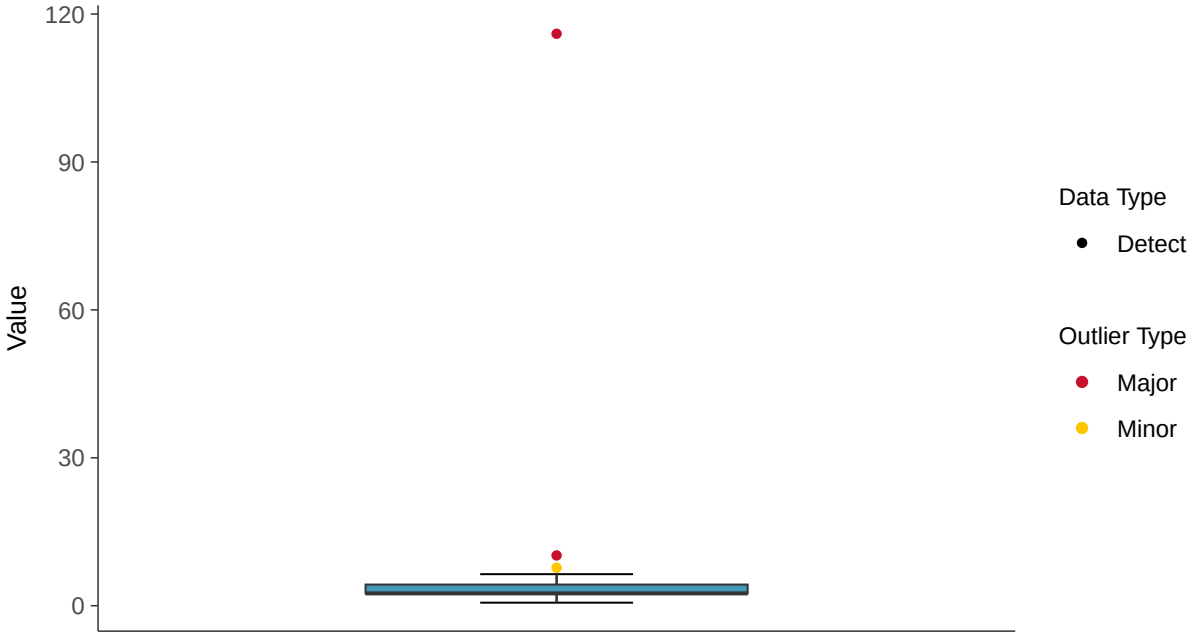
ID: 11_1_111





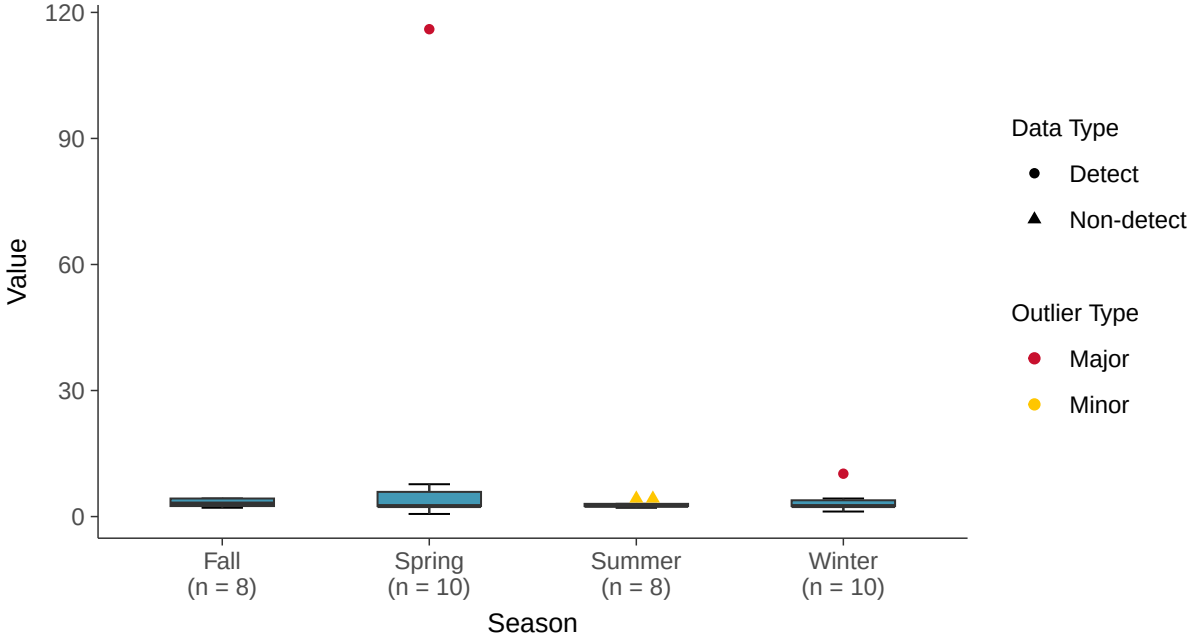
Boxplot

Copper, MW-8 (ug/L)



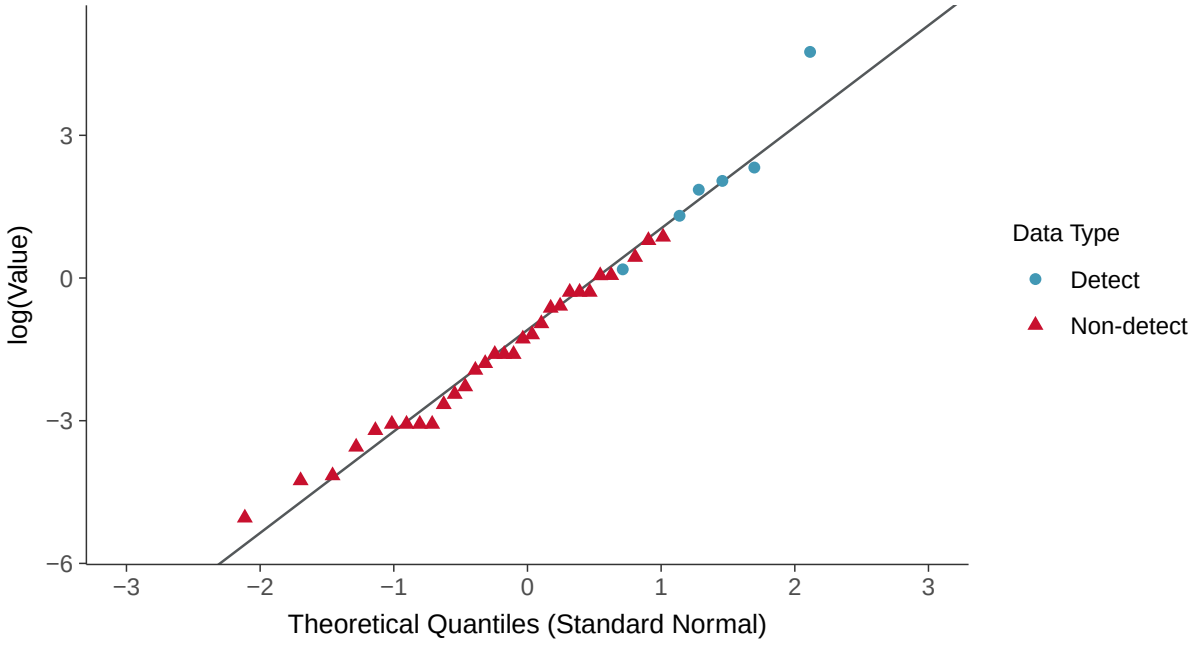
Boxplot by Season

Copper, MW-8 (ug/L)



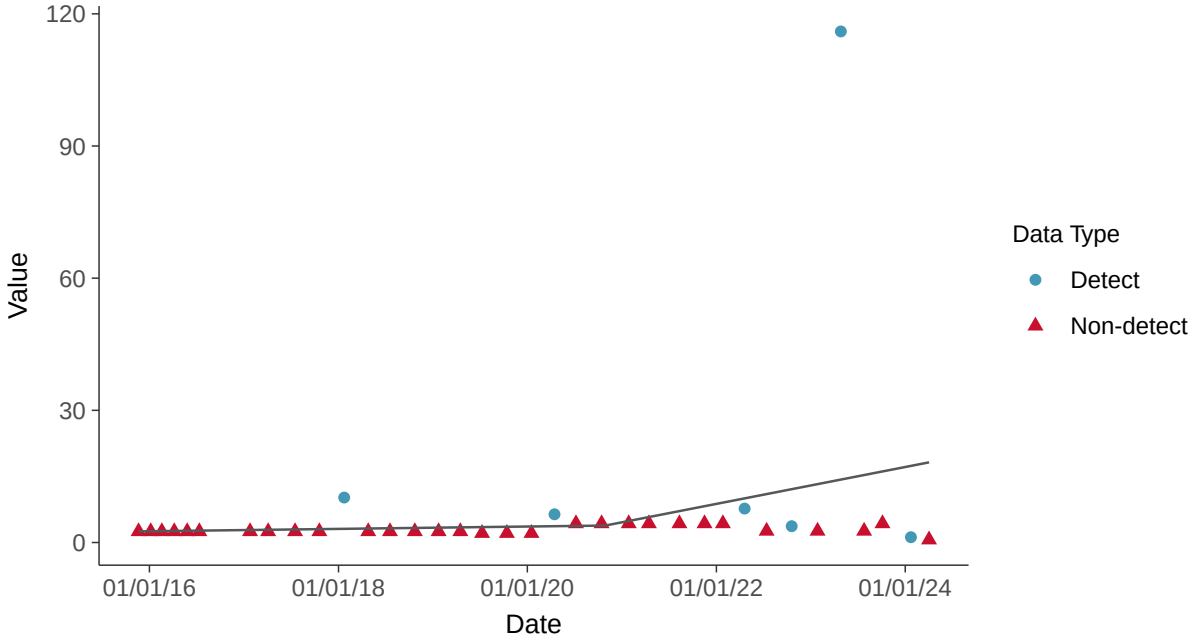
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-8 (ug/L)



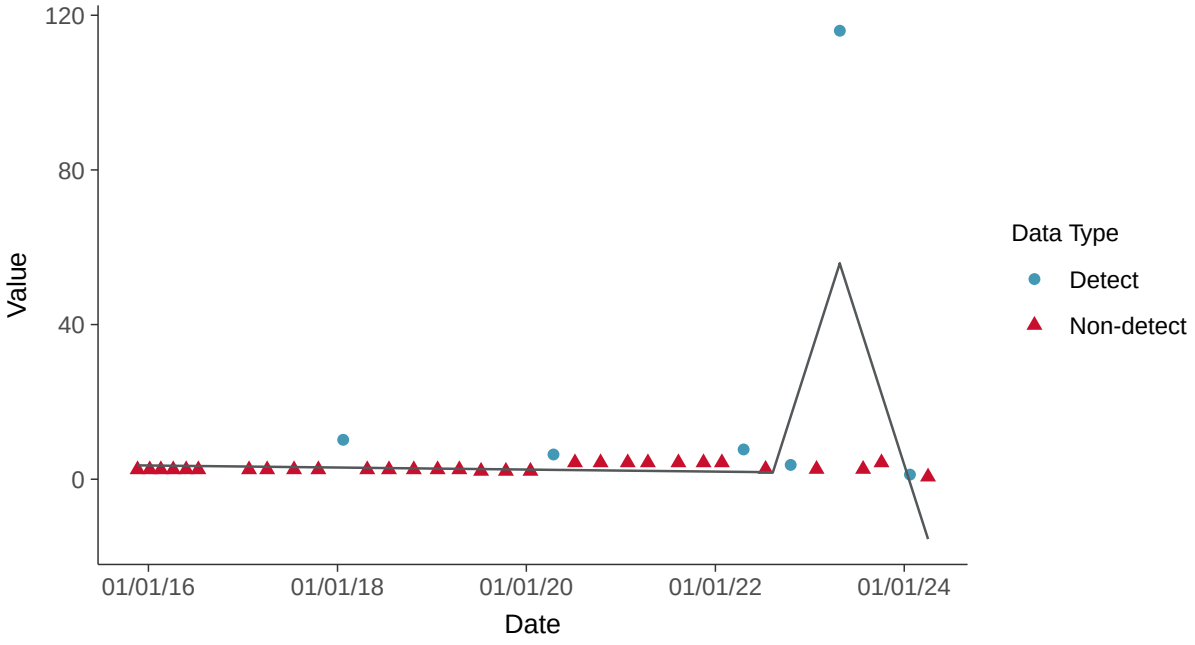
Trend Regression: Piecewise Linear-Linear

Copper, MW-8 (ug/L)



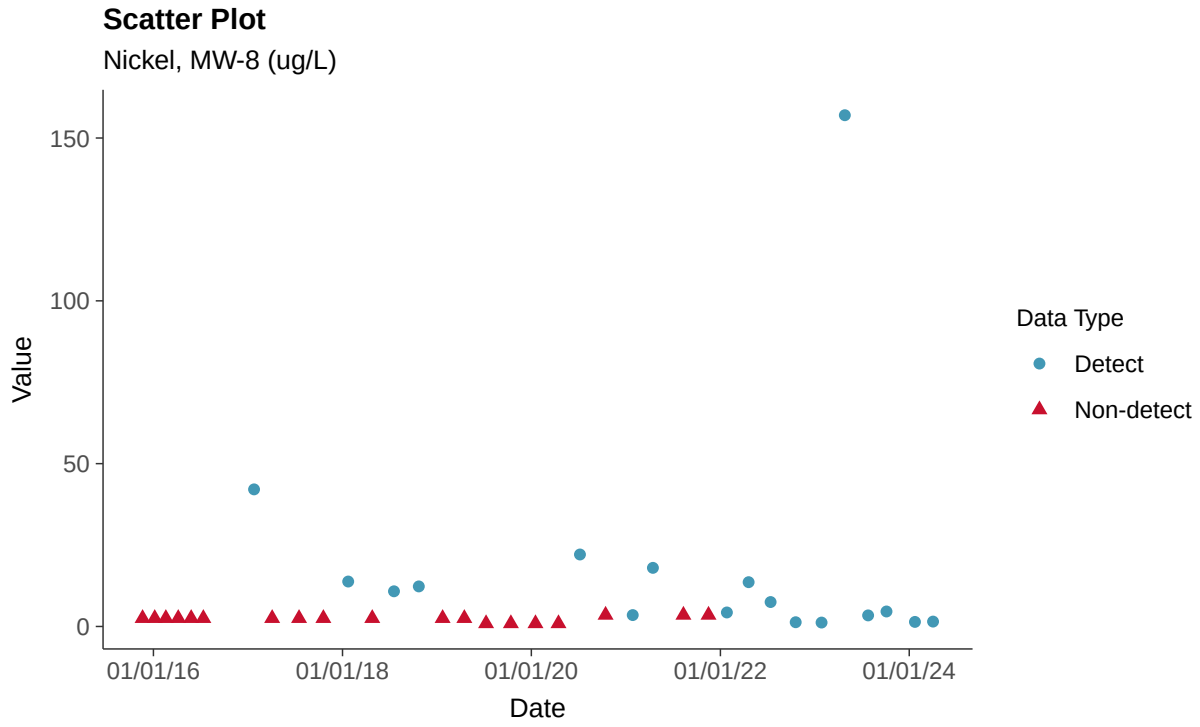
Trend Regression: Piecewise Linear-Linear-Linear

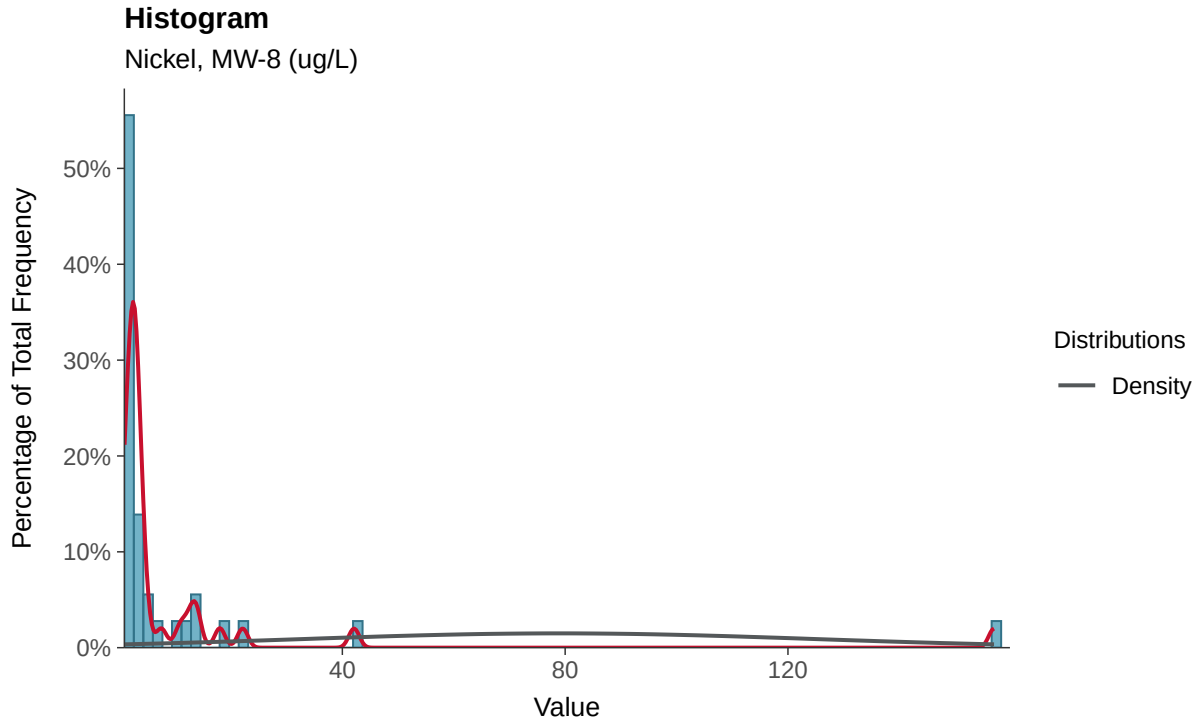
Copper, MW-8 (ug/L)



App. I Metals: Nickel, MW-8

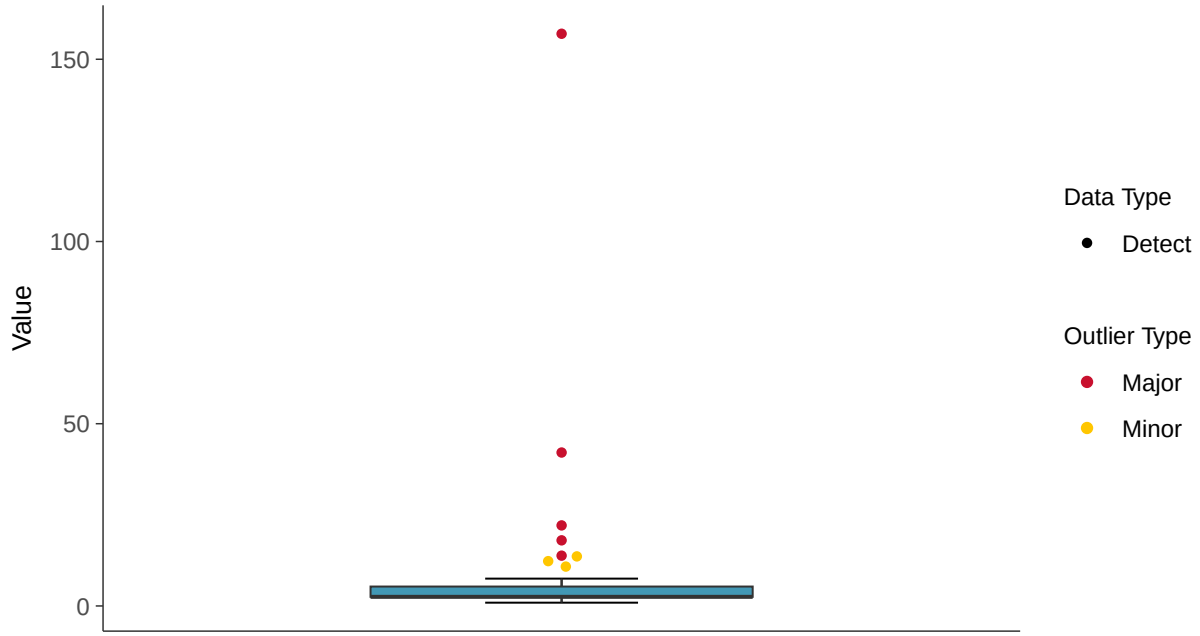
ID: 11_1_117





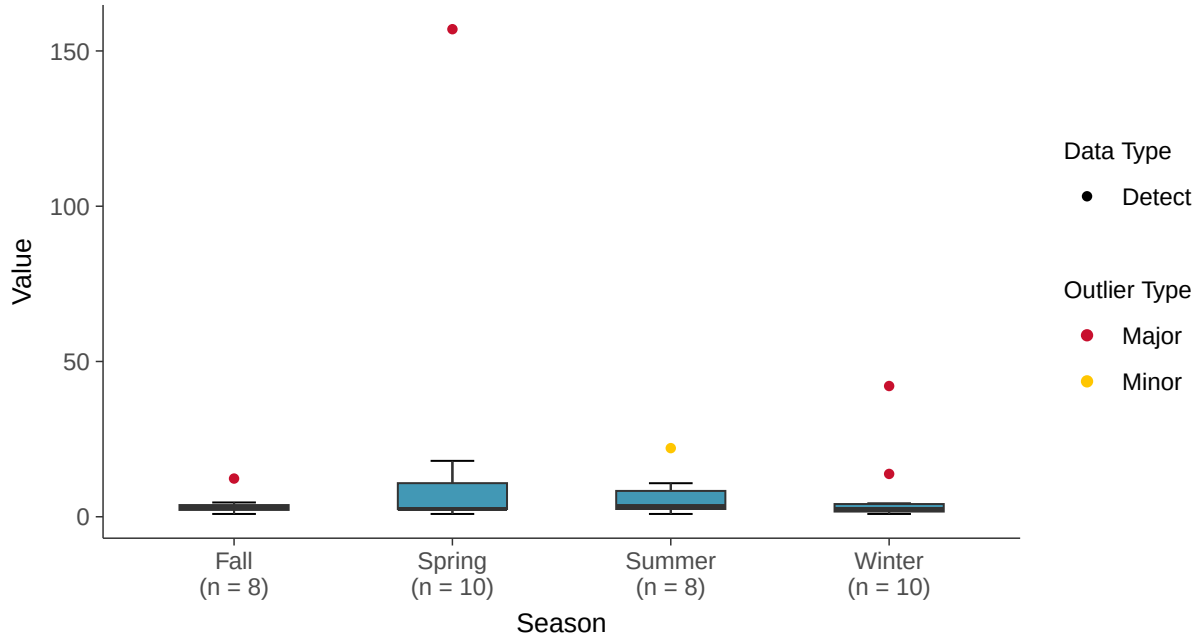
Boxplot

Nickel, MW-8 (ug/L)



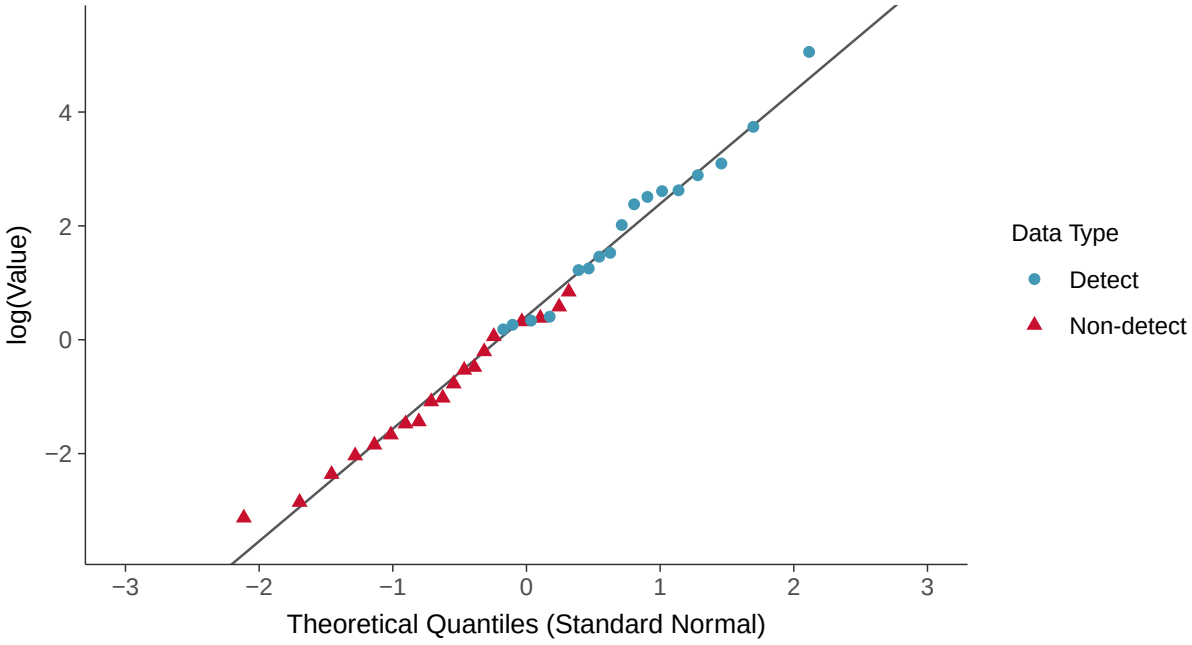
Boxplot by Season

Nickel, MW-8 (ug/L)



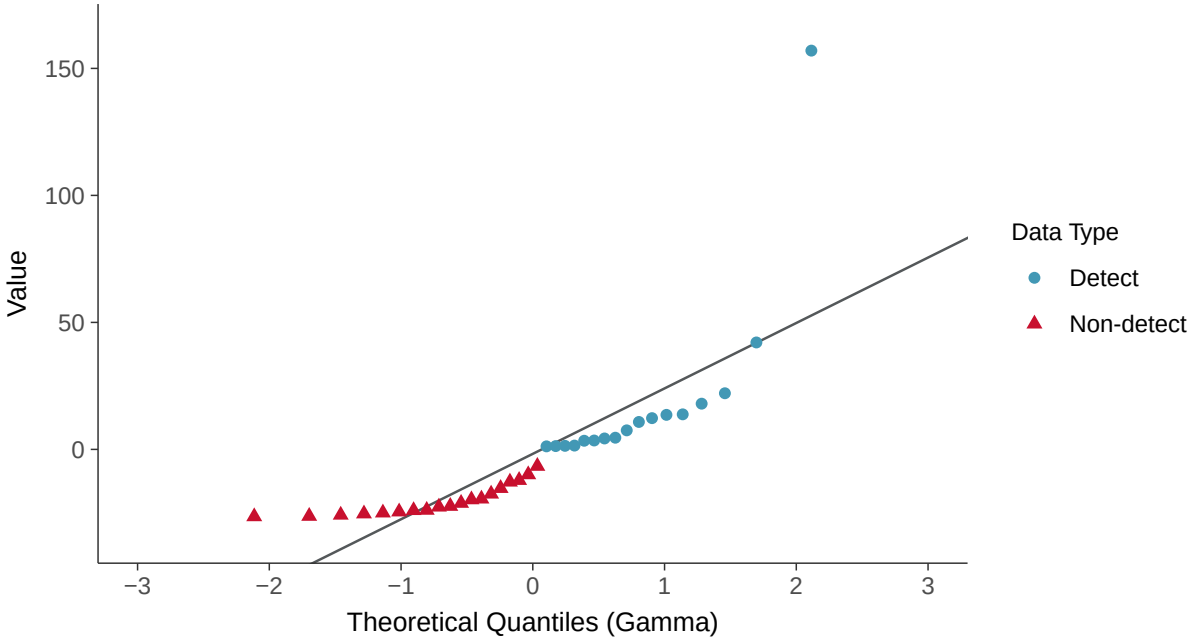
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-8 (ug/L)



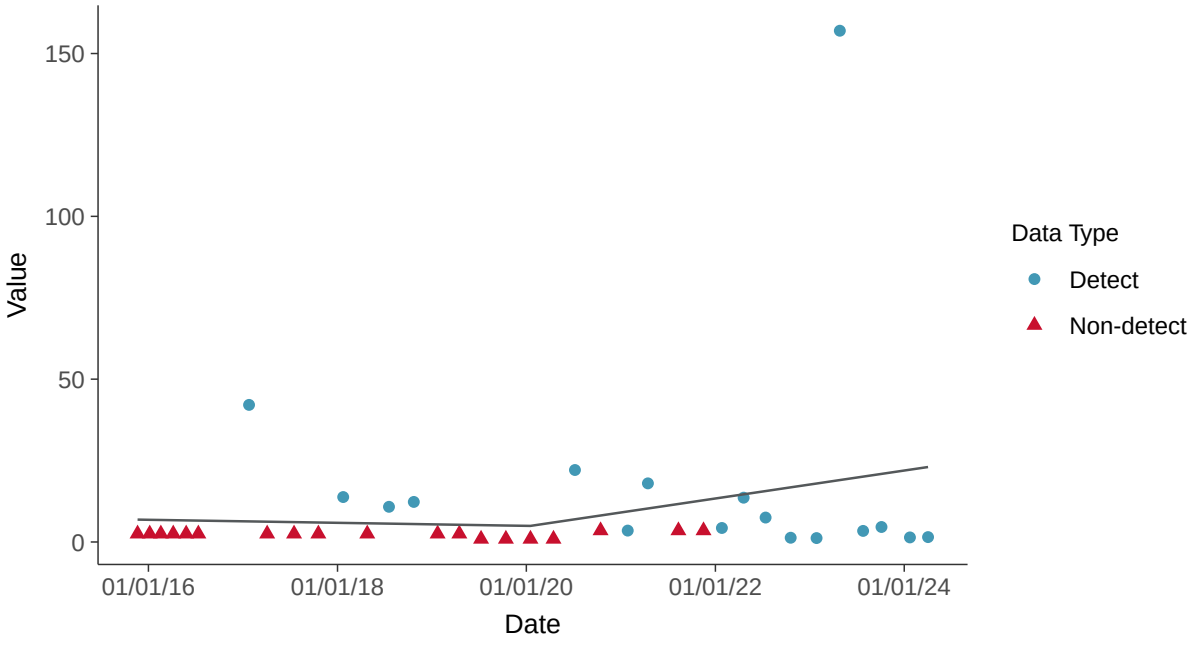
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-8 (ug/L)



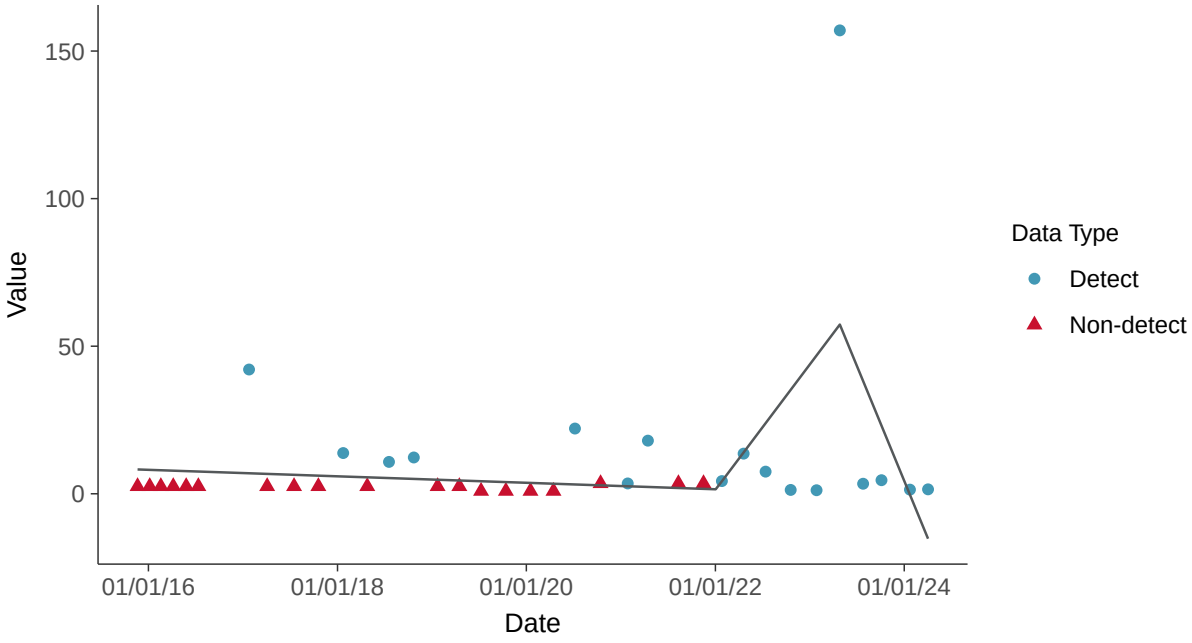
Trend Regression: Piecewise Linear-Linear

Nickel, MW-8 (ug/L)



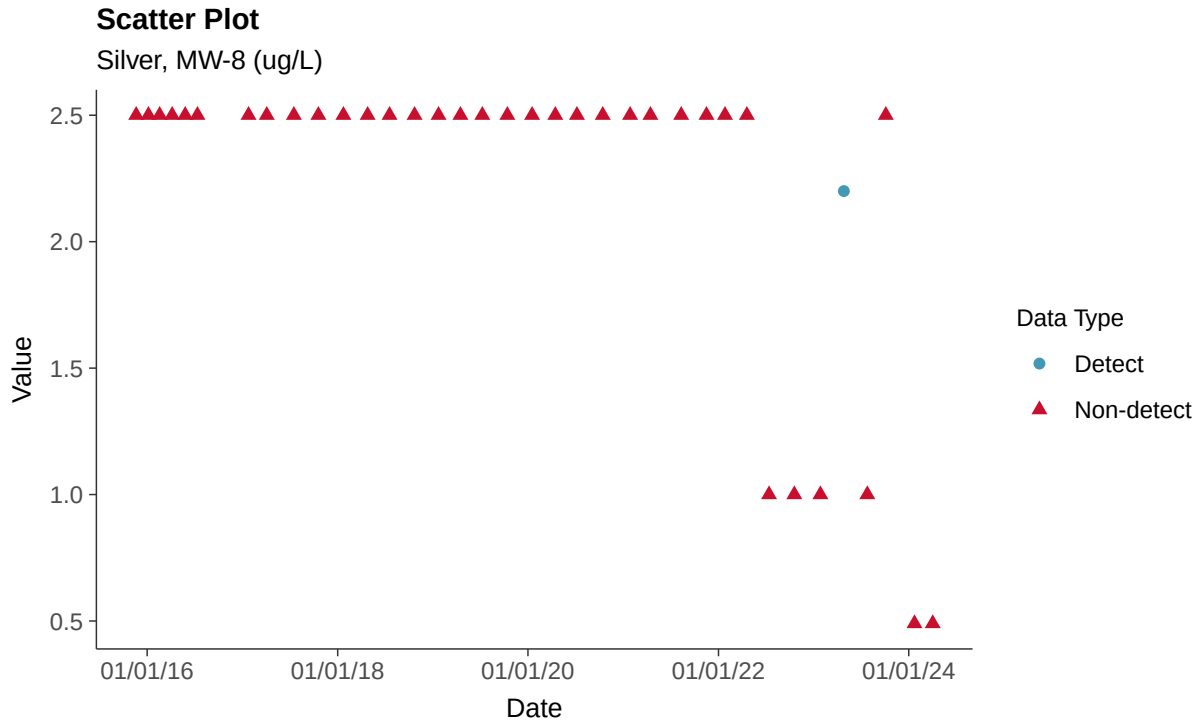
Trend Regression: Piecewise Linear-Linear-Linear

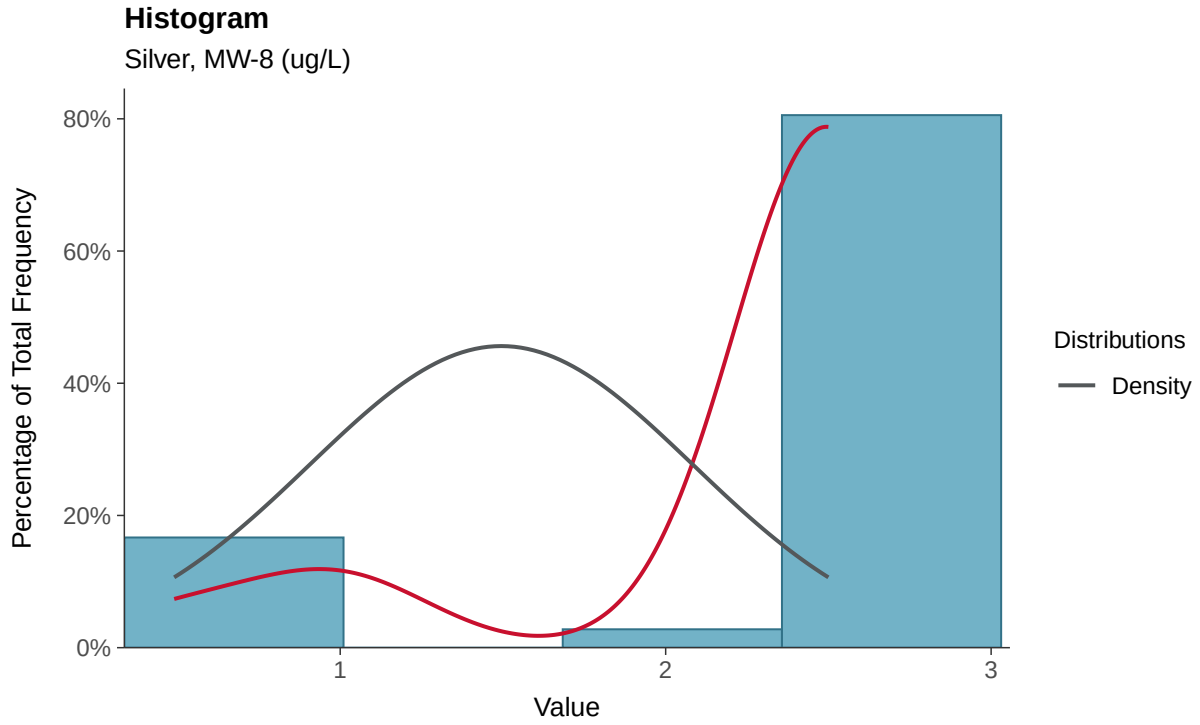
Nickel, MW-8 (ug/L)



App. I Metals: Silver, MW-8

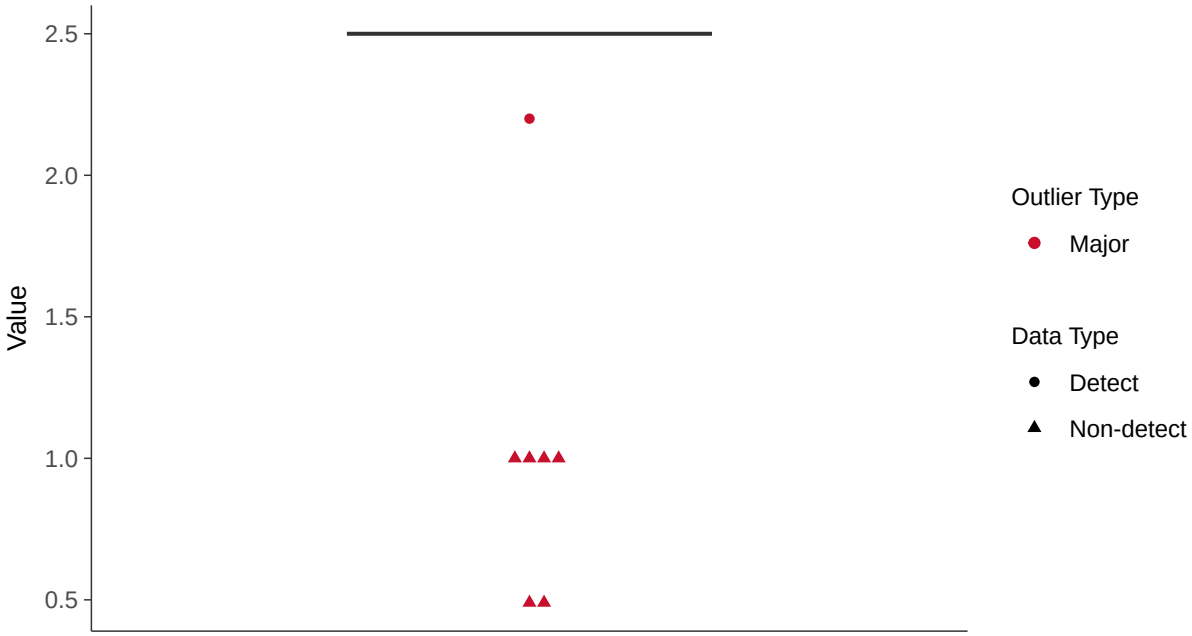
ID: 11_1_122





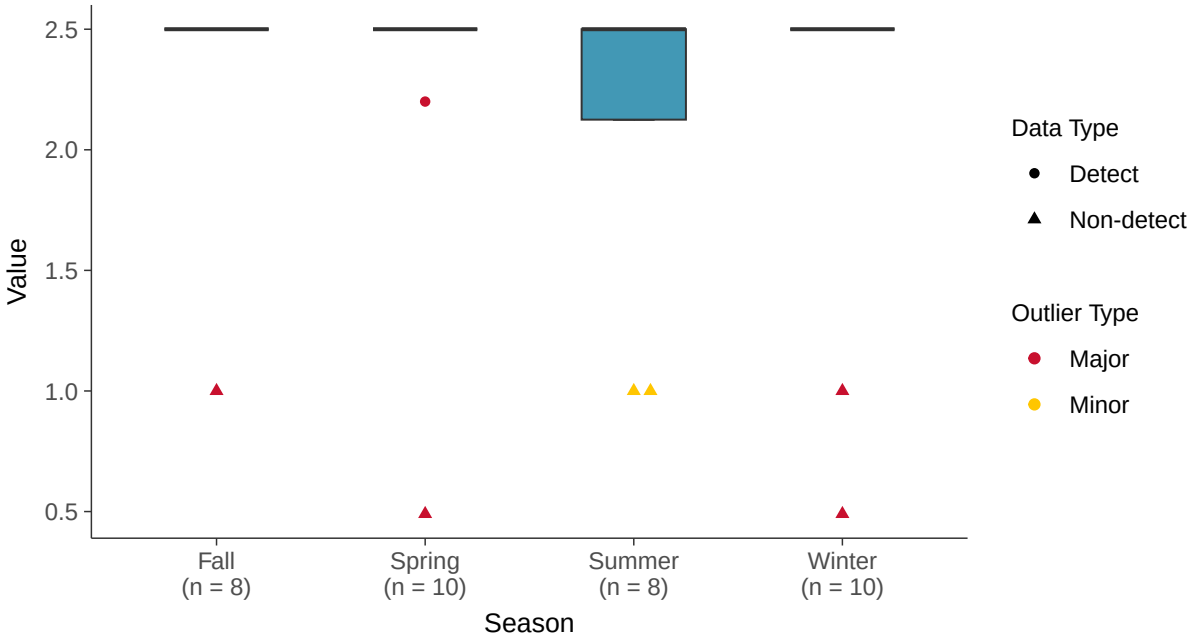
Boxplot

Silver, MW-8 (ug/L)



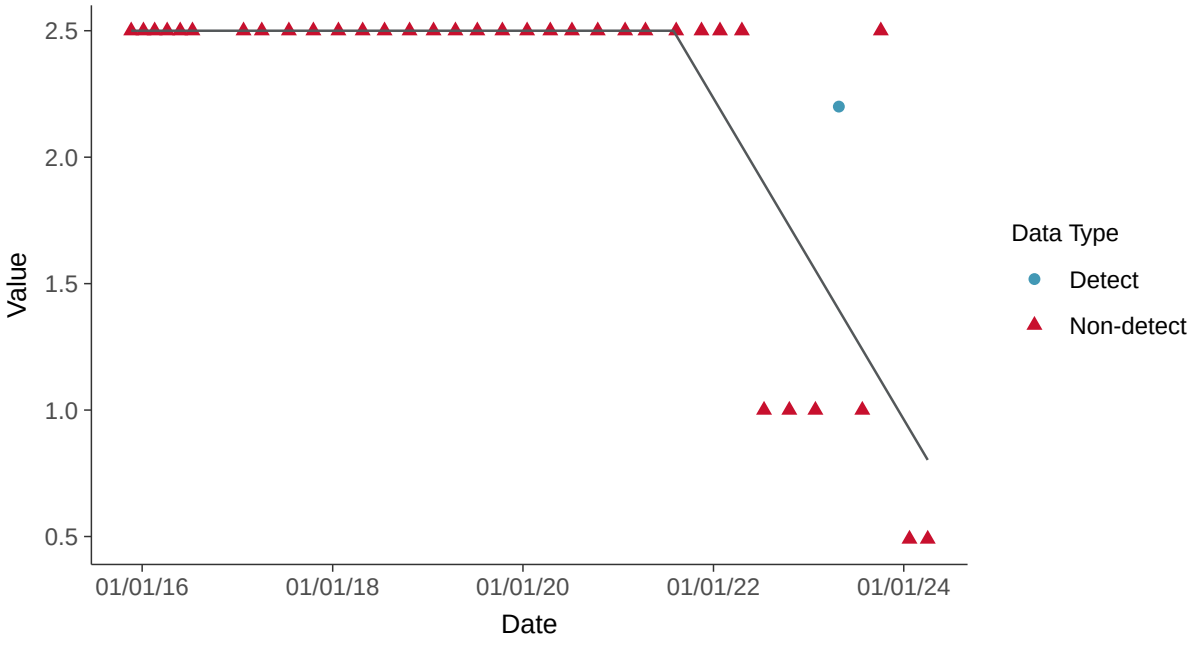
Boxplot by Season

Silver, MW-8 (ug/L)



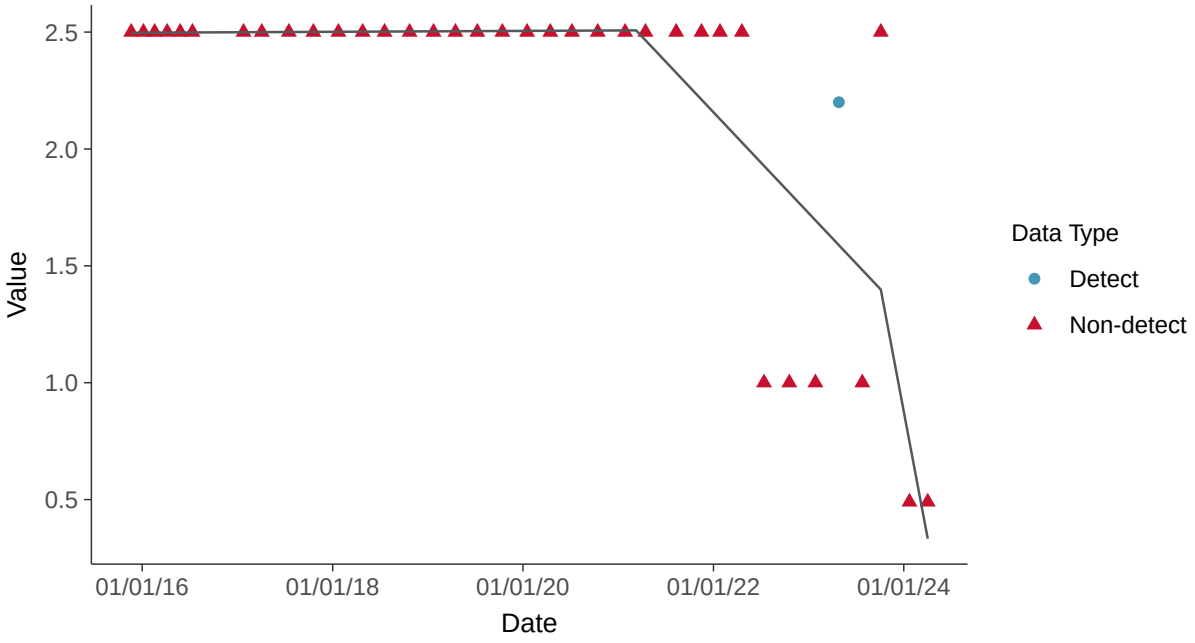
Trend Regression: Piecewise Linear-Linear

Silver, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-8 (ug/L)

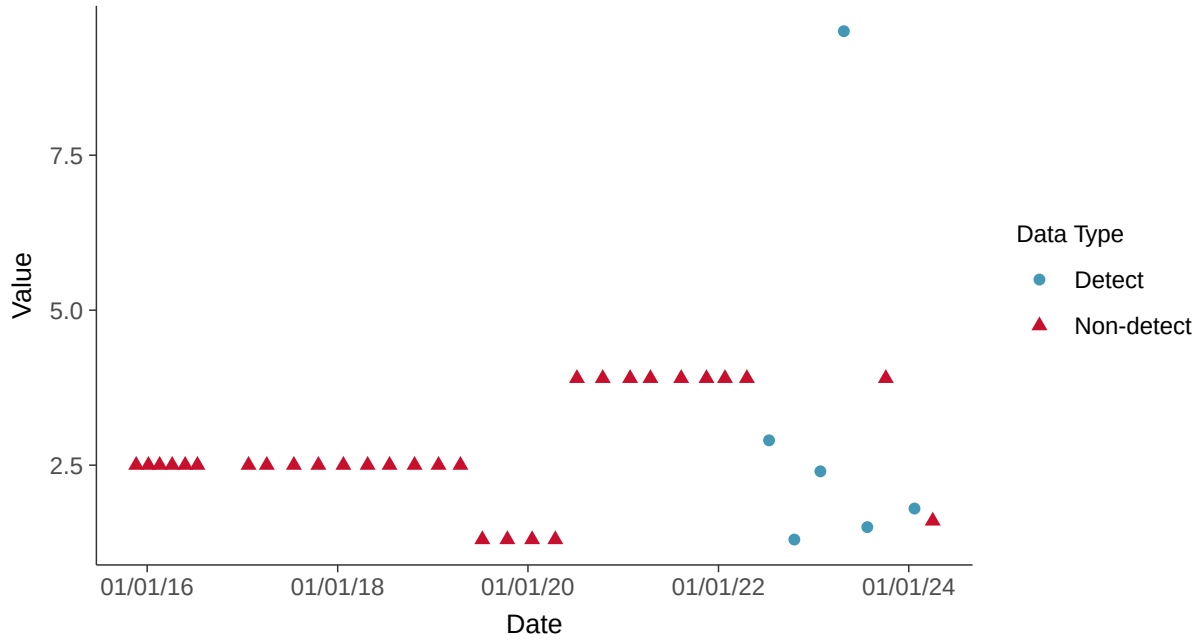


App. I Metals: Vanadium, MW-8

ID: 11_1_127

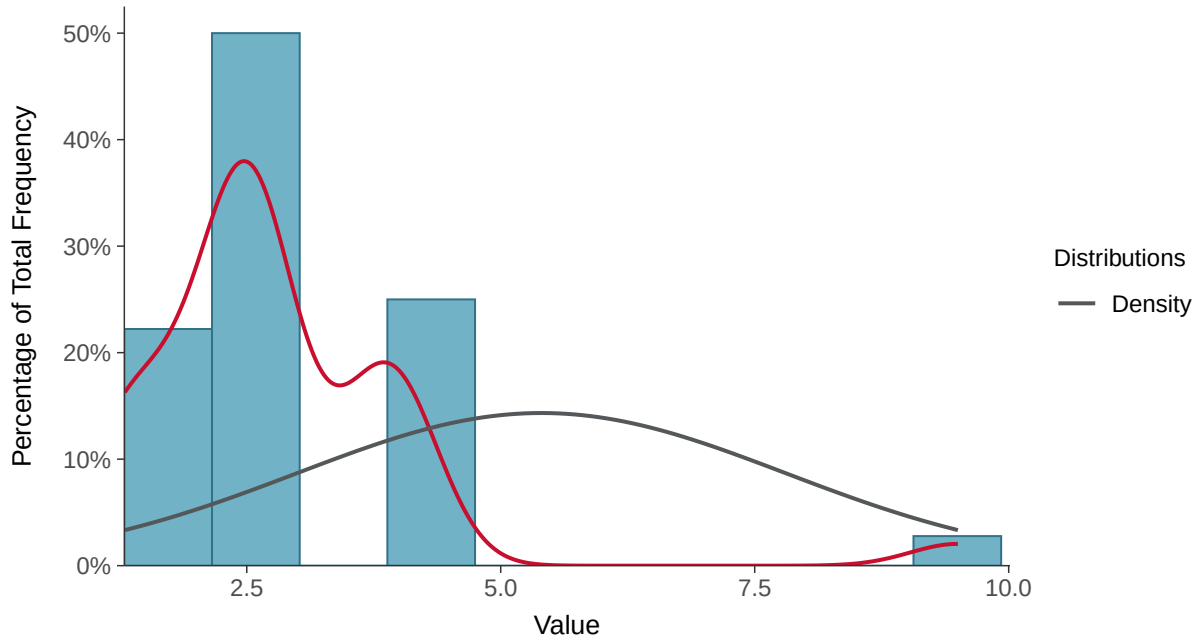
Scatter Plot

Vanadium, MW-8 (ug/L)



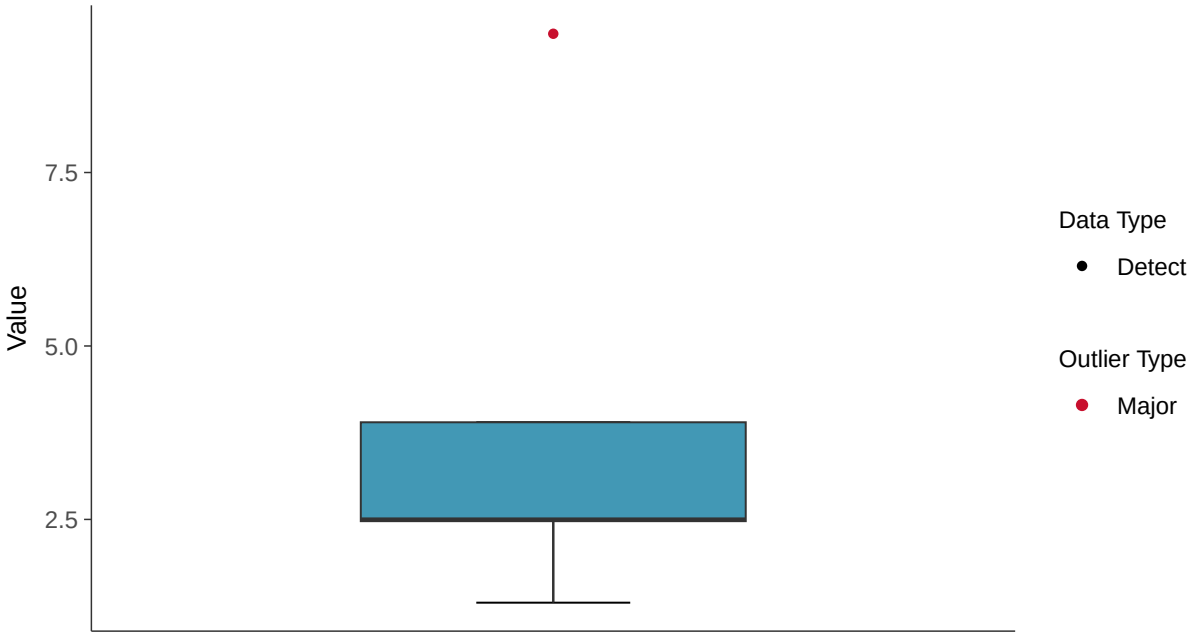
Histogram

Vanadium, MW-8 (ug/L)



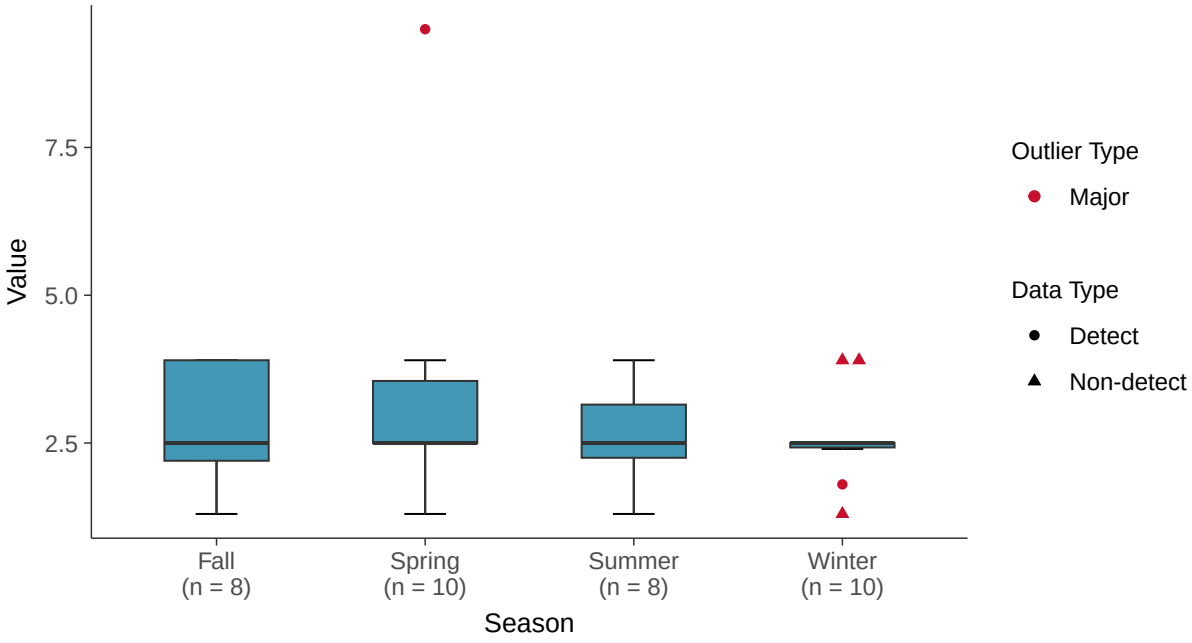
Boxplot

Vanadium, MW-8 (ug/L)



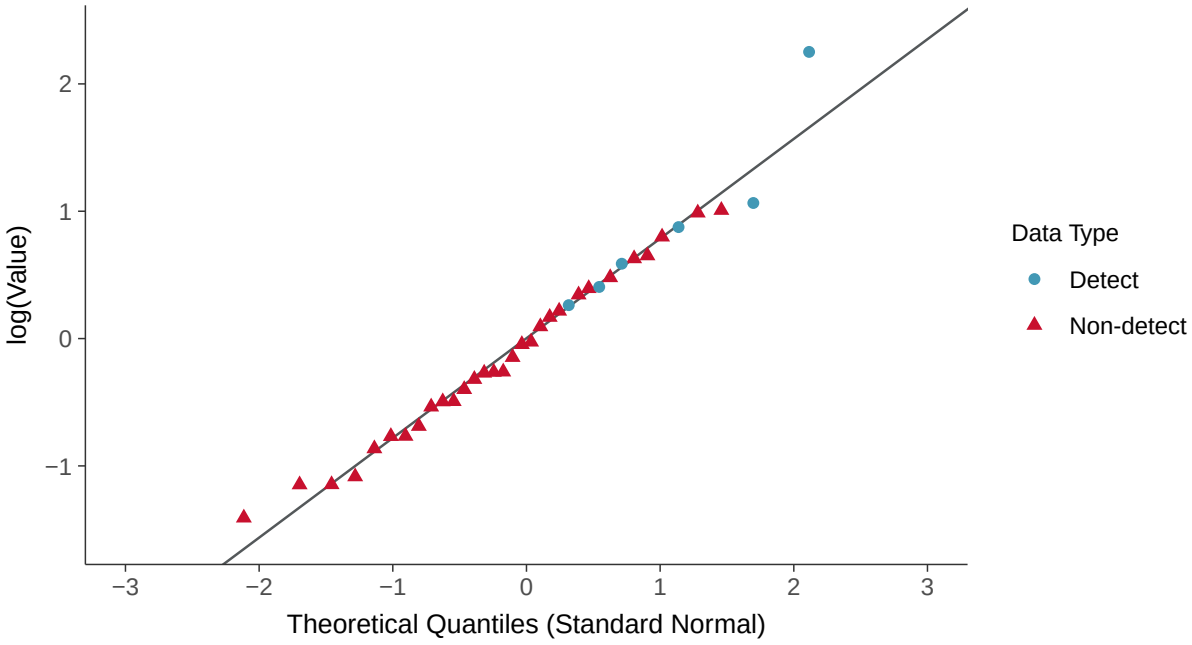
Boxplot by Season

Vanadium, MW-8 (ug/L)



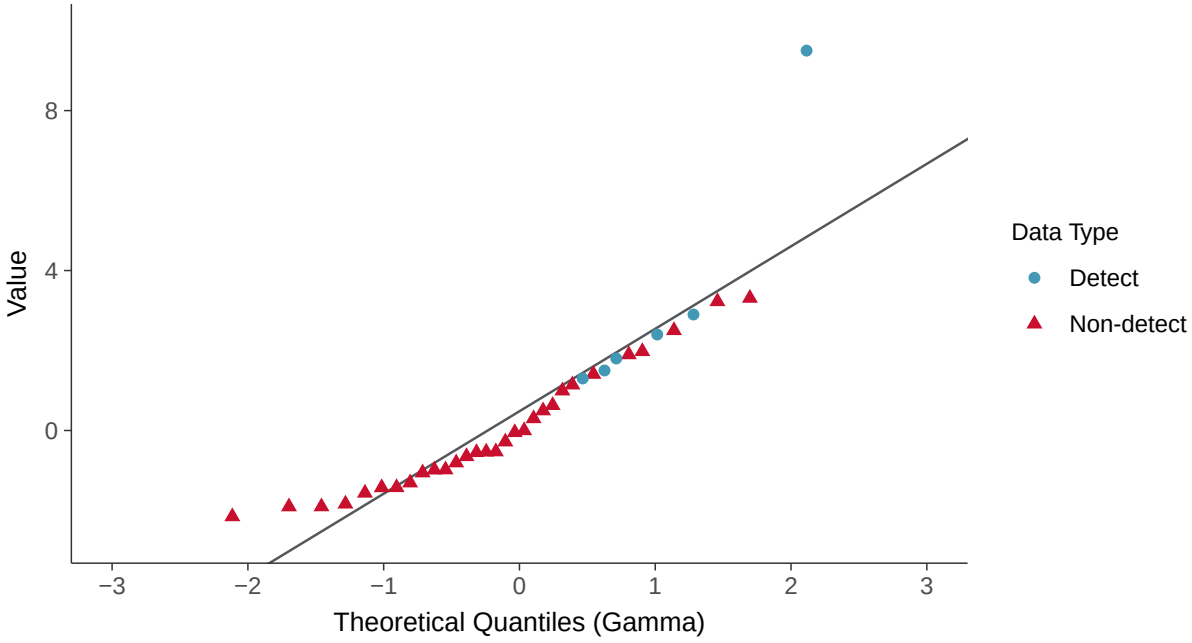
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



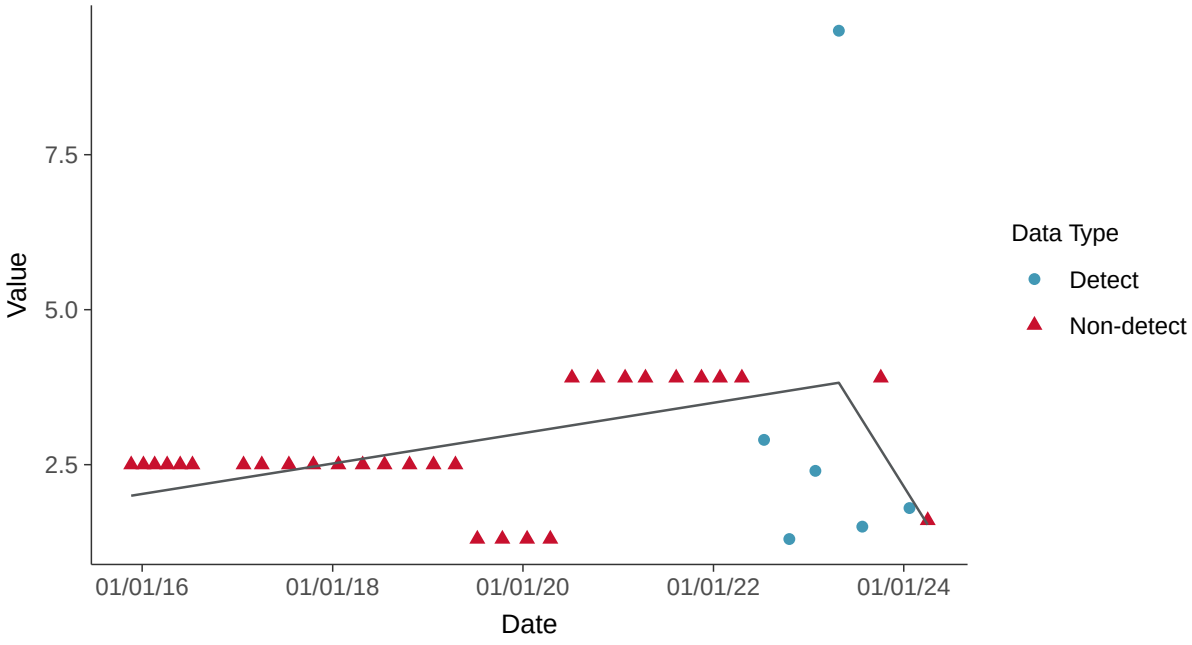
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



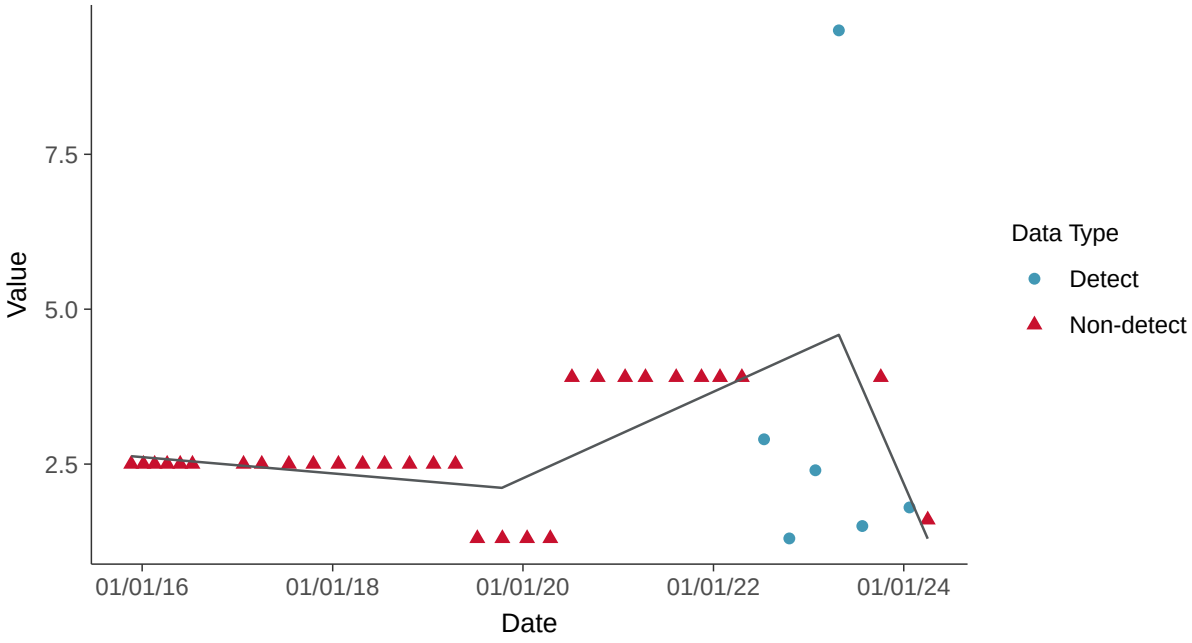
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-8 (ug/L)



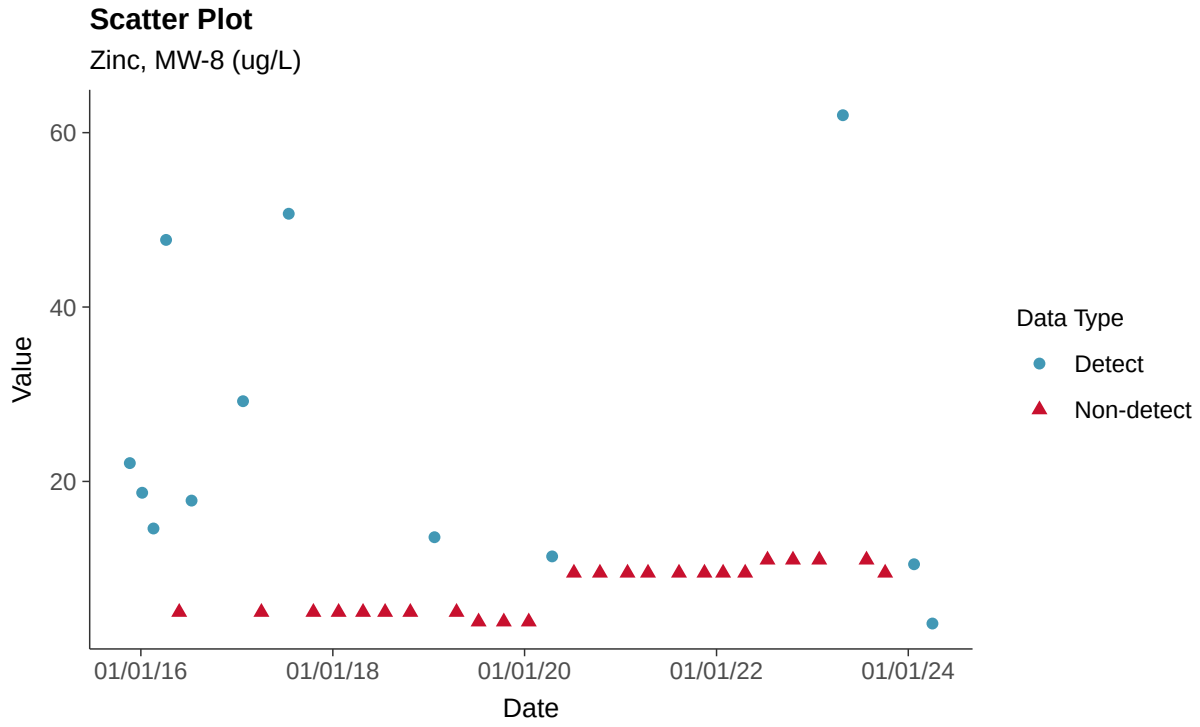
Trend Regression: Piecewise Linear-Linear-Linear

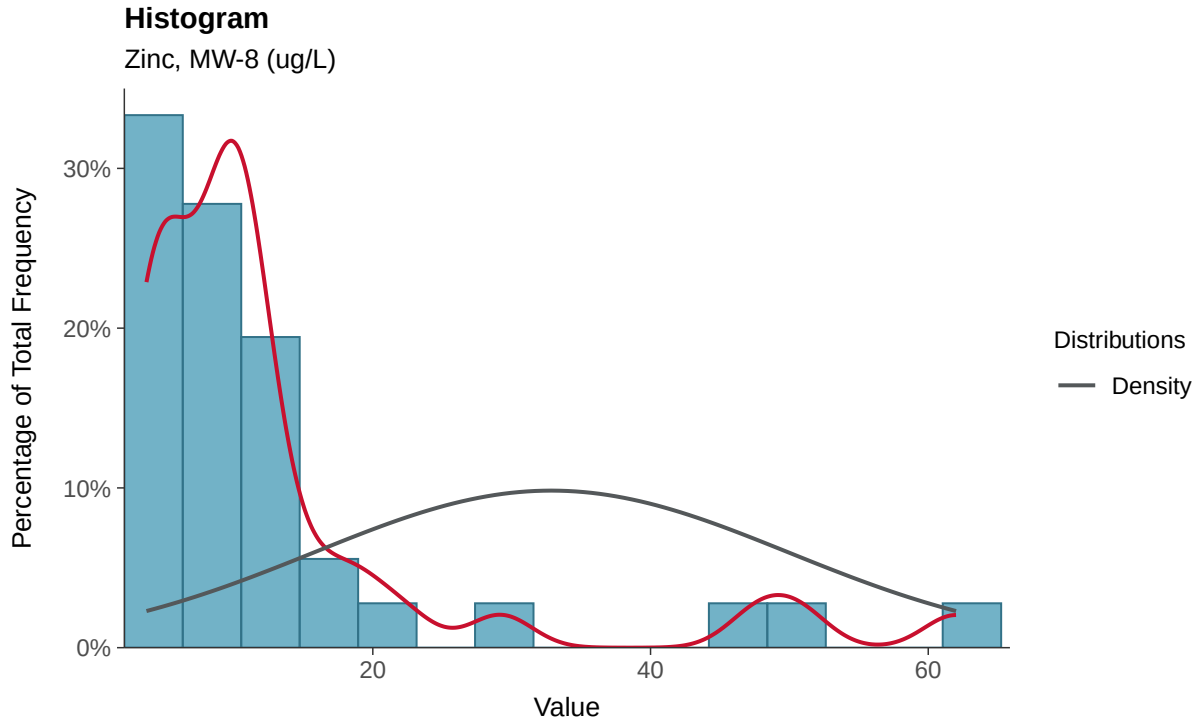
Vanadium, MW-8 (ug/L)



App. I Metals: Zinc, MW-8

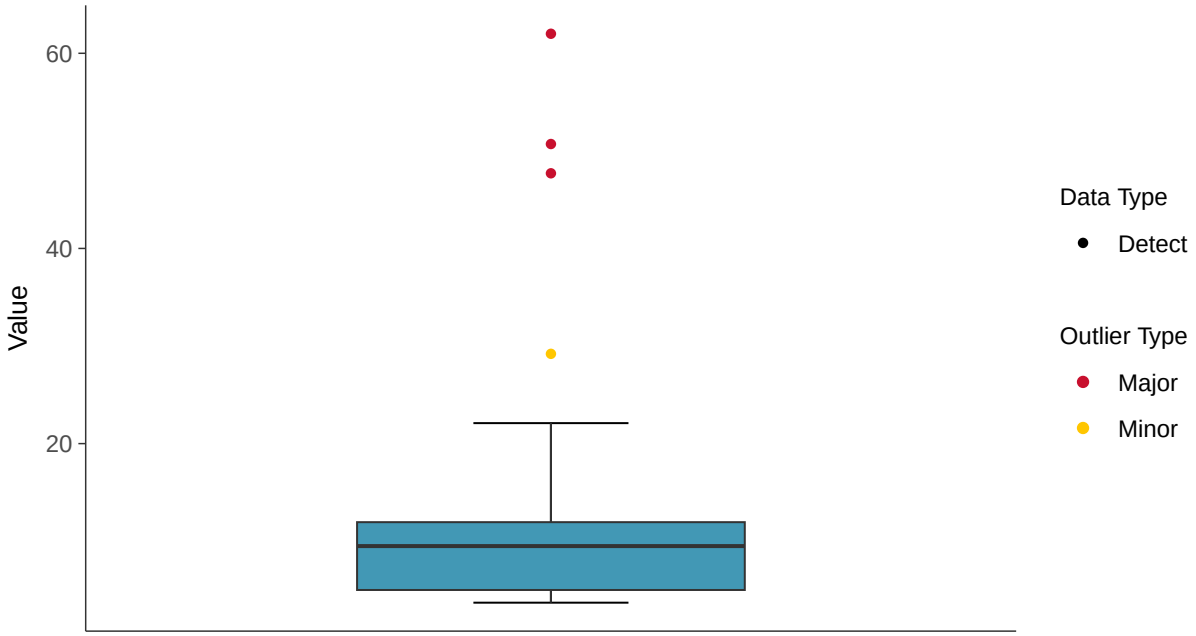
ID: 11_1_128





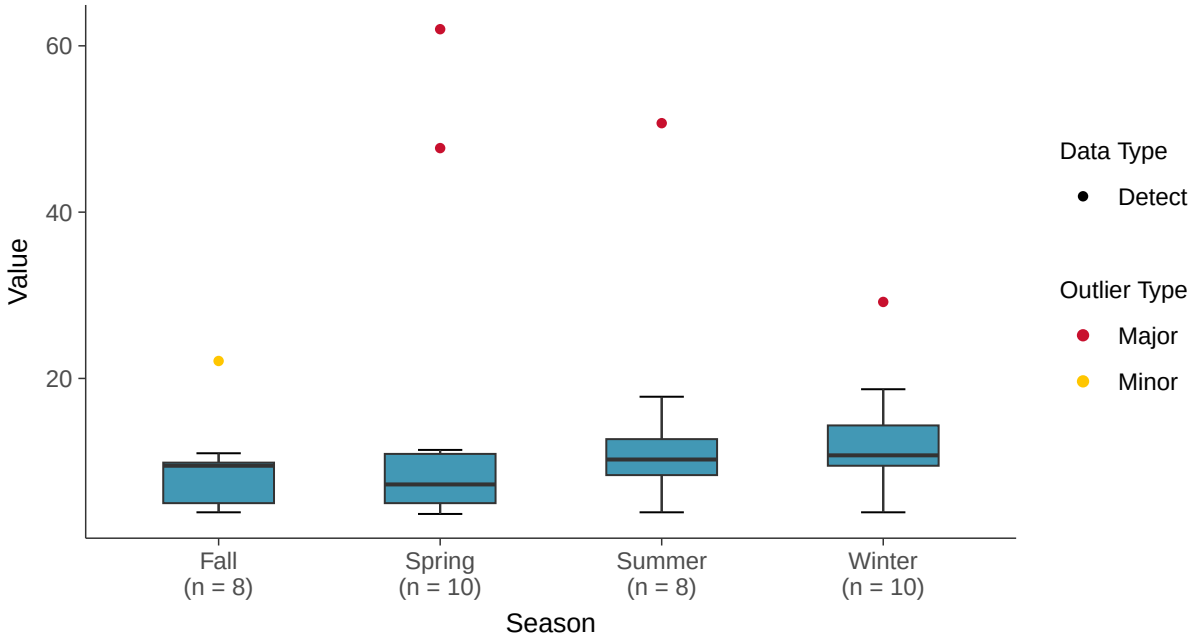
Boxplot

Zinc, MW-8 (ug/L)



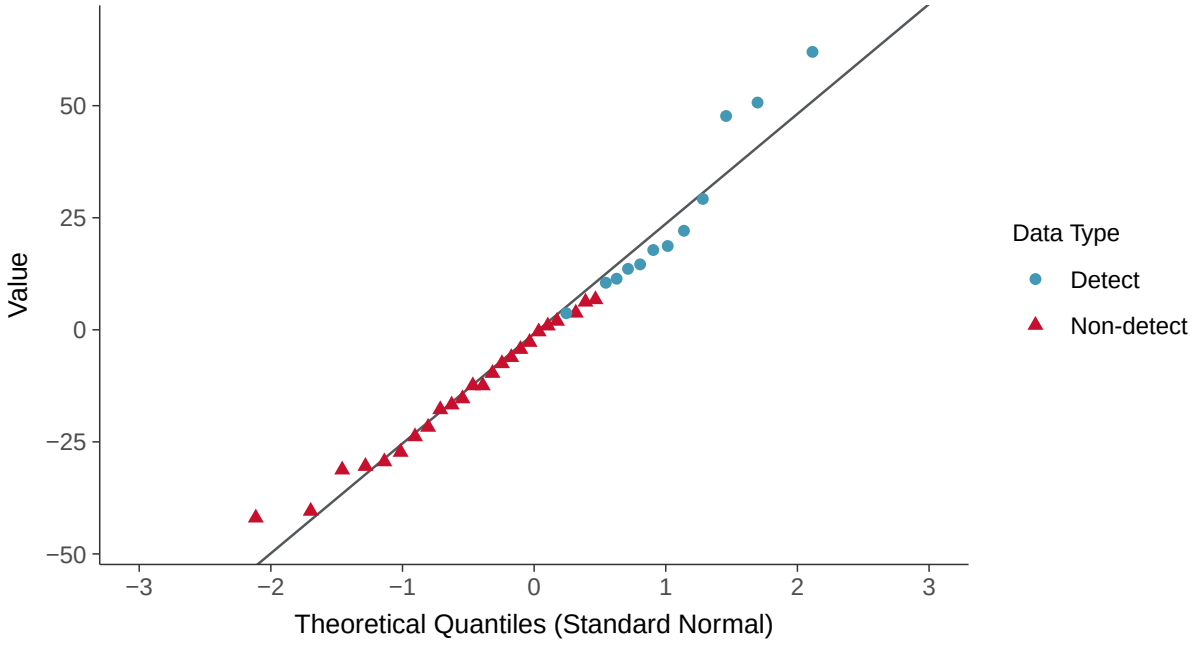
Boxplot by Season

Zinc, MW-8 (ug/L)



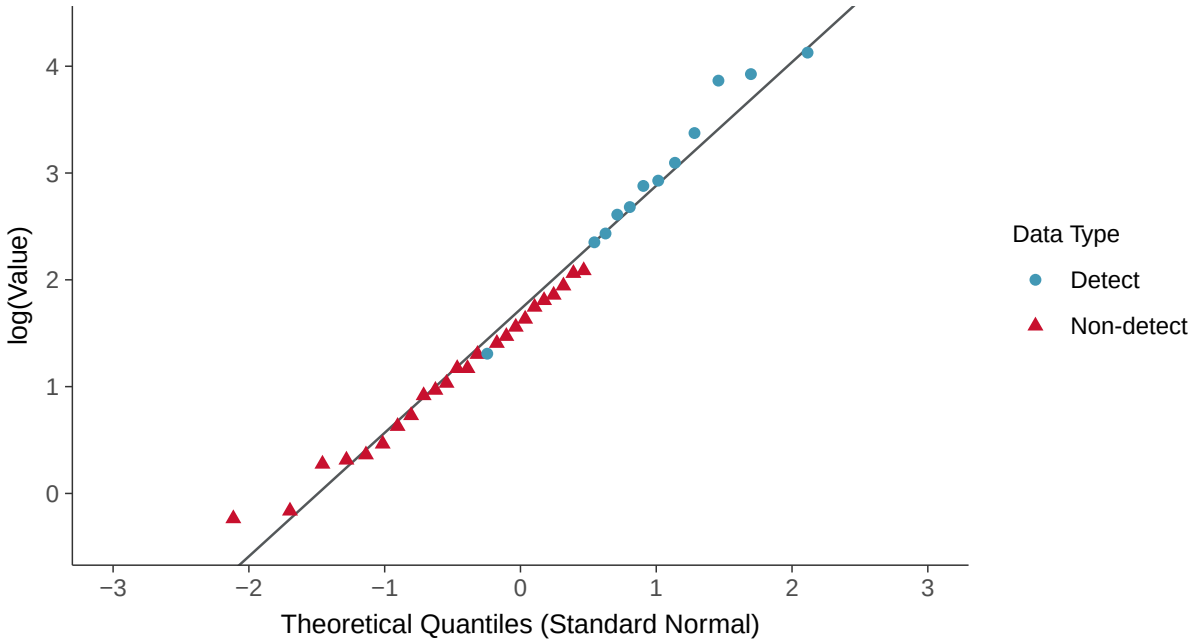
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-8 (ug/L)



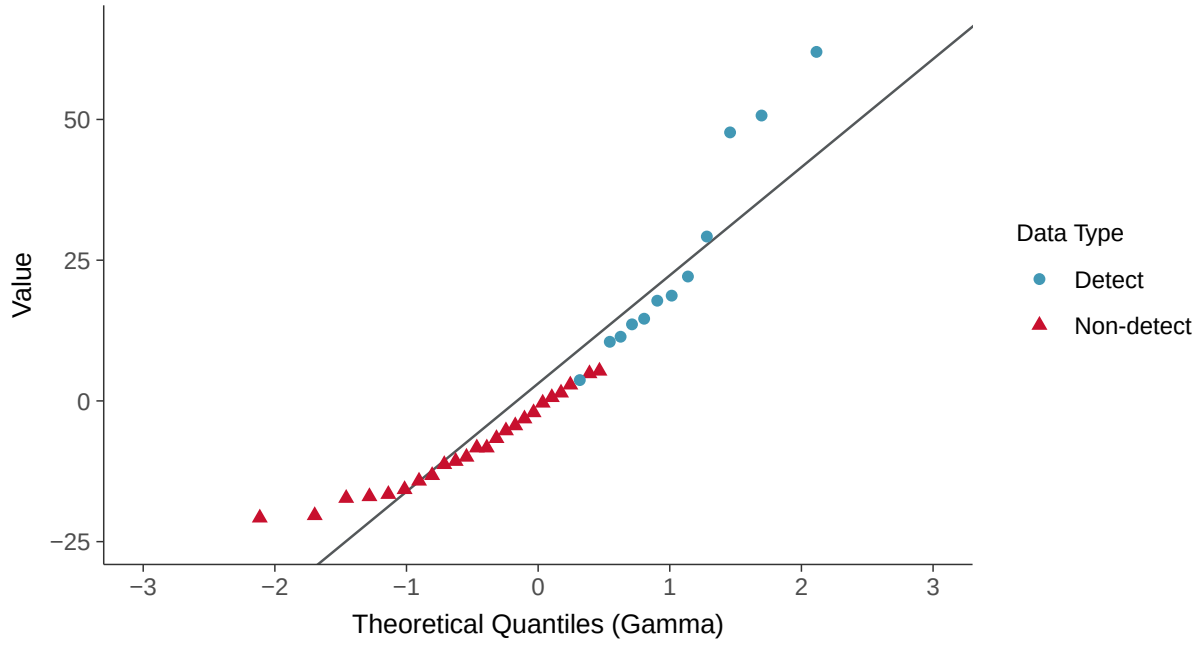
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-8 (ug/L)



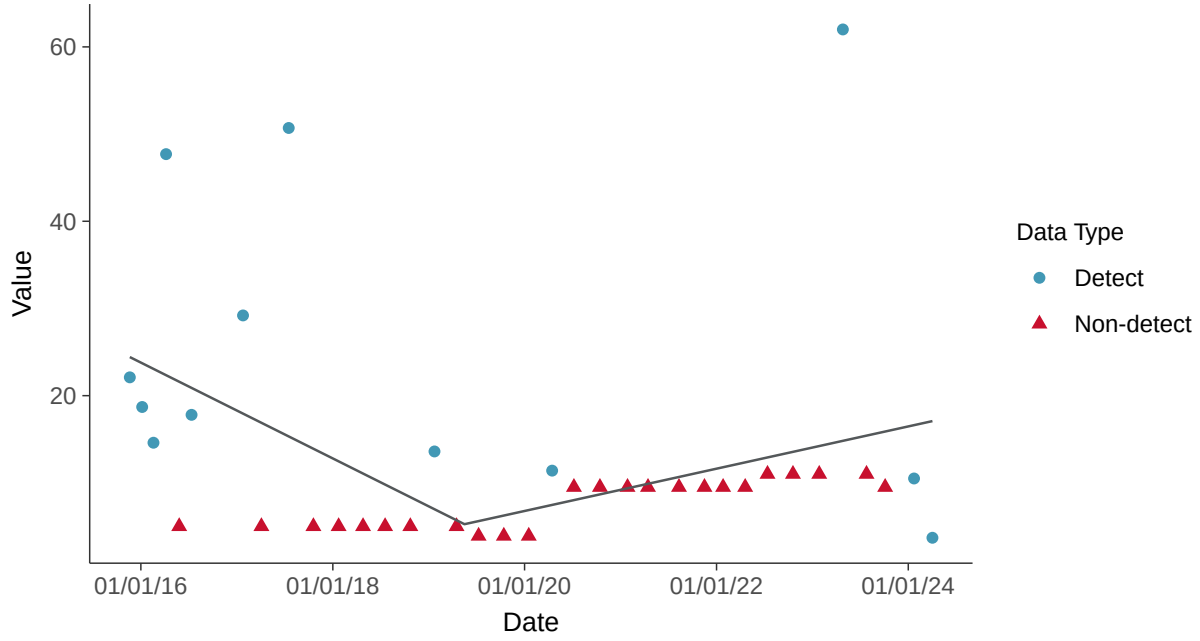
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-8 (ug/L)



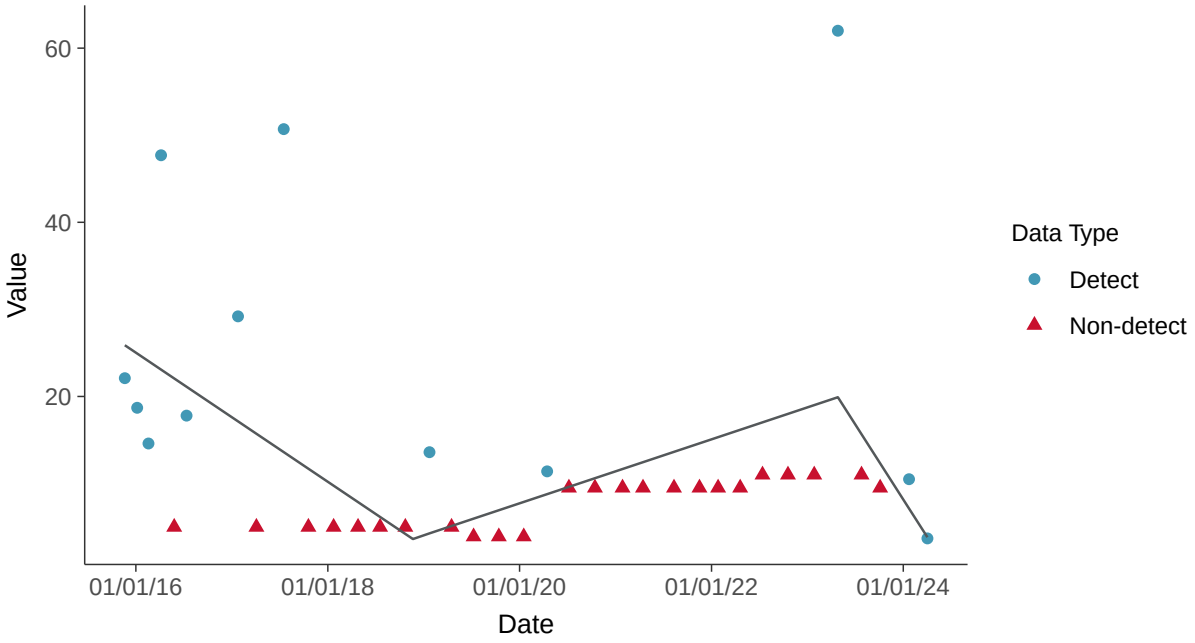
Trend Regression: Piecewise Linear-Linear

Zinc, MW-8 (ug/L)



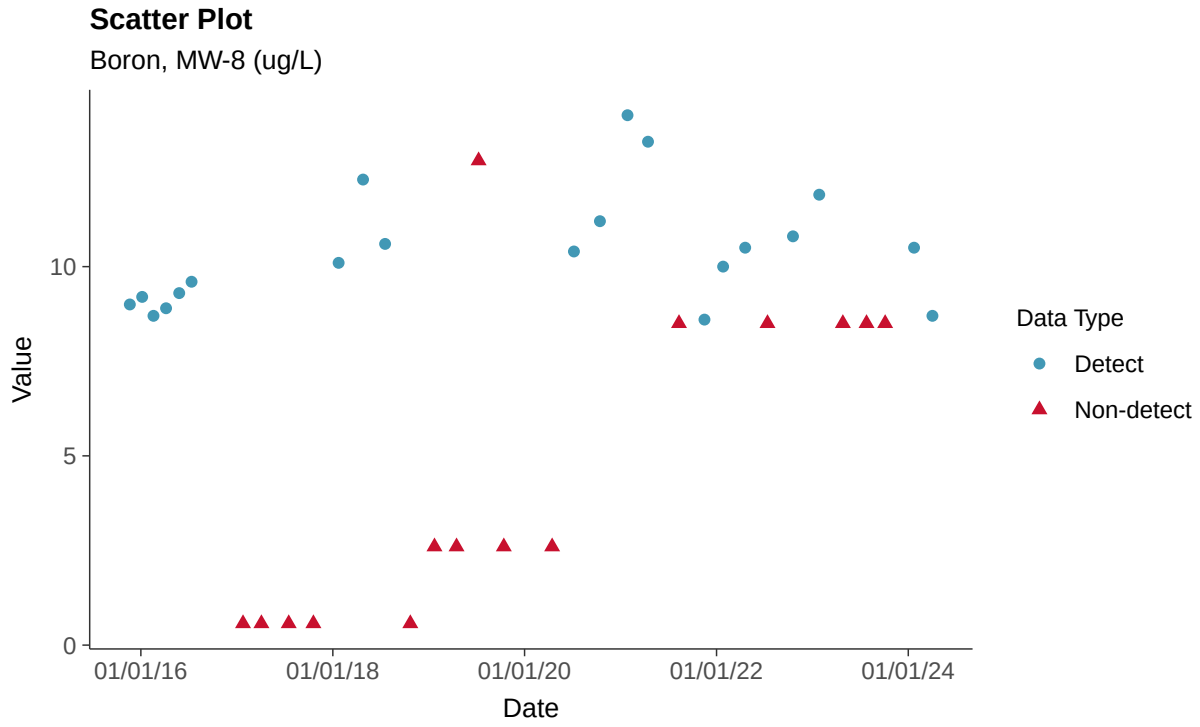
Trend Regression: Piecewise Linear-Linear-Linear

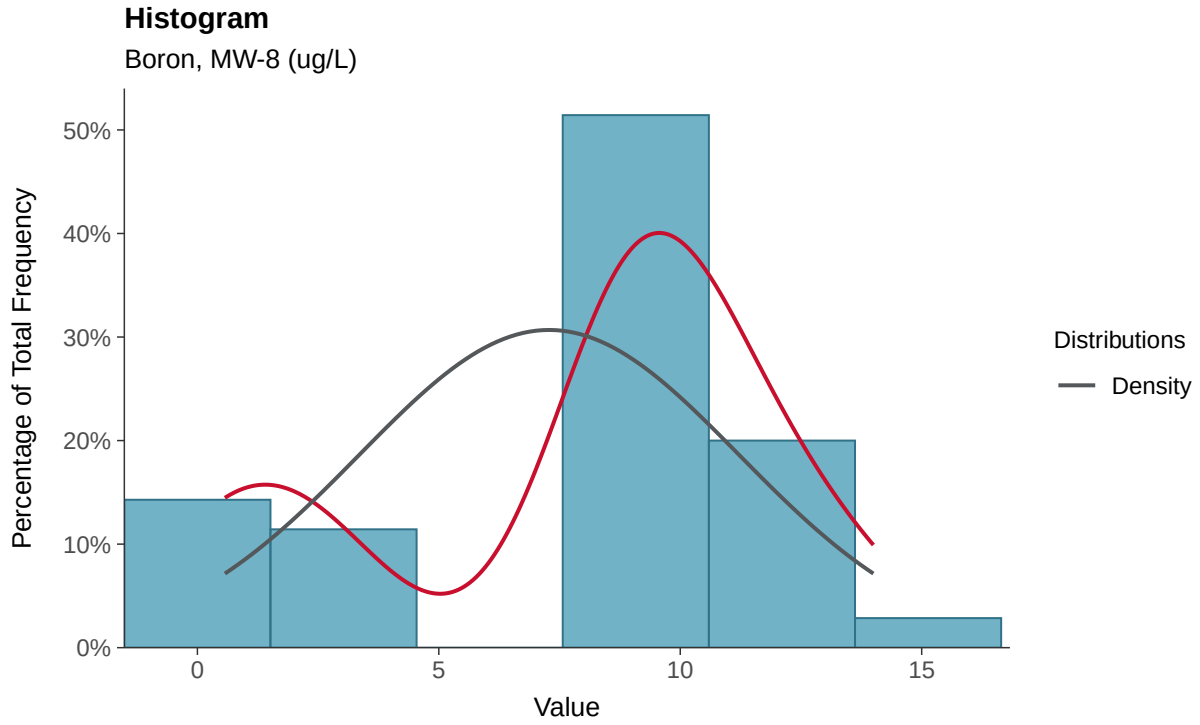
Zinc, MW-8 (ug/L)



App. III: Boron, MW-8

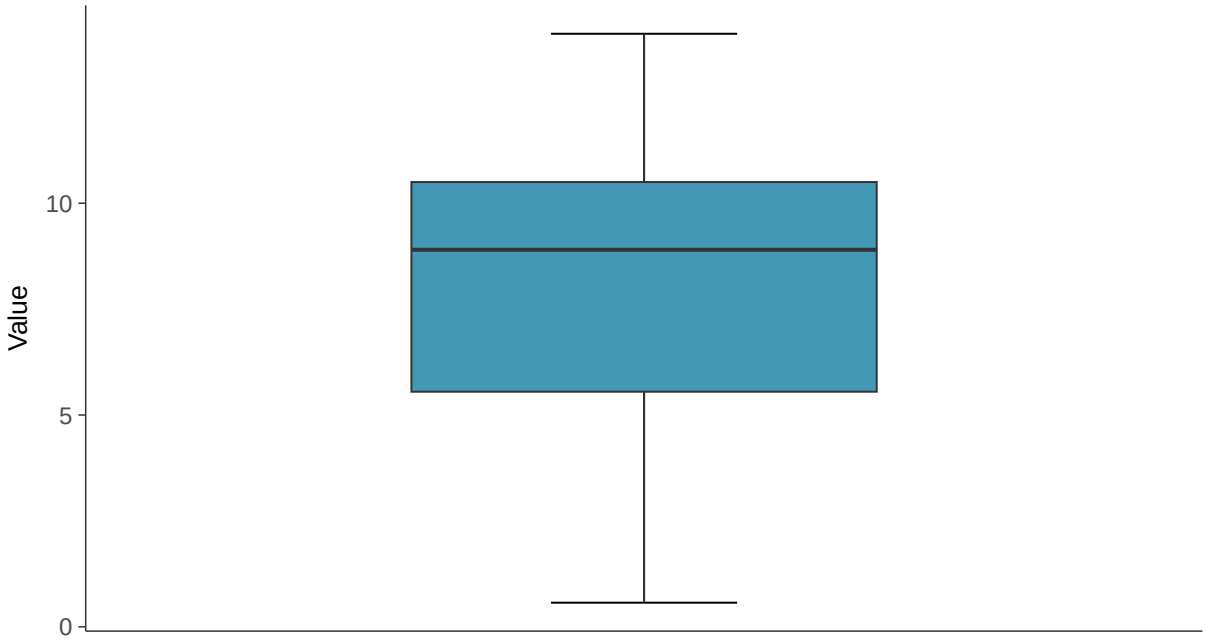
ID: 11_2_105





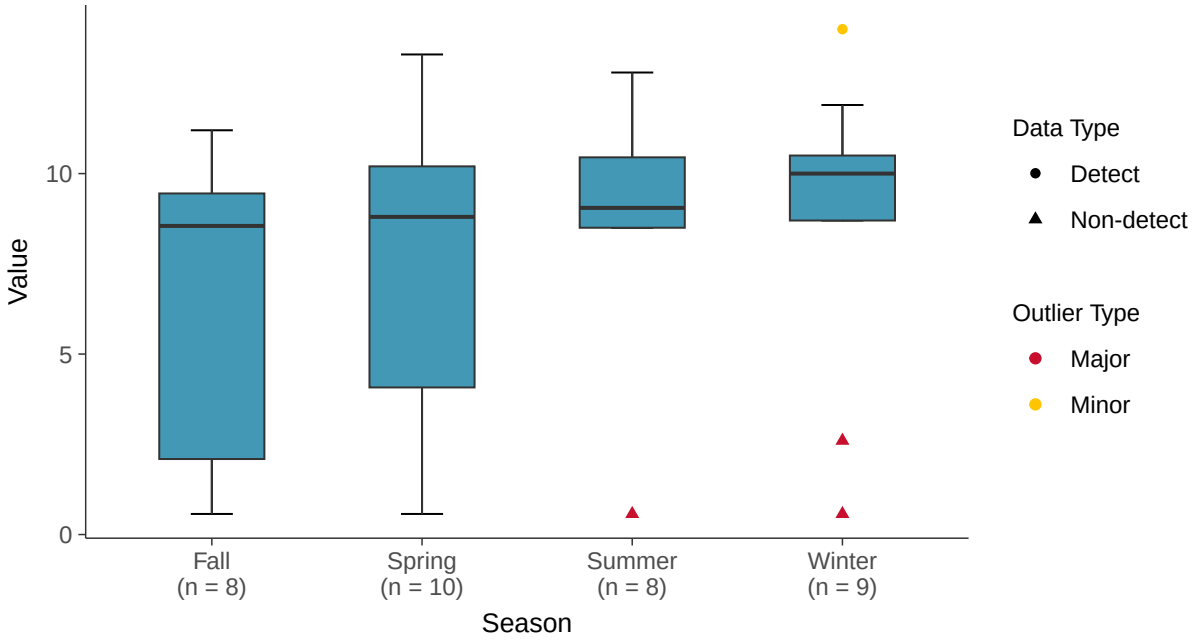
Boxplot

Boron, MW-8 (ug/L)



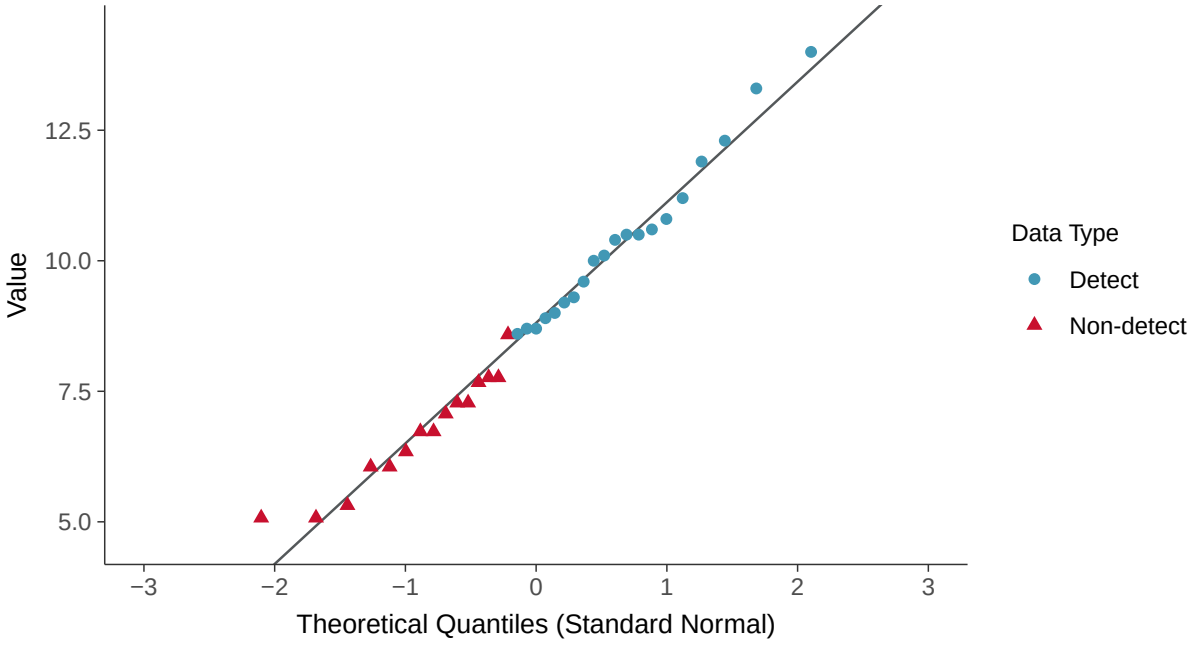
Boxplot by Season

Boron, MW-8 (ug/L)



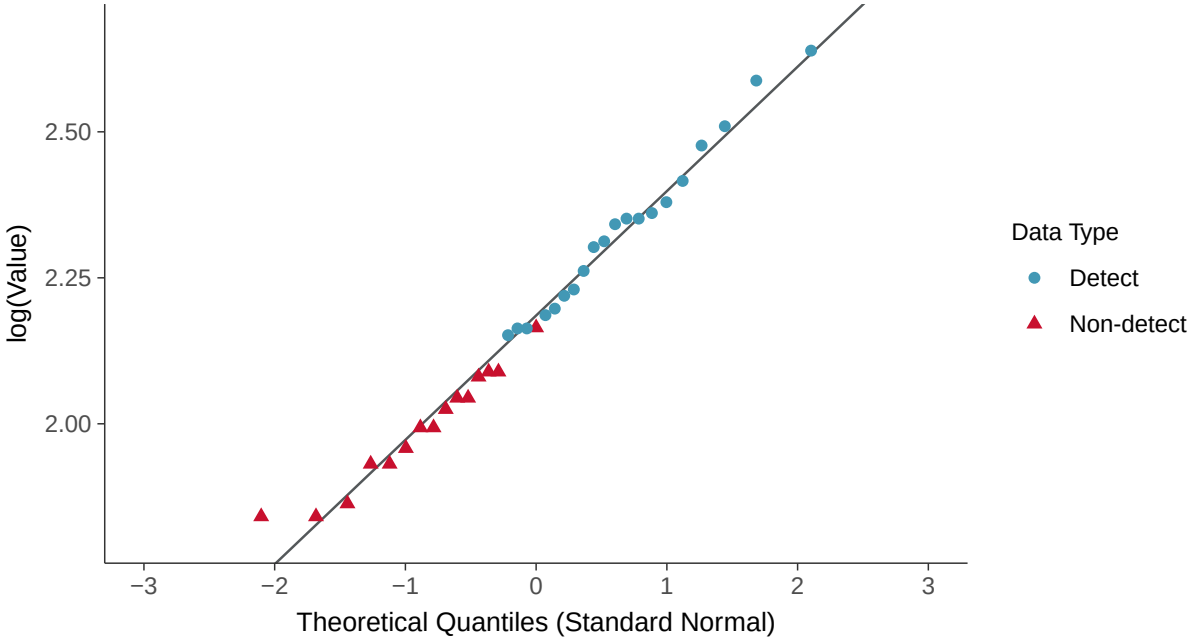
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



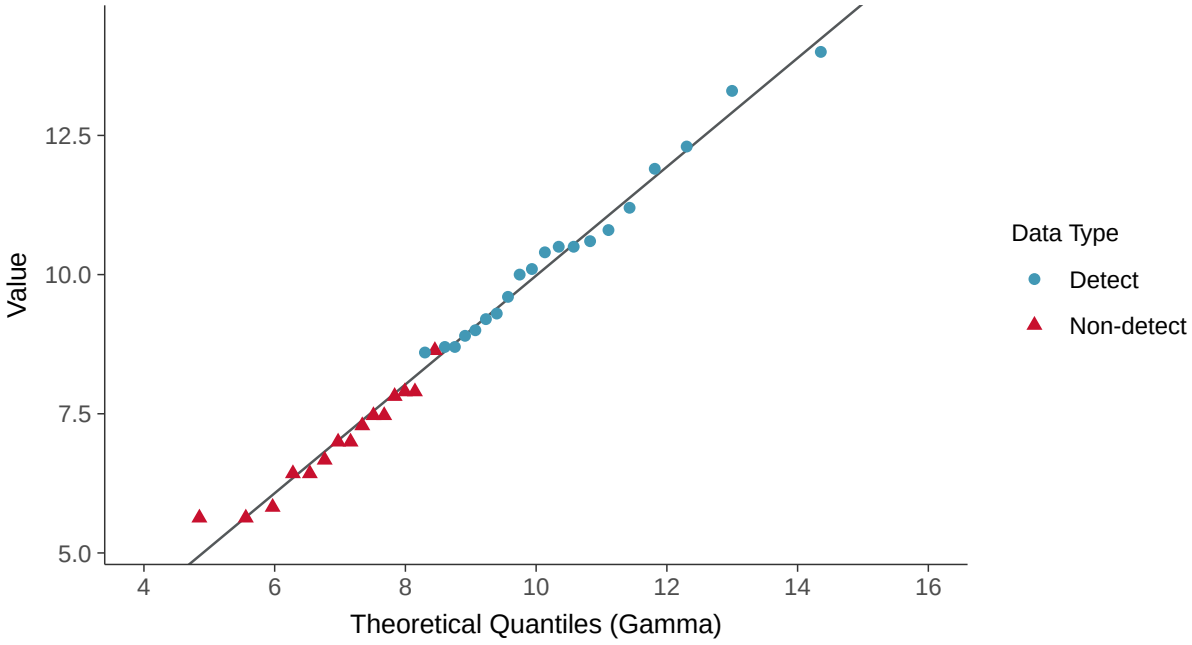
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



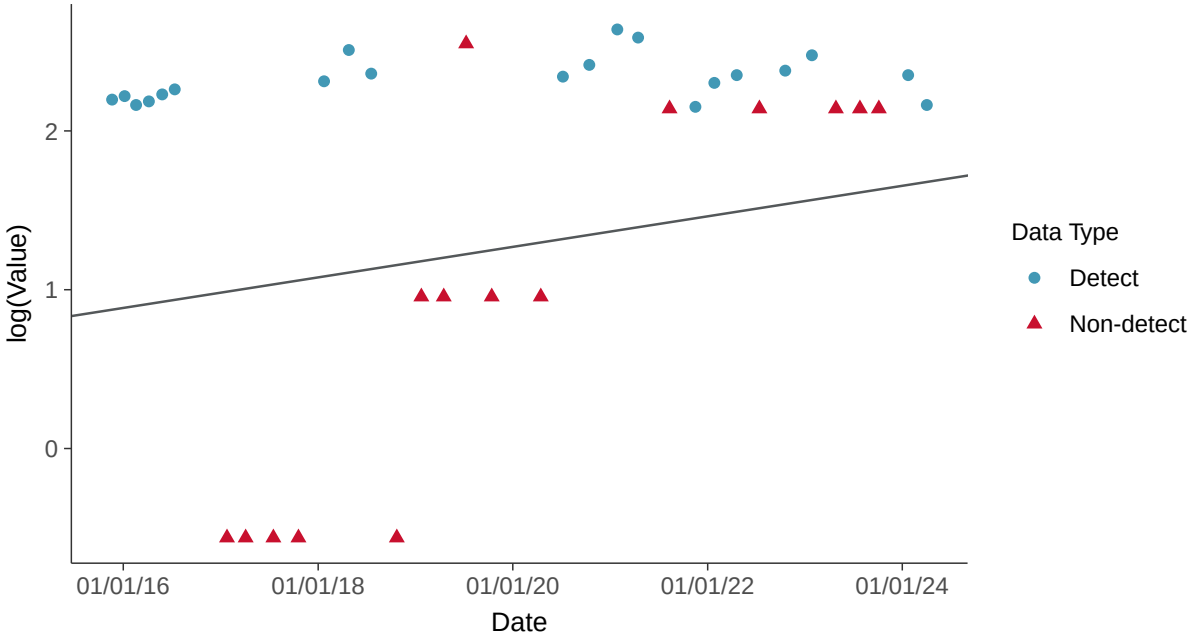
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



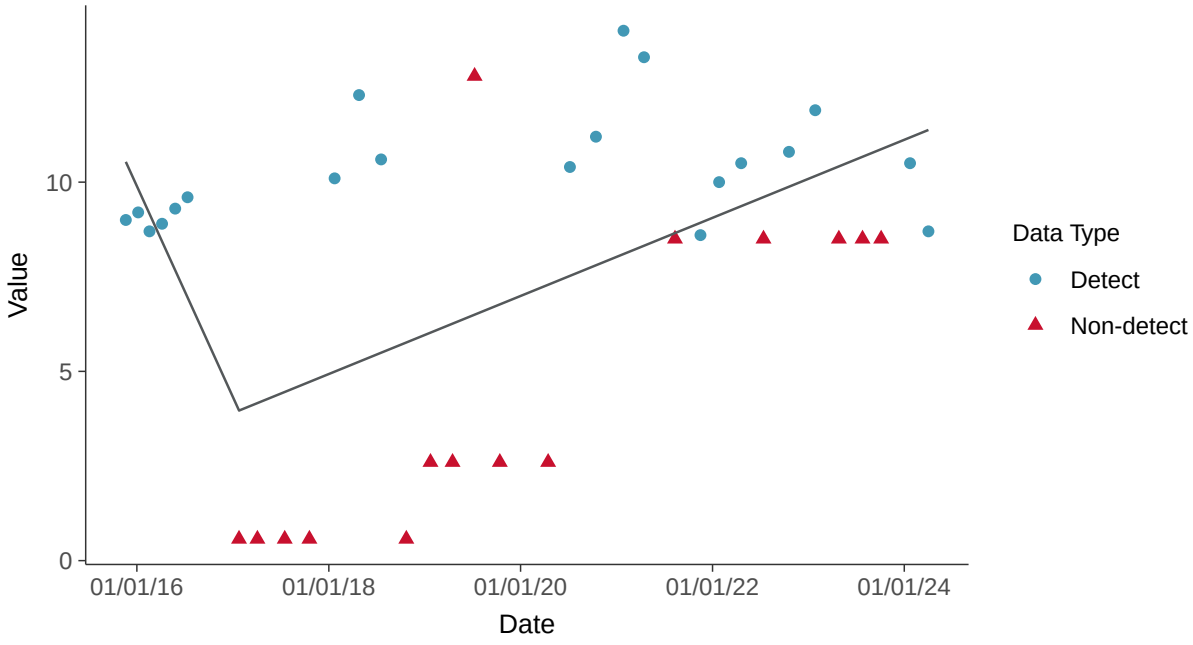
Trend Regression: Lognormal MLE

Boron, MW-8 (ug/L)



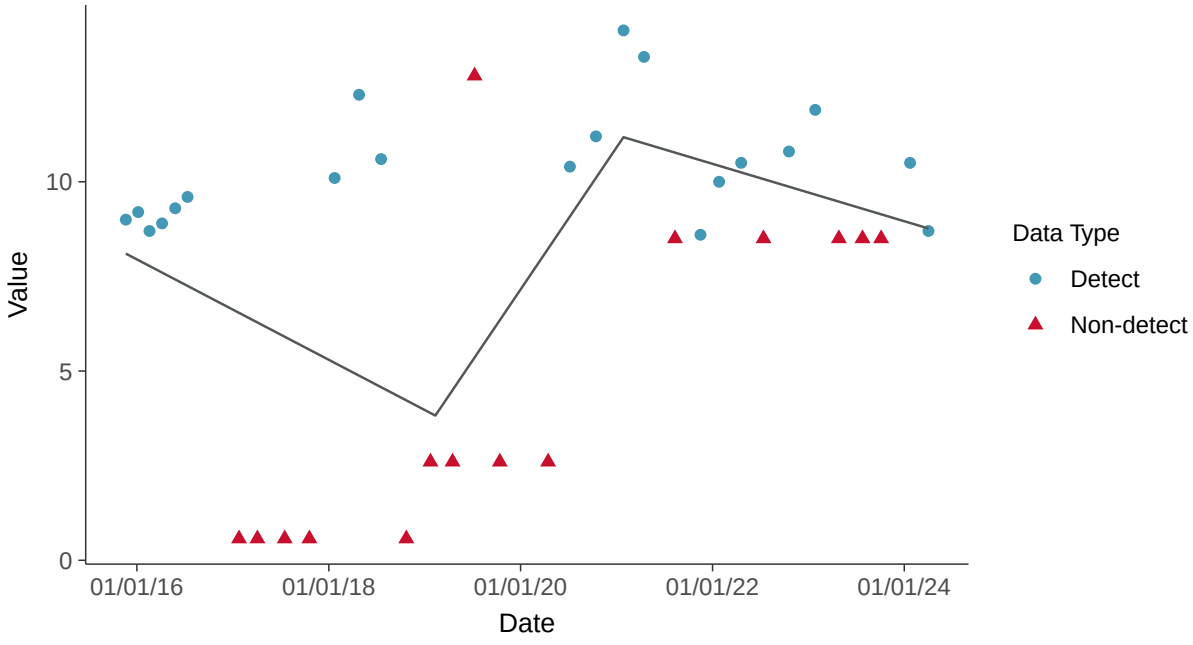
Trend Regression: Piecewise Linear-Linear

Boron, MW-8 (ug/L)



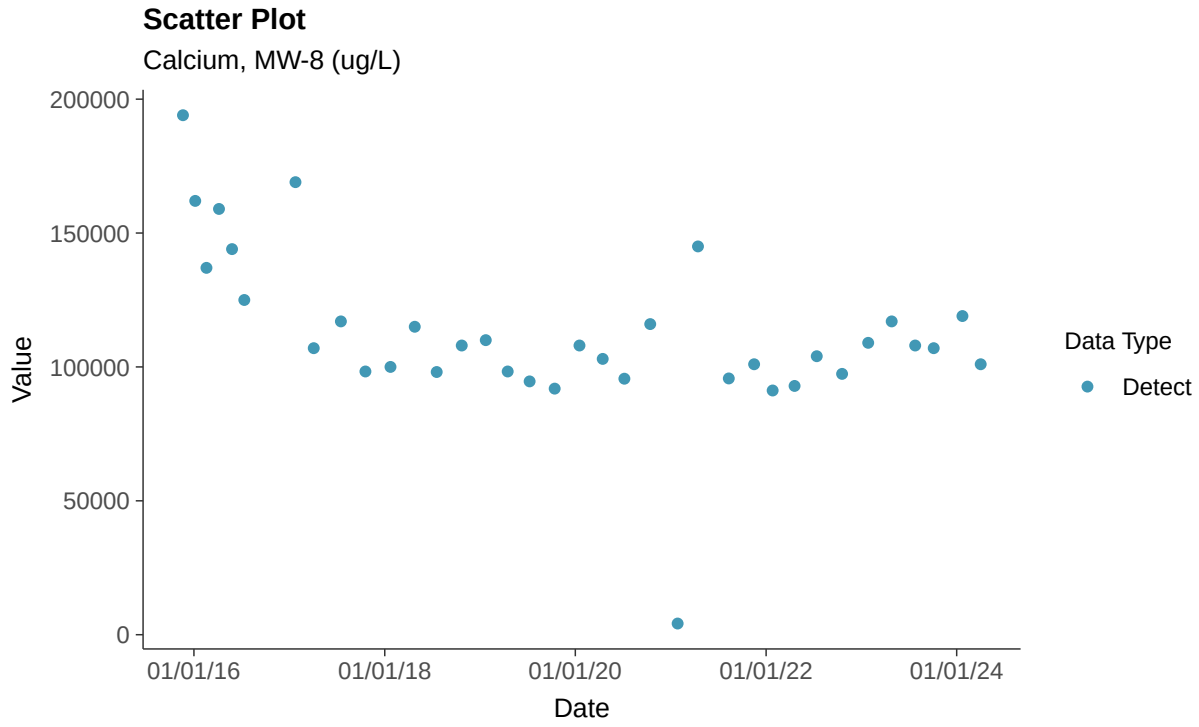
Trend Regression: Piecewise Linear-Linear-Linear

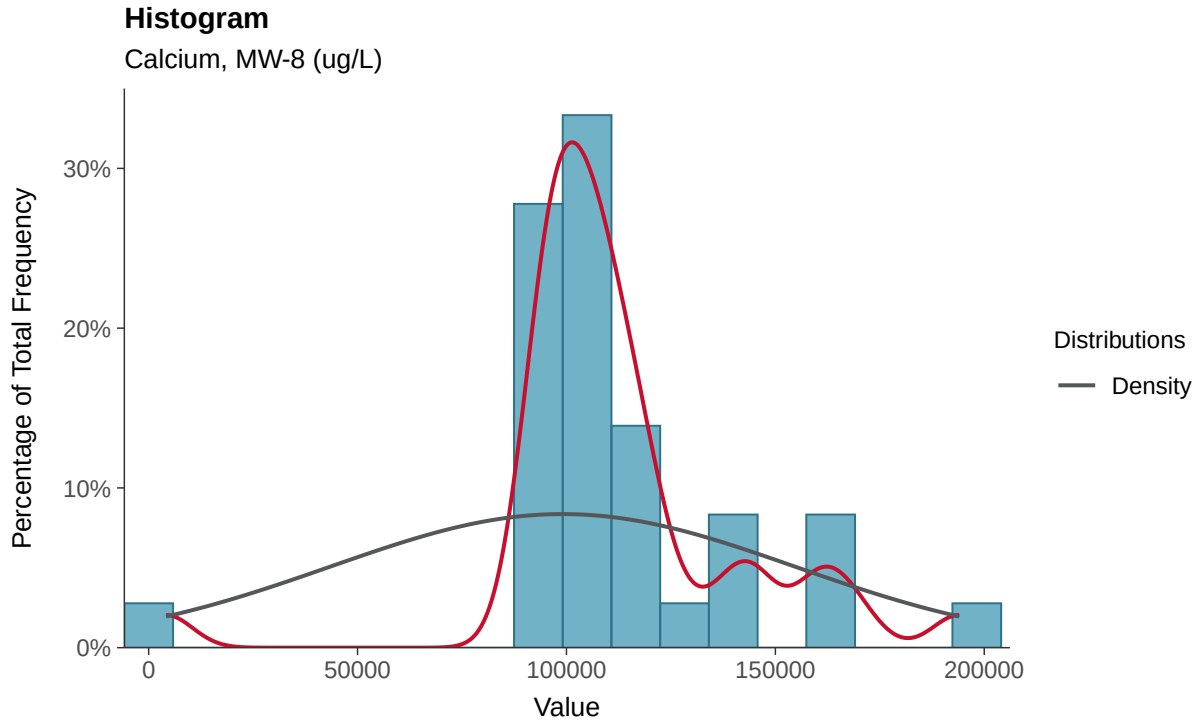
Boron, MW-8 (ug/L)



App. III: Calcium, MW-8

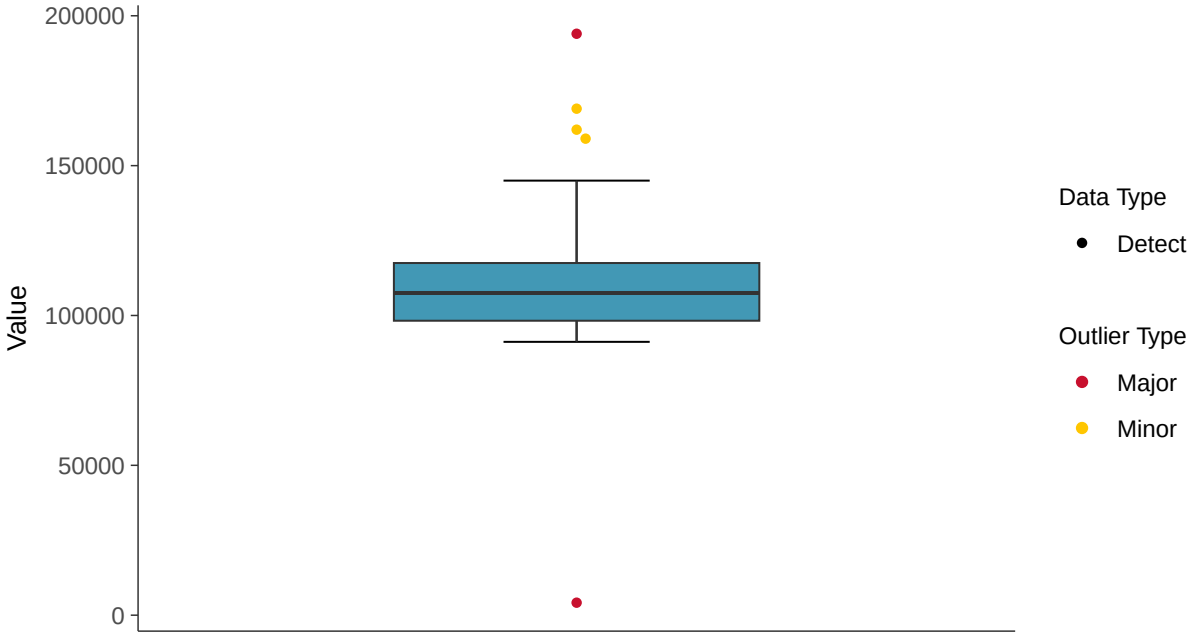
ID: 11_2_107





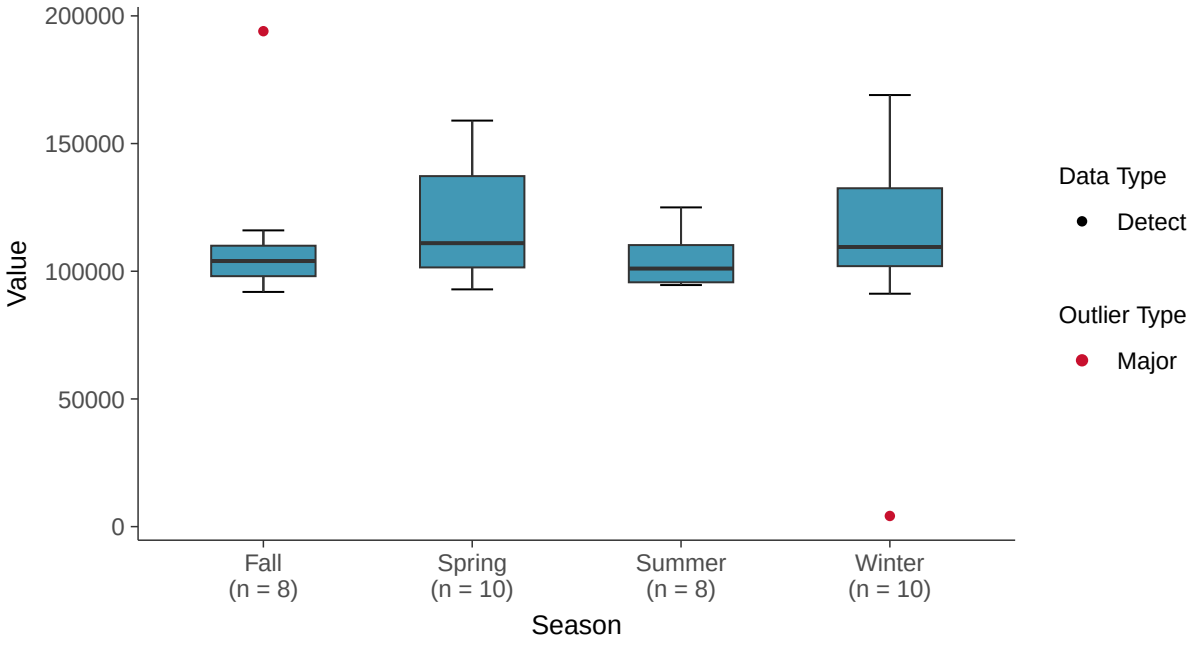
Boxplot

Calcium, MW-8 (ug/L)



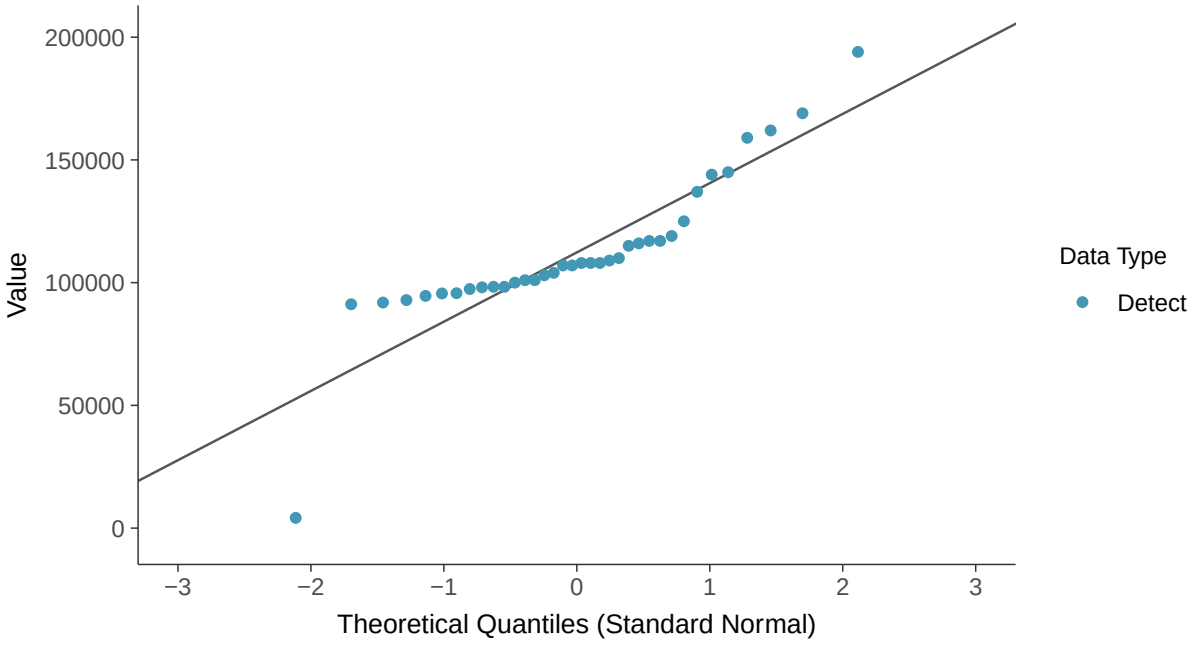
Boxplot by Season

Calcium, MW-8 (ug/L)



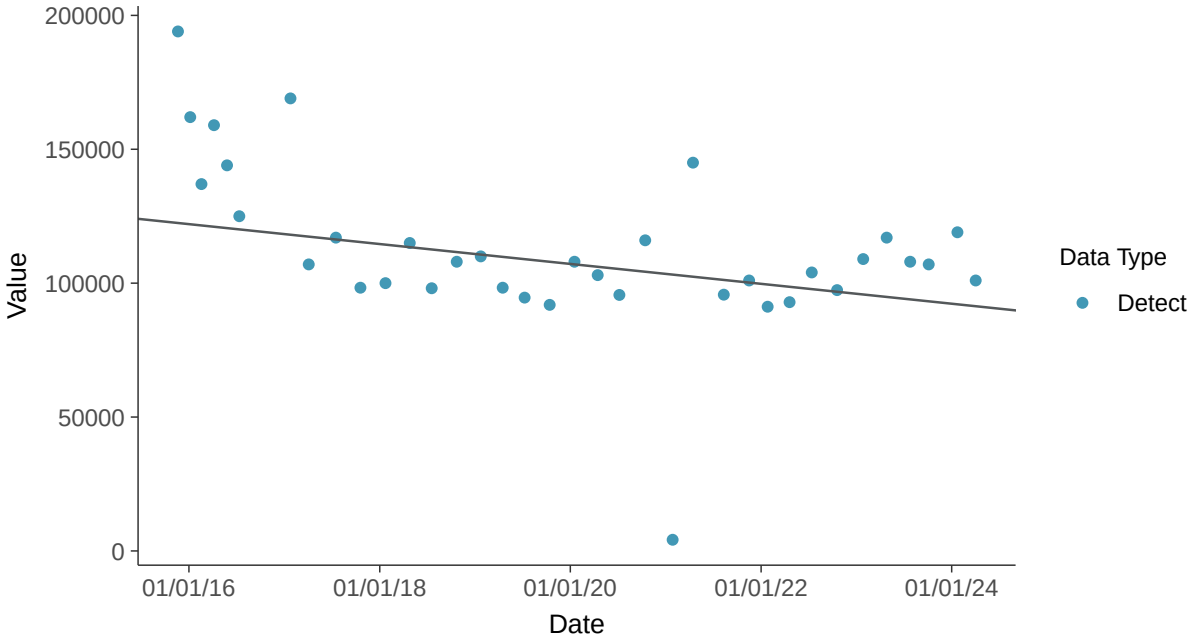
Normal Q-Q plot

Calcium, MW-8 (ug/L)



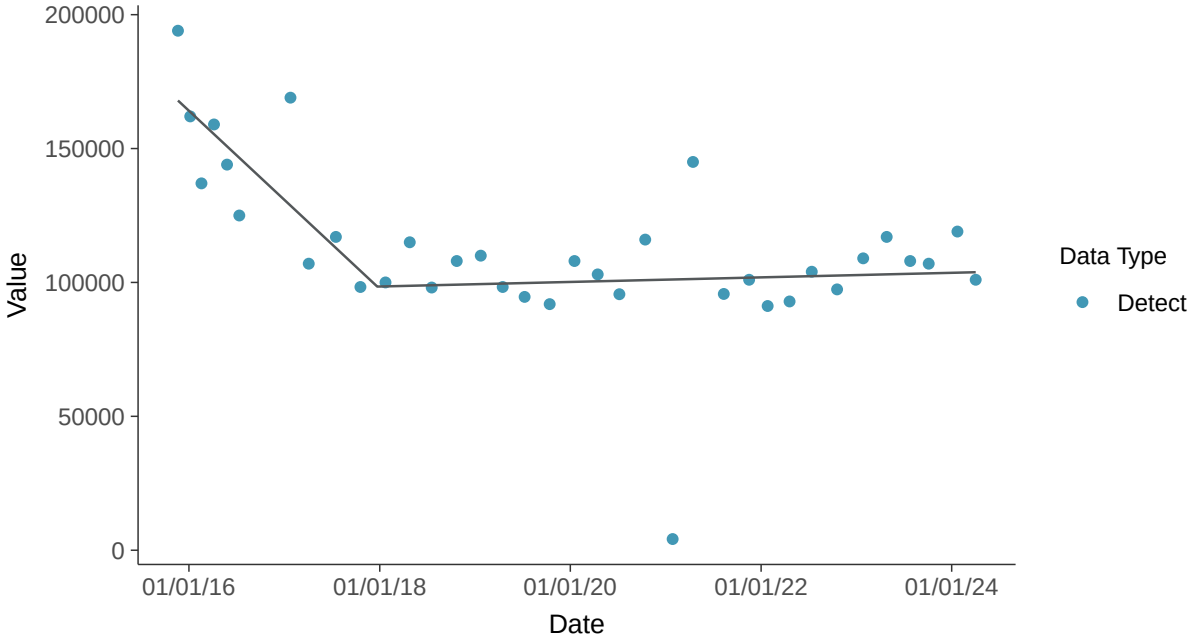
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-8 (ug/L)



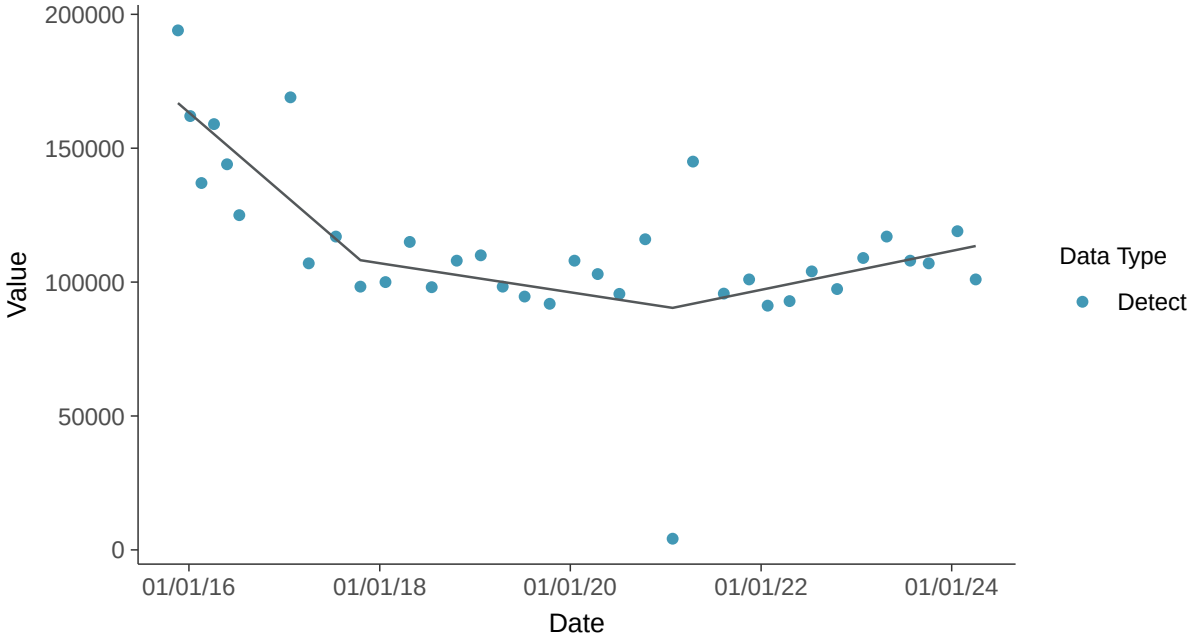
Trend Regression: Piecewise Linear-Linear

Calcium, MW-8 (ug/L)



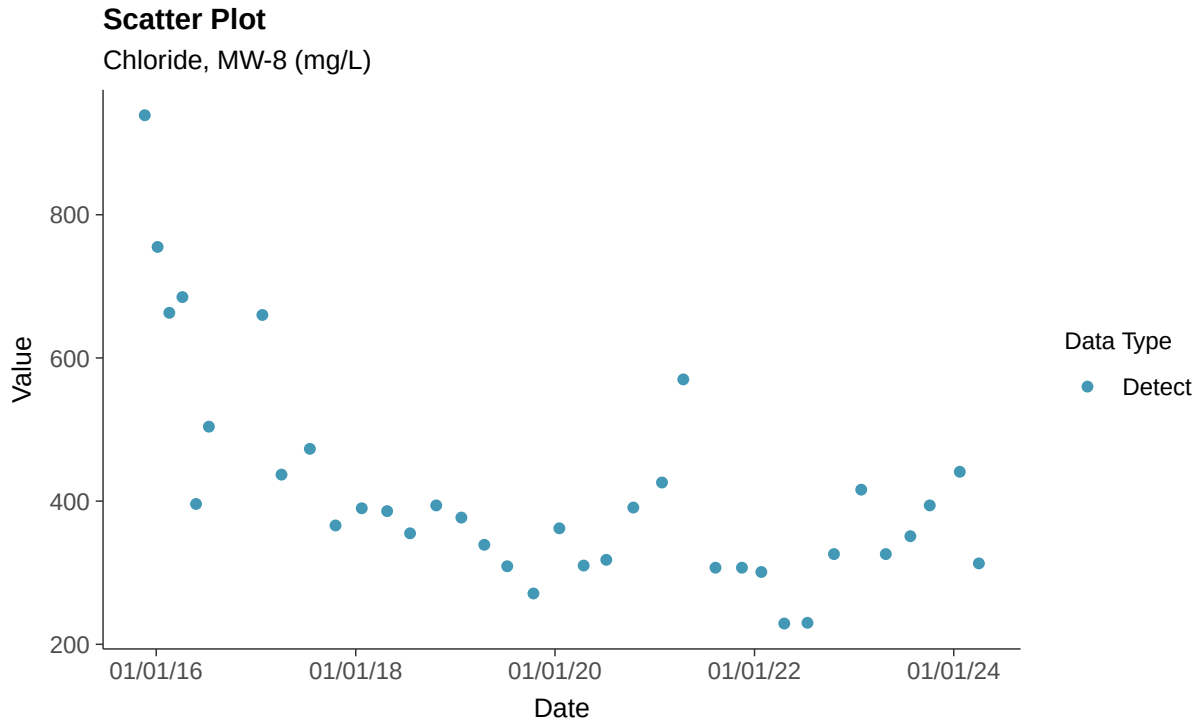
Trend Regression: Piecewise Linear-Linear-Linear

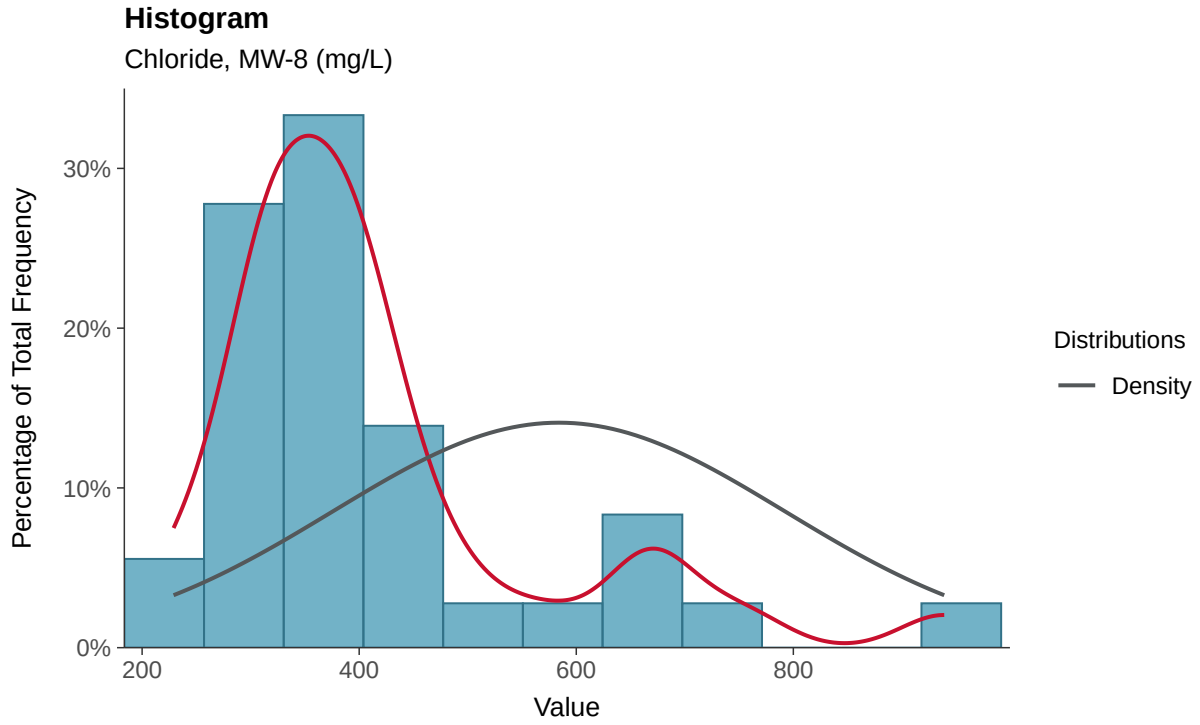
Calcium, MW-8 (ug/L)



App. III: Chloride, MW-8

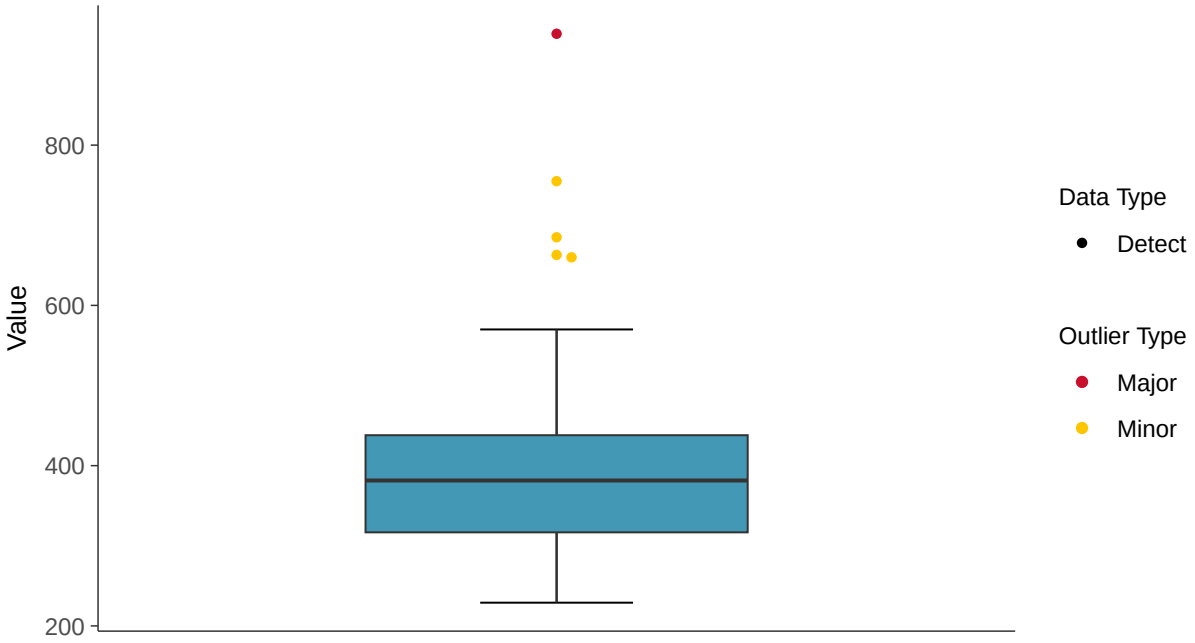
ID: 11_2_108





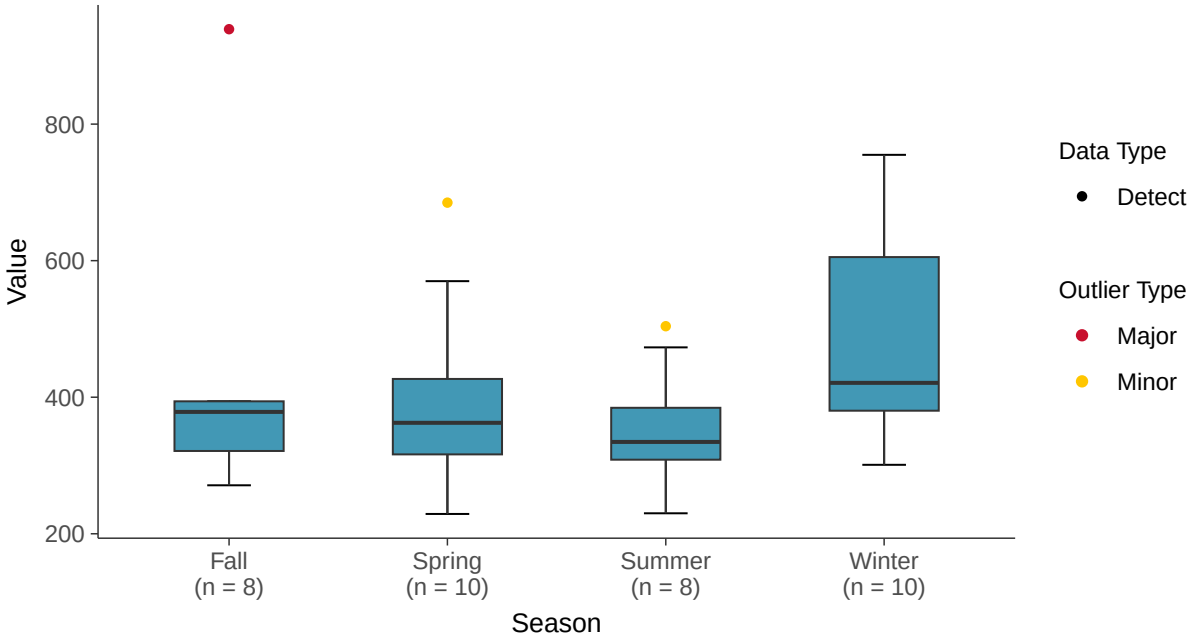
Boxplot

Chloride, MW-8 (mg/L)



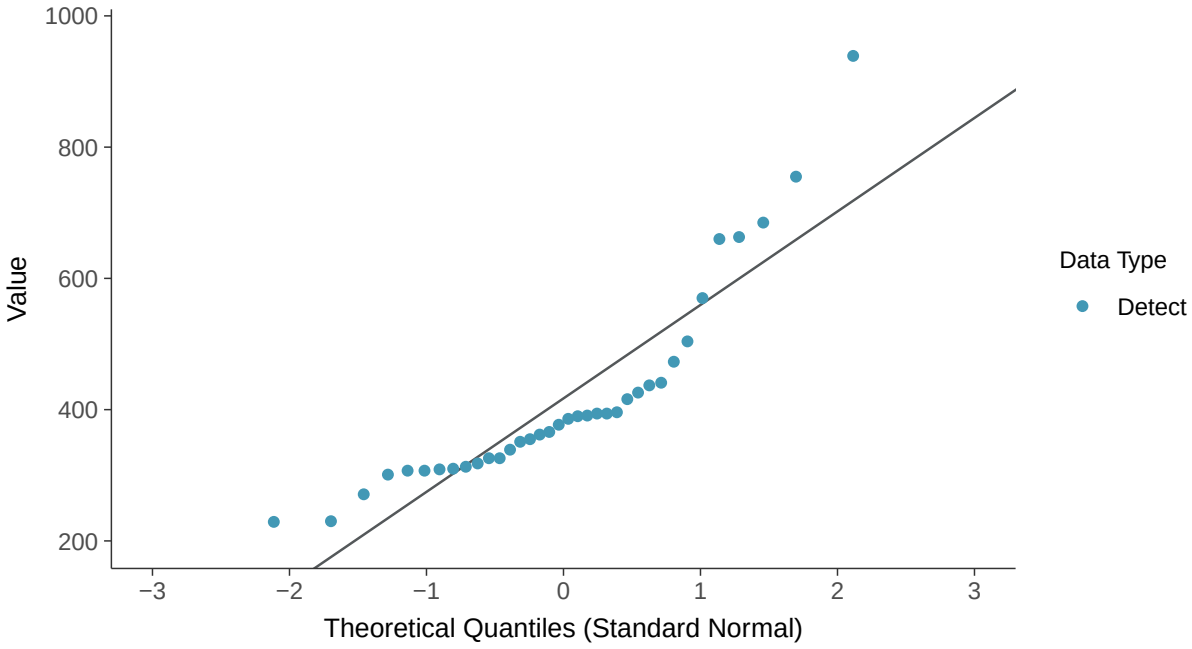
Boxplot by Season

Chloride, MW-8 (mg/L)



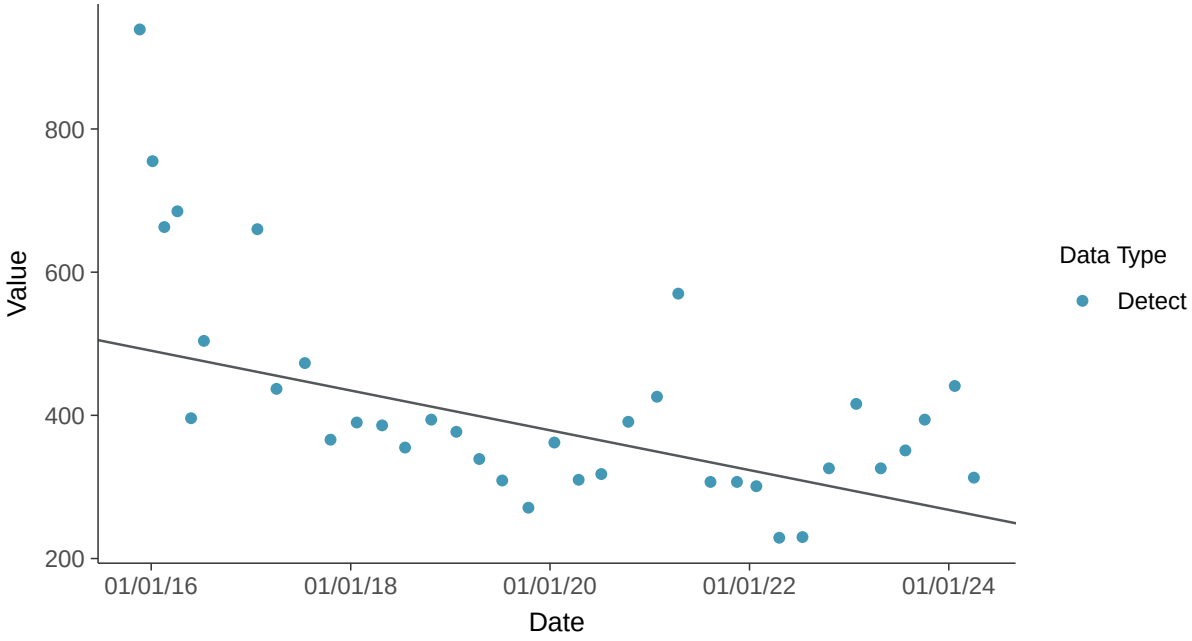
Normal Q-Q plot

Chloride, MW-8 (mg/L)



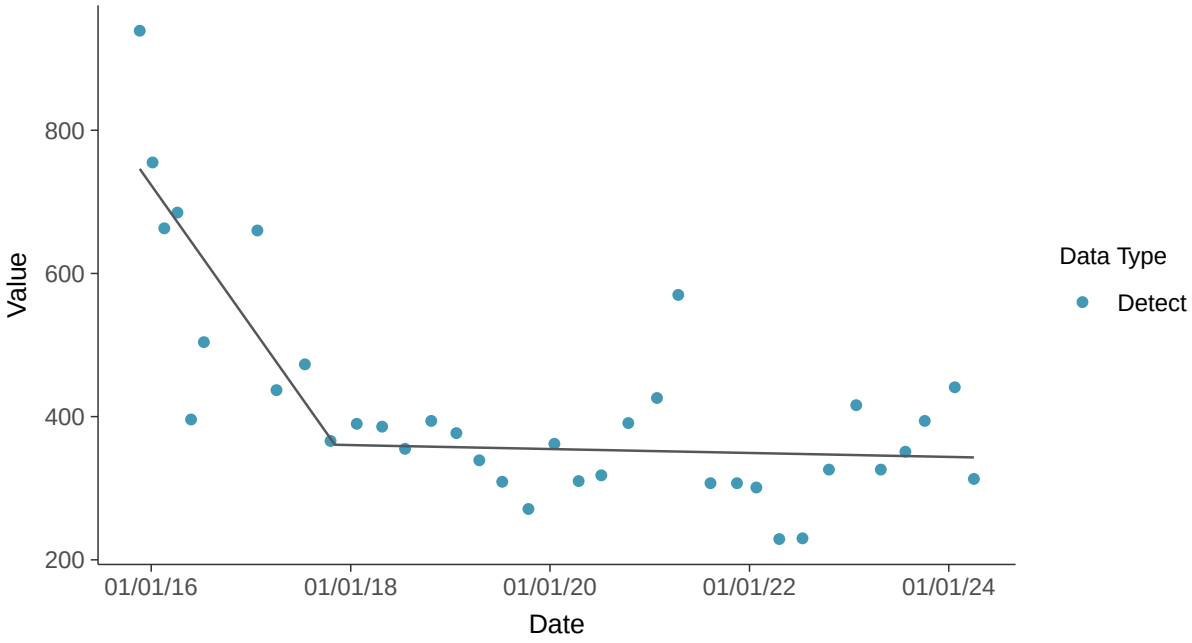
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-8 (mg/L)



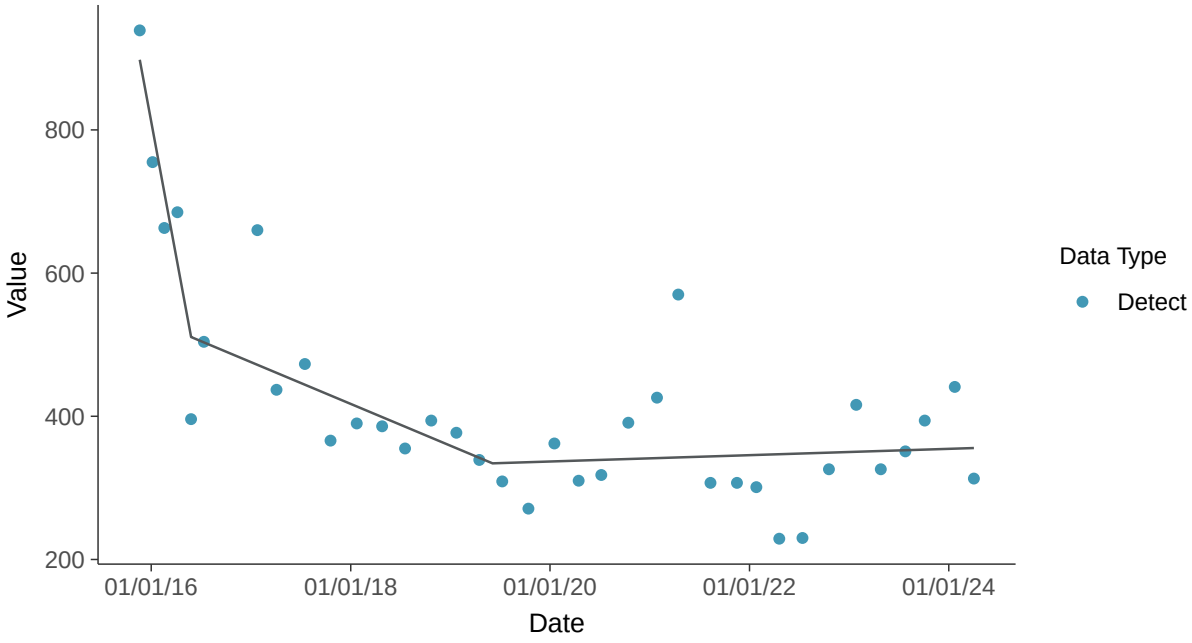
Trend Regression: Piecewise Linear-Linear

Chloride, MW-8 (mg/L)



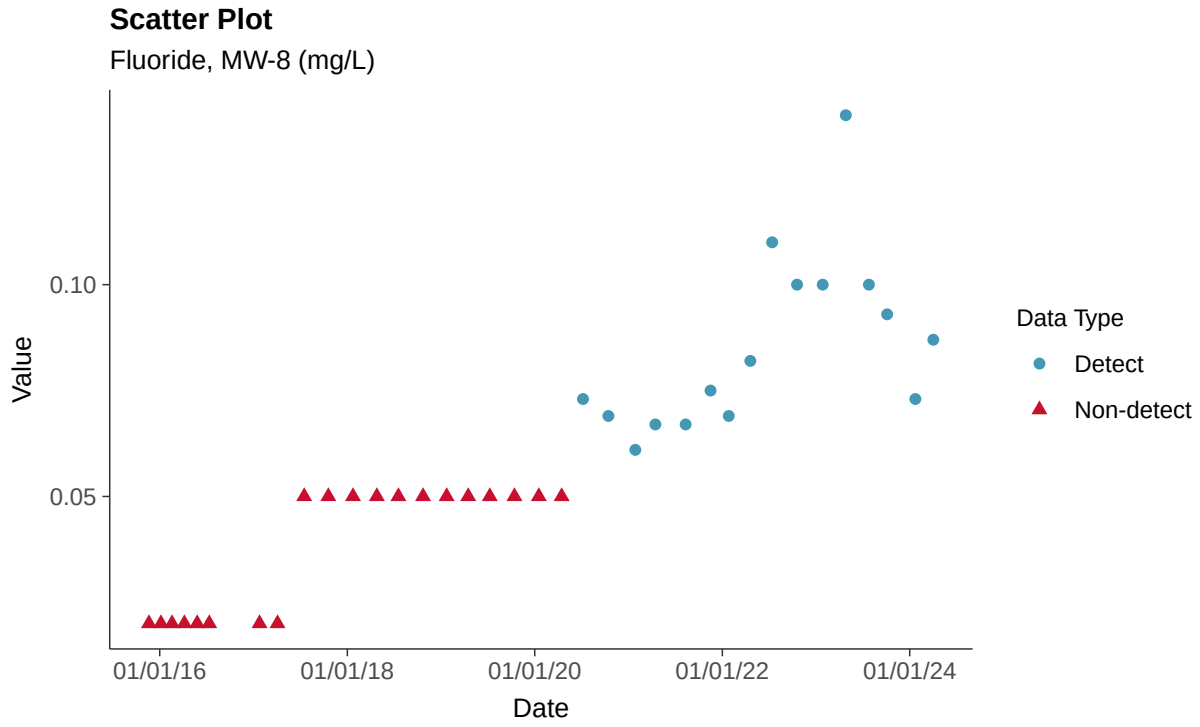
Trend Regression: Piecewise Linear-Linear-Linear

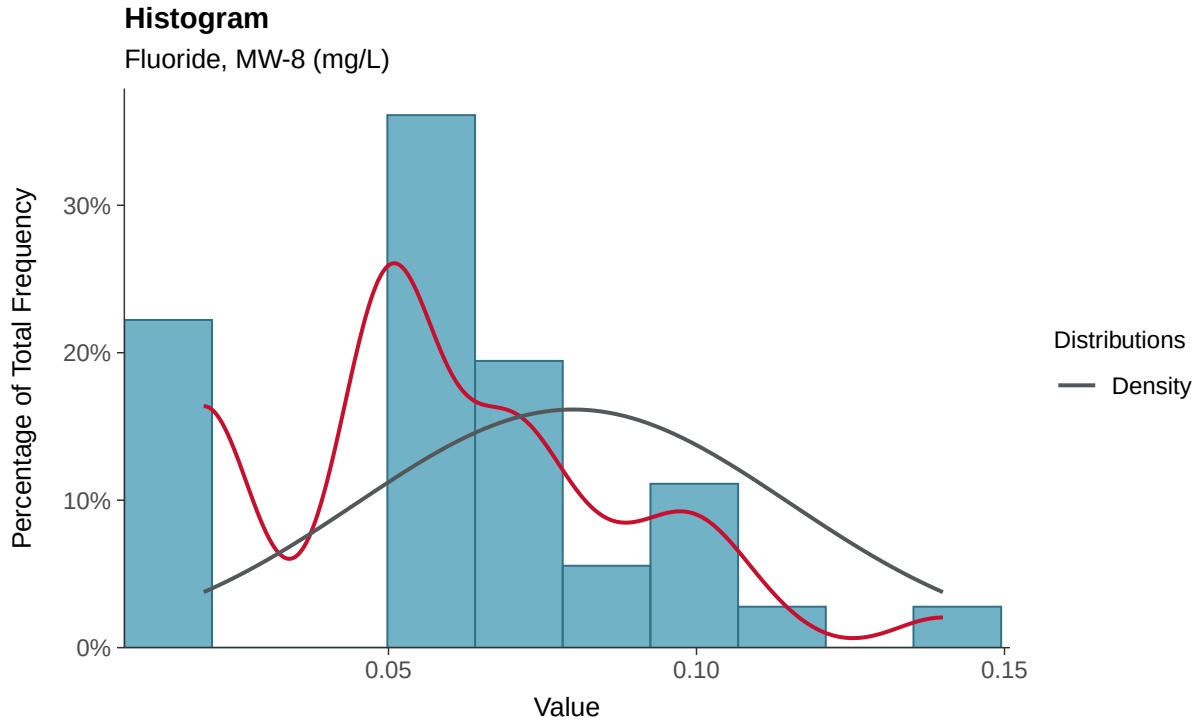
Chloride, MW-8 (mg/L)



App. III: Fluoride, MW-8

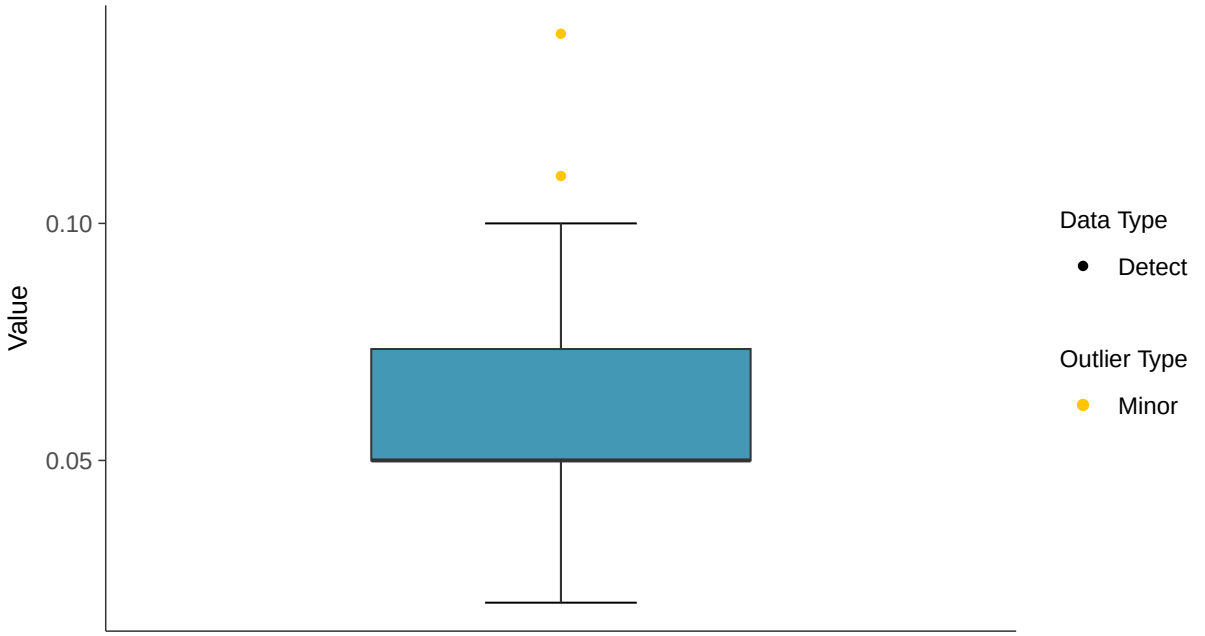
ID: 11_2_112





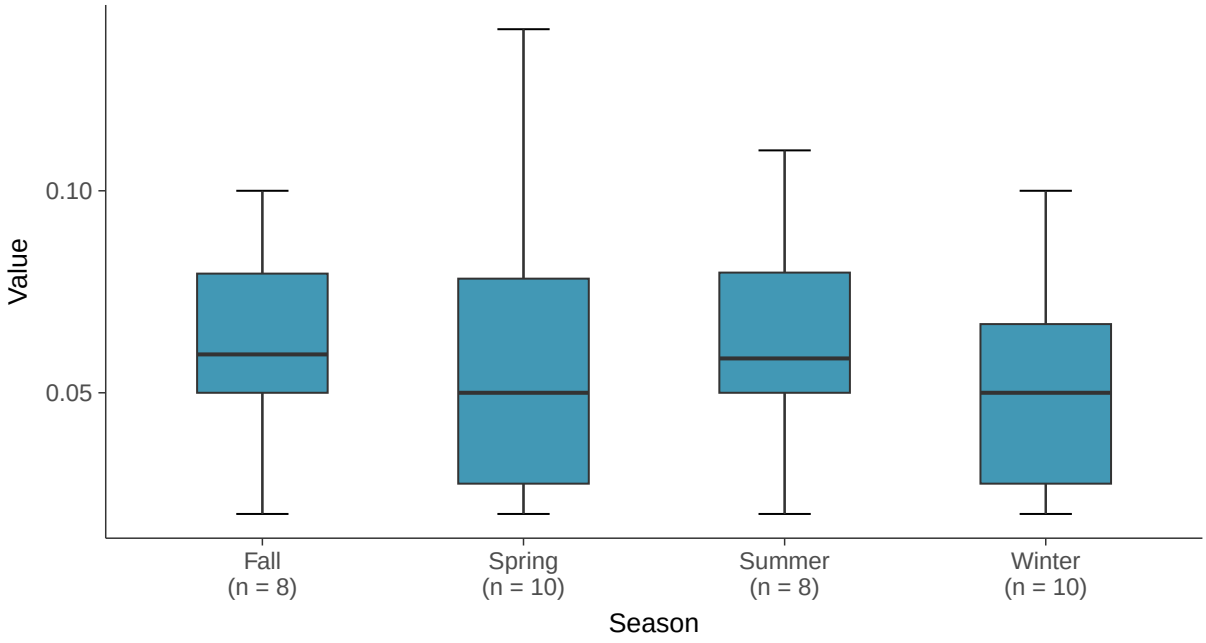
Boxplot

Fluoride, MW-8 (mg/L)



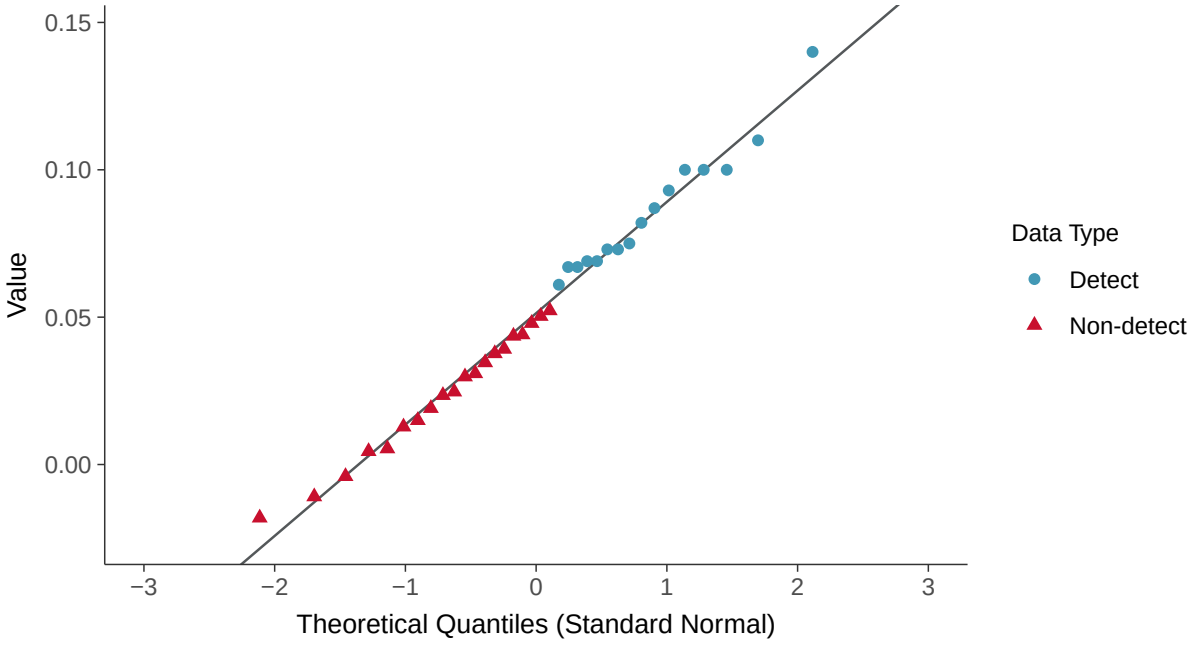
Boxplot by Season

Fluoride, MW-8 (mg/L)



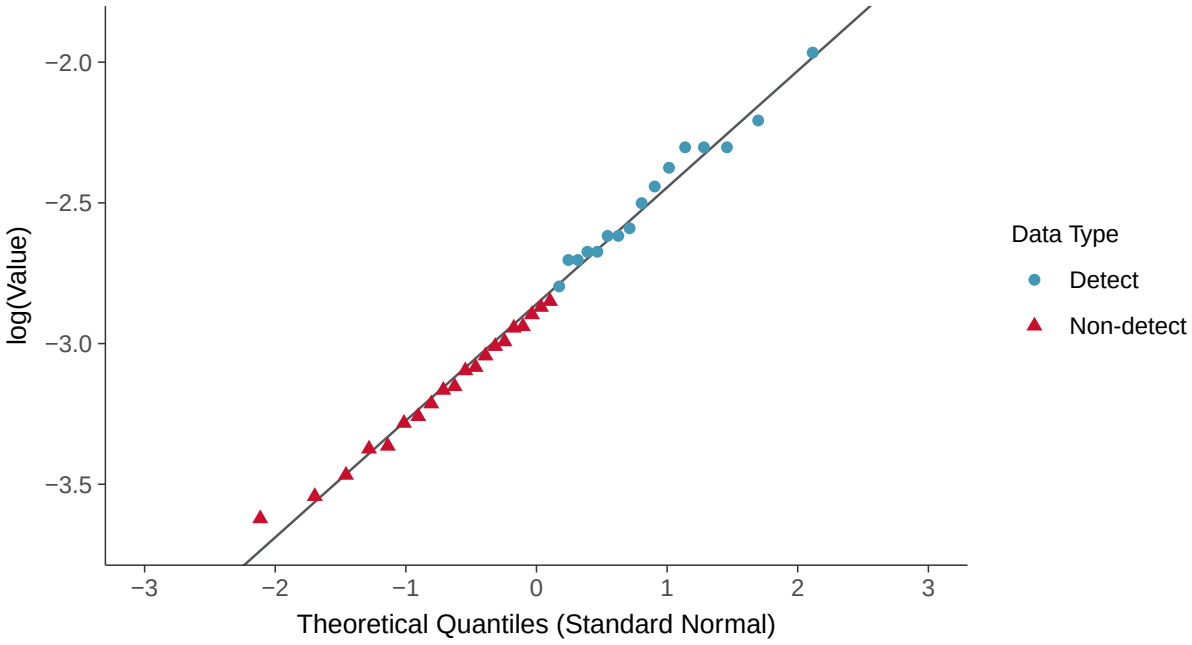
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



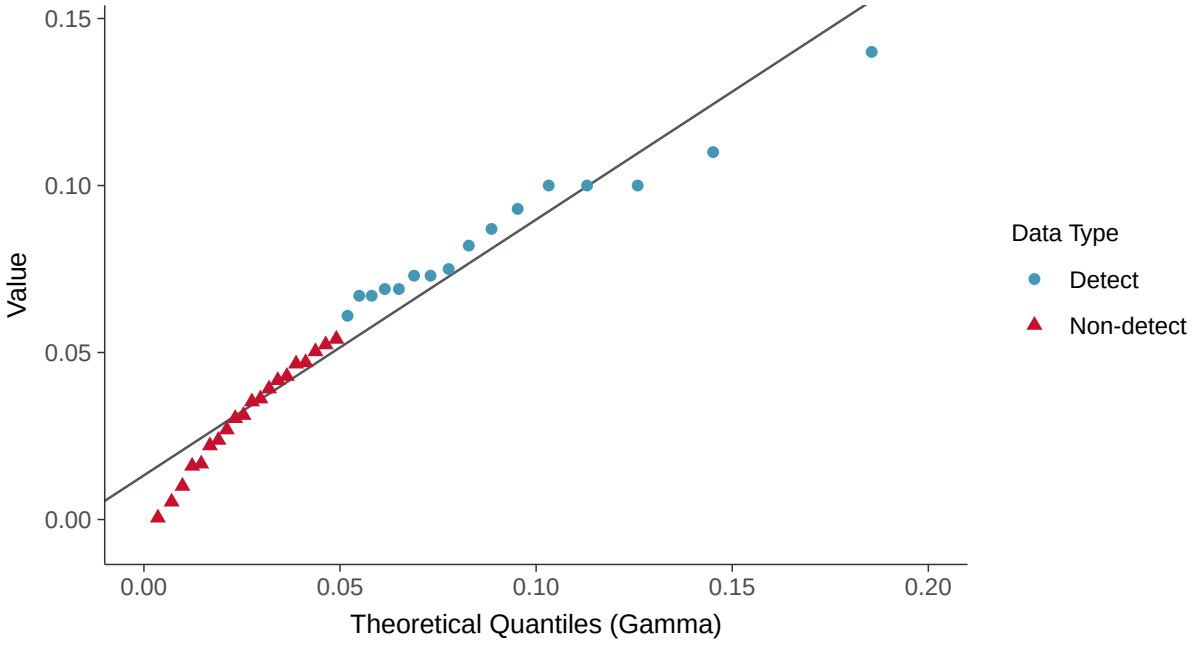
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



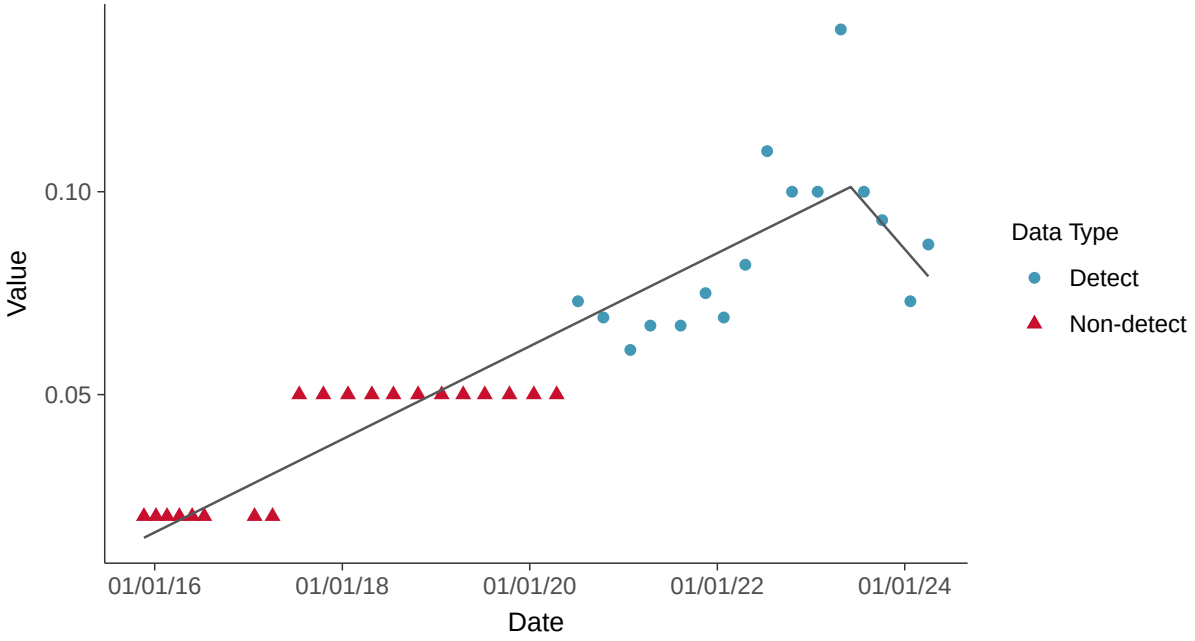
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



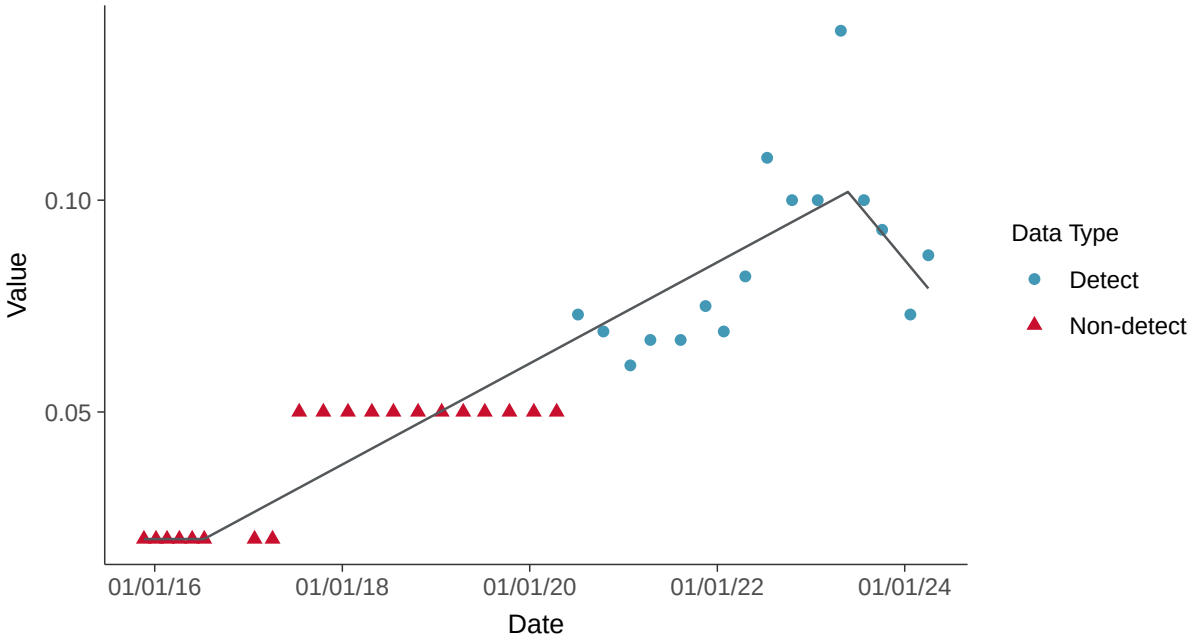
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-8 (mg/L)

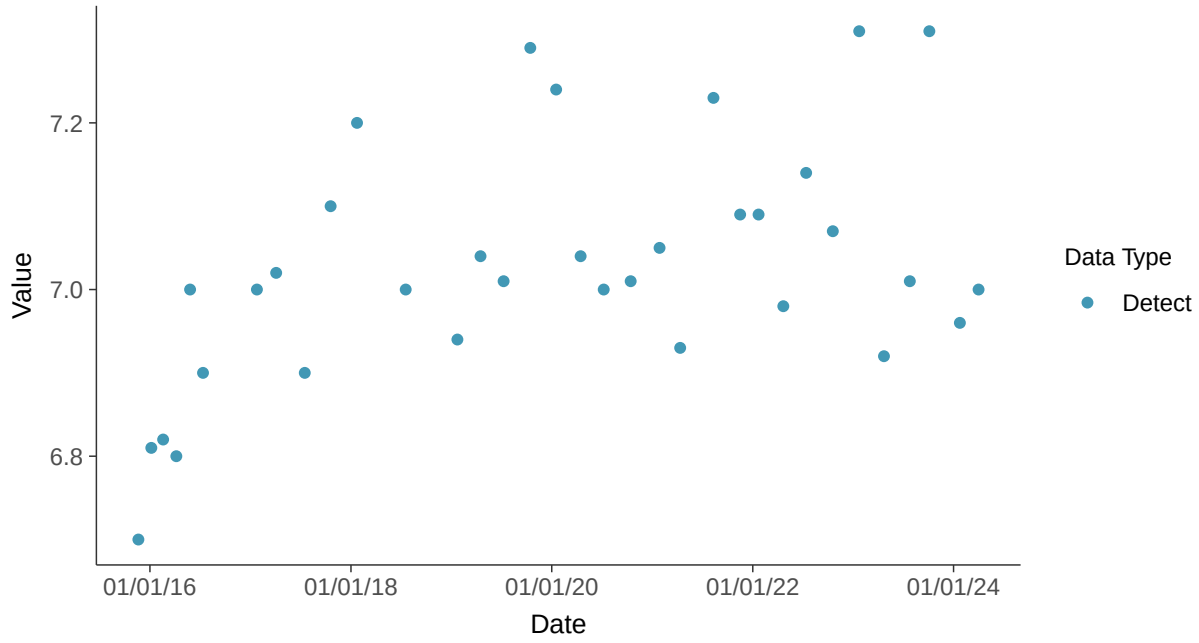


App. III: pH (Field), MW-8

ID: 11_2_118

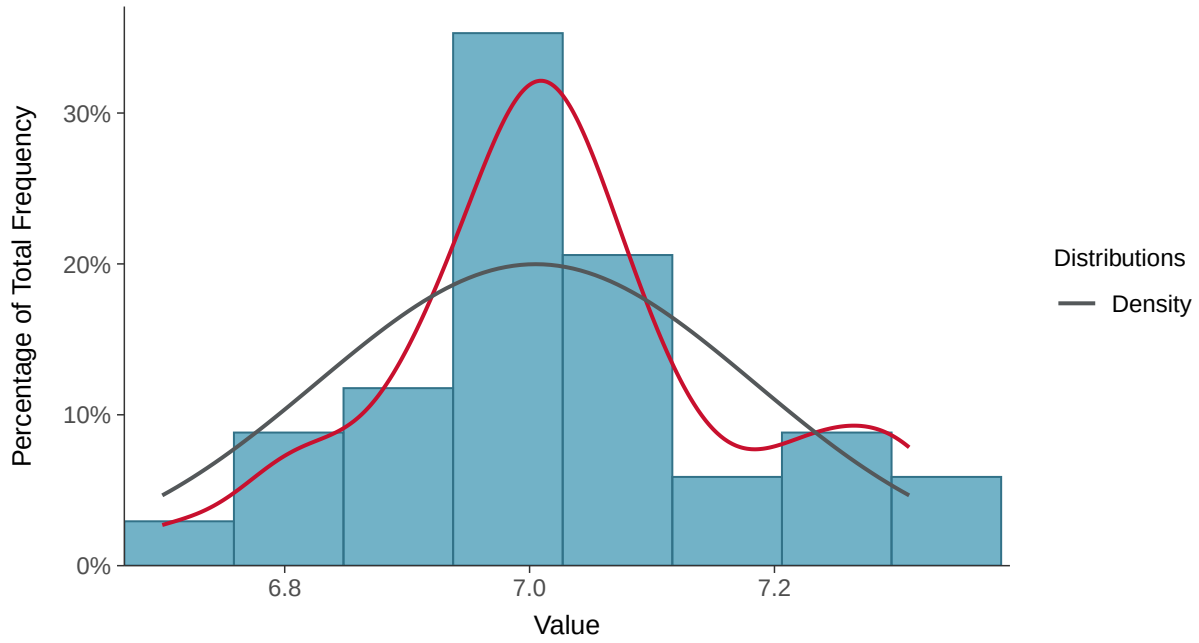
Scatter Plot

pH (Field), MW-8 (S.U.)



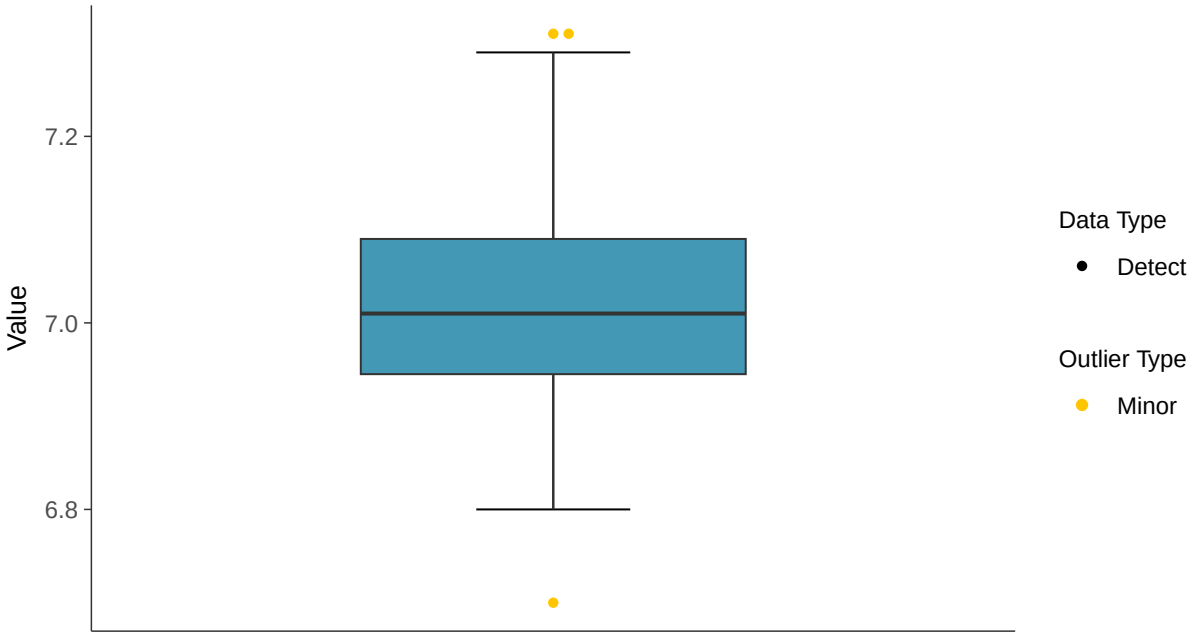
Histogram

pH (Field), MW-8 (S.U.)



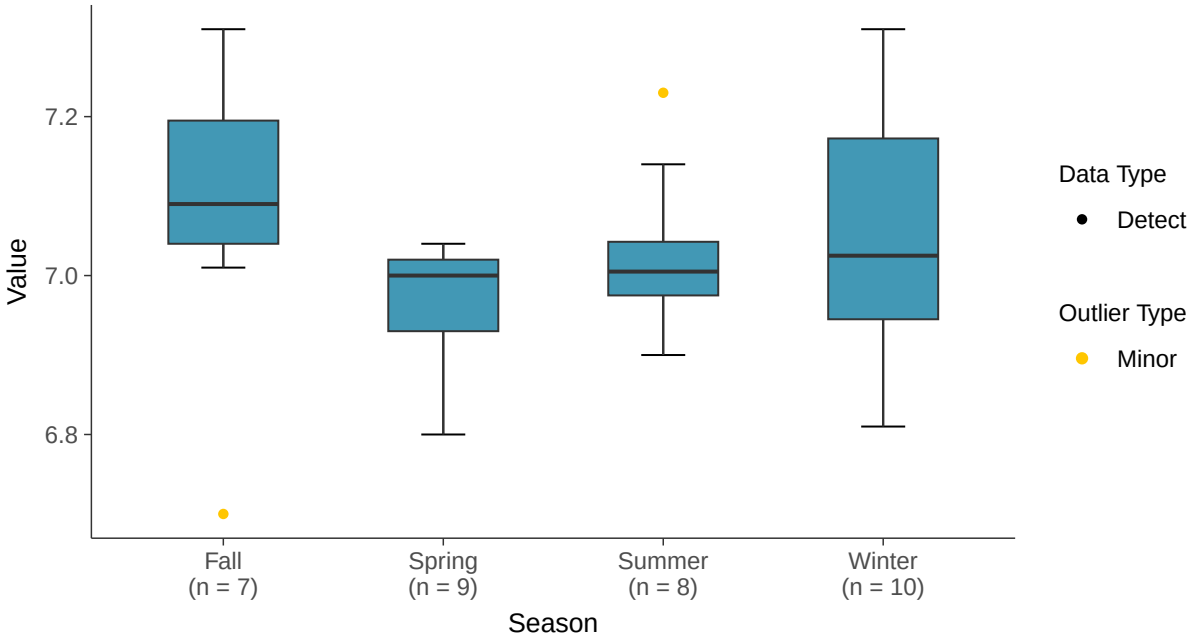
Boxplot

pH (Field), MW-8 (S.U.)



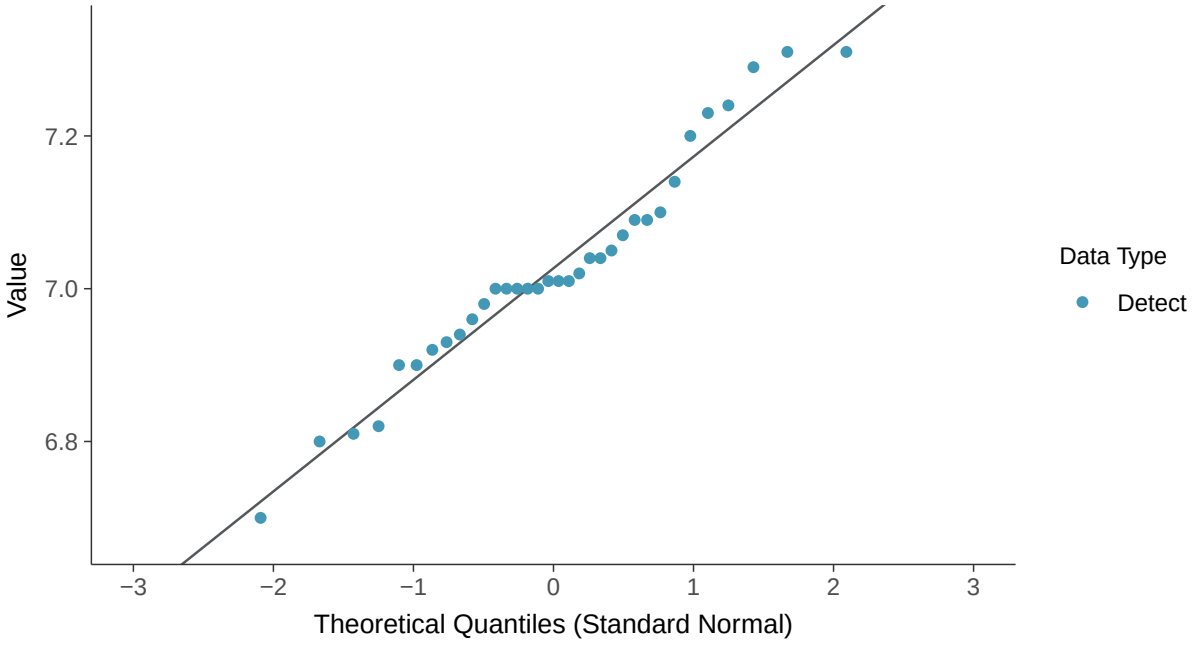
Boxplot by Season

pH (Field), MW-8 (S.U.)



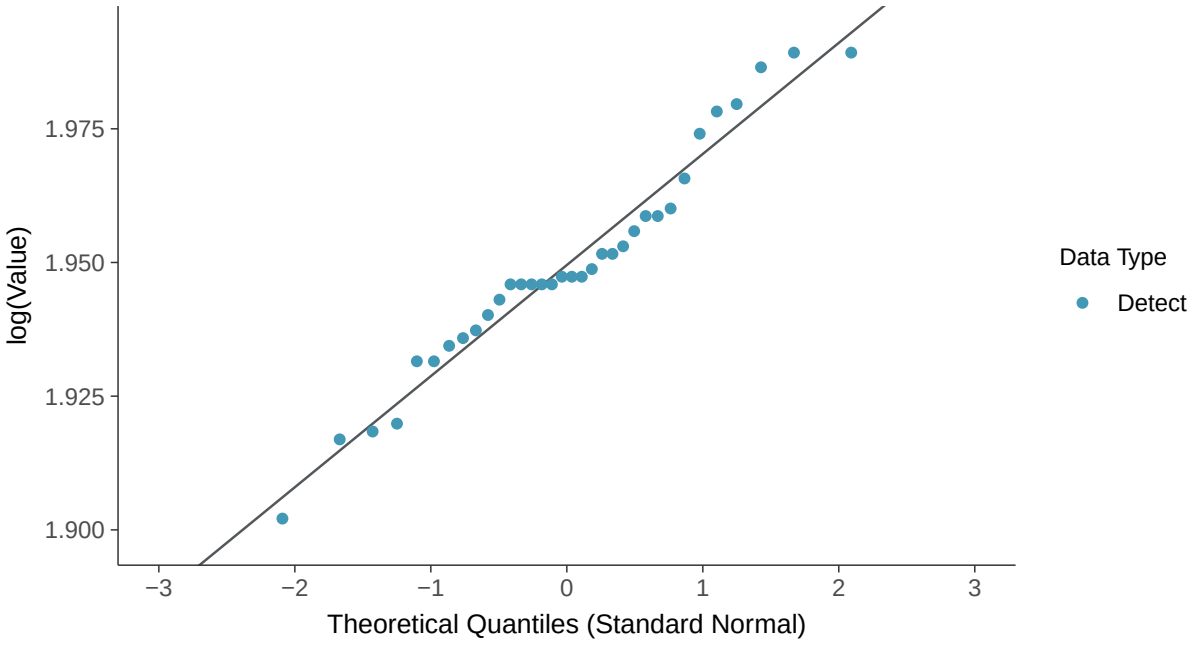
Normal Q-Q plot

pH (Field), MW-8 (S.U.)



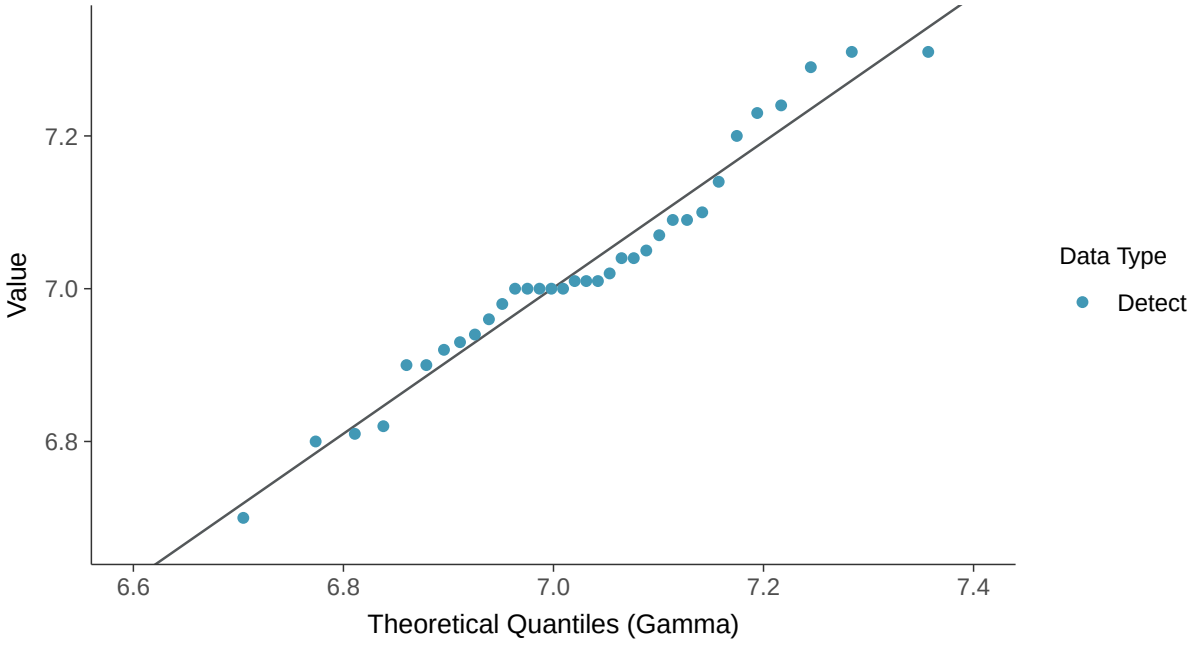
Lognormal Q-Q plot

pH (Field), MW-8 (S.U.)



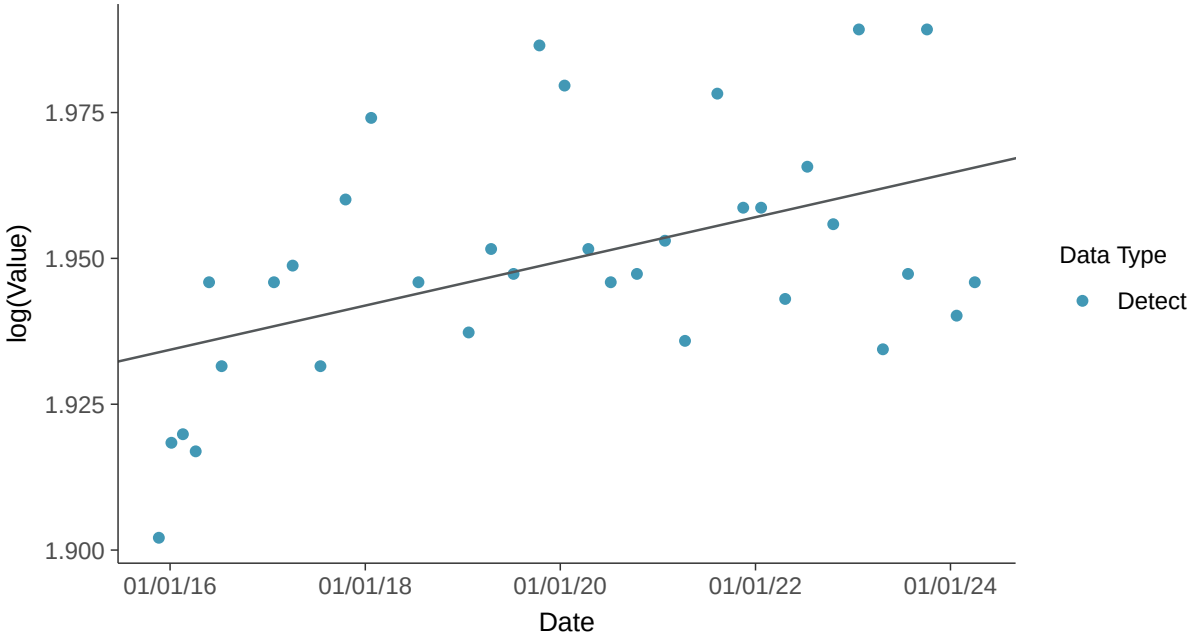
Gamma Q-Q plot

pH (Field), MW-8 (S.U.)



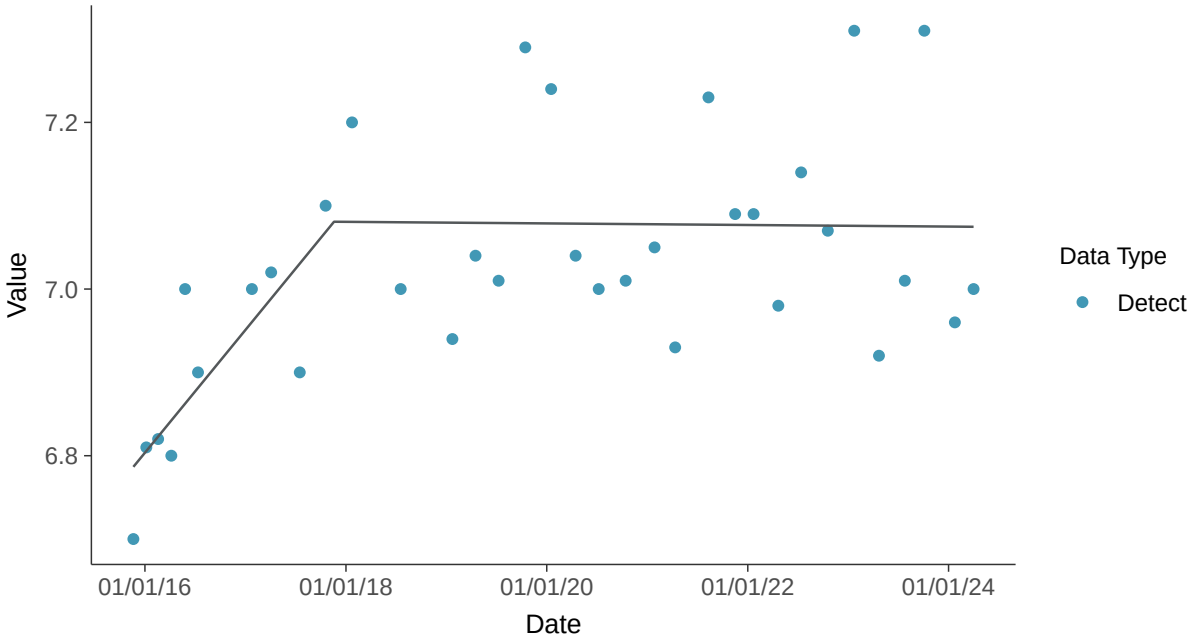
Trend Regression: Lognormal MLE

pH (Field), MW-8 (S.U.)



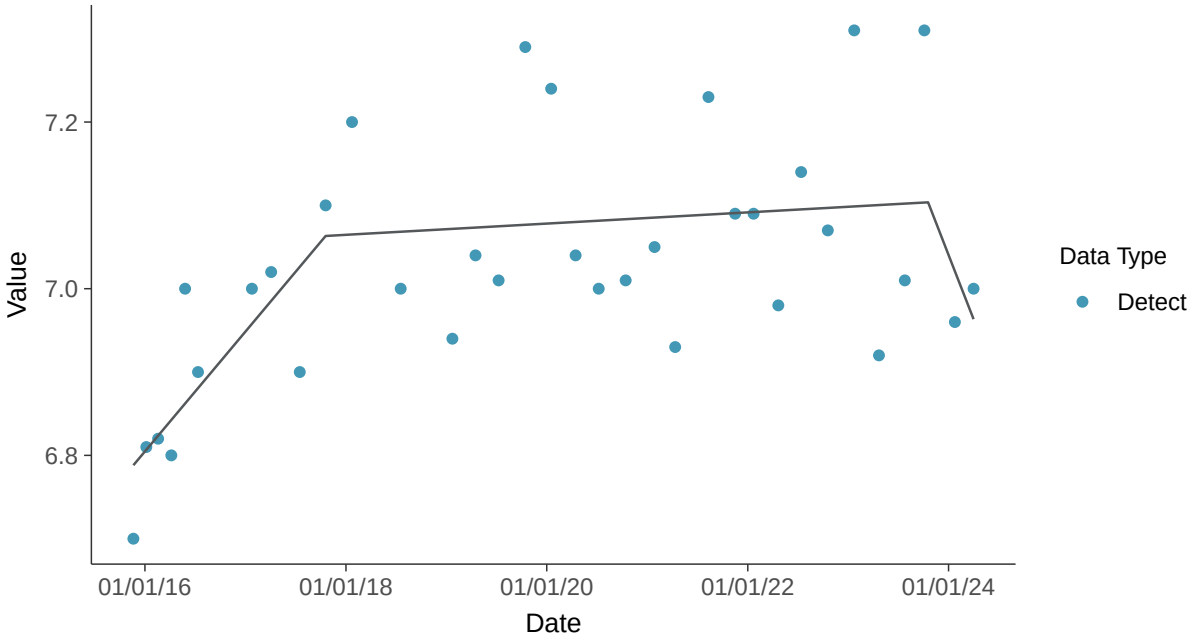
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-8 (S.U.)



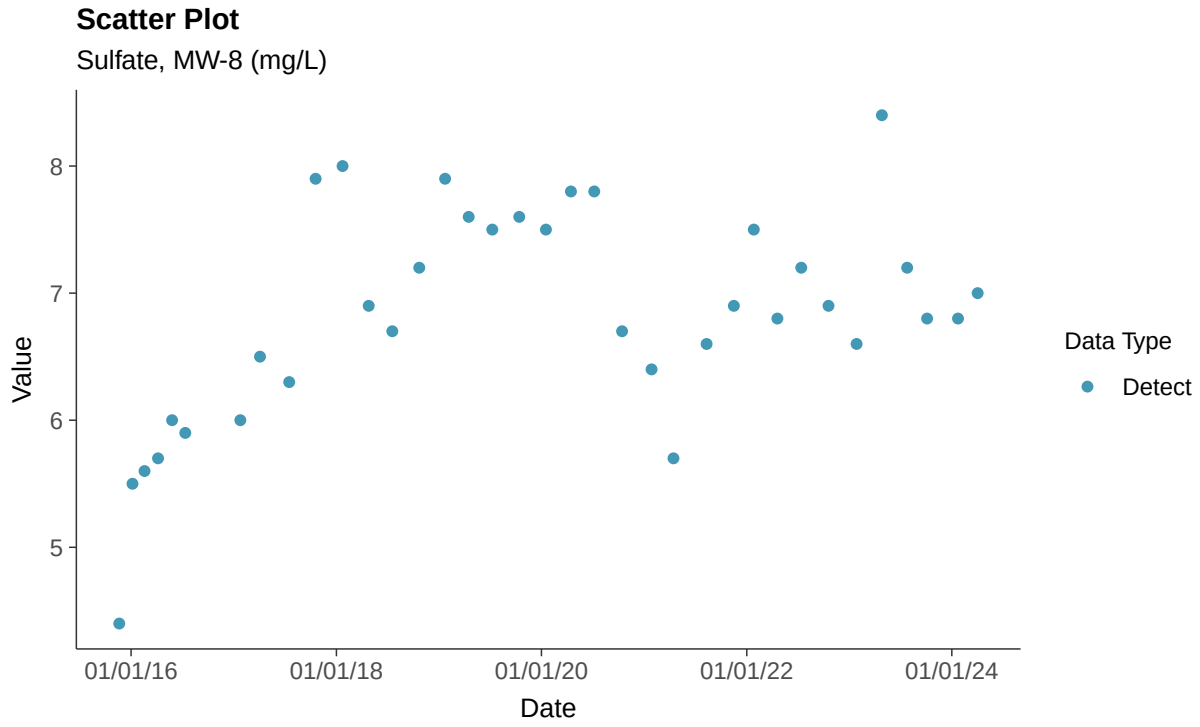
Trend Regression: Piecewise Linear-Linear-Linear

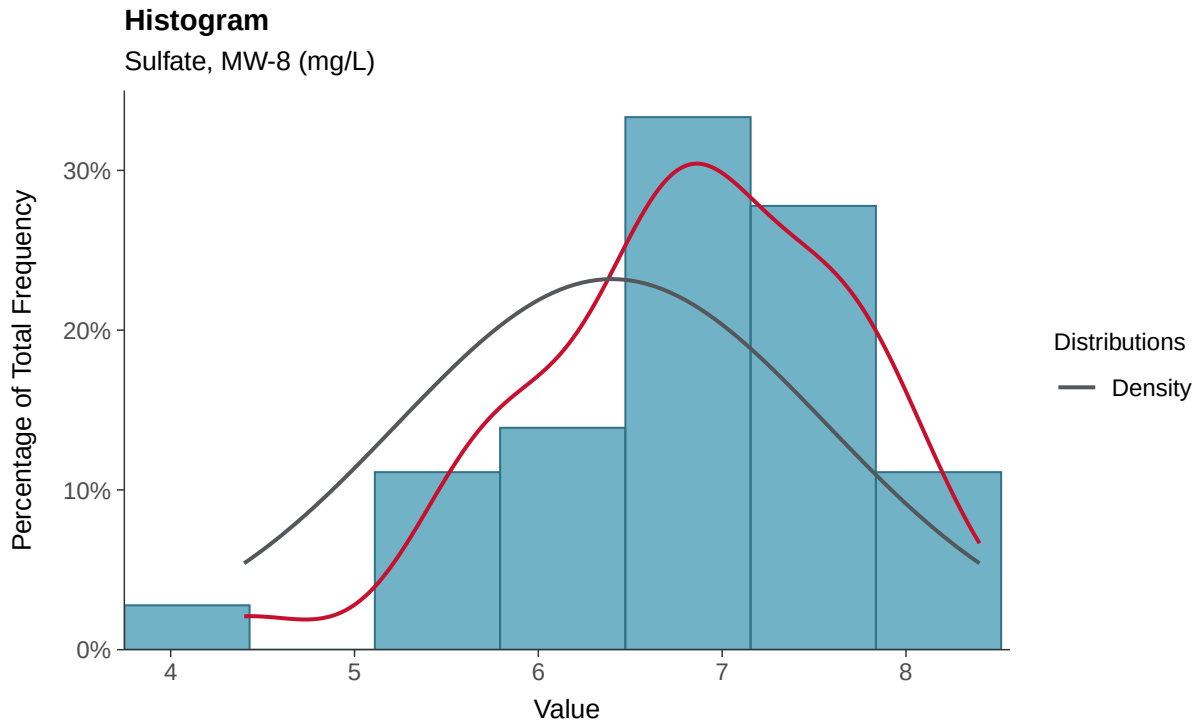
pH (Field), MW-8 (S.U.)



App. III: Sulfate, MW-8

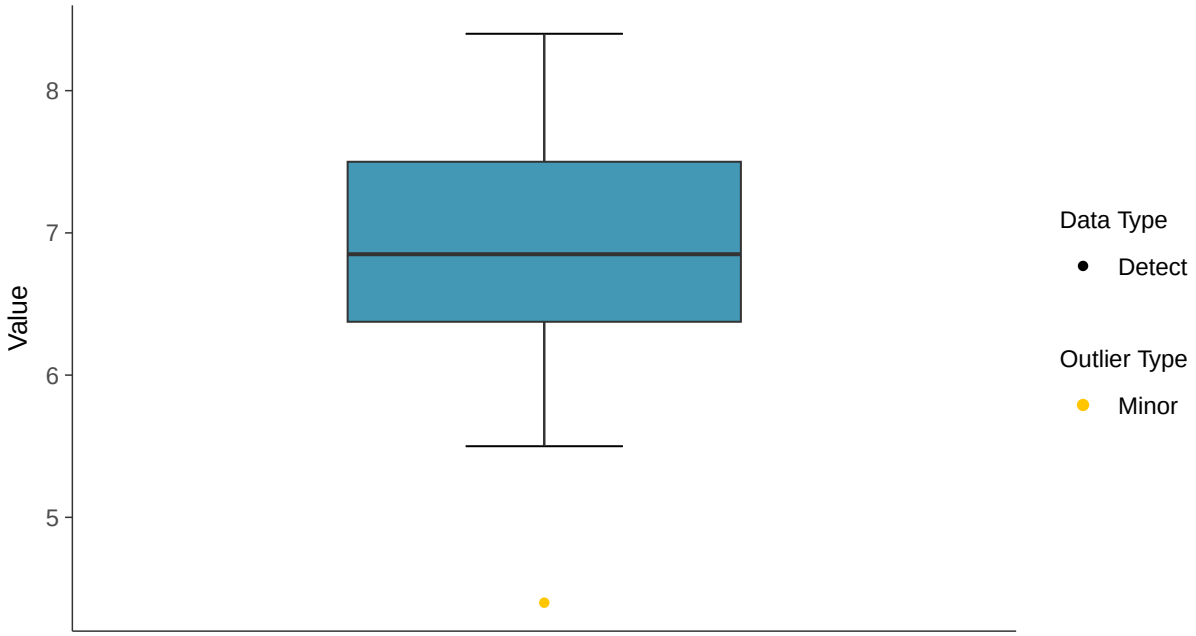
ID: 11_2_123





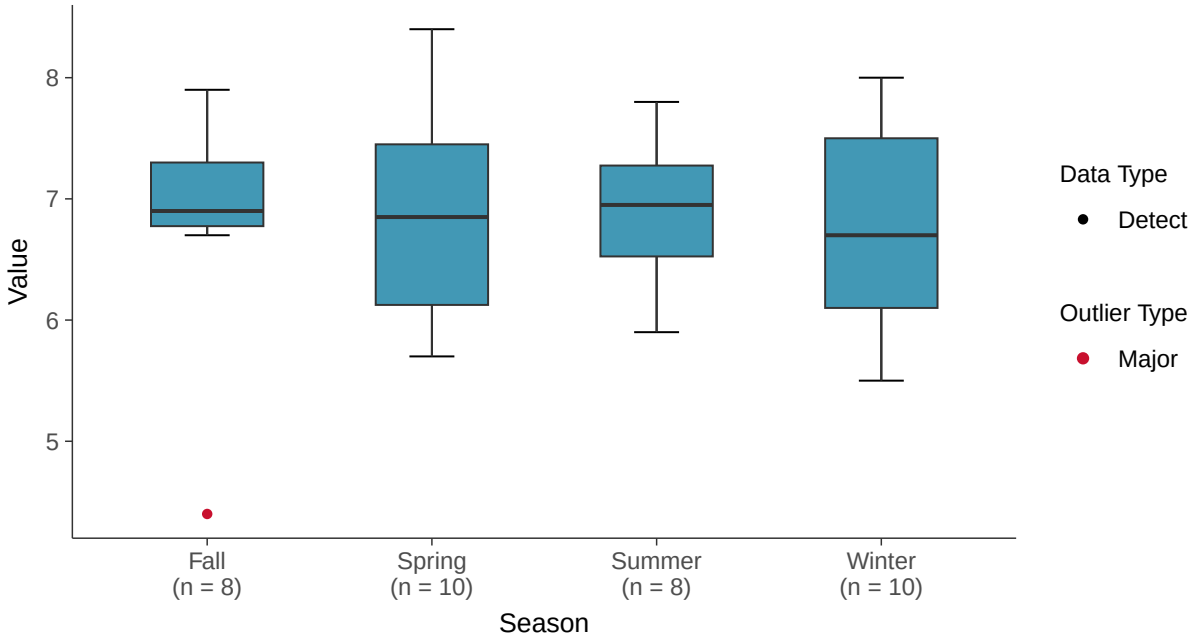
Boxplot

Sulfate, MW-8 (mg/L)



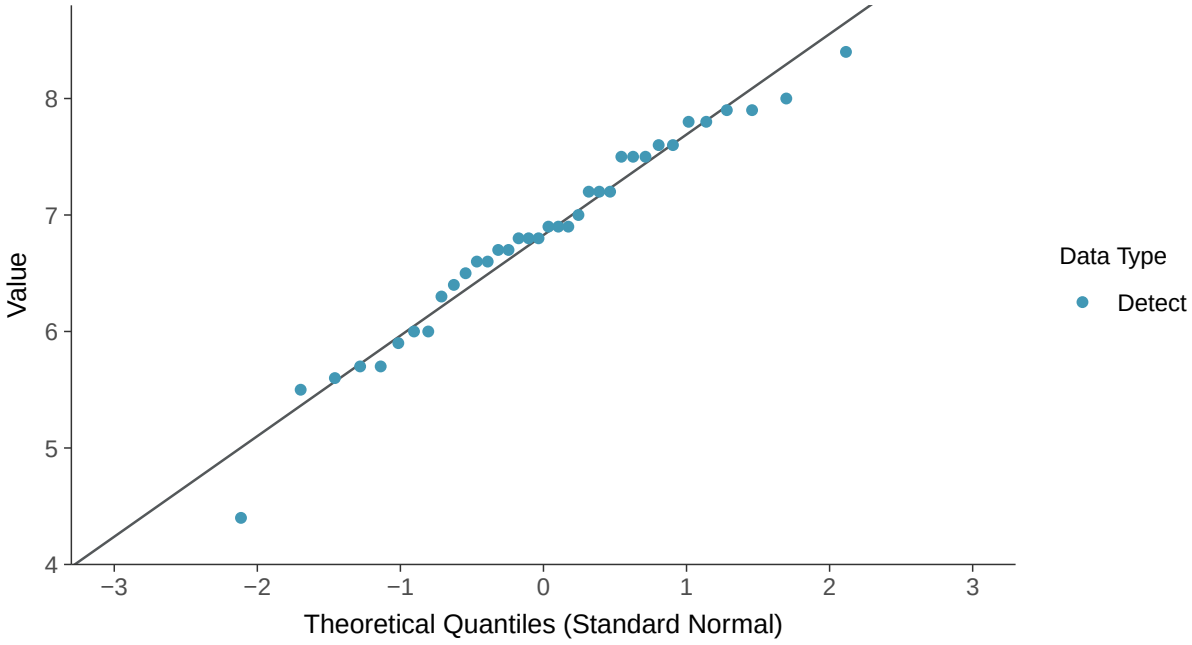
Boxplot by Season

Sulfate, MW-8 (mg/L)



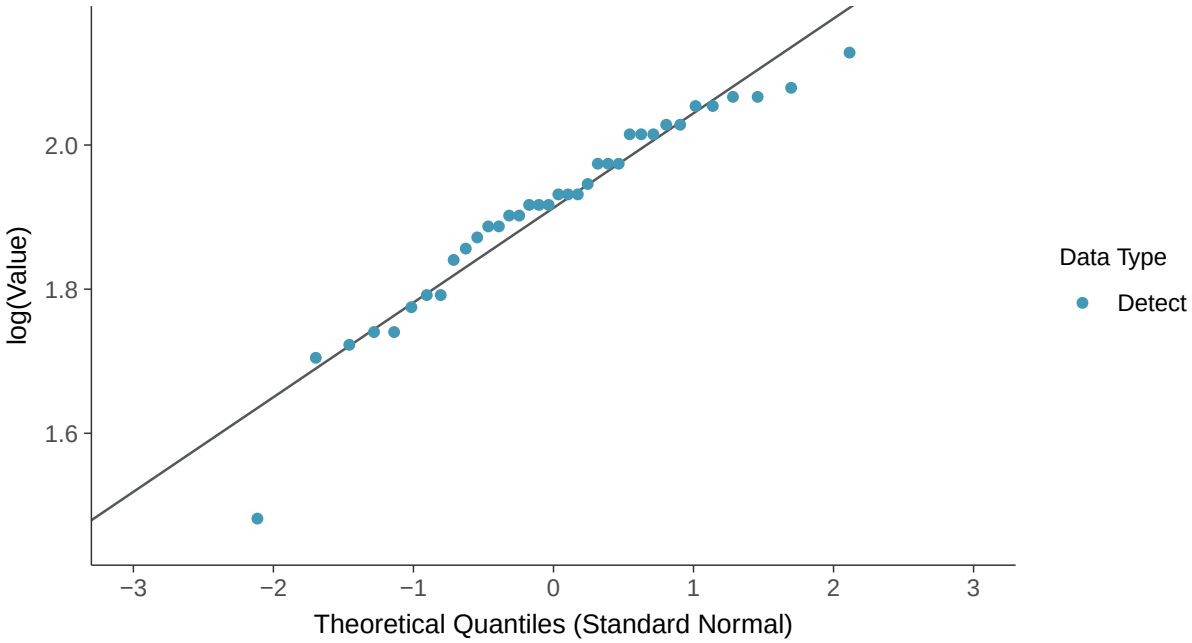
Normal Q-Q plot

Sulfate, MW-8 (mg/L)



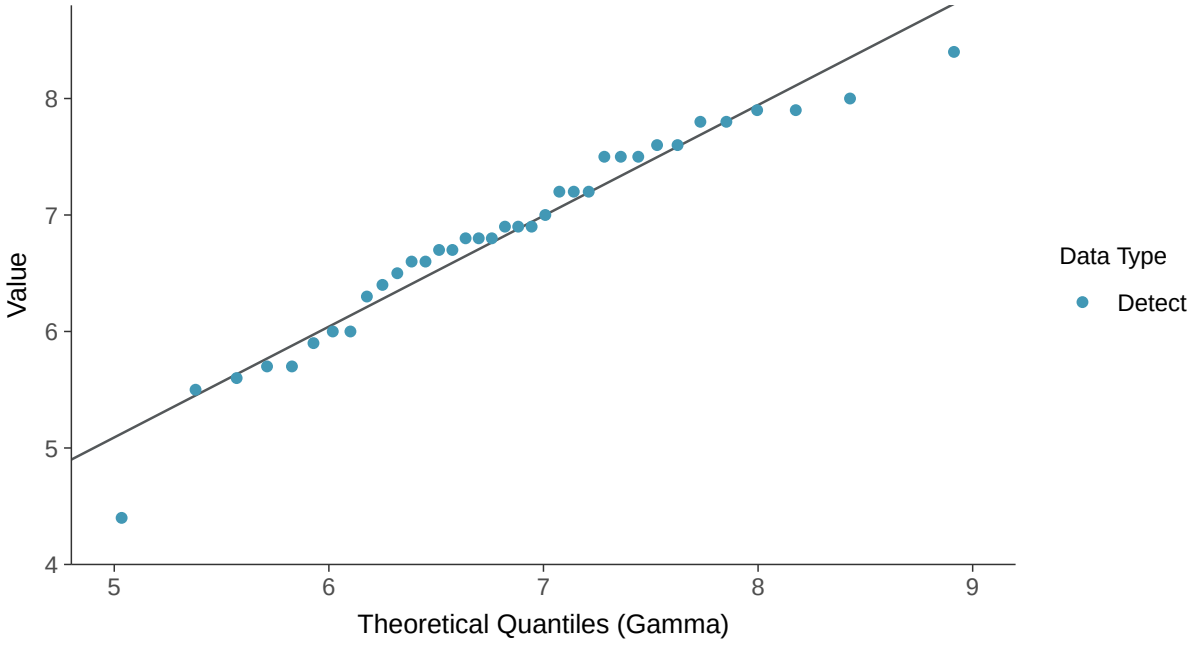
Lognormal Q-Q plot

Sulfate, MW-8 (mg/L)



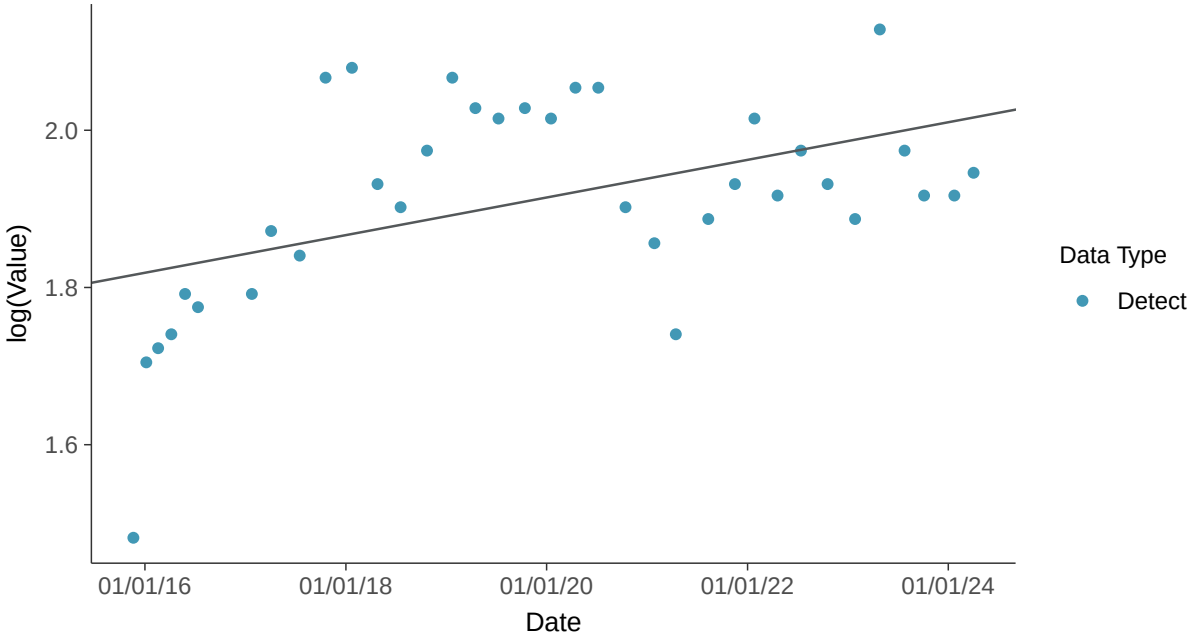
Gamma Q-Q plot

Sulfate, MW-8 (mg/L)



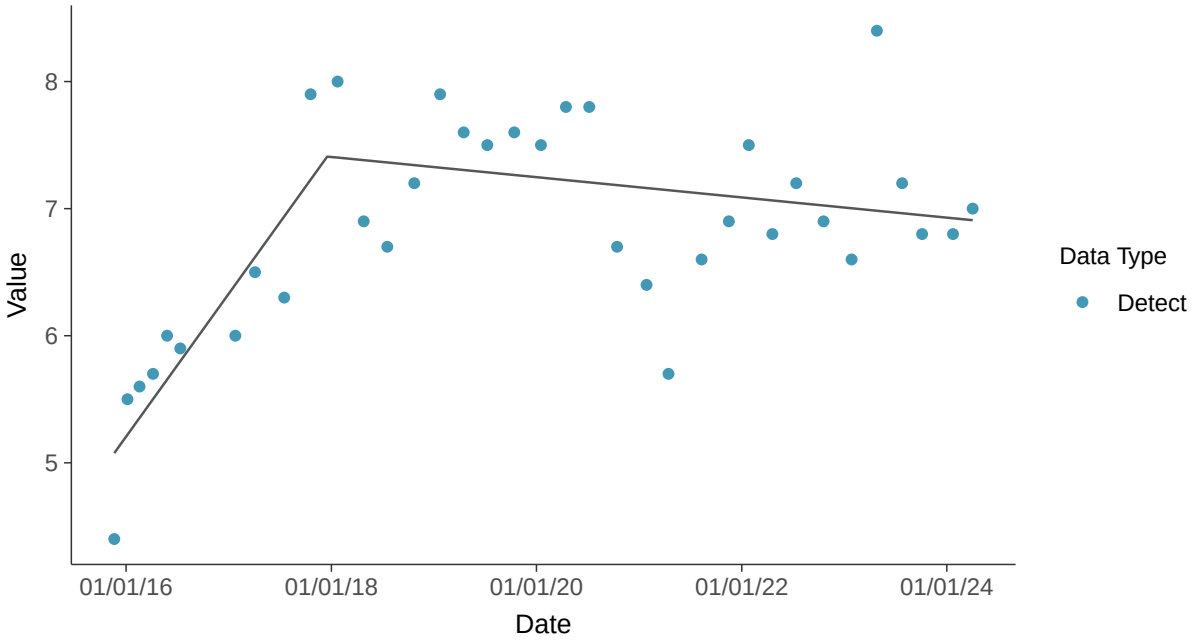
Trend Regression: Lognormal MLE

Sulfate, MW-8 (mg/L)



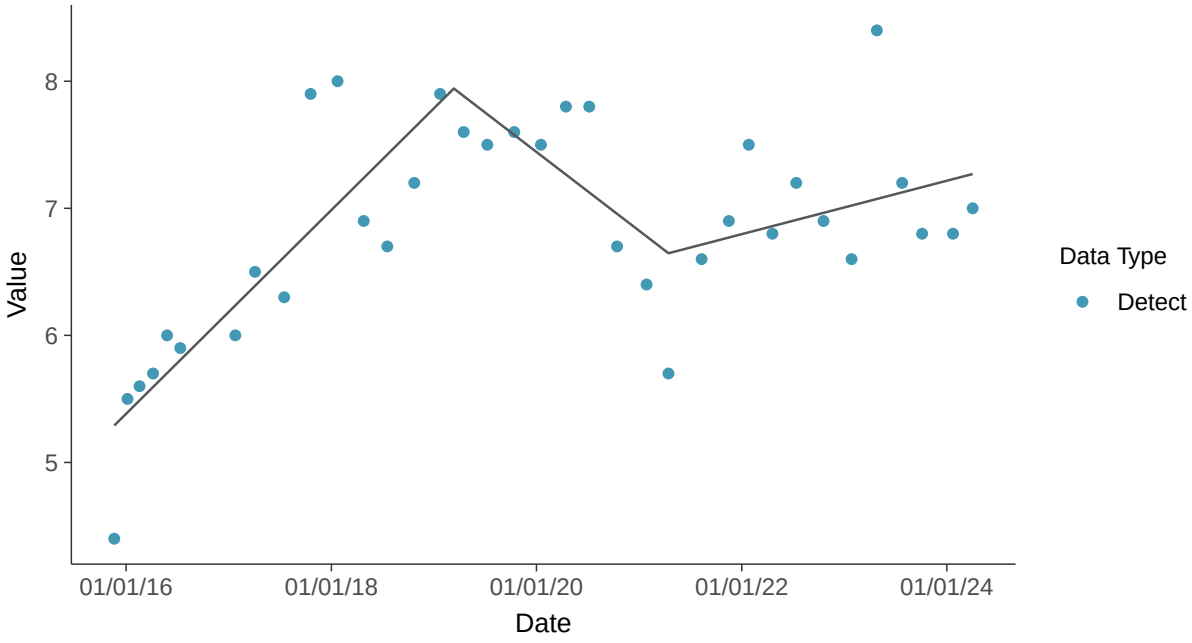
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-8 (mg/L)

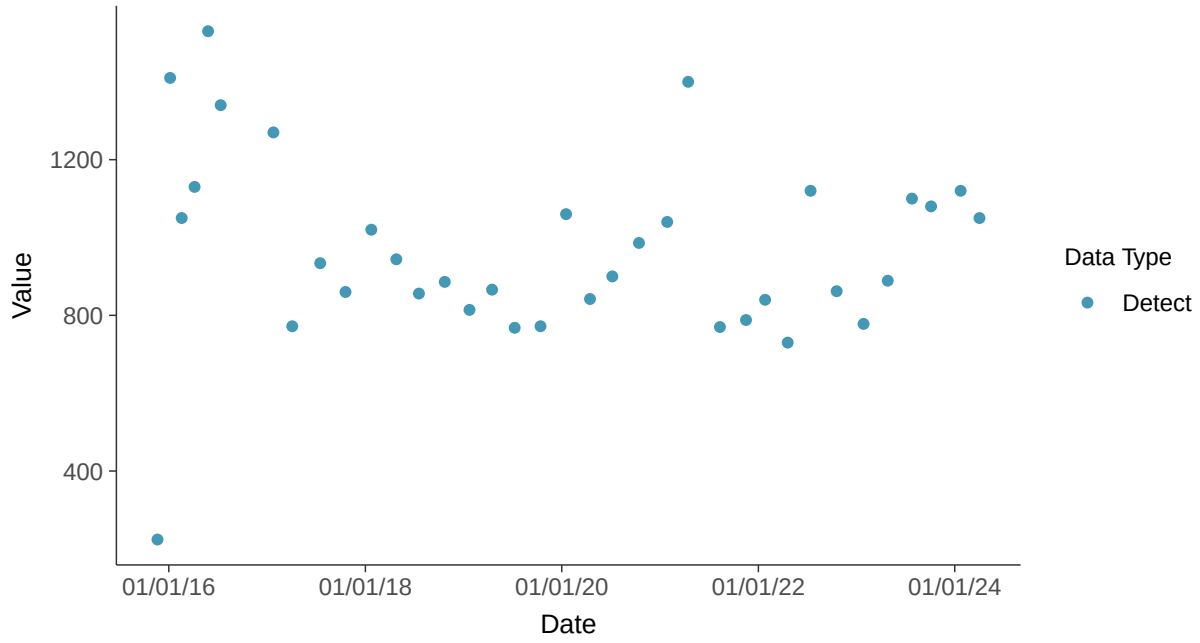


App. III: Total Dissolved Solids, MW-8

ID: 11_2_125

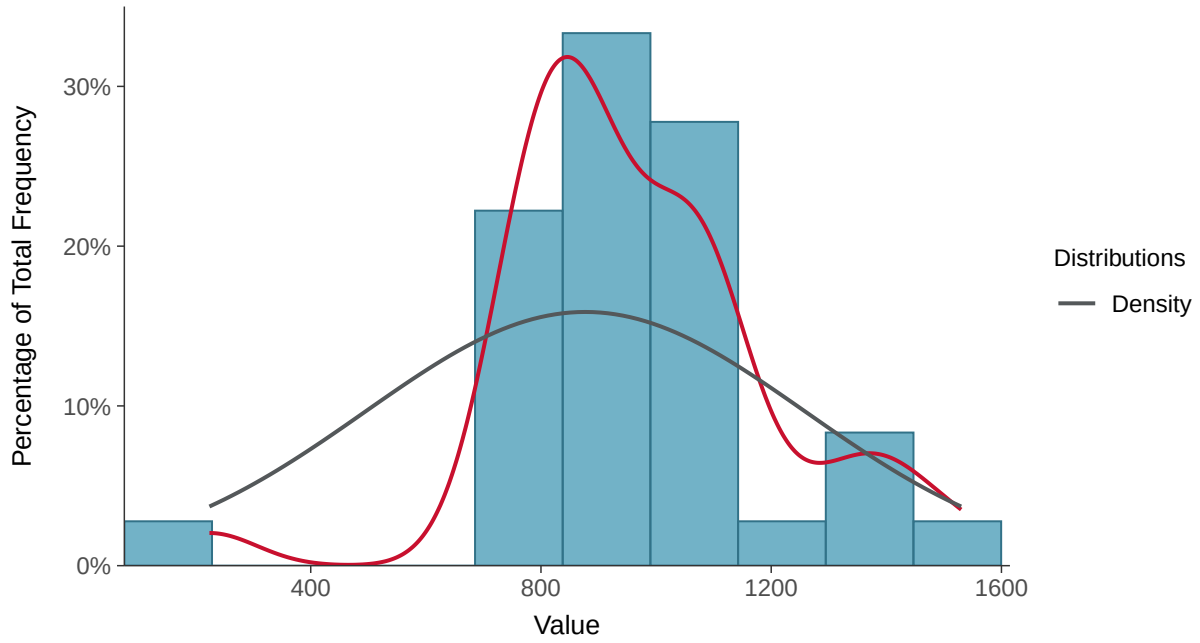
Scatter Plot

Total Dissolved Solids, MW-8 (mg/L)



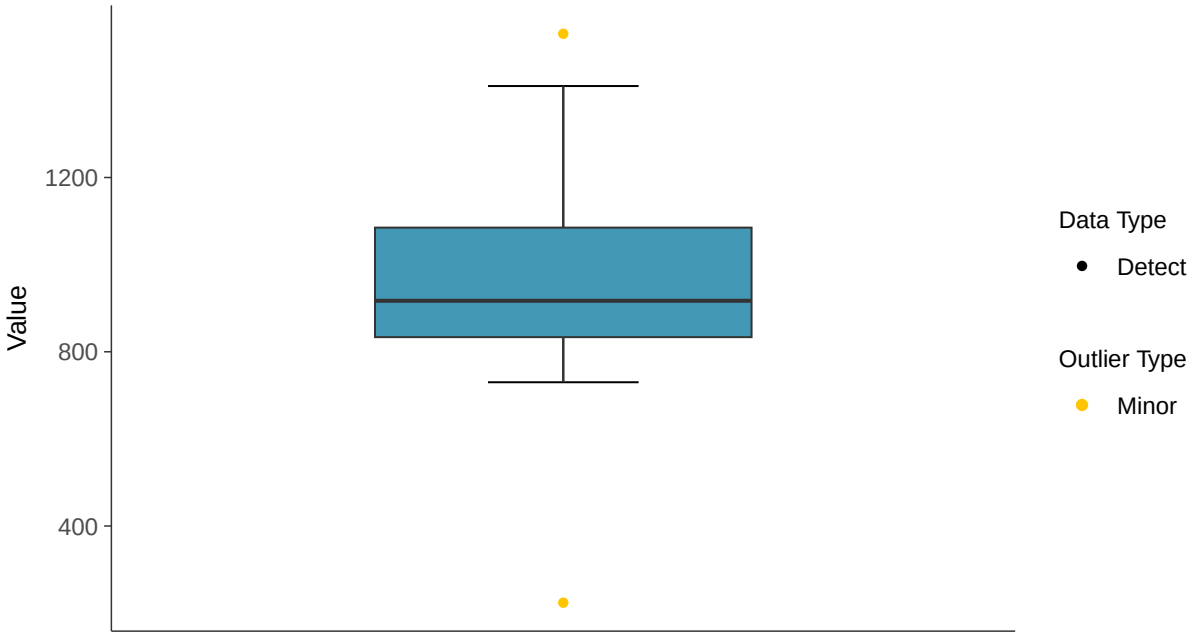
Histogram

Total Dissolved Solids, MW-8 (mg/L)



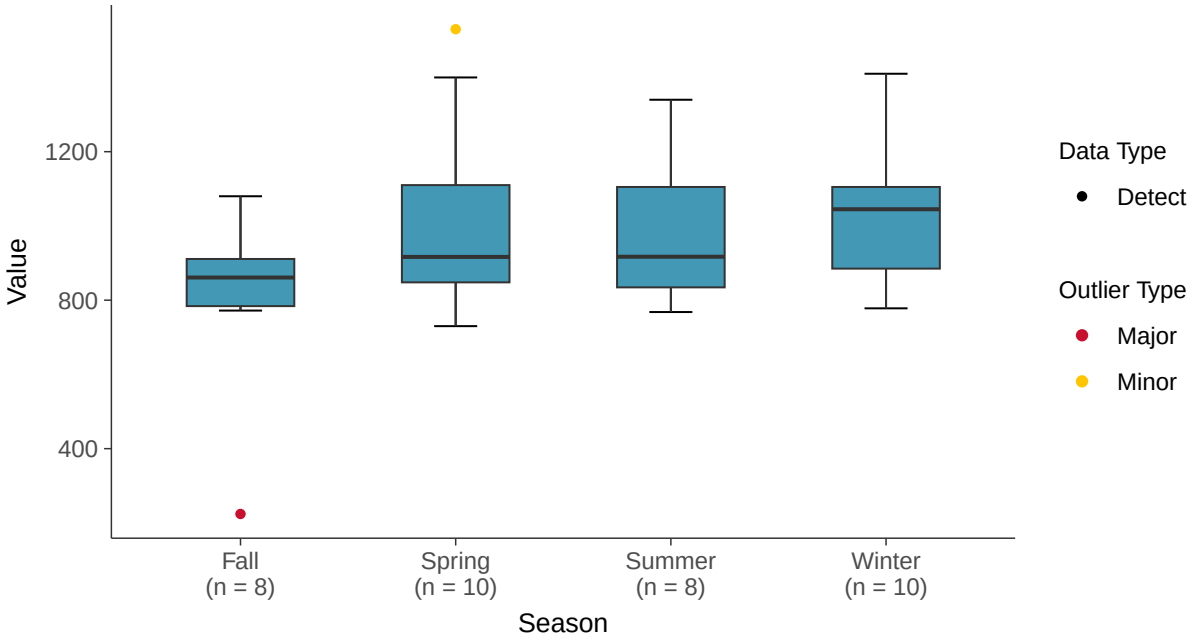
Boxplot

Total Dissolved Solids, MW-8 (mg/L)



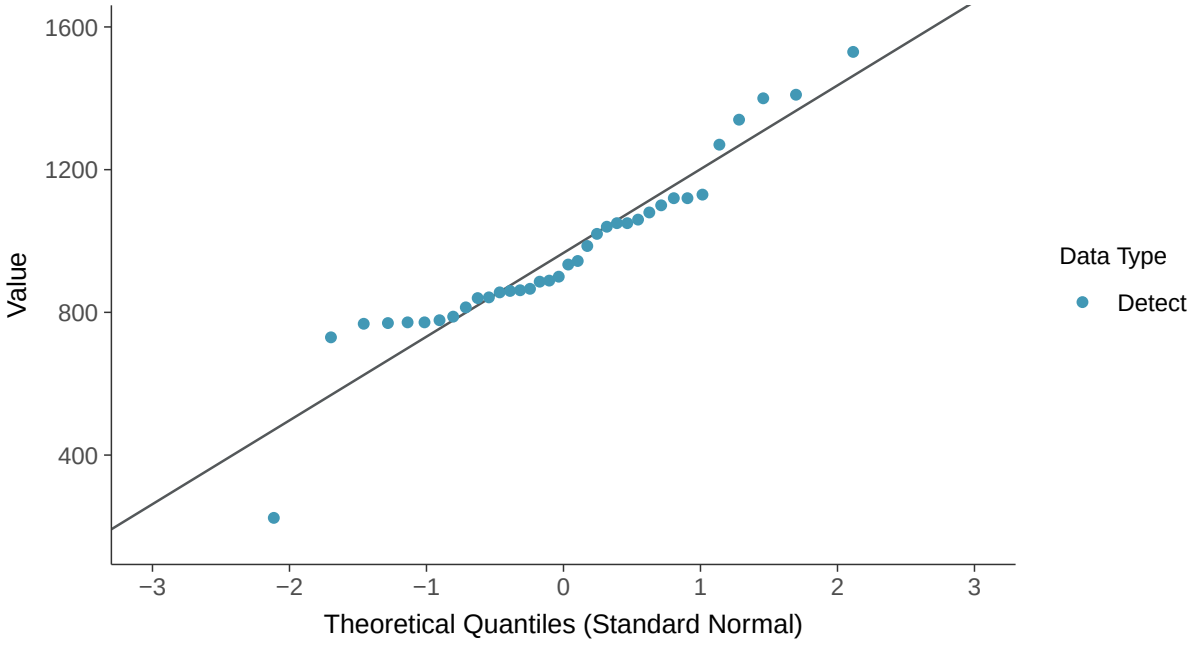
Boxplot by Season

Total Dissolved Solids, MW-8 (mg/L)



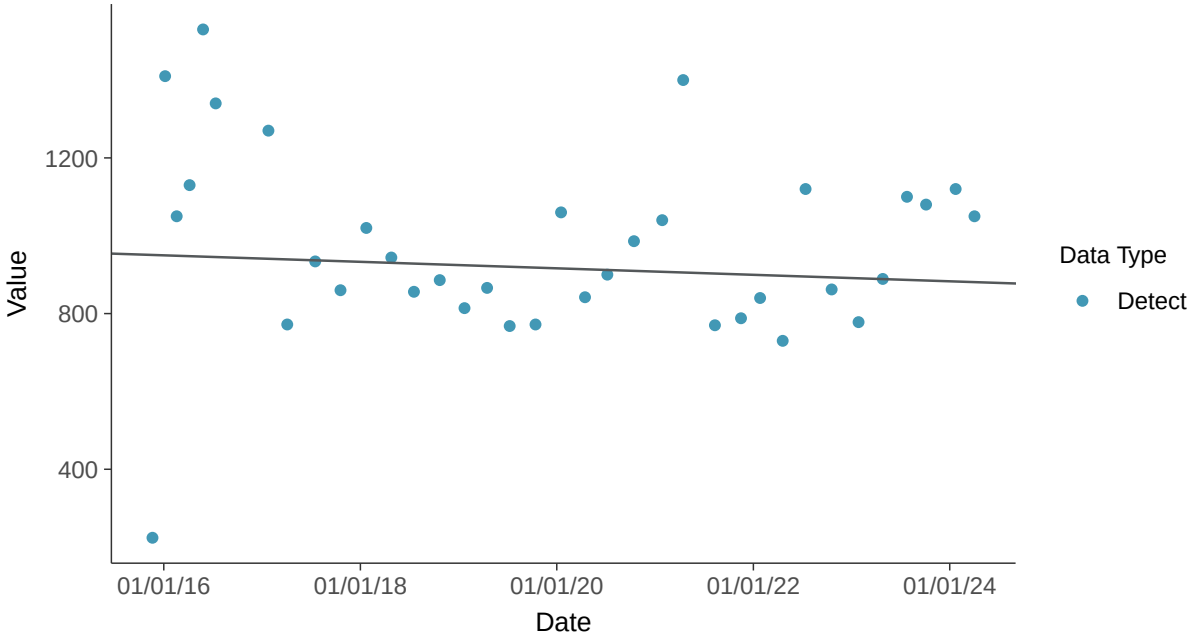
Normal Q-Q plot

Total Dissolved Solids, MW-8 (mg/L)



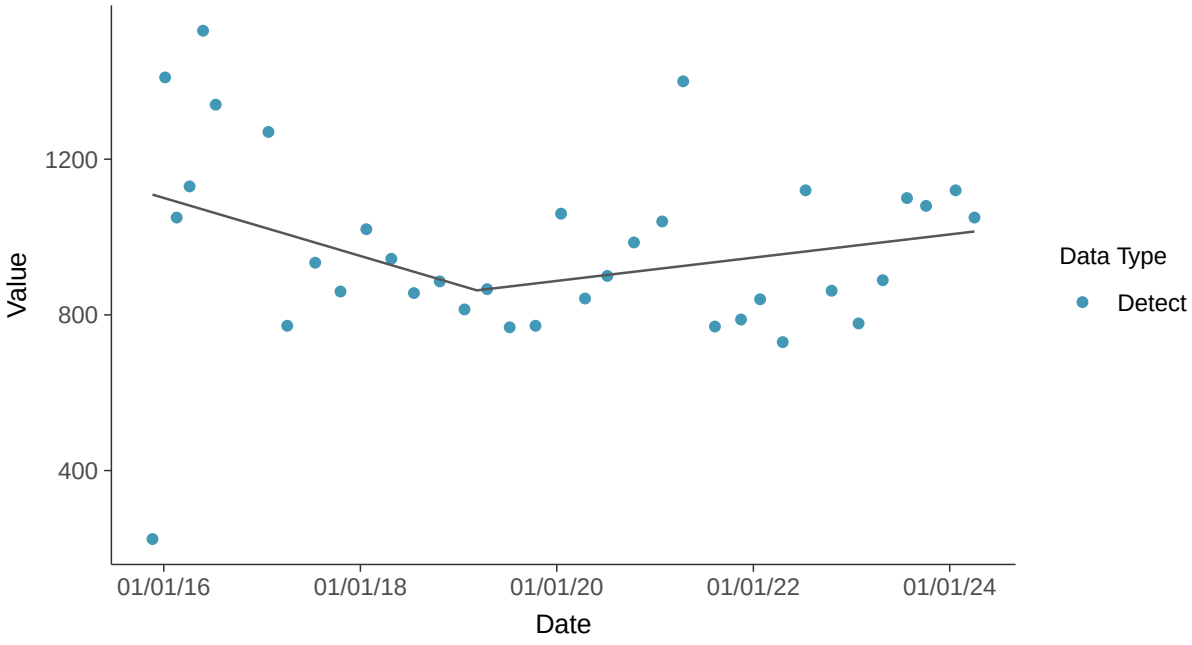
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-8 (mg/L)



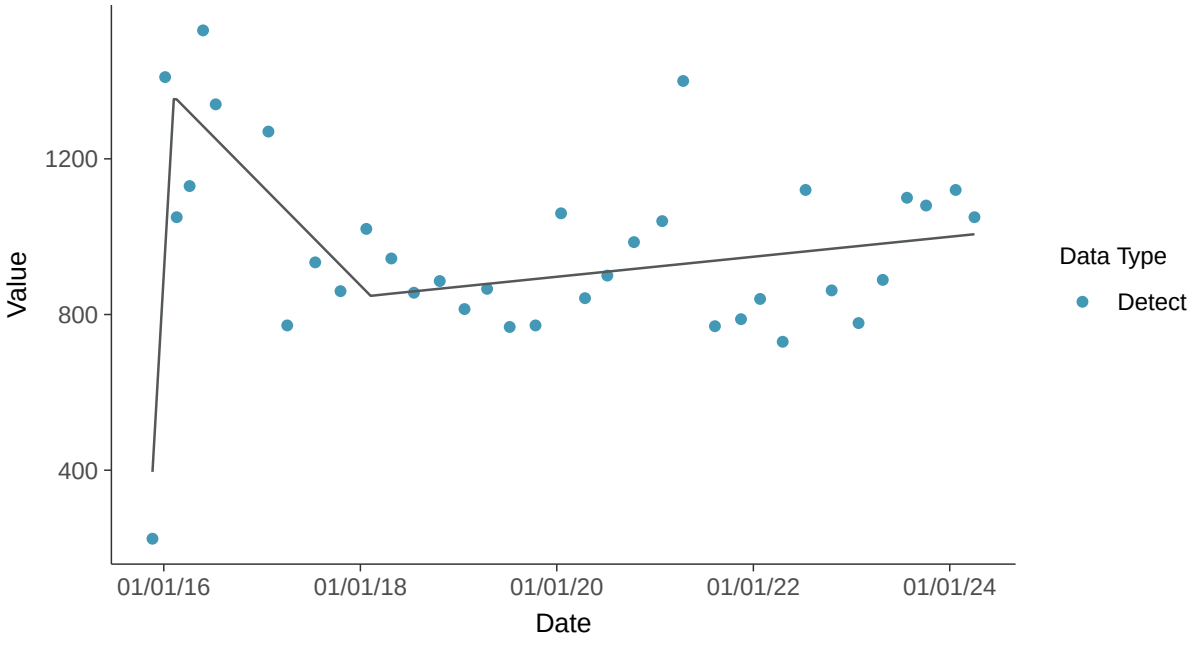
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-8 (mg/L)

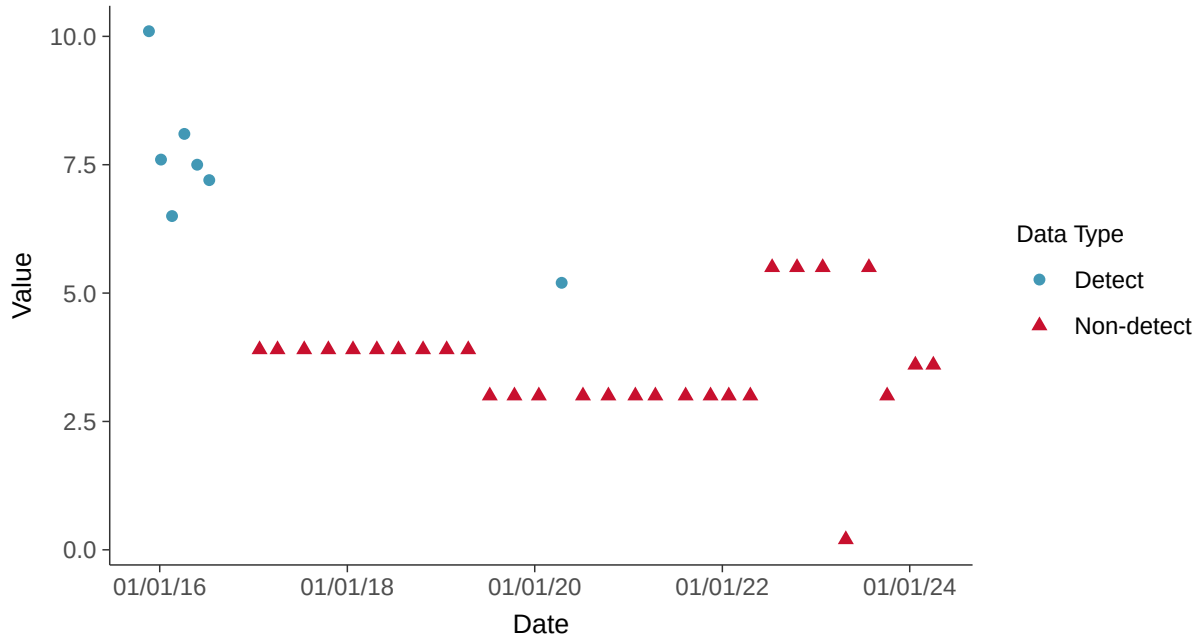


App. IV: Antimony, MW-8

ID: 11_3_101

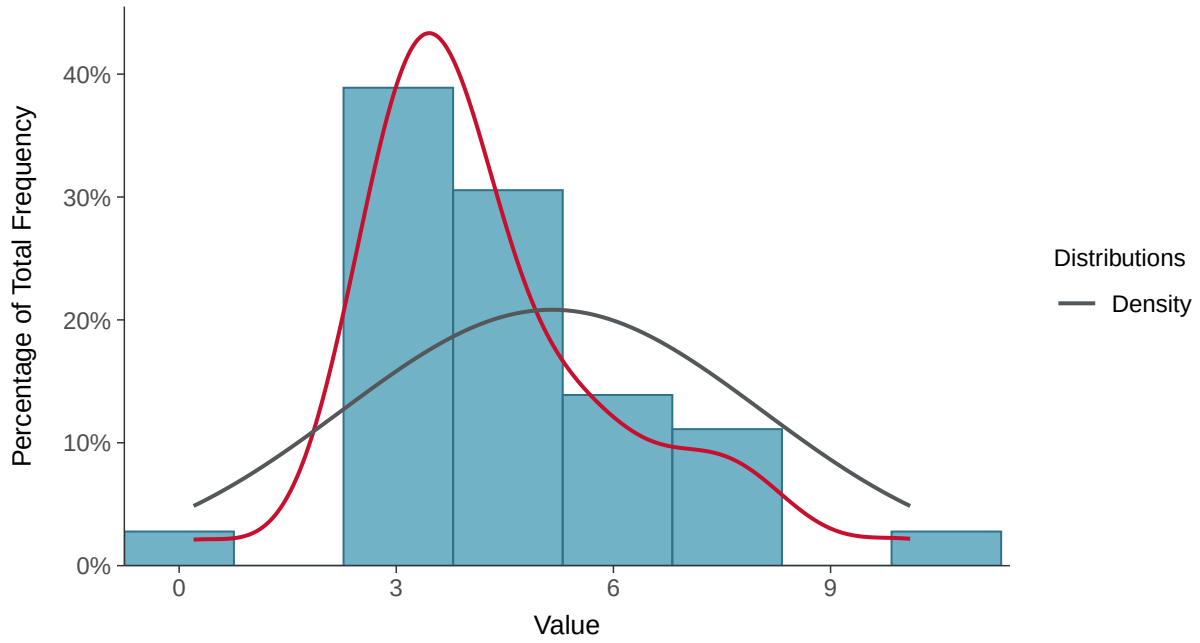
Scatter Plot

Antimony, MW-8 (ug/L)



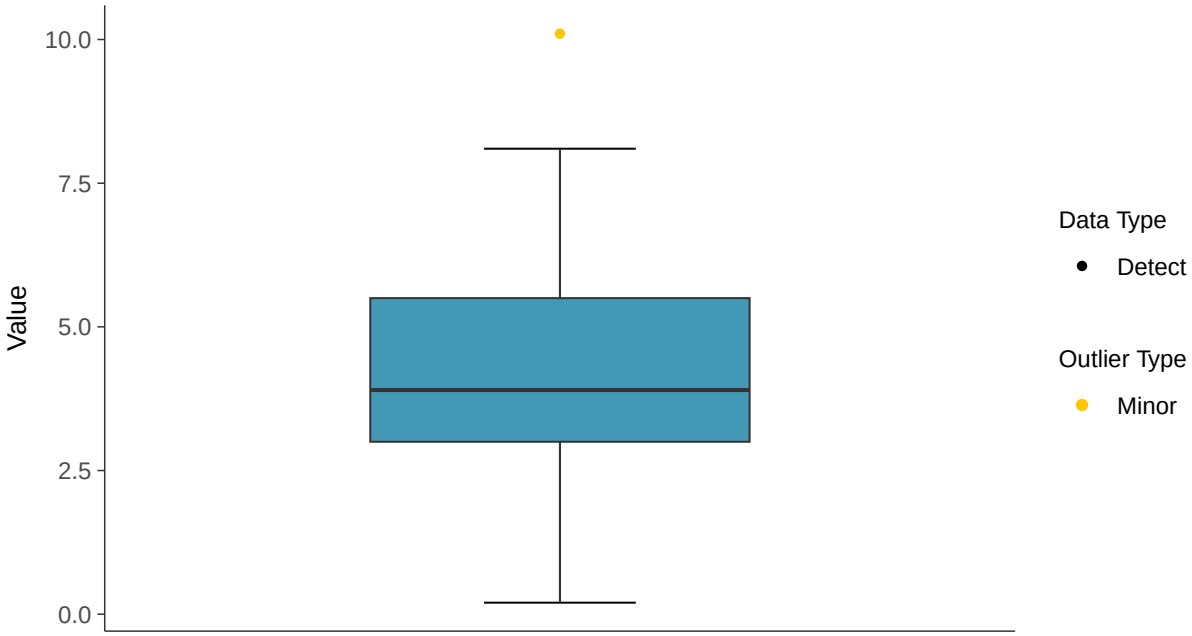
Histogram

Antimony, MW-8 (ug/L)



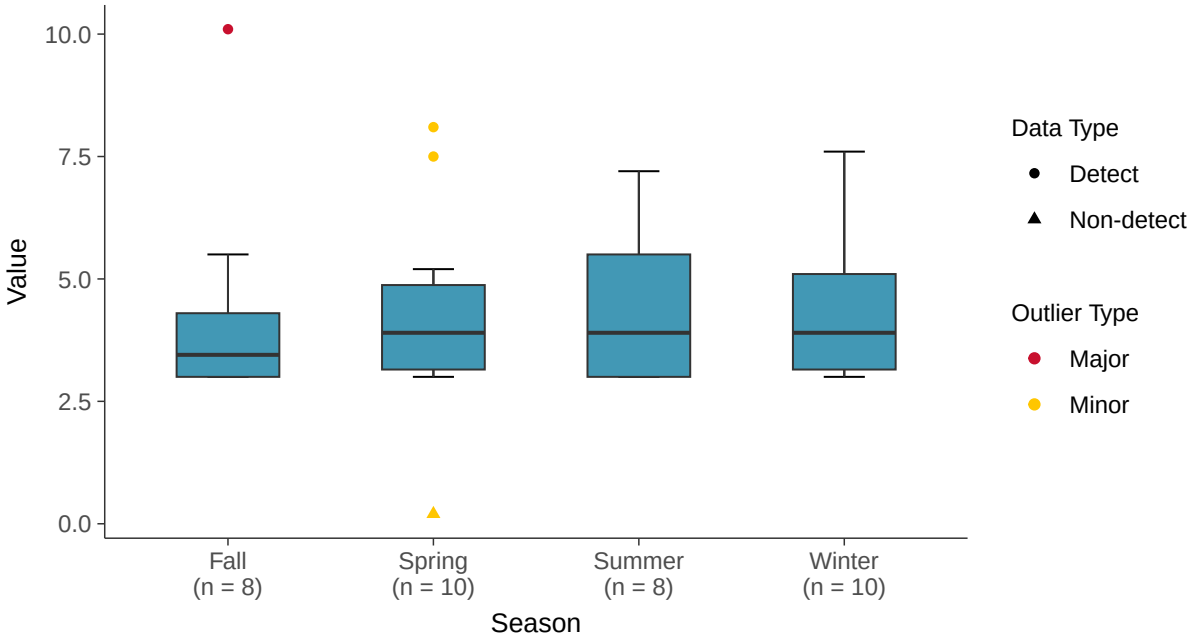
Boxplot

Antimony, MW-8 (ug/L)



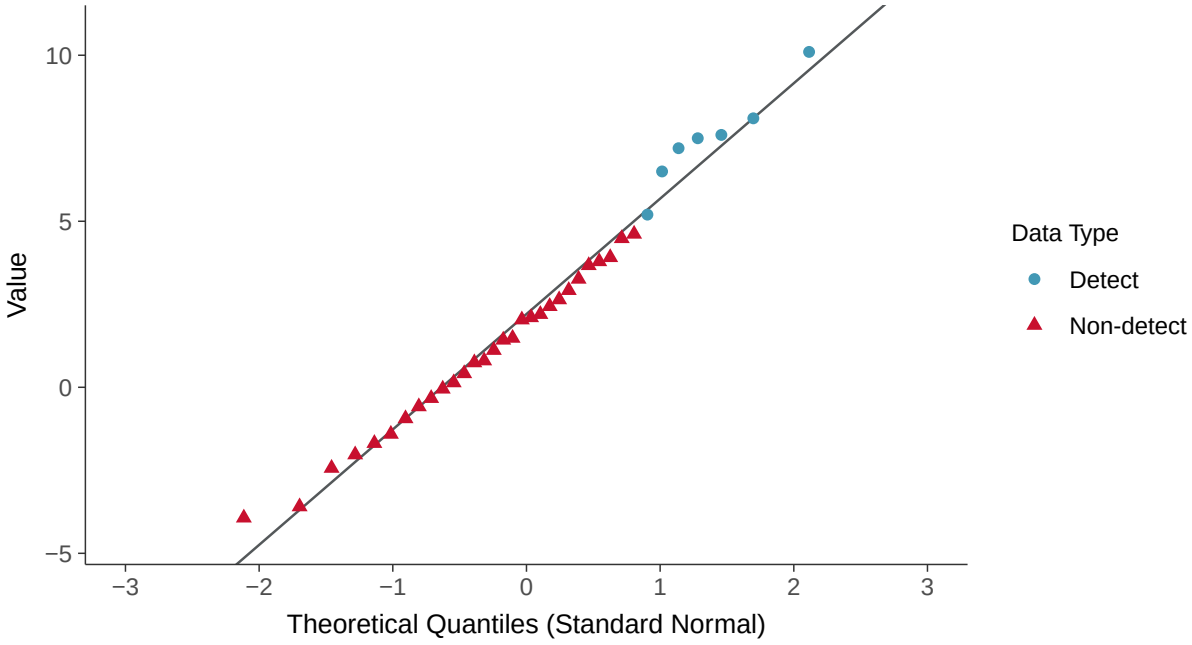
Boxplot by Season

Antimony, MW-8 (ug/L)



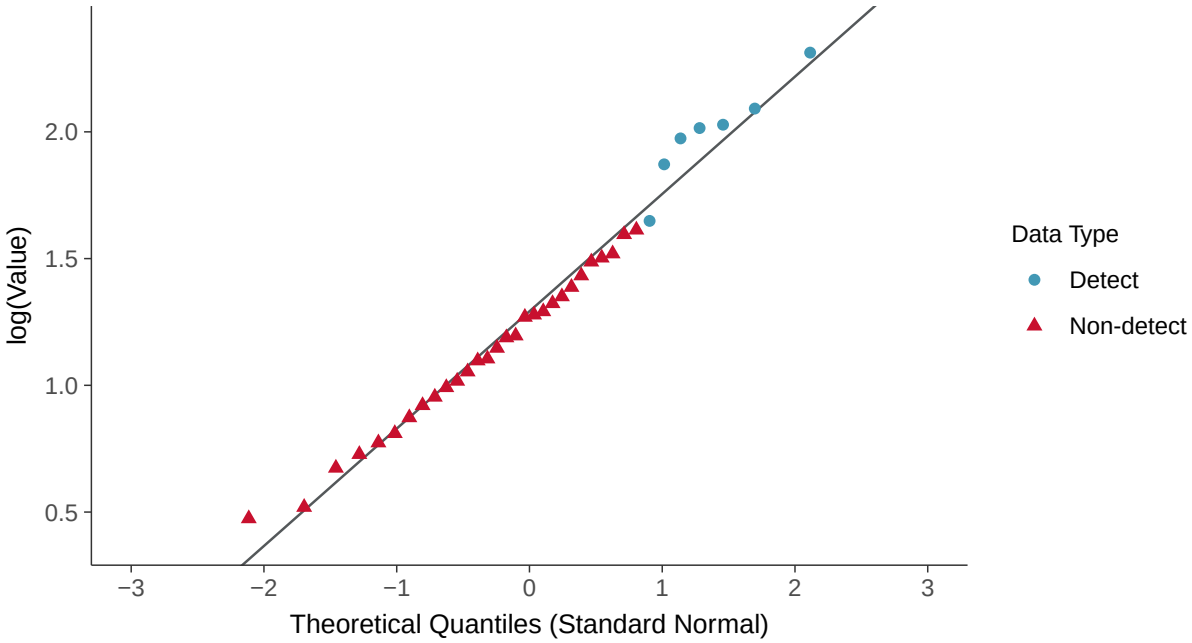
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



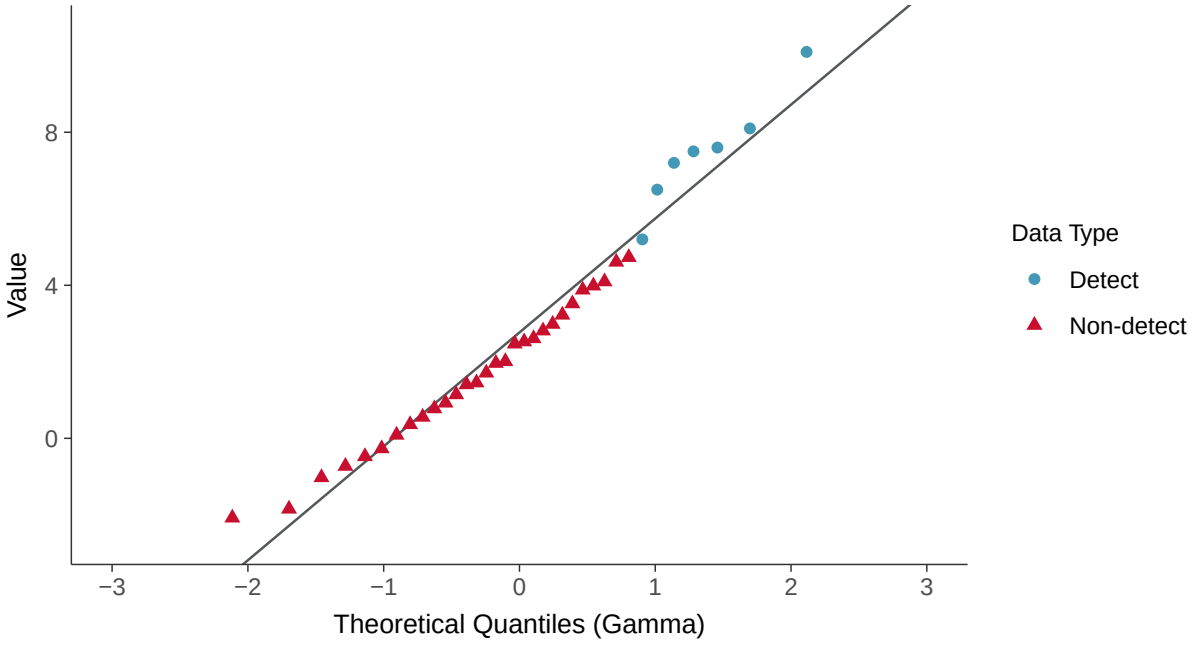
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



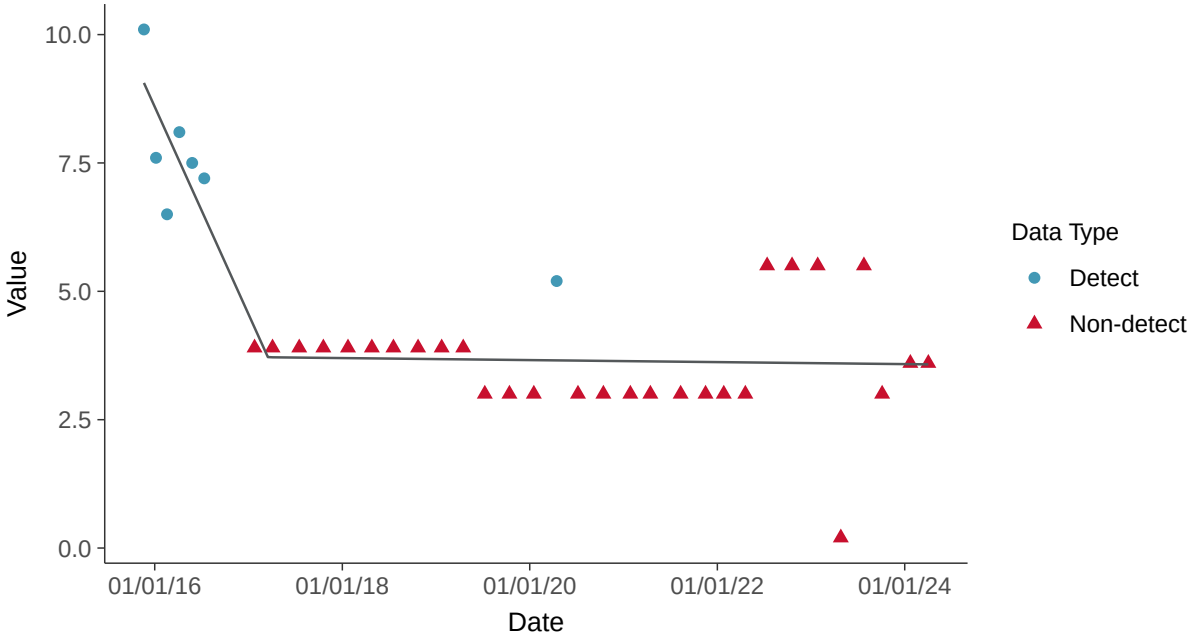
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



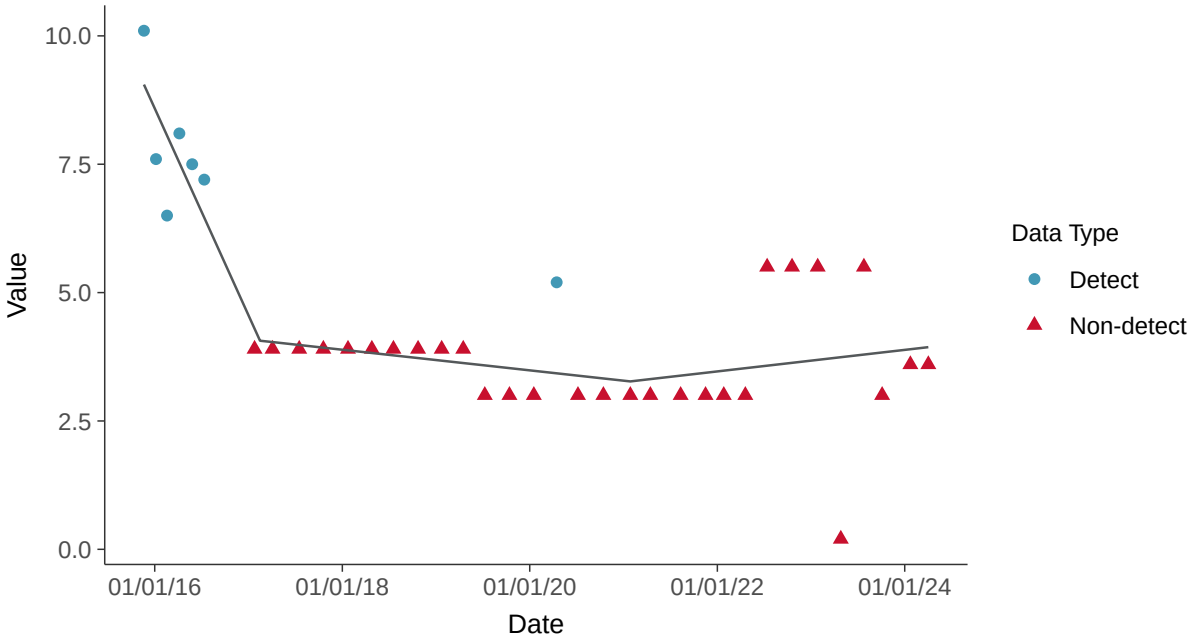
Trend Regression: Piecewise Linear-Linear

Antimony, MW-8 (ug/L)



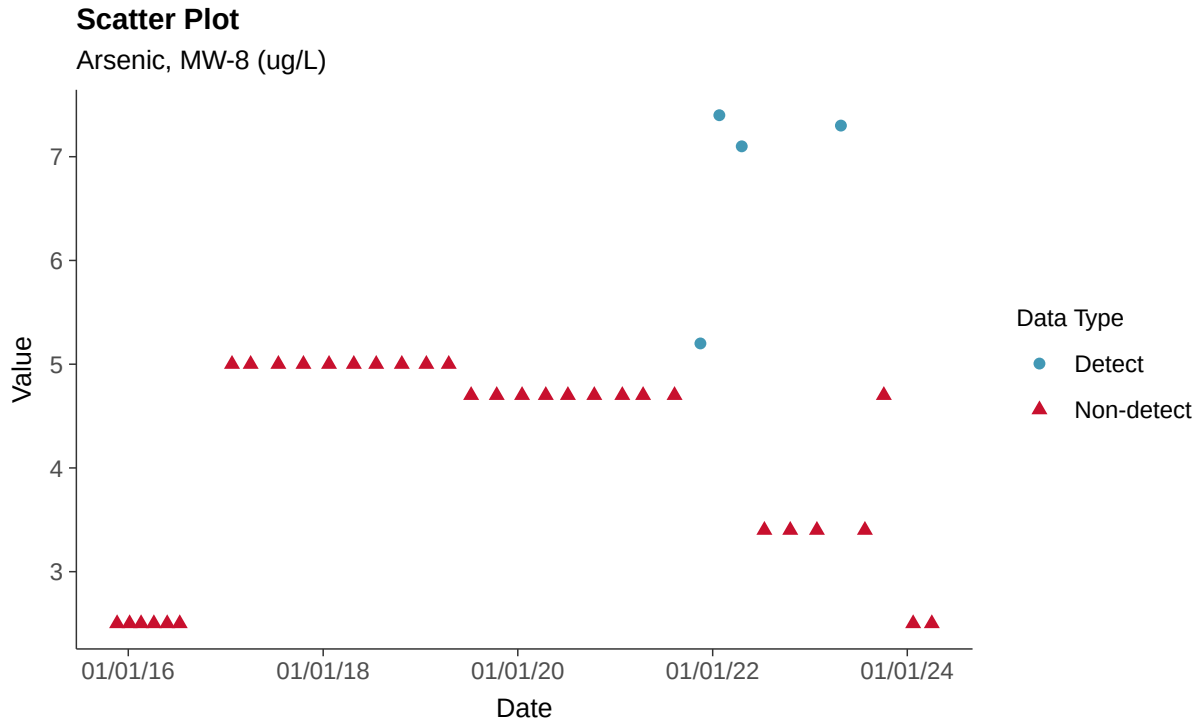
Trend Regression: Piecewise Linear-Linear-Linear

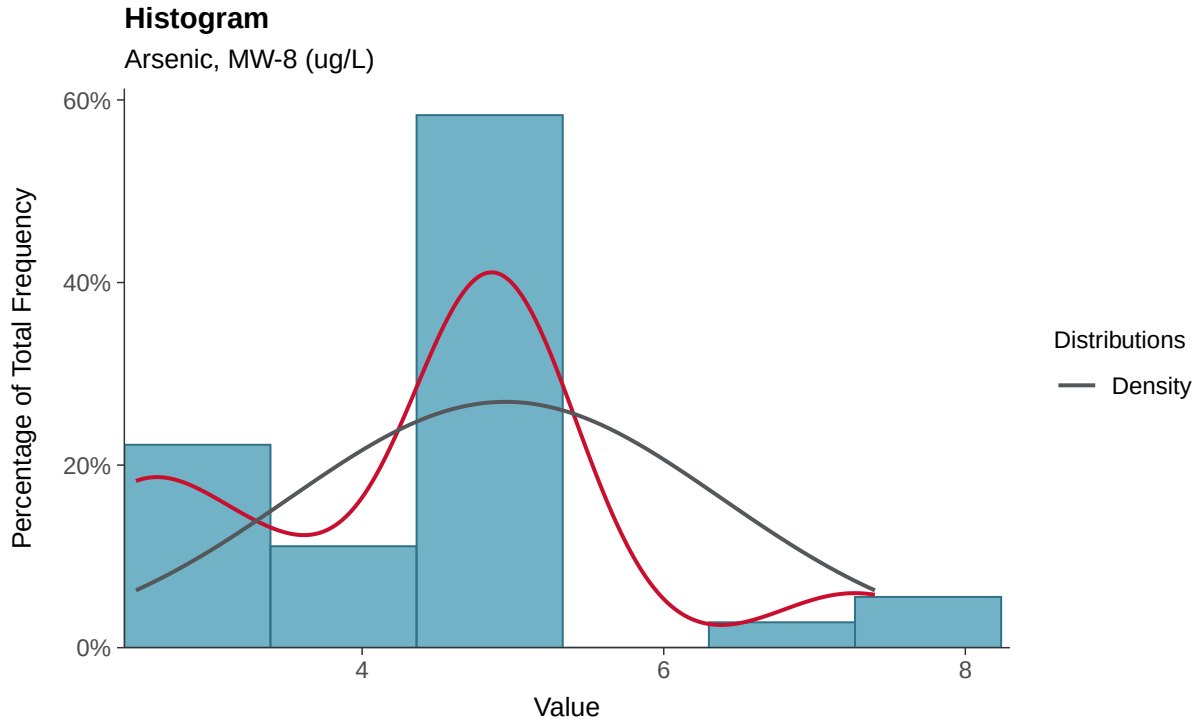
Antimony, MW-8 (ug/L)



App. IV: Arsenic, MW-8

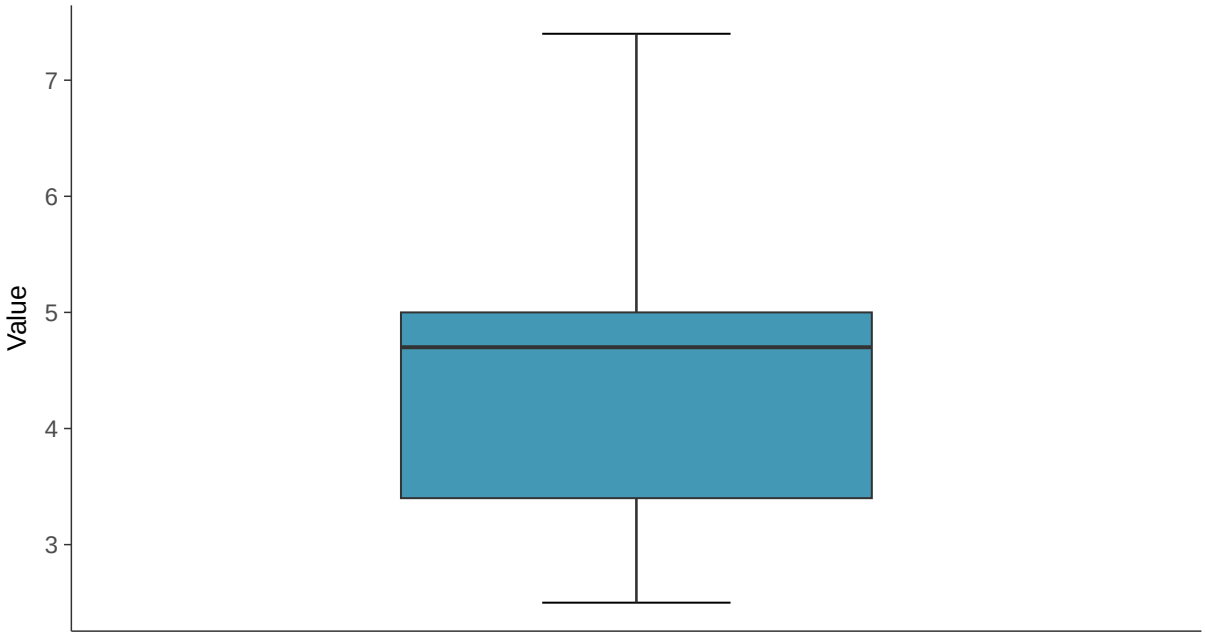
ID: 11_3_102





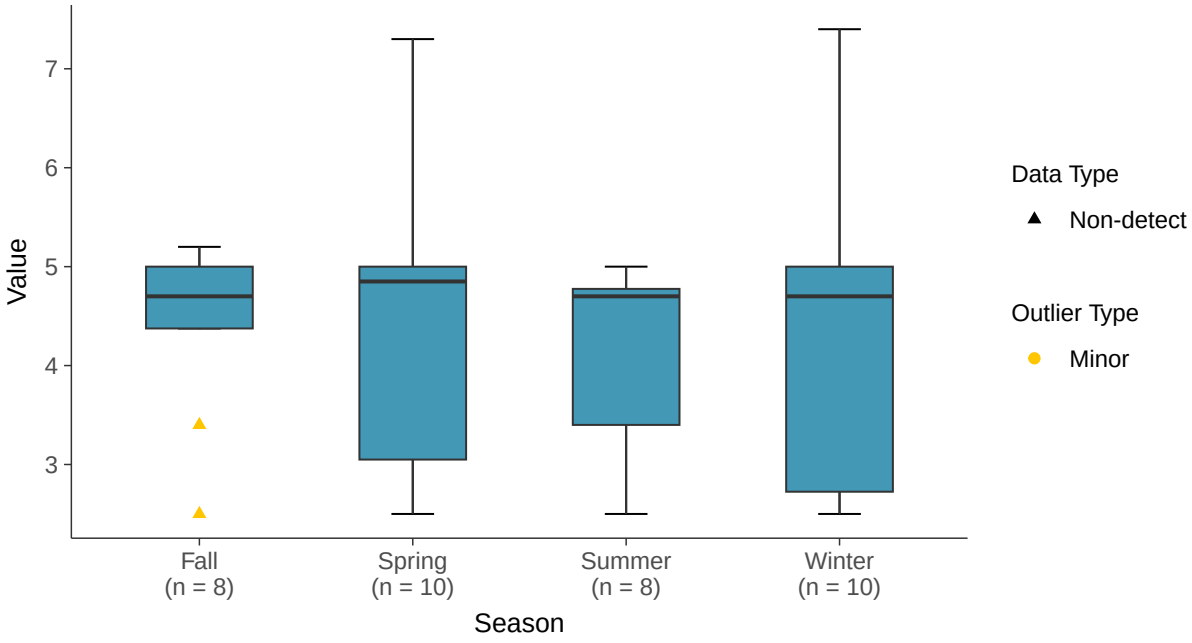
Boxplot

Arsenic, MW-8 (ug/L)



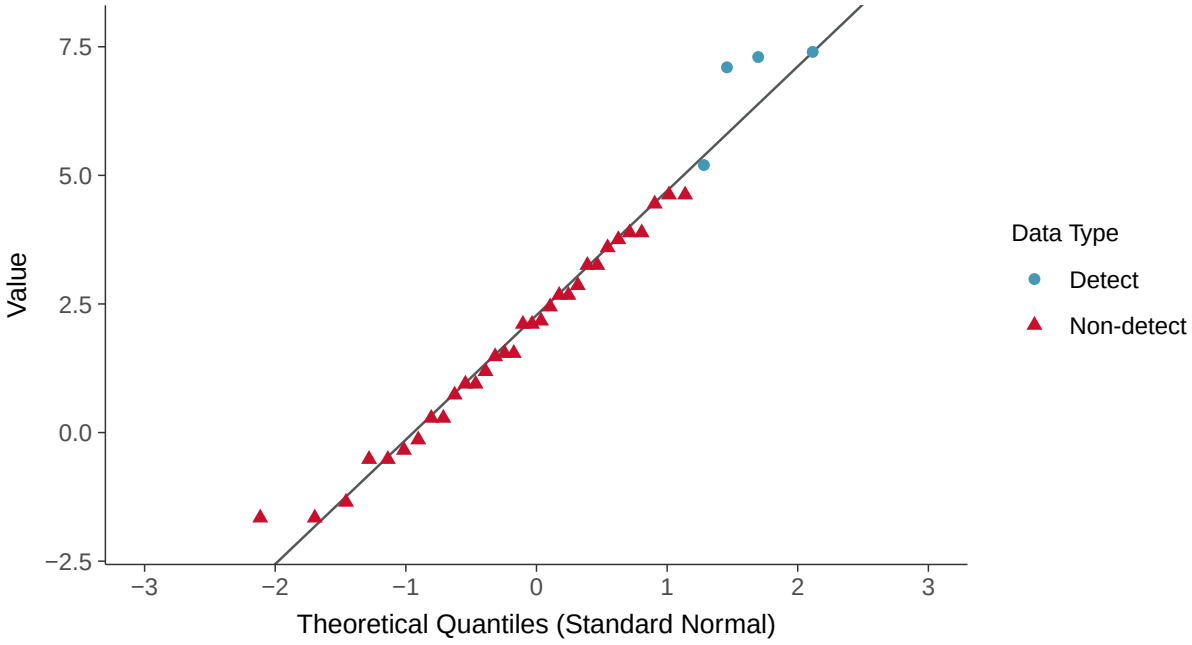
Boxplot by Season

Arsenic, MW-8 (ug/L)



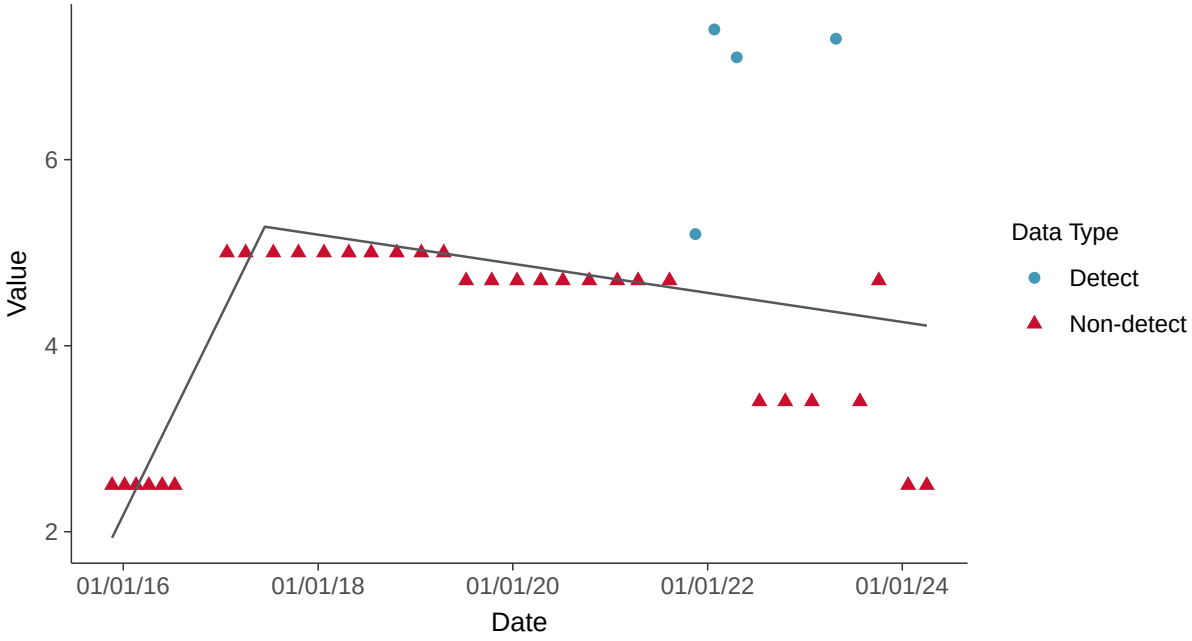
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-8 (ug/L)



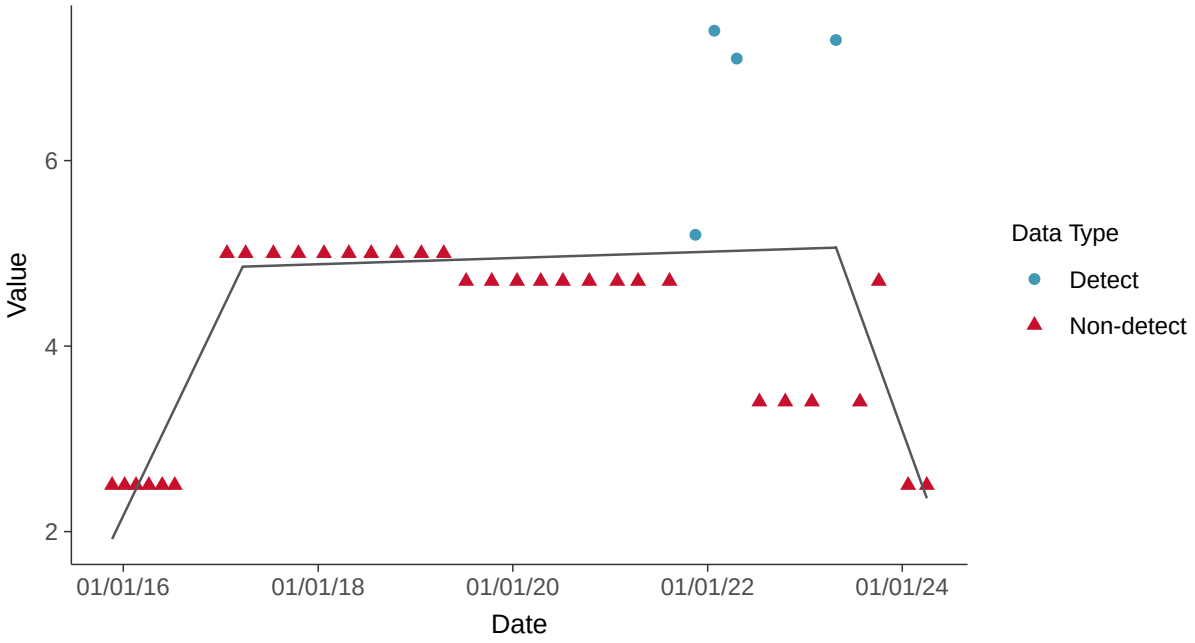
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-8 (ug/L)



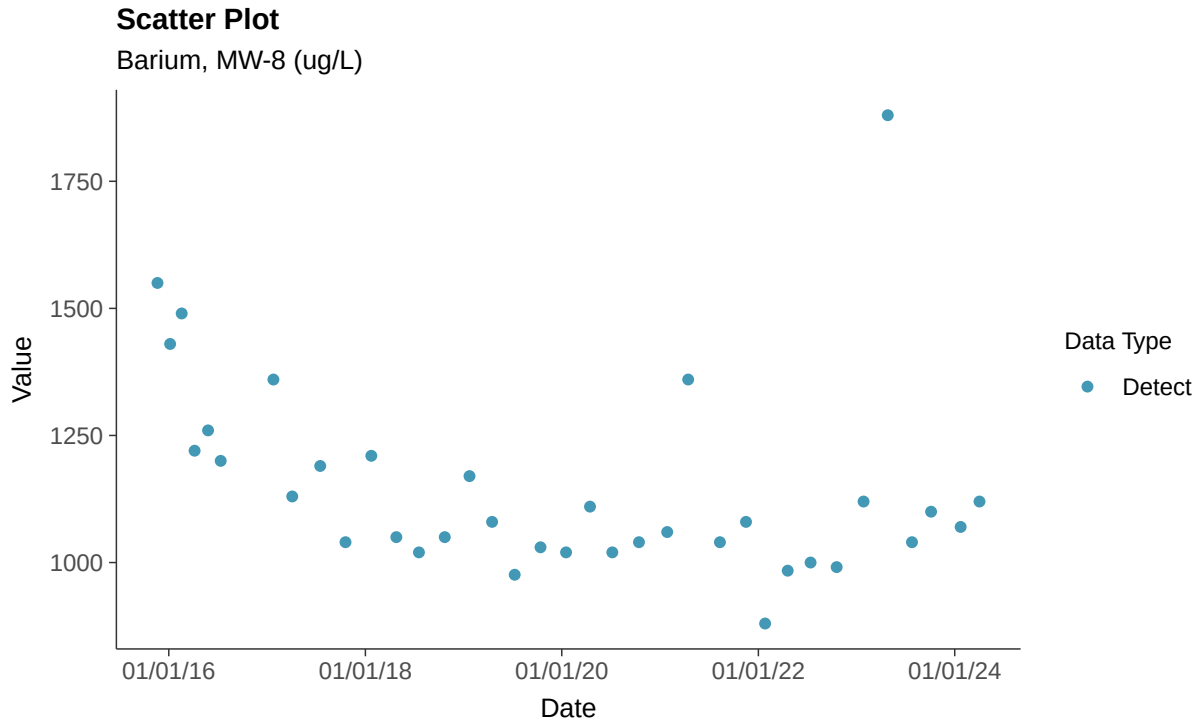
Trend Regression: Piecewise Linear-Linear-Linear

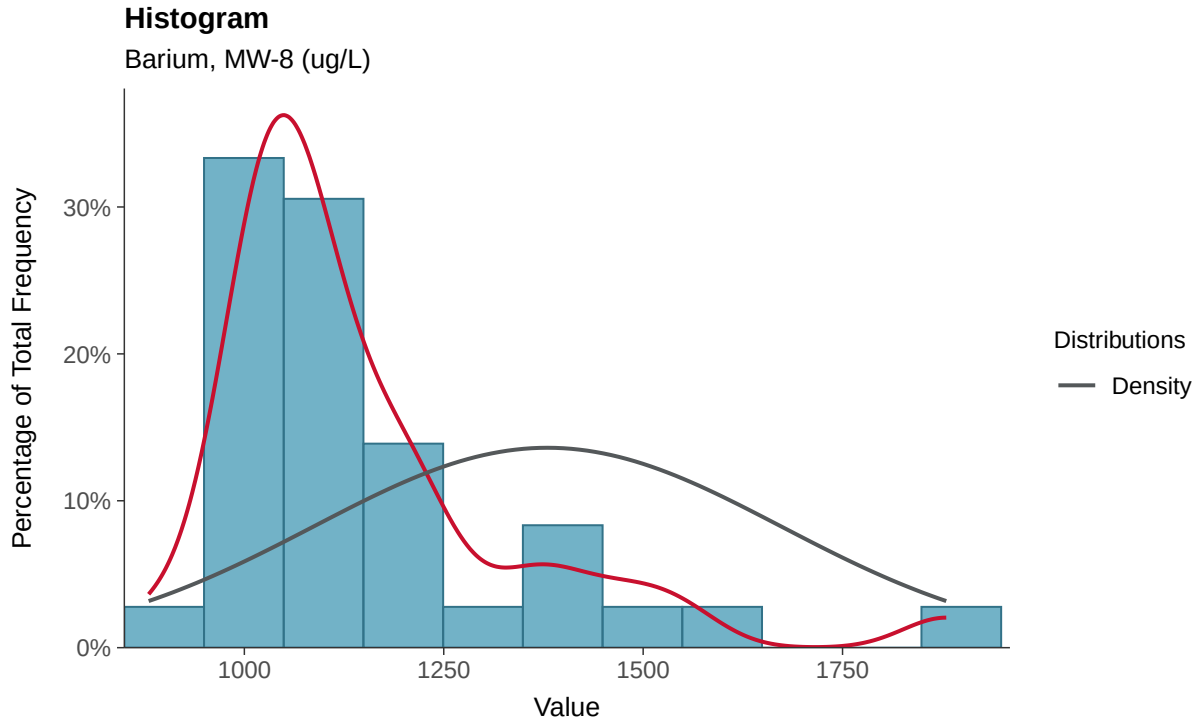
Arsenic, MW-8 (ug/L)



App. IV: Barium, MW-8

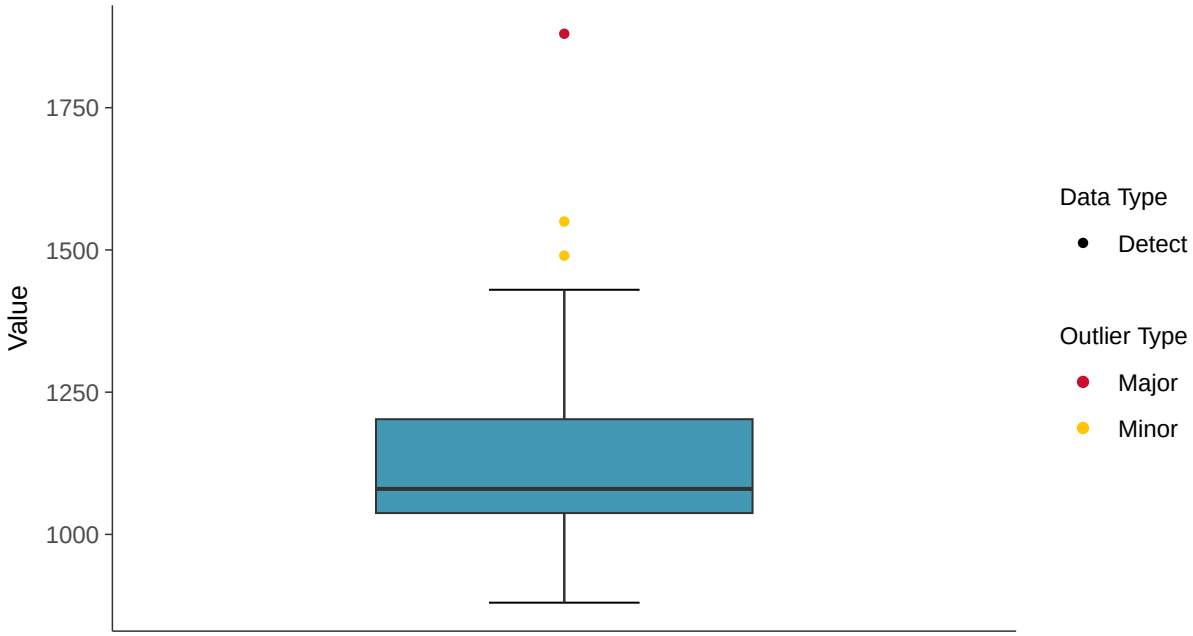
ID: 11_3_103





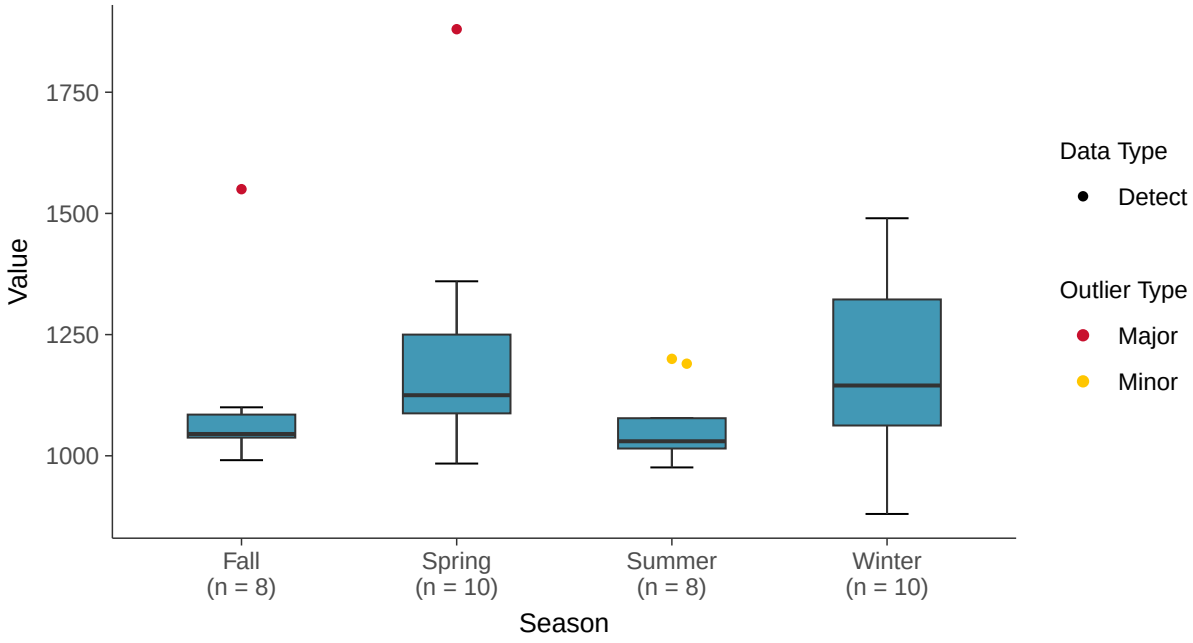
Boxplot

Barium, MW-8 (ug/L)



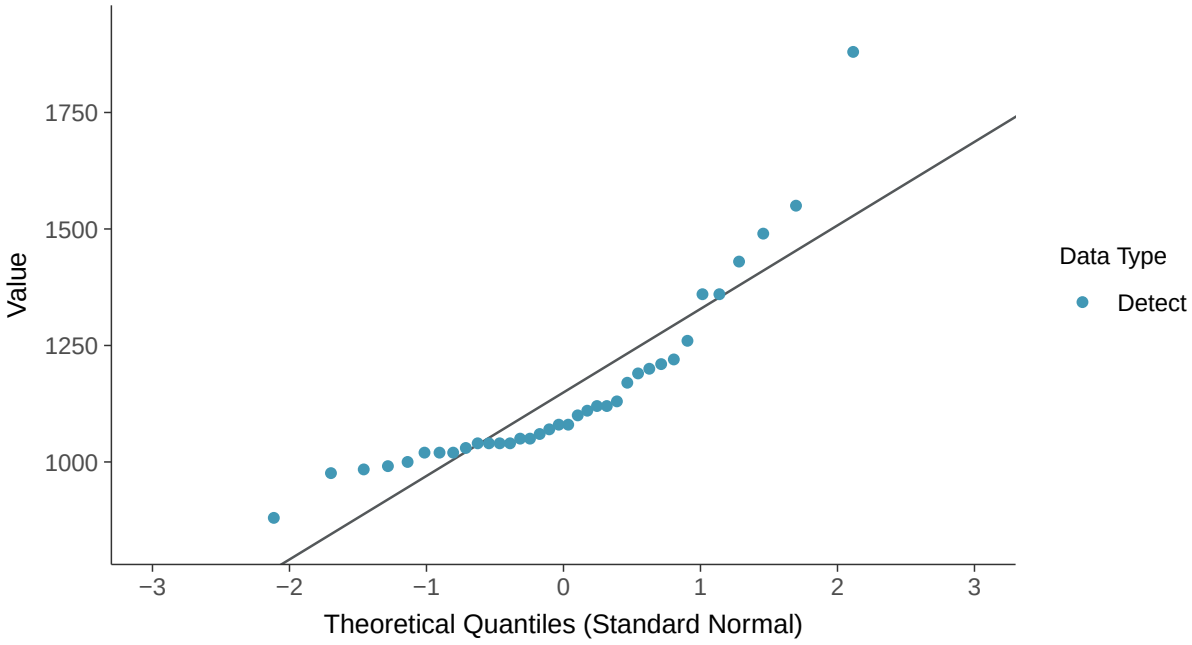
Boxplot by Season

Barium, MW-8 (ug/L)



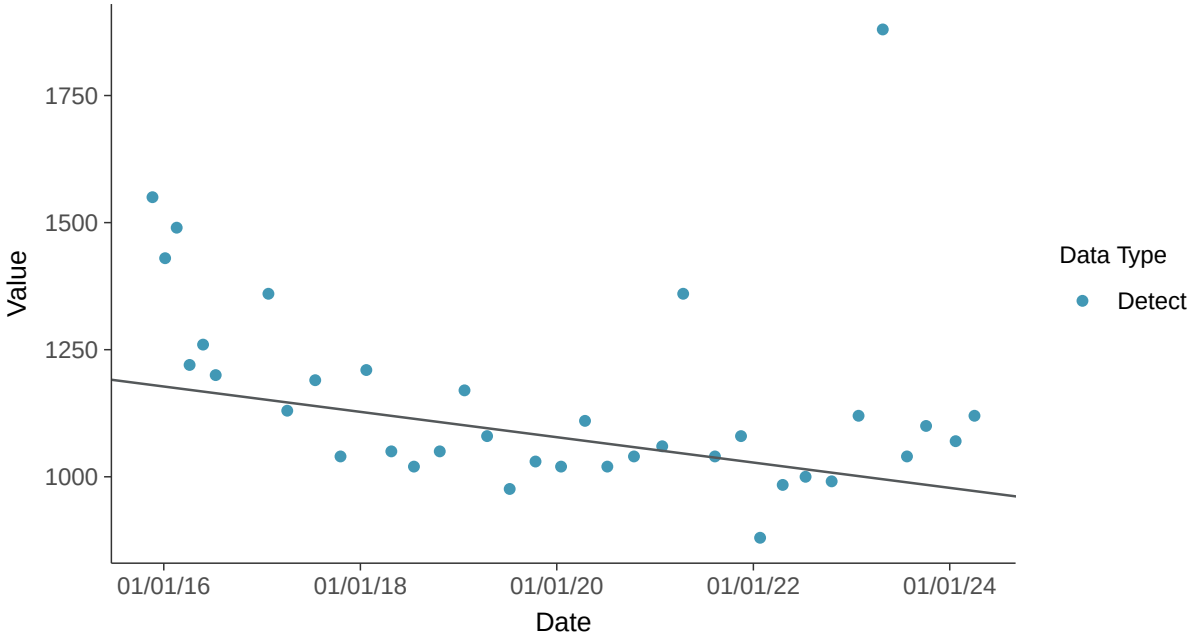
Normal Q-Q plot

Barium, MW-8 (ug/L)



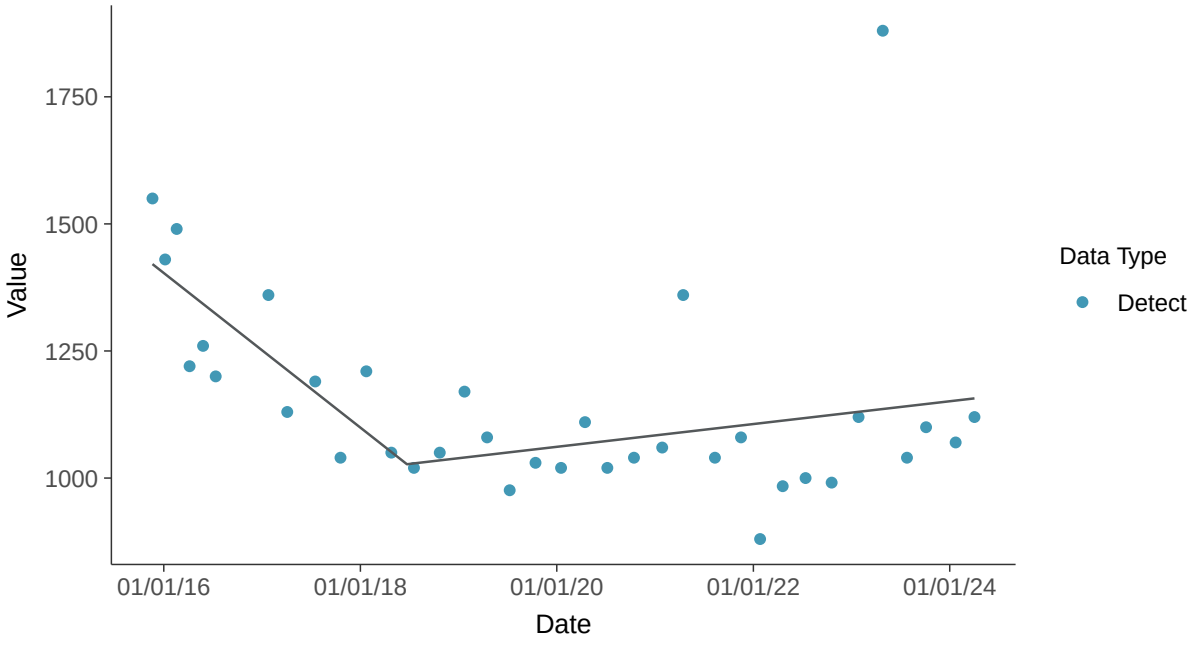
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-8 (ug/L)



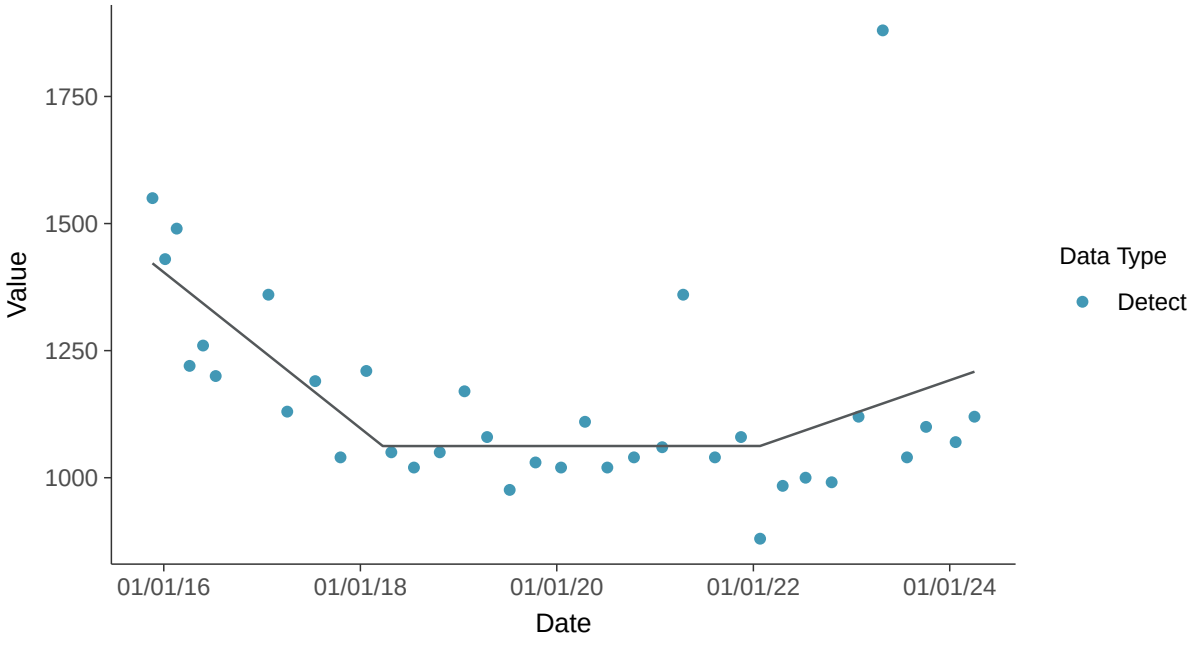
Trend Regression: Piecewise Linear-Linear

Barium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-8 (ug/L)

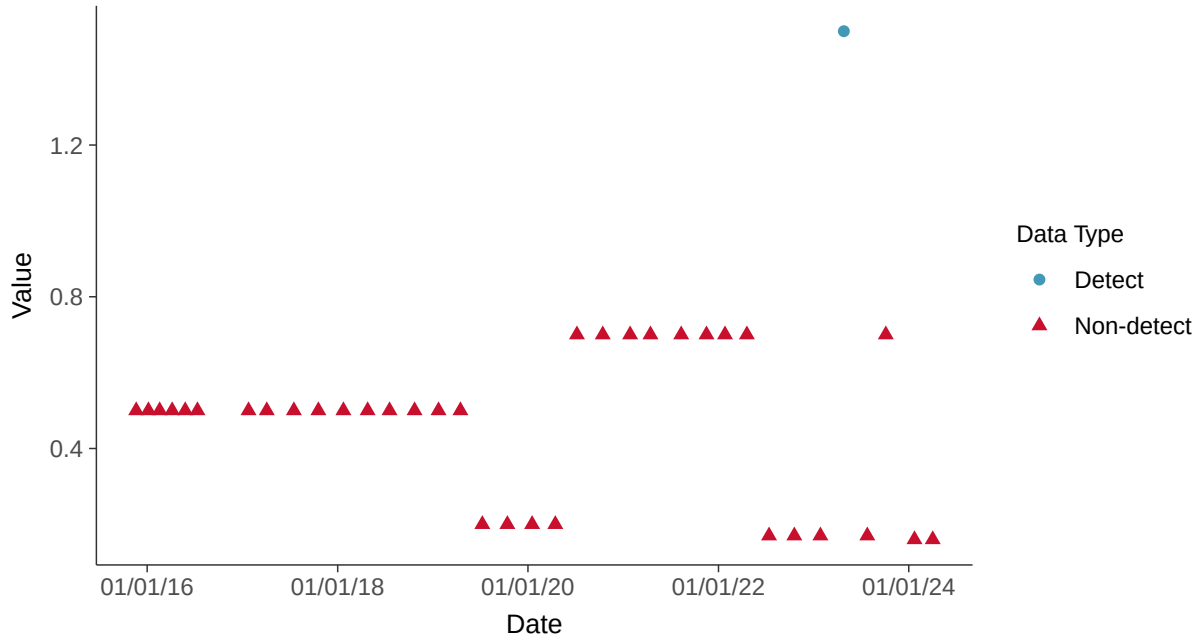


App. IV: Beryllium, MW-8

ID: 11_3_104

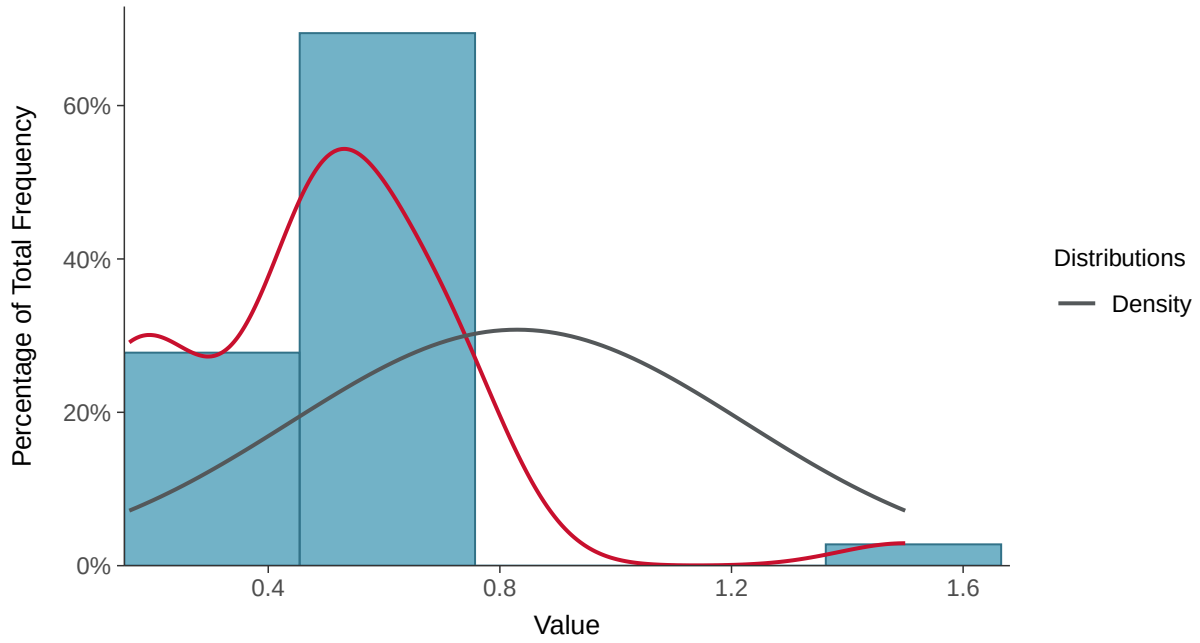
Scatter Plot

Beryllium, MW-8 (ug/L)



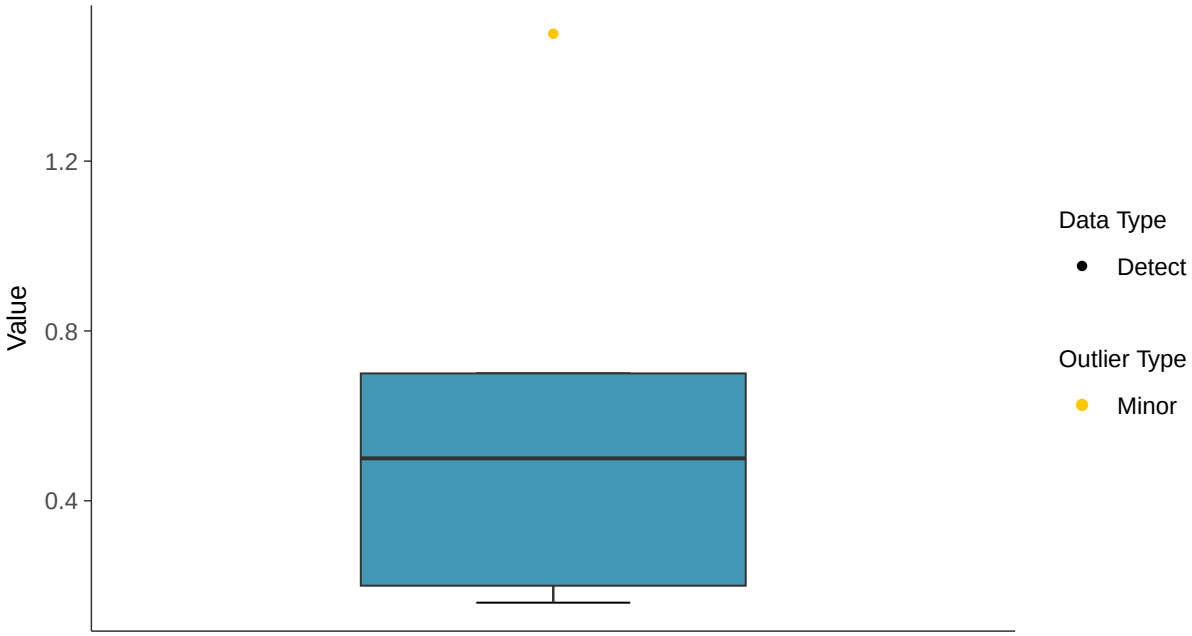
Histogram

Beryllium, MW-8 (ug/L)



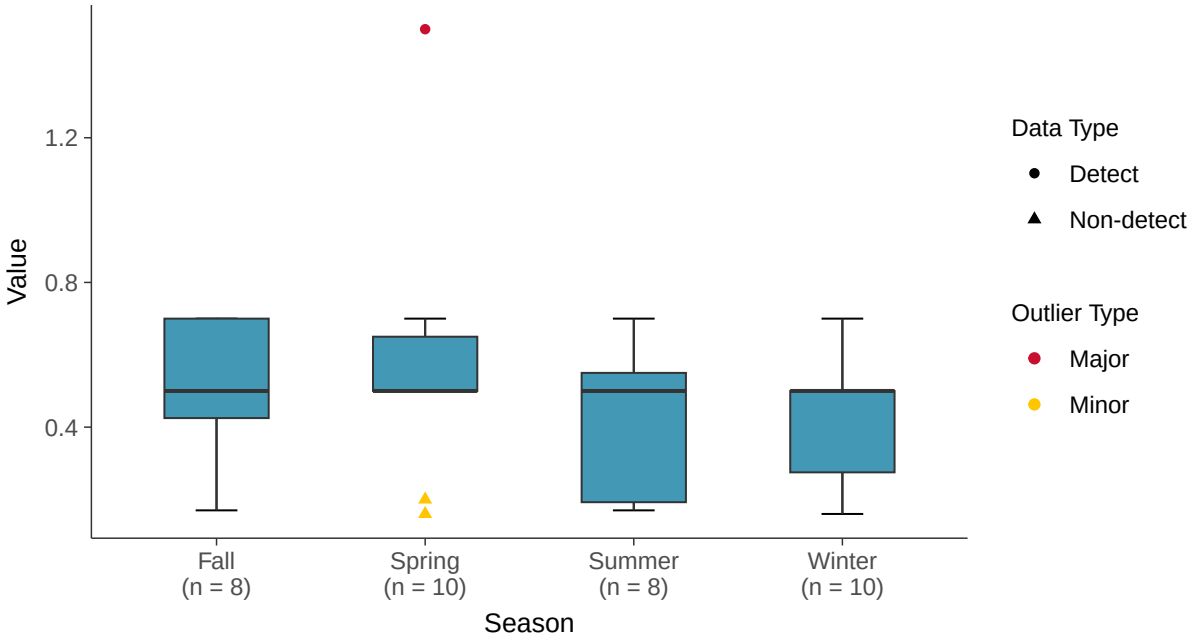
Boxplot

Beryllium, MW-8 (ug/L)



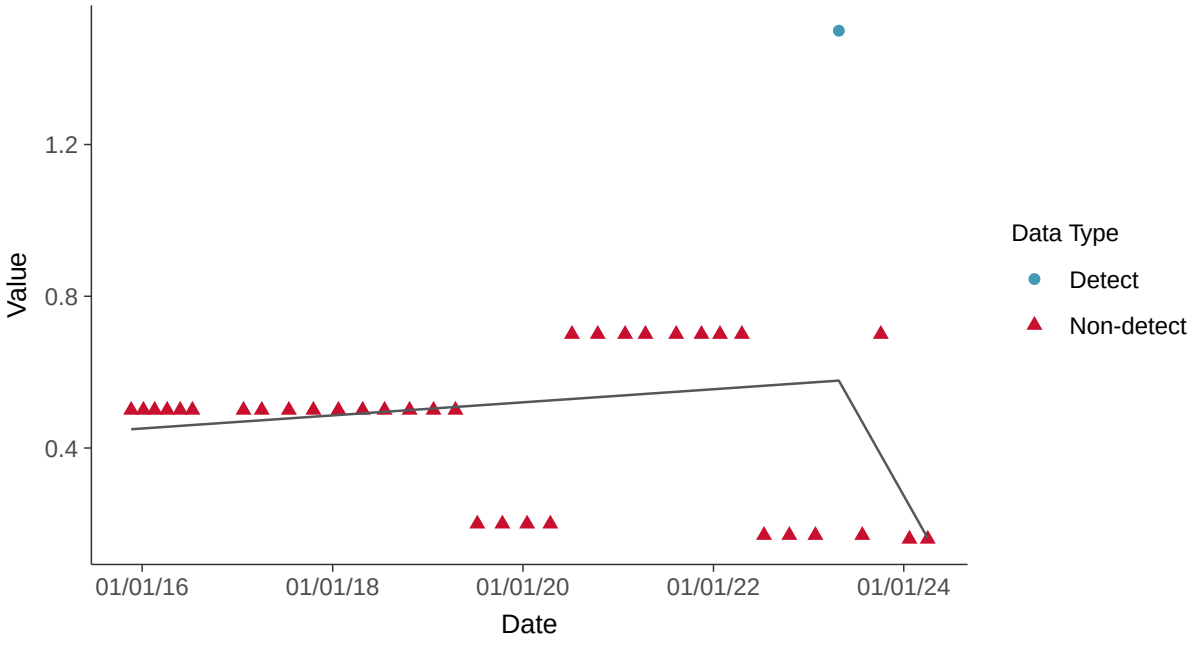
Boxplot by Season

Beryllium, MW-8 (ug/L)



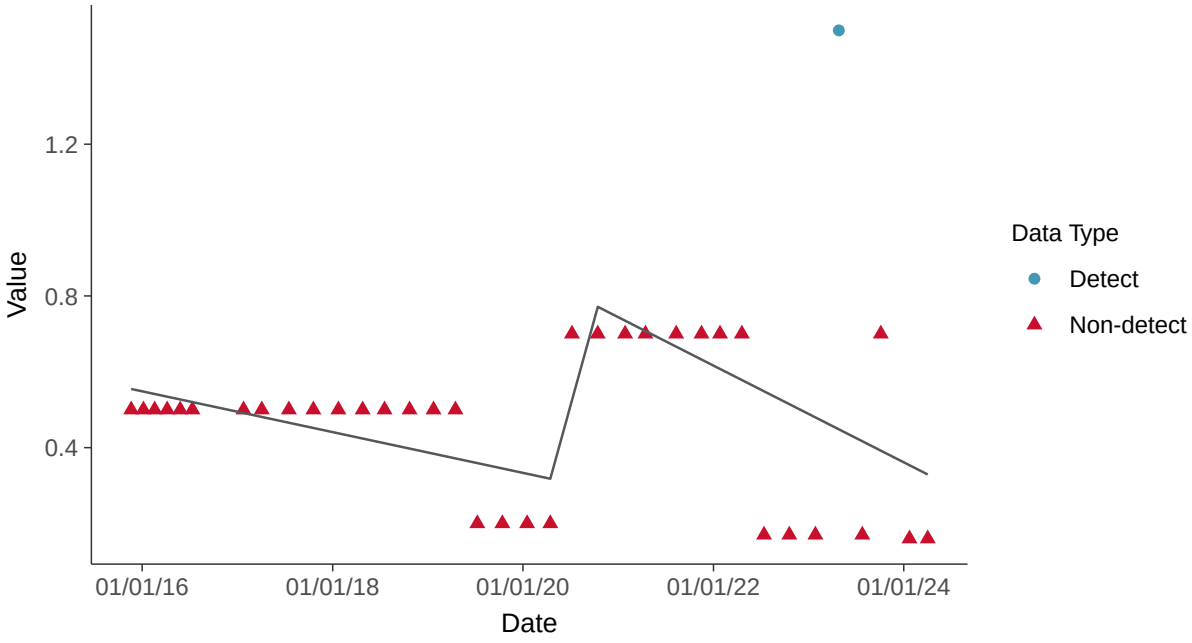
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-8 (ug/L)



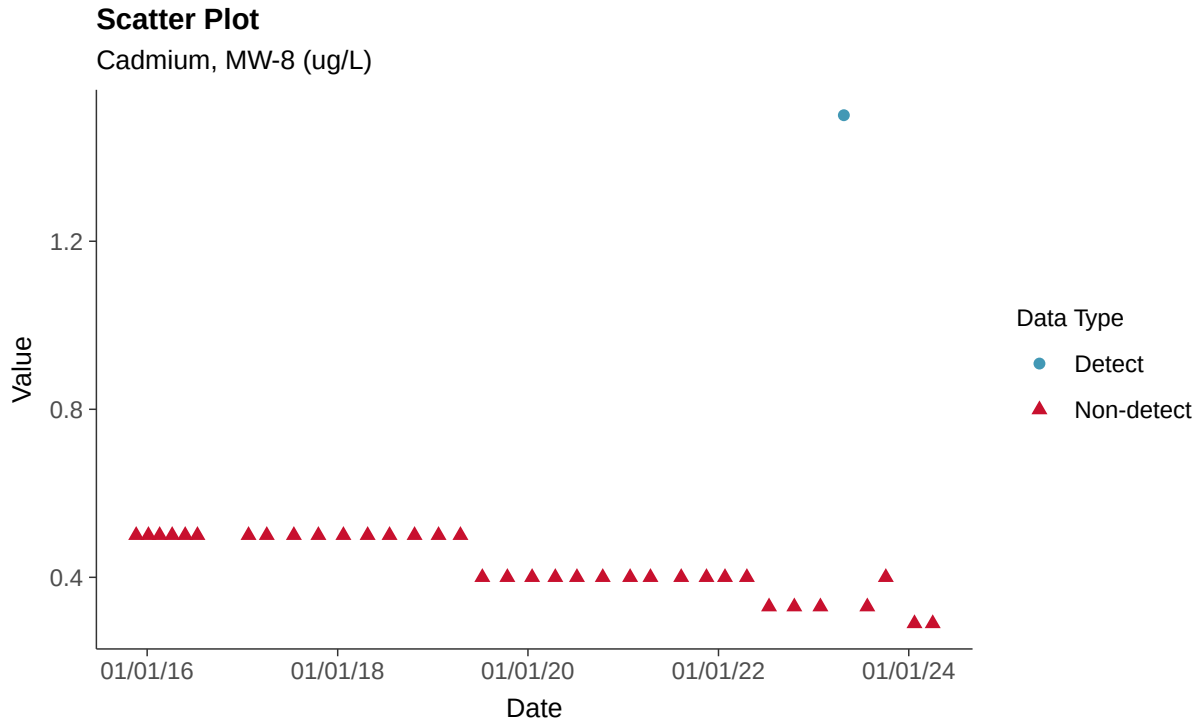
Trend Regression: Piecewise Linear-Linear-Linear

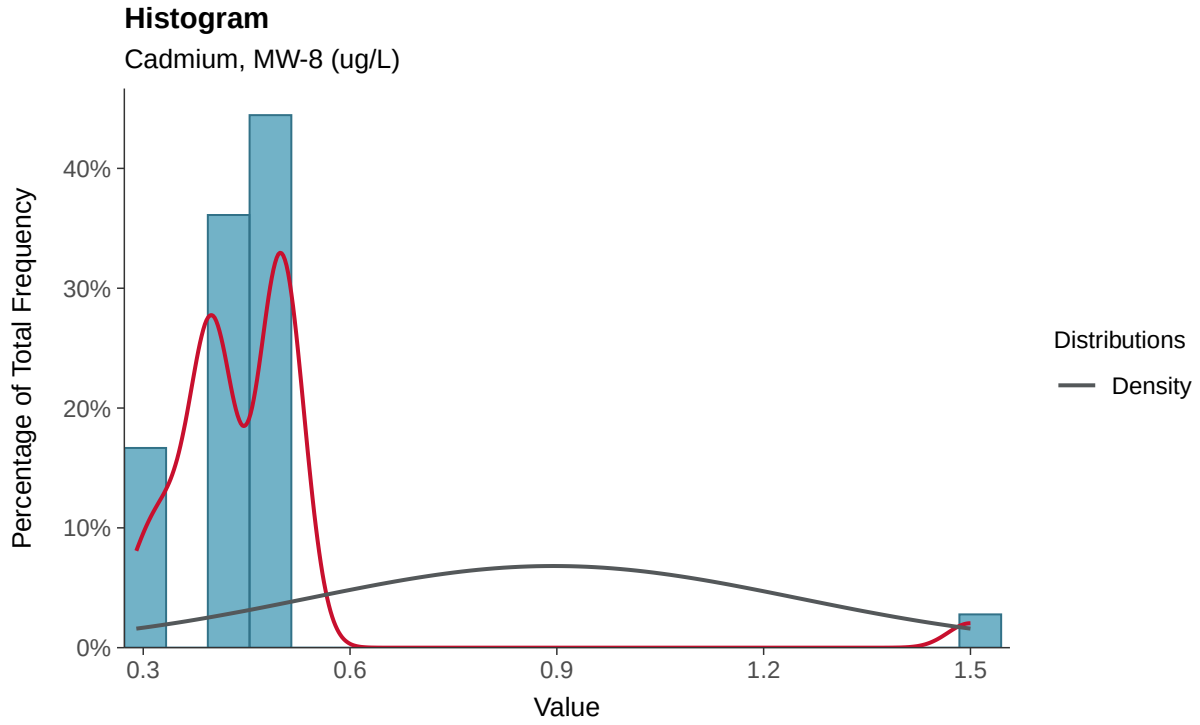
Beryllium, MW-8 (ug/L)



App. IV: Cadmium, MW-8

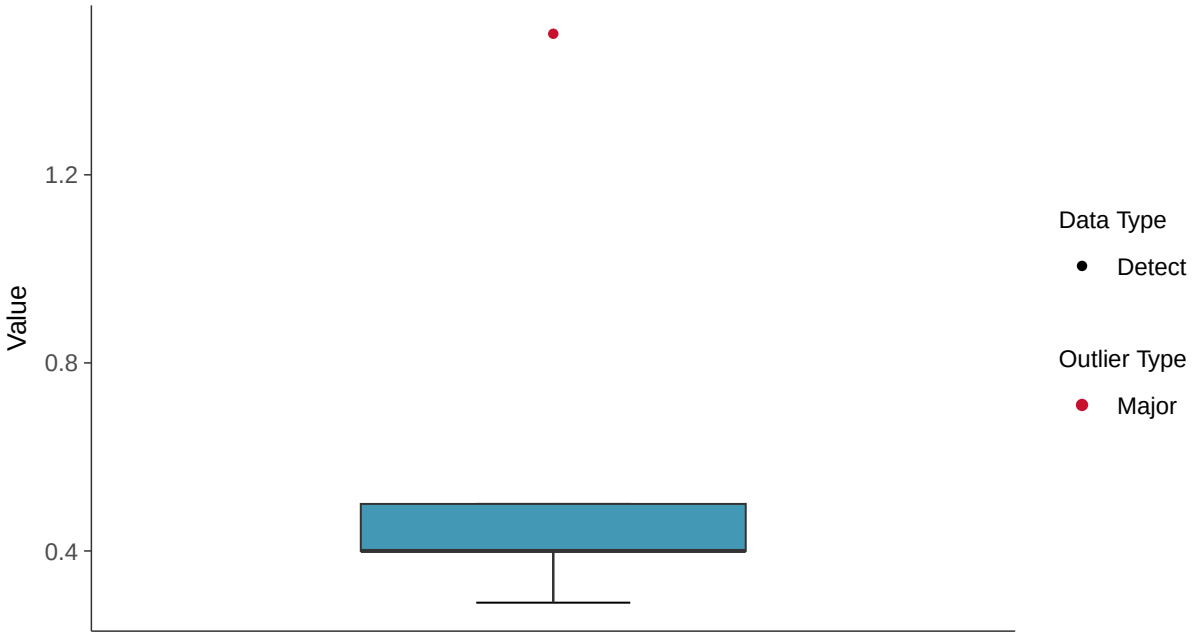
ID: 11_3_106





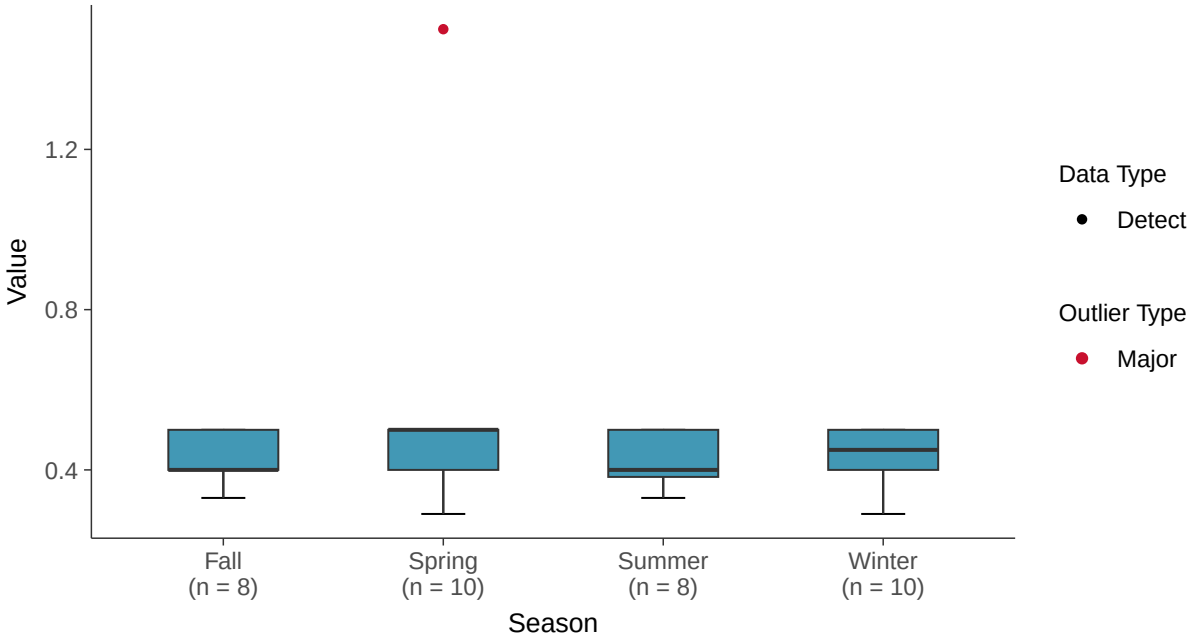
Boxplot

Cadmium, MW-8 (ug/L)



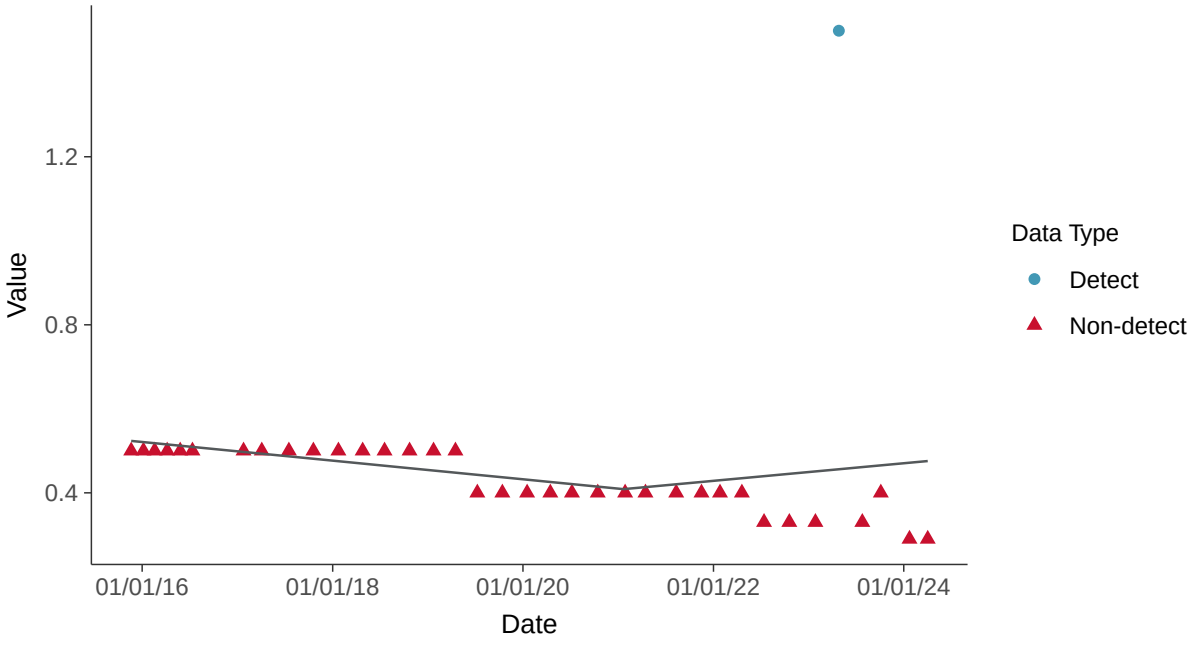
Boxplot by Season

Cadmium, MW-8 (ug/L)



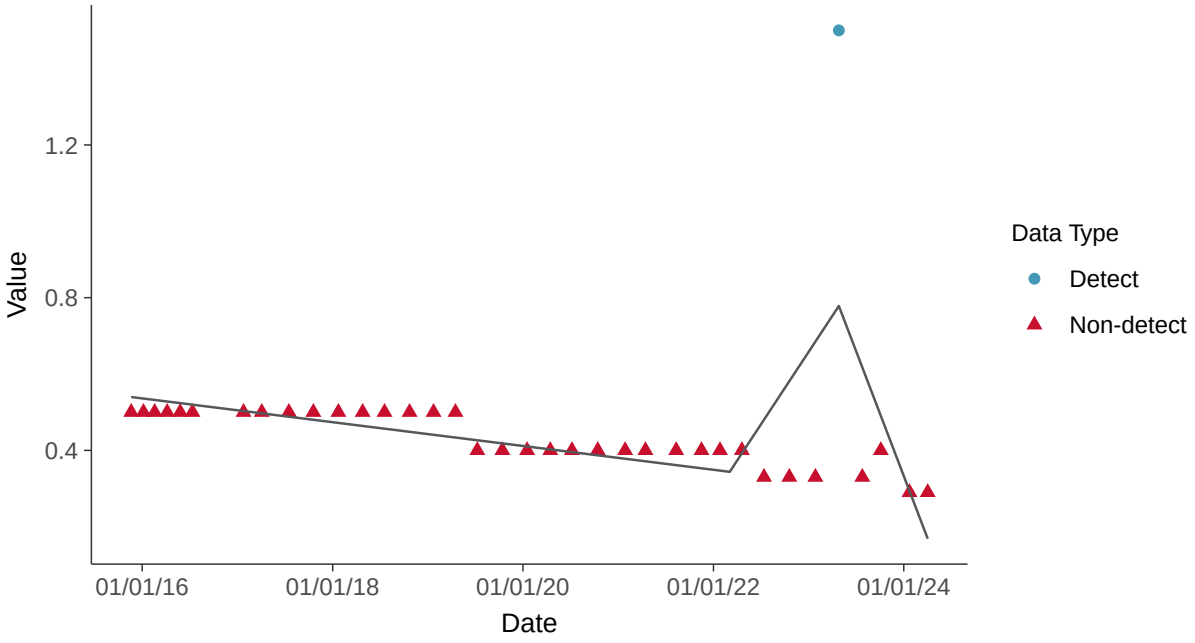
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-8 (ug/L)

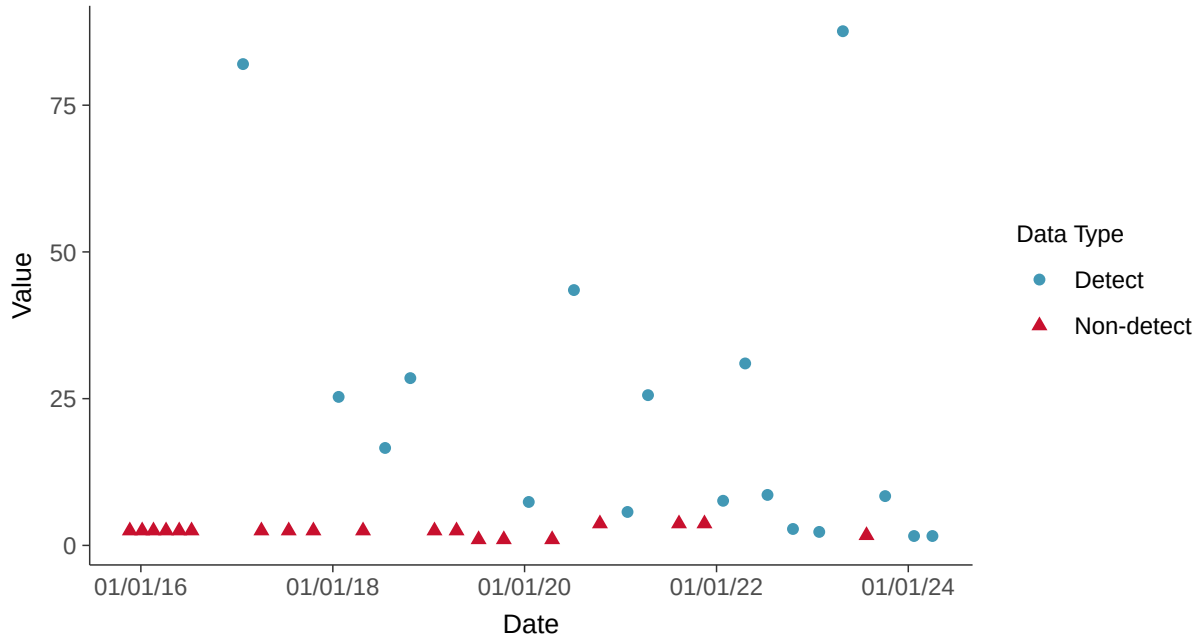


App. IV: Chromium, MW-8

ID: 11_3_109

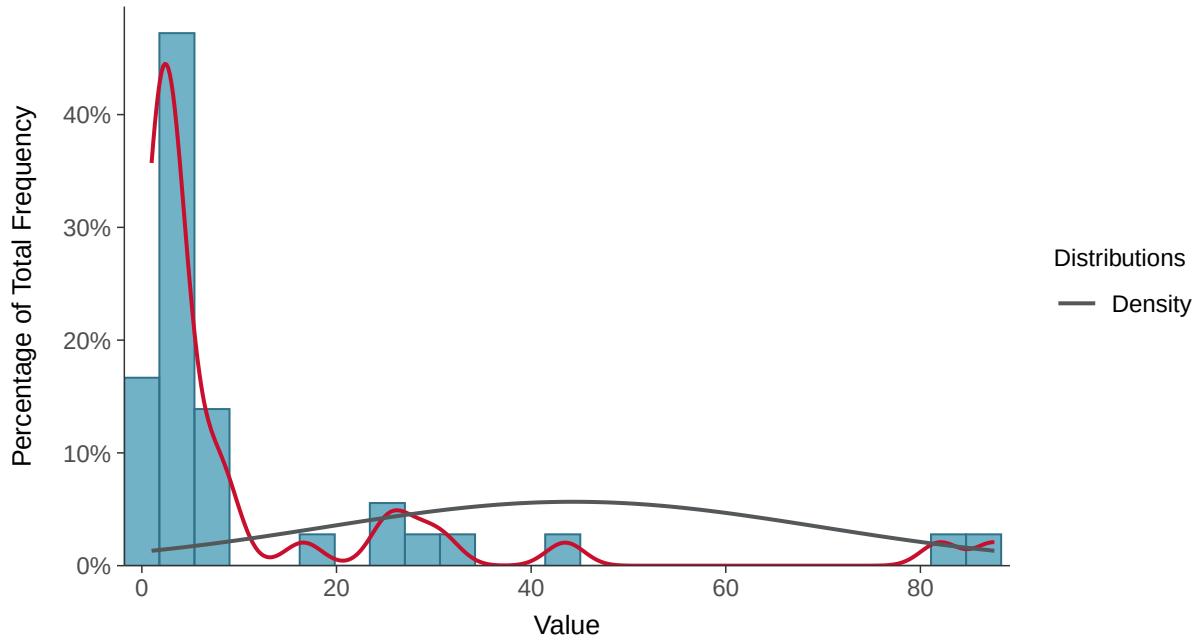
Scatter Plot

Chromium, MW-8 (ug/L)



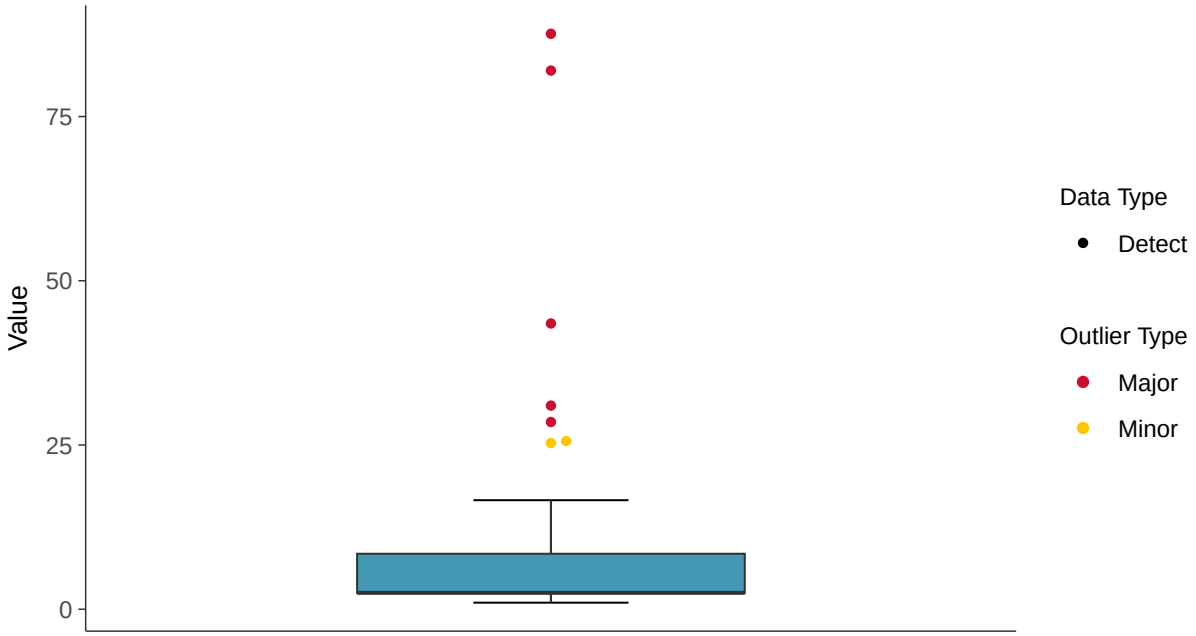
Histogram

Chromium, MW-8 (ug/L)



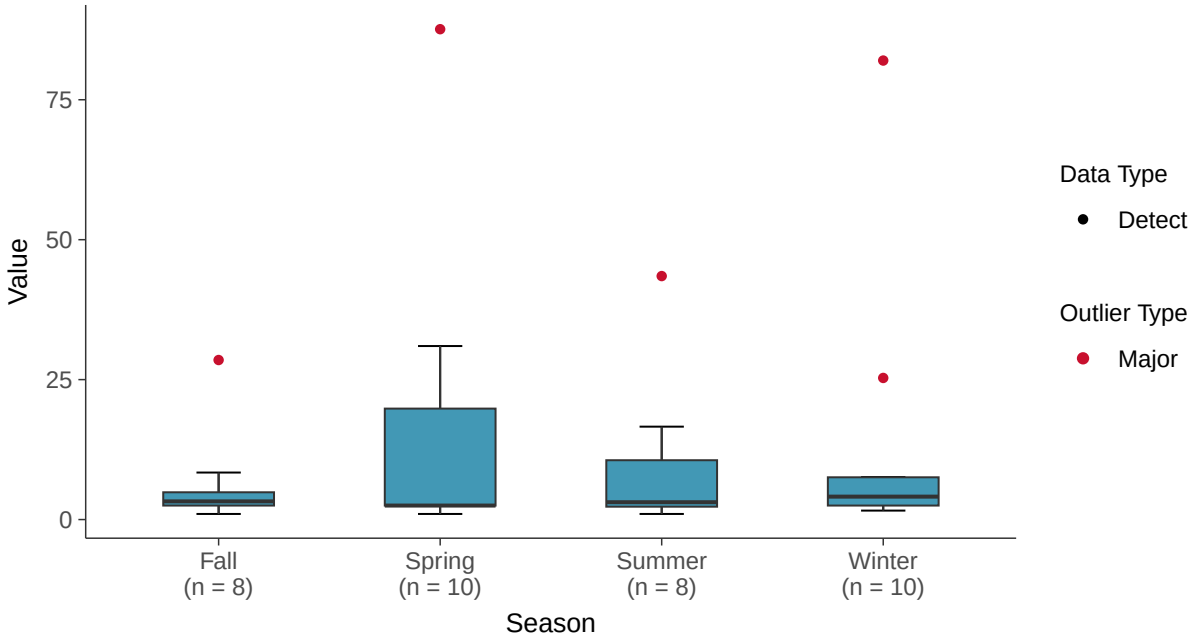
Boxplot

Chromium, MW-8 (ug/L)



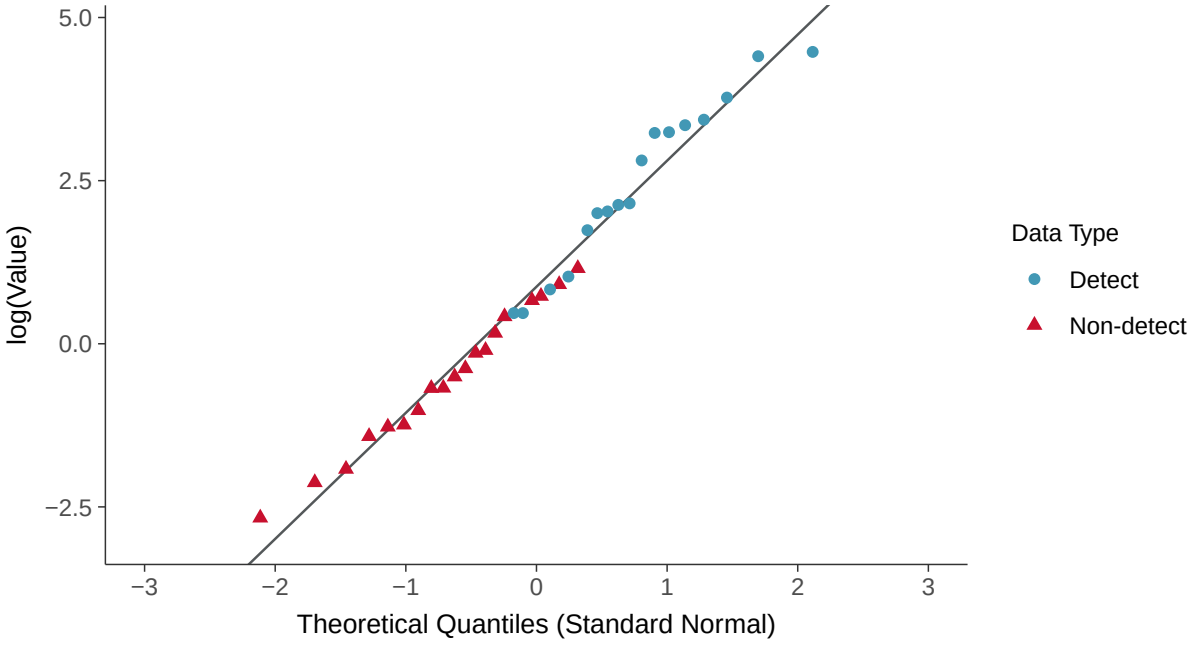
Boxplot by Season

Chromium, MW-8 (ug/L)



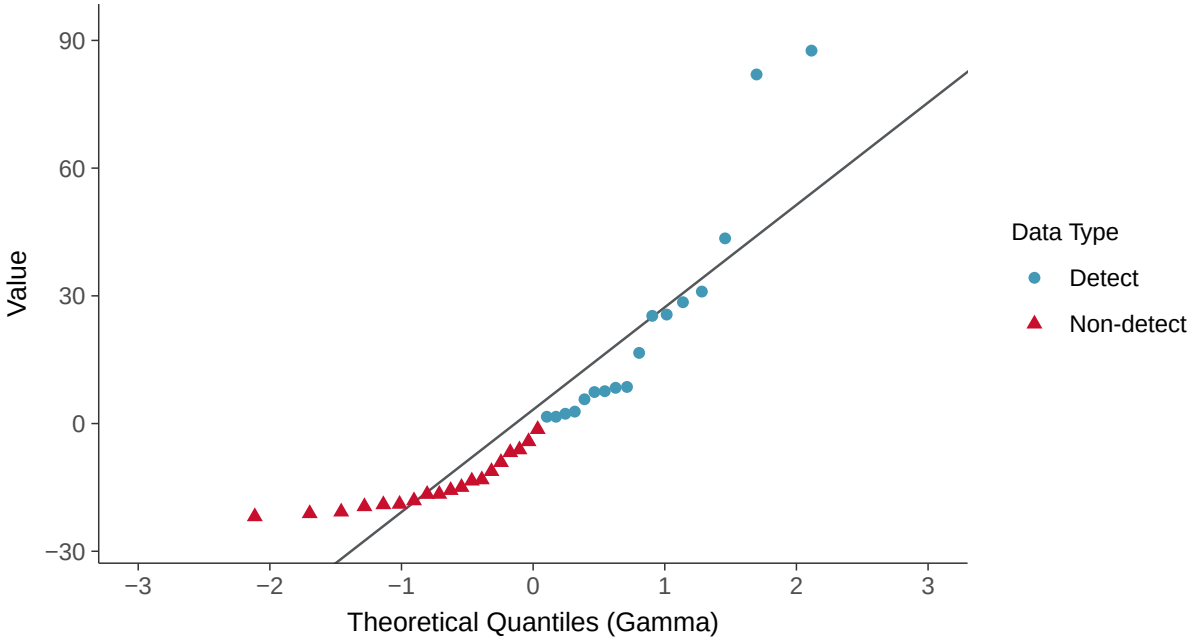
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-8 (ug/L)



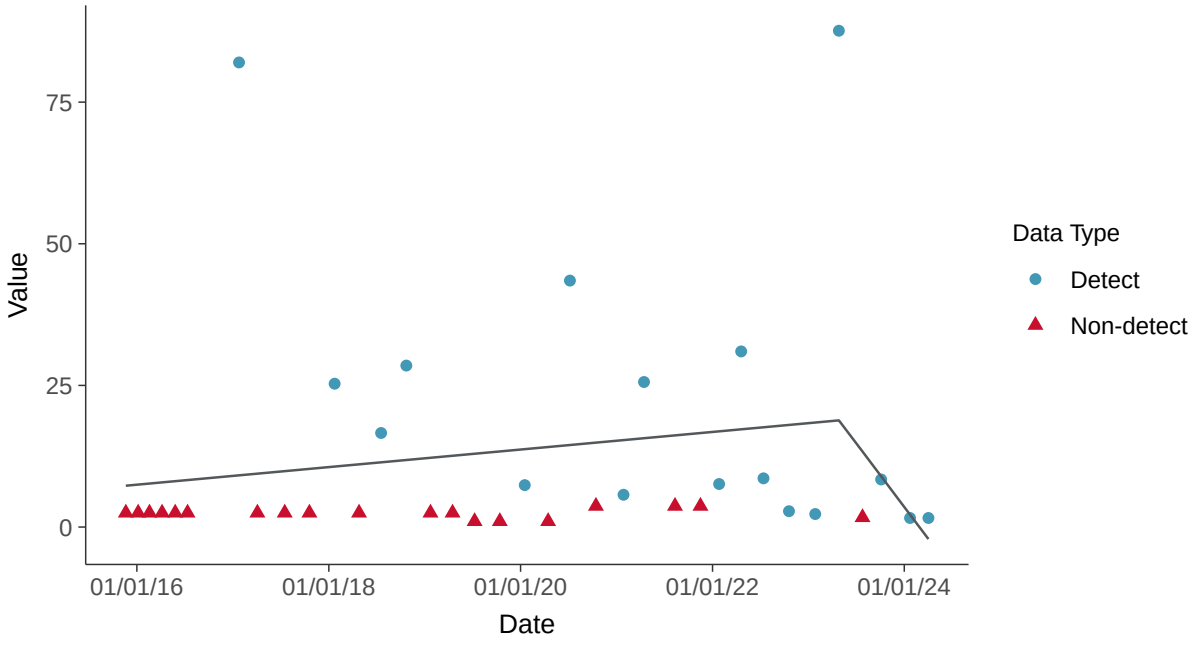
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-8 (ug/L)



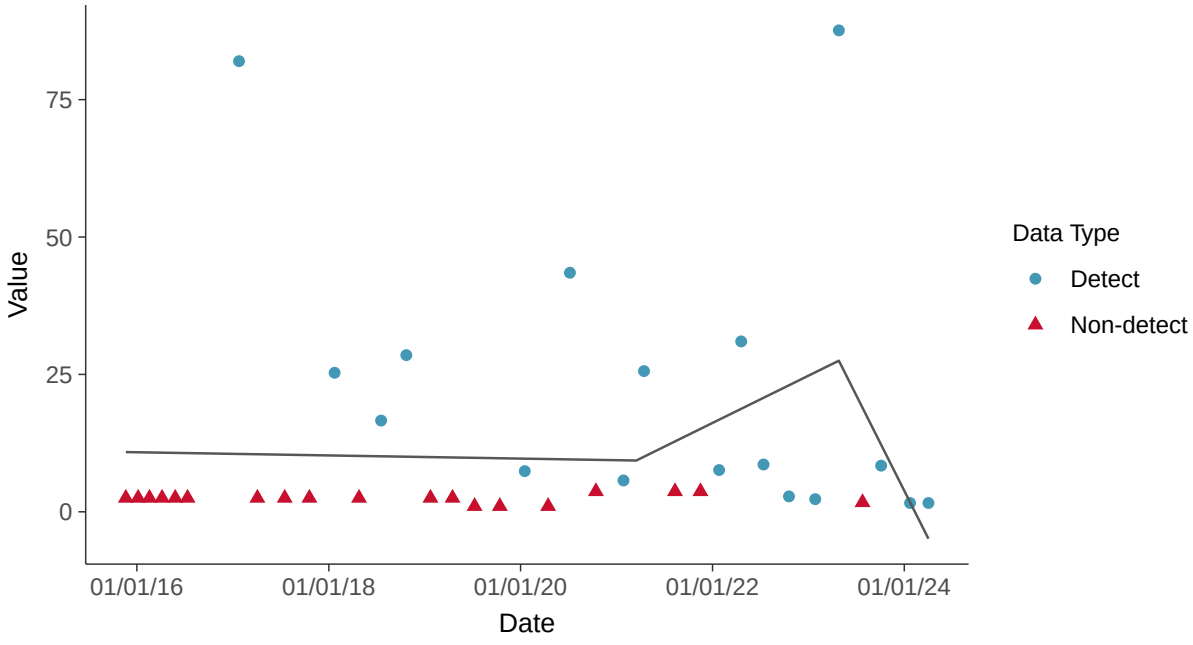
Trend Regression: Piecewise Linear-Linear

Chromium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-8 (ug/L)

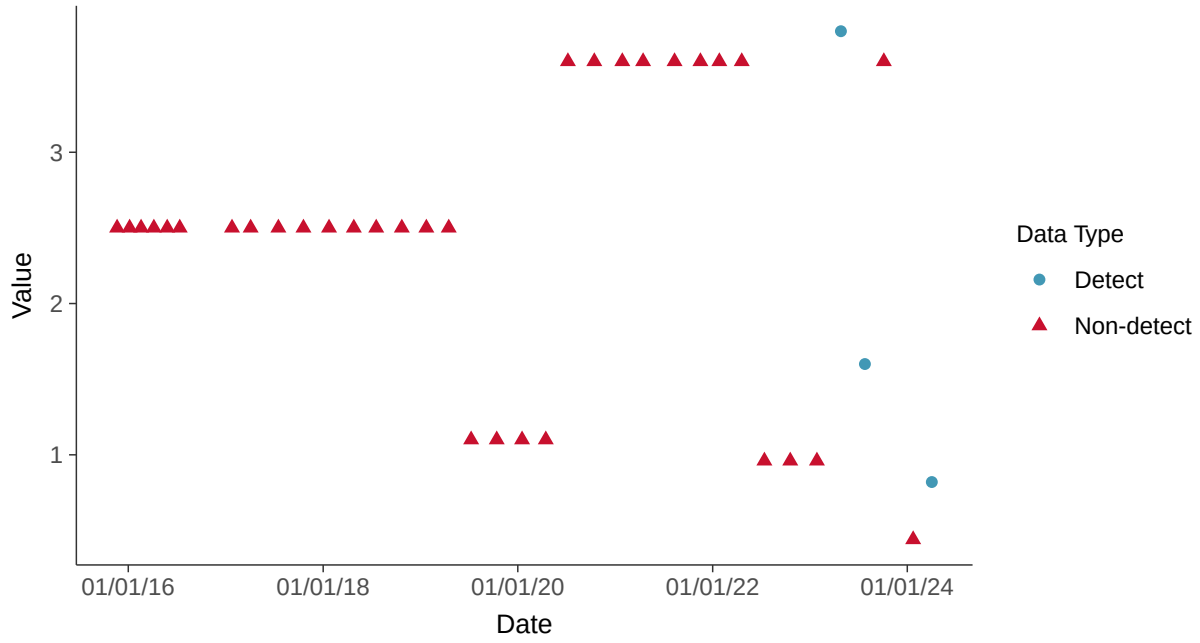


App. IV: Cobalt, MW-8

ID: 11_3_110

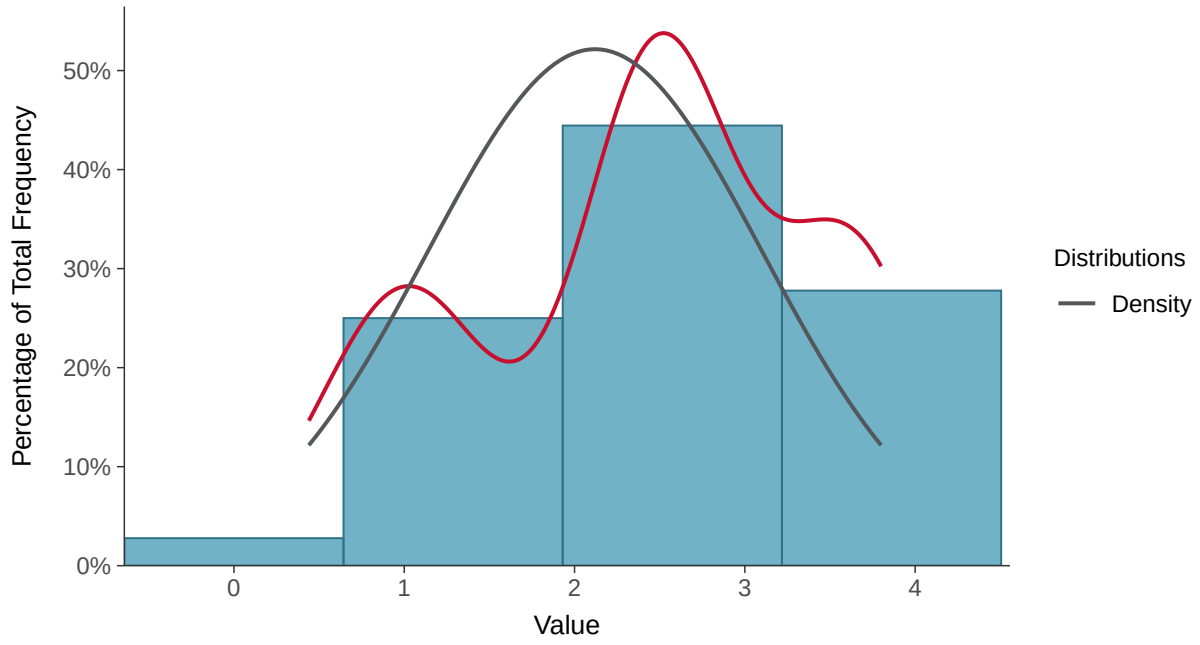
Scatter Plot

Cobalt, MW-8 (ug/L)



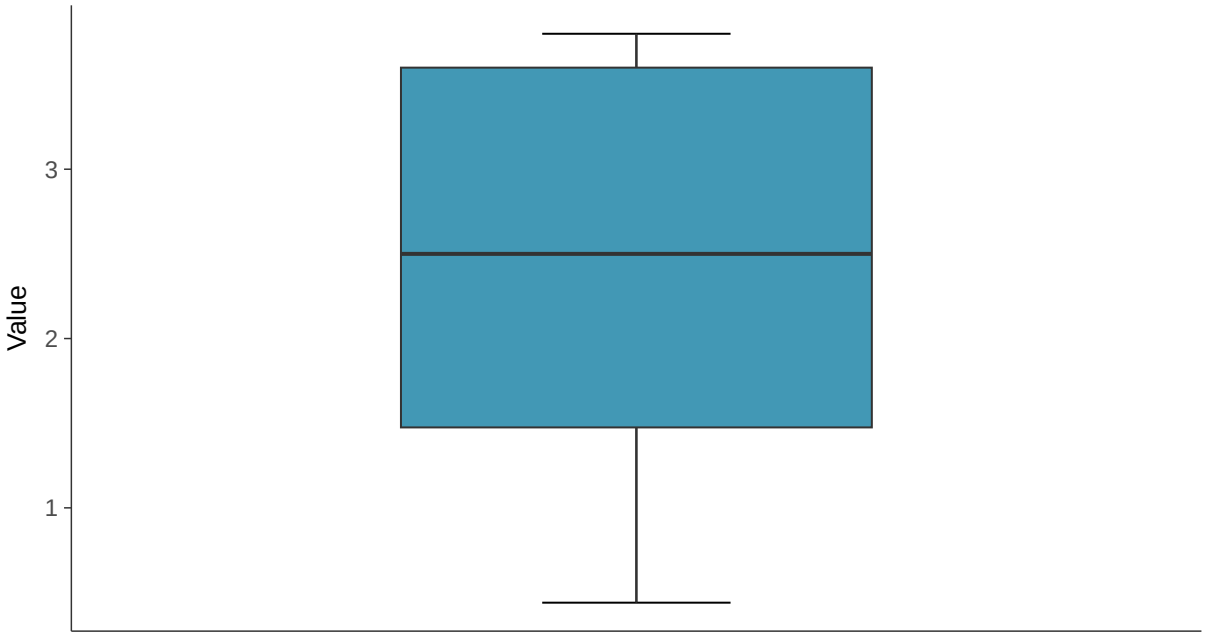
Histogram

Cobalt, MW-8 (ug/L)



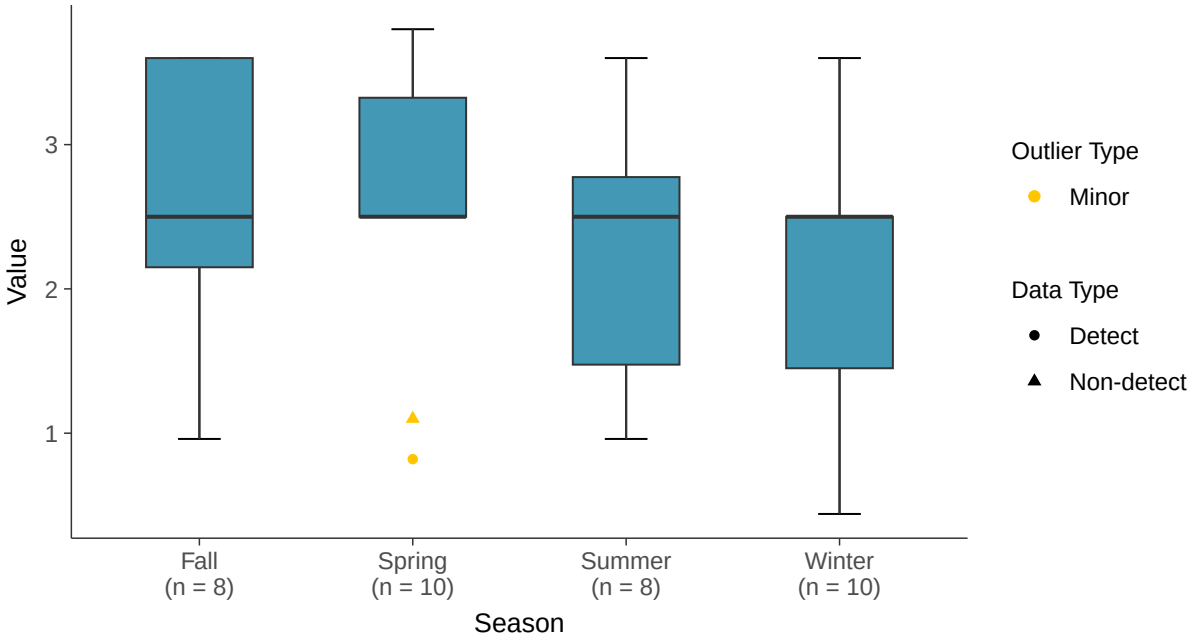
Boxplot

Cobalt, MW-8 (ug/L)



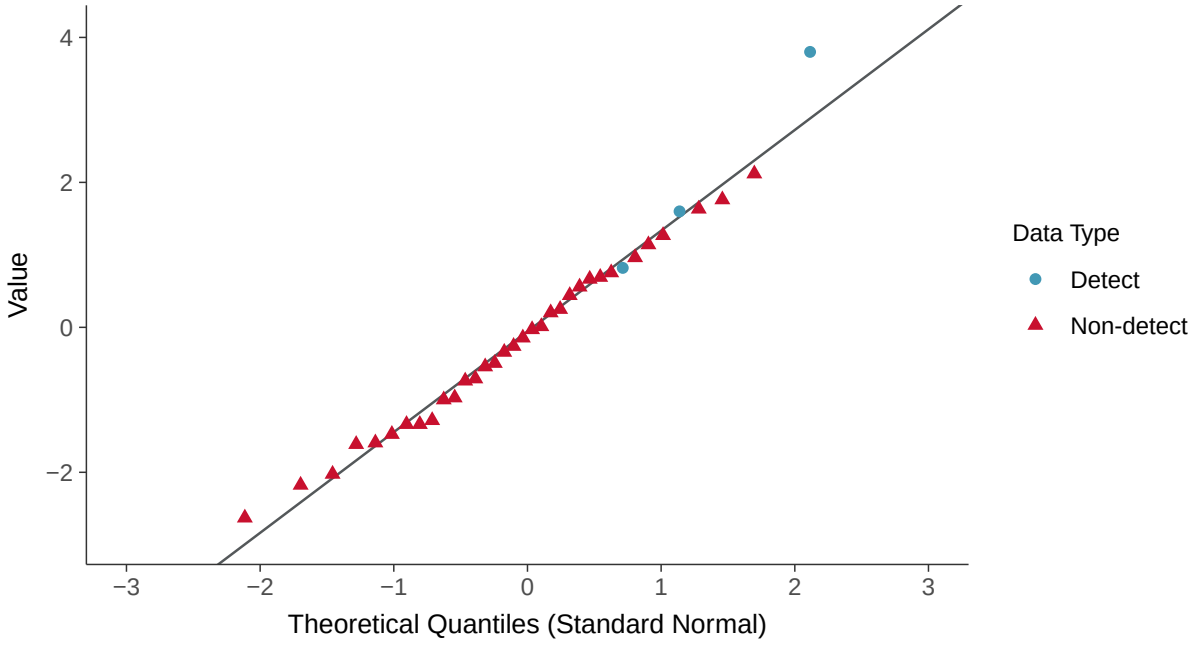
Boxplot by Season

Cobalt, MW-8 (ug/L)



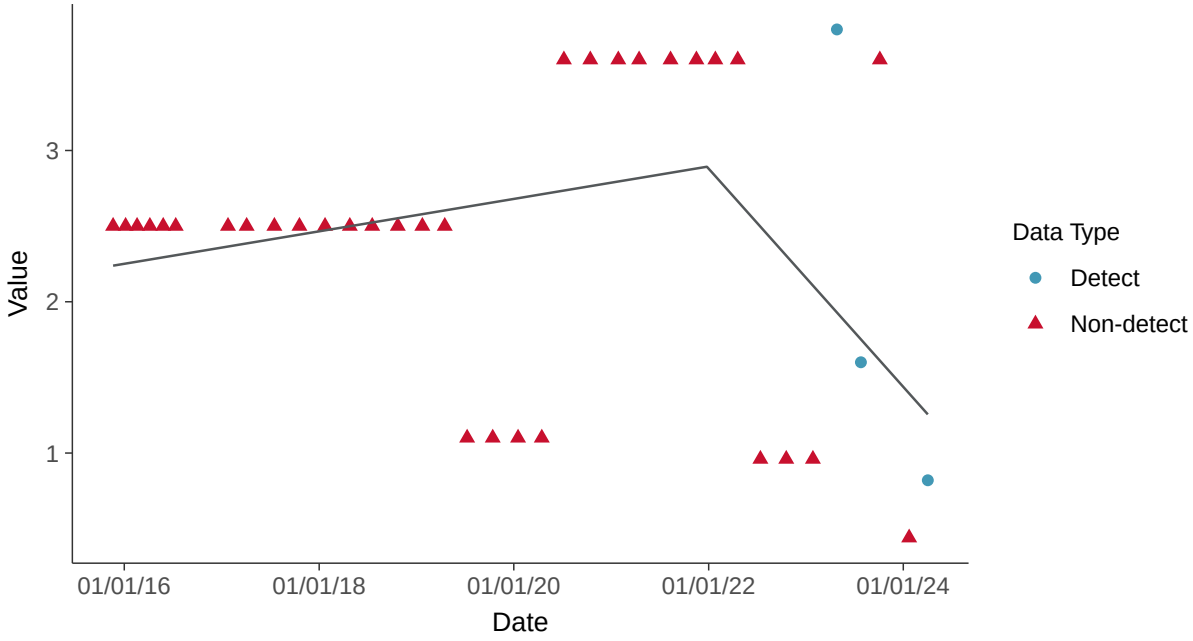
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-8 (ug/L)



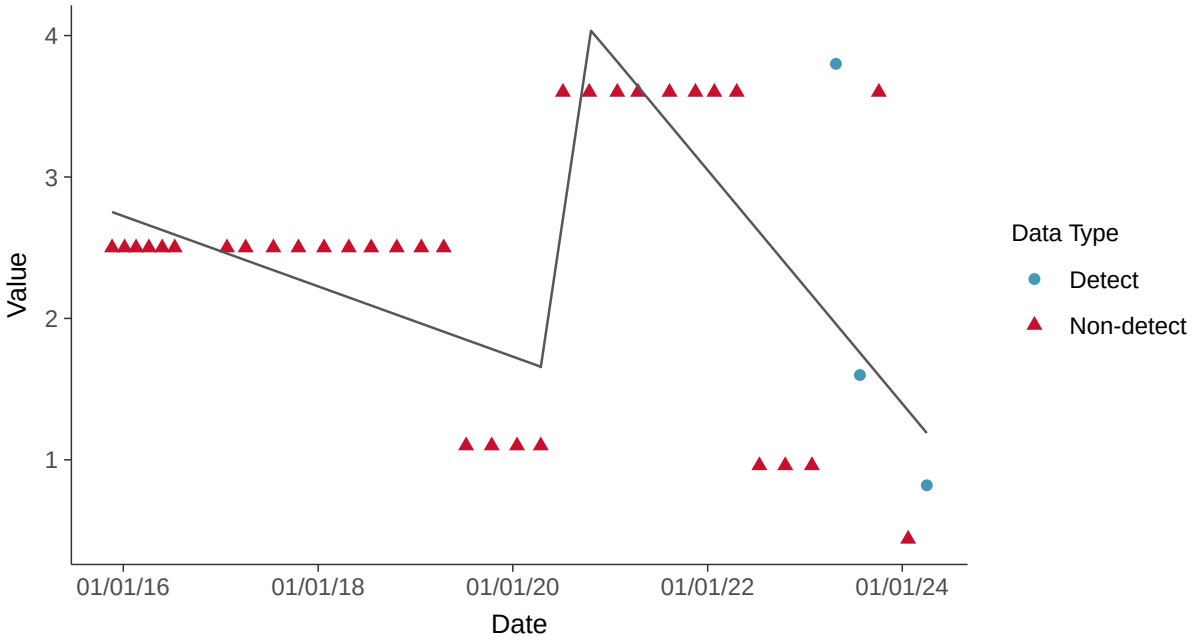
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-8 (ug/L)

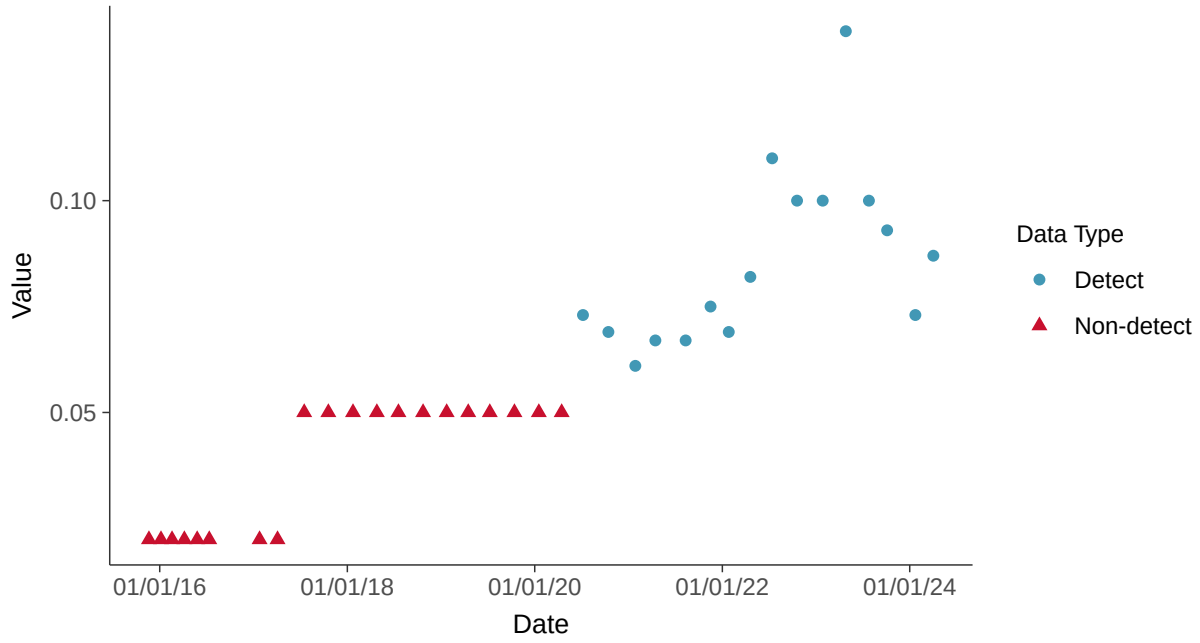


App. IV: Fluoride, MW-8

ID: 11_3_112

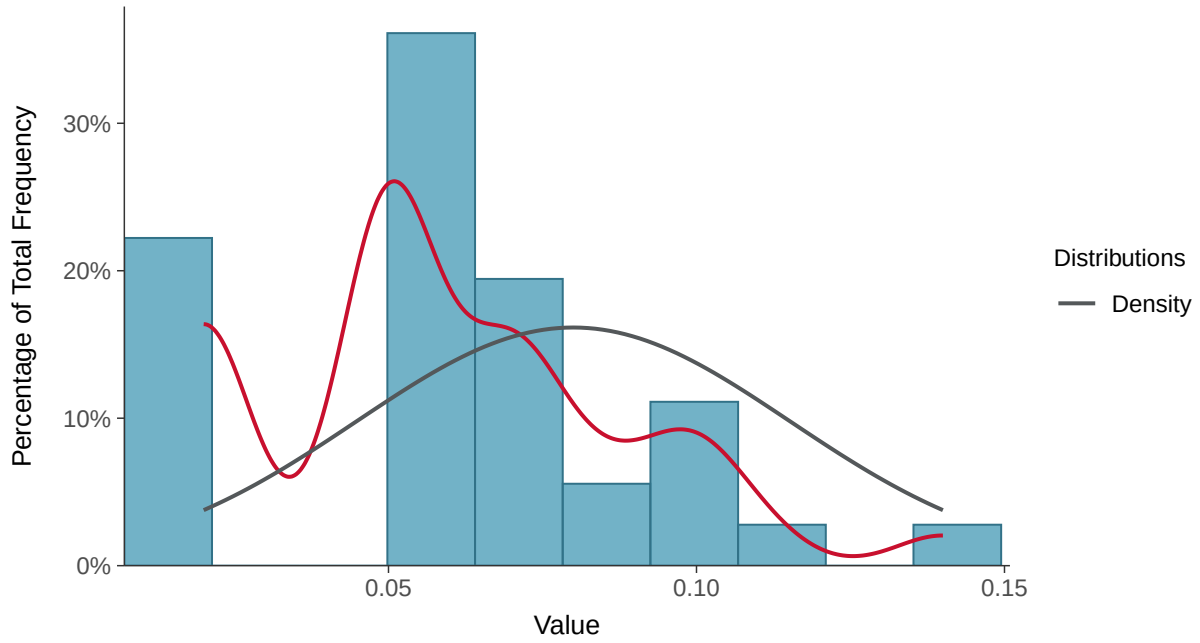
Scatter Plot

Fluoride, MW-8 (mg/L)



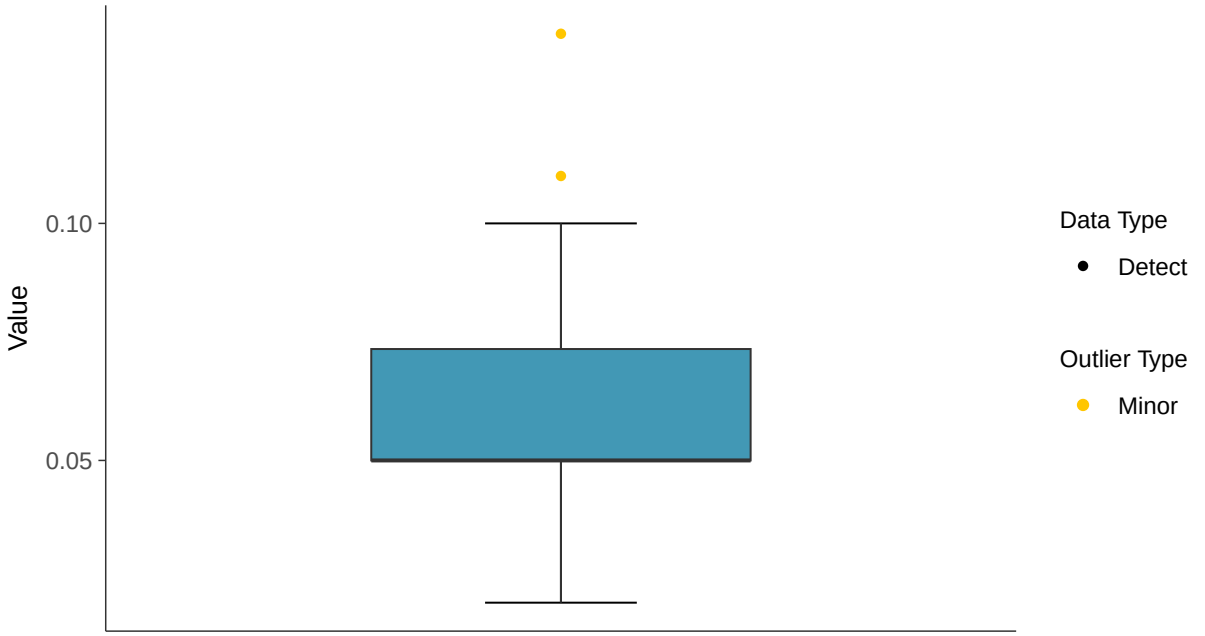
Histogram

Fluoride, MW-8 (mg/L)



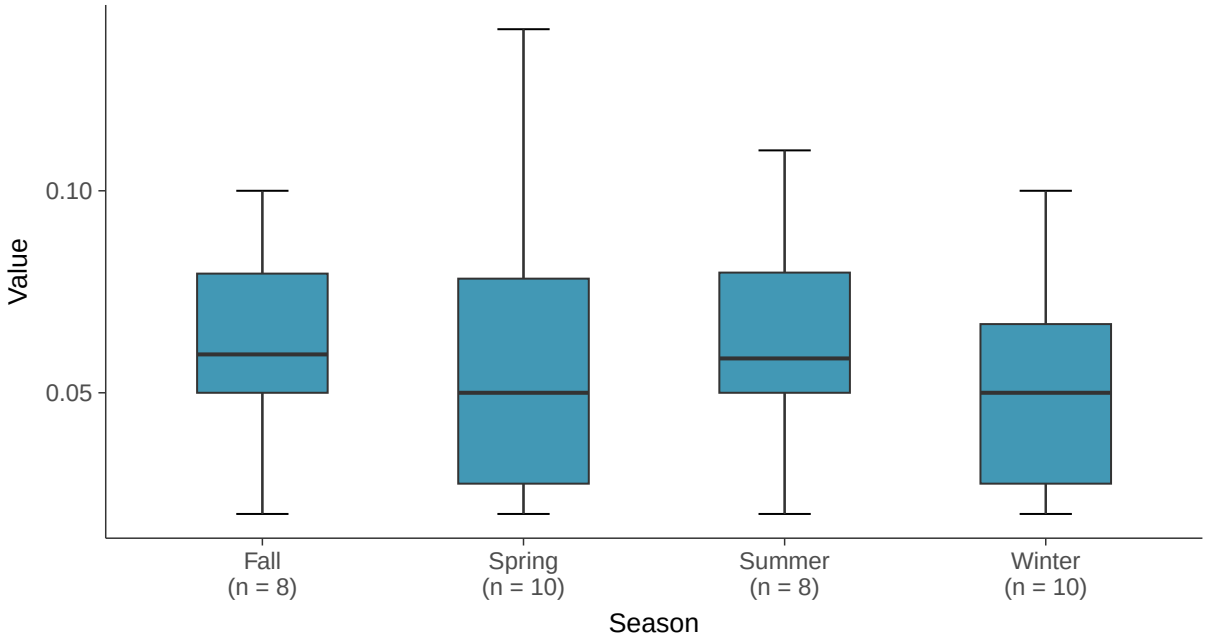
Boxplot

Fluoride, MW-8 (mg/L)



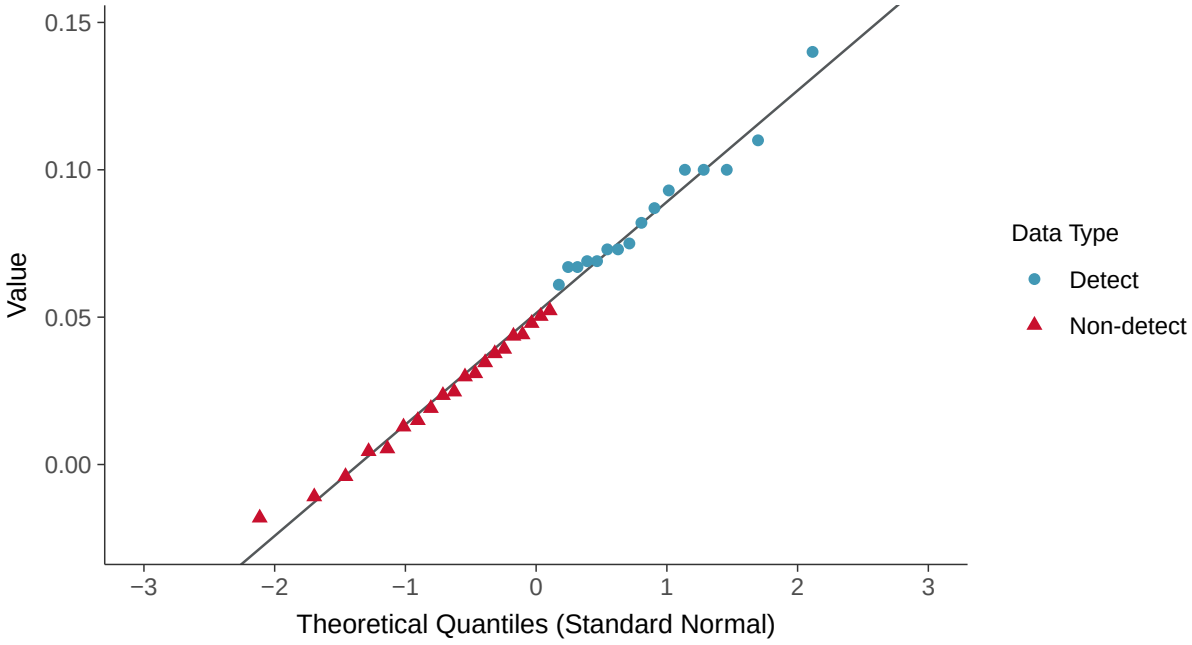
Boxplot by Season

Fluoride, MW-8 (mg/L)



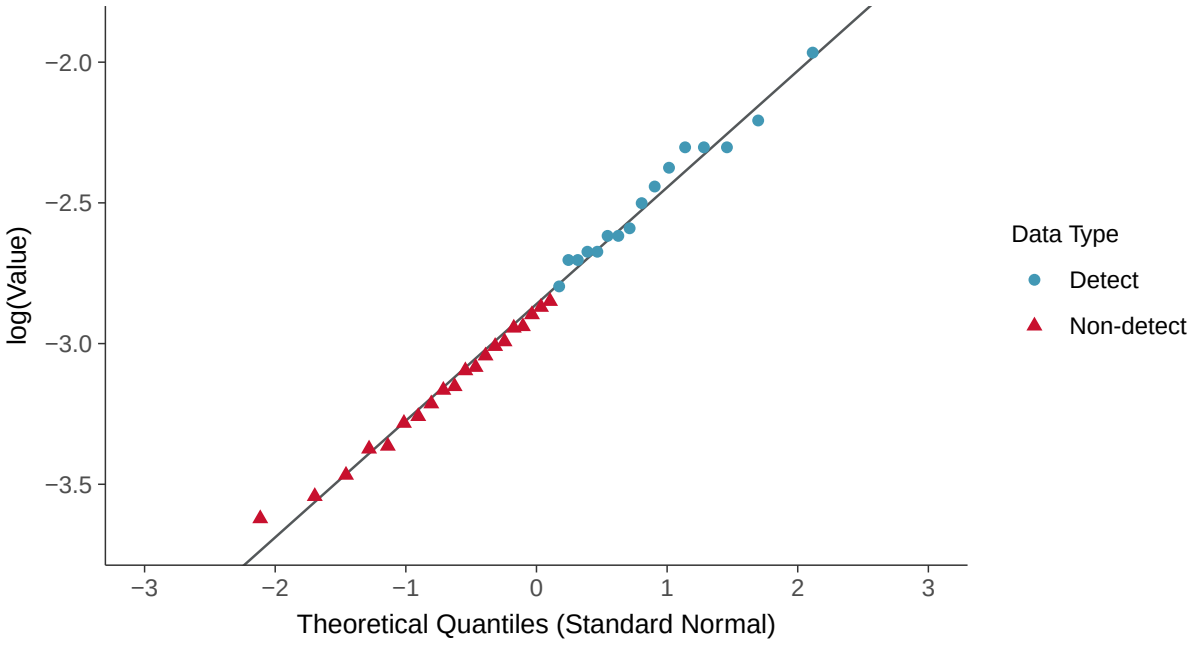
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



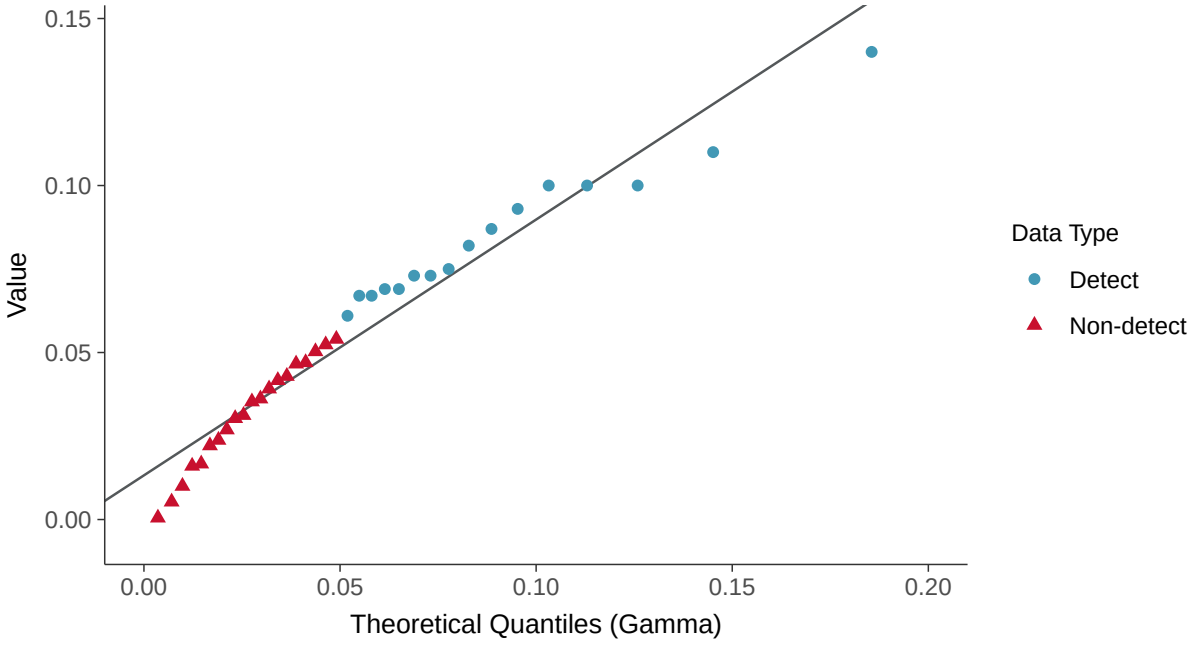
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



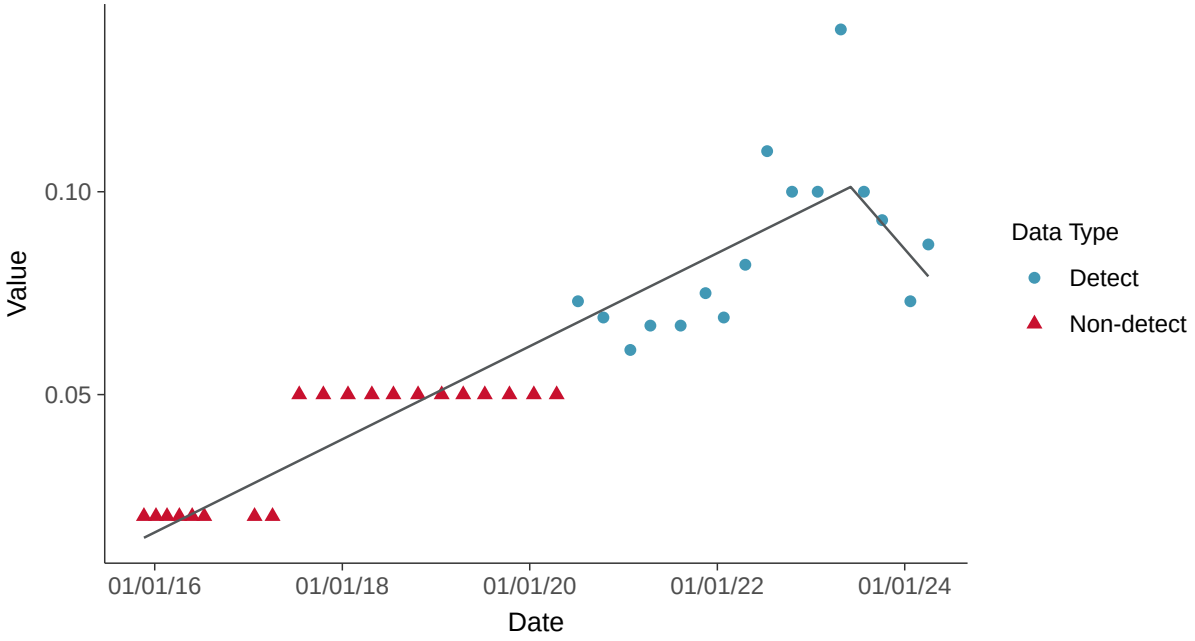
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



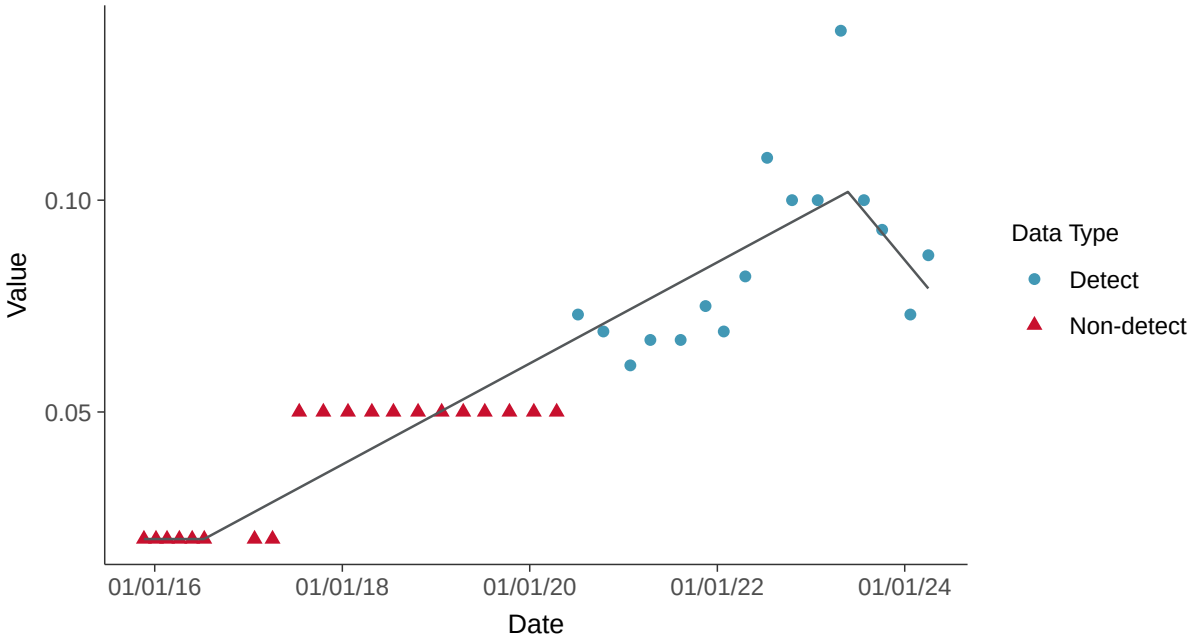
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-8 (mg/L)



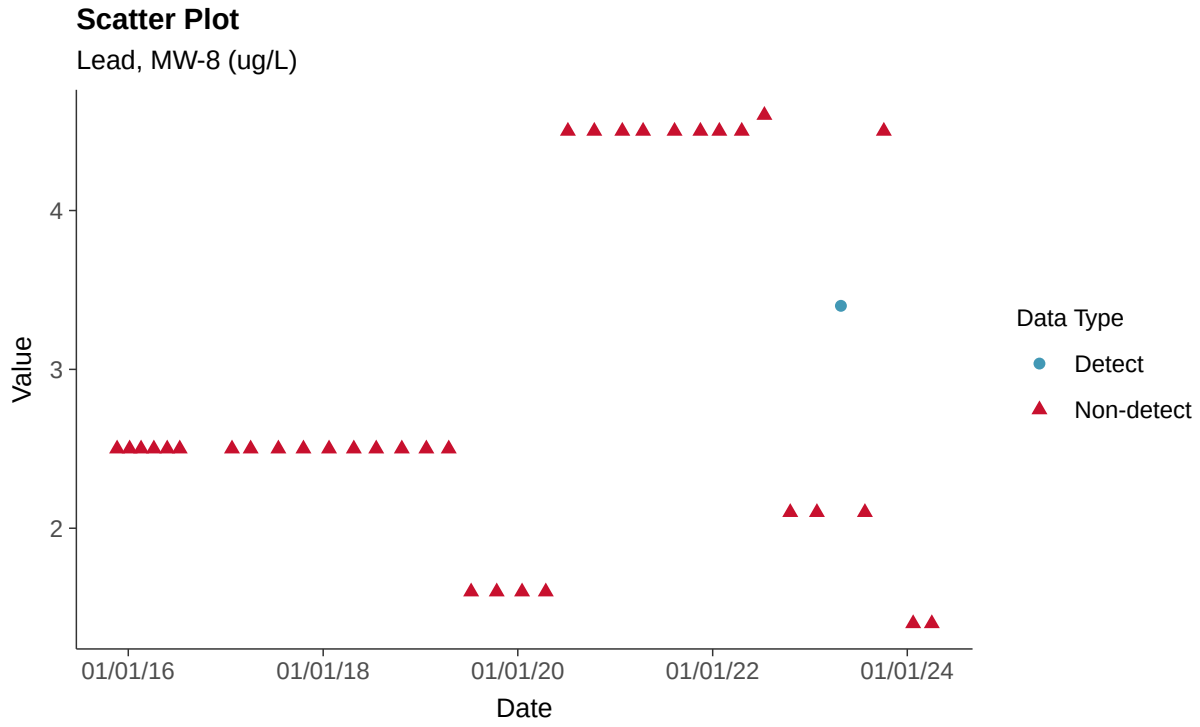
Trend Regression: Piecewise Linear-Linear-Linear

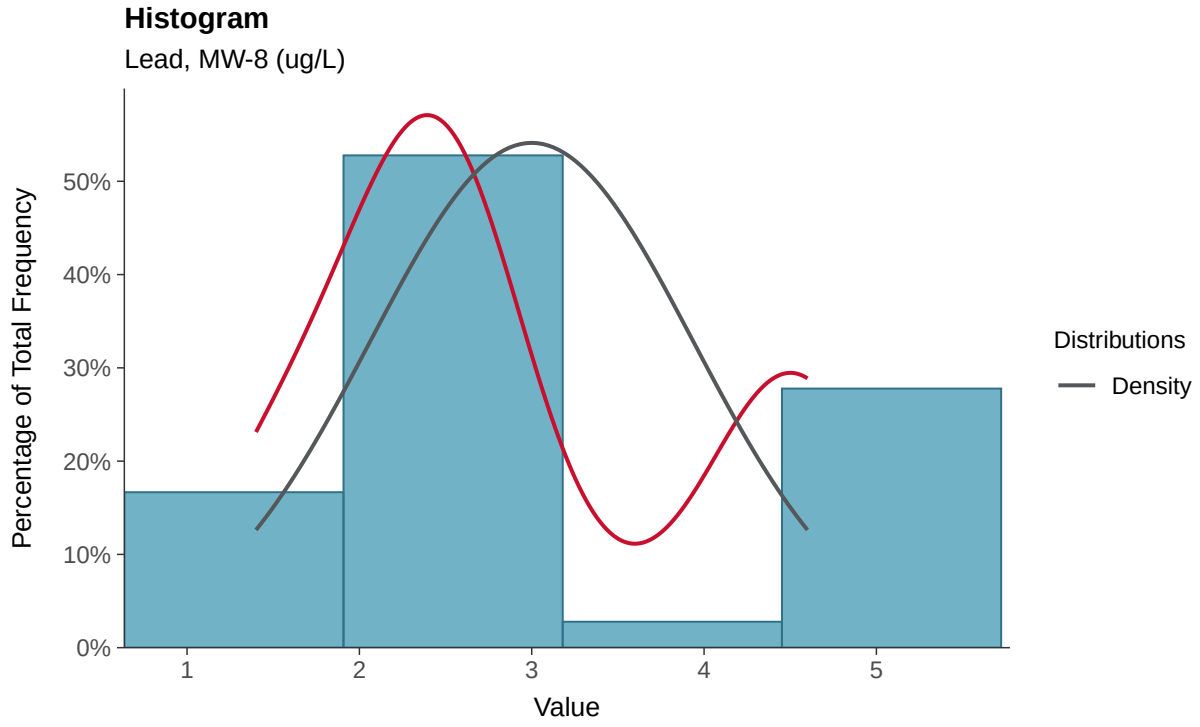
Fluoride, MW-8 (mg/L)



App. IV: Lead, MW-8

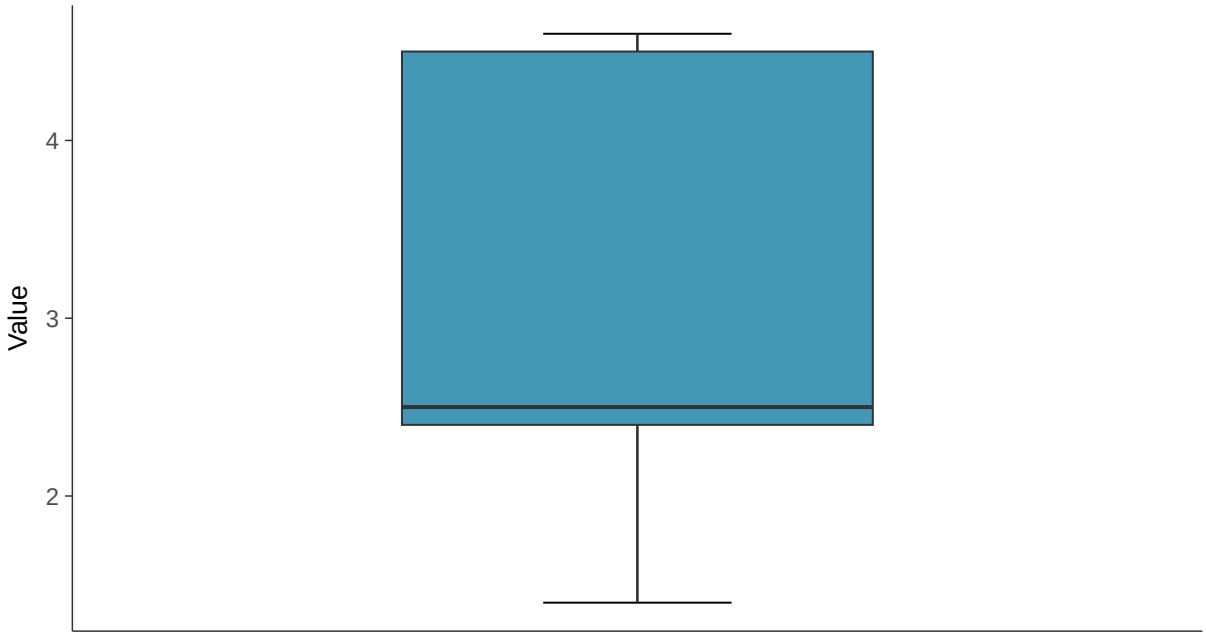
ID: 11_3_113





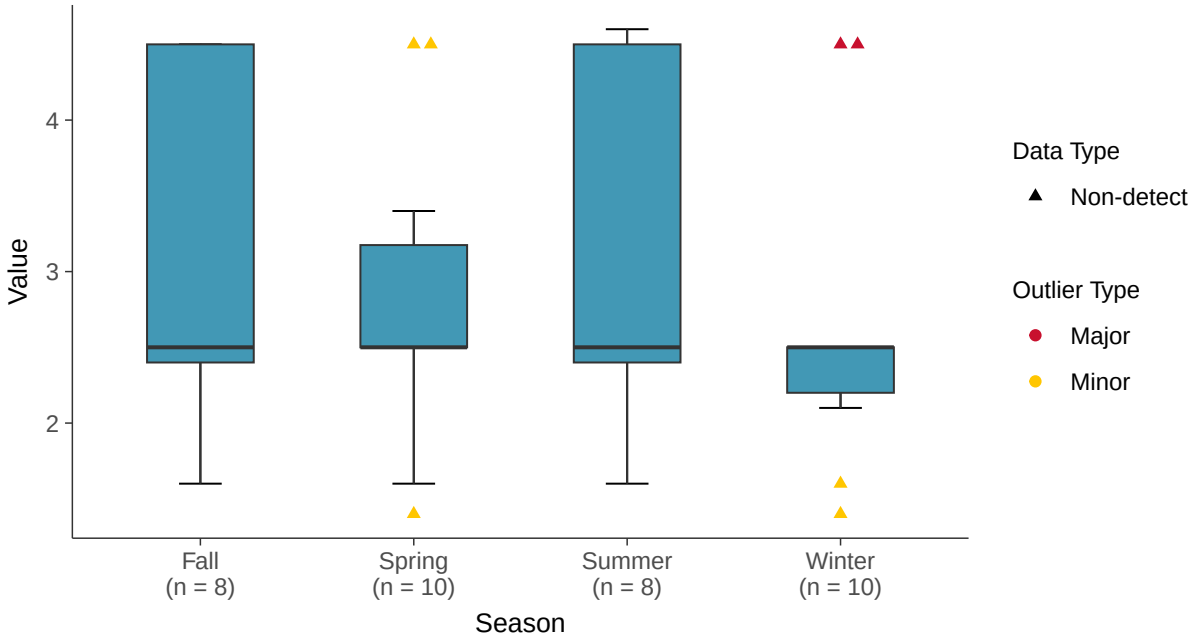
Boxplot

Lead, MW-8 (ug/L)



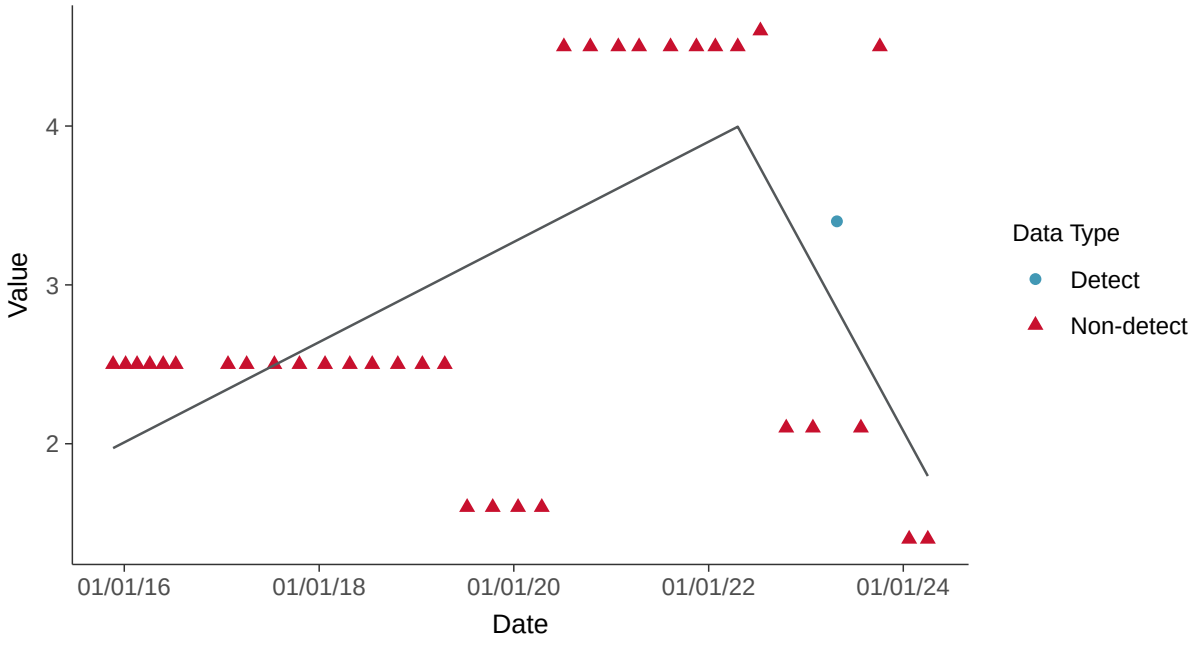
Boxplot by Season

Lead, MW-8 (ug/L)



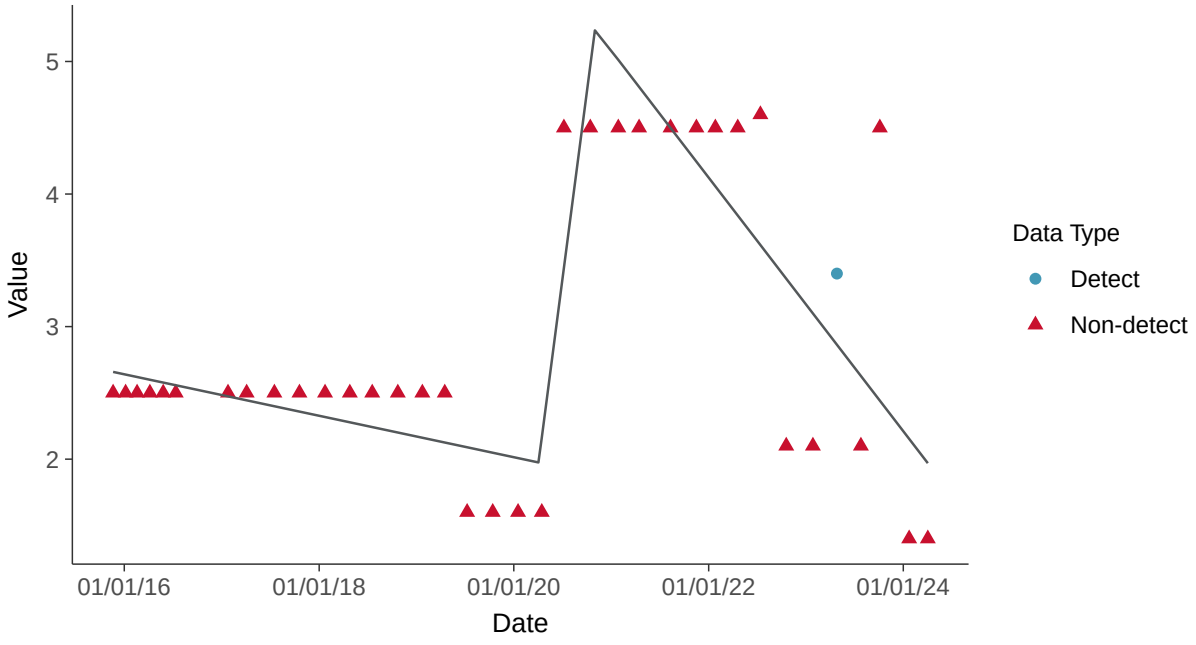
Trend Regression: Piecewise Linear-Linear

Lead, MW-8 (ug/L)



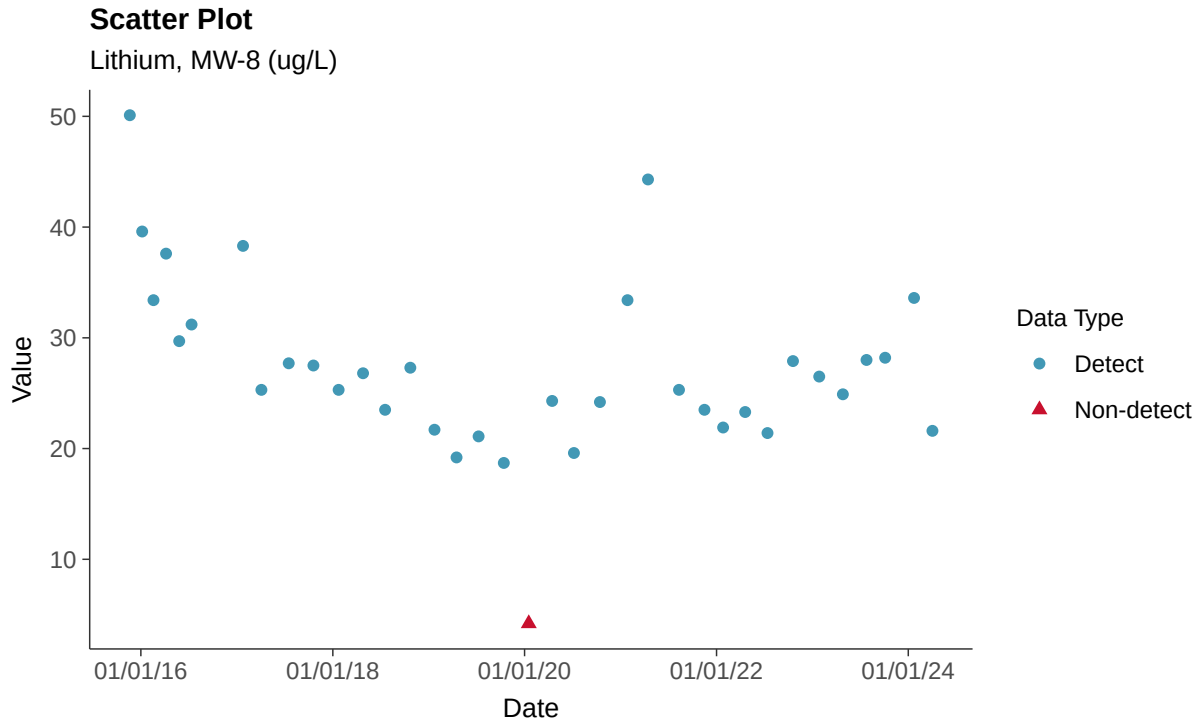
Trend Regression: Piecewise Linear-Linear-Linear

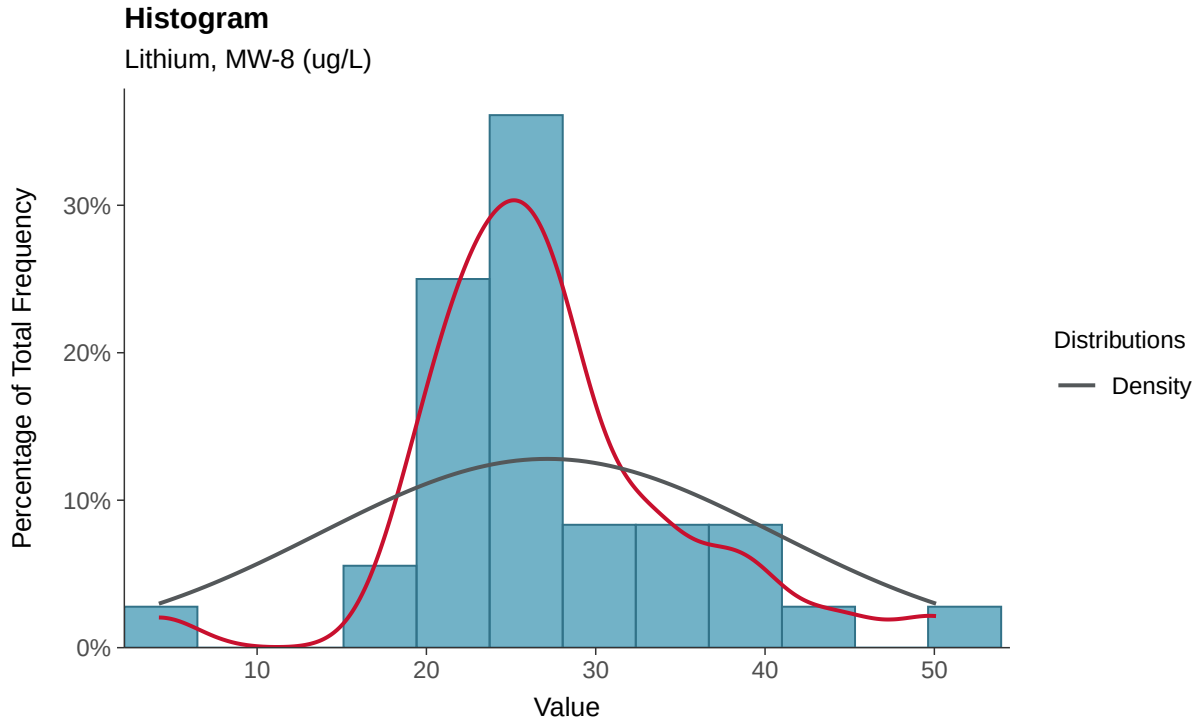
Lead, MW-8 (ug/L)



App. IV: Lithium, MW-8

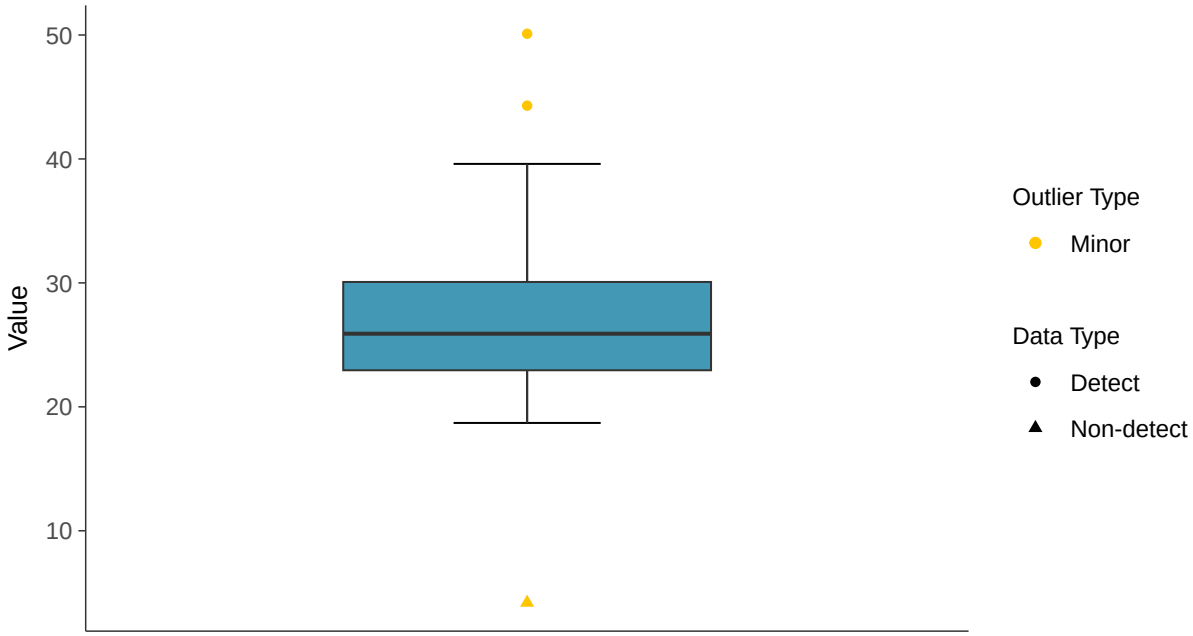
ID: 11_3_114





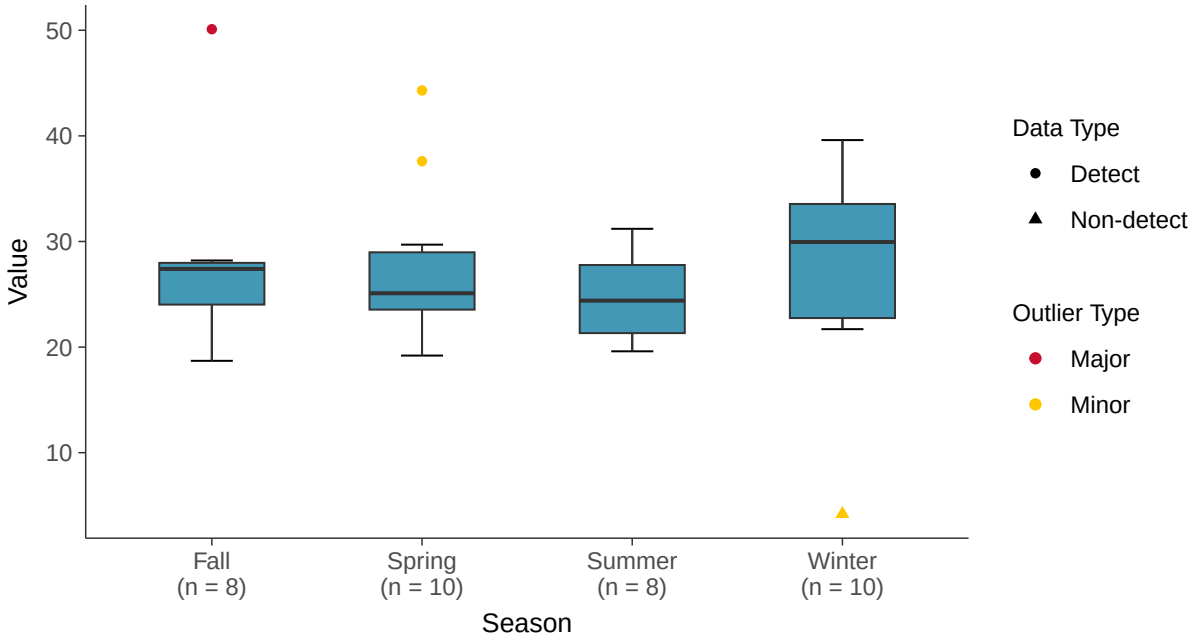
Boxplot

Lithium, MW-8 (ug/L)



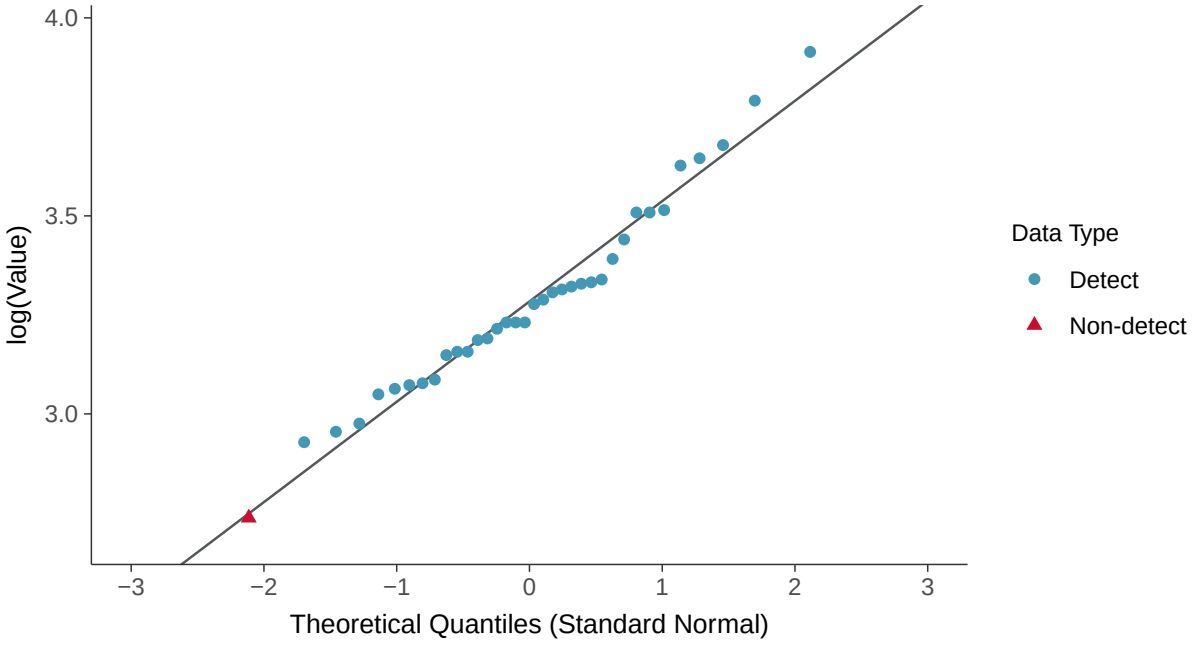
Boxplot by Season

Lithium, MW-8 (ug/L)



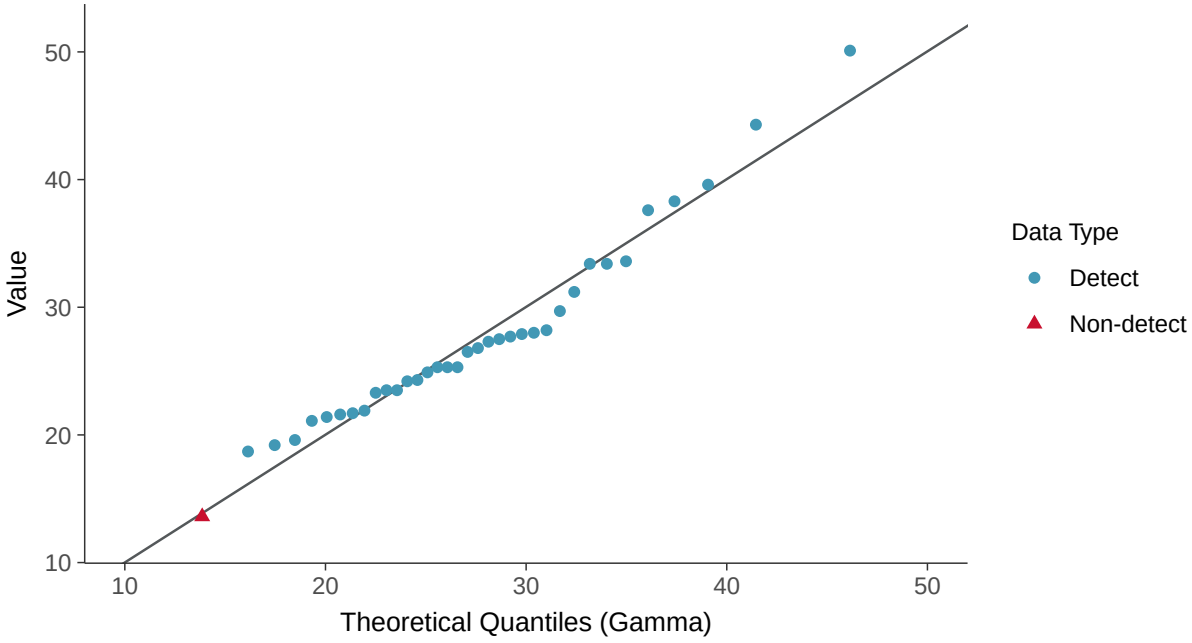
Lognormal Q-Q plot using ROS Imputed Estimates

Lithium, MW-8 (ug/L)



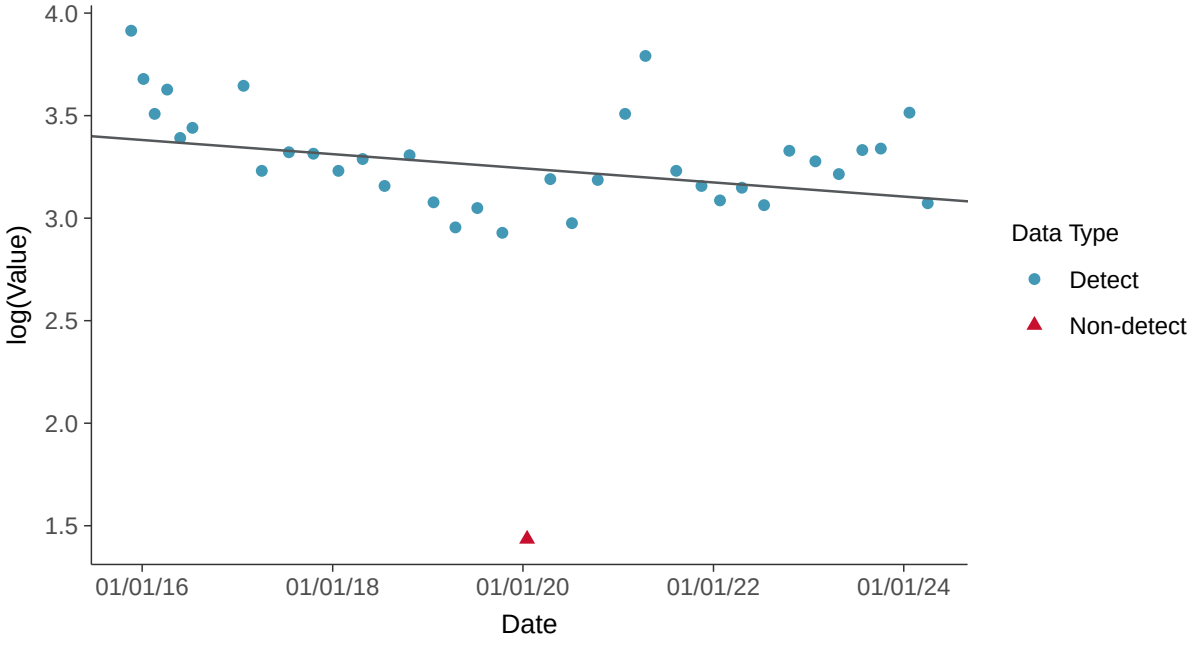
Gamma Q-Q plot using ROS Imputed Estimates

Lithium, MW-8 (ug/L)



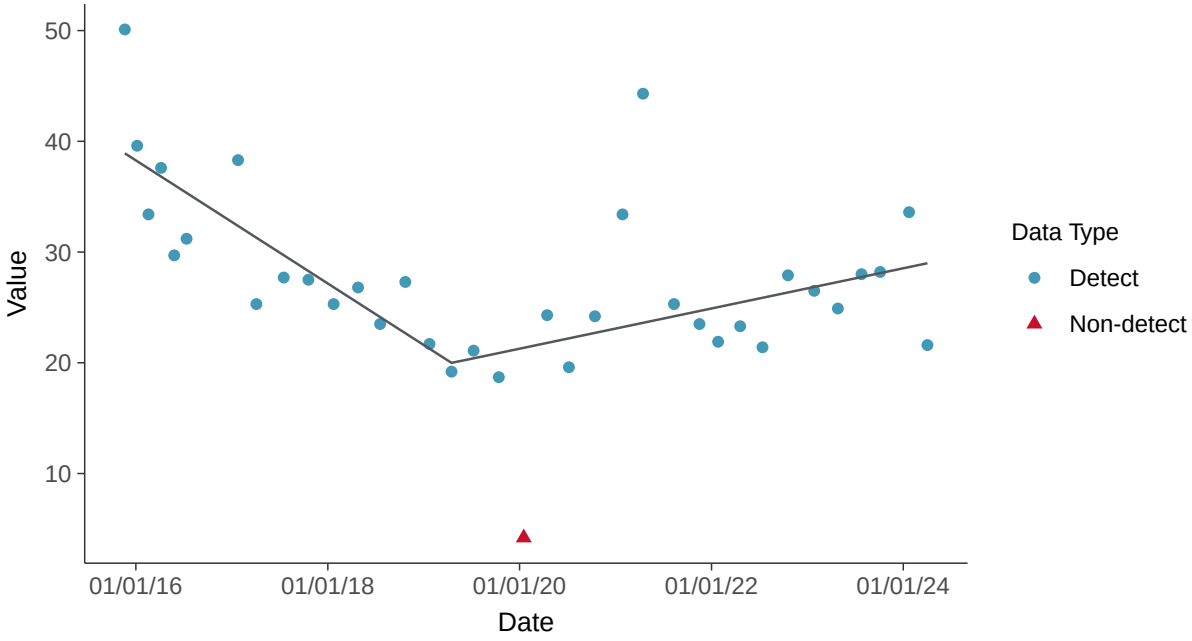
Trend Regression: Lognormal MLE

Lithium, MW-8 (ug/L)



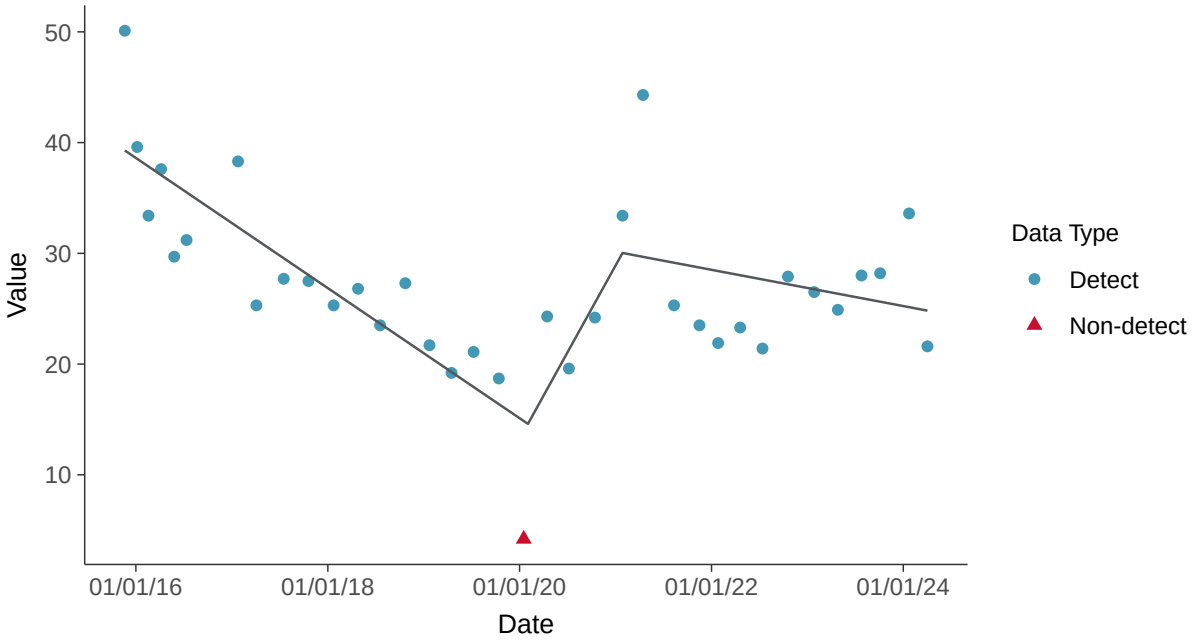
Trend Regression: Piecewise Linear-Linear

Lithium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lithium, MW-8 (ug/L)

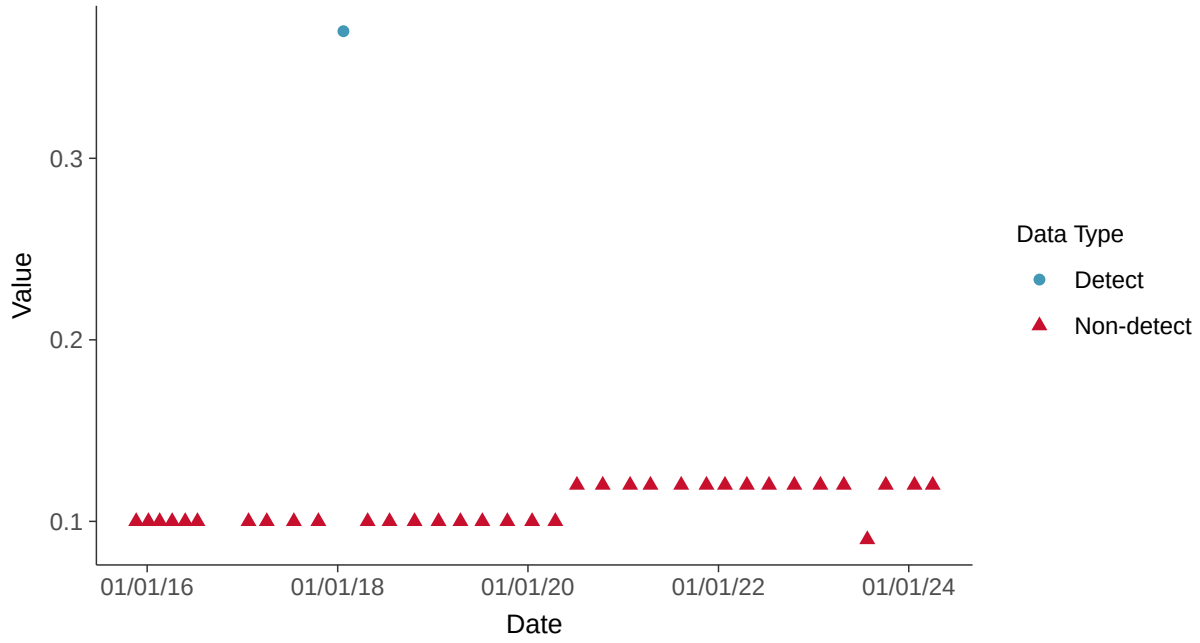


App. IV: Mercury, MW-8

ID: 11_3_115

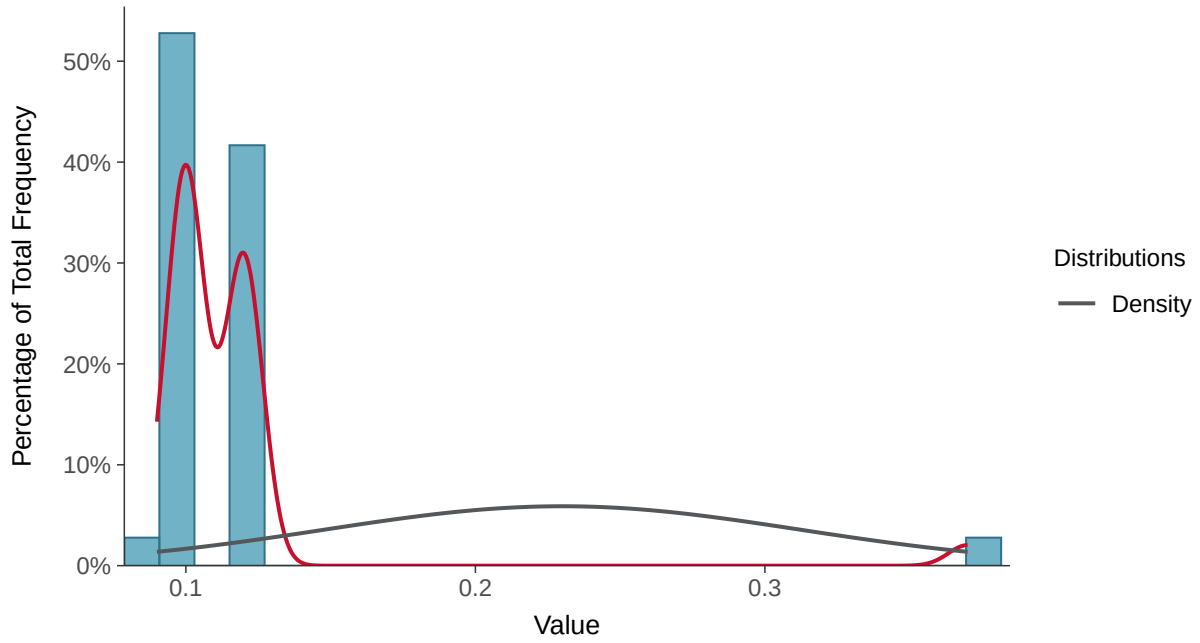
Scatter Plot

Mercury, MW-8 (ug/L)



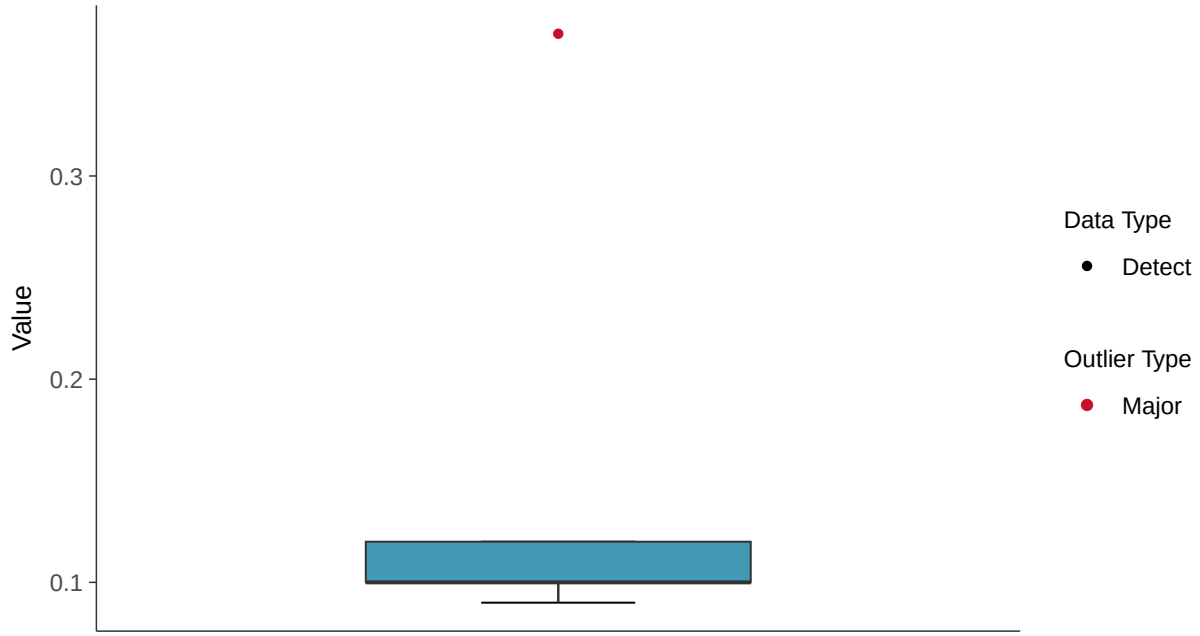
Histogram

Mercury, MW-8 (ug/L)



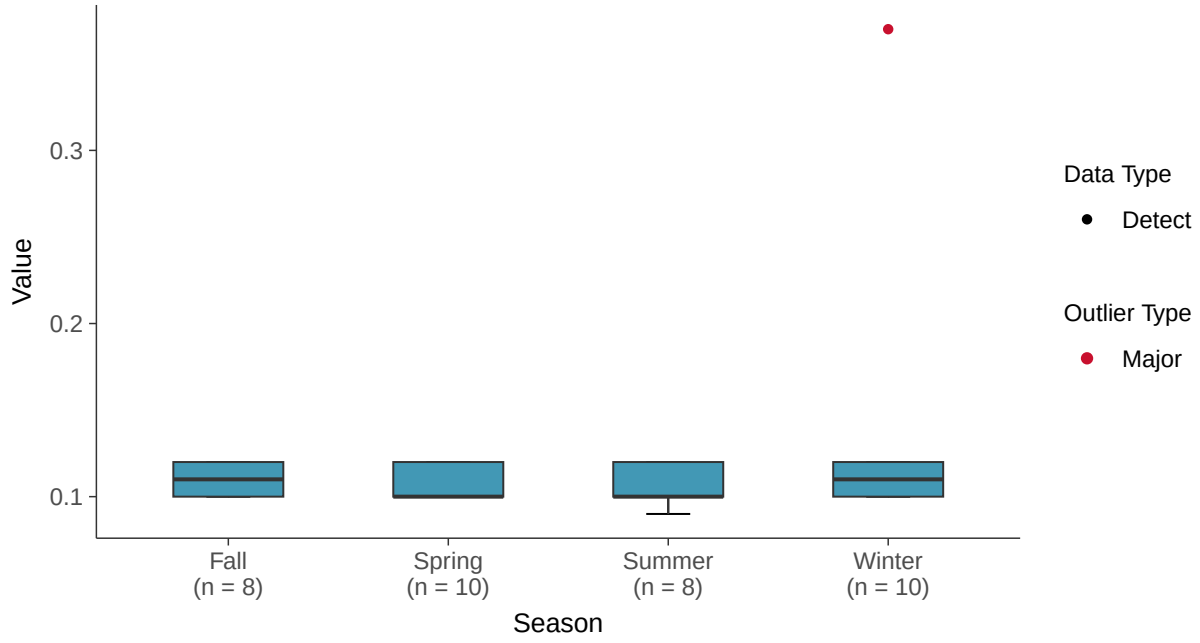
Boxplot

Mercury, MW-8 (ug/L)



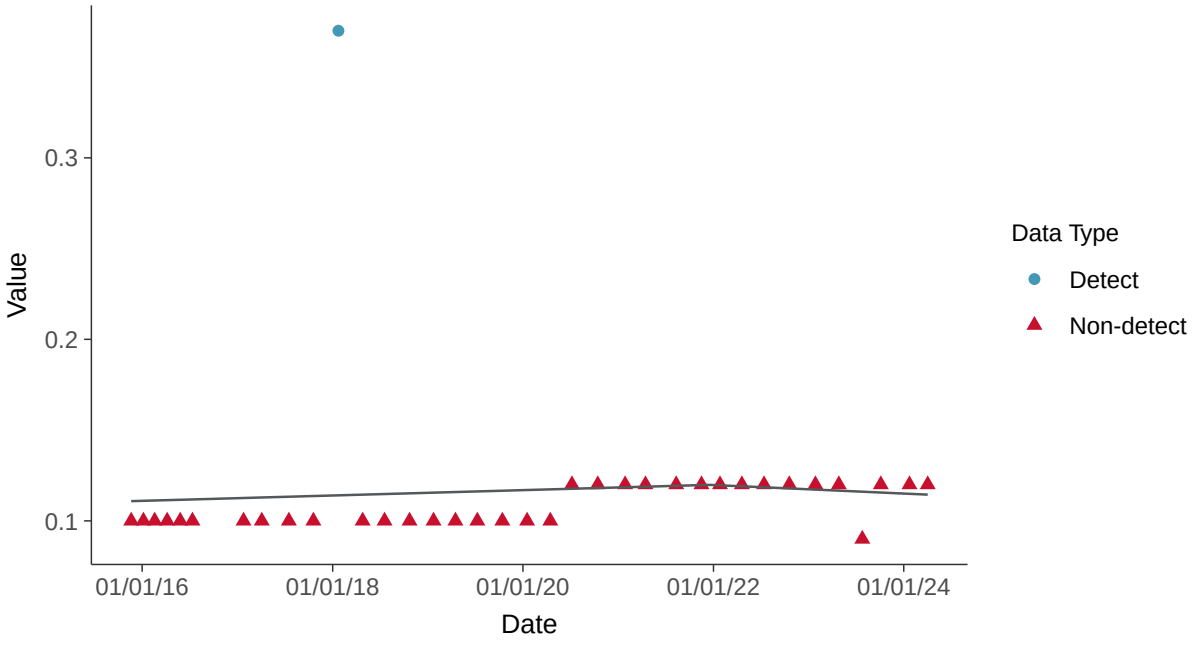
Boxplot by Season

Mercury, MW-8 (ug/L)



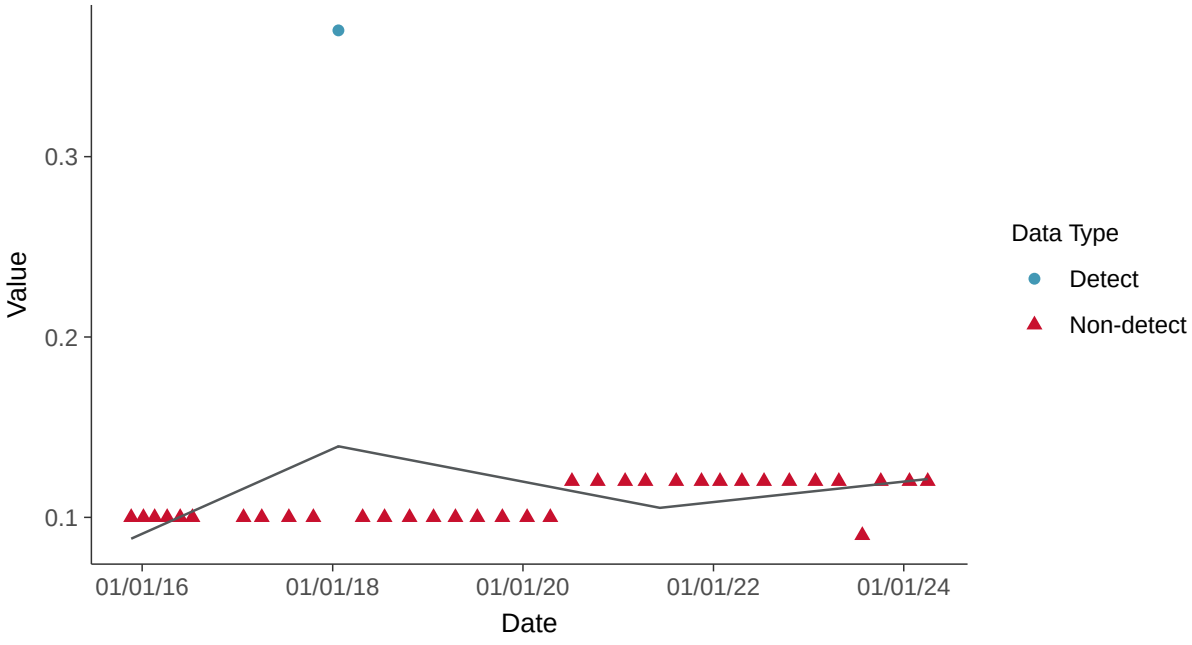
Trend Regression: Piecewise Linear-Linear

Mercury, MW-8 (ug/L)



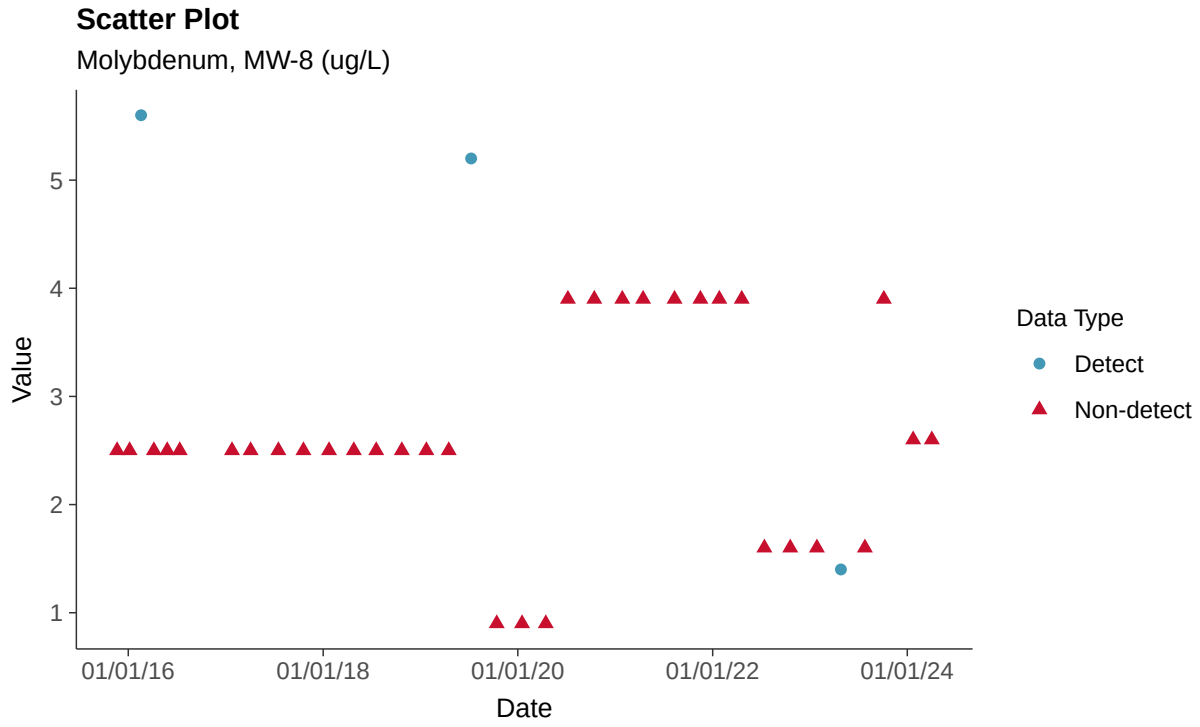
Trend Regression: Piecewise Linear-Linear-Linear

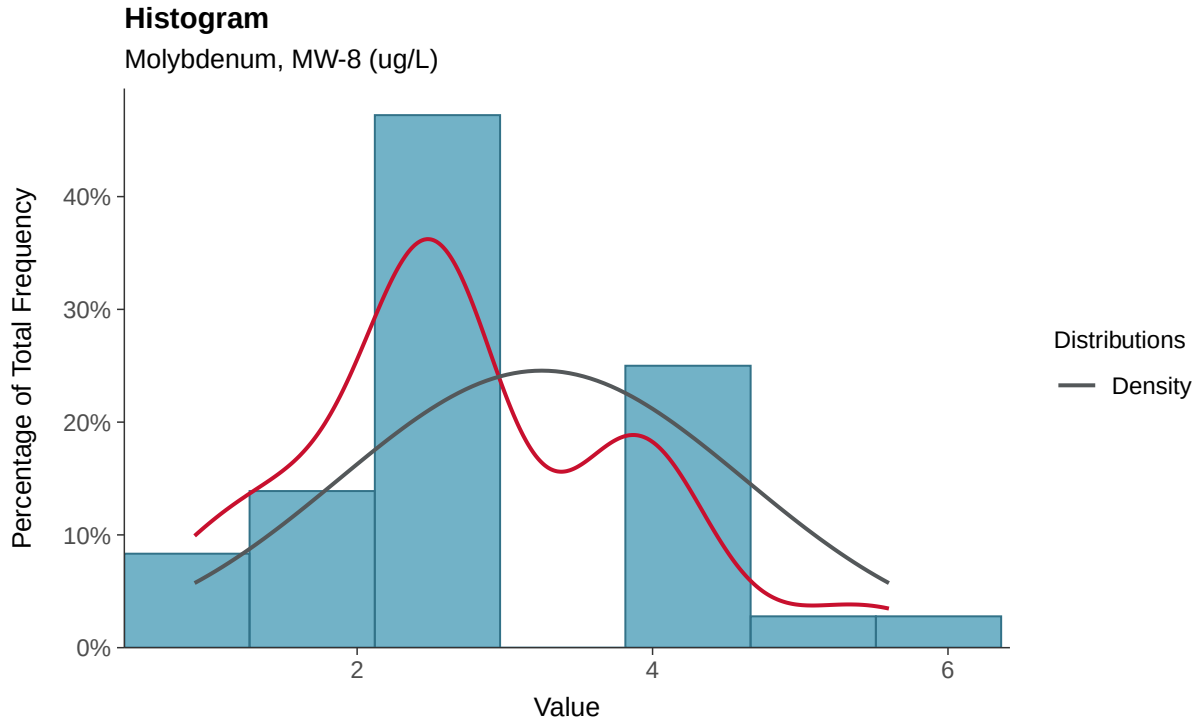
Mercury, MW-8 (ug/L)



App. IV: Molybdenum, MW-8

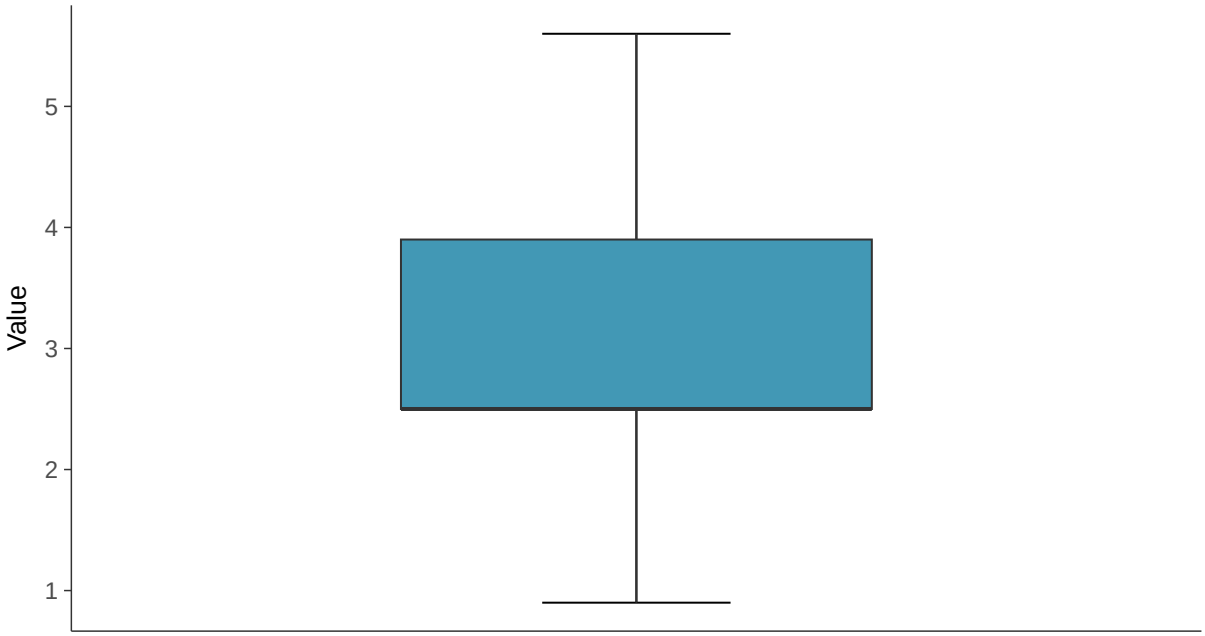
ID: 11_3_116





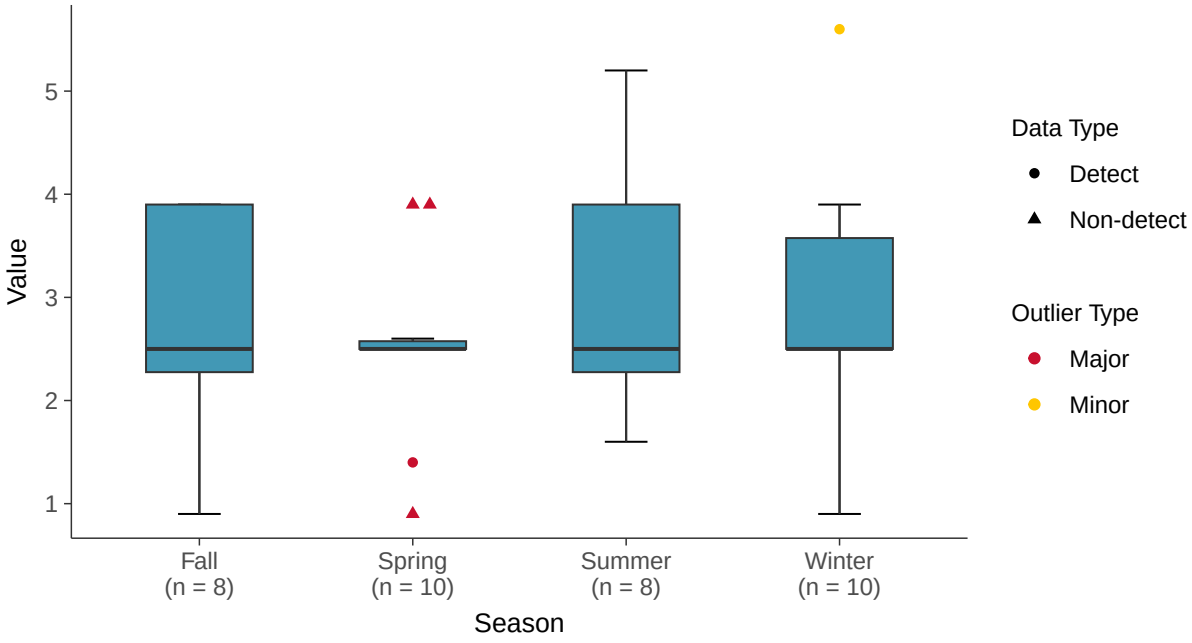
Boxplot

Molybdenum, MW-8 (ug/L)



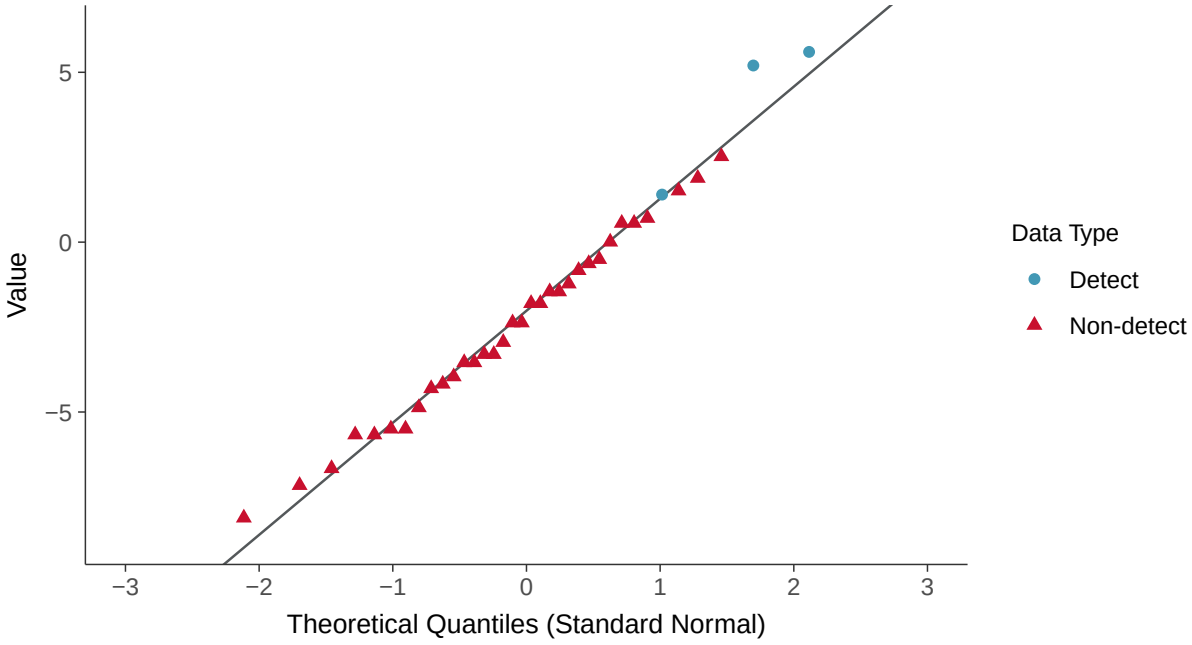
Boxplot by Season

Molybdenum, MW-8 (ug/L)



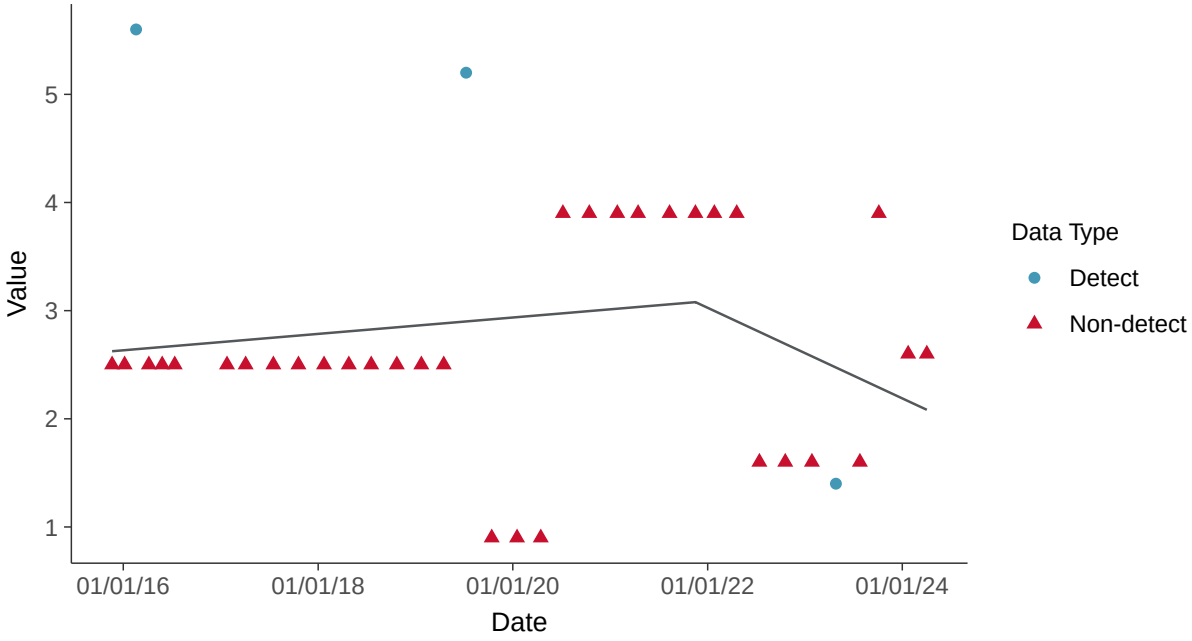
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-8 (ug/L)



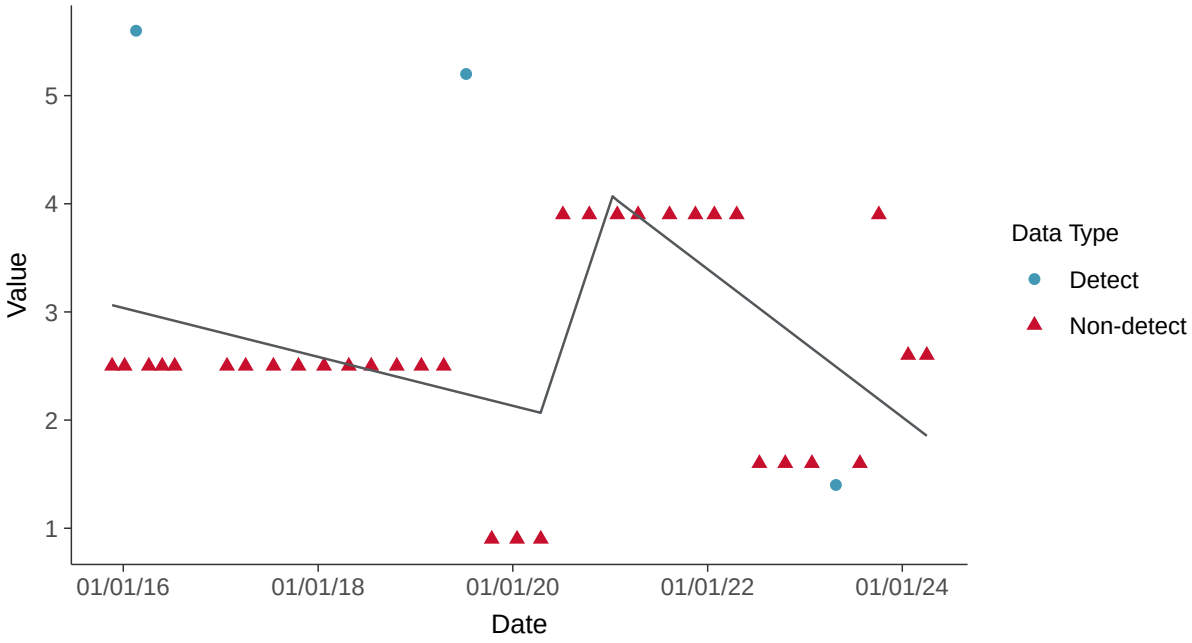
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-8 (ug/L)



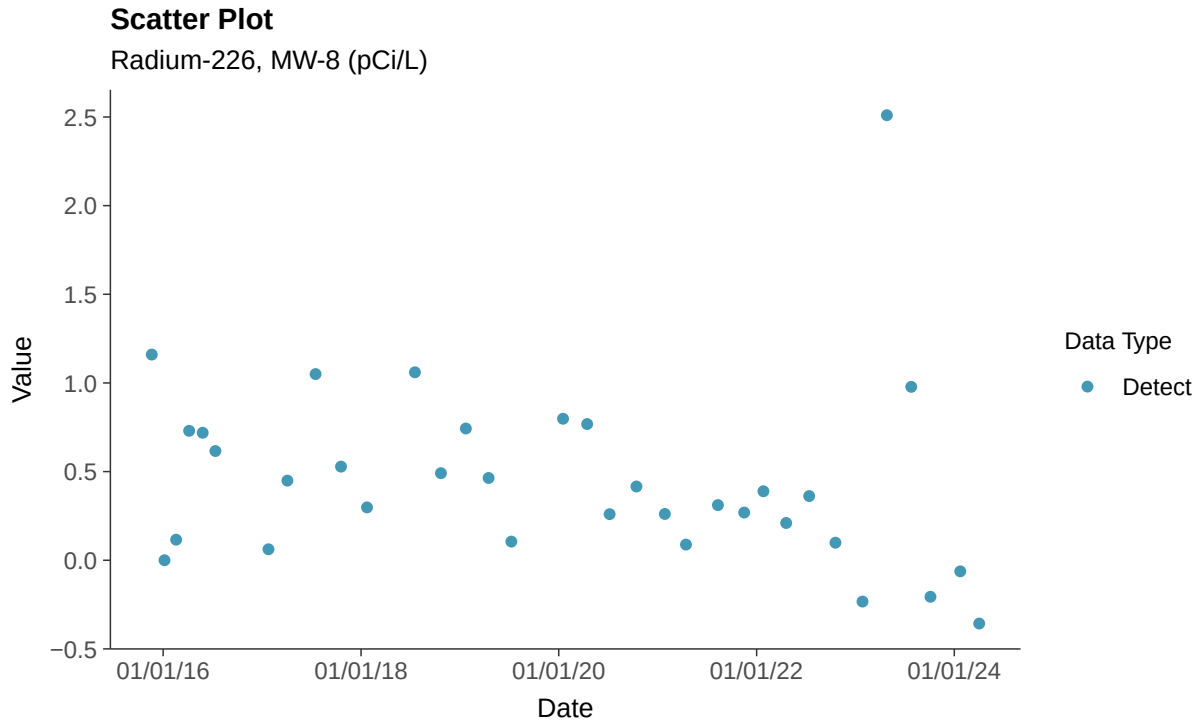
Trend Regression: Piecewise Linear-Linear-Linear

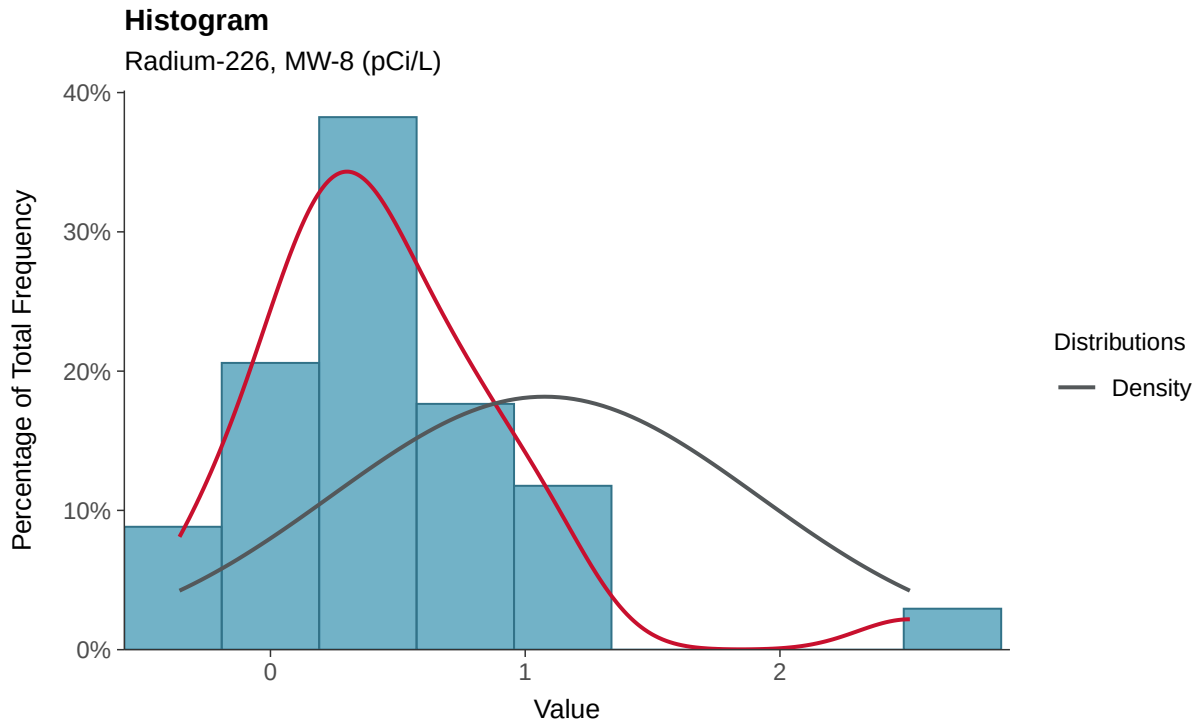
Molybdenum, MW-8 (ug/L)



App. IV: Radium-226, MW-8

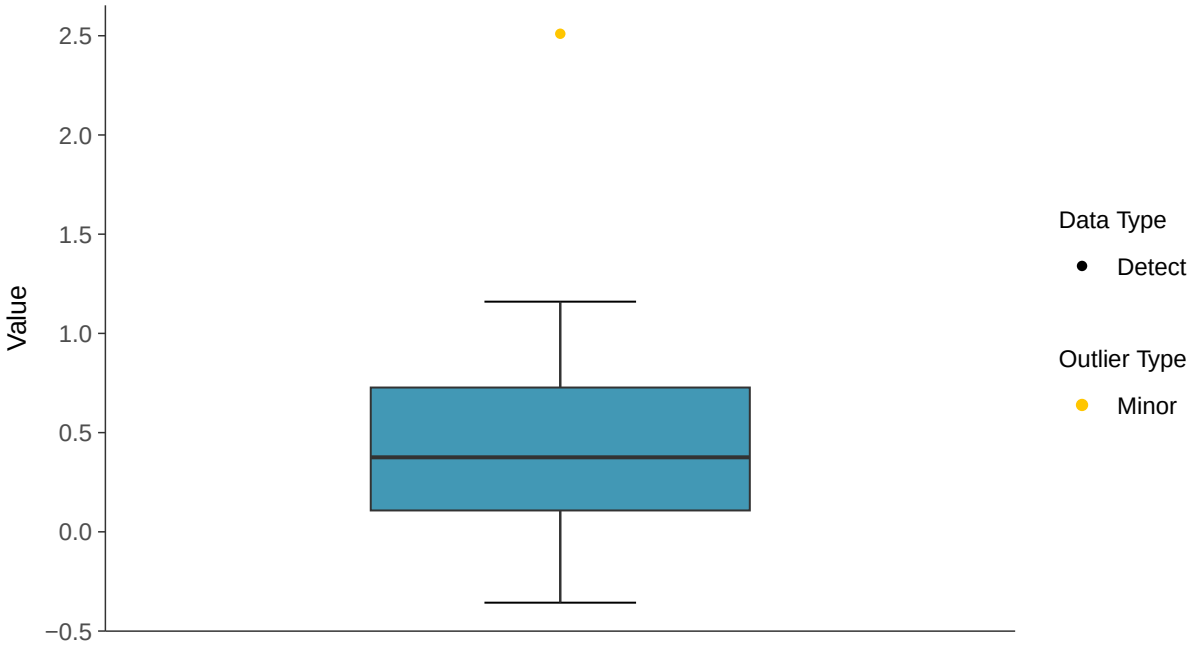
ID: 11_3_119





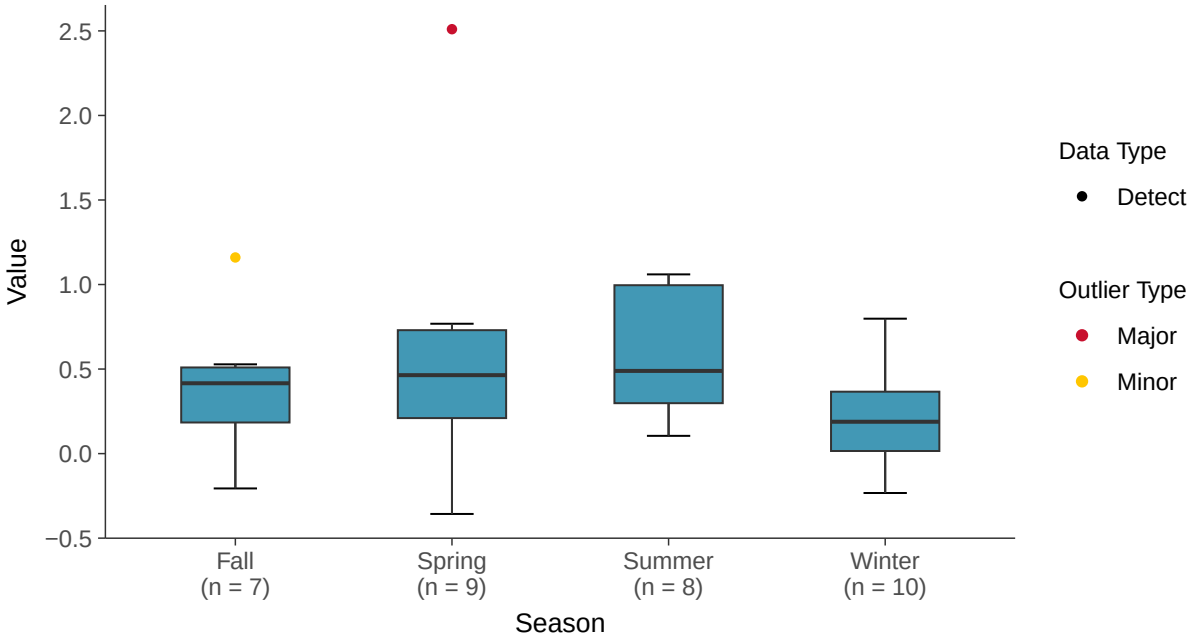
Boxplot

Radium-226, MW-8 (pCi/L)



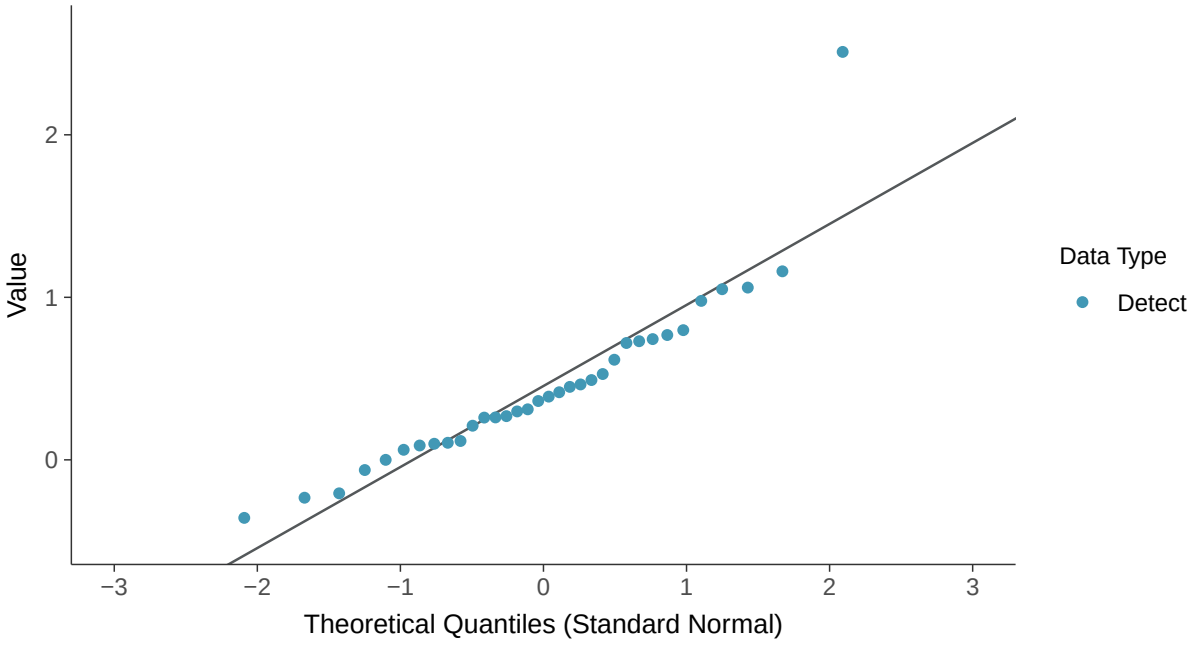
Boxplot by Season

Radium-226, MW-8 (pCi/L)



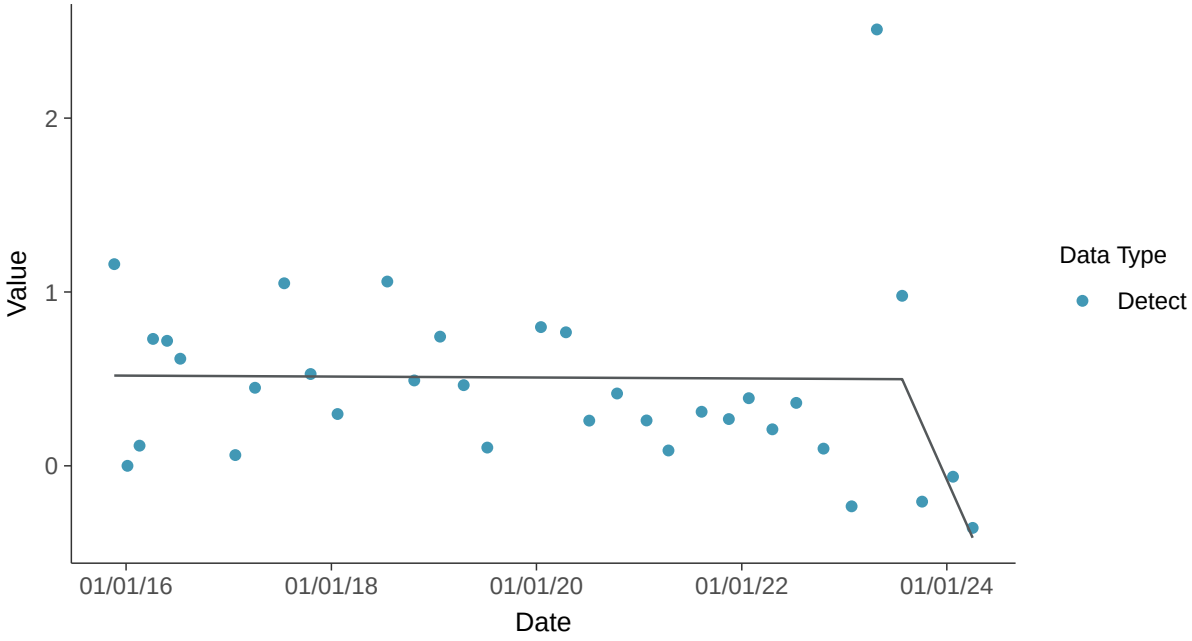
Normal Q-Q plot

Radium-226, MW-8 (pCi/L)



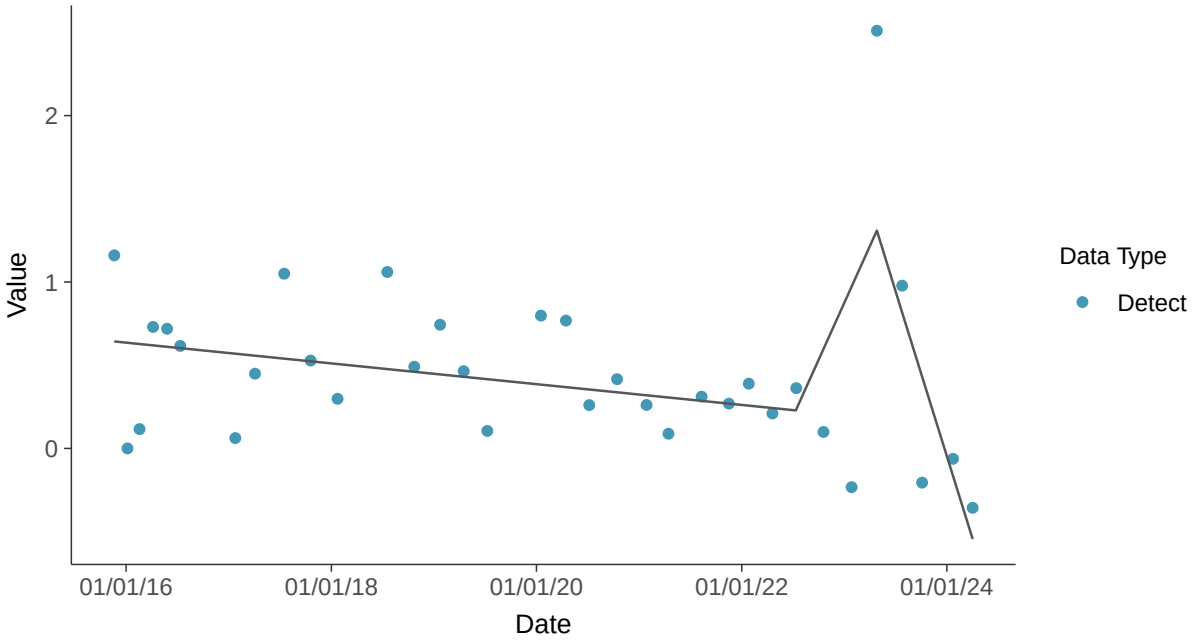
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-8 (pCi/L)



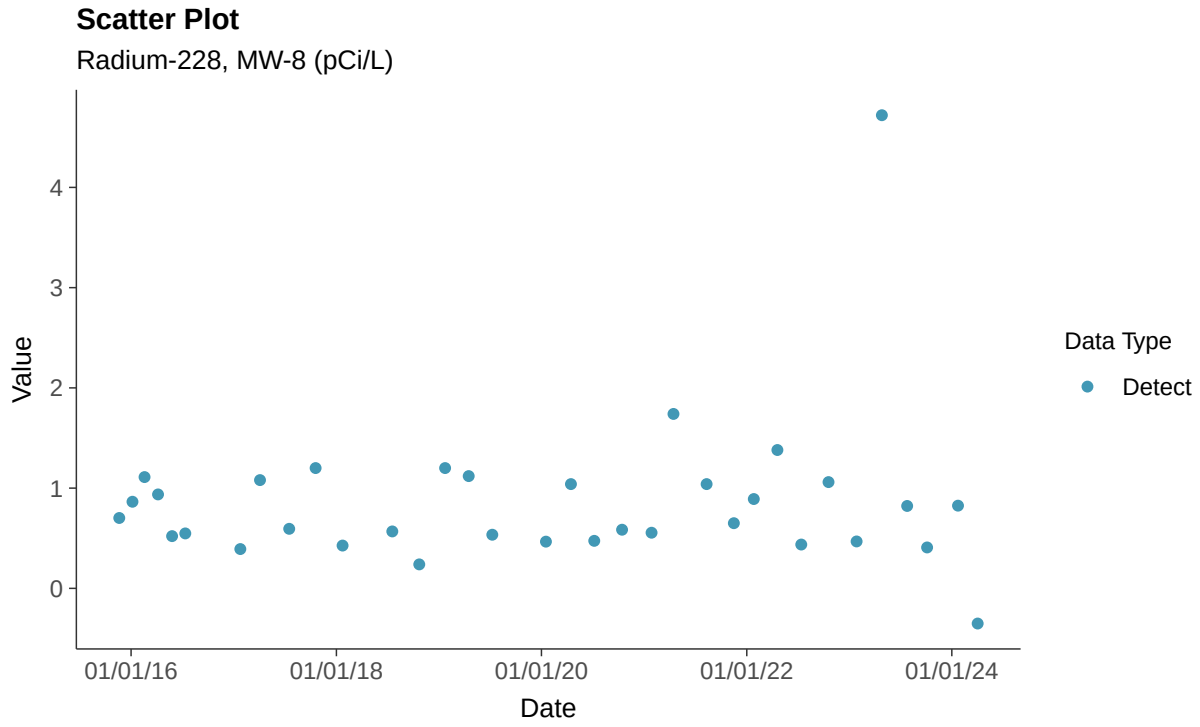
Trend Regression: Piecewise Linear-Linear-Linear

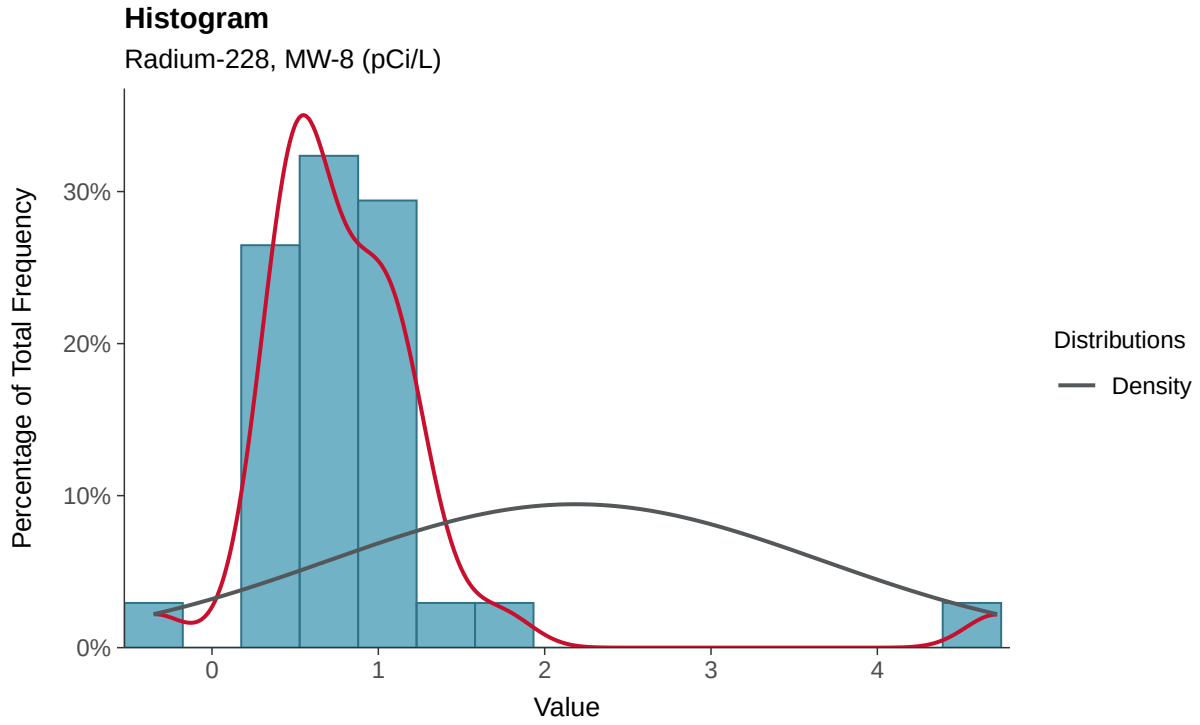
Radium-226, MW-8 (pCi/L)



App. IV: Radium-228, MW-8

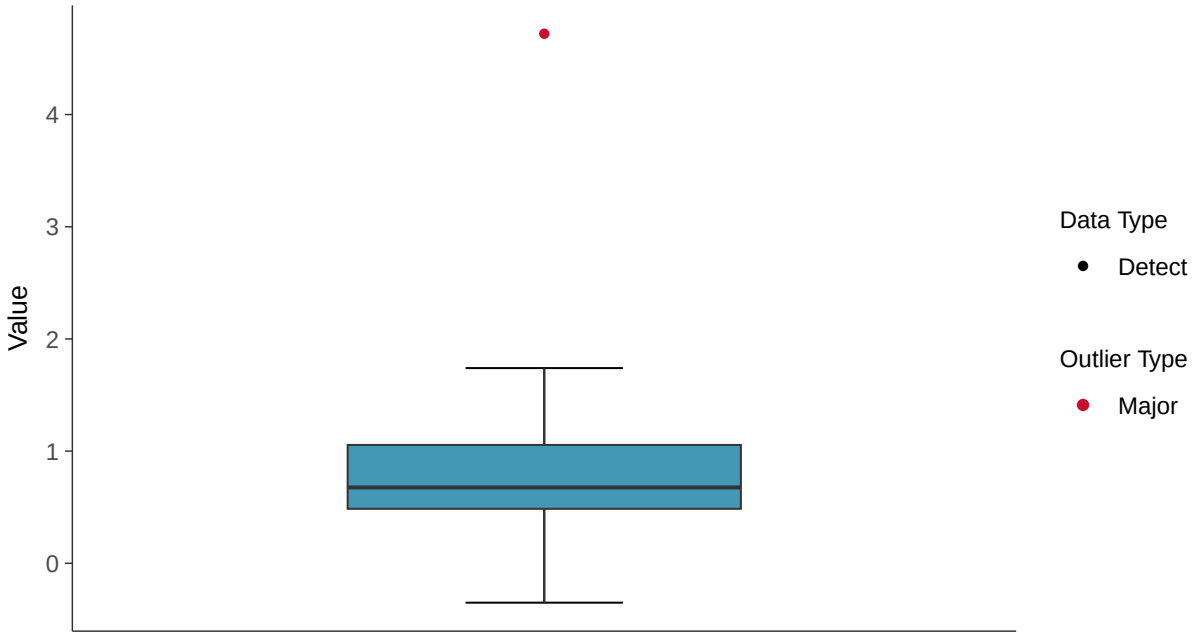
ID: 11_3_120





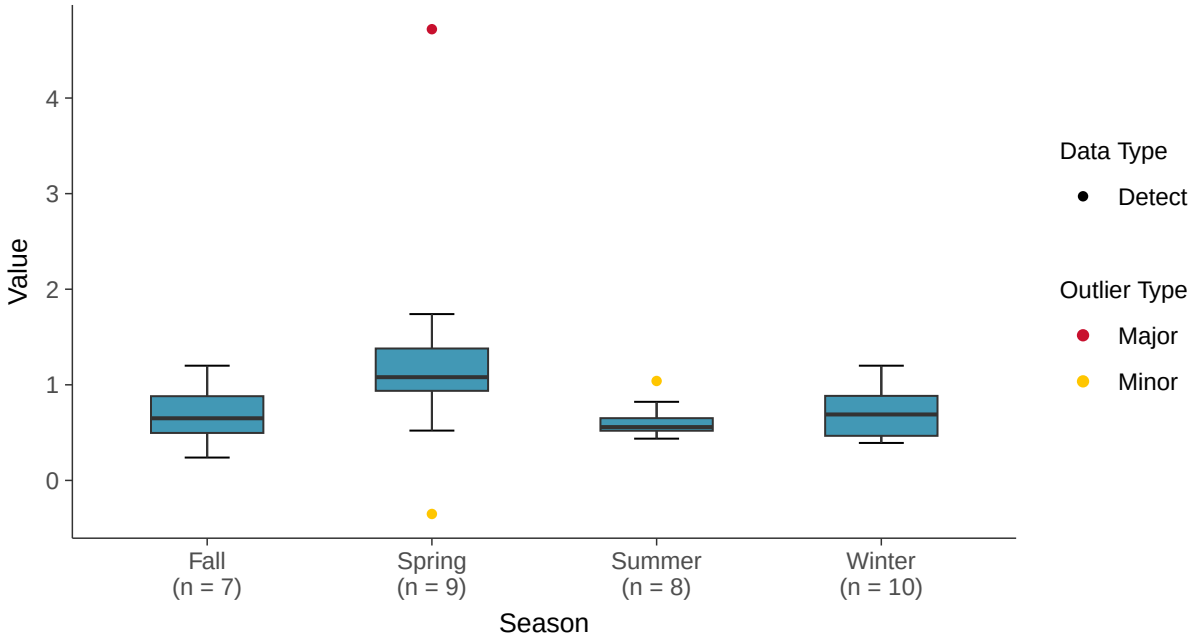
Boxplot

Radium-228, MW-8 (pCi/L)



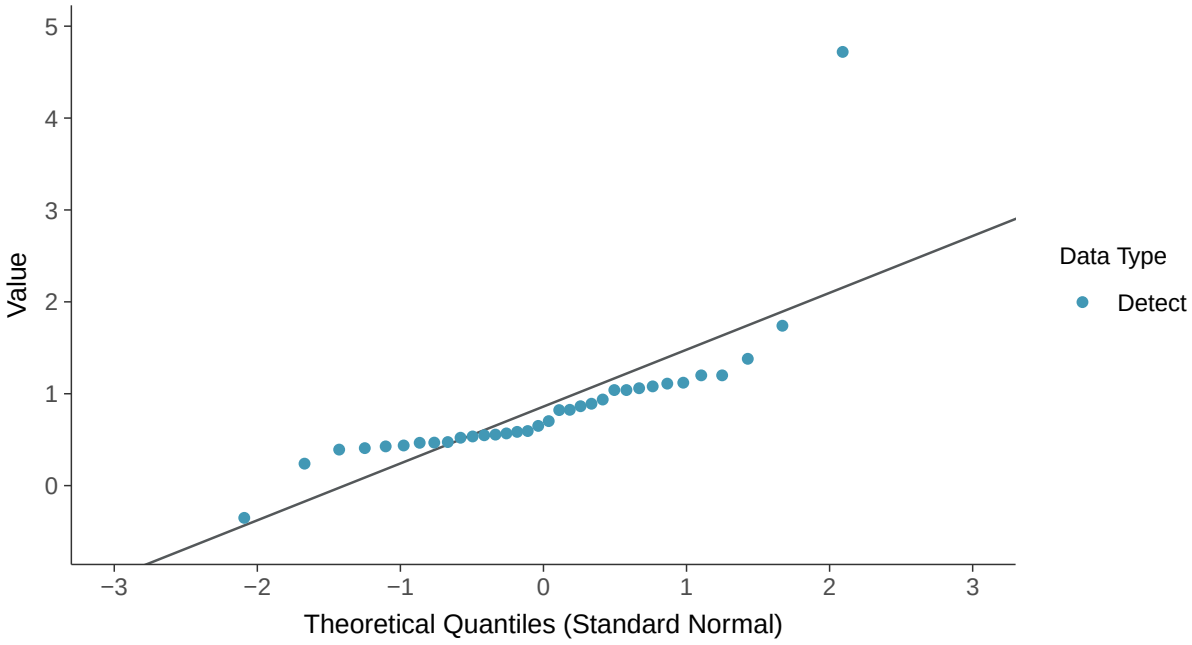
Boxplot by Season

Radium-228, MW-8 (pCi/L)



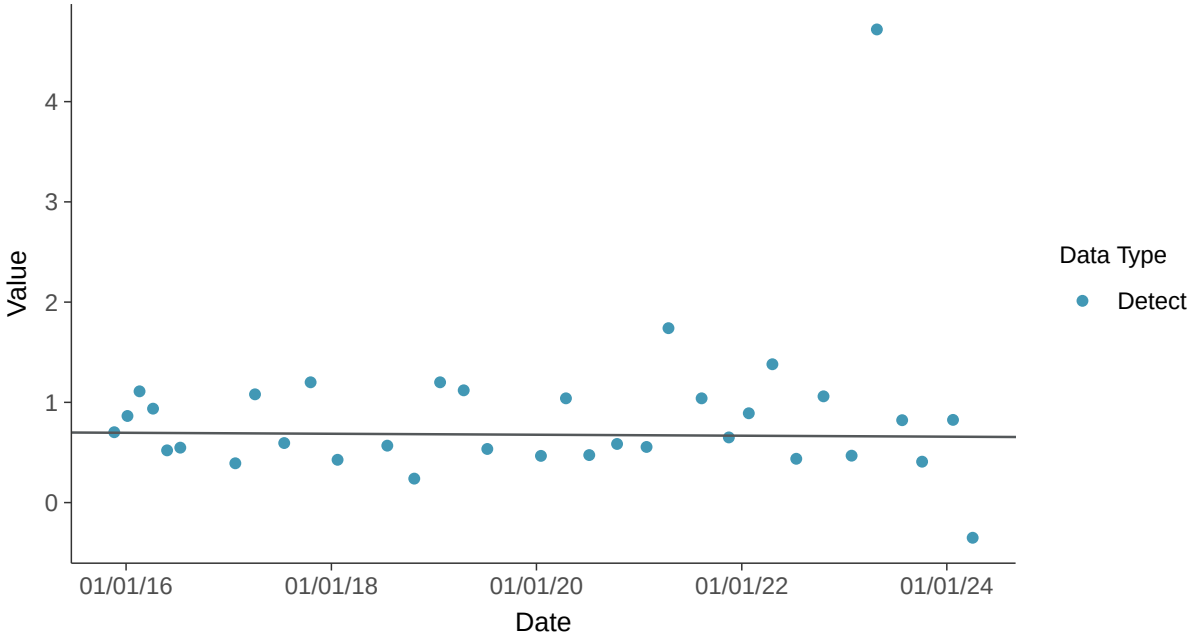
Normal Q-Q plot

Radium-228, MW-8 (pCi/L)



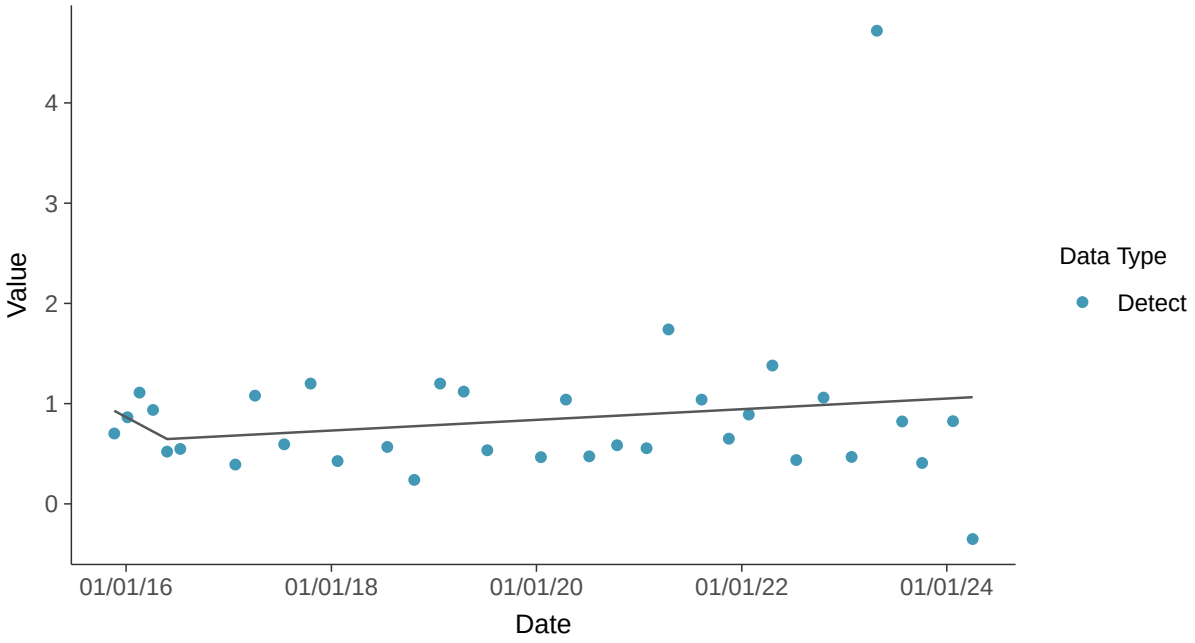
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-8 (pCi/L)



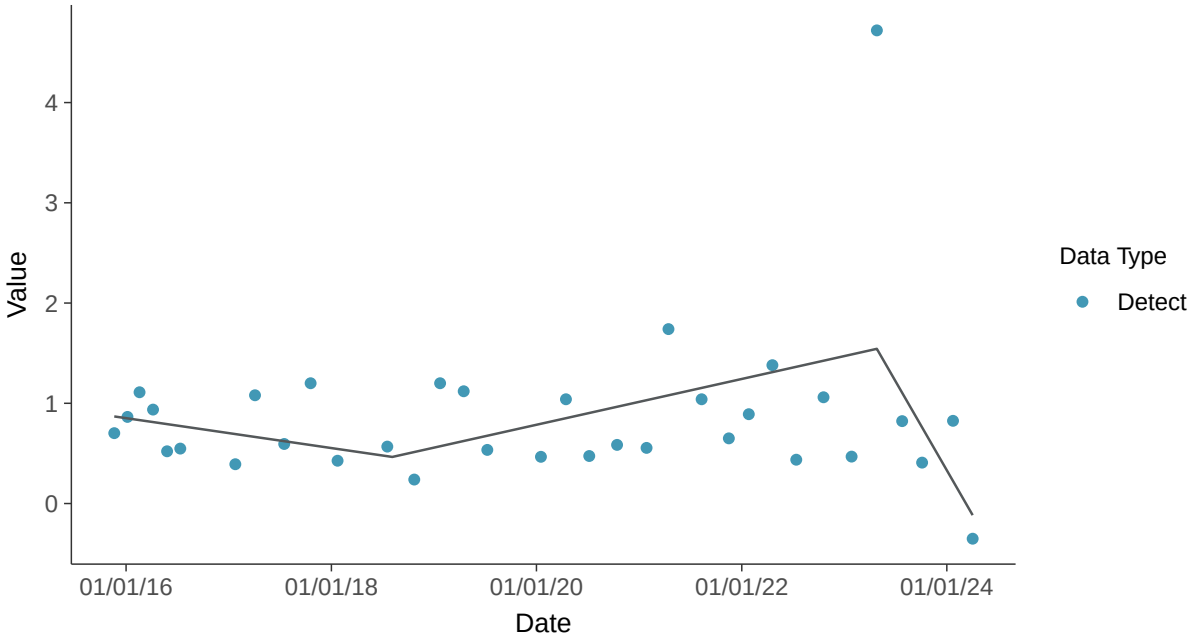
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-8 (pCi/L)



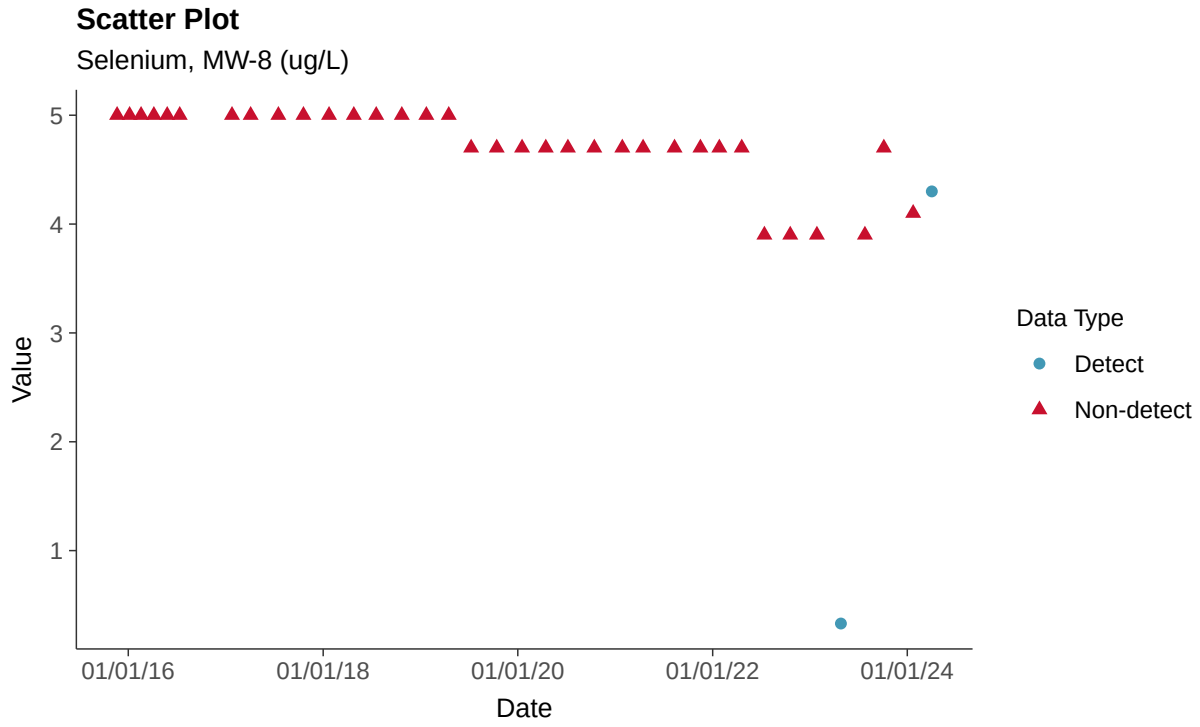
Trend Regression: Piecewise Linear-Linear-Linear

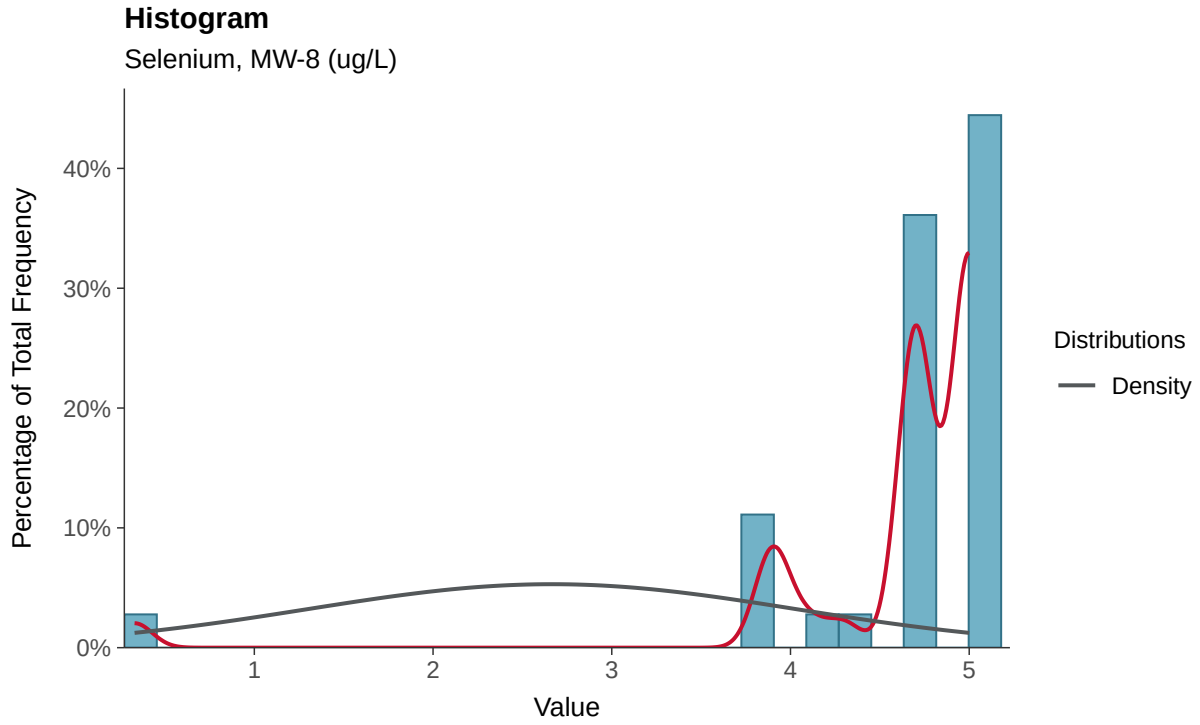
Radium-228, MW-8 (pCi/L)



App. IV: Selenium, MW-8

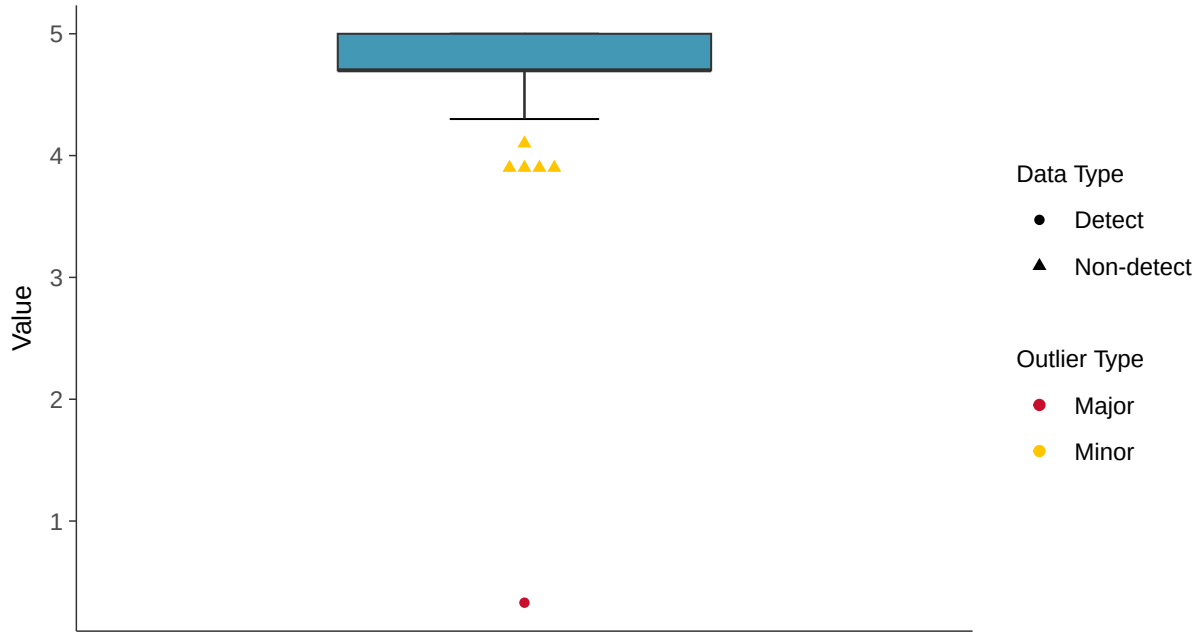
ID: 11_3_121





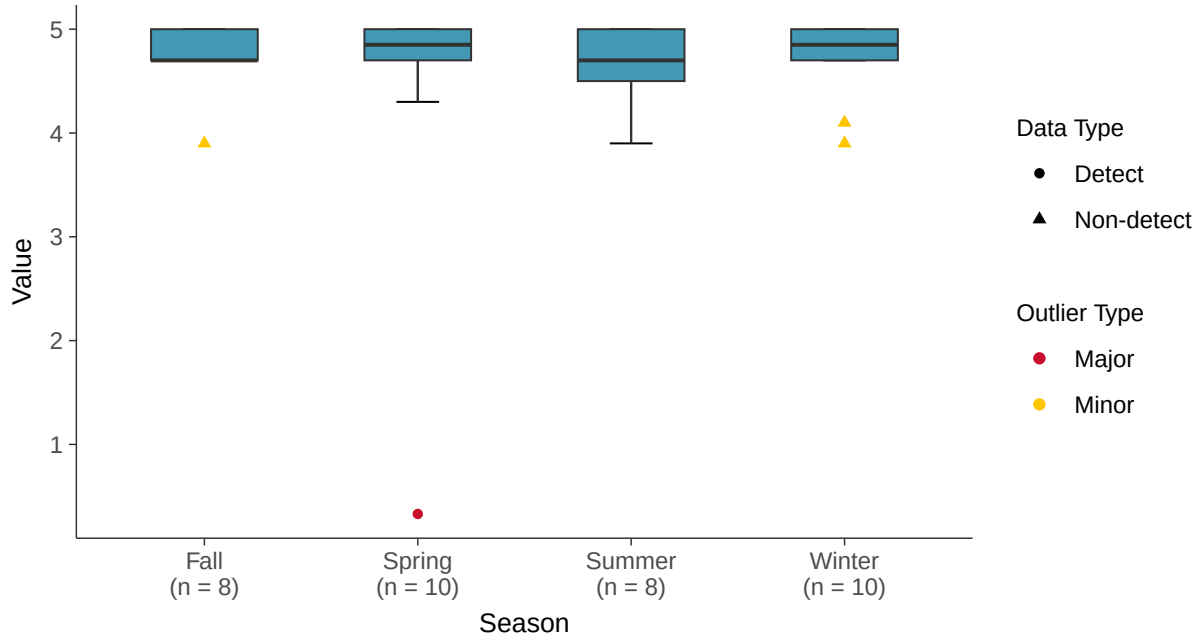
Boxplot

Selenium, MW-8 (ug/L)



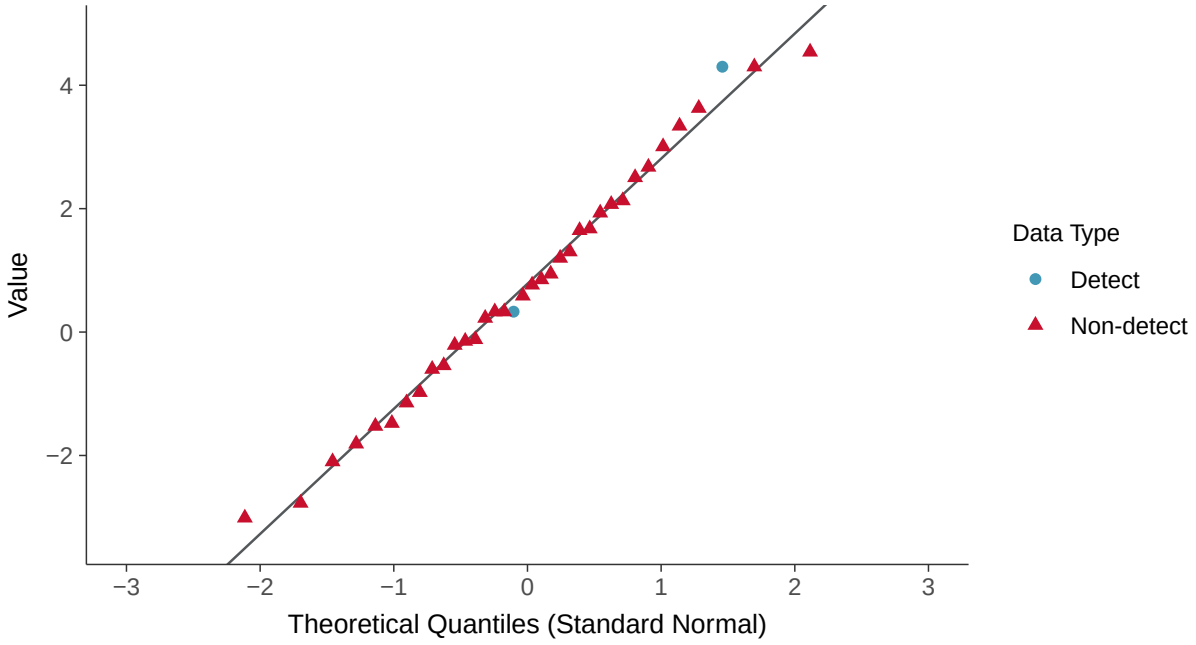
Boxplot by Season

Selenium, MW-8 (ug/L)



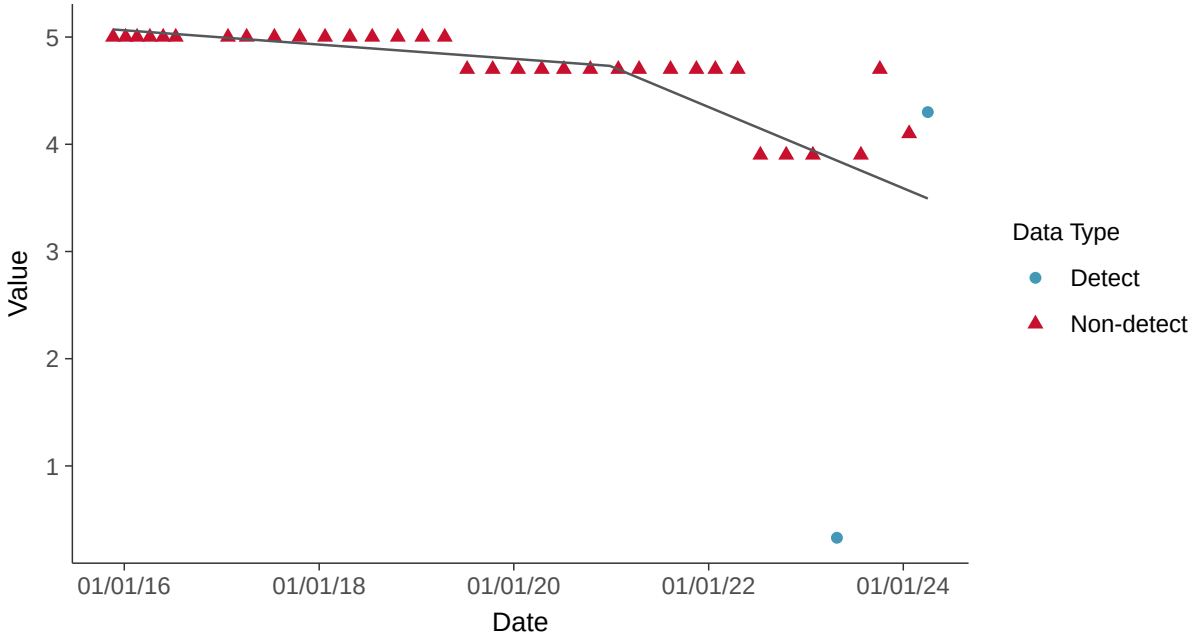
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-8 (ug/L)



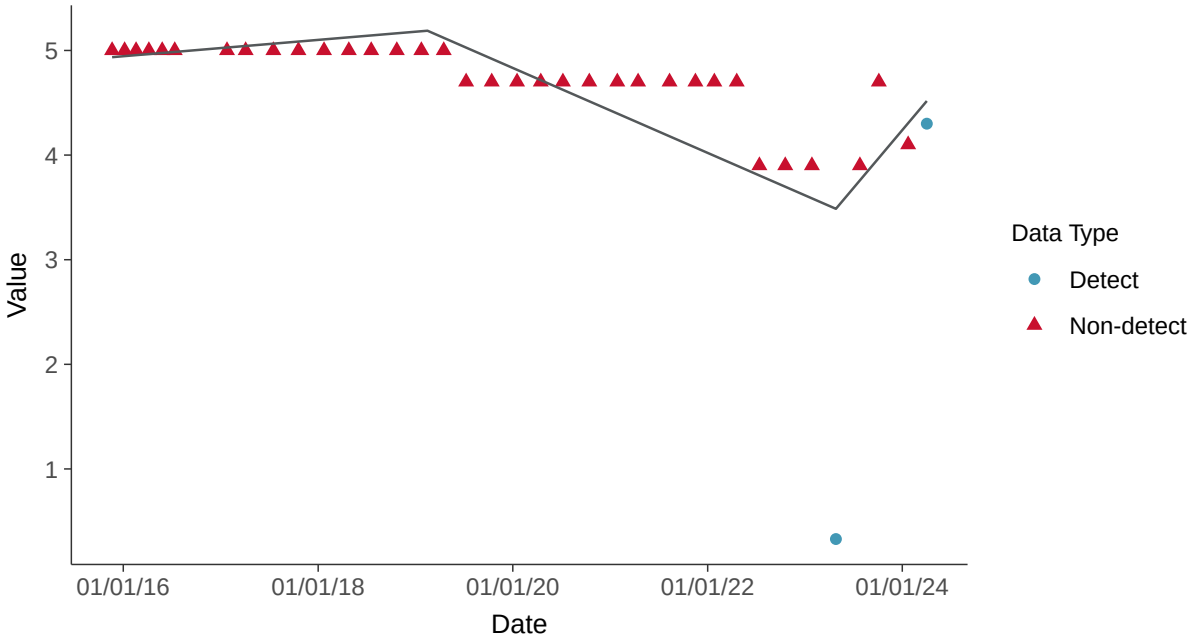
Trend Regression: Piecewise Linear-Linear

Selenium, MW-8 (ug/L)



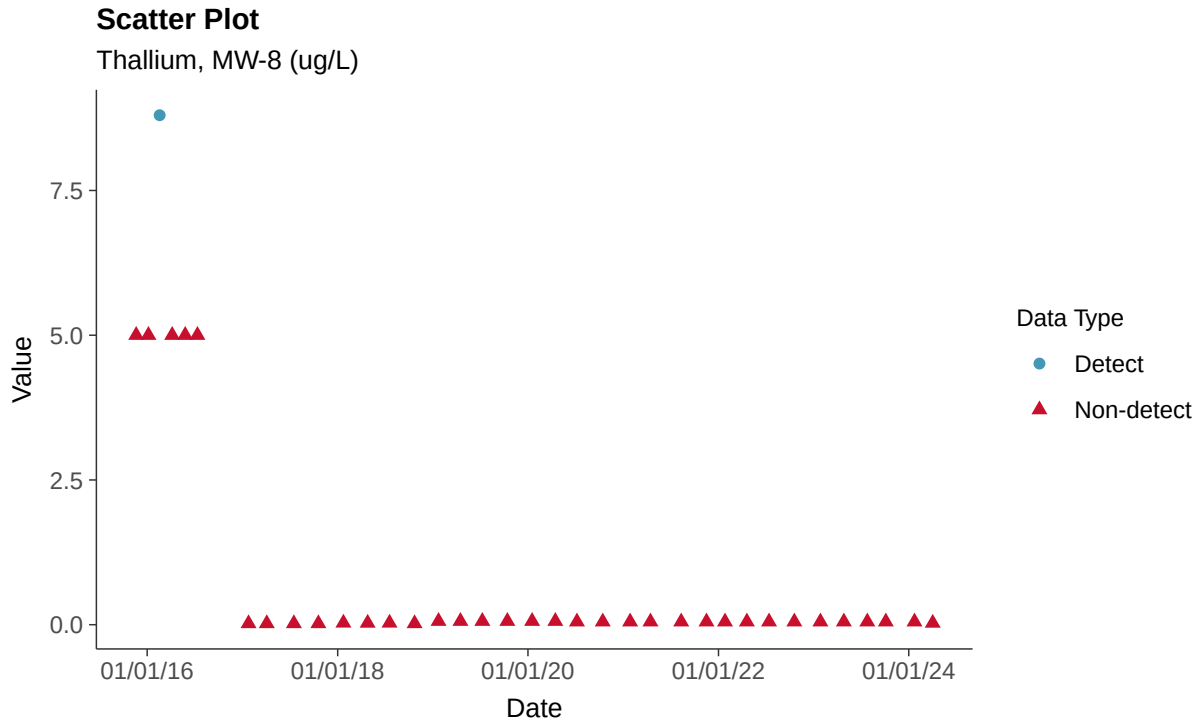
Trend Regression: Piecewise Linear-Linear-Linear

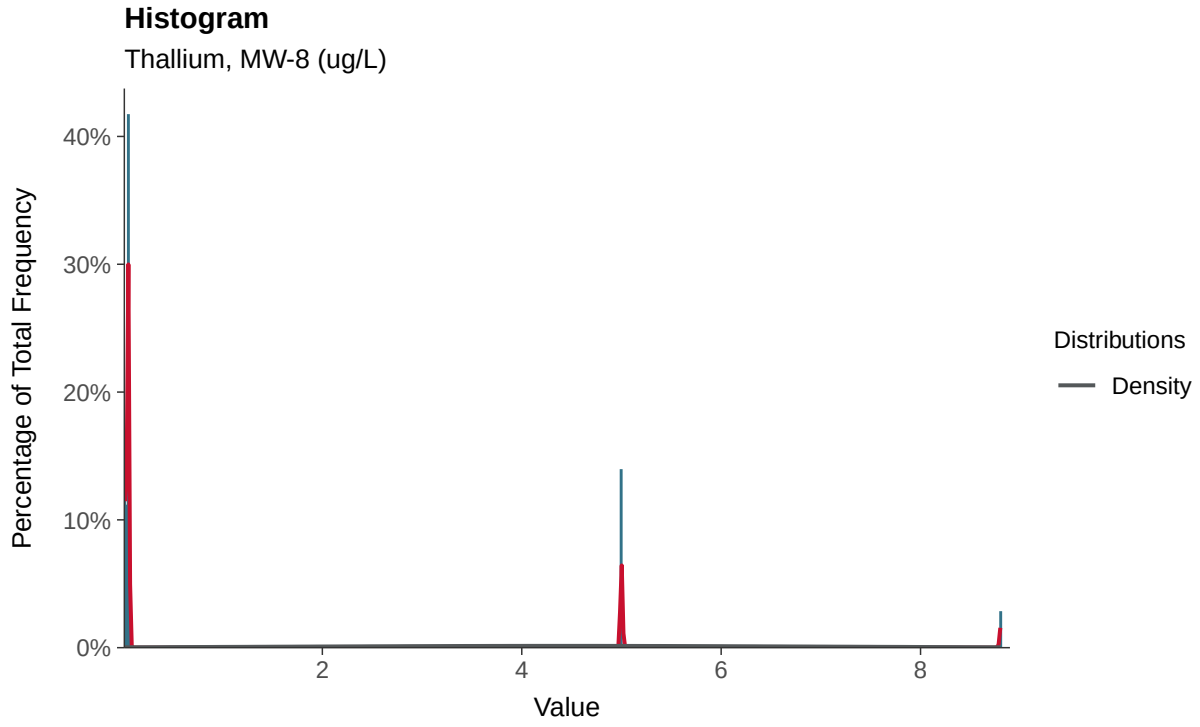
Selenium, MW-8 (ug/L)



App. IV: Thallium, MW-8

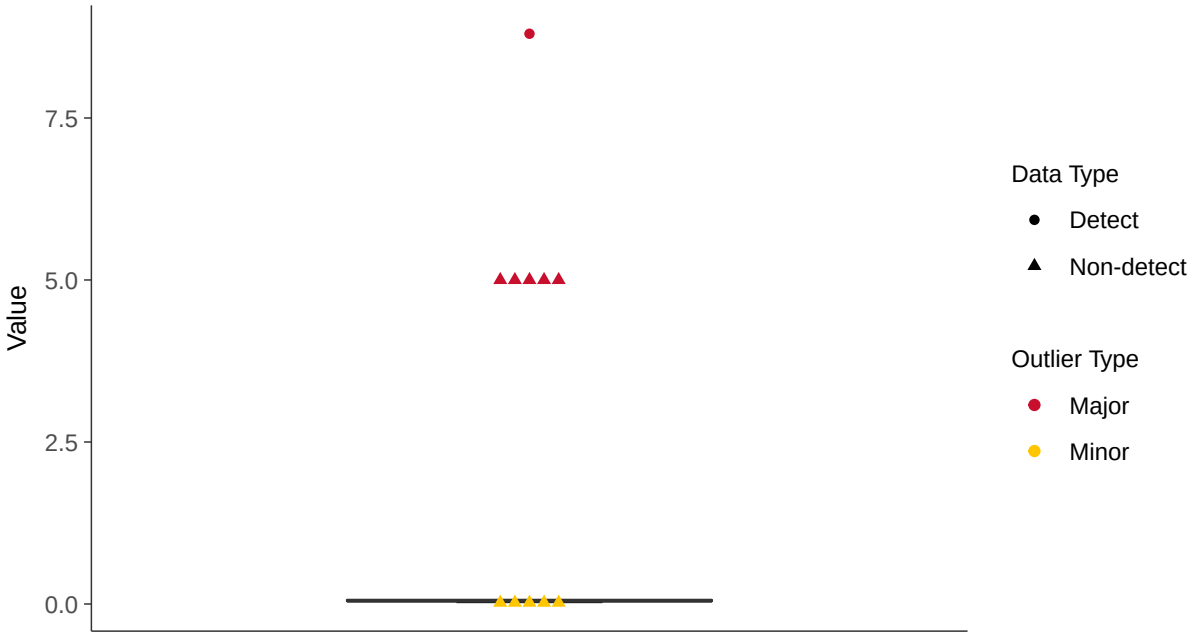
ID: 11_3_124





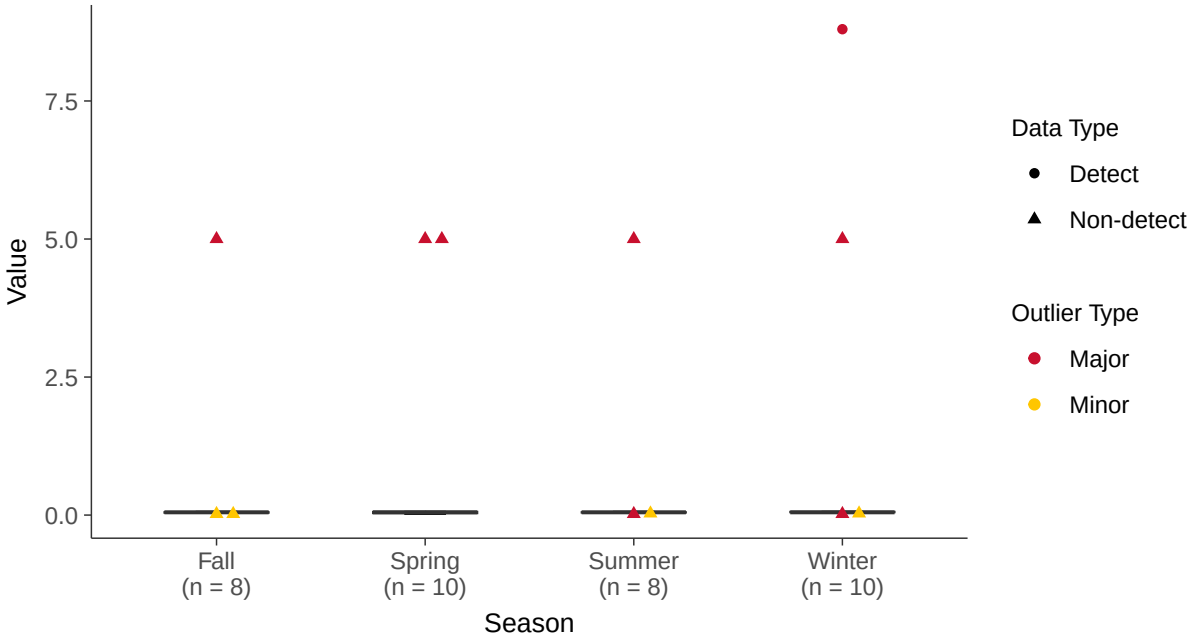
Boxplot

Thallium, MW-8 (ug/L)



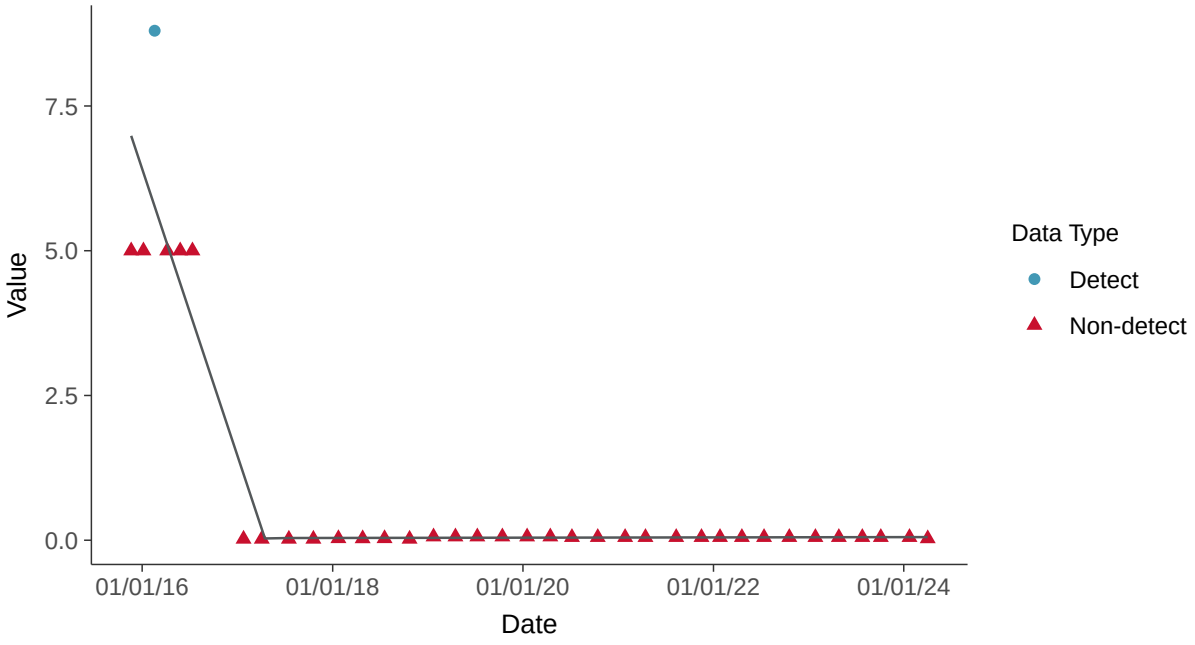
Boxplot by Season

Thallium, MW-8 (ug/L)



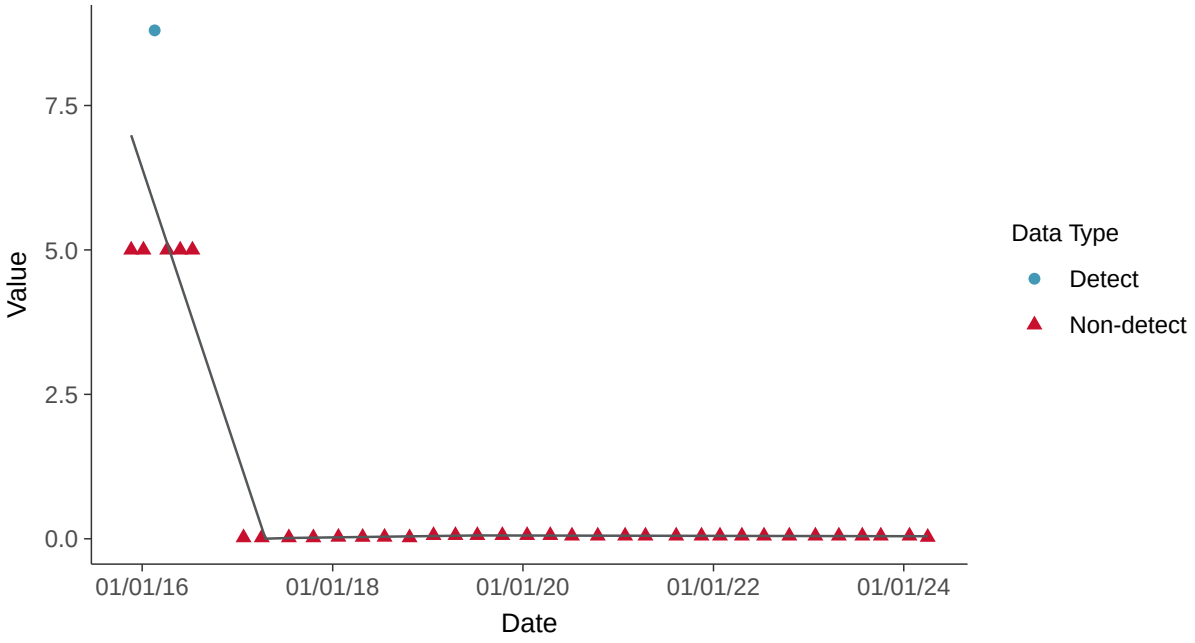
Trend Regression: Piecewise Linear-Linear

Thallium, MW-8 (ug/L)



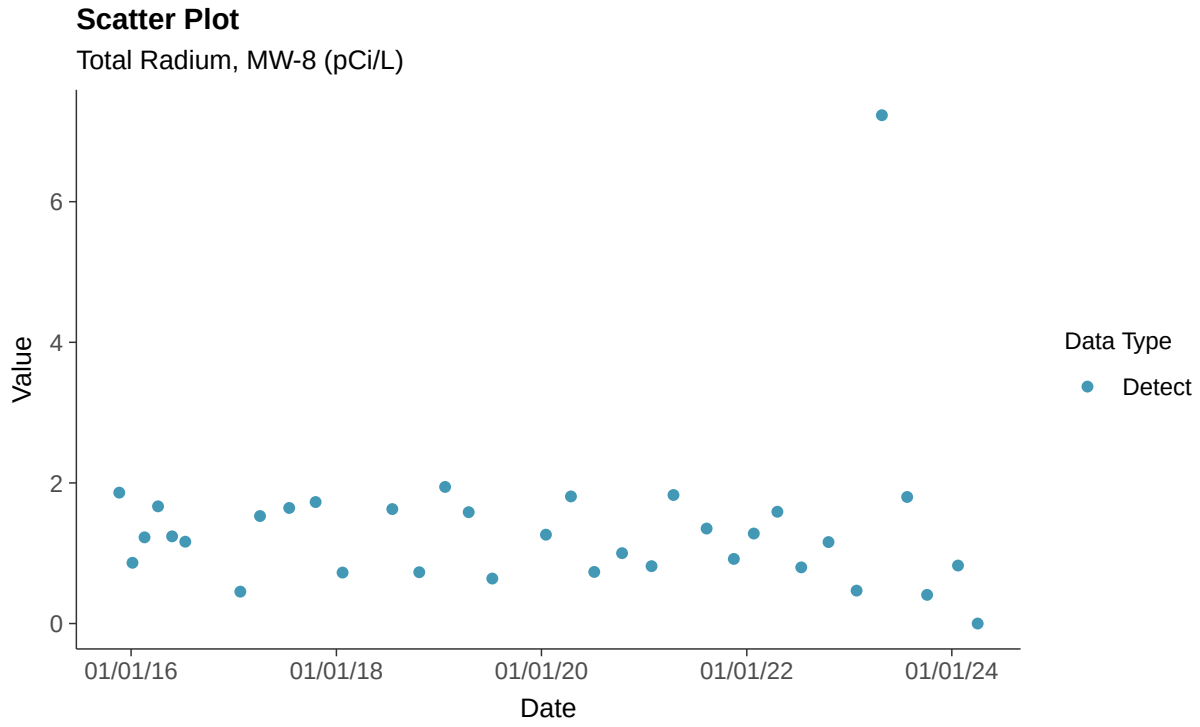
Trend Regression: Piecewise Linear-Linear-Linear

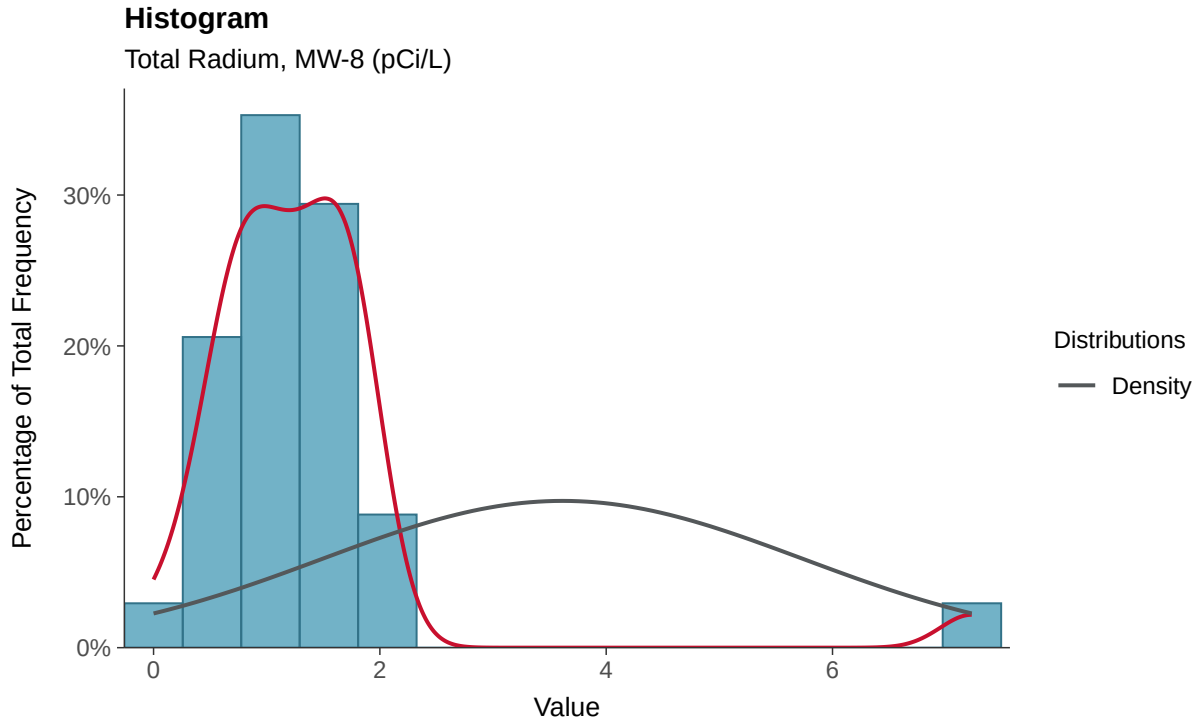
Thallium, MW-8 (ug/L)



App. IV: Total Radium, MW-8

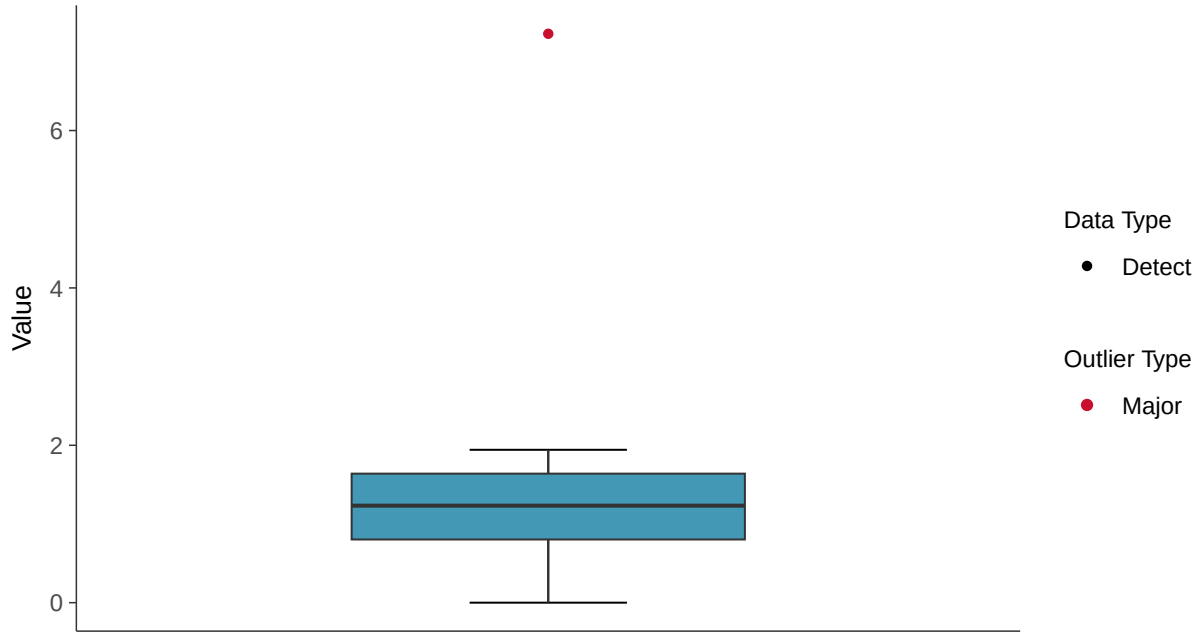
ID: 11_3_126





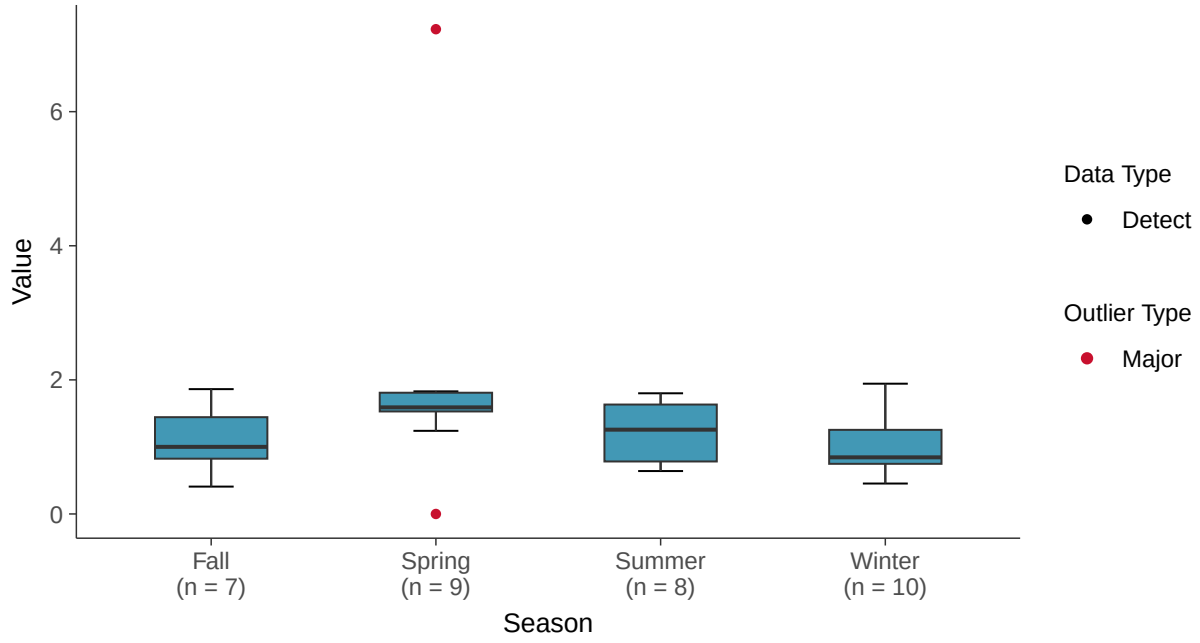
Boxplot

Total Radium, MW-8 (pCi/L)



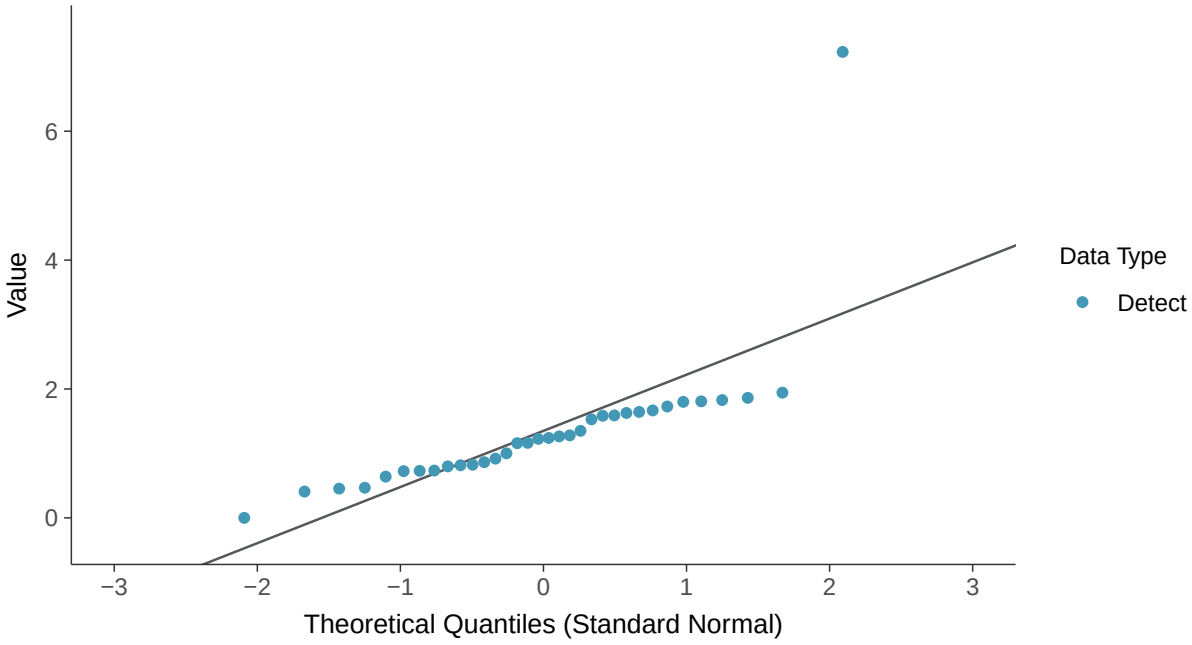
Boxplot by Season

Total Radium, MW-8 (pCi/L)



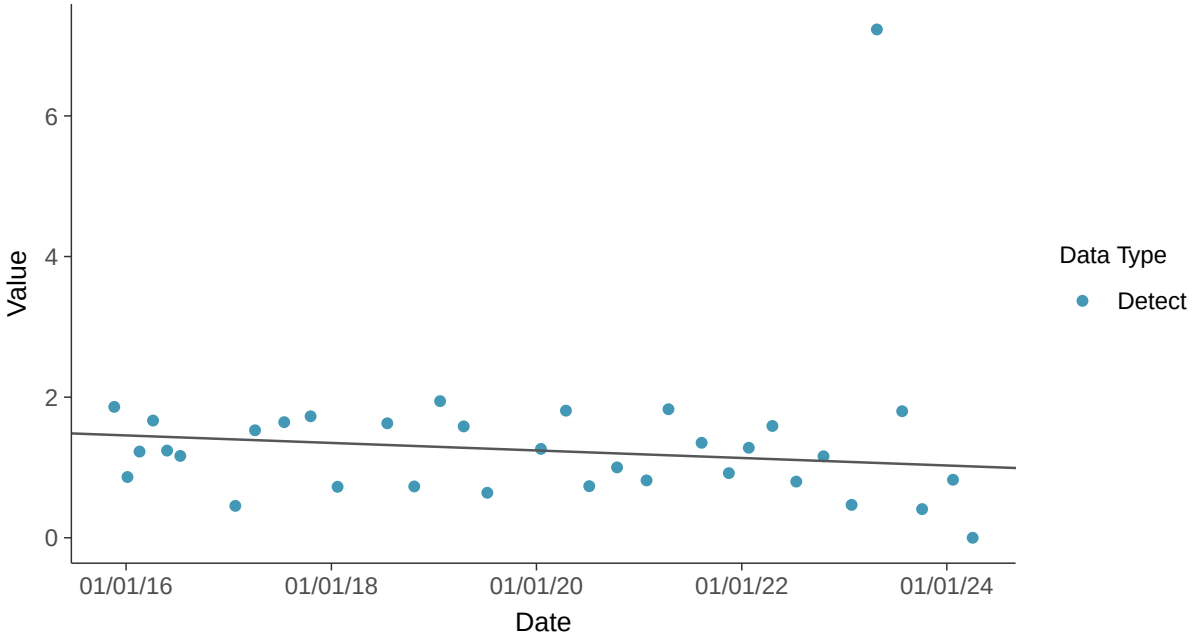
Normal Q-Q plot

Total Radium, MW-8 (pCi/L)



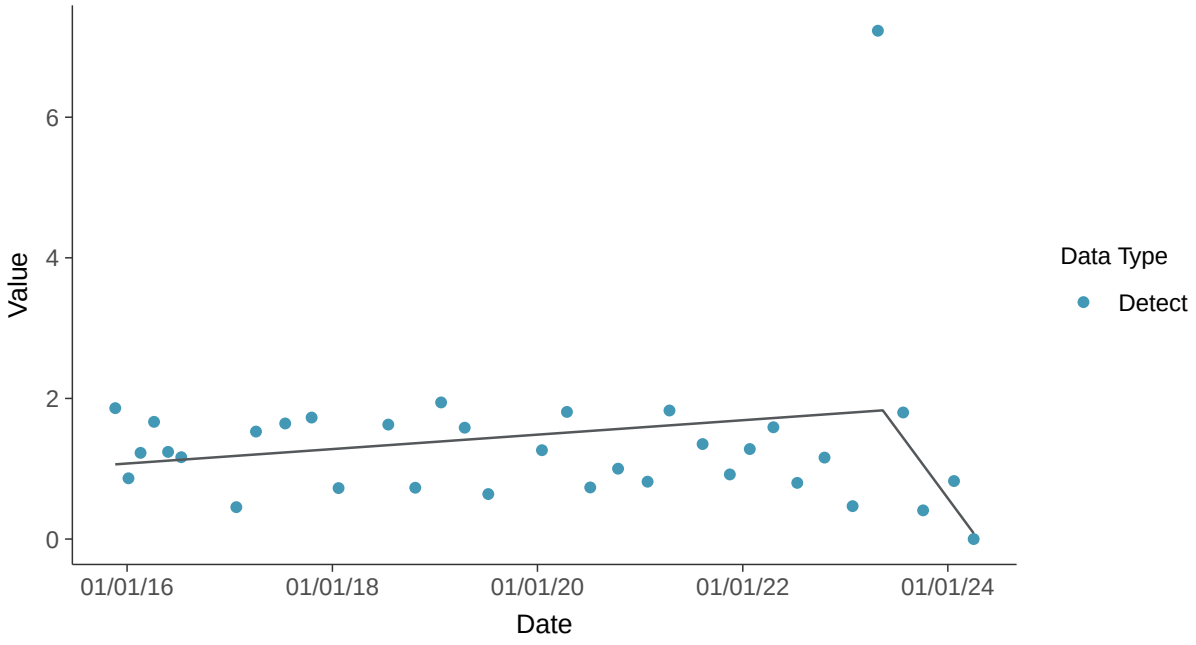
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-8 (pCi/L)



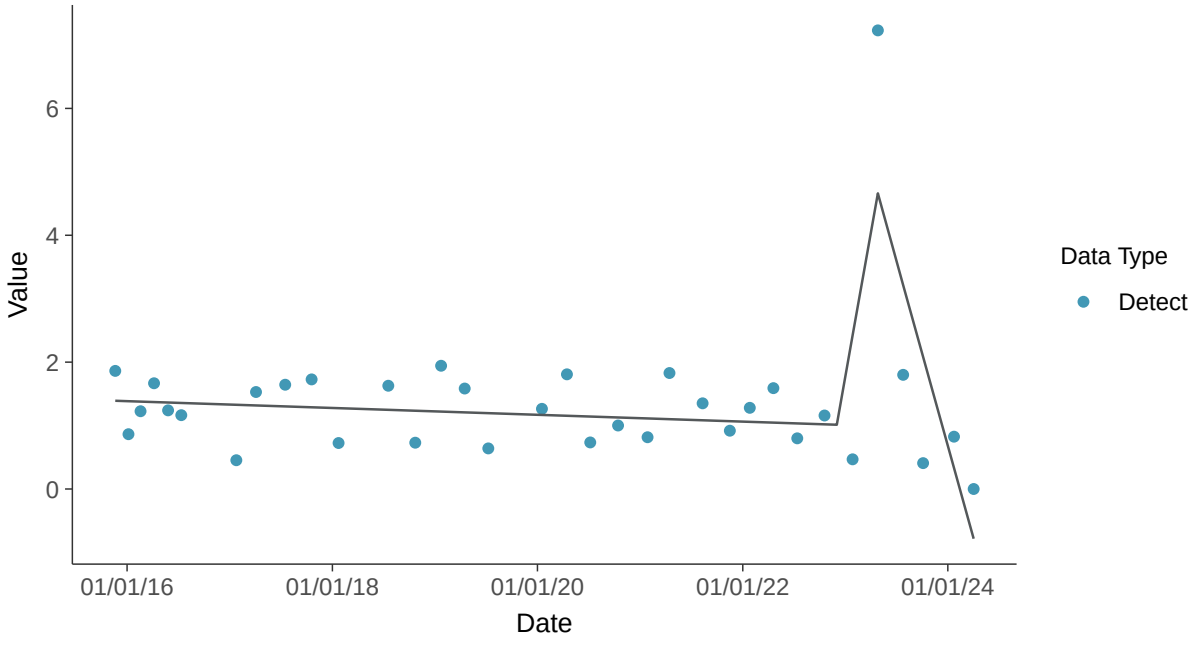
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-8 (pCi/L)



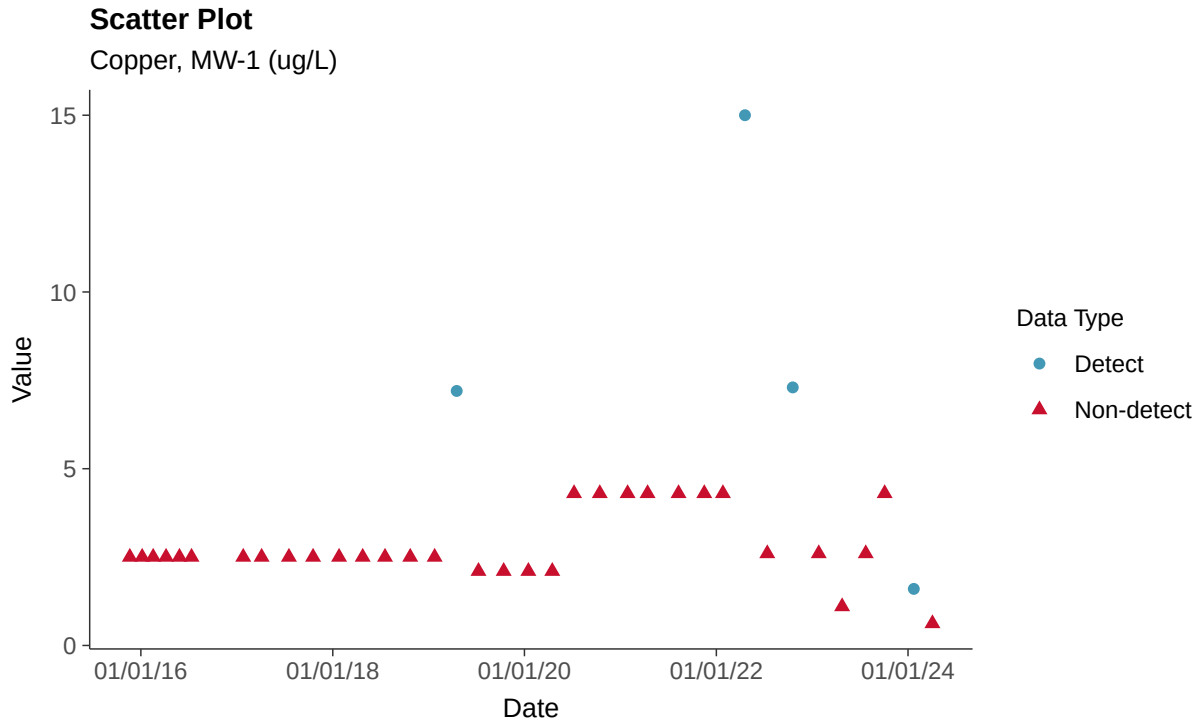
Trend Regression: Piecewise Linear-Linear-Linear

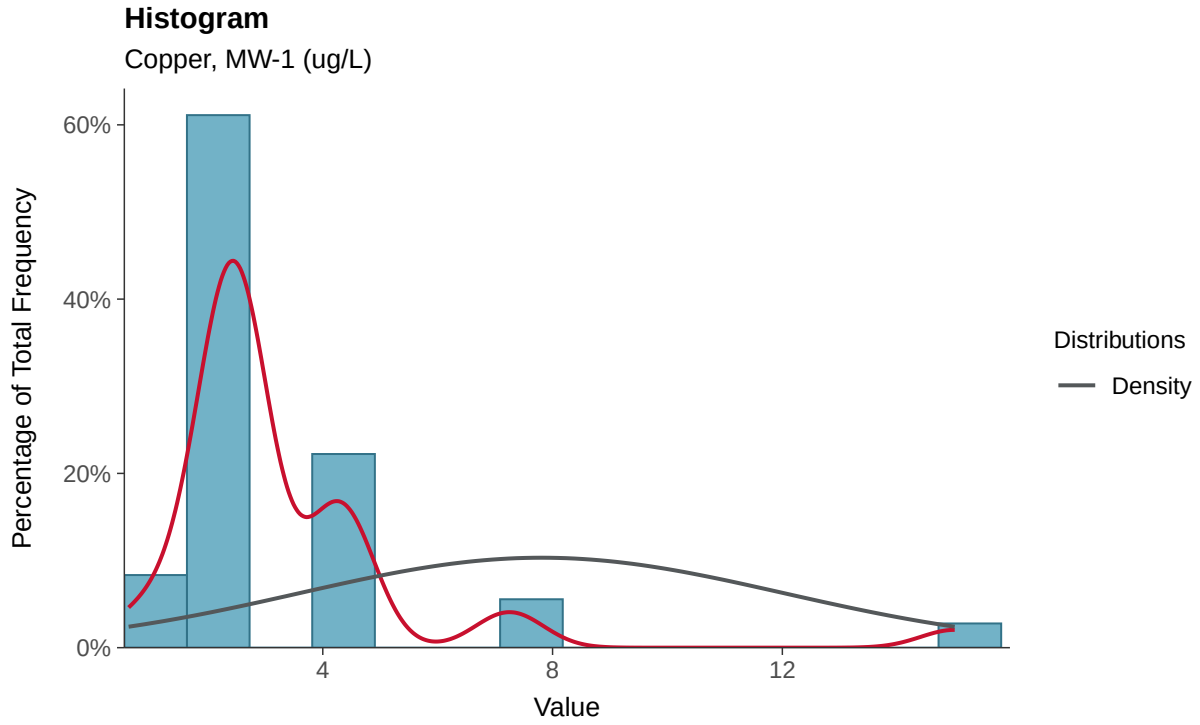
Total Radium, MW-8 (pCi/L)



App. I Metals: Copper, MW-1

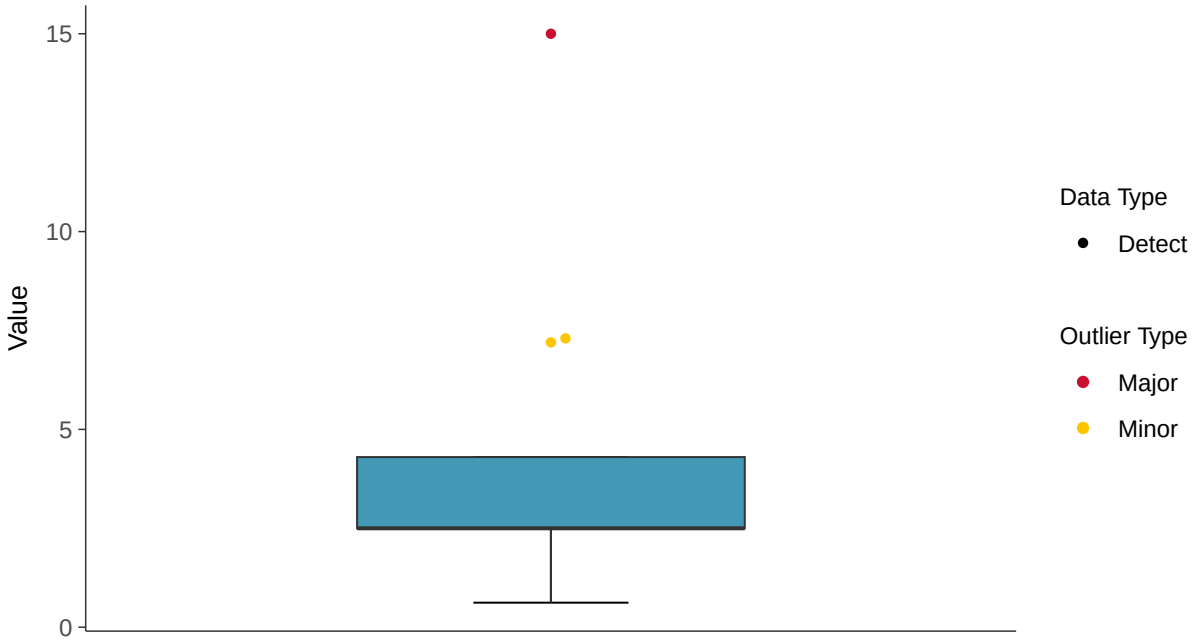
ID: 1_1_111





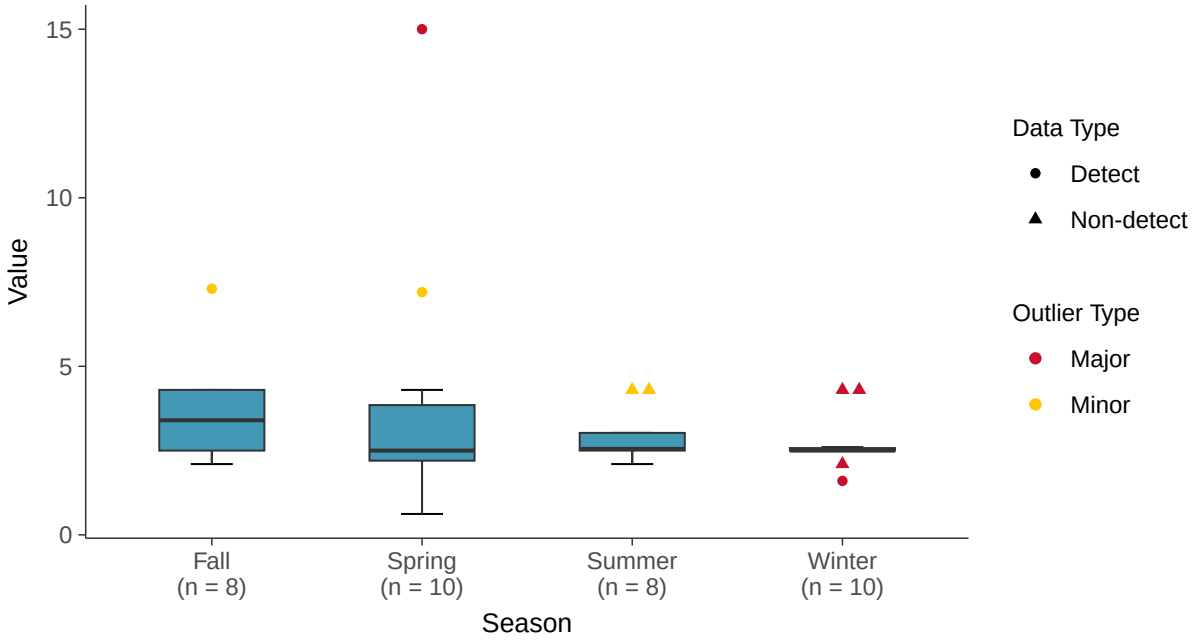
Boxplot

Copper, MW-1 (ug/L)



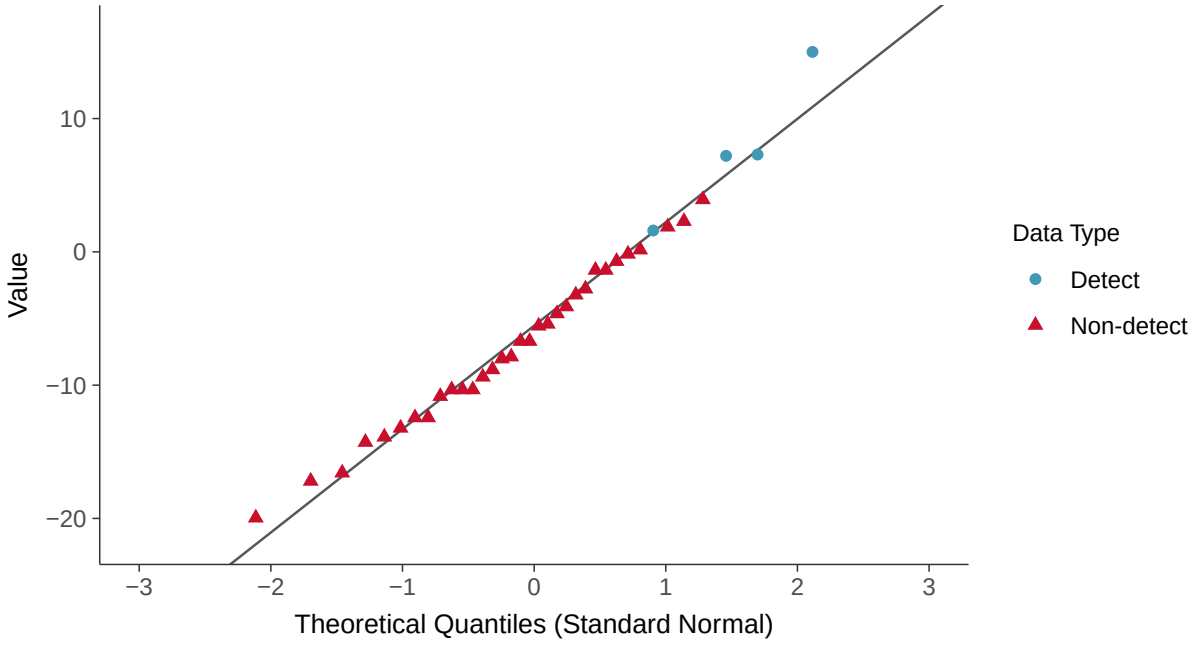
Boxplot by Season

Copper, MW-1 (ug/L)



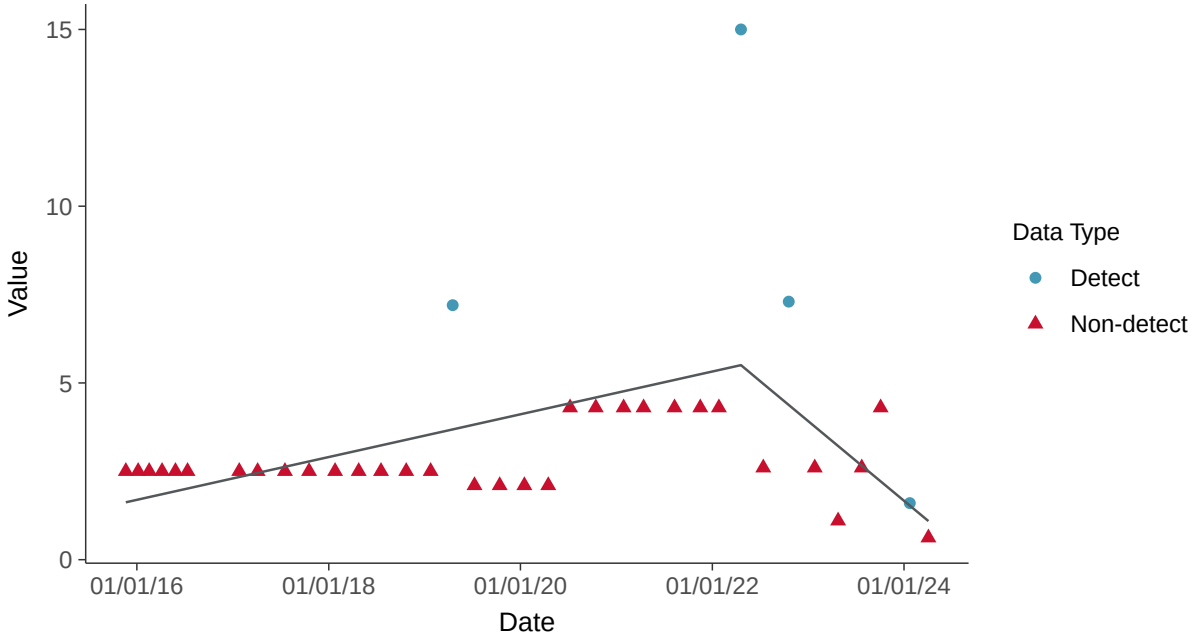
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-1 (ug/L)



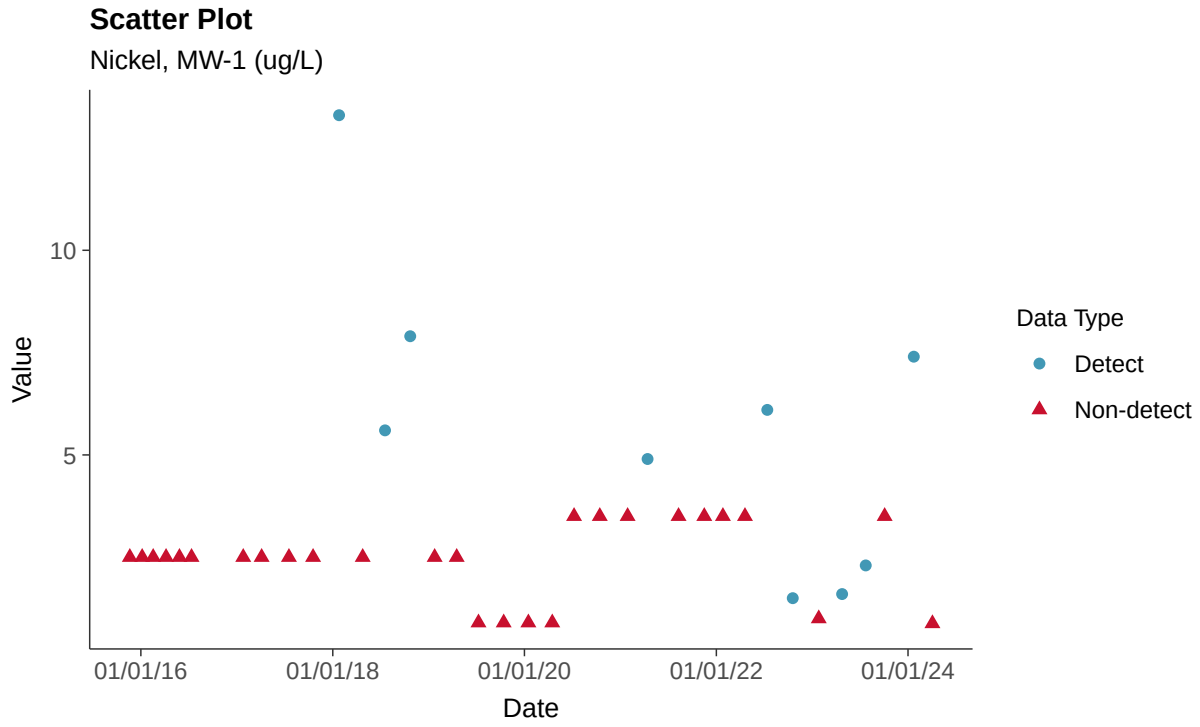
Trend Regression: Piecewise Linear-Linear

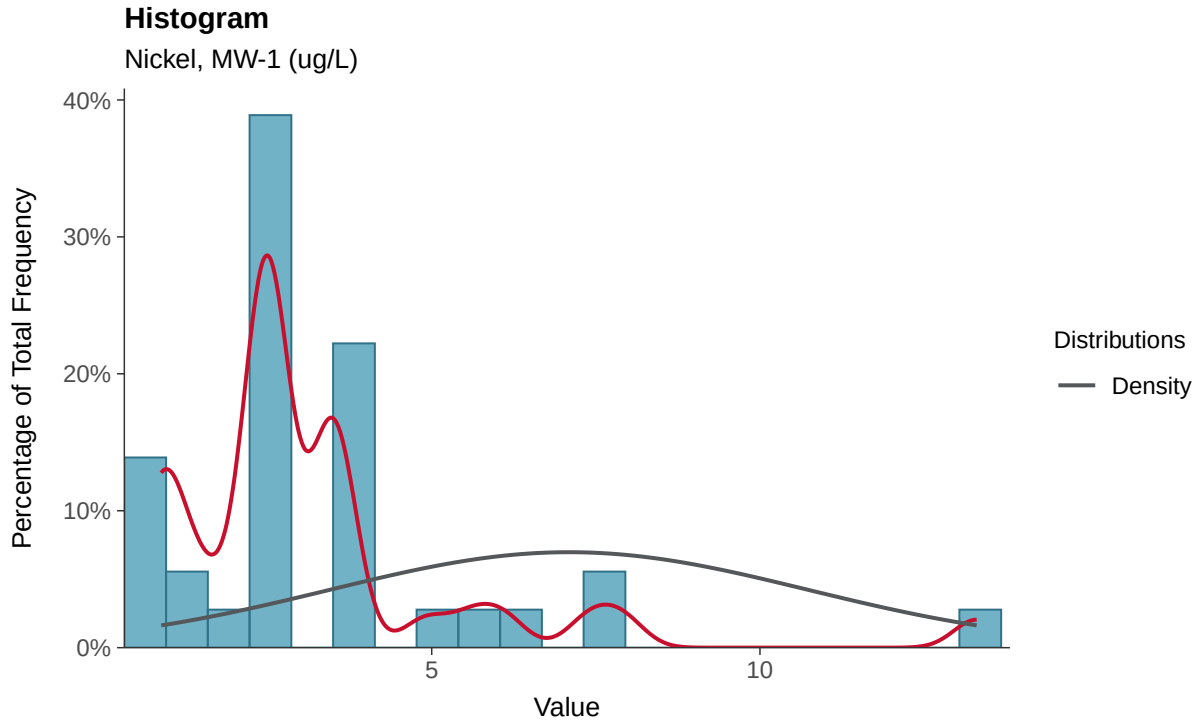
Copper, MW-1 (ug/L)



App. I Metals: Nickel, MW-1

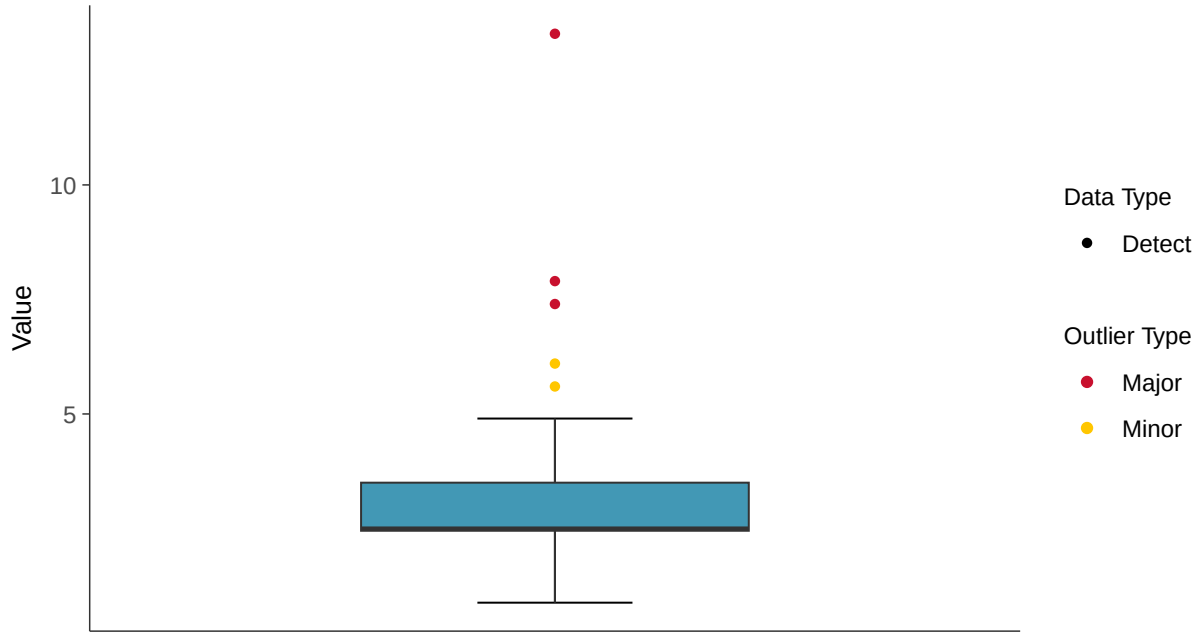
ID: 1_1_117





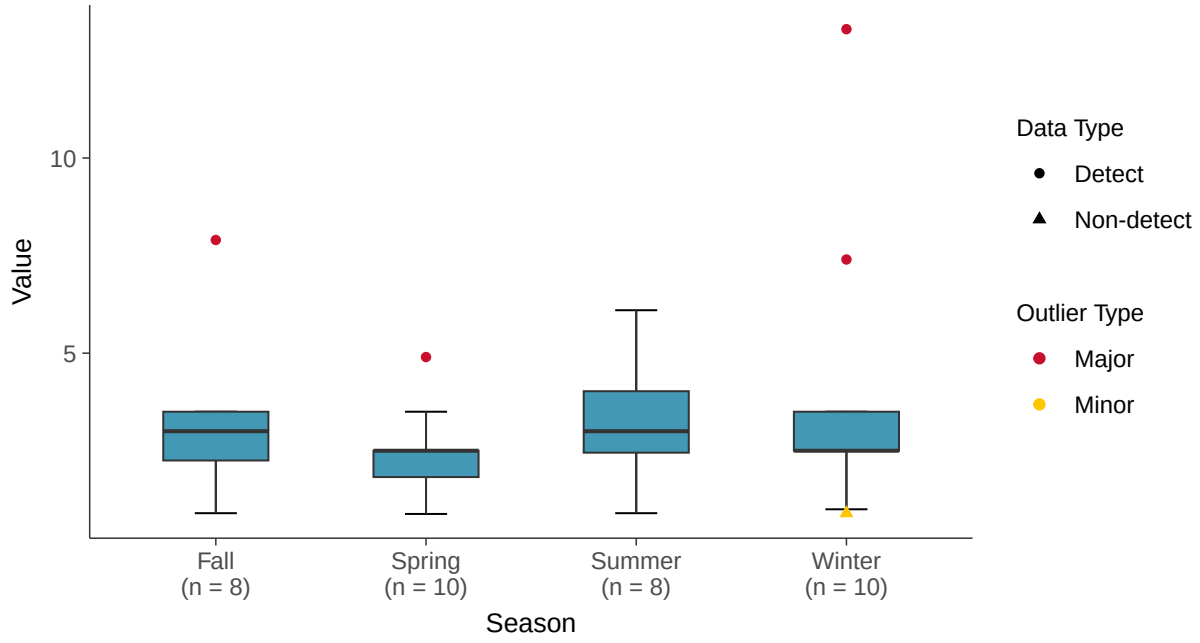
Boxplot

Nickel, MW-1 (ug/L)



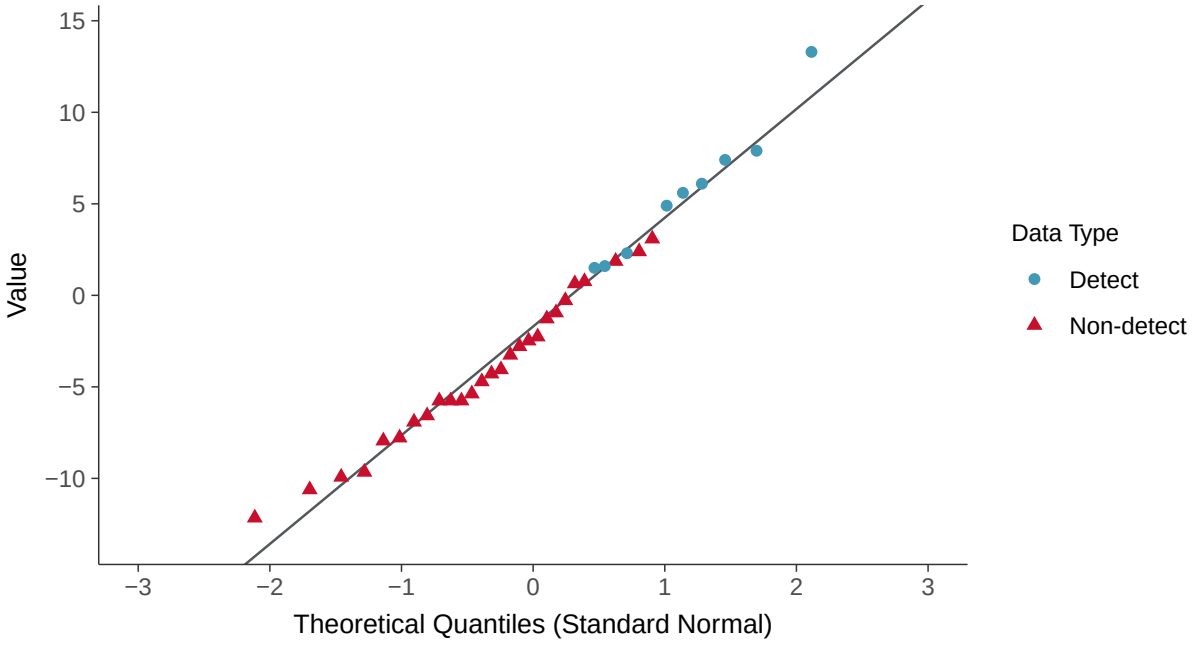
Boxplot by Season

Nickel, MW-1 (ug/L)



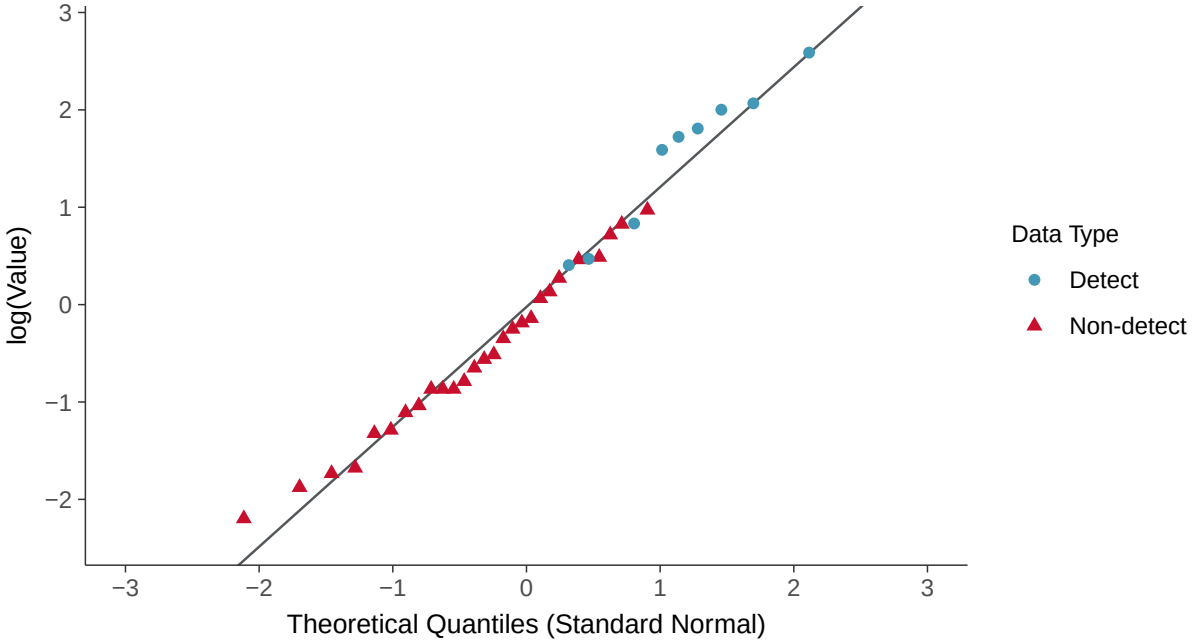
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



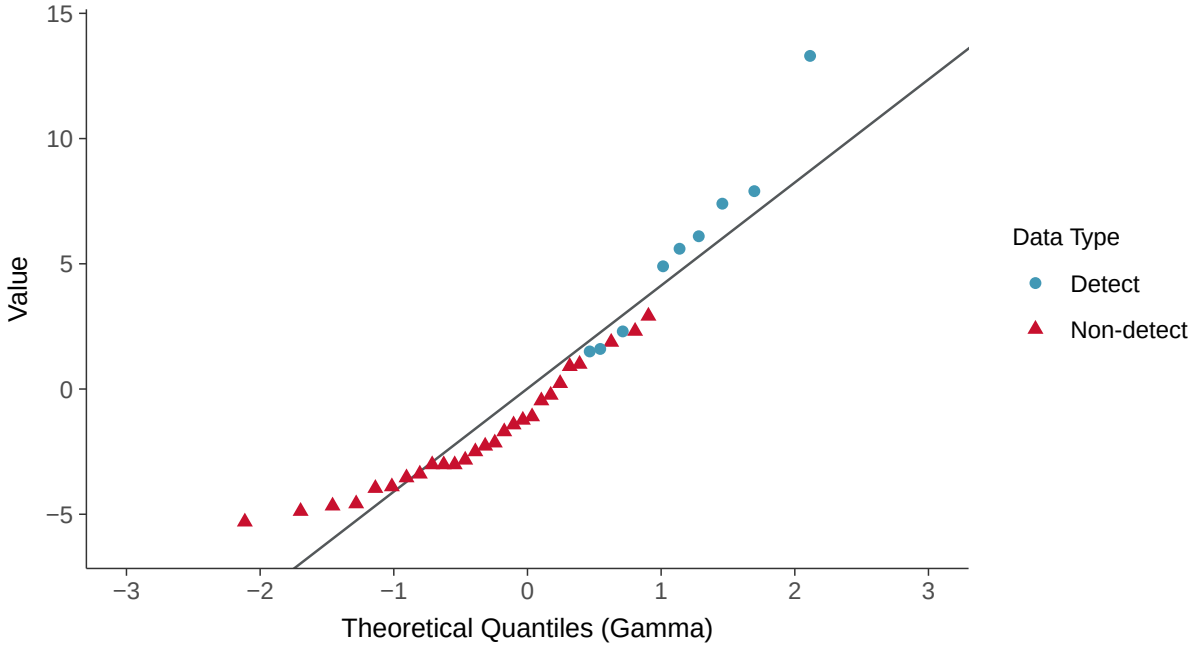
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



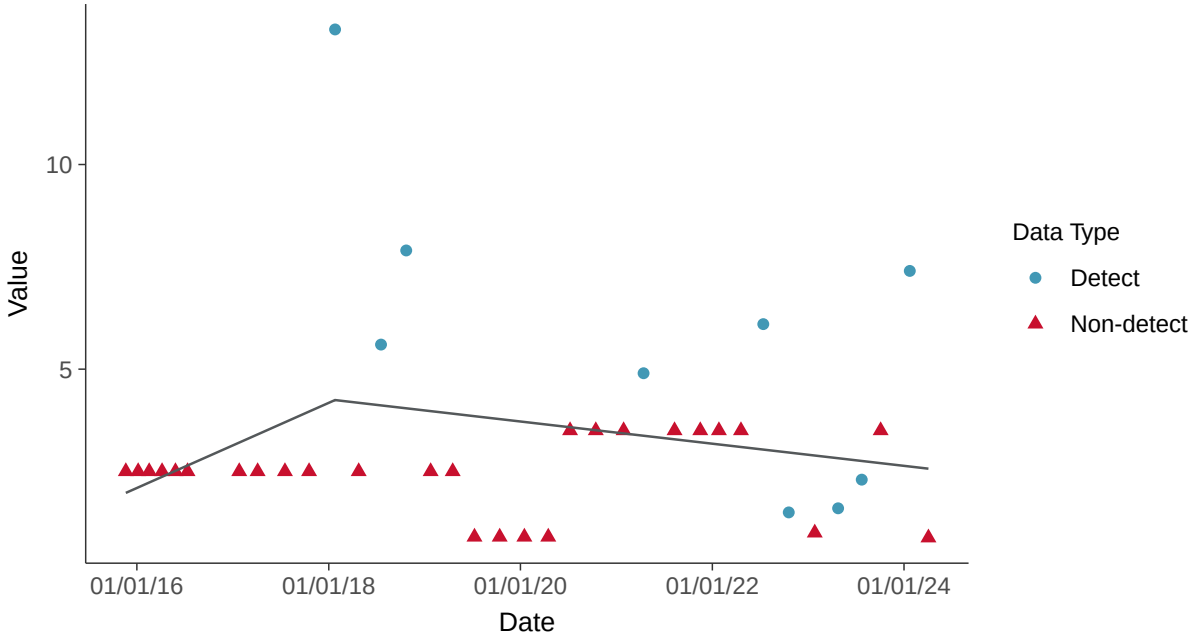
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



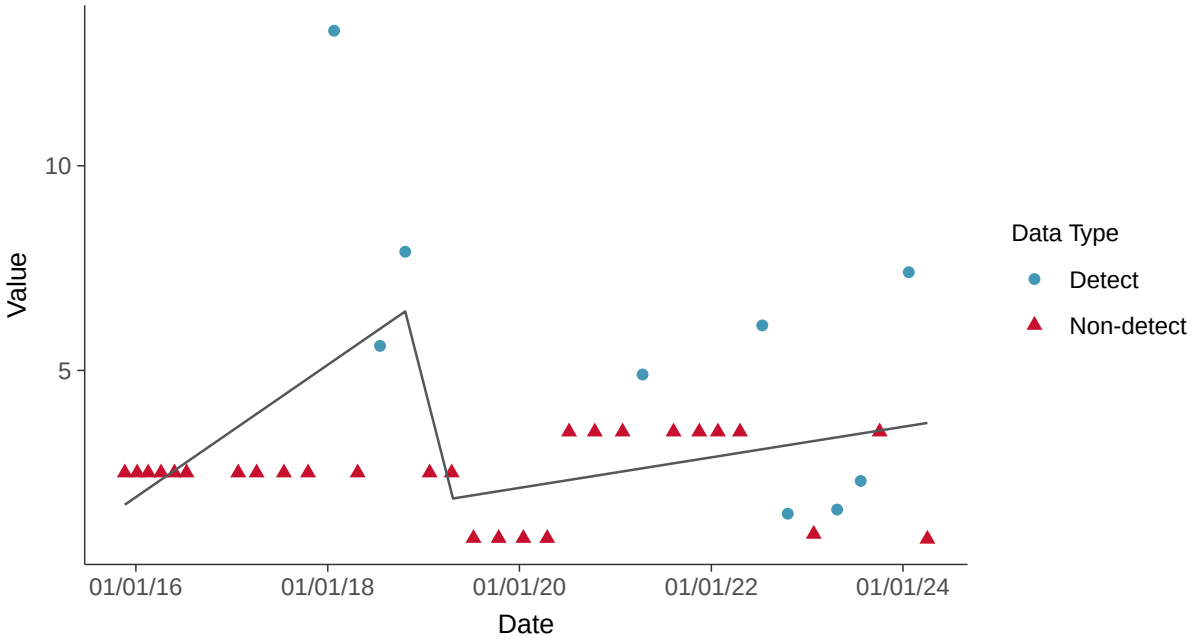
Trend Regression: Piecewise Linear-Linear

Nickel, MW-1 (ug/L)



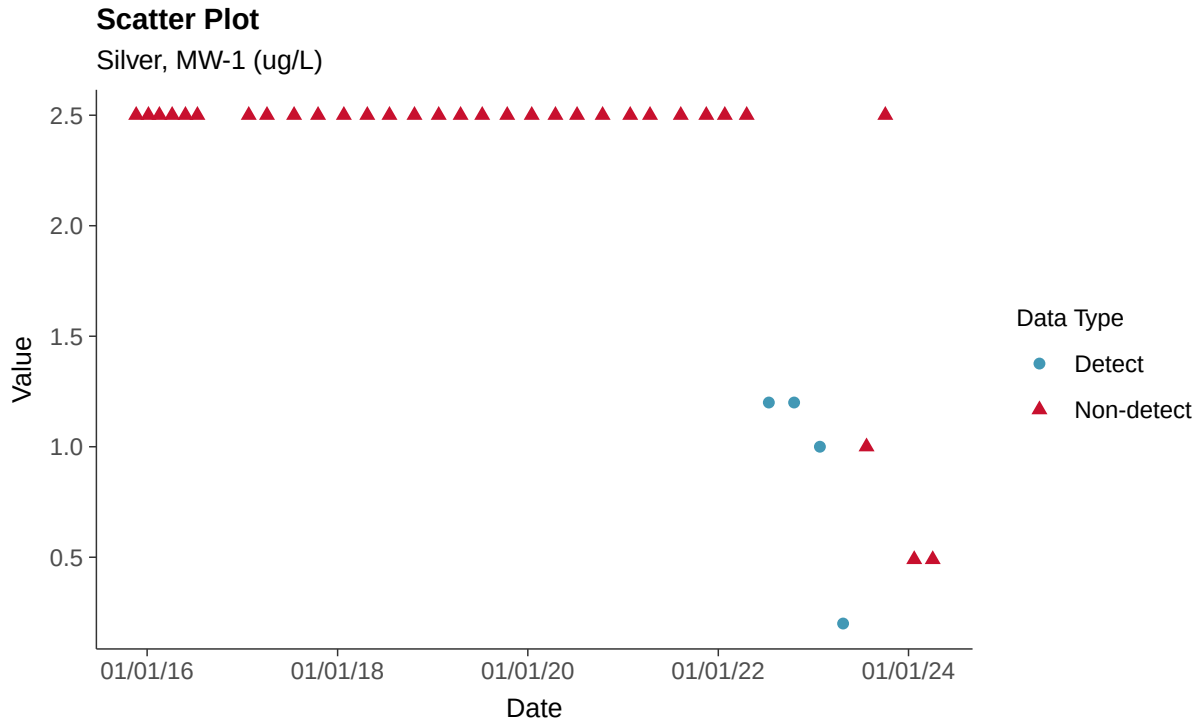
Trend Regression: Piecewise Linear-Linear-Linear

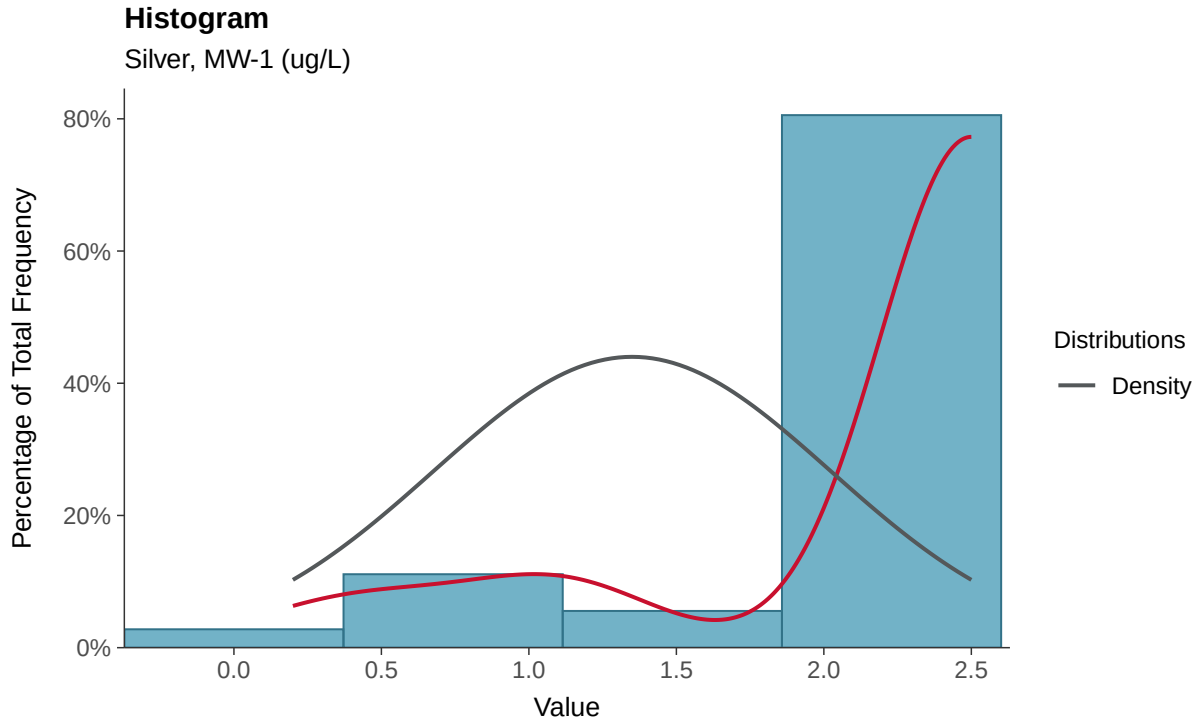
Nickel, MW-1 (ug/L)



App. I Metals: Silver, MW-1

ID: 1_1_122



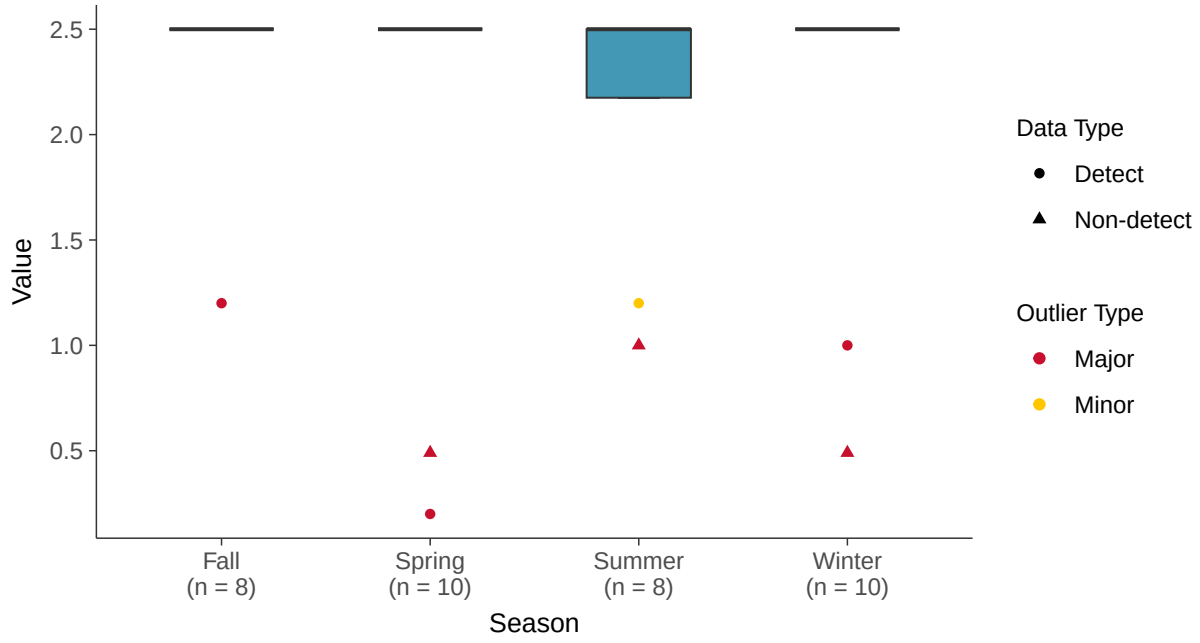


Boxplot

Silver, MW-1 (ug/L)

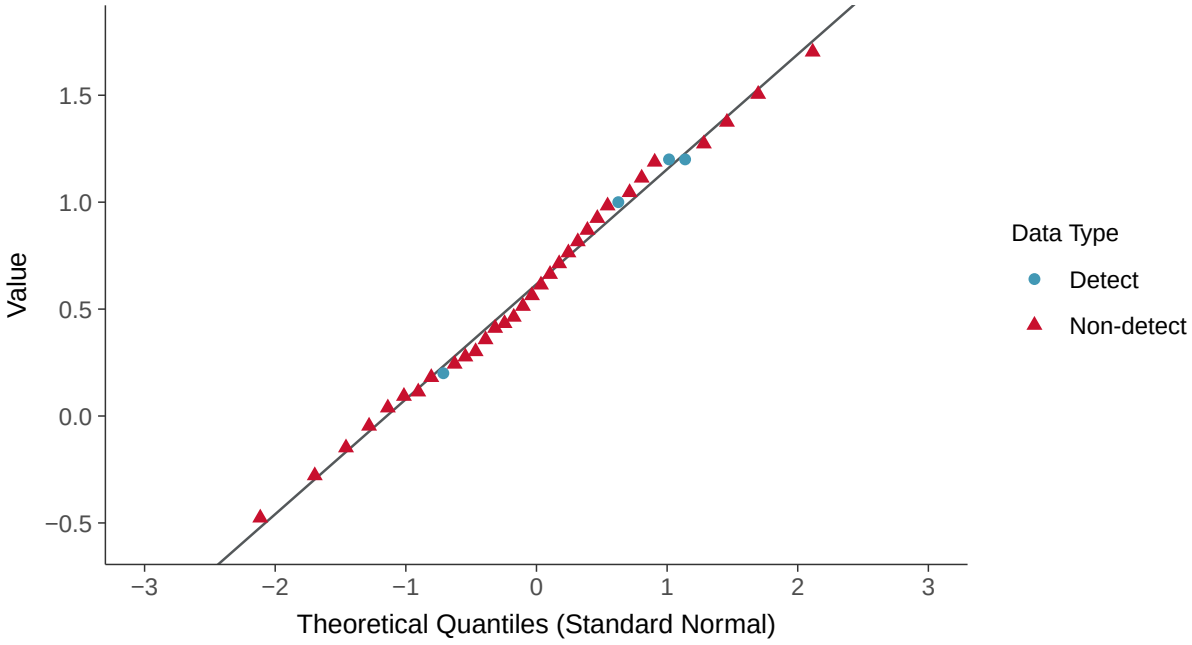
Boxplot by Season

Silver, MW-1 (ug/L)



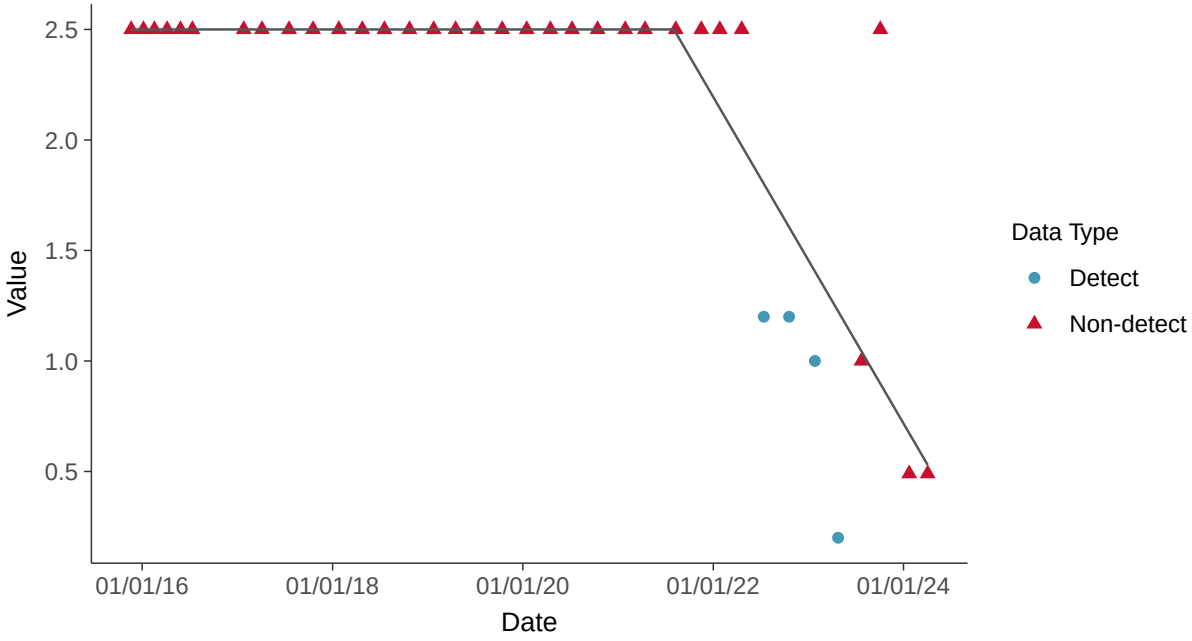
Normal Q-Q plot using ROS Imputed Estimates

Silver, MW-1 (ug/L)



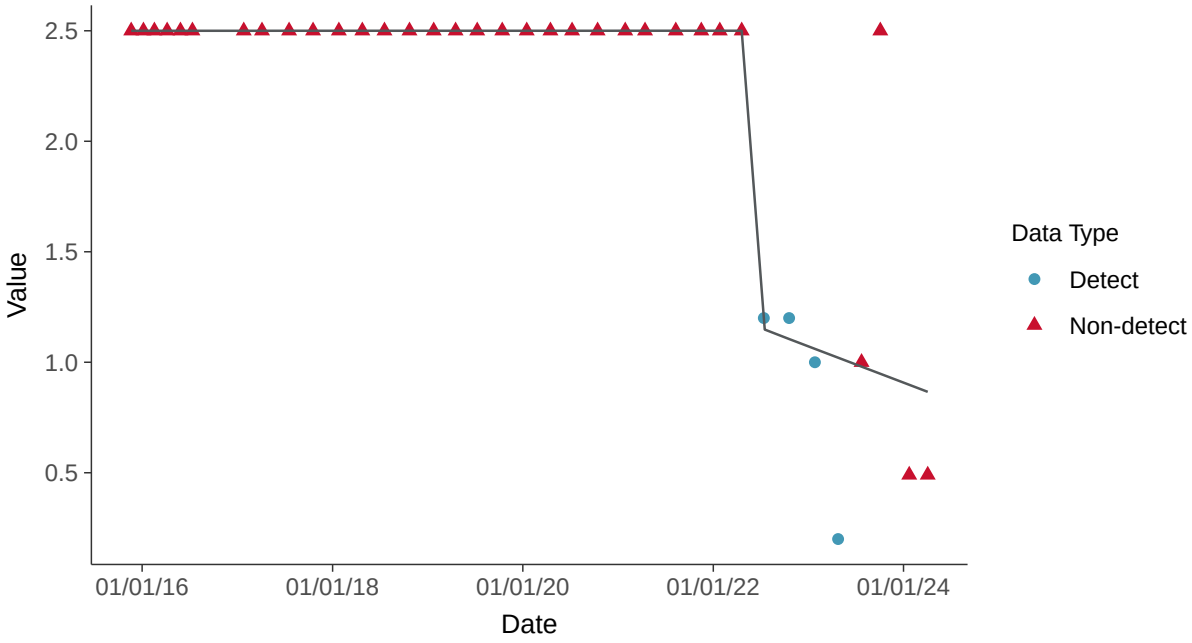
Trend Regression: Piecewise Linear-Linear

Silver, MW-1 (ug/L)



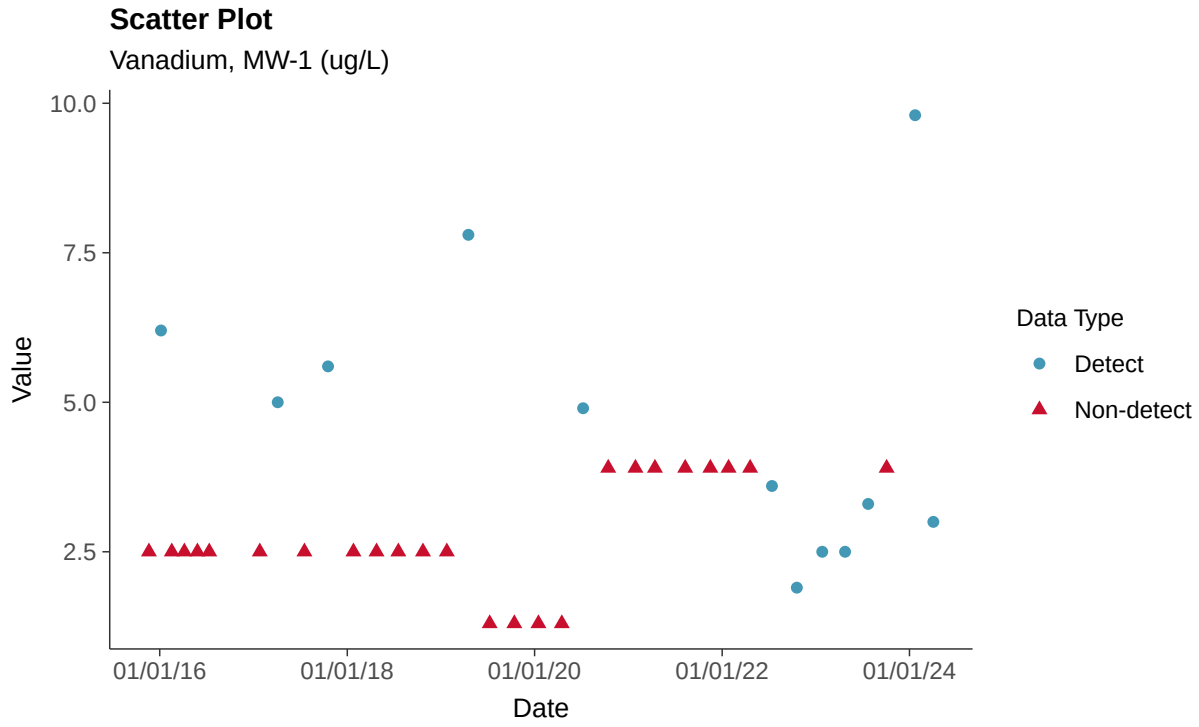
Trend Regression: Piecewise Linear-Linear-Linear

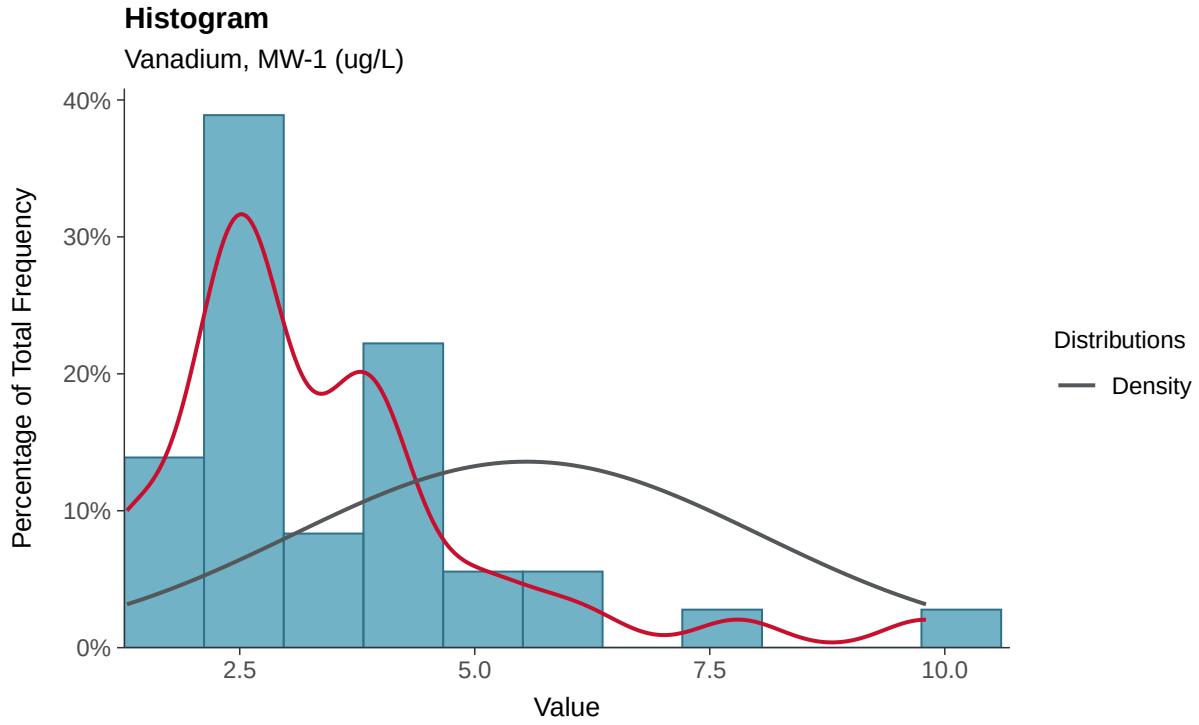
Silver, MW-1 (ug/L)



App. I Metals: Vanadium, MW-1

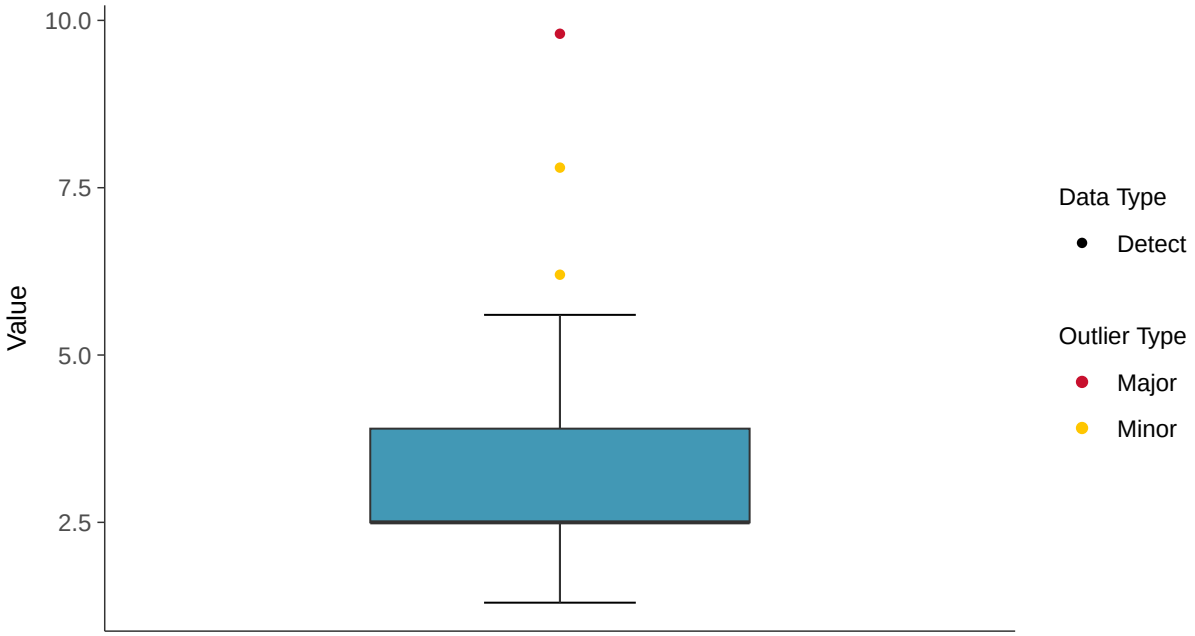
ID: 1_1_127





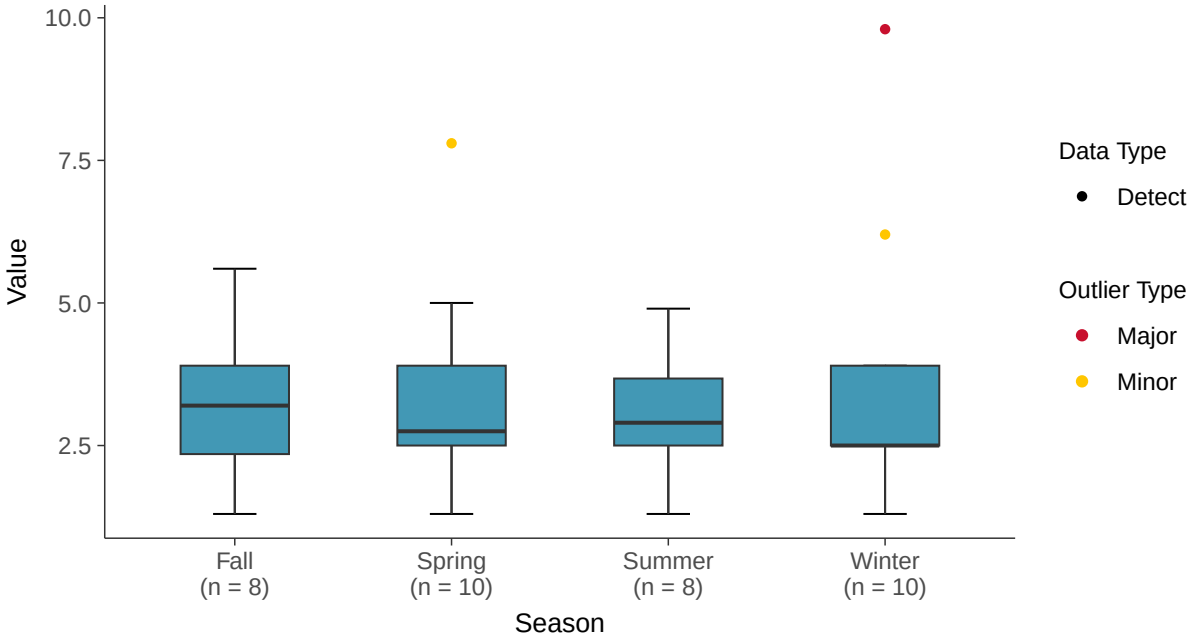
Boxplot

Vanadium, MW-1 (ug/L)



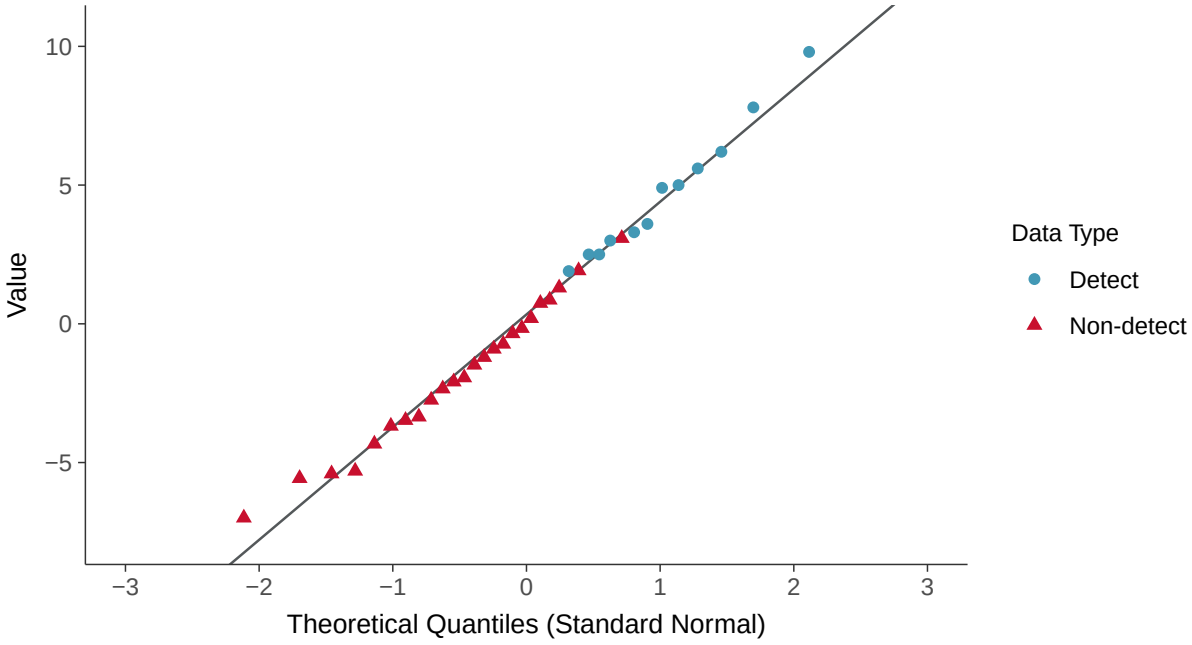
Boxplot by Season

Vanadium, MW-1 (ug/L)



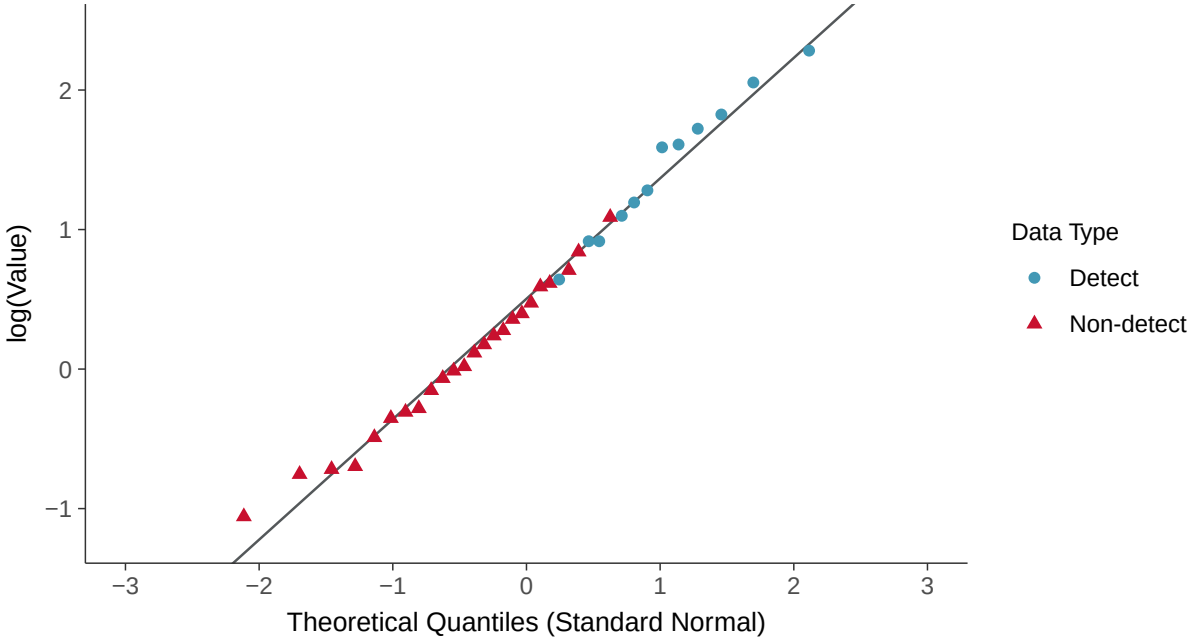
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-1 (ug/L)



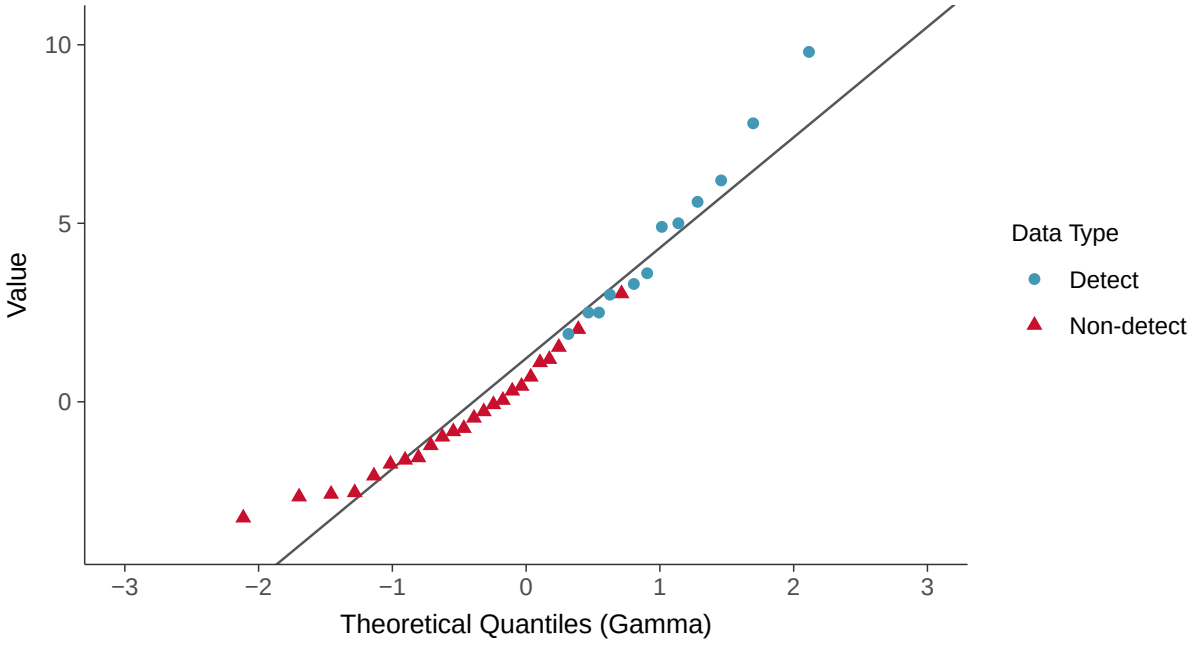
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-1 (ug/L)



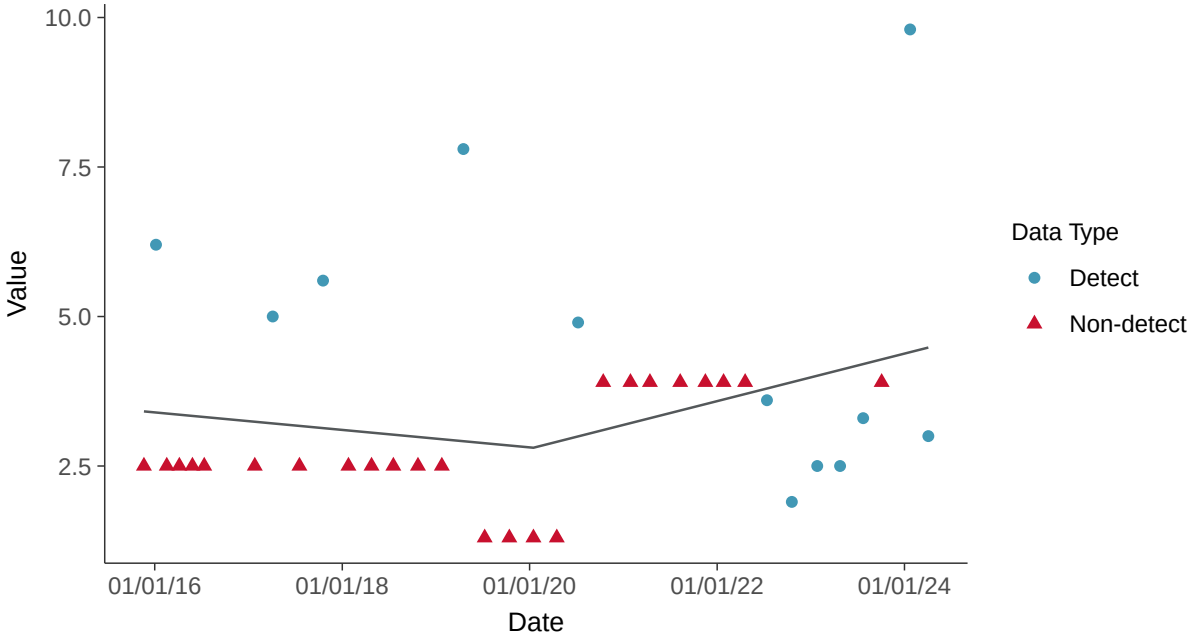
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-1 (ug/L)



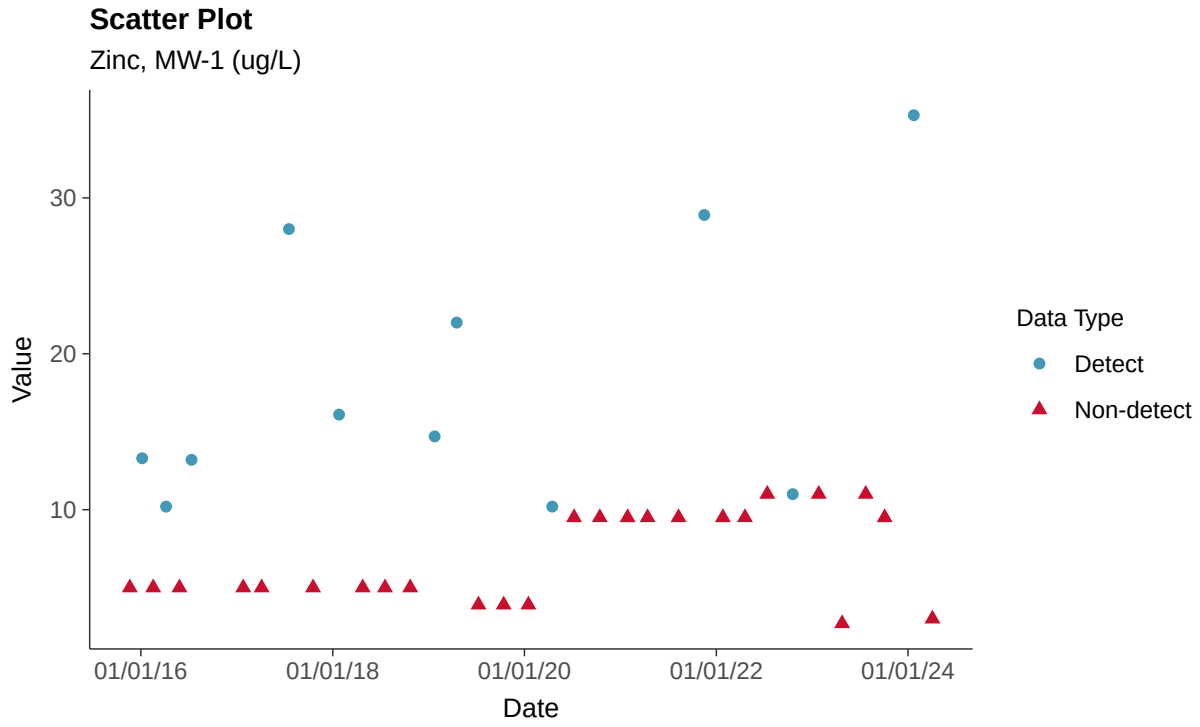
Trend Regression: Piecewise Linear-Linear

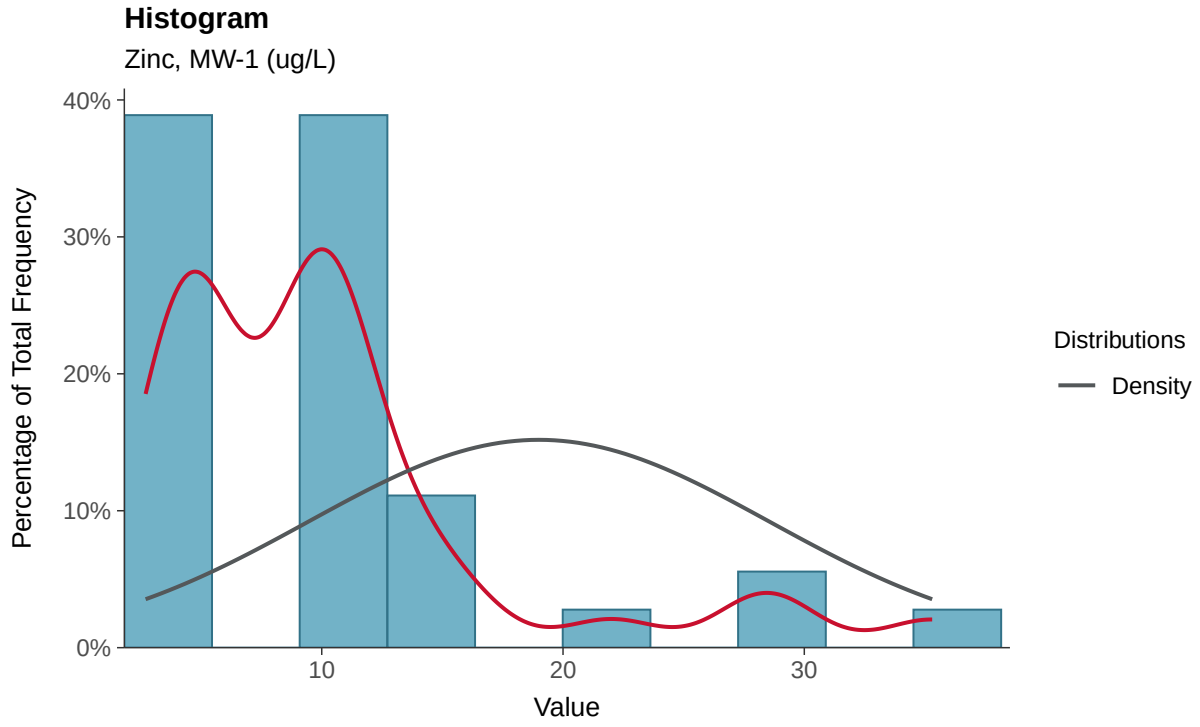
Vanadium, MW-1 (ug/L)



App. I Metals: Zinc, MW-1

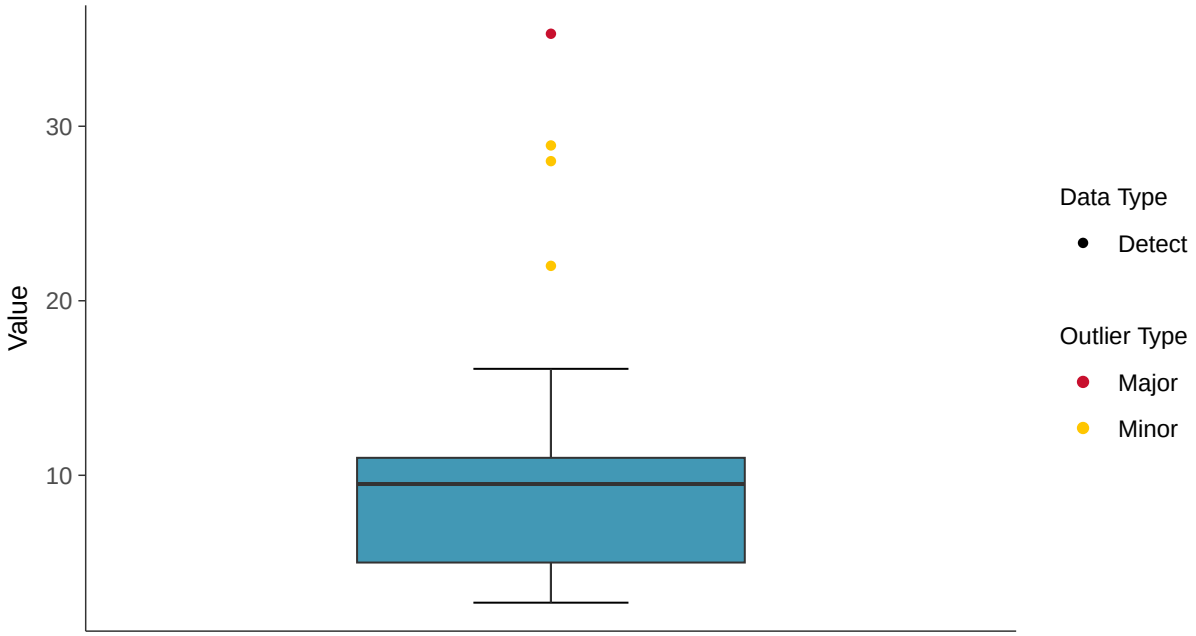
ID: 1_1_128





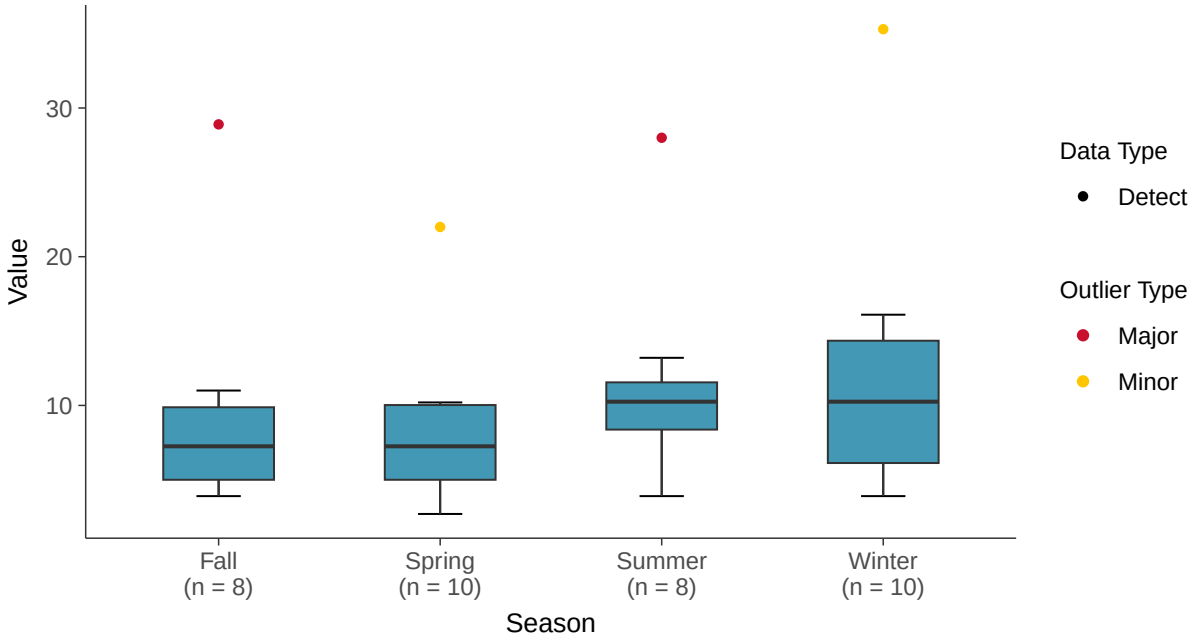
Boxplot

Zinc, MW-1 (ug/L)



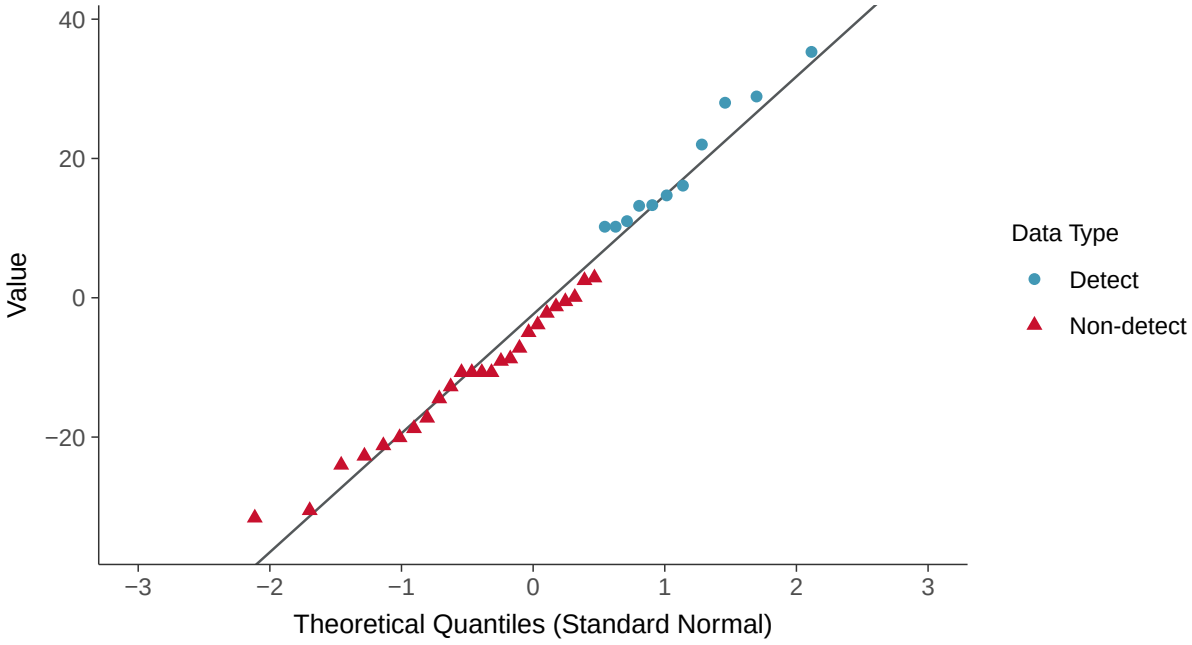
Boxplot by Season

Zinc, MW-1 (ug/L)



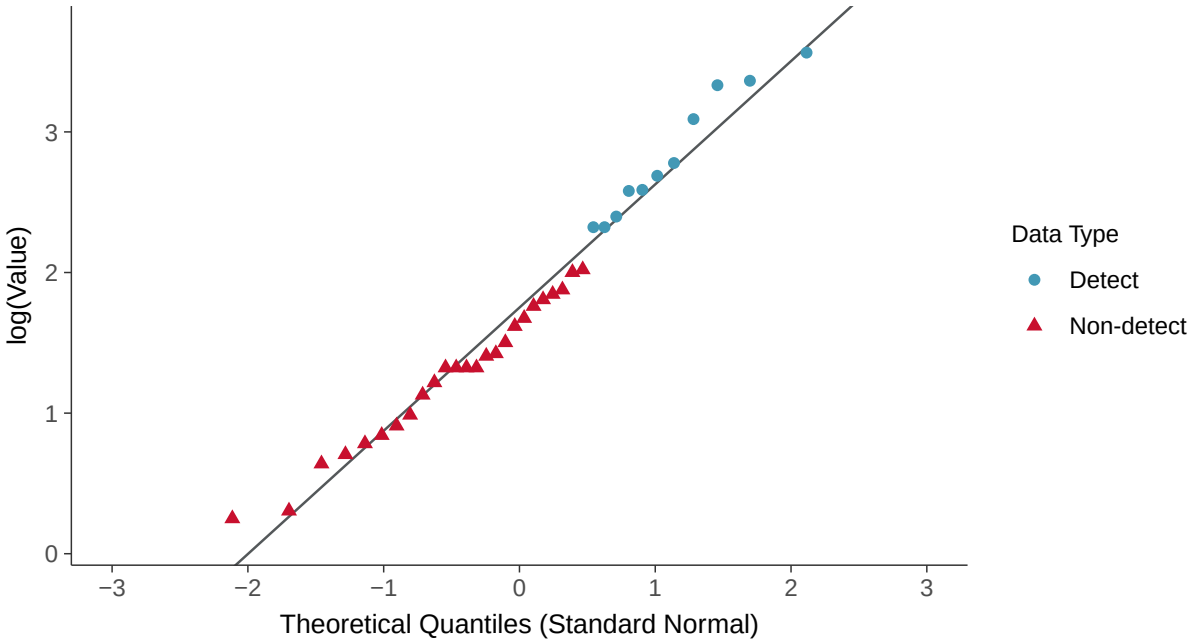
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



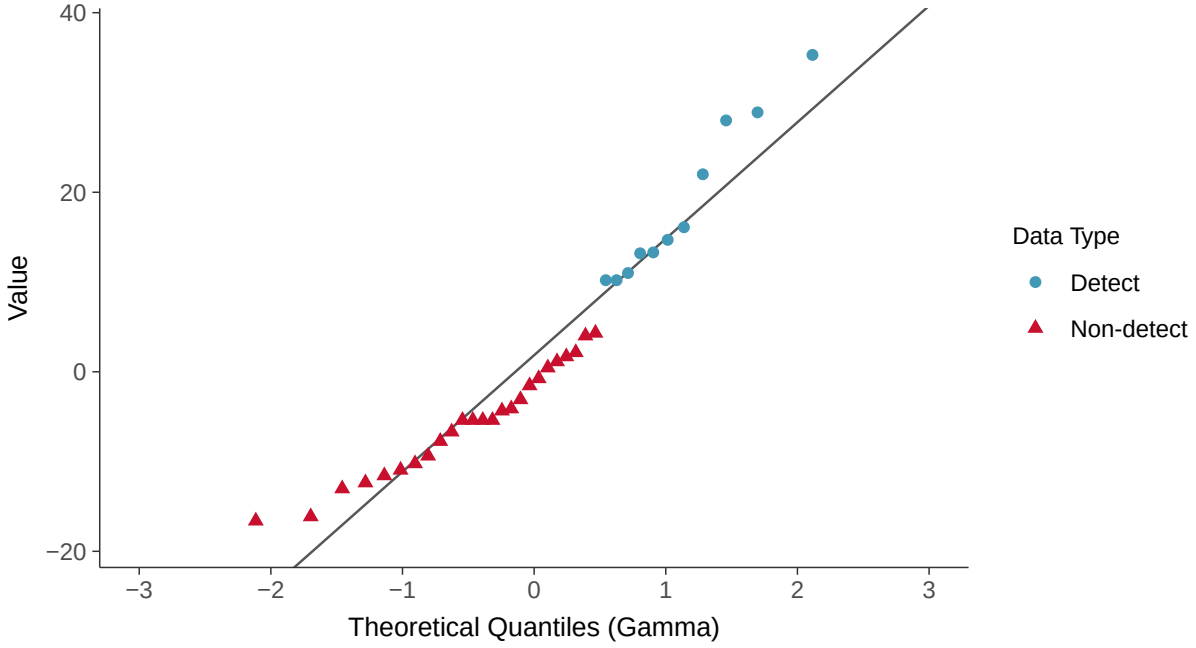
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



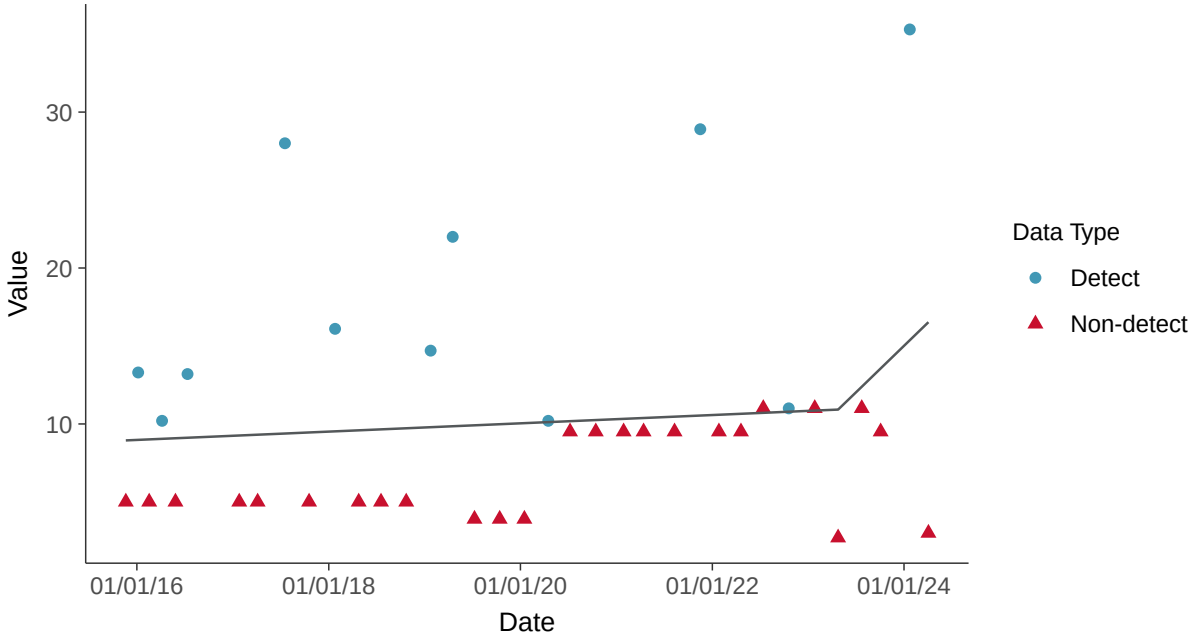
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



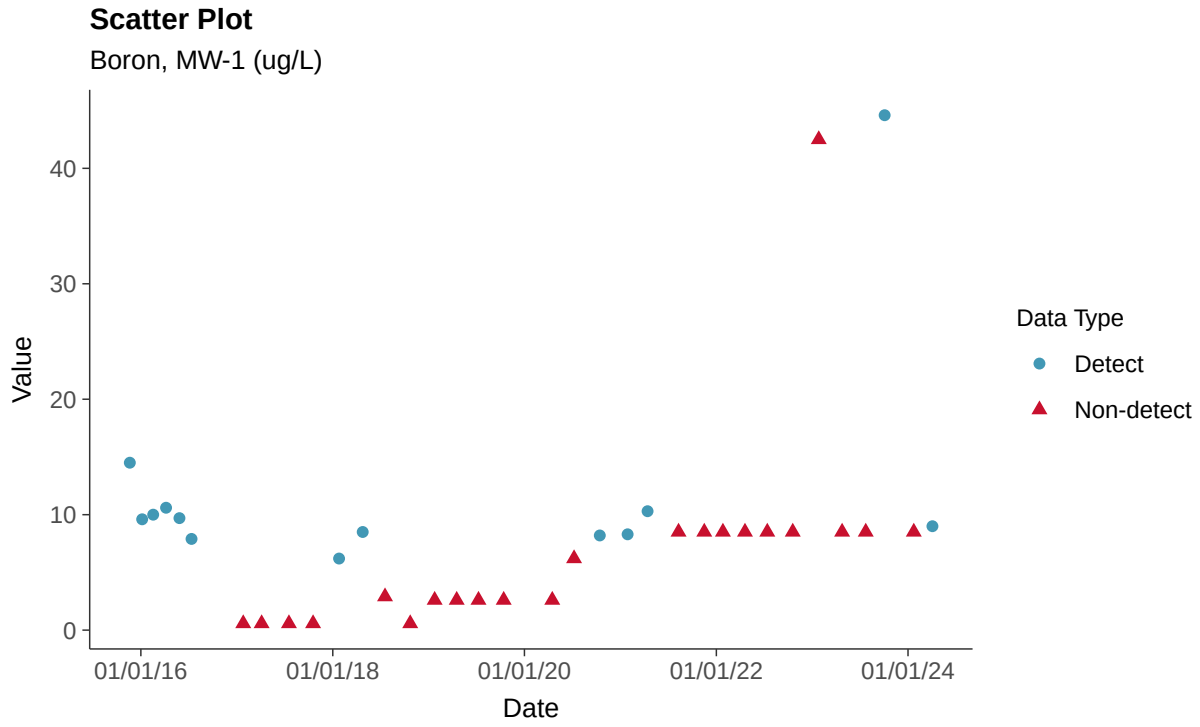
Trend Regression: Piecewise Linear-Linear

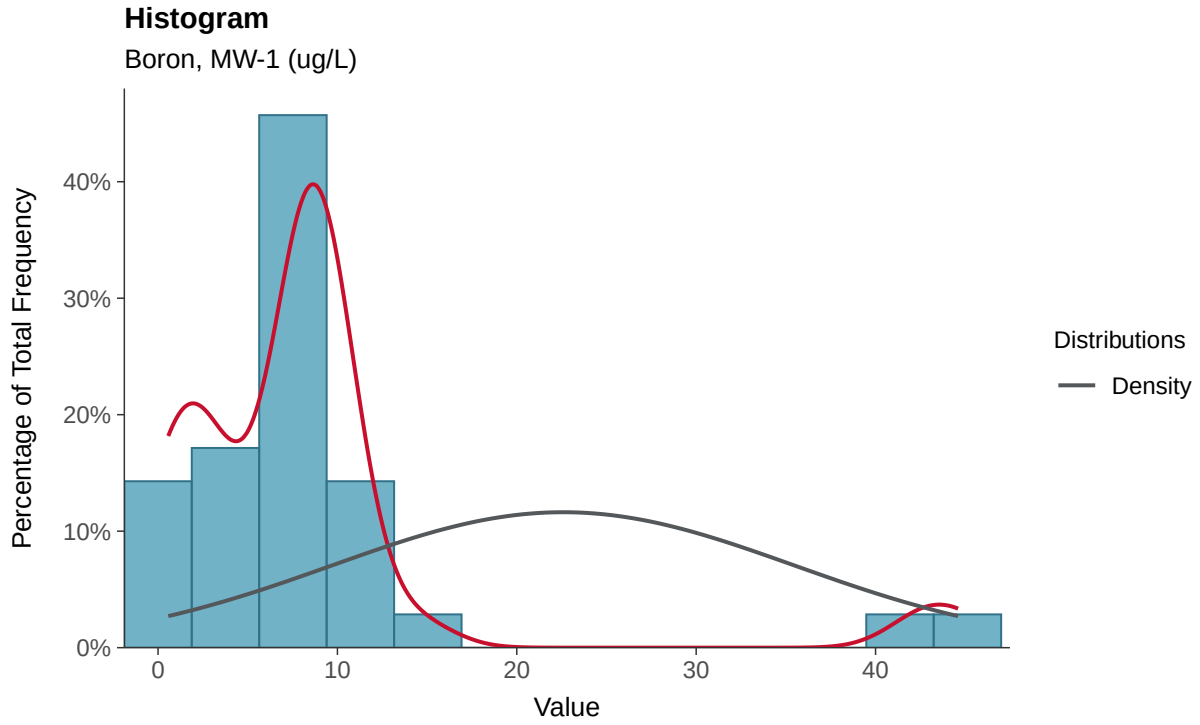
Zinc, MW-1 (ug/L)



App. III: Boron, MW-1

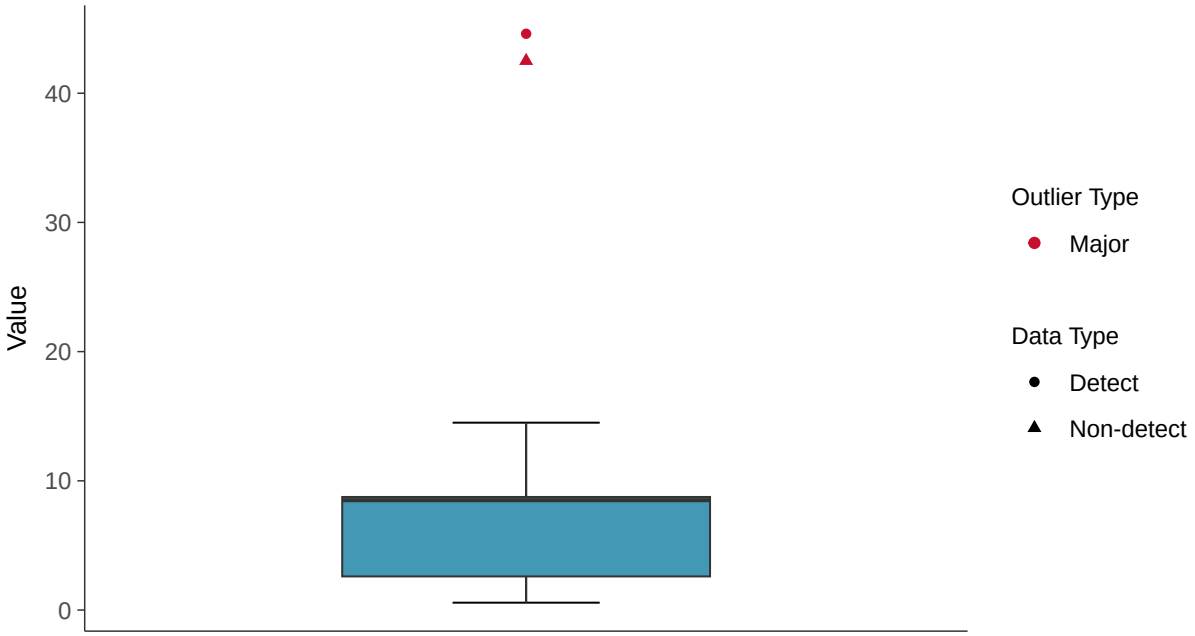
ID: 1_2_105





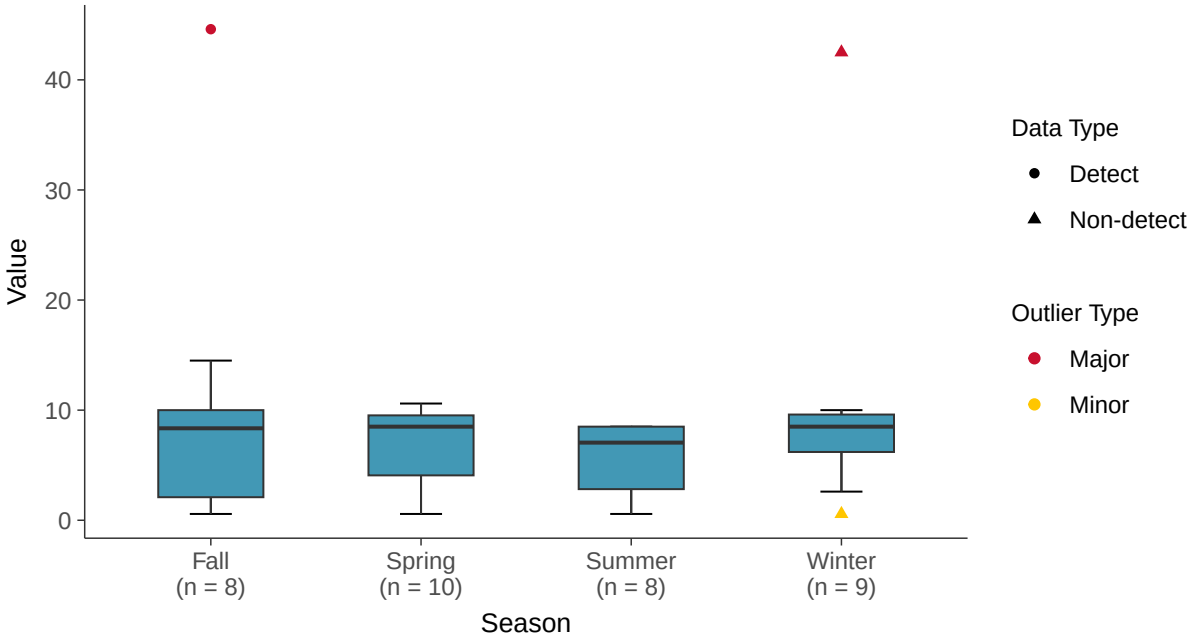
Boxplot

Boron, MW-1 (ug/L)



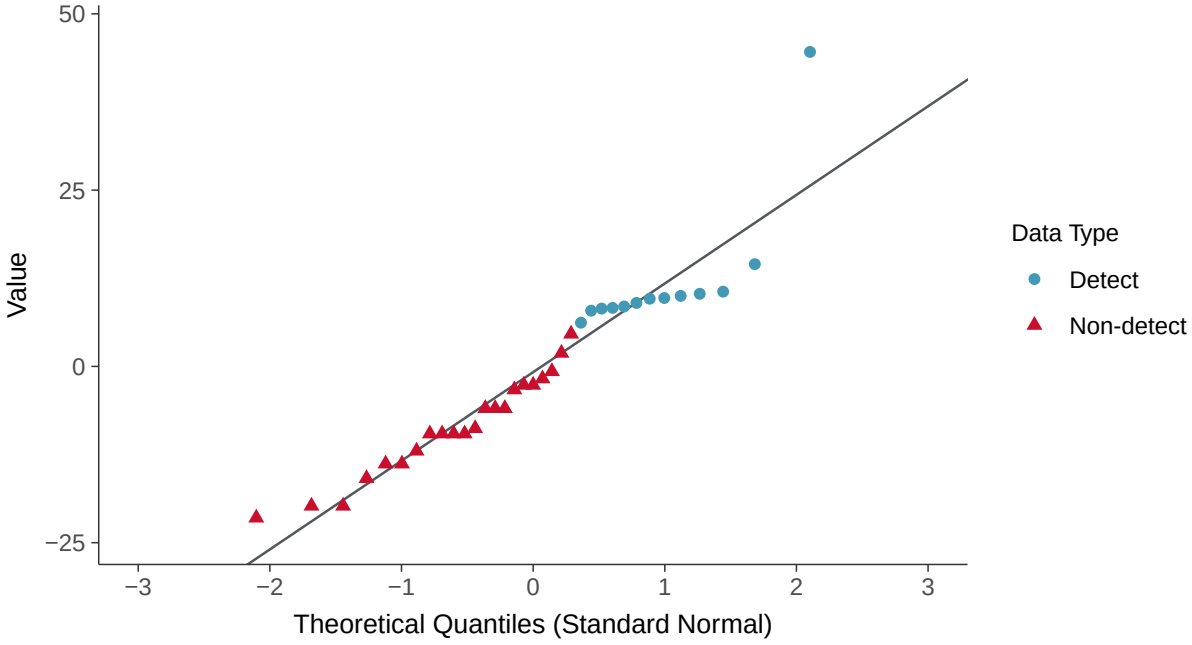
Boxplot by Season

Boron, MW-1 (ug/L)



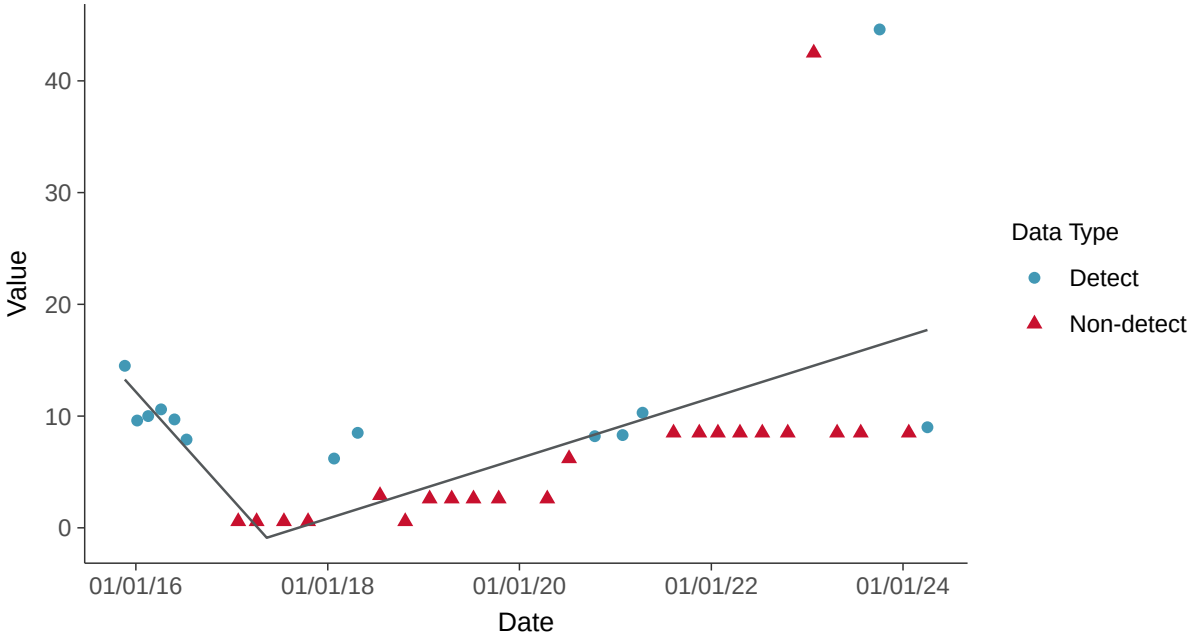
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-1 (ug/L)



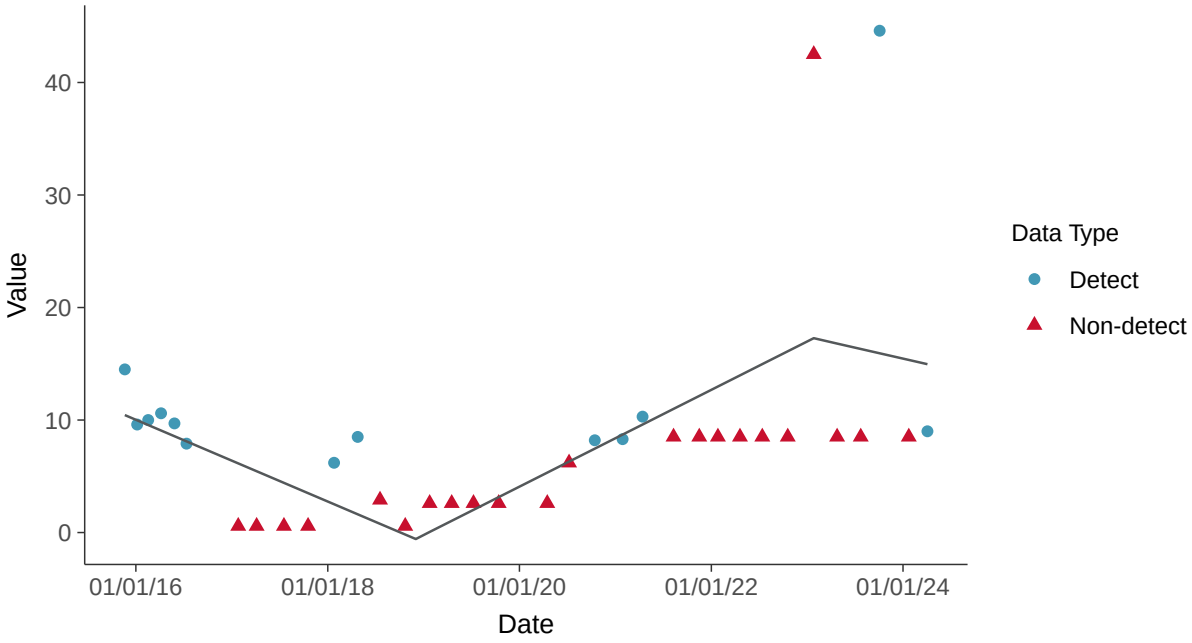
Trend Regression: Piecewise Linear-Linear

Boron, MW-1 (ug/L)



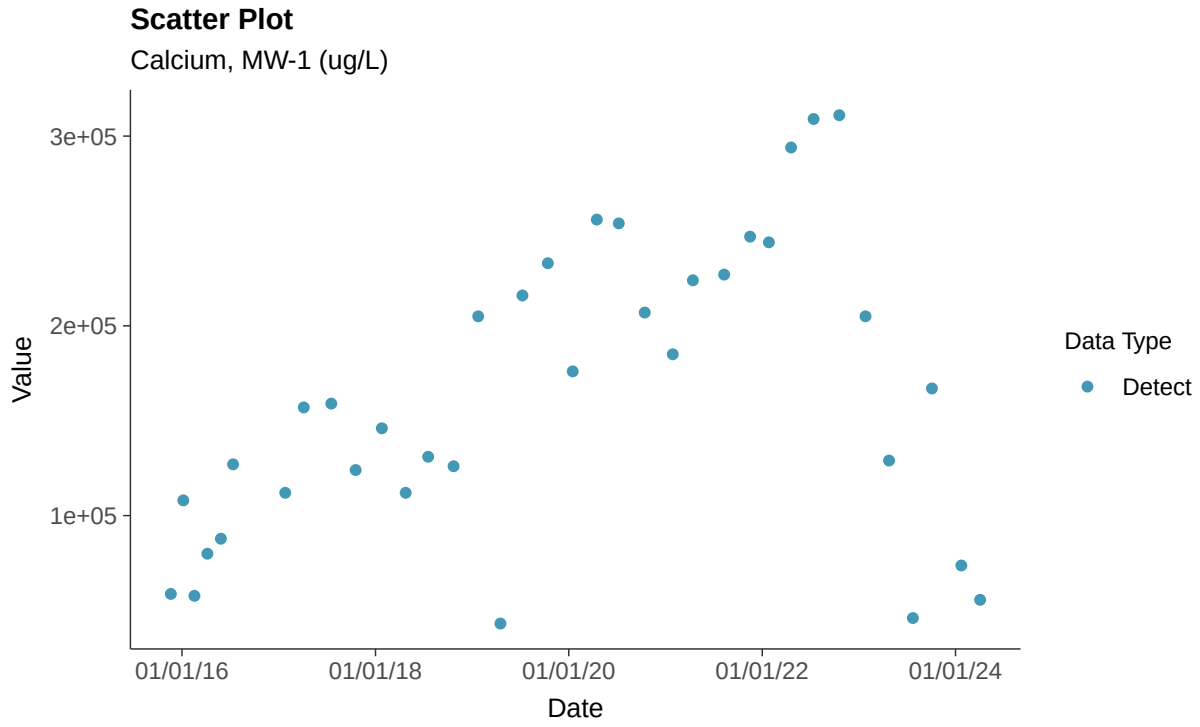
Trend Regression: Piecewise Linear-Linear-Linear

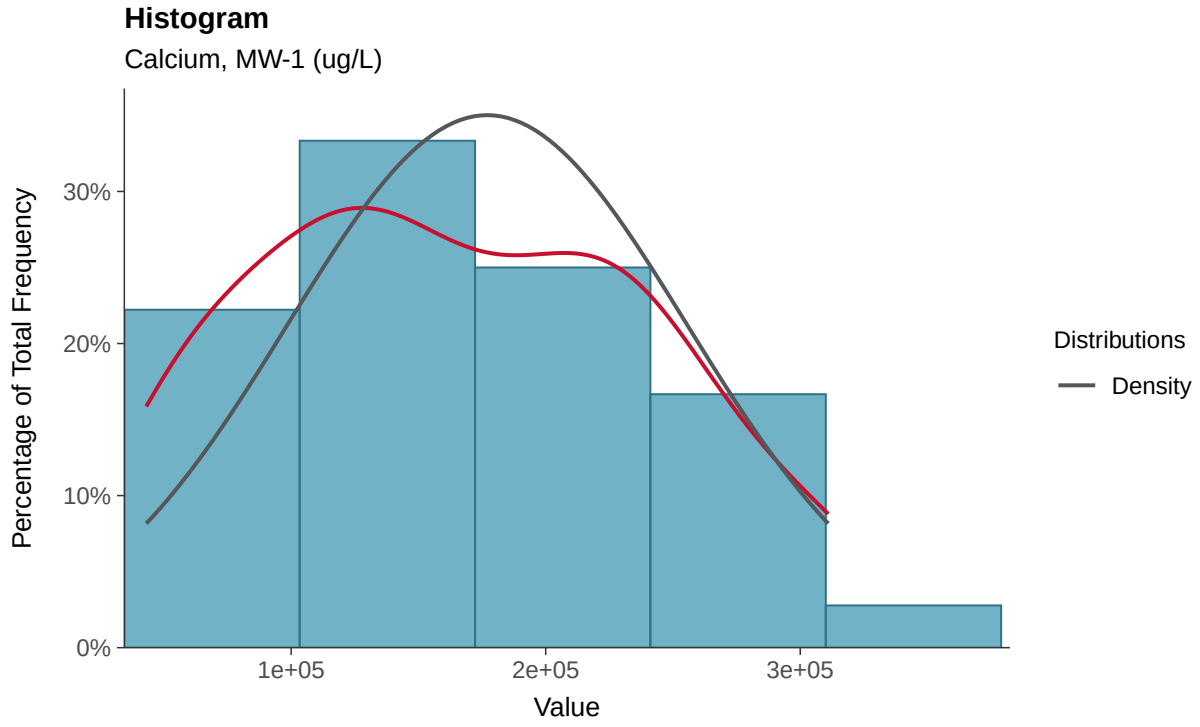
Boron, MW-1 (ug/L)



App. III: Calcium, MW-1

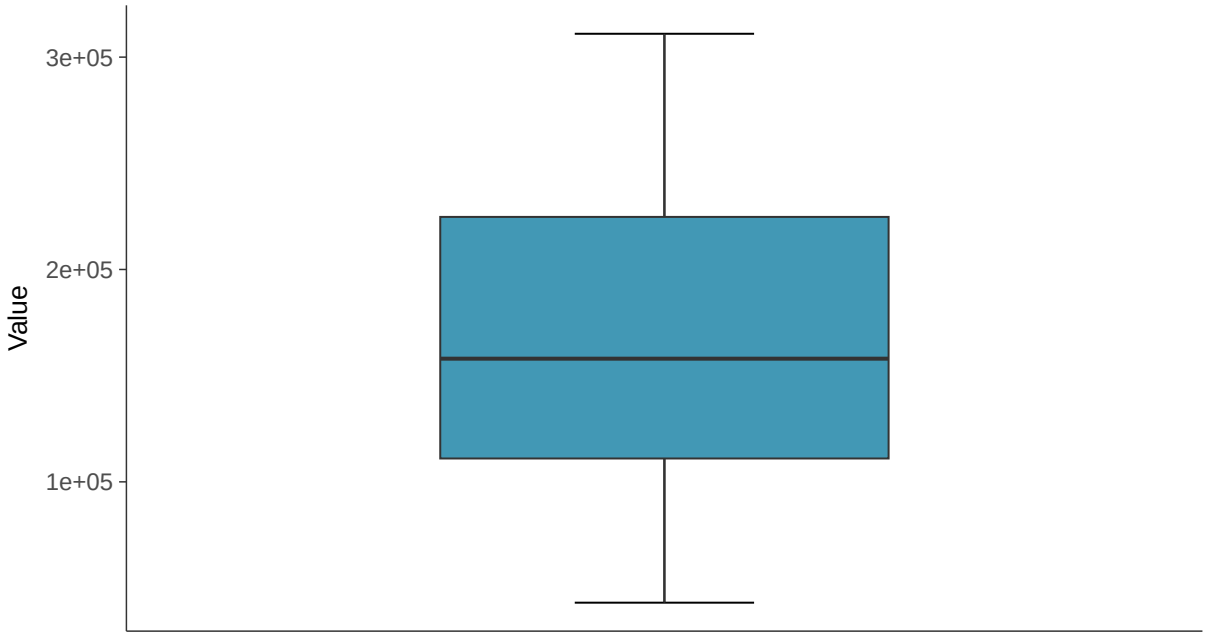
ID: 1_2_107





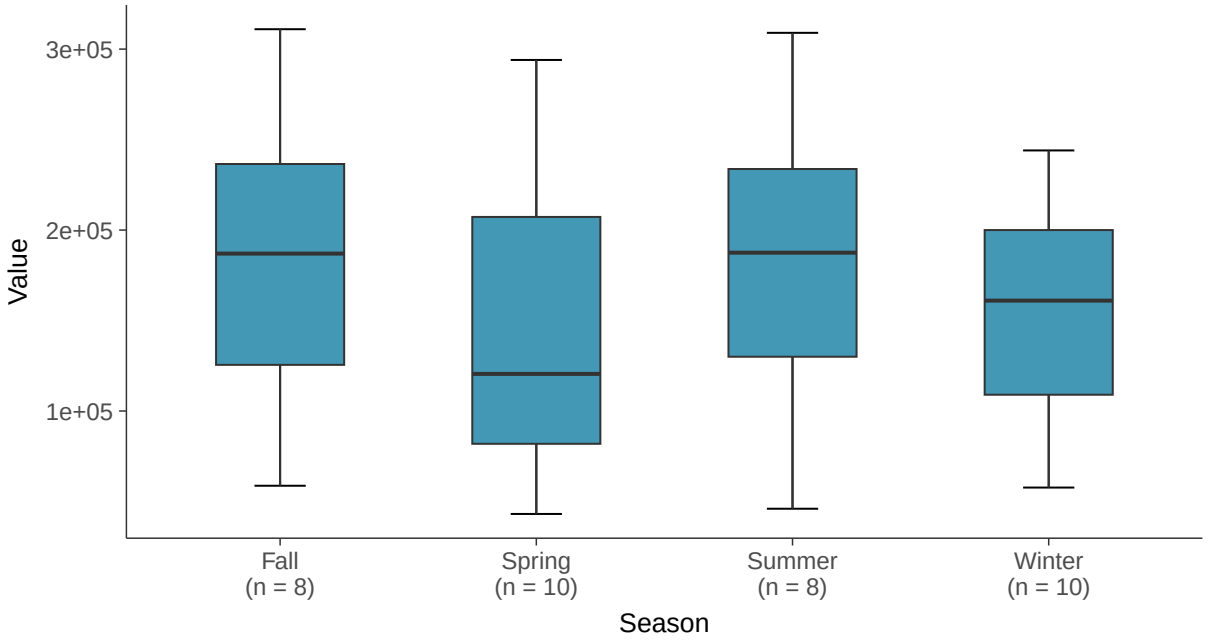
Boxplot

Calcium, MW-1 (ug/L)



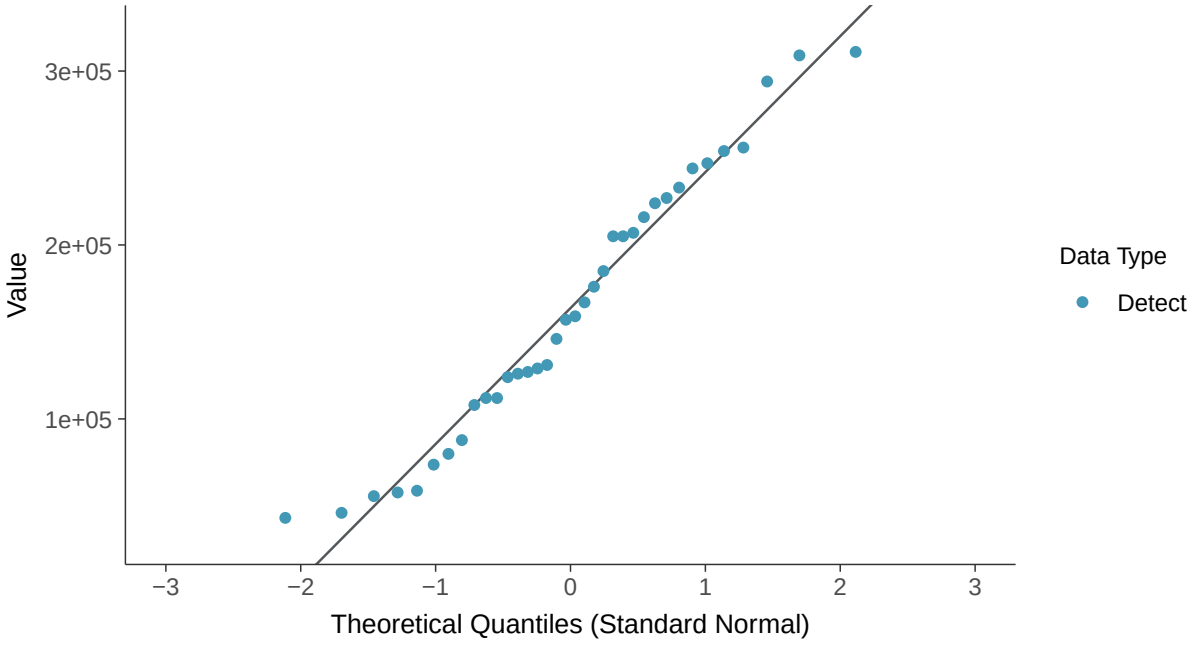
Boxplot by Season

Calcium, MW-1 (ug/L)



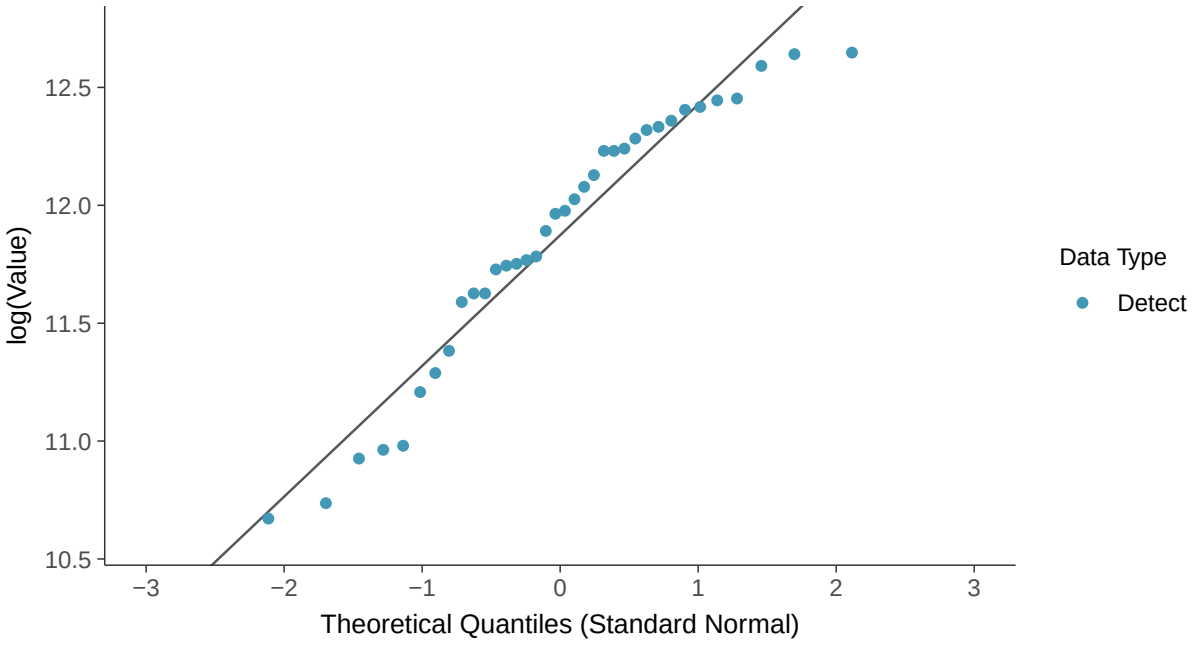
Normal Q-Q plot

Calcium, MW-1 (ug/L)



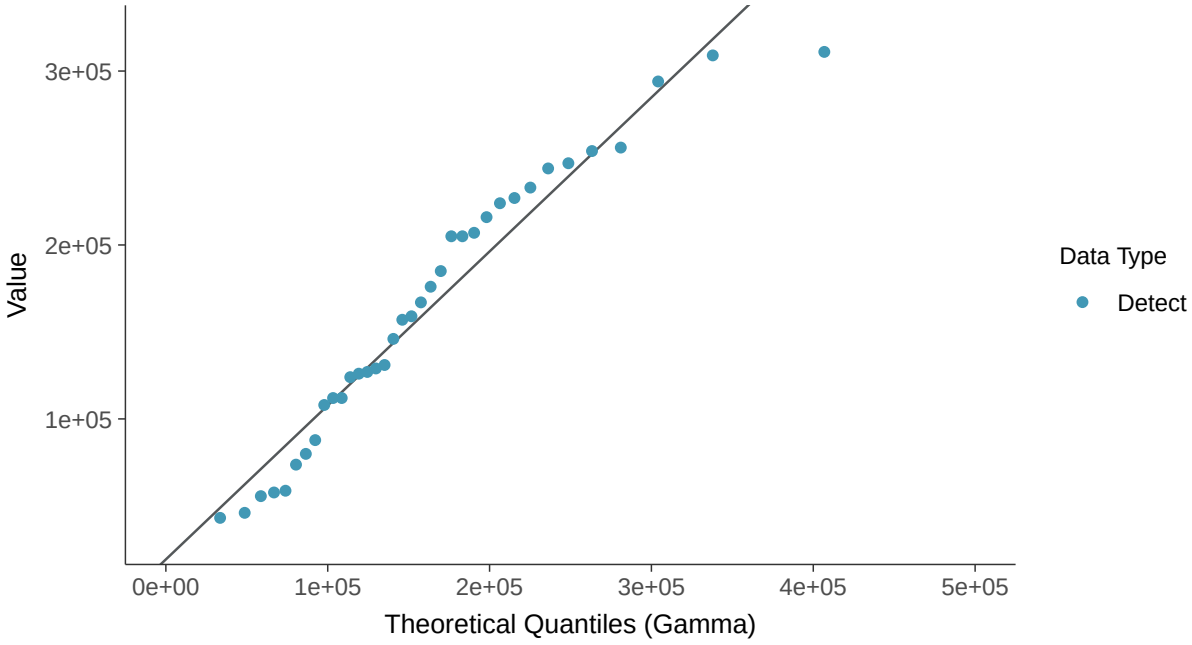
Lognormal Q-Q plot

Calcium, MW-1 (ug/L)



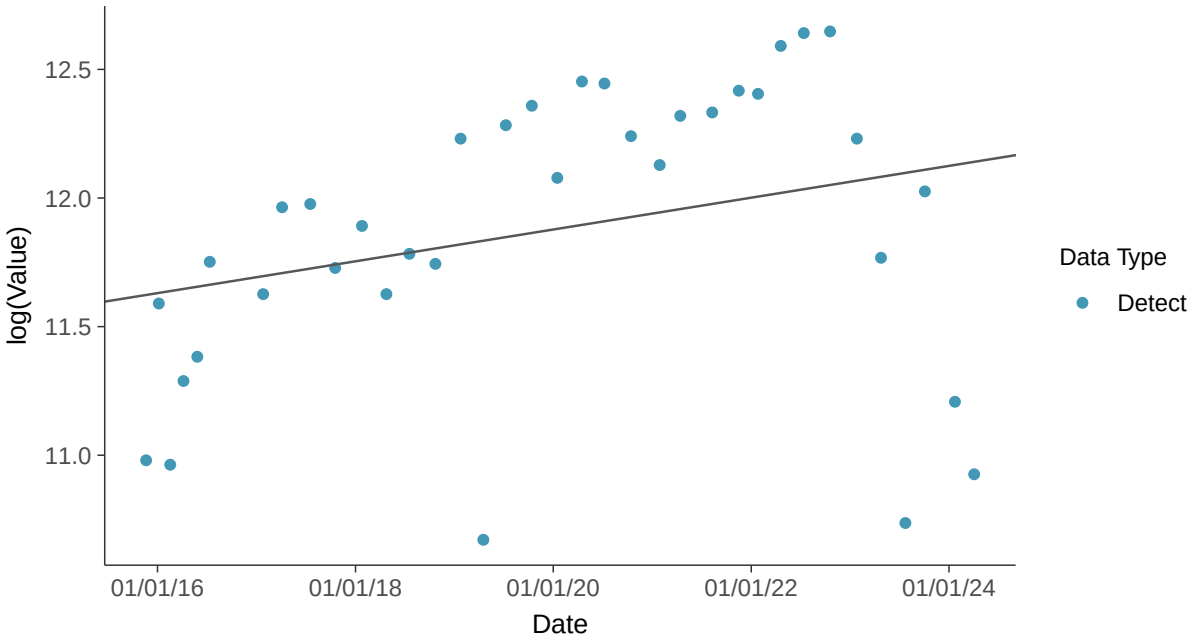
Gamma Q-Q plot

Calcium, MW-1 (ug/L)



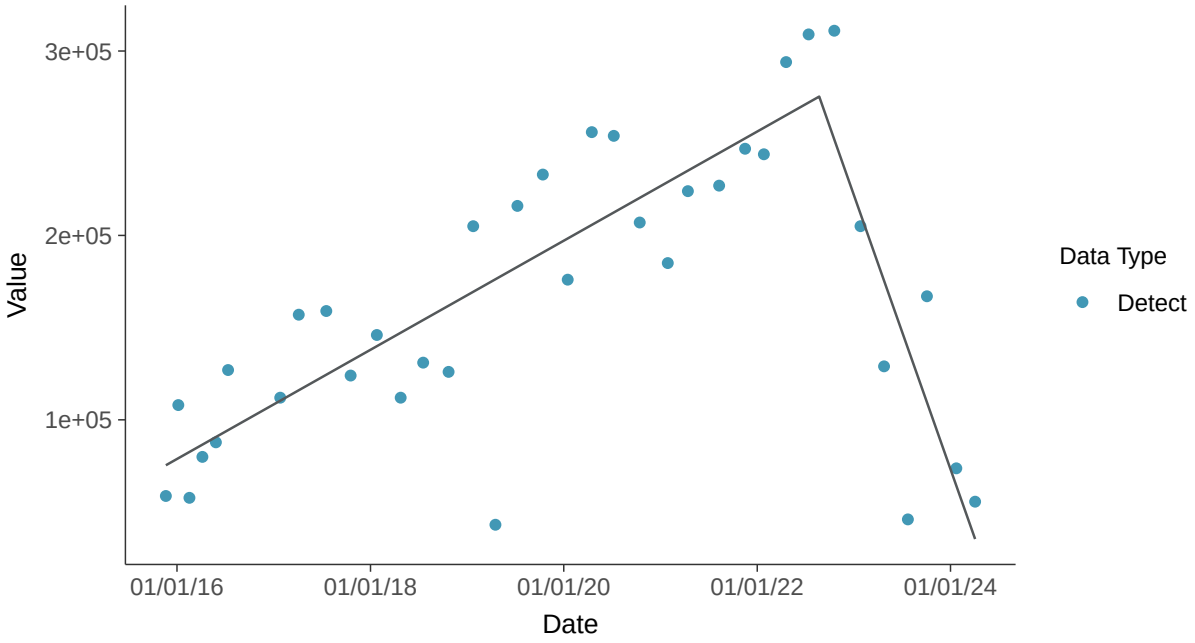
Trend Regression: Lognormal MLE

Calcium, MW-1 (ug/L)



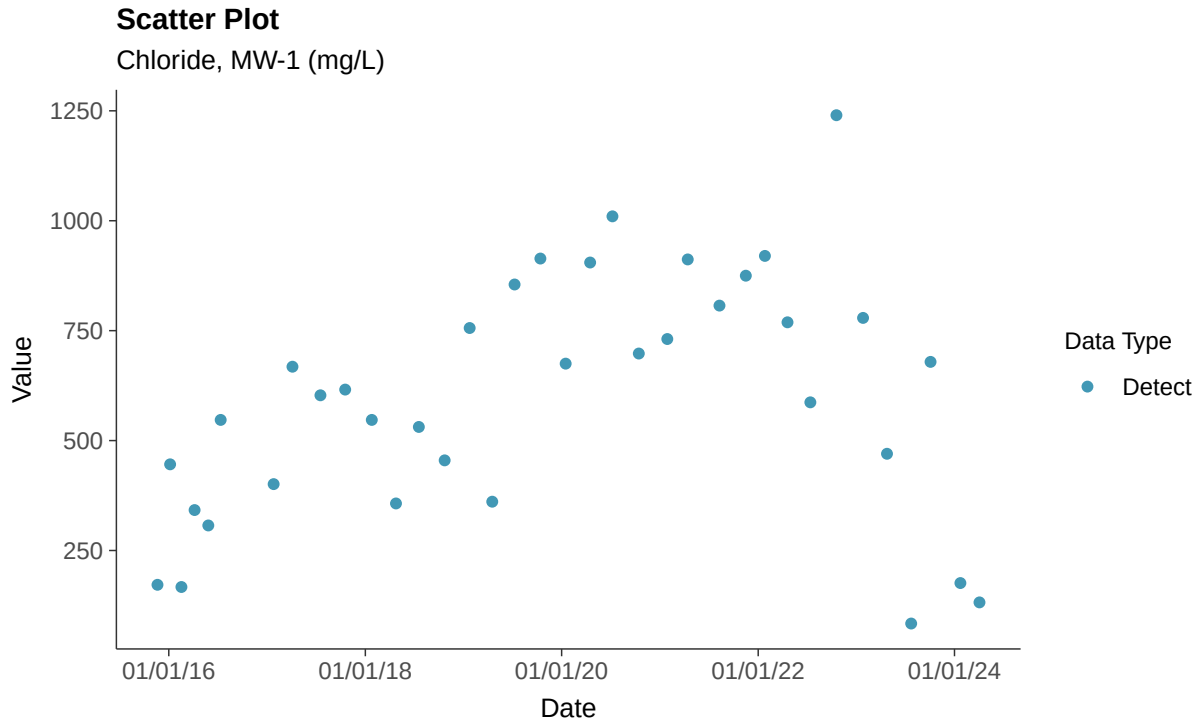
Trend Regression: Piecewise Linear-Linear

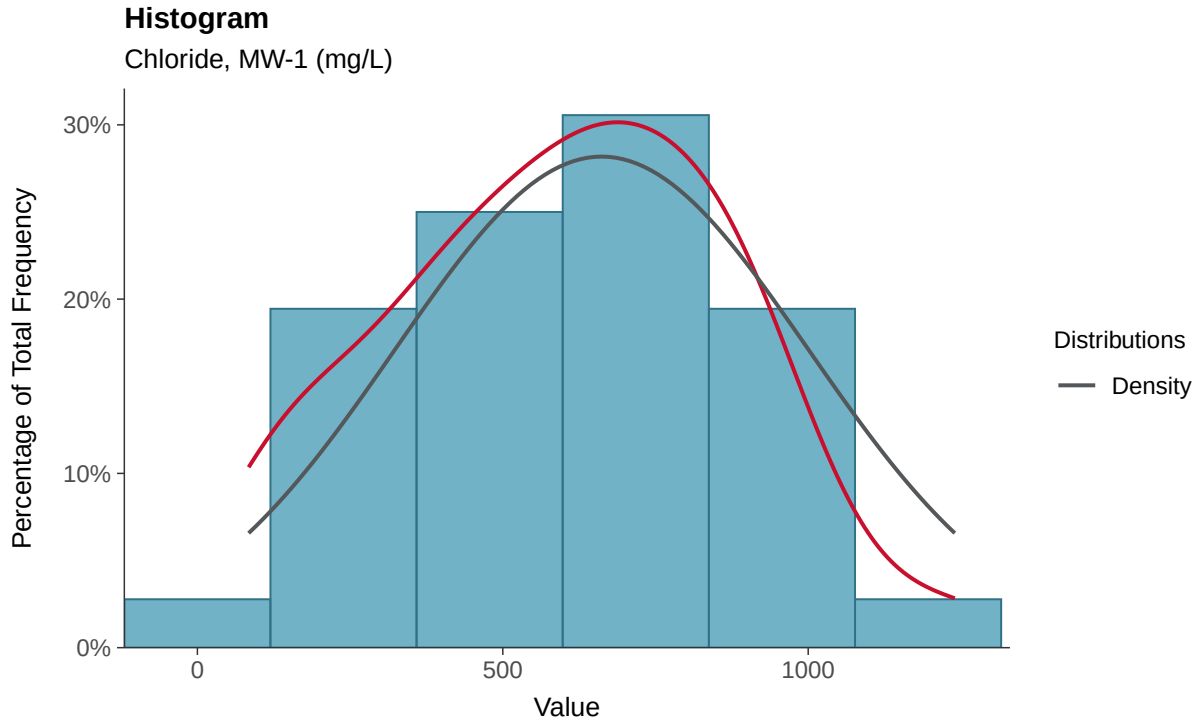
Calcium, MW-1 (ug/L)



App. III: Chloride, MW-1

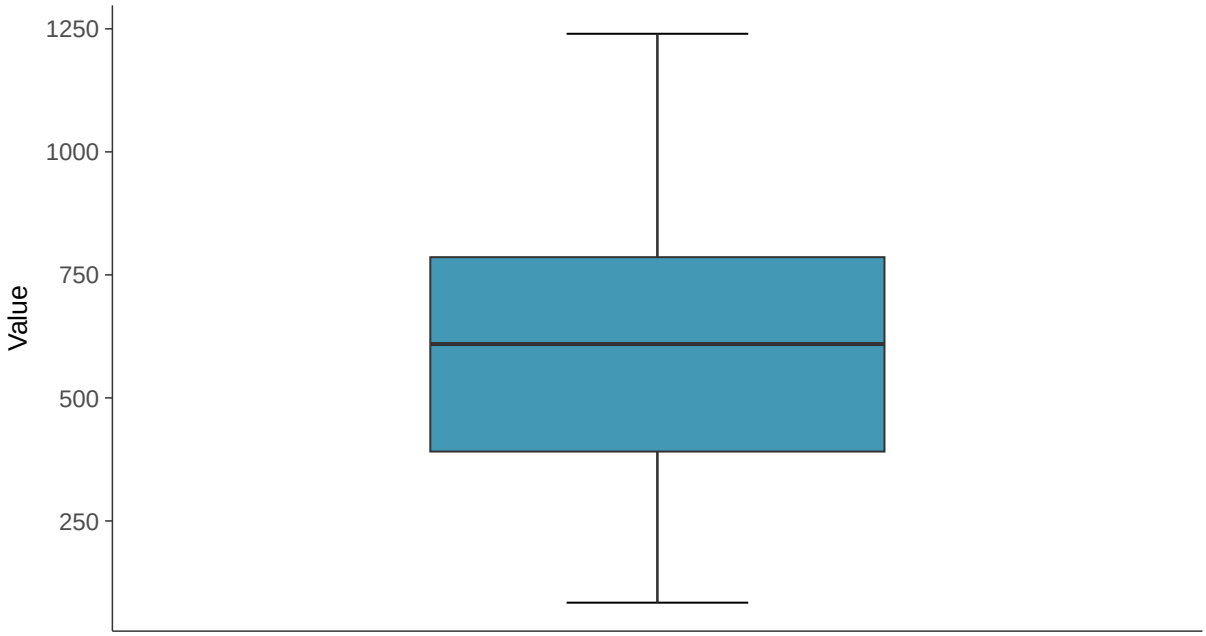
ID: 1_2_108





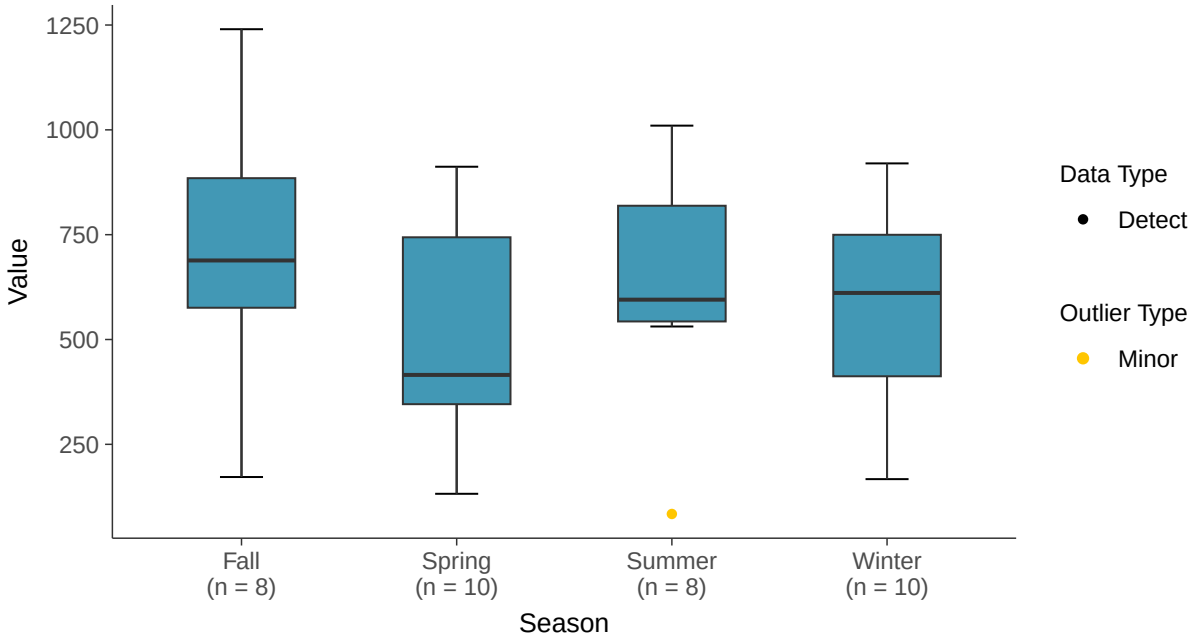
Boxplot

Chloride, MW-1 (mg/L)



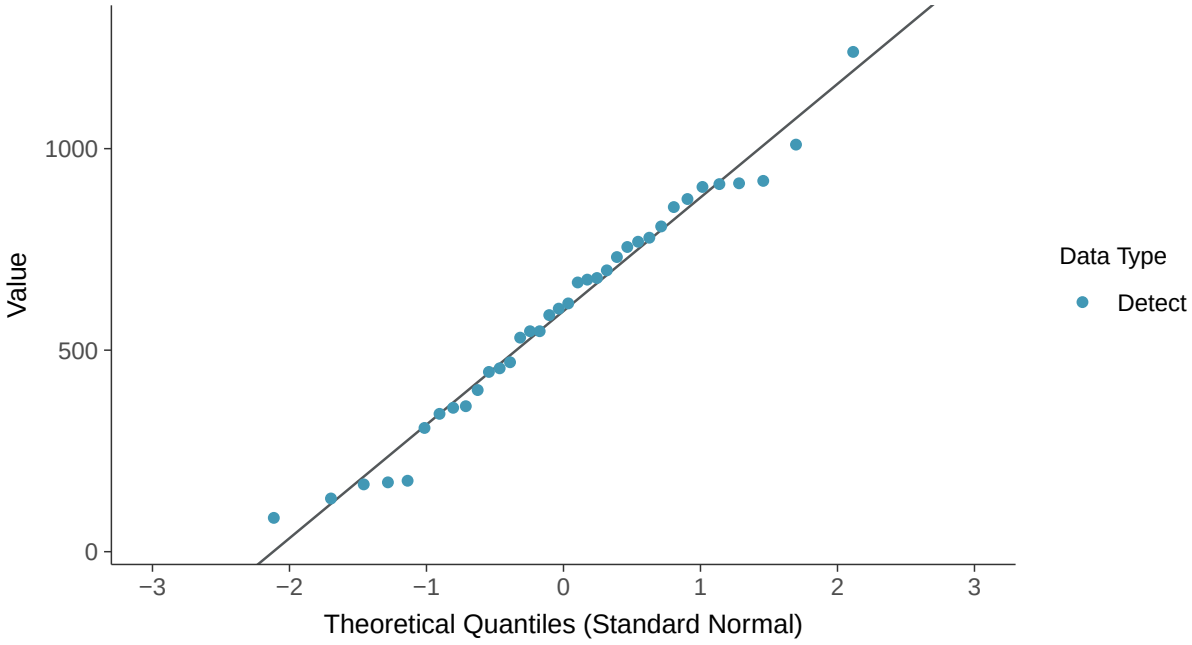
Boxplot by Season

Chloride, MW-1 (mg/L)



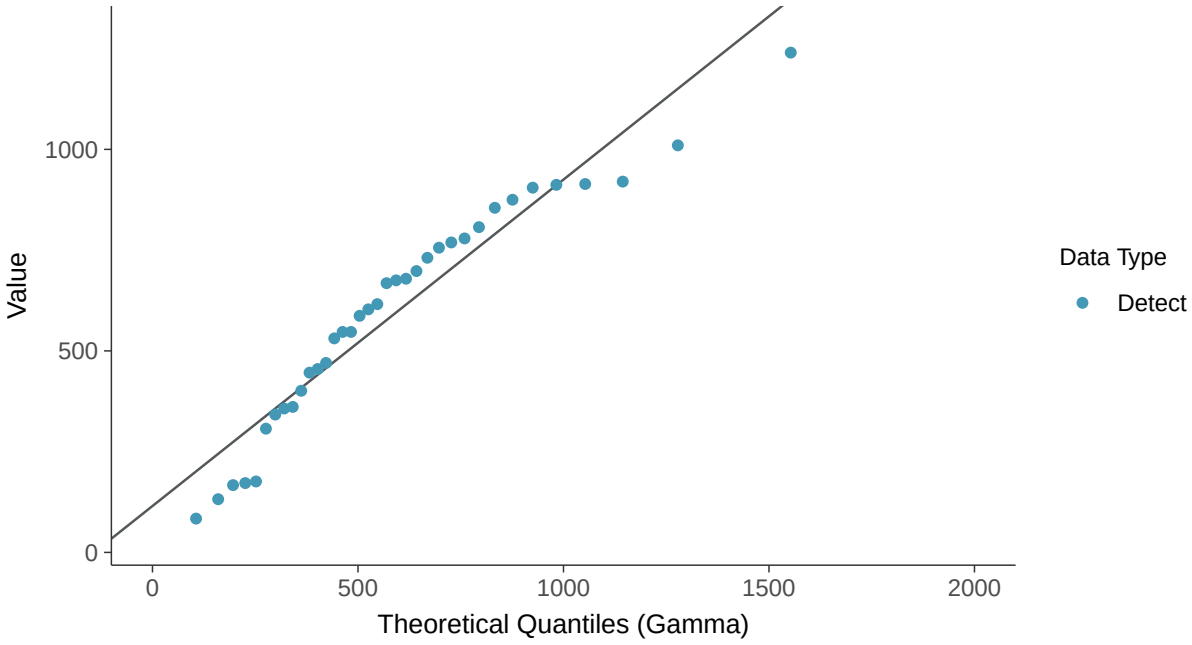
Normal Q-Q plot

Chloride, MW-1 (mg/L)



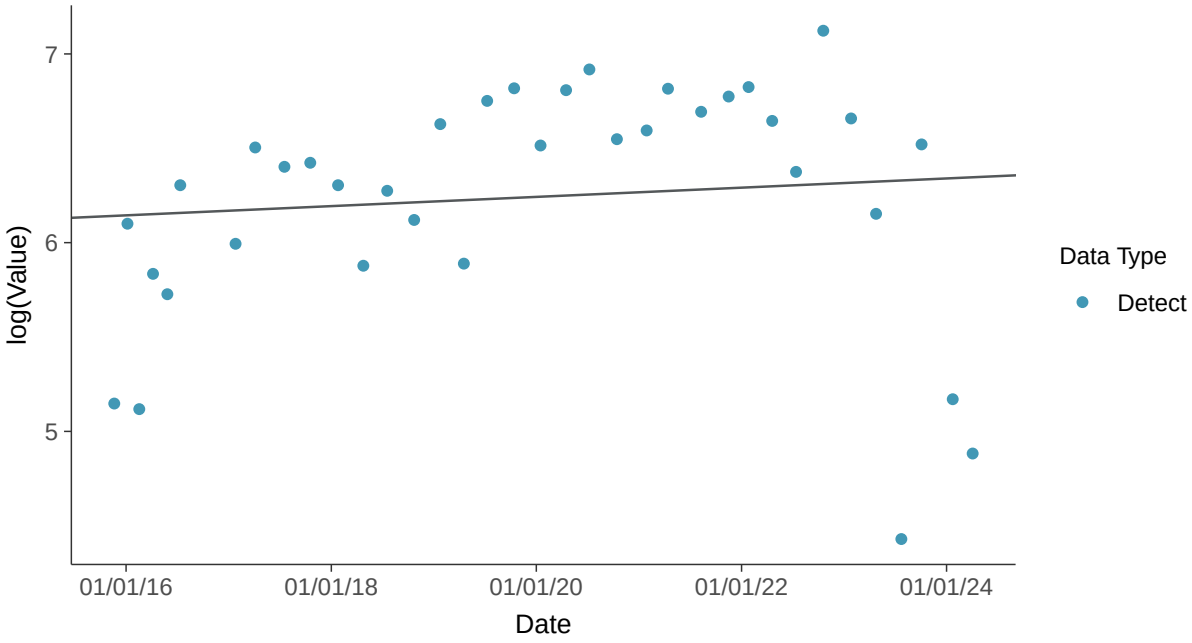
Gamma Q-Q plot

Chloride, MW-1 (mg/L)



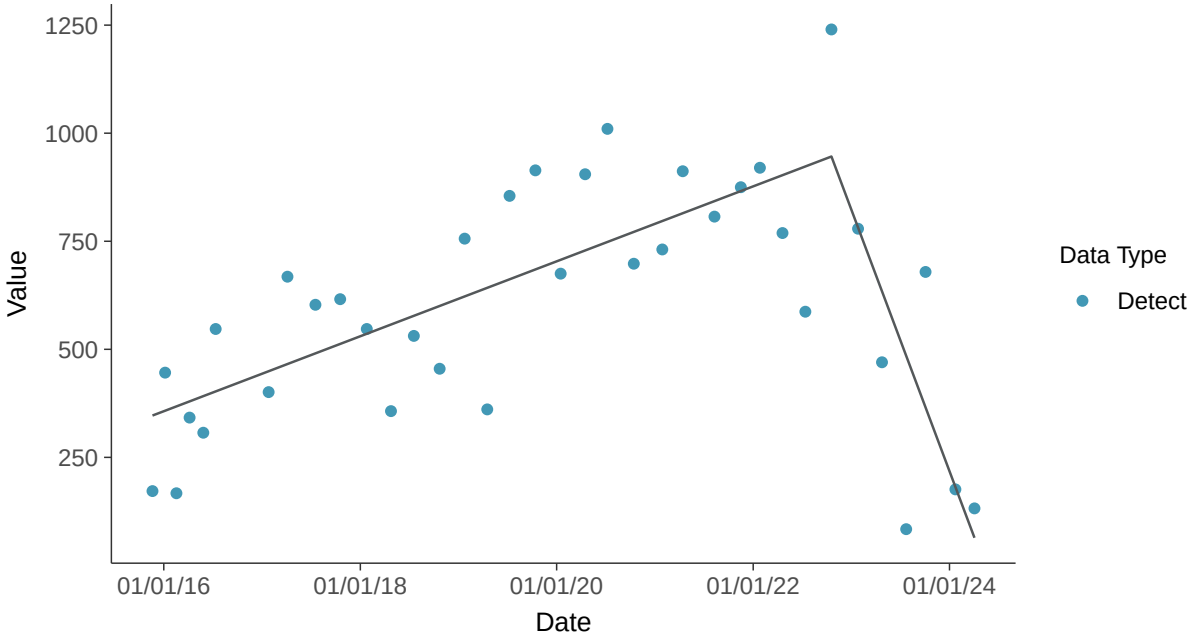
Trend Regression: Lognormal MLE

Chloride, MW-1 (mg/L)



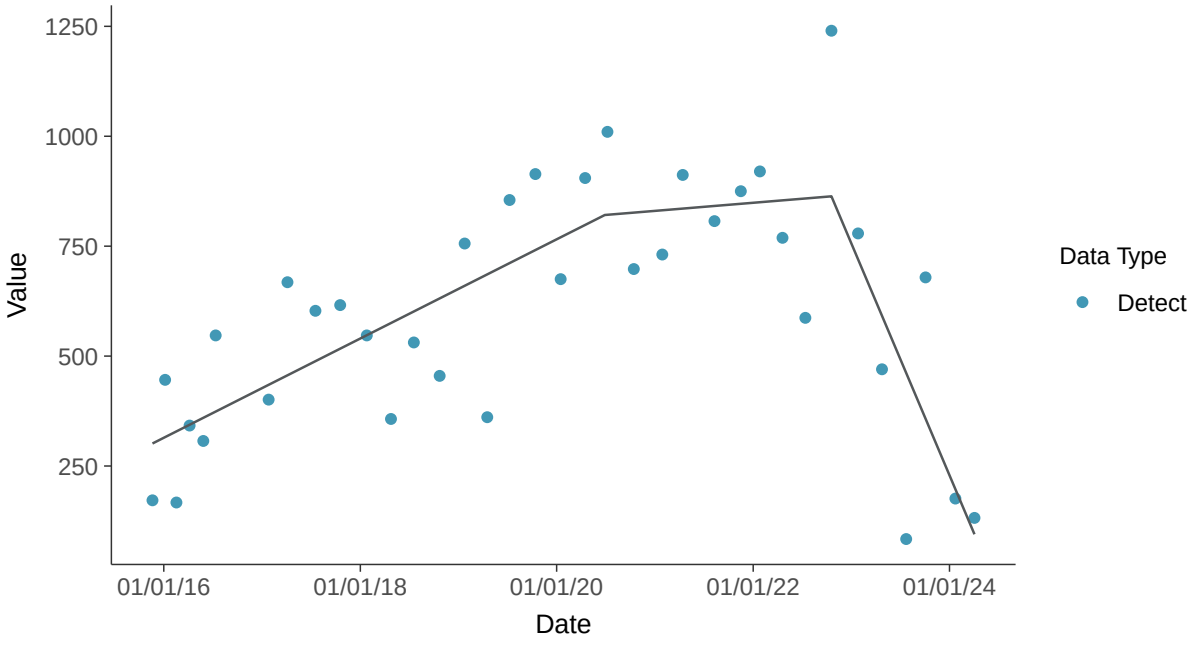
Trend Regression: Piecewise Linear-Linear

Chloride, MW-1 (mg/L)



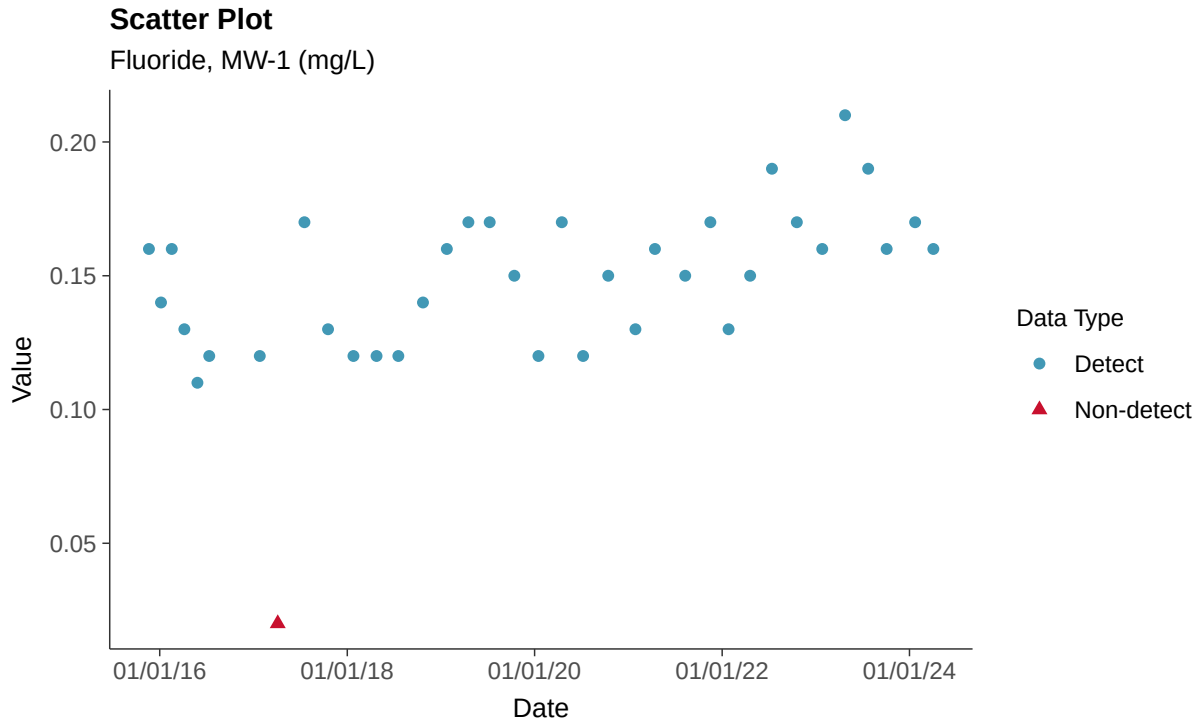
Trend Regression: Piecewise Linear-Linear-Linear

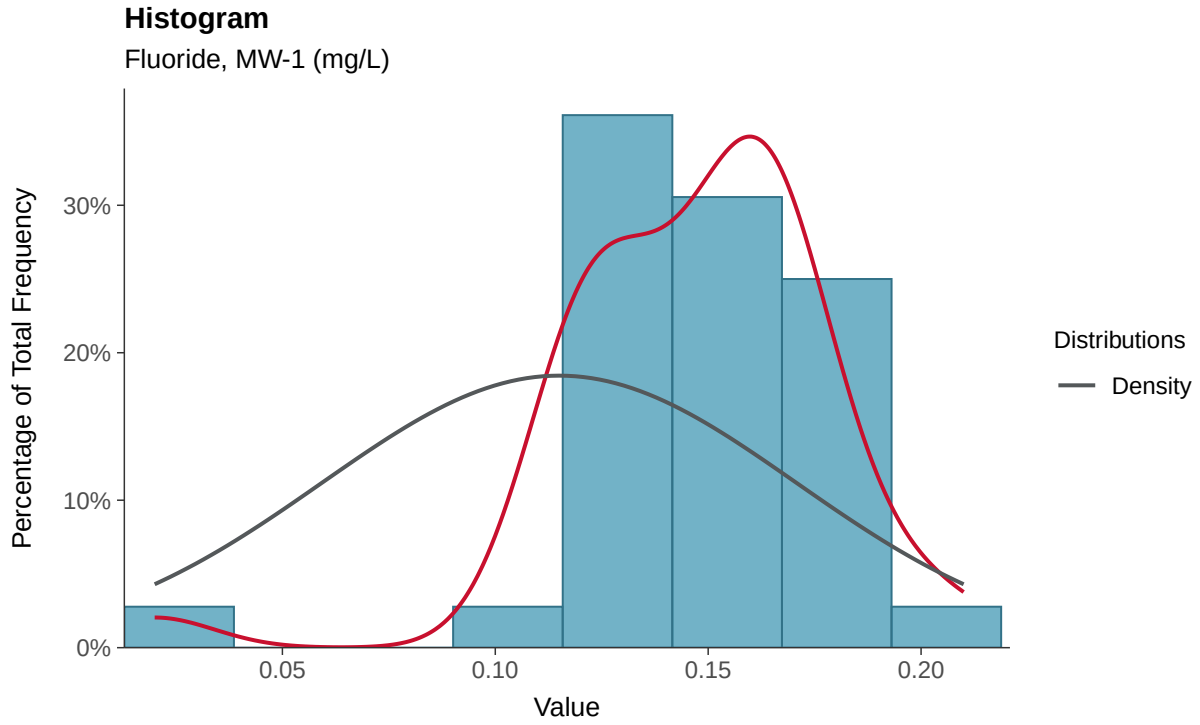
Chloride, MW-1 (mg/L)



App. III: Fluoride, MW-1

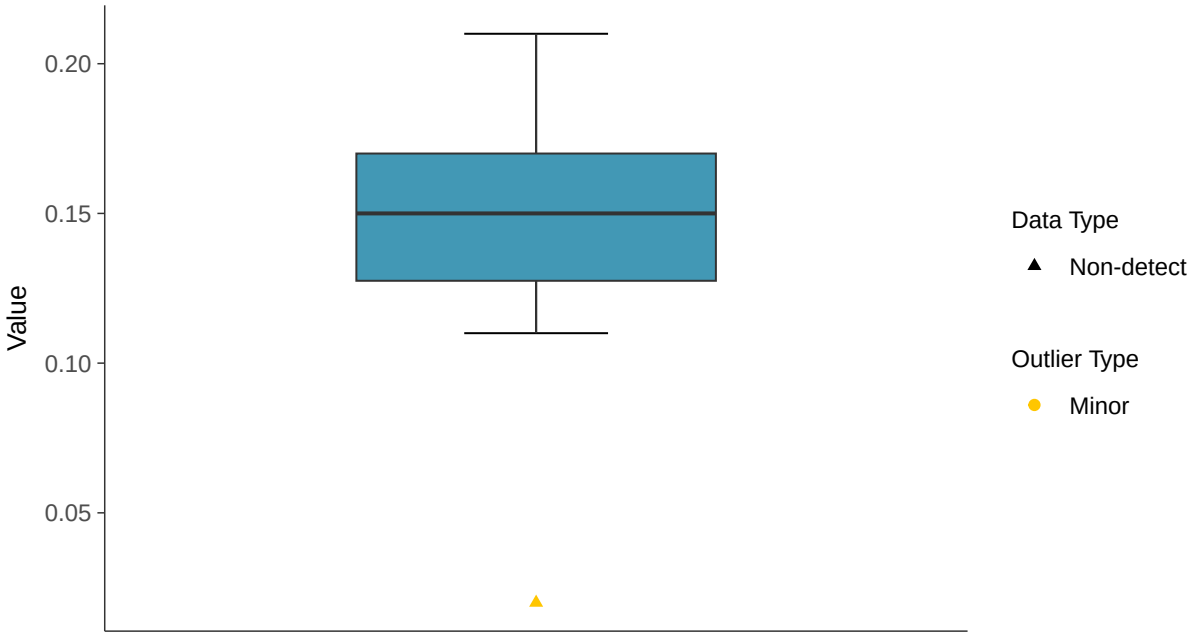
ID: 1_2_112





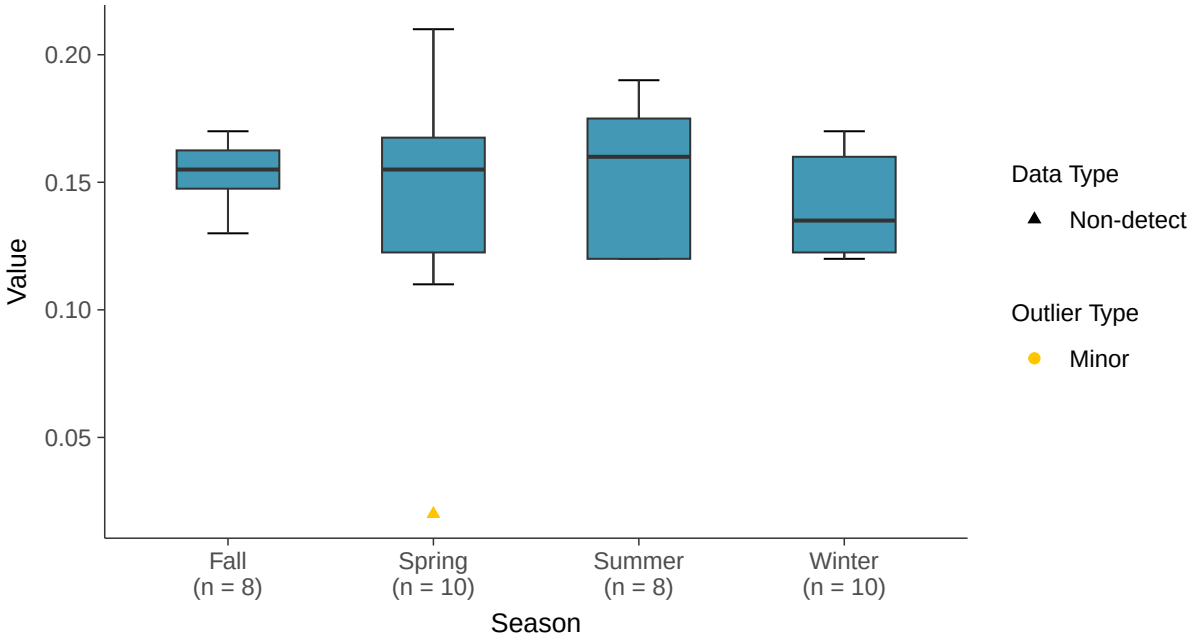
Boxplot

Fluoride, MW-1 (mg/L)



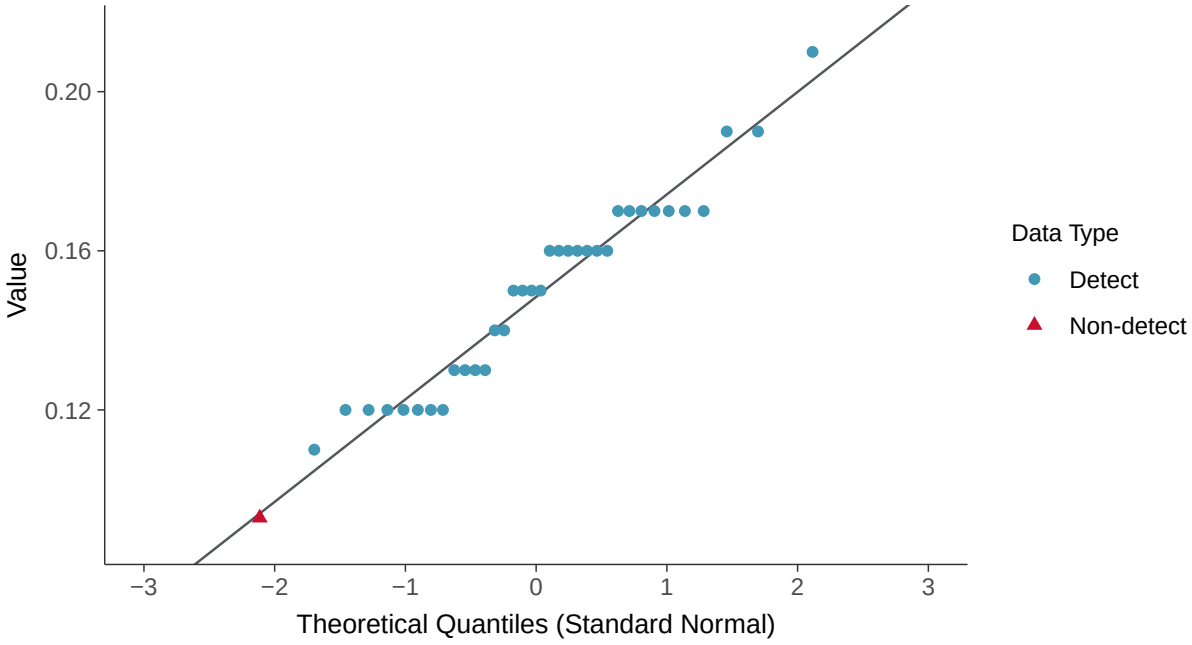
Boxplot by Season

Fluoride, MW-1 (mg/L)



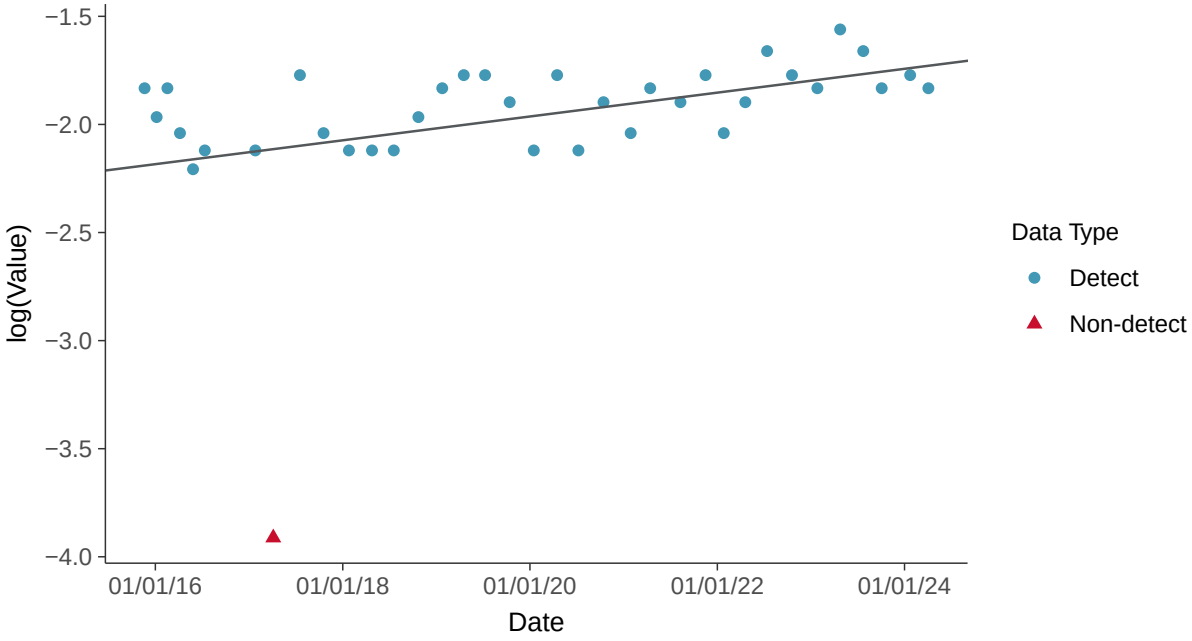
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-1 (mg/L)



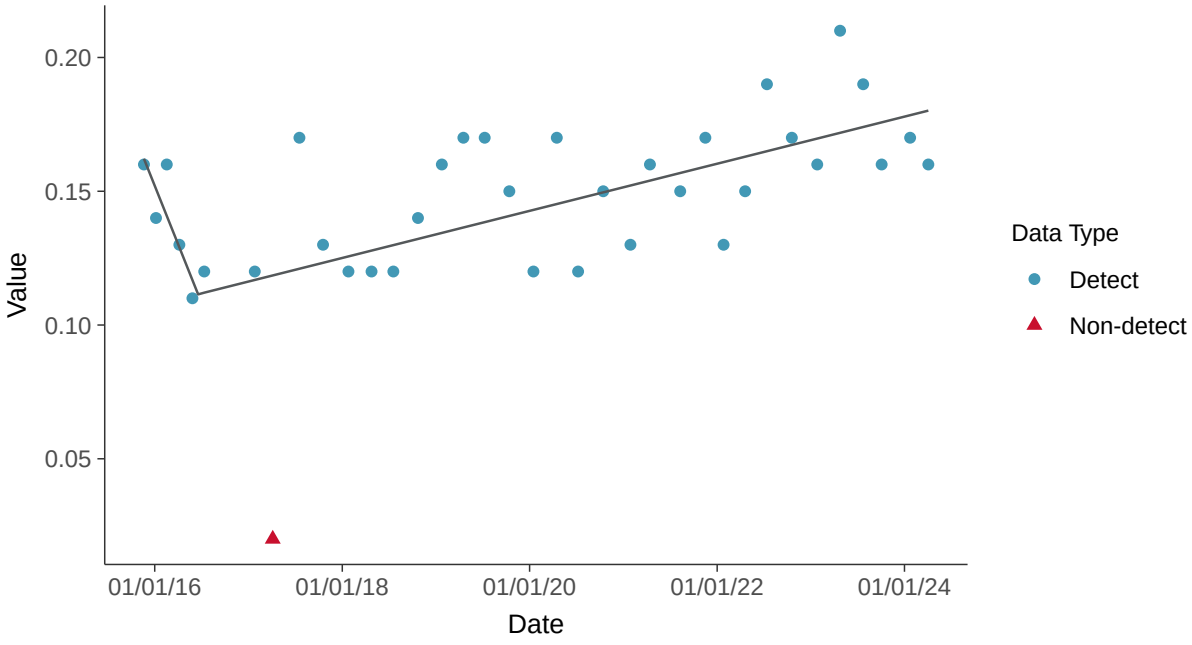
Trend Regression: Lognormal MLE

Fluoride, MW-1 (mg/L)



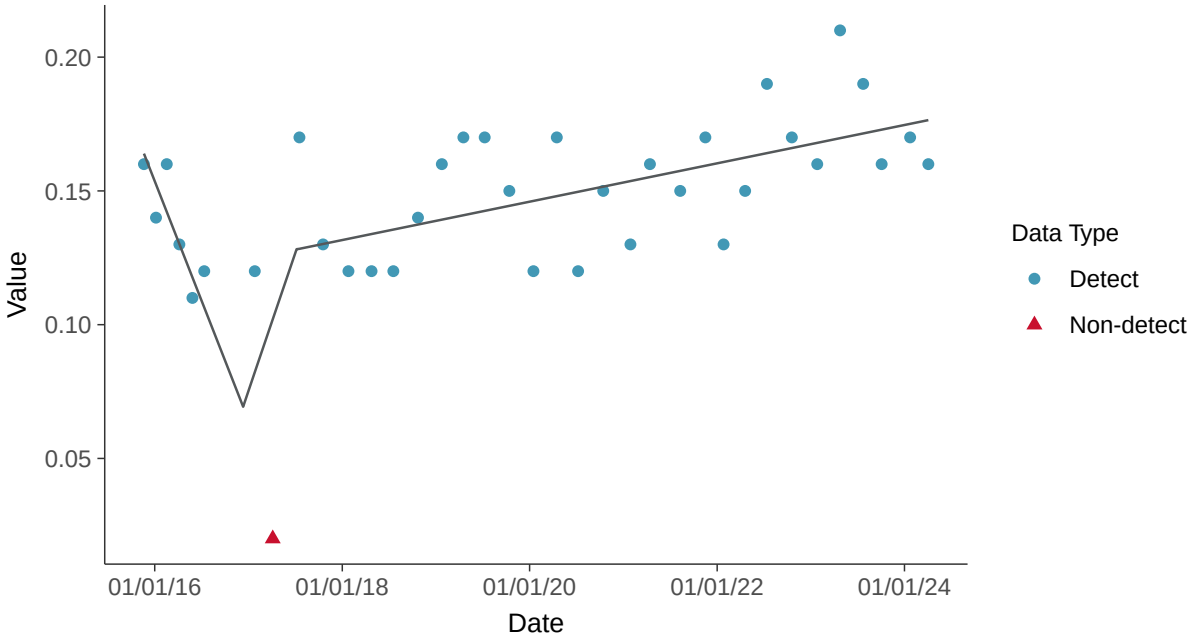
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-1 (mg/L)



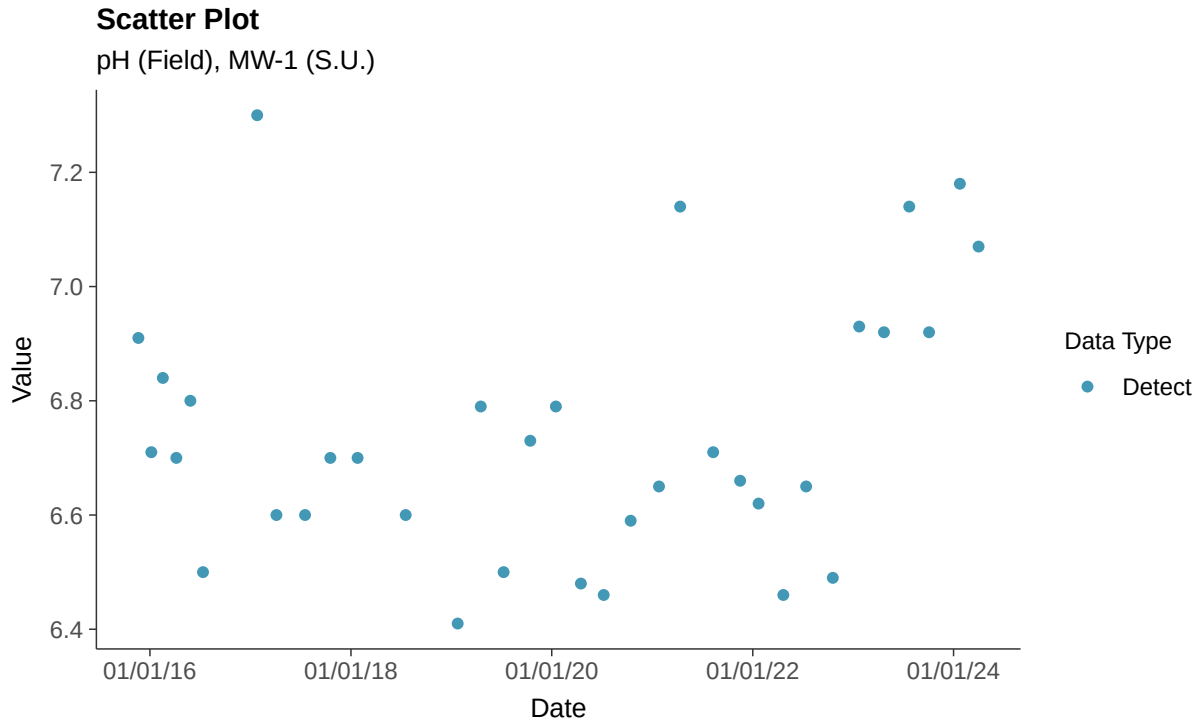
Trend Regression: Piecewise Linear-Linear-Linear

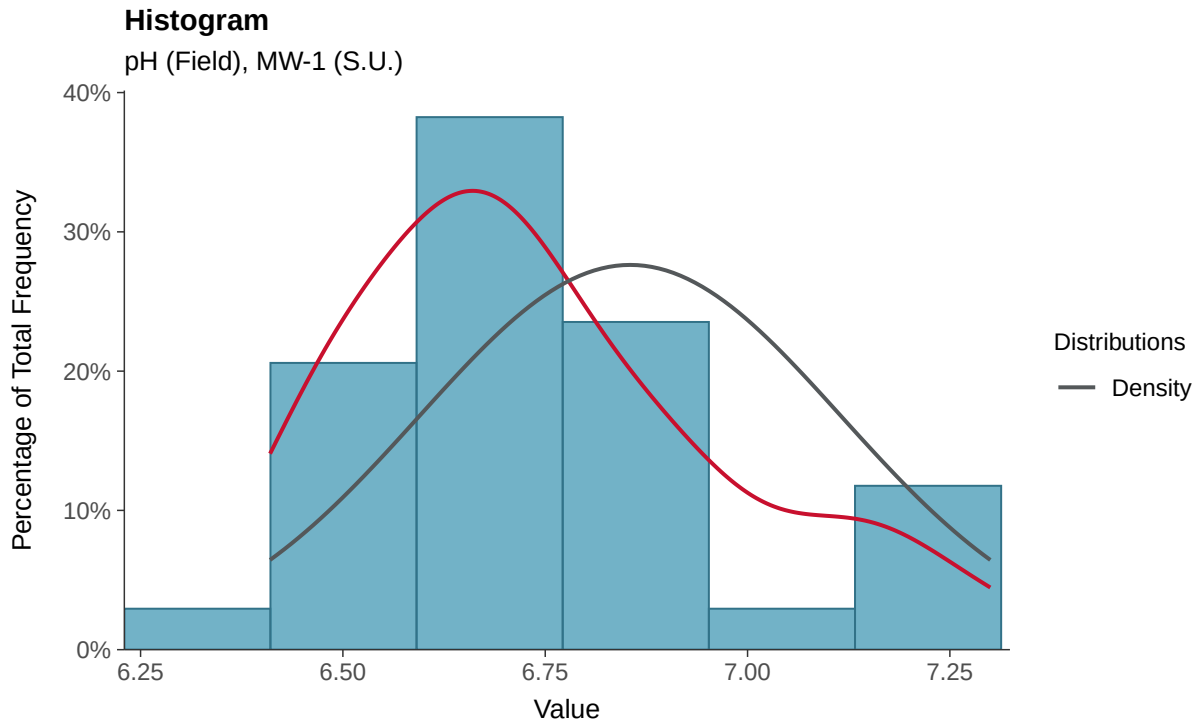
Fluoride, MW-1 (mg/L)



App. III: pH (Field), MW-1

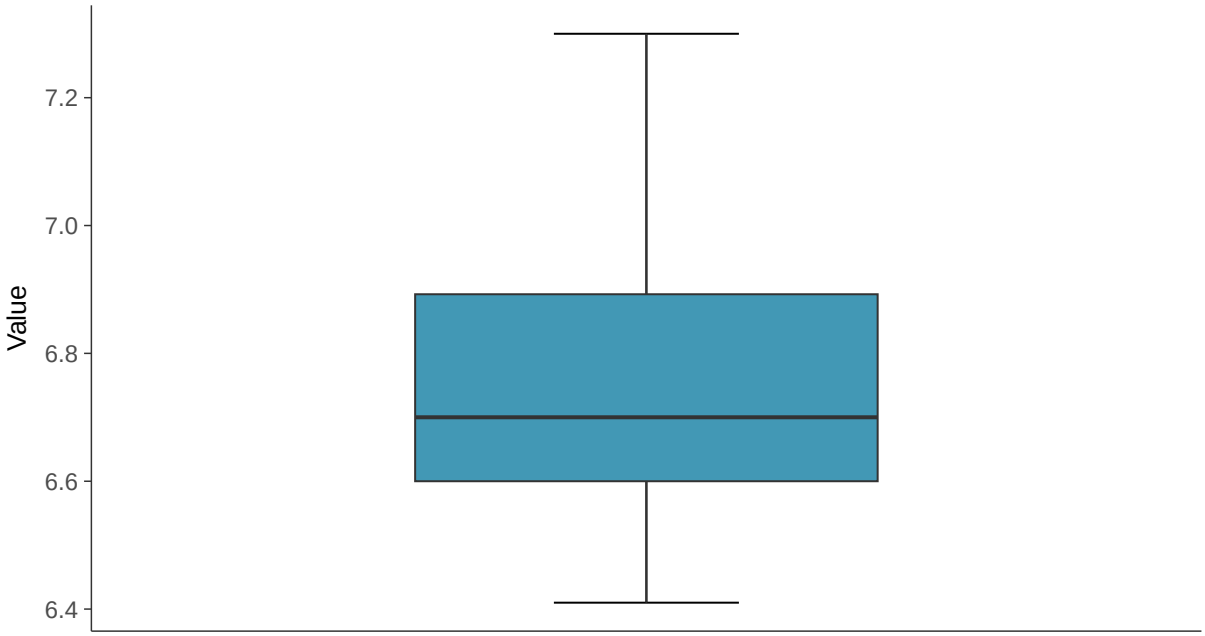
ID: 1_2_118





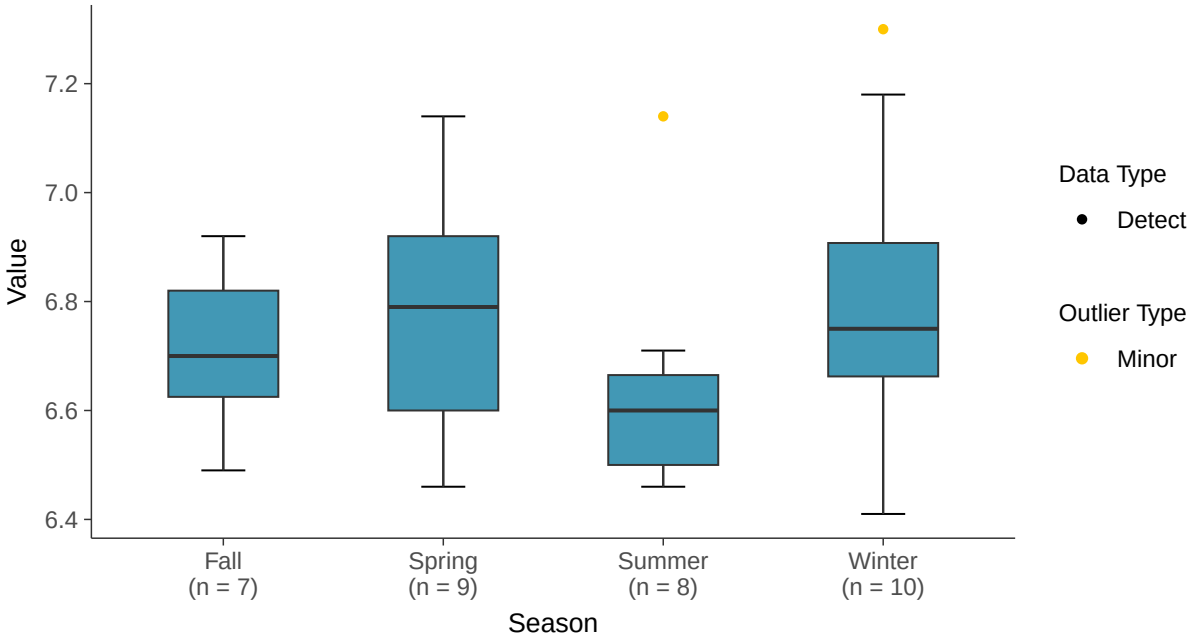
Boxplot

pH (Field), MW-1 (S.U.)



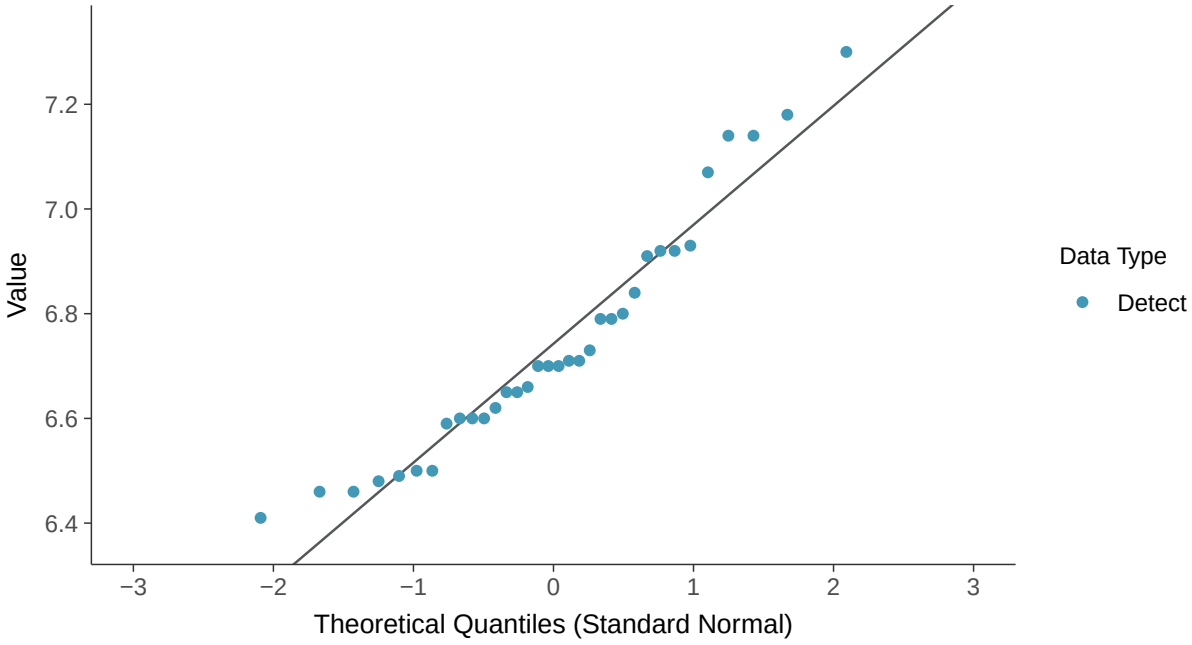
Boxplot by Season

pH (Field), MW-1 (S.U.)



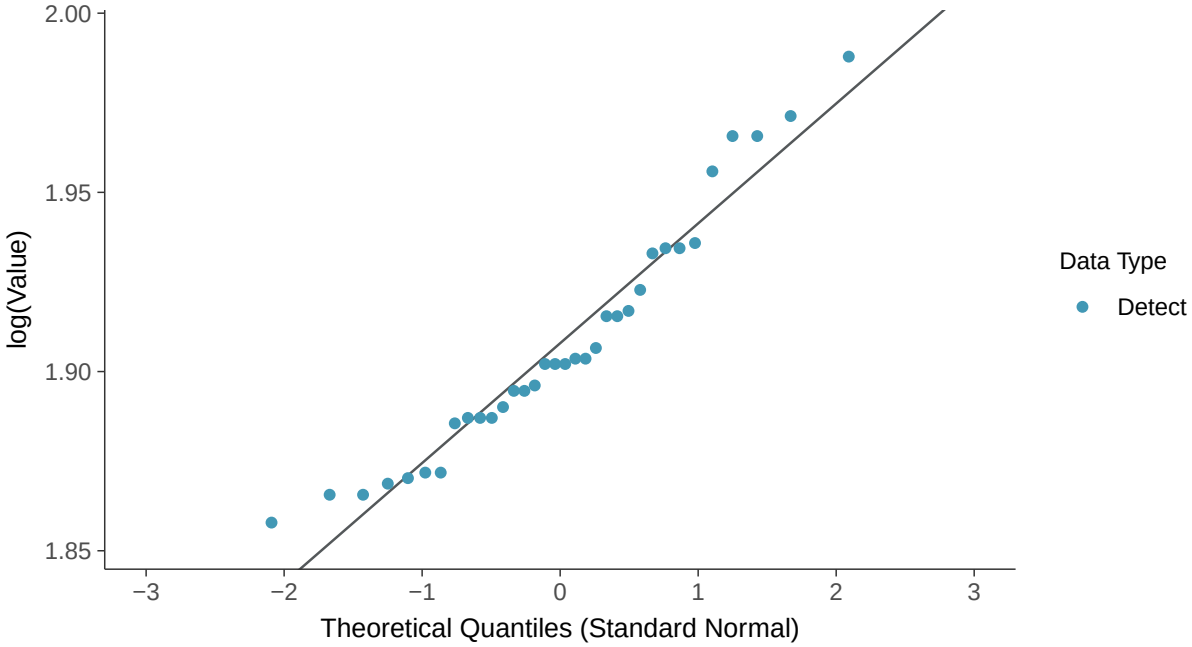
Normal Q-Q plot

pH (Field), MW-1 (S.U.)



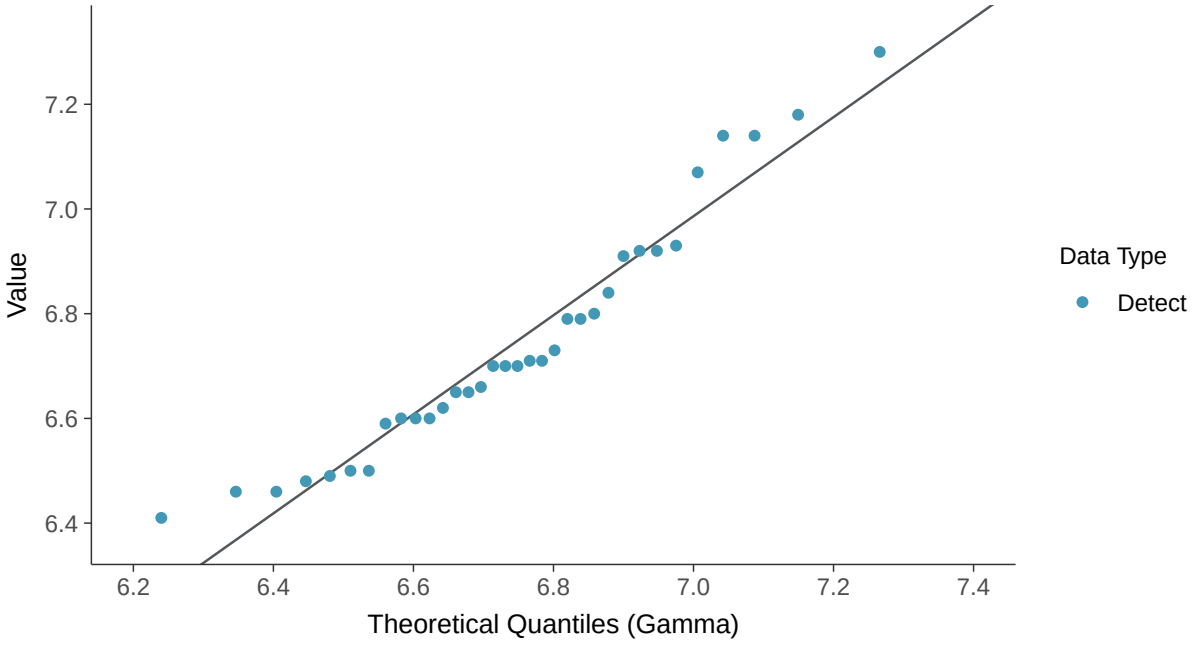
Lognormal Q-Q plot

pH (Field), MW-1 (S.U.)



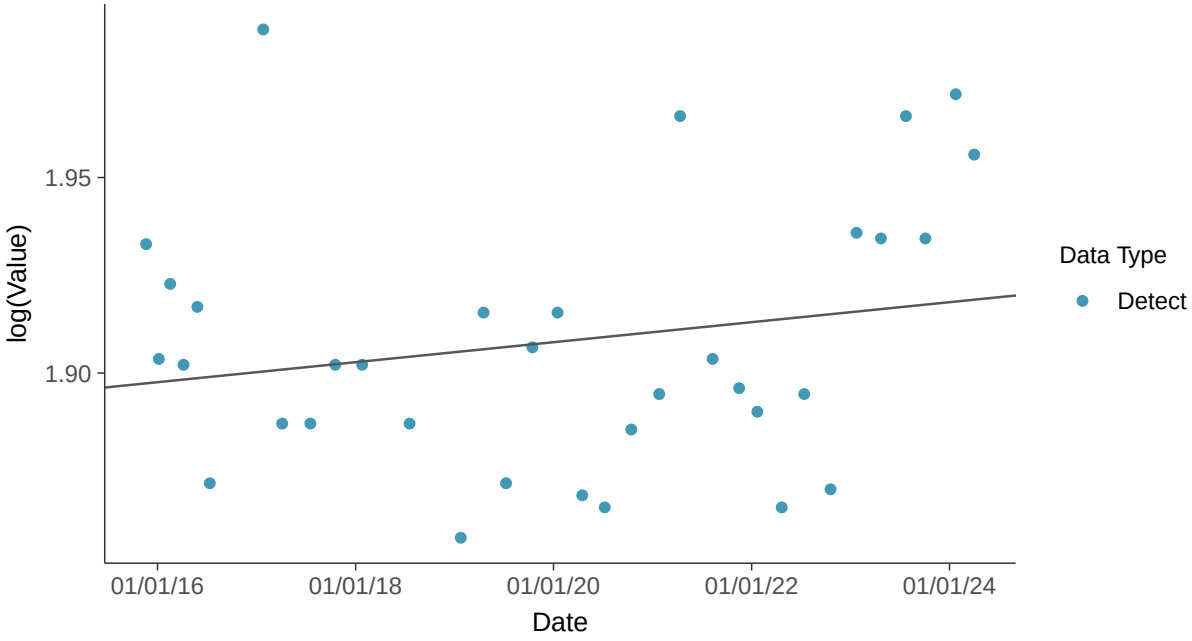
Gamma Q-Q plot

pH (Field), MW-1 (S.U.)



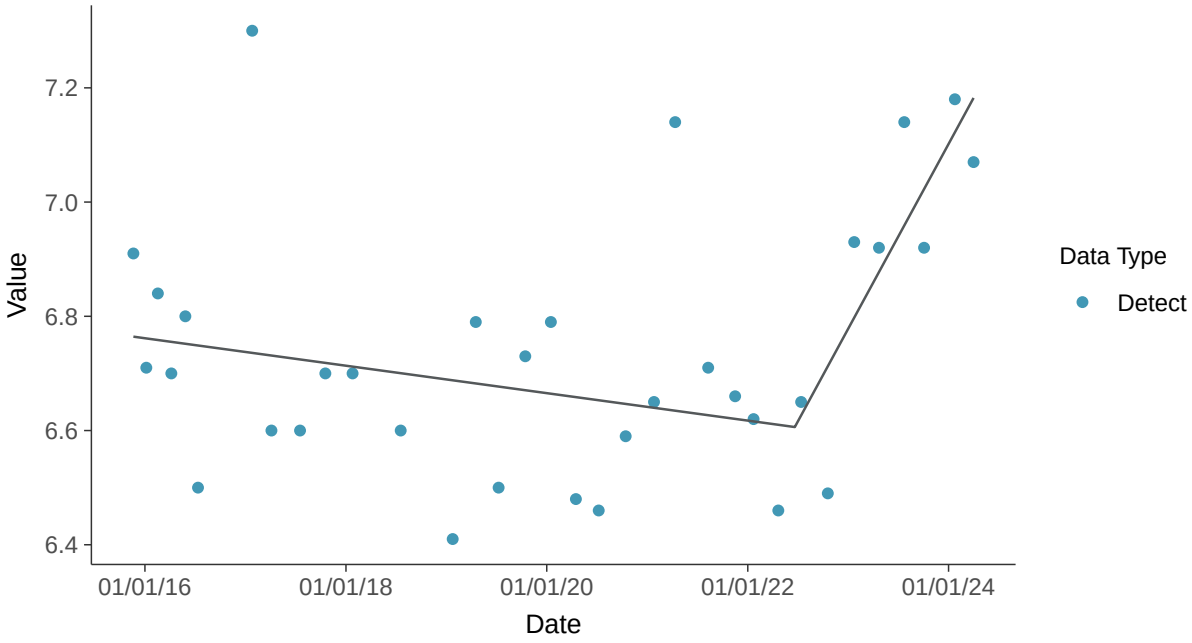
Trend Regression: Lognormal MLE

pH (Field), MW-1 (S.U.)



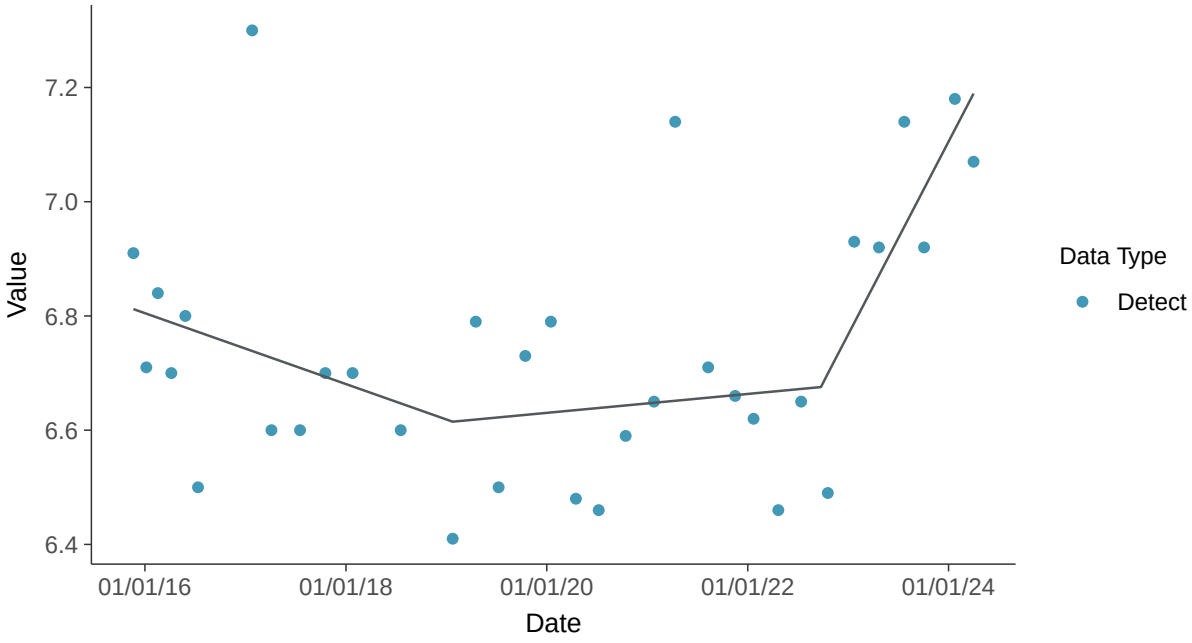
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-1 (S.U.)



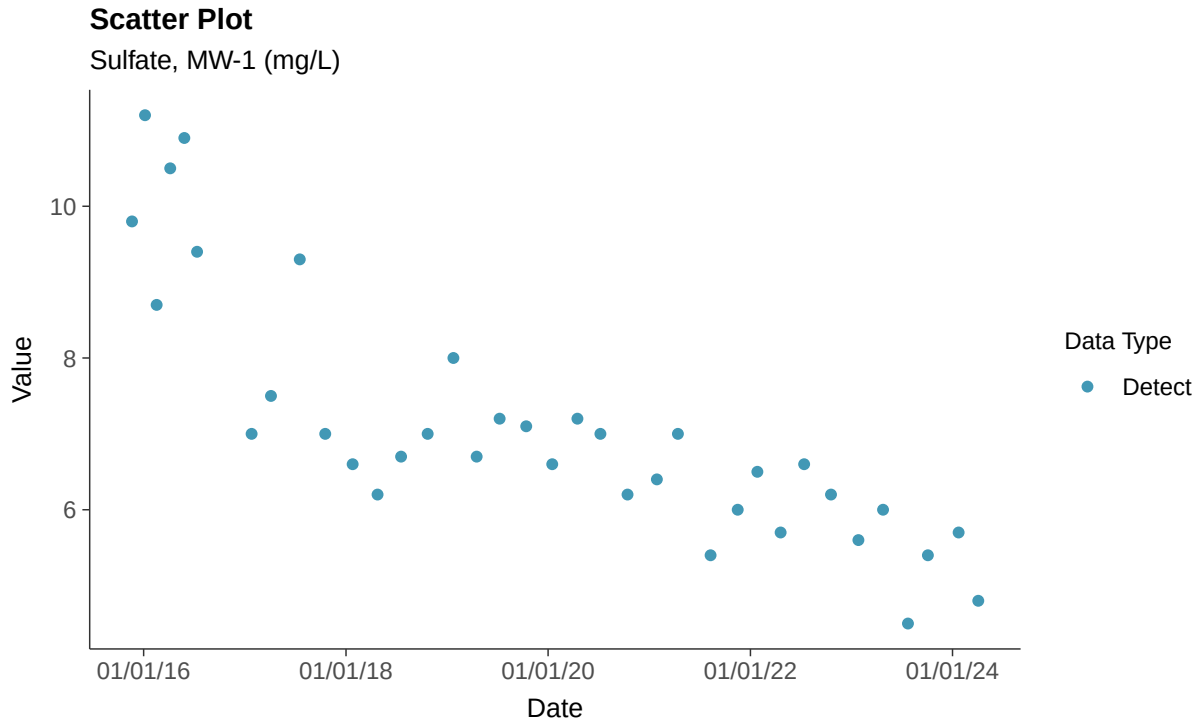
Trend Regression: Piecewise Linear-Linear-Linear

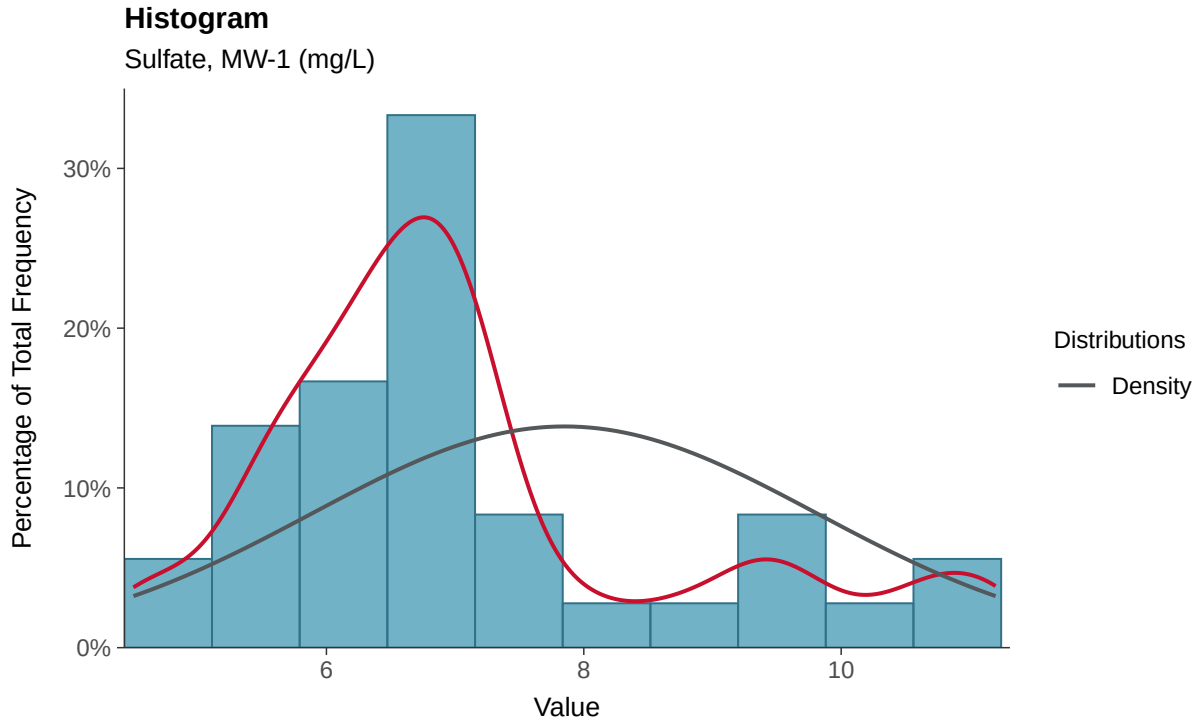
pH (Field), MW-1 (S.U.)



App. III: Sulfate, MW-1

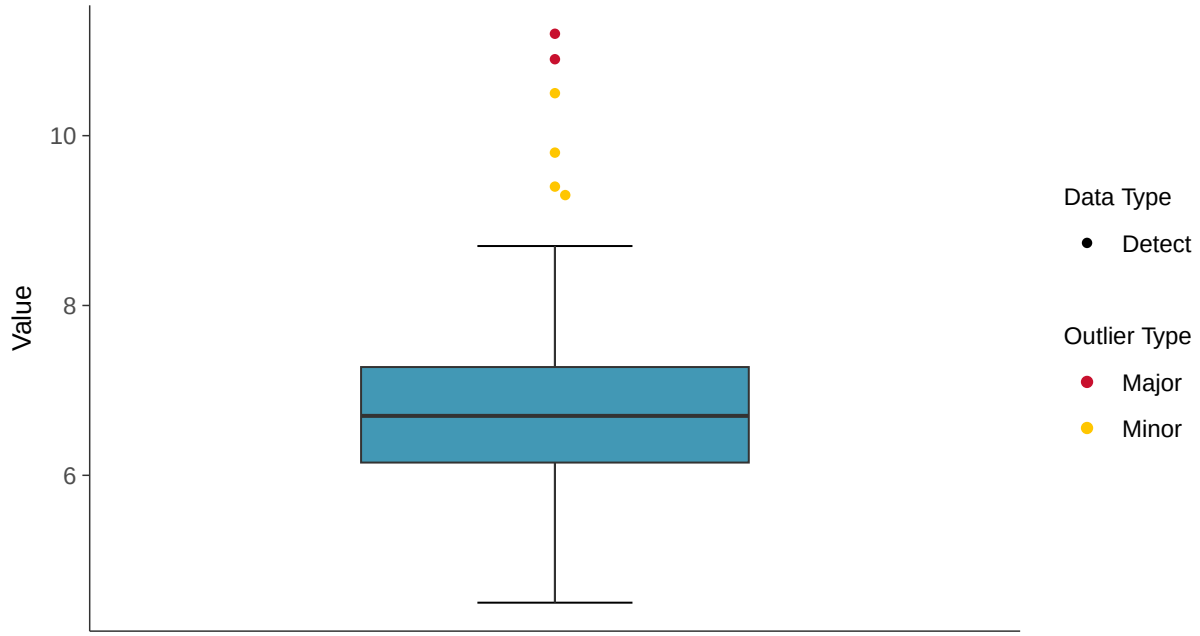
ID: 1_2_123





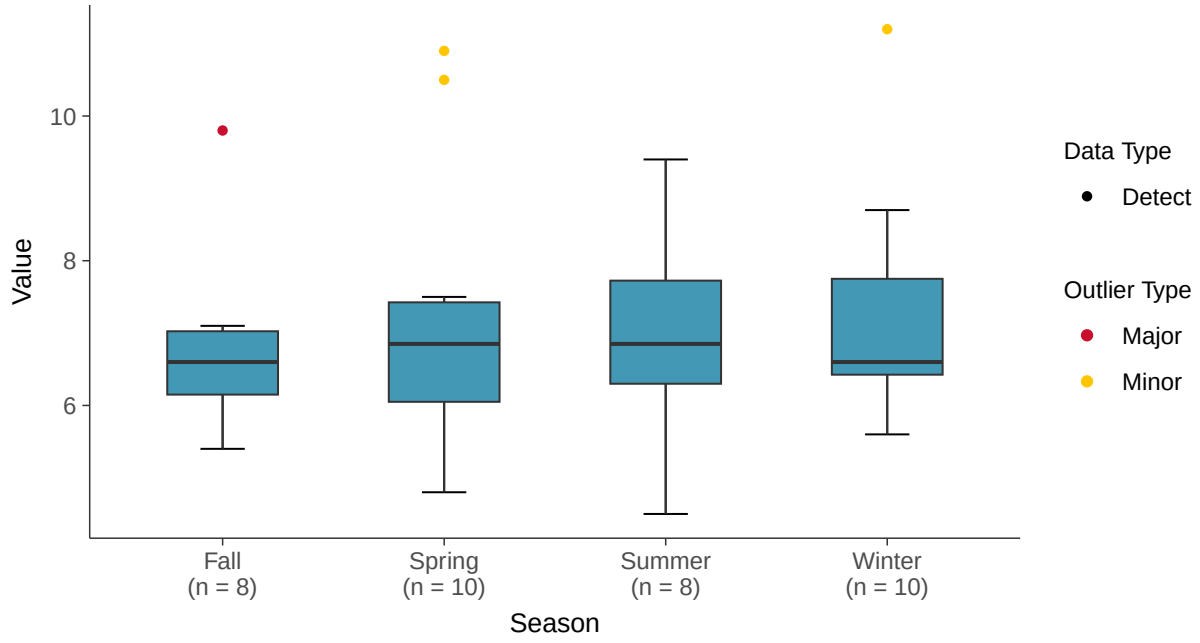
Boxplot

Sulfate, MW-1 (mg/L)



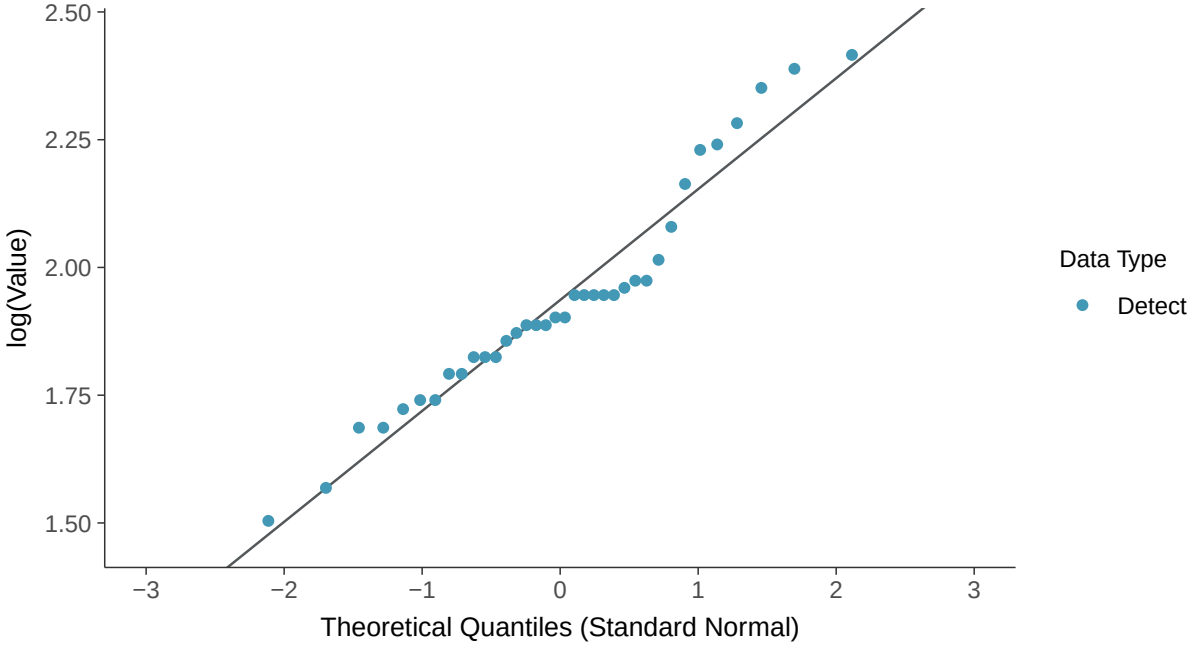
Boxplot by Season

Sulfate, MW-1 (mg/L)



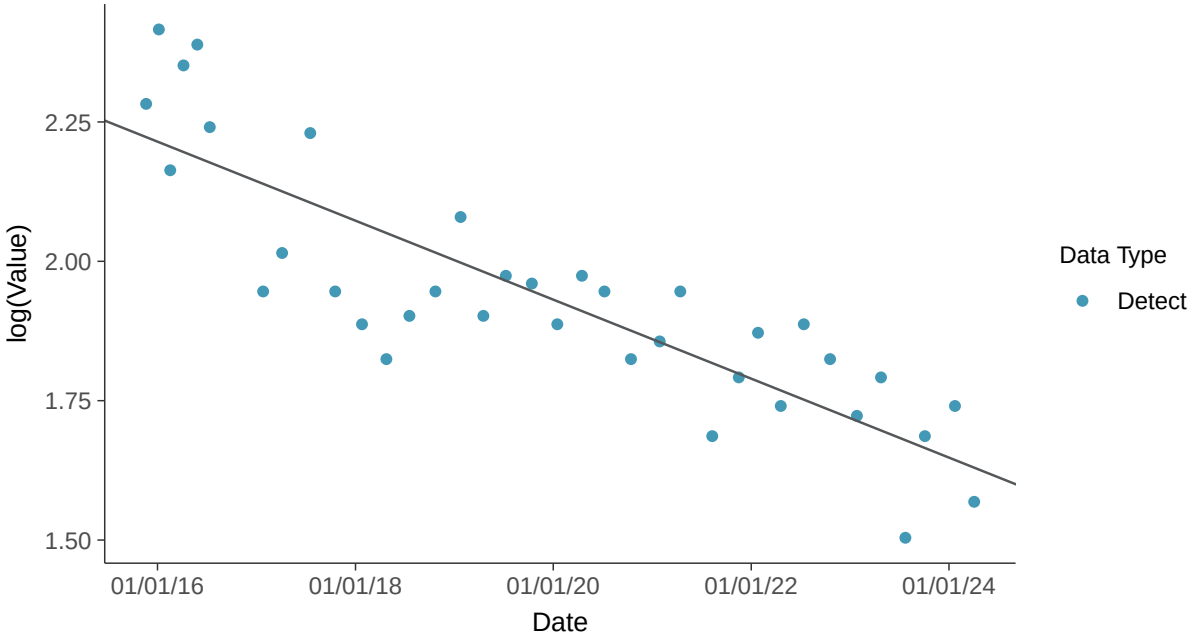
Lognormal Q-Q plot

Sulfate, MW-1 (mg/L)



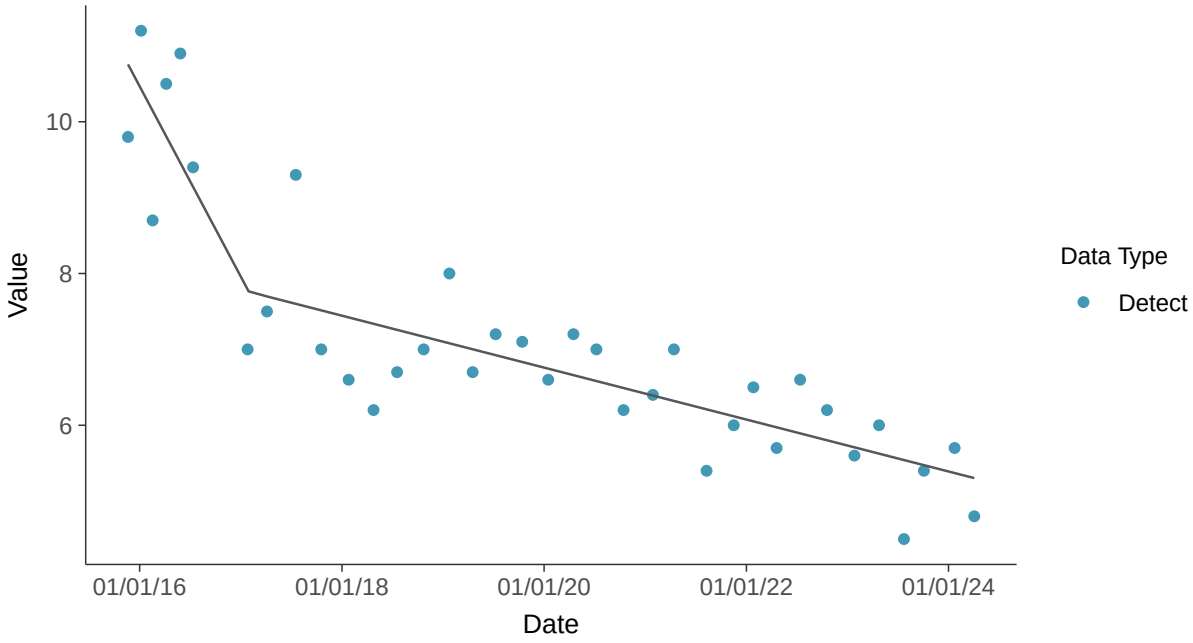
Trend Regression: Lognormal MLE

Sulfate, MW-1 (mg/L)



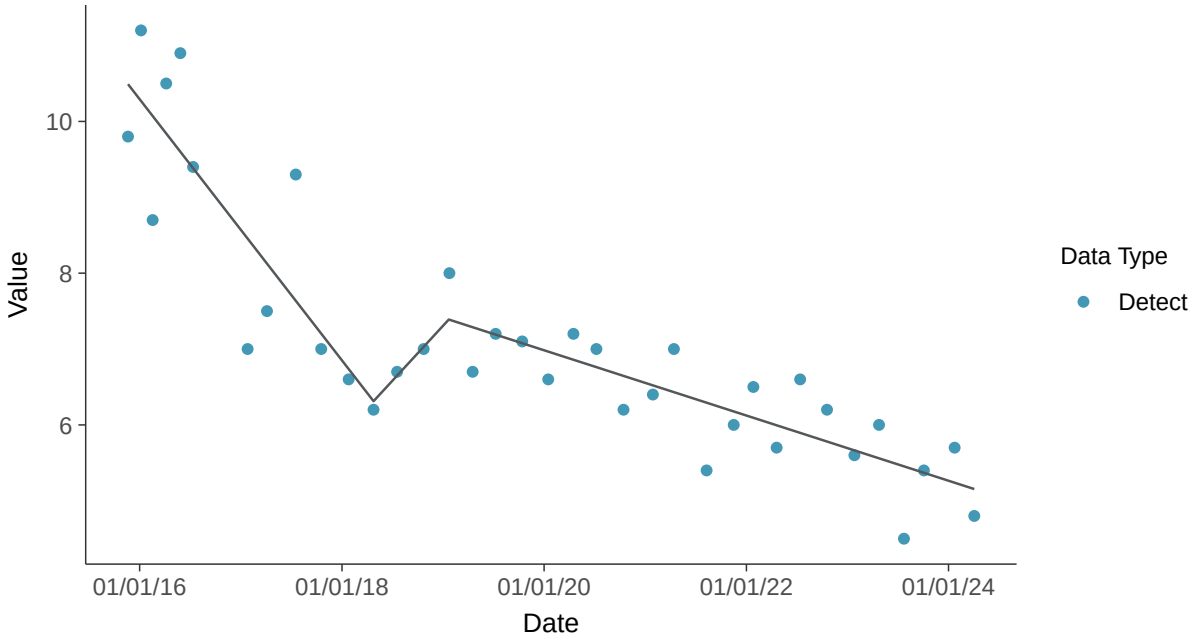
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-1 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-1 (mg/L)

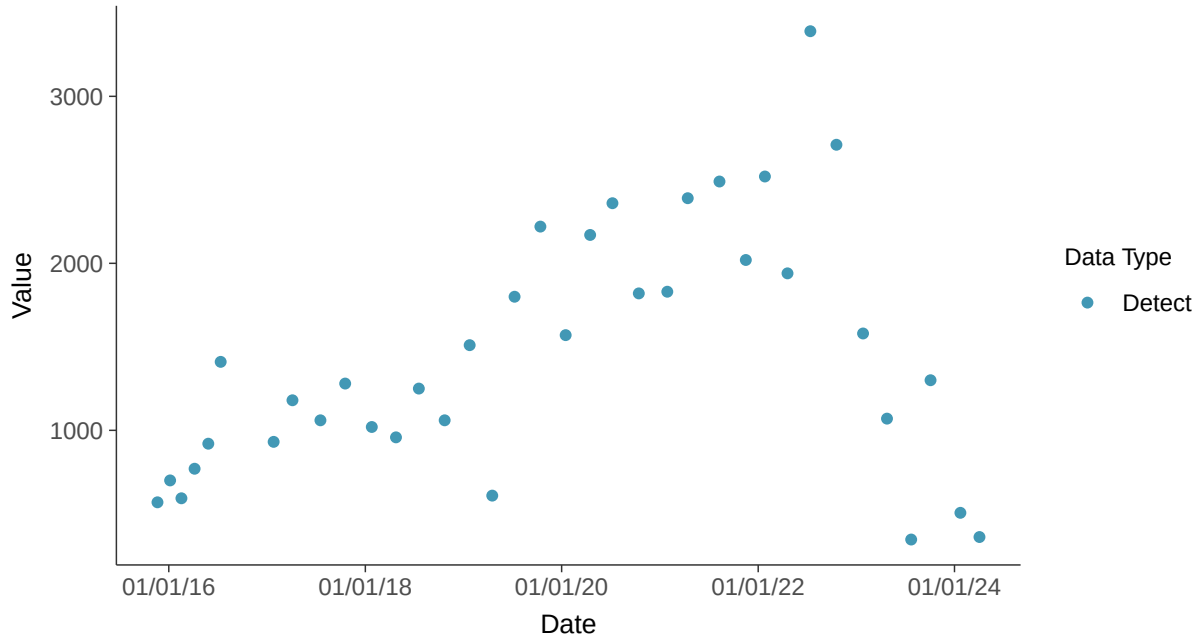


App. III: Total Dissolved Solids, MW-1

ID: 1_2_125

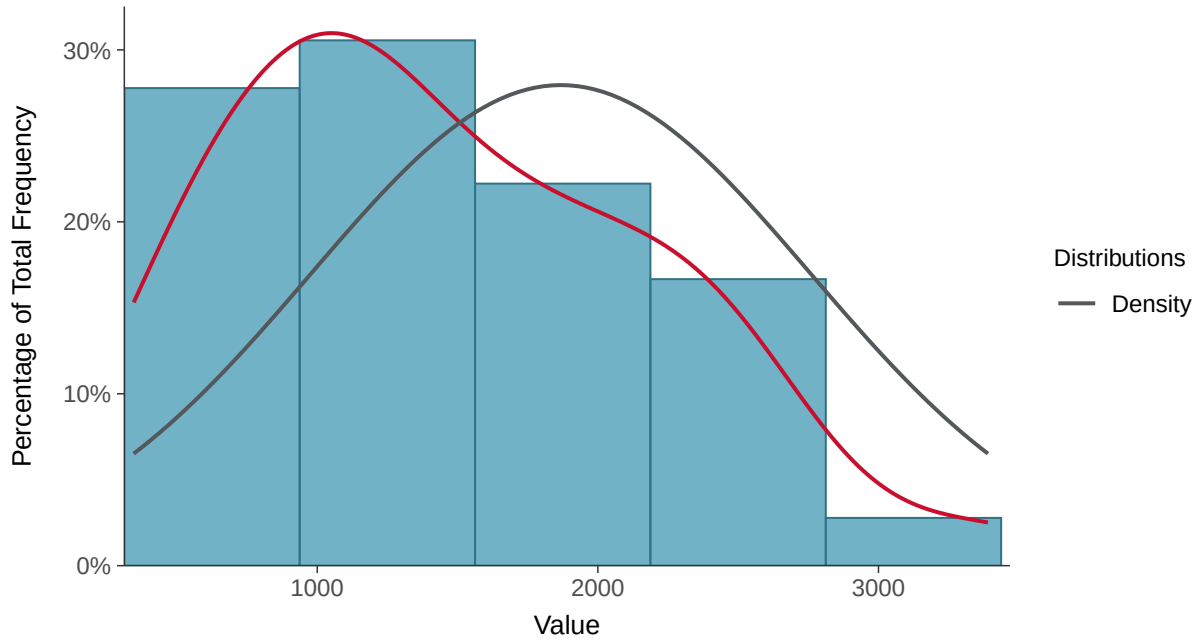
Scatter Plot

Total Dissolved Solids, MW-1 (mg/L)



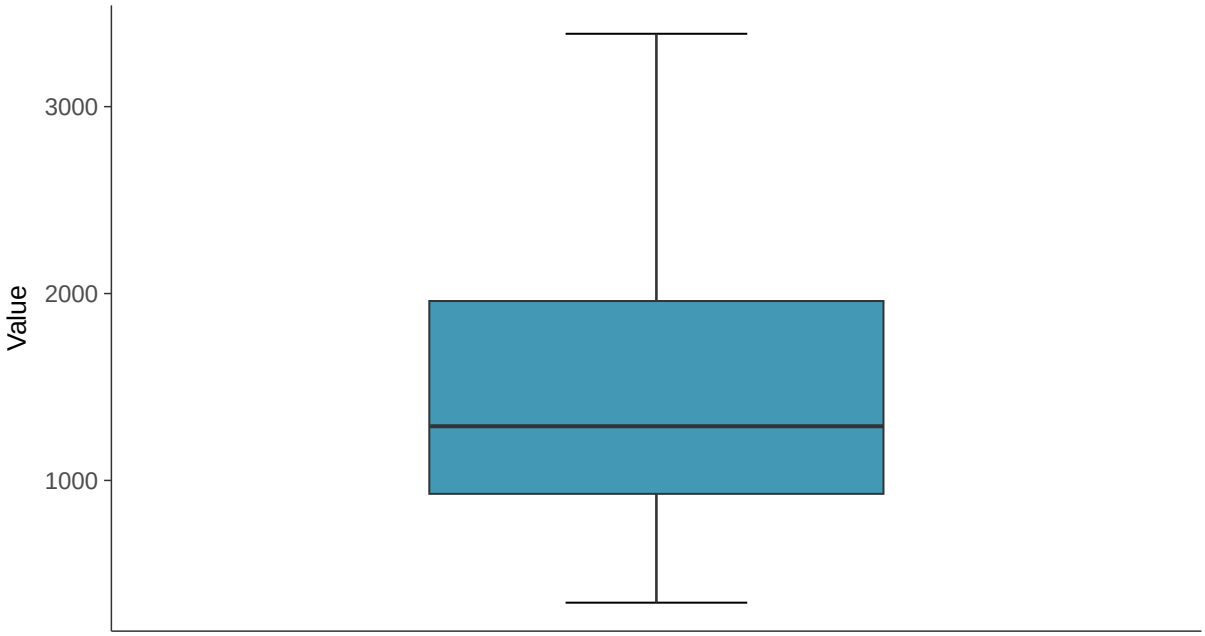
Histogram

Total Dissolved Solids, MW-1 (mg/L)



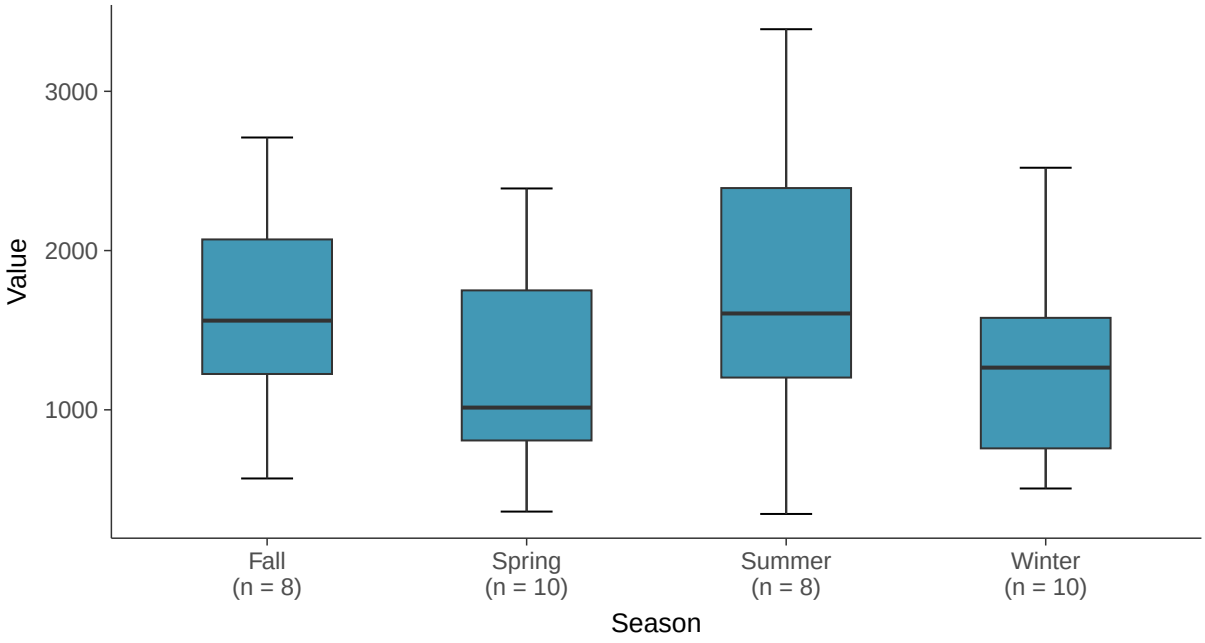
Boxplot

Total Dissolved Solids, MW-1 (mg/L)



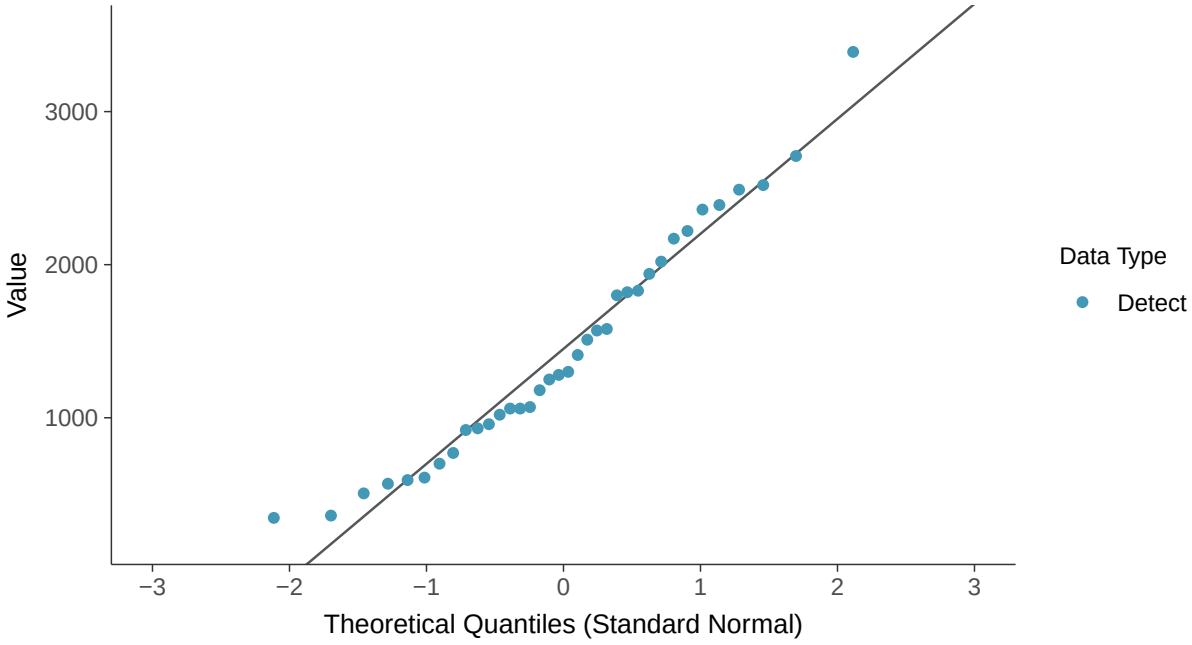
Boxplot by Season

Total Dissolved Solids, MW-1 (mg/L)



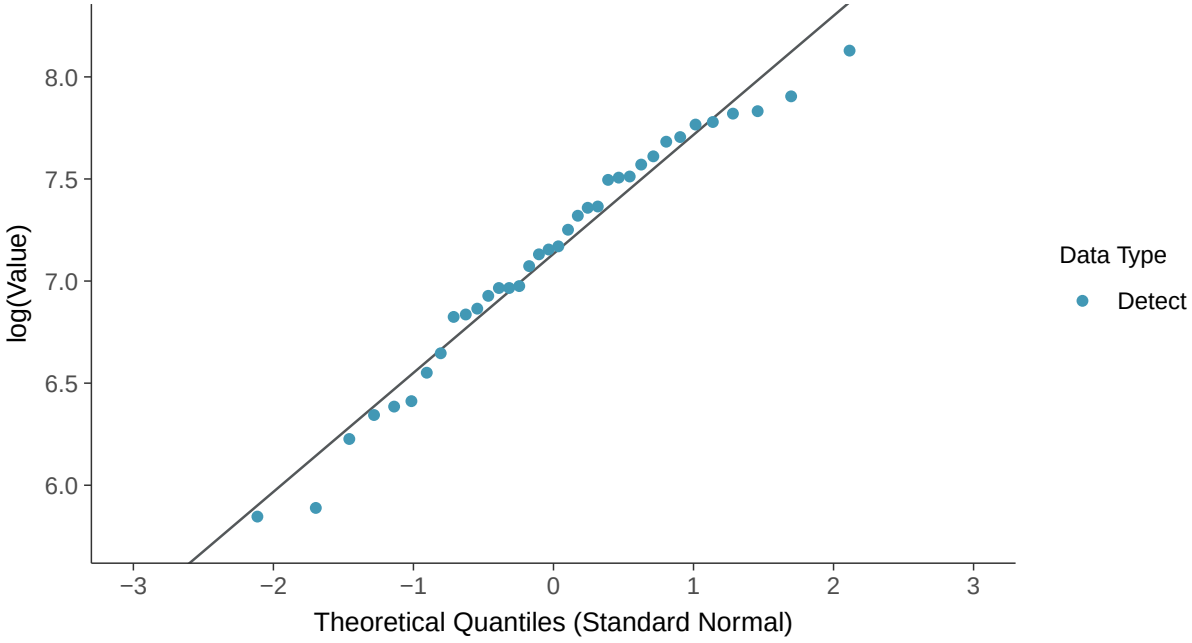
Normal Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



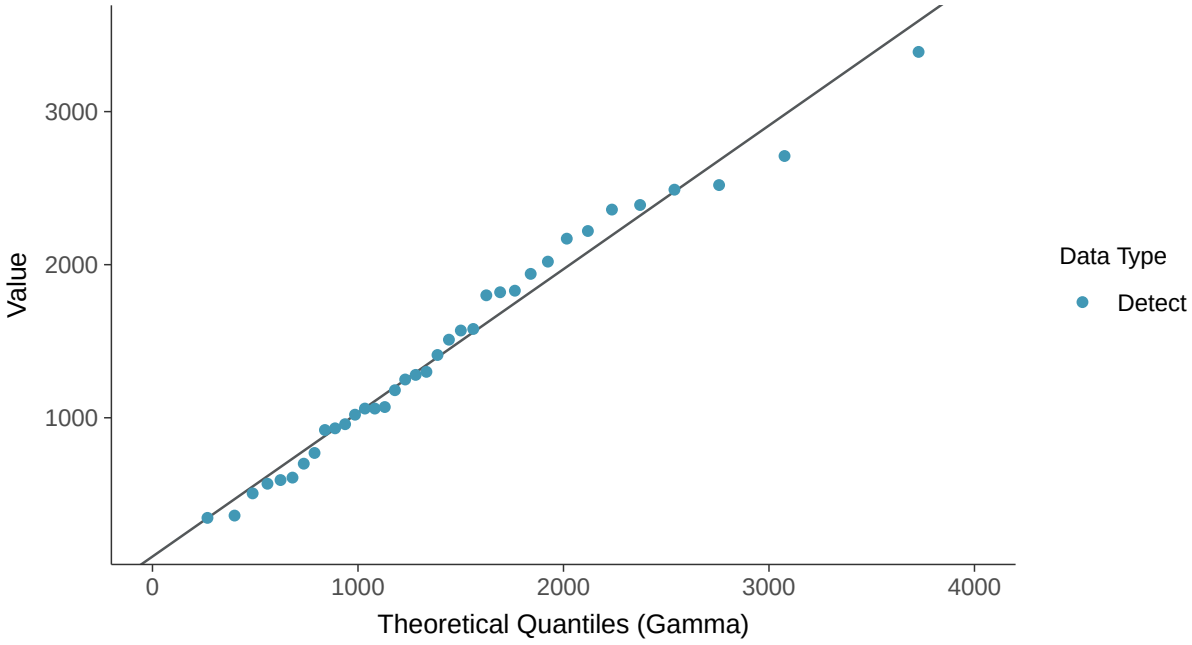
Lognormal Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



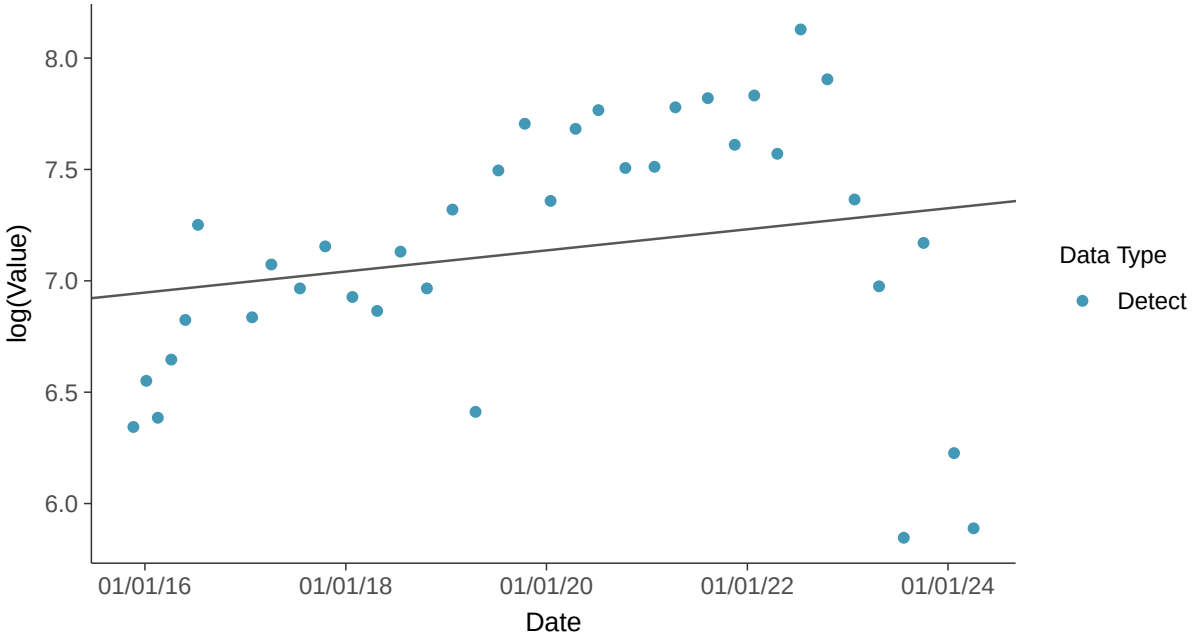
Gamma Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



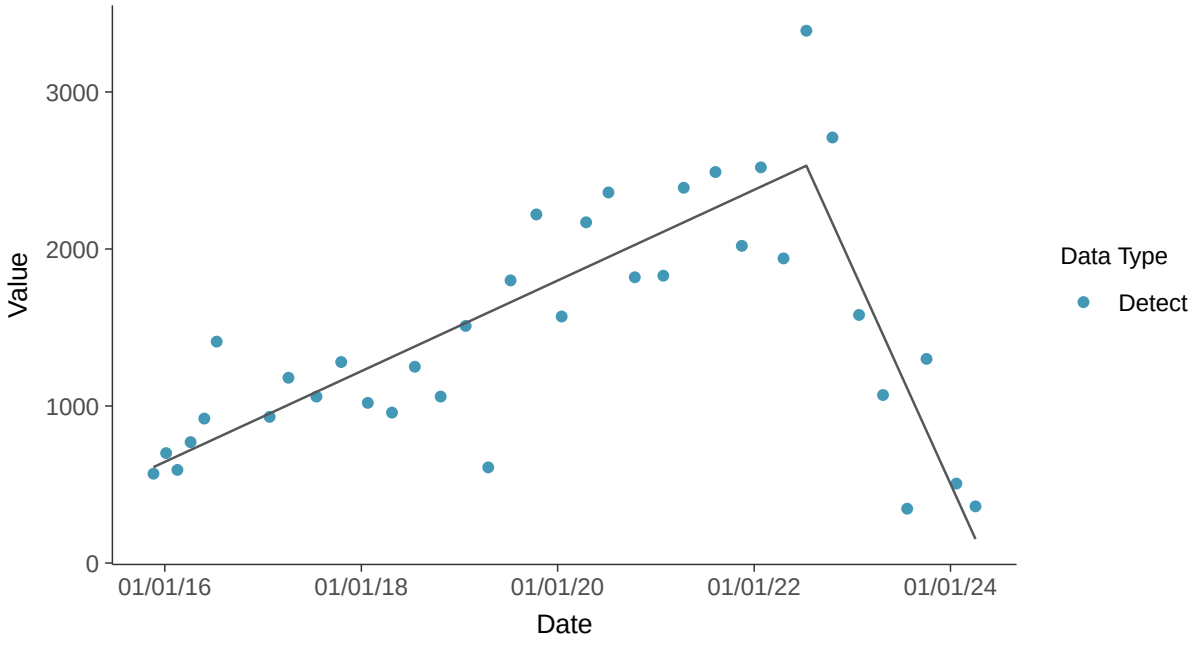
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-1 (mg/L)



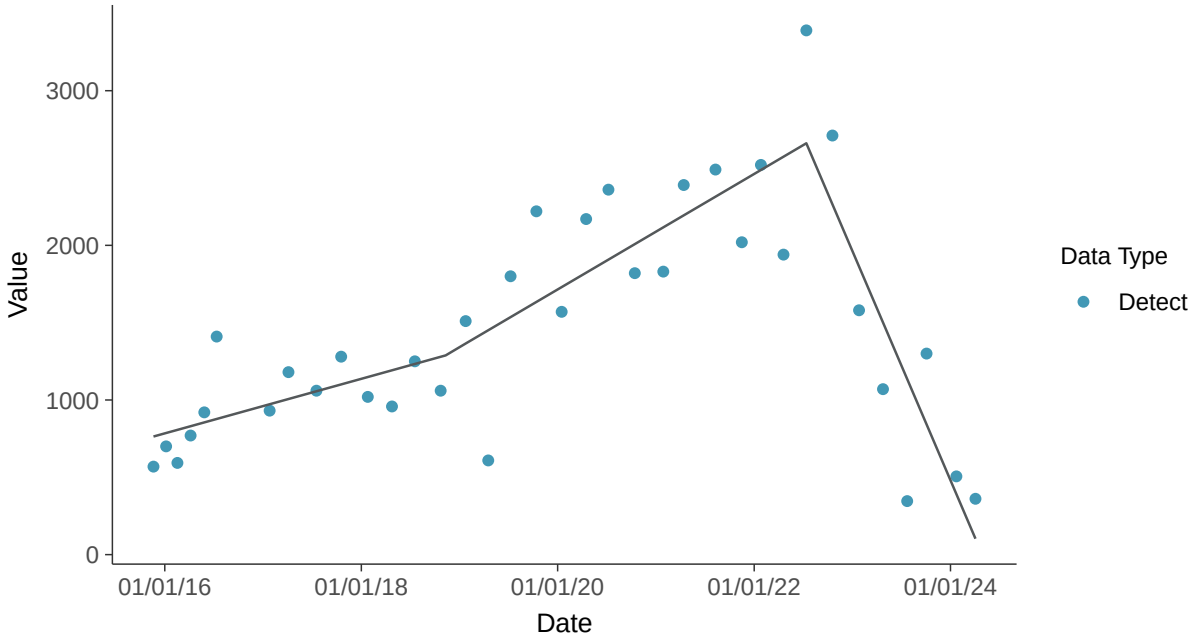
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-1 (mg/L)



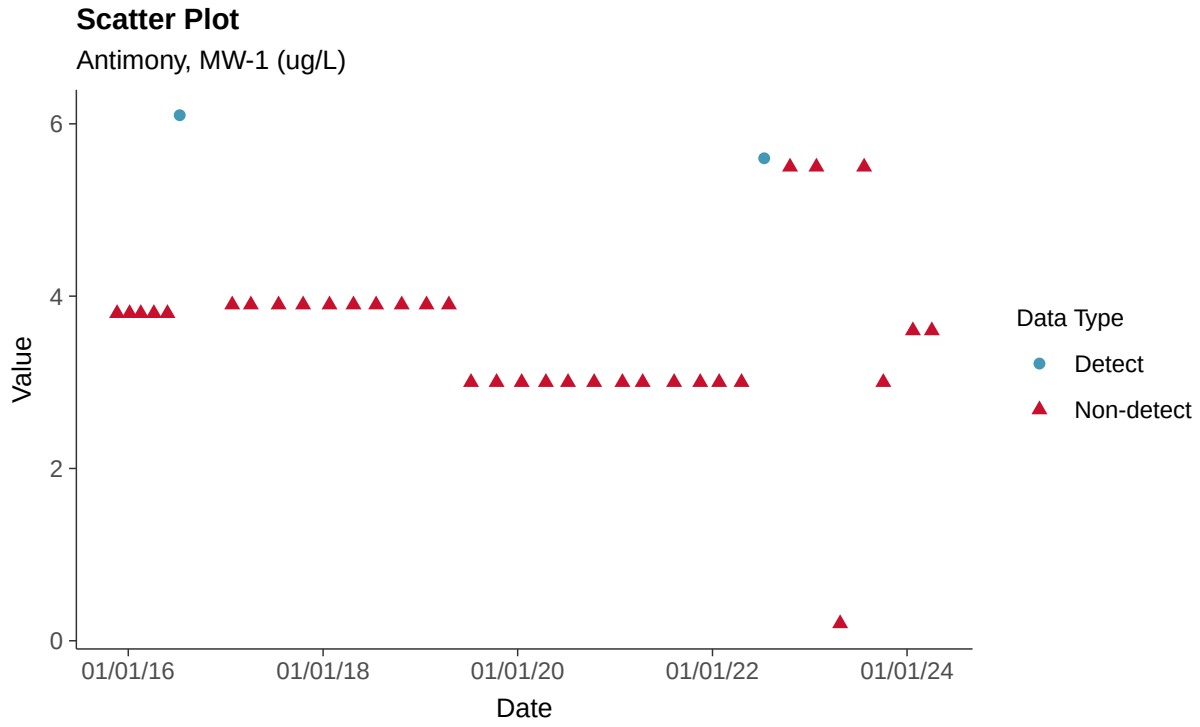
Trend Regression: Piecewise Linear-Linear-Linear

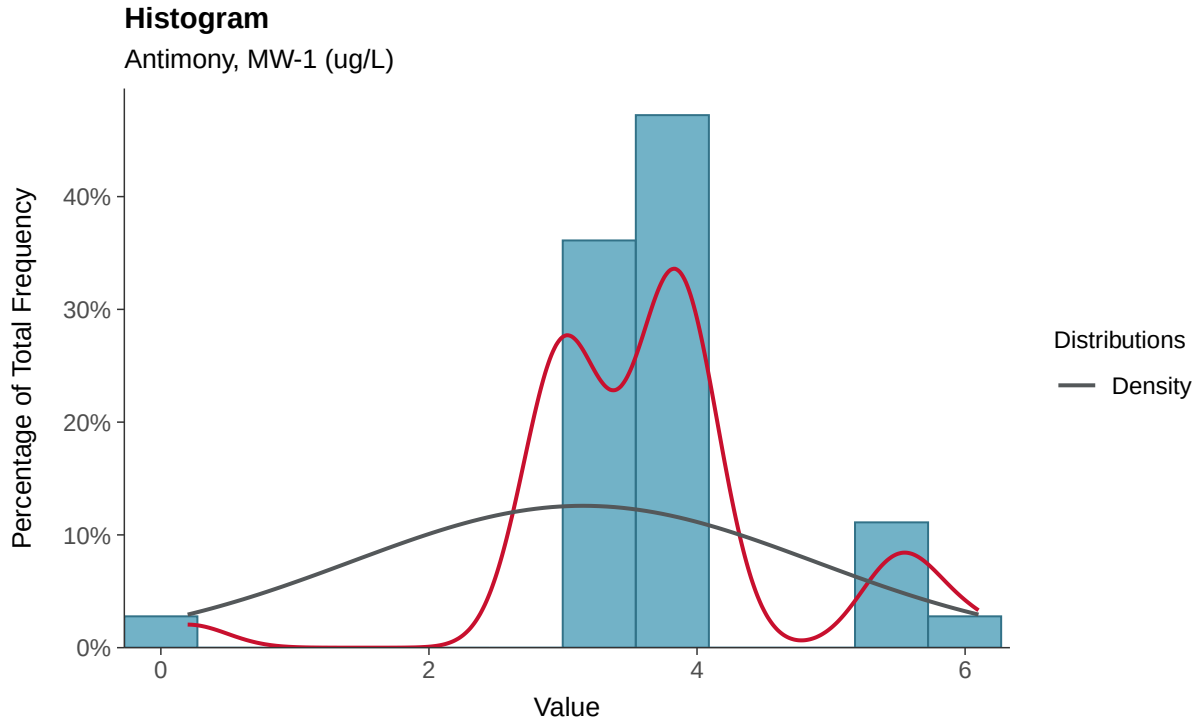
Total Dissolved Solids, MW-1 (mg/L)



App. IV: Antimony, MW-1

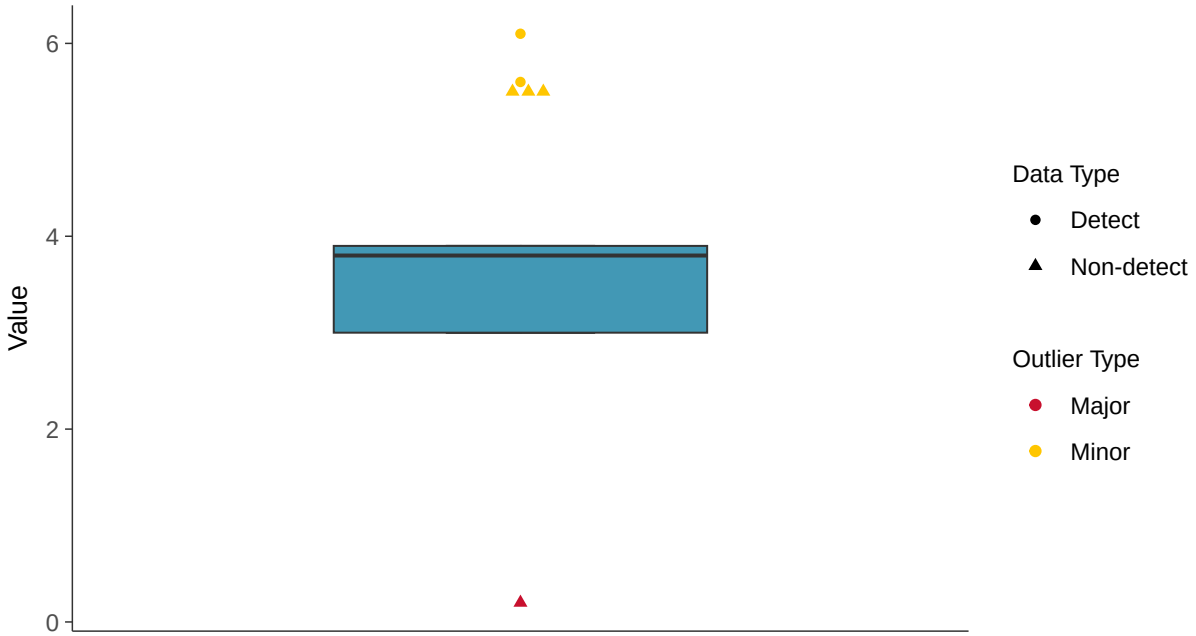
ID: 1_3_101





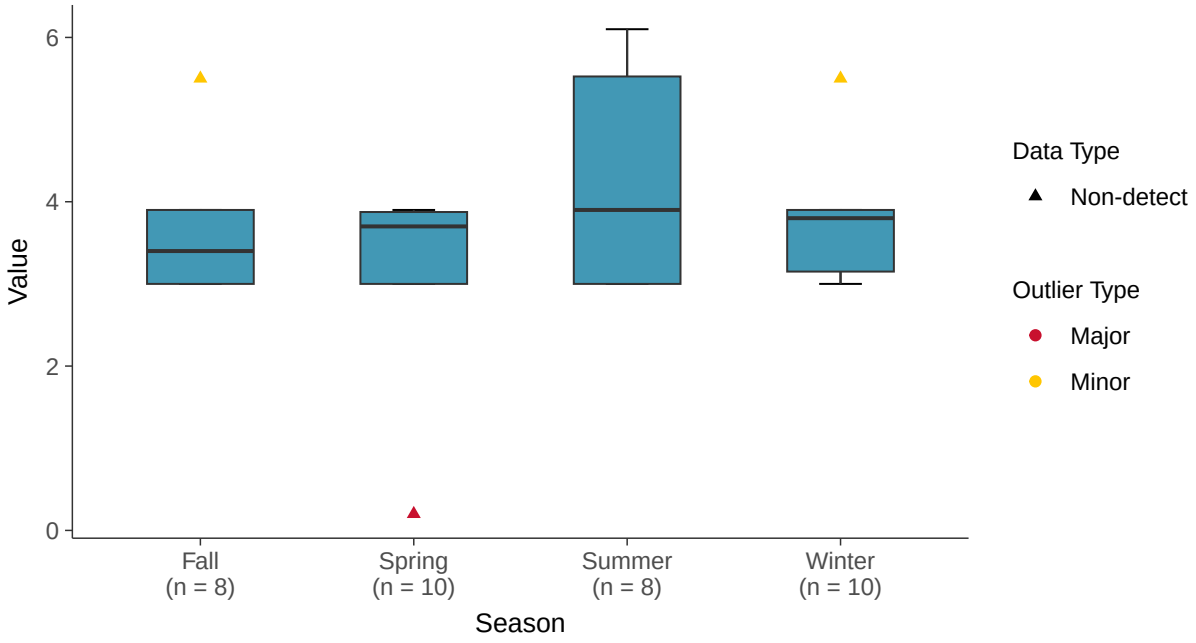
Boxplot

Antimony, MW-1 (ug/L)



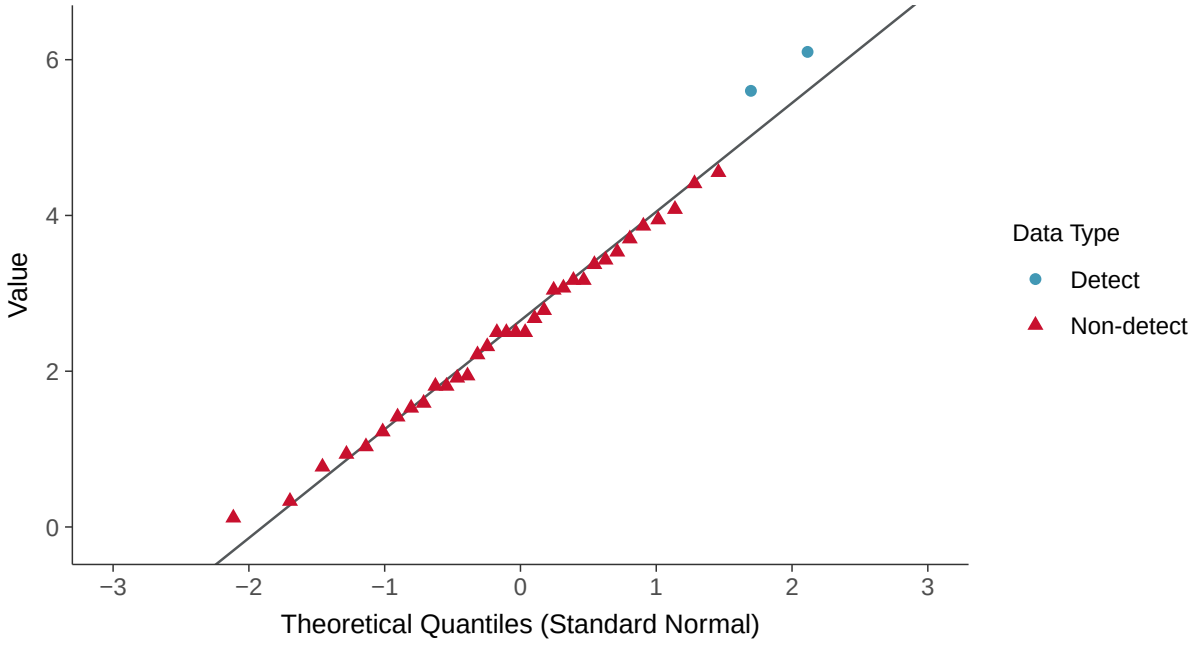
Boxplot by Season

Antimony, MW-1 (ug/L)



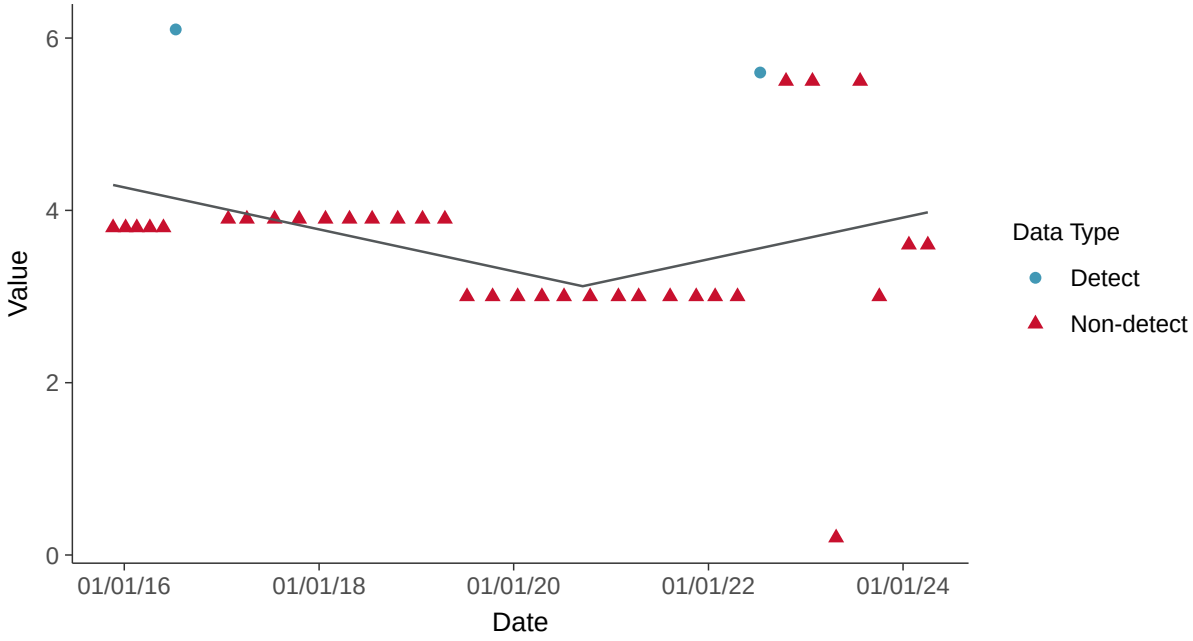
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-1 (ug/L)



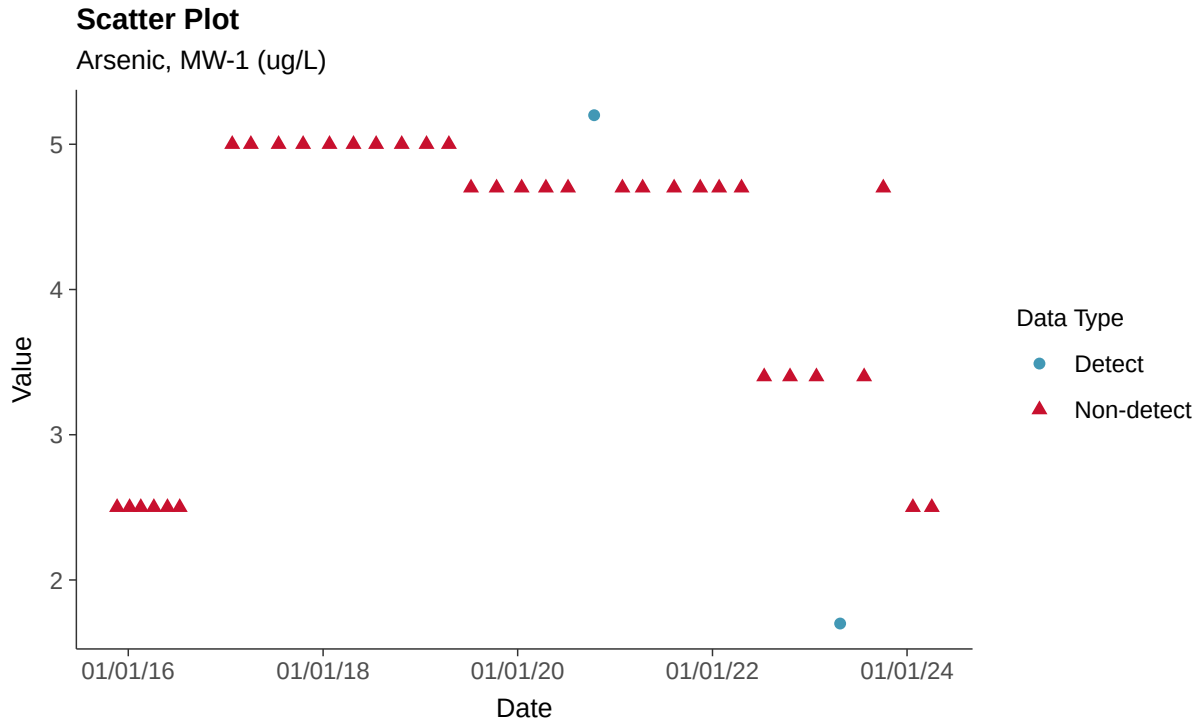
Trend Regression: Piecewise Linear-Linear

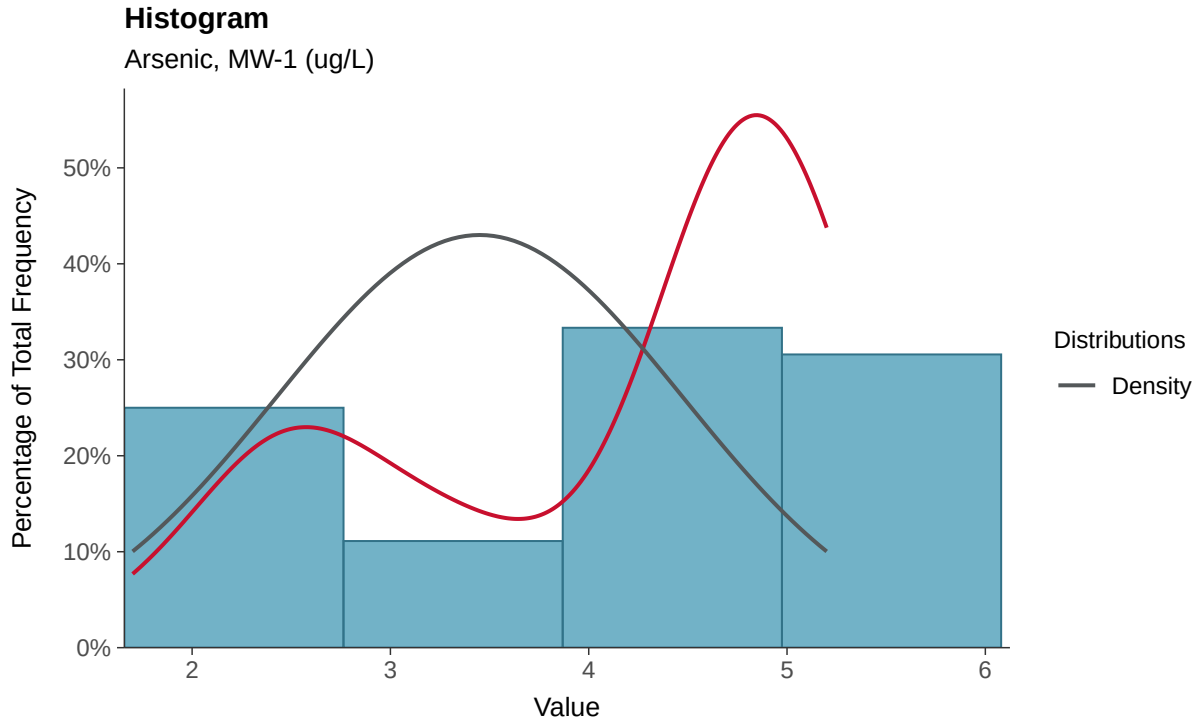
Antimony, MW-1 (ug/L)



App. IV: Arsenic, MW-1

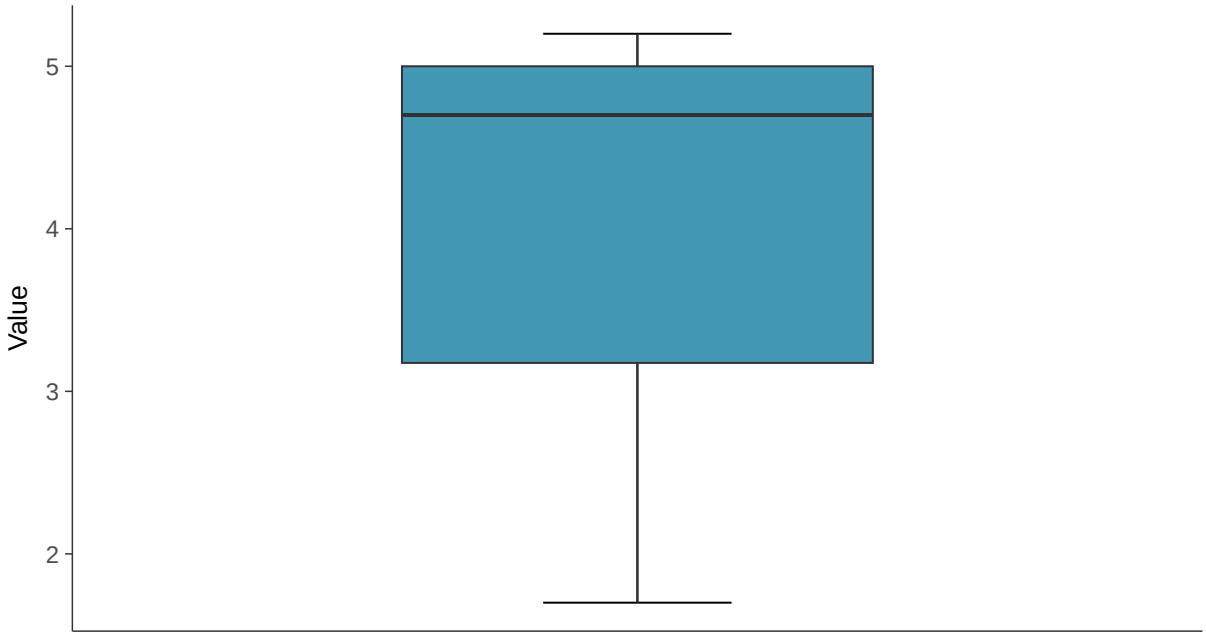
ID: 1_3_102





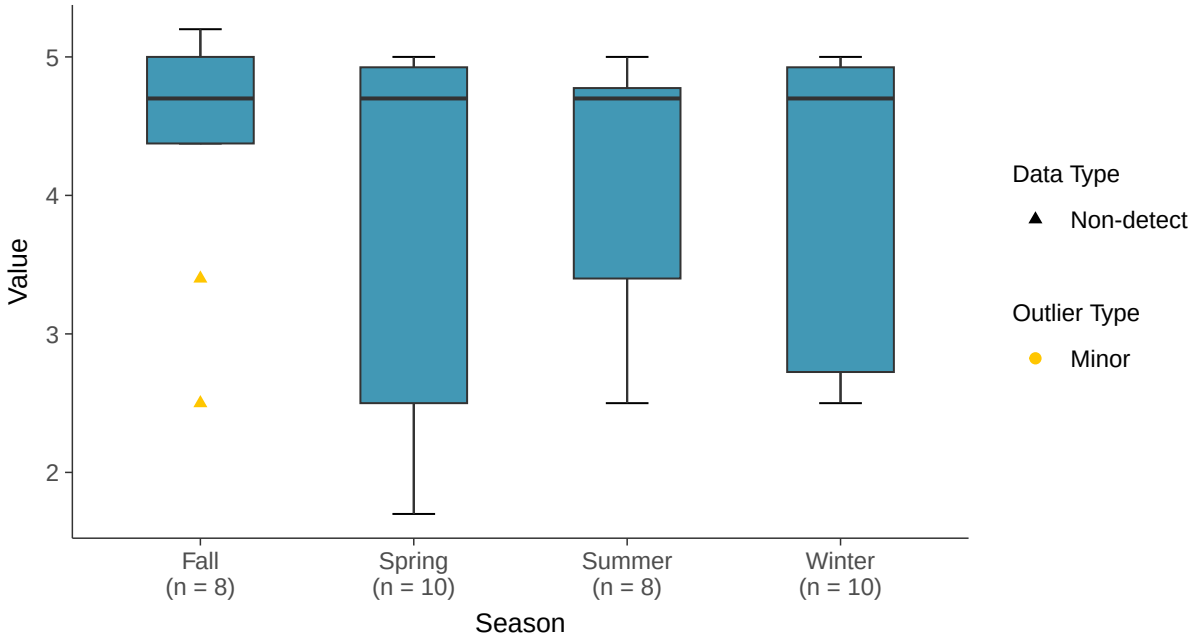
Boxplot

Arsenic, MW-1 (ug/L)



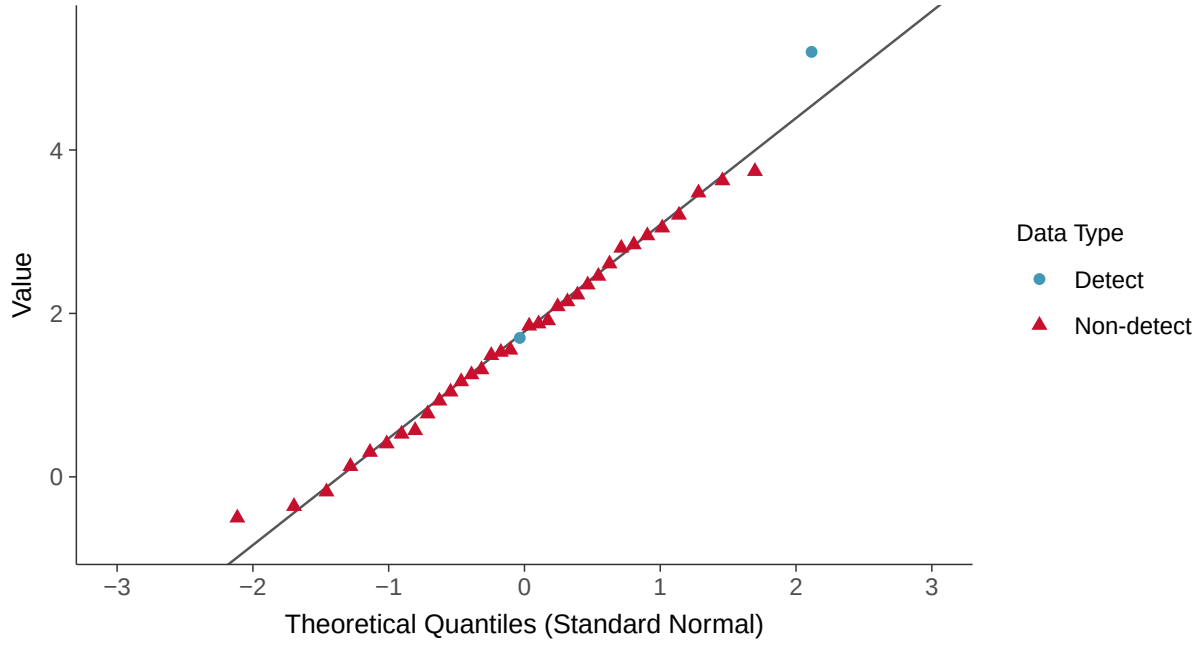
Boxplot by Season

Arsenic, MW-1 (ug/L)



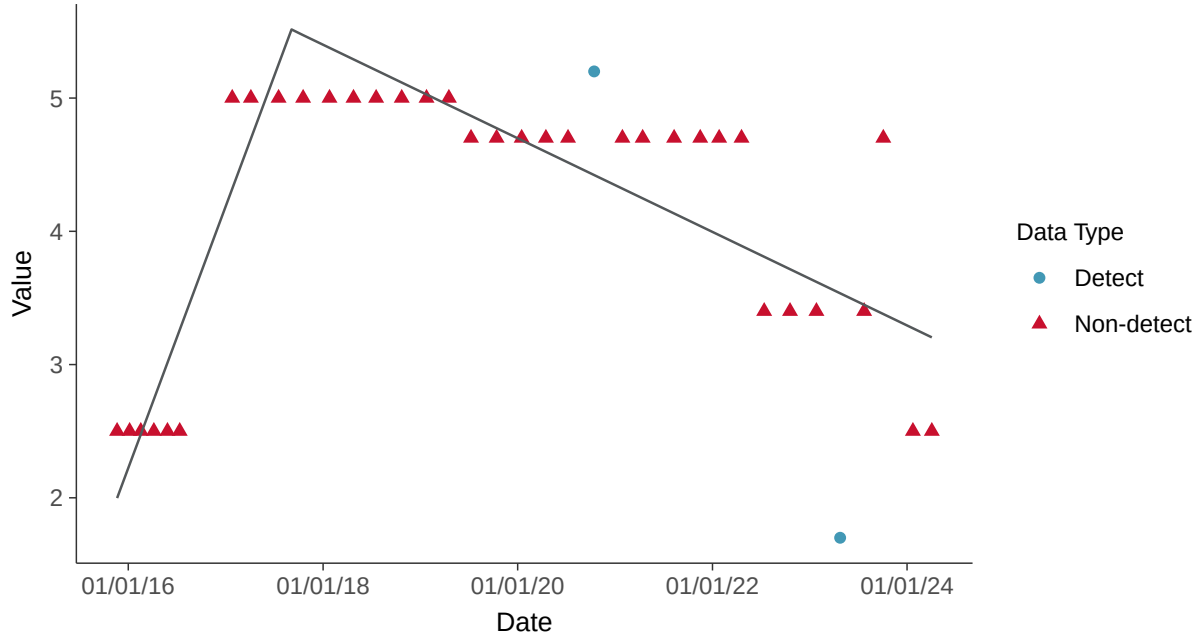
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-1 (ug/L)



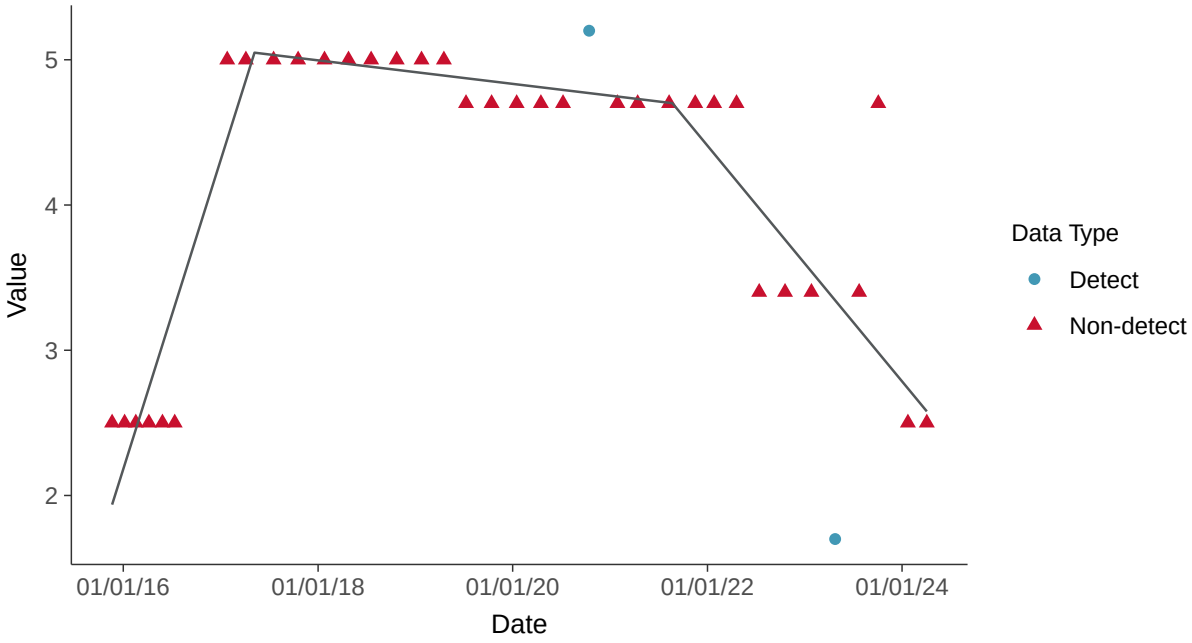
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-1 (ug/L)



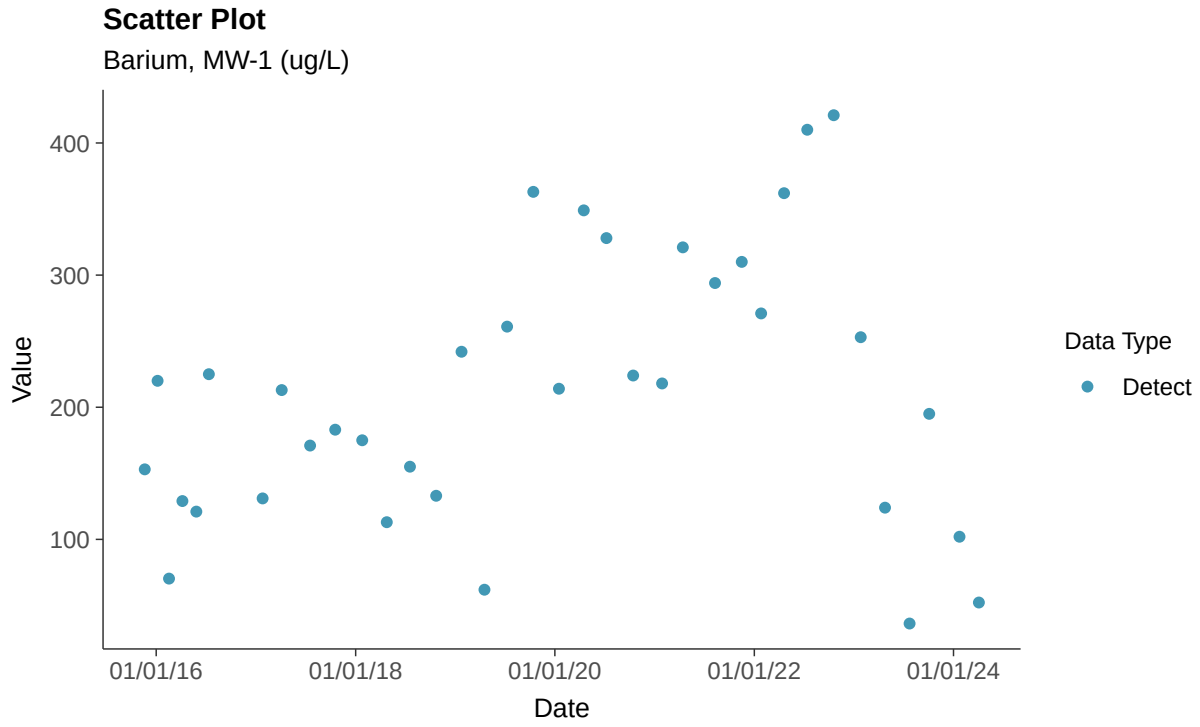
Trend Regression: Piecewise Linear-Linear-Linear

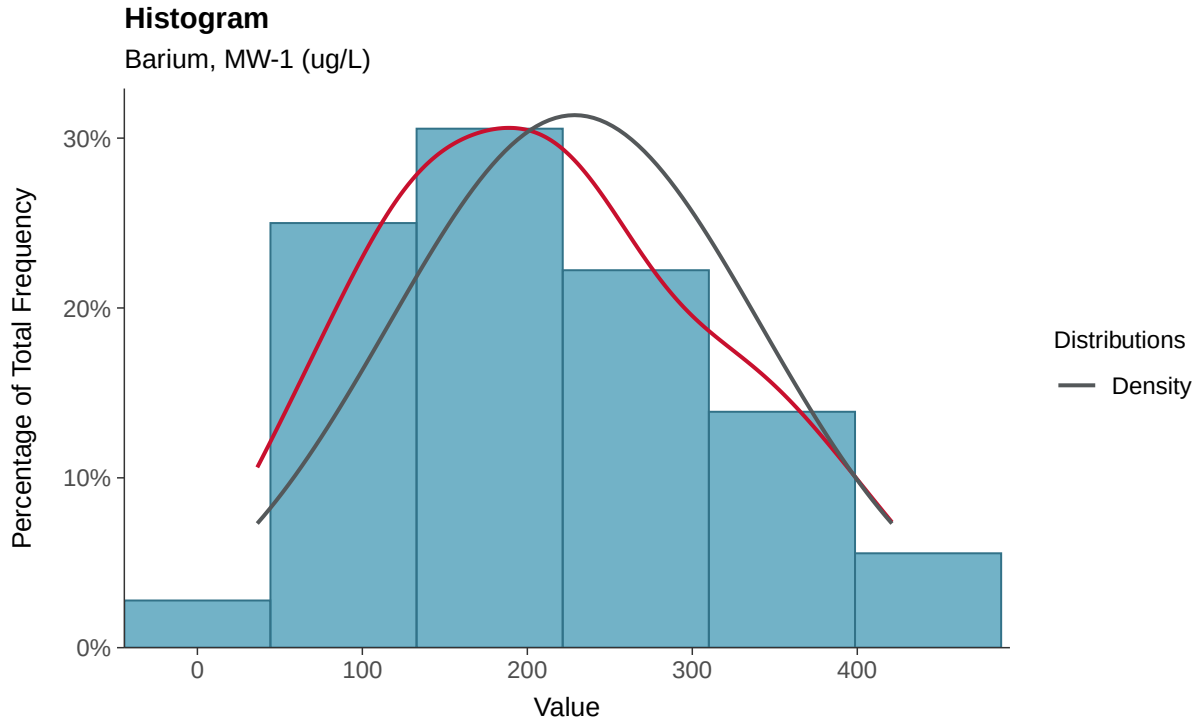
Arsenic, MW-1 (ug/L)



App. IV: Barium, MW-1

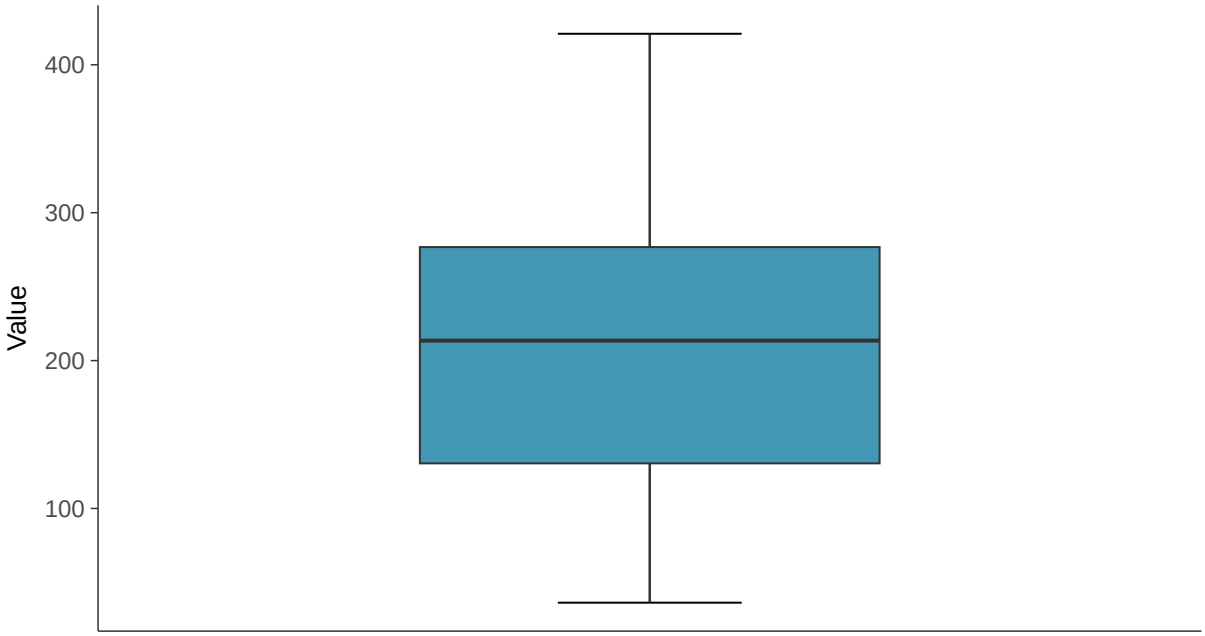
ID: 1_3_103





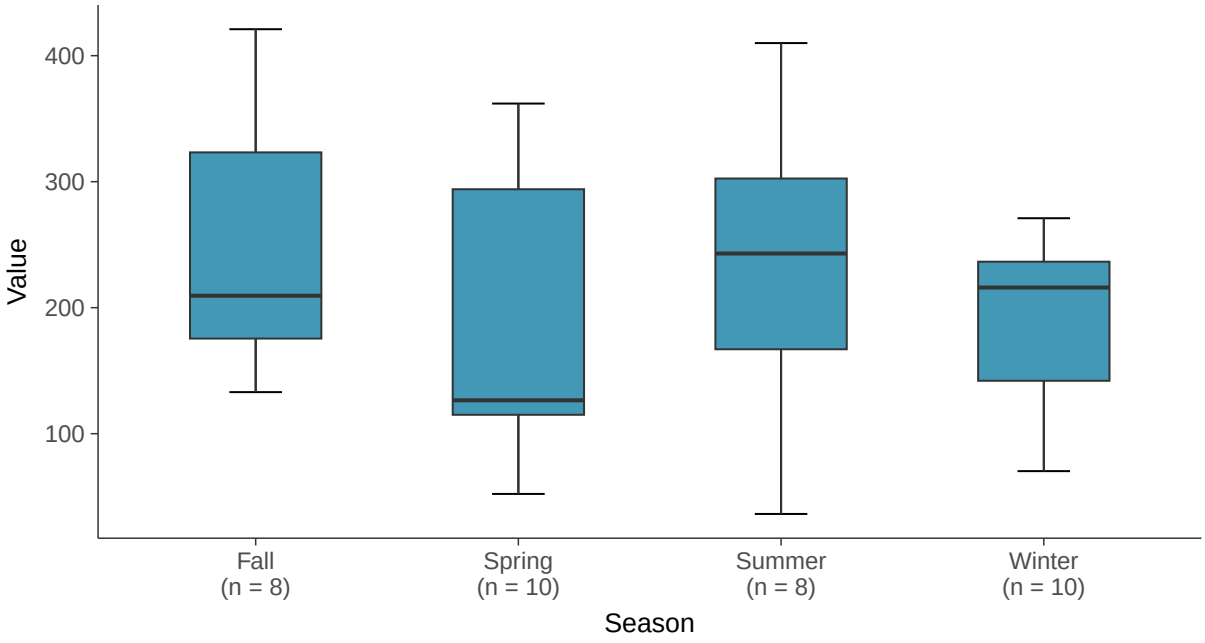
Boxplot

Barium, MW-1 (ug/L)



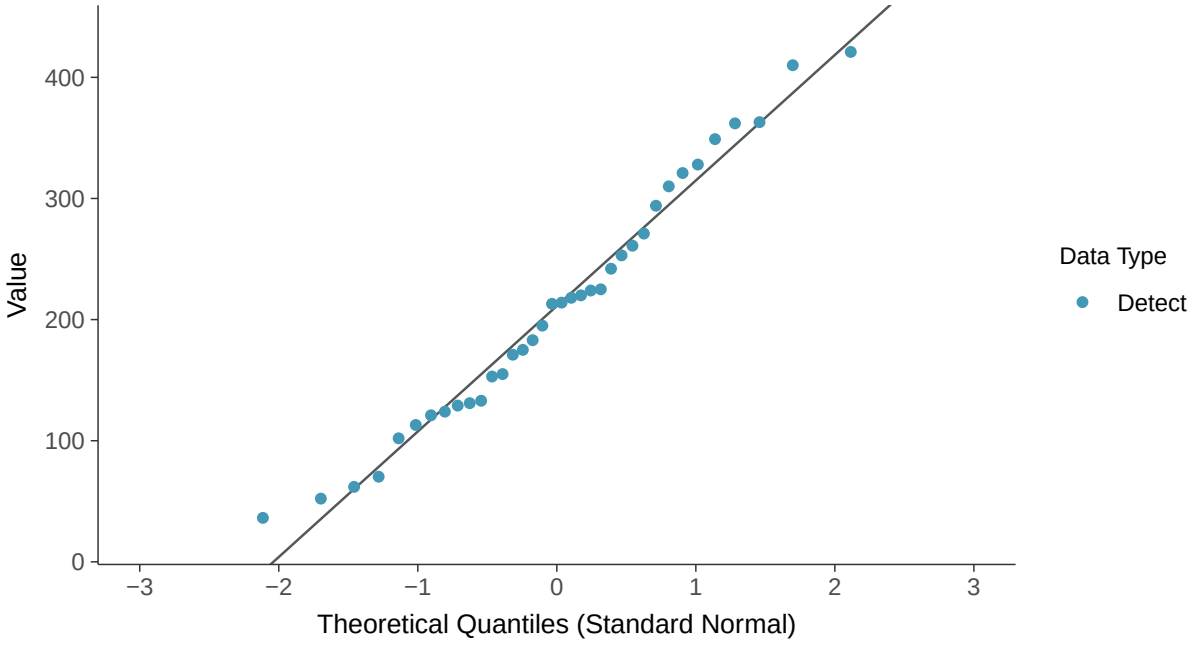
Boxplot by Season

Barium, MW-1 (ug/L)



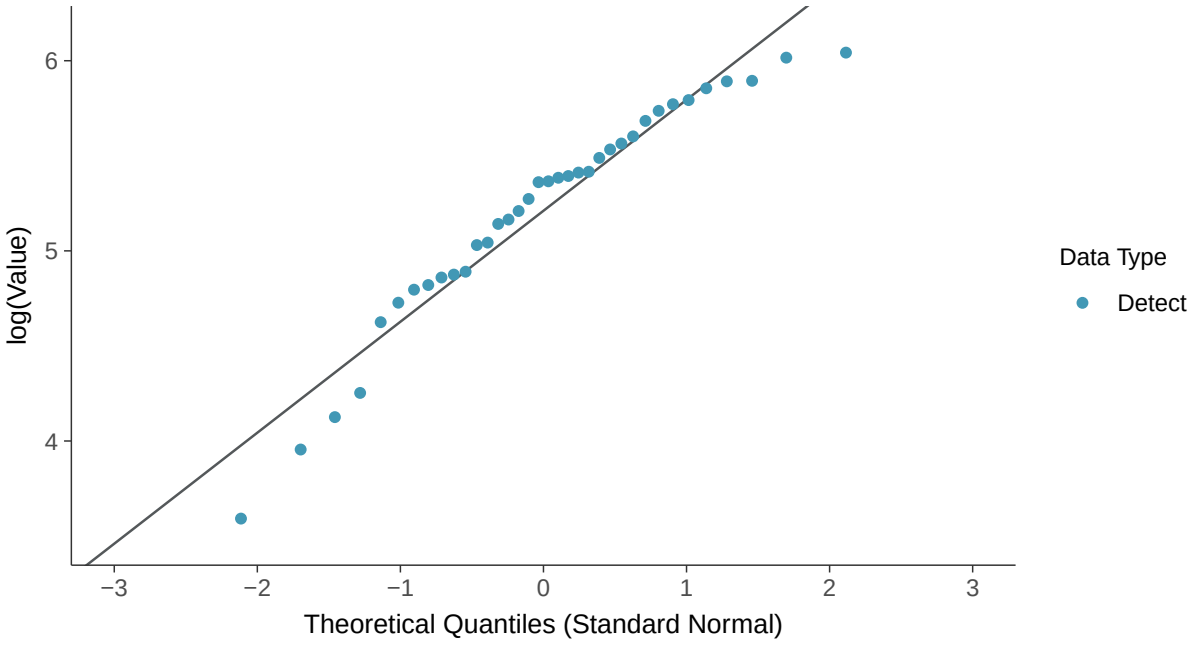
Normal Q-Q plot

Barium, MW-1 (ug/L)



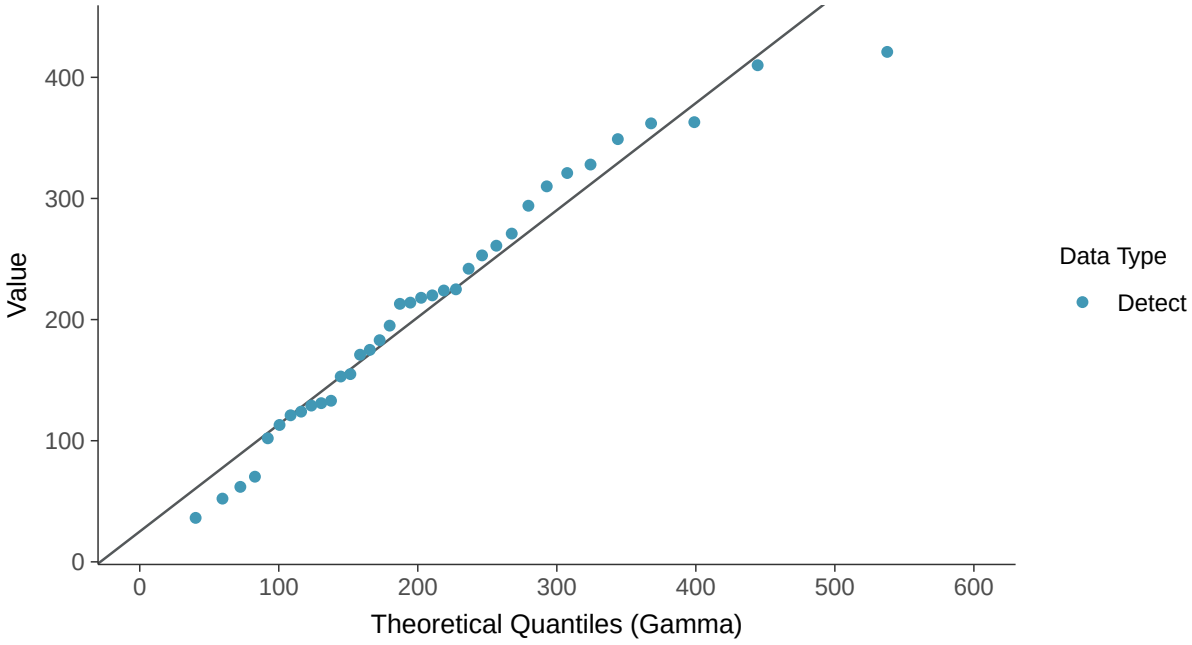
Lognormal Q-Q plot

Barium, MW-1 (ug/L)



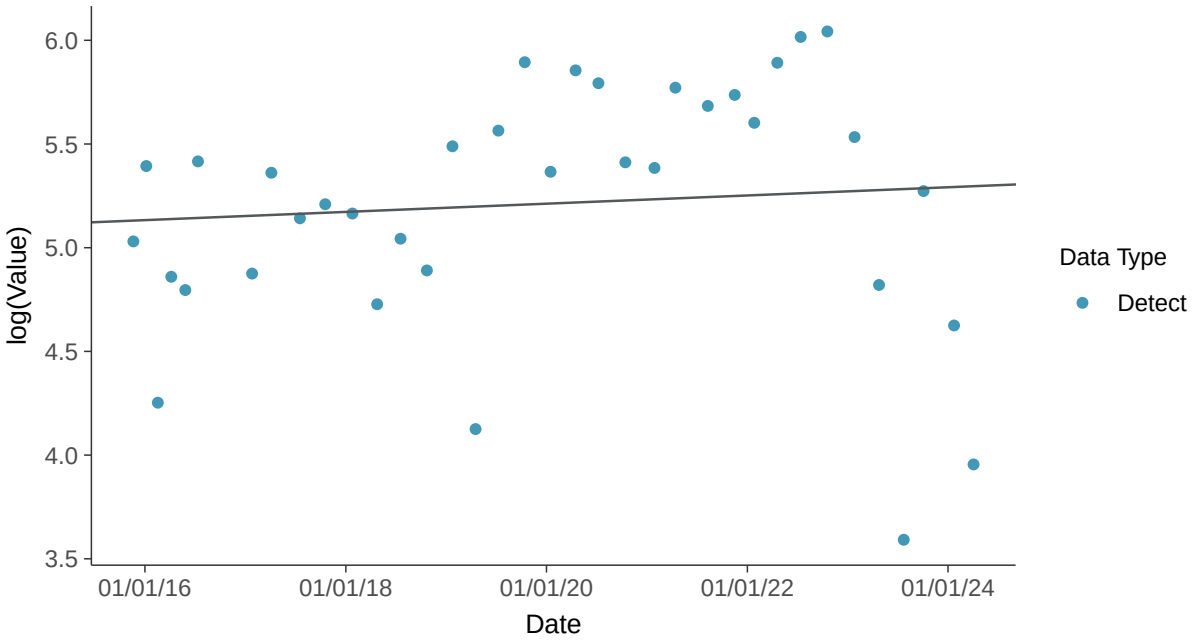
Gamma Q-Q plot

Barium, MW-1 (ug/L)



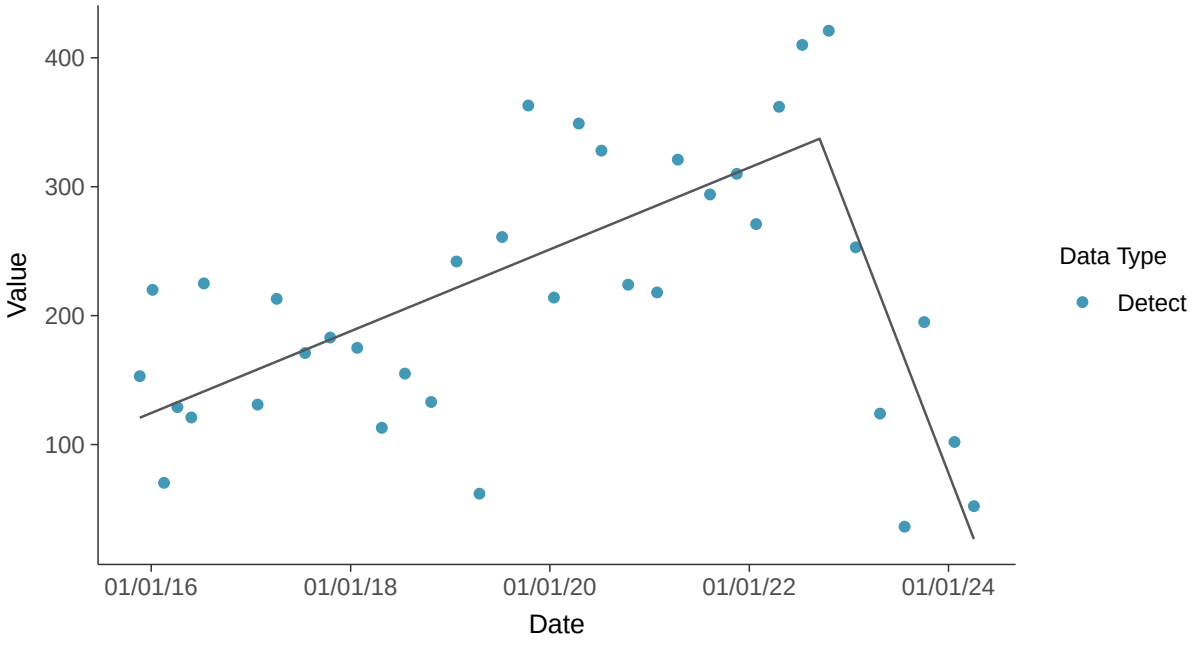
Trend Regression: Lognormal MLE

Barium, MW-1 (ug/L)



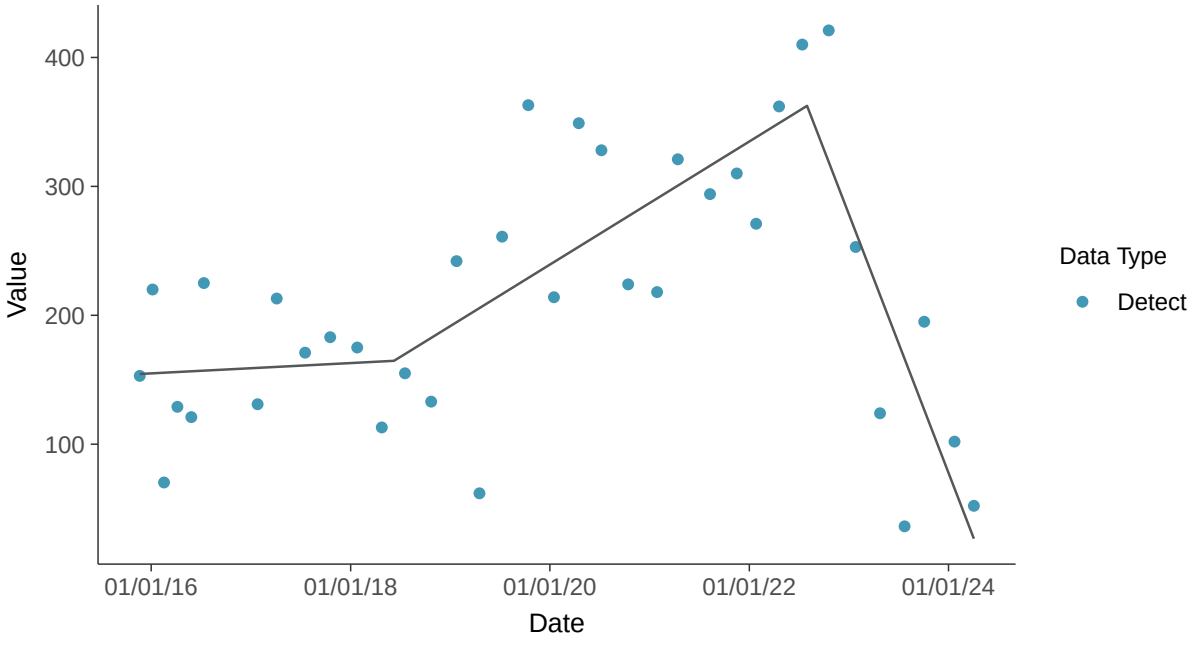
Trend Regression: Piecewise Linear-Linear

Barium, MW-1 (ug/L)



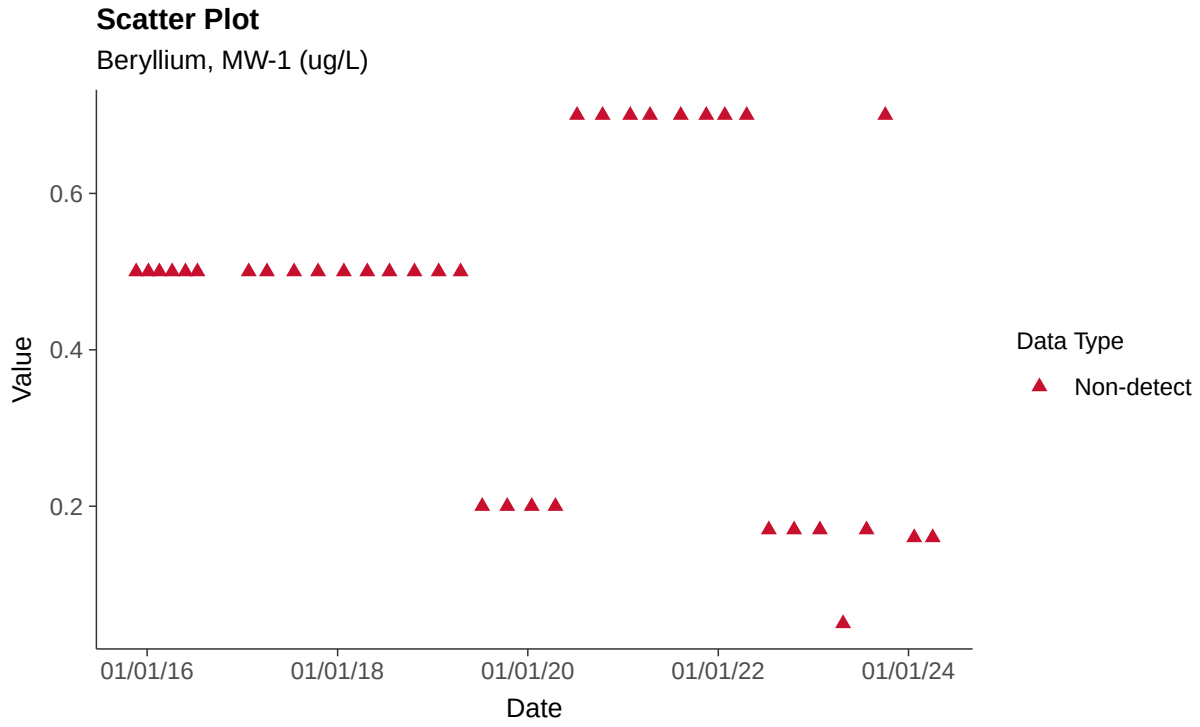
Trend Regression: Piecewise Linear-Linear-Linear

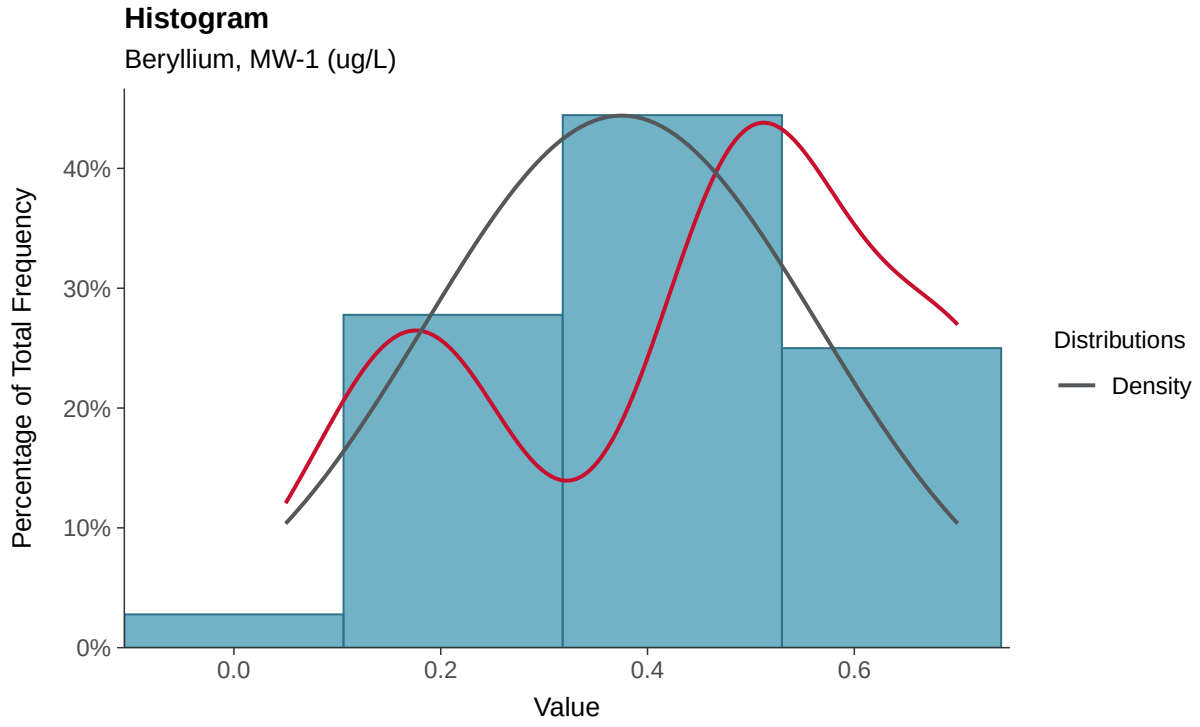
Barium, MW-1 (ug/L)



App. IV: Beryllium, MW-1

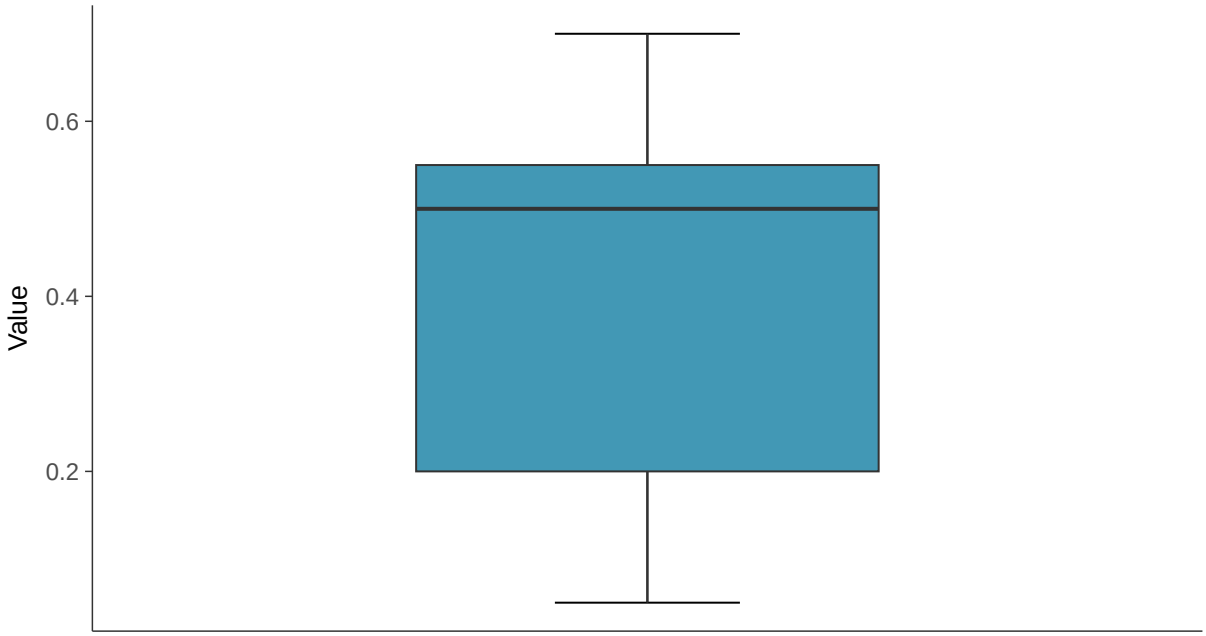
ID: 1_3_104





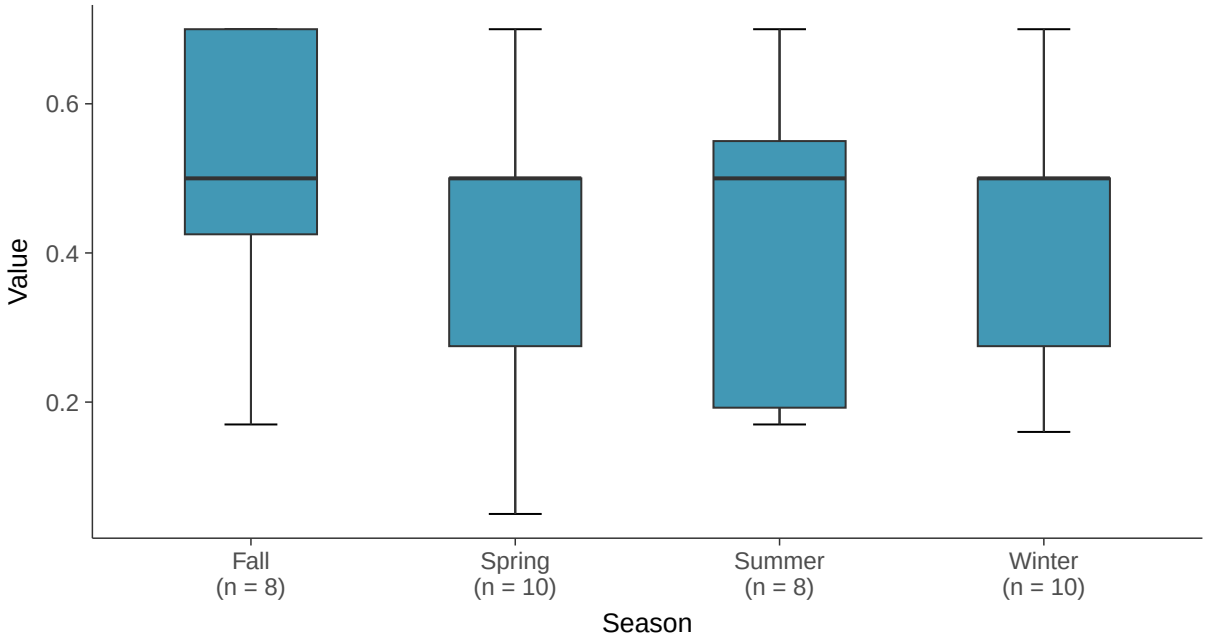
Boxplot

Beryllium, MW-1 (ug/L)



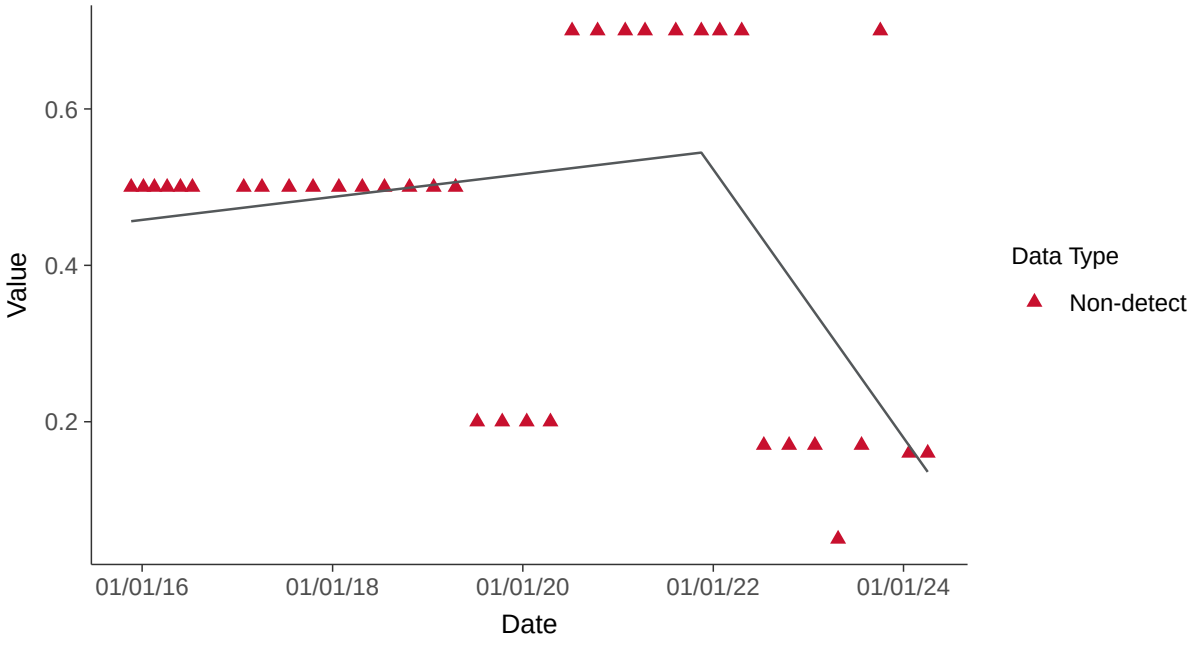
Boxplot by Season

Beryllium, MW-1 (ug/L)



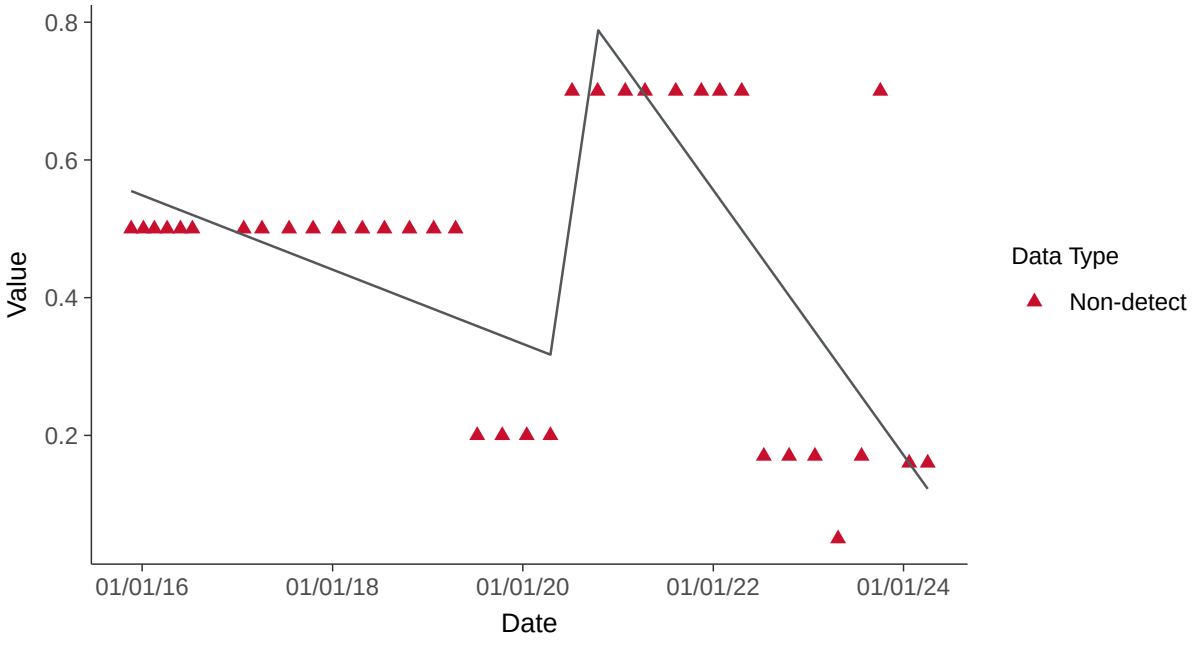
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-1 (ug/L)



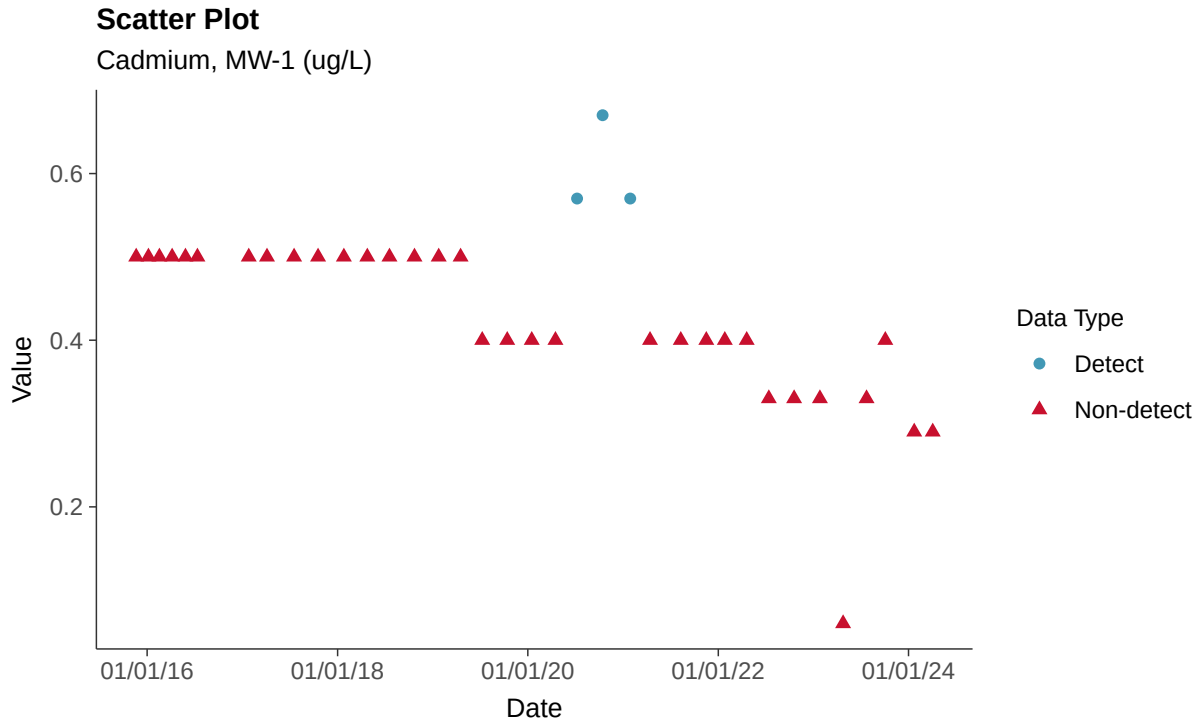
Trend Regression: Piecewise Linear-Linear-Linear

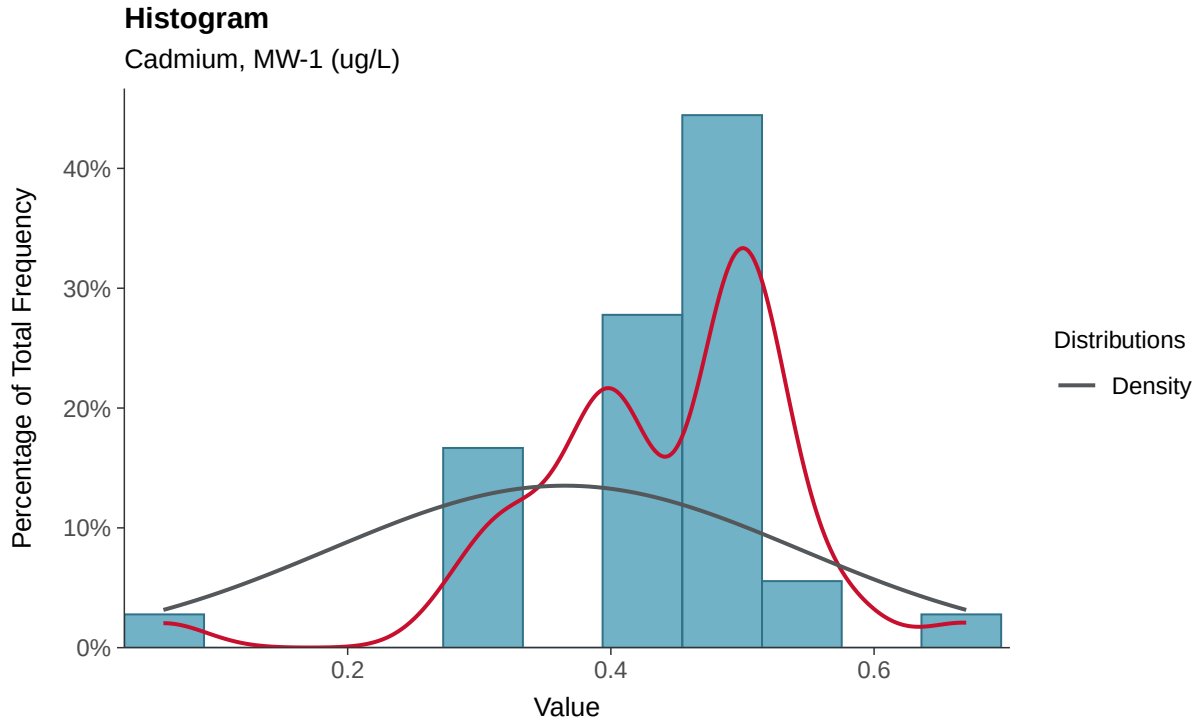
Beryllium, MW-1 (ug/L)



App. IV: Cadmium, MW-1

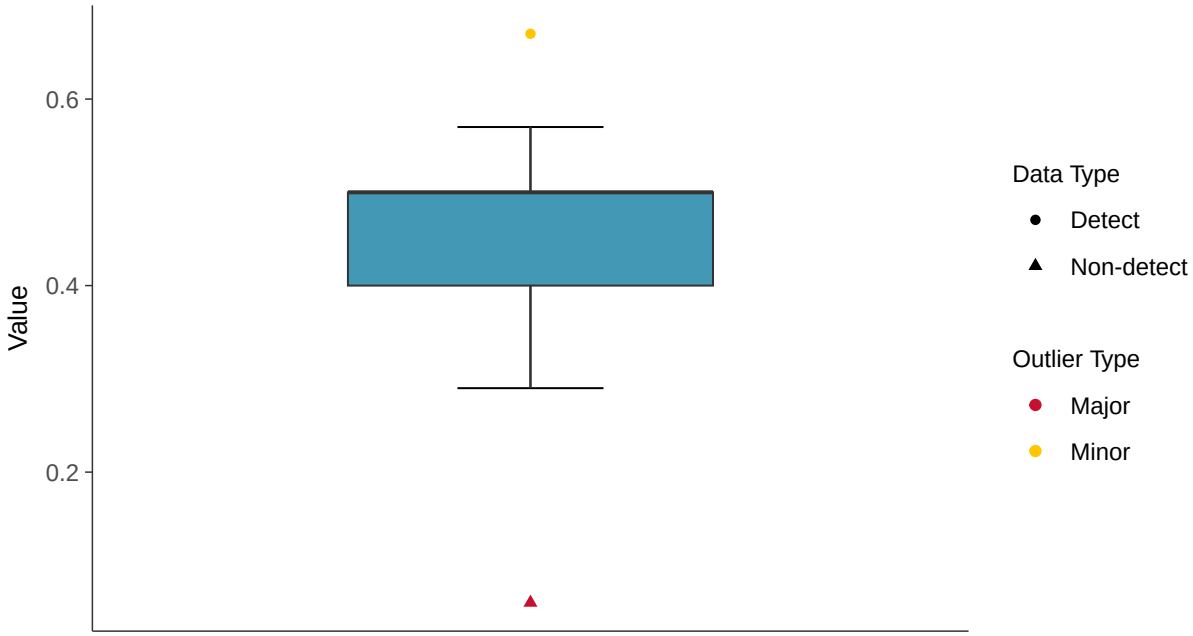
ID: 1_3_106





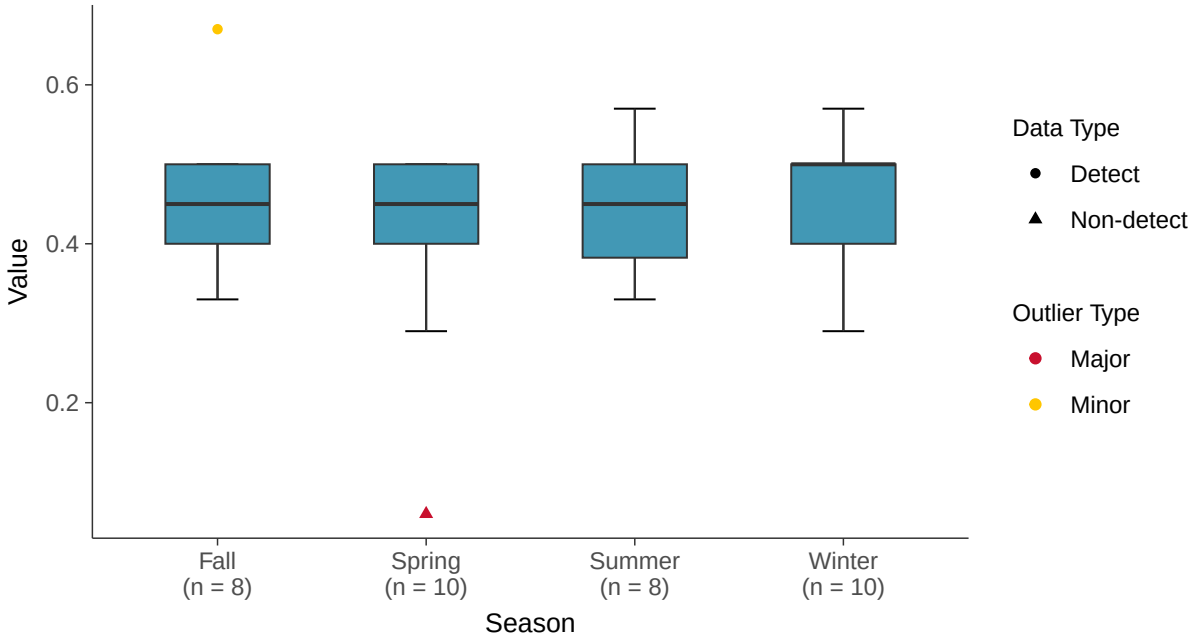
Boxplot

Cadmium, MW-1 (ug/L)



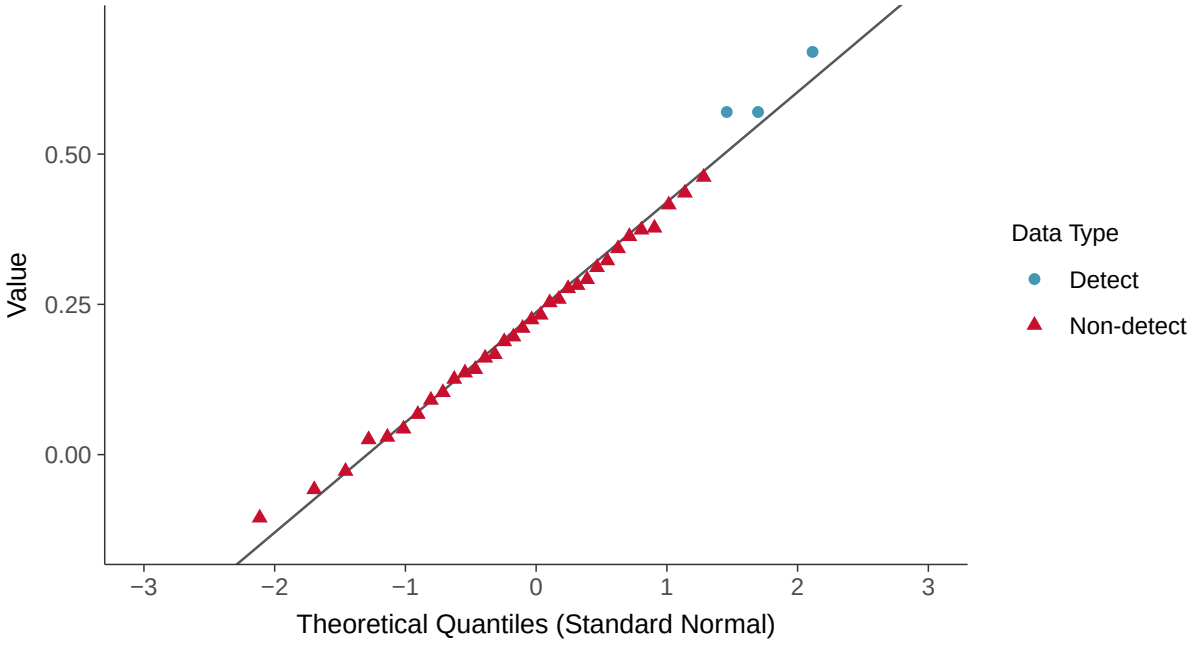
Boxplot by Season

Cadmium, MW-1 (ug/L)



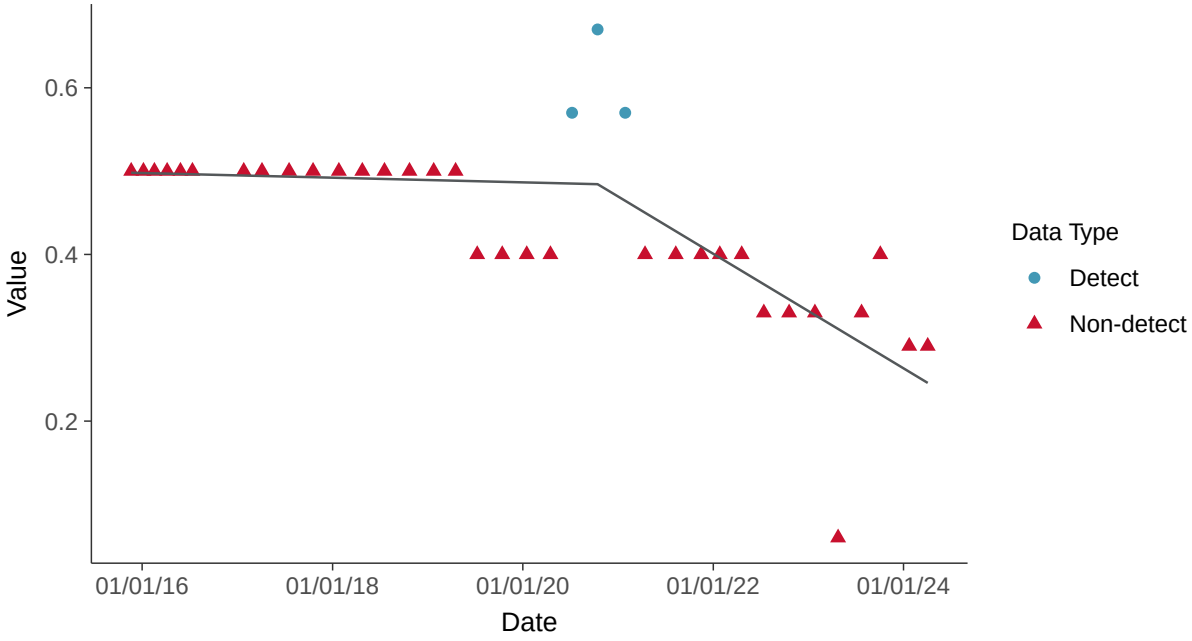
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-1 (ug/L)



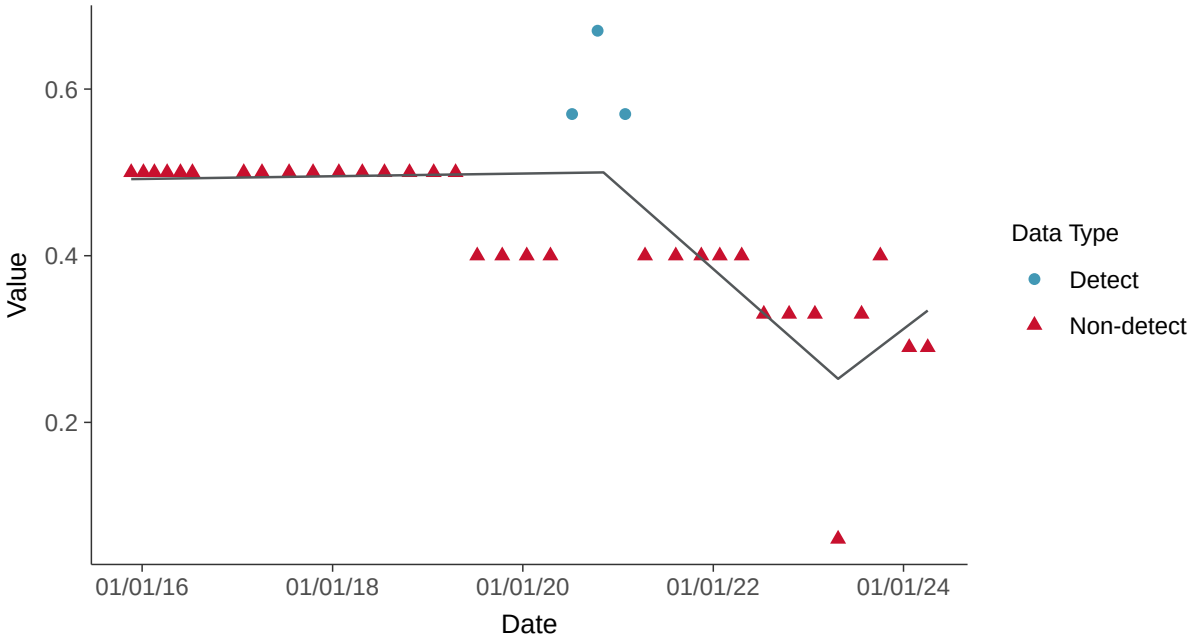
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-1 (ug/L)

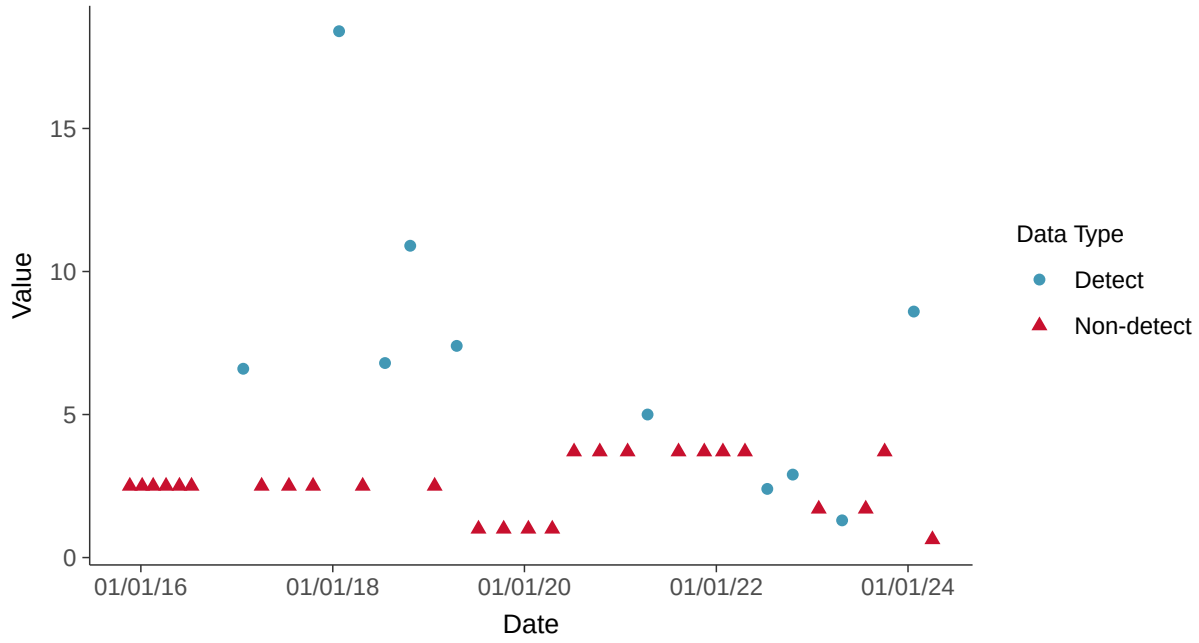


App. IV: Chromium, MW-1

ID: 1_3_109

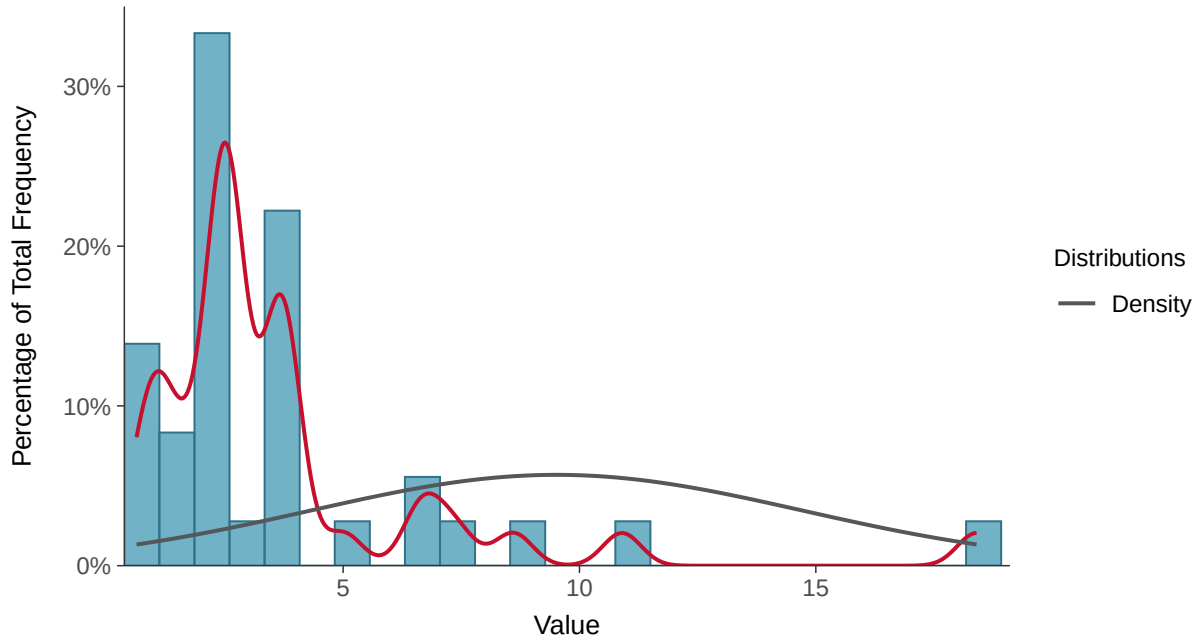
Scatter Plot

Chromium, MW-1 (ug/L)



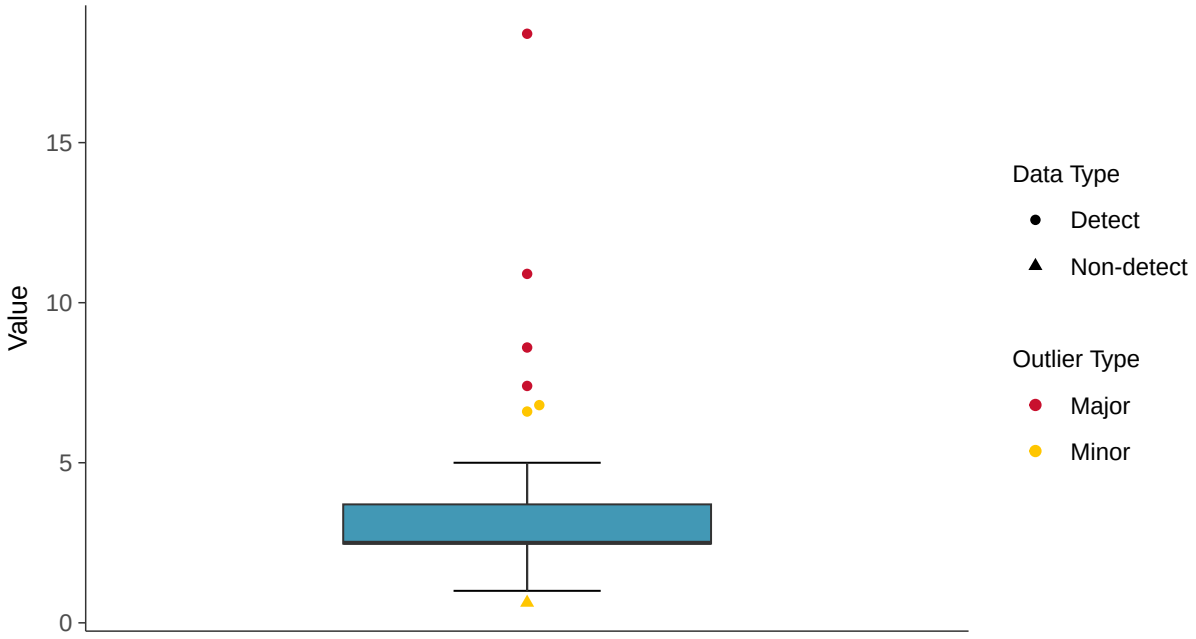
Histogram

Chromium, MW-1 (ug/L)



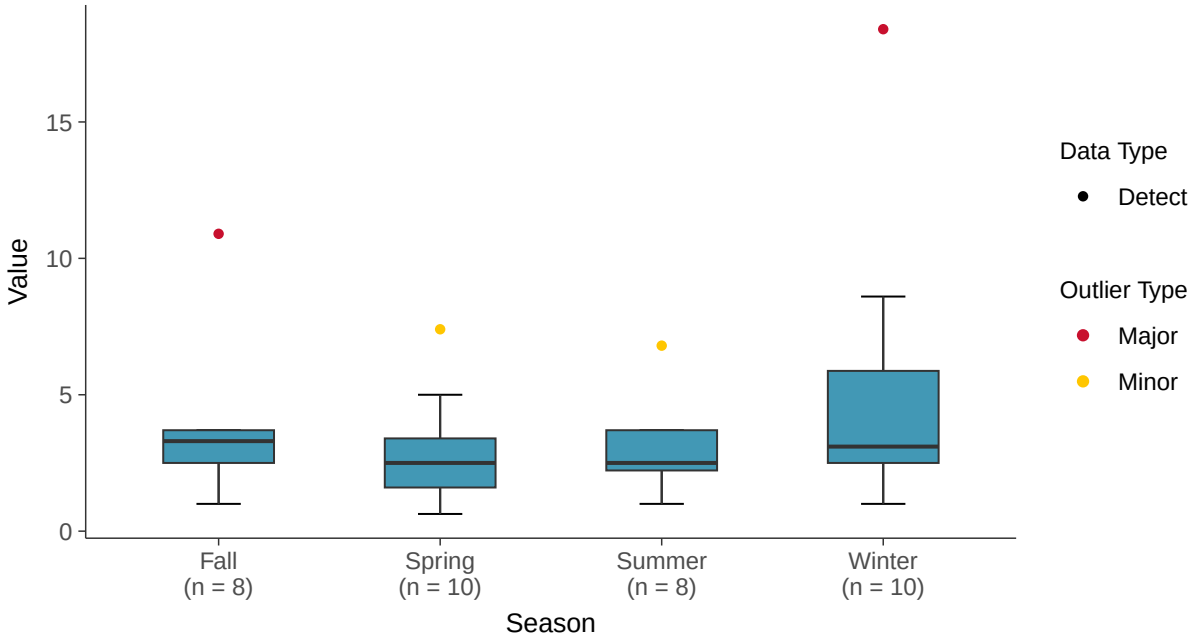
Boxplot

Chromium, MW-1 (ug/L)



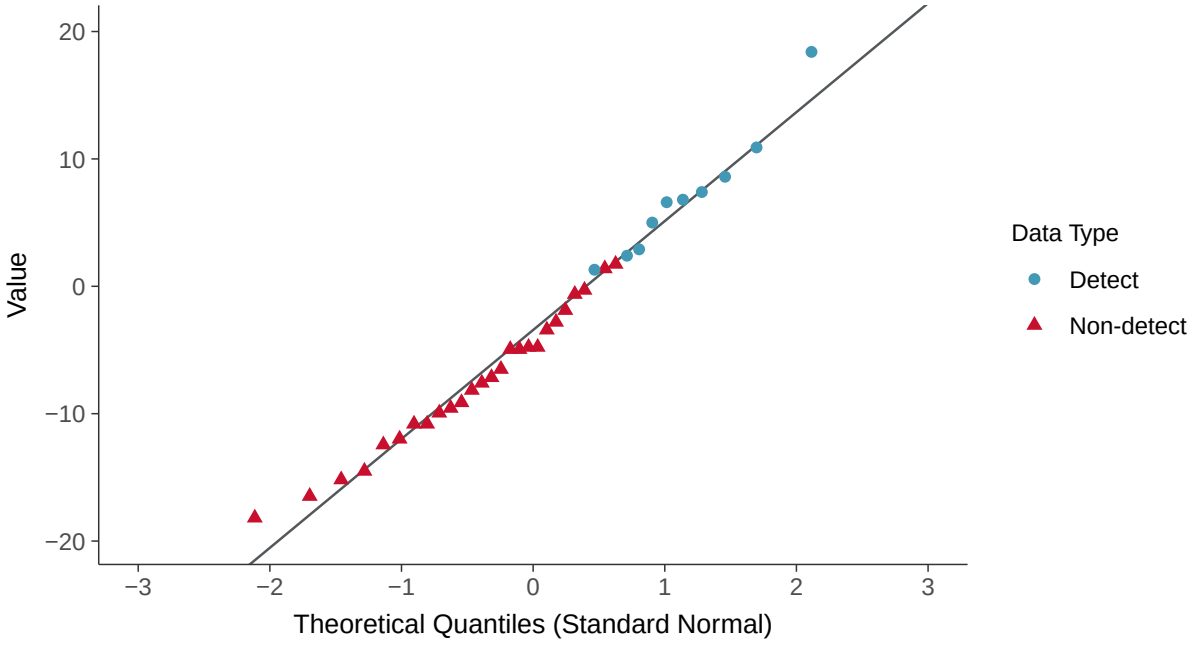
Boxplot by Season

Chromium, MW-1 (ug/L)



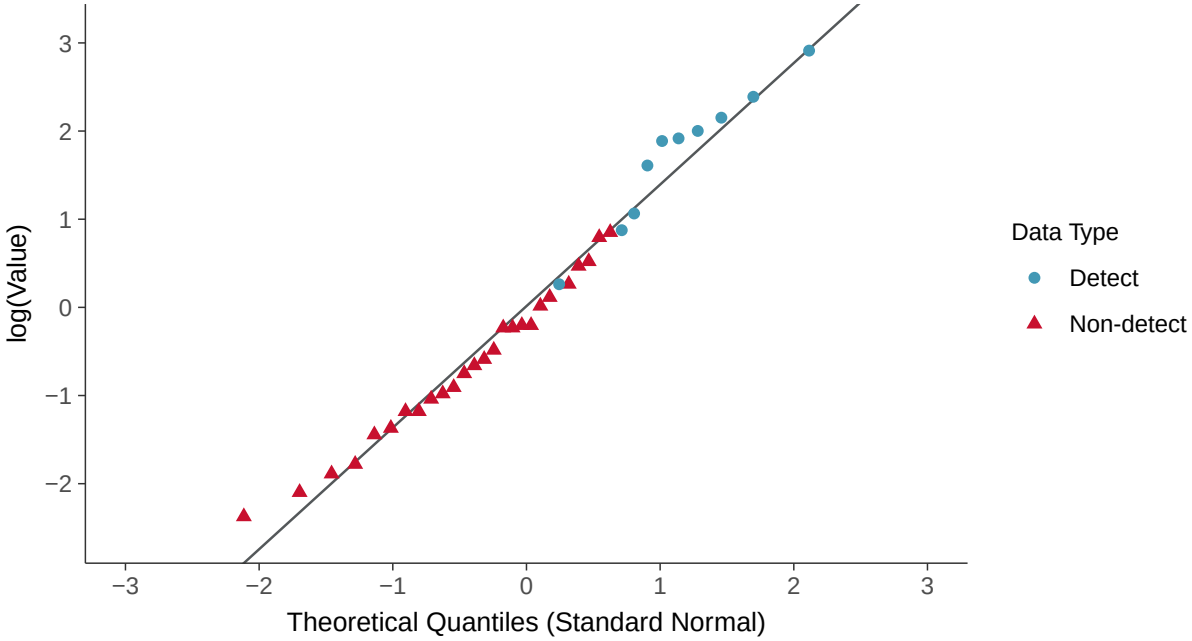
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



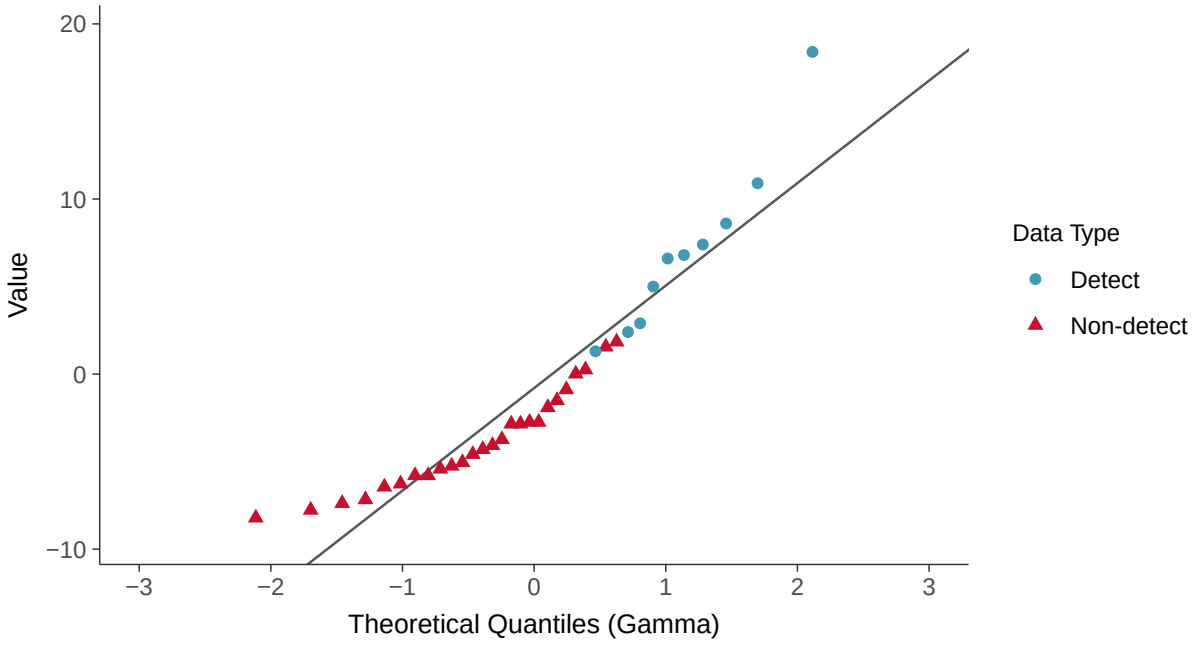
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



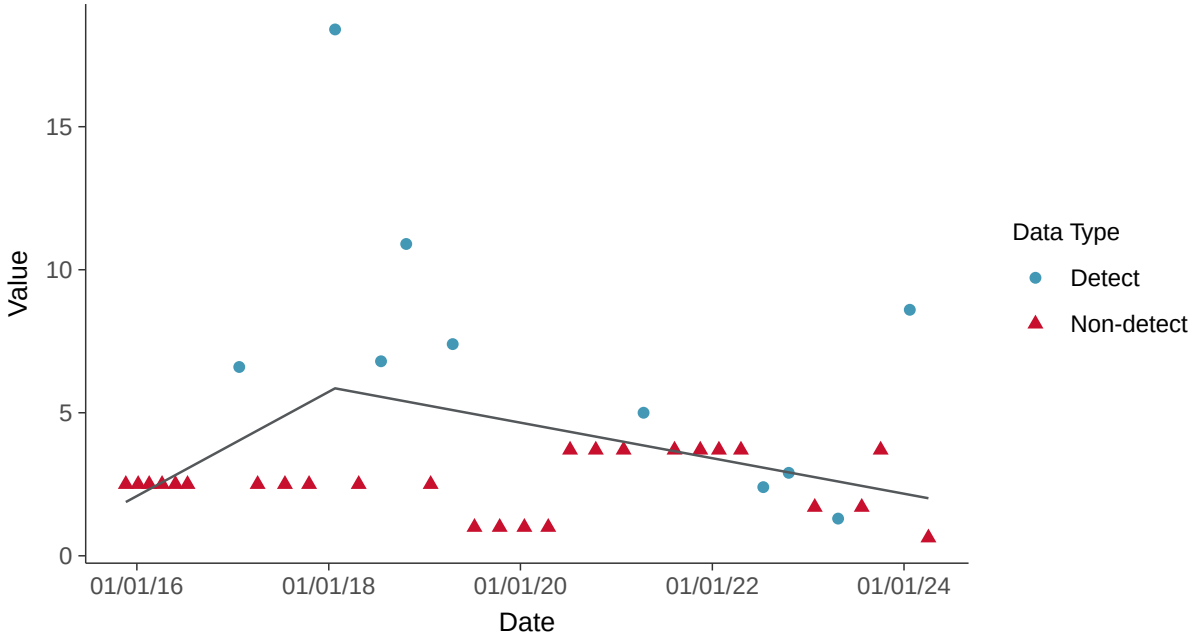
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



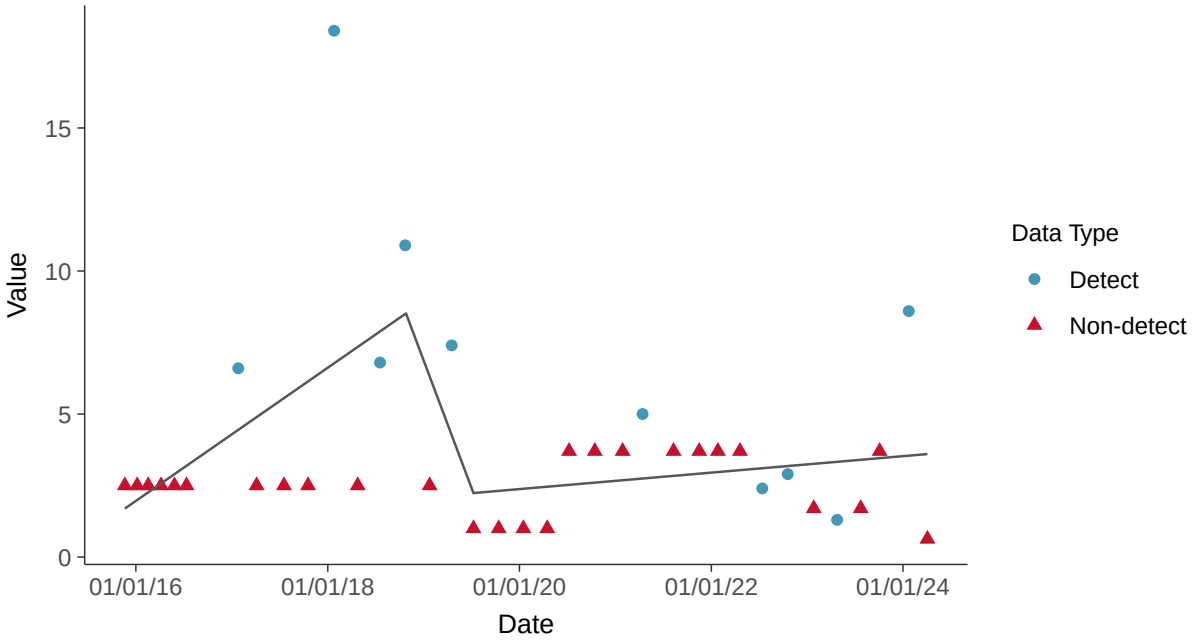
Trend Regression: Piecewise Linear-Linear

Chromium, MW-1 (ug/L)



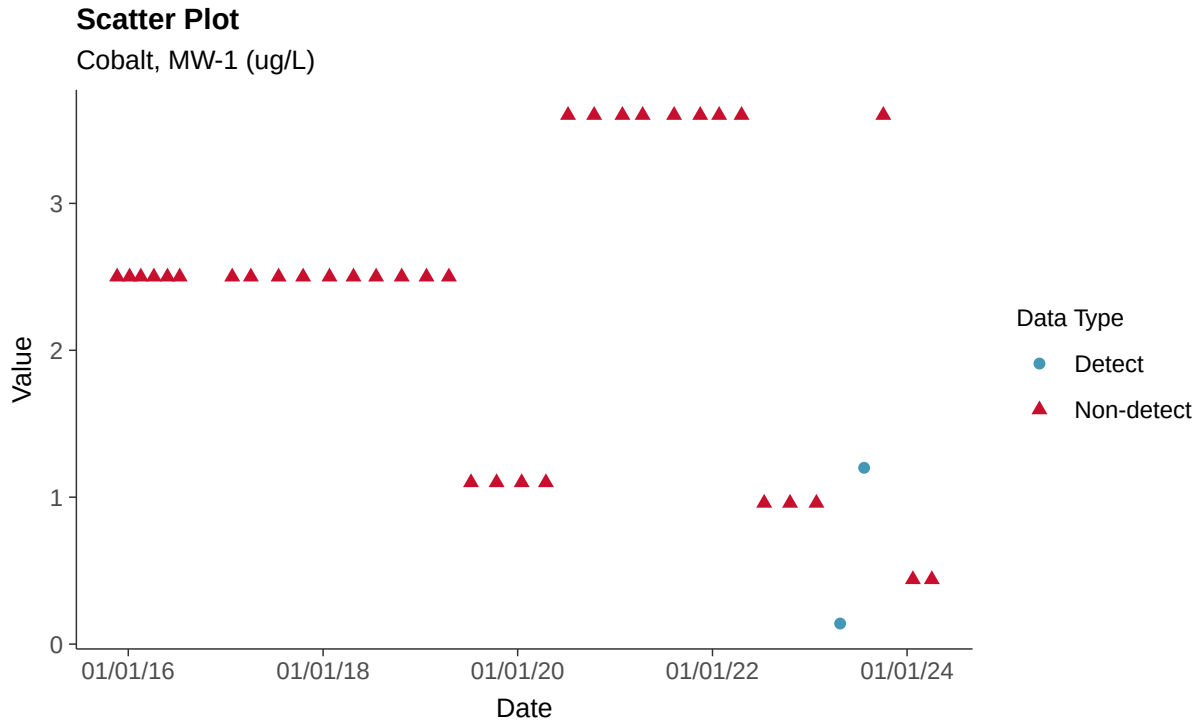
Trend Regression: Piecewise Linear-Linear-Linear

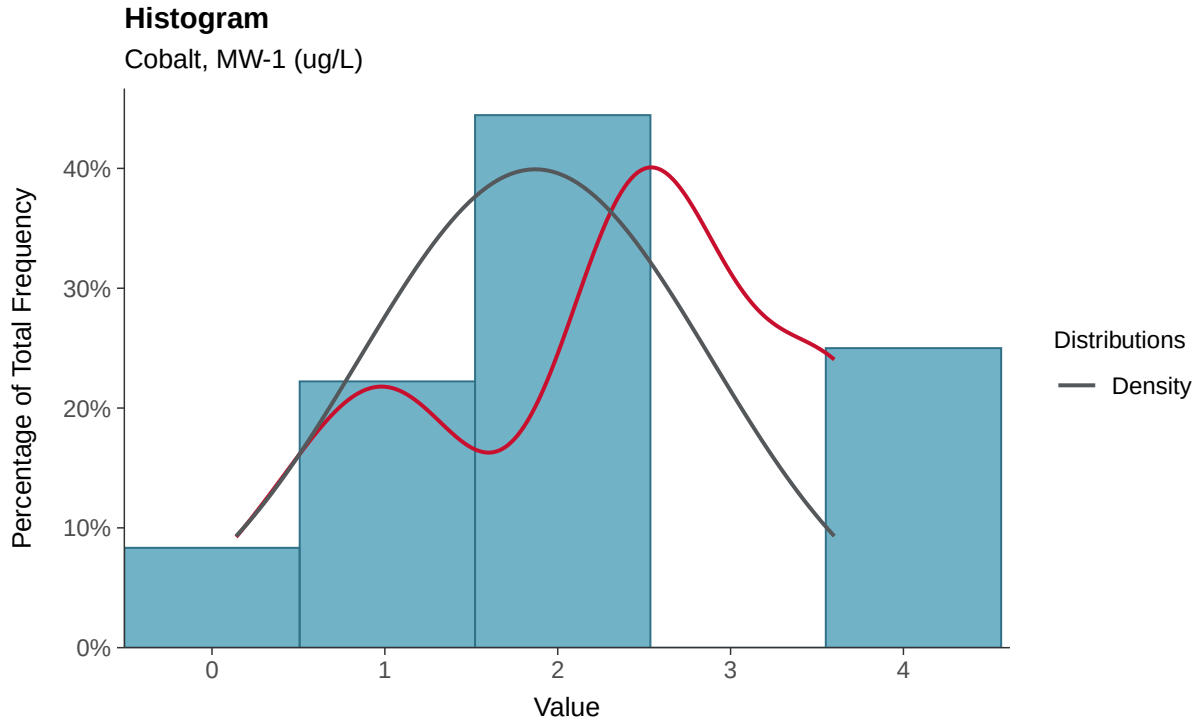
Chromium, MW-1 (ug/L)



App. IV: Cobalt, MW-1

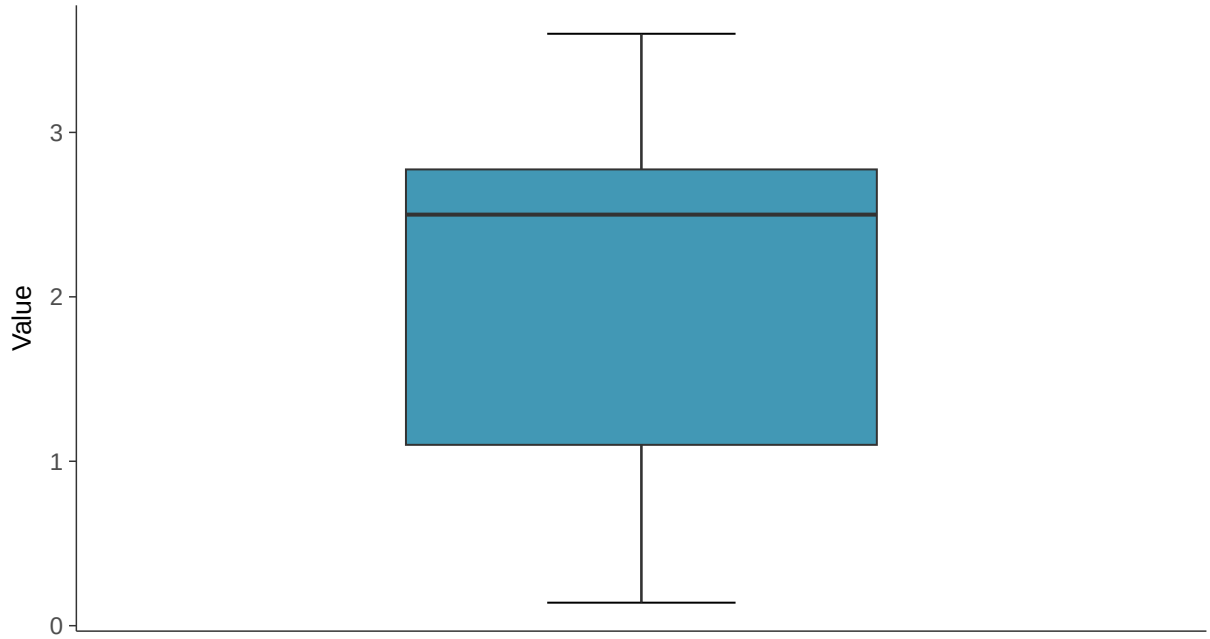
ID: 1_3_110





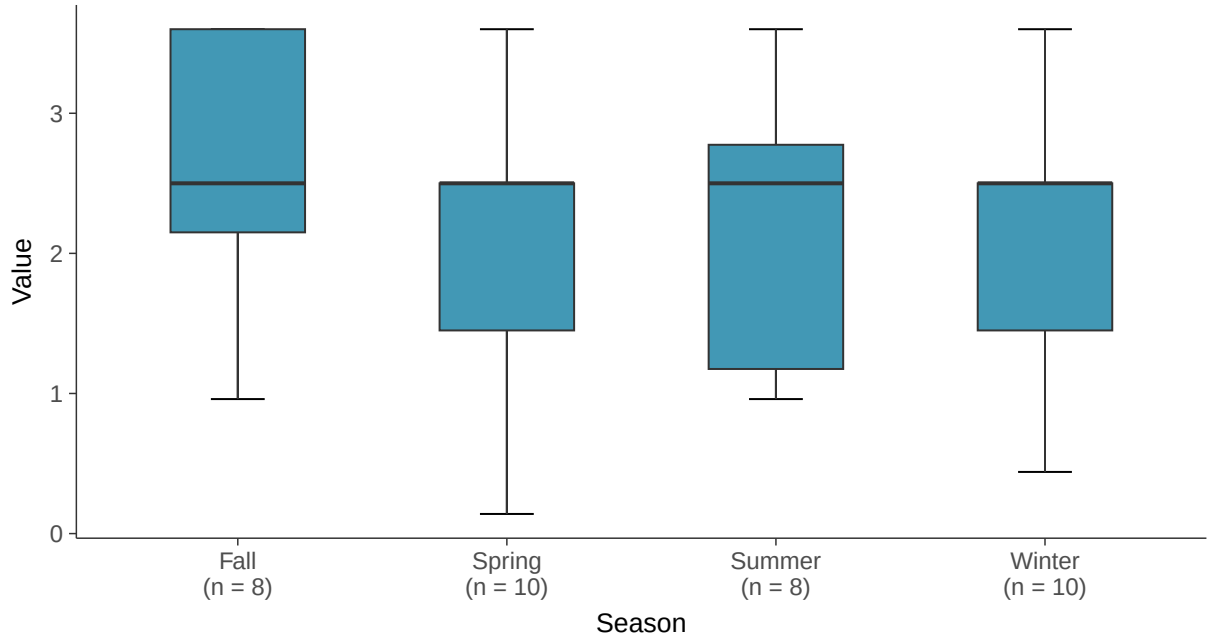
Boxplot

Cobalt, MW-1 (ug/L)



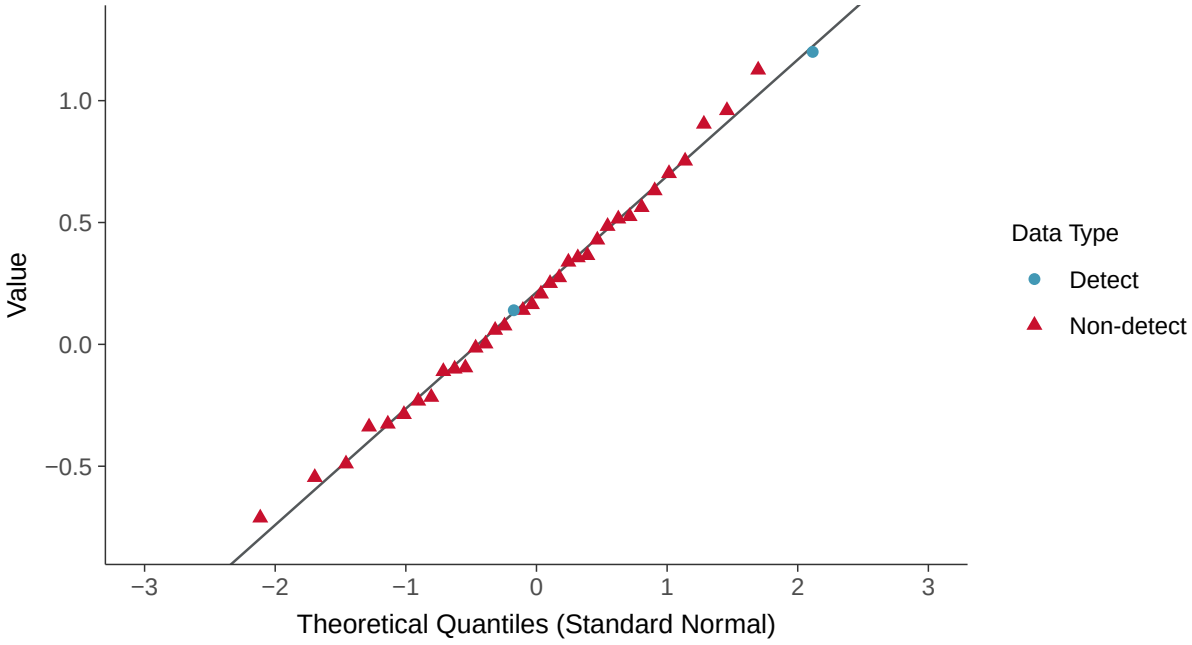
Boxplot by Season

Cobalt, MW-1 (ug/L)



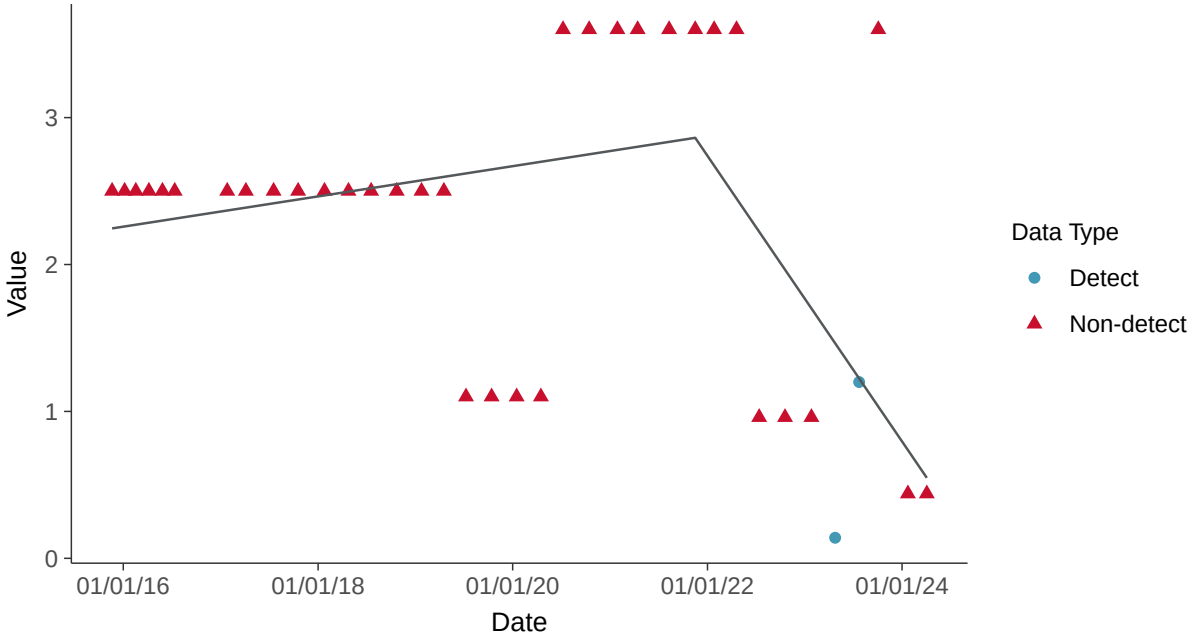
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-1 (ug/L)



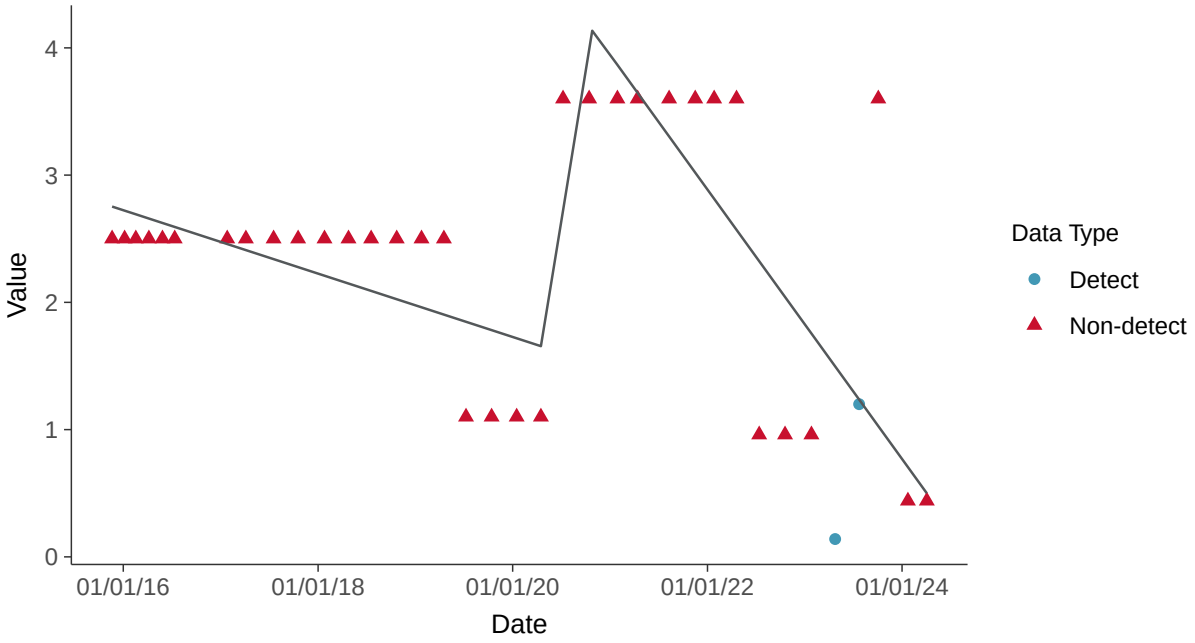
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-1 (ug/L)



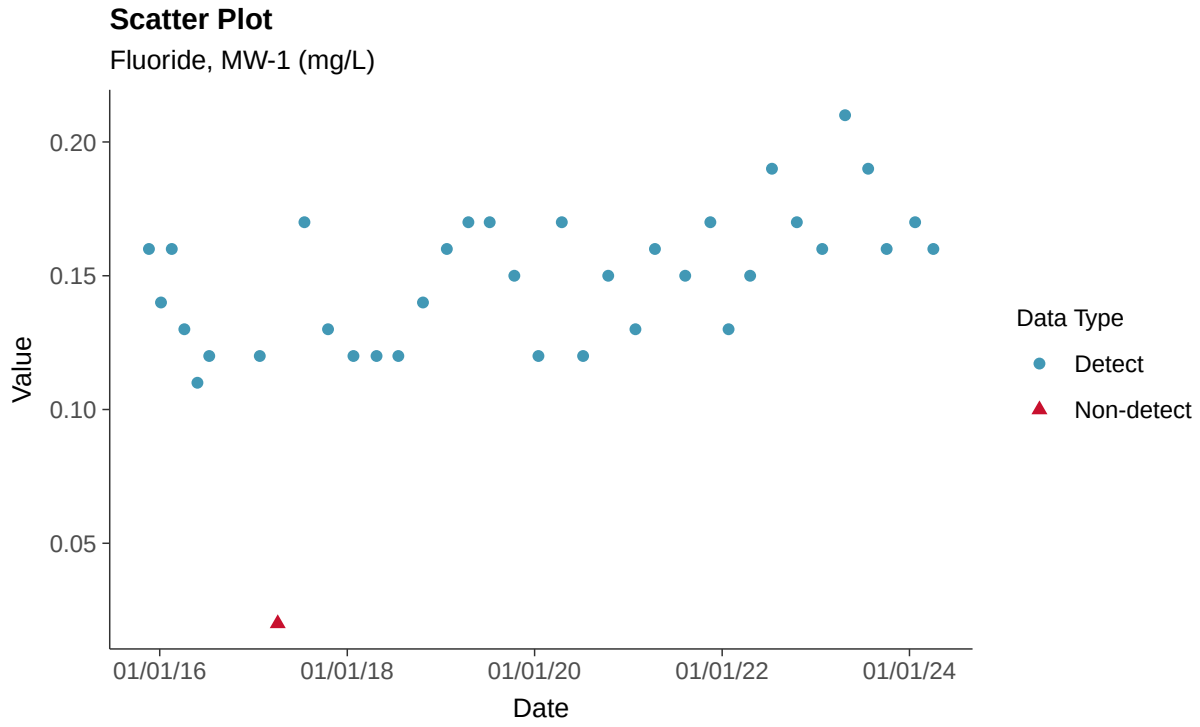
Trend Regression: Piecewise Linear-Linear-Linear

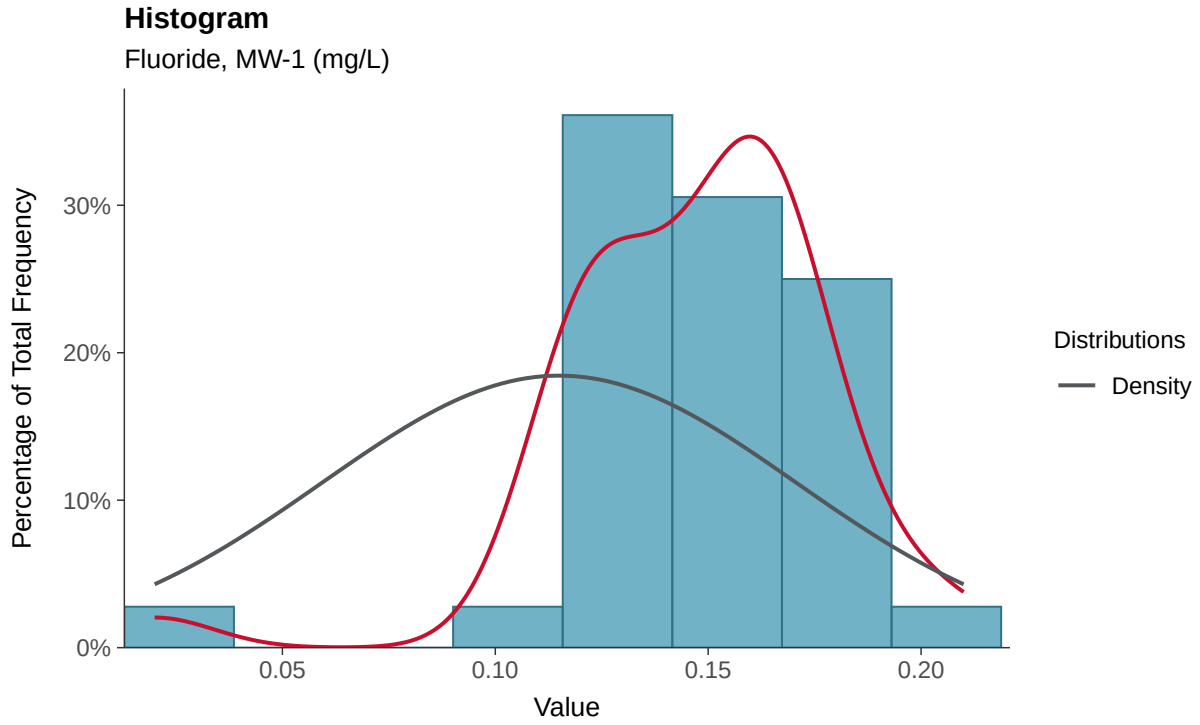
Cobalt, MW-1 (ug/L)



App. IV: Fluoride, MW-1

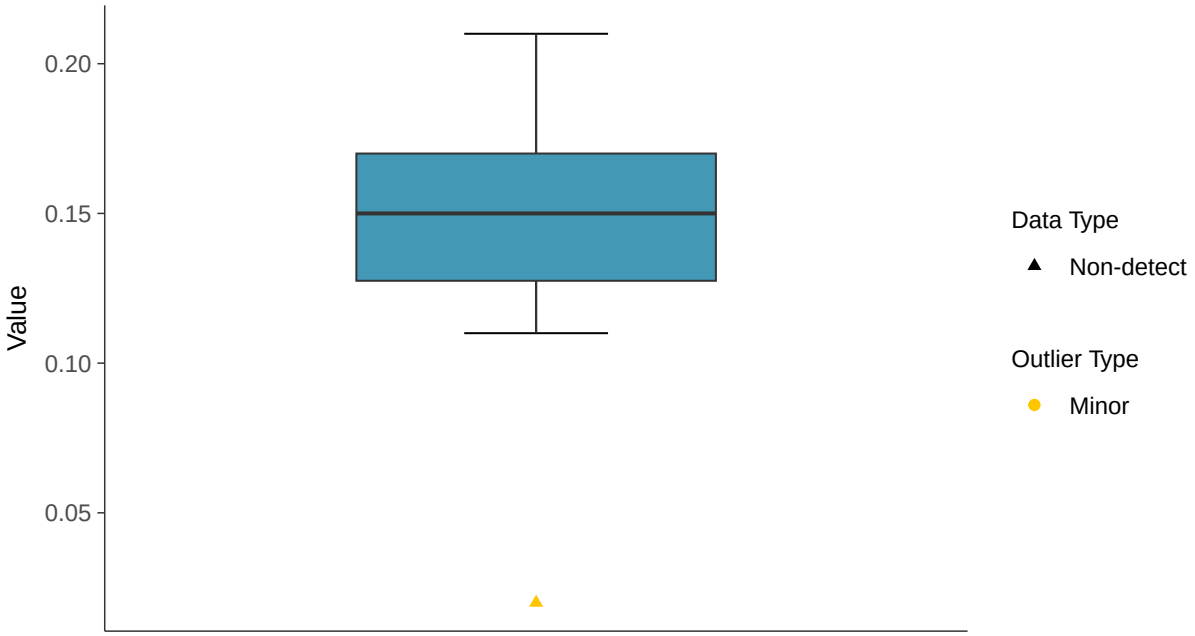
ID: 1_3_112





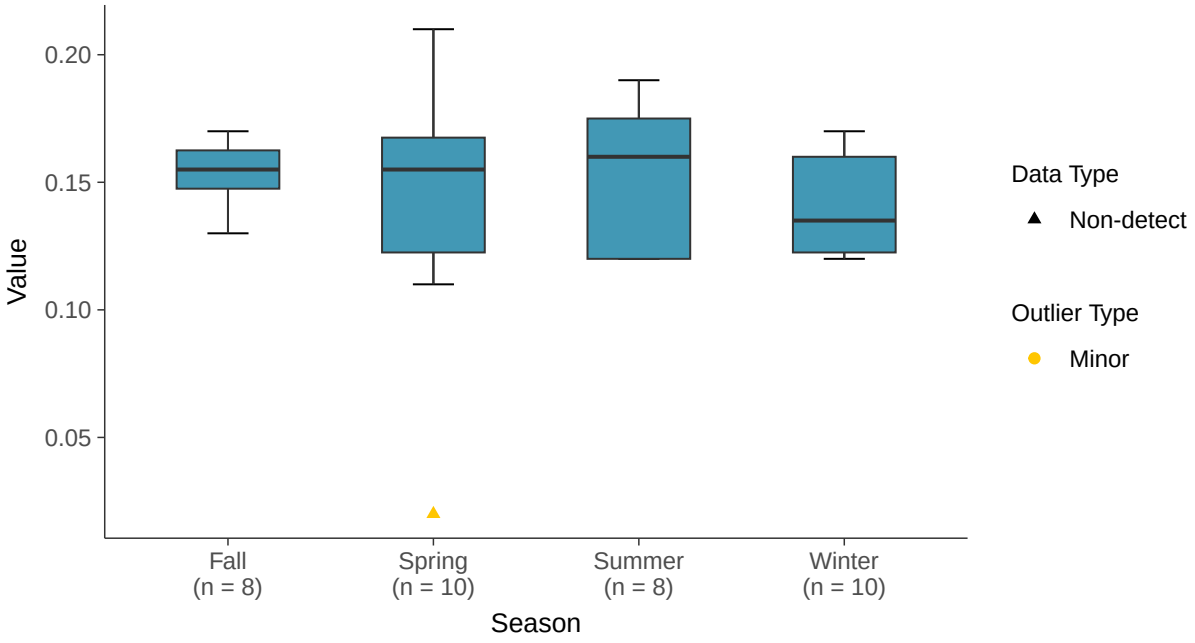
Boxplot

Fluoride, MW-1 (mg/L)



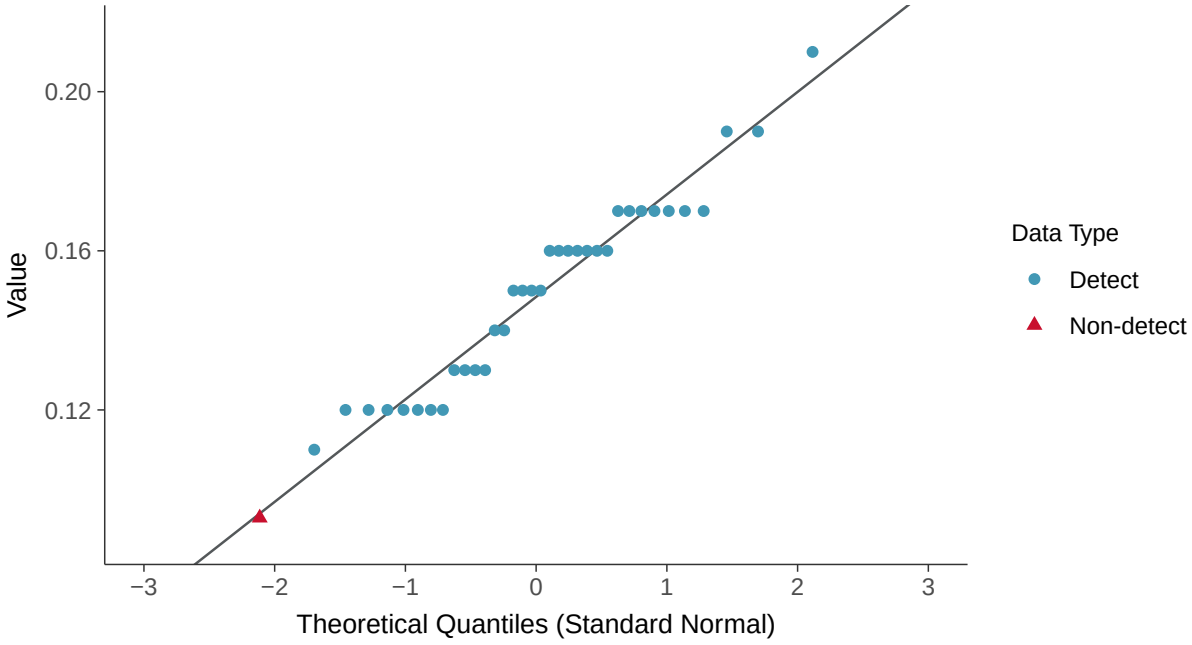
Boxplot by Season

Fluoride, MW-1 (mg/L)



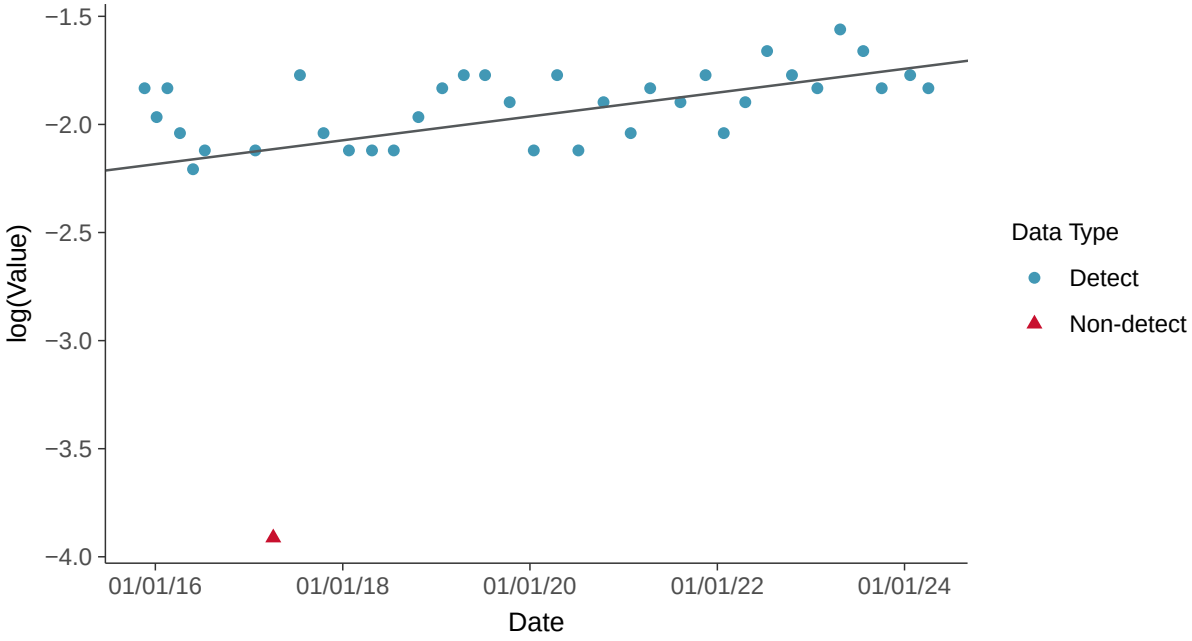
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-1 (mg/L)



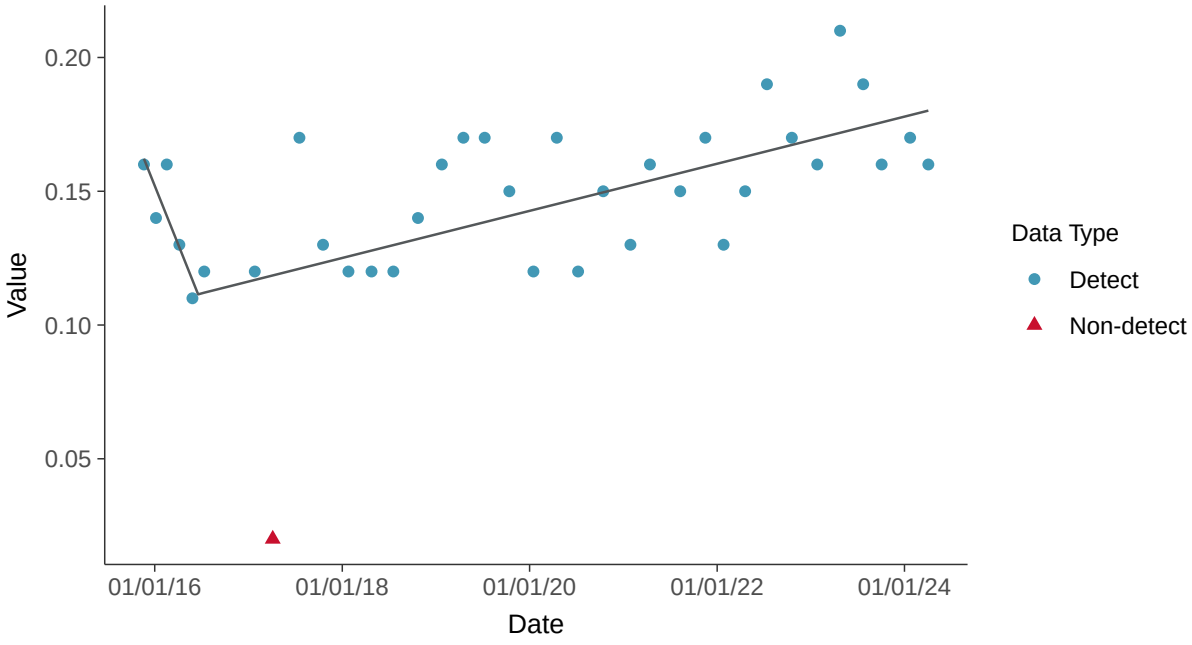
Trend Regression: Lognormal MLE

Fluoride, MW-1 (mg/L)



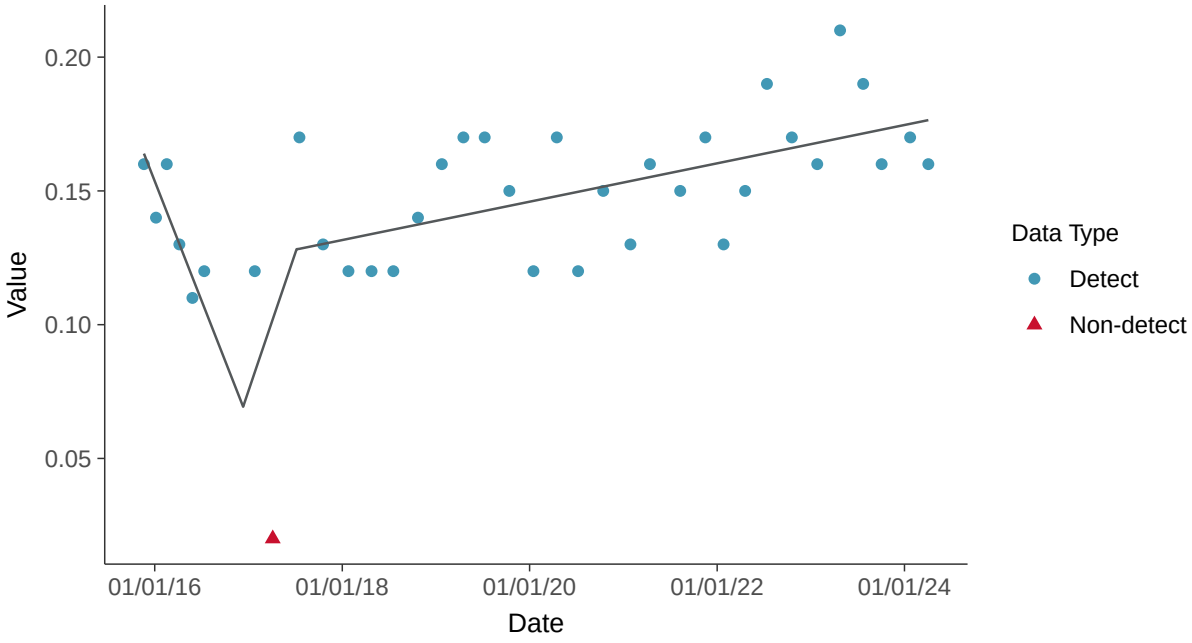
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-1 (mg/L)



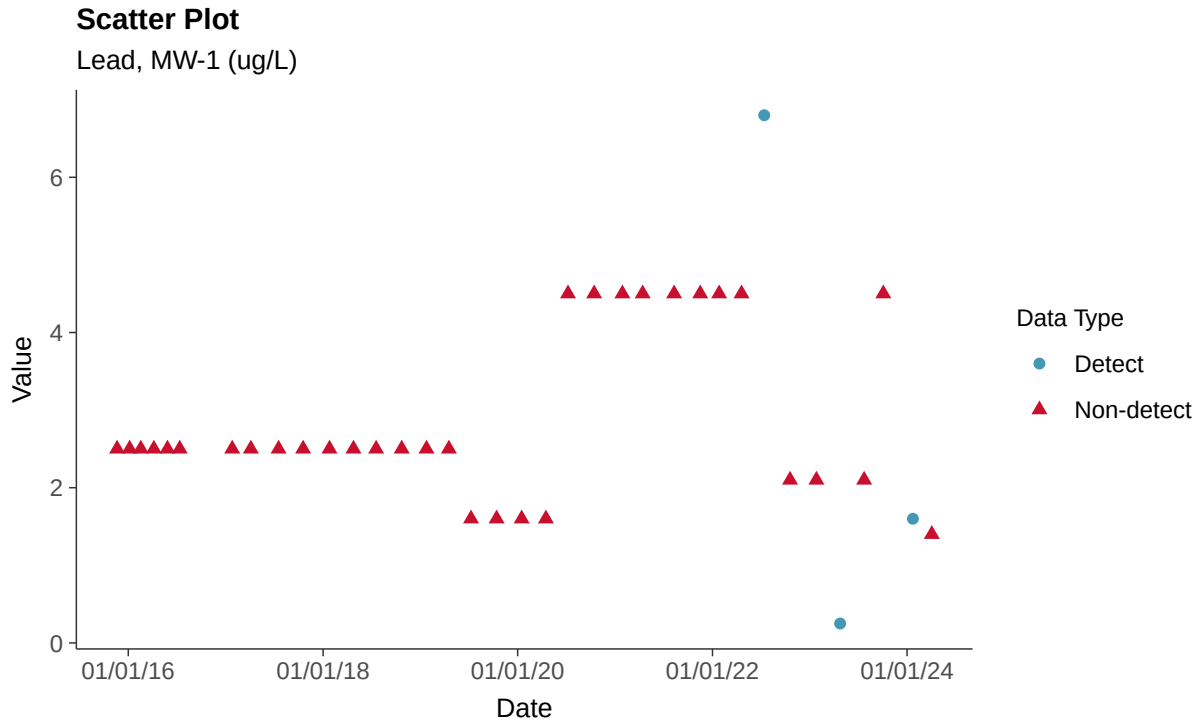
Trend Regression: Piecewise Linear-Linear-Linear

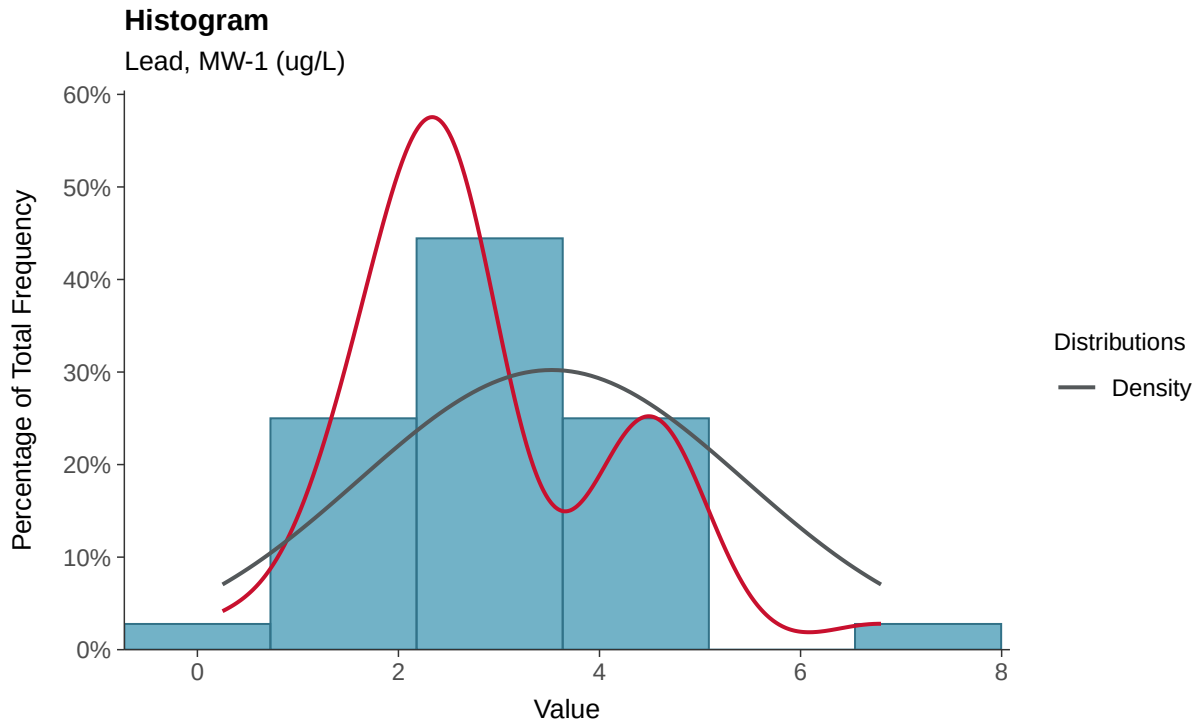
Fluoride, MW-1 (mg/L)



App. IV: Lead, MW-1

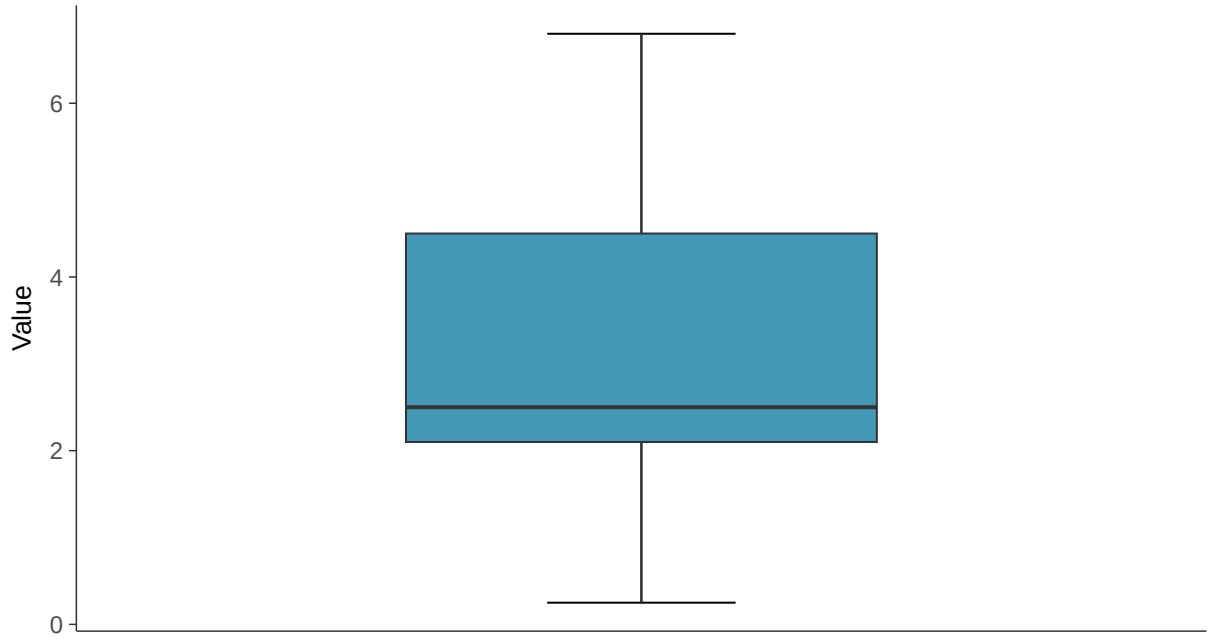
ID: 1_3_113





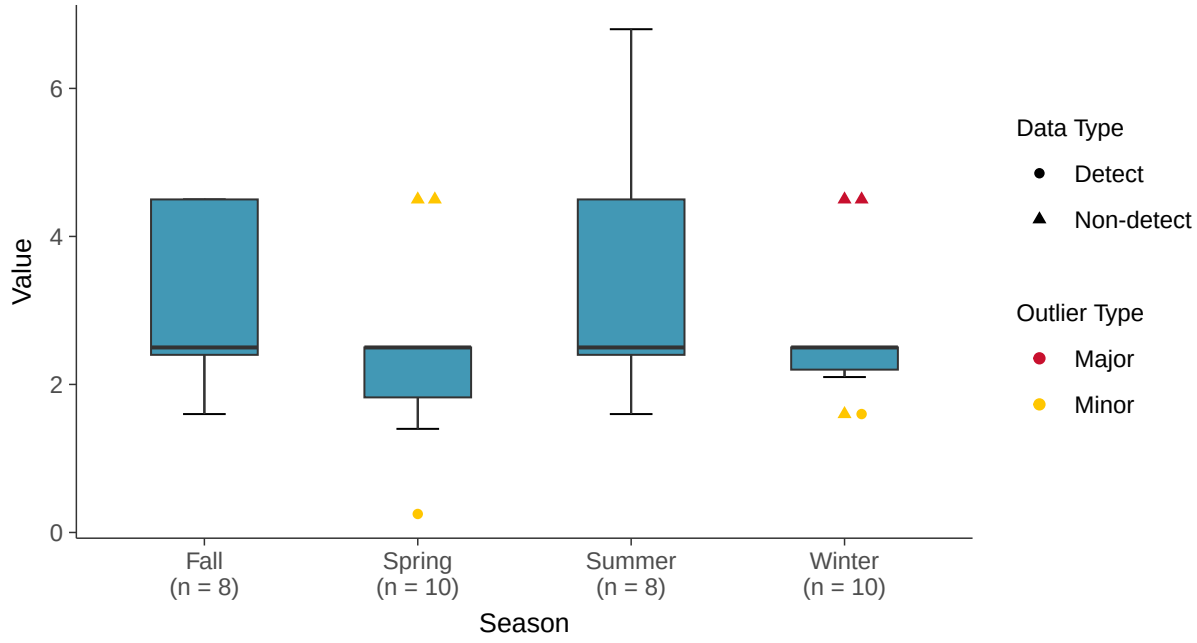
Boxplot

Lead, MW-1 (ug/L)



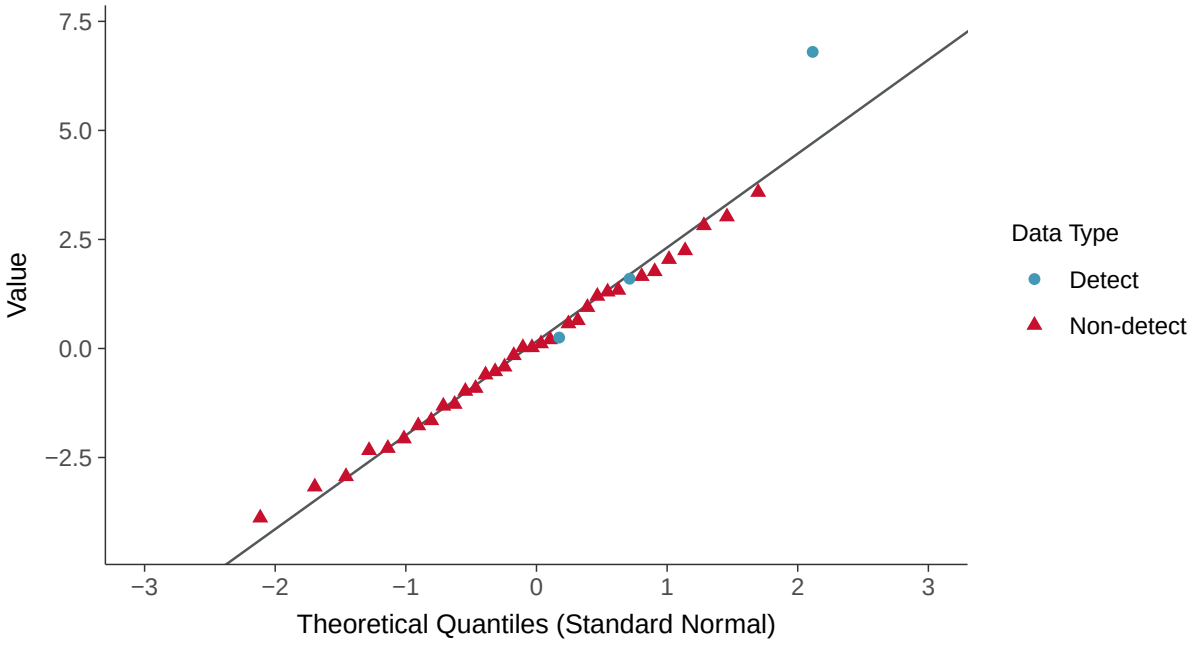
Boxplot by Season

Lead, MW-1 (ug/L)



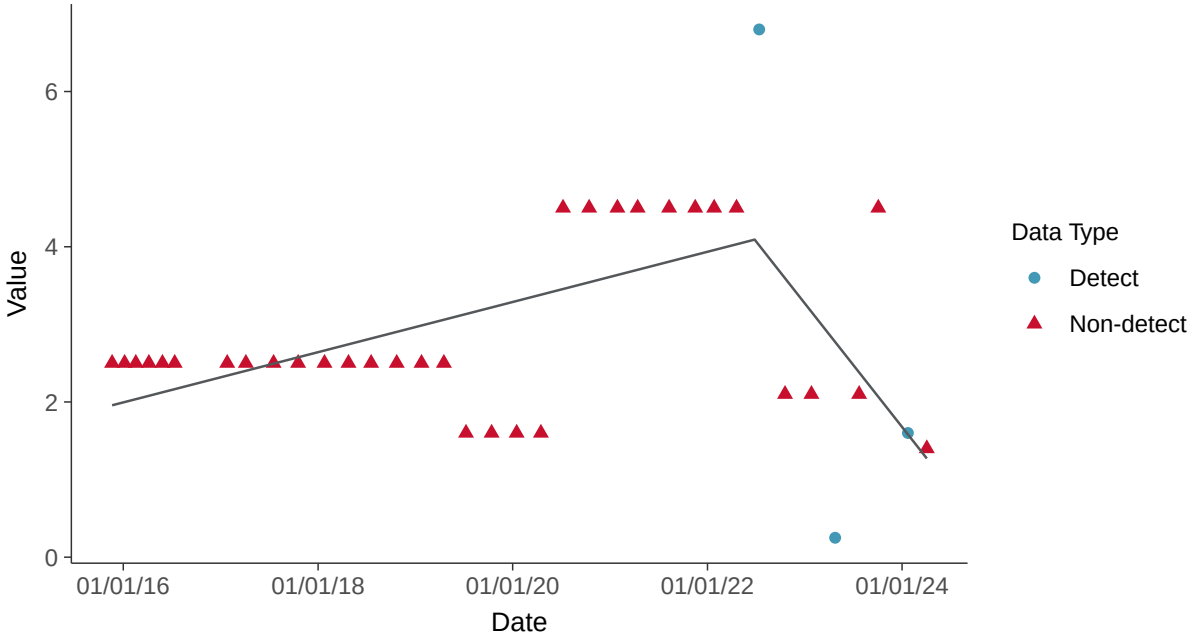
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-1 (ug/L)



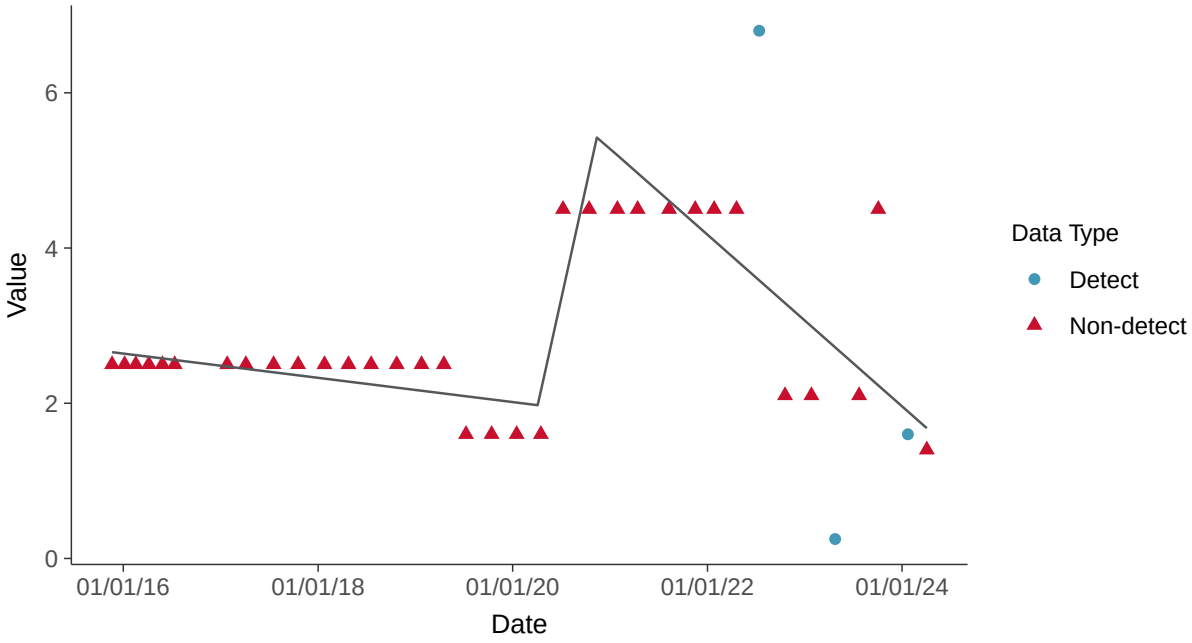
Trend Regression: Piecewise Linear-Linear

Lead, MW-1 (ug/L)



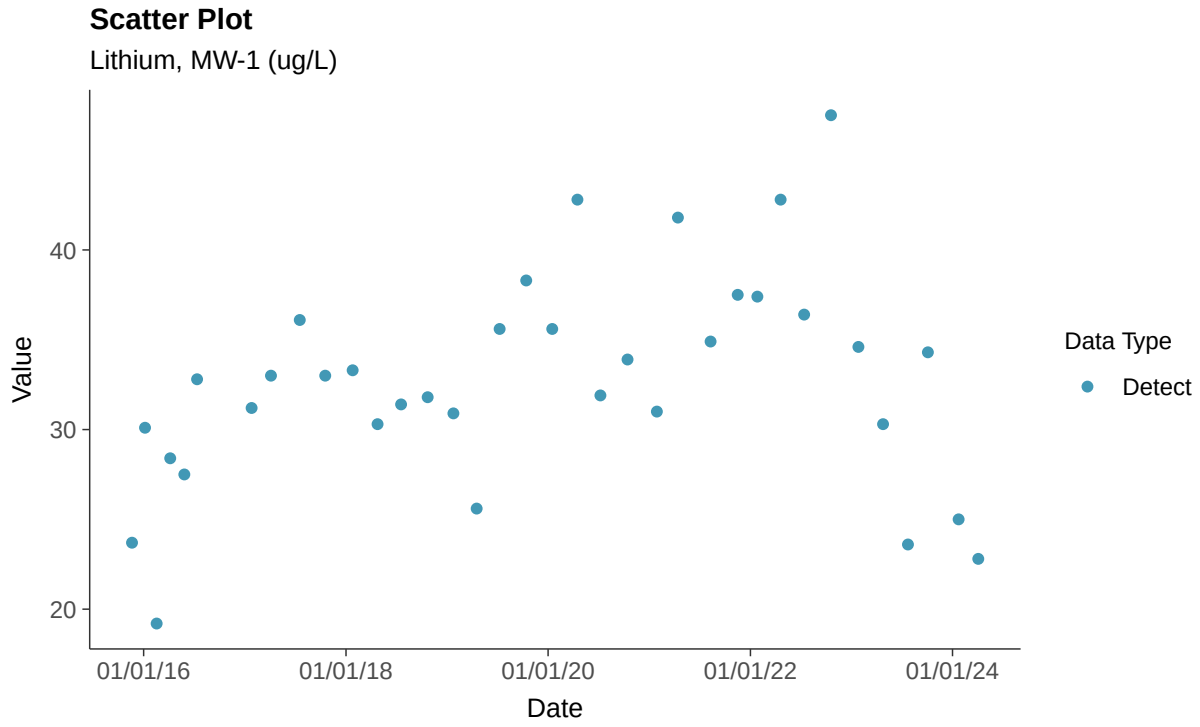
Trend Regression: Piecewise Linear-Linear-Linear

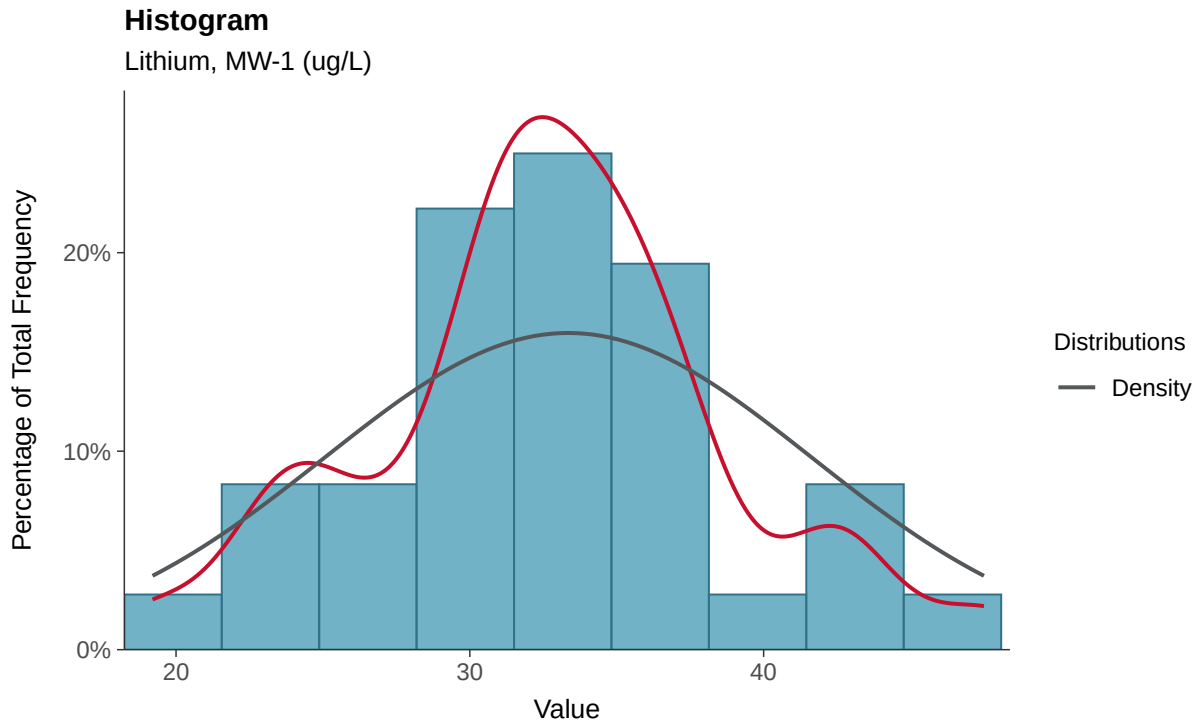
Lead, MW-1 (ug/L)



App. IV: Lithium, MW-1

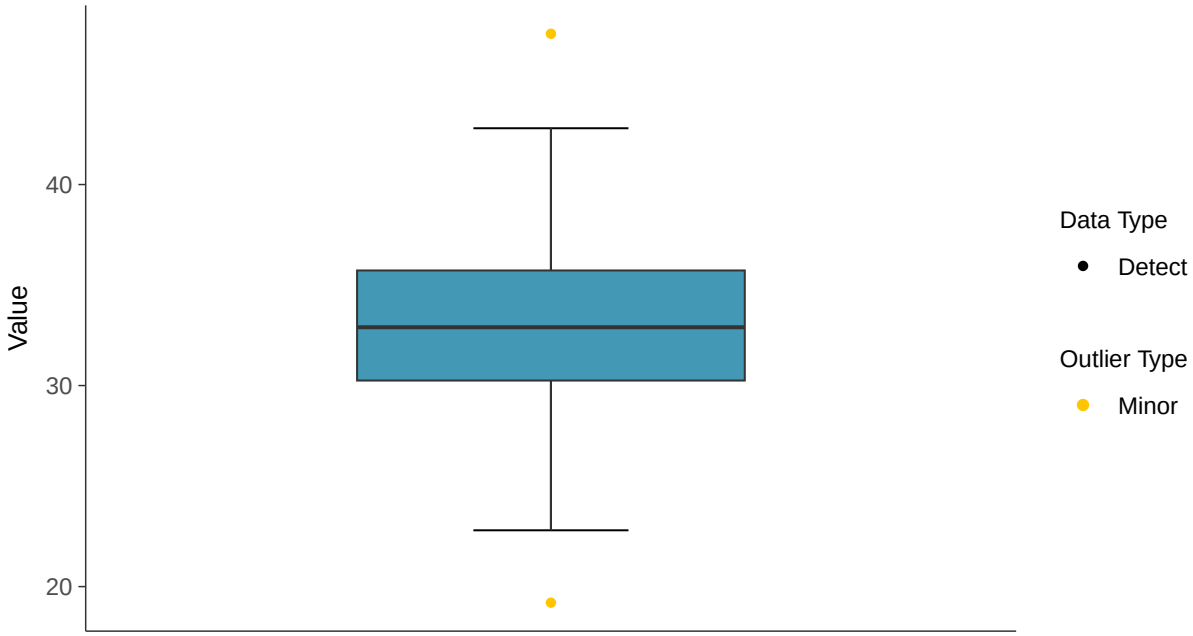
ID: 1_3_114





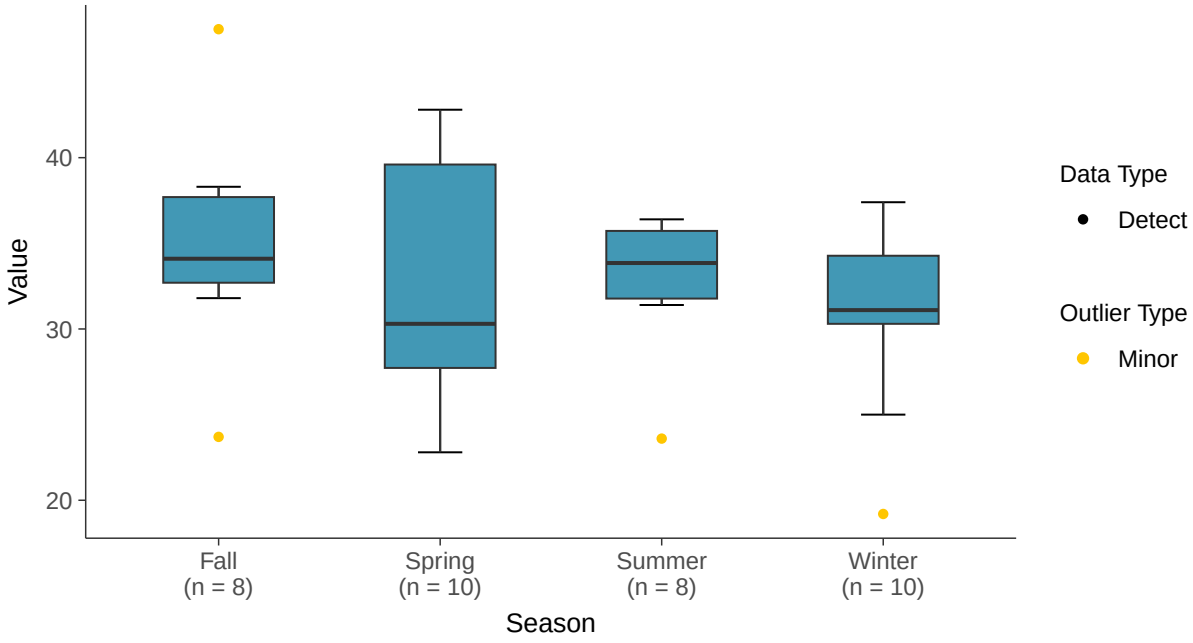
Boxplot

Lithium, MW-1 (ug/L)



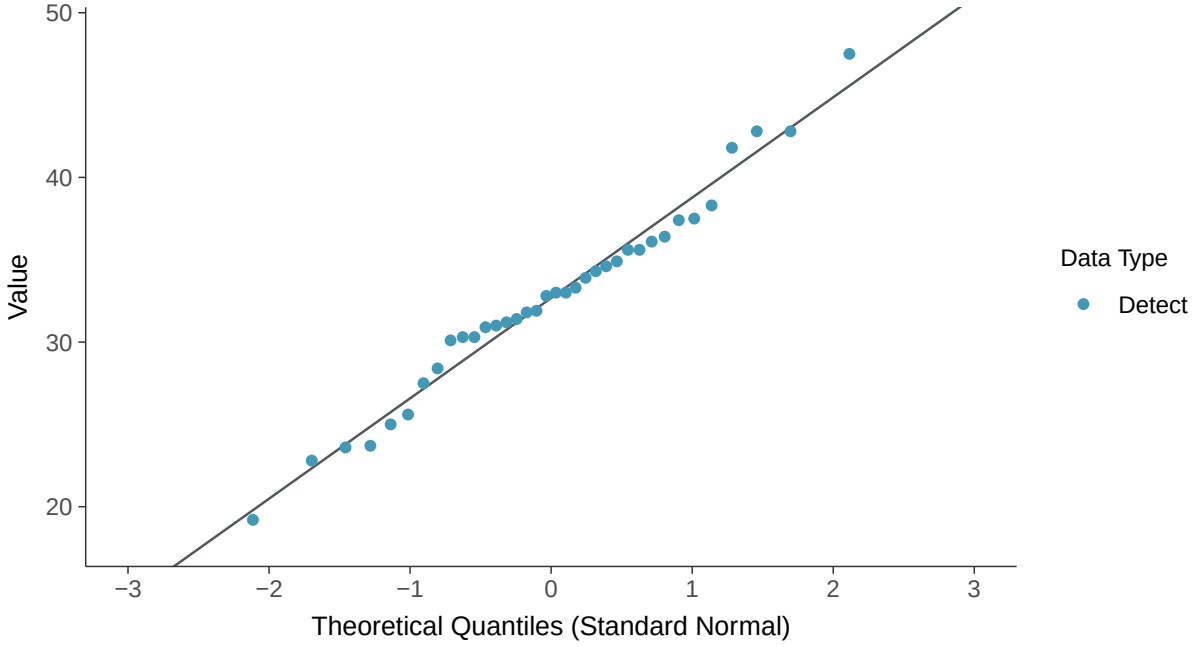
Boxplot by Season

Lithium, MW-1 (ug/L)



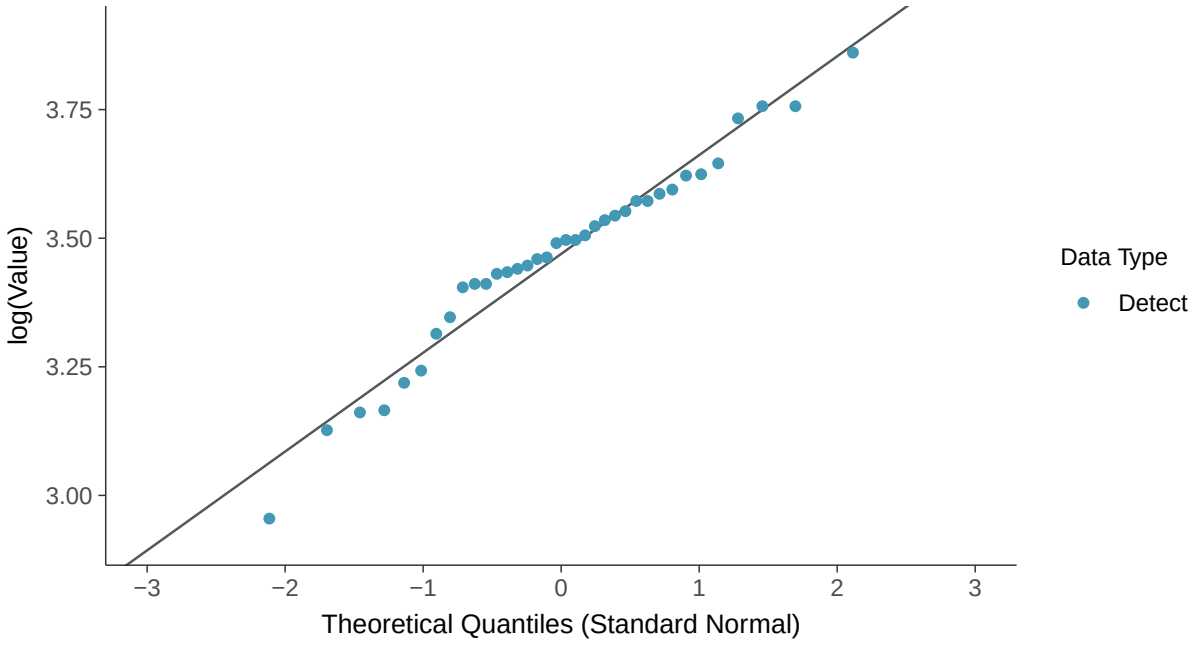
Normal Q-Q plot

Lithium, MW-1 (ug/L)



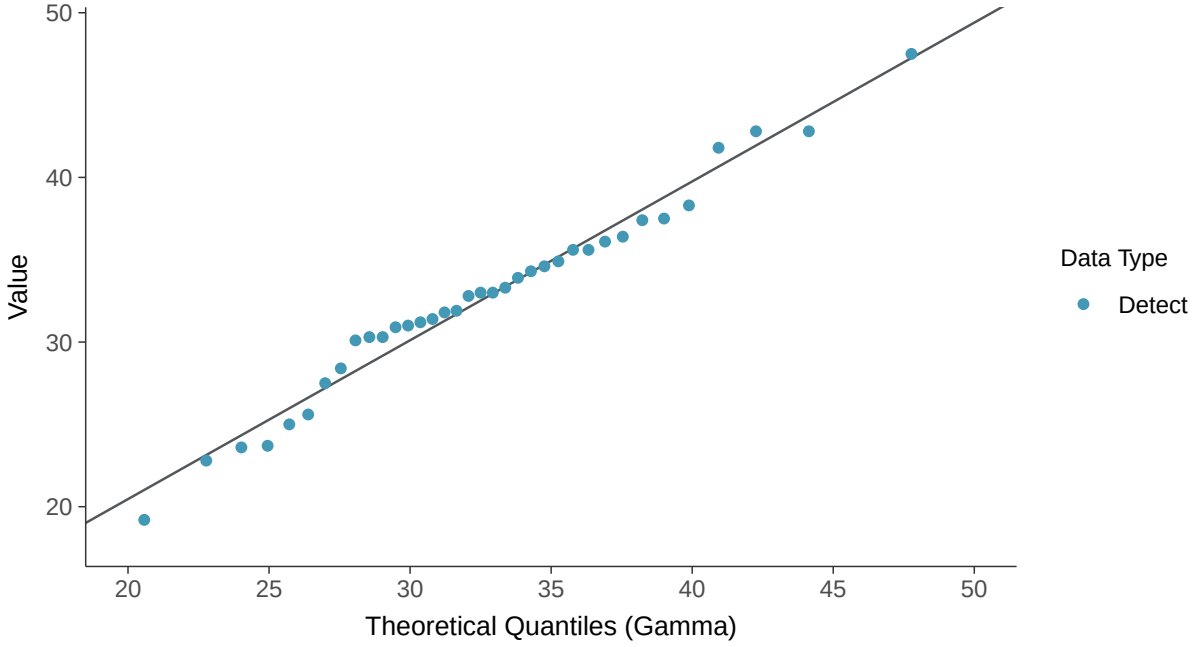
Lognormal Q-Q plot

Lithium, MW-1 (ug/L)



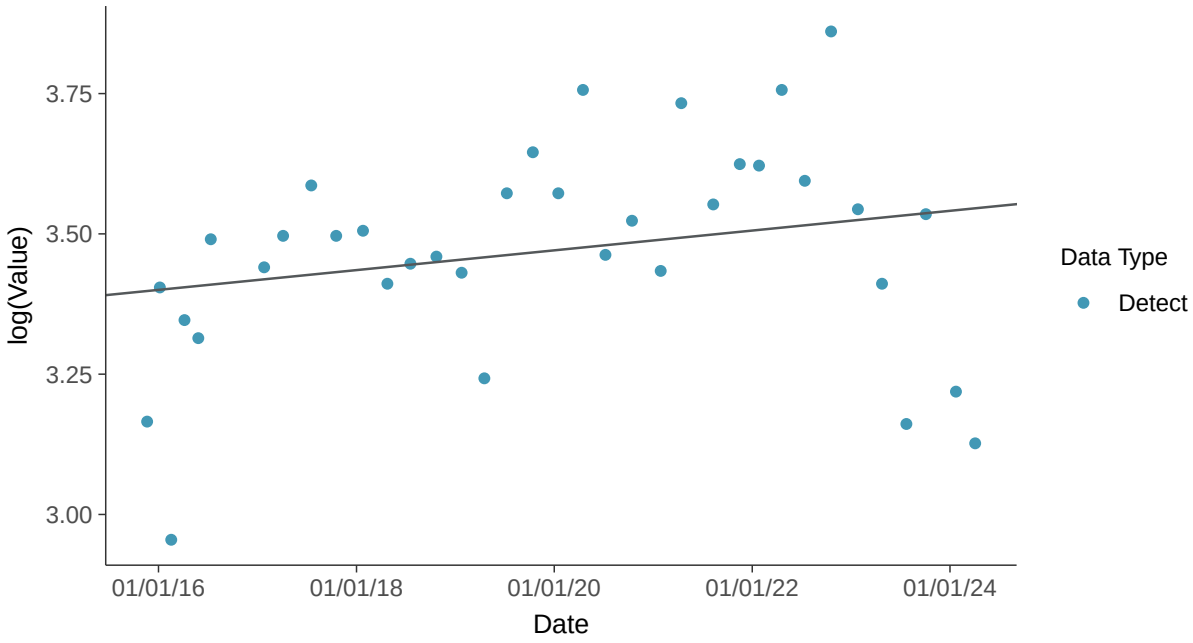
Gamma Q-Q plot

Lithium, MW-1 (ug/L)



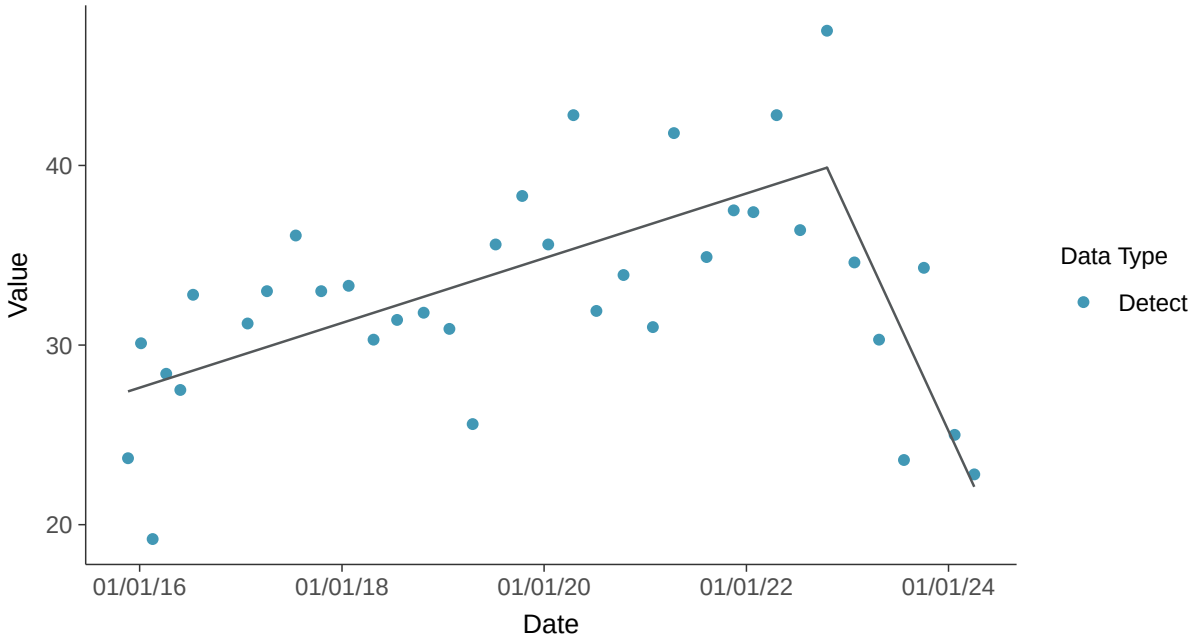
Trend Regression: Lognormal MLE

Lithium, MW-1 (ug/L)



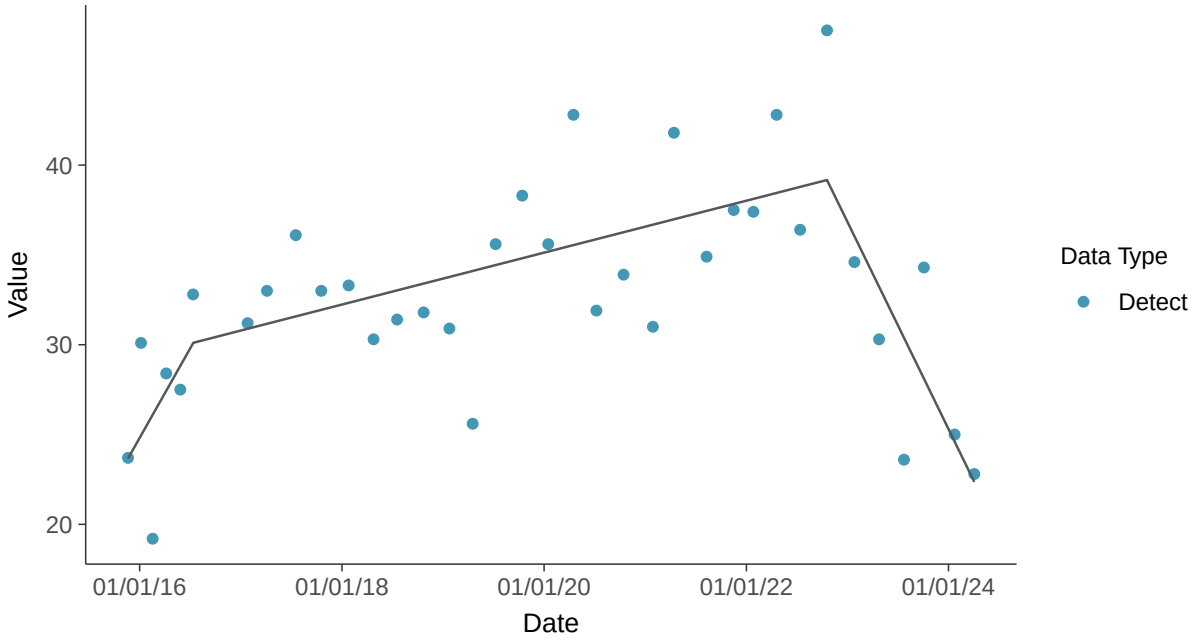
Trend Regression: Piecewise Linear-Linear

Lithium, MW-1 (ug/L)



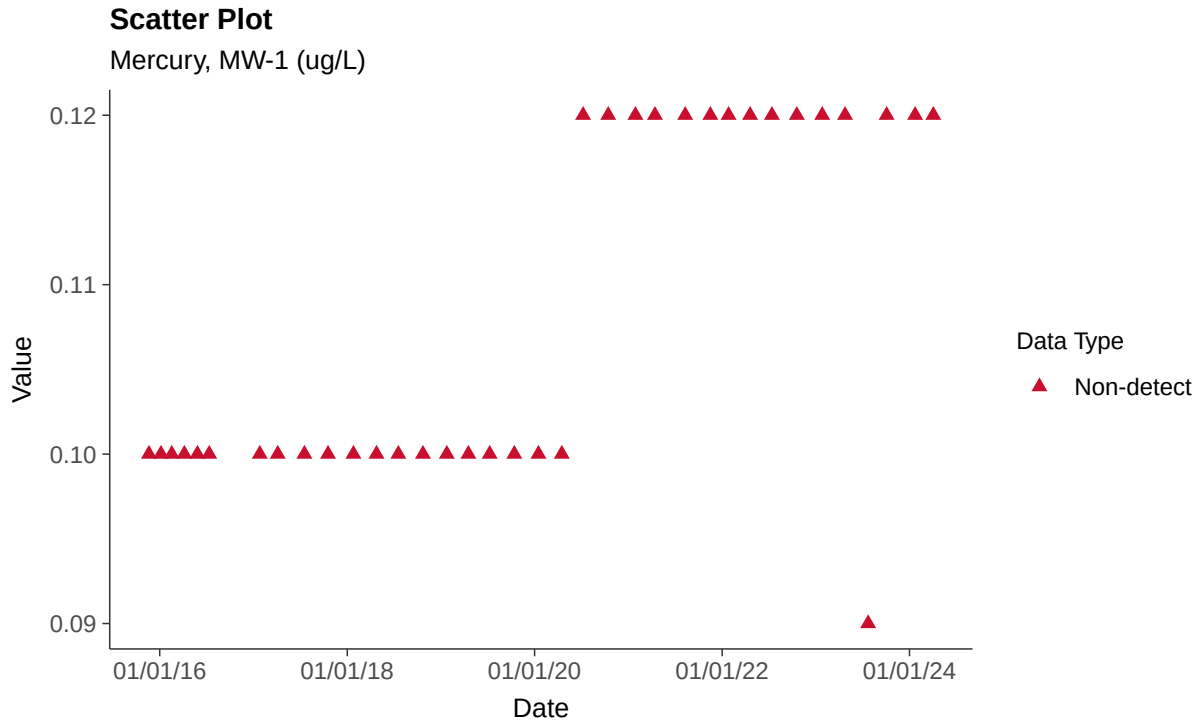
Trend Regression: Piecewise Linear-Linear-Linear

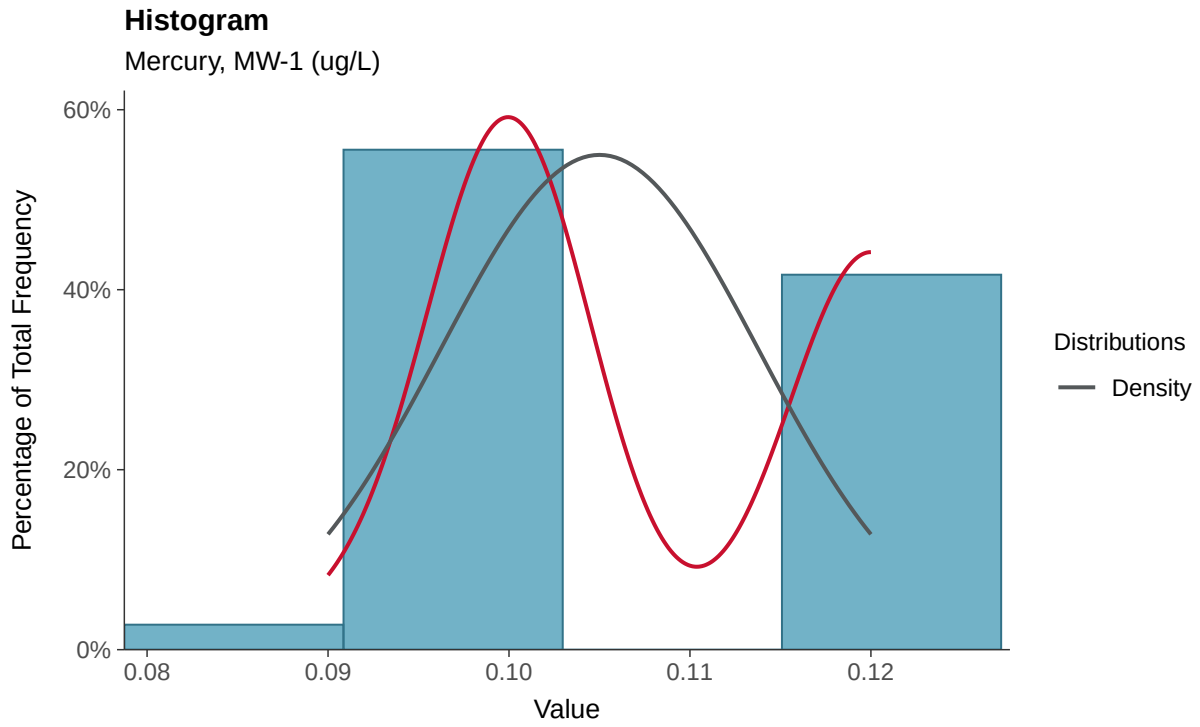
Lithium, MW-1 (ug/L)



App. IV: Mercury, MW-1

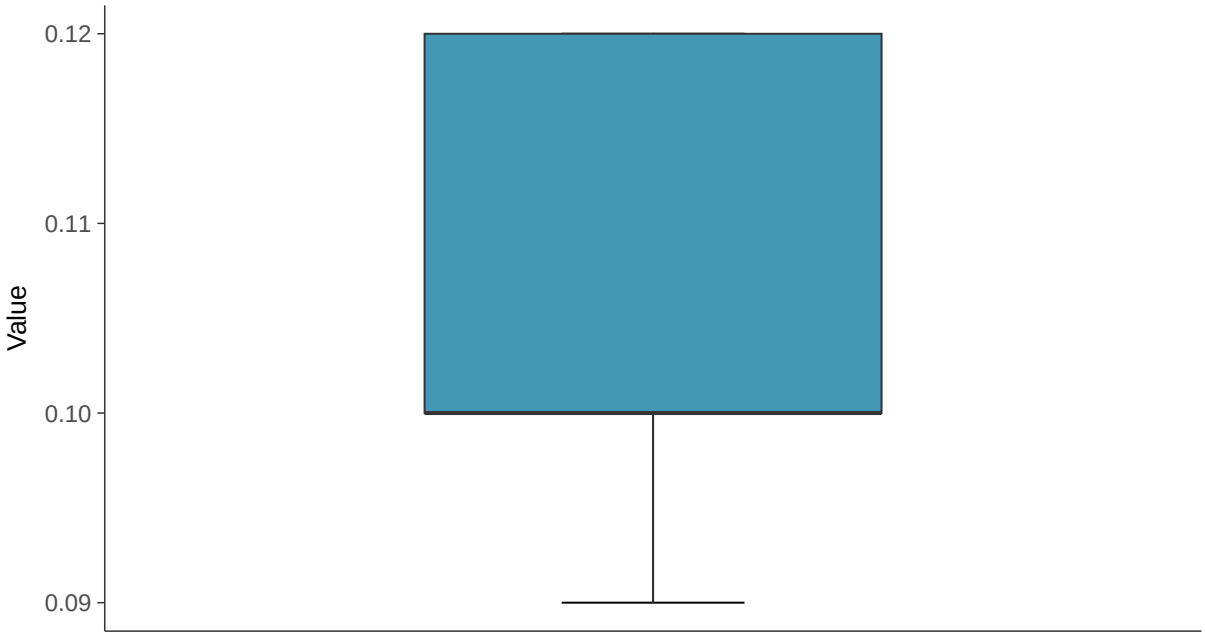
ID: 1_3_115





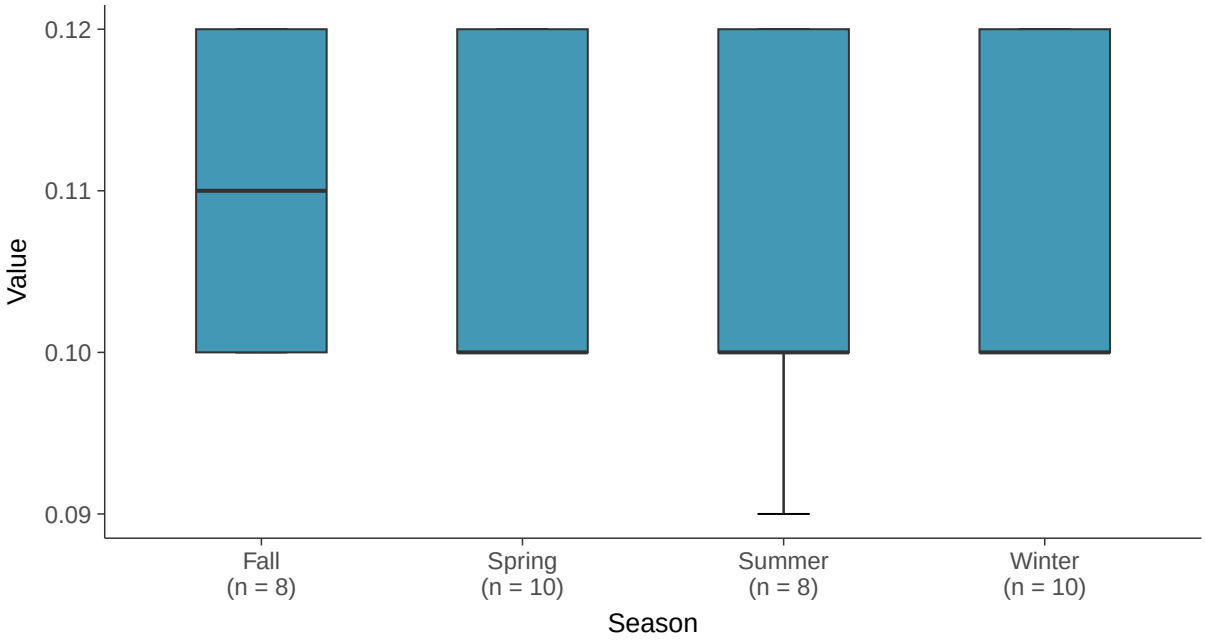
Boxplot

Mercury, MW-1 (ug/L)



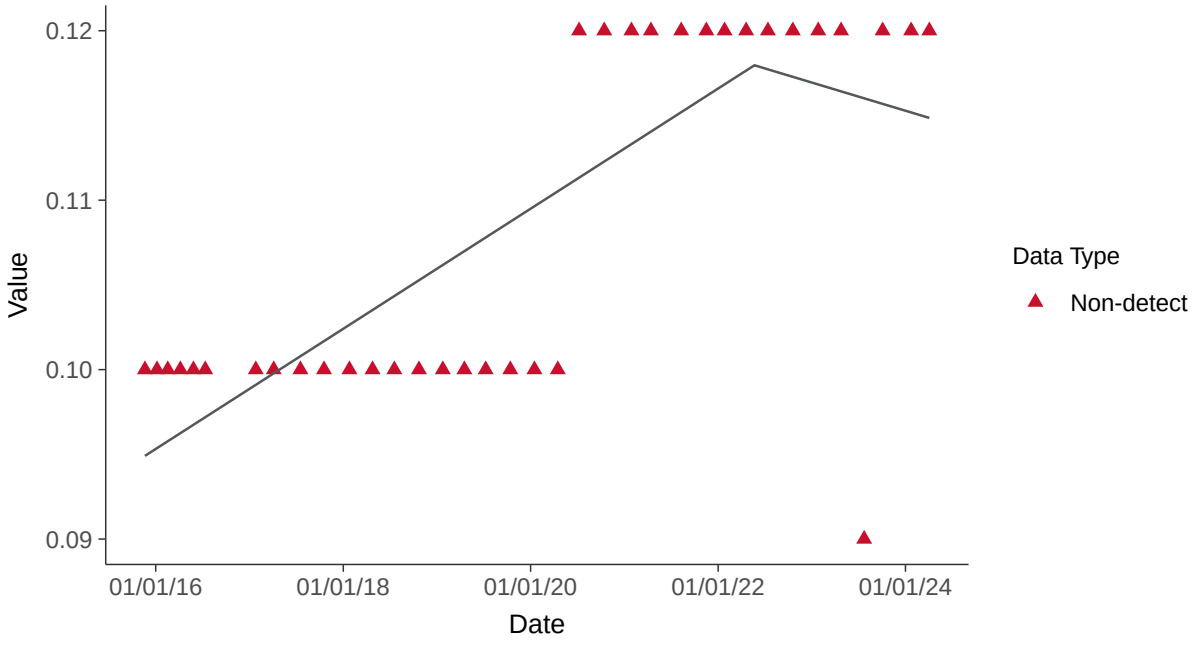
Boxplot by Season

Mercury, MW-1 (ug/L)



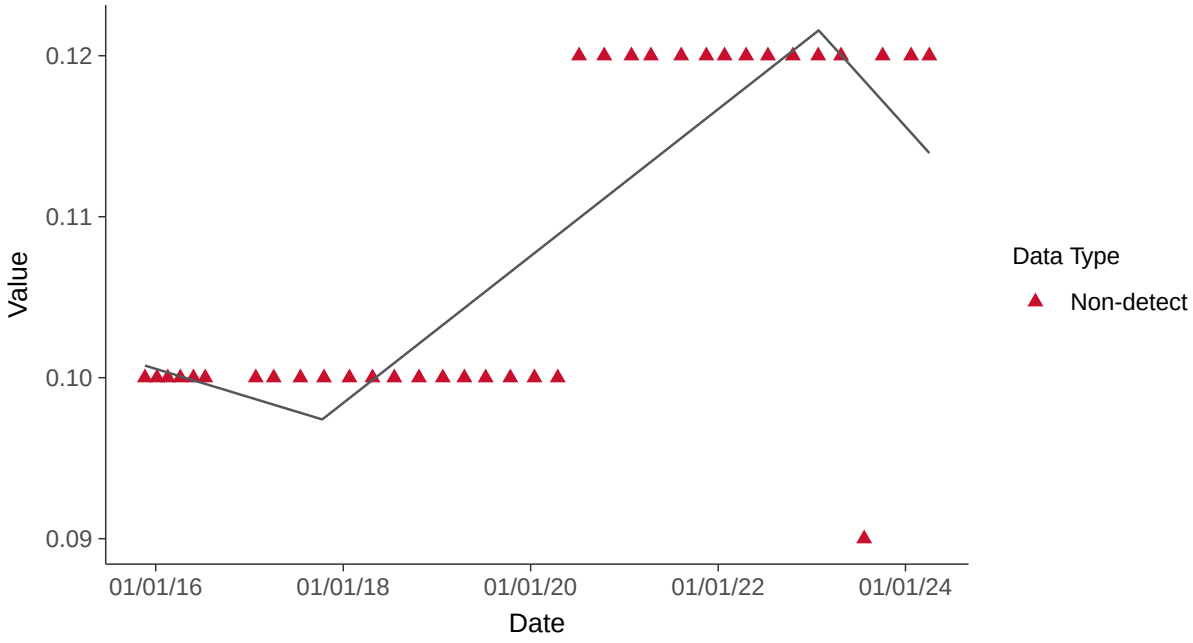
Trend Regression: Piecewise Linear-Linear

Mercury, MW-1 (ug/L)



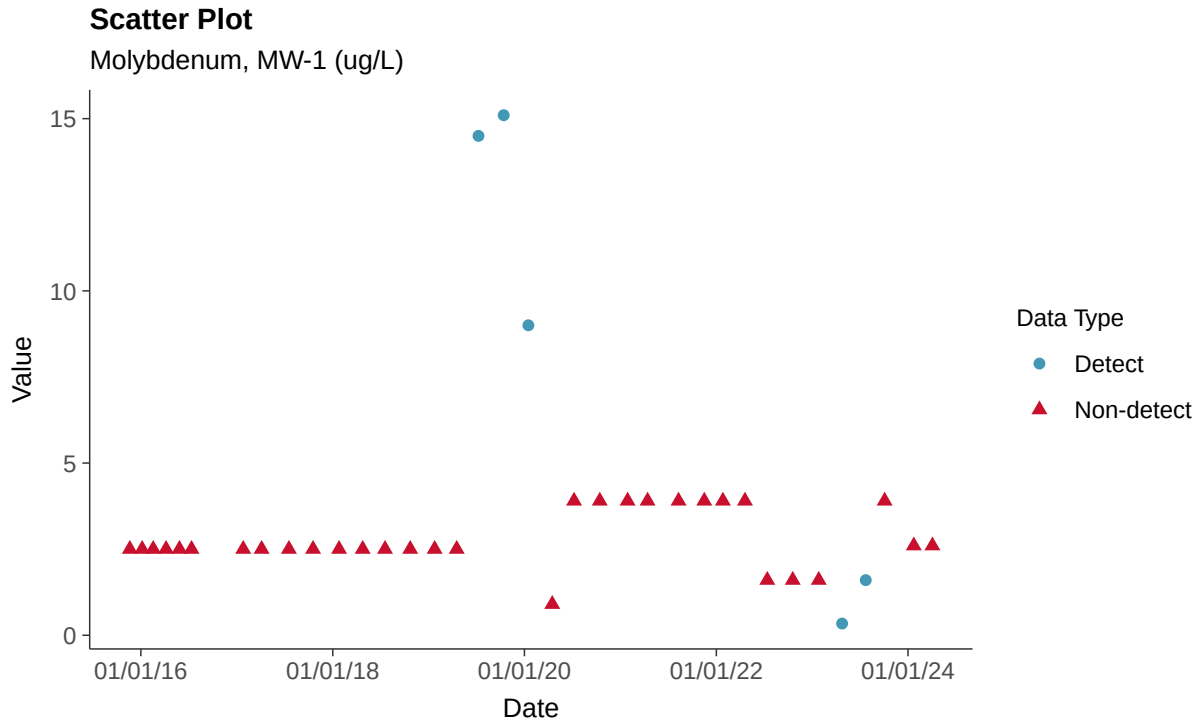
Trend Regression: Piecewise Linear-Linear-Linear

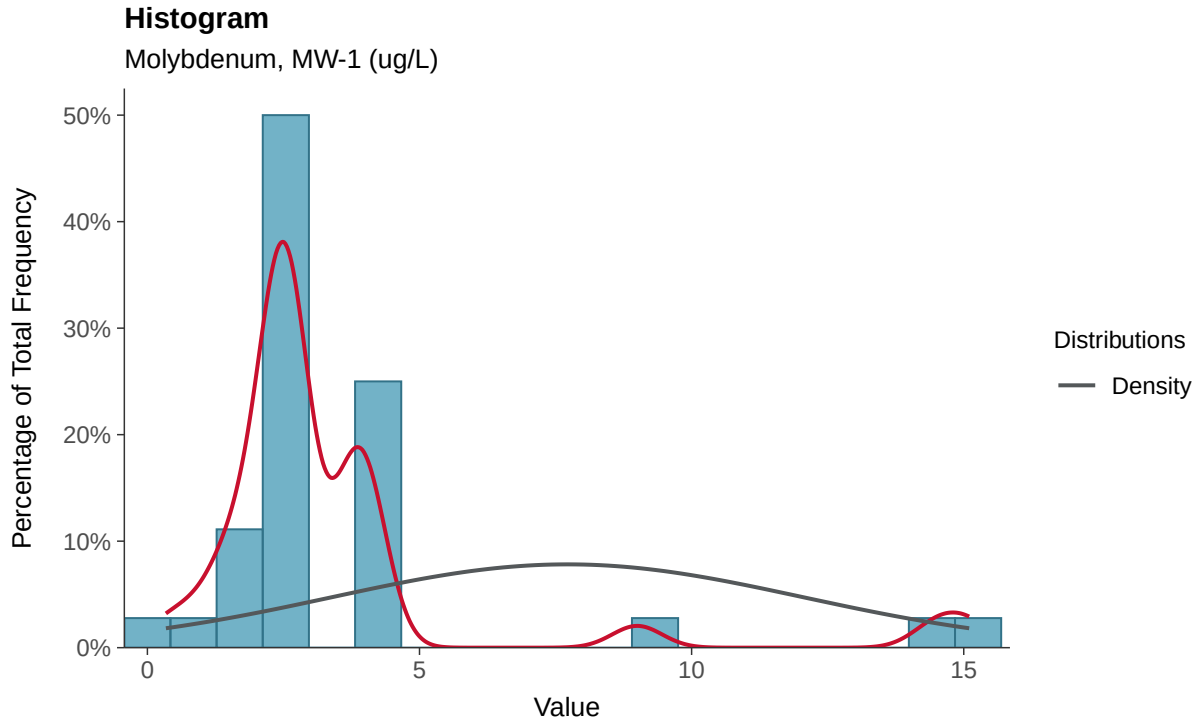
Mercury, MW-1 (ug/L)



App. IV: Molybdenum, MW-1

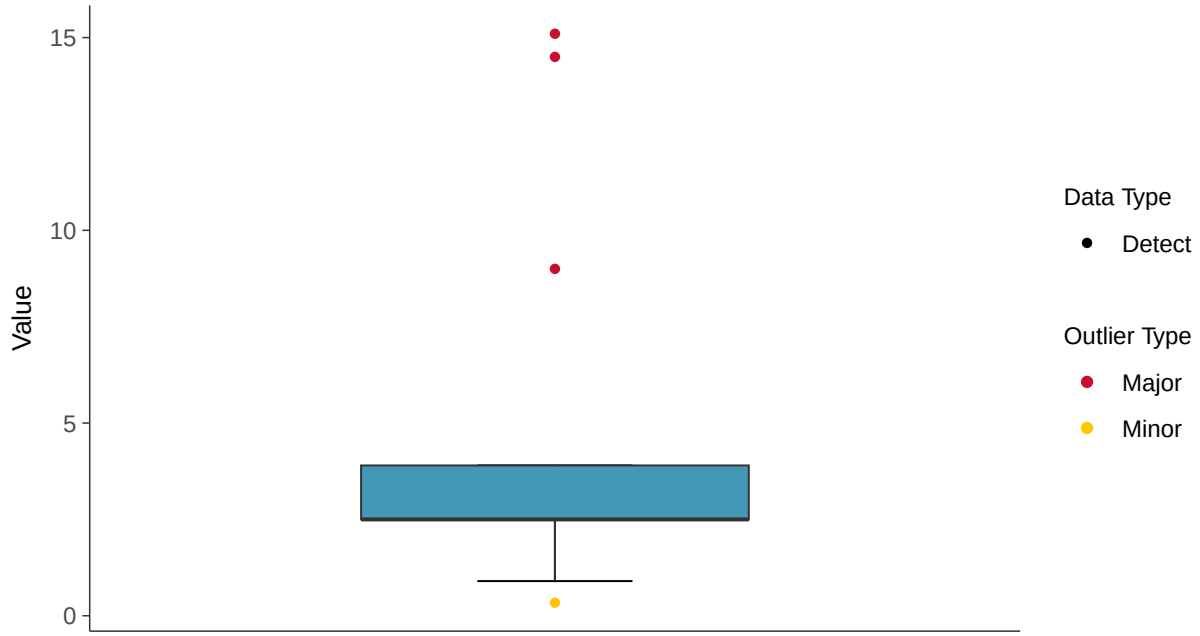
ID: 1_3_116





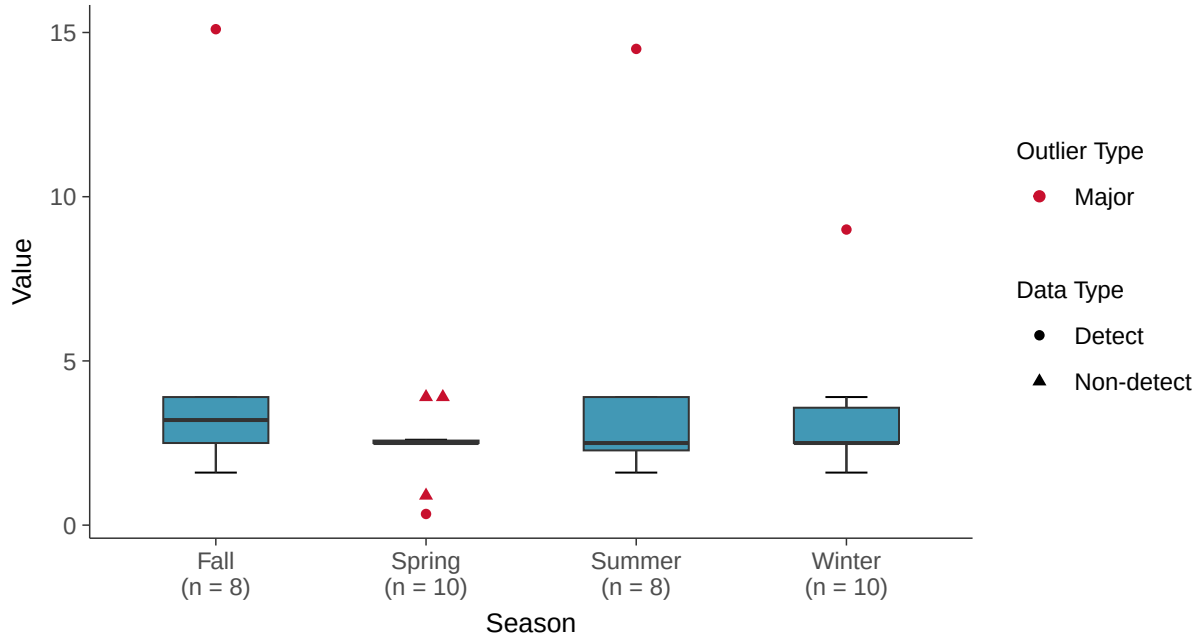
Boxplot

Molybdenum, MW-1 (ug/L)



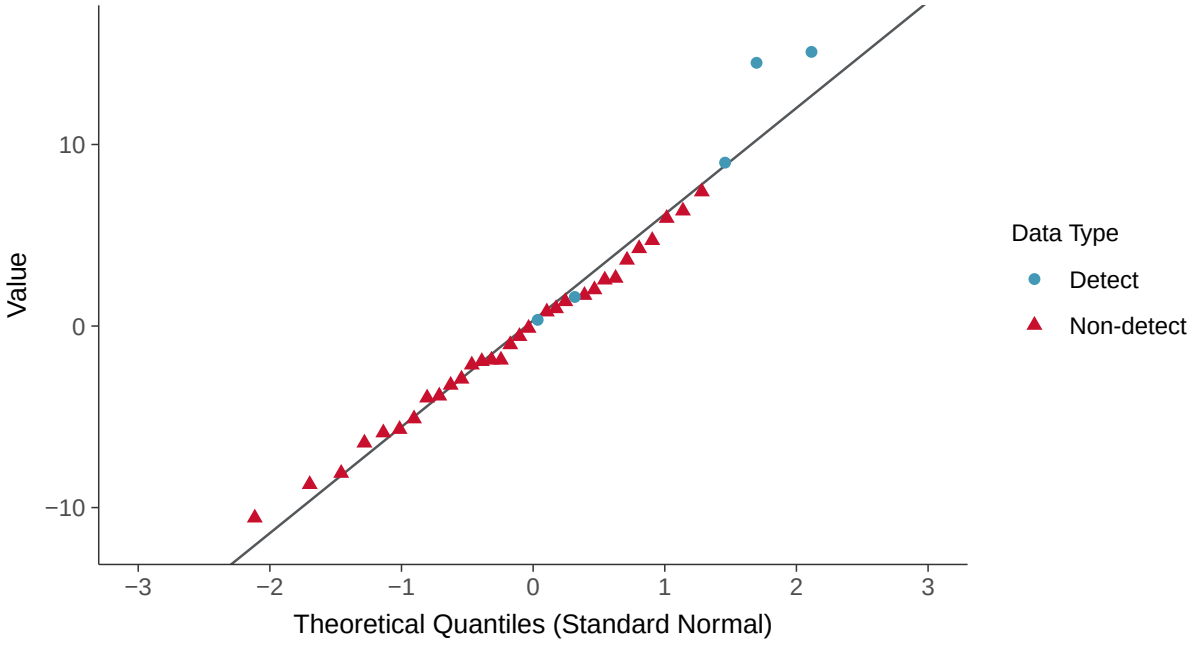
Boxplot by Season

Molybdenum, MW-1 (ug/L)



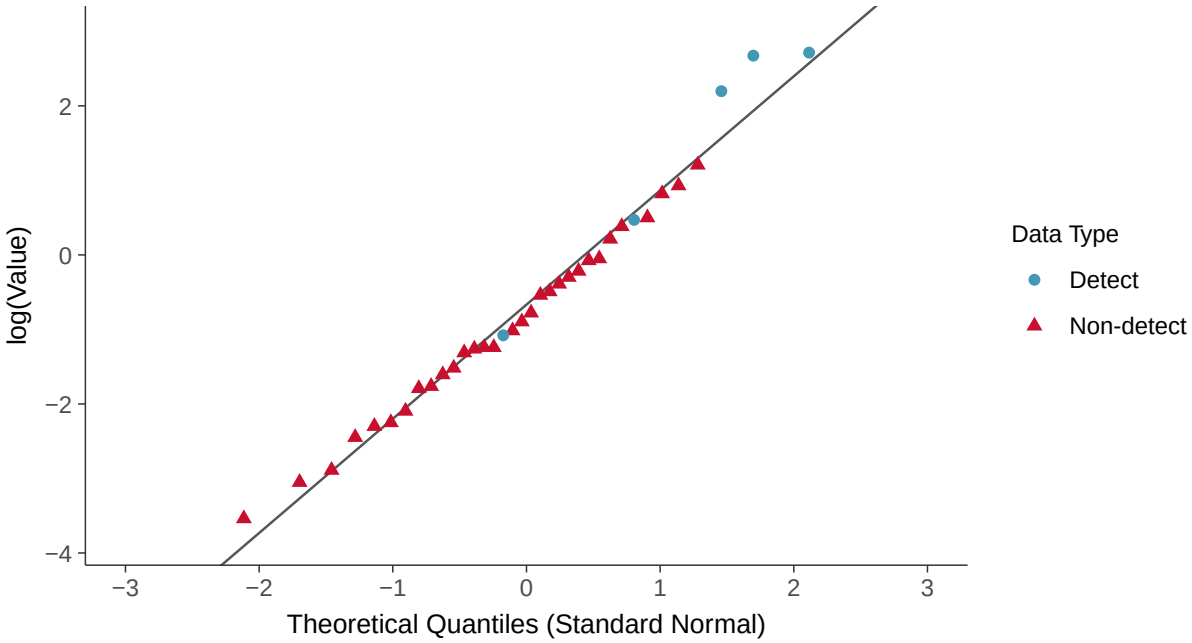
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



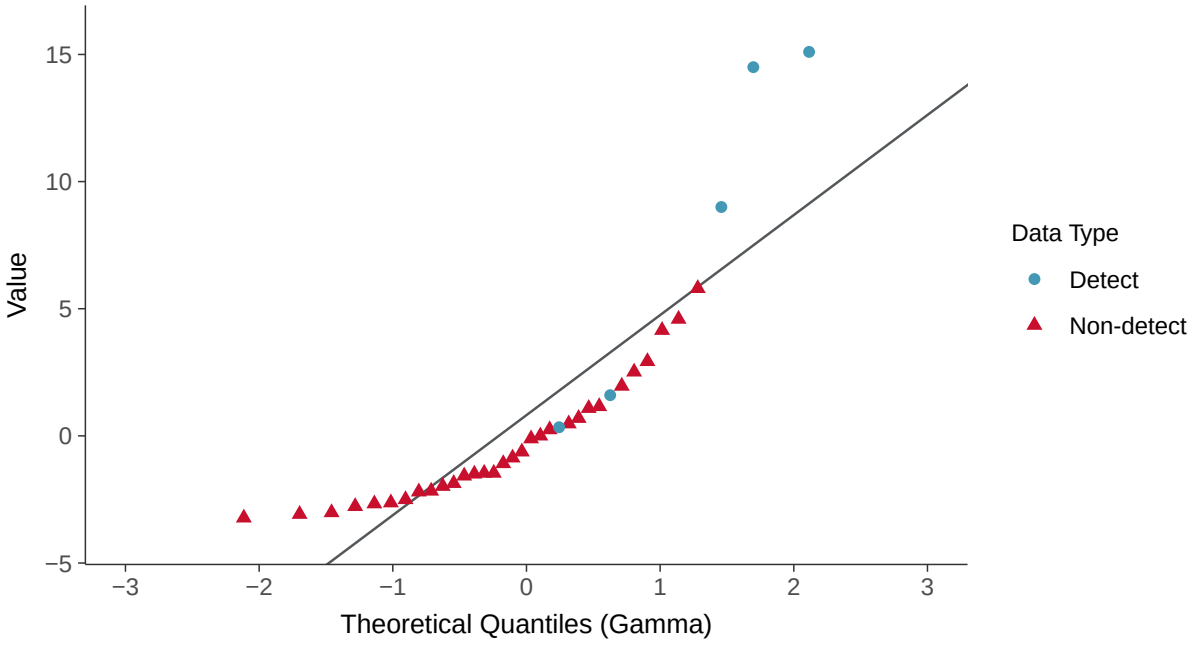
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



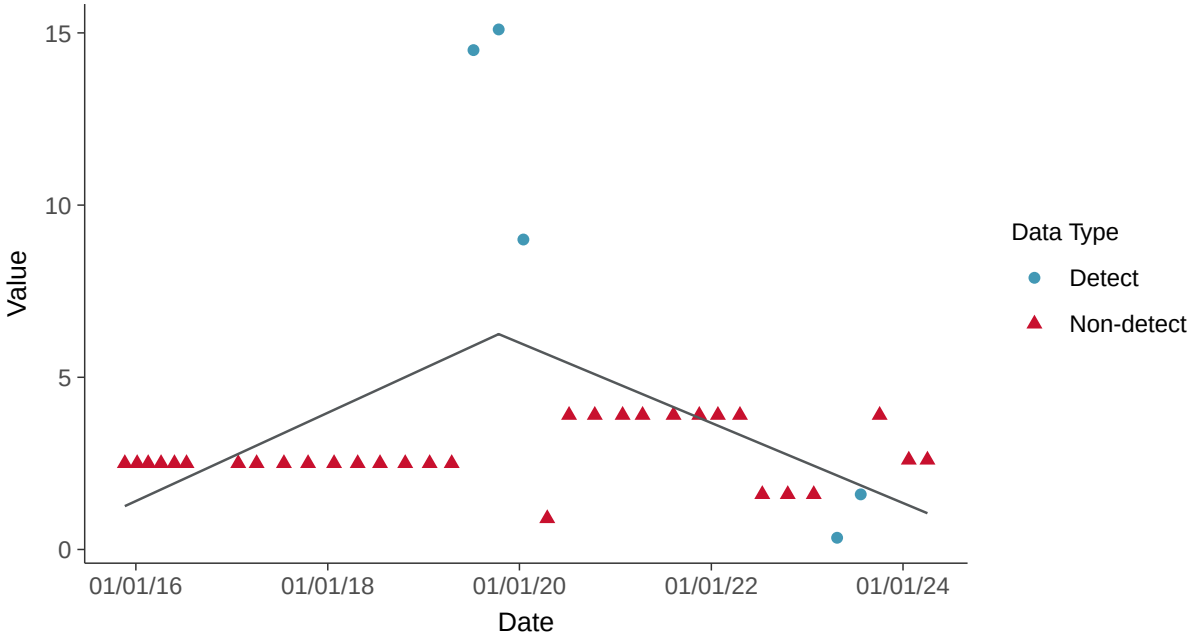
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



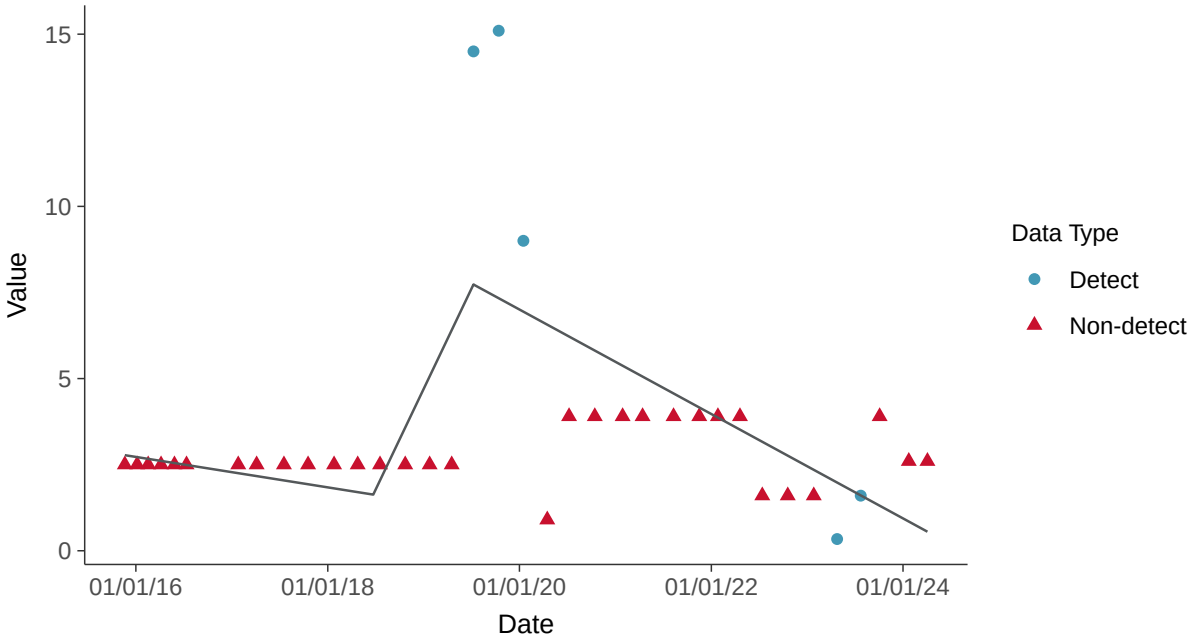
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-1 (ug/L)



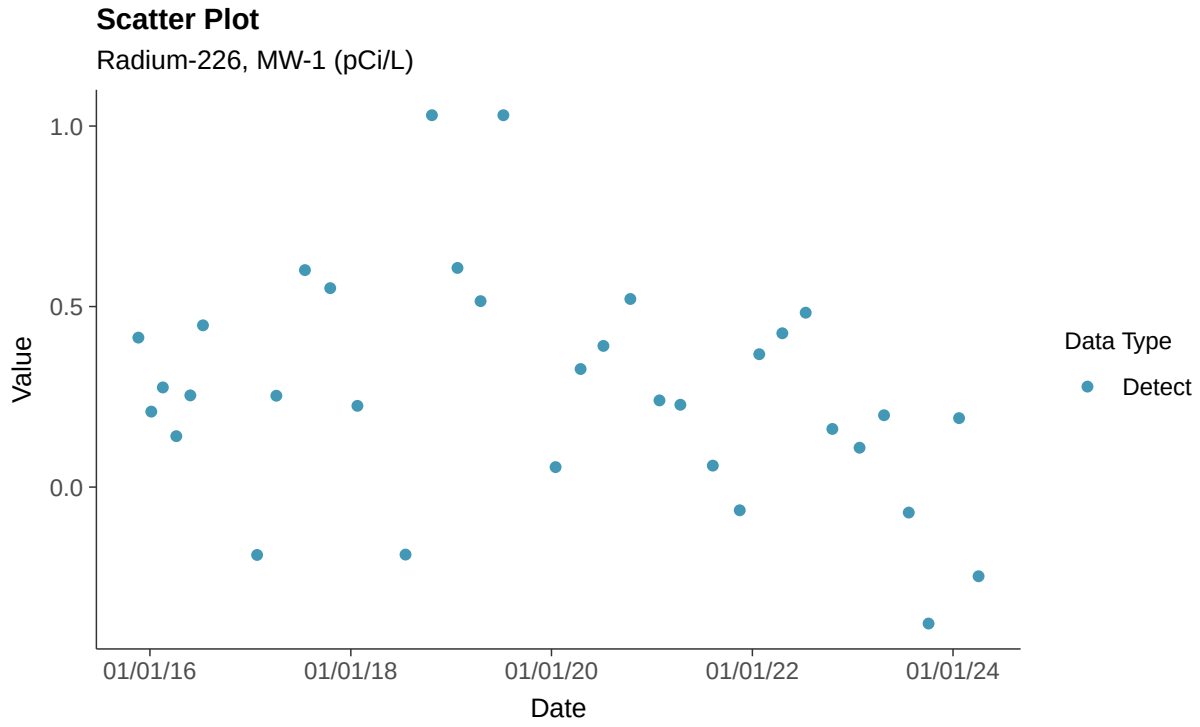
Trend Regression: Piecewise Linear-Linear-Linear

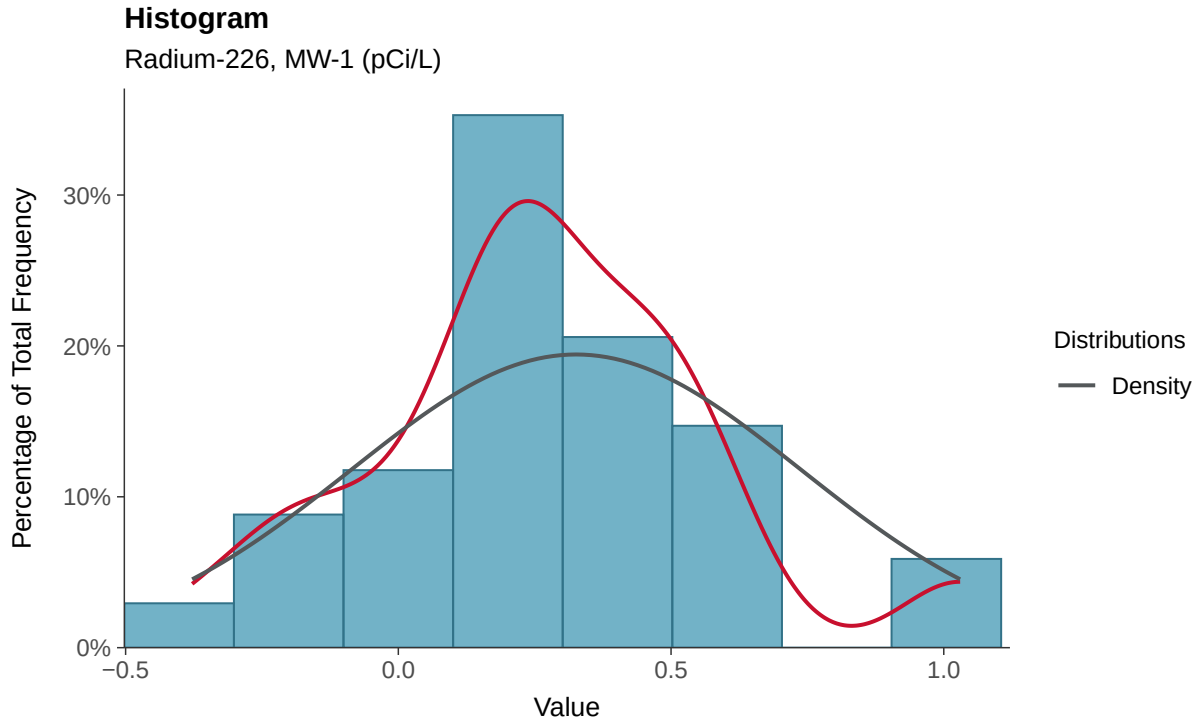
Molybdenum, MW-1 (ug/L)



App. IV: Radium-226, MW-1

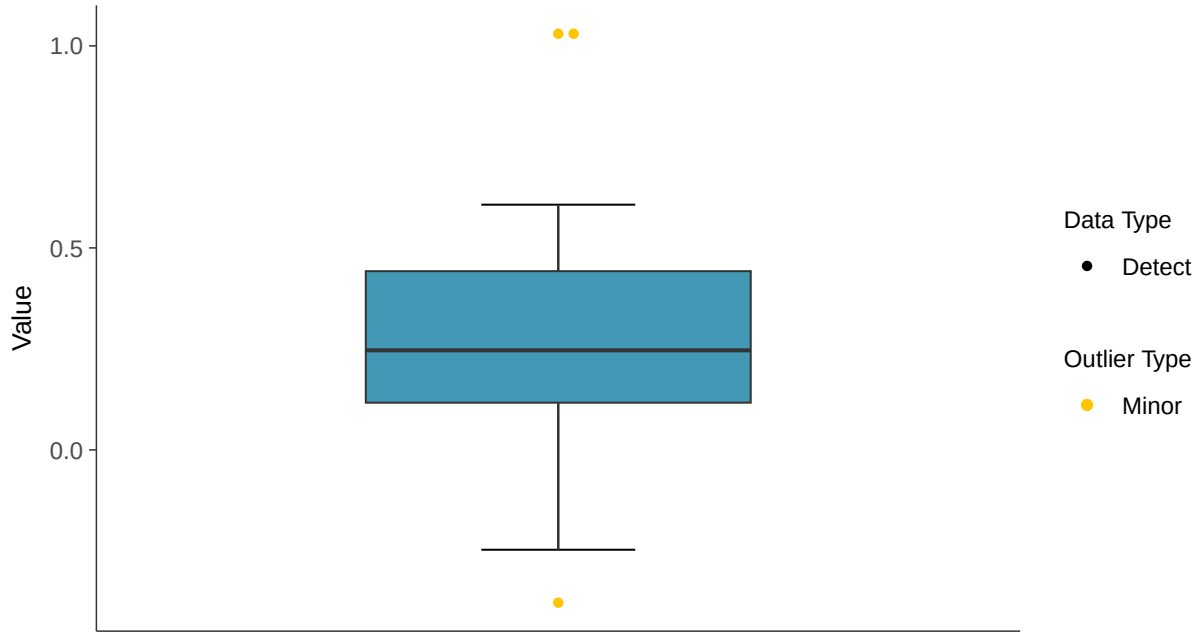
ID: 1_3_119





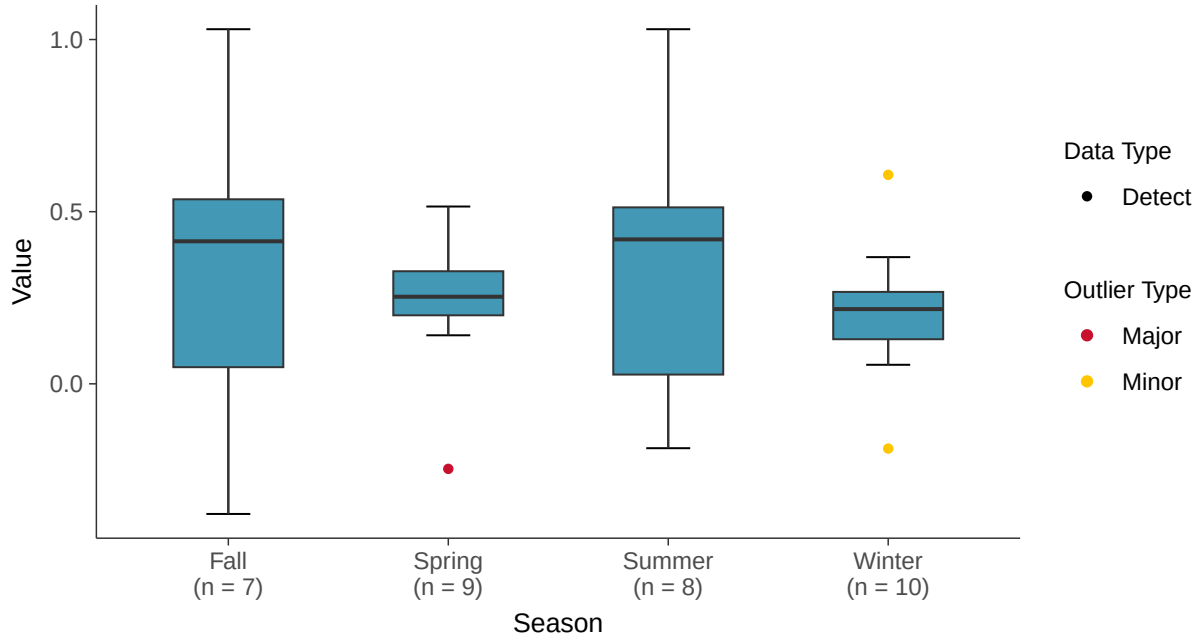
Boxplot

Radium-226, MW-1 (pCi/L)



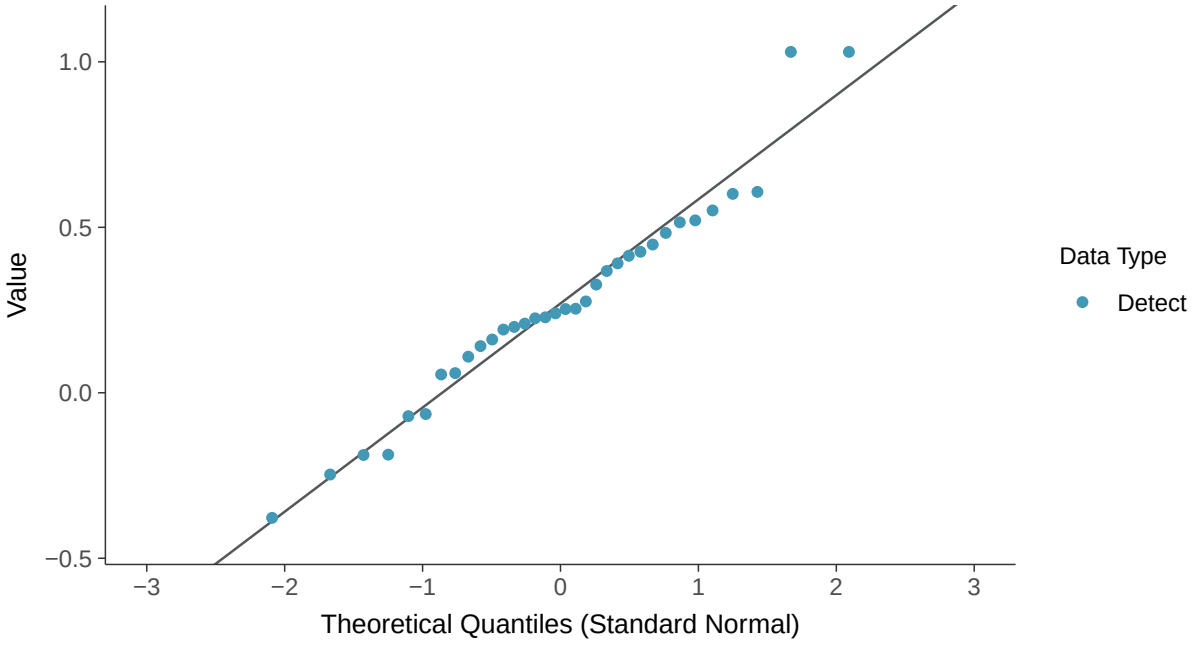
Boxplot by Season

Radium-226, MW-1 (pCi/L)



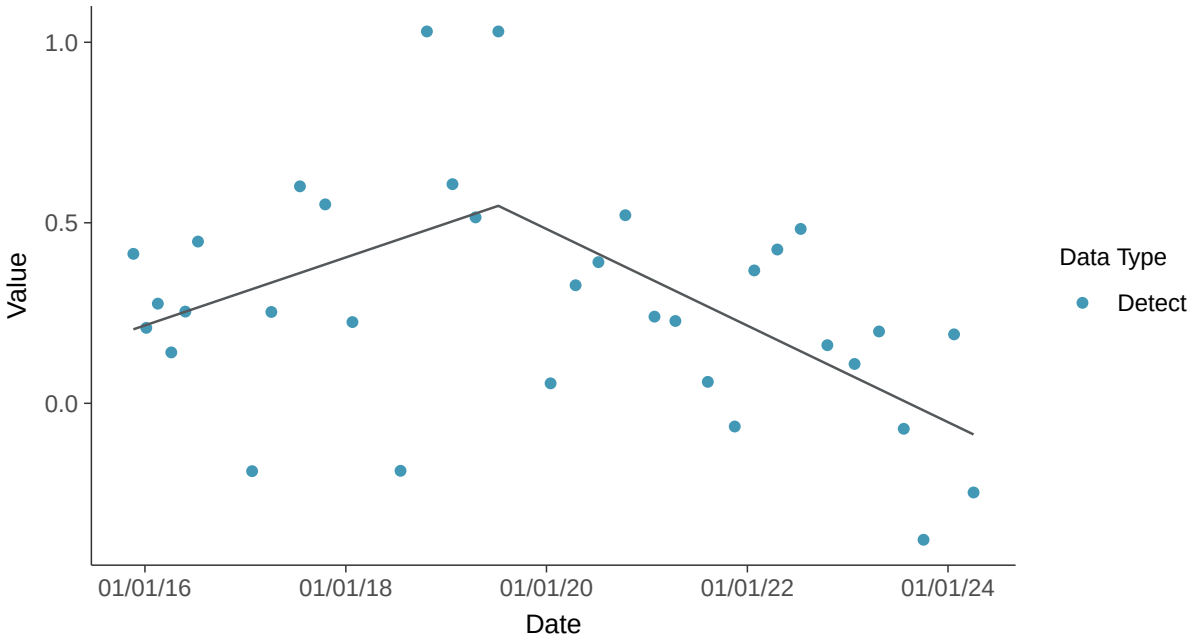
Normal Q-Q plot

Radium-226, MW-1 (pCi/L)



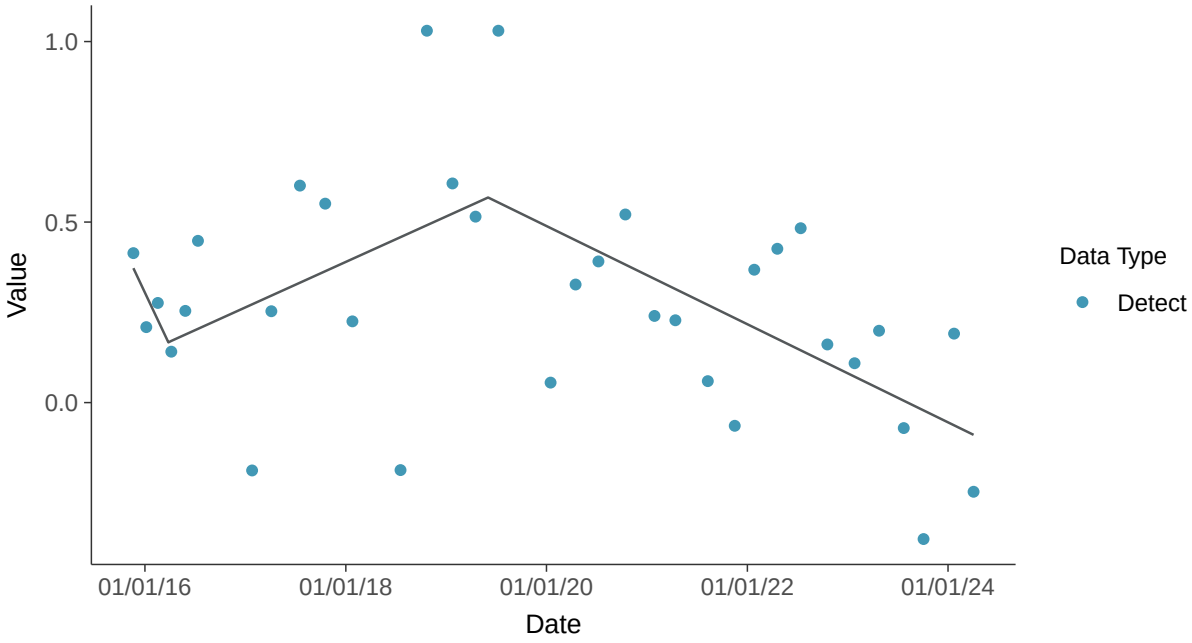
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-1 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-1 (pCi/L)

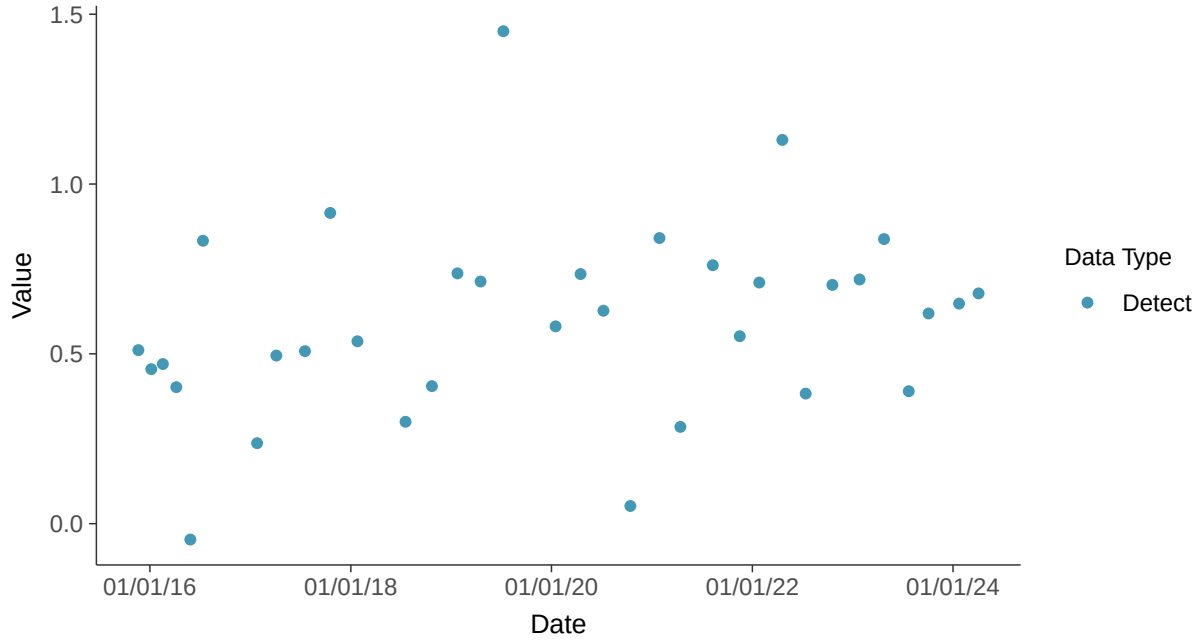


App. IV: Radium-228, MW-1

ID: 1_3_120

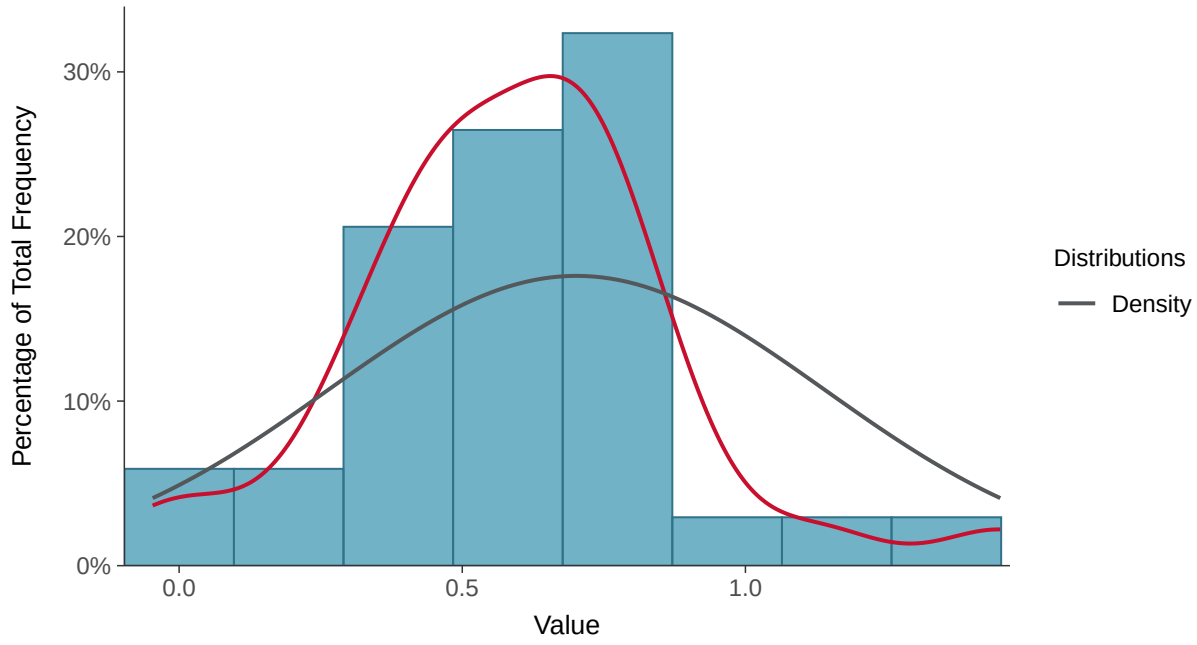
Scatter Plot

Radium-228, MW-1 (pCi/L)



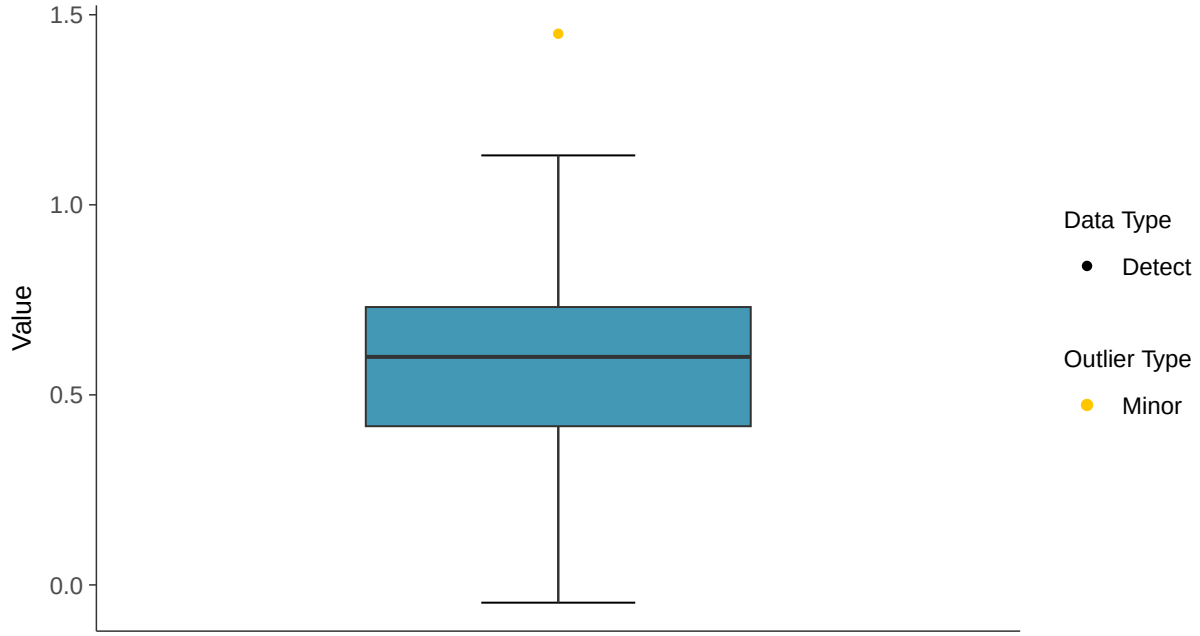
Histogram

Radium-228, MW-1 (pCi/L)



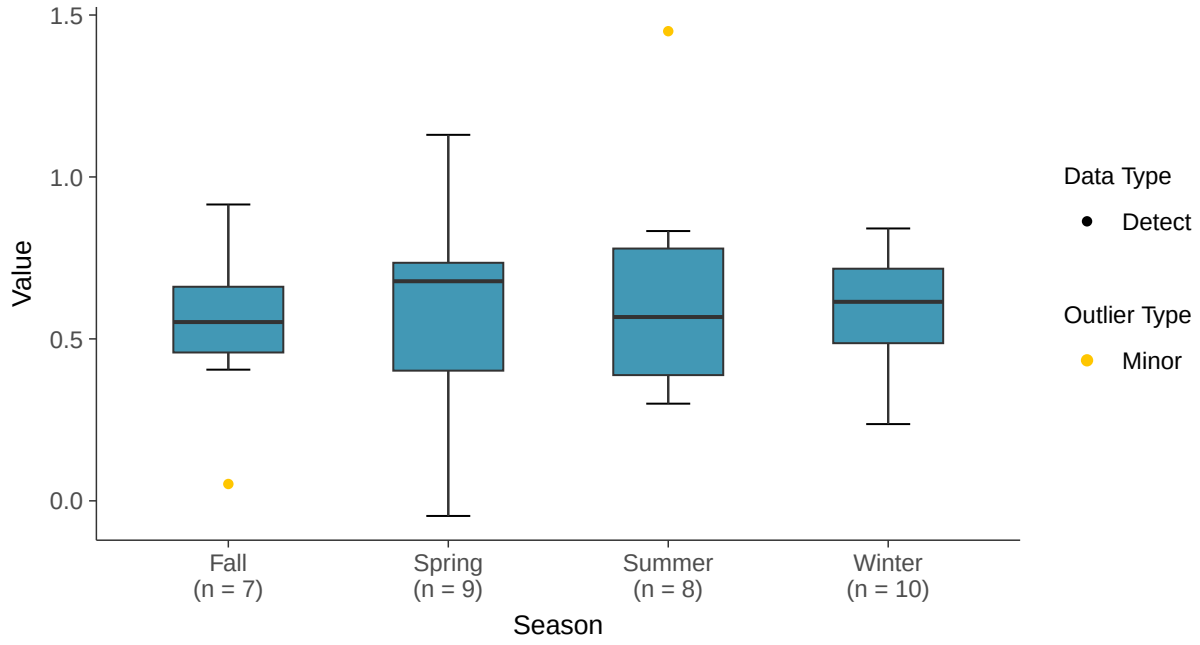
Boxplot

Radium-228, MW-1 (pCi/L)



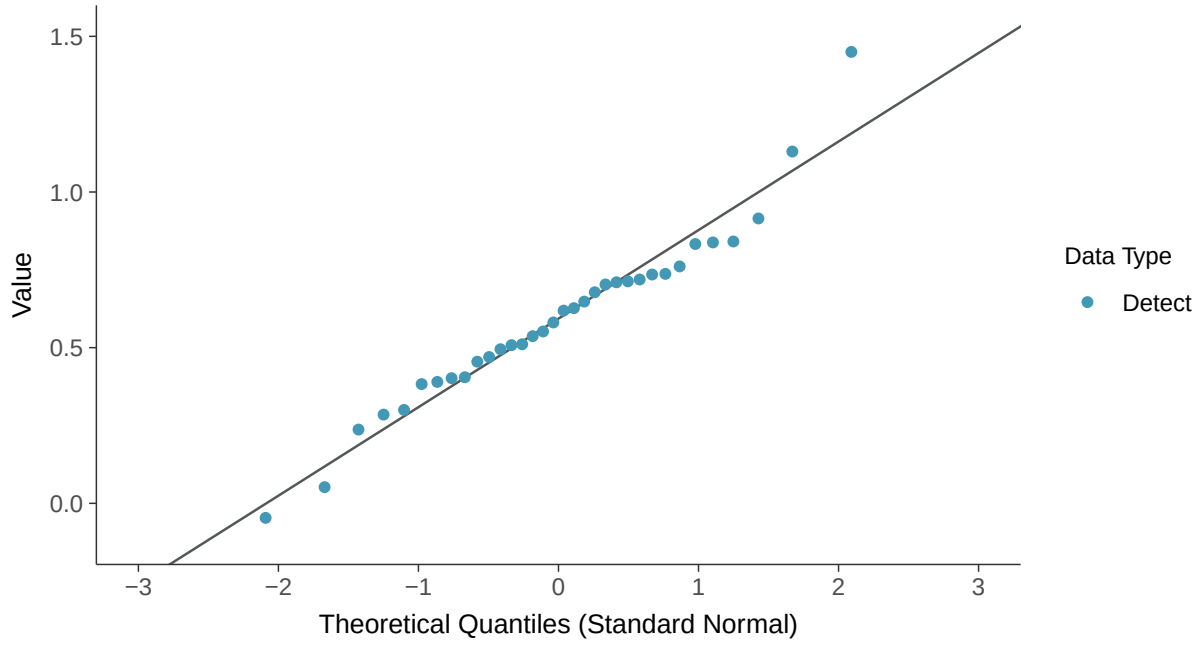
Boxplot by Season

Radium-228, MW-1 (pCi/L)



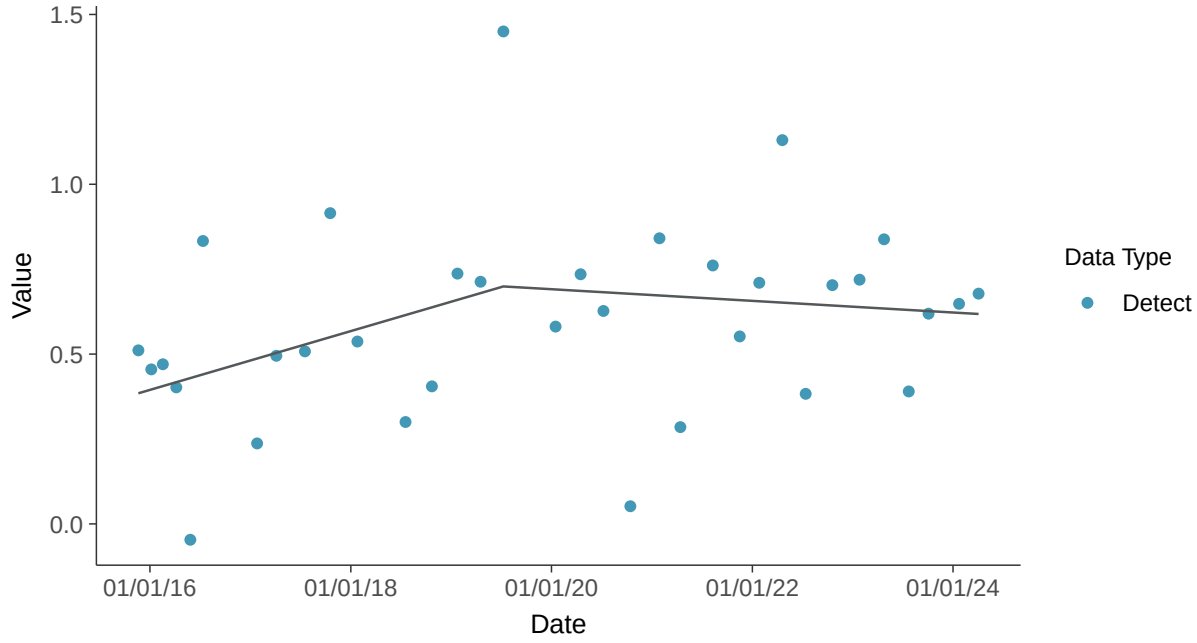
Normal Q-Q plot

Radium-228, MW-1 (pCi/L)



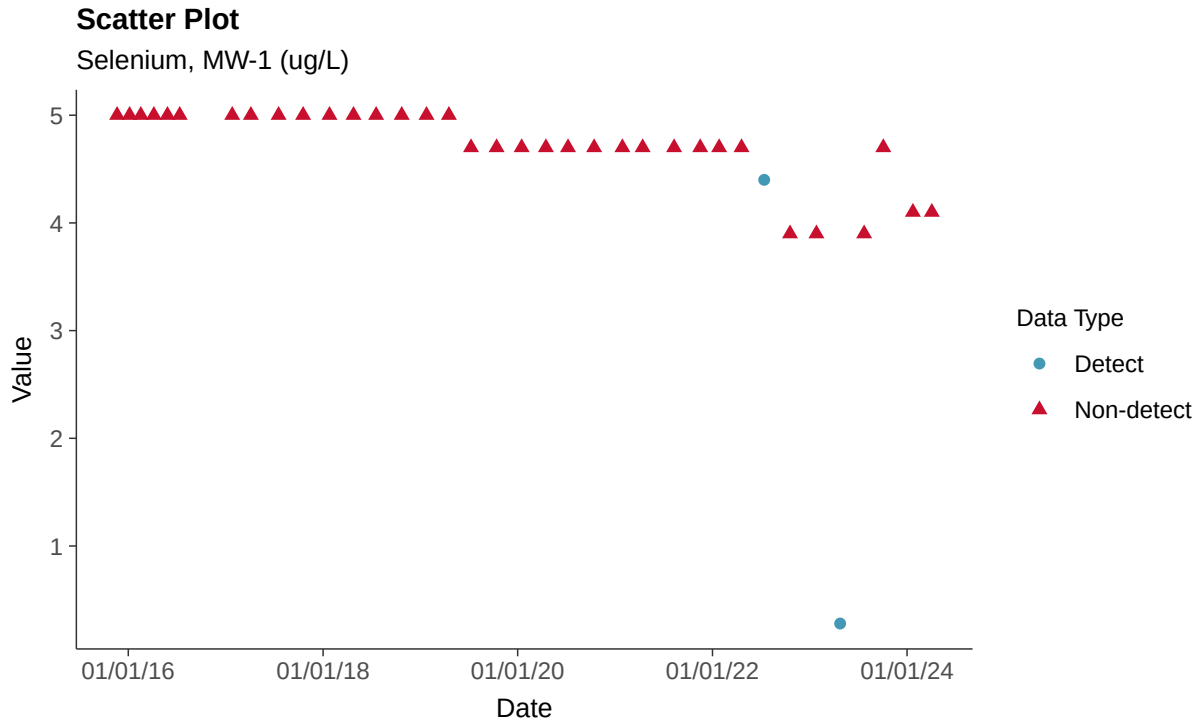
Trend Regression: Piecewise Linear-Linear

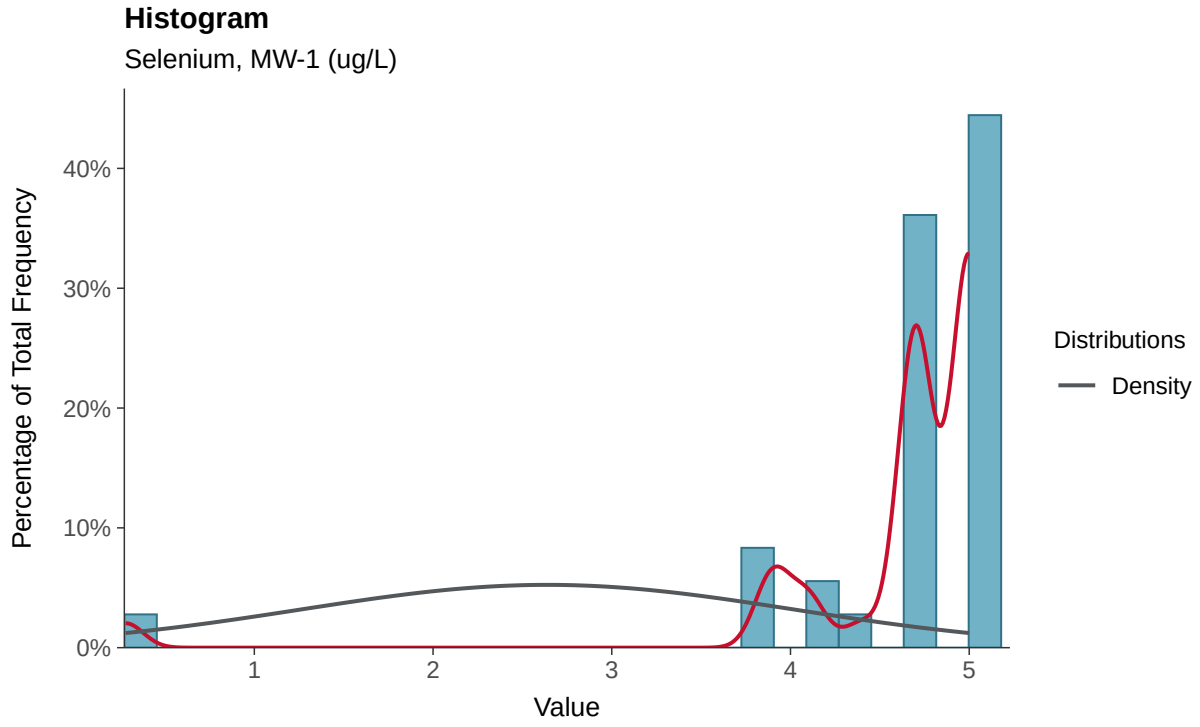
Radium-228, MW-1 (pCi/L)



App. IV: Selenium, MW-1

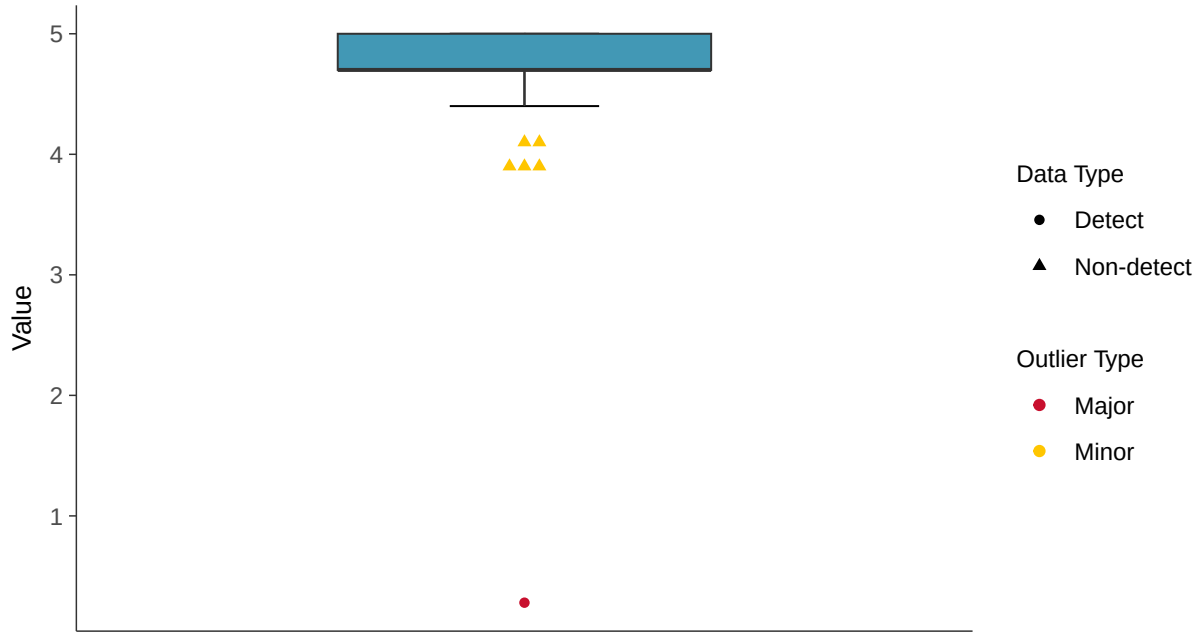
ID: 1_3_121





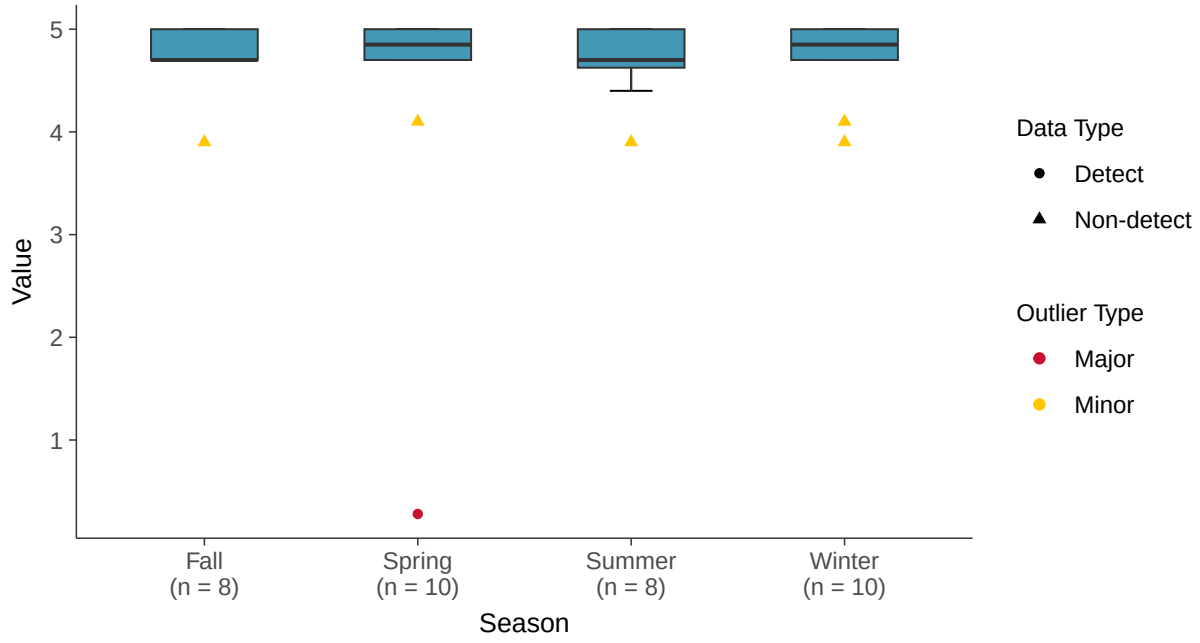
Boxplot

Selenium, MW-1 (ug/L)



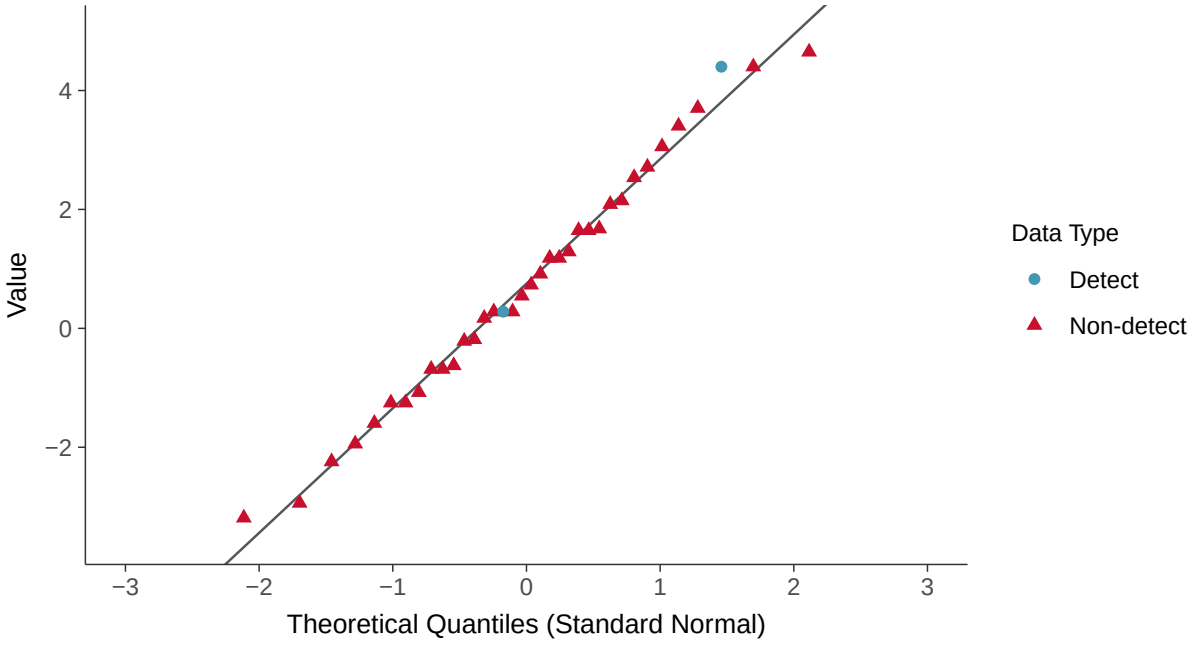
Boxplot by Season

Selenium, MW-1 (ug/L)



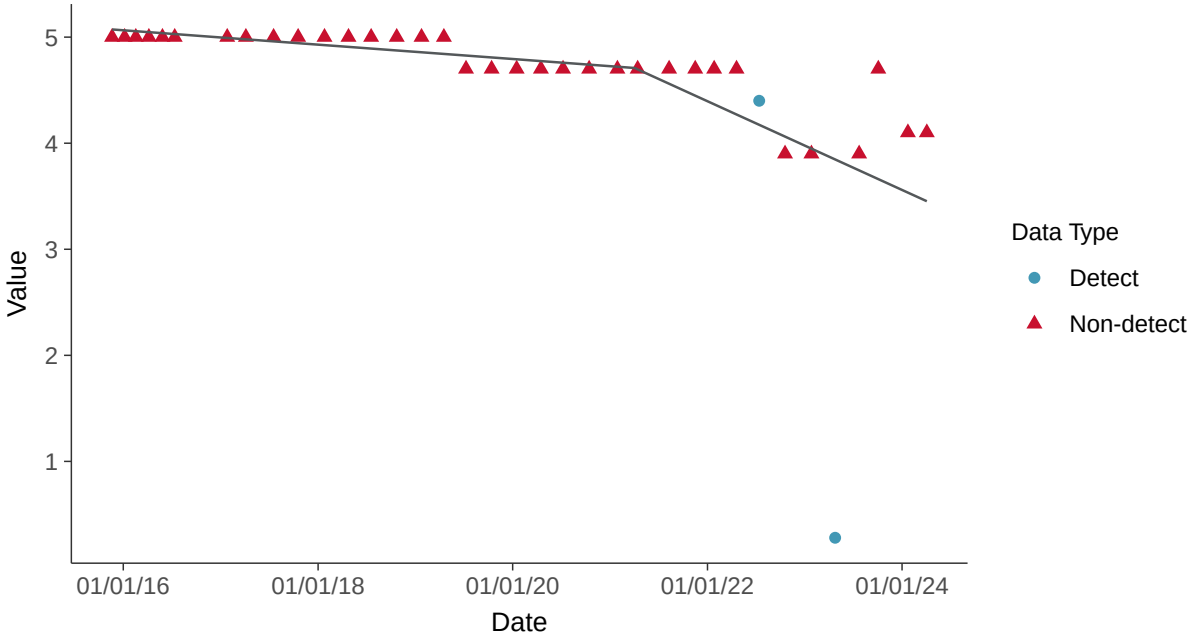
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-1 (ug/L)



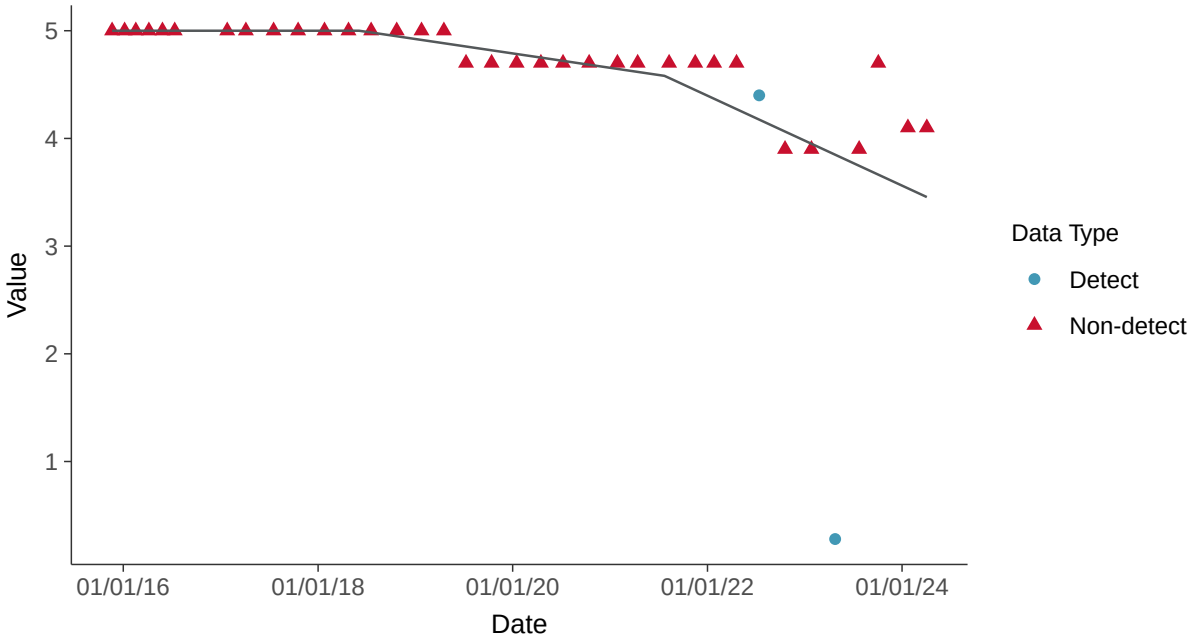
Trend Regression: Piecewise Linear-Linear

Selenium, MW-1 (ug/L)



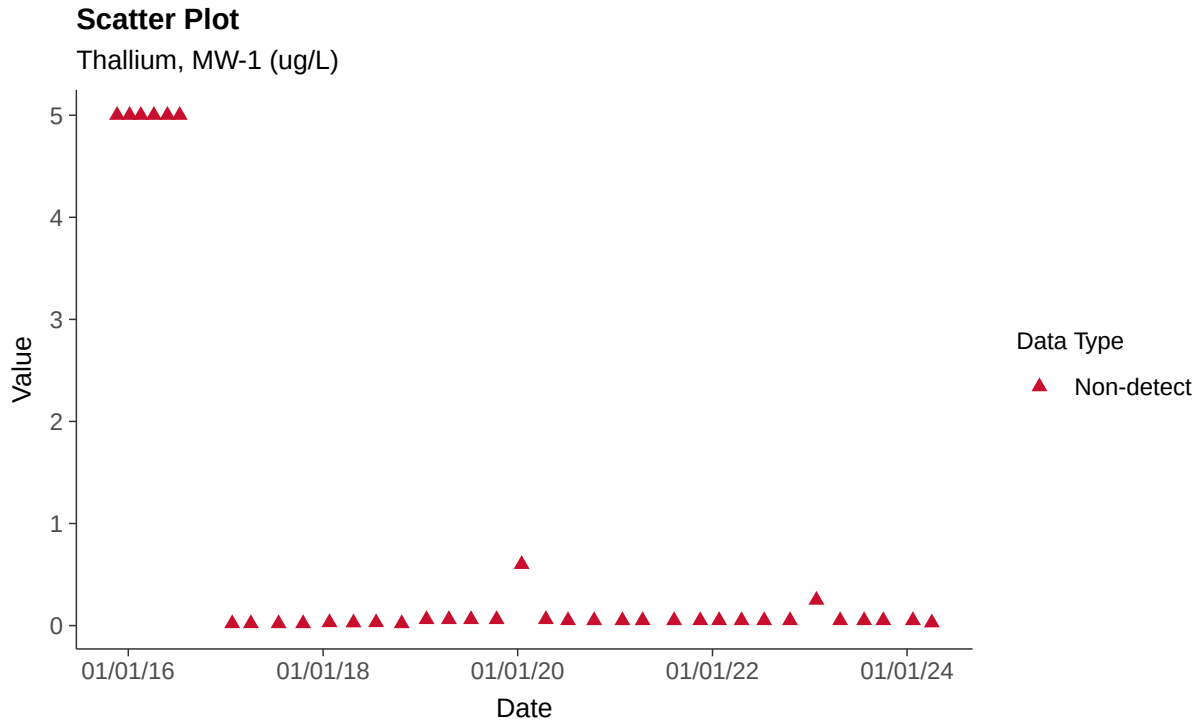
Trend Regression: Piecewise Linear-Linear-Linear

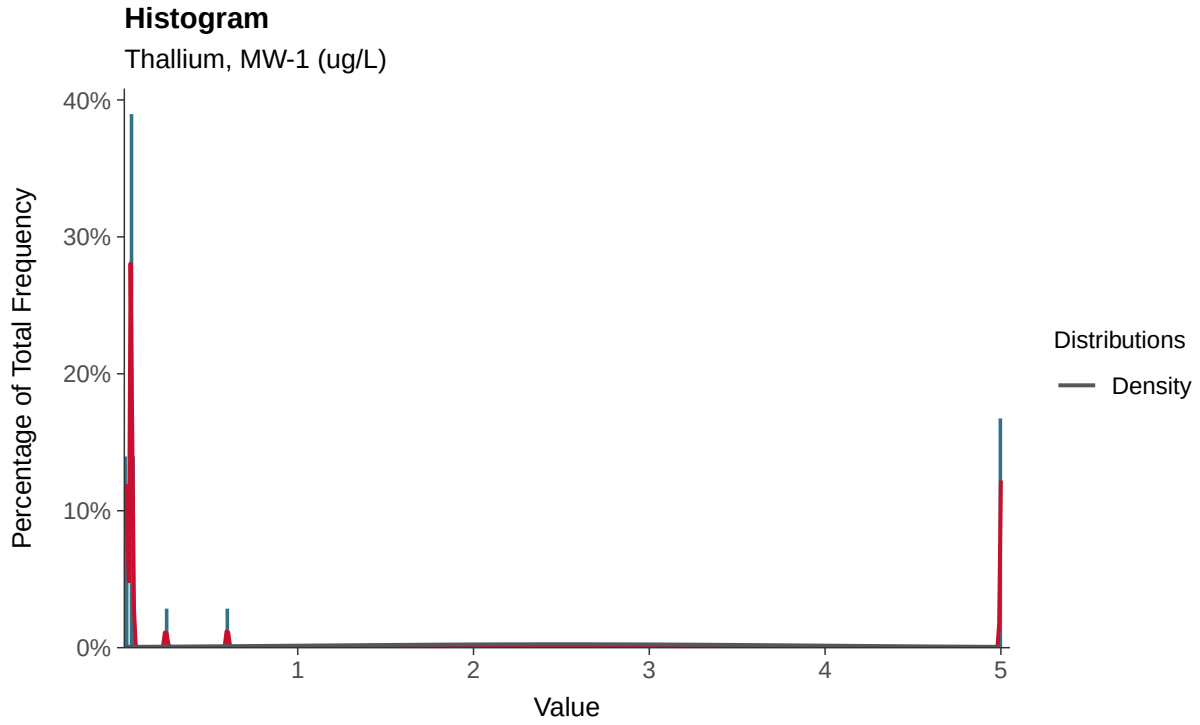
Selenium, MW-1 (ug/L)



App. IV: Thallium, MW-1

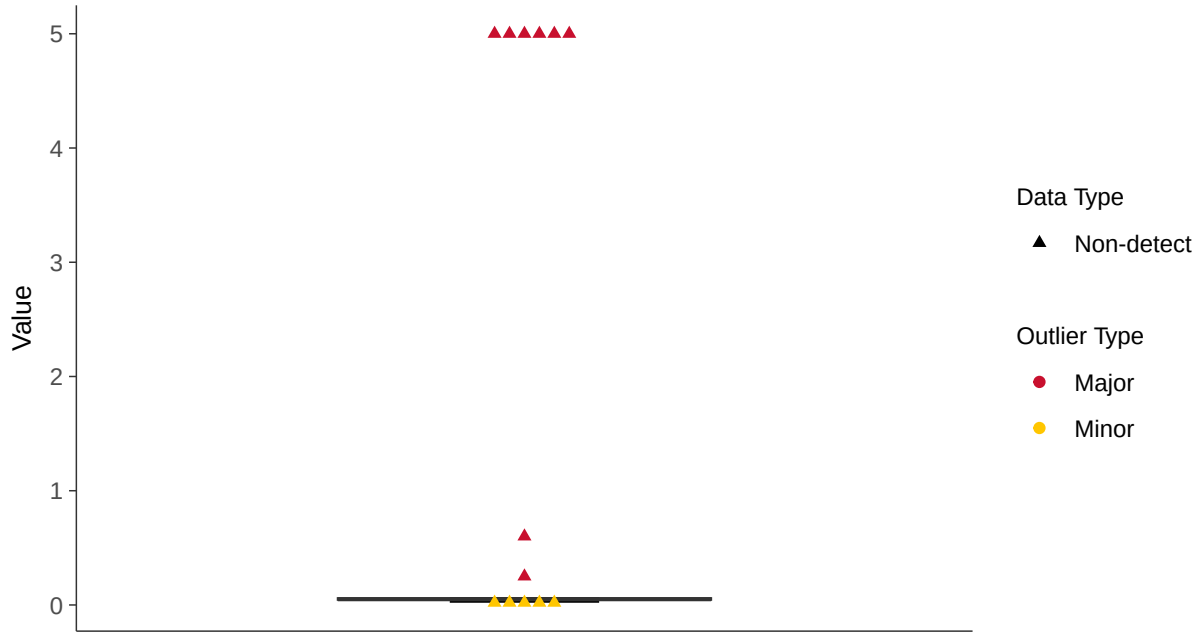
ID: 1_3_124





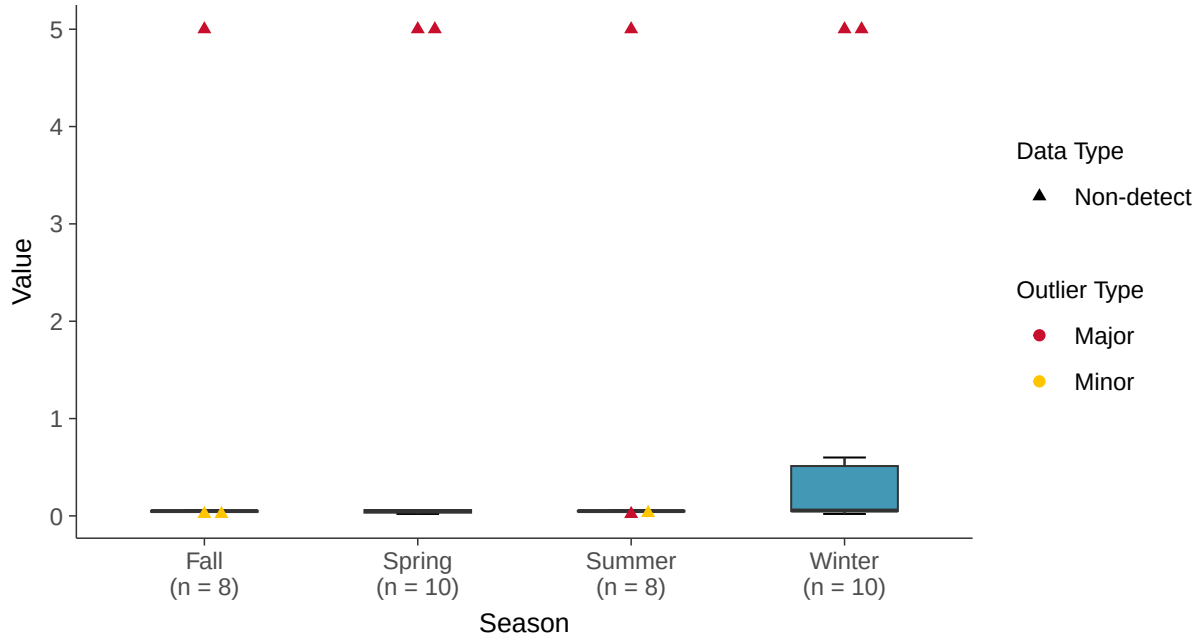
Boxplot

Thallium, MW-1 (ug/L)



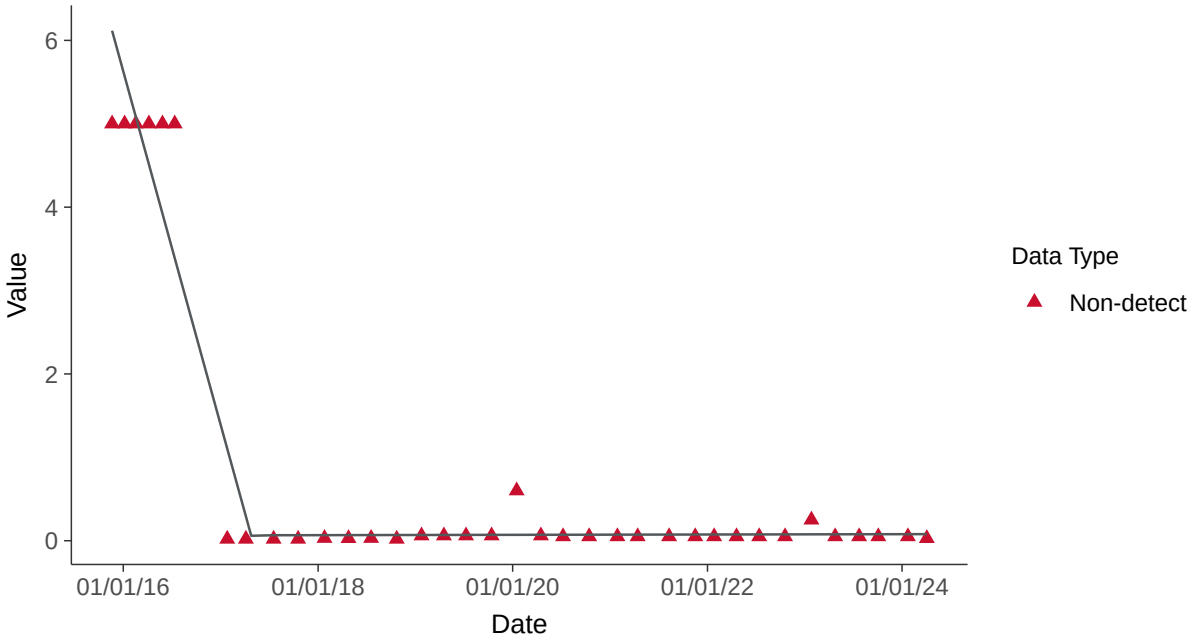
Boxplot by Season

Thallium, MW-1 (ug/L)



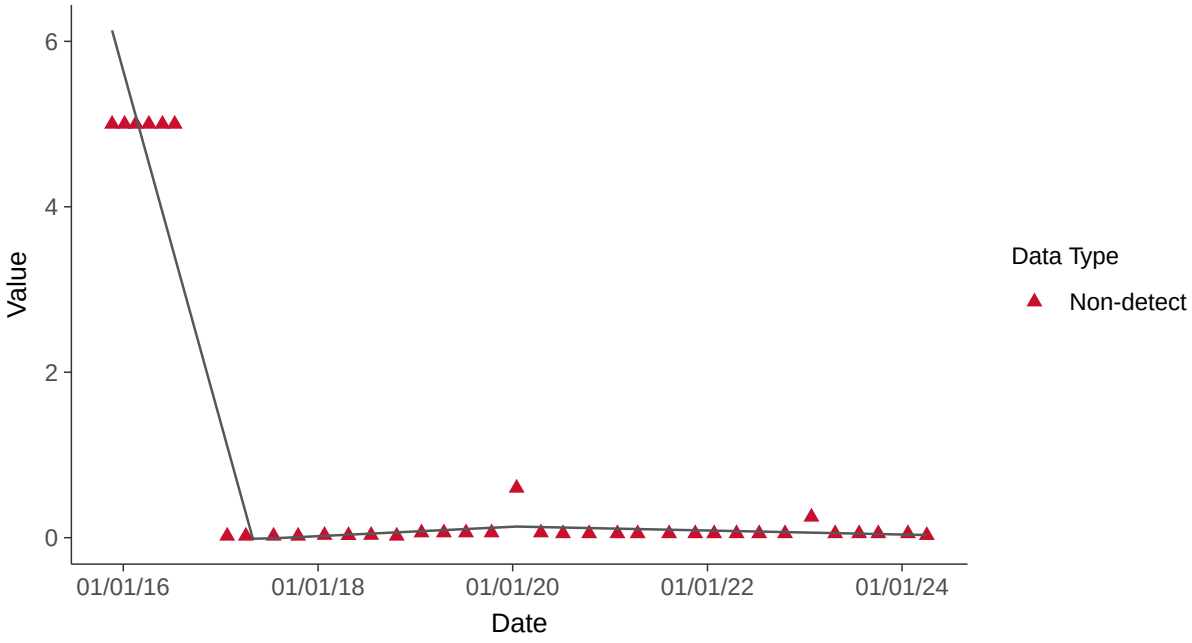
Trend Regression: Piecewise Linear-Linear

Thallium, MW-1 (ug/L)



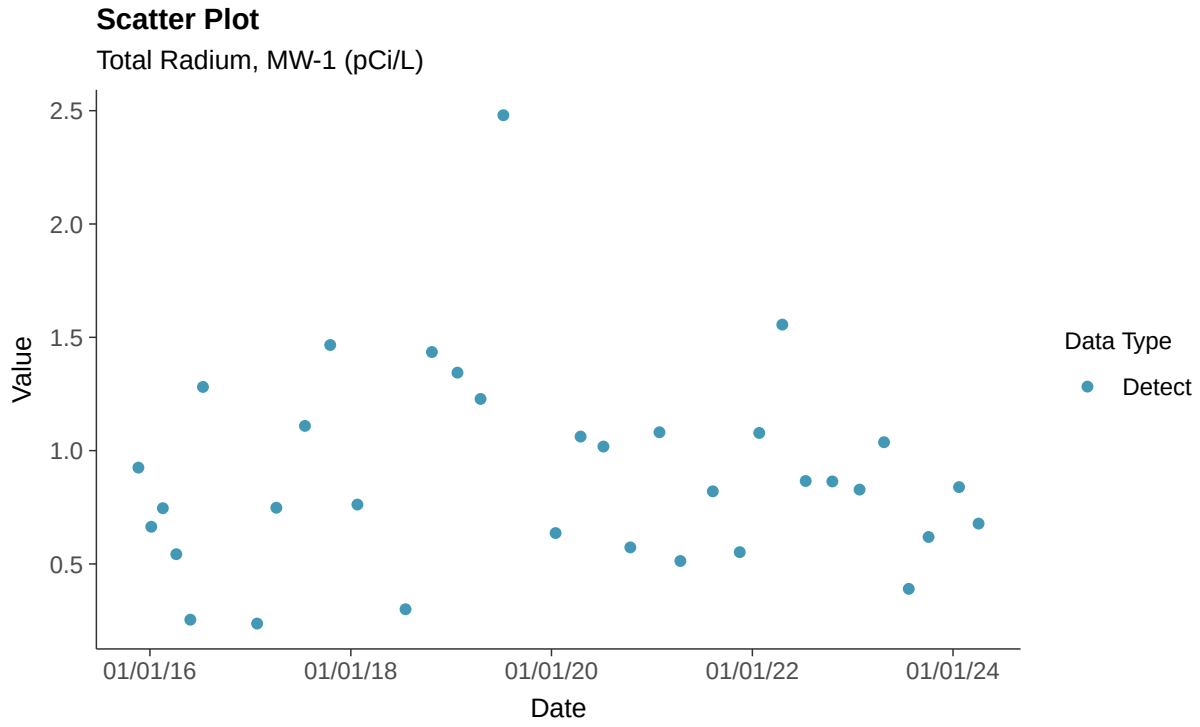
Trend Regression: Piecewise Linear-Linear-Linear

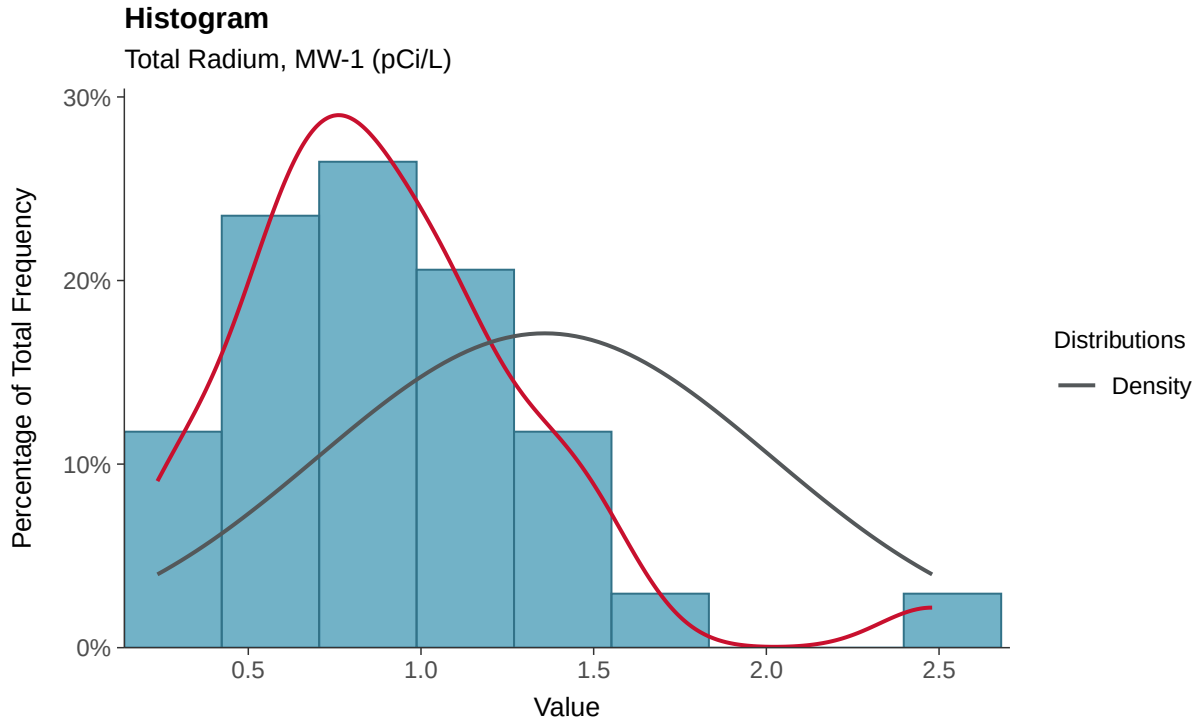
Thallium, MW-1 (ug/L)



App. IV: Total Radium, MW-1

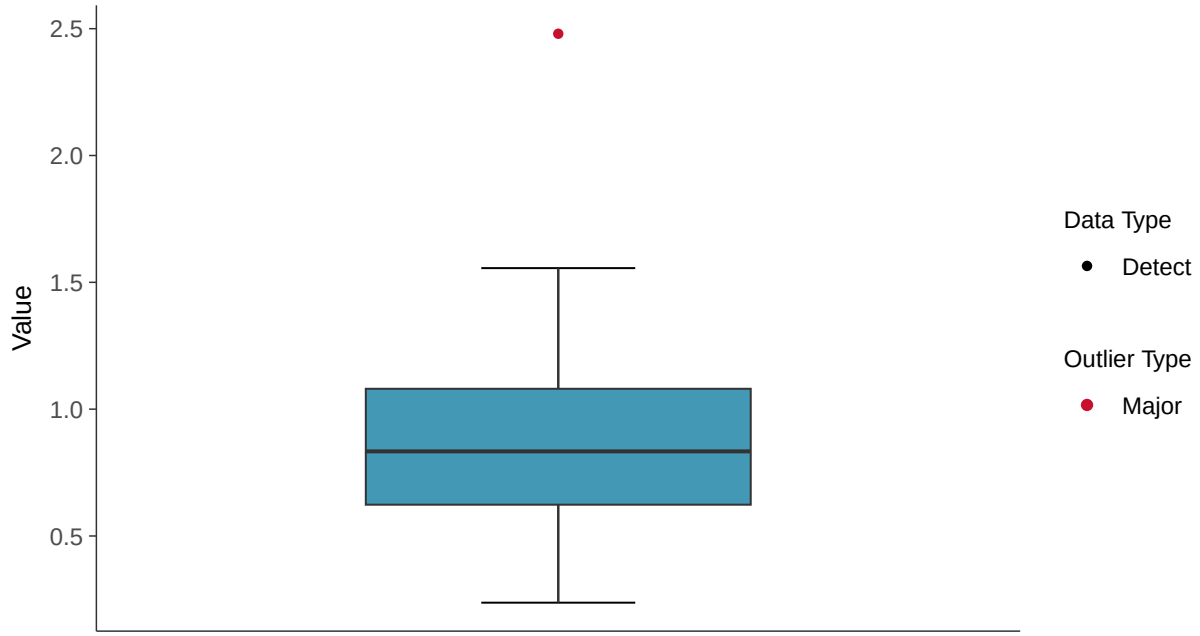
ID: 1_3_126





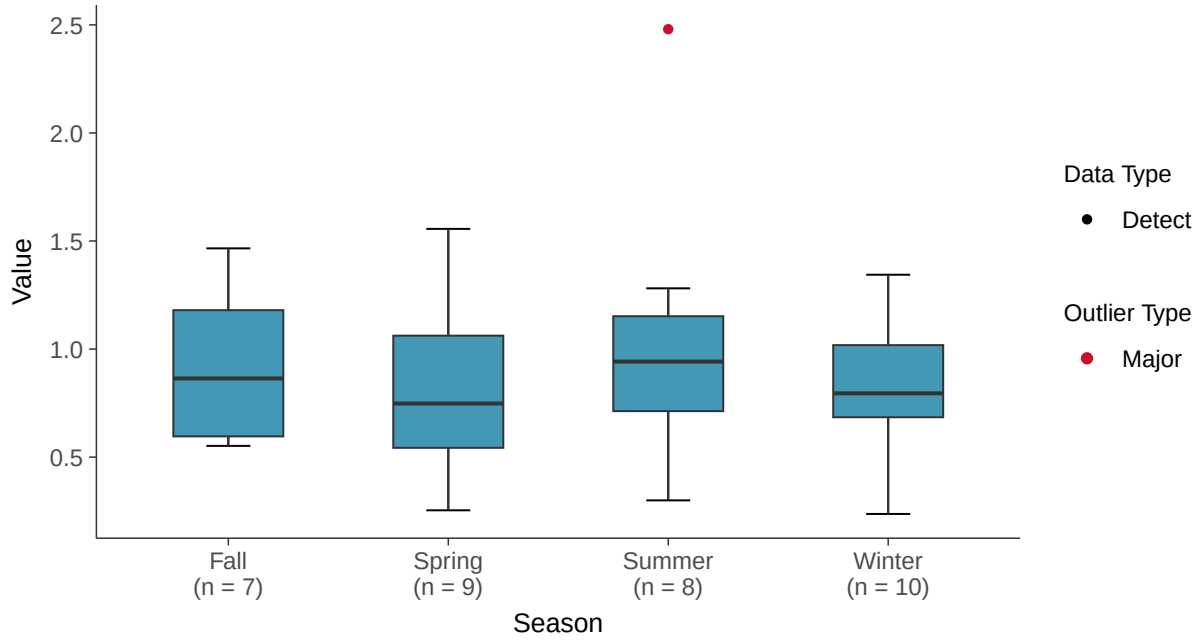
Boxplot

Total Radium, MW-1 (pCi/L)



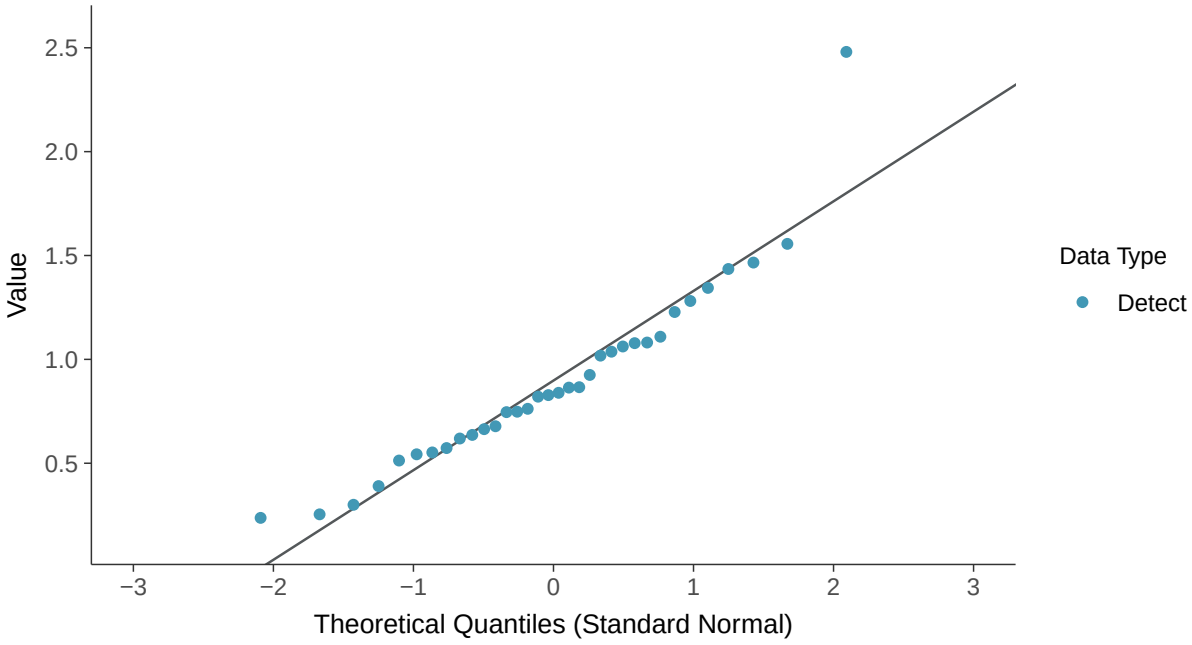
Boxplot by Season

Total Radium, MW-1 (pCi/L)



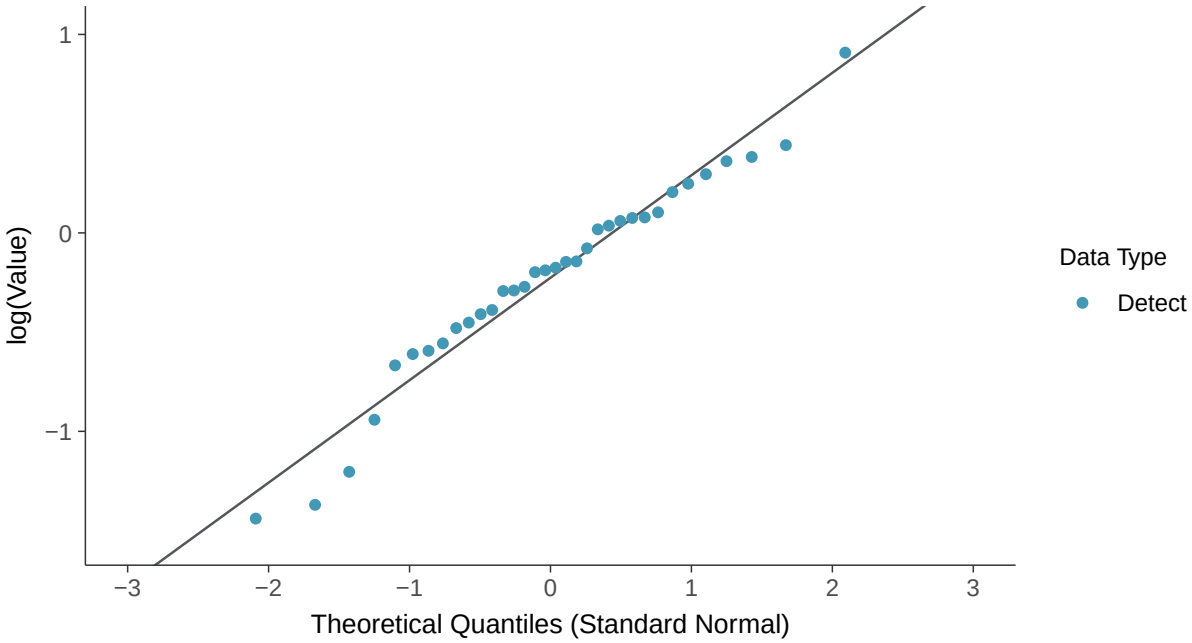
Normal Q-Q plot

Total Radium, MW-1 (pCi/L)



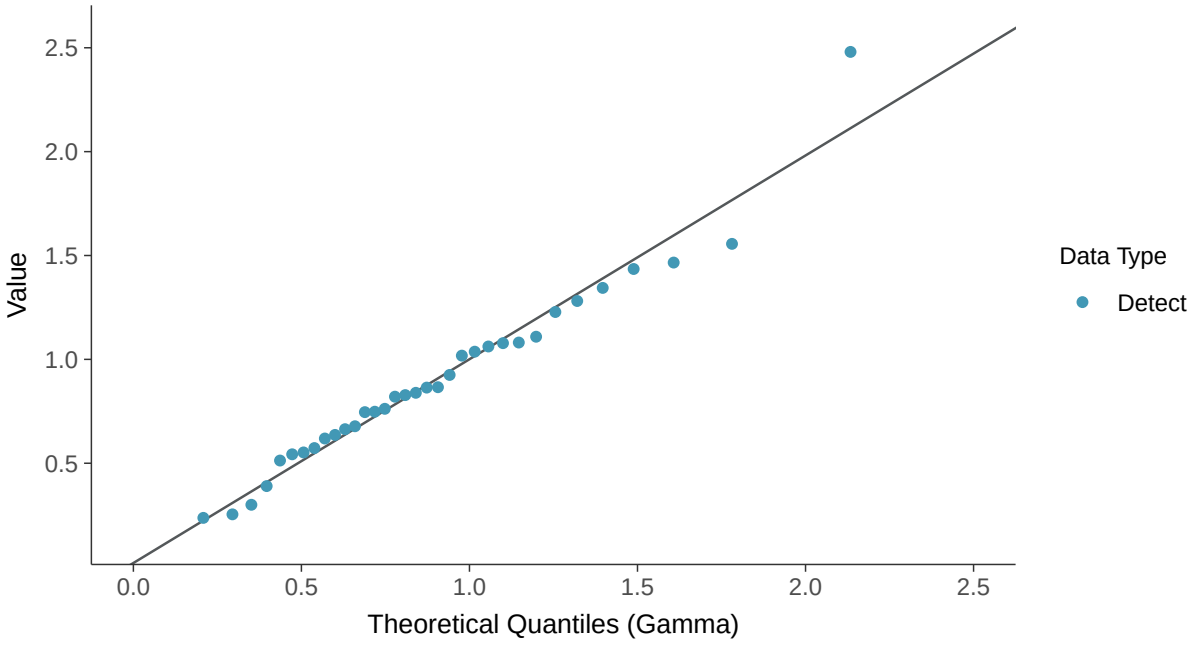
Lognormal Q-Q plot

Total Radium, MW-1 (pCi/L)



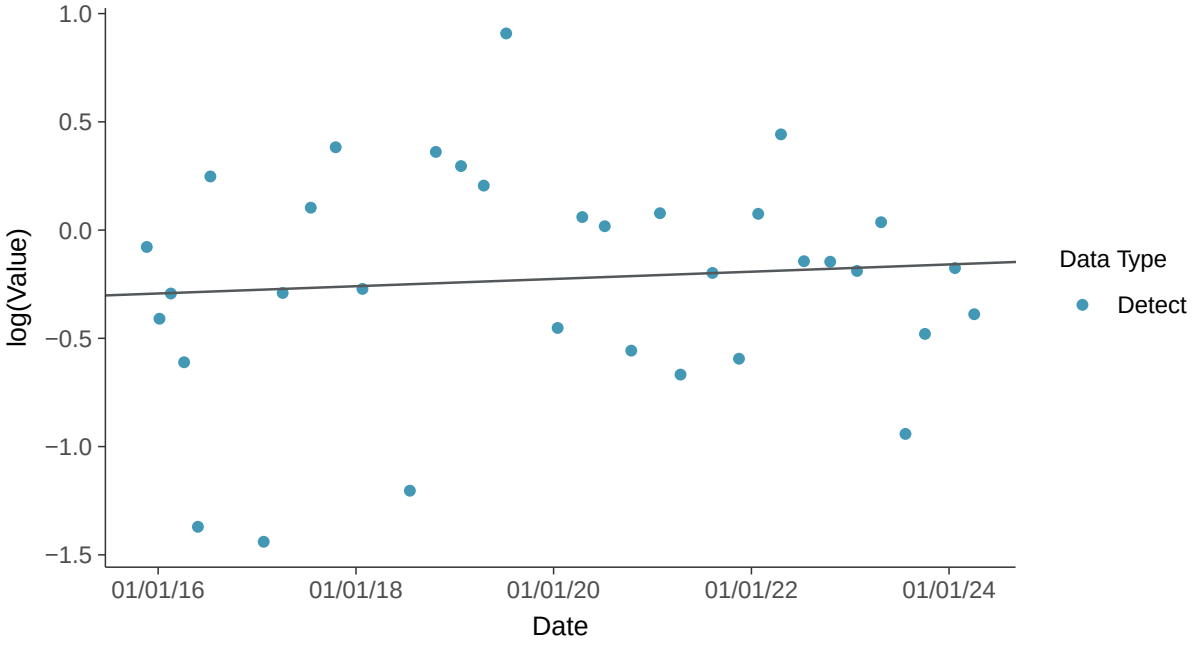
Gamma Q-Q plot

Total Radium, MW-1 (pCi/L)



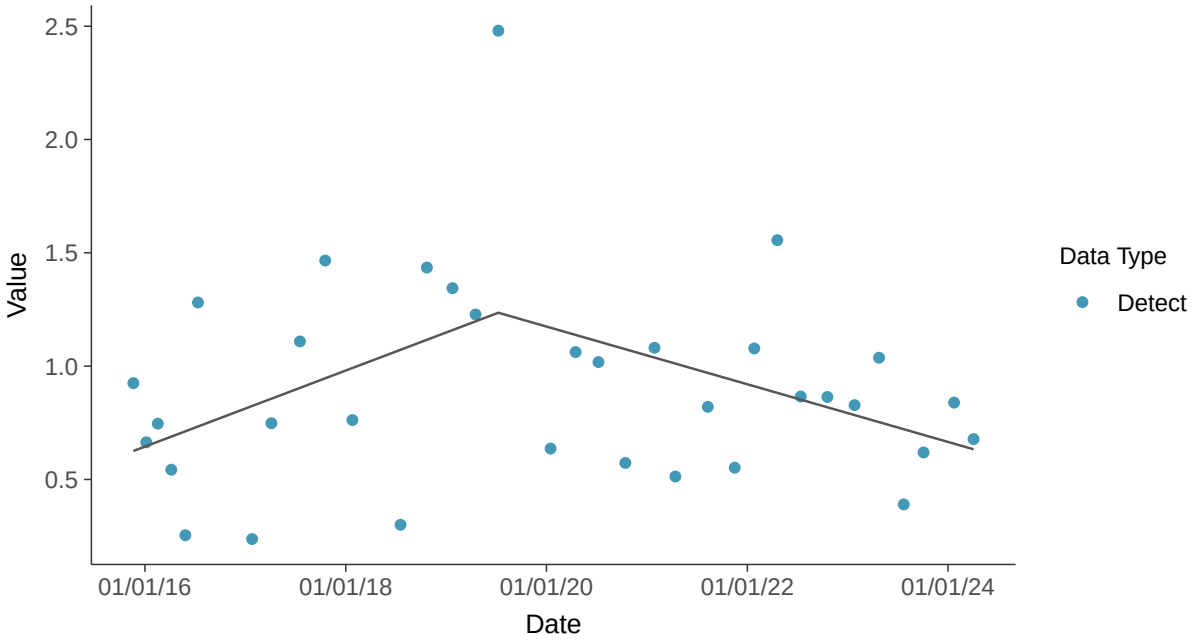
Trend Regression: Lognormal MLE

Total Radium, MW-1 (pCi/L)



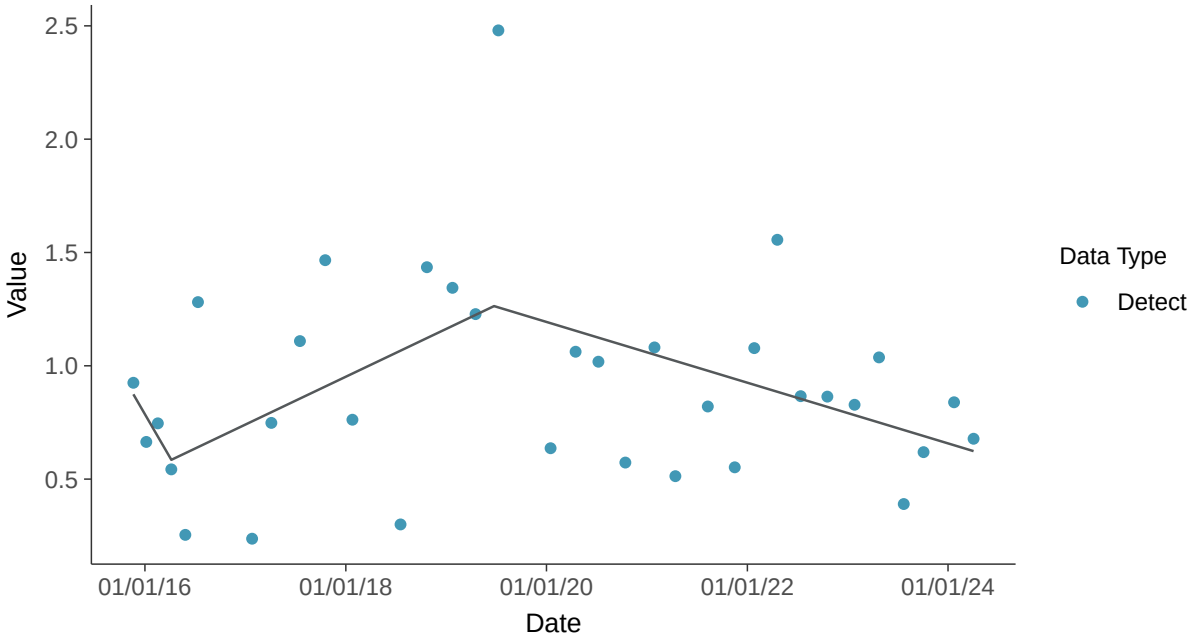
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-1 (pCi/L)



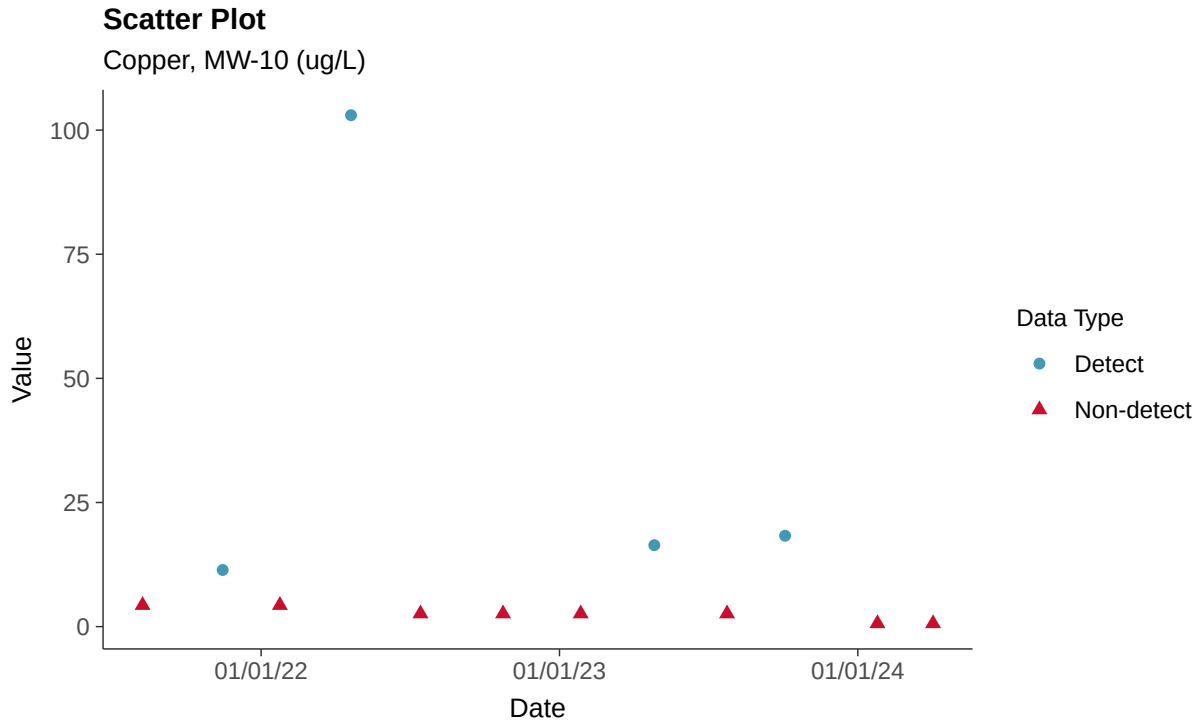
Trend Regression: Piecewise Linear-Linear-Linear

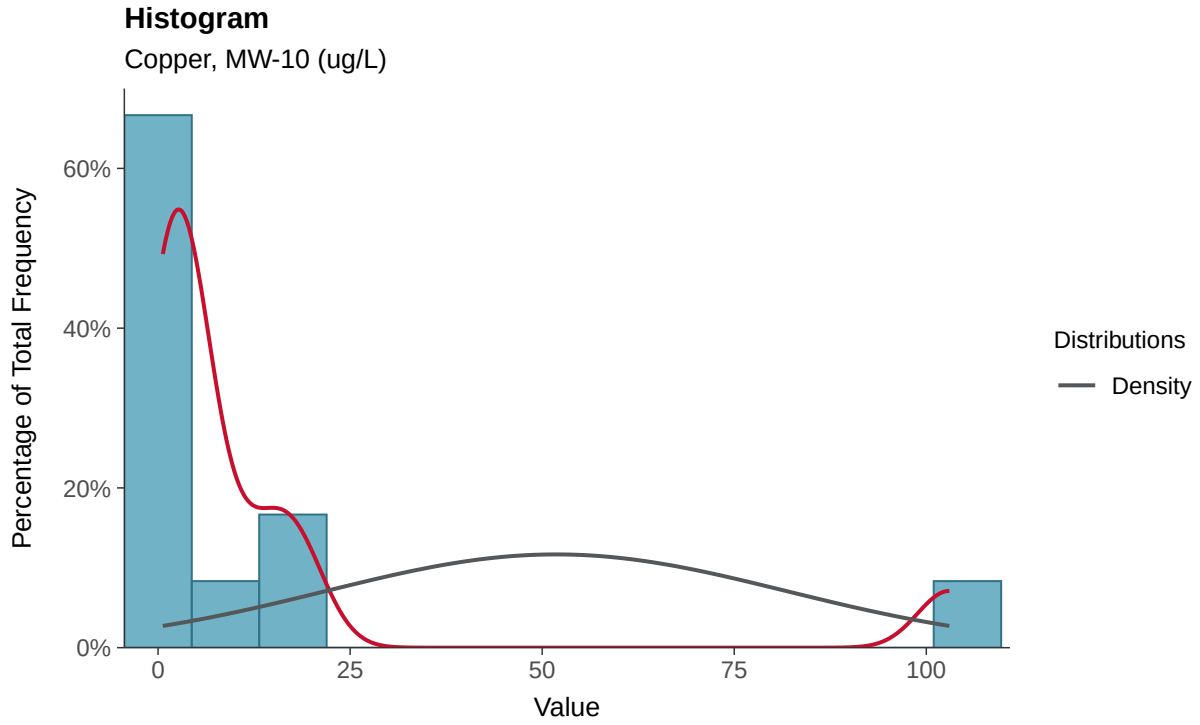
Total Radium, MW-1 (pCi/L)



App. I Metals: Copper, MW-10

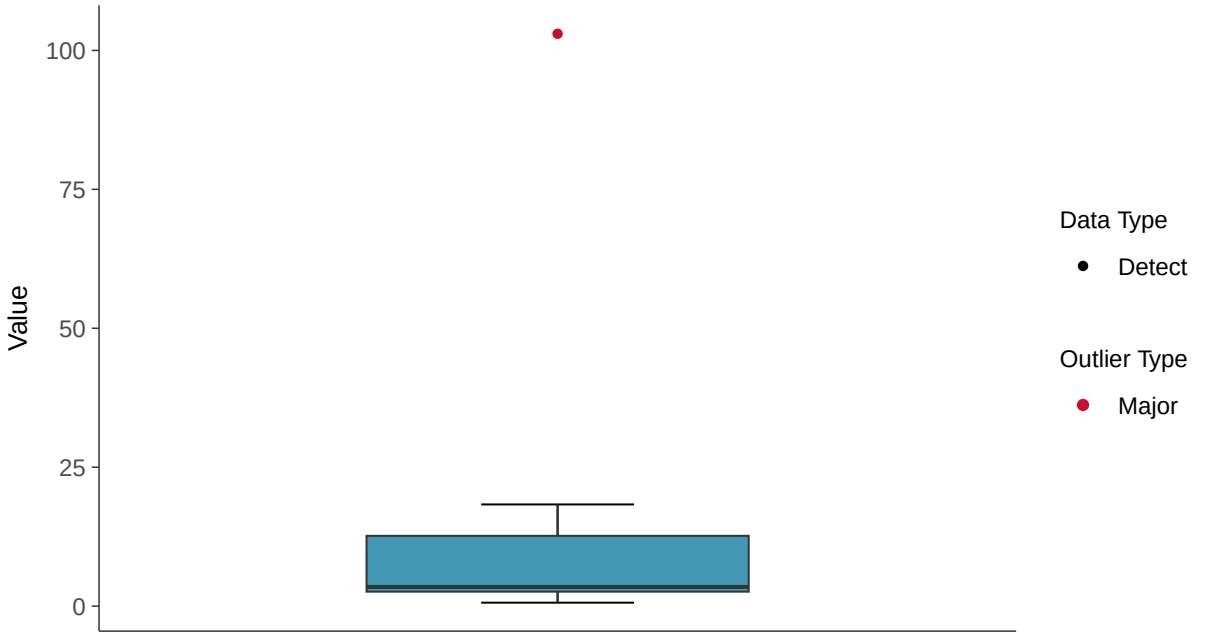
ID: 2_1_111





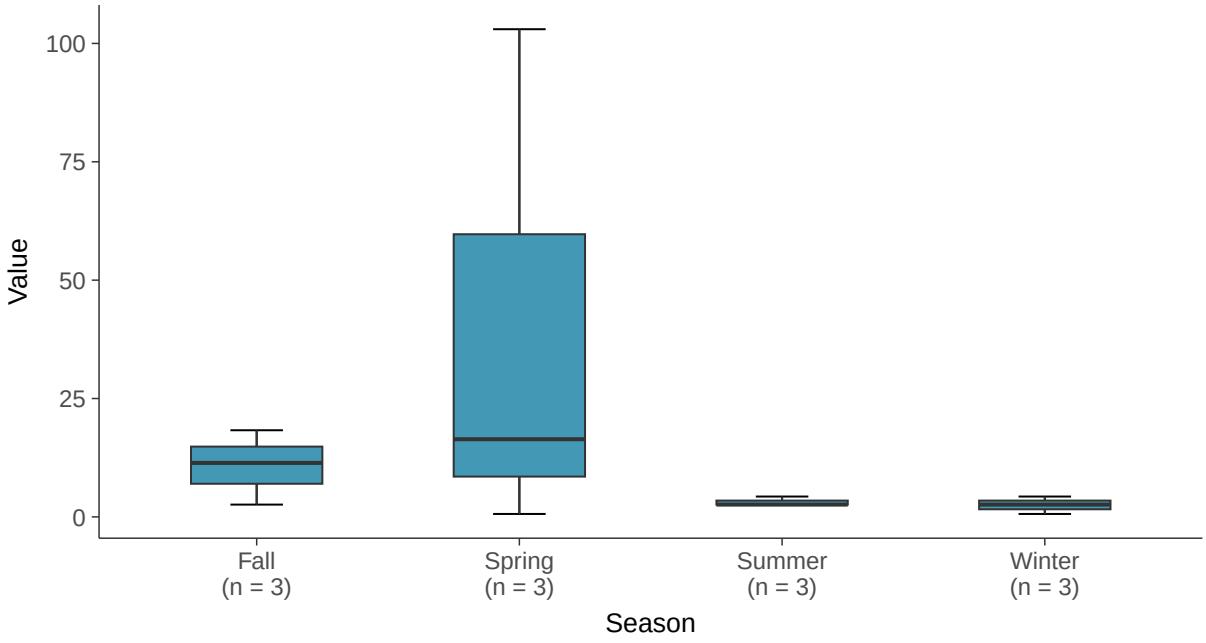
Boxplot

Copper, MW-10 (ug/L)



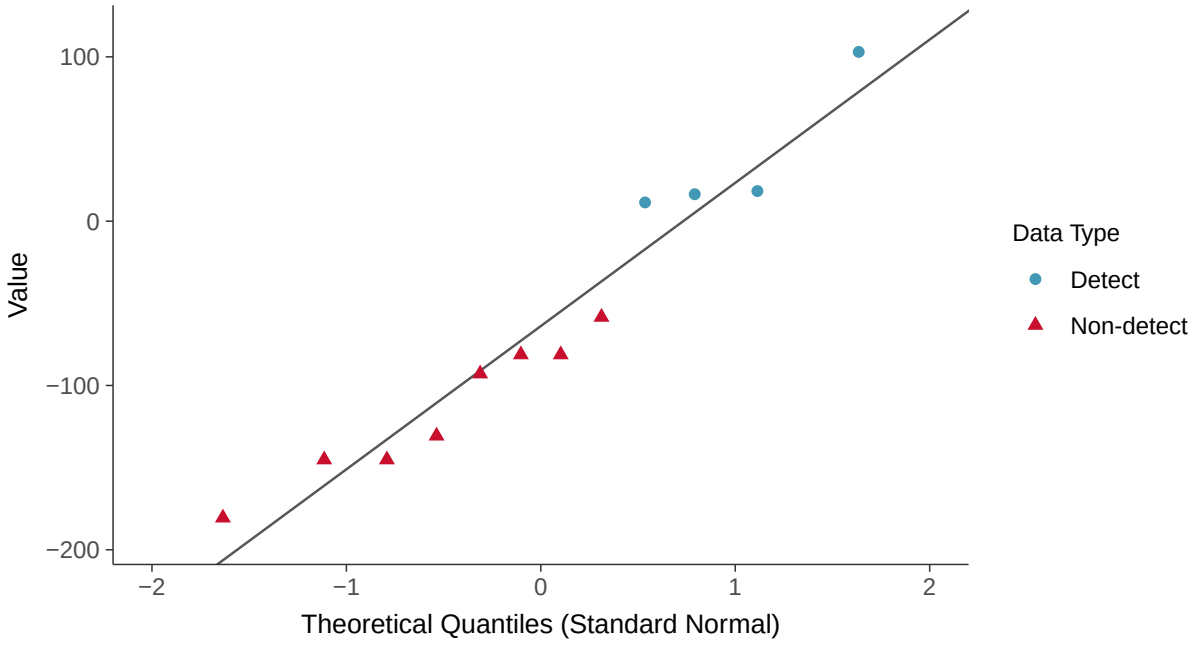
Boxplot by Season

Copper, MW-10 (ug/L)



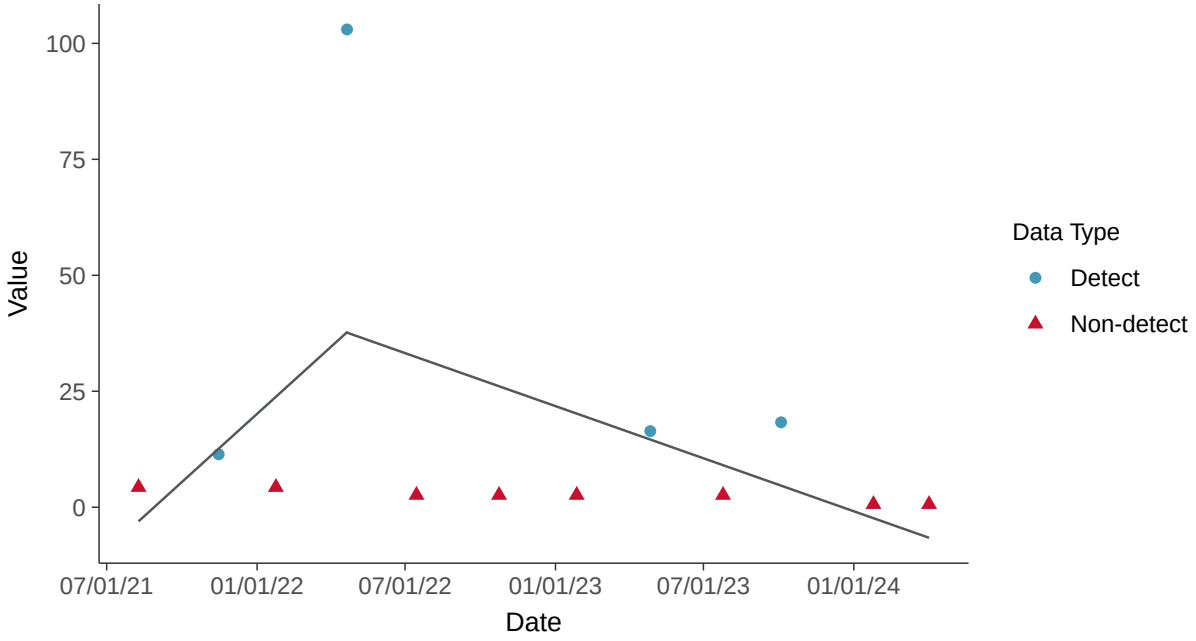
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-10 (ug/L)



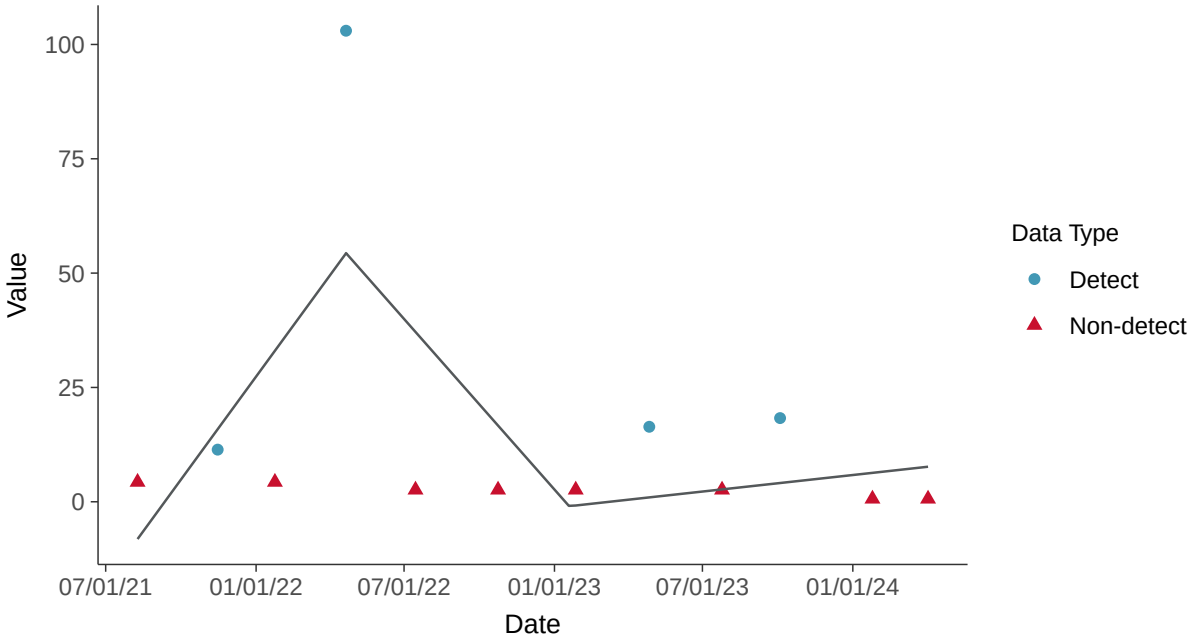
Trend Regression: Piecewise Linear-Linear

Copper, MW-10 (ug/L)



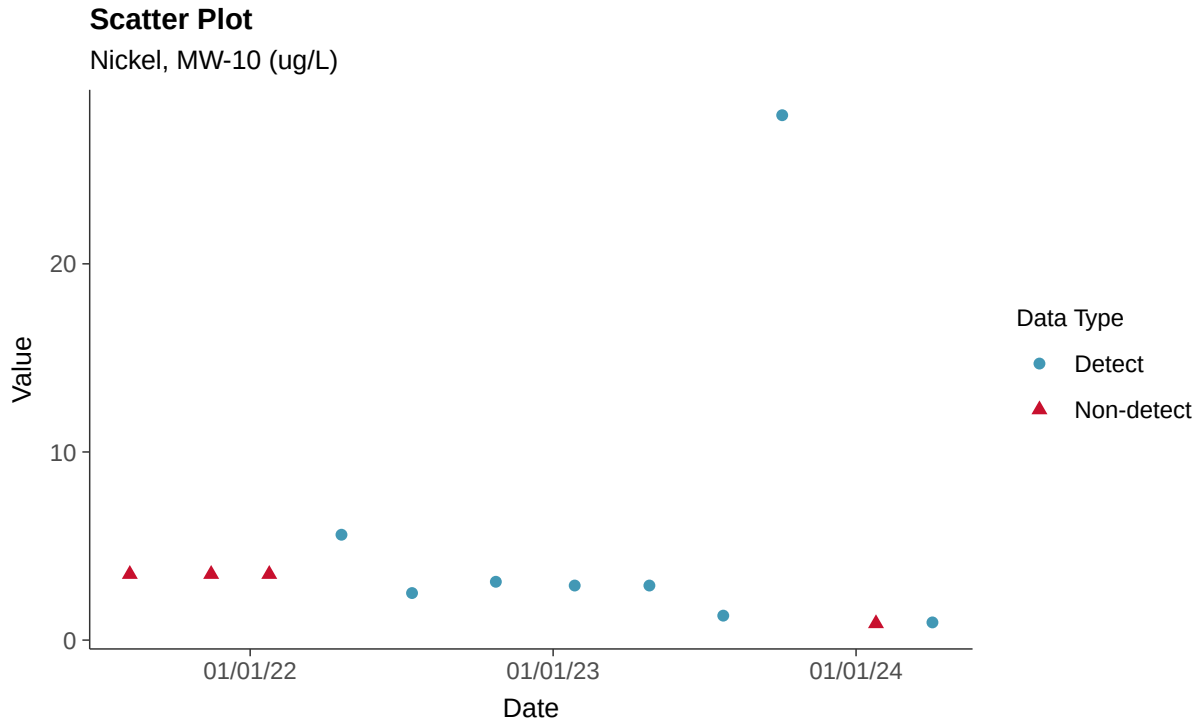
Trend Regression: Piecewise Linear-Linear-Linear

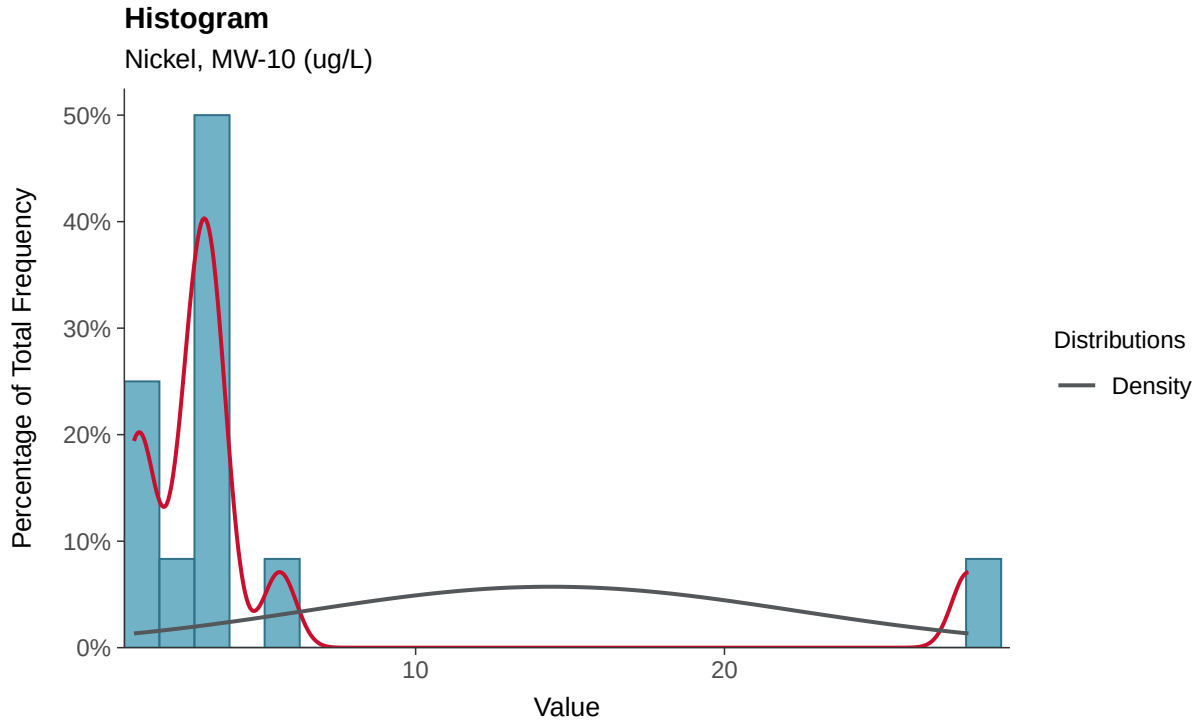
Copper, MW-10 (ug/L)



App. I Metals: Nickel, MW-10

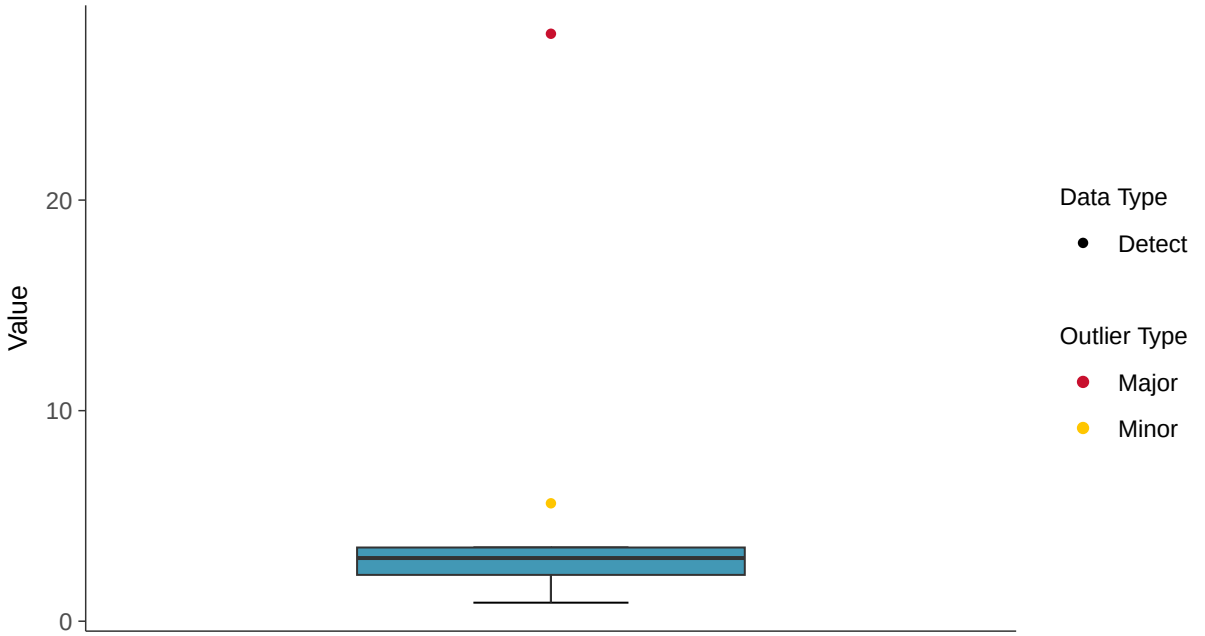
ID: 2_1_117





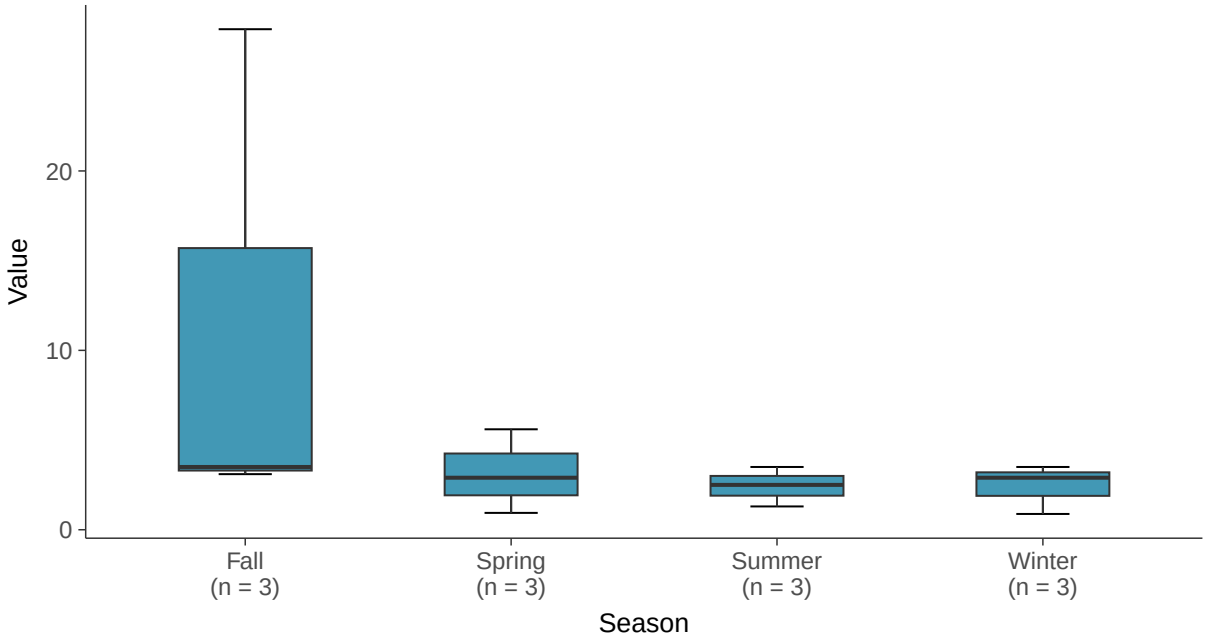
Boxplot

Nickel, MW-10 (ug/L)



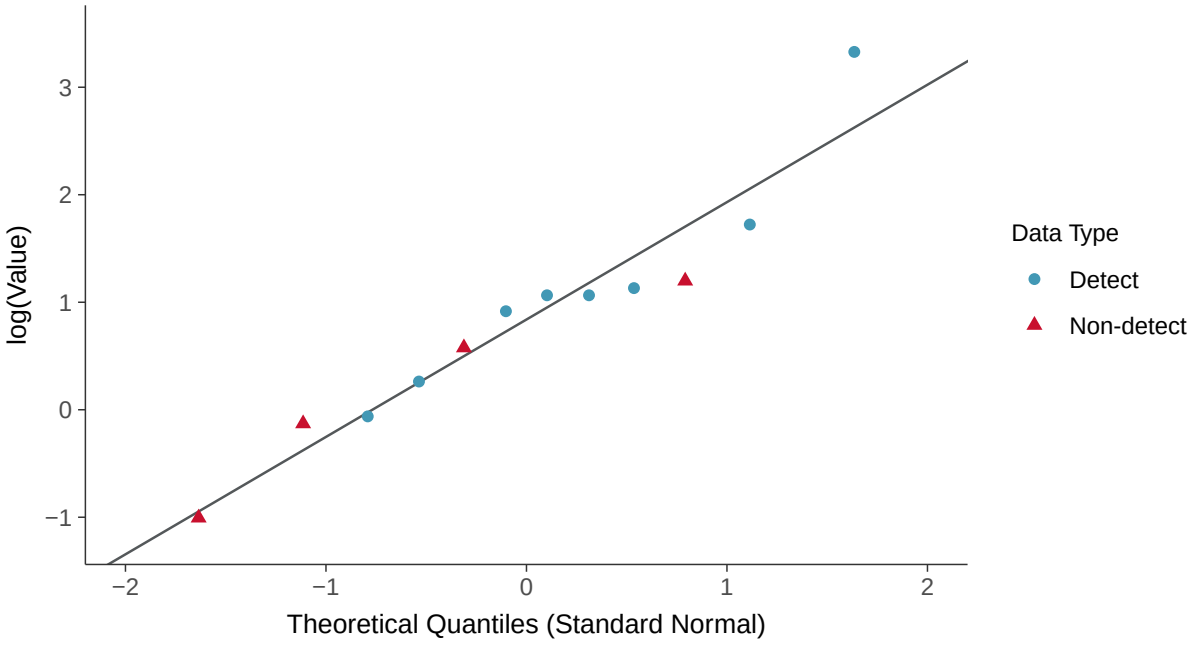
Boxplot by Season

Nickel, MW-10 (ug/L)



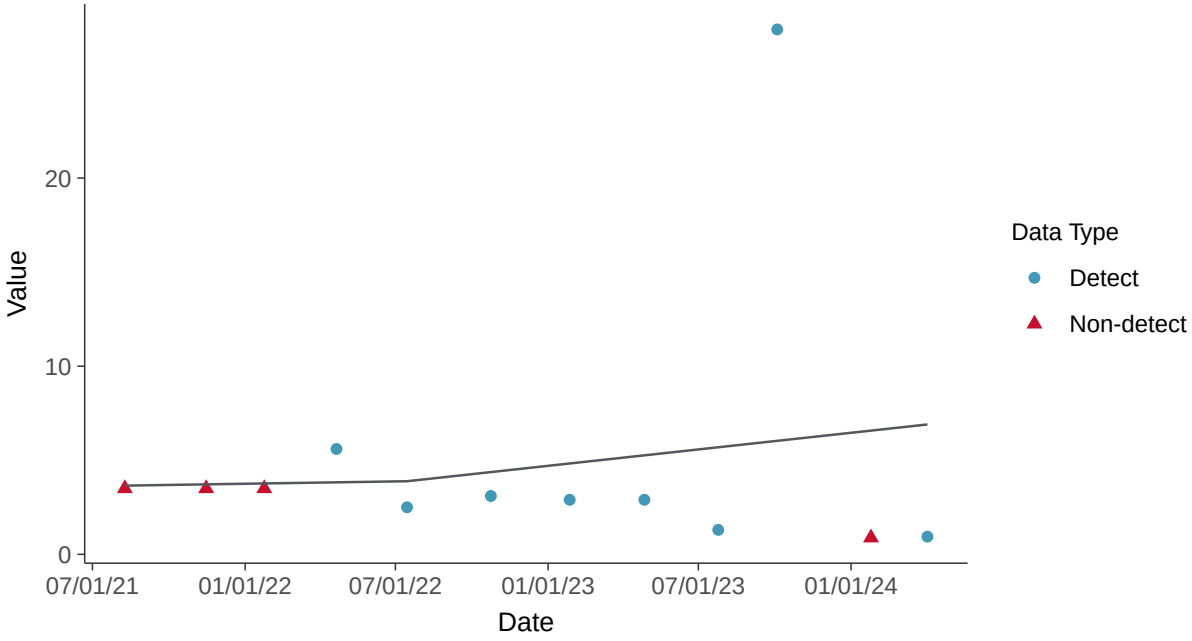
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-10 (ug/L)



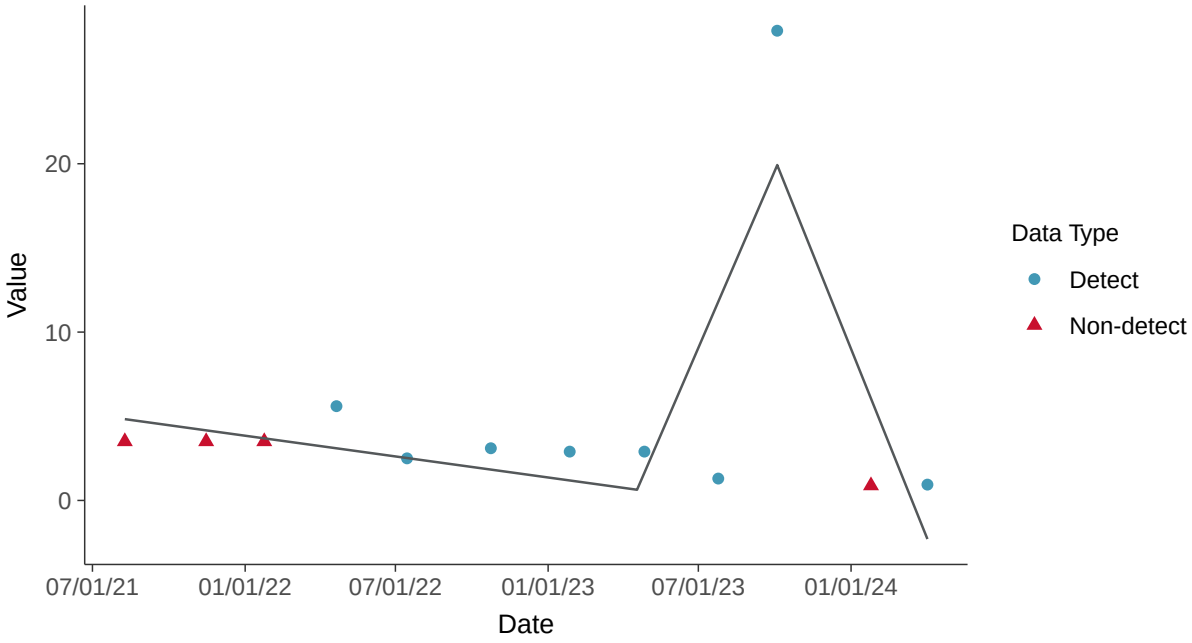
Trend Regression: Piecewise Linear-Linear

Nickel, MW-10 (ug/L)



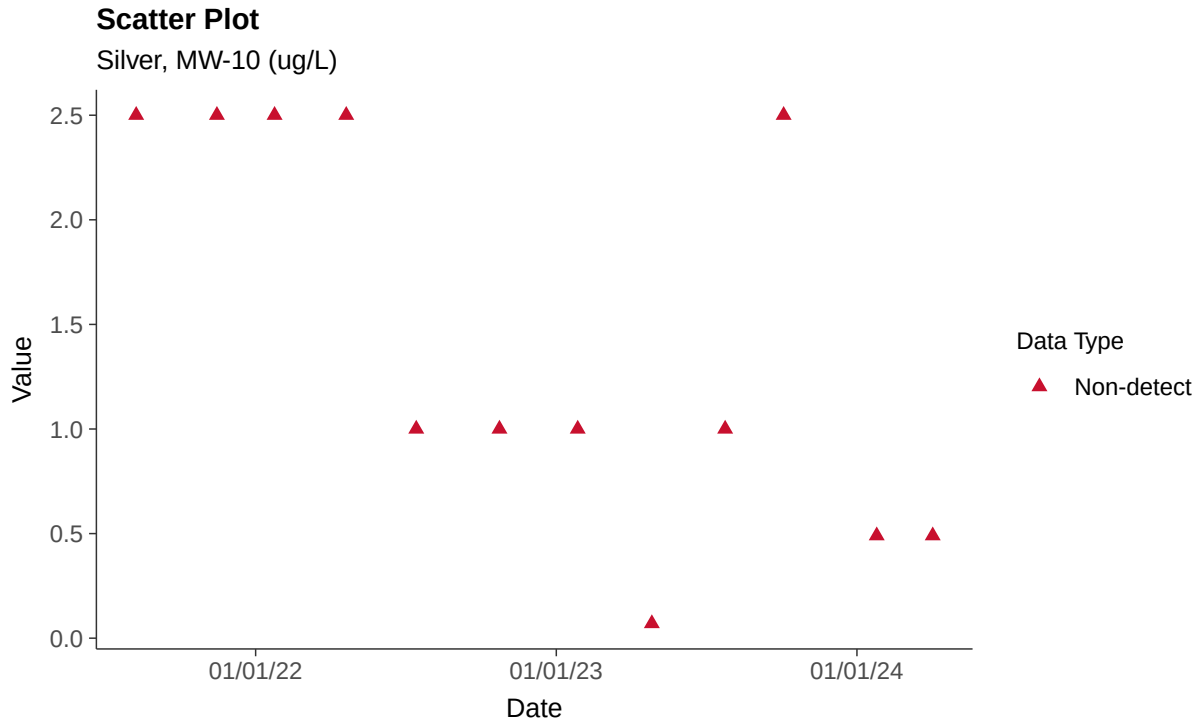
Trend Regression: Piecewise Linear-Linear-Linear

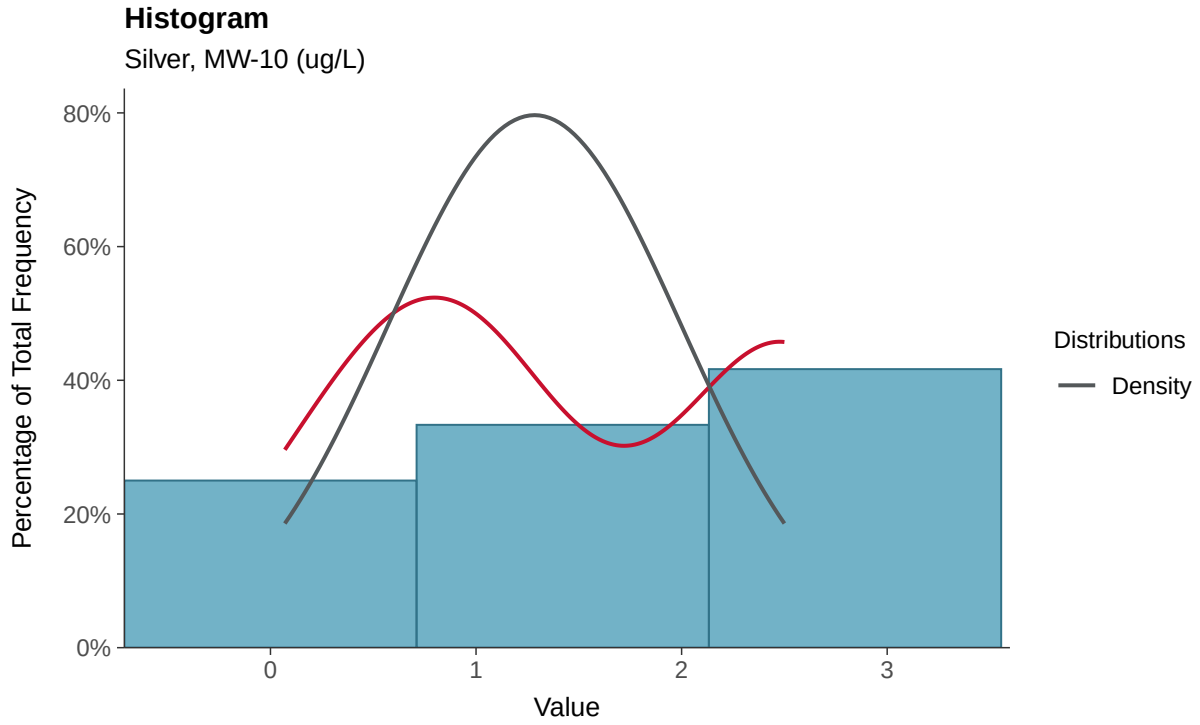
Nickel, MW-10 (ug/L)



App. I Metals: Silver, MW-10

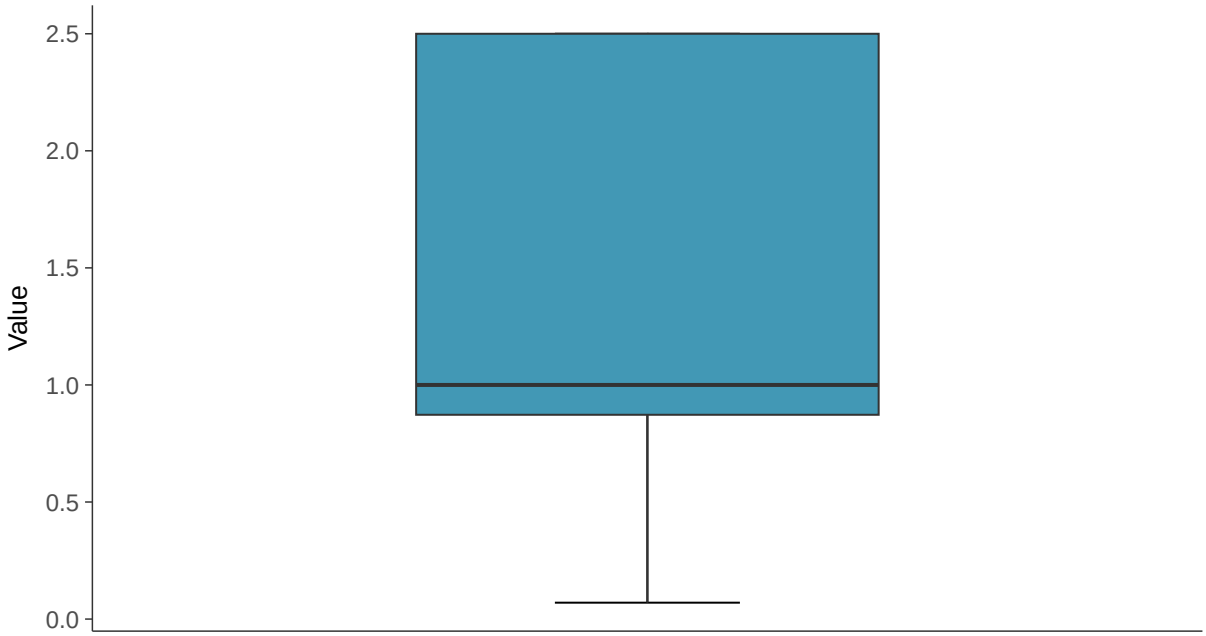
ID: 2_1_122





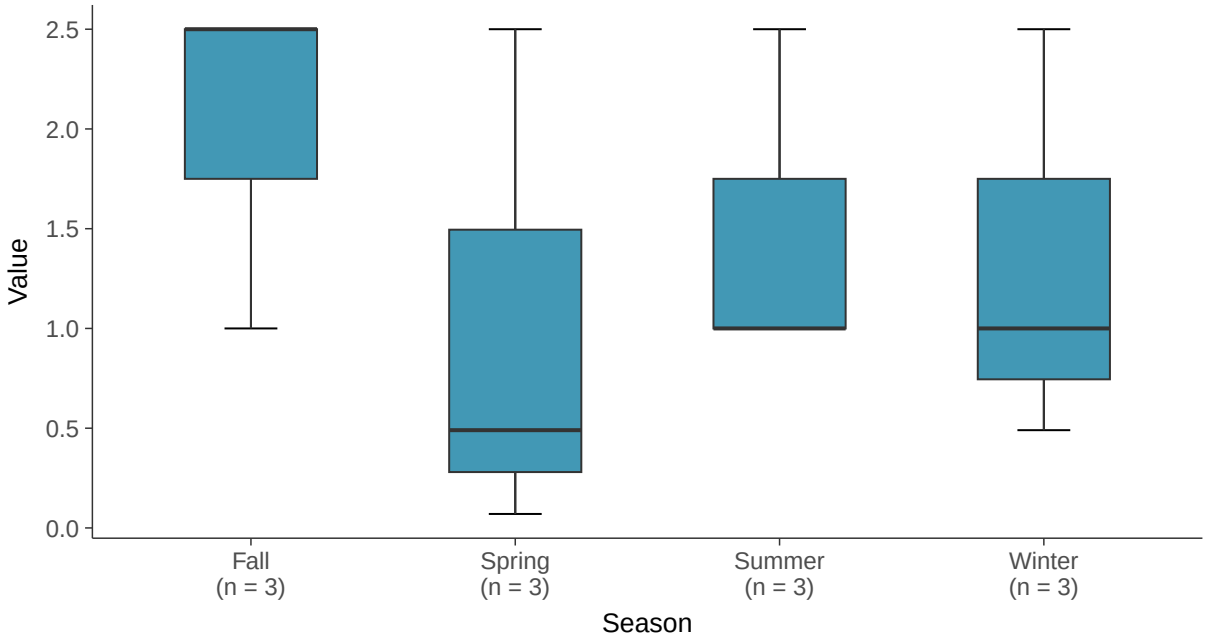
Boxplot

Silver, MW-10 (ug/L)



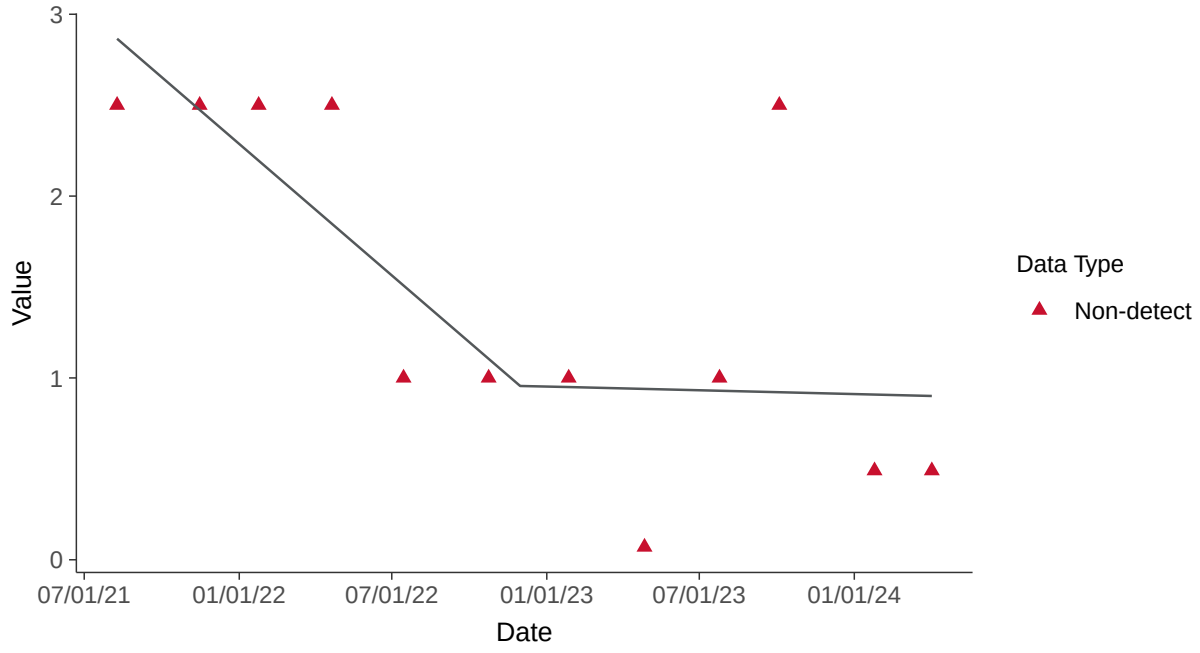
Boxplot by Season

Silver, MW-10 (ug/L)



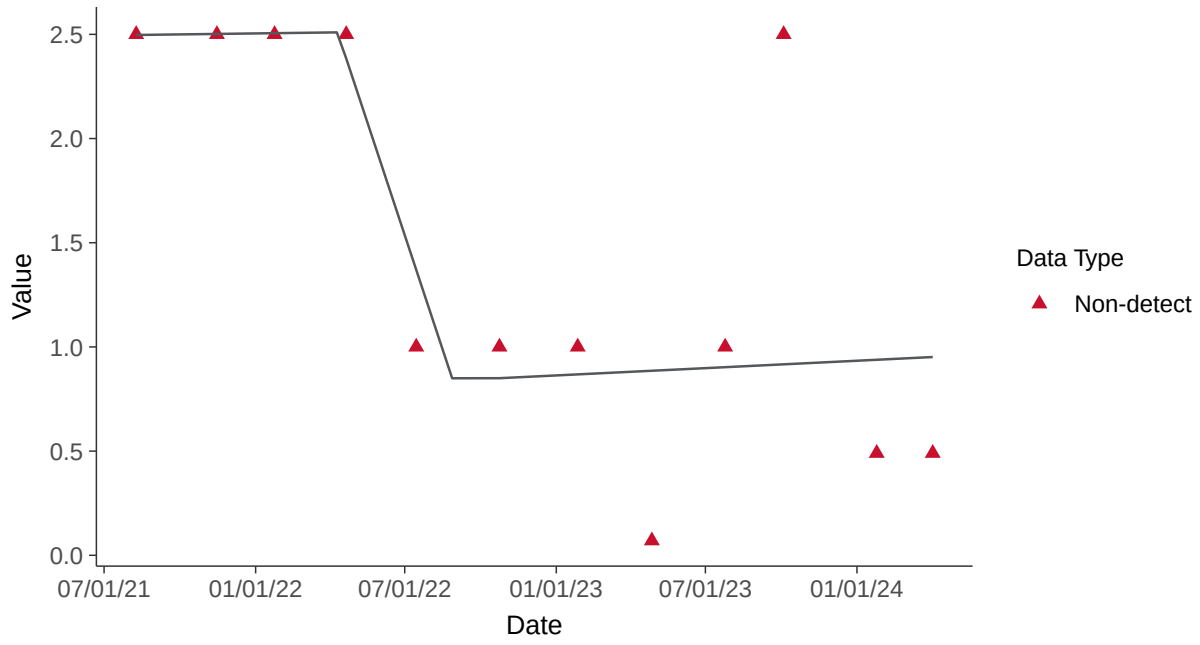
Trend Regression: Piecewise Linear-Linear

Silver, MW-10 (ug/L)



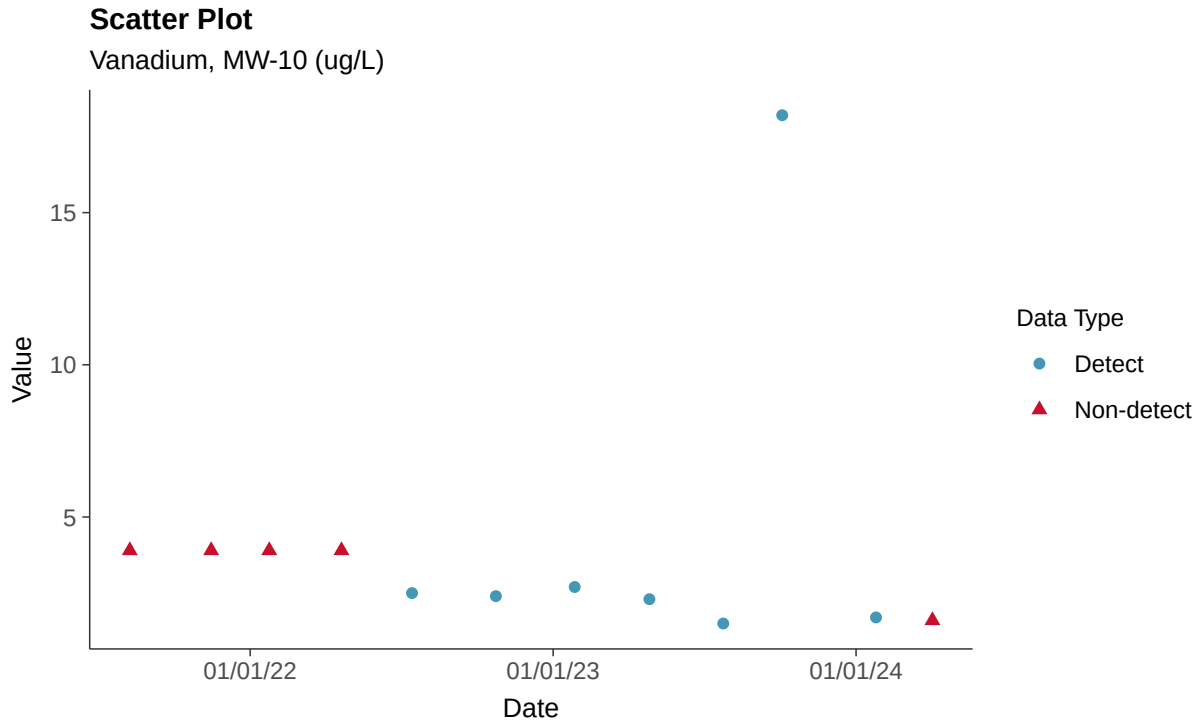
Trend Regression: Piecewise Linear-Linear-Linear

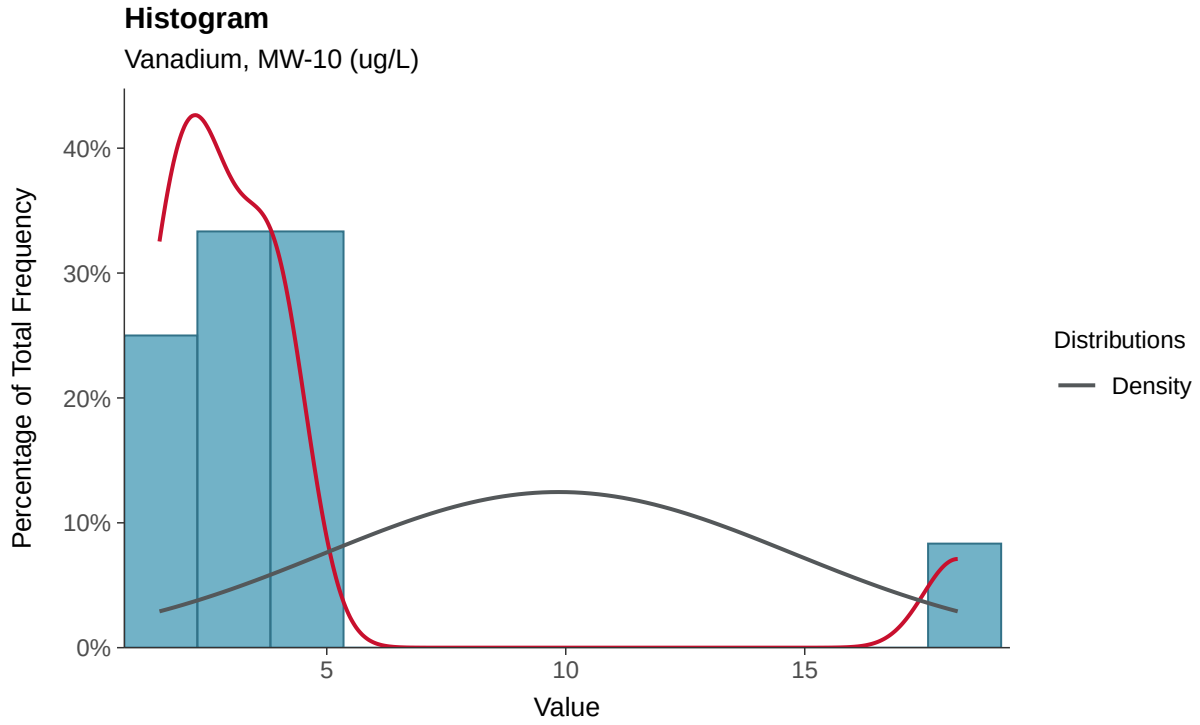
Silver, MW-10 (ug/L)



App. I Metals: Vanadium, MW-10

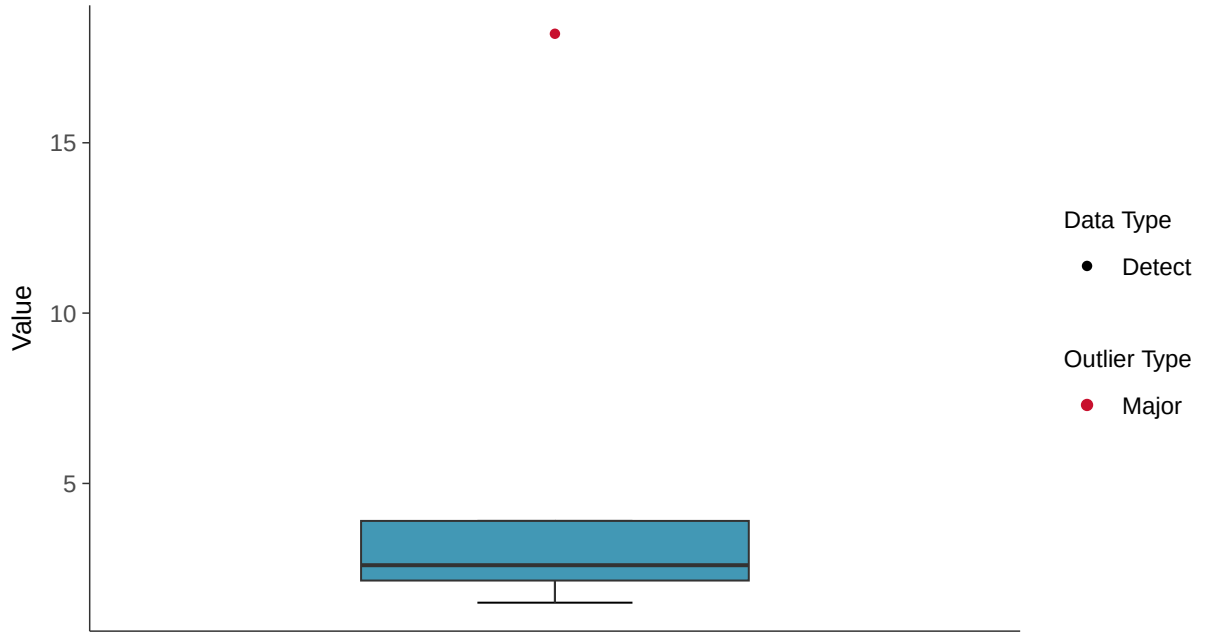
ID: 2_1_127





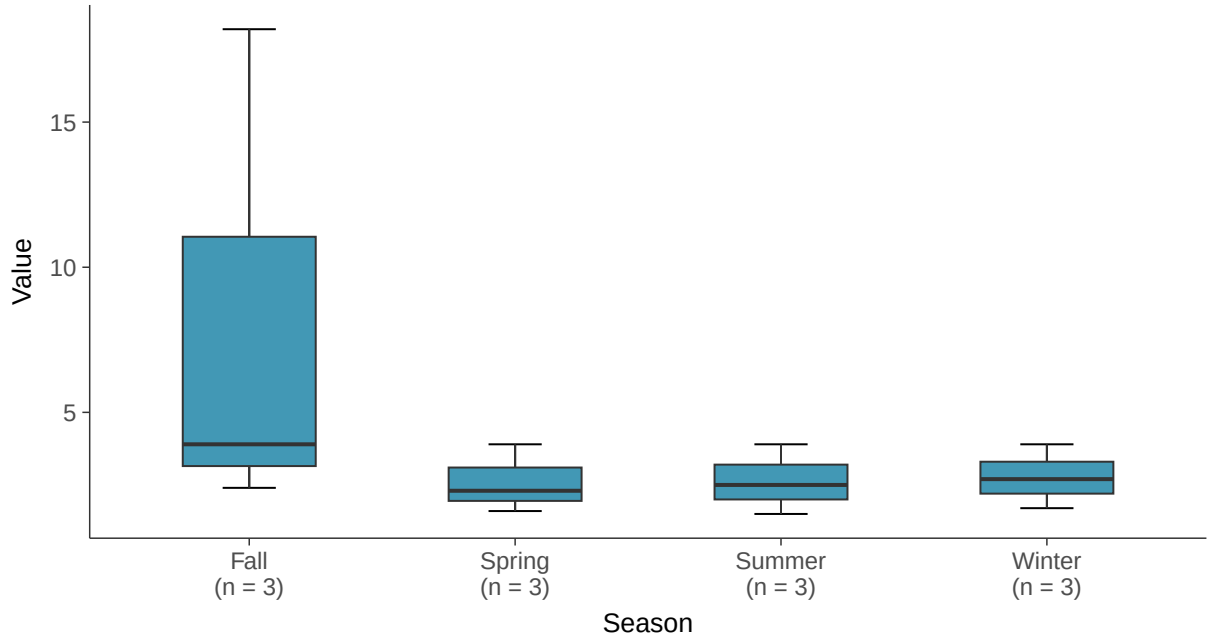
Boxplot

Vanadium, MW-10 (ug/L)



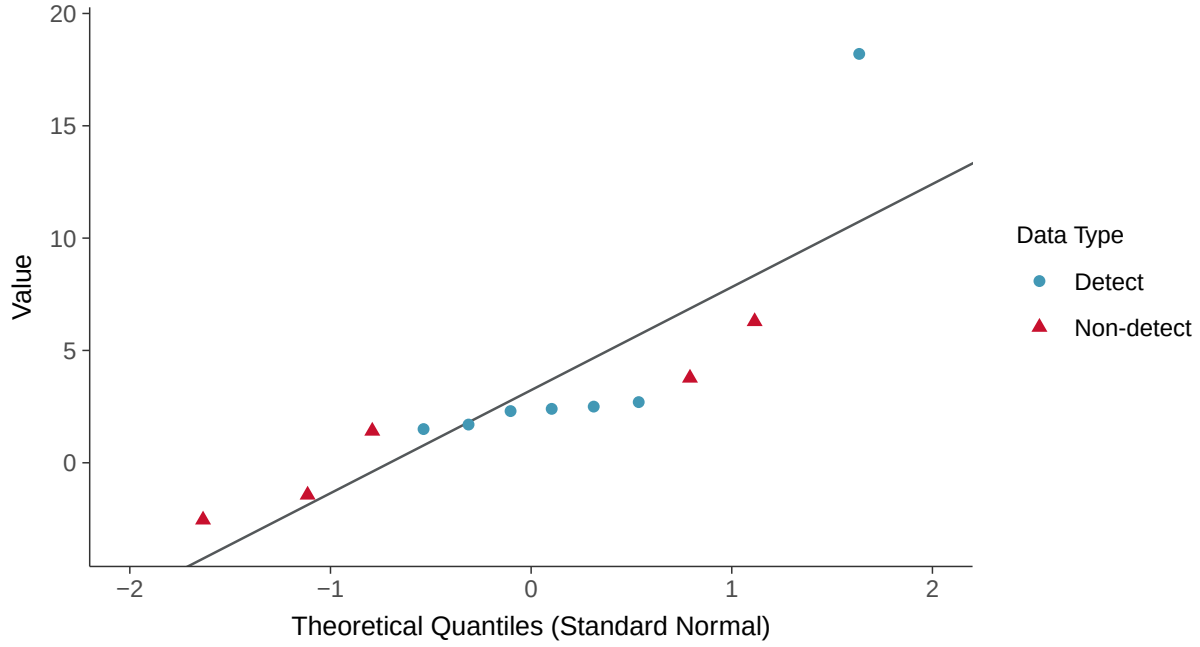
Boxplot by Season

Vanadium, MW-10 (ug/L)



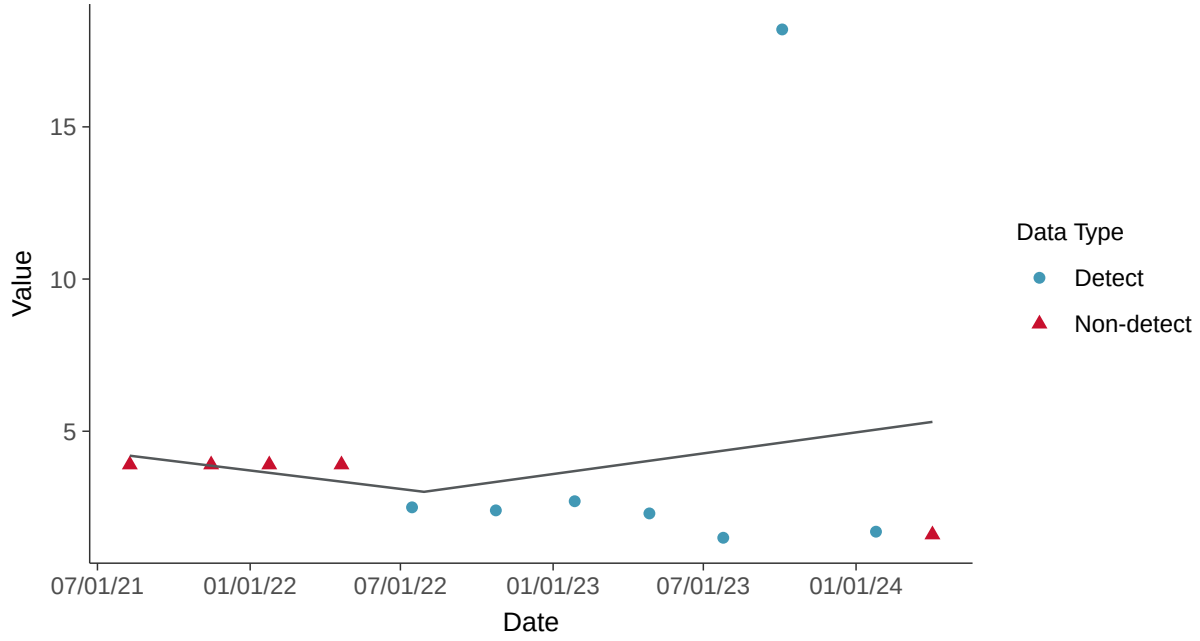
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-10 (ug/L)



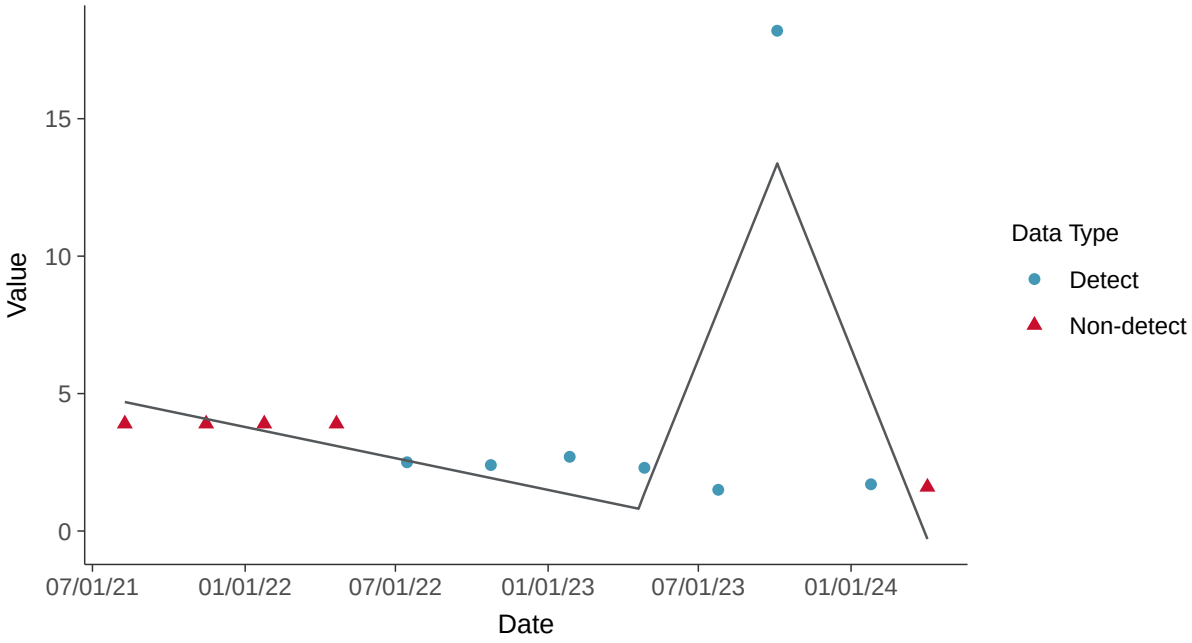
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-10 (ug/L)



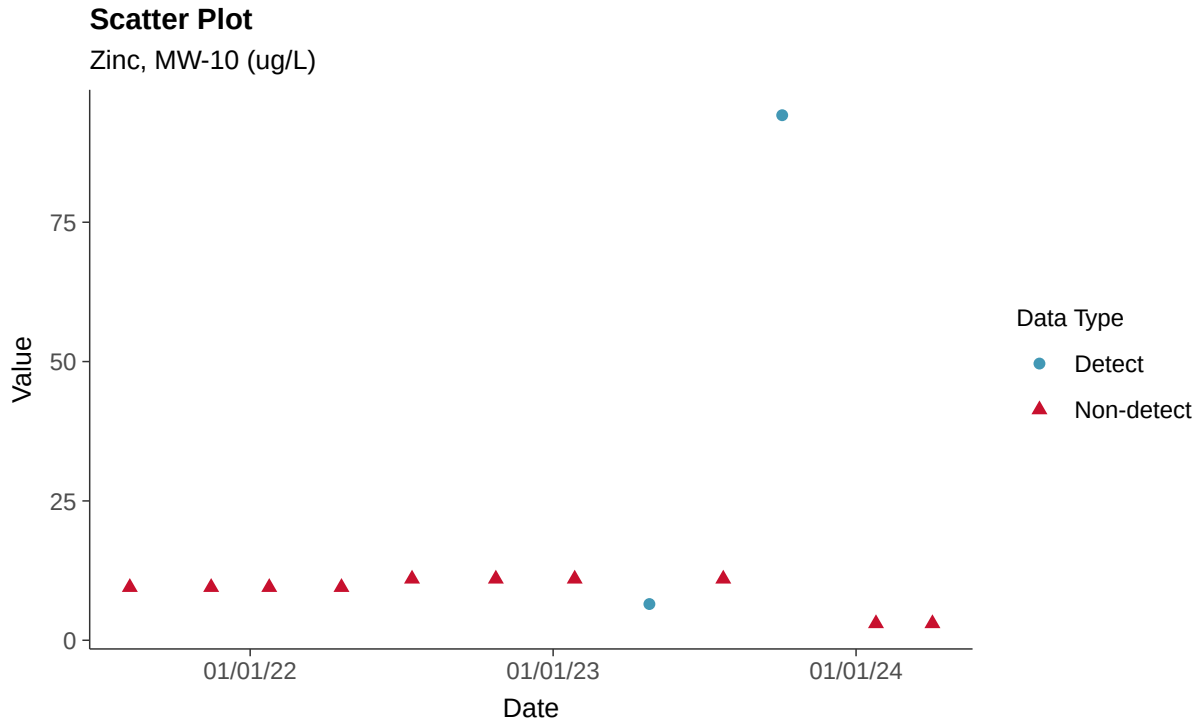
Trend Regression: Piecewise Linear-Linear-Linear

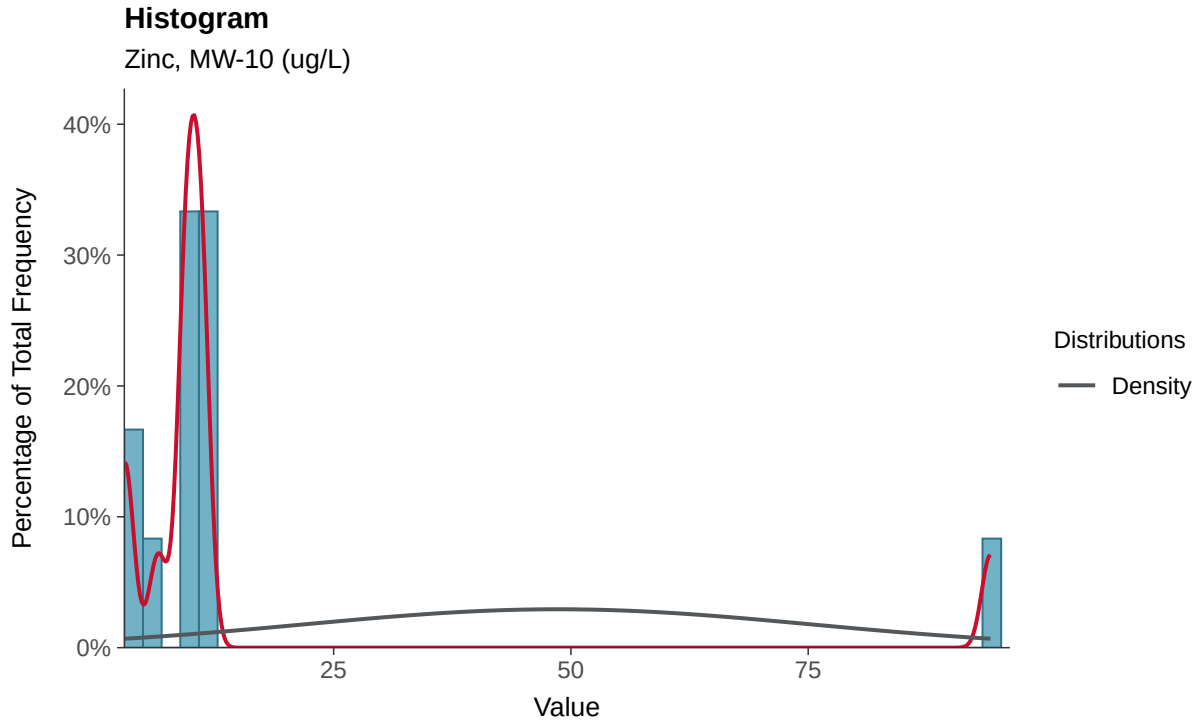
Vanadium, MW-10 (ug/L)



App. I Metals: Zinc, MW-10

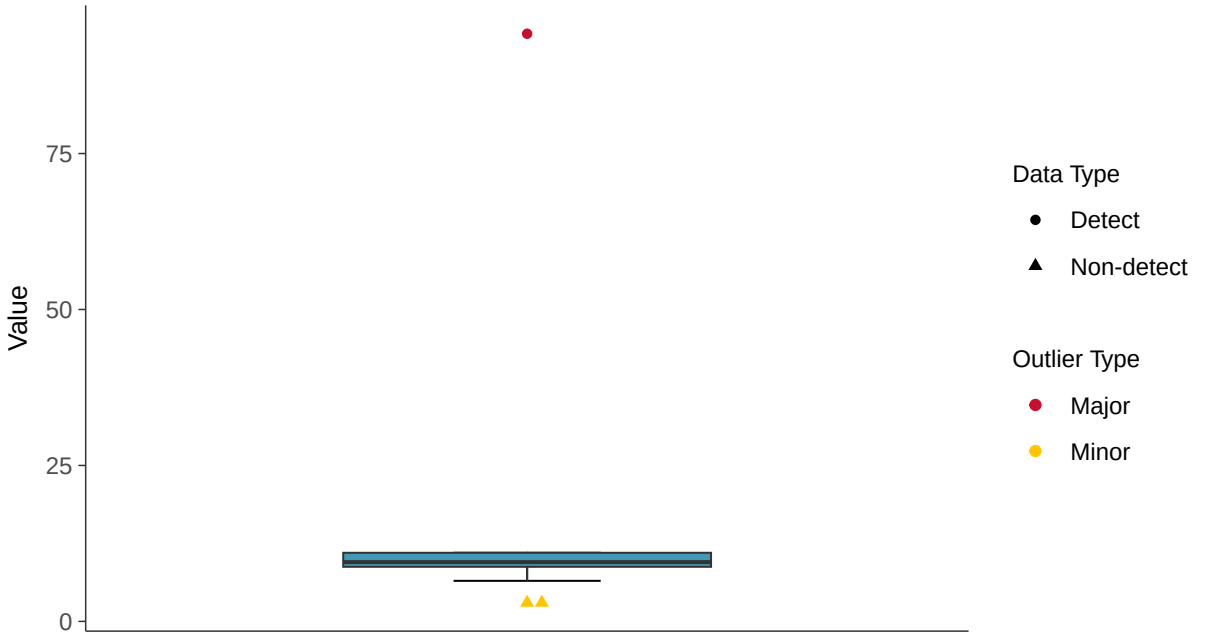
ID: 2_1_128





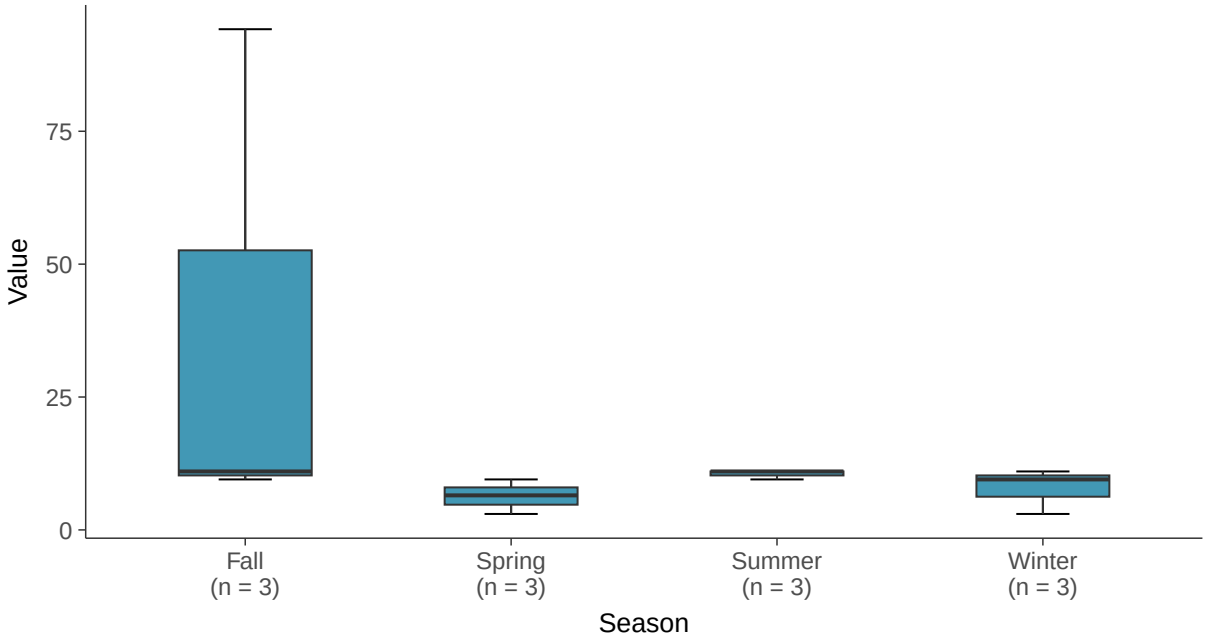
Boxplot

Zinc, MW-10 (ug/L)



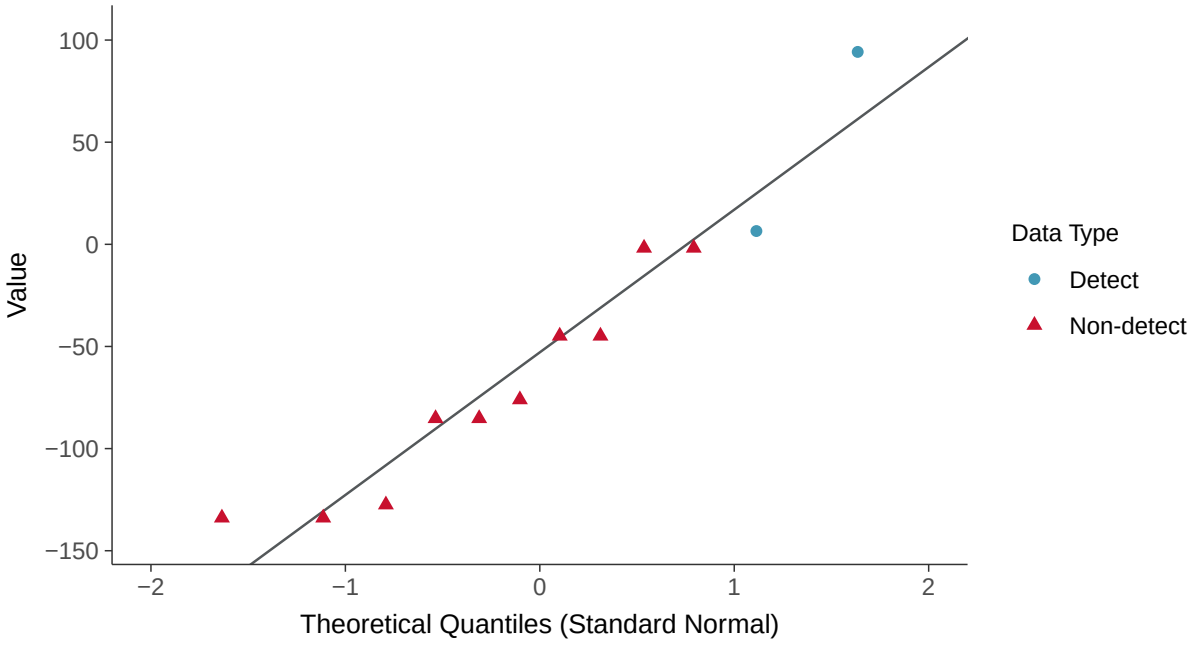
Boxplot by Season

Zinc, MW-10 (ug/L)



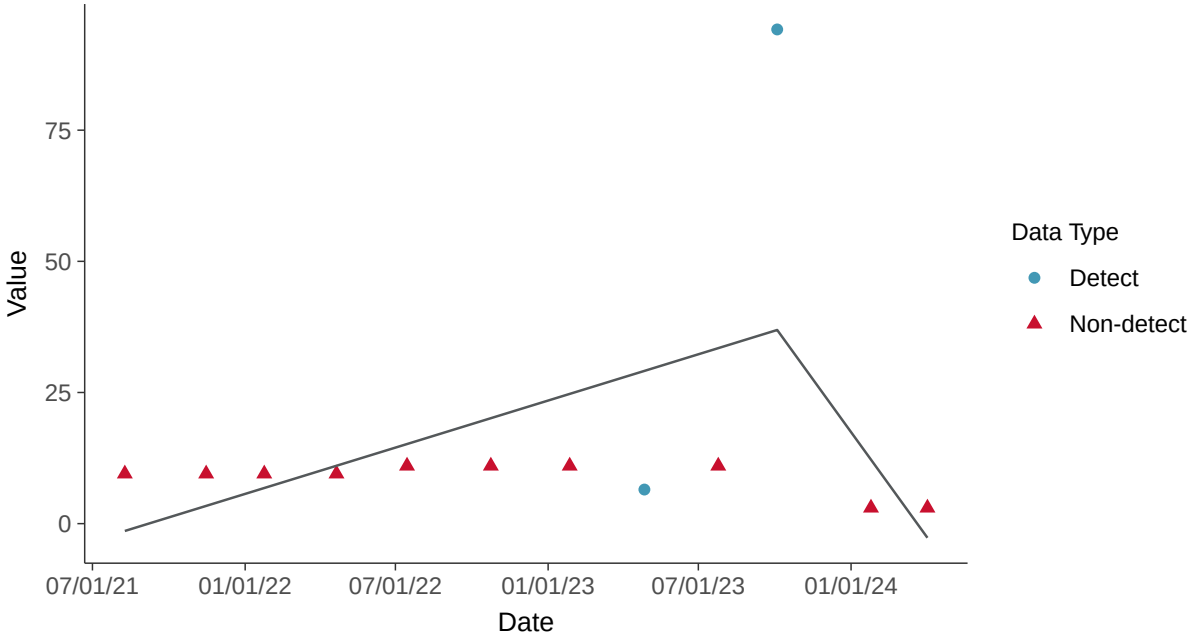
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-10 (ug/L)



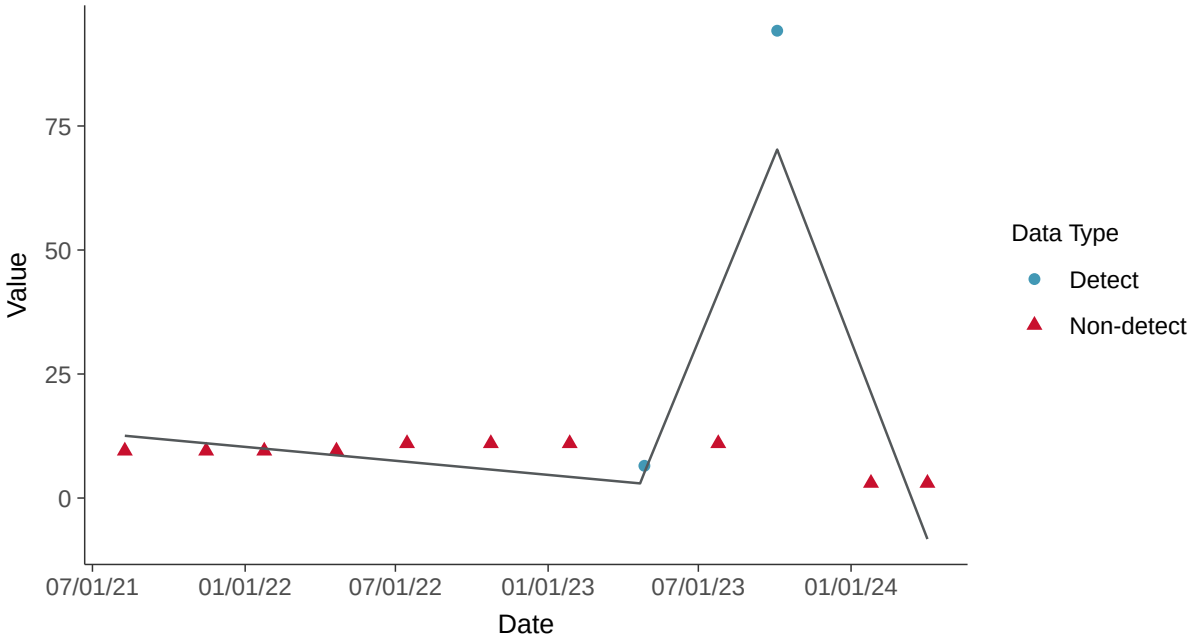
Trend Regression: Piecewise Linear-Linear

Zinc, MW-10 (ug/L)



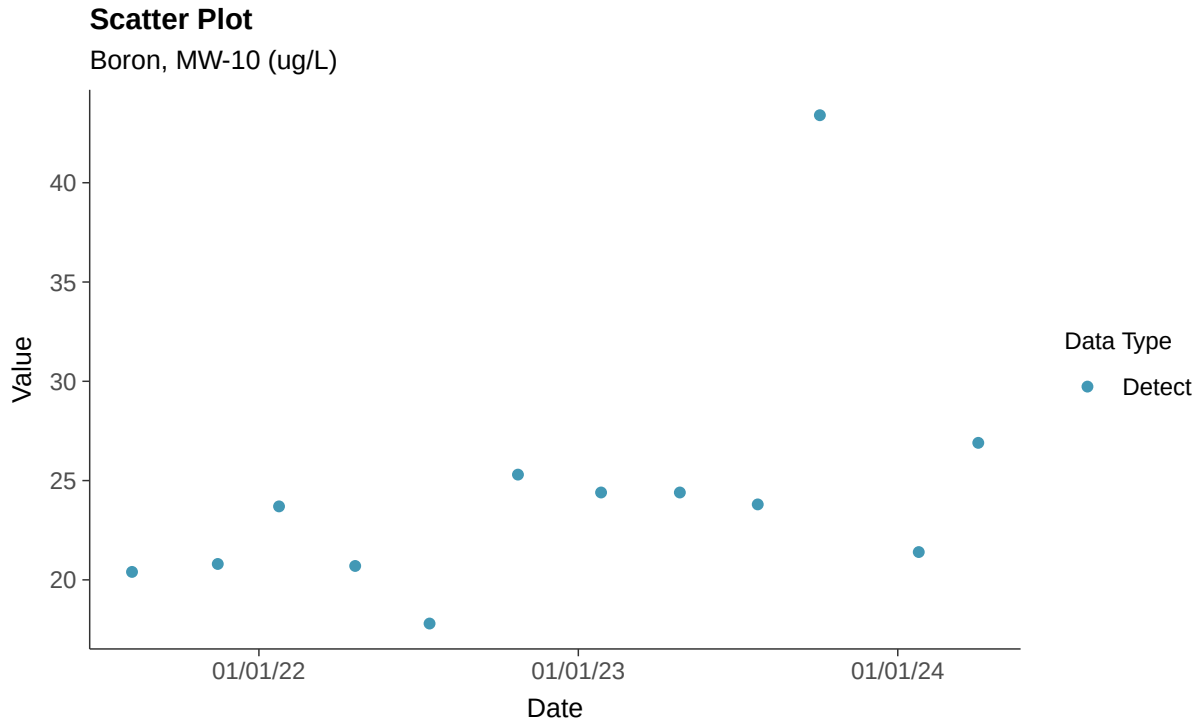
Trend Regression: Piecewise Linear-Linear-Linear

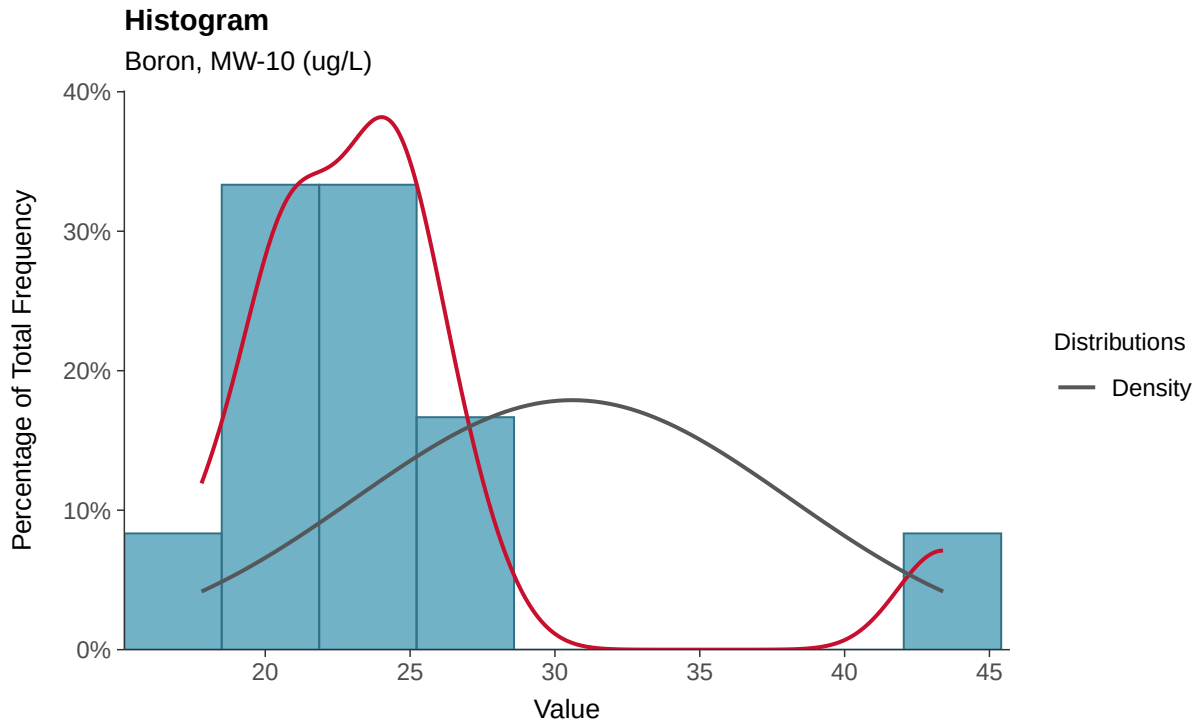
Zinc, MW-10 (ug/L)



App. III: Boron, MW-10

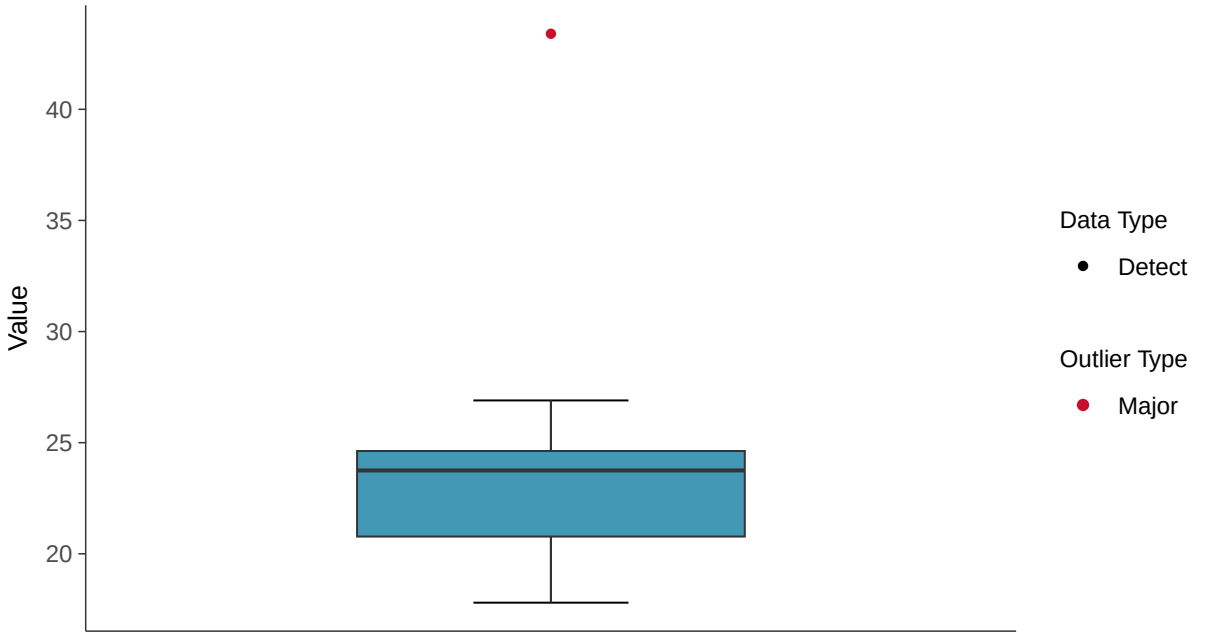
ID: 2_2_105





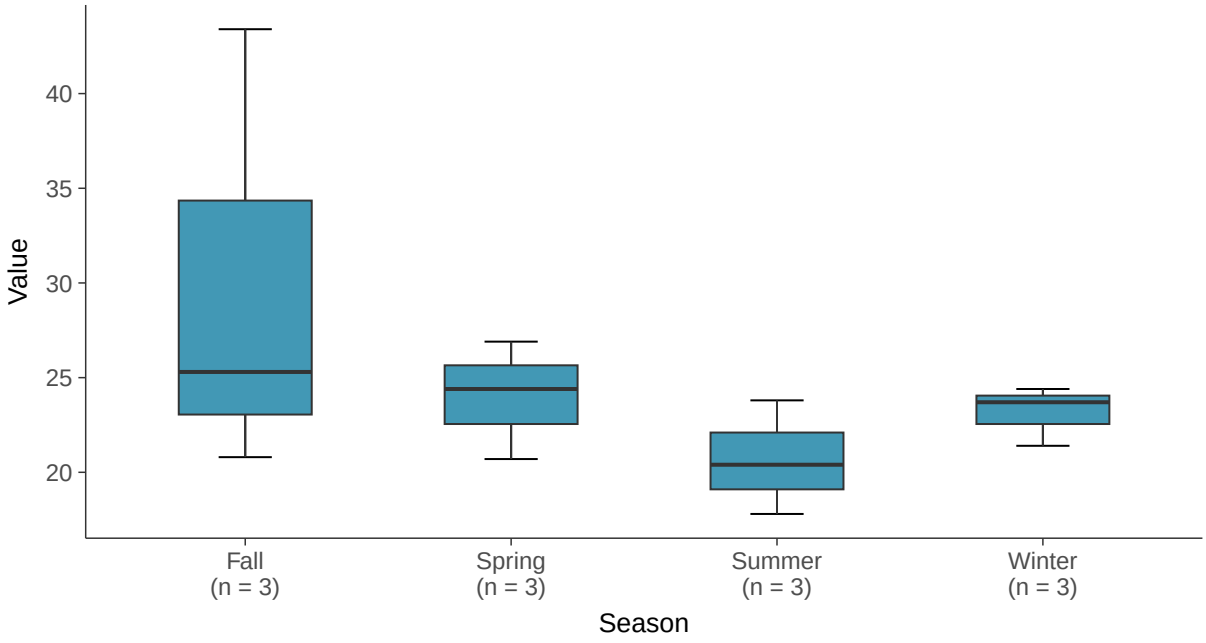
Boxplot

Boron, MW-10 (ug/L)



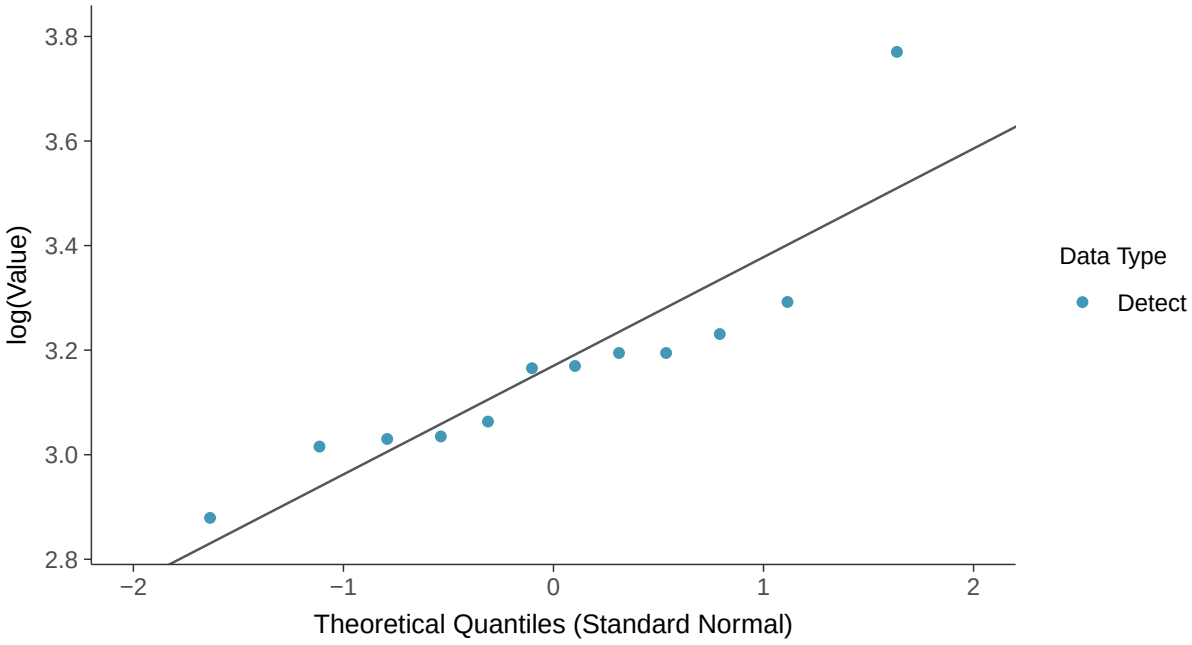
Boxplot by Season

Boron, MW-10 (ug/L)



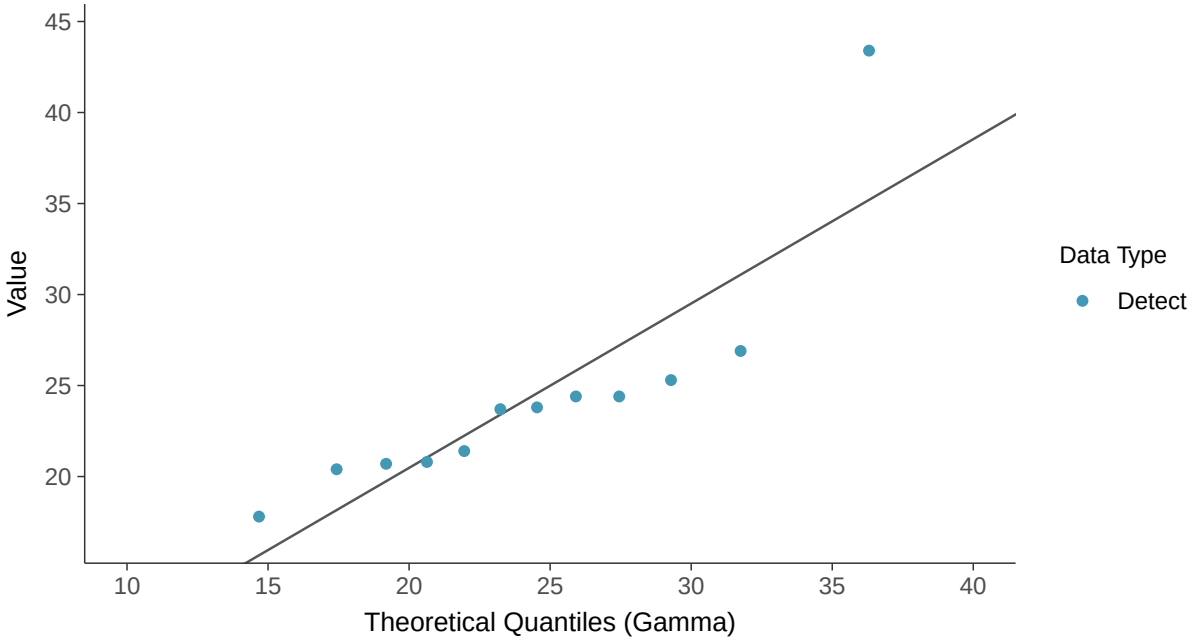
Lognormal Q-Q plot

Boron, MW-10 (ug/L)



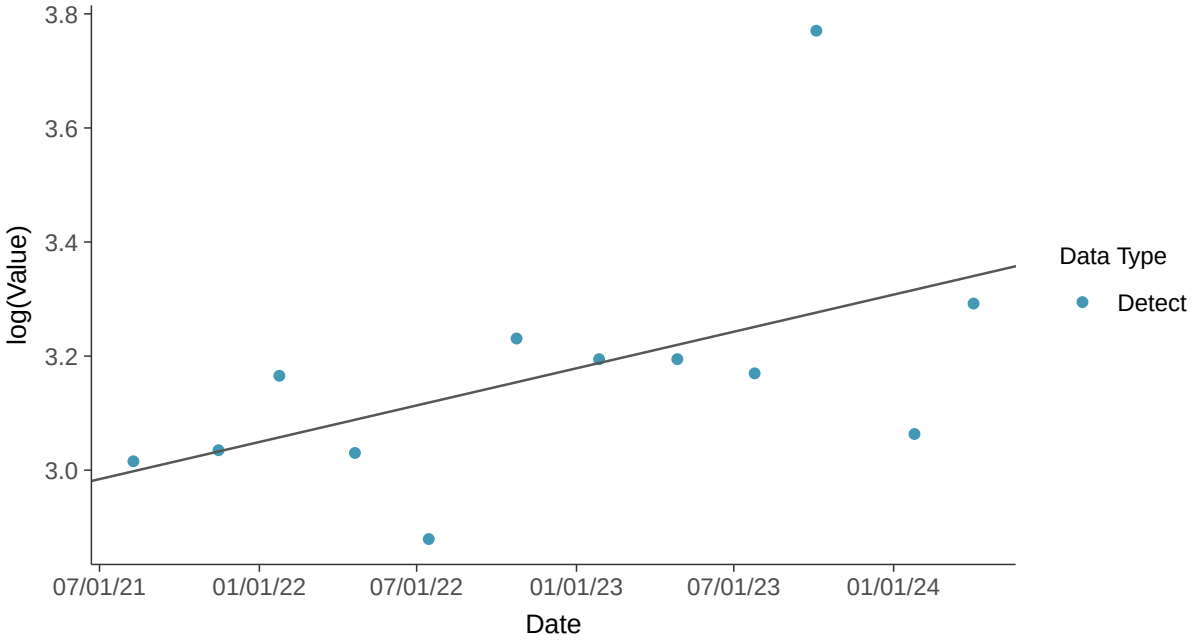
Gamma Q-Q plot

Boron, MW-10 (ug/L)



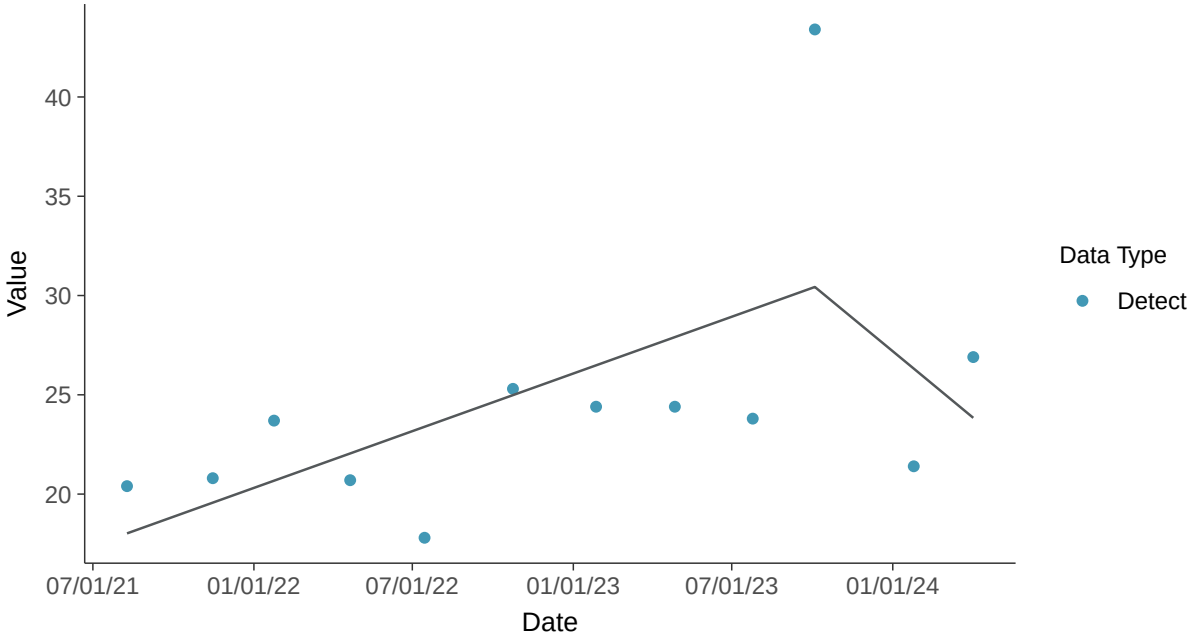
Trend Regression: Lognormal MLE

Boron, MW-10 (ug/L)



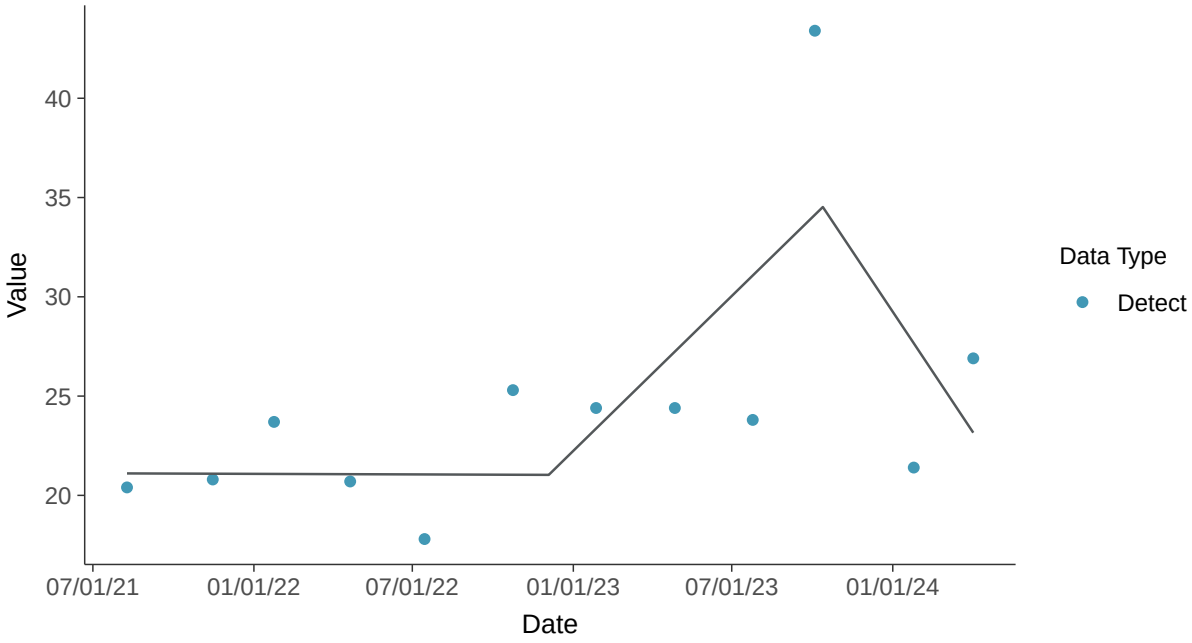
Trend Regression: Piecewise Linear-Linear

Boron, MW-10 (ug/L)



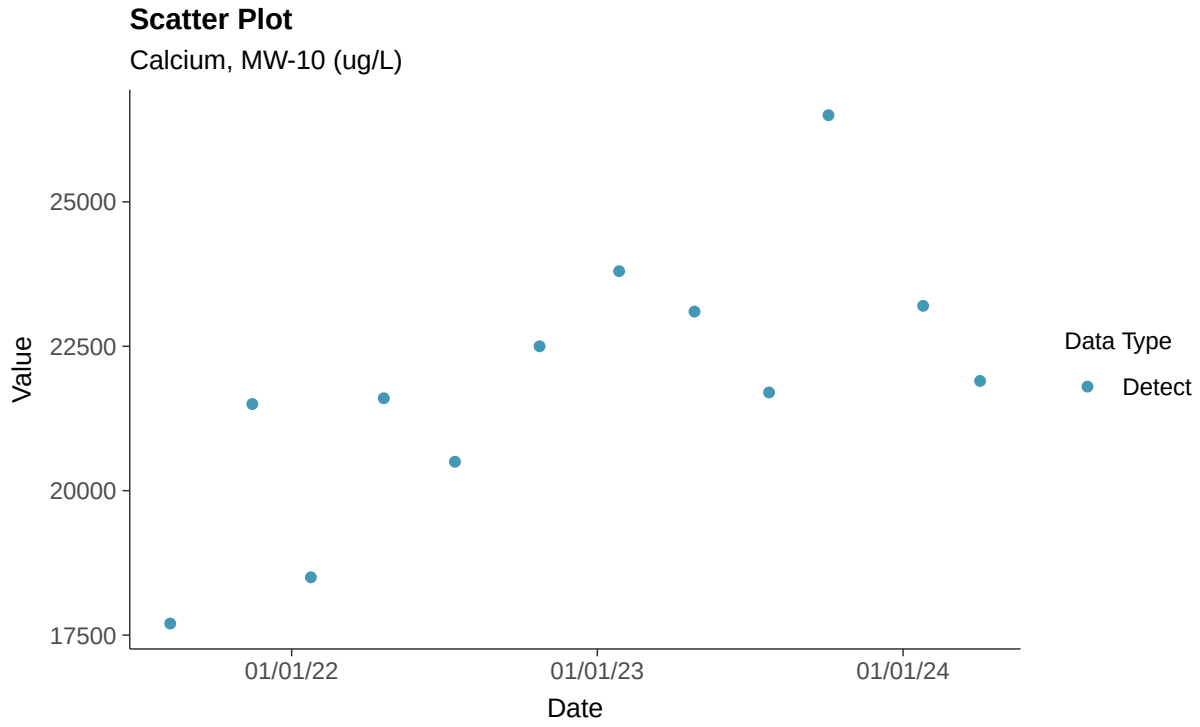
Trend Regression: Piecewise Linear-Linear-Linear

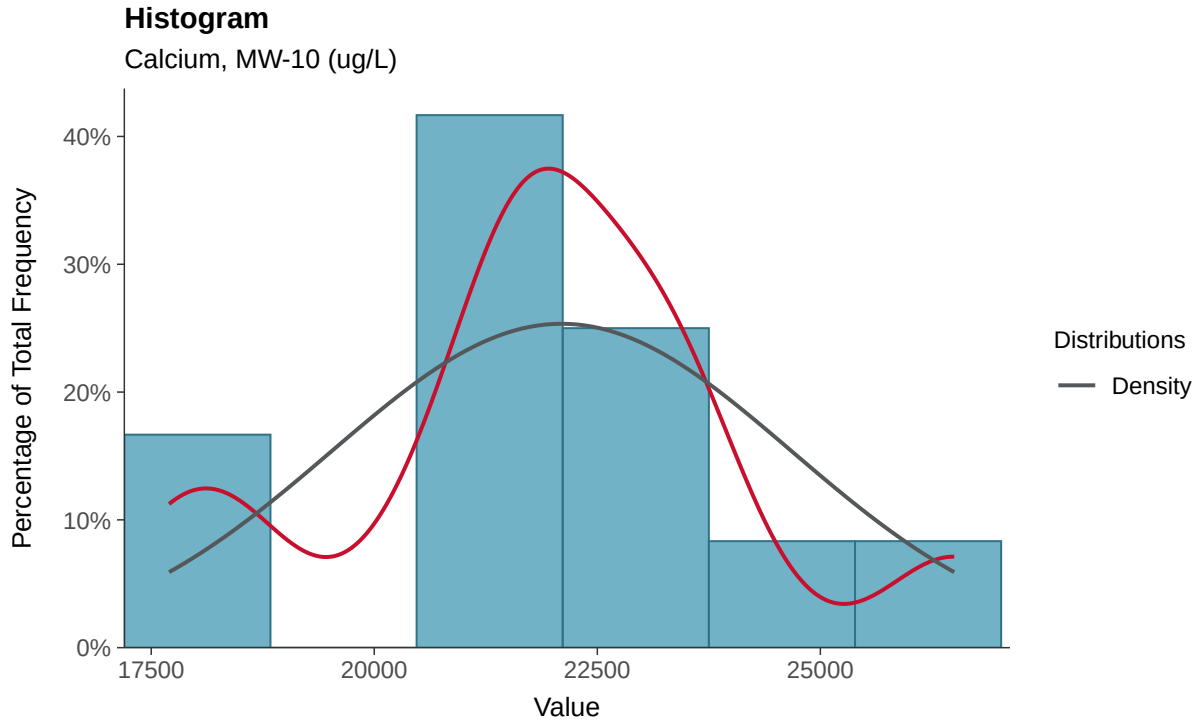
Boron, MW-10 (ug/L)



App. III: Calcium, MW-10

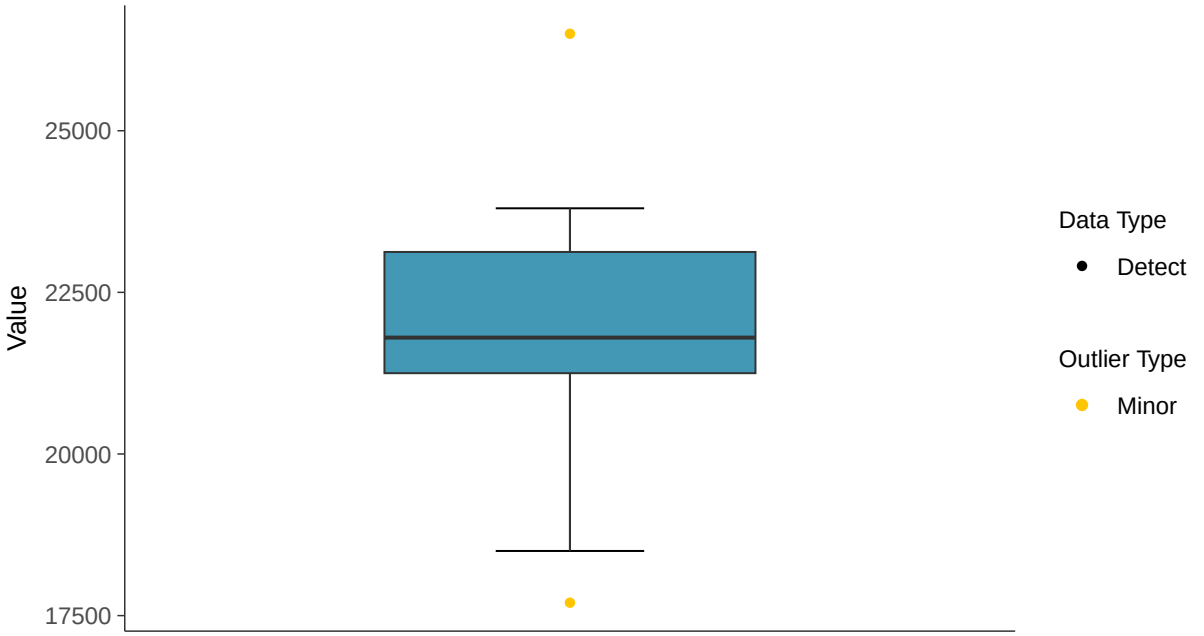
ID: 2_2_107





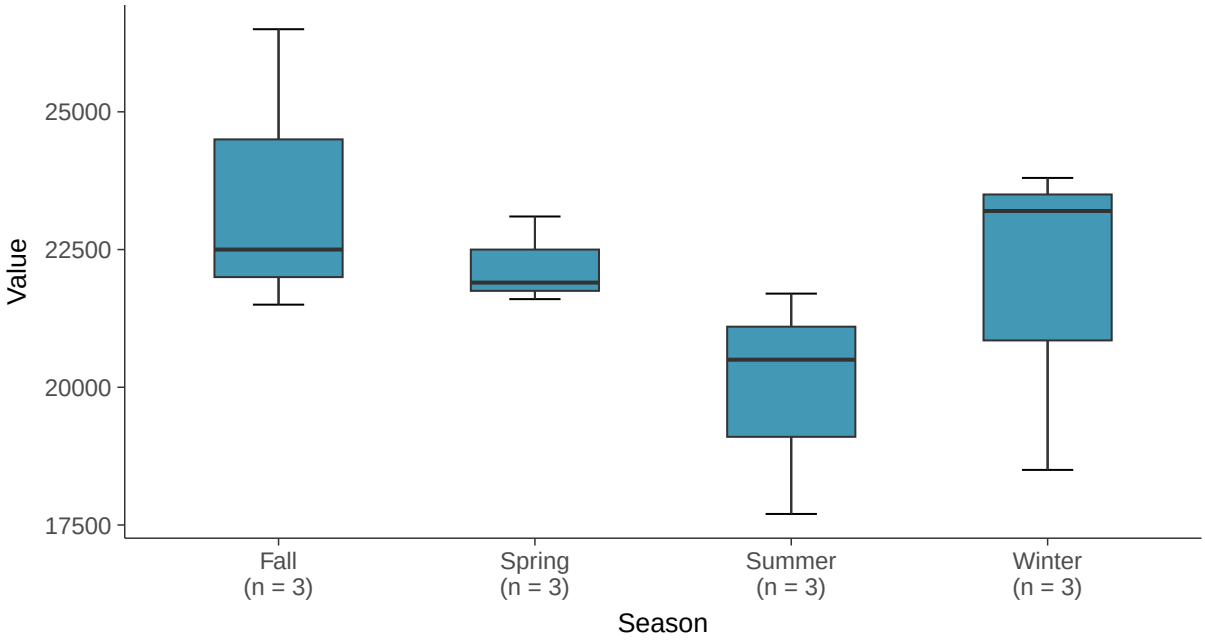
Boxplot

Calcium, MW-10 (ug/L)



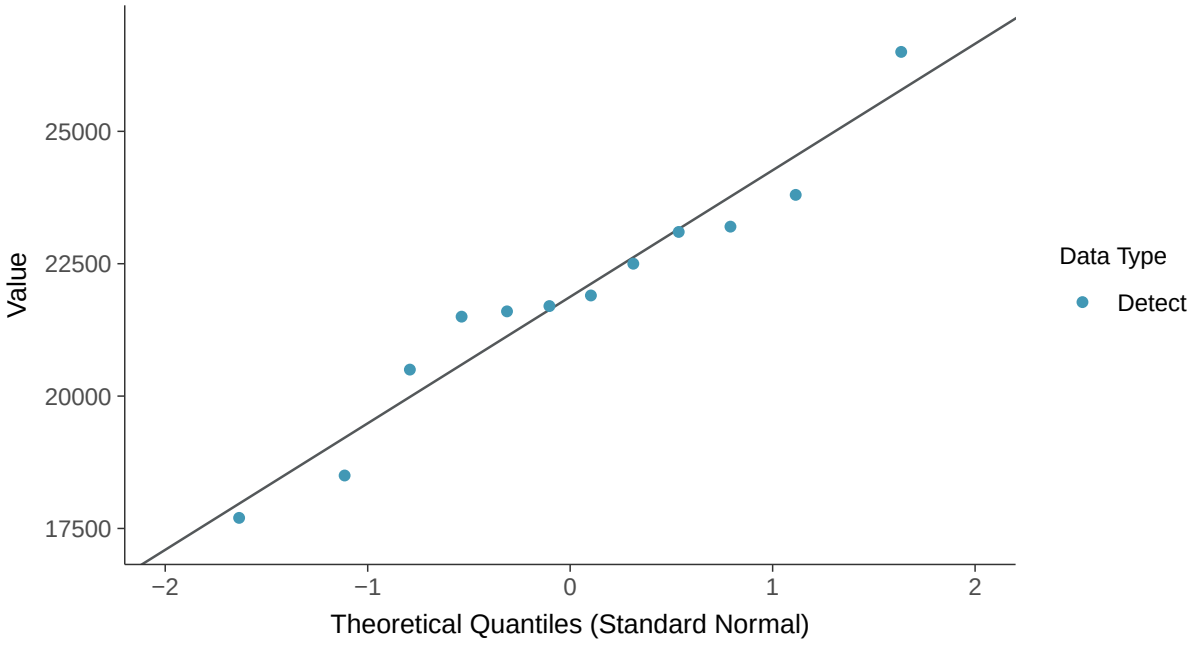
Boxplot by Season

Calcium, MW-10 (ug/L)



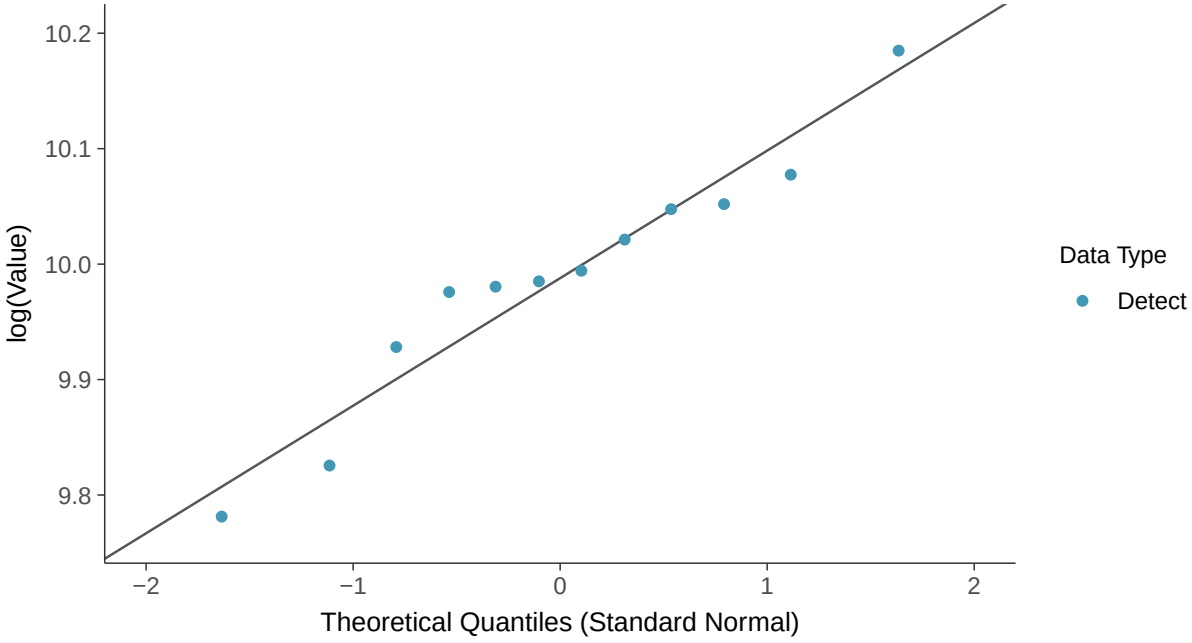
Normal Q-Q plot

Calcium, MW-10 (ug/L)



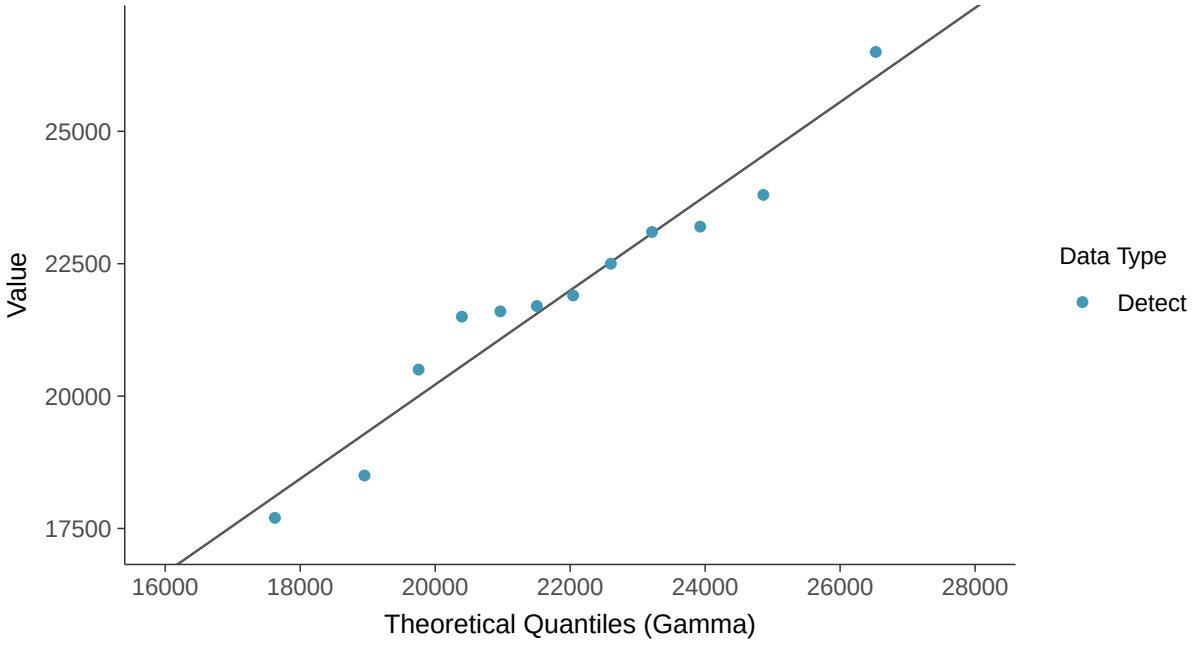
Lognormal Q-Q plot

Calcium, MW-10 (ug/L)



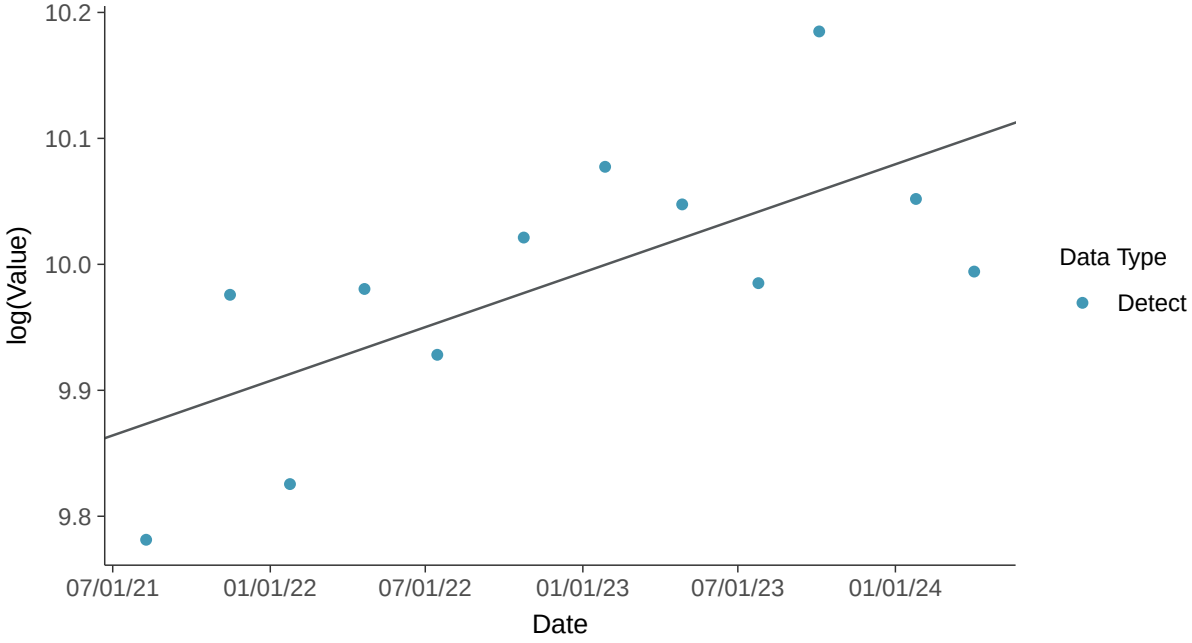
Gamma Q-Q plot

Calcium, MW-10 (ug/L)



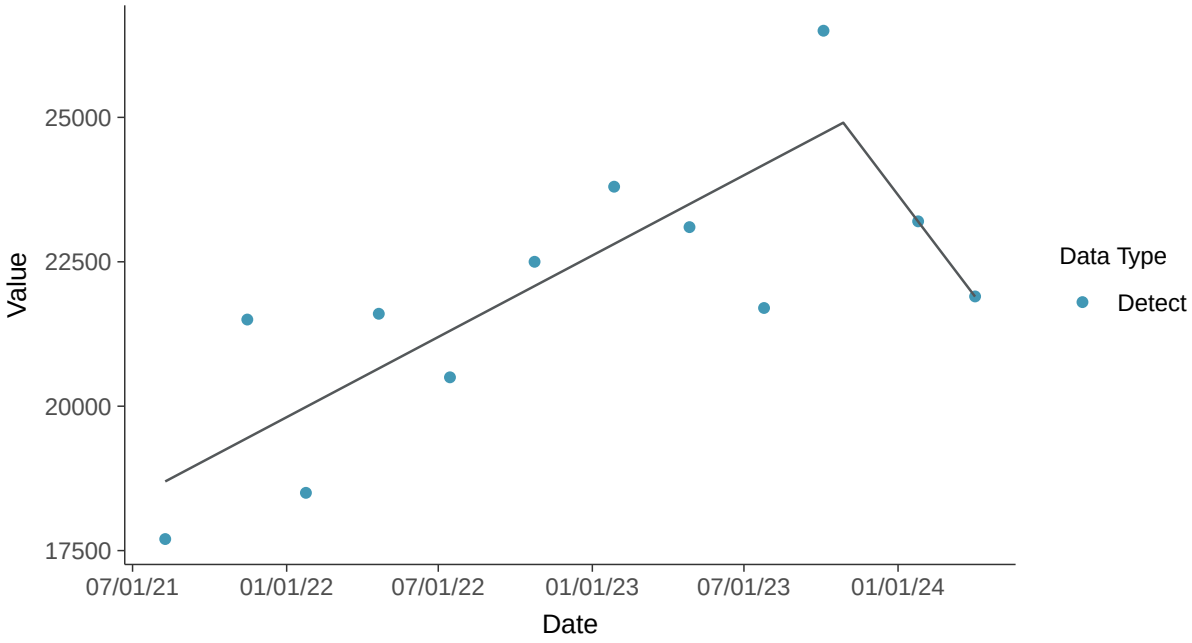
Trend Regression: Lognormal MLE

Calcium, MW-10 (ug/L)



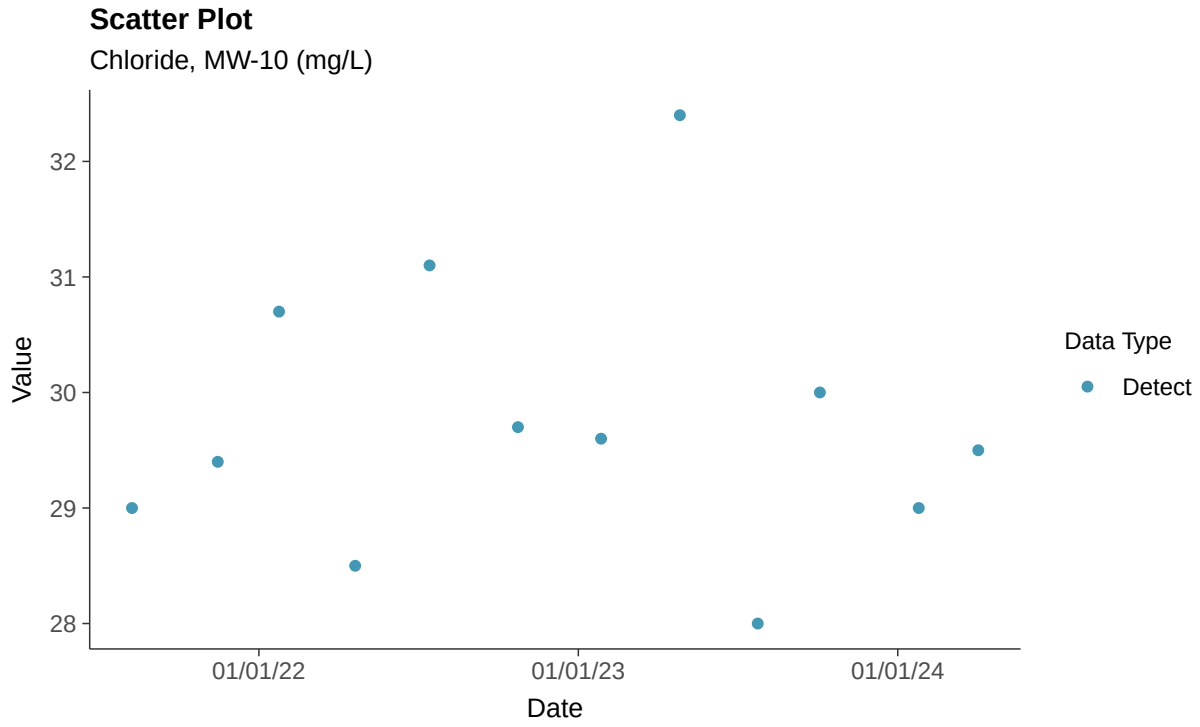
Trend Regression: Piecewise Linear-Linear

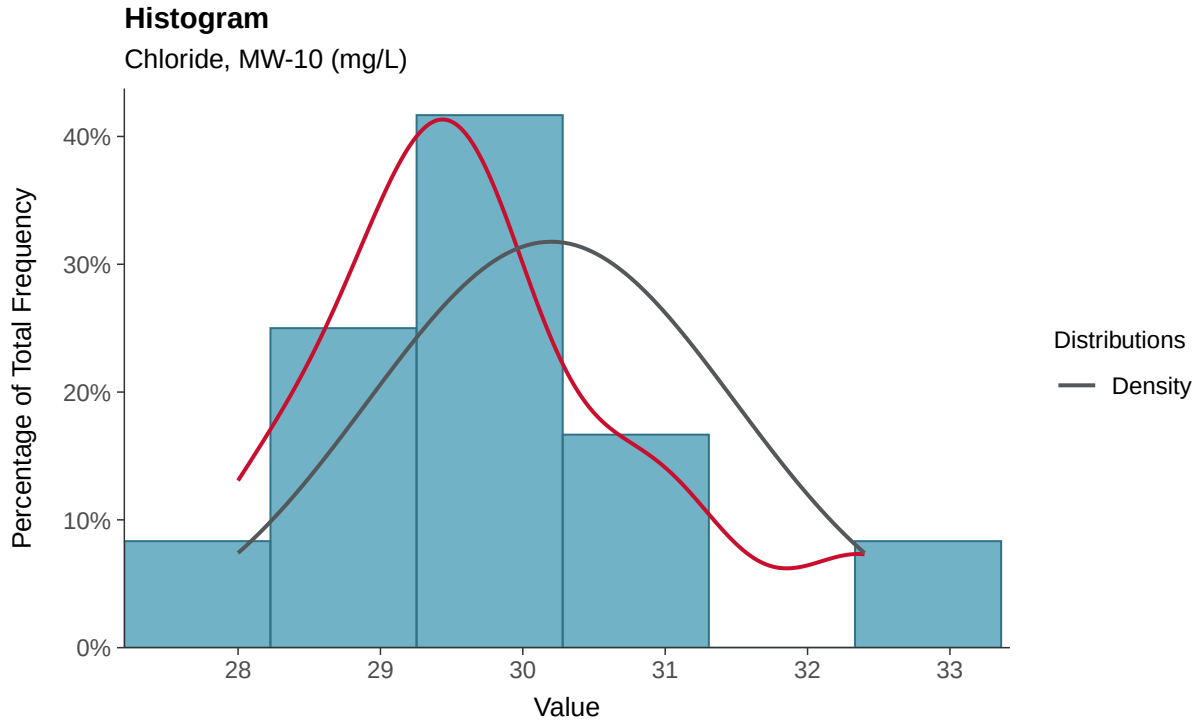
Calcium, MW-10 (ug/L)



App. III: Chloride, MW-10

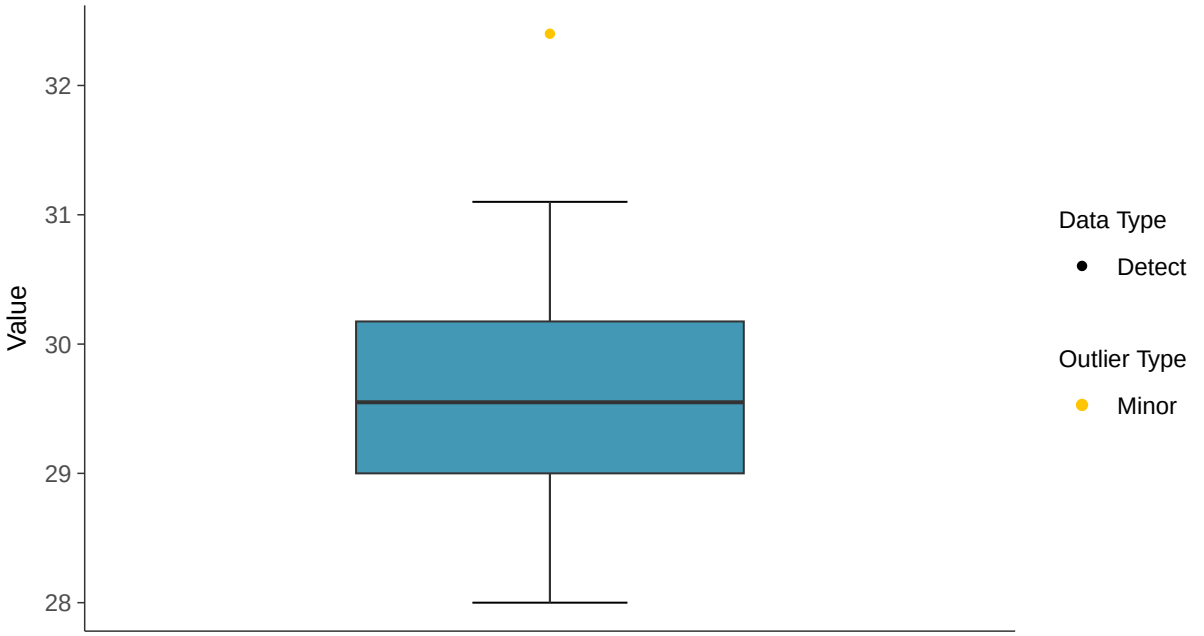
ID: 2_2_108





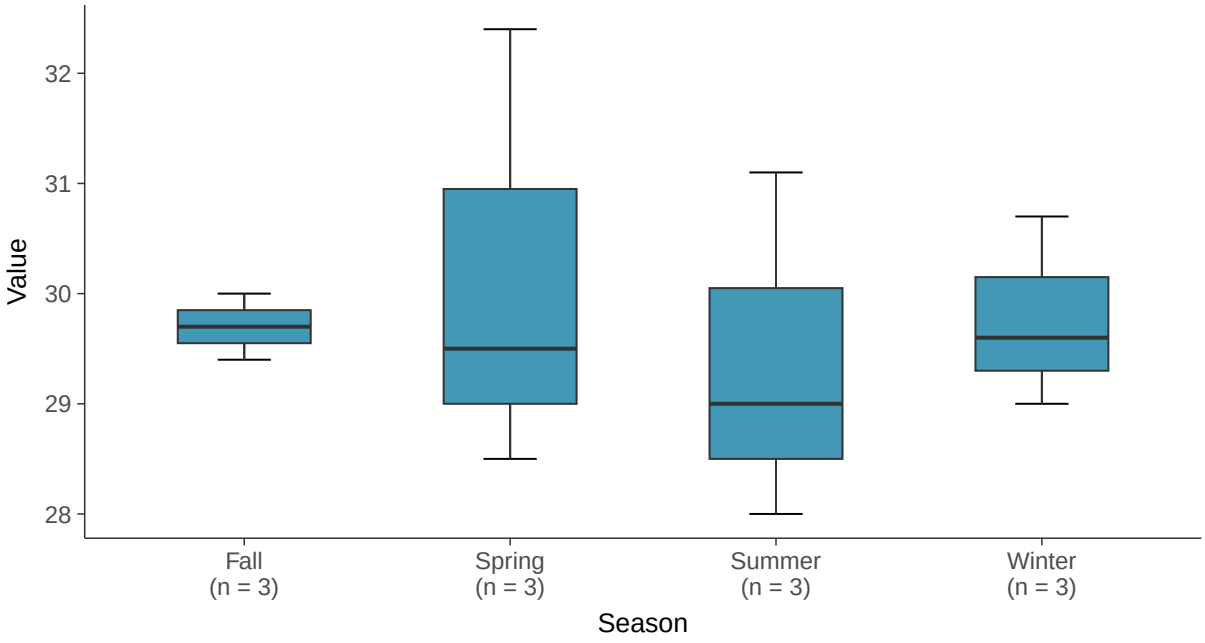
Boxplot

Chloride, MW-10 (mg/L)



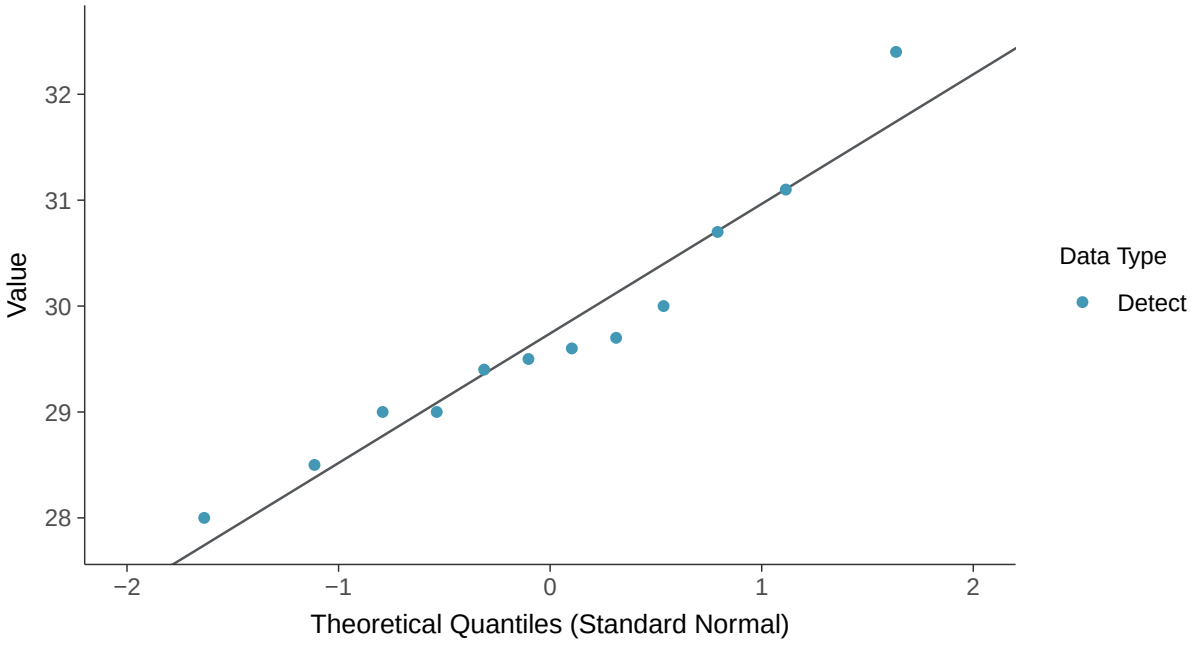
Boxplot by Season

Chloride, MW-10 (mg/L)



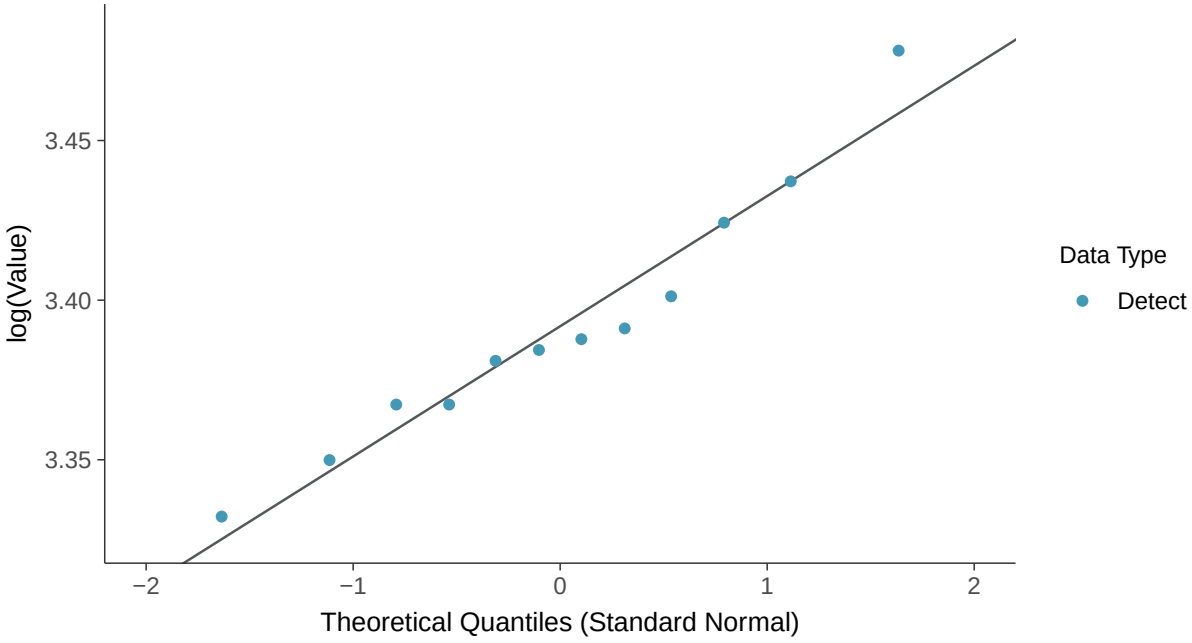
Normal Q-Q plot

Chloride, MW-10 (mg/L)



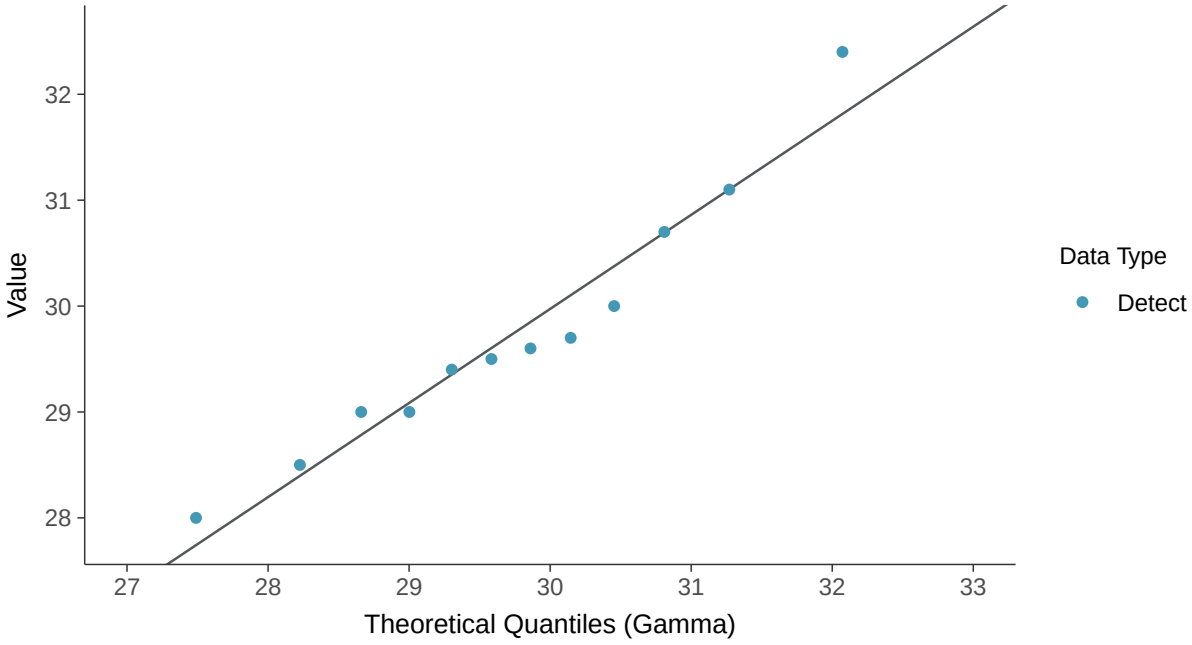
Lognormal Q-Q plot

Chloride, MW-10 (mg/L)



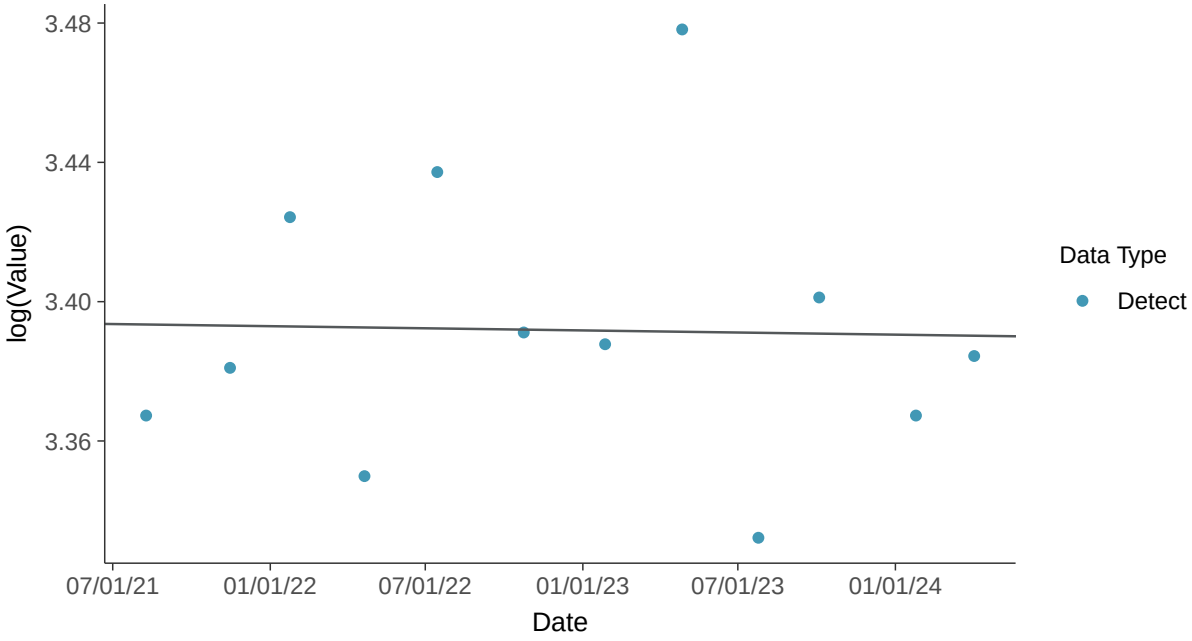
Gamma Q-Q plot

Chloride, MW-10 (mg/L)



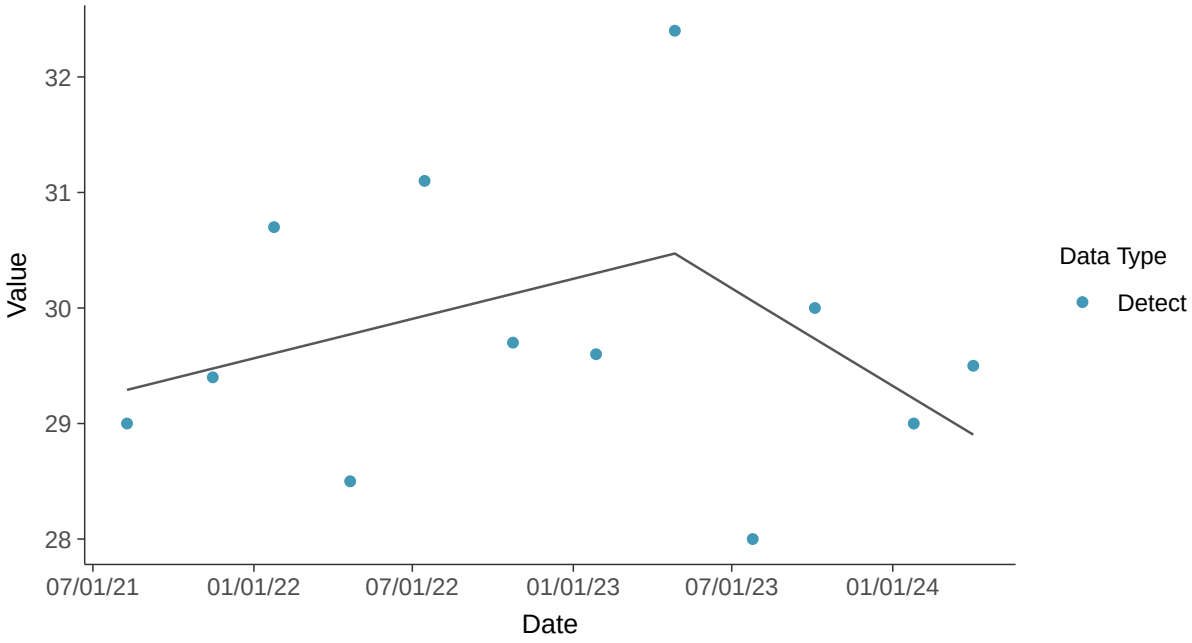
Trend Regression: Lognormal MLE

Chloride, MW-10 (mg/L)



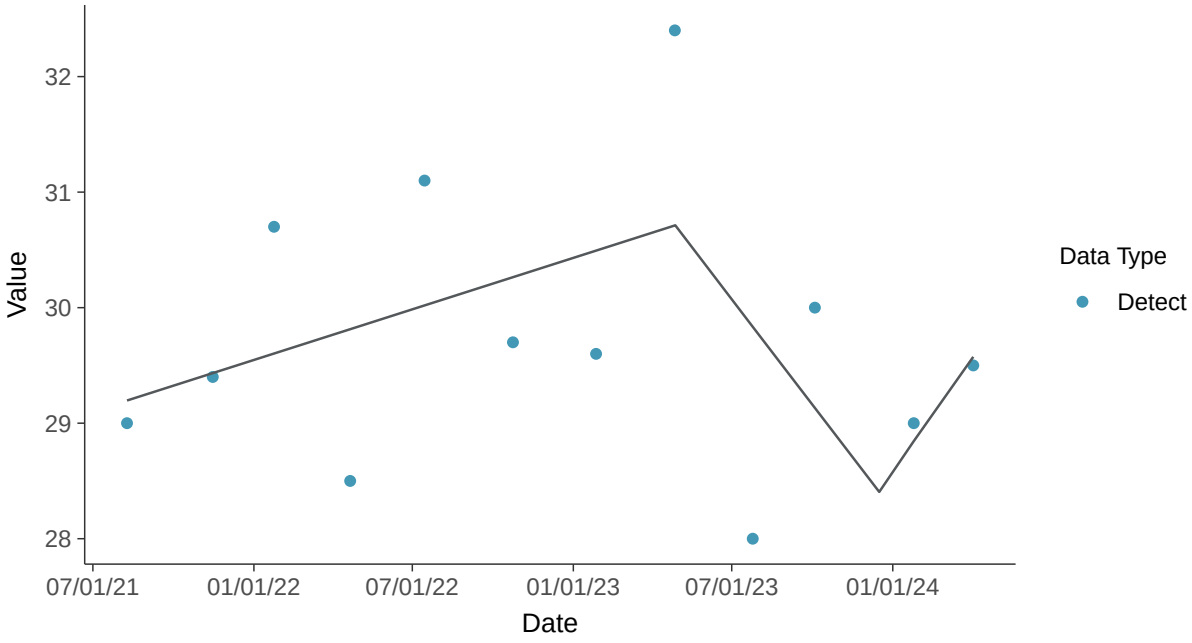
Trend Regression: Piecewise Linear-Linear

Chloride, MW-10 (mg/L)



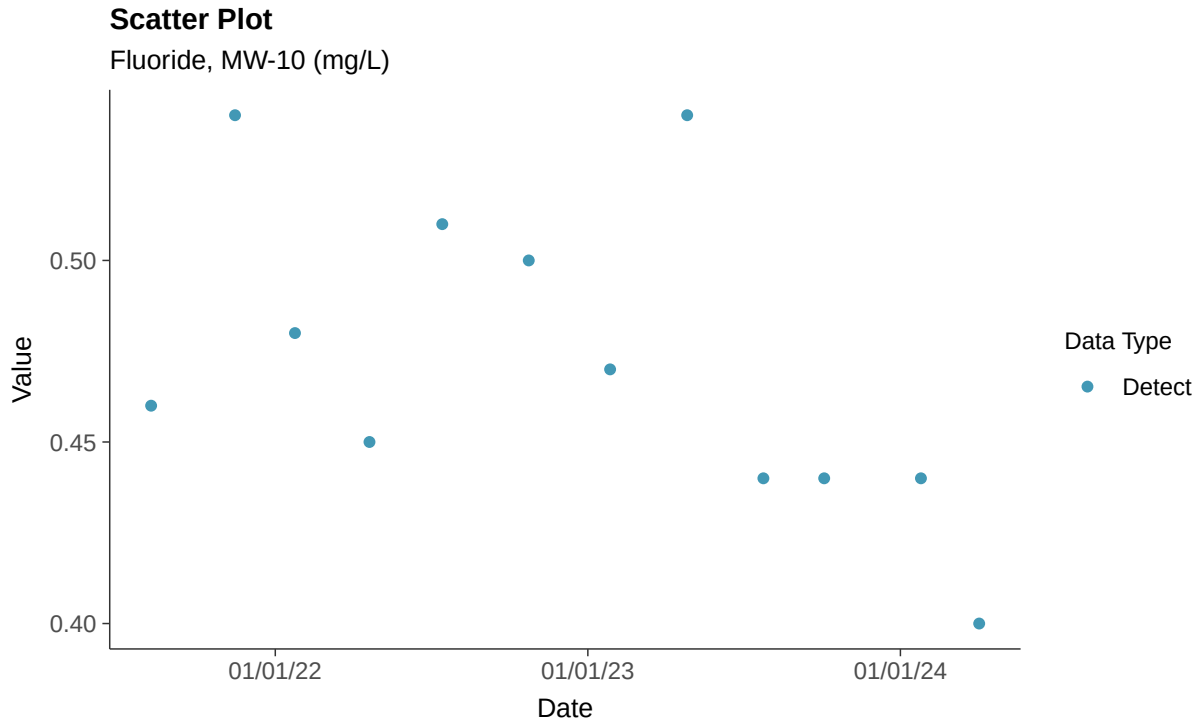
Trend Regression: Piecewise Linear-Linear-Linear

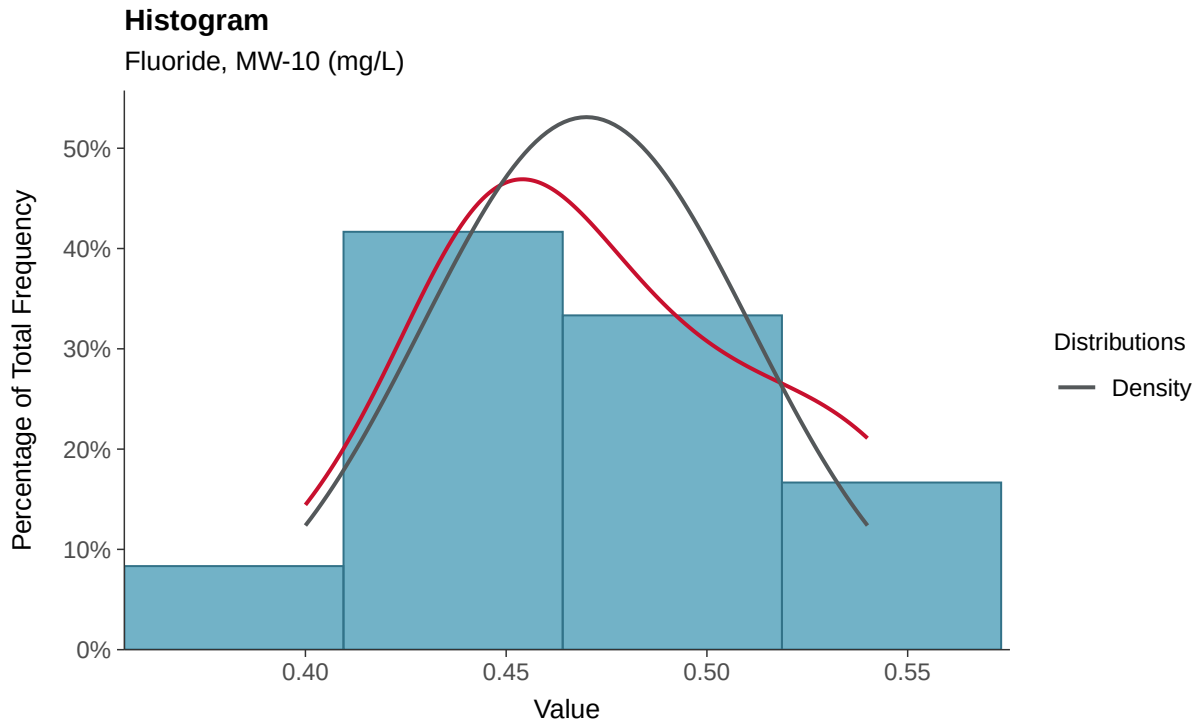
Chloride, MW-10 (mg/L)



App. III: Fluoride, MW-10

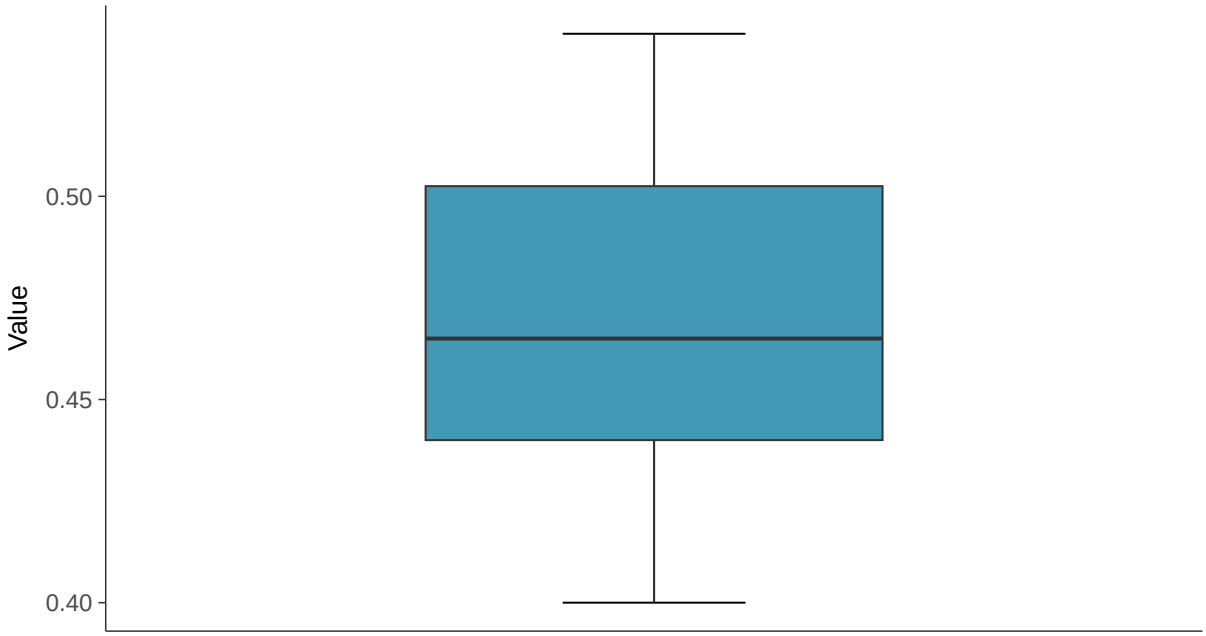
ID: 2_2_112





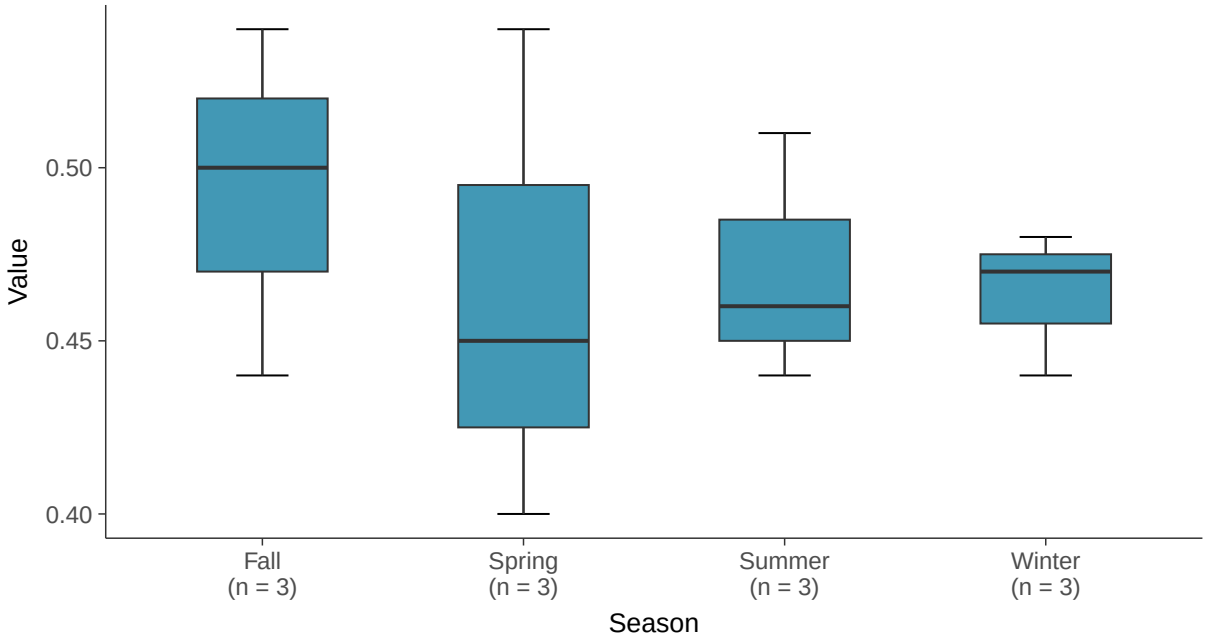
Boxplot

Fluoride, MW-10 (mg/L)



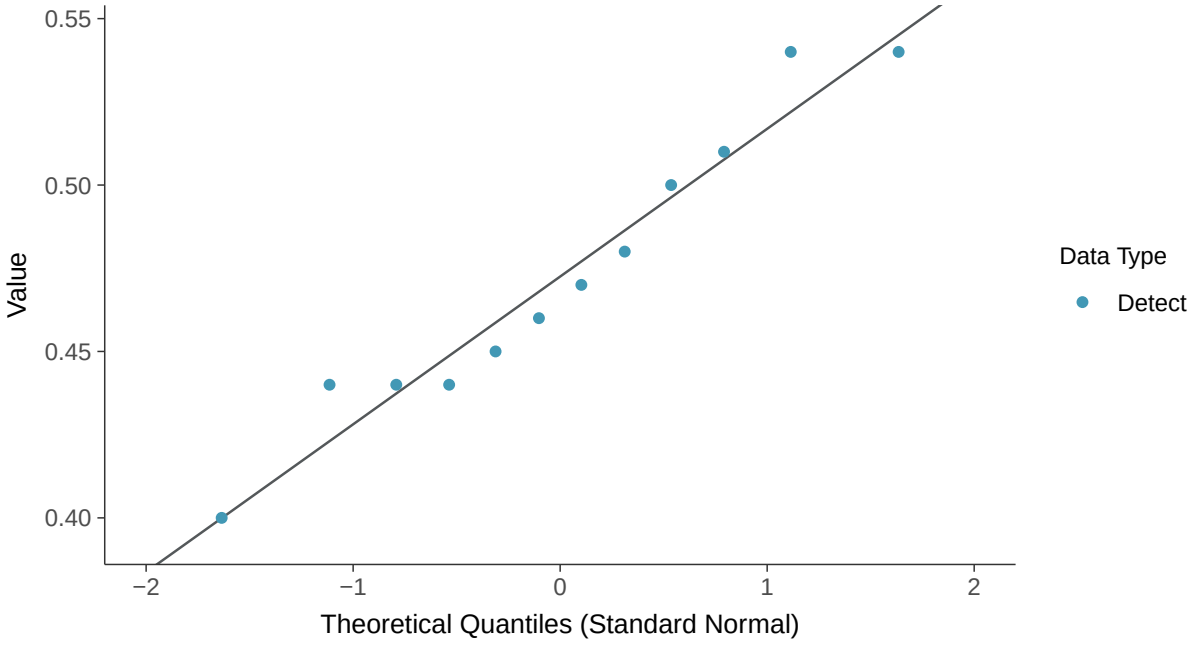
Boxplot by Season

Fluoride, MW-10 (mg/L)



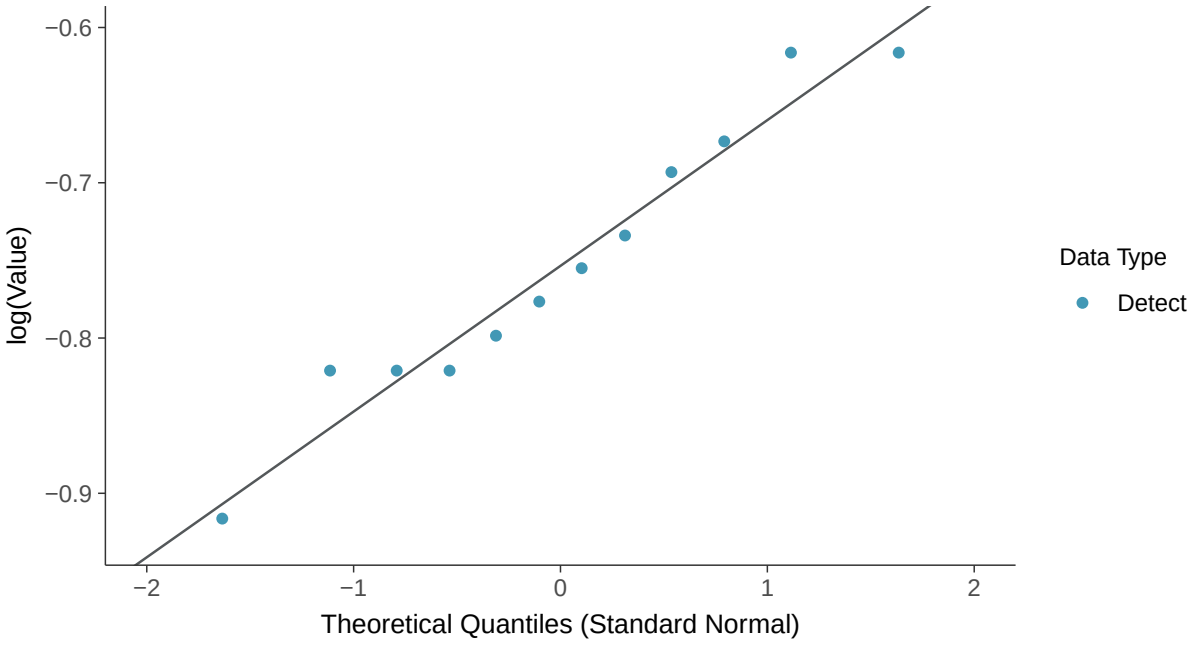
Normal Q-Q plot

Fluoride, MW-10 (mg/L)



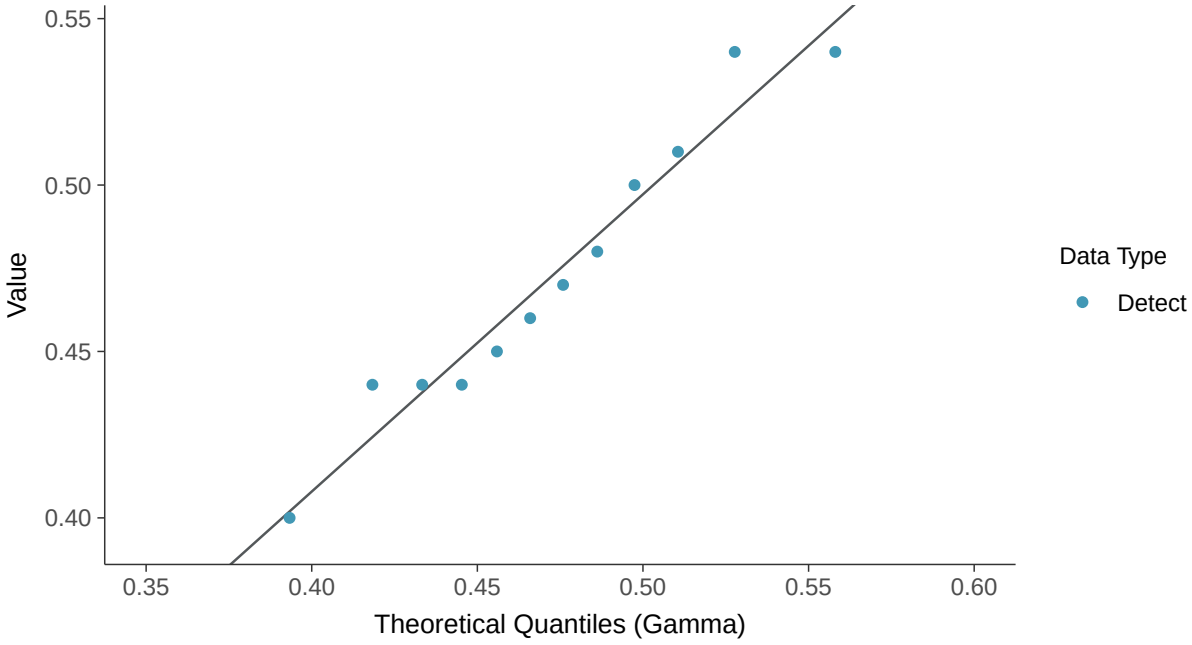
Lognormal Q-Q plot

Fluoride, MW-10 (mg/L)



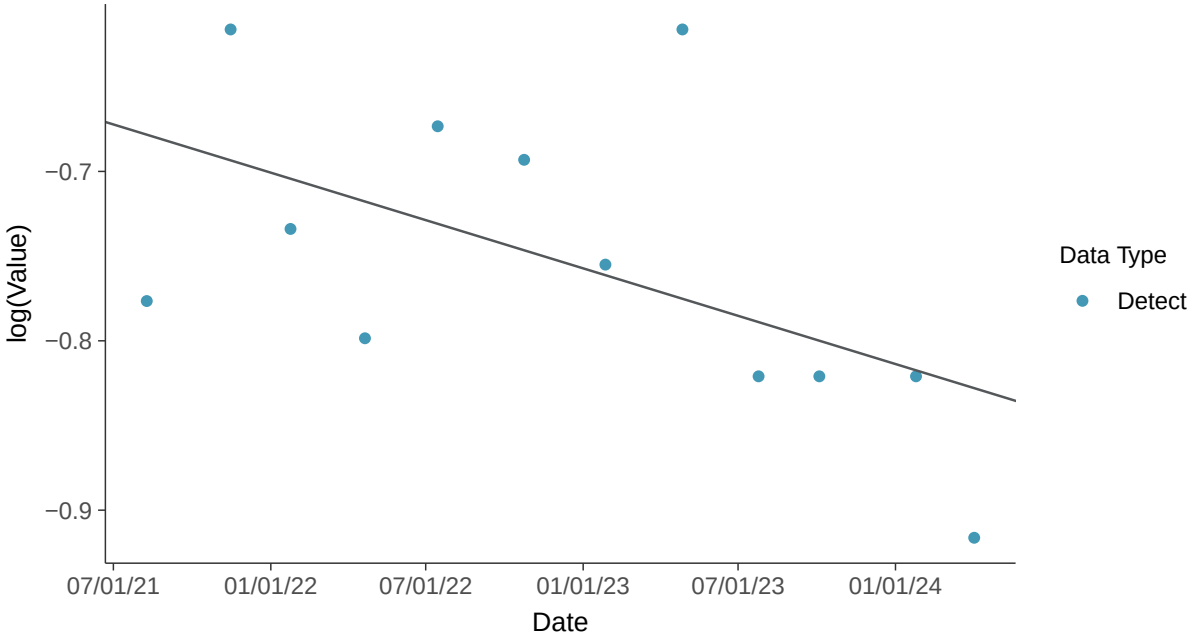
Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



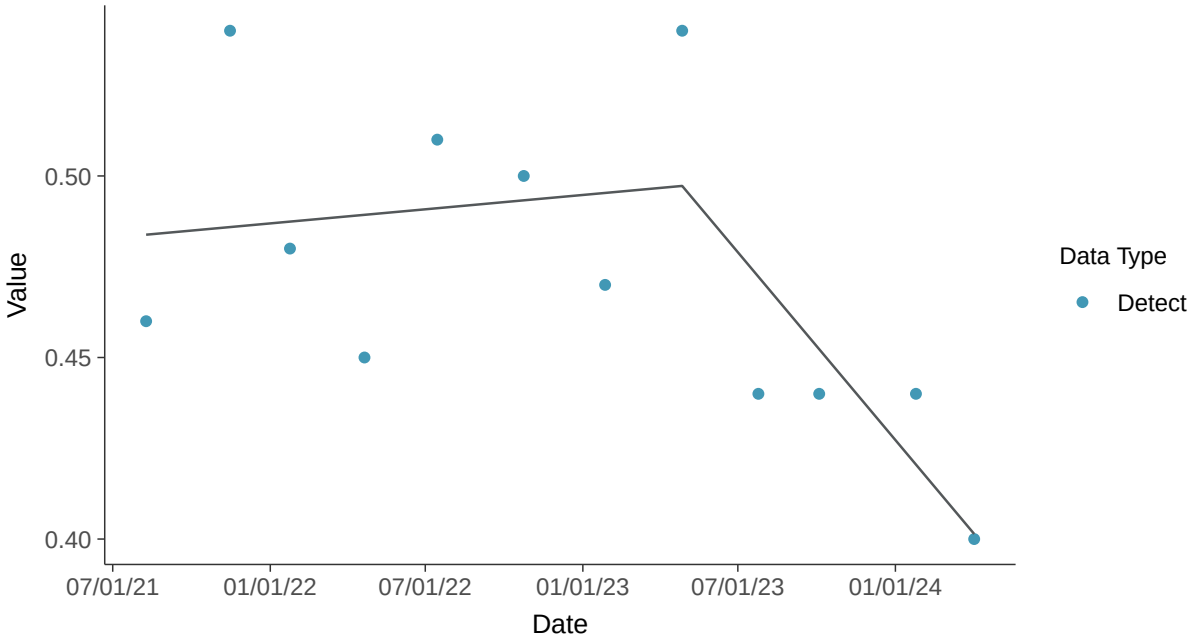
Trend Regression: Lognormal MLE

Fluoride, MW-10 (mg/L)



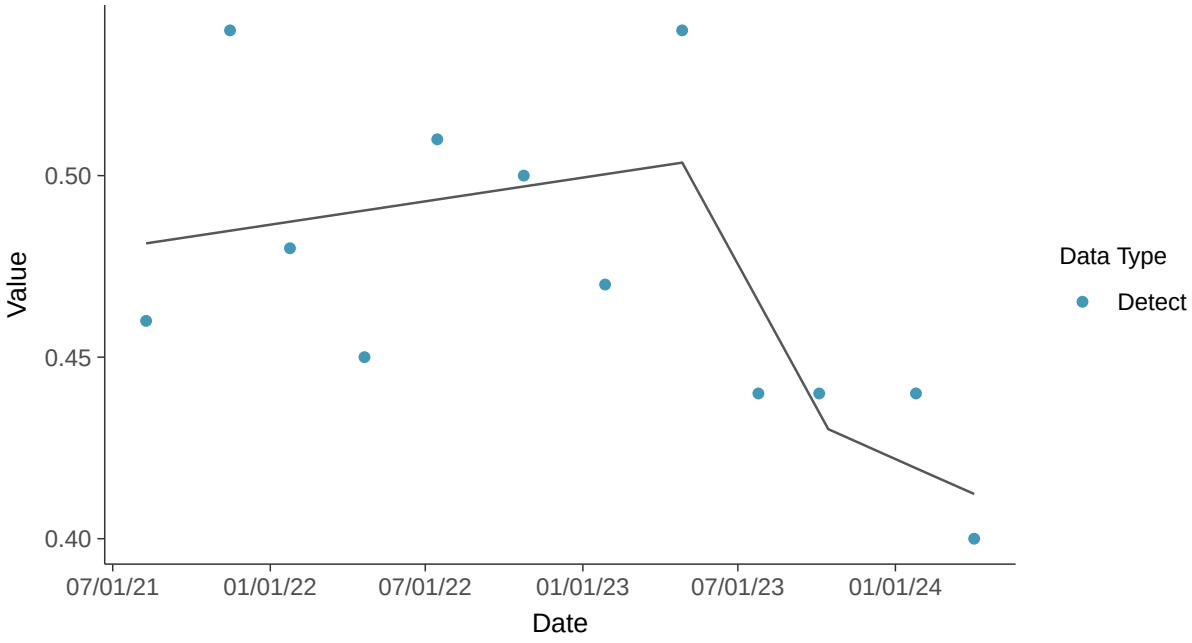
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



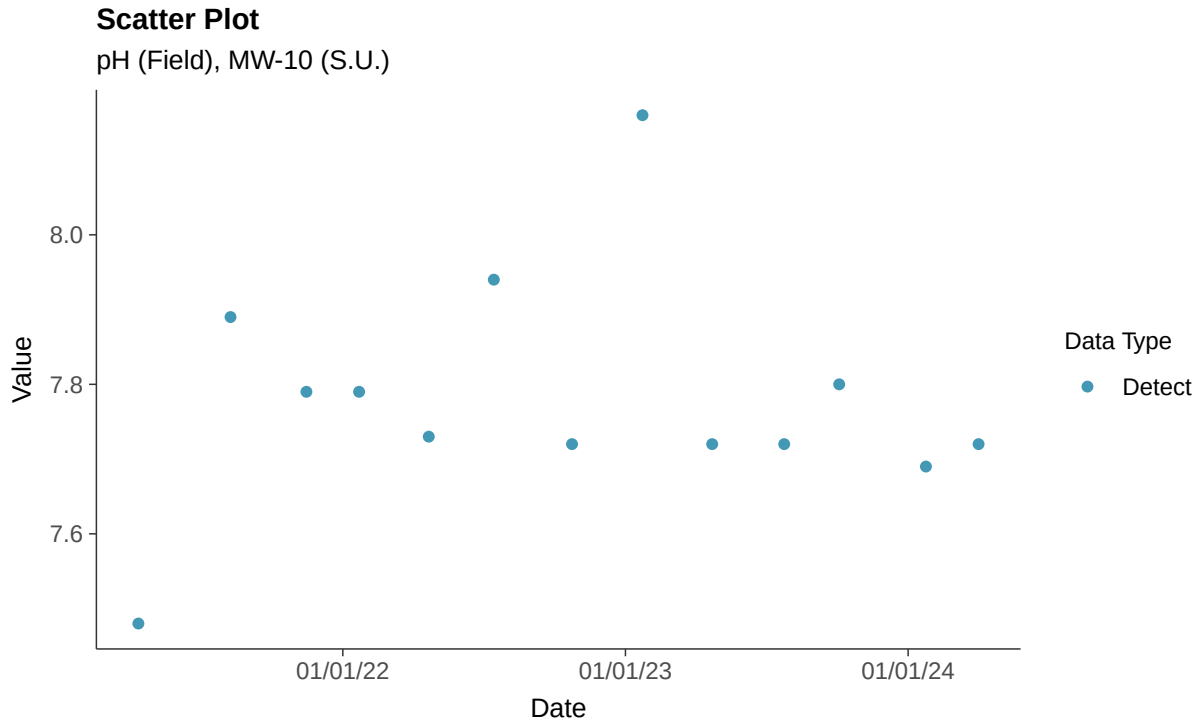
Trend Regression: Piecewise Linear-Linear-Linear

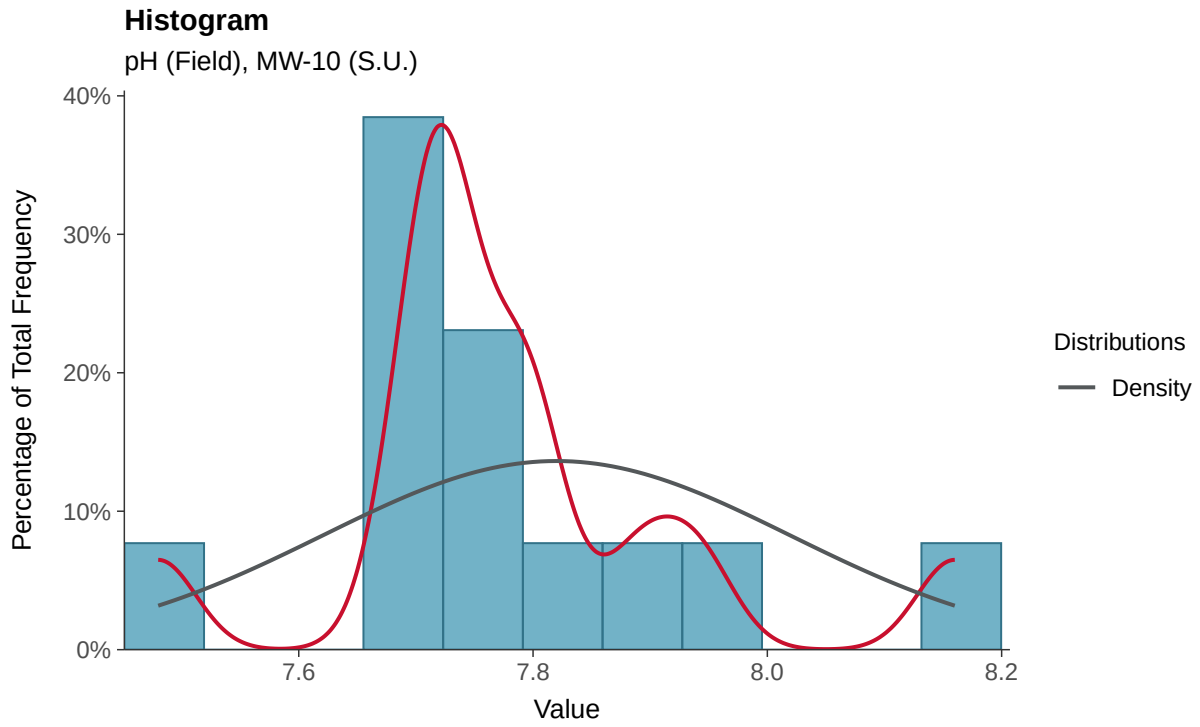
Fluoride, MW-10 (mg/L)



App. III: pH (Field), MW-10

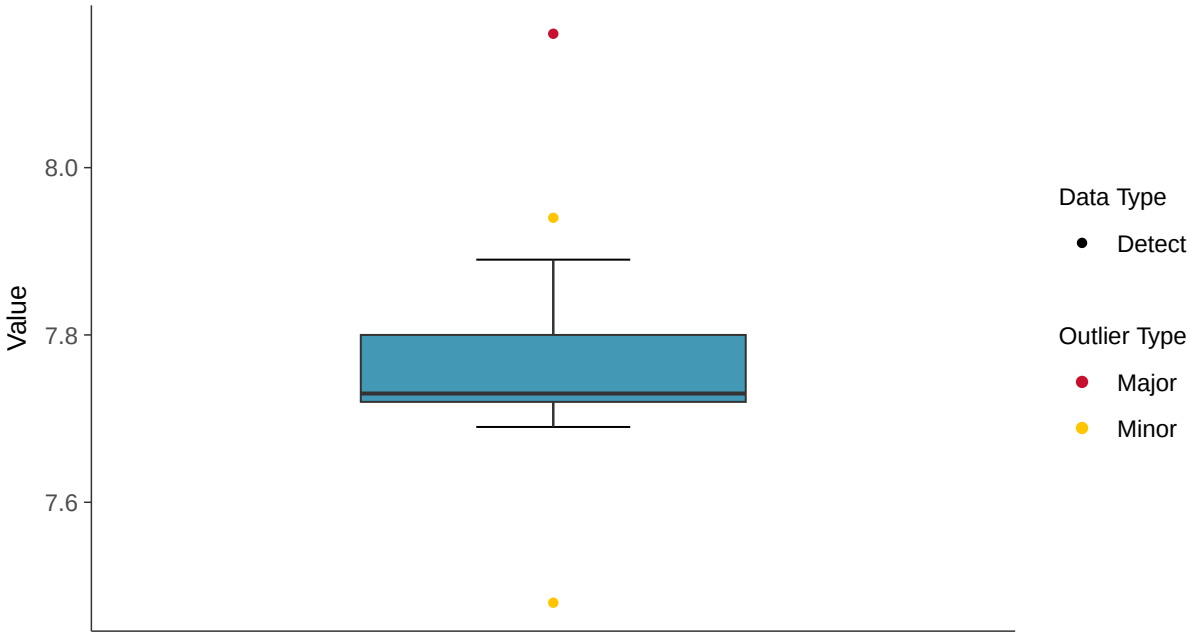
ID: 2_2_118





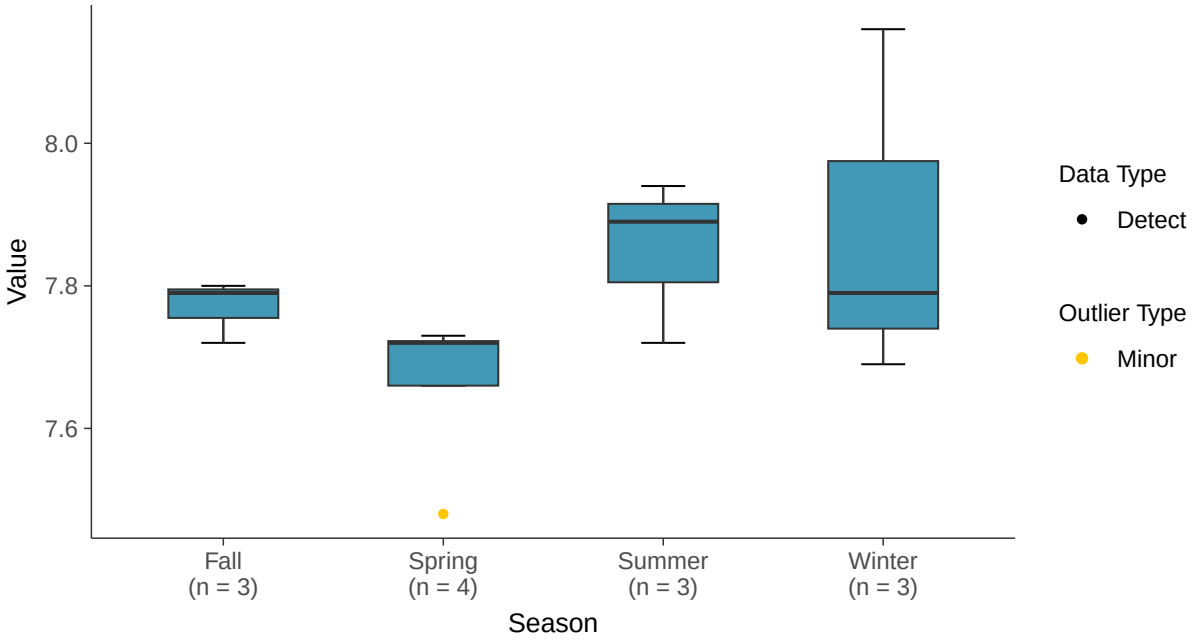
Boxplot

pH (Field), MW-10 (S.U.)



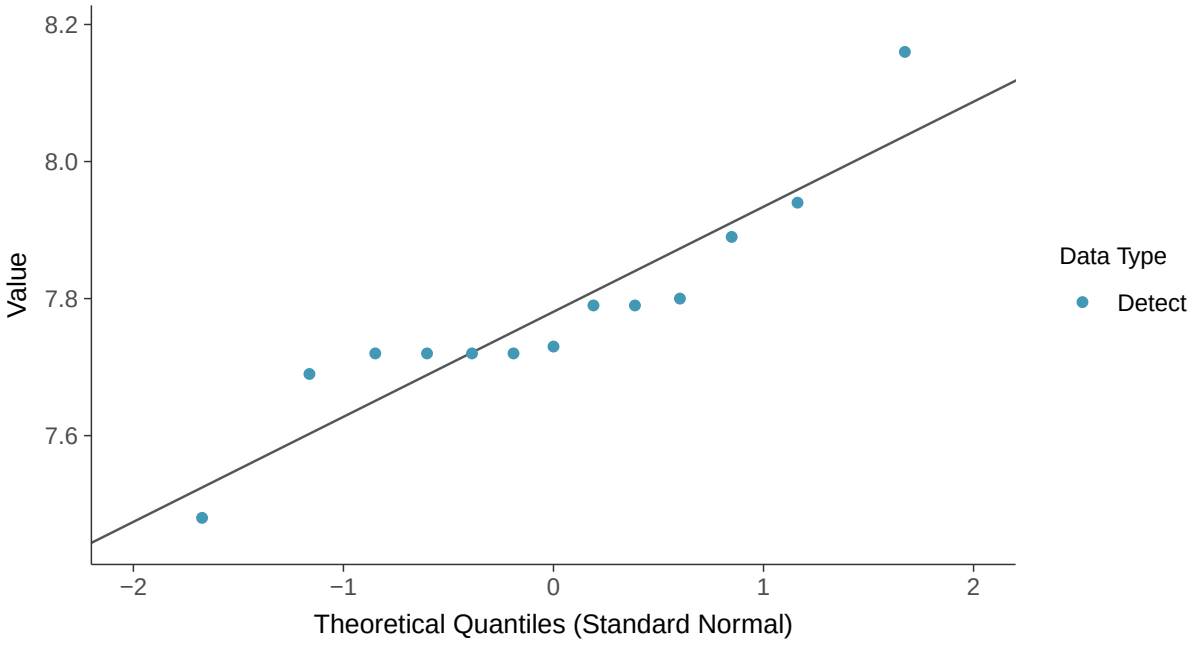
Boxplot by Season

pH (Field), MW-10 (S.U.)



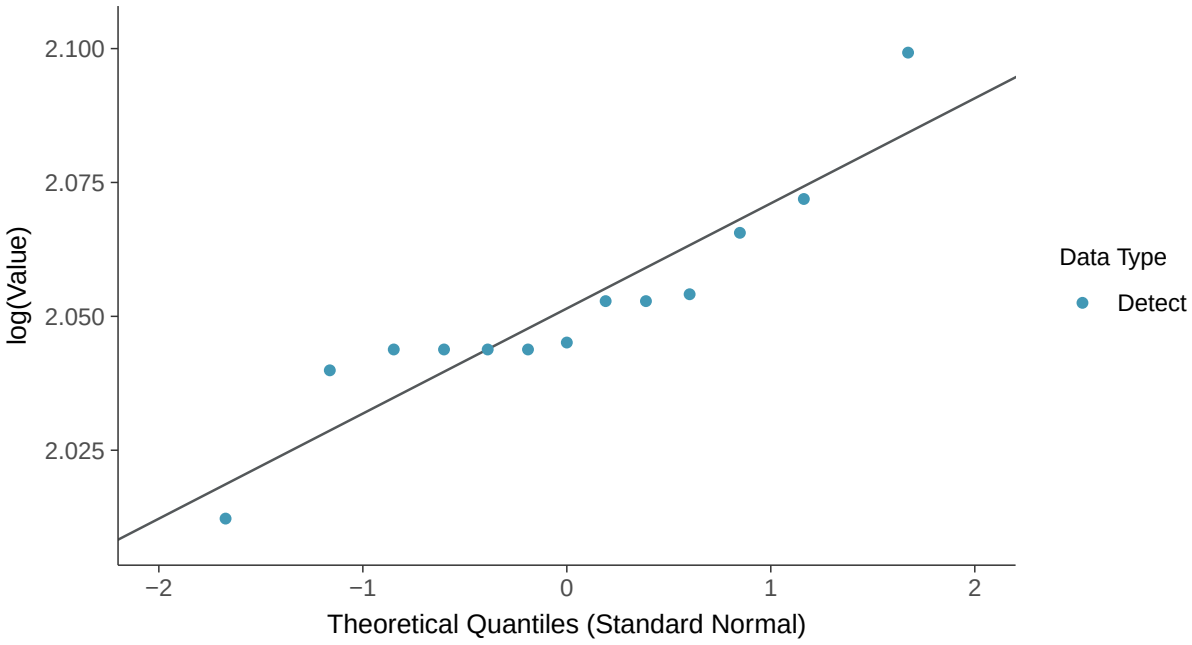
Normal Q-Q plot

pH (Field), MW-10 (S.U.)



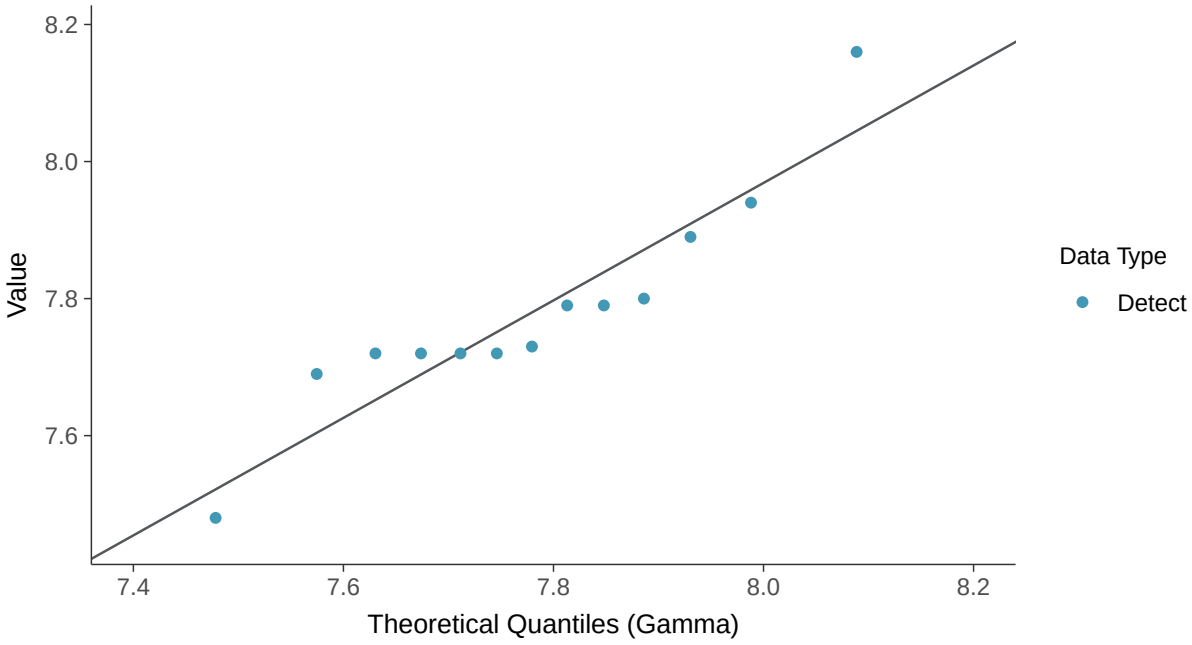
Lognormal Q-Q plot

pH (Field), MW-10 (S.U.)



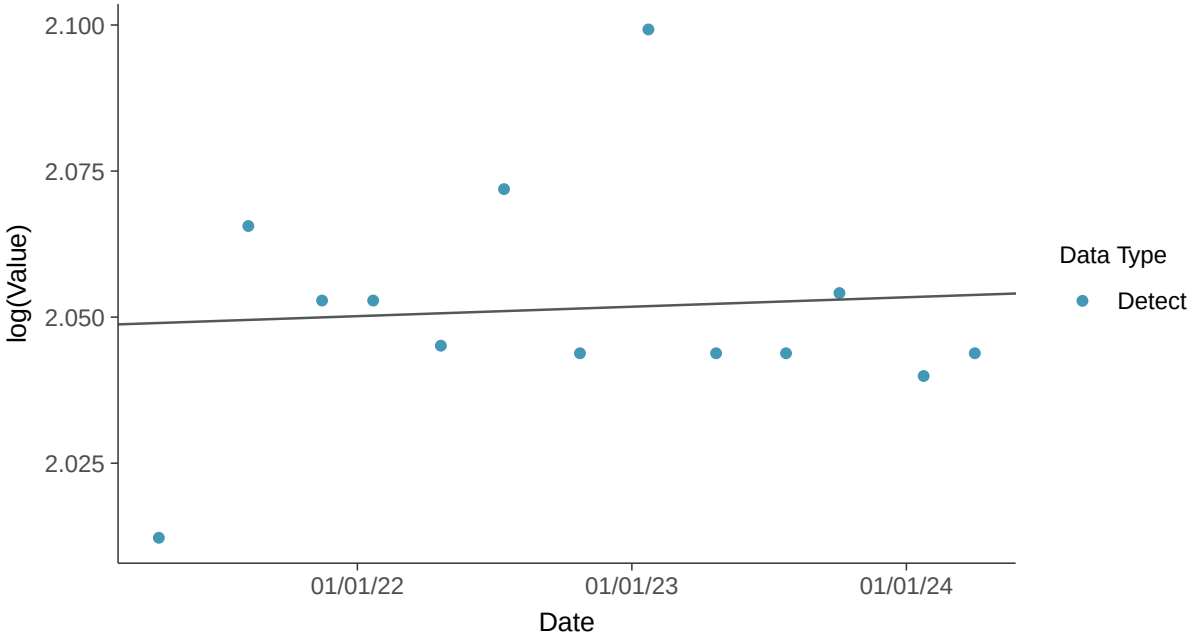
Gamma Q-Q plot

pH (Field), MW-10 (S.U.)



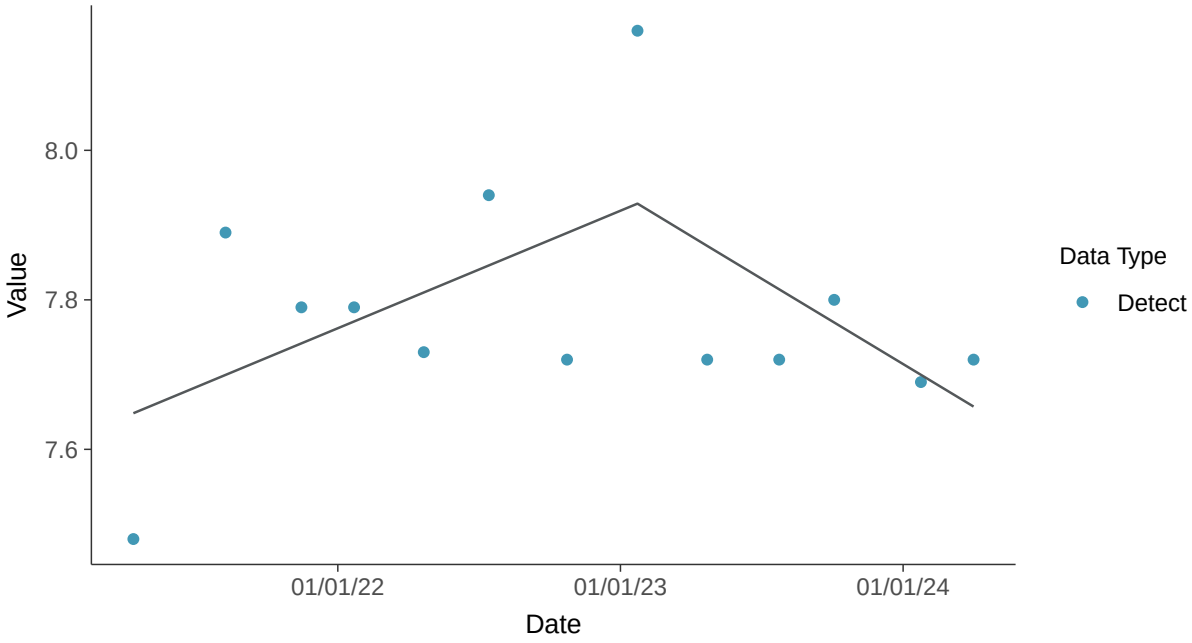
Trend Regression: Lognormal MLE

pH (Field), MW-10 (S.U.)



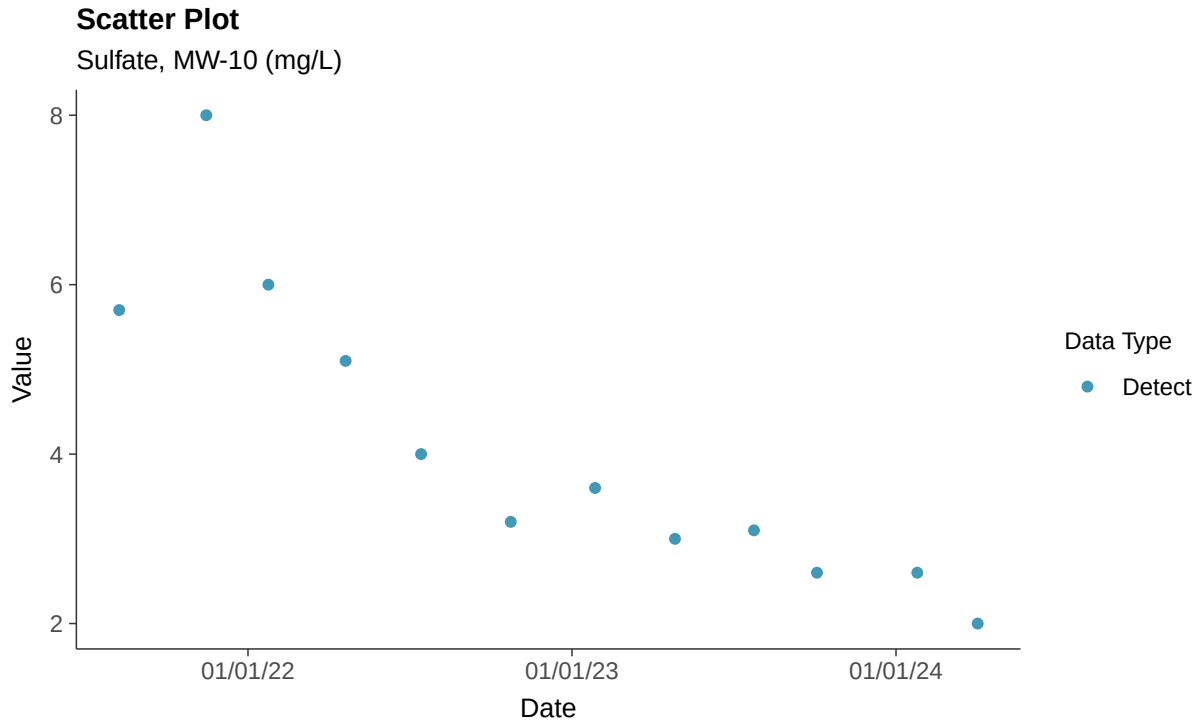
Trend Regression: Piecewise Linear-Linear

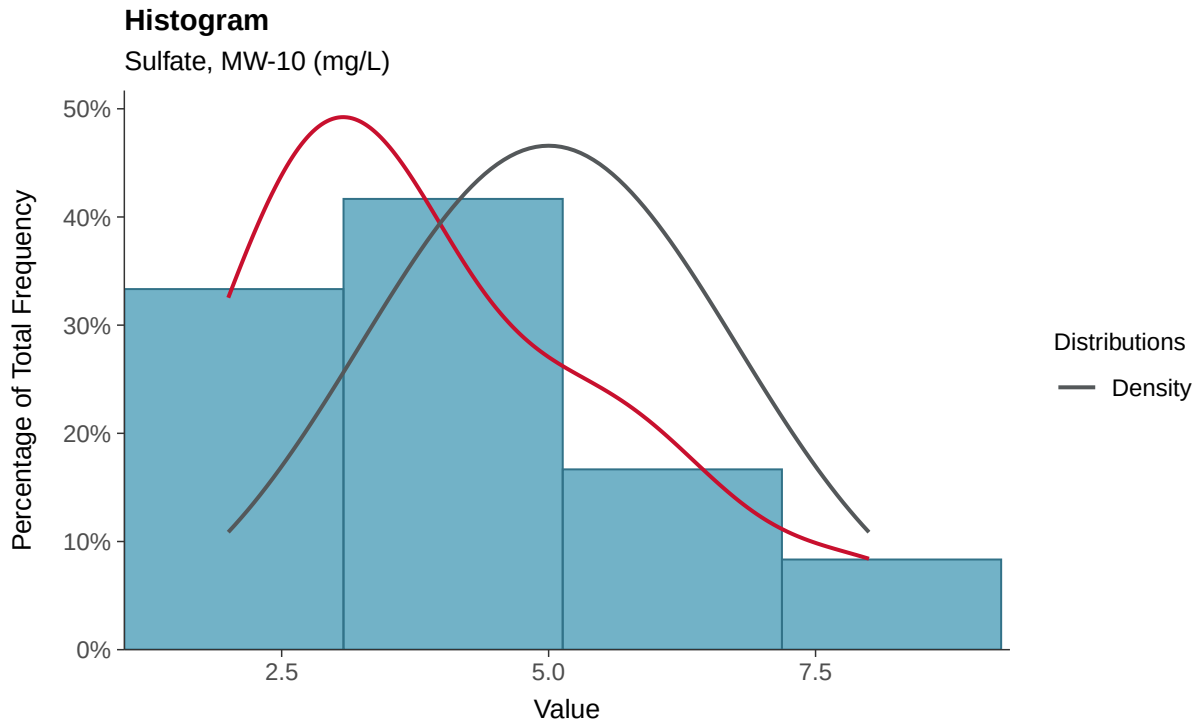
pH (Field), MW-10 (S.U.)



App. III: Sulfate, MW-10

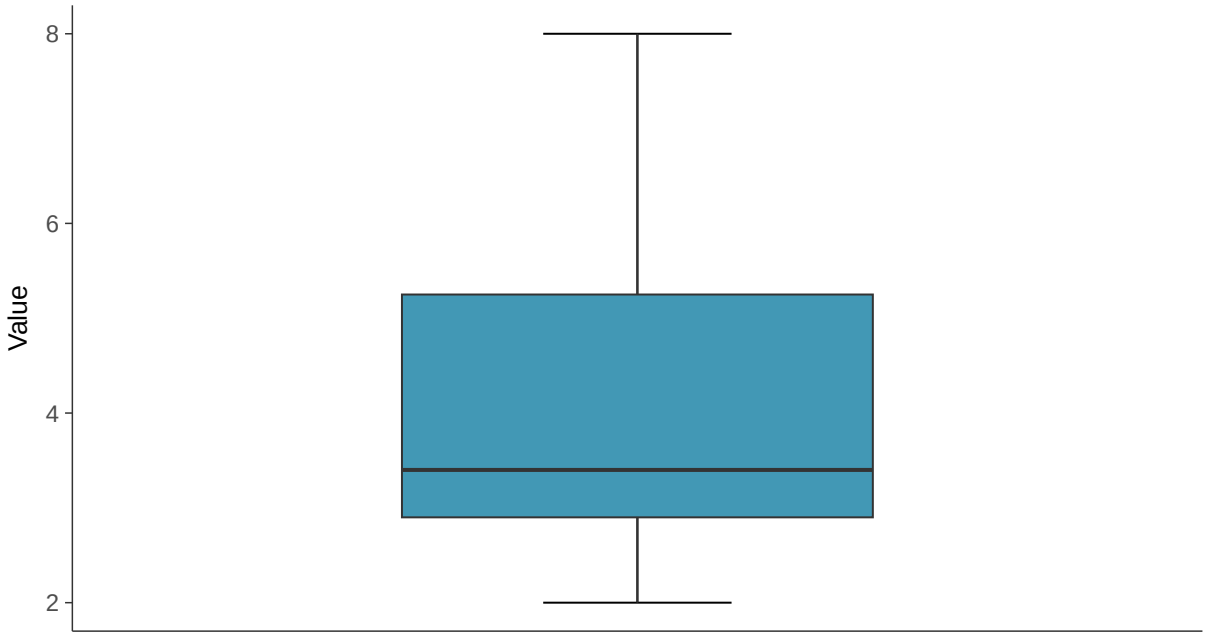
ID: 2_2_123





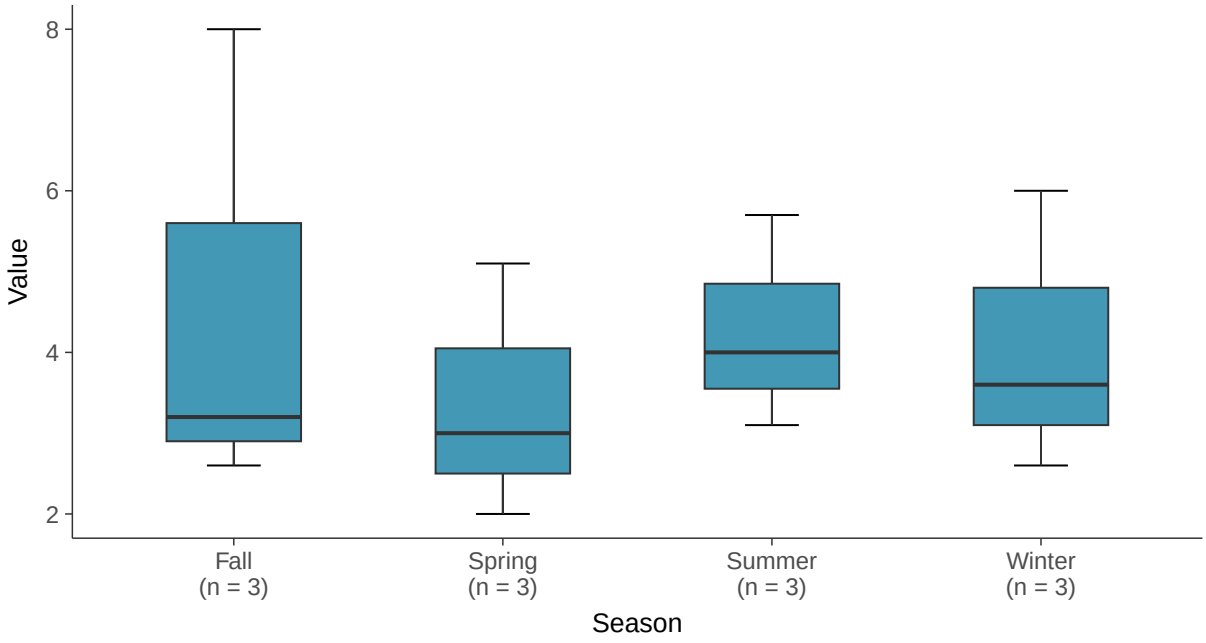
Boxplot

Sulfate, MW-10 (mg/L)



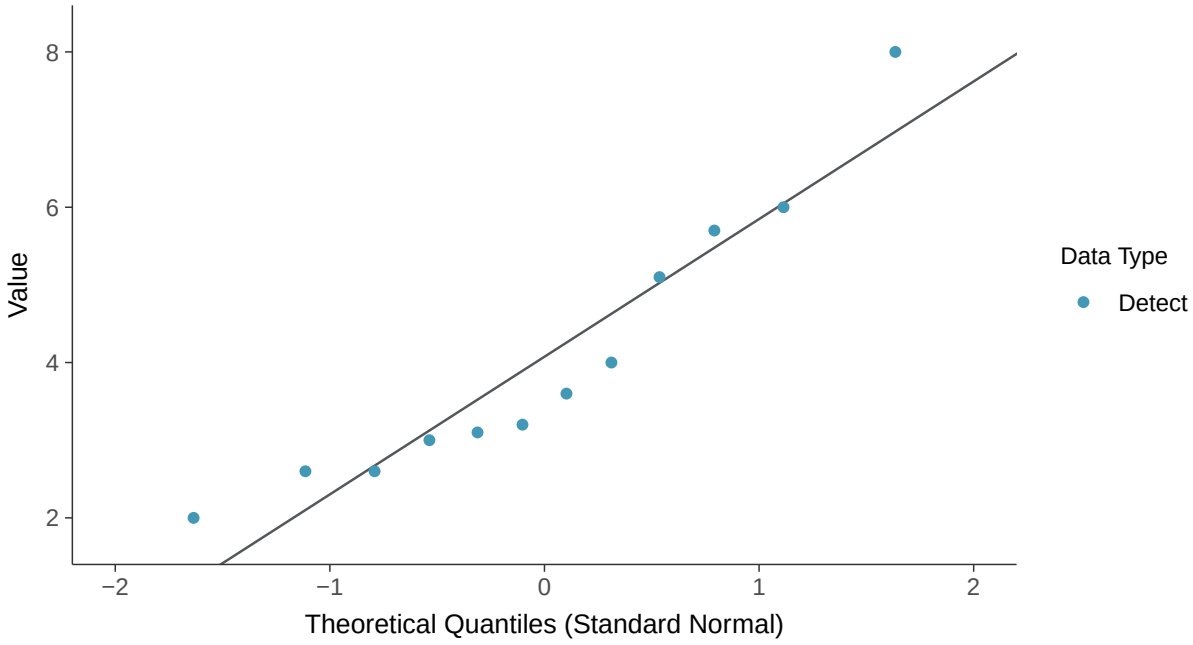
Boxplot by Season

Sulfate, MW-10 (mg/L)



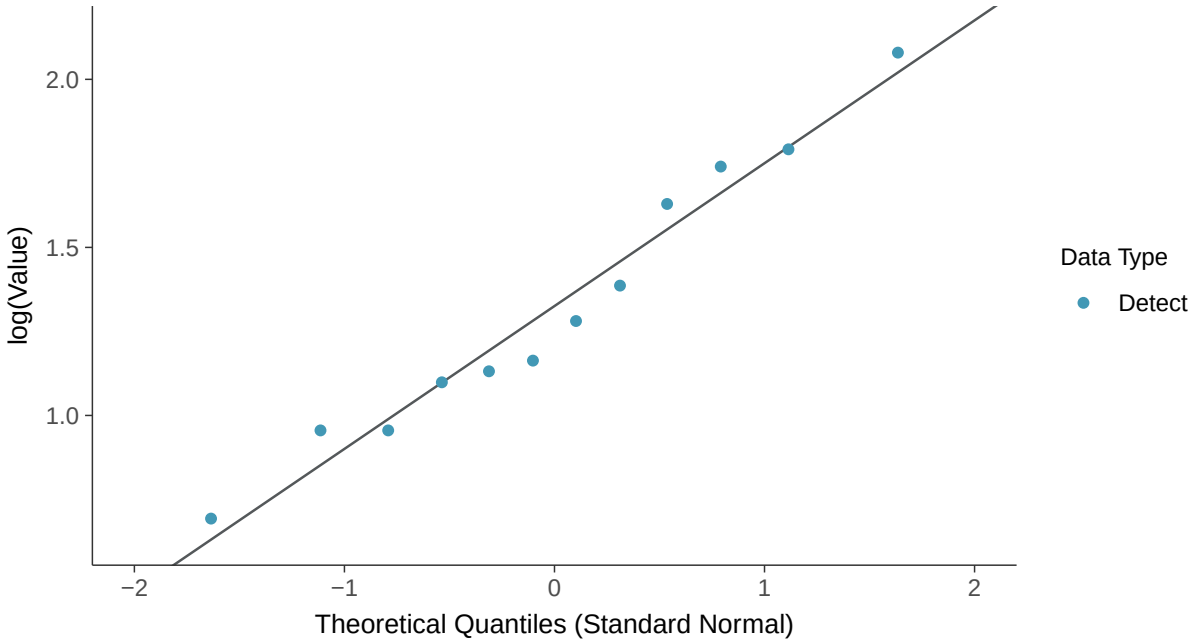
Normal Q-Q plot

Sulfate, MW-10 (mg/L)



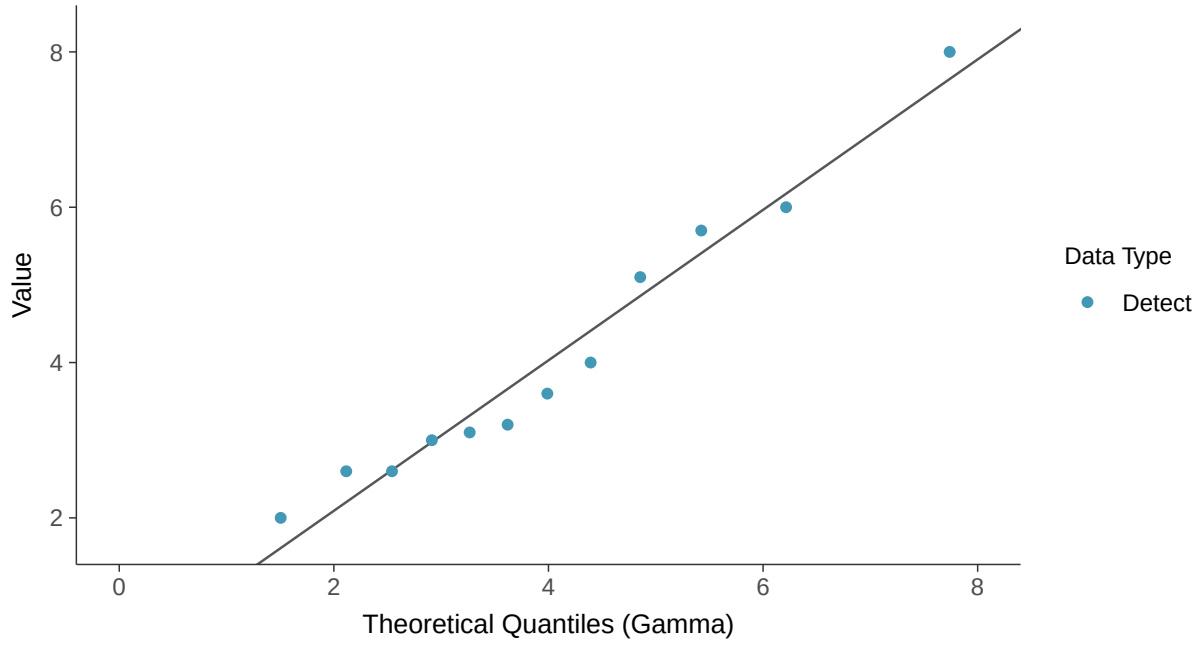
Lognormal Q-Q plot

Sulfate, MW-10 (mg/L)



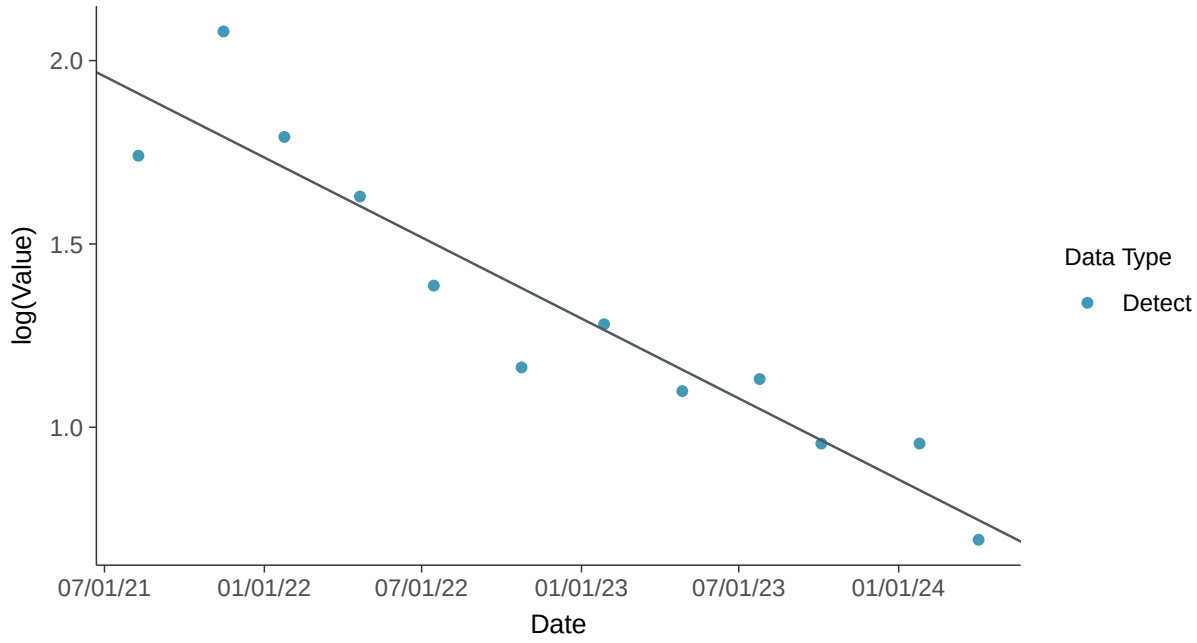
Gamma Q-Q plot

Sulfate, MW-10 (mg/L)



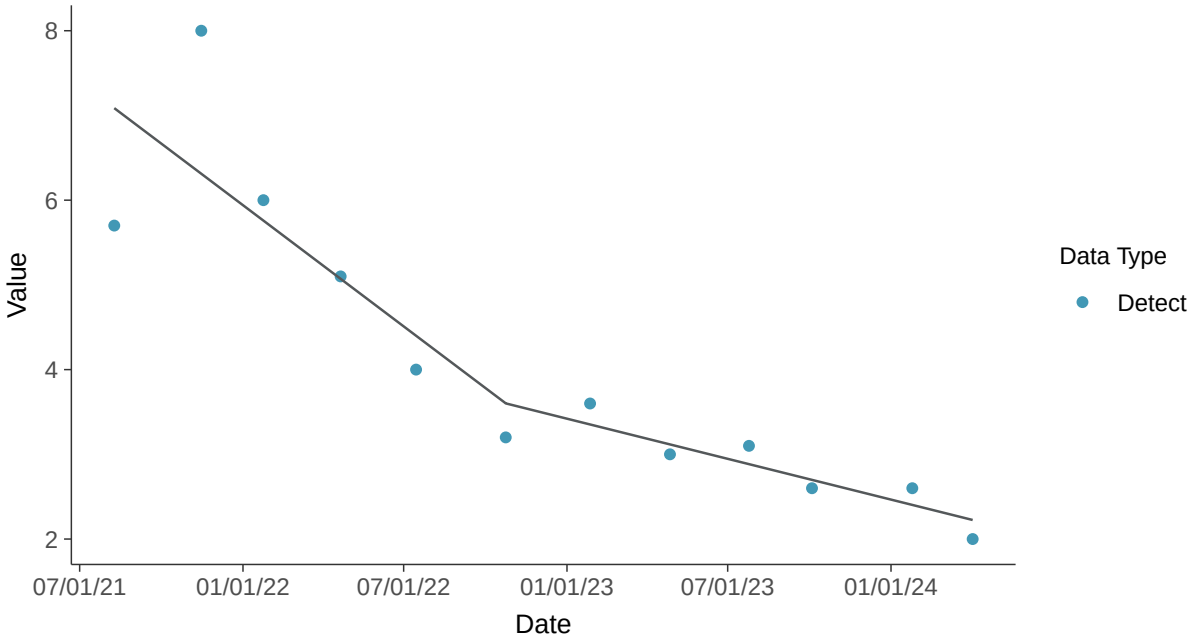
Trend Regression: Lognormal MLE

Sulfate, MW-10 (mg/L)



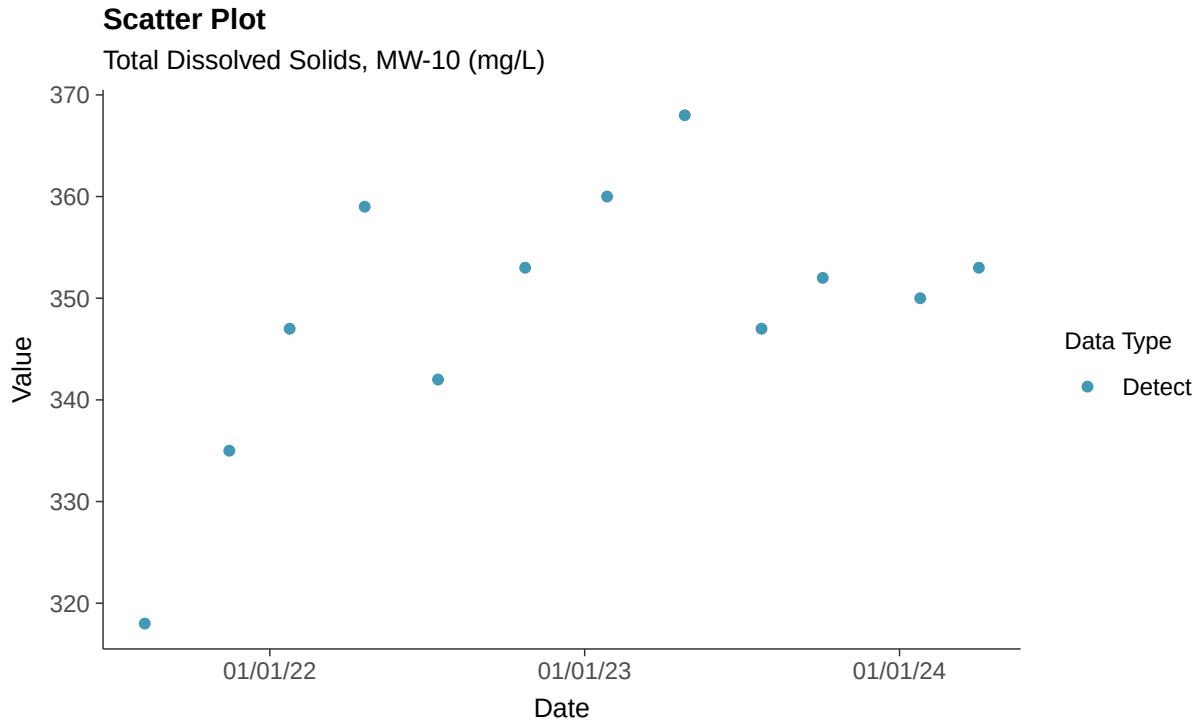
Trend Regression: Piecewise Linear-Linear

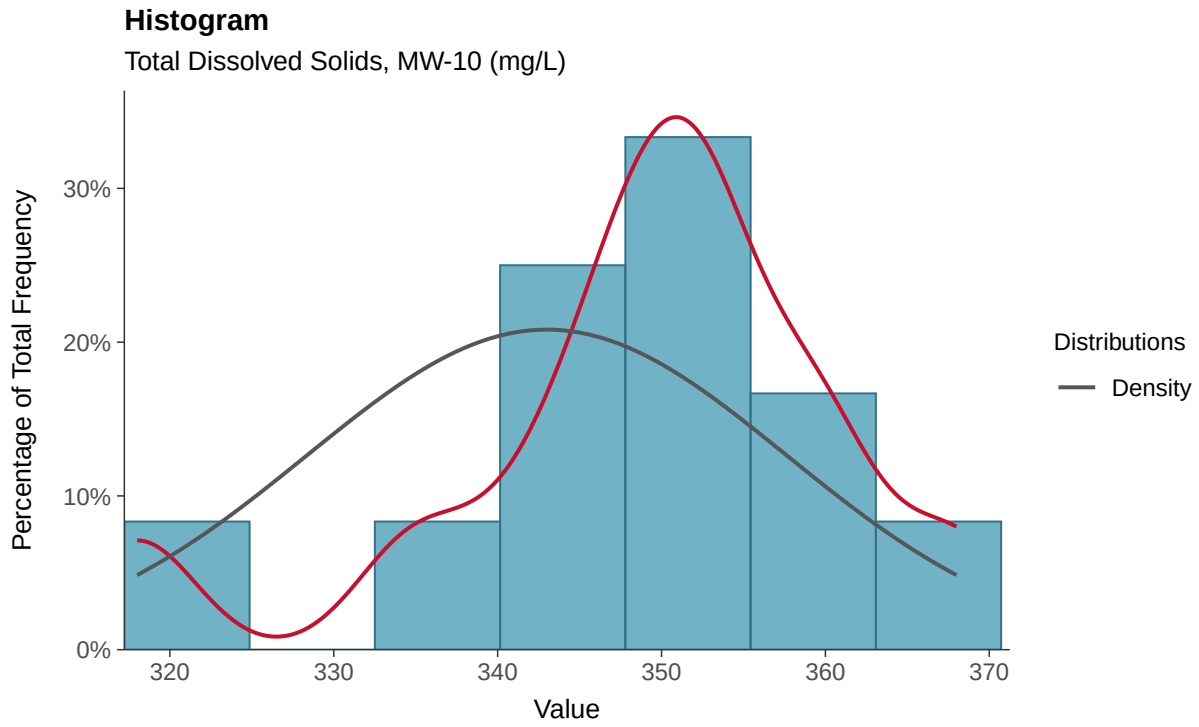
Sulfate, MW-10 (mg/L)



App. III: Total Dissolved Solids, MW-10

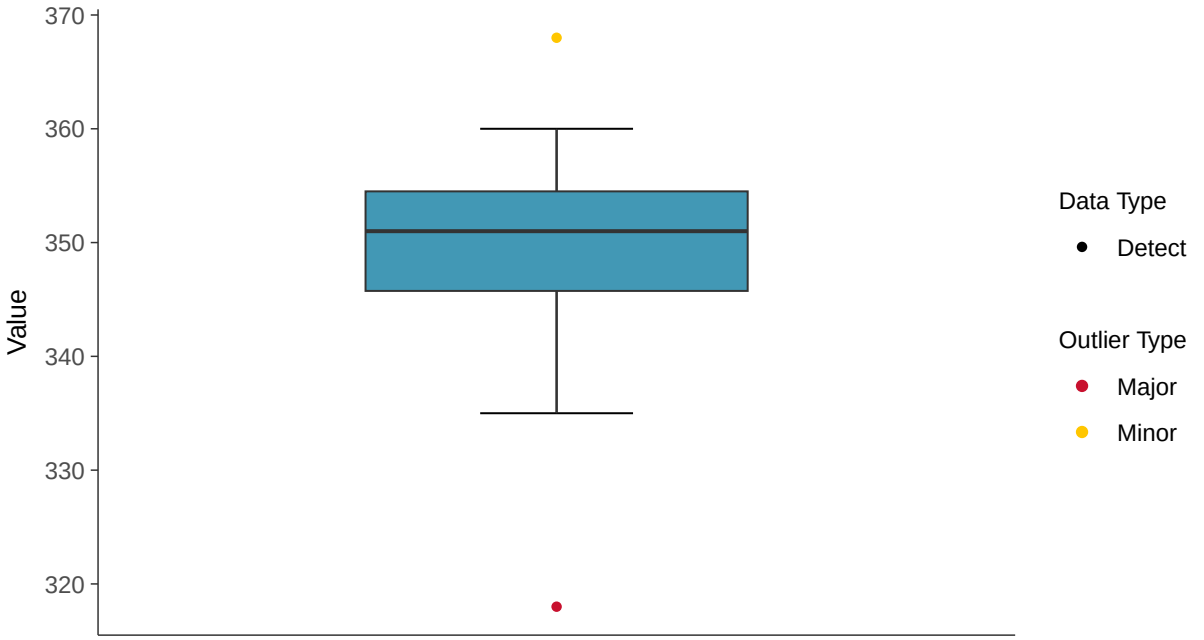
ID: 2_2_125





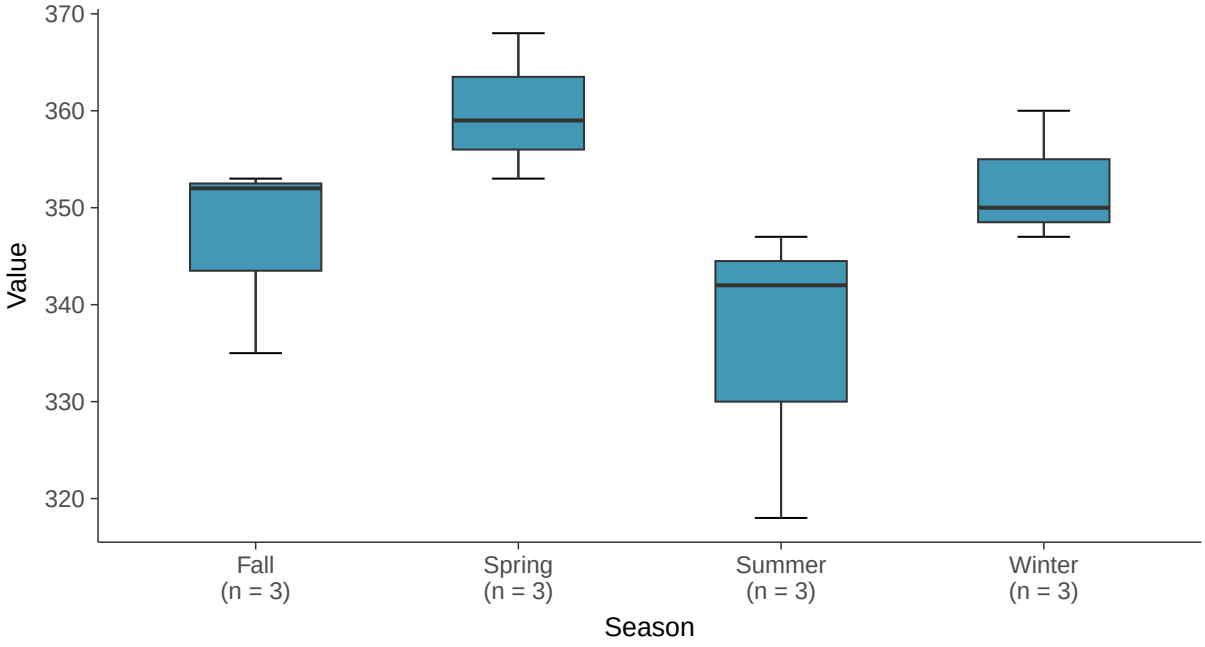
Boxplot

Total Dissolved Solids, MW-10 (mg/L)



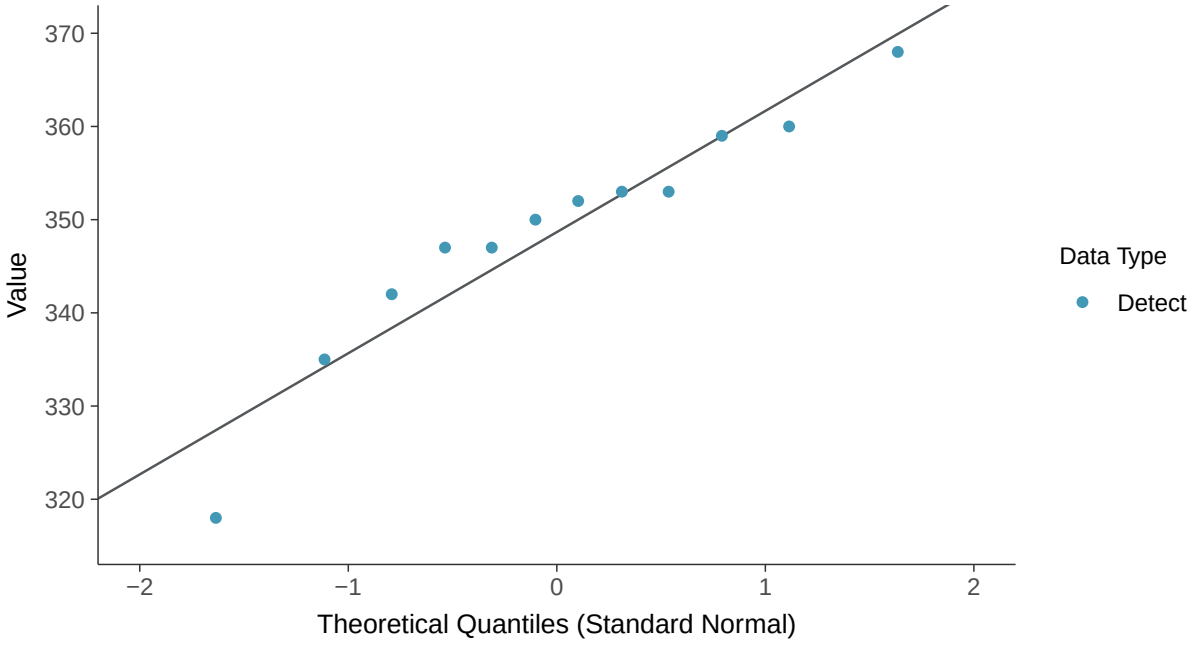
Boxplot by Season

Total Dissolved Solids, MW-10 (mg/L)



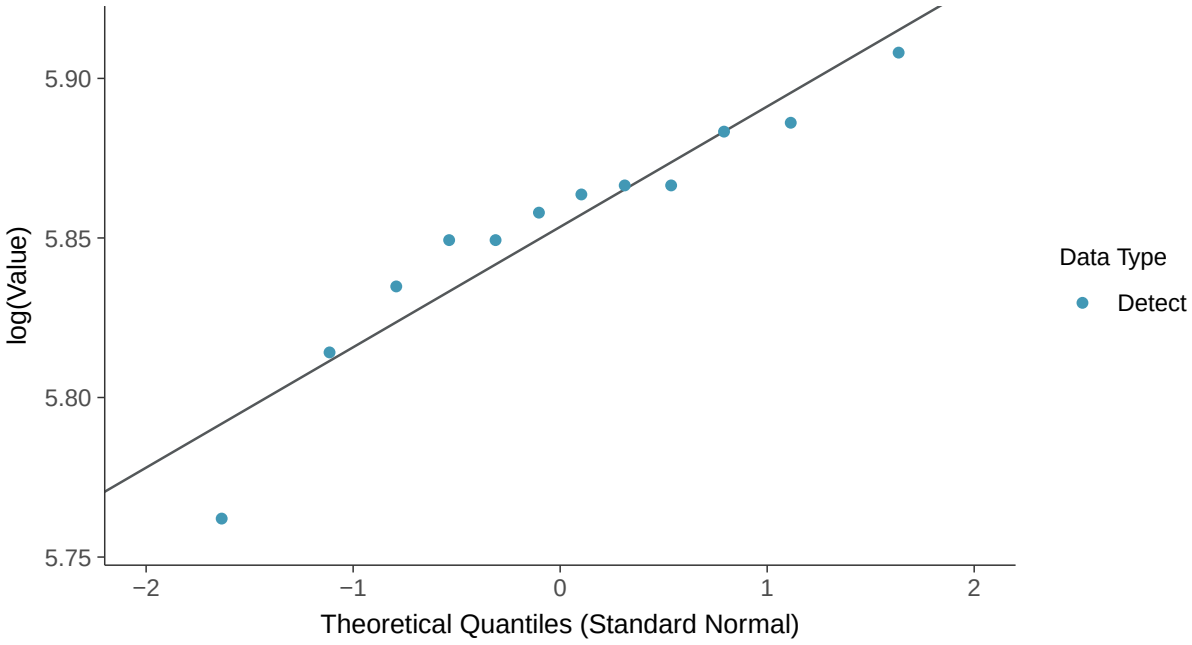
Normal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



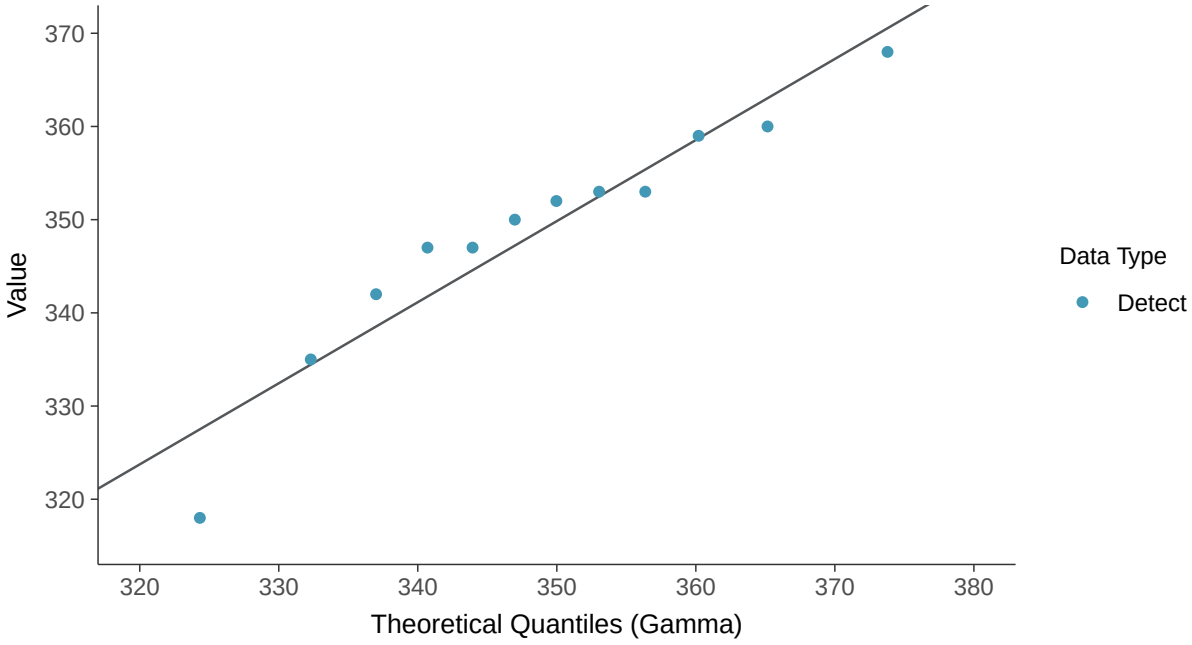
Lognormal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



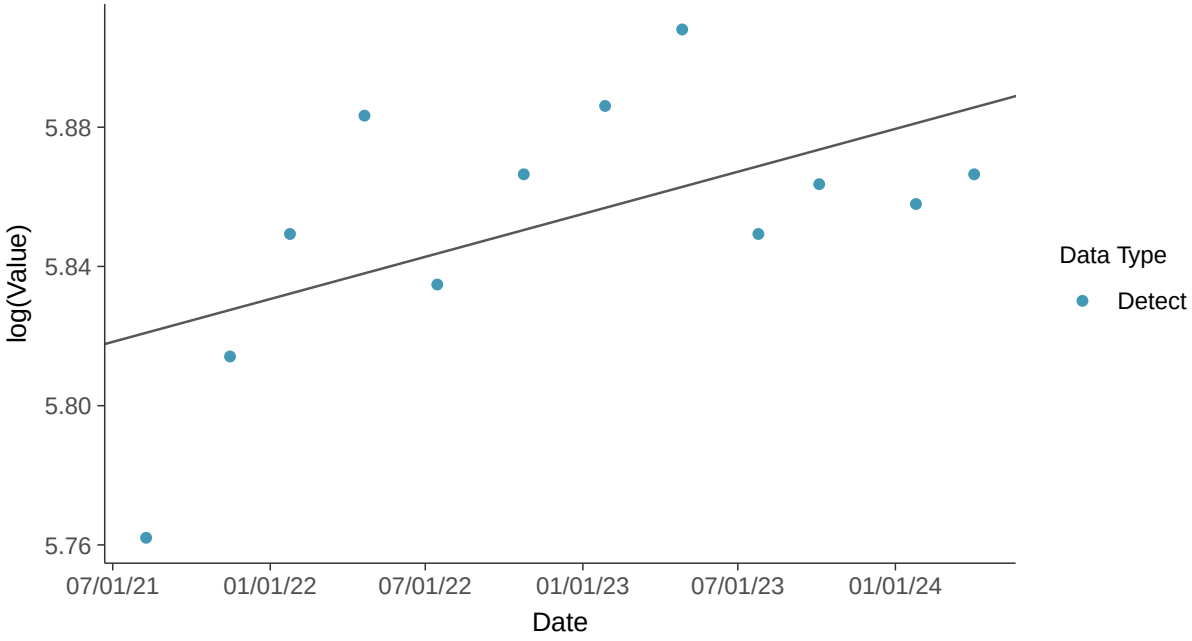
Gamma Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



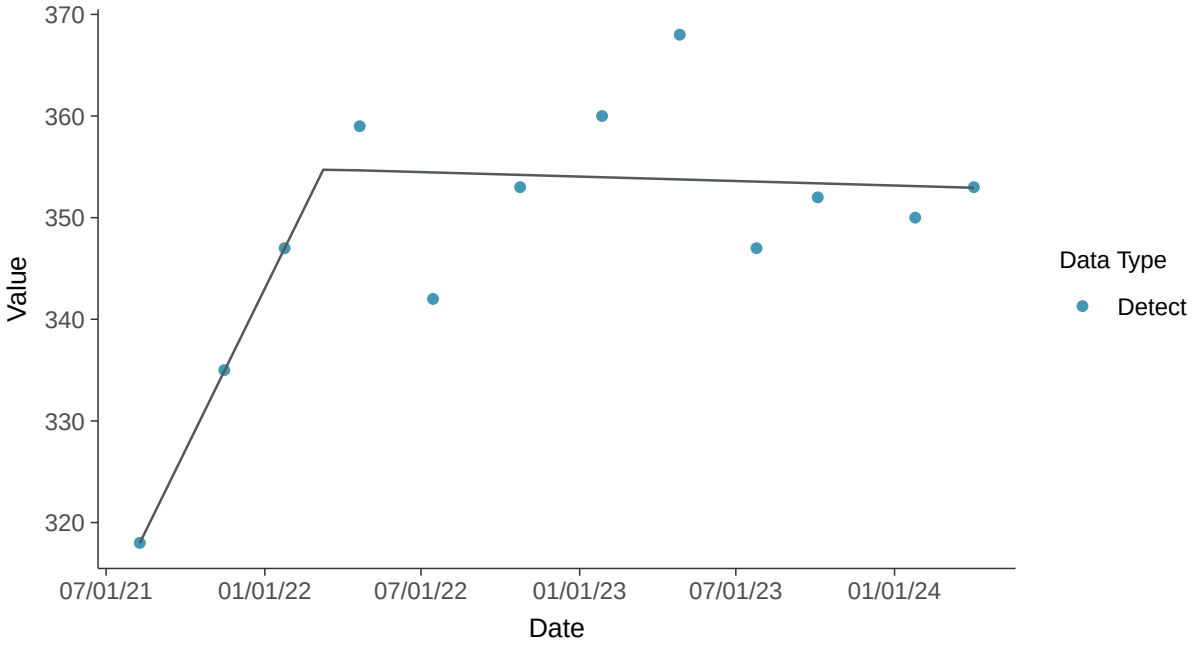
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-10 (mg/L)



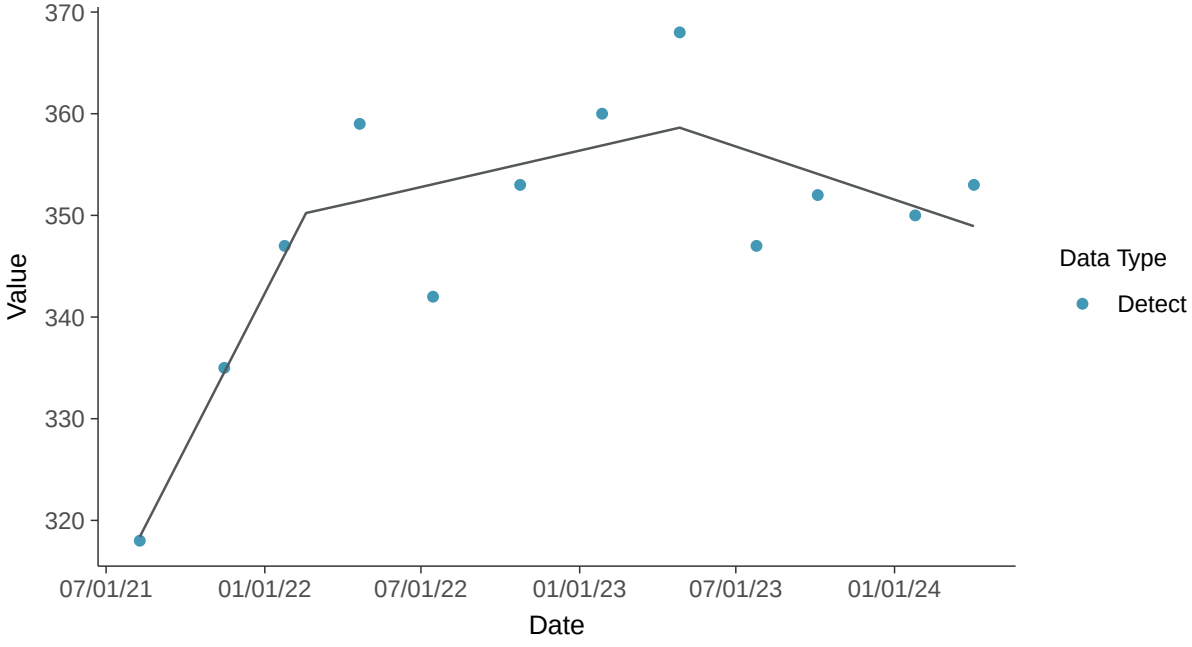
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-10 (mg/L)



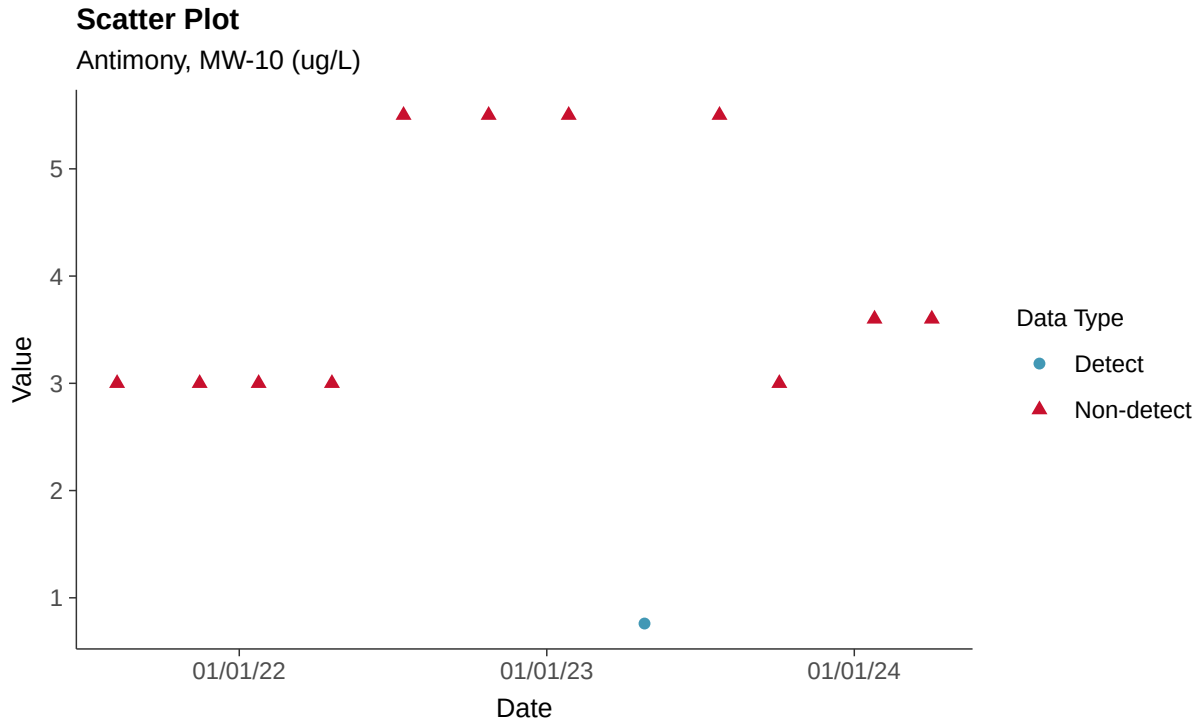
Trend Regression: Piecewise Linear-Linear-Linear

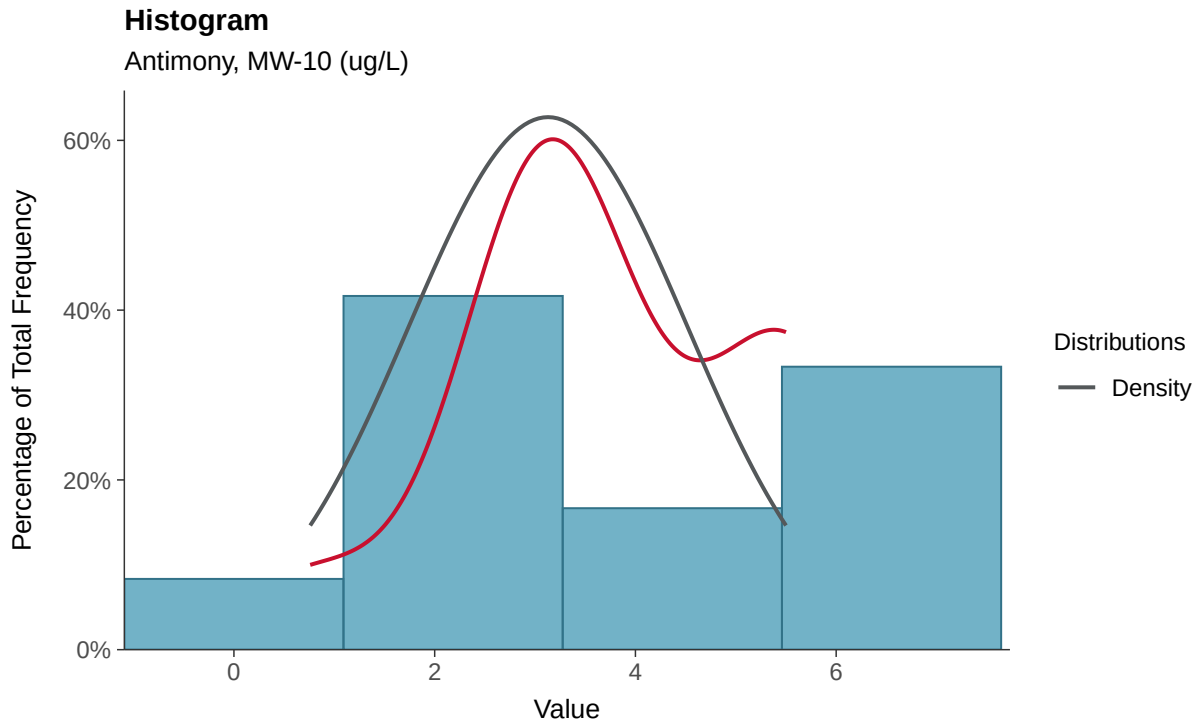
Total Dissolved Solids, MW-10 (mg/L)



App. IV: Antimony, MW-10

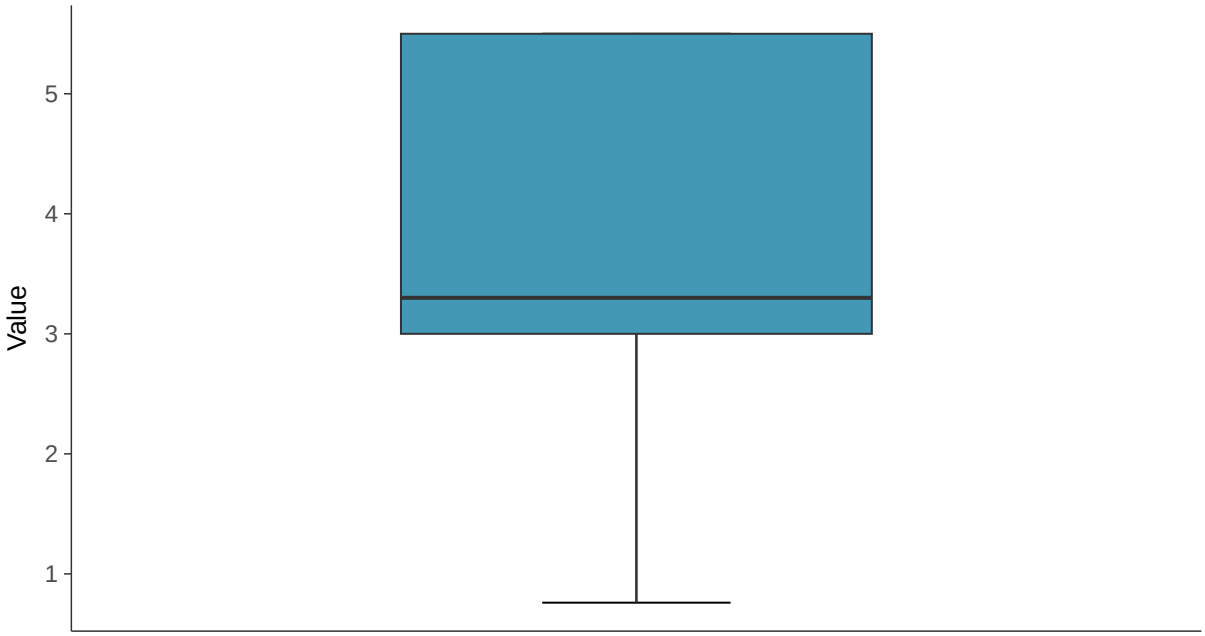
ID: 2_3_101





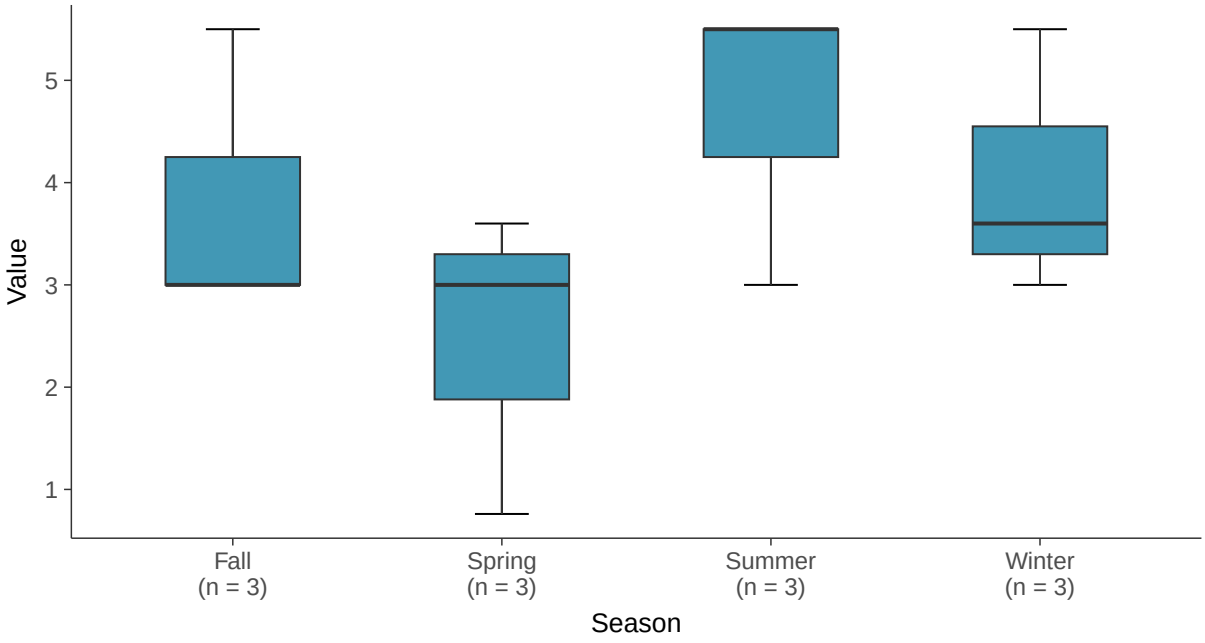
Boxplot

Antimony, MW-10 (ug/L)



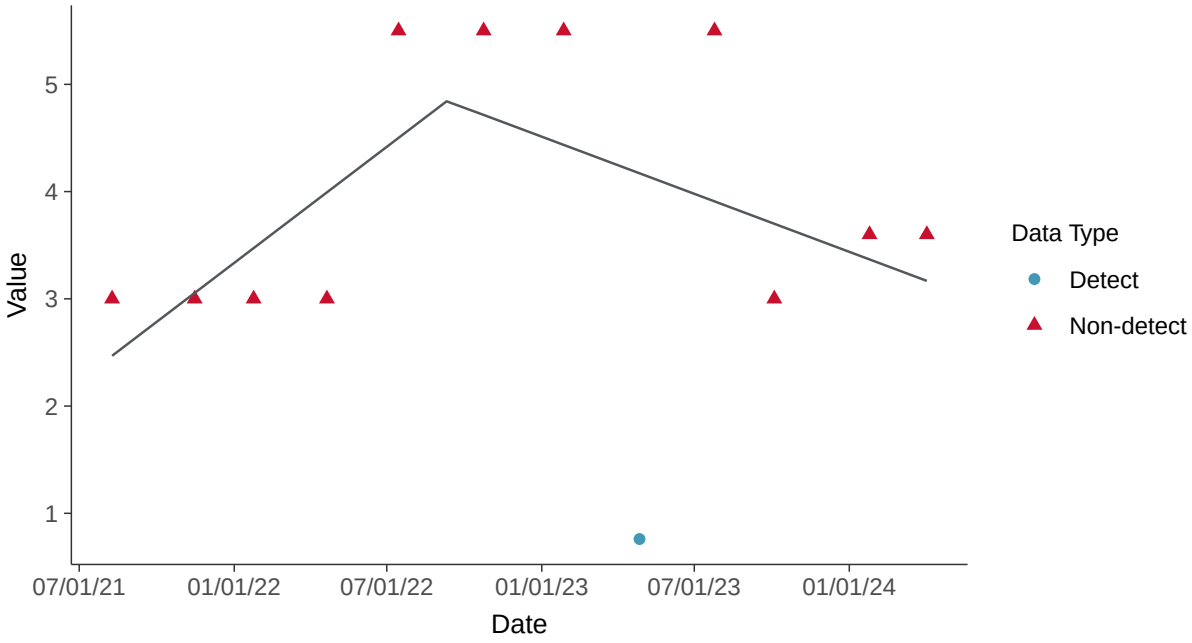
Boxplot by Season

Antimony, MW-10 (ug/L)



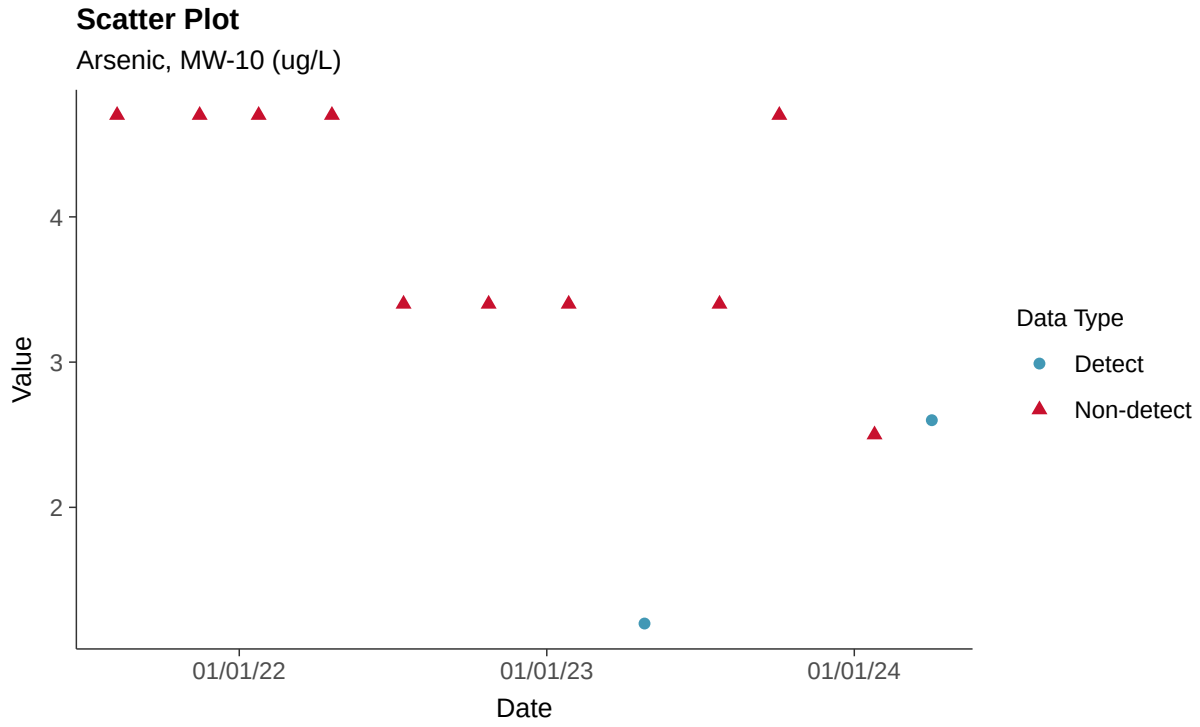
Trend Regression: Piecewise Linear-Linear

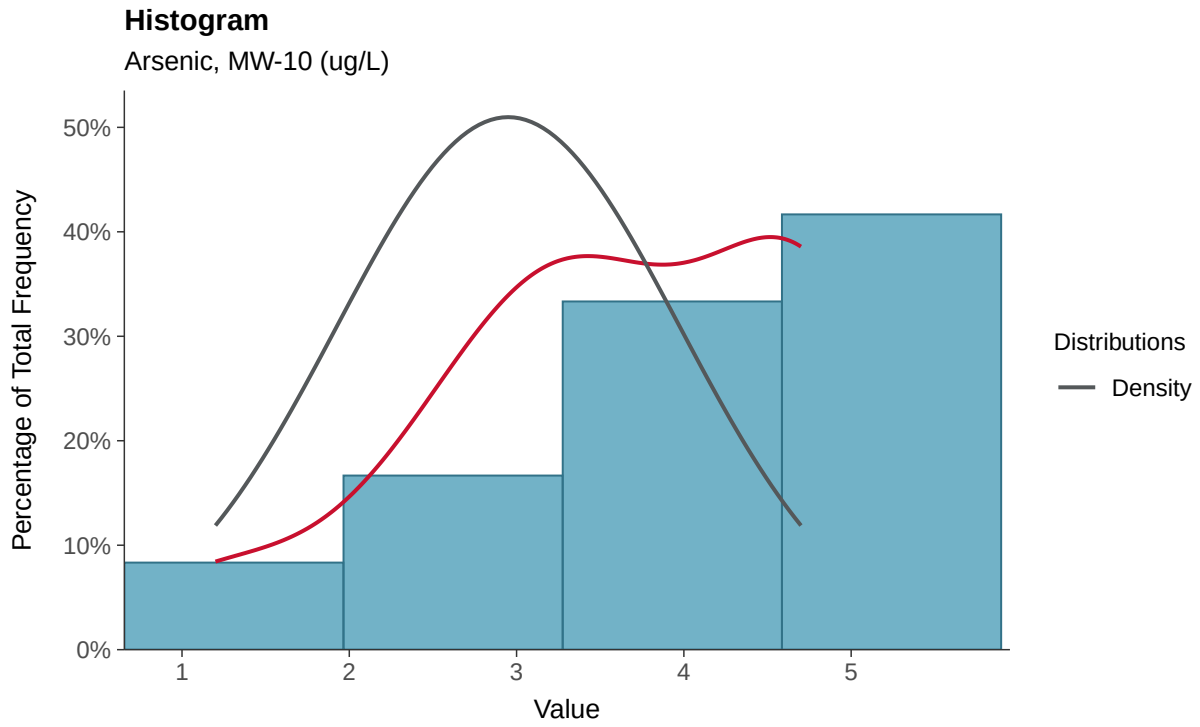
Antimony, MW-10 (ug/L)



App. IV: Arsenic, MW-10

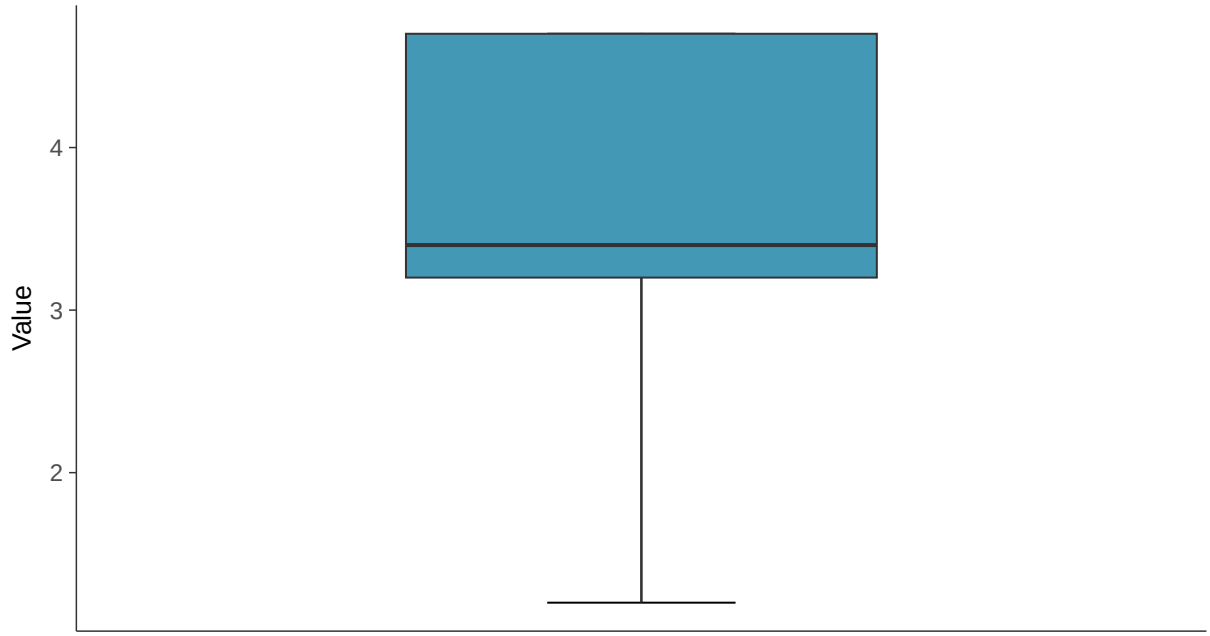
ID: 2_3_102





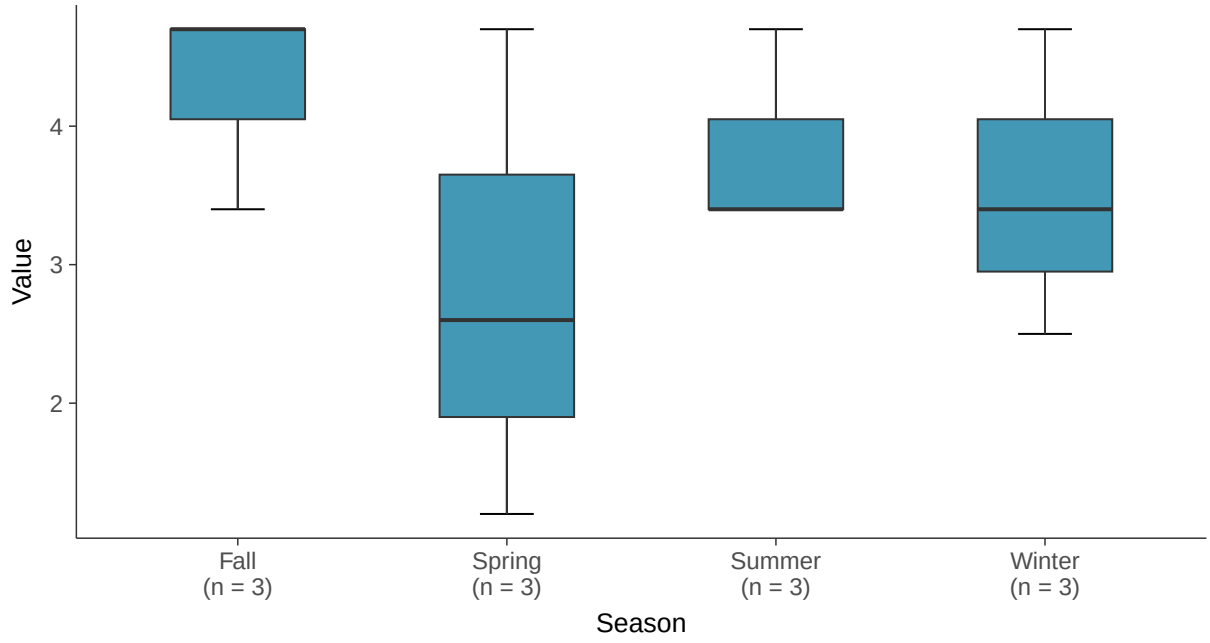
Boxplot

Arsenic, MW-10 (ug/L)



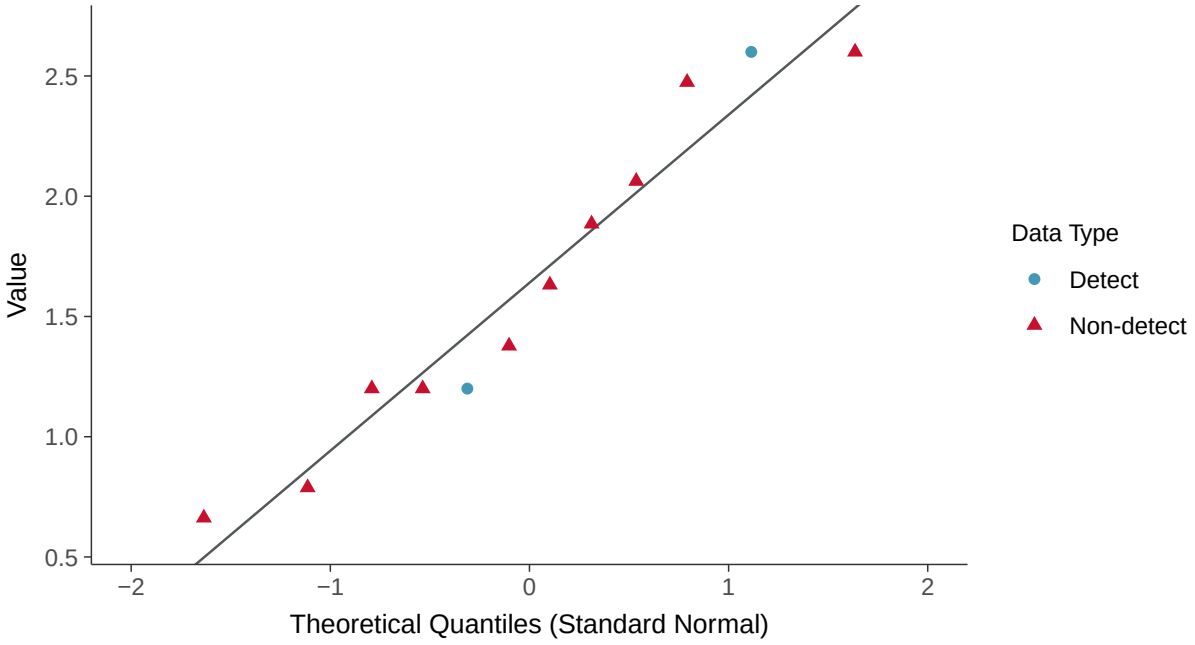
Boxplot by Season

Arsenic, MW-10 (ug/L)



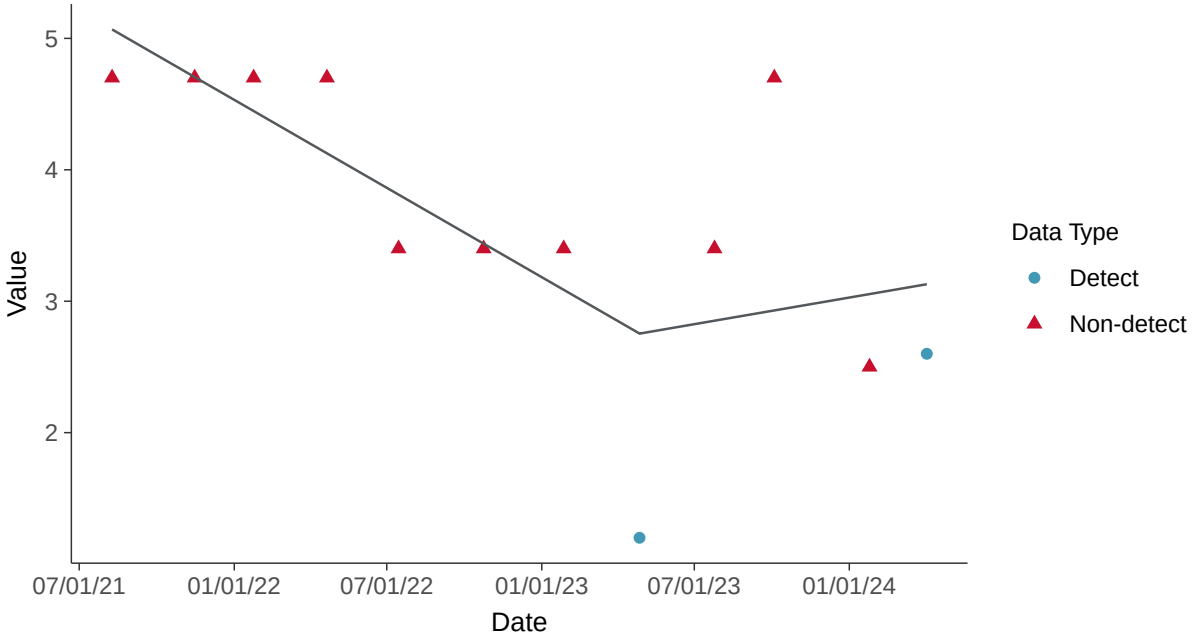
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-10 (ug/L)



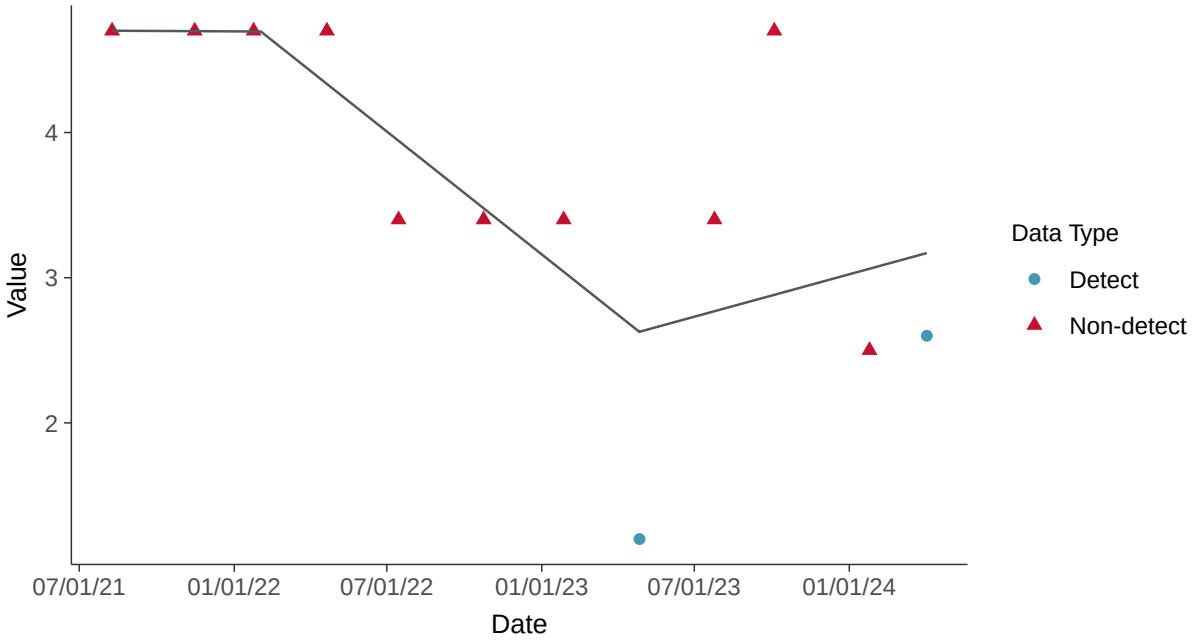
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-10 (ug/L)



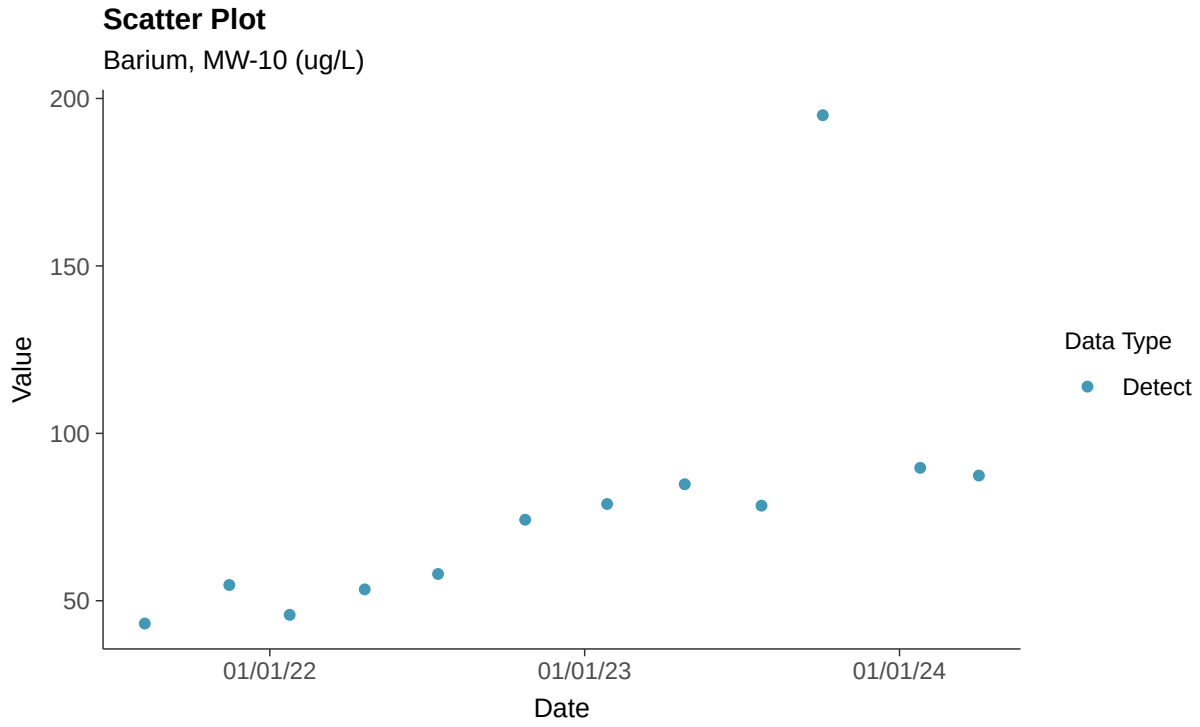
Trend Regression: Piecewise Linear-Linear-Linear

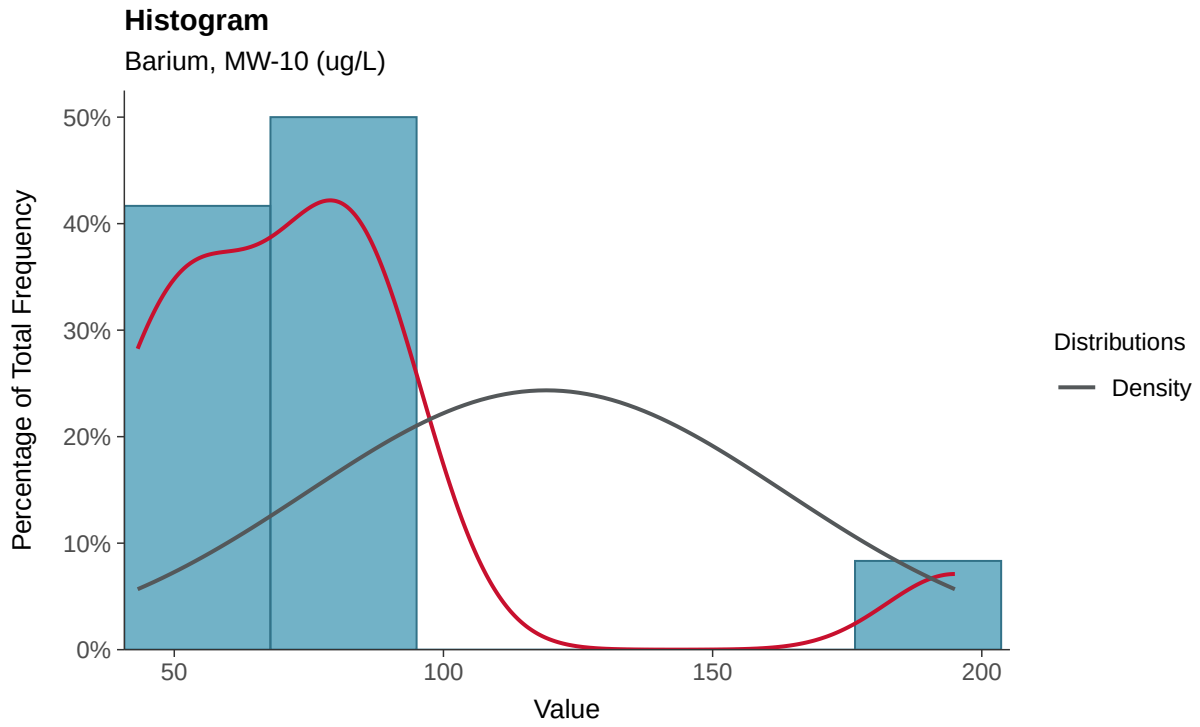
Arsenic, MW-10 (ug/L)



App. IV: Barium, MW-10

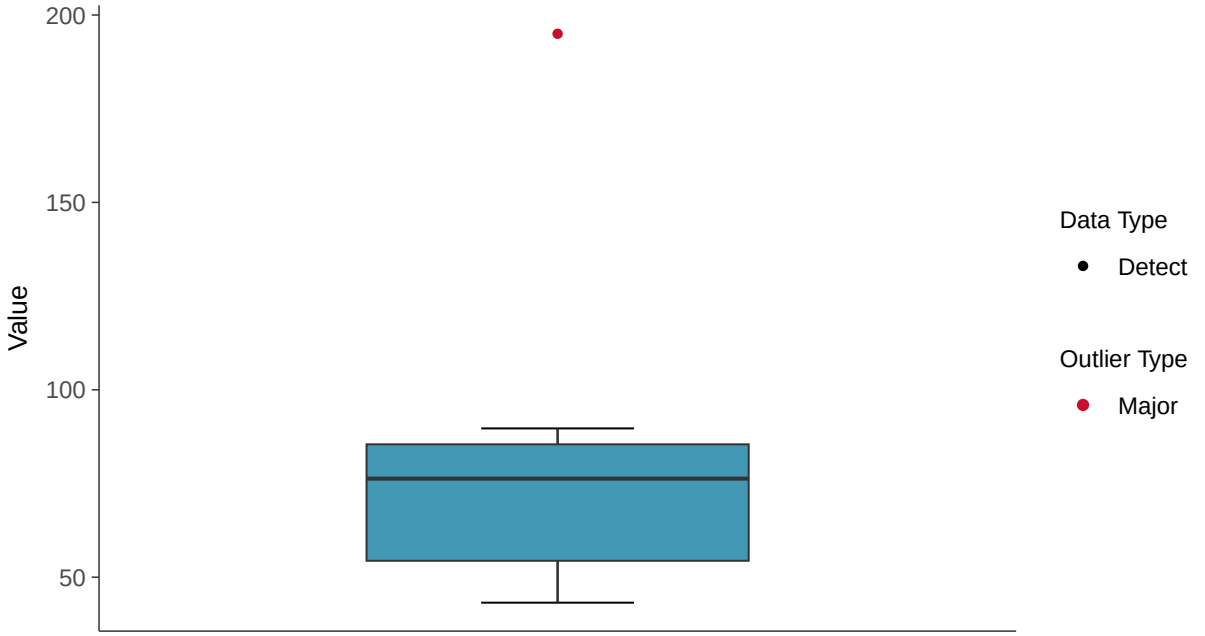
ID: 2_3_103





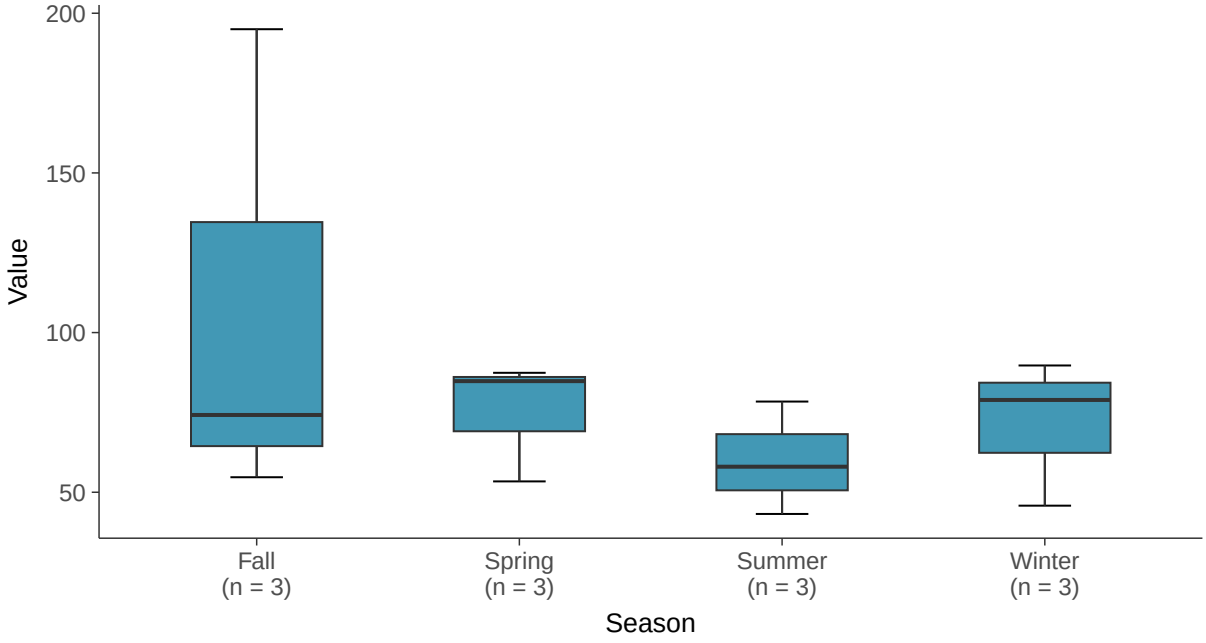
Boxplot

Barium, MW-10 (ug/L)



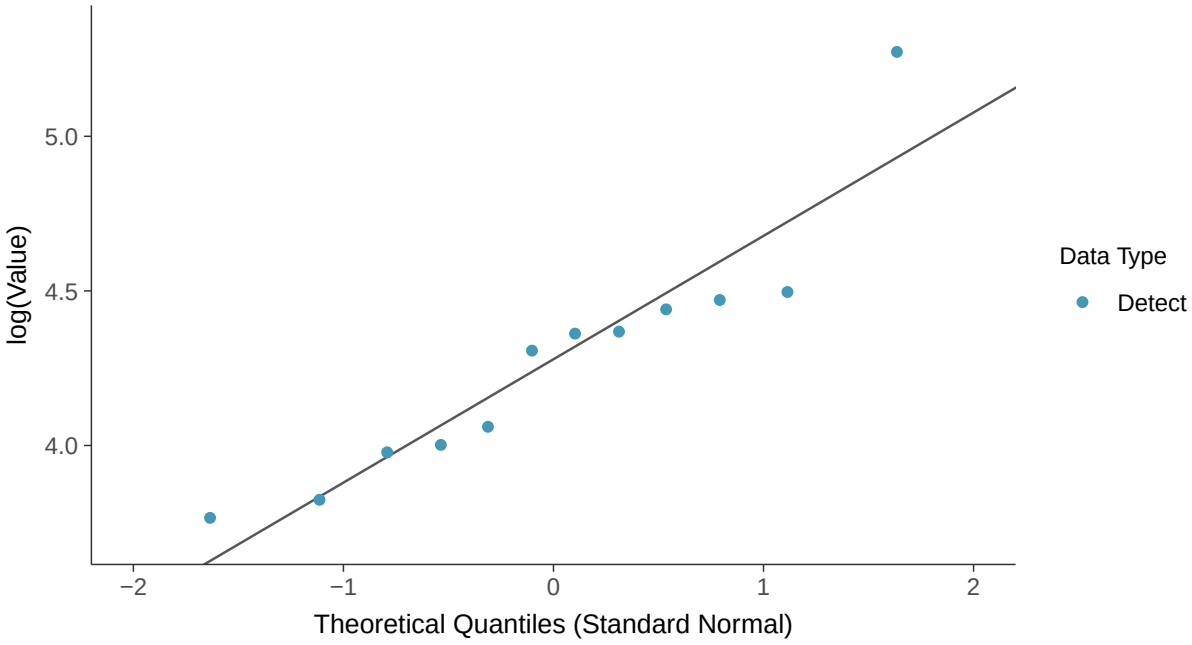
Boxplot by Season

Barium, MW-10 (ug/L)



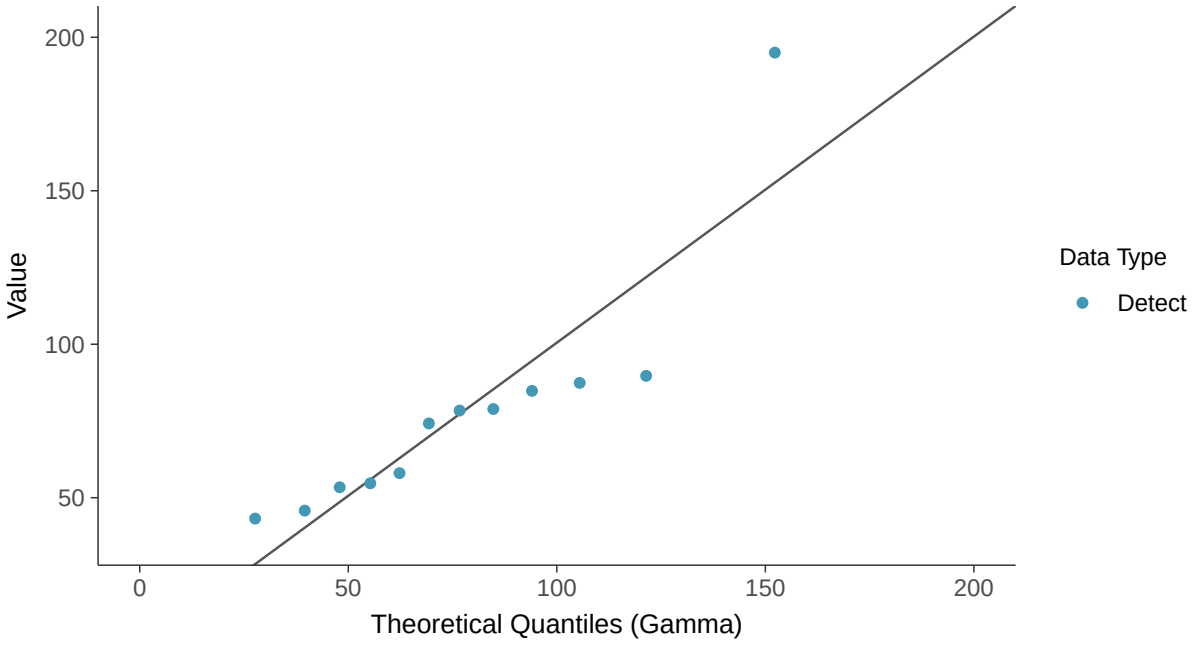
Lognormal Q-Q plot

Barium, MW-10 (ug/L)



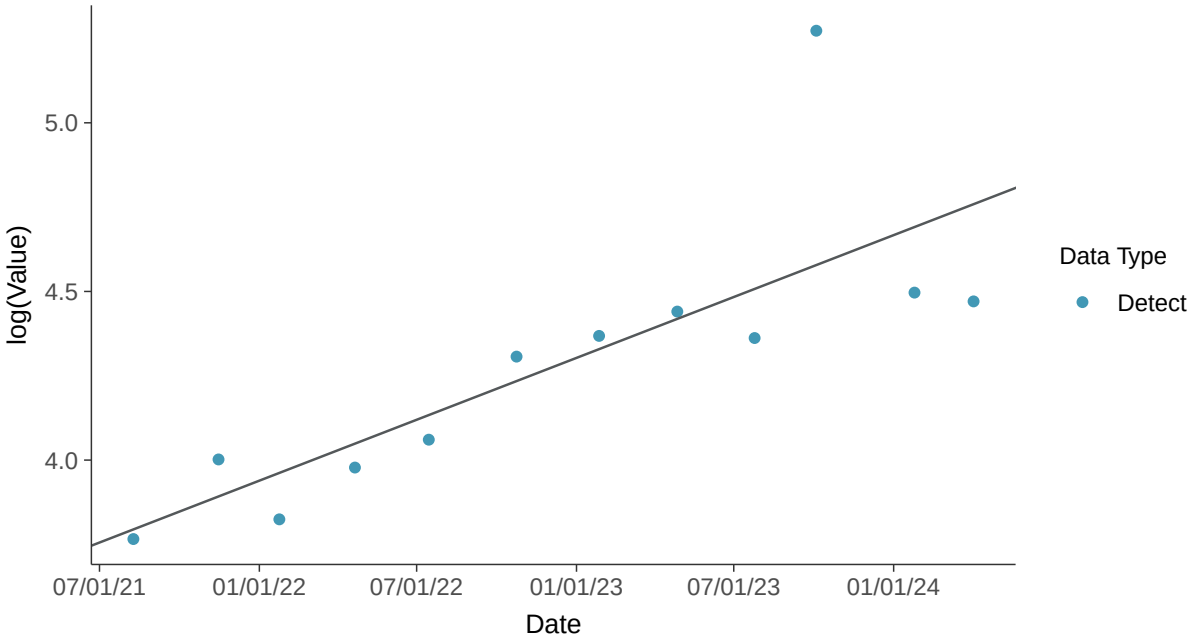
Gamma Q-Q plot

Barium, MW-10 (ug/L)



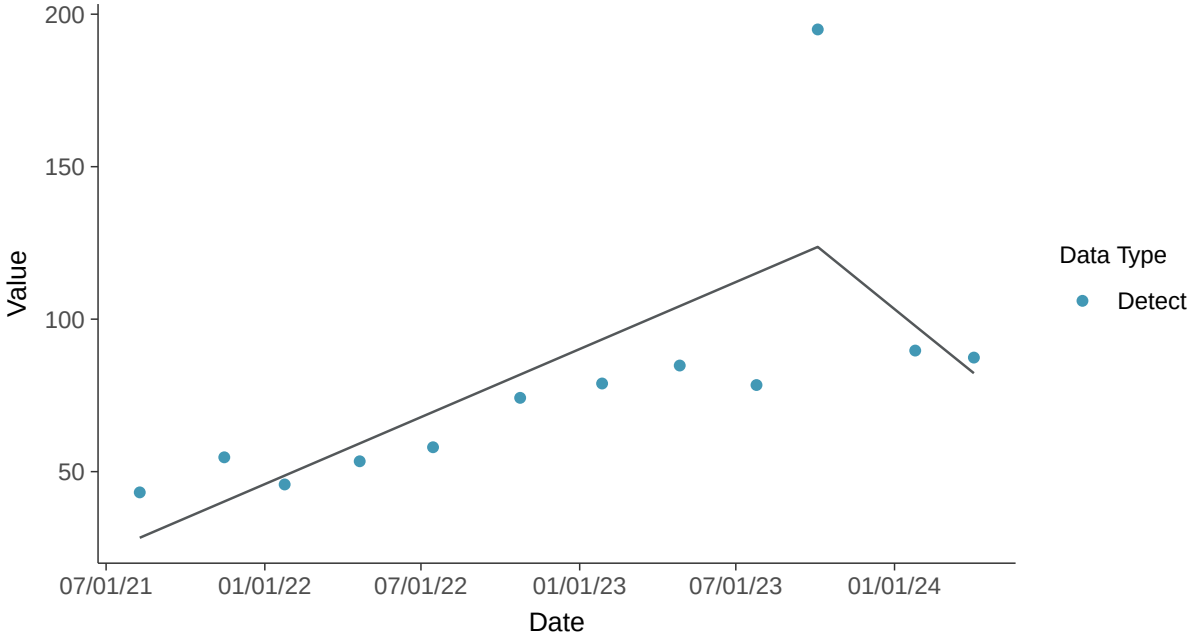
Trend Regression: Lognormal MLE

Barium, MW-10 (ug/L)



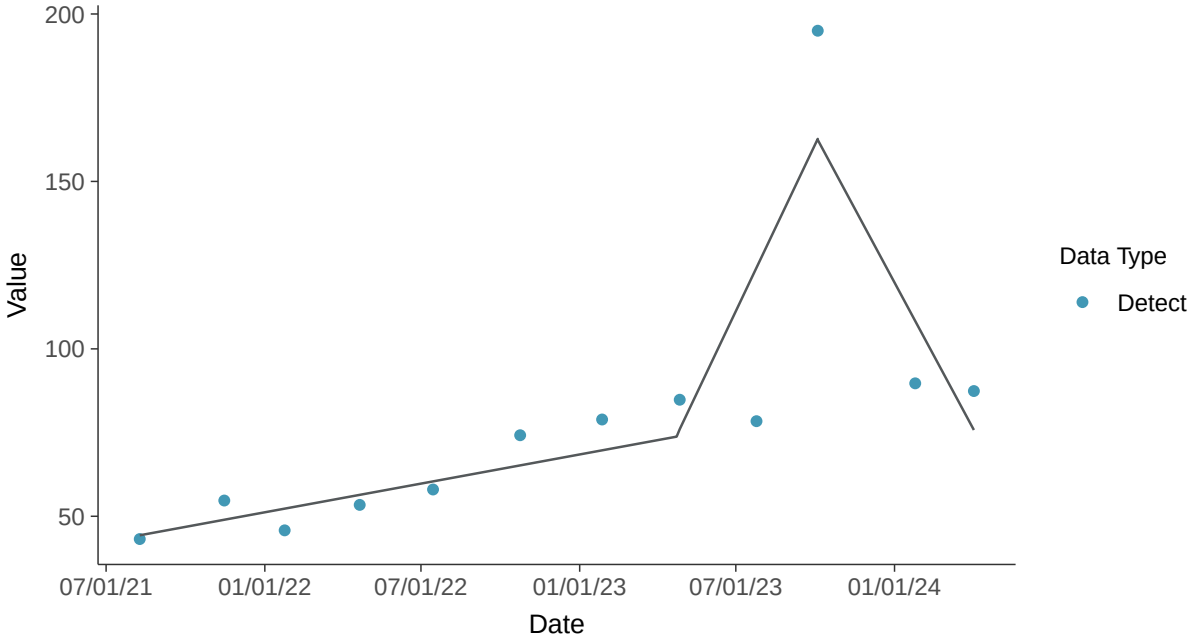
Trend Regression: Piecewise Linear-Linear

Barium, MW-10 (ug/L)



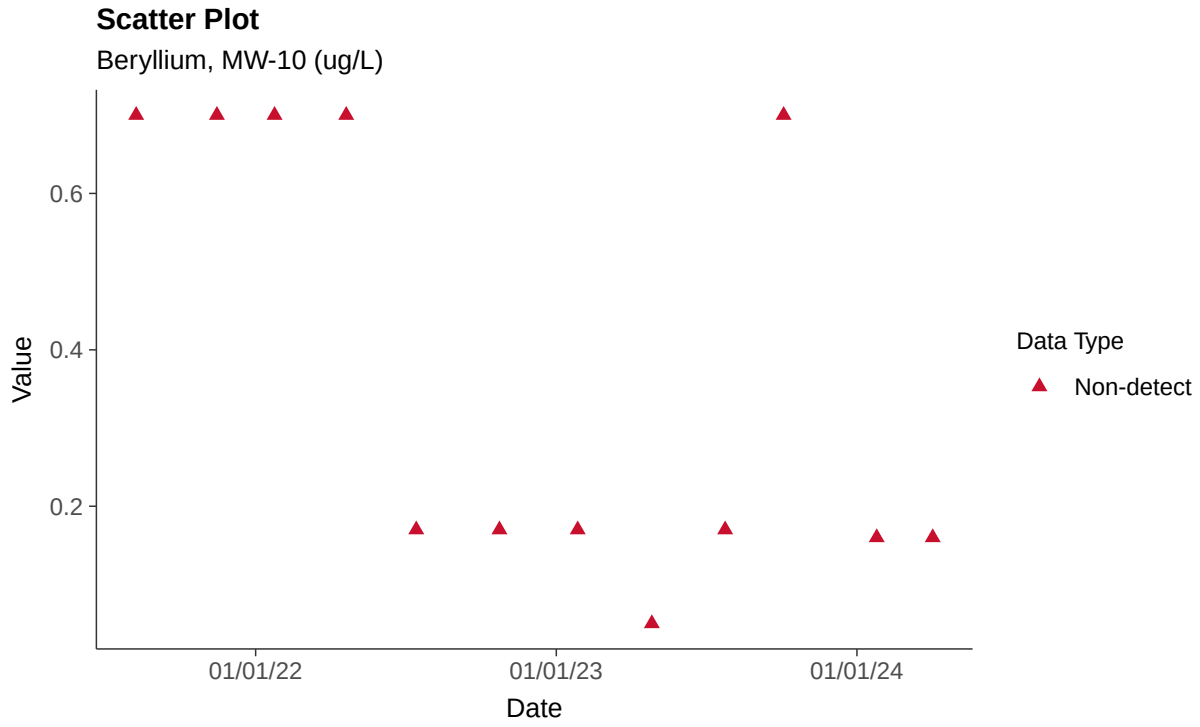
Trend Regression: Piecewise Linear-Linear-Linear

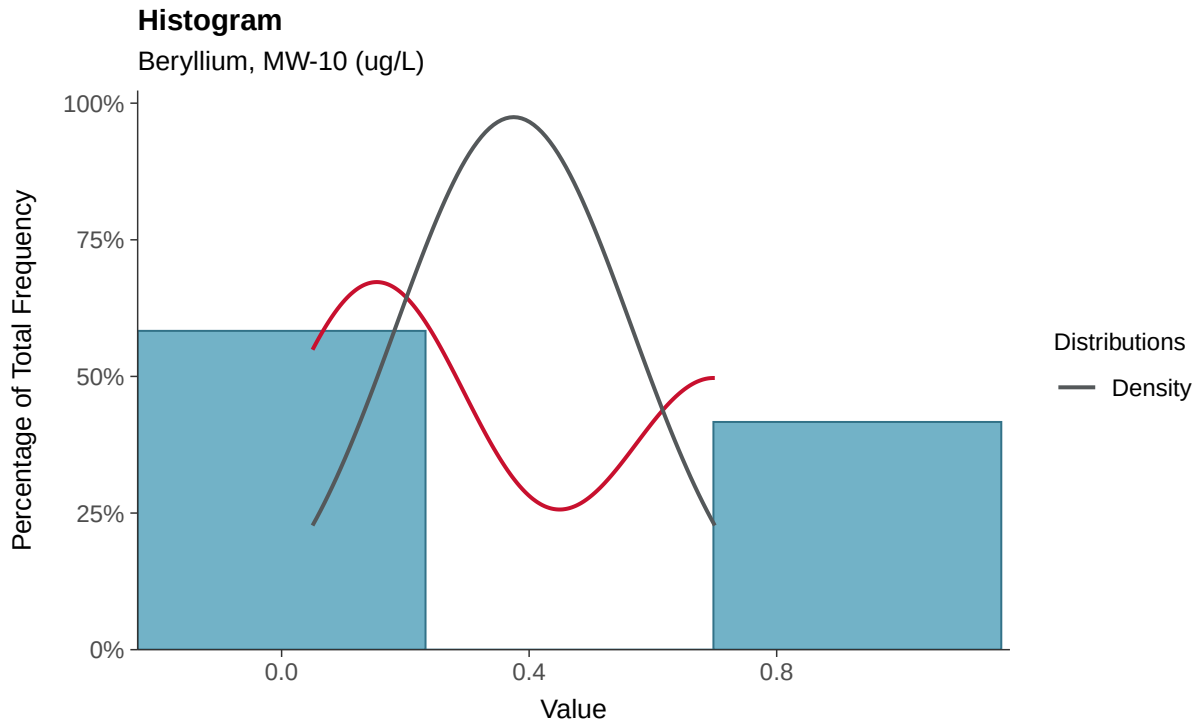
Barium, MW-10 (ug/L)



App. IV: Beryllium, MW-10

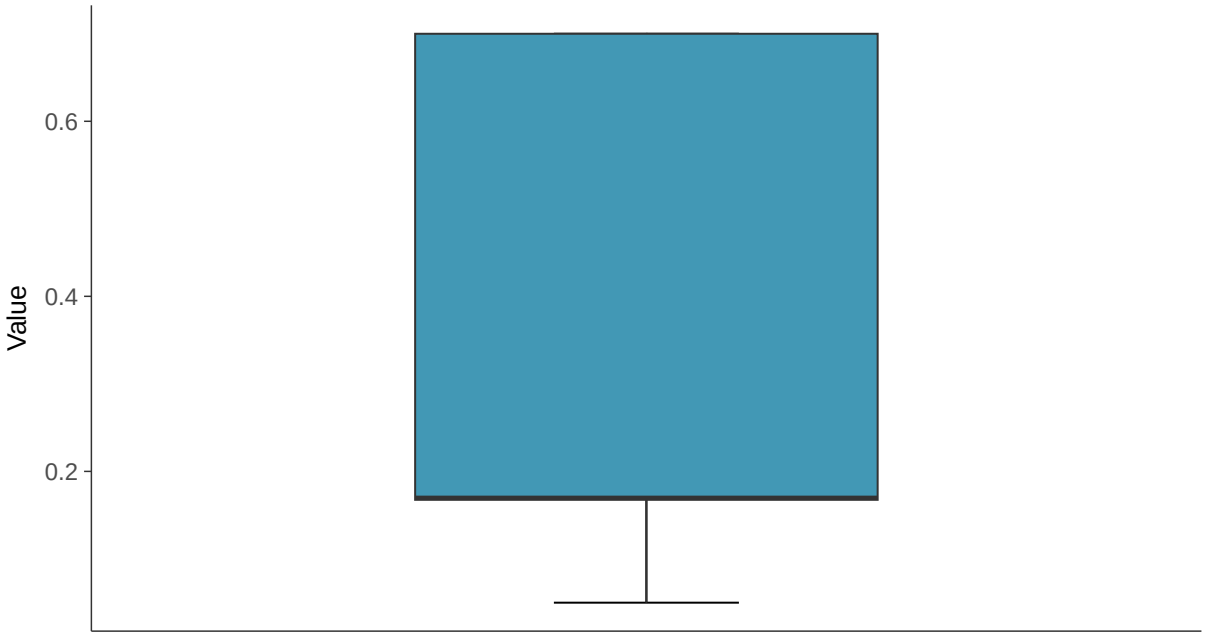
ID: 2_3_104





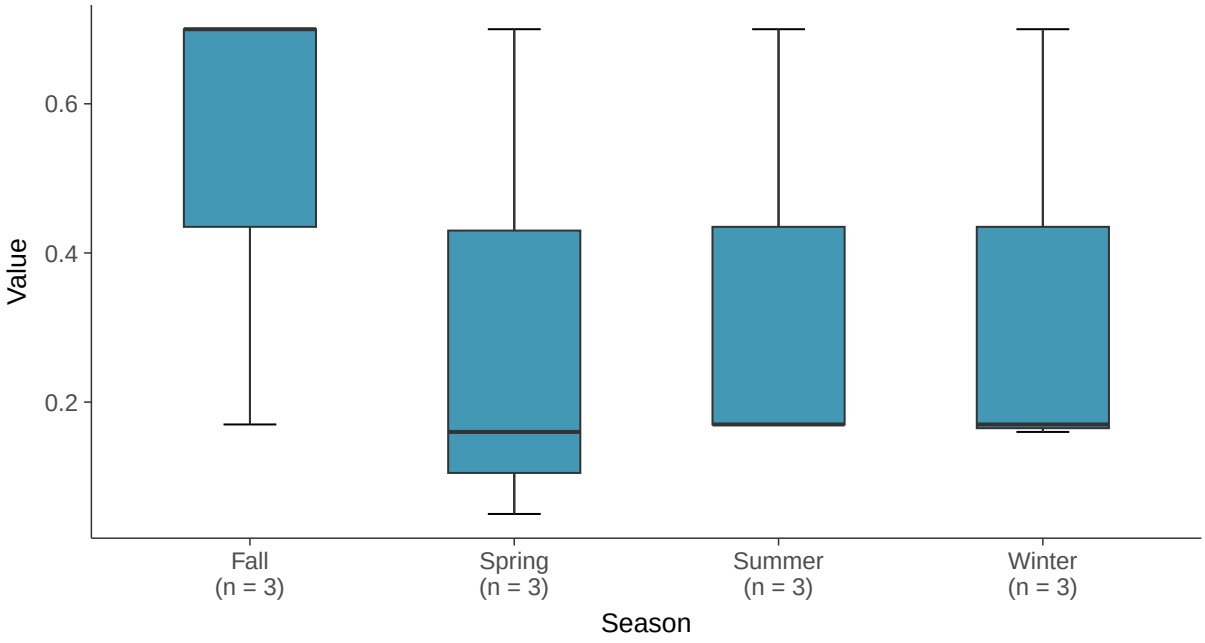
Boxplot

Beryllium, MW-10 (ug/L)



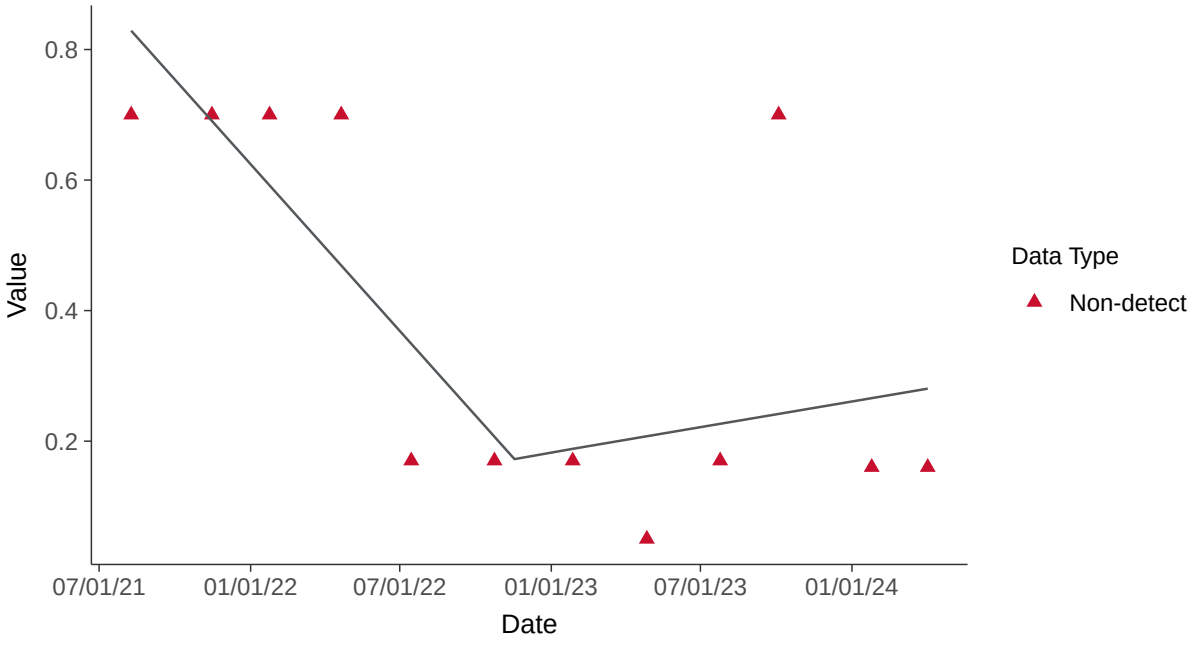
Boxplot by Season

Beryllium, MW-10 (ug/L)



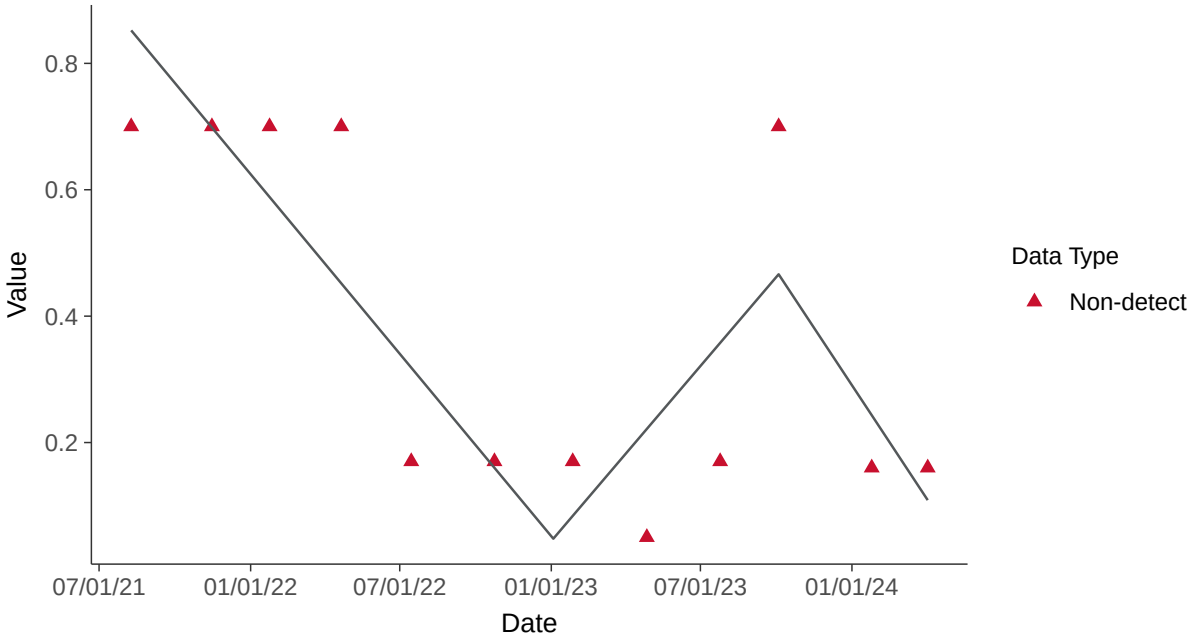
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-10 (ug/L)



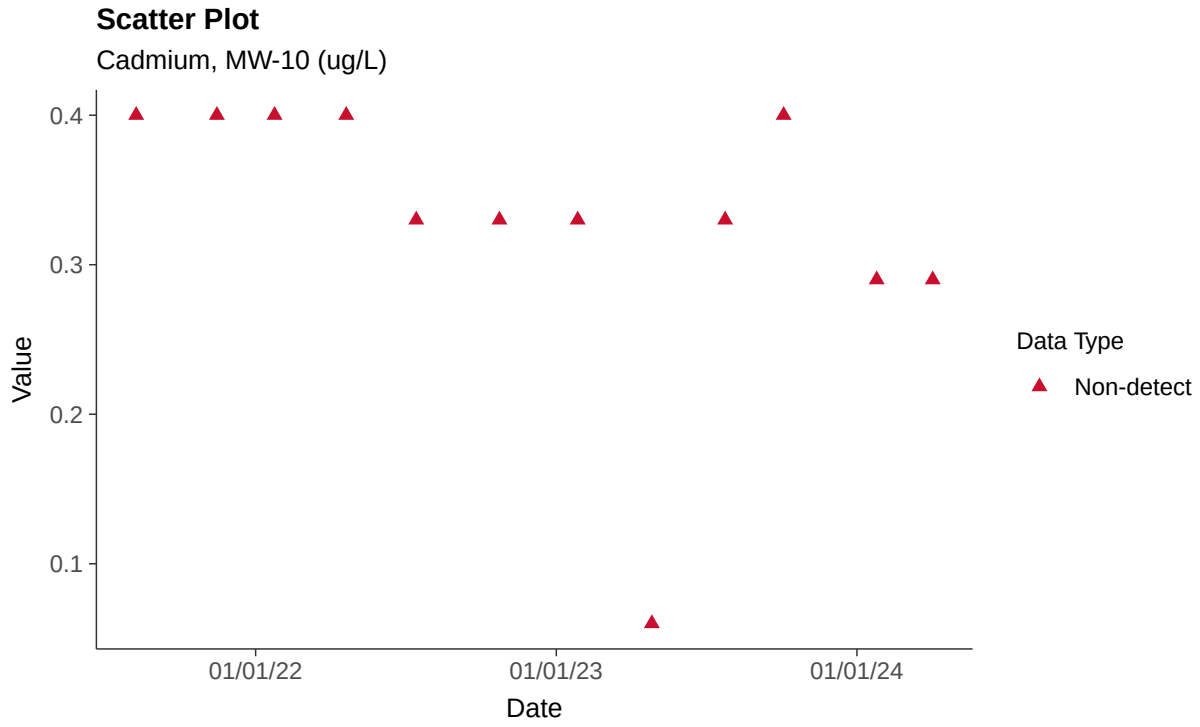
Trend Regression: Piecewise Linear-Linear-Linear

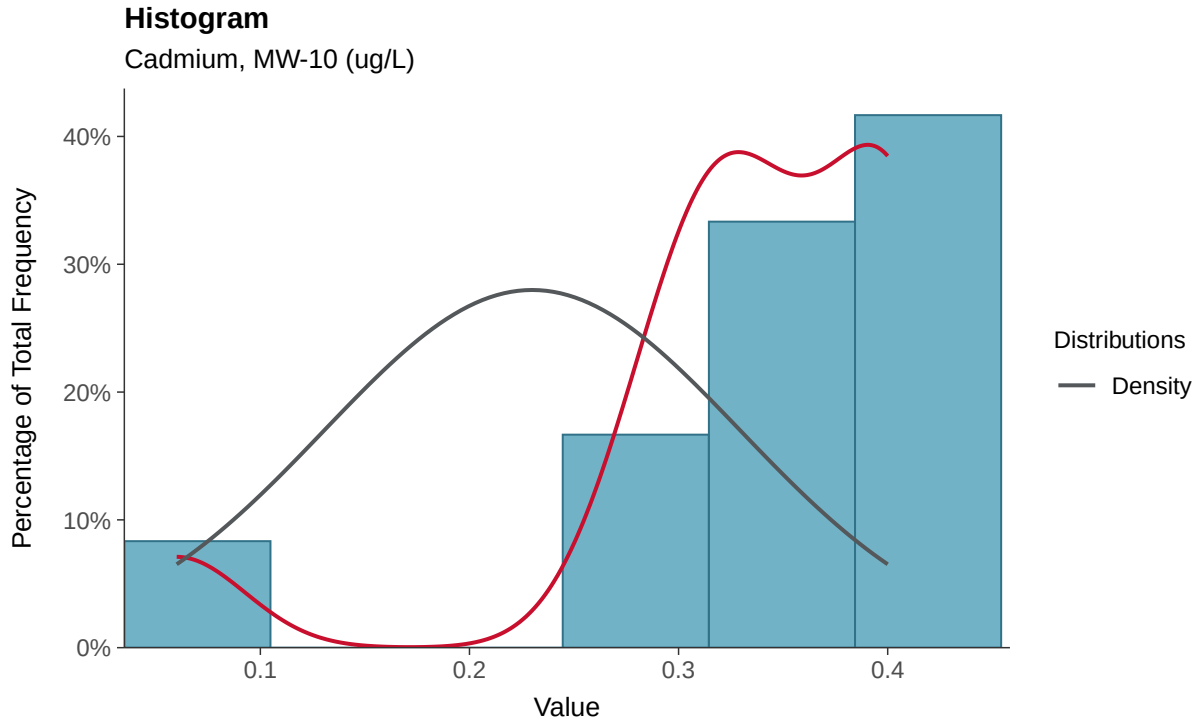
Beryllium, MW-10 (ug/L)



App. IV: Cadmium, MW-10

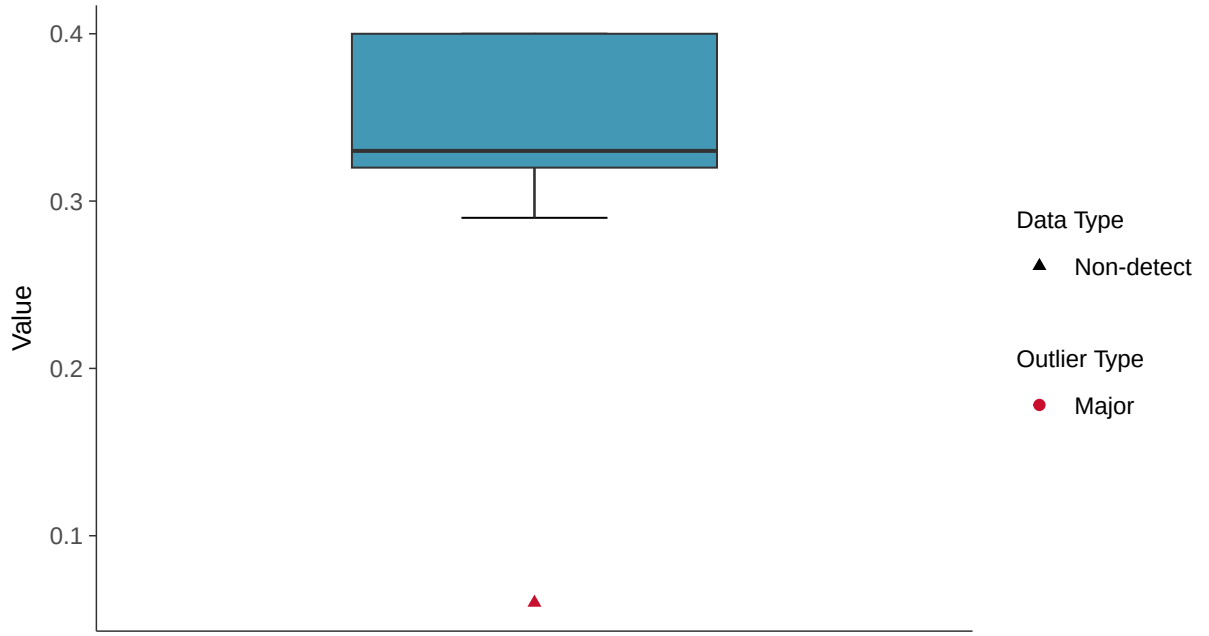
ID: 2_3_106





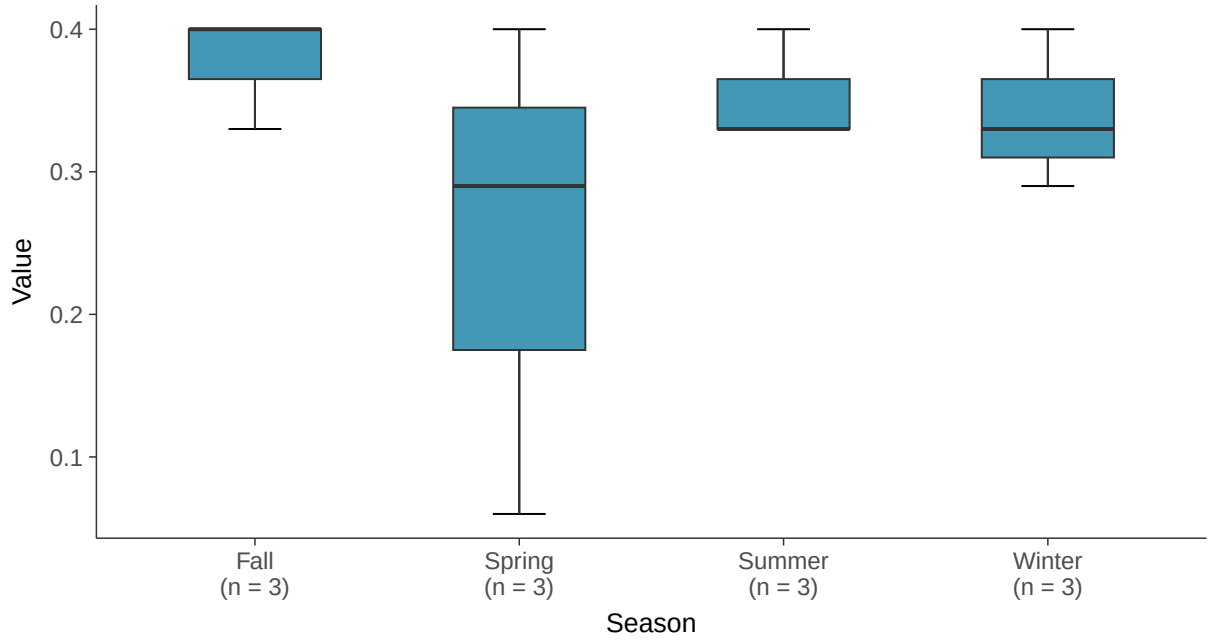
Boxplot

Cadmium, MW-10 (ug/L)



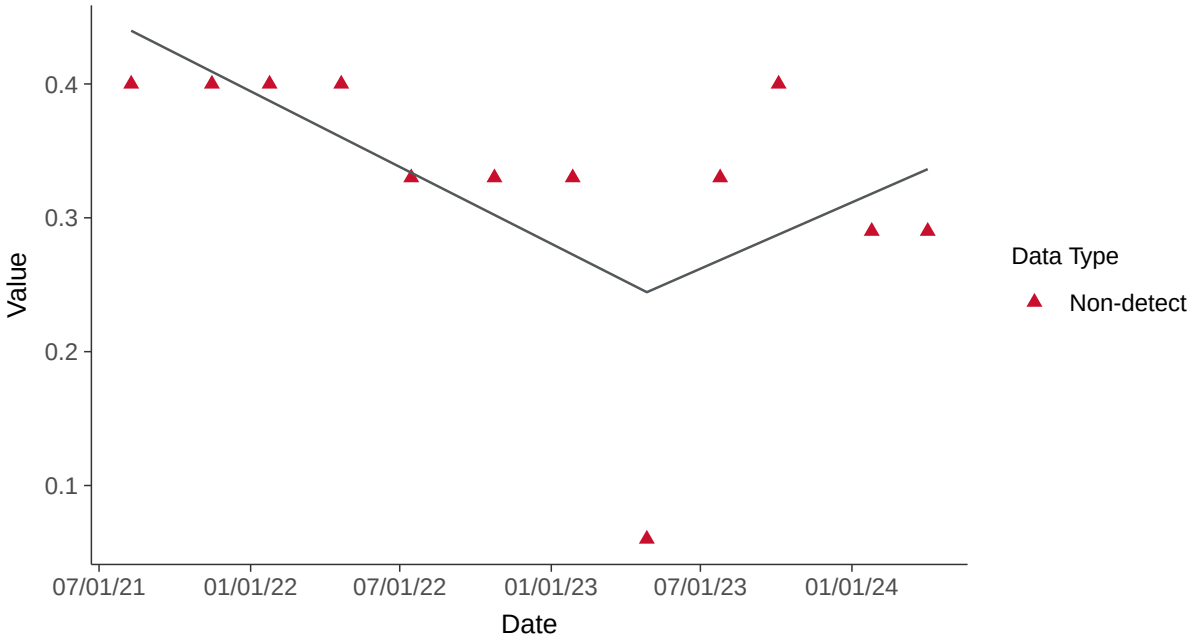
Boxplot by Season

Cadmium, MW-10 (ug/L)



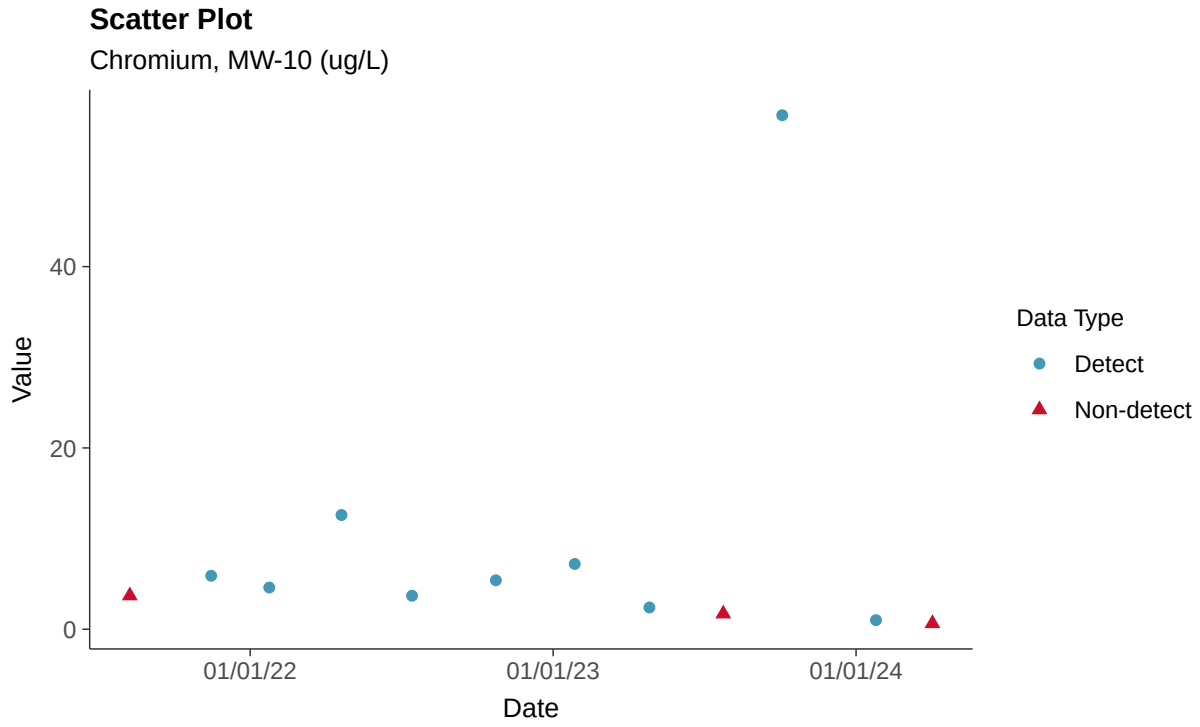
Trend Regression: Piecewise Linear-Linear

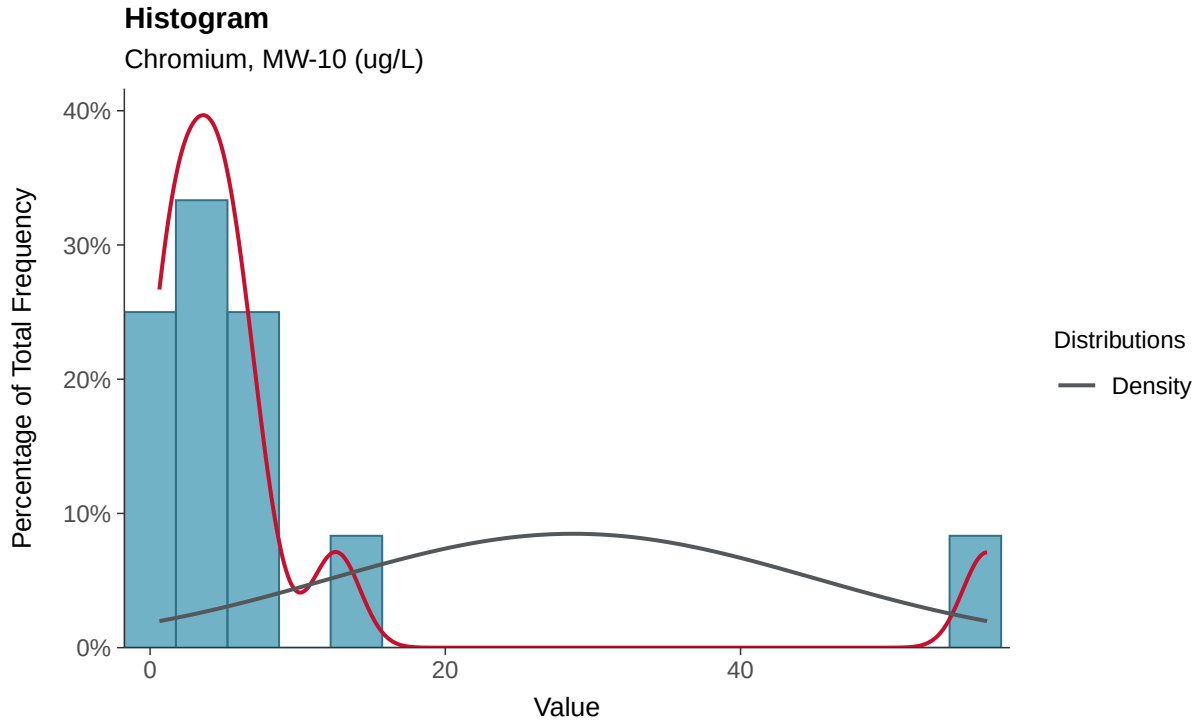
Cadmium, MW-10 (ug/L)



App. IV: Chromium, MW-10

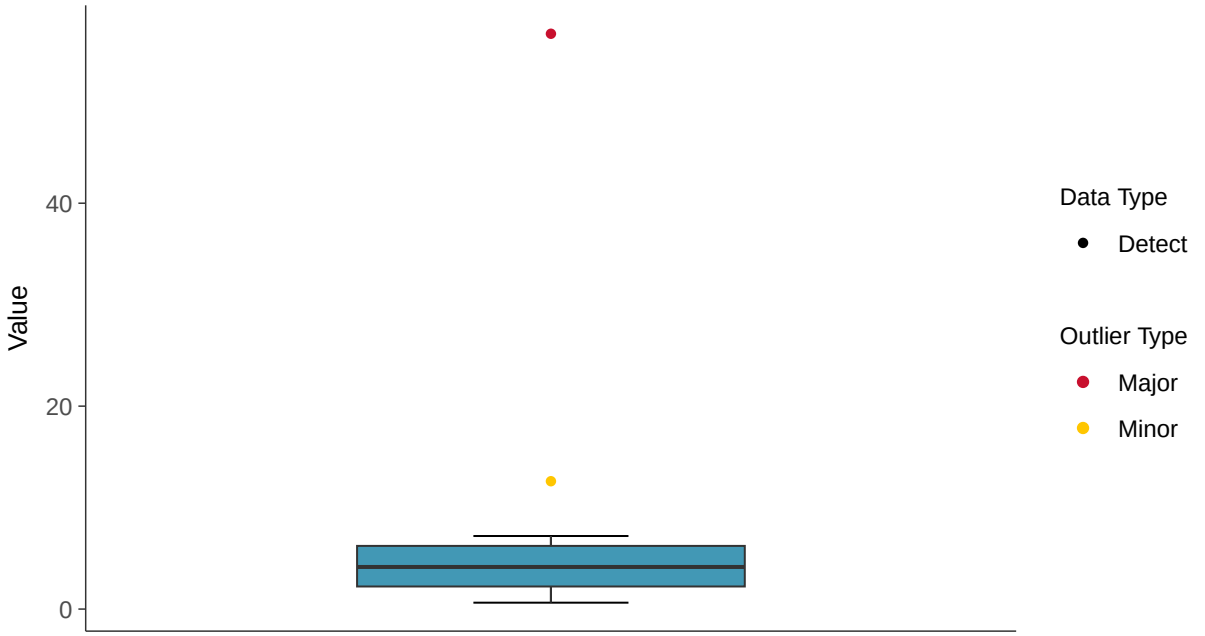
ID: 2_3_109





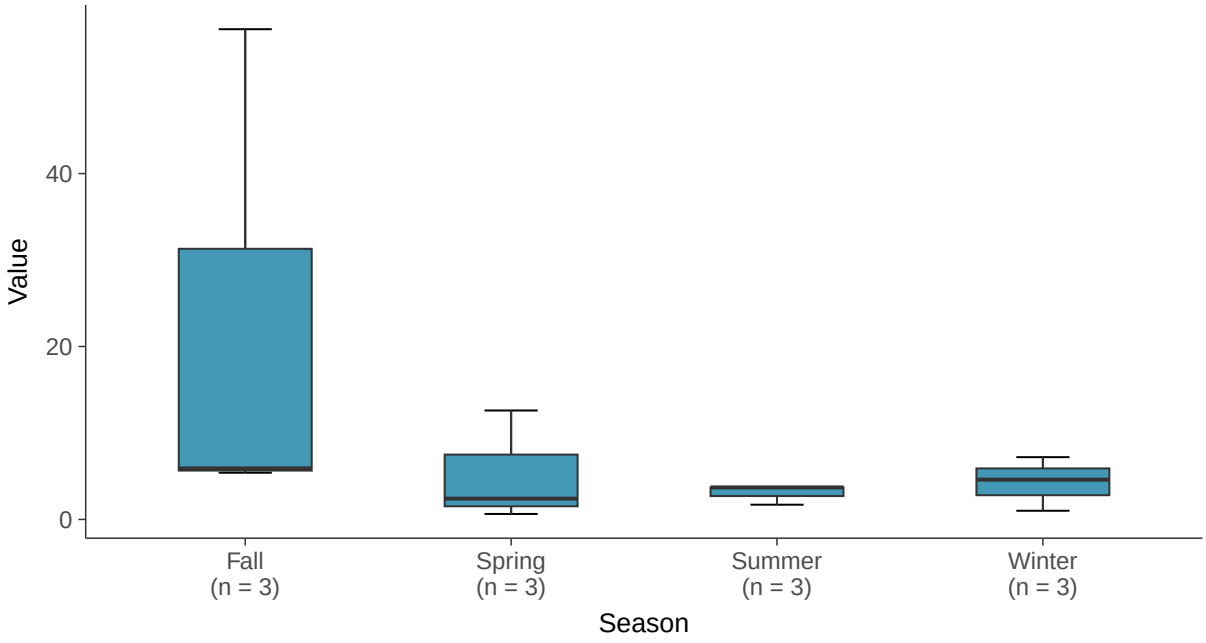
Boxplot

Chromium, MW-10 (ug/L)



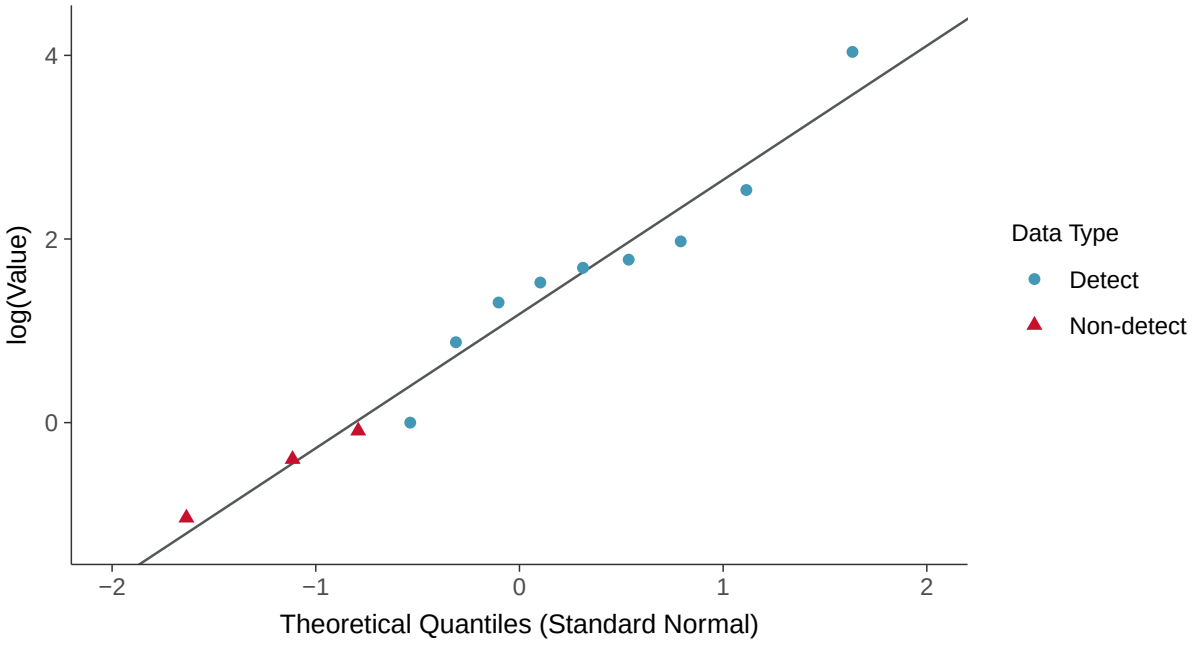
Boxplot by Season

Chromium, MW-10 (ug/L)



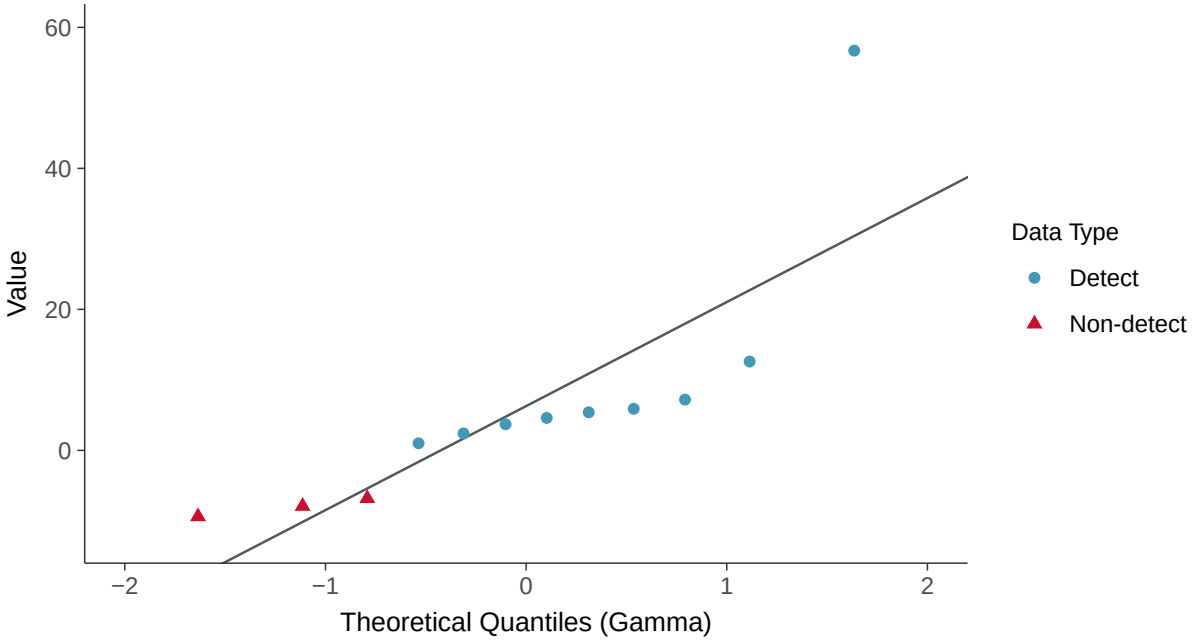
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-10 (ug/L)



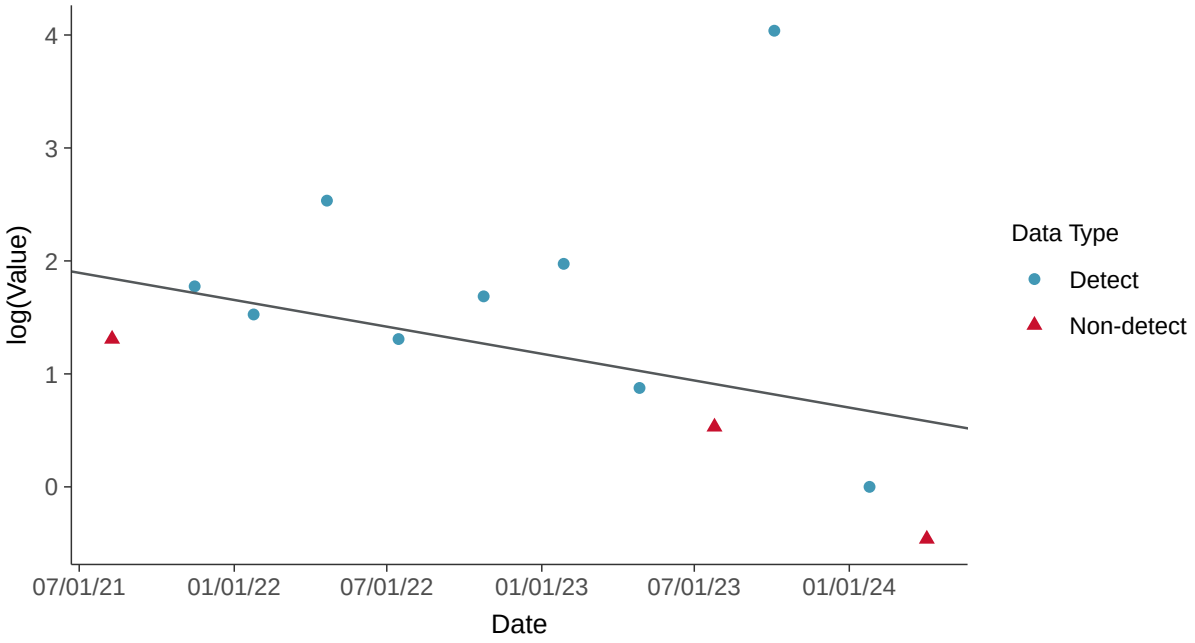
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-10 (ug/L)



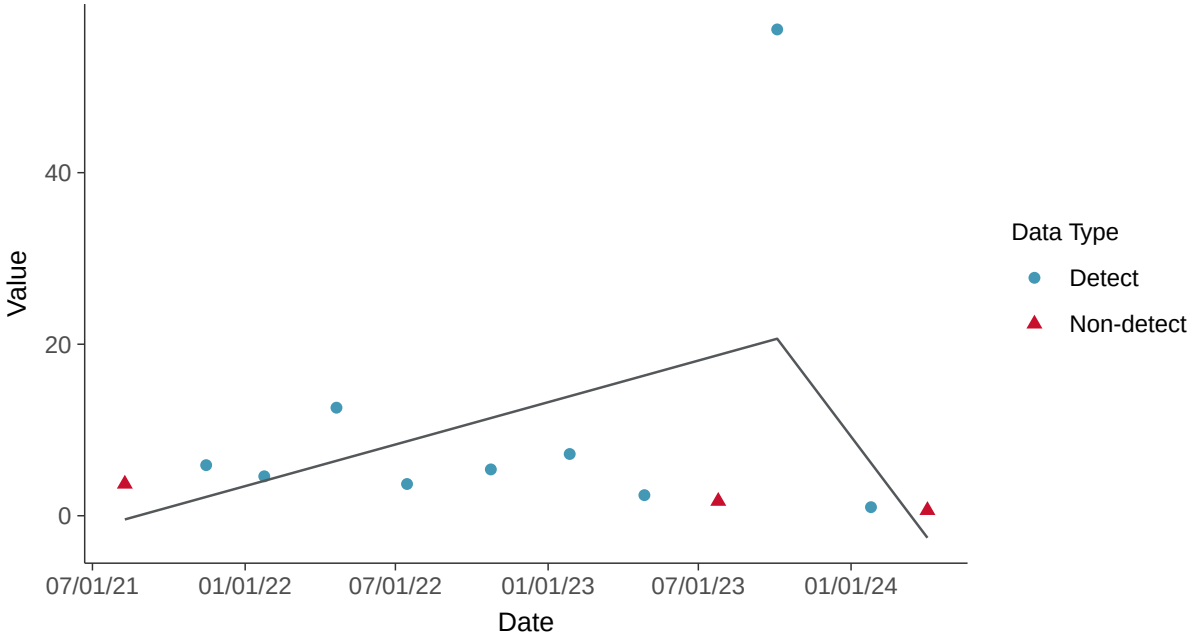
Trend Regression: Lognormal MLE

Chromium, MW-10 (ug/L)



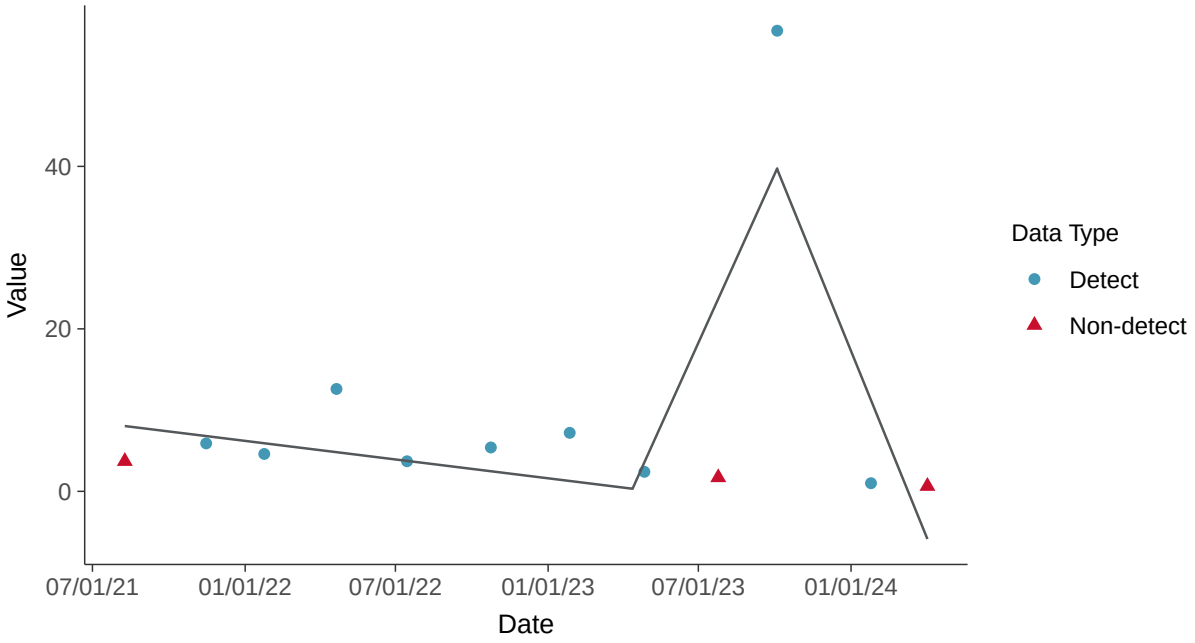
Trend Regression: Piecewise Linear-Linear

Chromium, MW-10 (ug/L)



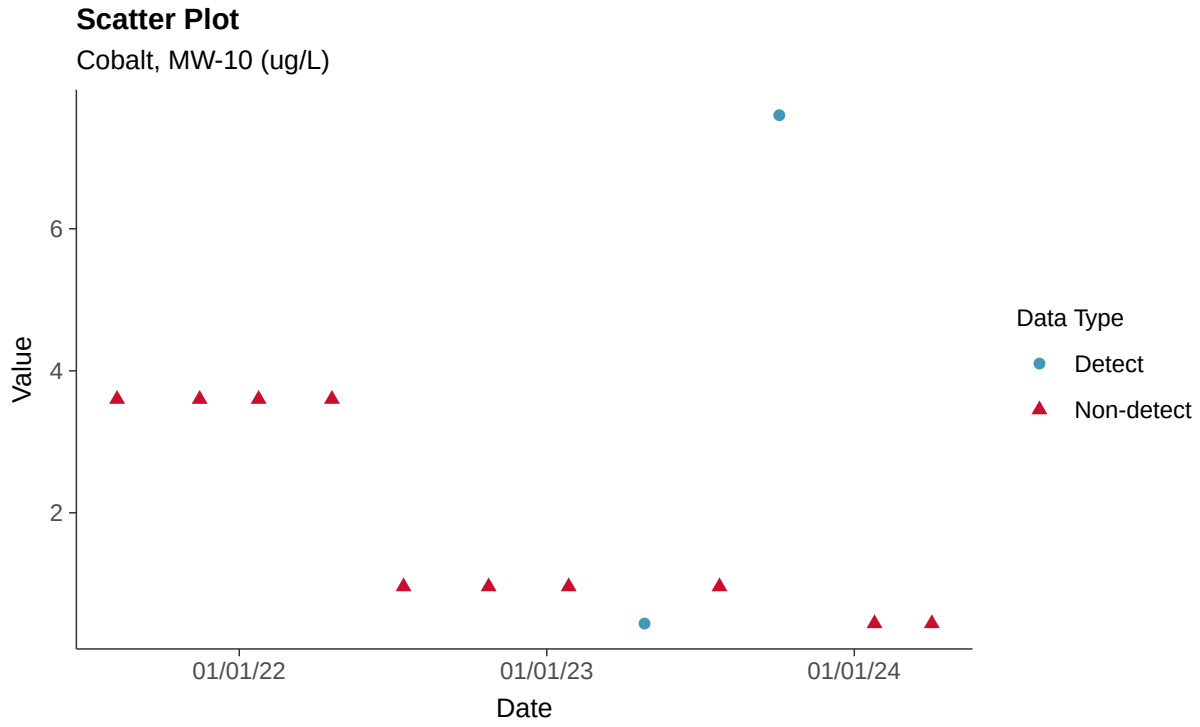
Trend Regression: Piecewise Linear-Linear-Linear

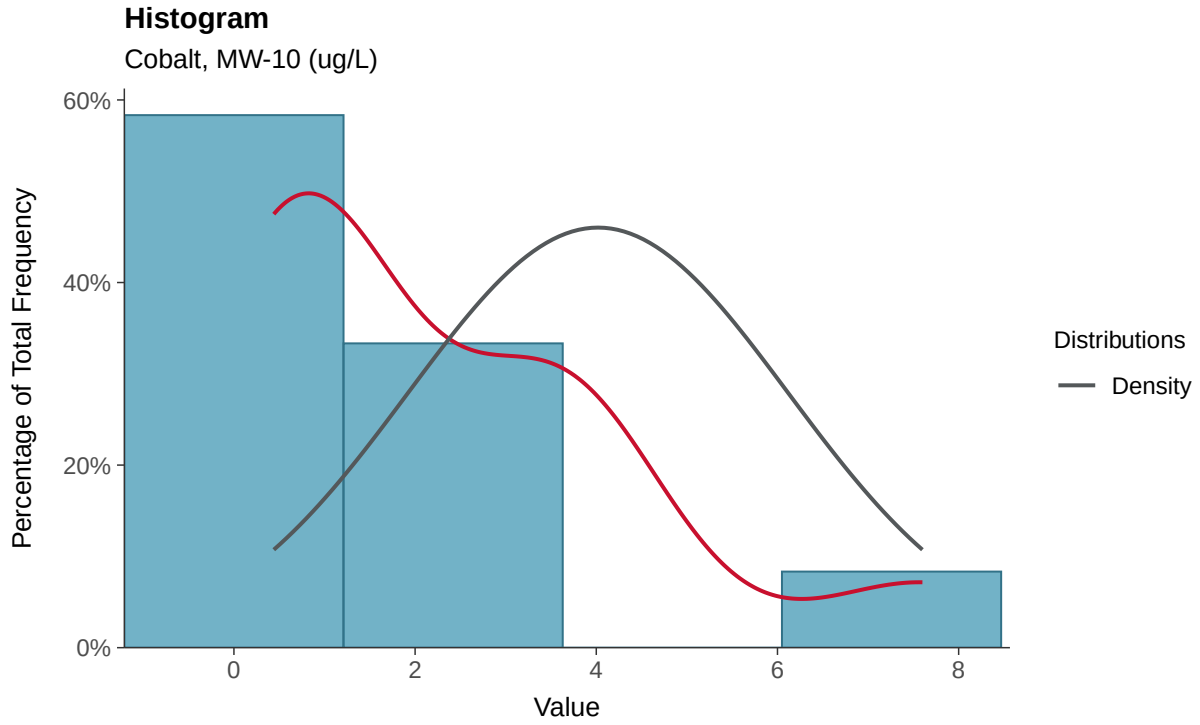
Chromium, MW-10 (ug/L)



App. IV: Cobalt, MW-10

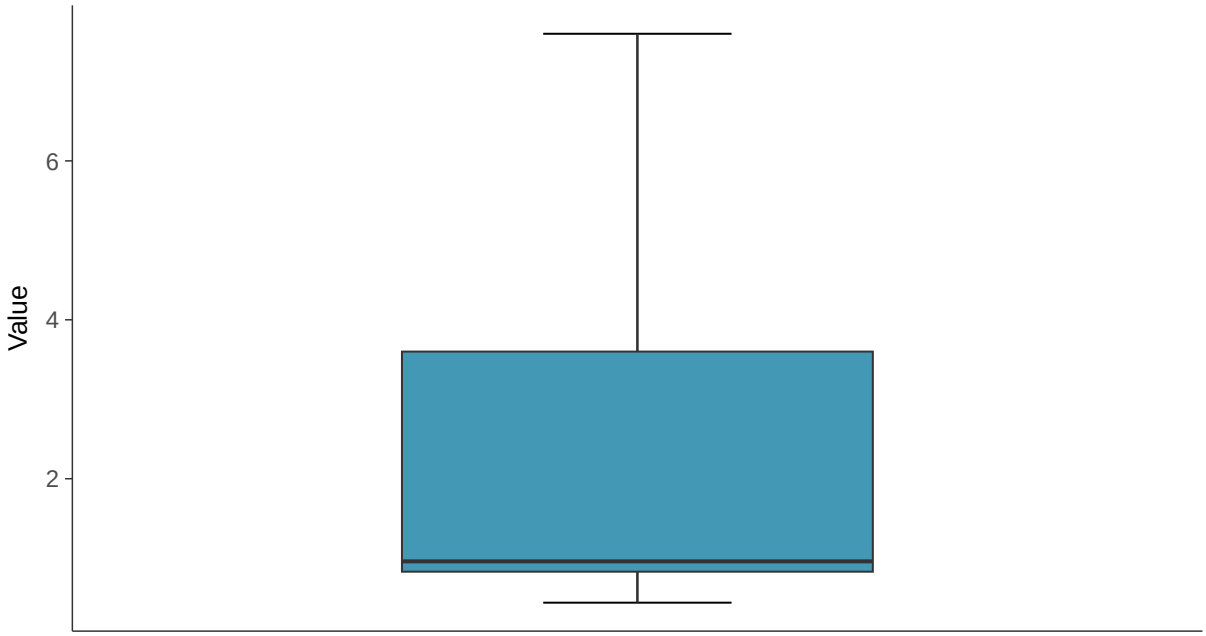
ID: 2_3_110





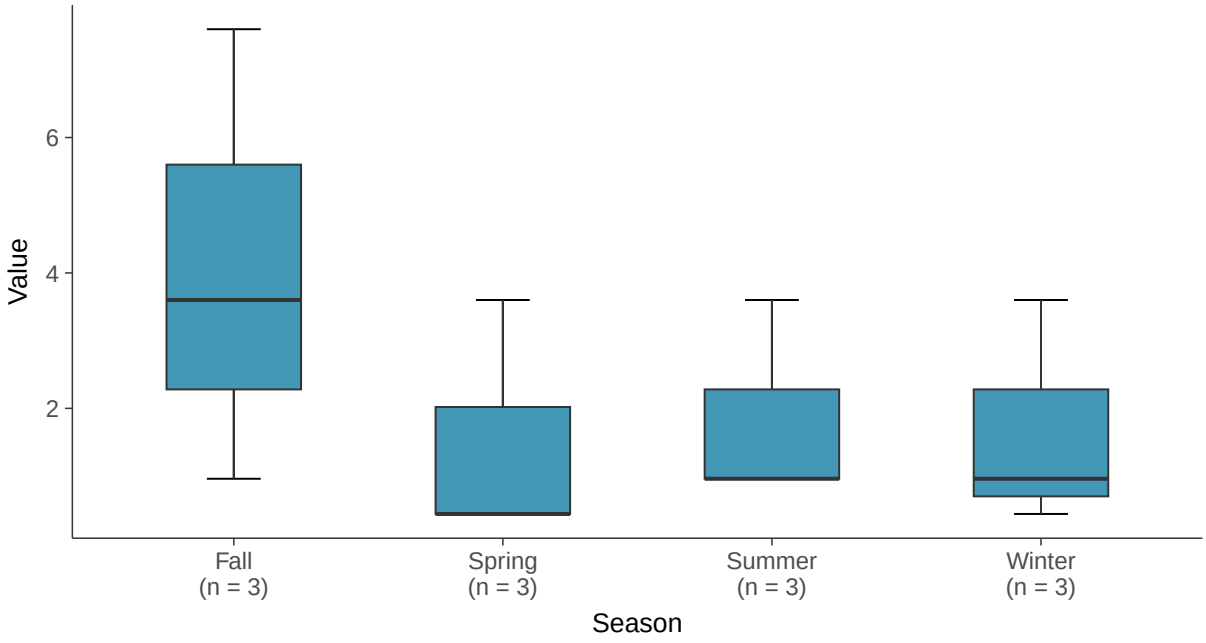
Boxplot

Cobalt, MW-10 (ug/L)



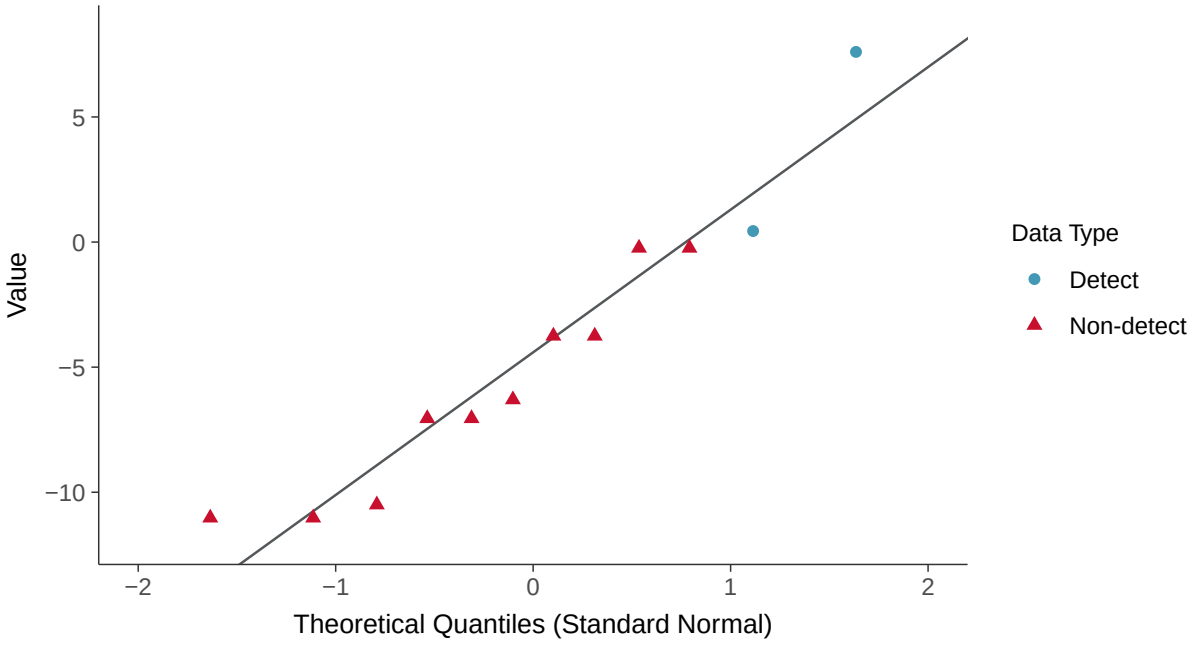
Boxplot by Season

Cobalt, MW-10 (ug/L)



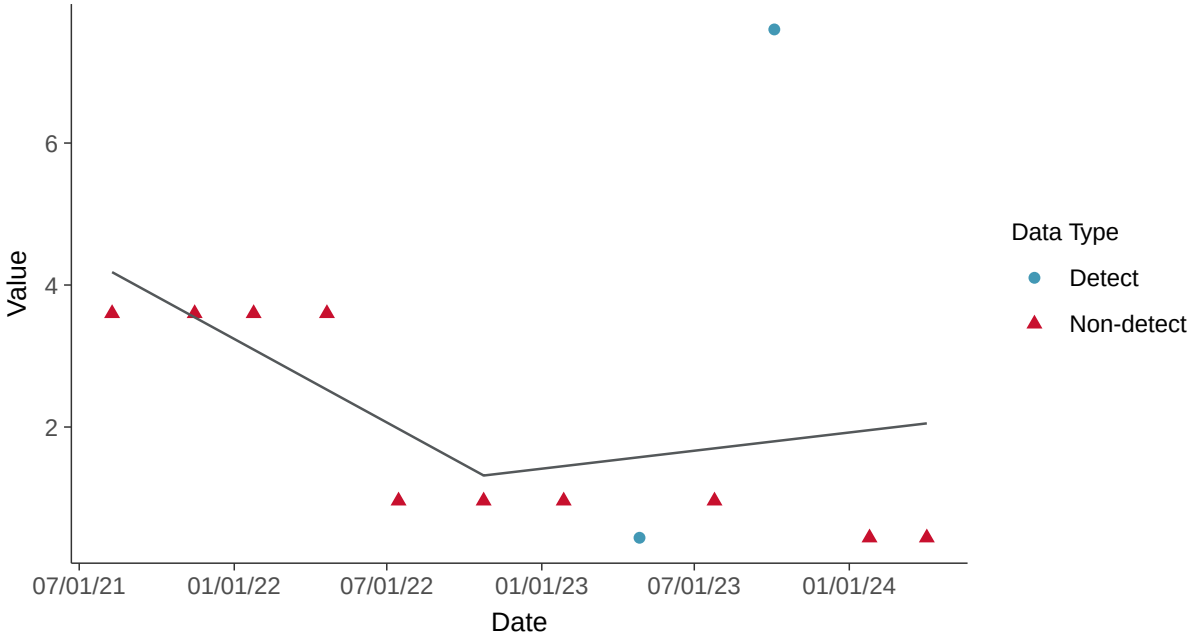
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-10 (ug/L)



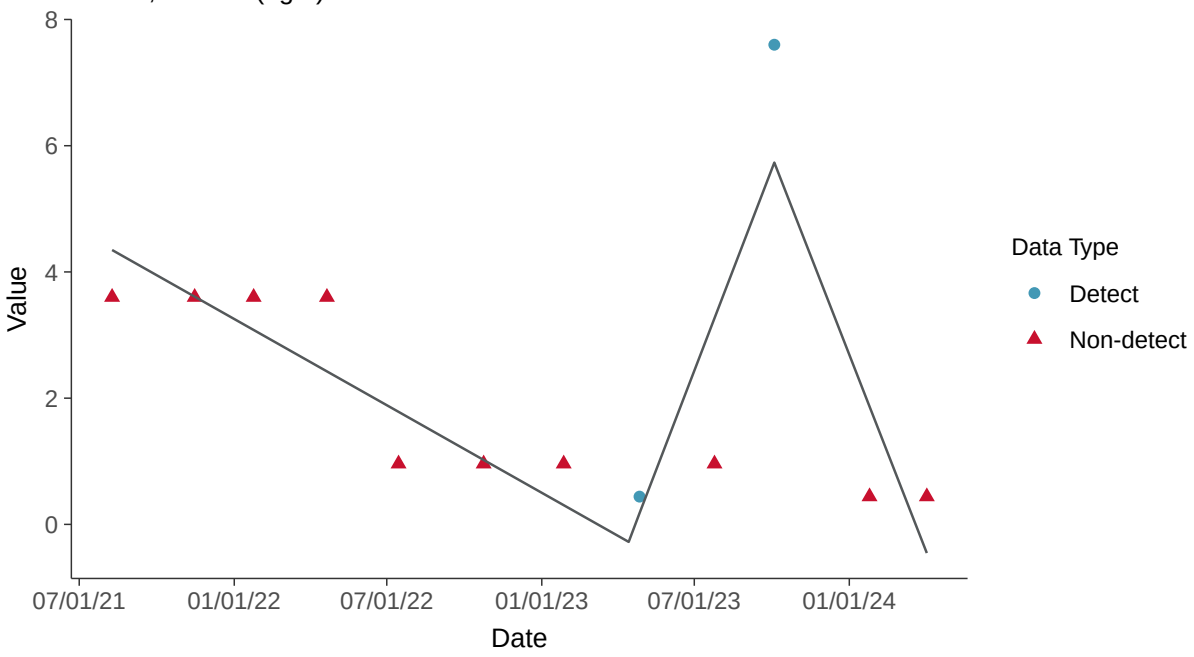
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-10 (ug/L)



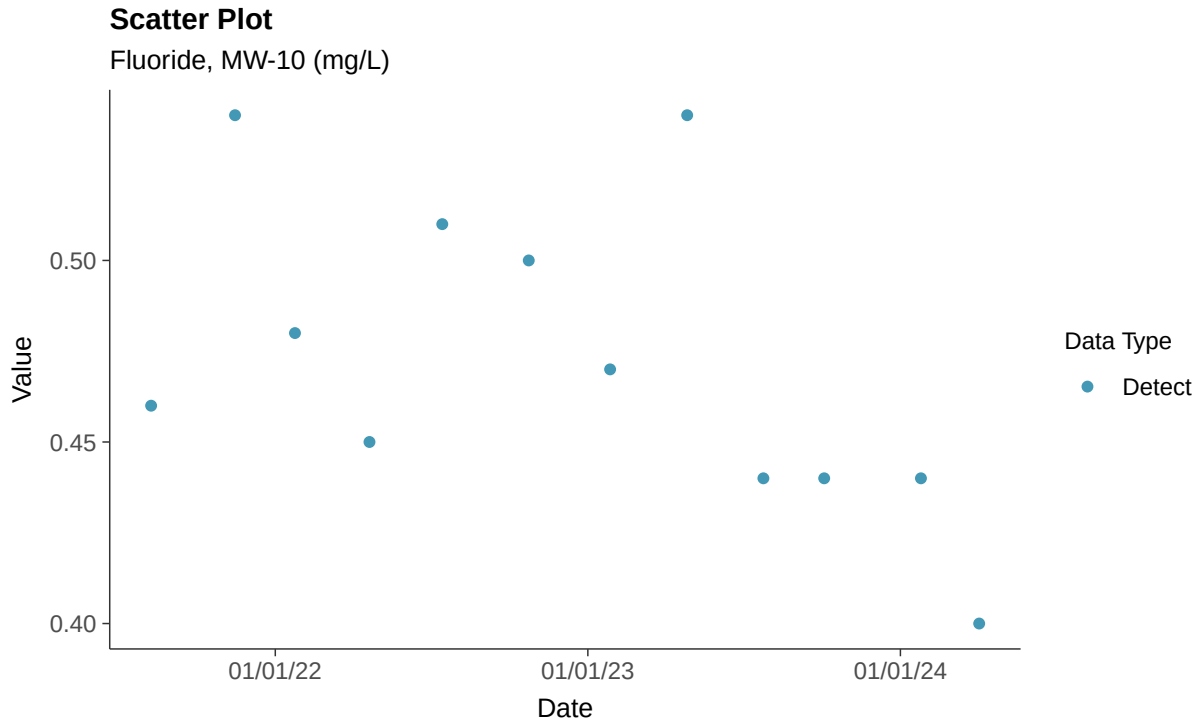
Trend Regression: Piecewise Linear-Linear-Linear

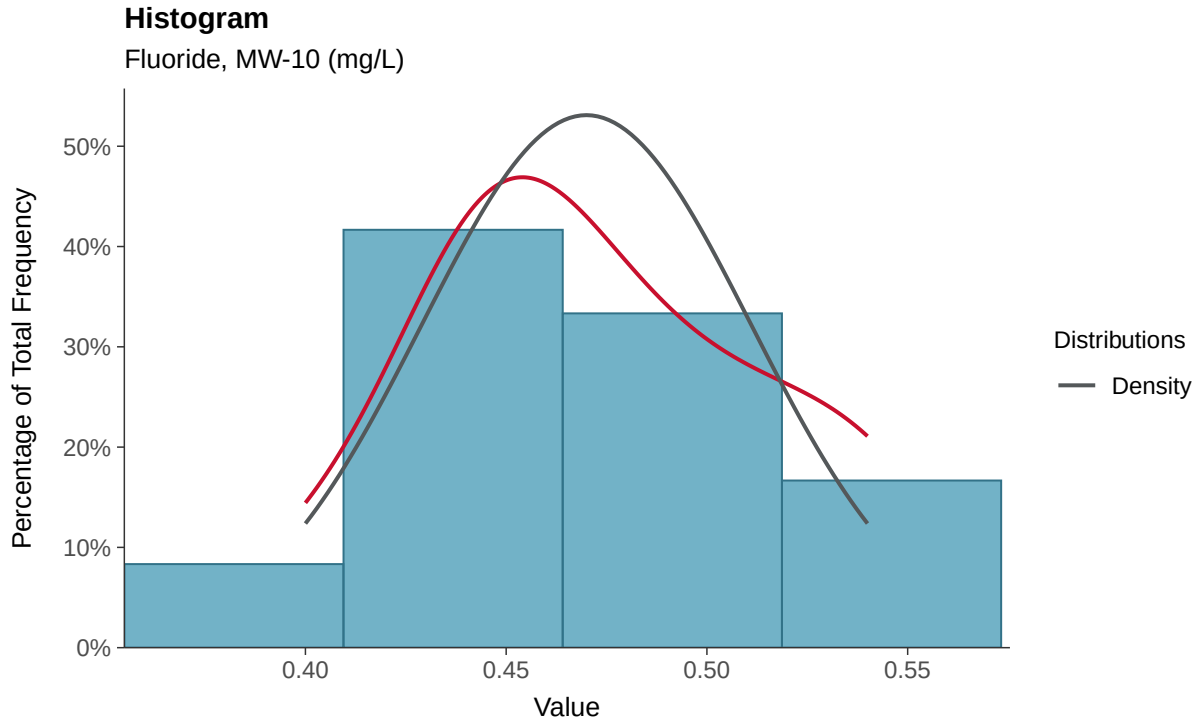
Cobalt, MW-10 (ug/L)



App. IV: Fluoride, MW-10

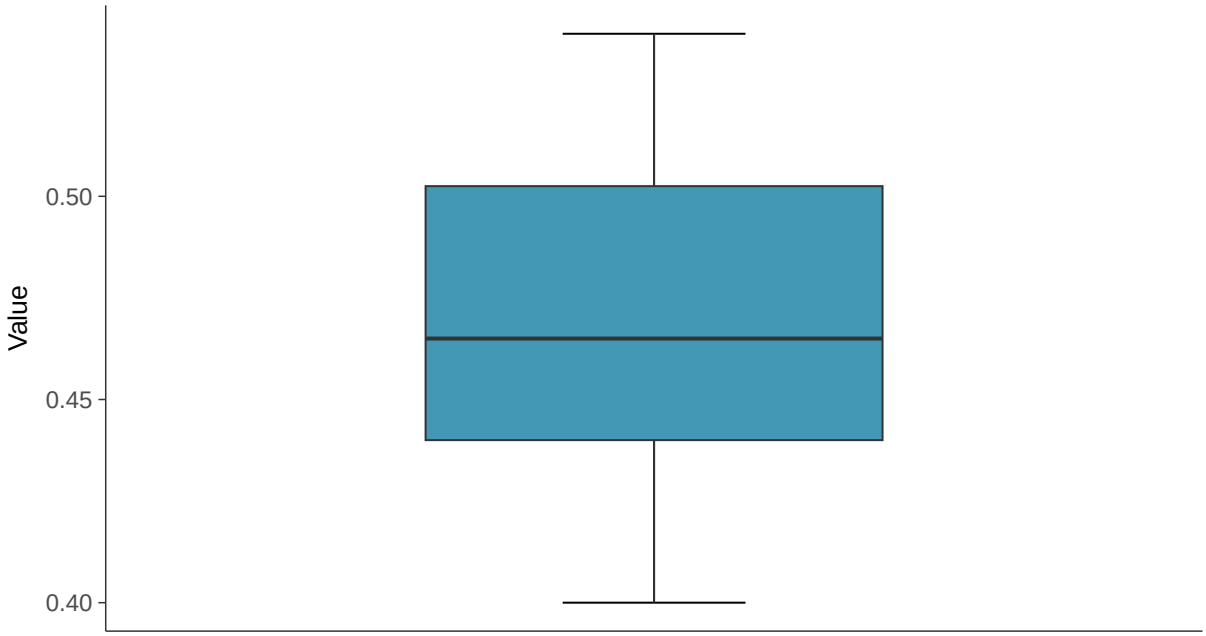
ID: 2_3_112





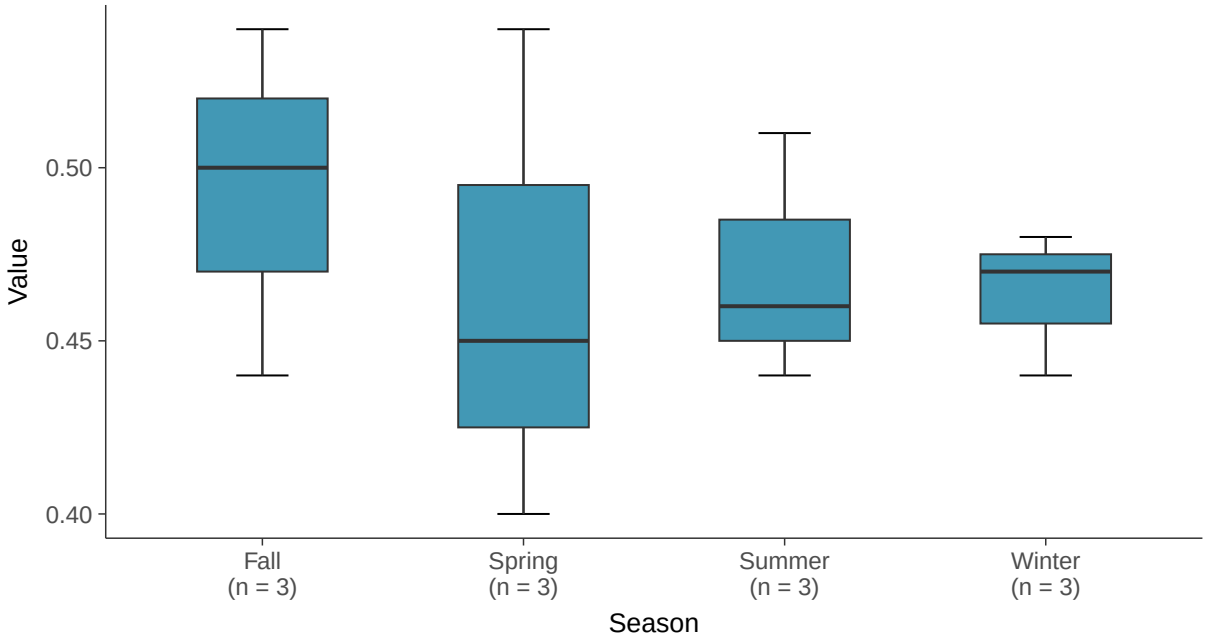
Boxplot

Fluoride, MW-10 (mg/L)



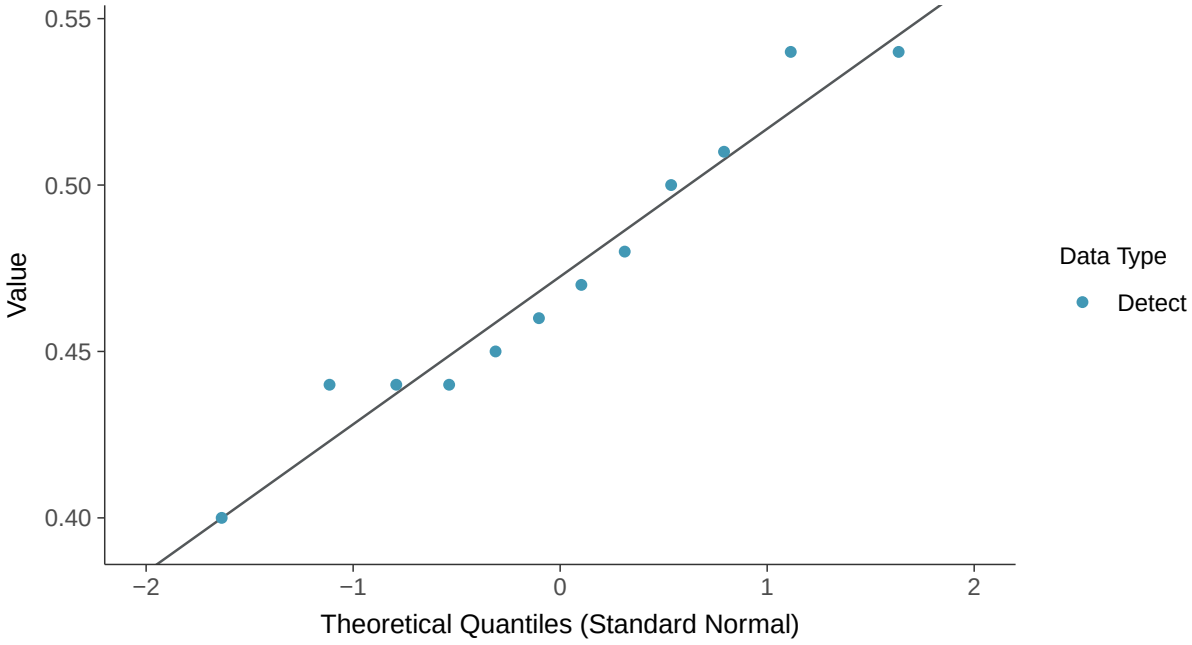
Boxplot by Season

Fluoride, MW-10 (mg/L)



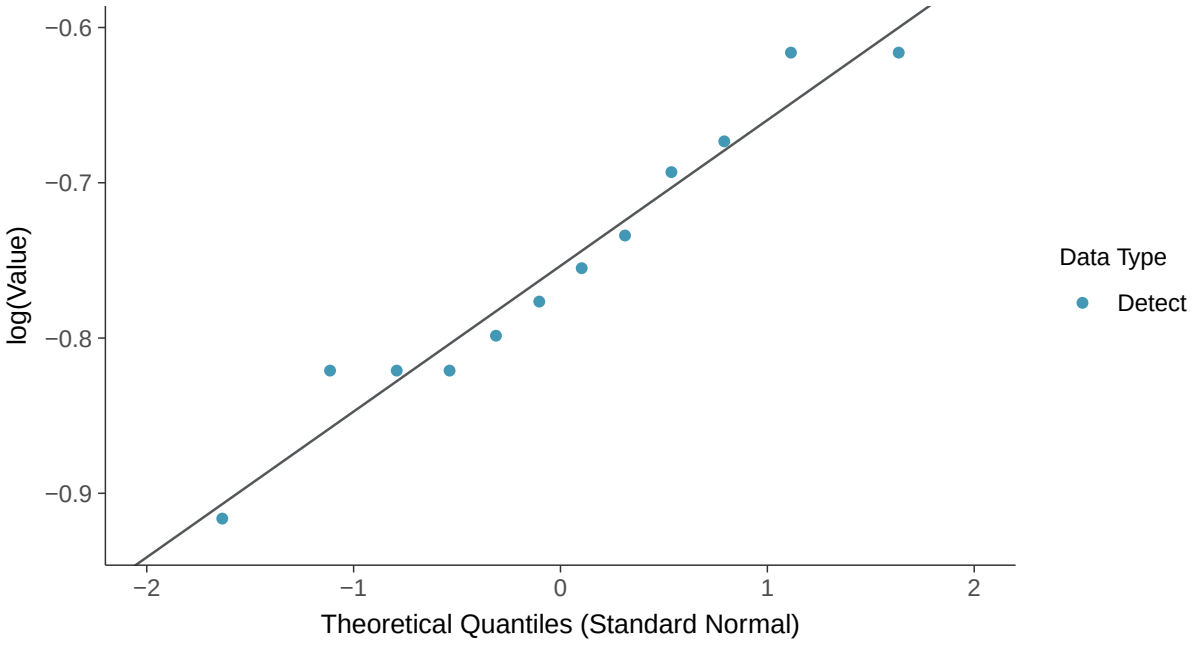
Normal Q-Q plot

Fluoride, MW-10 (mg/L)



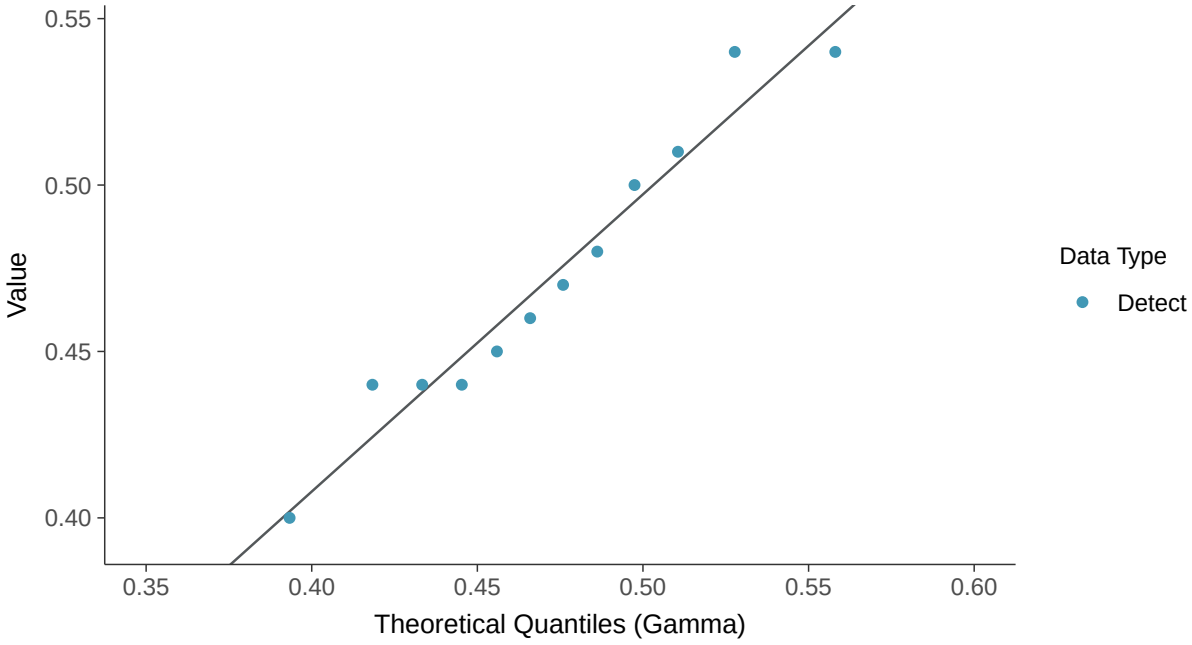
Lognormal Q-Q plot

Fluoride, MW-10 (mg/L)



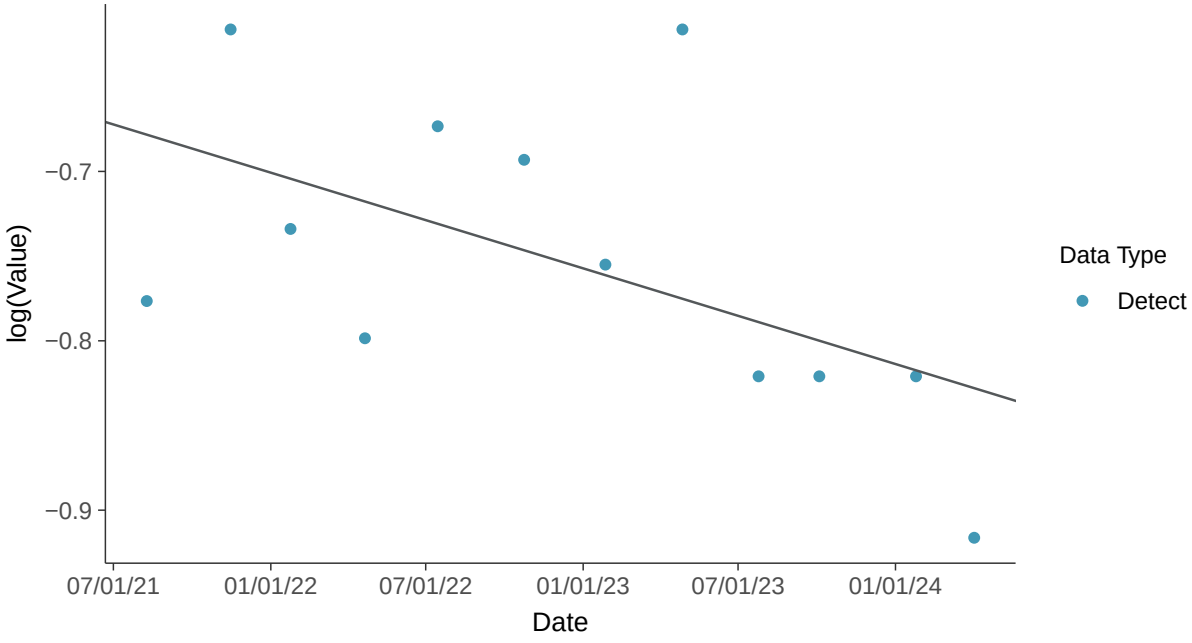
Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



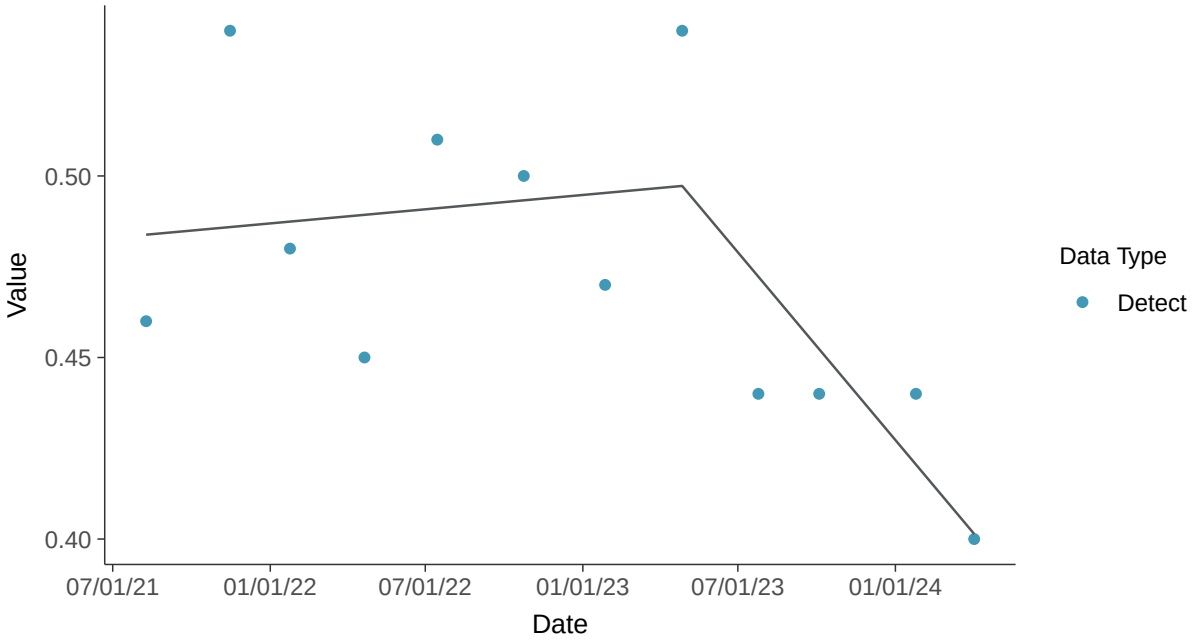
Trend Regression: Lognormal MLE

Fluoride, MW-10 (mg/L)



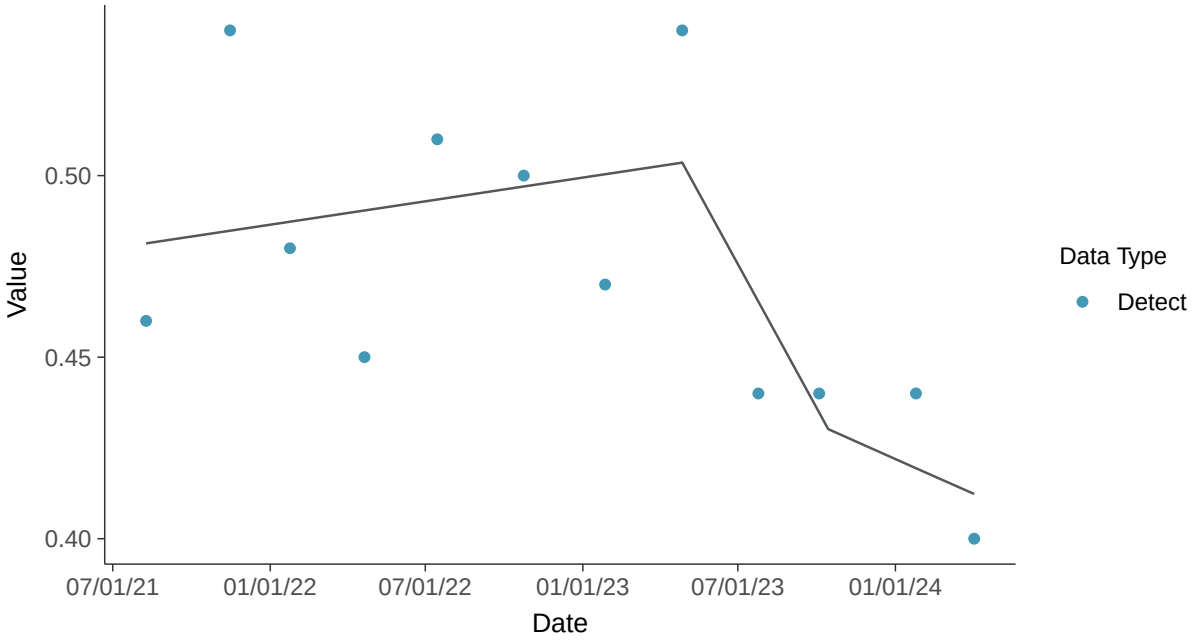
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



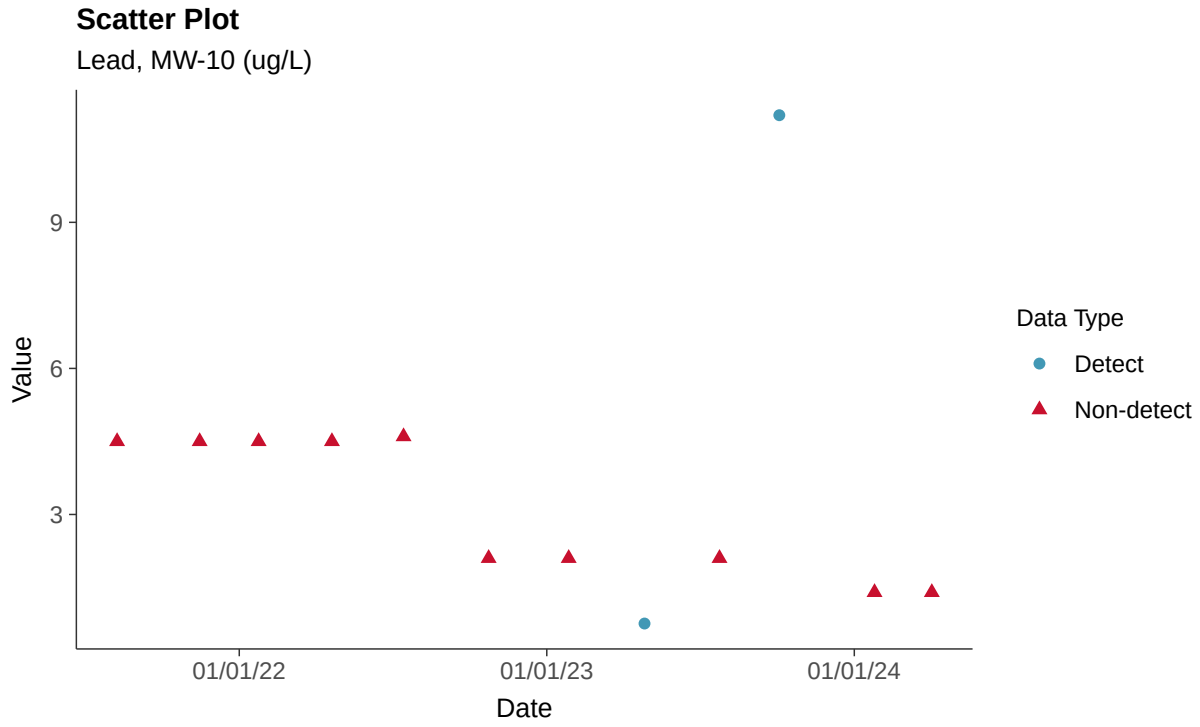
Trend Regression: Piecewise Linear-Linear-Linear

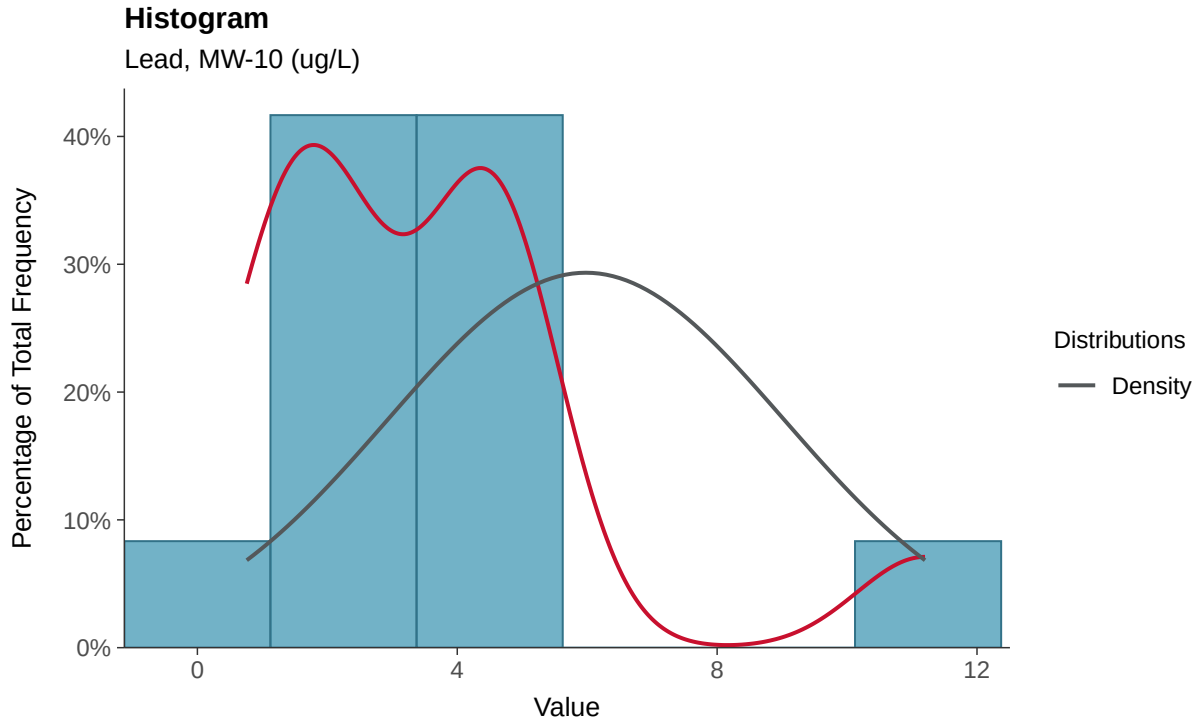
Fluoride, MW-10 (mg/L)



App. IV: Lead, MW-10

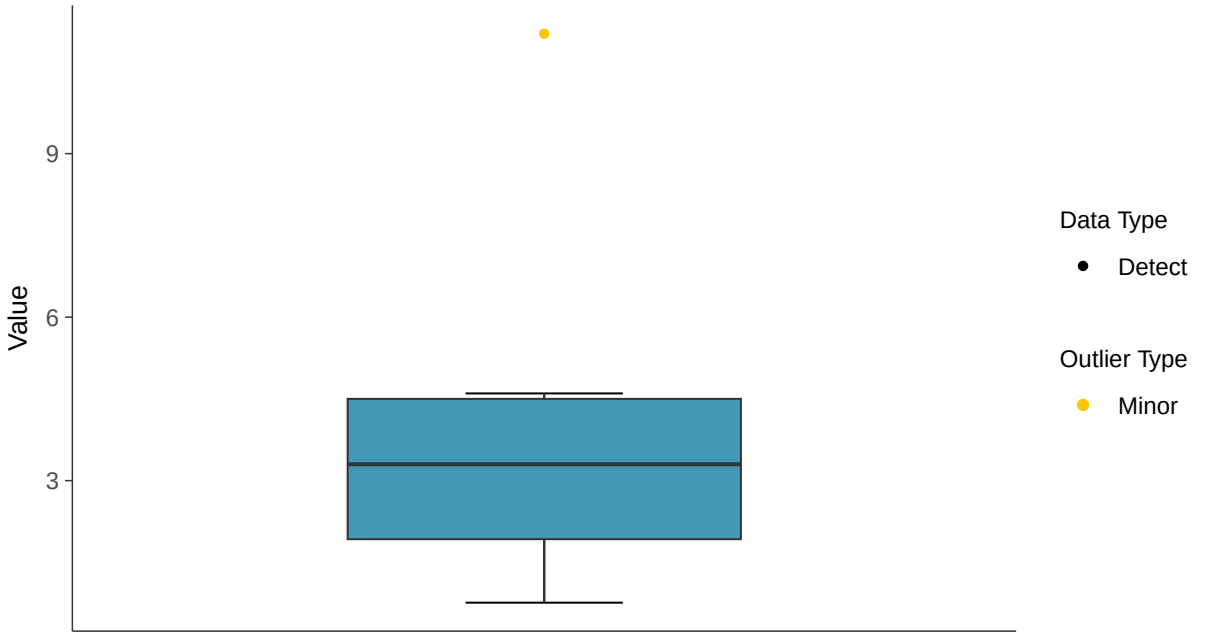
ID: 2_3_113





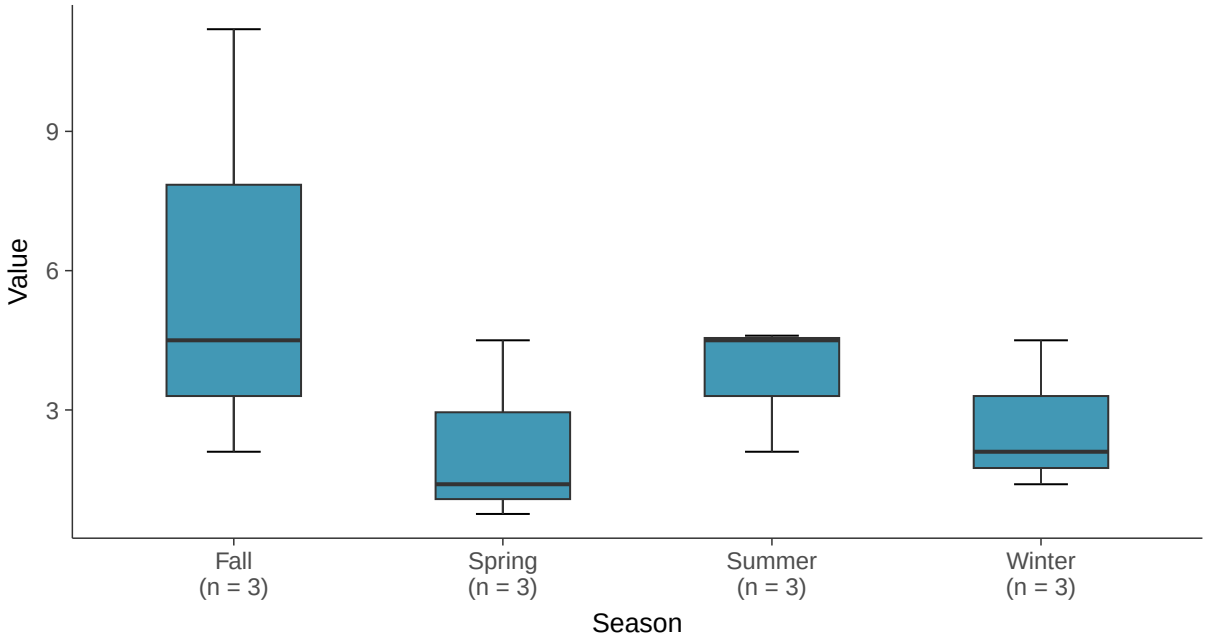
Boxplot

Lead, MW-10 (ug/L)



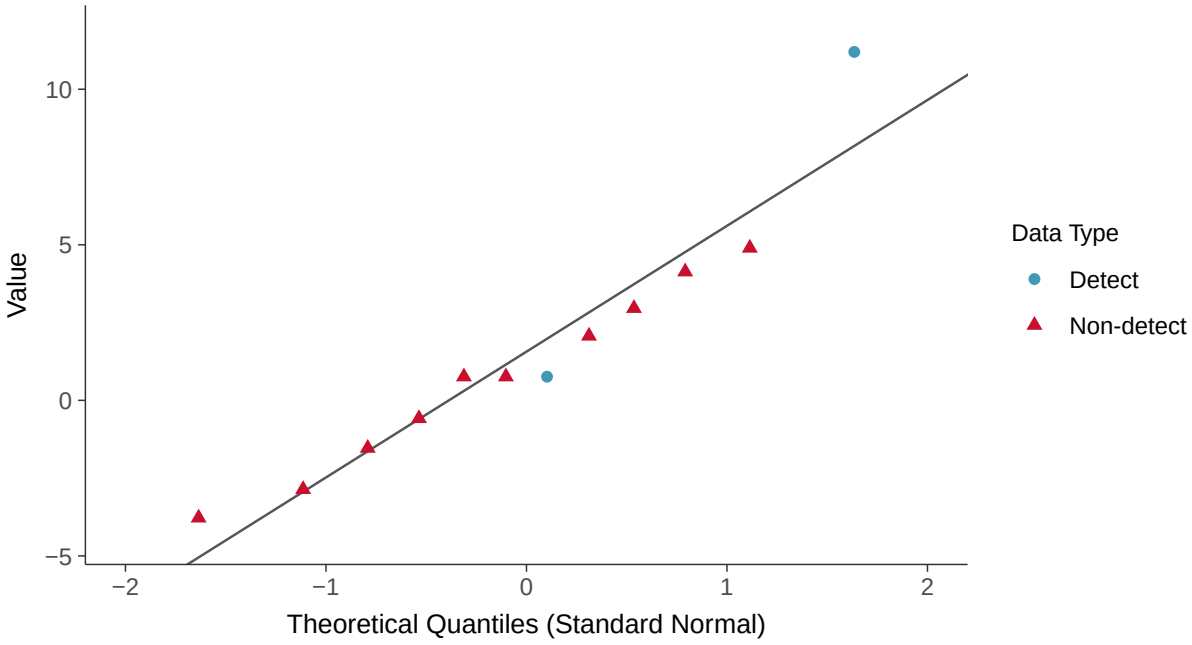
Boxplot by Season

Lead, MW-10 (ug/L)



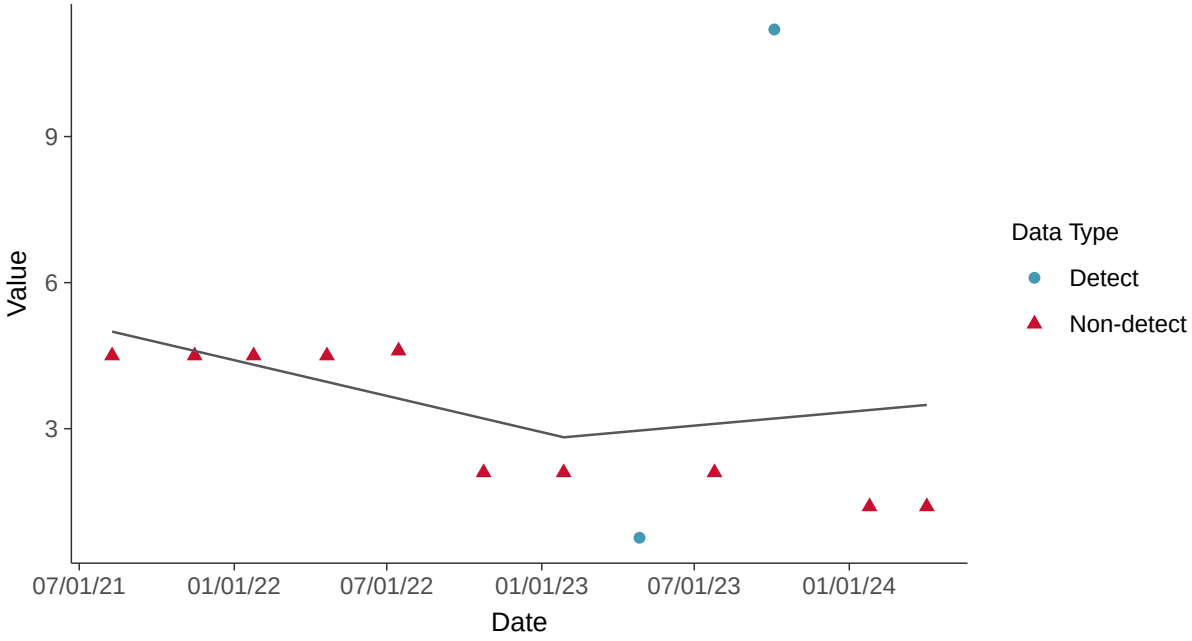
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-10 (ug/L)



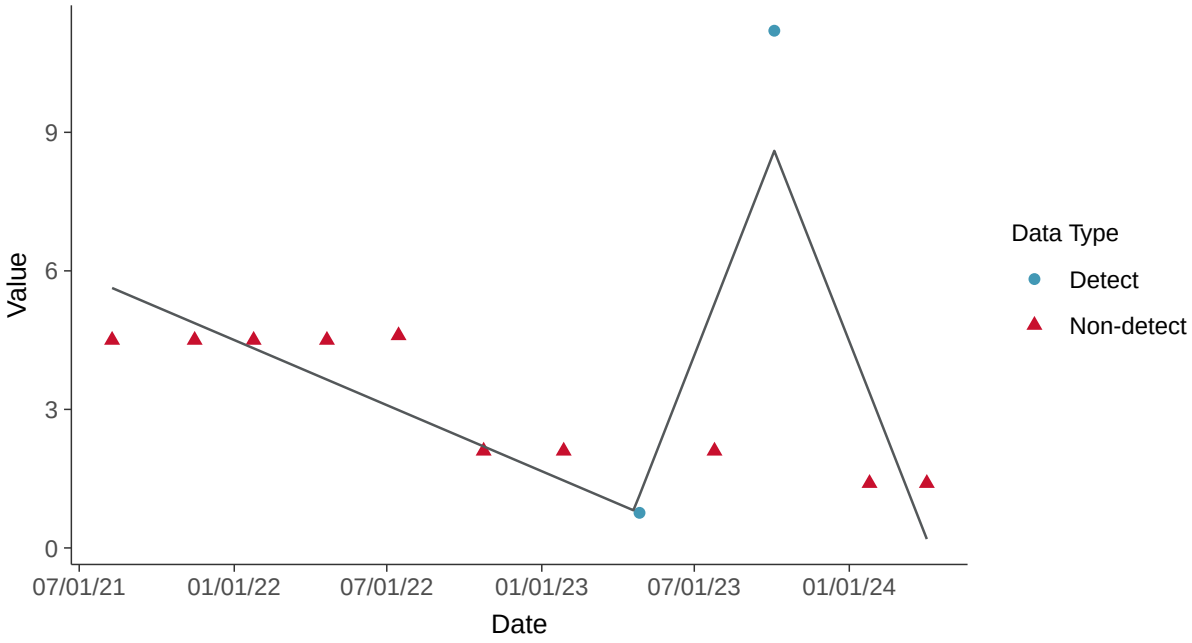
Trend Regression: Piecewise Linear-Linear

Lead, MW-10 (ug/L)



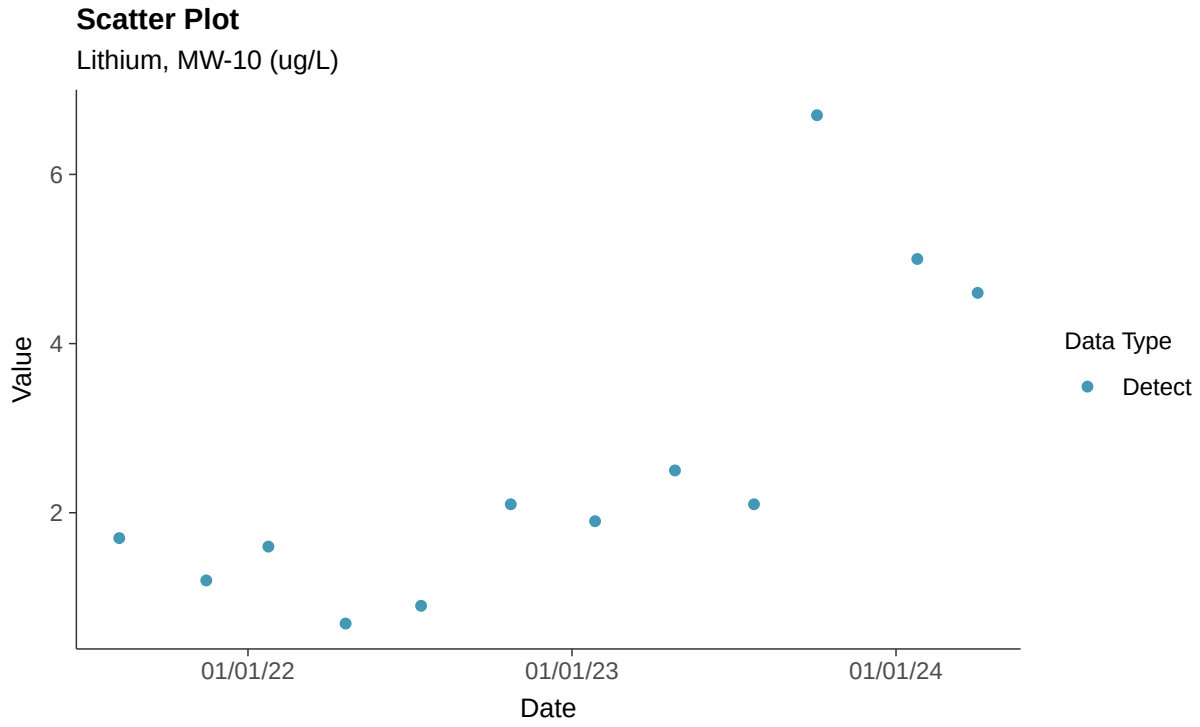
Trend Regression: Piecewise Linear-Linear-Linear

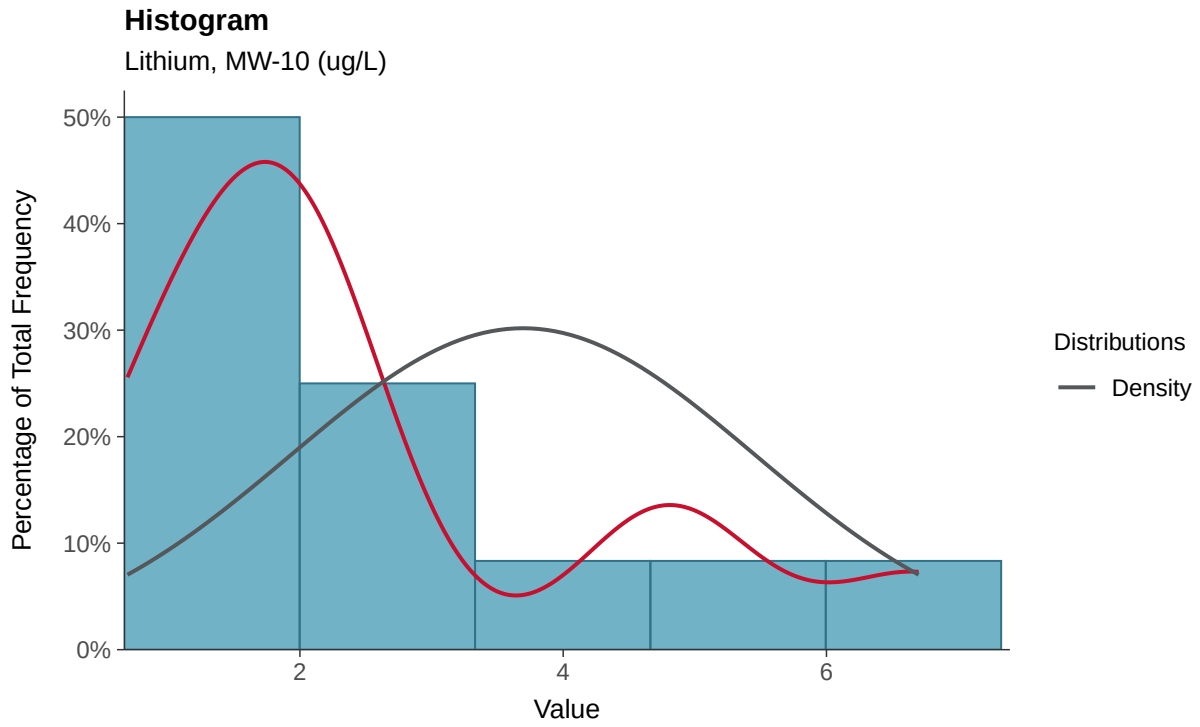
Lead, MW-10 (ug/L)



App. IV: Lithium, MW-10

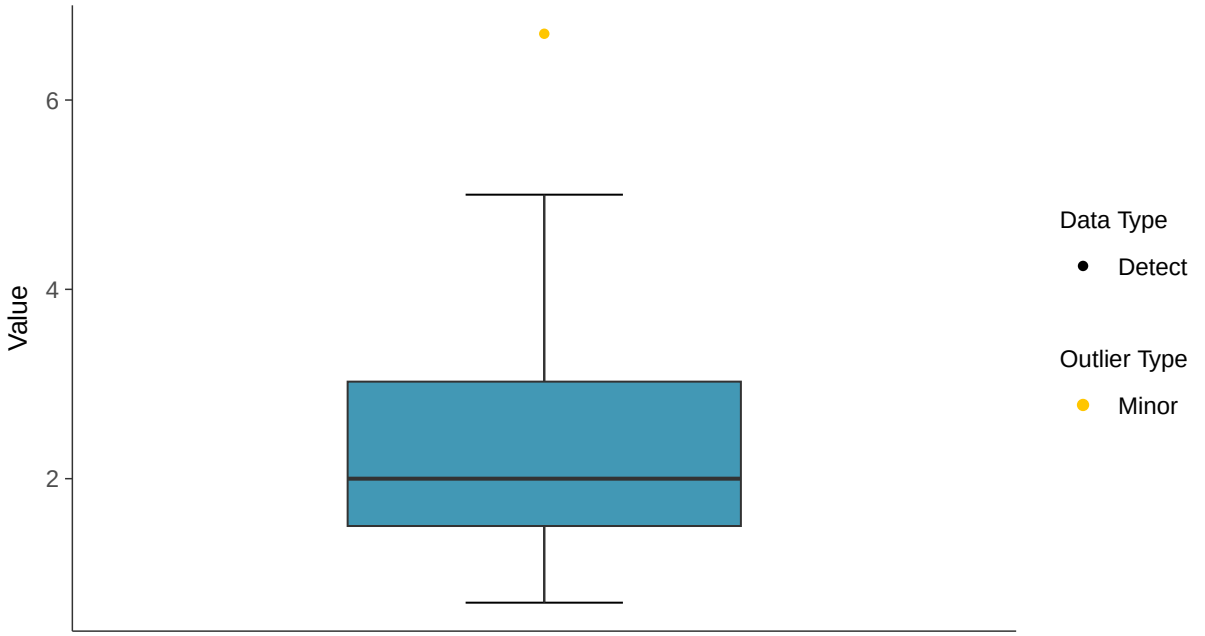
ID: 2_3_114





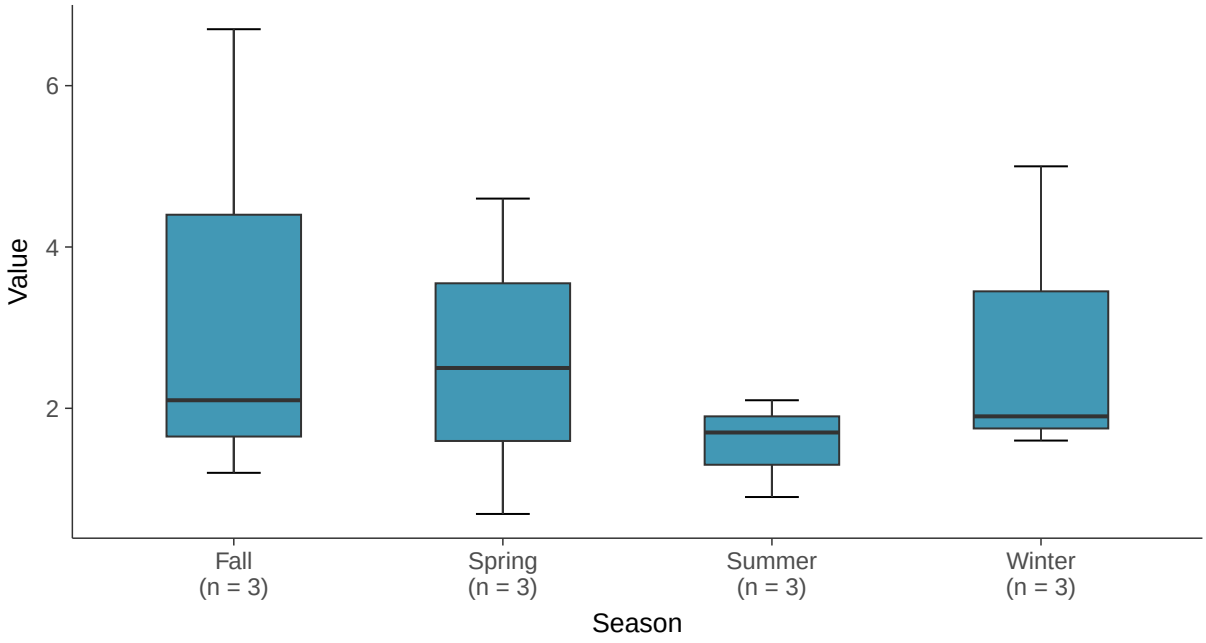
Boxplot

Lithium, MW-10 (ug/L)



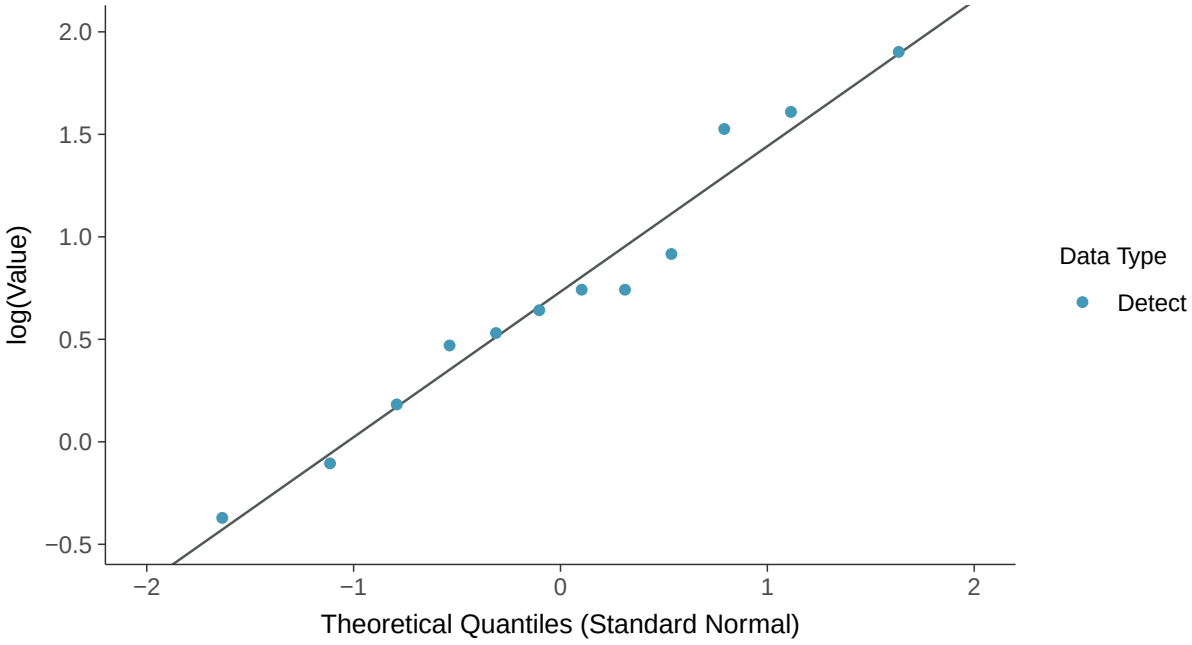
Boxplot by Season

Lithium, MW-10 (ug/L)



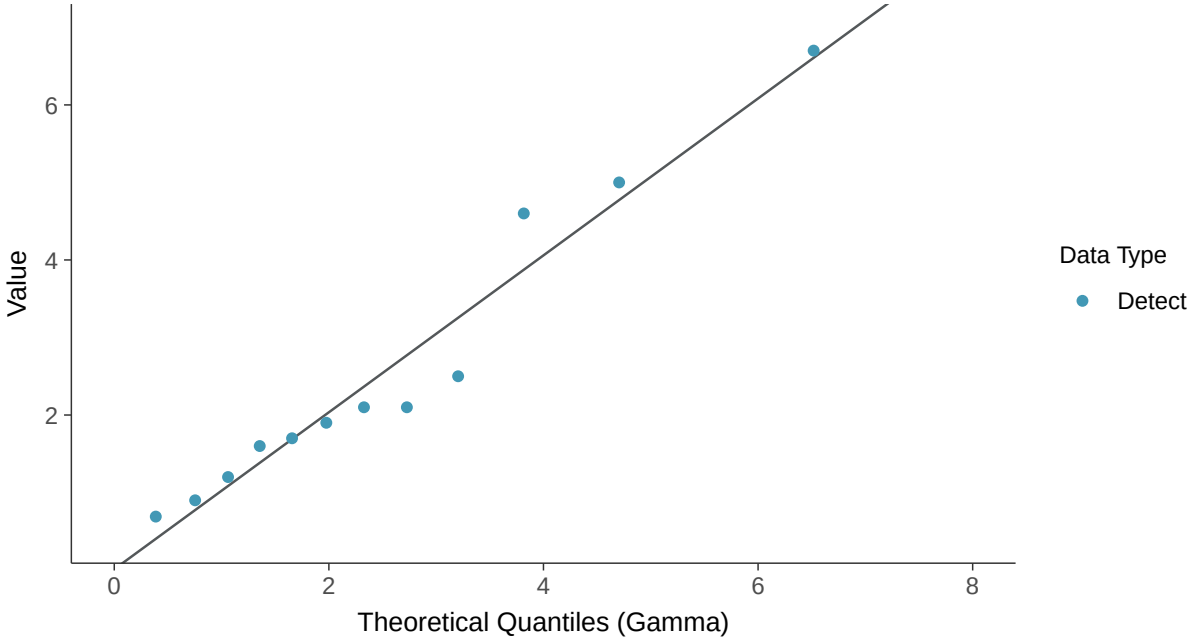
Lognormal Q-Q plot

Lithium, MW-10 (ug/L)



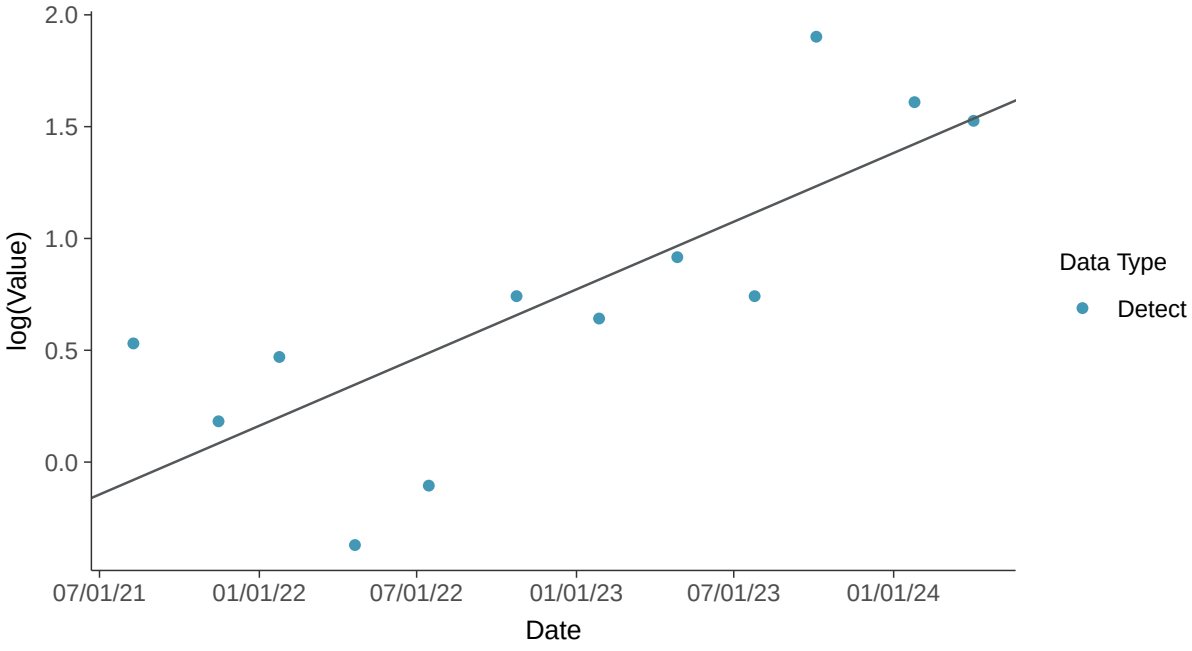
Gamma Q-Q plot

Lithium, MW-10 (ug/L)



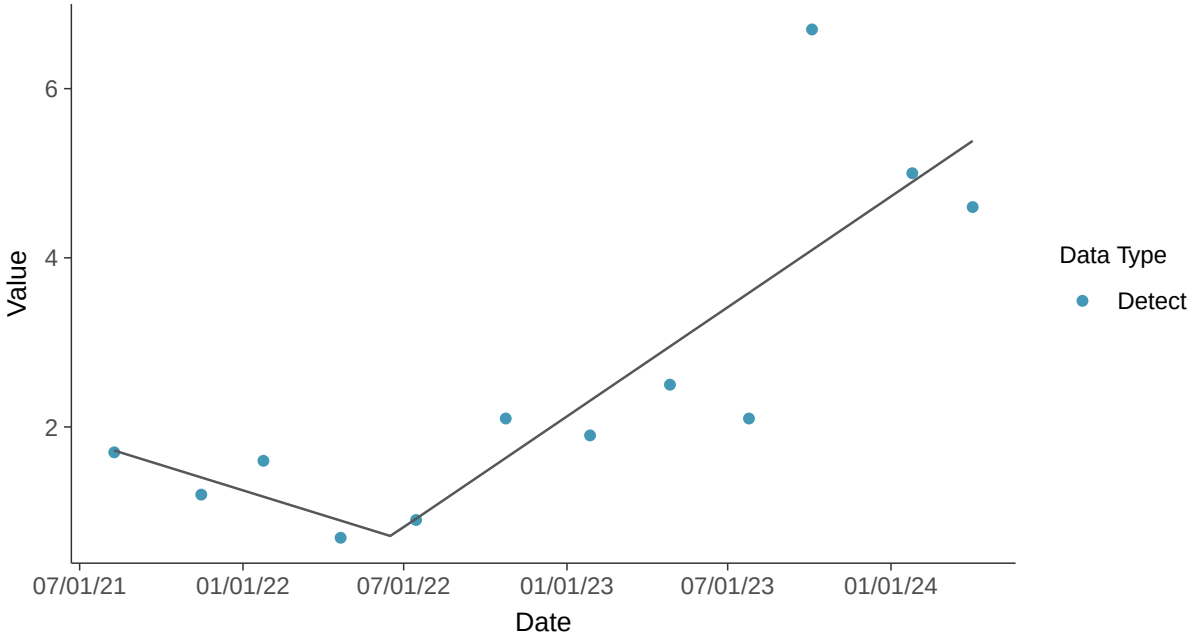
Trend Regression: Lognormal MLE

Lithium, MW-10 (ug/L)



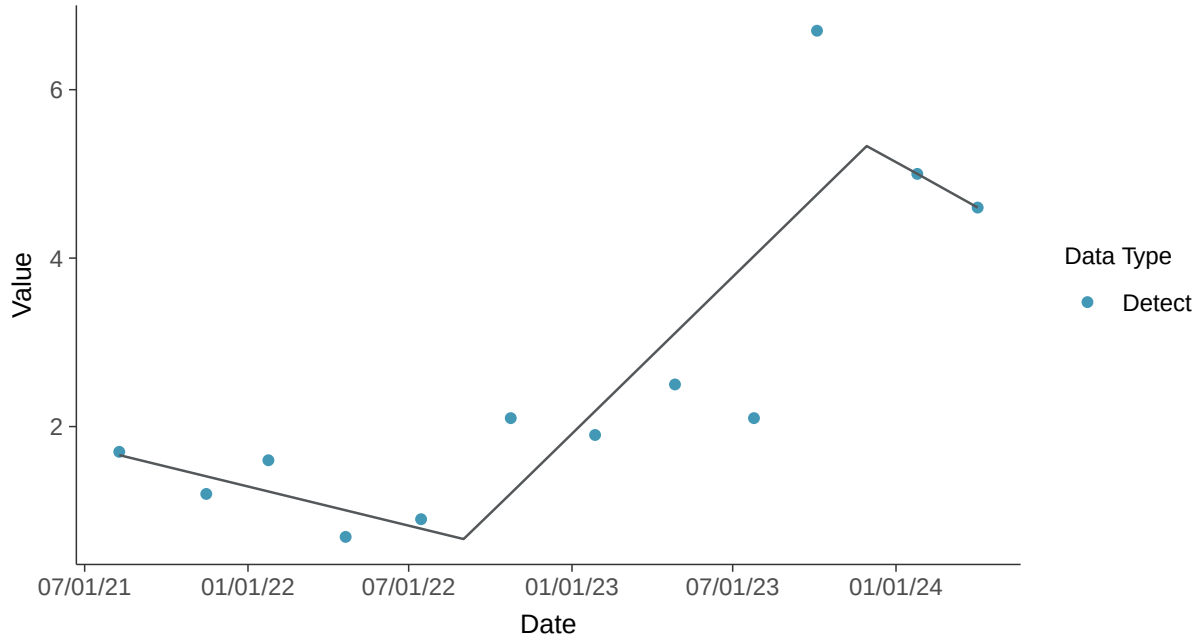
Trend Regression: Piecewise Linear-Linear

Lithium, MW-10 (ug/L)



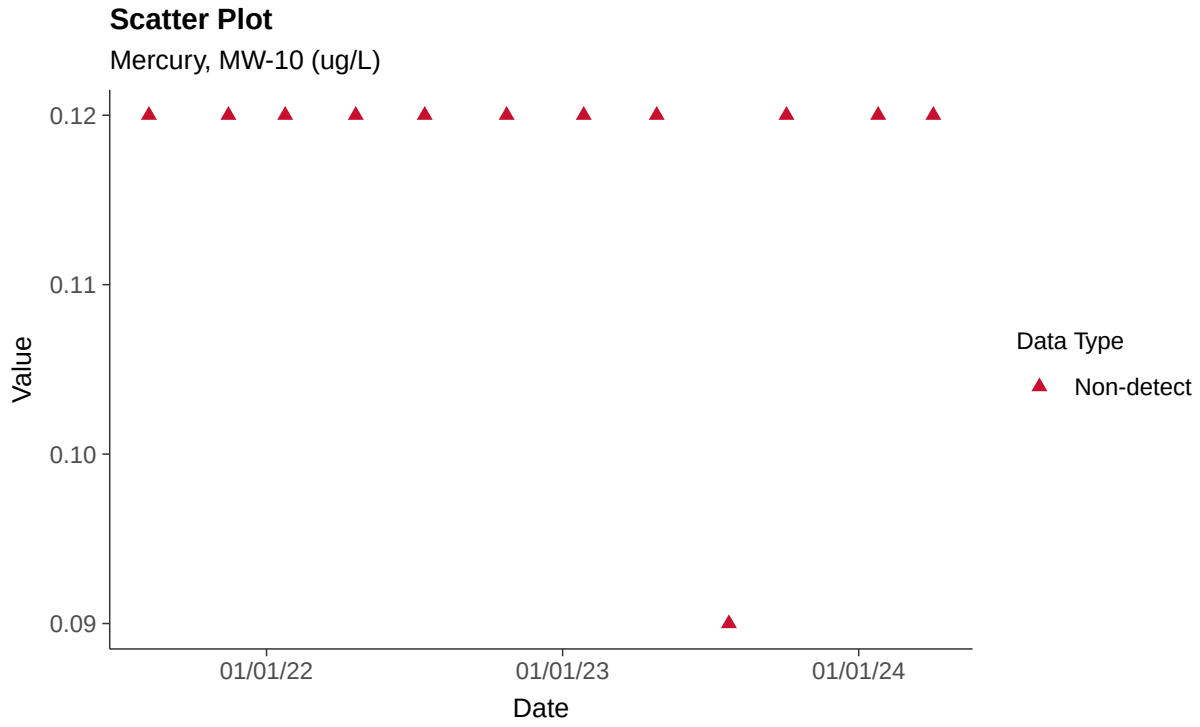
Trend Regression: Piecewise Linear-Linear-Linear

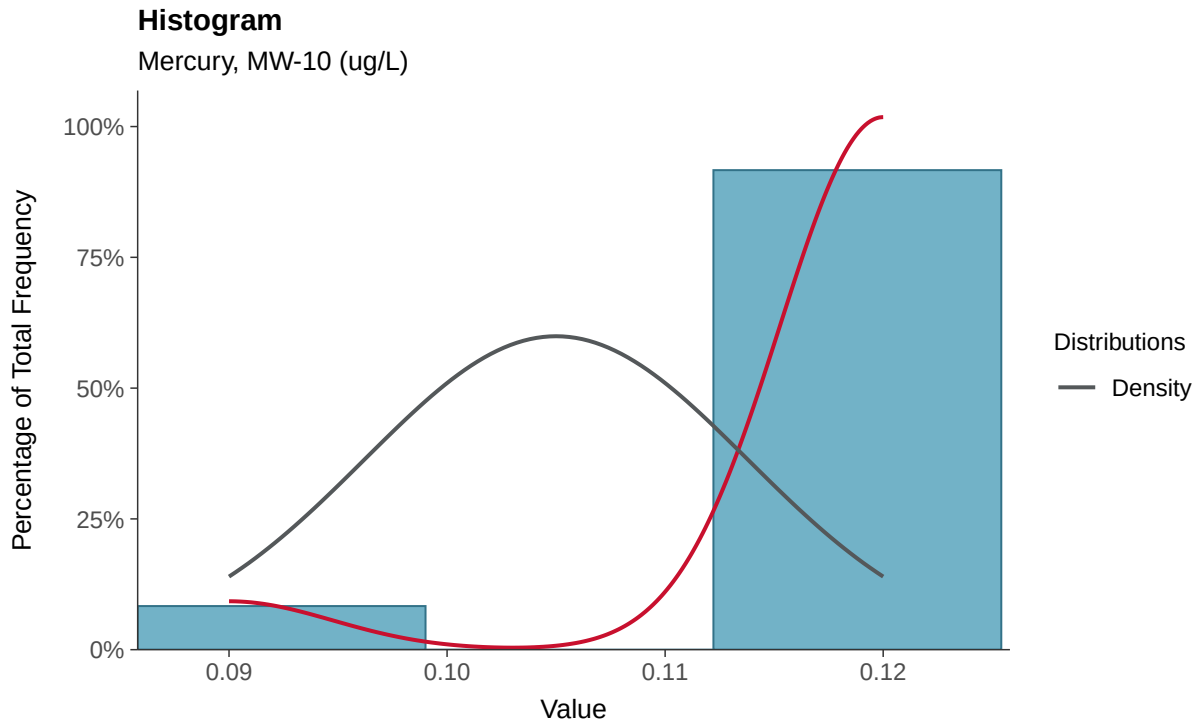
Lithium, MW-10 (ug/L)



App. IV: Mercury, MW-10

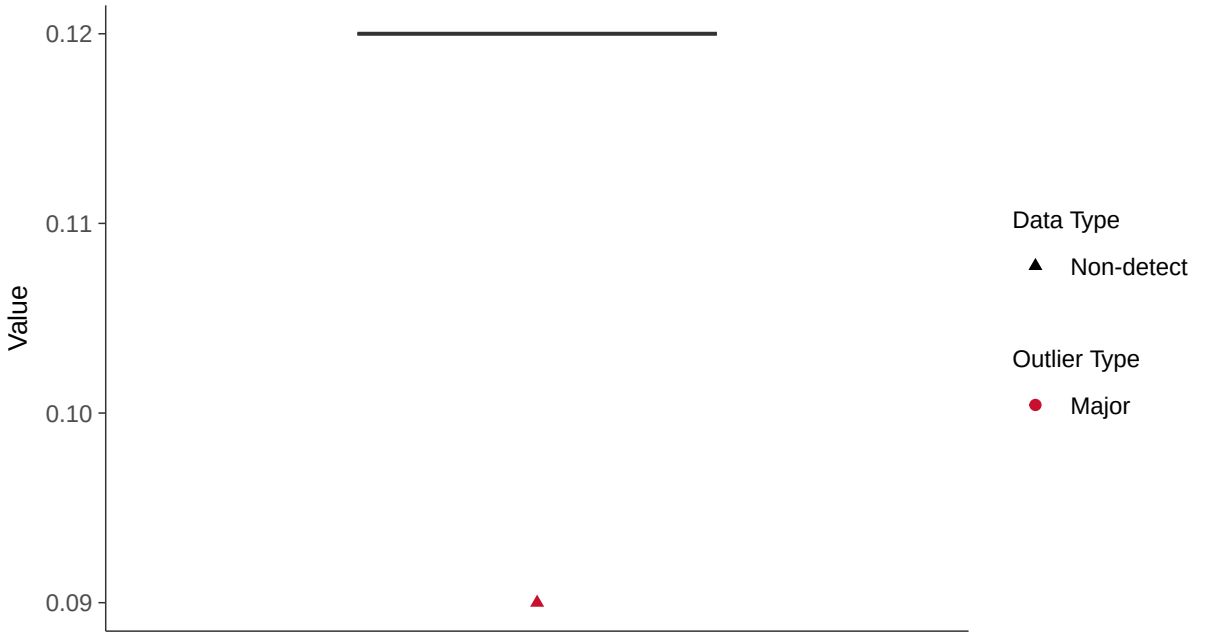
ID: 2_3_115





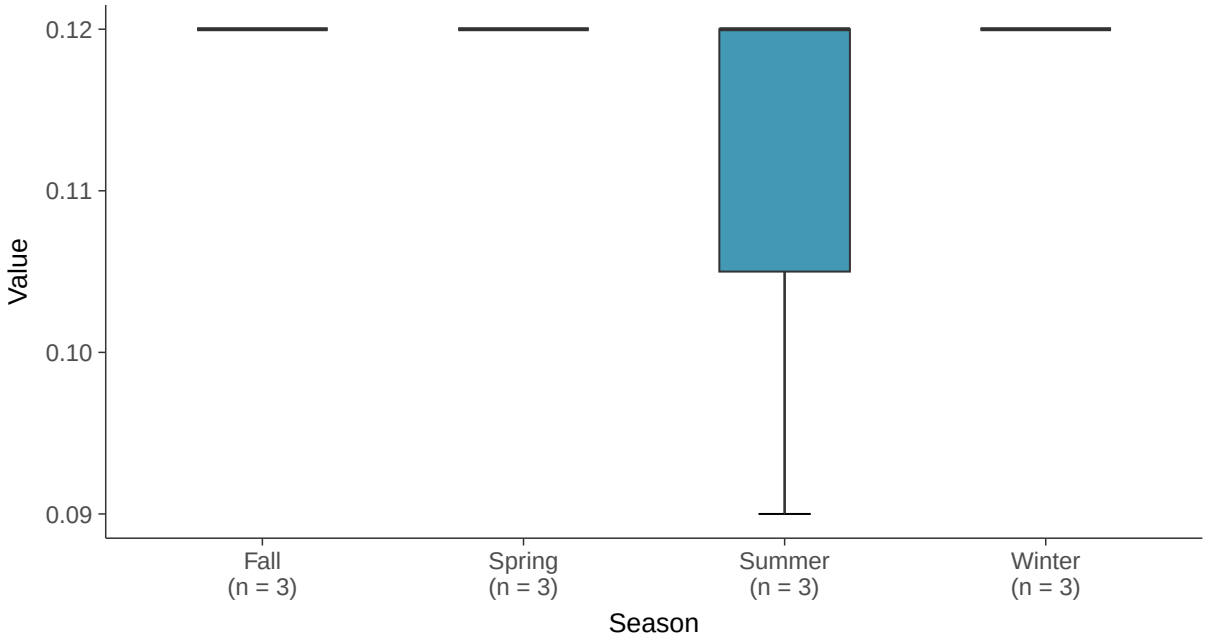
Boxplot

Mercury, MW-10 (ug/L)



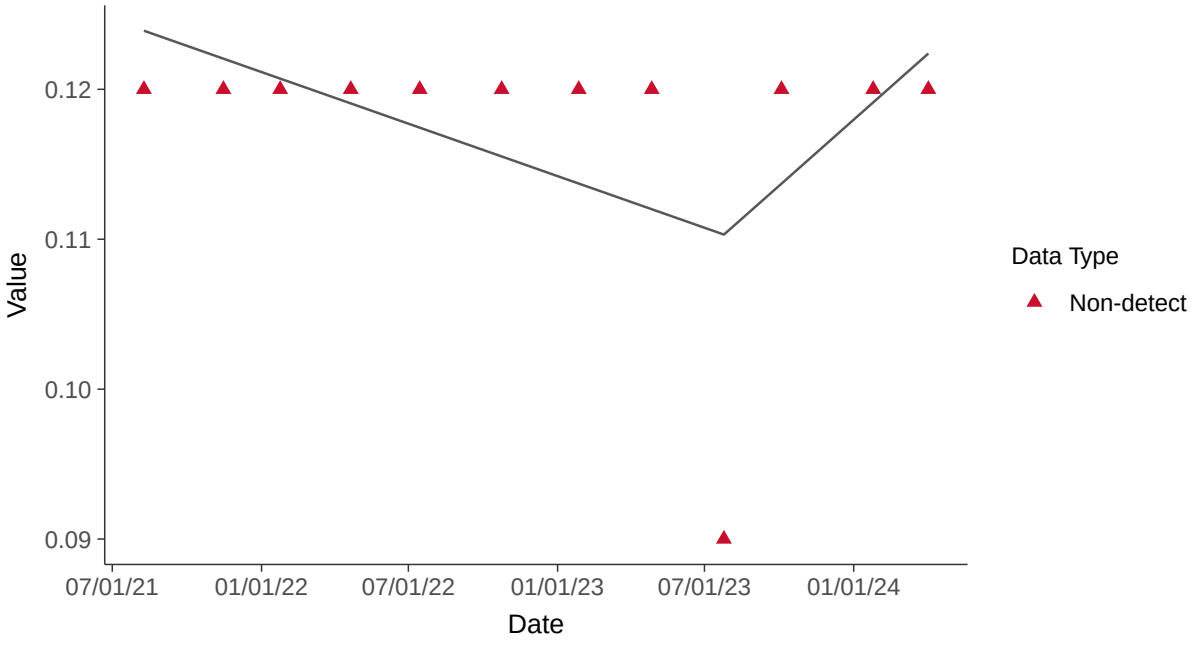
Boxplot by Season

Mercury, MW-10 (ug/L)



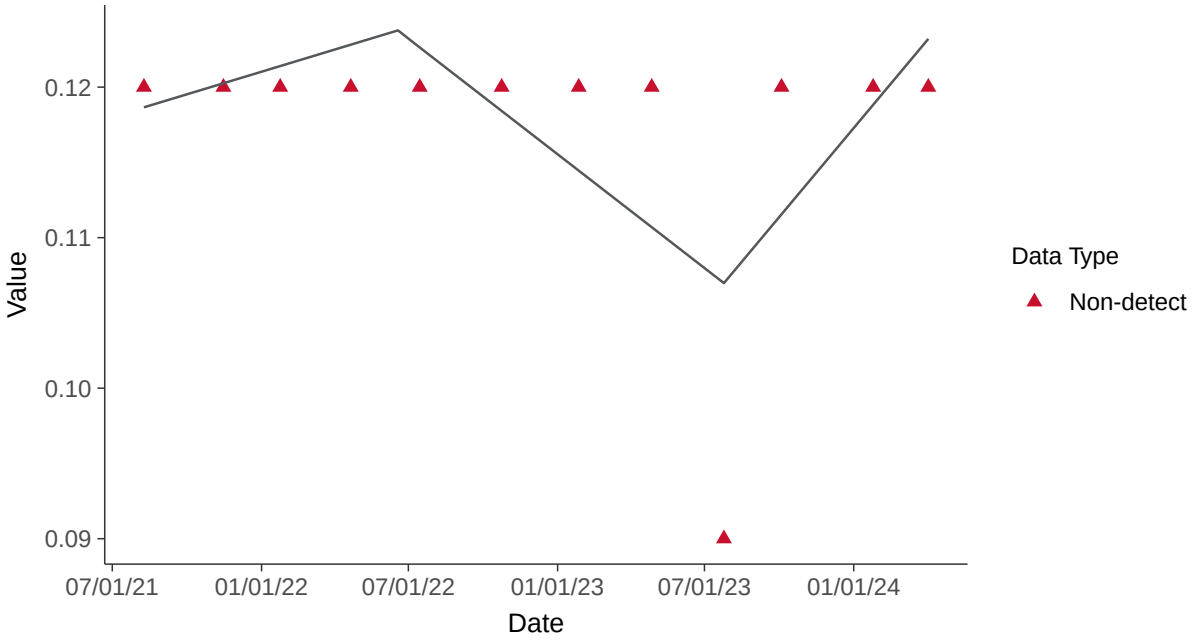
Trend Regression: Piecewise Linear-Linear

Mercury, MW-10 (ug/L)



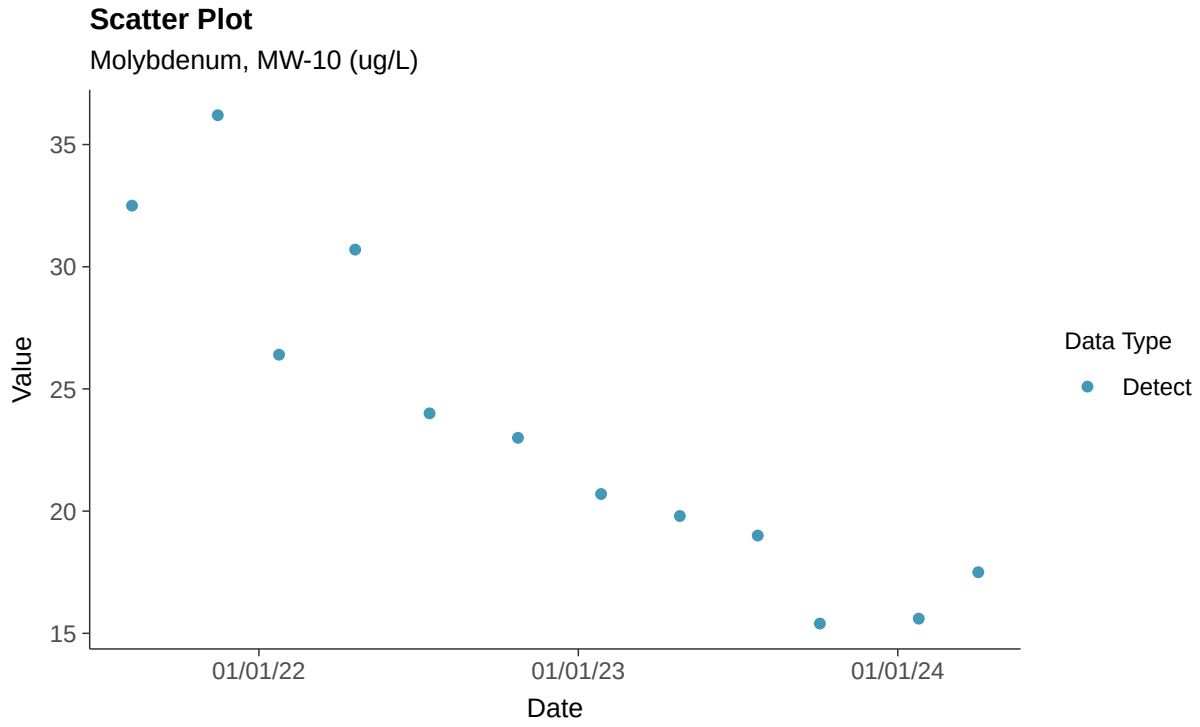
Trend Regression: Piecewise Linear-Linear-Linear

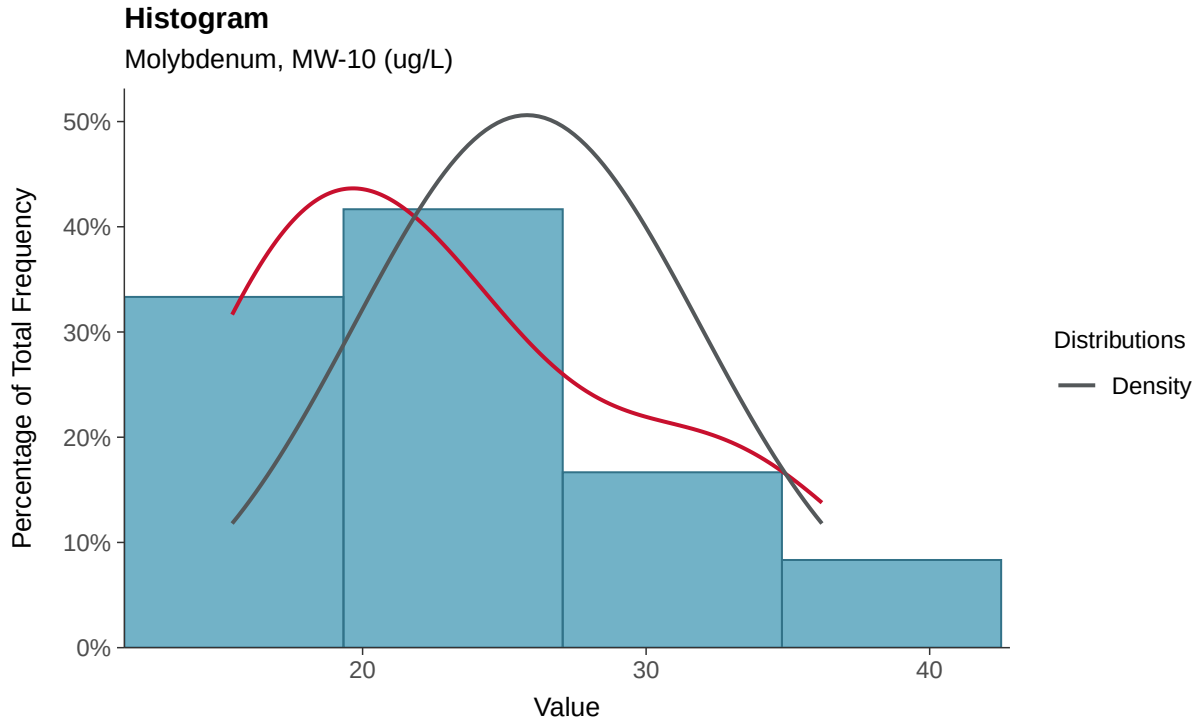
Mercury, MW-10 (ug/L)



App. IV: Molybdenum, MW-10

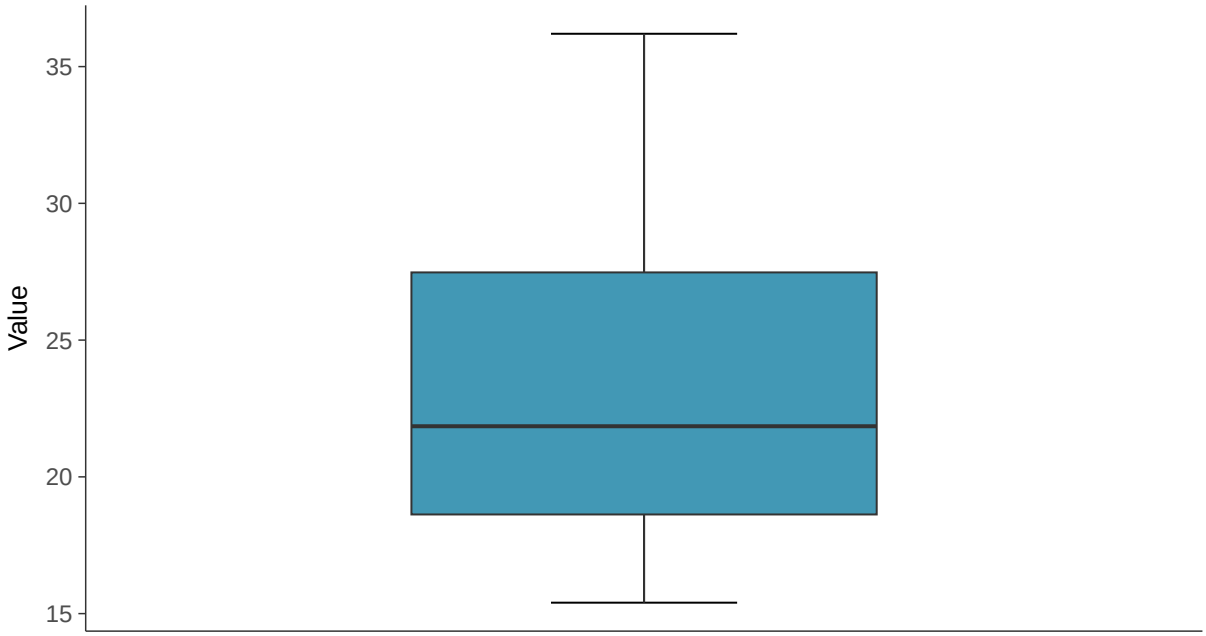
ID: 2_3_116





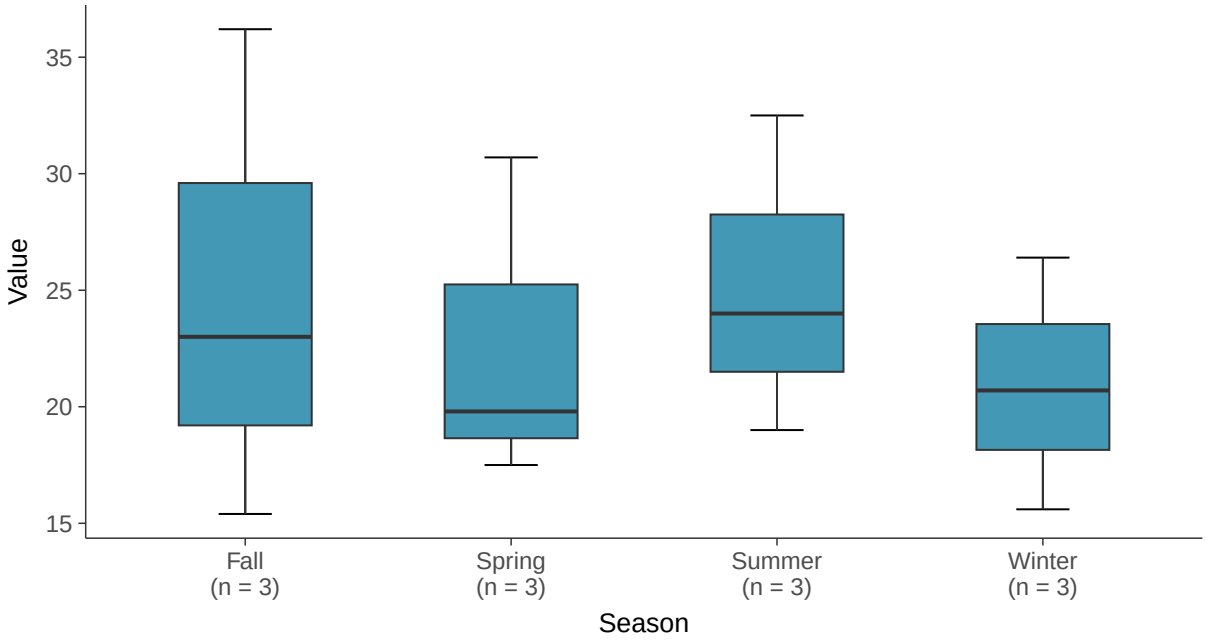
Boxplot

Molybdenum, MW-10 (ug/L)



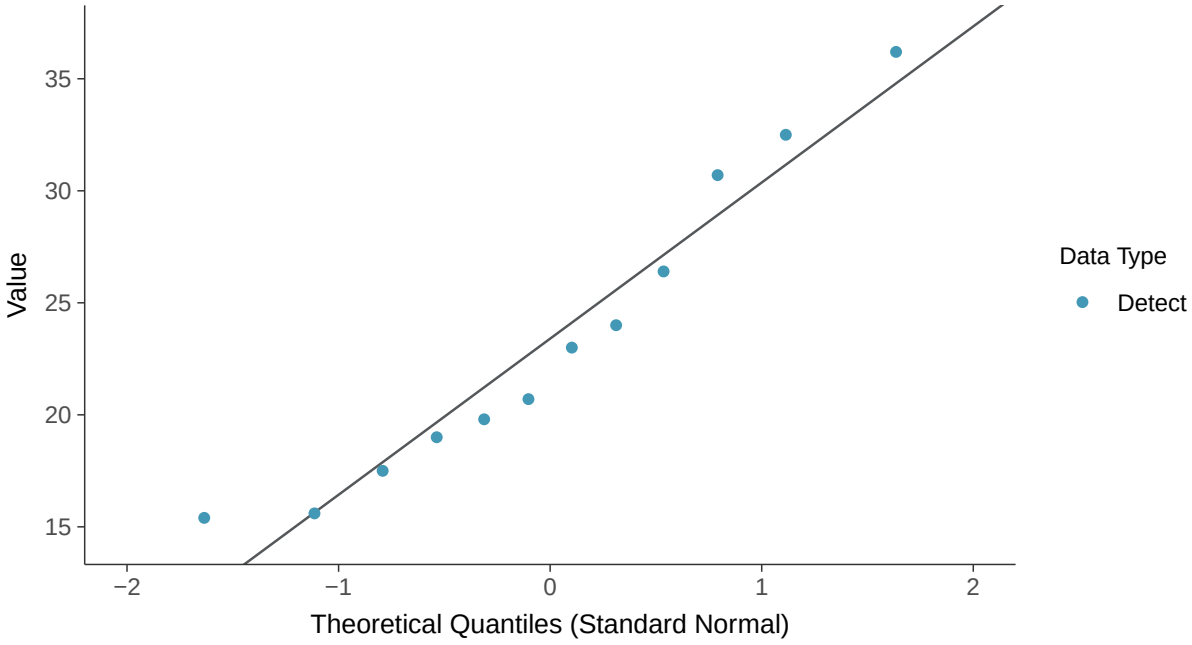
Boxplot by Season

Molybdenum, MW-10 (ug/L)



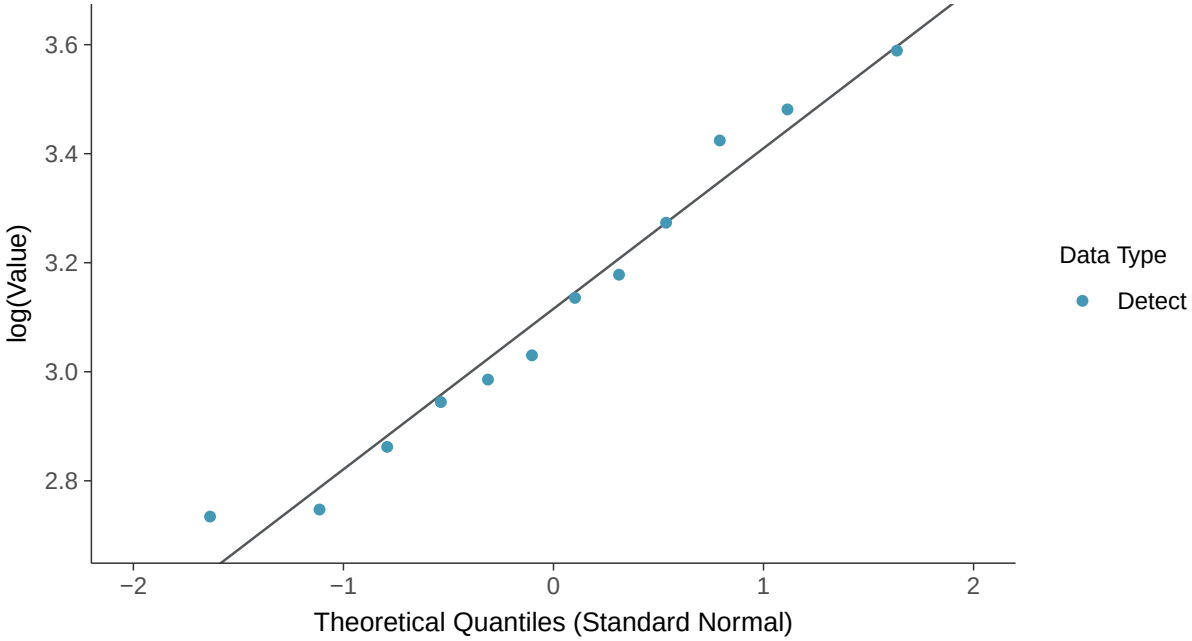
Normal Q-Q plot

Molybdenum, MW-10 (ug/L)



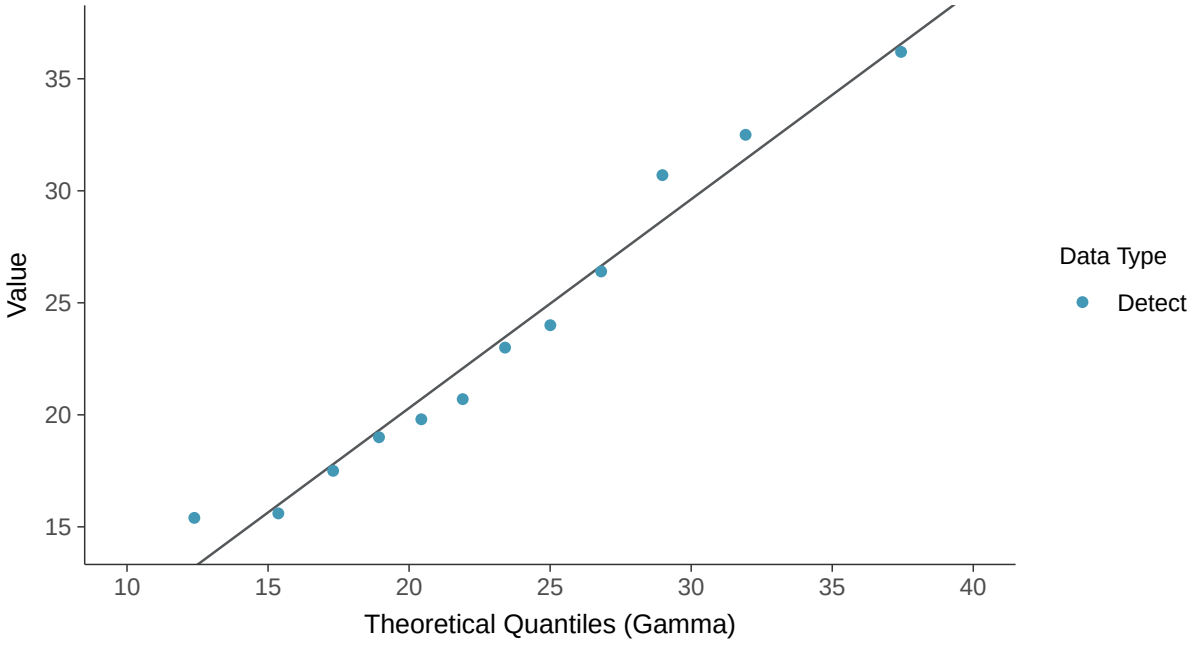
Lognormal Q-Q plot

Molybdenum, MW-10 (ug/L)



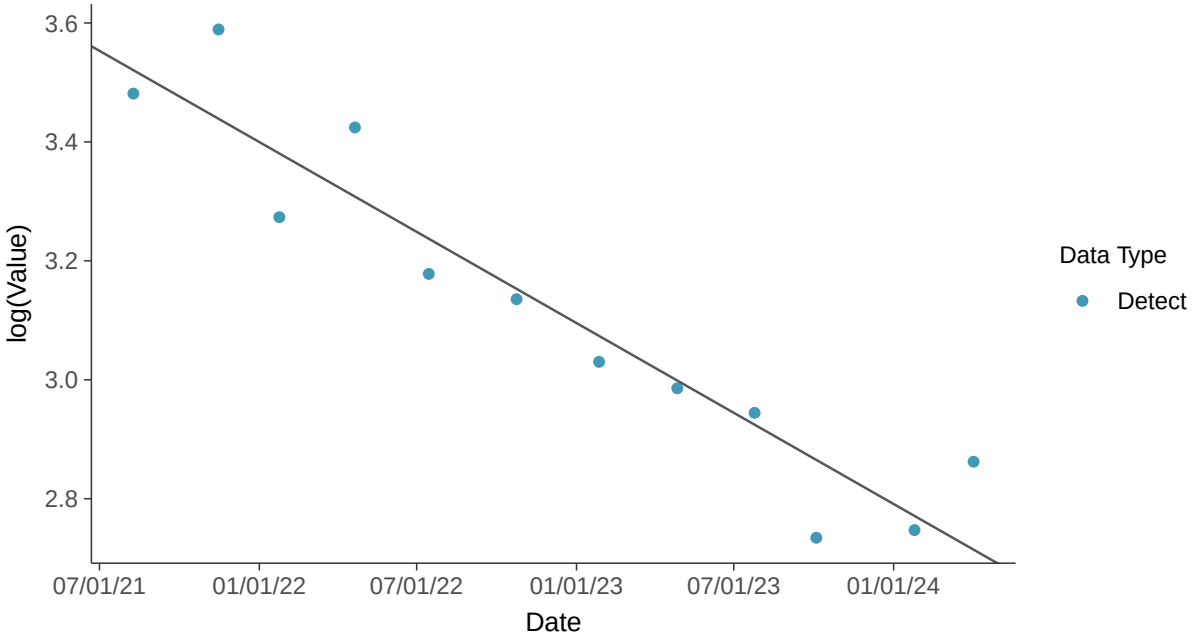
Gamma Q-Q plot

Molybdenum, MW-10 (ug/L)



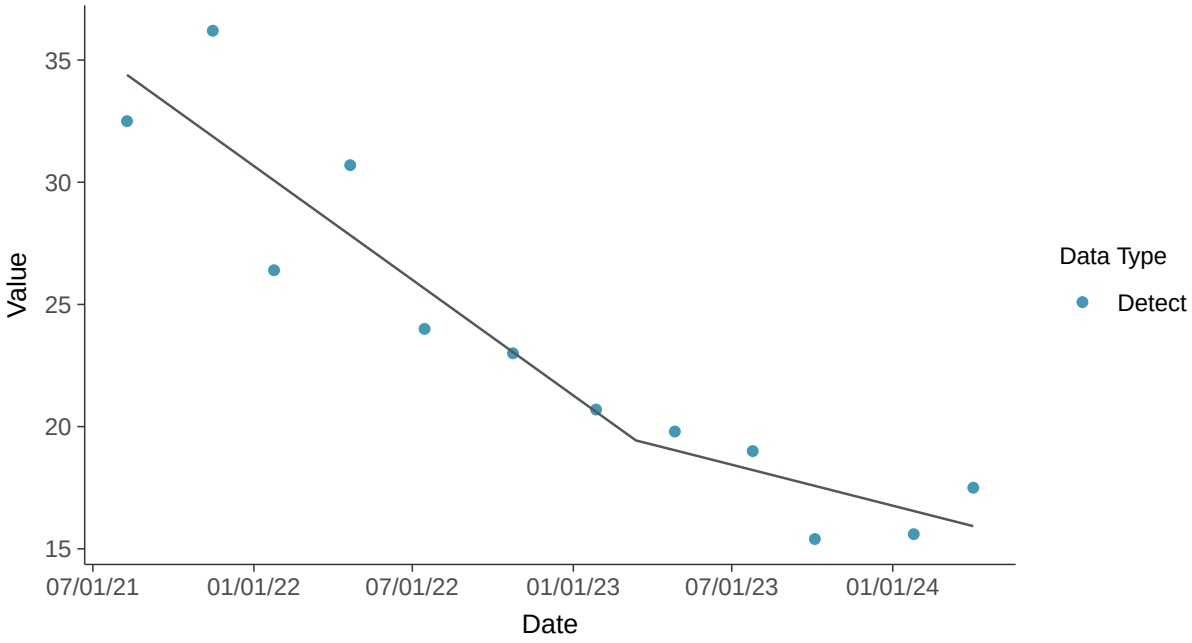
Trend Regression: Lognormal MLE

Molybdenum, MW-10 (ug/L)



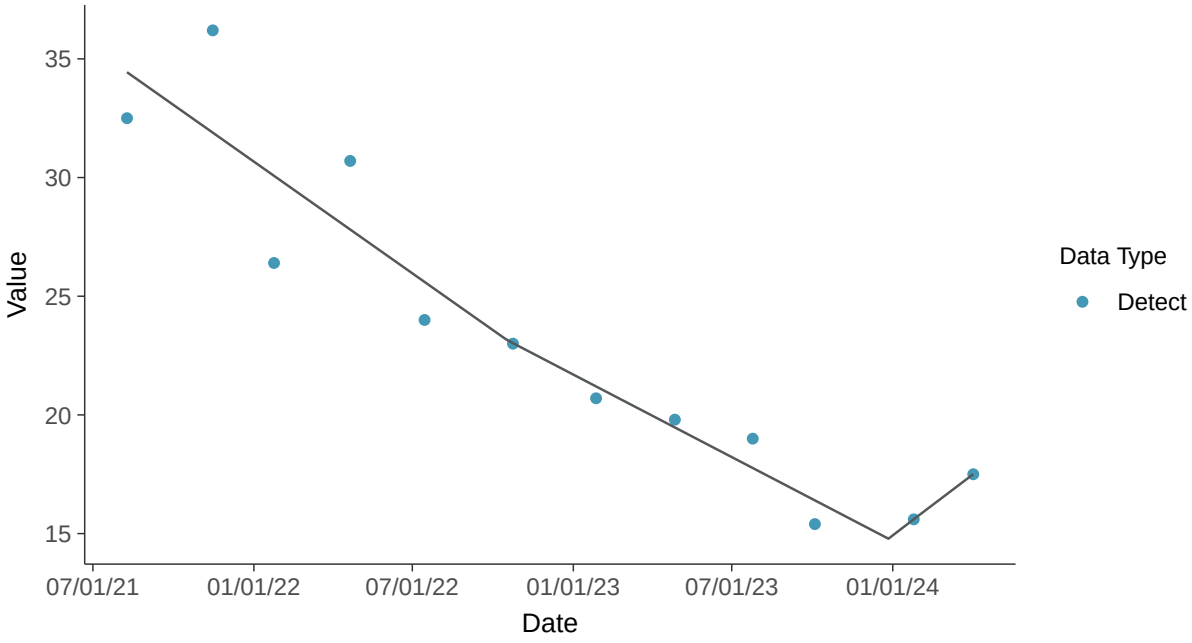
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-10 (ug/L)



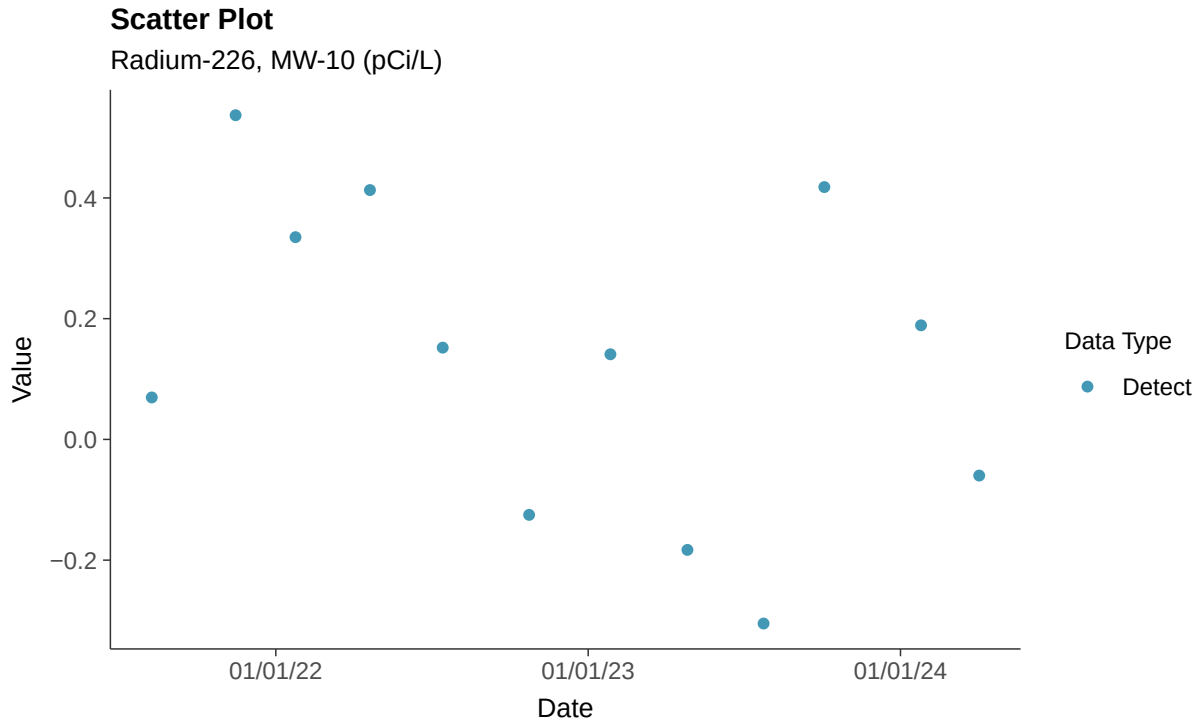
Trend Regression: Piecewise Linear-Linear-Linear

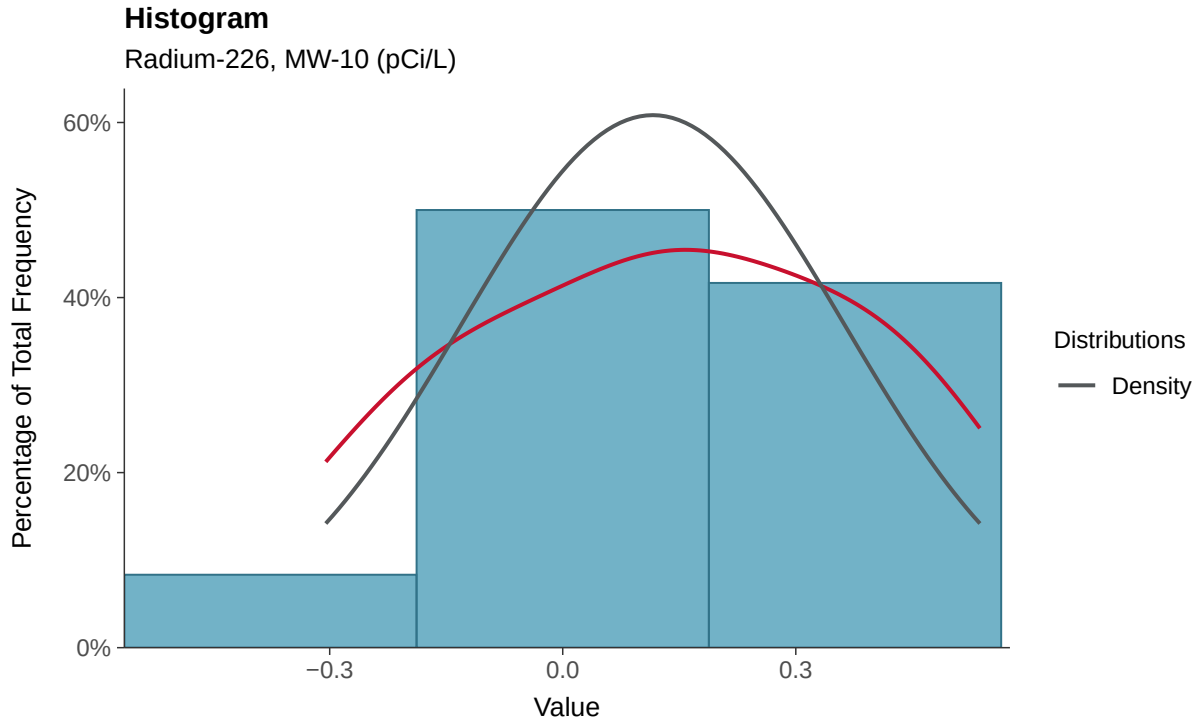
Molybdenum, MW-10 (ug/L)



App. IV: Radium-226, MW-10

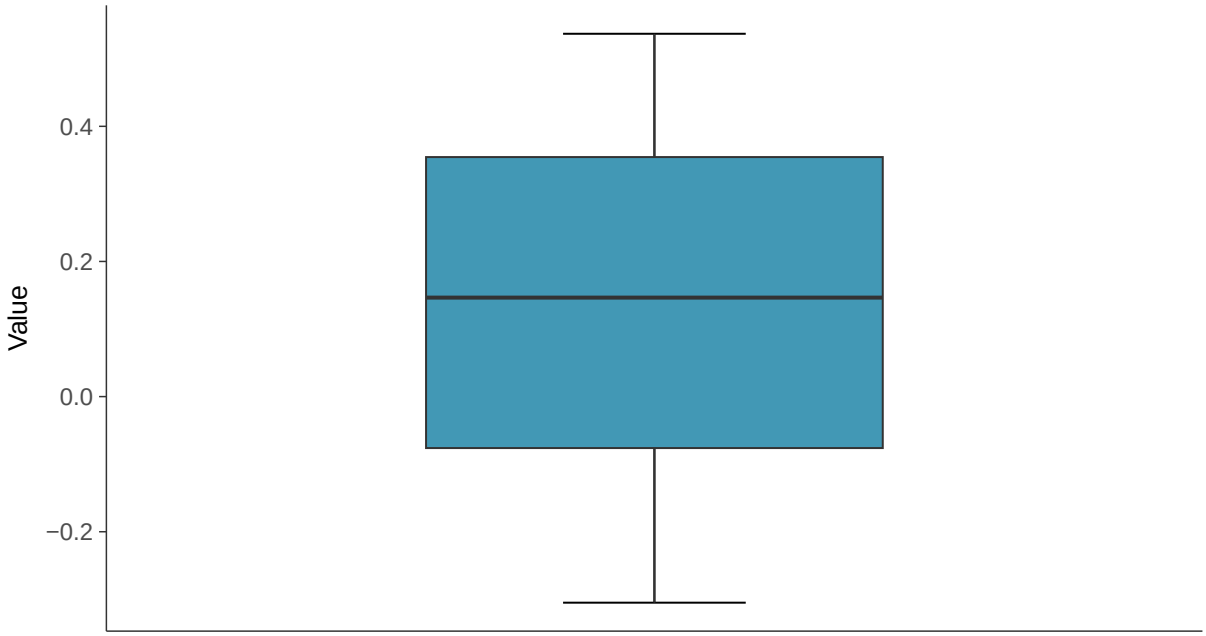
ID: 2_3_119





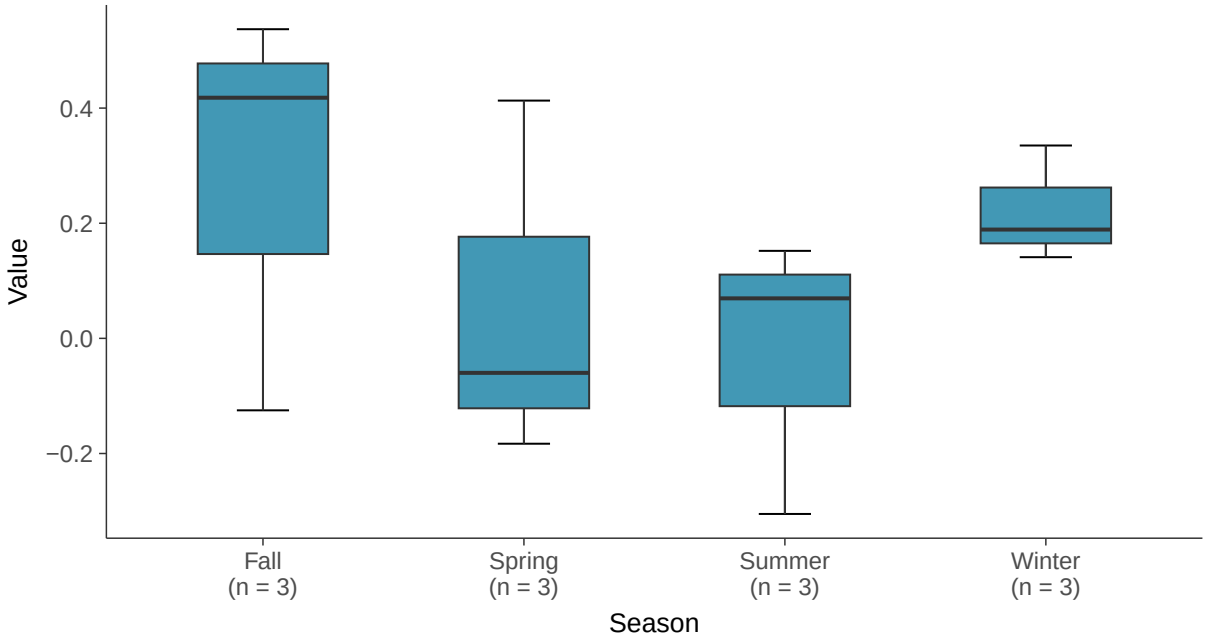
Boxplot

Radium-226, MW-10 (pCi/L)



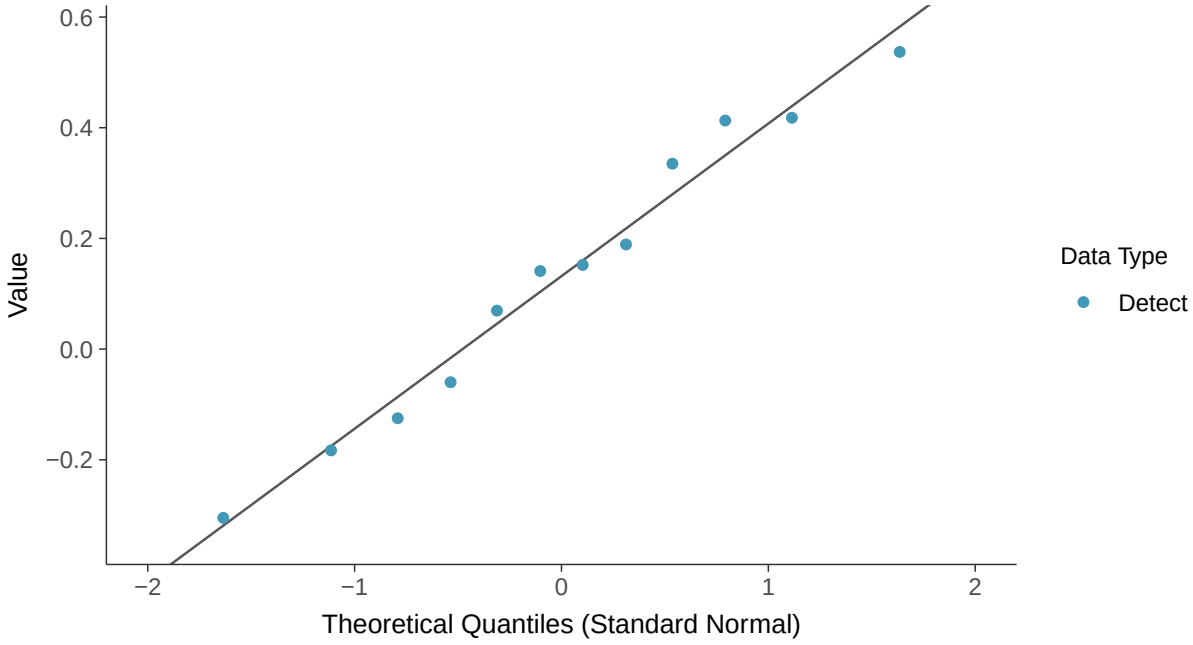
Boxplot by Season

Radium-226, MW-10 (pCi/L)



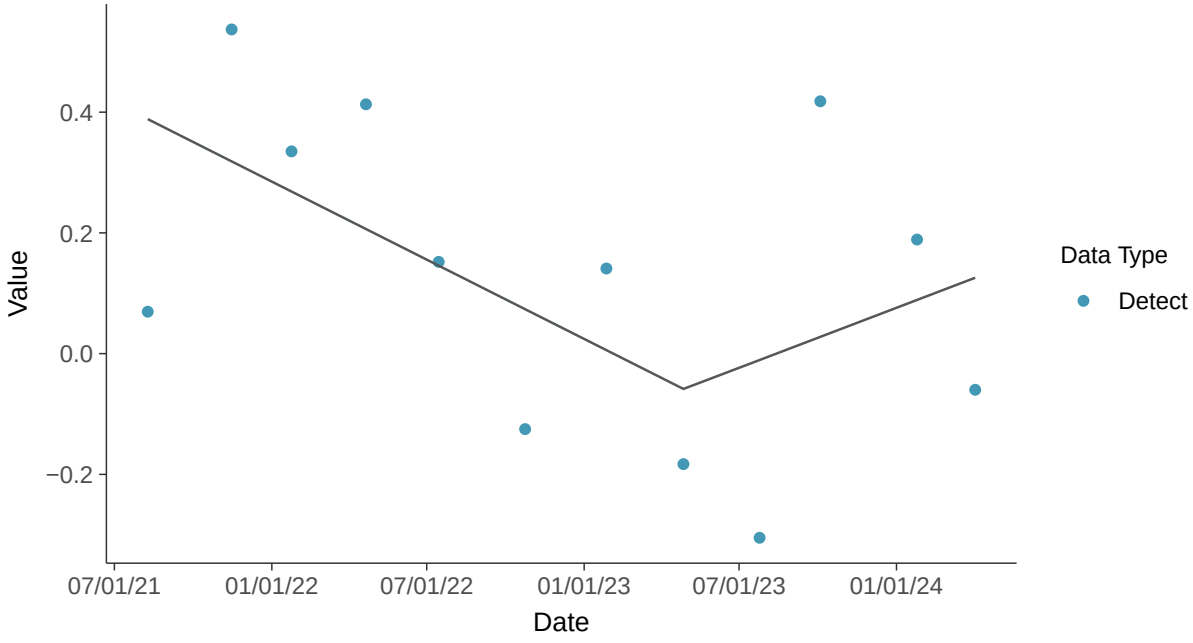
Normal Q-Q plot

Radium-226, MW-10 (pCi/L)



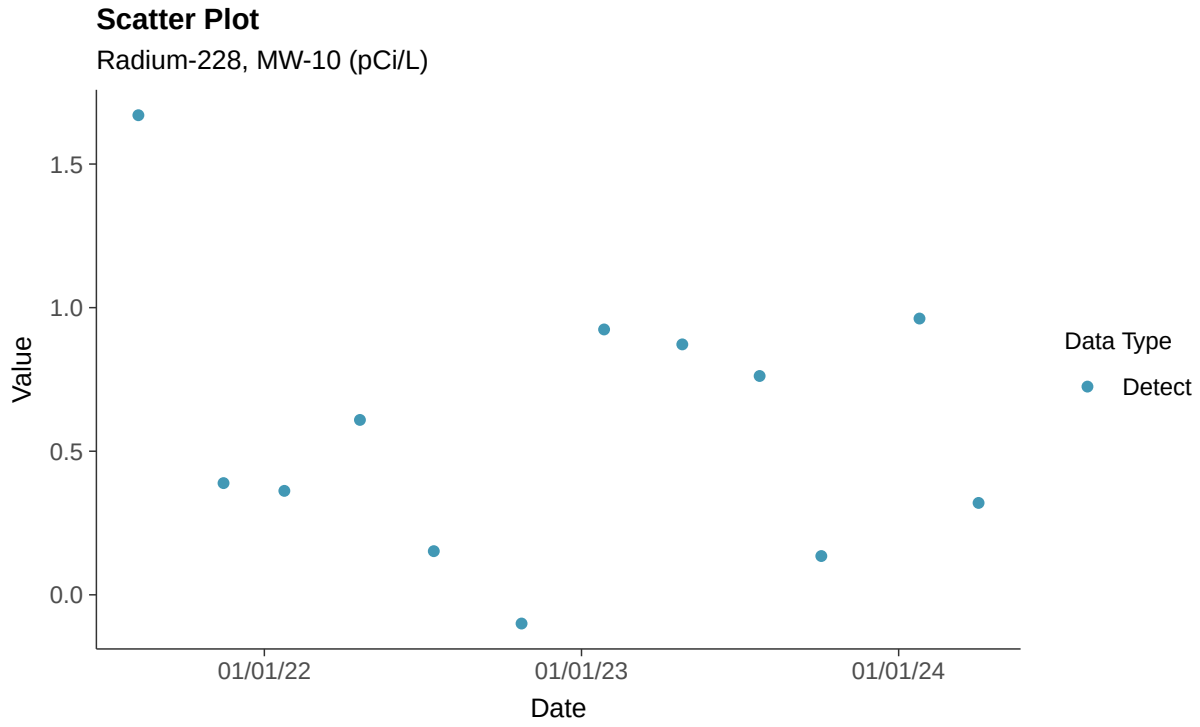
Trend Regression: Piecewise Linear-Linear

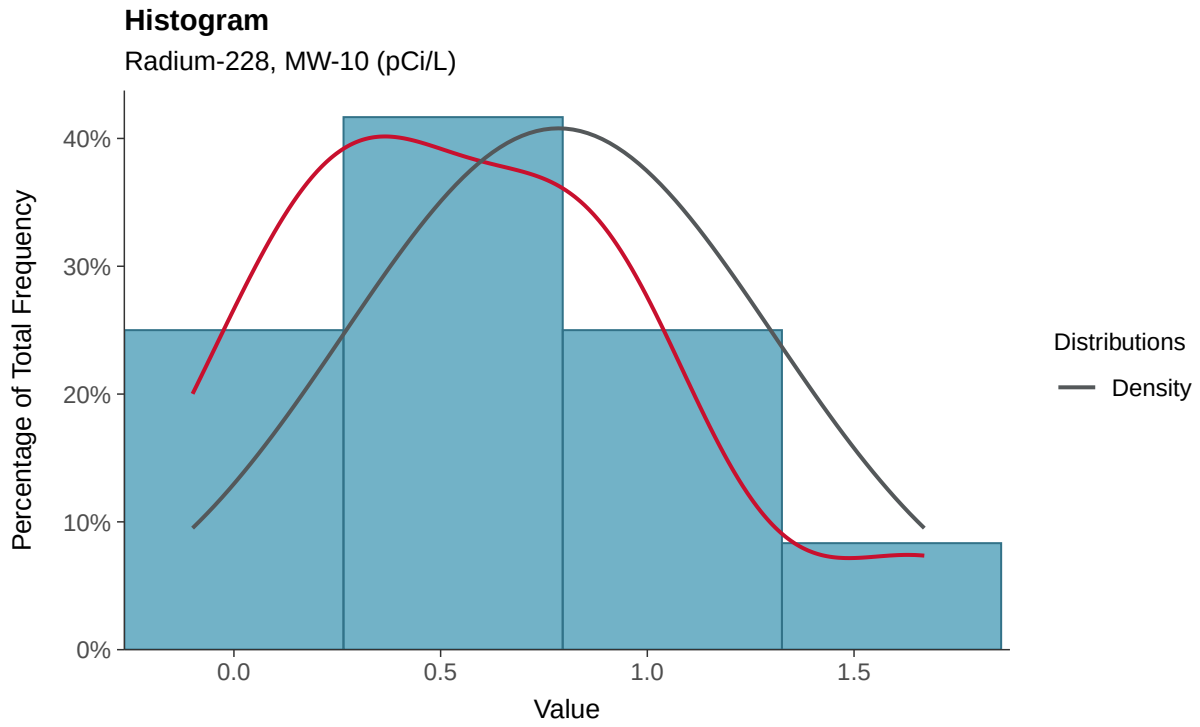
Radium-226, MW-10 (pCi/L)



App. IV: Radium-228, MW-10

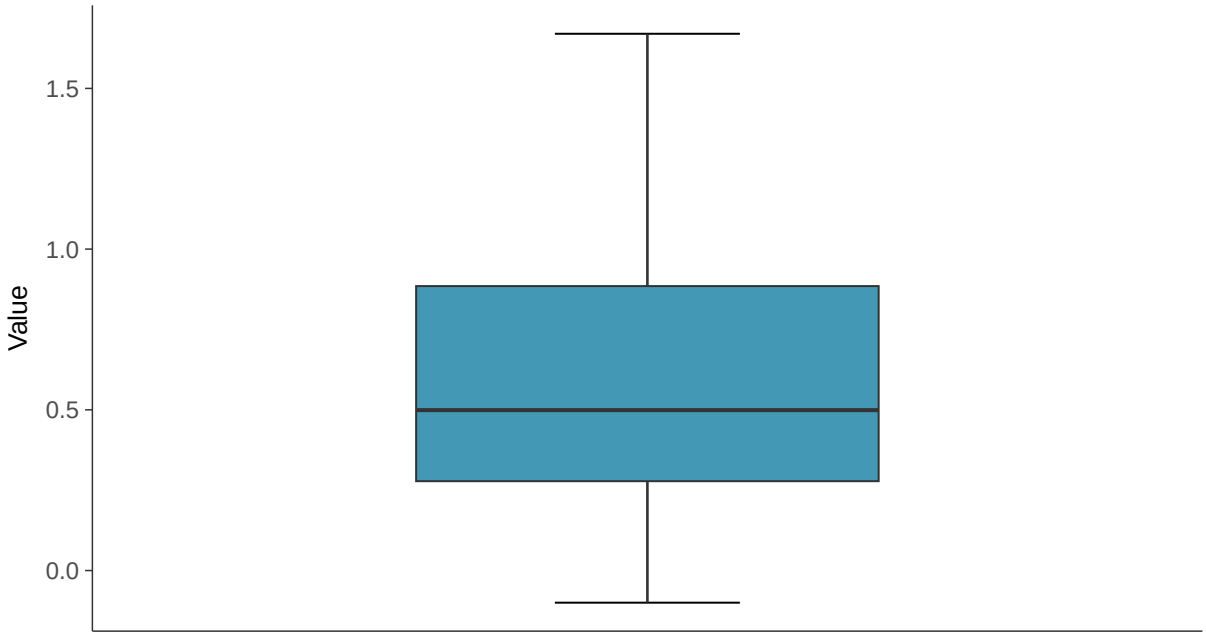
ID: 2_3_120





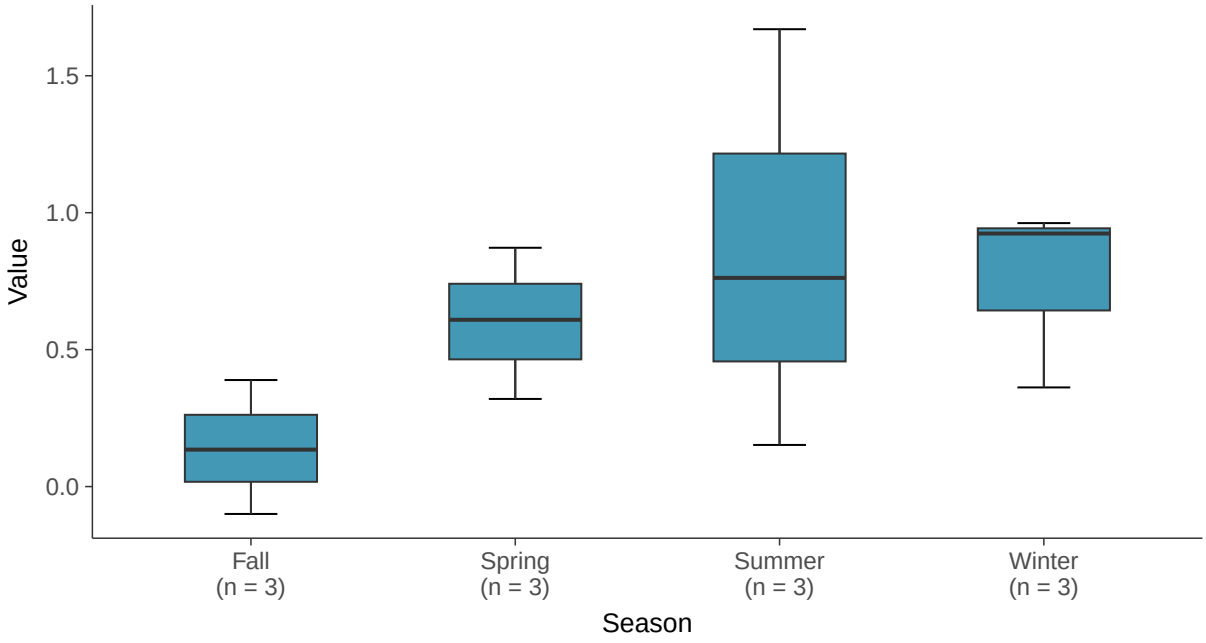
Boxplot

Radium-228, MW-10 (pCi/L)



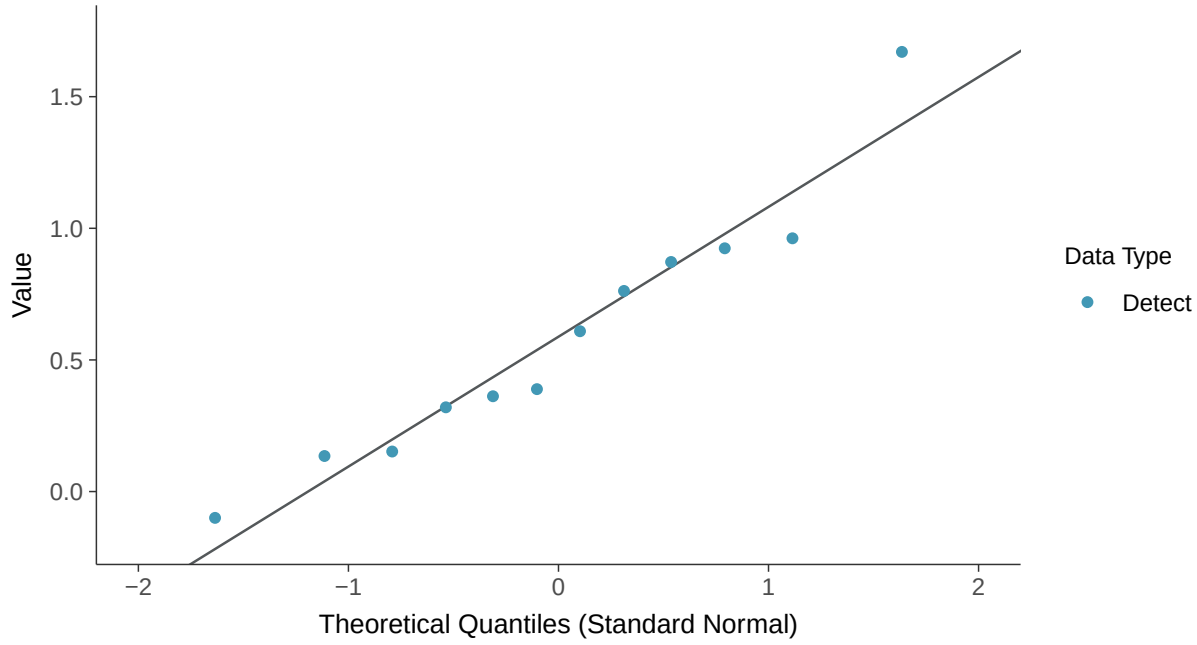
Boxplot by Season

Radium-228, MW-10 (pCi/L)



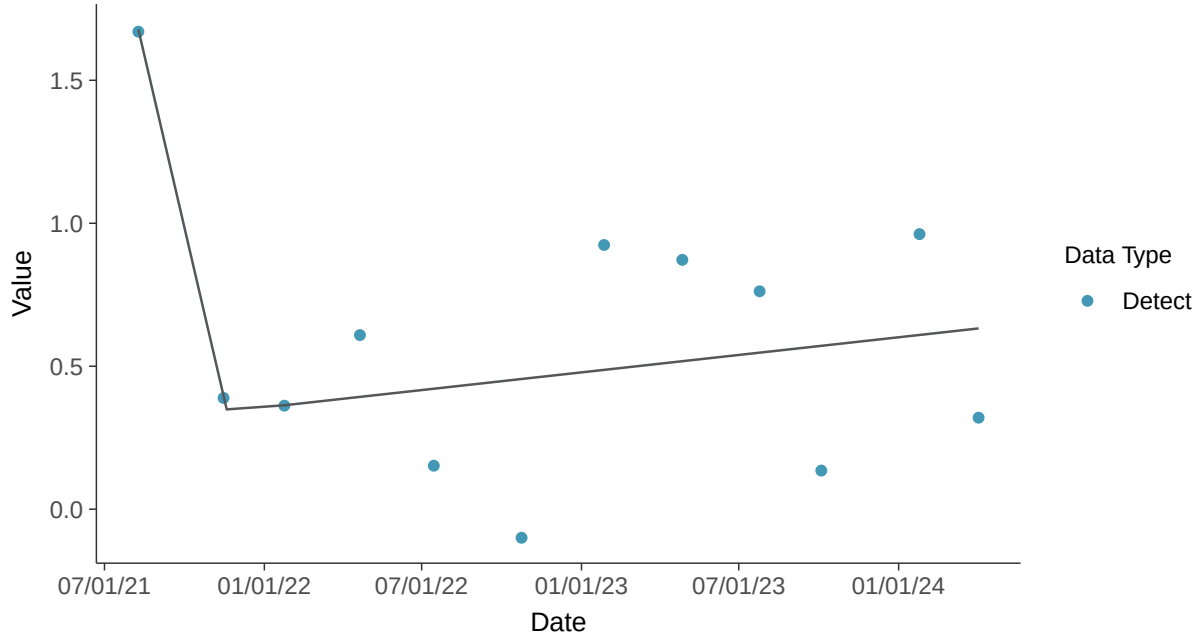
Normal Q-Q plot

Radium-228, MW-10 (pCi/L)



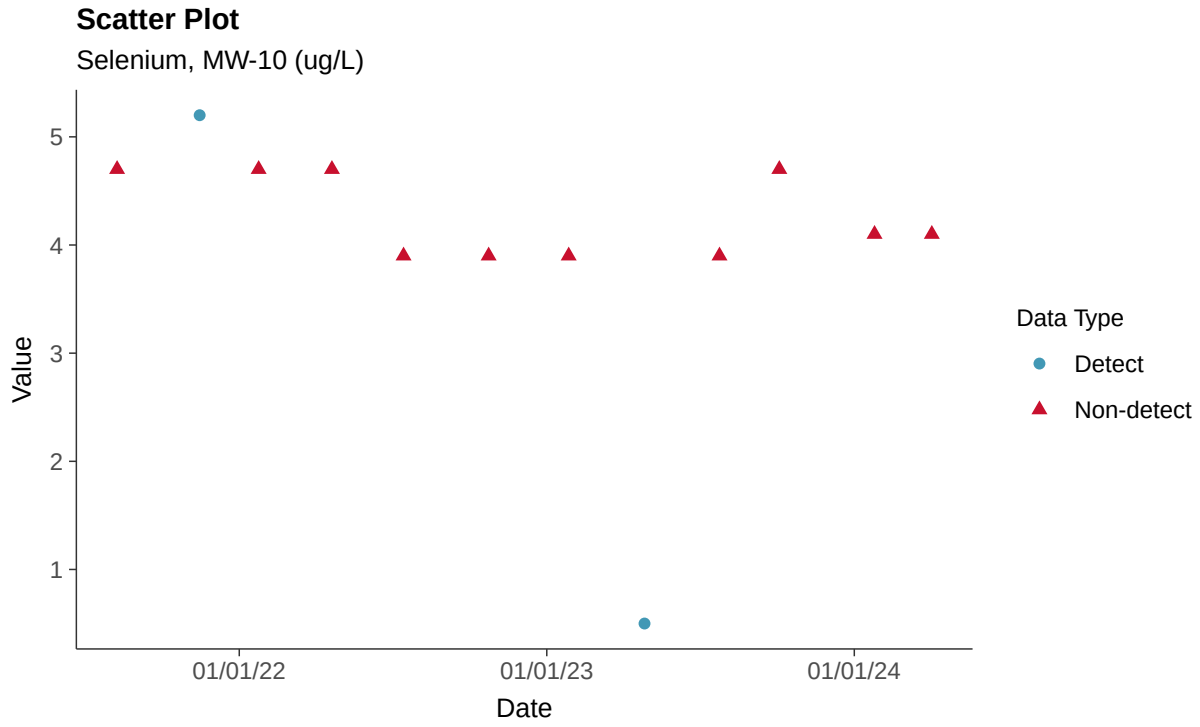
Trend Regression: Piecewise Linear-Linear

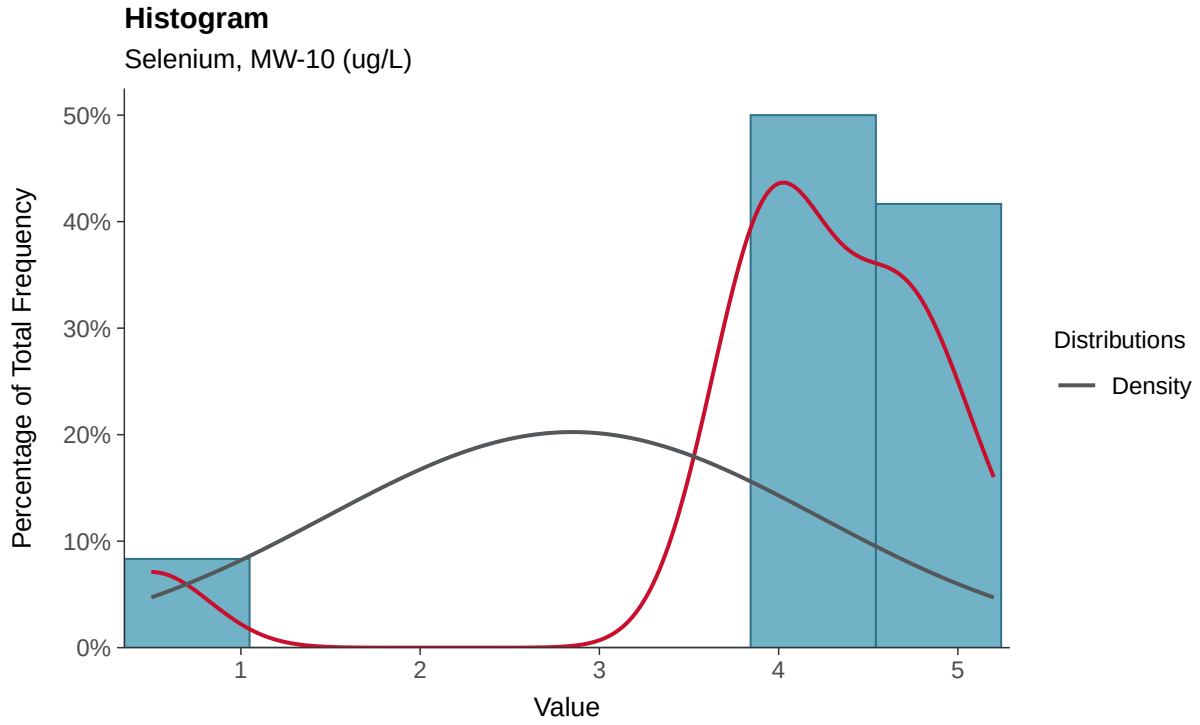
Radium-228, MW-10 (pCi/L)



App. IV: Selenium, MW-10

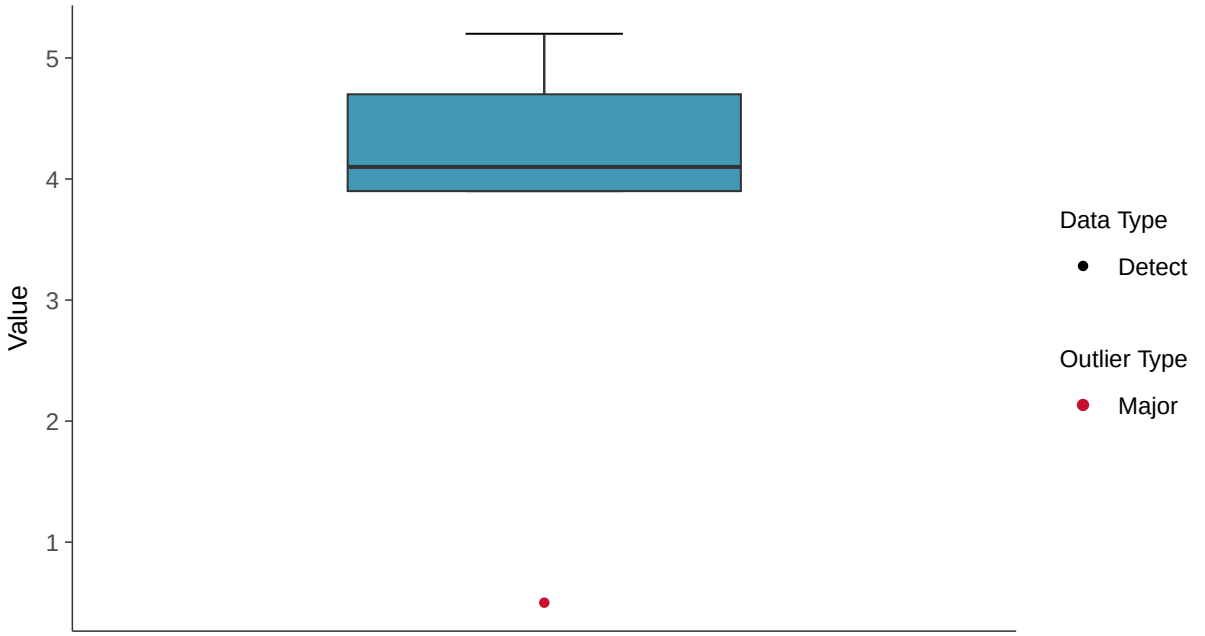
ID: 2_3_121





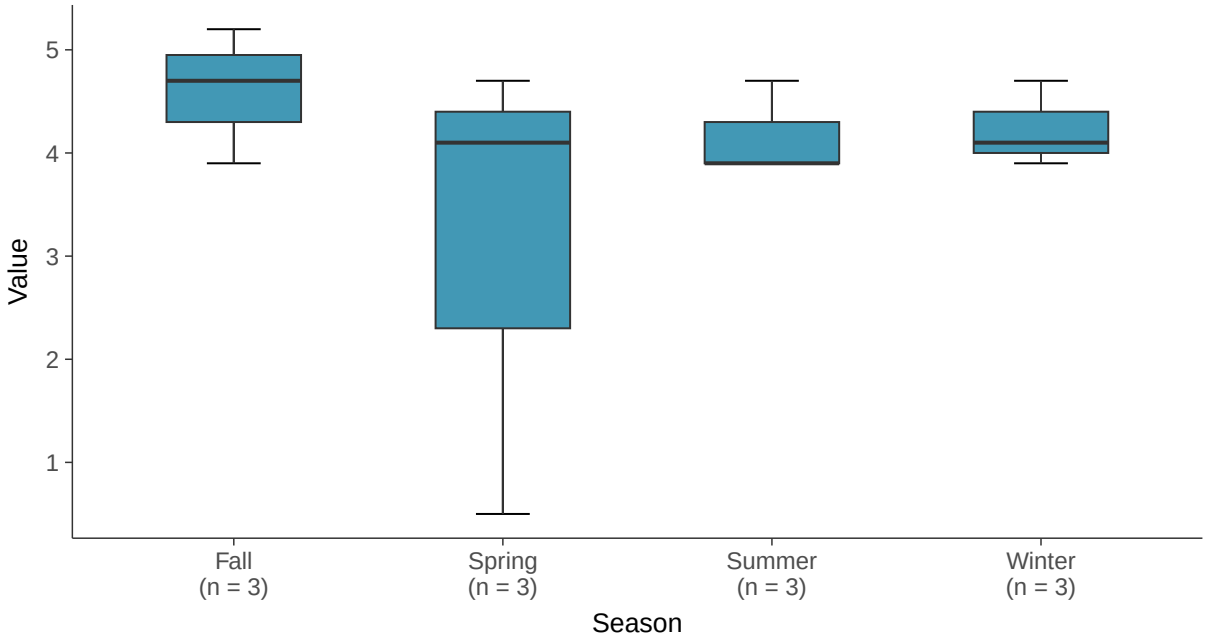
Boxplot

Selenium, MW-10 (ug/L)



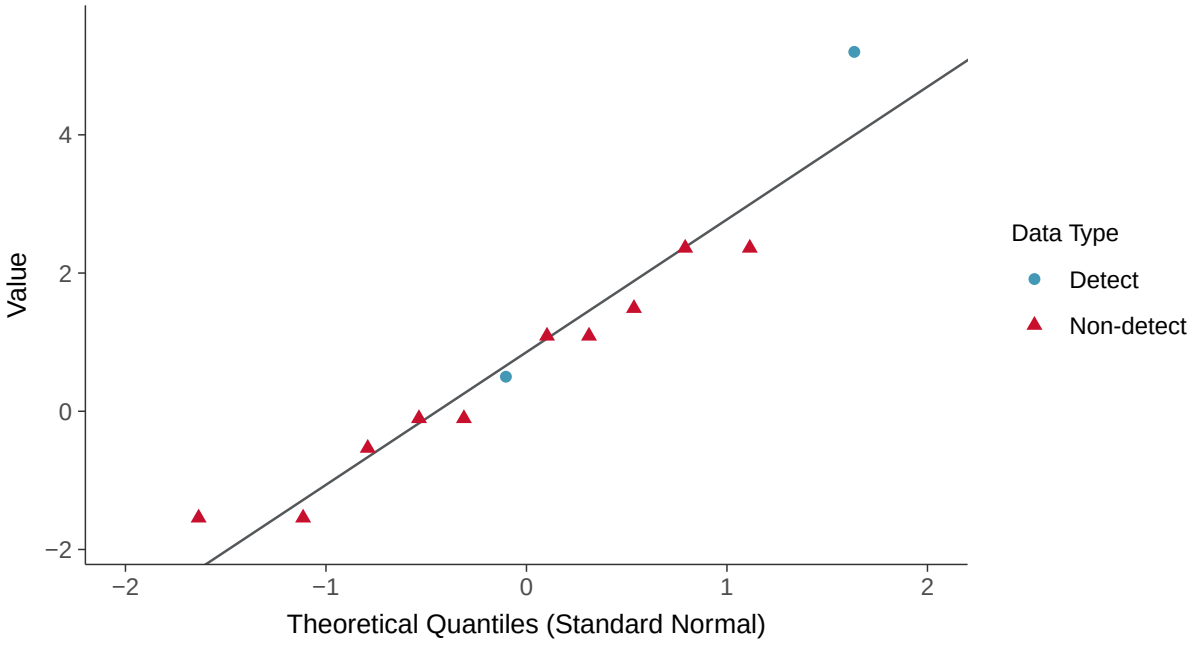
Boxplot by Season

Selenium, MW-10 (ug/L)



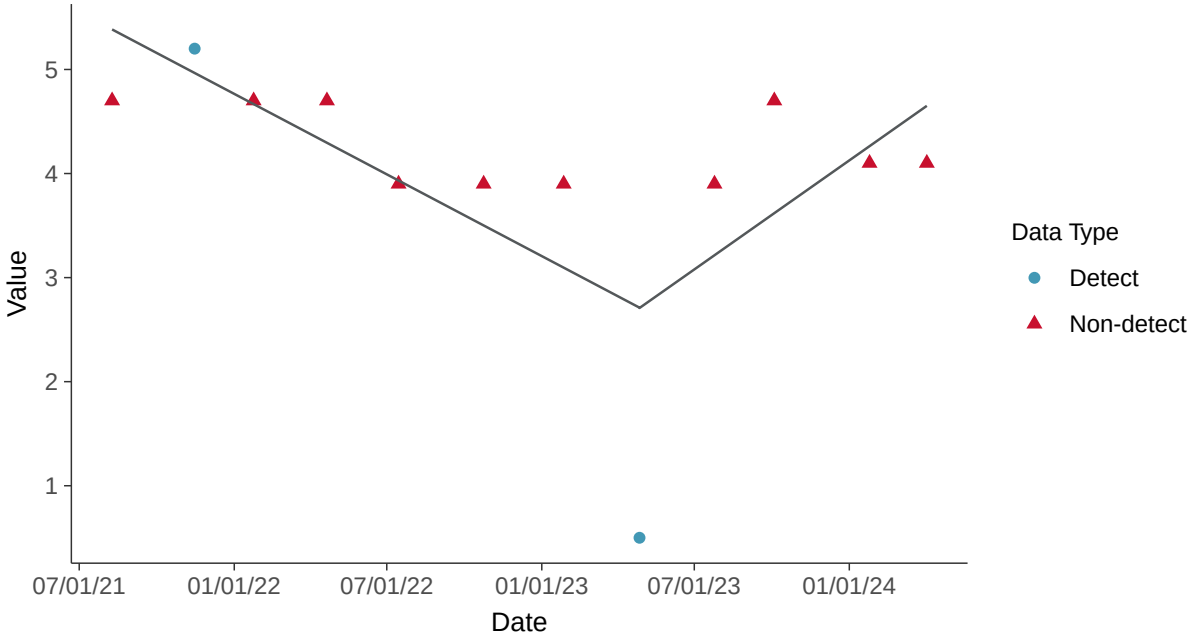
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (ug/L)



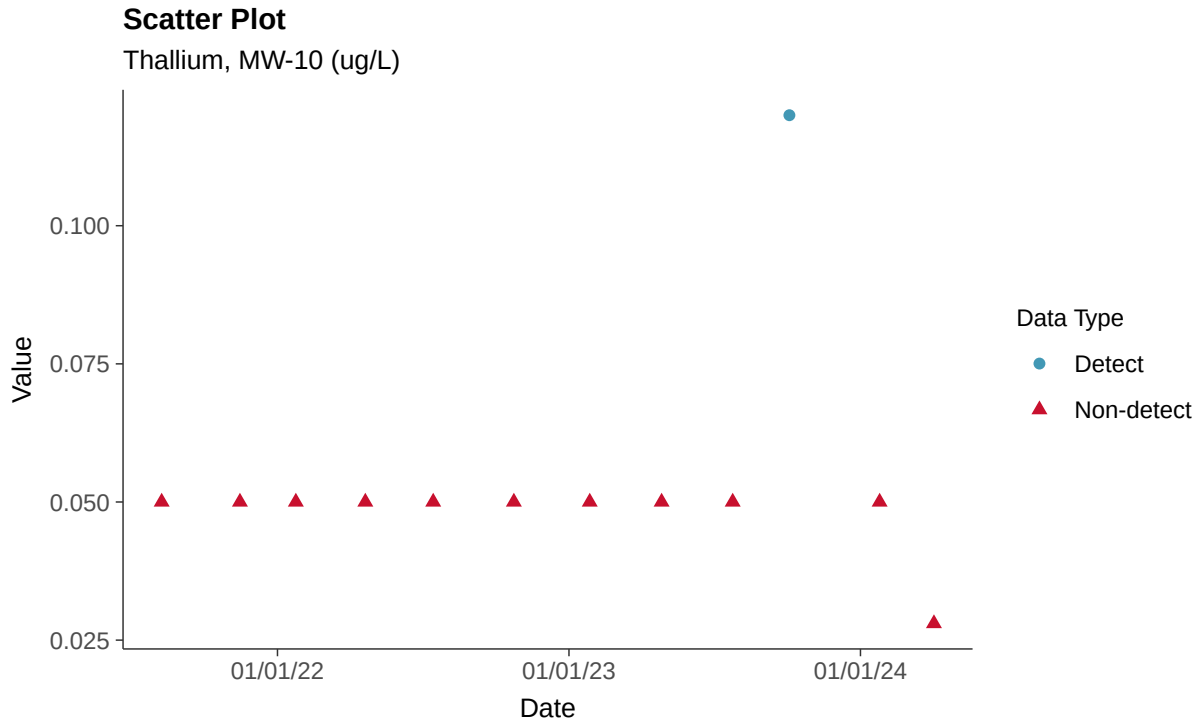
Trend Regression: Piecewise Linear-Linear

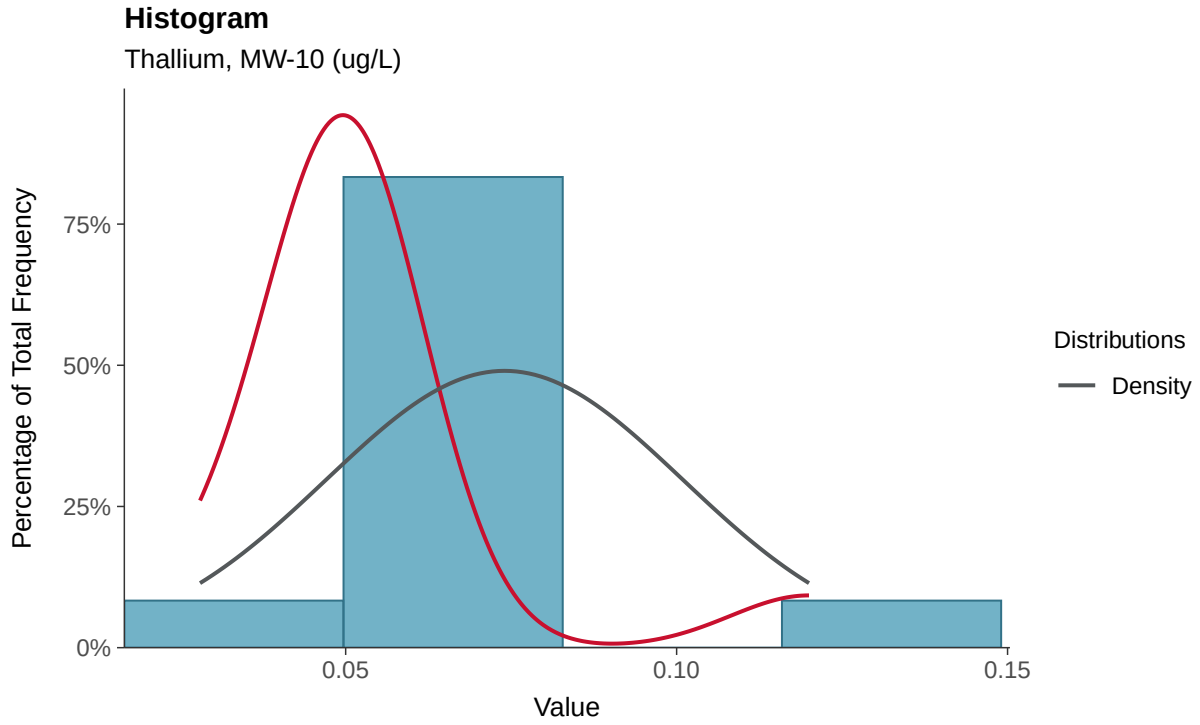
Selenium, MW-10 (ug/L)



App. IV: Thallium, MW-10

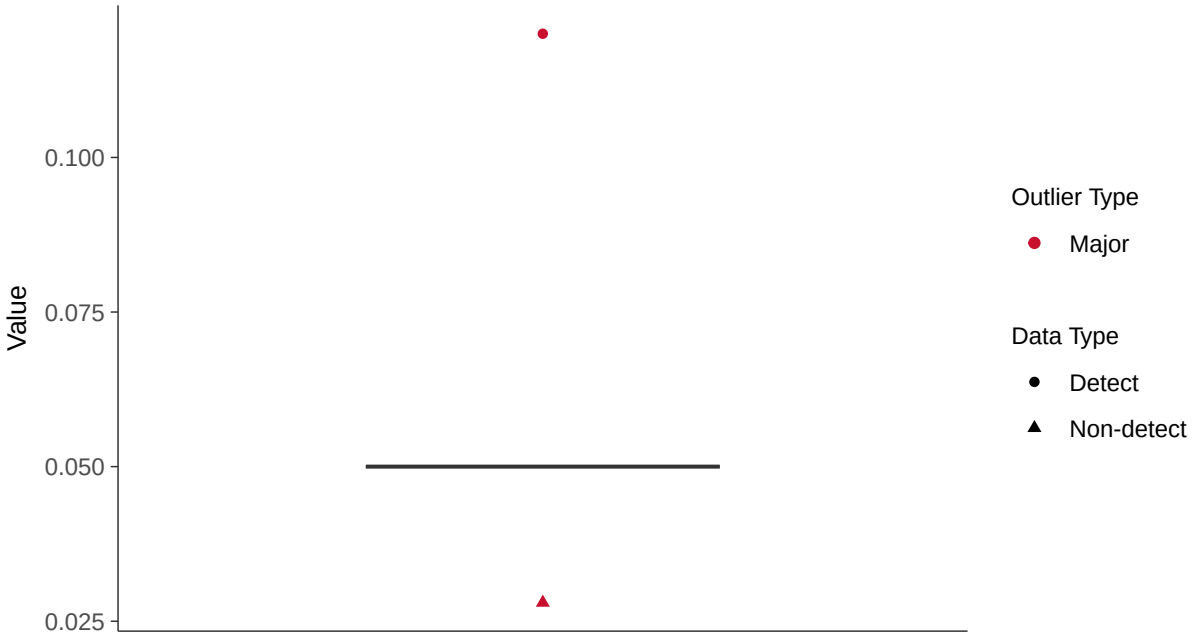
ID: 2_3_124





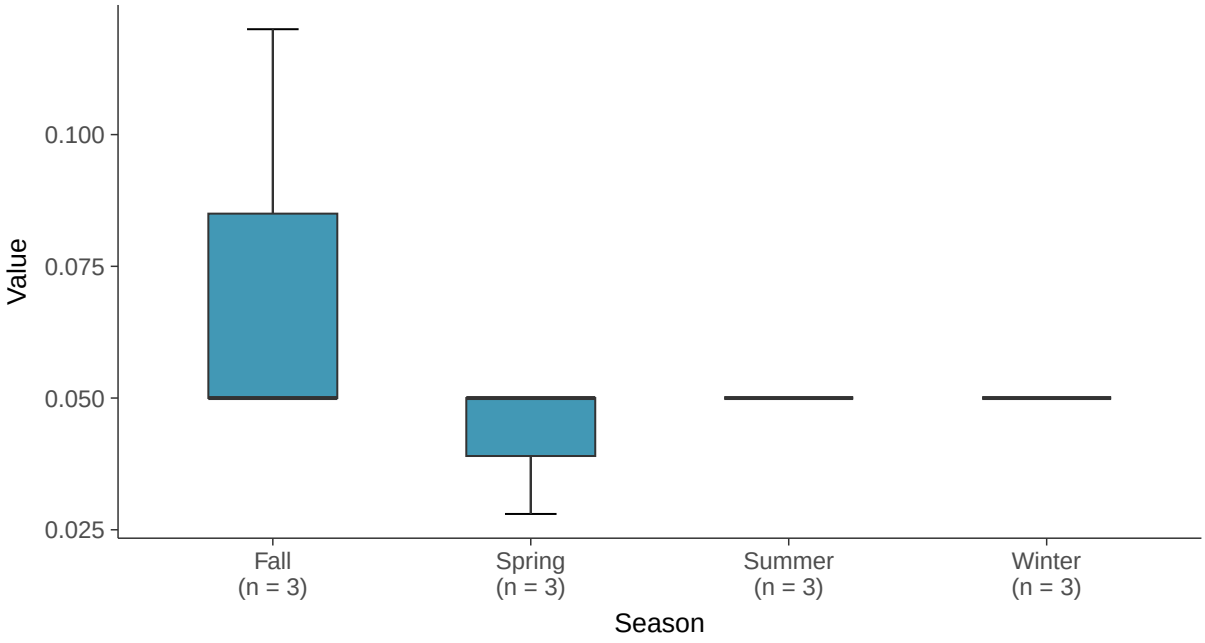
Boxplot

Thallium, MW-10 (ug/L)



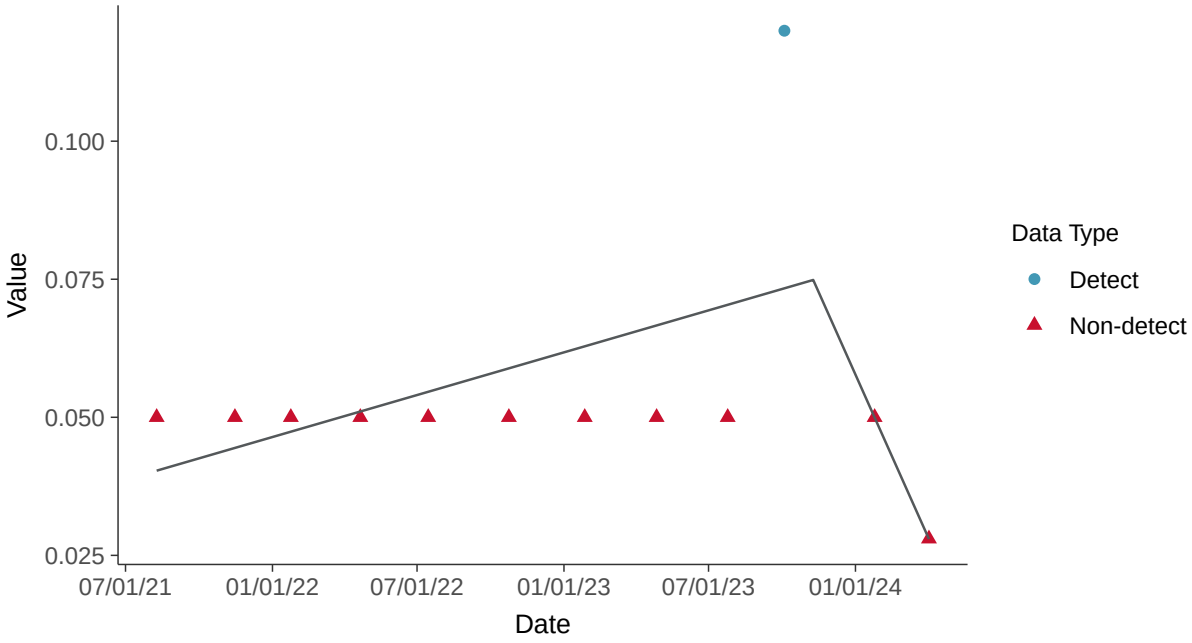
Boxplot by Season

Thallium, MW-10 (ug/L)



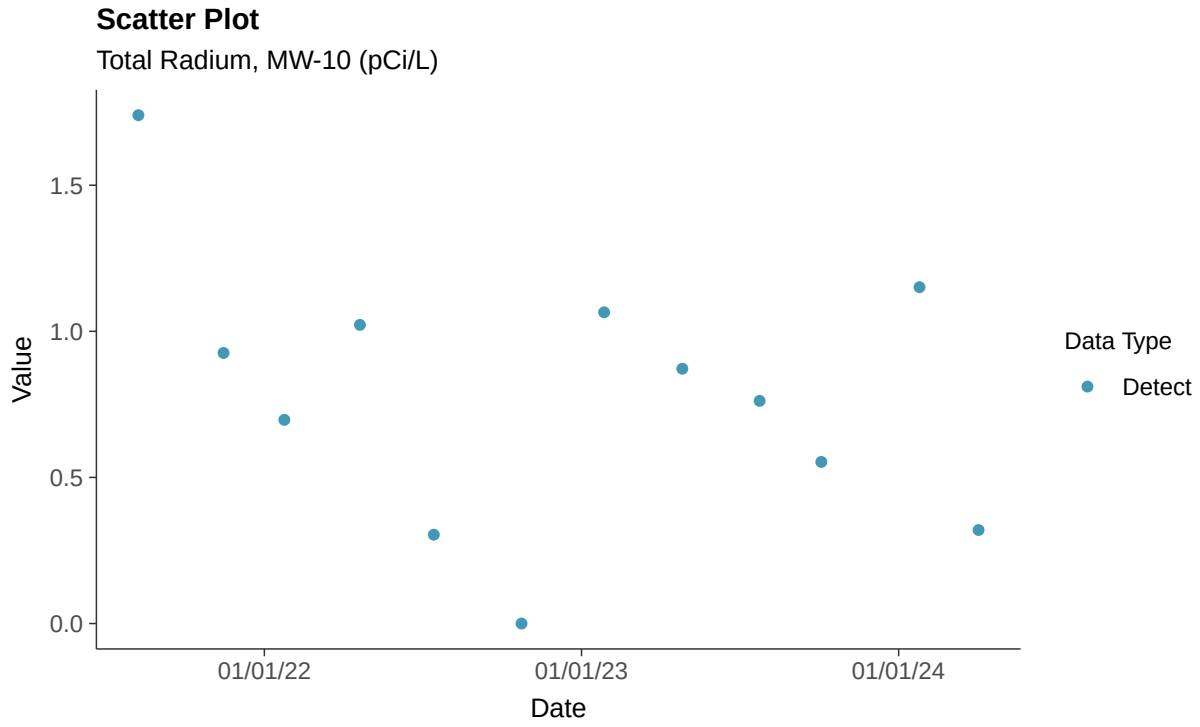
Trend Regression: Piecewise Linear-Linear

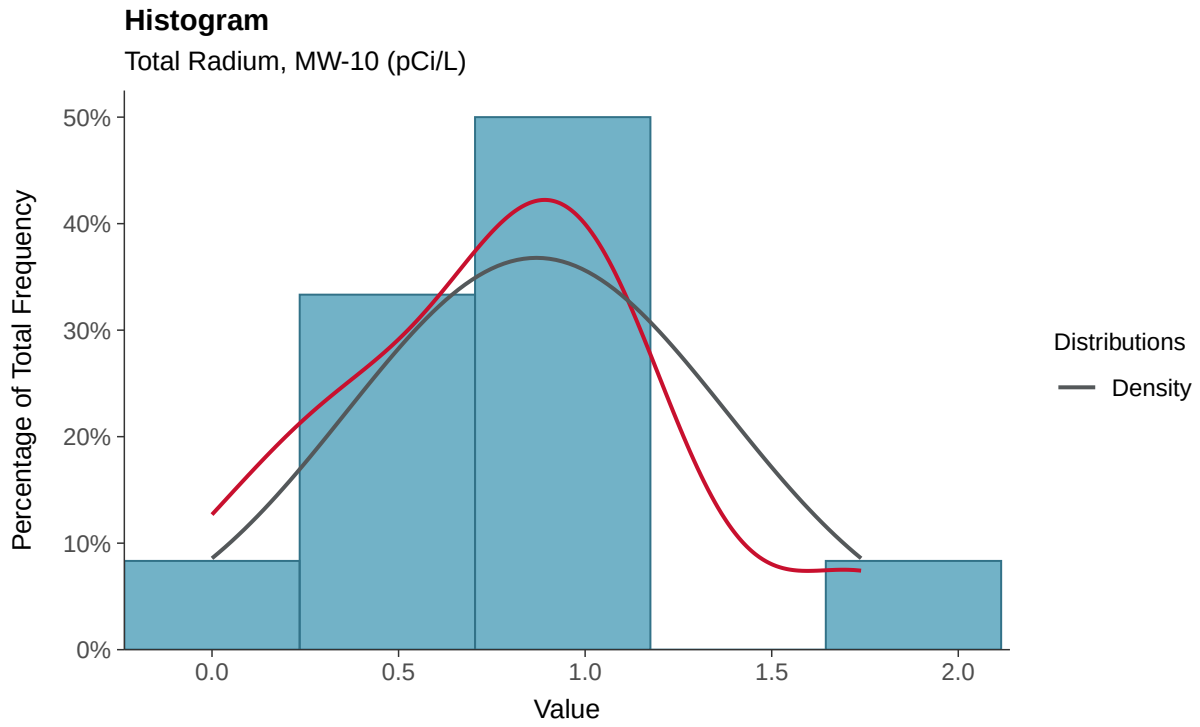
Thallium, MW-10 (ug/L)



App. IV: Total Radium, MW-10

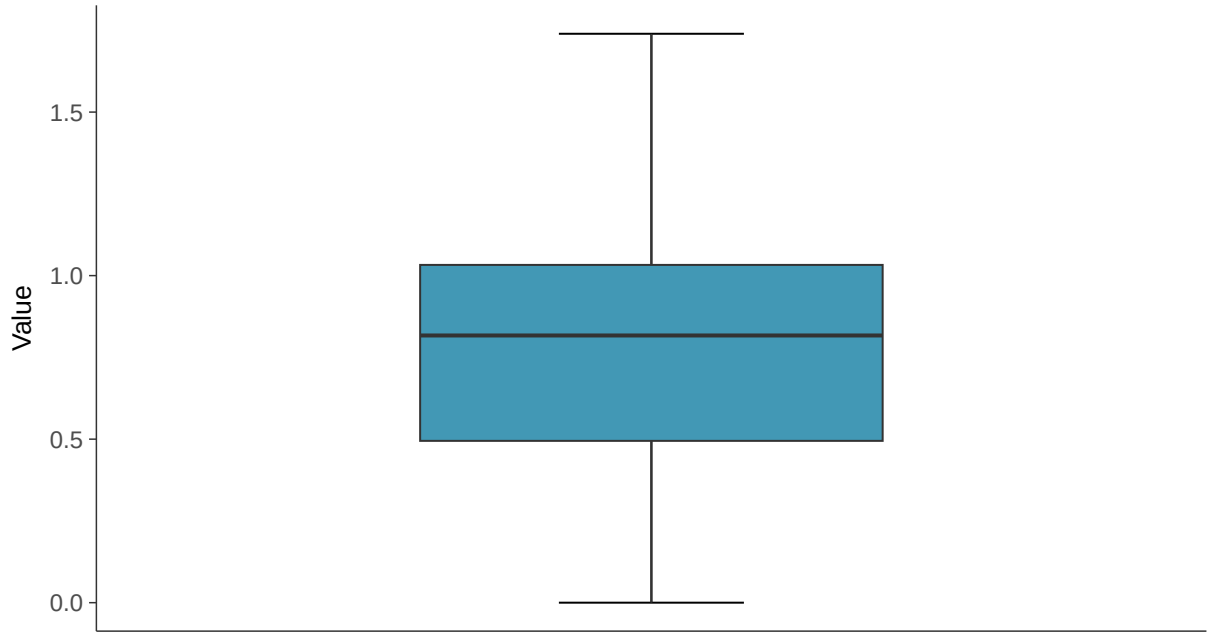
ID: 2_3_126





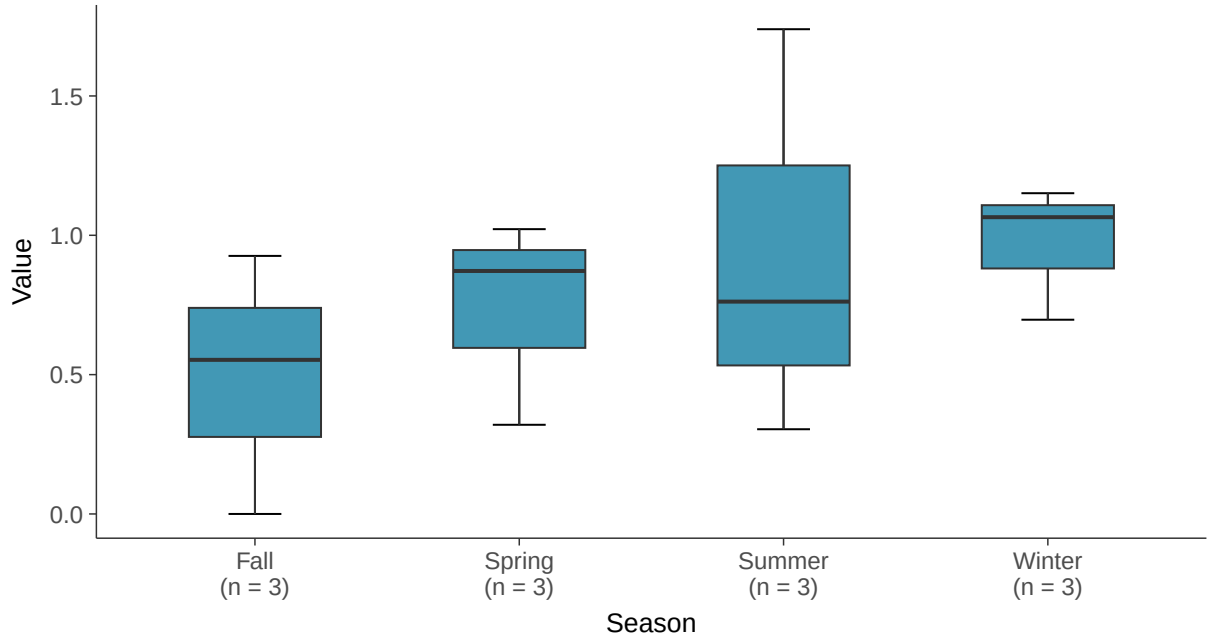
Boxplot

Total Radium, MW-10 (pCi/L)



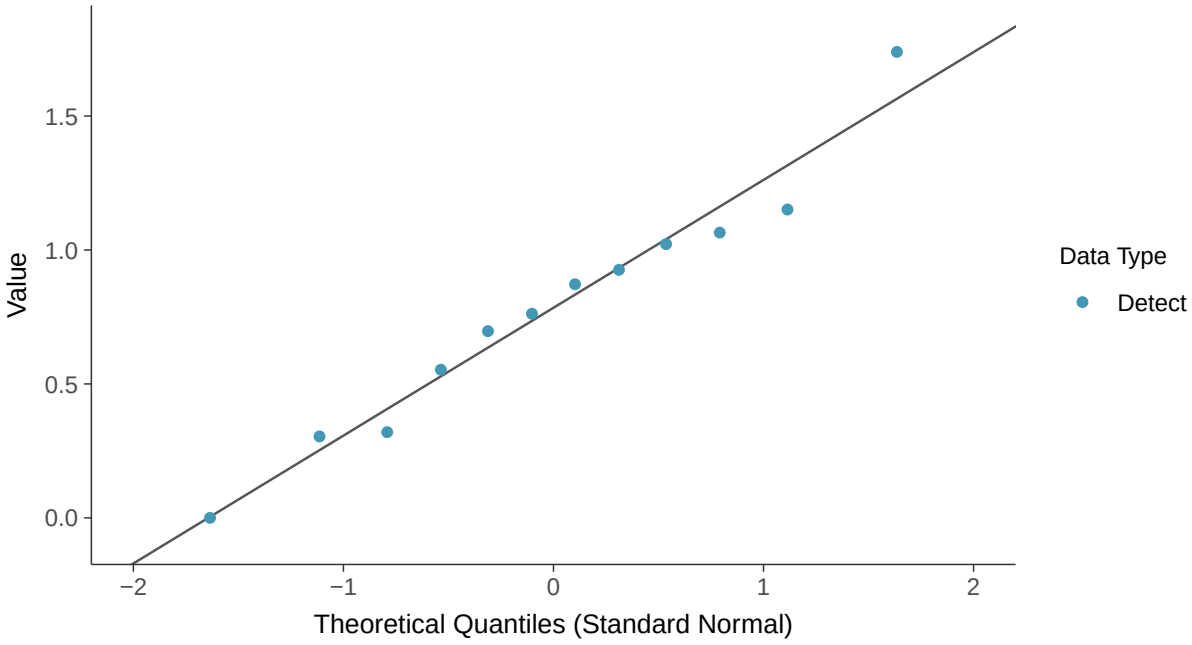
Boxplot by Season

Total Radium, MW-10 (pCi/L)



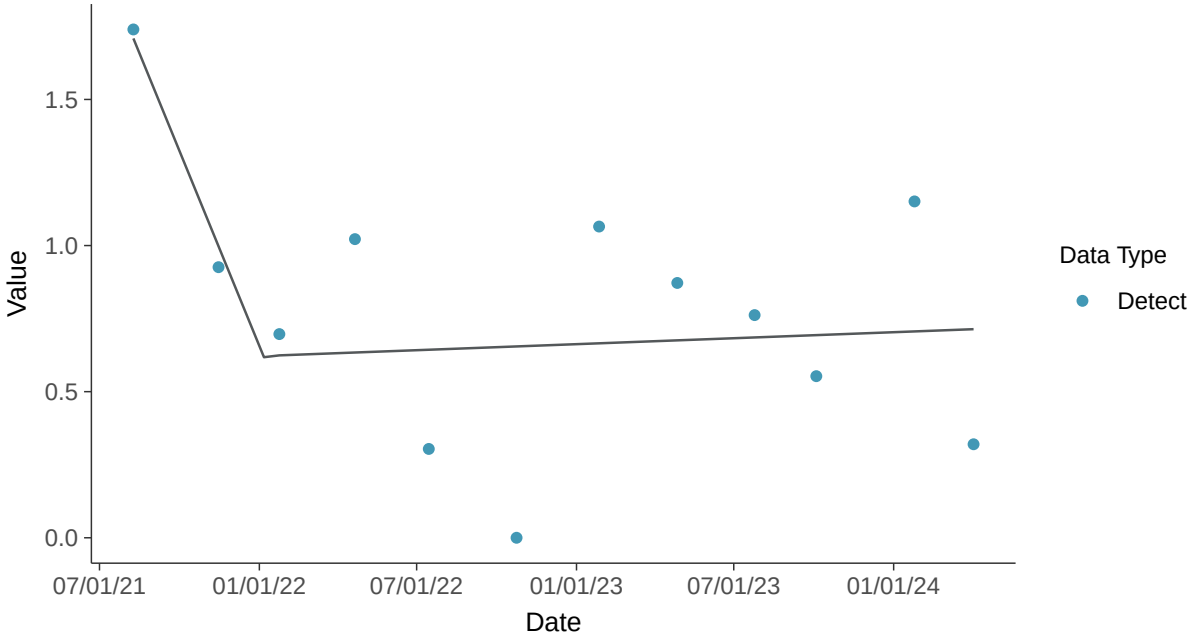
Normal Q-Q plot

Total Radium, MW-10 (pCi/L)



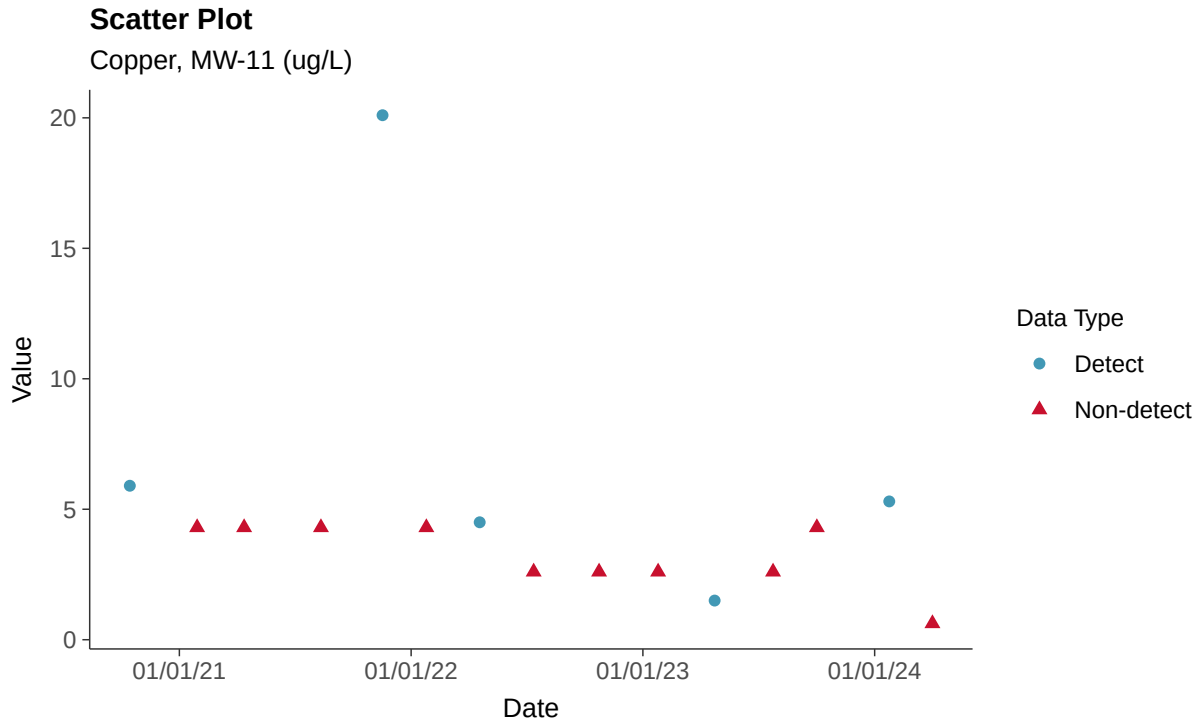
Trend Regression: Piecewise Linear-Linear

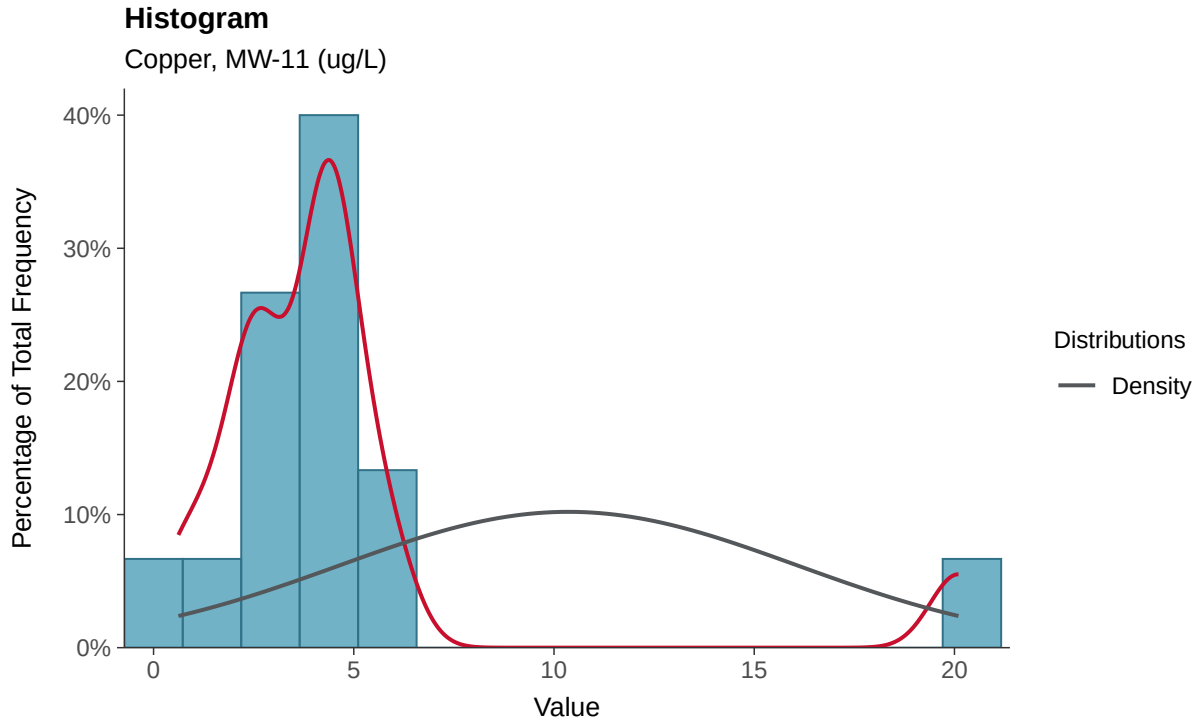
Total Radium, MW-10 (pCi/L)



App. I Metals: Copper, MW-11

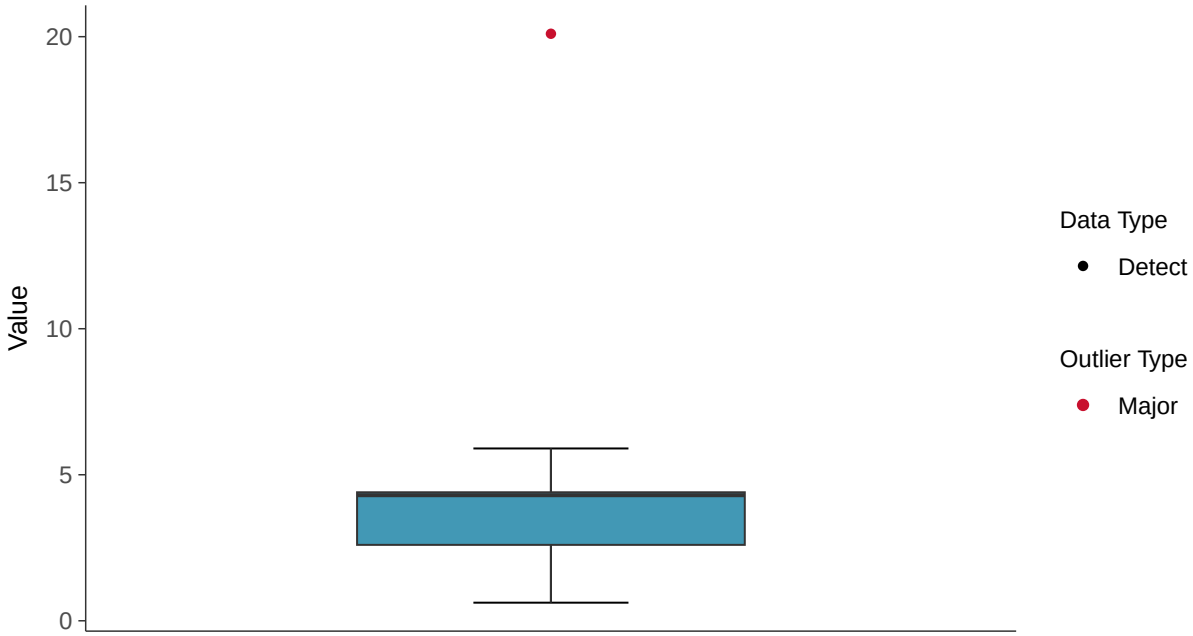
ID: 3_1_111





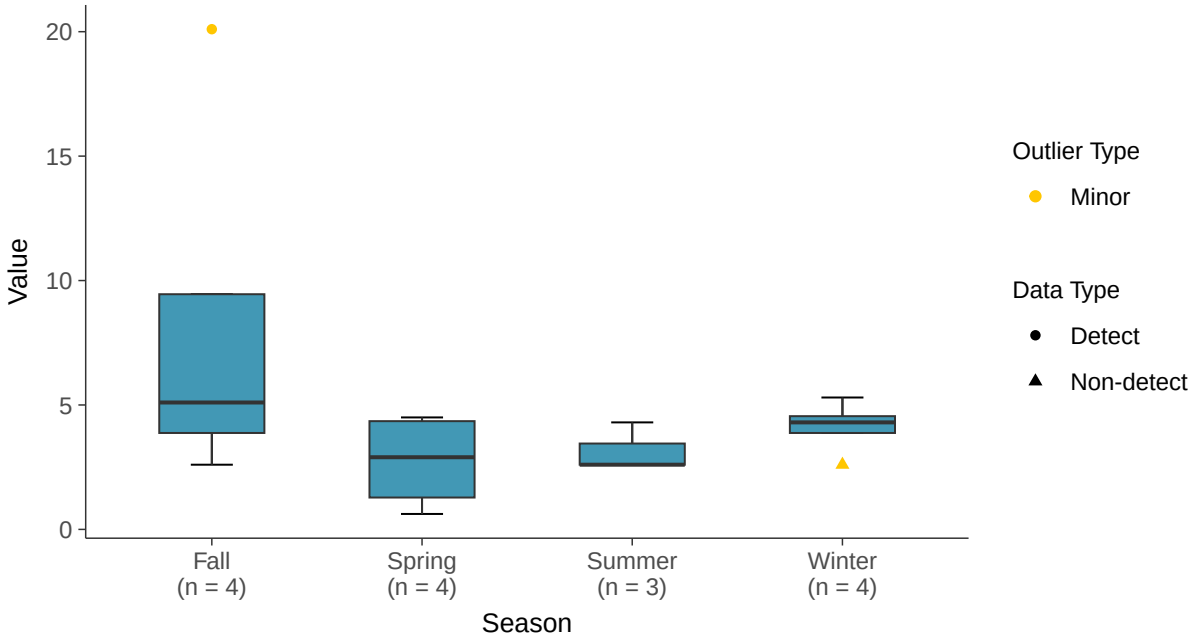
Boxplot

Copper, MW-11 (ug/L)



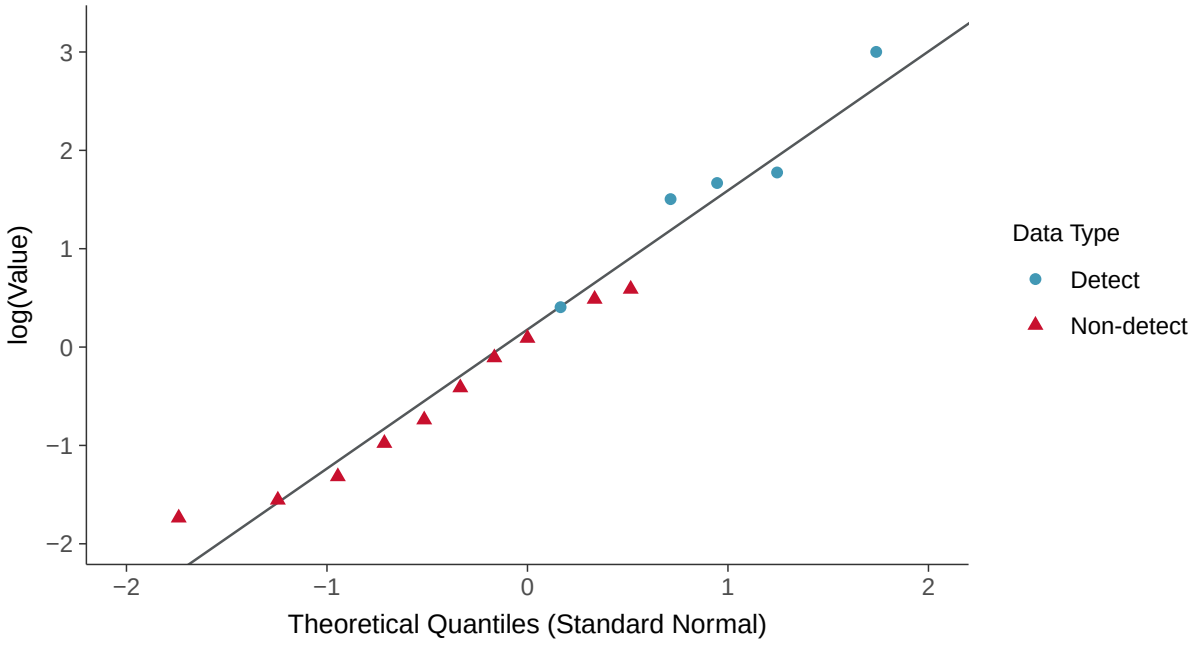
Boxplot by Season

Copper, MW-11 (ug/L)



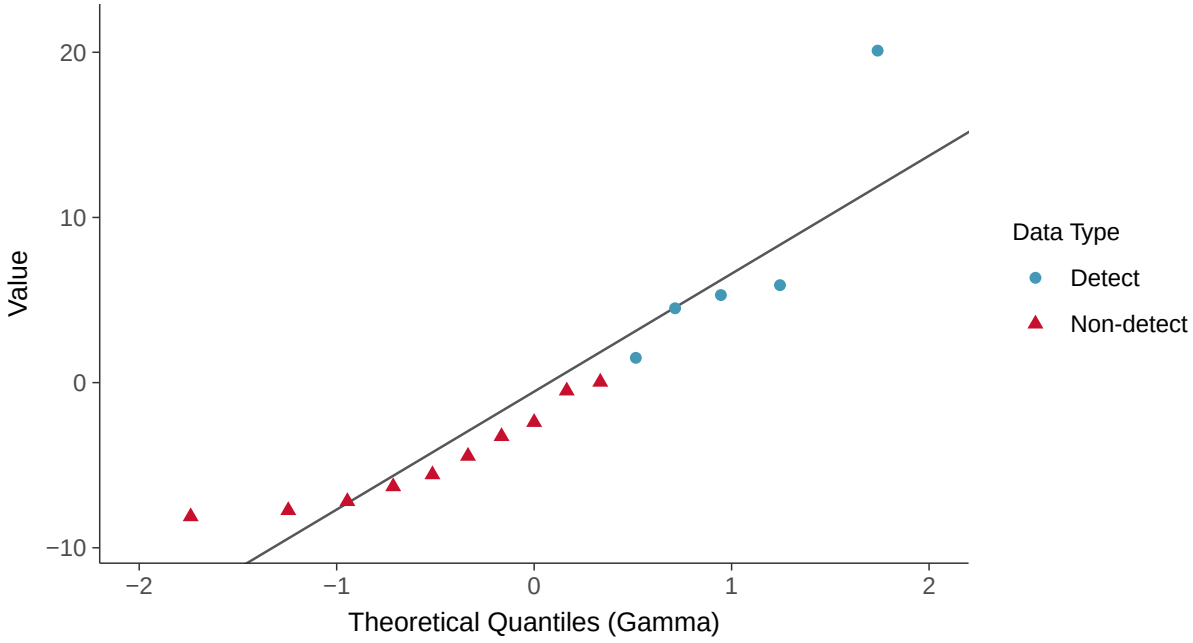
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (ug/L)



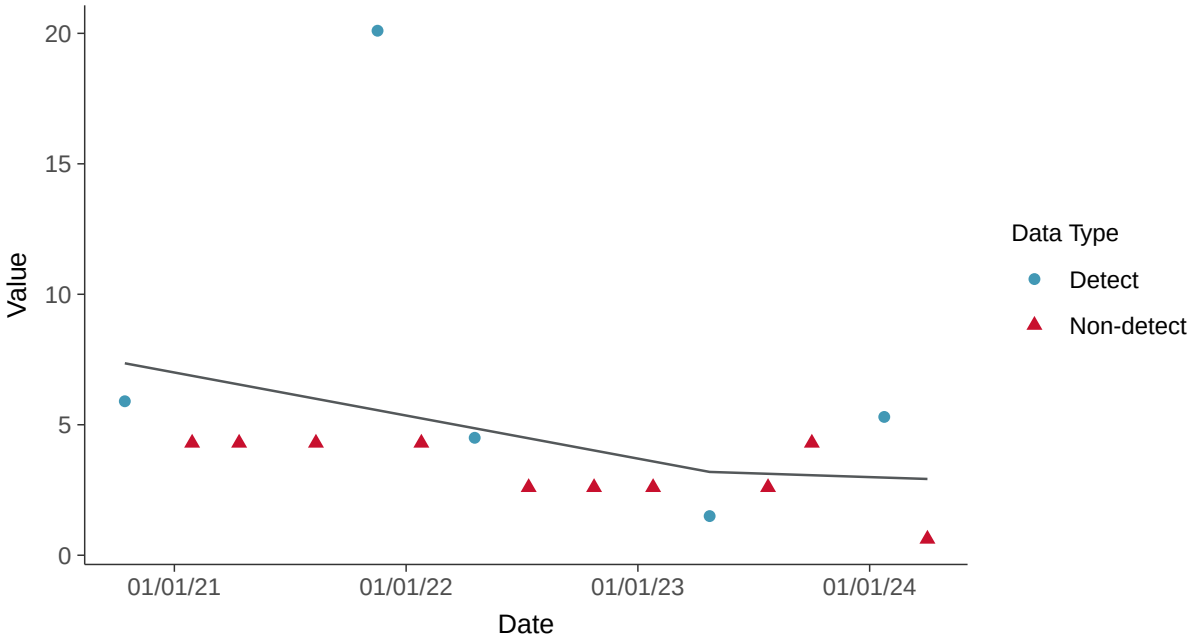
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (ug/L)



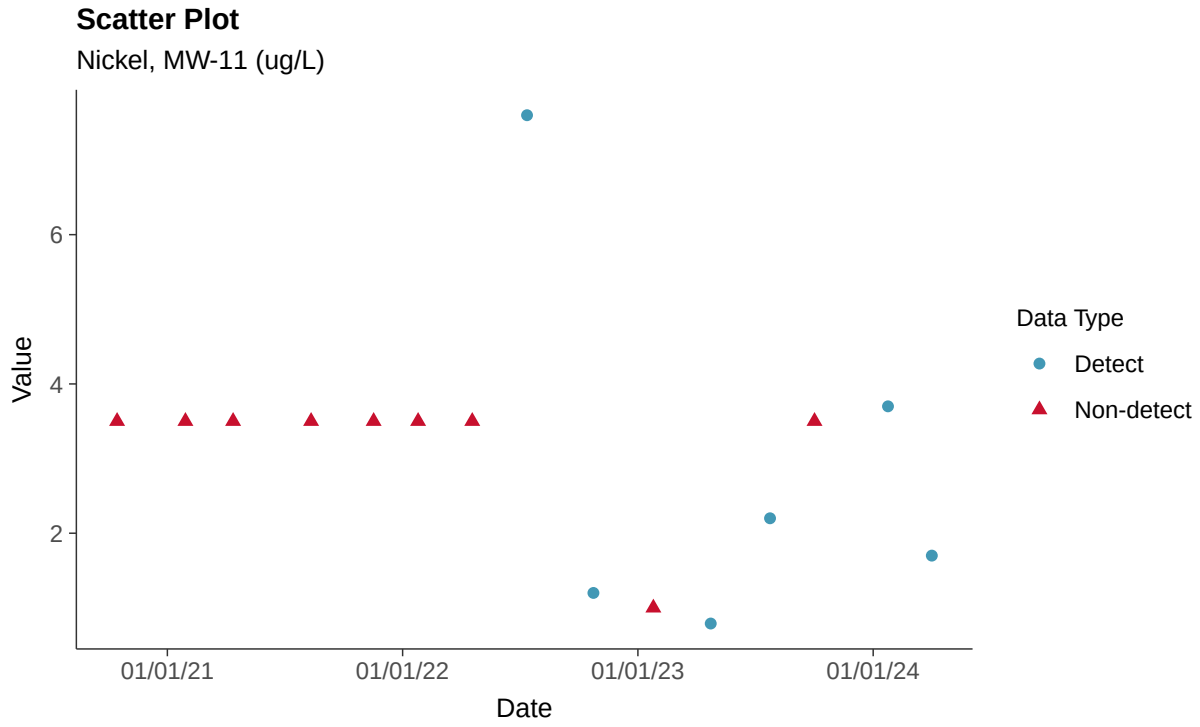
Trend Regression: Piecewise Linear-Linear

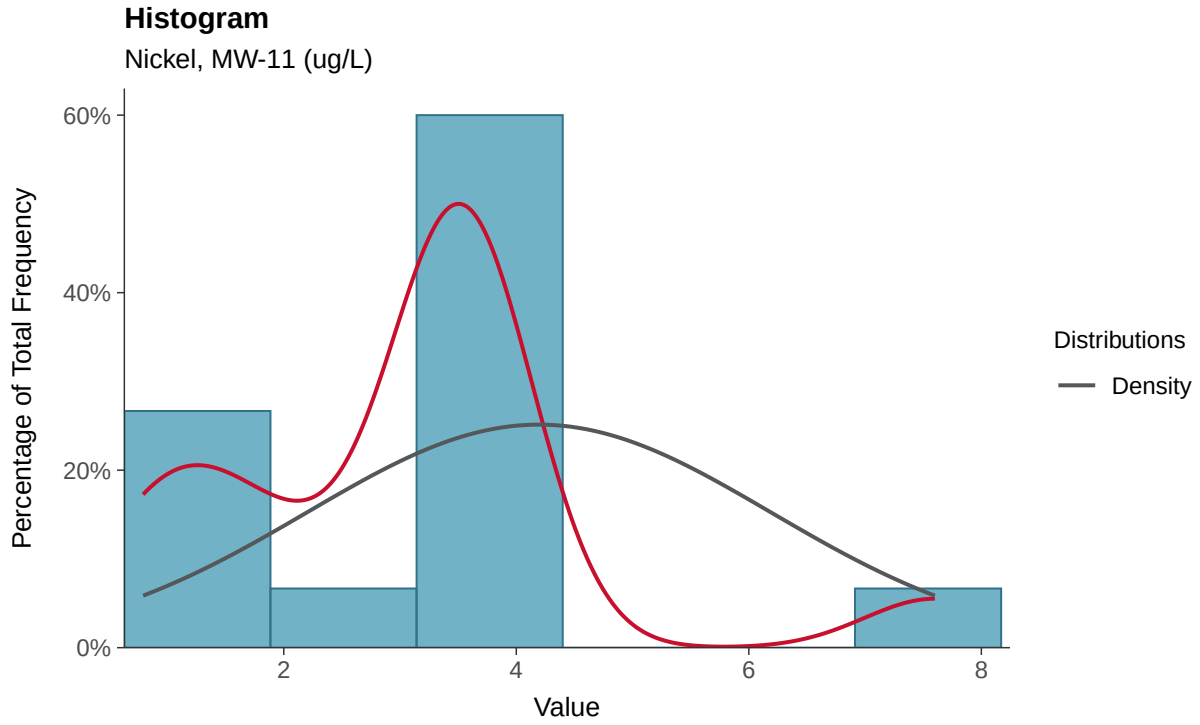
Copper, MW-11 (ug/L)



App. I Metals: Nickel, MW-11

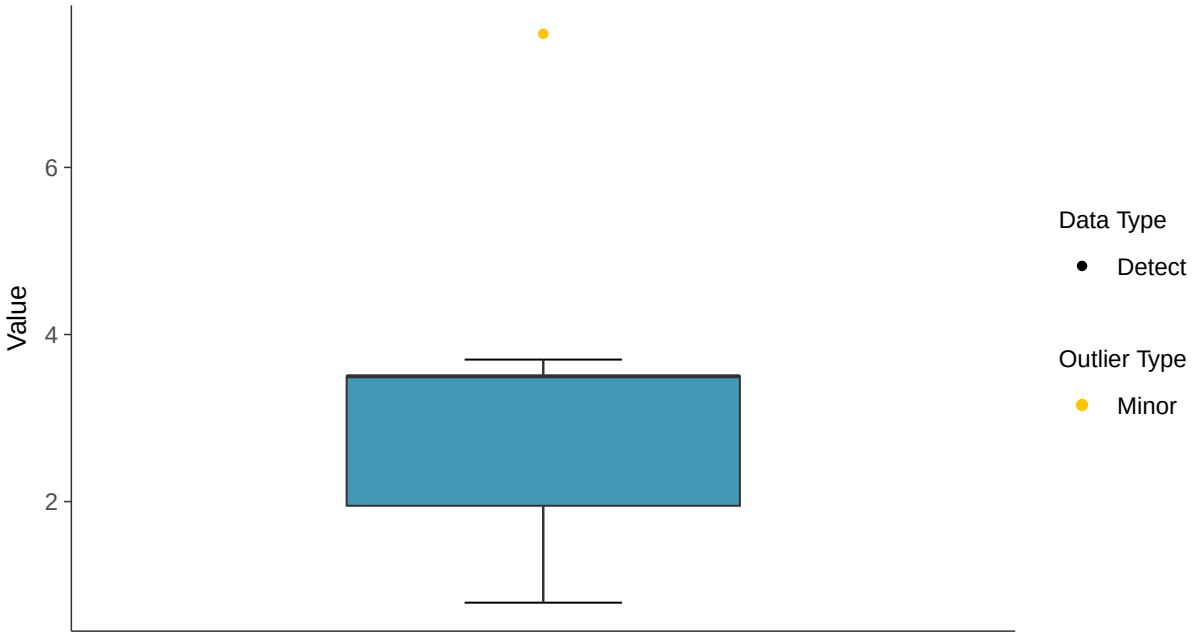
ID: 3_1_117





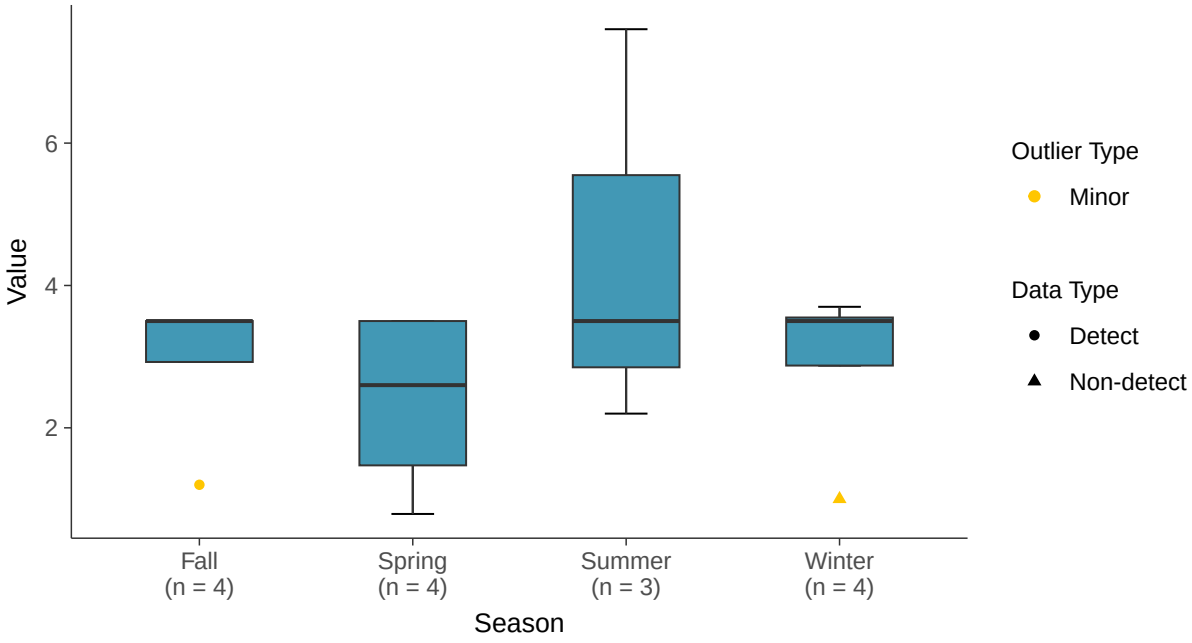
Boxplot

Nickel, MW-11 (ug/L)



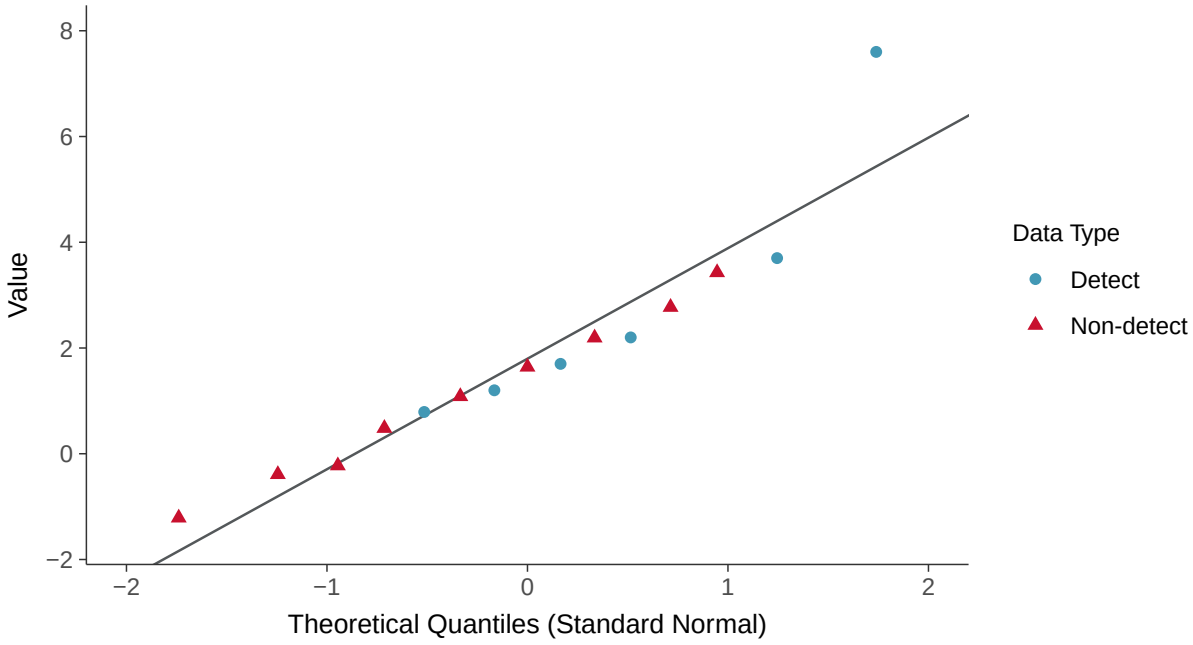
Boxplot by Season

Nickel, MW-11 (ug/L)



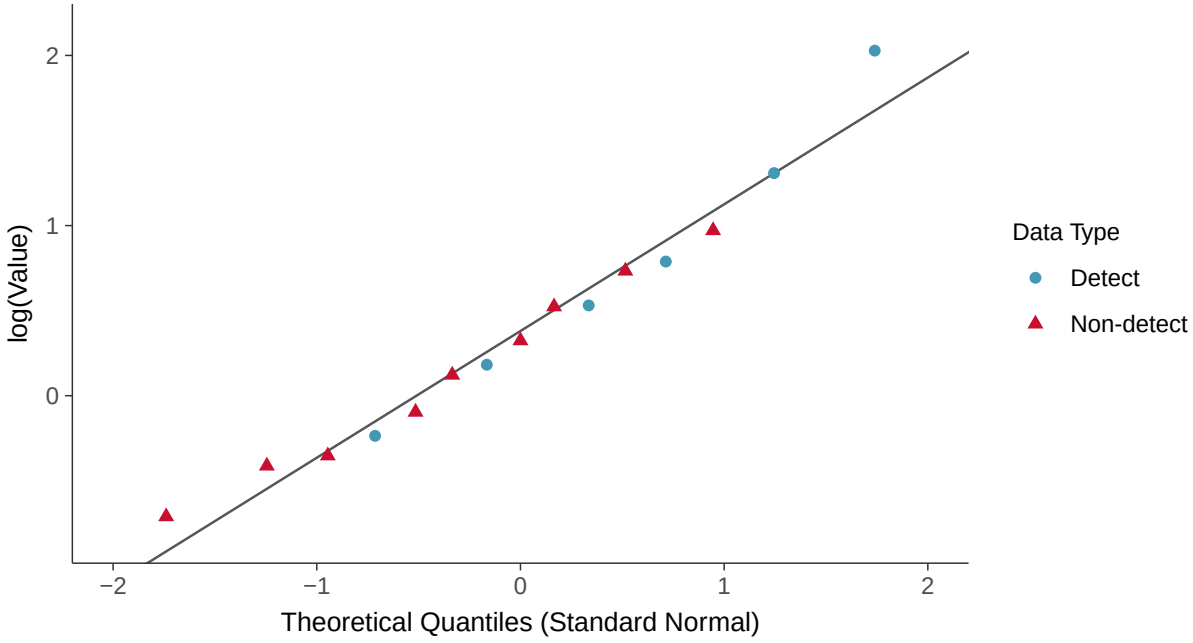
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-11 (ug/L)



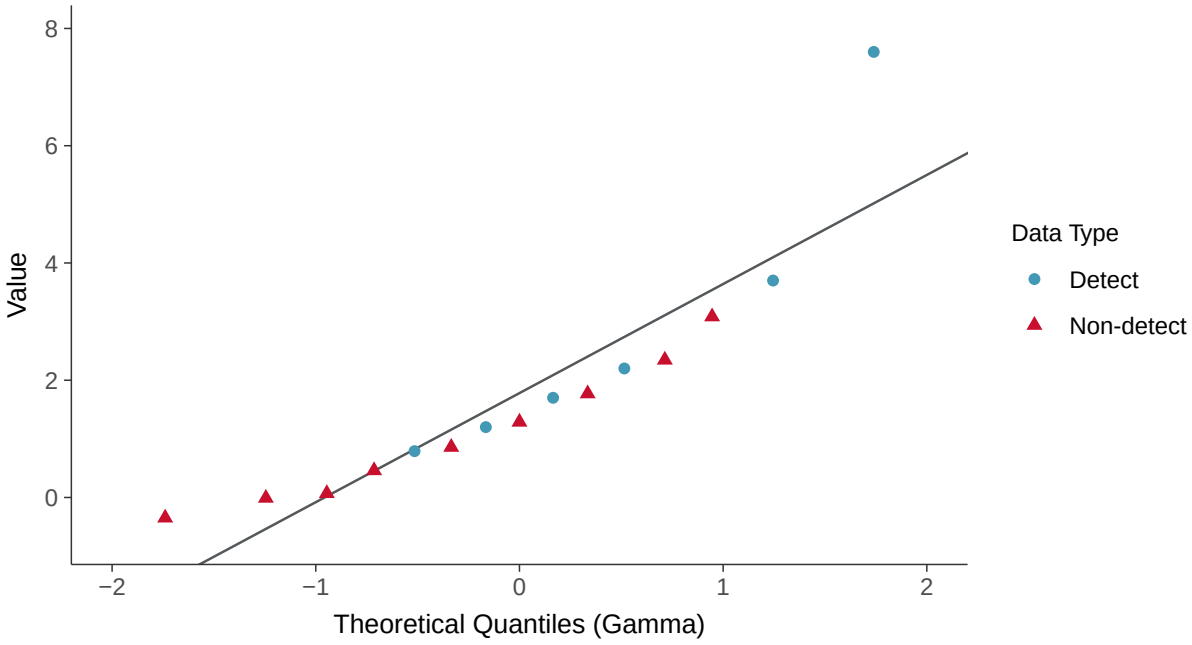
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-11 (ug/L)



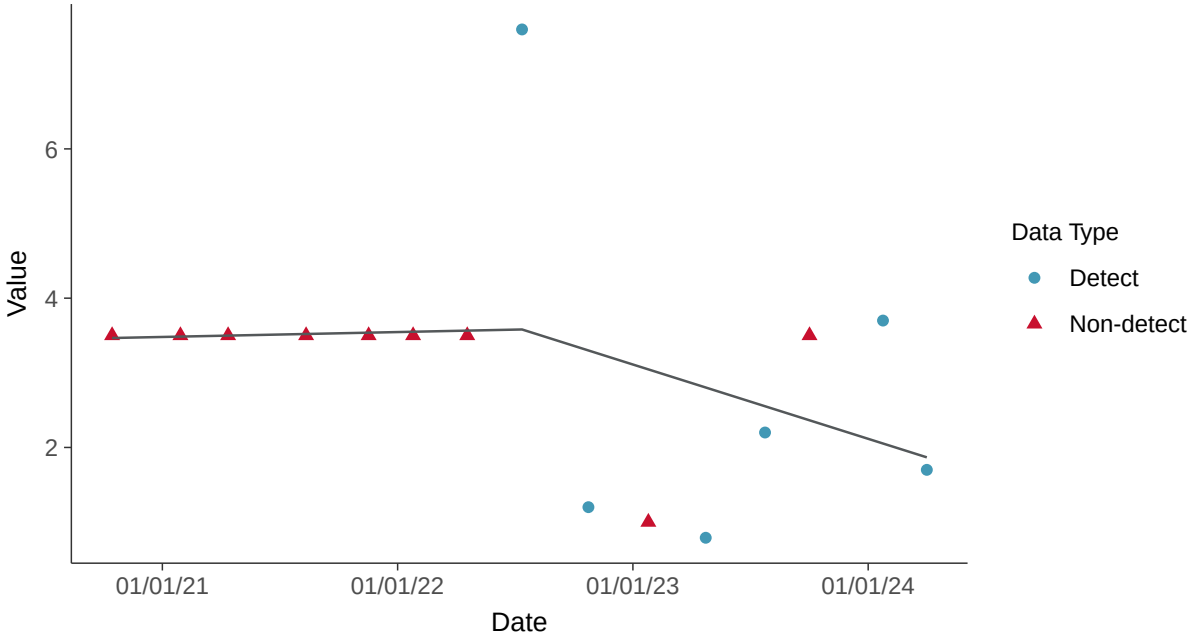
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-11 (ug/L)



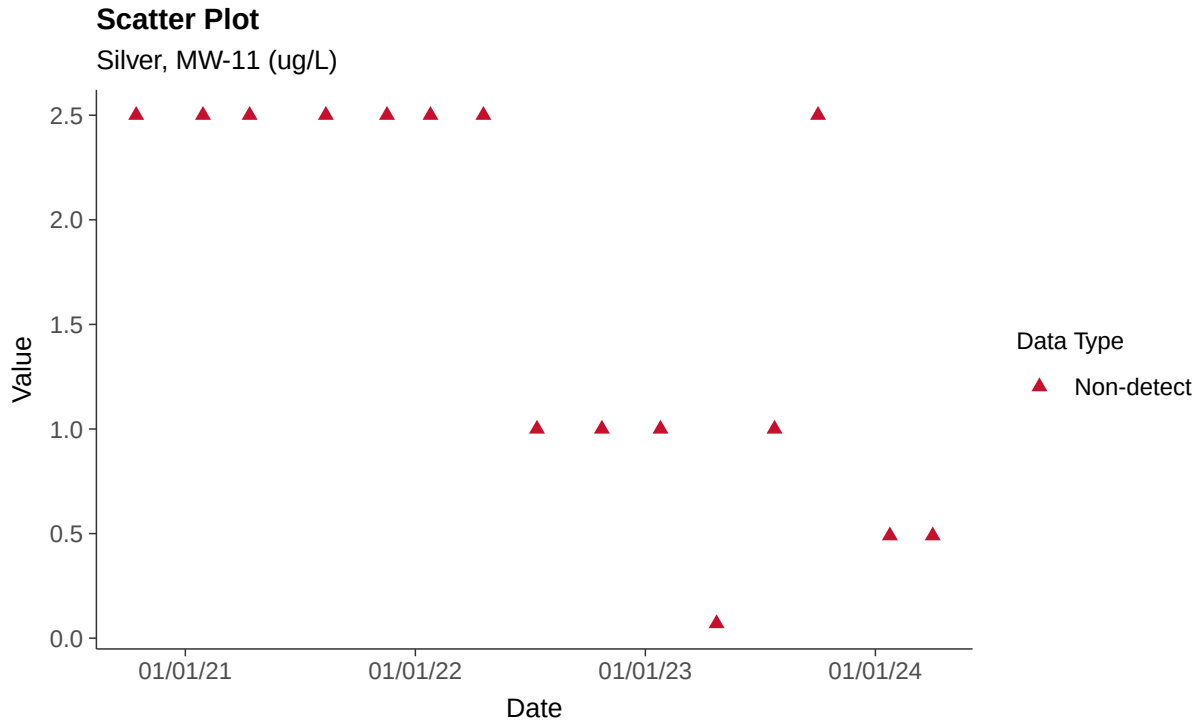
Trend Regression: Piecewise Linear-Linear

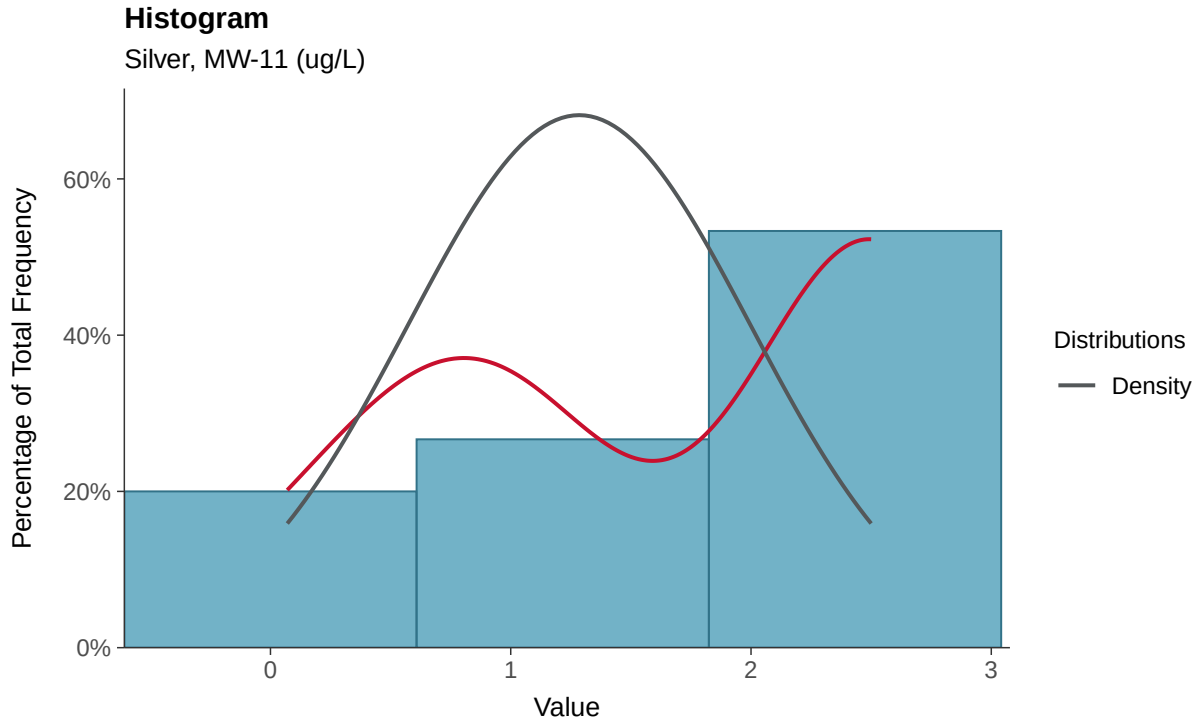
Nickel, MW-11 (ug/L)



App. I Metals: Silver, MW-11

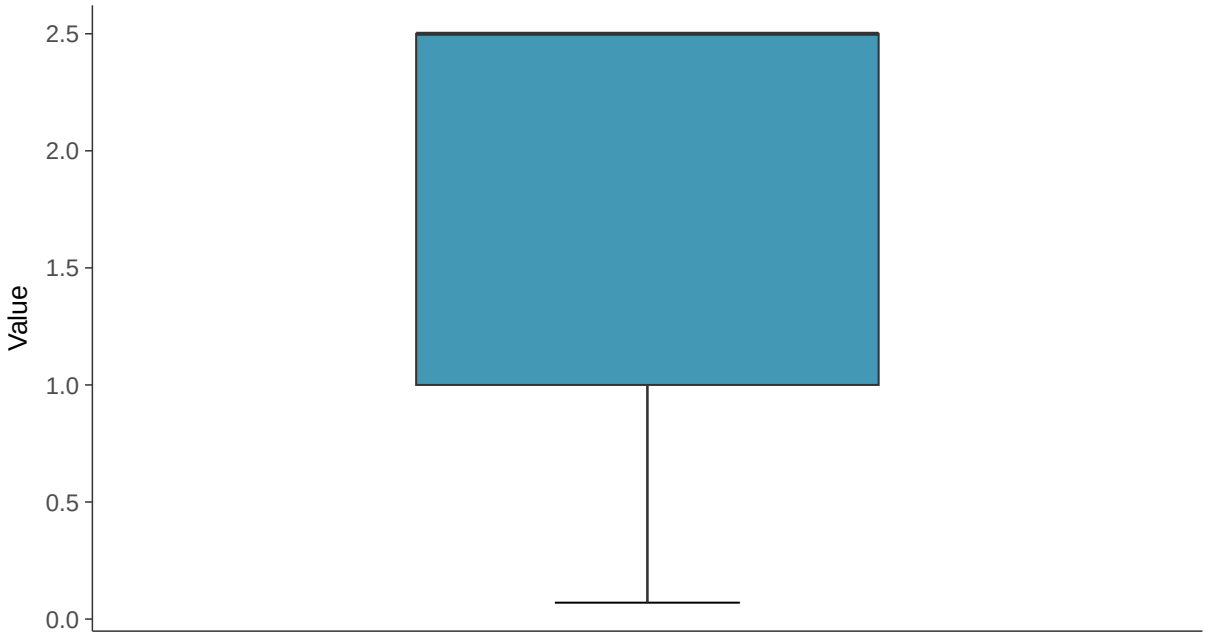
ID: 3_1_122





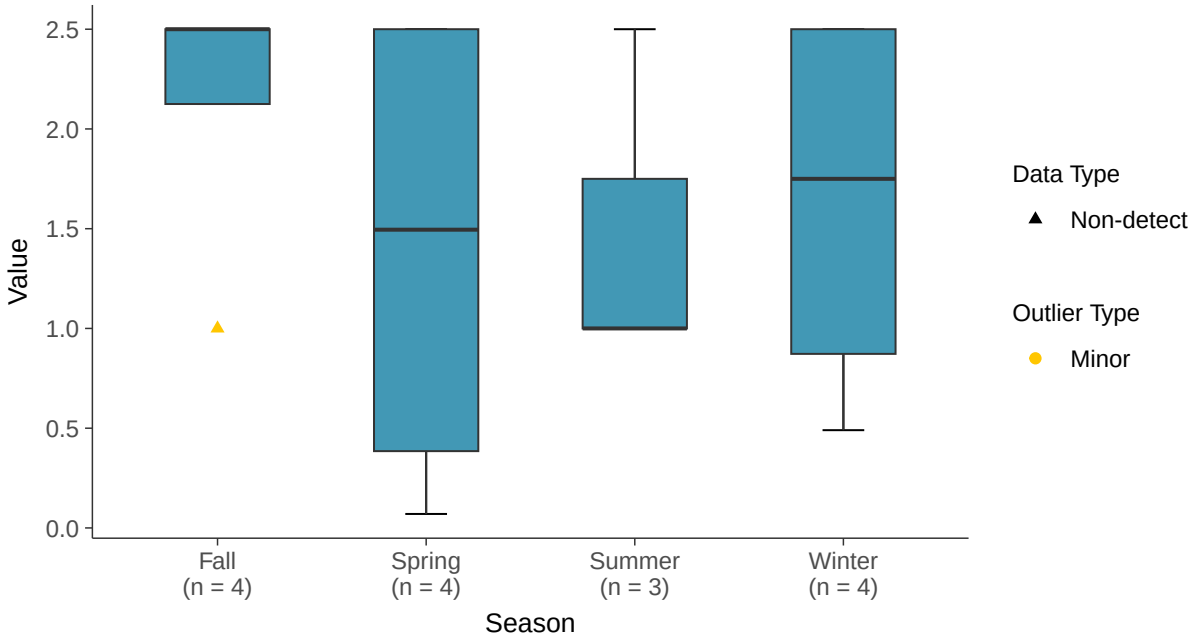
Boxplot

Silver, MW-11 (ug/L)



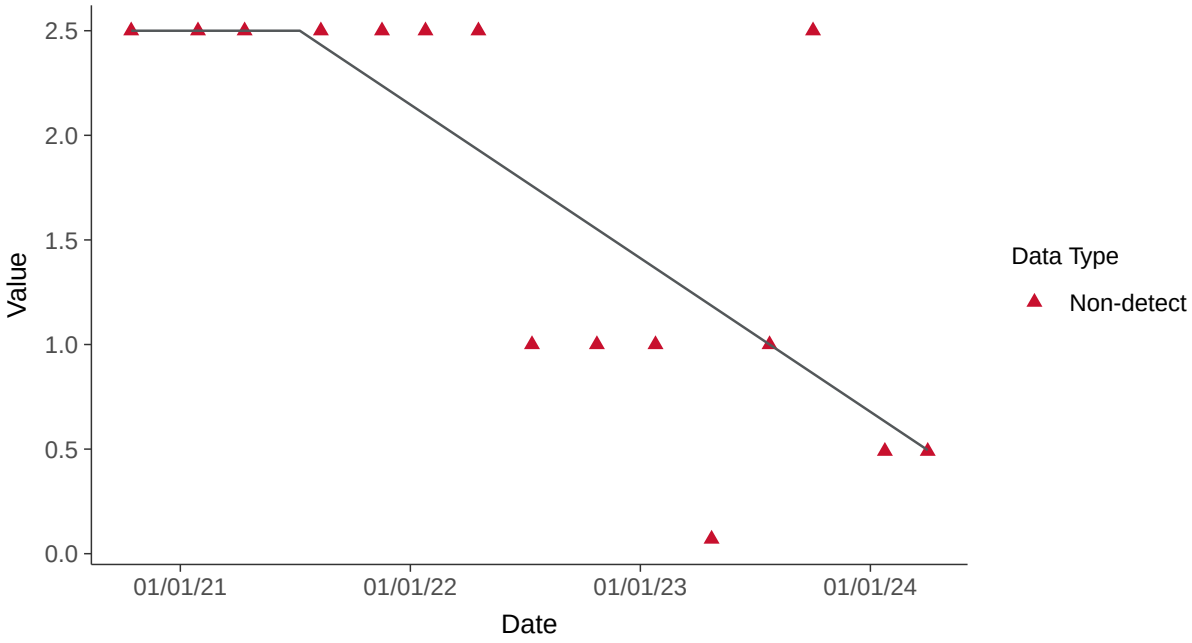
Boxplot by Season

Silver, MW-11 (ug/L)



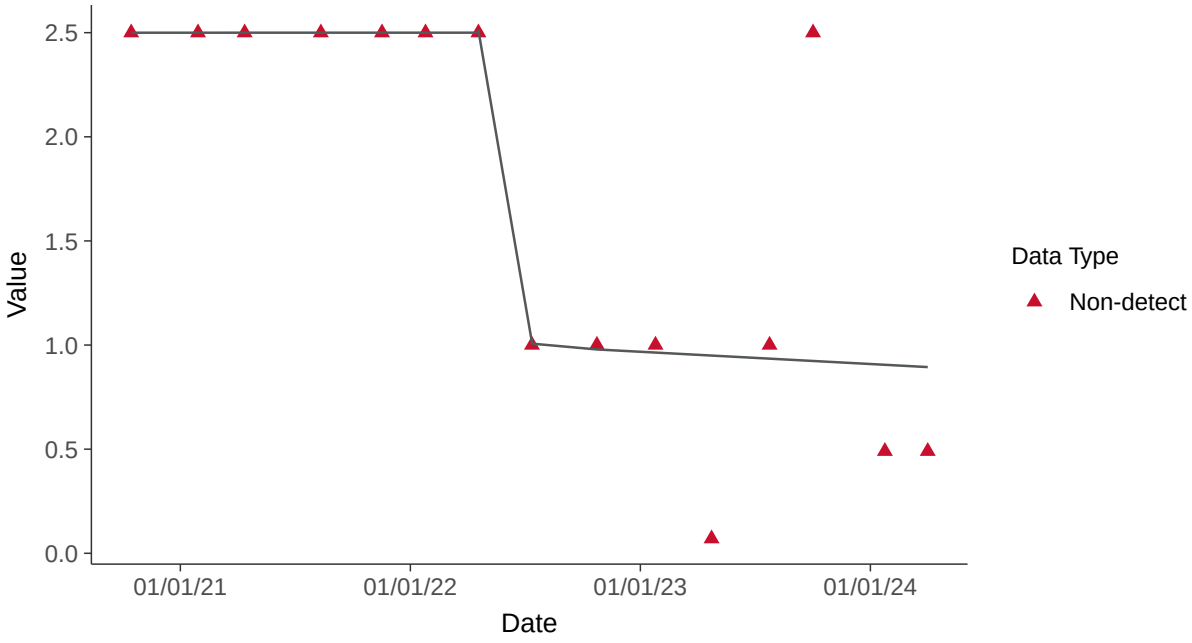
Trend Regression: Piecewise Linear-Linear

Silver, MW-11 (ug/L)



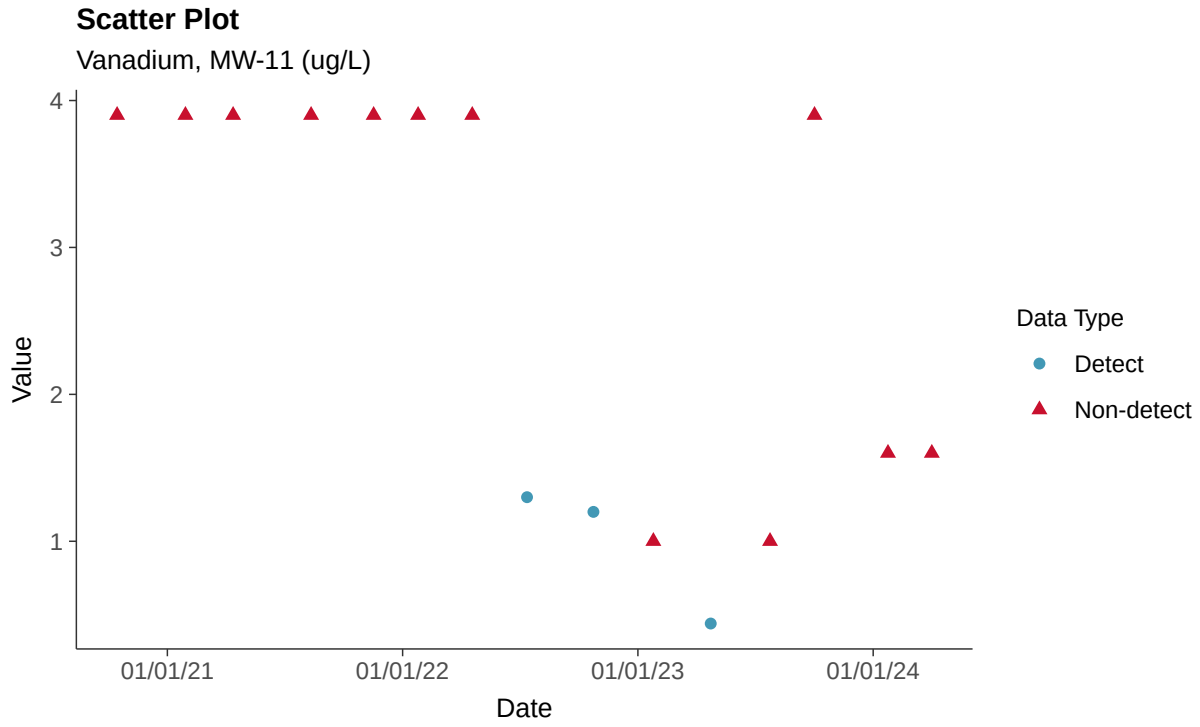
Trend Regression: Piecewise Linear-Linear-Linear

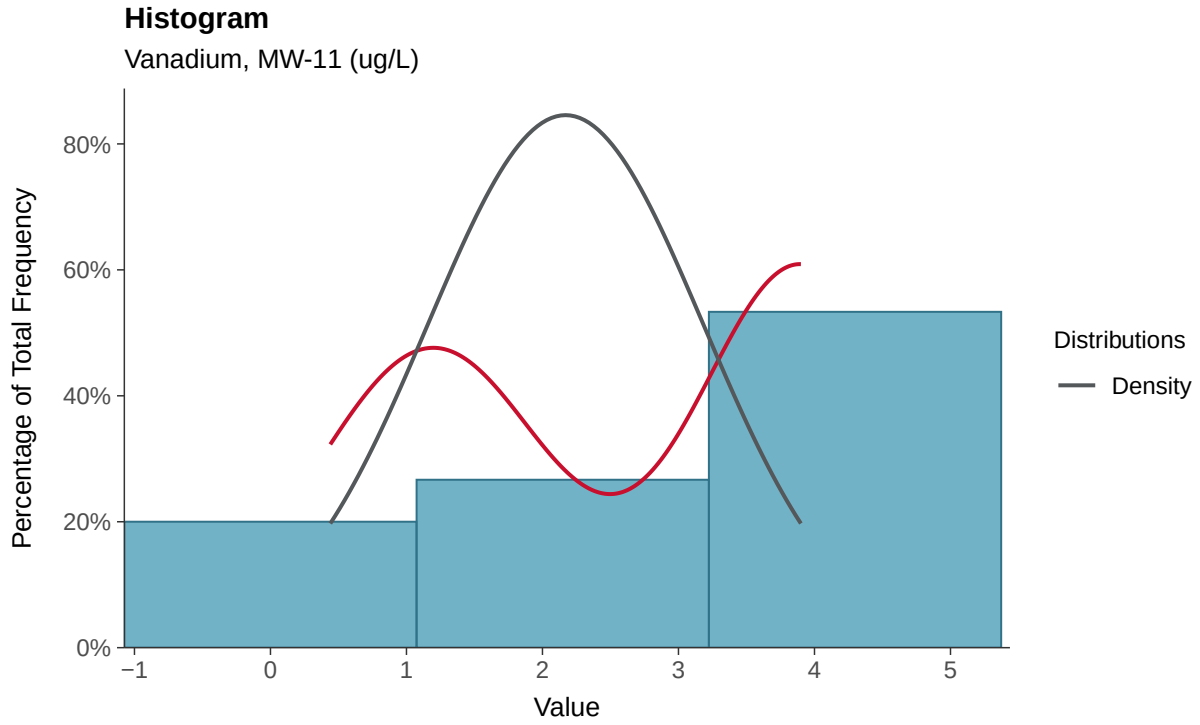
Silver, MW-11 (ug/L)



App. I Metals: Vanadium, MW-11

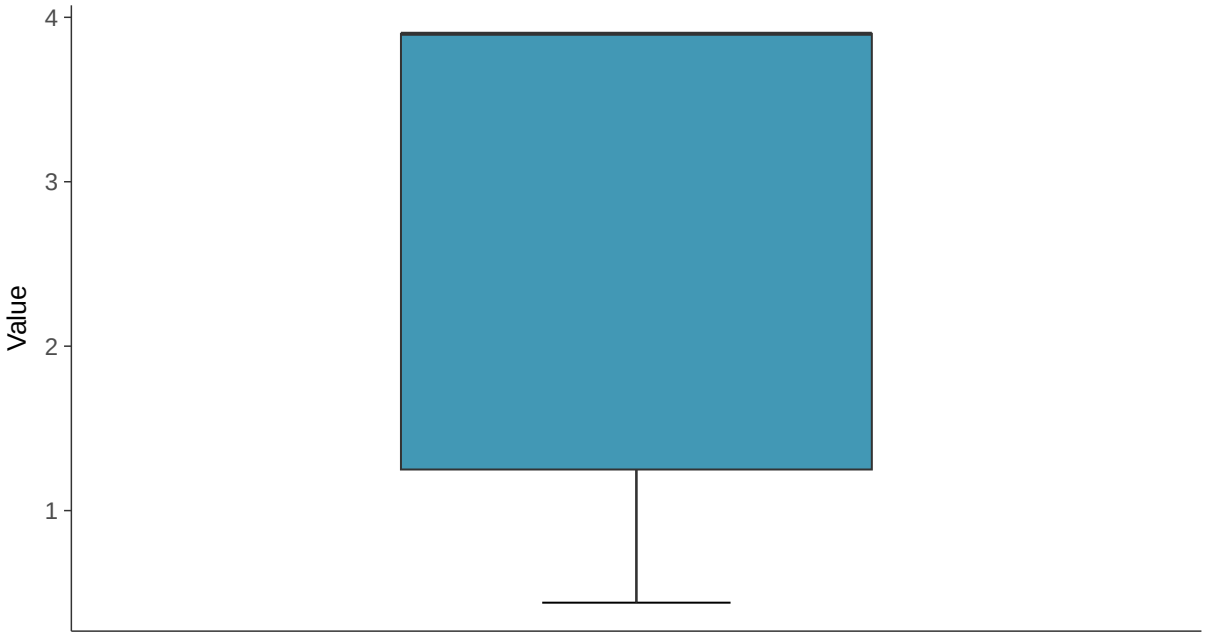
ID: 3_1_127





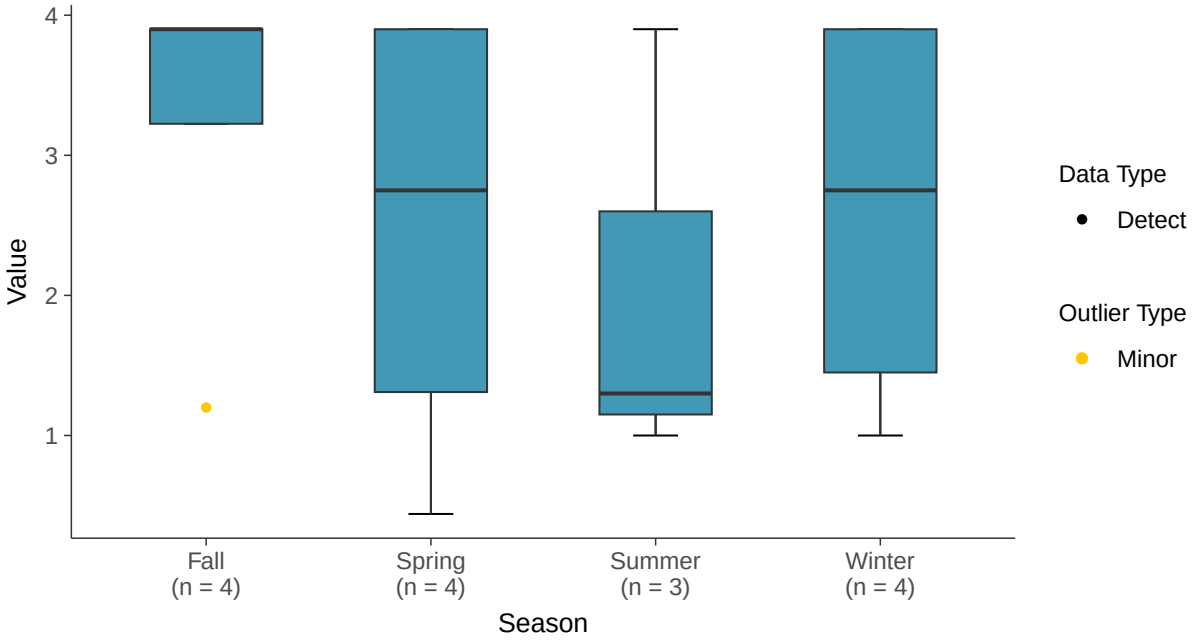
Boxplot

Vanadium, MW-11 (ug/L)



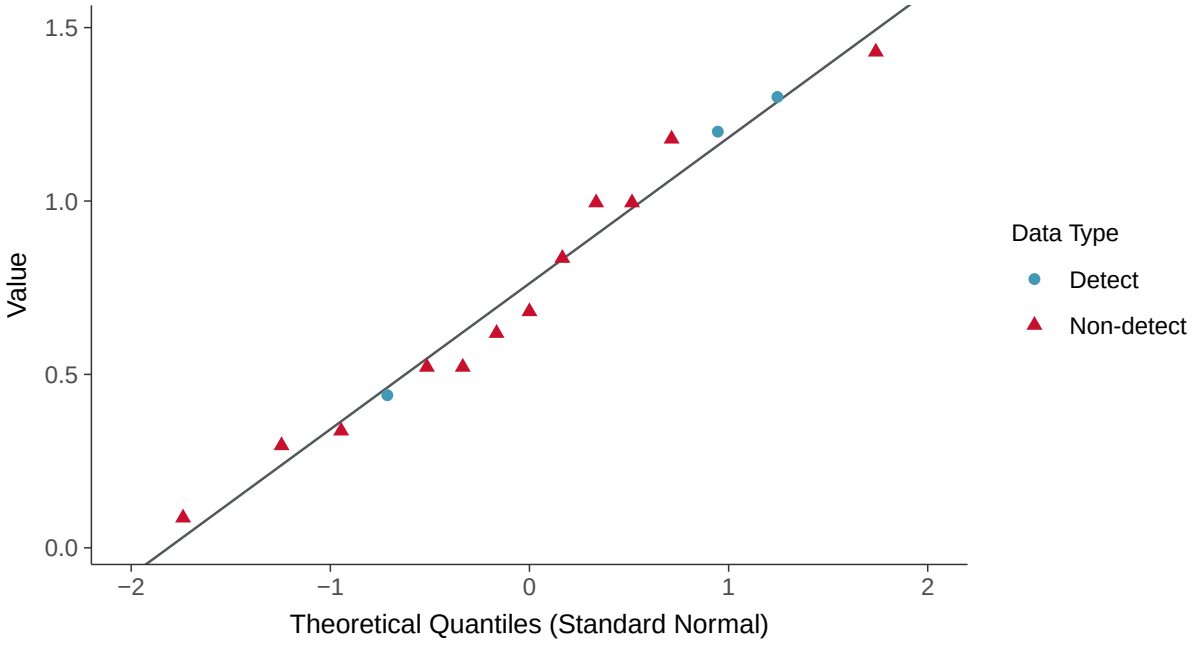
Boxplot by Season

Vanadium, MW-11 (ug/L)



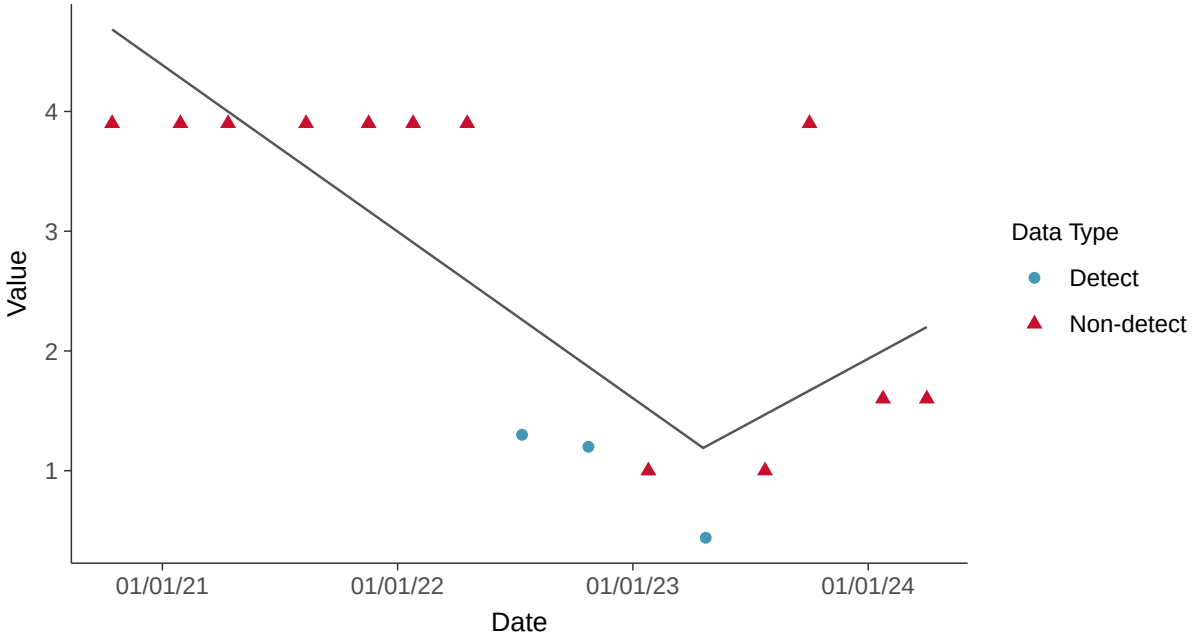
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-11 (ug/L)



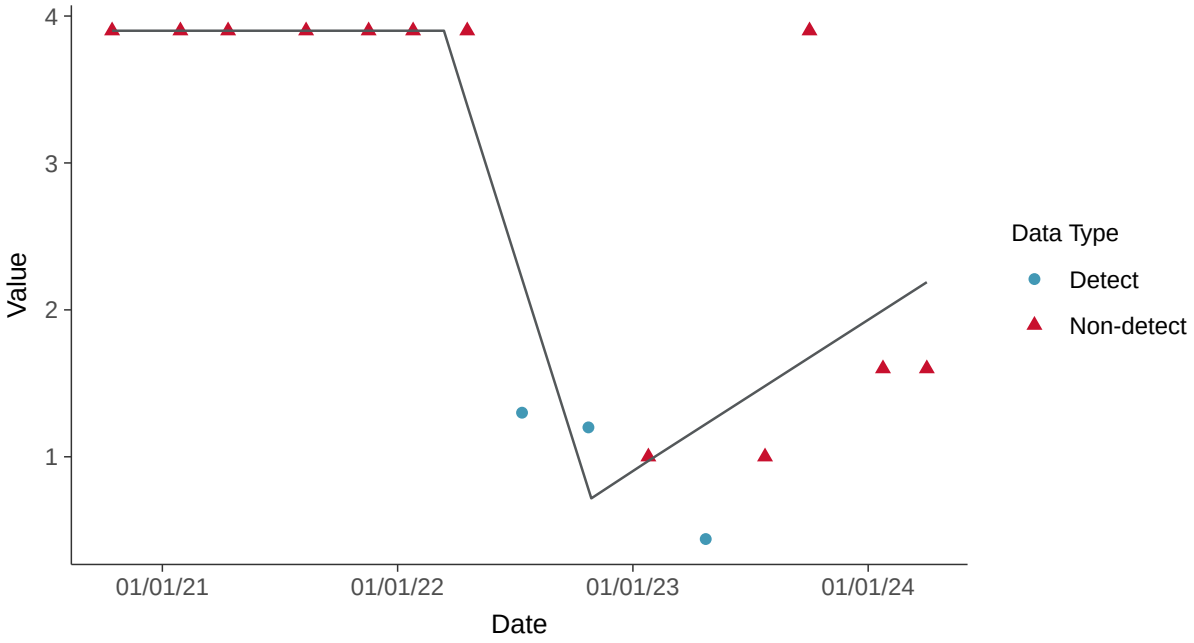
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-11 (ug/L)



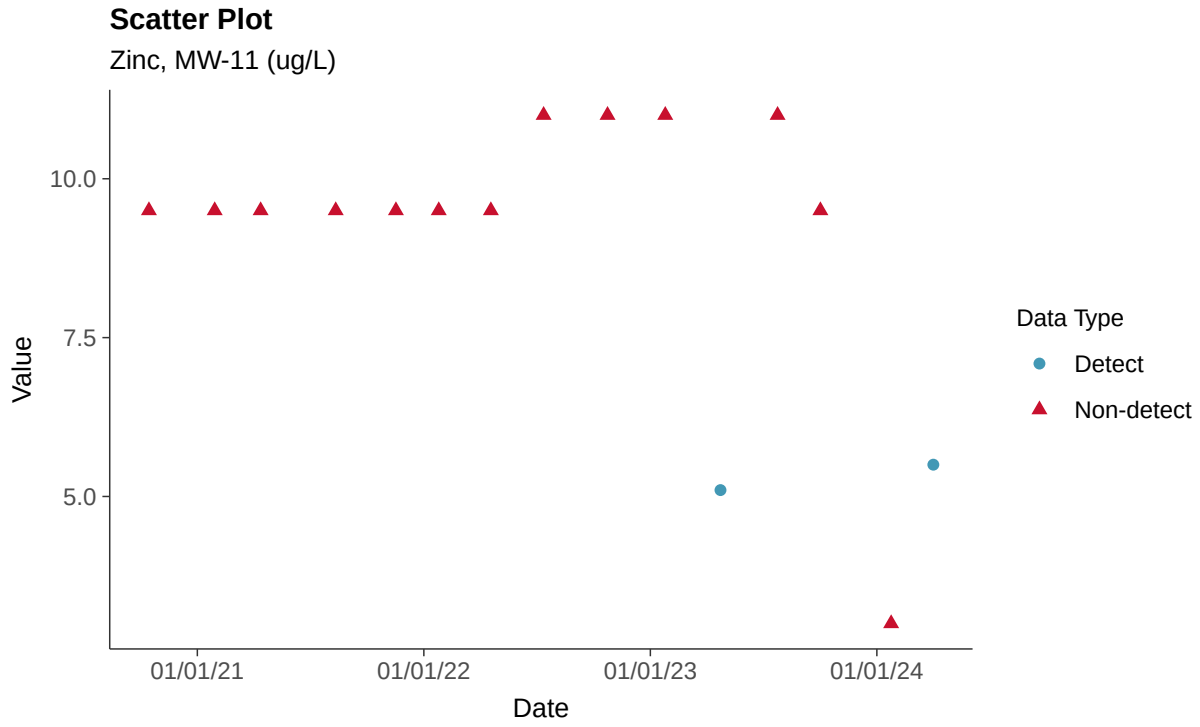
Trend Regression: Piecewise Linear-Linear-Linear

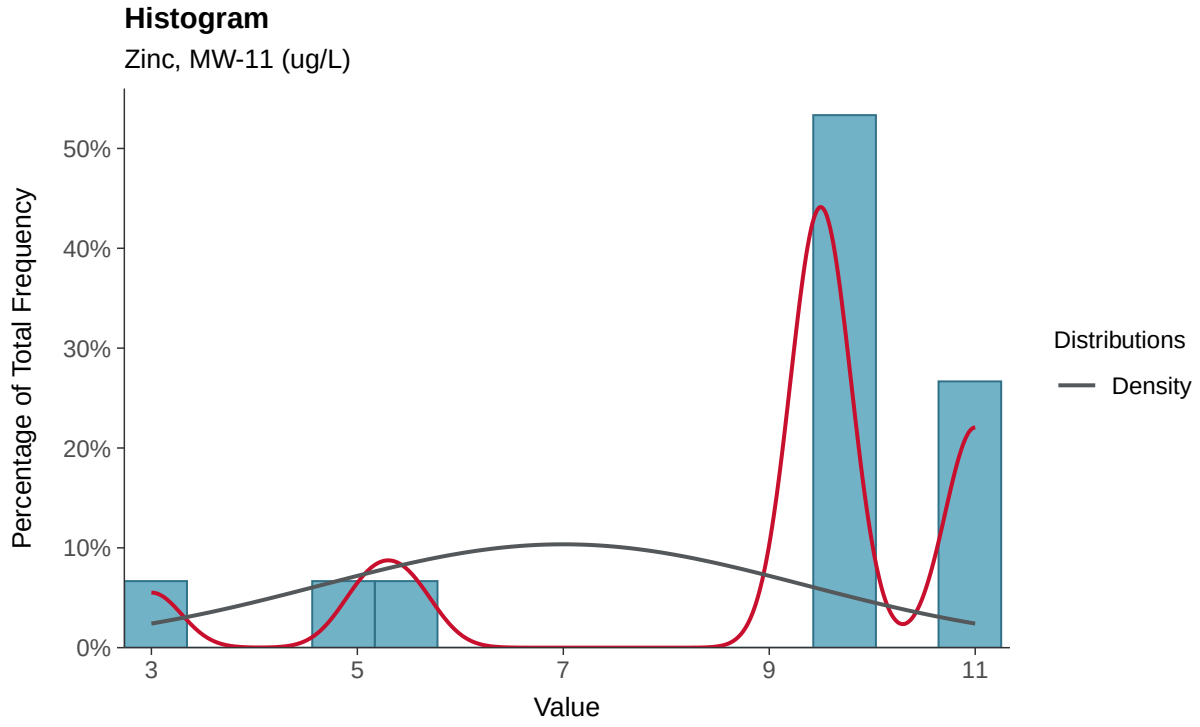
Vanadium, MW-11 (ug/L)



App. I Metals: Zinc, MW-11

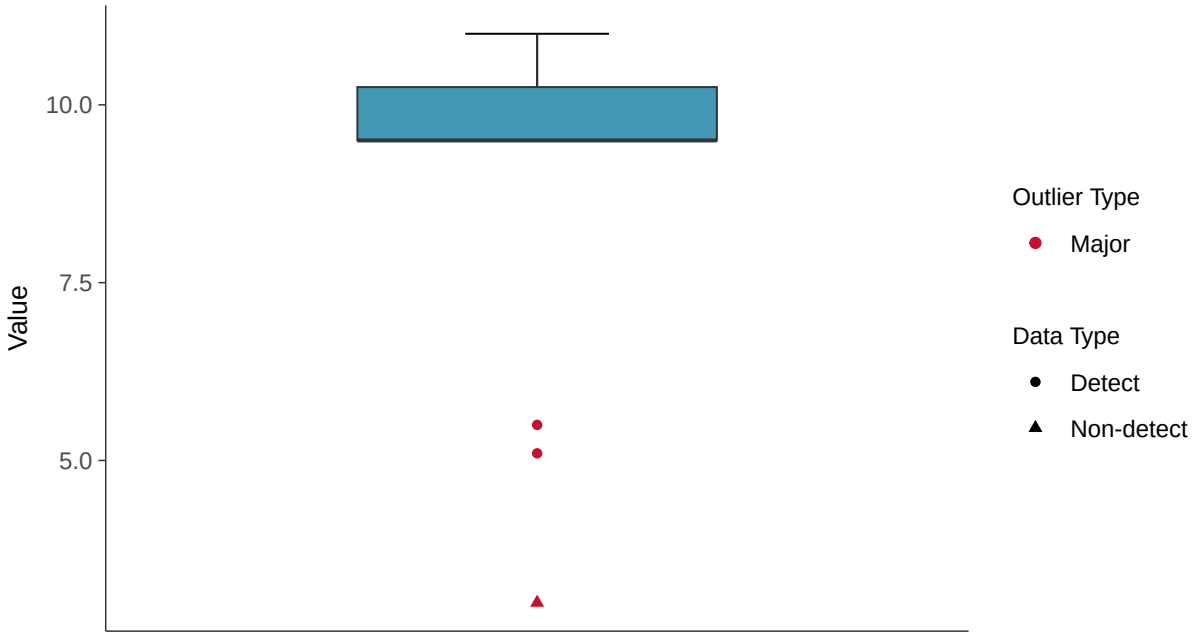
ID: 3_1_128





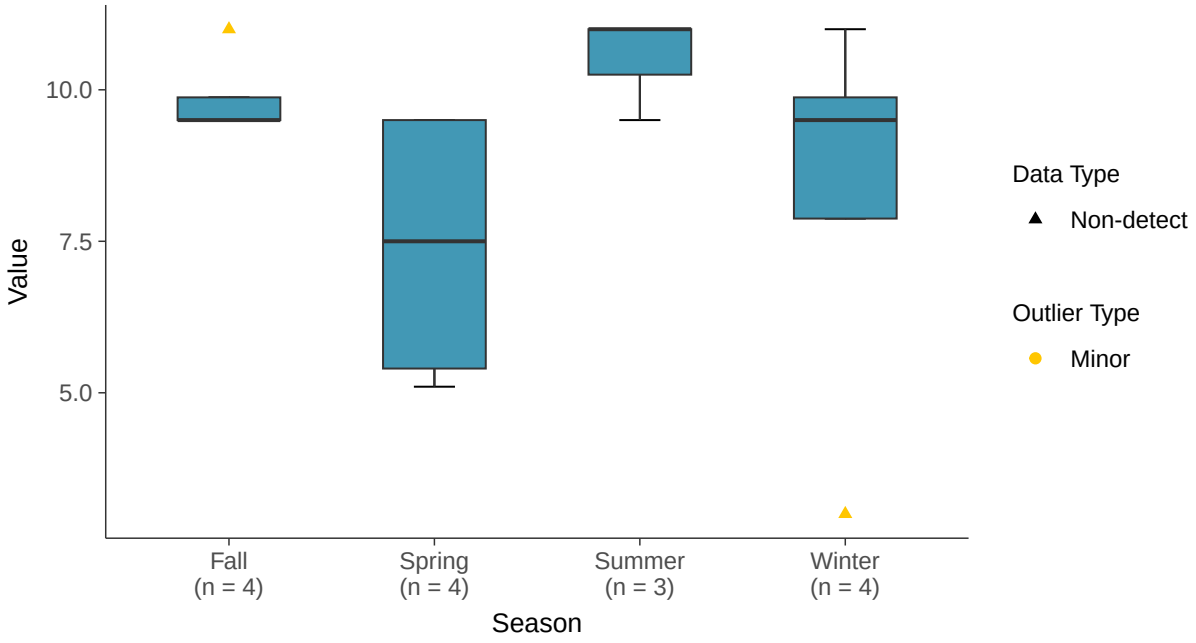
Boxplot

Zinc, MW-11 (ug/L)



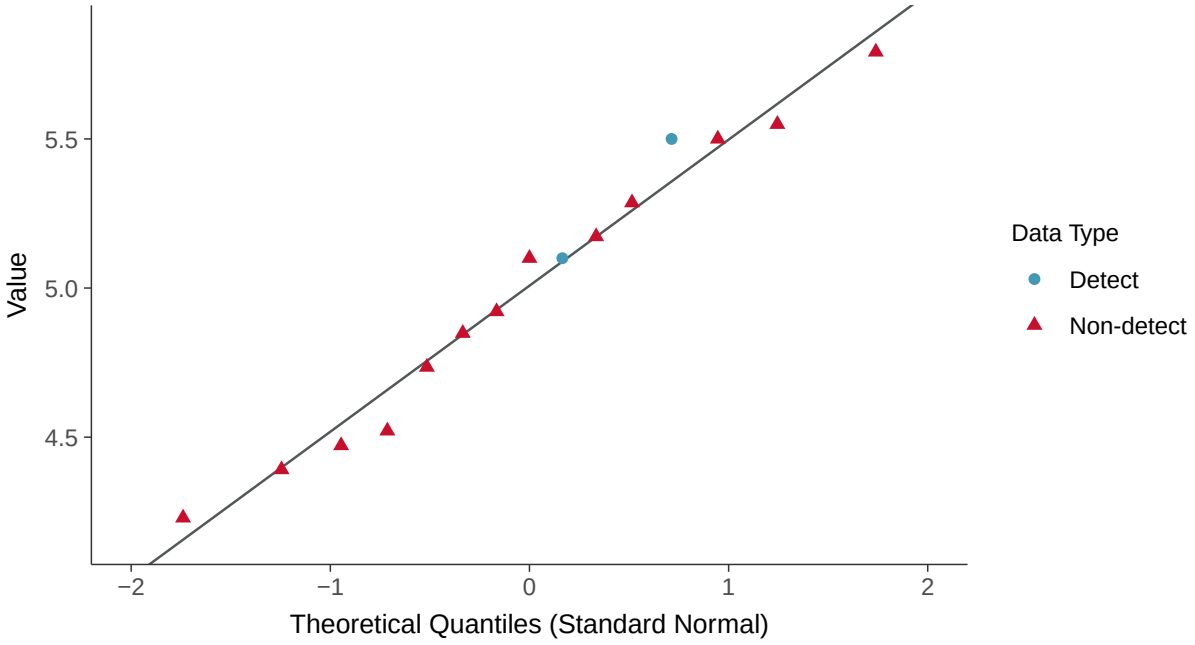
Boxplot by Season

Zinc, MW-11 (ug/L)



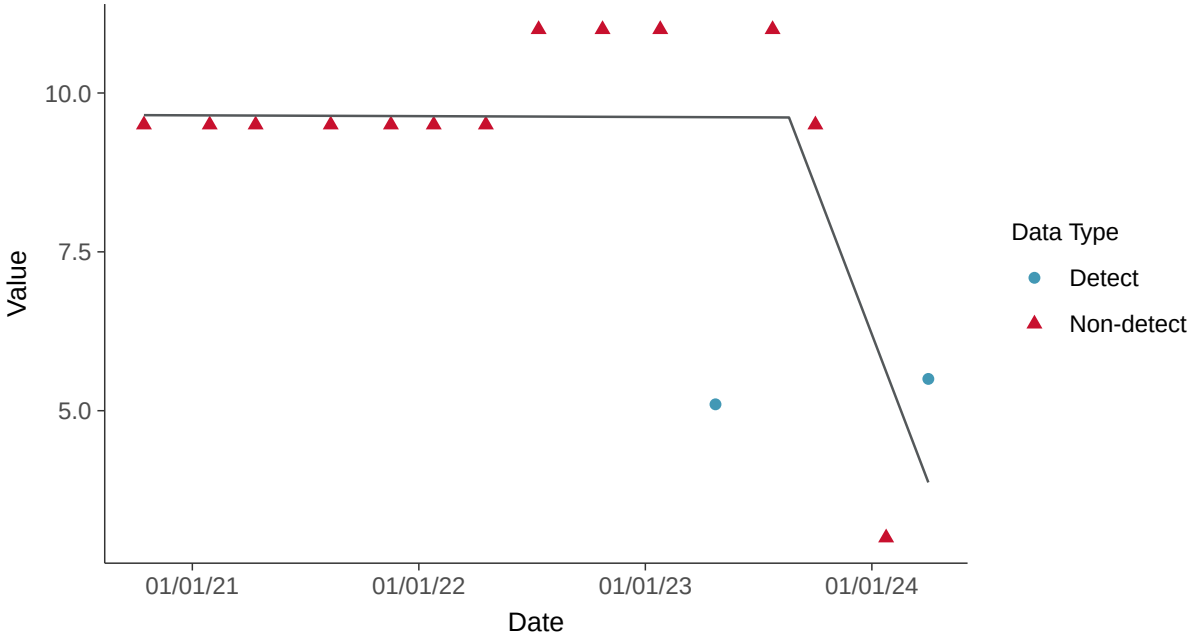
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11 (ug/L)



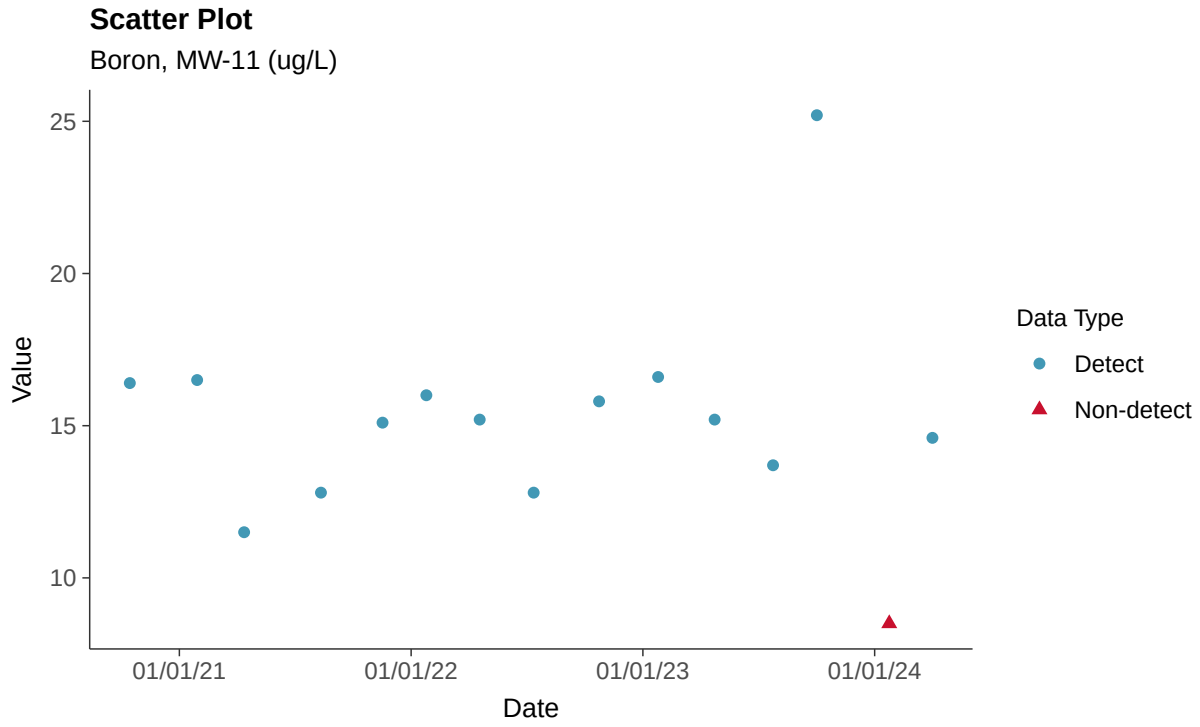
Trend Regression: Piecewise Linear-Linear

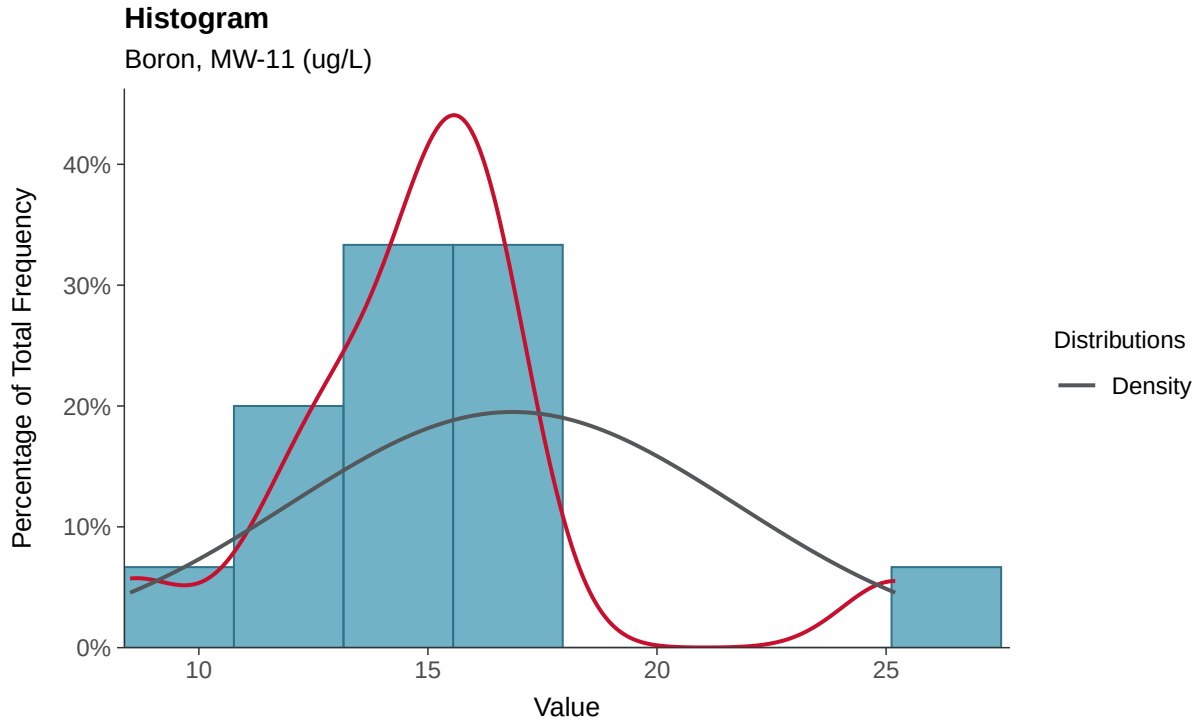
Zinc, MW-11 (ug/L)



App. III: Boron, MW-11

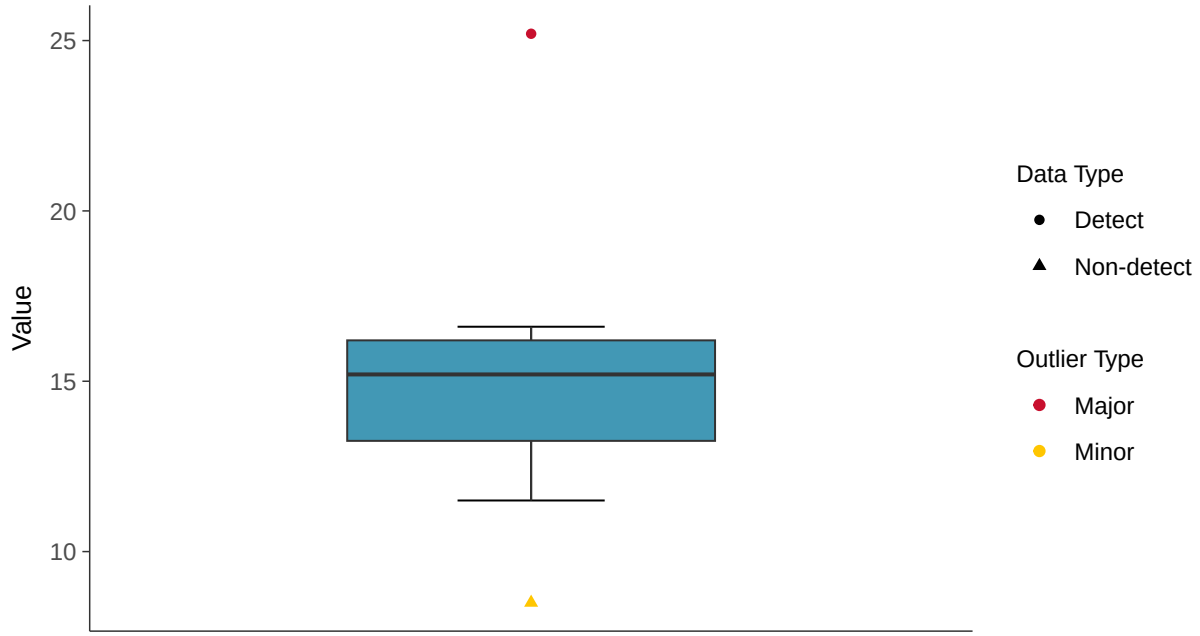
ID: 3_2_105





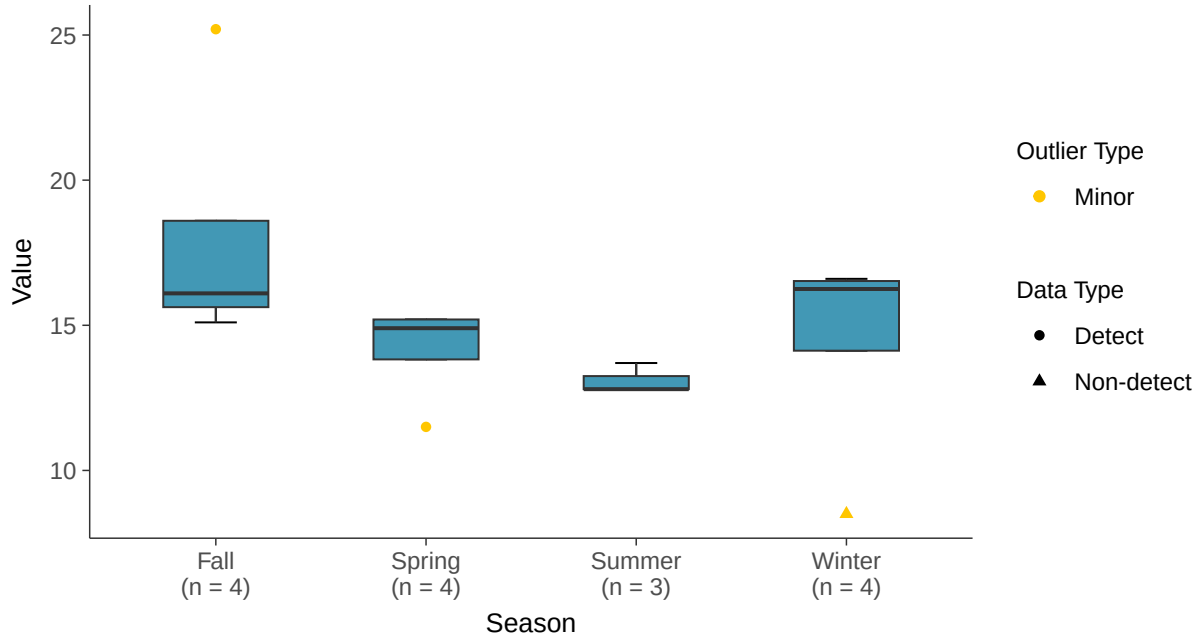
Boxplot

Boron, MW-11 (ug/L)



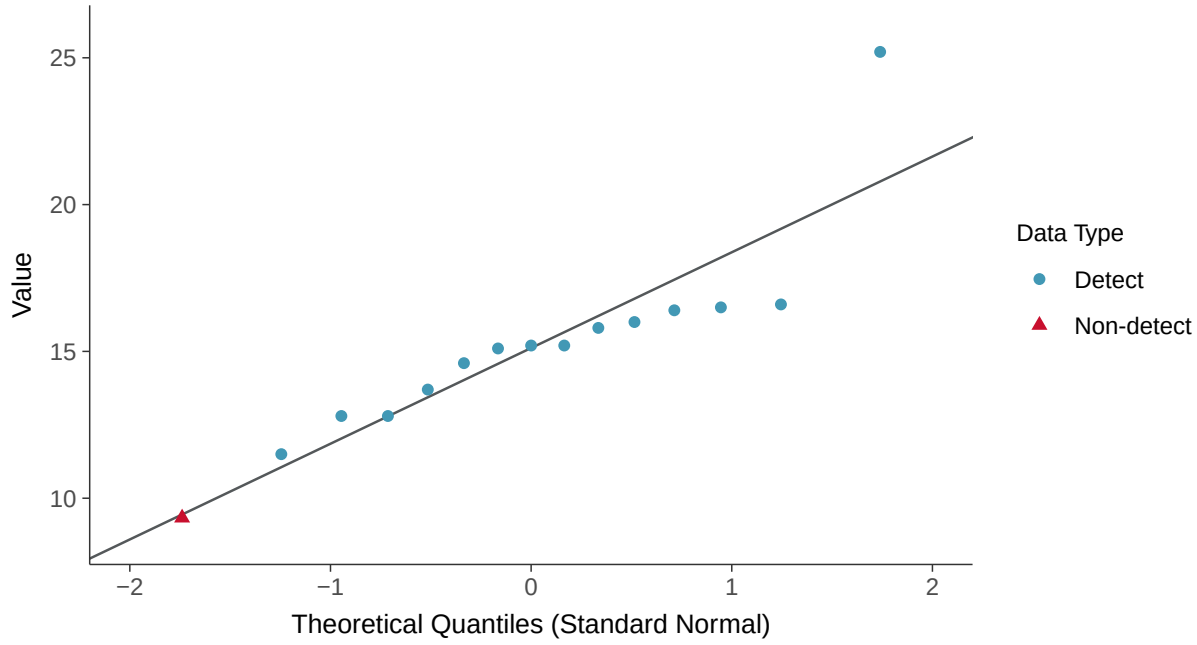
Boxplot by Season

Boron, MW-11 (ug/L)



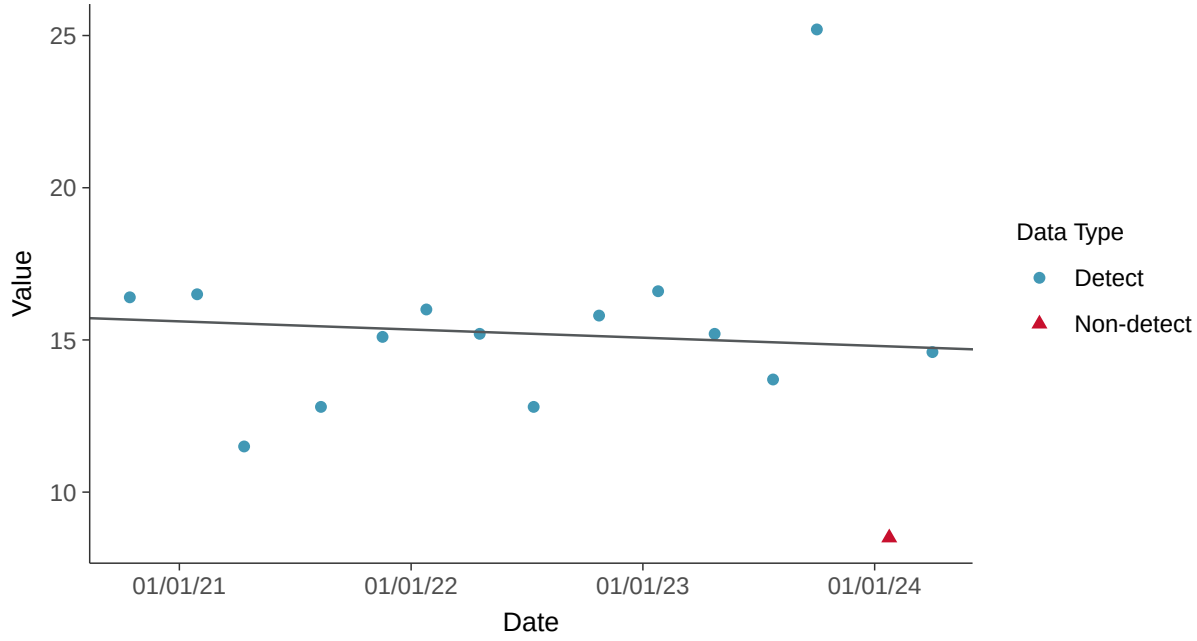
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-11 (ug/L)



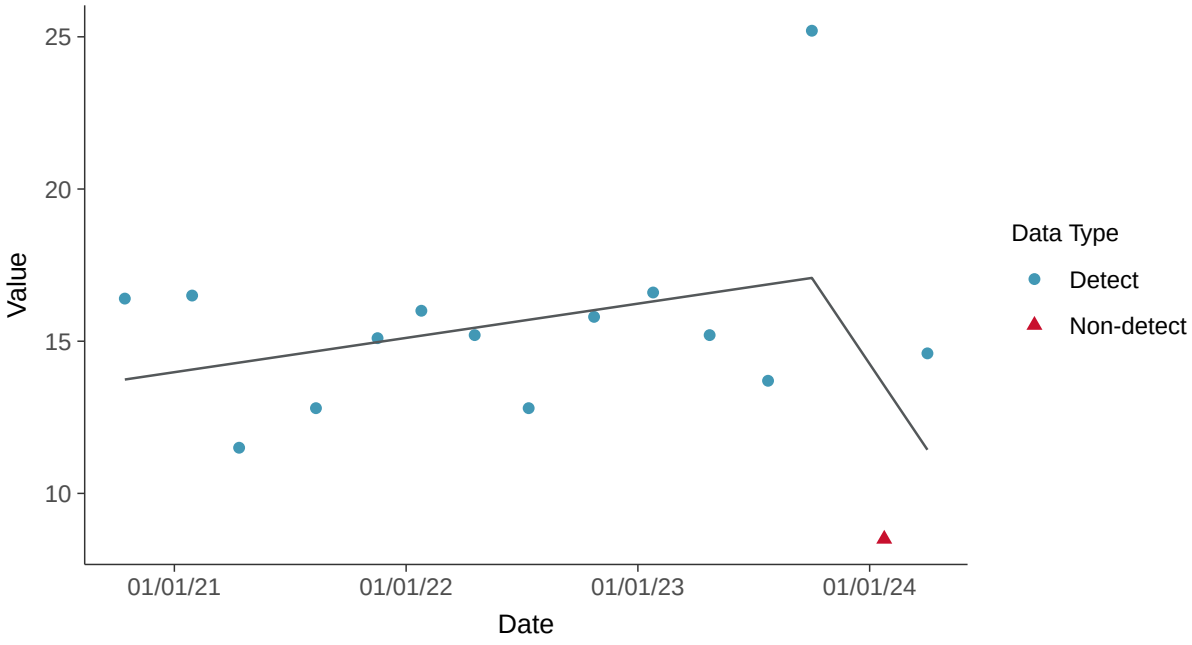
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Boron, MW-11 (ug/L)



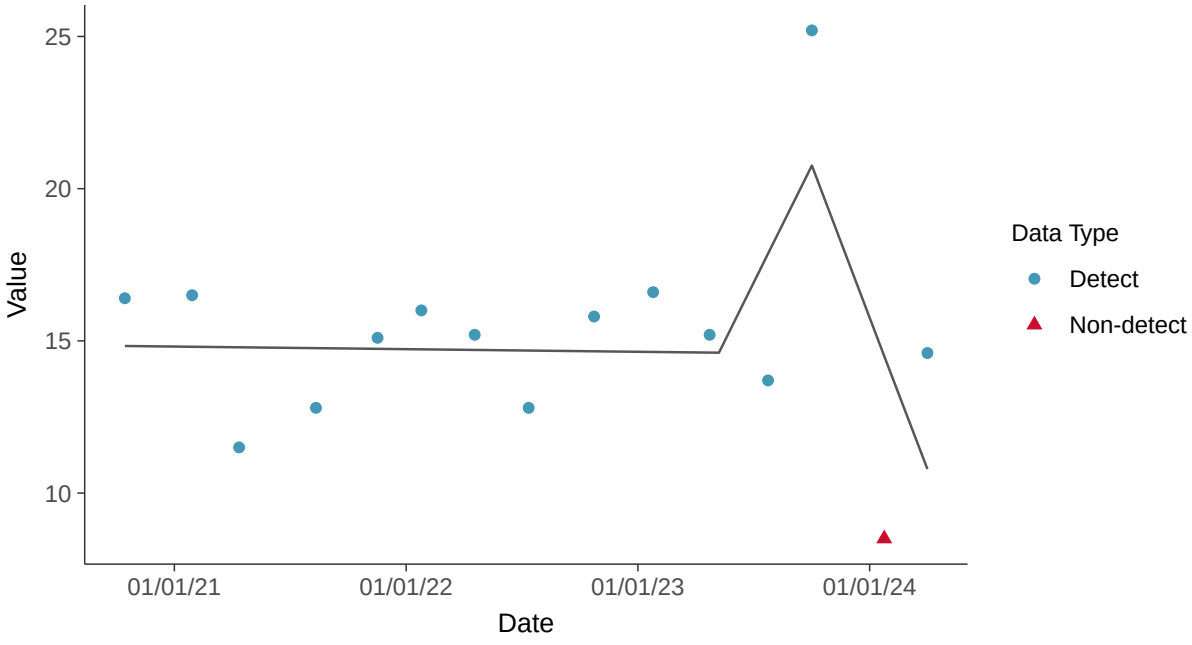
Trend Regression: Piecewise Linear-Linear

Boron, MW-11 (ug/L)



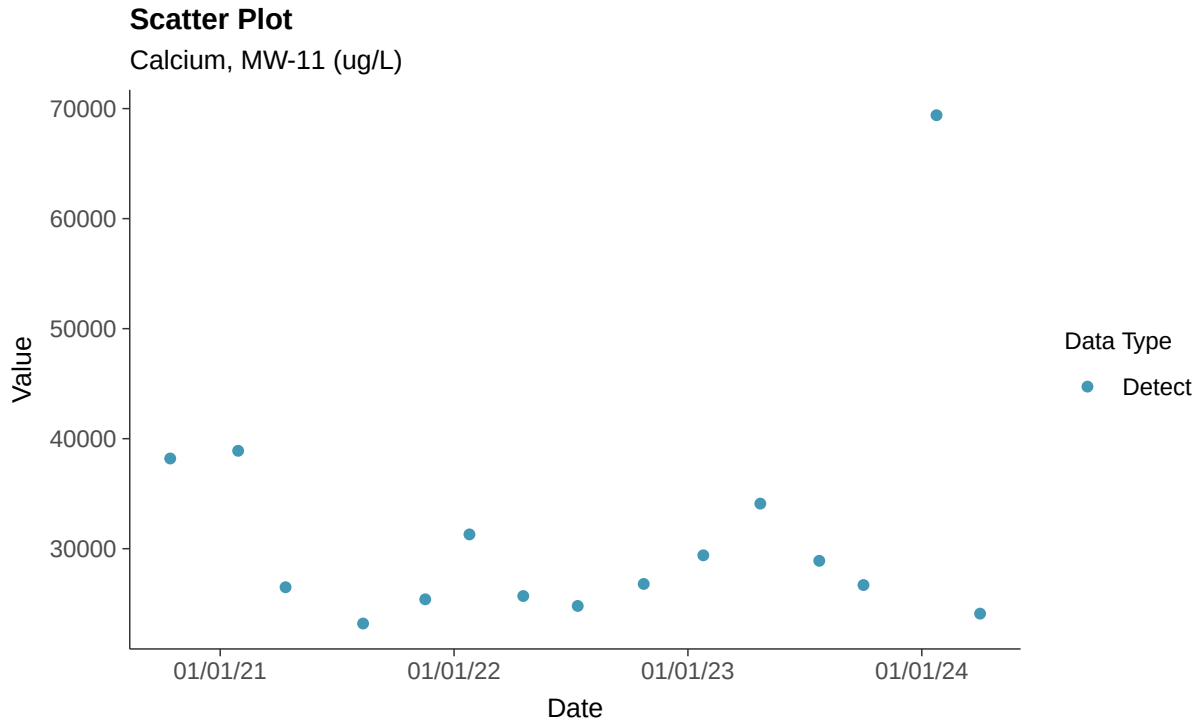
Trend Regression: Piecewise Linear-Linear-Linear

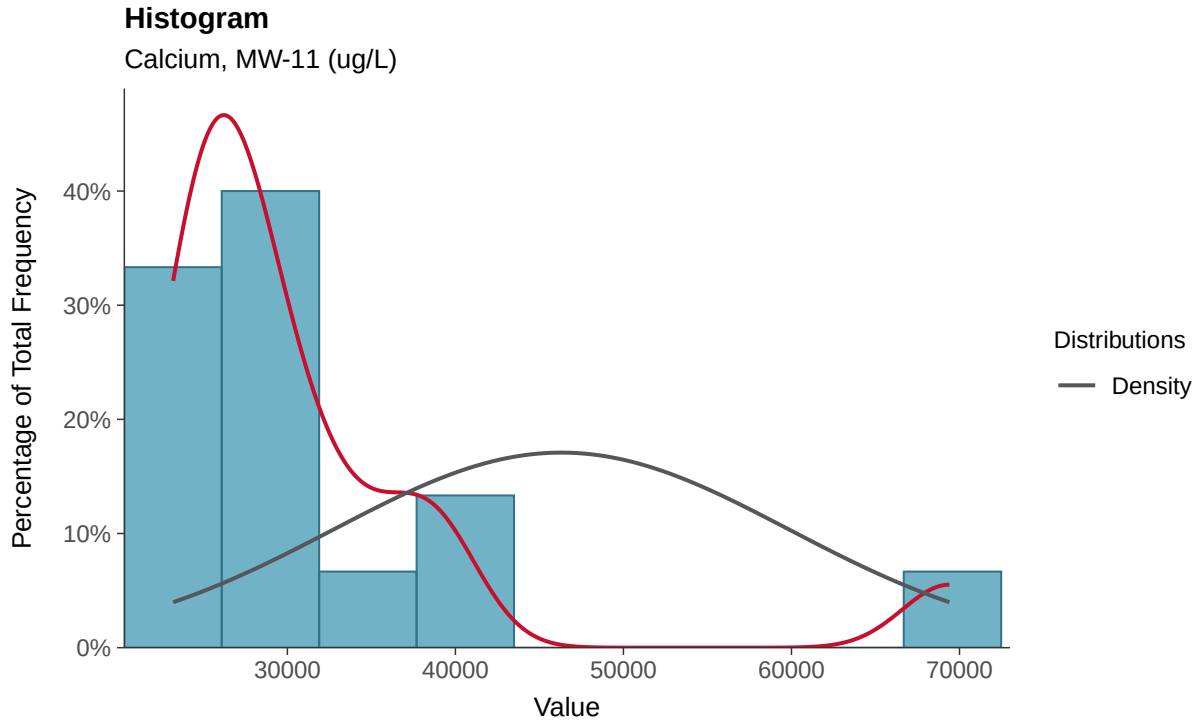
Boron, MW-11 (ug/L)



App. III: Calcium, MW-11

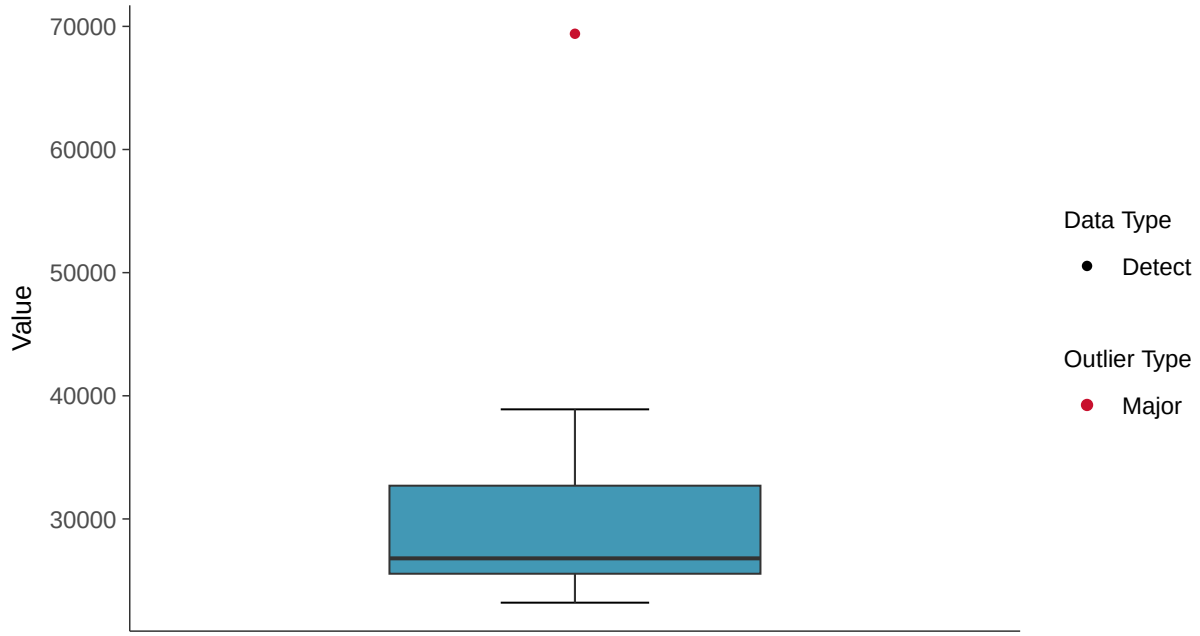
ID: 3_2_107





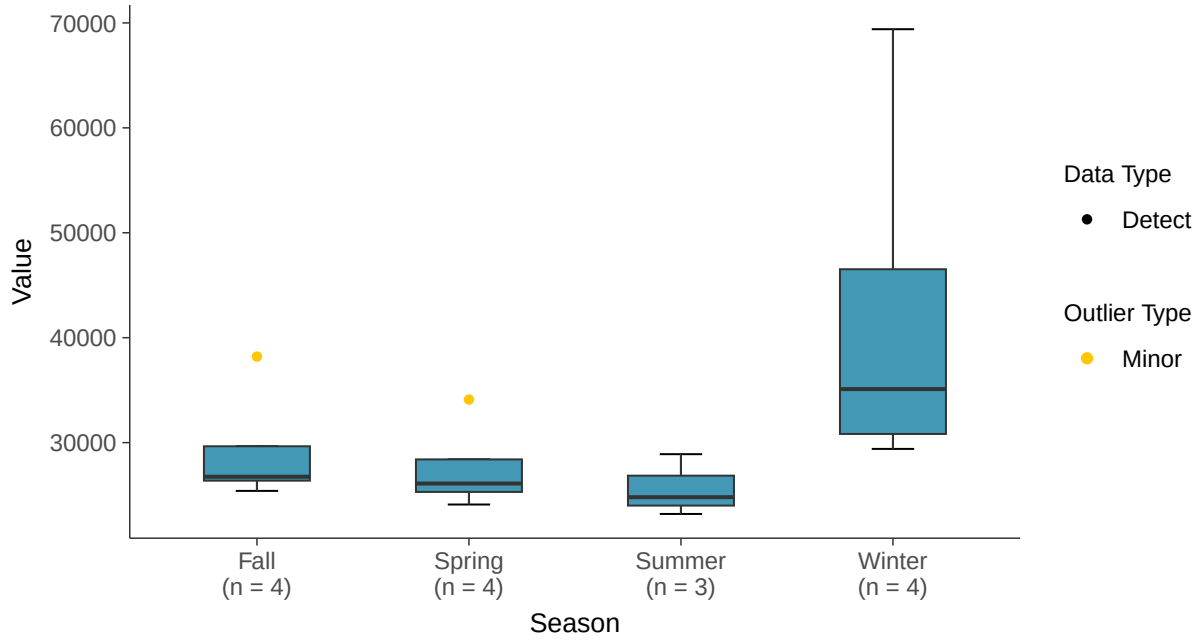
Boxplot

Calcium, MW-11 (ug/L)



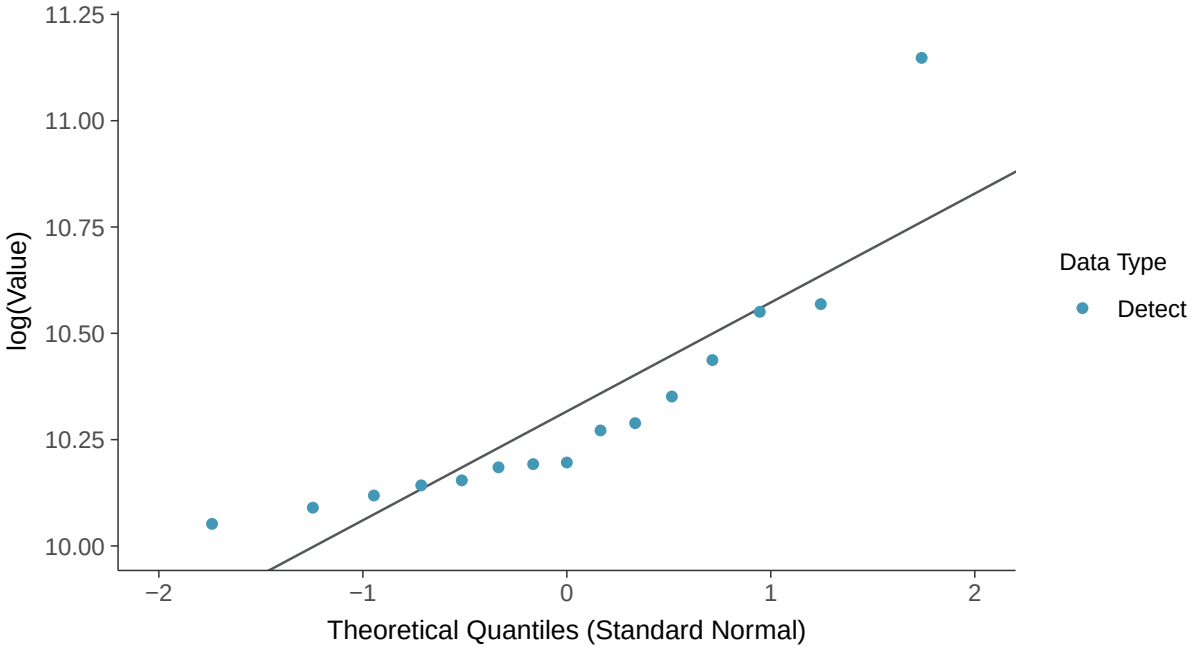
Boxplot by Season

Calcium, MW-11 (ug/L)



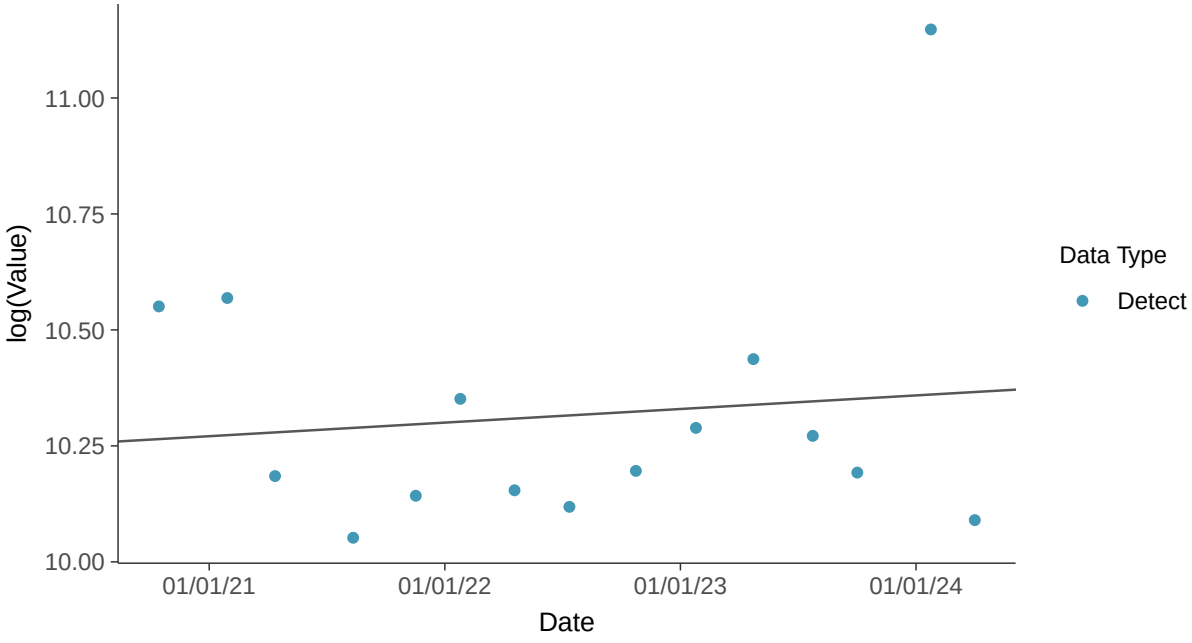
Lognormal Q-Q plot

Calcium, MW-11 (ug/L)



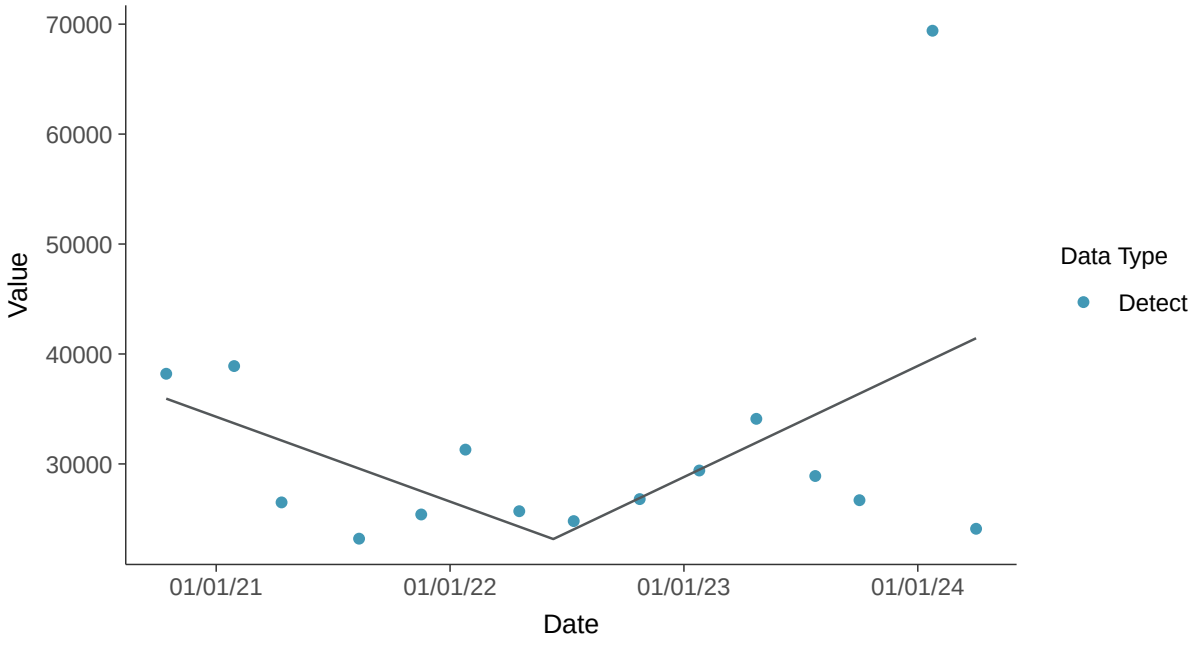
Trend Regression: Lognormal MLE

Calcium, MW-11 (ug/L)



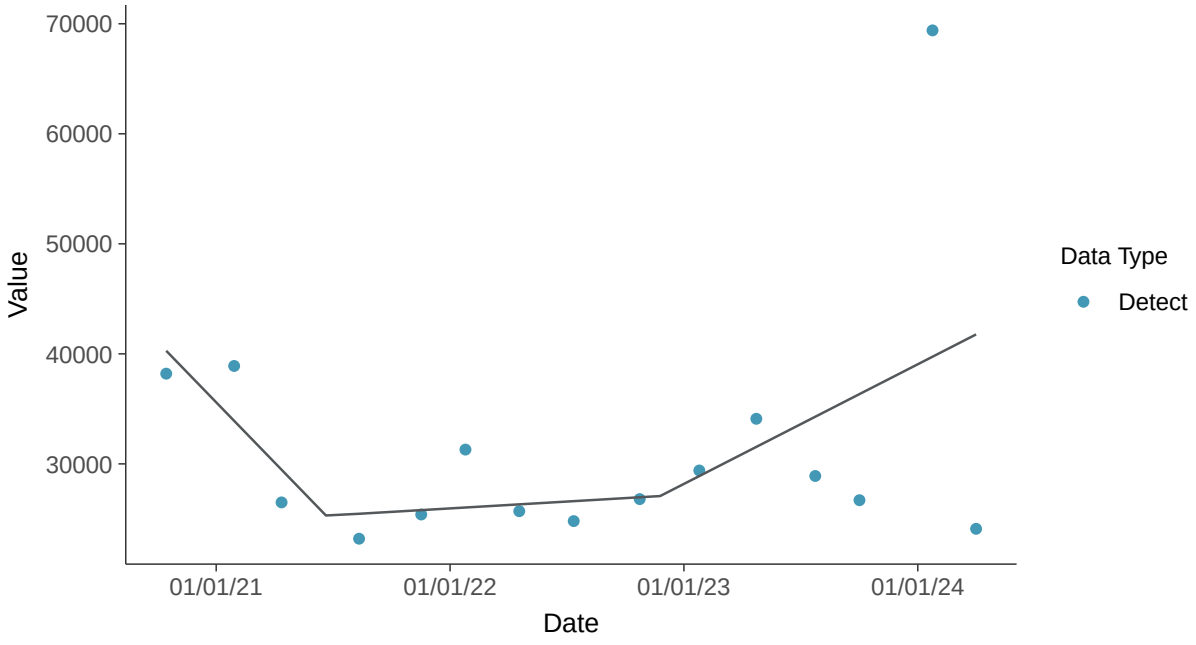
Trend Regression: Piecewise Linear-Linear

Calcium, MW-11 (ug/L)



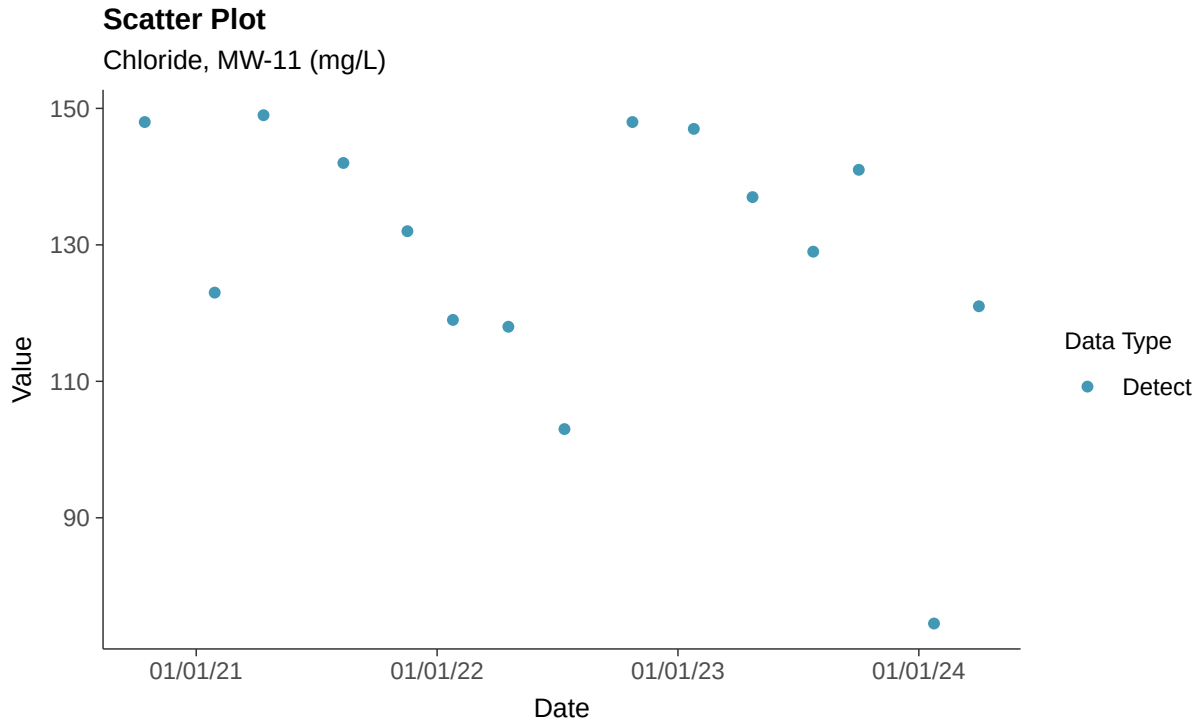
Trend Regression: Piecewise Linear-Linear-Linear

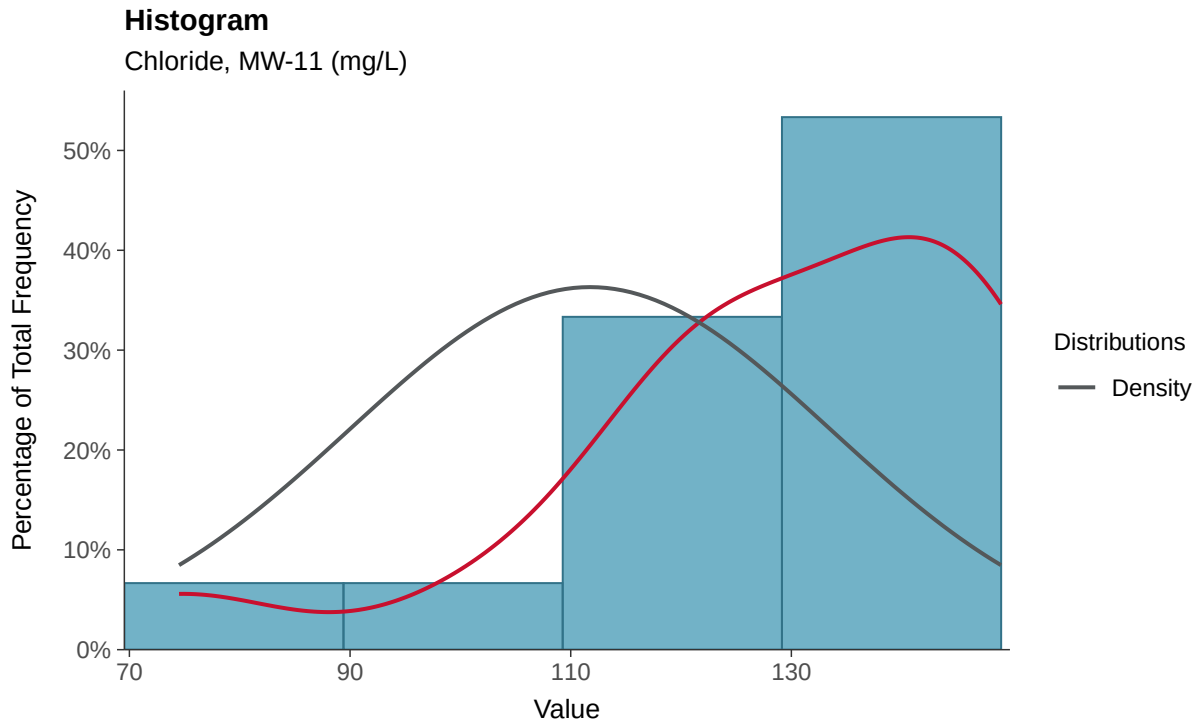
Calcium, MW-11 (ug/L)



App. III: Chloride, MW-11

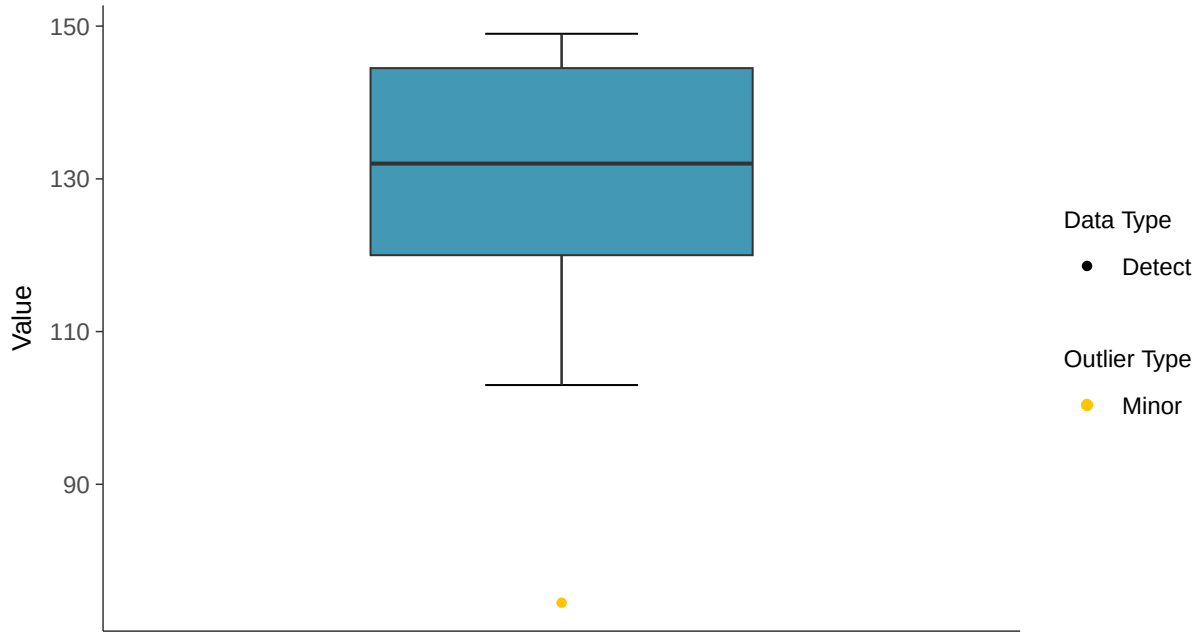
ID: 3_2_108





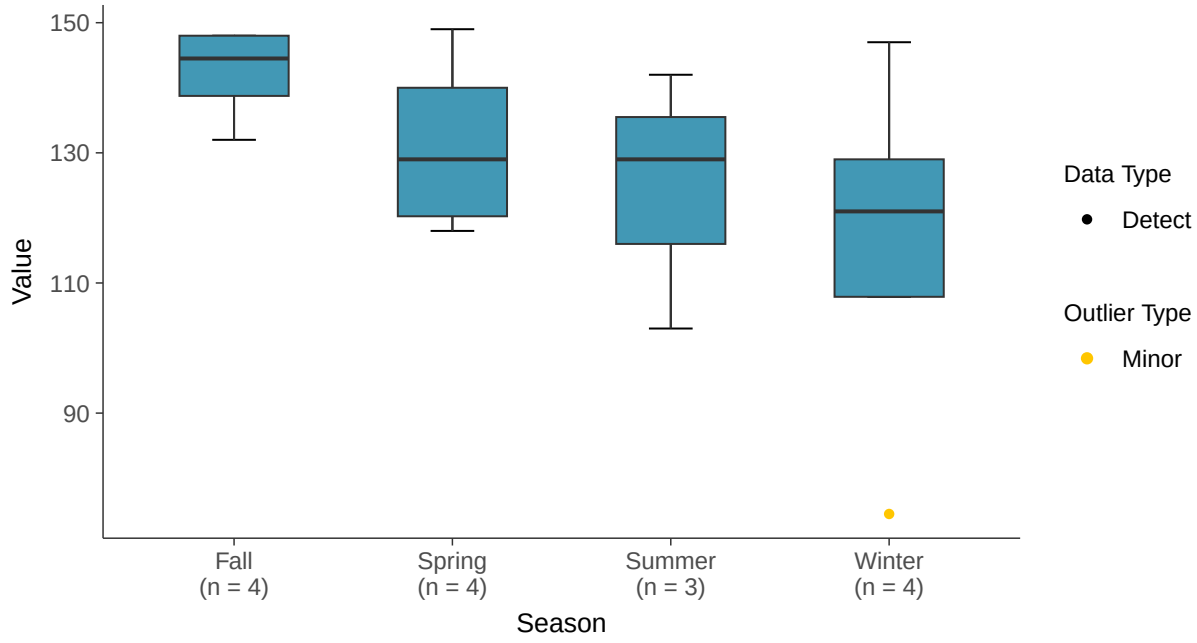
Boxplot

Chloride, MW-11 (mg/L)



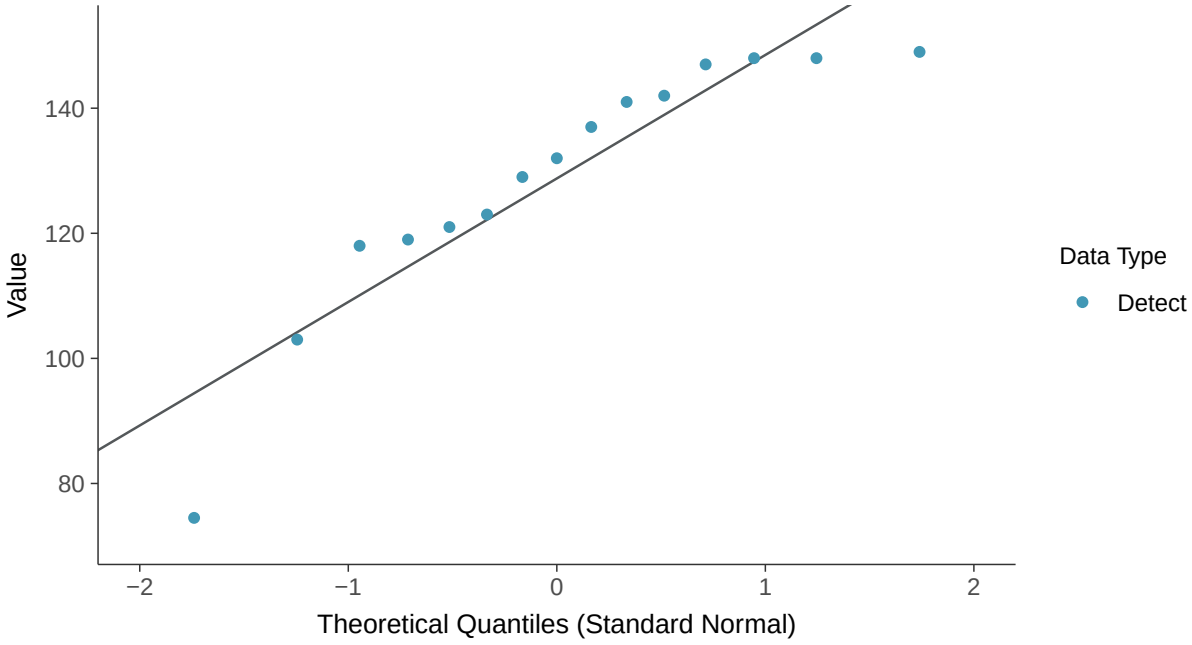
Boxplot by Season

Chloride, MW-11 (mg/L)



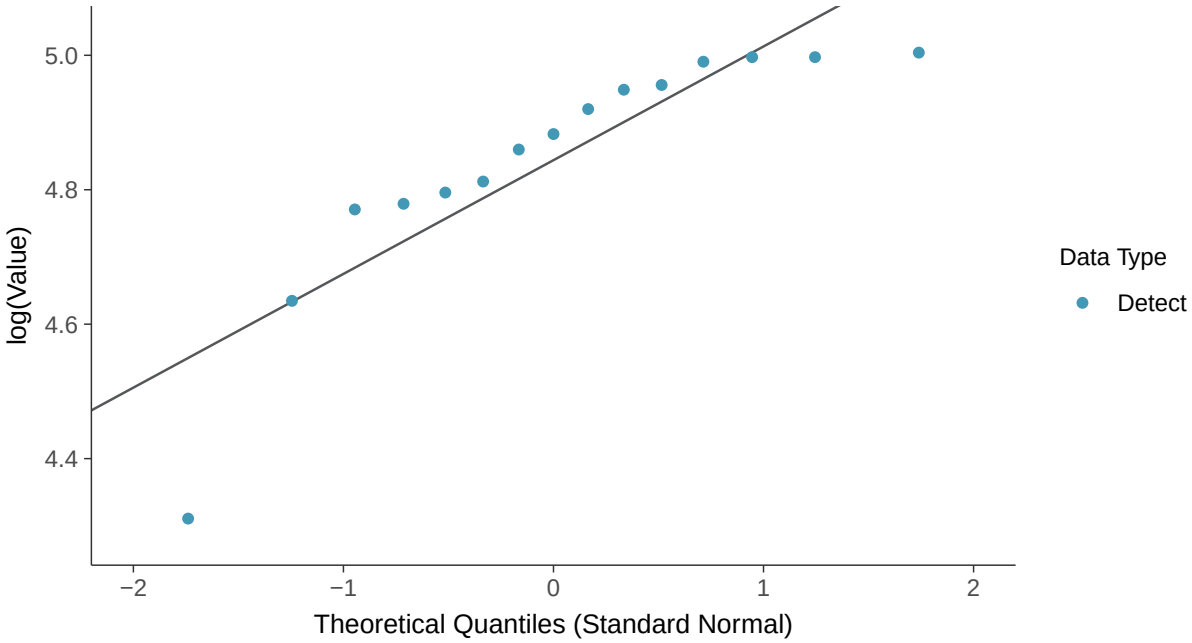
Normal Q-Q plot

Chloride, MW-11 (mg/L)



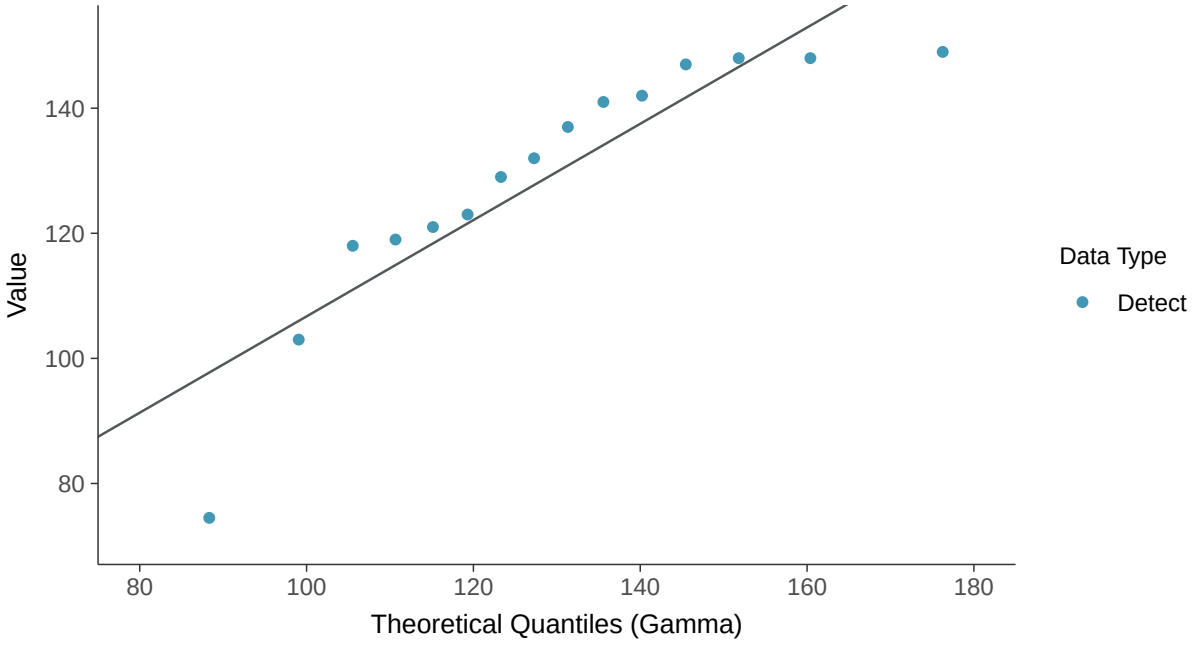
Lognormal Q-Q plot

Chloride, MW-11 (mg/L)



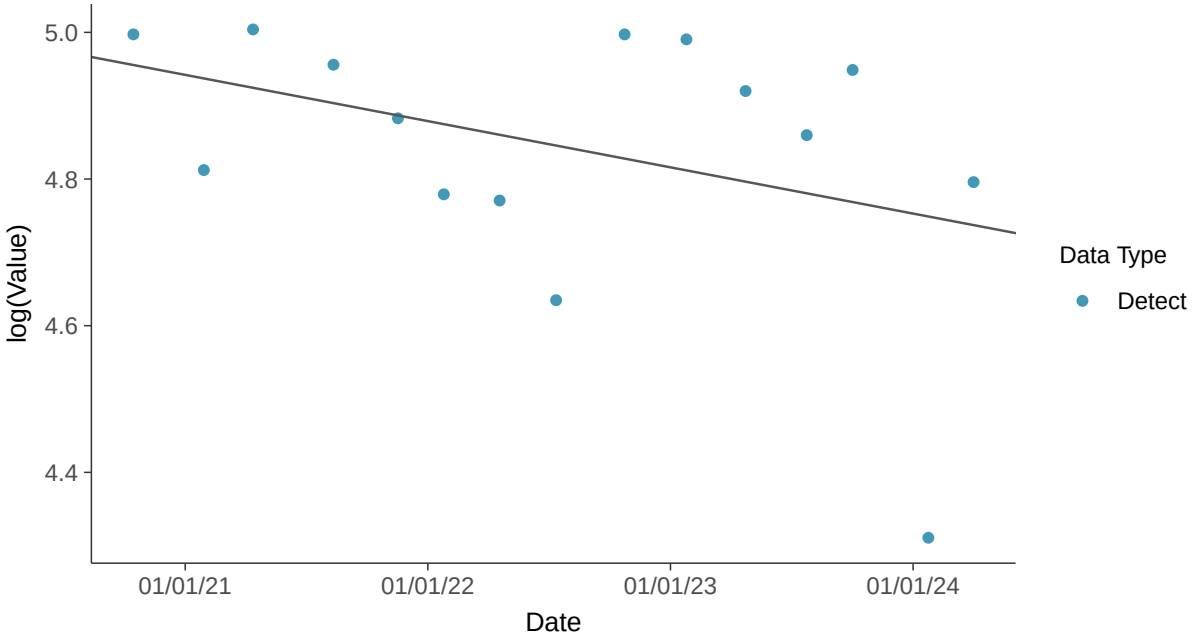
Gamma Q-Q plot

Chloride, MW-11 (mg/L)



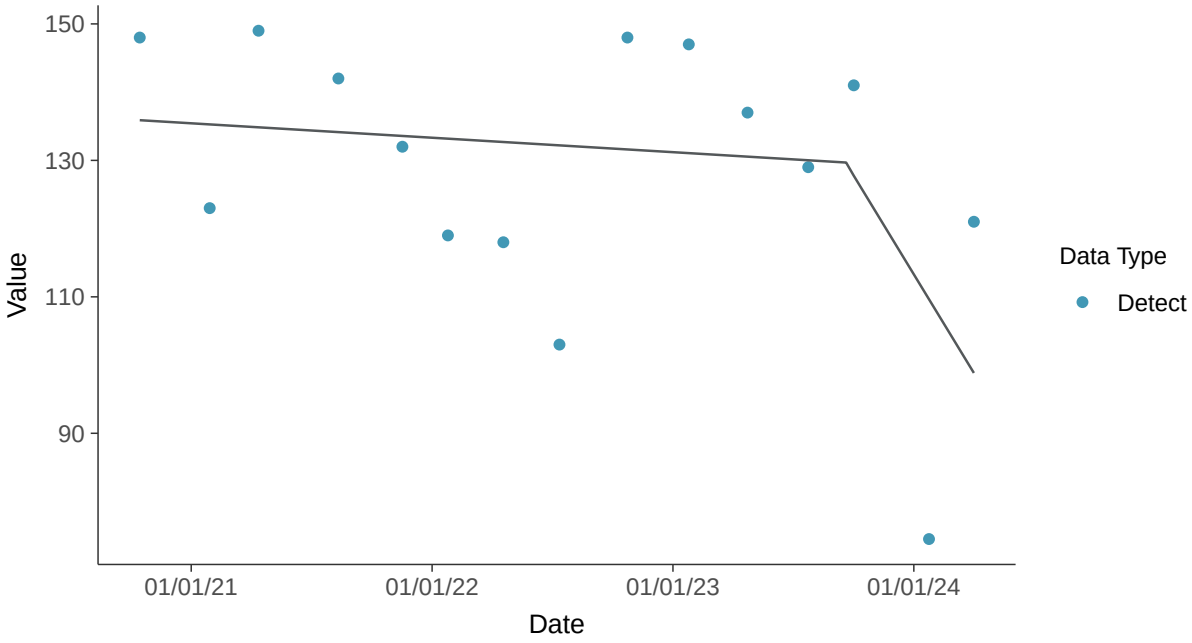
Trend Regression: Lognormal MLE

Chloride, MW-11 (mg/L)



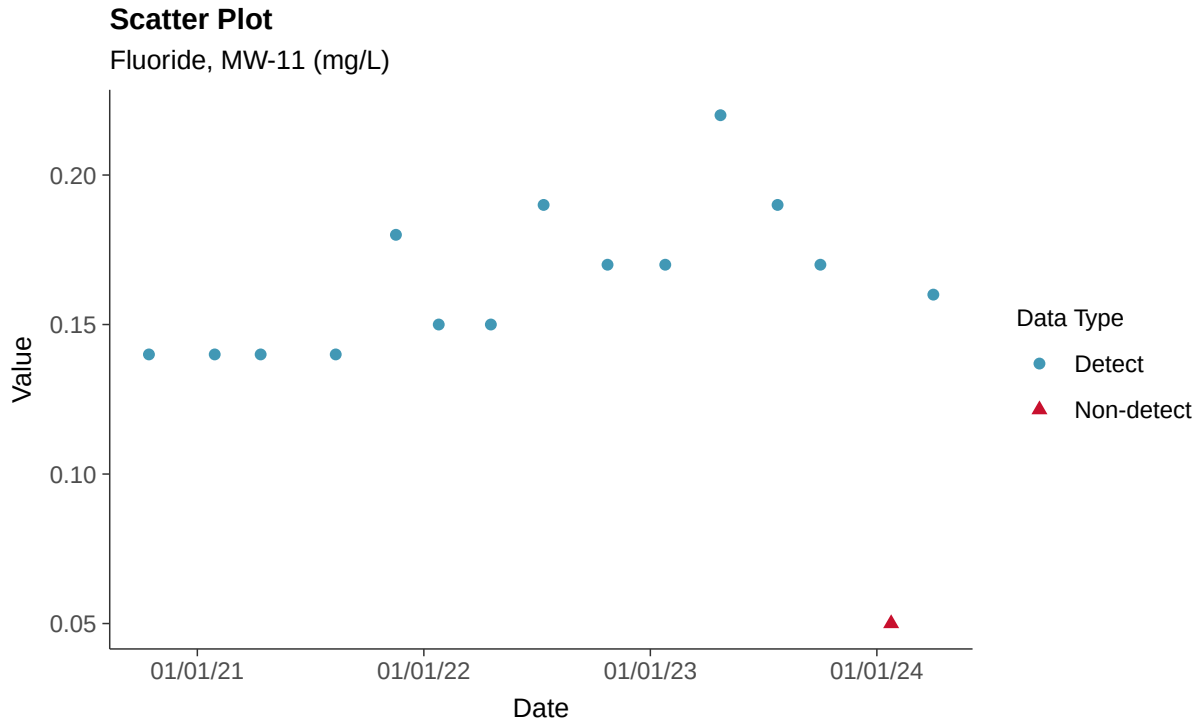
Trend Regression: Piecewise Linear-Linear

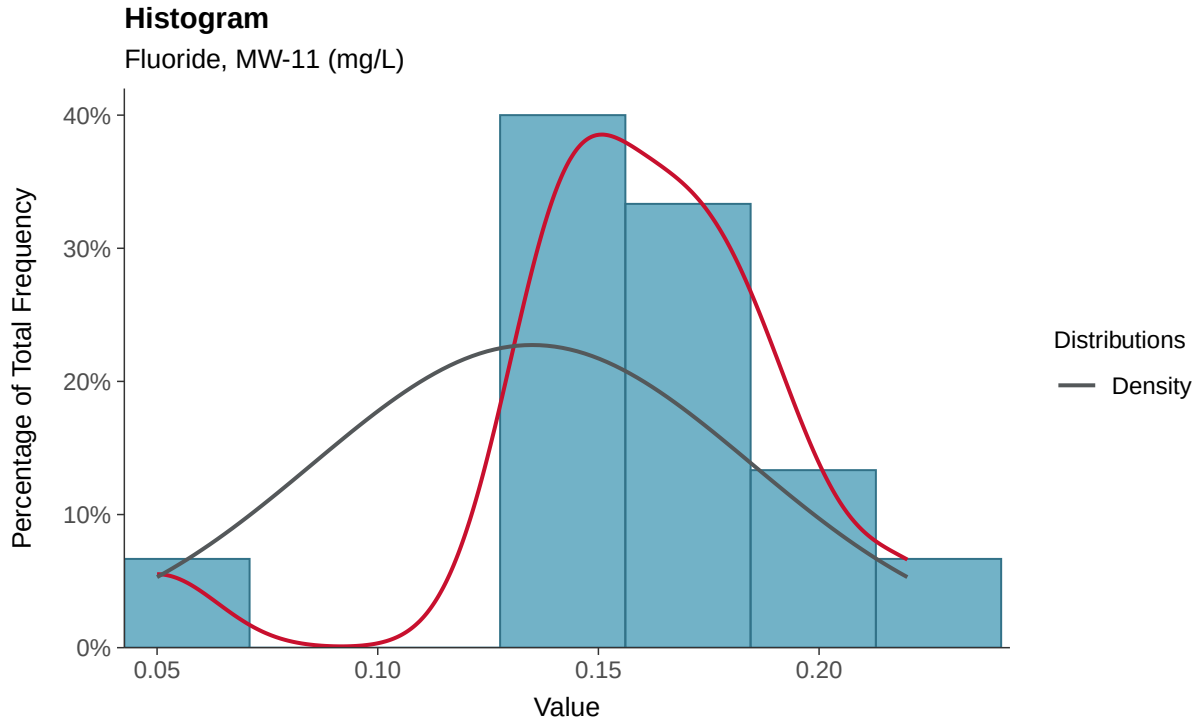
Chloride, MW-11 (mg/L)



App. III: Fluoride, MW-11

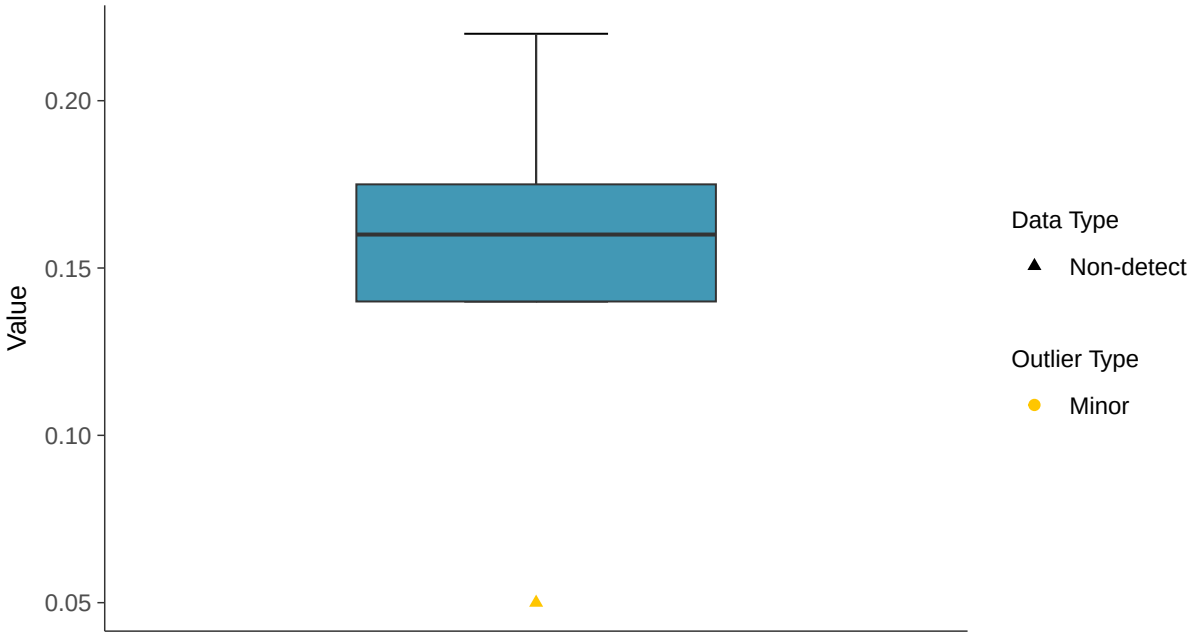
ID: 3_2_112





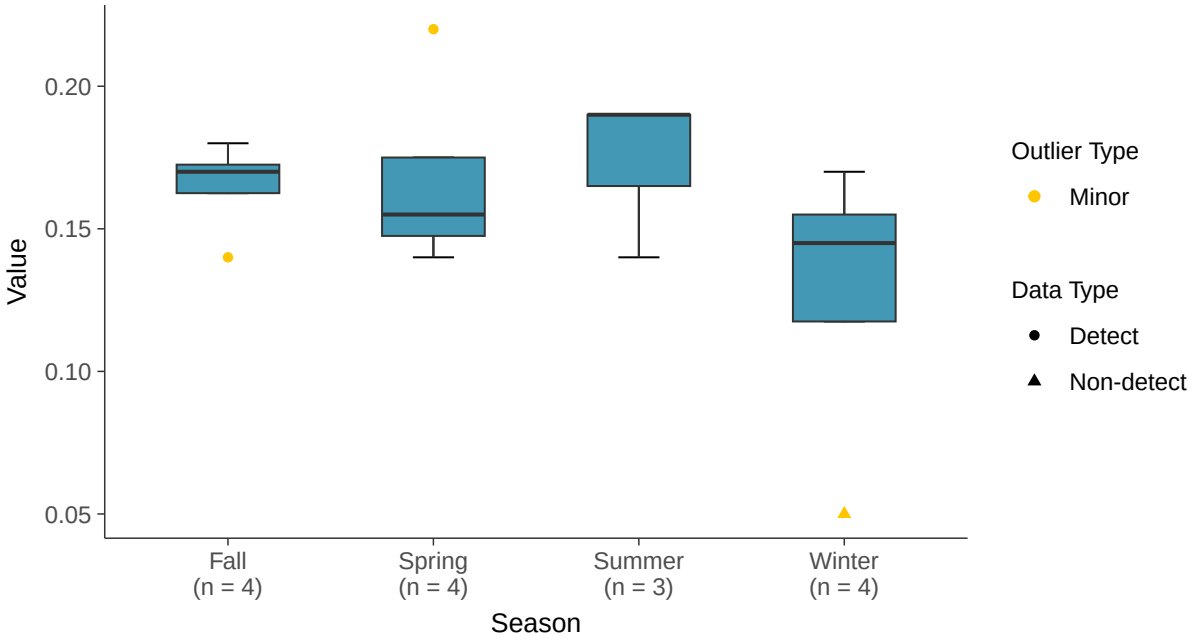
Boxplot

Fluoride, MW-11 (mg/L)



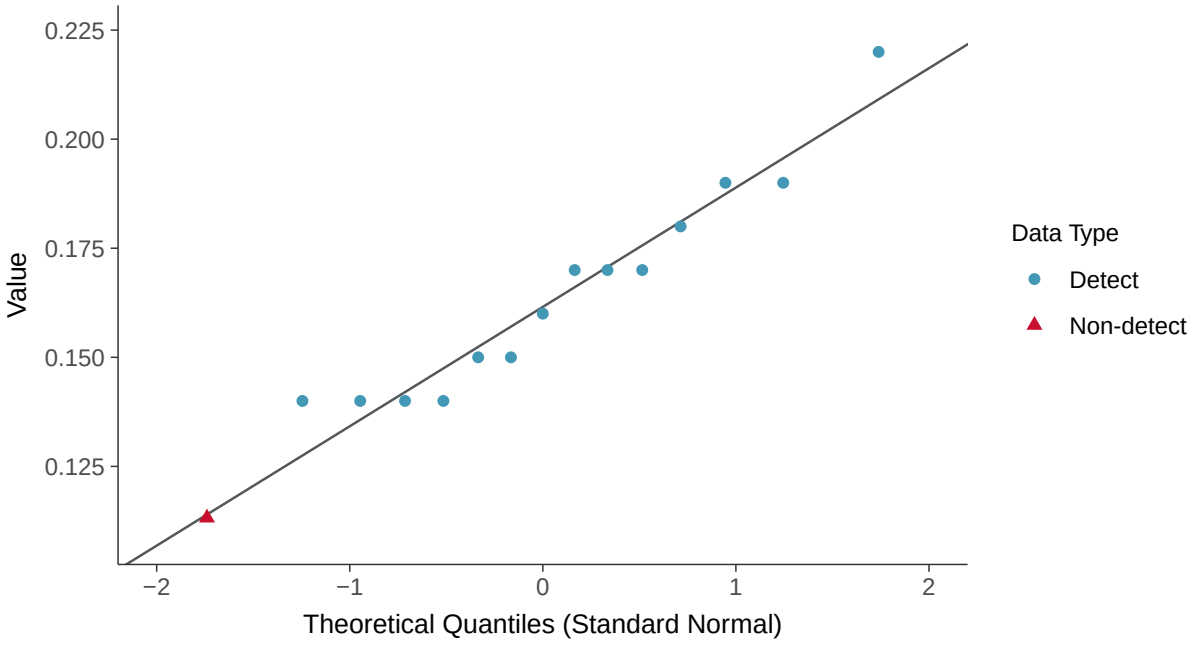
Boxplot by Season

Fluoride, MW-11 (mg/L)



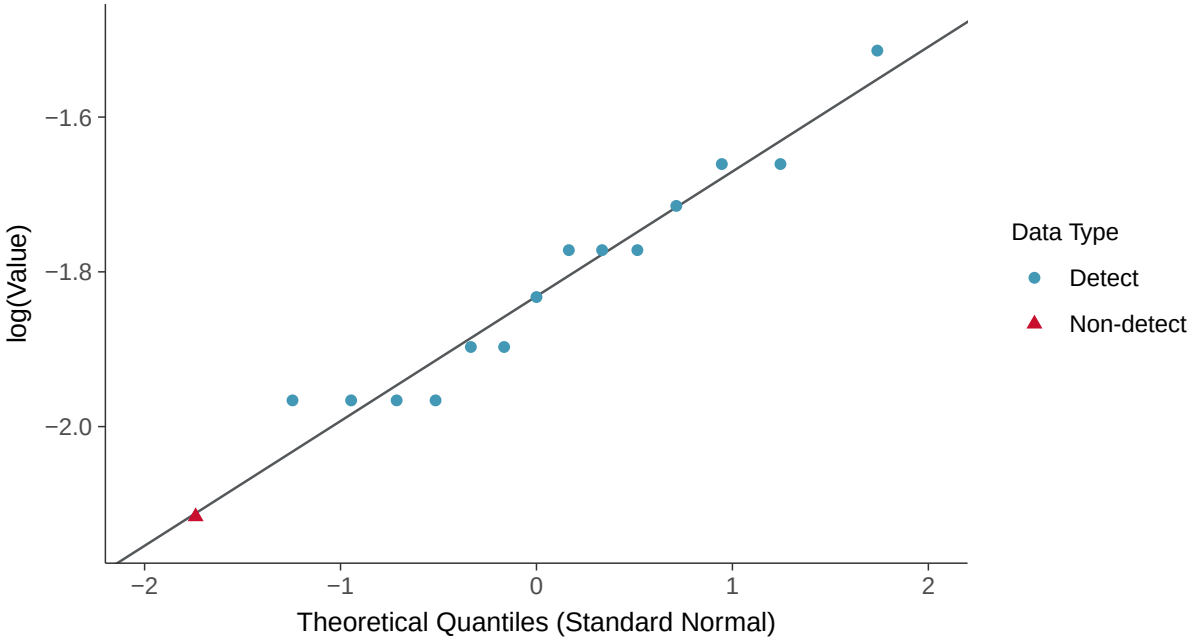
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



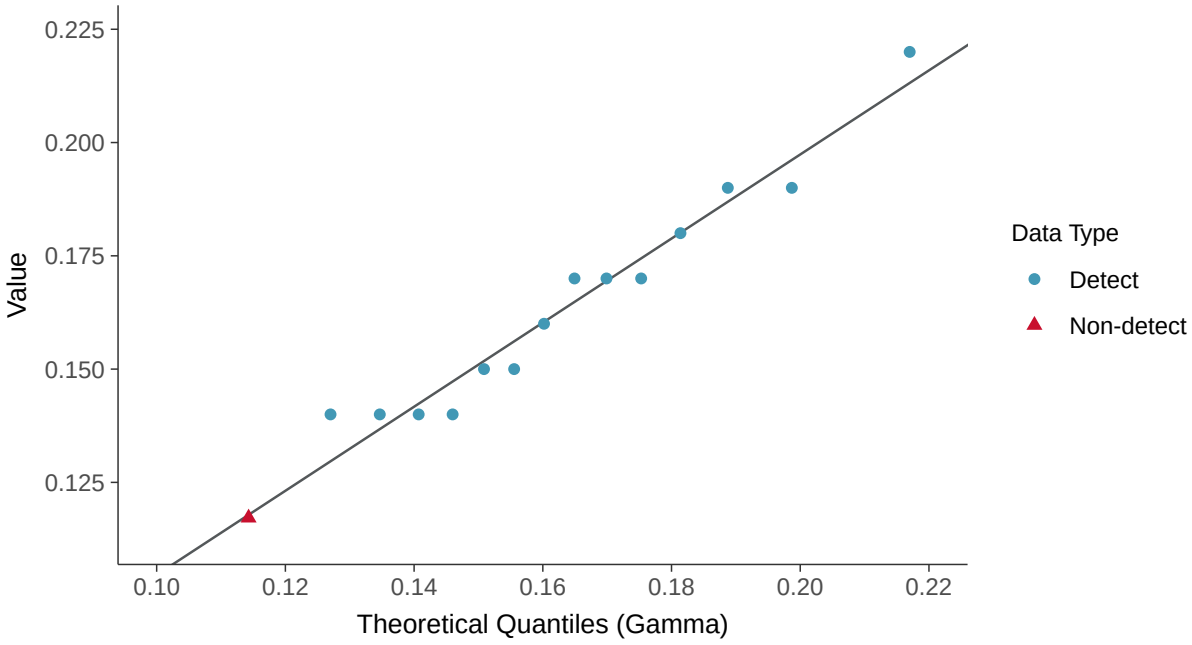
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



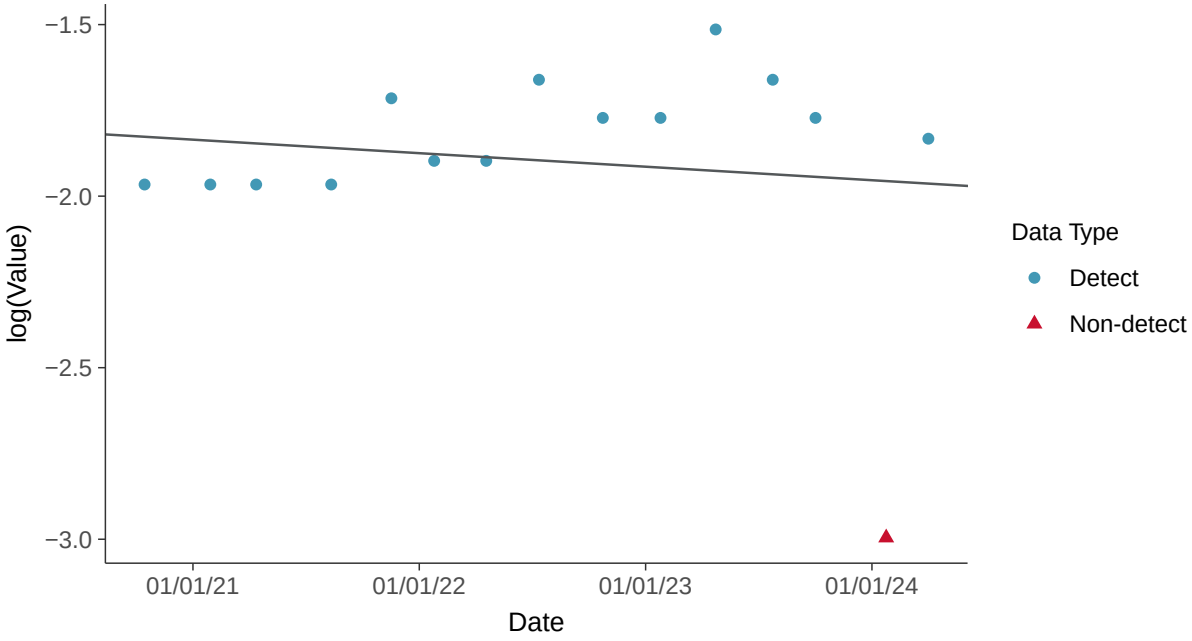
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



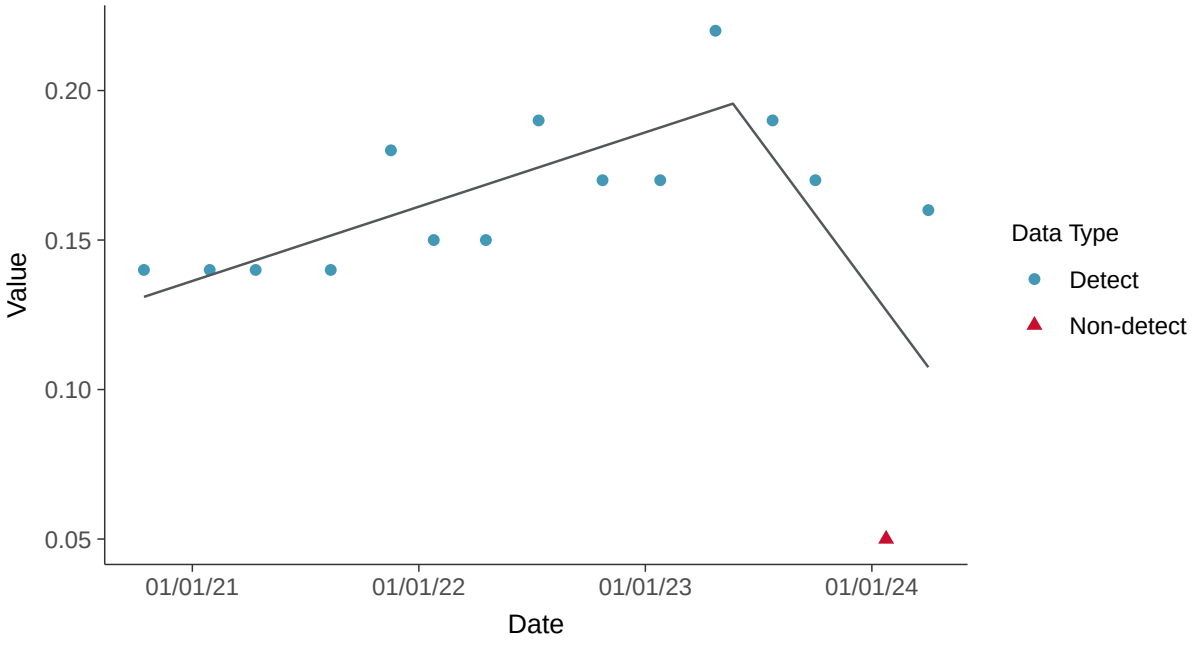
Trend Regression: Lognormal MLE

Fluoride, MW-11 (mg/L)



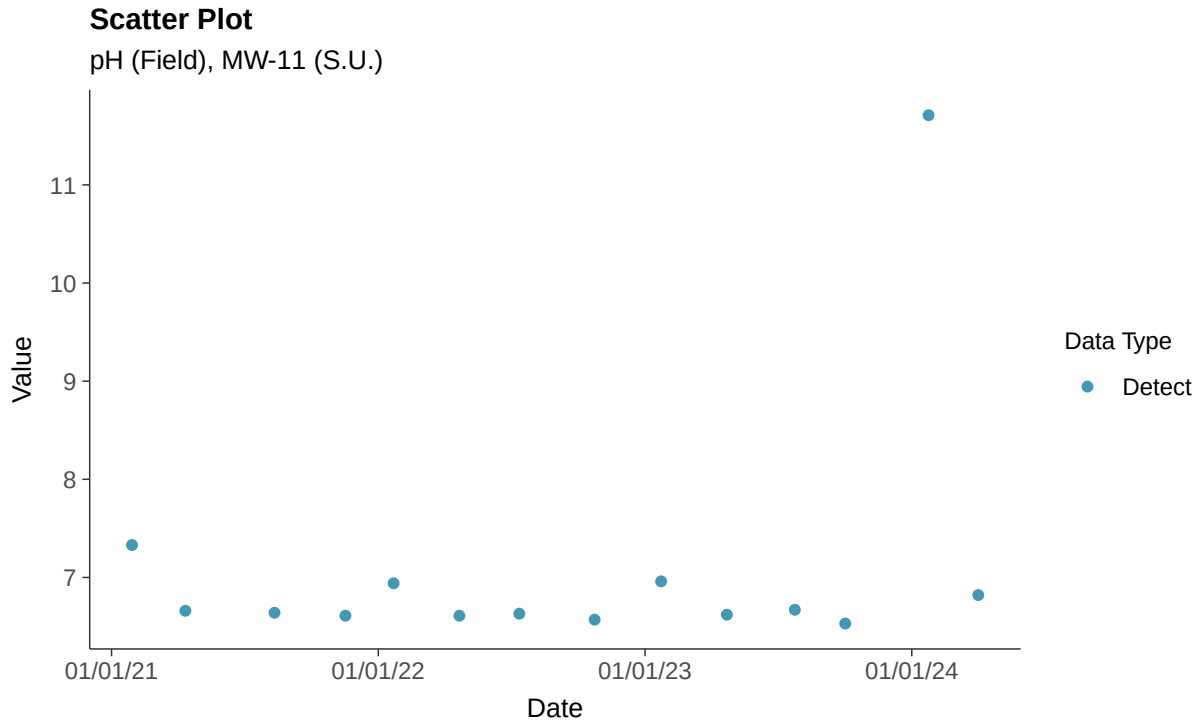
Trend Regression: Piecewise Linear-Linear

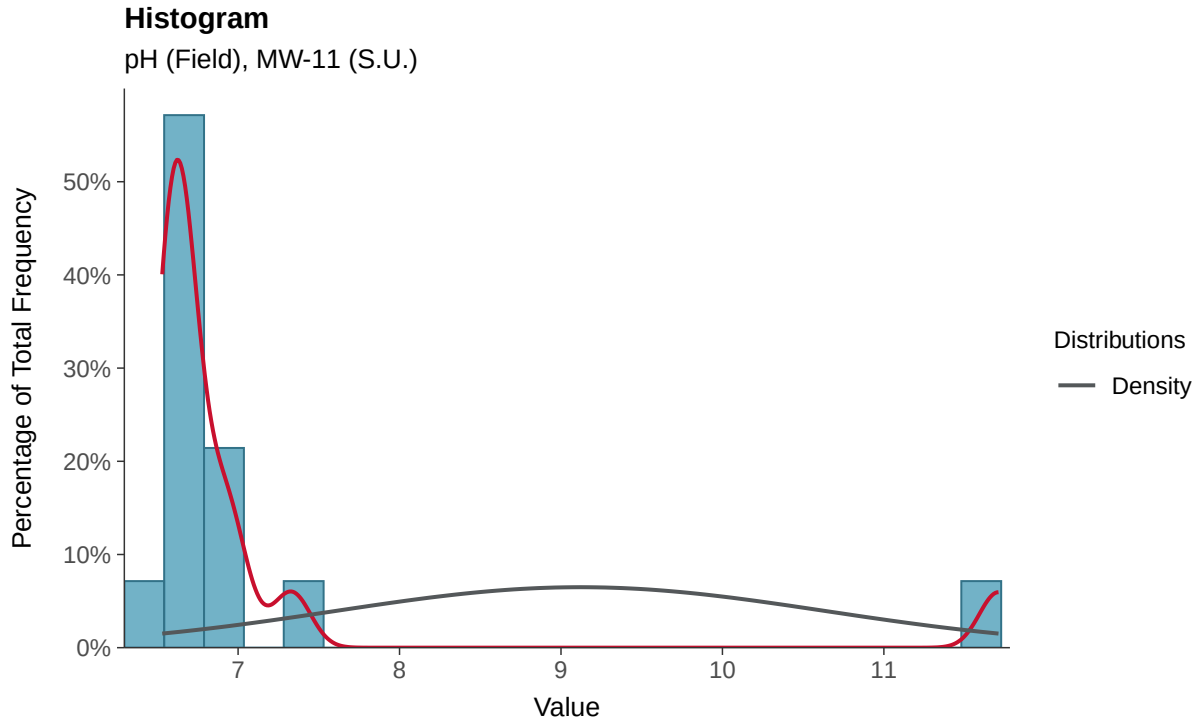
Fluoride, MW-11 (mg/L)



App. III: pH (Field), MW-11

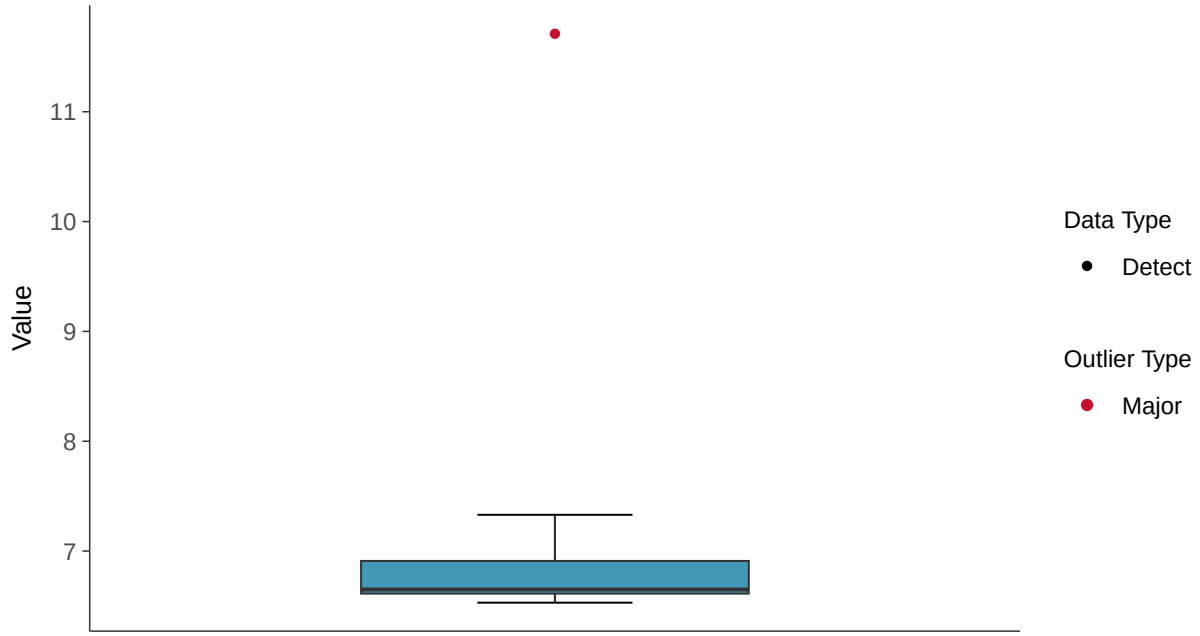
ID: 3_2_118





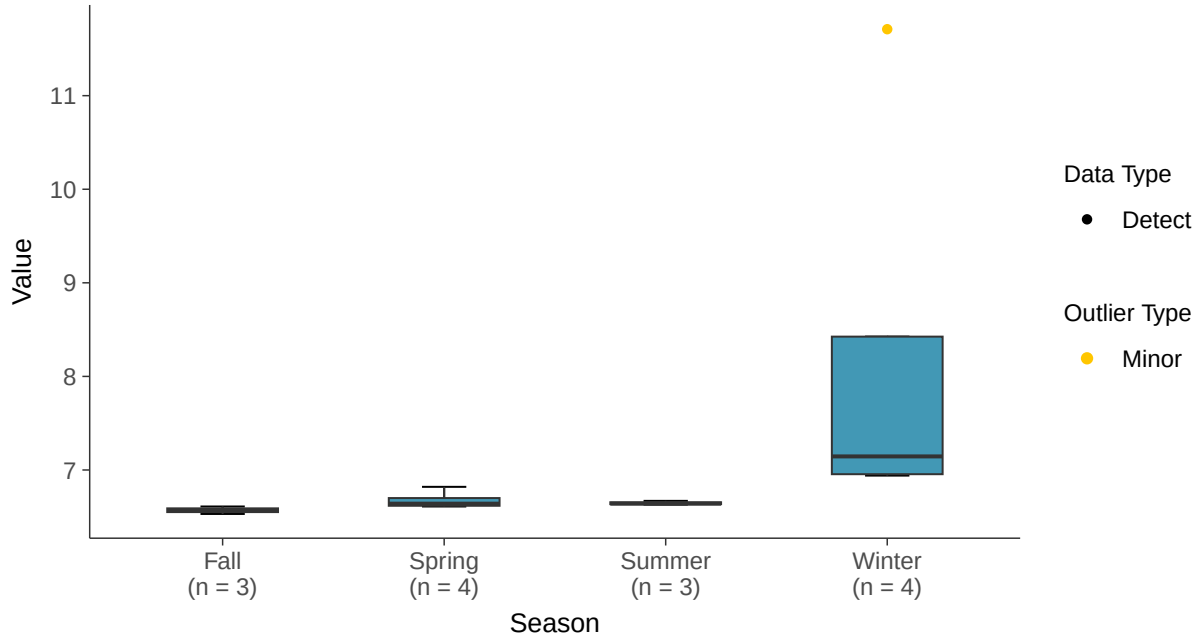
Boxplot

pH (Field), MW-11 (S.U.)



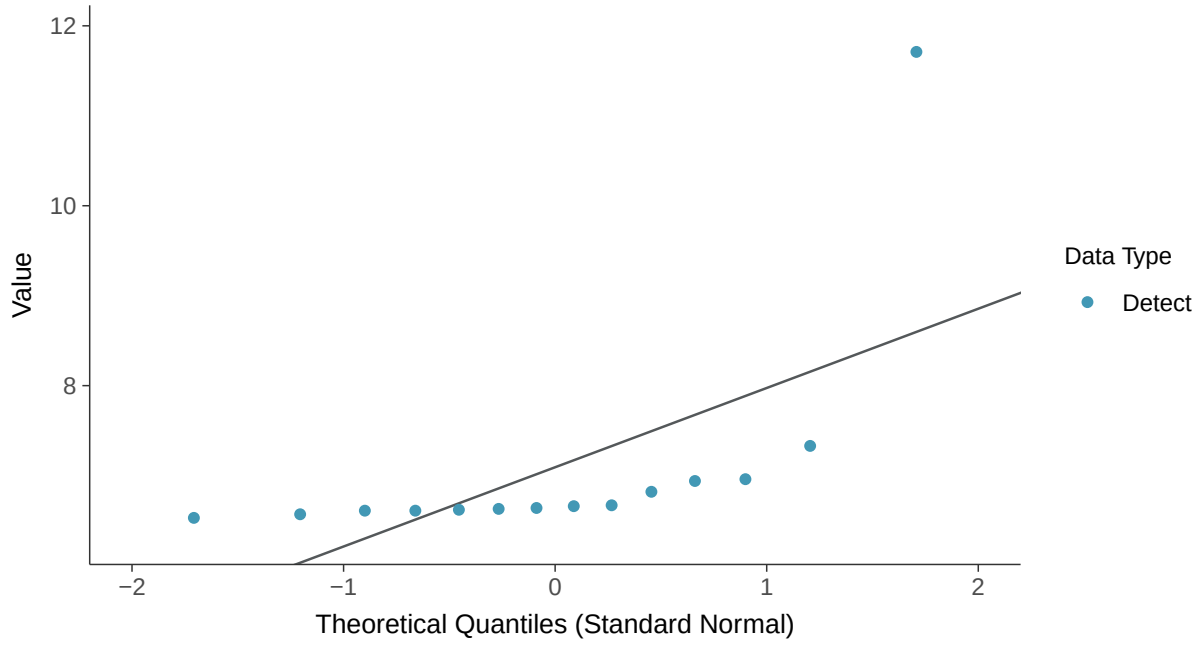
Boxplot by Season

pH (Field), MW-11 (S.U.)



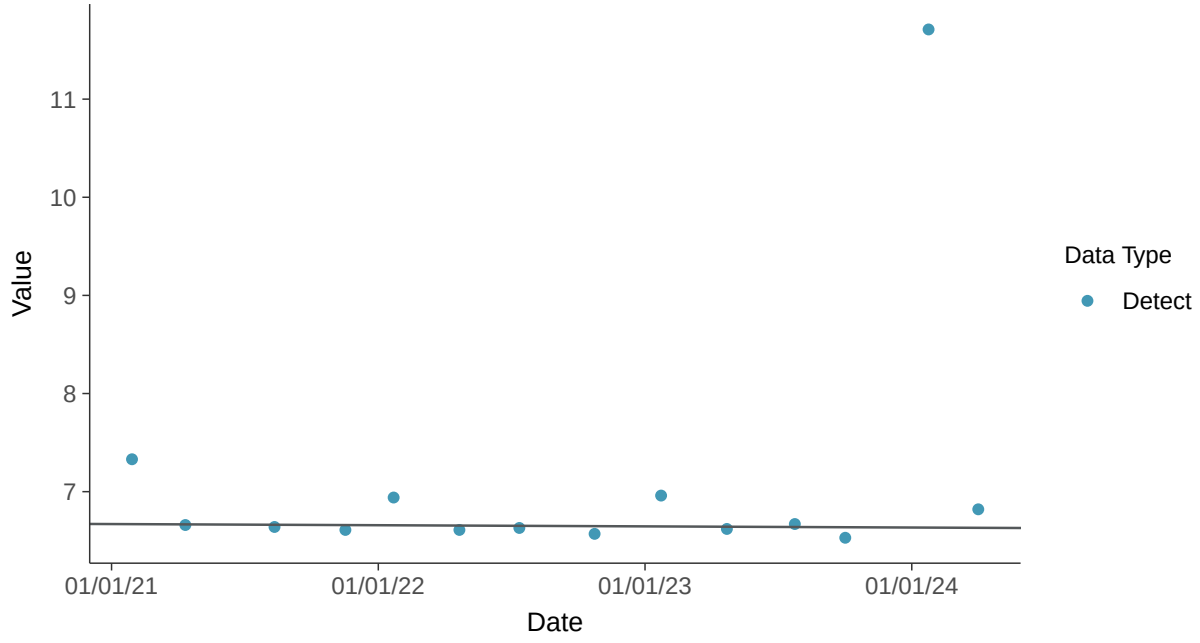
Normal Q-Q plot

pH (Field), MW-11 (S.U.)



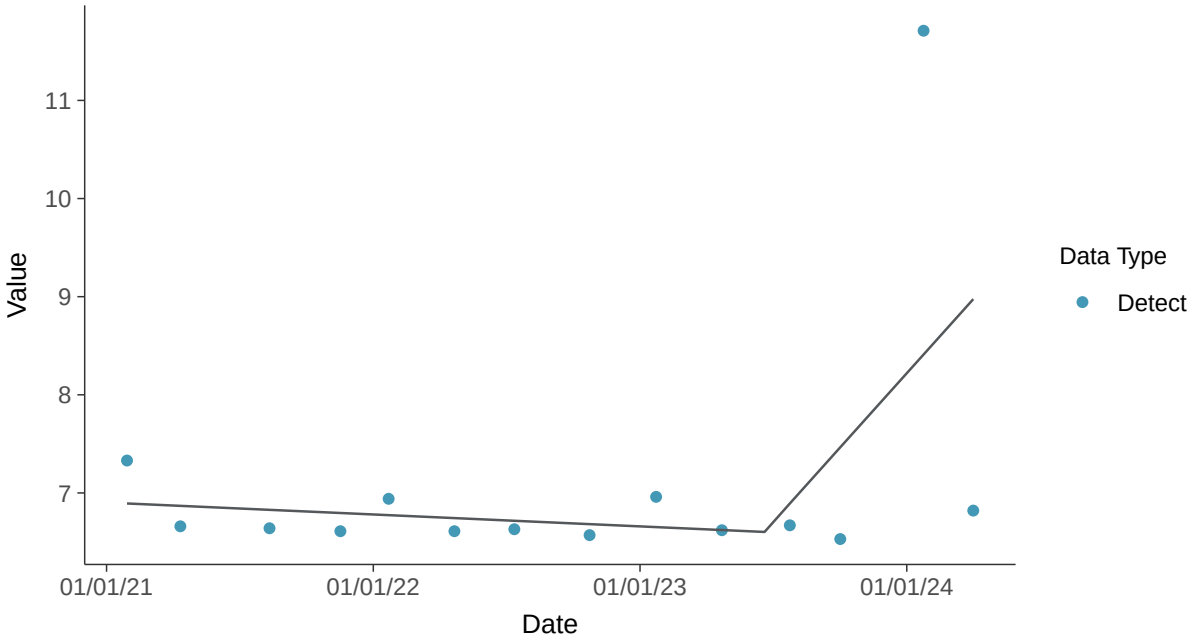
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-11 (S.U.)



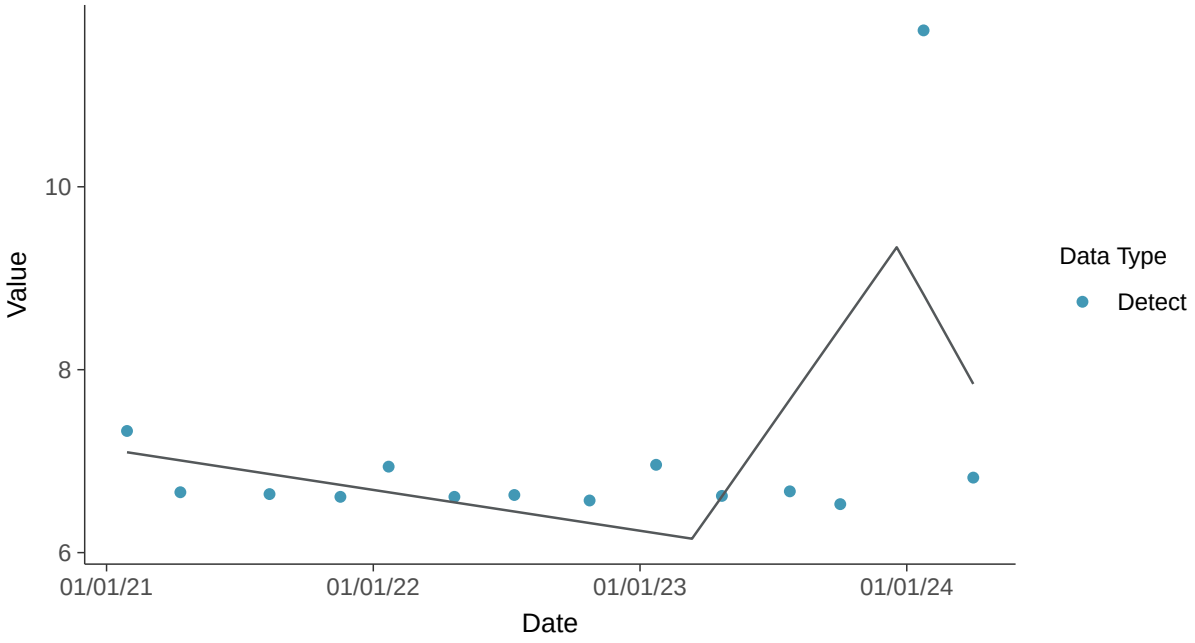
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-11 (S.U.)



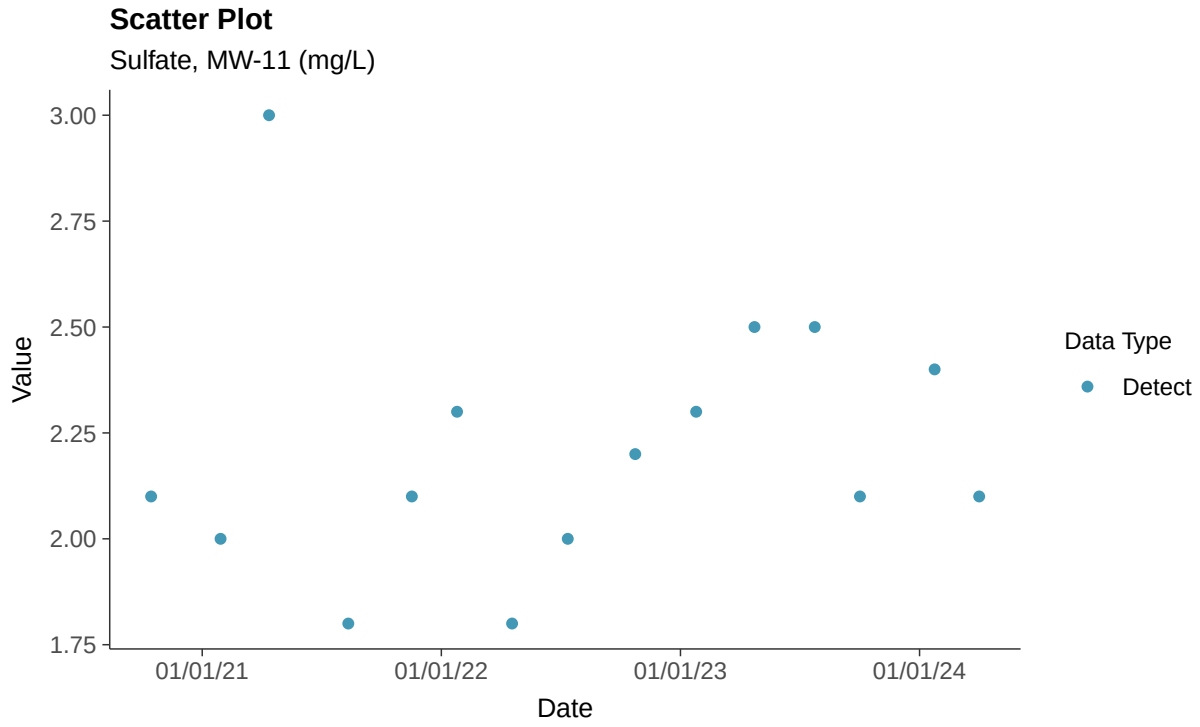
Trend Regression: Piecewise Linear-Linear-Linear

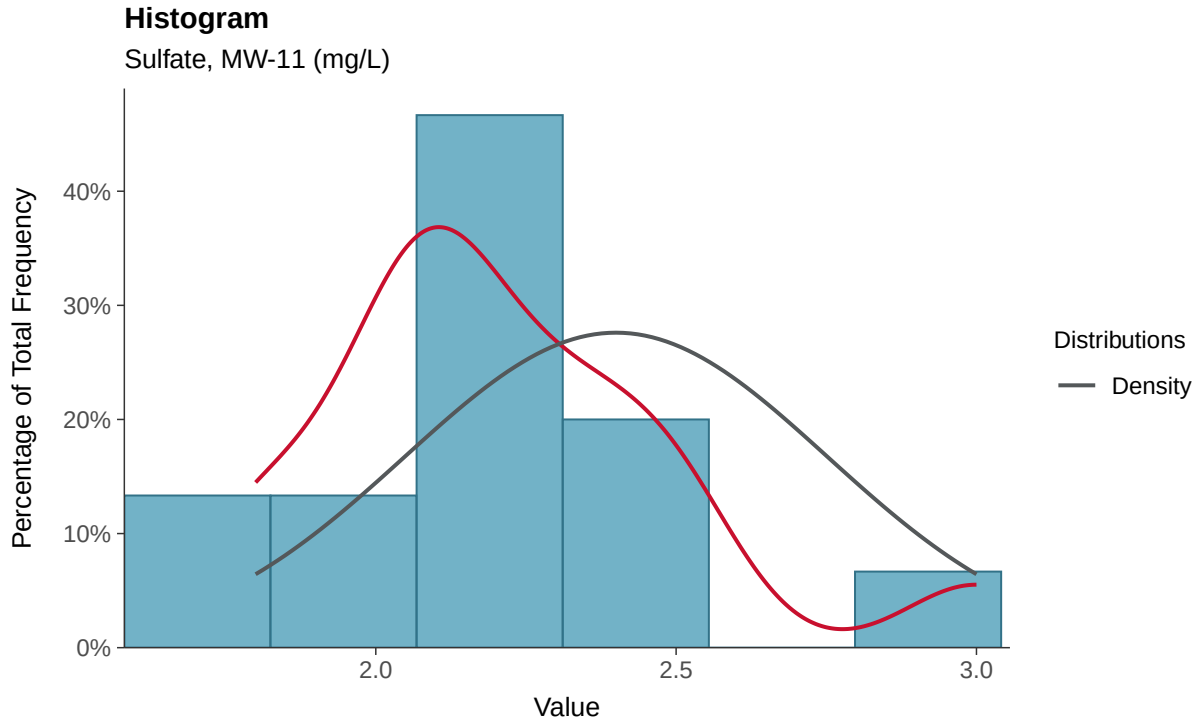
pH (Field), MW-11 (S.U.)



App. III: Sulfate, MW-11

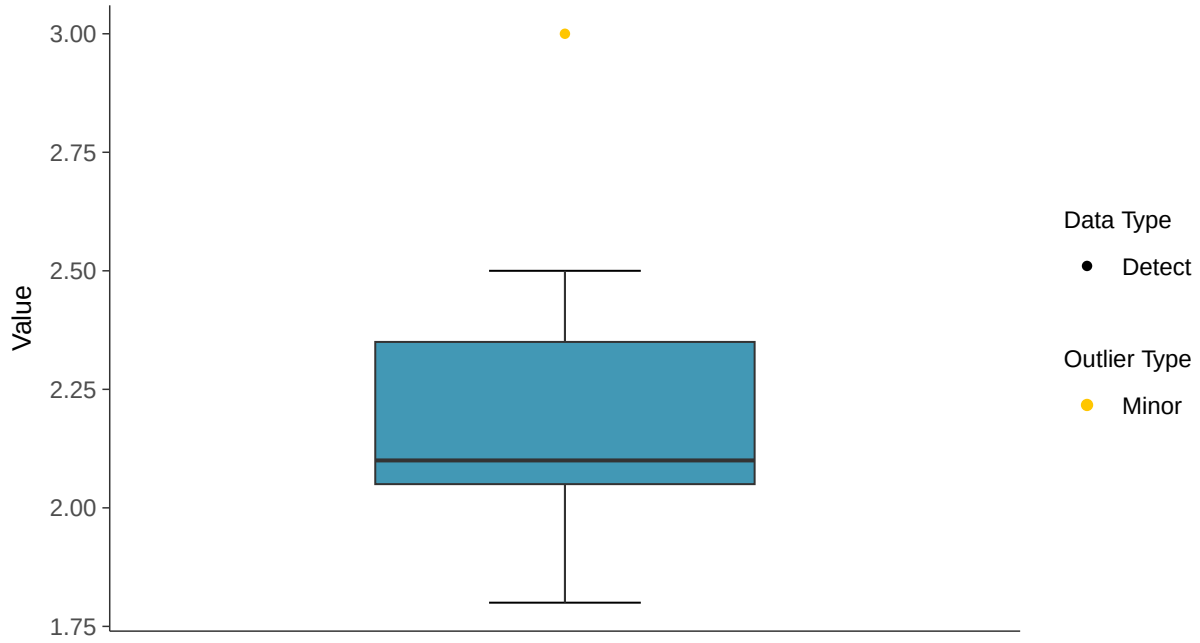
ID: 3_2_123





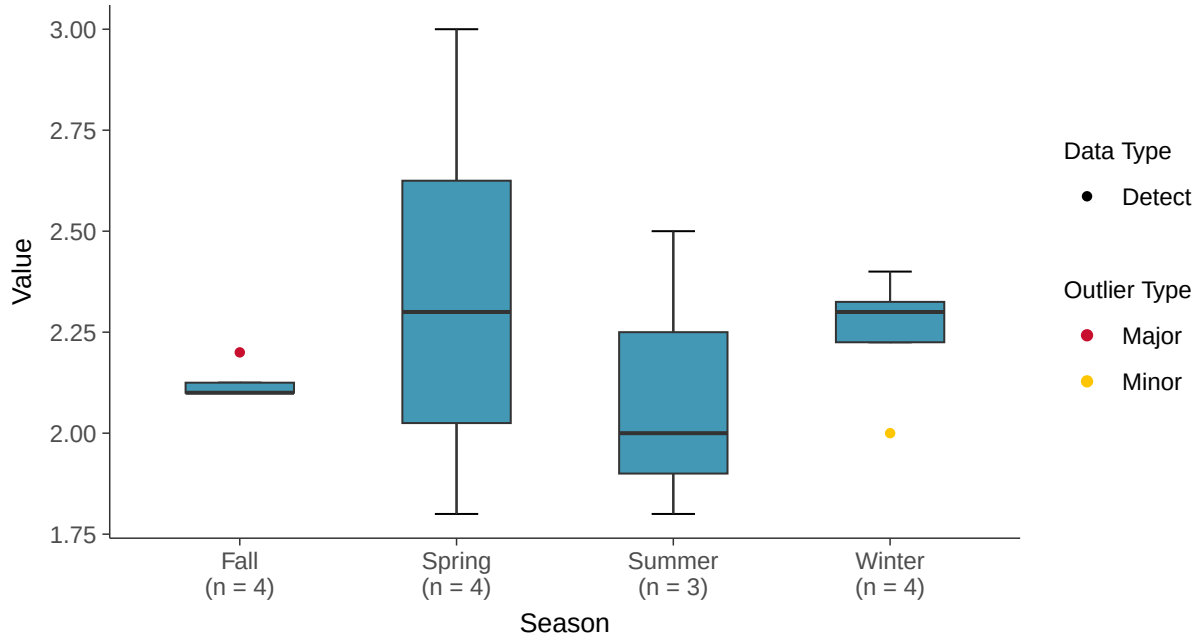
Boxplot

Sulfate, MW-11 (mg/L)



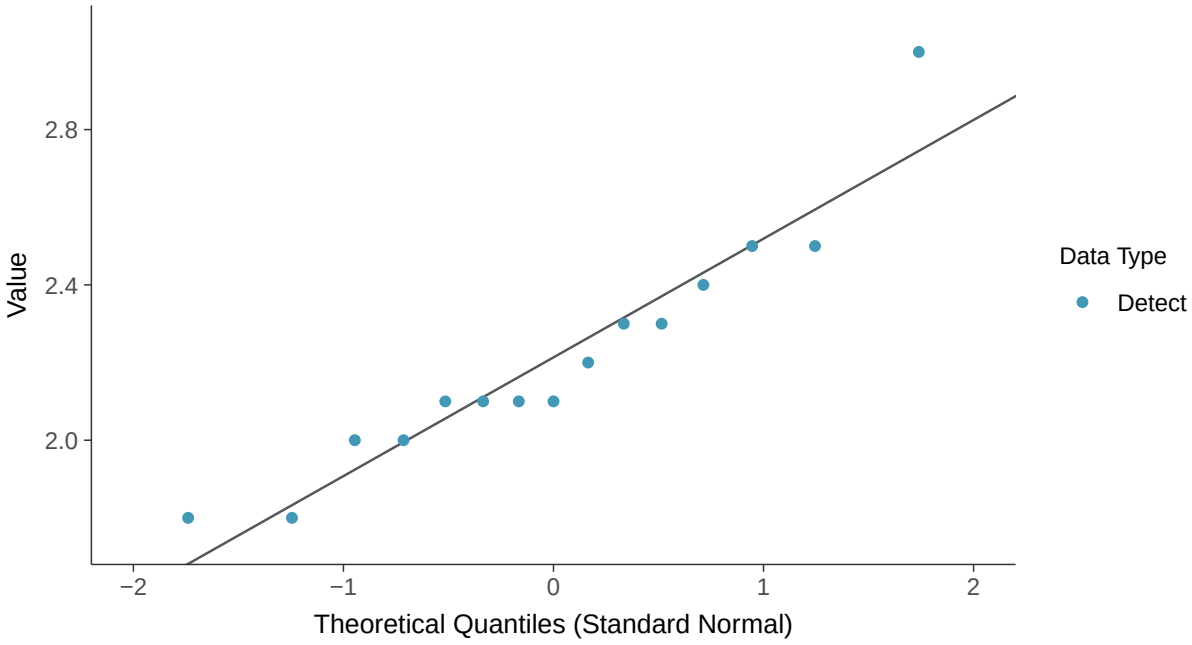
Boxplot by Season

Sulfate, MW-11 (mg/L)



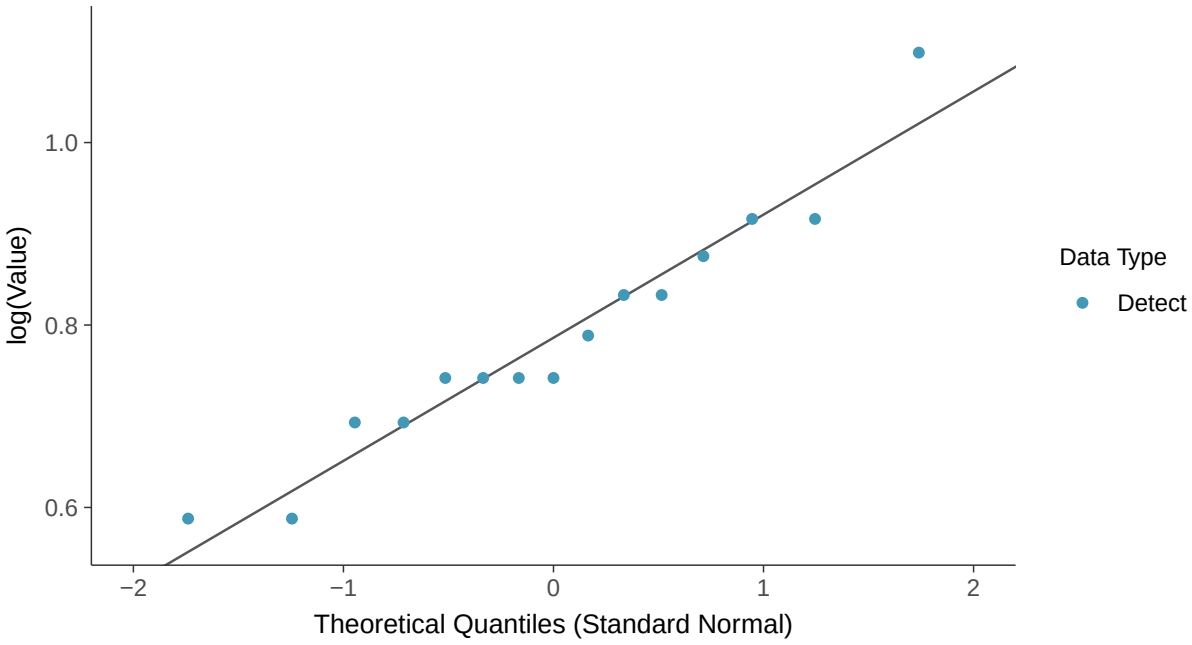
Normal Q-Q plot

Sulfate, MW-11 (mg/L)



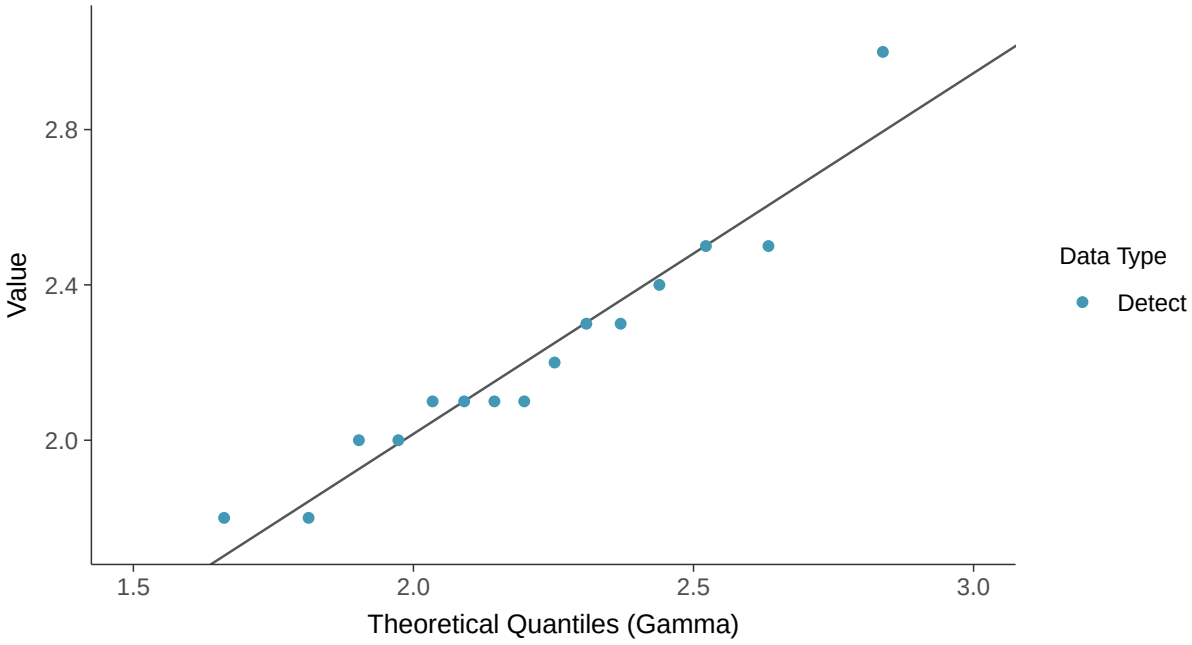
Lognormal Q-Q plot

Sulfate, MW-11 (mg/L)



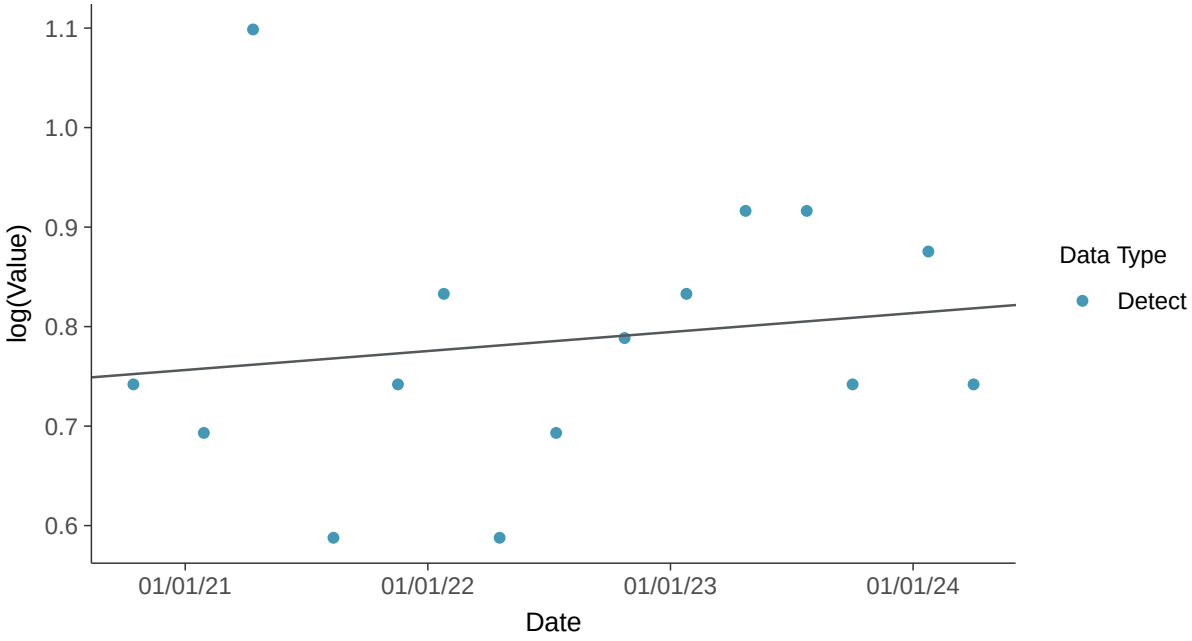
Gamma Q-Q plot

Sulfate, MW-11 (mg/L)



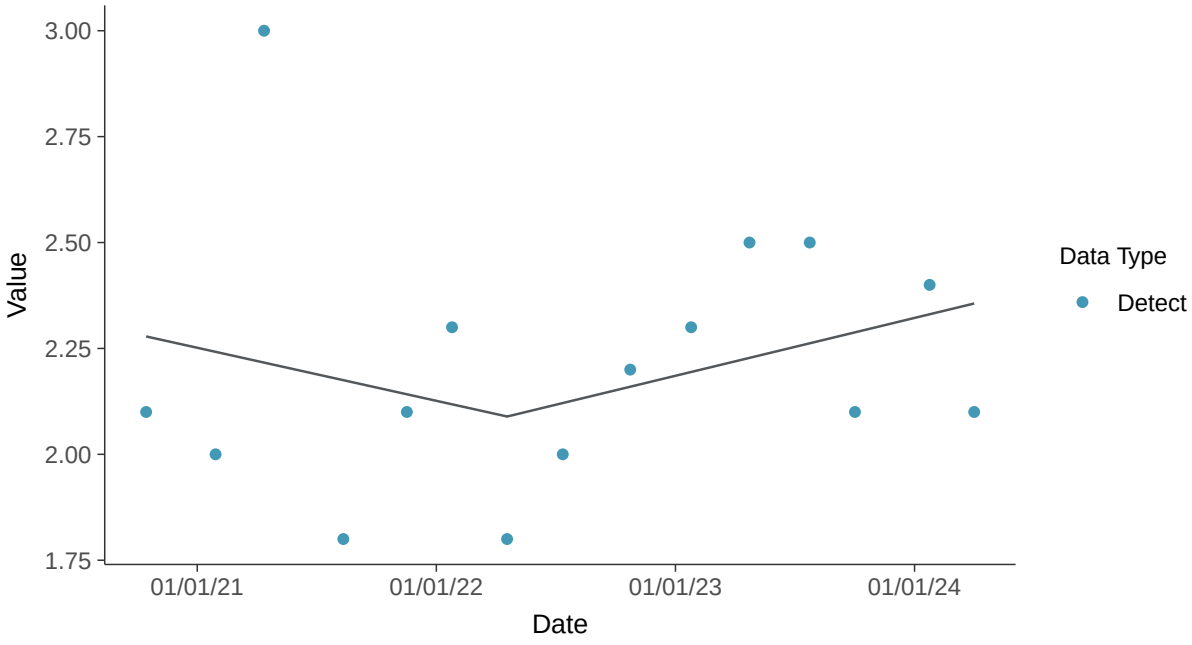
Trend Regression: Lognormal MLE

Sulfate, MW-11 (mg/L)



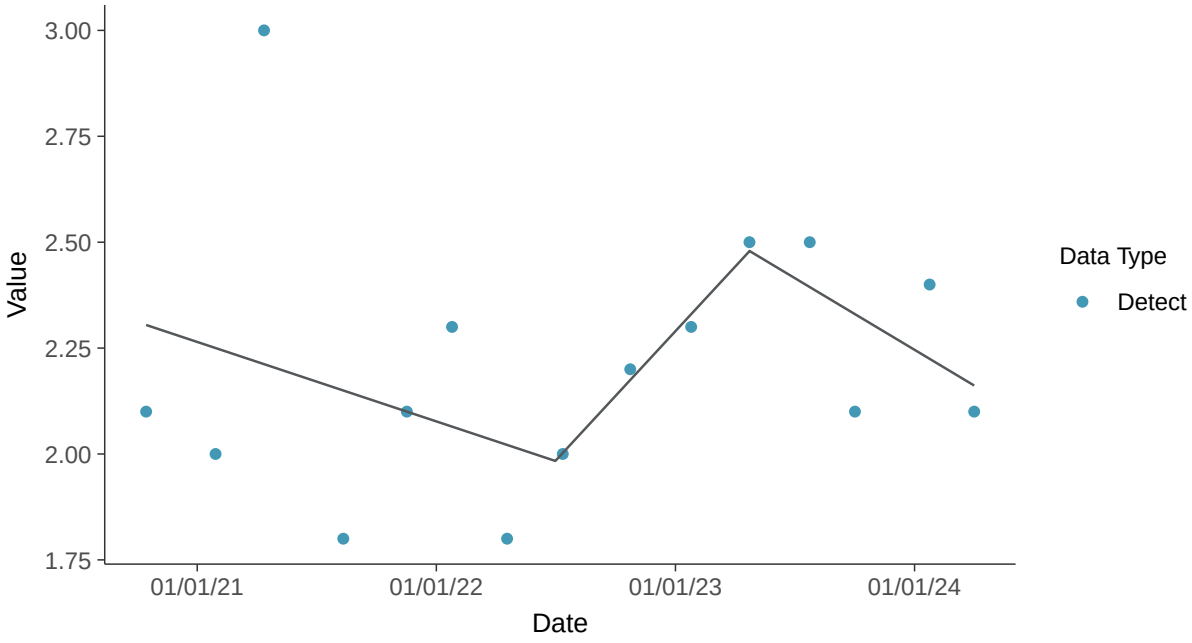
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-11 (mg/L)



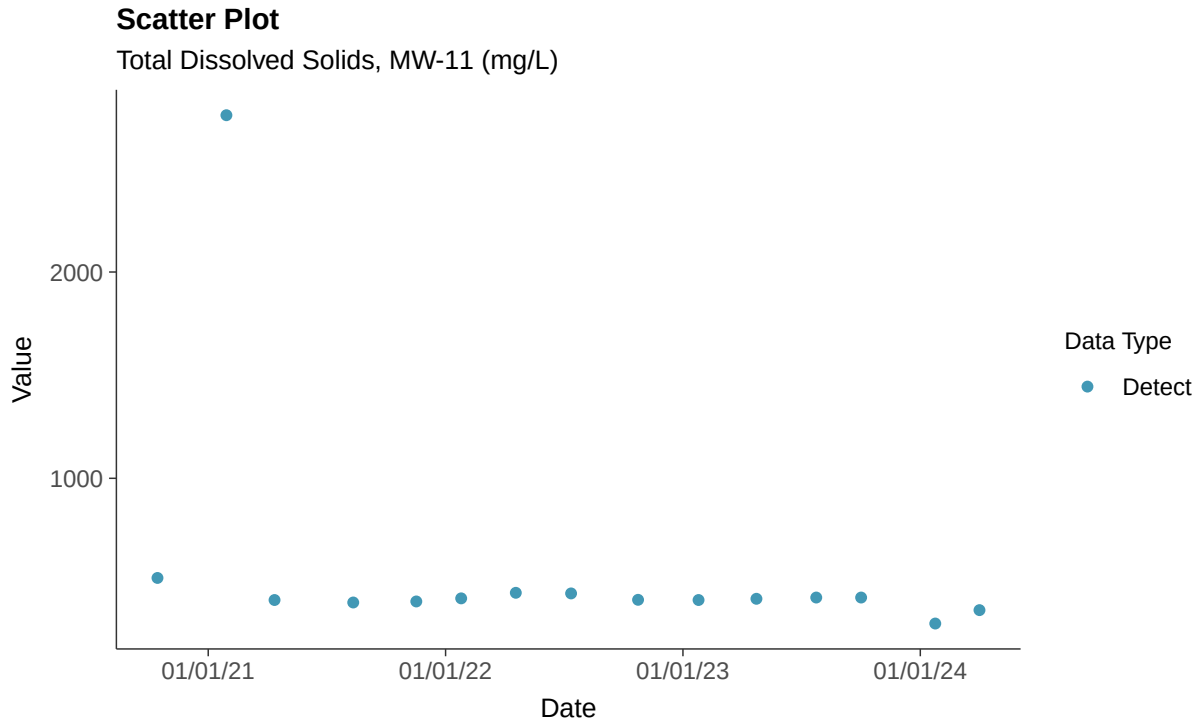
Trend Regression: Piecewise Linear-Linear-Linear

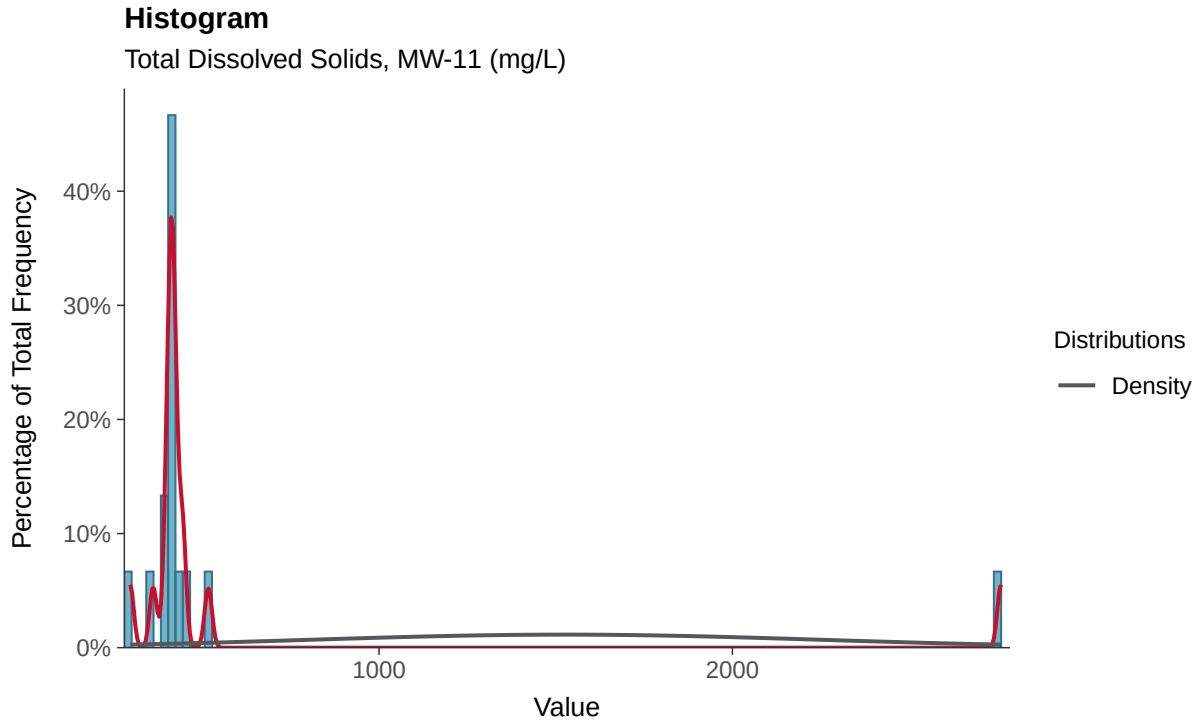
Sulfate, MW-11 (mg/L)



App. III: Total Dissolved Solids, MW-11

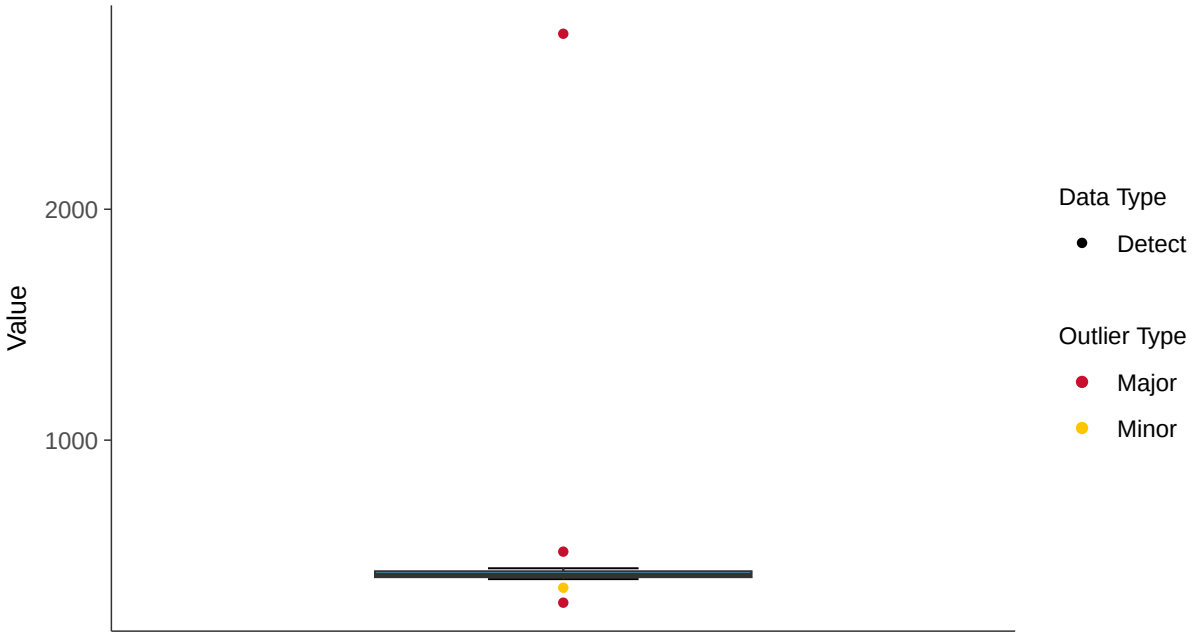
ID: 3_2_125





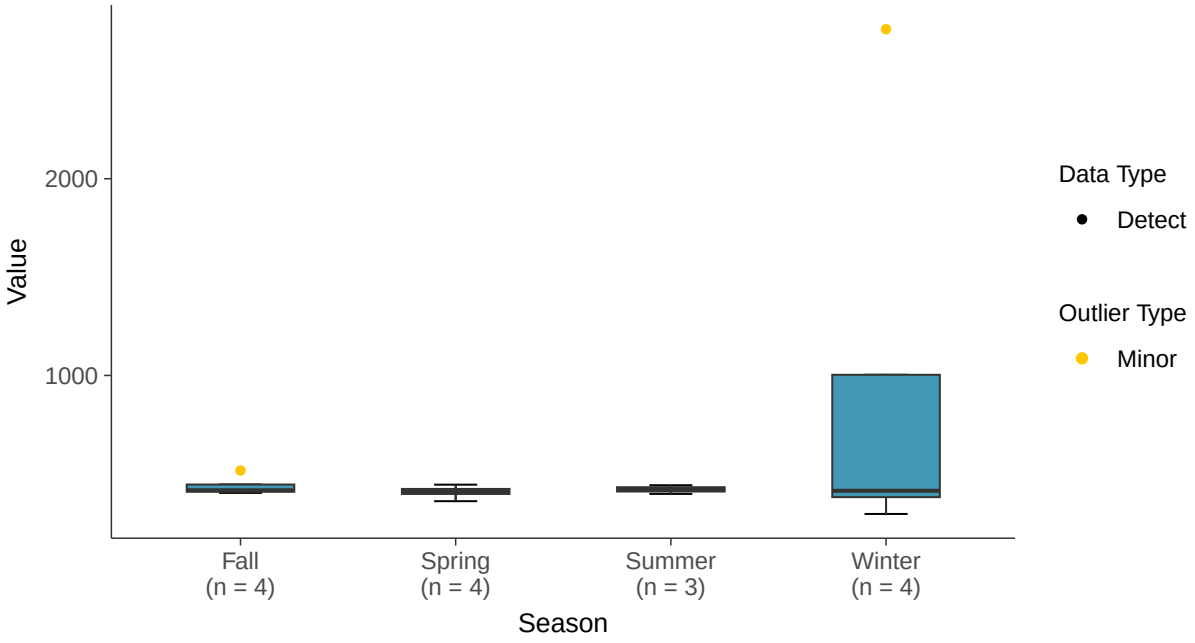
Boxplot

Total Dissolved Solids, MW-11 (mg/L)



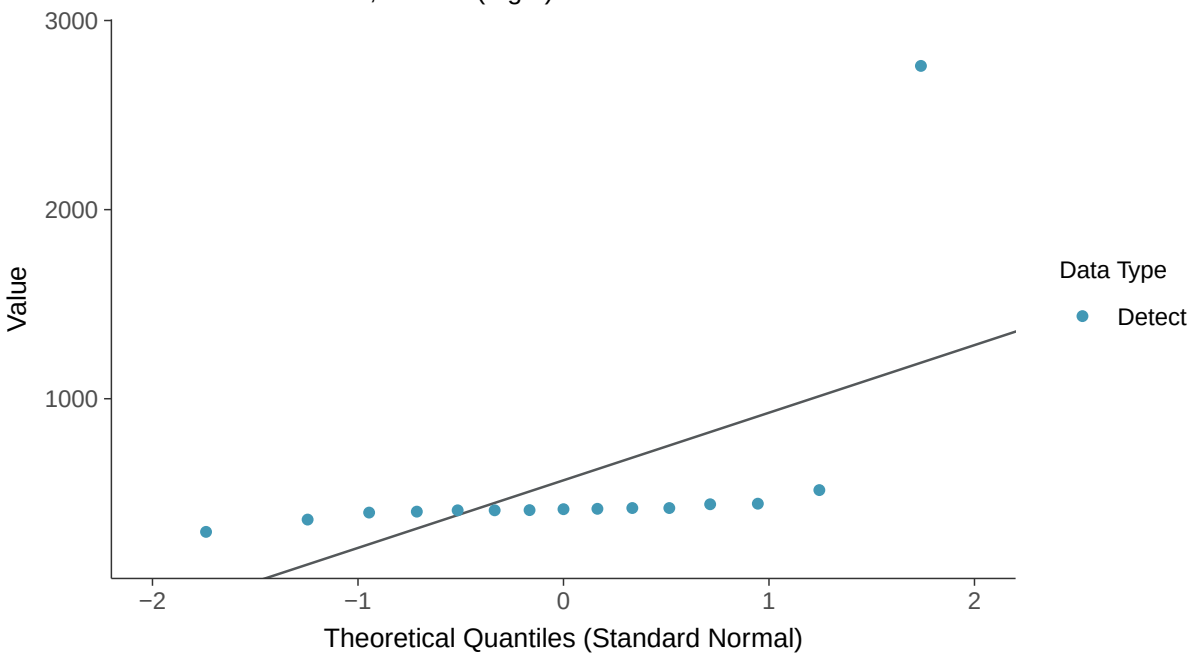
Boxplot by Season

Total Dissolved Solids, MW-11 (mg/L)



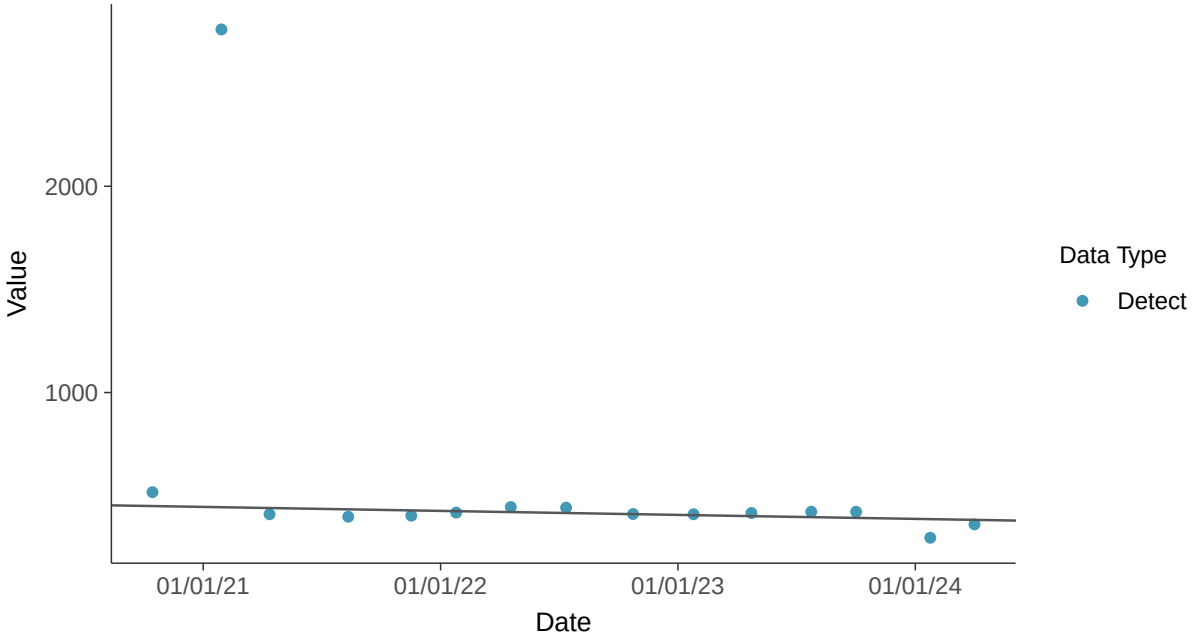
Normal Q-Q plot

Total Dissolved Solids, MW-11 (mg/L)



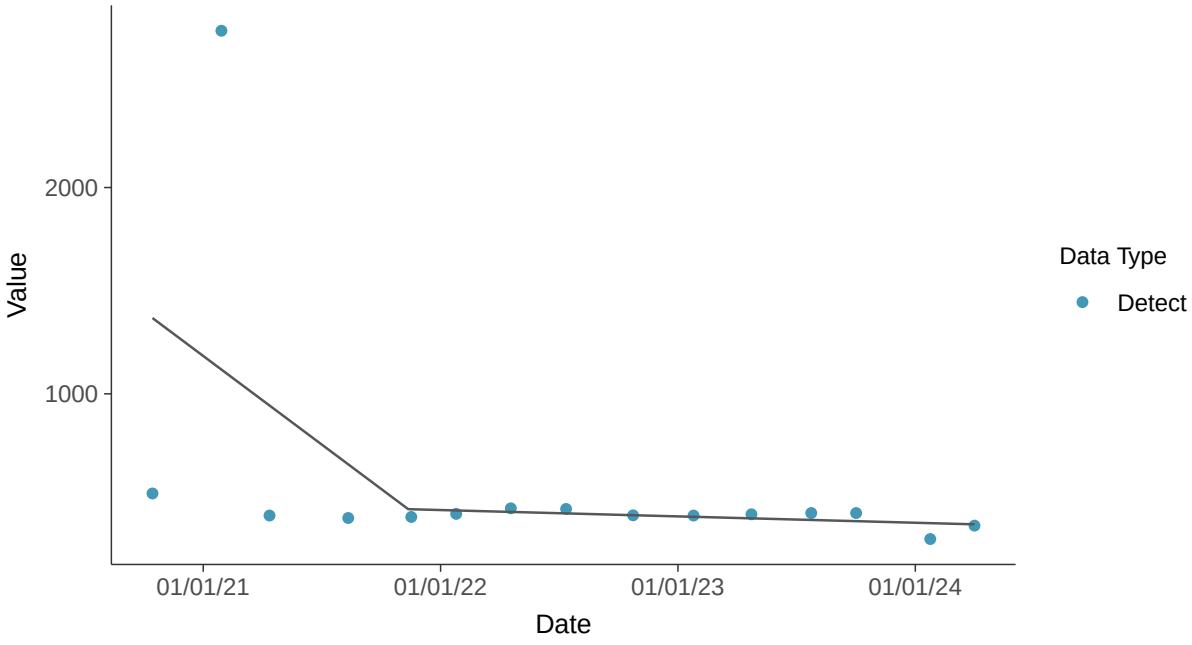
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-11 (mg/L)



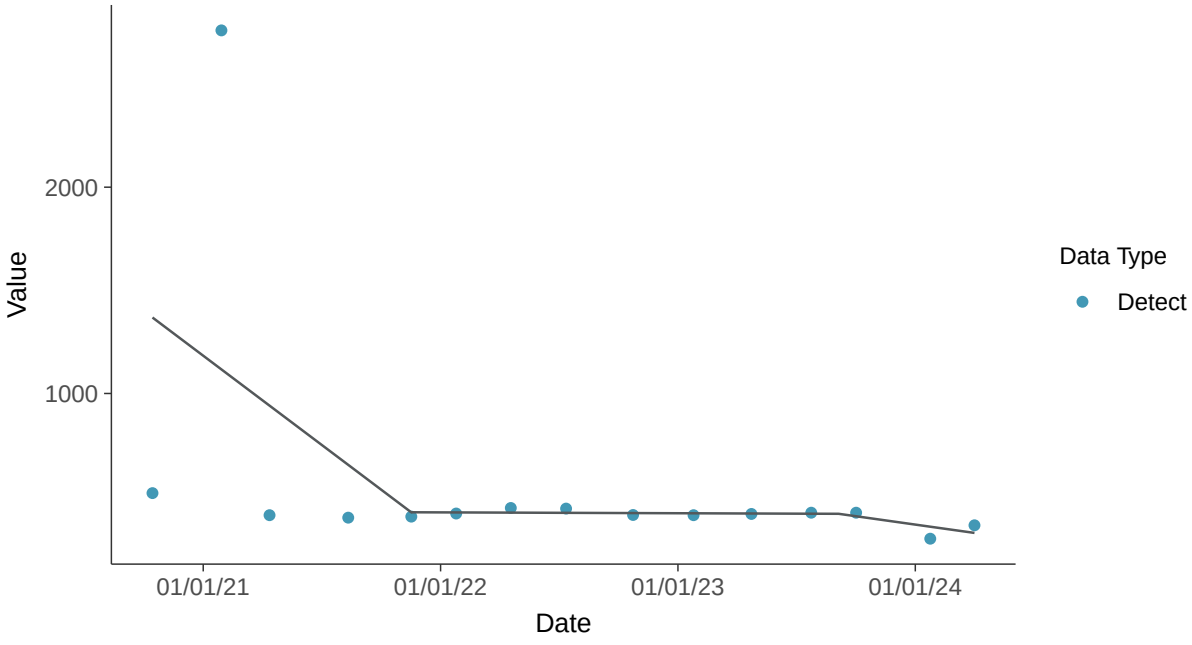
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-11 (mg/L)



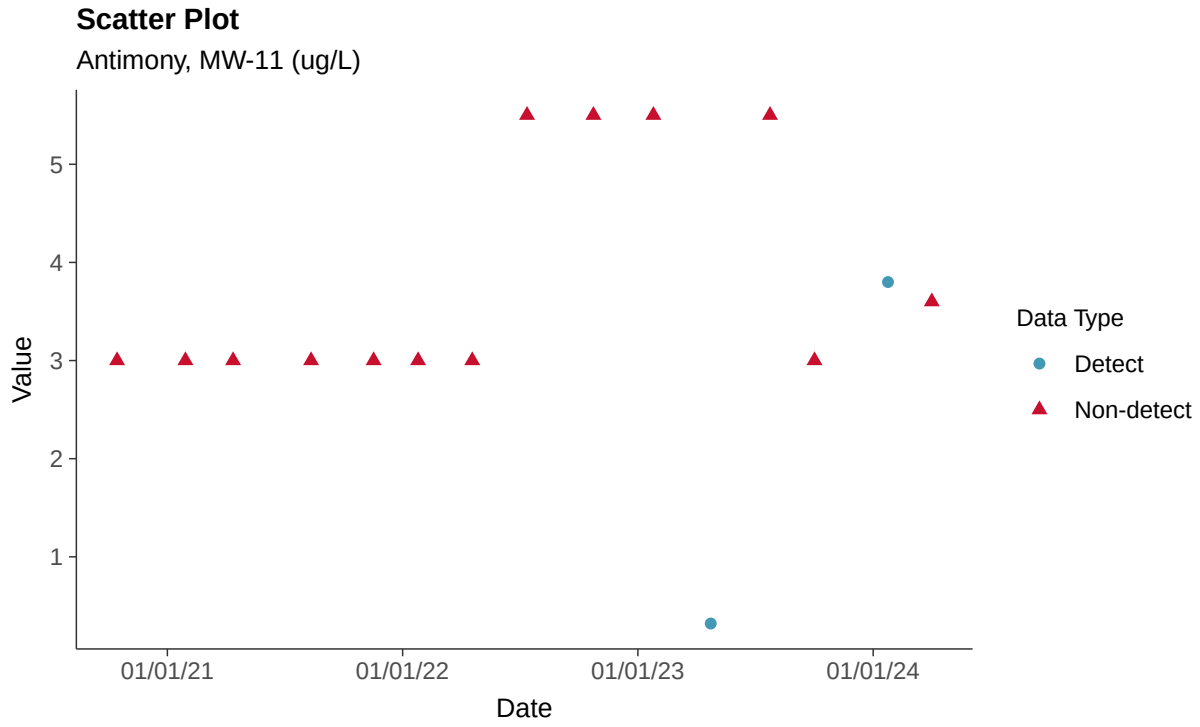
Trend Regression: Piecewise Linear-Linear-Linear

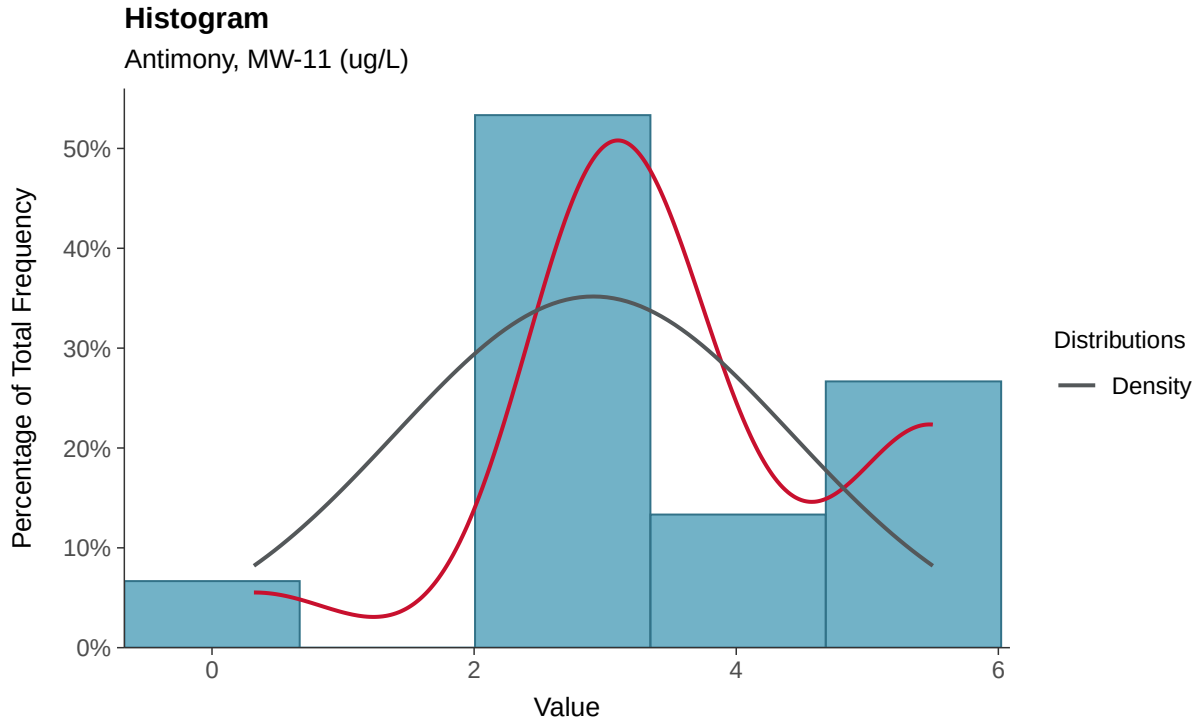
Total Dissolved Solids, MW-11 (mg/L)



App. IV: Antimony, MW-11

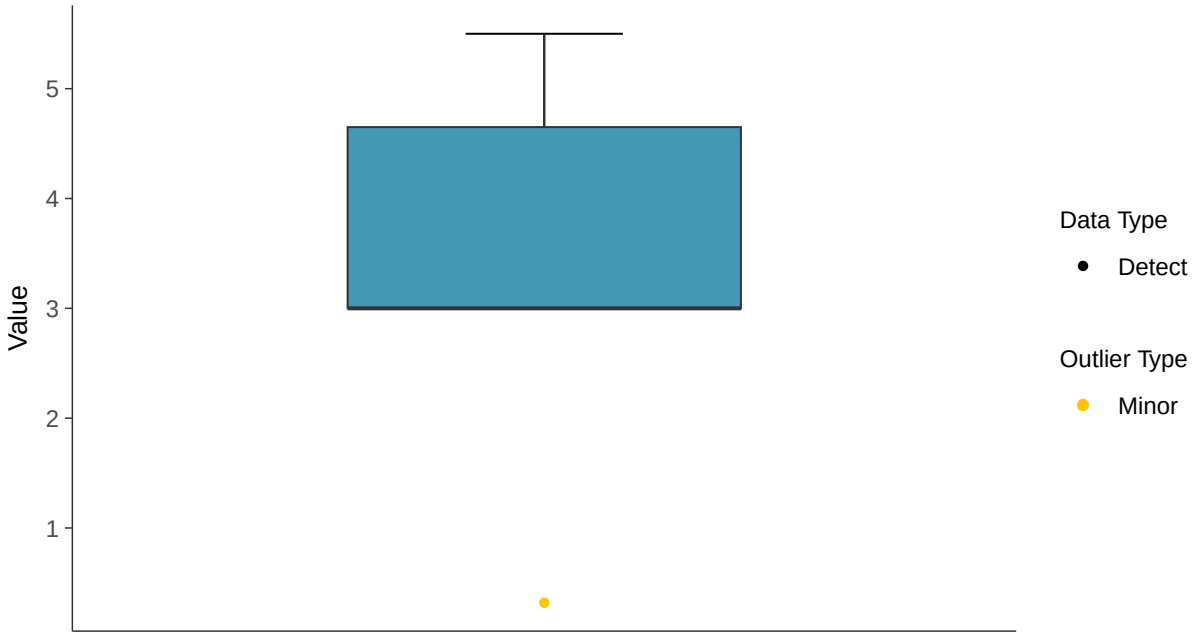
ID: 3_3_101





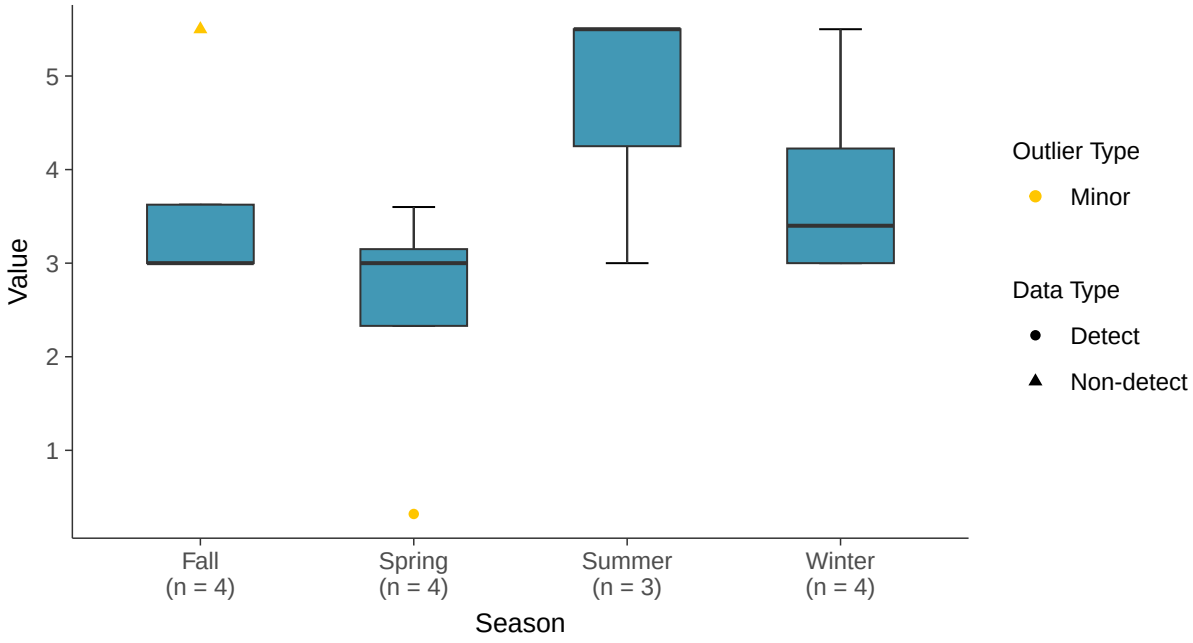
Boxplot

Antimony, MW-11 (ug/L)



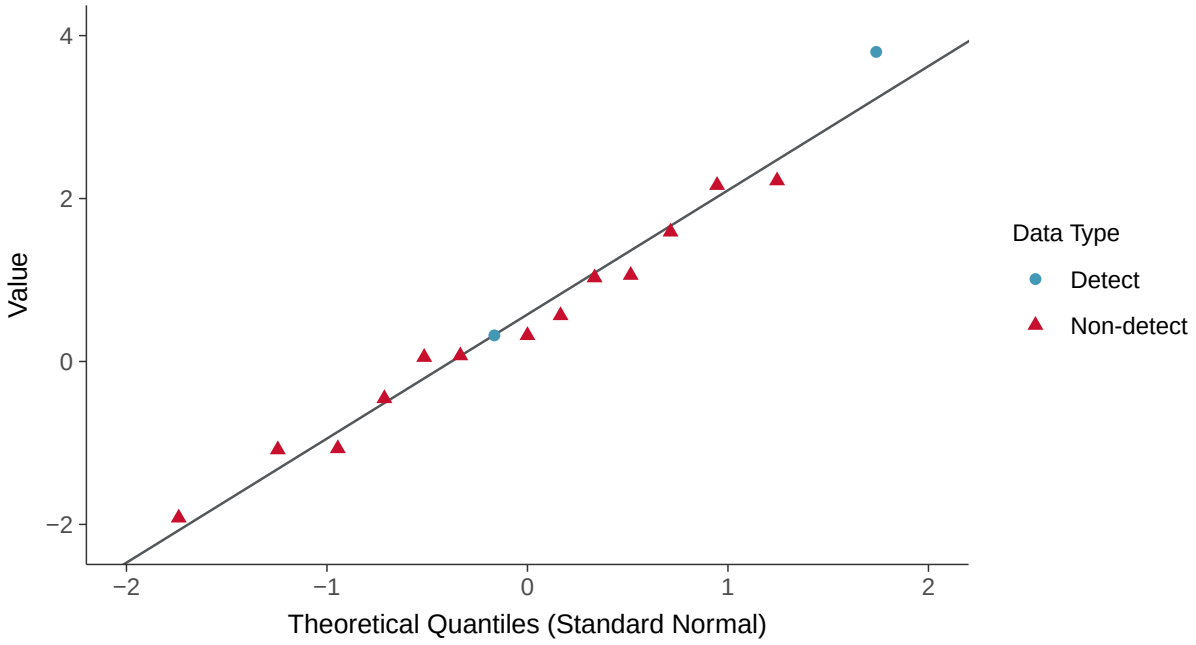
Boxplot by Season

Antimony, MW-11 (ug/L)



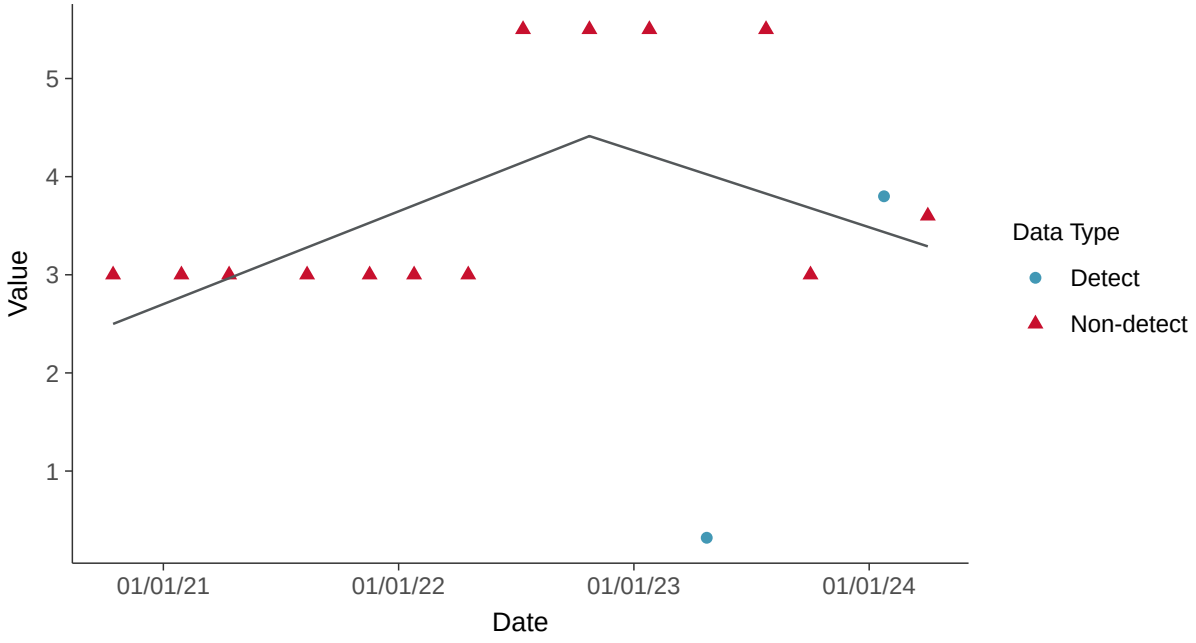
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11 (ug/L)



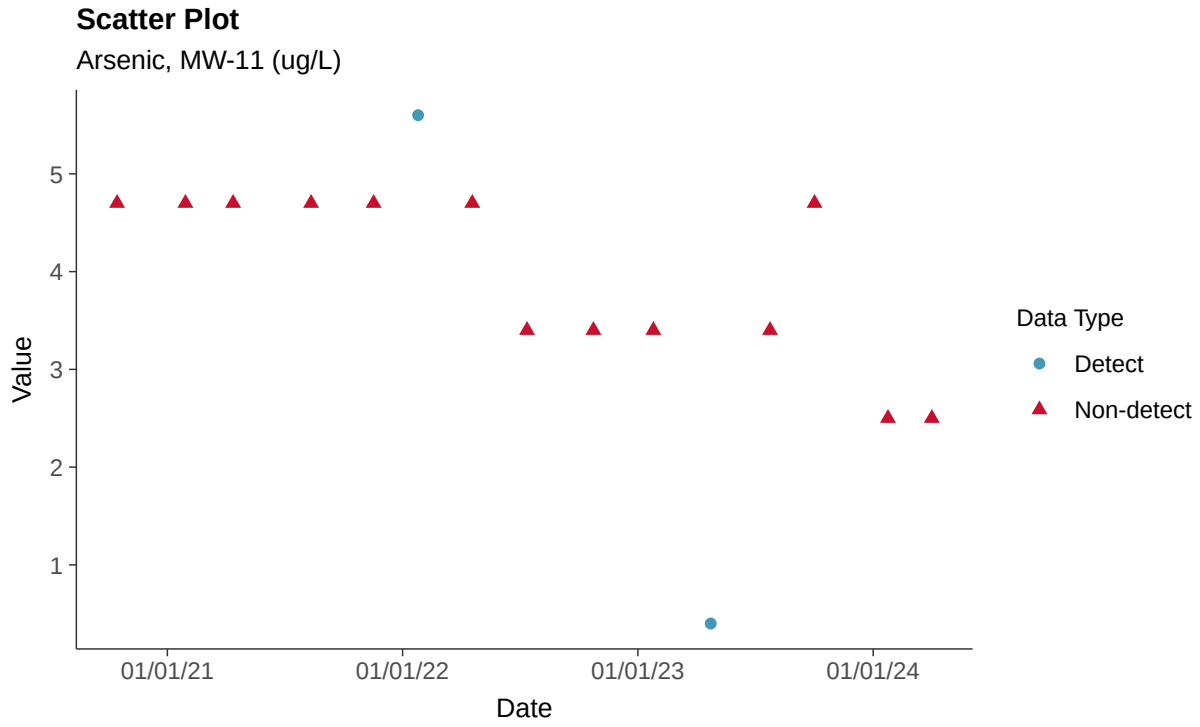
Trend Regression: Piecewise Linear-Linear

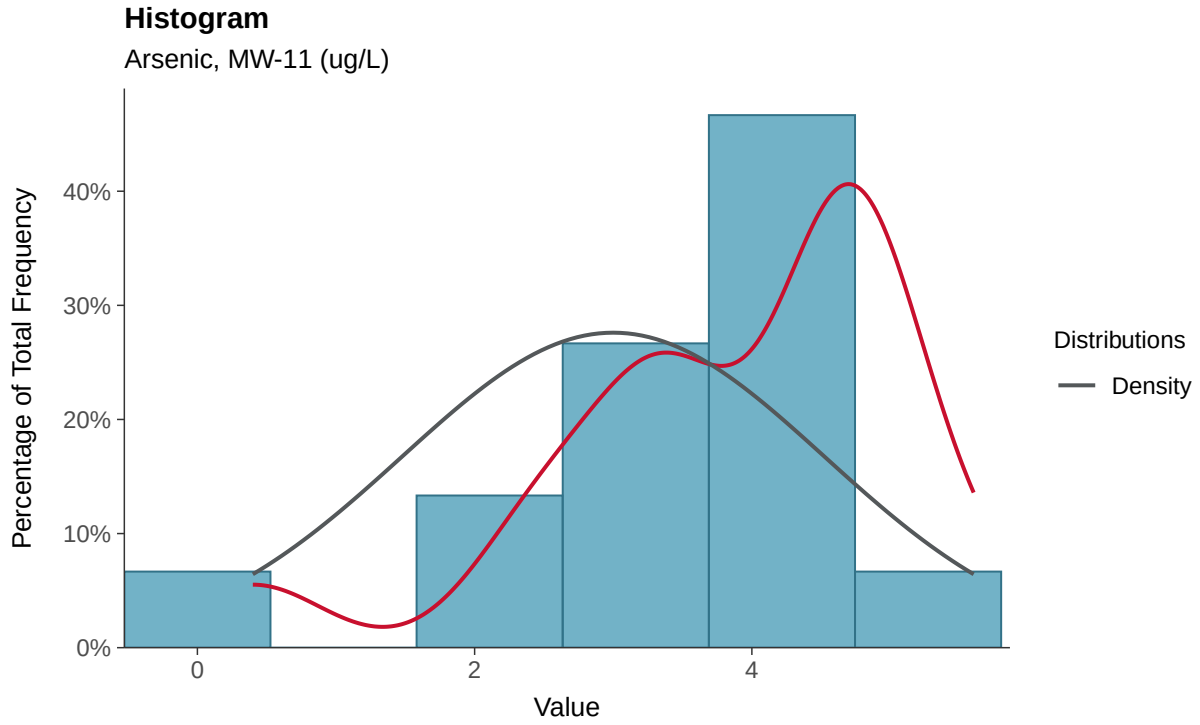
Antimony, MW-11 (ug/L)



App. IV: Arsenic, MW-11

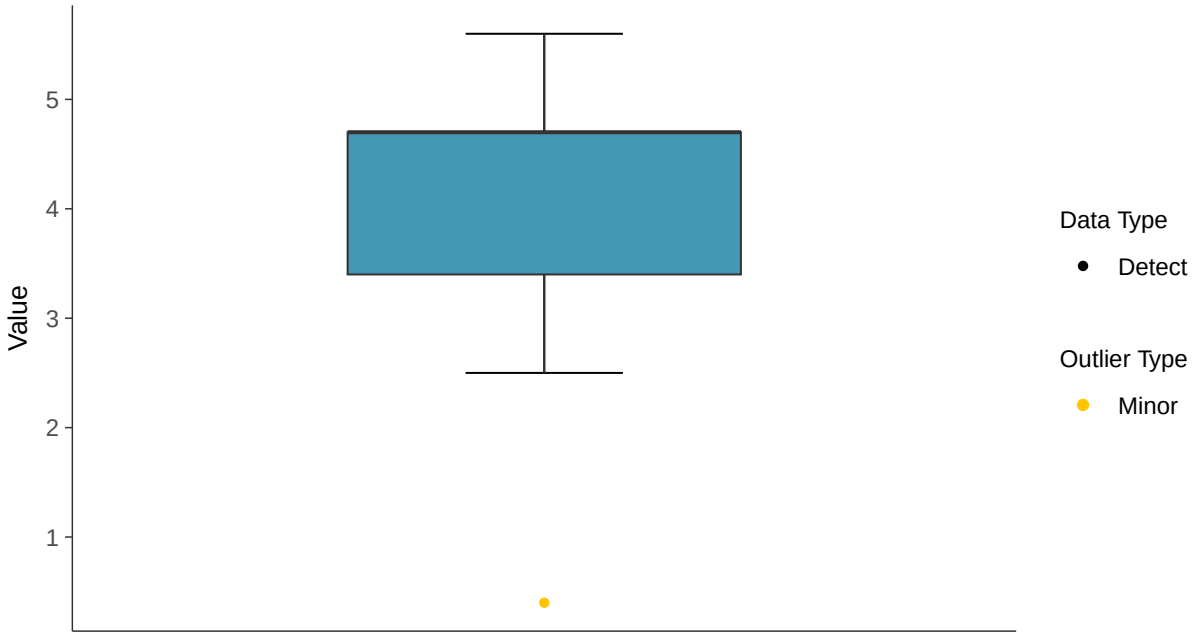
ID: 3_3_102





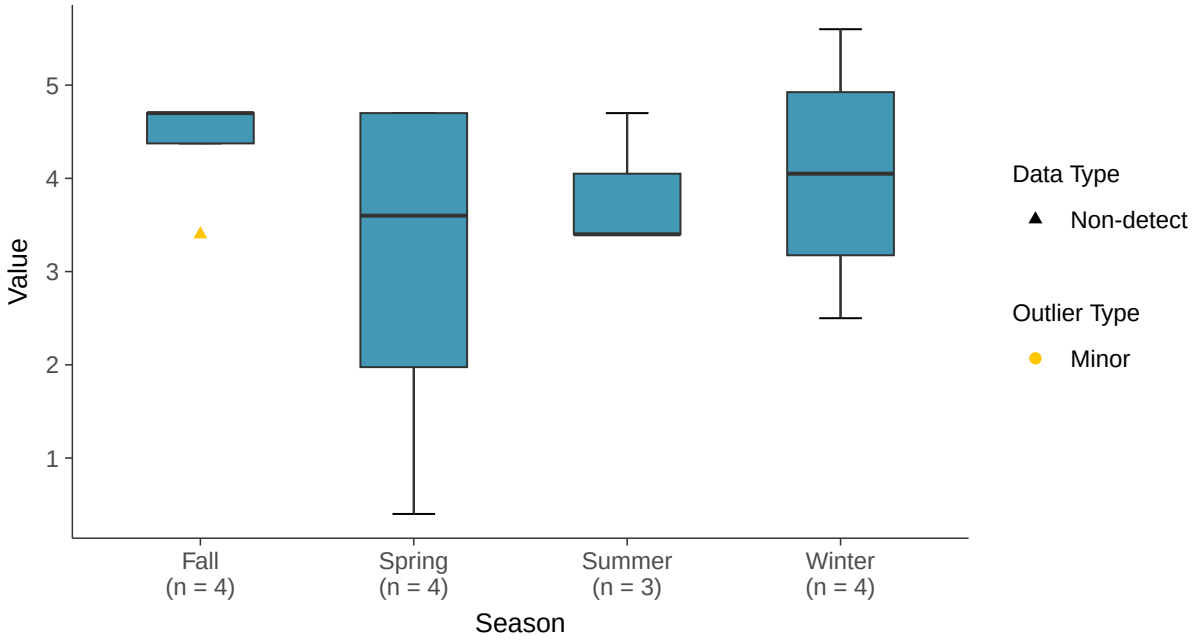
Boxplot

Arsenic, MW-11 (ug/L)



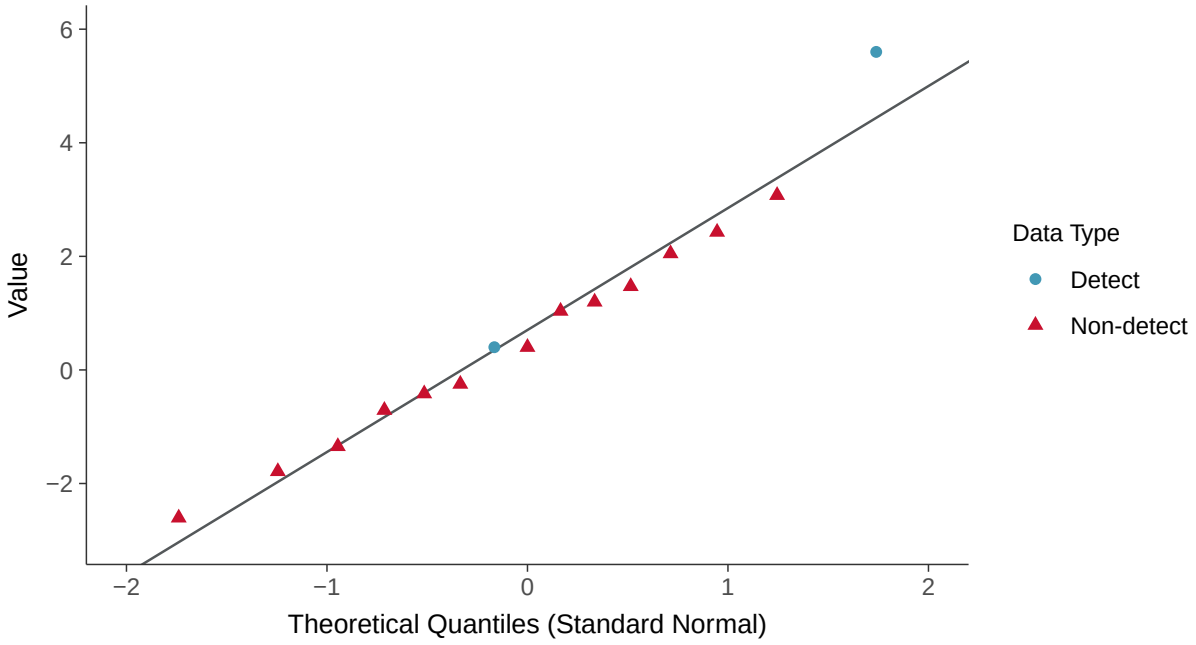
Boxplot by Season

Arsenic, MW-11 (ug/L)



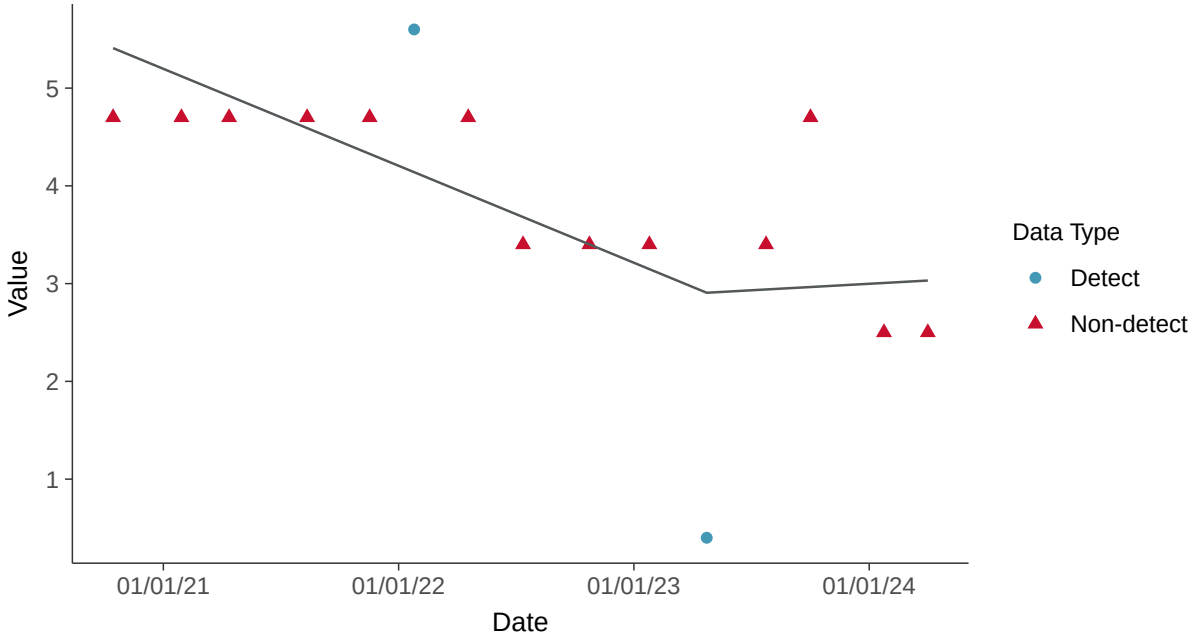
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11 (ug/L)



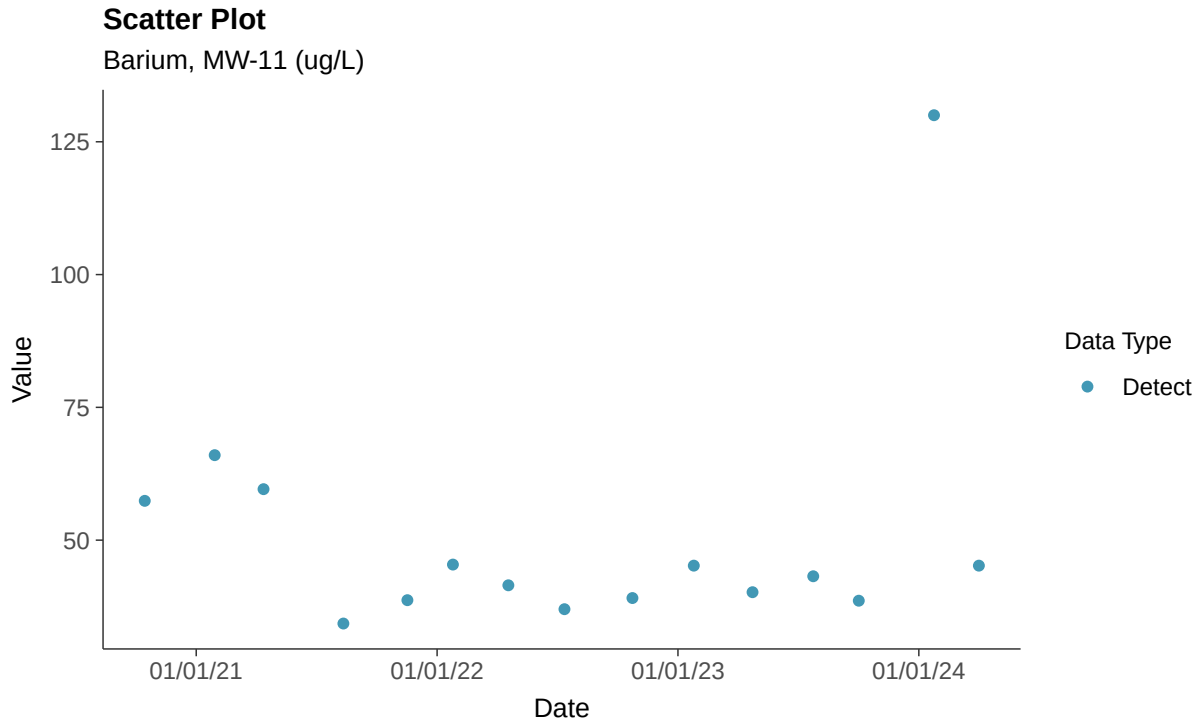
Trend Regression: Piecewise Linear-Linear

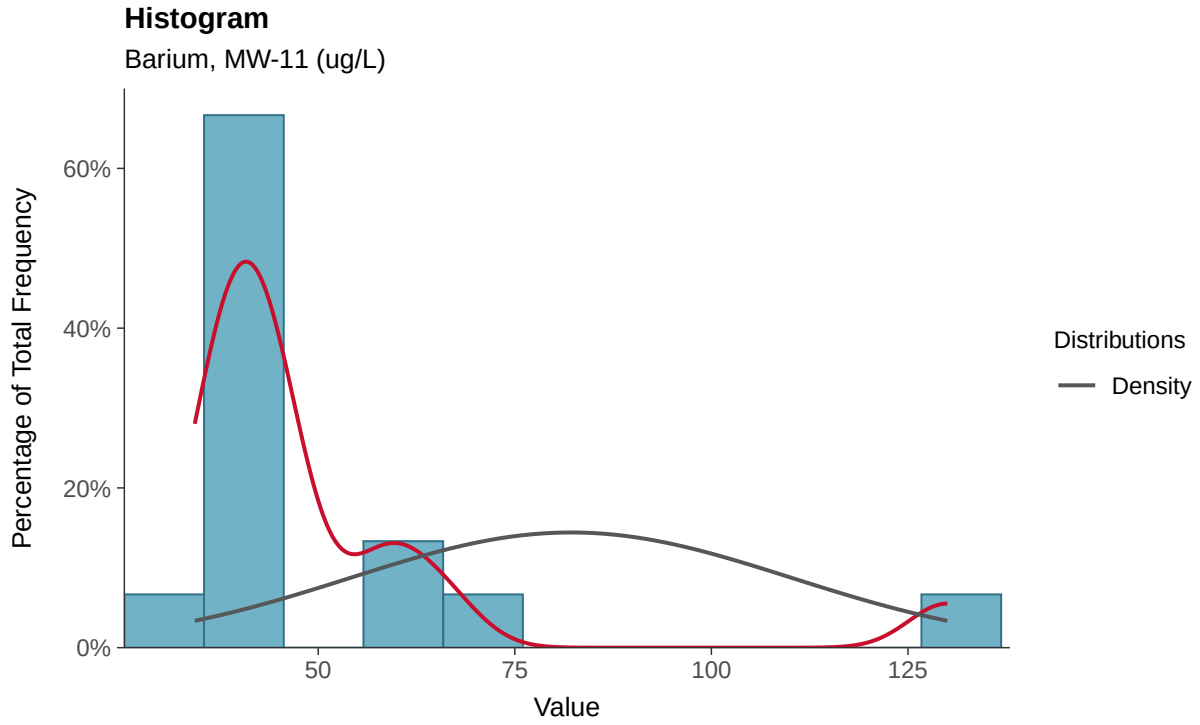
Arsenic, MW-11 (ug/L)



App. IV: Barium, MW-11

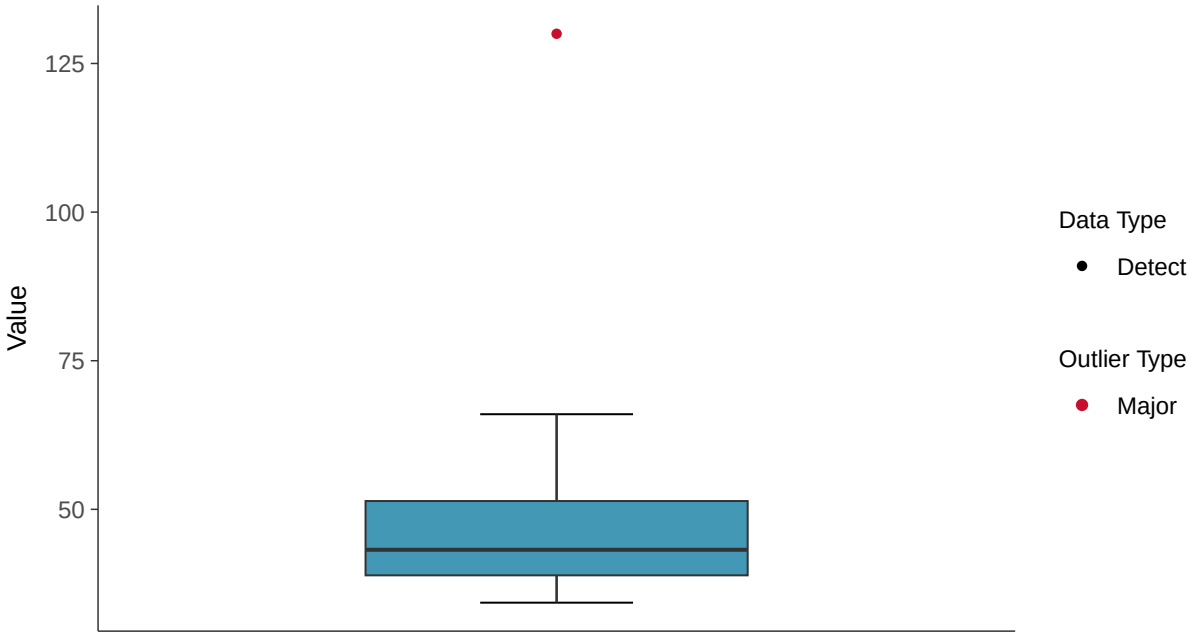
ID: 3_3_103





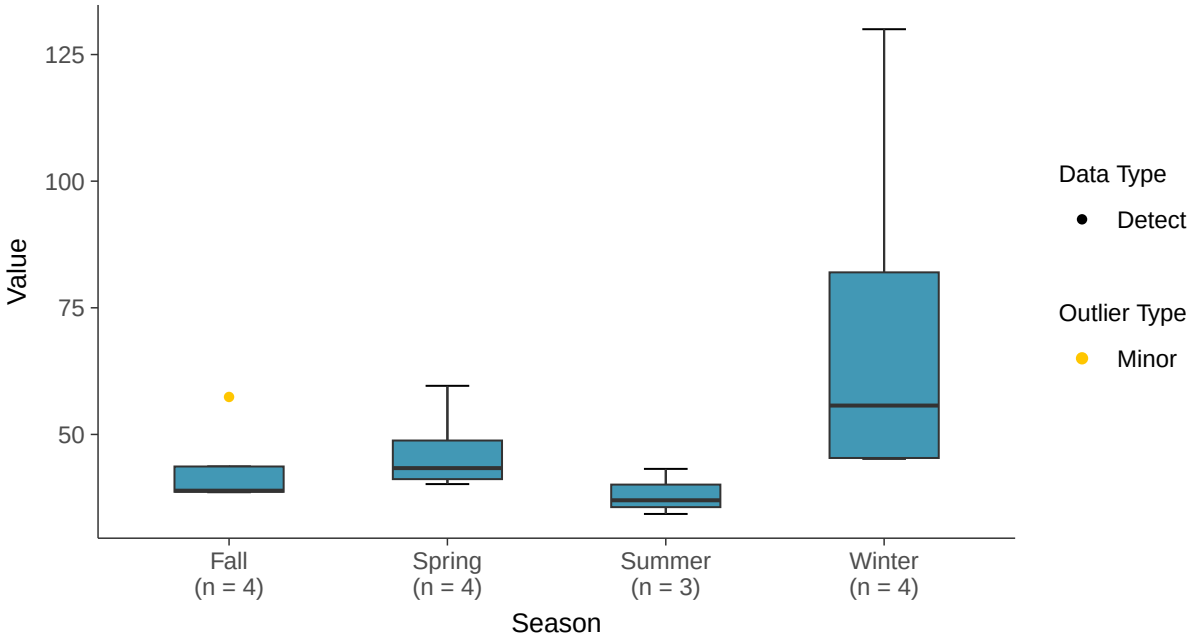
Boxplot

Barium, MW-11 (ug/L)



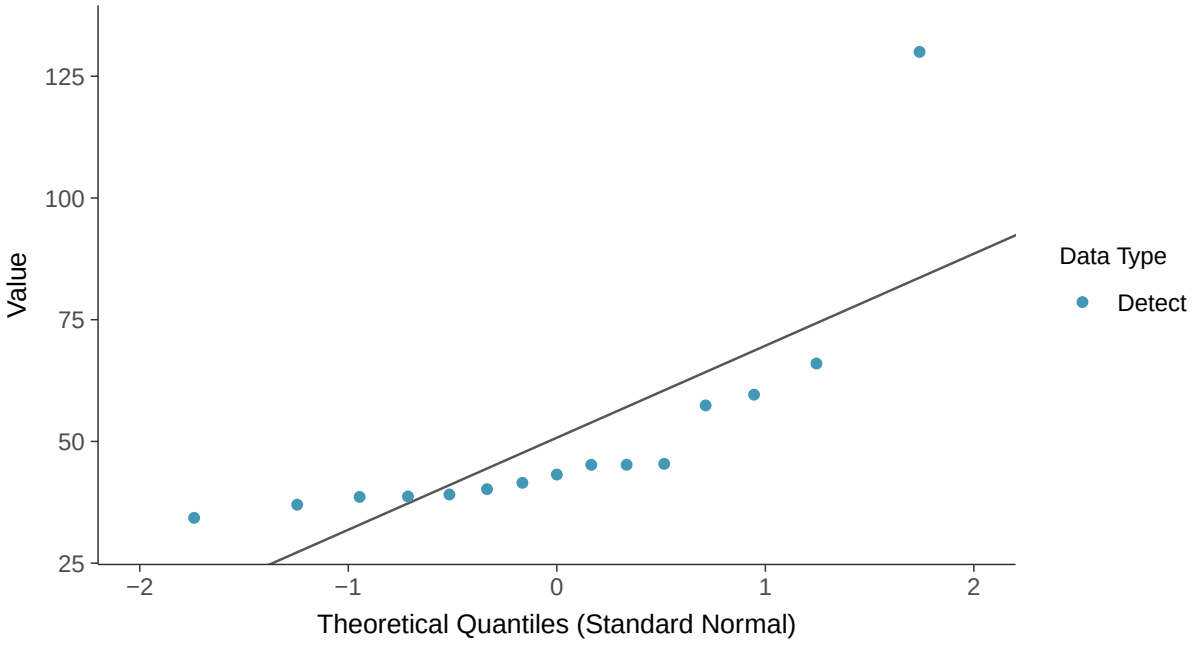
Boxplot by Season

Barium, MW-11 (ug/L)



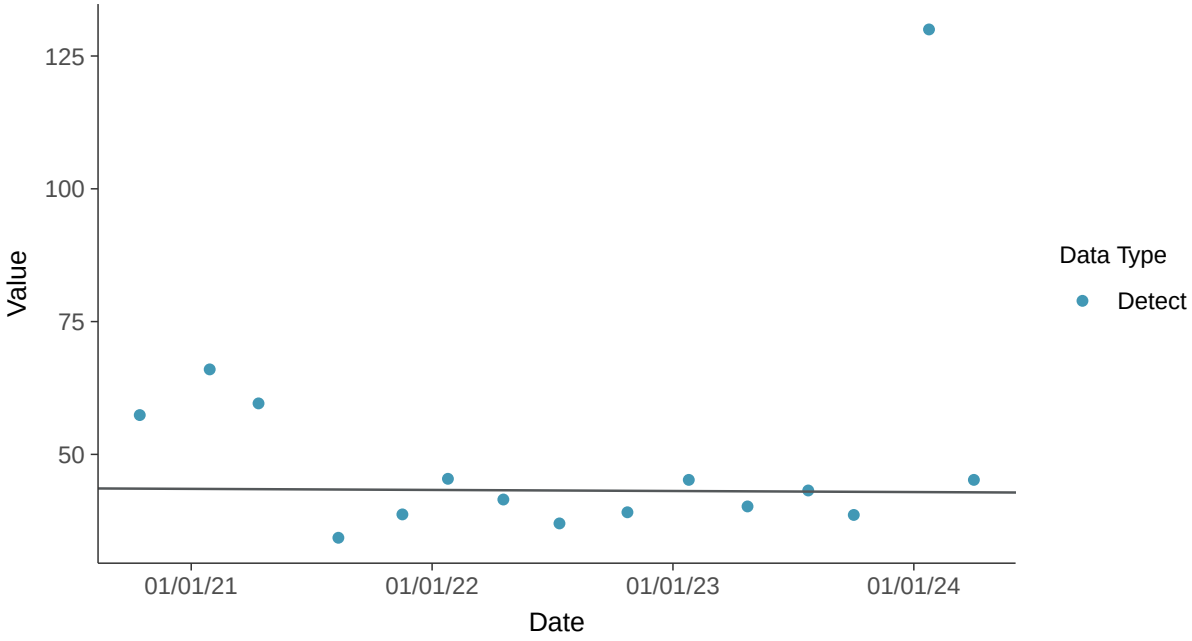
Normal Q-Q plot

Barium, MW-11 (ug/L)



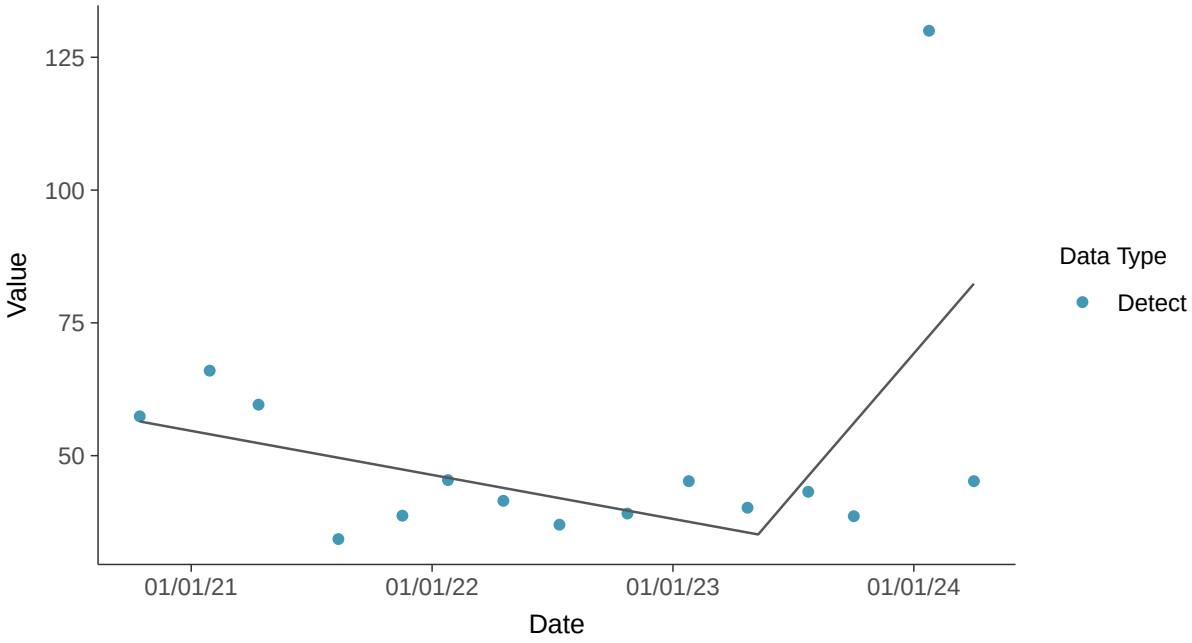
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Barium, MW-11 (ug/L)

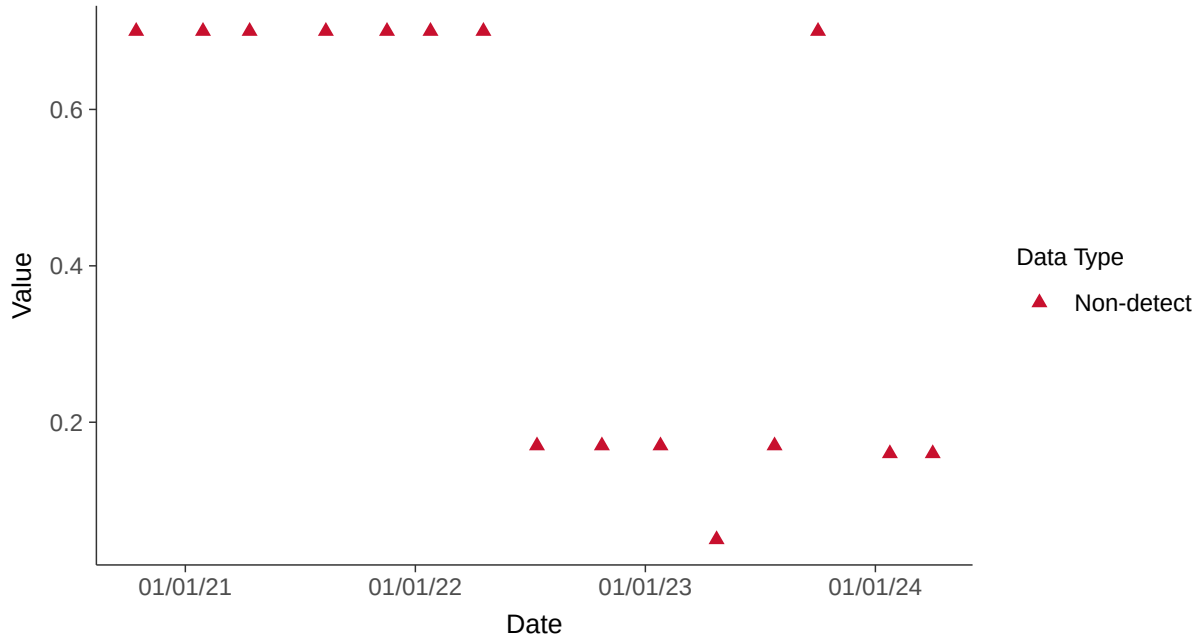


App. IV: Beryllium, MW-11

ID: 3_3_104

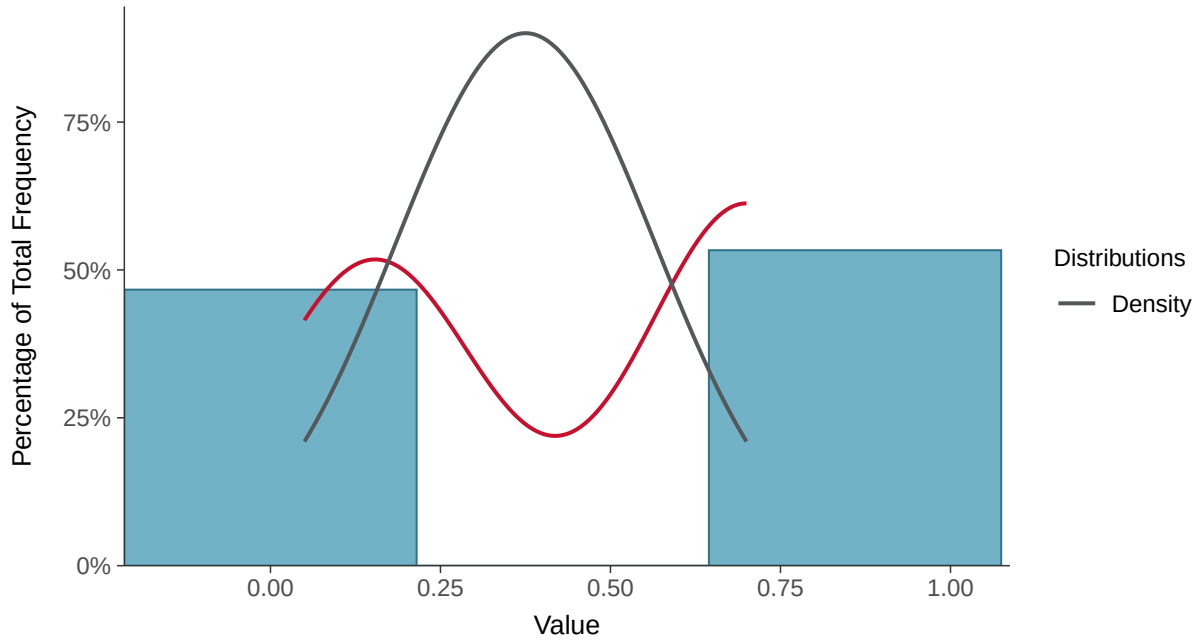
Scatter Plot

Beryllium, MW-11 (ug/L)



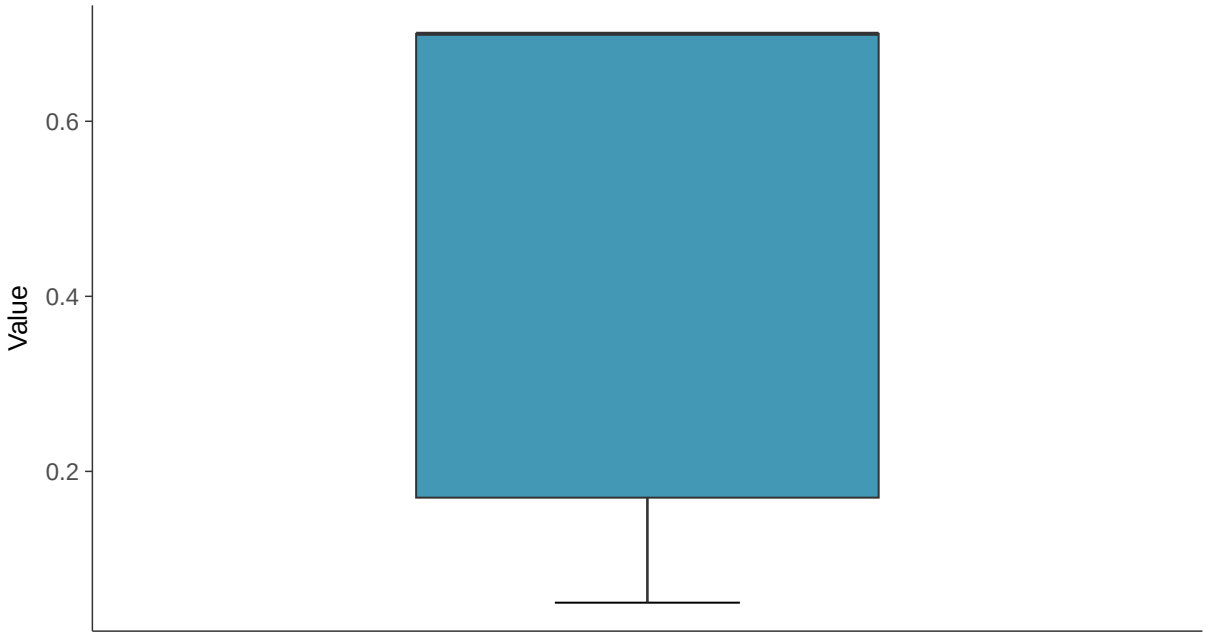
Histogram

Beryllium, MW-11 (ug/L)



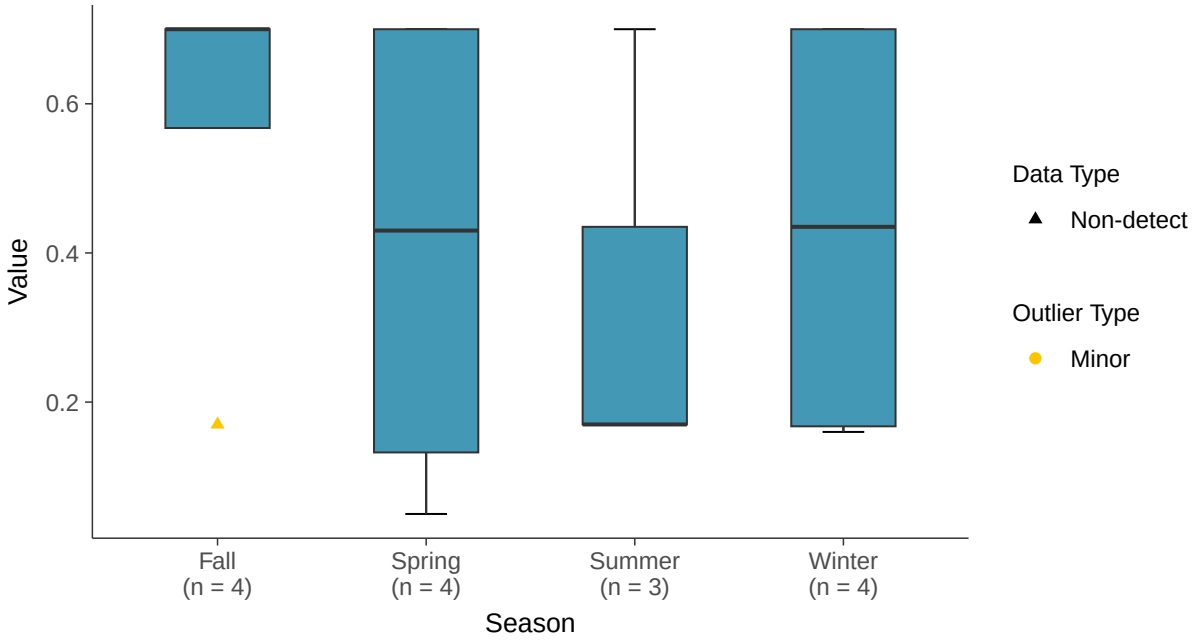
Boxplot

Beryllium, MW-11 (ug/L)



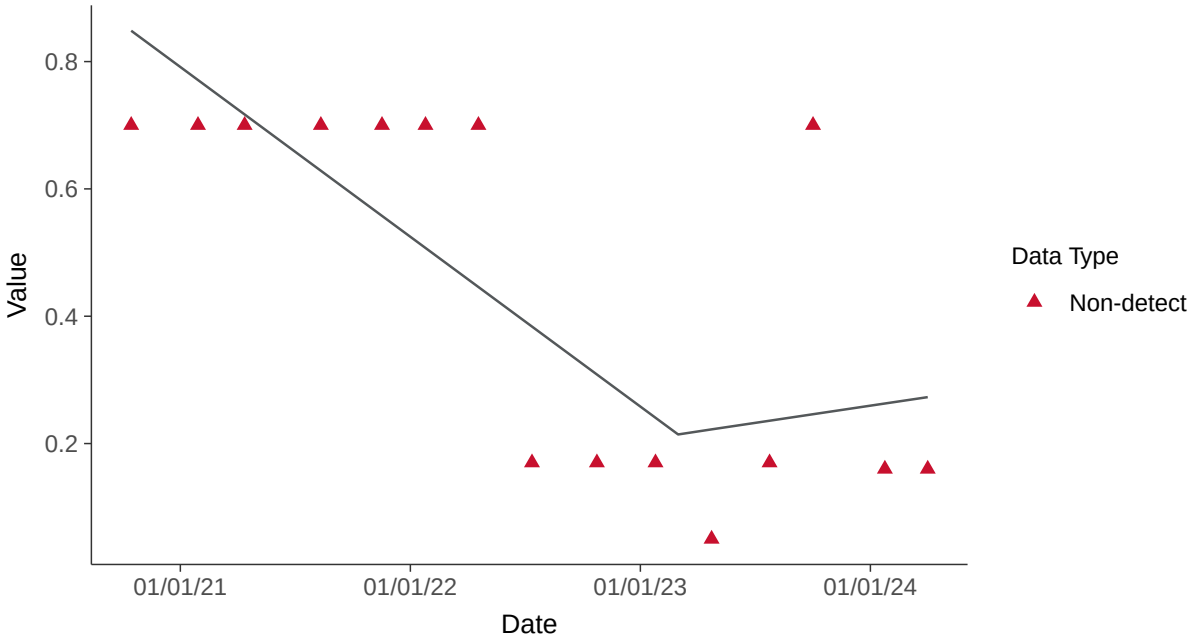
Boxplot by Season

Beryllium, MW-11 (ug/L)



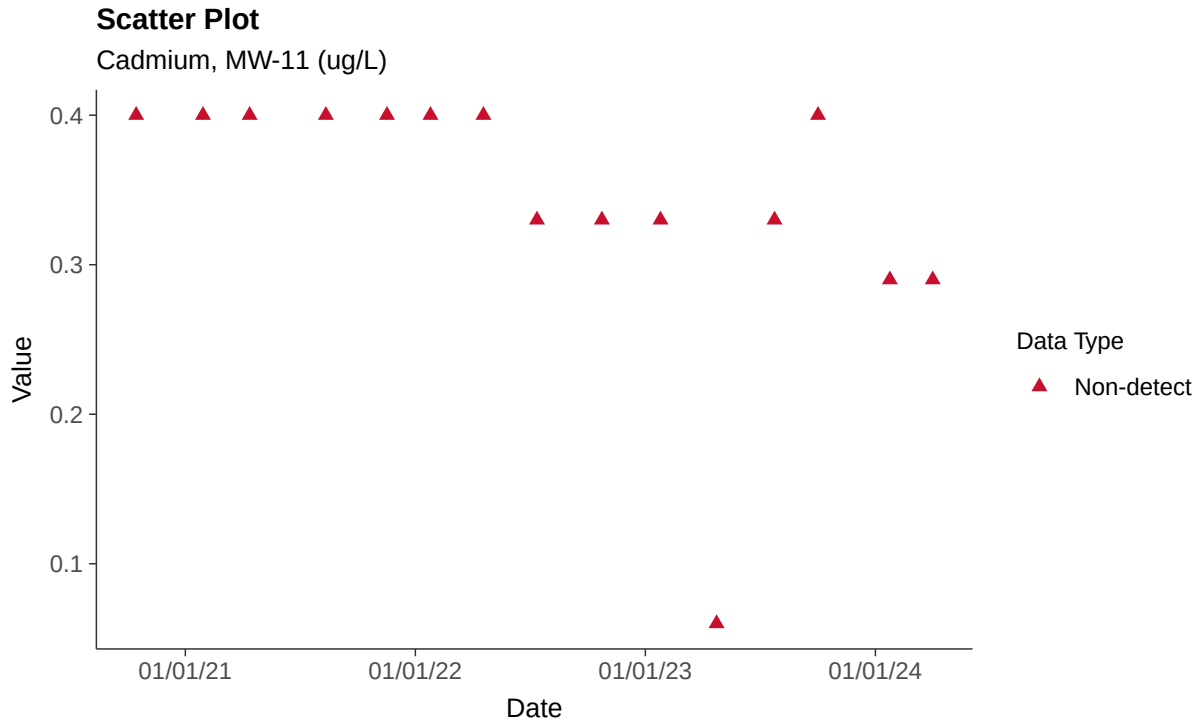
Trend Regression: Piecewise Linear-Linear

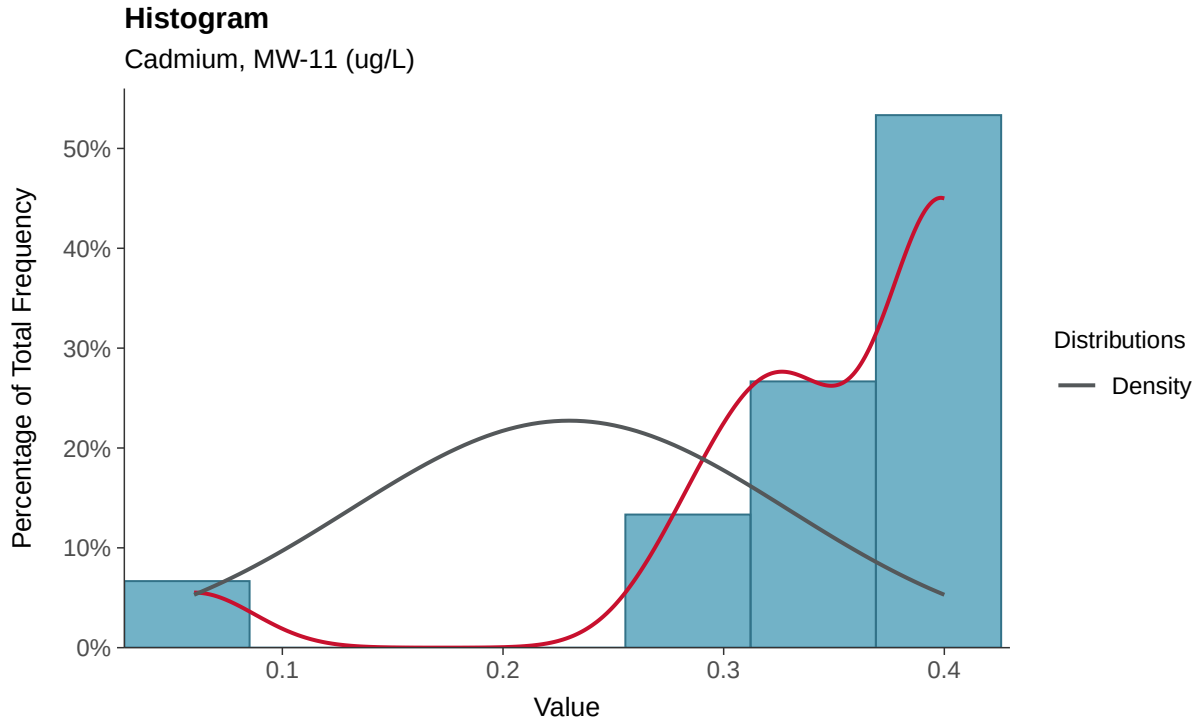
Beryllium, MW-11 (ug/L)



App. IV: Cadmium, MW-11

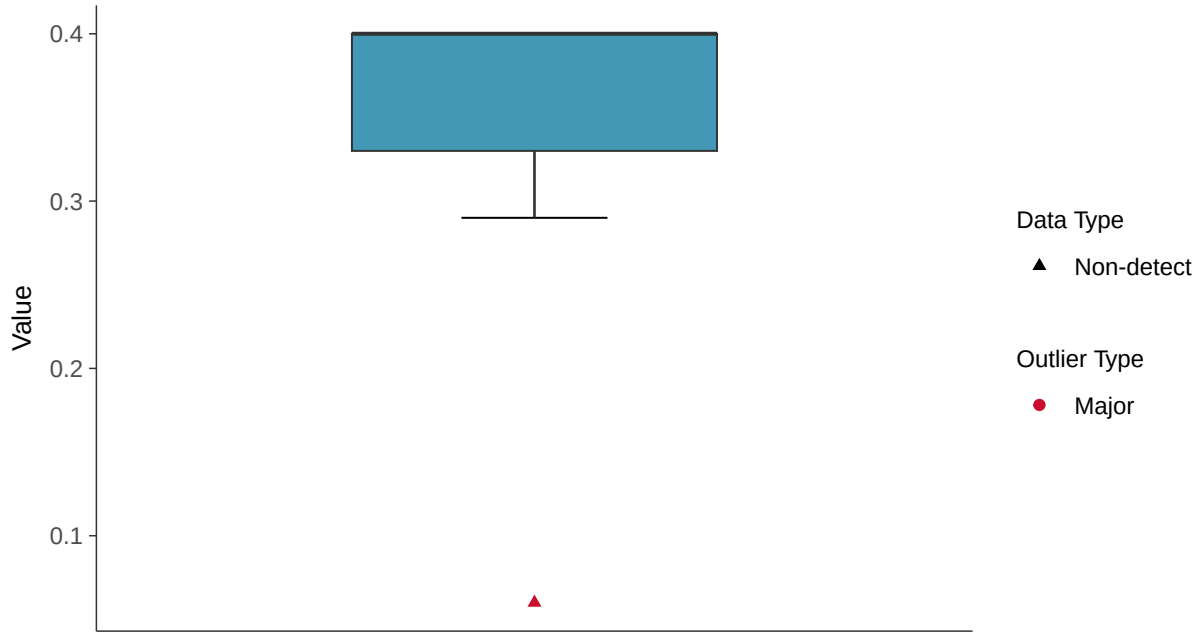
ID: 3_3_106





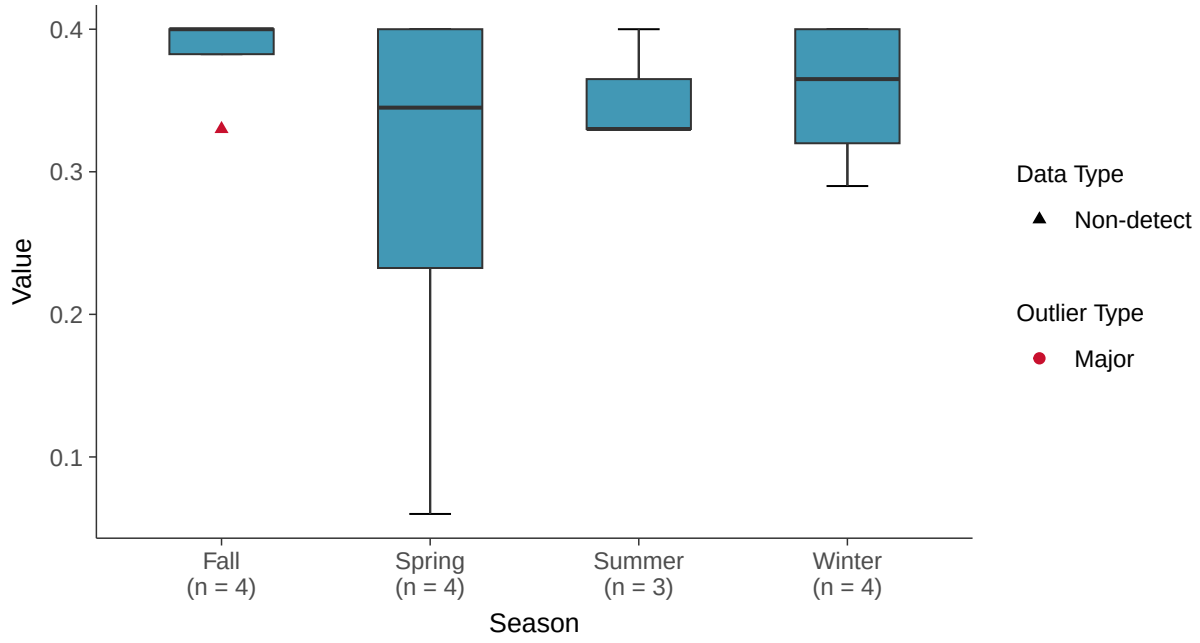
Boxplot

Cadmium, MW-11 (ug/L)



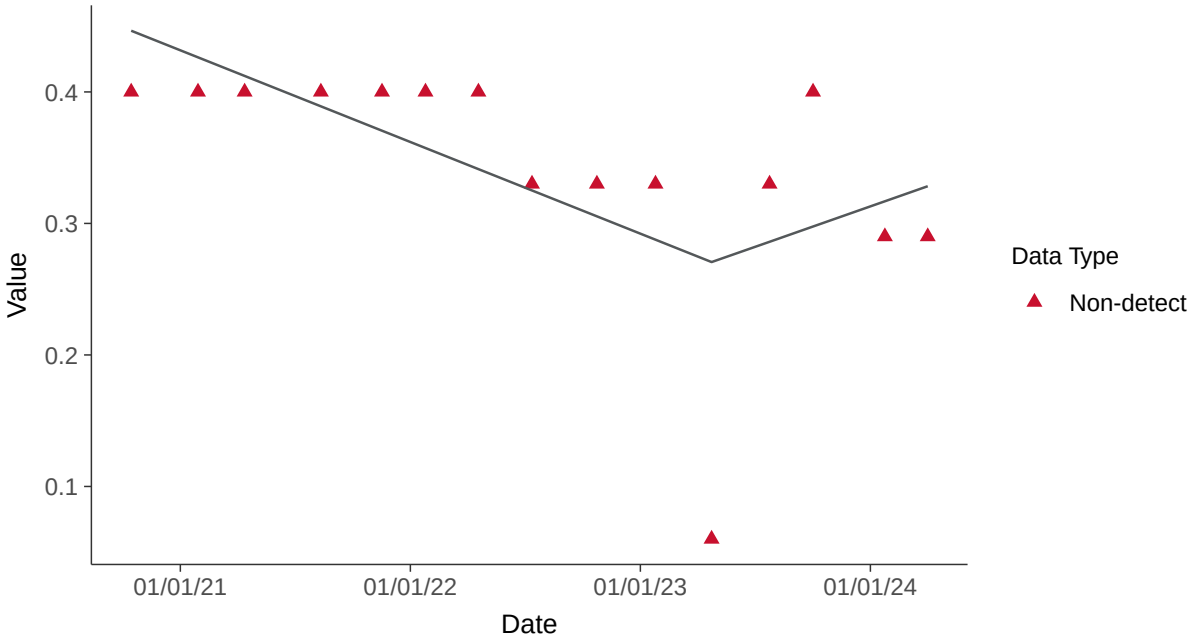
Boxplot by Season

Cadmium, MW-11 (ug/L)



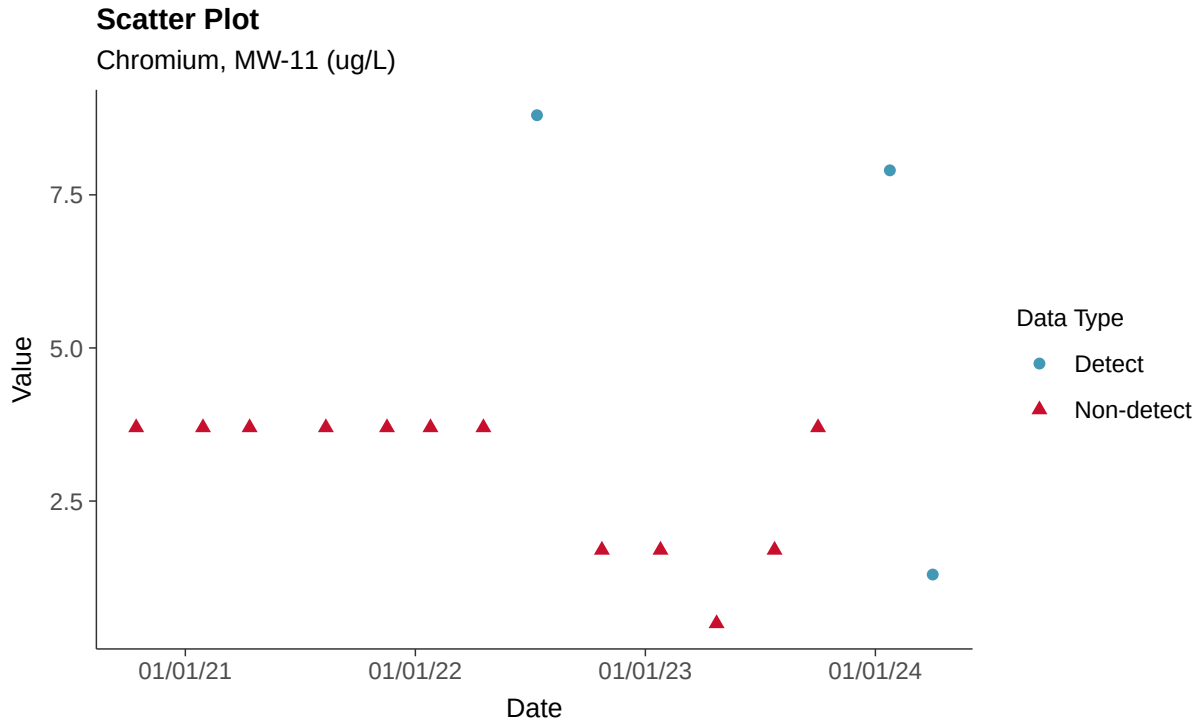
Trend Regression: Piecewise Linear-Linear

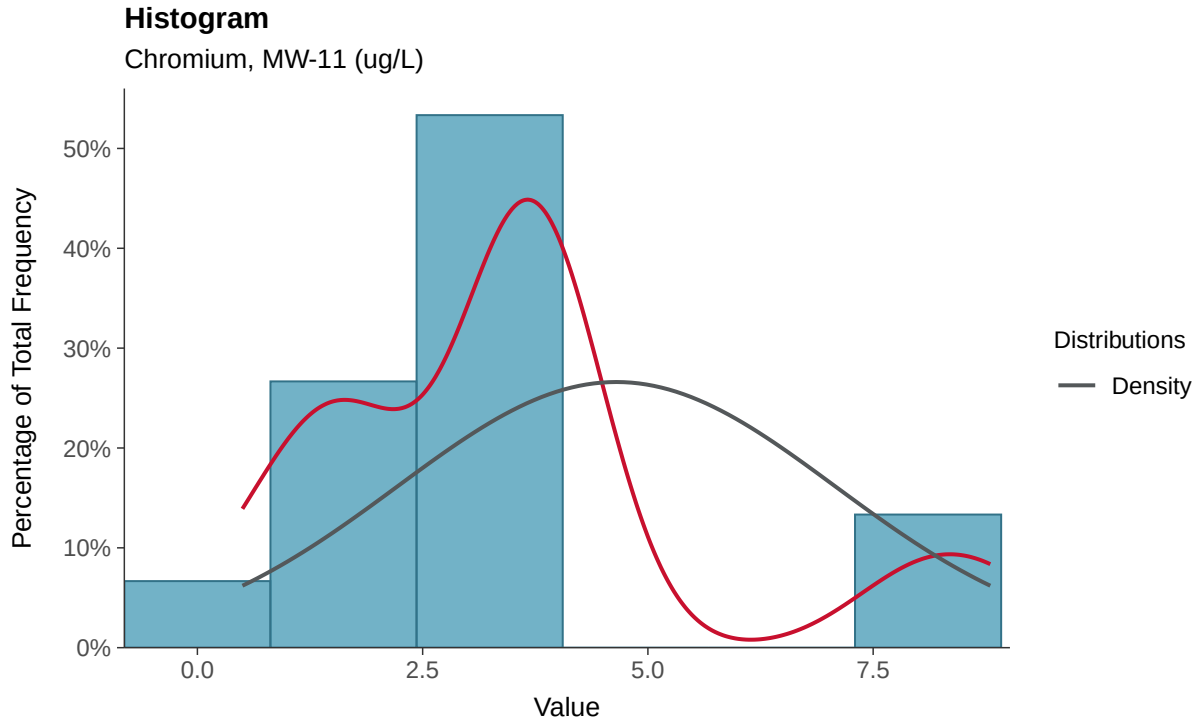
Cadmium, MW-11 (ug/L)



App. IV: Chromium, MW-11

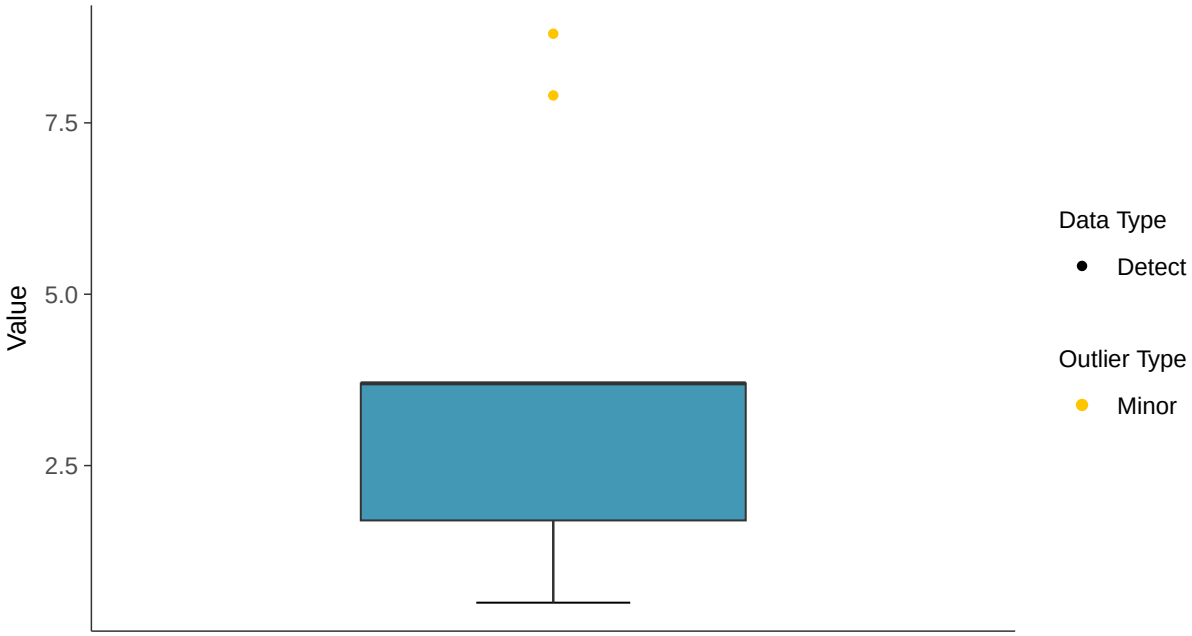
ID: 3_3_109





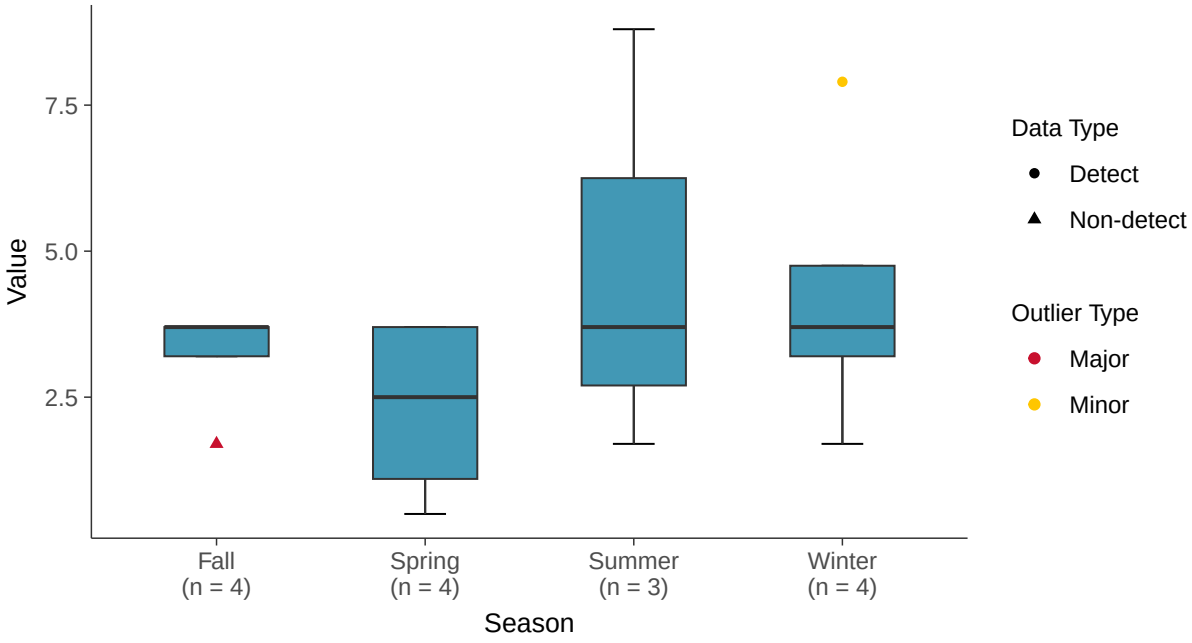
Boxplot

Chromium, MW-11 (ug/L)



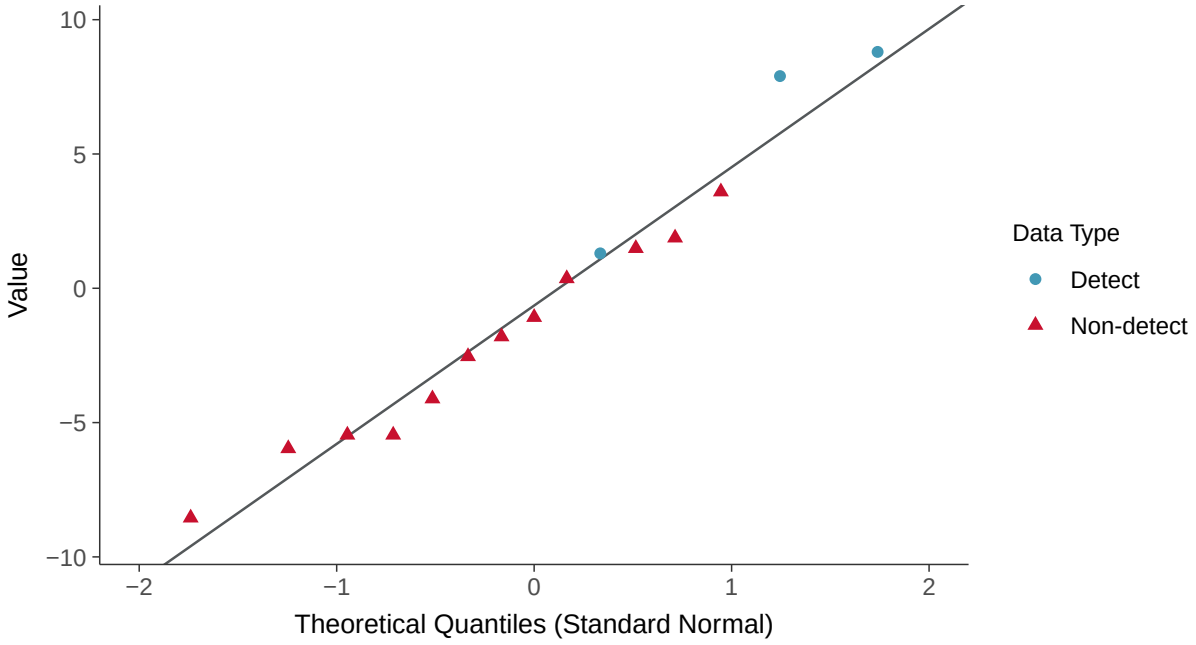
Boxplot by Season

Chromium, MW-11 (ug/L)



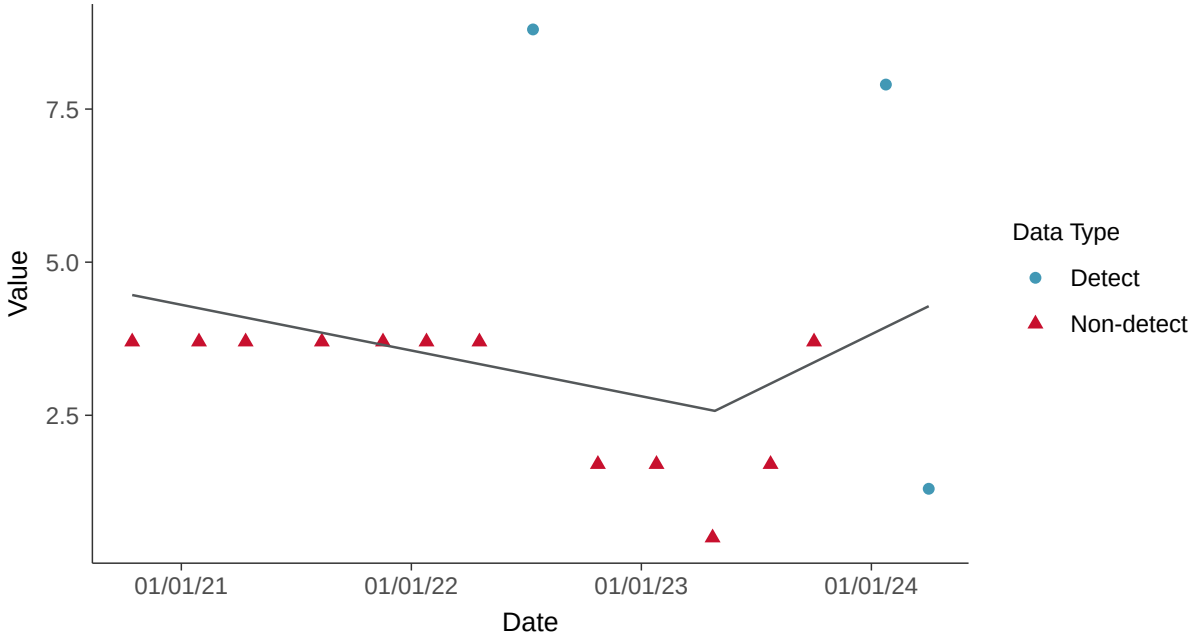
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-11 (ug/L)



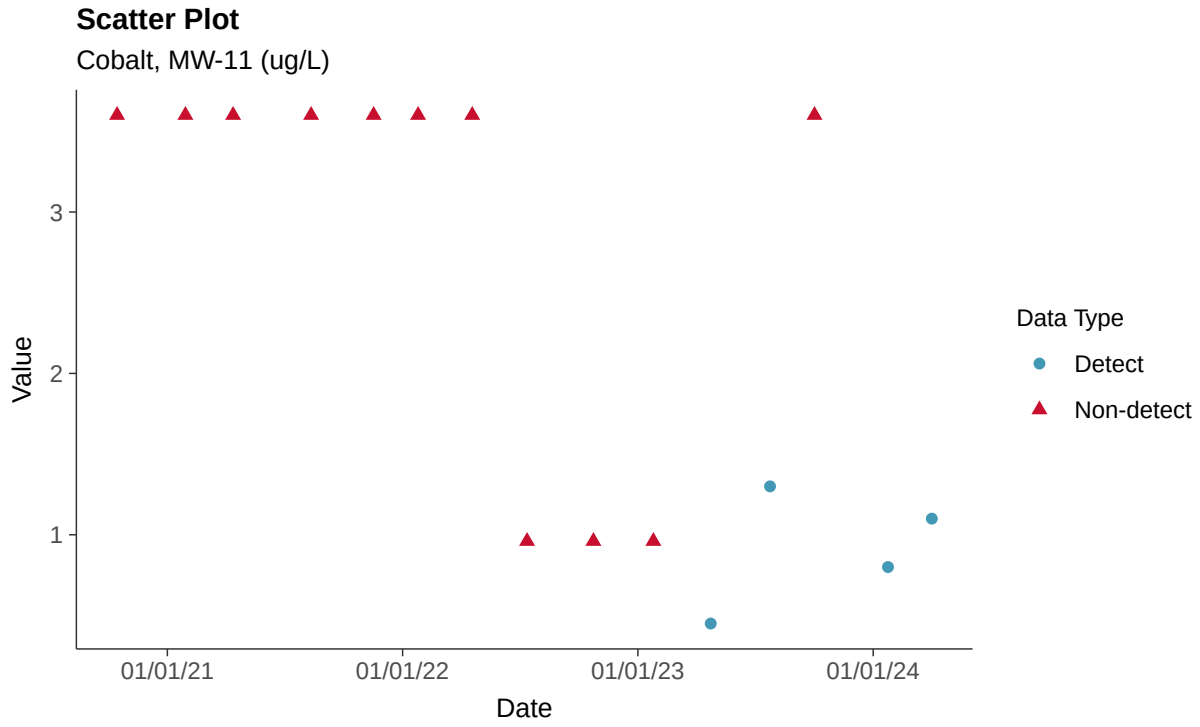
Trend Regression: Piecewise Linear-Linear

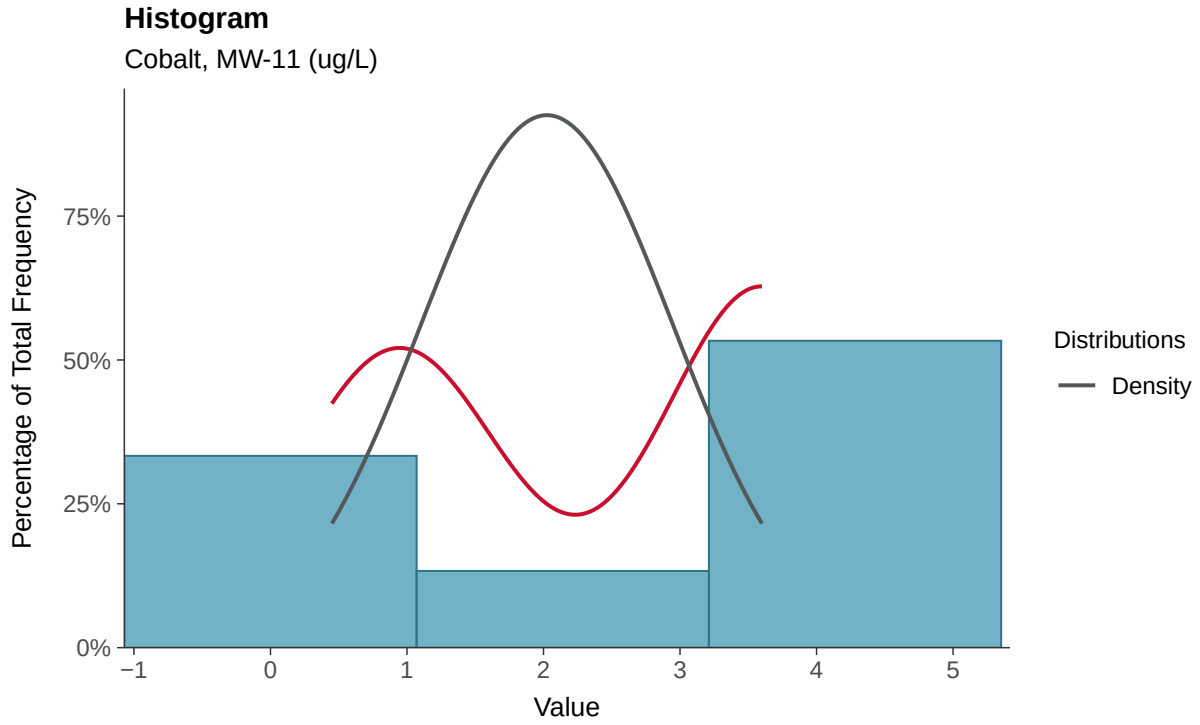
Chromium, MW-11 (ug/L)



App. IV: Cobalt, MW-11

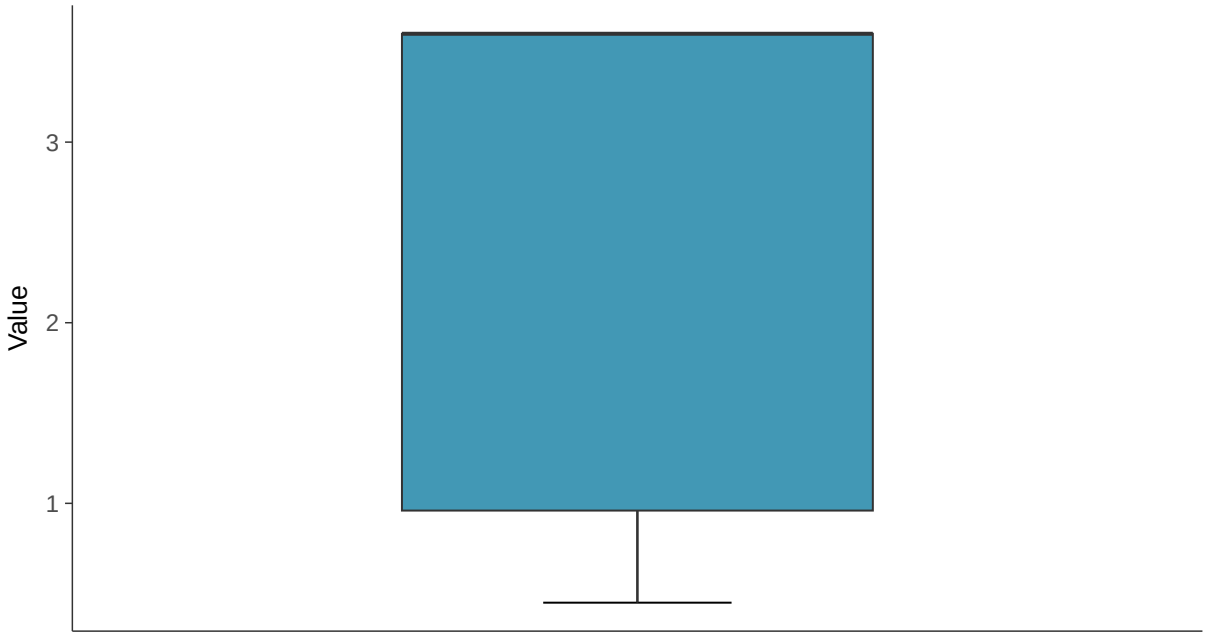
ID: 3_3_110





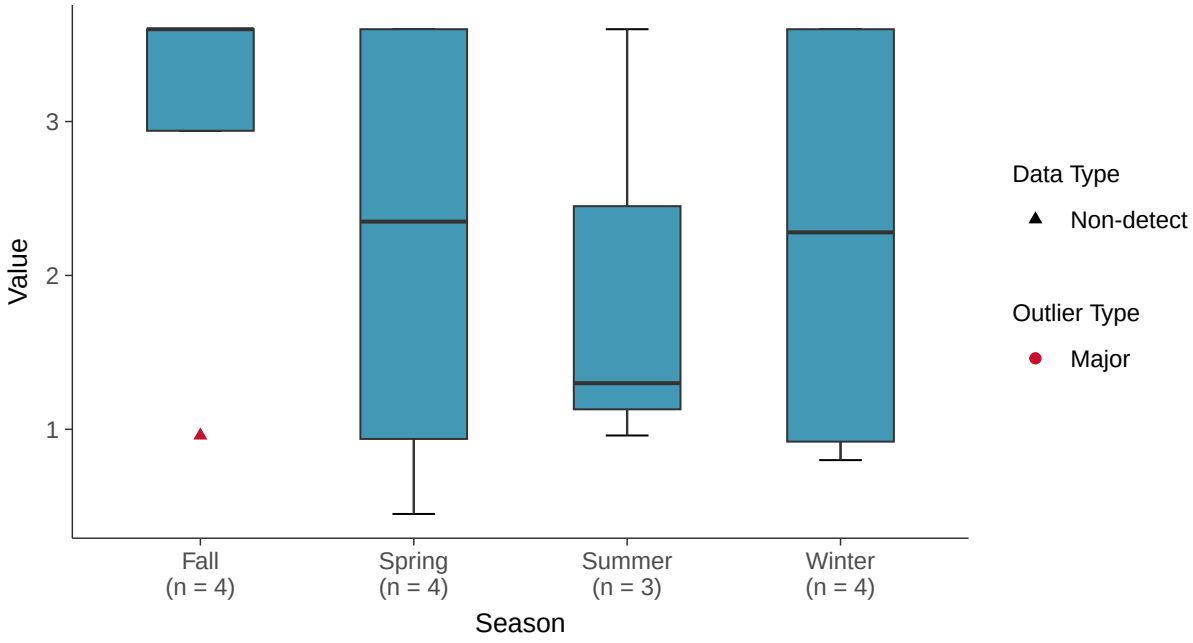
Boxplot

Cobalt, MW-11 (ug/L)



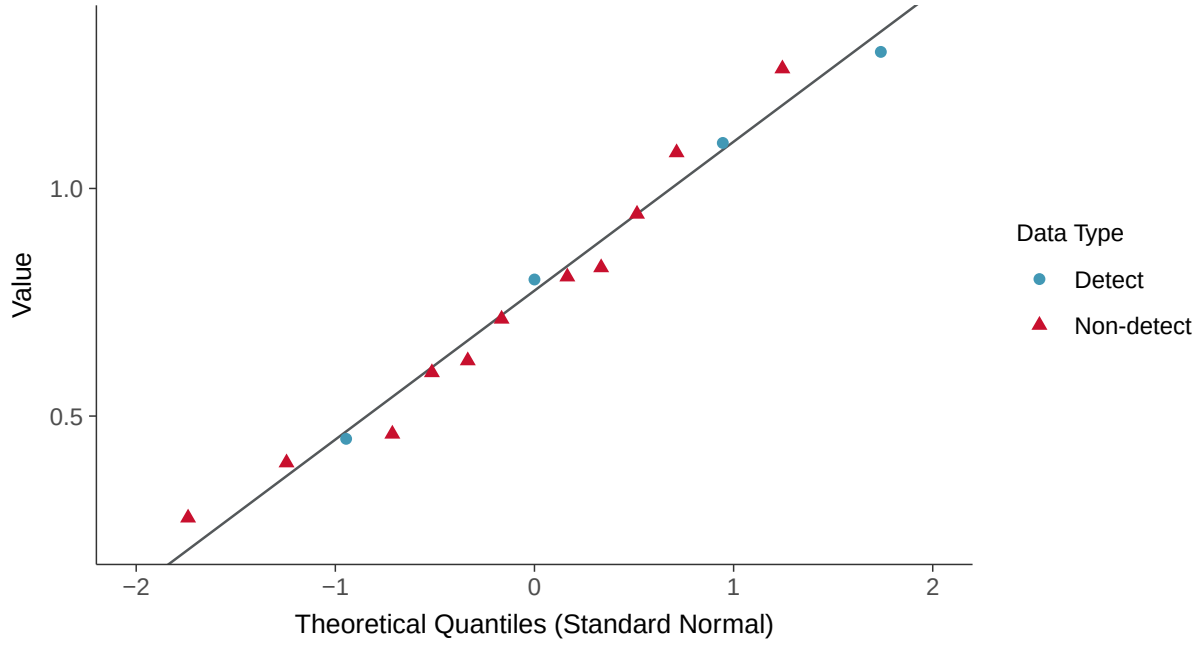
Boxplot by Season

Cobalt, MW-11 (ug/L)



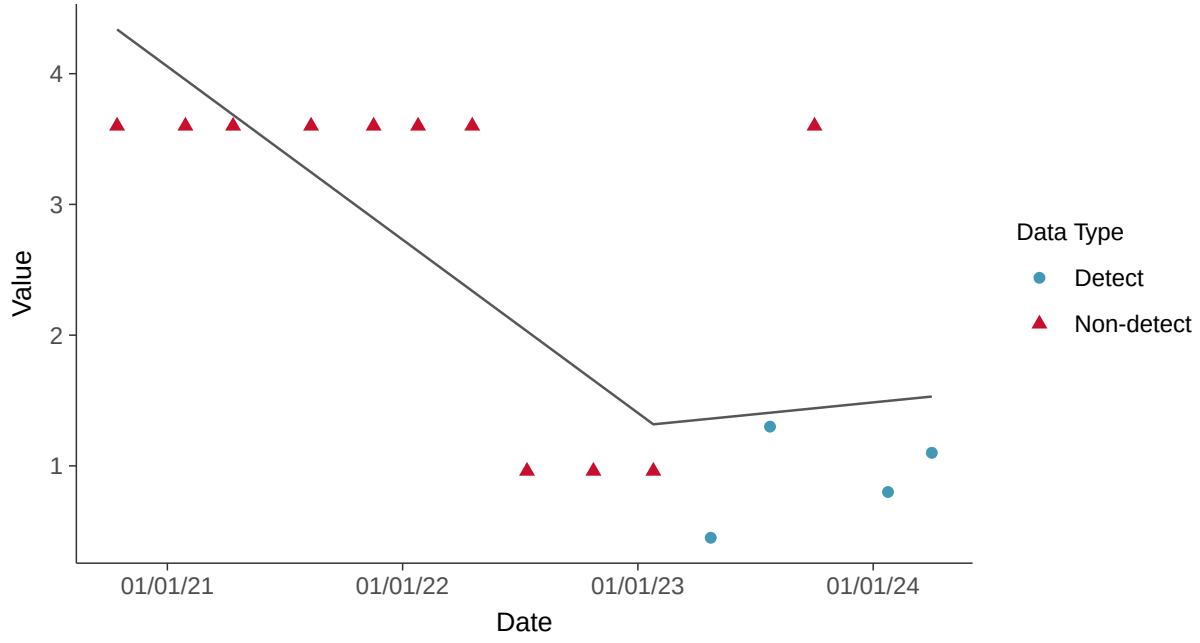
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-11 (ug/L)



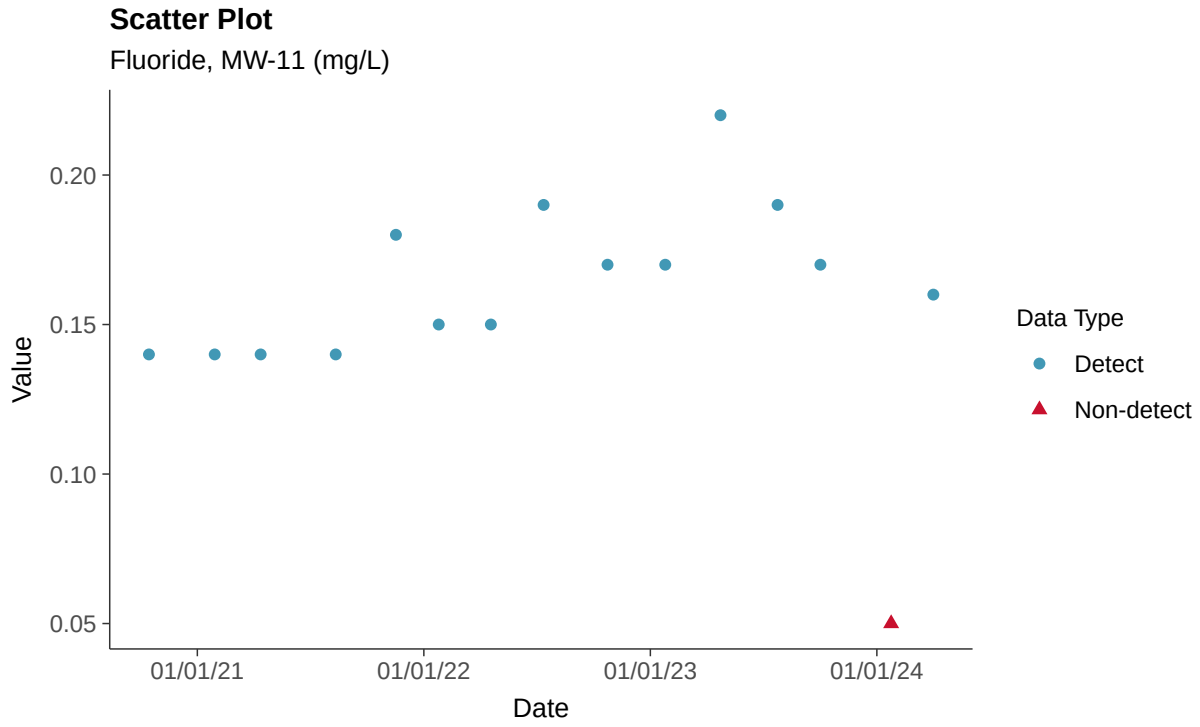
Trend Regression: Piecewise Linear-Linear

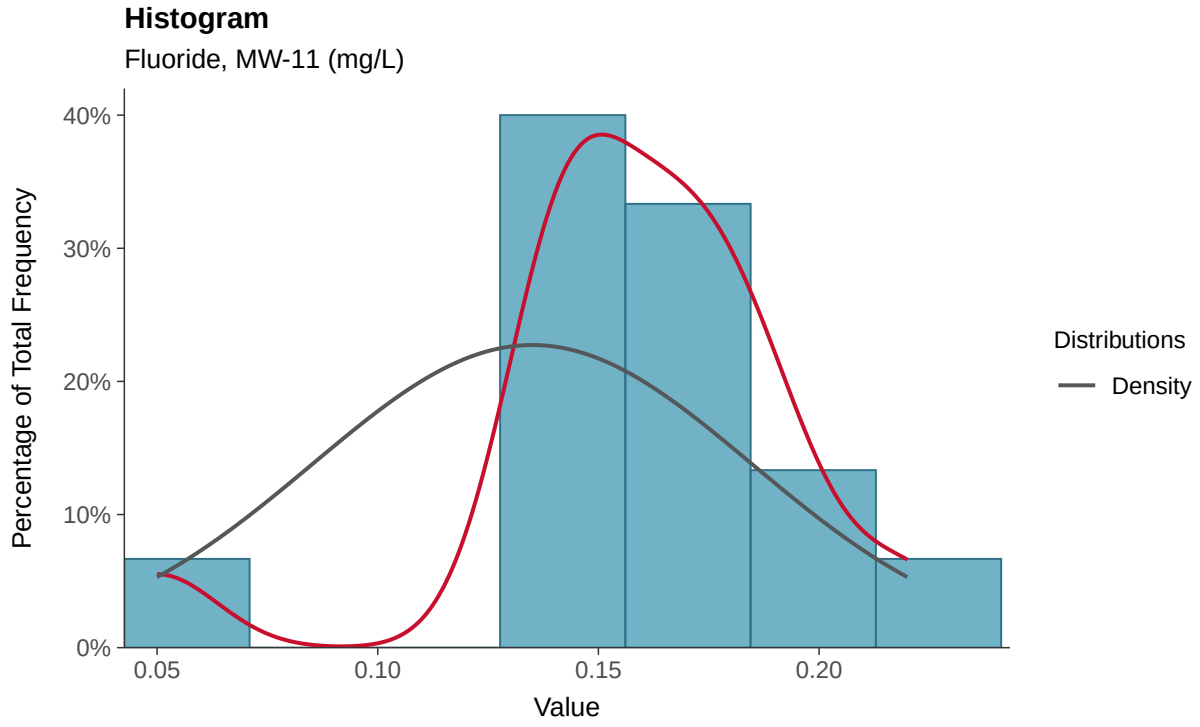
Cobalt, MW-11 (ug/L)



App. IV: Fluoride, MW-11

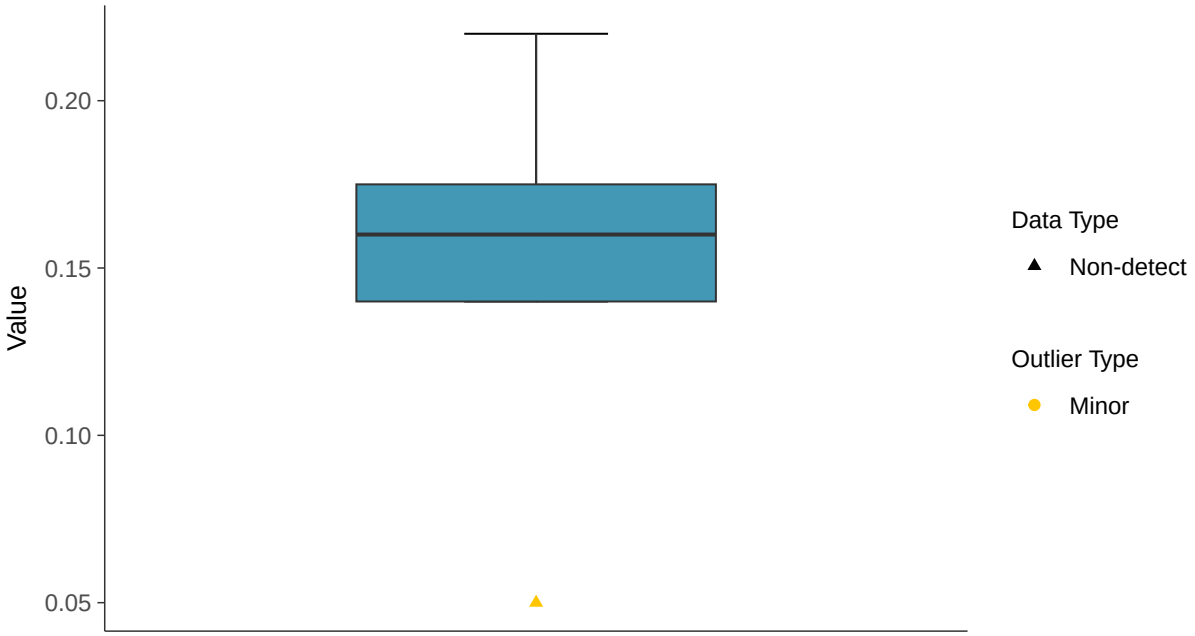
ID: 3_3_112





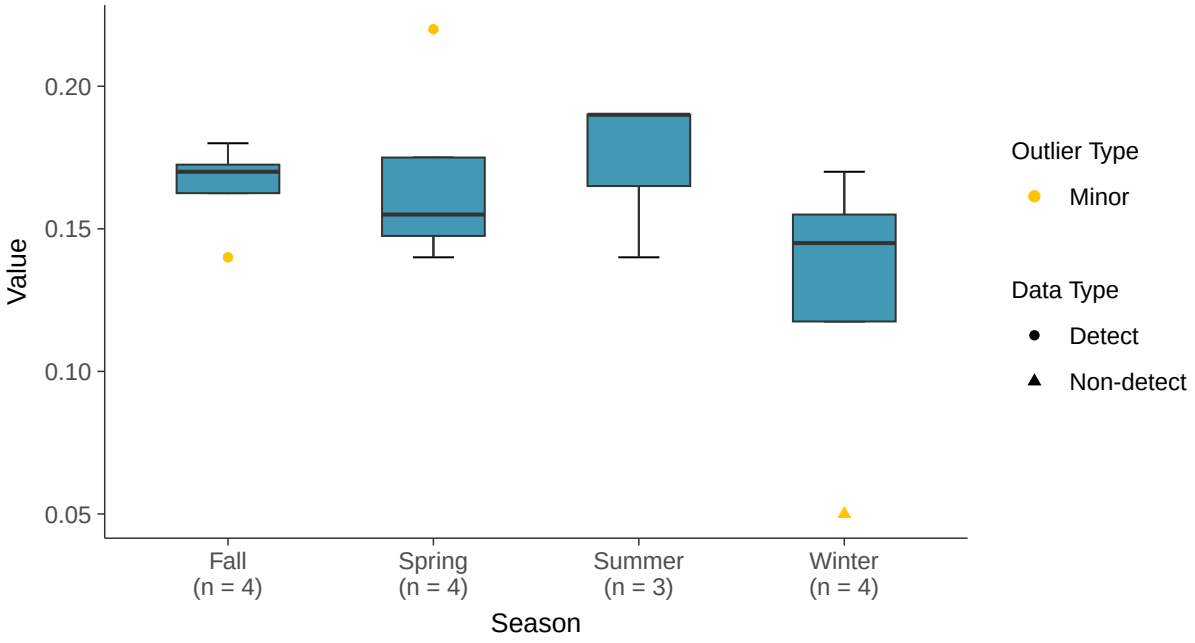
Boxplot

Fluoride, MW-11 (mg/L)



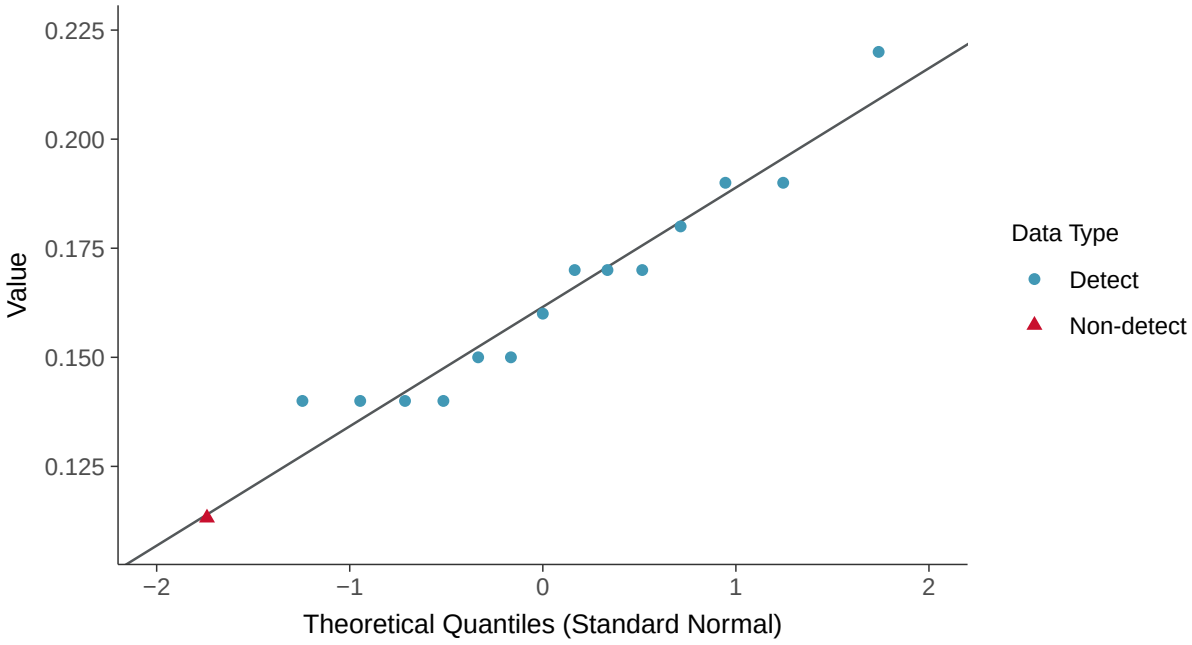
Boxplot by Season

Fluoride, MW-11 (mg/L)



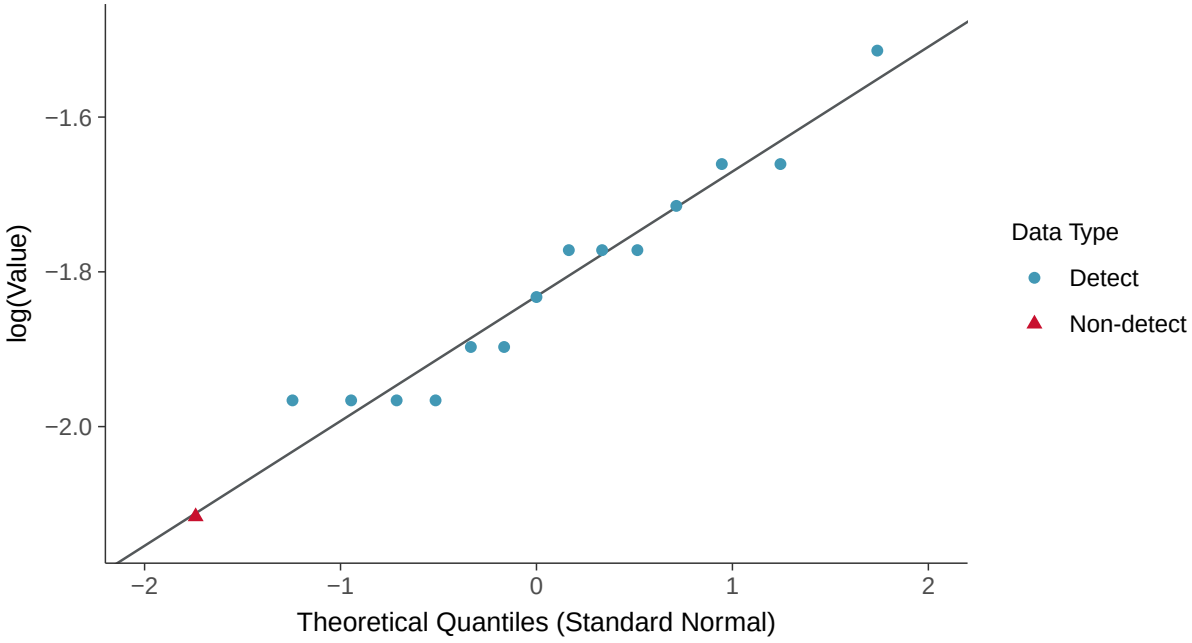
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



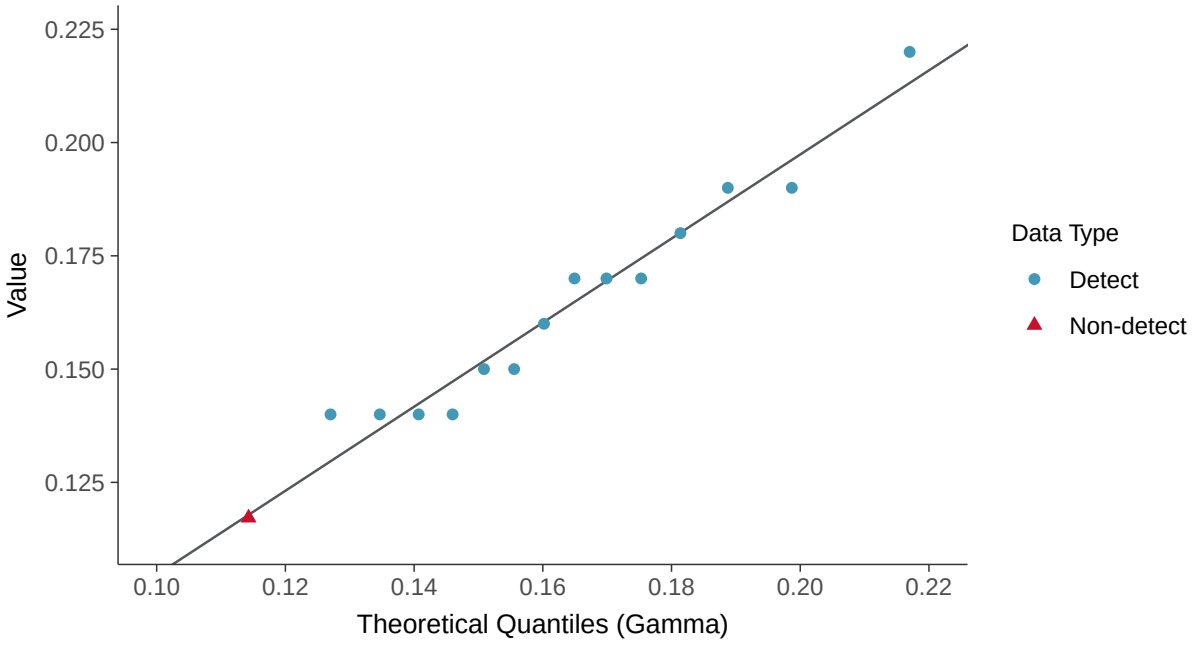
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



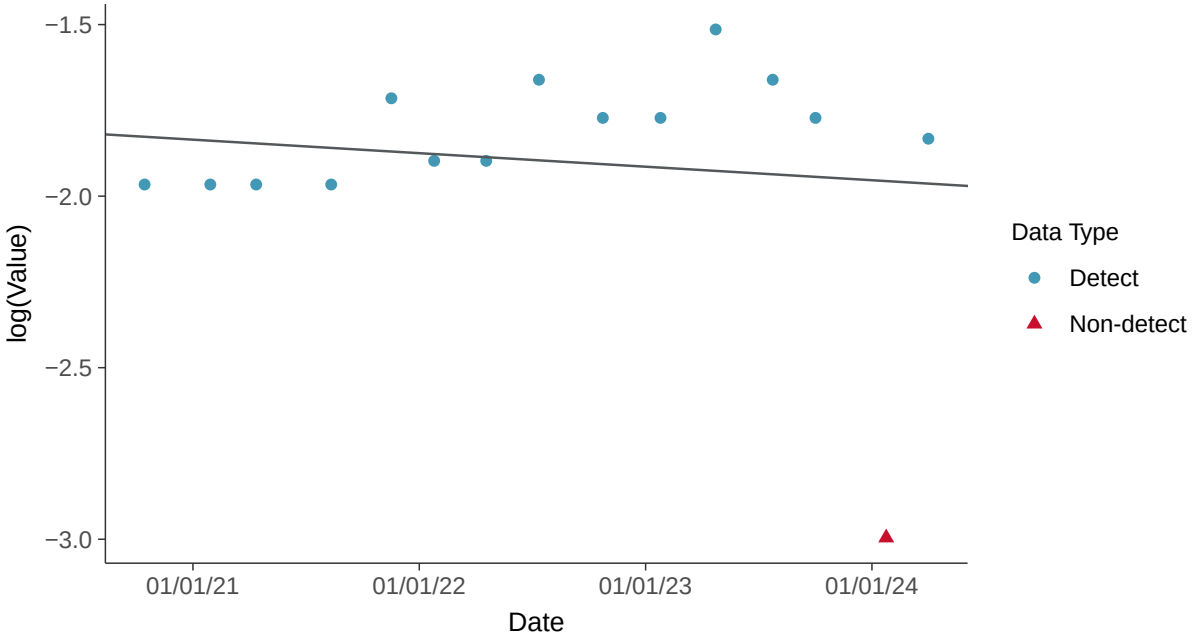
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



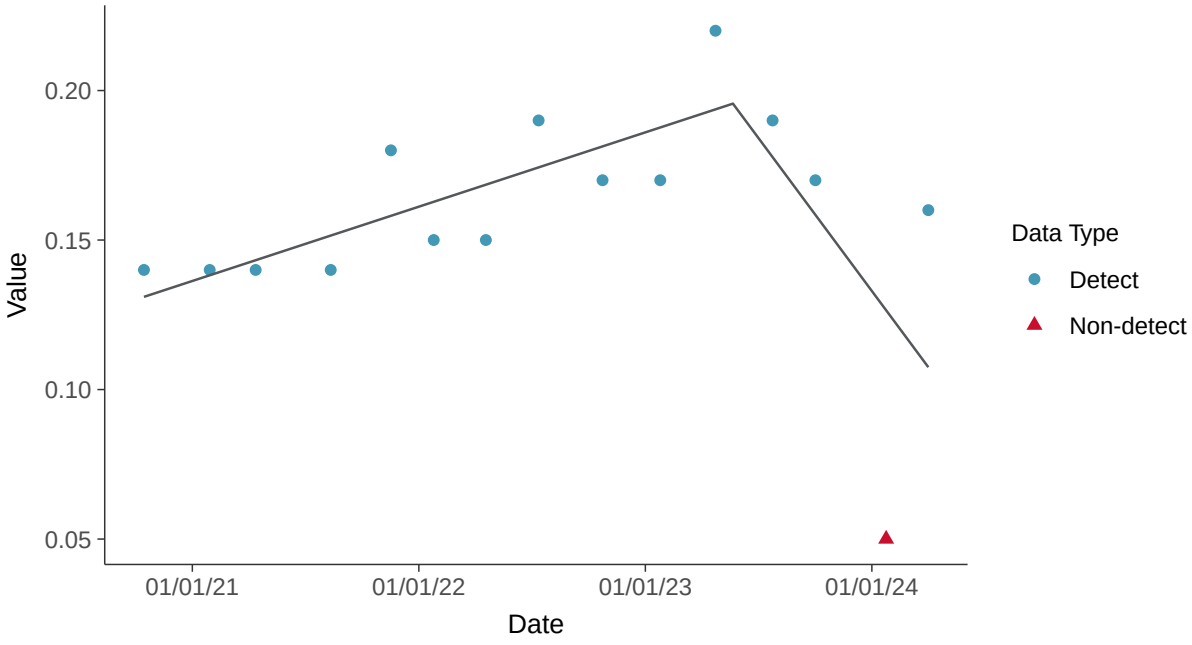
Trend Regression: Lognormal MLE

Fluoride, MW-11 (mg/L)



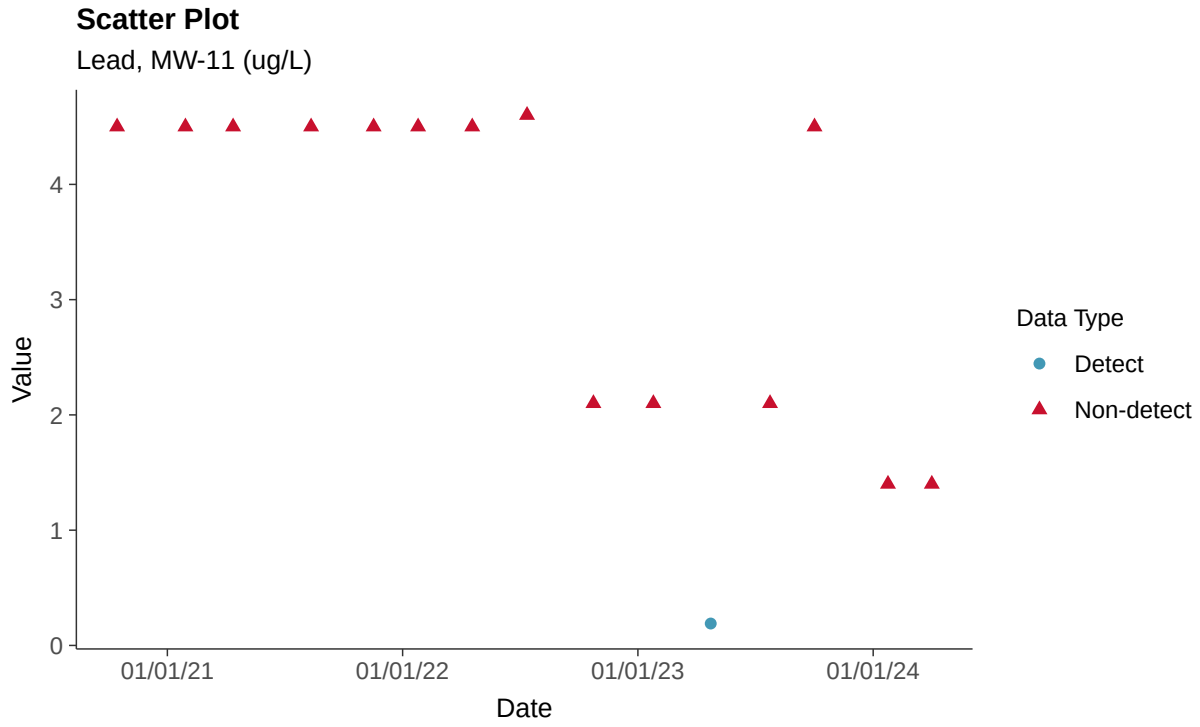
Trend Regression: Piecewise Linear-Linear

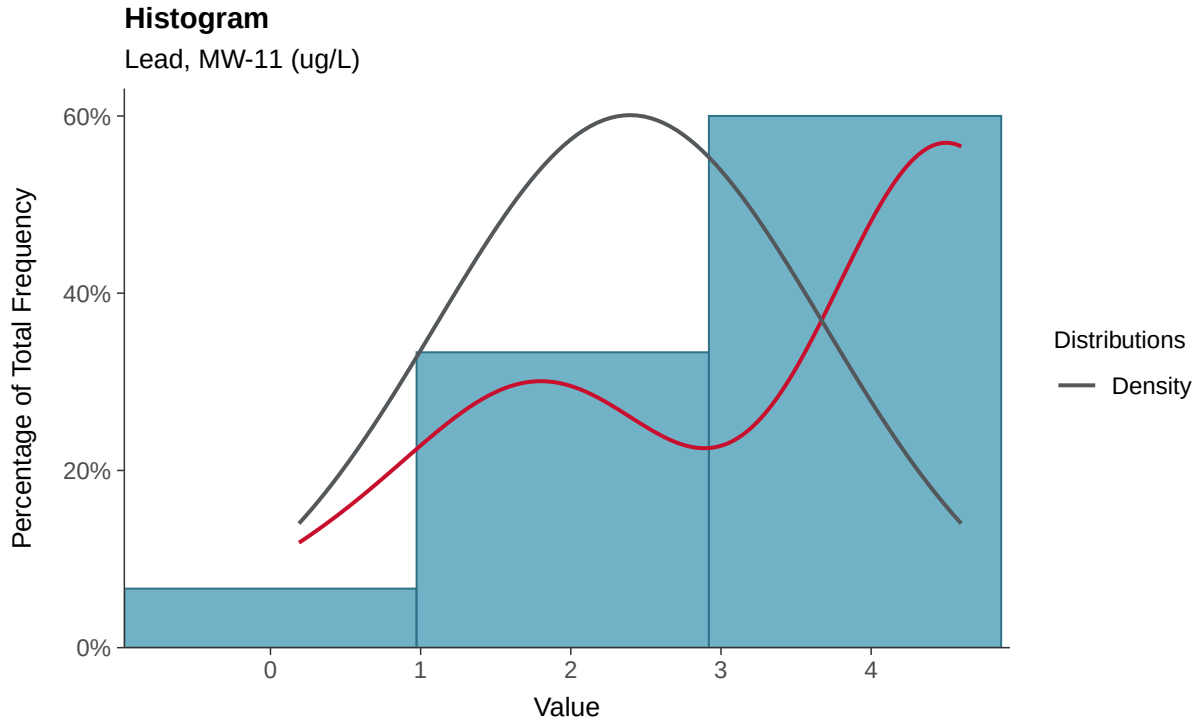
Fluoride, MW-11 (mg/L)



App. IV: Lead, MW-11

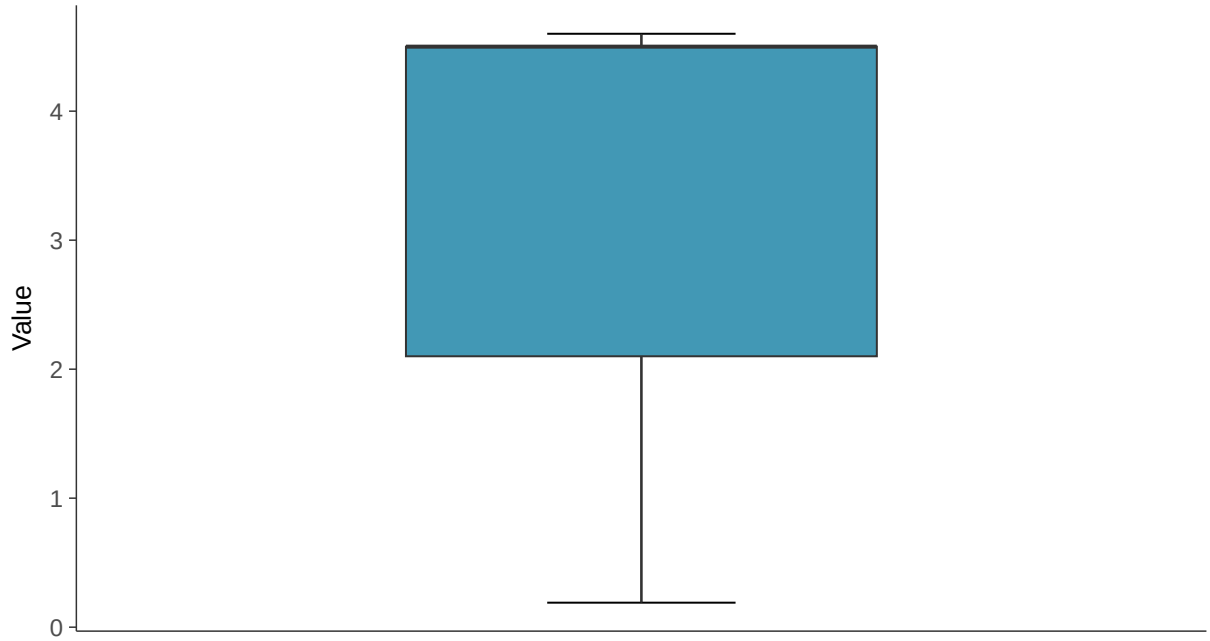
ID: 3_3_113





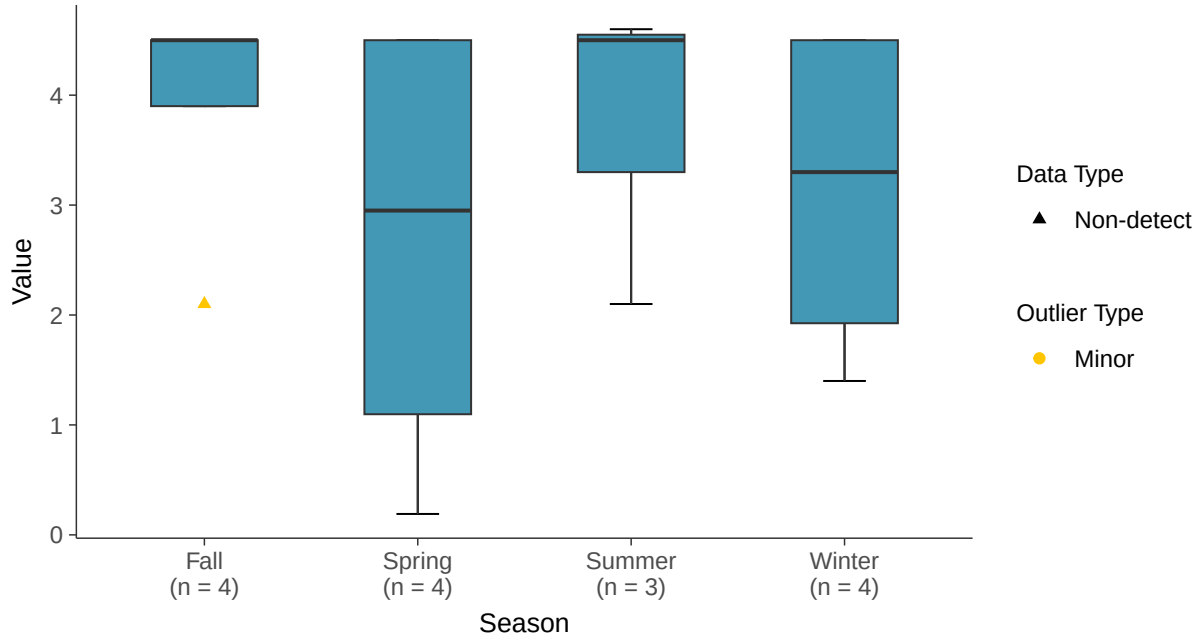
Boxplot

Lead, MW-11 (ug/L)



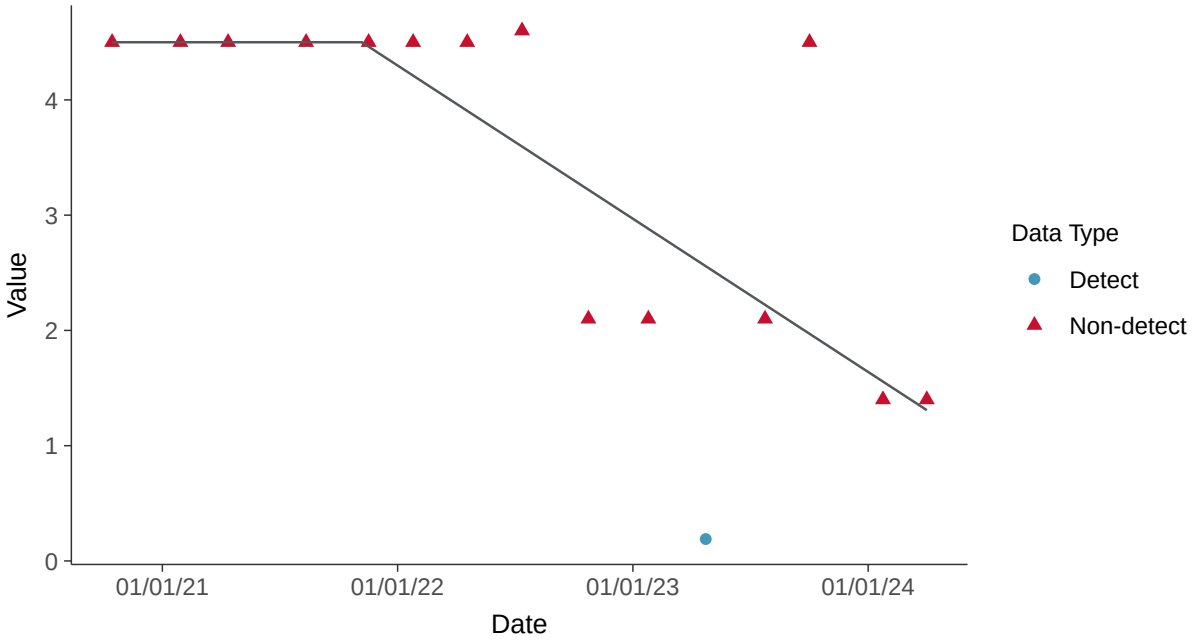
Boxplot by Season

Lead, MW-11 (ug/L)



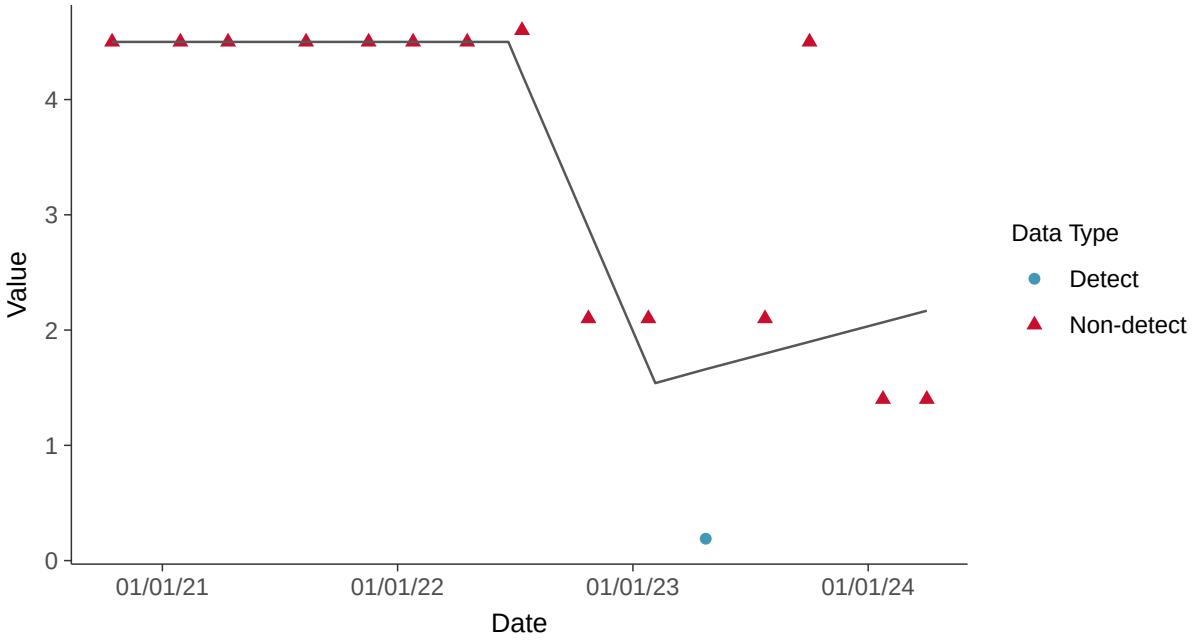
Trend Regression: Piecewise Linear-Linear

Lead, MW-11 (ug/L)



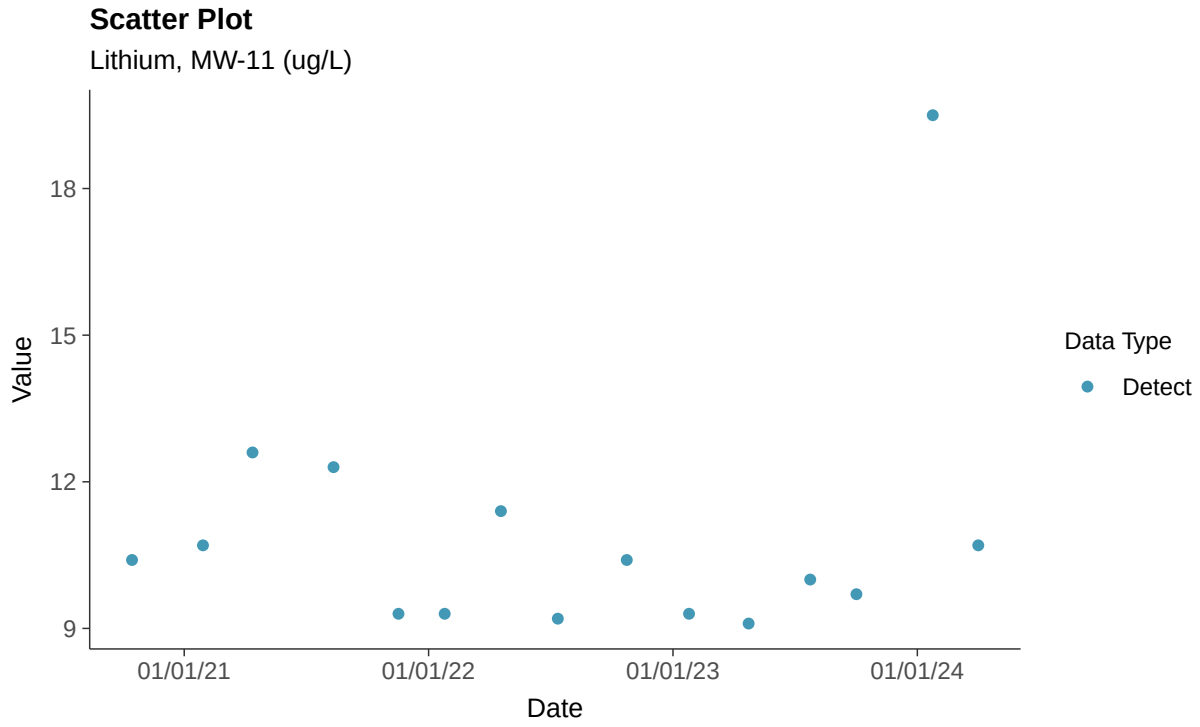
Trend Regression: Piecewise Linear-Linear-Linear

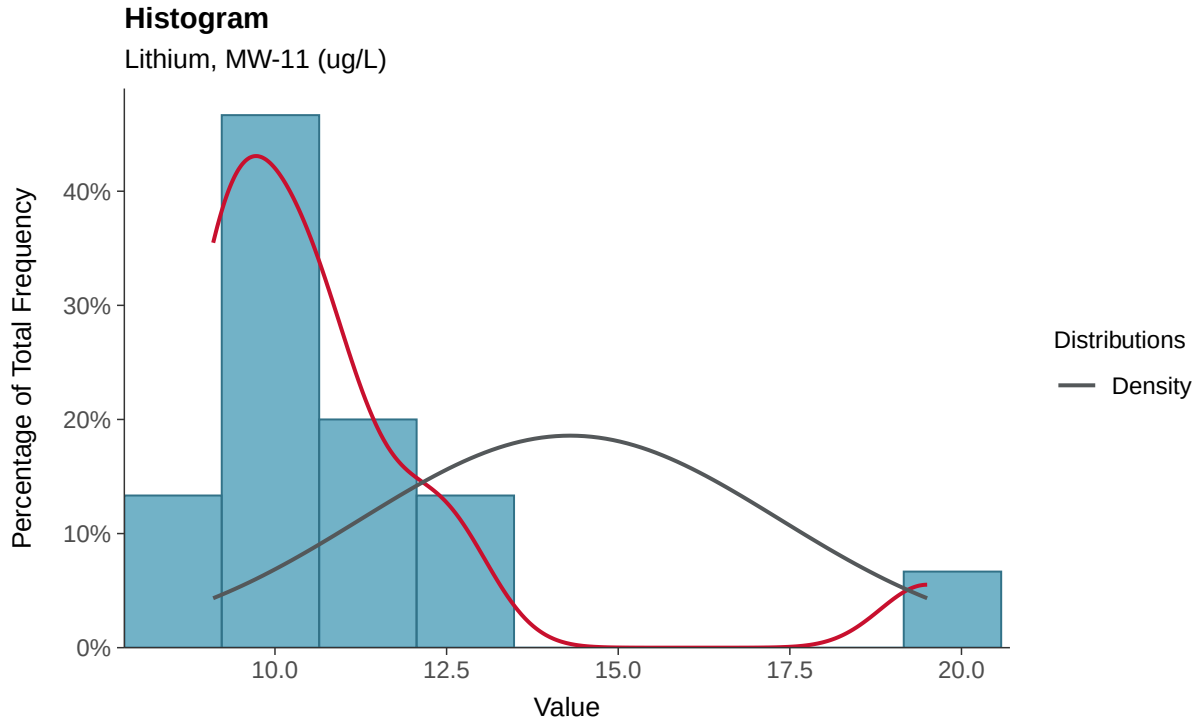
Lead, MW-11 (ug/L)



App. IV: Lithium, MW-11

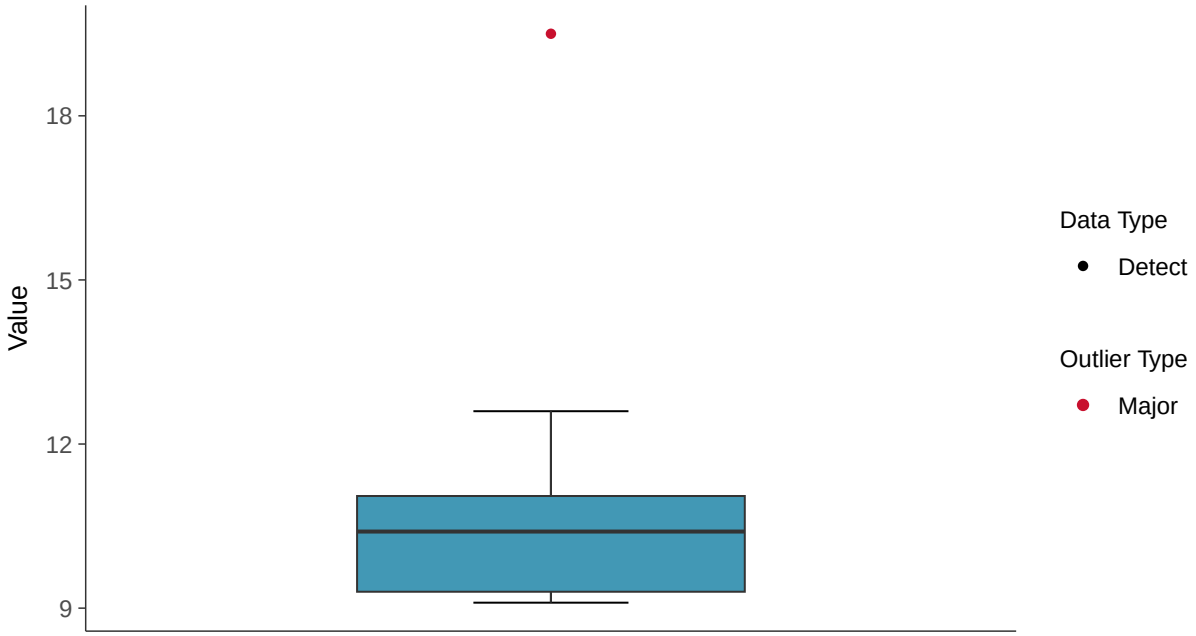
ID: 3_3_114





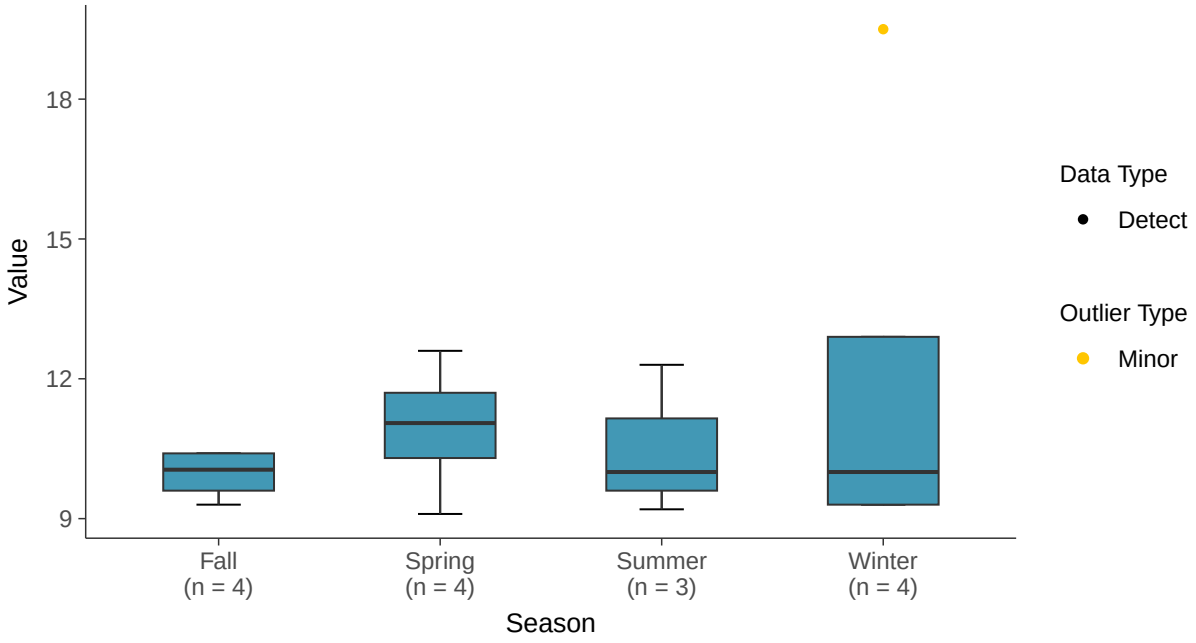
Boxplot

Lithium, MW-11 (ug/L)



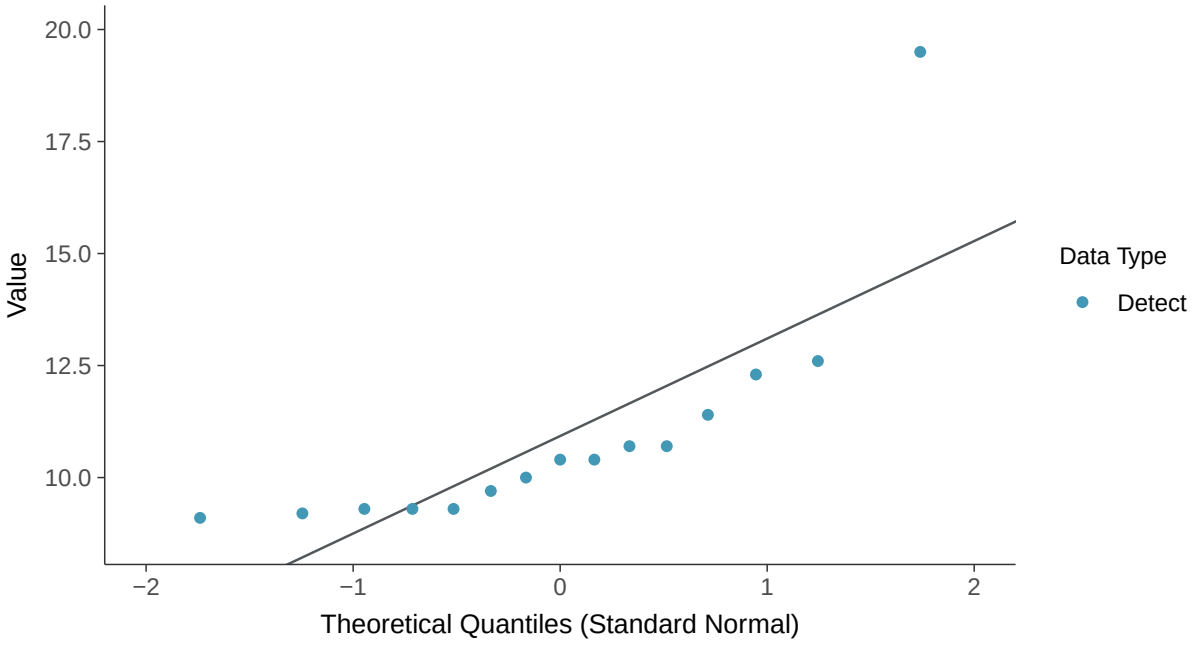
Boxplot by Season

Lithium, MW-11 (ug/L)



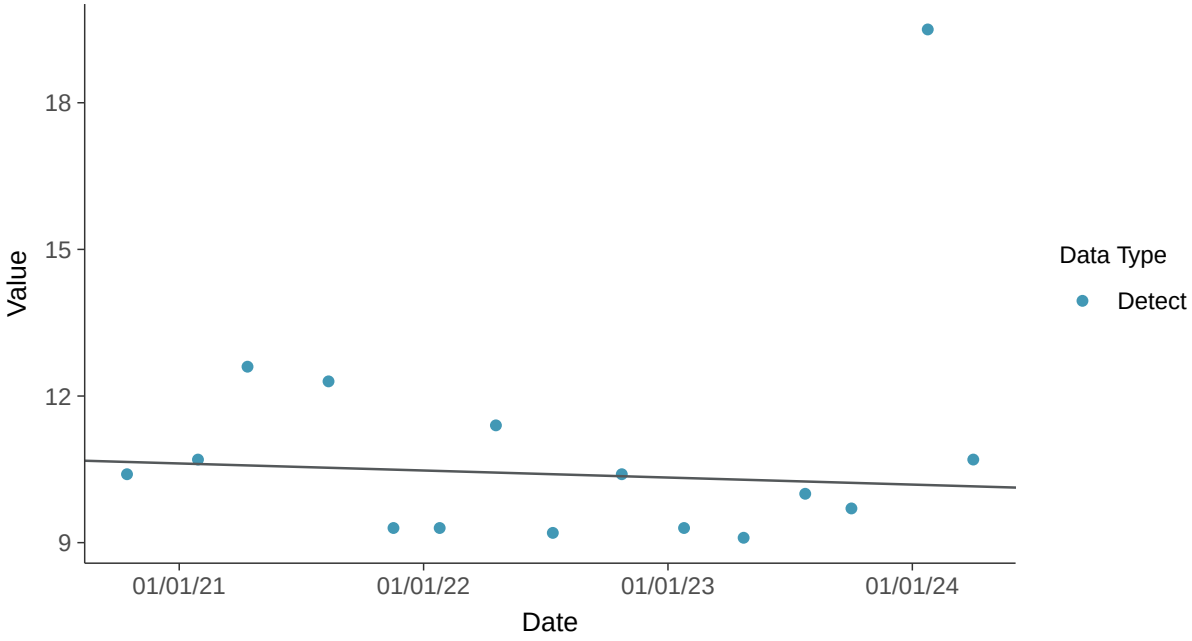
Normal Q-Q plot

Lithium, MW-11 (ug/L)



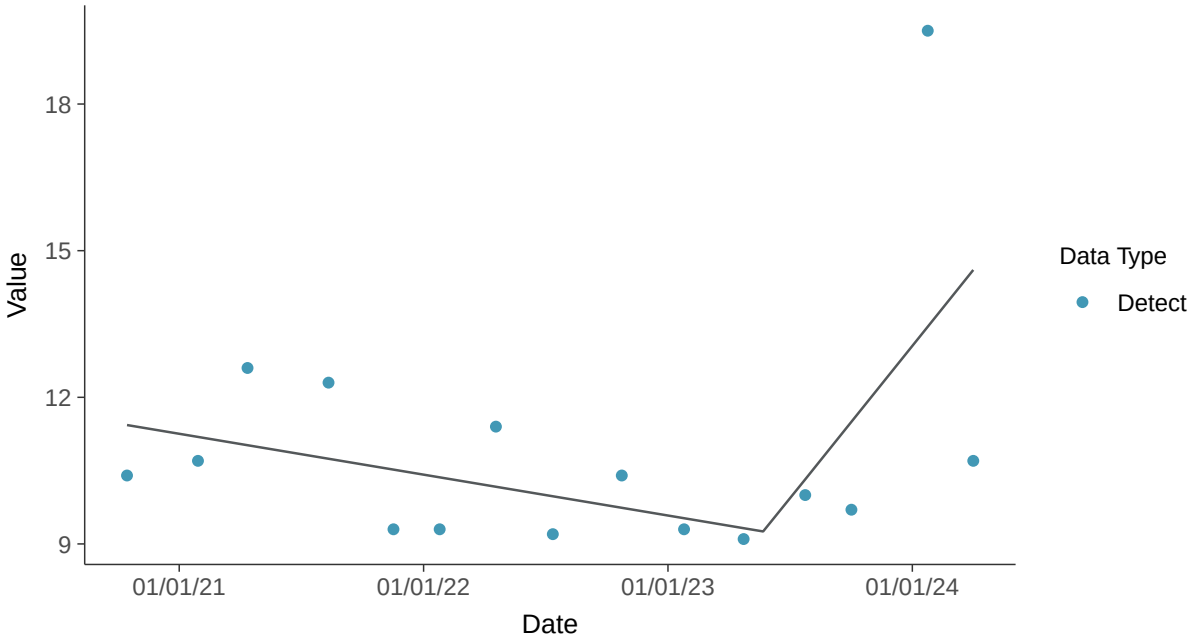
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-11 (ug/L)



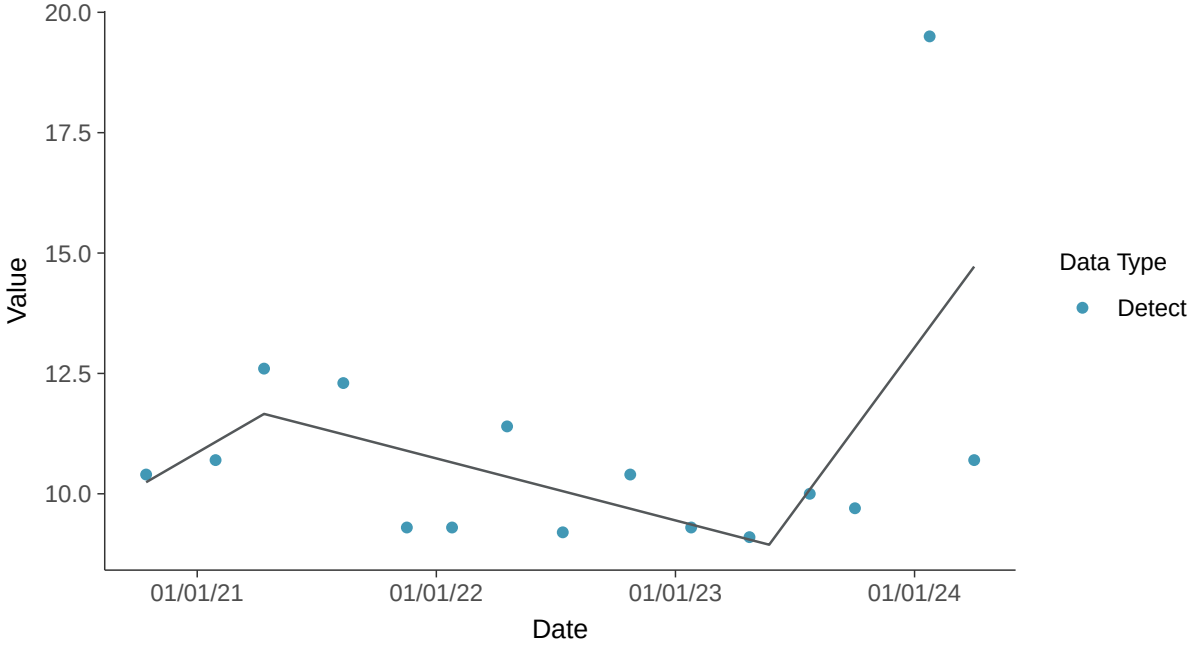
Trend Regression: Piecewise Linear-Linear

Lithium, MW-11 (ug/L)



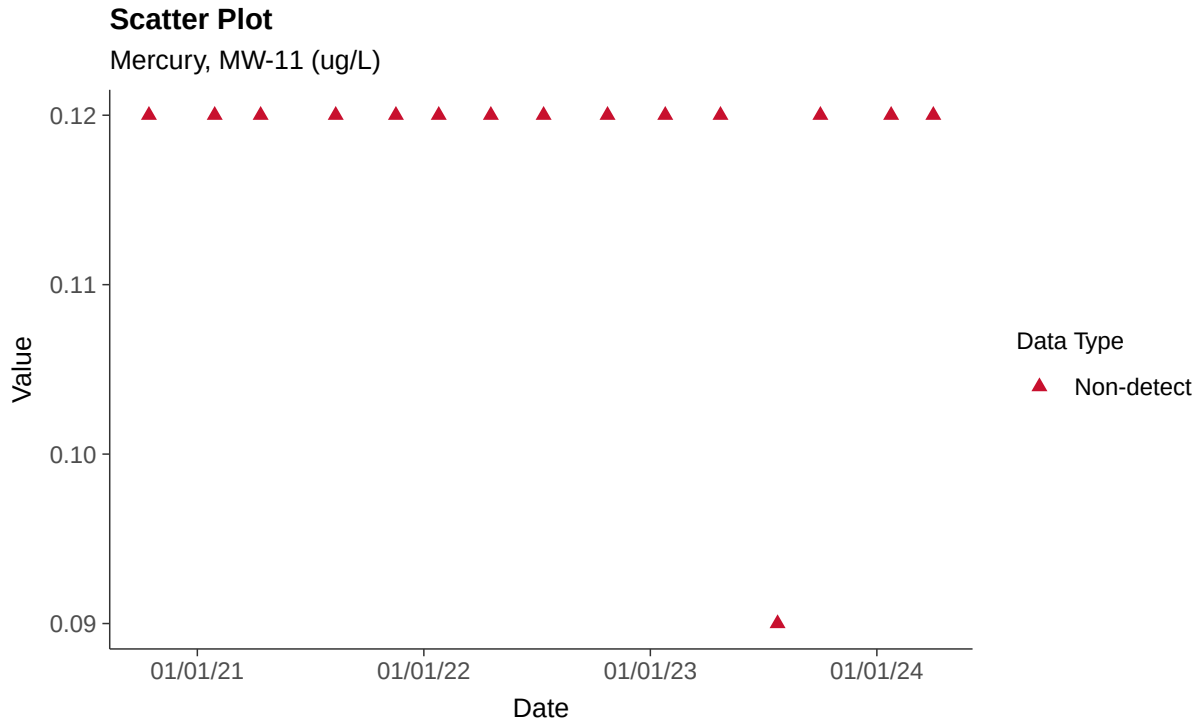
Trend Regression: Piecewise Linear-Linear-Linear

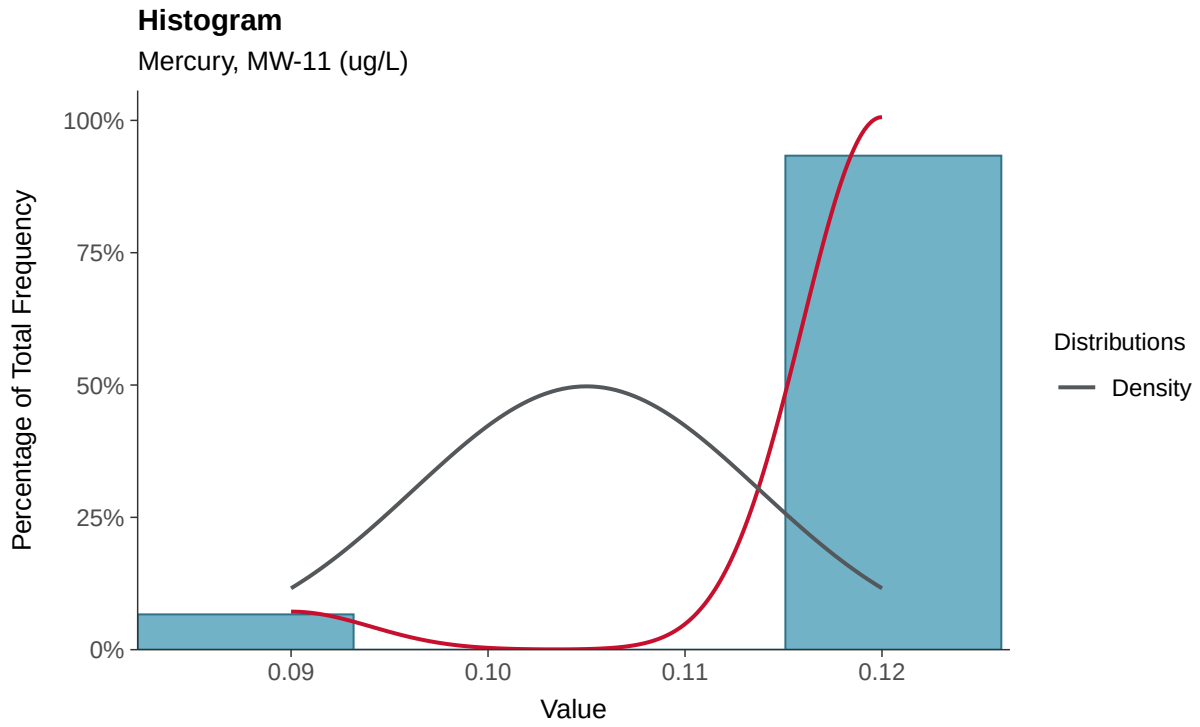
Lithium, MW-11 (ug/L)



App. IV: Mercury, MW-11

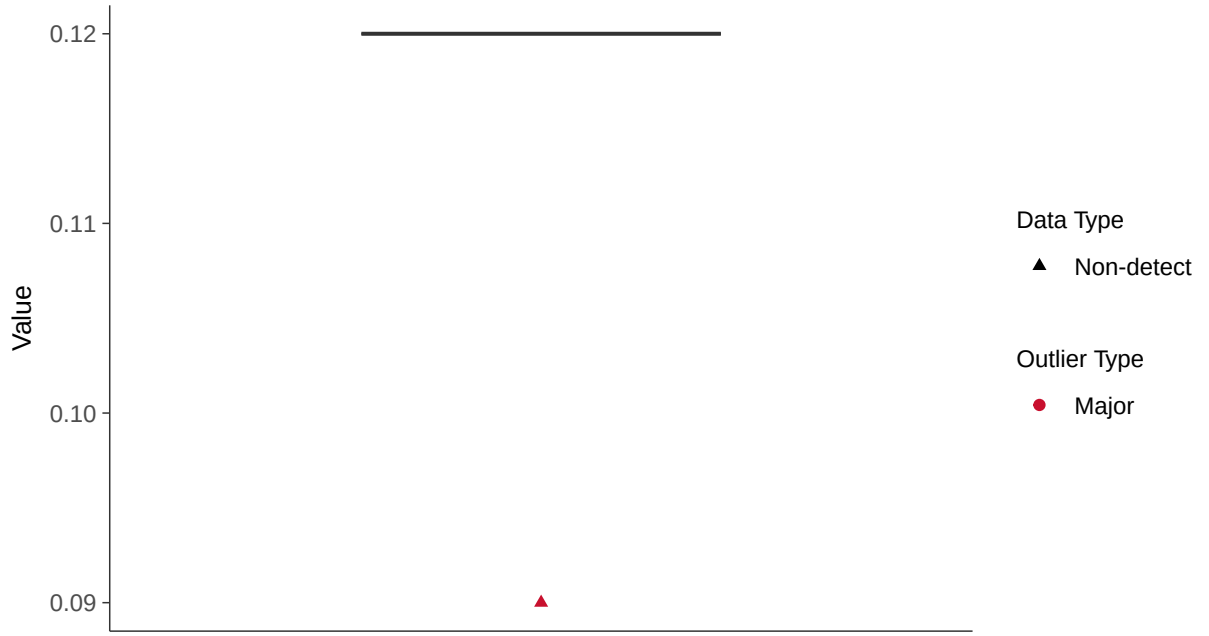
ID: 3_3_115





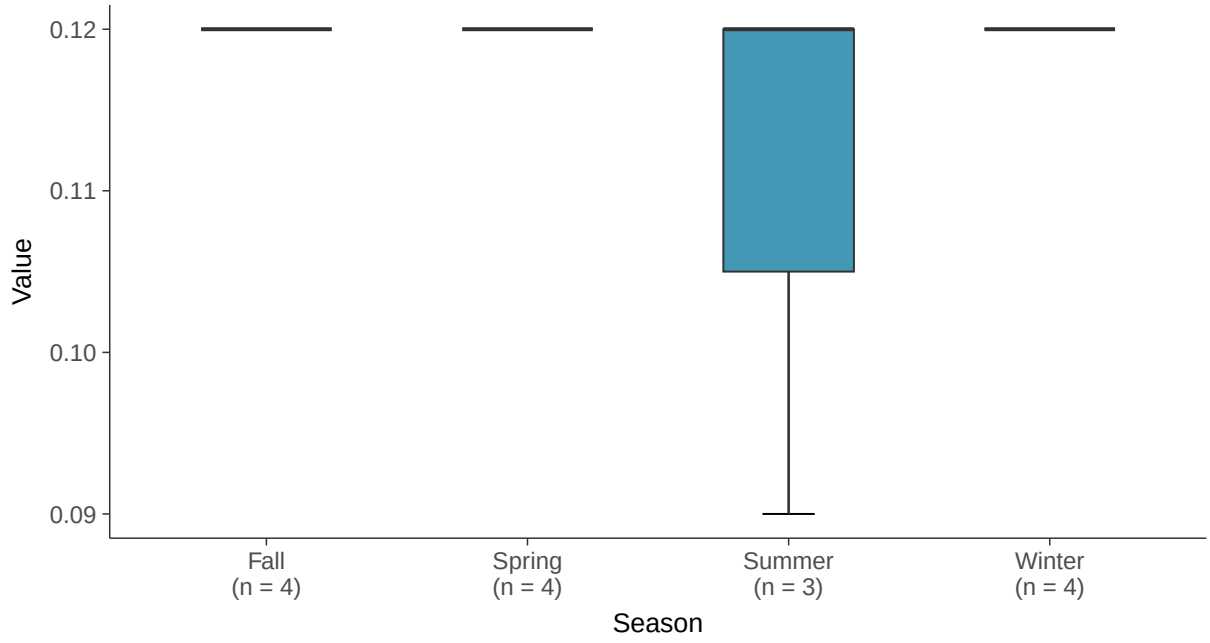
Boxplot

Mercury, MW-11 (ug/L)



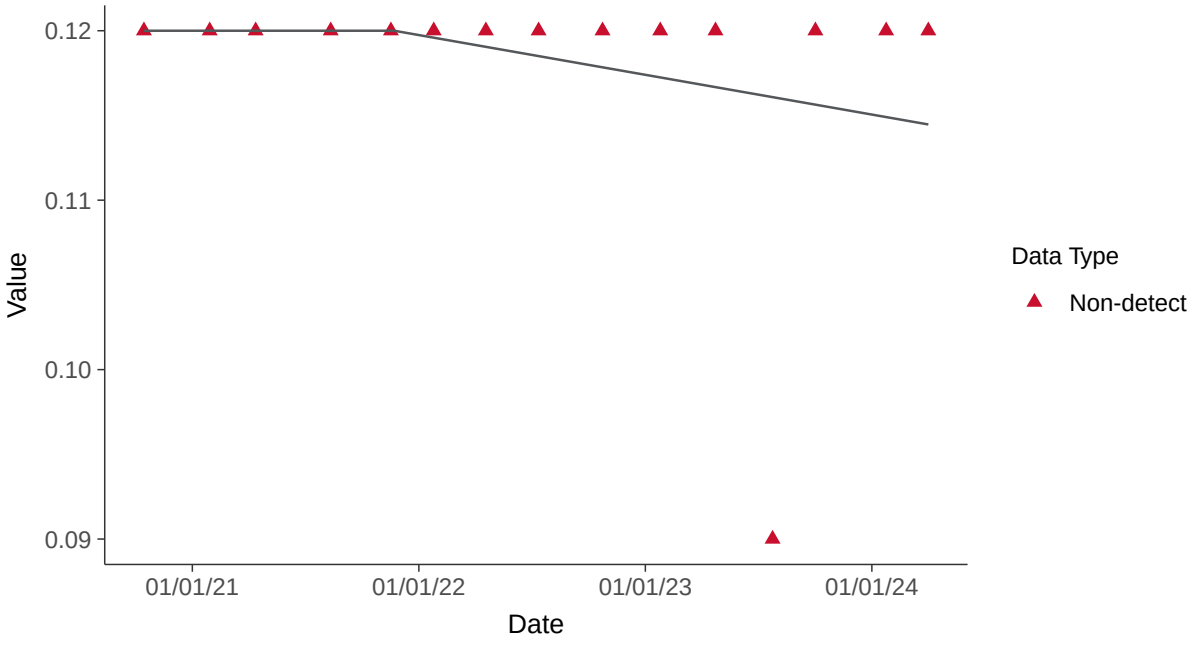
Boxplot by Season

Mercury, MW-11 (ug/L)



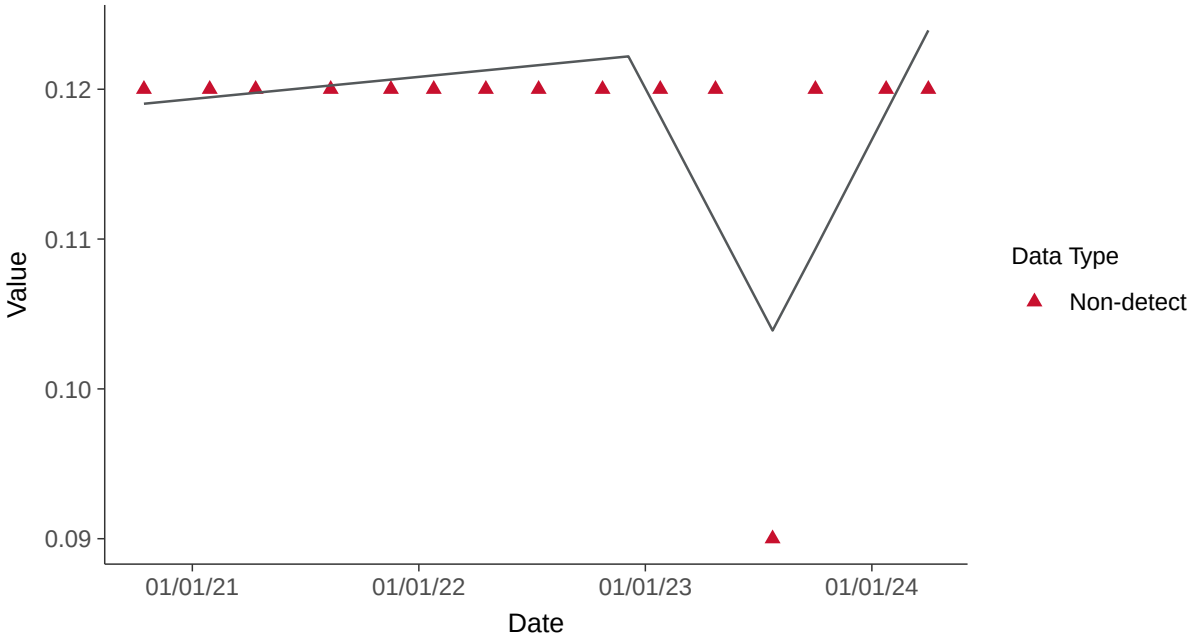
Trend Regression: Piecewise Linear-Linear

Mercury, MW-11 (ug/L)



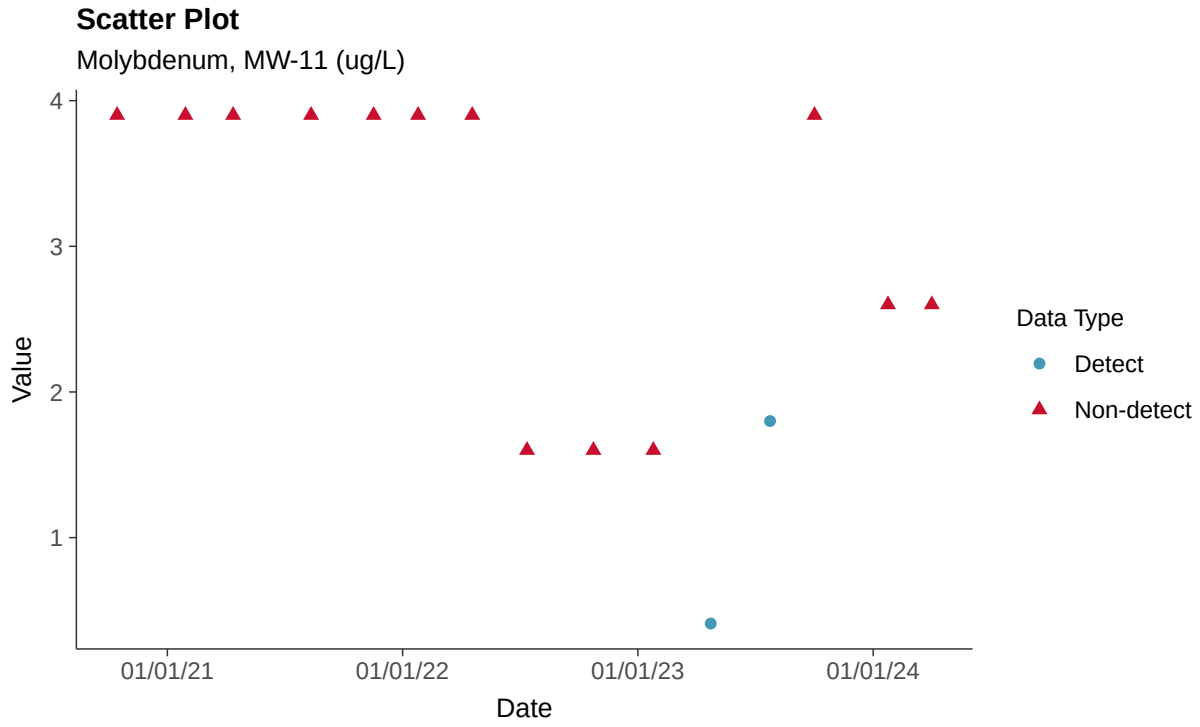
Trend Regression: Piecewise Linear-Linear-Linear

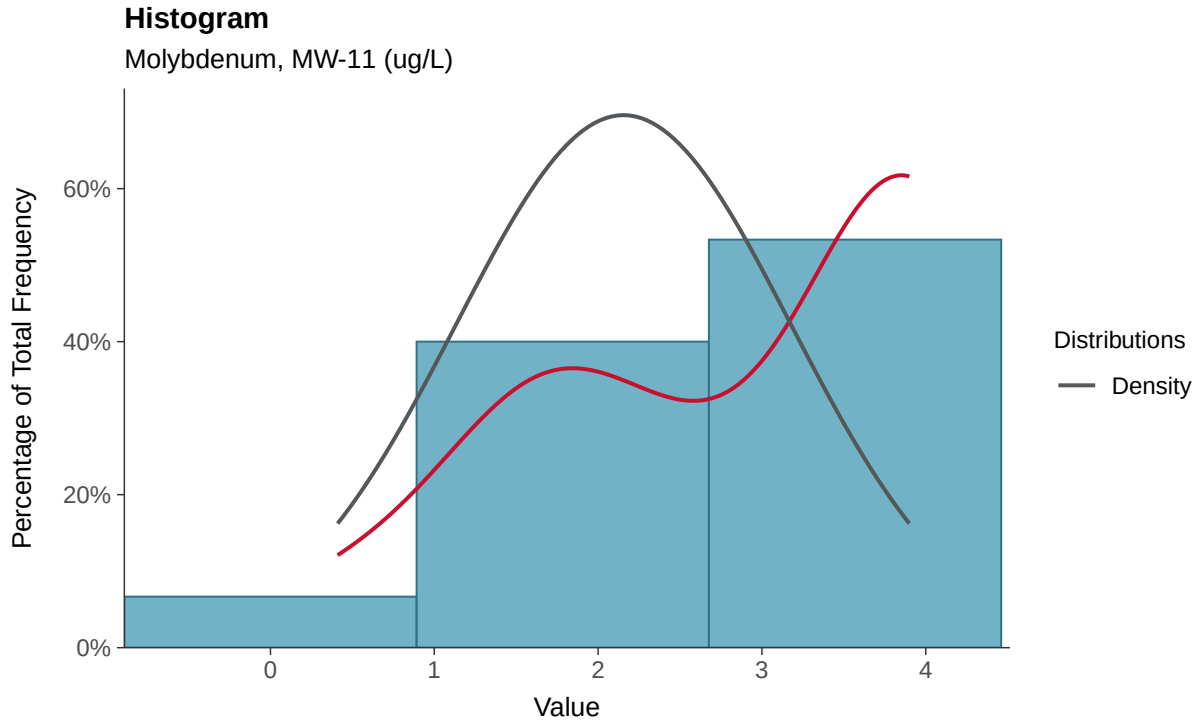
Mercury, MW-11 (ug/L)



App. IV: Molybdenum, MW-11

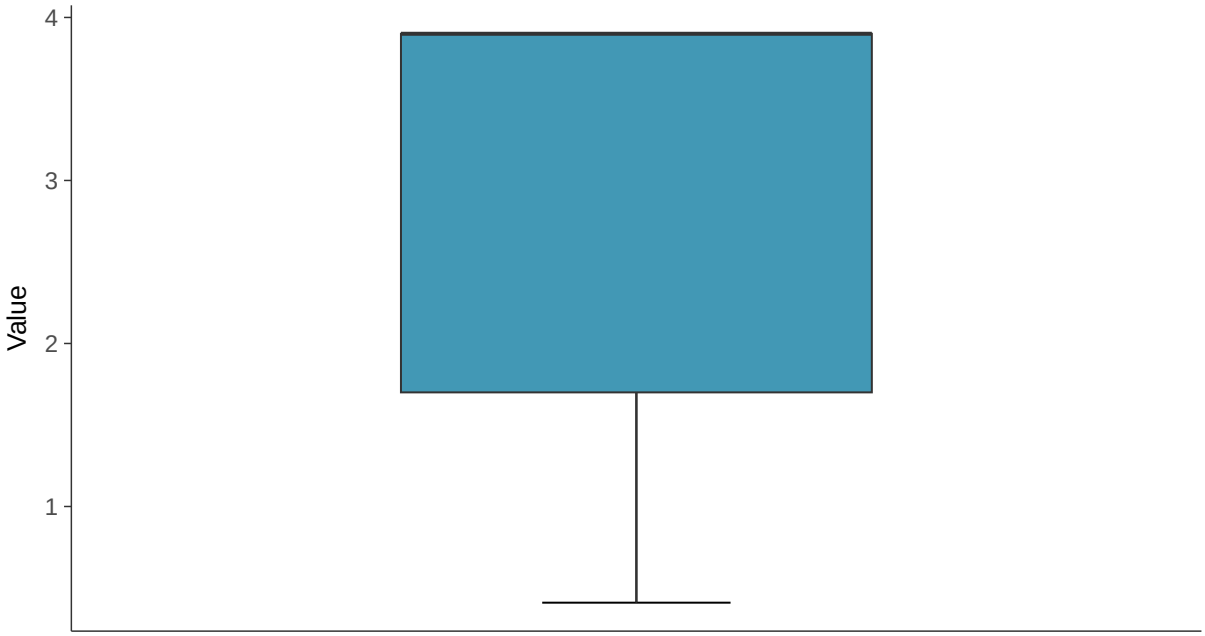
ID: 3_3_116





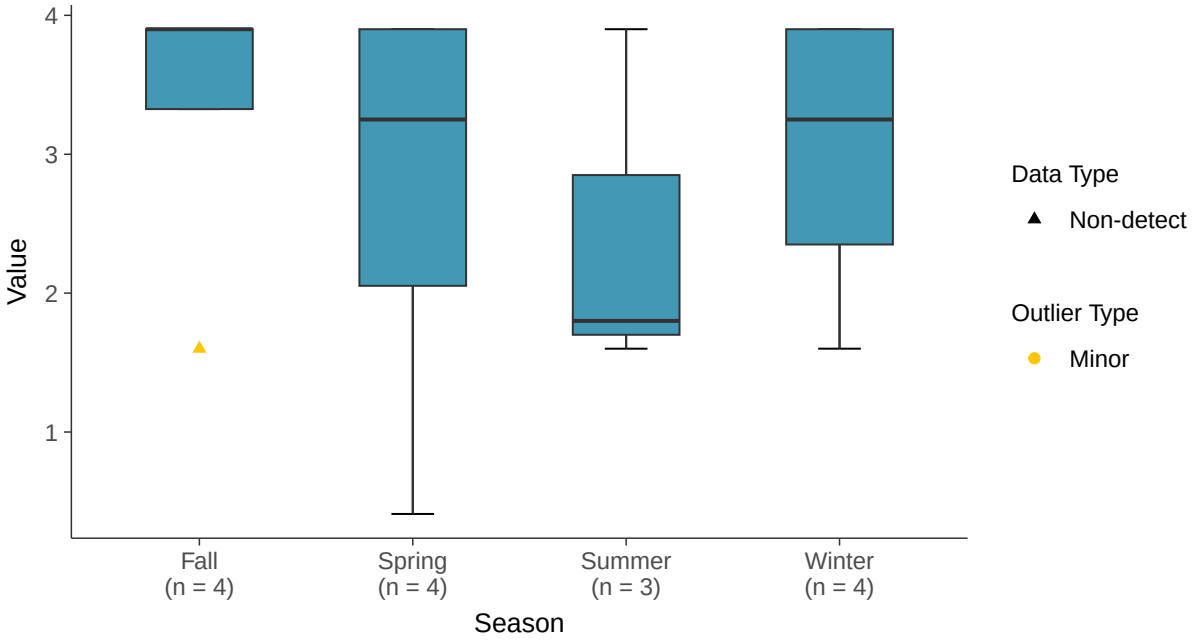
Boxplot

Molybdenum, MW-11 (ug/L)



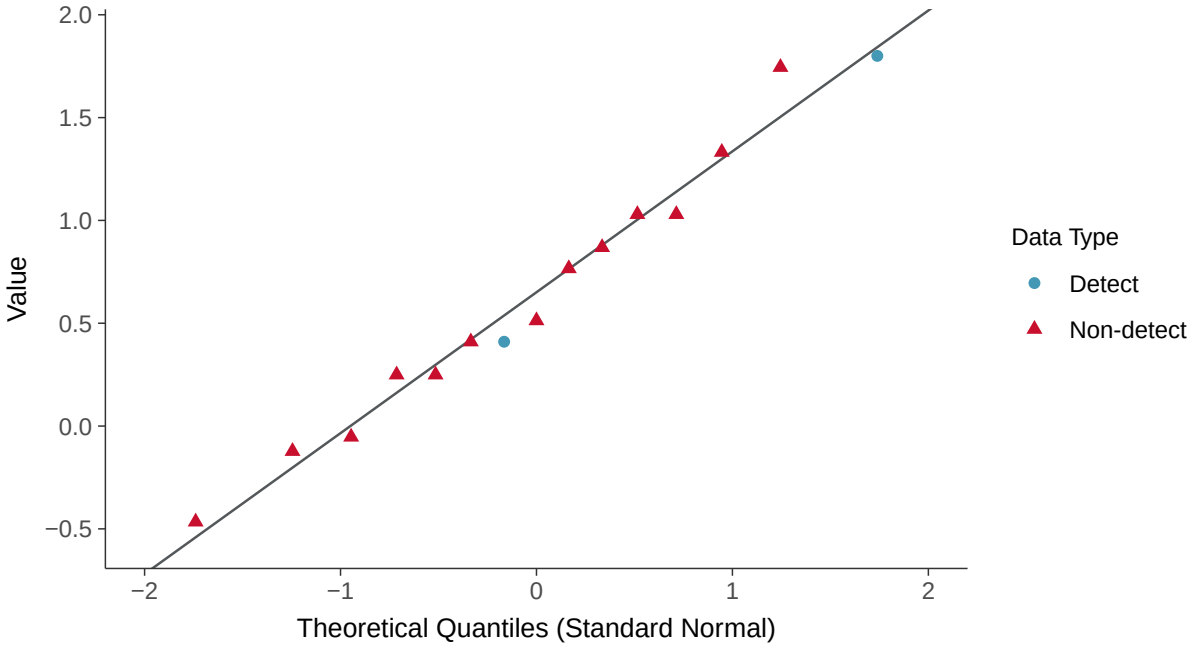
Boxplot by Season

Molybdenum, MW-11 (ug/L)



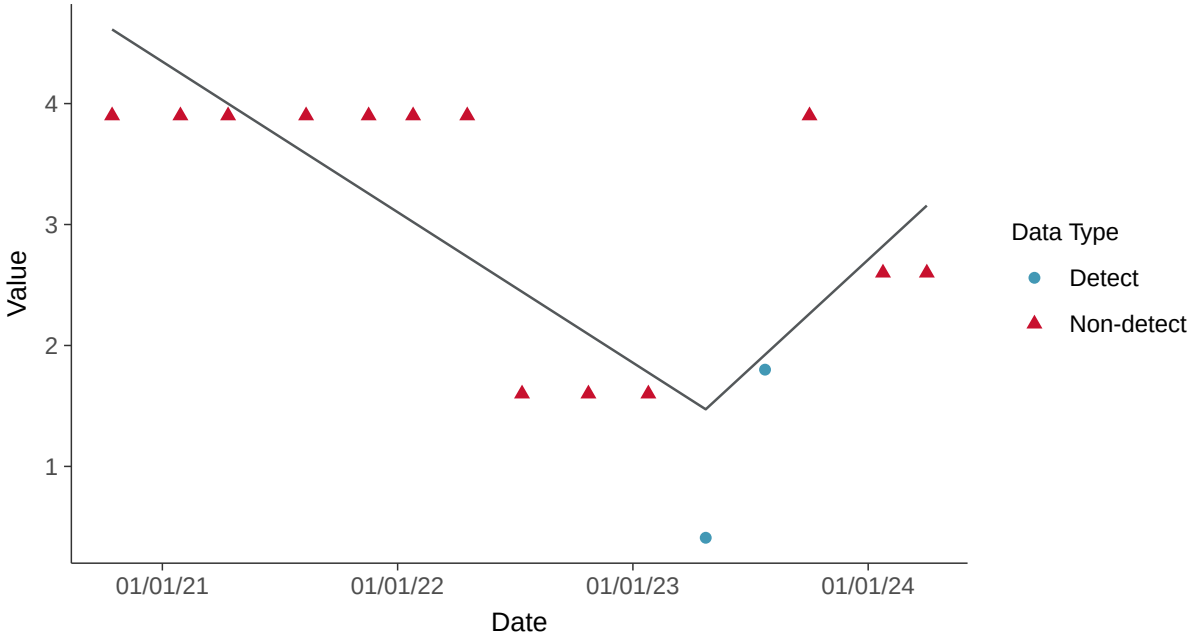
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (ug/L)



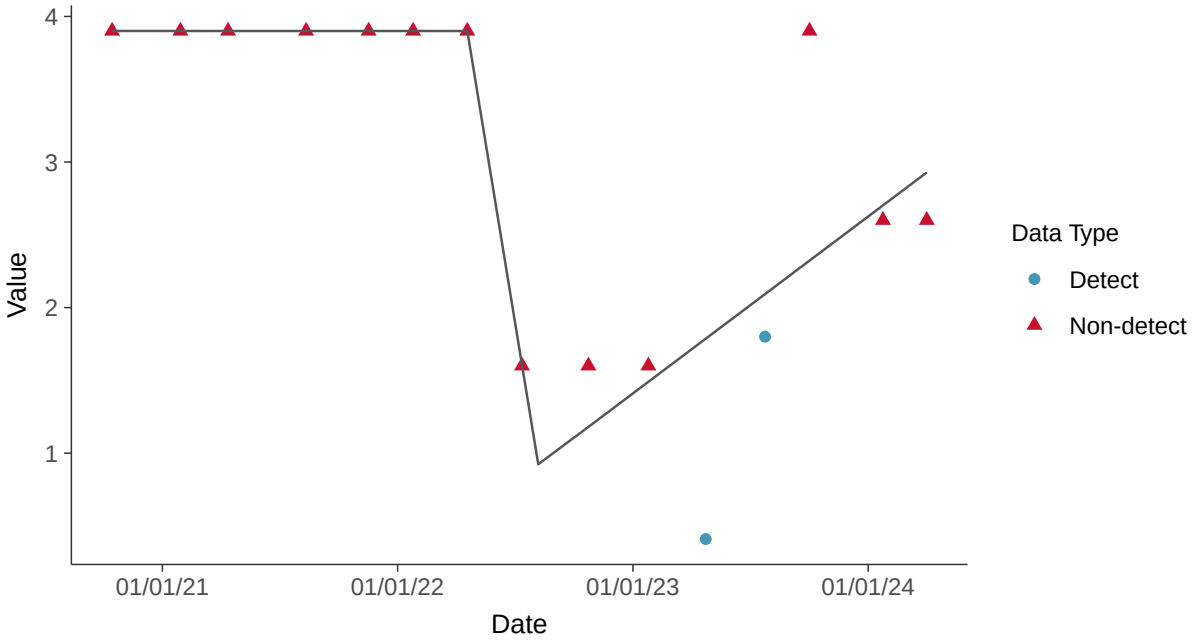
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-11 (ug/L)

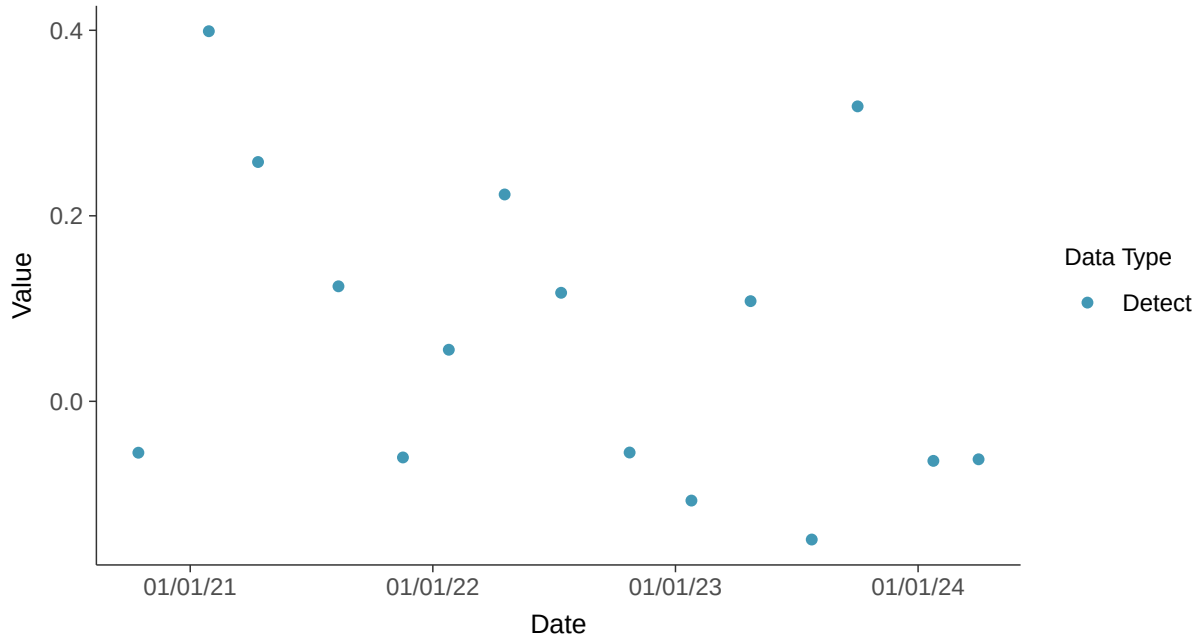


App. IV: Radium-226, MW-11

ID: 3_3_119

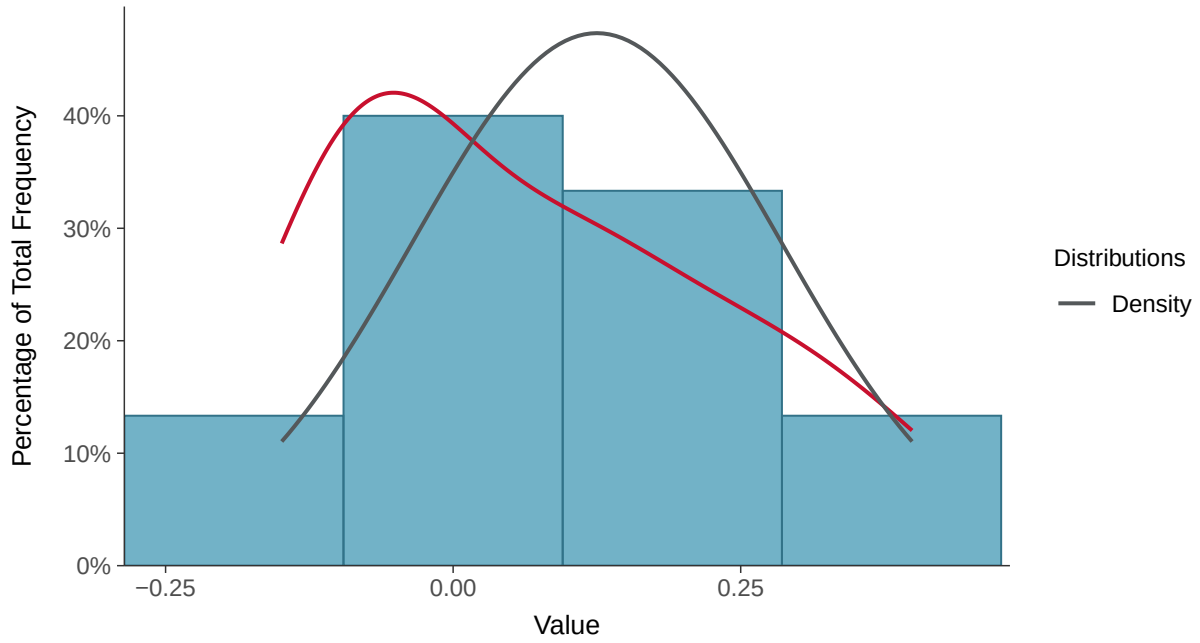
Scatter Plot

Radium-226, MW-11 (pCi/L)



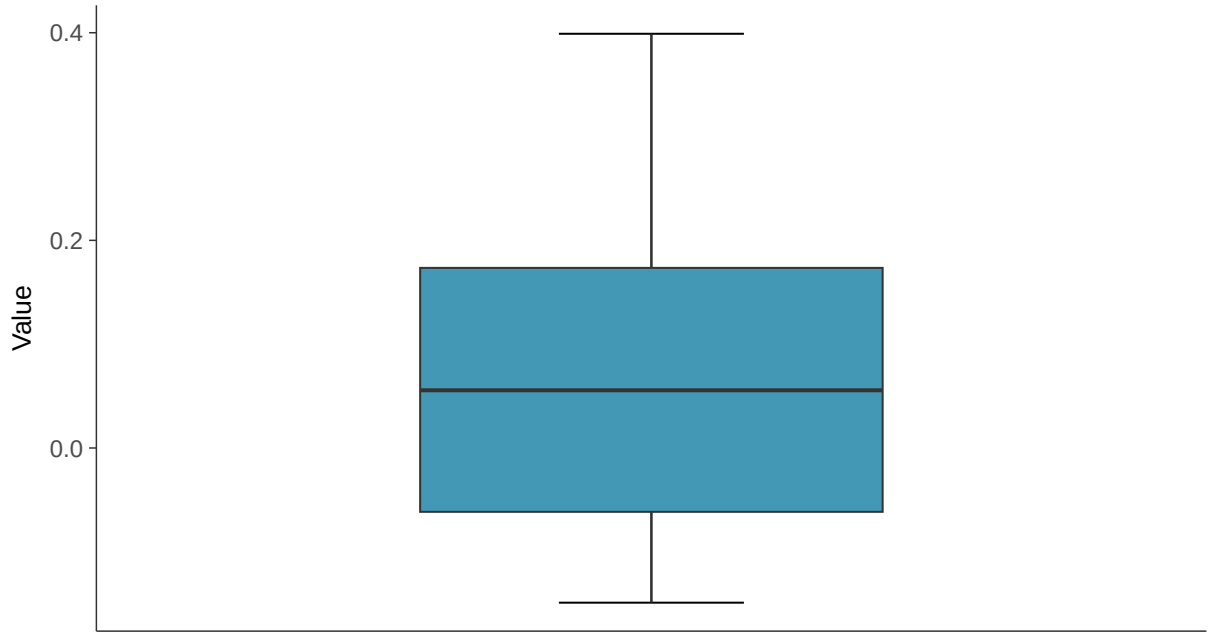
Histogram

Radium-226, MW-11 (pCi/L)



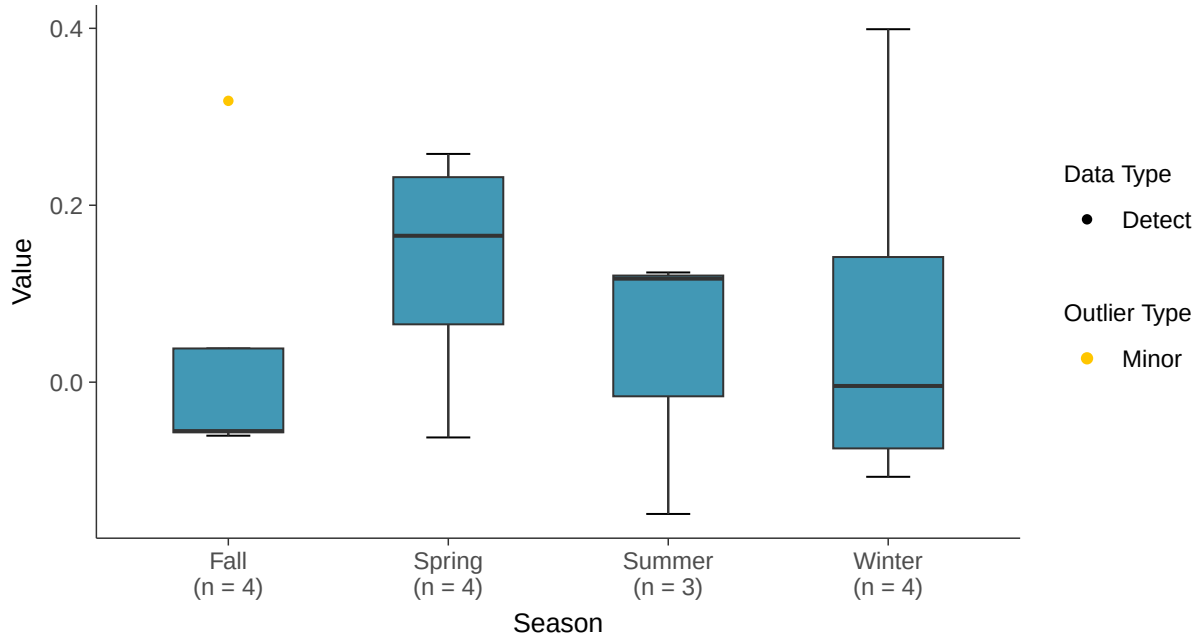
Boxplot

Radium-226, MW-11 (pCi/L)



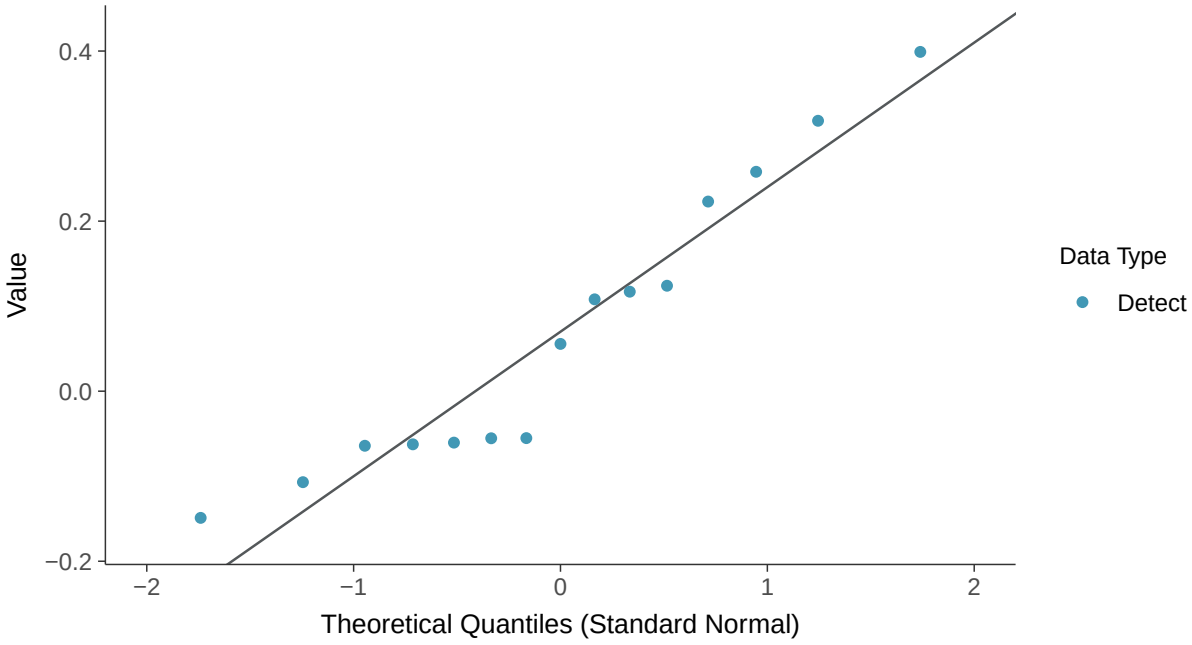
Boxplot by Season

Radium-226, MW-11 (pCi/L)



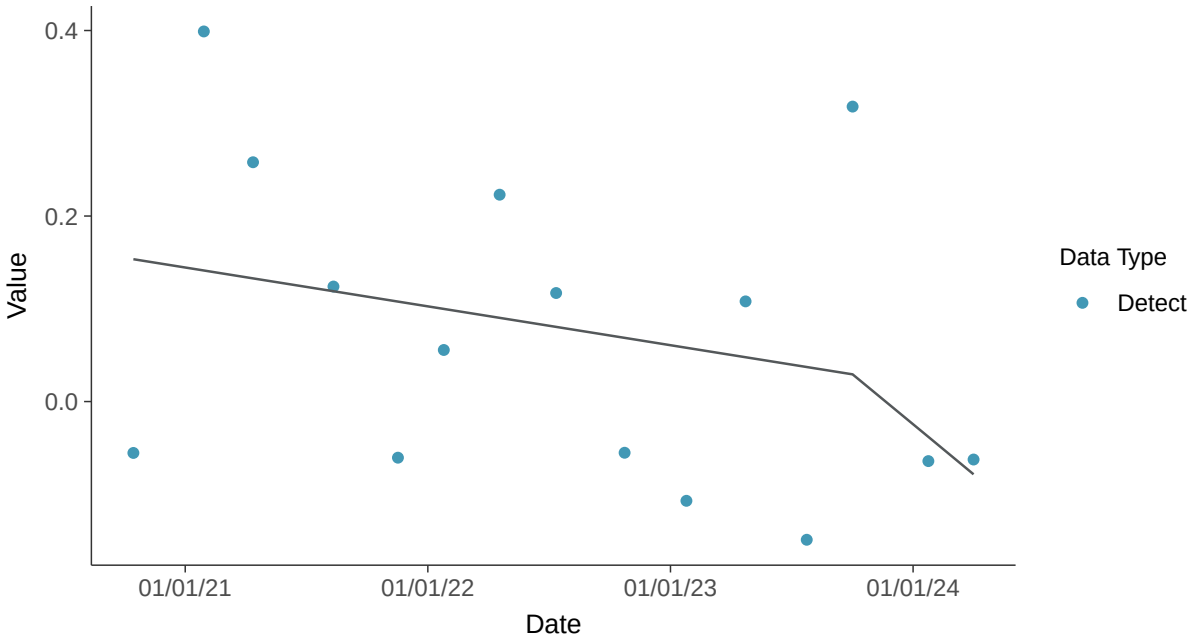
Normal Q-Q plot

Radium-226, MW-11 (pCi/L)



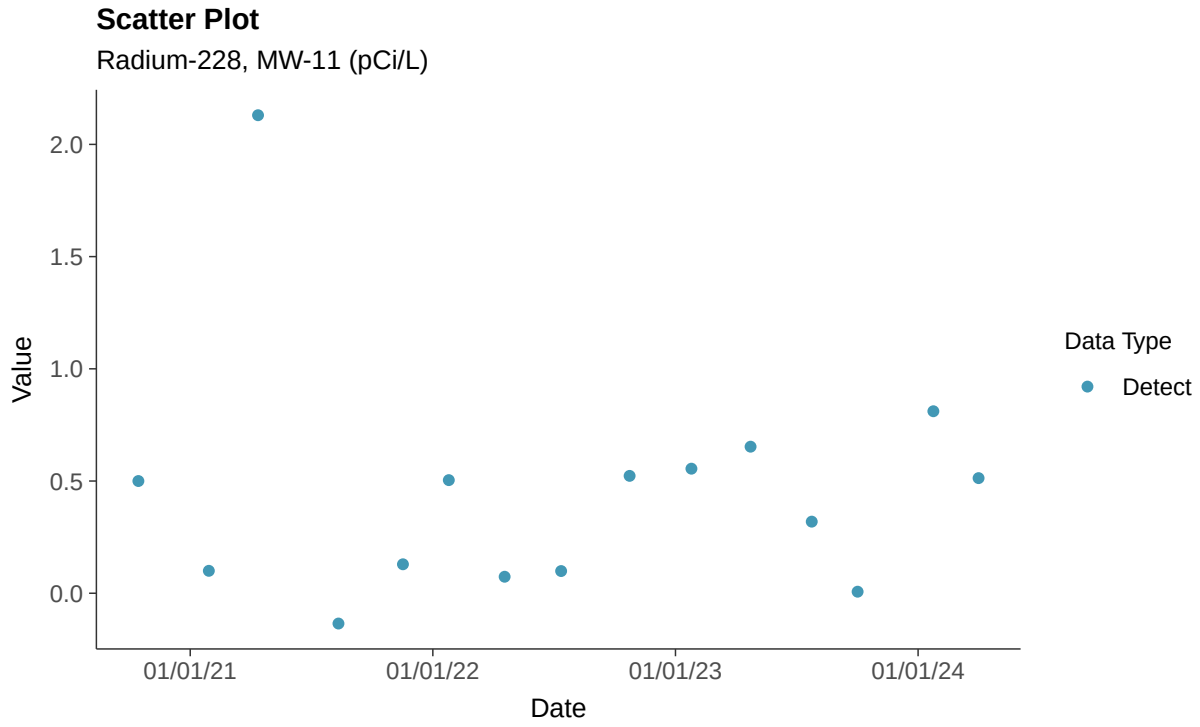
Trend Regression: Piecewise Linear-Linear

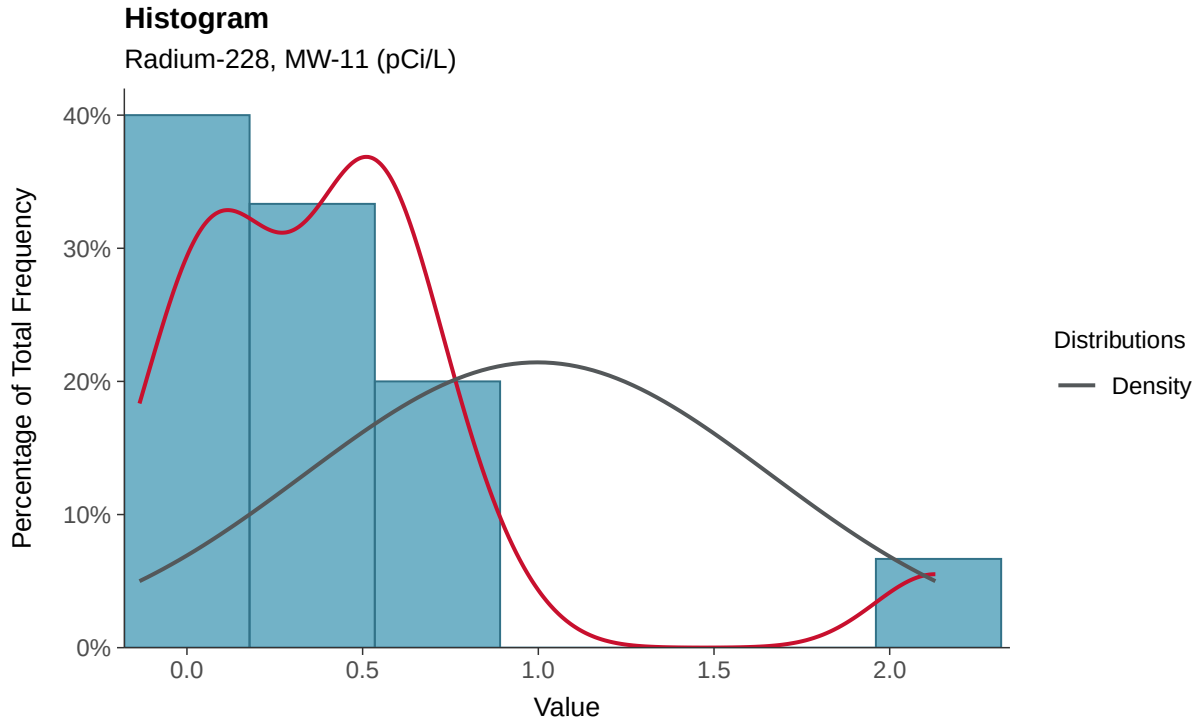
Radium-226, MW-11 (pCi/L)



App. IV: Radium-228, MW-11

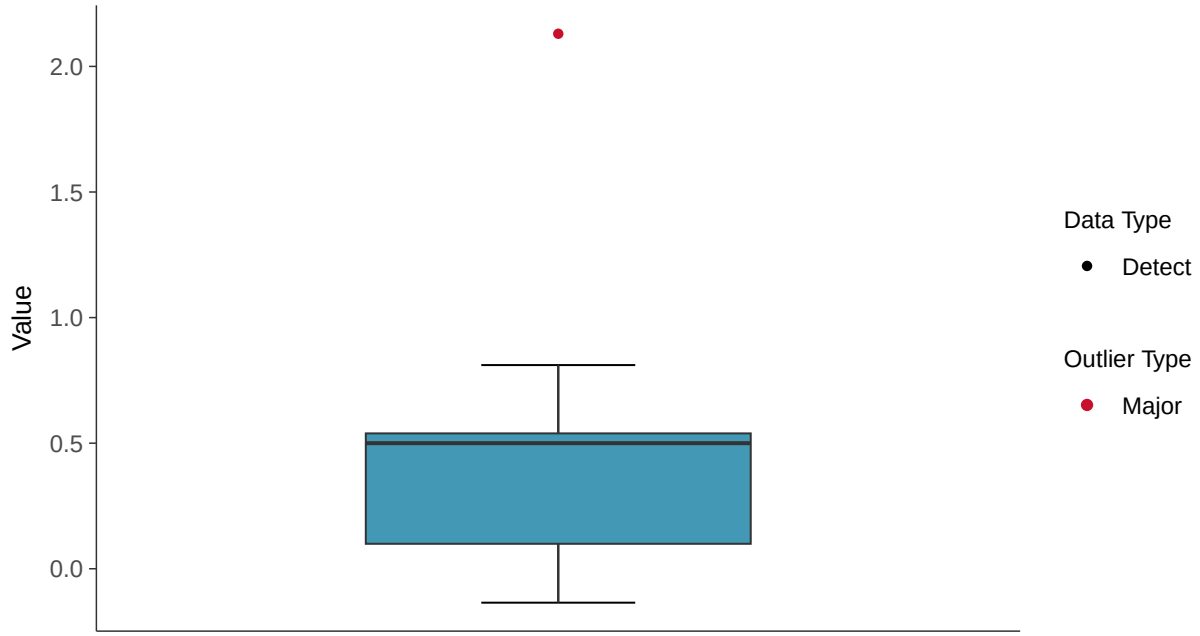
ID: 3_3_120





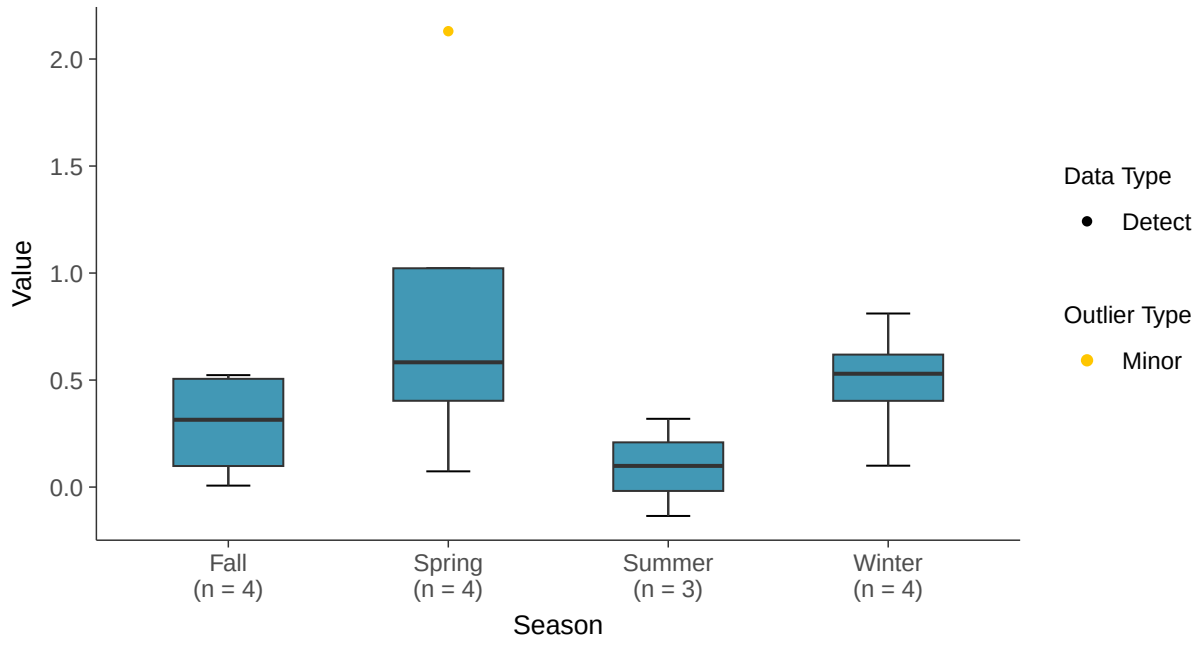
Boxplot

Radium-228, MW-11 (pCi/L)



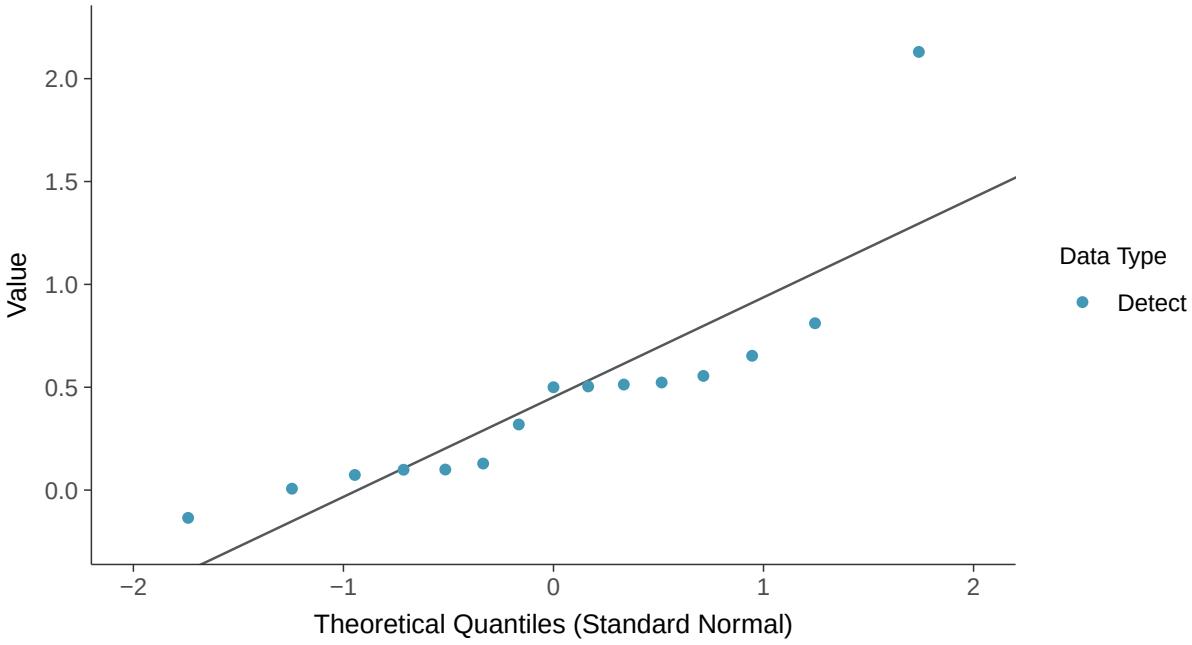
Boxplot by Season

Radium-228, MW-11 (pCi/L)



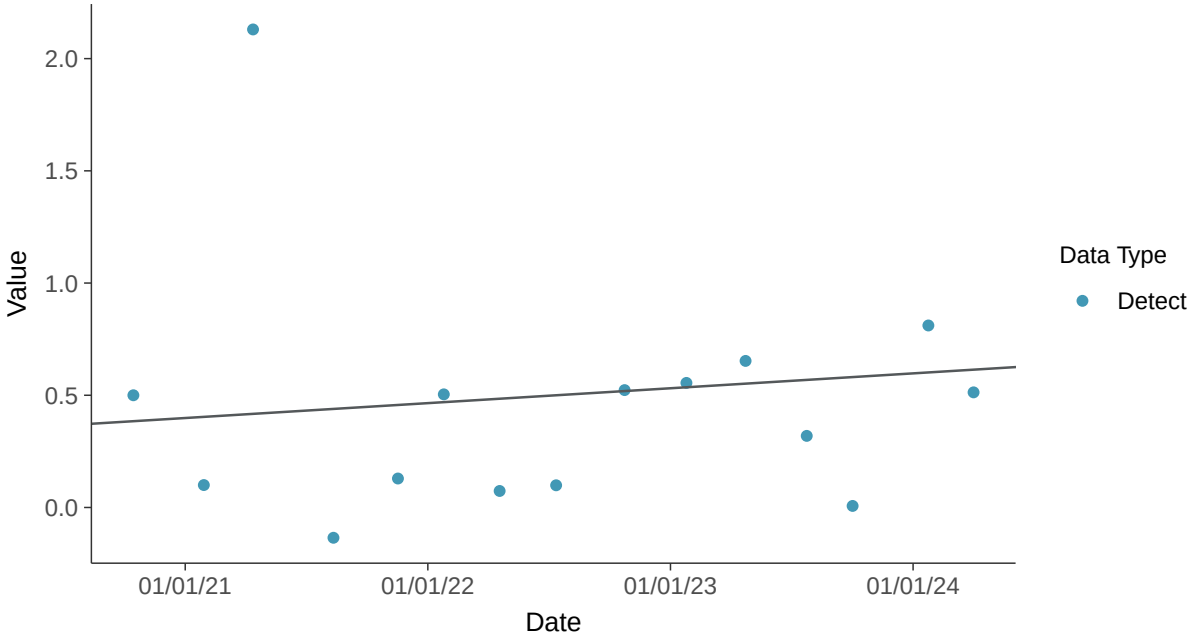
Normal Q-Q plot

Radium-228, MW-11 (pCi/L)



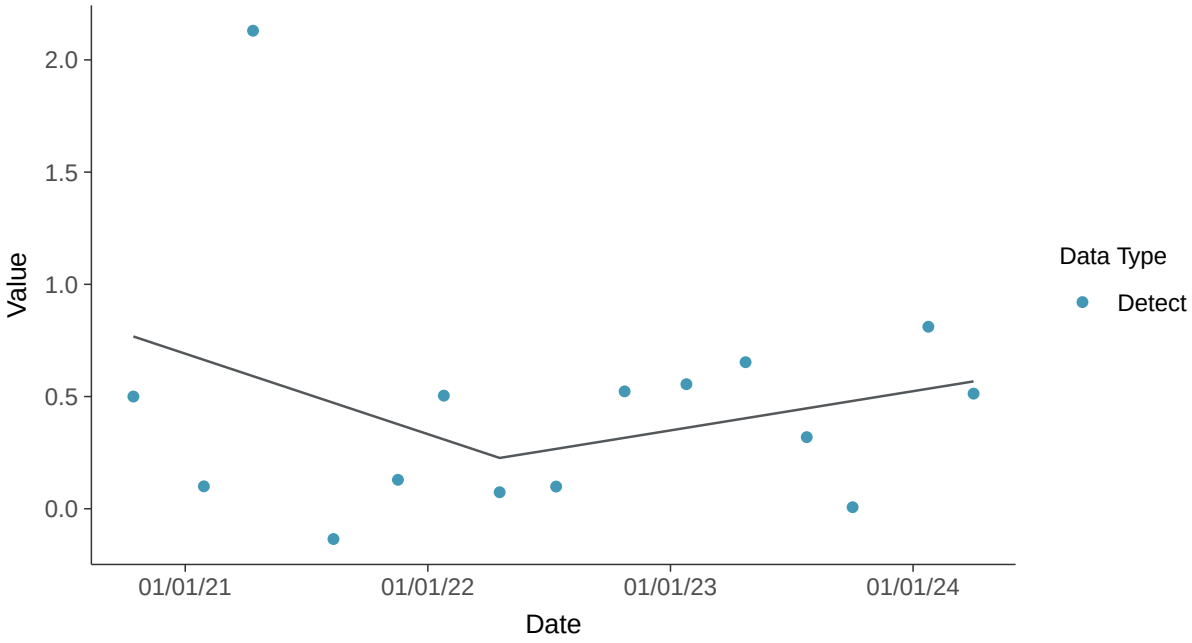
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-11 (pCi/L)



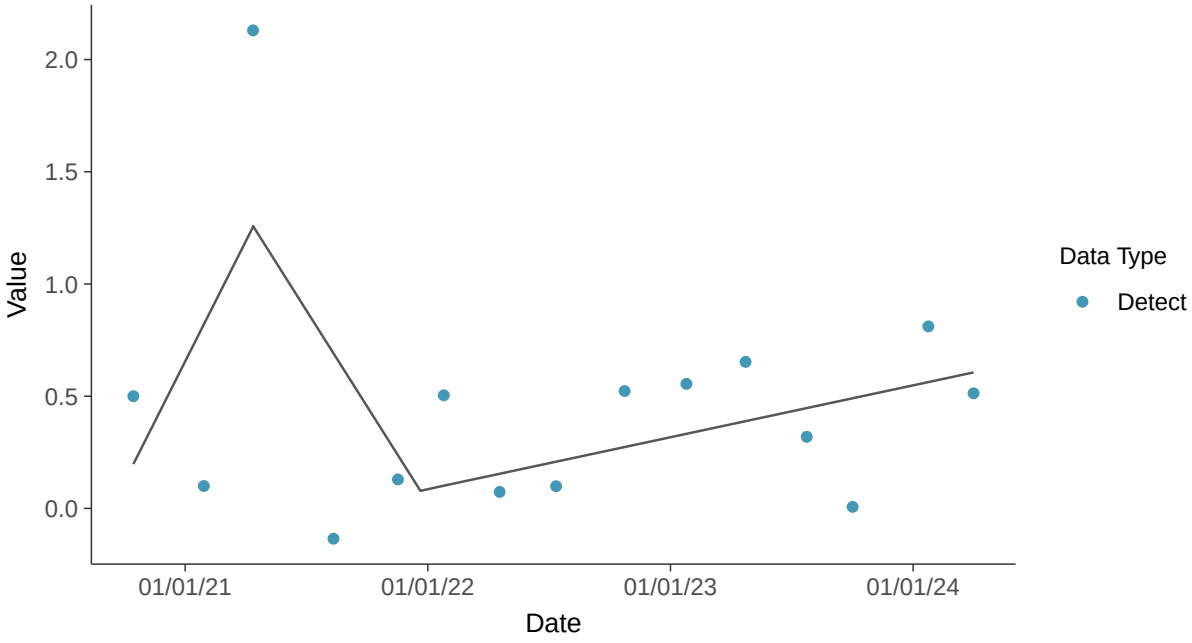
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-11 (pCi/L)



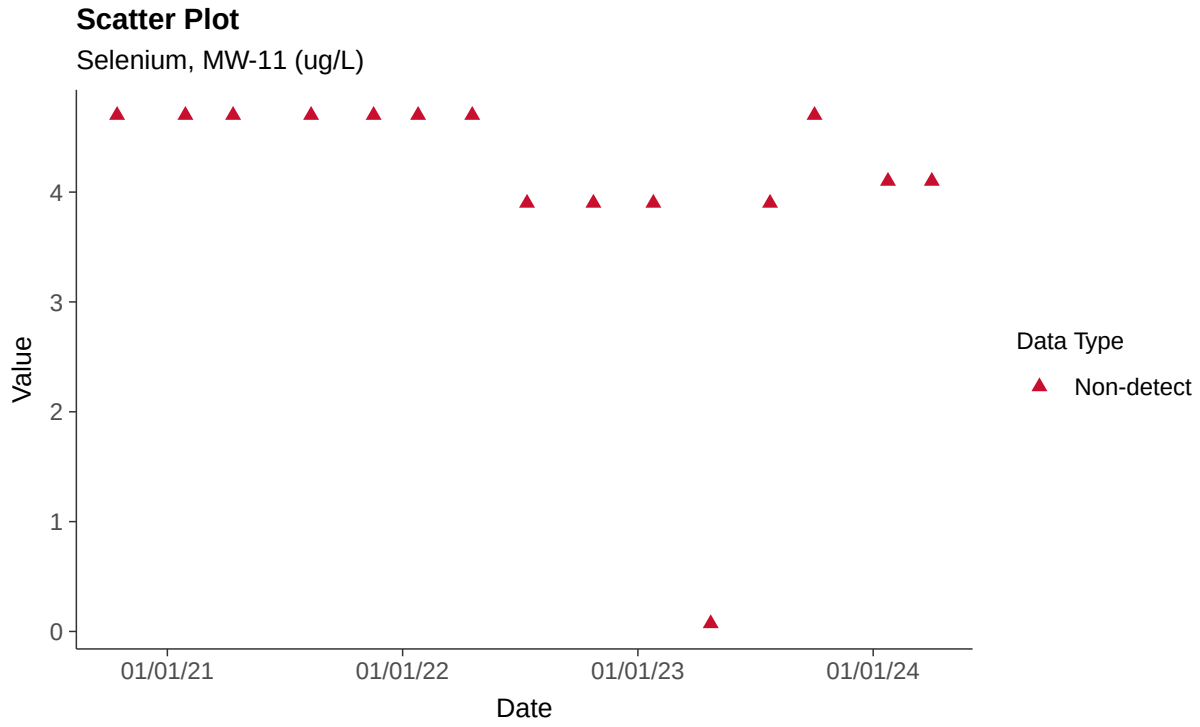
Trend Regression: Piecewise Linear-Linear-Linear

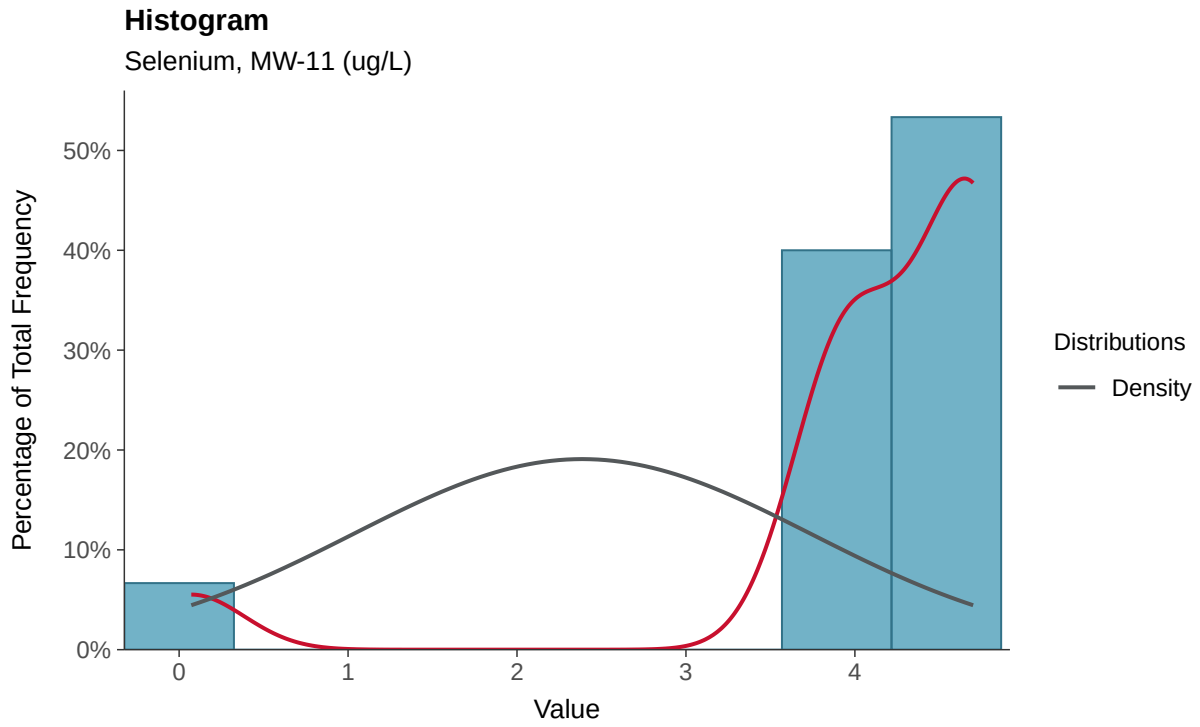
Radium-228, MW-11 (pCi/L)



App. IV: Selenium, MW-11

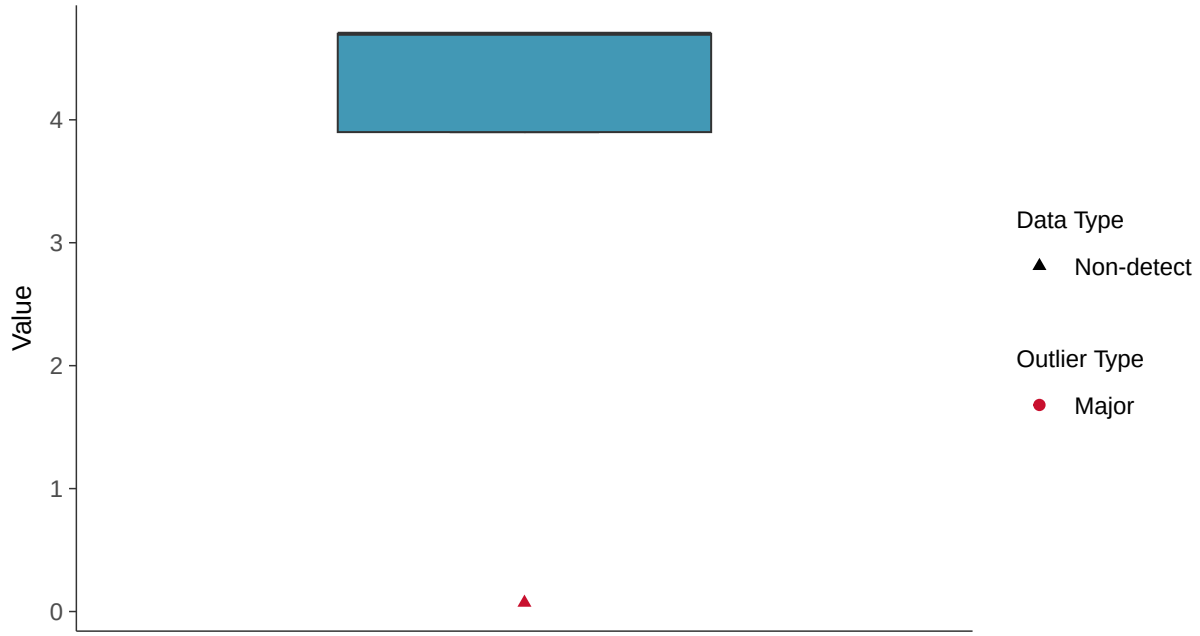
ID: 3_3_121





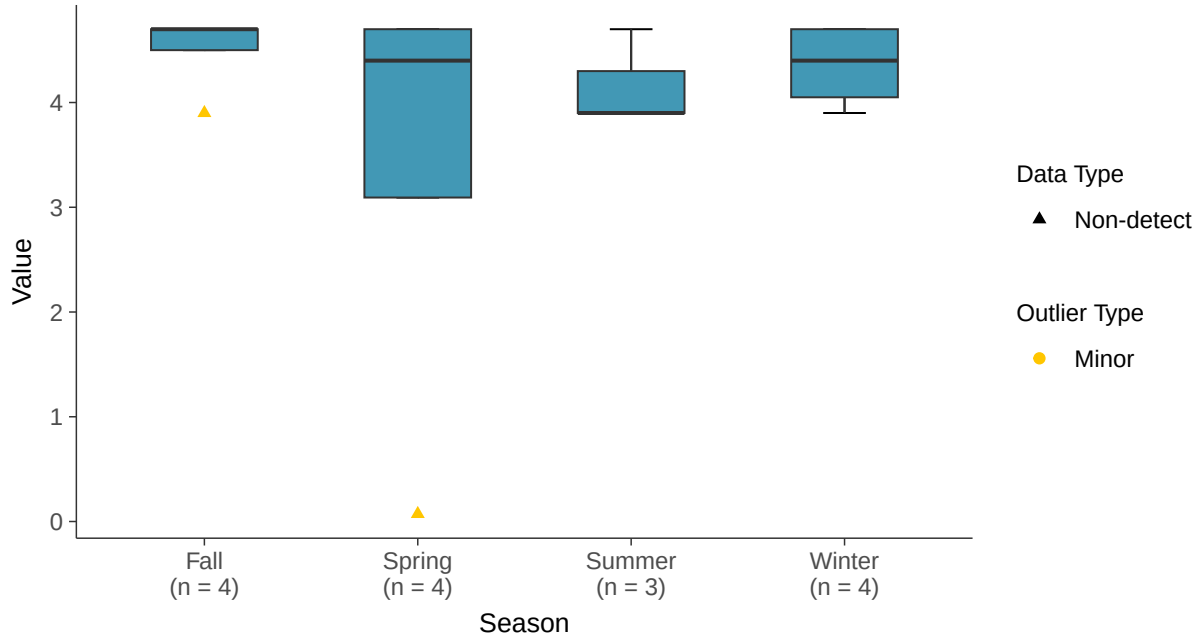
Boxplot

Selenium, MW-11 (ug/L)



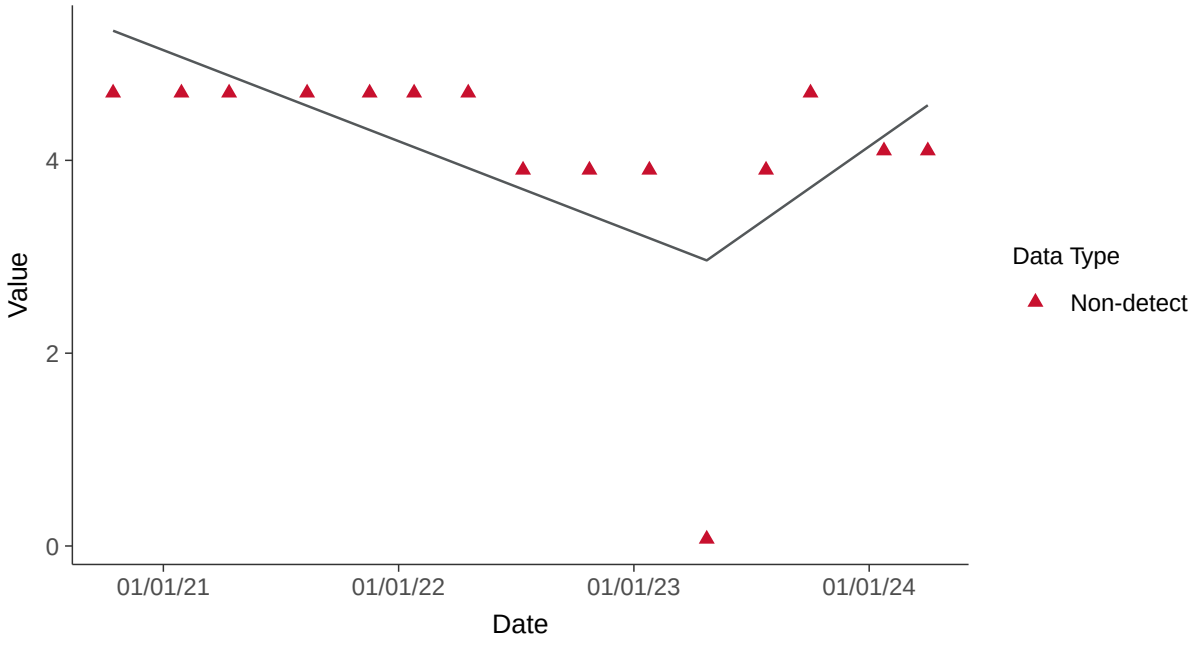
Boxplot by Season

Selenium, MW-11 (ug/L)



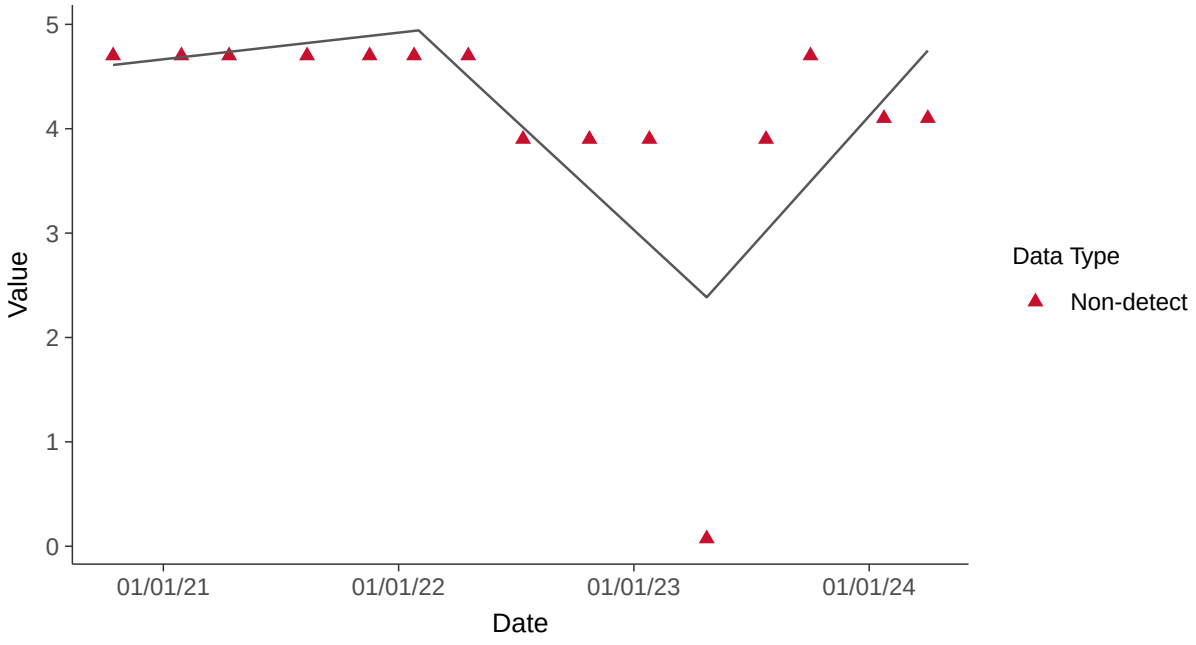
Trend Regression: Piecewise Linear-Linear

Selenium, MW-11 (ug/L)



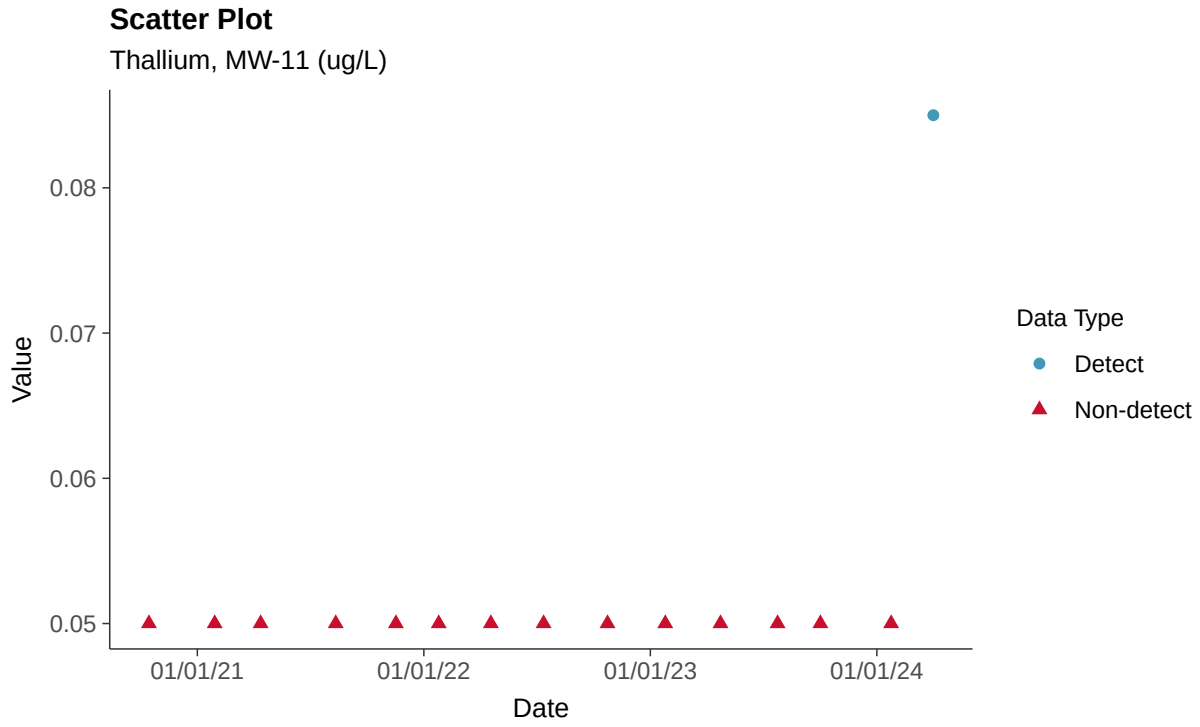
Trend Regression: Piecewise Linear-Linear-Linear

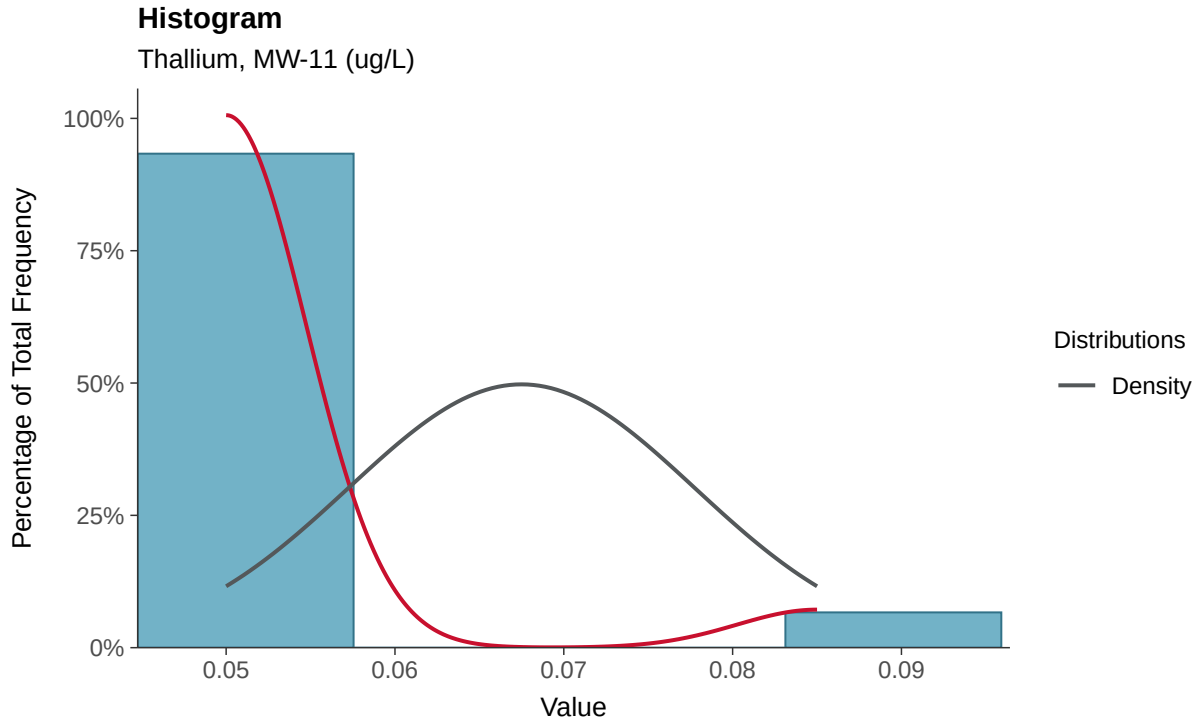
Selenium, MW-11 (ug/L)



App. IV: Thallium, MW-11

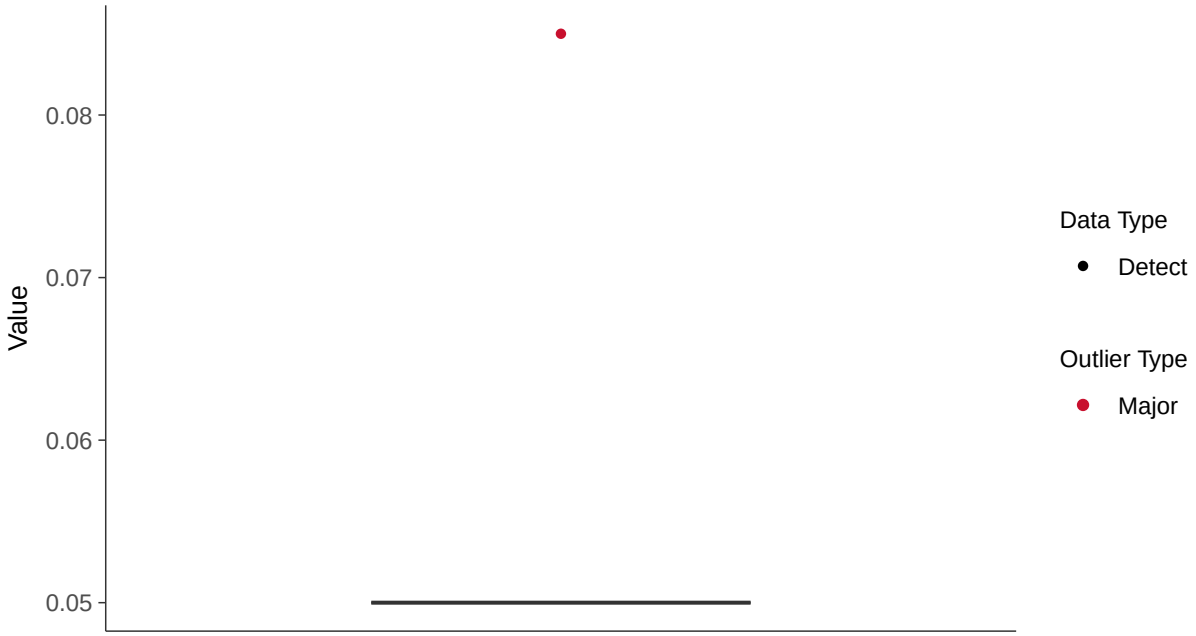
ID: 3_3_124





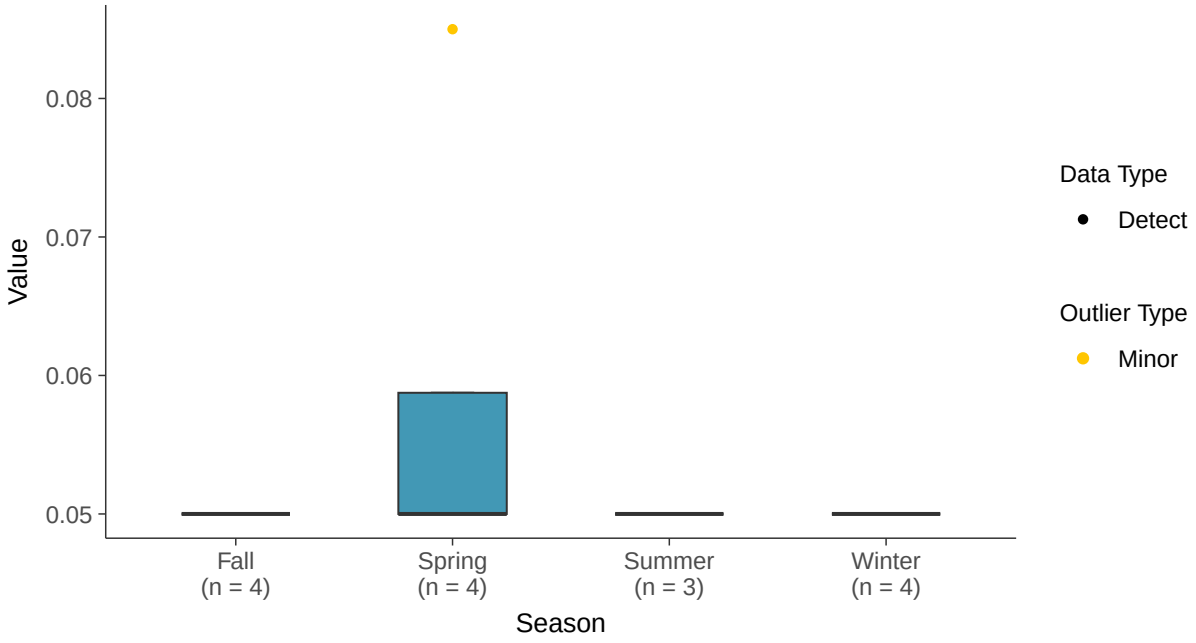
Boxplot

Thallium, MW-11 (ug/L)



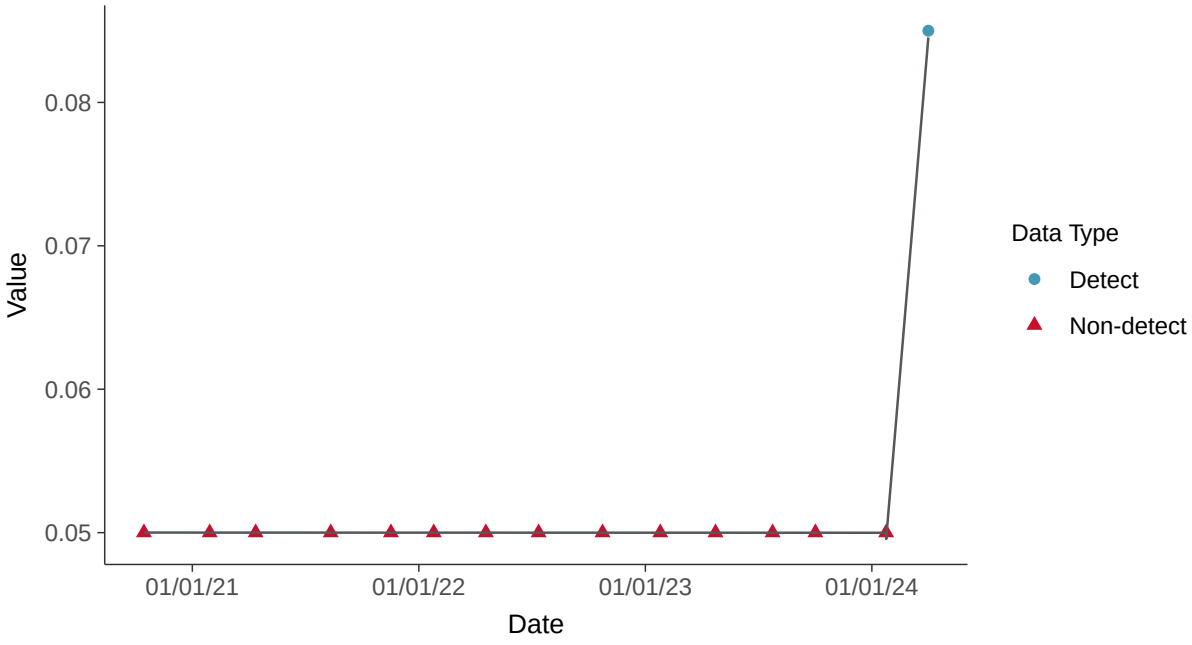
Boxplot by Season

Thallium, MW-11 (ug/L)



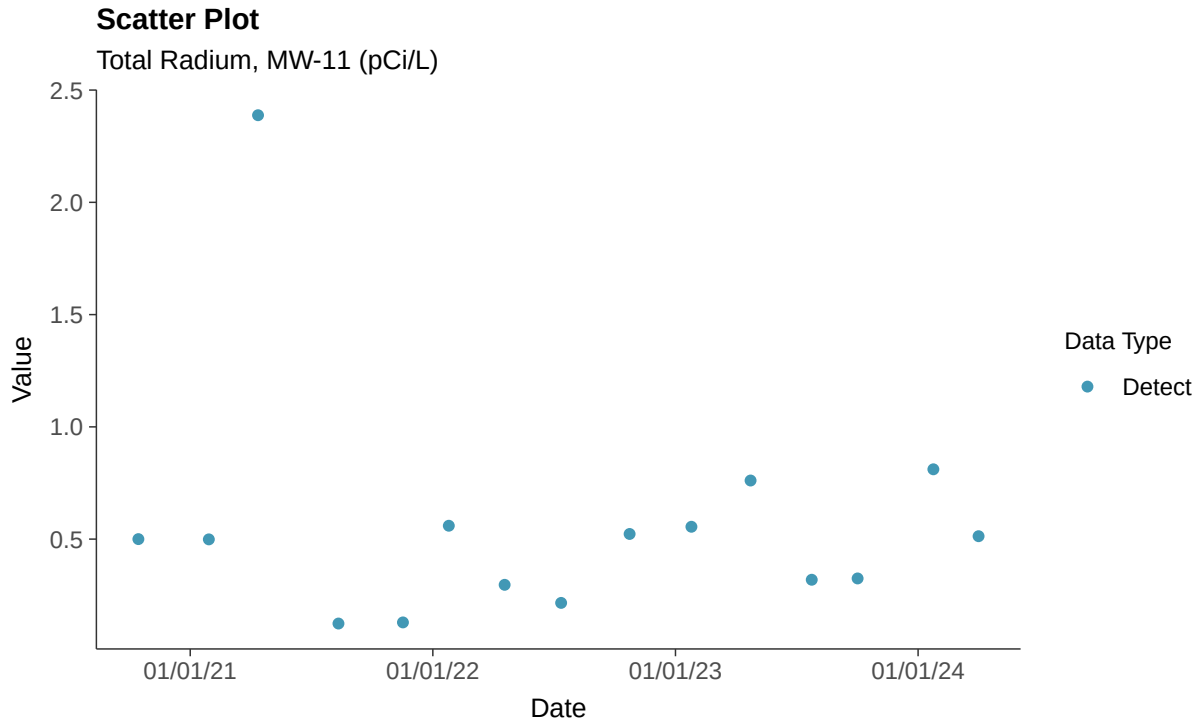
Trend Regression: Piecewise Linear-Linear

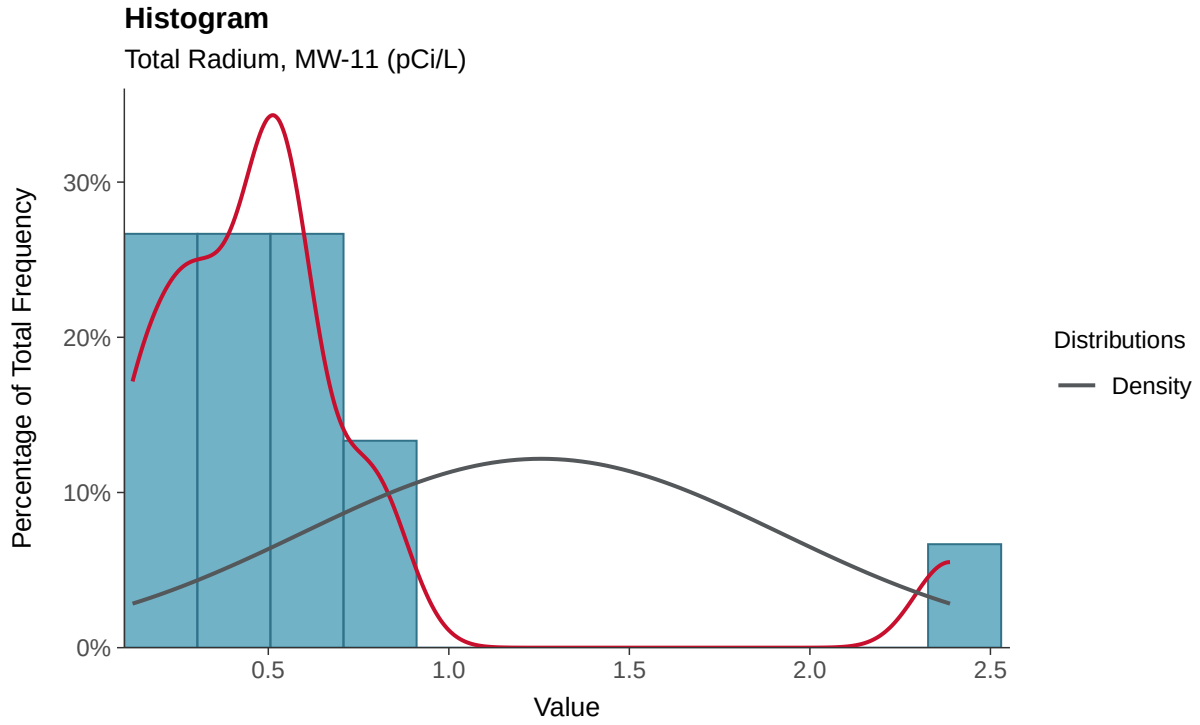
Thallium, MW-11 (ug/L)



App. IV: Total Radium, MW-11

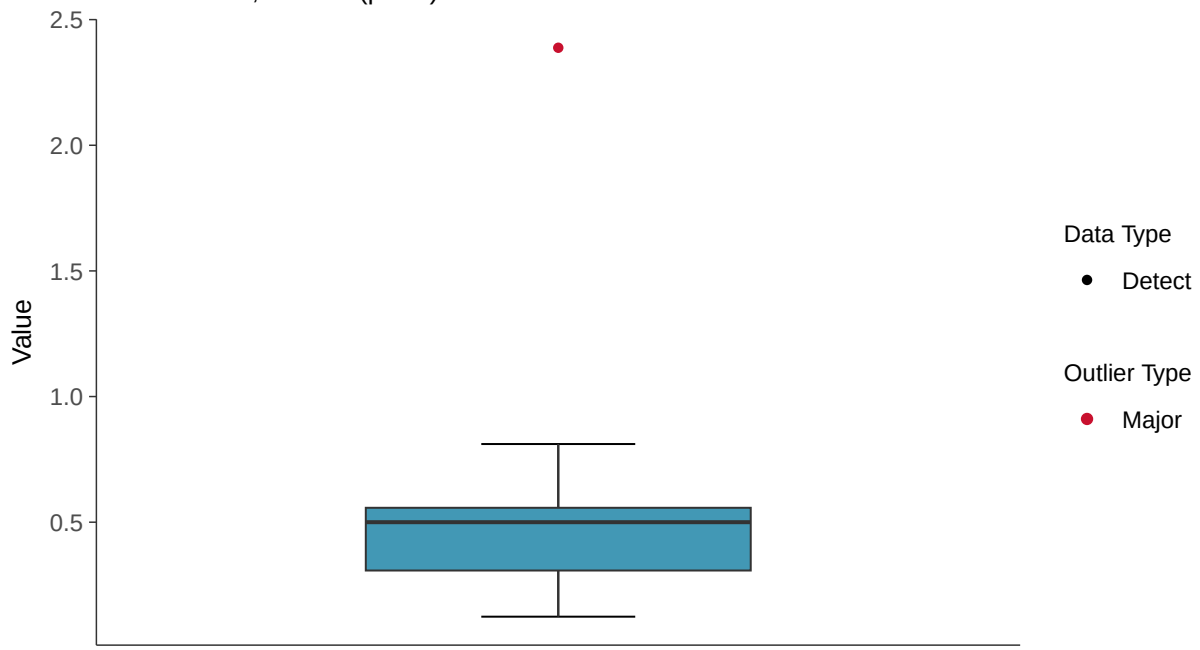
ID: 3_3_126





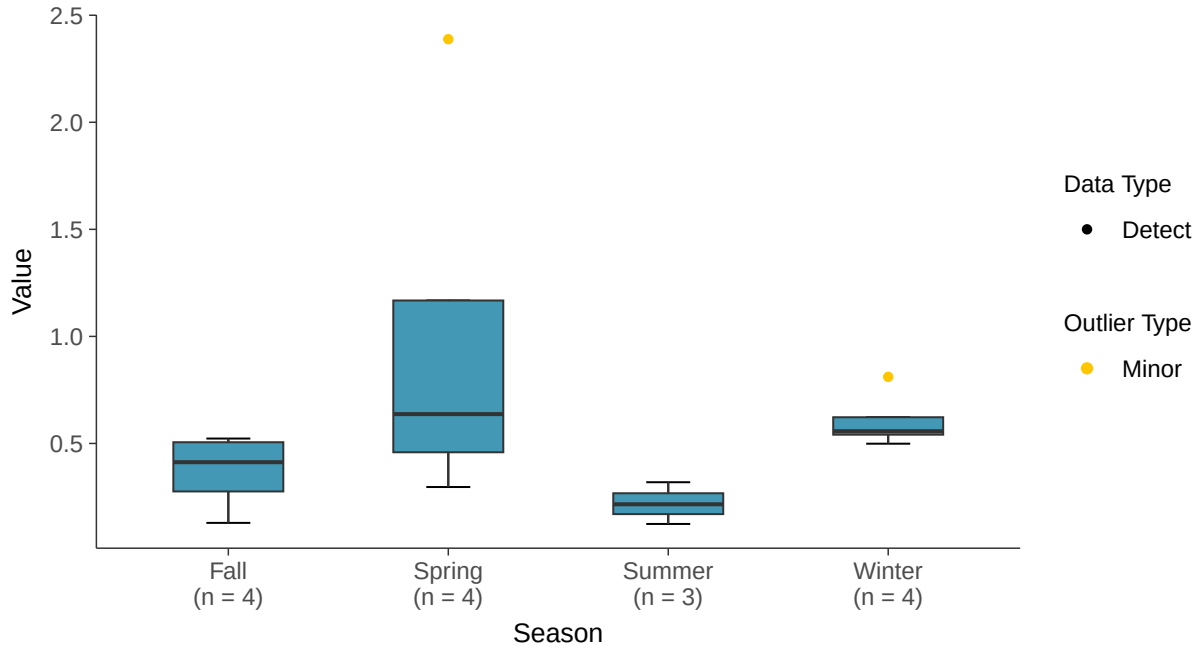
Boxplot

Total Radium, MW-11 (pCi/L)



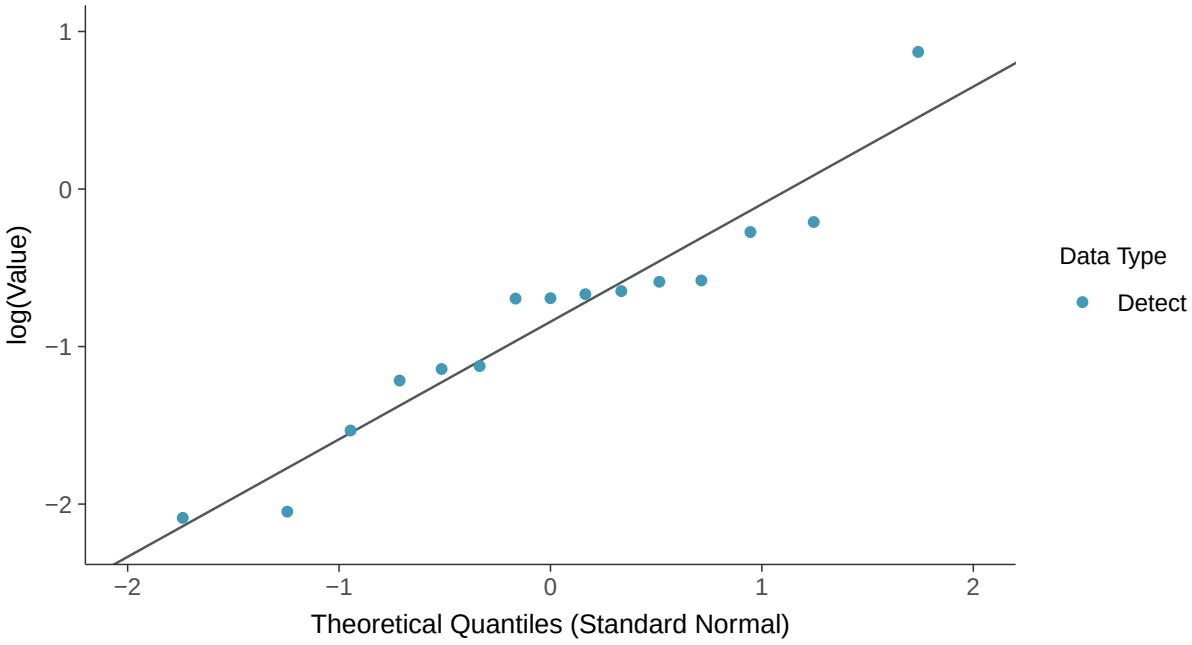
Boxplot by Season

Total Radium, MW-11 (pCi/L)



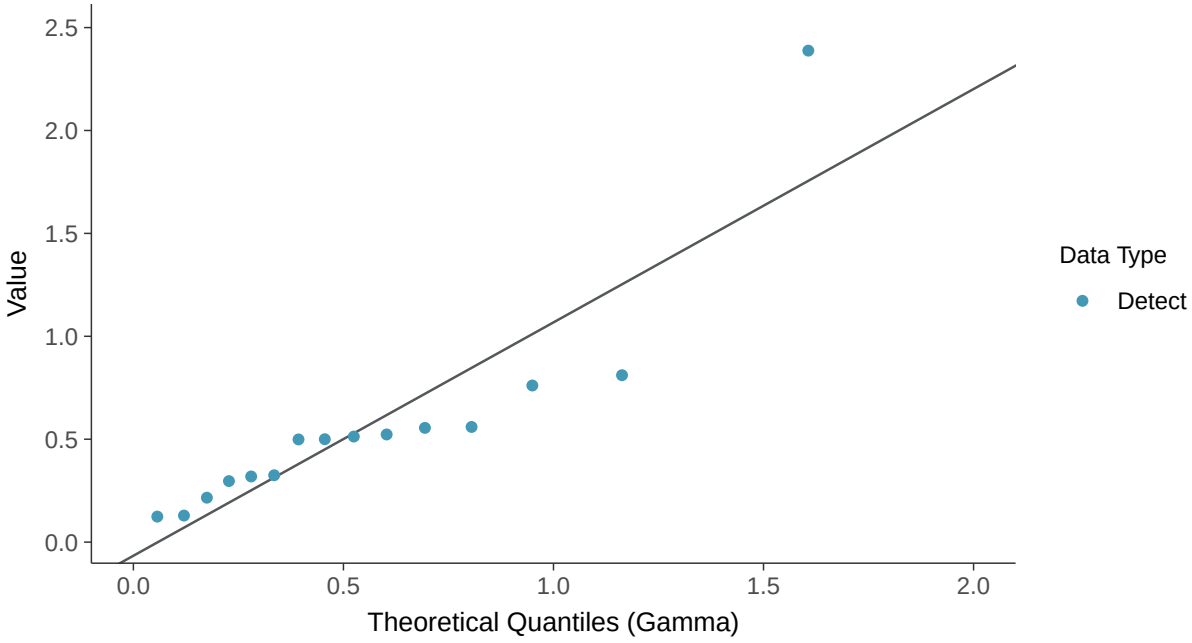
Lognormal Q-Q plot

Total Radium, MW-11 (pCi/L)



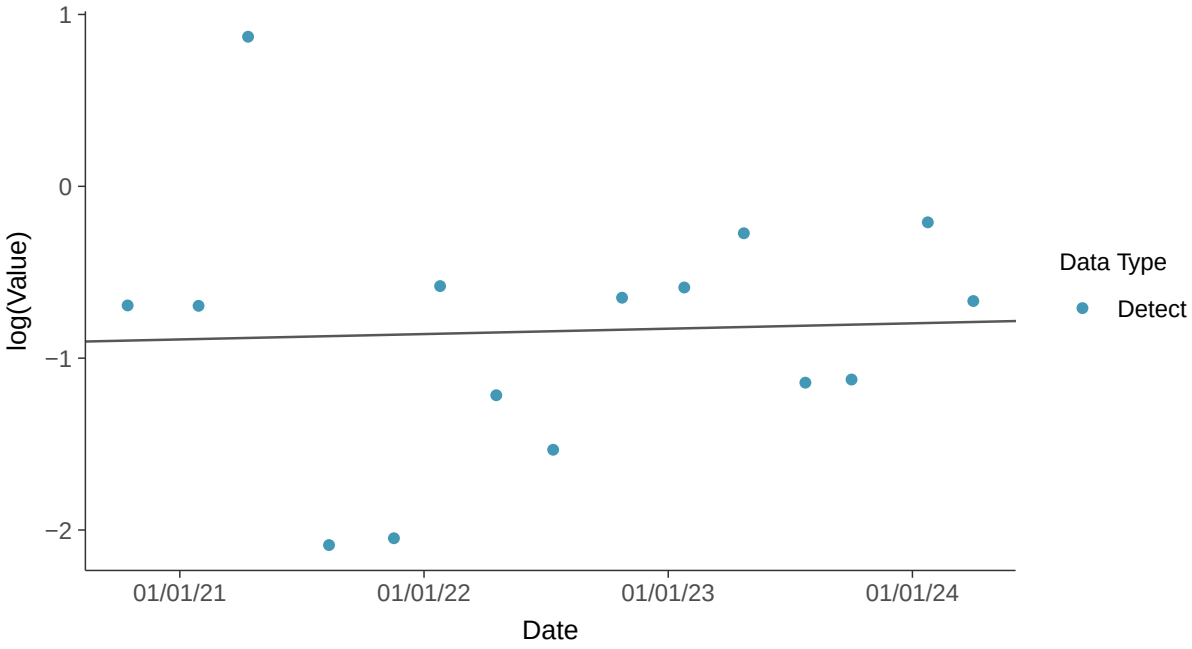
Gamma Q-Q plot

Total Radium, MW-11 (pCi/L)



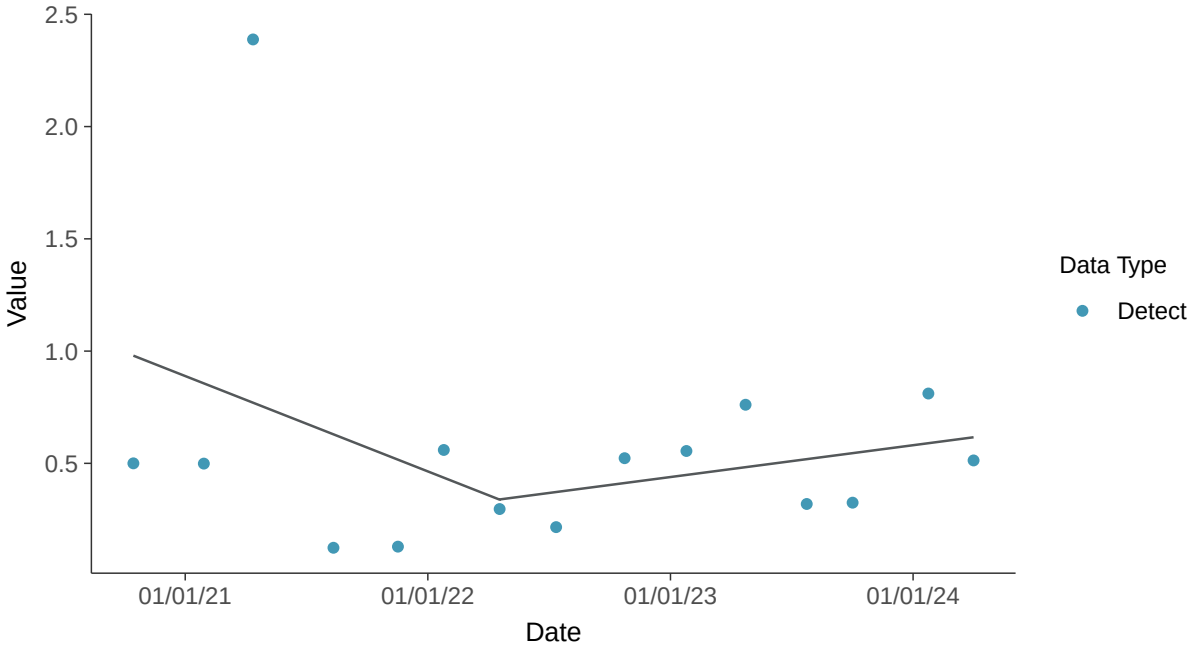
Trend Regression: Lognormal MLE

Total Radium, MW-11 (pCi/L)



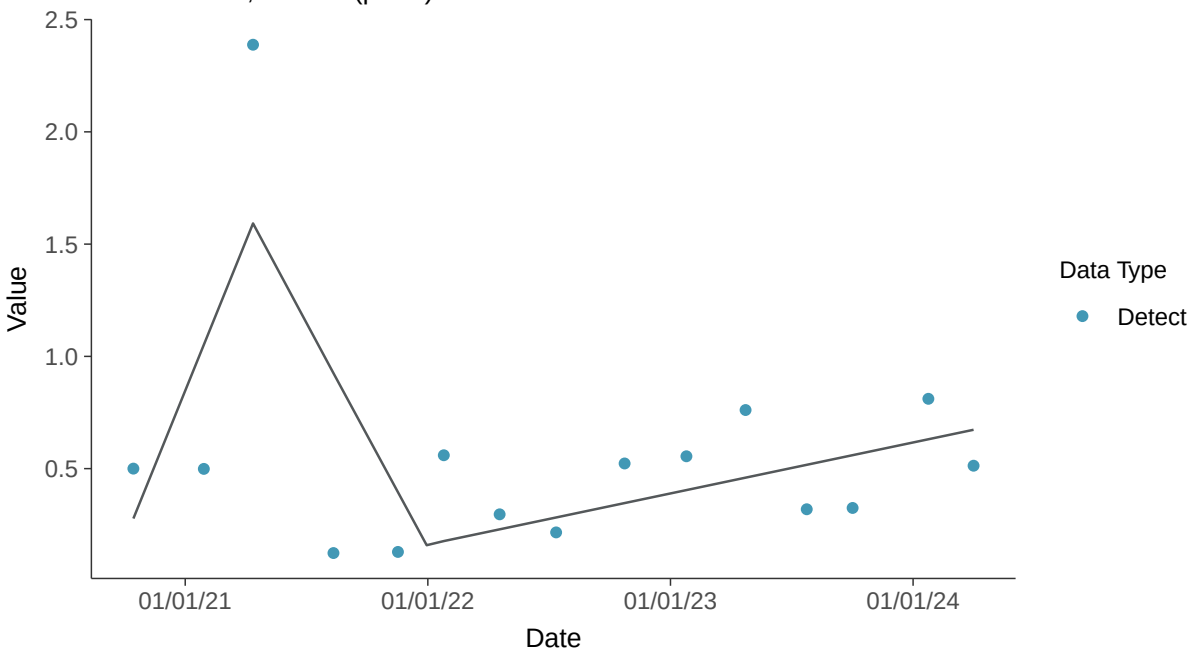
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-11 (pCi/L)



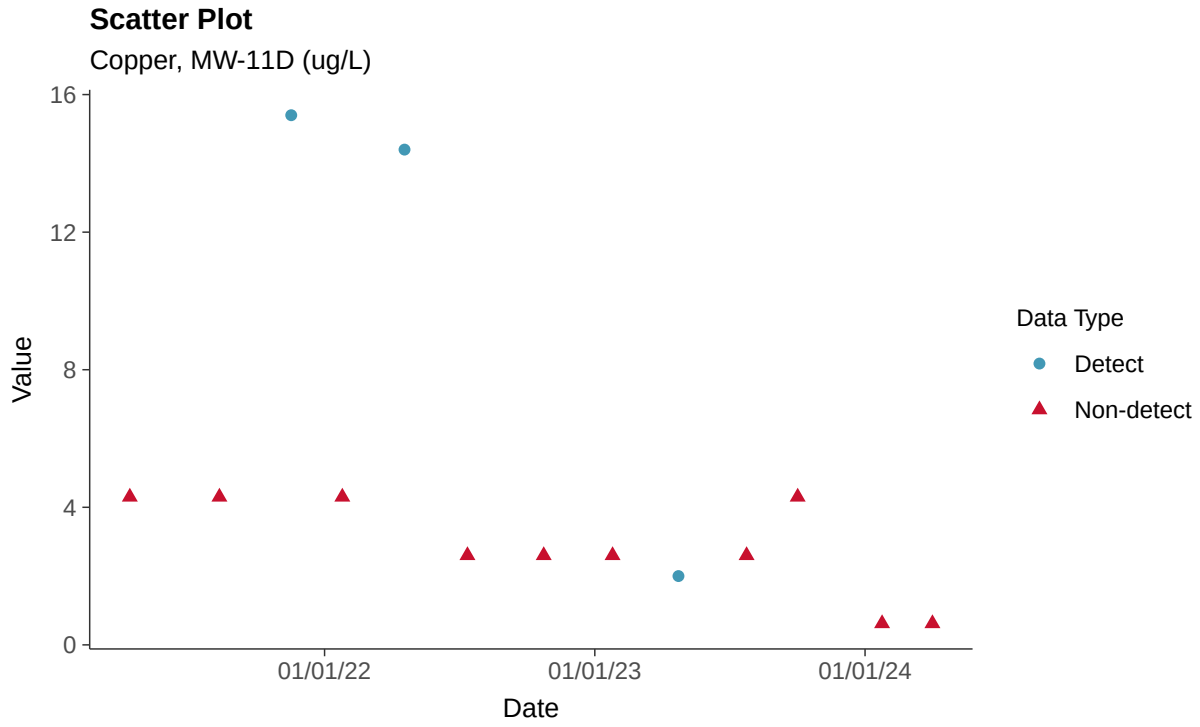
Trend Regression: Piecewise Linear-Linear-Linear

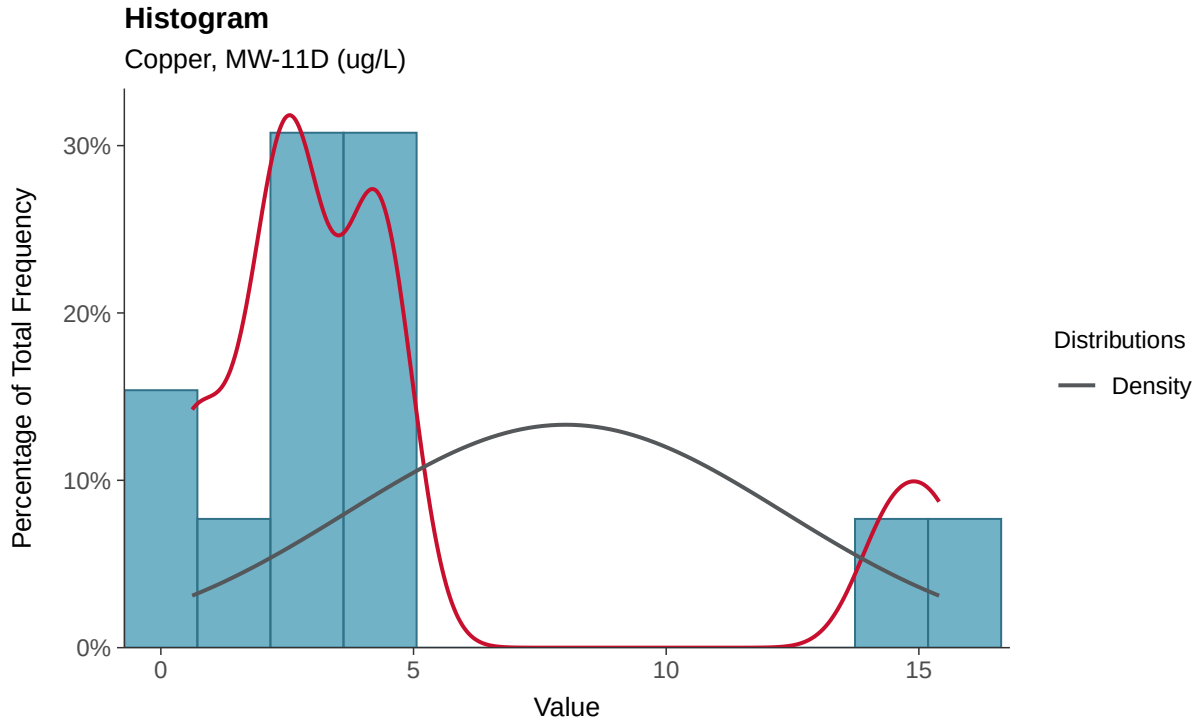
Total Radium, MW-11 (pCi/L)



App. I Metals: Copper, MW-11D

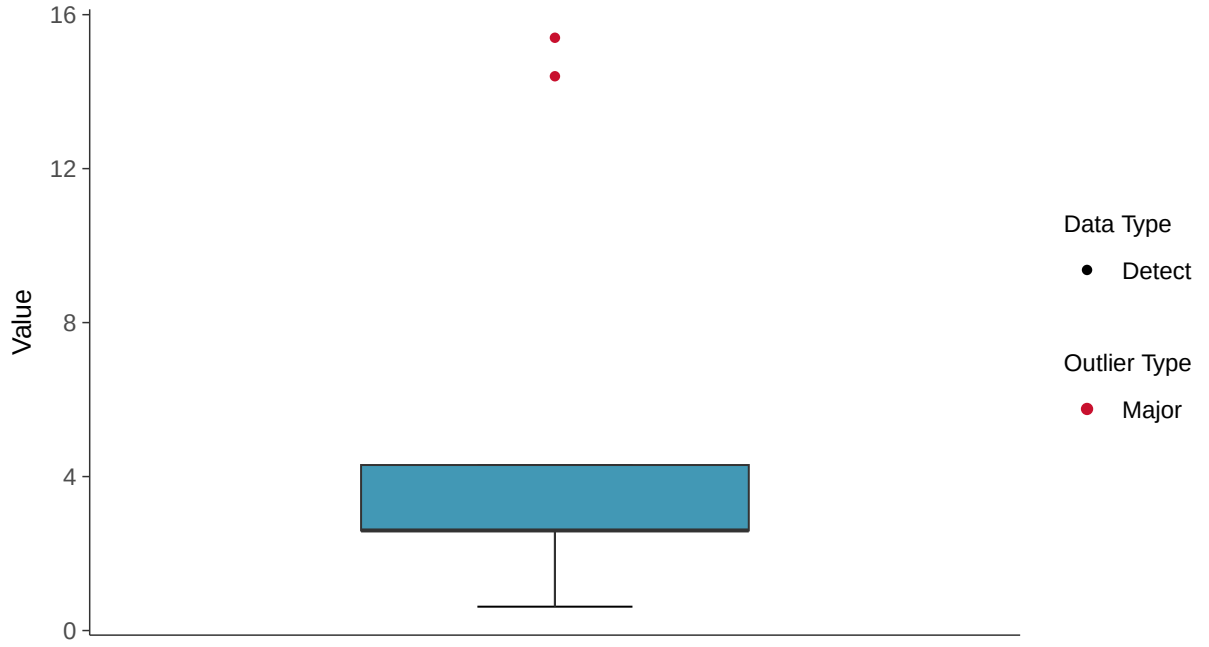
ID: 4_1_111





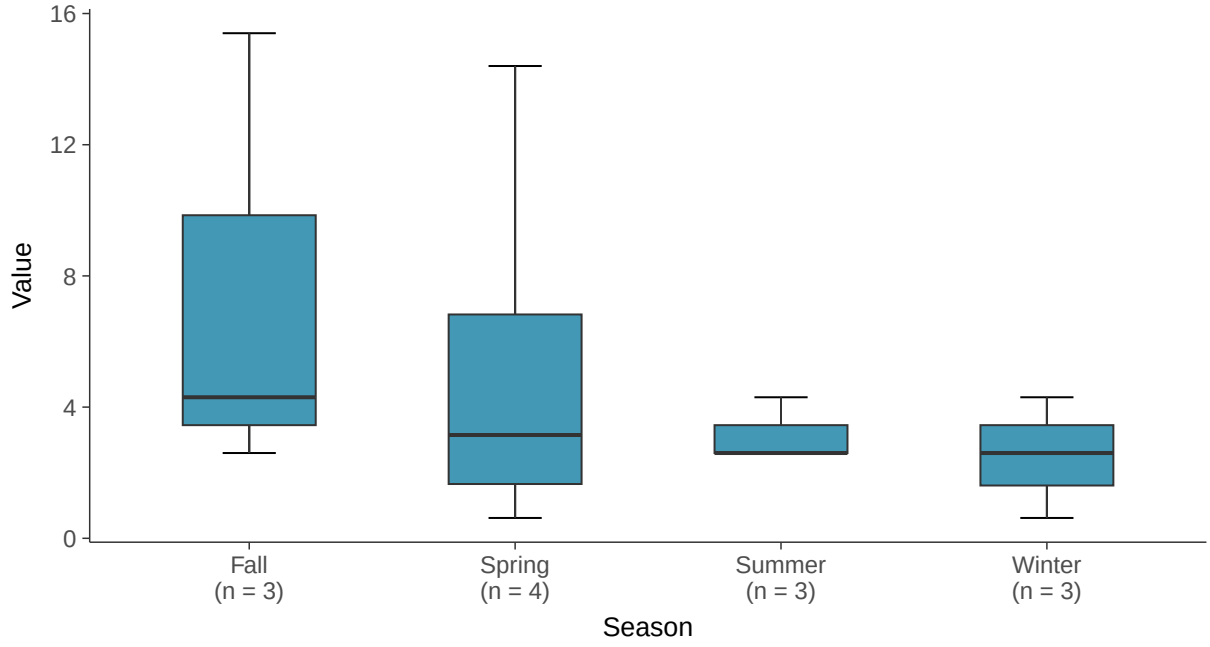
Boxplot

Copper, MW-11D (ug/L)



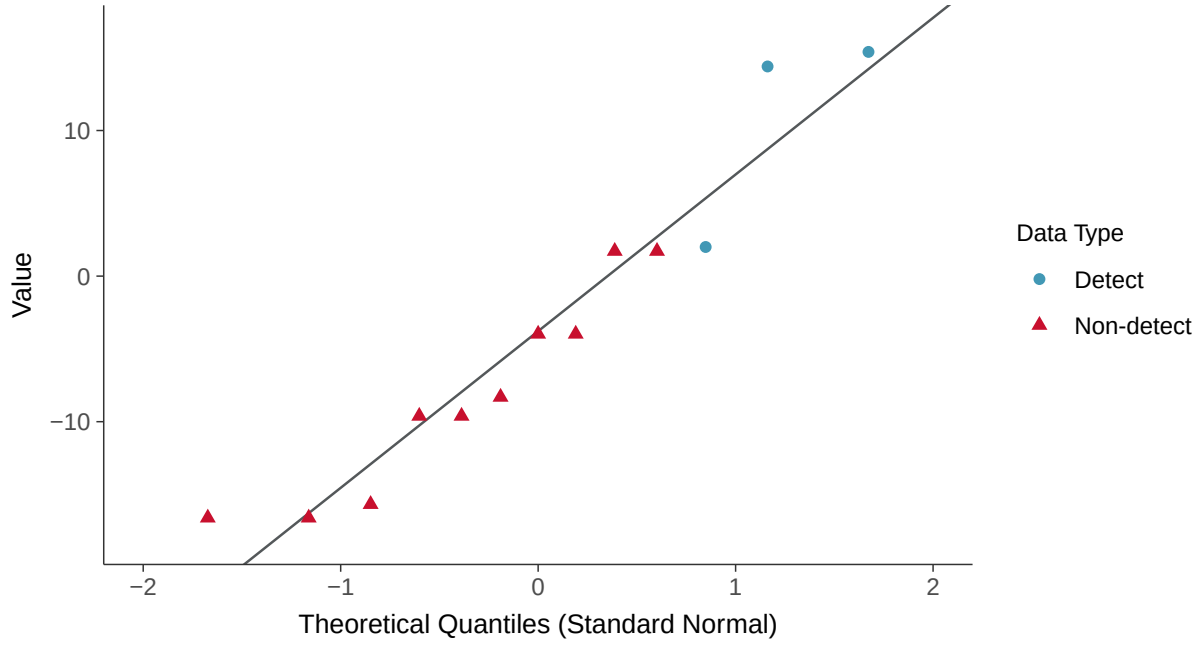
Boxplot by Season

Copper, MW-11D (ug/L)



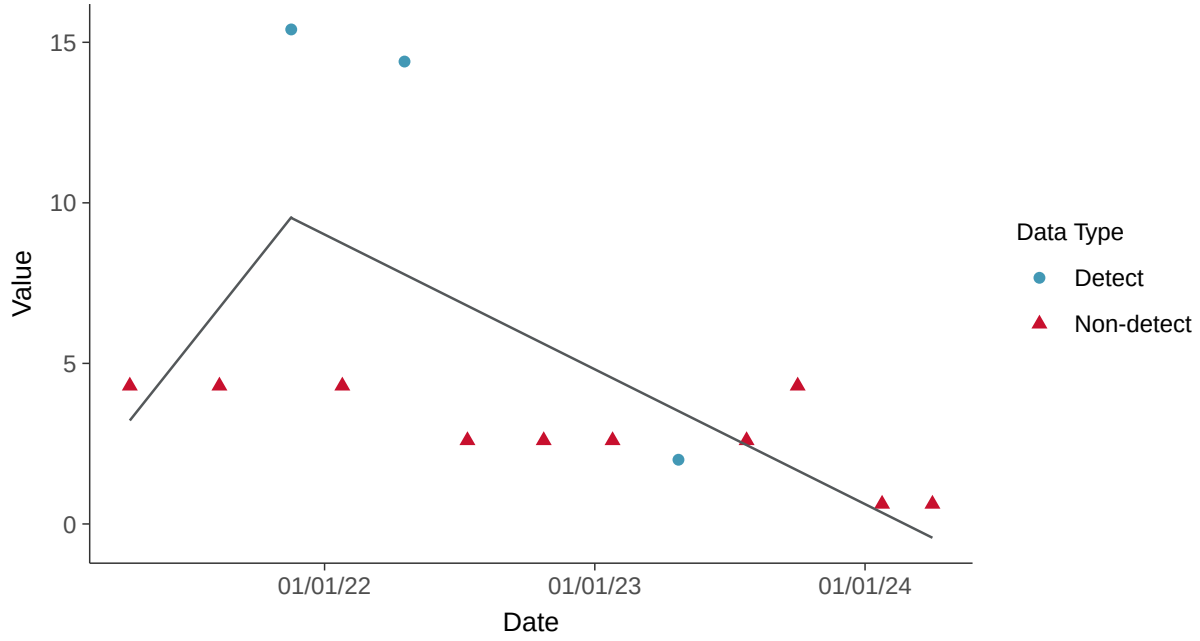
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-11D (ug/L)



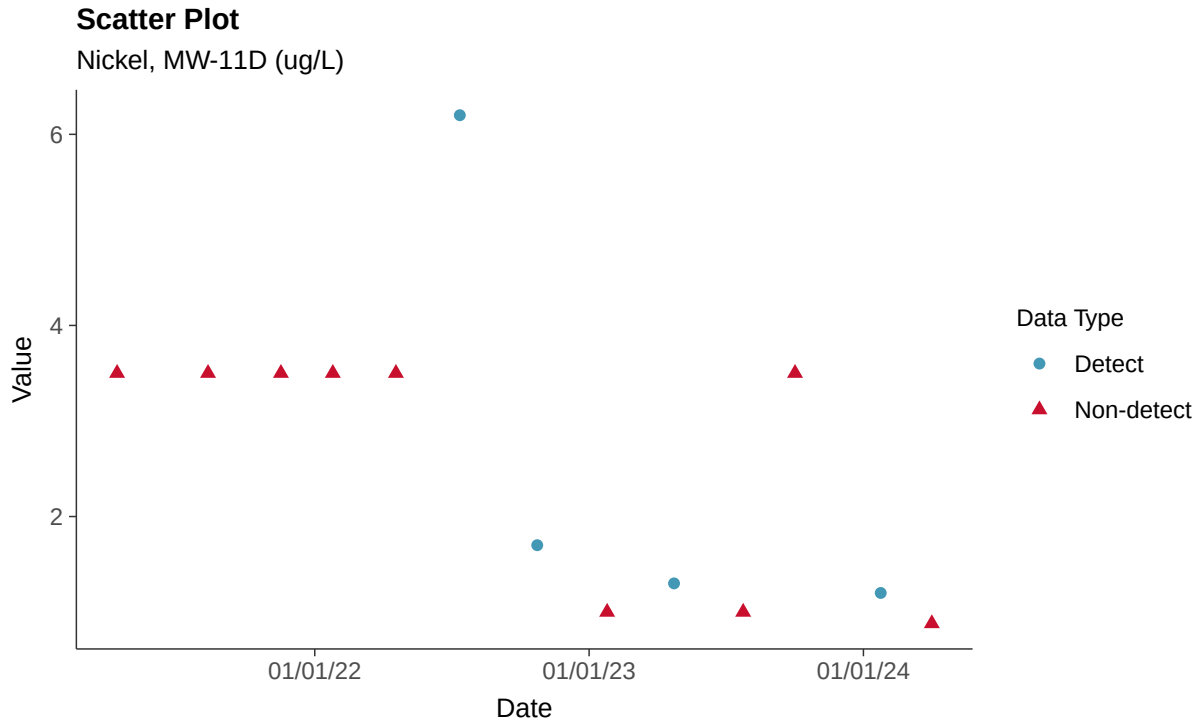
Trend Regression: Piecewise Linear-Linear

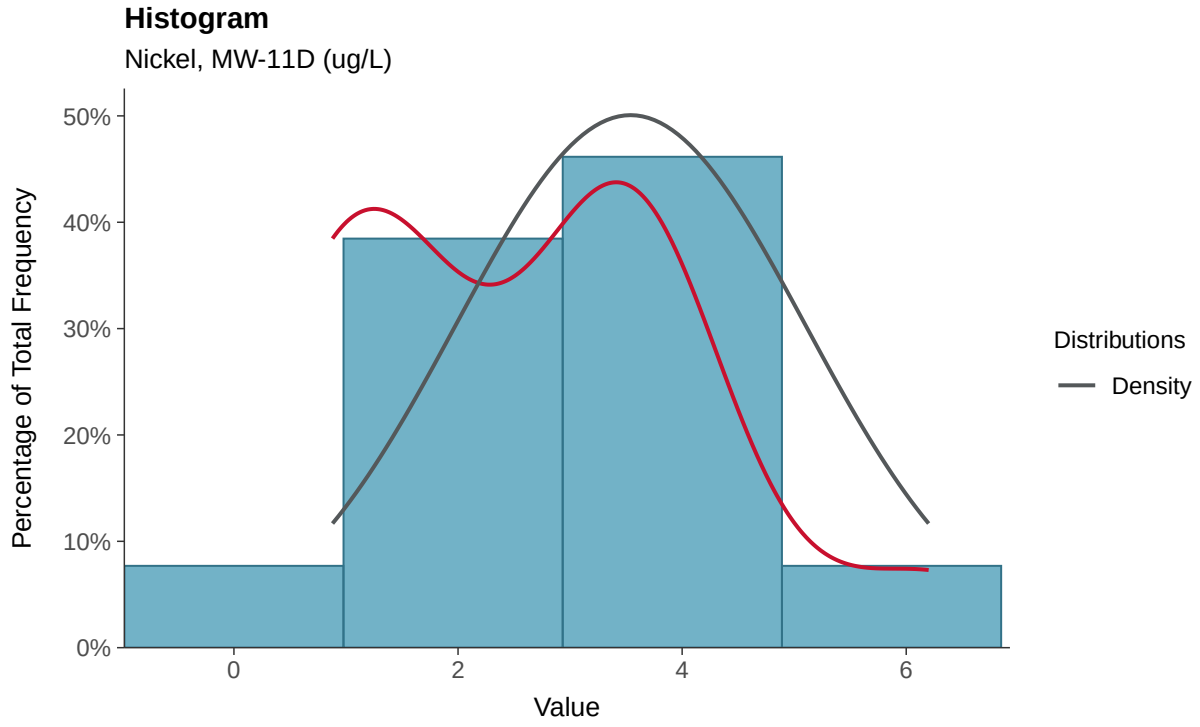
Copper, MW-11D (ug/L)



App. I Metals: Nickel, MW-11D

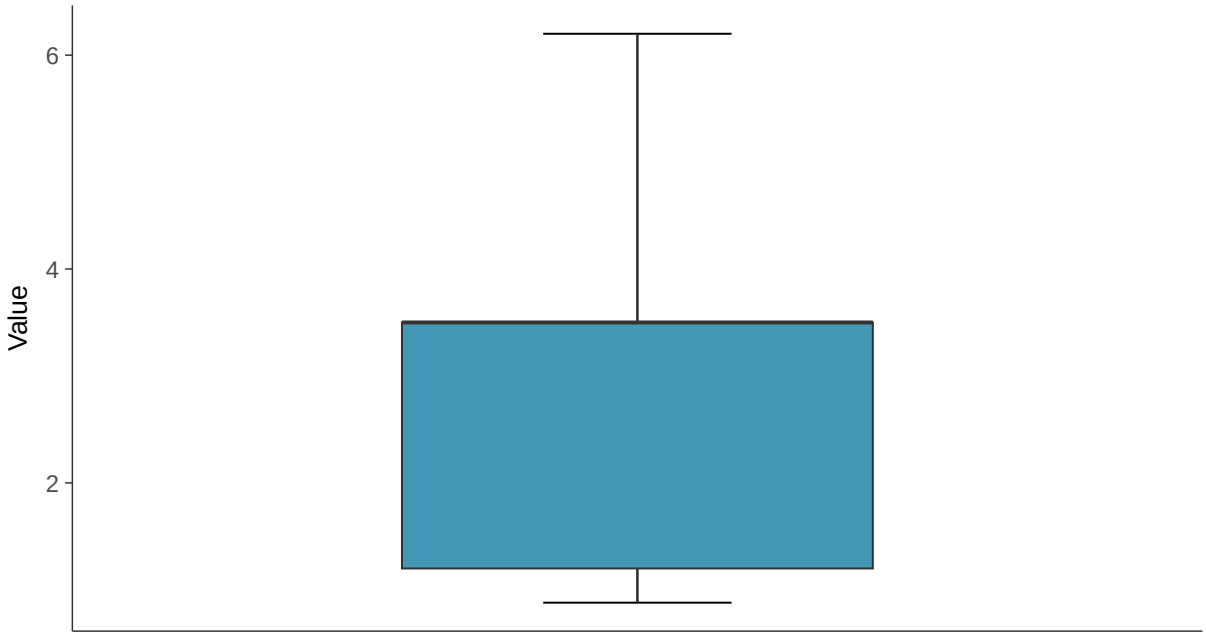
ID: 4_1_117





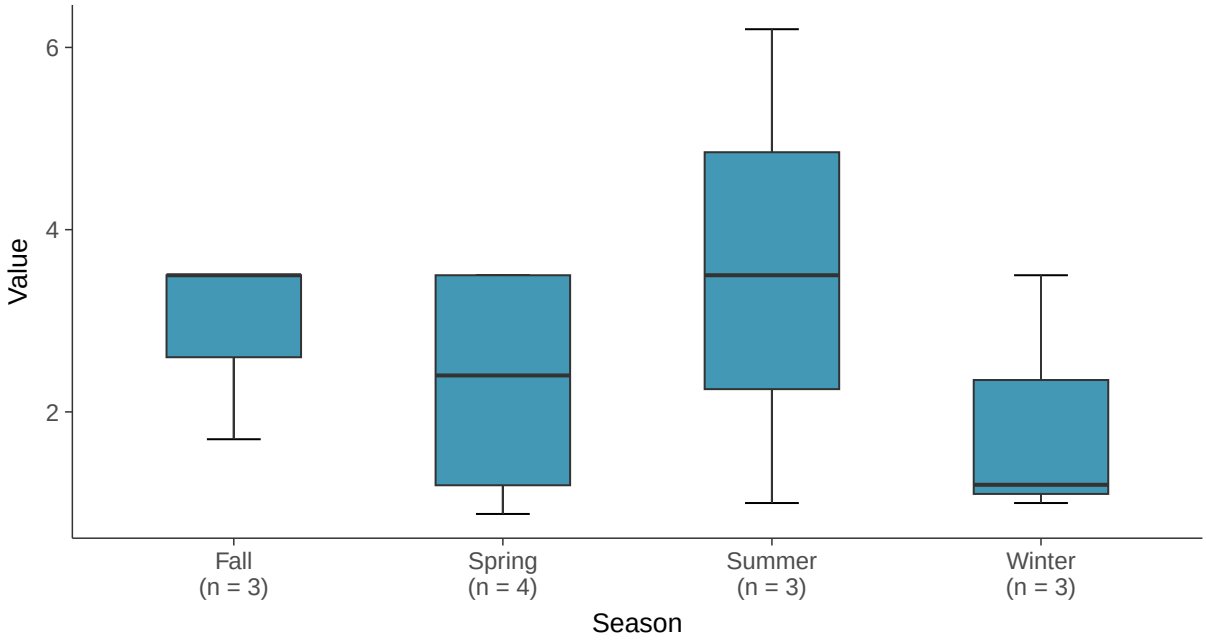
Boxplot

Nickel, MW-11D (ug/L)



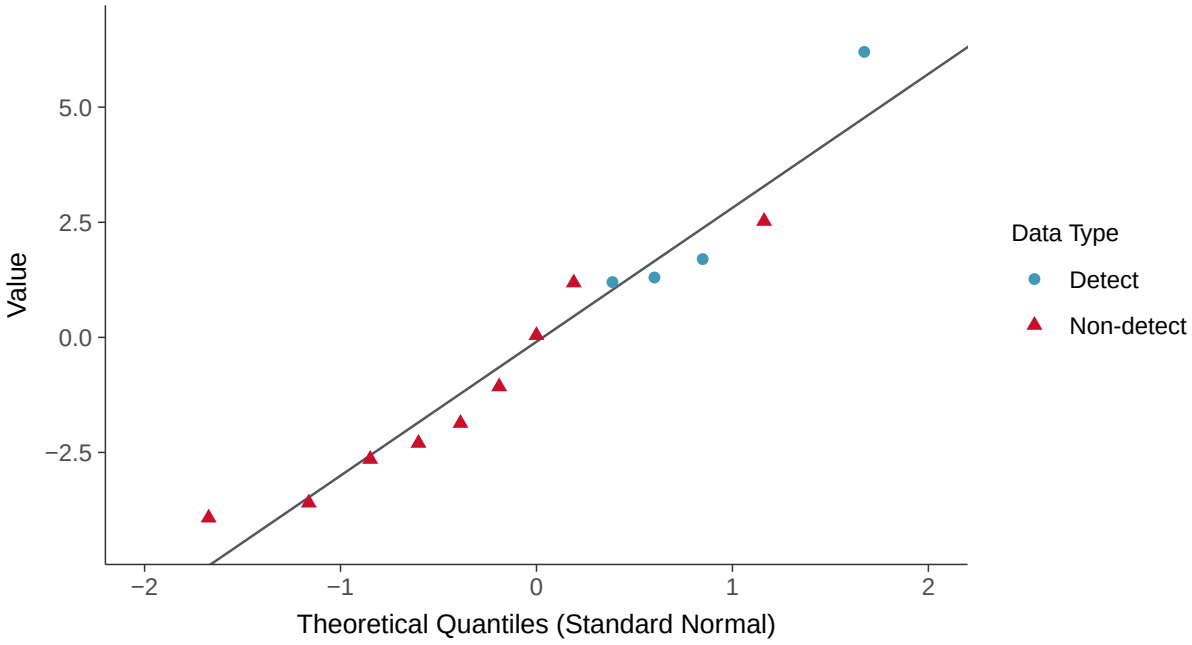
Boxplot by Season

Nickel, MW-11D (ug/L)



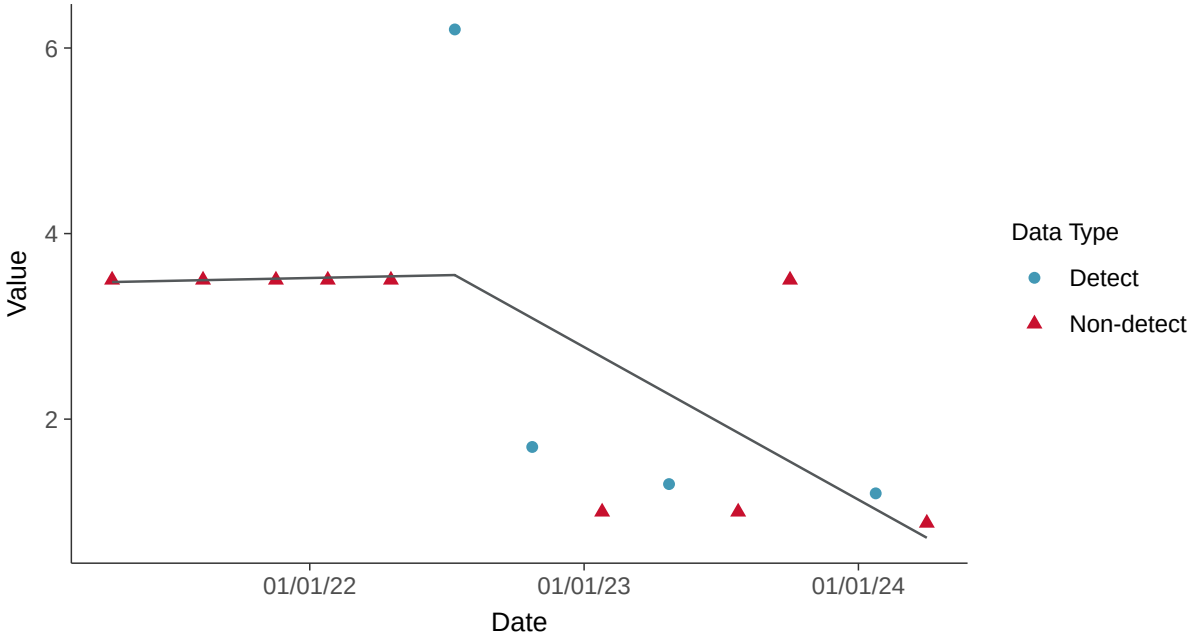
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-11D (ug/L)



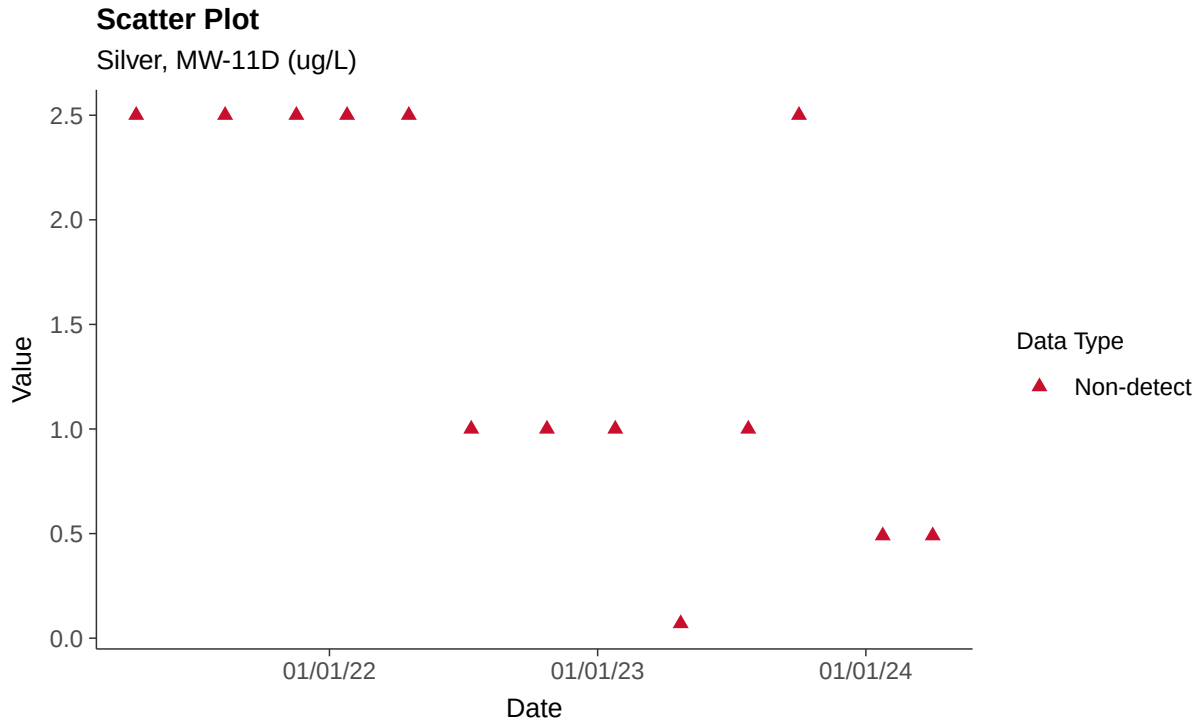
Trend Regression: Piecewise Linear-Linear

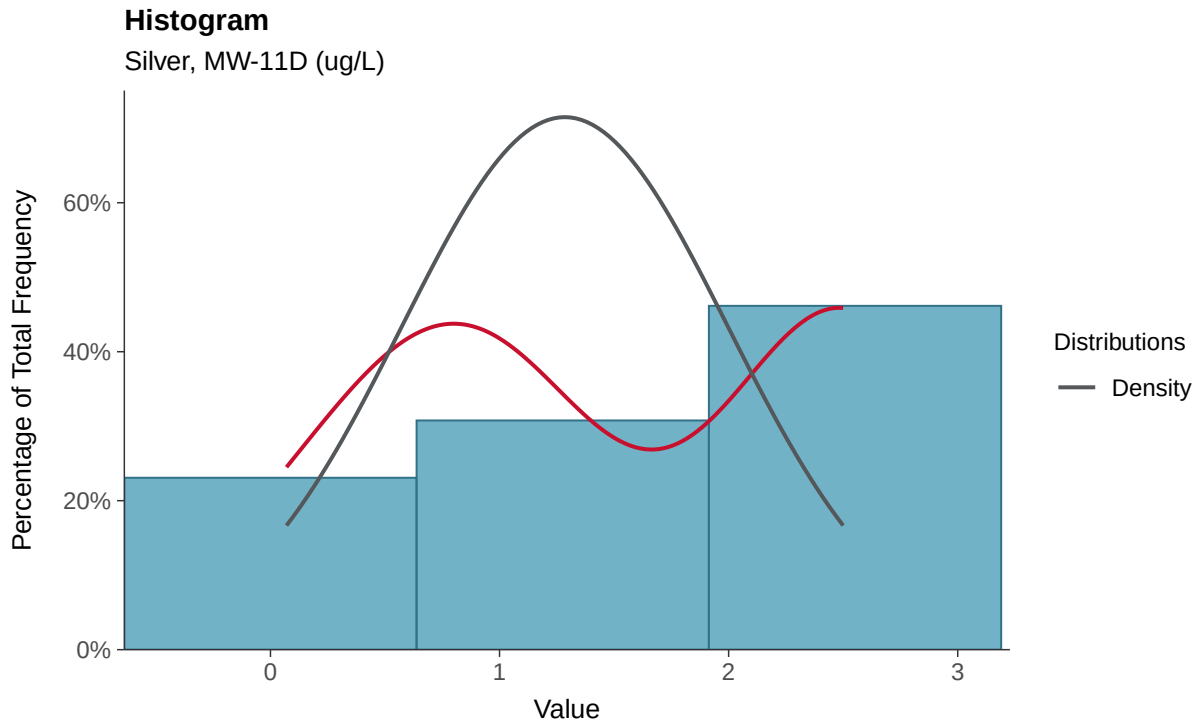
Nickel, MW-11D (ug/L)



App. I Metals: Silver, MW-11D

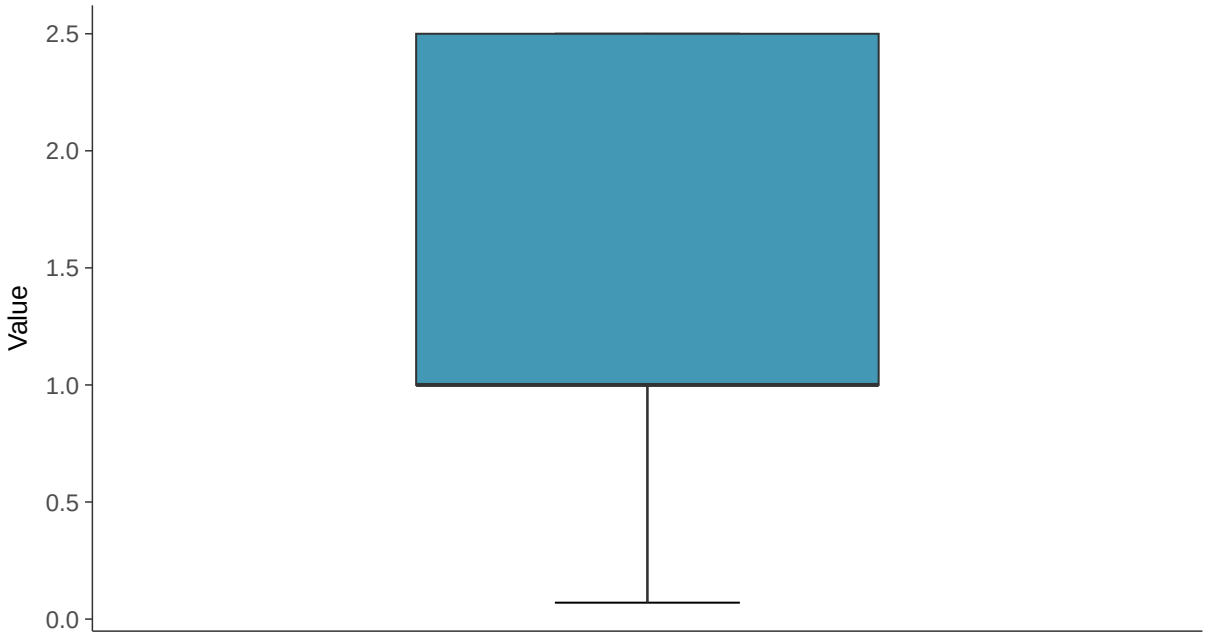
ID: 4_1_122





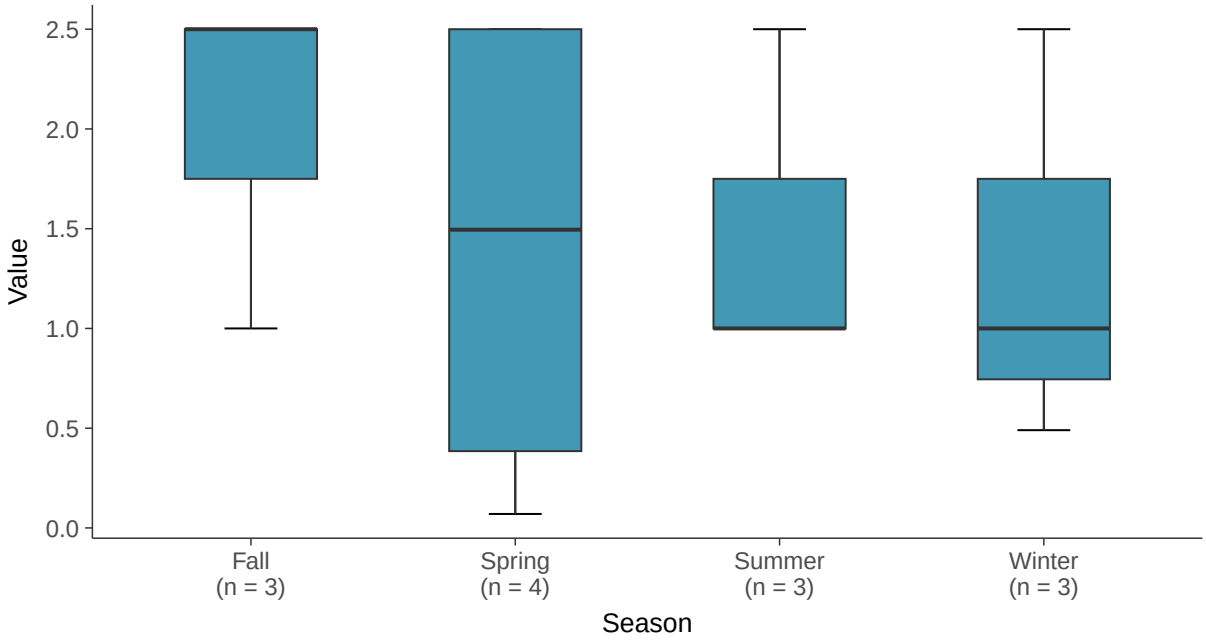
Boxplot

Silver, MW-11D (ug/L)



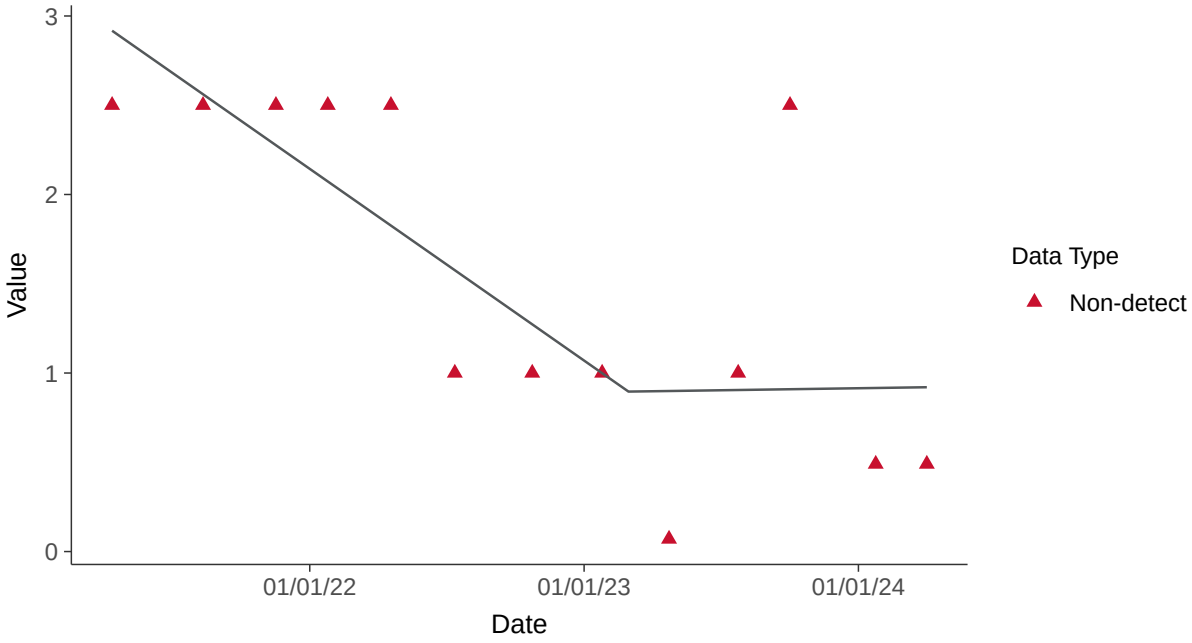
Boxplot by Season

Silver, MW-11D (ug/L)



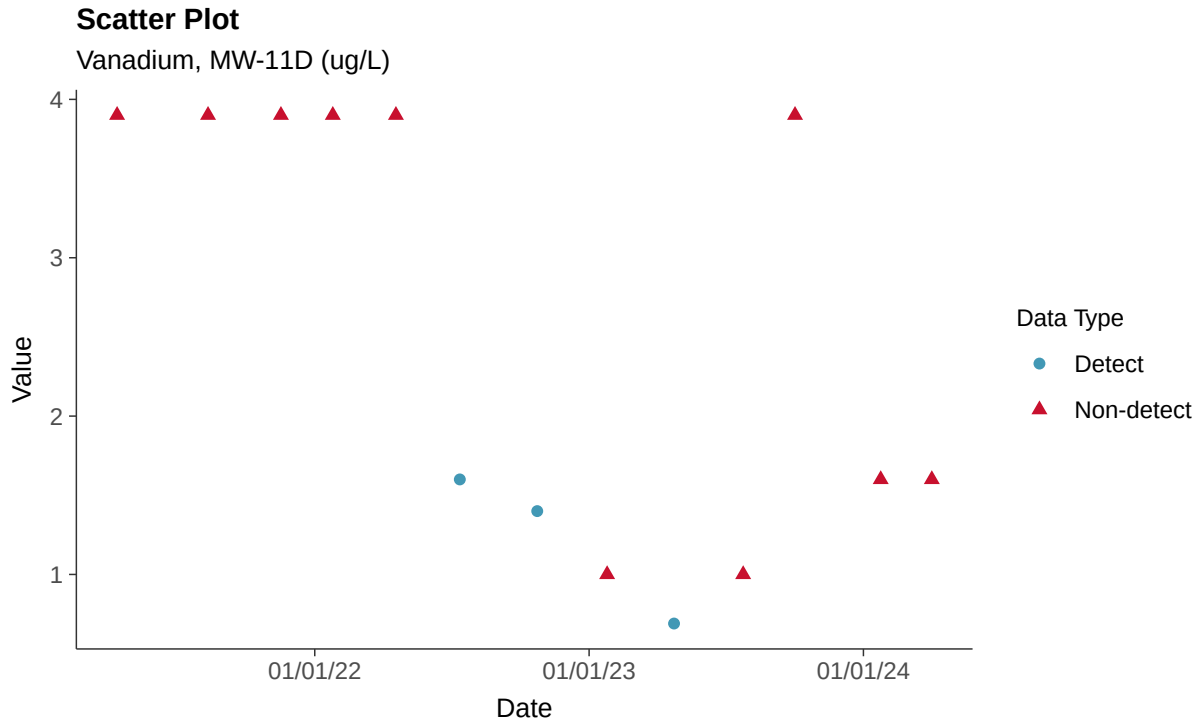
Trend Regression: Piecewise Linear-Linear

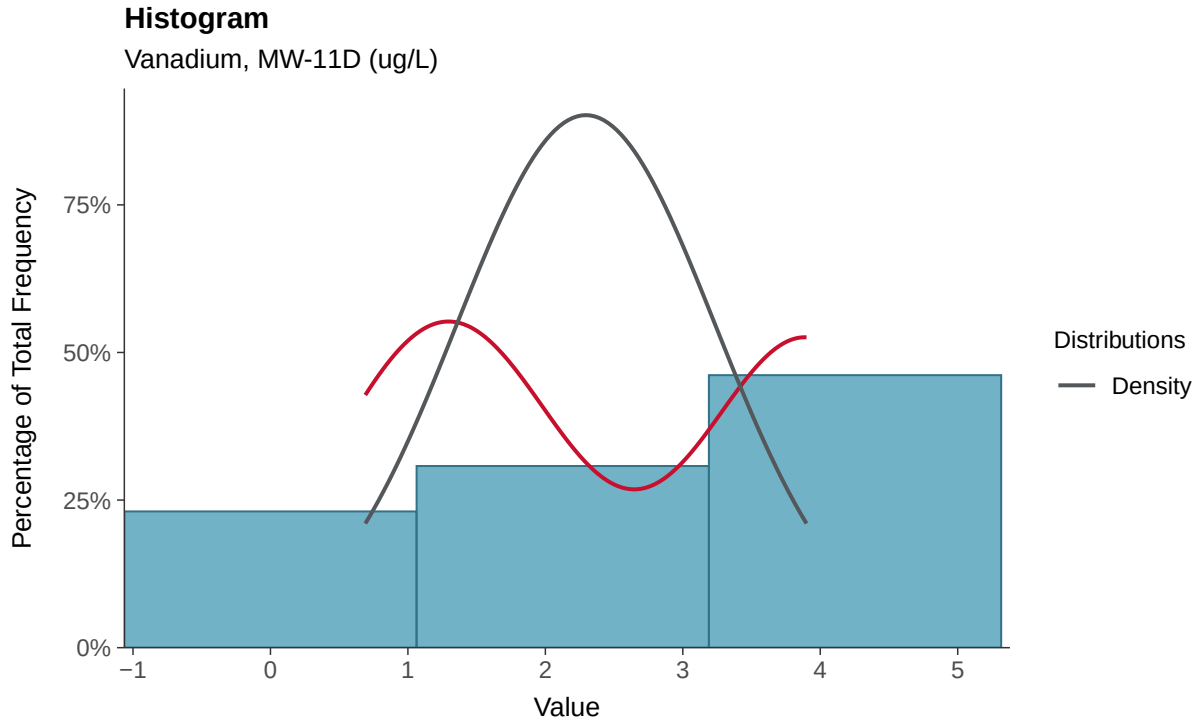
Silver, MW-11D (ug/L)



App. I Metals: Vanadium, MW-11D

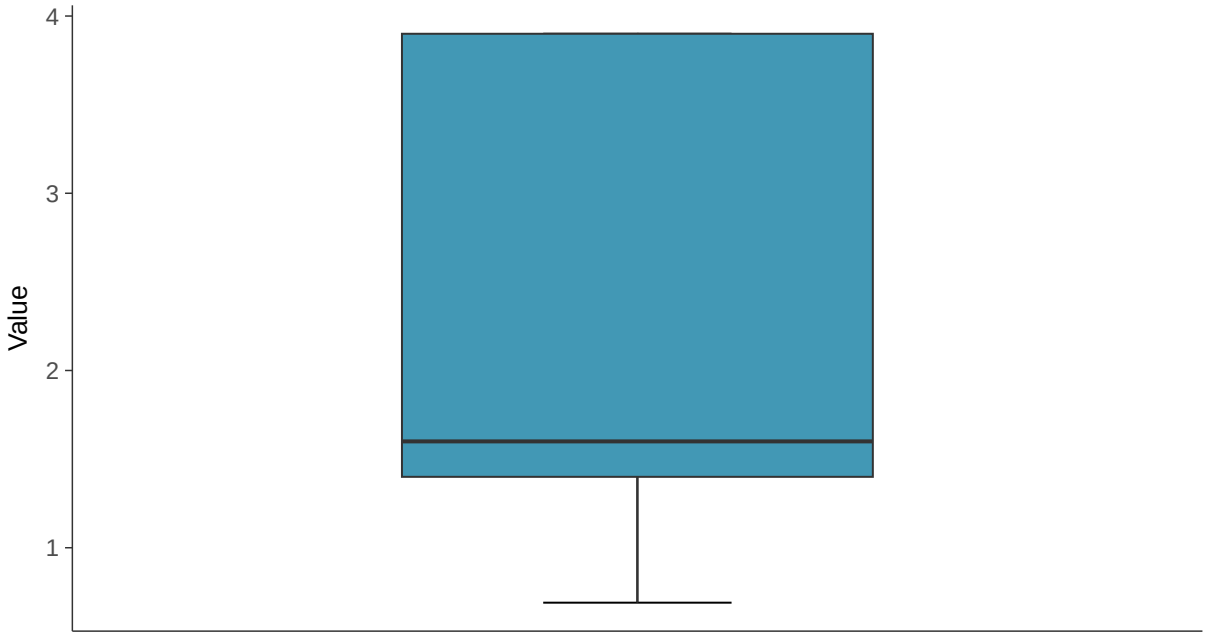
ID: 4_1_127





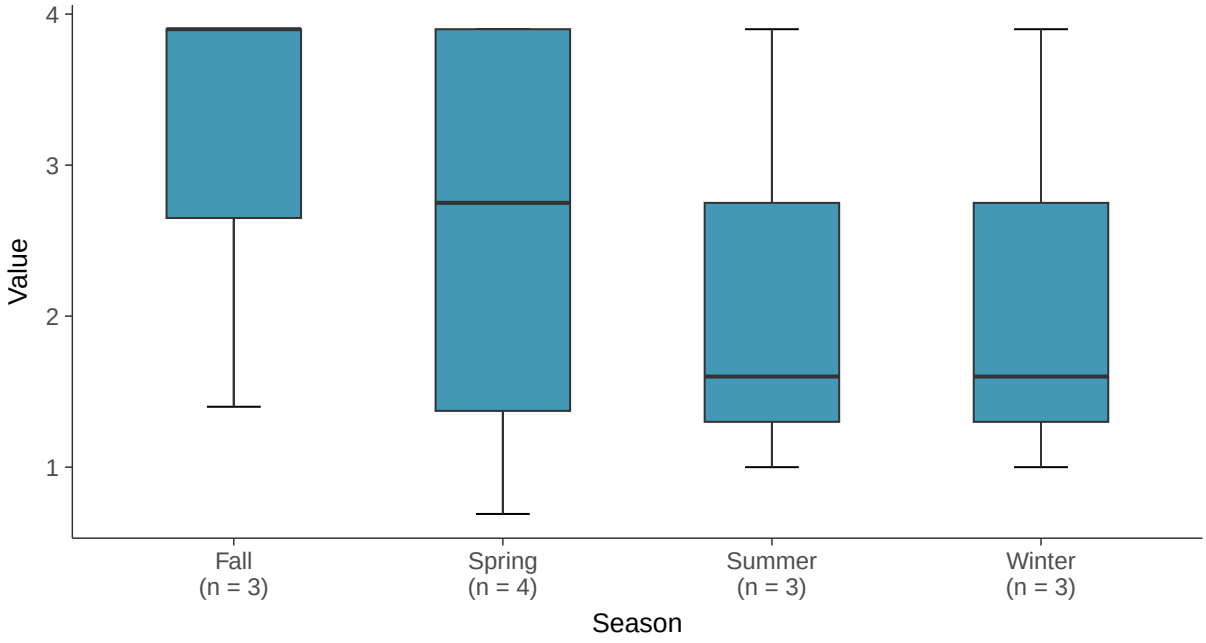
Boxplot

Vanadium, MW-11D (ug/L)



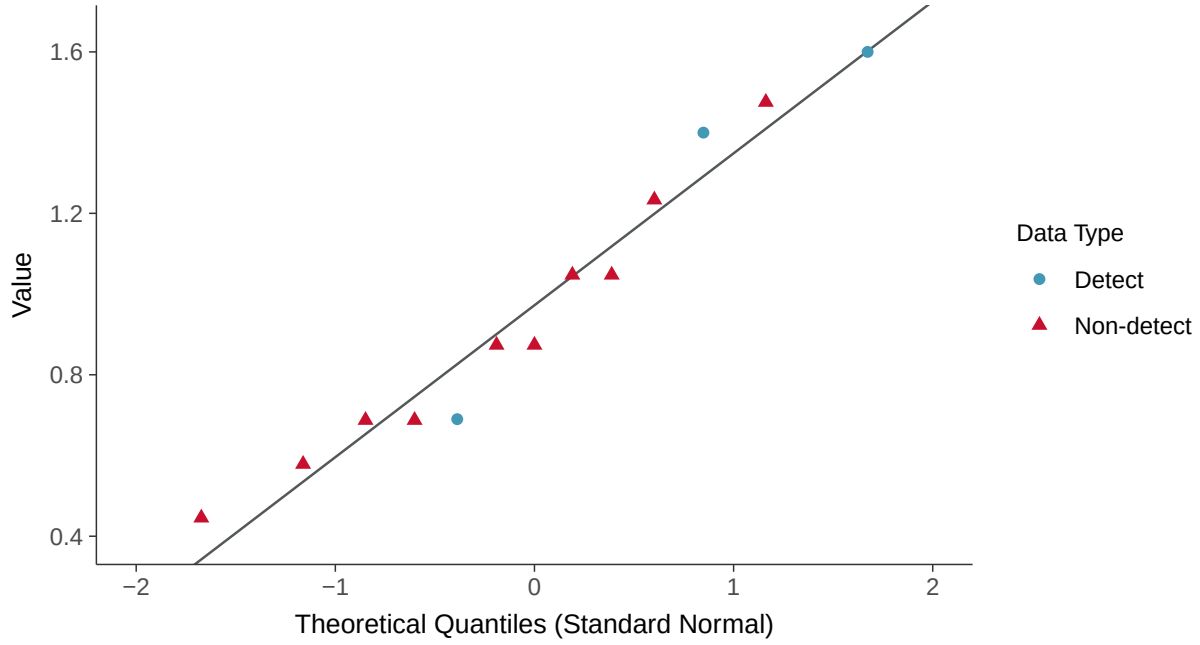
Boxplot by Season

Vanadium, MW-11D (ug/L)



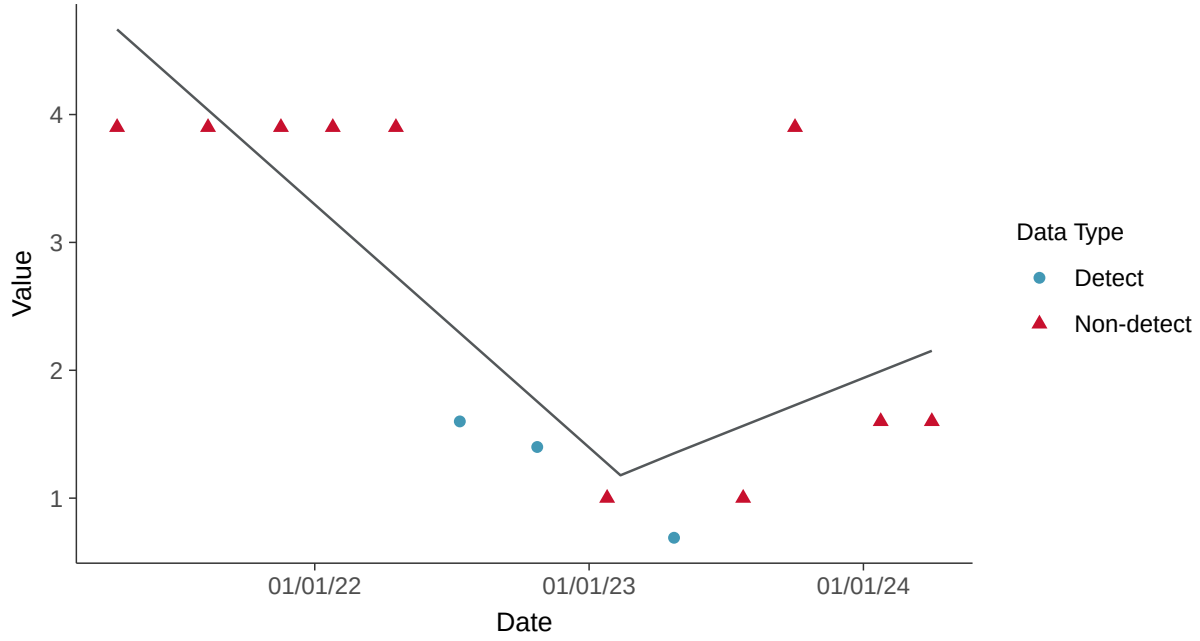
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-11D (ug/L)



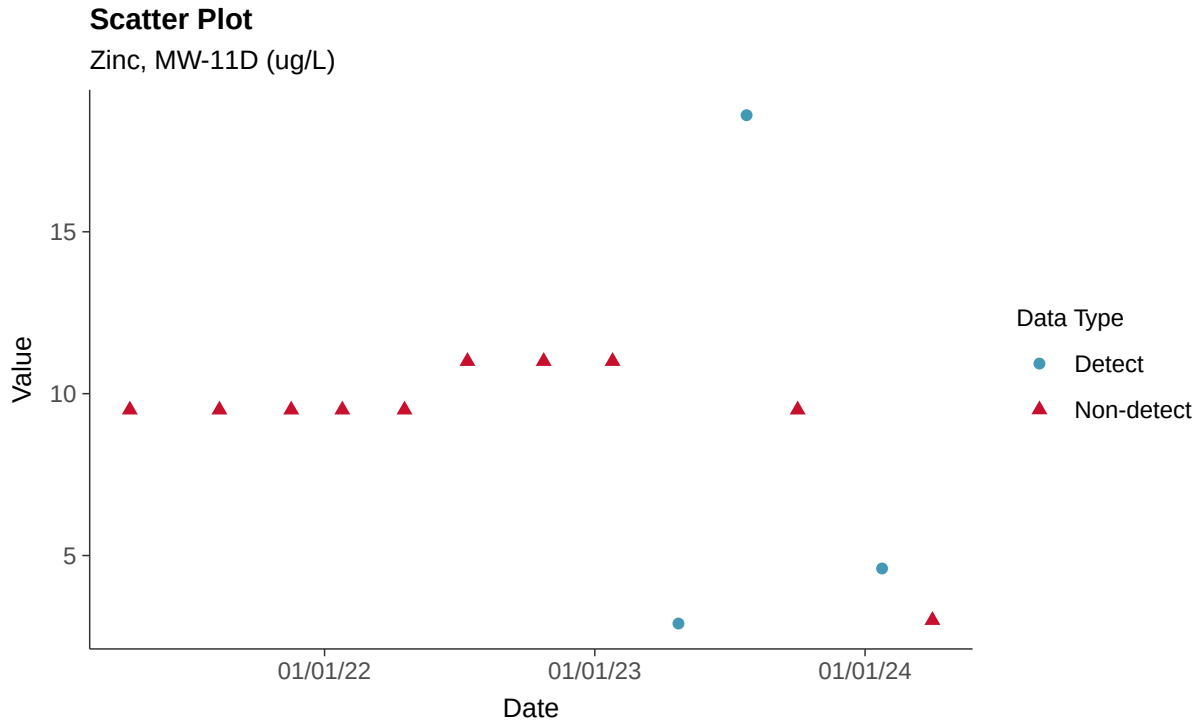
Trend Regression: Piecewise Linear-Linear

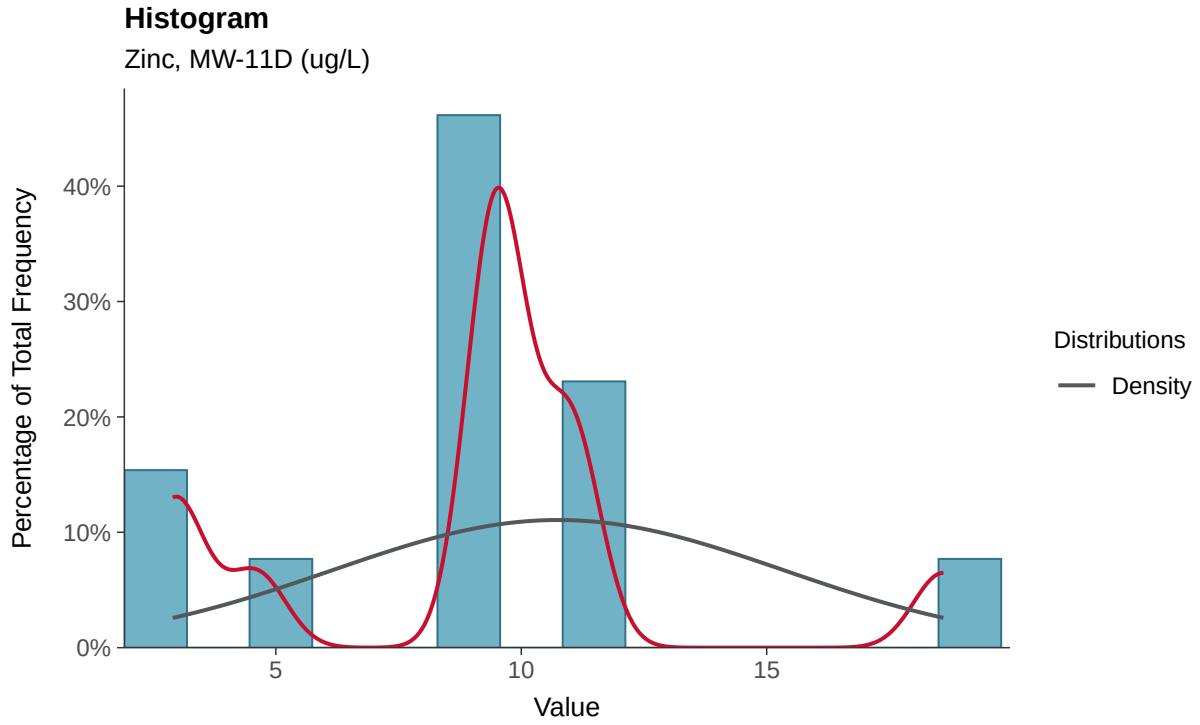
Vanadium, MW-11D (ug/L)



App. I Metals: Zinc, MW-11D

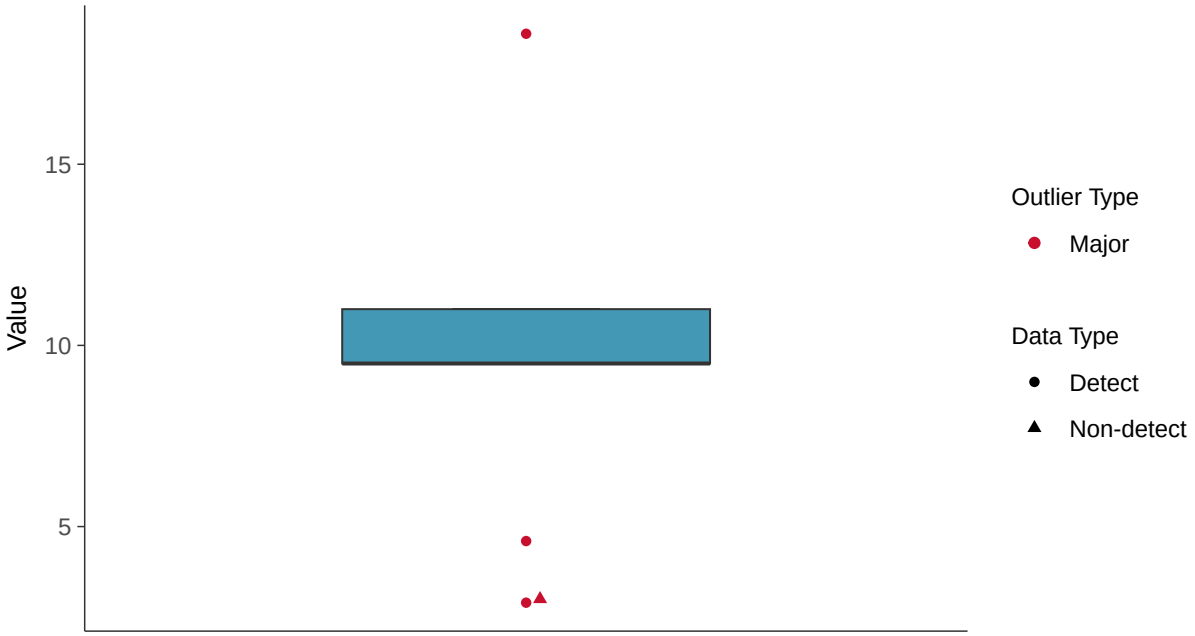
ID: 4_1_128





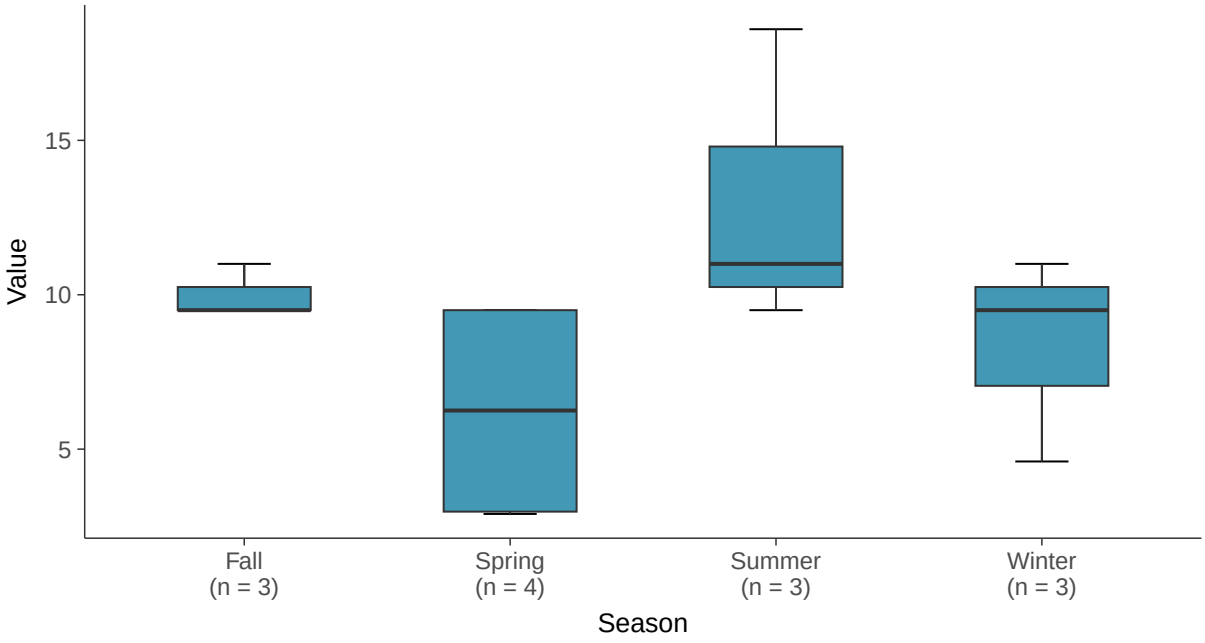
Boxplot

Zinc, MW-11D (ug/L)



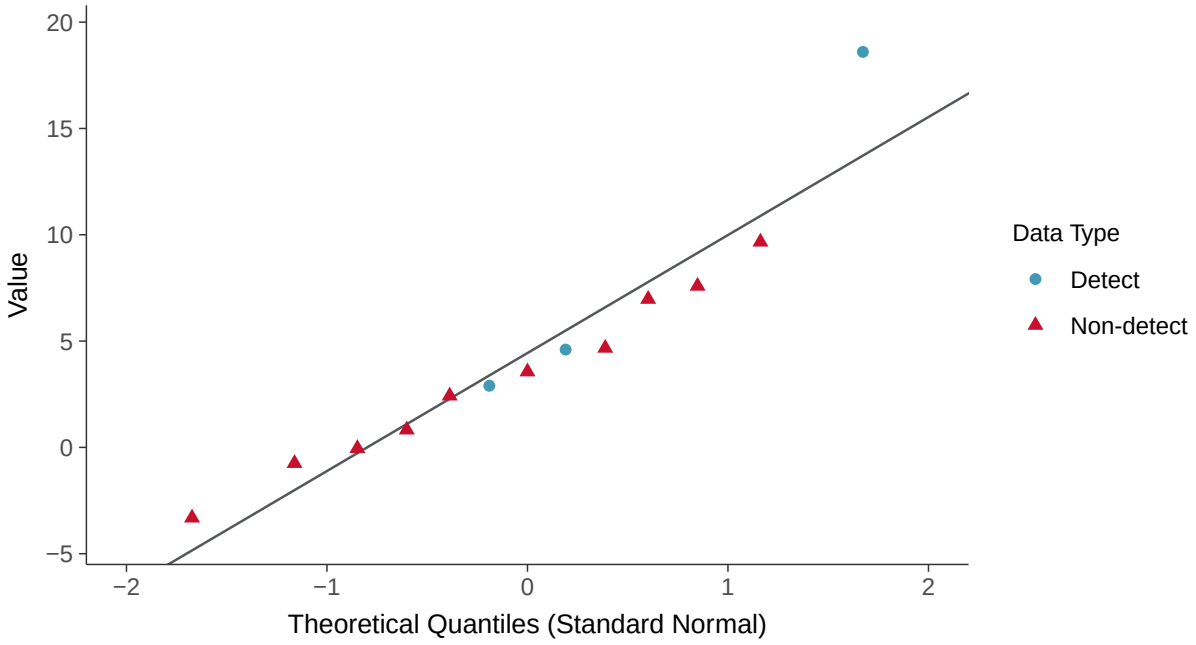
Boxplot by Season

Zinc, MW-11D (ug/L)



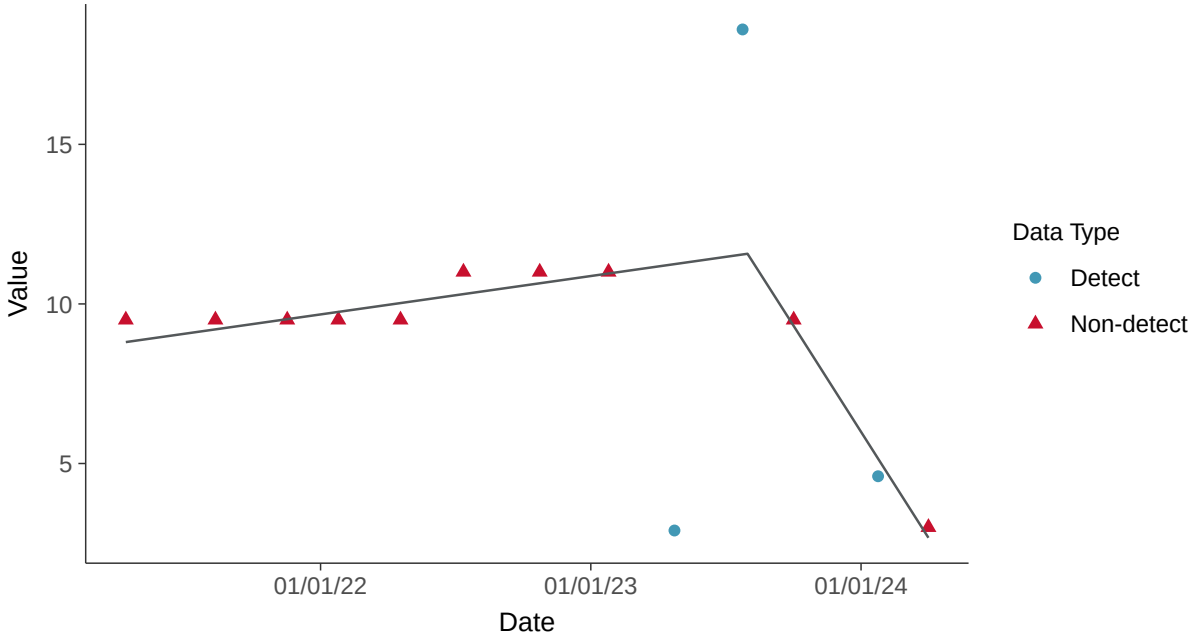
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11D (ug/L)



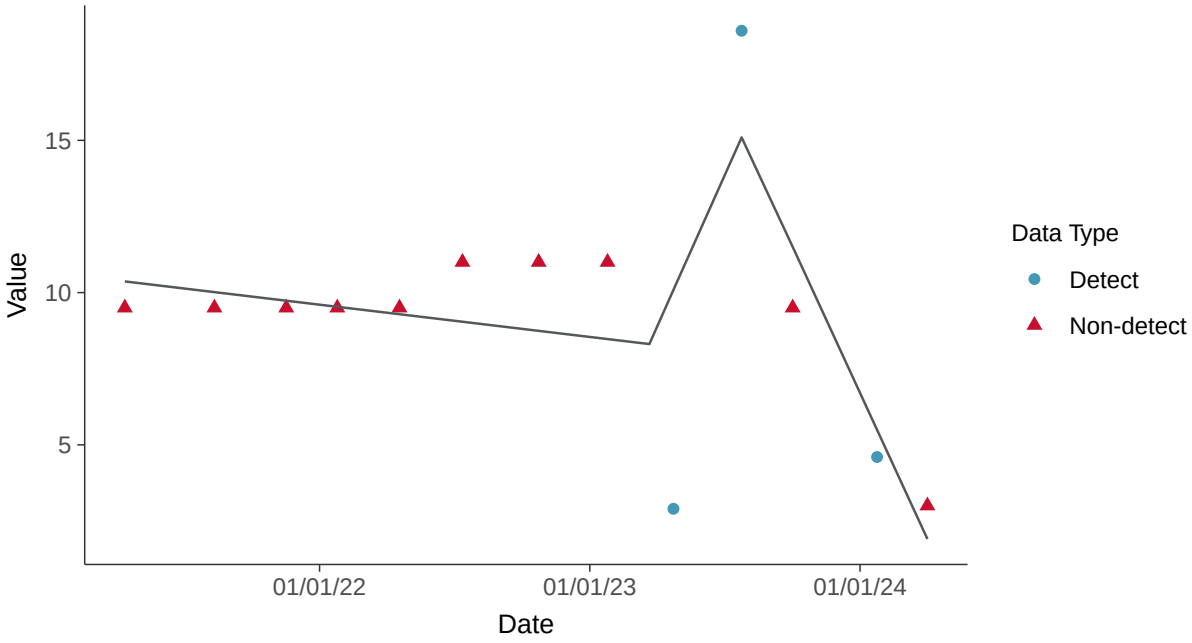
Trend Regression: Piecewise Linear-Linear

Zinc, MW-11D (ug/L)



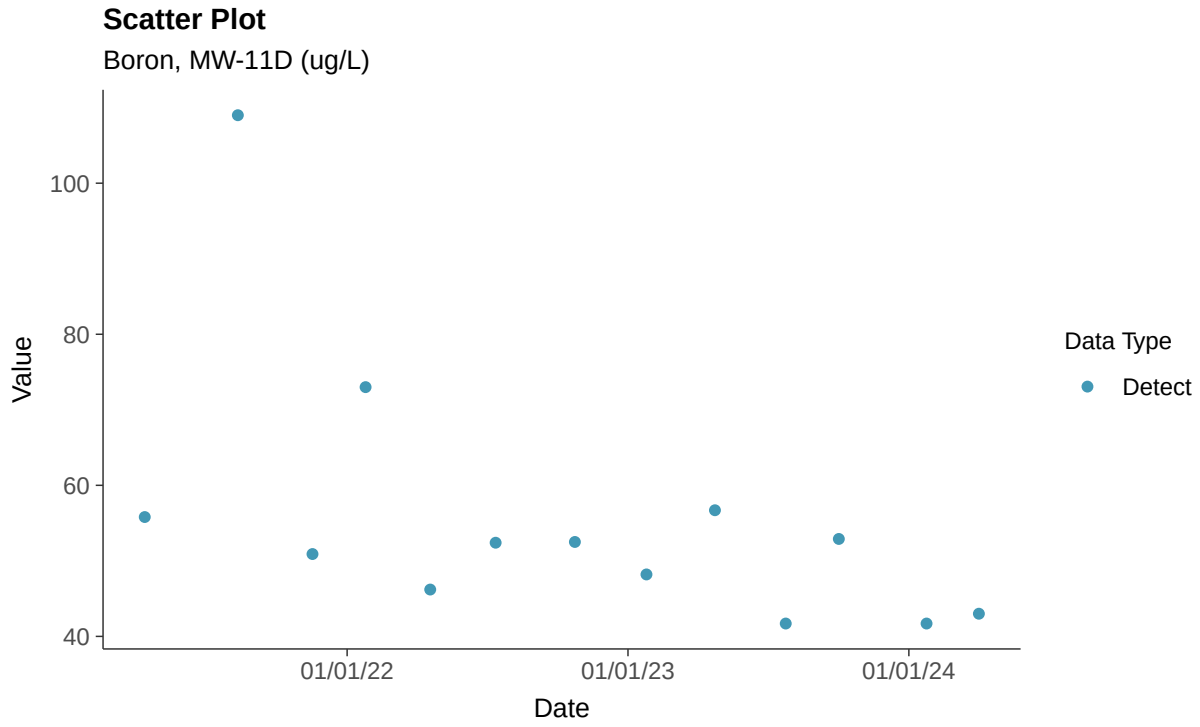
Trend Regression: Piecewise Linear-Linear-Linear

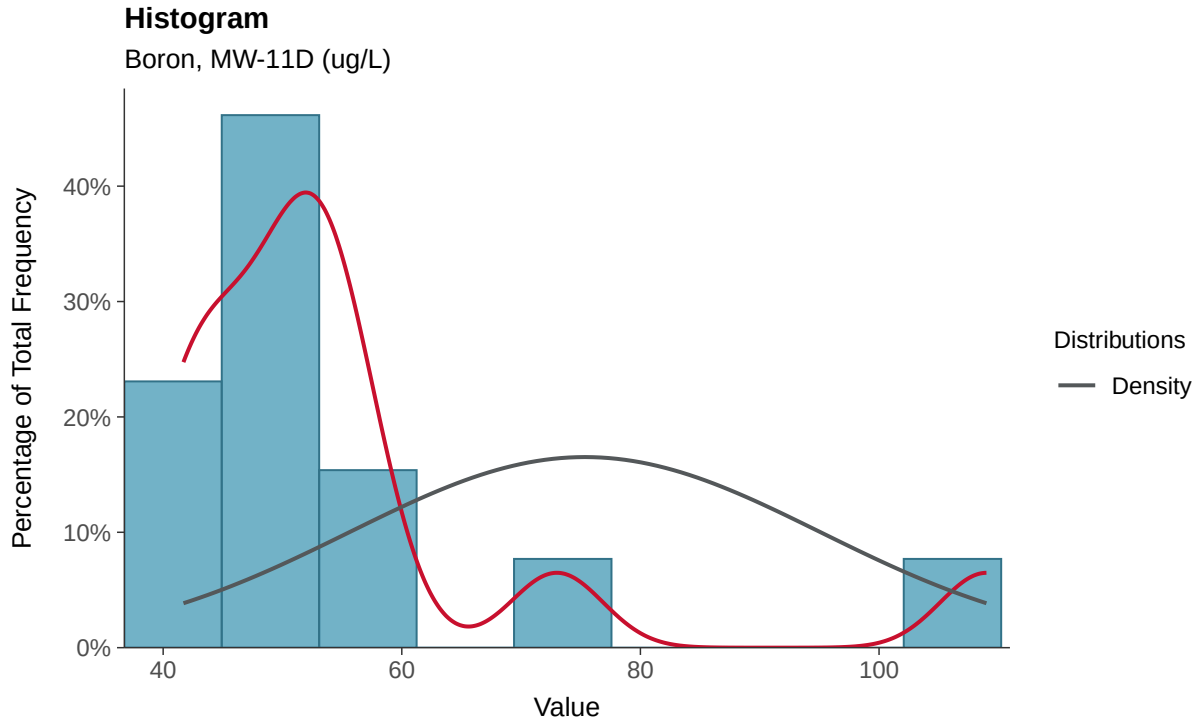
Zinc, MW-11D (ug/L)



App. III: Boron, MW-11D

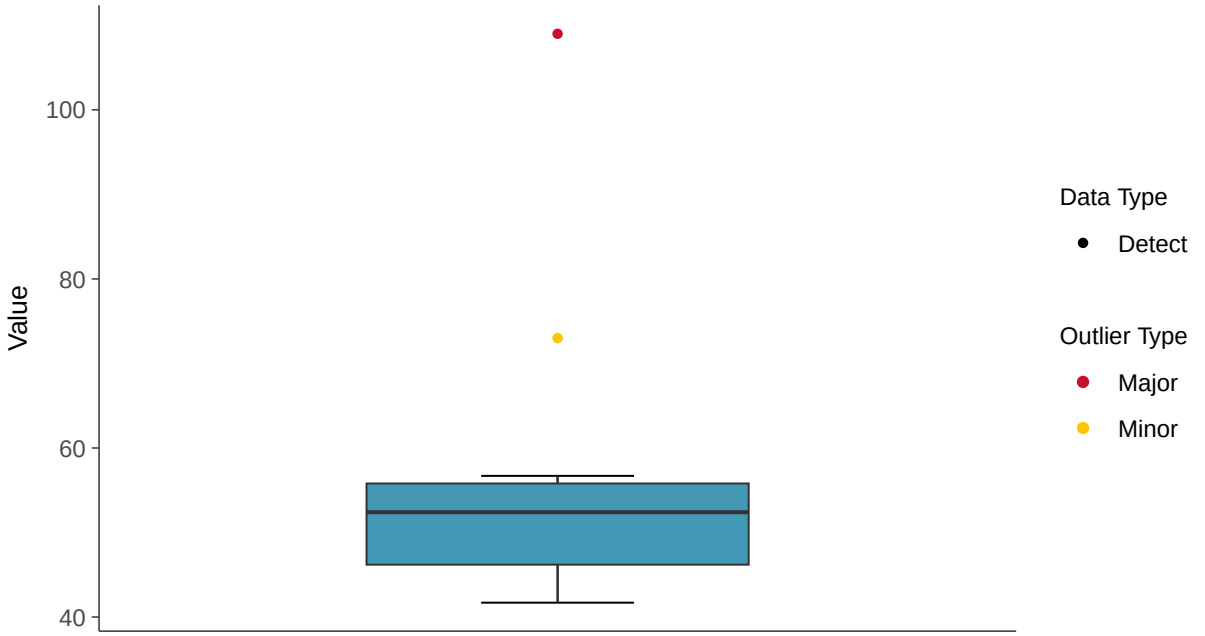
ID: 4_2_105





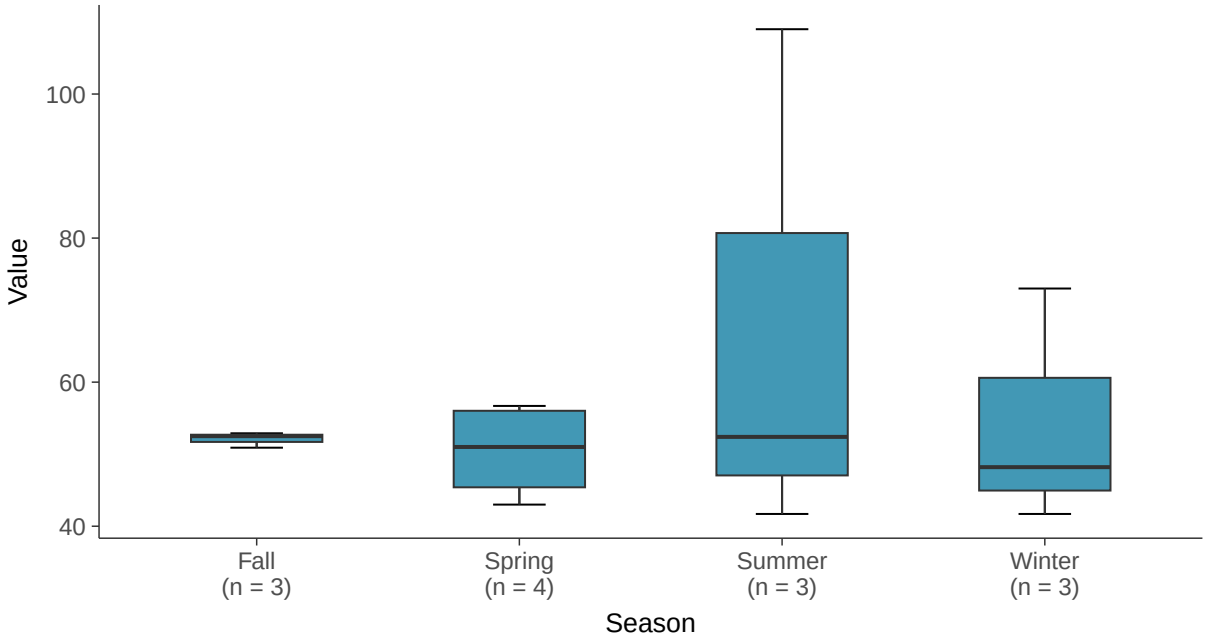
Boxplot

Boron, MW-11D (ug/L)



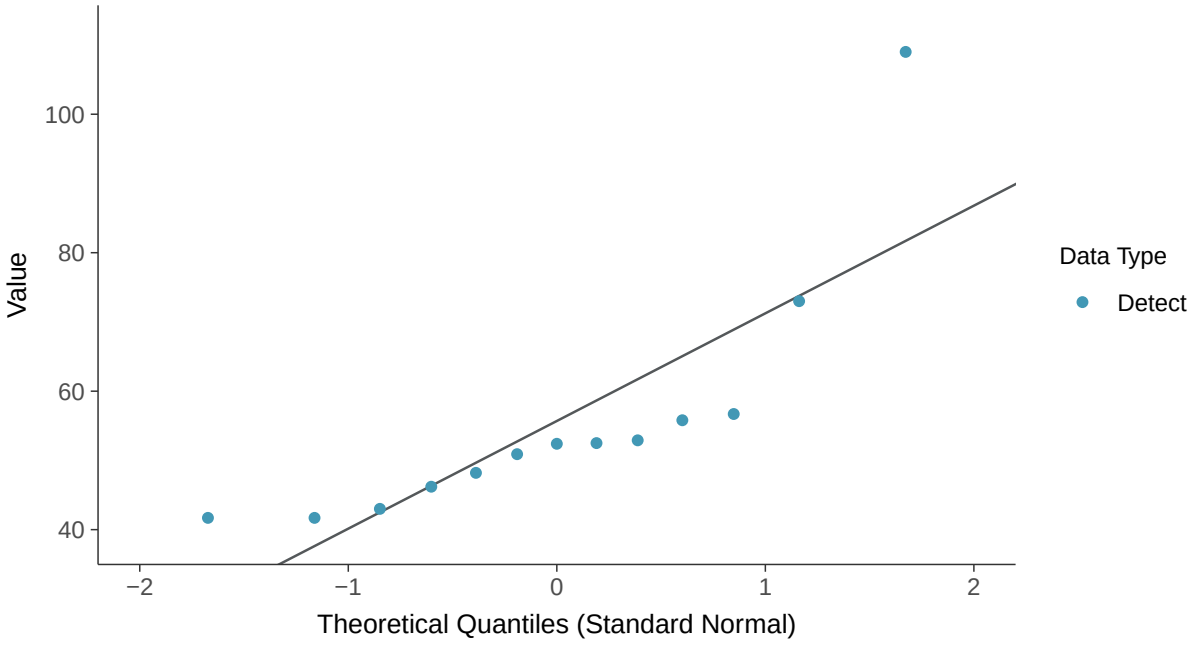
Boxplot by Season

Boron, MW-11D (ug/L)



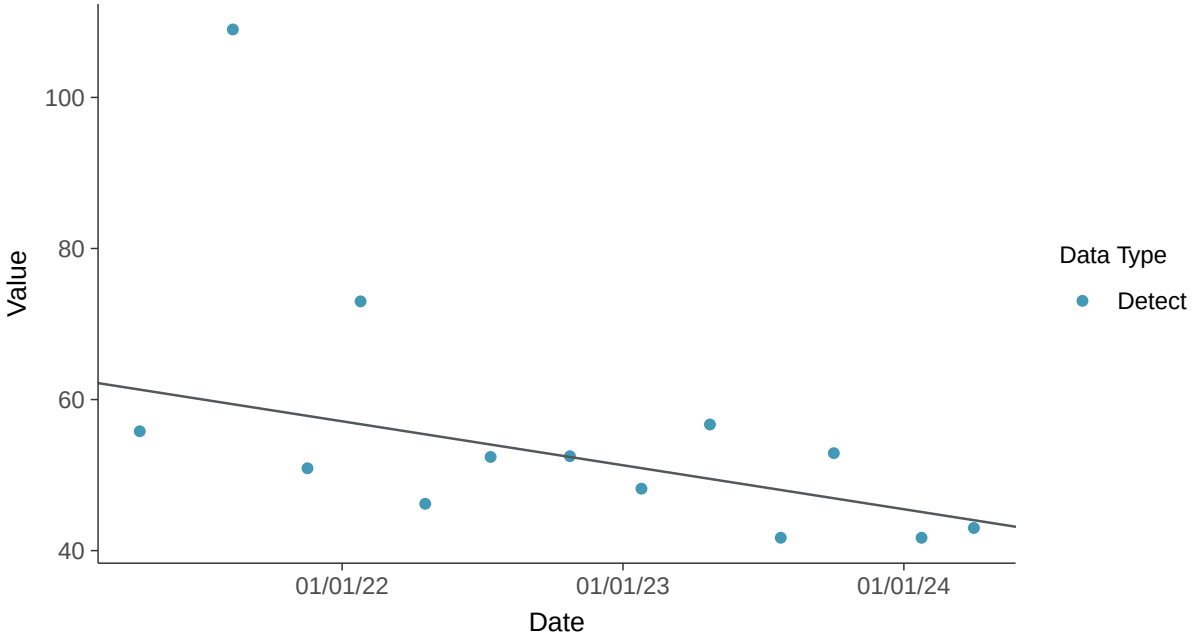
Normal Q-Q plot

Boron, MW-11D (ug/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Boron, MW-11D (ug/L)

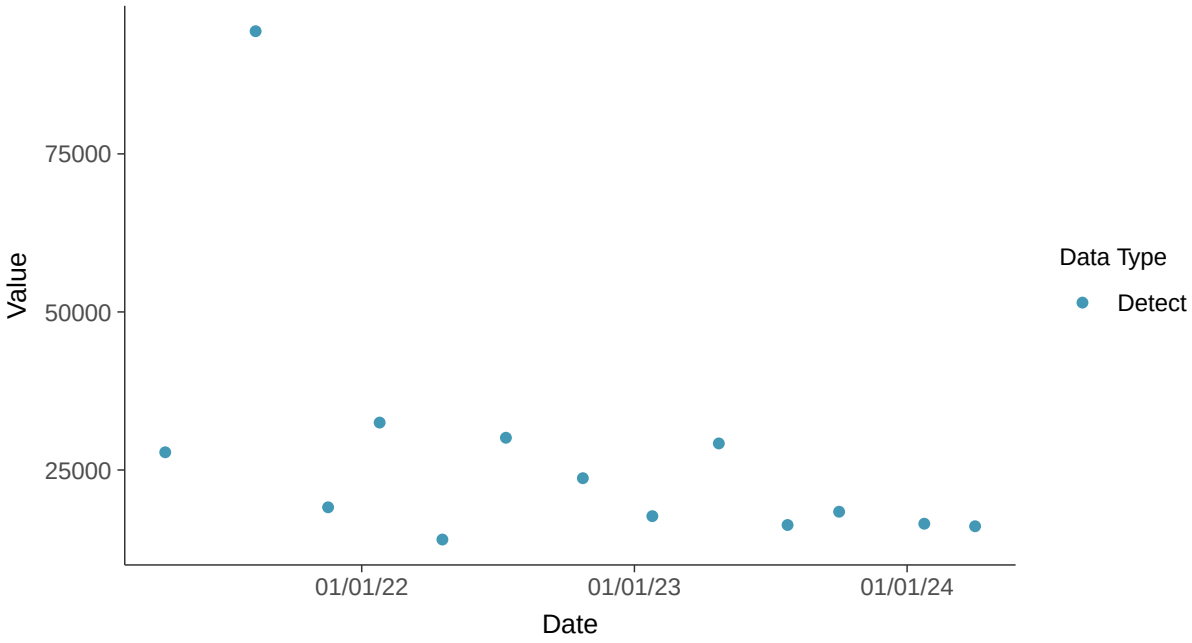


App. III: Calcium, MW-11D

ID: 4_2_107

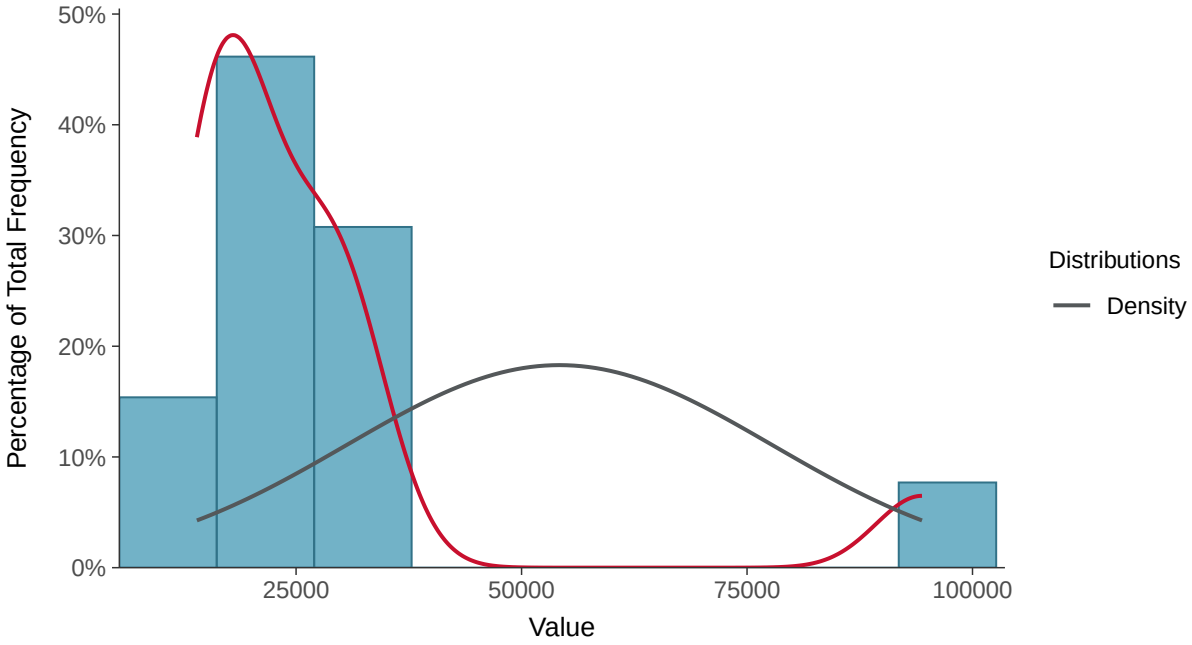
Scatter Plot

Calcium, MW-11D (ug/L)



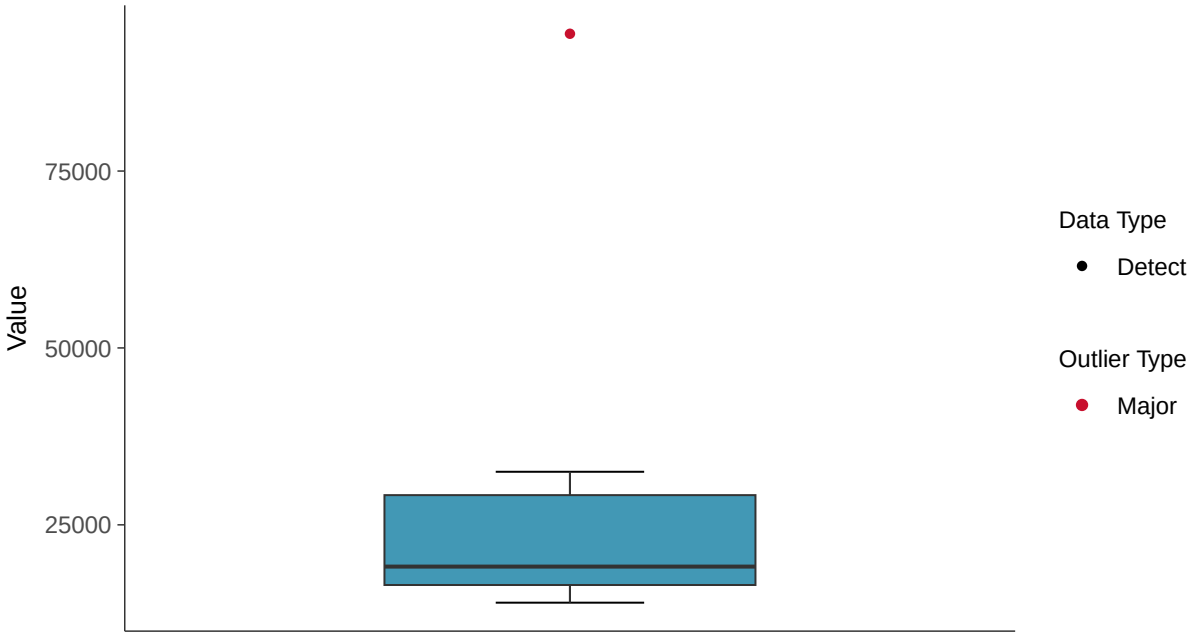
Histogram

Calcium, MW-11D (ug/L)



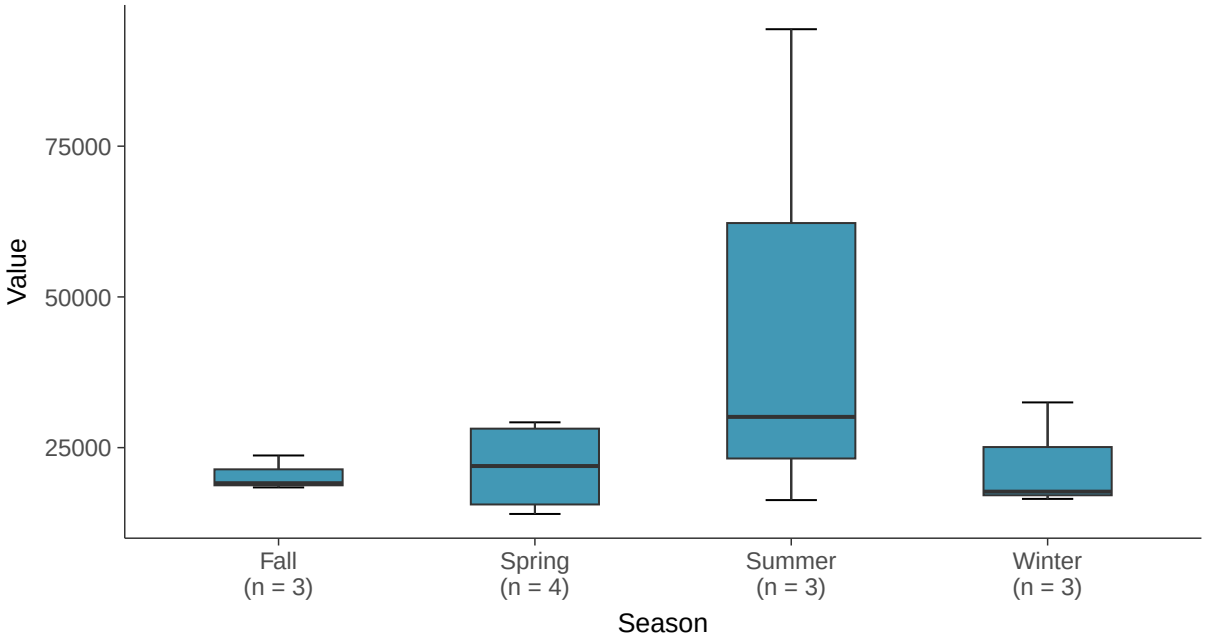
Boxplot

Calcium, MW-11D (ug/L)



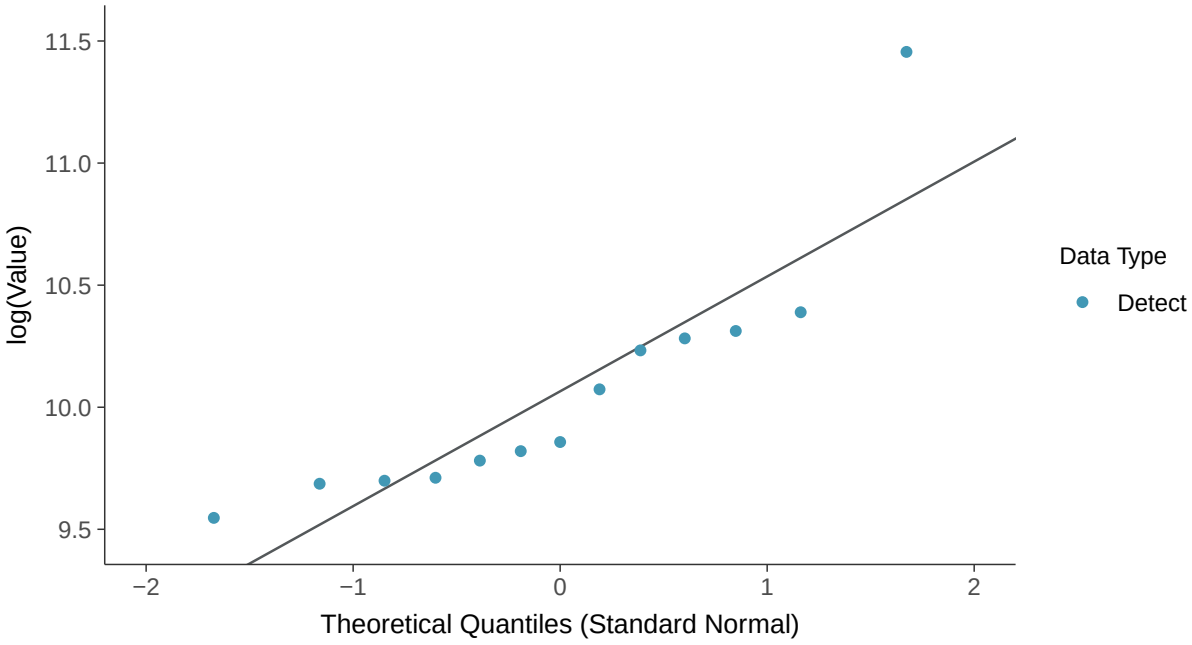
Boxplot by Season

Calcium, MW-11D (ug/L)



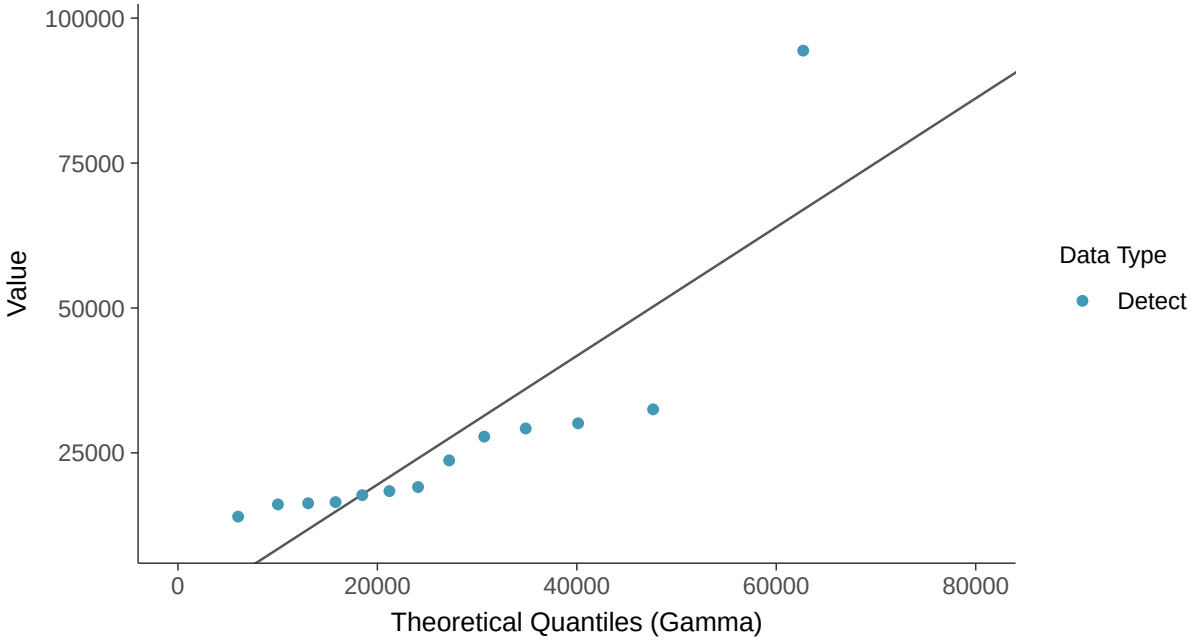
Lognormal Q-Q plot

Calcium, MW-11D (ug/L)



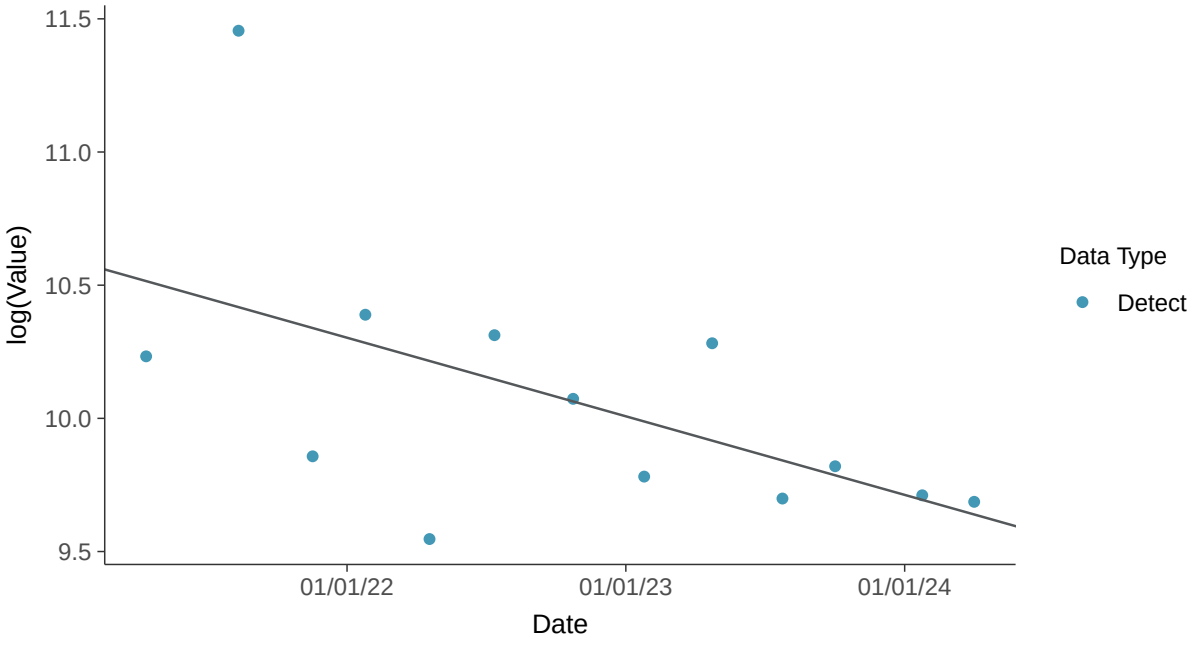
Gamma Q-Q plot

Calcium, MW-11D (ug/L)



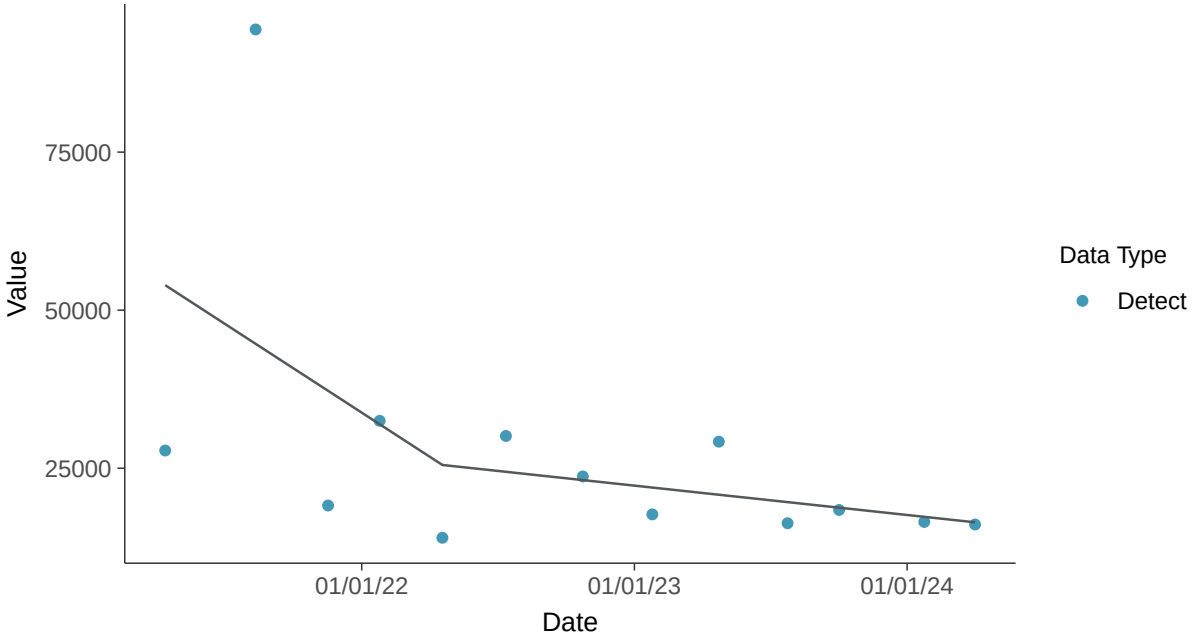
Trend Regression: Lognormal MLE

Calcium, MW-11D (ug/L)



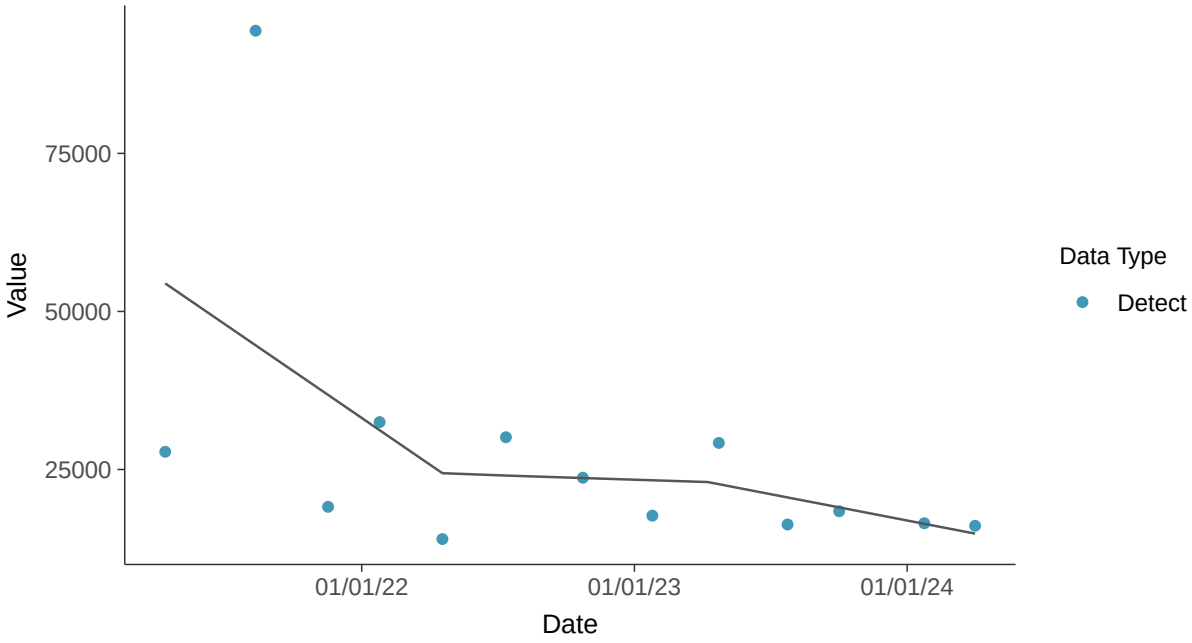
Trend Regression: Piecewise Linear-Linear

Calcium, MW-11D (ug/L)



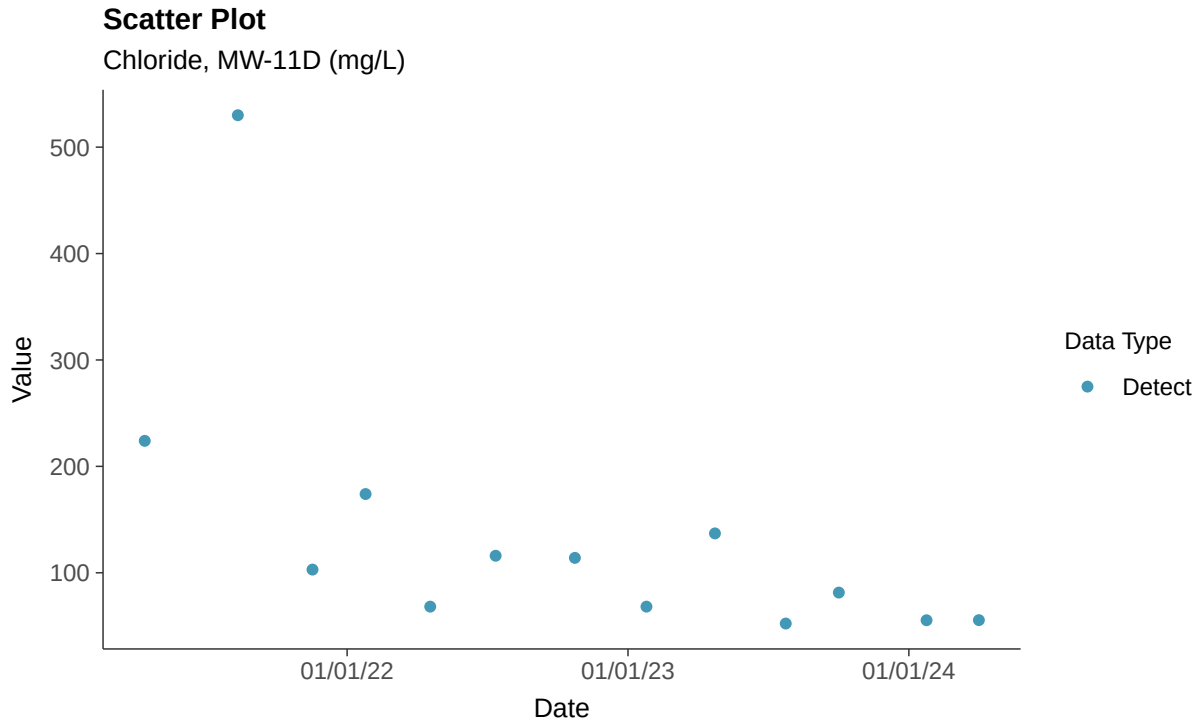
Trend Regression: Piecewise Linear-Linear-Linear

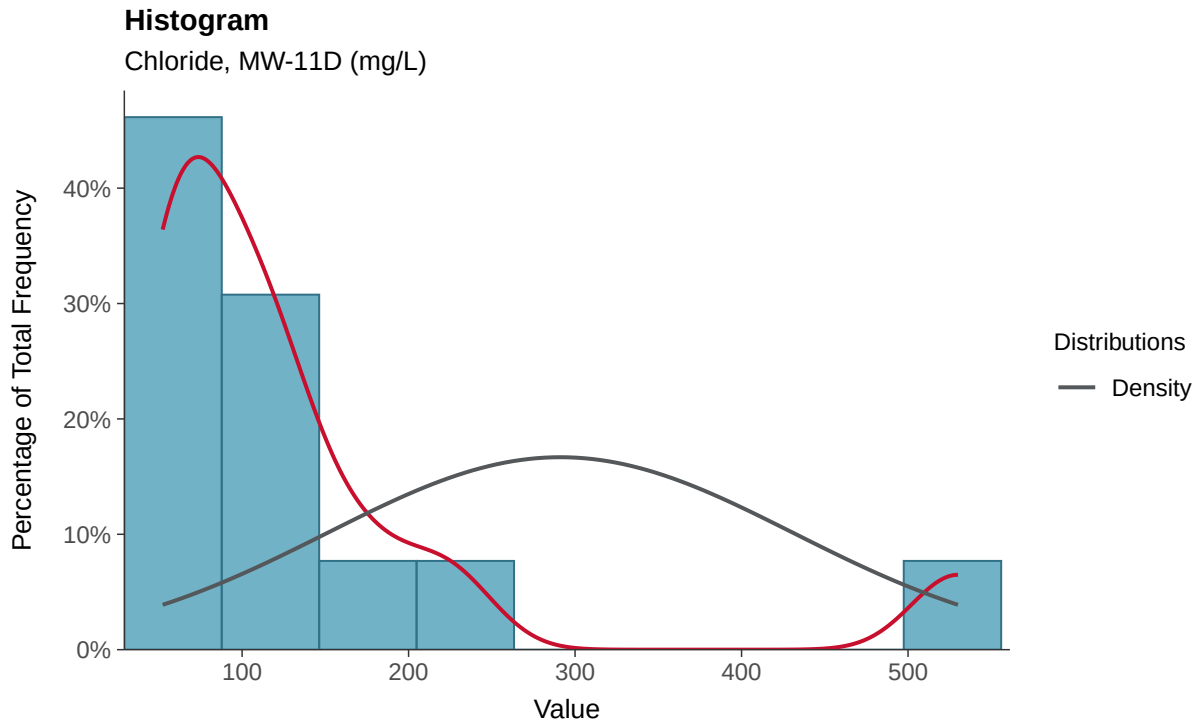
Calcium, MW-11D (ug/L)



App. III: Chloride, MW-11D

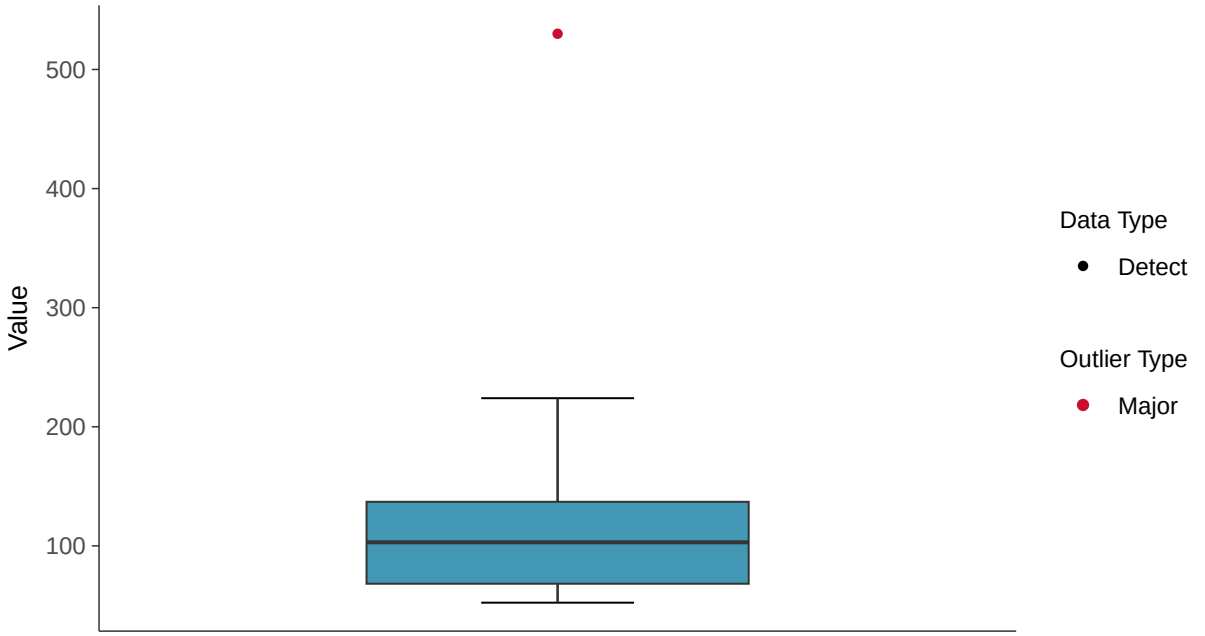
ID: 4_2_108





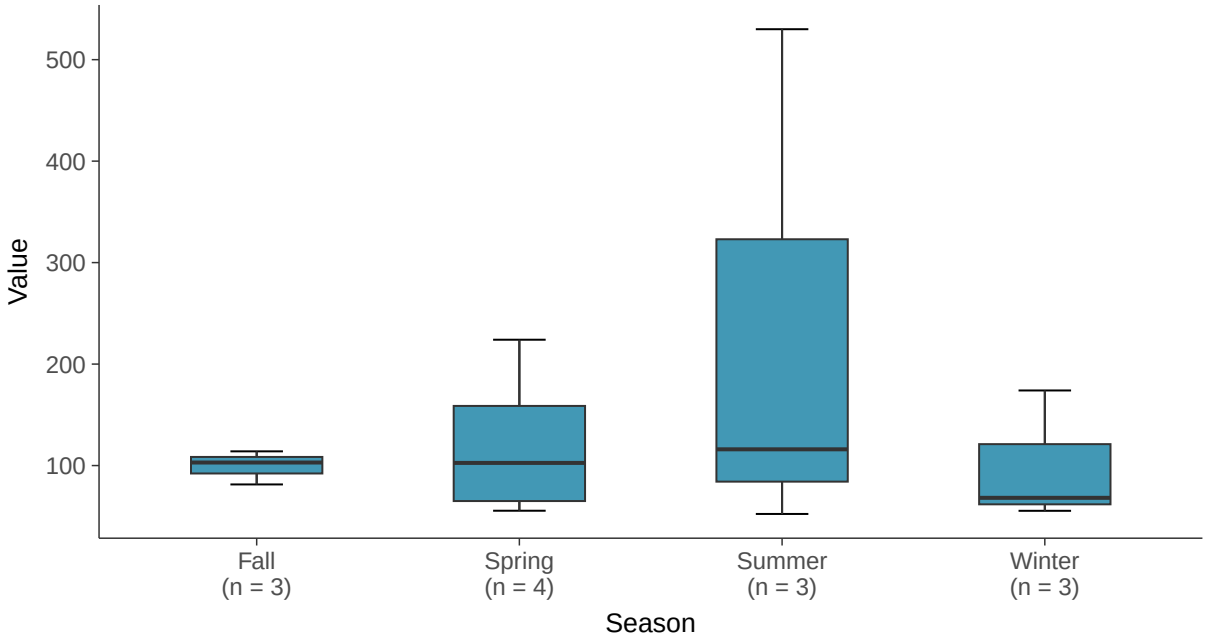
Boxplot

Chloride, MW-11D (mg/L)



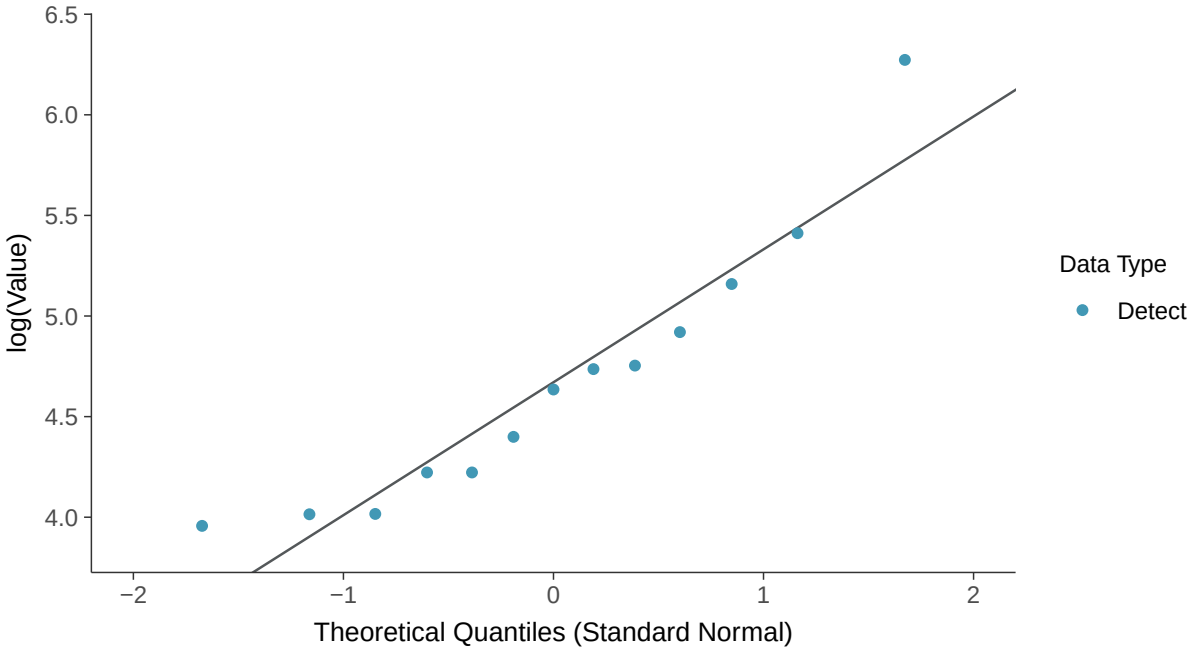
Boxplot by Season

Chloride, MW-11D (mg/L)



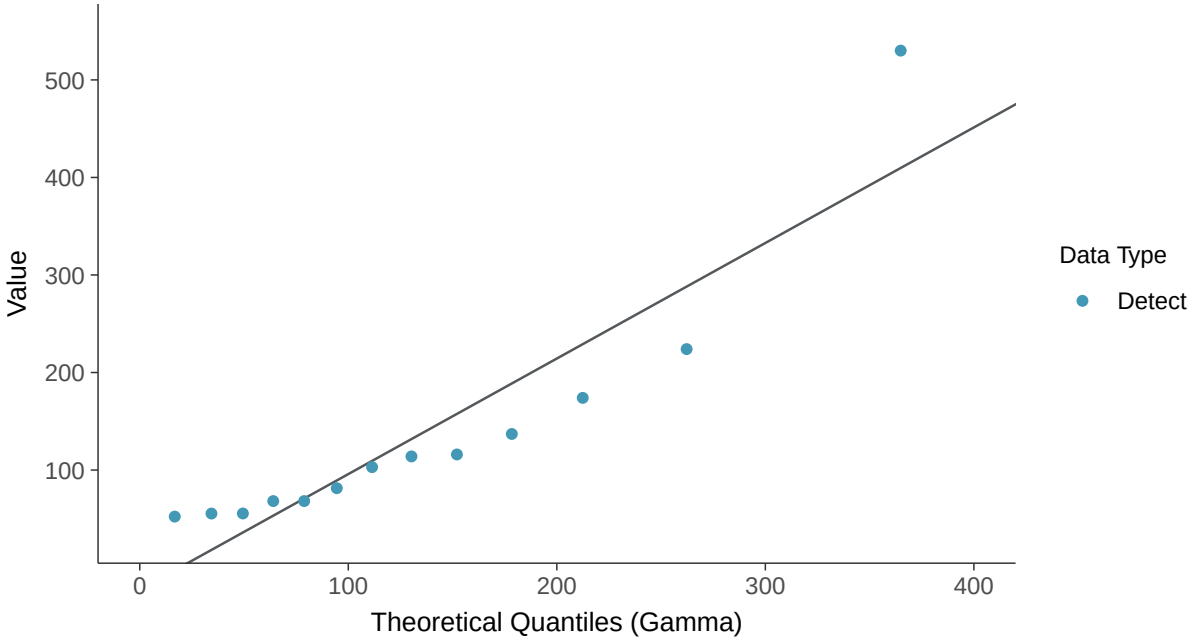
Lognormal Q-Q plot

Chloride, MW-11D (mg/L)



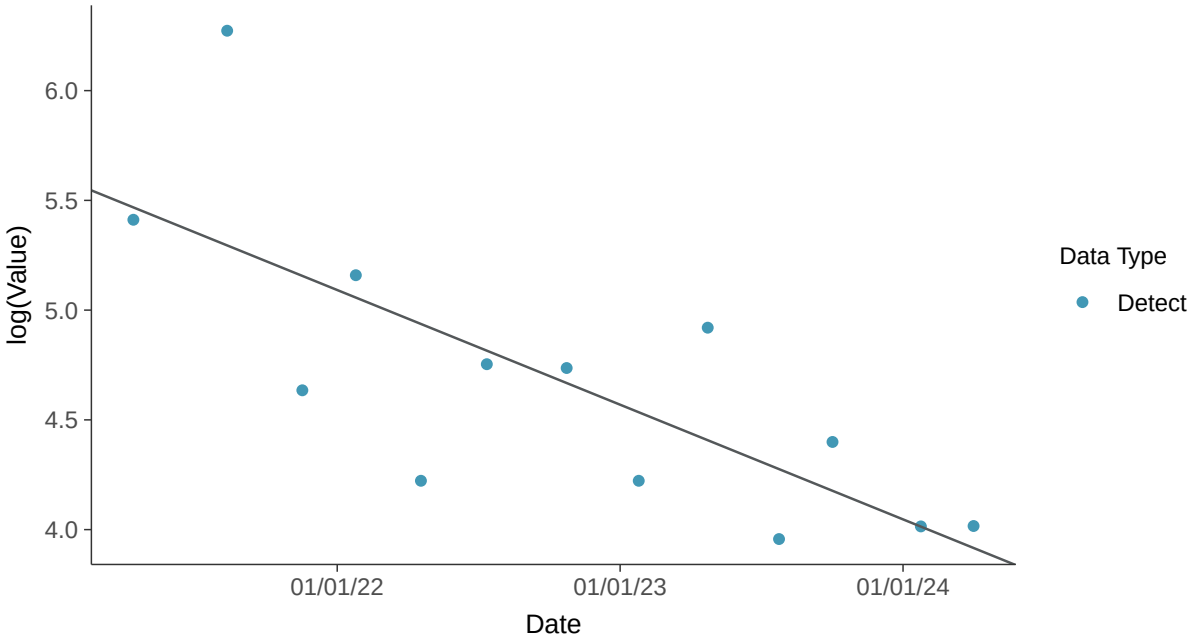
Gamma Q-Q plot

Chloride, MW-11D (mg/L)



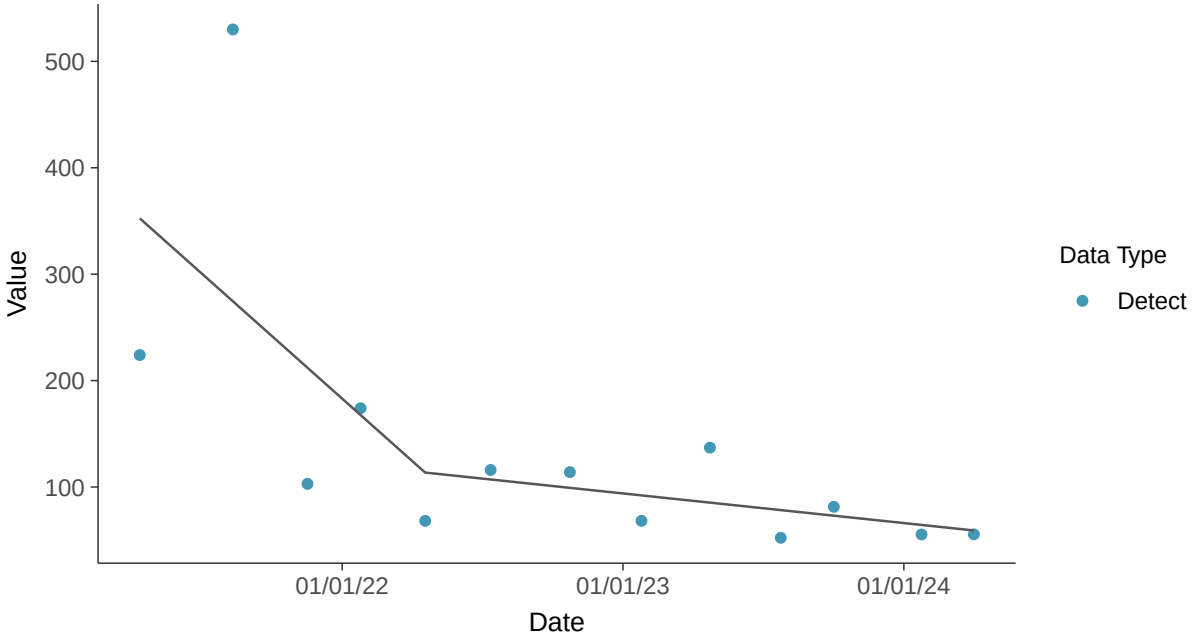
Trend Regression: Lognormal MLE

Chloride, MW-11D (mg/L)



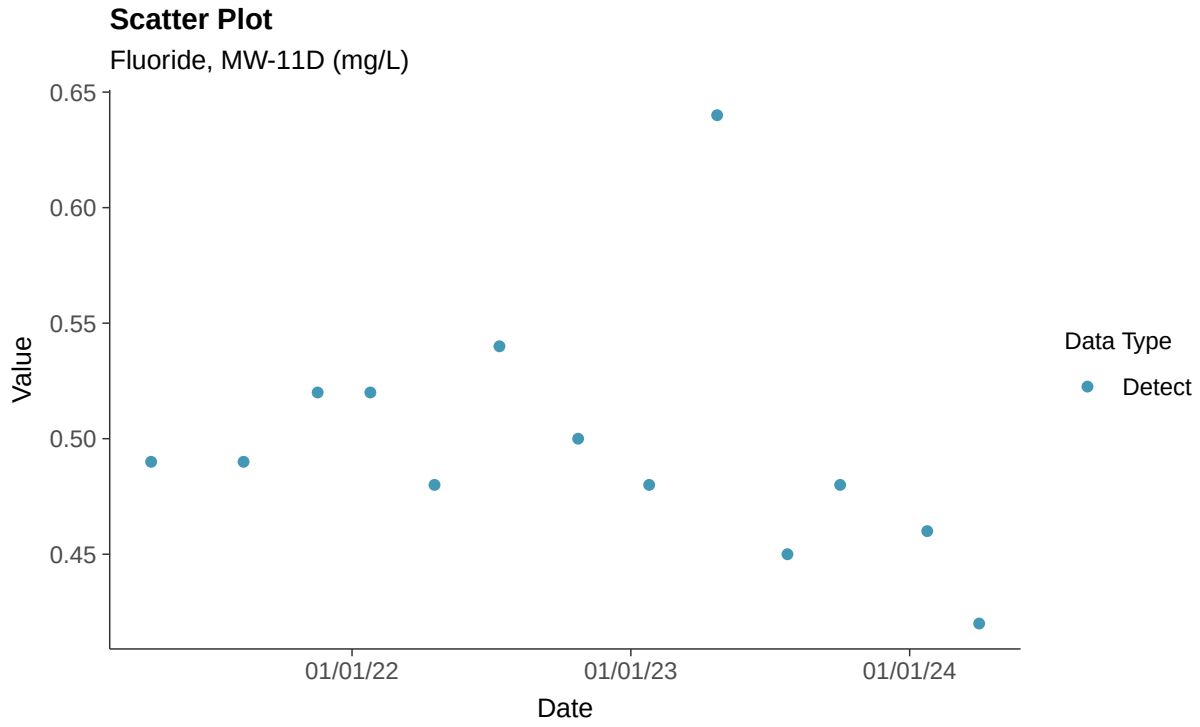
Trend Regression: Piecewise Linear-Linear

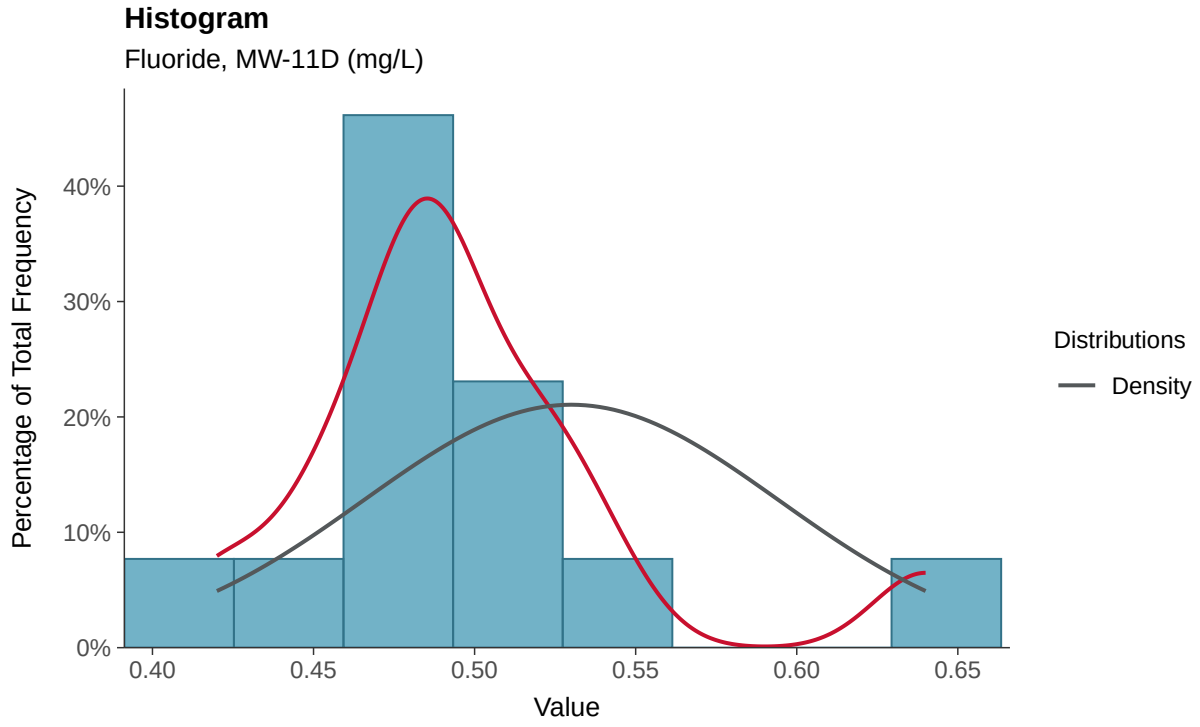
Chloride, MW-11D (mg/L)



App. III: Fluoride, MW-11D

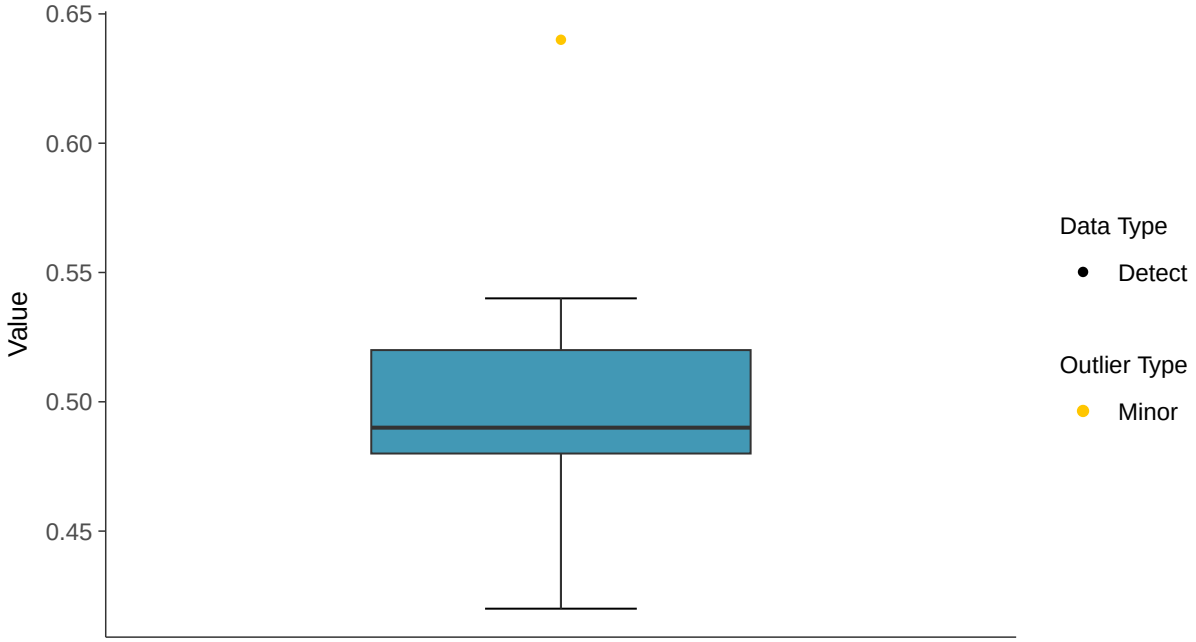
ID: 4_2_112





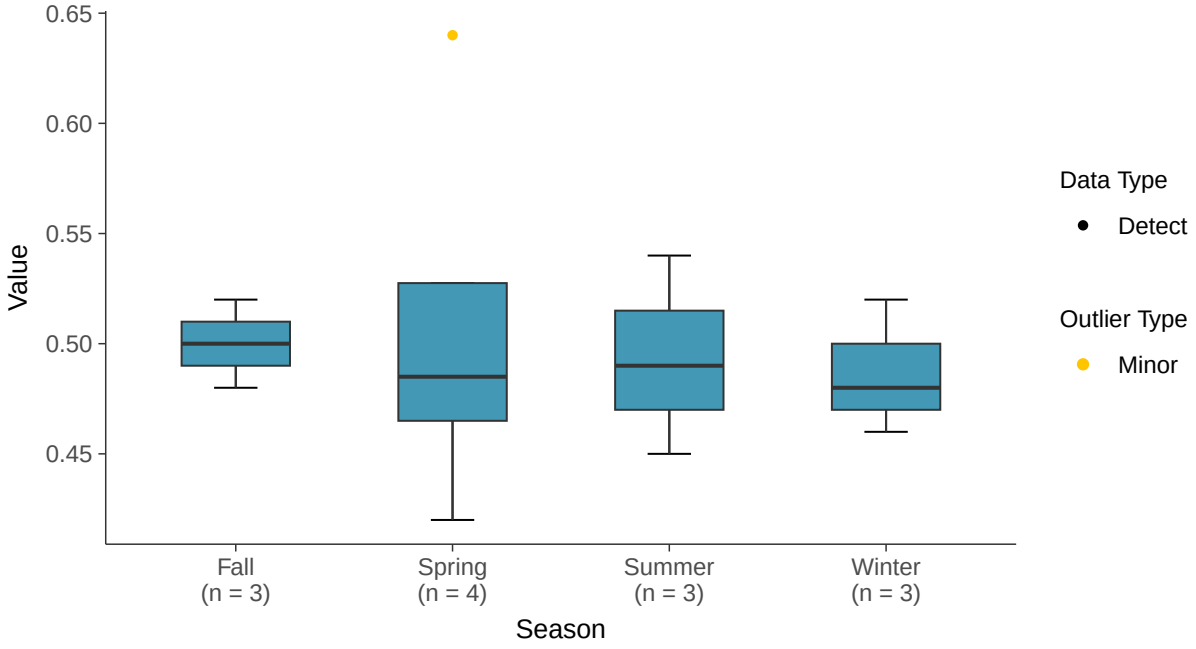
Boxplot

Fluoride, MW-11D (mg/L)



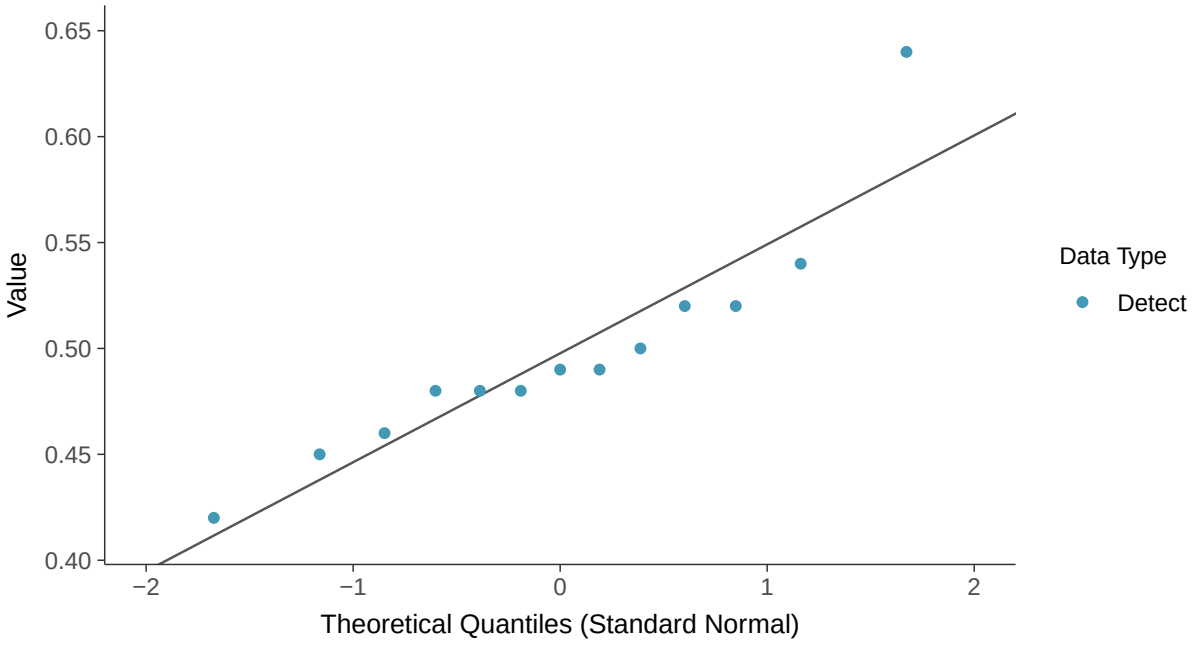
Boxplot by Season

Fluoride, MW-11D (mg/L)



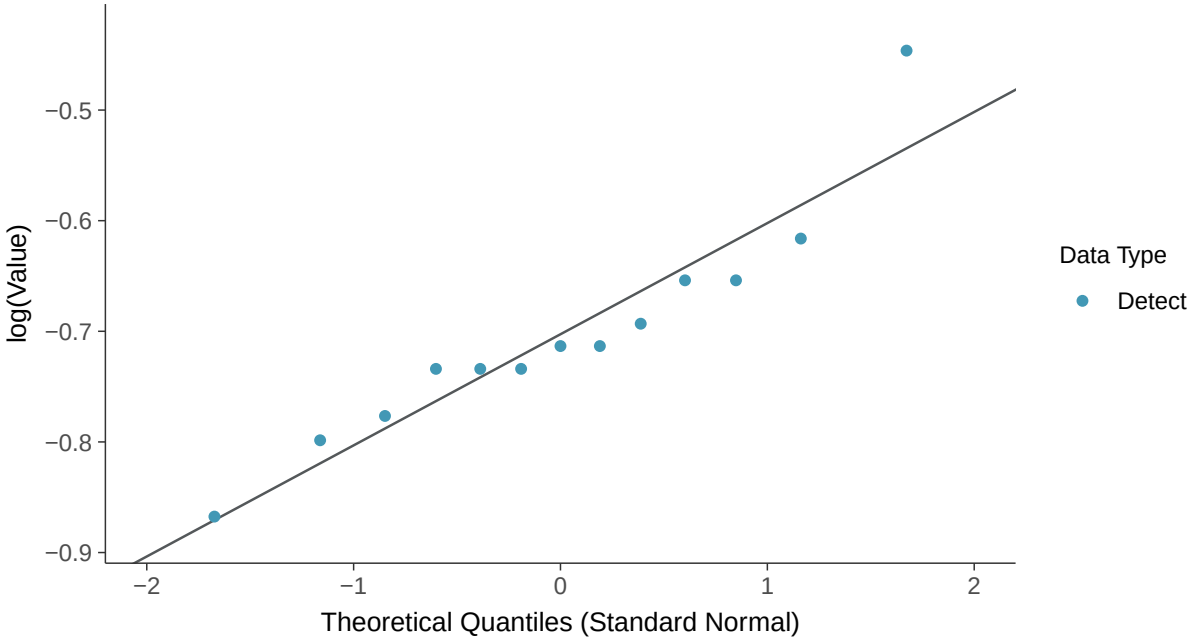
Normal Q-Q plot

Fluoride, MW-11D (mg/L)



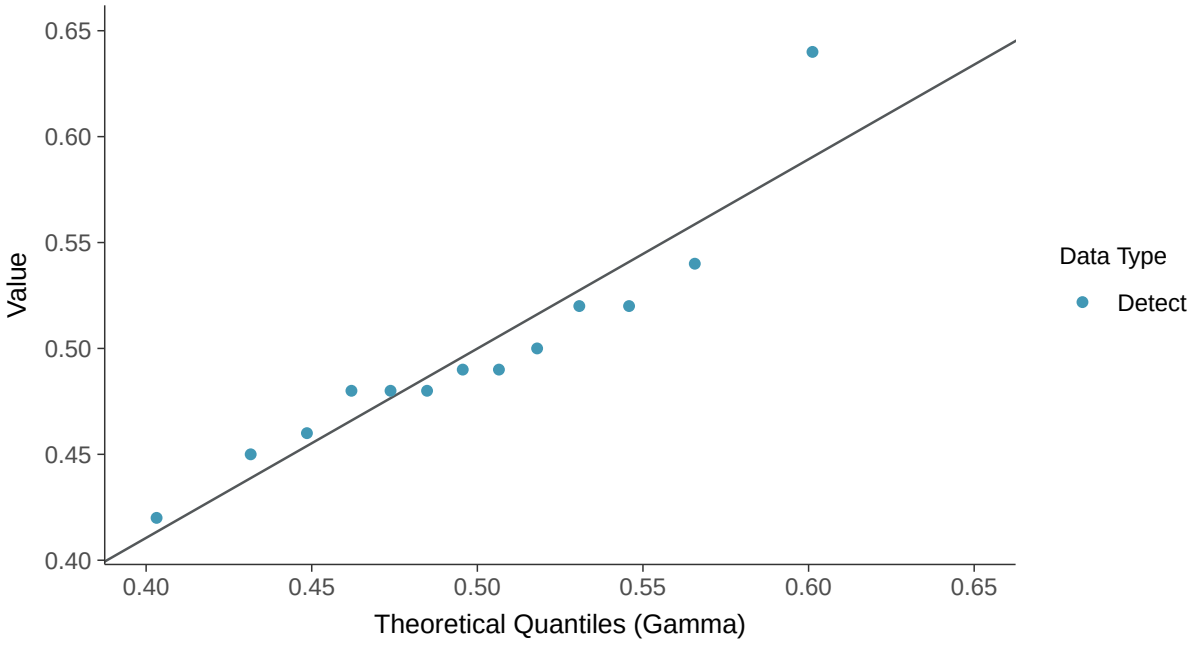
Lognormal Q-Q plot

Fluoride, MW-11D (mg/L)



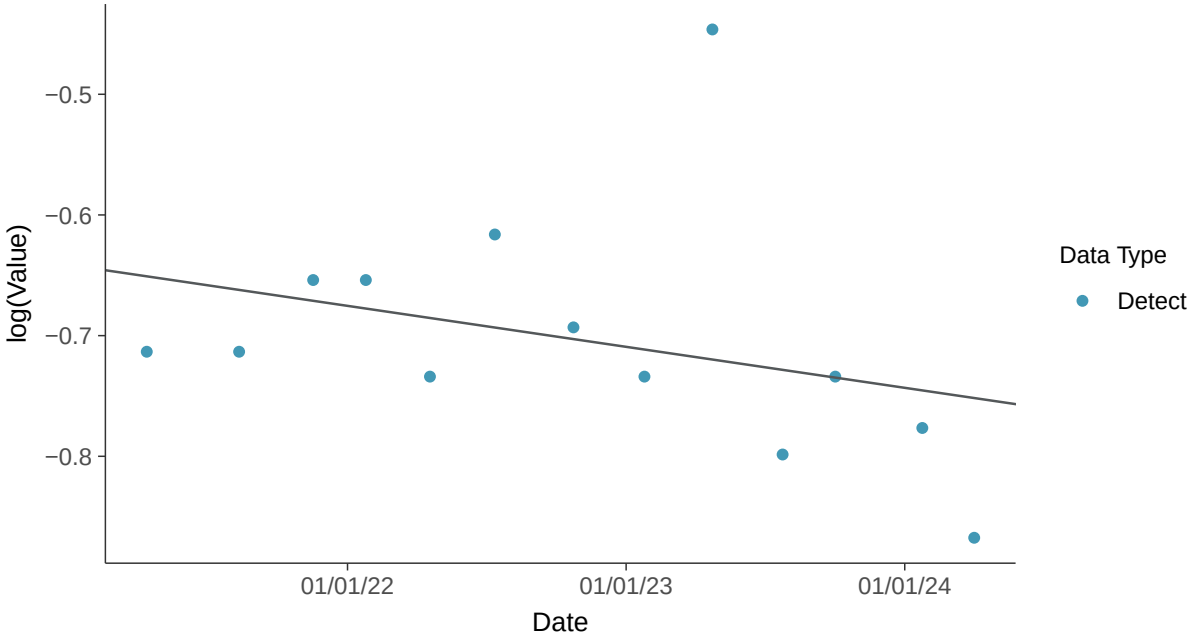
Gamma Q-Q plot

Fluoride, MW-11D (mg/L)



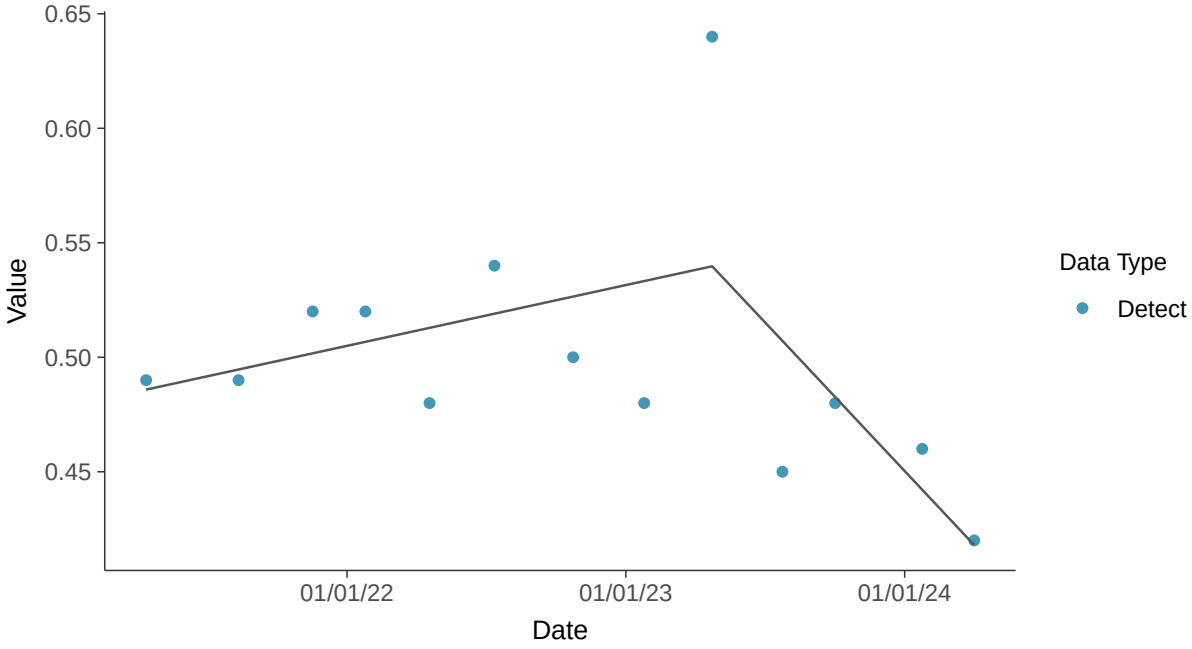
Trend Regression: Lognormal MLE

Fluoride, MW-11D (mg/L)



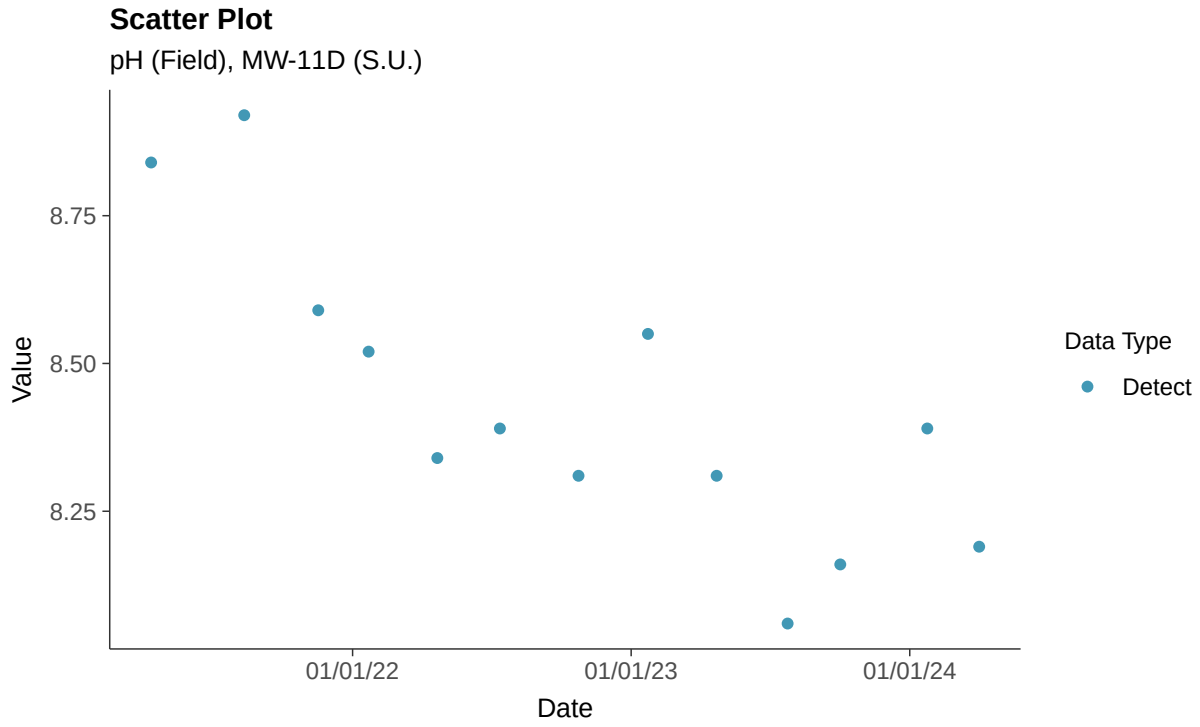
Trend Regression: Piecewise Linear-Linear

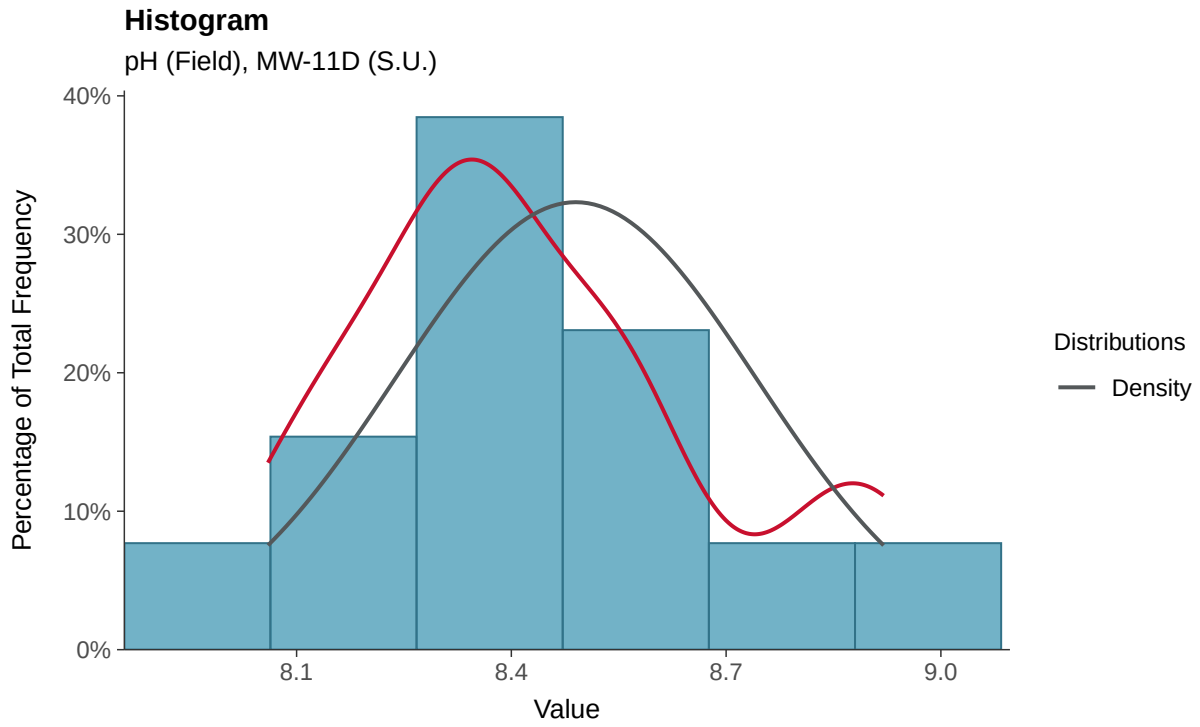
Fluoride, MW-11D (mg/L)



App. III: pH (Field), MW-11D

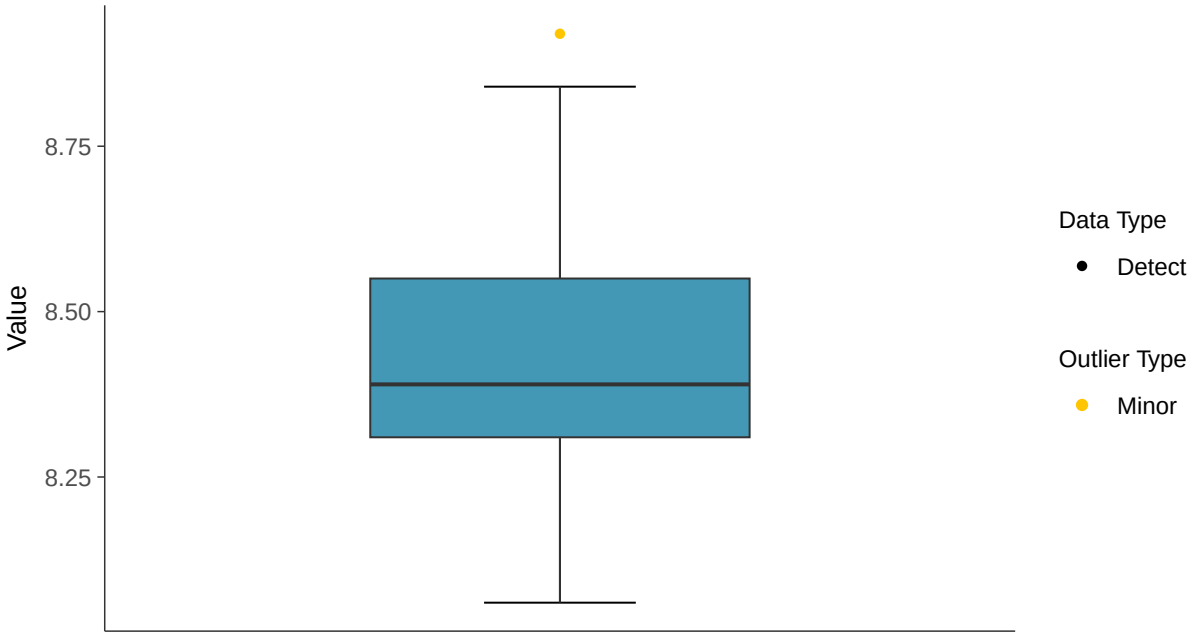
ID: 4_2_118





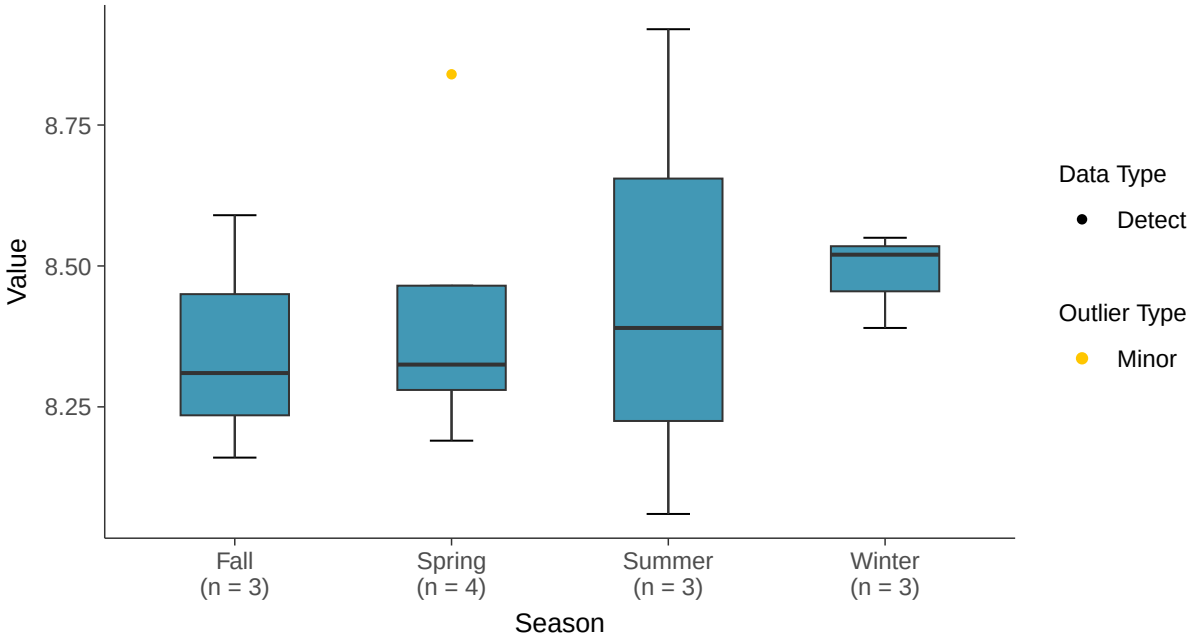
Boxplot

pH (Field), MW-11D (S.U.)



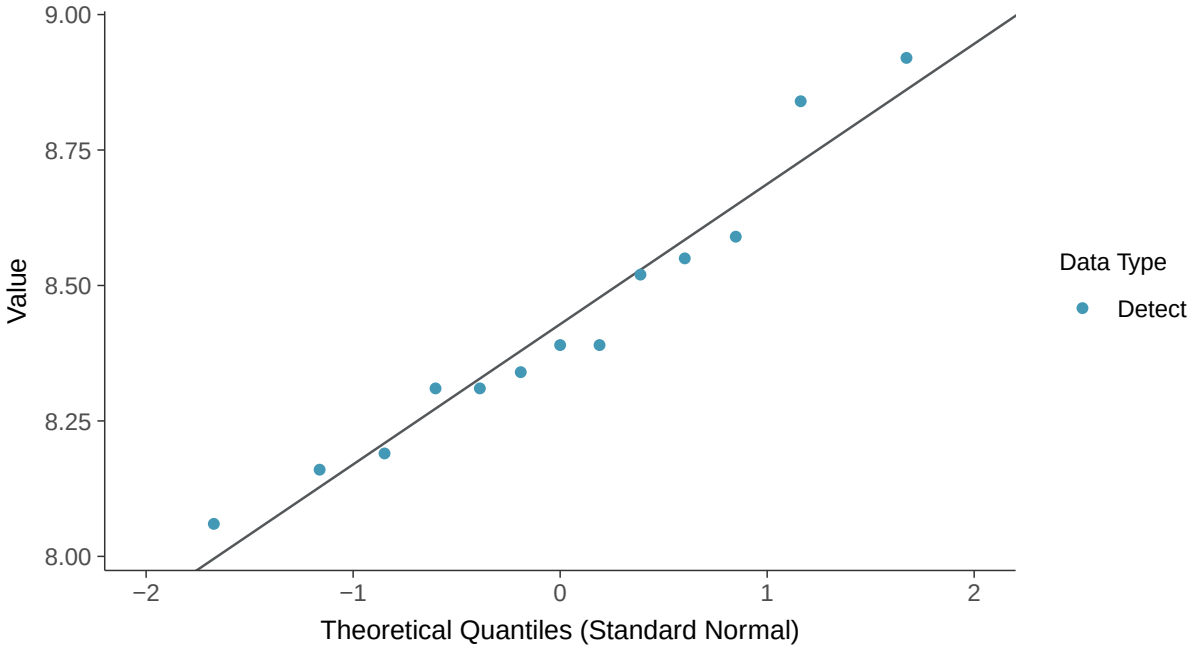
Boxplot by Season

pH (Field), MW-11D (S.U.)



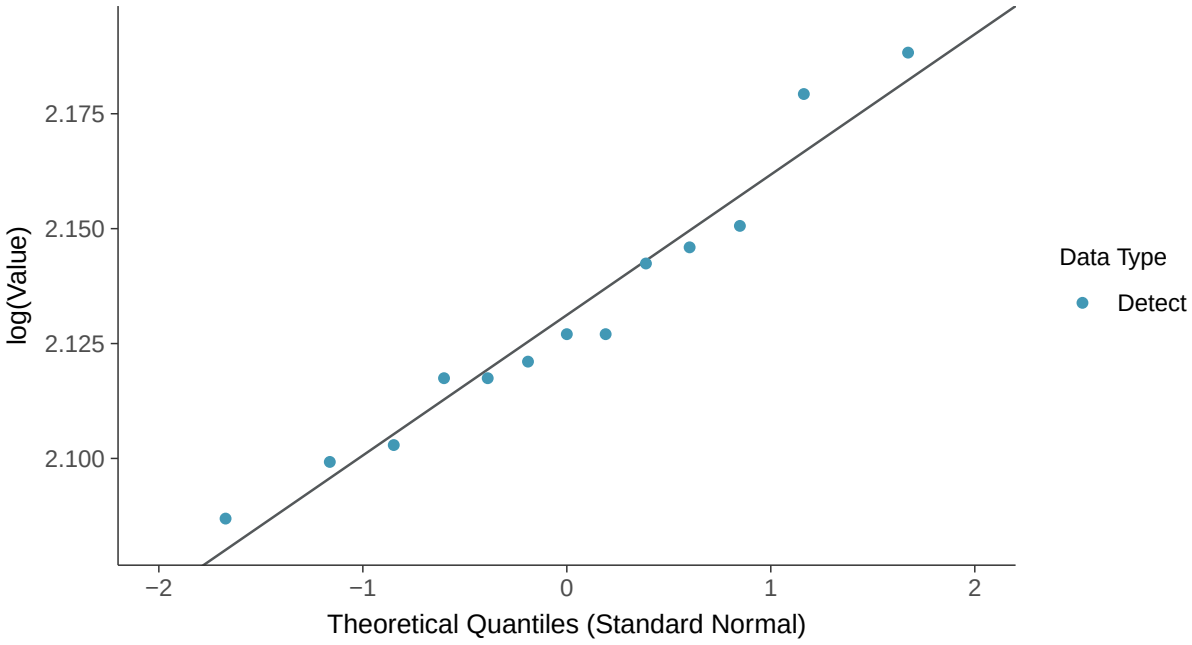
Normal Q-Q plot

pH (Field), MW-11D (S.U.)



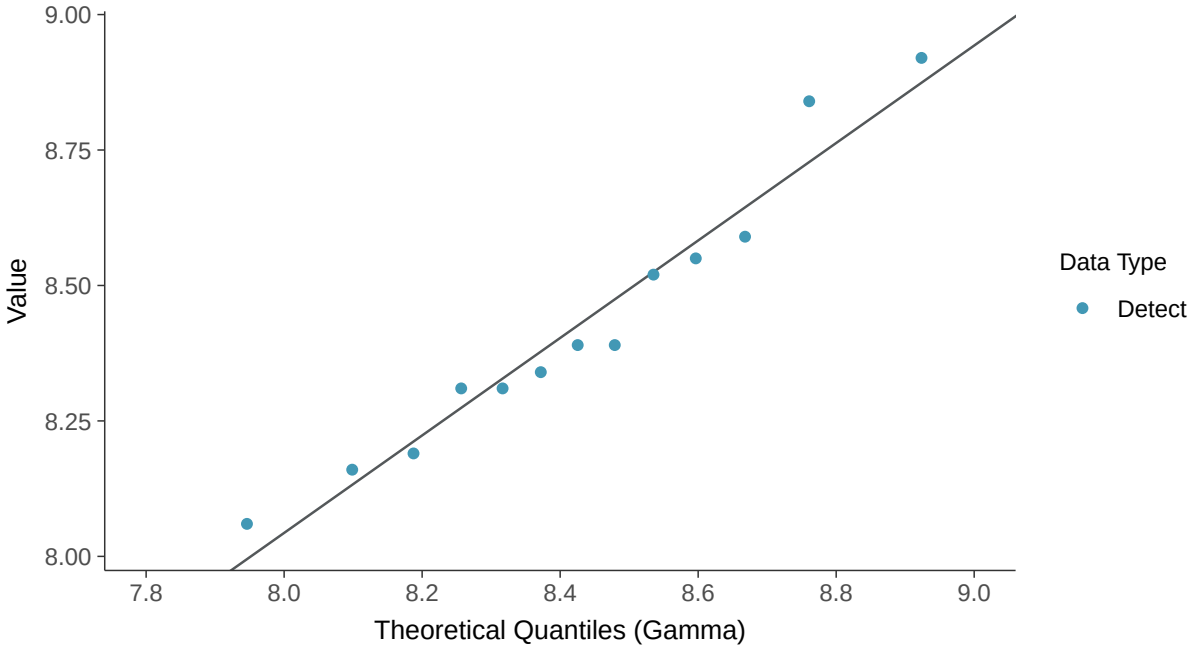
Lognormal Q-Q plot

pH (Field), MW-11D (S.U.)



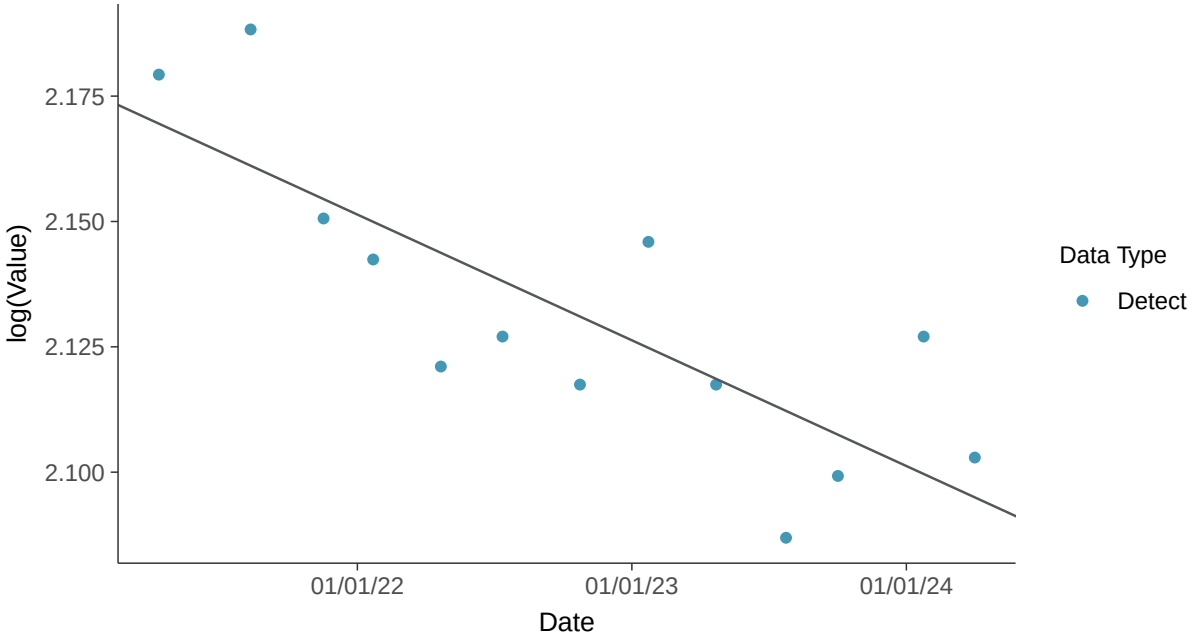
Gamma Q-Q plot

pH (Field), MW-11D (S.U.)



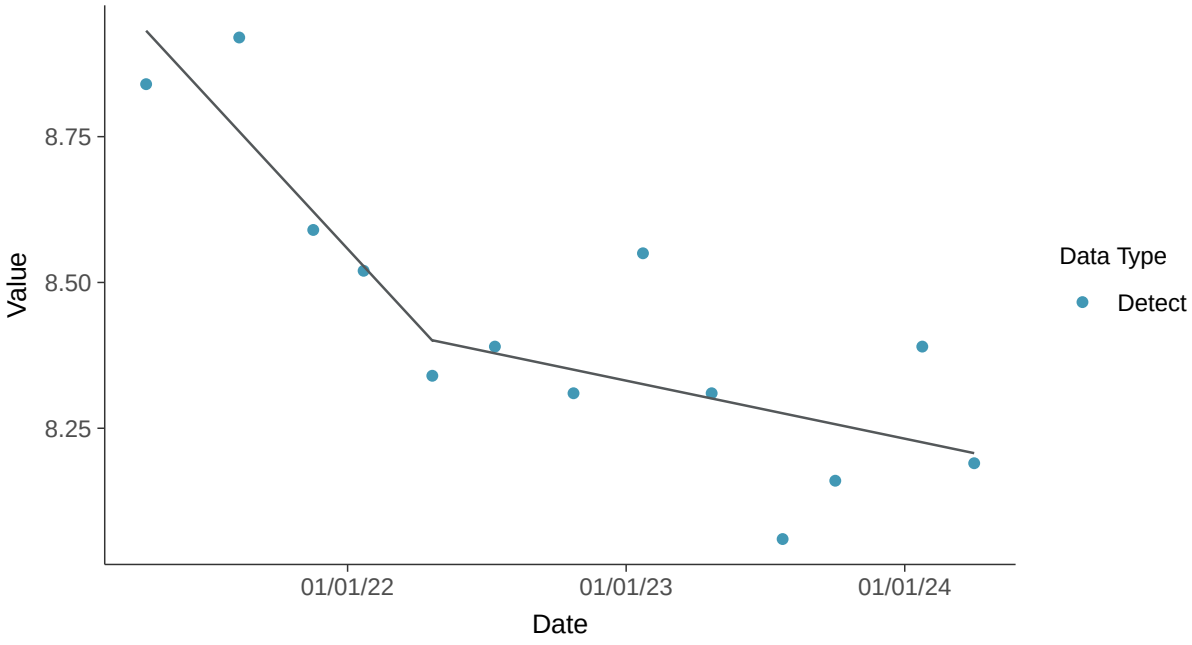
Trend Regression: Lognormal MLE

pH (Field), MW-11D (S.U.)



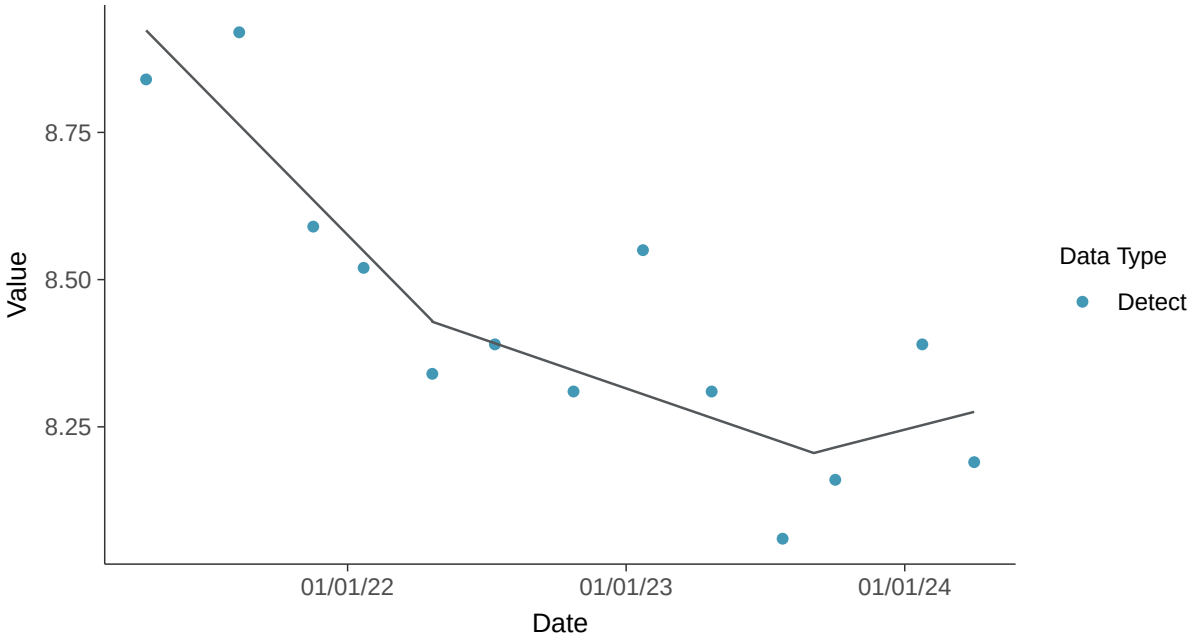
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-11D (S.U.)



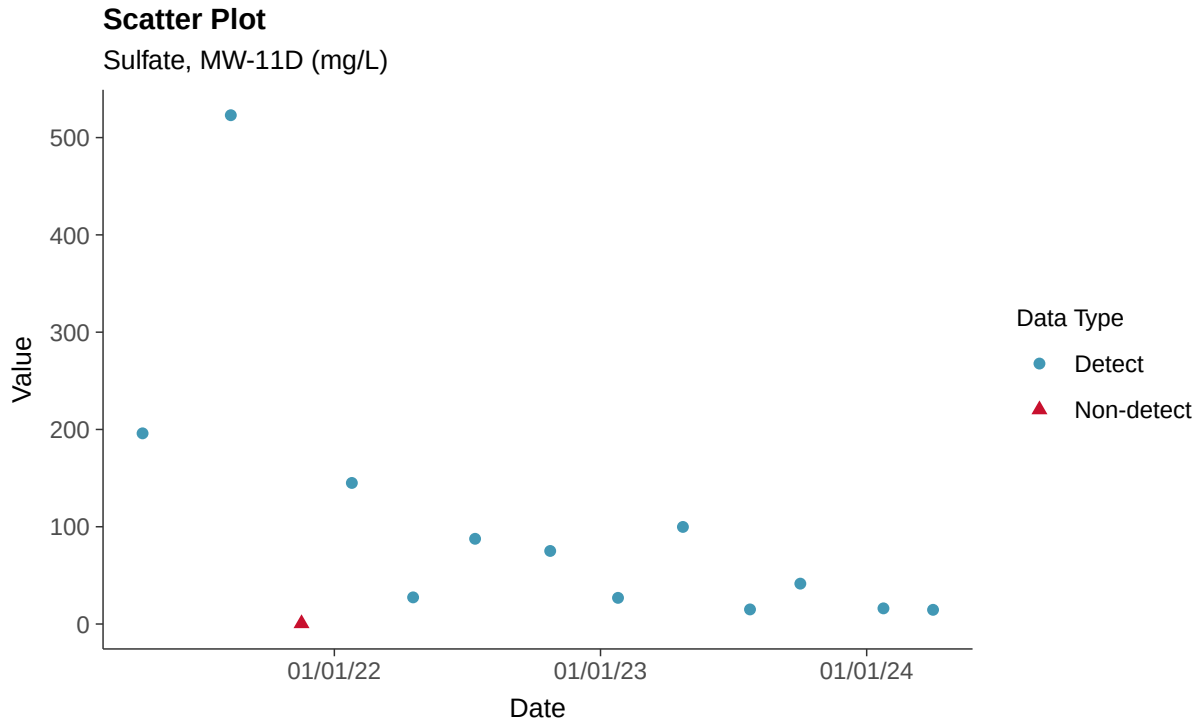
Trend Regression: Piecewise Linear-Linear-Linear

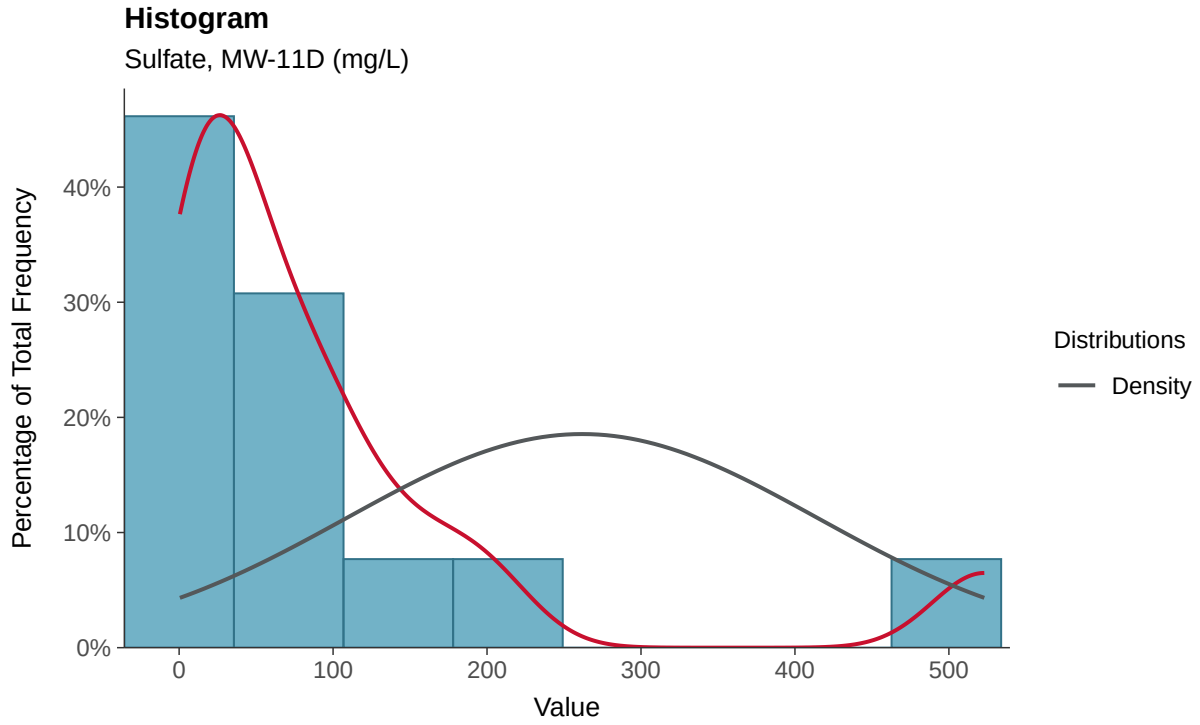
pH (Field), MW-11D (S.U.)



App. III: Sulfate, MW-11D

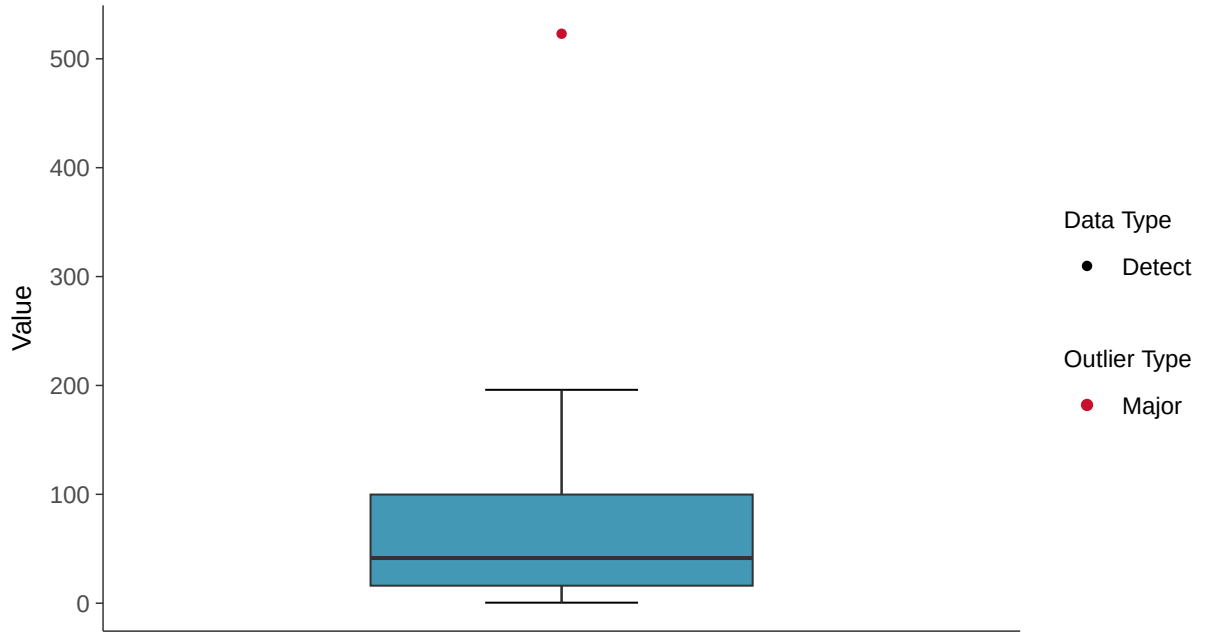
ID: 4_2_123





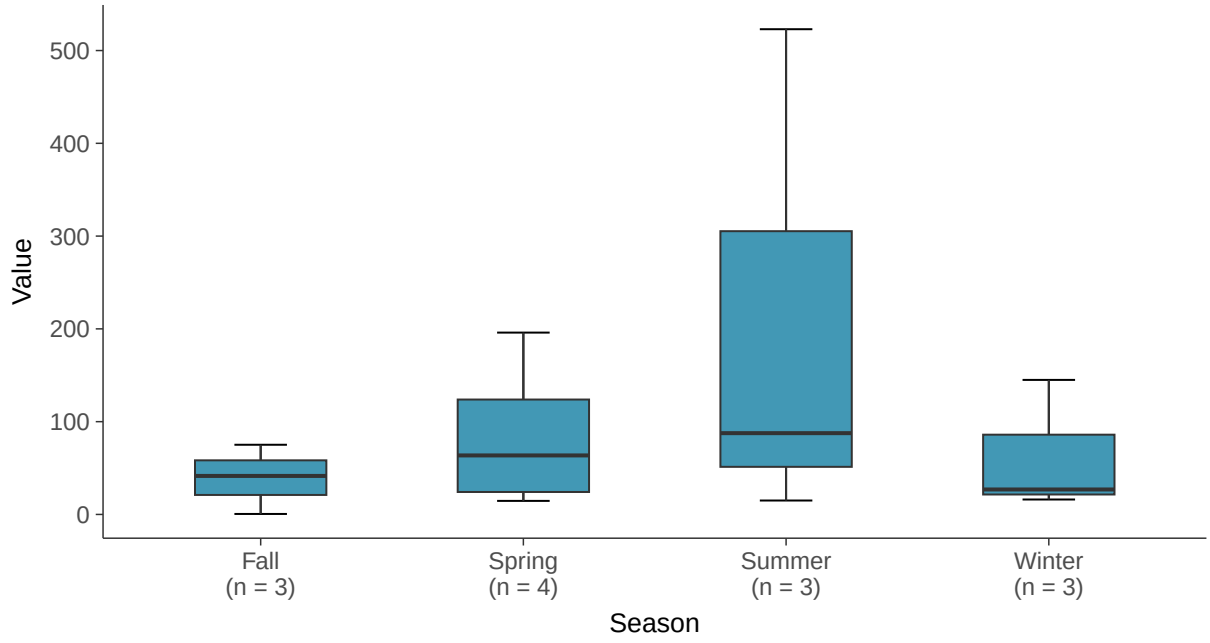
Boxplot

Sulfate, MW-11D (mg/L)



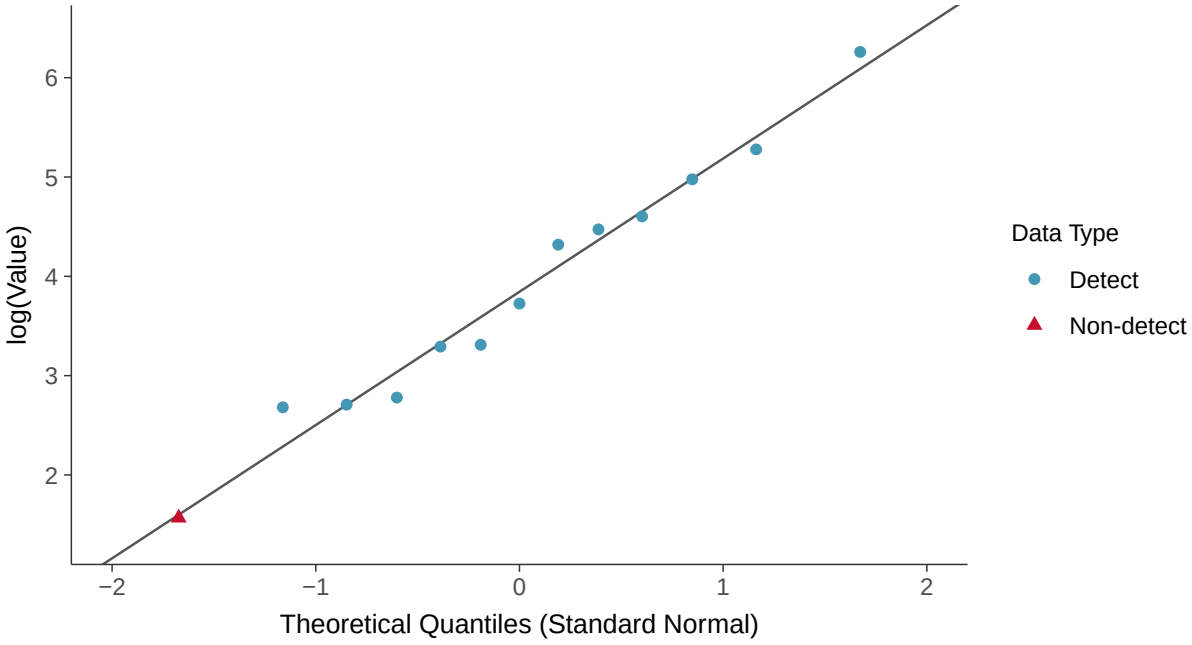
Boxplot by Season

Sulfate, MW-11D (mg/L)



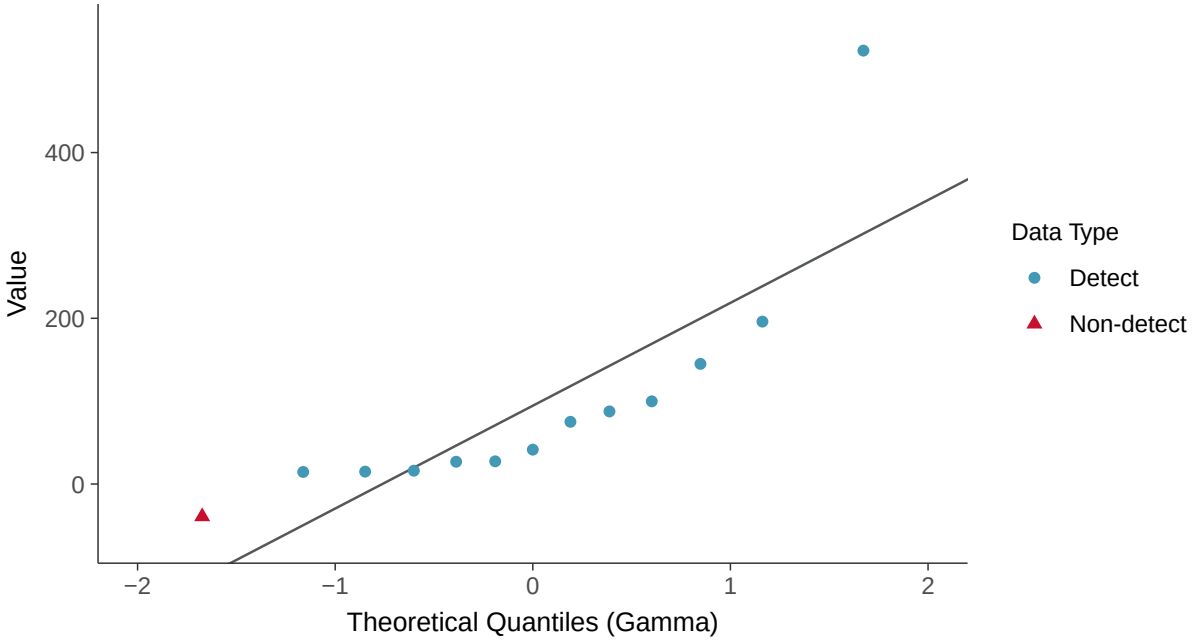
Lognormal Q-Q plot using ROS Imputed Estimates

Sulfate, MW-11D (mg/L)



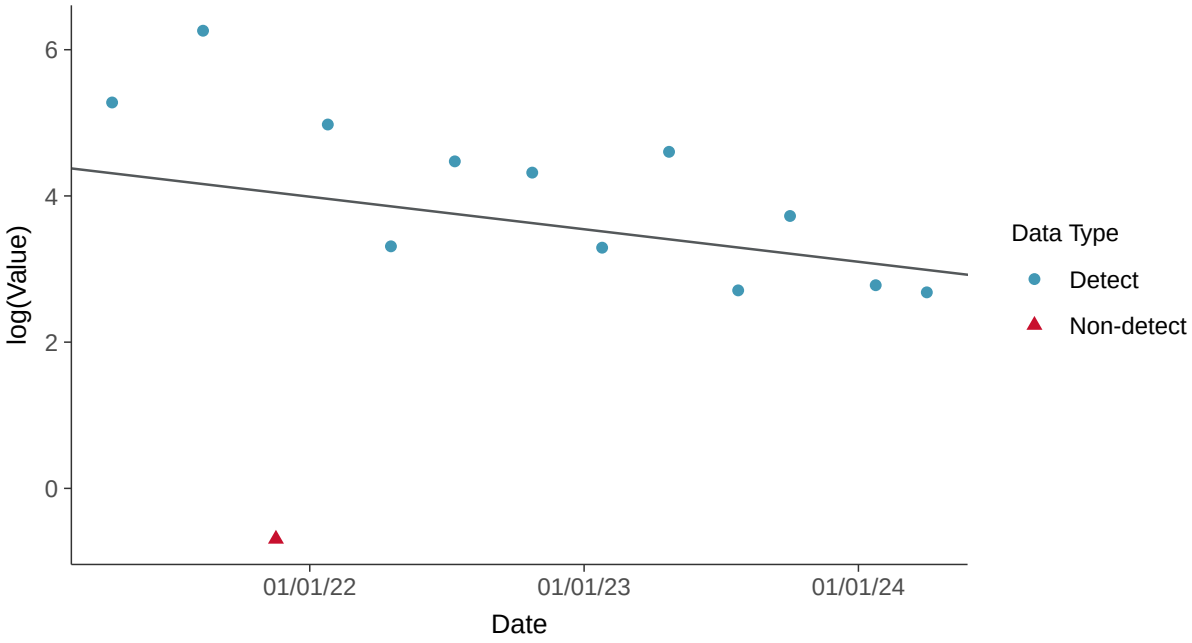
Gamma Q-Q plot using ROS Imputed Estimates

Sulfate, MW-11D (mg/L)



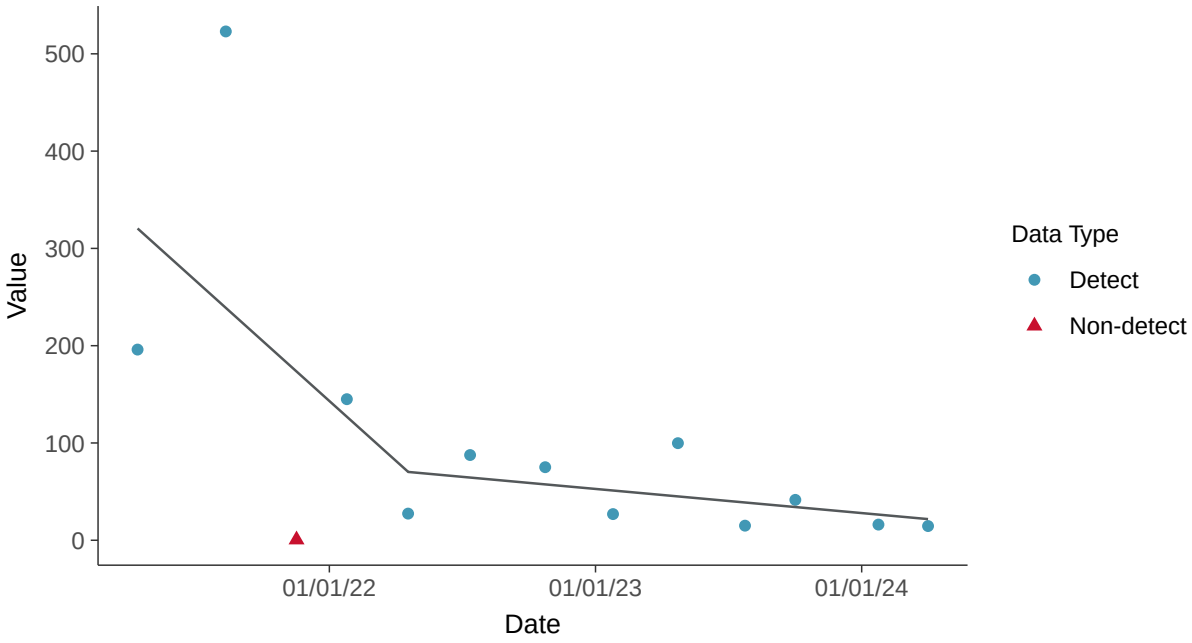
Trend Regression: Lognormal MLE

Sulfate, MW-11D (mg/L)



Trend Regression: Piecewise Linear-Linear

Sulfate, MW-11D (mg/L)

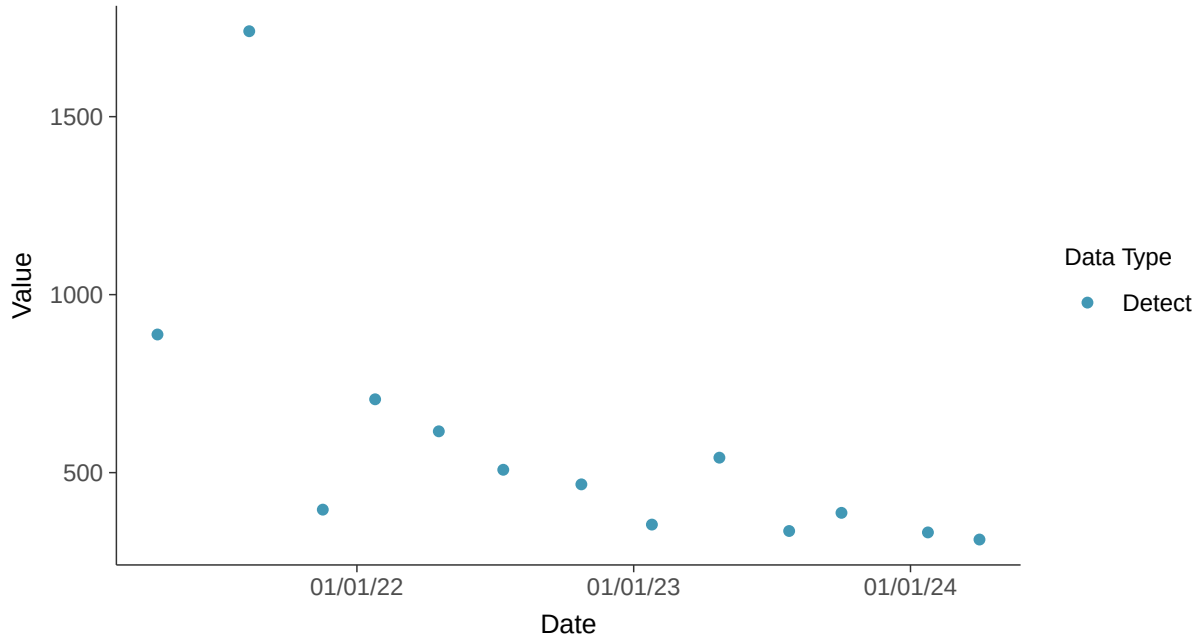


App. III: Total Dissolved Solids, MW-11D

ID: 4_2_125

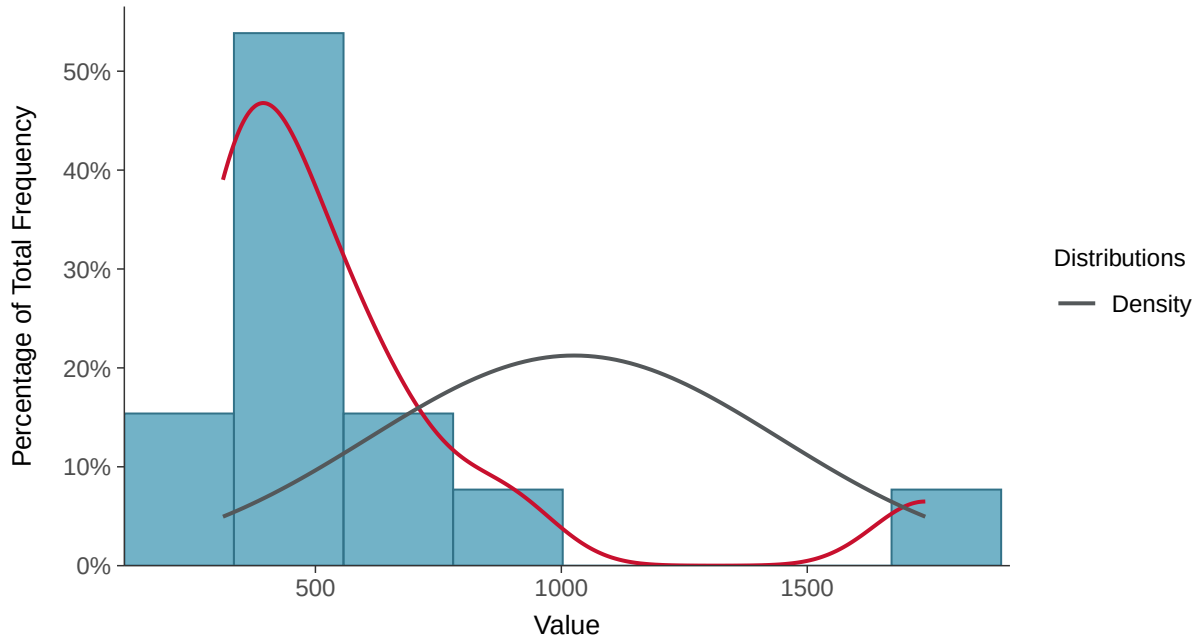
Scatter Plot

Total Dissolved Solids, MW-11D (mg/L)



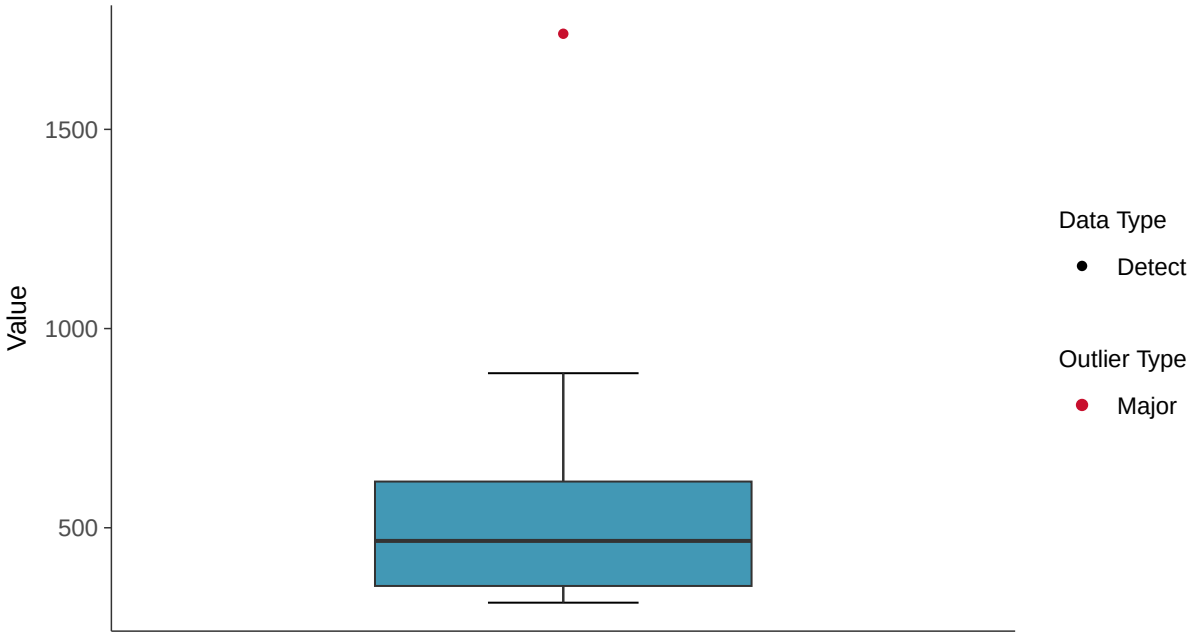
Histogram

Total Dissolved Solids, MW-11D (mg/L)



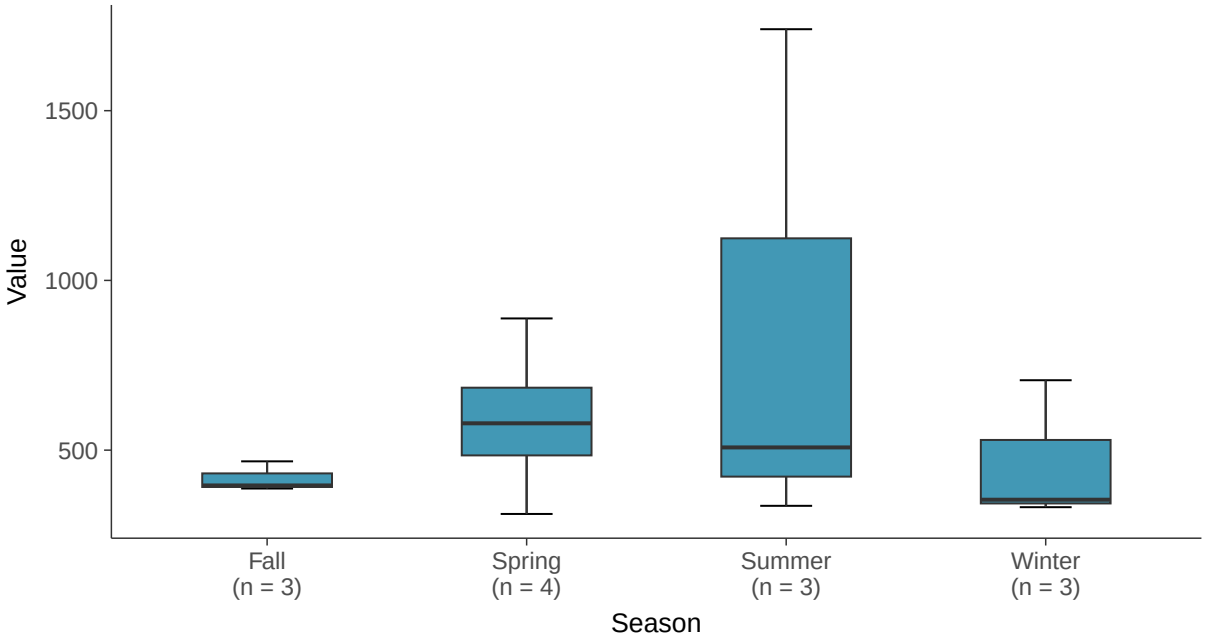
Boxplot

Total Dissolved Solids, MW-11D (mg/L)



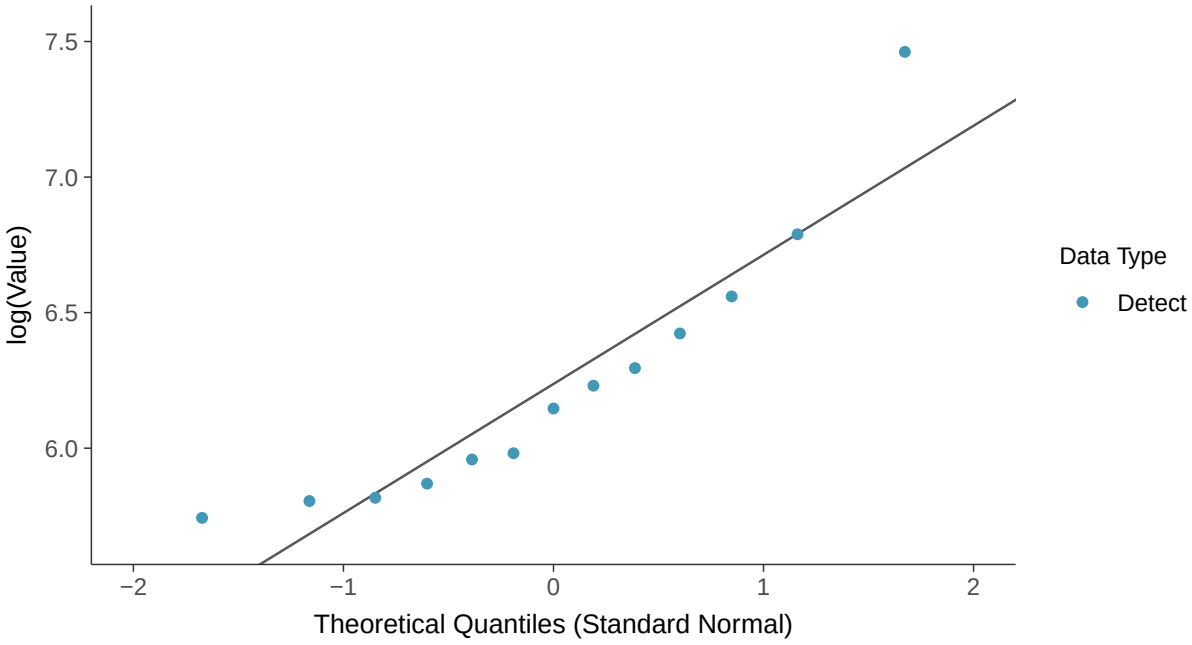
Boxplot by Season

Total Dissolved Solids, MW-11D (mg/L)



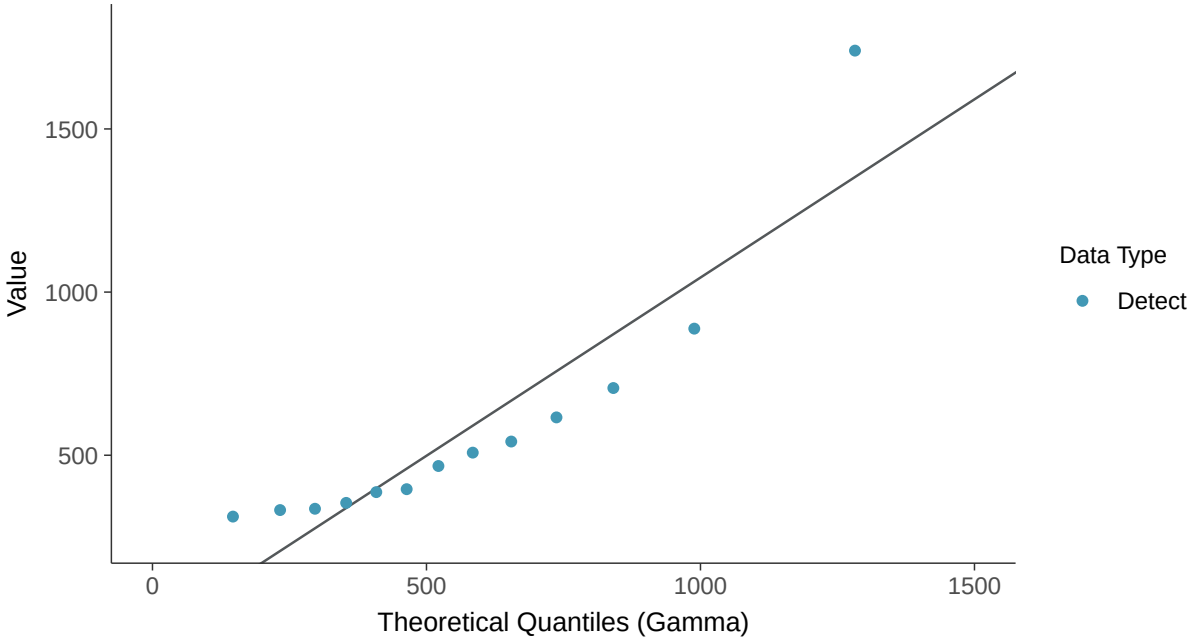
Lognormal Q-Q plot

Total Dissolved Solids, MW-11D (mg/L)



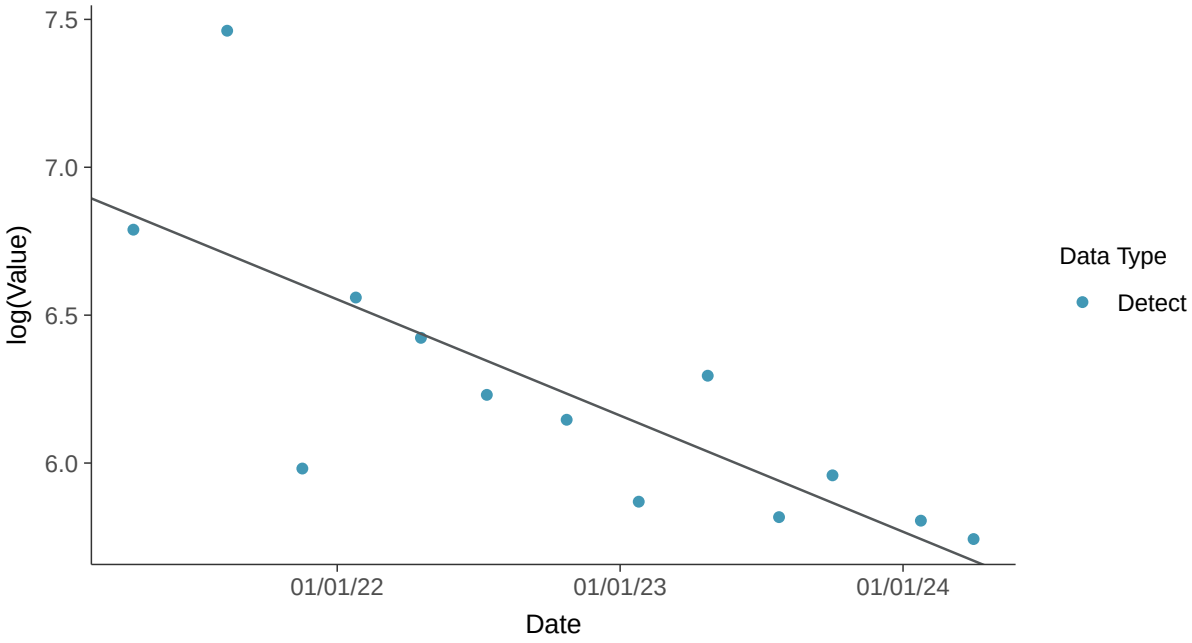
Gamma Q-Q plot

Total Dissolved Solids, MW-11D (mg/L)



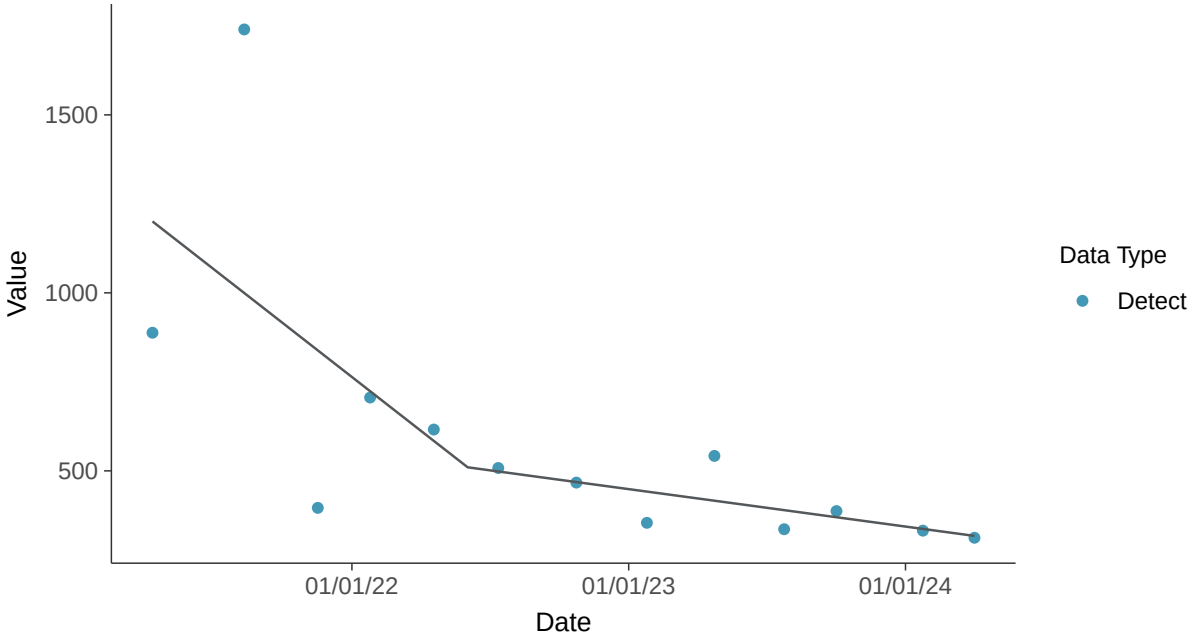
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-11D (mg/L)



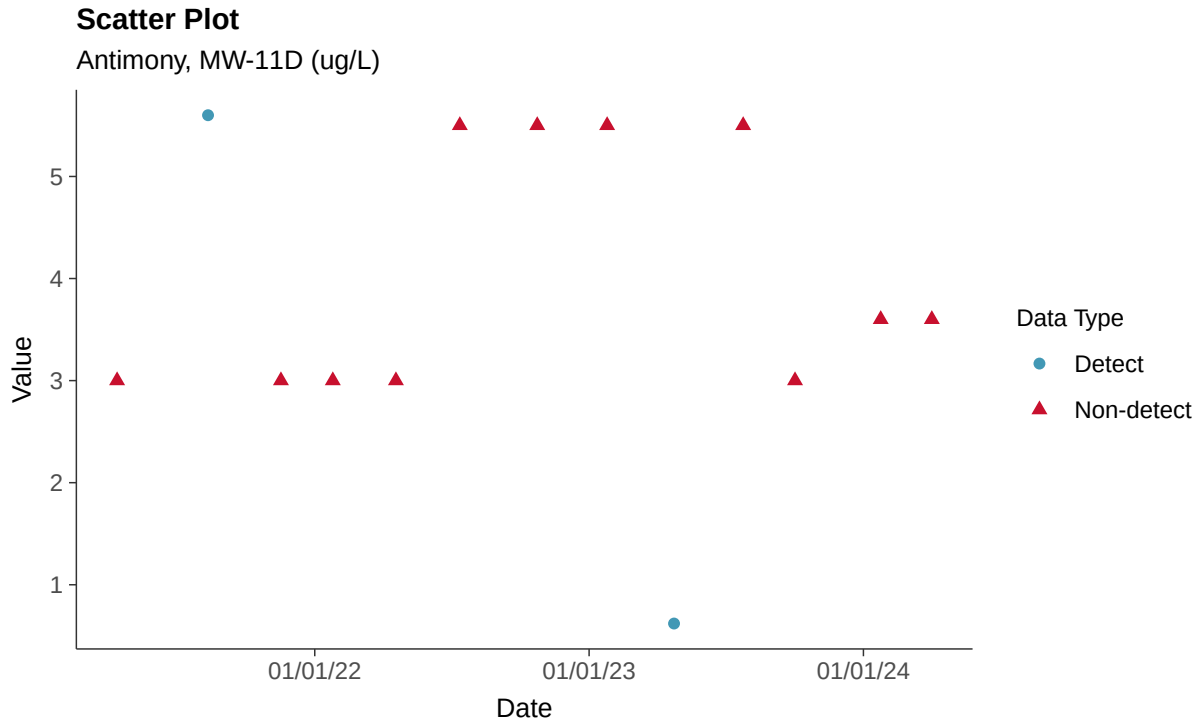
Trend Regression: Piecewise Linear-Linear

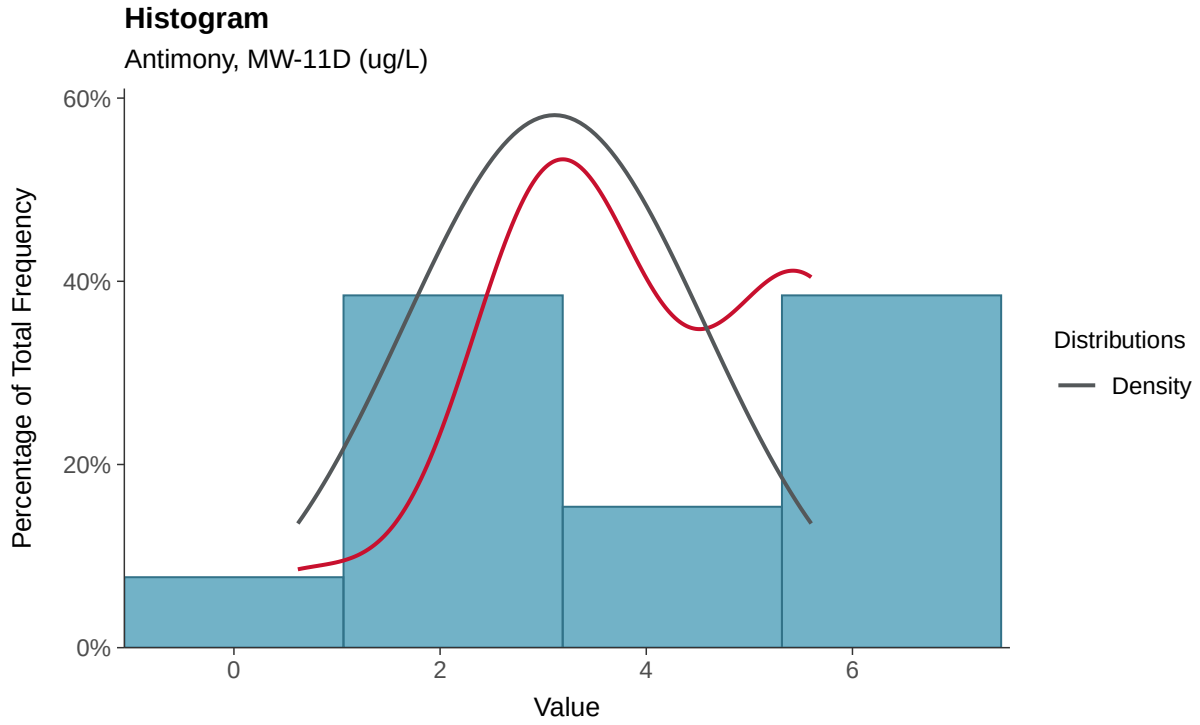
Total Dissolved Solids, MW-11D (mg/L)



App. IV: Antimony, MW-11D

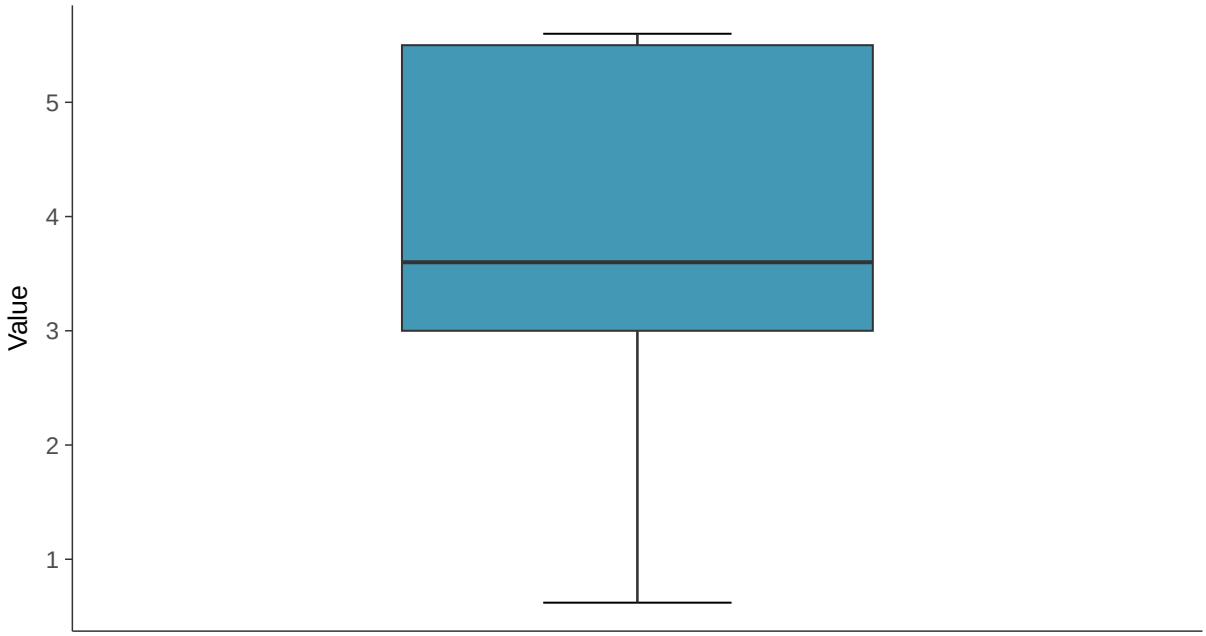
ID: 4_3_101





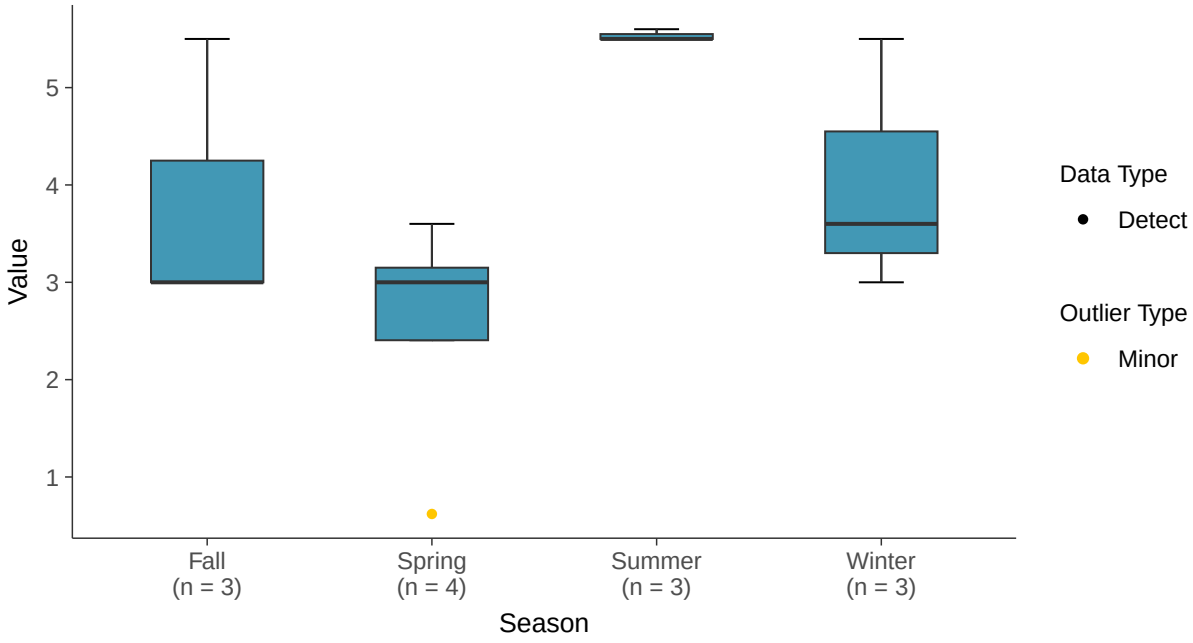
Boxplot

Antimony, MW-11D (ug/L)



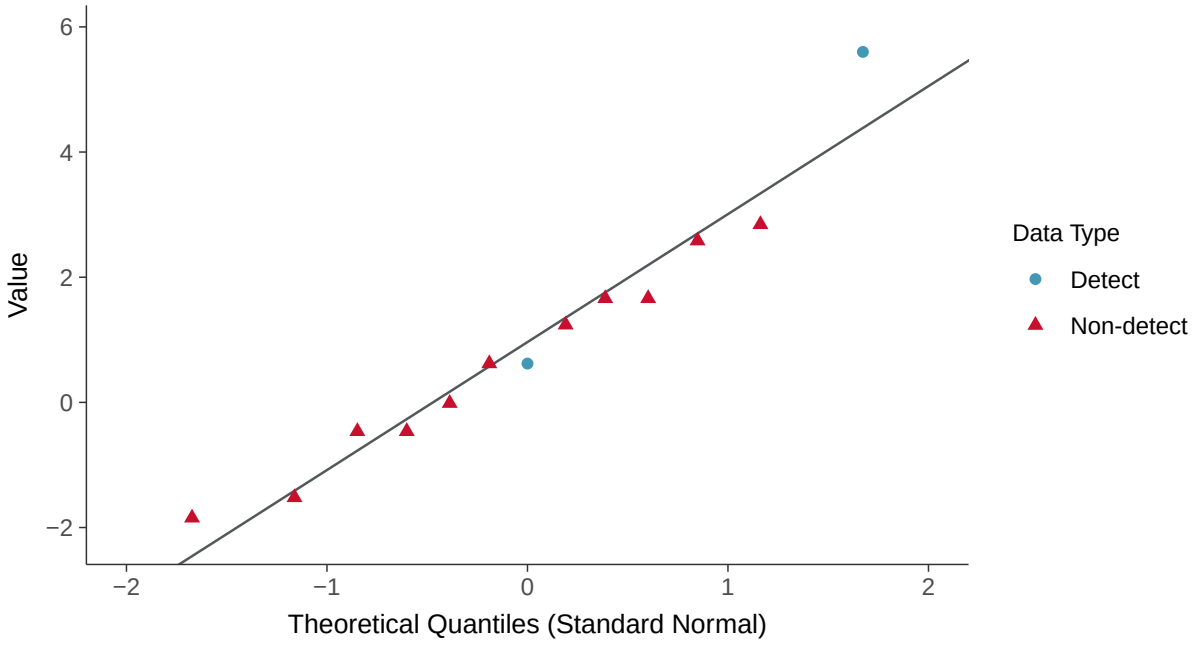
Boxplot by Season

Antimony, MW-11D (ug/L)



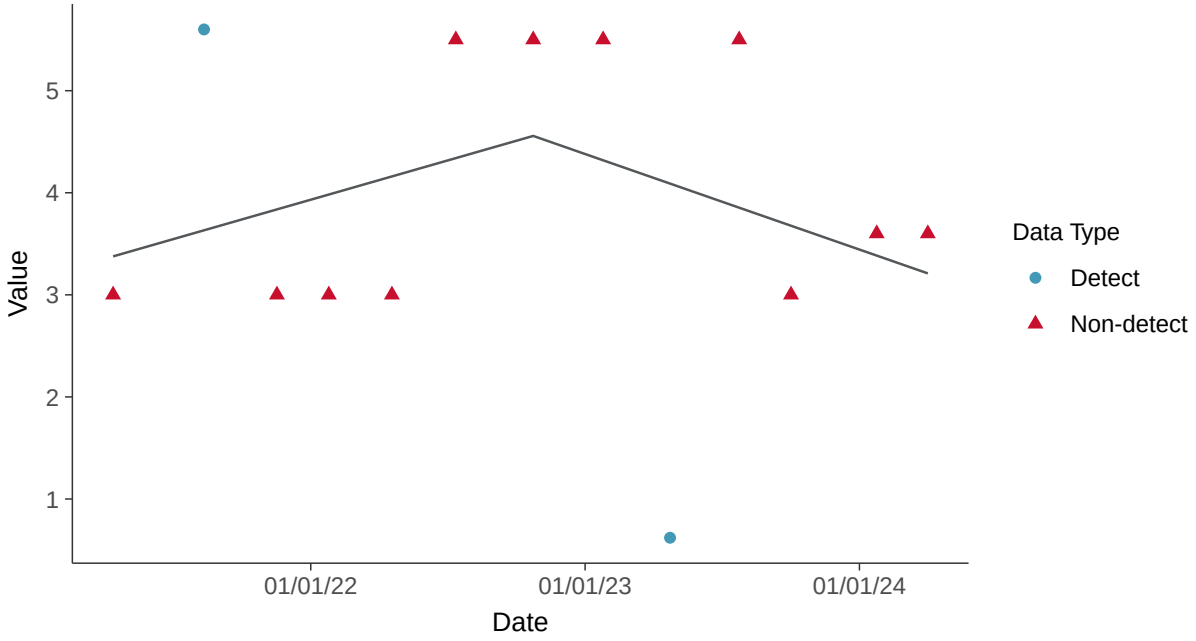
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11D (ug/L)



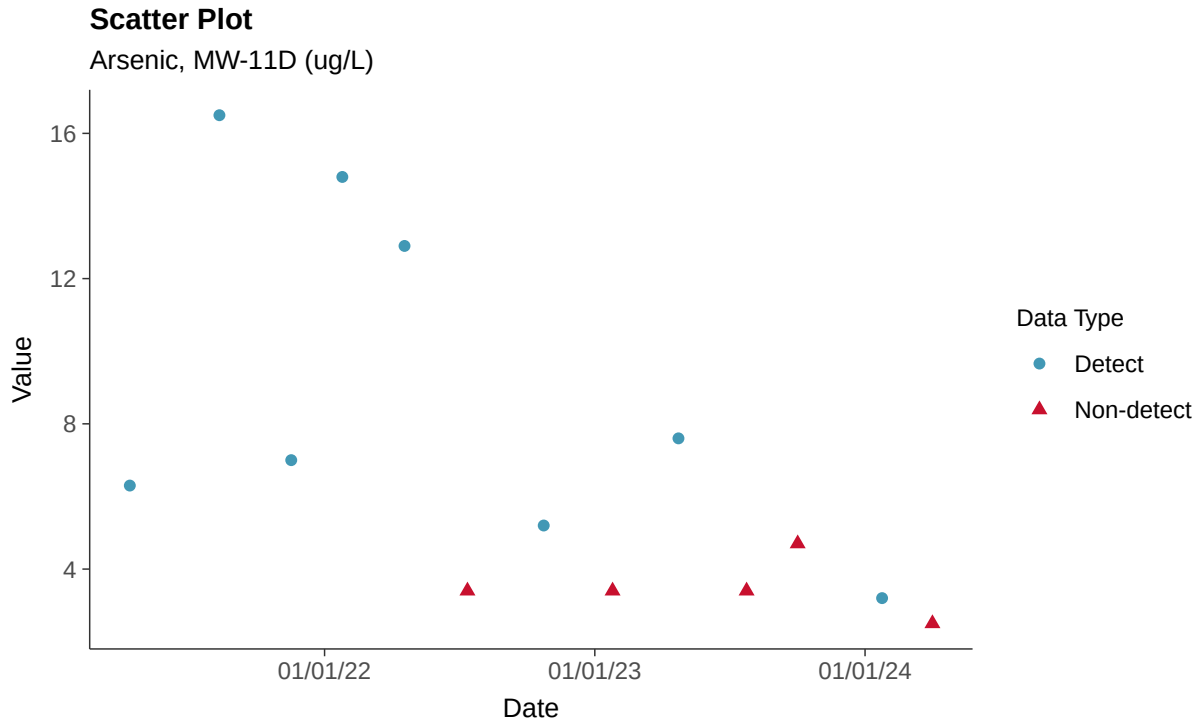
Trend Regression: Piecewise Linear-Linear

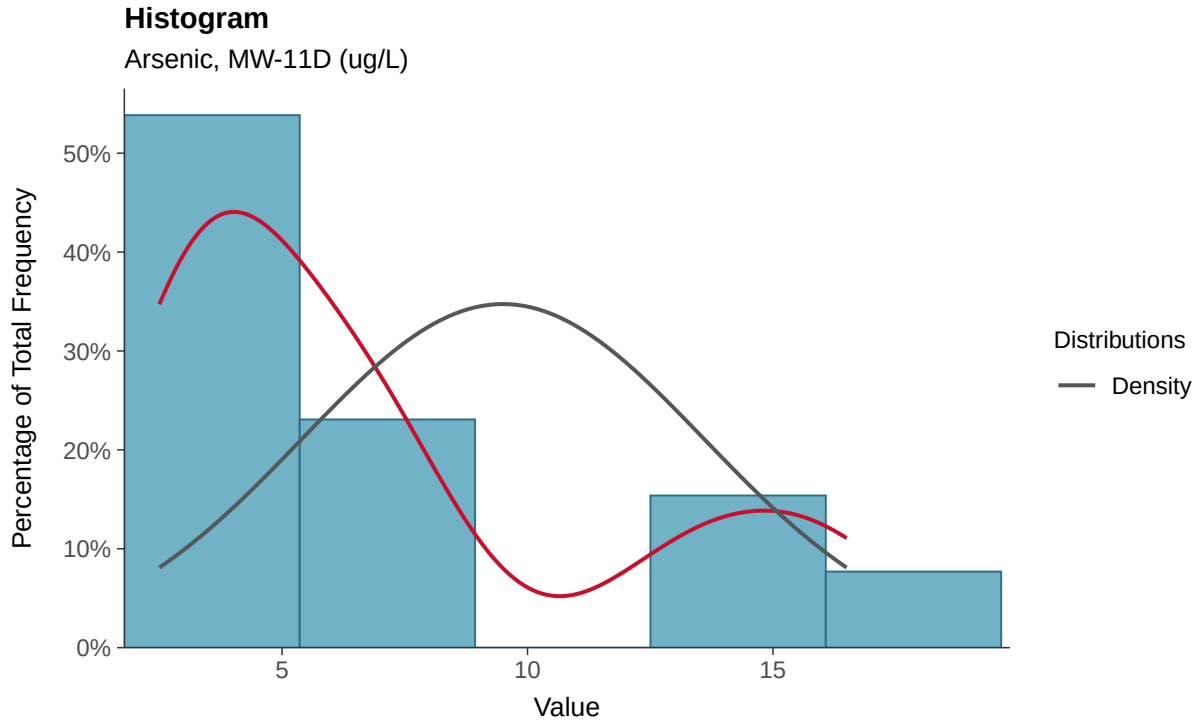
Antimony, MW-11D (ug/L)



App. IV: Arsenic, MW-11D

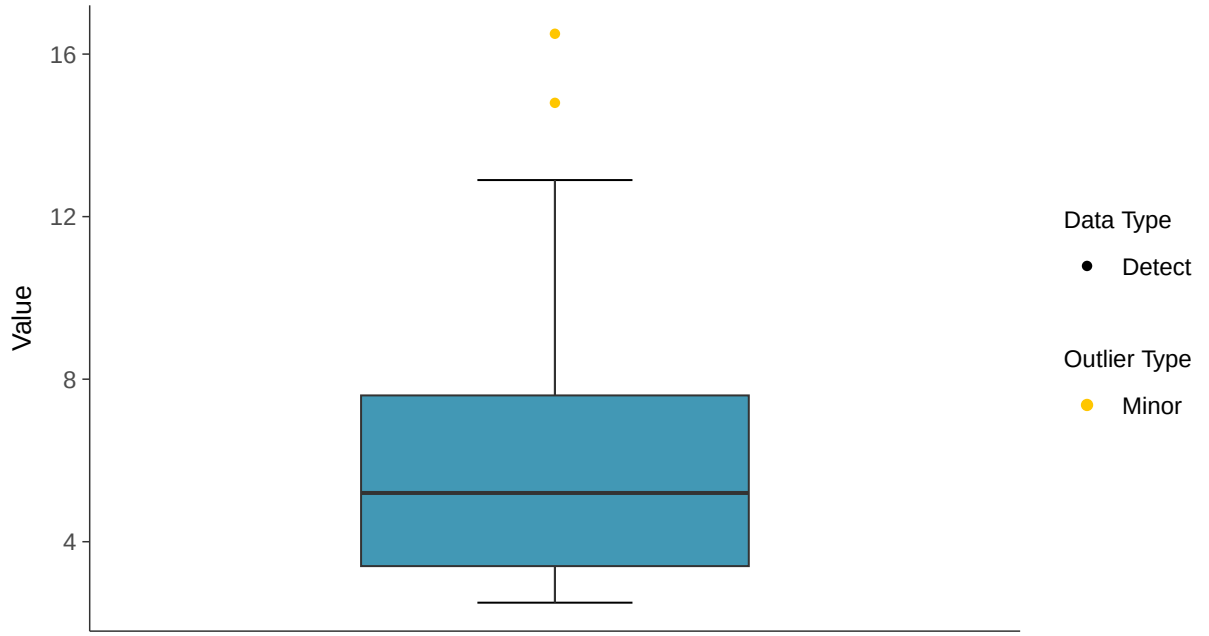
ID: 4_3_102





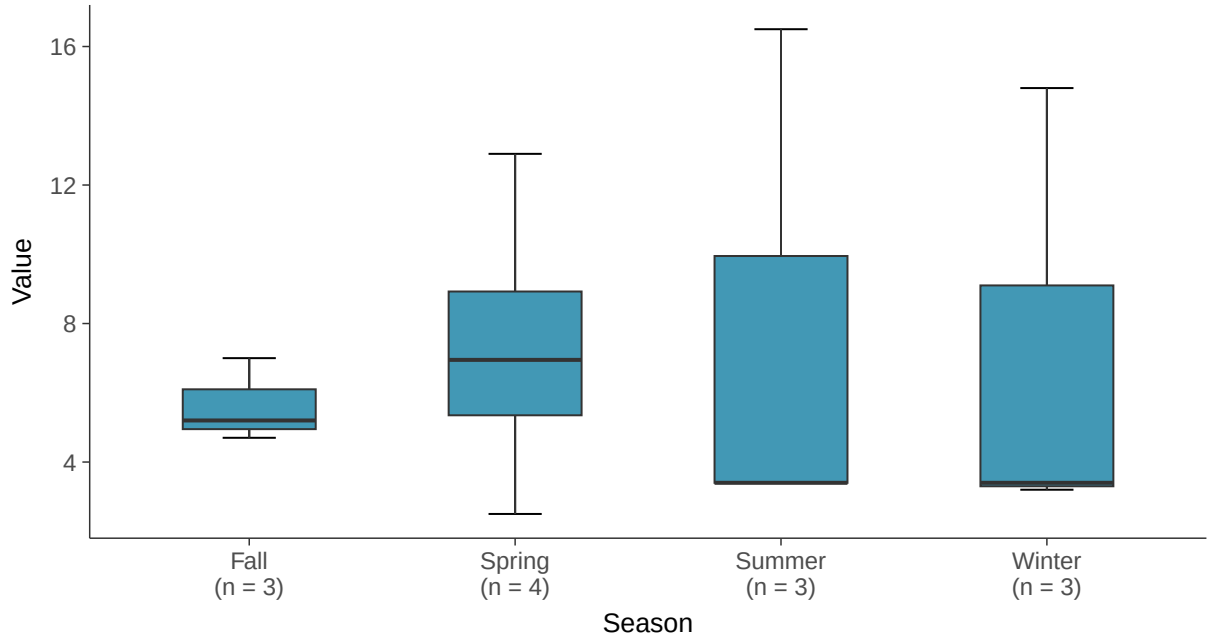
Boxplot

Arsenic, MW-11D (ug/L)



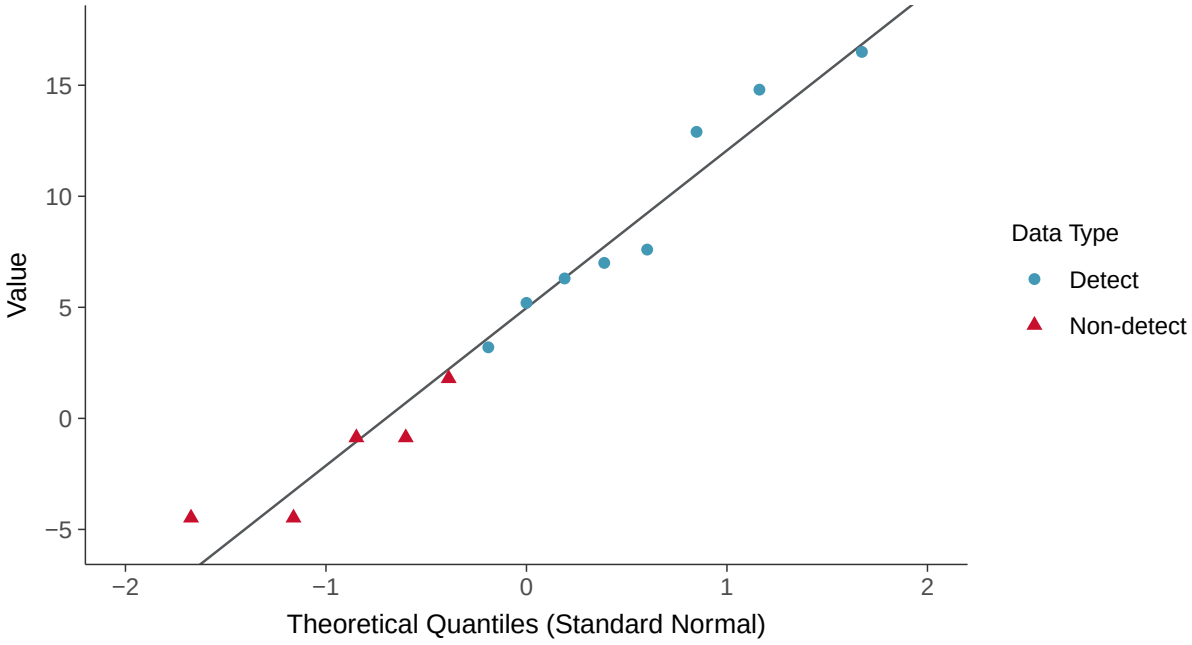
Boxplot by Season

Arsenic, MW-11D (ug/L)



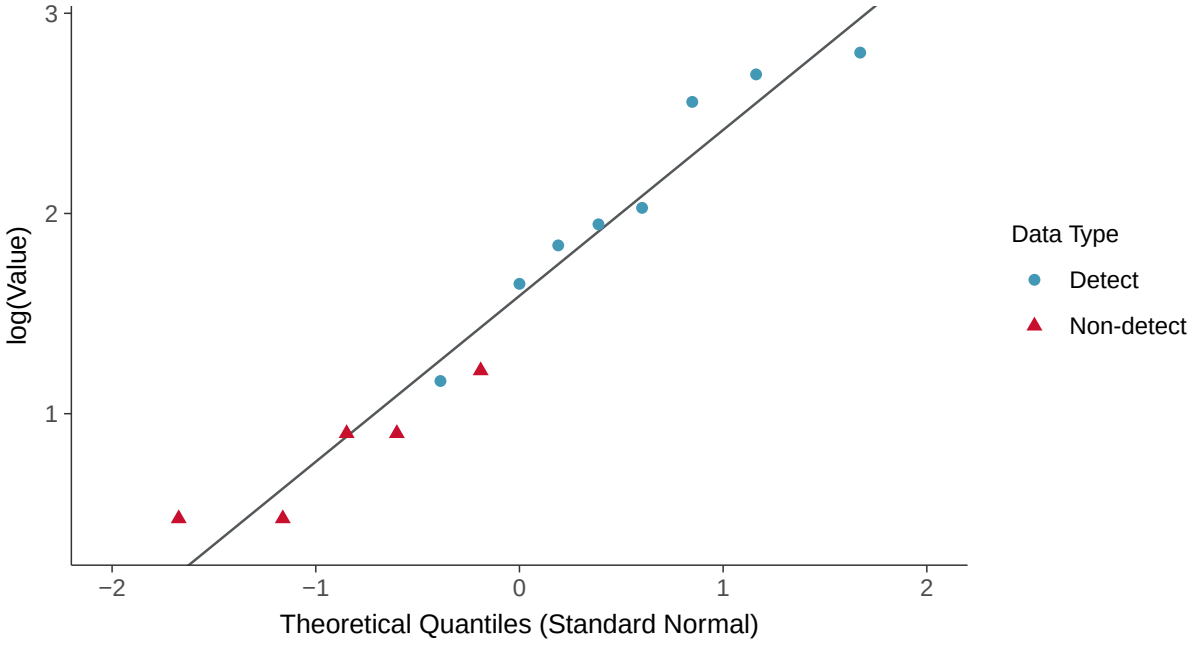
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11D (ug/L)



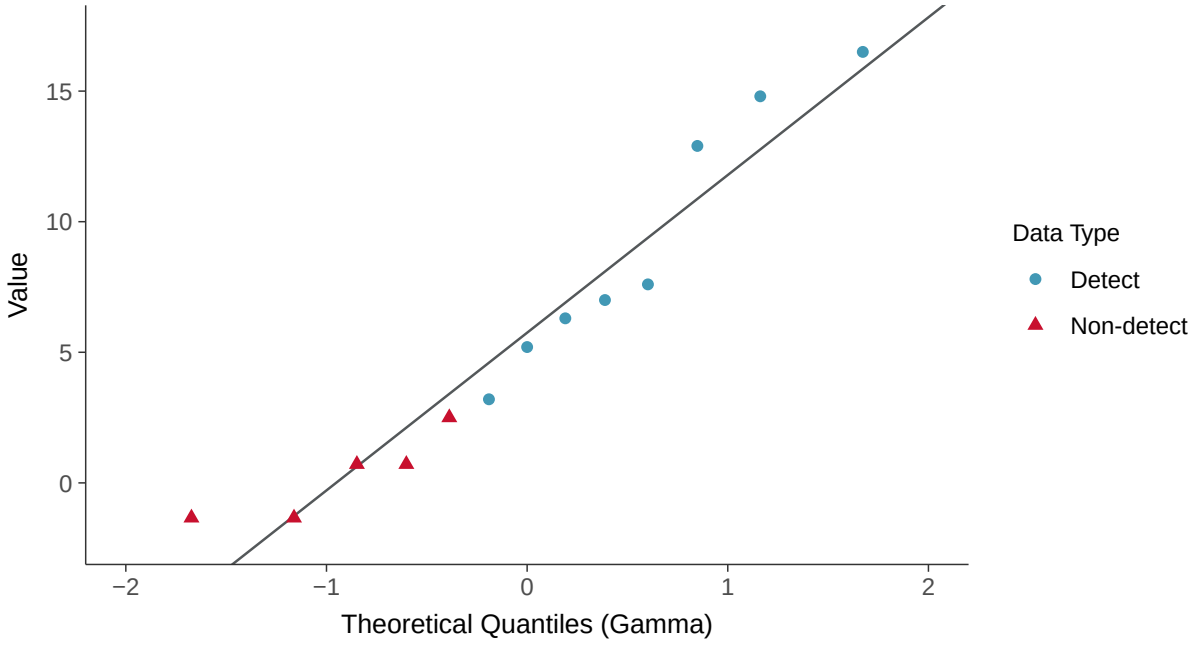
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11D (ug/L)



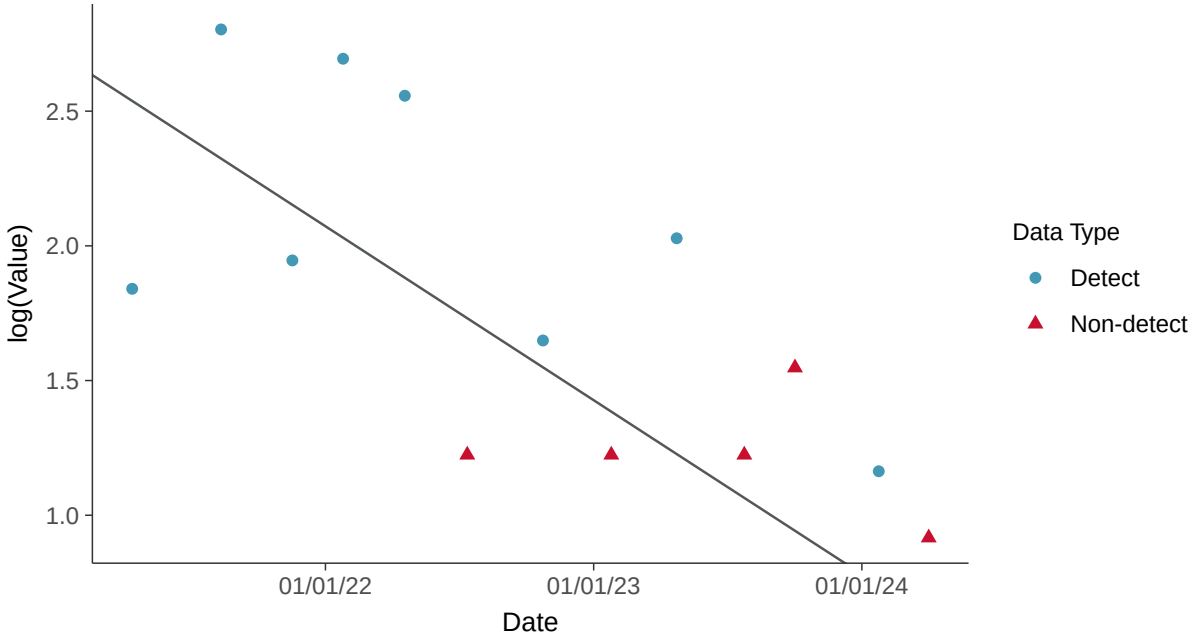
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11D (ug/L)



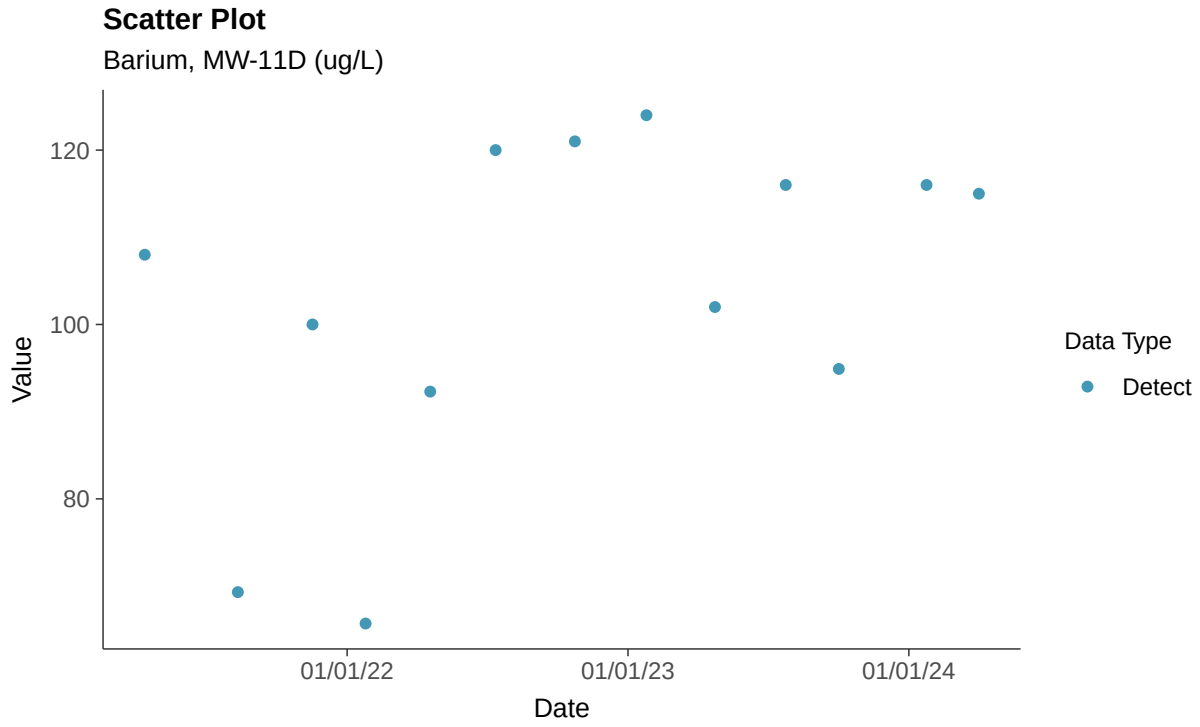
Trend Regression: Lognormal MLE

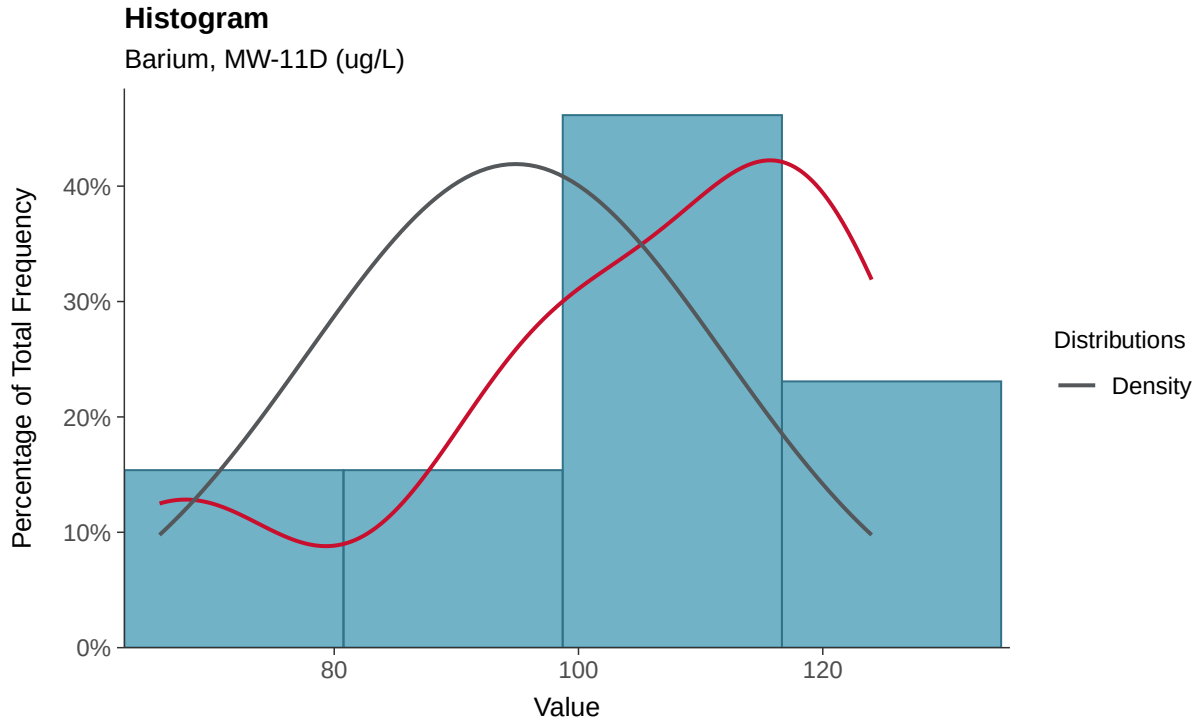
Arsenic, MW-11D (ug/L)



App. IV: Barium, MW-11D

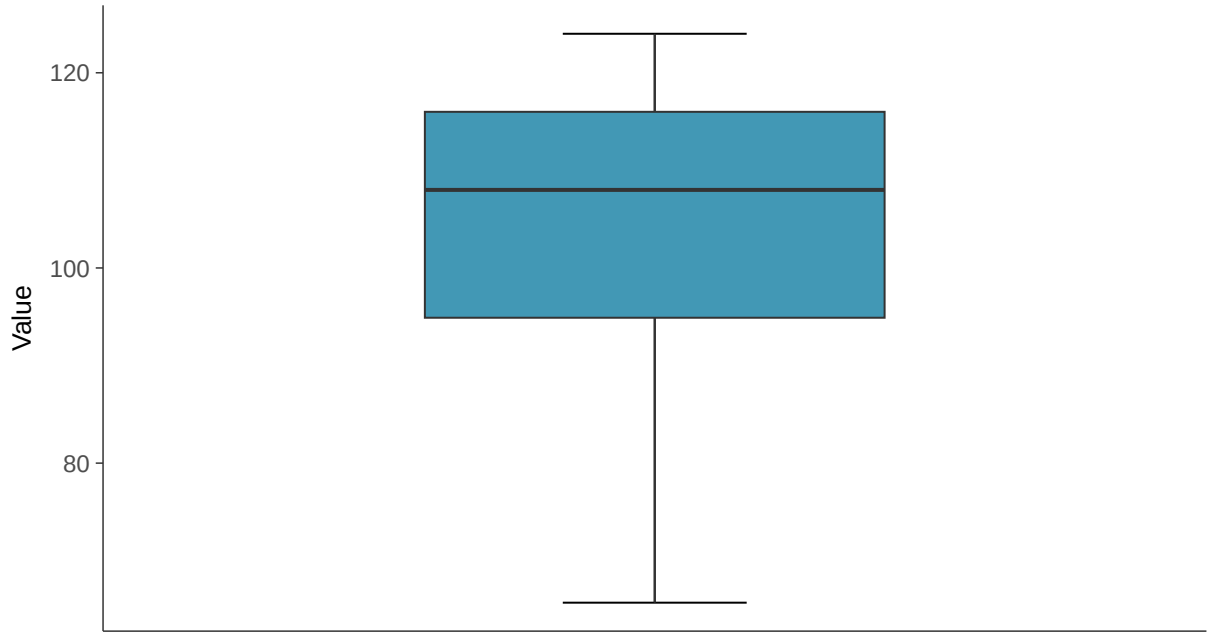
ID: 4_3_103





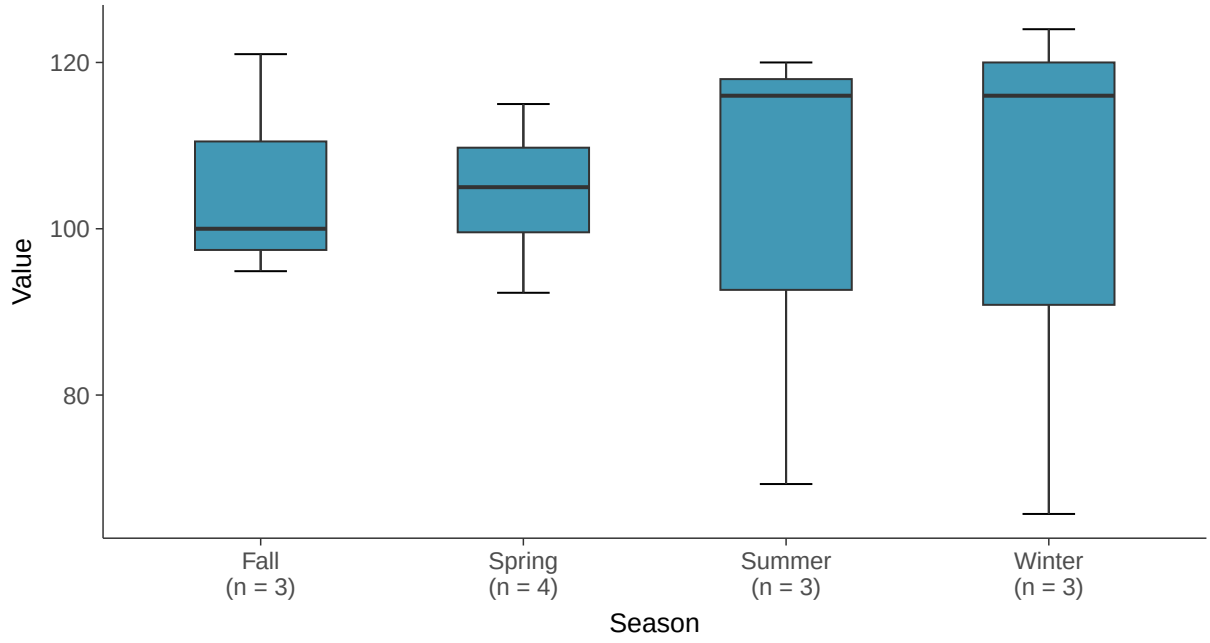
Boxplot

Barium, MW-11D (ug/L)



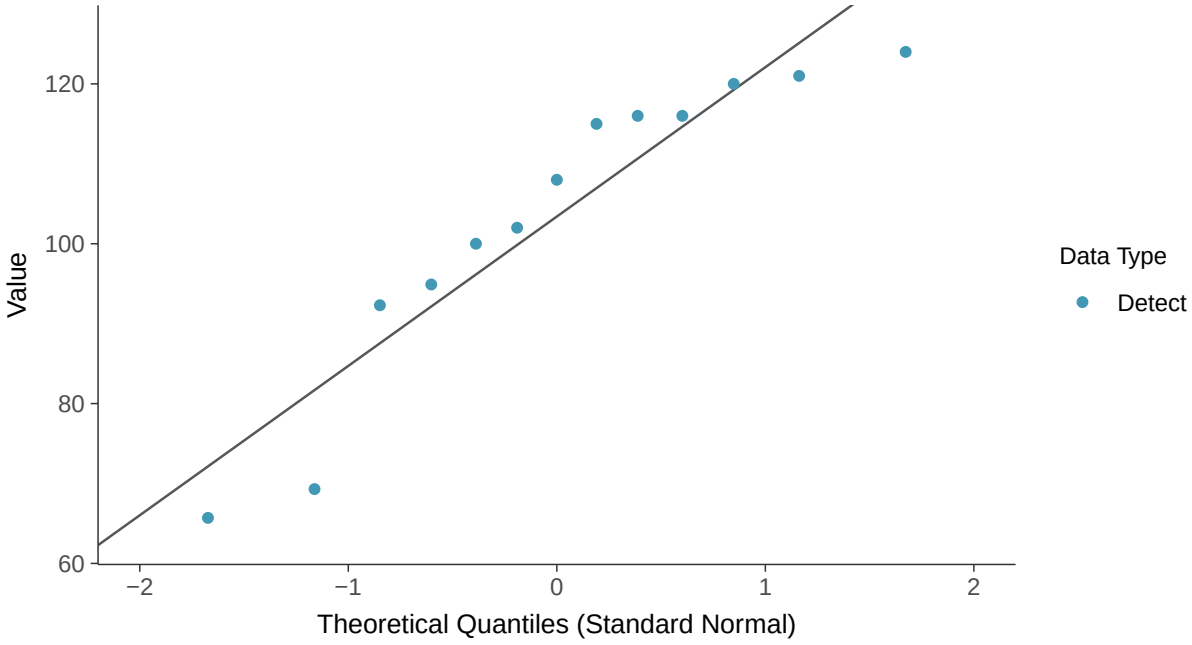
Boxplot by Season

Barium, MW-11D (ug/L)



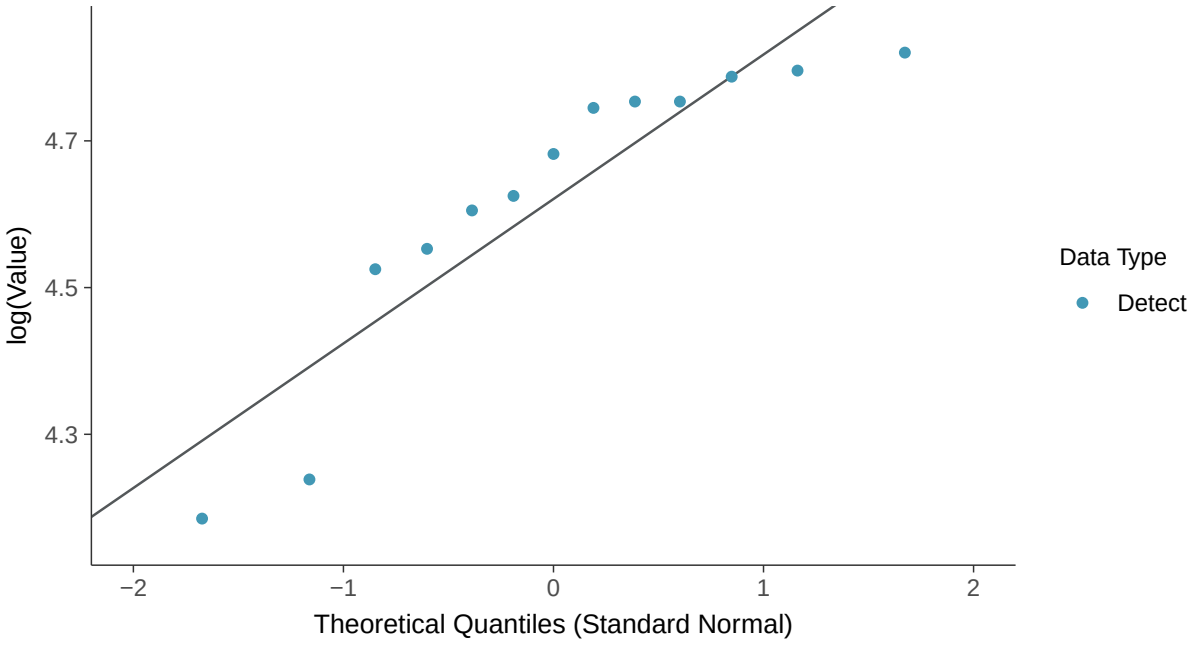
Normal Q-Q plot

Barium, MW-11D (ug/L)



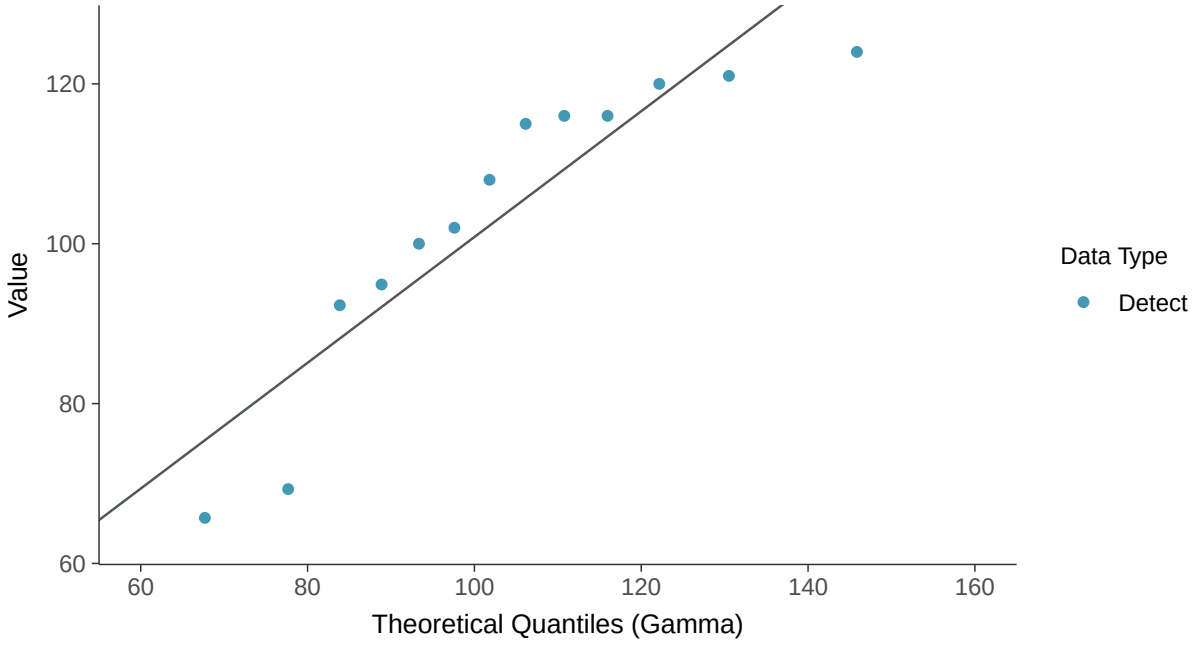
Lognormal Q-Q plot

Barium, MW-11D (ug/L)



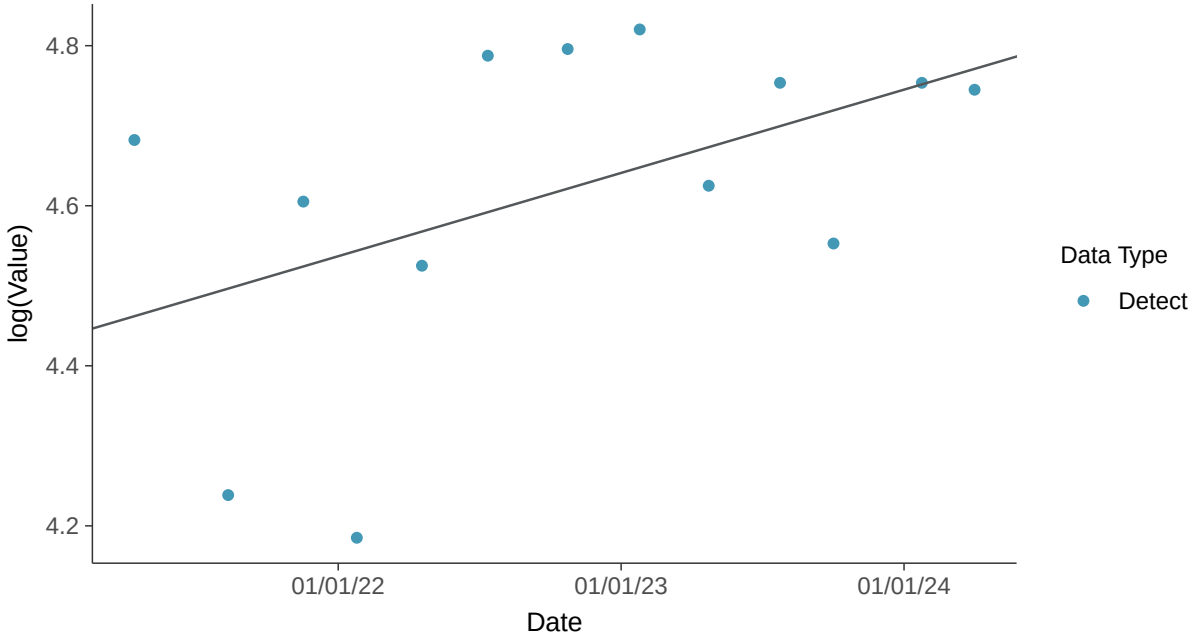
Gamma Q-Q plot

Barium, MW-11D (ug/L)



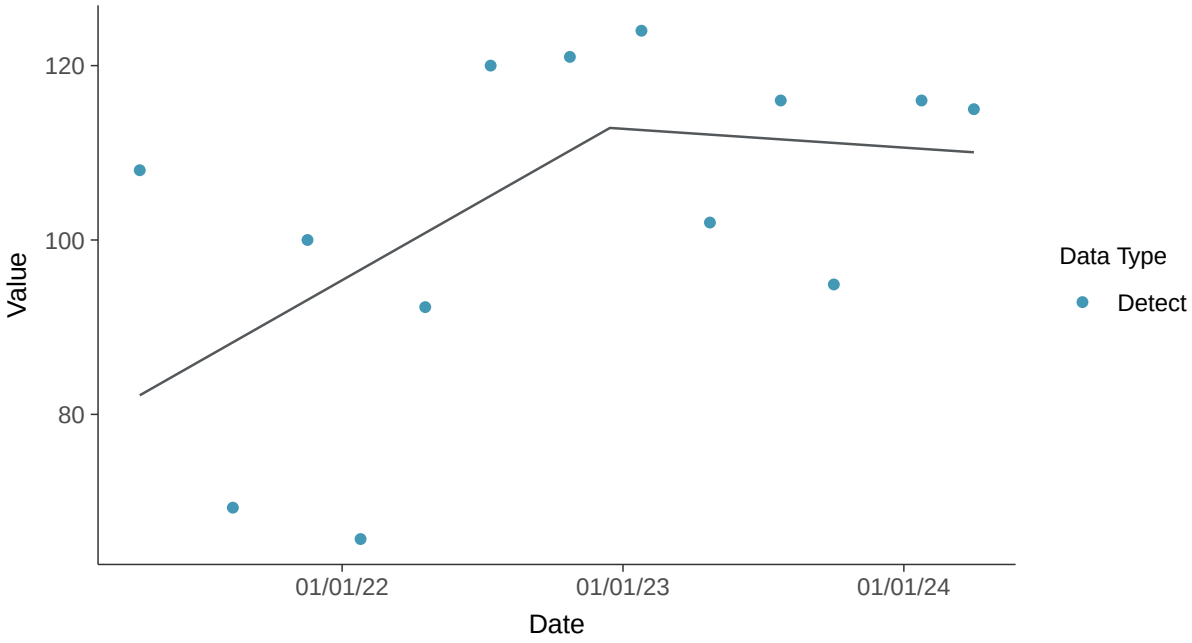
Trend Regression: Lognormal MLE

Barium, MW-11D (ug/L)



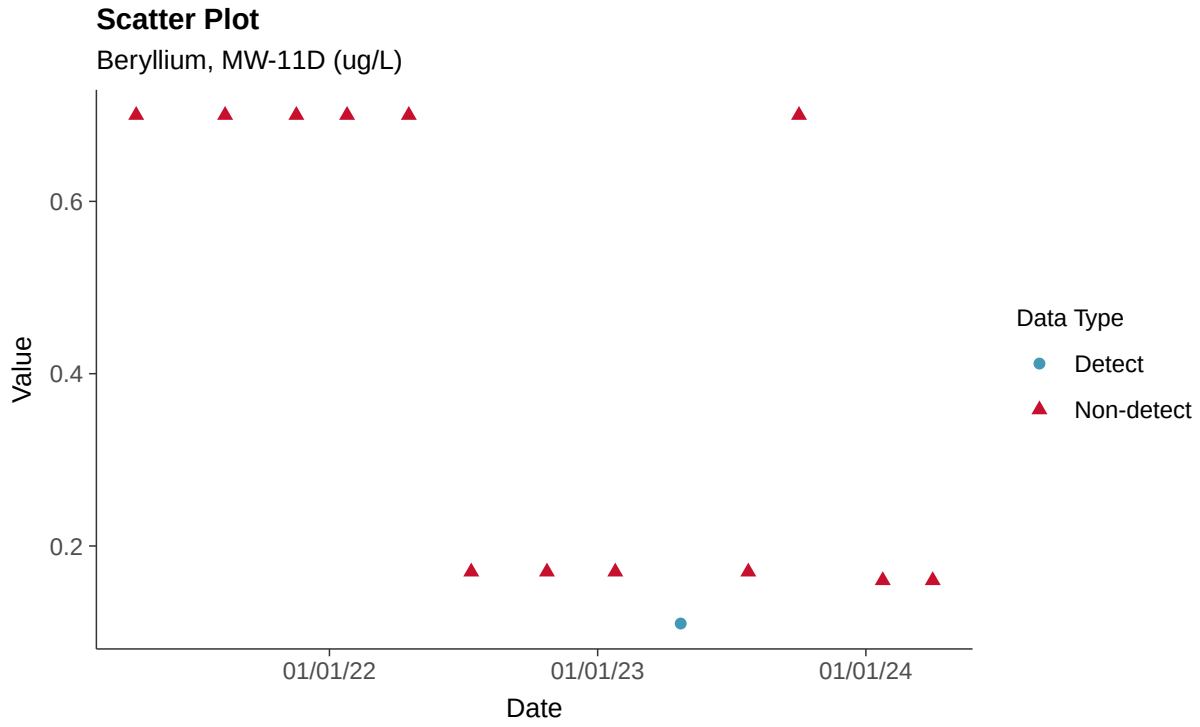
Trend Regression: Piecewise Linear-Linear

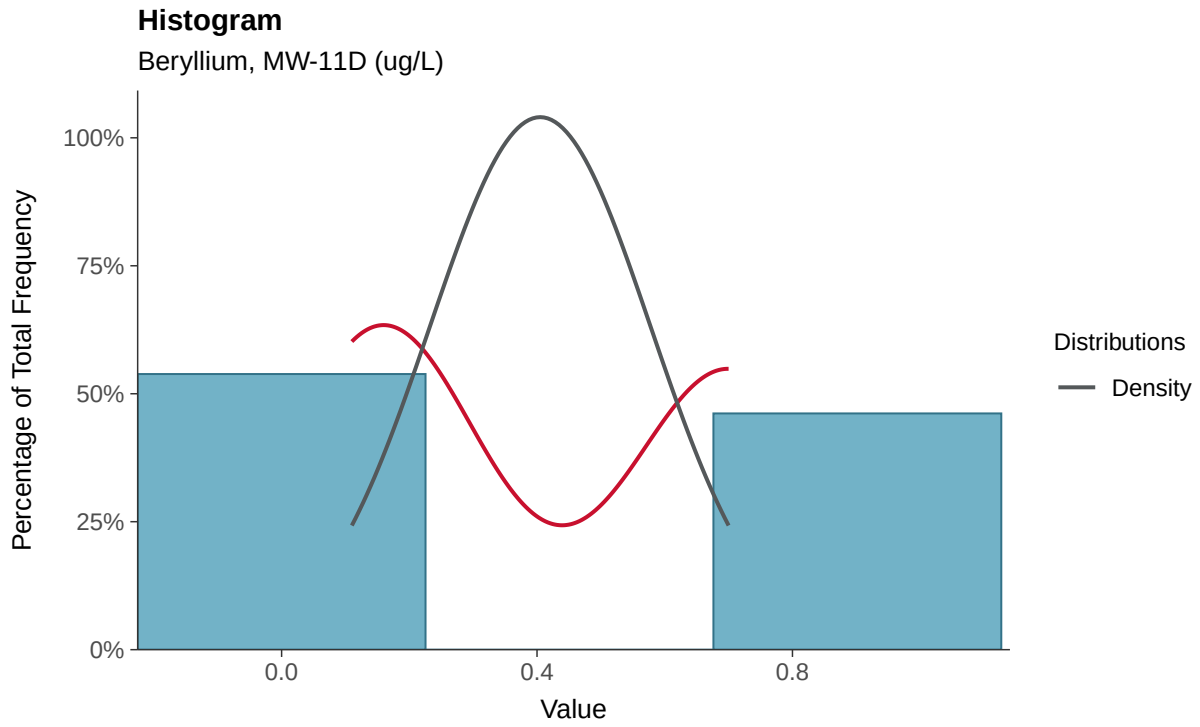
Barium, MW-11D (ug/L)



App. IV: Beryllium, MW-11D

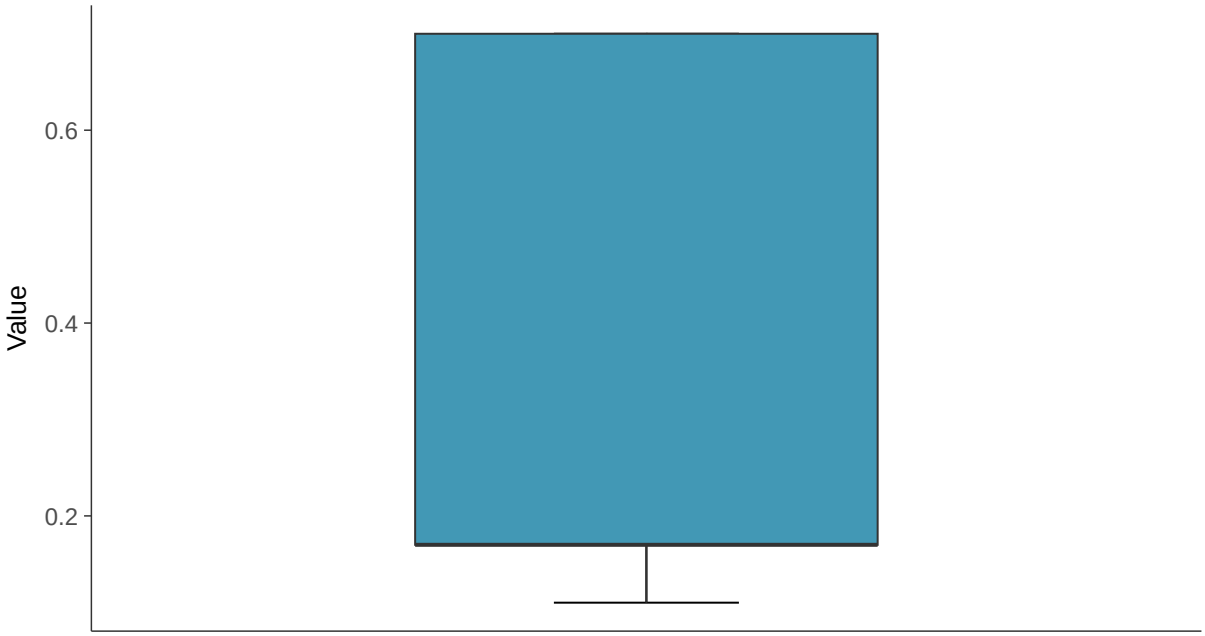
ID: 4_3_104





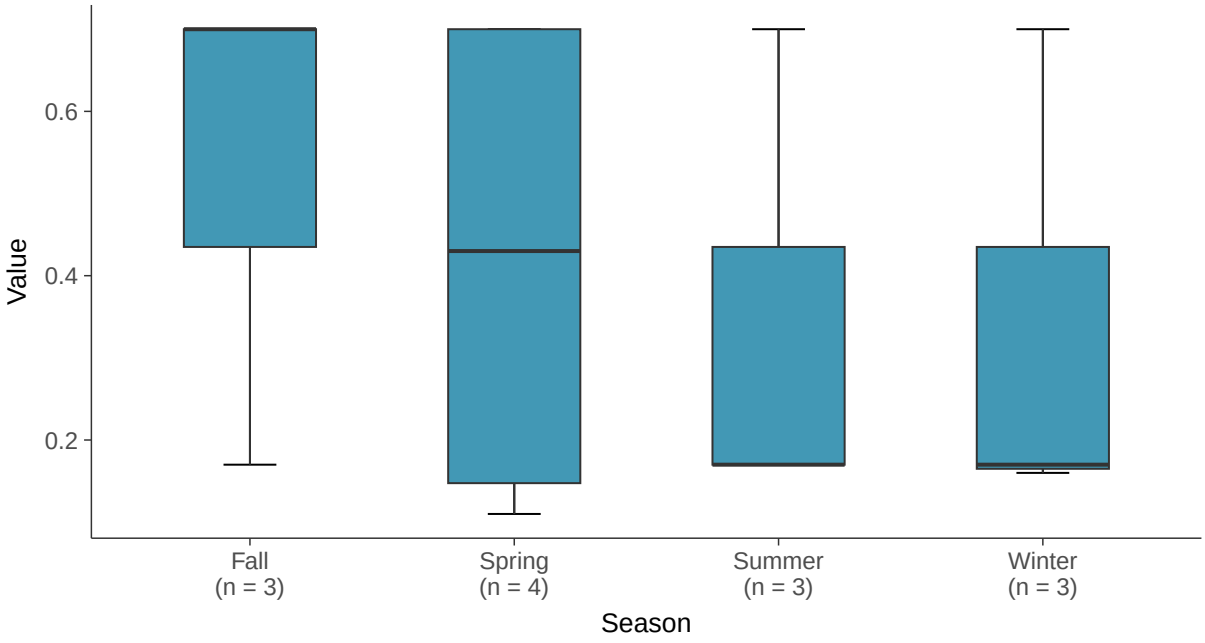
Boxplot

Beryllium, MW-11D (ug/L)



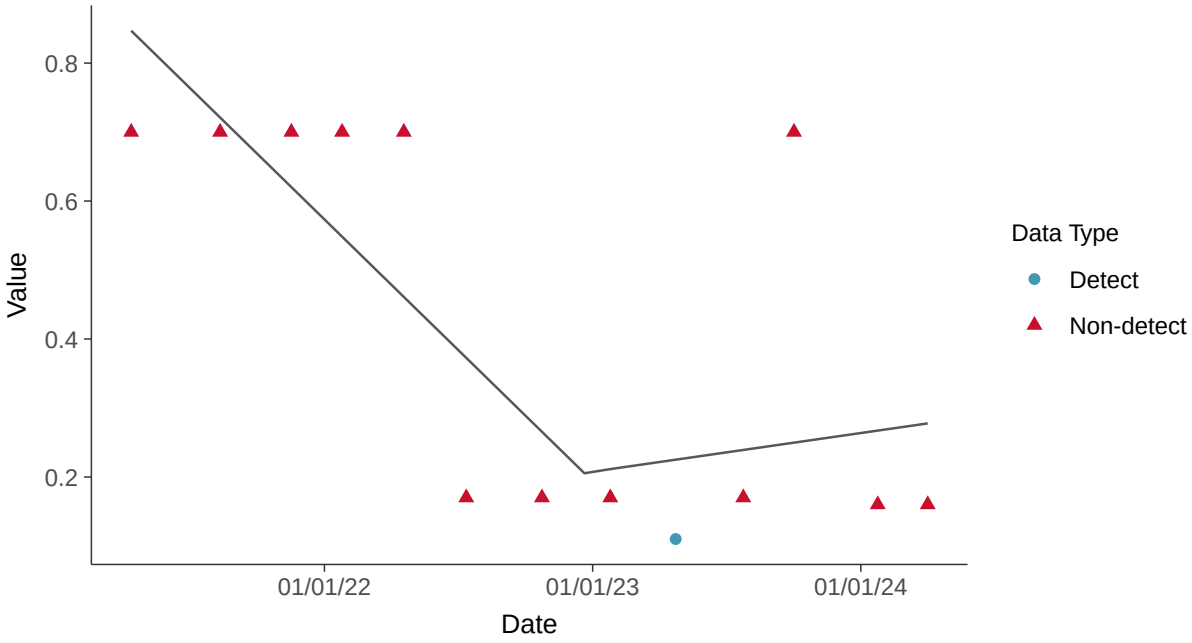
Boxplot by Season

Beryllium, MW-11D (ug/L)



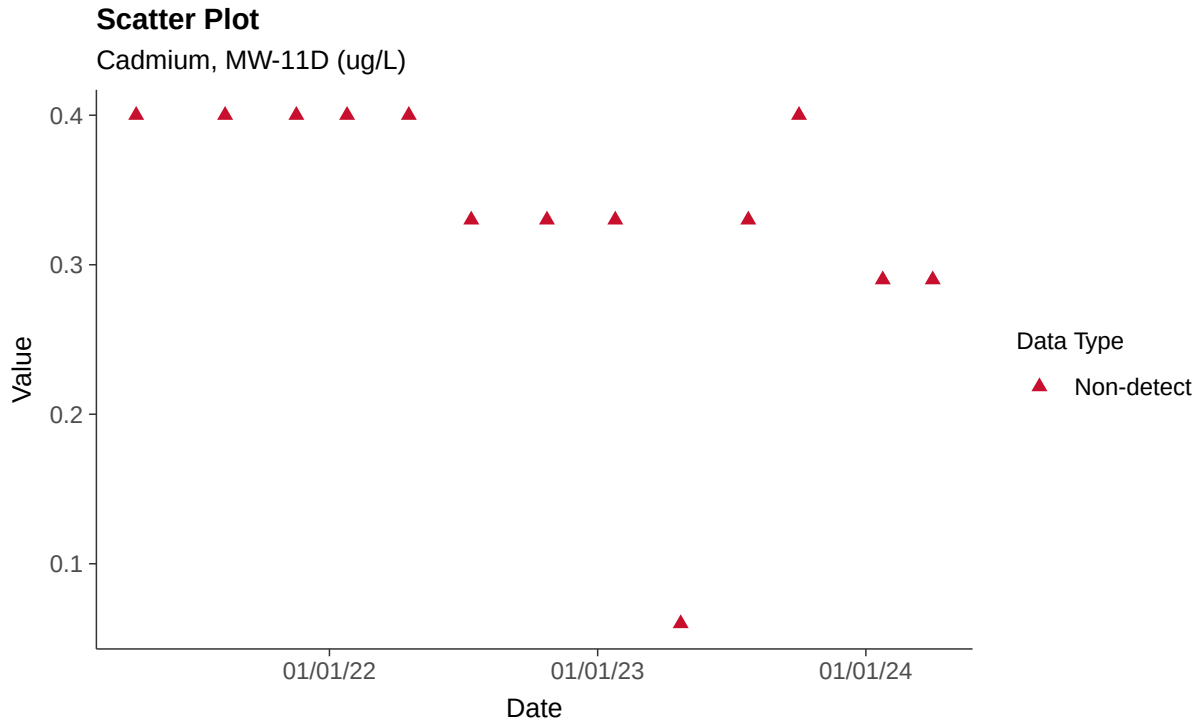
Trend Regression: Piecewise Linear-Linear

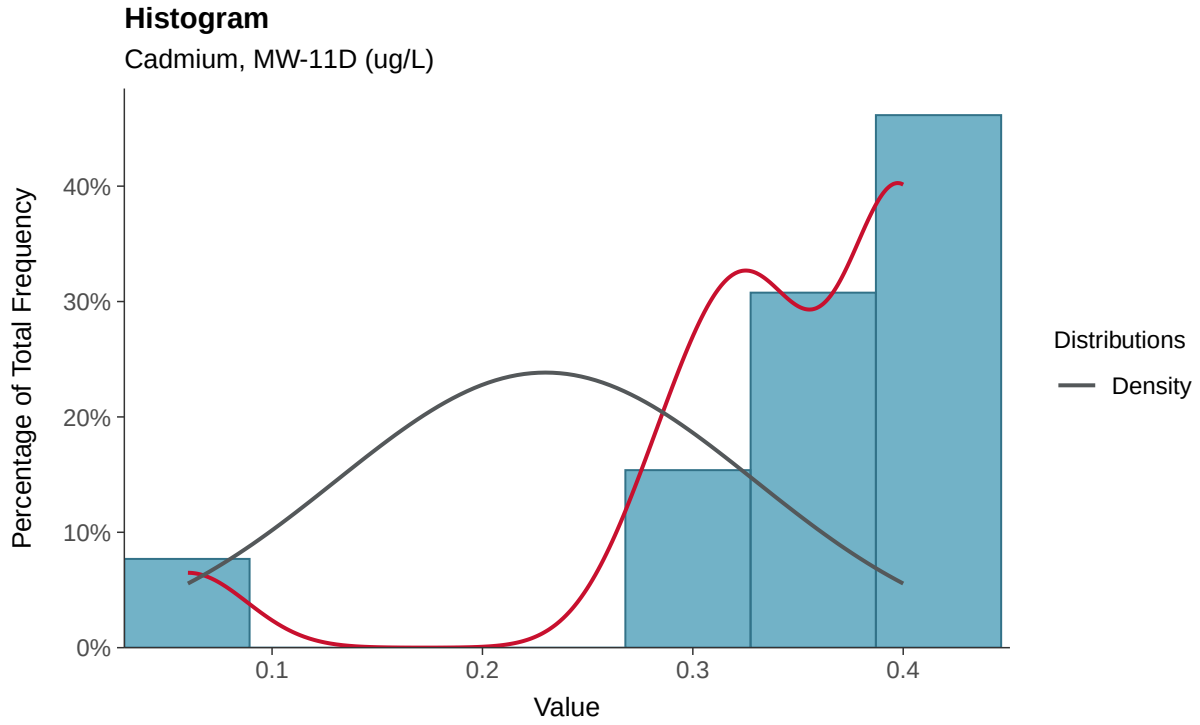
Beryllium, MW-11D (ug/L)



App. IV: Cadmium, MW-11D

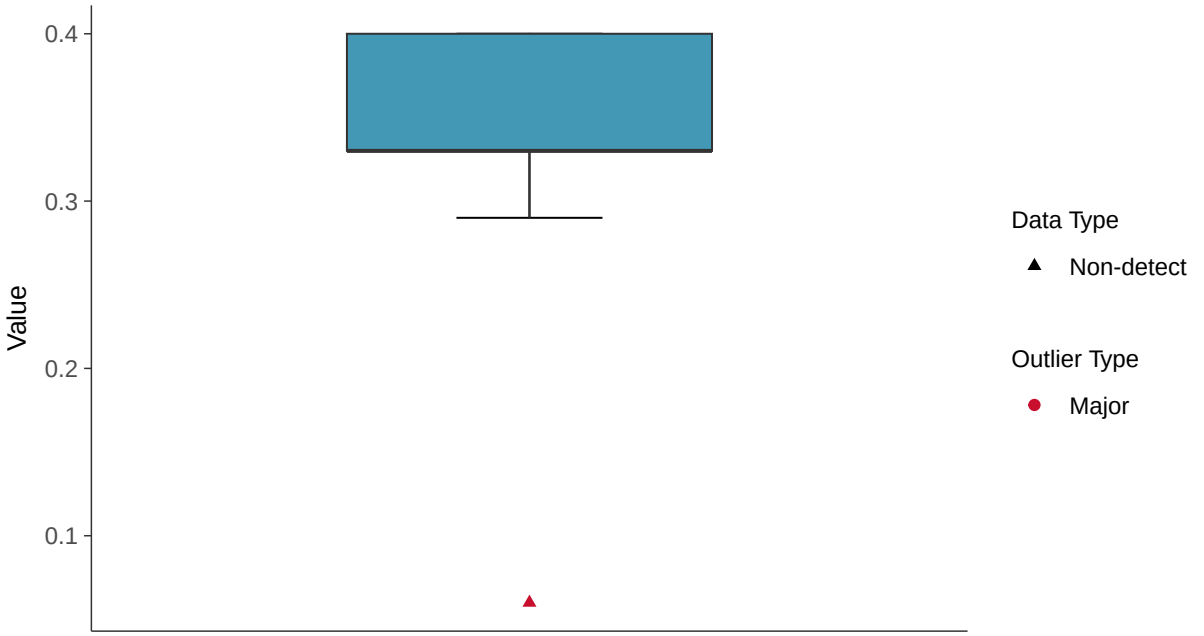
ID: 4_3_106





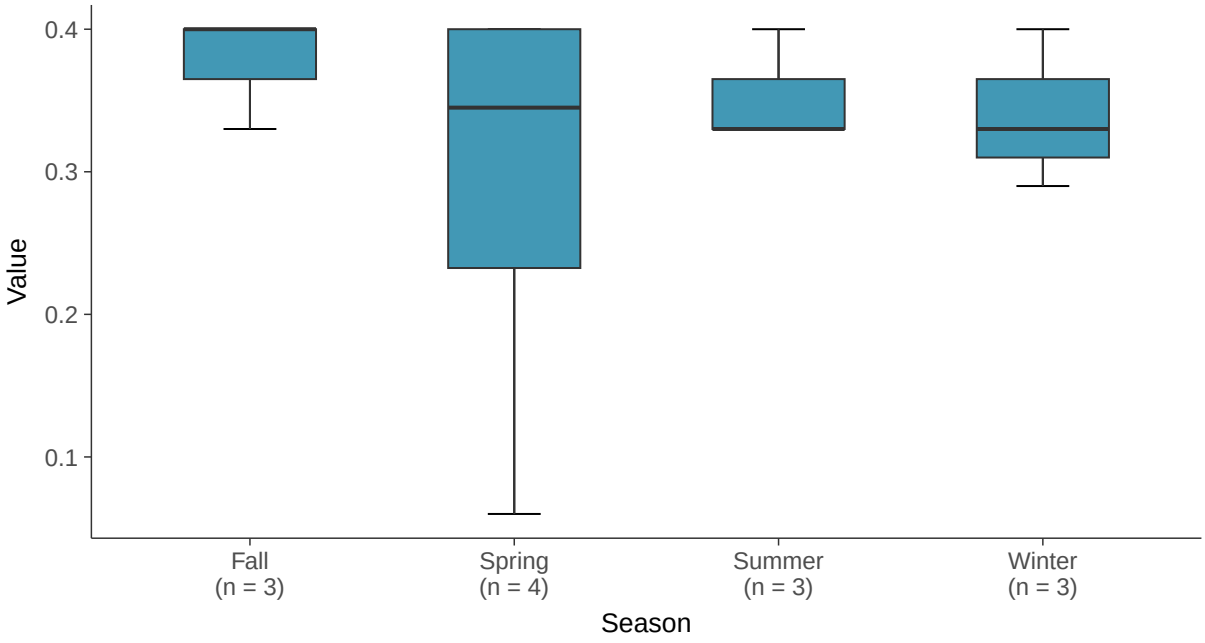
Boxplot

Cadmium, MW-11D (ug/L)



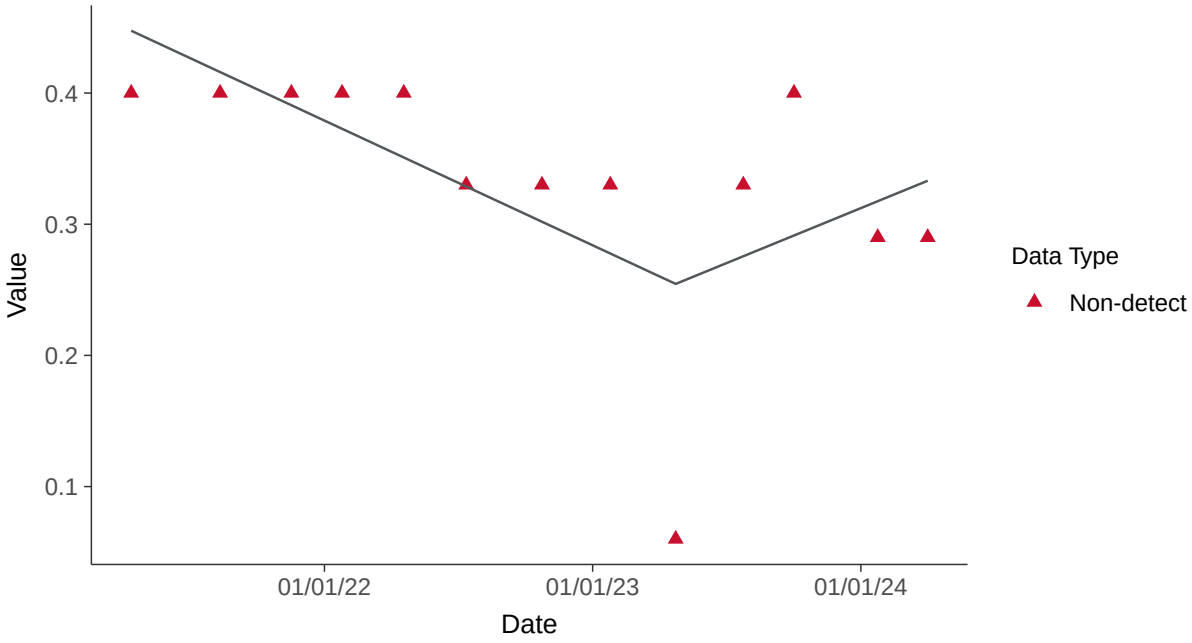
Boxplot by Season

Cadmium, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Cadmium, MW-11D (ug/L)

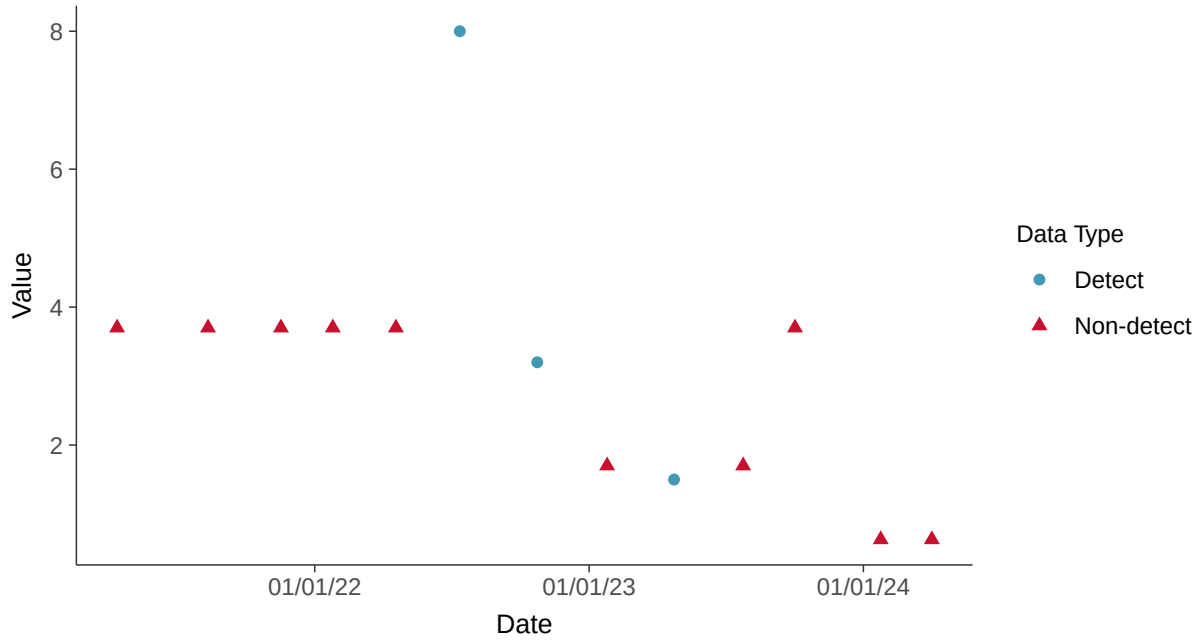


App. IV: Chromium, MW-11D

ID: 4_3_109

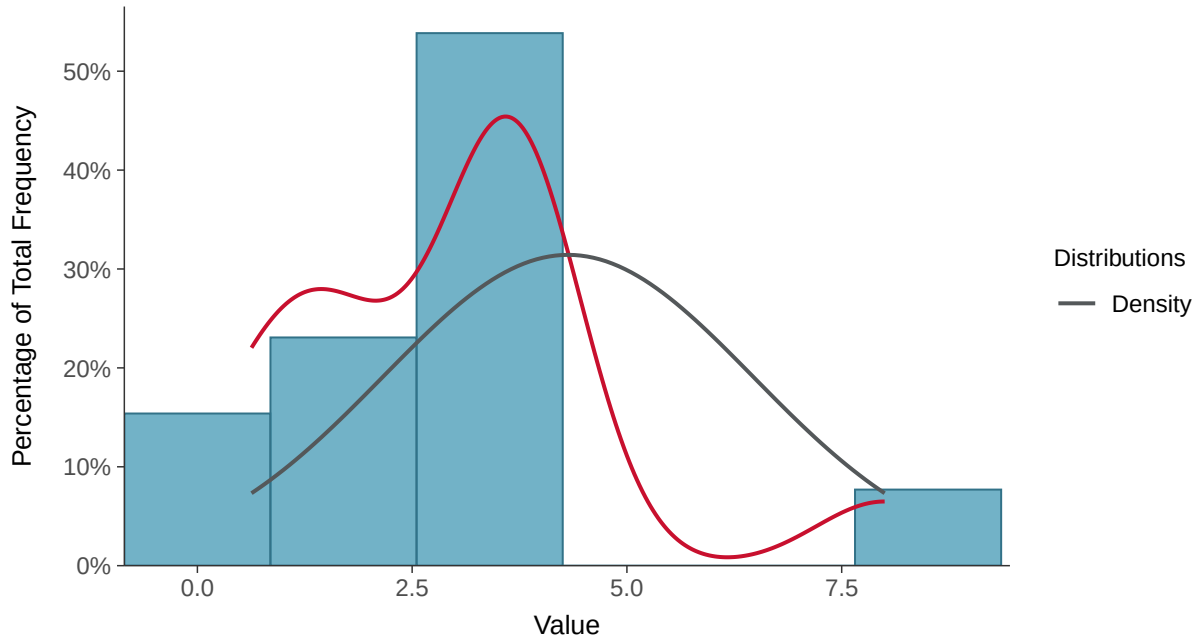
Scatter Plot

Chromium, MW-11D (ug/L)



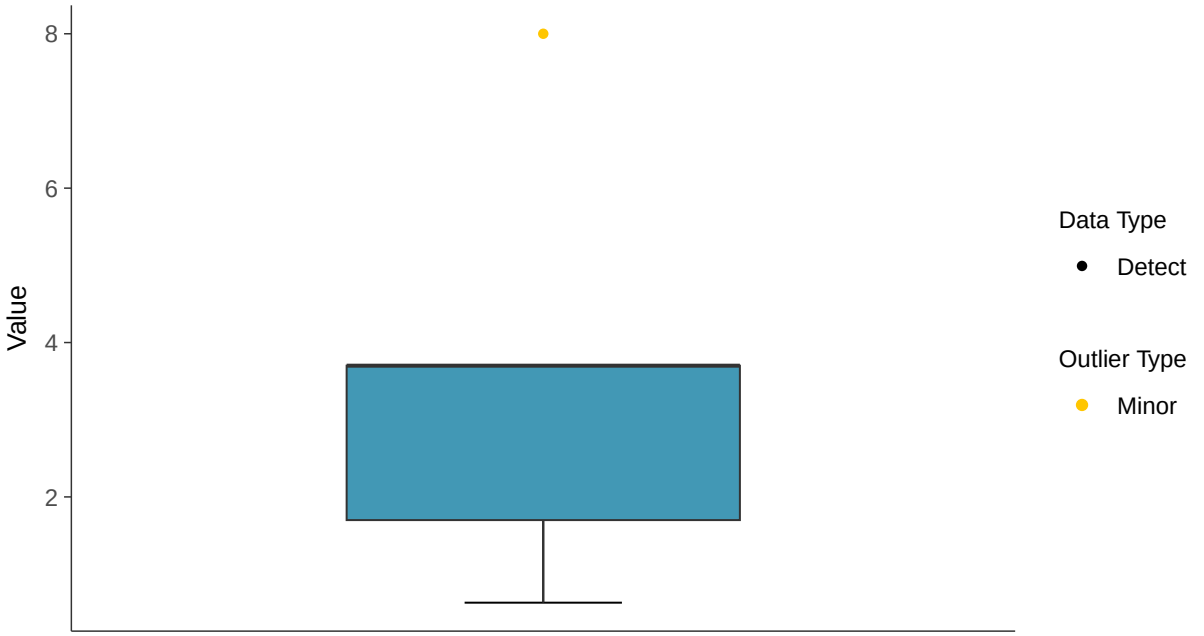
Histogram

Chromium, MW-11D (ug/L)



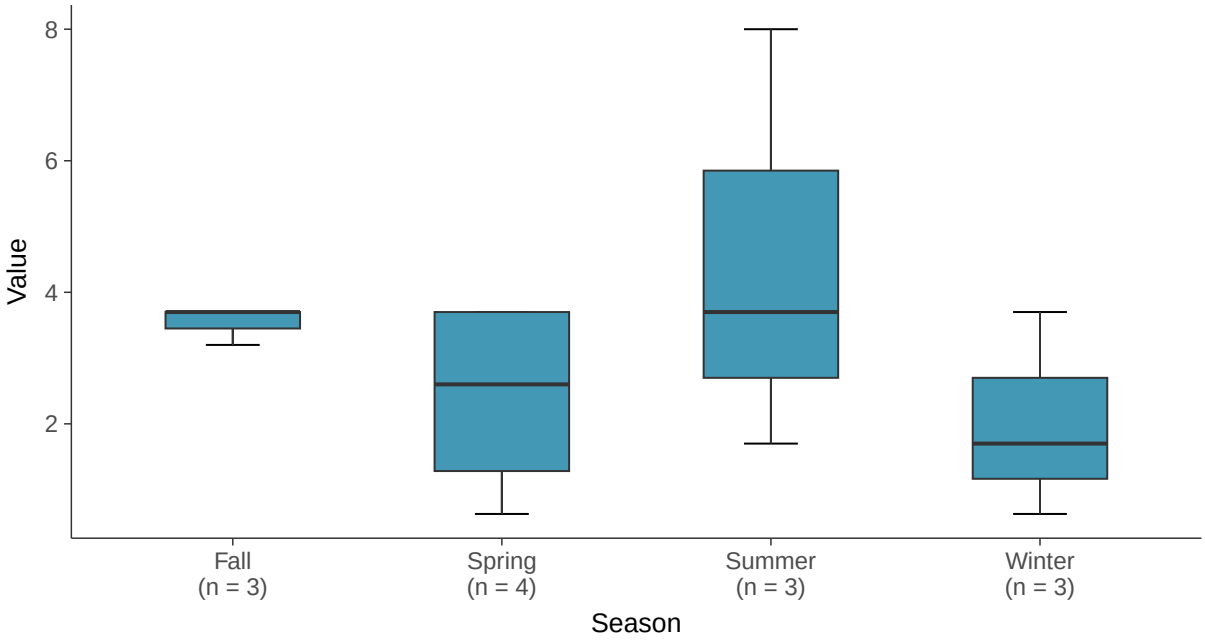
Boxplot

Chromium, MW-11D (ug/L)



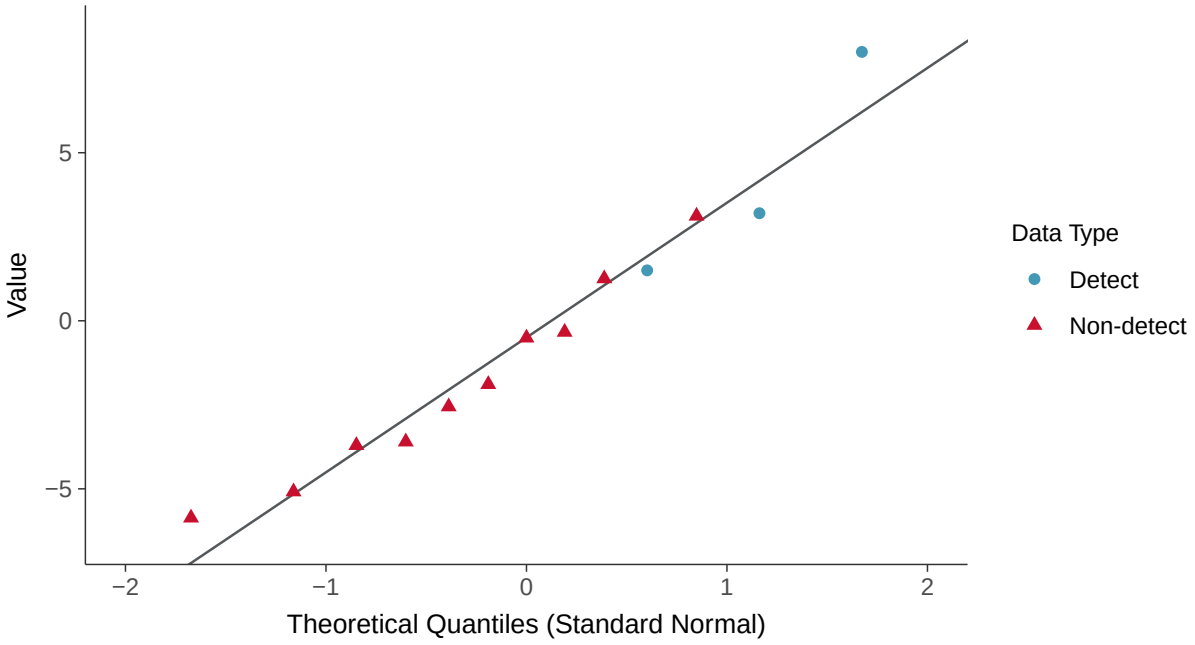
Boxplot by Season

Chromium, MW-11D (ug/L)



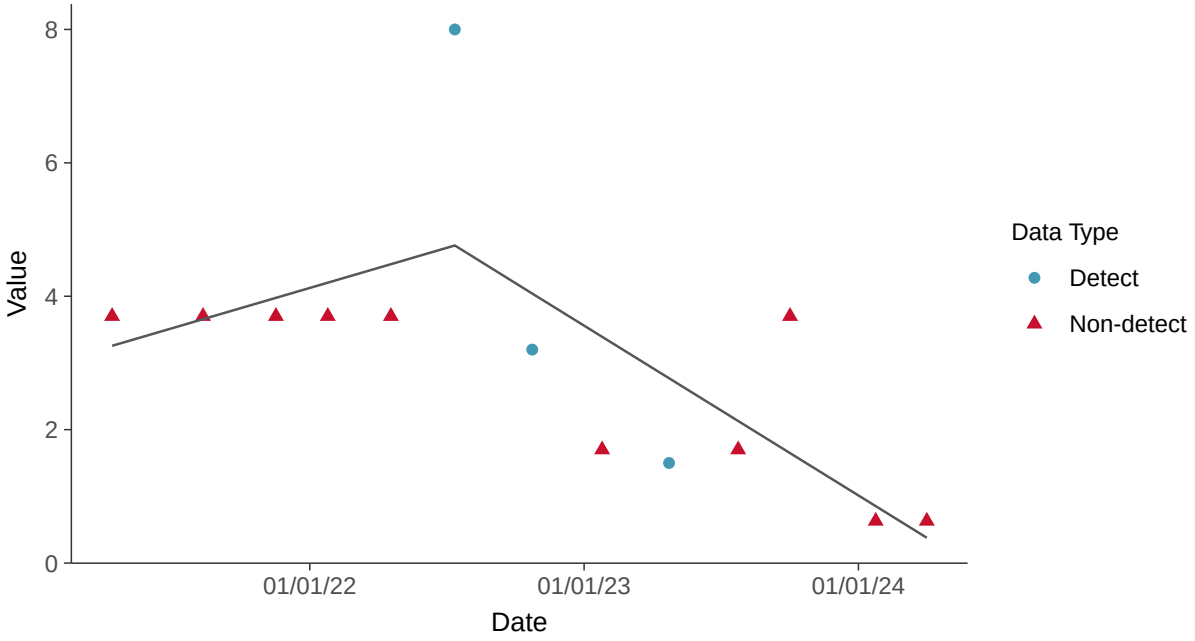
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-11D (ug/L)



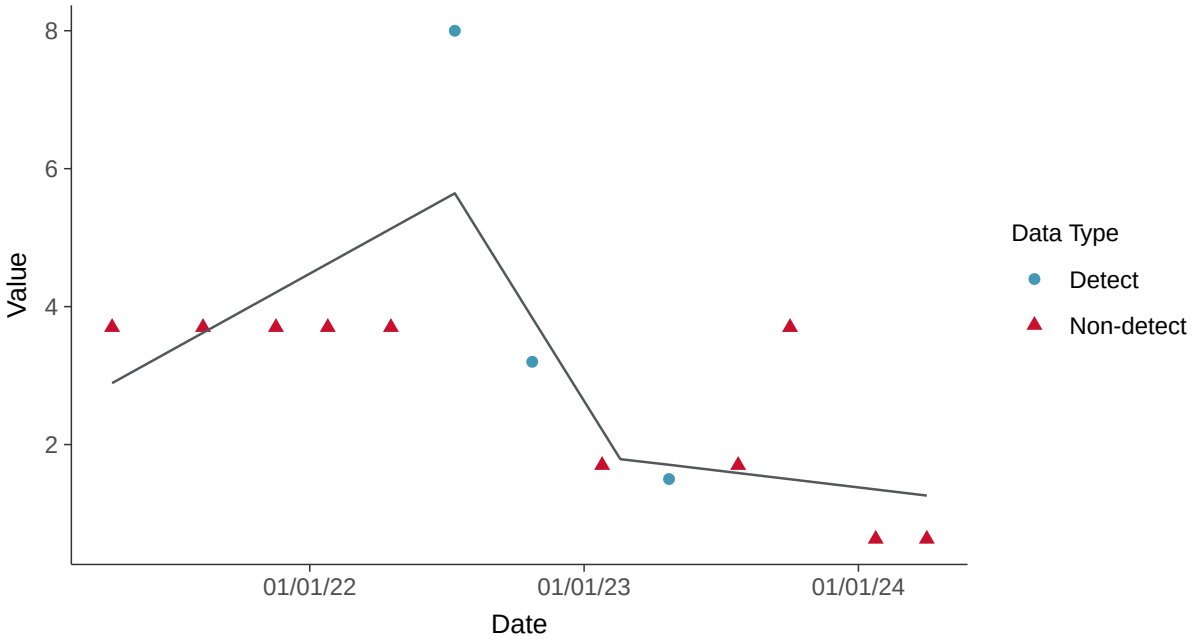
Trend Regression: Piecewise Linear-Linear

Chromium, MW-11D (ug/L)



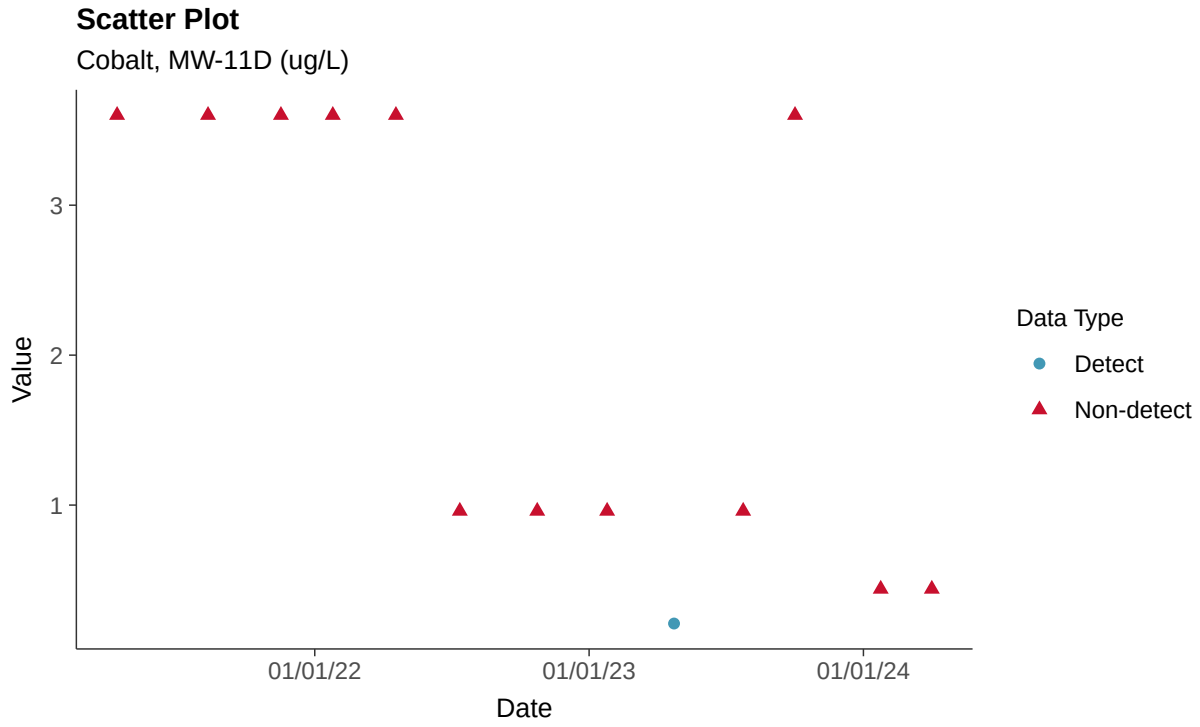
Trend Regression: Piecewise Linear-Linear-Linear

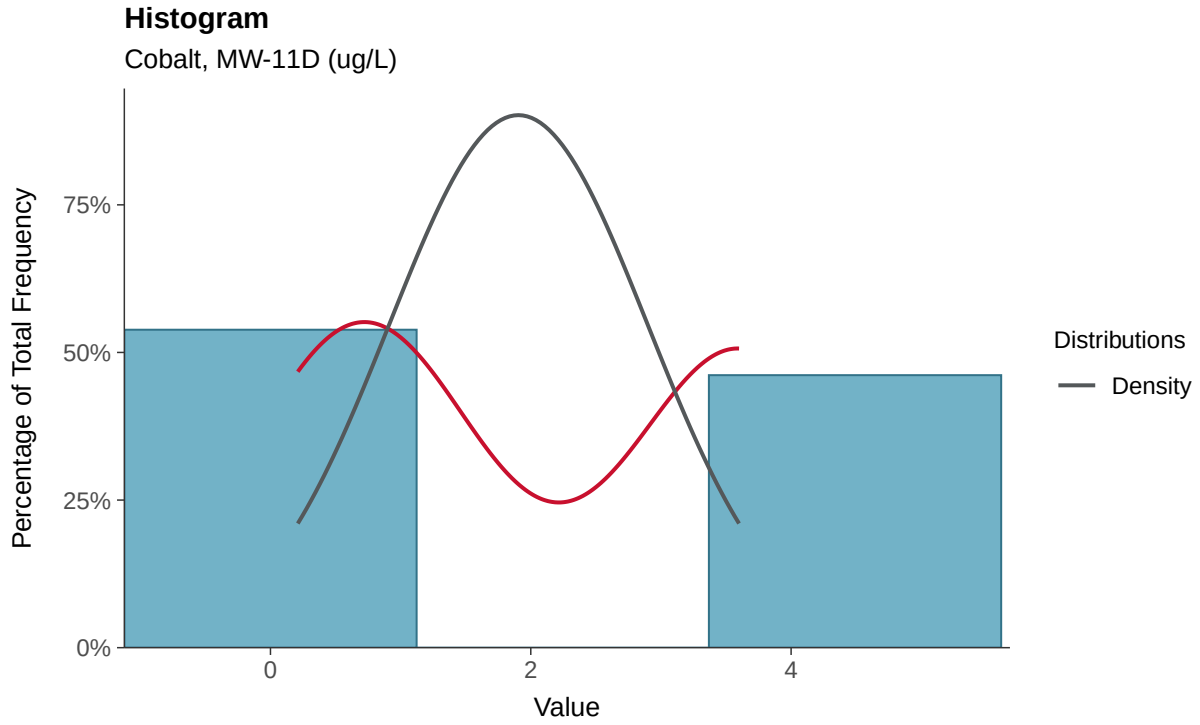
Chromium, MW-11D (ug/L)



App. IV: Cobalt, MW-11D

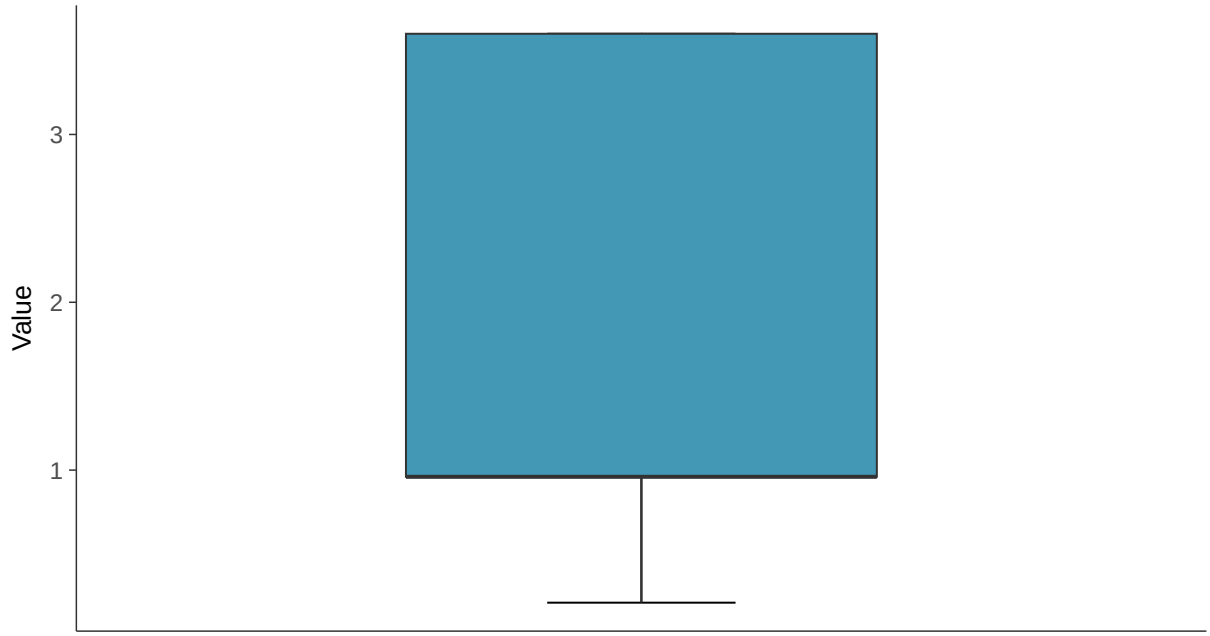
ID: 4_3_110





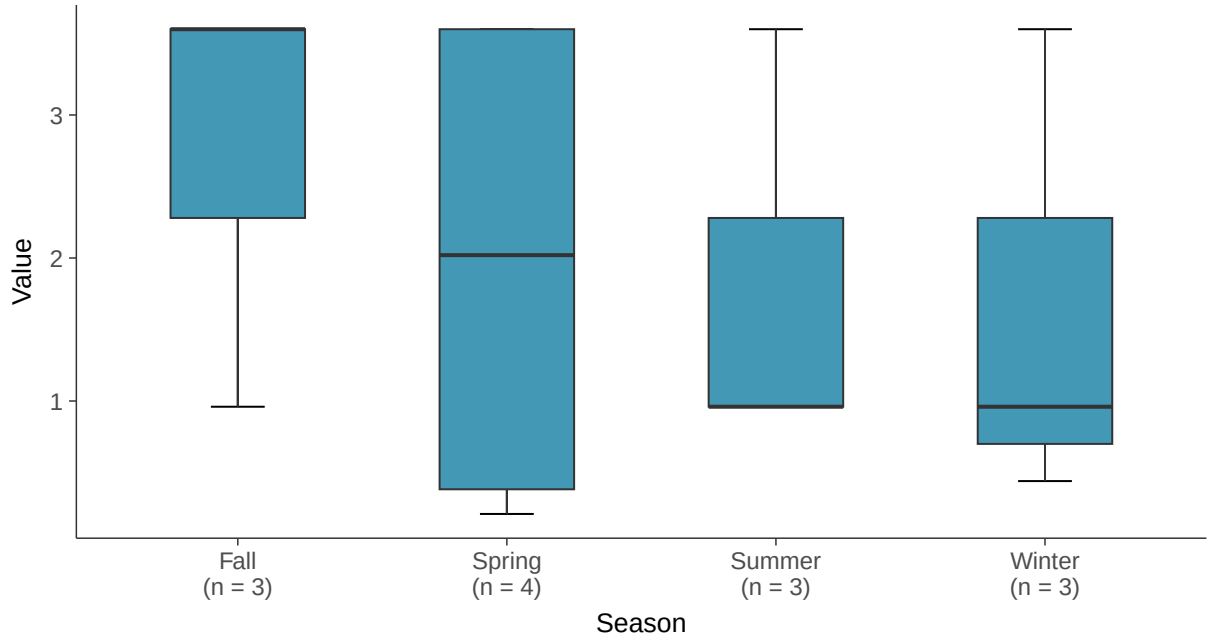
Boxplot

Cobalt, MW-11D (ug/L)



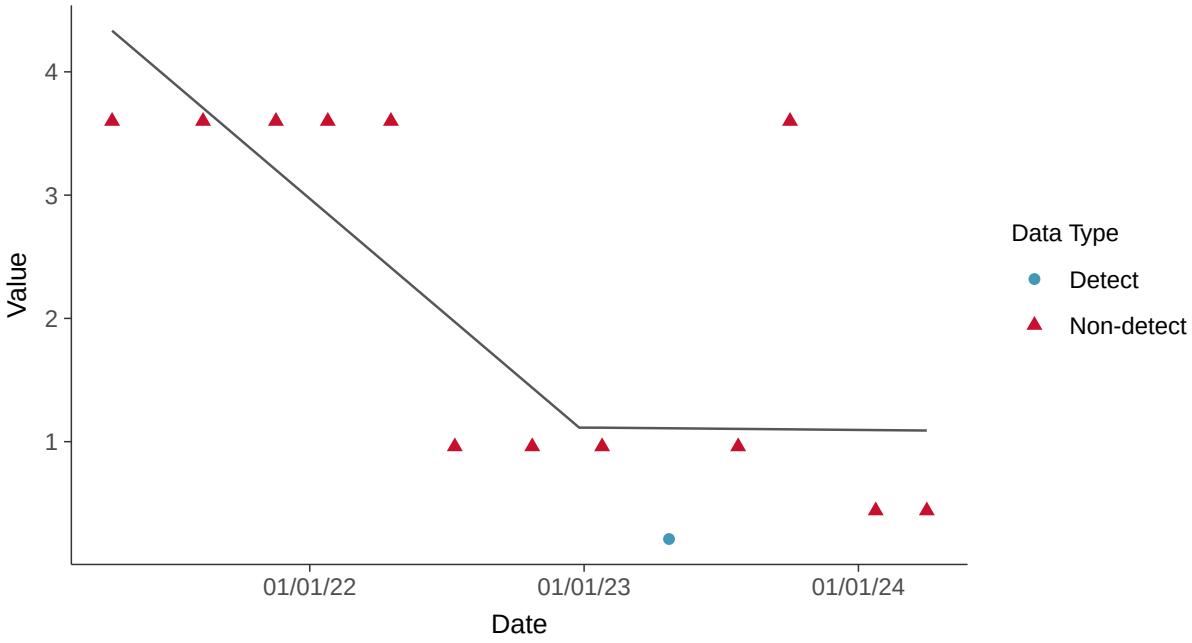
Boxplot by Season

Cobalt, MW-11D (ug/L)



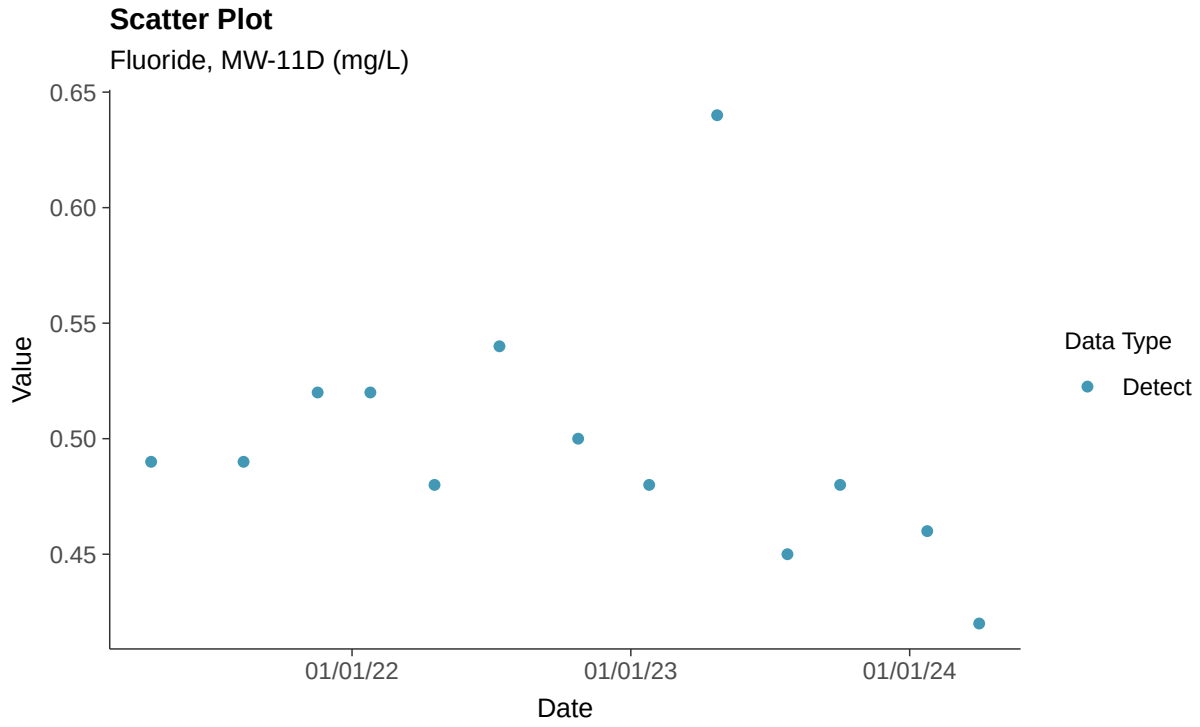
Trend Regression: Piecewise Linear-Linear

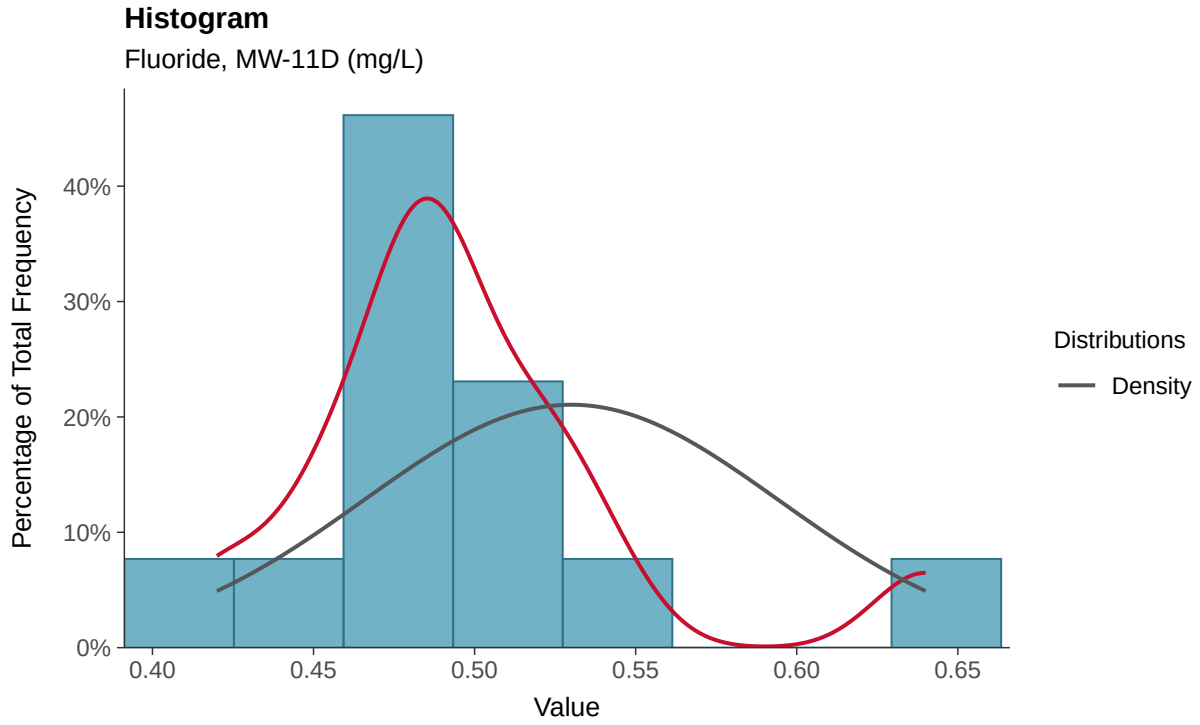
Cobalt, MW-11D (ug/L)



App. IV: Fluoride, MW-11D

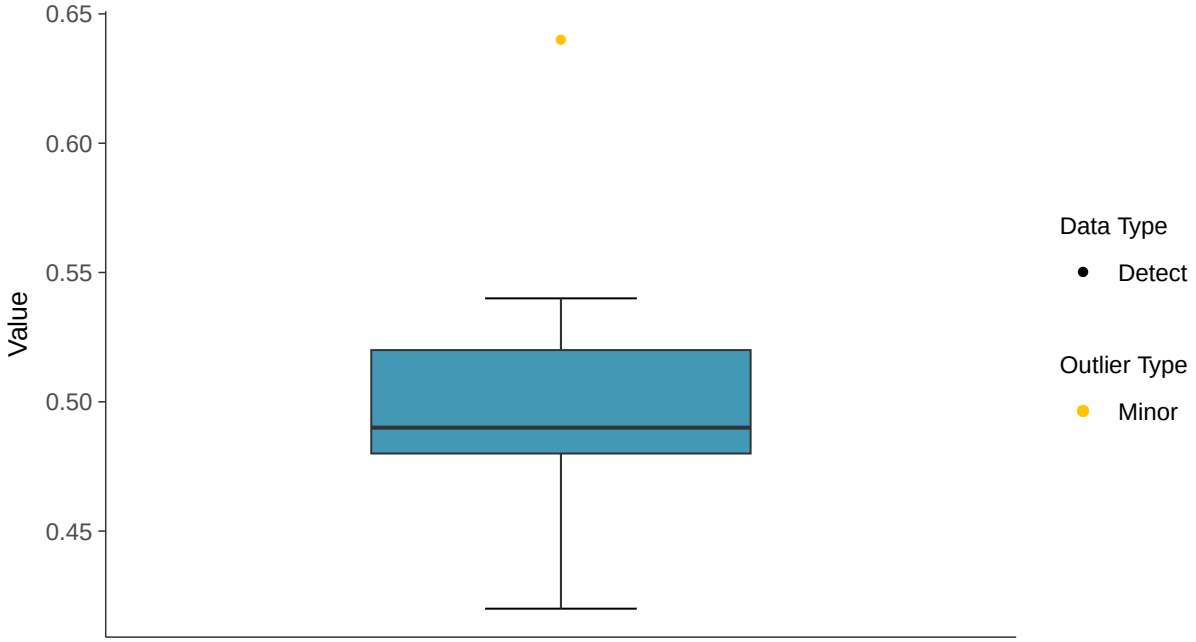
ID: 4_3_112





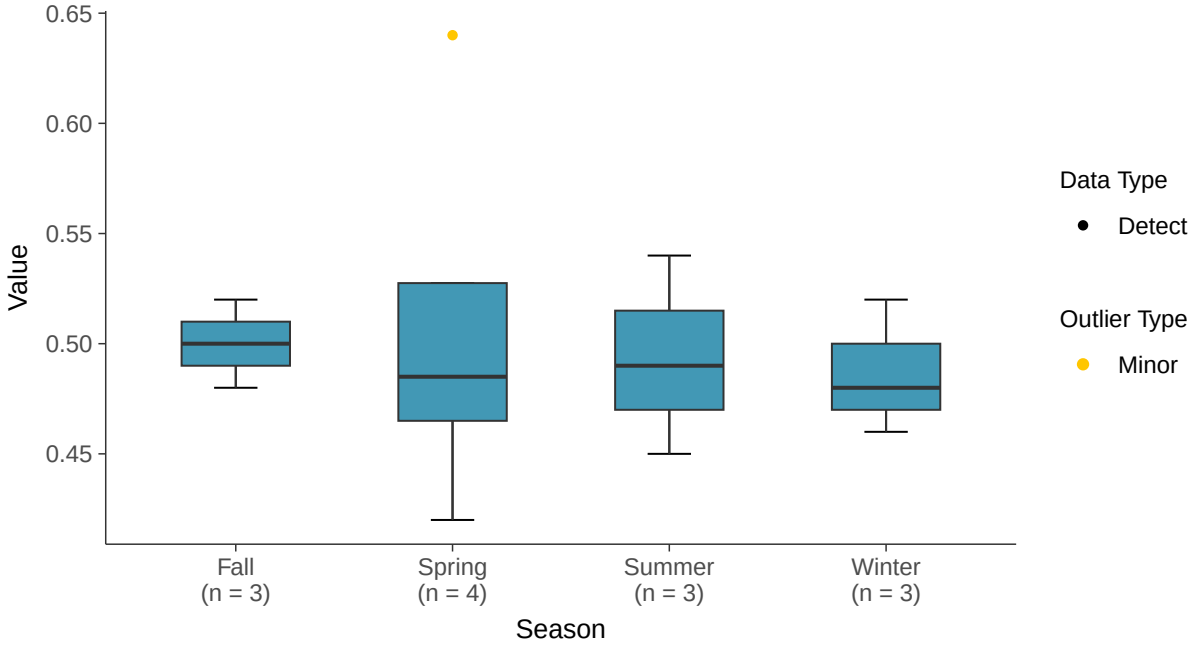
Boxplot

Fluoride, MW-11D (mg/L)



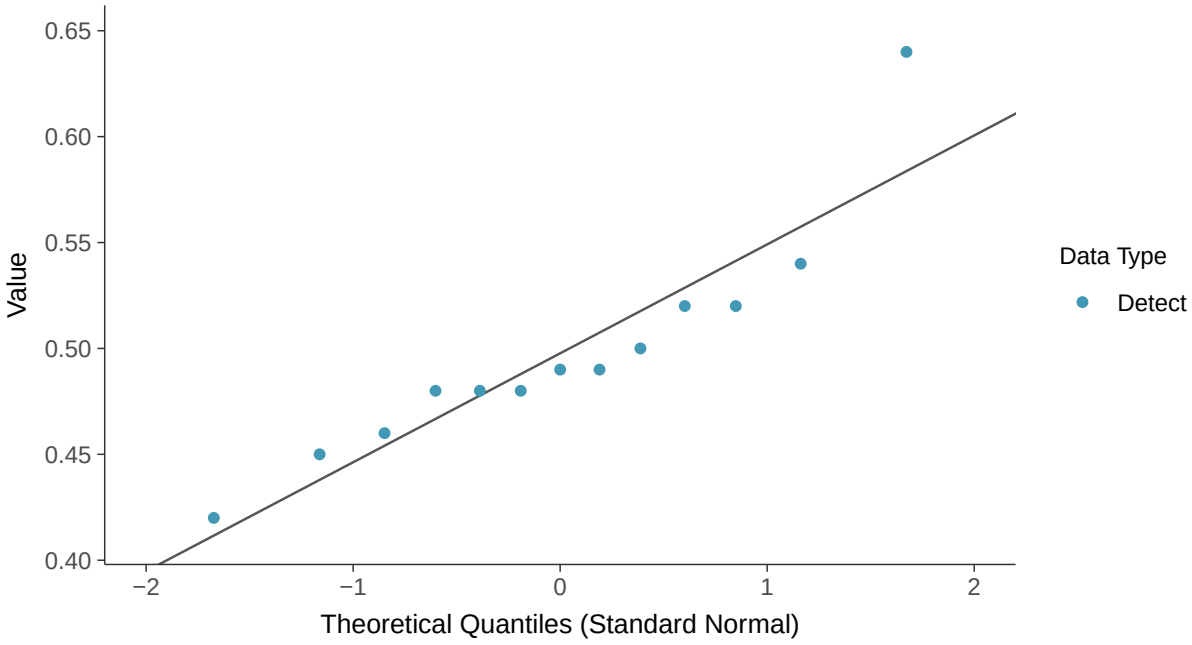
Boxplot by Season

Fluoride, MW-11D (mg/L)



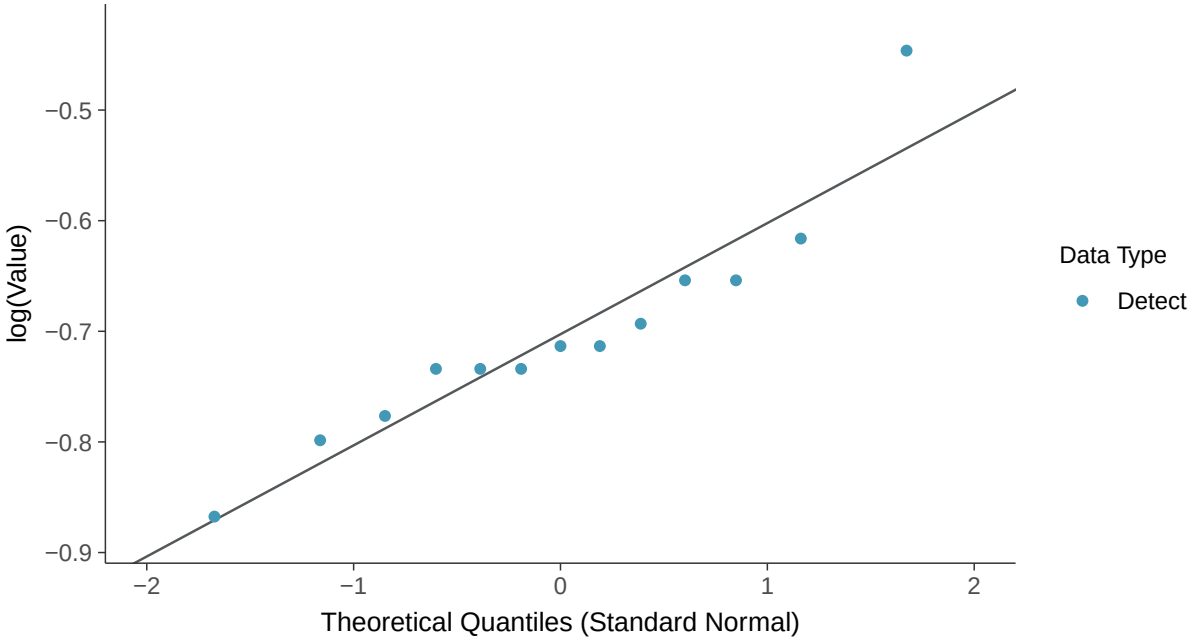
Normal Q-Q plot

Fluoride, MW-11D (mg/L)



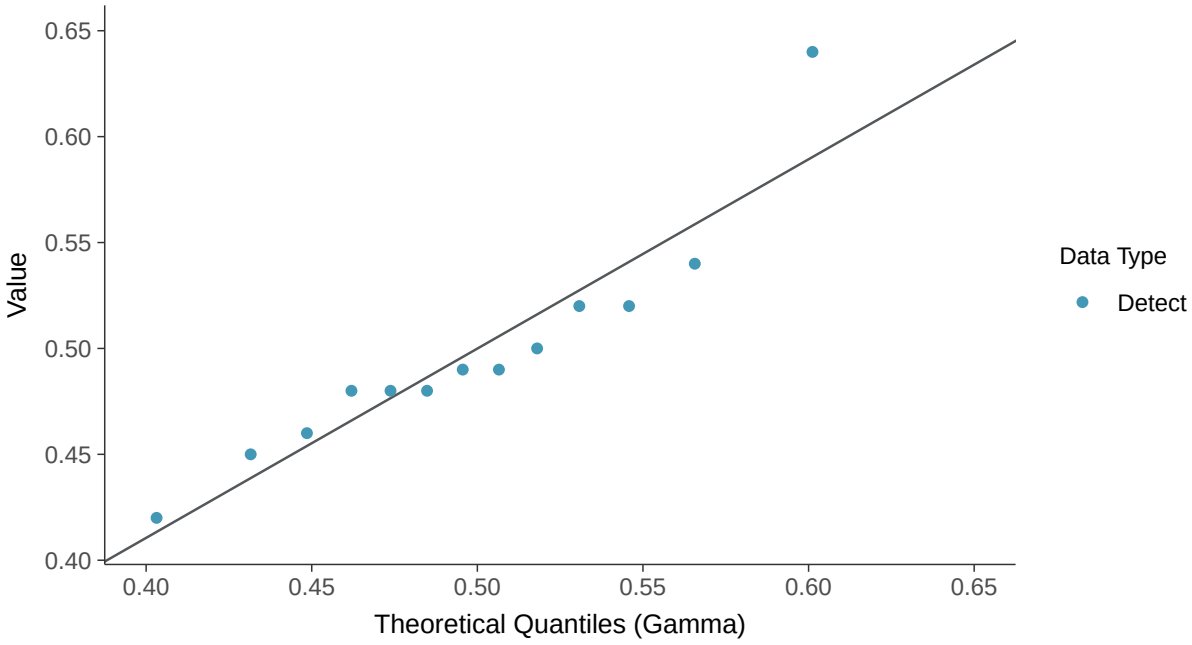
Lognormal Q-Q plot

Fluoride, MW-11D (mg/L)



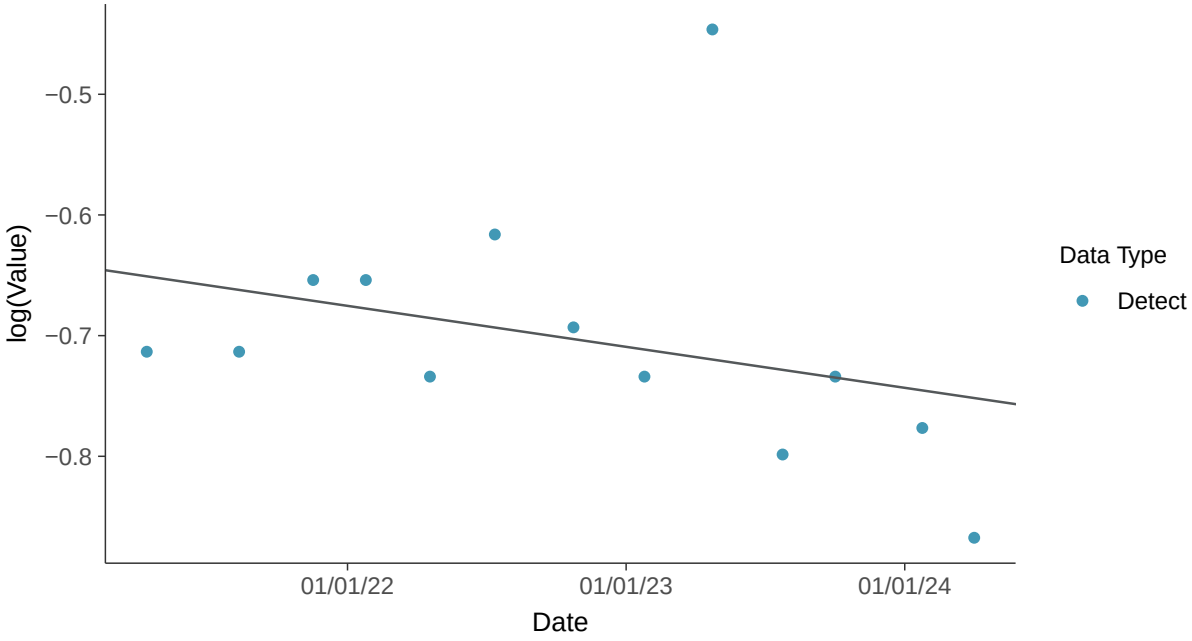
Gamma Q-Q plot

Fluoride, MW-11D (mg/L)



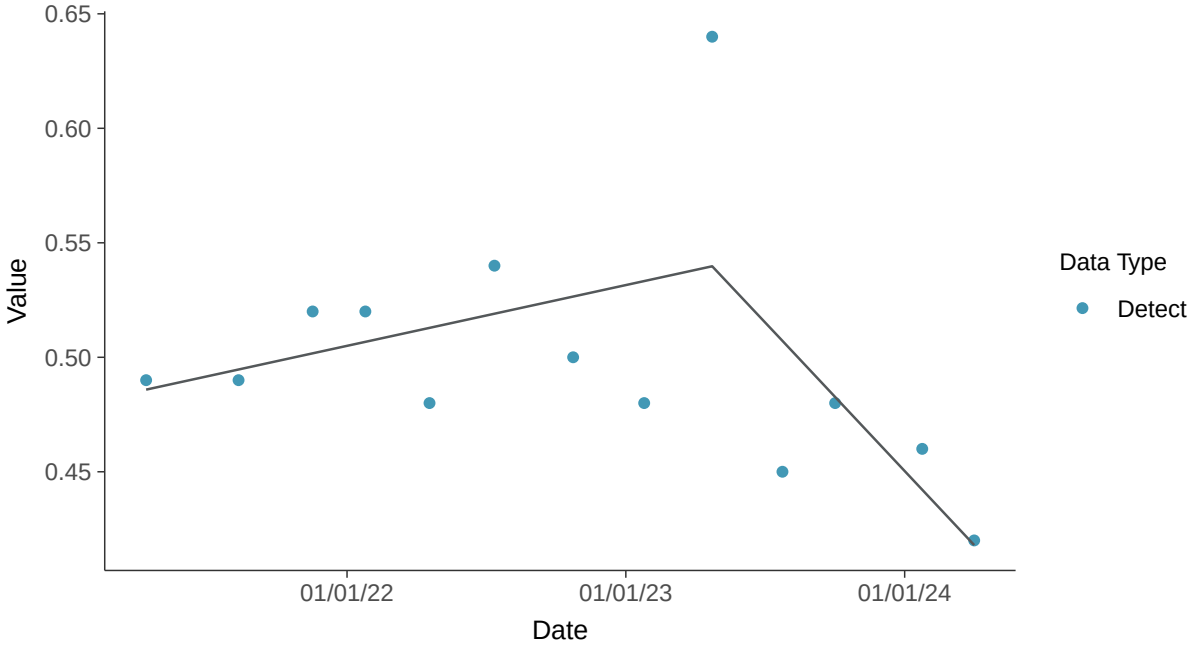
Trend Regression: Lognormal MLE

Fluoride, MW-11D (mg/L)



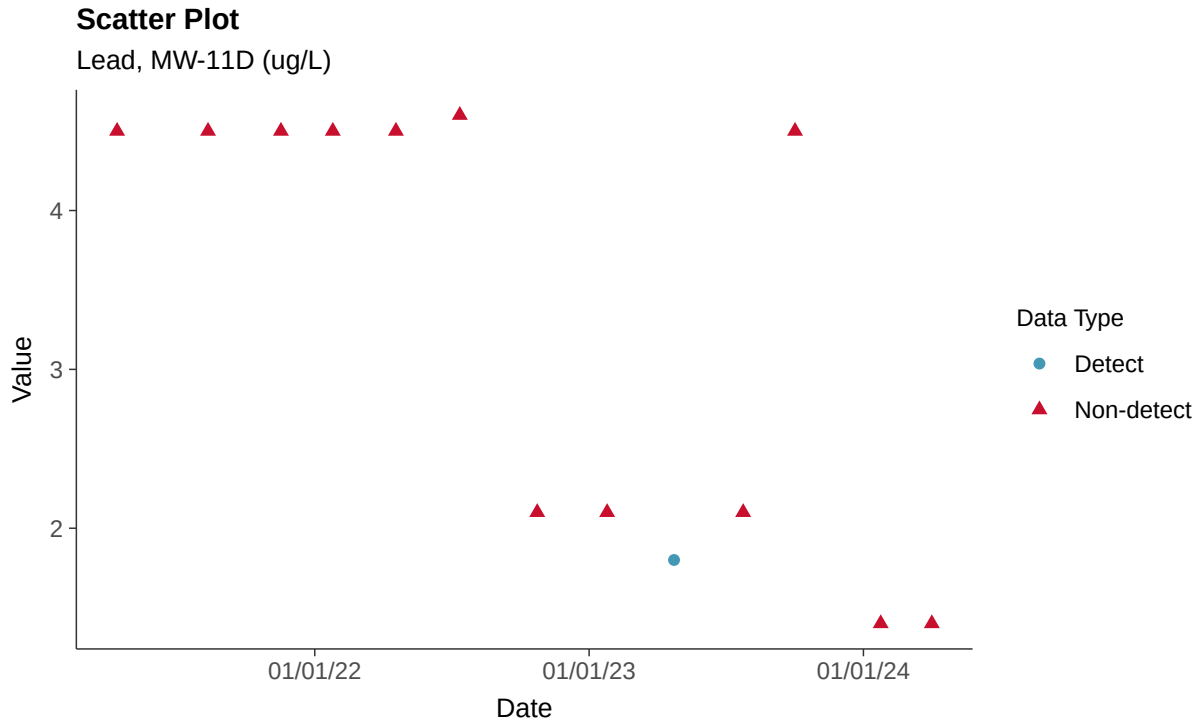
Trend Regression: Piecewise Linear-Linear

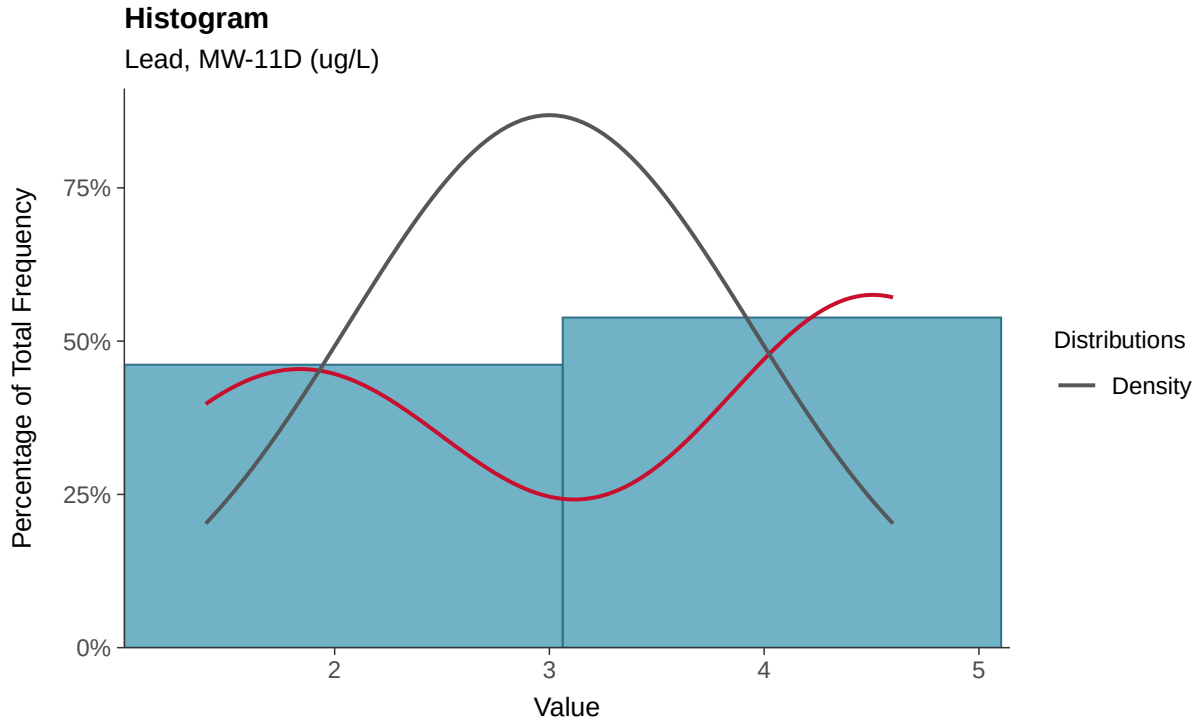
Fluoride, MW-11D (mg/L)



App. IV: Lead, MW-11D

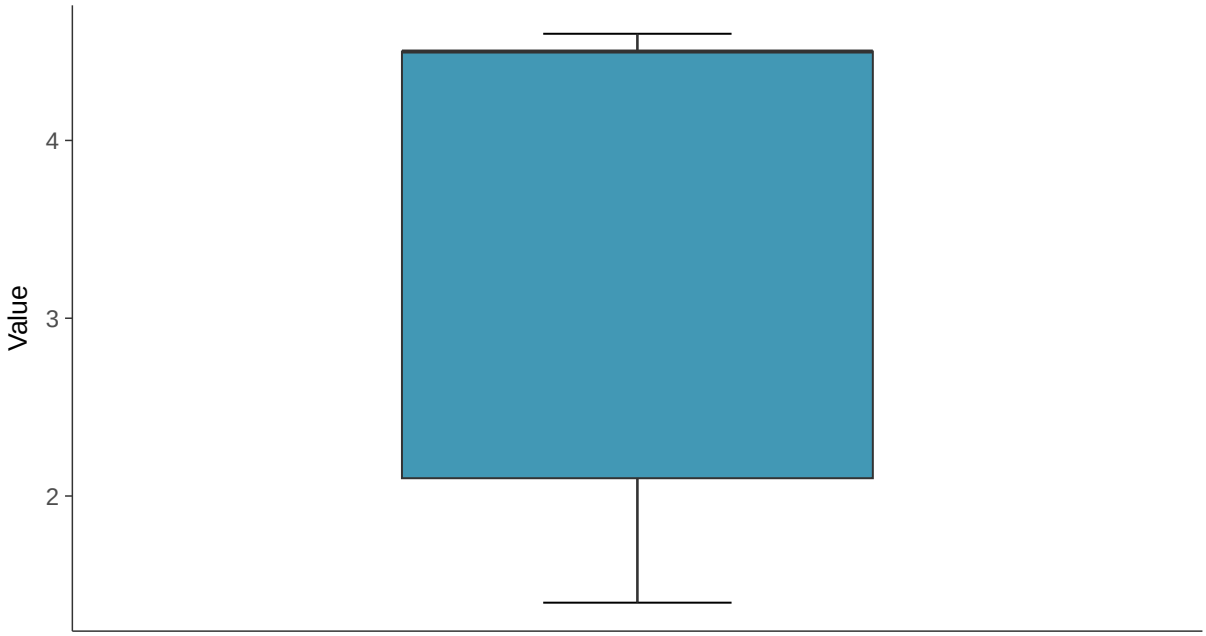
ID: 4_3_113





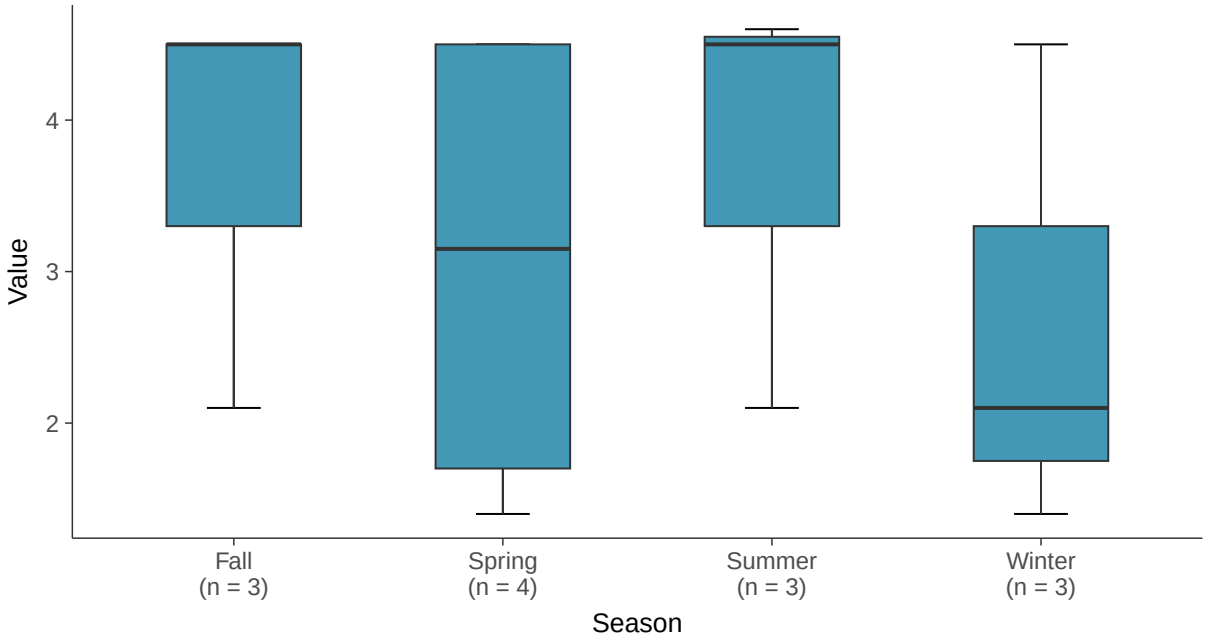
Boxplot

Lead, MW-11D (ug/L)



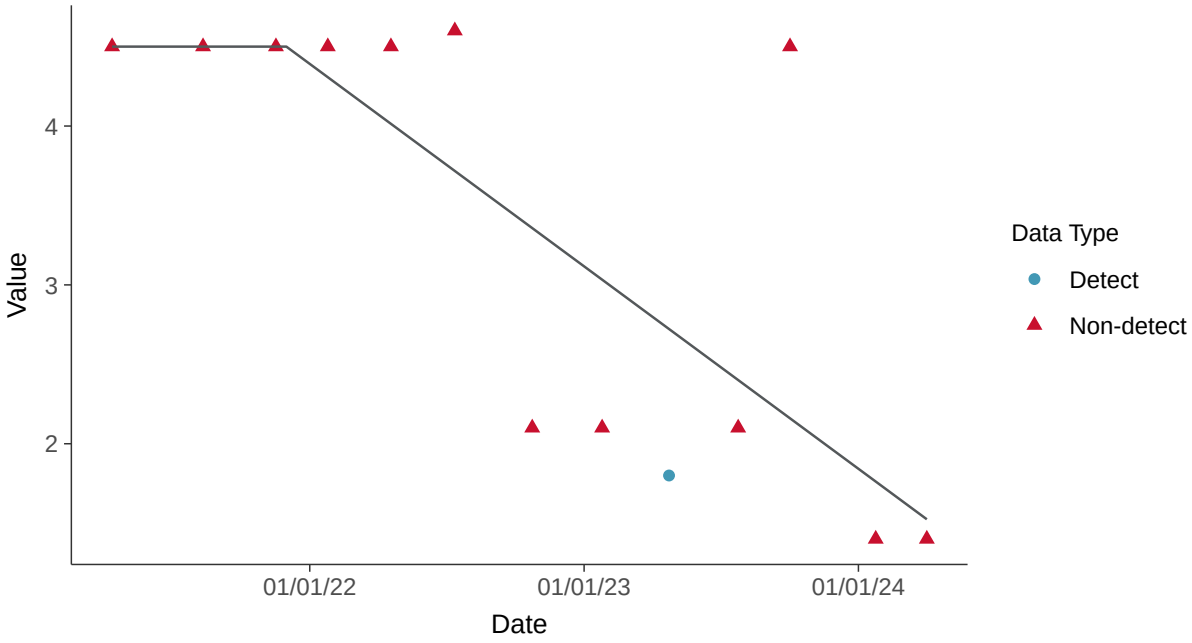
Boxplot by Season

Lead, MW-11D (ug/L)



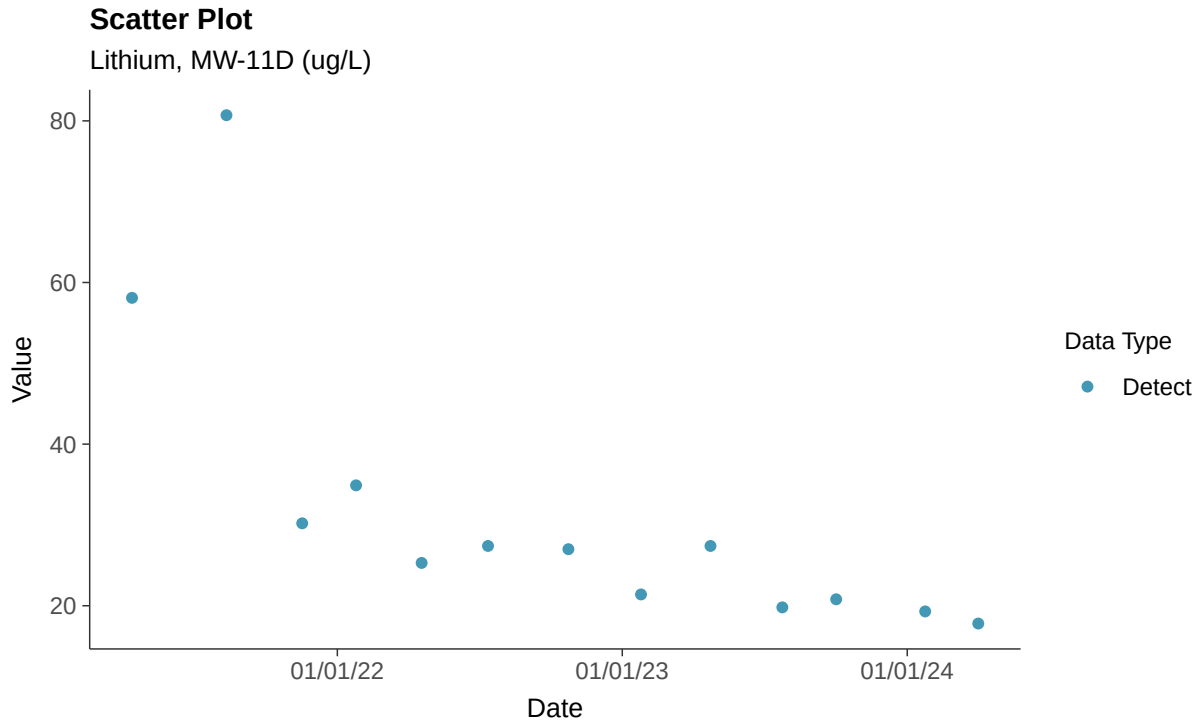
Trend Regression: Piecewise Linear-Linear

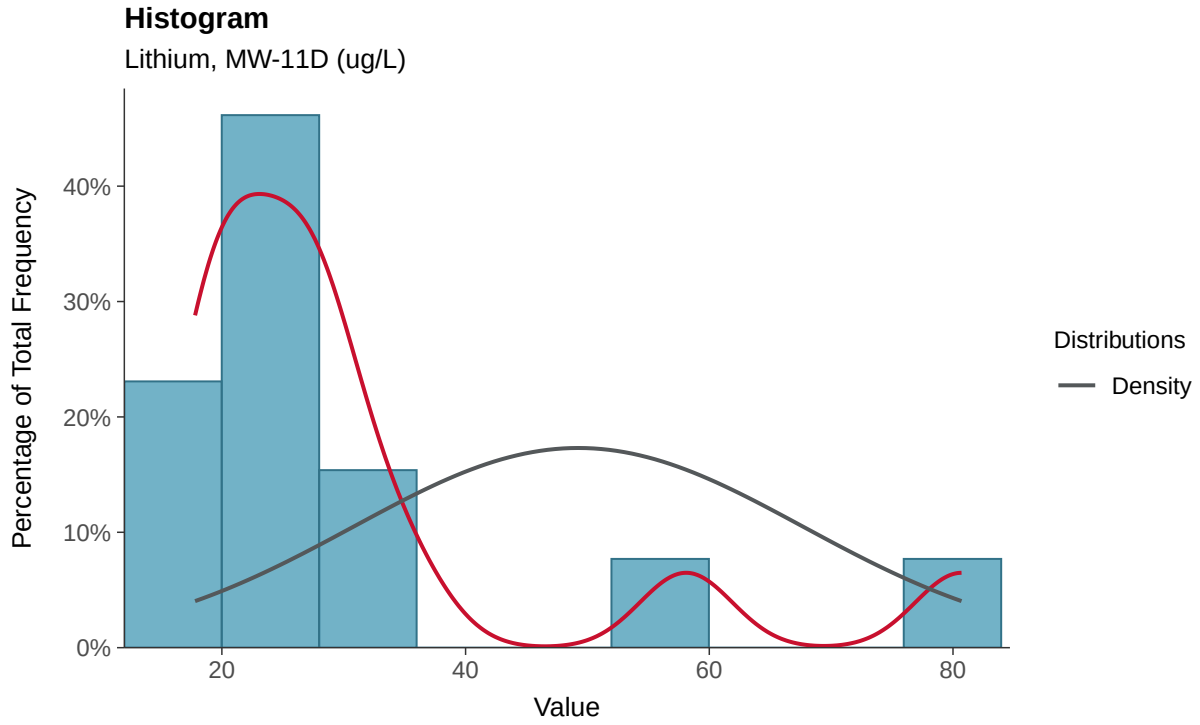
Lead, MW-11D (ug/L)



App. IV: Lithium, MW-11D

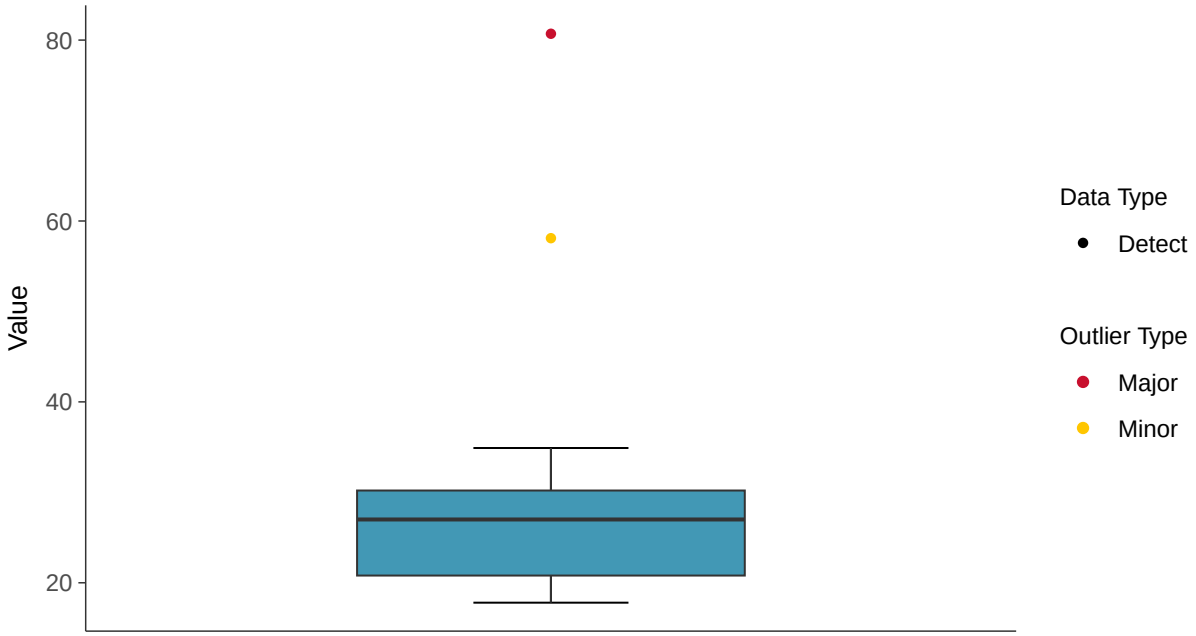
ID: 4_3_114





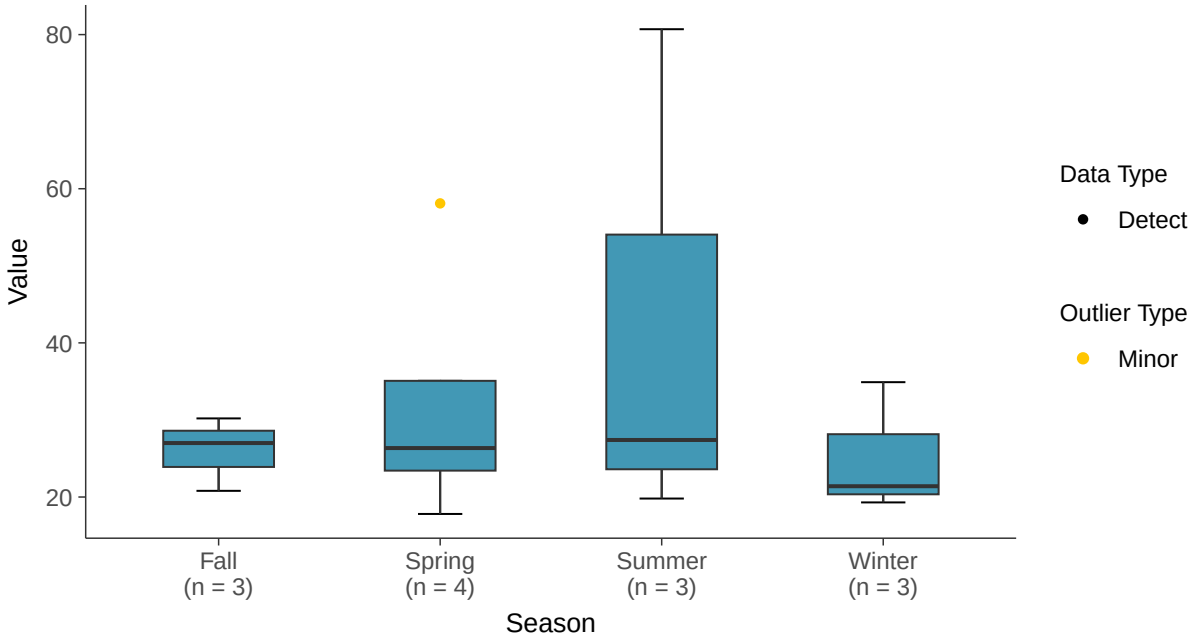
Boxplot

Lithium, MW-11D (ug/L)



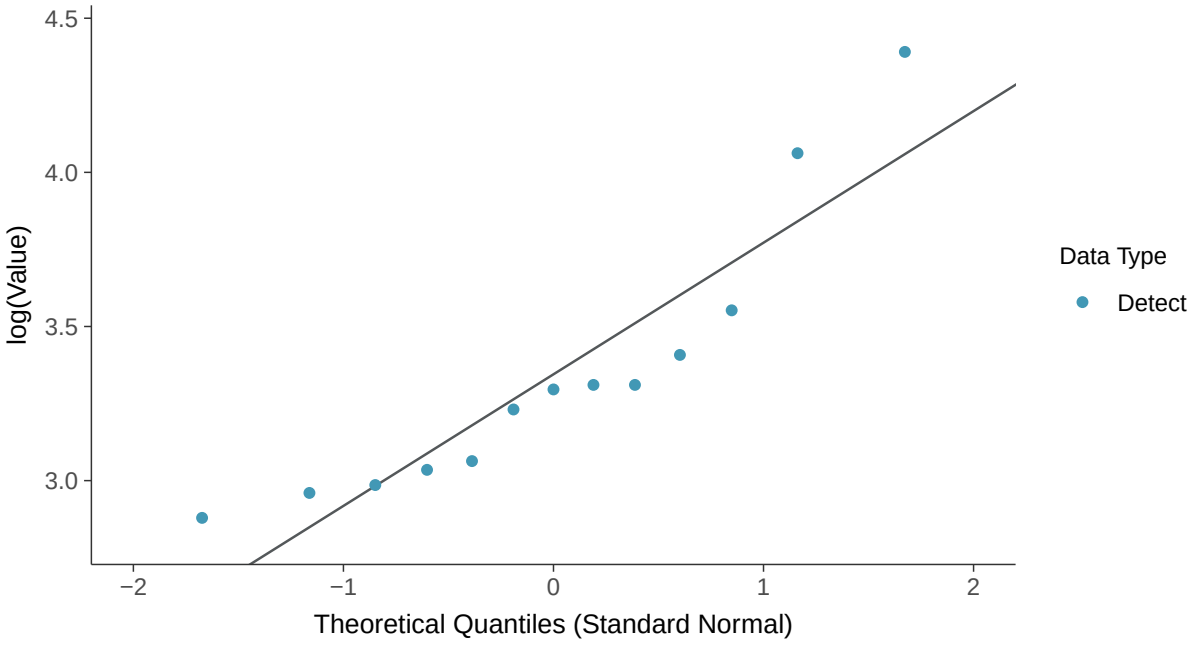
Boxplot by Season

Lithium, MW-11D (ug/L)



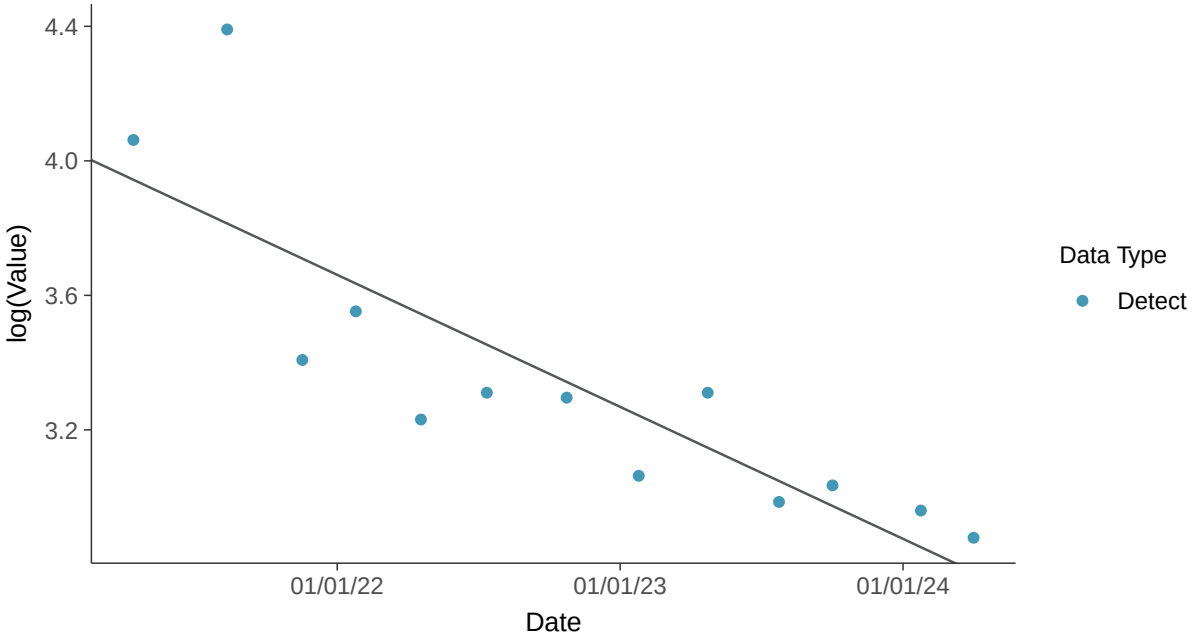
Lognormal Q-Q plot

Lithium, MW-11D (ug/L)



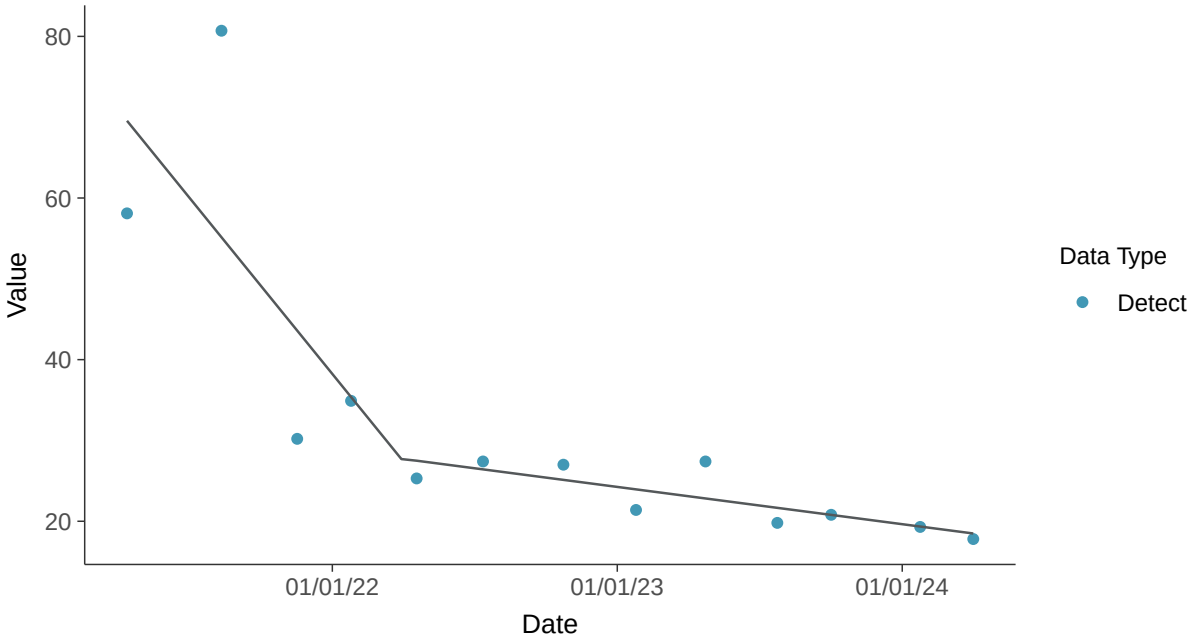
Trend Regression: Lognormal MLE

Lithium, MW-11D (ug/L)



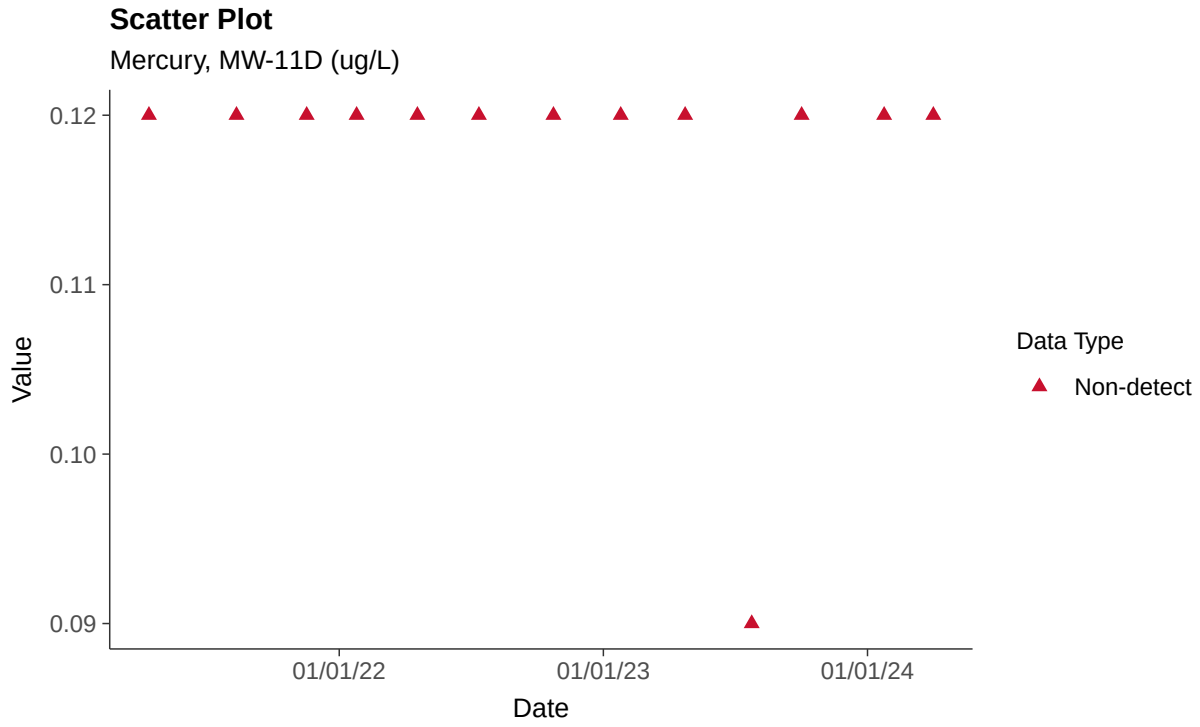
Trend Regression: Piecewise Linear-Linear

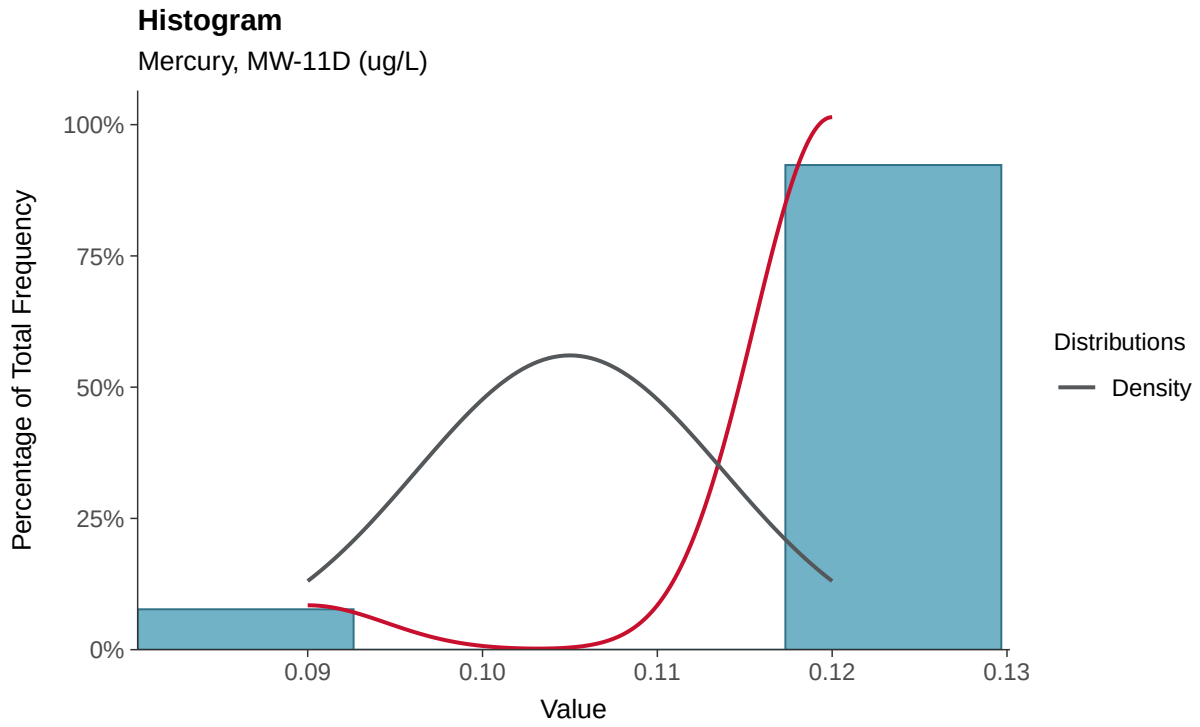
Lithium, MW-11D (ug/L)



App. IV: Mercury, MW-11D

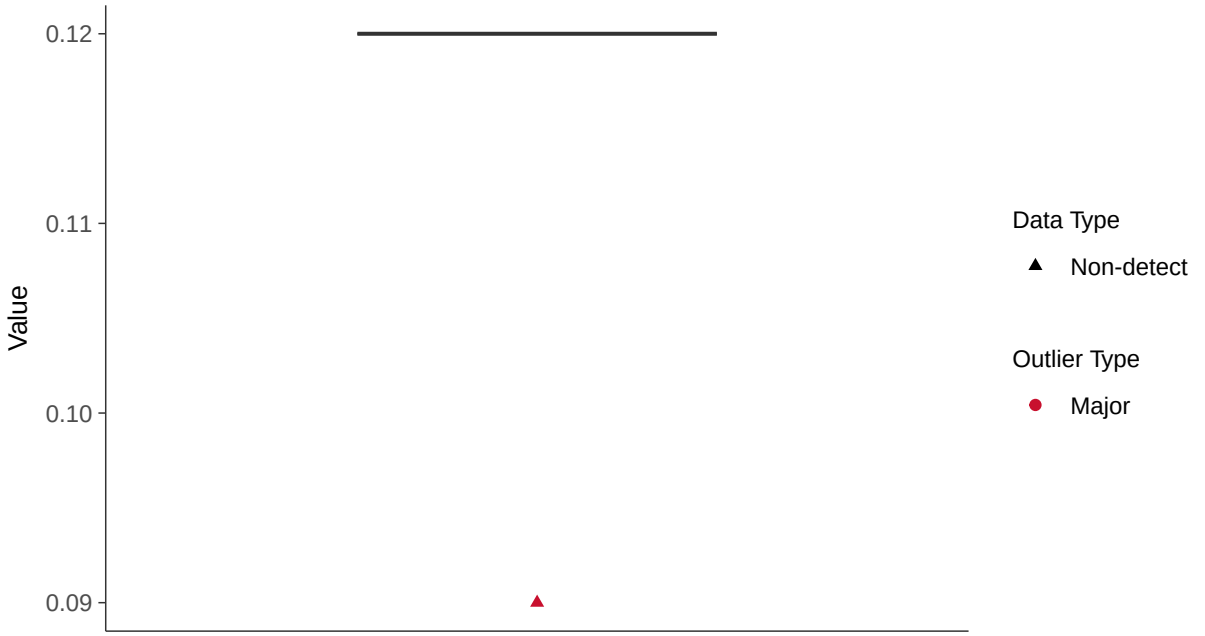
ID: 4_3_115





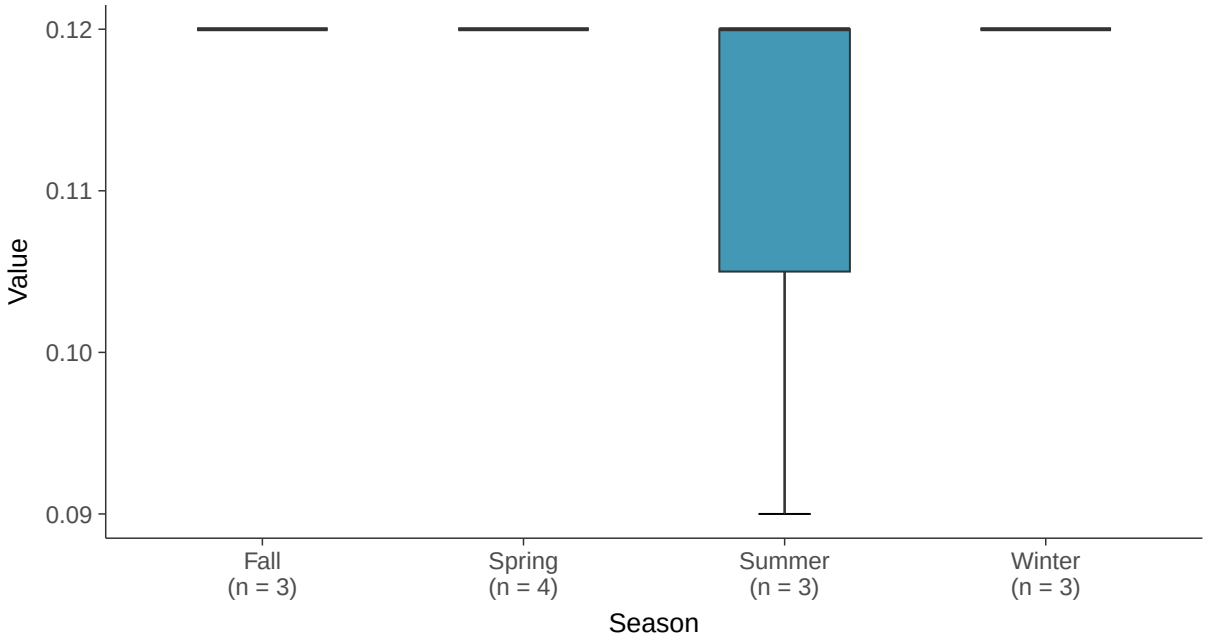
Boxplot

Mercury, MW-11D (ug/L)



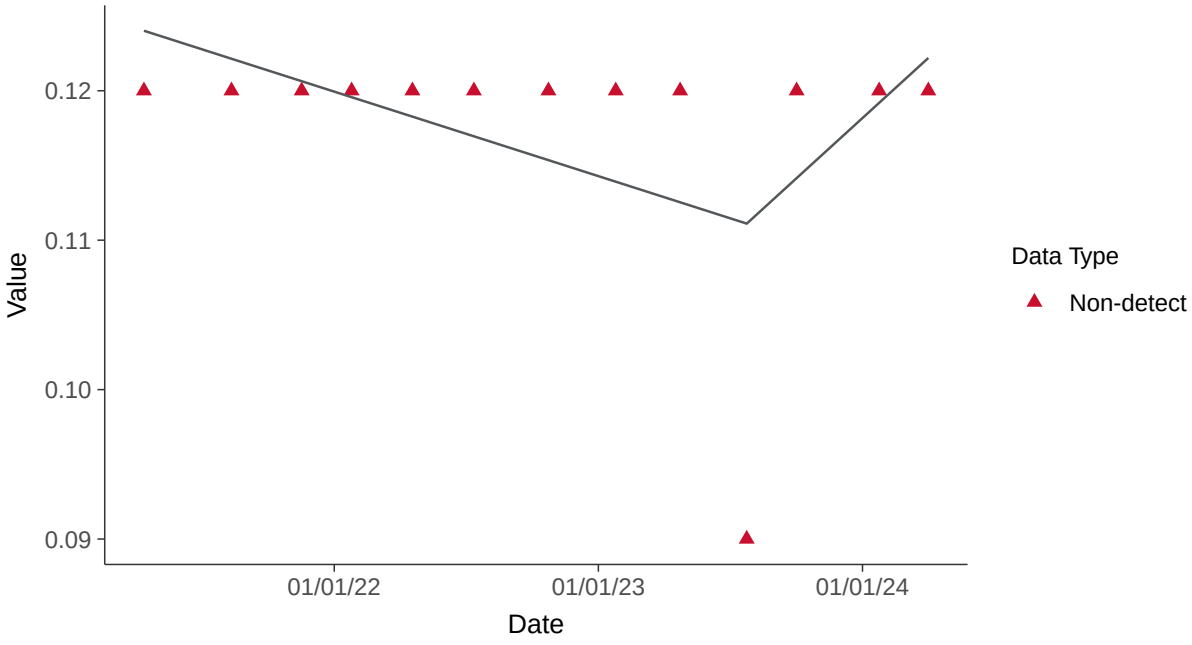
Boxplot by Season

Mercury, MW-11D (ug/L)



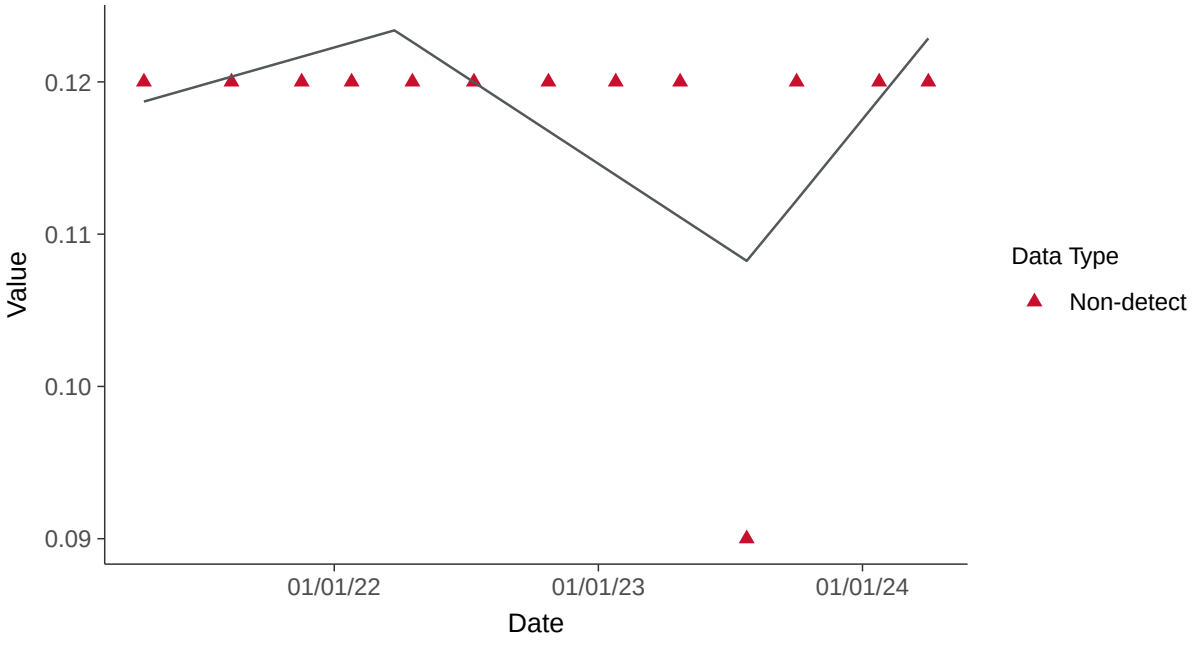
Trend Regression: Piecewise Linear-Linear

Mercury, MW-11D (ug/L)



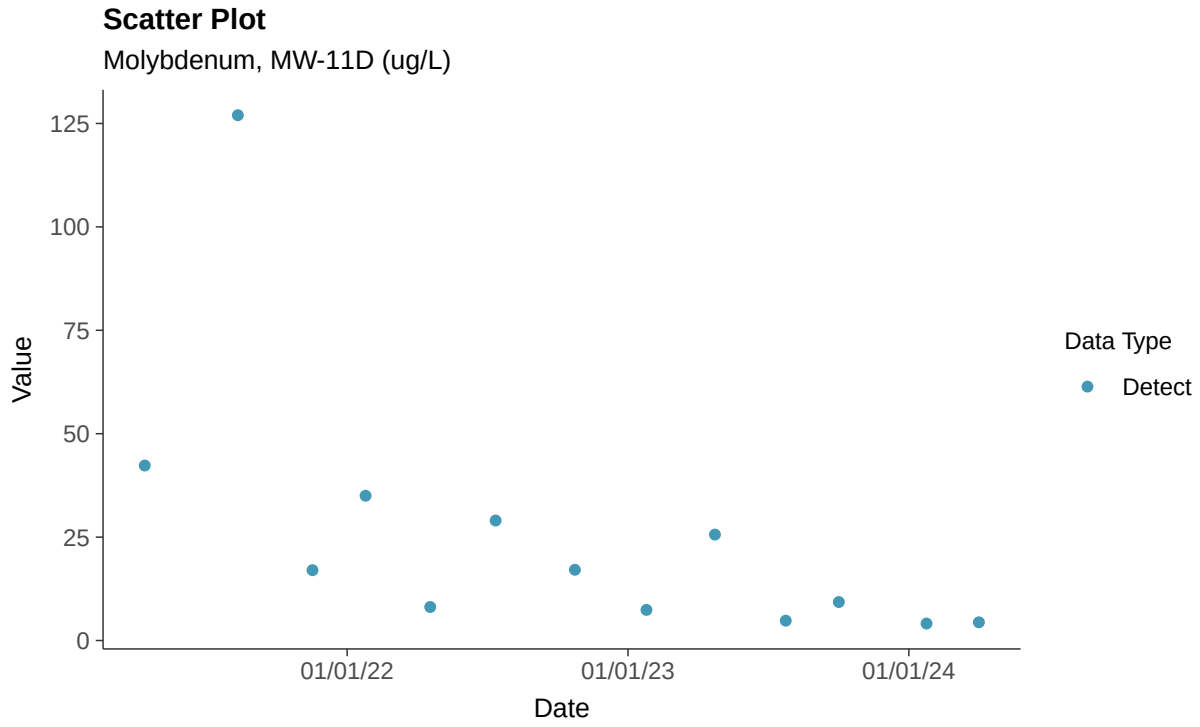
Trend Regression: Piecewise Linear-Linear-Linear

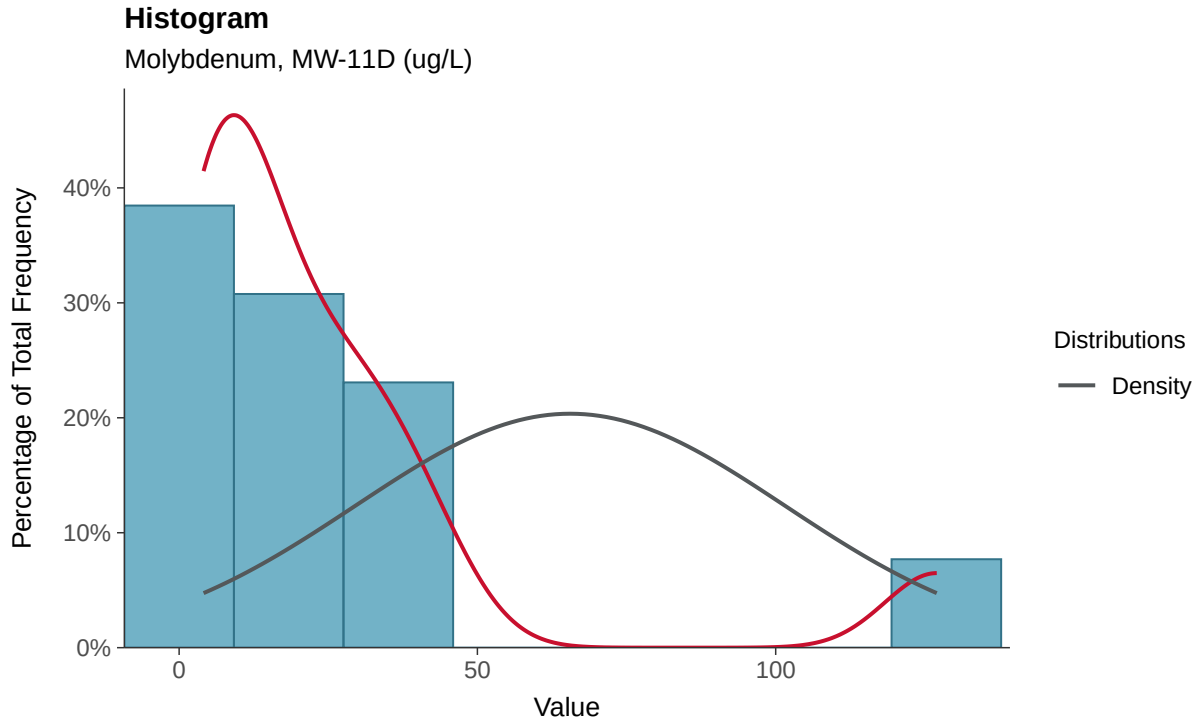
Mercury, MW-11D (ug/L)



App. IV: Molybdenum, MW-11D

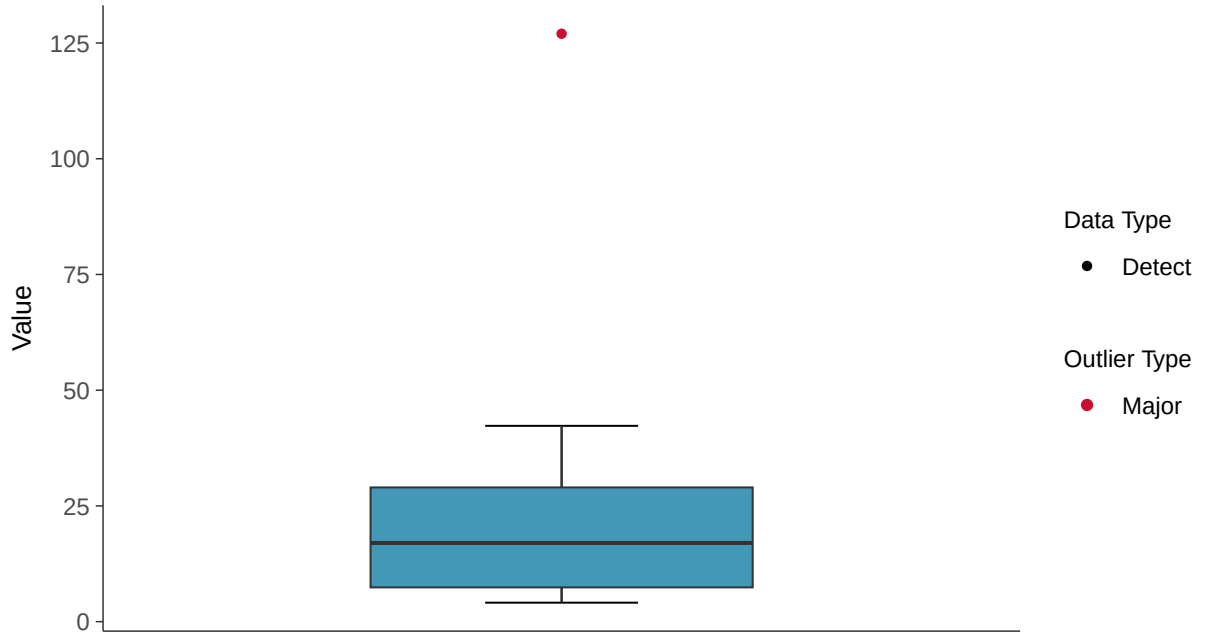
ID: 4_3_116





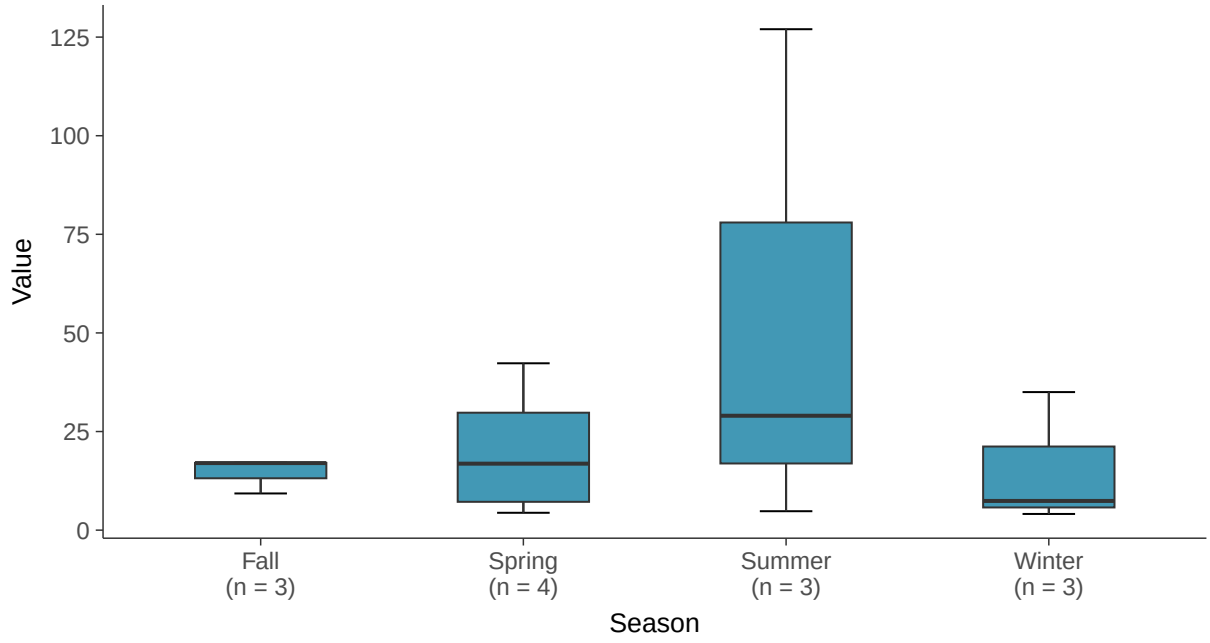
Boxplot

Molybdenum, MW-11D (ug/L)



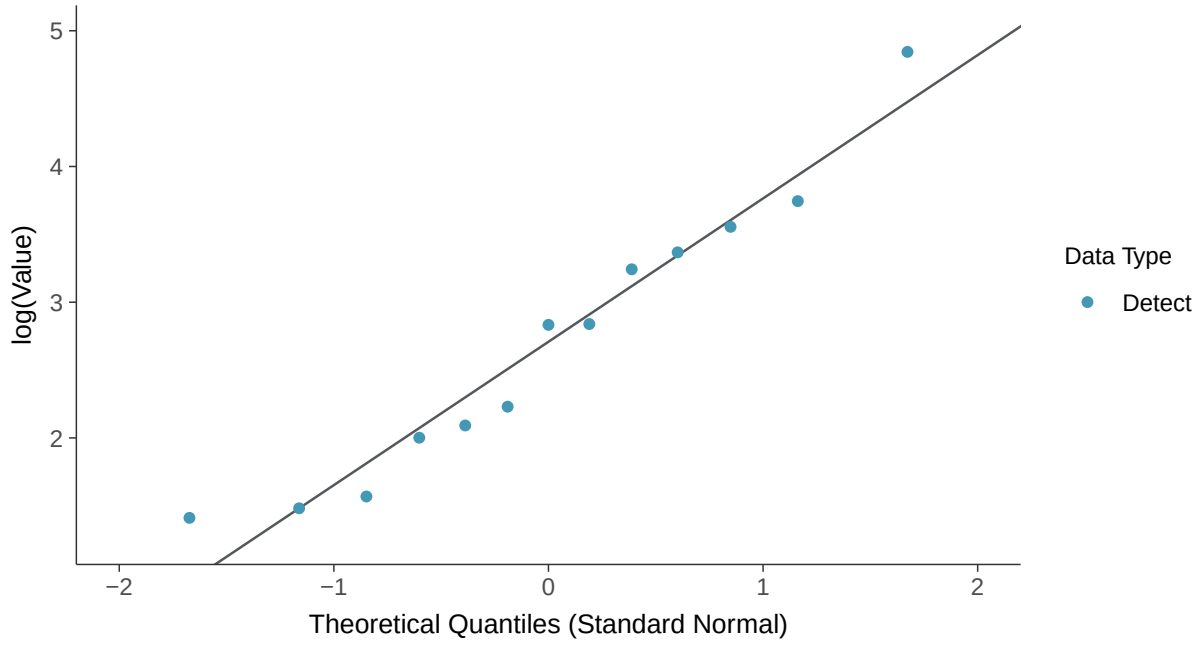
Boxplot by Season

Molybdenum, MW-11D (ug/L)



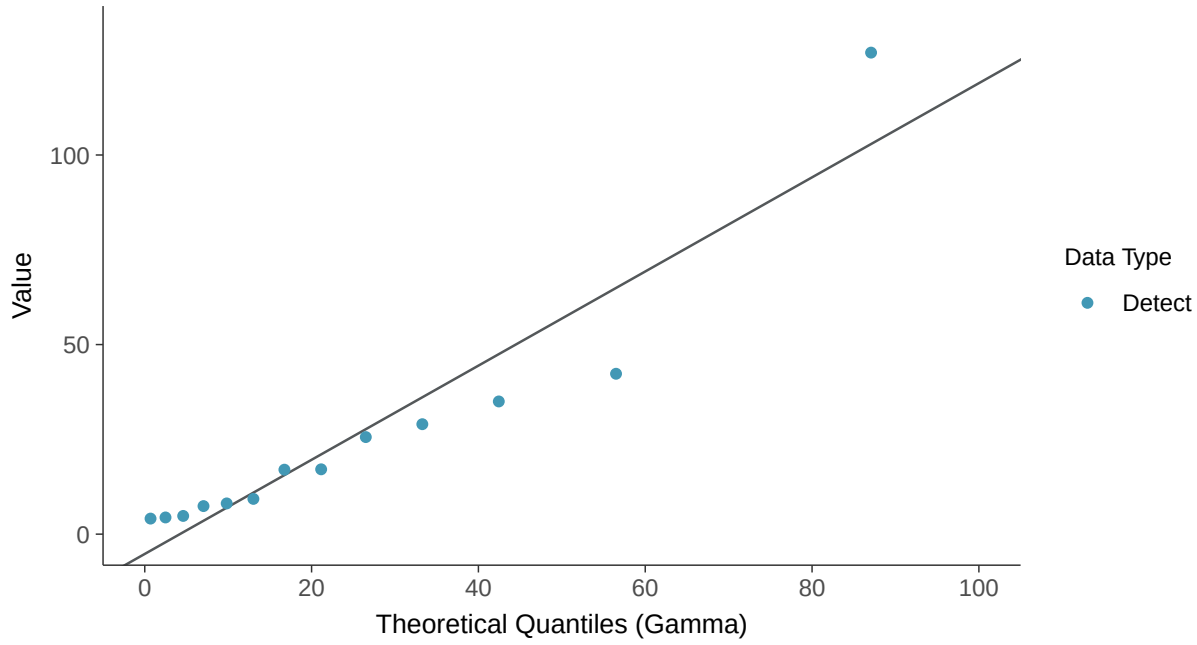
Lognormal Q-Q plot

Molybdenum, MW-11D (ug/L)



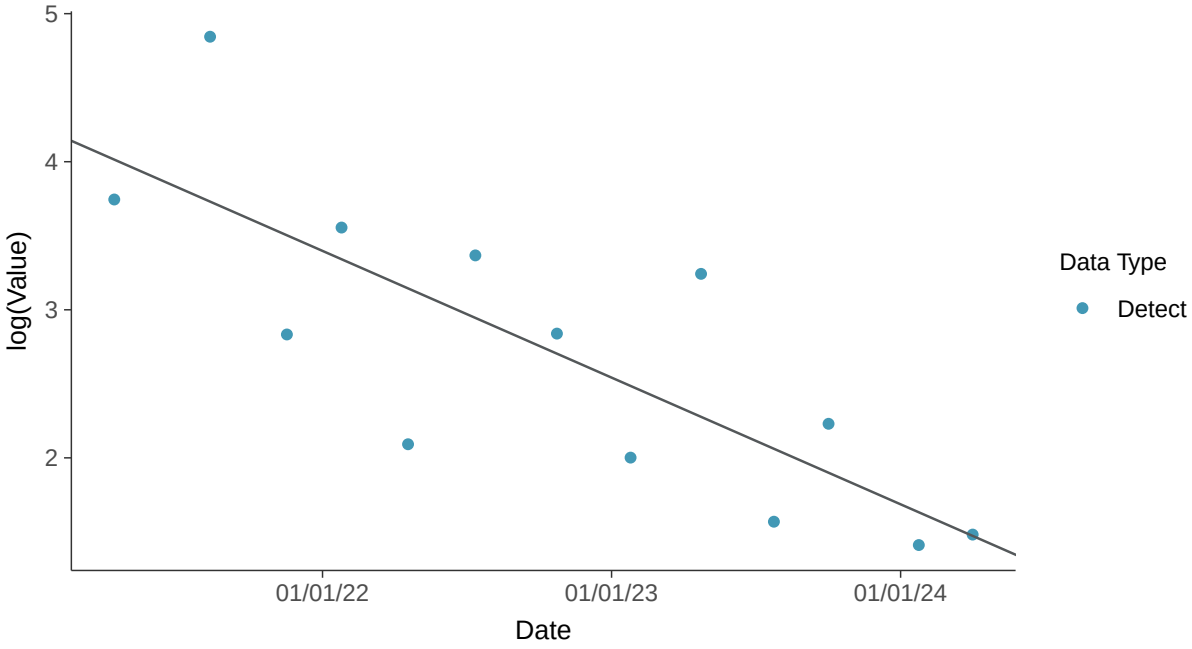
Gamma Q-Q plot

Molybdenum, MW-11D (ug/L)



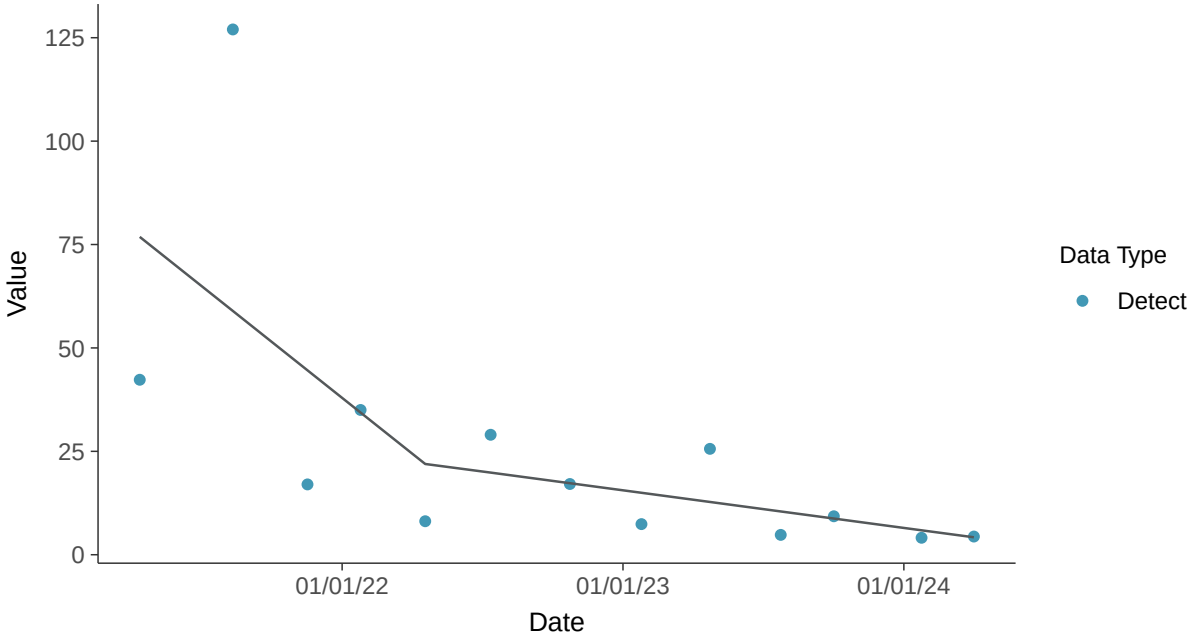
Trend Regression: Lognormal MLE

Molybdenum, MW-11D (ug/L)



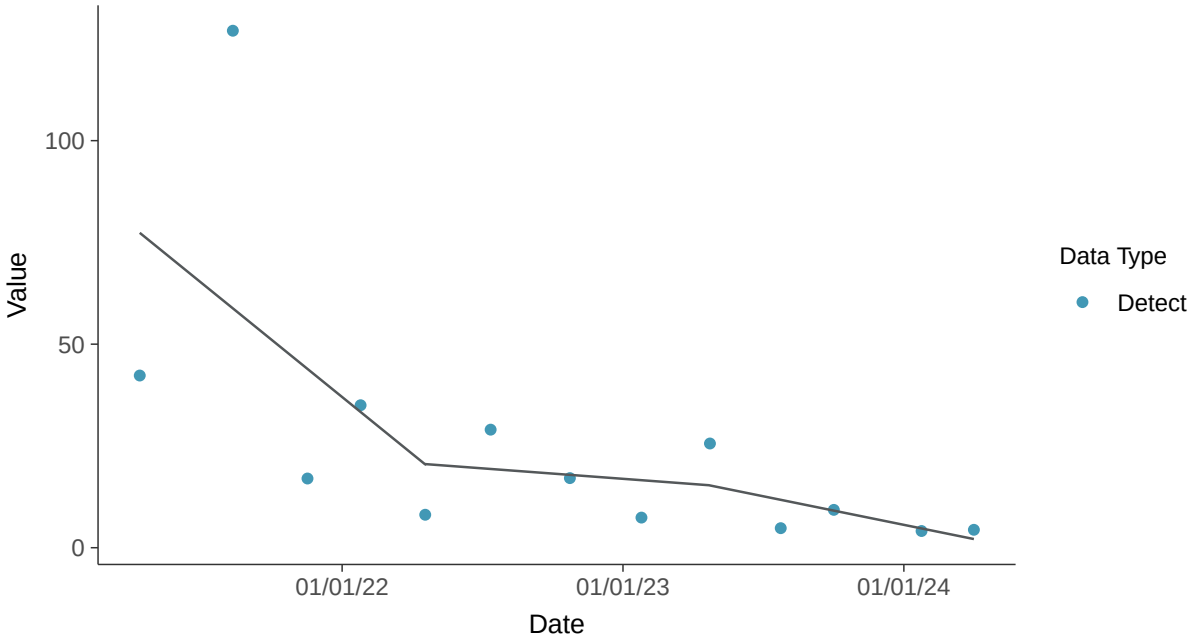
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11D (ug/L)



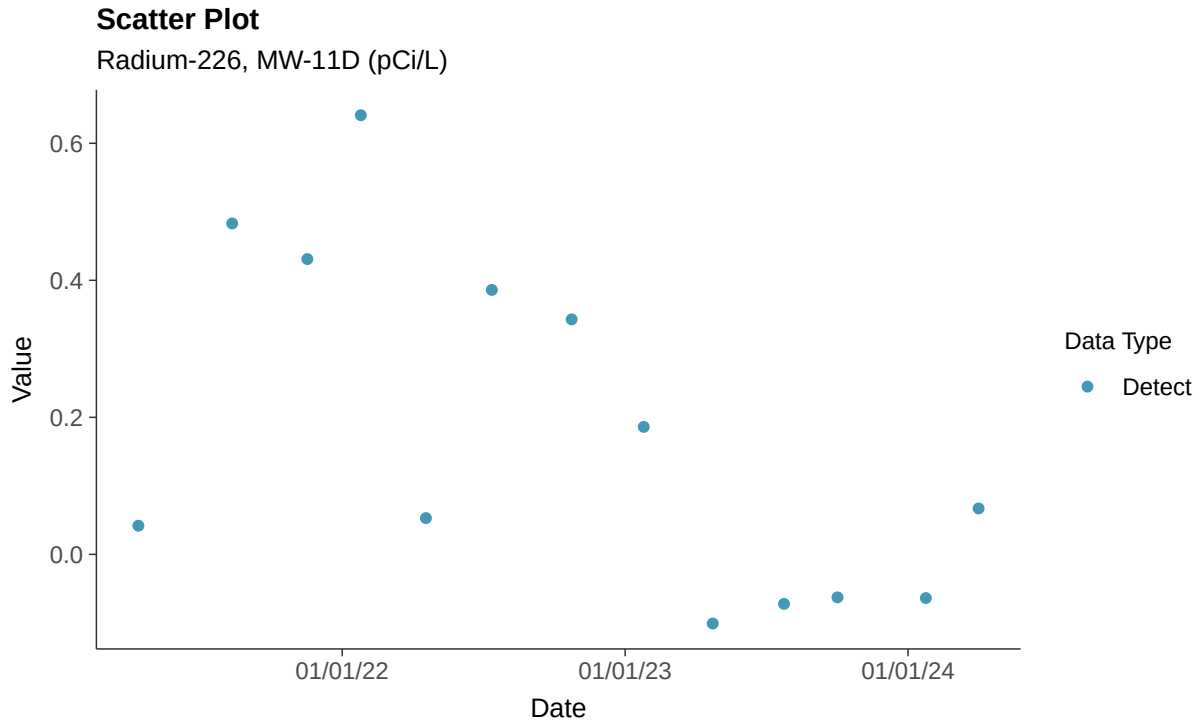
Trend Regression: Piecewise Linear-Linear-Linear

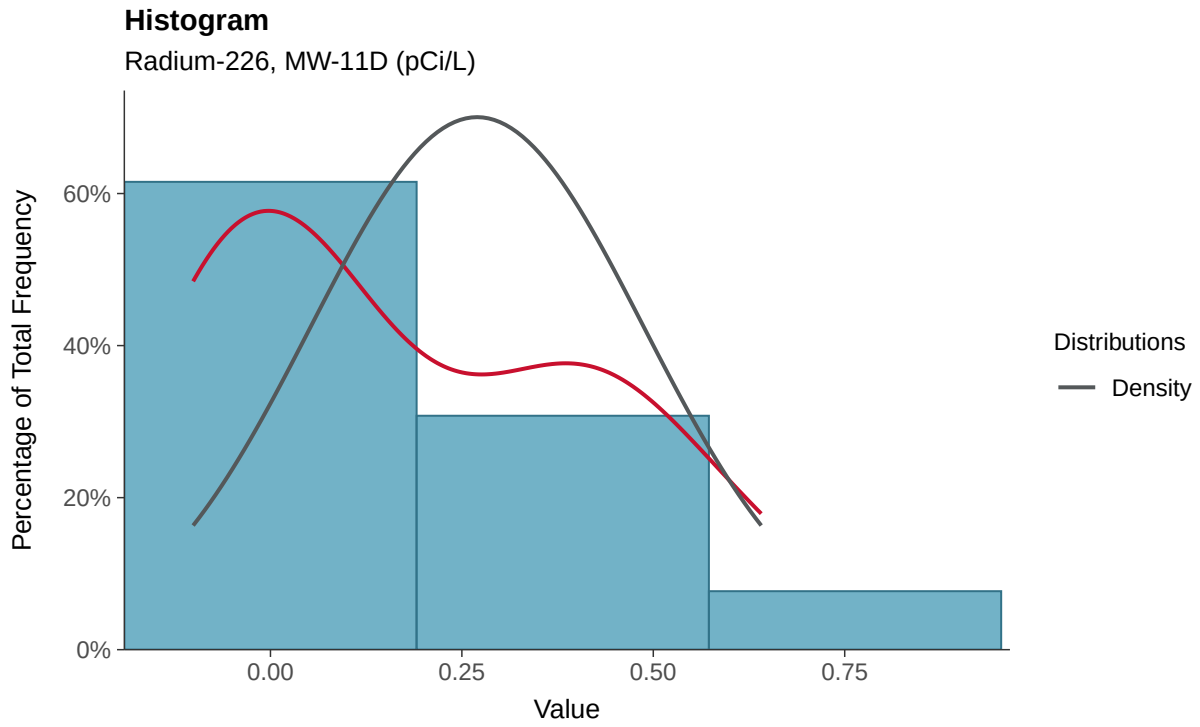
Molybdenum, MW-11D (ug/L)



App. IV: Radium-226, MW-11D

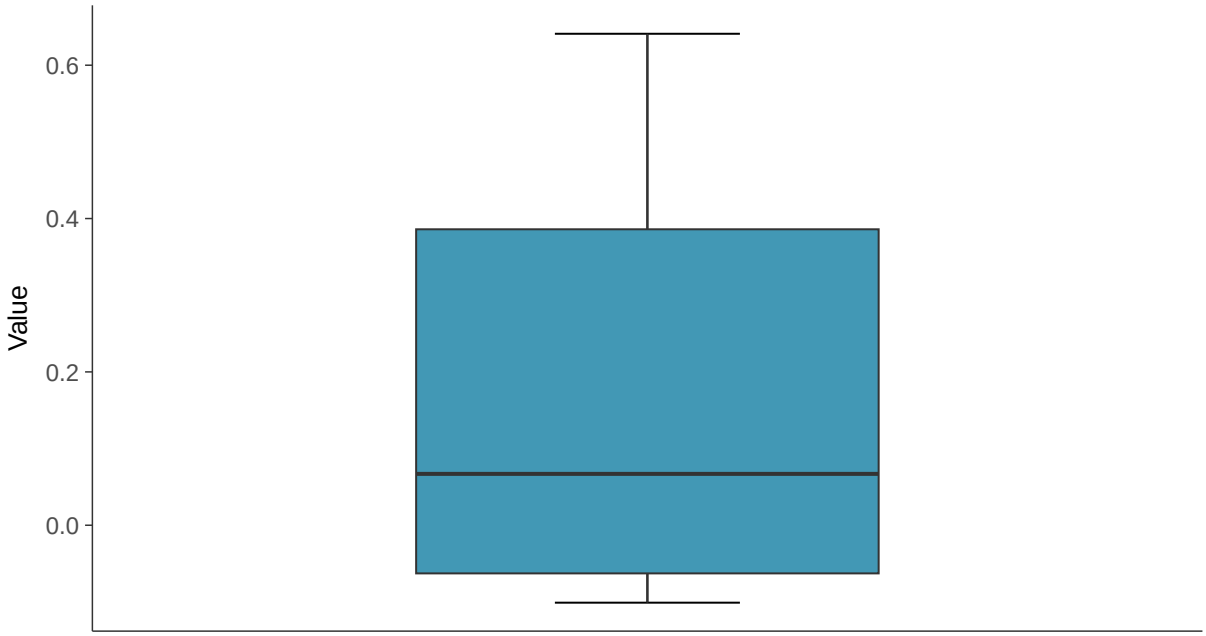
ID: 4_3_119





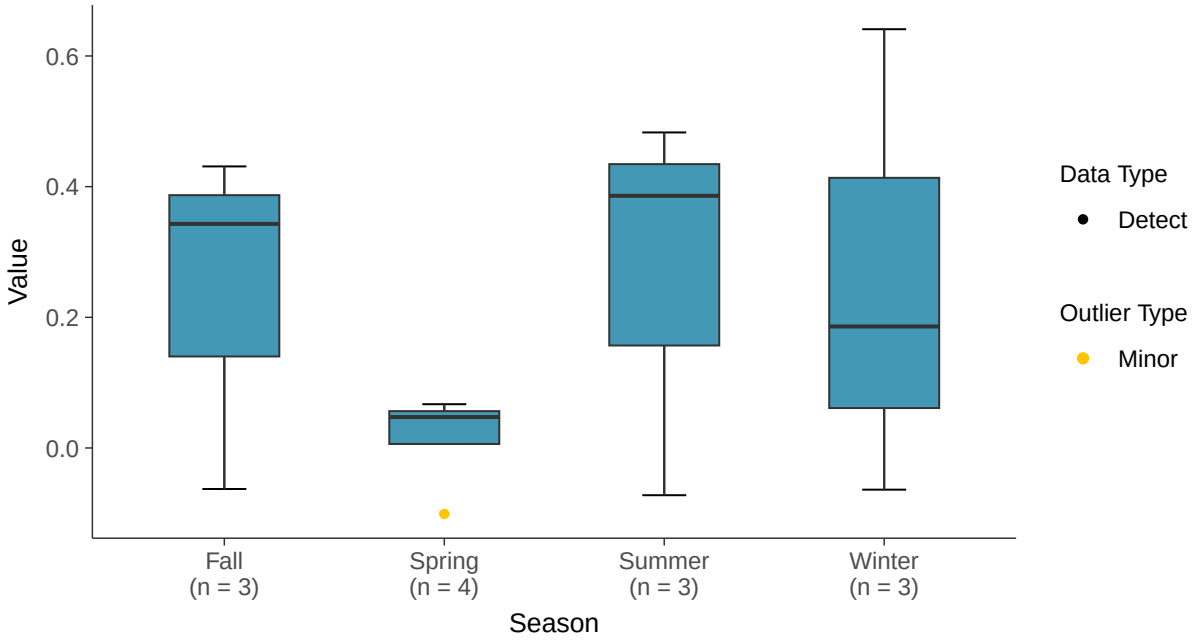
Boxplot

Radium-226, MW-11D (pCi/L)



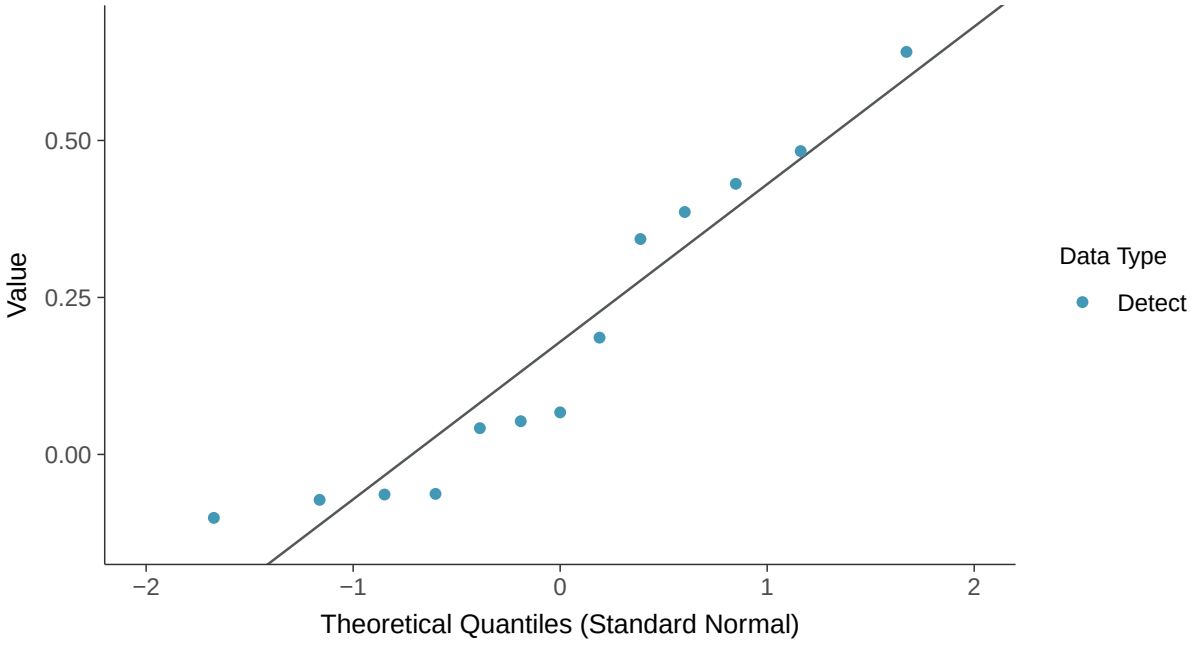
Boxplot by Season

Radium-226, MW-11D (pCi/L)



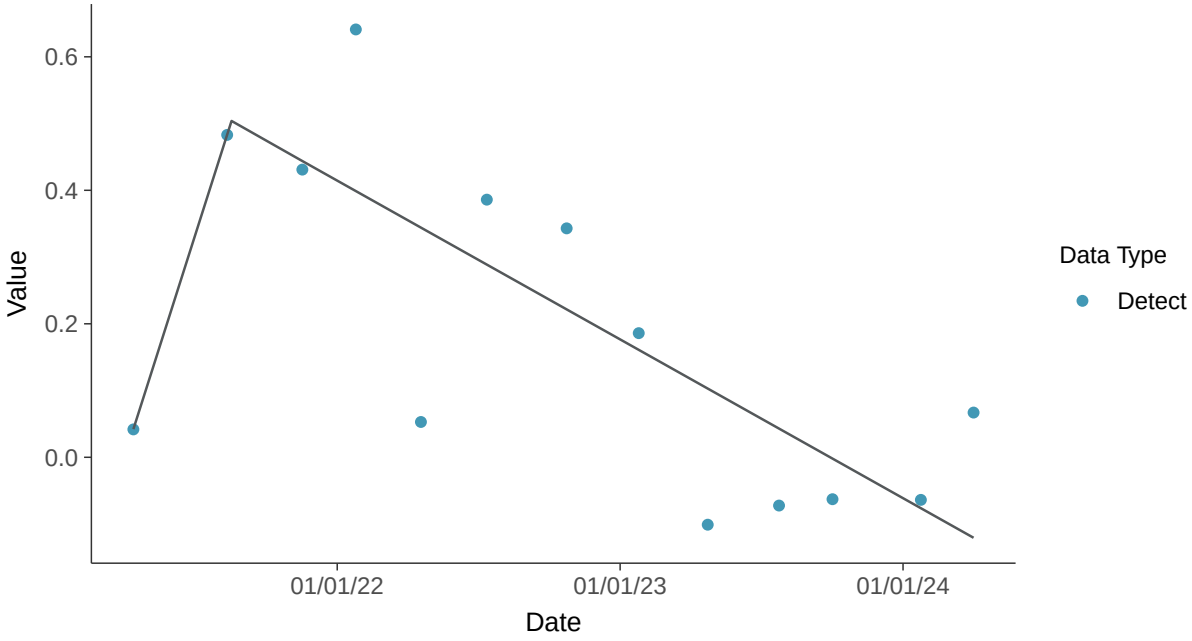
Normal Q-Q plot

Radium-226, MW-11D (pCi/L)



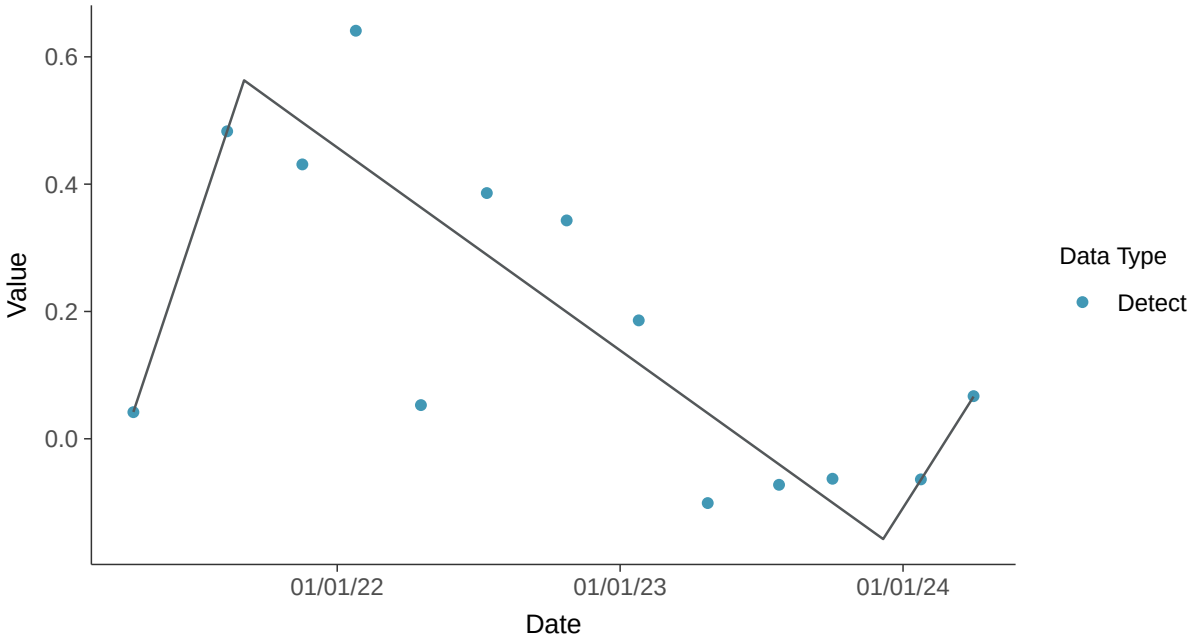
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-11D (pCi/L)



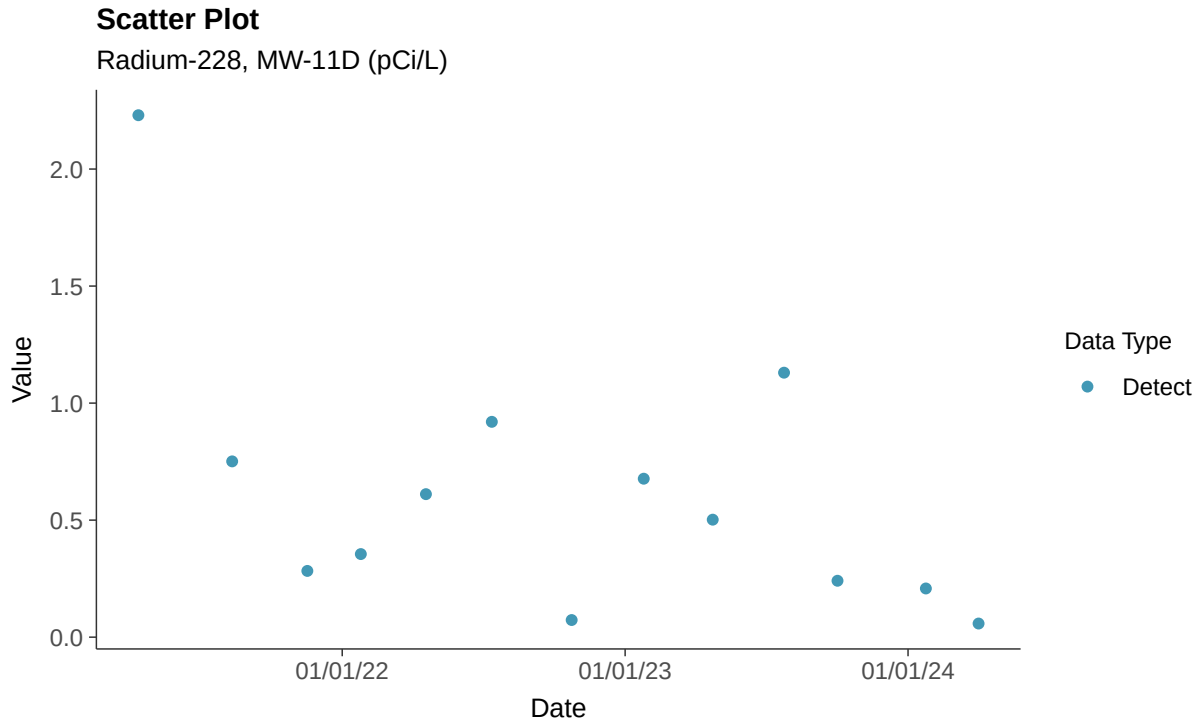
Trend Regression: Piecewise Linear-Linear-Linear

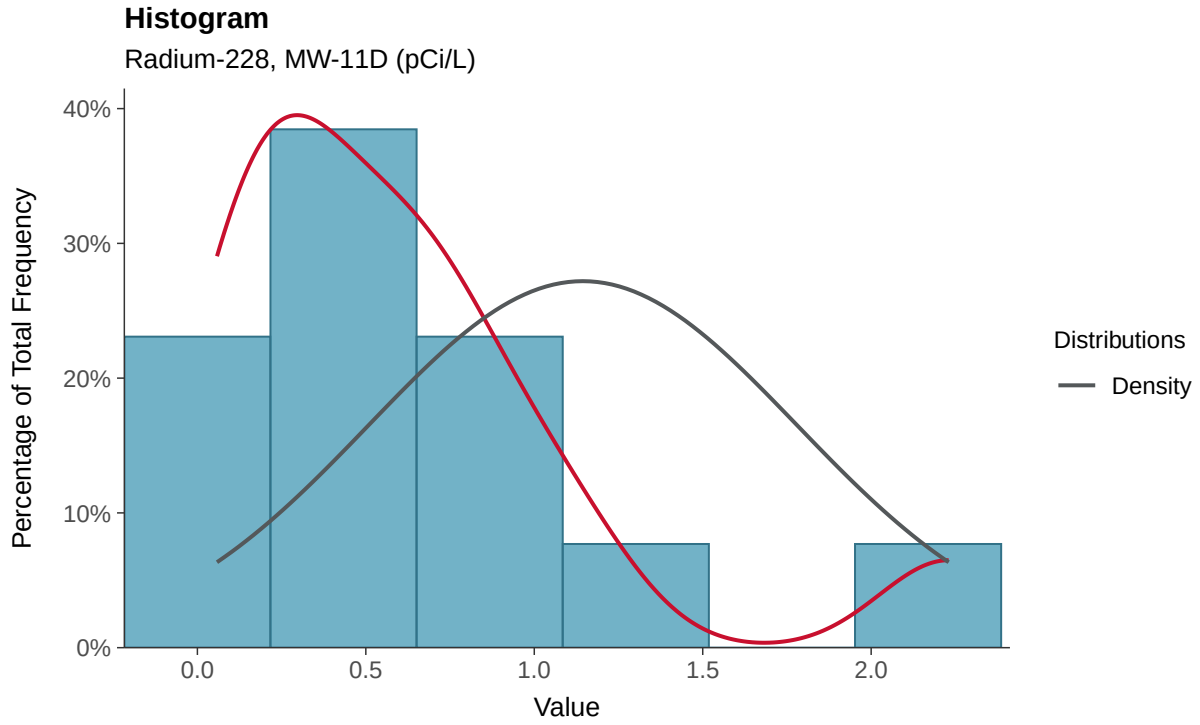
Radium-226, MW-11D (pCi/L)



App. IV: Radium-228, MW-11D

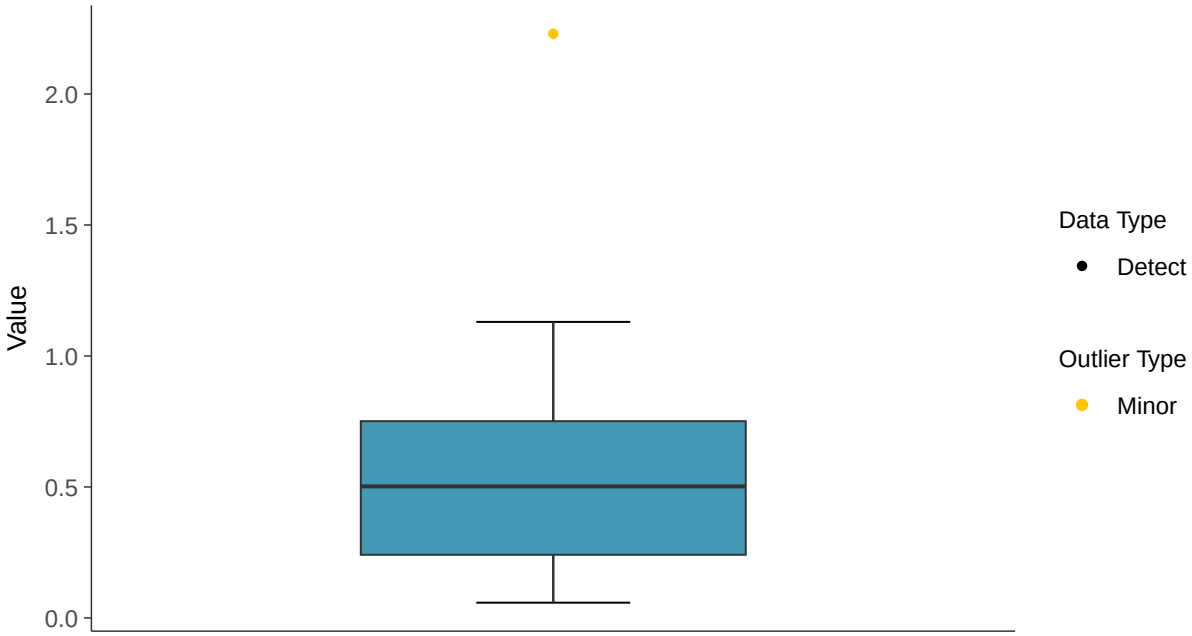
ID: 4_3_120





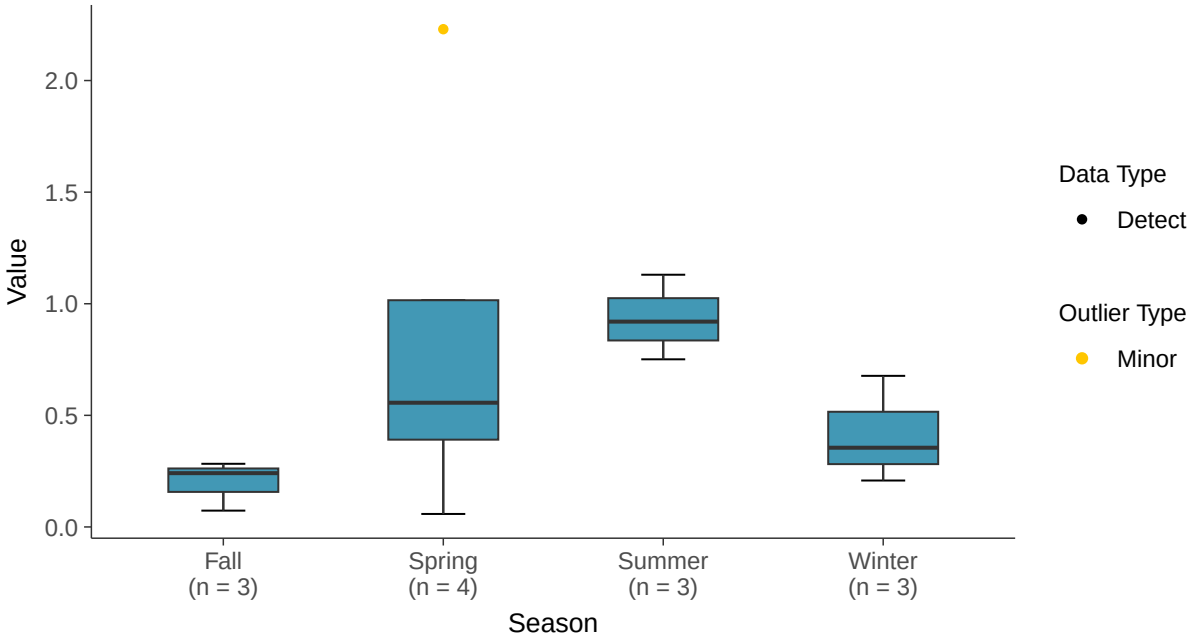
Boxplot

Radium-228, MW-11D (pCi/L)



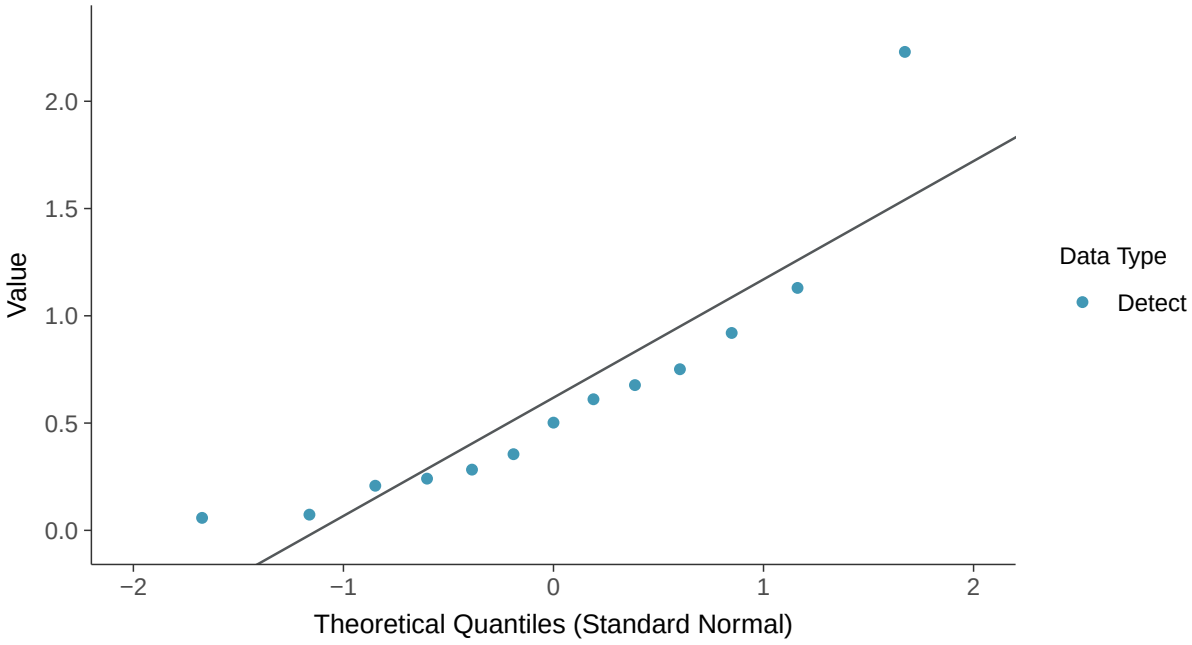
Boxplot by Season

Radium-228, MW-11D (pCi/L)



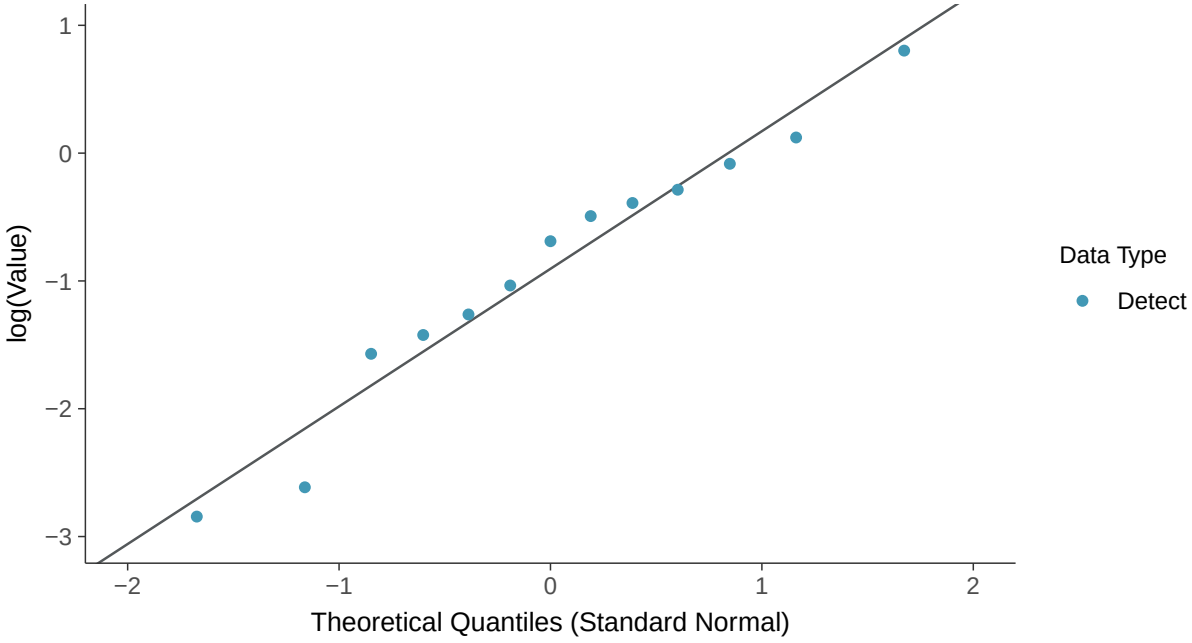
Normal Q-Q plot

Radium-228, MW-11D (pCi/L)



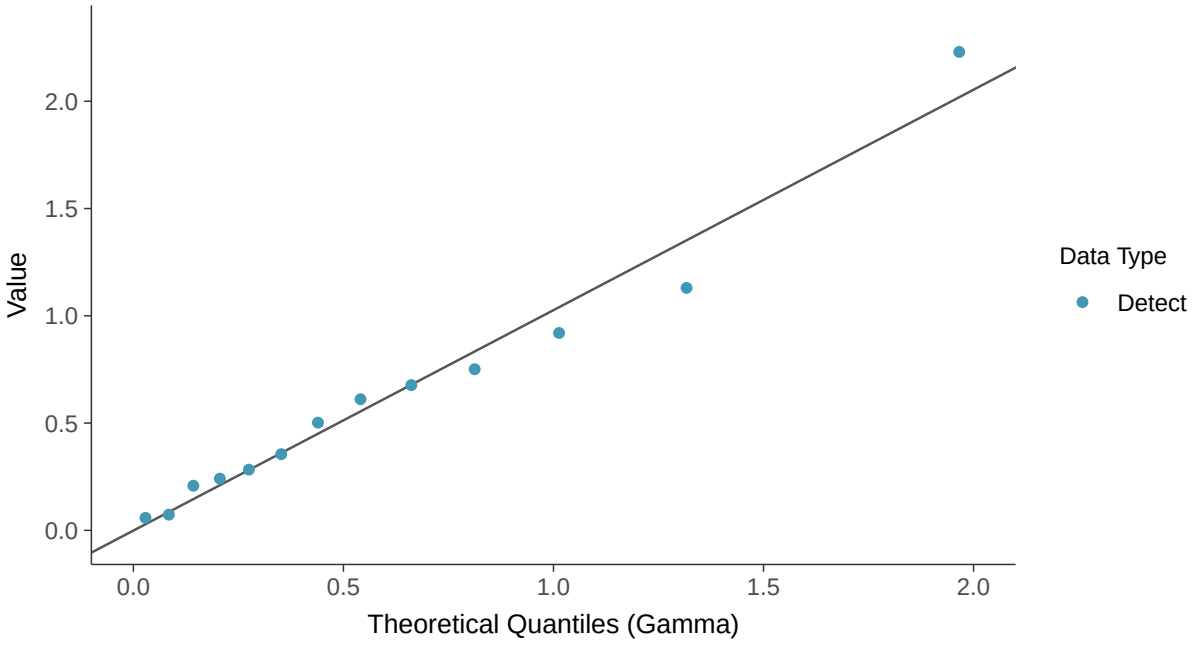
Lognormal Q-Q plot

Radium-228, MW-11D (pCi/L)



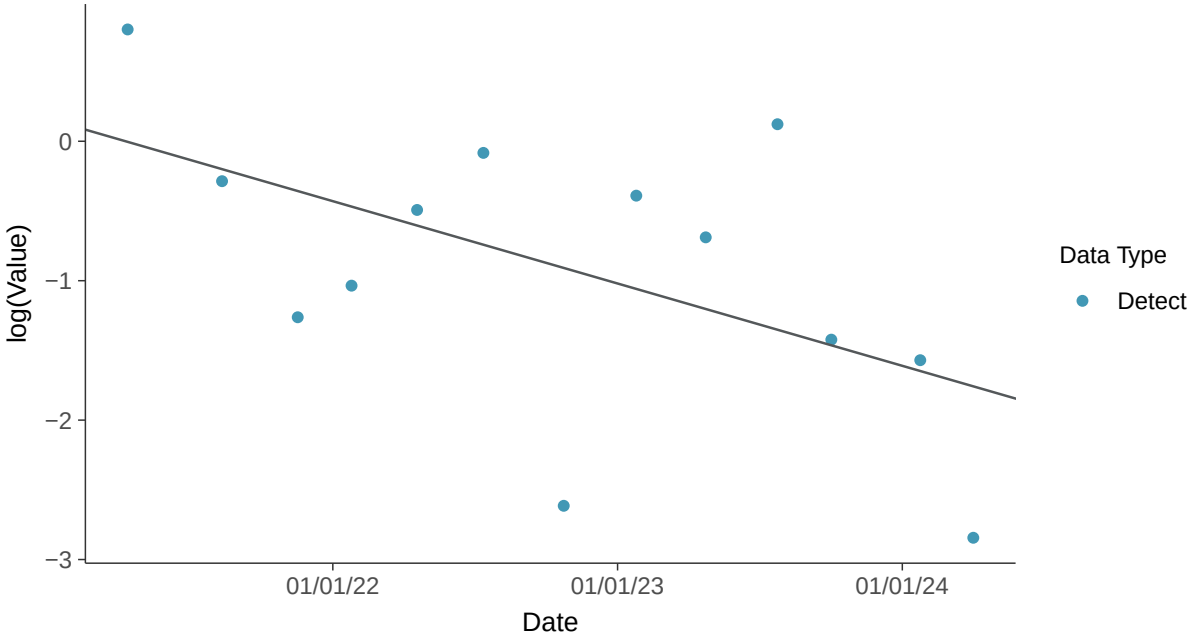
Gamma Q-Q plot

Radium-228, MW-11D (pCi/L)



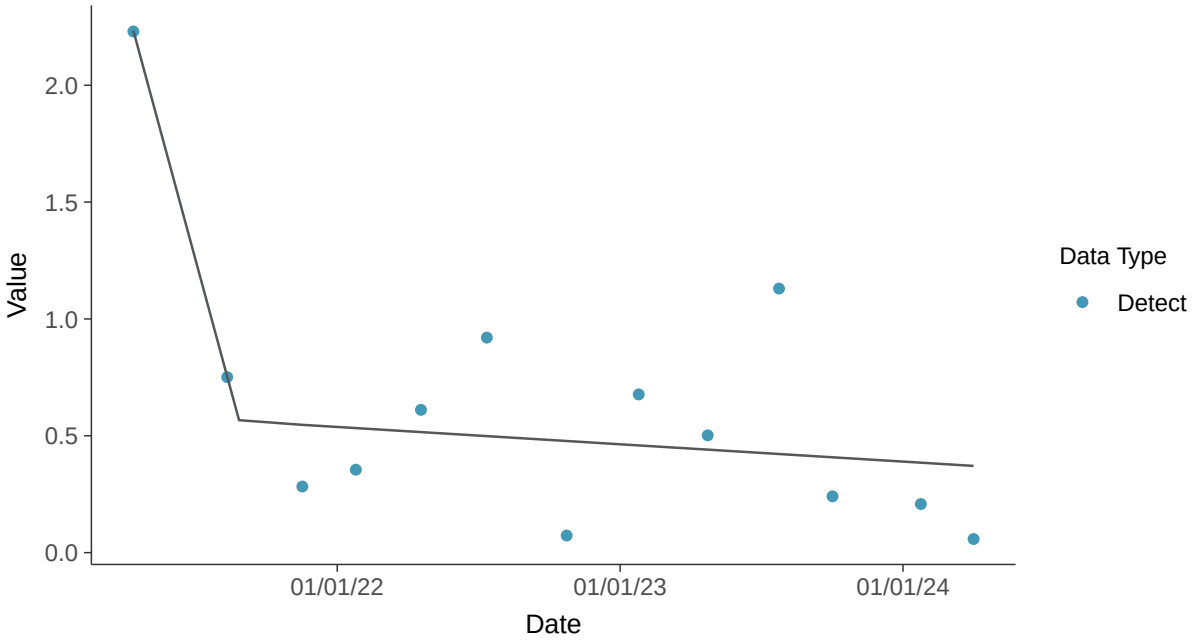
Trend Regression: Lognormal MLE

Radium-228, MW-11D (pCi/L)



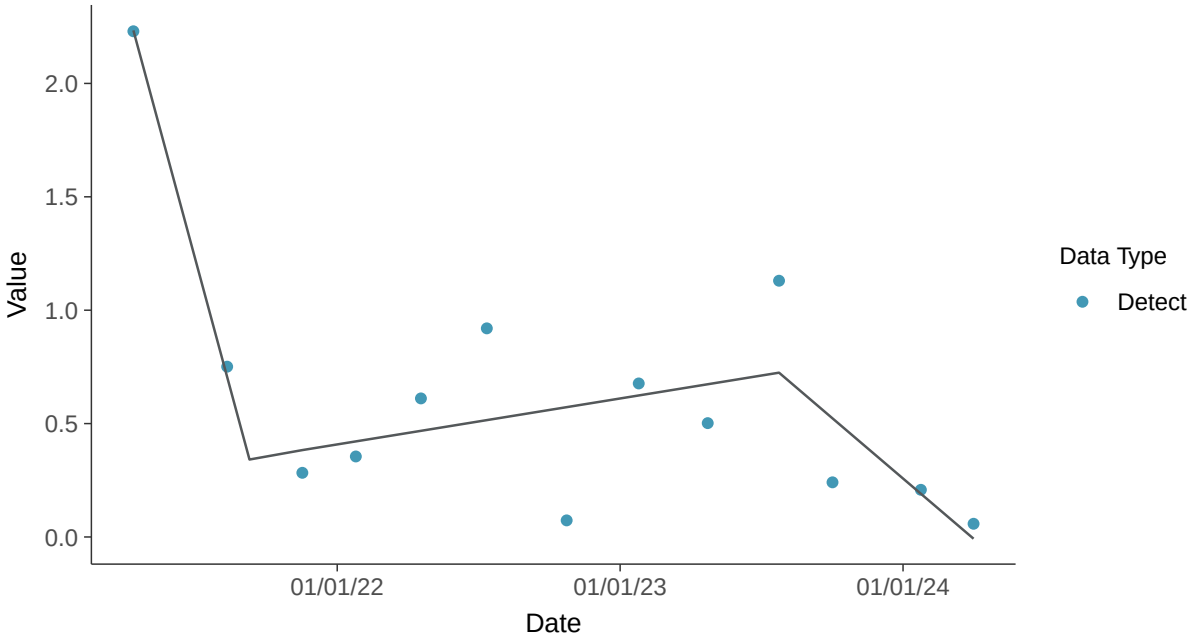
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-11D (pCi/L)



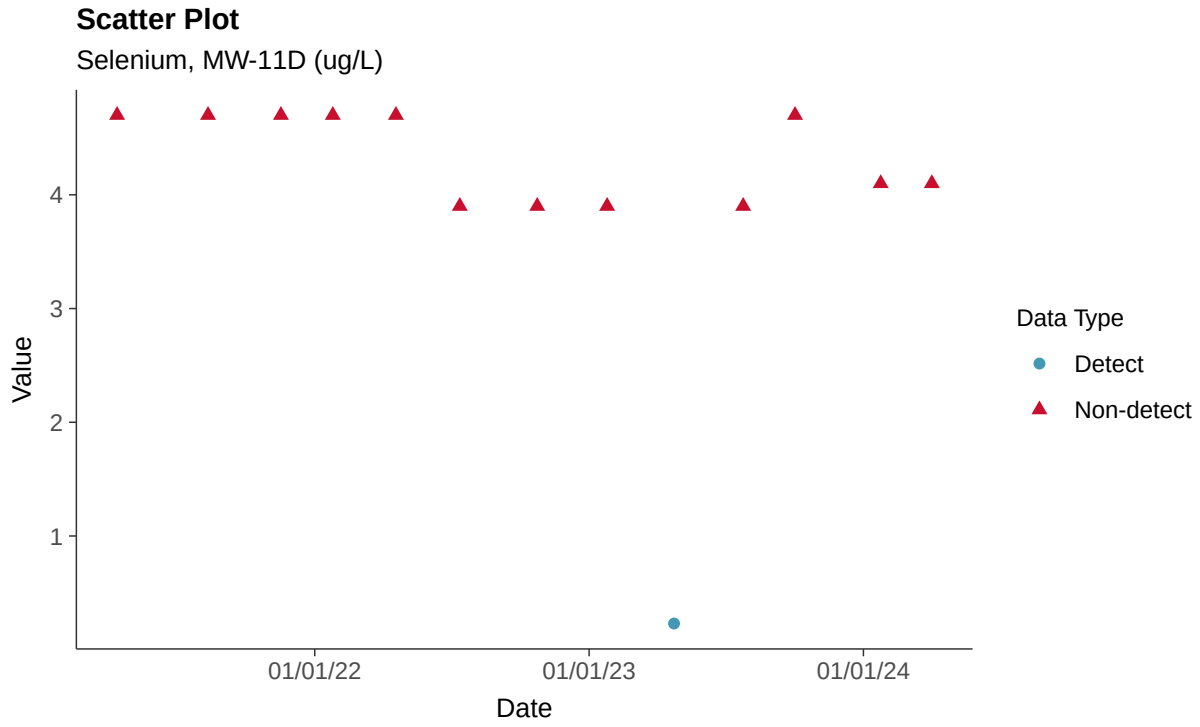
Trend Regression: Piecewise Linear-Linear-Linear

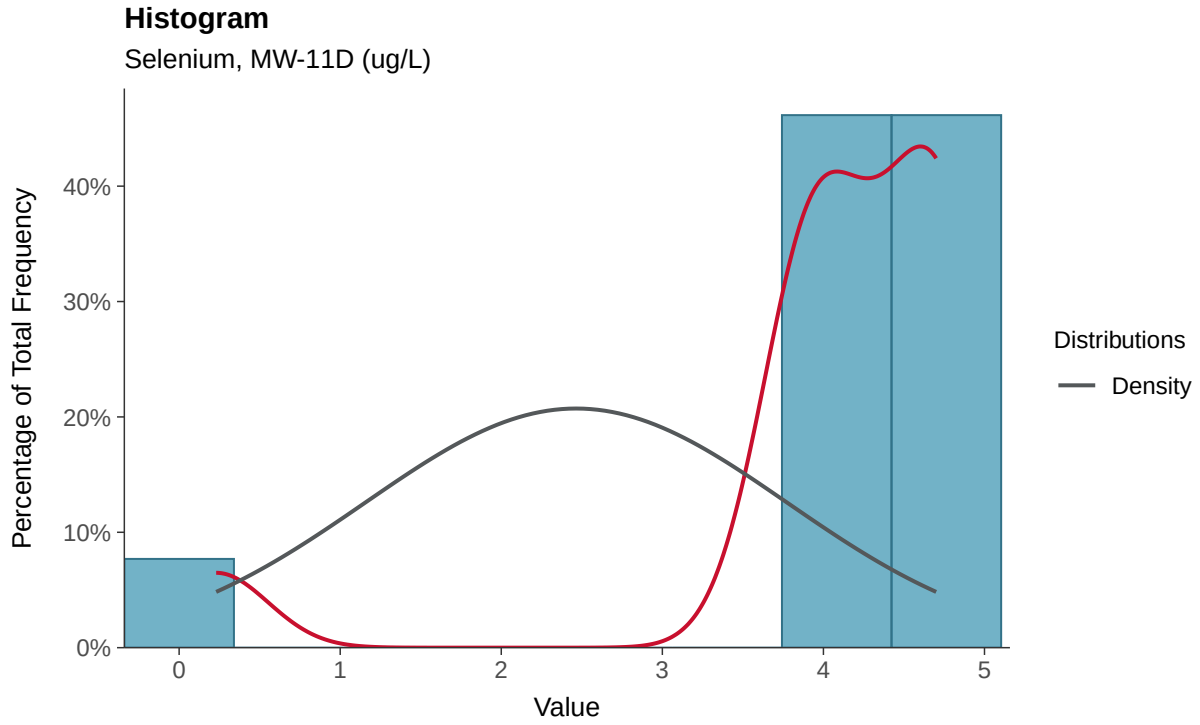
Radium-228, MW-11D (pCi/L)



App. IV: Selenium, MW-11D

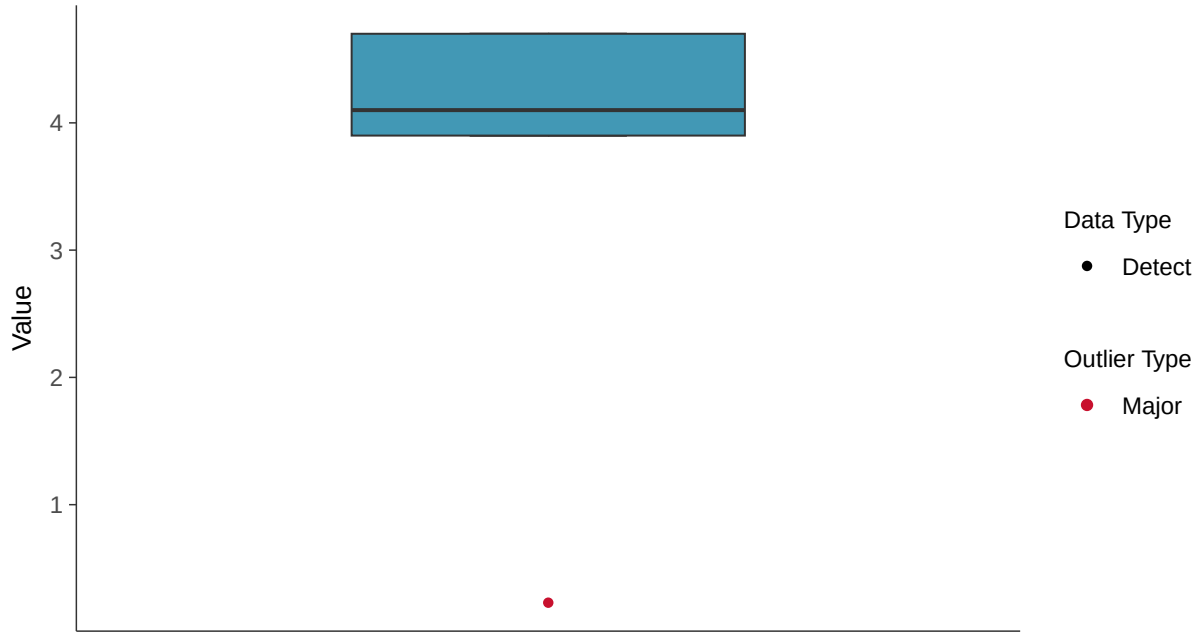
ID: 4_3_121





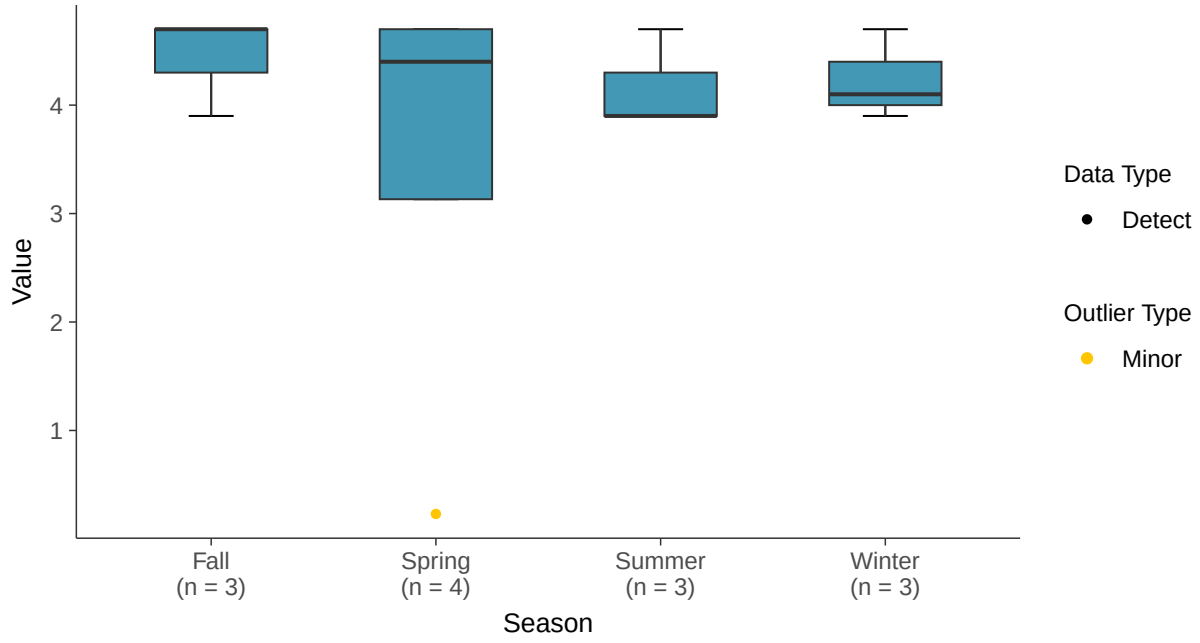
Boxplot

Selenium, MW-11D (ug/L)



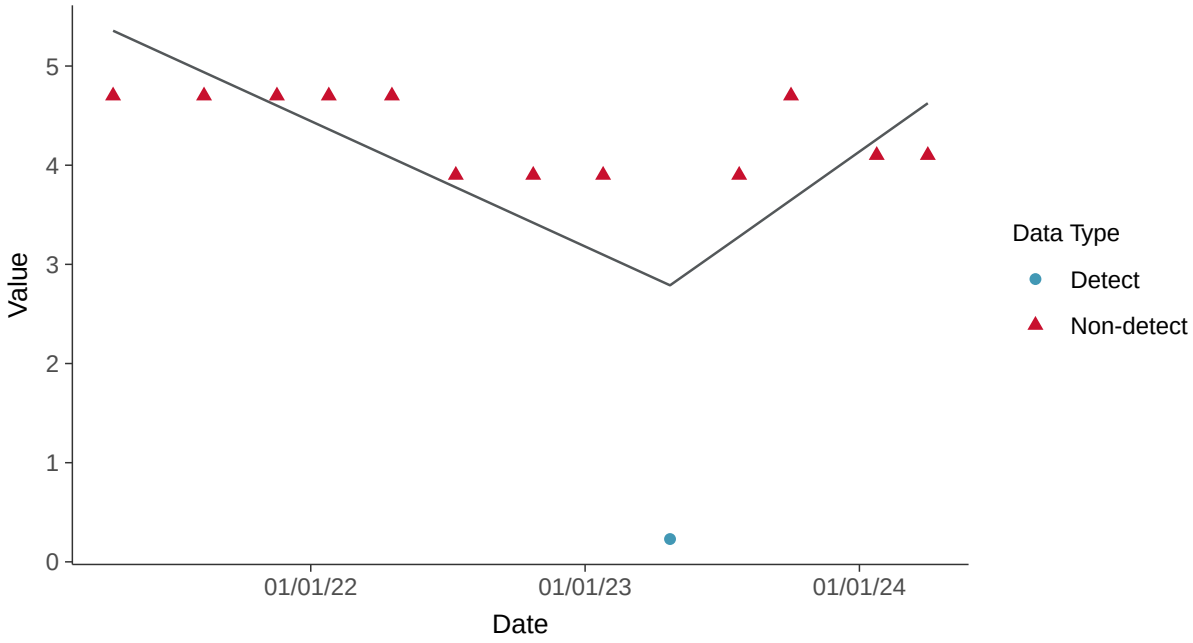
Boxplot by Season

Selenium, MW-11D (ug/L)



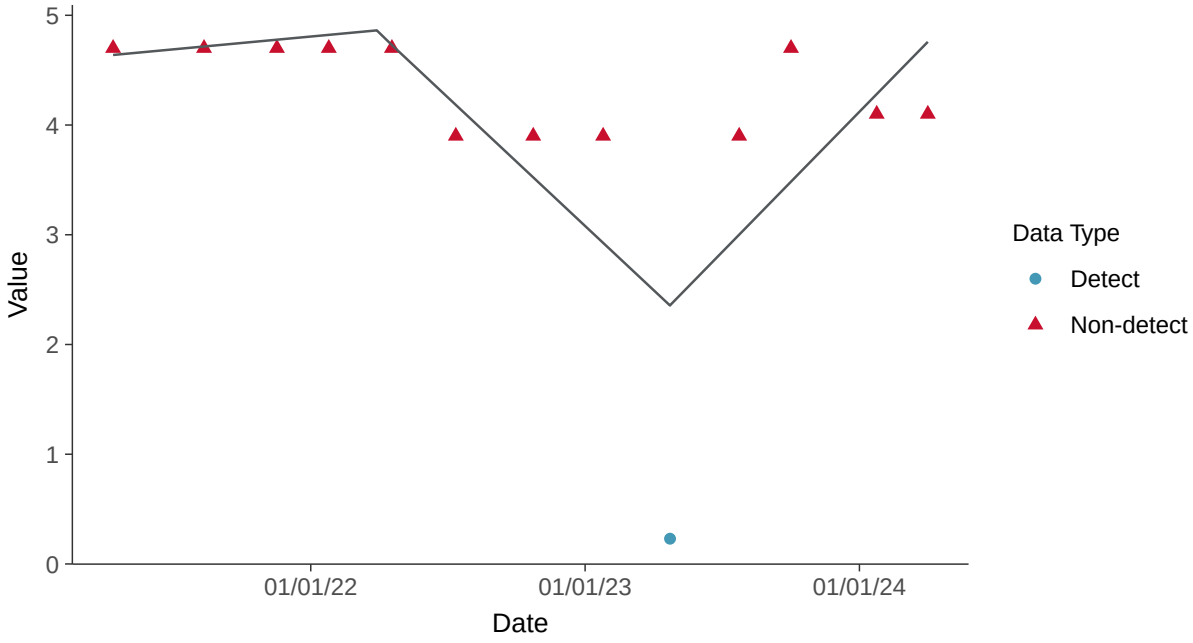
Trend Regression: Piecewise Linear-Linear

Selenium, MW-11D (ug/L)



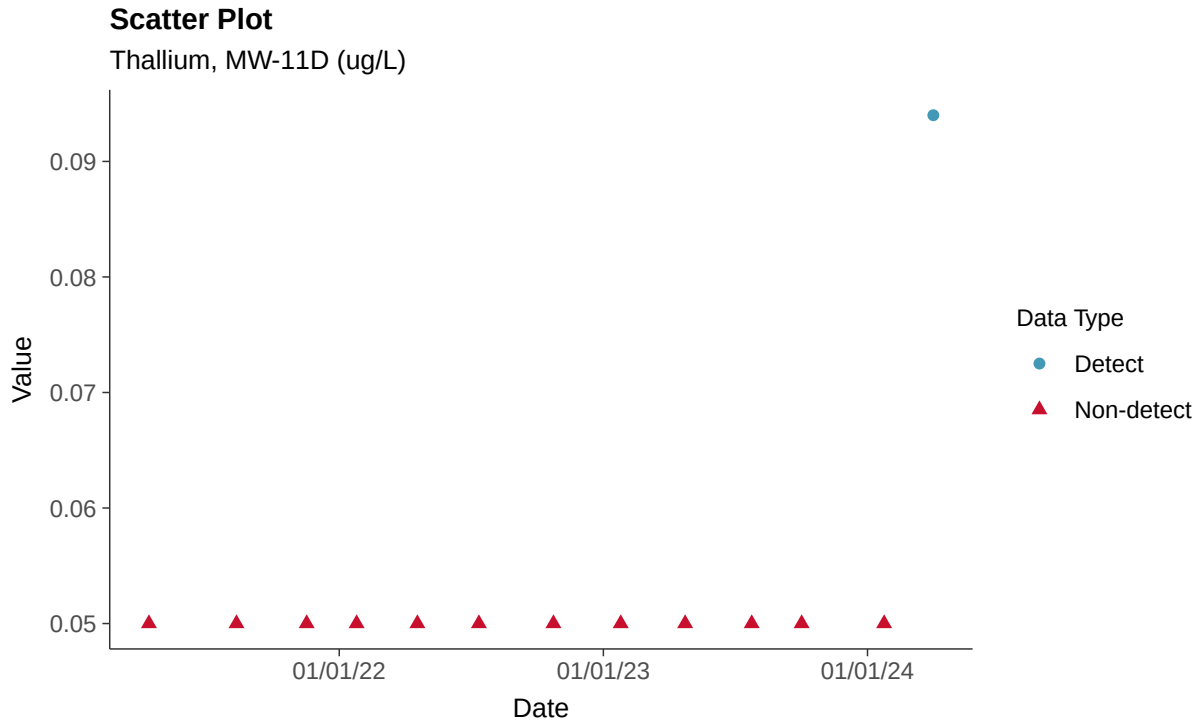
Trend Regression: Piecewise Linear-Linear-Linear

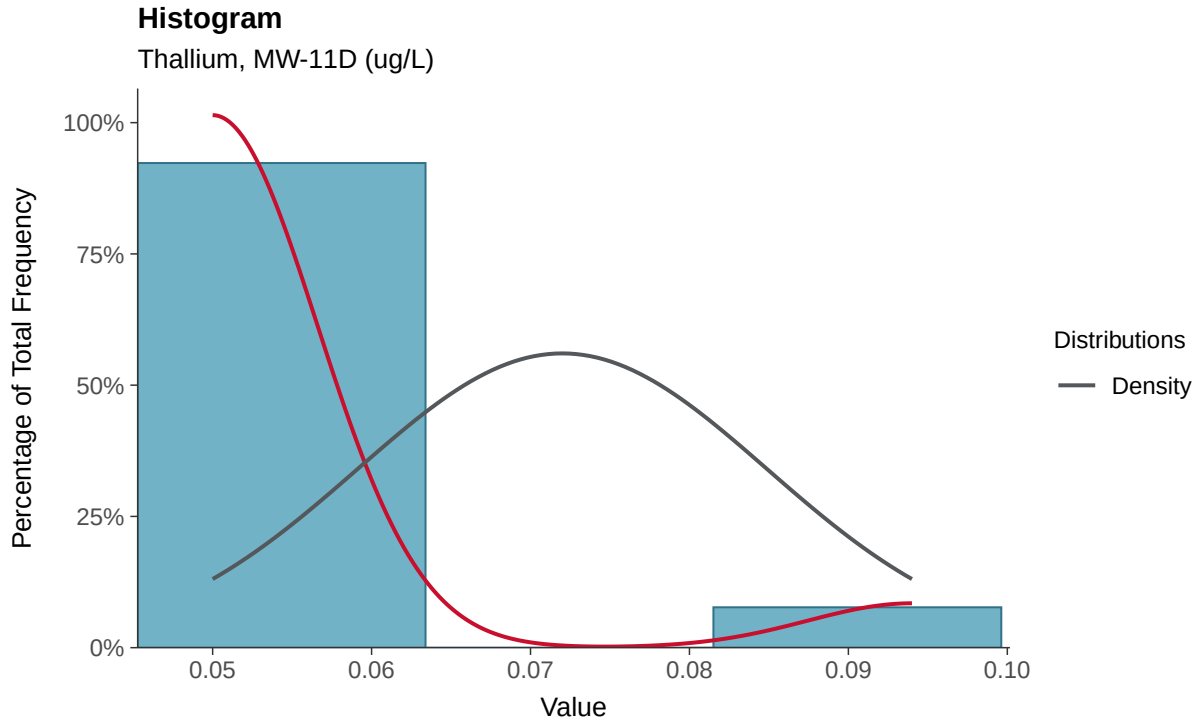
Selenium, MW-11D (ug/L)



App. IV: Thallium, MW-11D

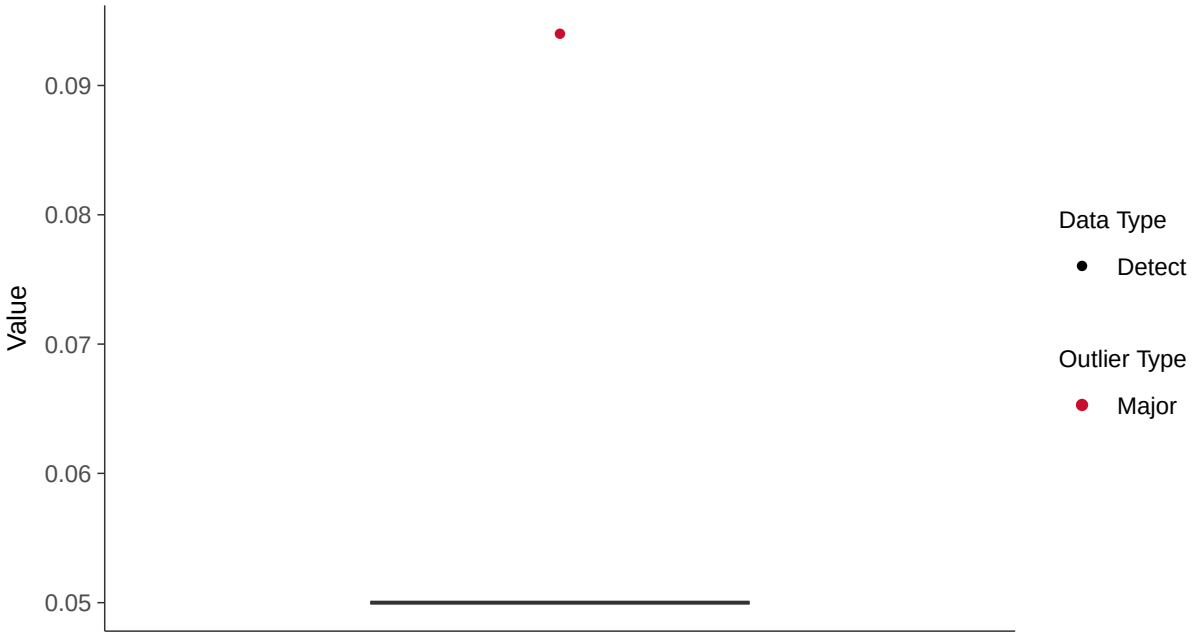
ID: 4_3_124





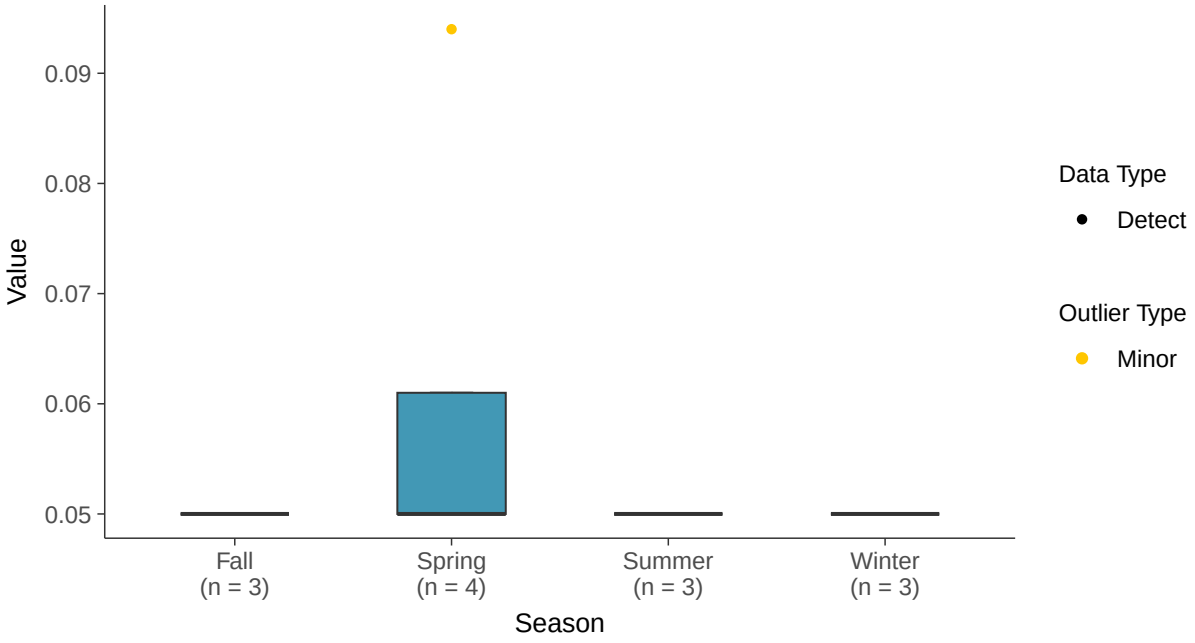
Boxplot

Thallium, MW-11D (ug/L)



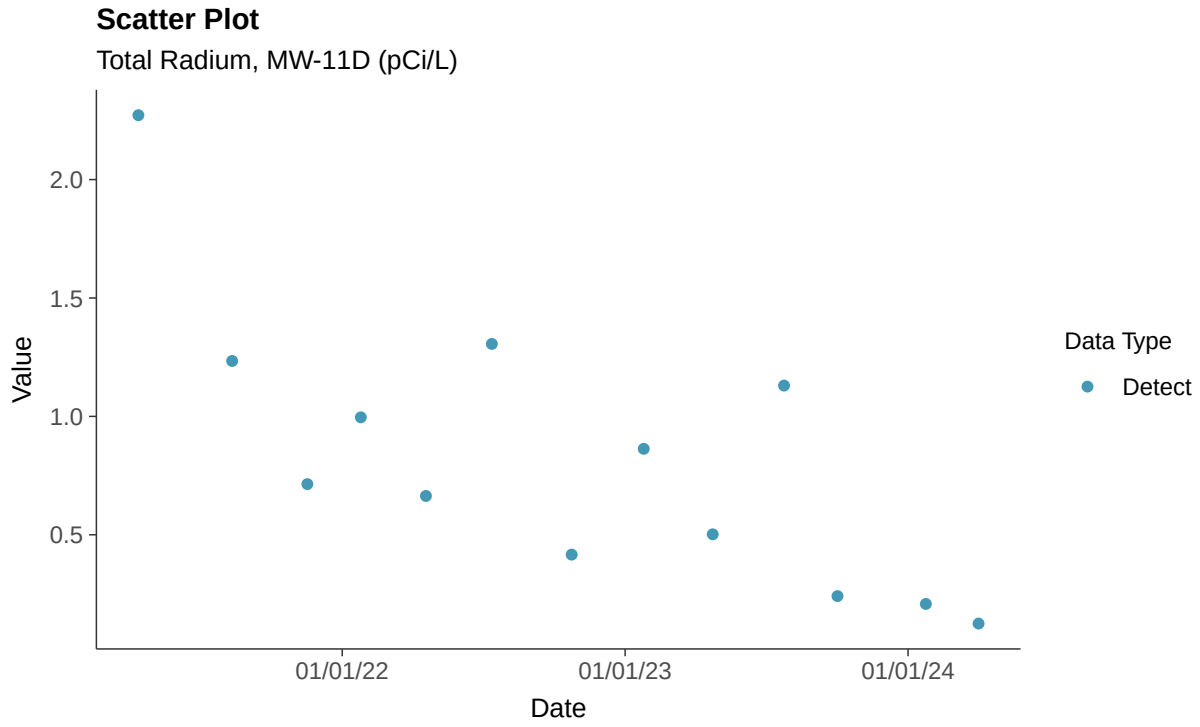
Boxplot by Season

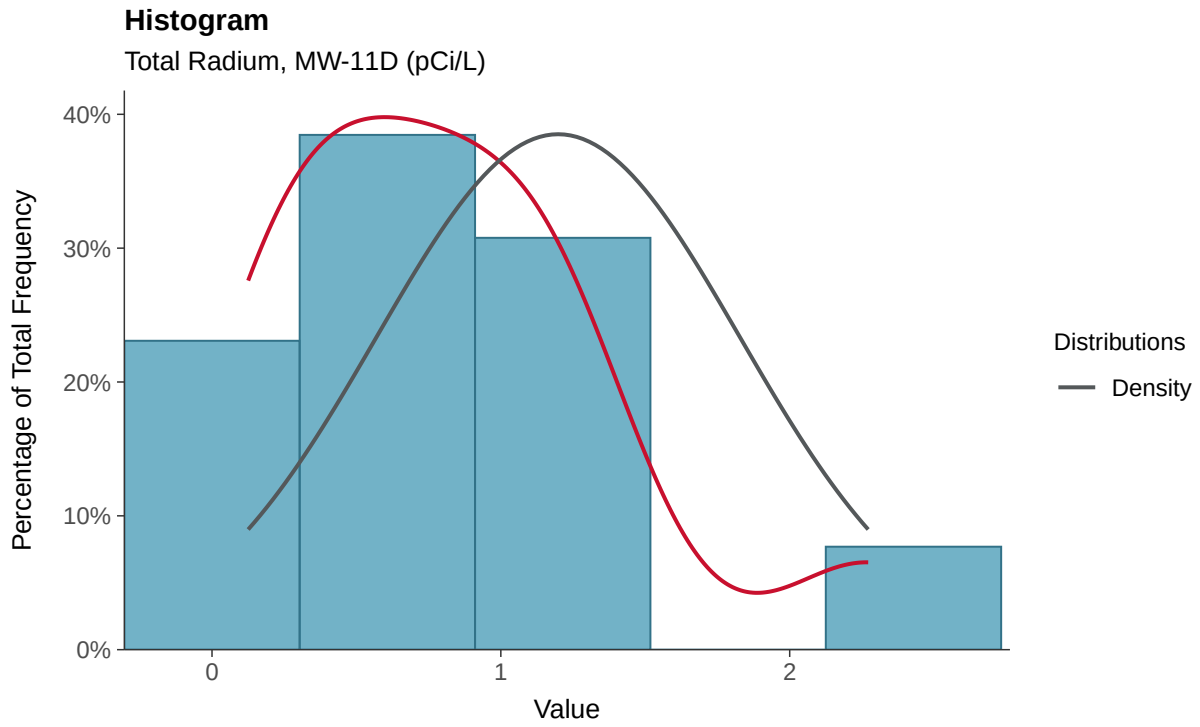
Thallium, MW-11D (ug/L)



App. IV: Total Radium, MW-11D

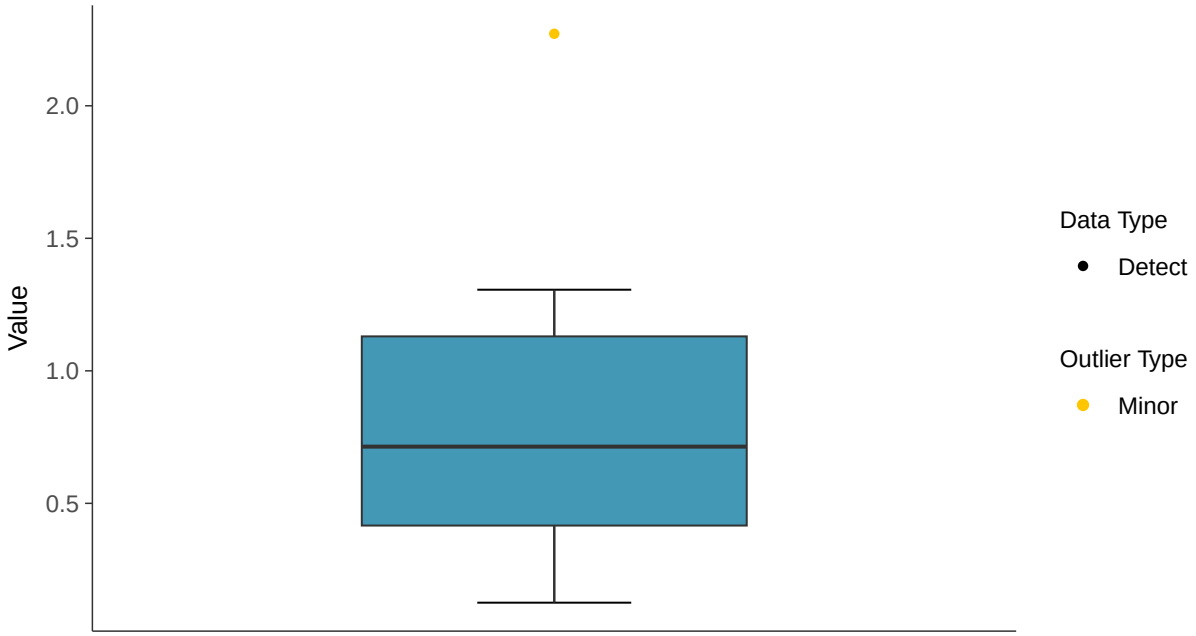
ID: 4_3_126





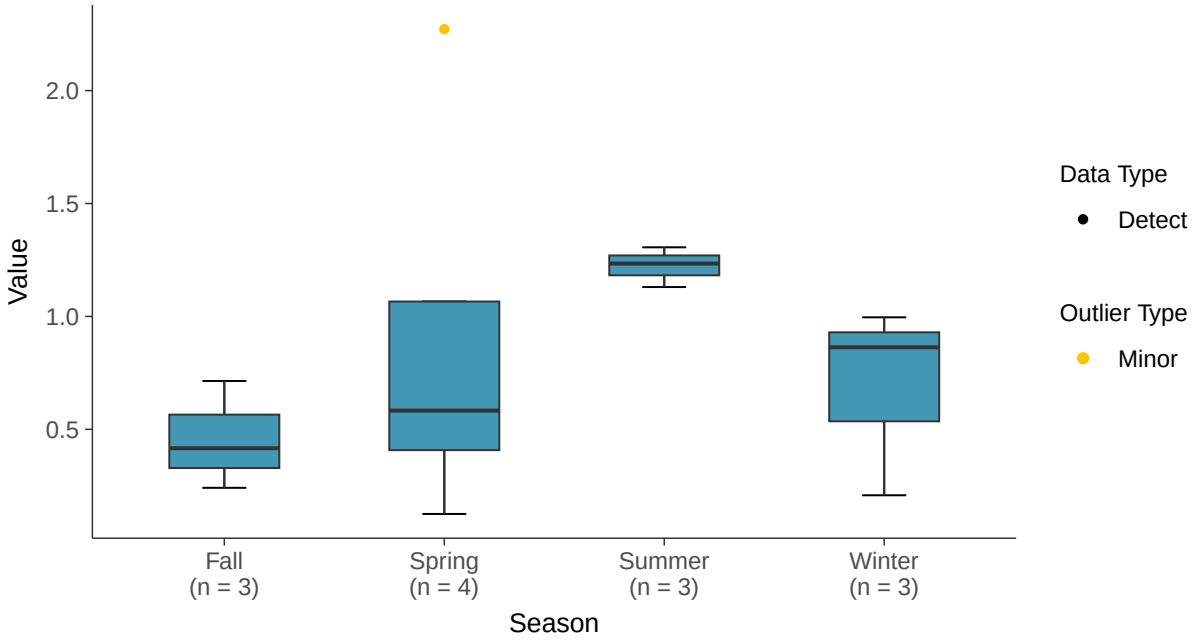
Boxplot

Total Radium, MW-11D (pCi/L)



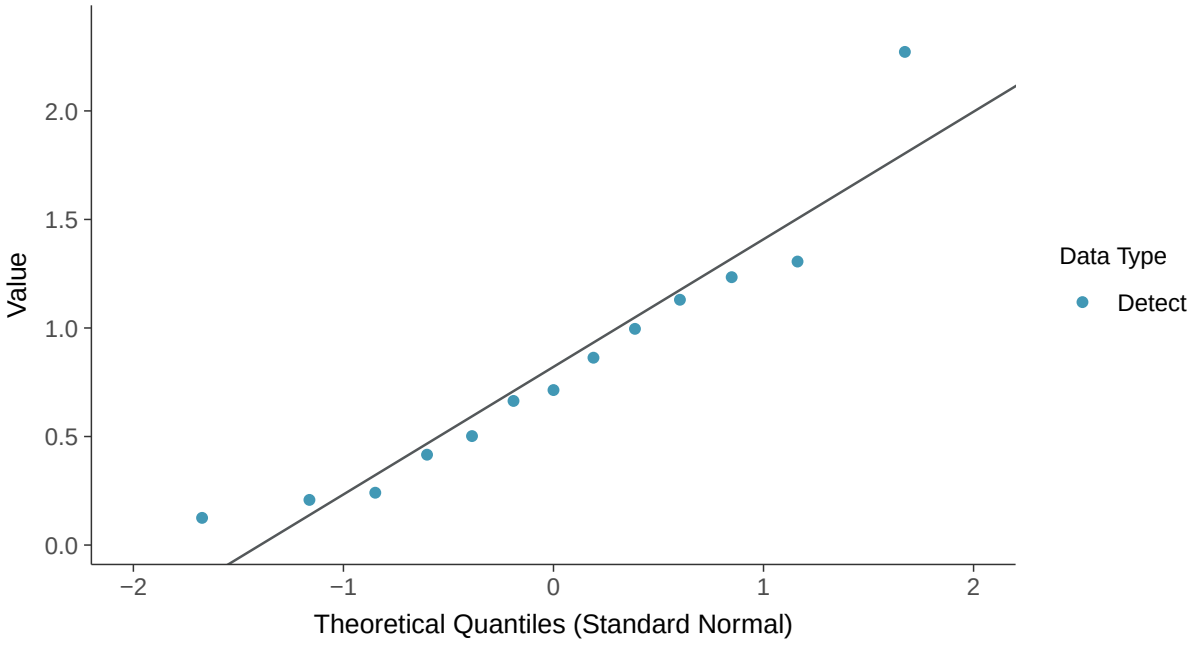
Boxplot by Season

Total Radium, MW-11D (pCi/L)



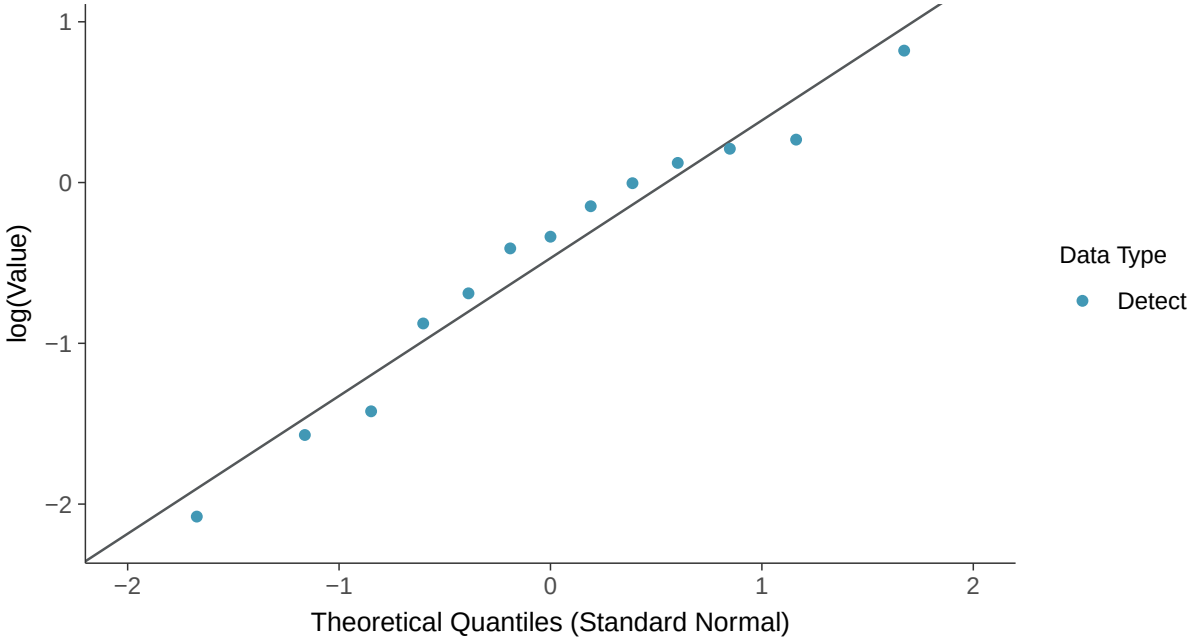
Normal Q-Q plot

Total Radium, MW-11D (pCi/L)



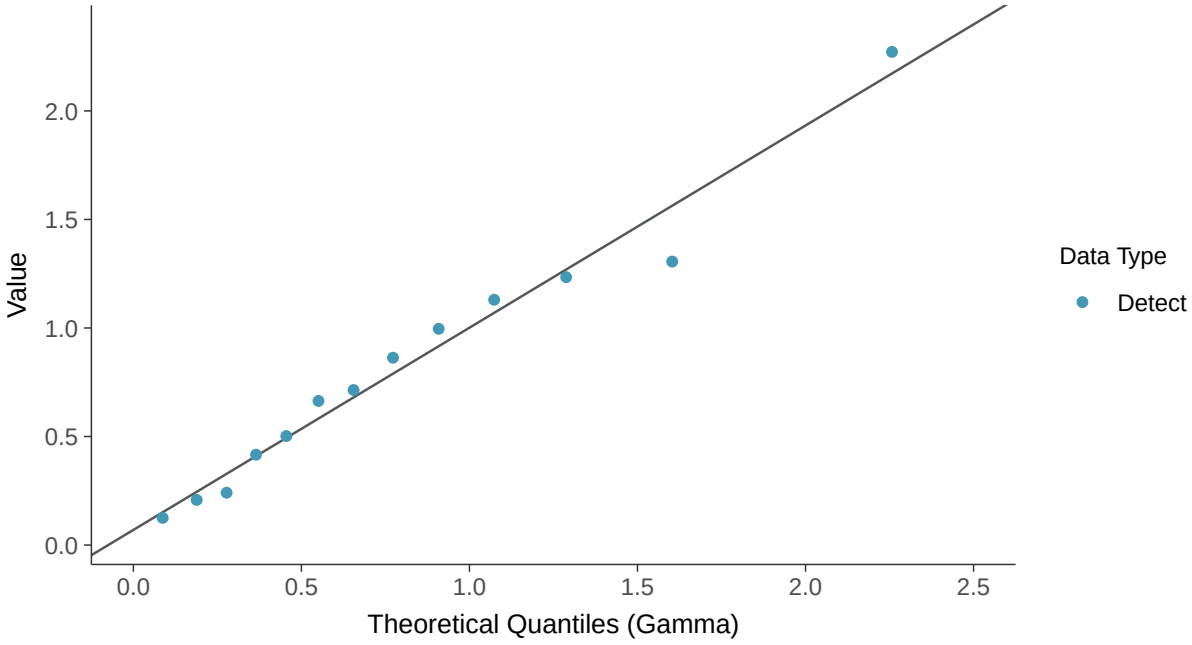
Lognormal Q-Q plot

Total Radium, MW-11D (pCi/L)



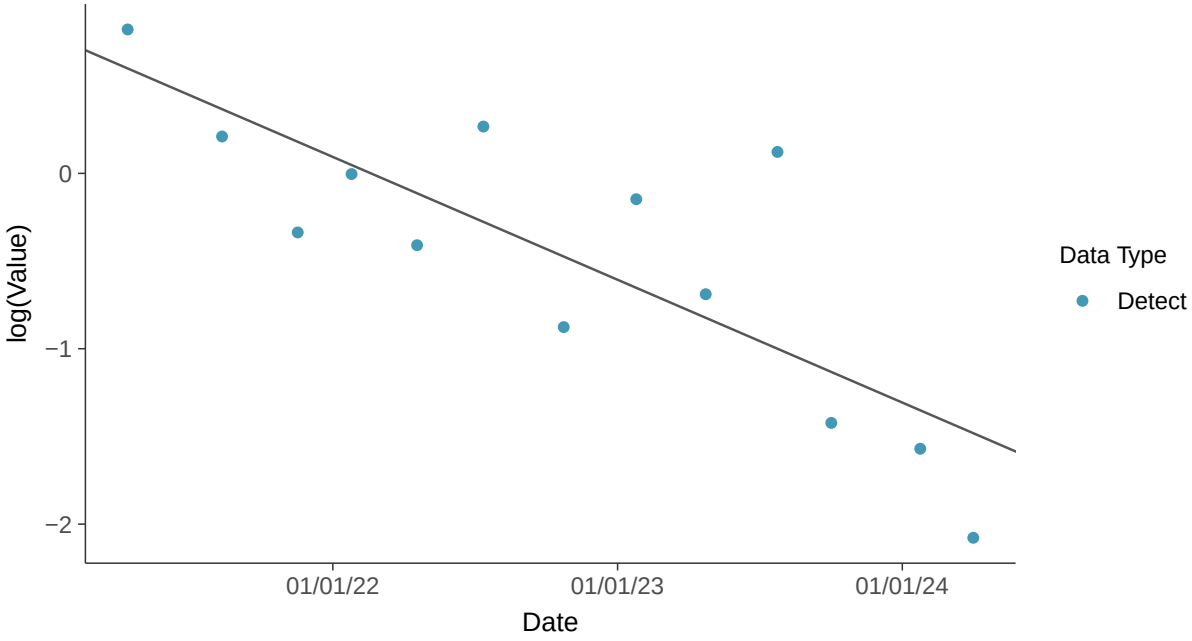
Gamma Q-Q plot

Total Radium, MW-11D (pCi/L)



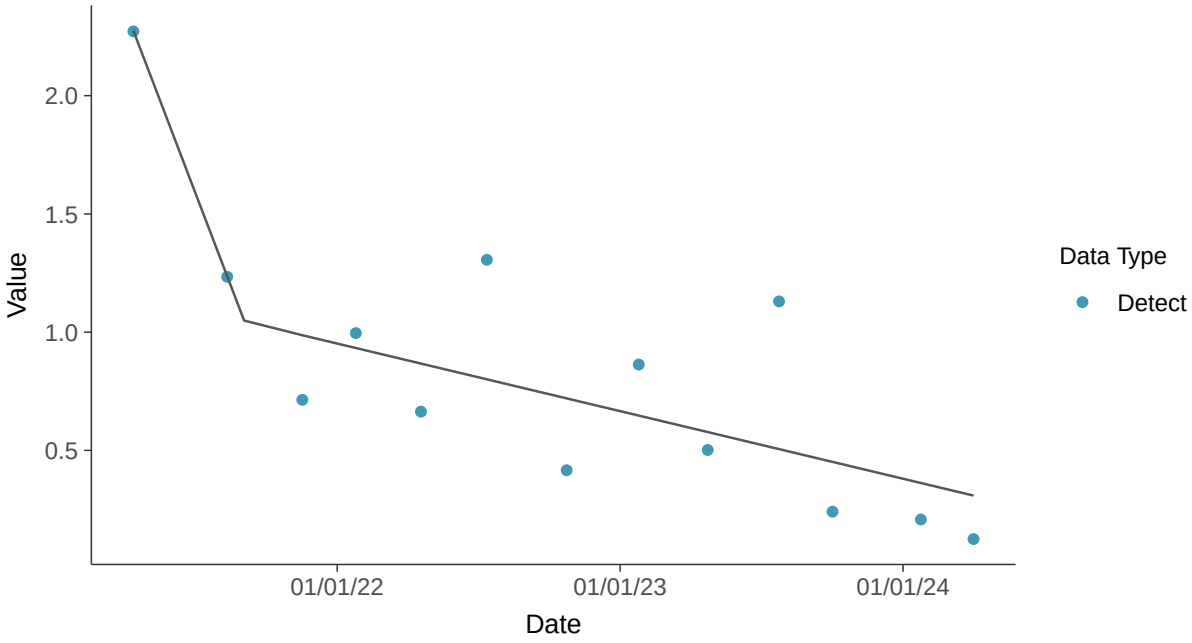
Trend Regression: Lognormal MLE

Total Radium, MW-11D (pCi/L)



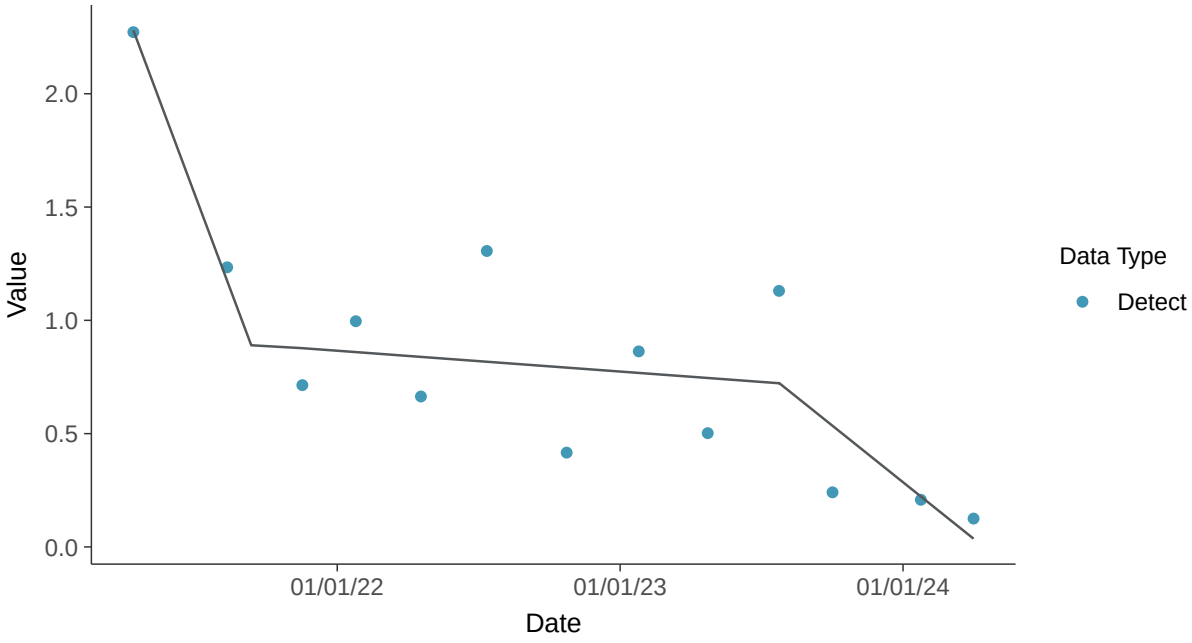
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-11D (pCi/L)



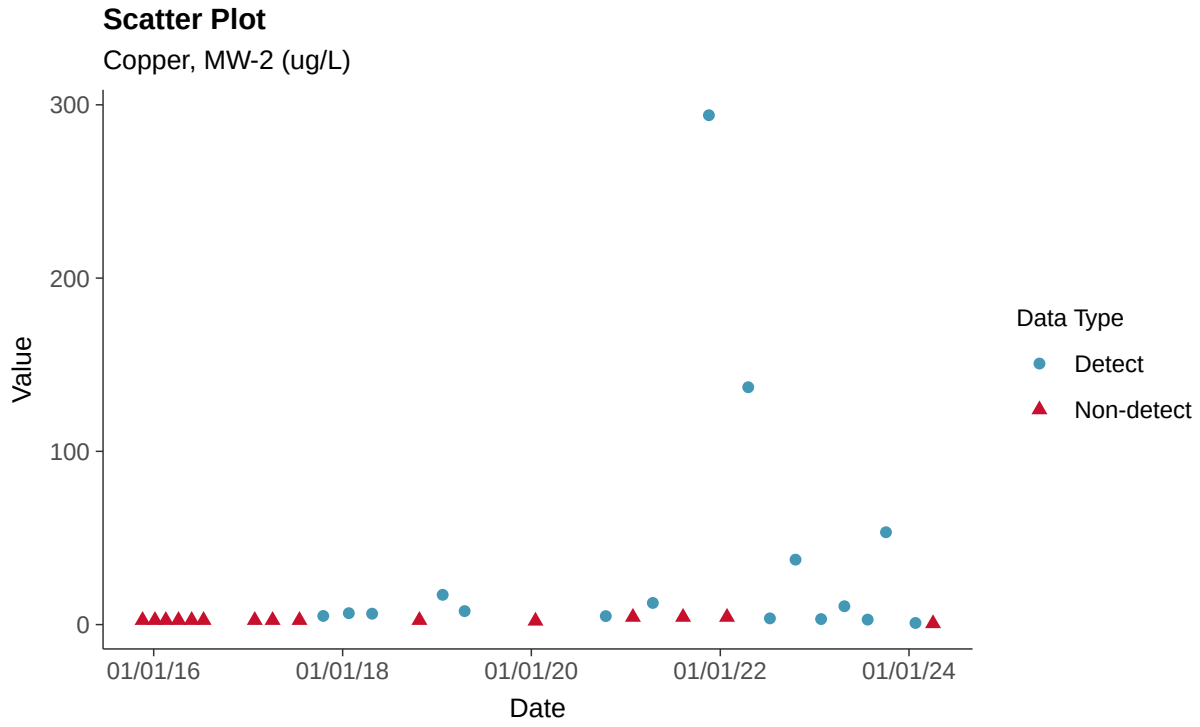
Trend Regression: Piecewise Linear-Linear-Linear

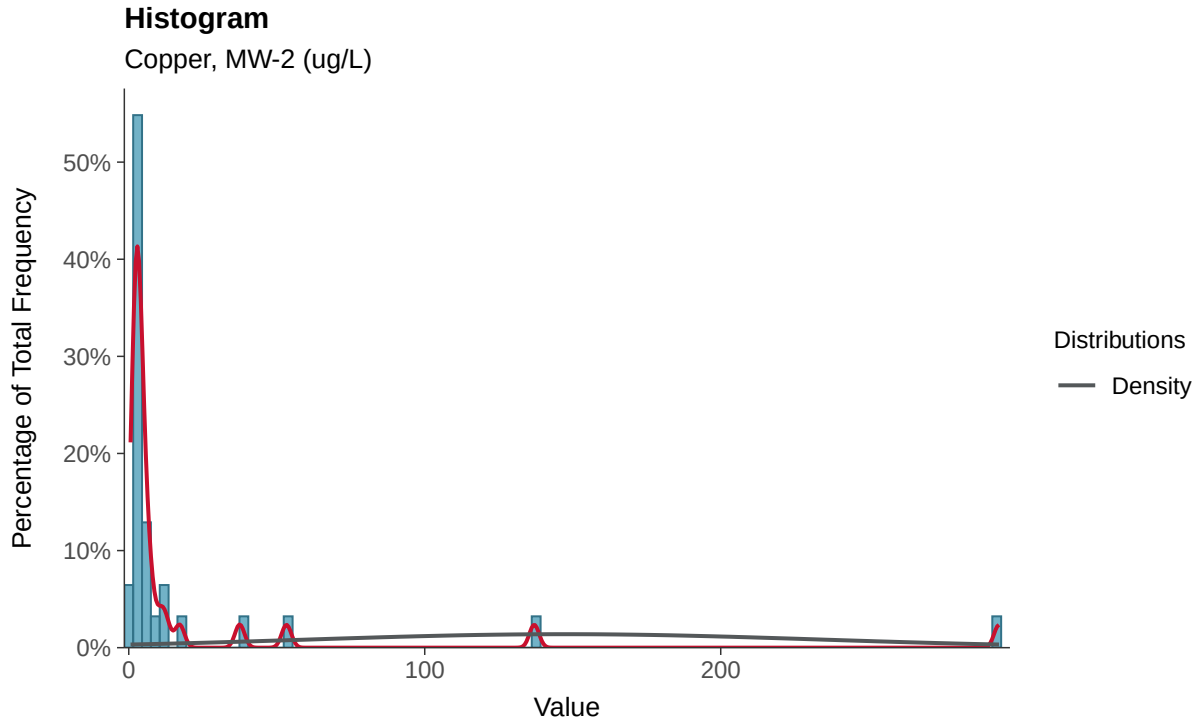
Total Radium, MW-11D (pCi/L)



App. I Metals: Copper, MW-2

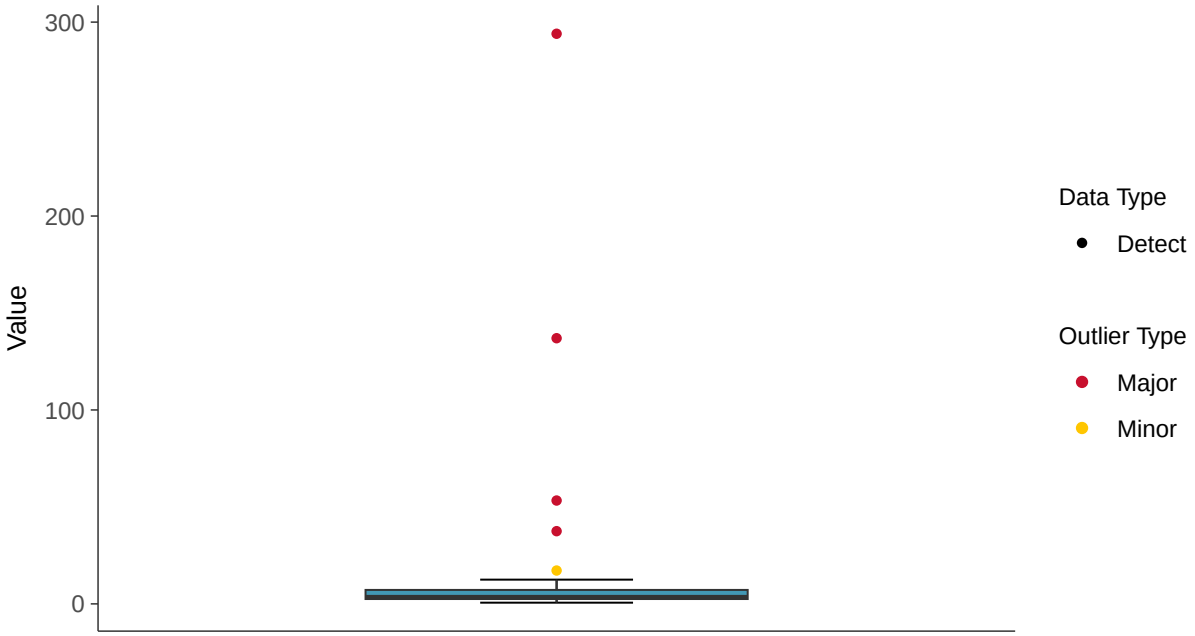
ID: 5_1_111





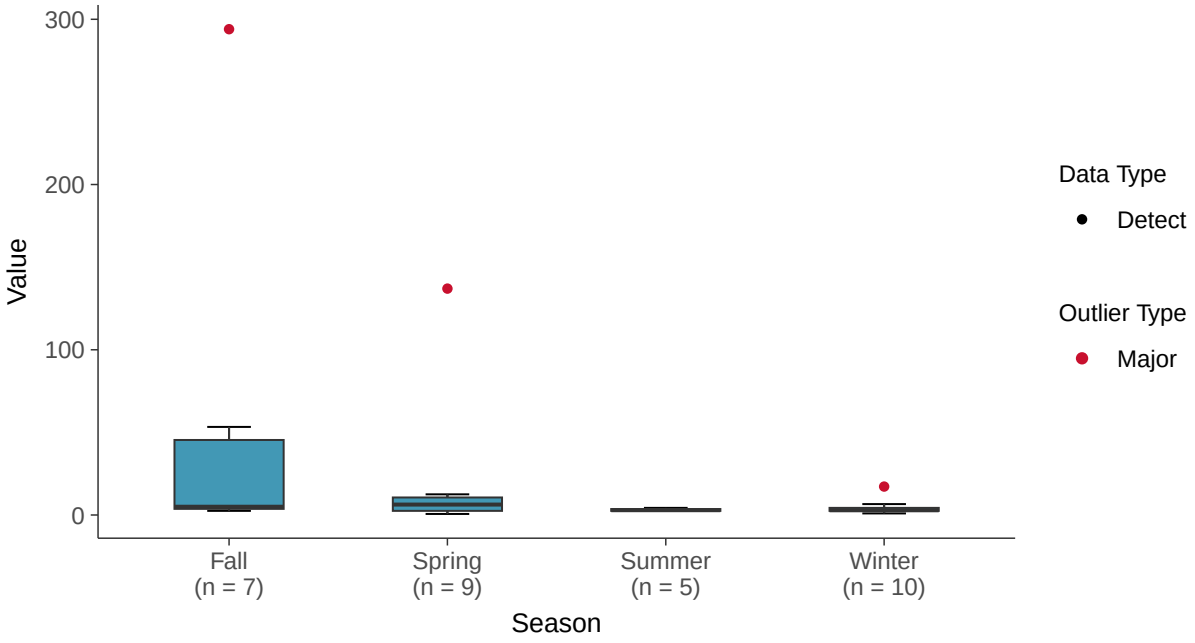
Boxplot

Copper, MW-2 (ug/L)



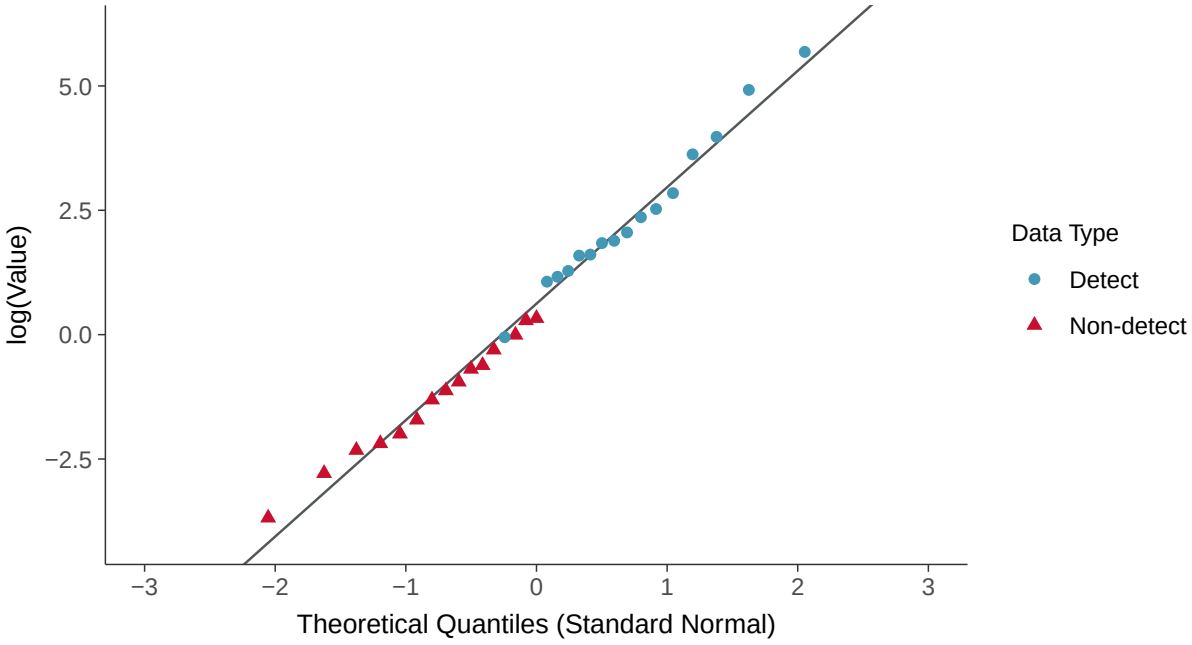
Boxplot by Season

Copper, MW-2 (ug/L)



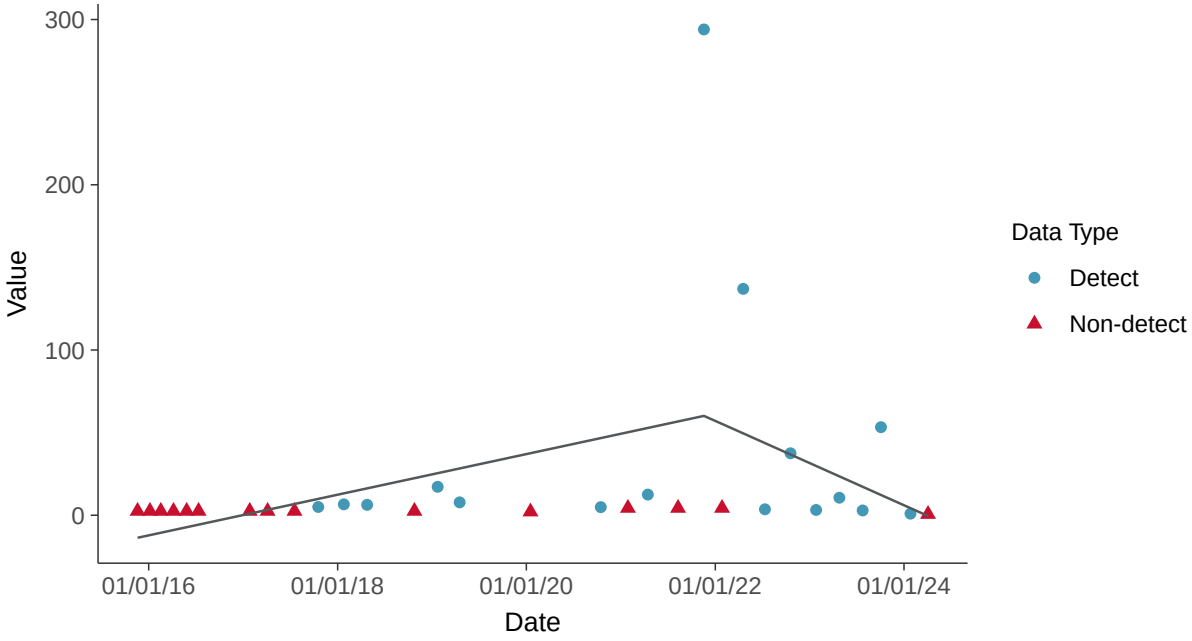
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-2 (ug/L)



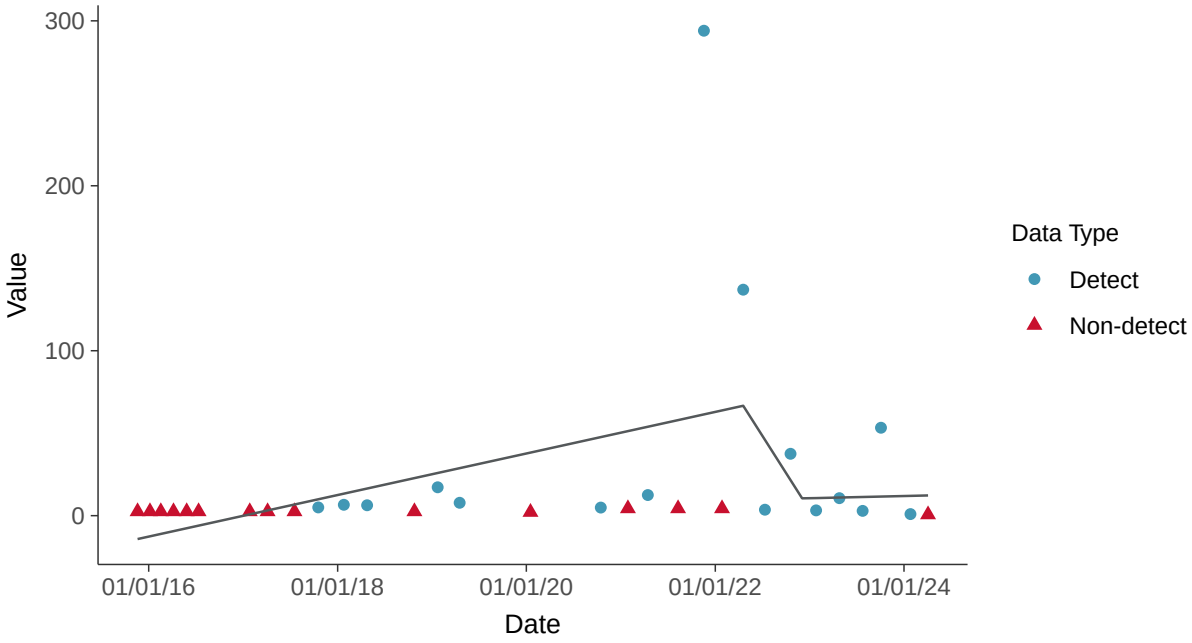
Trend Regression: Piecewise Linear-Linear

Copper, MW-2 (ug/L)



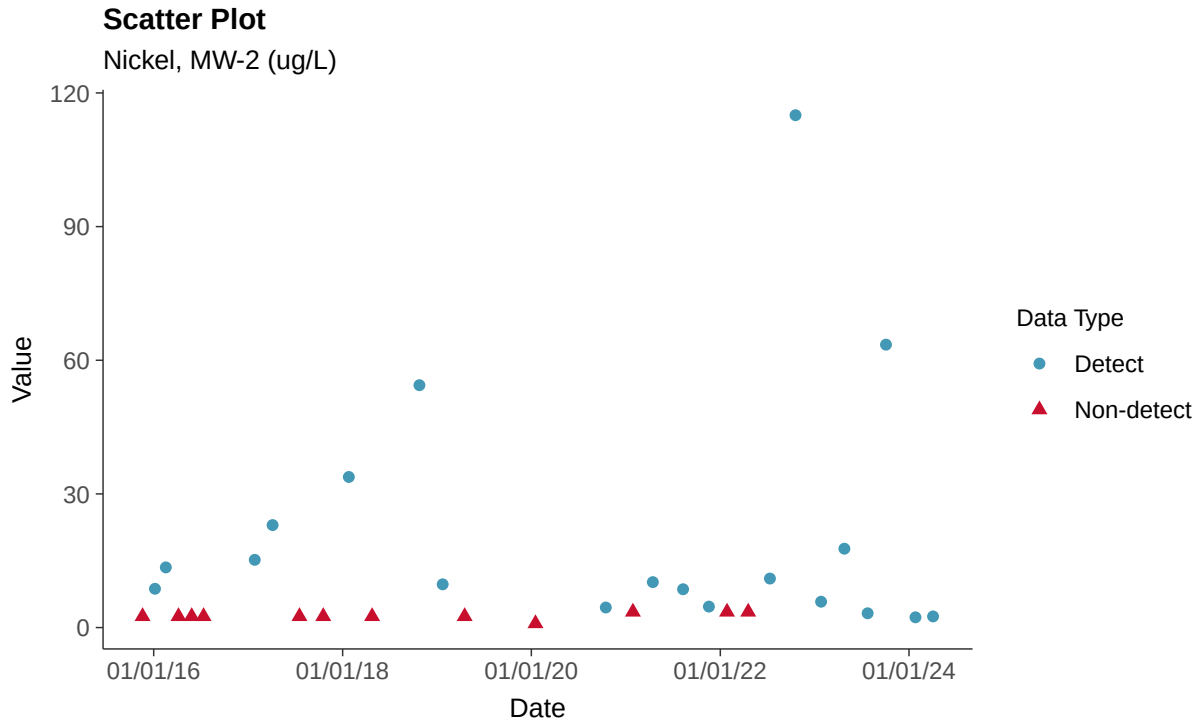
Trend Regression: Piecewise Linear-Linear-Linear

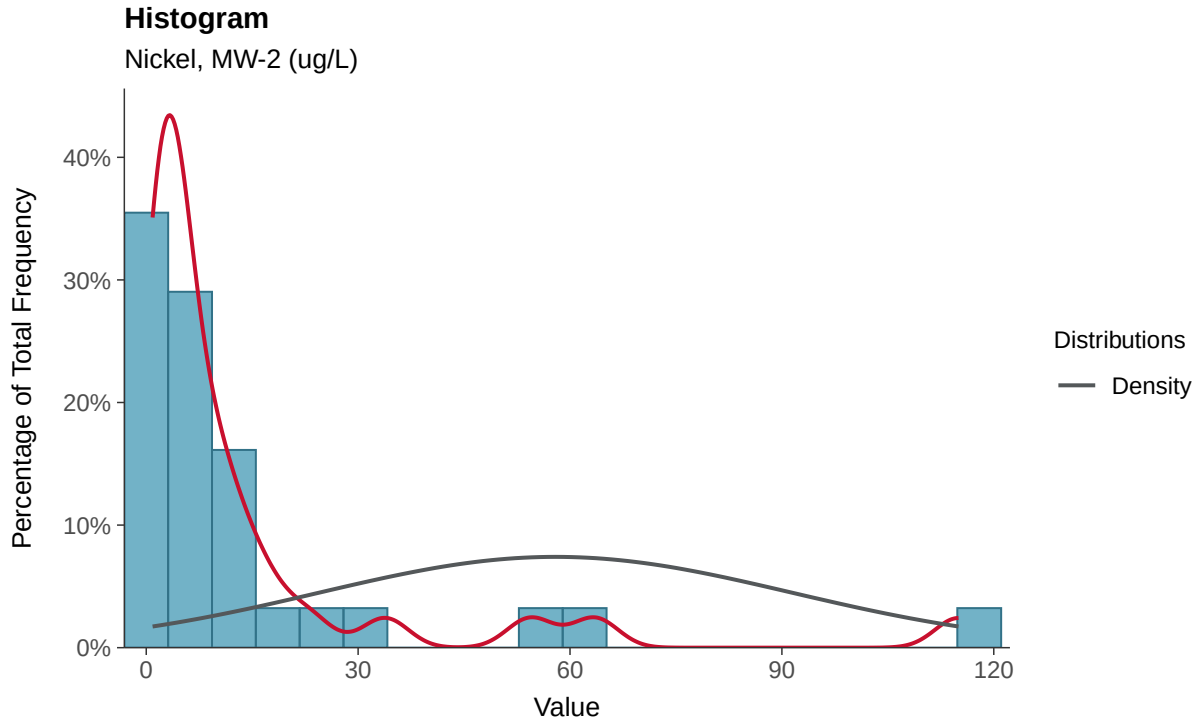
Copper, MW-2 (ug/L)



App. I Metals: Nickel, MW-2

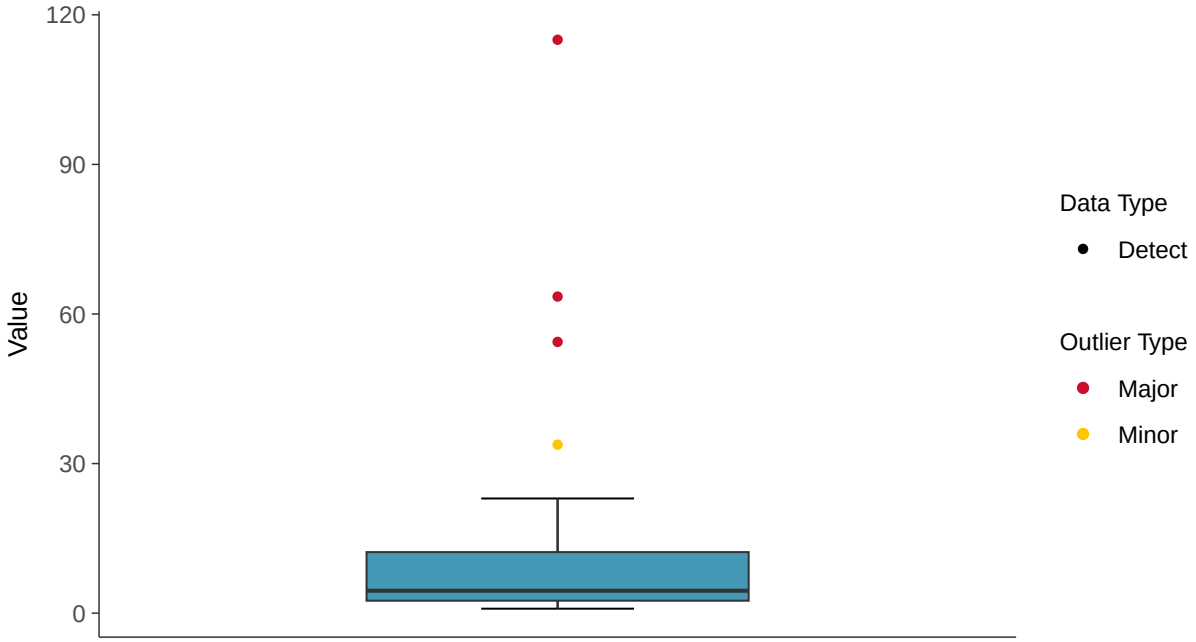
ID: 5_1_117





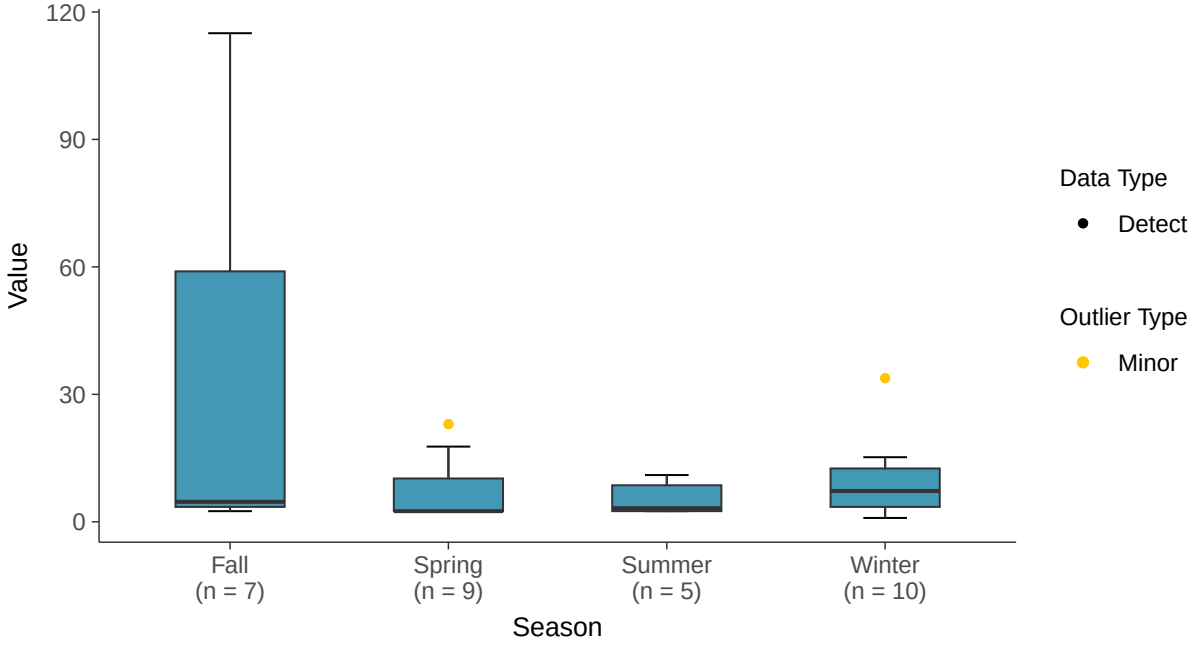
Boxplot

Nickel, MW-2 (ug/L)



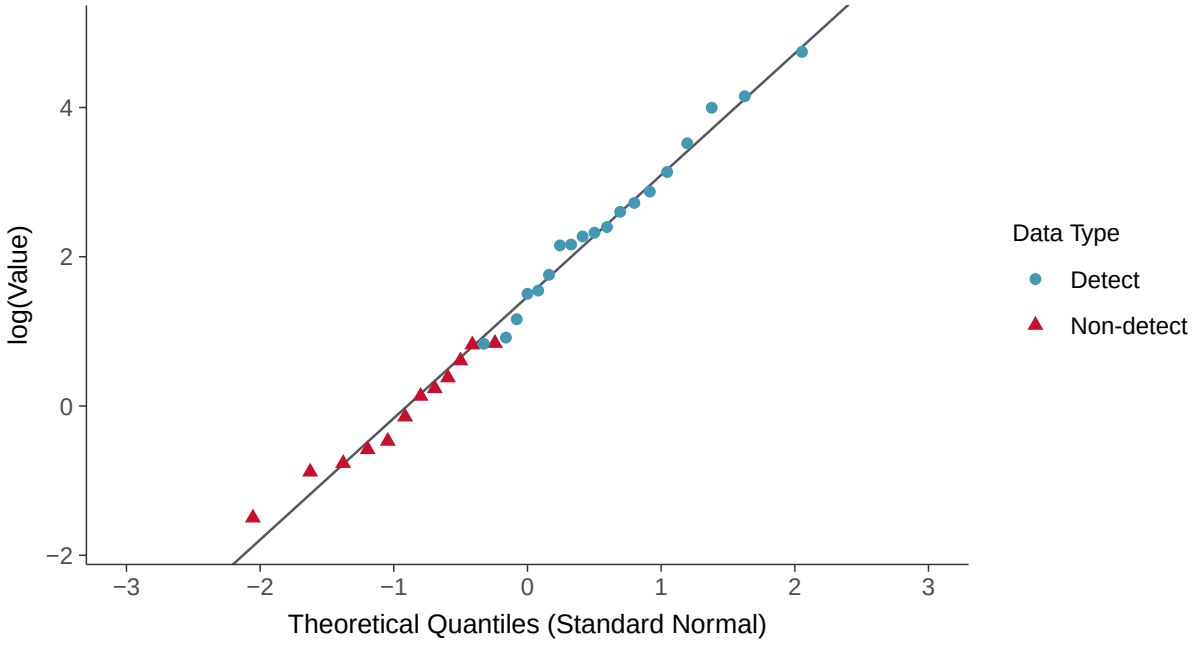
Boxplot by Season

Nickel, MW-2 (ug/L)



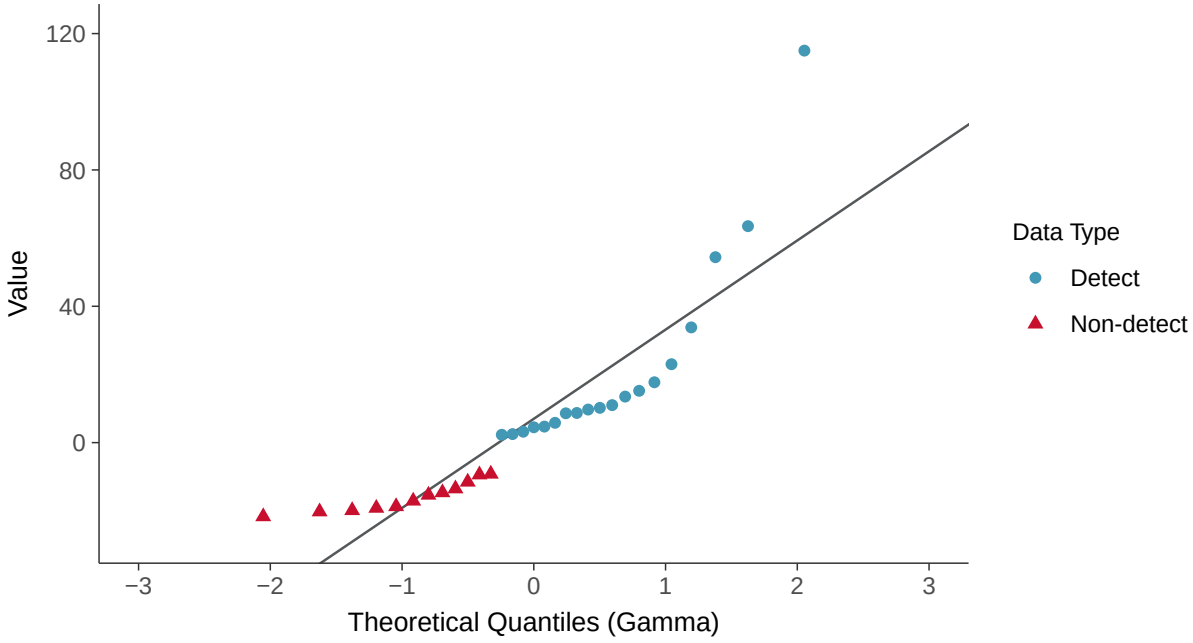
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-2 (ug/L)



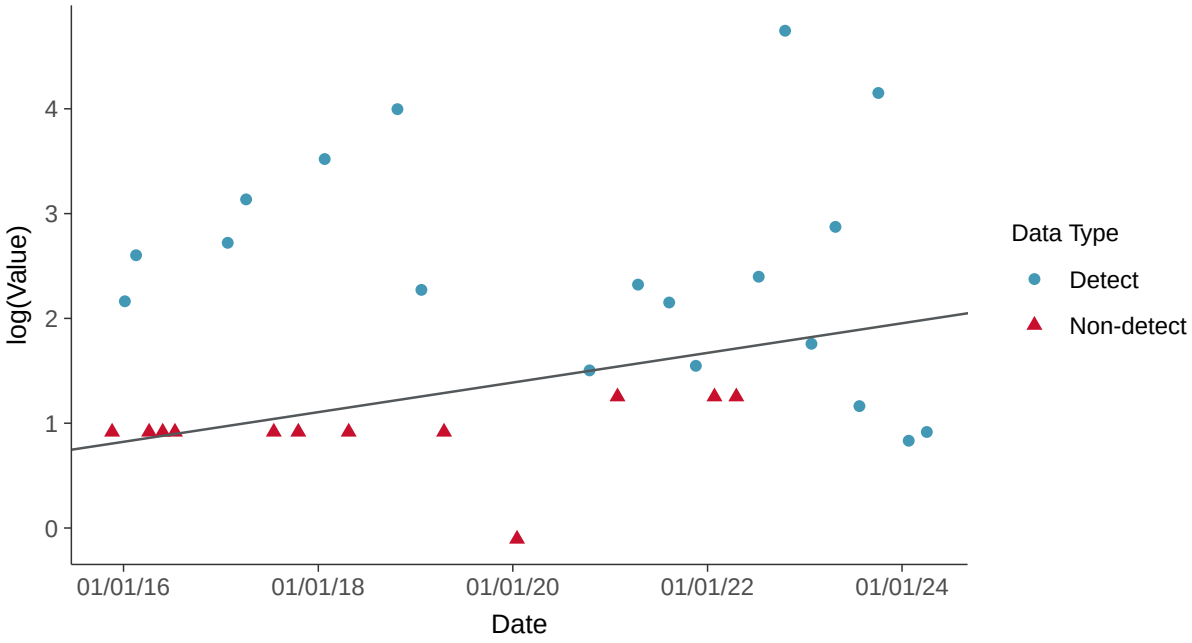
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-2 (ug/L)



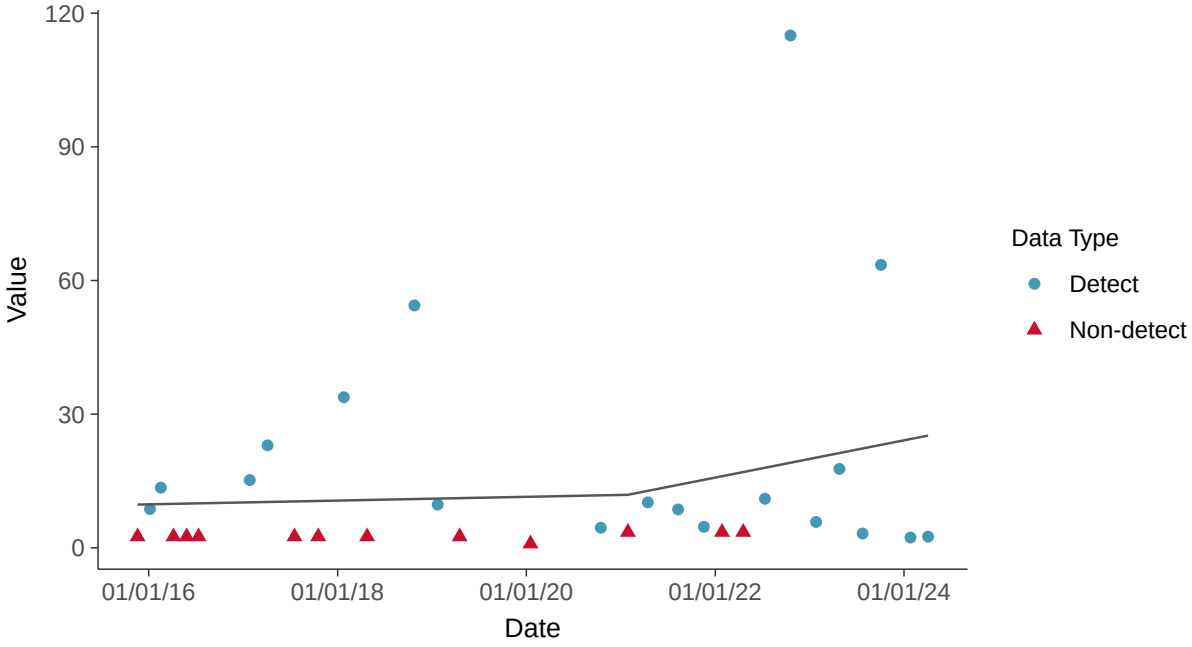
Trend Regression: Lognormal MLE

Nickel, MW-2 (ug/L)



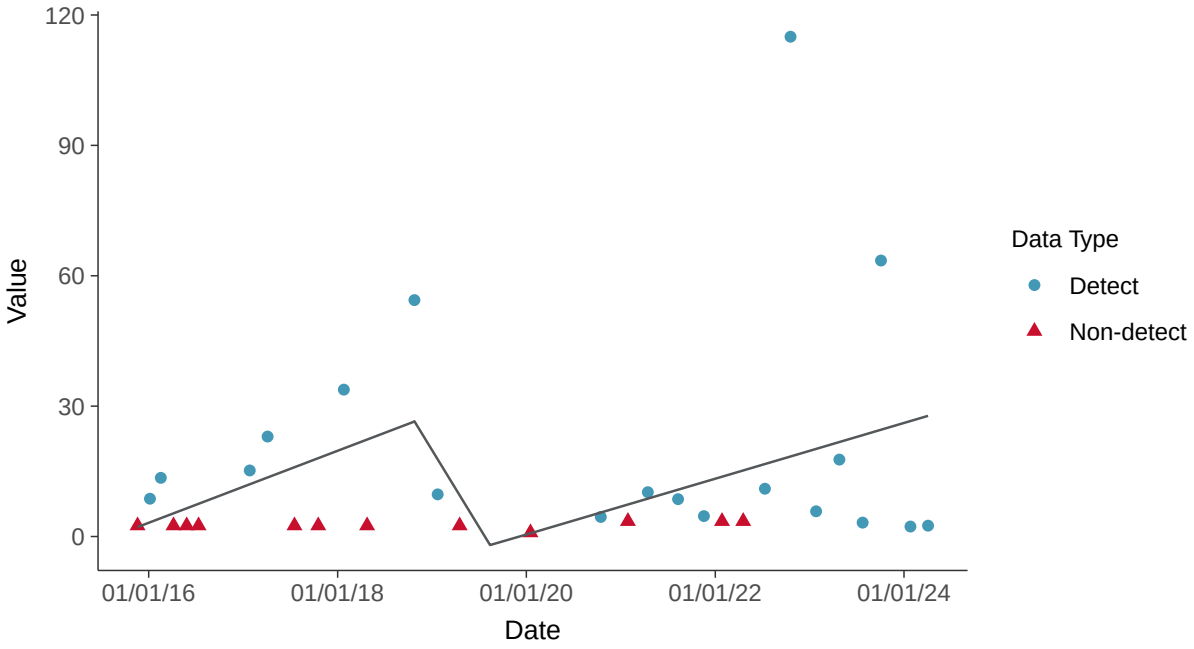
Trend Regression: Piecewise Linear-Linear

Nickel, MW-2 (ug/L)



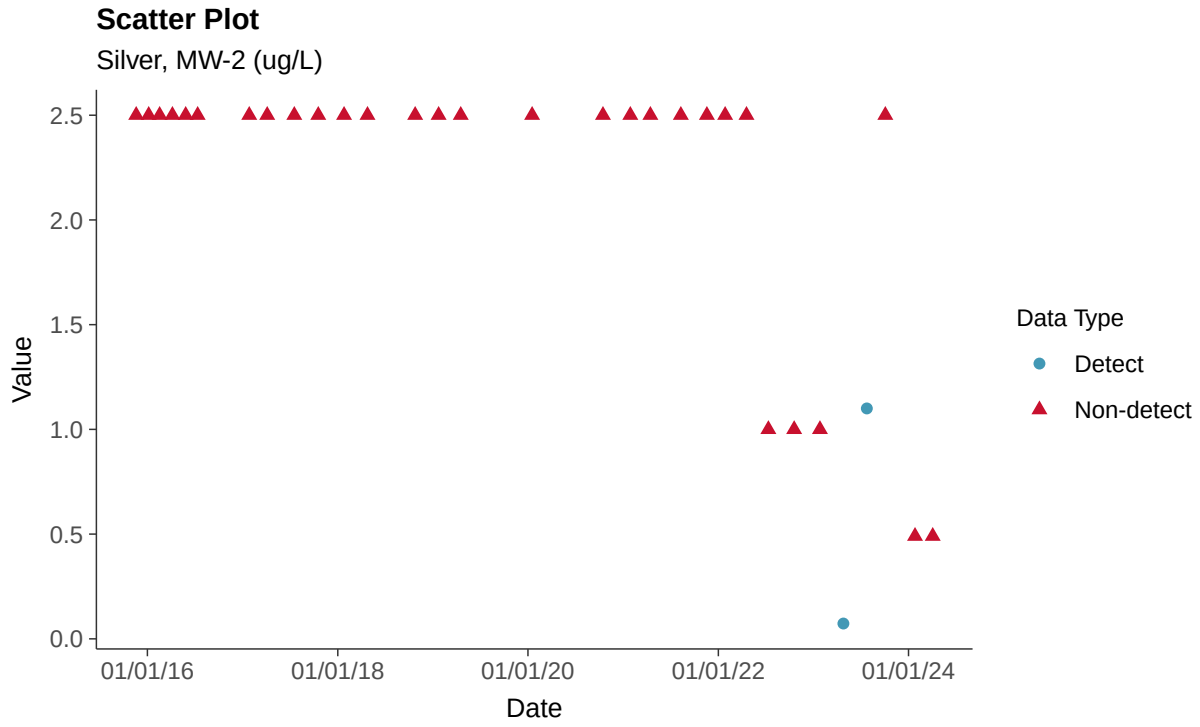
Trend Regression: Piecewise Linear-Linear-Linear

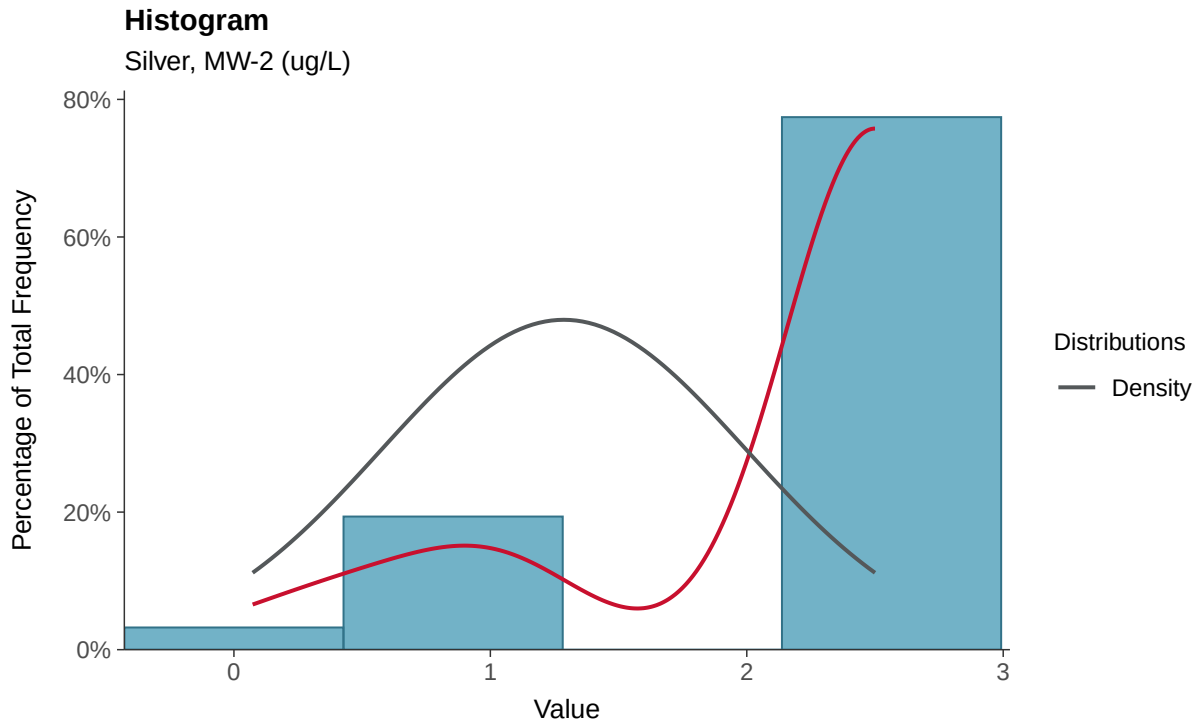
Nickel, MW-2 (ug/L)



App. I Metals: Silver, MW-2

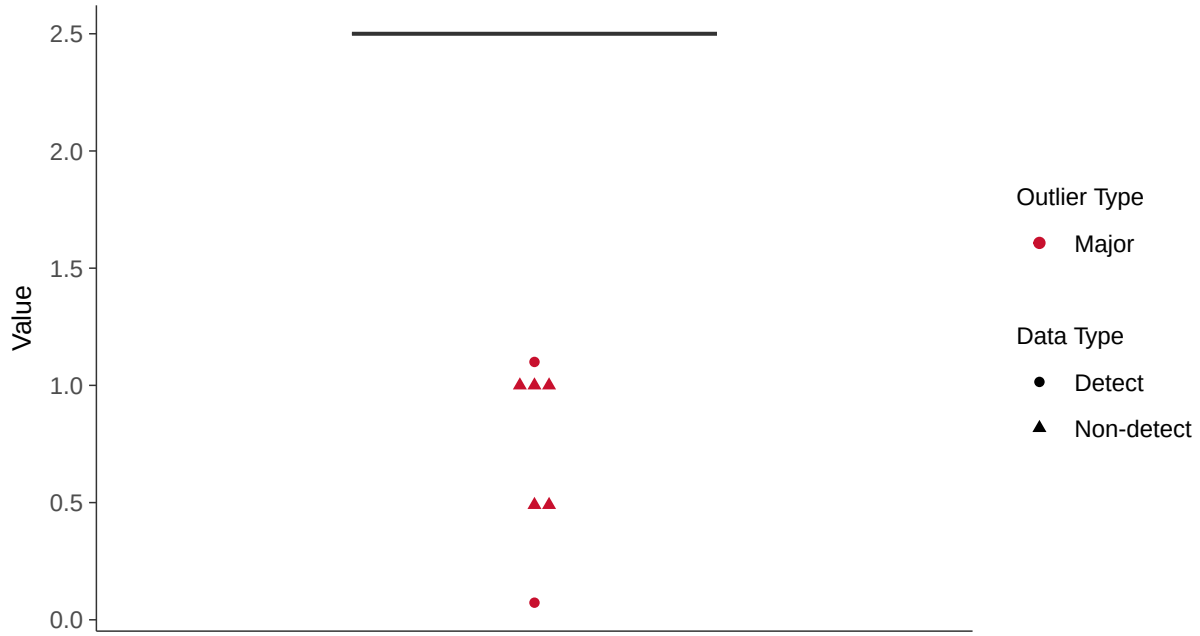
ID: 5_1_122





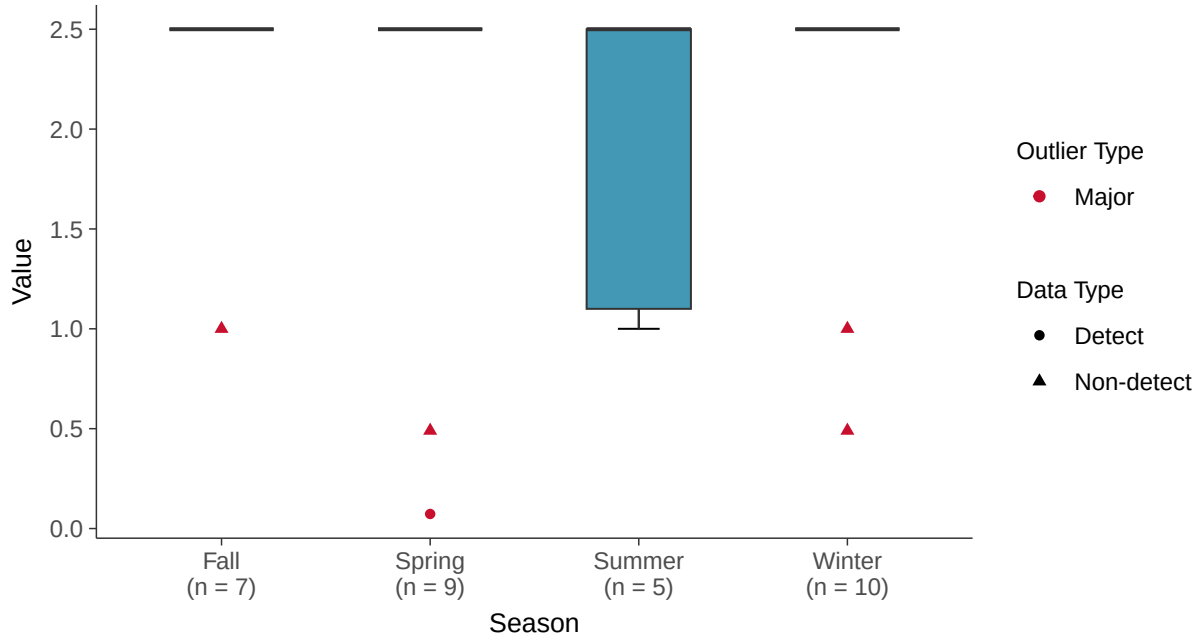
Boxplot

Silver, MW-2 (ug/L)



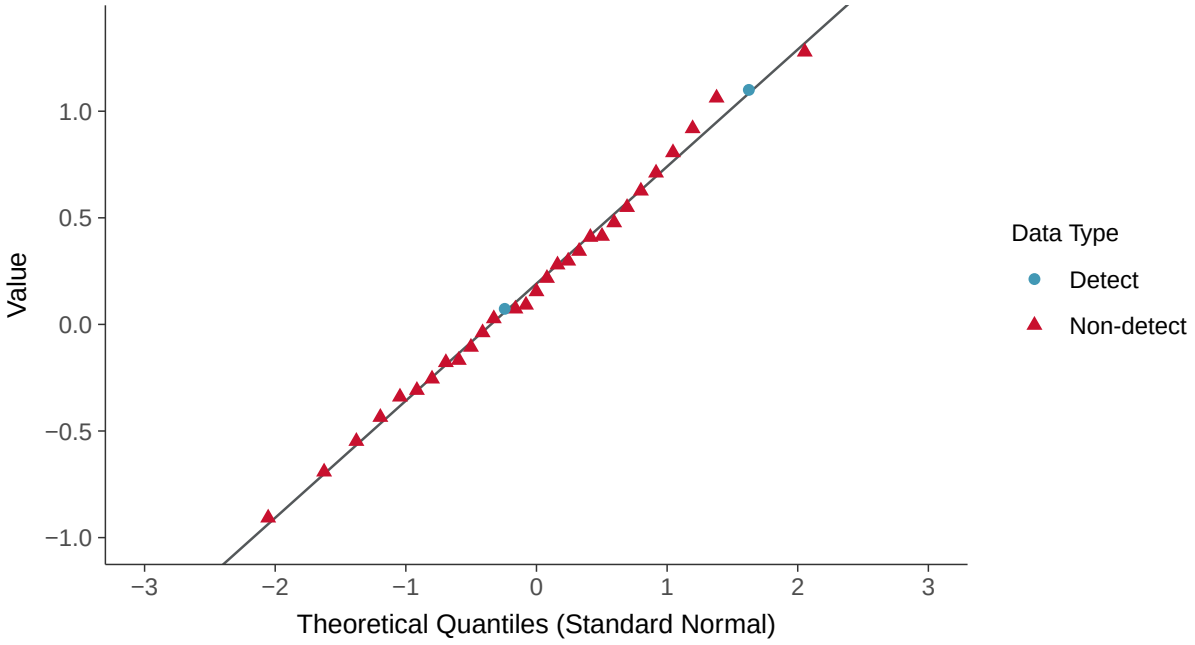
Boxplot by Season

Silver, MW-2 (ug/L)



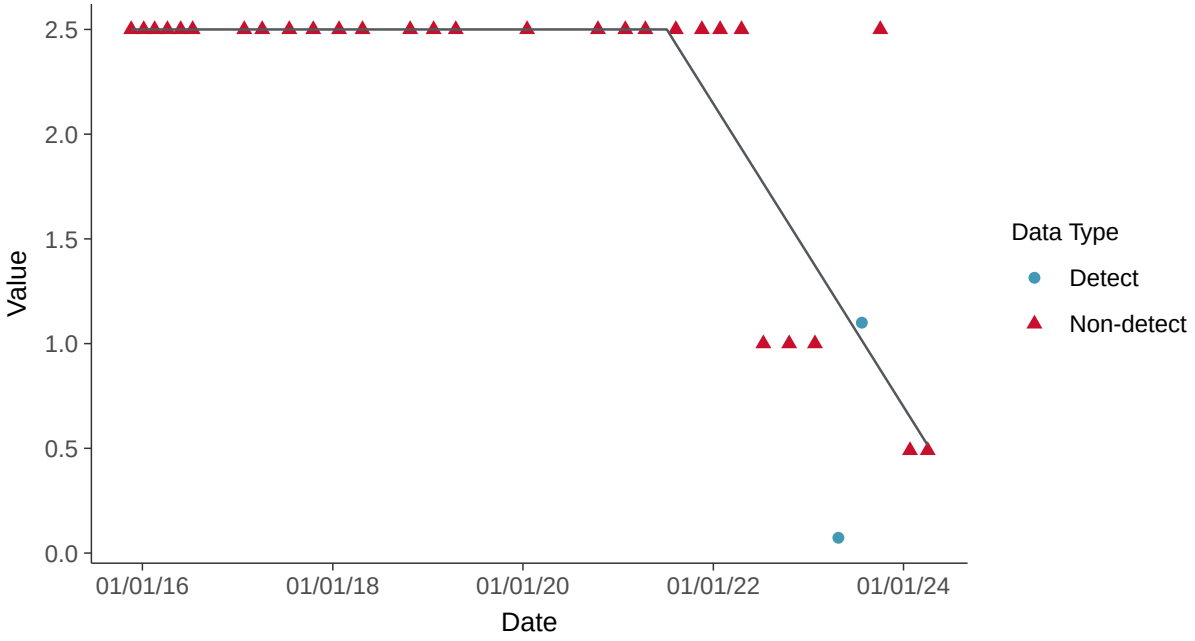
Normal Q-Q plot using ROS Imputed Estimates

Silver, MW-2 (ug/L)



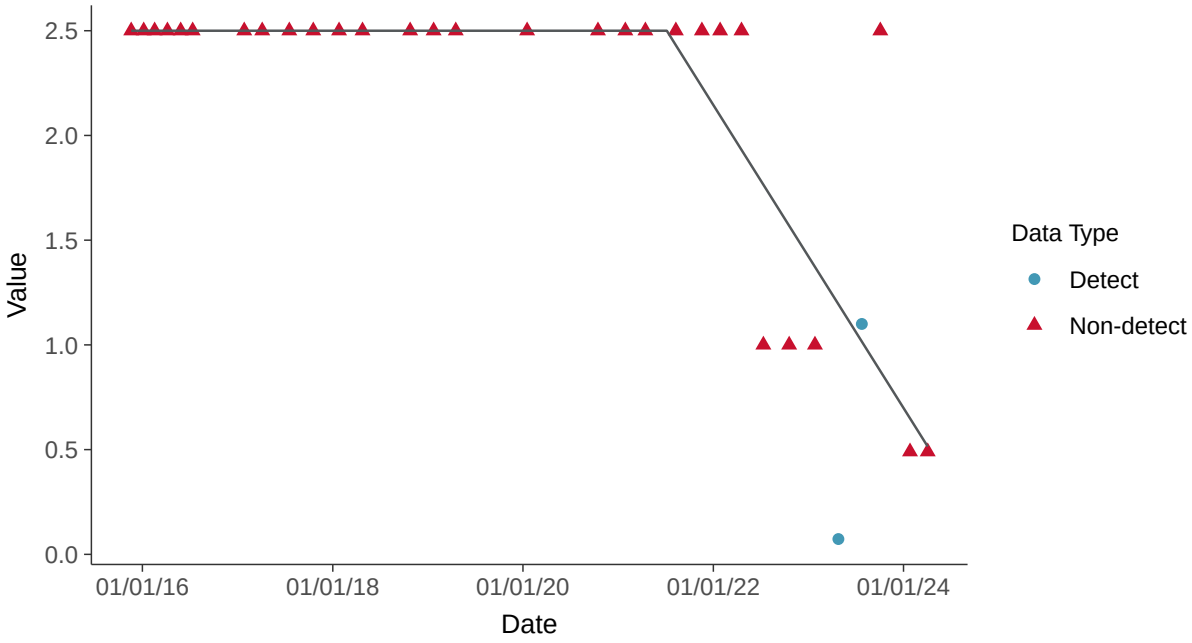
Trend Regression: Piecewise Linear-Linear

Silver, MW-2 (ug/L)



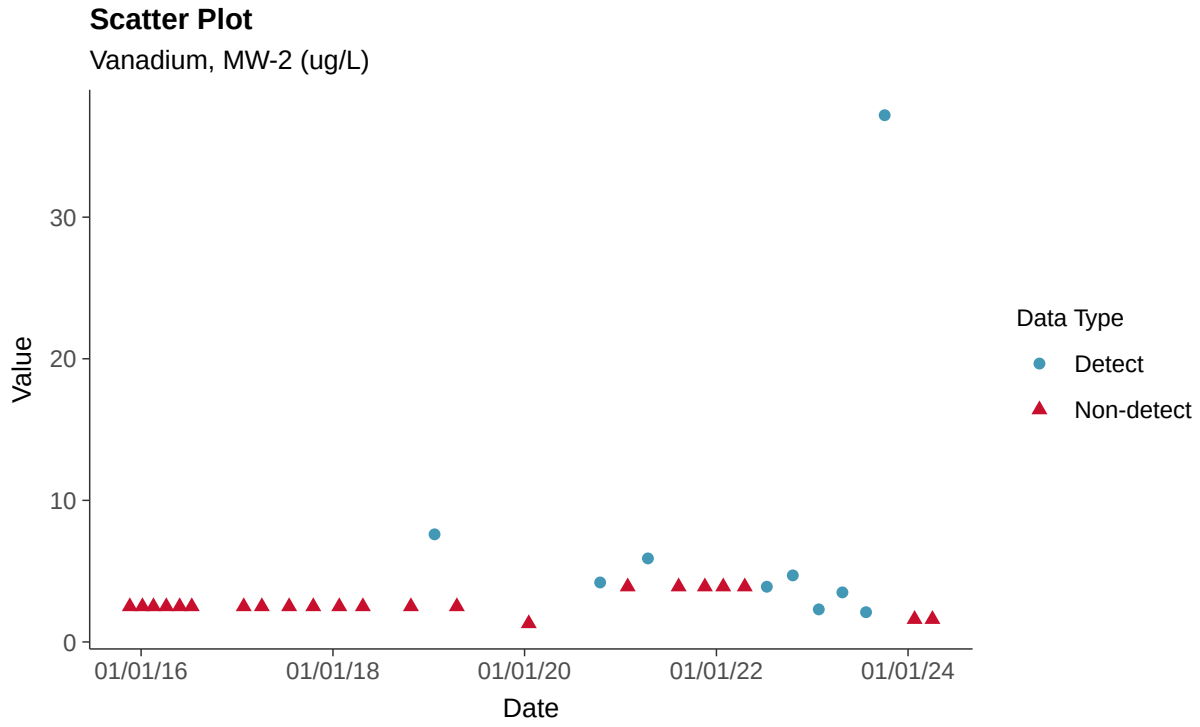
Trend Regression: Piecewise Linear-Linear-Linear

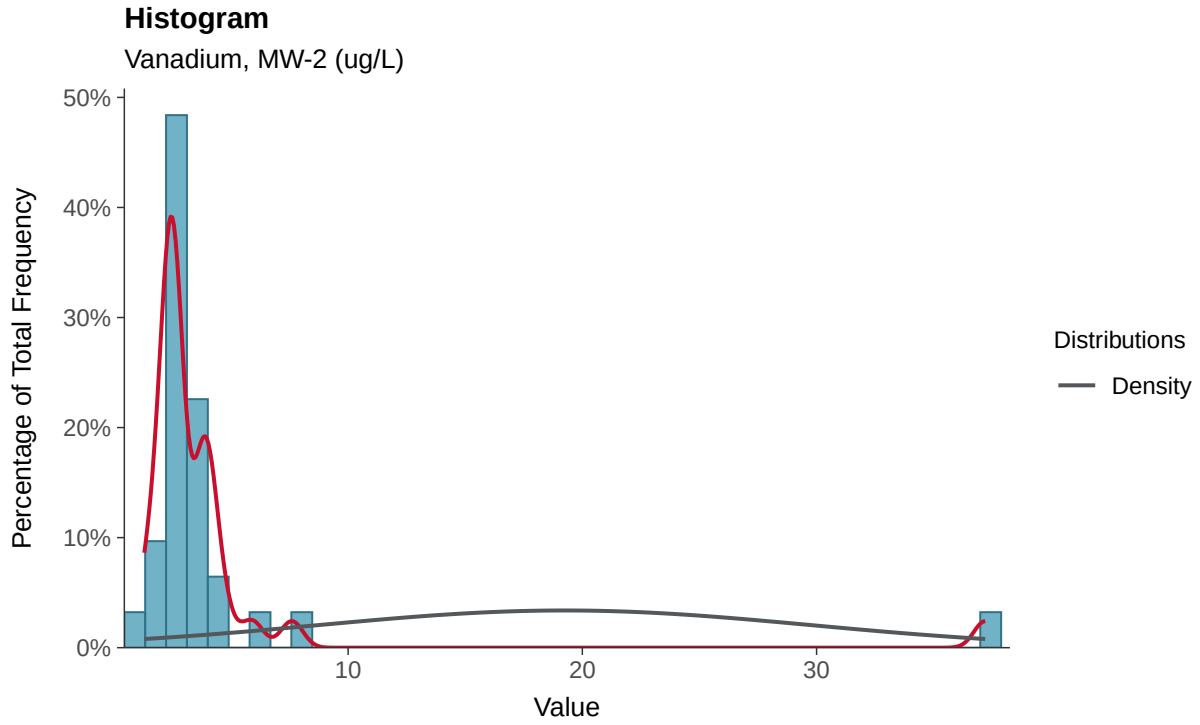
Silver, MW-2 (ug/L)



App. I Metals: Vanadium, MW-2

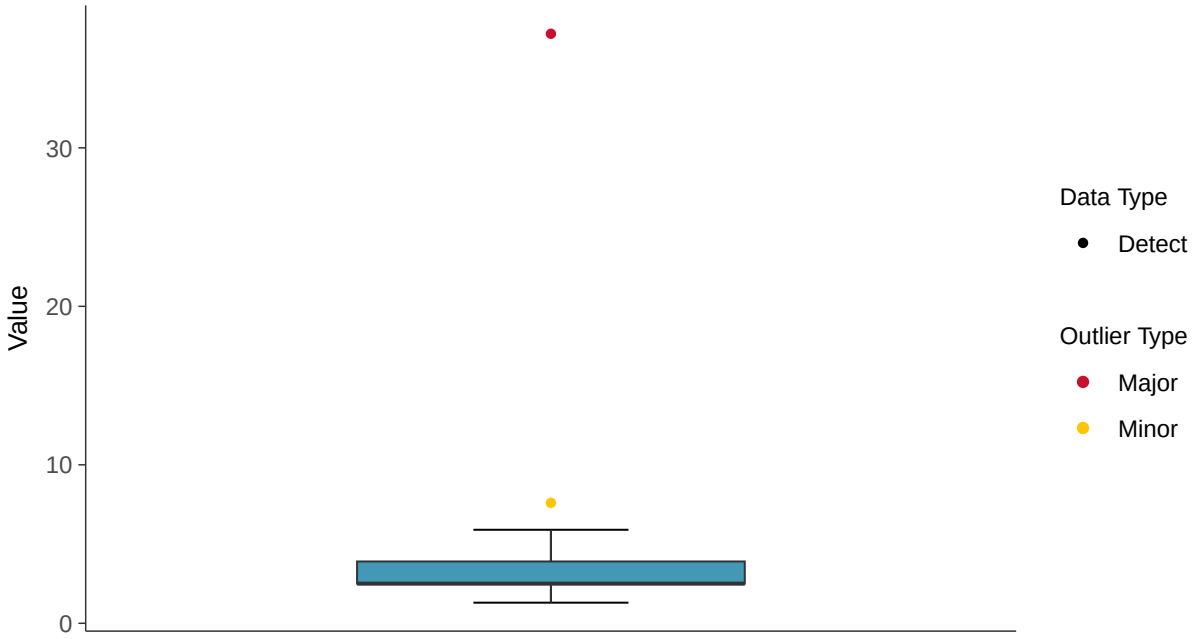
ID: 5_1_127





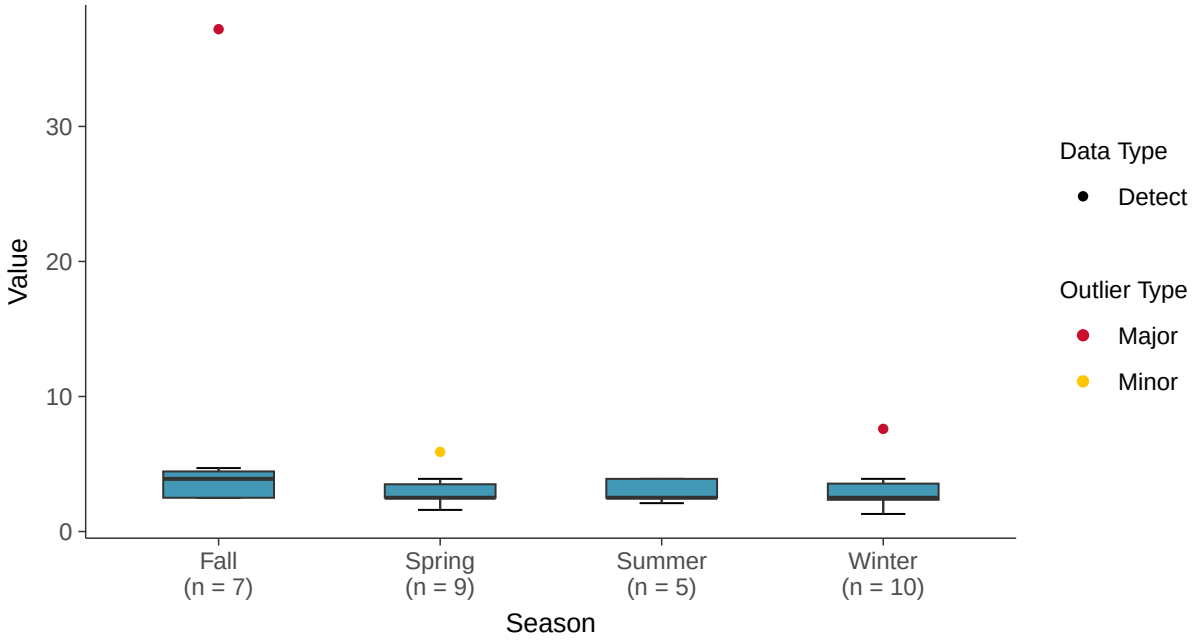
Boxplot

Vanadium, MW-2 (ug/L)



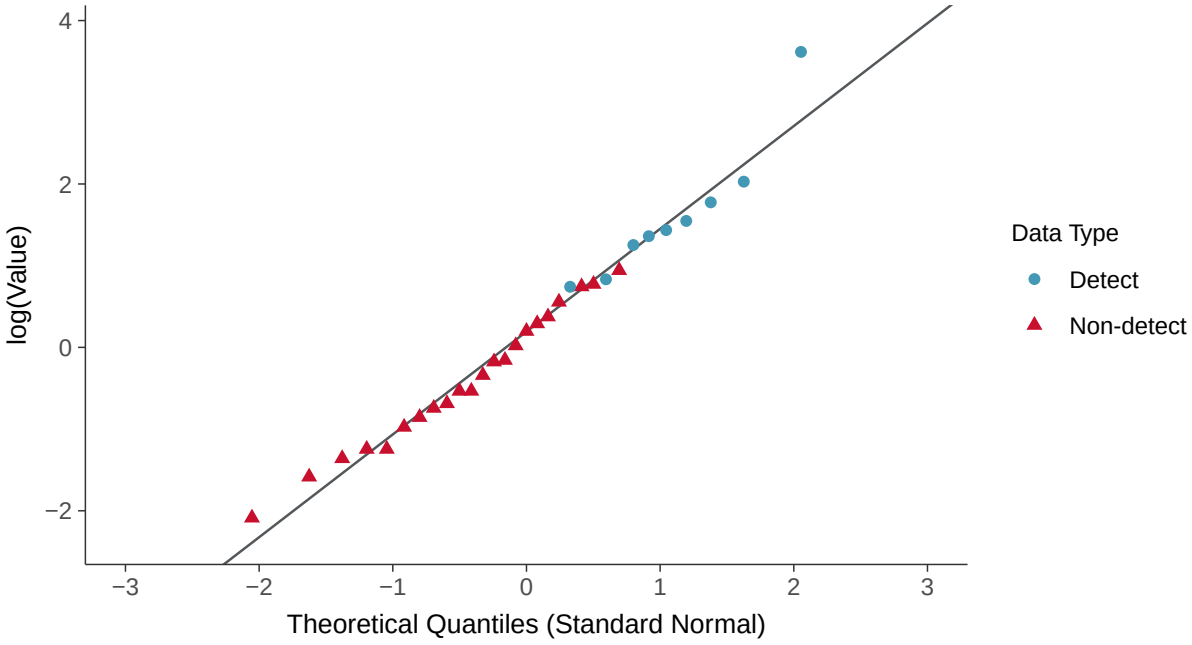
Boxplot by Season

Vanadium, MW-2 (ug/L)



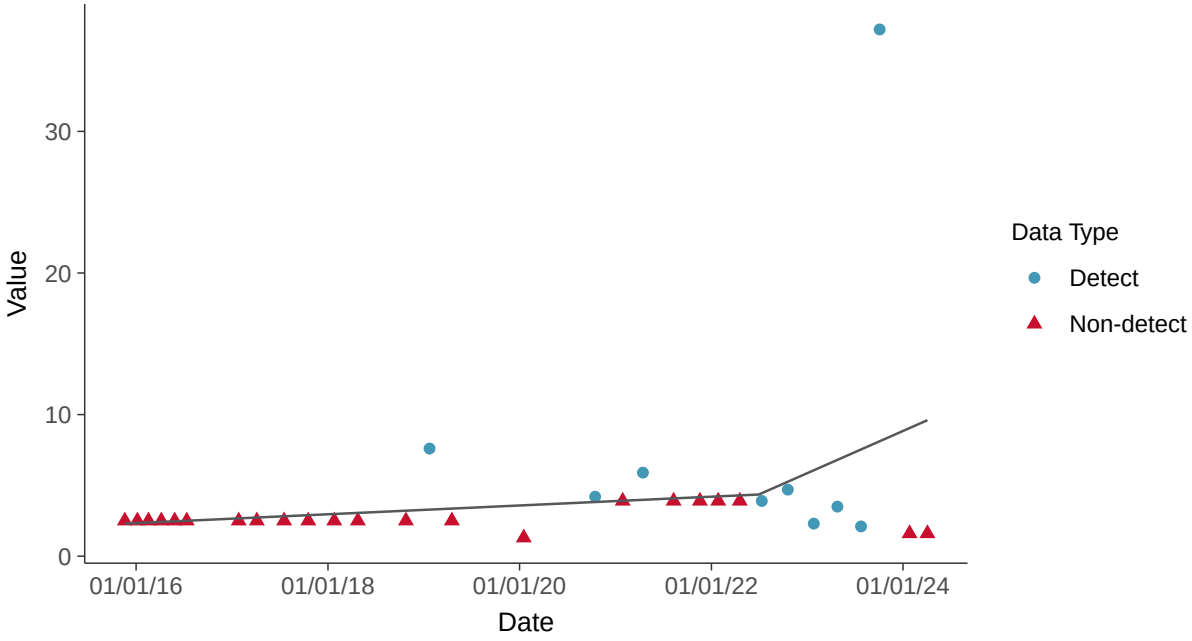
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-2 (ug/L)



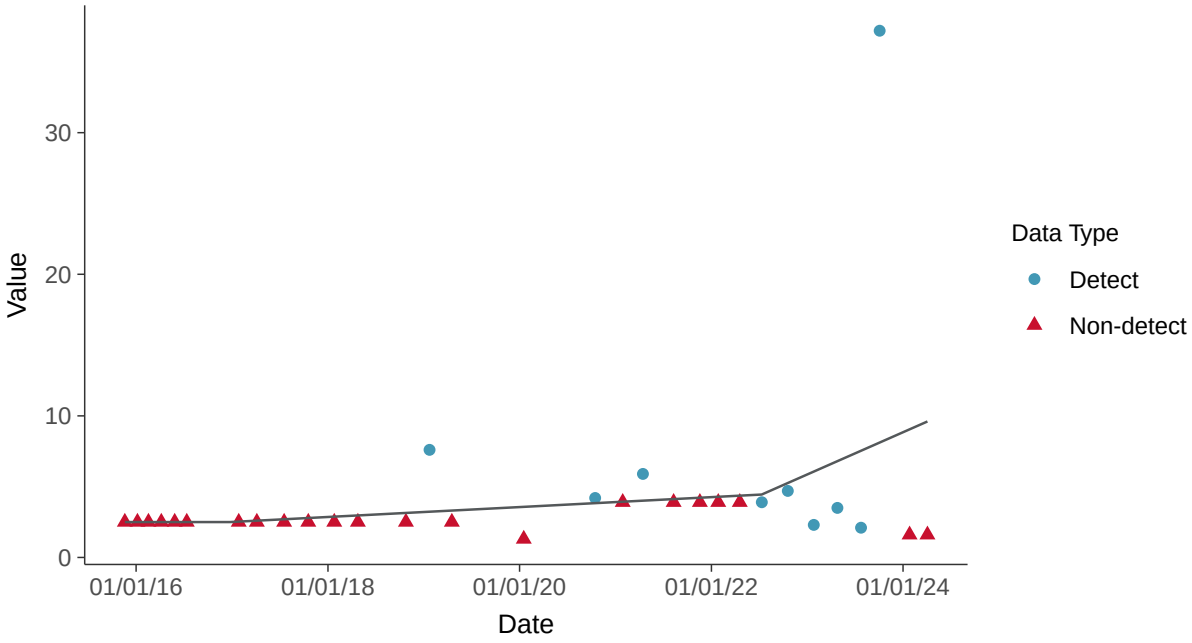
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-2 (ug/L)



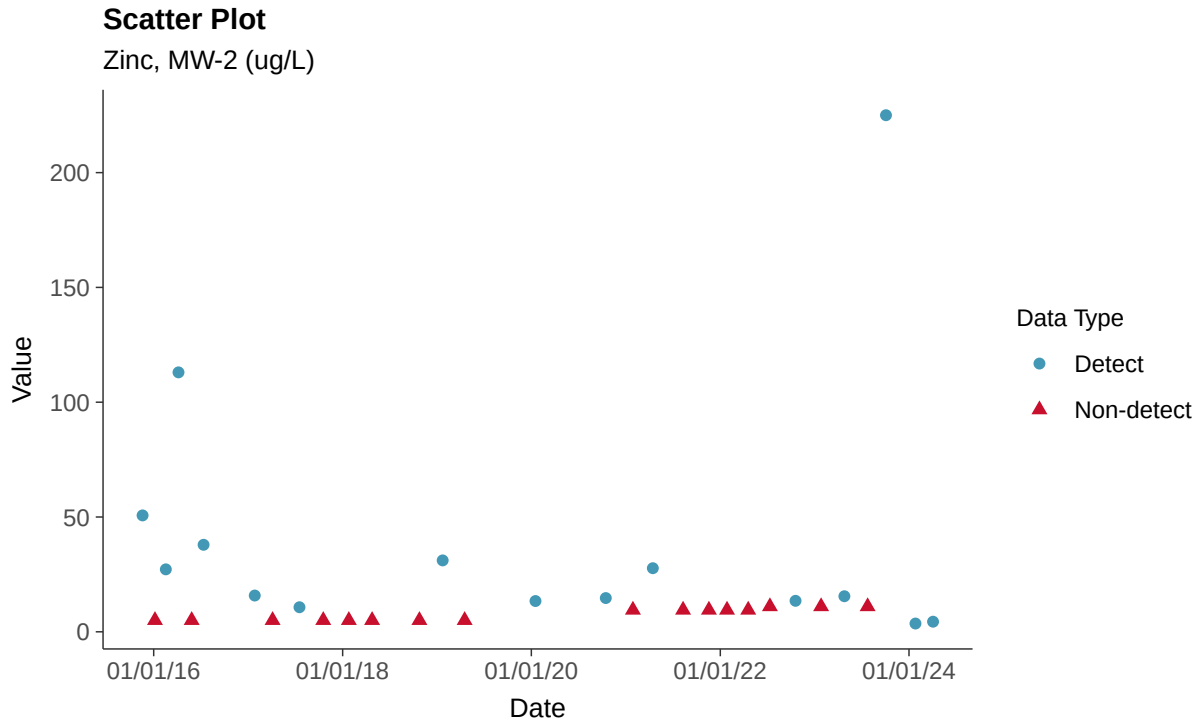
Trend Regression: Piecewise Linear-Linear-Linear

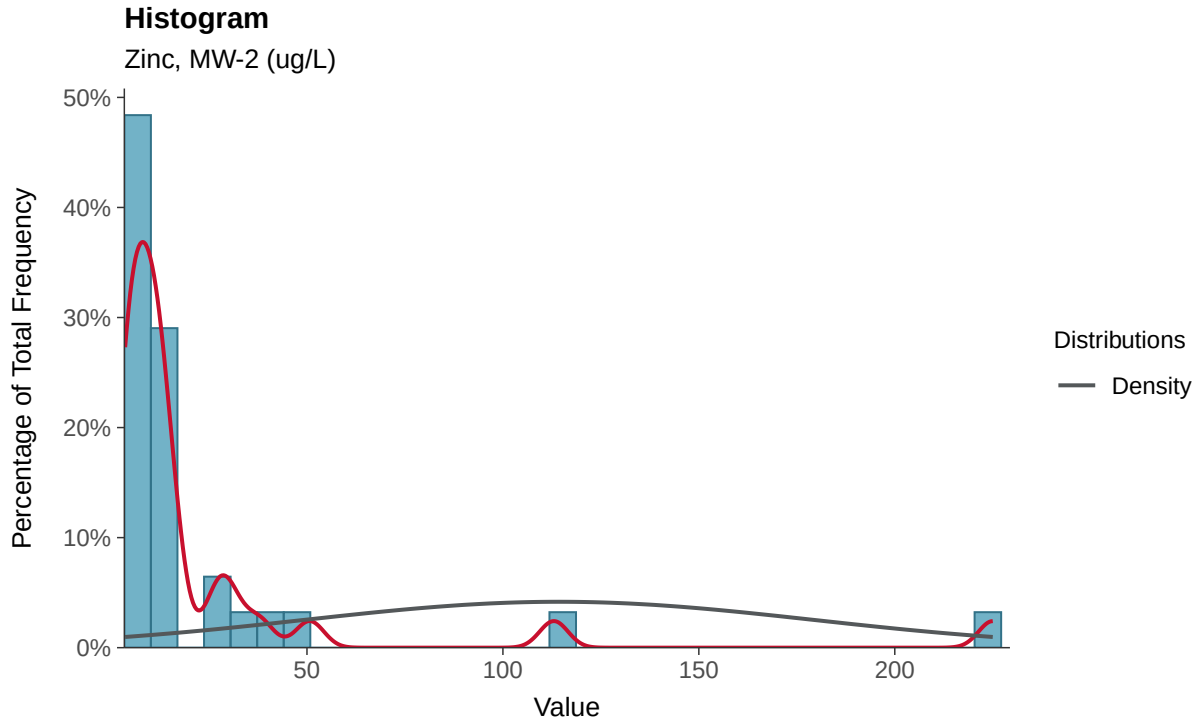
Vanadium, MW-2 (ug/L)



App. I Metals: Zinc, MW-2

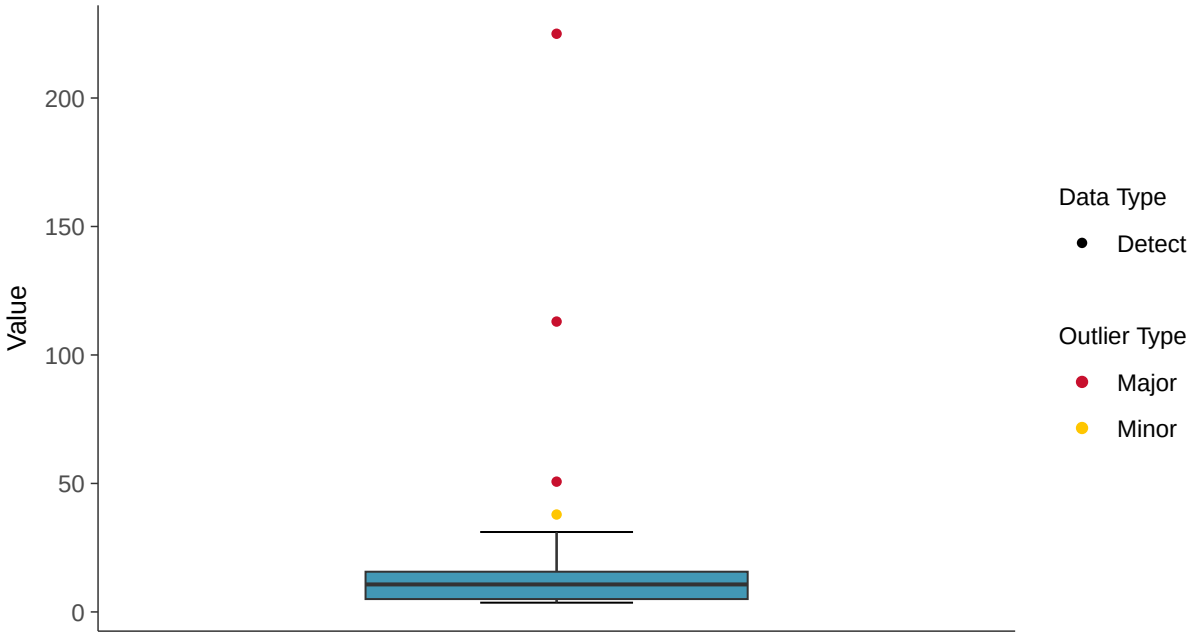
ID: 5_1_128





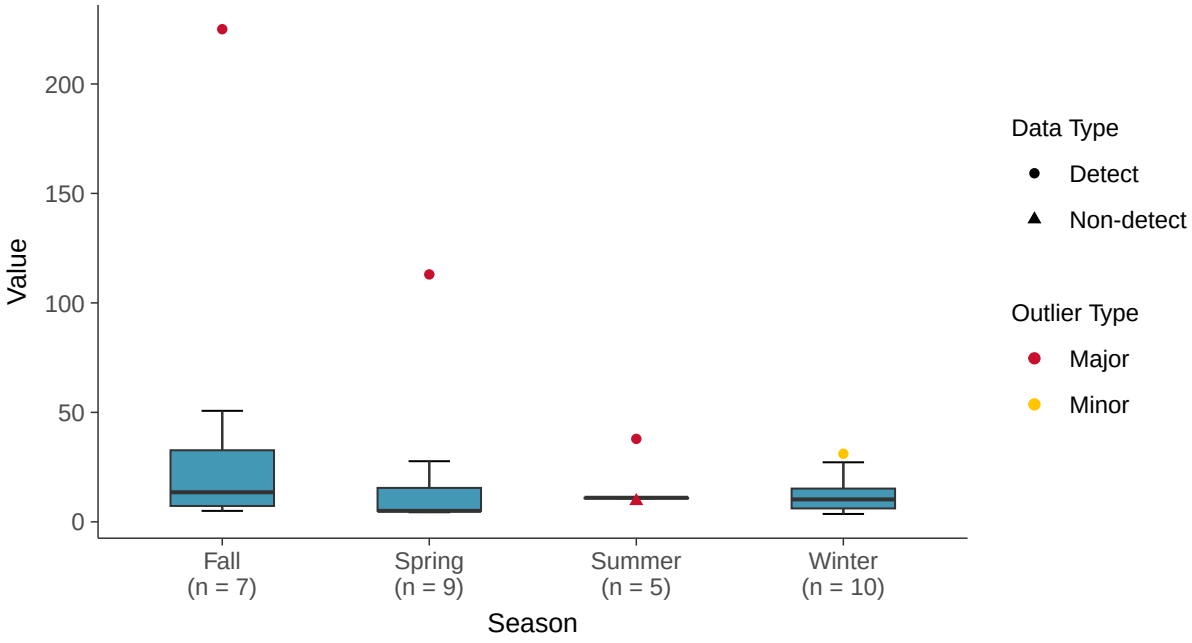
Boxplot

Zinc, MW-2 (ug/L)



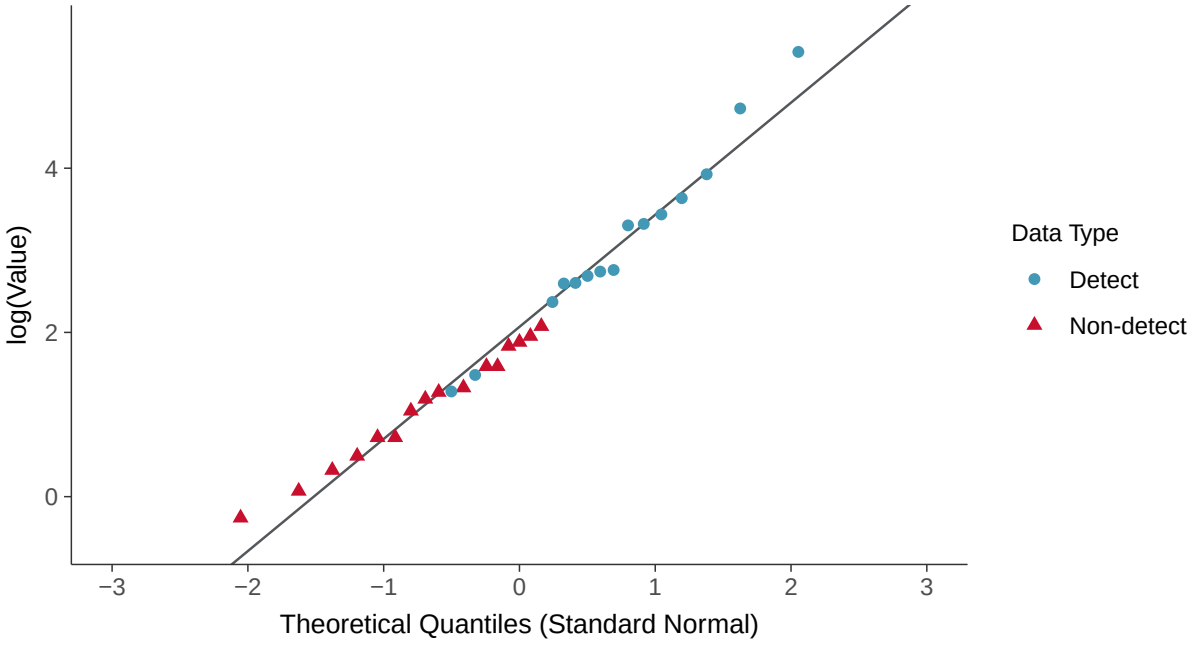
Boxplot by Season

Zinc, MW-2 (ug/L)



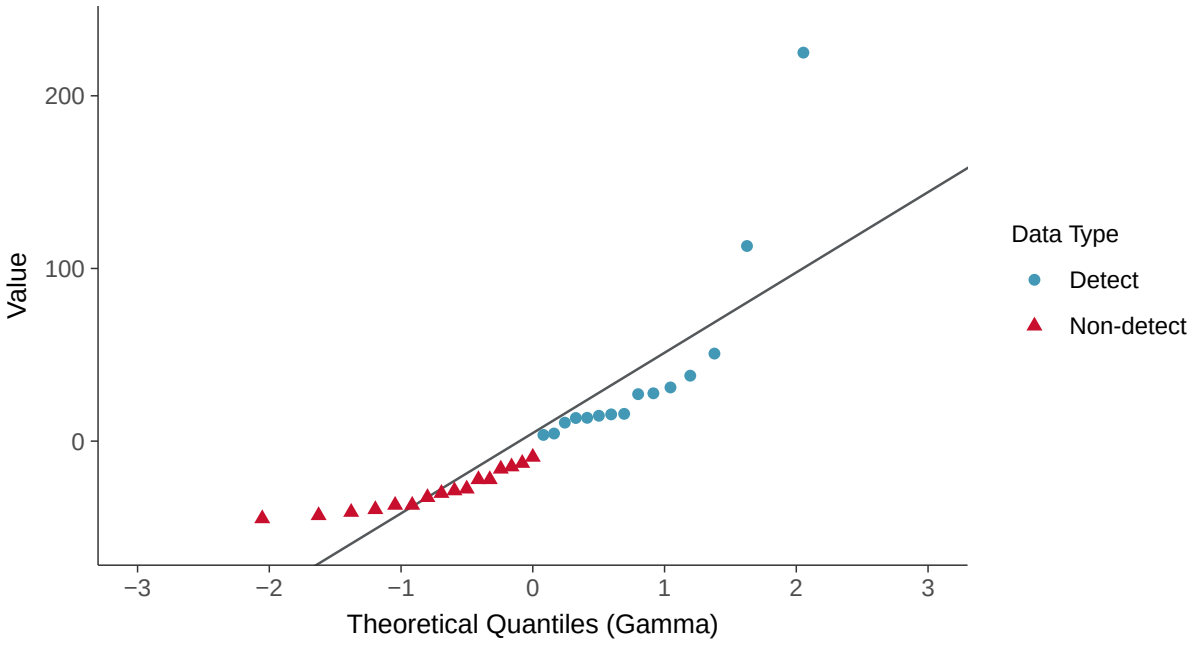
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-2 (ug/L)



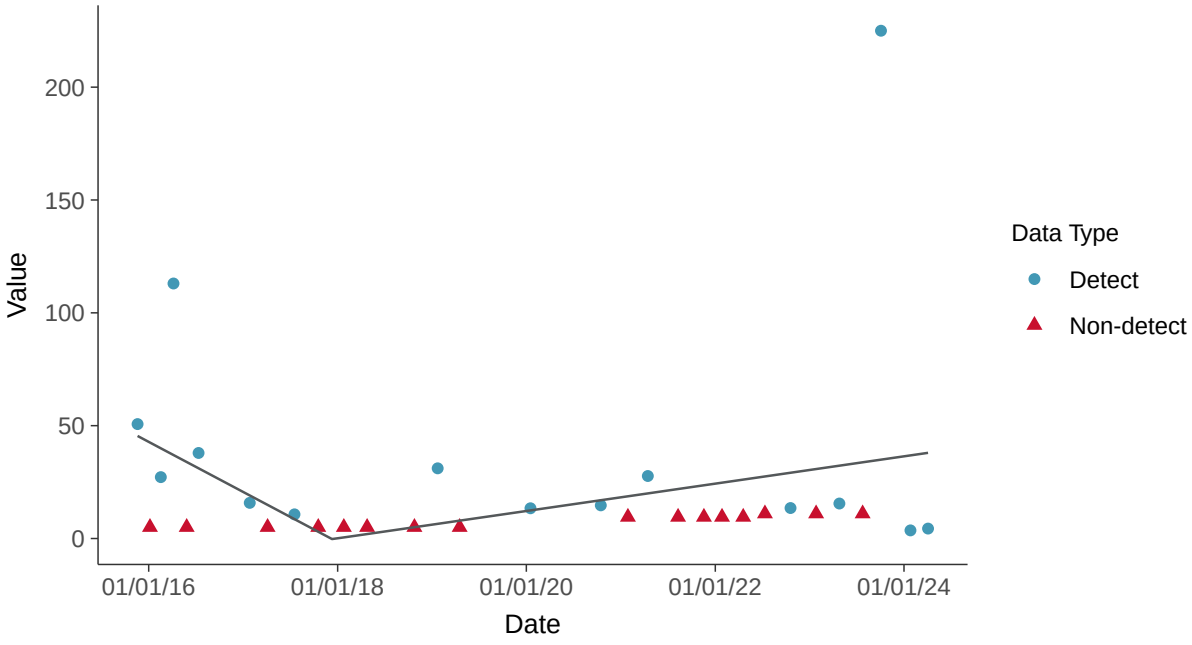
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-2 (ug/L)



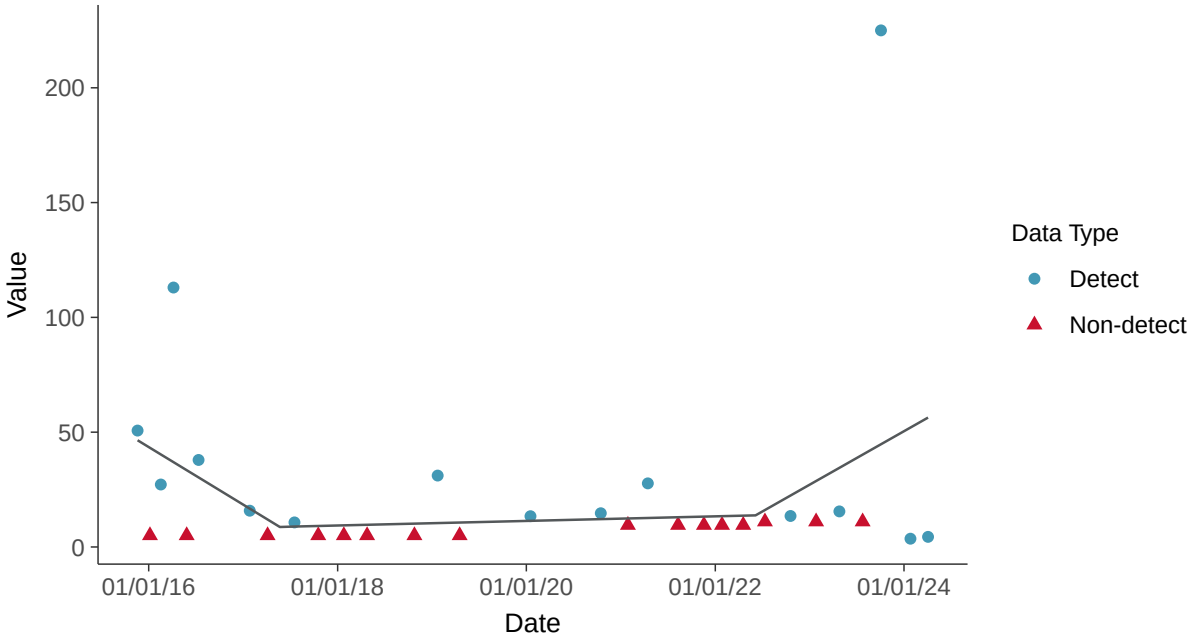
Trend Regression: Piecewise Linear-Linear

Zinc, MW-2 (ug/L)



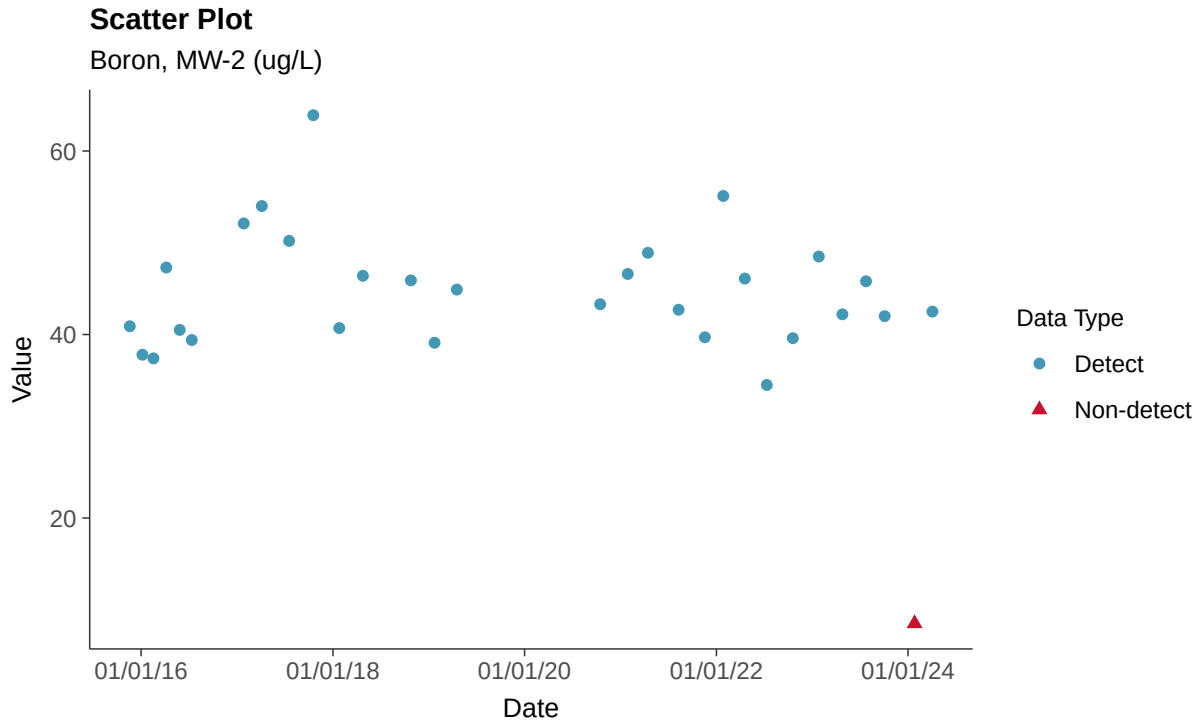
Trend Regression: Piecewise Linear-Linear-Linear

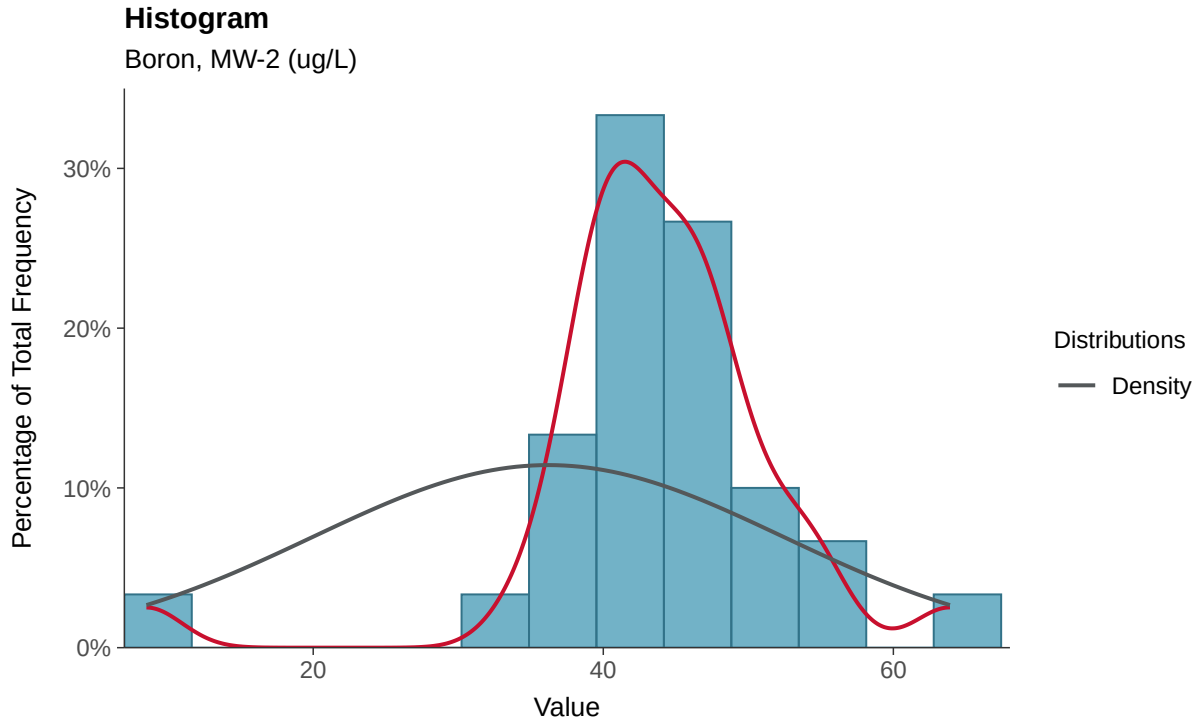
Zinc, MW-2 (ug/L)



App. III: Boron, MW-2

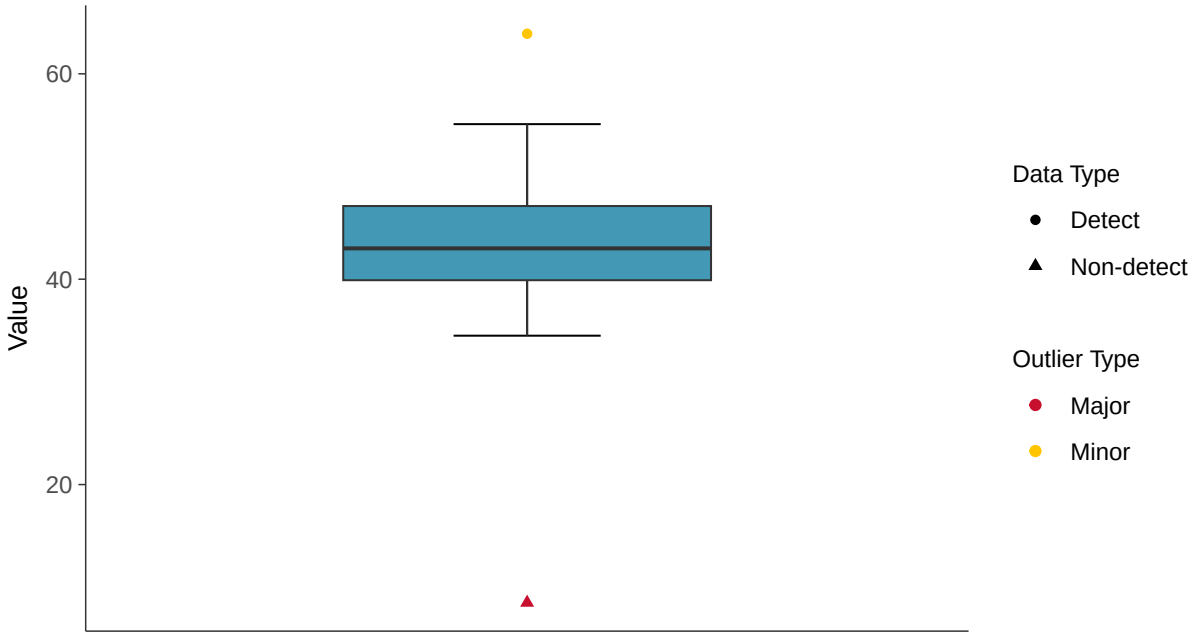
ID: 5_2_105





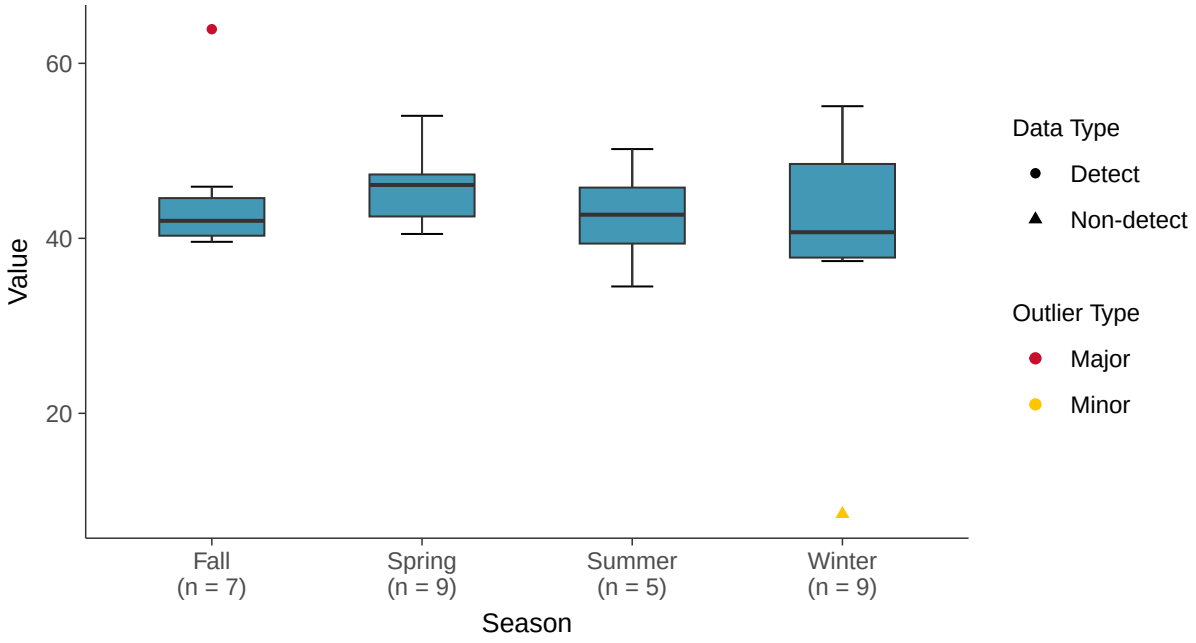
Boxplot

Boron, MW-2 (ug/L)



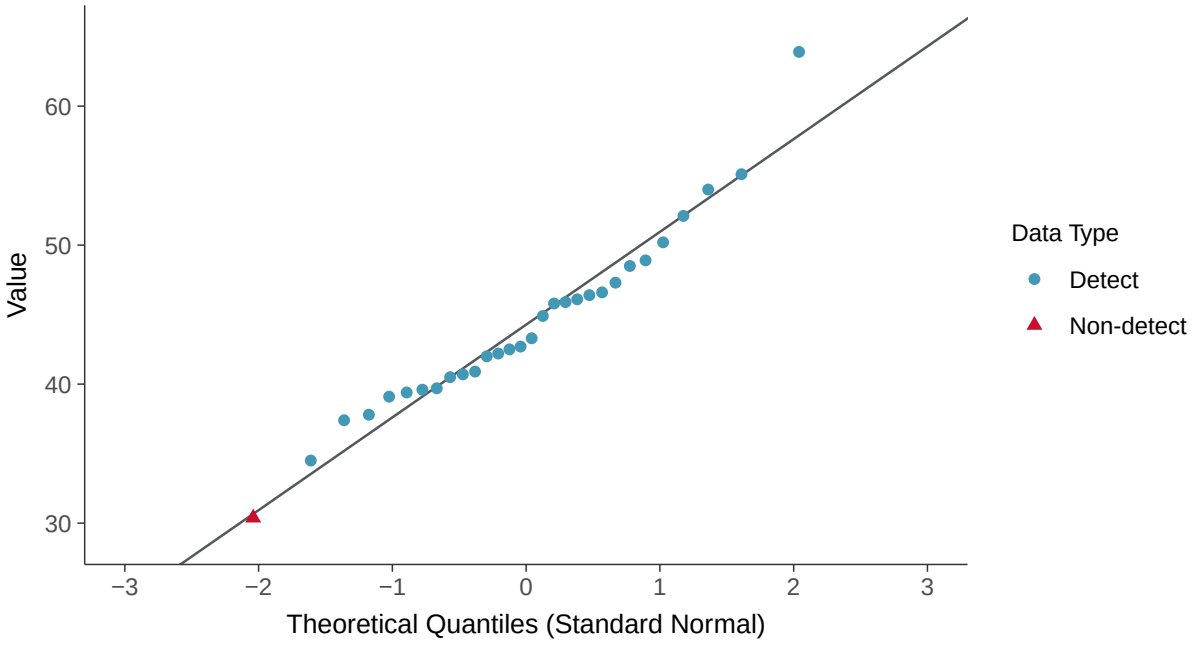
Boxplot by Season

Boron, MW-2 (ug/L)



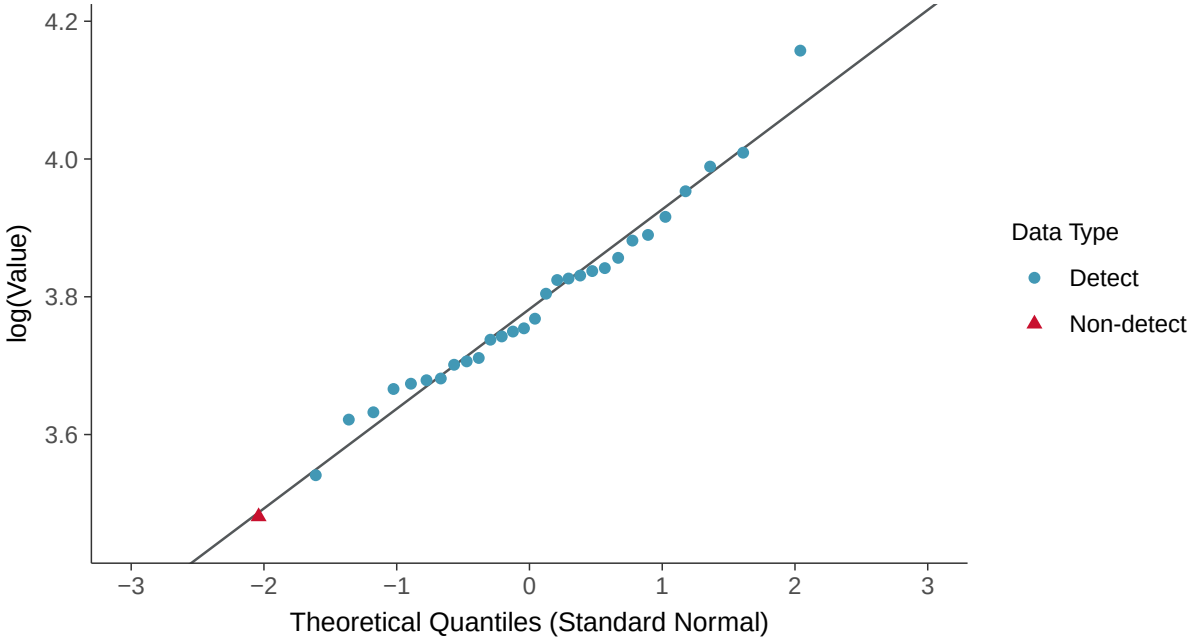
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



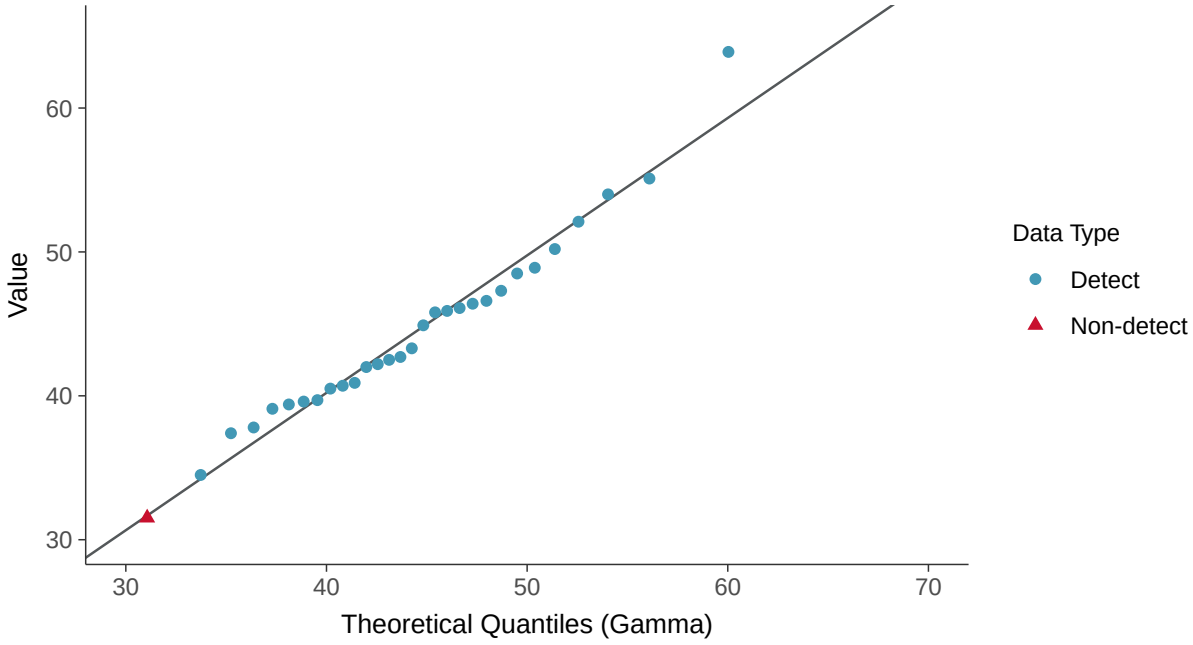
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



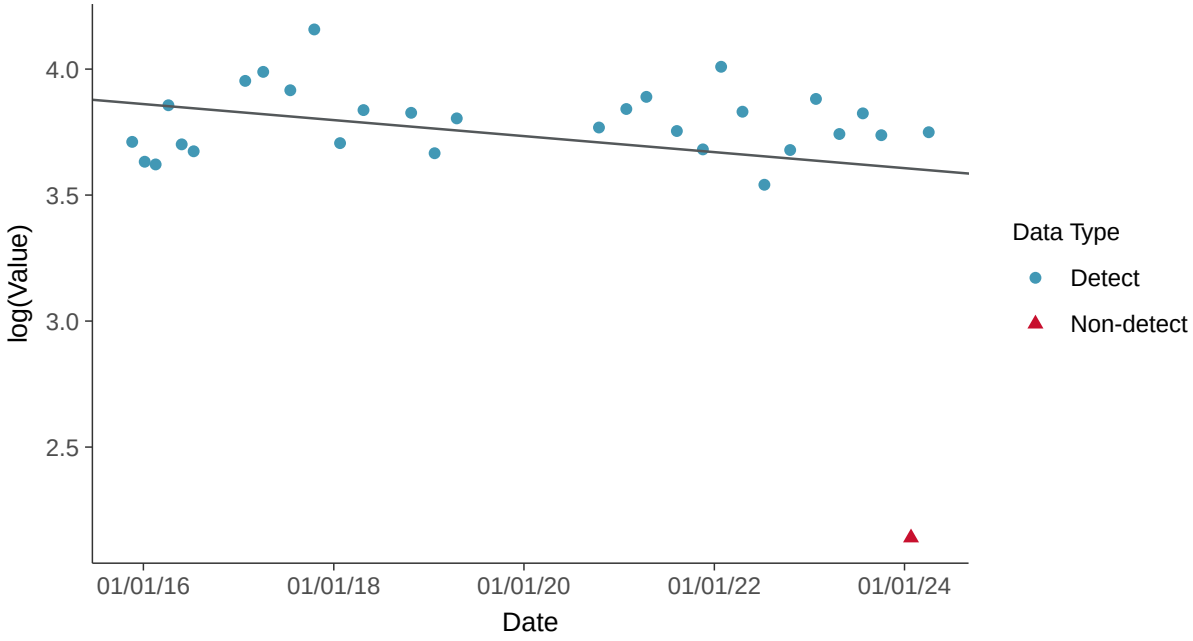
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



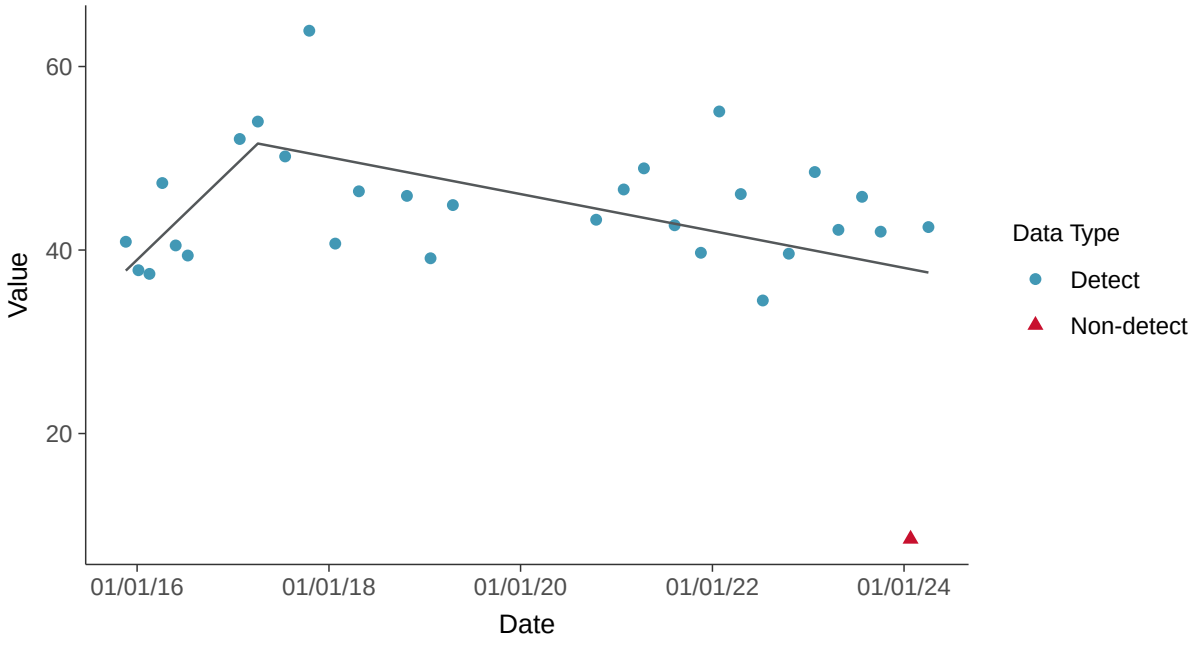
Trend Regression: Lognormal MLE

Boron, MW-2 (ug/L)



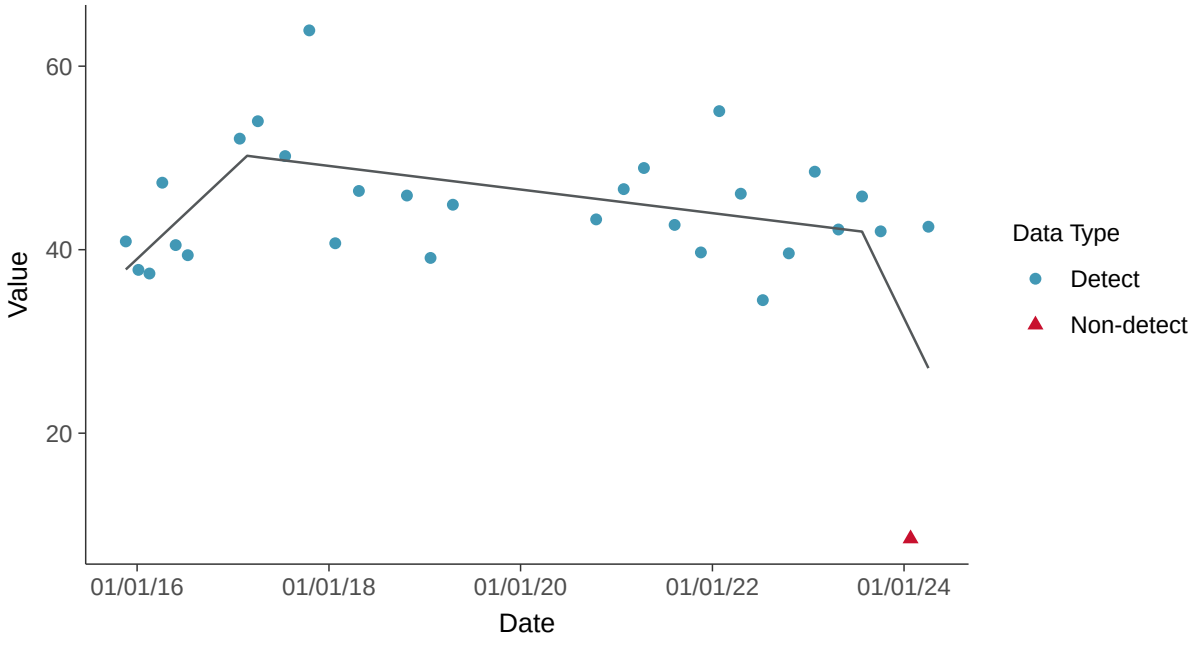
Trend Regression: Piecewise Linear-Linear

Boron, MW-2 (ug/L)



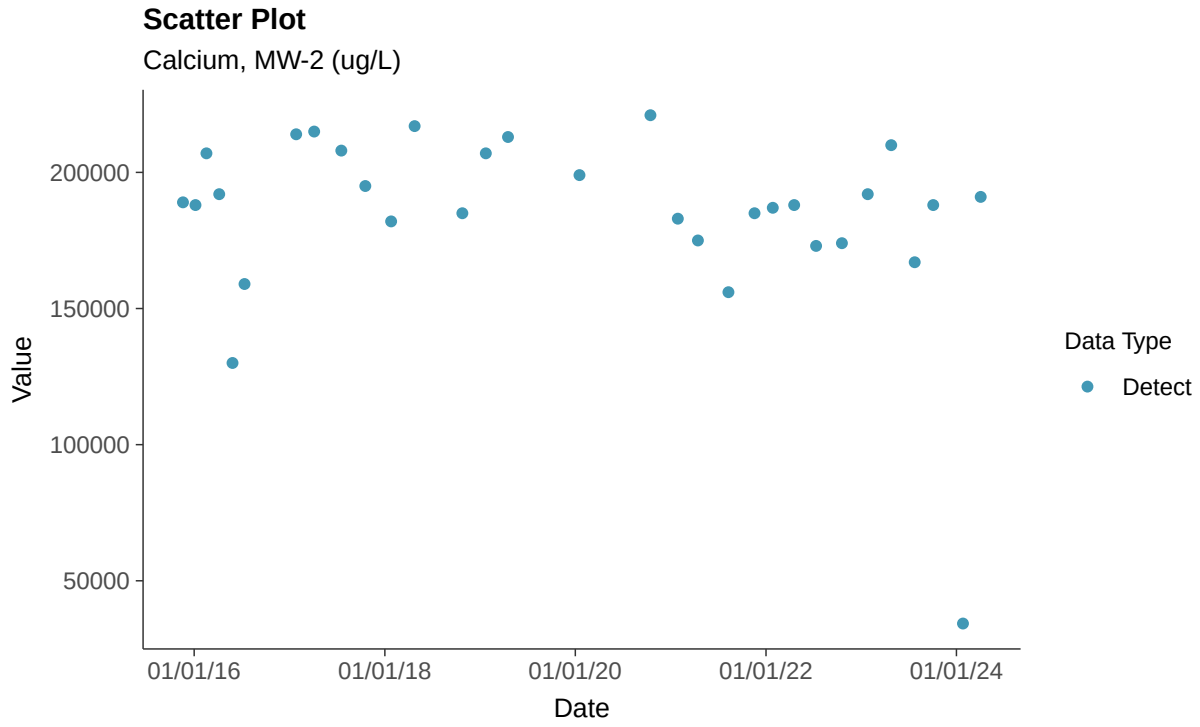
Trend Regression: Piecewise Linear-Linear-Linear

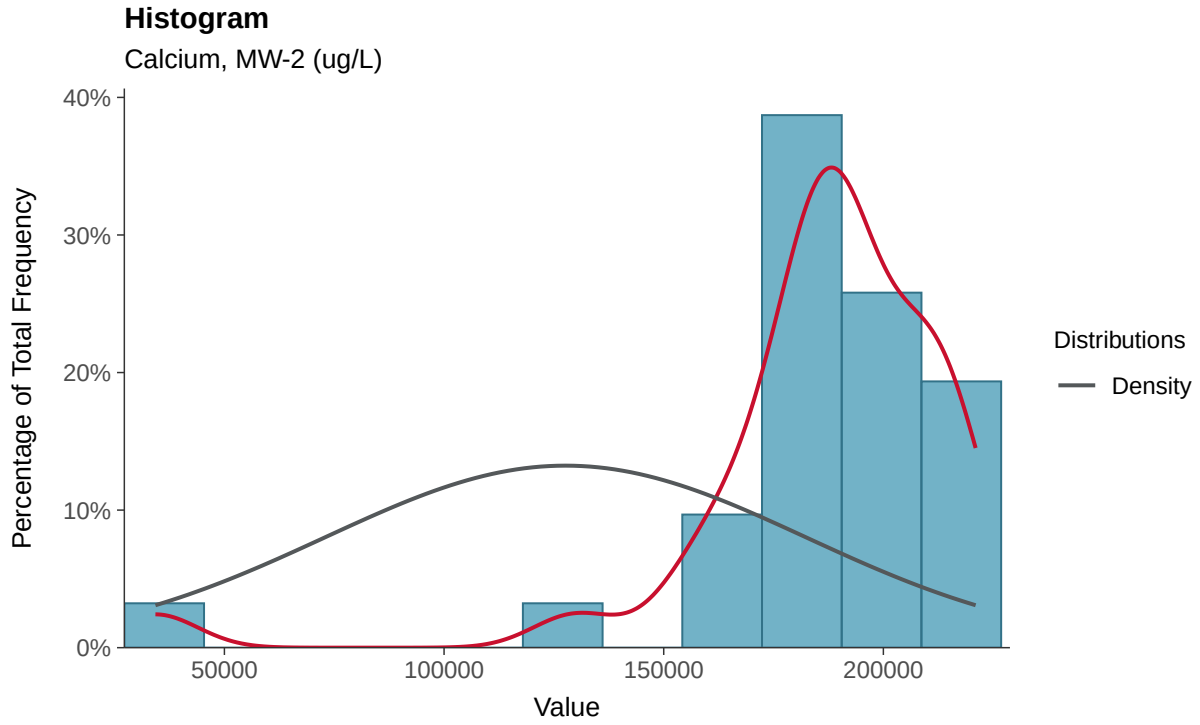
Boron, MW-2 (ug/L)



App. III: Calcium, MW-2

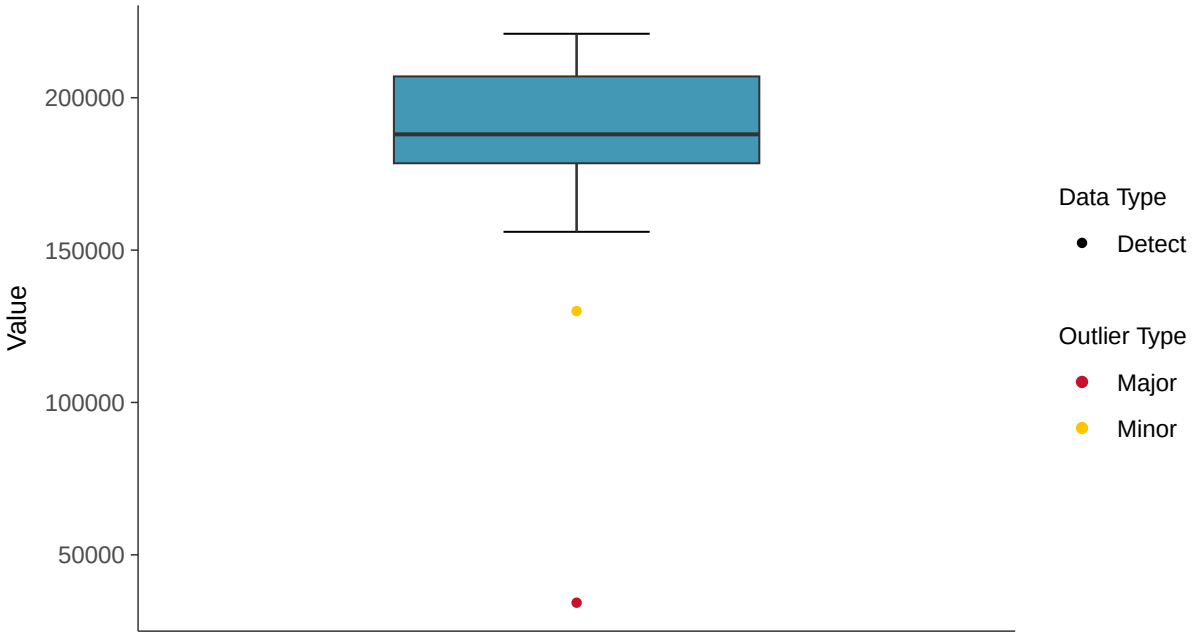
ID: 5_2_107





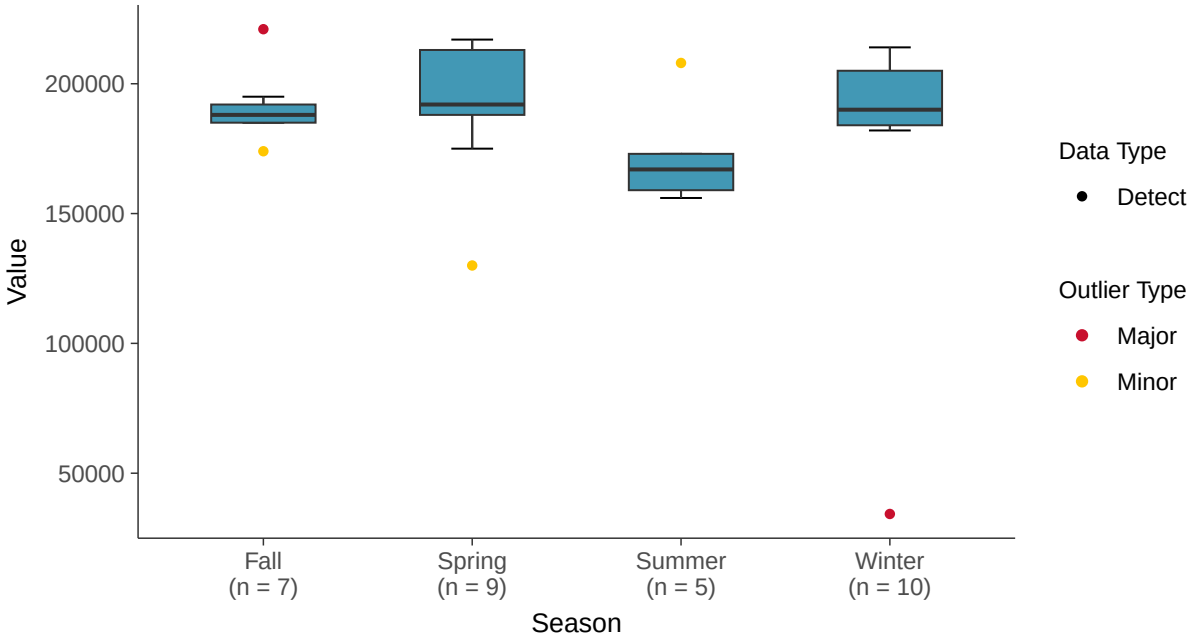
Boxplot

Calcium, MW-2 (ug/L)



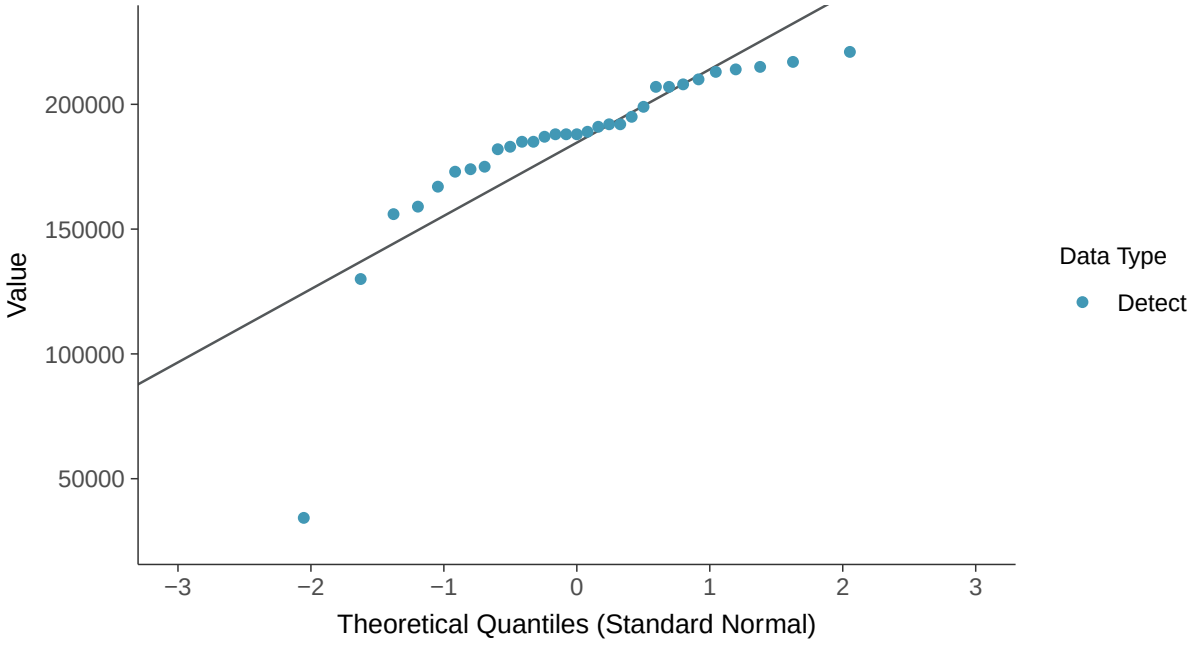
Boxplot by Season

Calcium, MW-2 (ug/L)



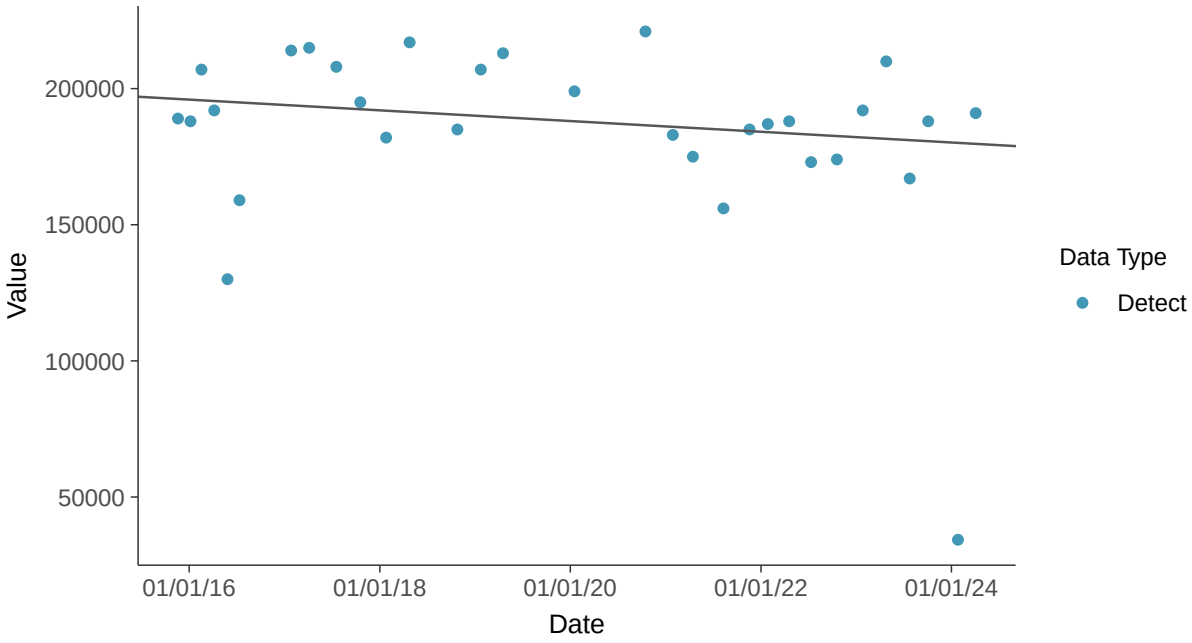
Normal Q-Q plot

Calcium, MW-2 (ug/L)



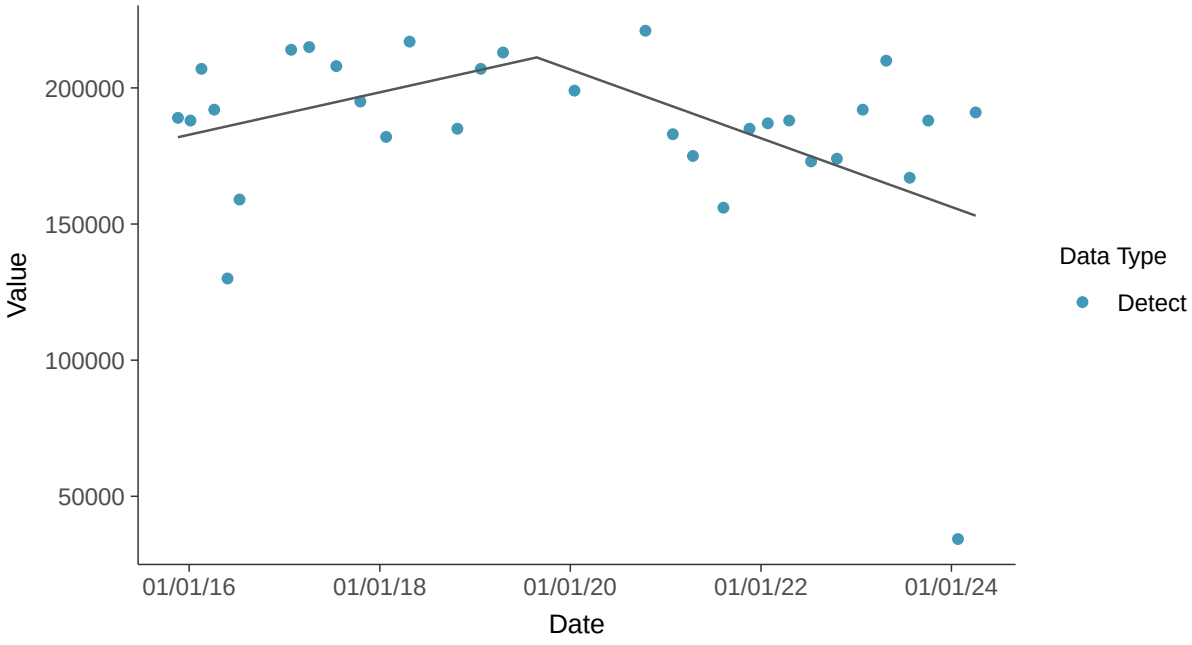
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-2 (ug/L)



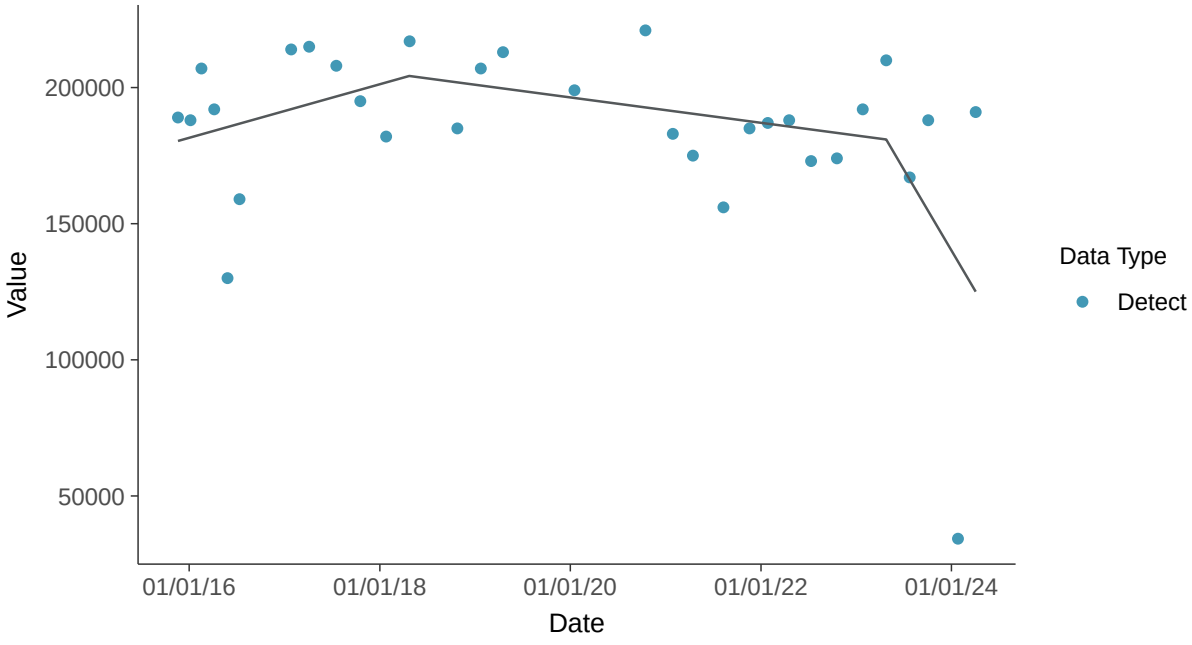
Trend Regression: Piecewise Linear-Linear

Calcium, MW-2 (ug/L)



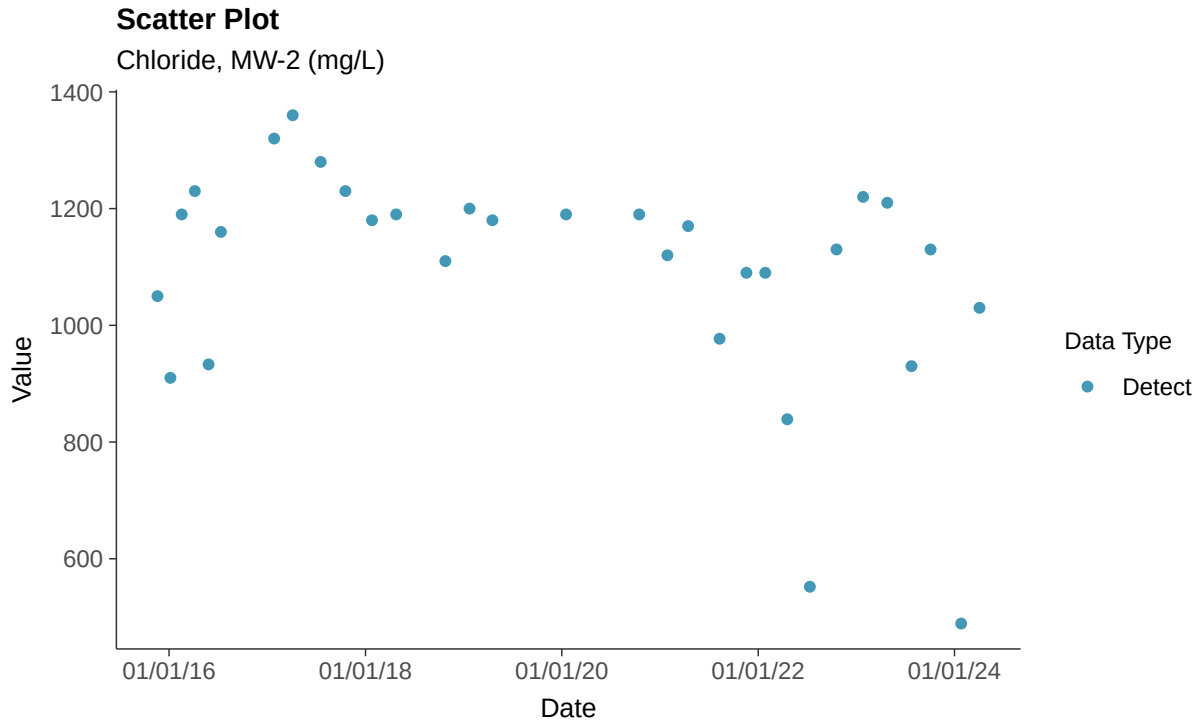
Trend Regression: Piecewise Linear-Linear-Linear

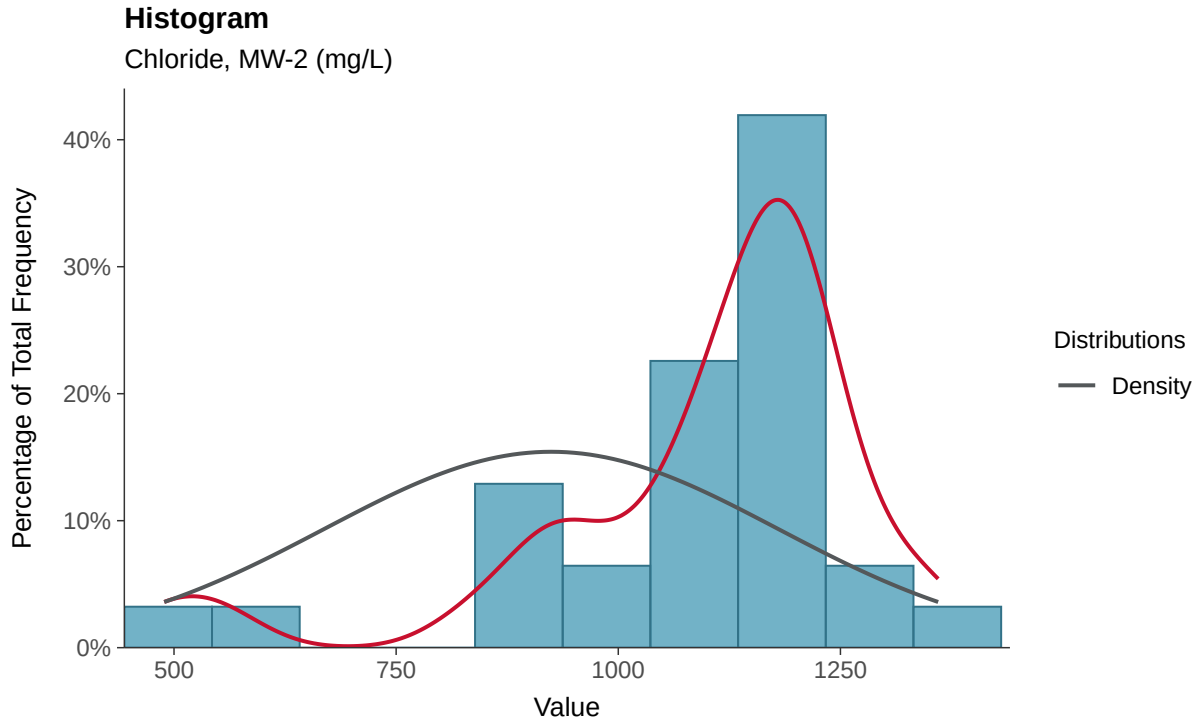
Calcium, MW-2 (ug/L)



App. III: Chloride, MW-2

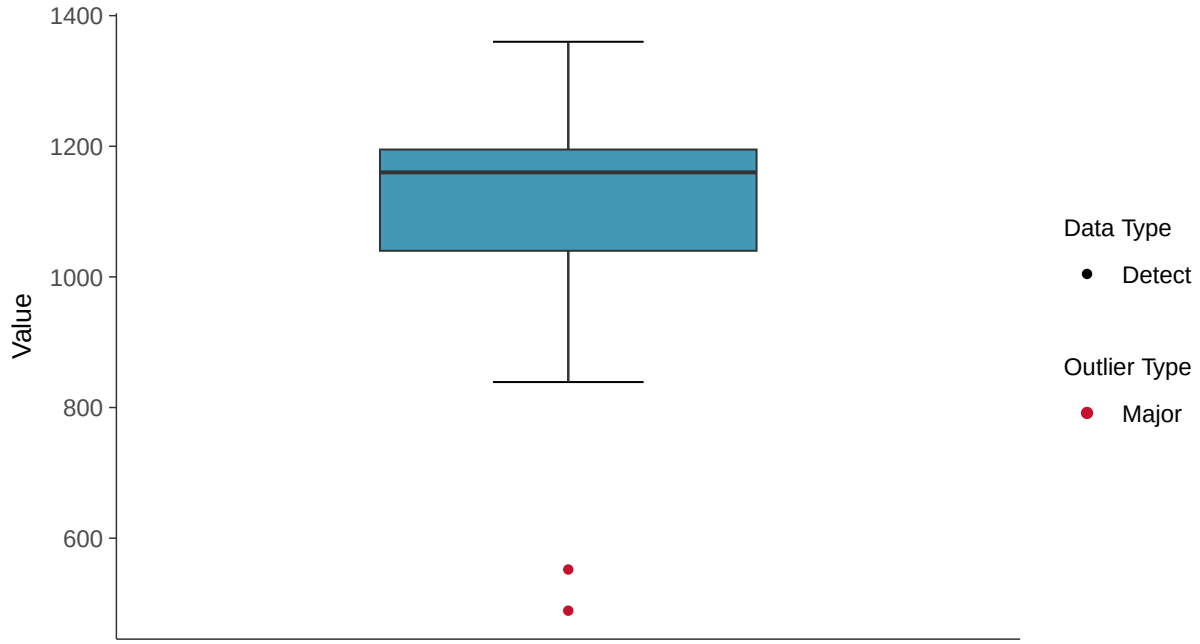
ID: 5_2_108





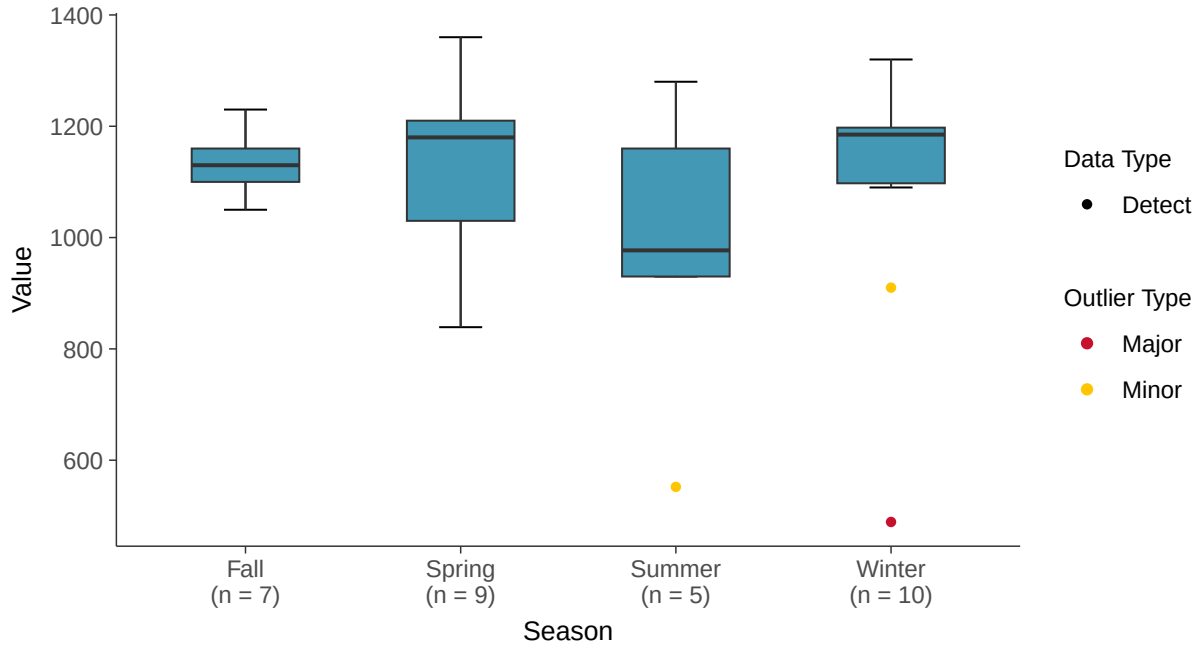
Boxplot

Chloride, MW-2 (mg/L)



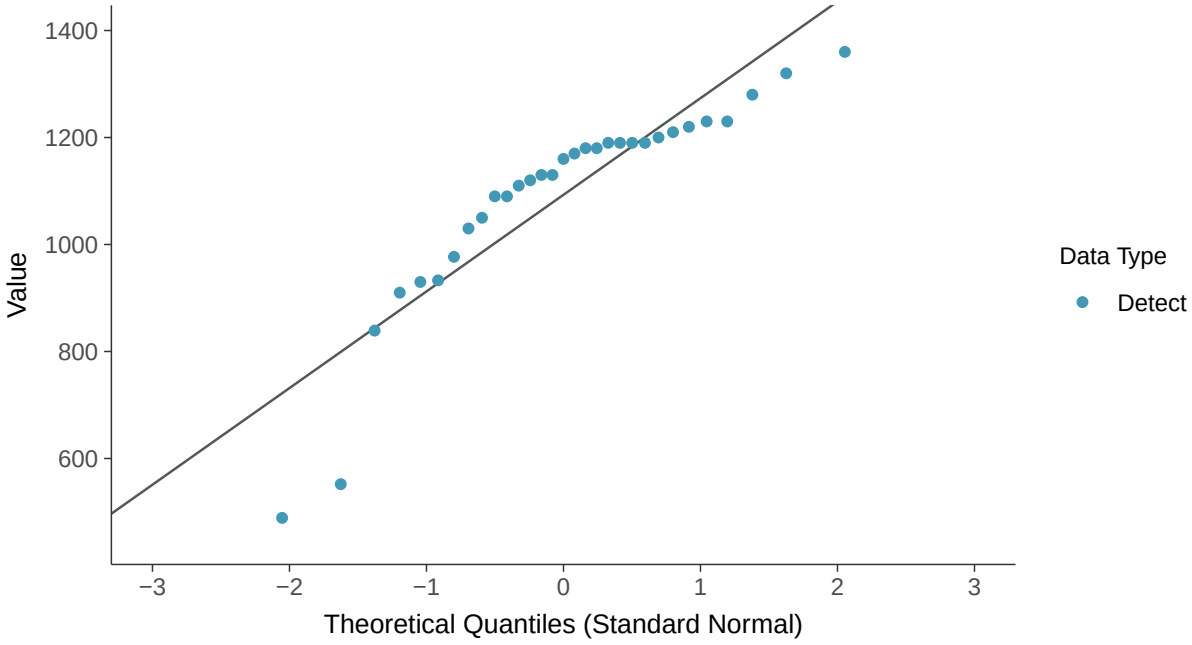
Boxplot by Season

Chloride, MW-2 (mg/L)



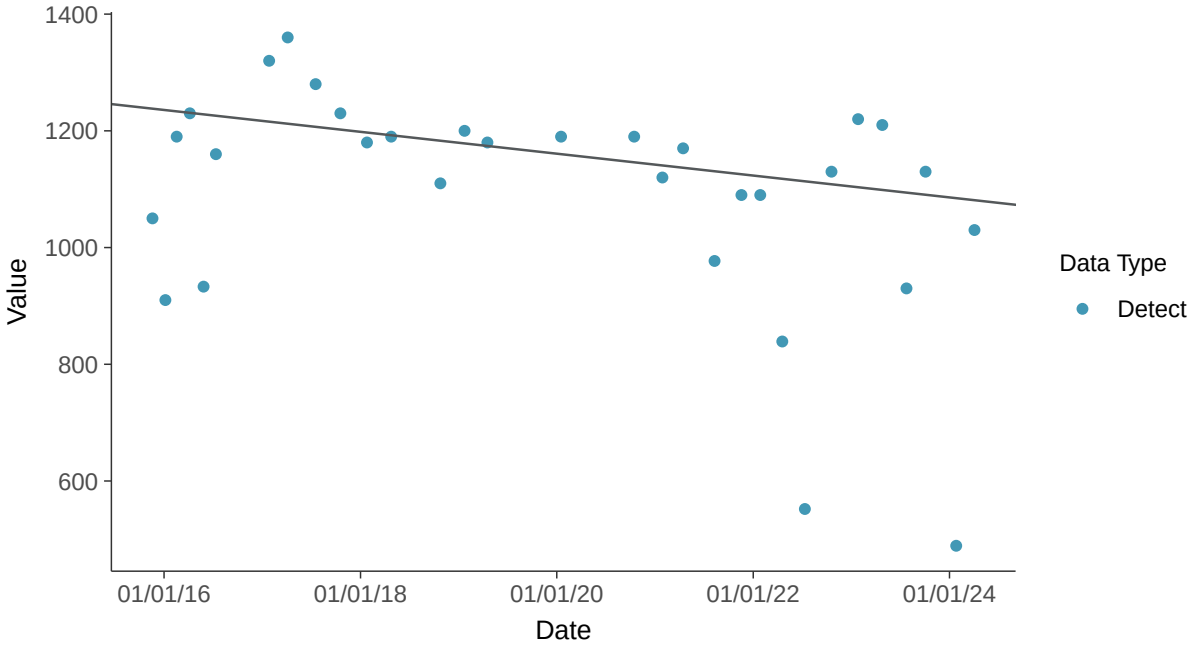
Normal Q-Q plot

Chloride, MW-2 (mg/L)



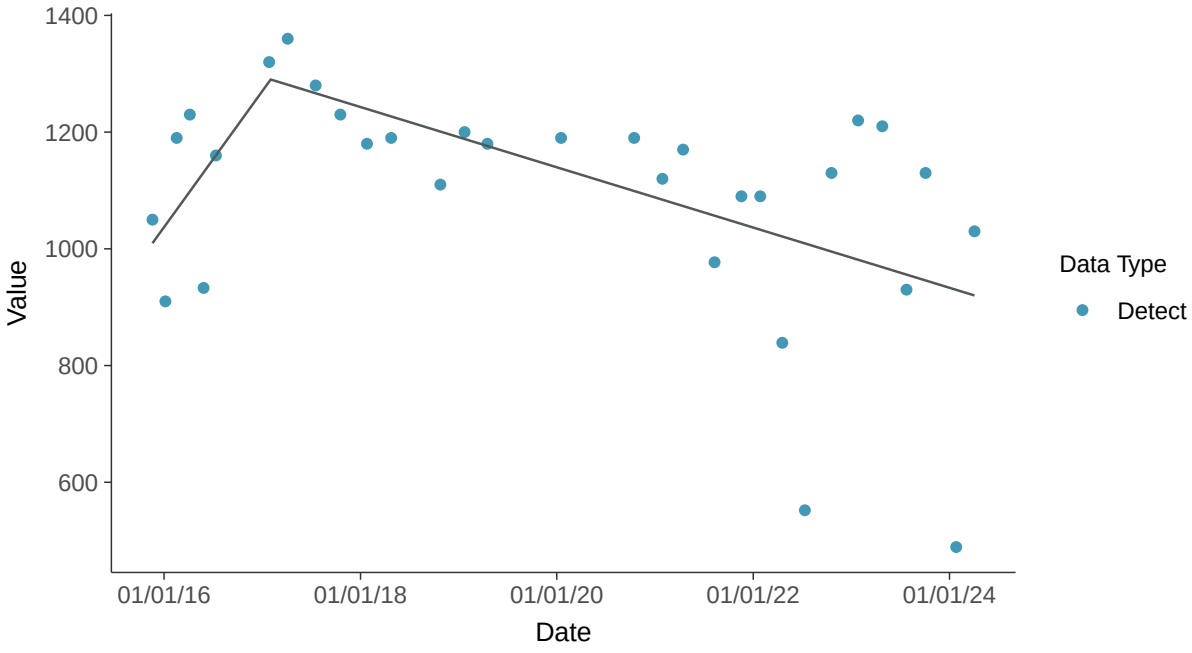
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-2 (mg/L)



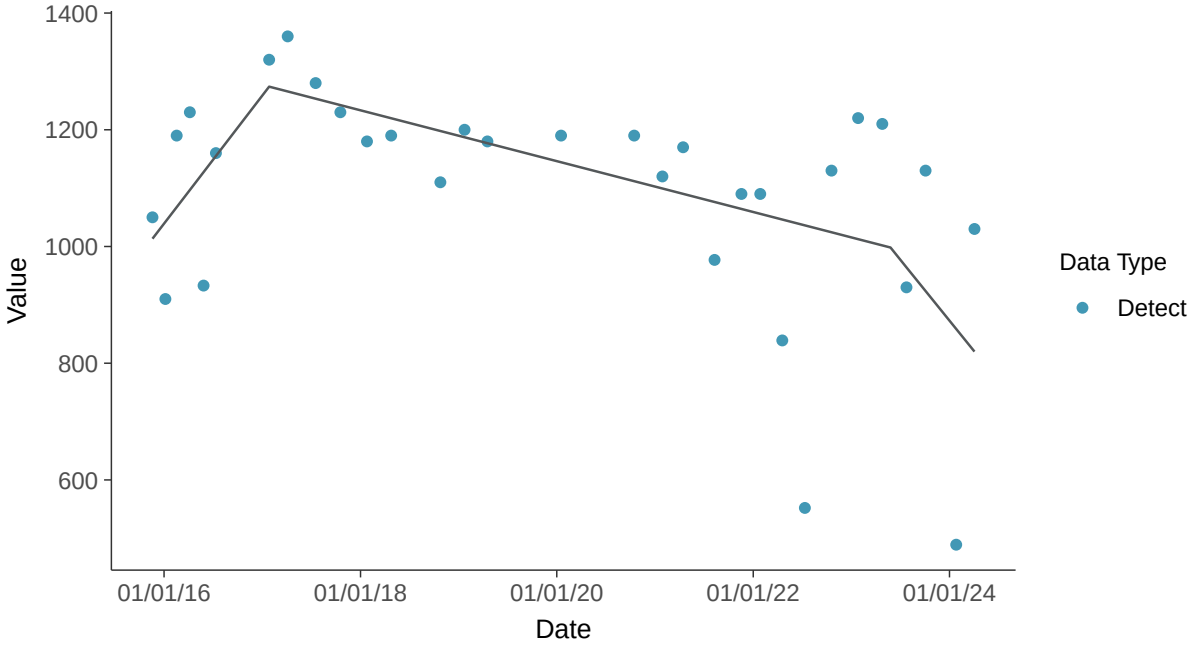
Trend Regression: Piecewise Linear-Linear

Chloride, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride, MW-2 (mg/L)

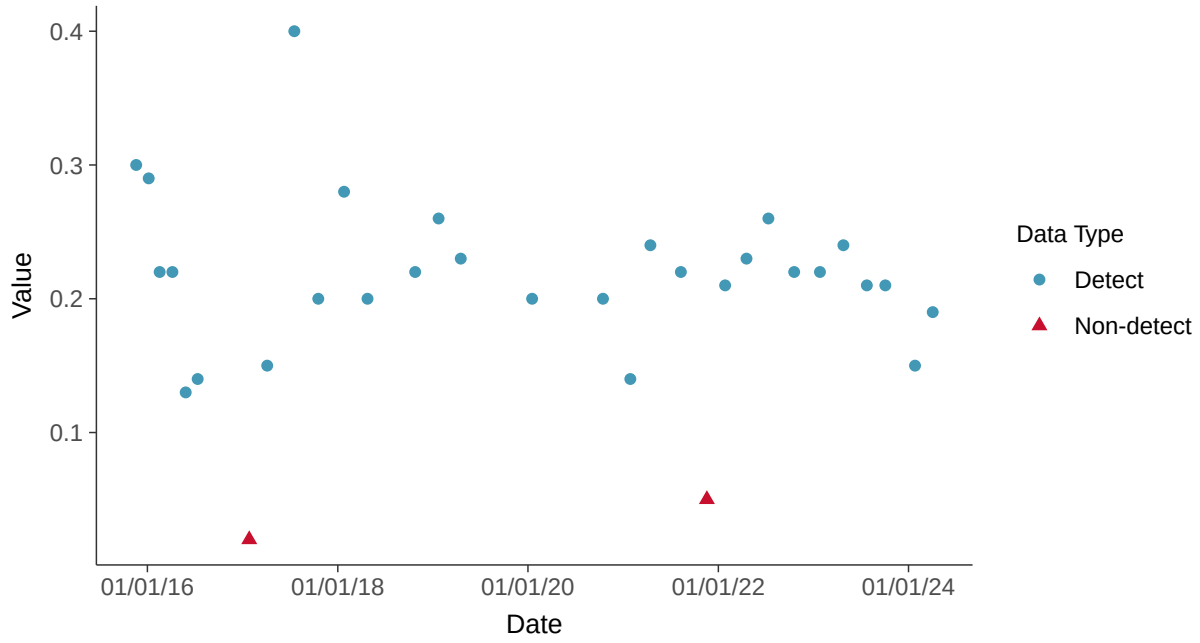


App. III: Fluoride, MW-2

ID: 5_2_112

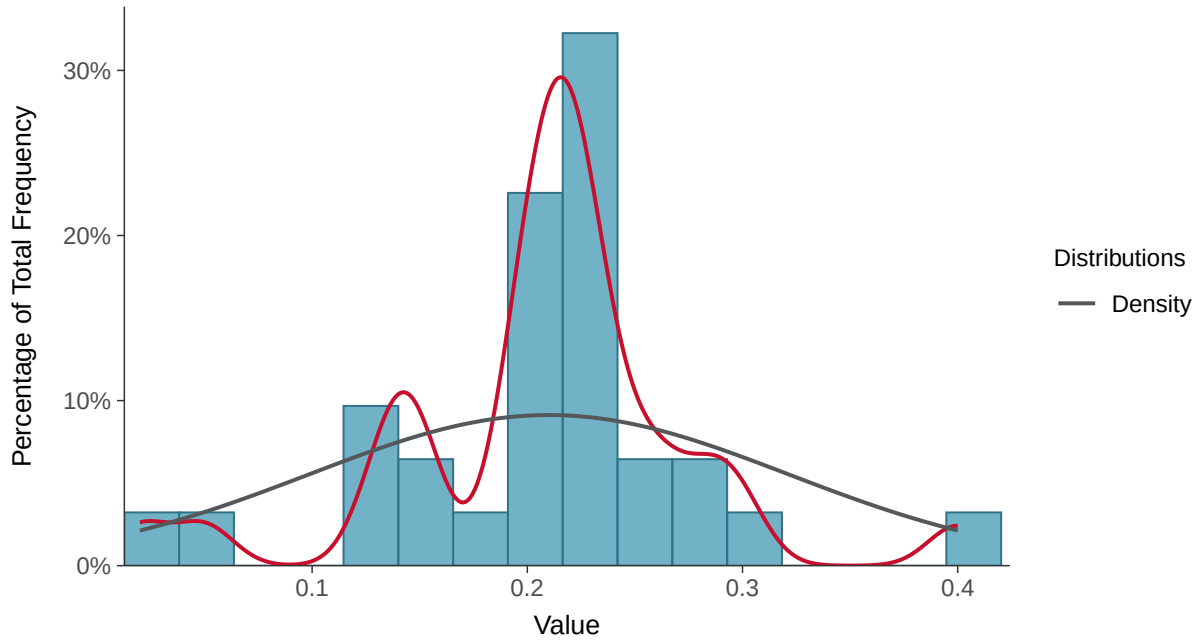
Scatter Plot

Fluoride, MW-2 (mg/L)



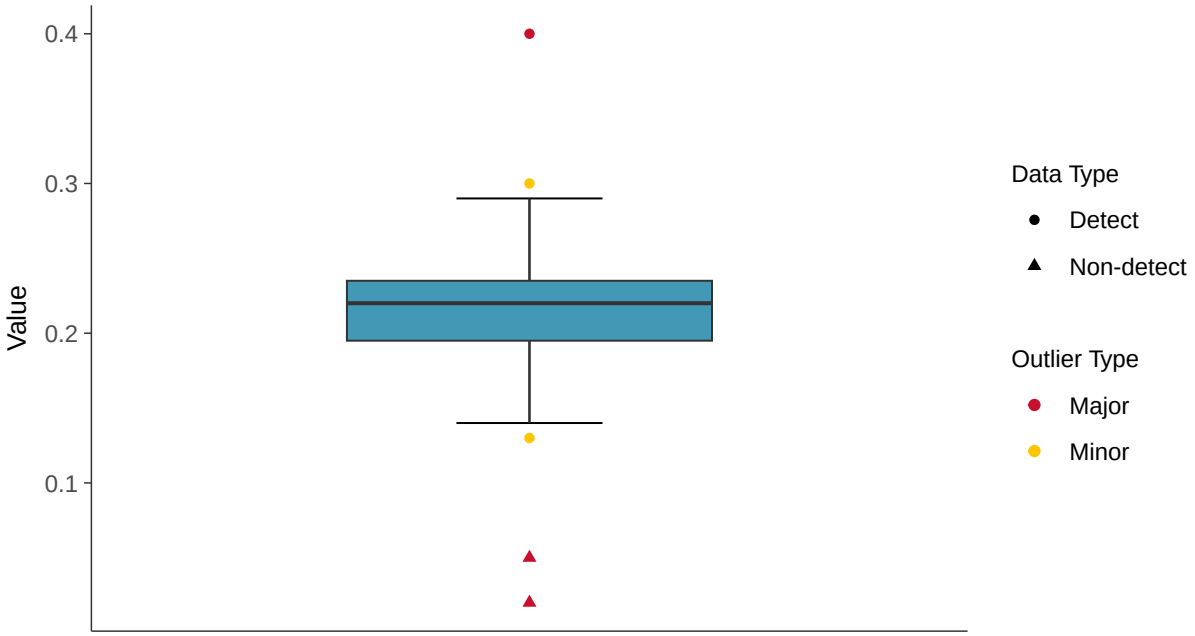
Histogram

Fluoride, MW-2 (mg/L)



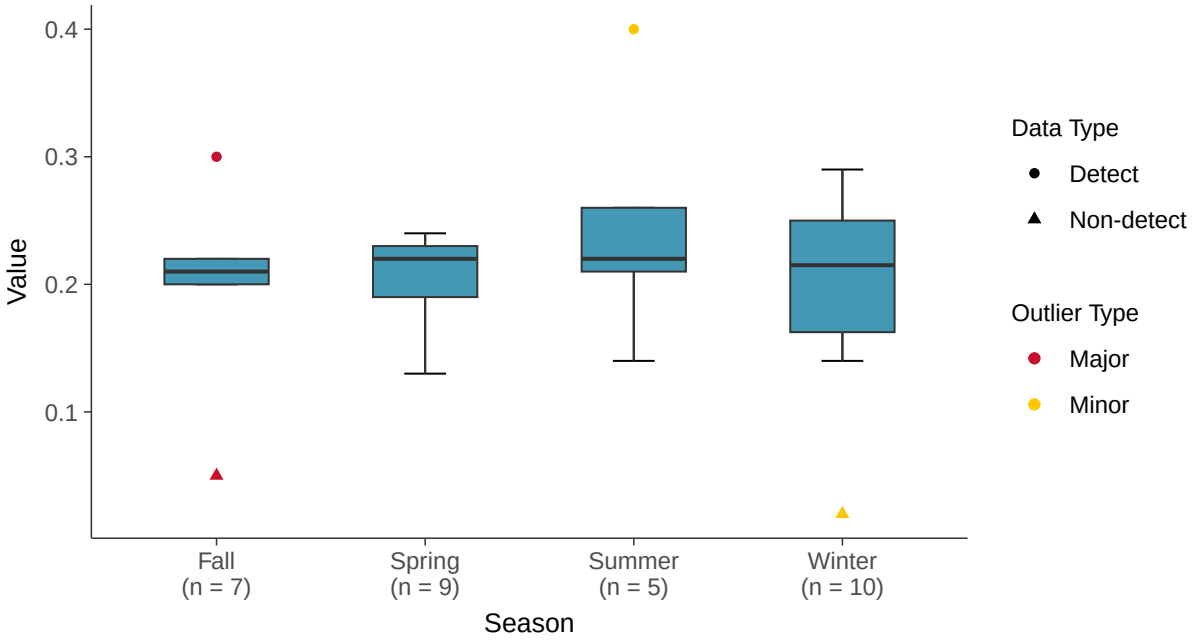
Boxplot

Fluoride, MW-2 (mg/L)



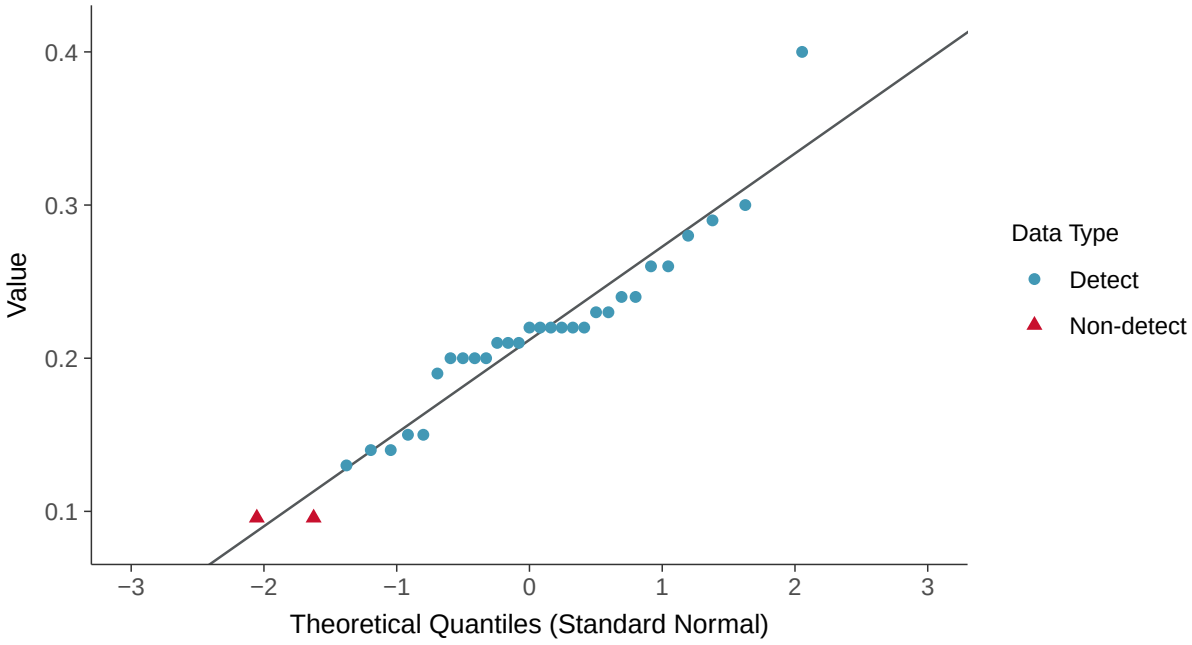
Boxplot by Season

Fluoride, MW-2 (mg/L)



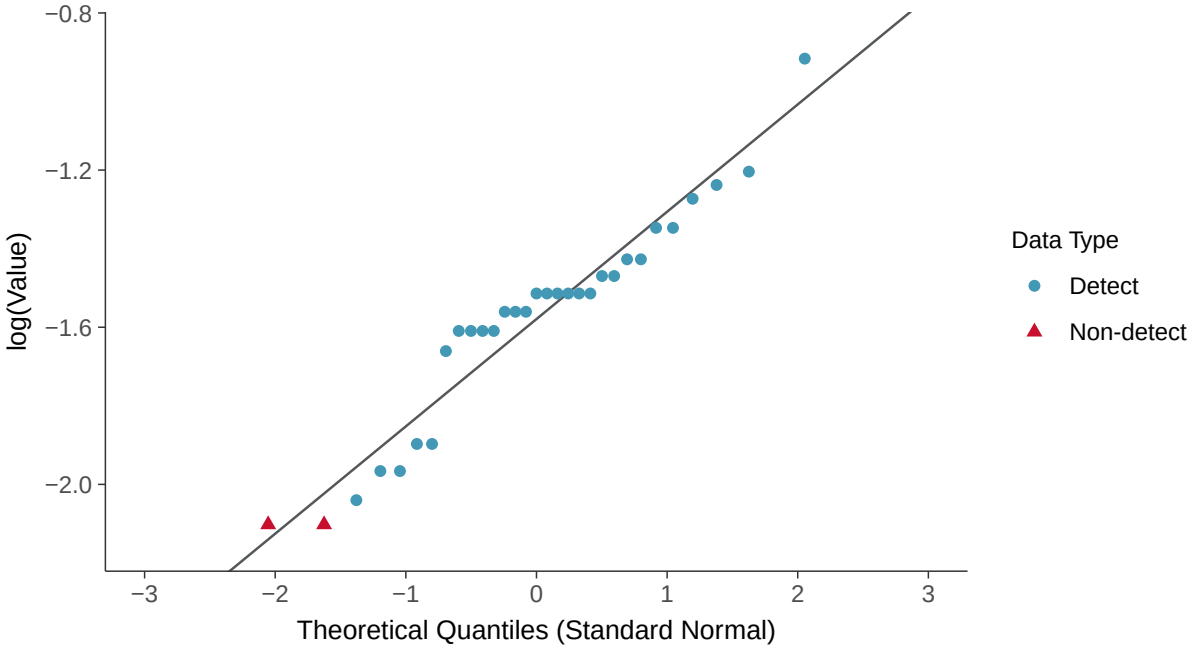
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



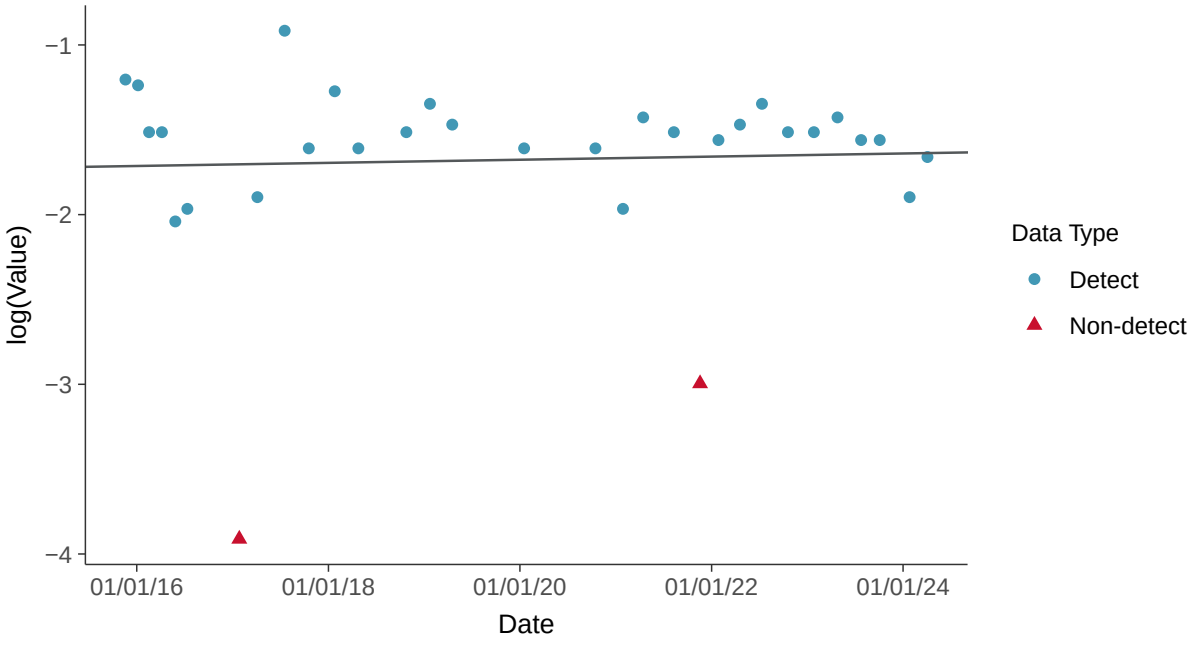
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



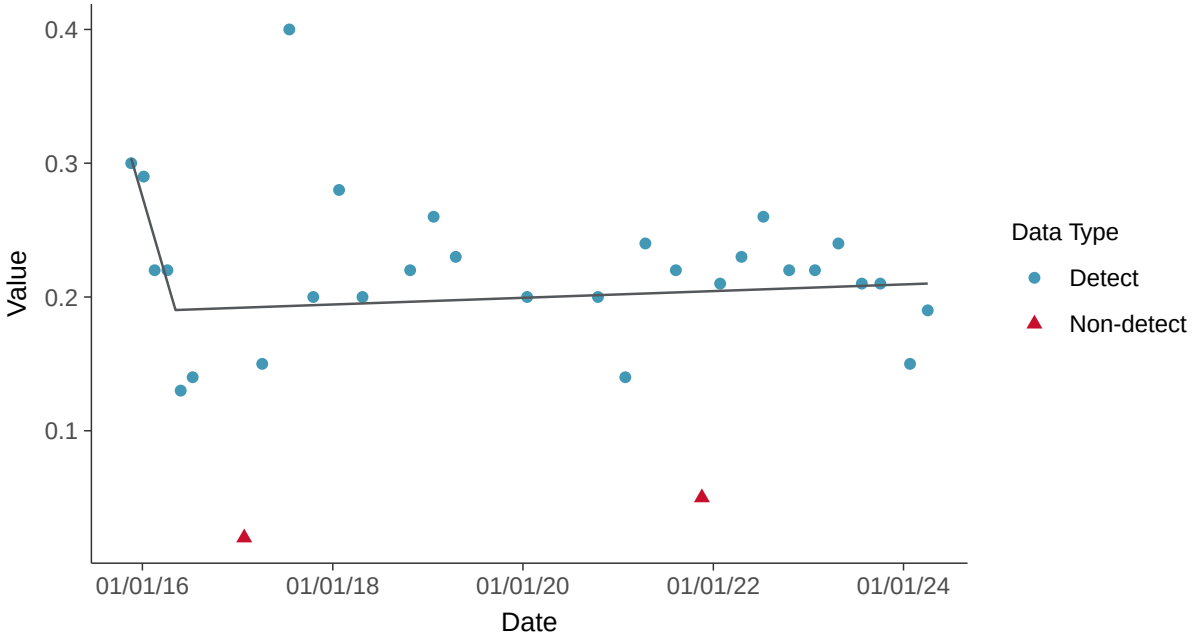
Trend Regression: Lognormal MLE

Fluoride, MW-2 (mg/L)



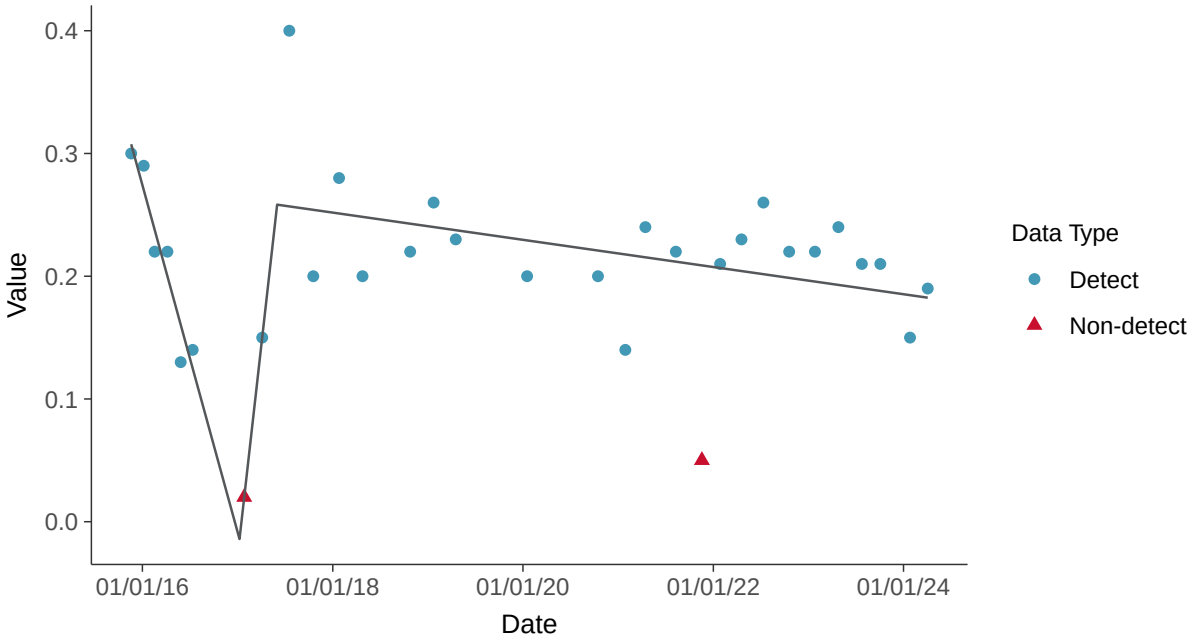
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-2 (mg/L)

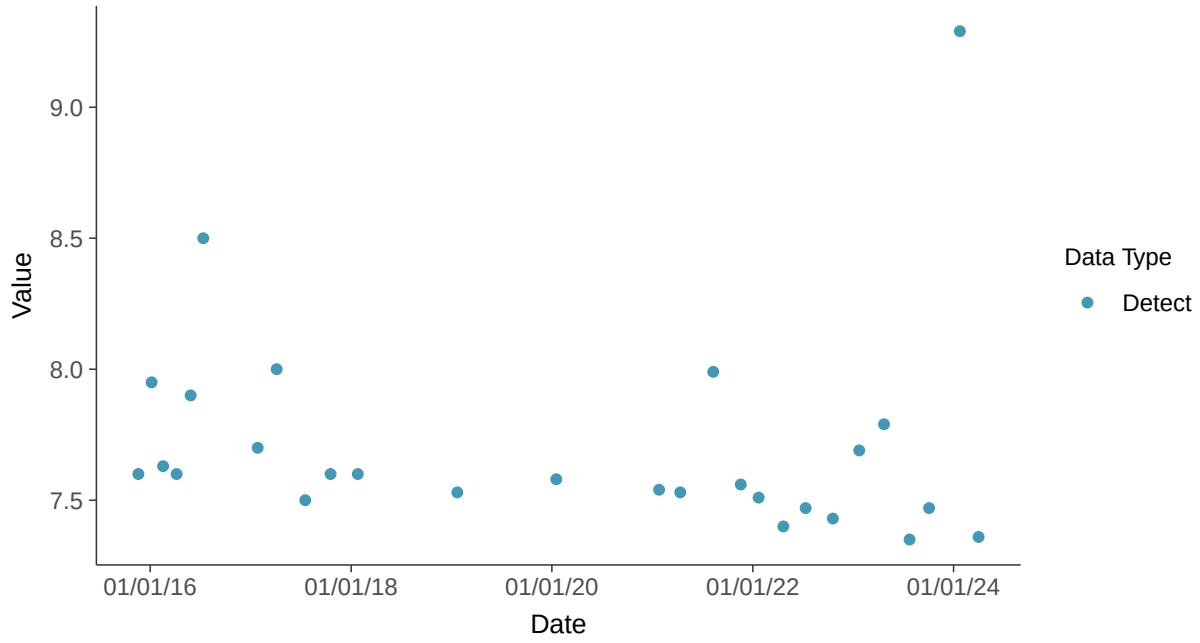


App. III: pH (Field), MW-2

ID: 5_2_118

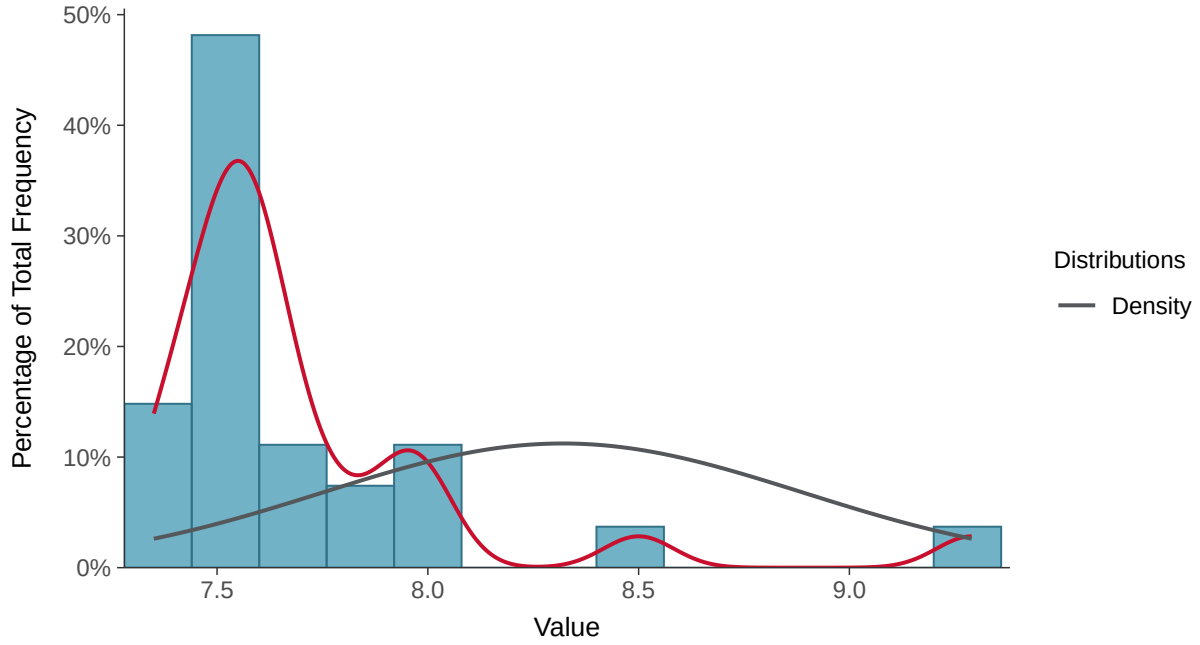
Scatter Plot

pH (Field), MW-2 (S.U.)



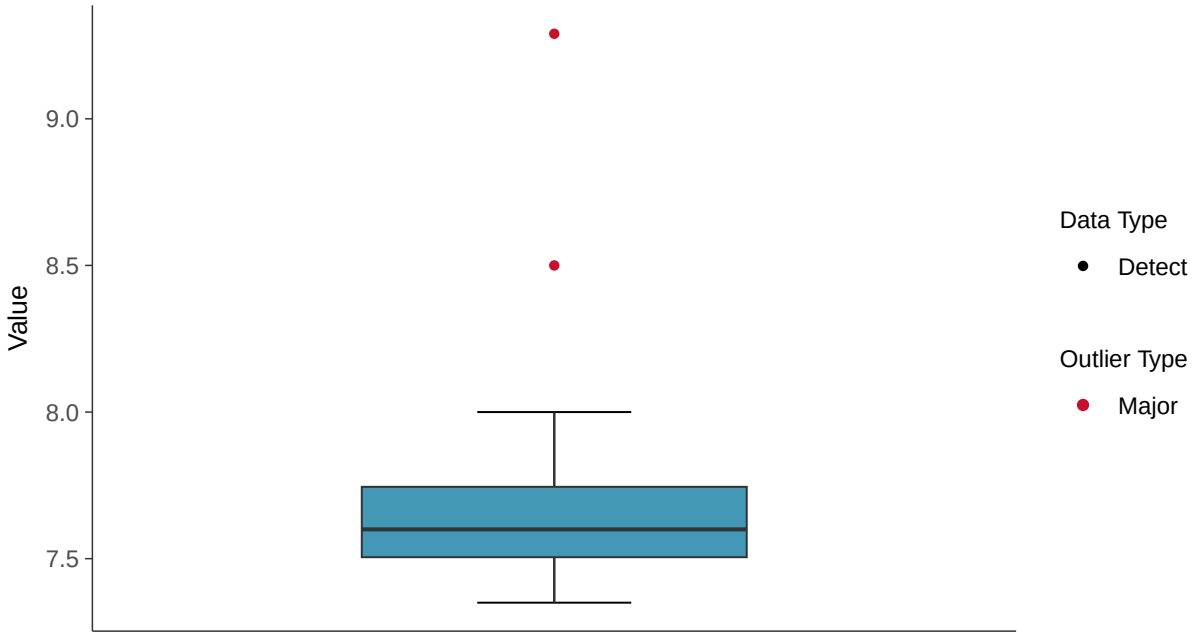
Histogram

pH (Field), MW-2 (S.U.)



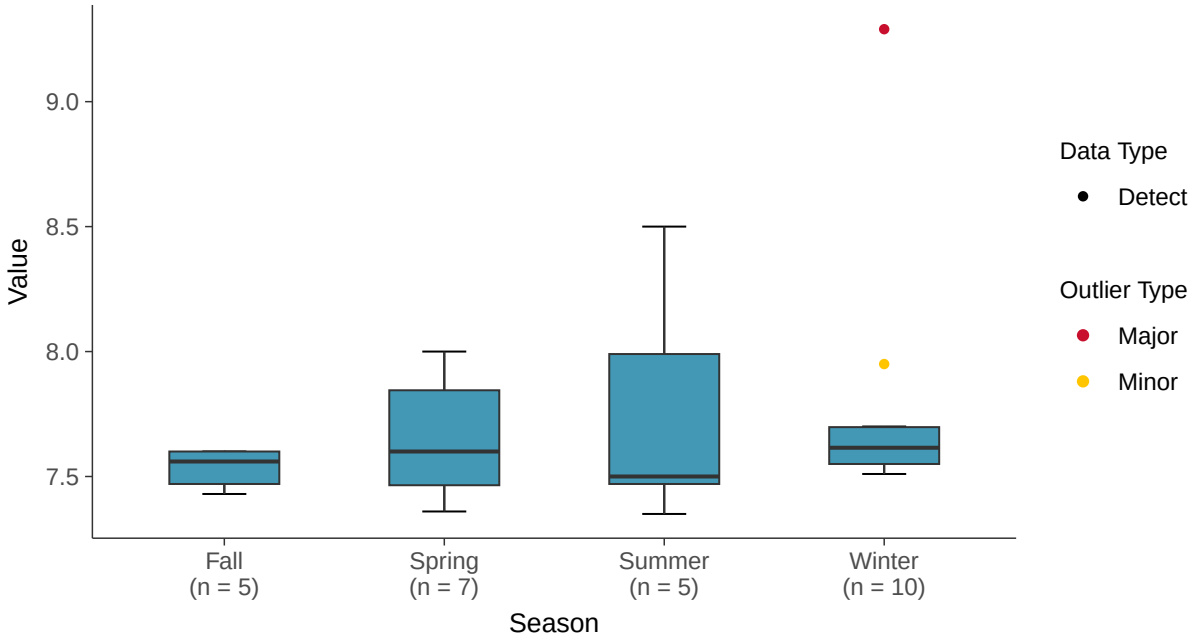
Boxplot

pH (Field), MW-2 (S.U.)



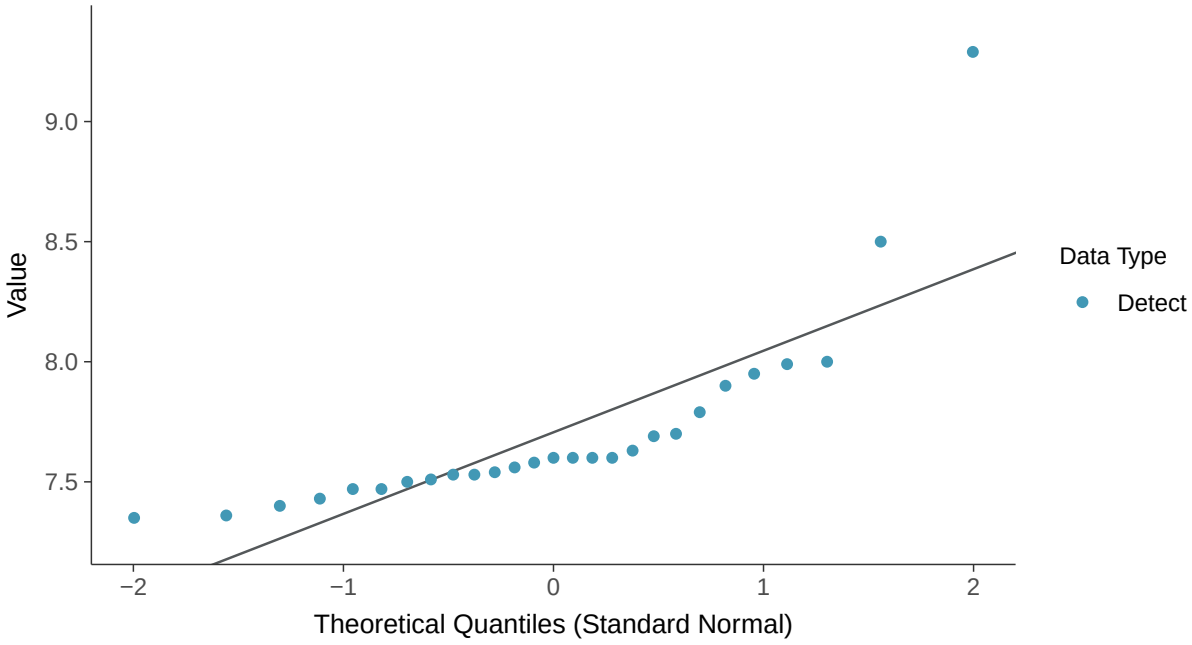
Boxplot by Season

pH (Field), MW-2 (S.U.)



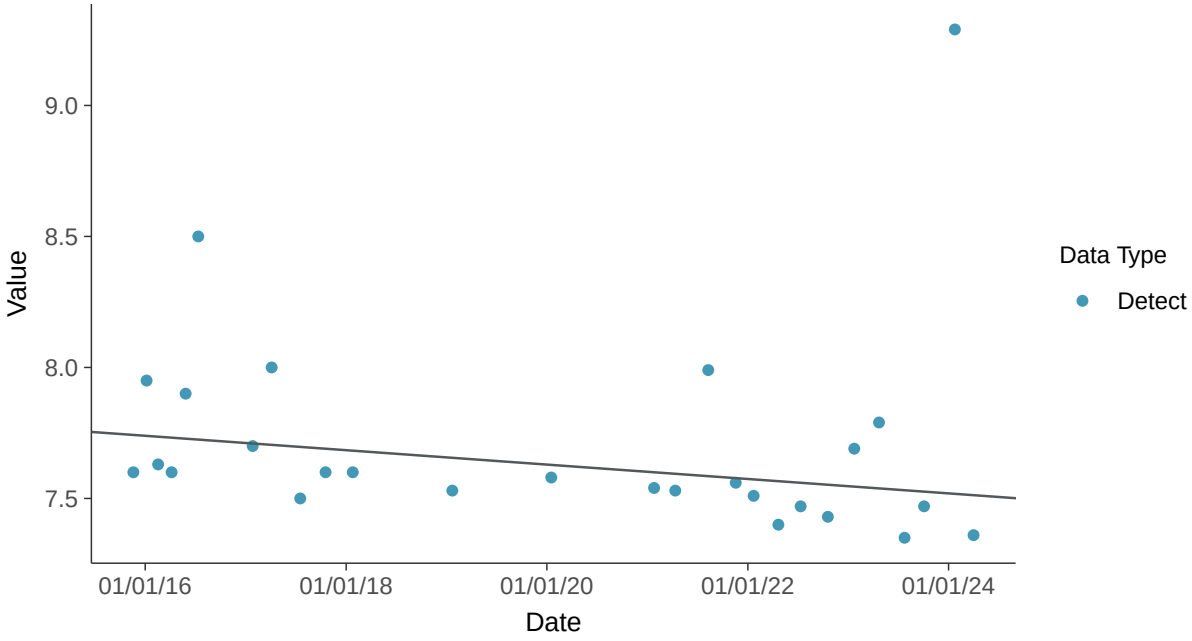
Normal Q-Q plot

pH (Field), MW-2 (S.U.)



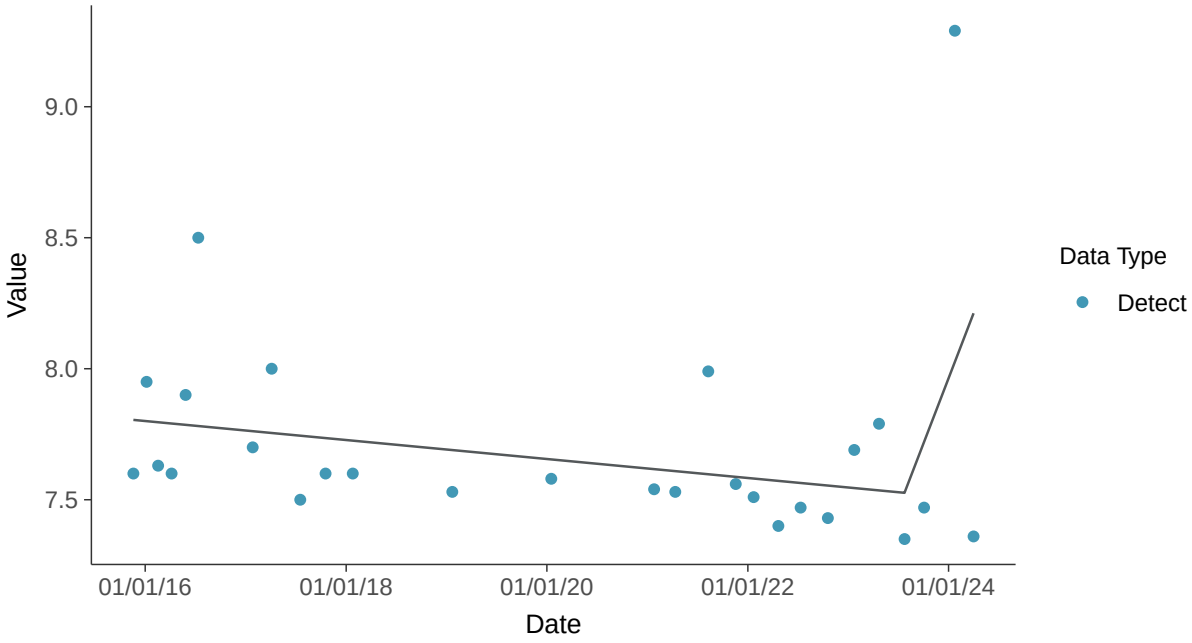
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-2 (S.U.)



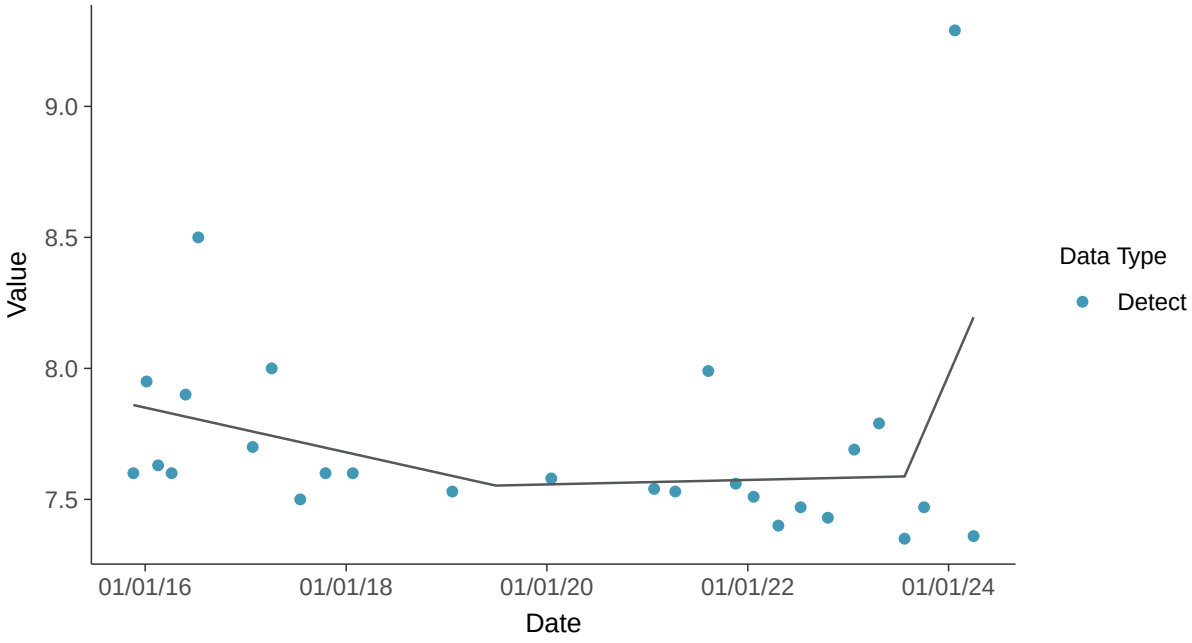
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-2 (S.U.)



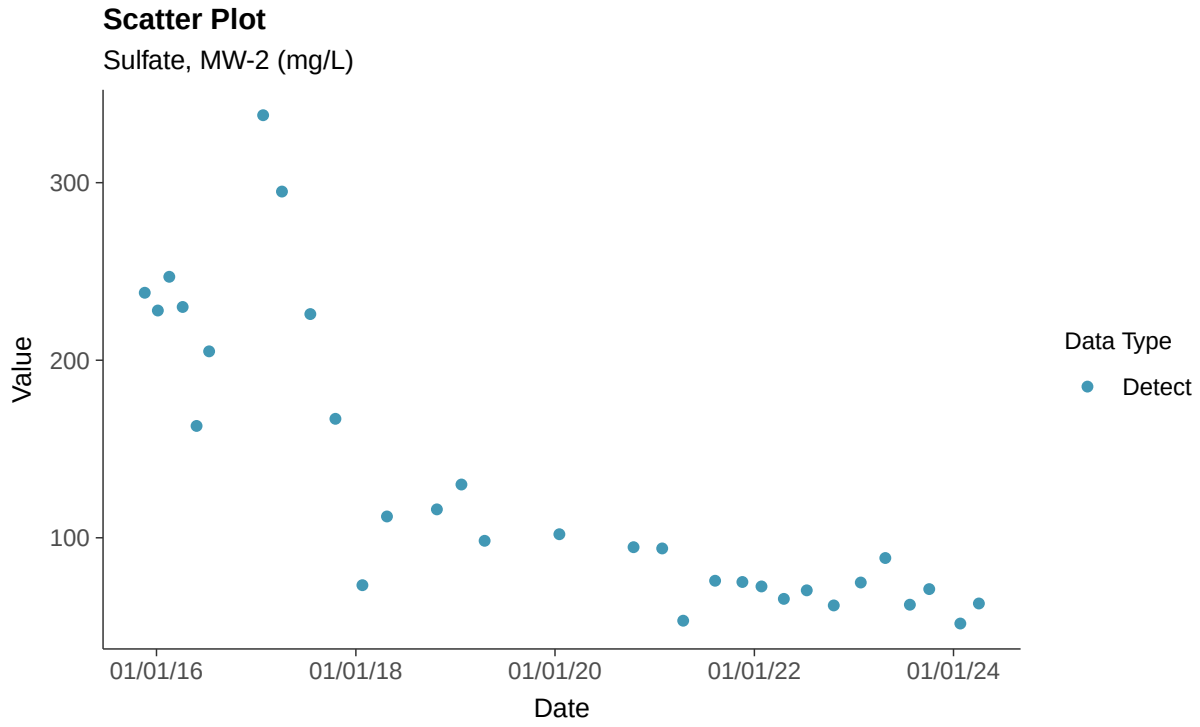
Trend Regression: Piecewise Linear-Linear-Linear

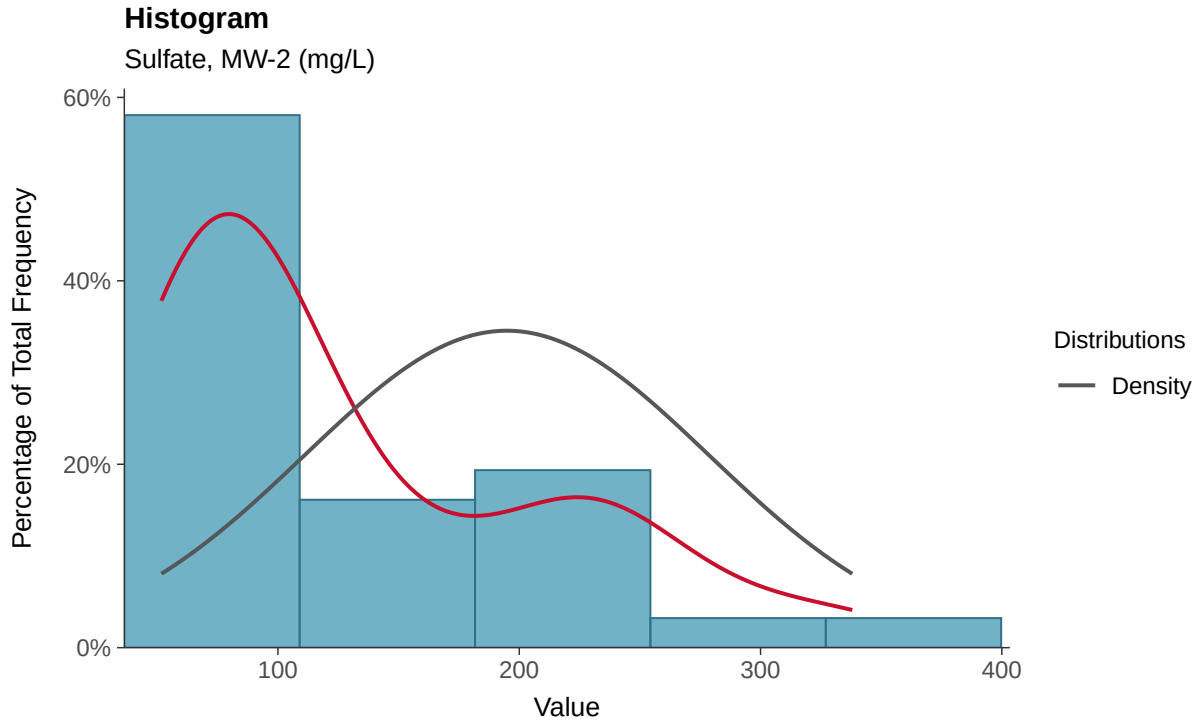
pH (Field), MW-2 (S.U.)



App. III: Sulfate, MW-2

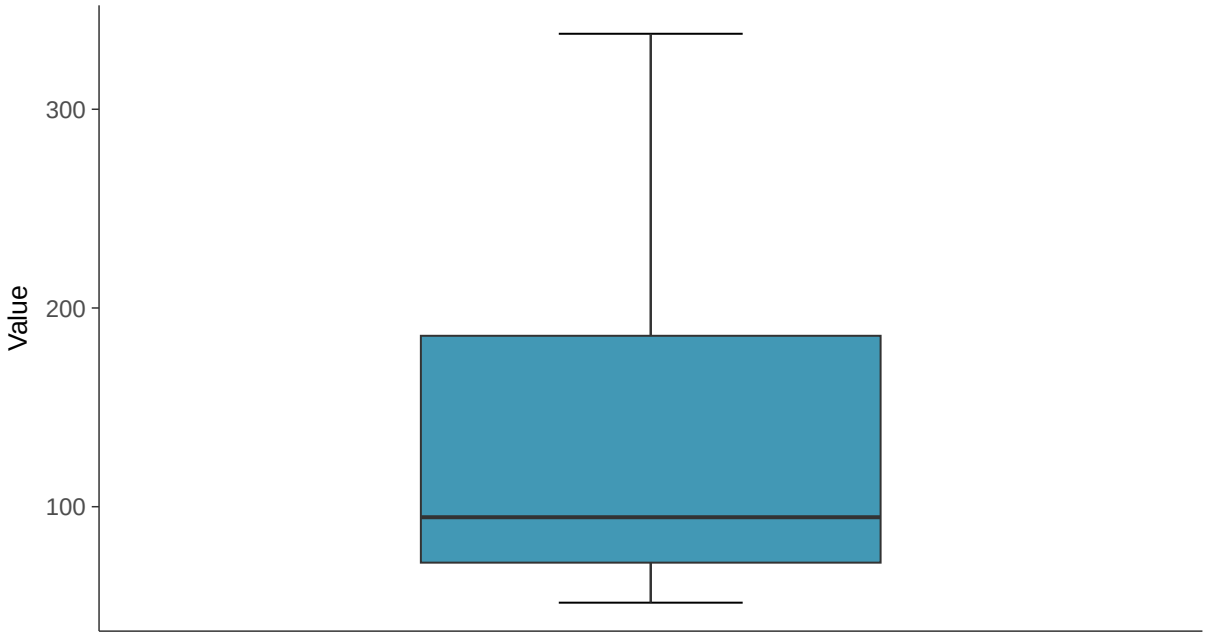
ID: 5_2_123





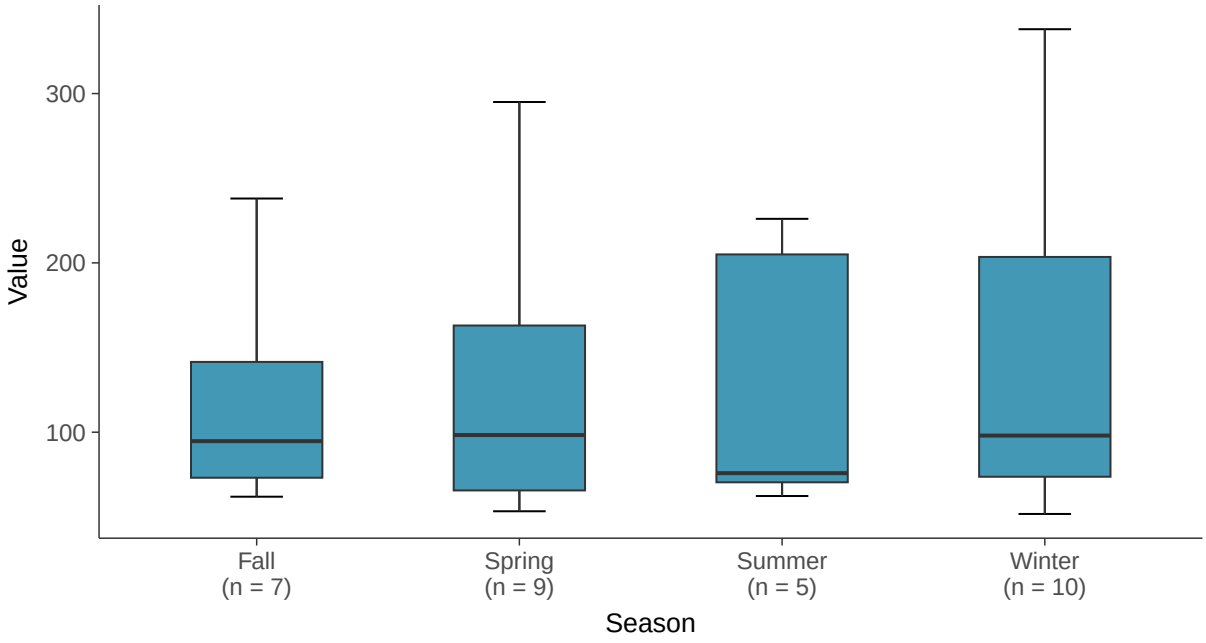
Boxplot

Sulfate, MW-2 (mg/L)



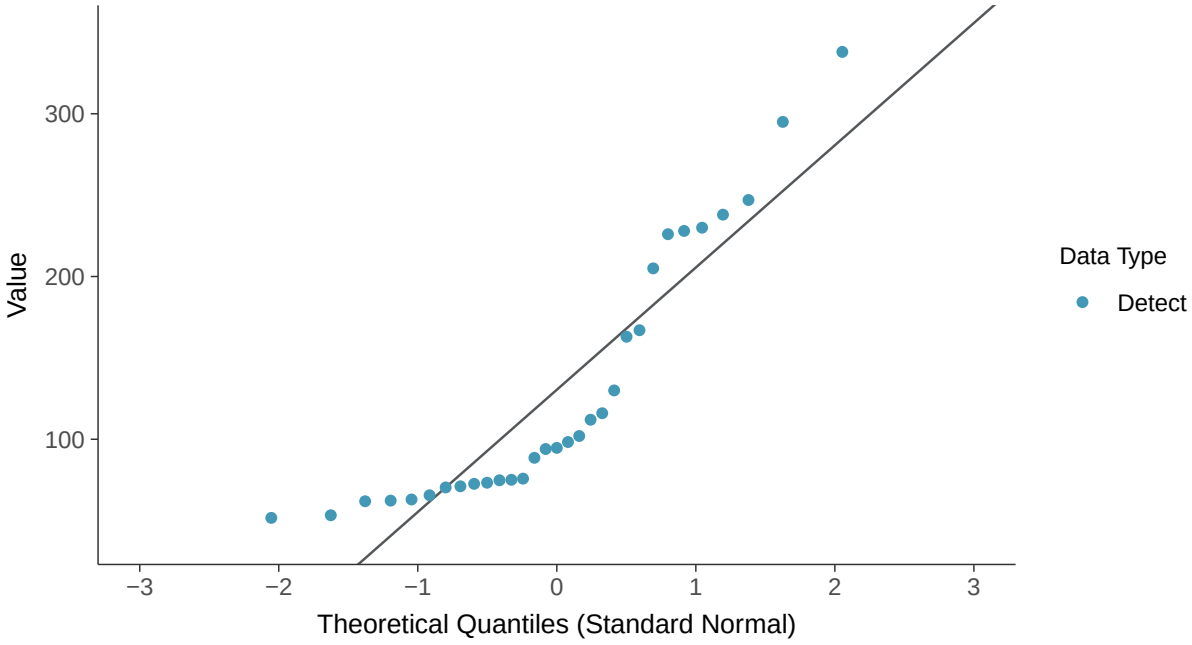
Boxplot by Season

Sulfate, MW-2 (mg/L)



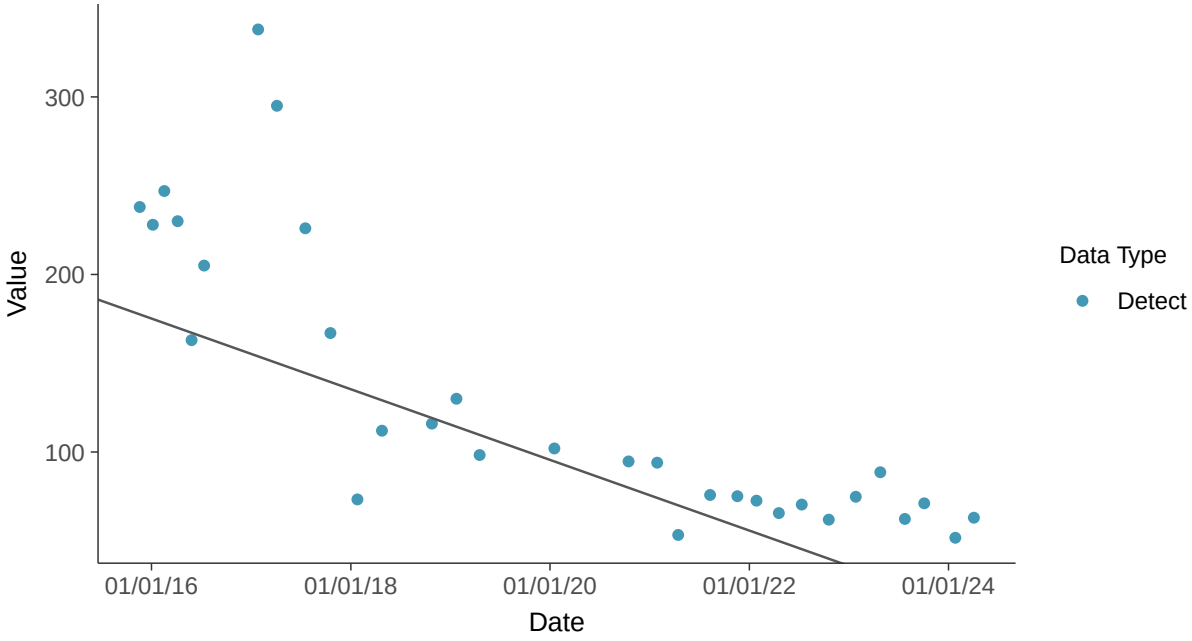
Normal Q-Q plot

Sulfate, MW-2 (mg/L)



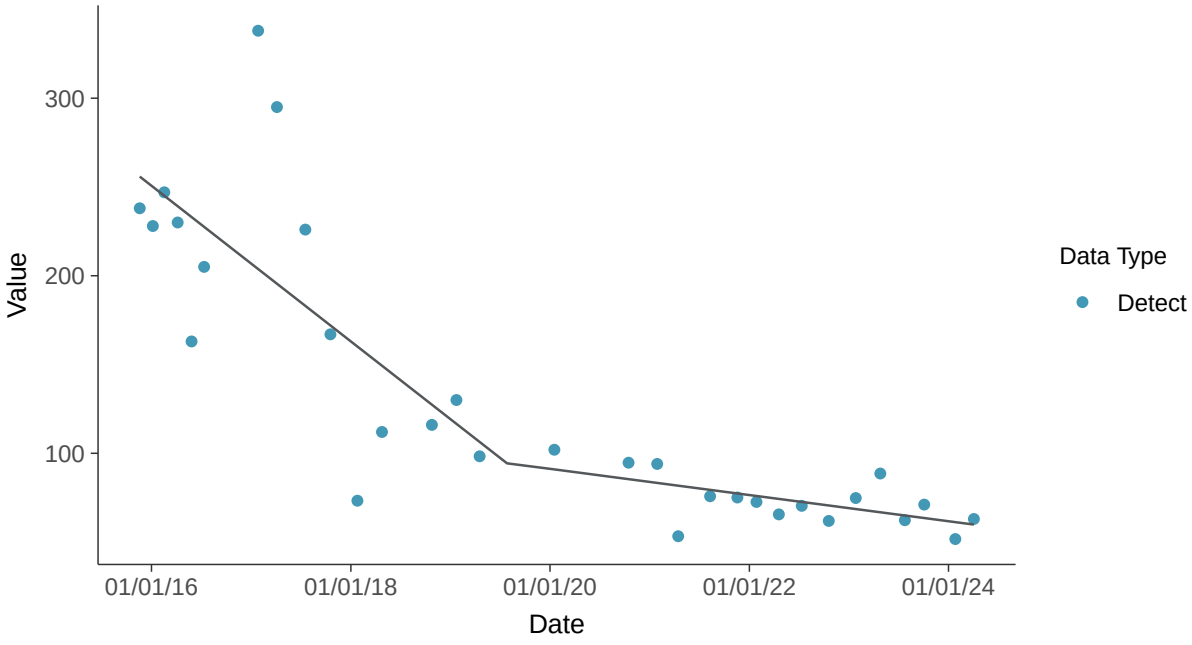
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-2 (mg/L)



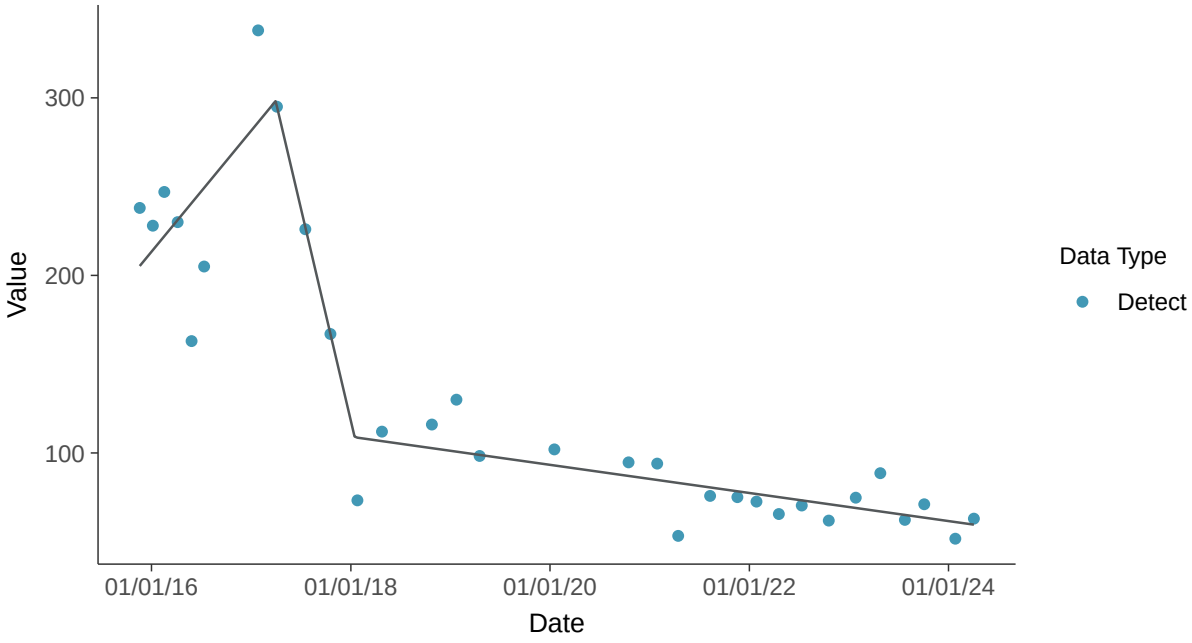
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-2 (mg/L)

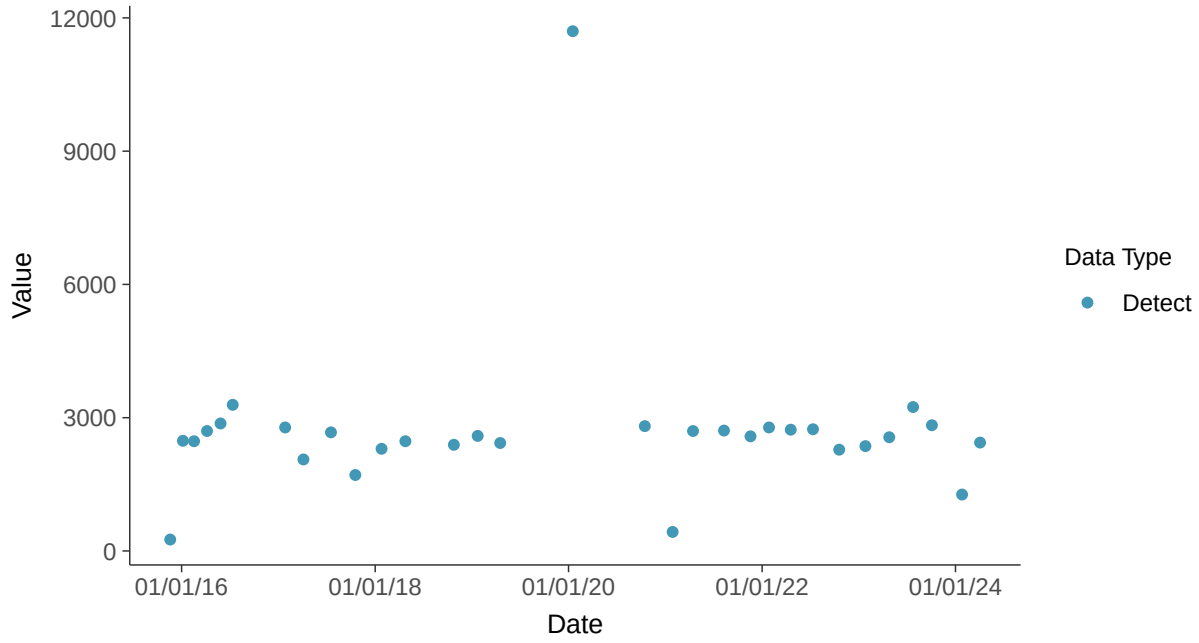


App. III: Total Dissolved Solids, MW-2

ID: 5_2_125

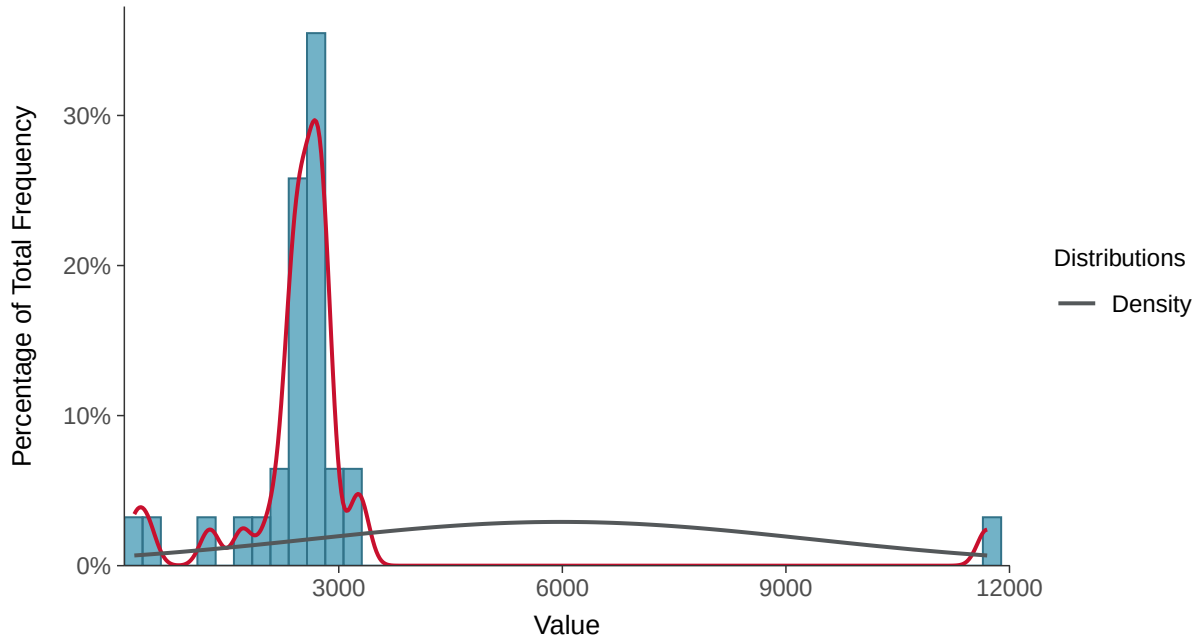
Scatter Plot

Total Dissolved Solids, MW-2 (mg/L)



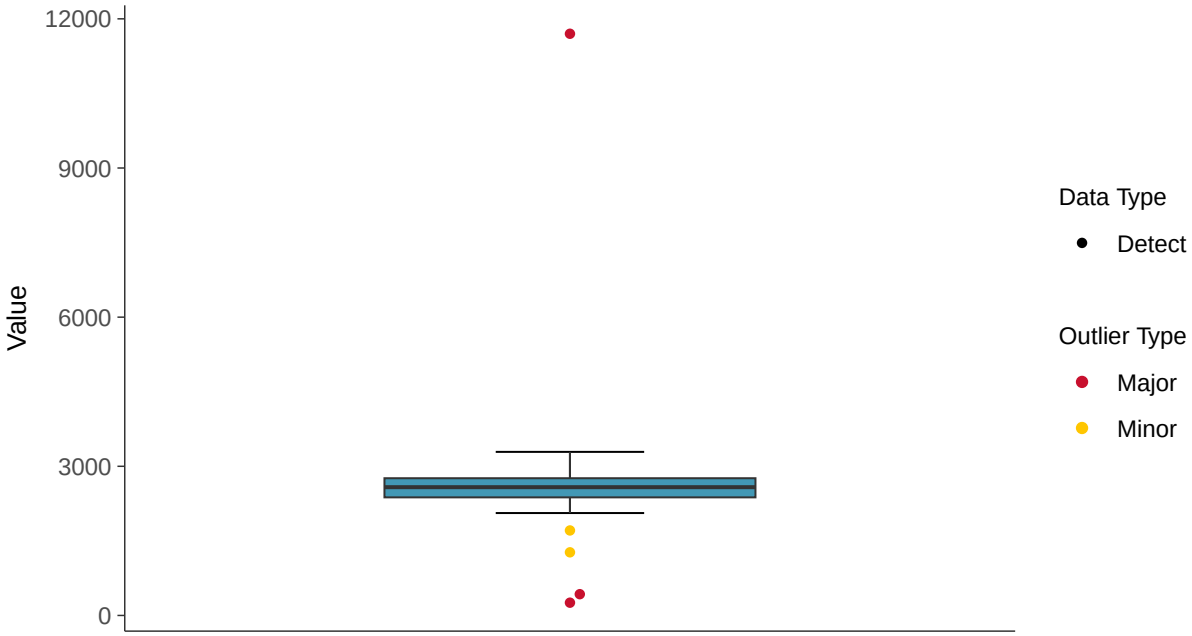
Histogram

Total Dissolved Solids, MW-2 (mg/L)



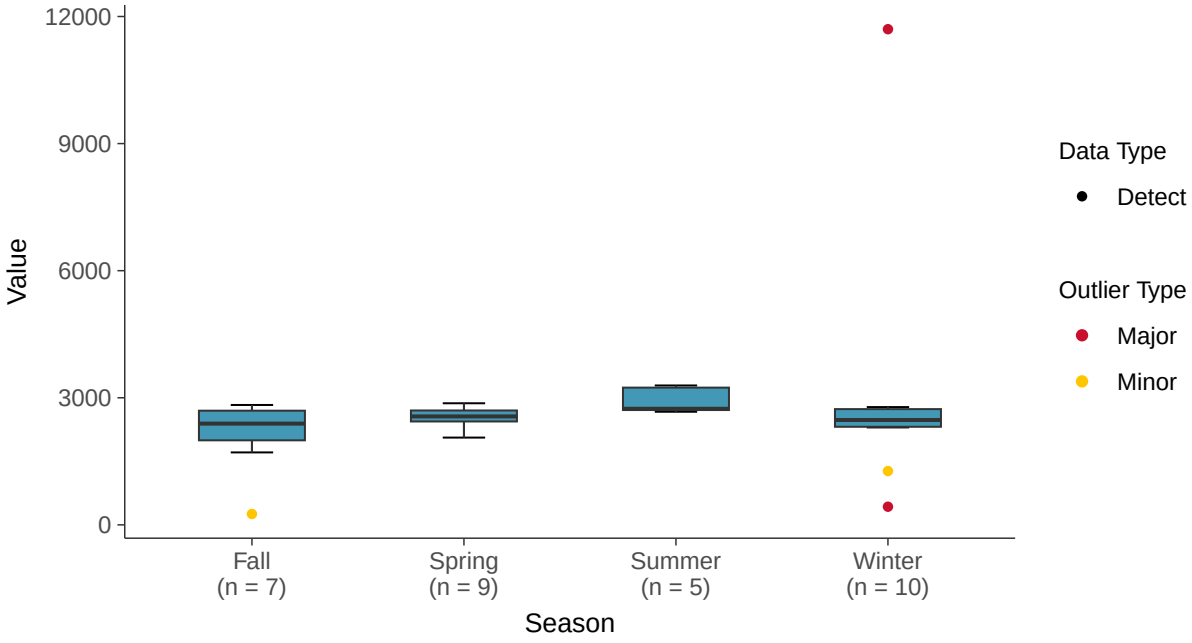
Boxplot

Total Dissolved Solids, MW-2 (mg/L)



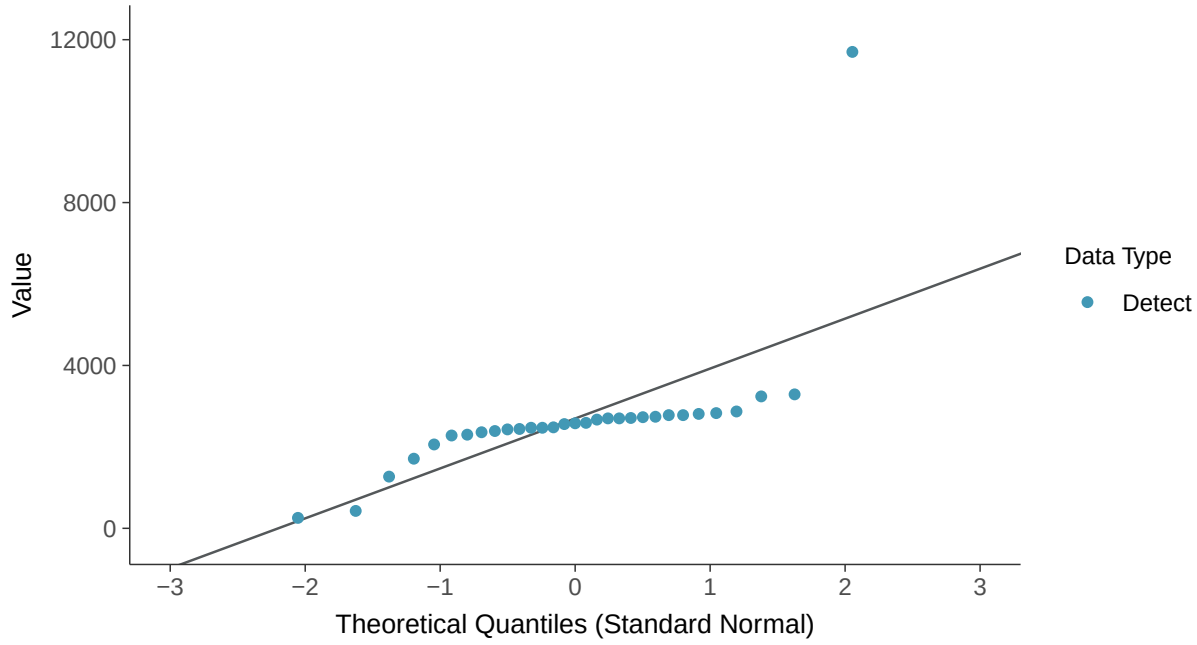
Boxplot by Season

Total Dissolved Solids, MW-2 (mg/L)



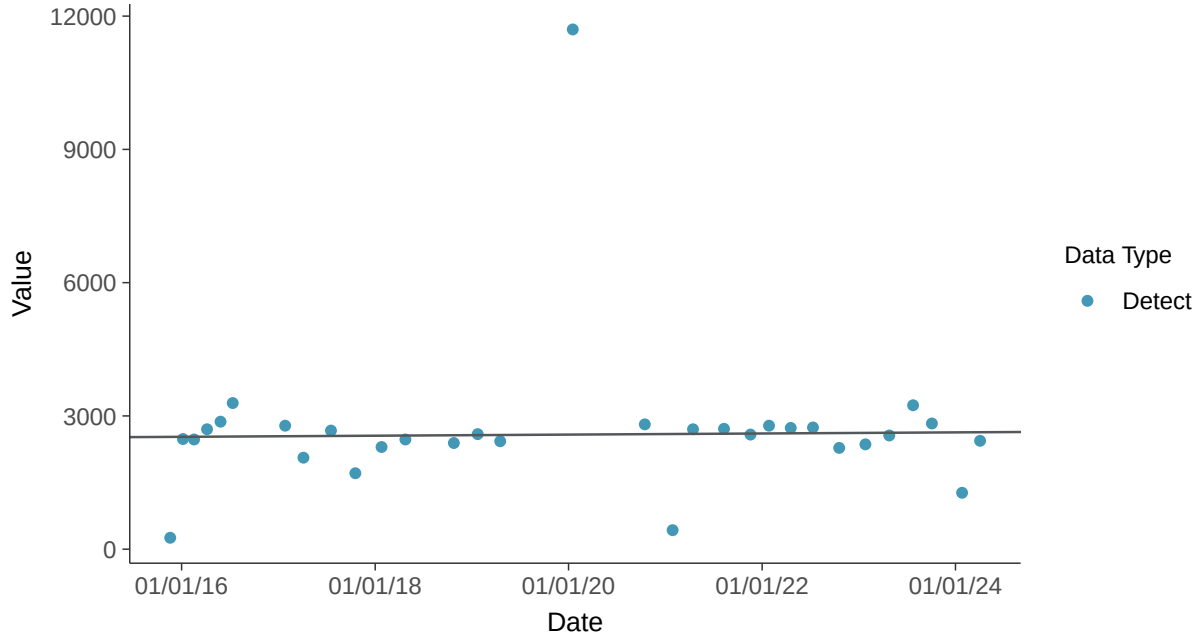
Normal Q-Q plot

Total Dissolved Solids, MW-2 (mg/L)



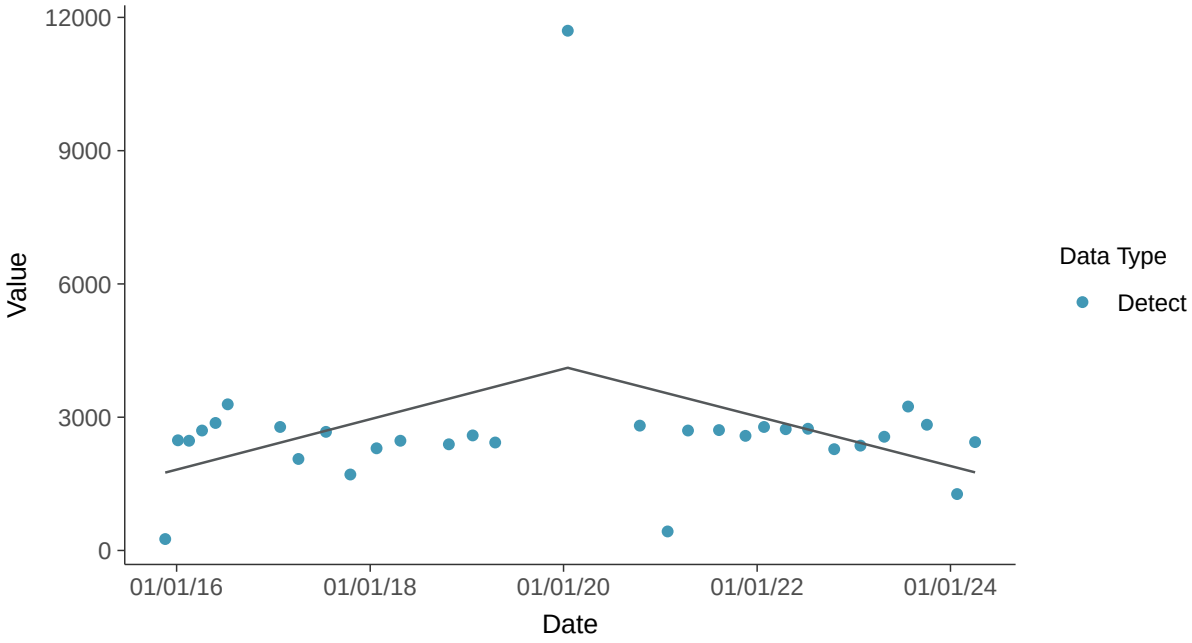
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-2 (mg/L)



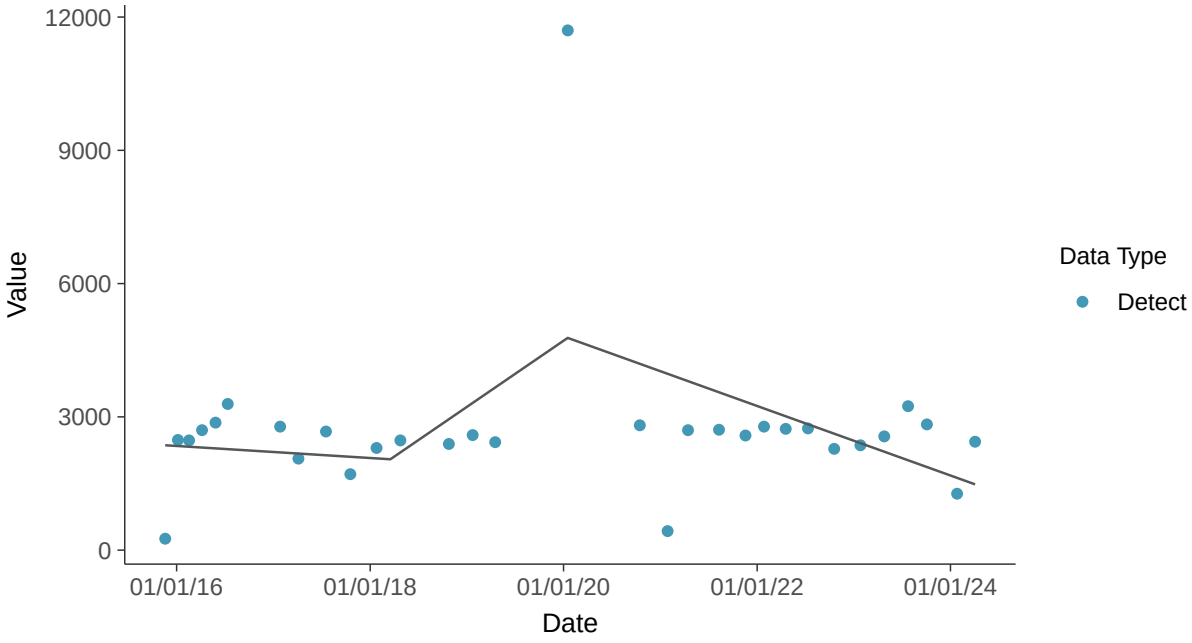
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-2 (mg/L)



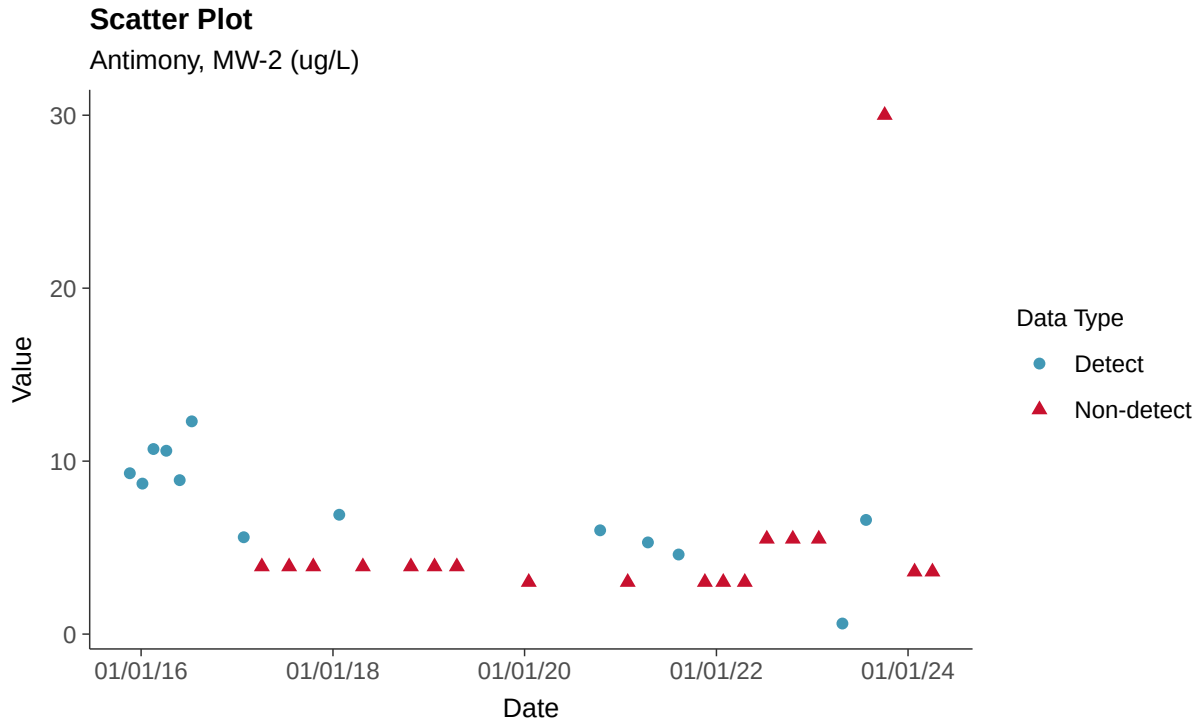
Trend Regression: Piecewise Linear-Linear-Linear

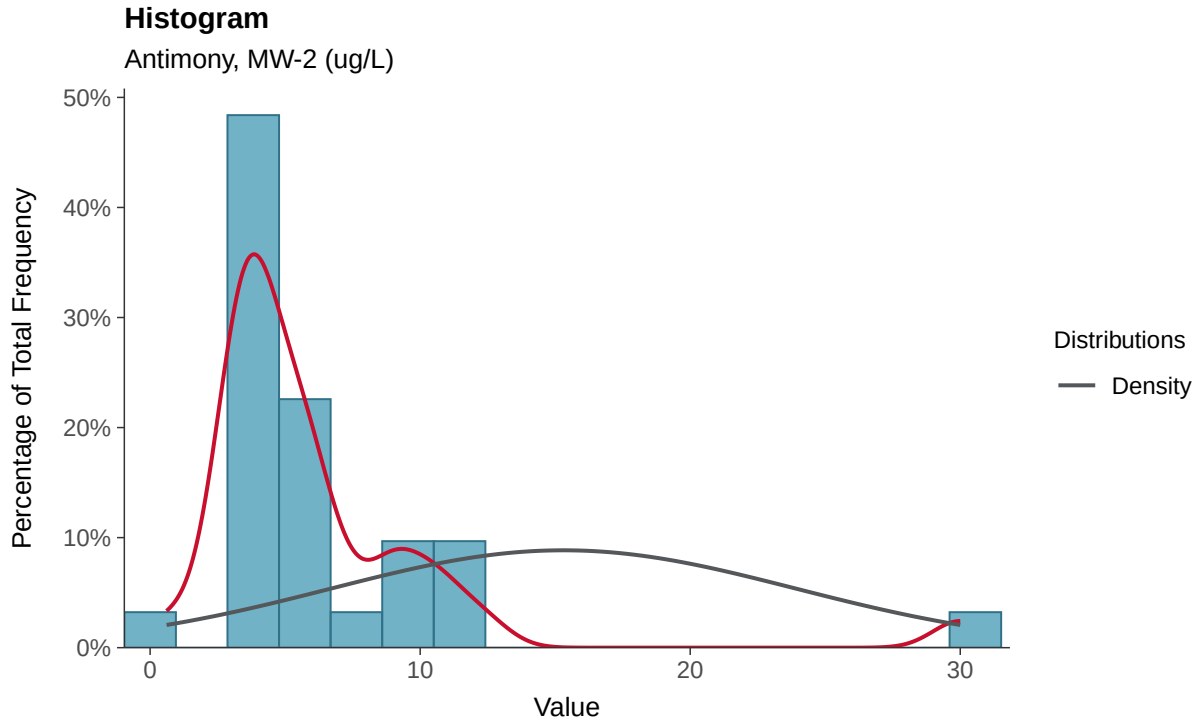
Total Dissolved Solids, MW-2 (mg/L)



App. IV: Antimony, MW-2

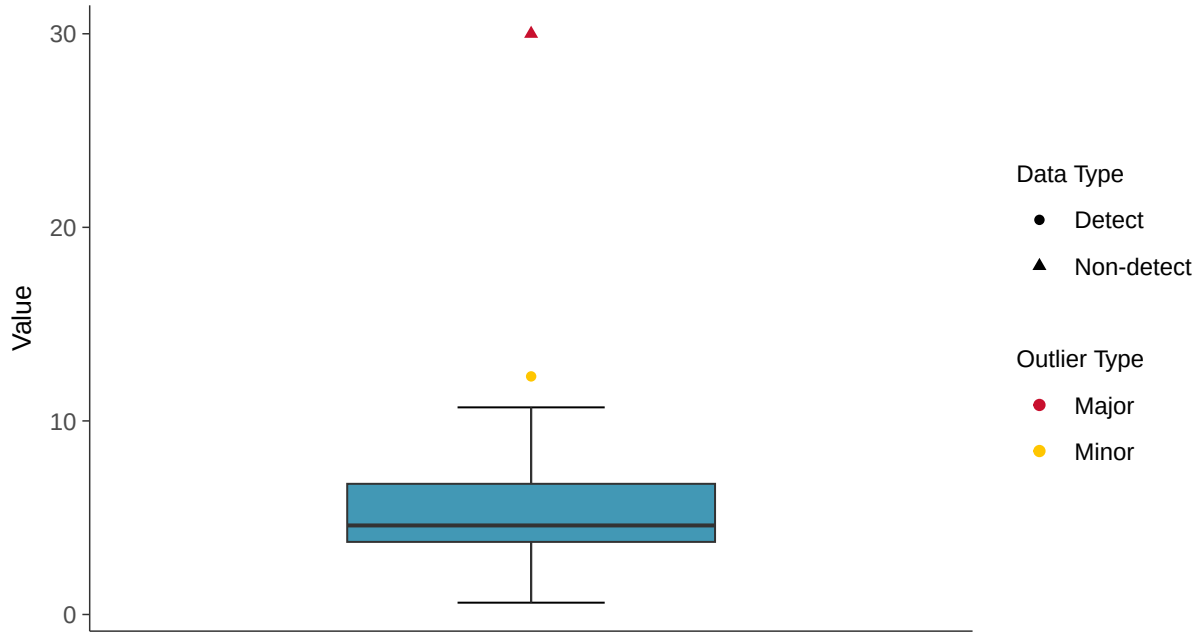
ID: 5_3_101





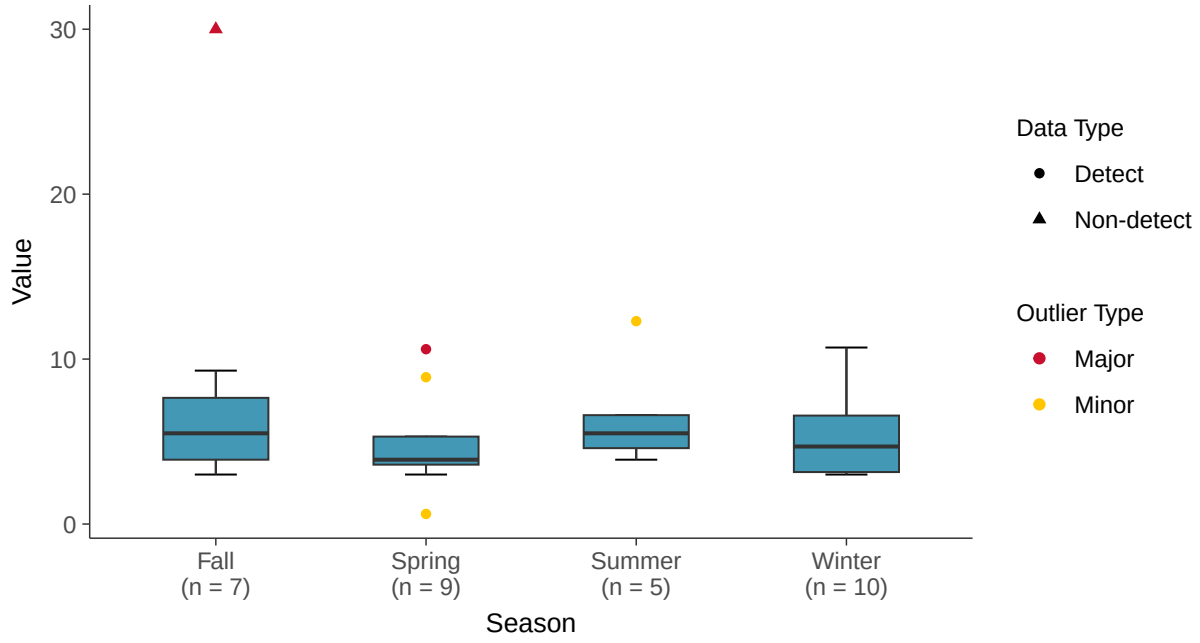
Boxplot

Antimony, MW-2 (ug/L)



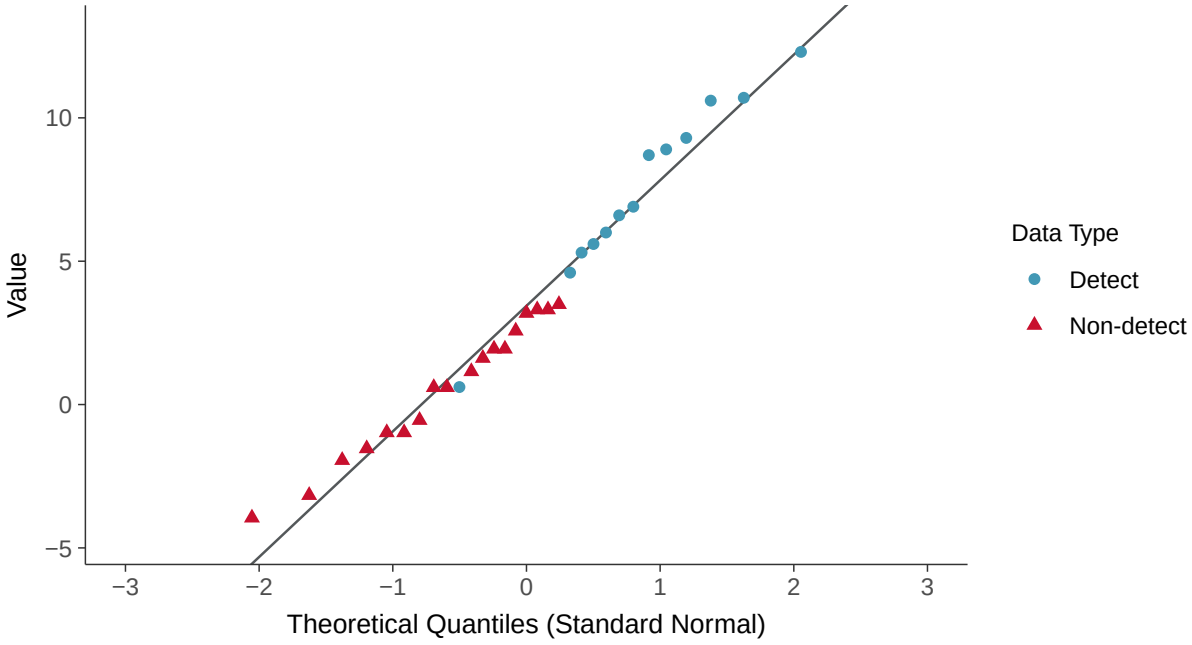
Boxplot by Season

Antimony, MW-2 (ug/L)



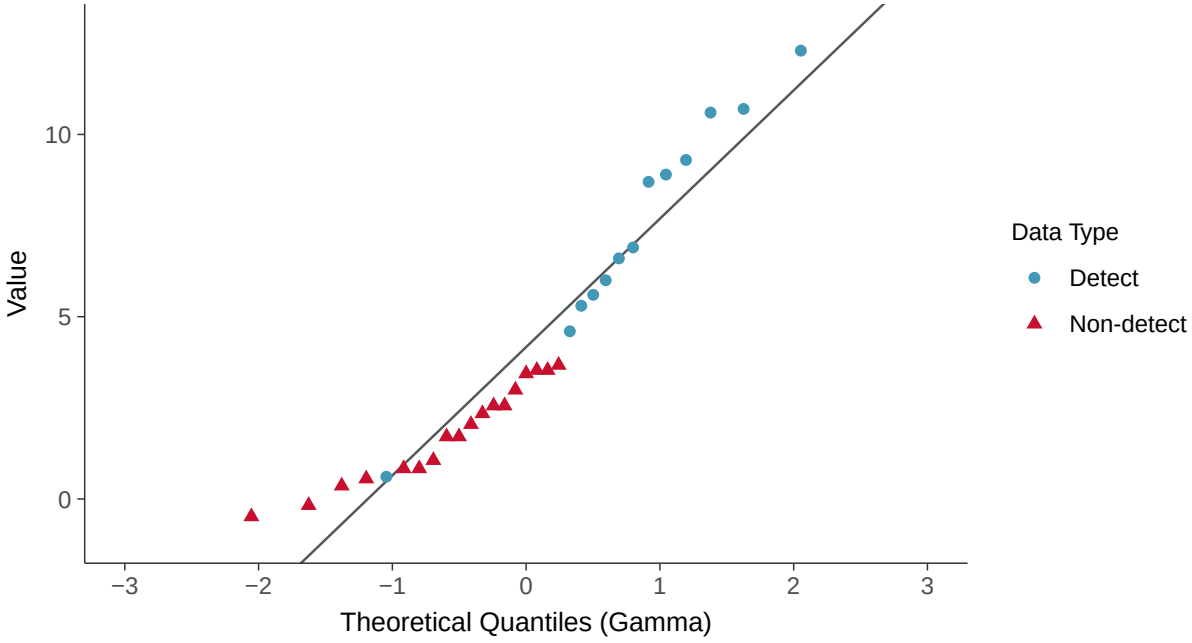
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-2 (ug/L)



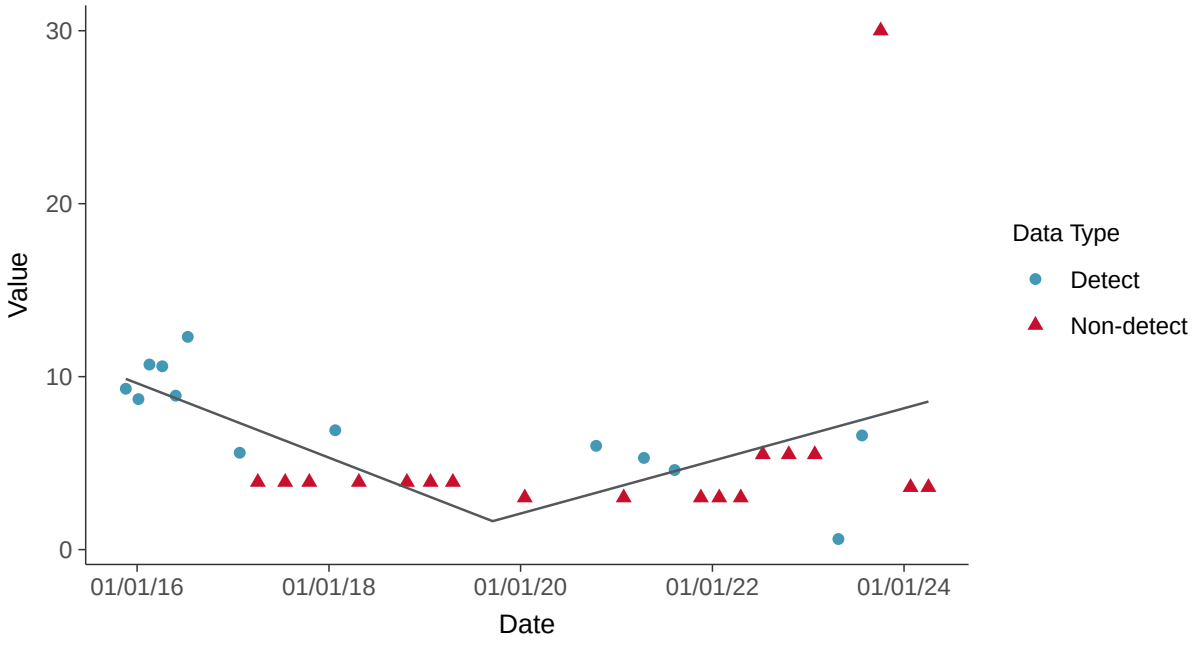
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-2 (ug/L)



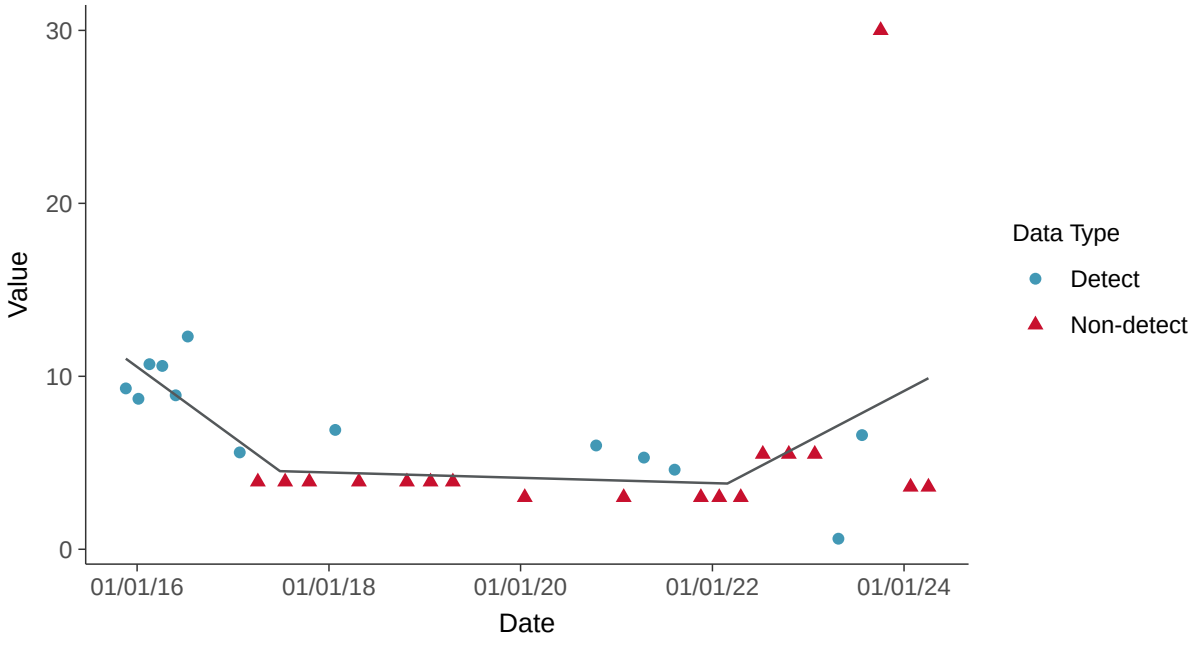
Trend Regression: Piecewise Linear-Linear

Antimony, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-2 (ug/L)

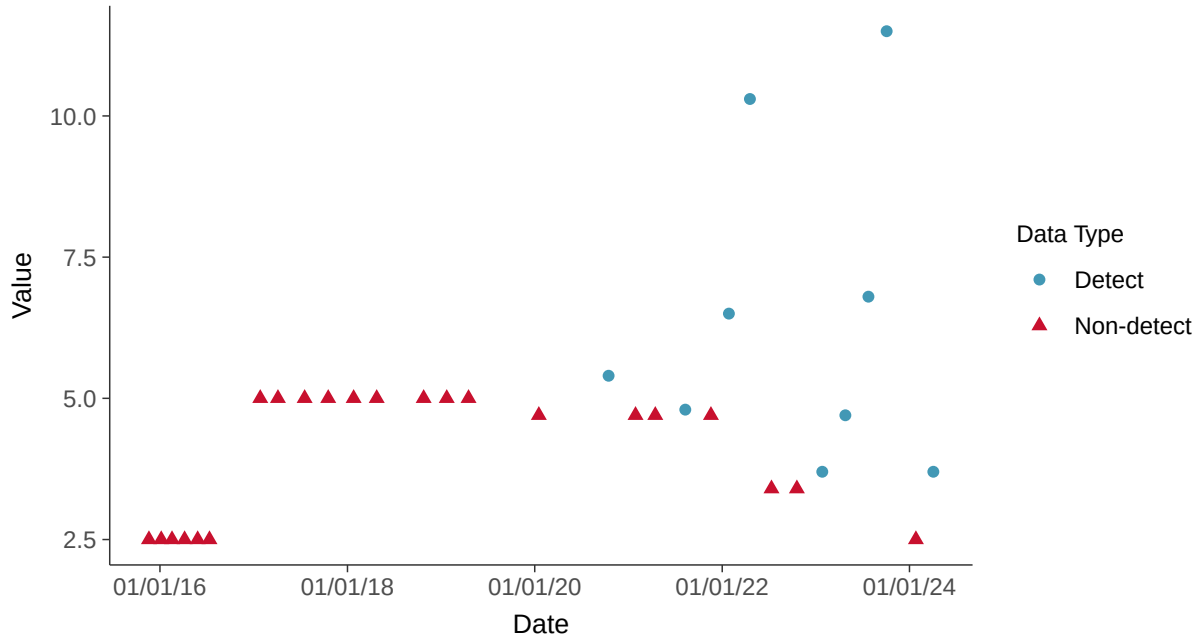


App. IV: Arsenic, MW-2

ID: 5_3_102

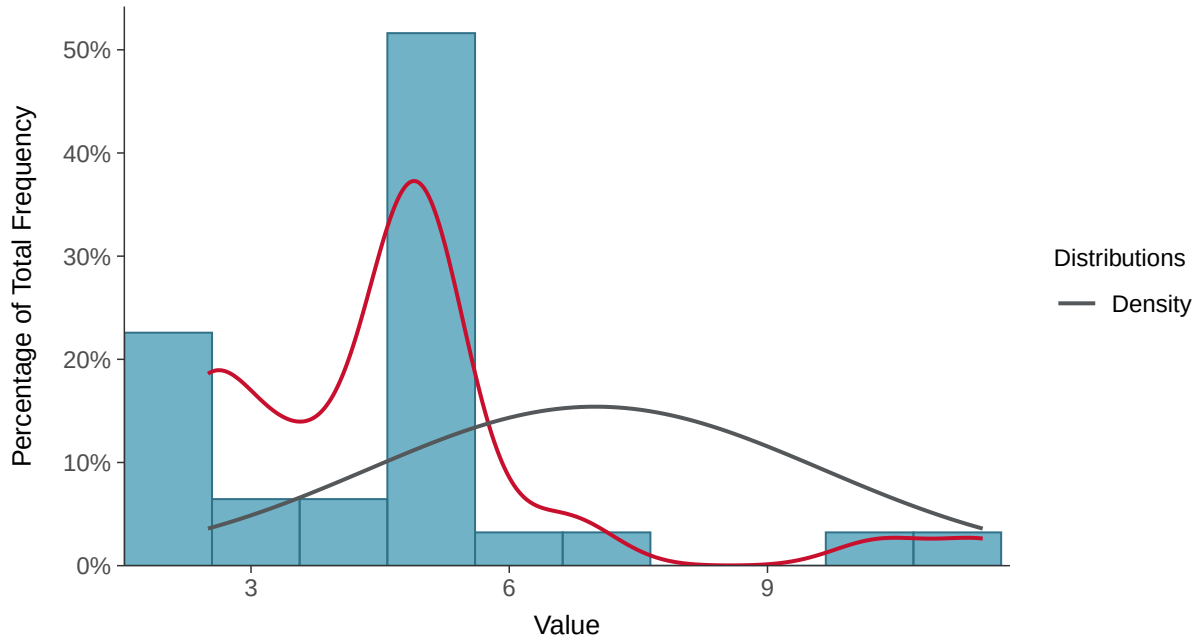
Scatter Plot

Arsenic, MW-2 (ug/L)



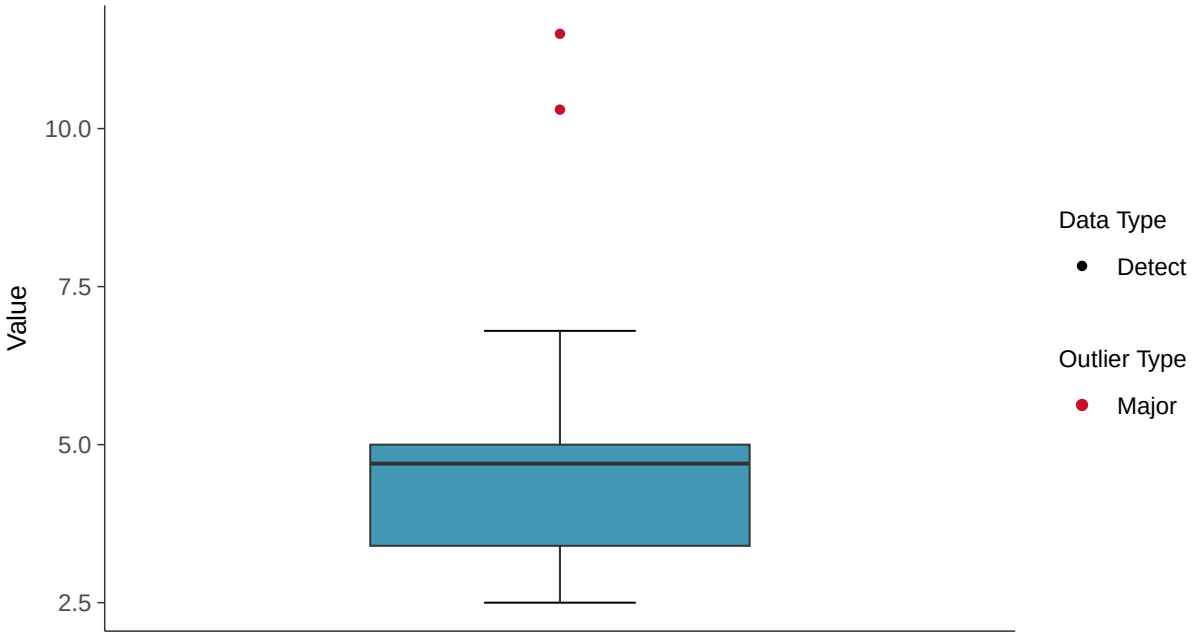
Histogram

Arsenic, MW-2 (ug/L)



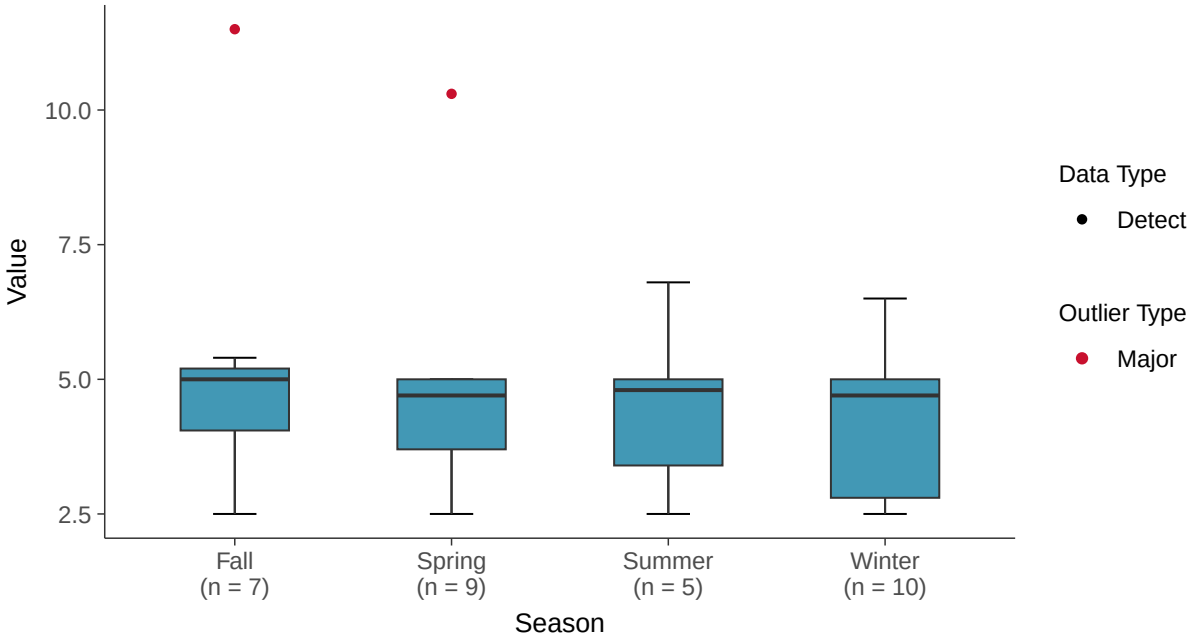
Boxplot

Arsenic, MW-2 (ug/L)



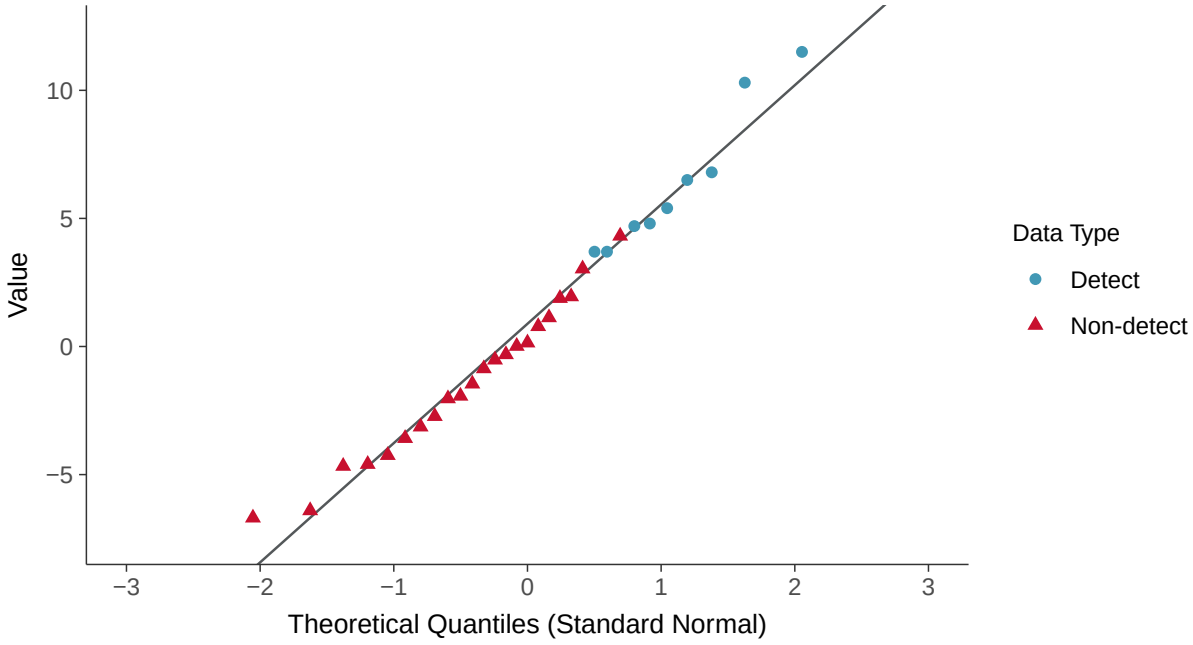
Boxplot by Season

Arsenic, MW-2 (ug/L)



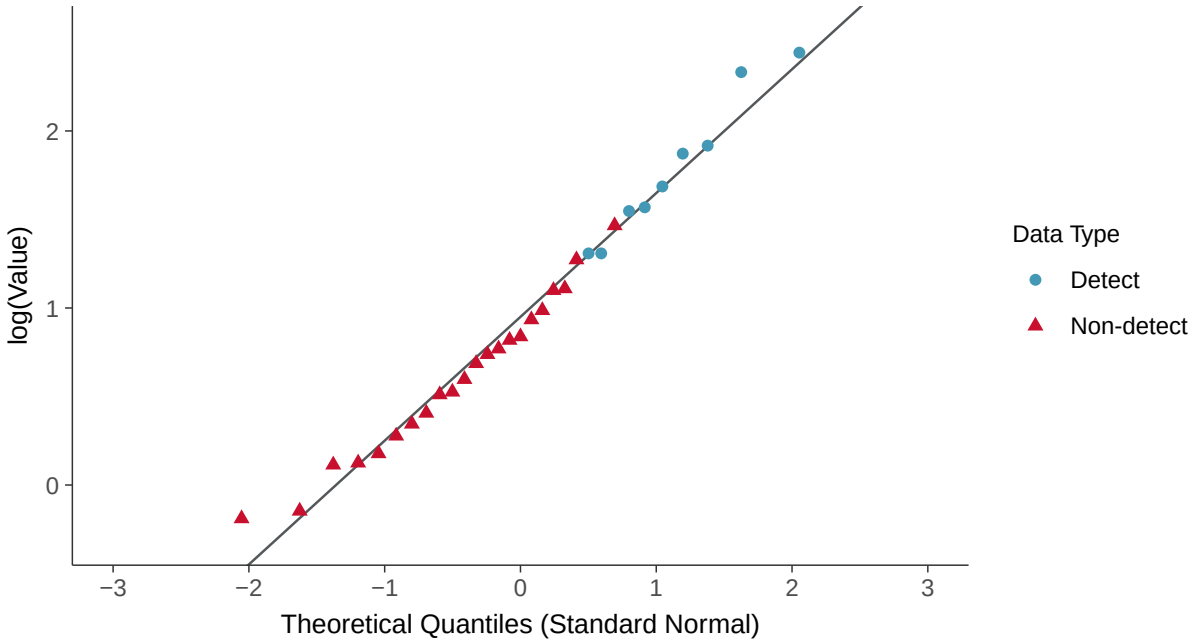
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



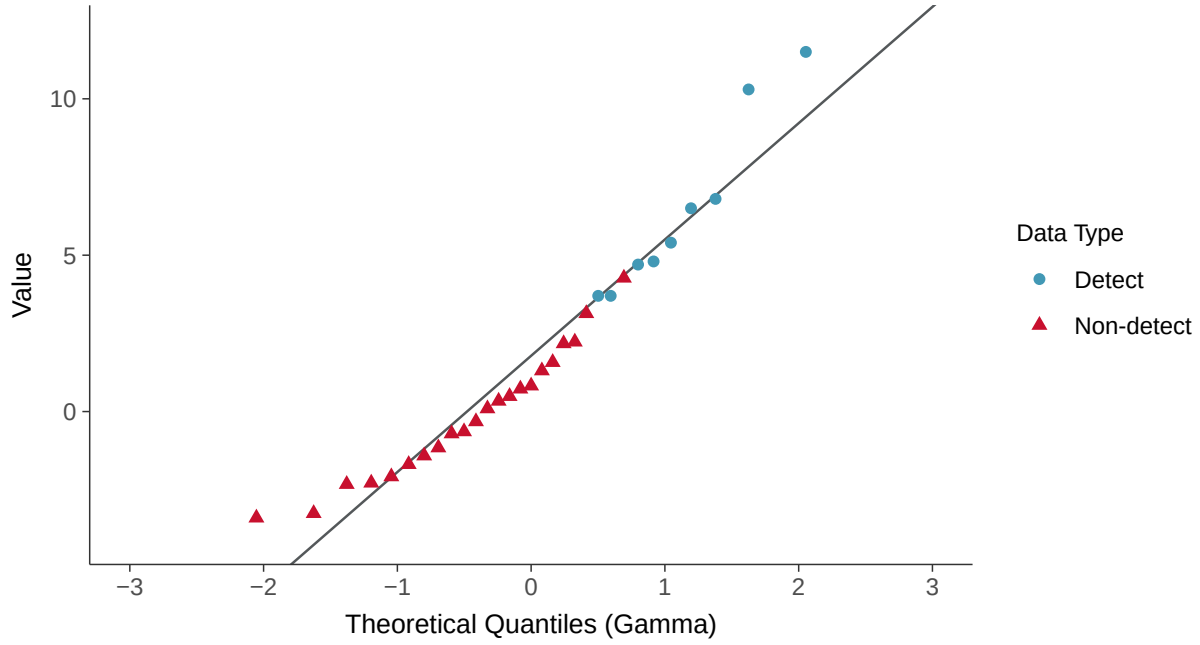
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



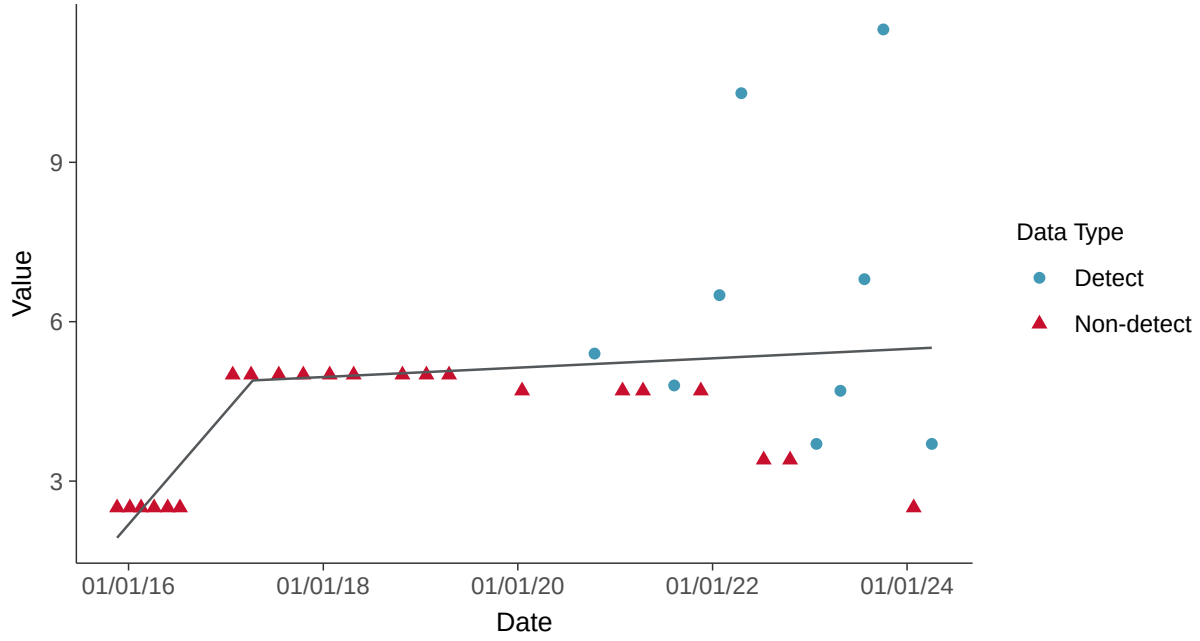
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



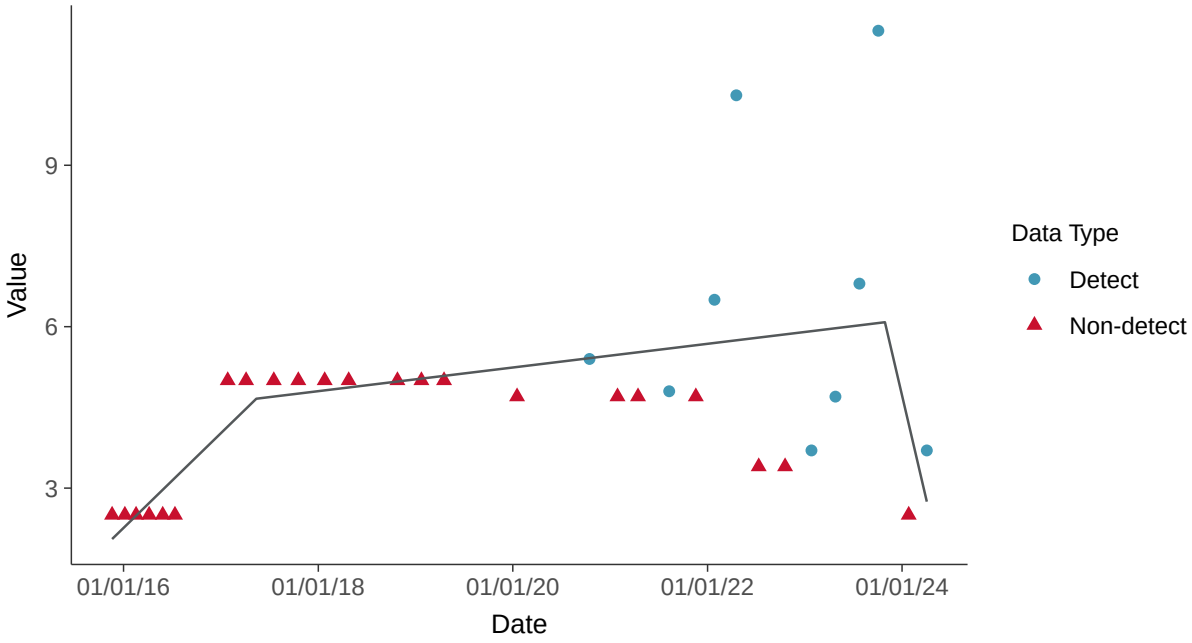
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-2 (ug/L)



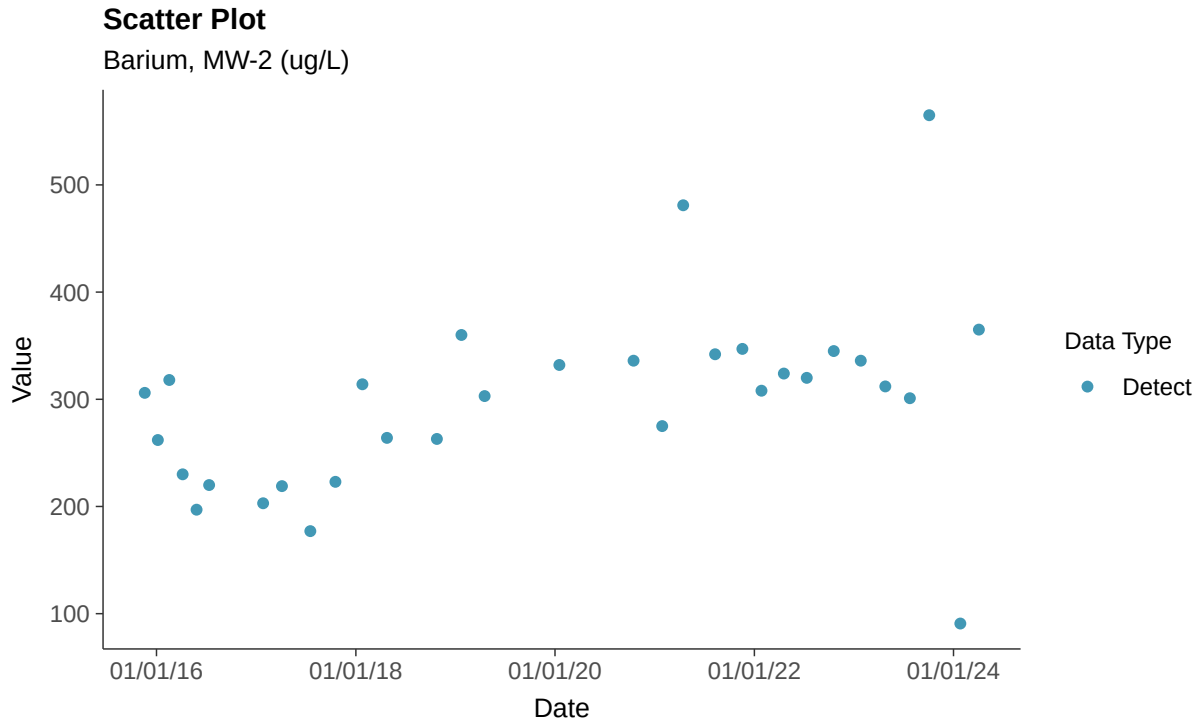
Trend Regression: Piecewise Linear-Linear-Linear

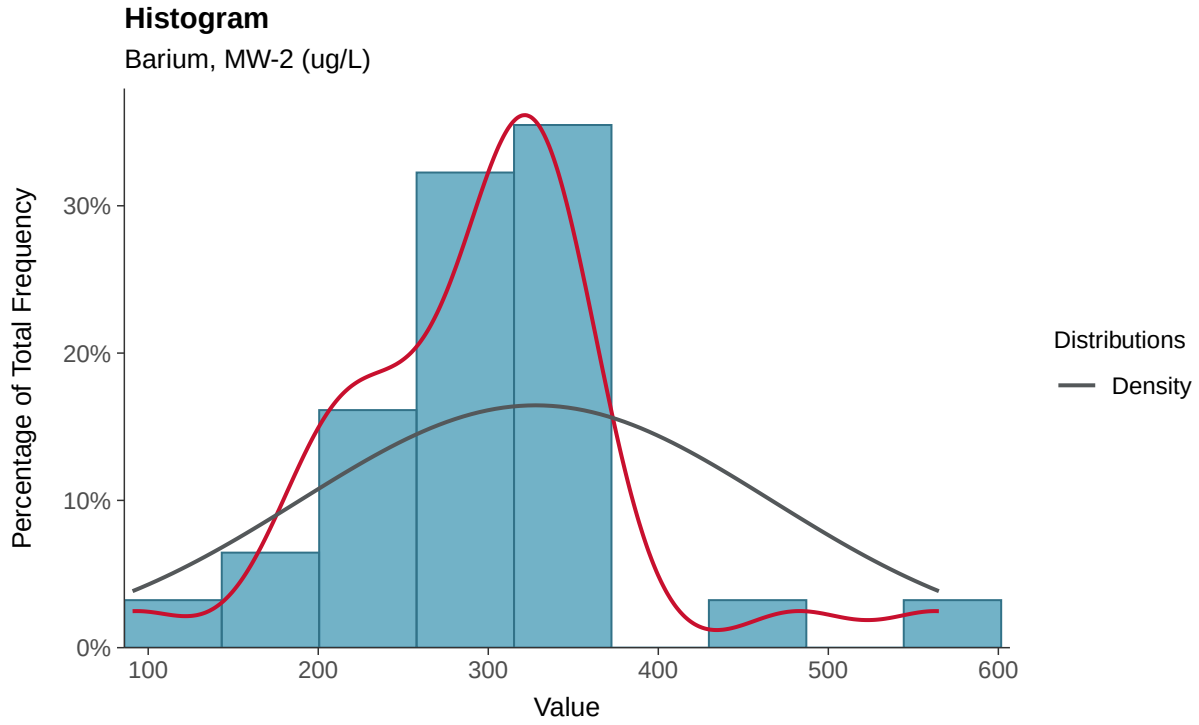
Arsenic, MW-2 (ug/L)



App. IV: Barium, MW-2

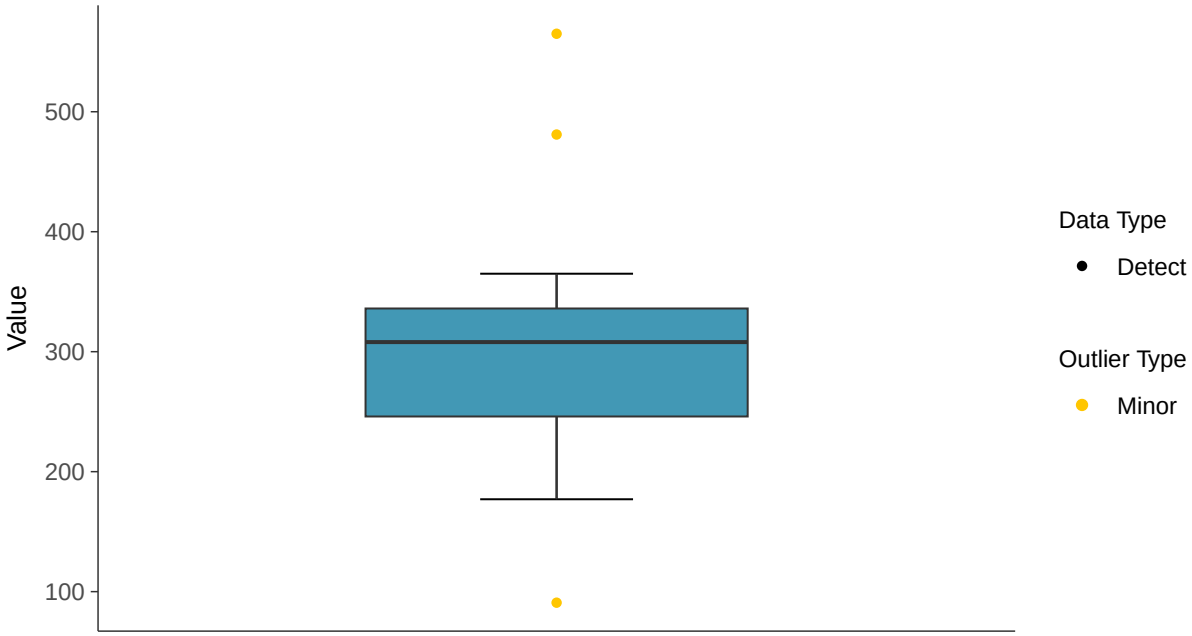
ID: 5_3_103





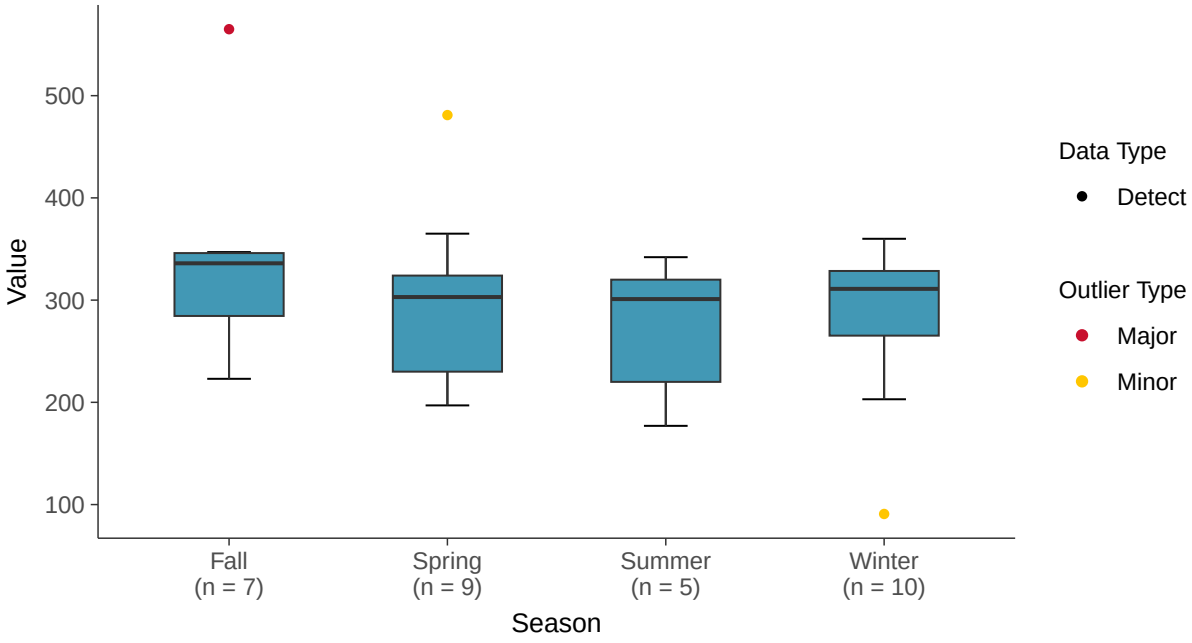
Boxplot

Barium, MW-2 (ug/L)



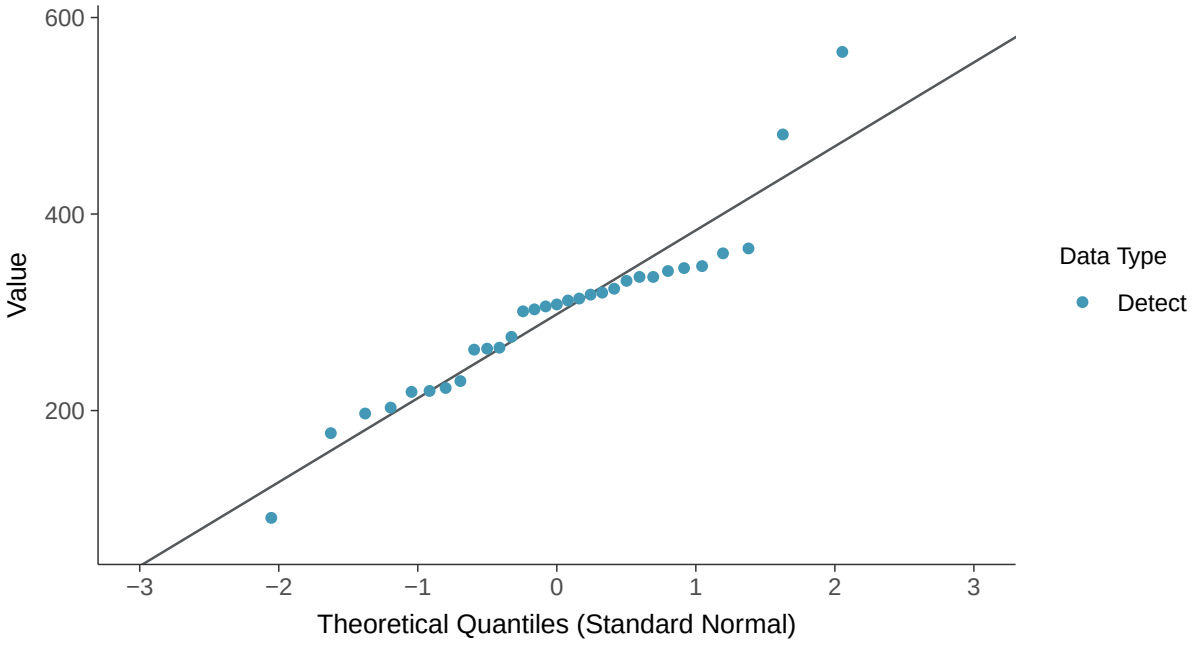
Boxplot by Season

Barium, MW-2 (ug/L)



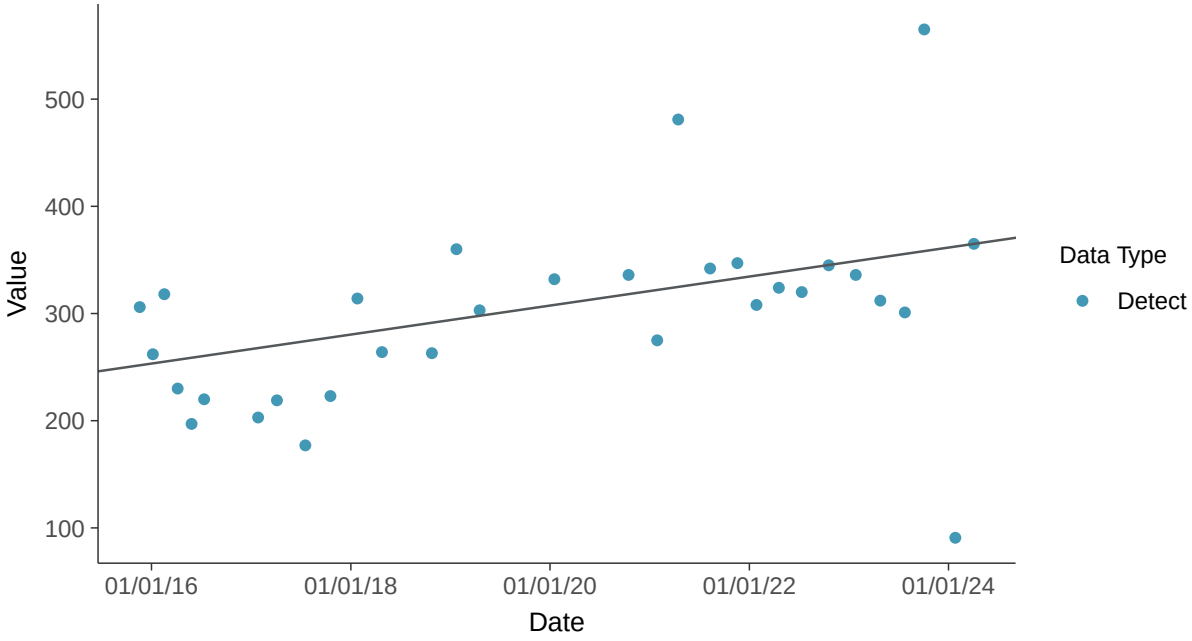
Normal Q-Q plot

Barium, MW-2 (ug/L)



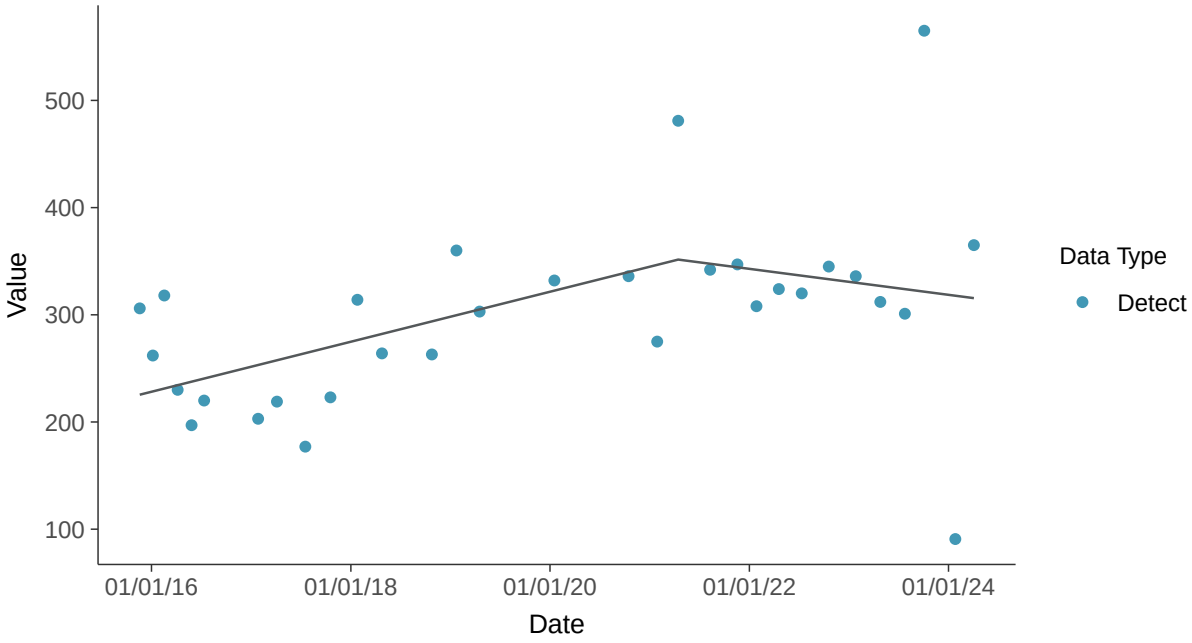
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-2 (ug/L)



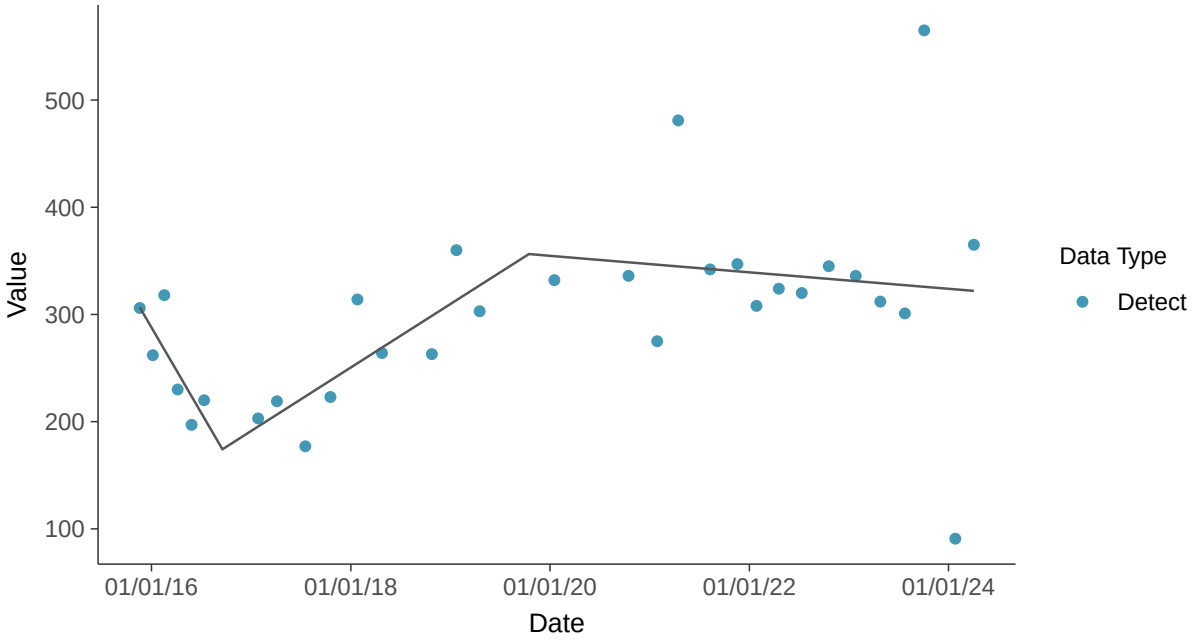
Trend Regression: Piecewise Linear-Linear

Barium, MW-2 (ug/L)



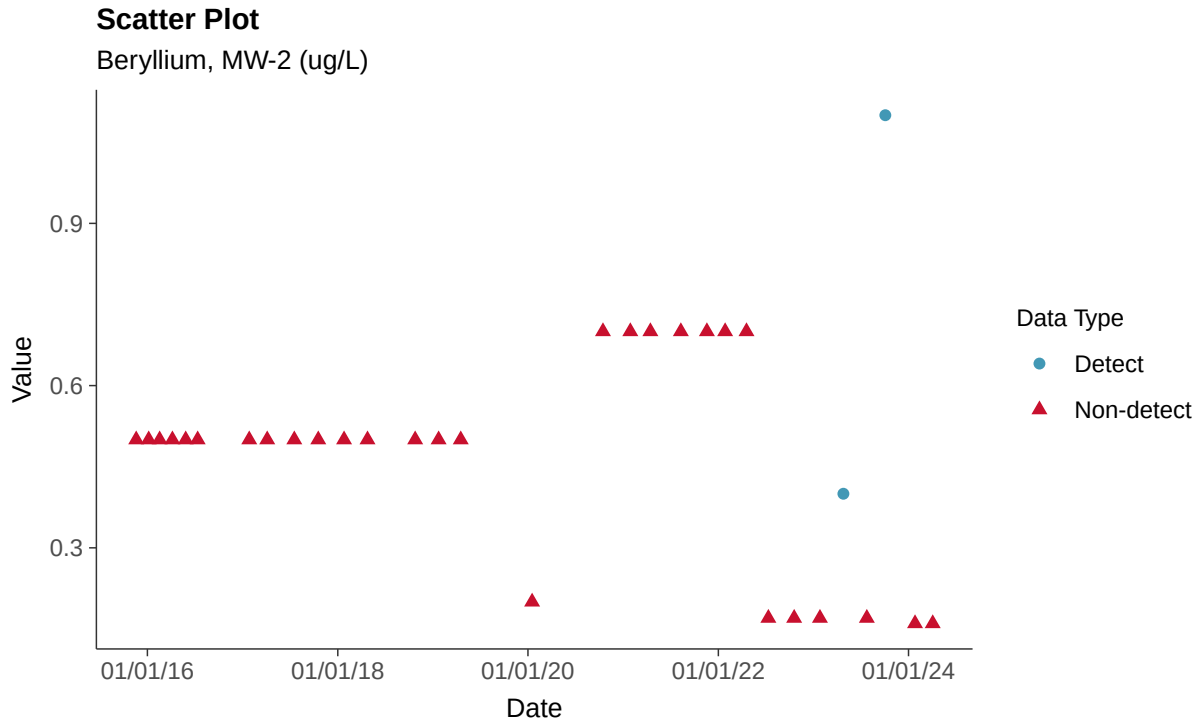
Trend Regression: Piecewise Linear-Linear-Linear

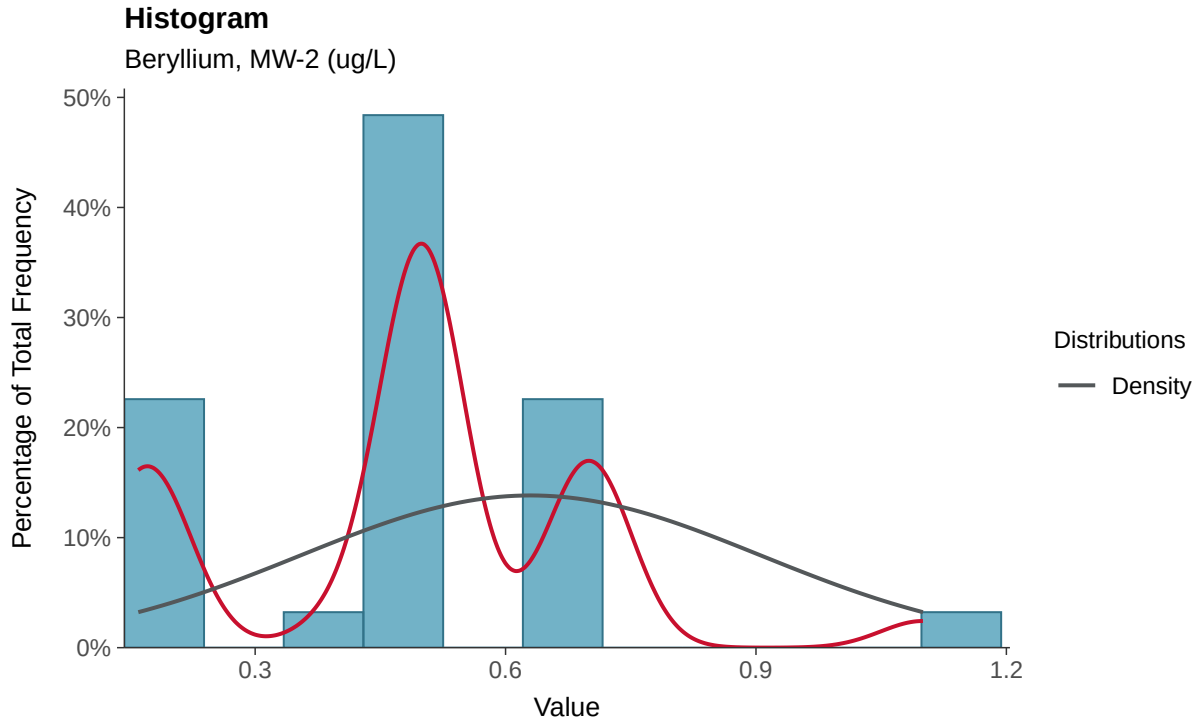
Barium, MW-2 (ug/L)



App. IV: Beryllium, MW-2

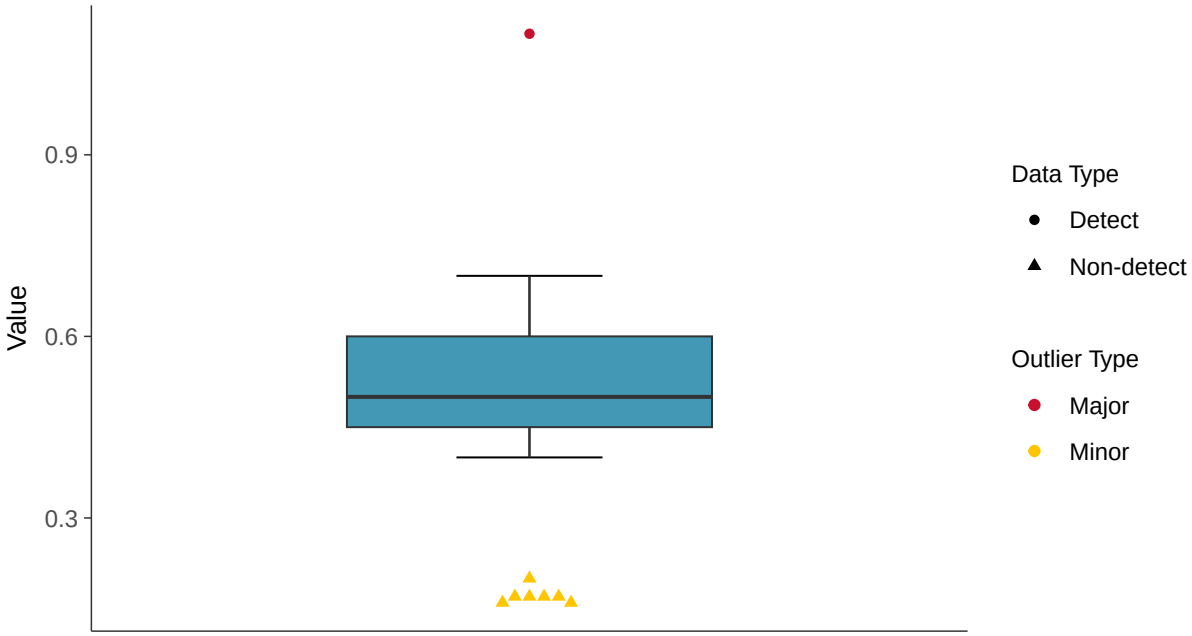
ID: 5_3_104





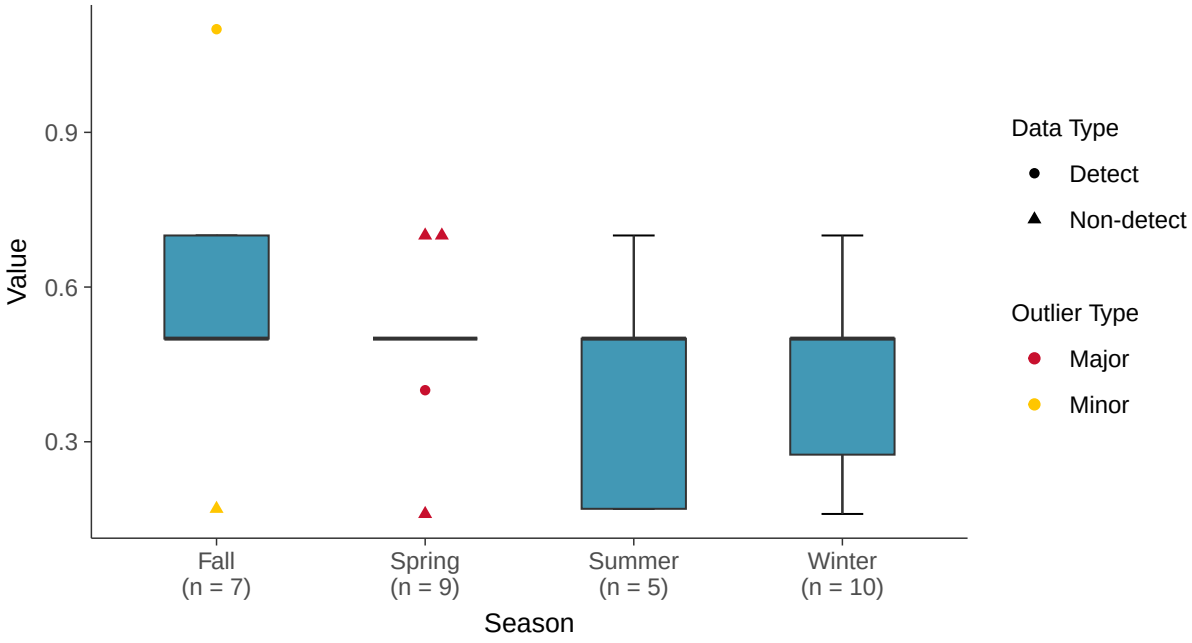
Boxplot

Beryllium, MW-2 (ug/L)



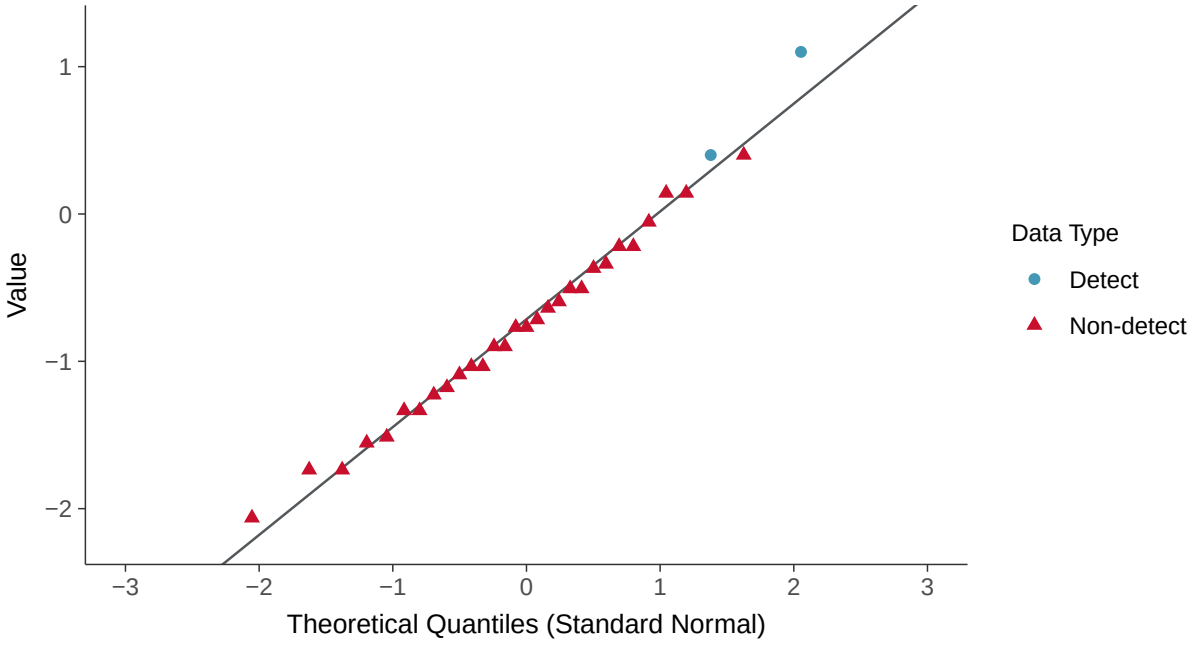
Boxplot by Season

Beryllium, MW-2 (ug/L)



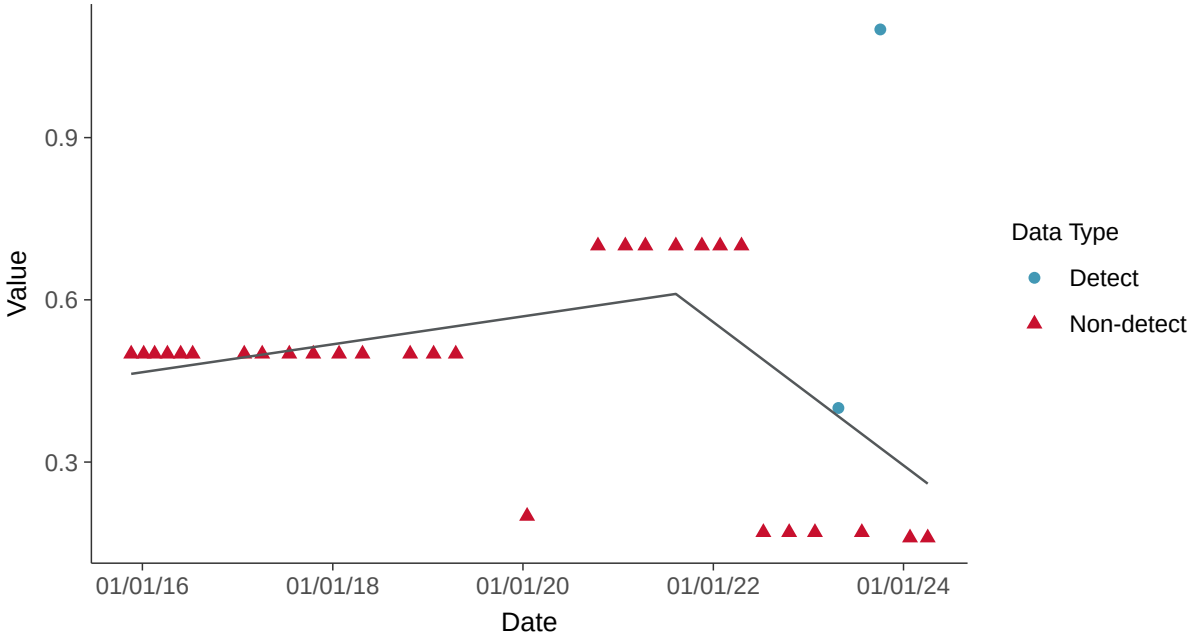
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-2 (ug/L)



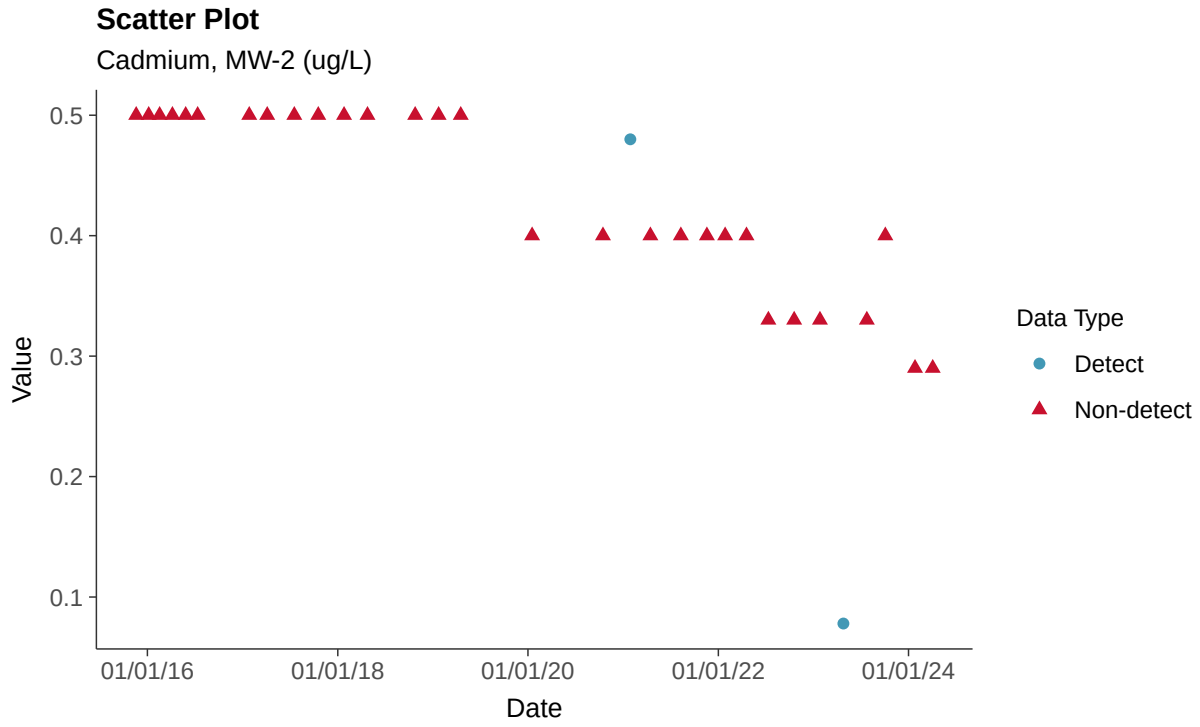
Trend Regression: Piecewise Linear-Linear

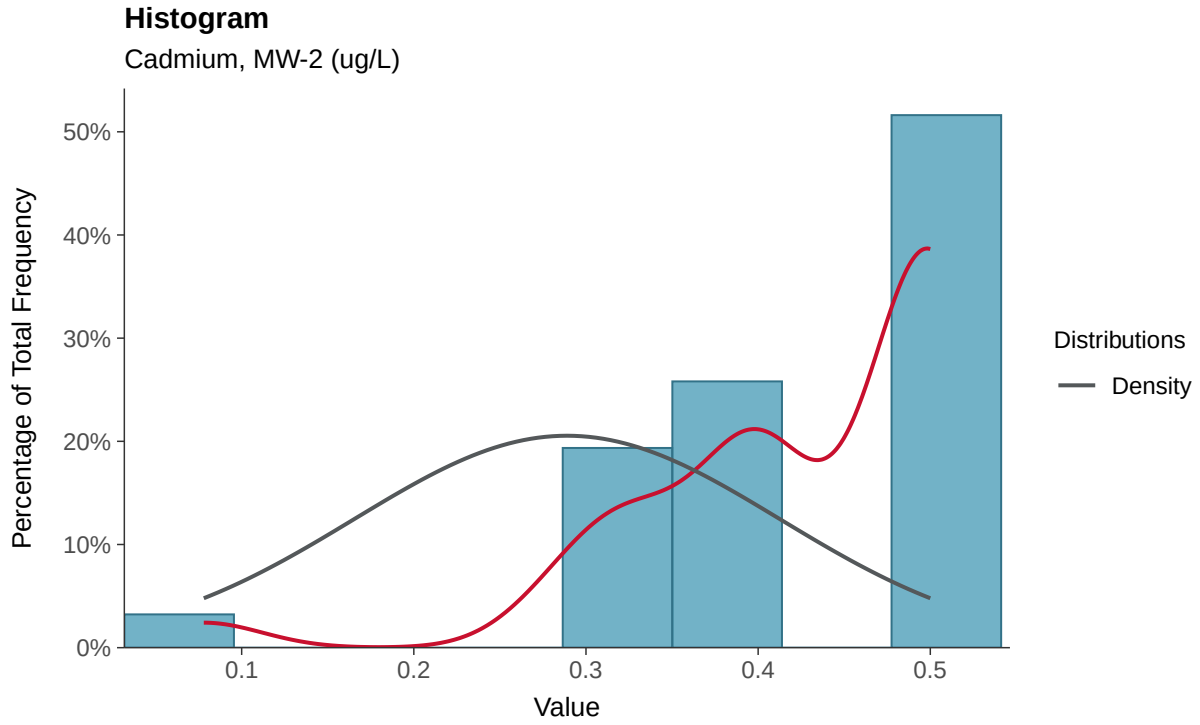
Beryllium, MW-2 (ug/L)



App. IV: Cadmium, MW-2

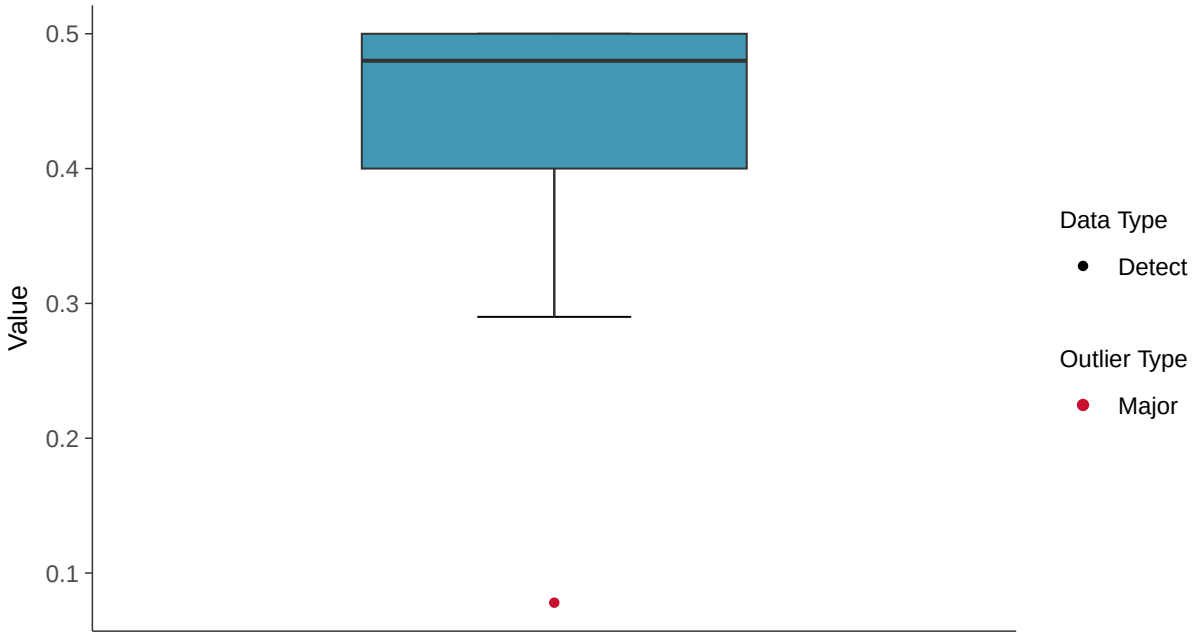
ID: 5_3_106





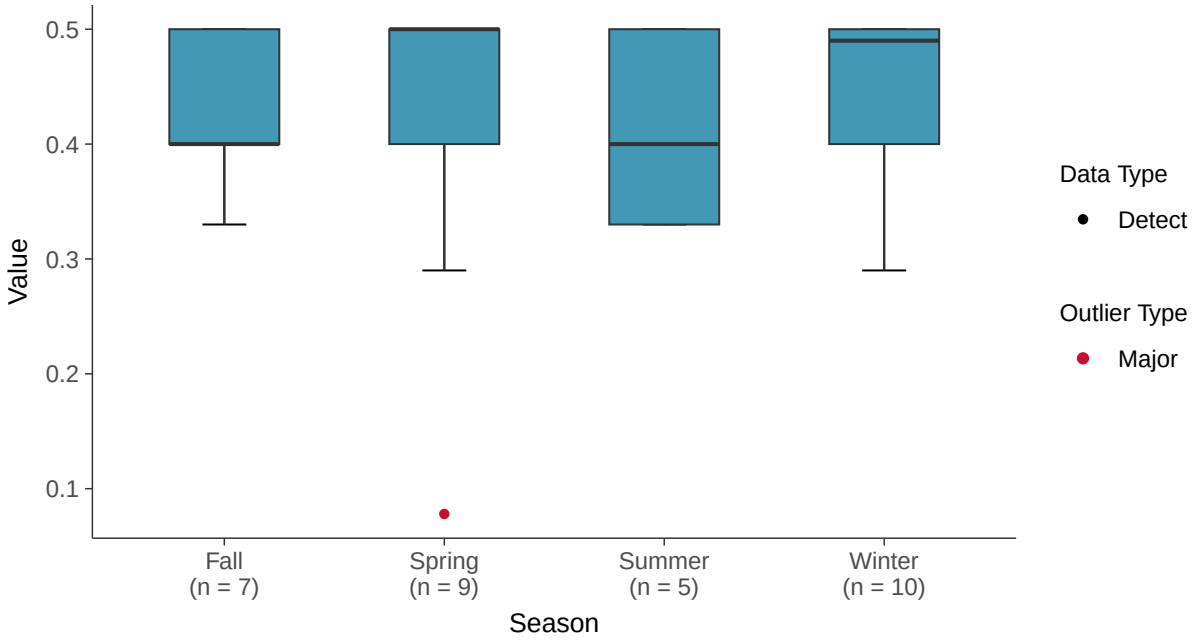
Boxplot

Cadmium, MW-2 (ug/L)



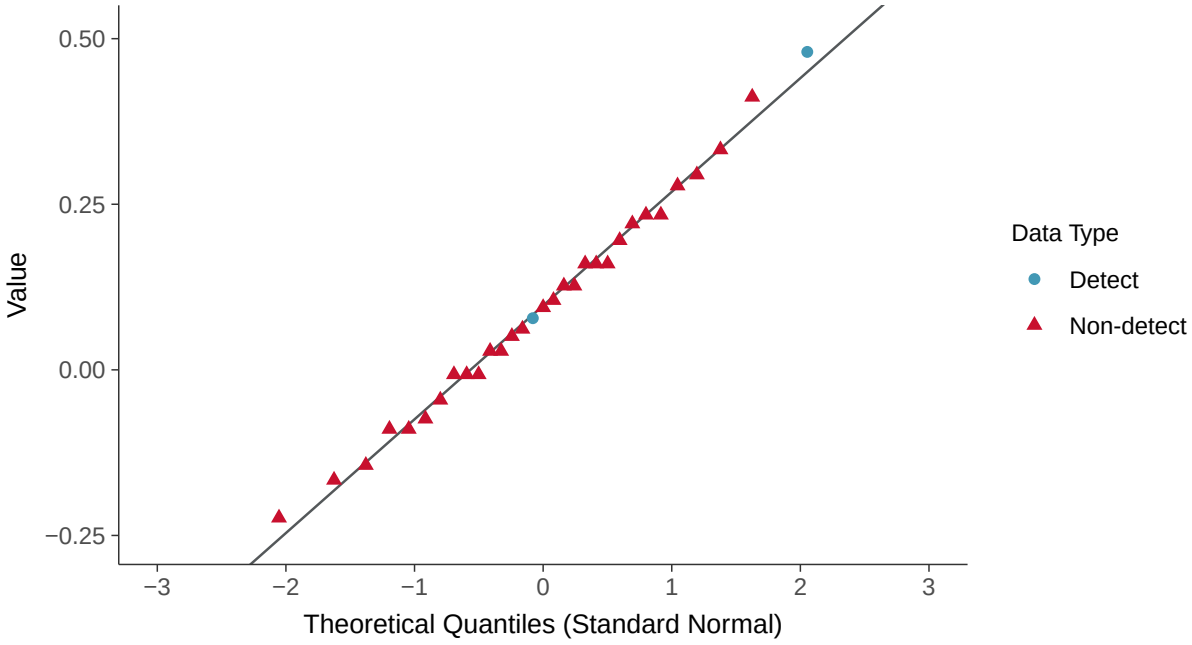
Boxplot by Season

Cadmium, MW-2 (ug/L)



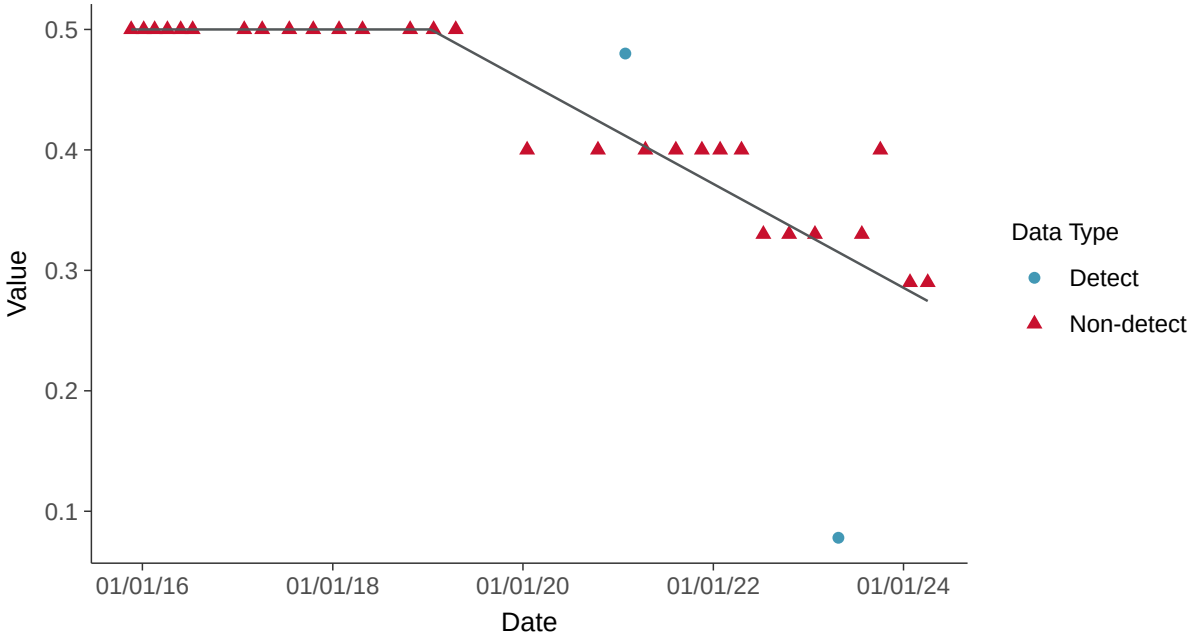
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-2 (ug/L)



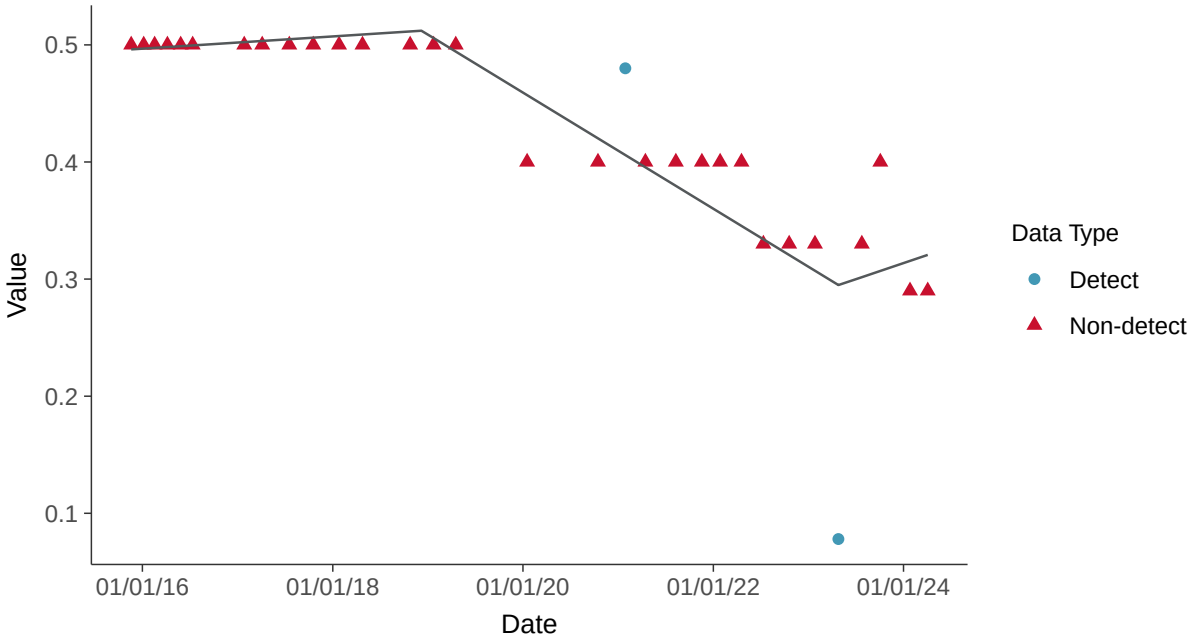
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-2 (ug/L)

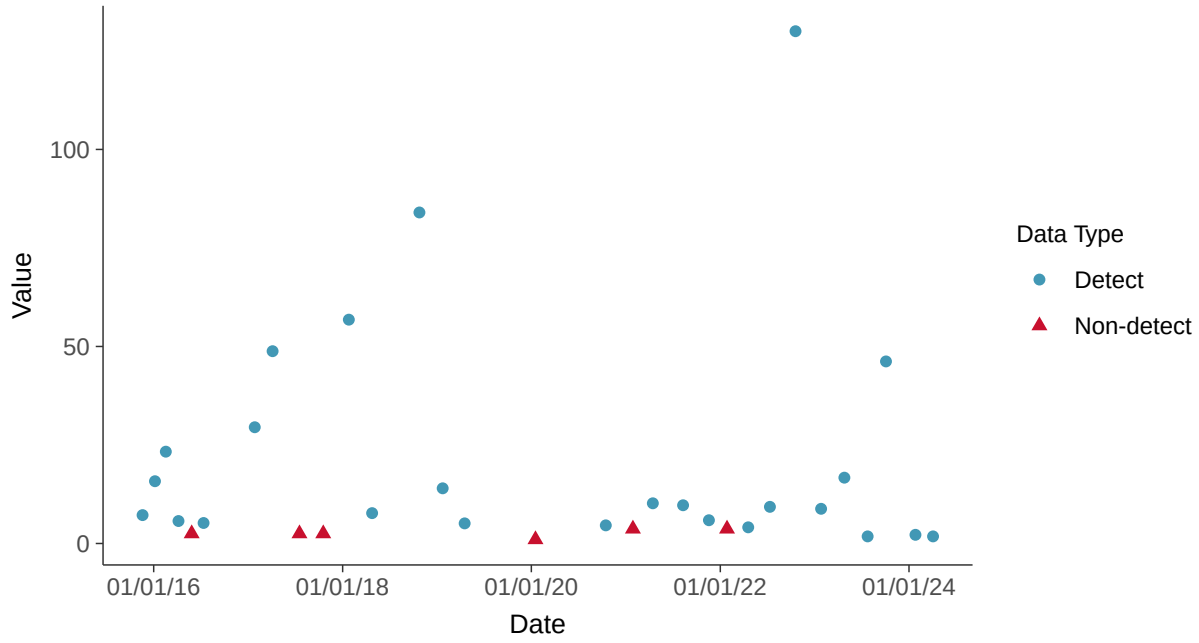


App. IV: Chromium, MW-2

ID: 5_3_109

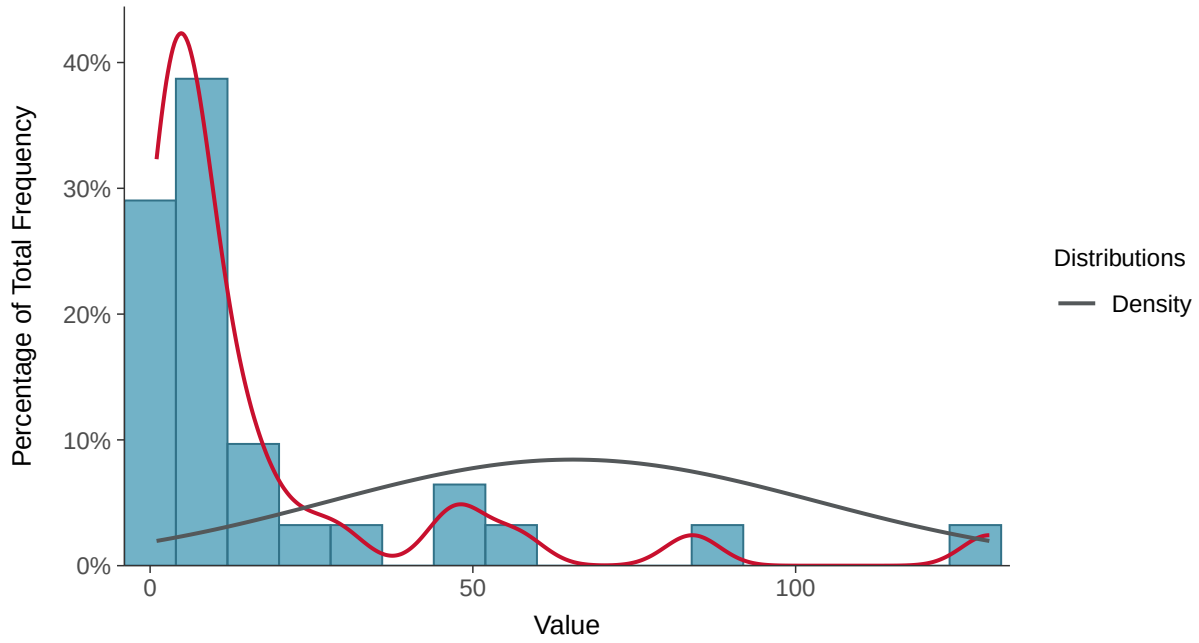
Scatter Plot

Chromium, MW-2 (ug/L)



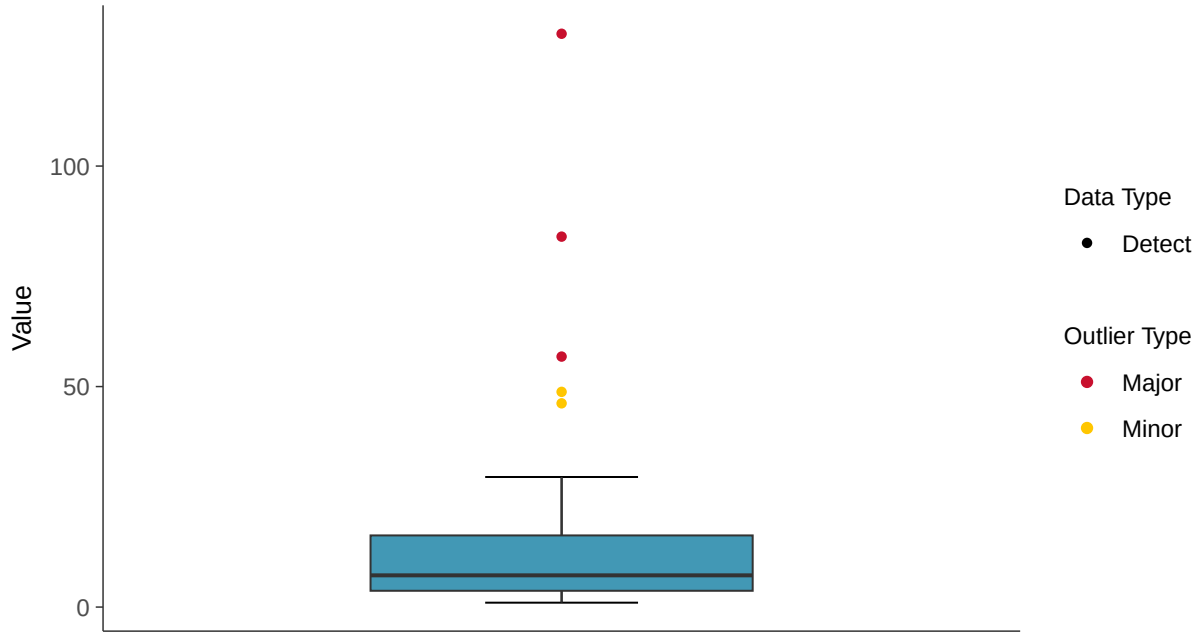
Histogram

Chromium, MW-2 (ug/L)



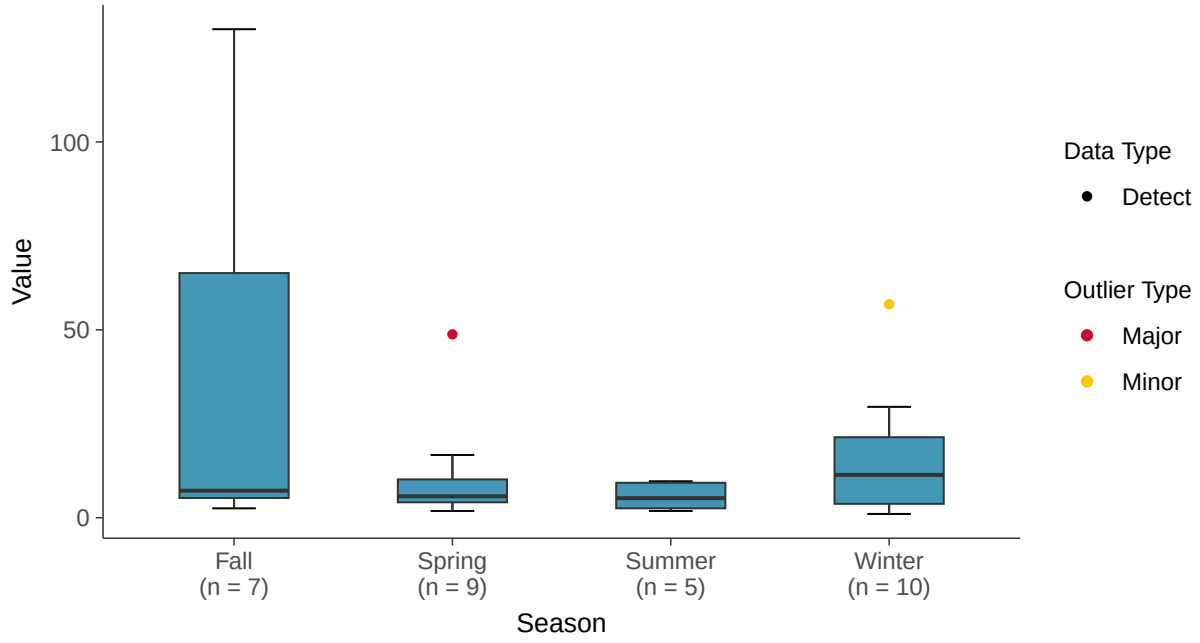
Boxplot

Chromium, MW-2 (ug/L)



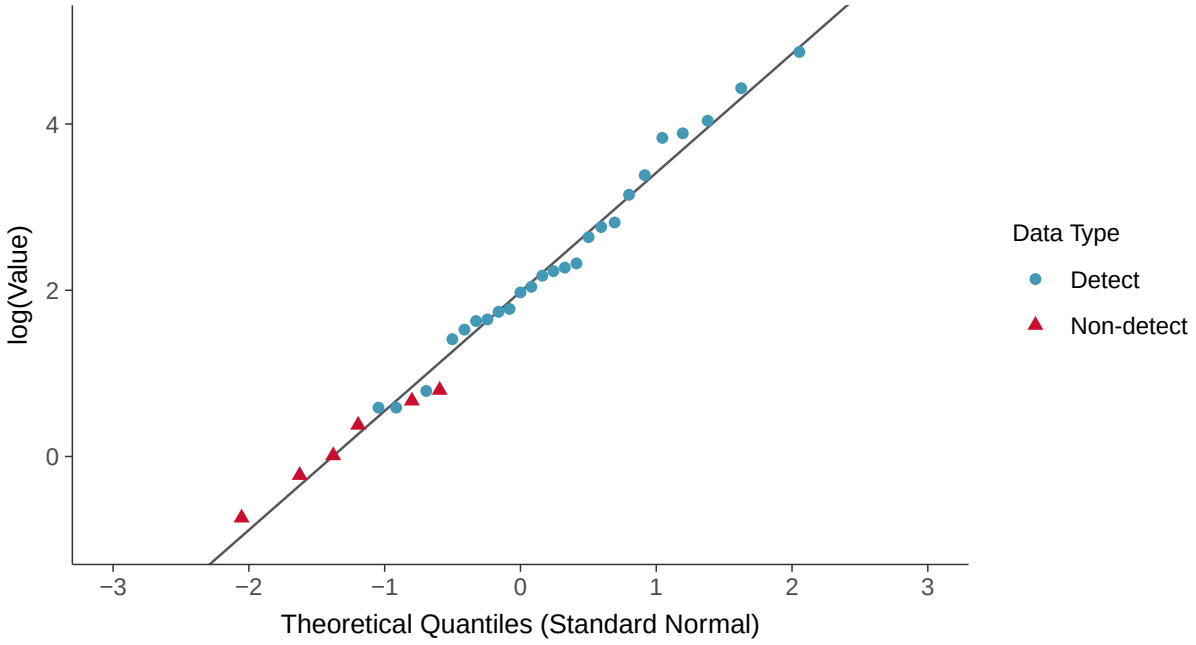
Boxplot by Season

Chromium, MW-2 (ug/L)



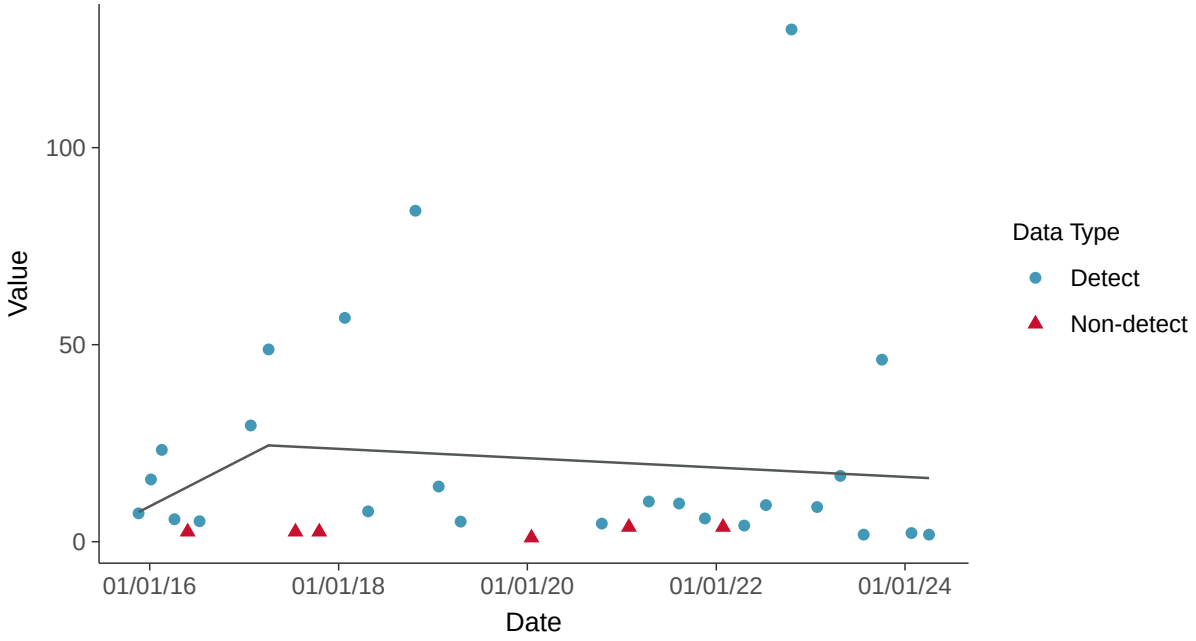
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-2 (ug/L)



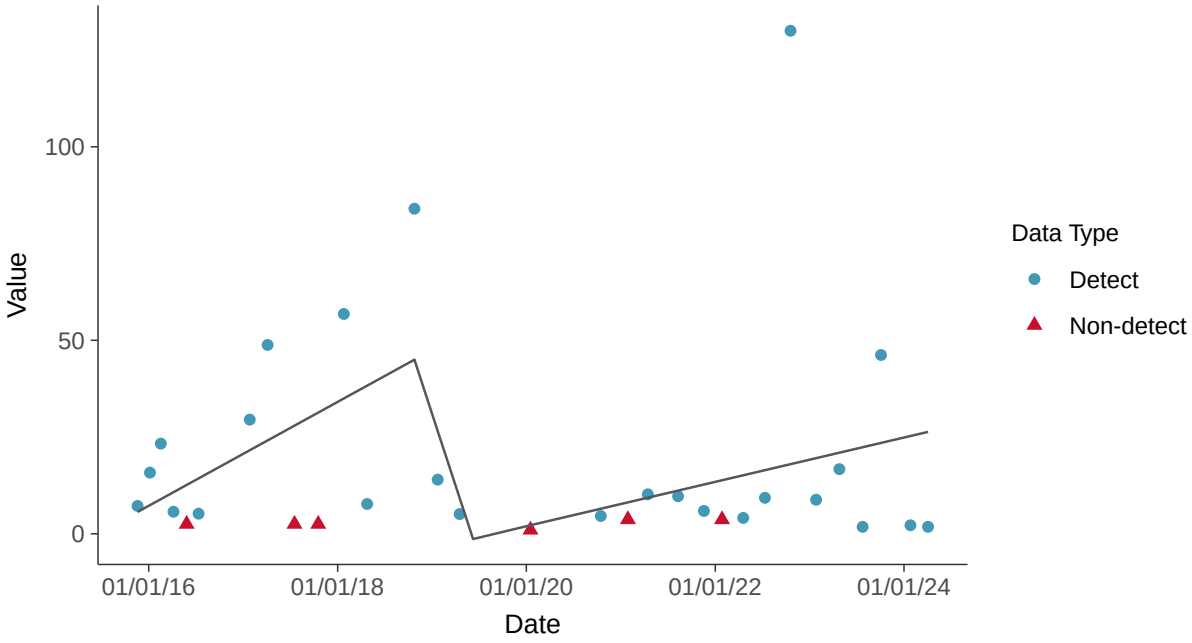
Trend Regression: Piecewise Linear-Linear

Chromium, MW-2 (ug/L)



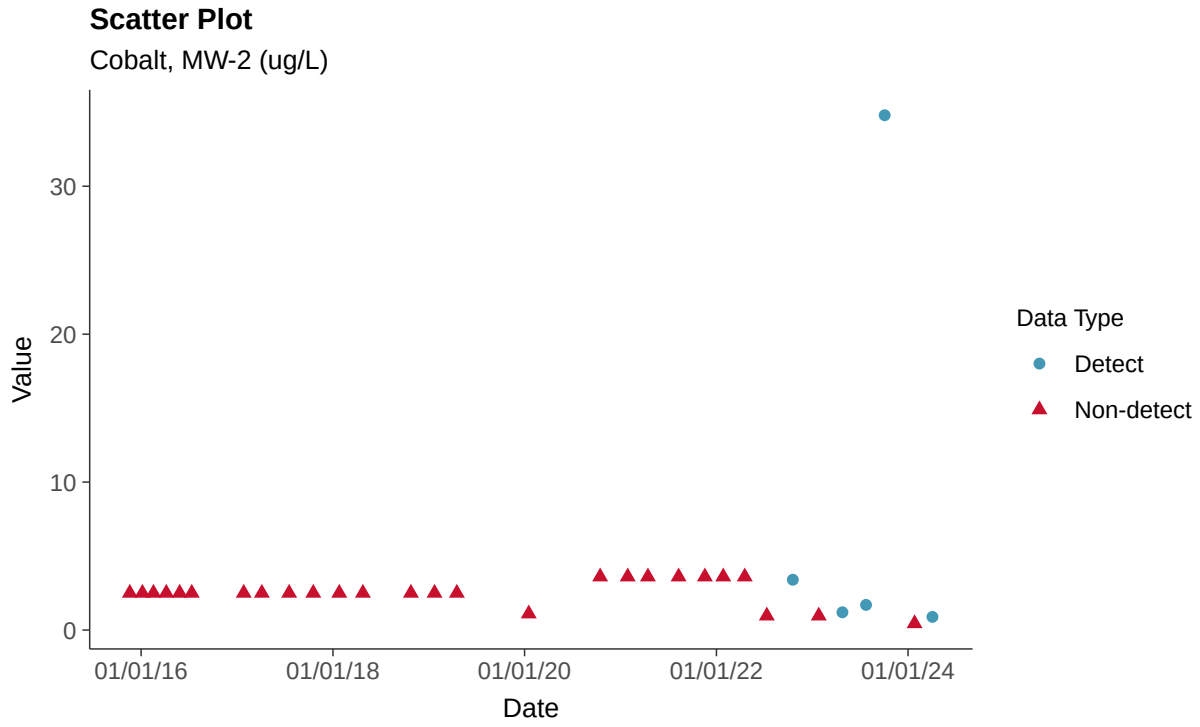
Trend Regression: Piecewise Linear-Linear-Linear

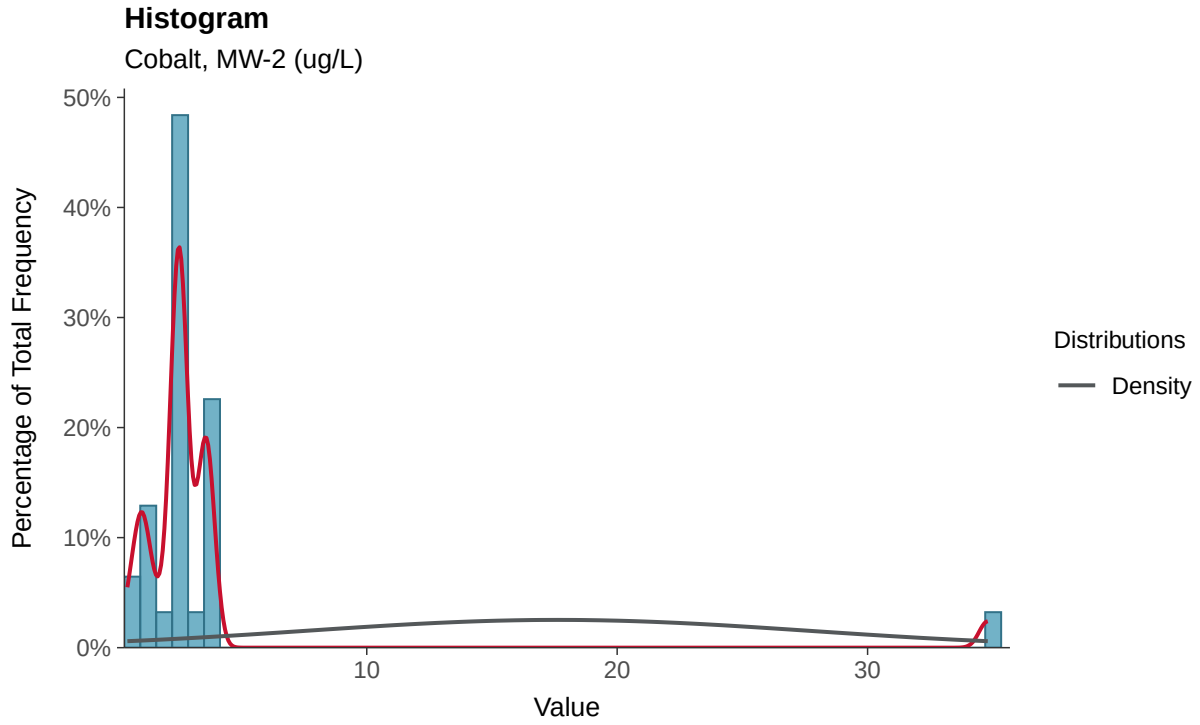
Chromium, MW-2 (ug/L)



App. IV: Cobalt, MW-2

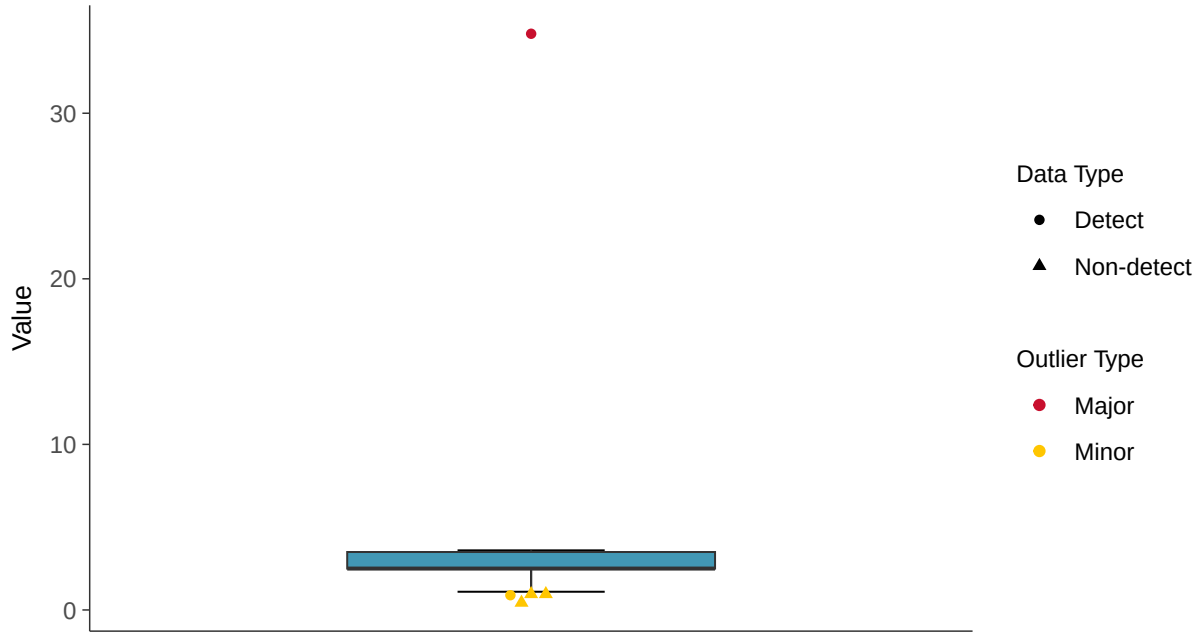
ID: 5_3_110





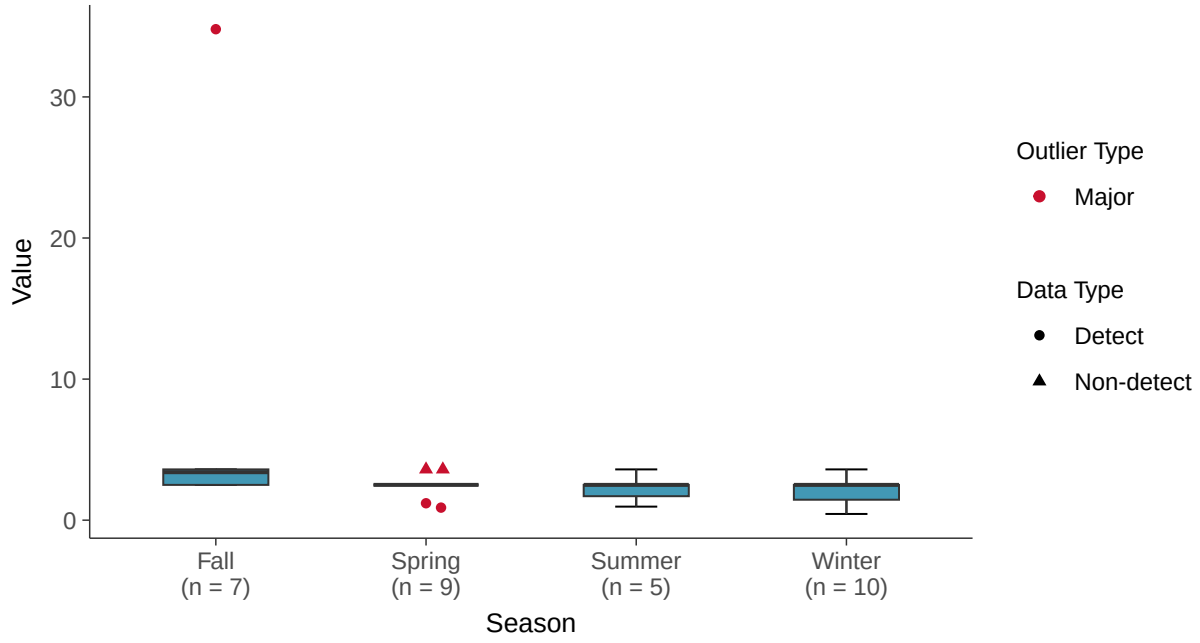
Boxplot

Cobalt, MW-2 (ug/L)



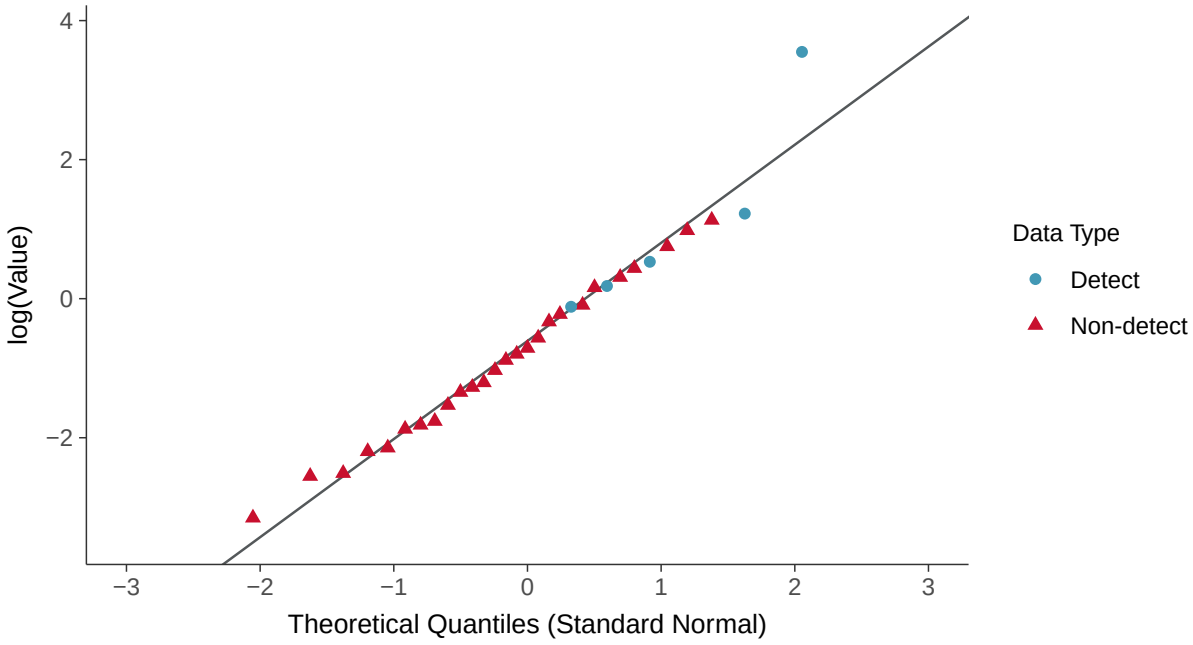
Boxplot by Season

Cobalt, MW-2 (ug/L)



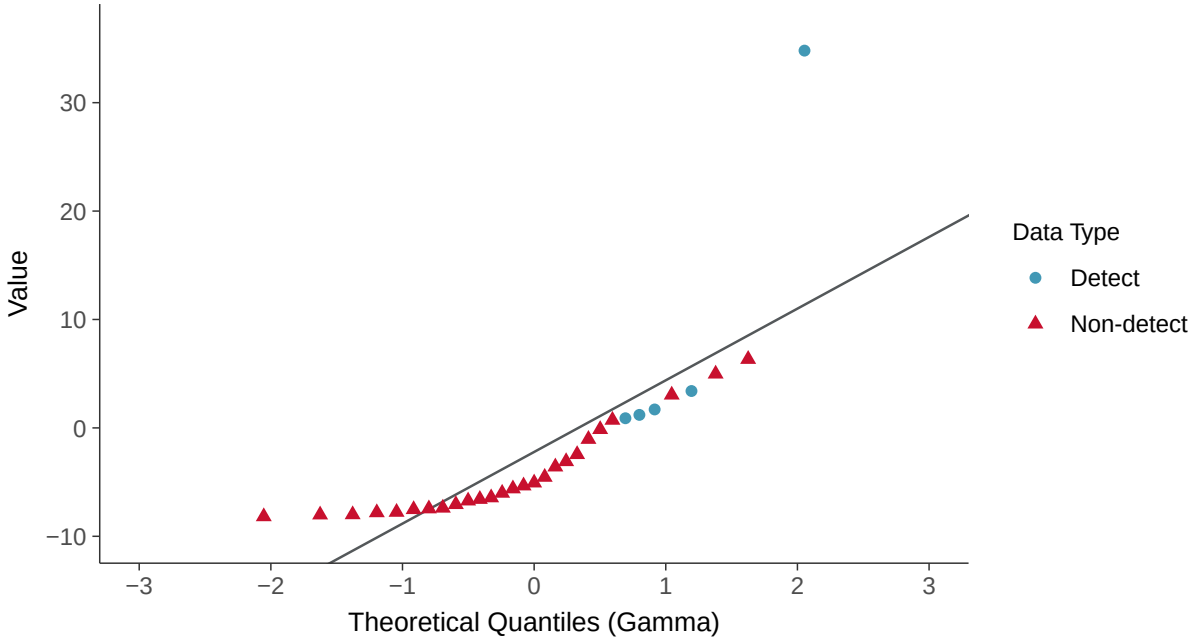
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-2 (ug/L)



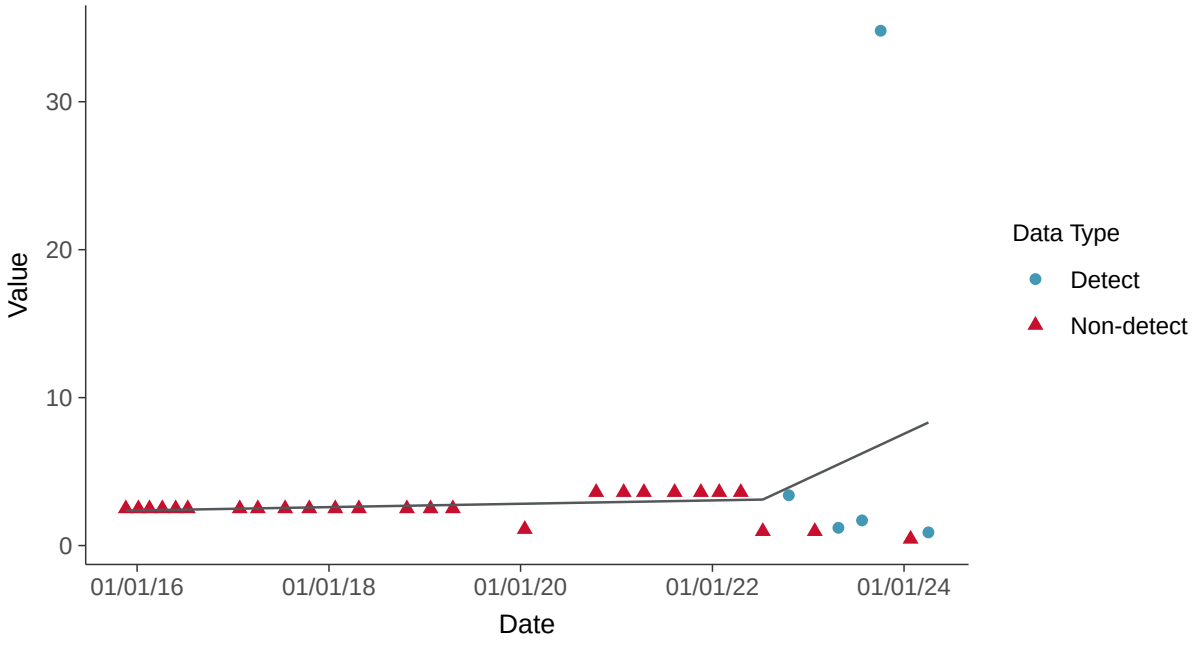
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-2 (ug/L)



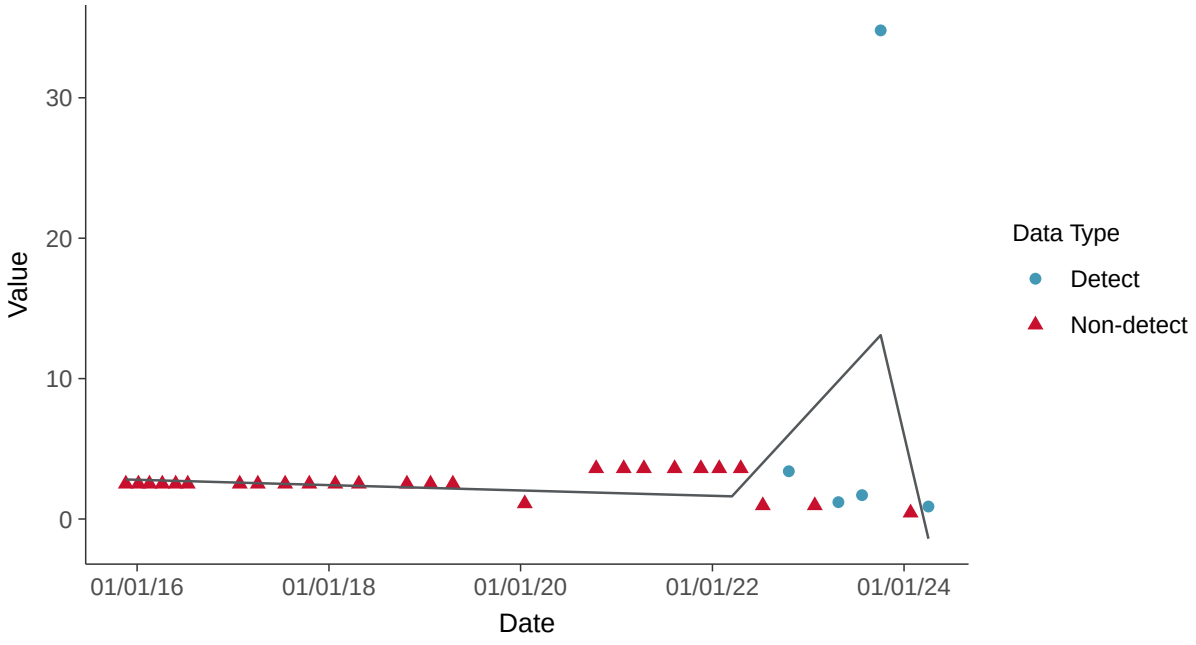
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-2 (ug/L)

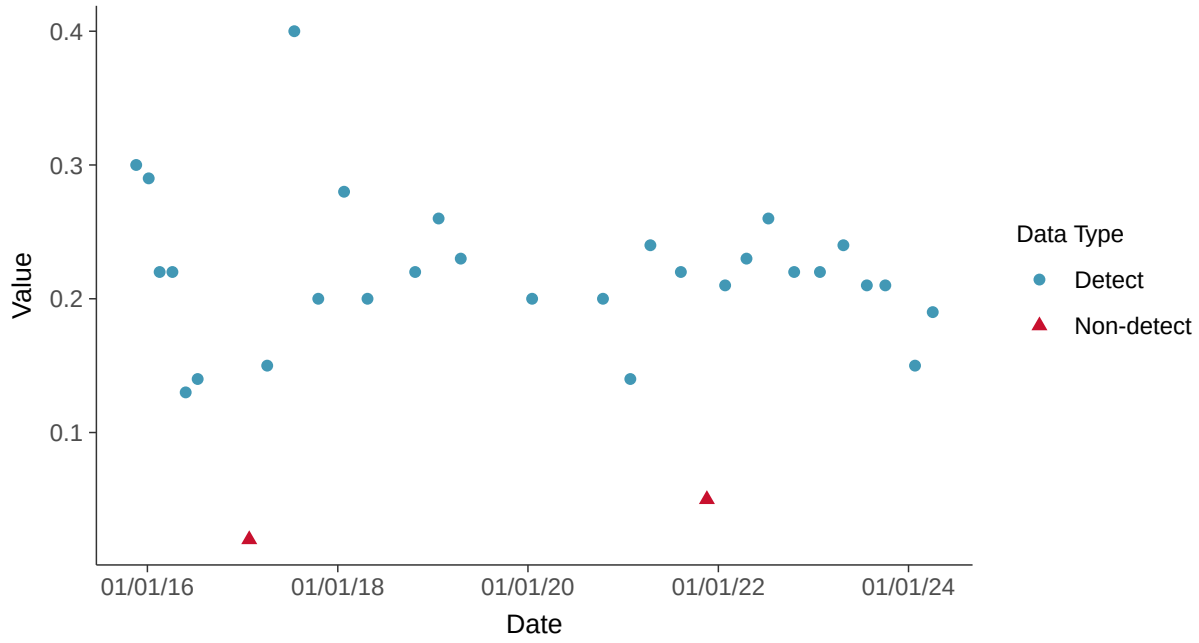


App. IV: Fluoride, MW-2

ID: 5_3_112

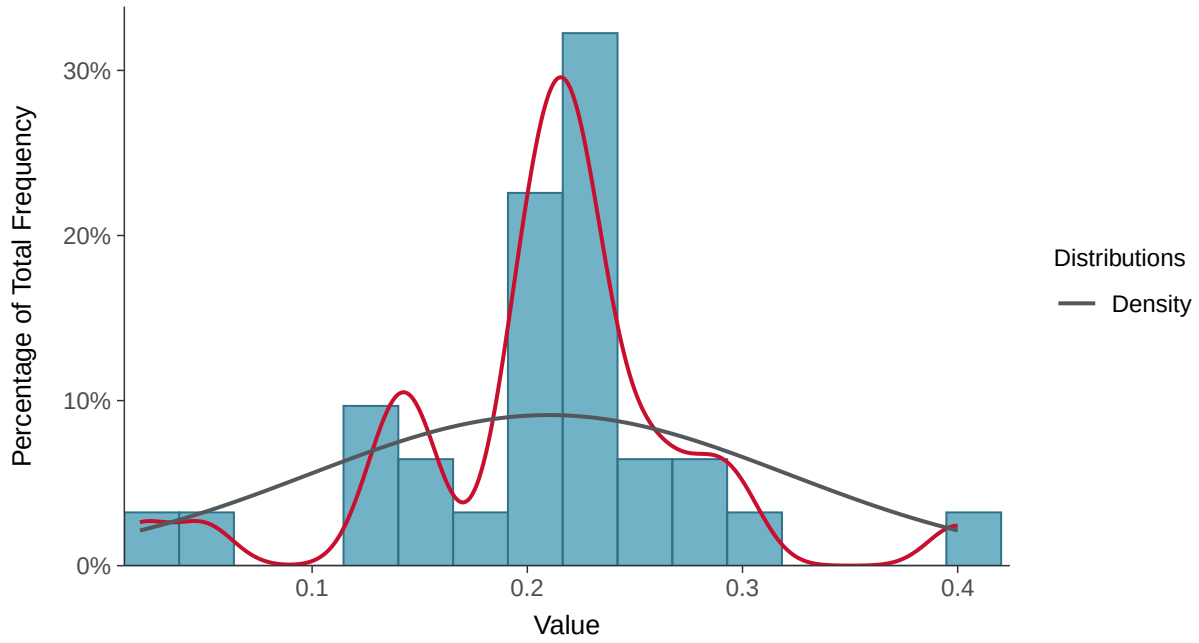
Scatter Plot

Fluoride, MW-2 (mg/L)



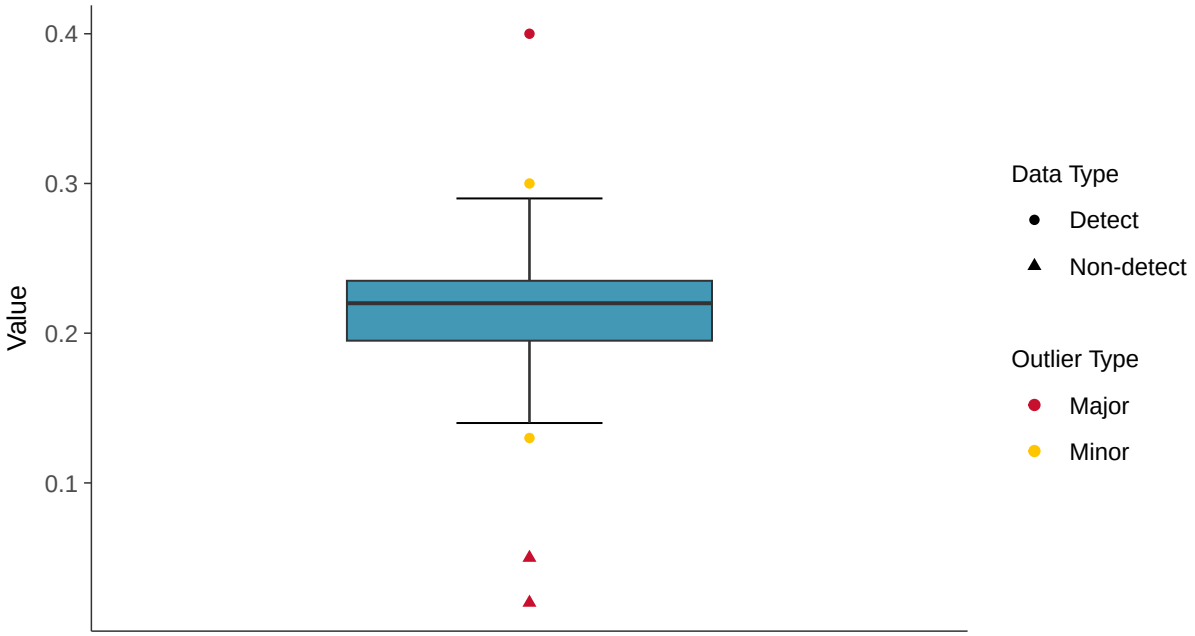
Histogram

Fluoride, MW-2 (mg/L)



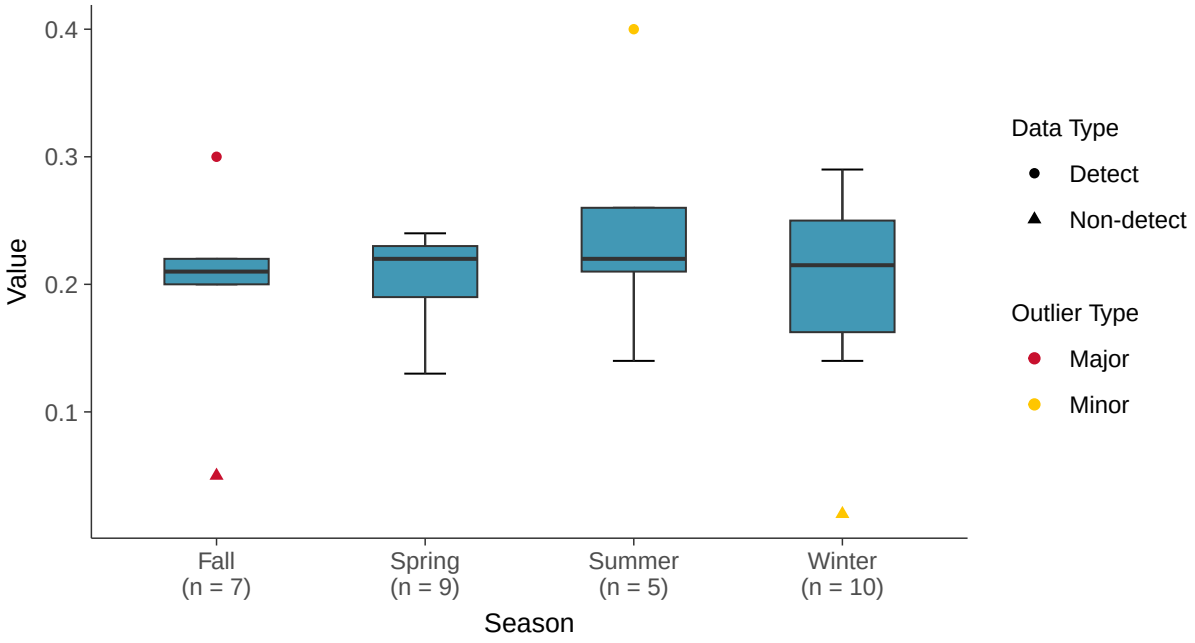
Boxplot

Fluoride, MW-2 (mg/L)



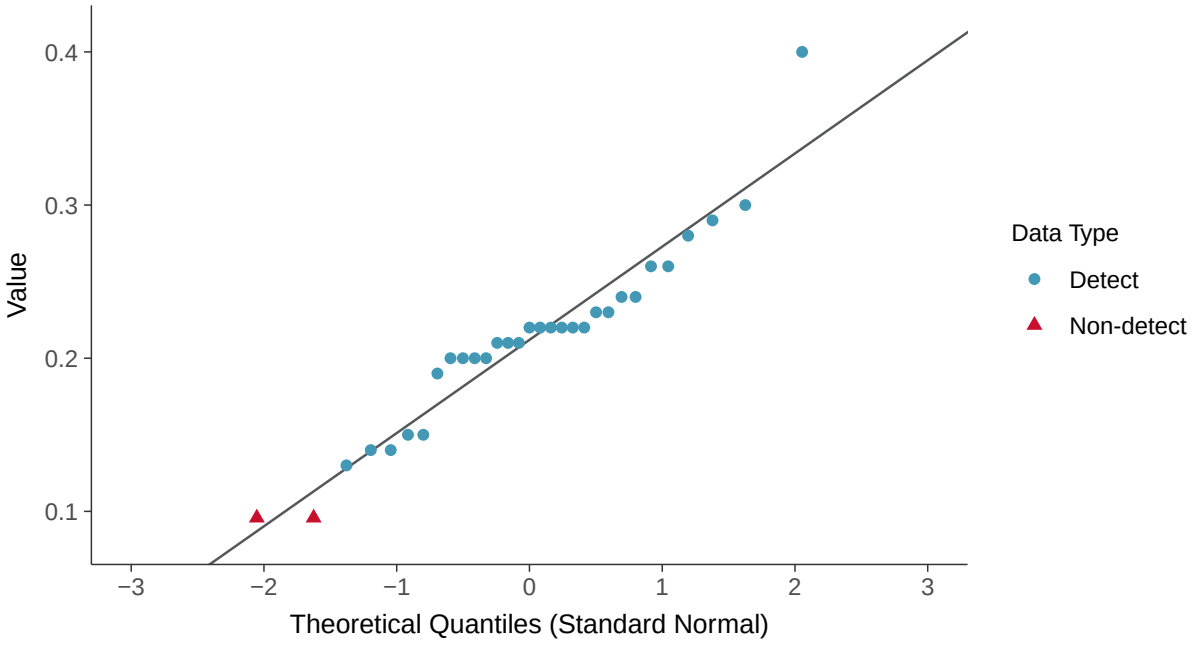
Boxplot by Season

Fluoride, MW-2 (mg/L)



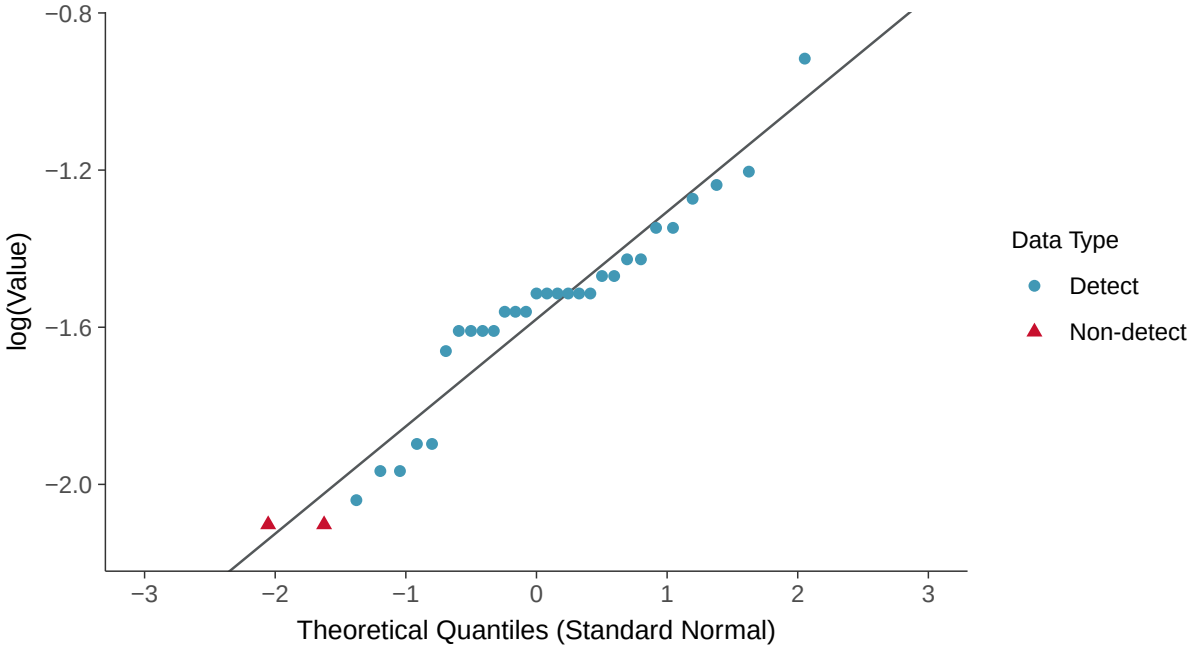
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



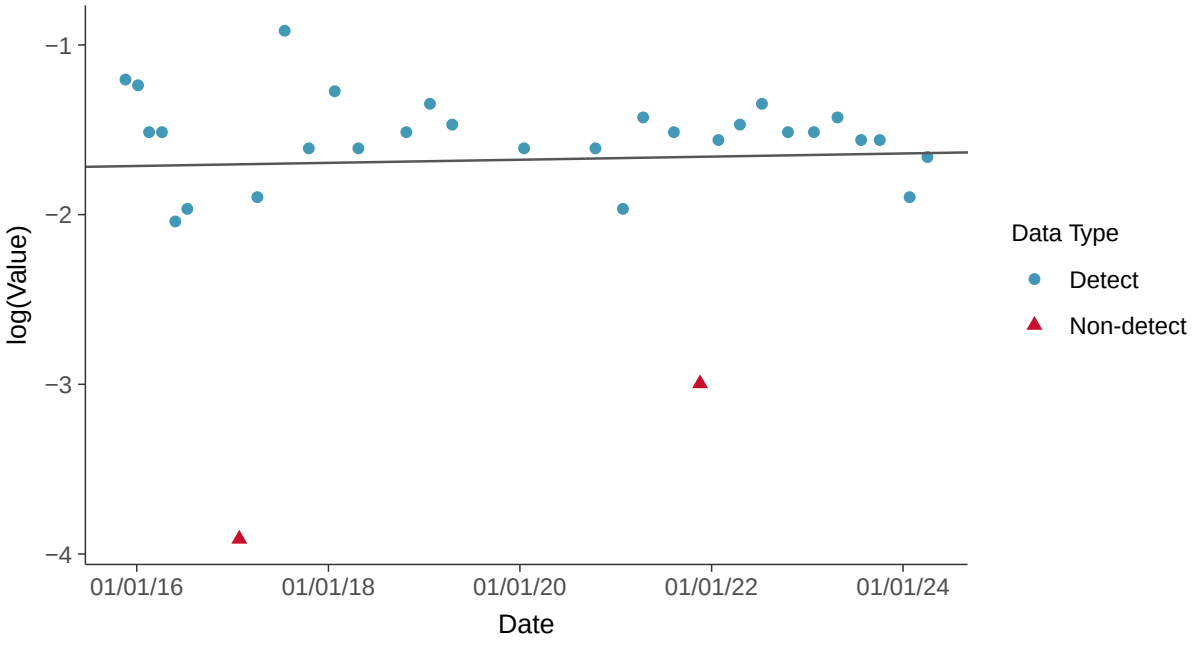
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



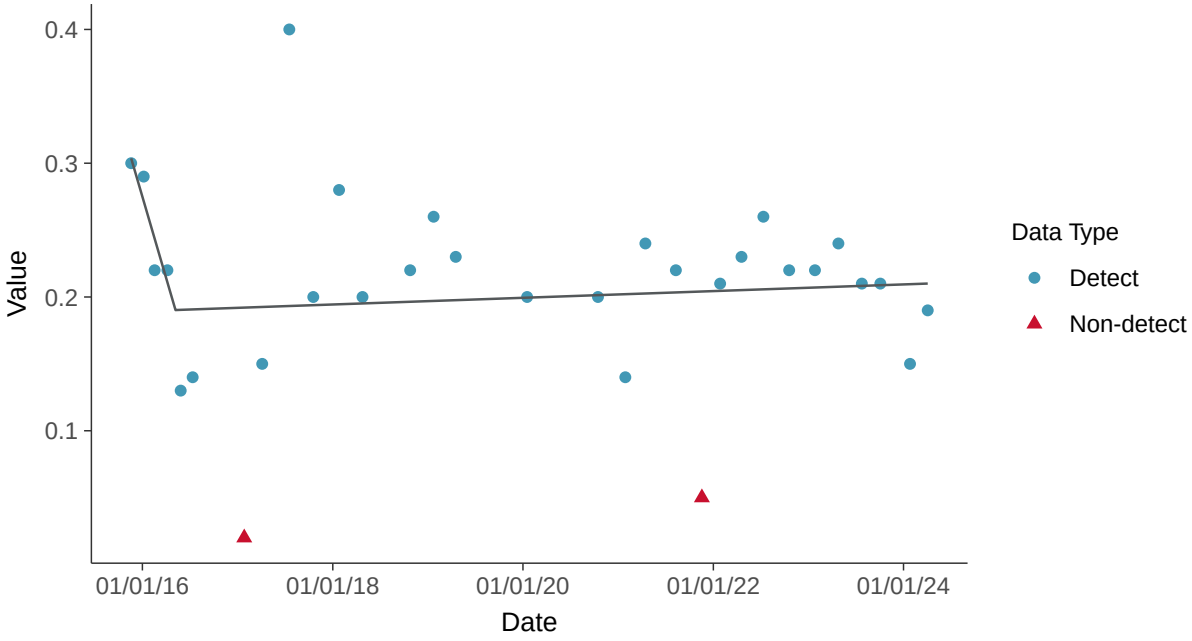
Trend Regression: Lognormal MLE

Fluoride, MW-2 (mg/L)



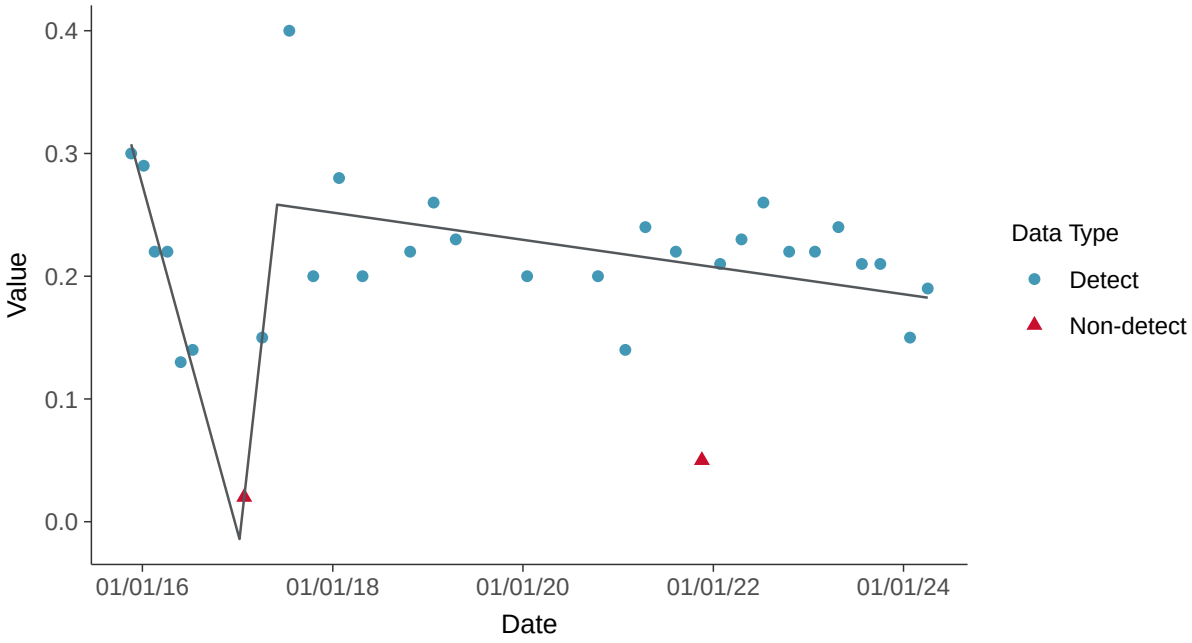
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-2 (mg/L)



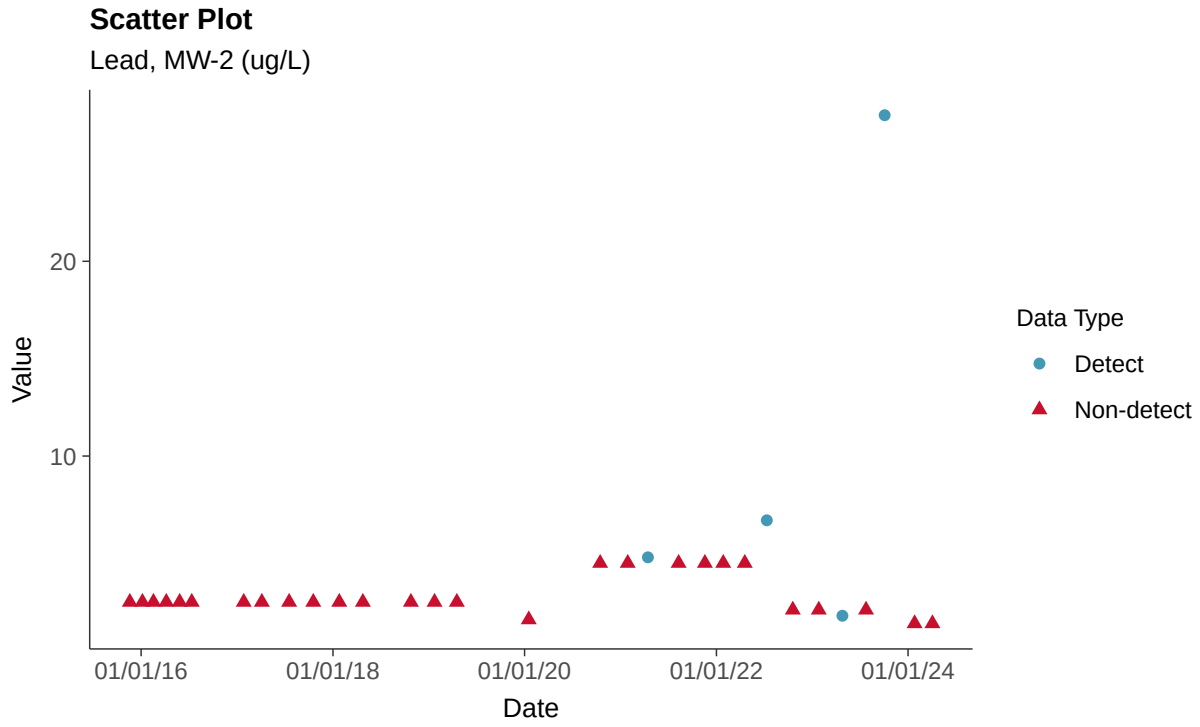
Trend Regression: Piecewise Linear-Linear-Linear

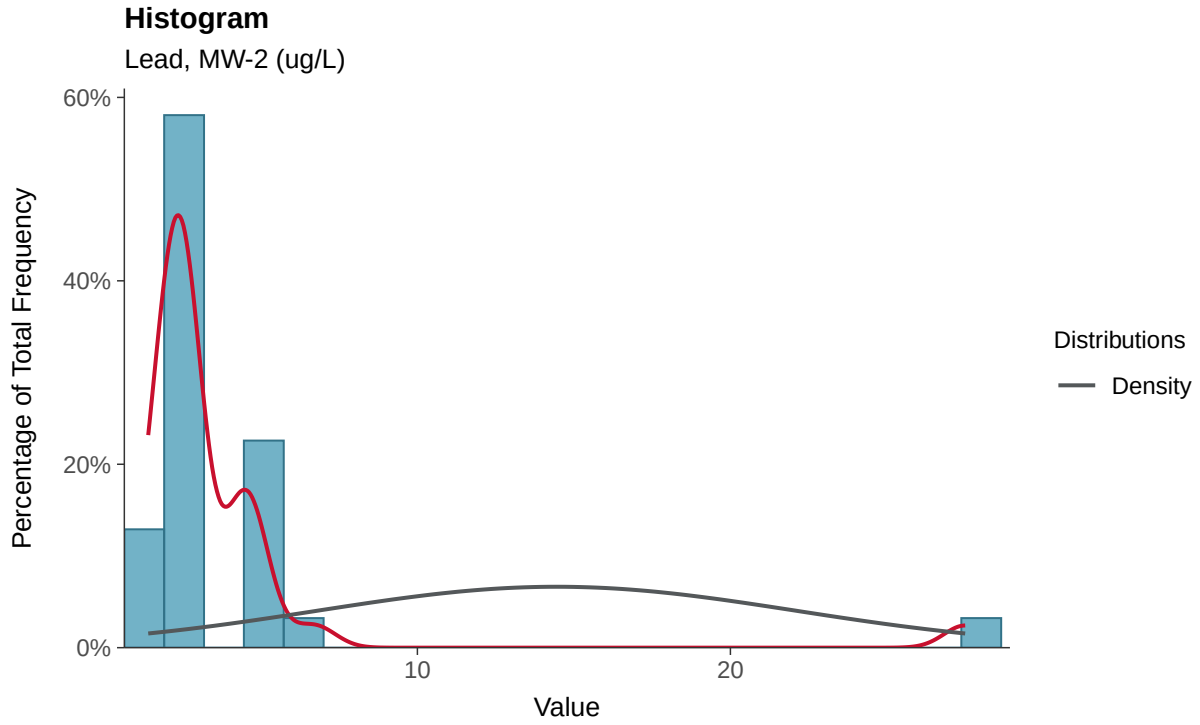
Fluoride, MW-2 (mg/L)



App. IV: Lead, MW-2

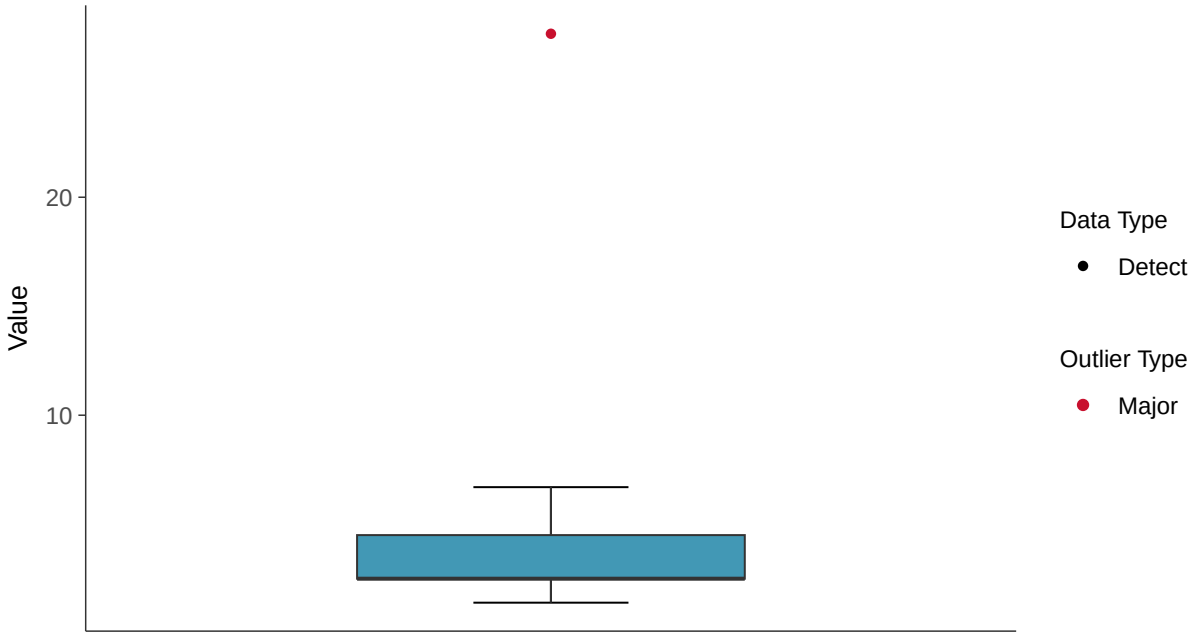
ID: 5_3_113





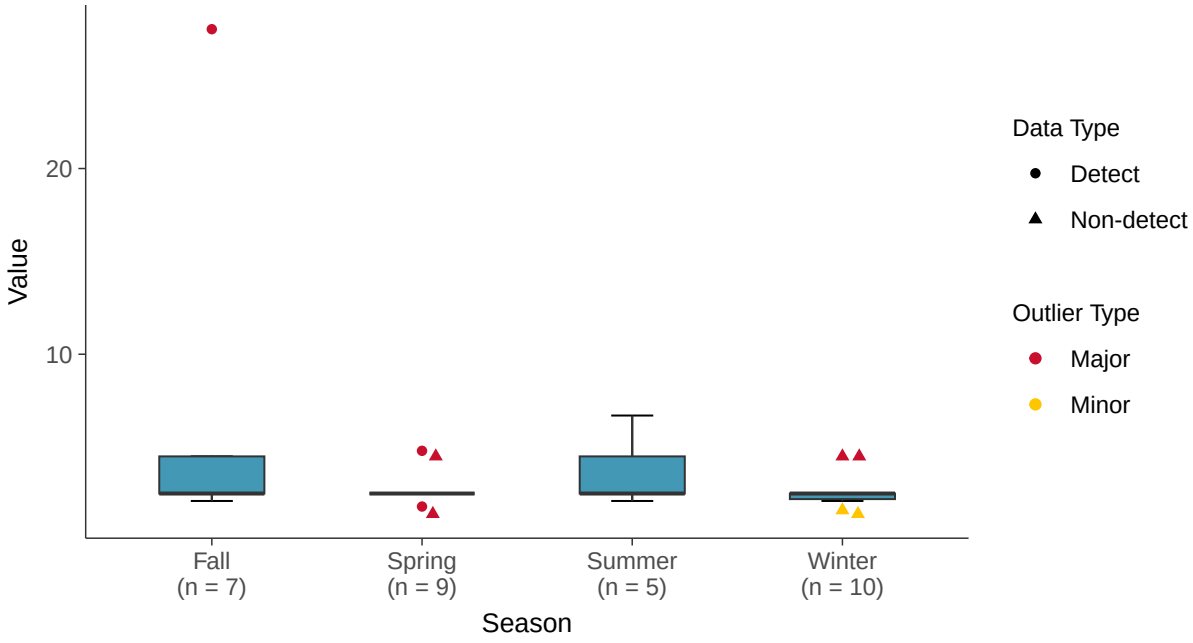
Boxplot

Lead, MW-2 (ug/L)



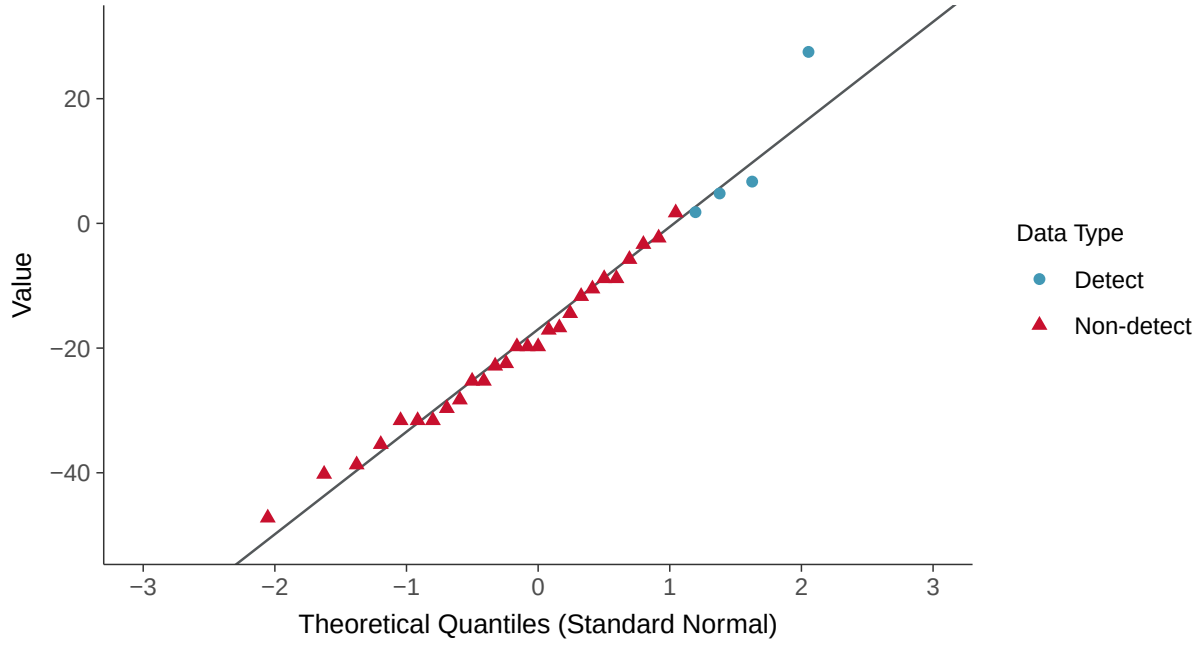
Boxplot by Season

Lead, MW-2 (ug/L)



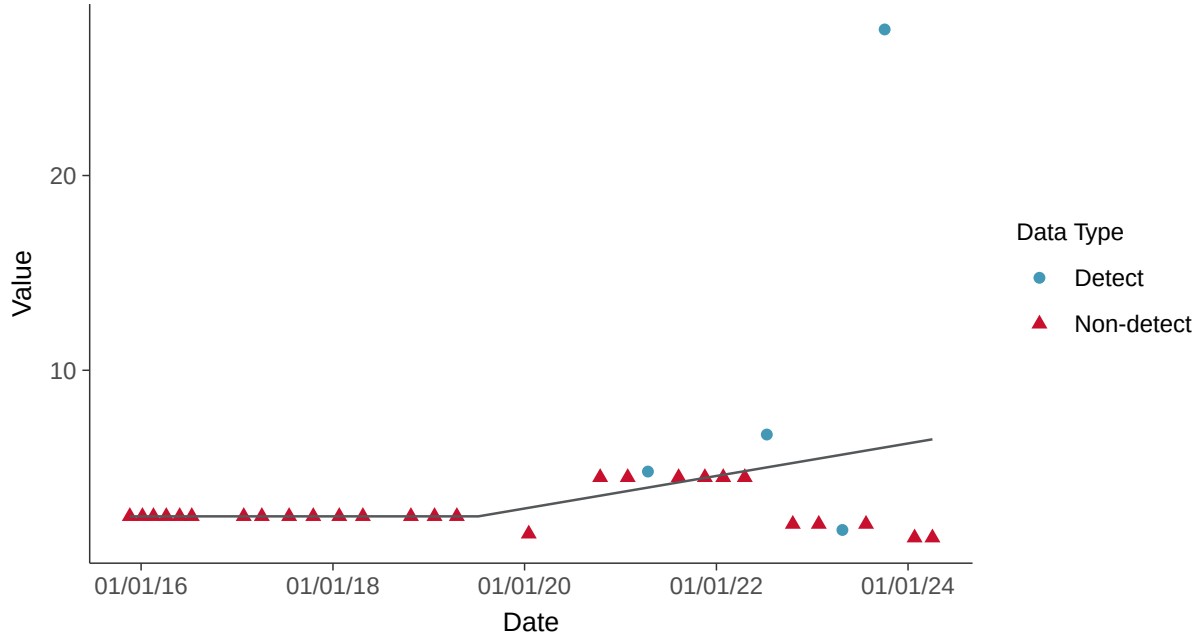
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-2 (ug/L)



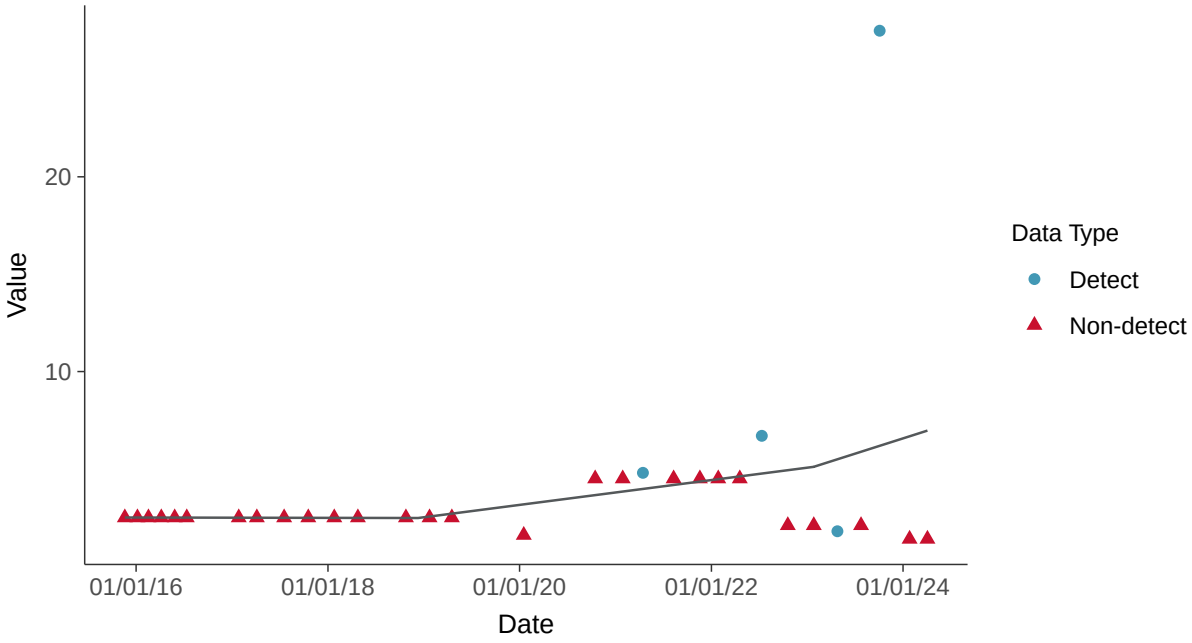
Trend Regression: Piecewise Linear-Linear

Lead, MW-2 (ug/L)



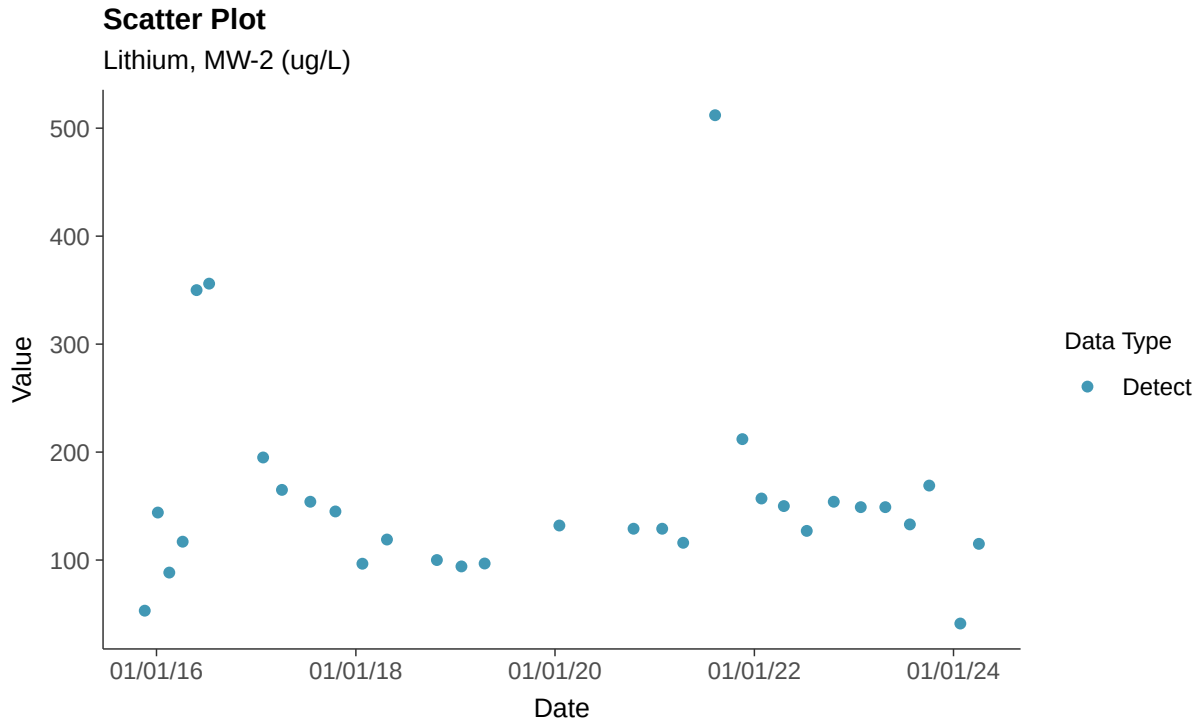
Trend Regression: Piecewise Linear-Linear-Linear

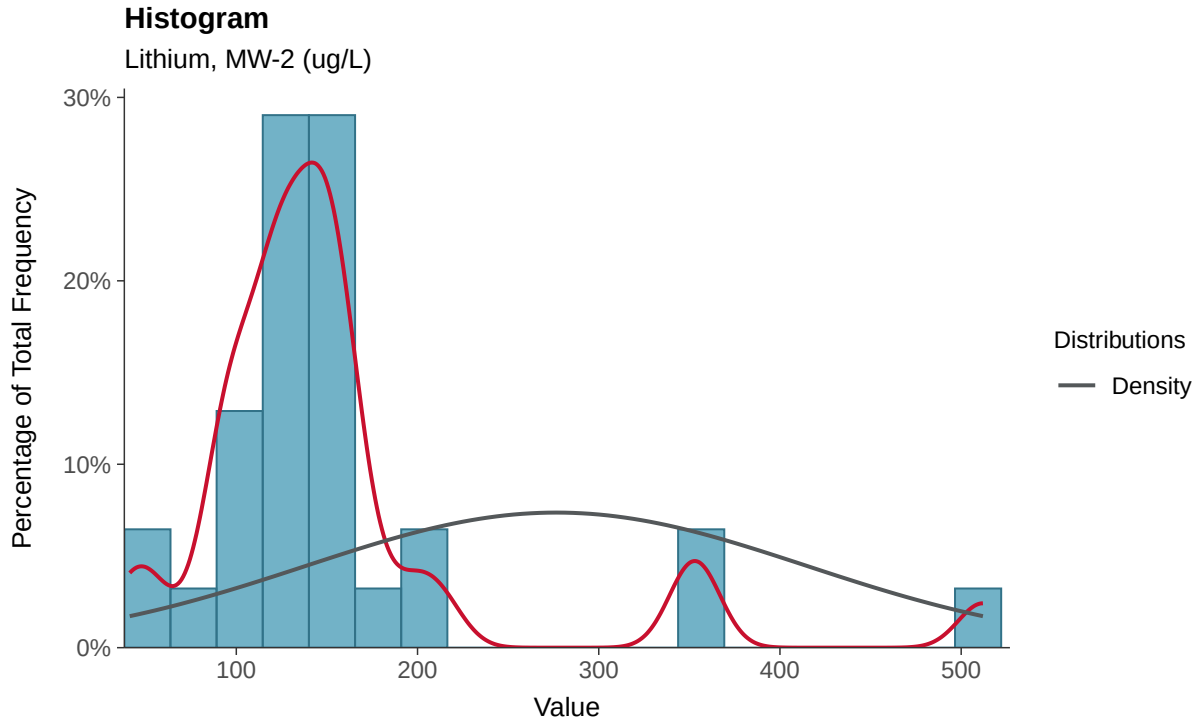
Lead, MW-2 (ug/L)



App. IV: Lithium, MW-2

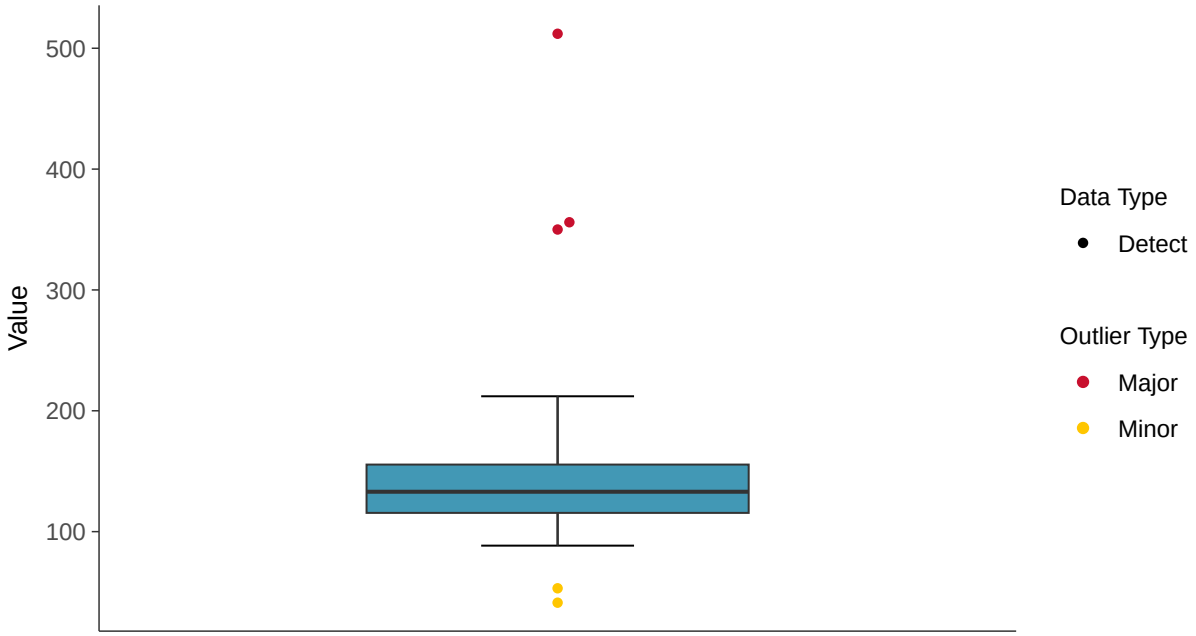
ID: 5_3_114





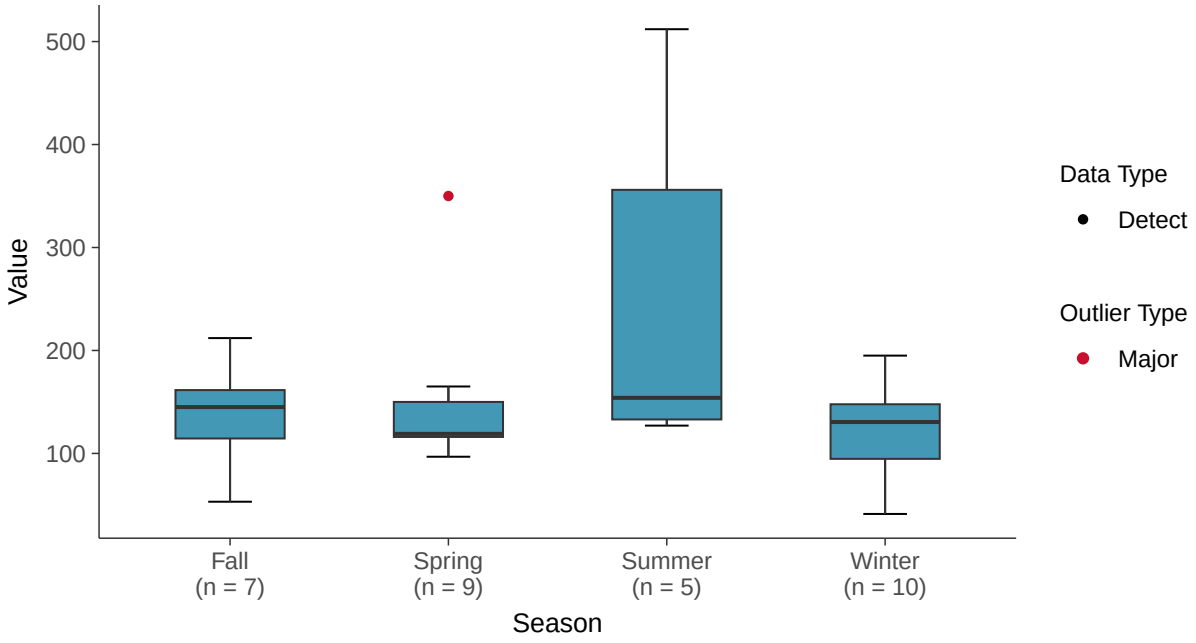
Boxplot

Lithium, MW-2 (ug/L)



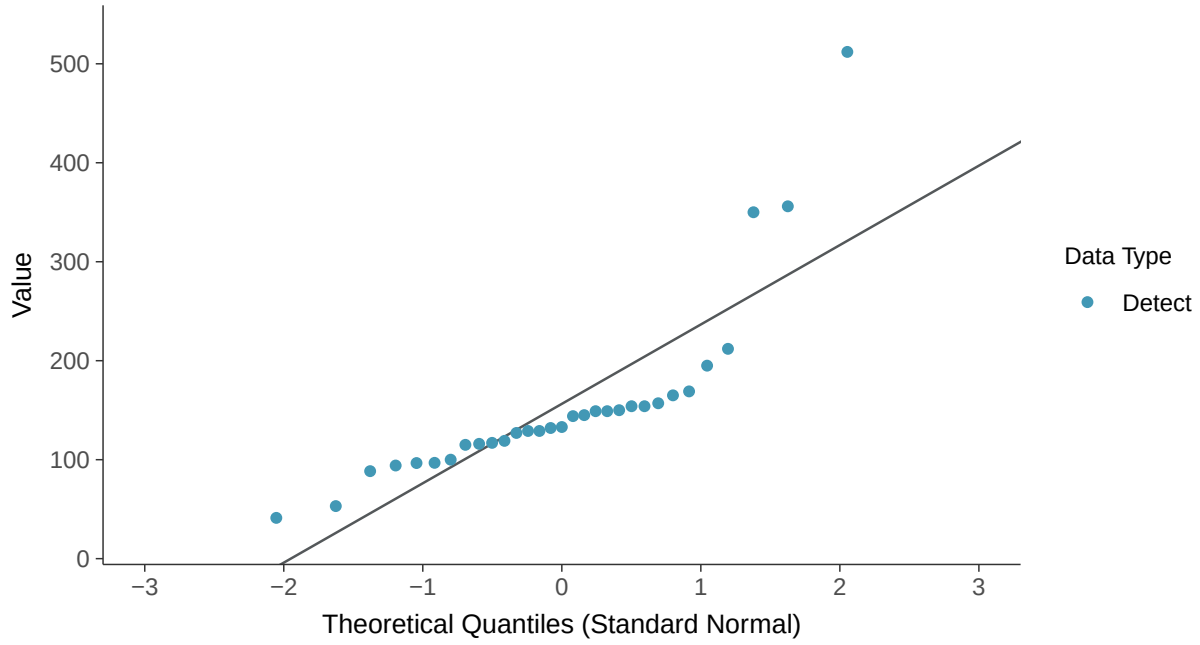
Boxplot by Season

Lithium, MW-2 (ug/L)



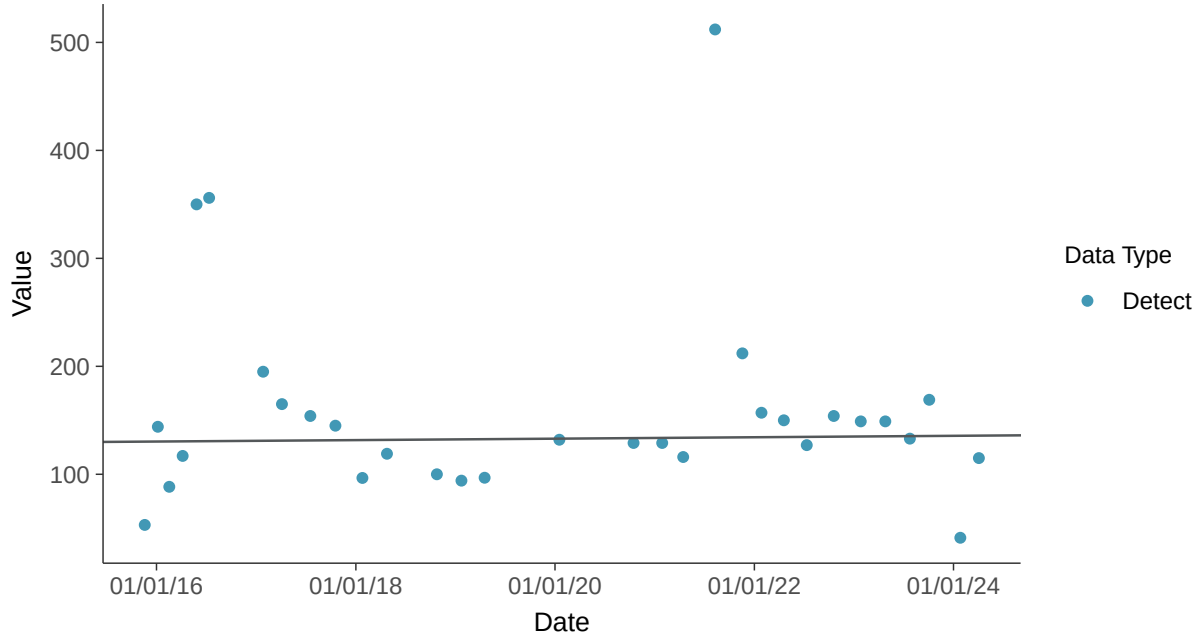
Normal Q-Q plot

Lithium, MW-2 (ug/L)



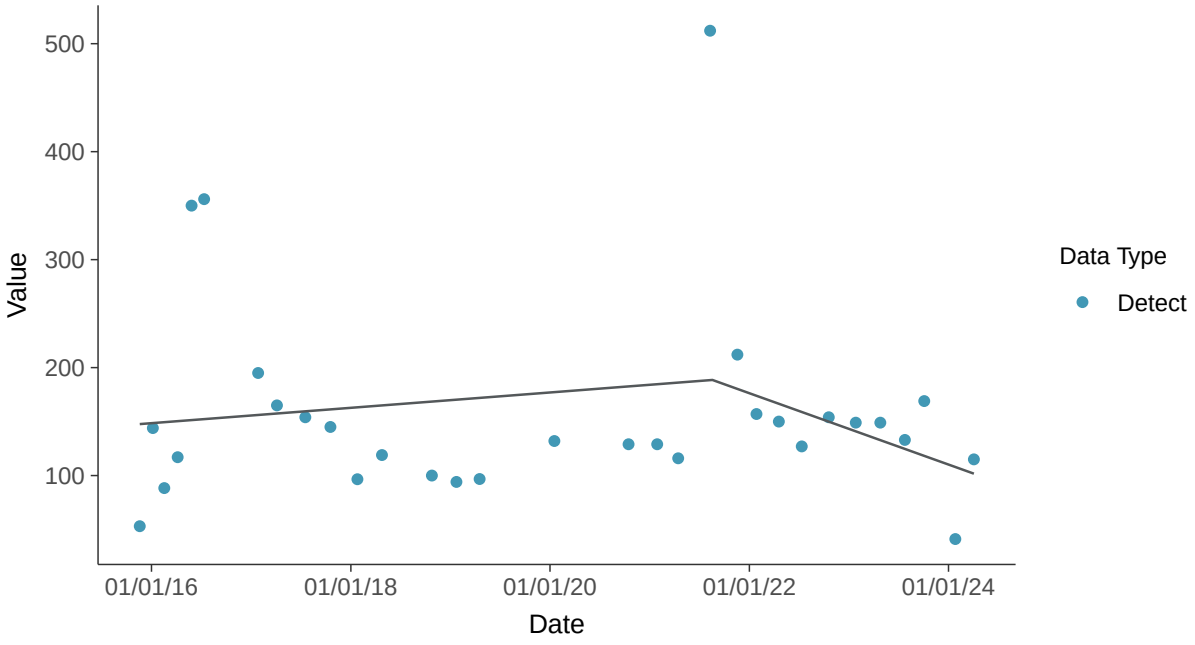
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-2 (ug/L)



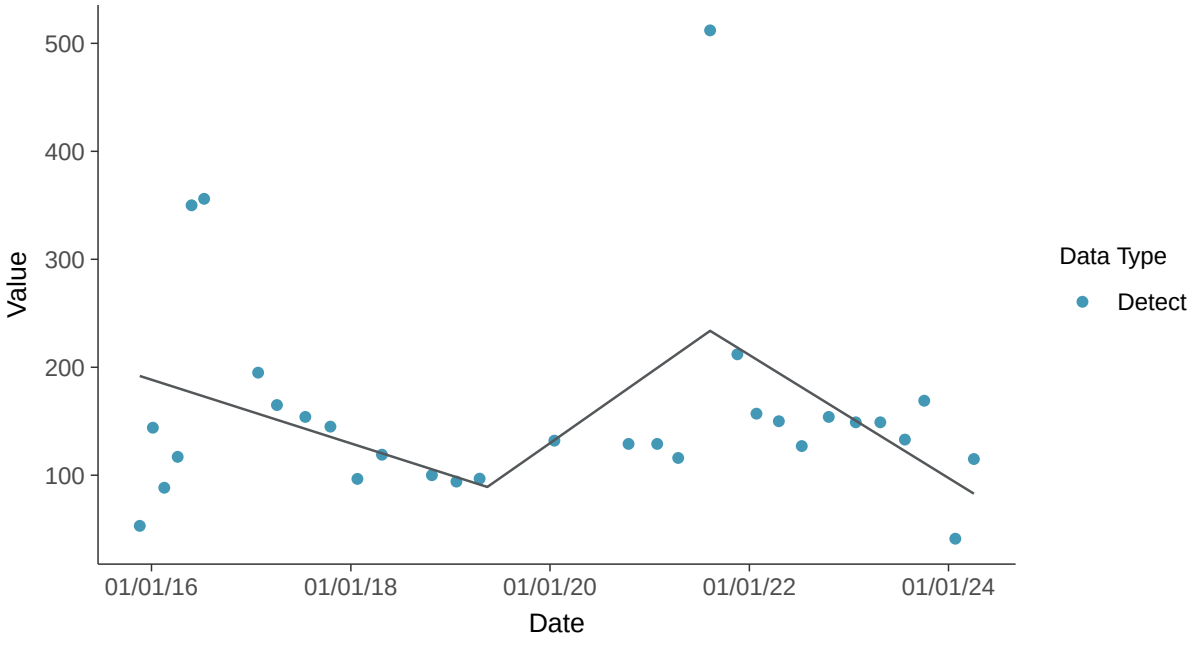
Trend Regression: Piecewise Linear-Linear

Lithium, MW-2 (ug/L)



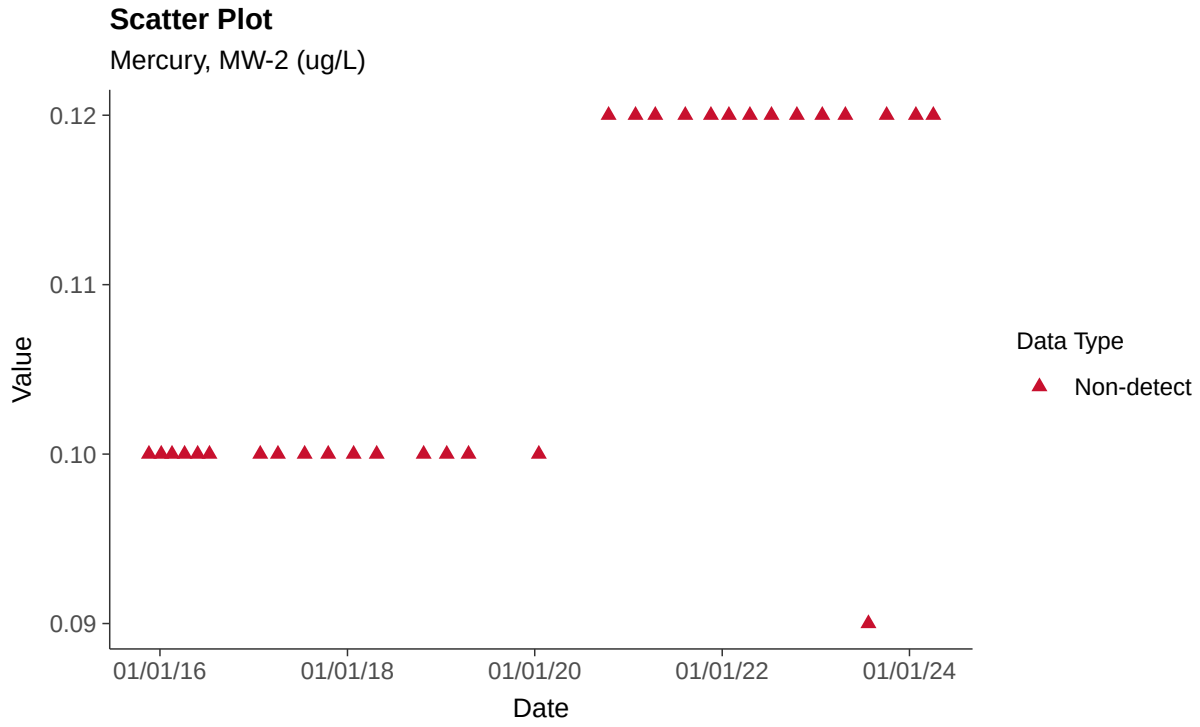
Trend Regression: Piecewise Linear-Linear-Linear

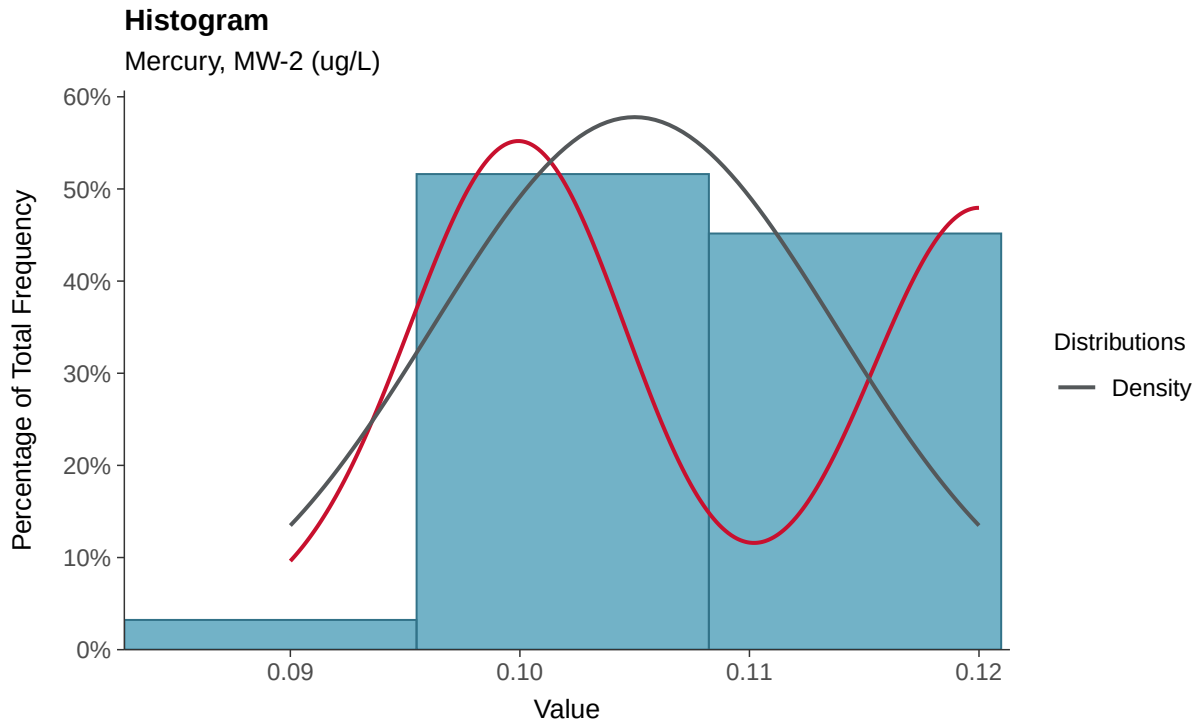
Lithium, MW-2 (ug/L)



App. IV: Mercury, MW-2

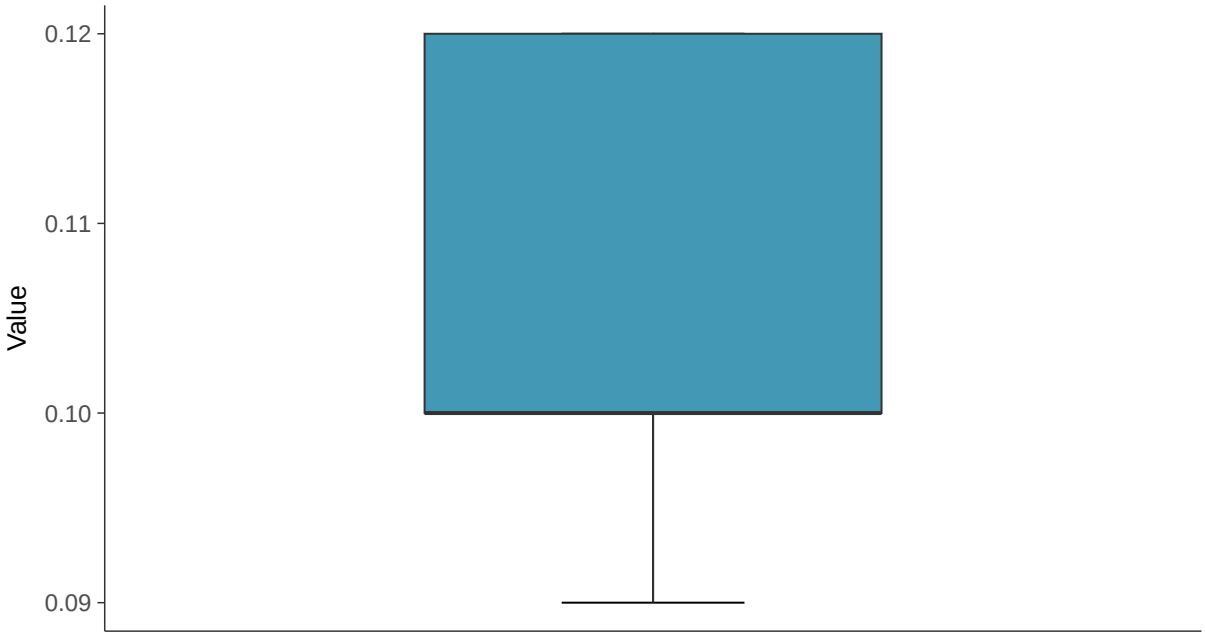
ID: 5_3_115





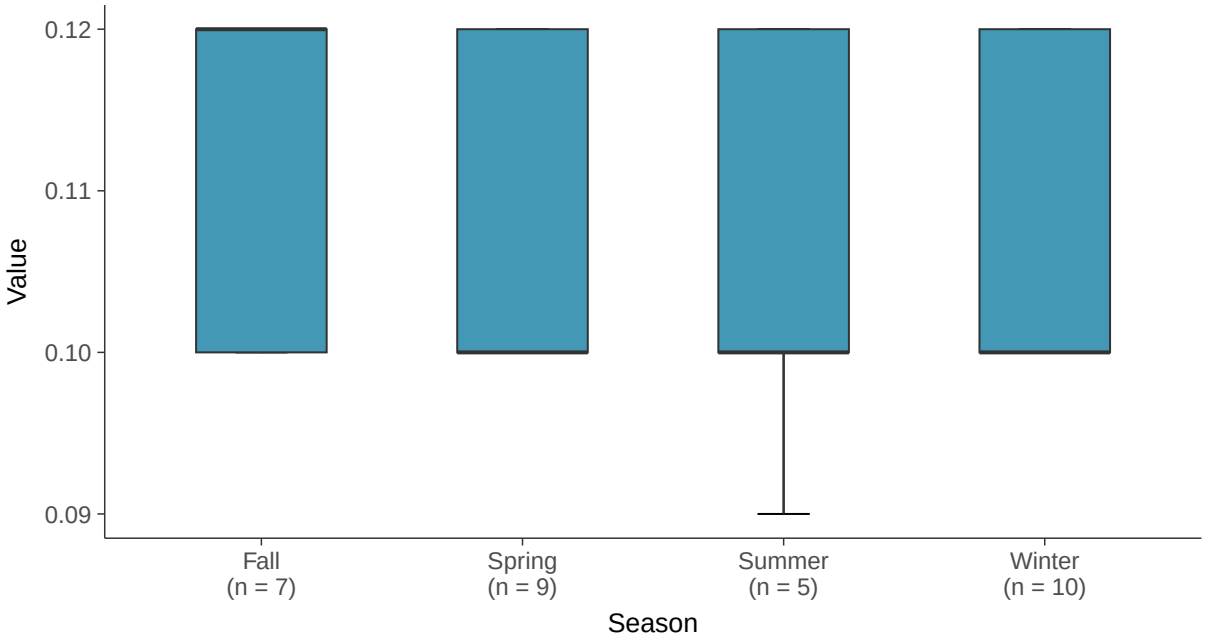
Boxplot

Mercury, MW-2 (ug/L)



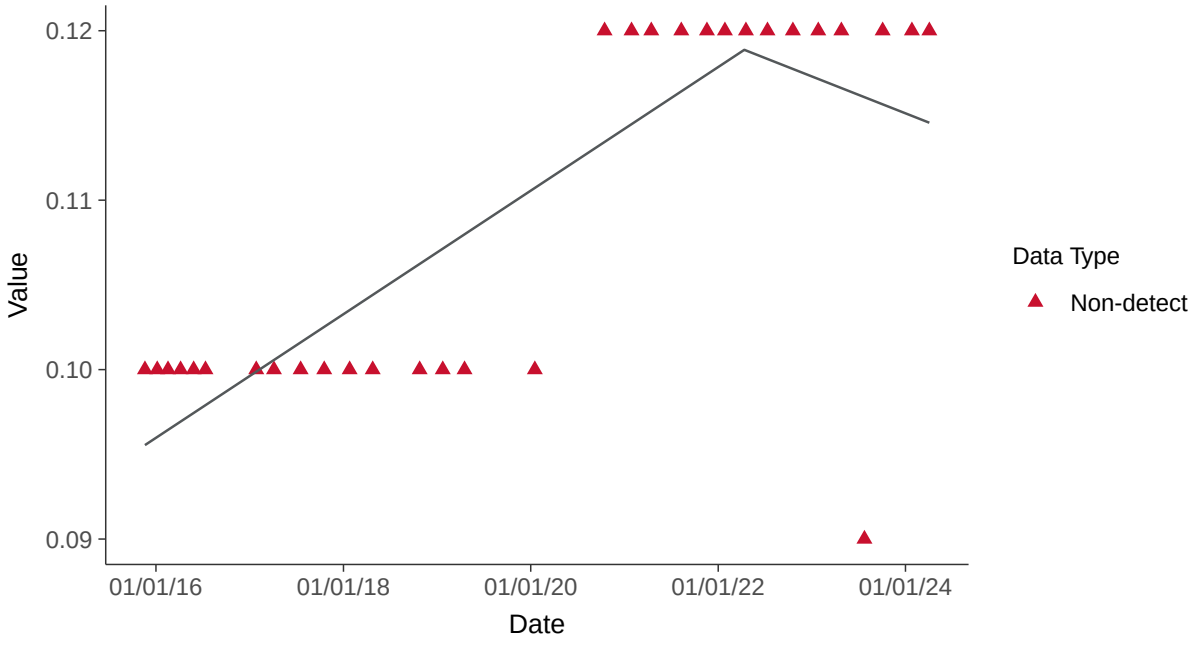
Boxplot by Season

Mercury, MW-2 (ug/L)



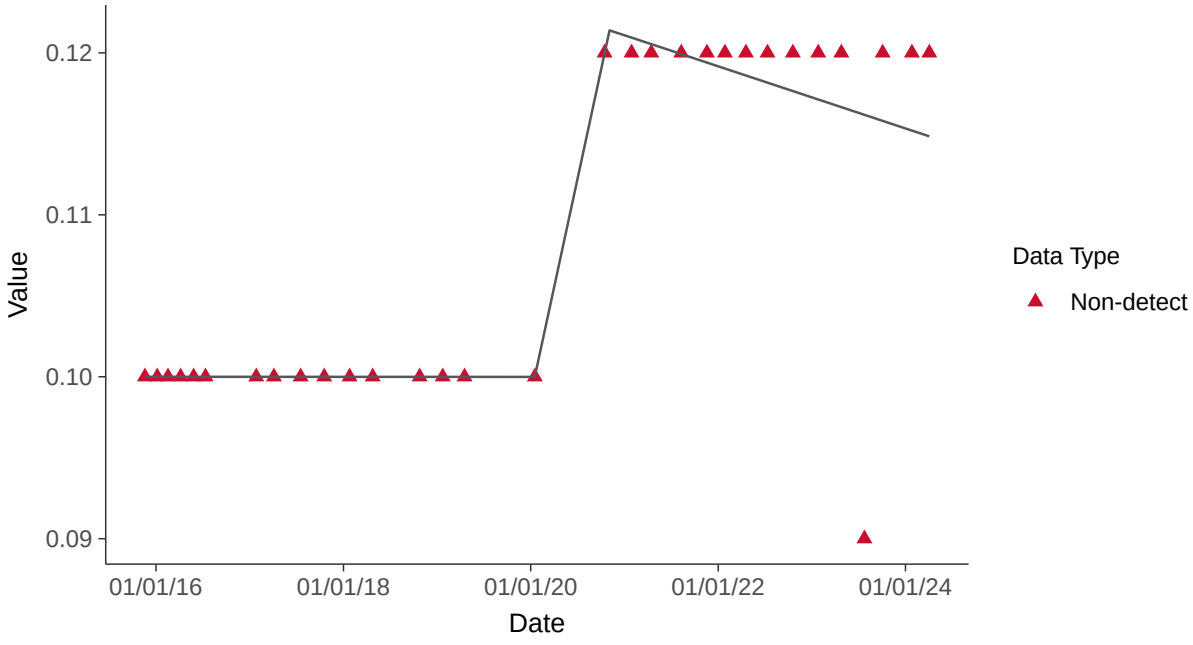
Trend Regression: Piecewise Linear-Linear

Mercury, MW-2 (ug/L)



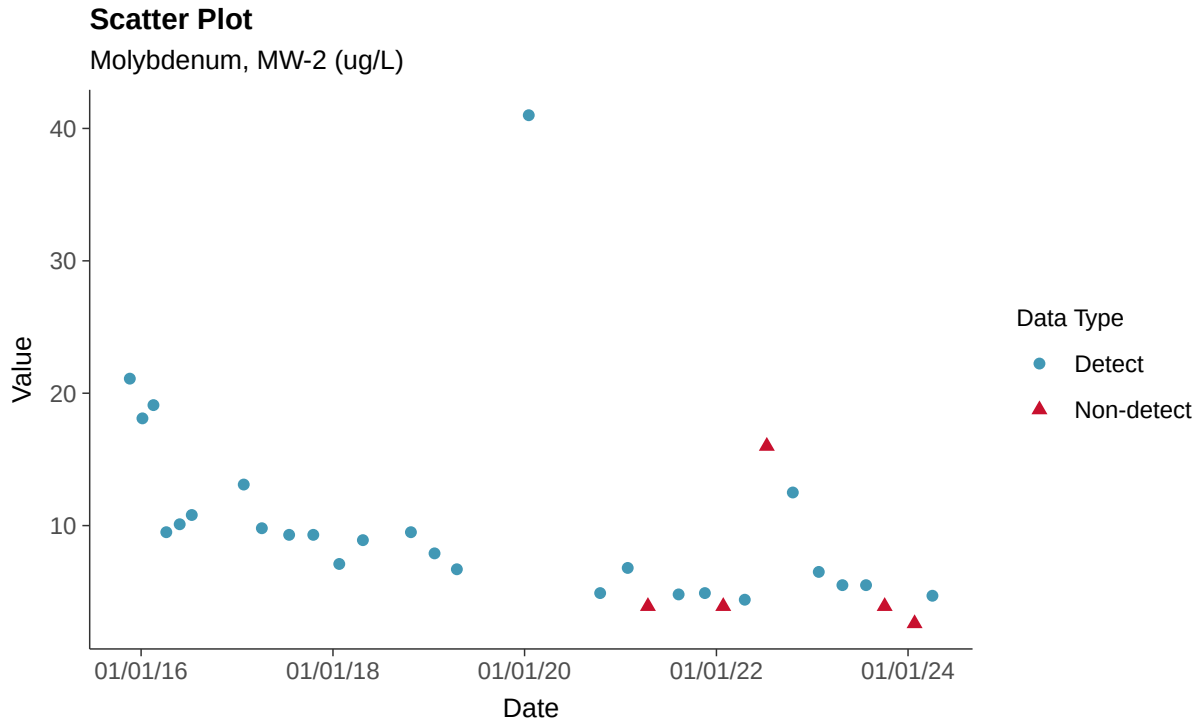
Trend Regression: Piecewise Linear-Linear-Linear

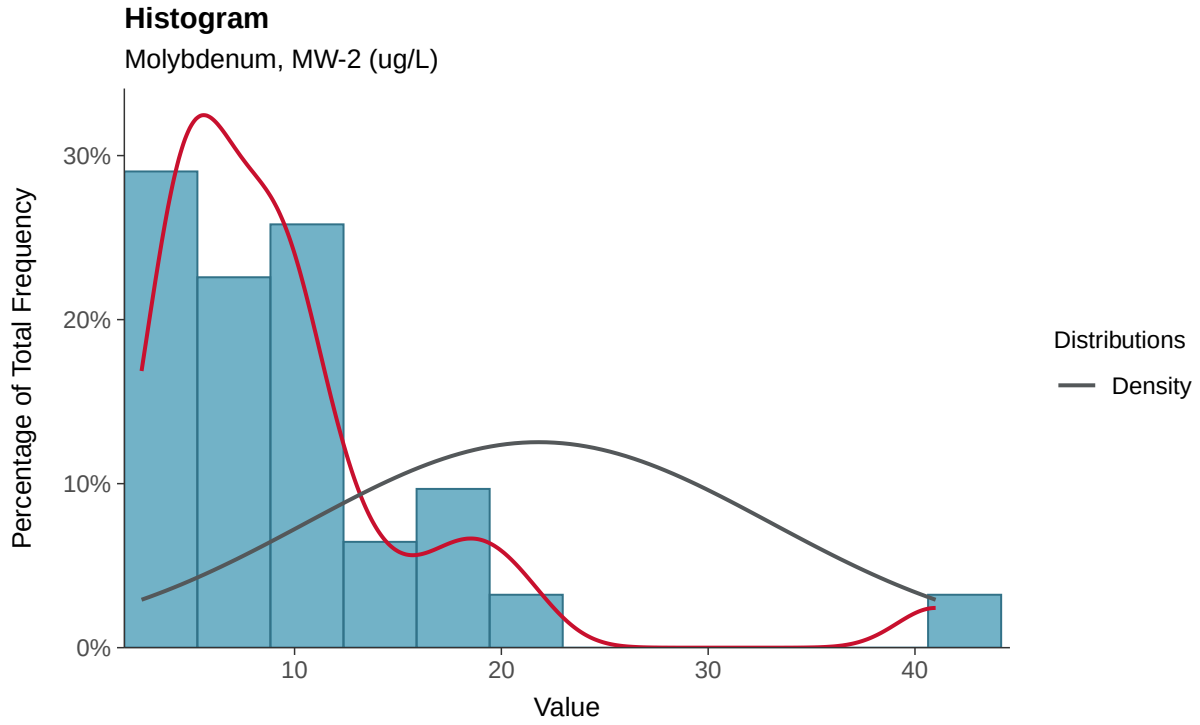
Mercury, MW-2 (ug/L)



App. IV: Molybdenum, MW-2

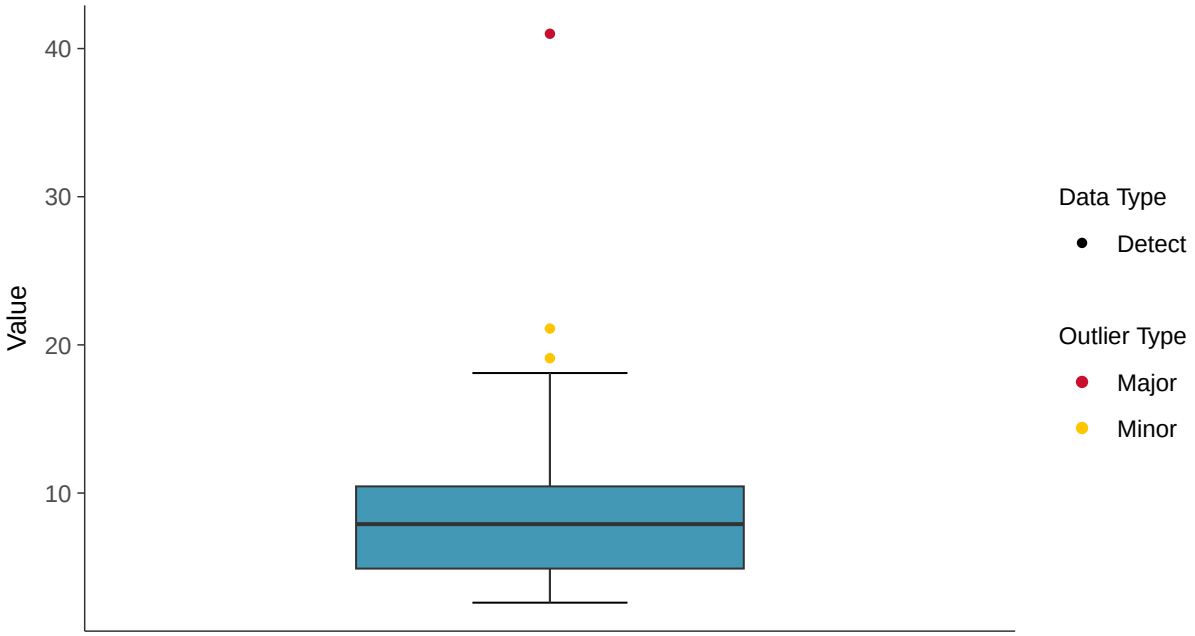
ID: 5_3_116





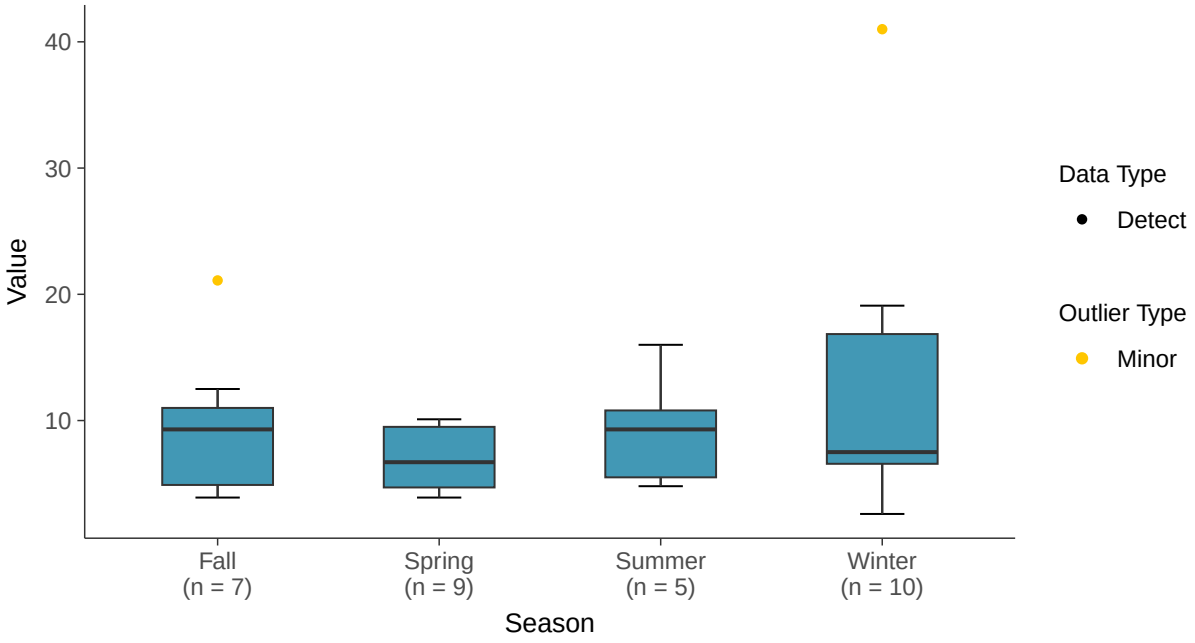
Boxplot

Molybdenum, MW-2 (ug/L)



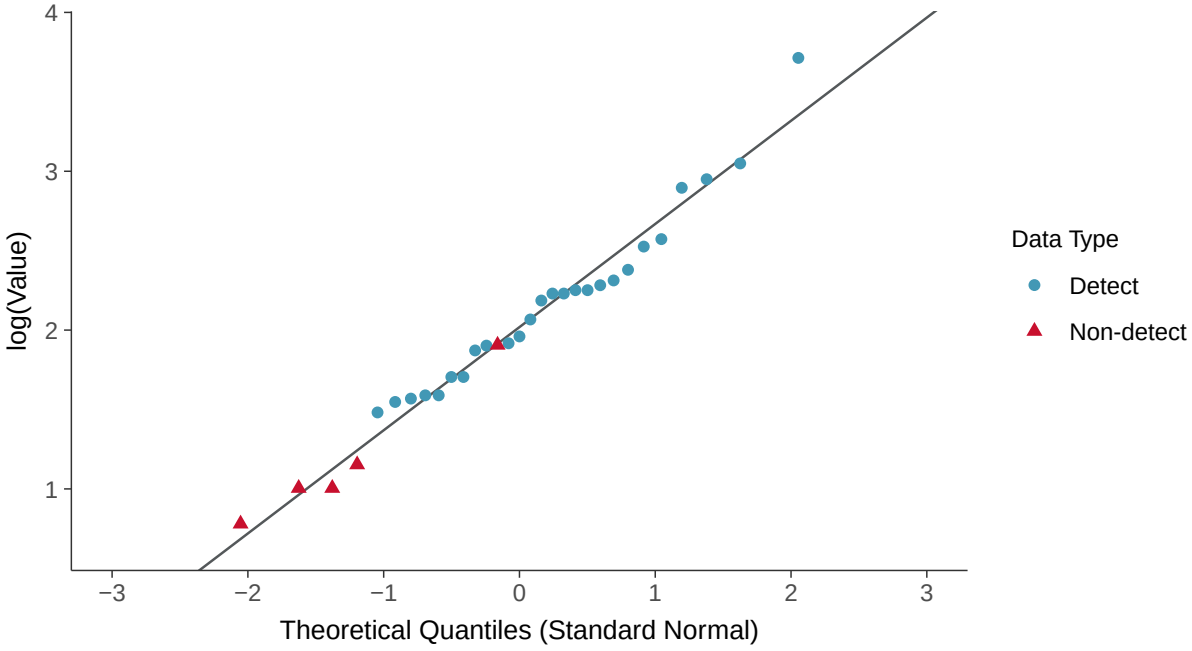
Boxplot by Season

Molybdenum, MW-2 (ug/L)



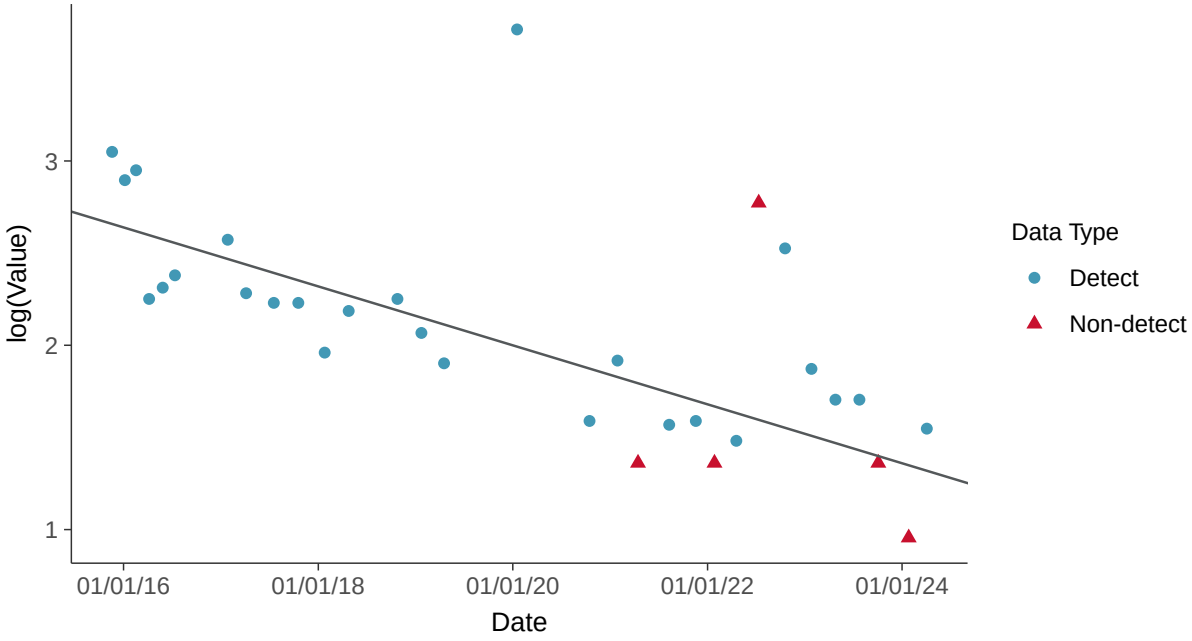
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-2 (ug/L)



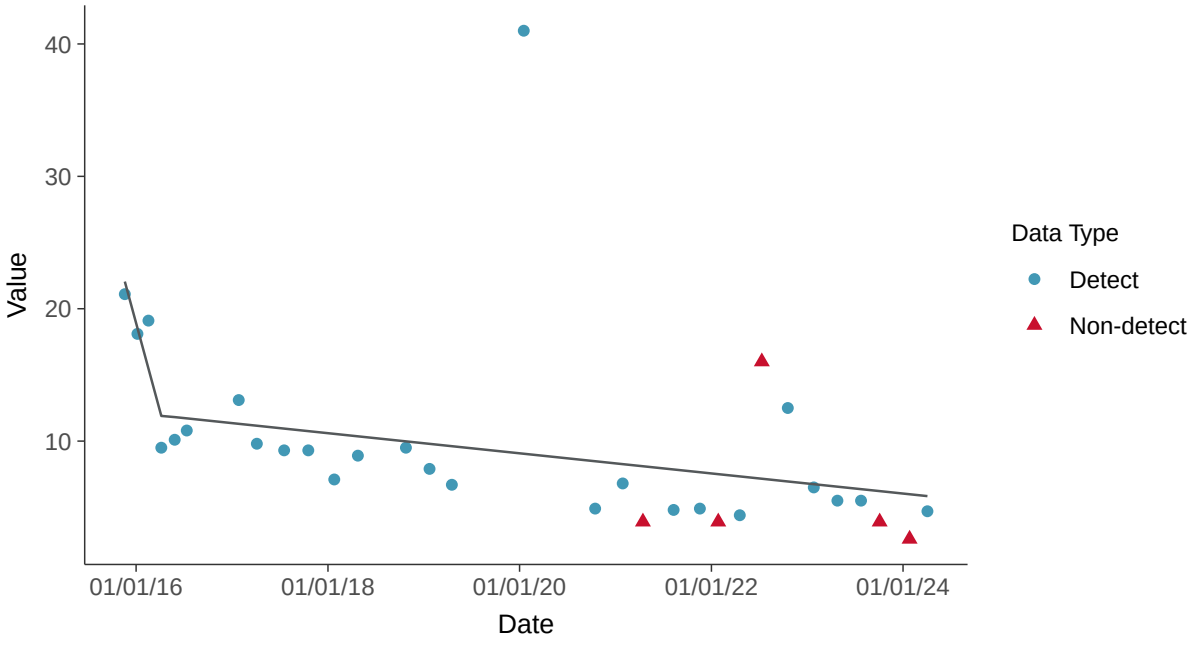
Trend Regression: Lognormal MLE

Molybdenum, MW-2 (ug/L)



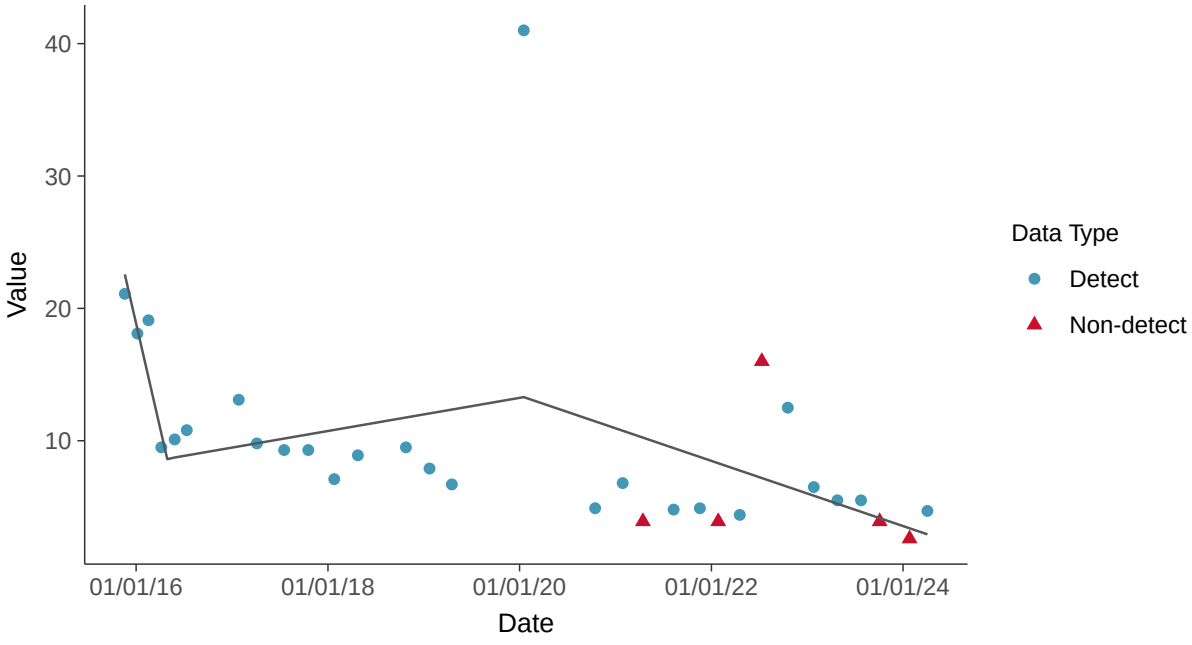
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-2 (ug/L)



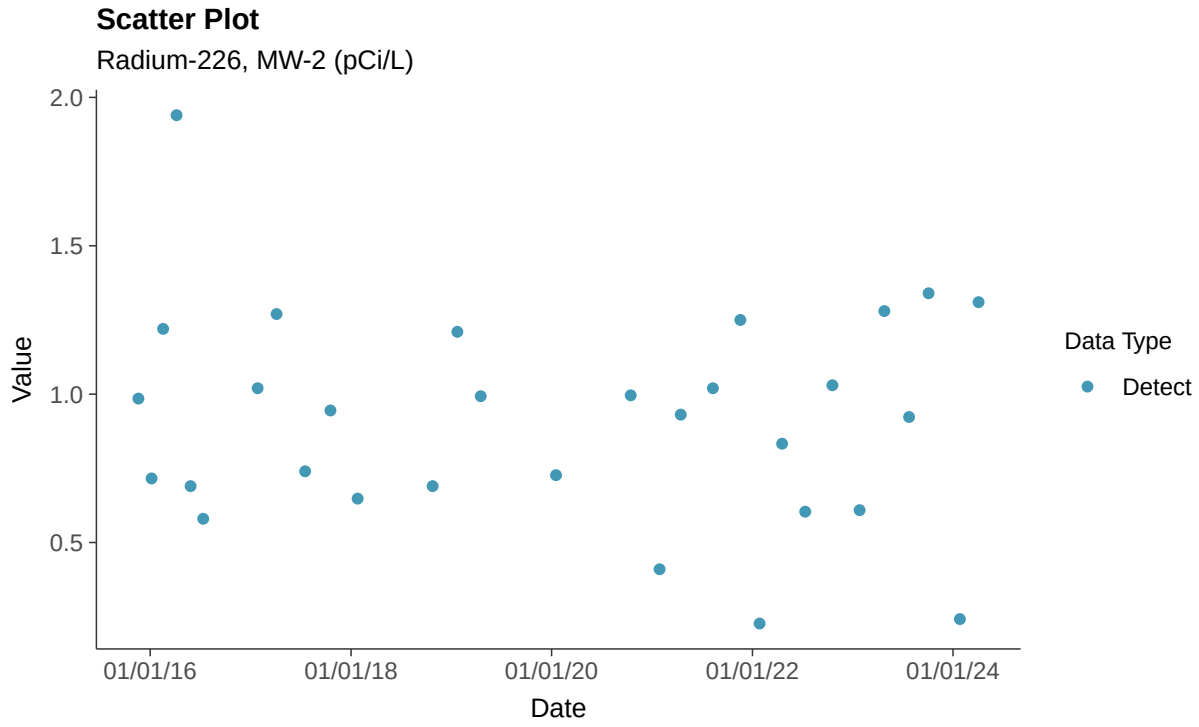
Trend Regression: Piecewise Linear-Linear-Linear

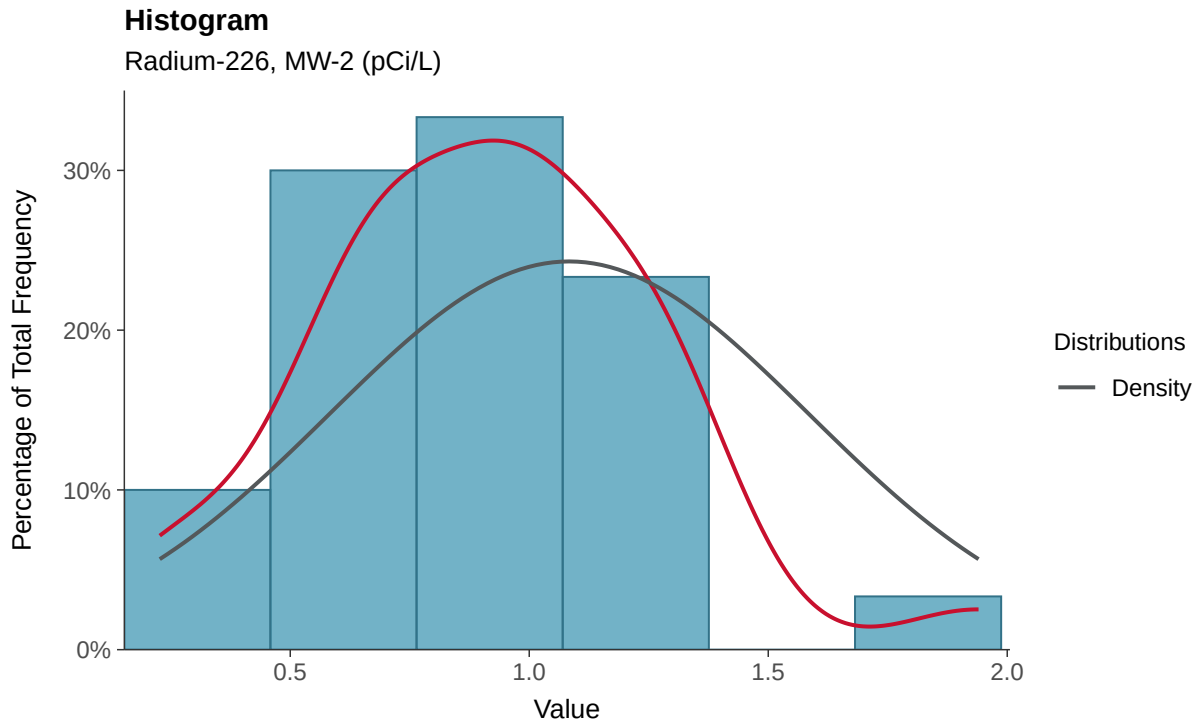
Molybdenum, MW-2 (ug/L)



App. IV: Radium-226, MW-2

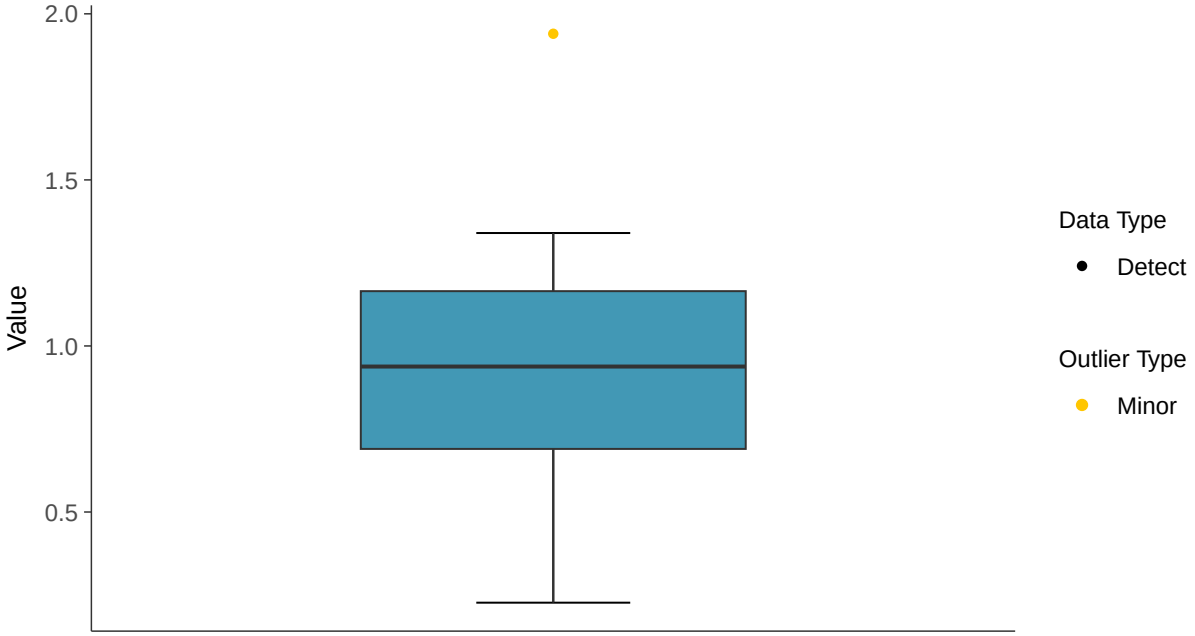
ID: 5_3_119





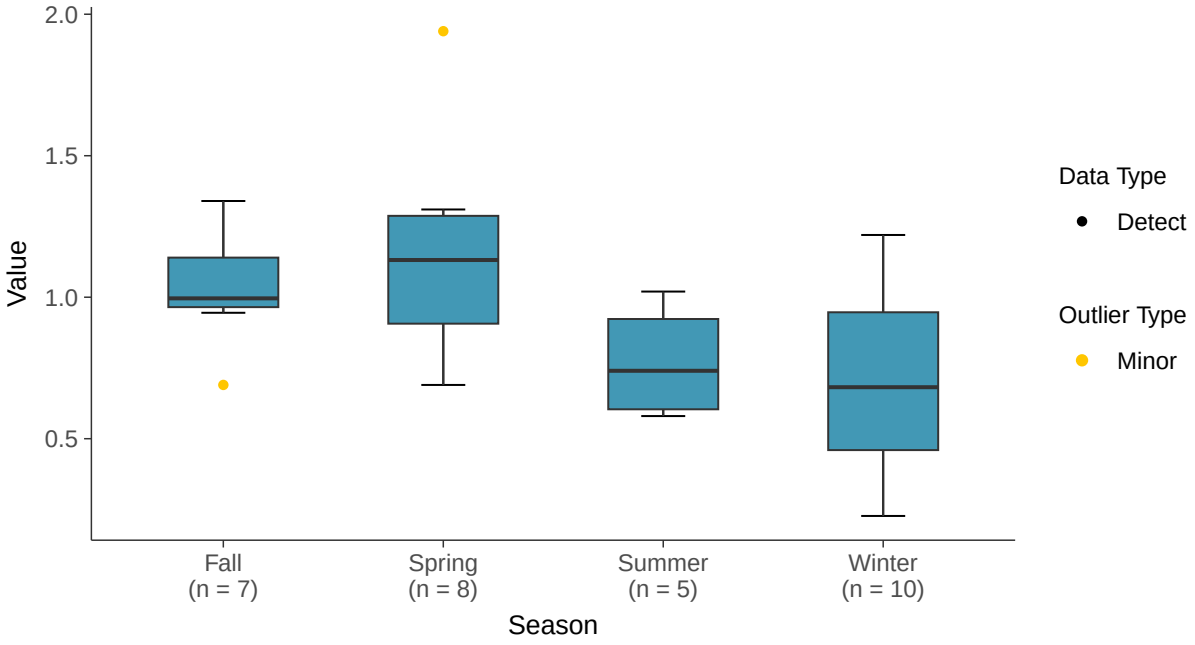
Boxplot

Radium-226, MW-2 (pCi/L)



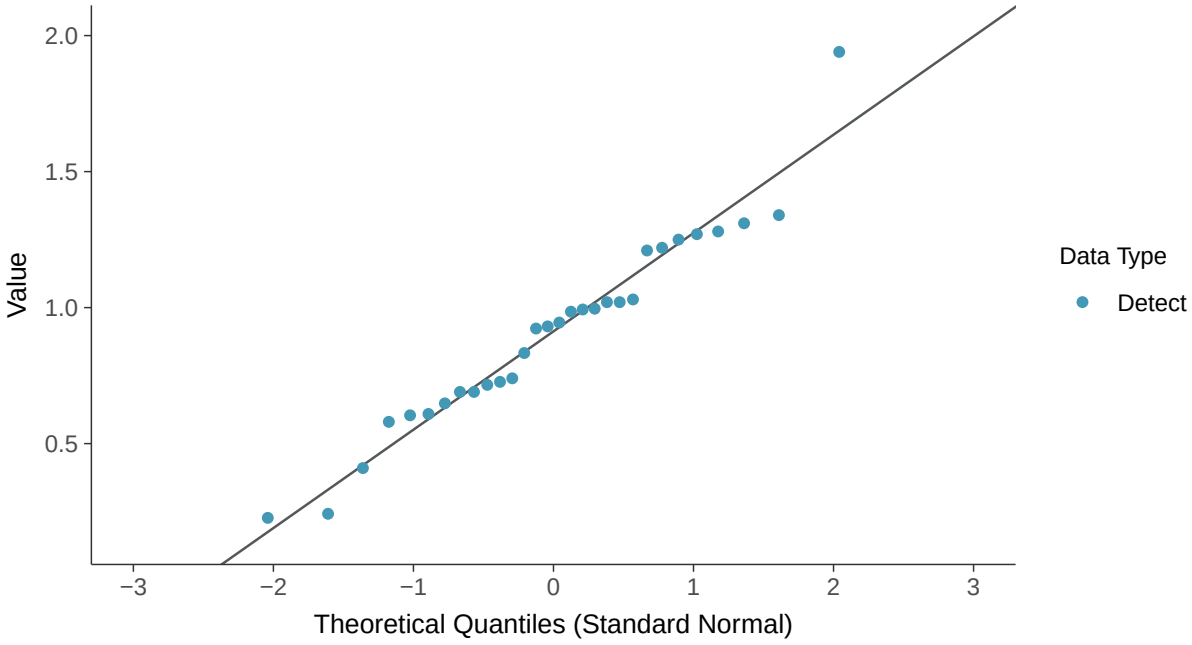
Boxplot by Season

Radium-226, MW-2 (pCi/L)



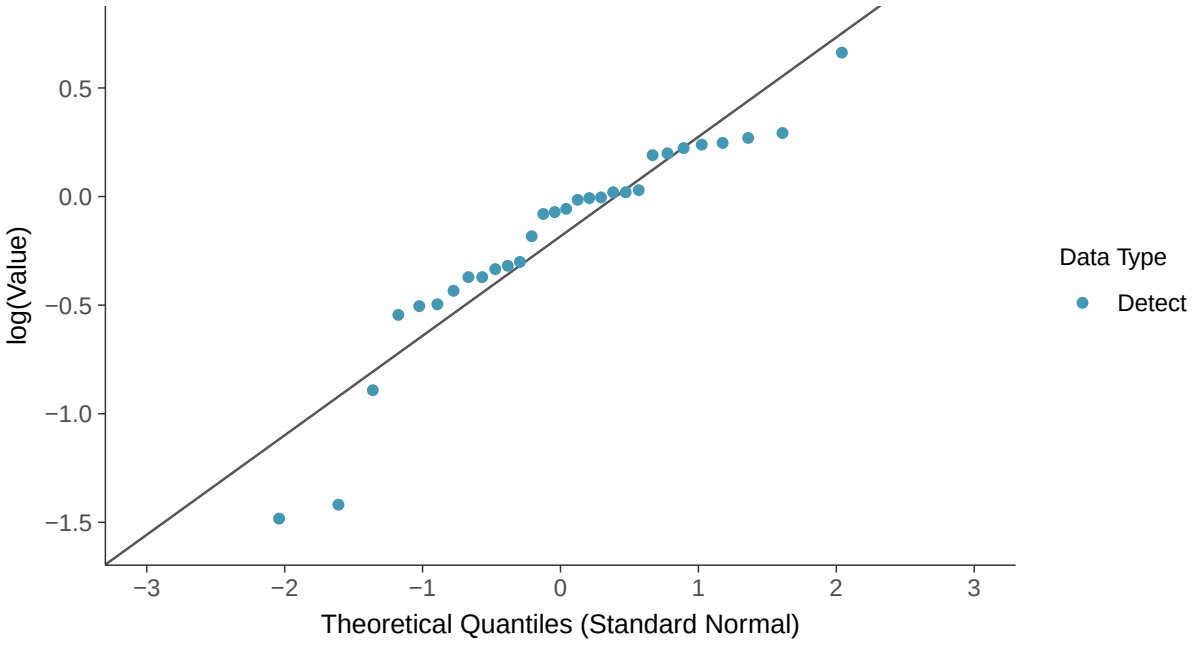
Normal Q-Q plot

Radium-226, MW-2 (pCi/L)



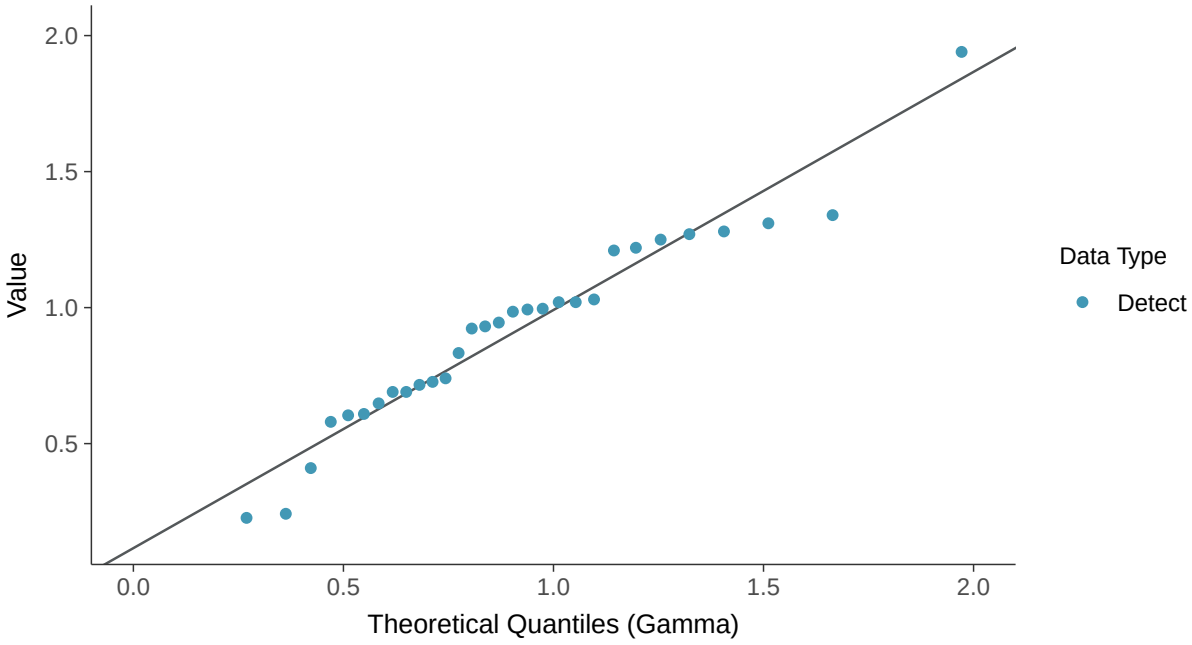
Lognormal Q-Q plot

Radium-226, MW-2 (pCi/L)



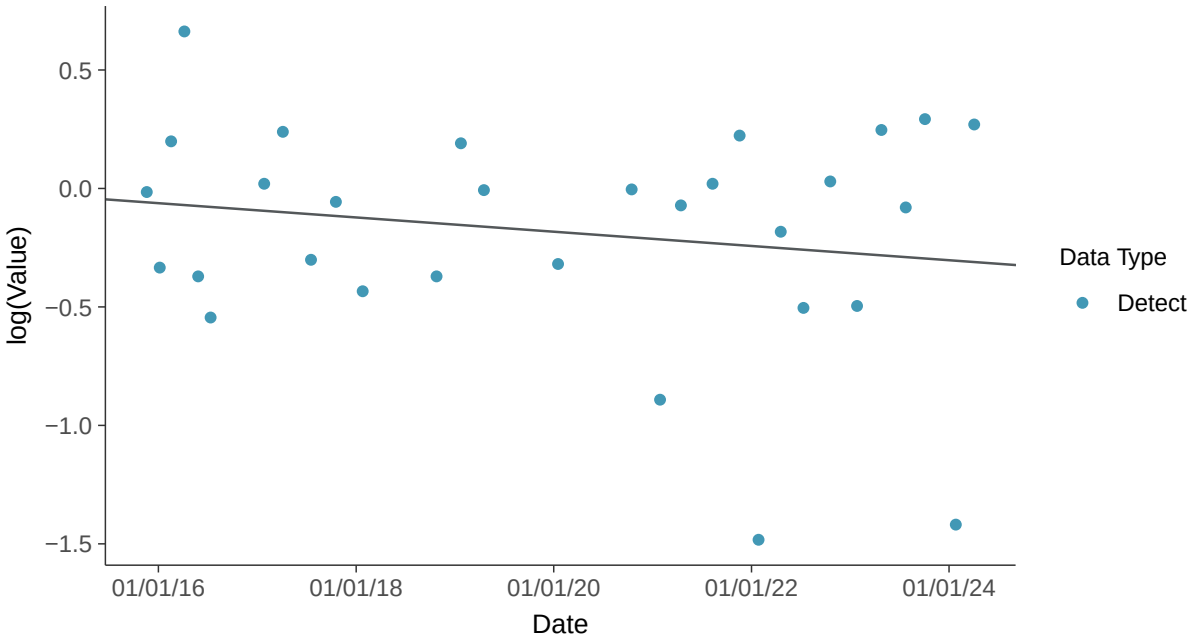
Gamma Q-Q plot

Radium-226, MW-2 (pCi/L)



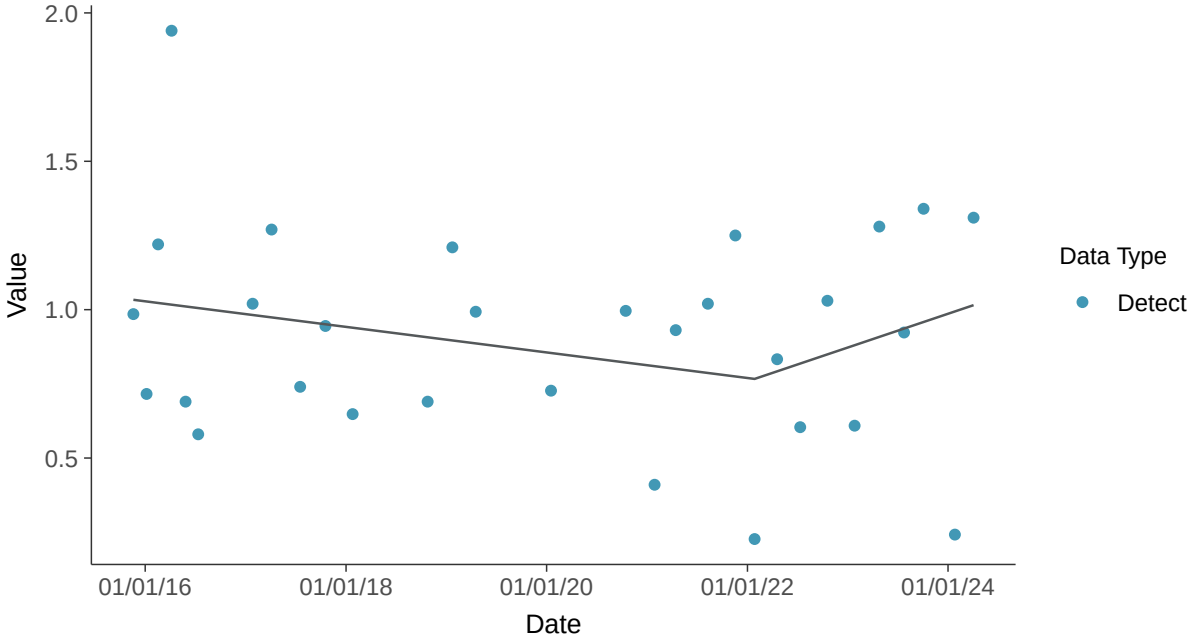
Trend Regression: Lognormal MLE

Radium-226, MW-2 (pCi/L)



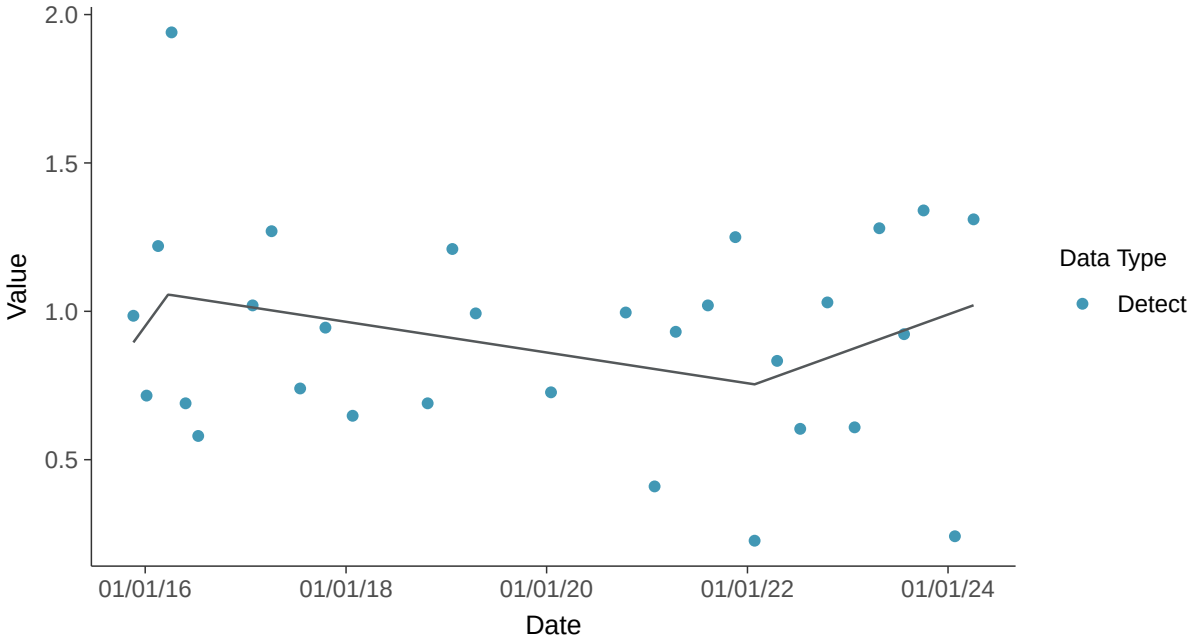
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-2 (pCi/L)

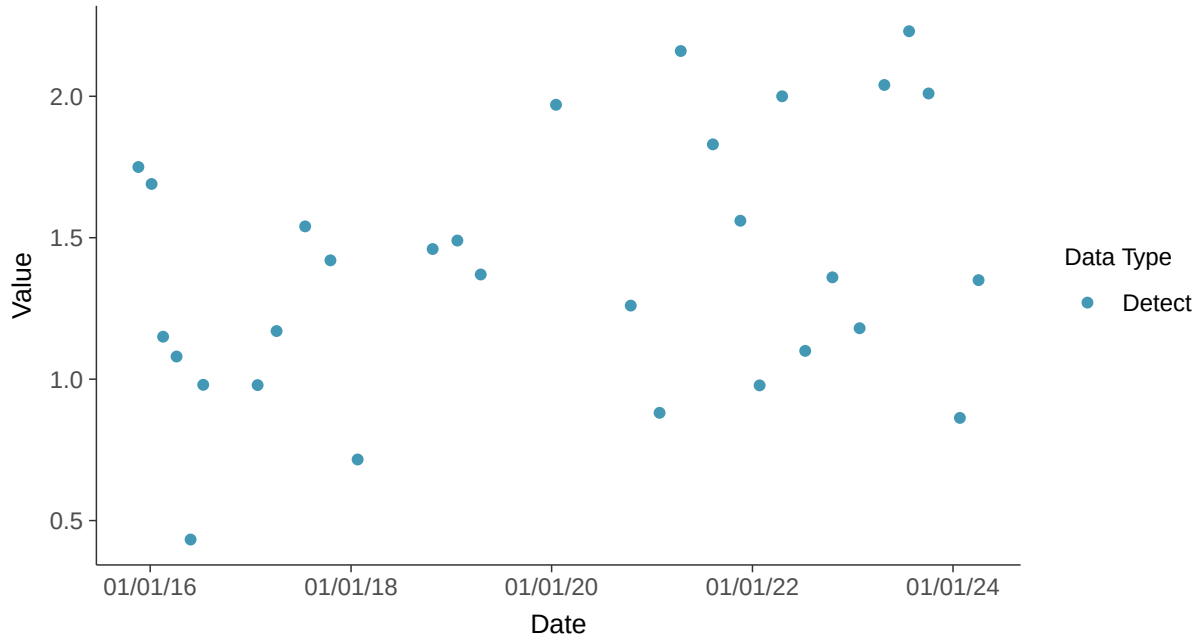


App. IV: Radium-228, MW-2

ID: 5_3_120

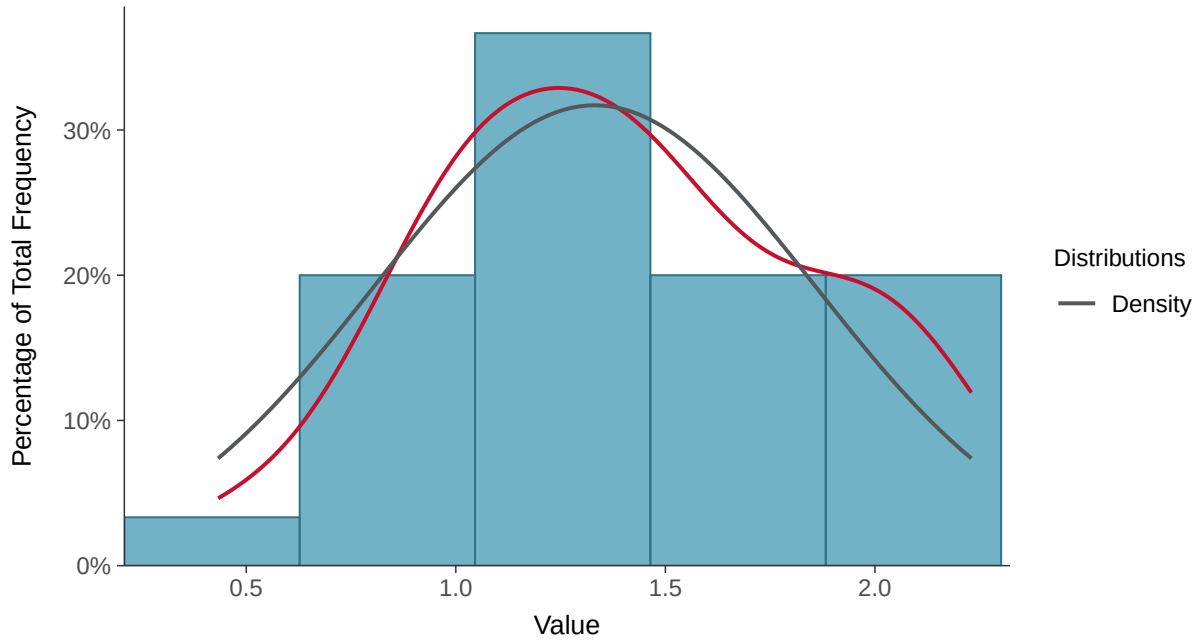
Scatter Plot

Radium-228, MW-2 (pCi/L)



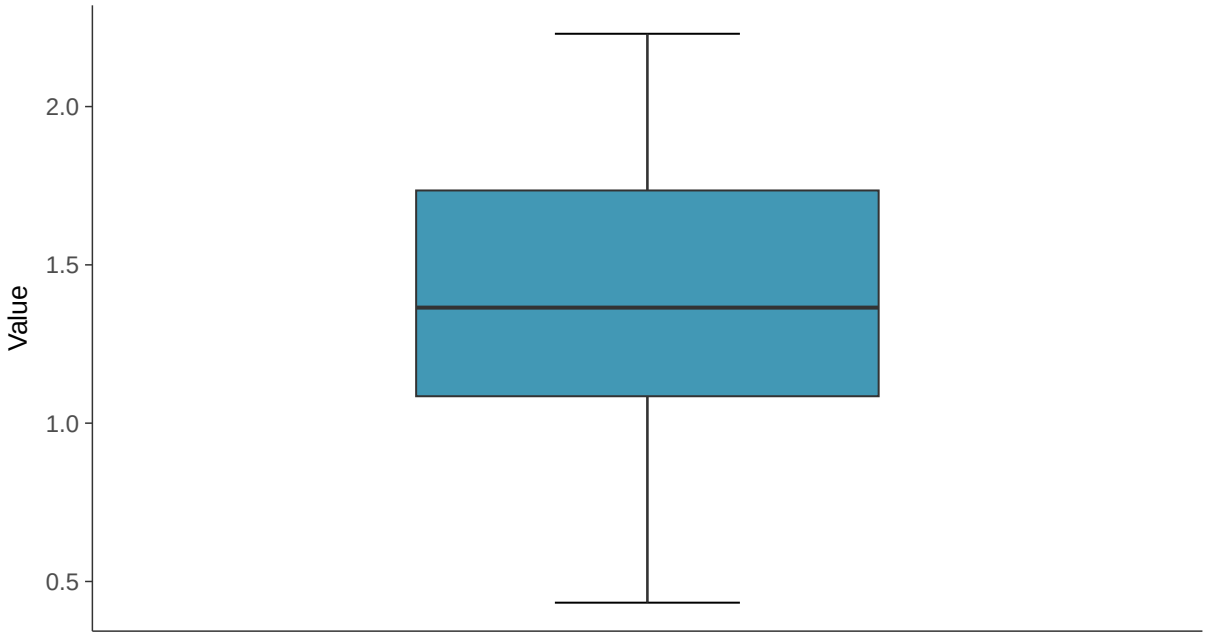
Histogram

Radium-228, MW-2 (pCi/L)



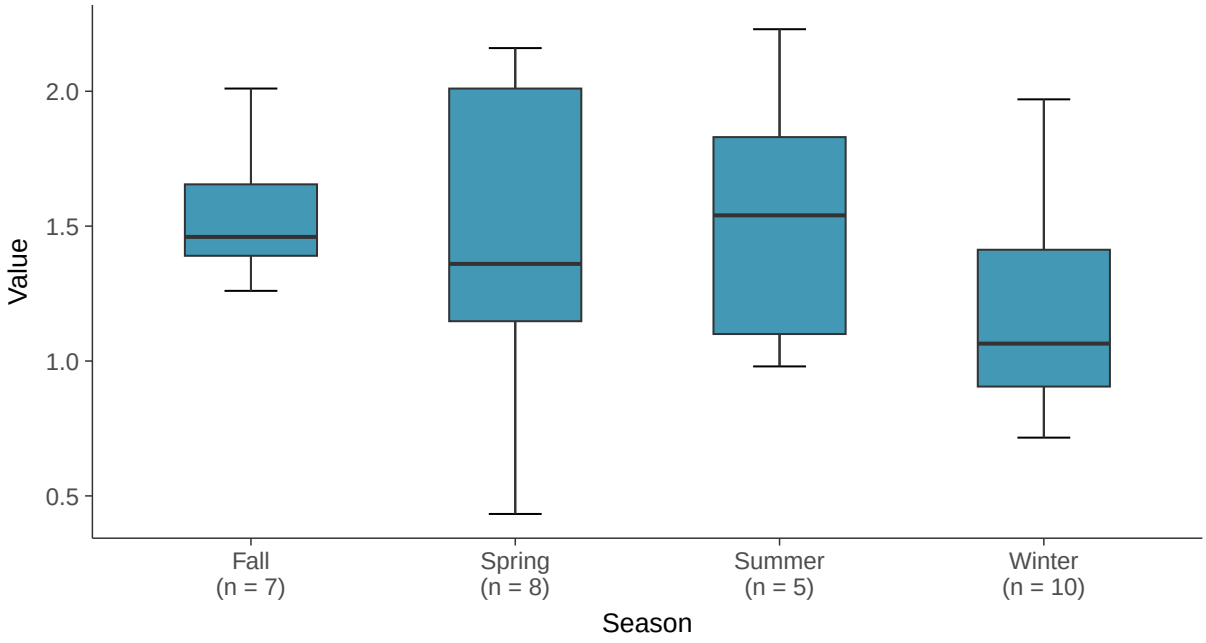
Boxplot

Radium-228, MW-2 (pCi/L)



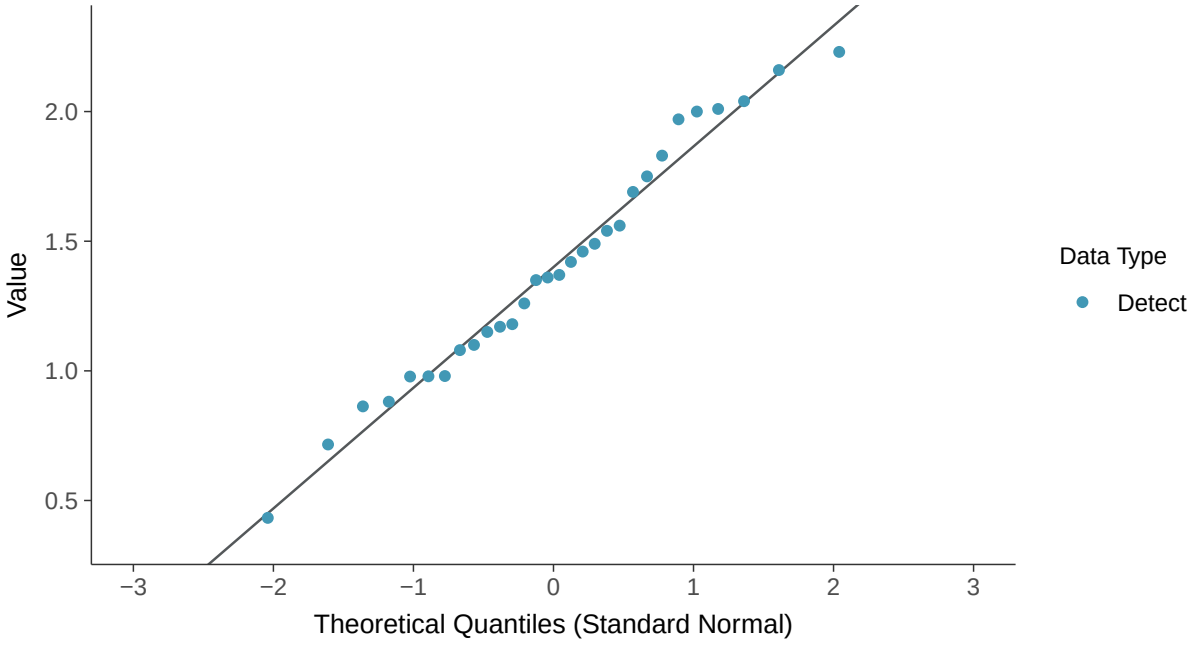
Boxplot by Season

Radium-228, MW-2 (pCi/L)



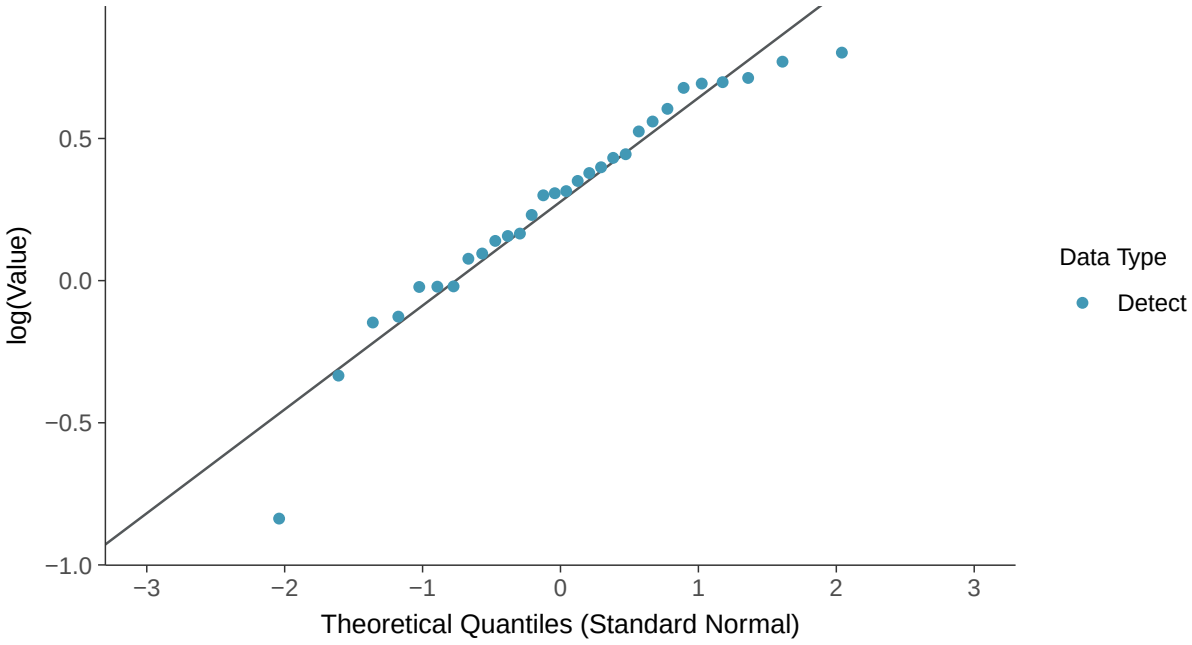
Normal Q-Q plot

Radium-228, MW-2 (pCi/L)



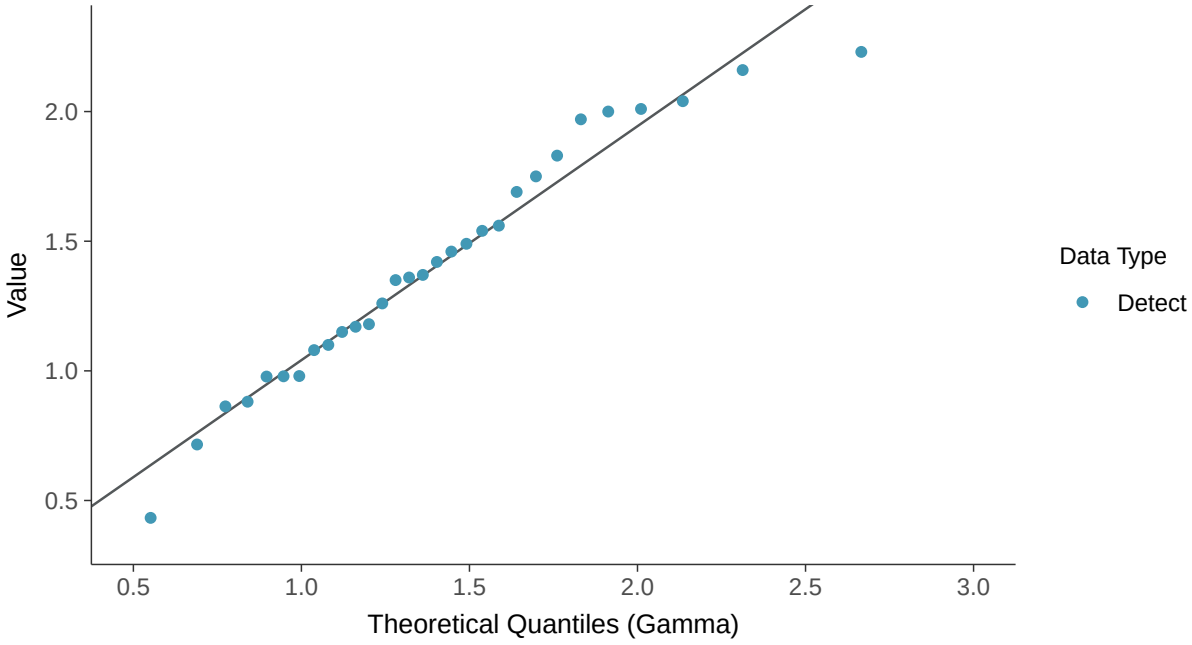
Lognormal Q-Q plot

Radium-228, MW-2 (pCi/L)



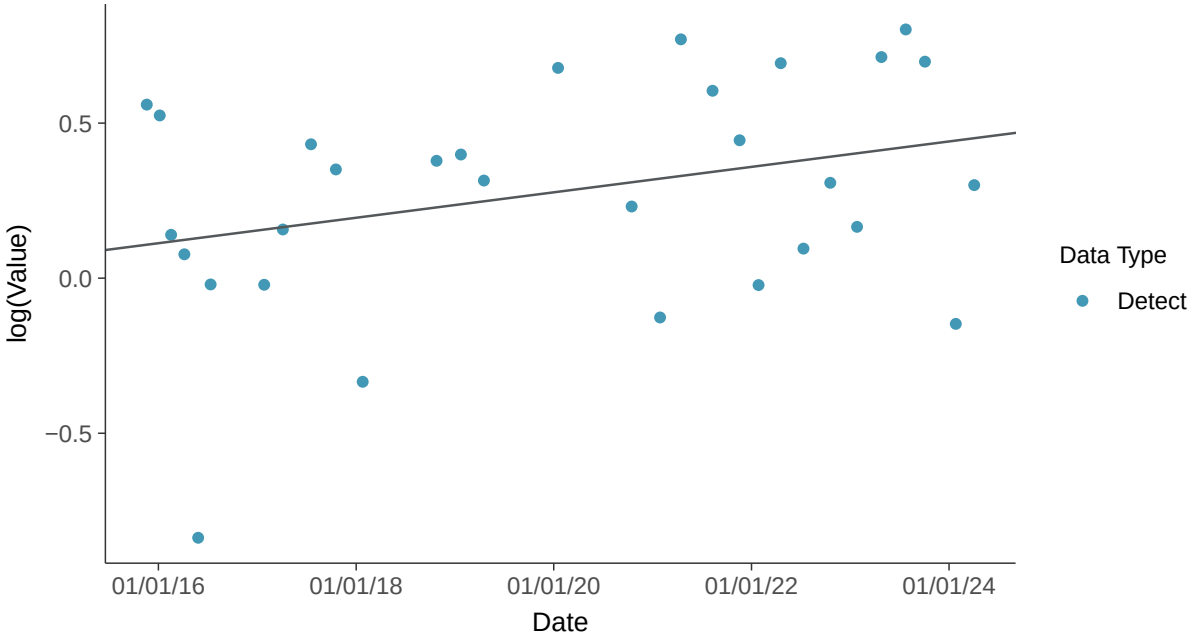
Gamma Q-Q plot

Radium-228, MW-2 (pCi/L)



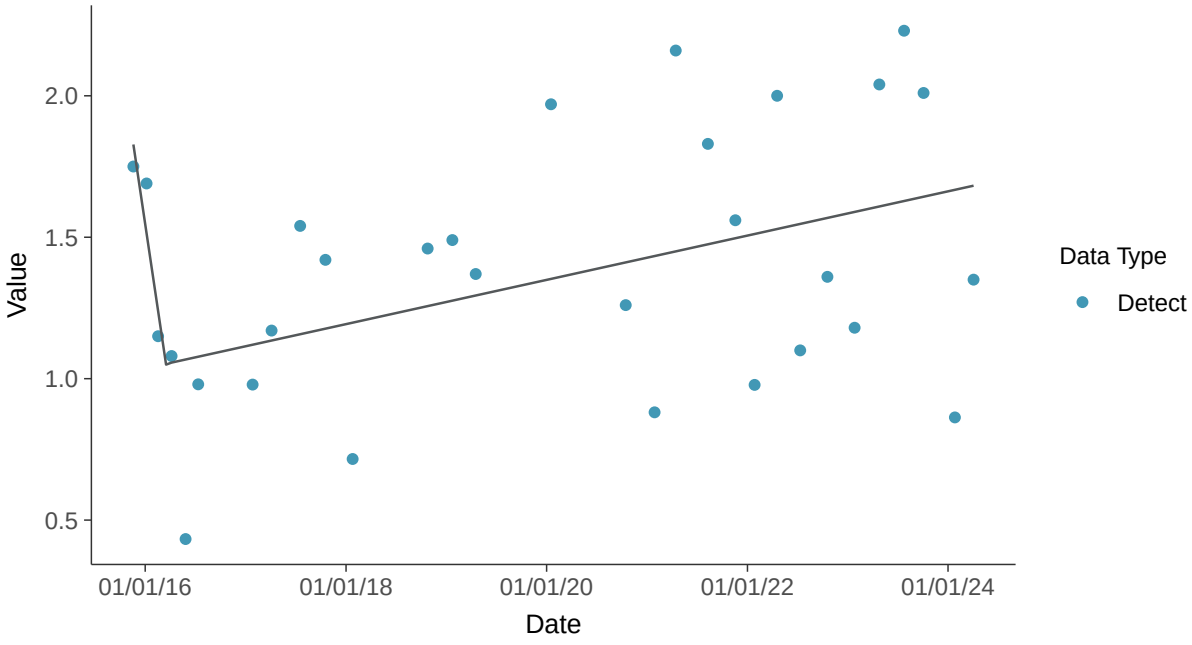
Trend Regression: Lognormal MLE

Radium-228, MW-2 (pCi/L)



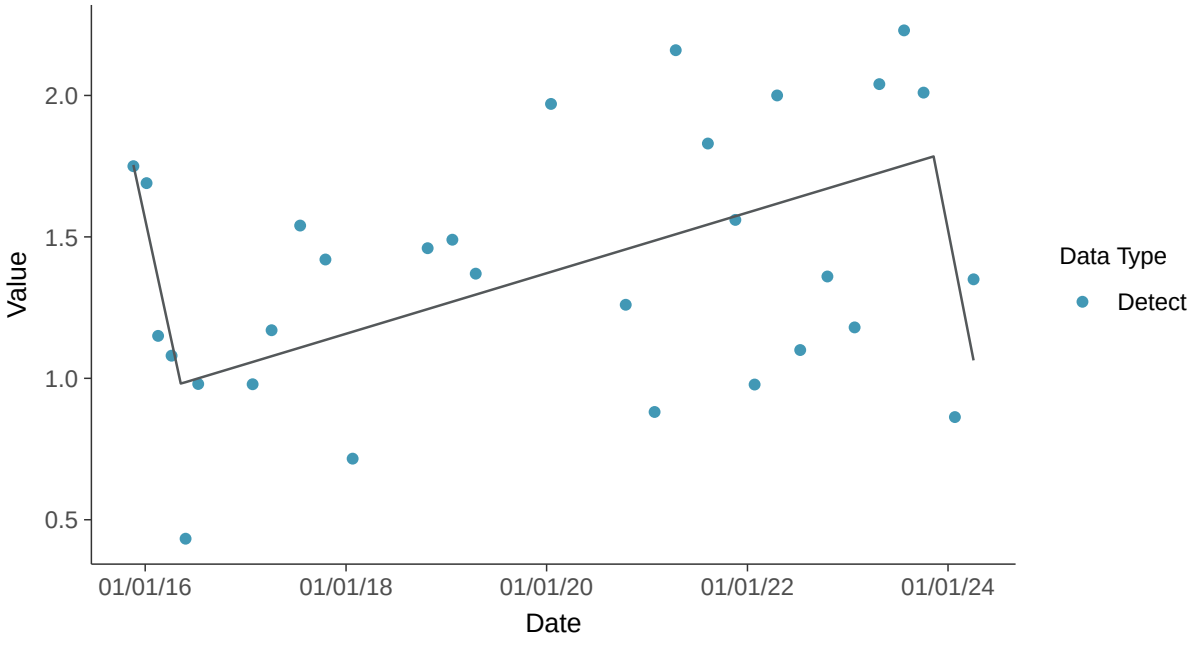
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-2 (pCi/L)



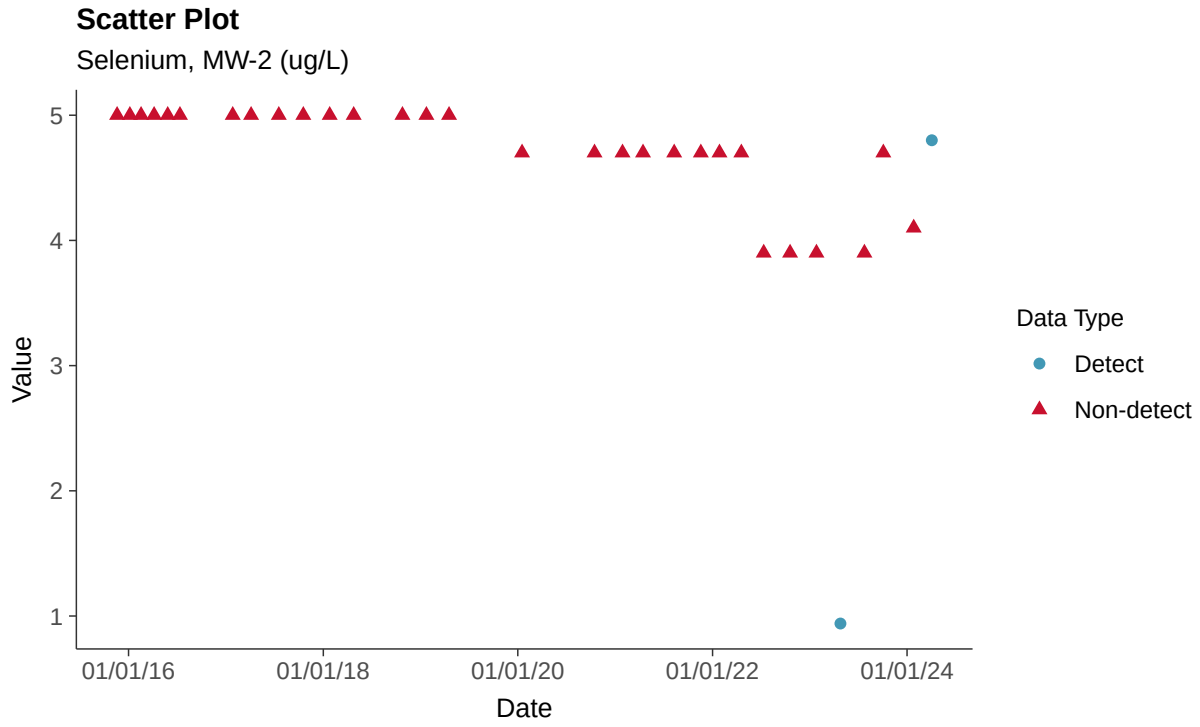
Trend Regression: Piecewise Linear-Linear-Linear

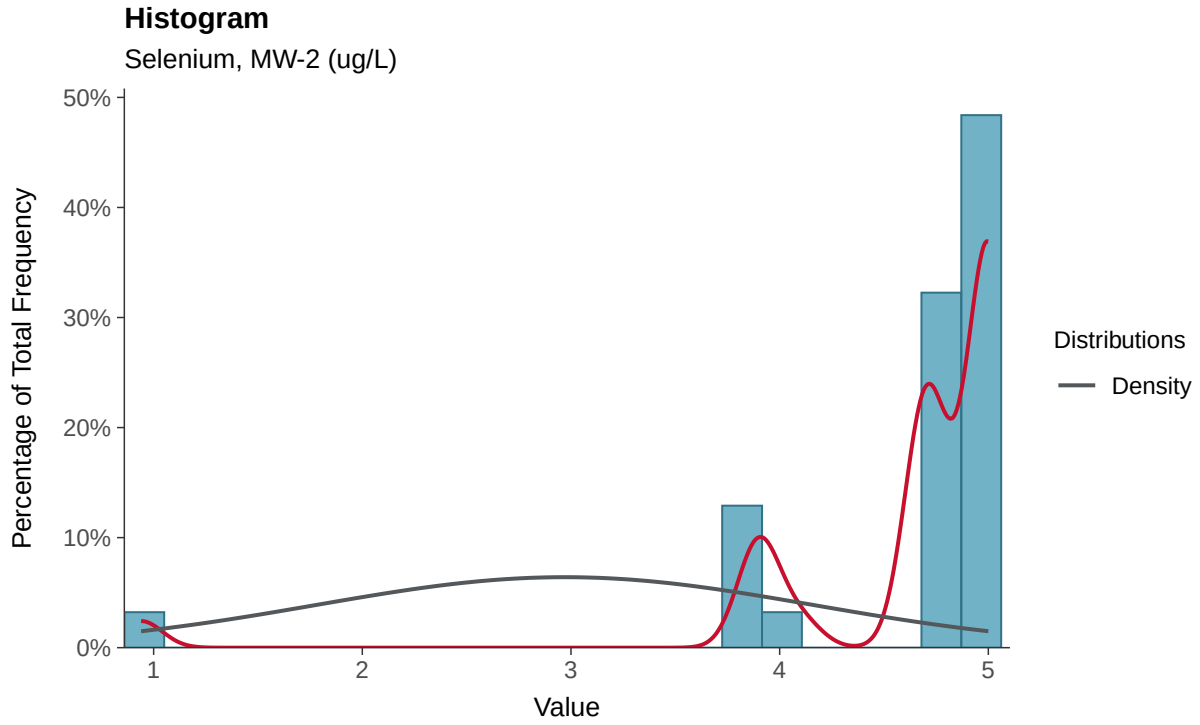
Radium-228, MW-2 (pCi/L)



App. IV: Selenium, MW-2

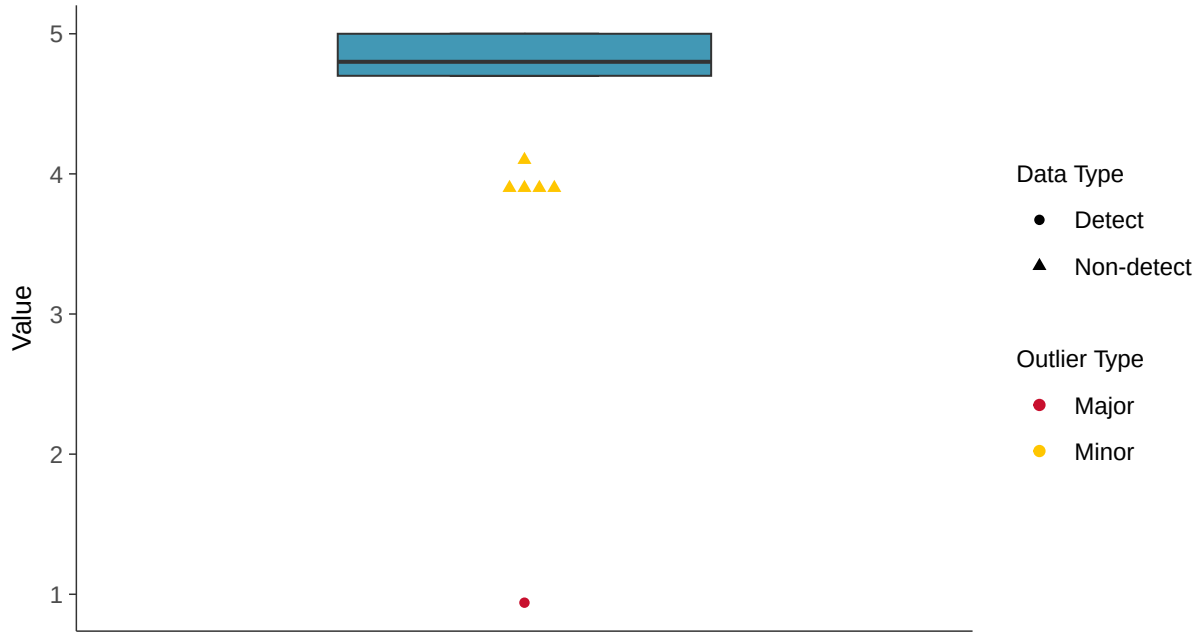
ID: 5_3_121





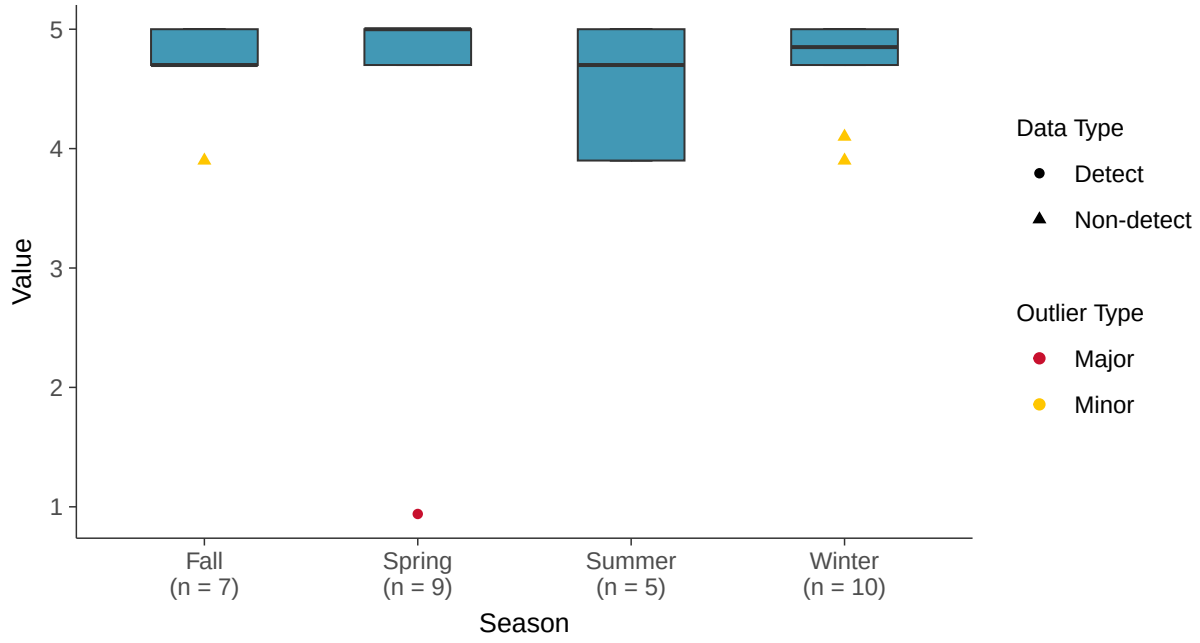
Boxplot

Selenium, MW-2 (ug/L)



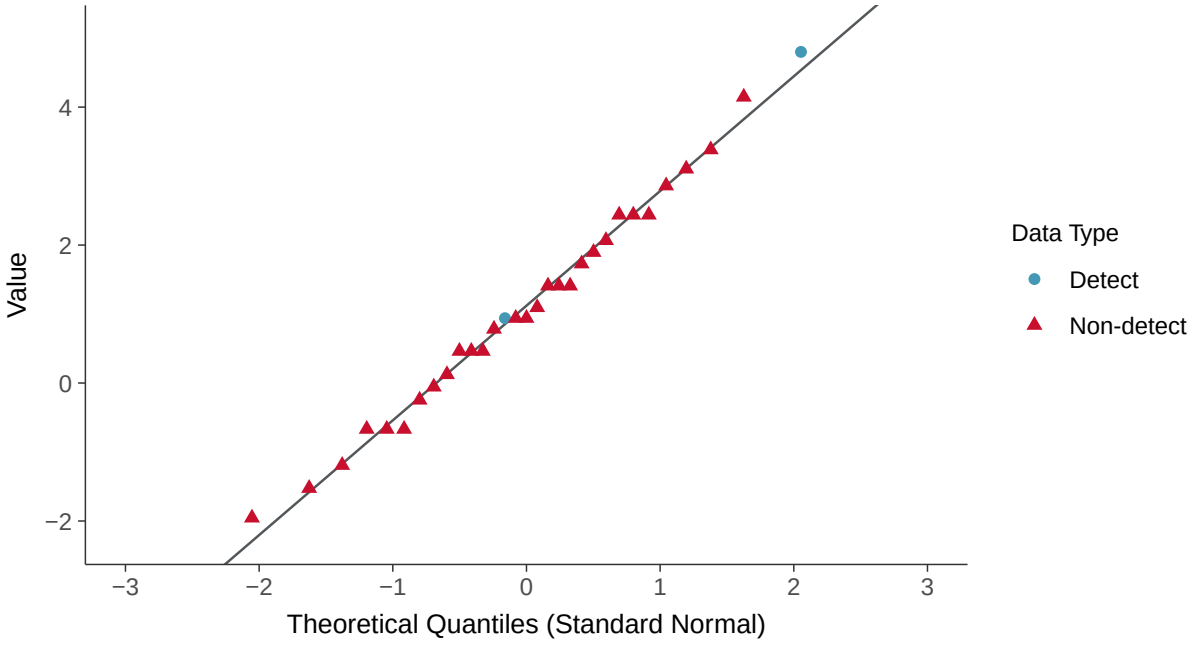
Boxplot by Season

Selenium, MW-2 (ug/L)



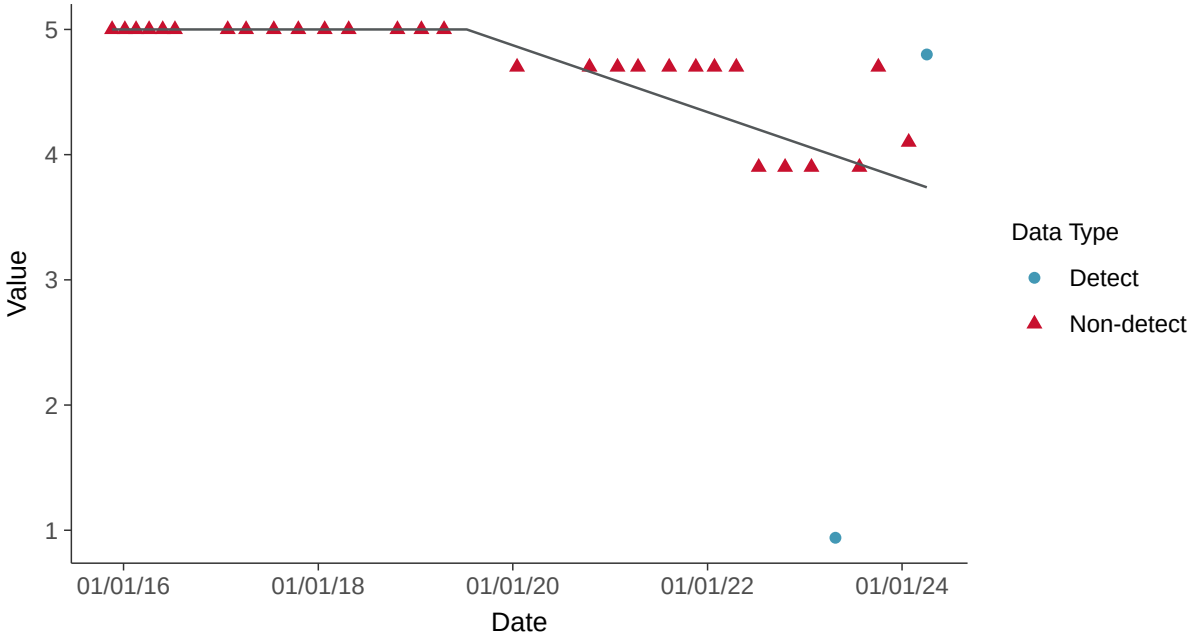
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-2 (ug/L)



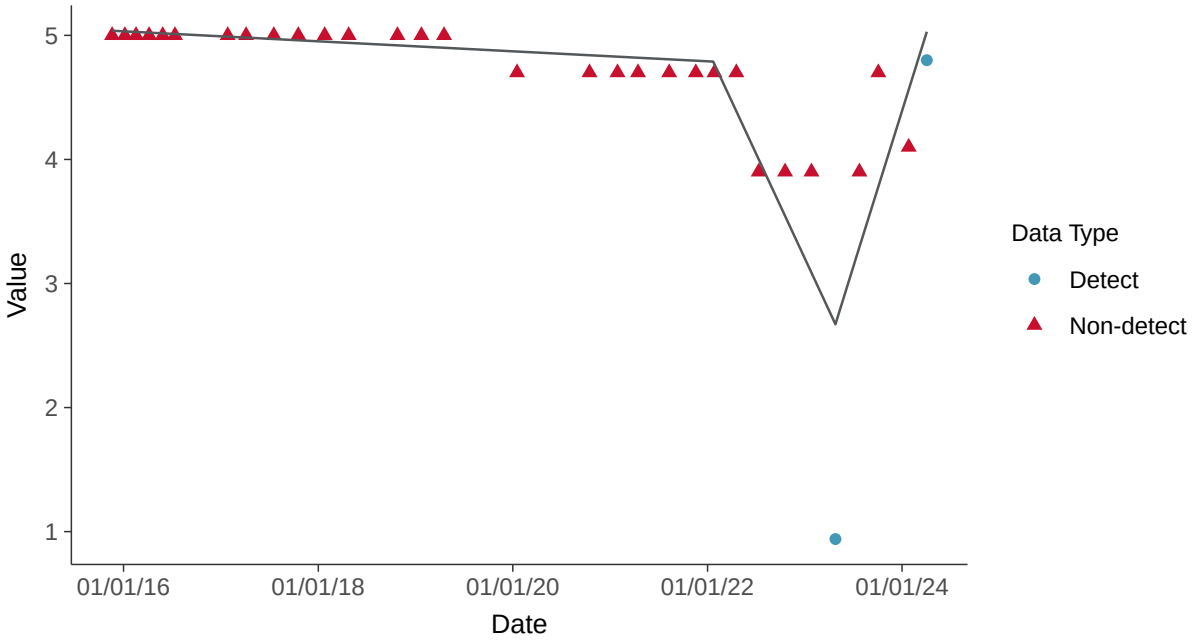
Trend Regression: Piecewise Linear-Linear

Selenium, MW-2 (ug/L)



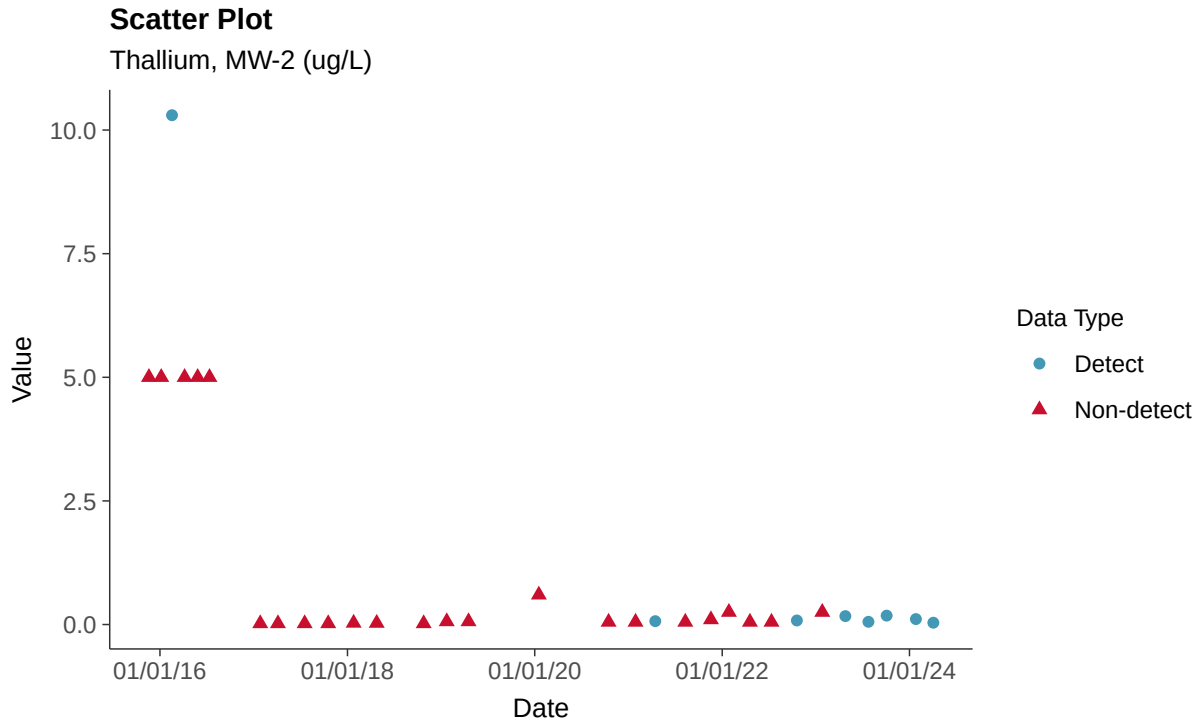
Trend Regression: Piecewise Linear-Linear-Linear

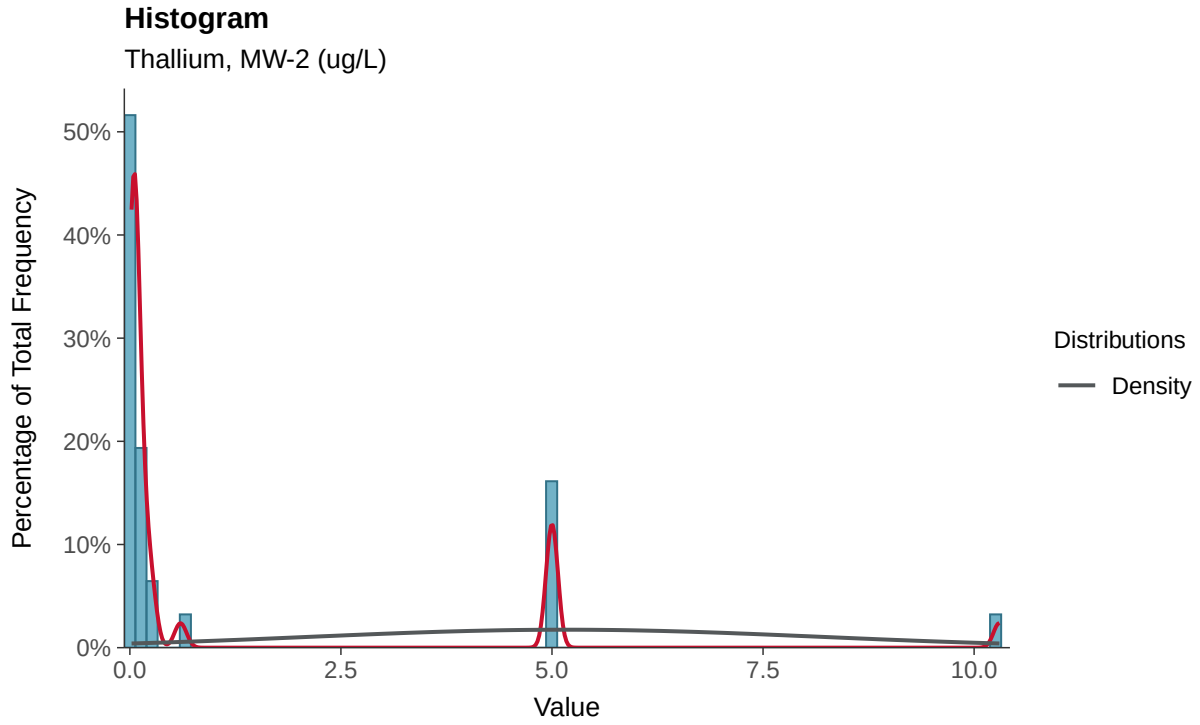
Selenium, MW-2 (ug/L)



App. IV: Thallium, MW-2

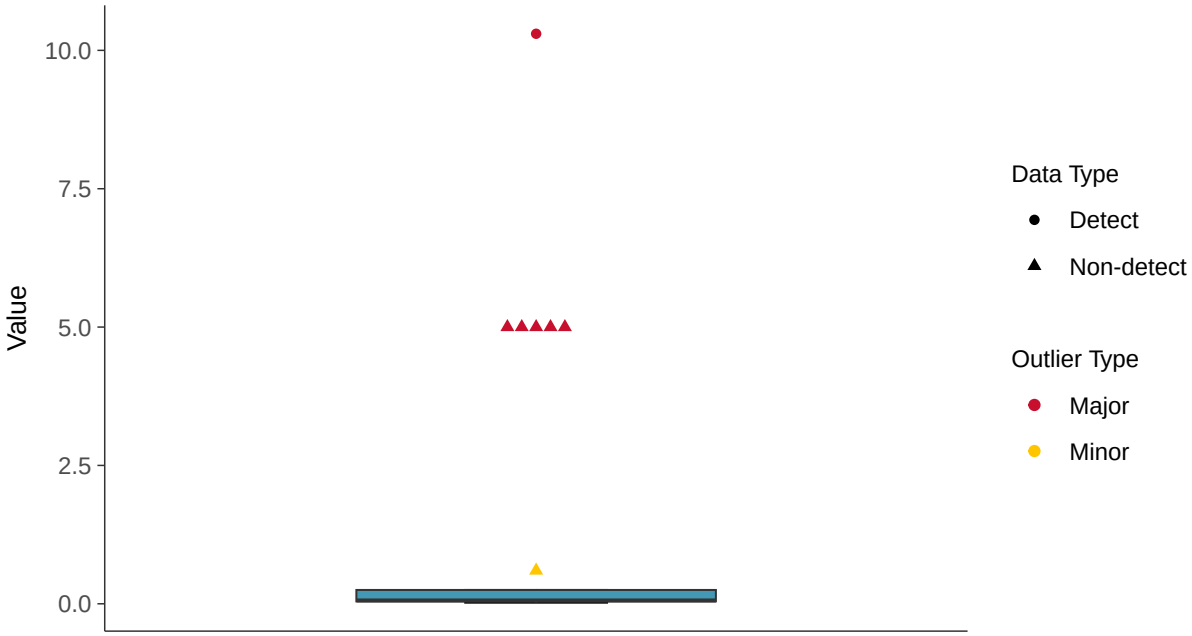
ID: 5_3_124





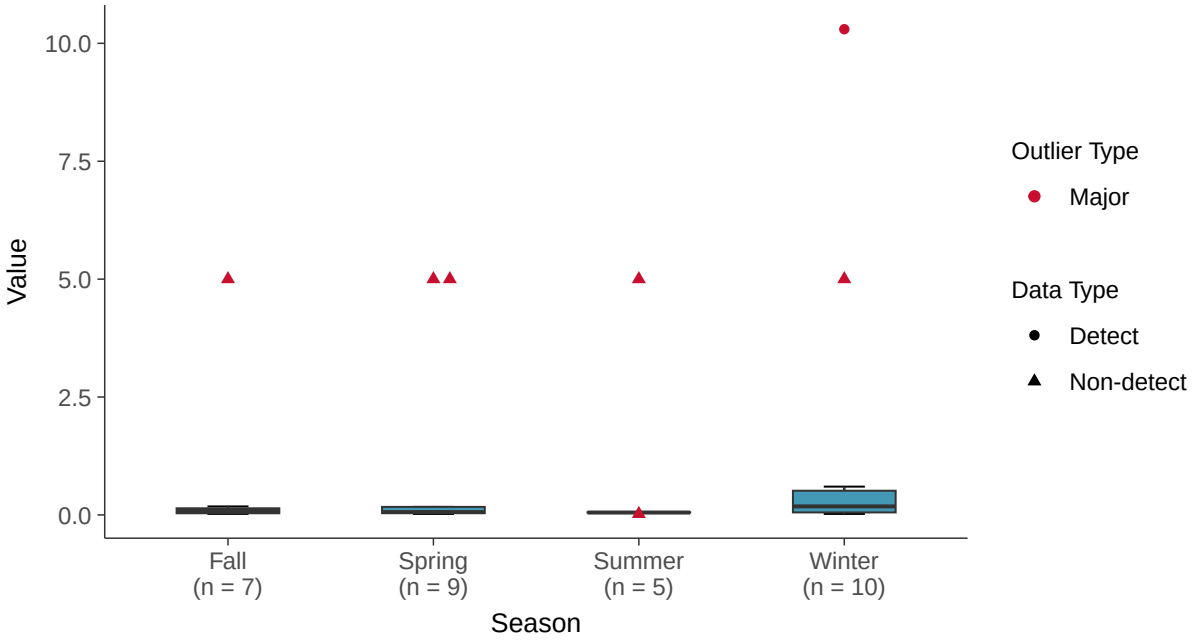
Boxplot

Thallium, MW-2 (ug/L)



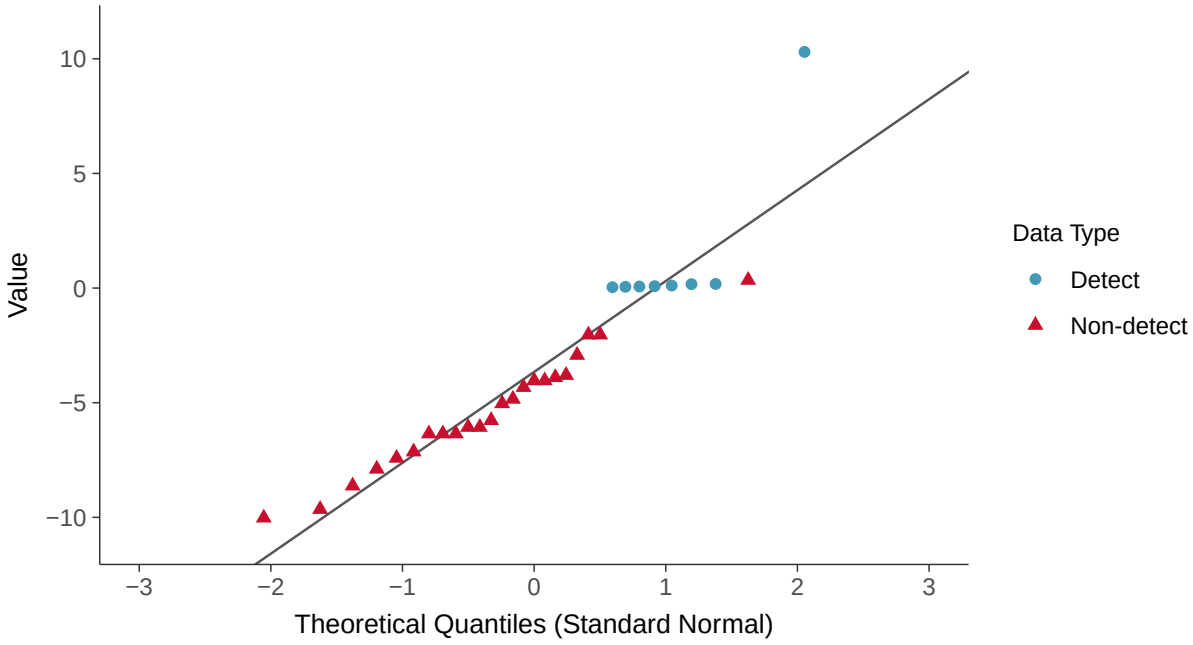
Boxplot by Season

Thallium, MW-2 (ug/L)



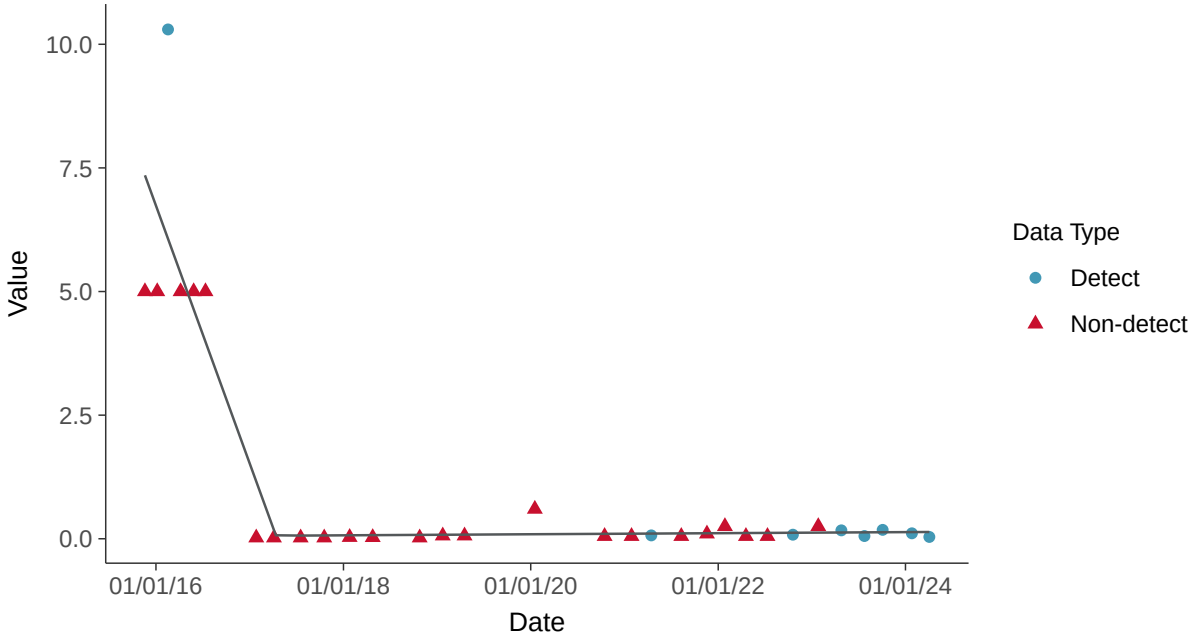
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-2 (ug/L)



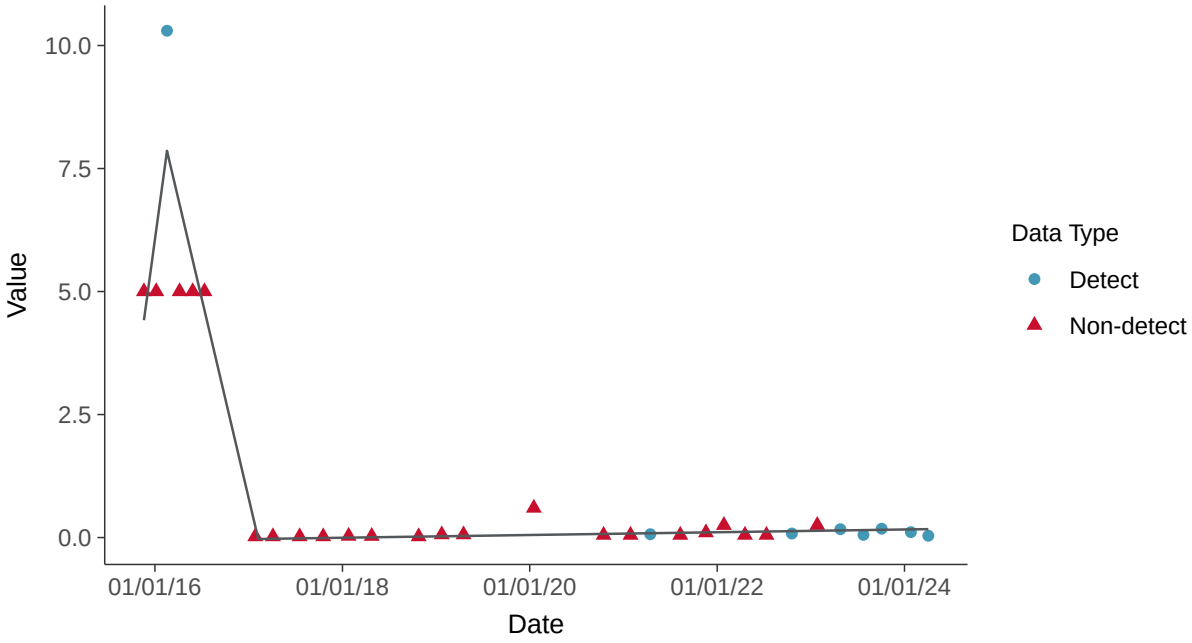
Trend Regression: Piecewise Linear-Linear

Thallium, MW-2 (ug/L)



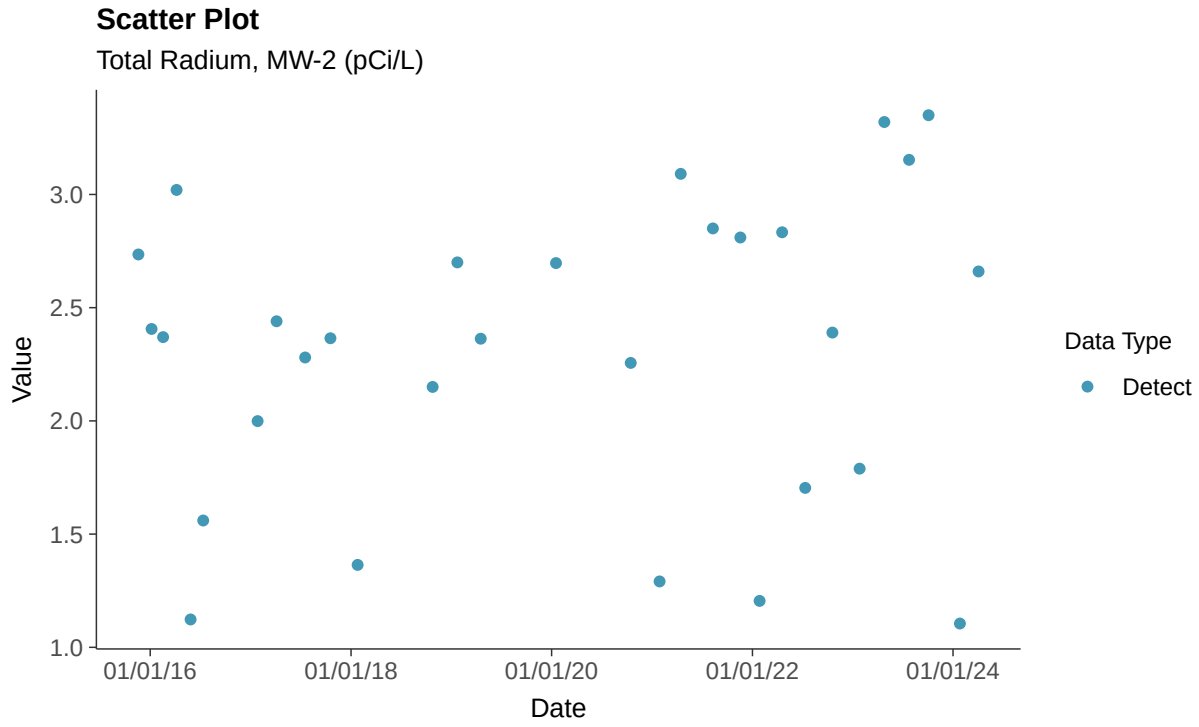
Trend Regression: Piecewise Linear-Linear-Linear

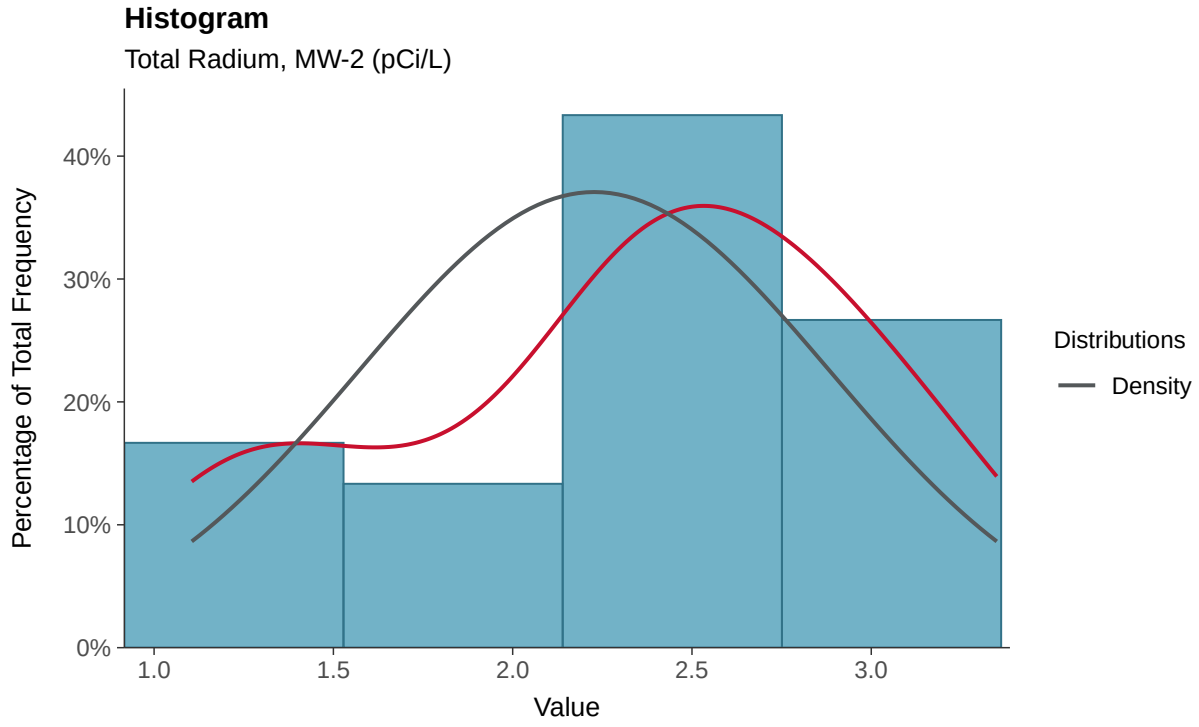
Thallium, MW-2 (ug/L)



App. IV: Total Radium, MW-2

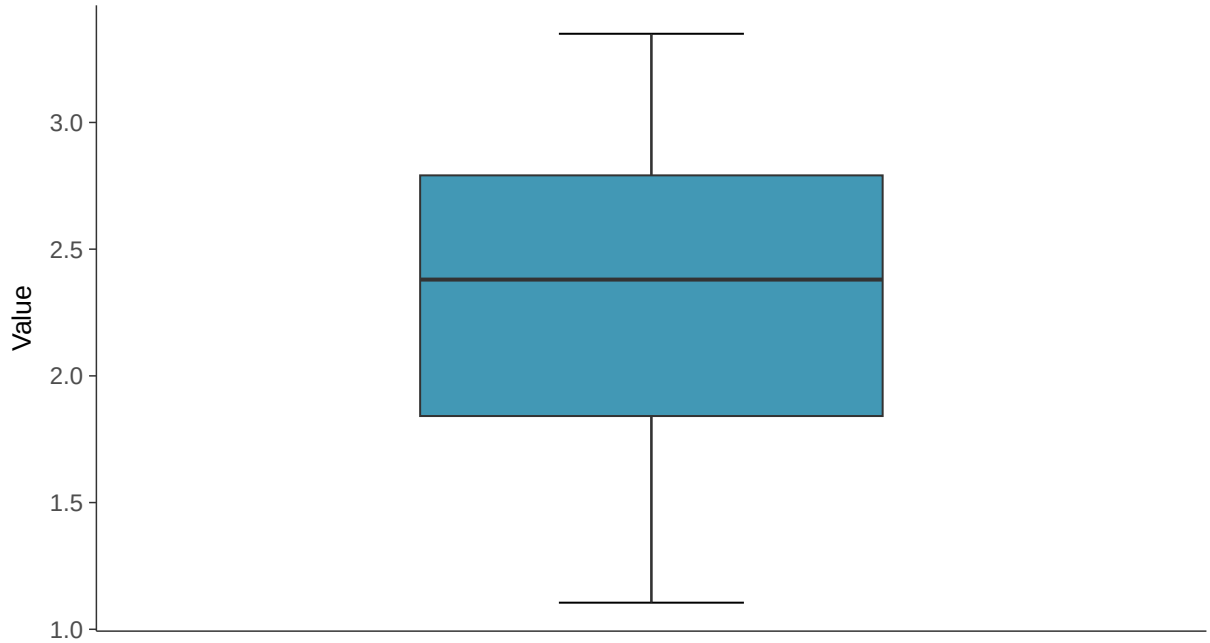
ID: 5_3_126





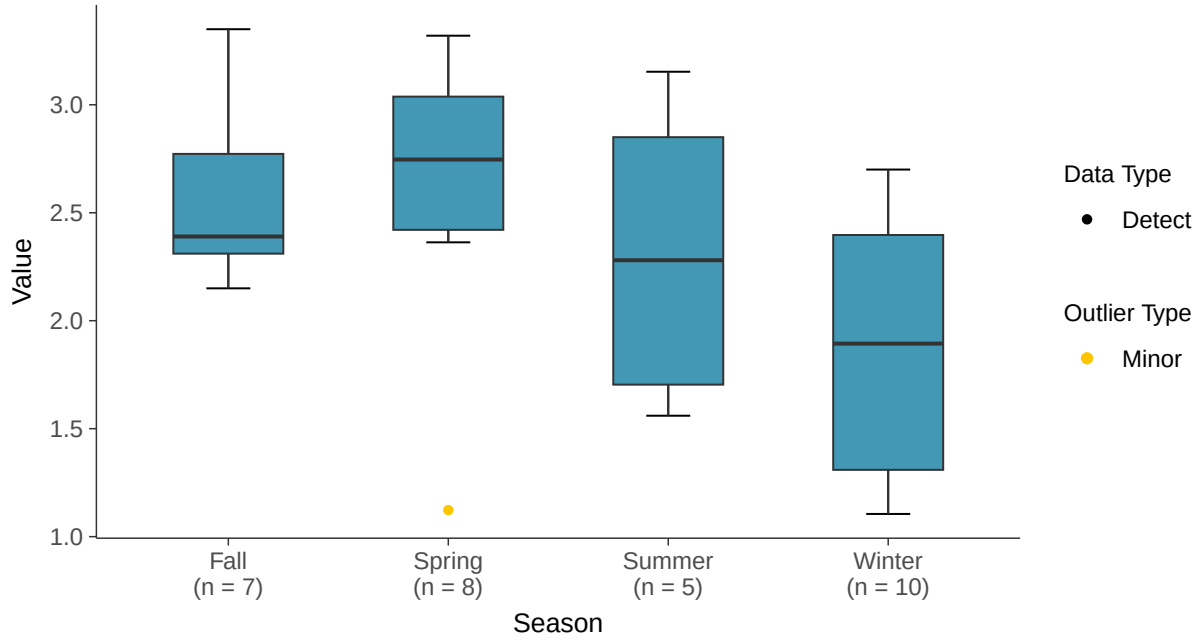
Boxplot

Total Radium, MW-2 (pCi/L)



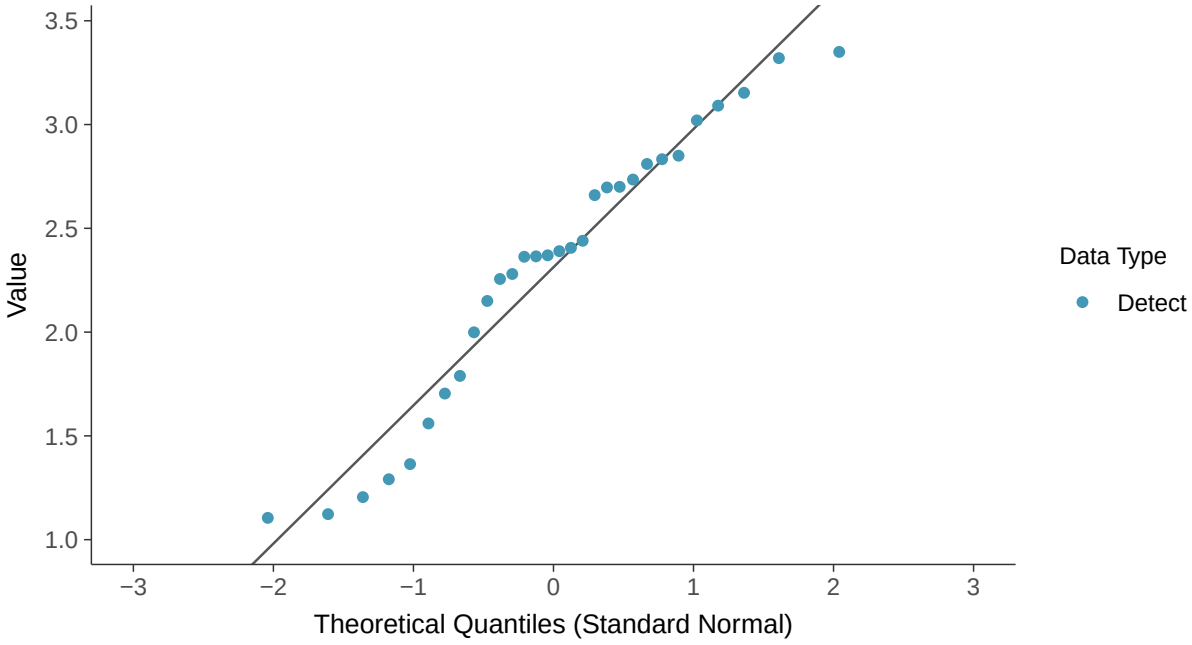
Boxplot by Season

Total Radium, MW-2 (pCi/L)



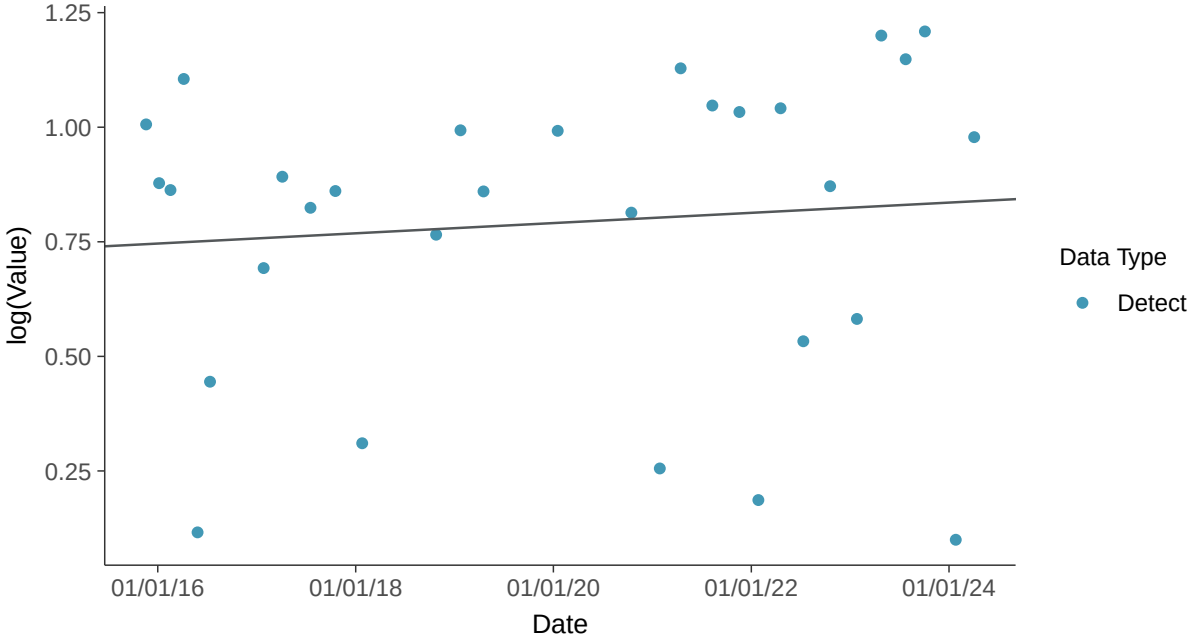
Normal Q-Q plot

Total Radium, MW-2 (pCi/L)



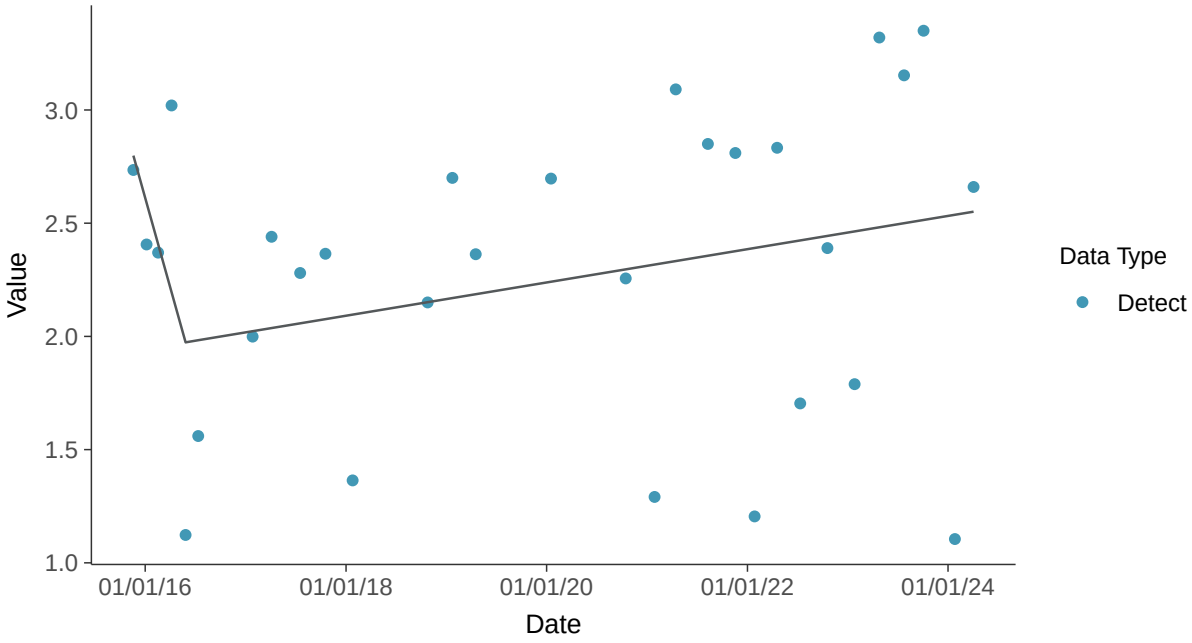
Trend Regression: Lognormal MLE

Total Radium, MW-2 (pCi/L)



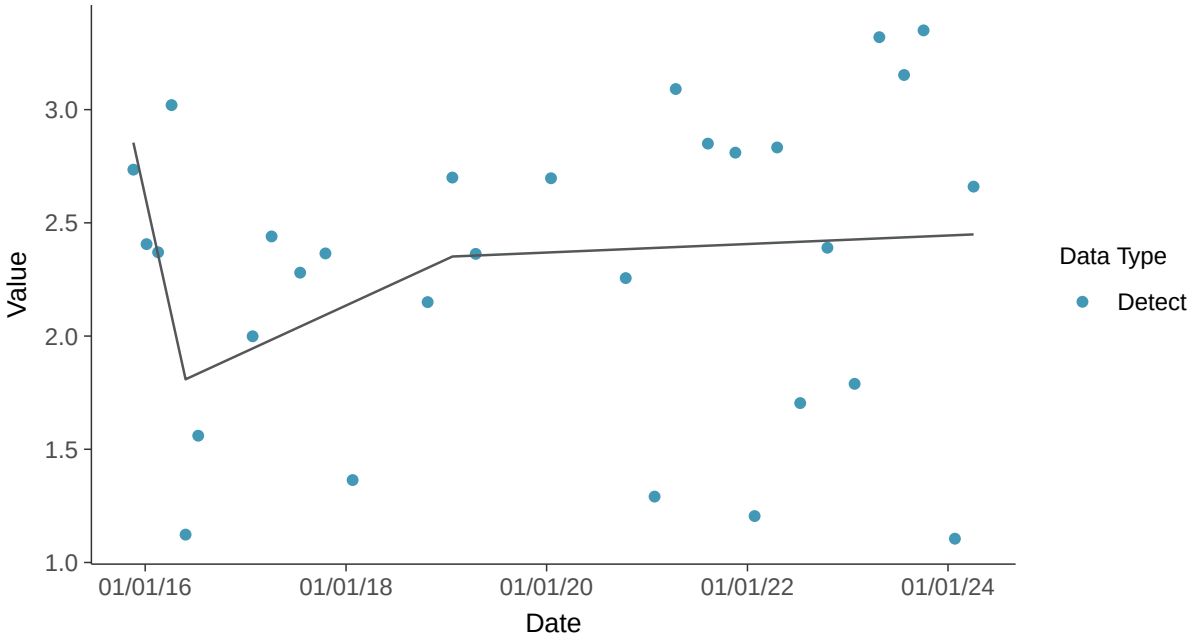
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-2 (pCi/L)



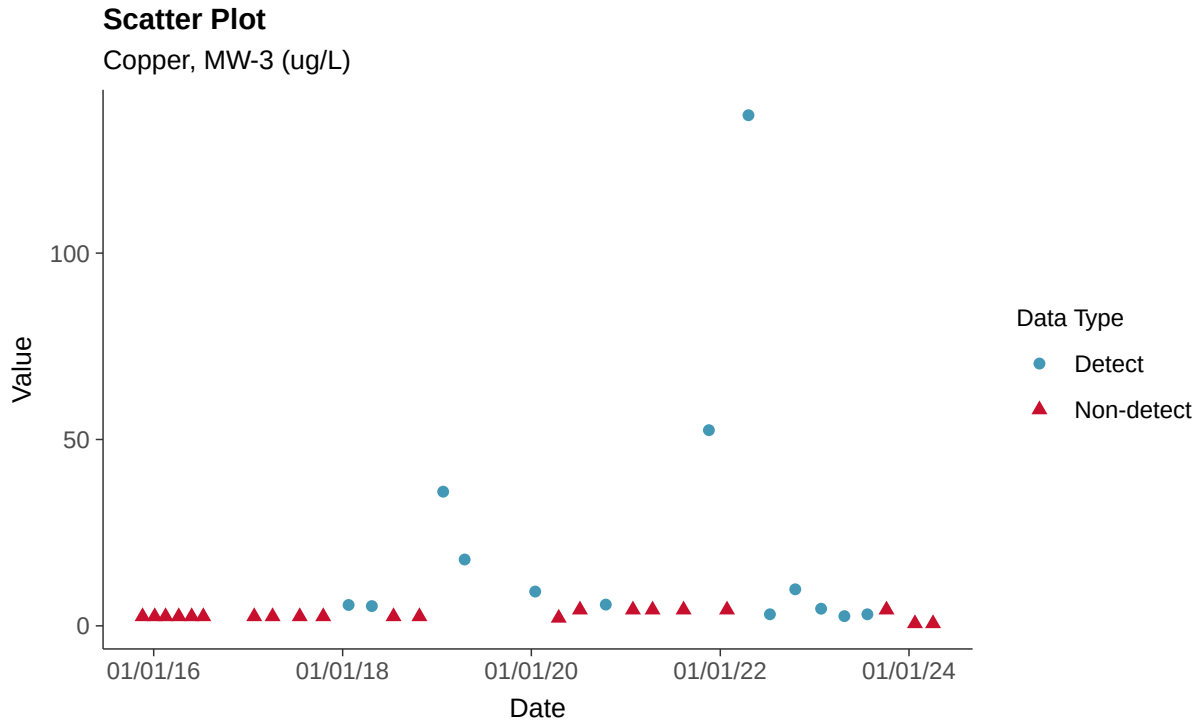
Trend Regression: Piecewise Linear-Linear-Linear

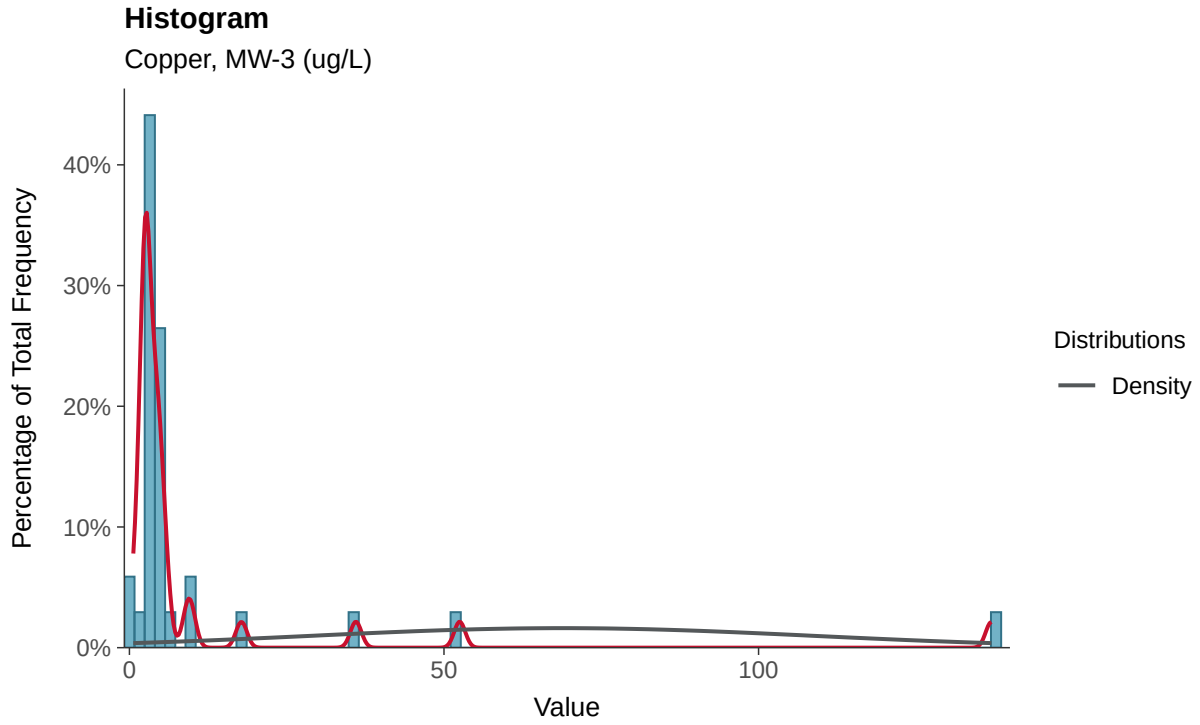
Total Radium, MW-2 (pCi/L)



App. I Metals: Copper, MW-3

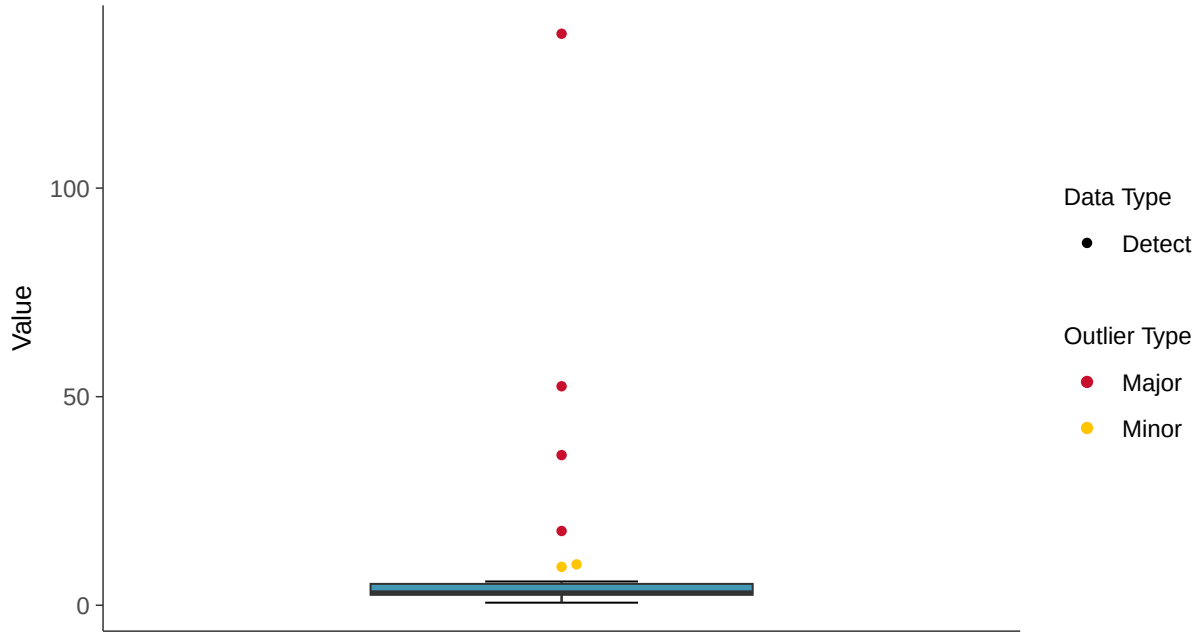
ID: 6_1_111





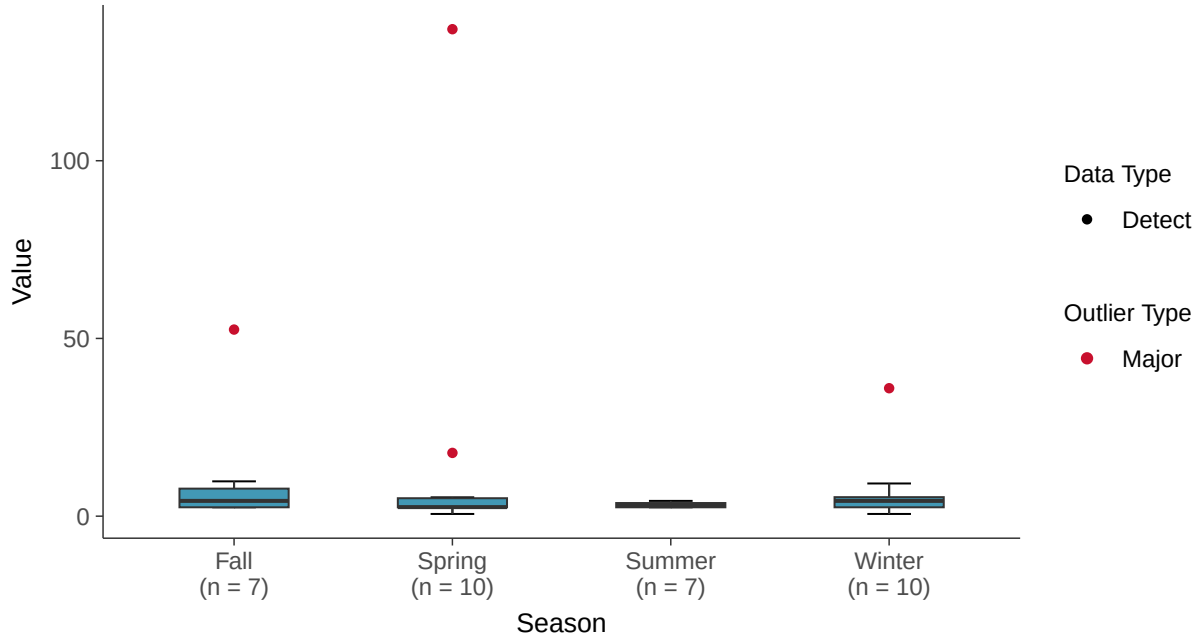
Boxplot

Copper, MW-3 (ug/L)



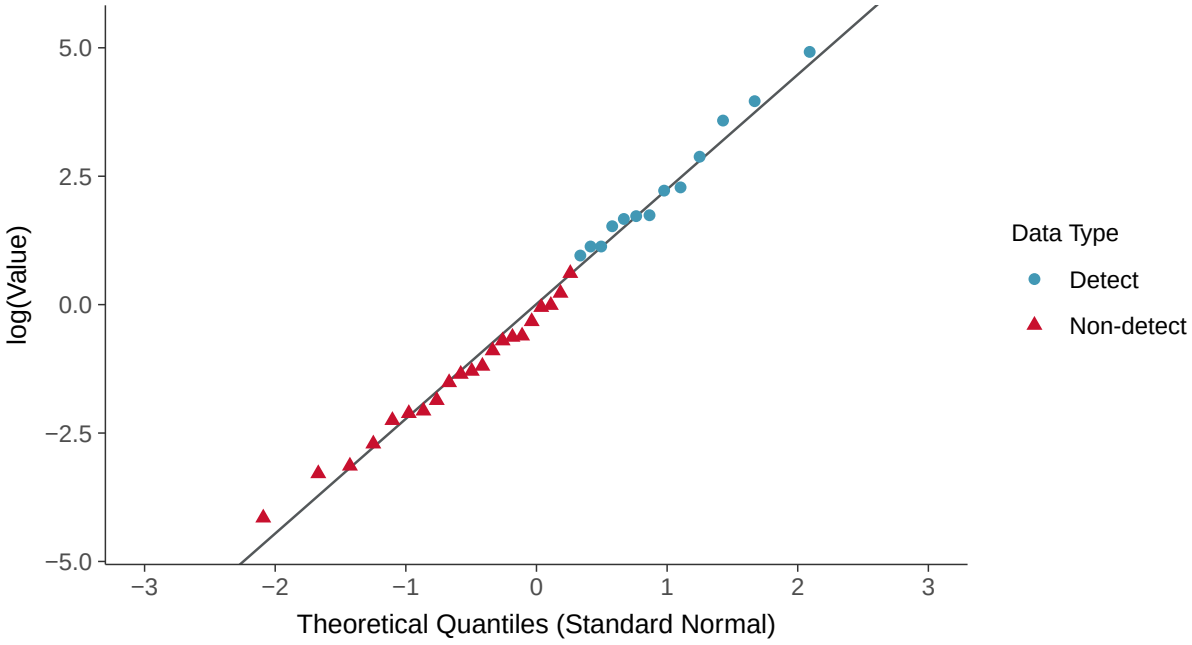
Boxplot by Season

Copper, MW-3 (ug/L)



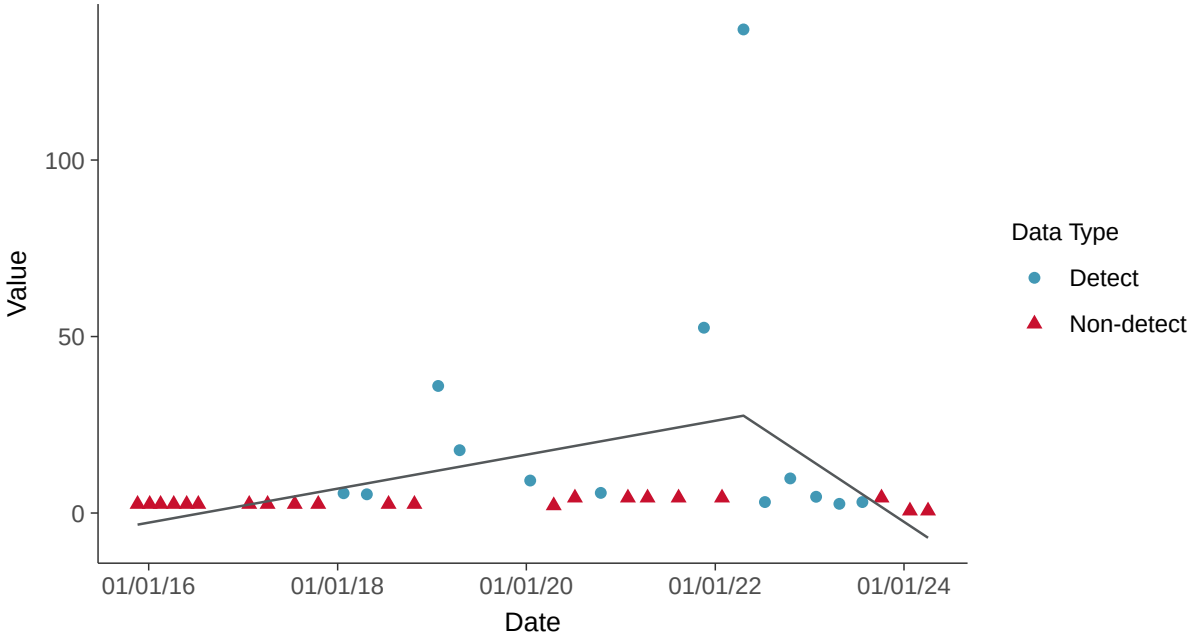
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-3 (ug/L)



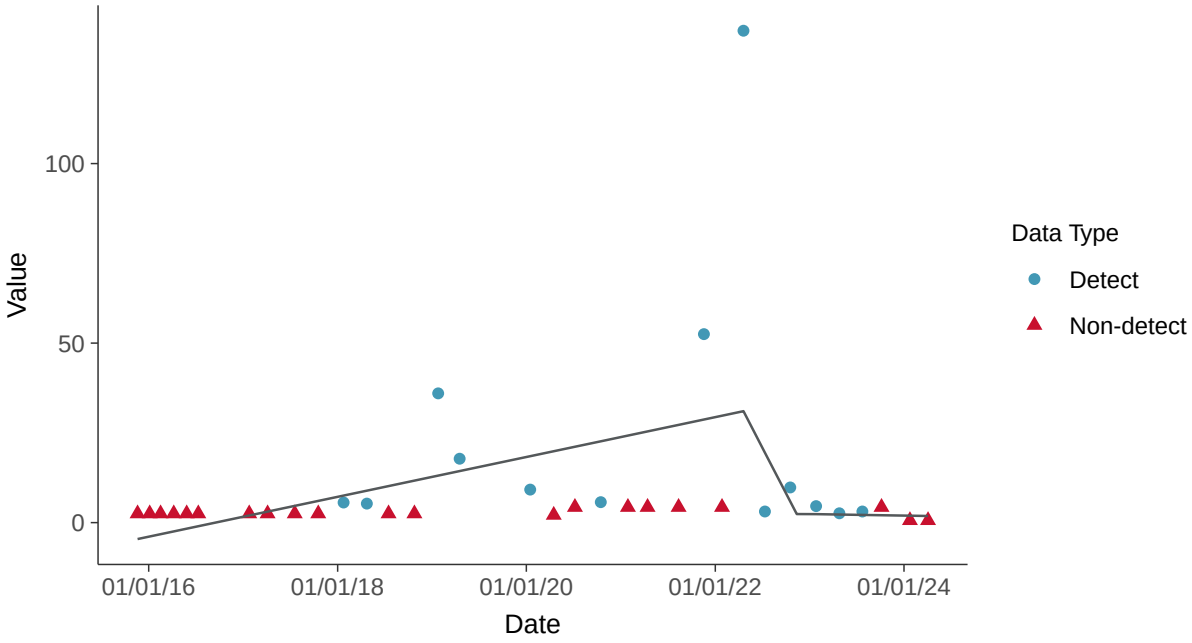
Trend Regression: Piecewise Linear-Linear

Copper, MW-3 (ug/L)



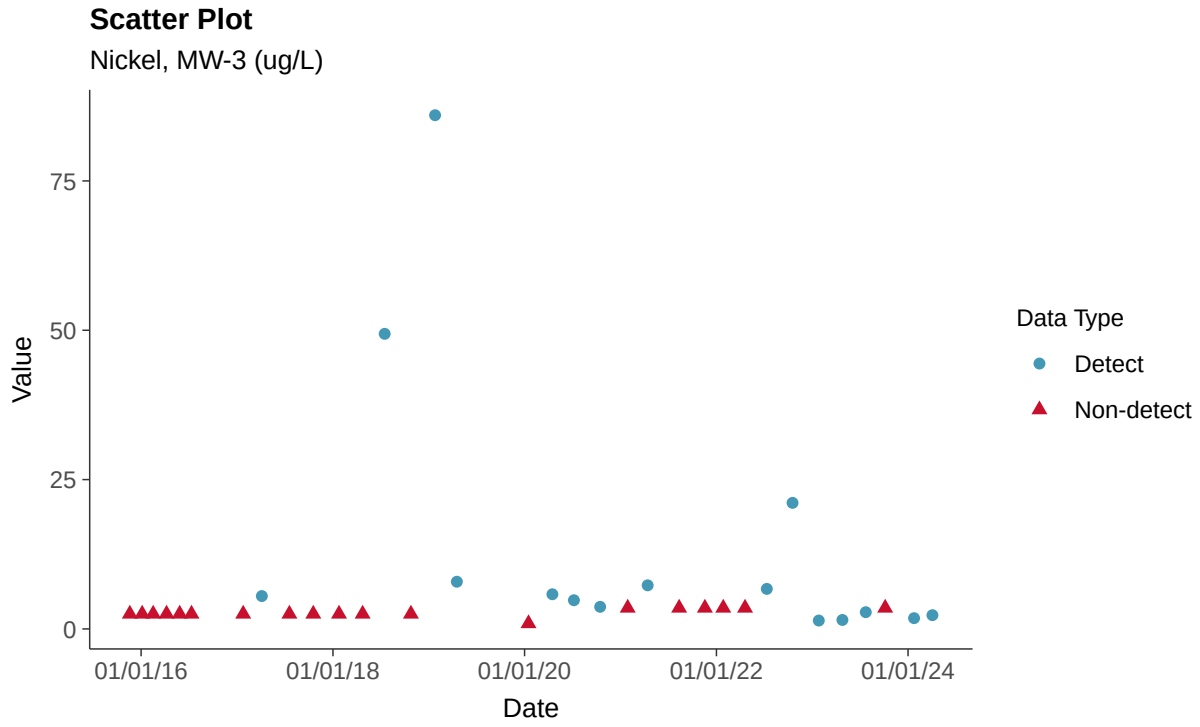
Trend Regression: Piecewise Linear-Linear-Linear

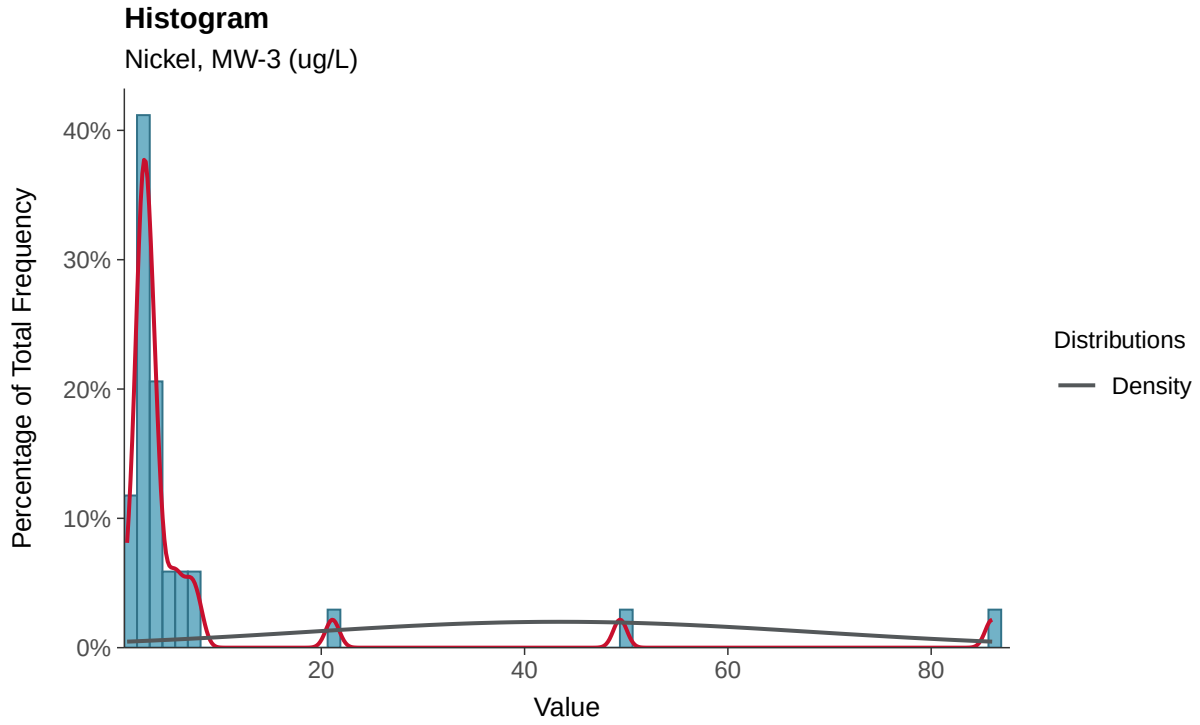
Copper, MW-3 (ug/L)



App. I Metals: Nickel, MW-3

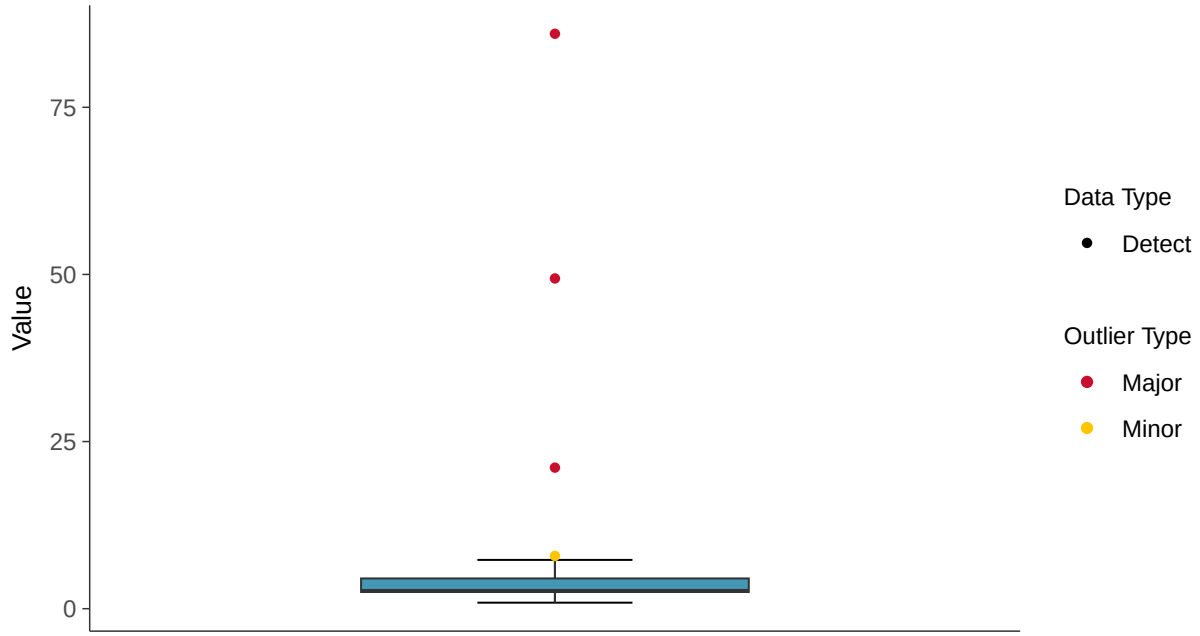
ID: 6_1_117





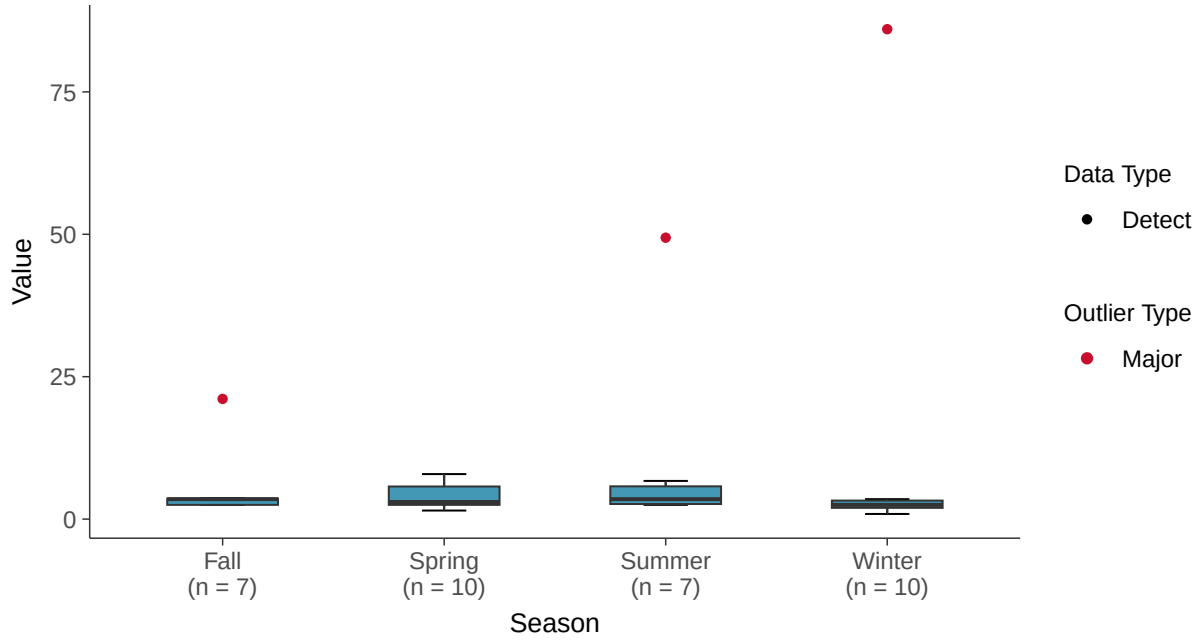
Boxplot

Nickel, MW-3 (ug/L)



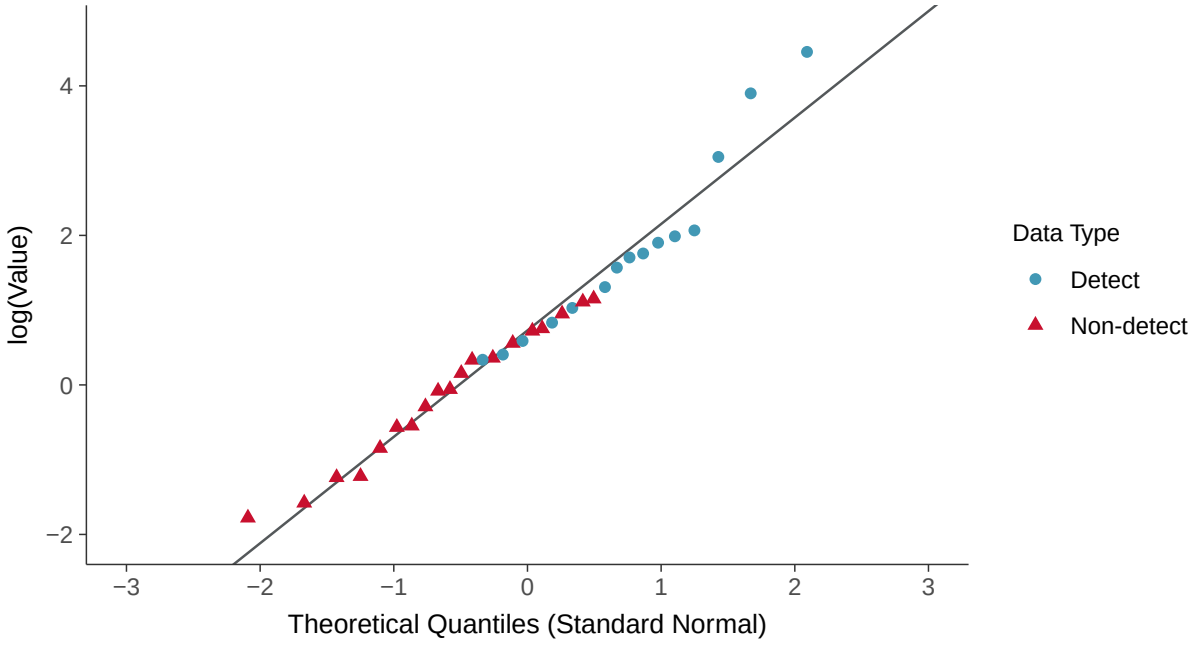
Boxplot by Season

Nickel, MW-3 (ug/L)



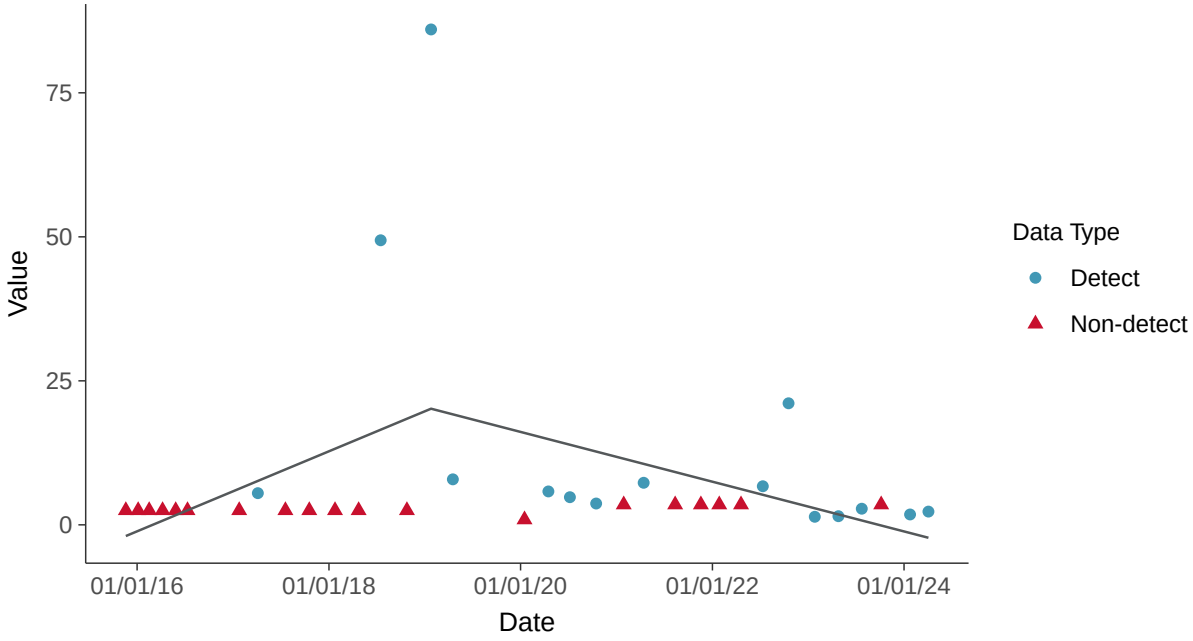
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-3 (ug/L)



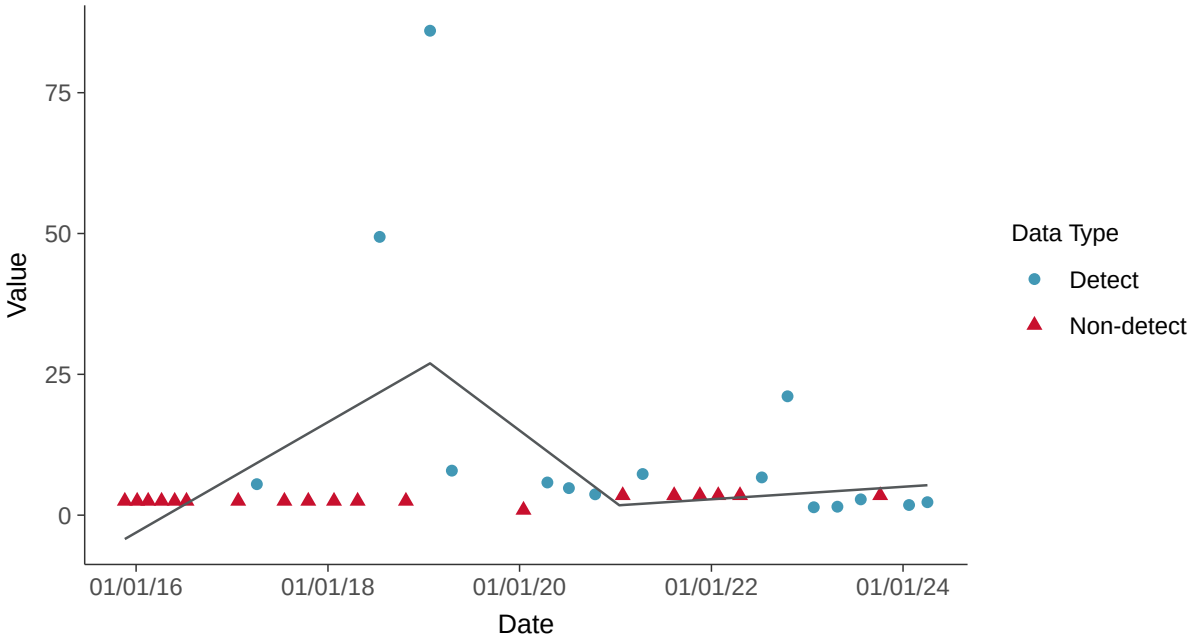
Trend Regression: Piecewise Linear-Linear

Nickel, MW-3 (ug/L)



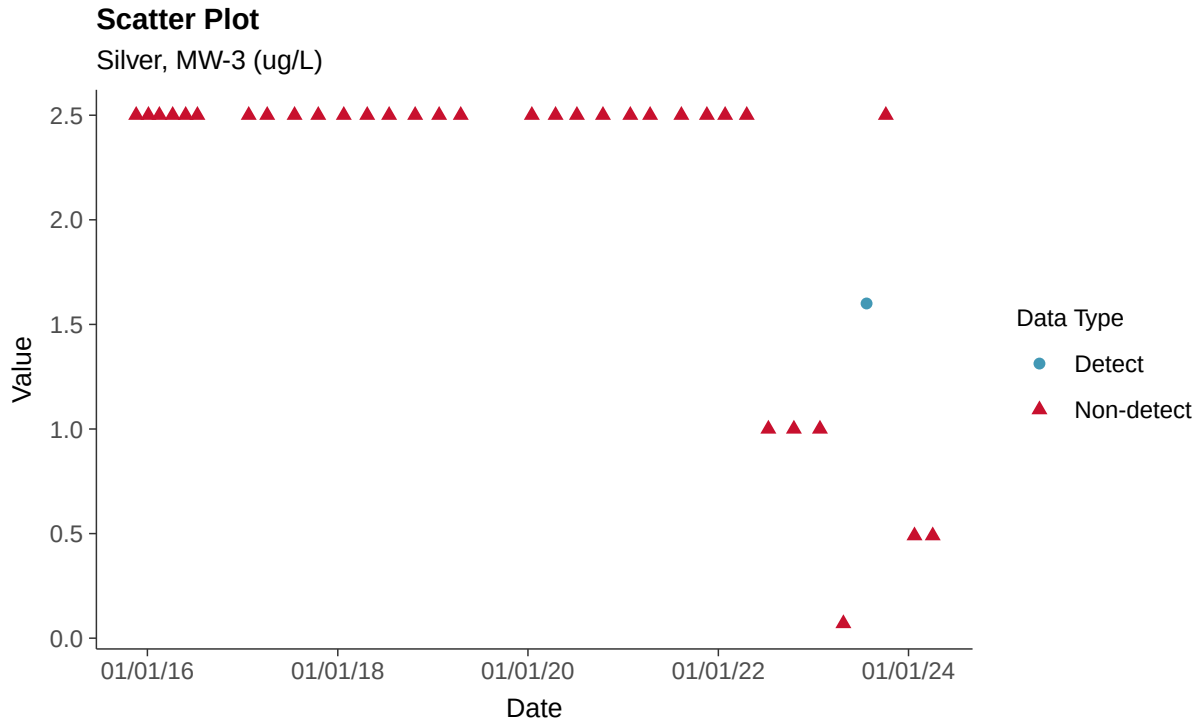
Trend Regression: Piecewise Linear-Linear-Linear

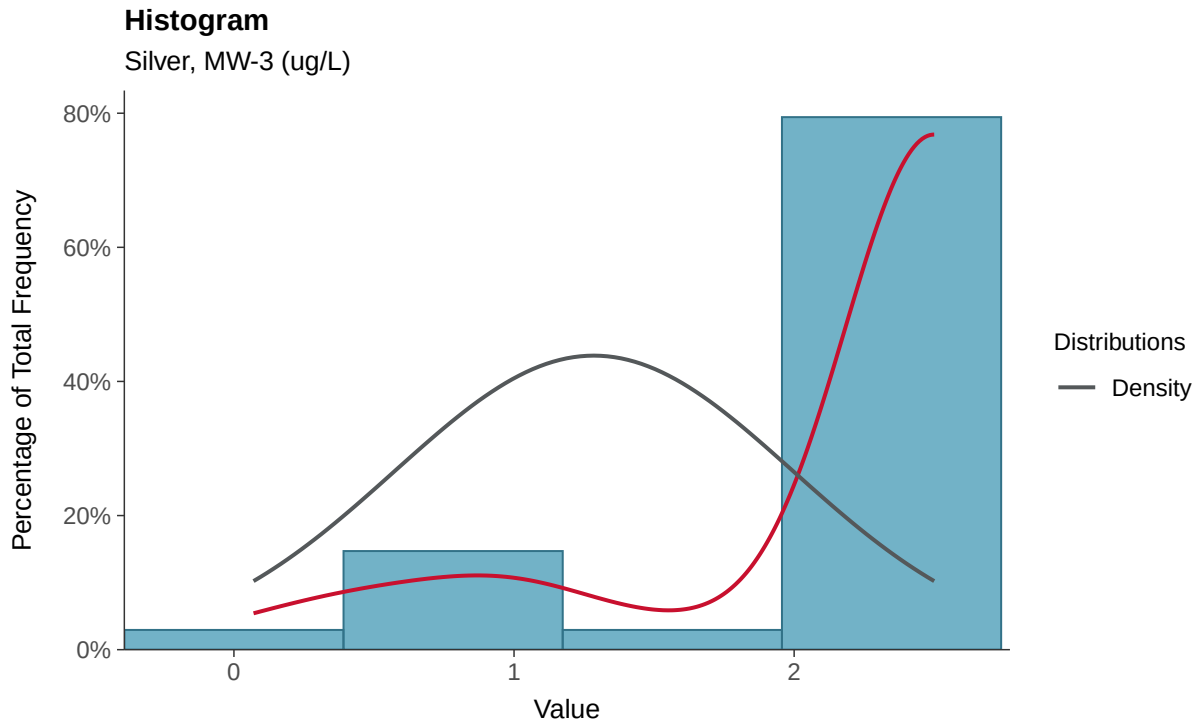
Nickel, MW-3 (ug/L)



App. I Metals: Silver, MW-3

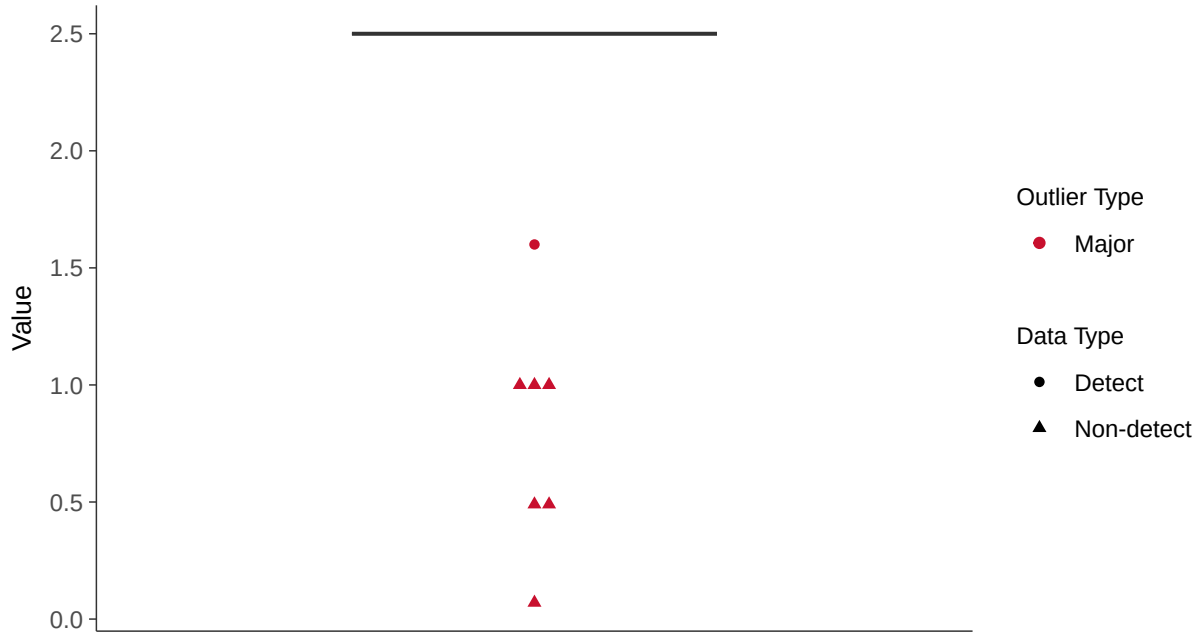
ID: 6_1_122





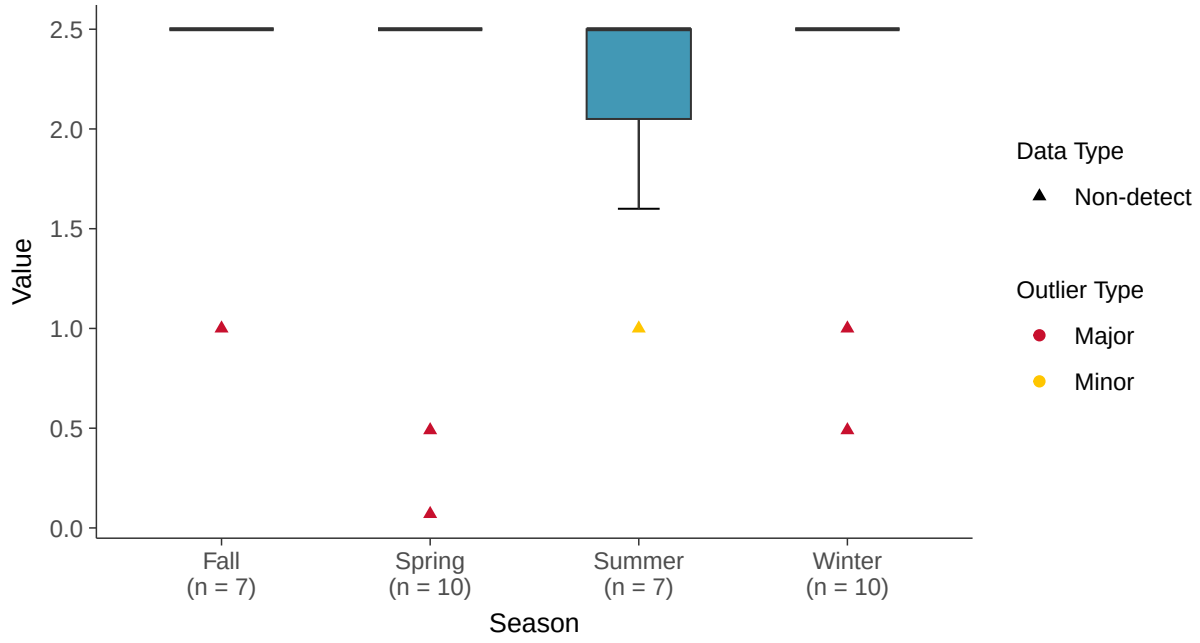
Boxplot

Silver, MW-3 (ug/L)



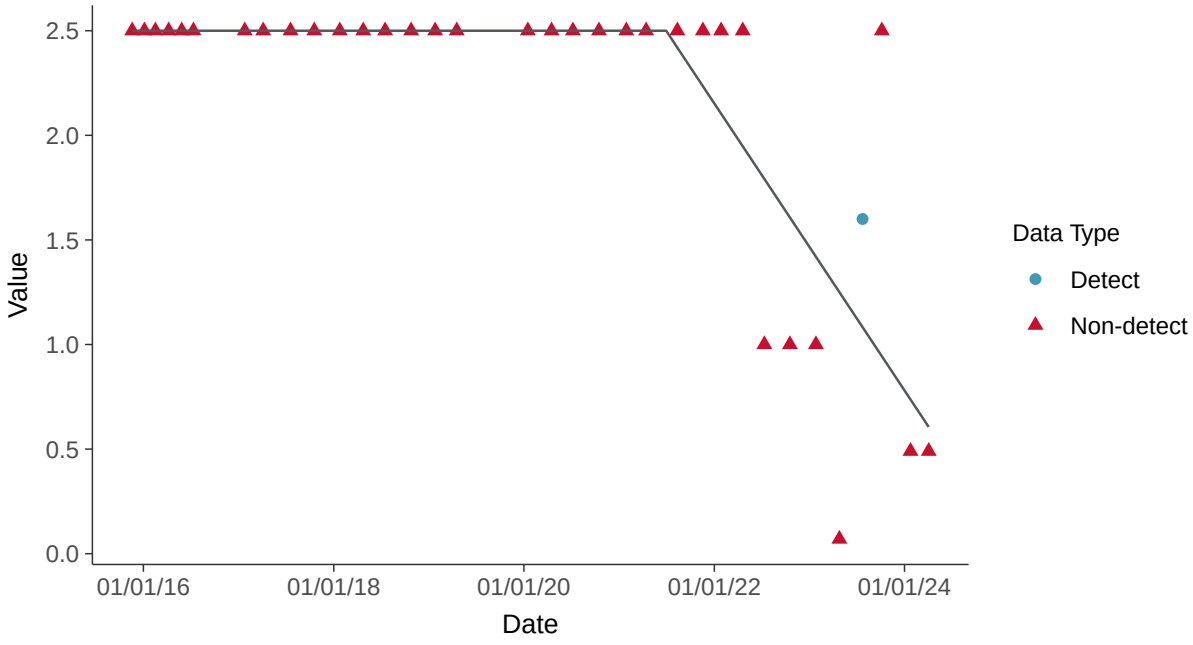
Boxplot by Season

Silver, MW-3 (ug/L)



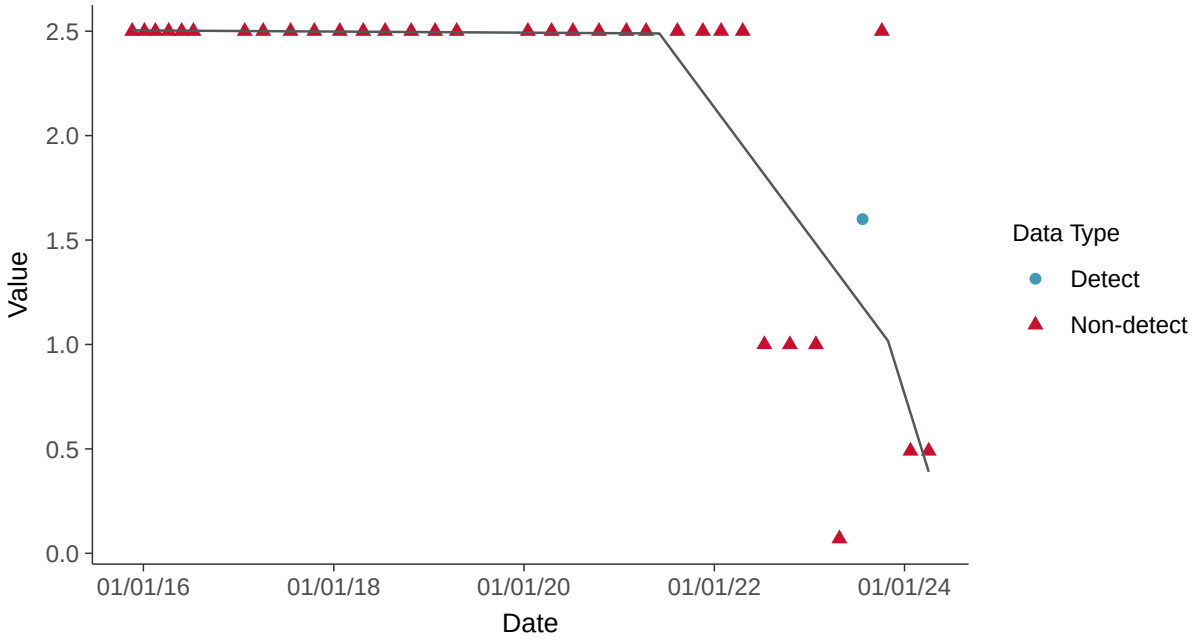
Trend Regression: Piecewise Linear-Linear

Silver, MW-3 (ug/L)



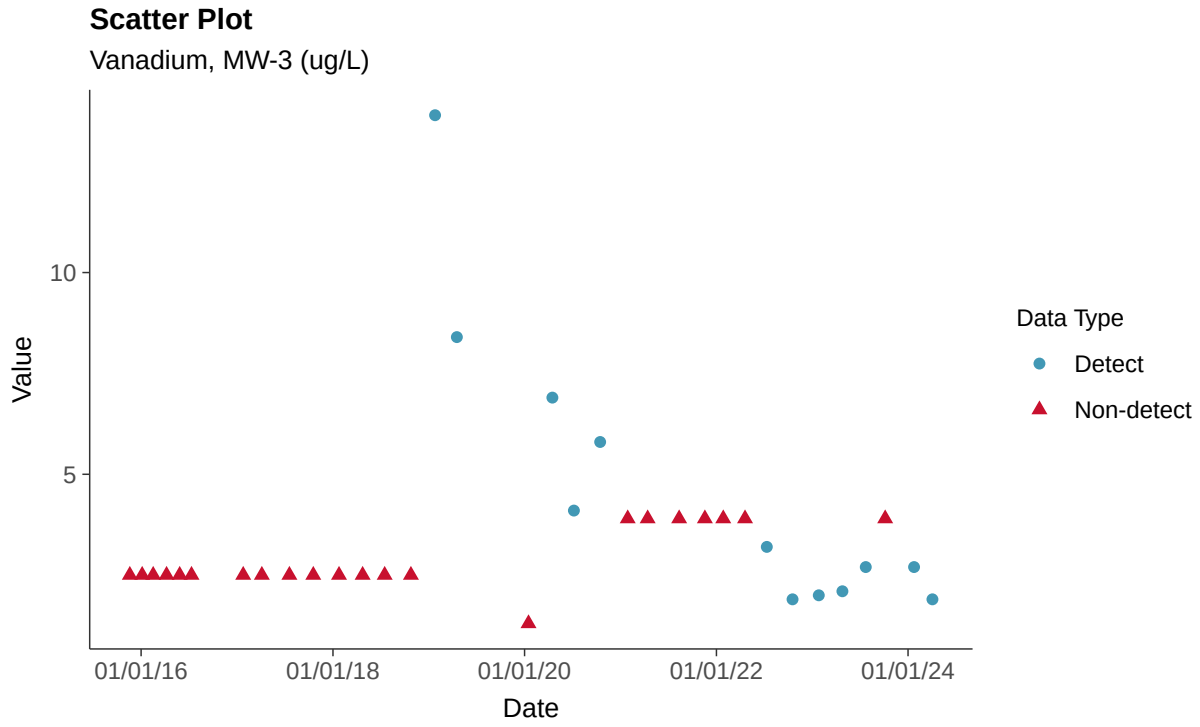
Trend Regression: Piecewise Linear-Linear-Linear

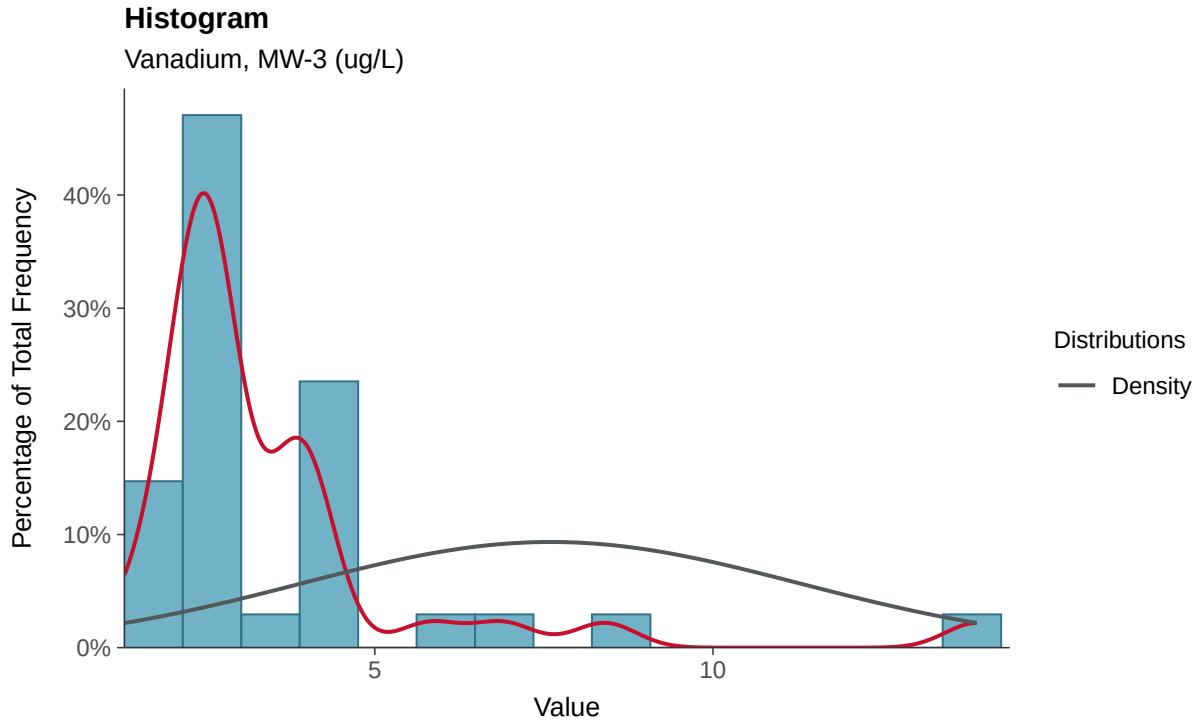
Silver, MW-3 (ug/L)



App. I Metals: Vanadium, MW-3

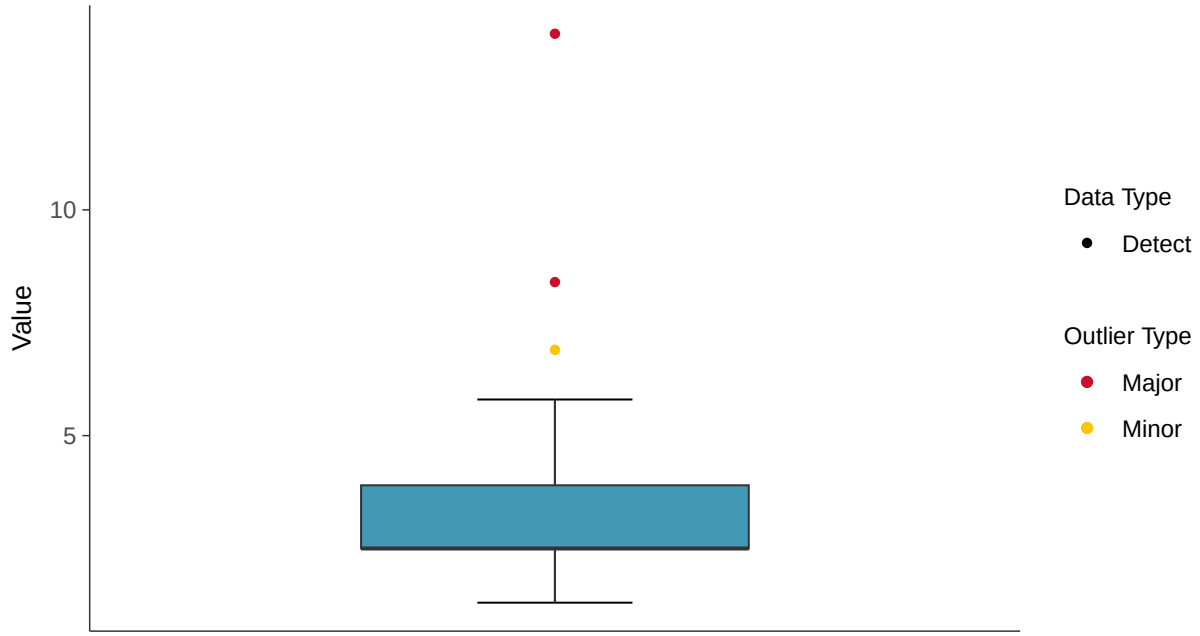
ID: 6_1_127





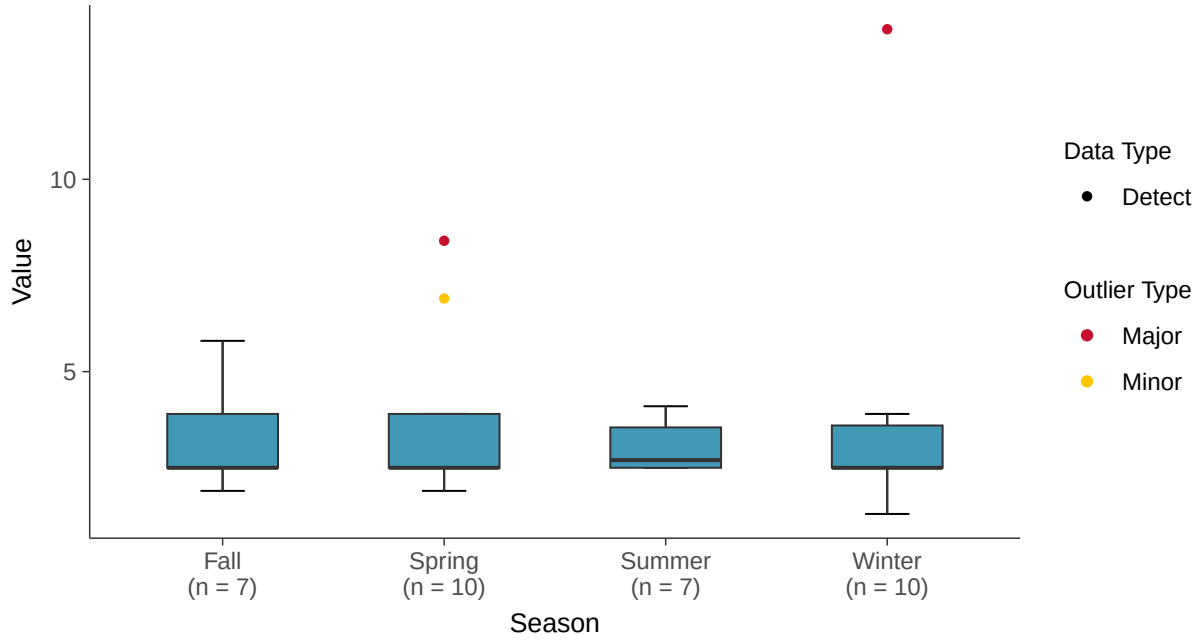
Boxplot

Vanadium, MW-3 (ug/L)



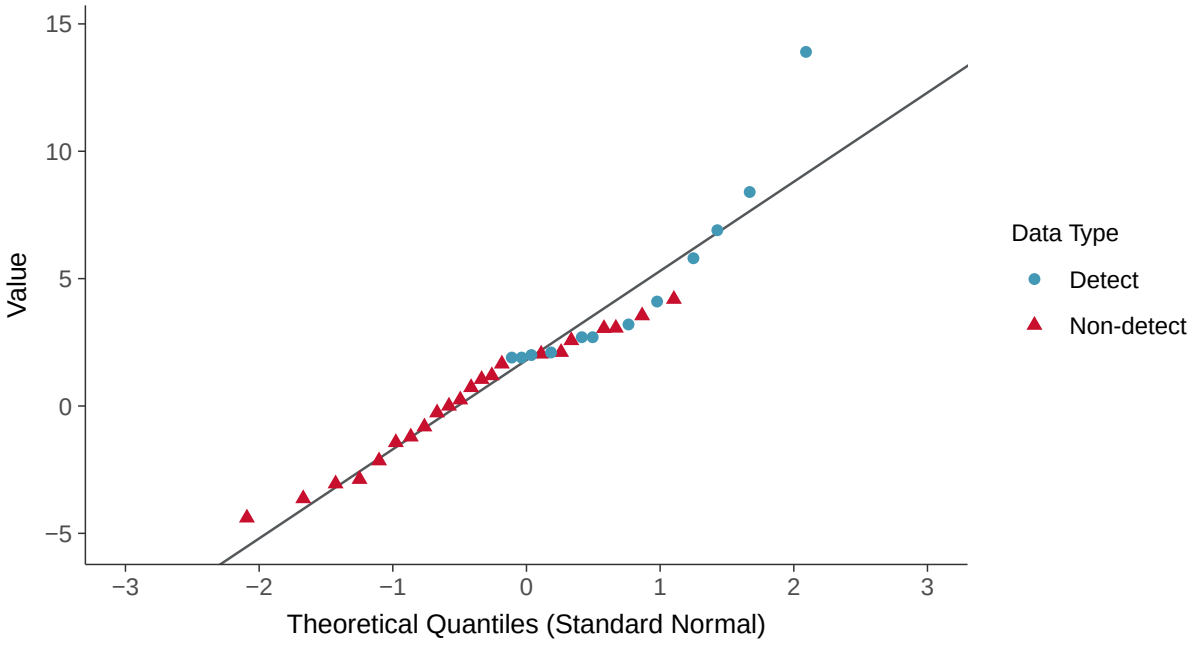
Boxplot by Season

Vanadium, MW-3 (ug/L)



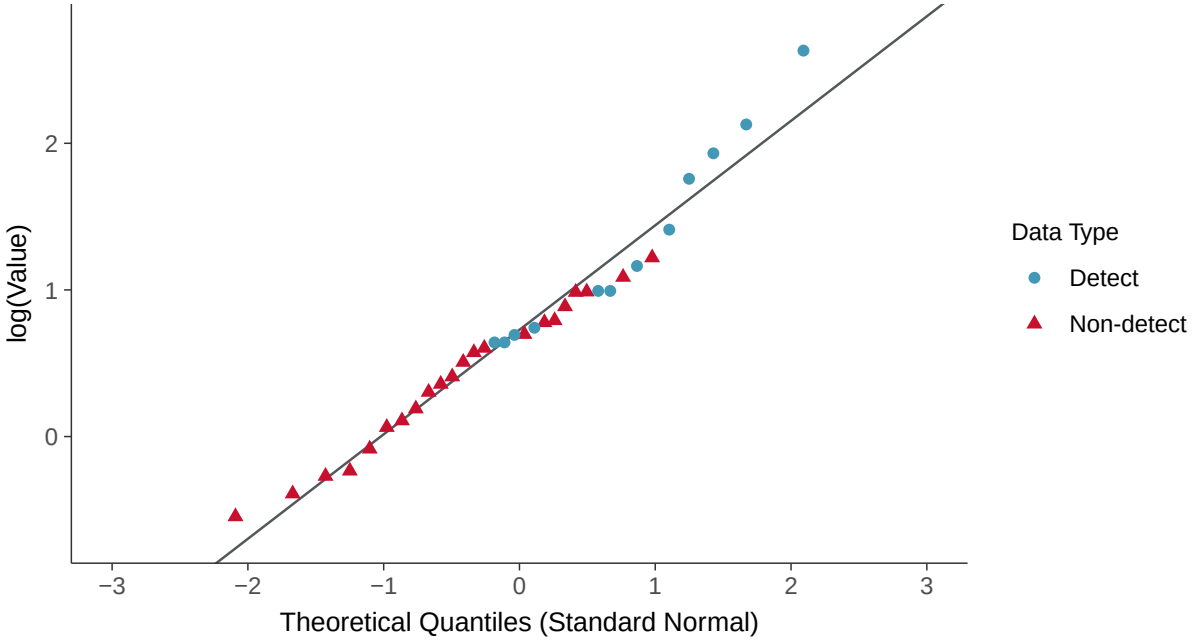
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-3 (ug/L)



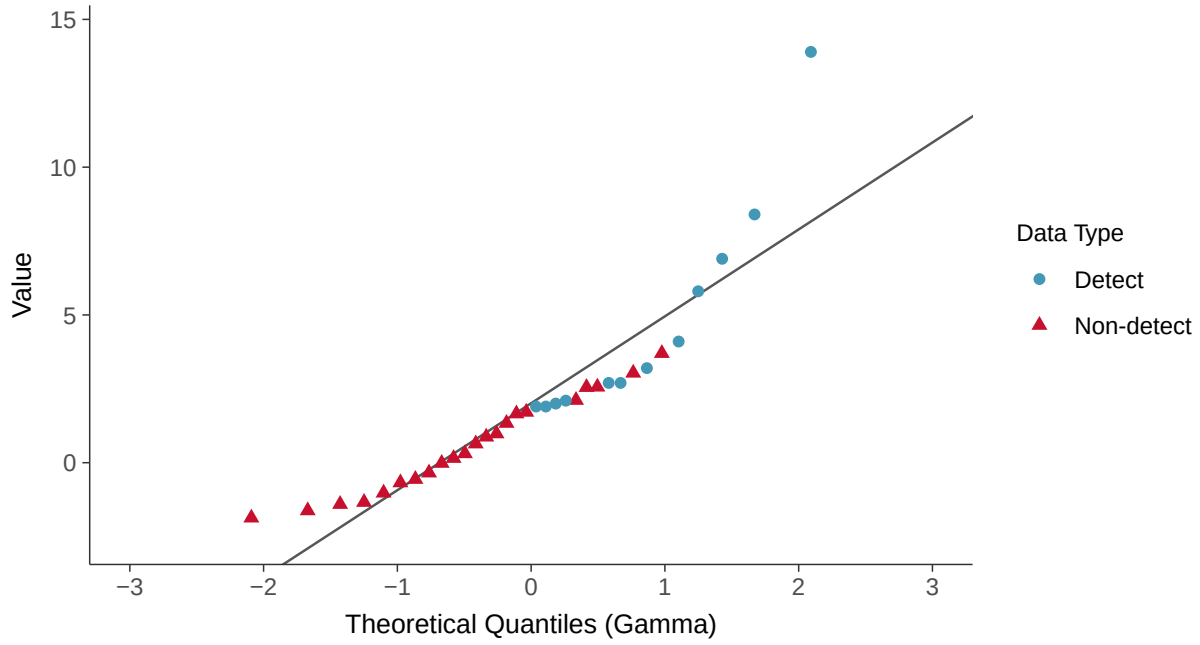
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-3 (ug/L)



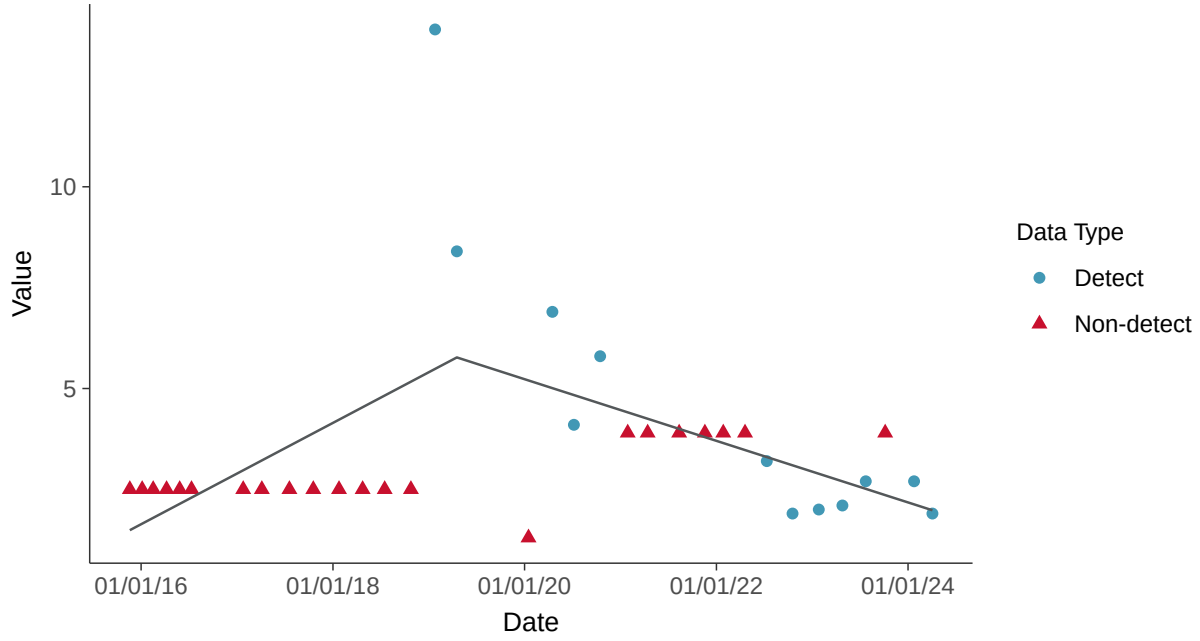
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-3 (ug/L)



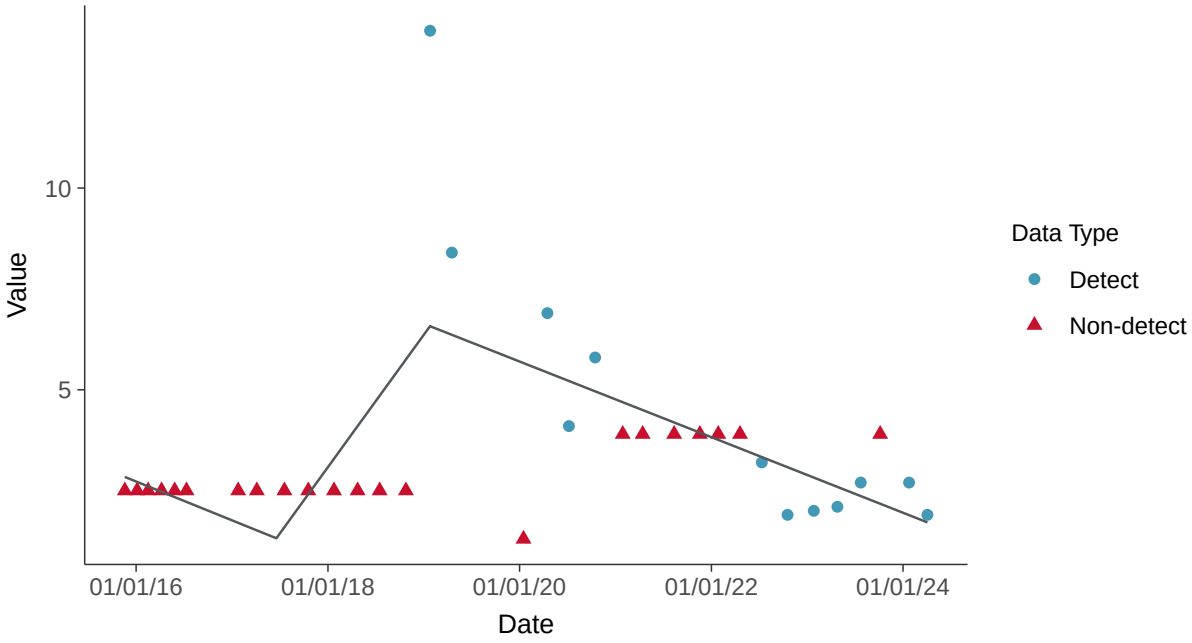
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-3 (ug/L)



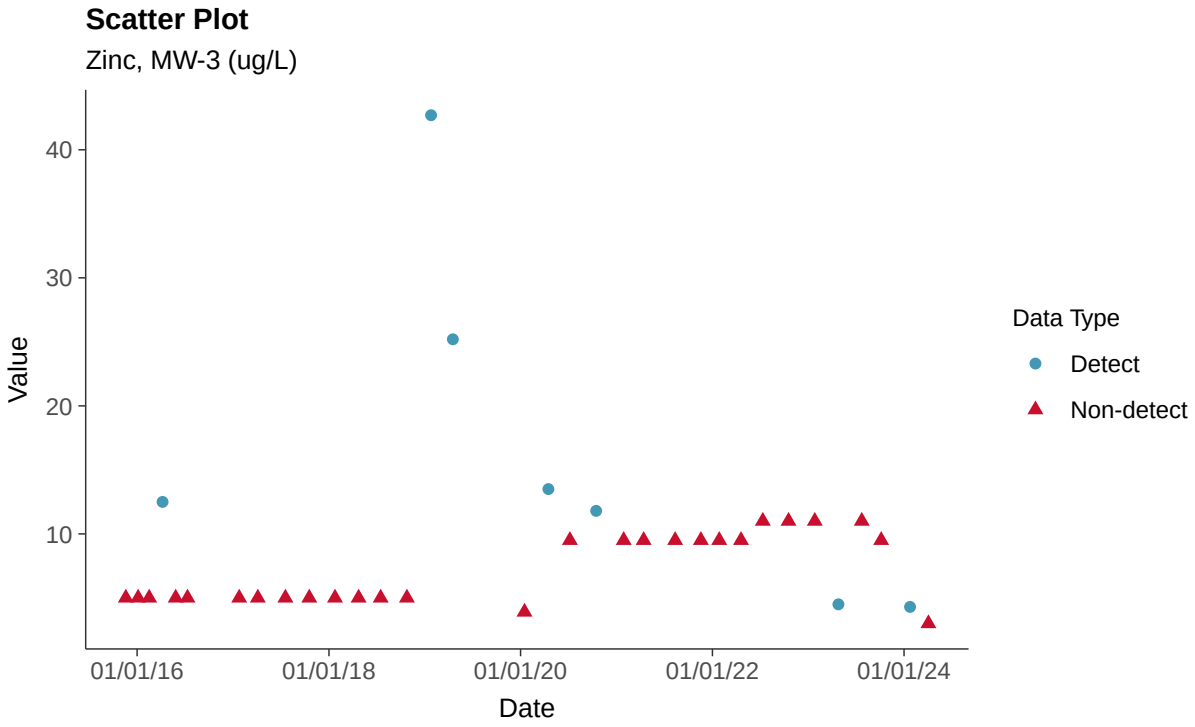
Trend Regression: Piecewise Linear-Linear-Linear

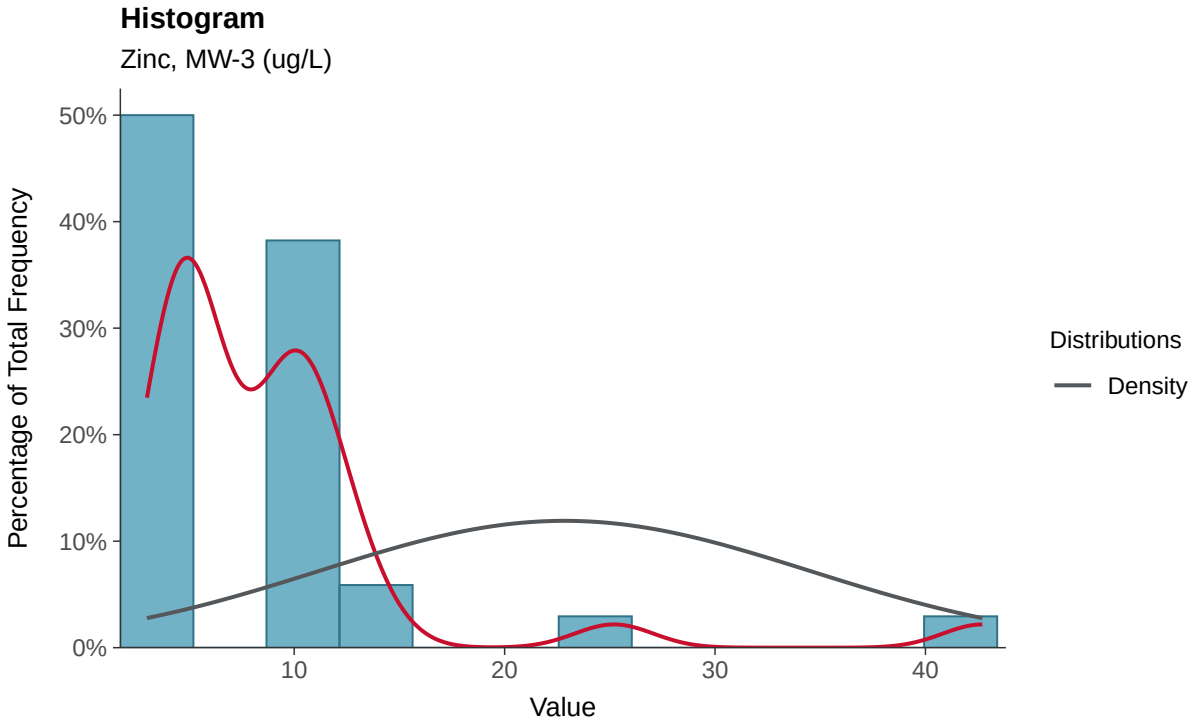
Vanadium, MW-3 (ug/L)



App. I Metals: Zinc, MW-3

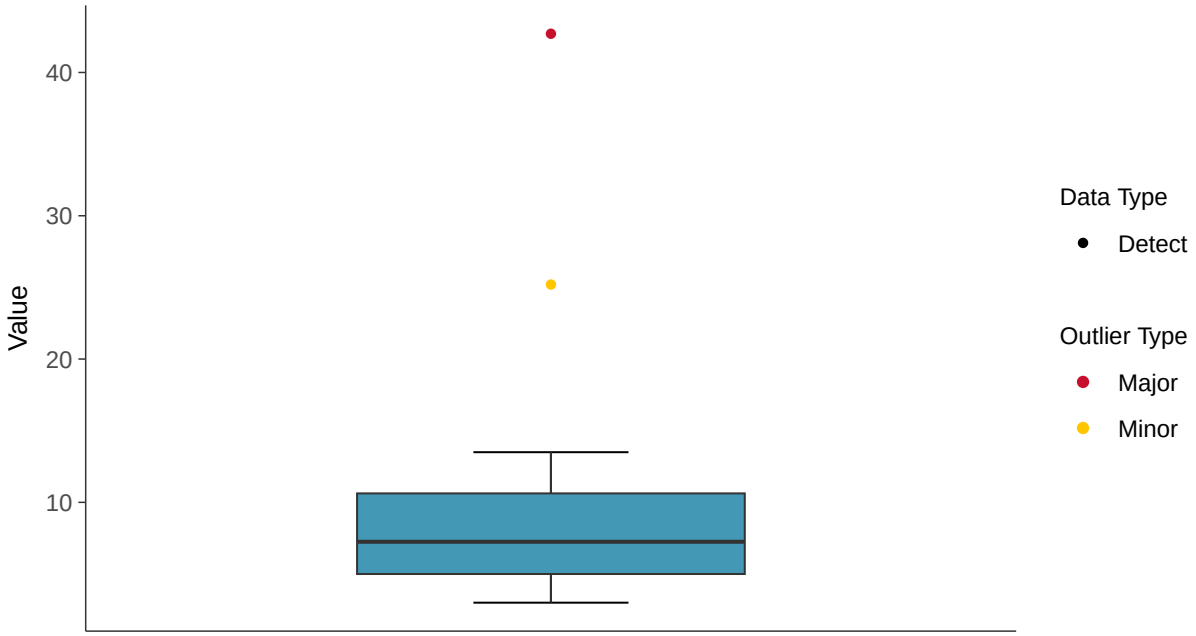
ID: 6_1_128





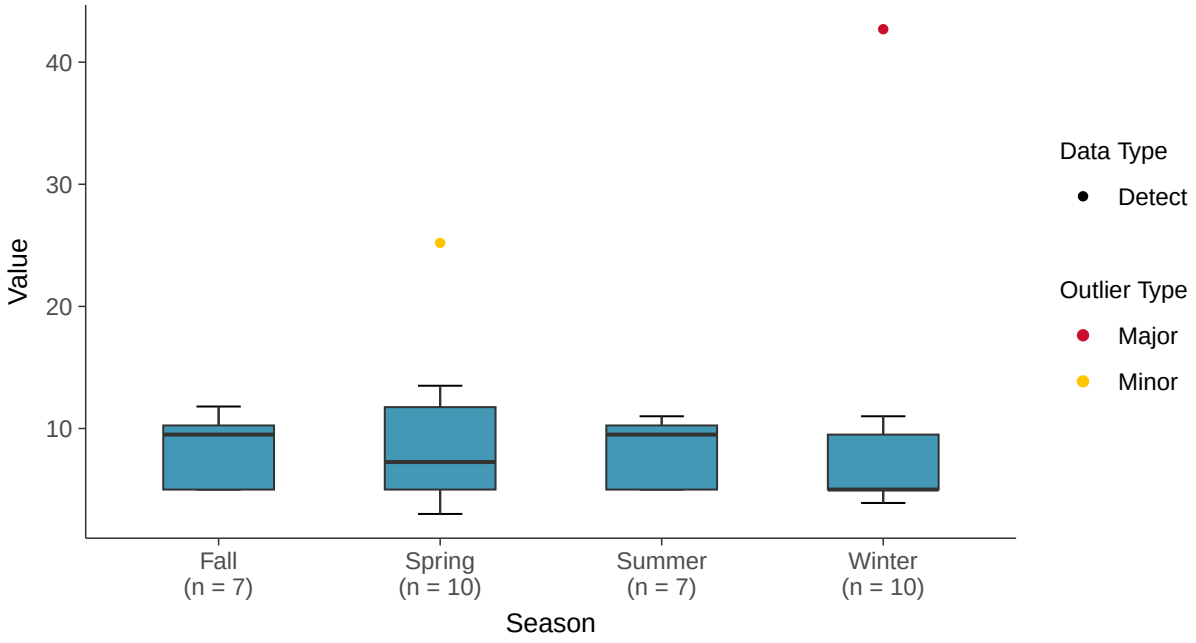
Boxplot

Zinc, MW-3 (ug/L)



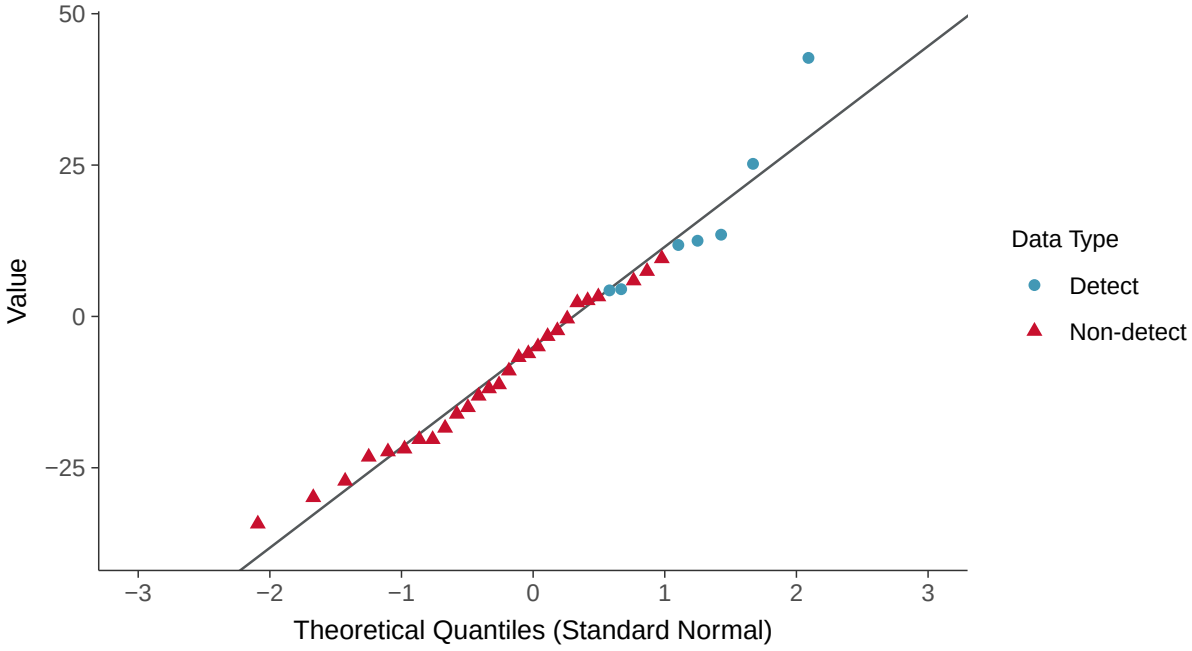
Boxplot by Season

Zinc, MW-3 (ug/L)



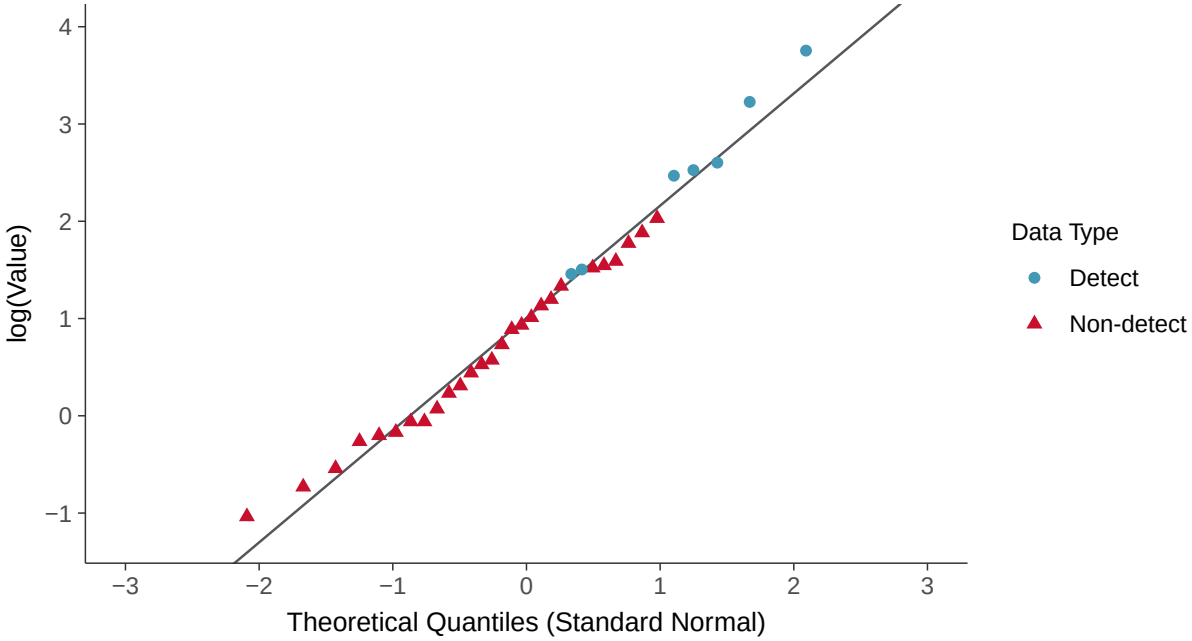
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-3 (ug/L)



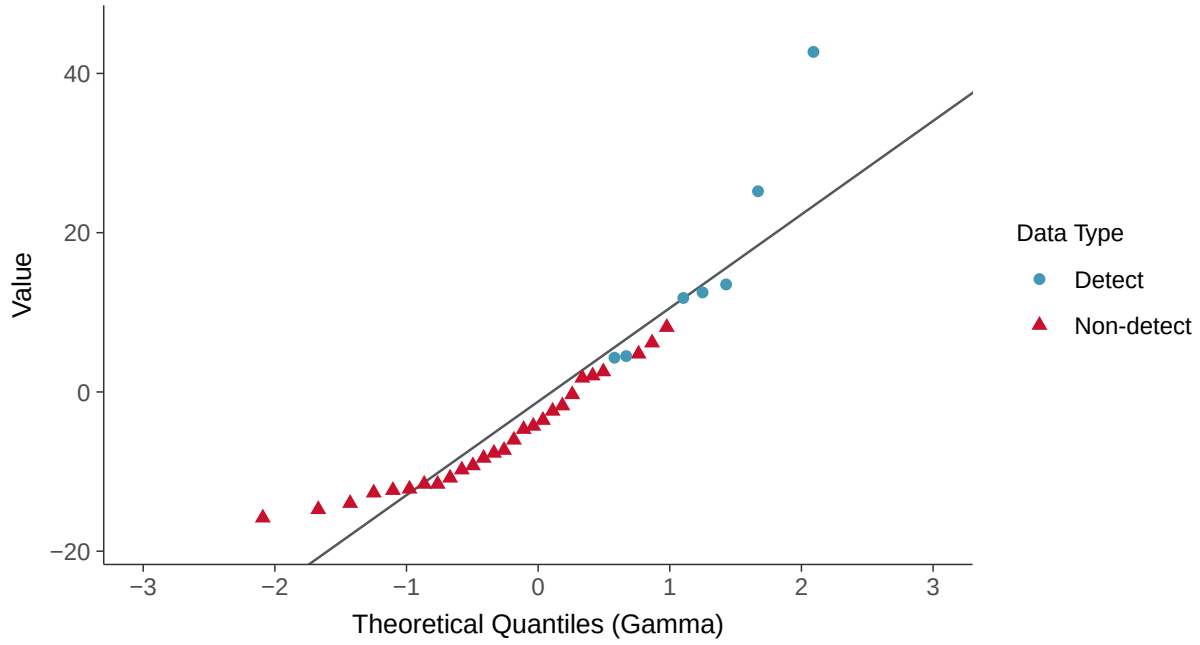
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-3 (ug/L)



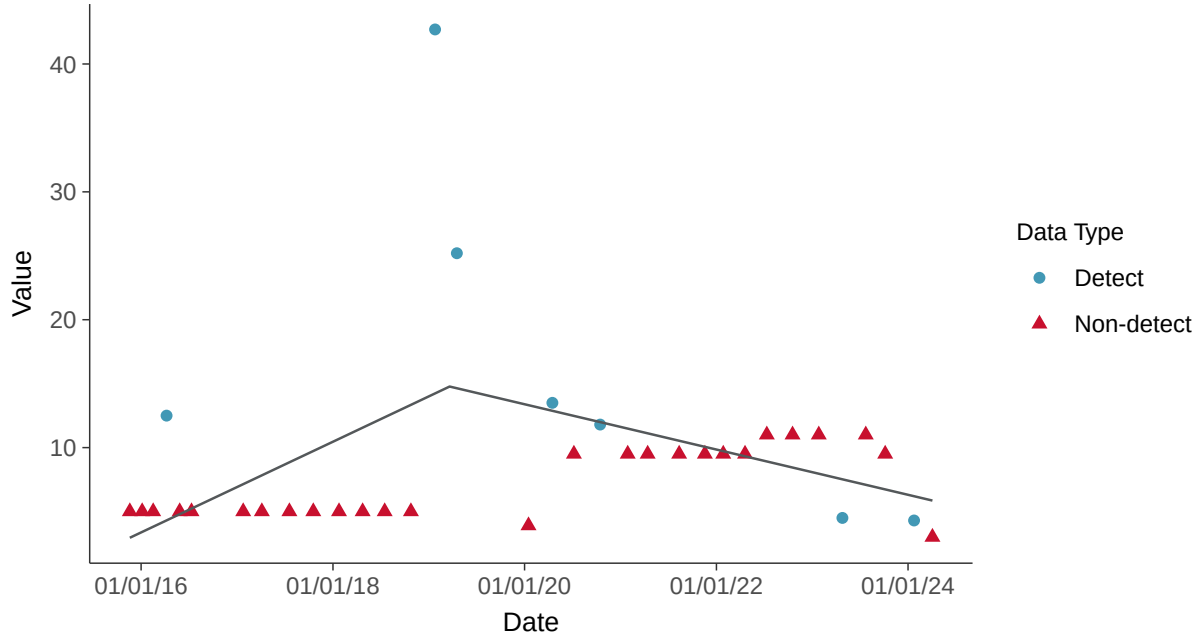
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-3 (ug/L)



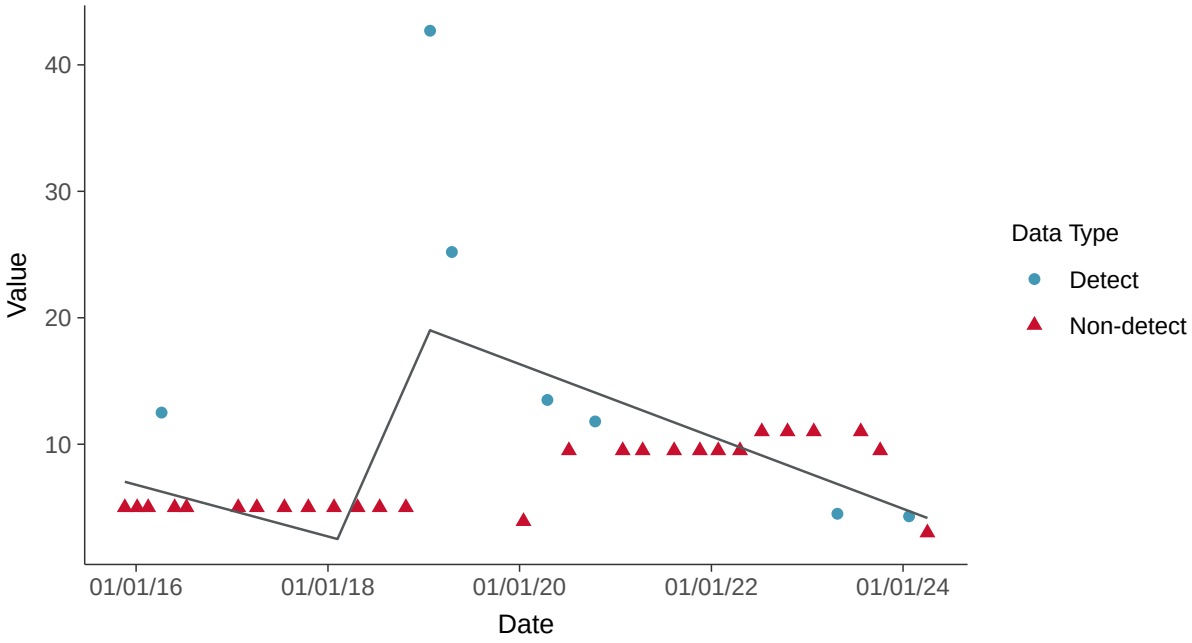
Trend Regression: Piecewise Linear-Linear

Zinc, MW-3 (ug/L)



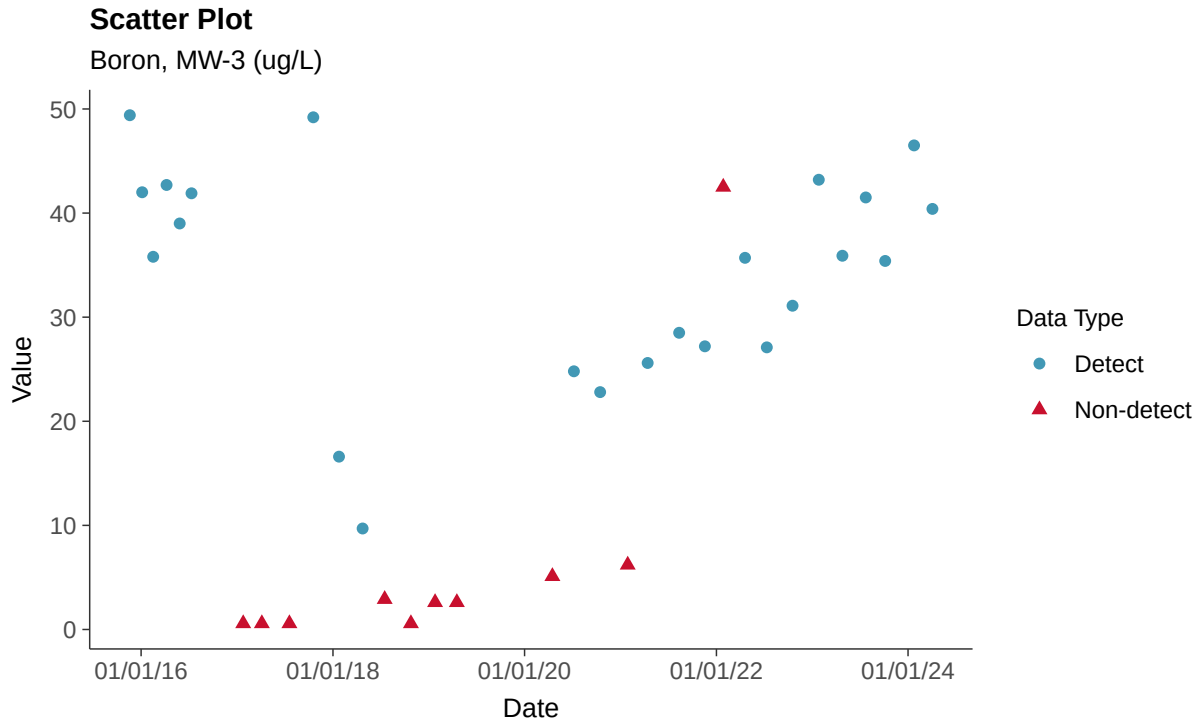
Trend Regression: Piecewise Linear-Linear-Linear

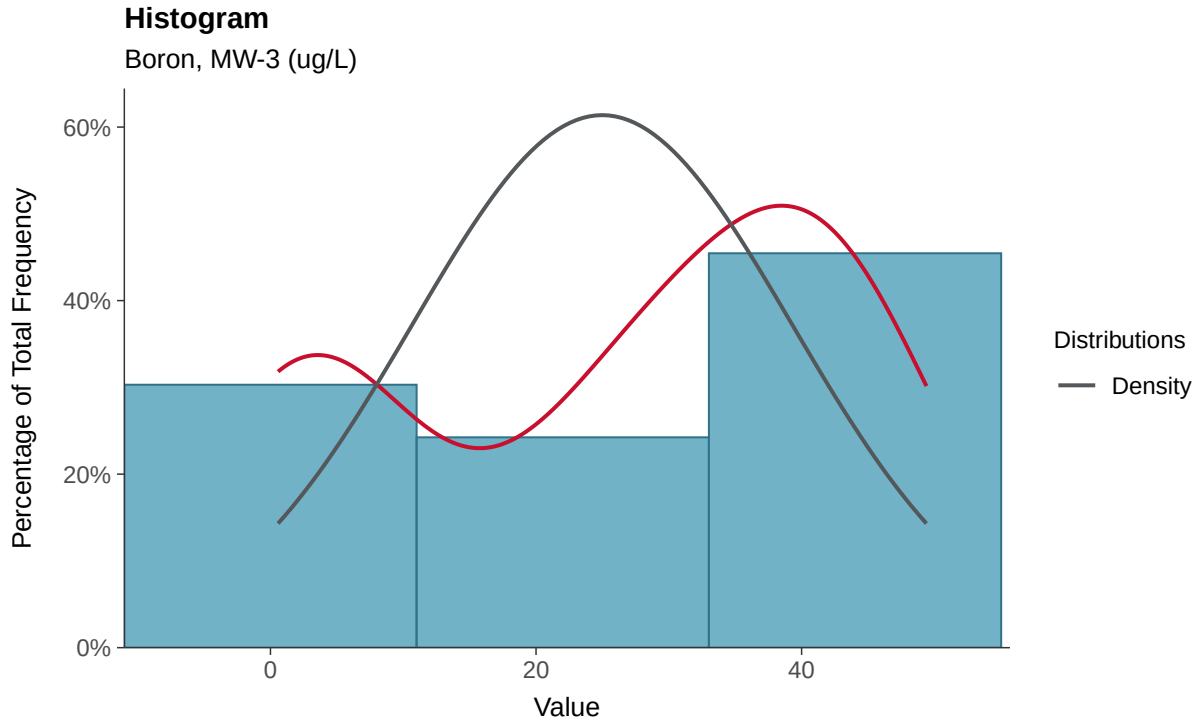
Zinc, MW-3 (ug/L)



App. III: Boron, MW-3

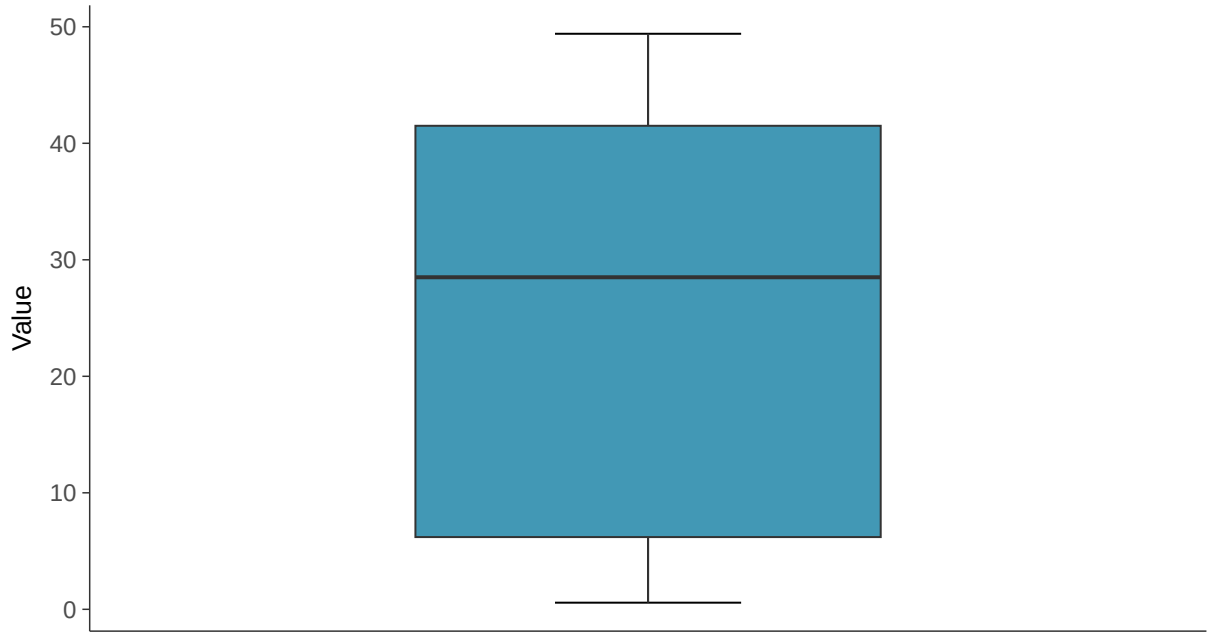
ID: 6_2_105





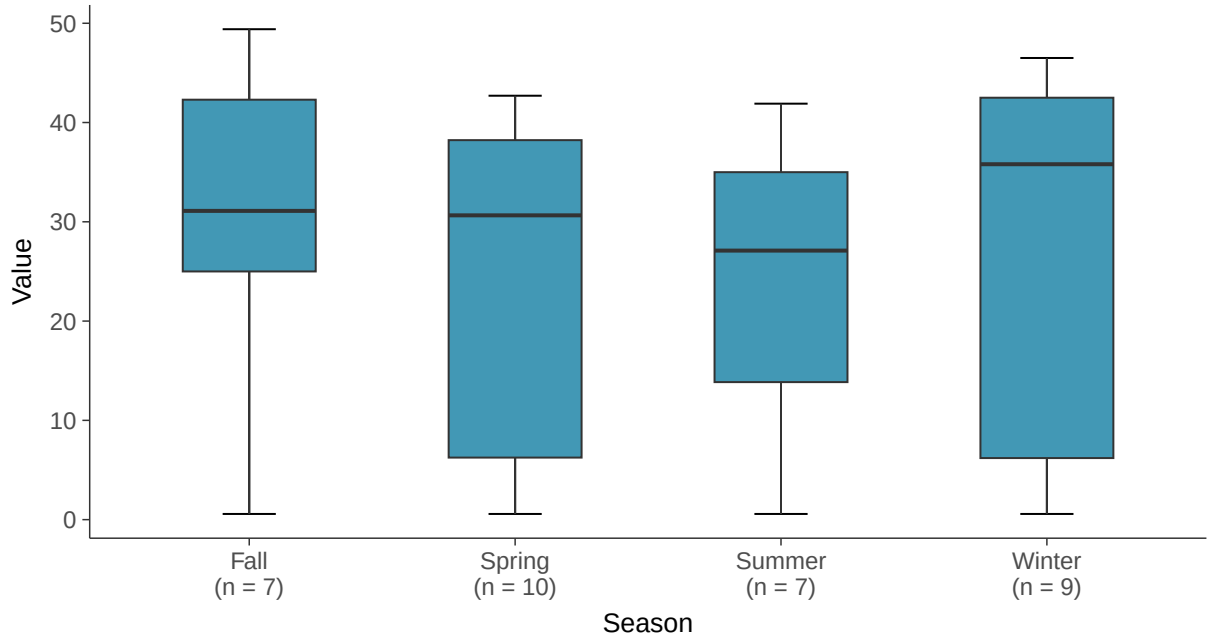
Boxplot

Boron, MW-3 (ug/L)



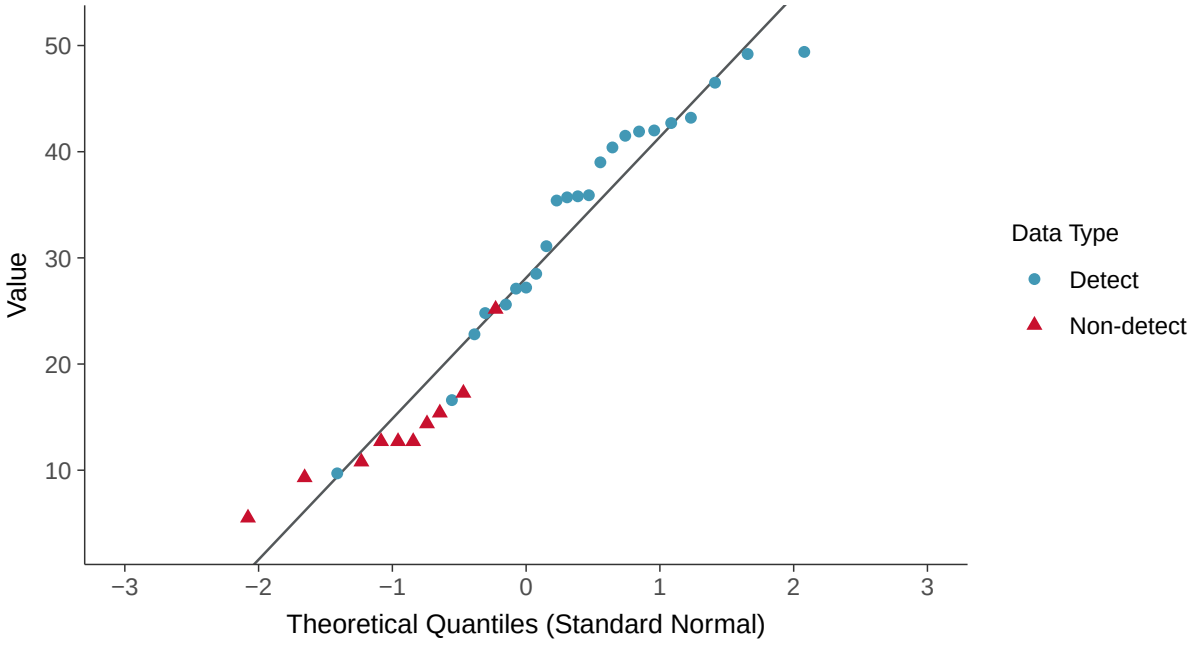
Boxplot by Season

Boron, MW-3 (ug/L)



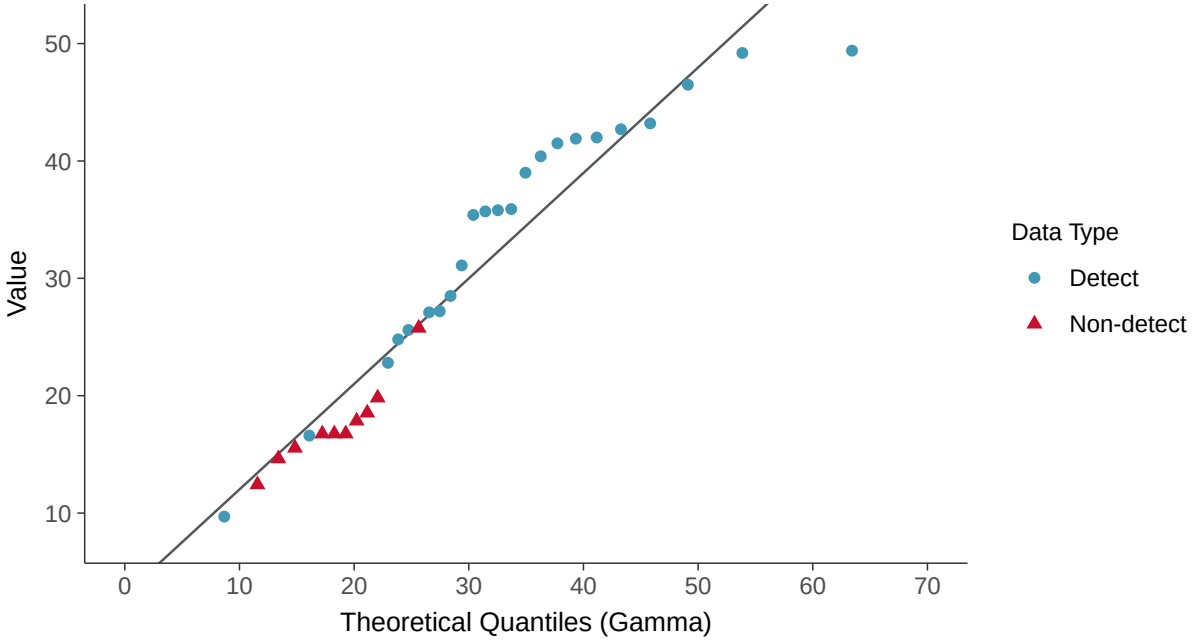
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-3 (ug/L)



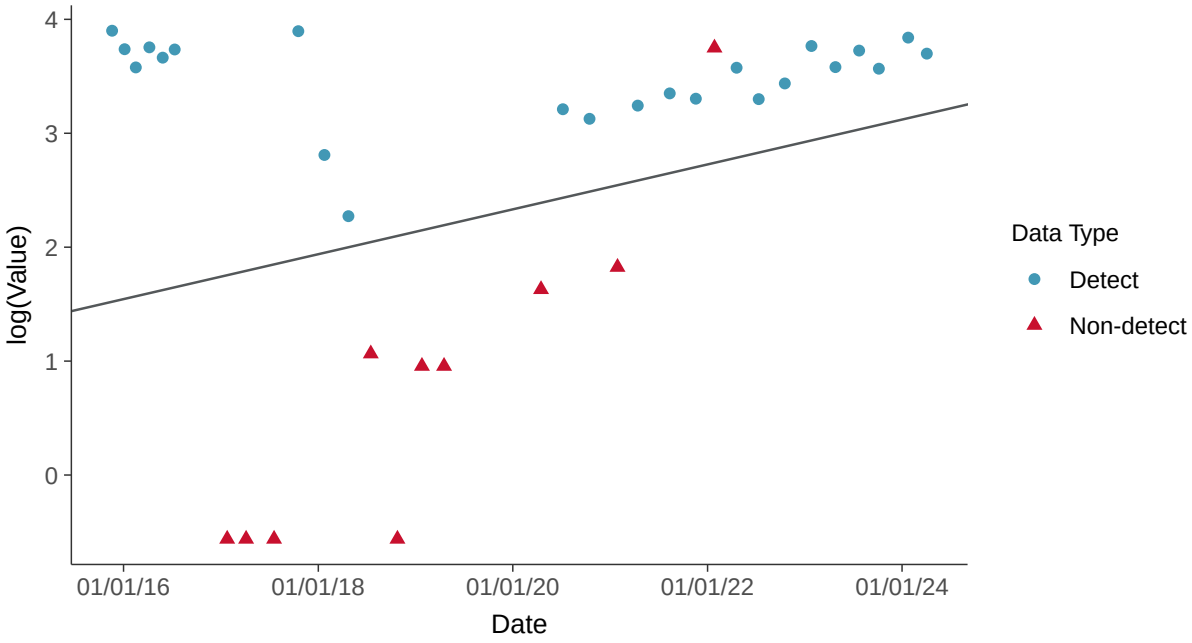
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-3 (ug/L)



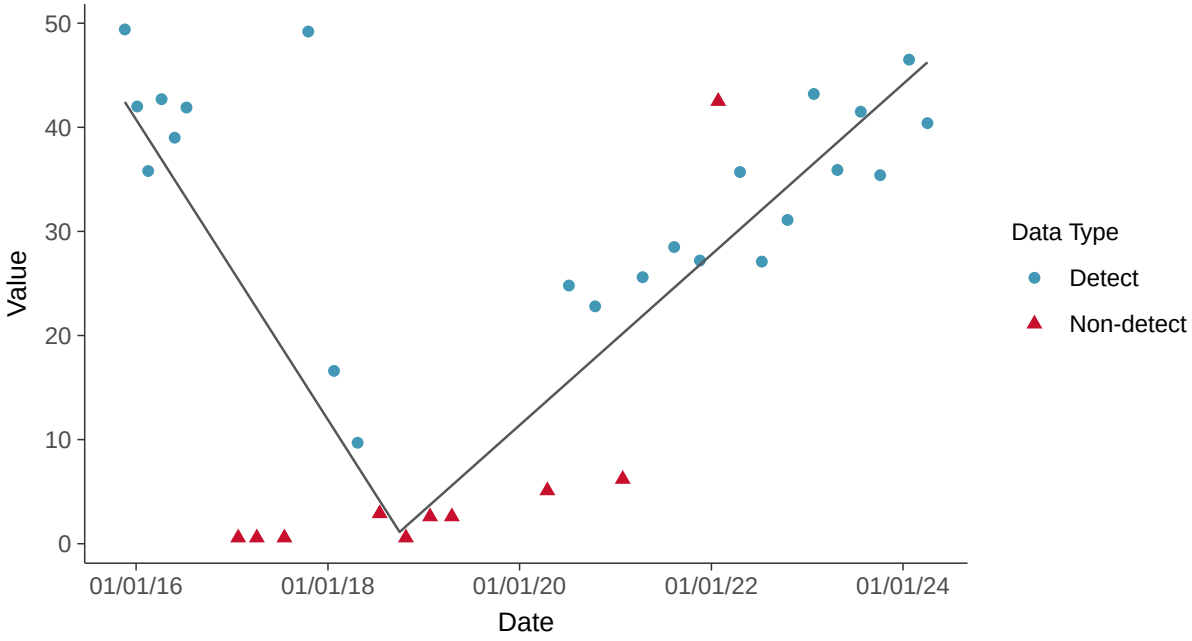
Trend Regression: Lognormal MLE

Boron, MW-3 (ug/L)



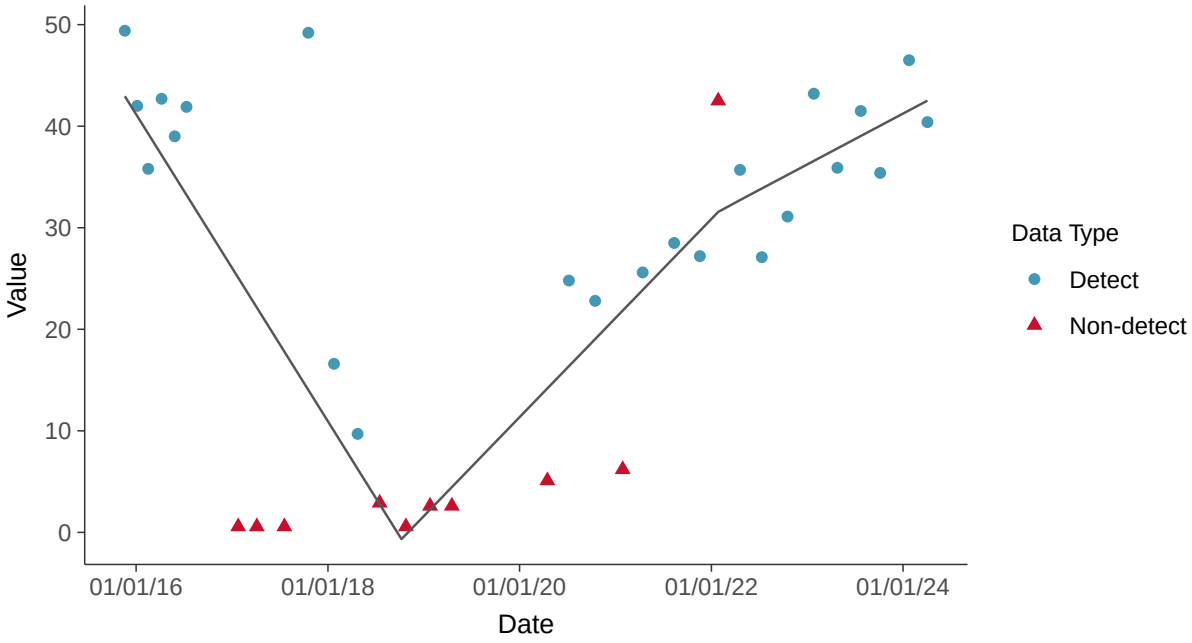
Trend Regression: Piecewise Linear-Linear

Boron, MW-3 (ug/L)



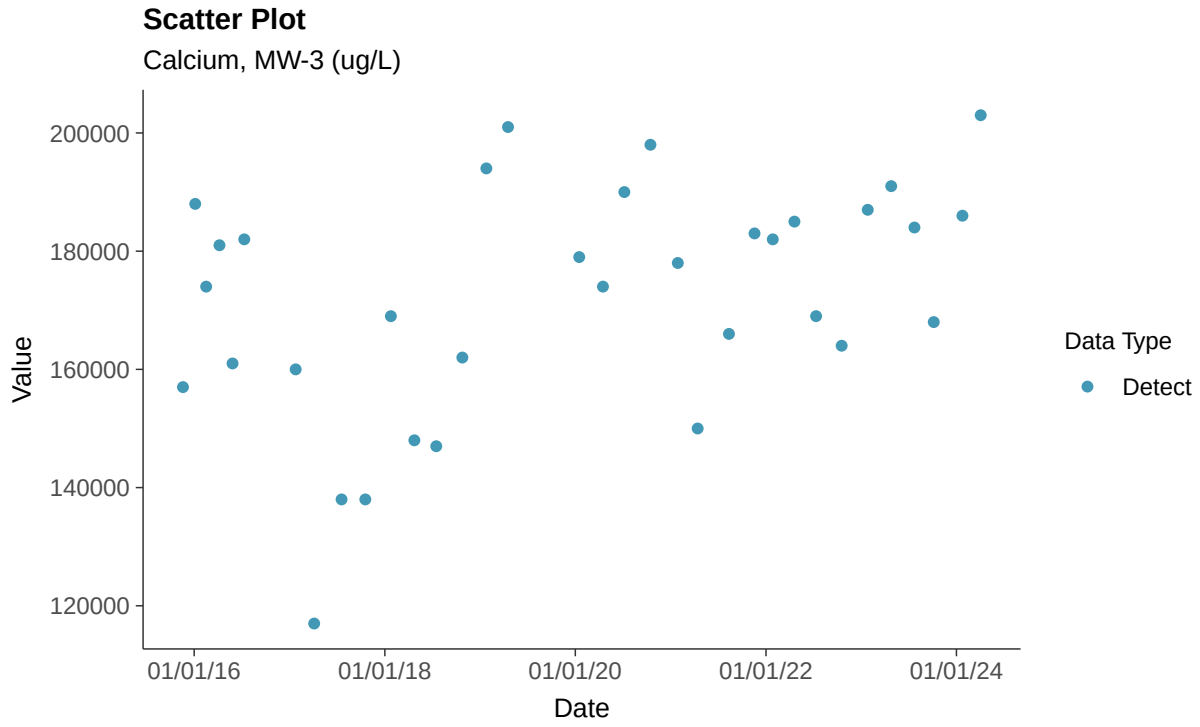
Trend Regression: Piecewise Linear-Linear-Linear

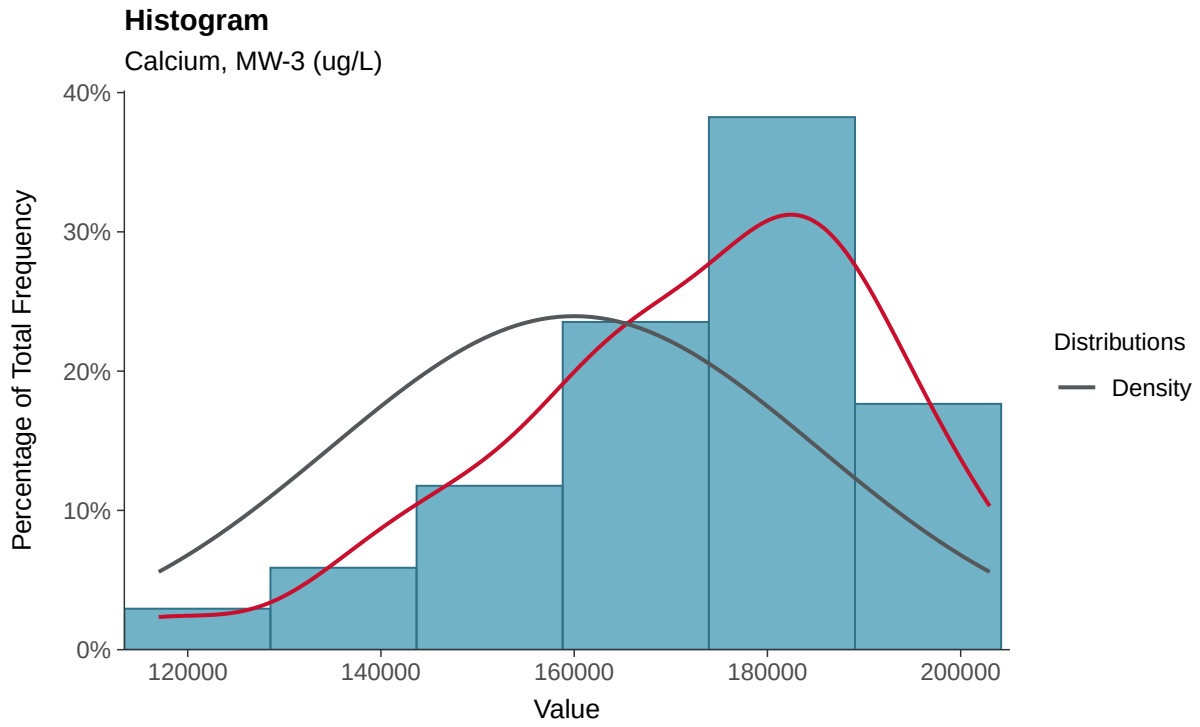
Boron, MW-3 (ug/L)



App. III: Calcium, MW-3

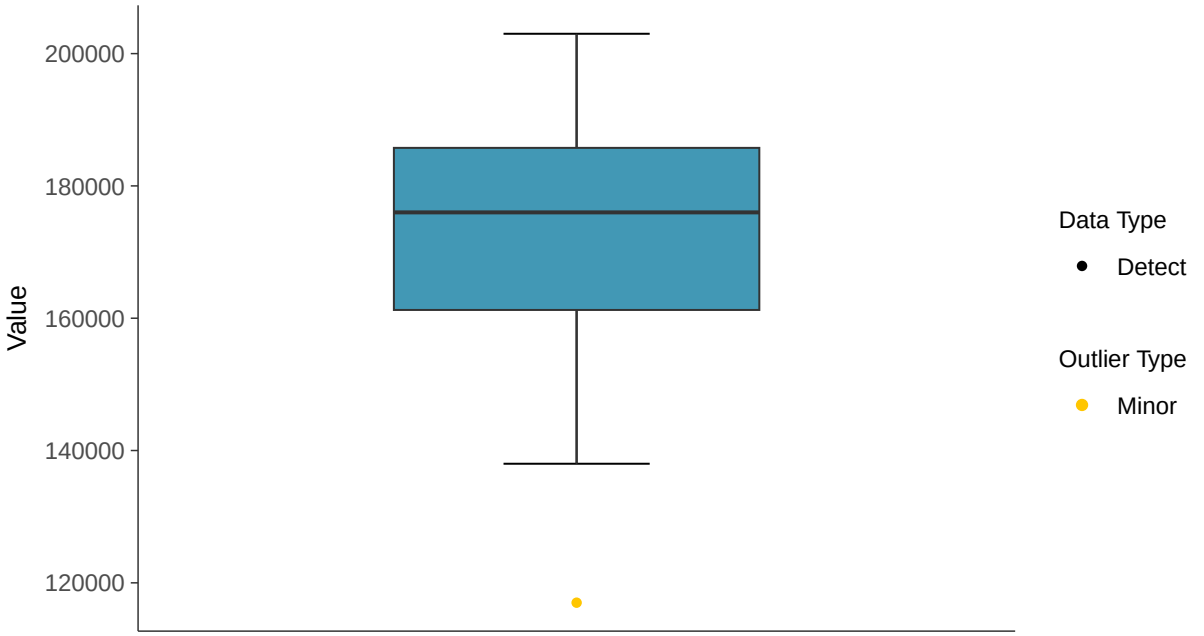
ID: 6_2_107





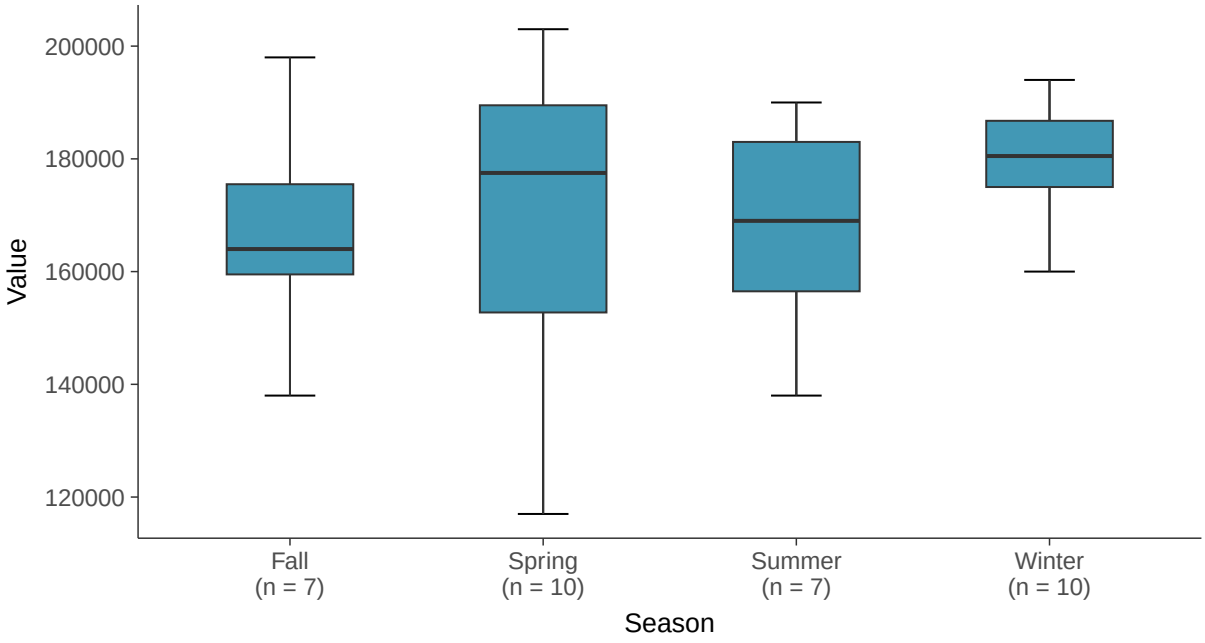
Boxplot

Calcium, MW-3 (ug/L)



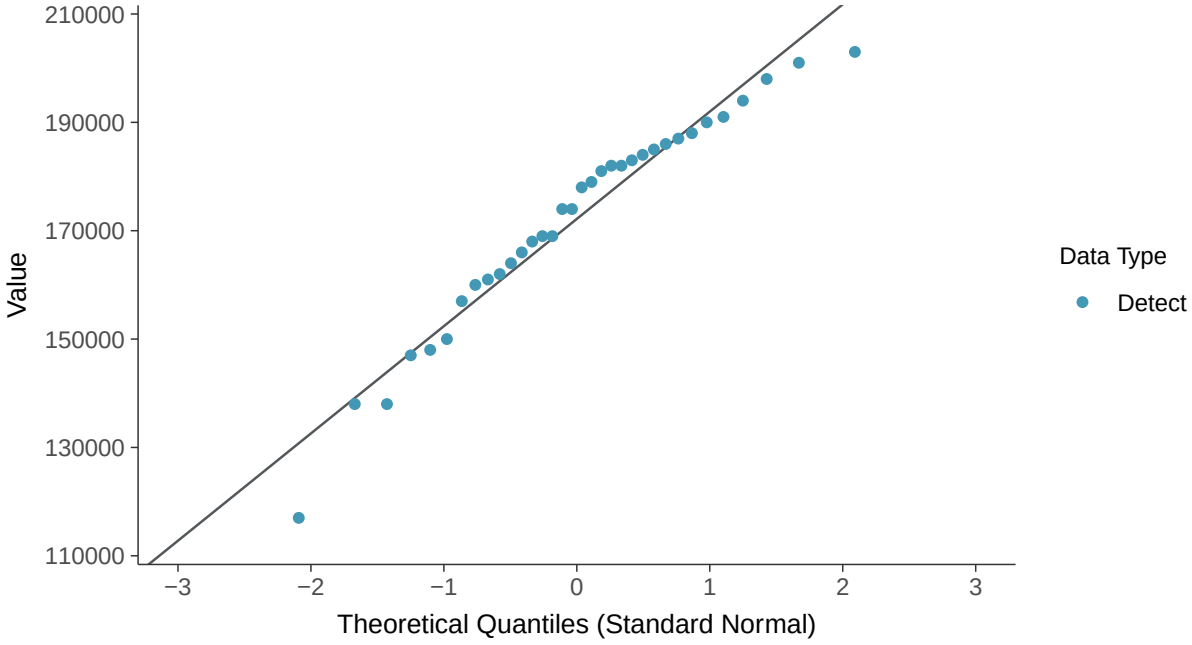
Boxplot by Season

Calcium, MW-3 (ug/L)



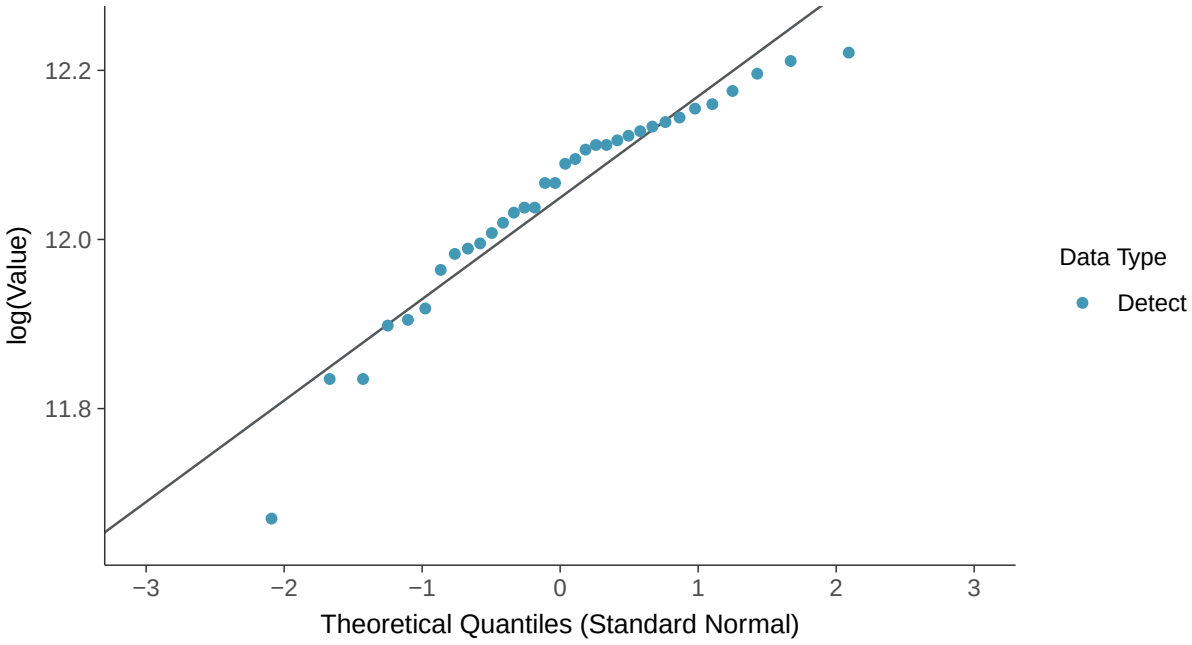
Normal Q-Q plot

Calcium, MW-3 (ug/L)



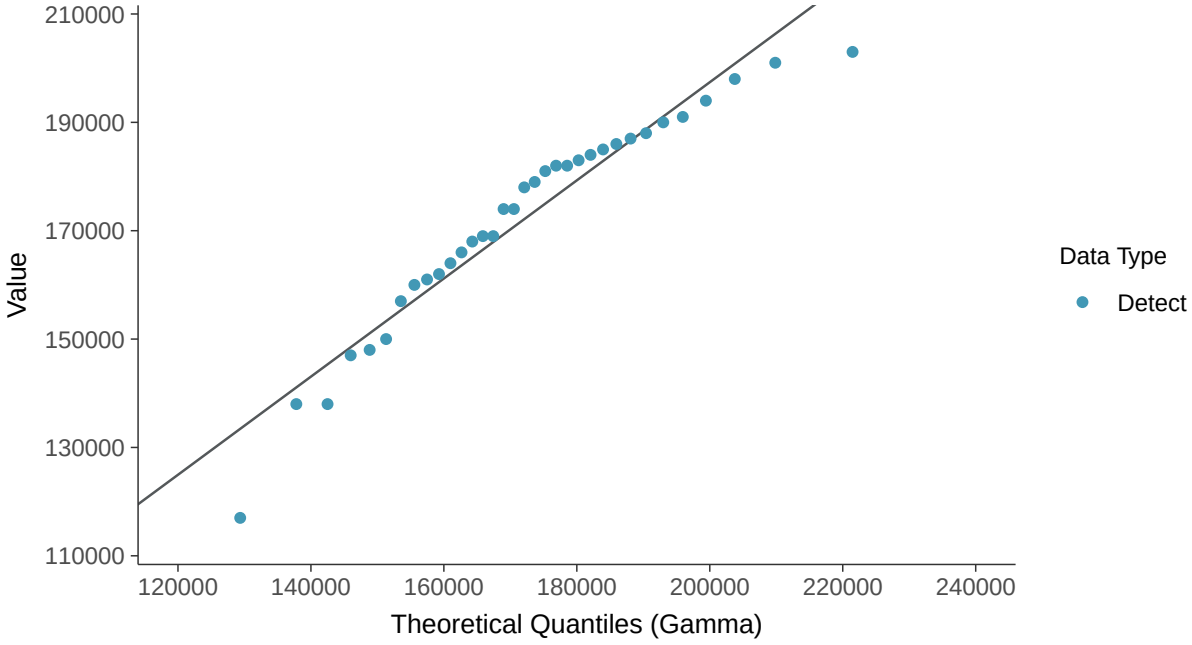
Lognormal Q-Q plot

Calcium, MW-3 (ug/L)



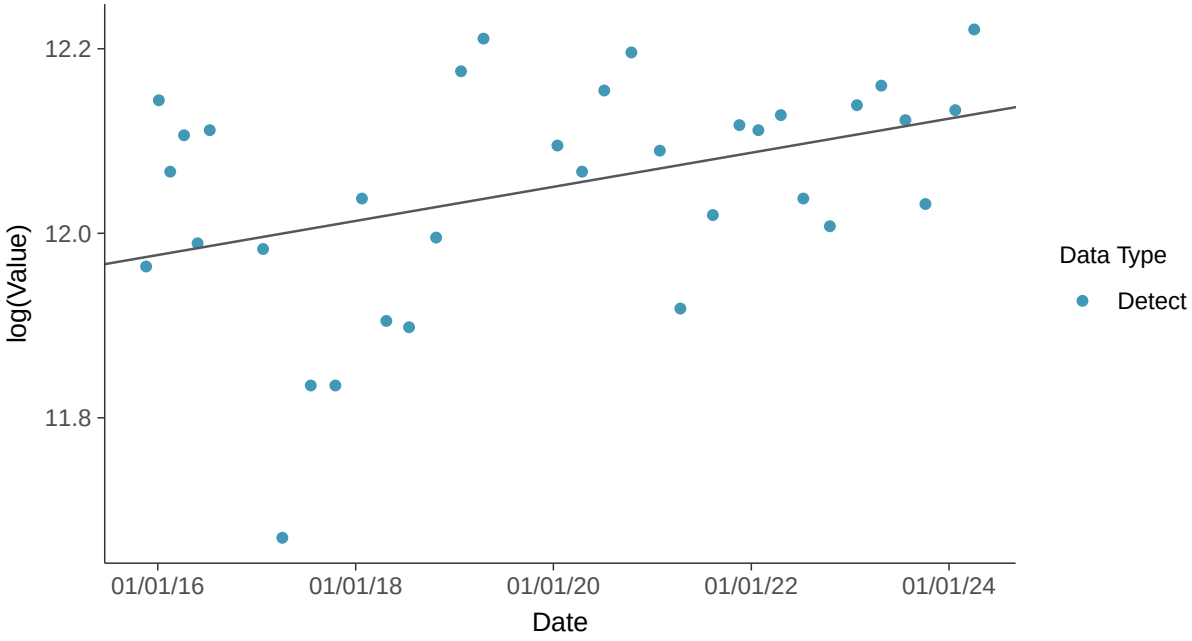
Gamma Q-Q plot

Calcium, MW-3 (ug/L)



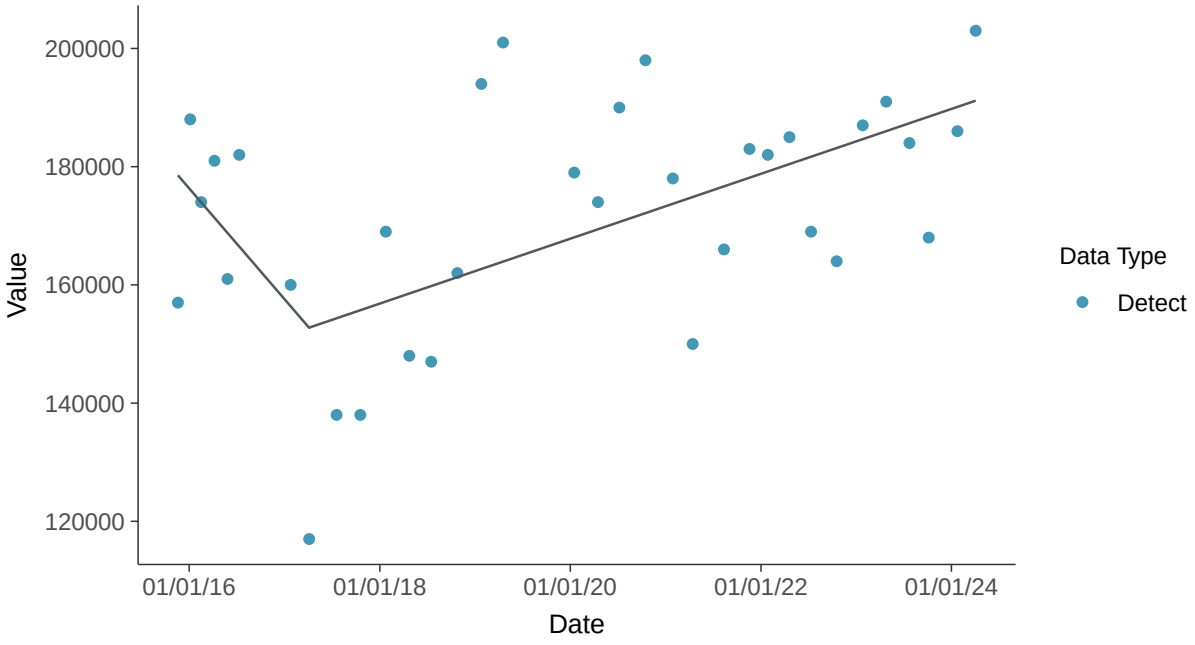
Trend Regression: Lognormal MLE

Calcium, MW-3 (ug/L)



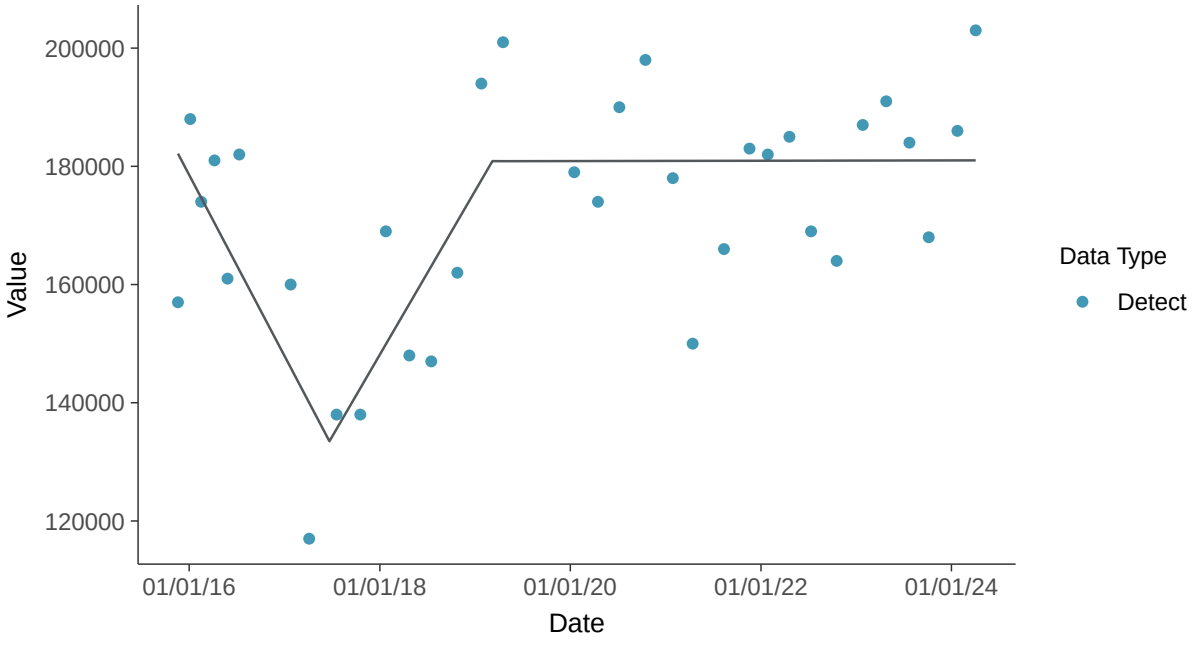
Trend Regression: Piecewise Linear-Linear

Calcium, MW-3 (ug/L)



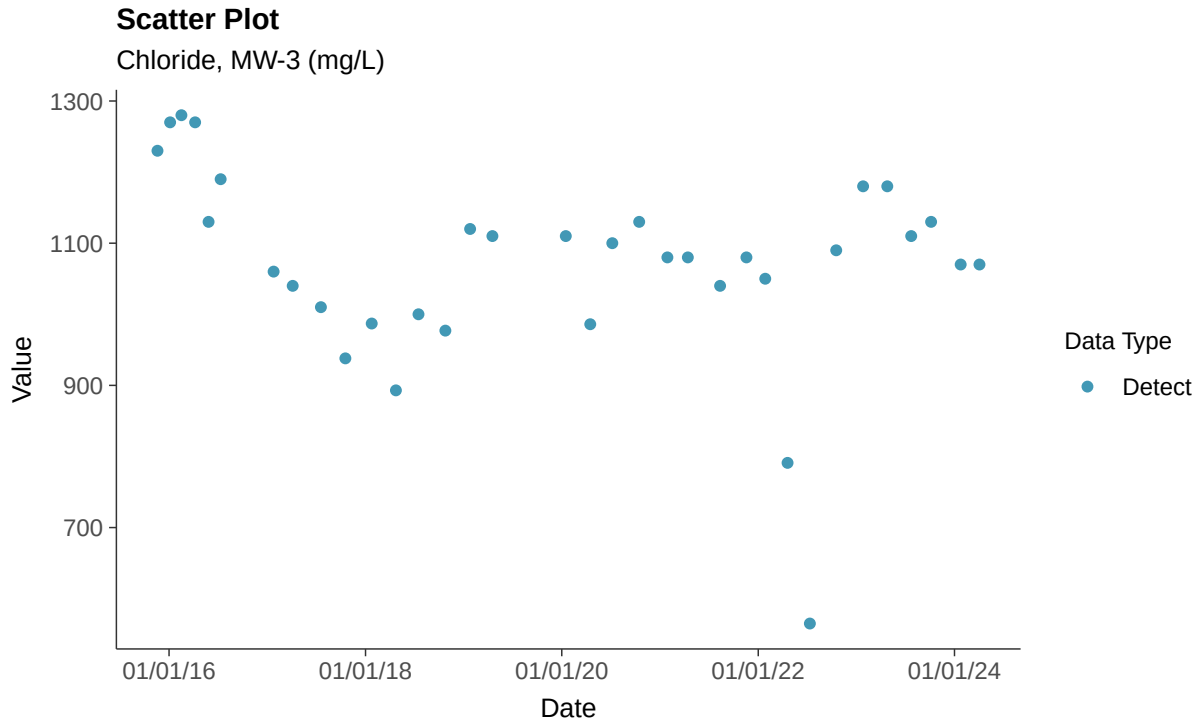
Trend Regression: Piecewise Linear-Linear-Linear

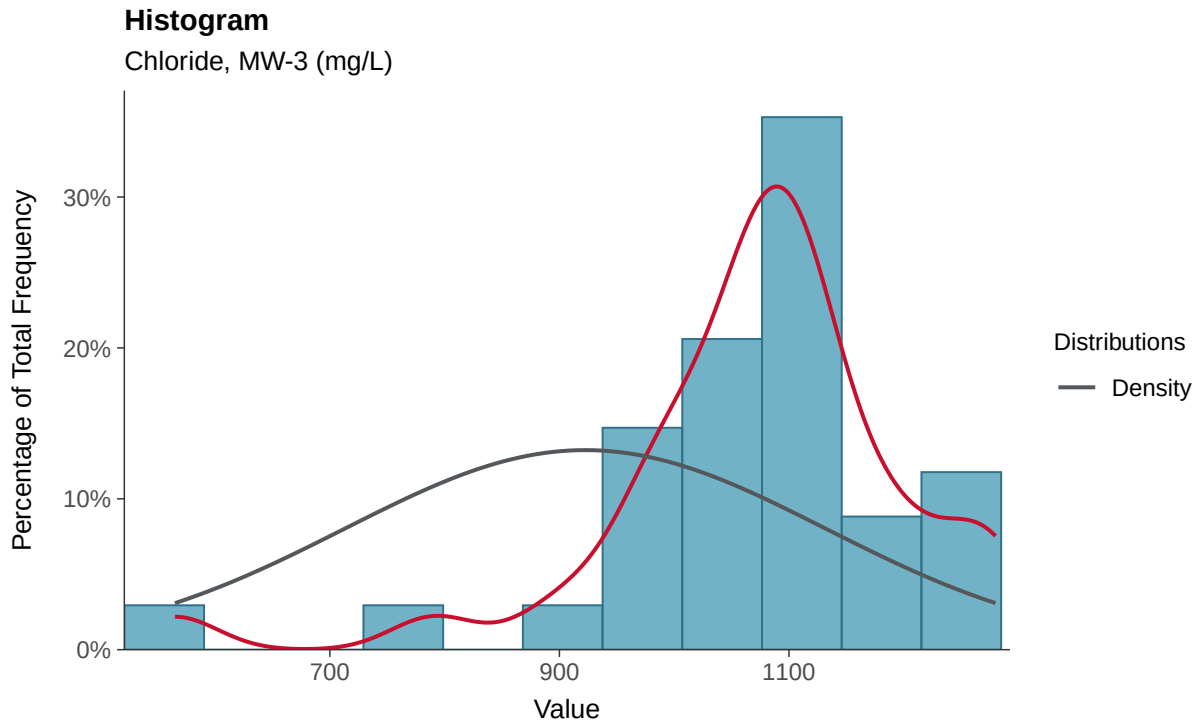
Calcium, MW-3 (ug/L)



App. III: Chloride, MW-3

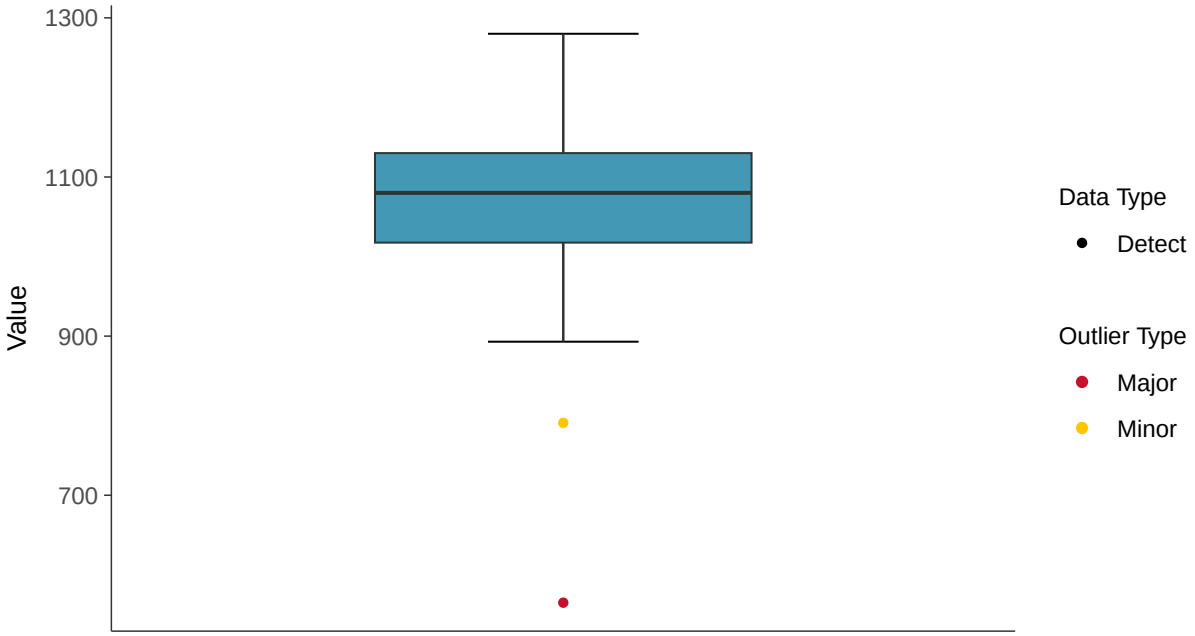
ID: 6_2_108





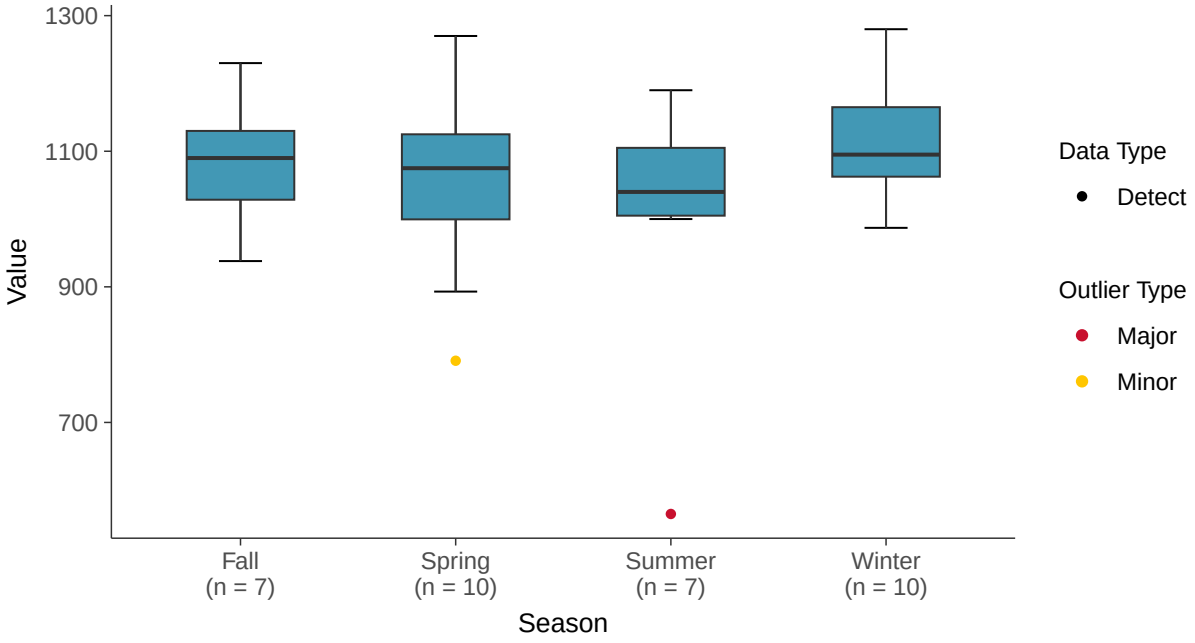
Boxplot

Chloride, MW-3 (mg/L)



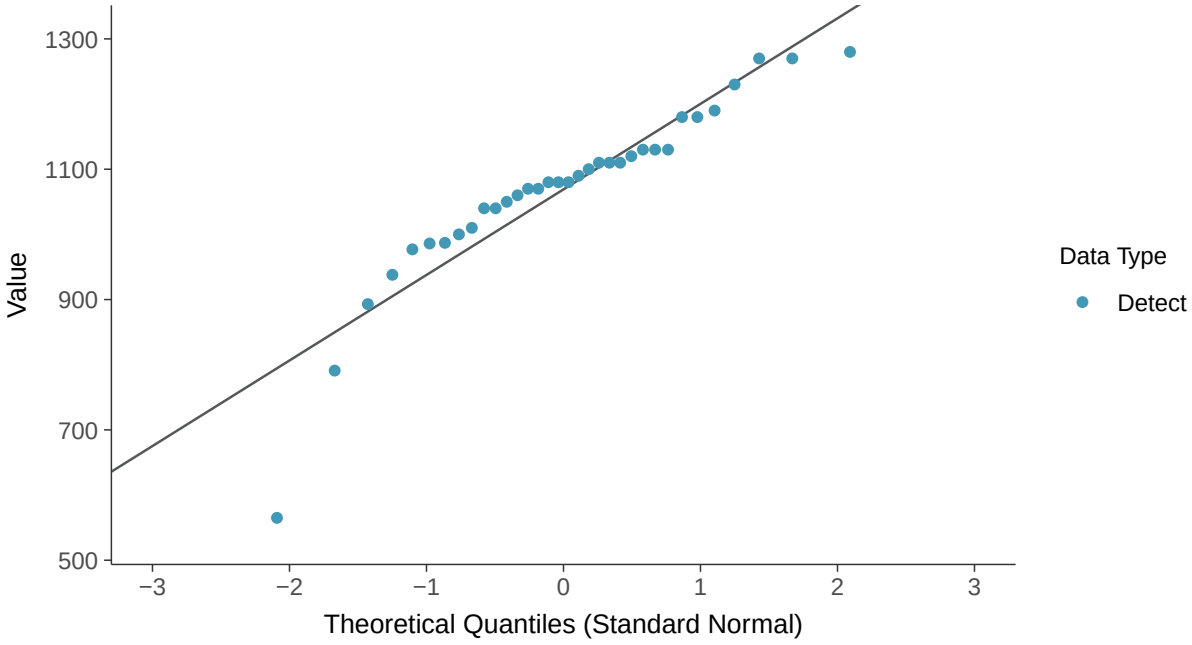
Boxplot by Season

Chloride, MW-3 (mg/L)



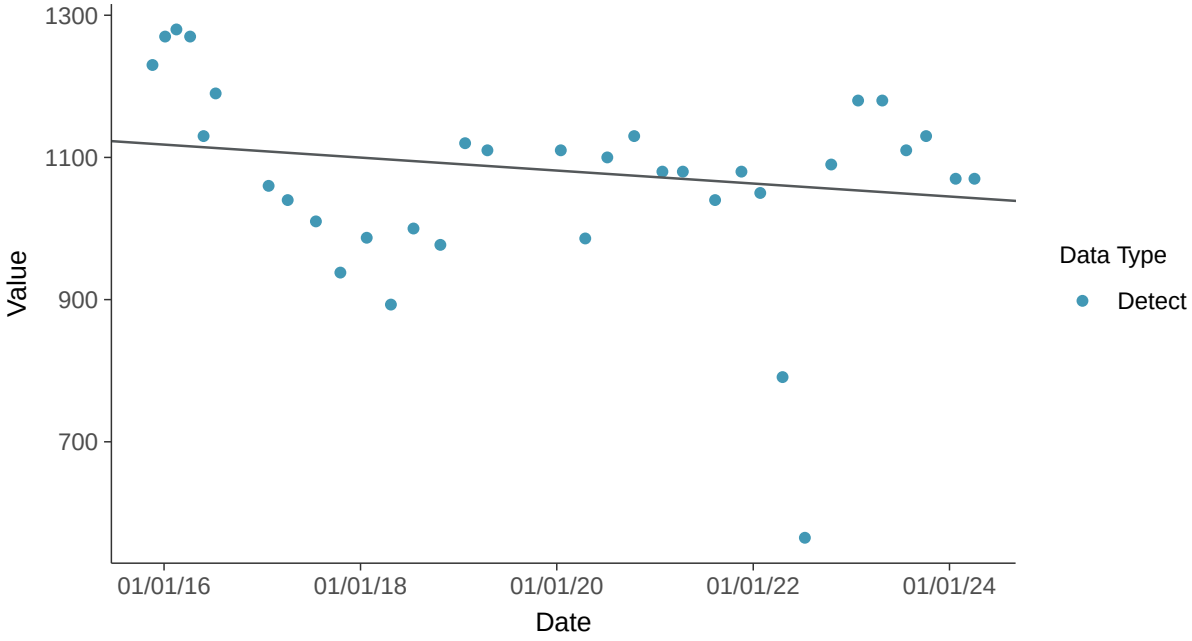
Normal Q-Q plot

Chloride, MW-3 (mg/L)



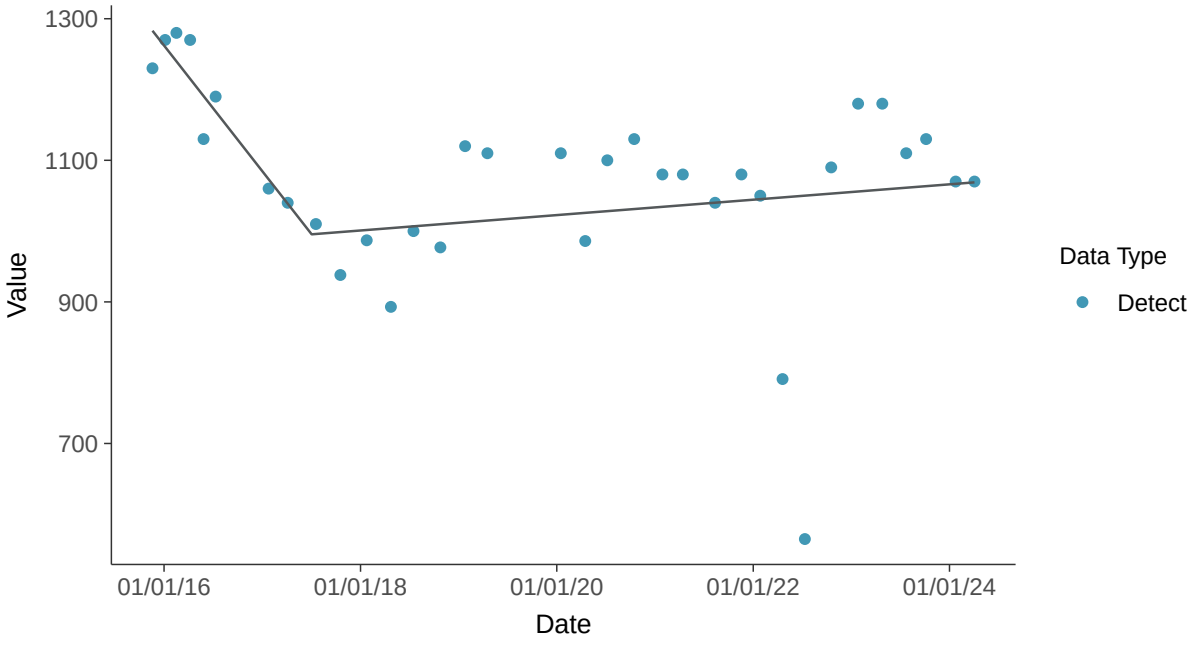
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-3 (mg/L)



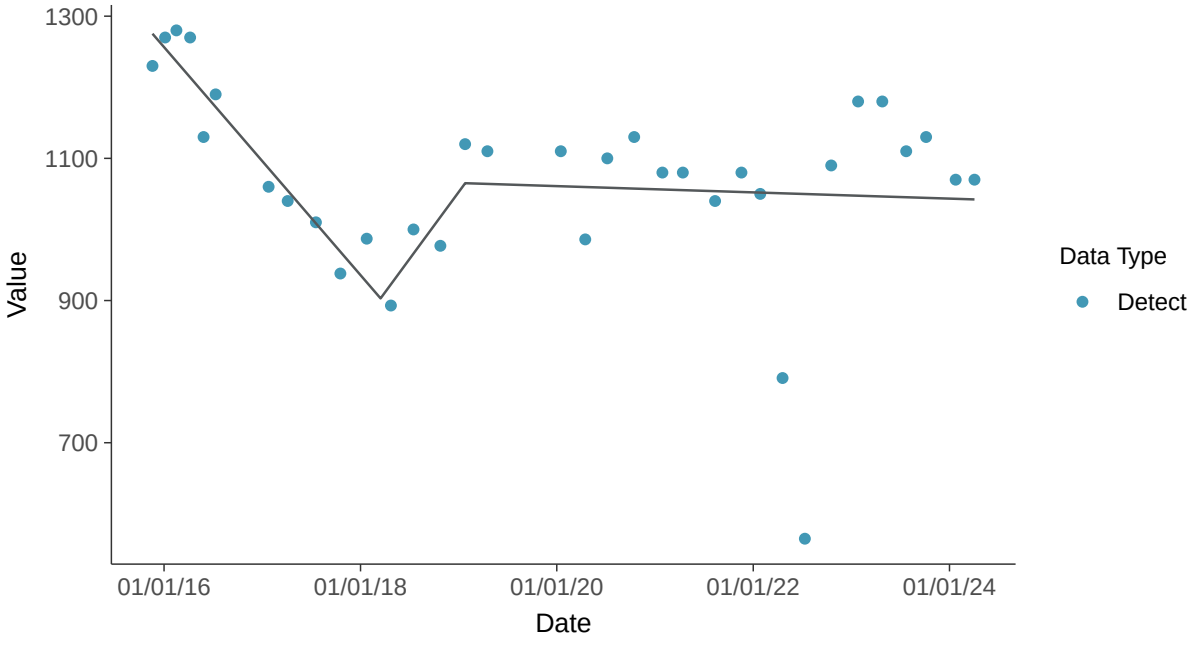
Trend Regression: Piecewise Linear-Linear

Chloride, MW-3 (mg/L)



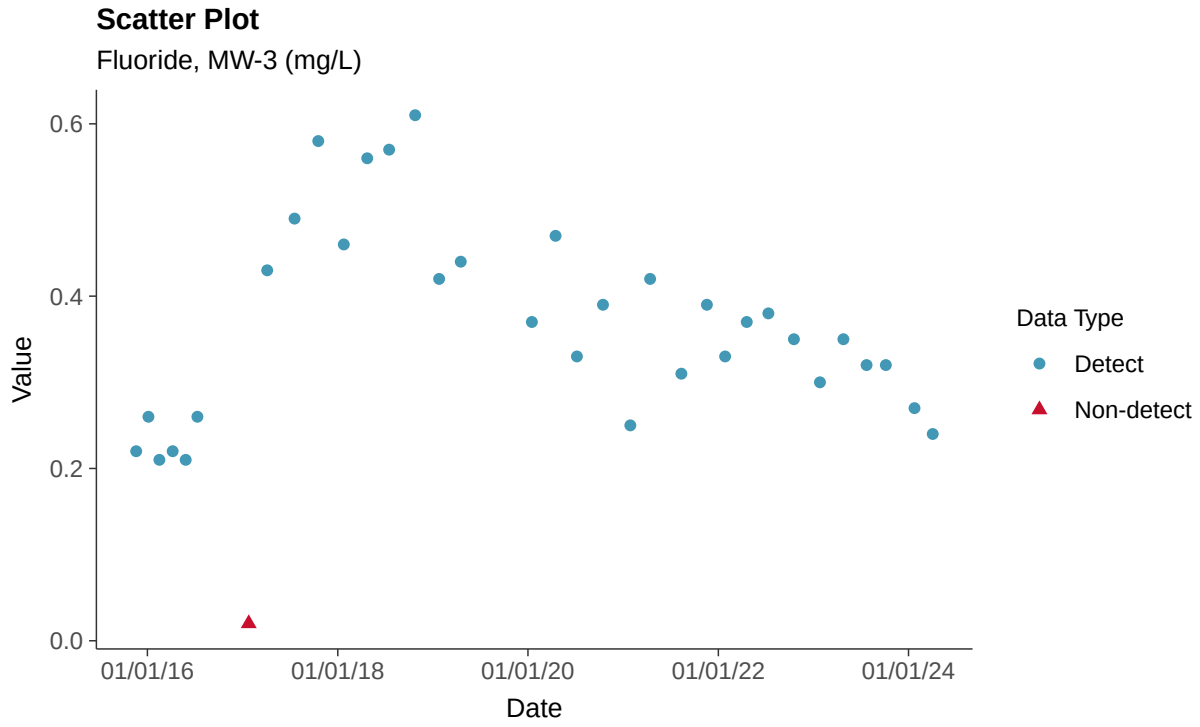
Trend Regression: Piecewise Linear-Linear-Linear

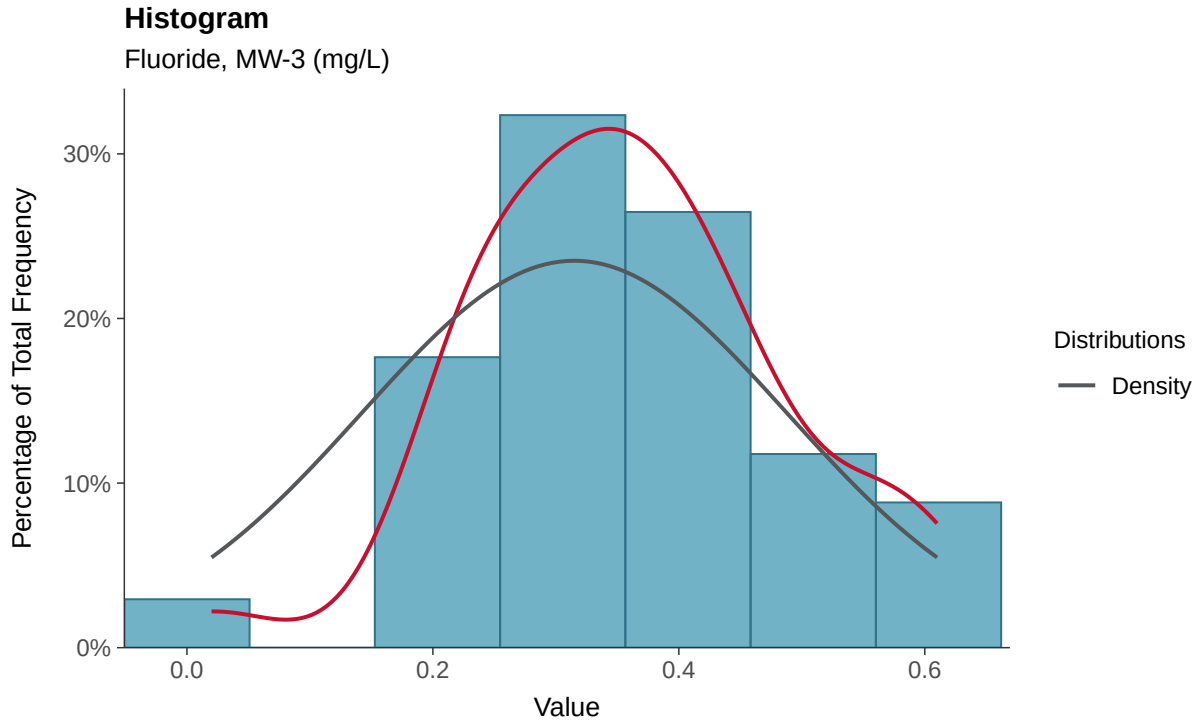
Chloride, MW-3 (mg/L)



App. III: Fluoride, MW-3

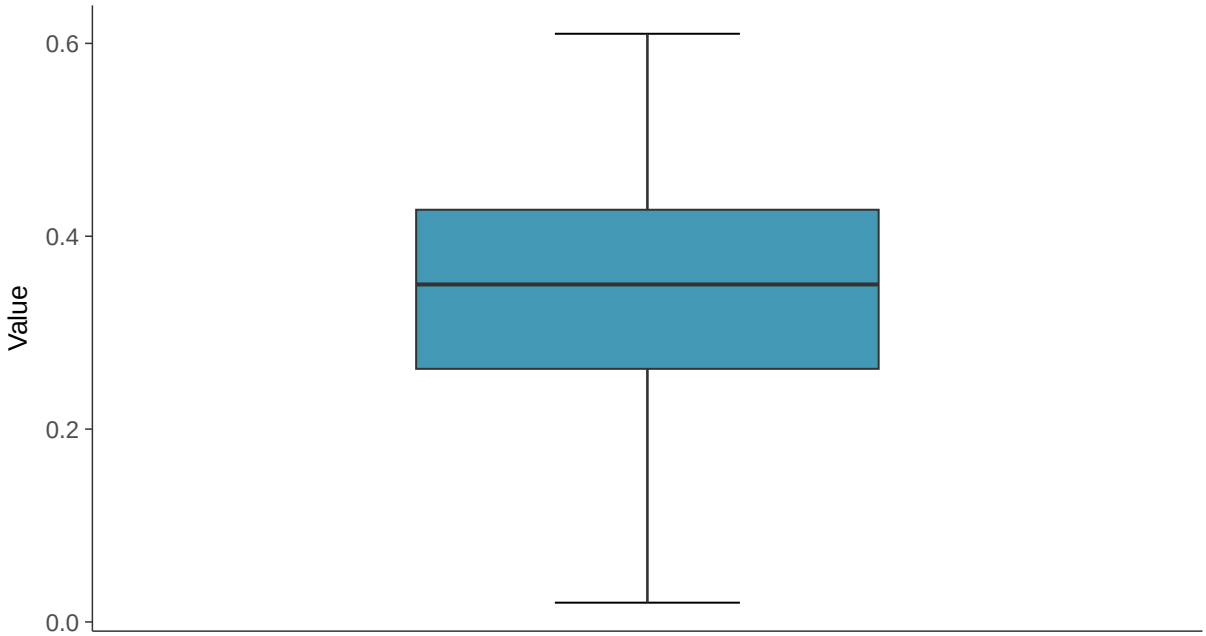
ID: 6_2_112





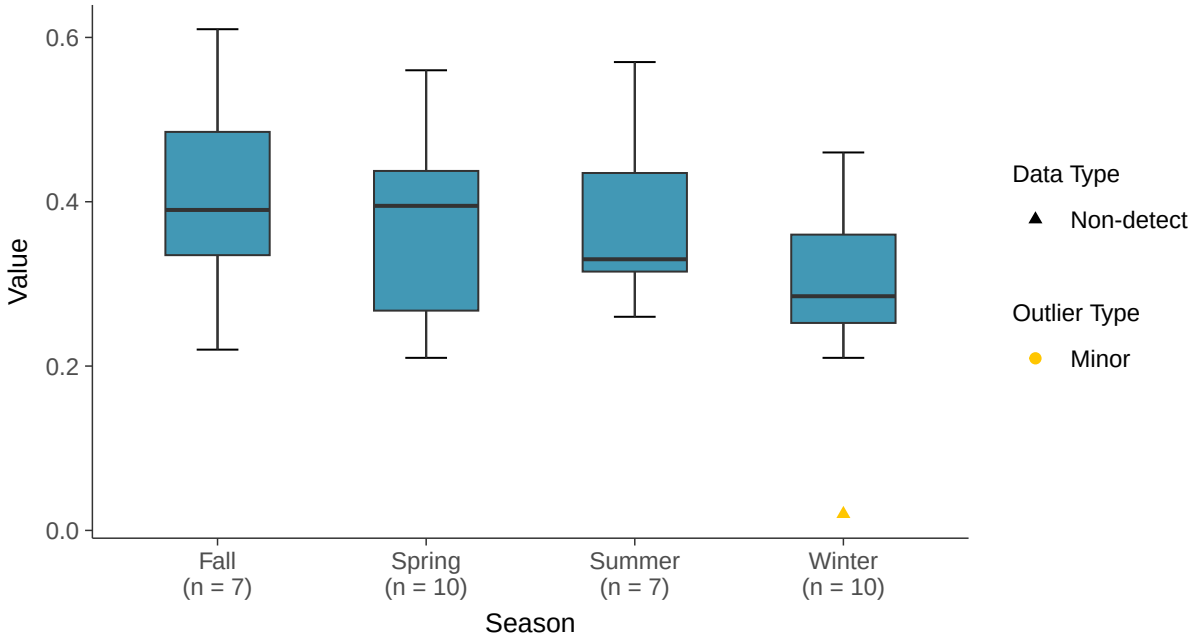
Boxplot

Fluoride, MW-3 (mg/L)



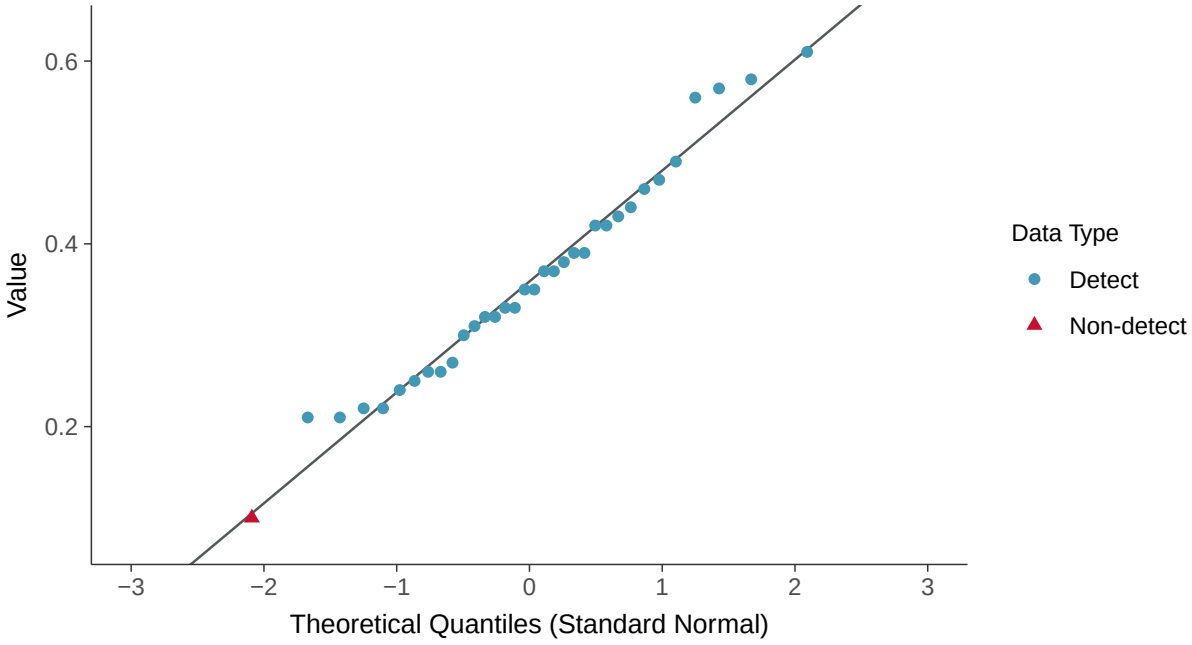
Boxplot by Season

Fluoride, MW-3 (mg/L)



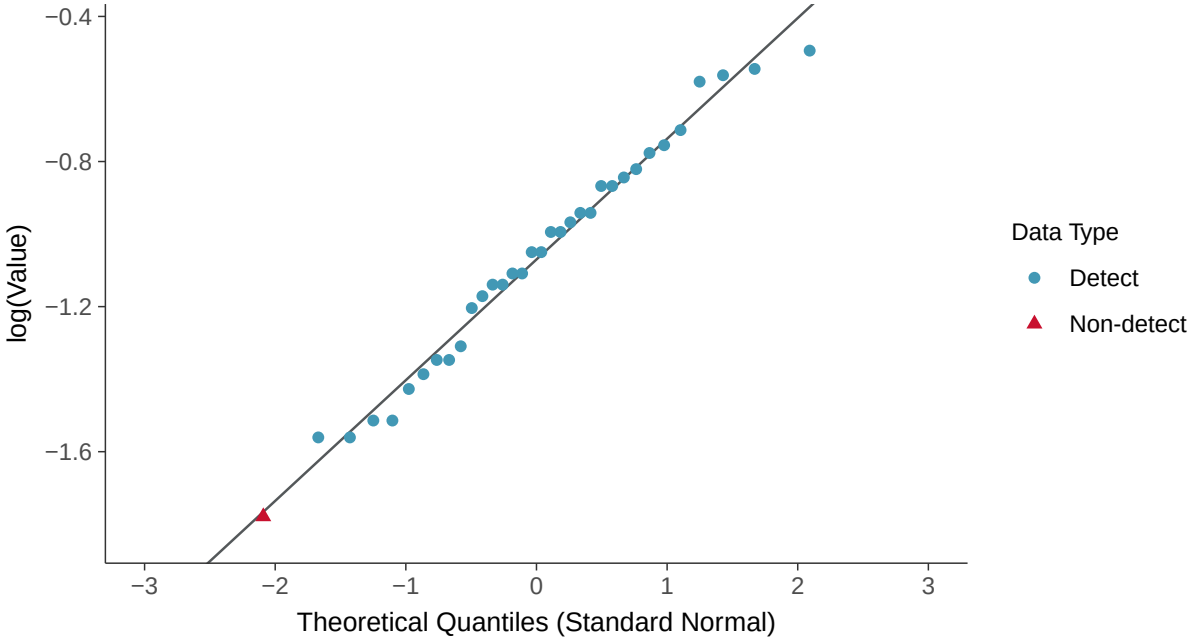
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



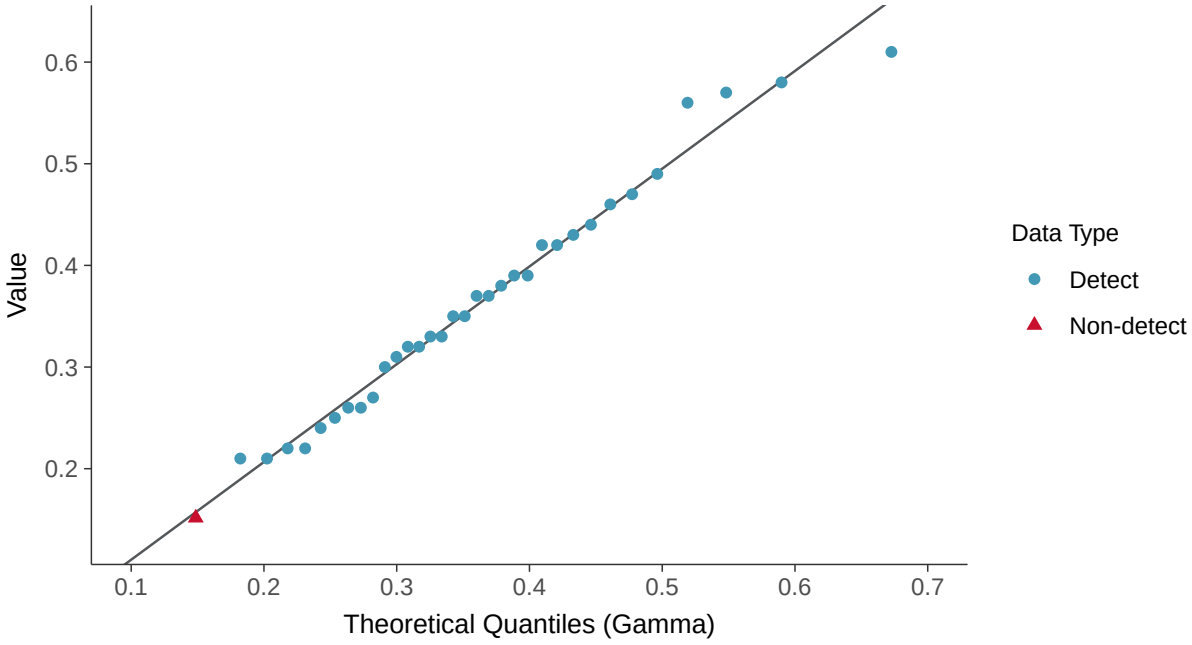
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



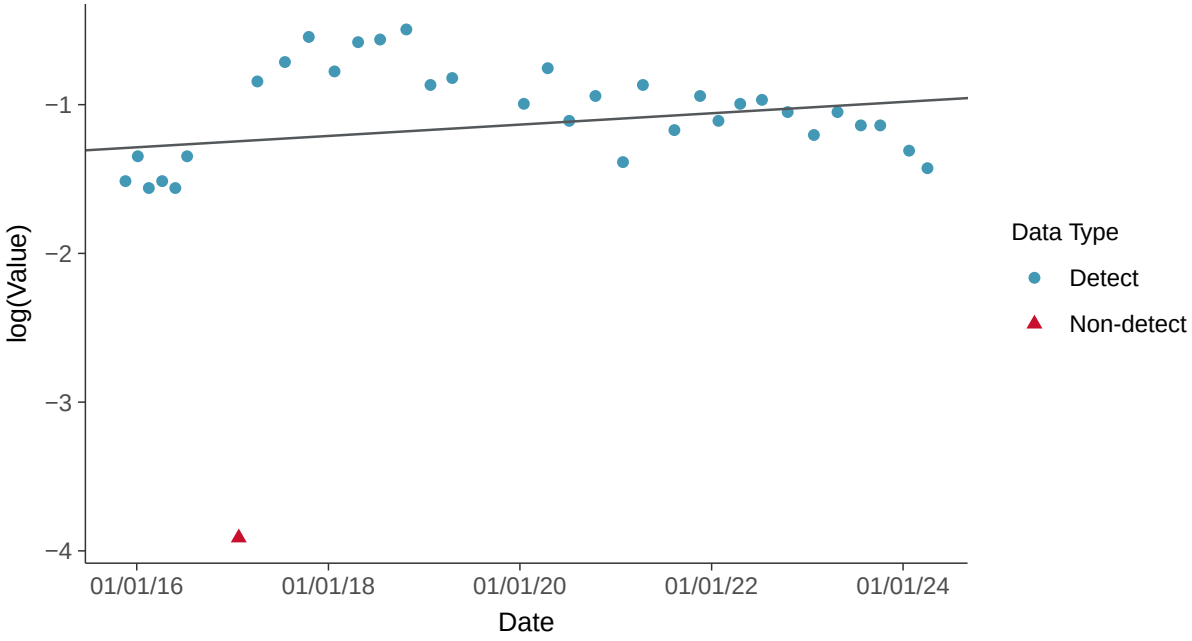
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



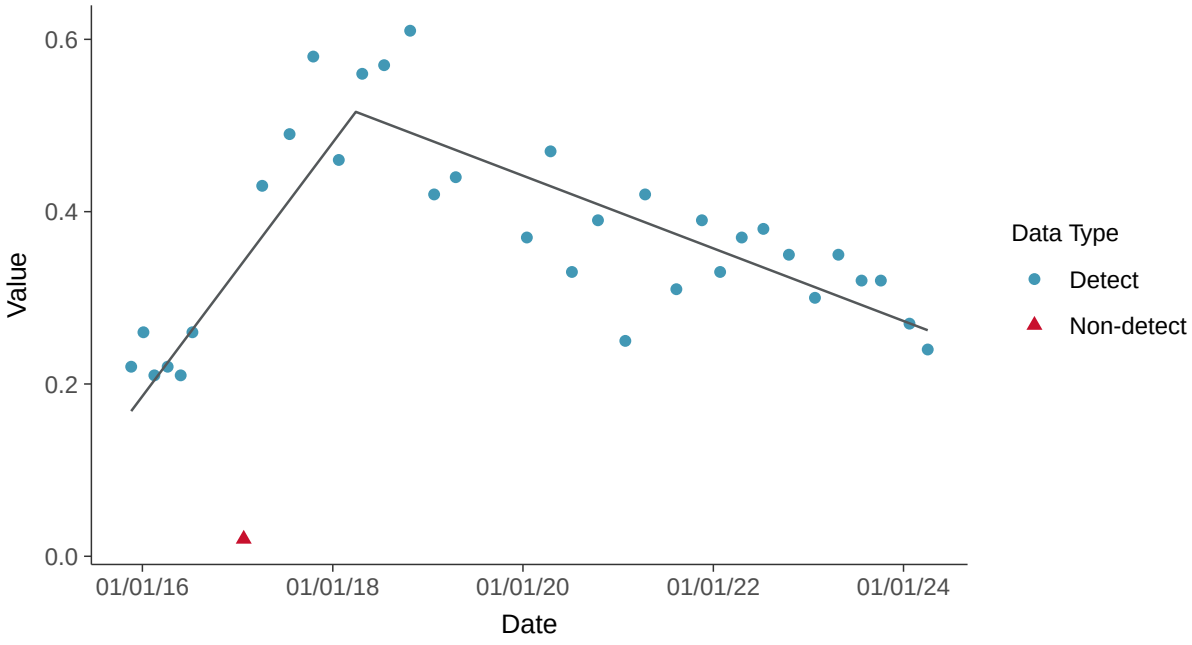
Trend Regression: Lognormal MLE

Fluoride, MW-3 (mg/L)



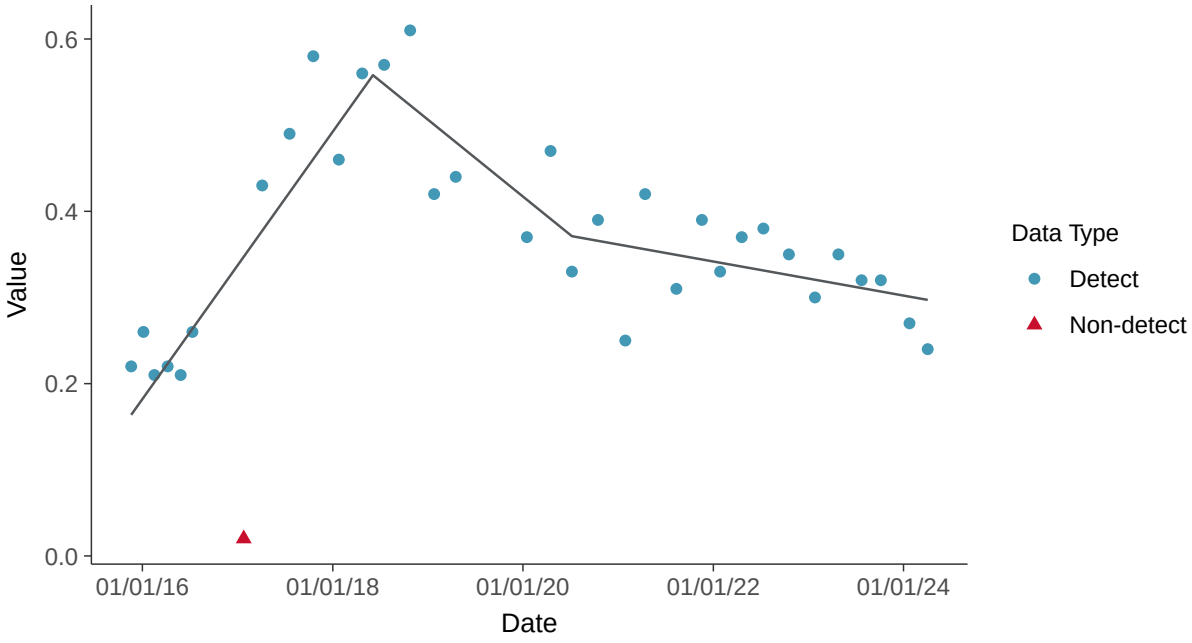
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-3 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-3 (mg/L)

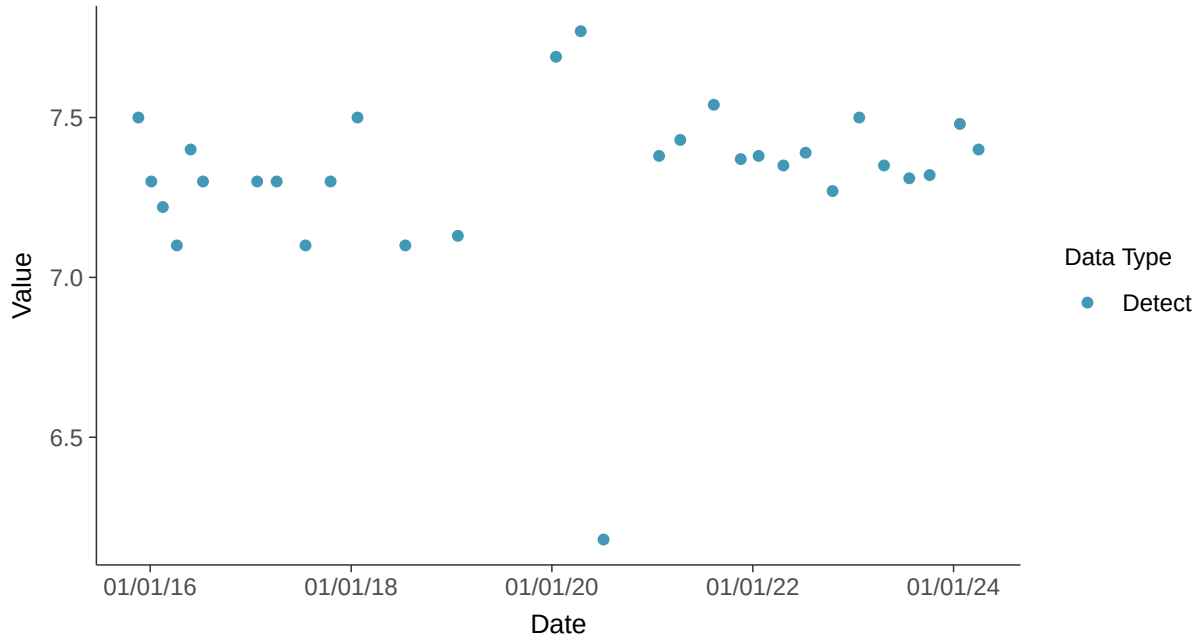


App. III: pH (Field), MW-3

ID: 6_2_118

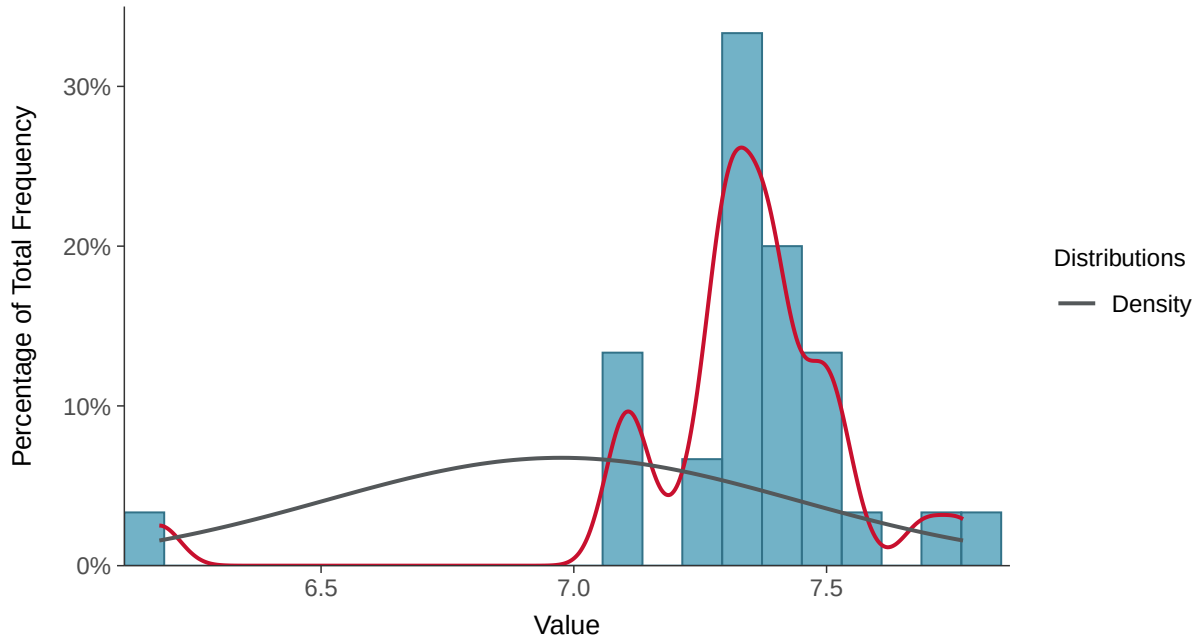
Scatter Plot

pH (Field), MW-3 (S.U.)



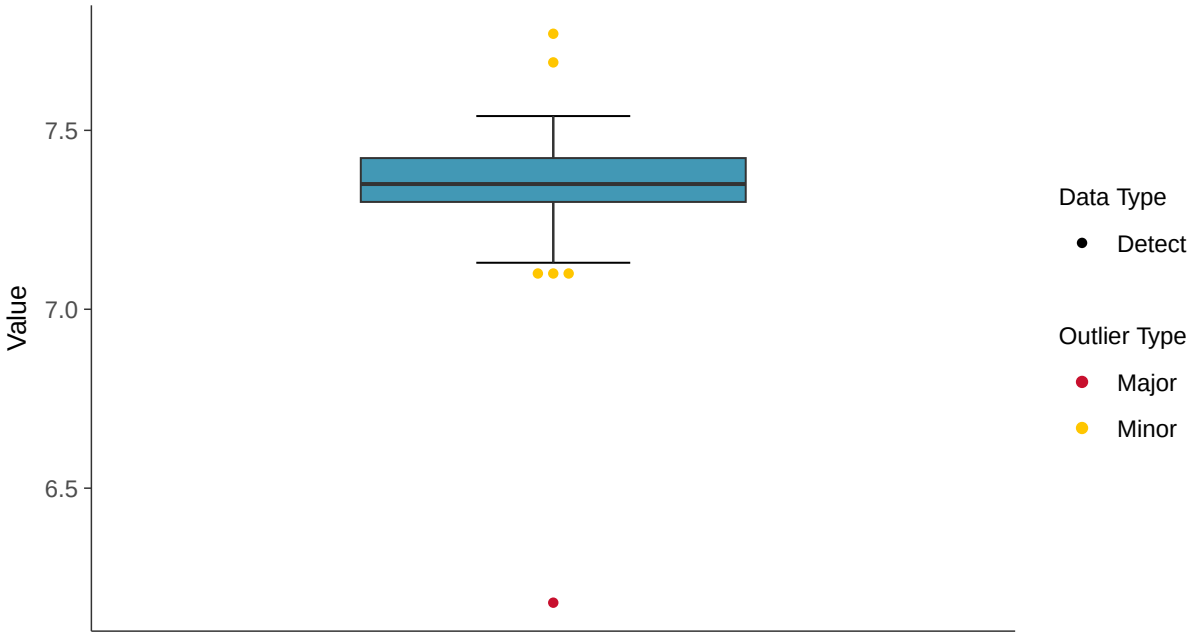
Histogram

pH (Field), MW-3 (S.U.)



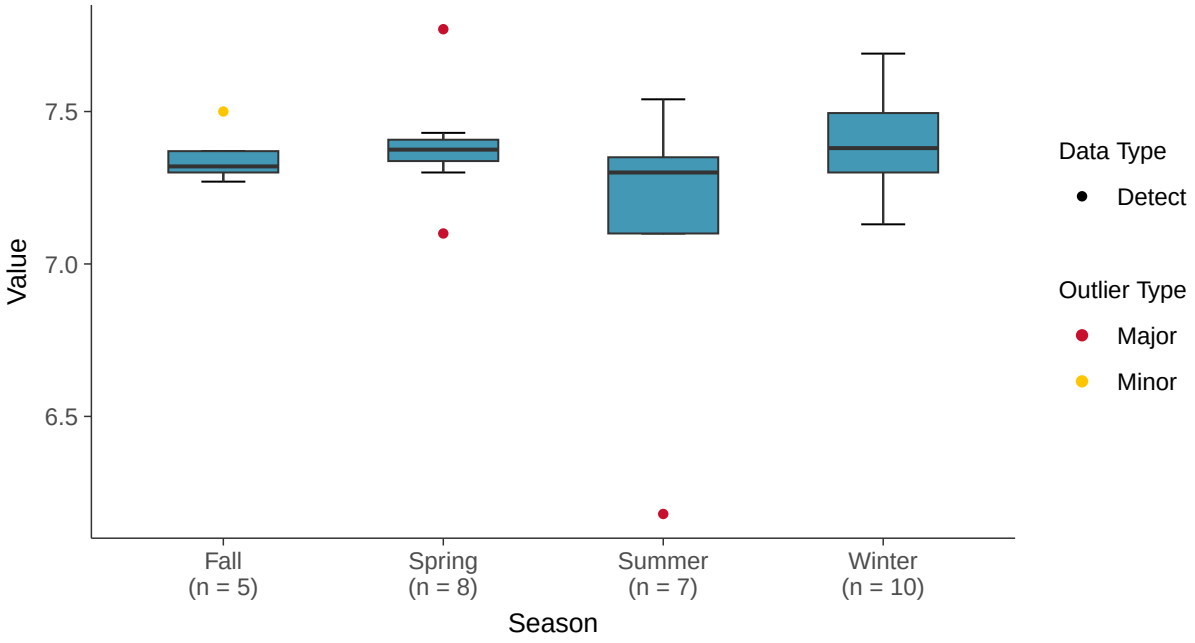
Boxplot

pH (Field), MW-3 (S.U.)



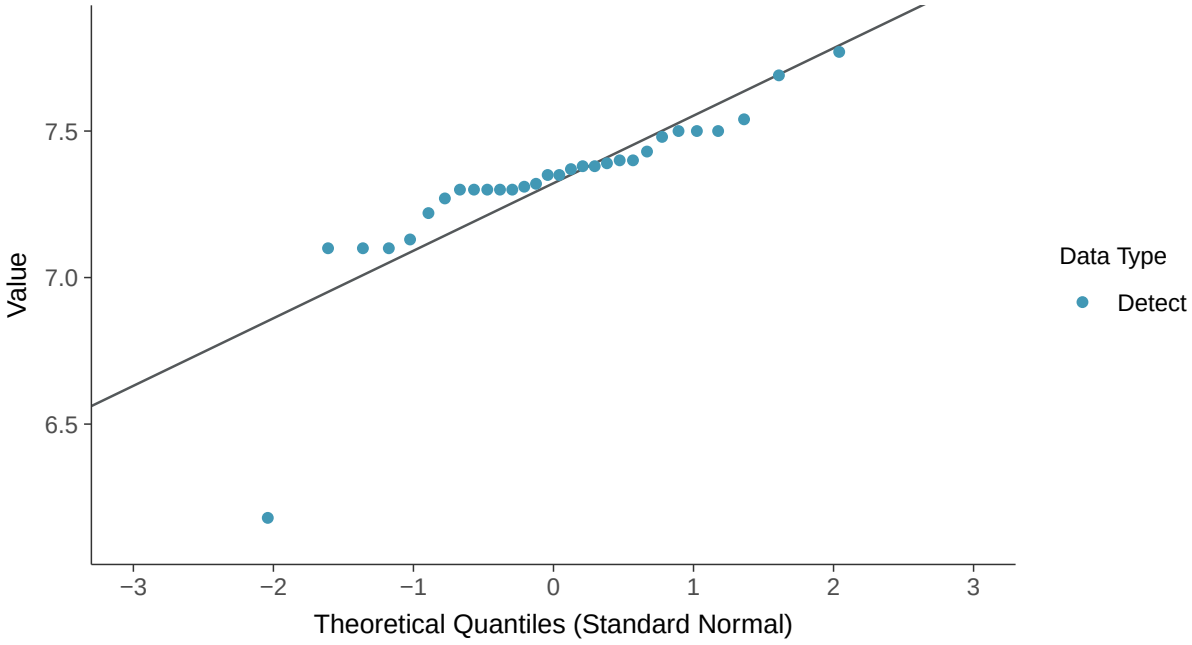
Boxplot by Season

pH (Field), MW-3 (S.U.)



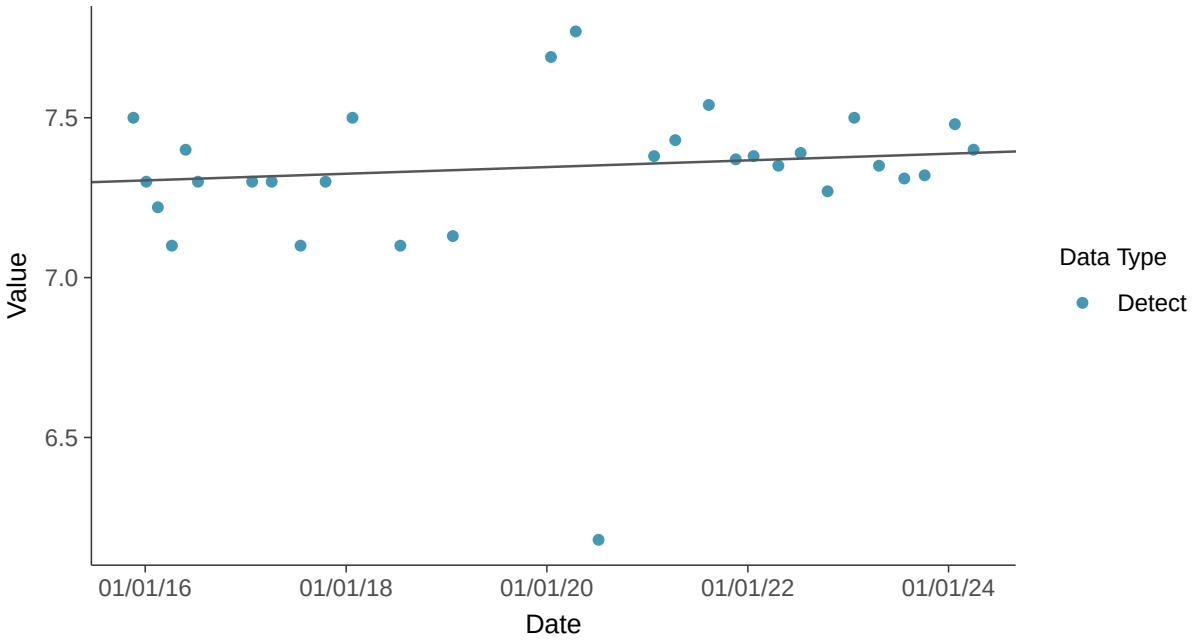
Normal Q-Q plot

pH (Field), MW-3 (S.U.)



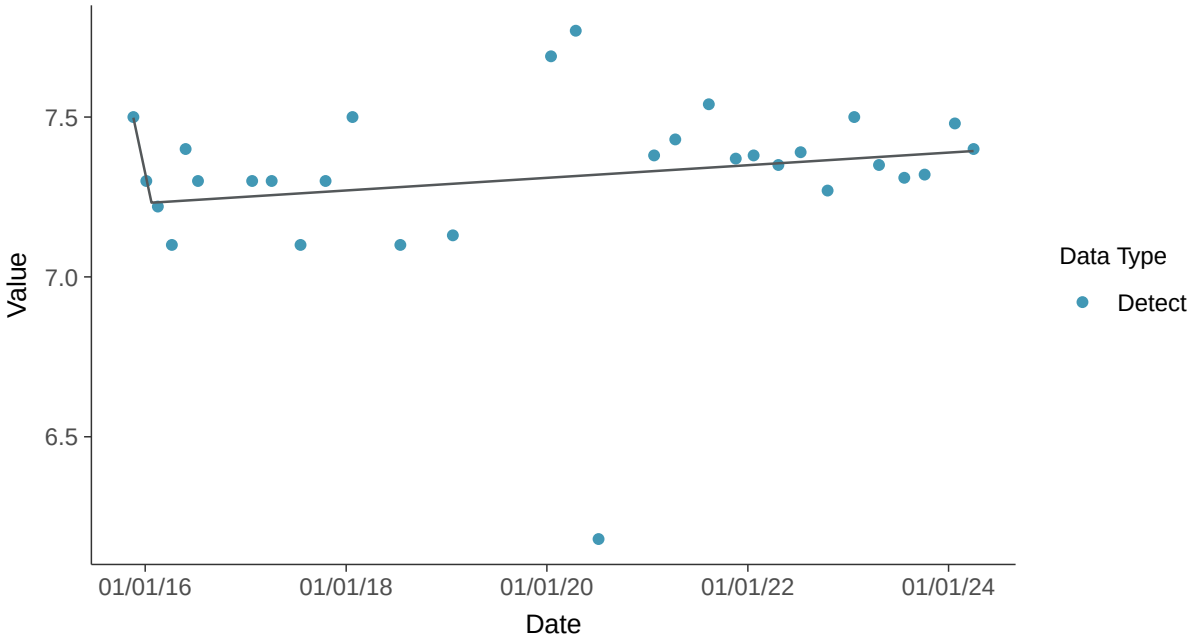
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-3 (S.U.)



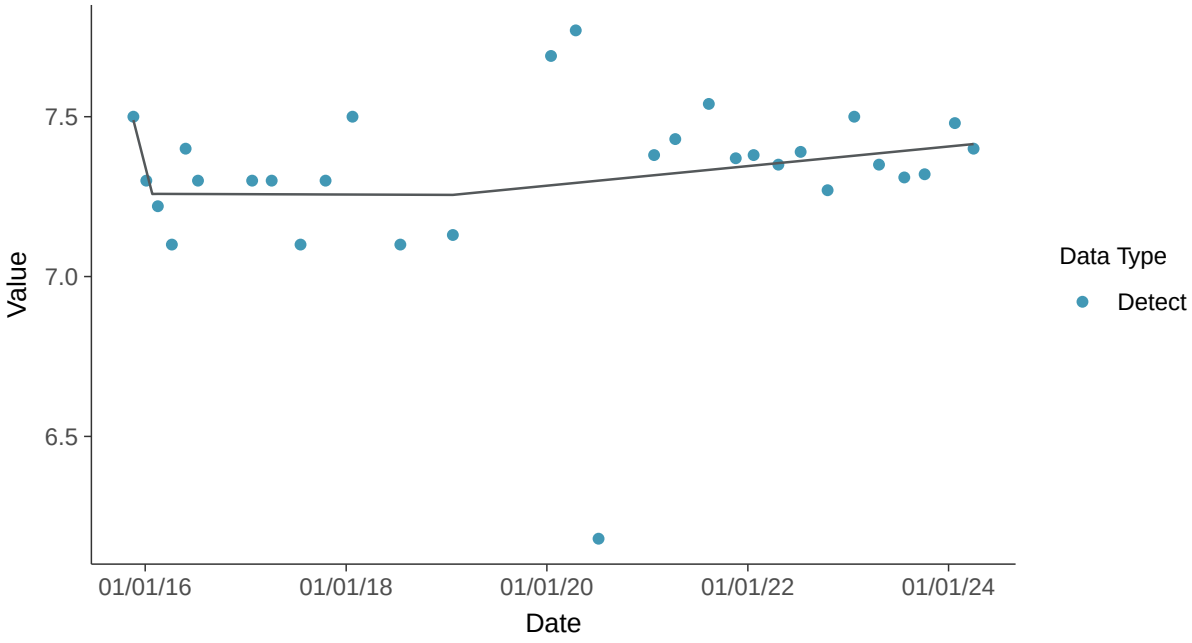
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-3 (S.U.)



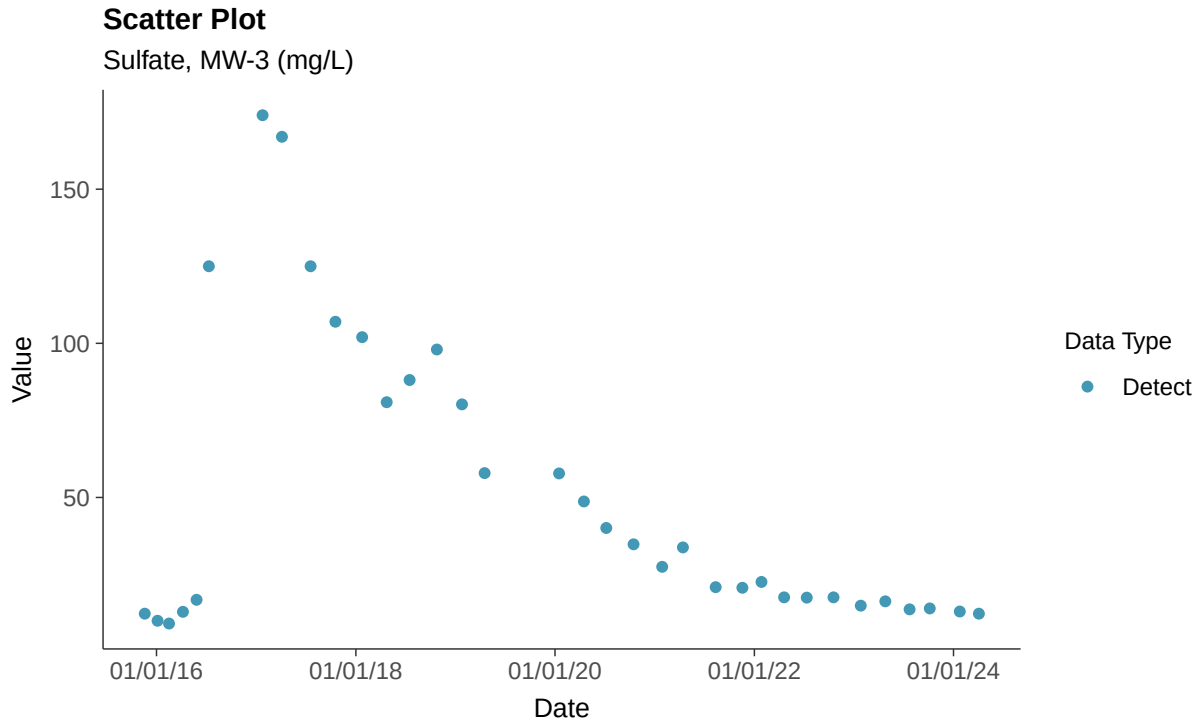
Trend Regression: Piecewise Linear-Linear-Linear

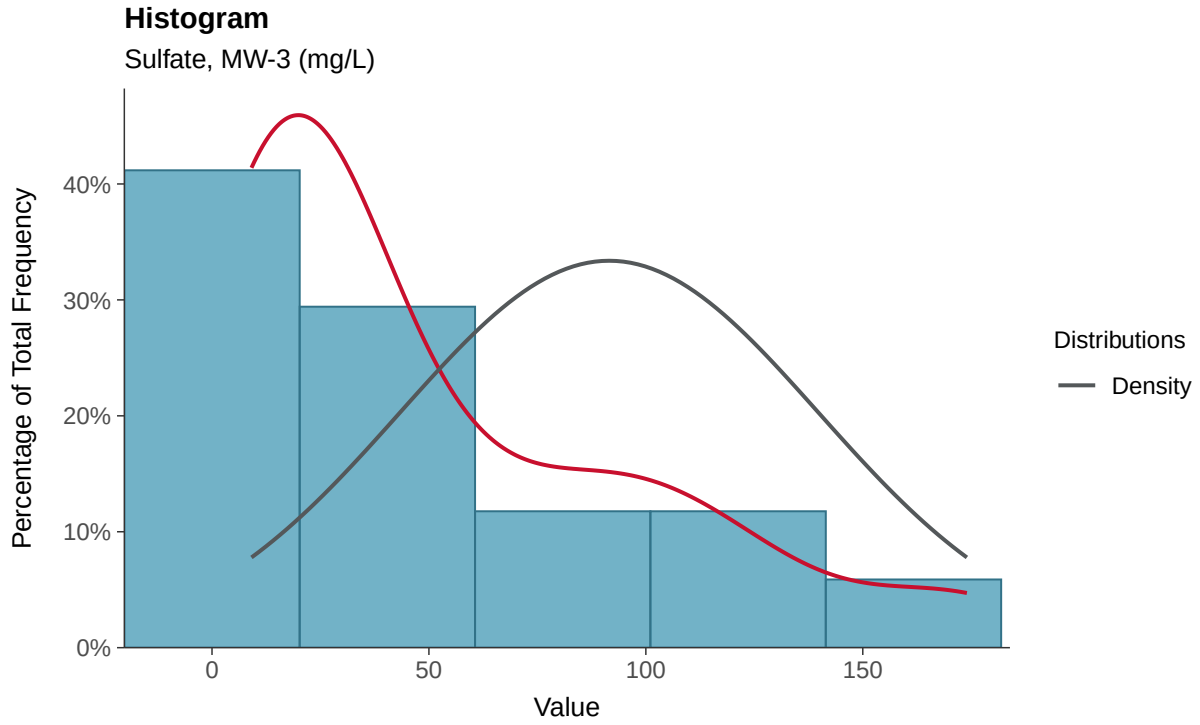
pH (Field), MW-3 (S.U.)



App. III: Sulfate, MW-3

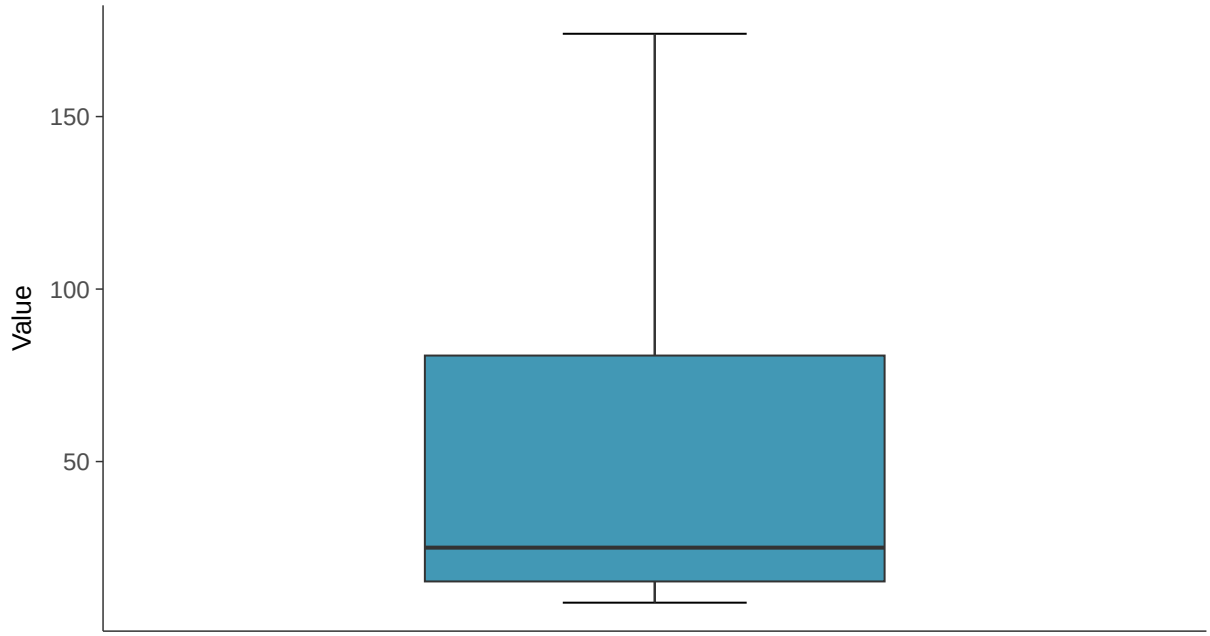
ID: 6_2_123





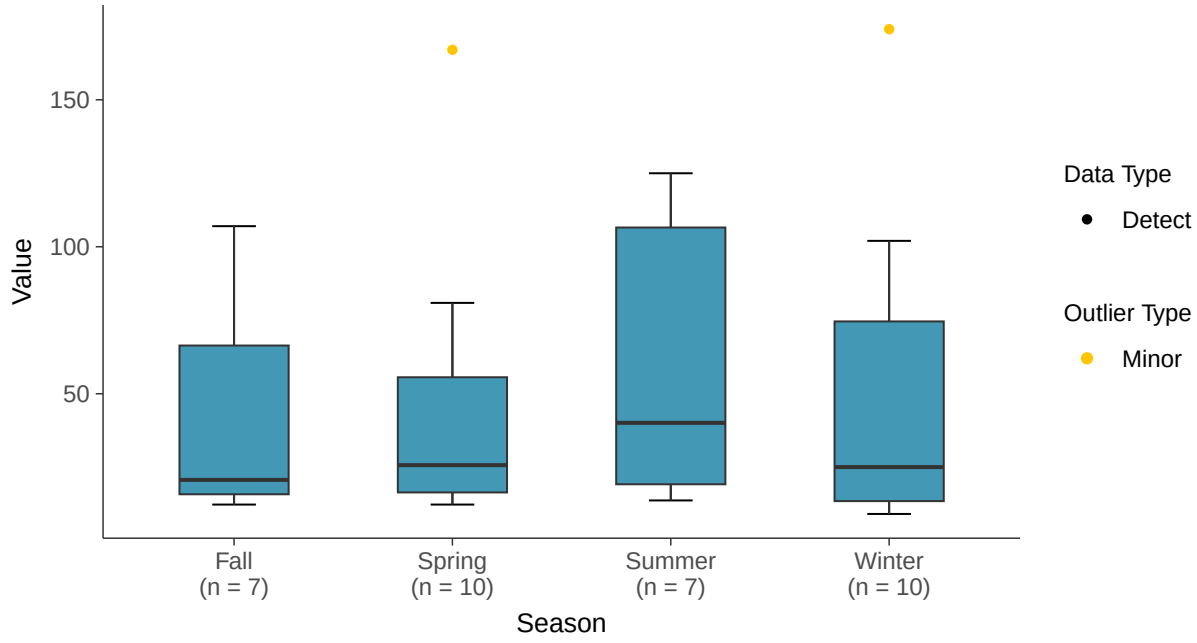
Boxplot

Sulfate, MW-3 (mg/L)



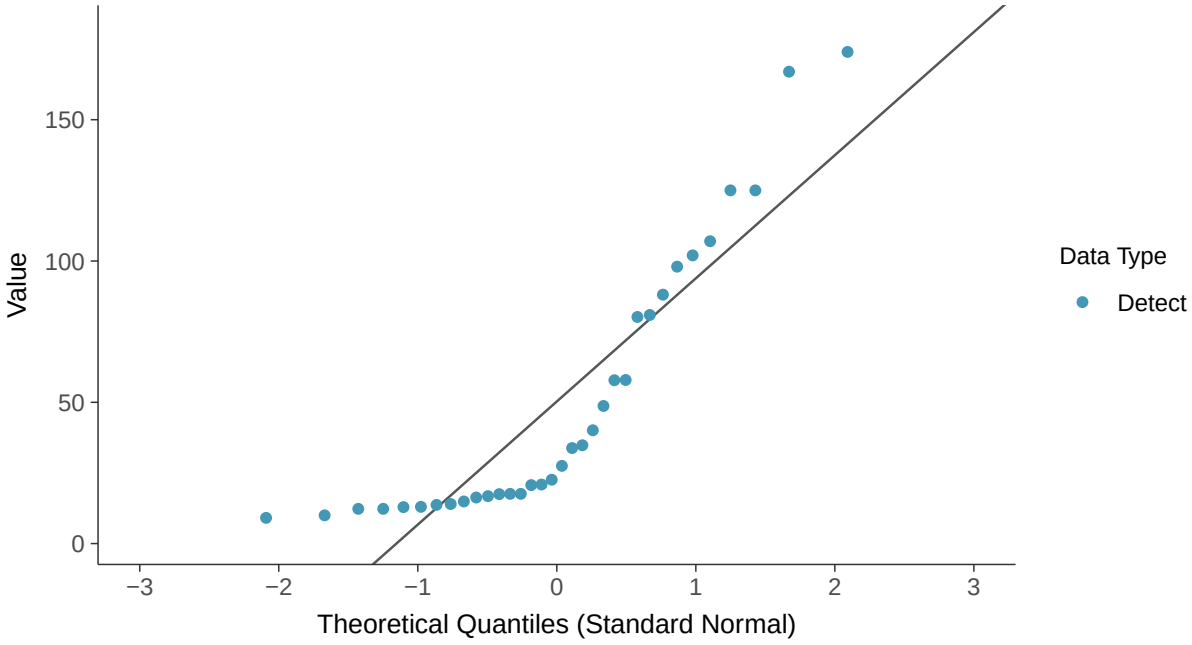
Boxplot by Season

Sulfate, MW-3 (mg/L)



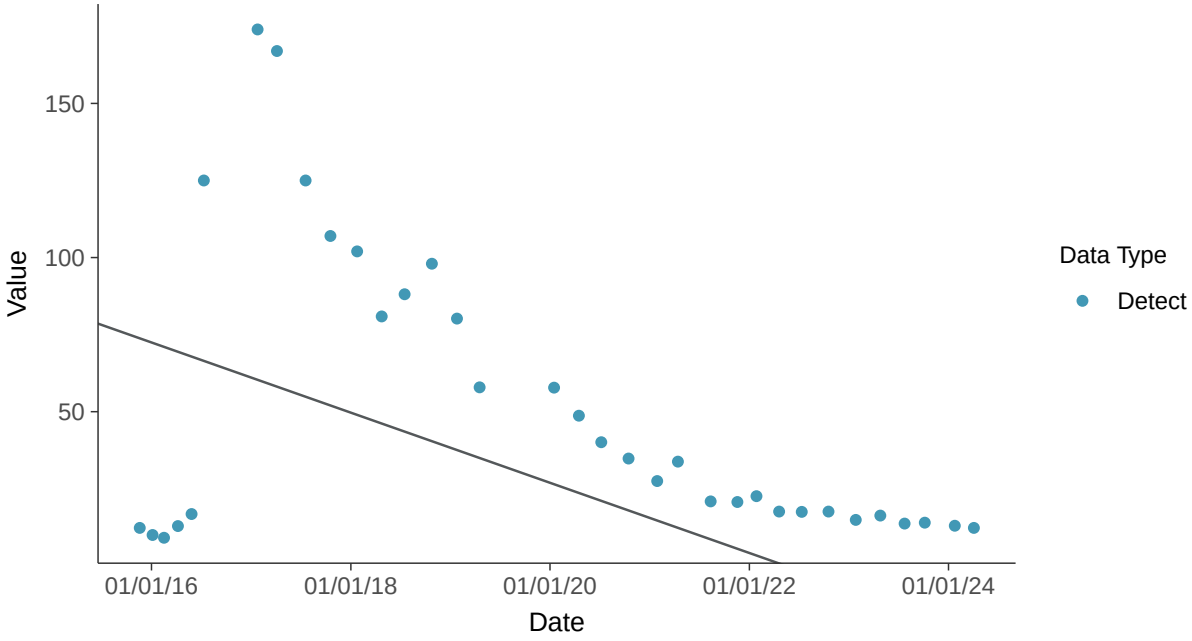
Normal Q-Q plot

Sulfate, MW-3 (mg/L)



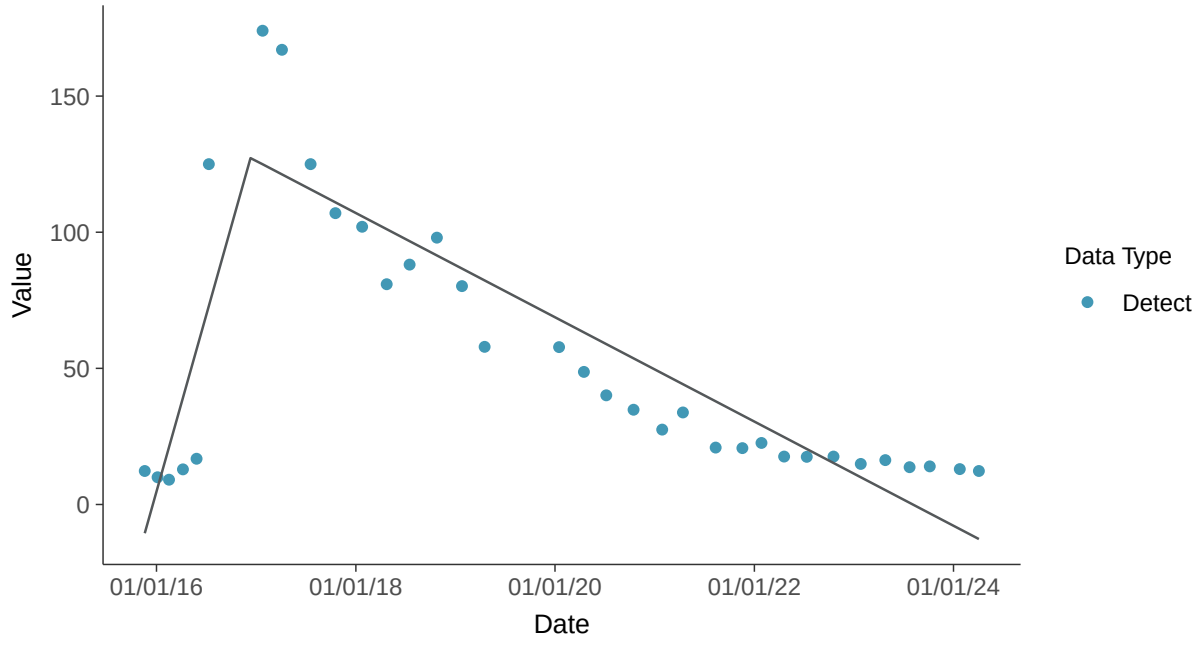
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-3 (mg/L)



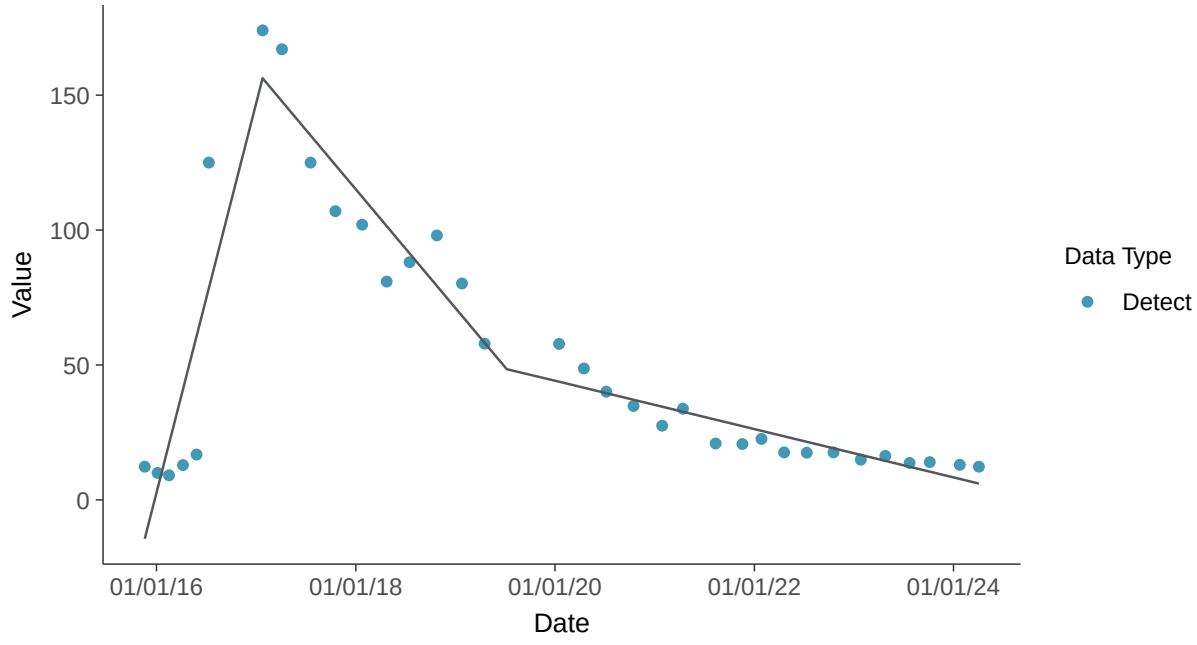
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-3 (mg/L)



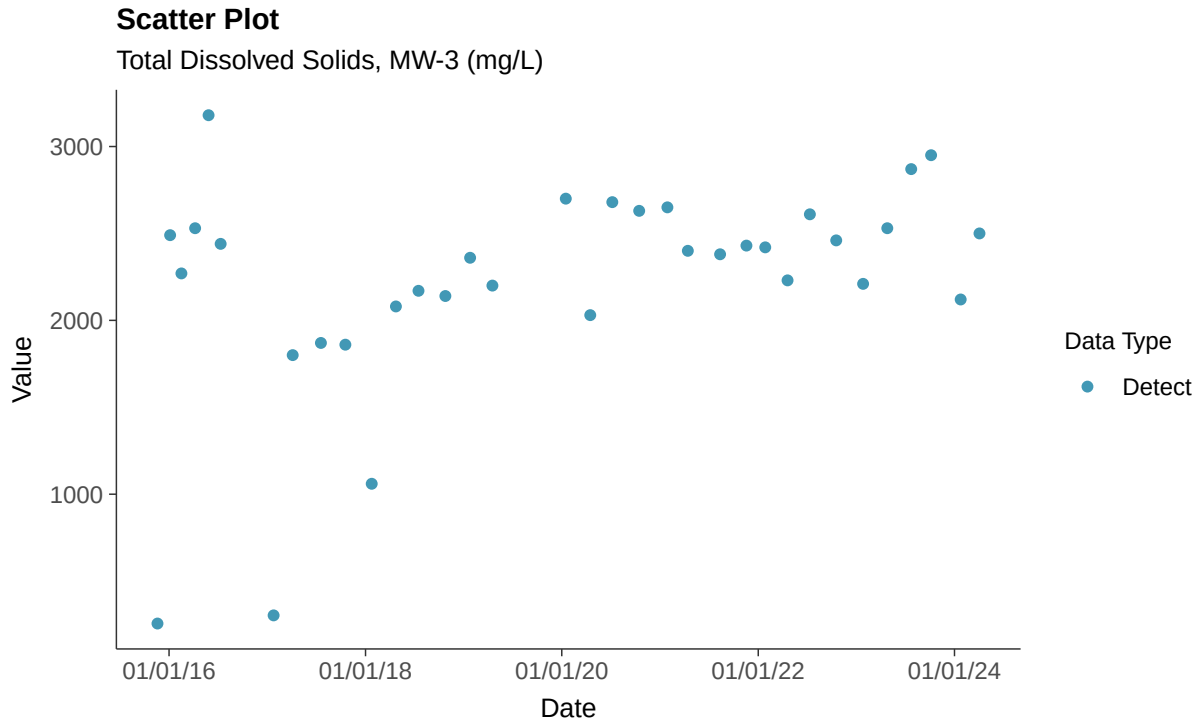
Trend Regression: Piecewise Linear-Linear-Linear

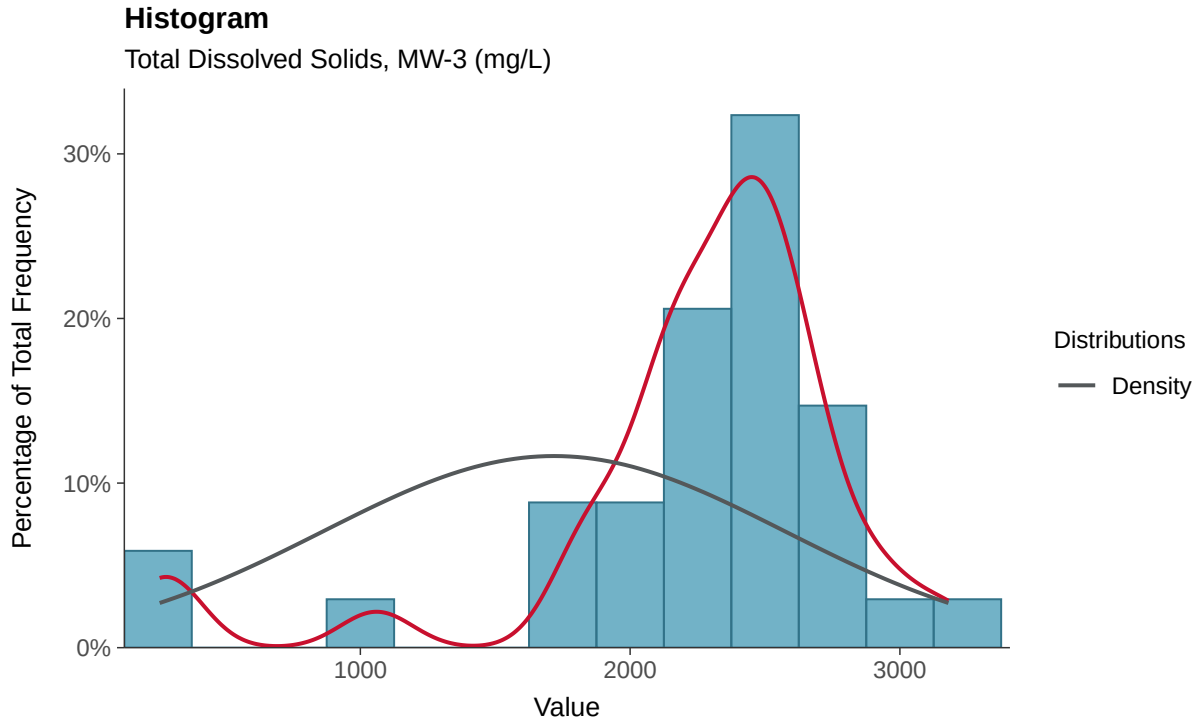
Sulfate, MW-3 (mg/L)



App. III: Total Dissolved Solids, MW-3

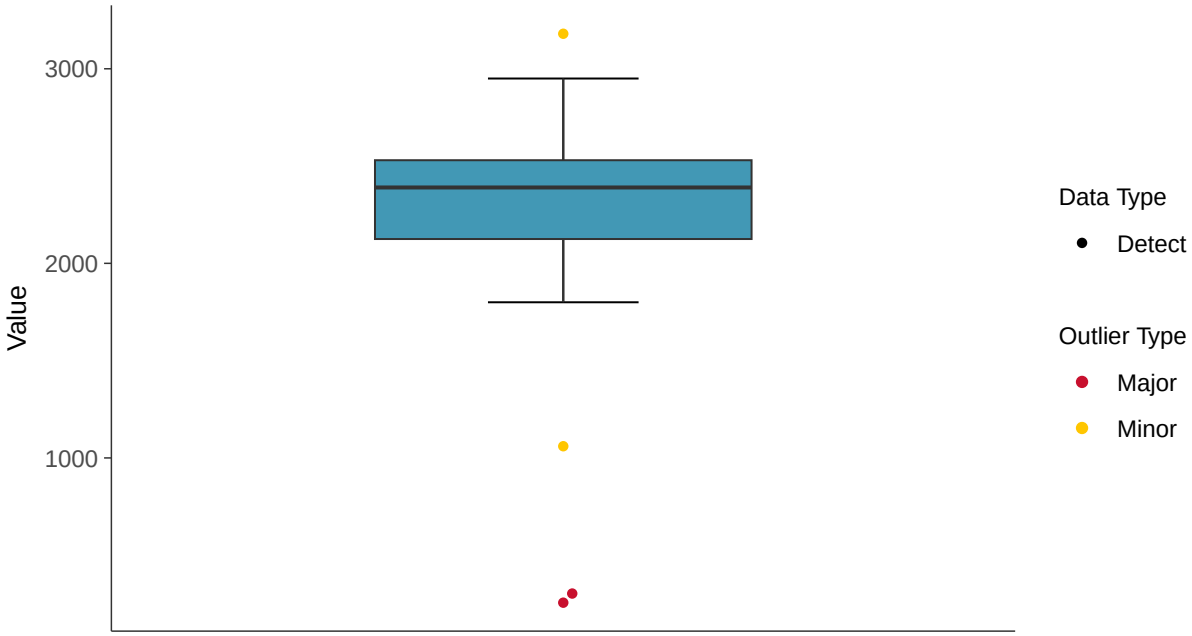
ID: 6_2_125





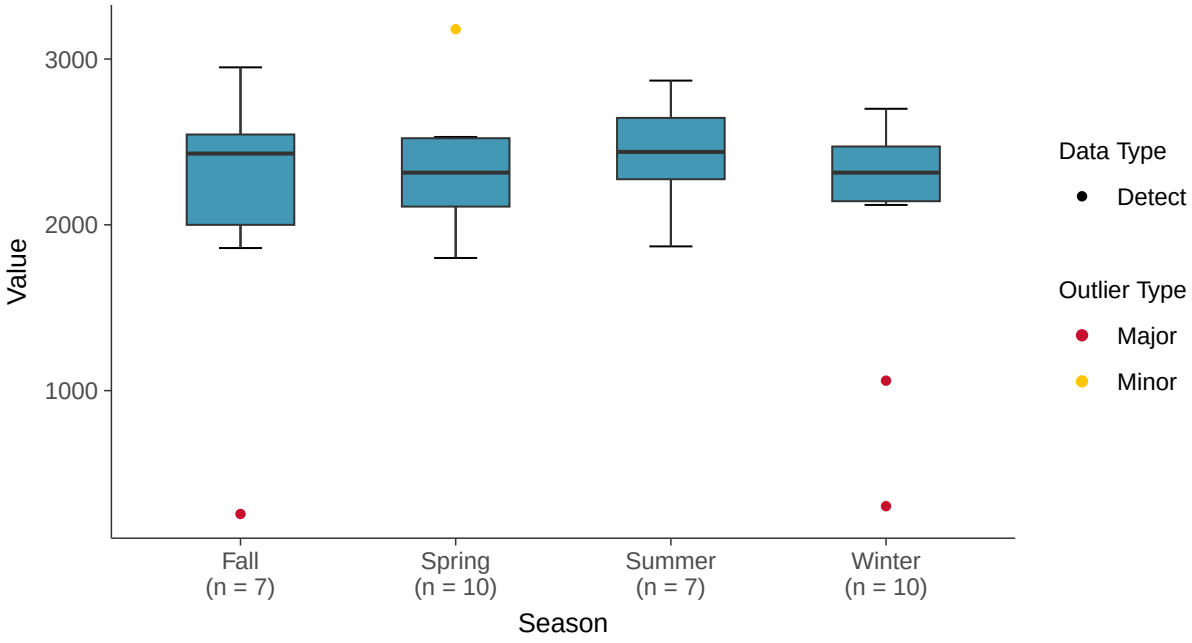
Boxplot

Total Dissolved Solids, MW-3 (mg/L)



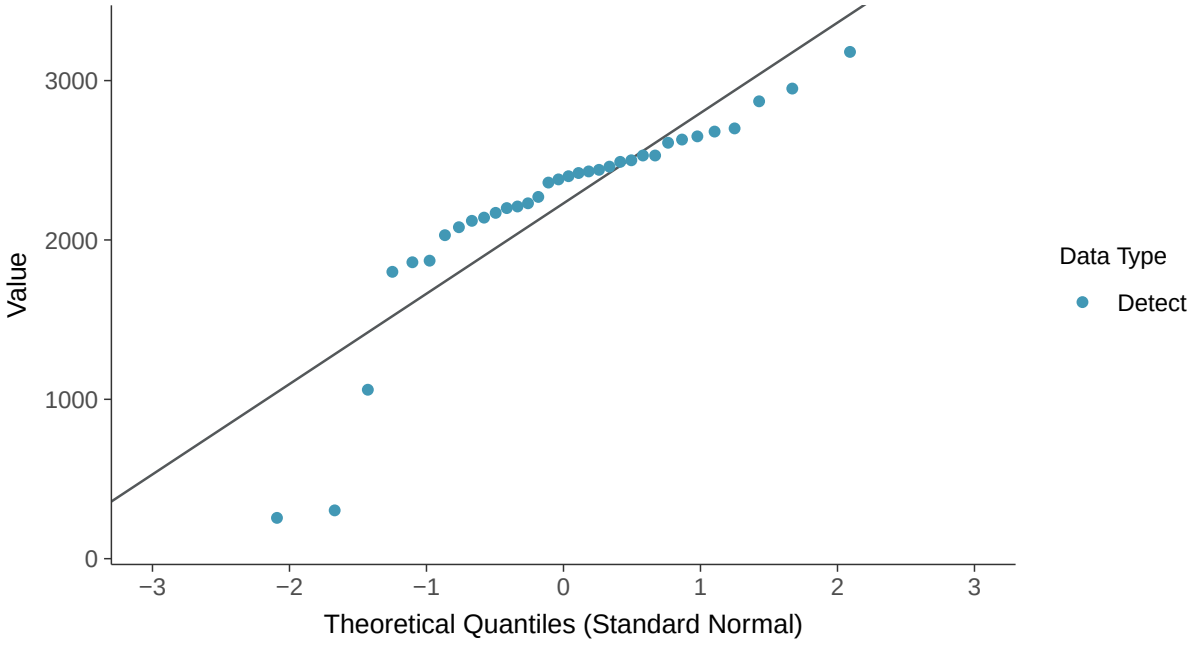
Boxplot by Season

Total Dissolved Solids, MW-3 (mg/L)



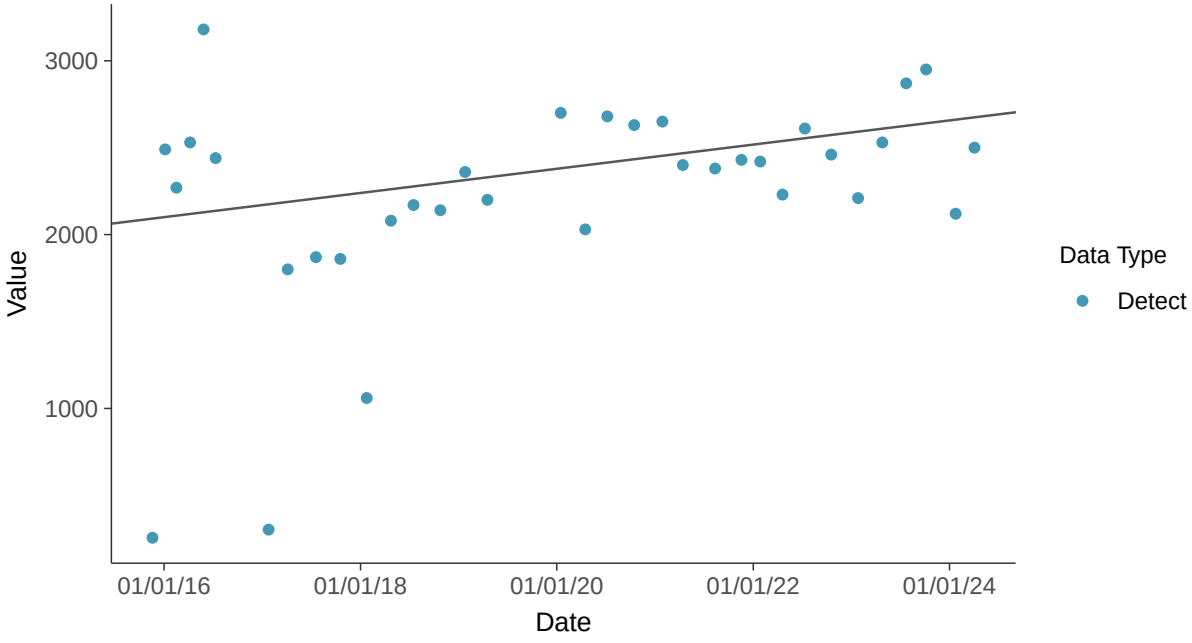
Normal Q-Q plot

Total Dissolved Solids, MW-3 (mg/L)



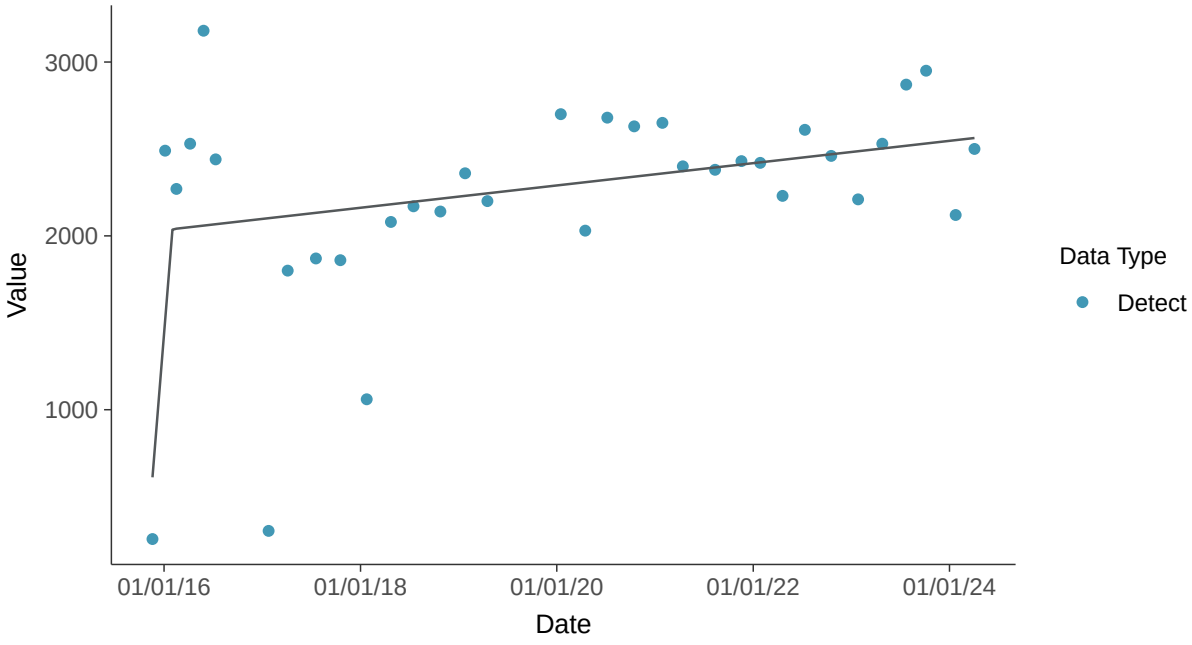
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-3 (mg/L)



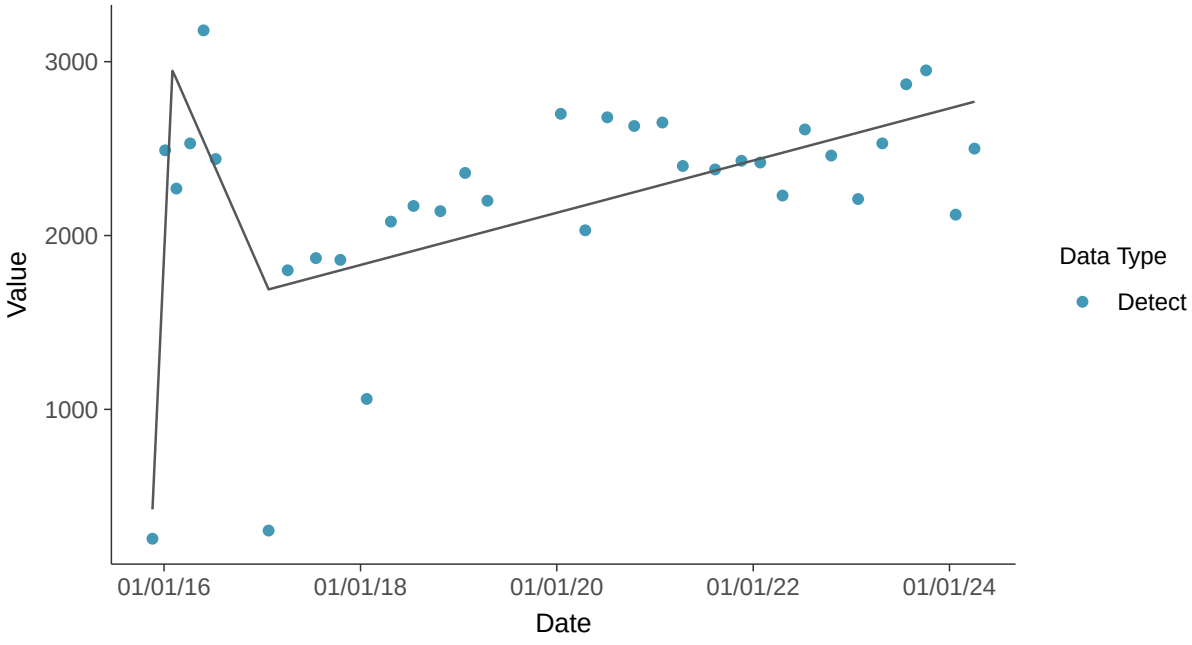
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-3 (mg/L)



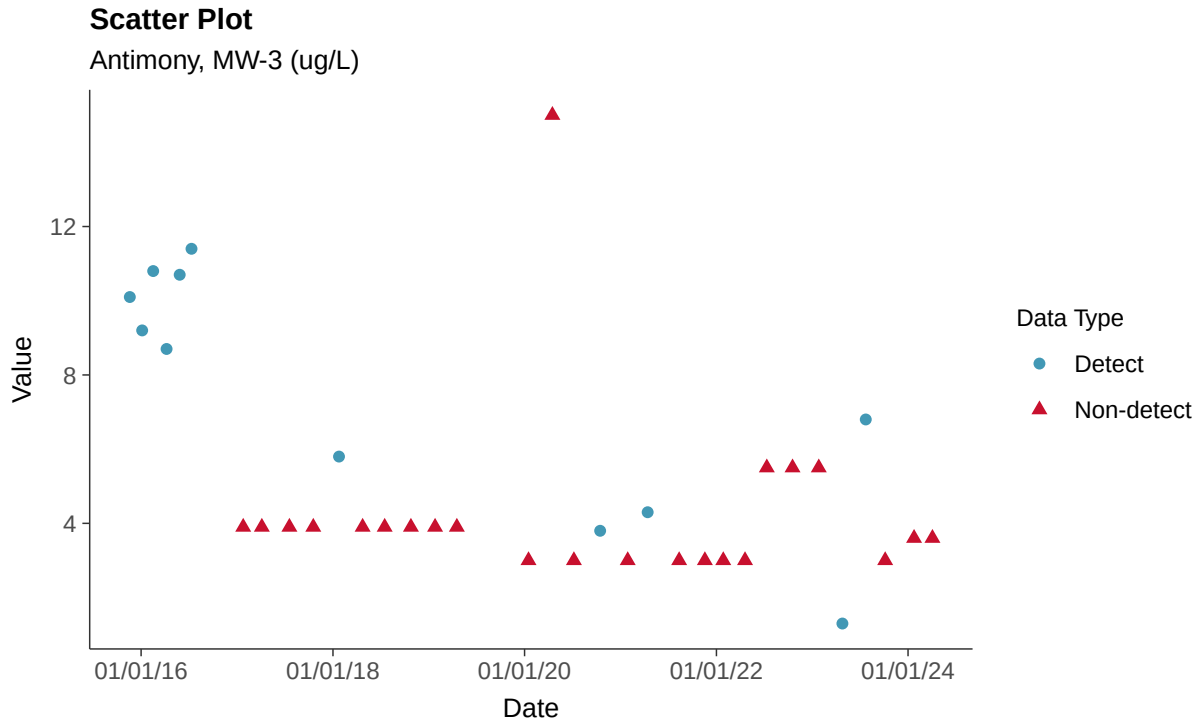
Trend Regression: Piecewise Linear-Linear-Linear

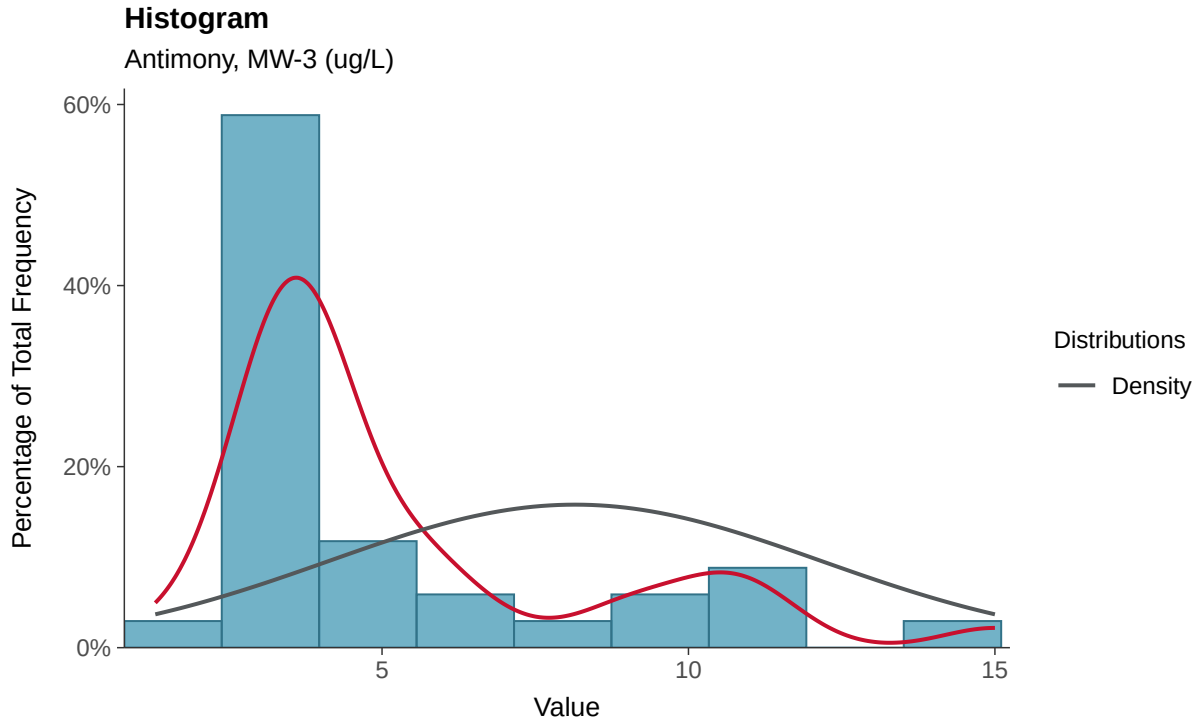
Total Dissolved Solids, MW-3 (mg/L)



App. IV: Antimony, MW-3

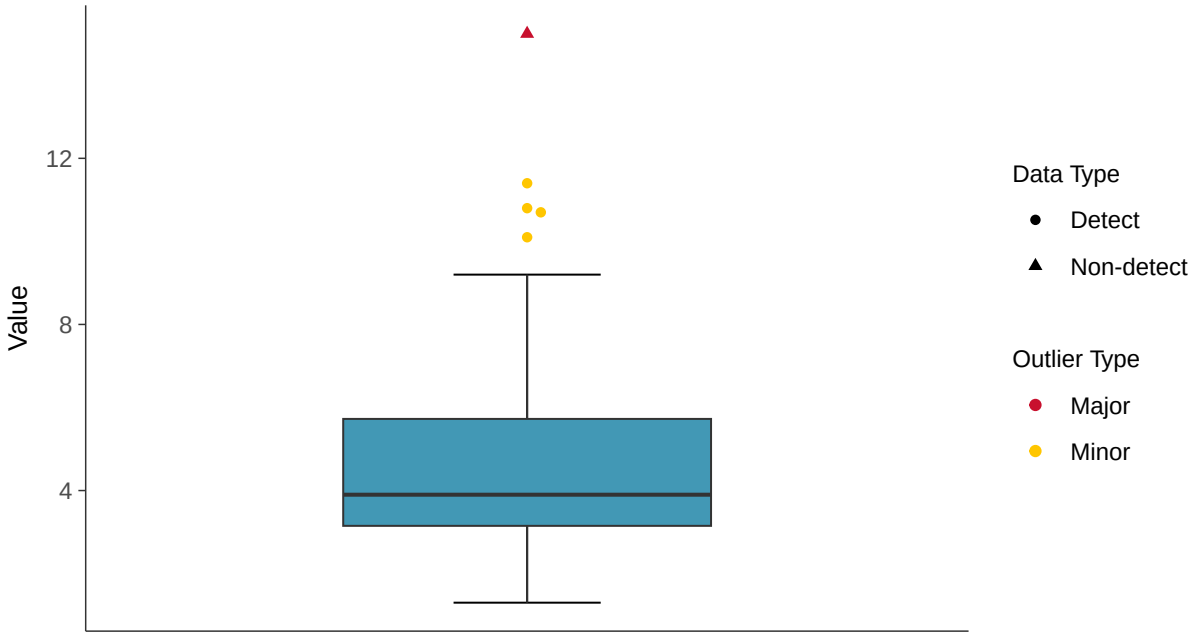
ID: 6_3_101





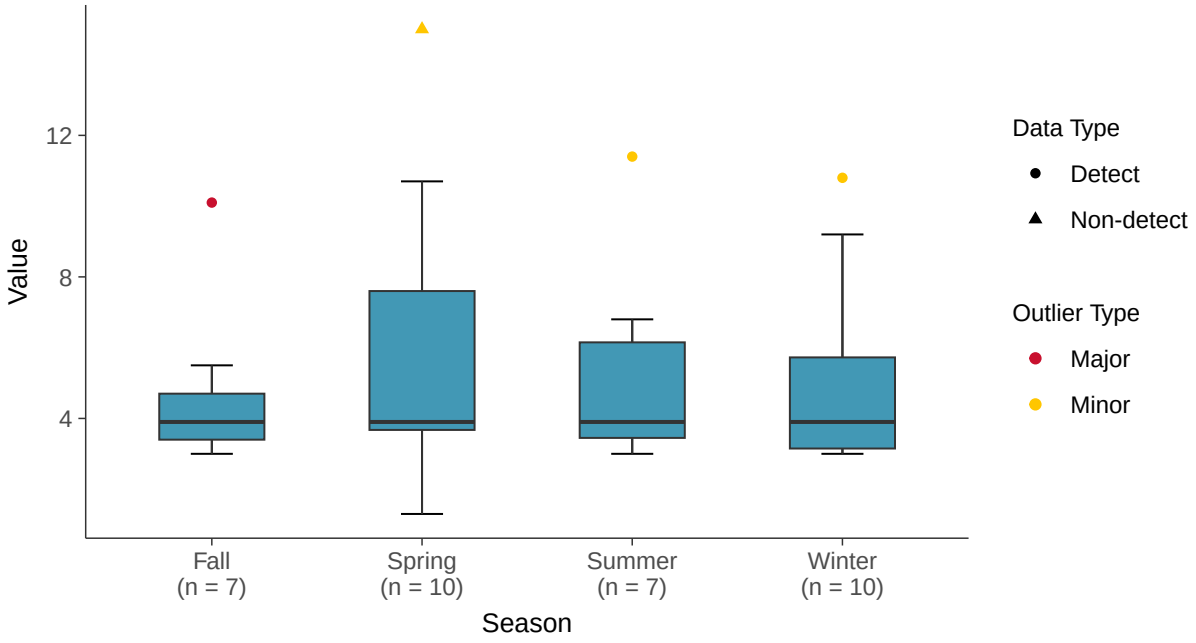
Boxplot

Antimony, MW-3 (ug/L)



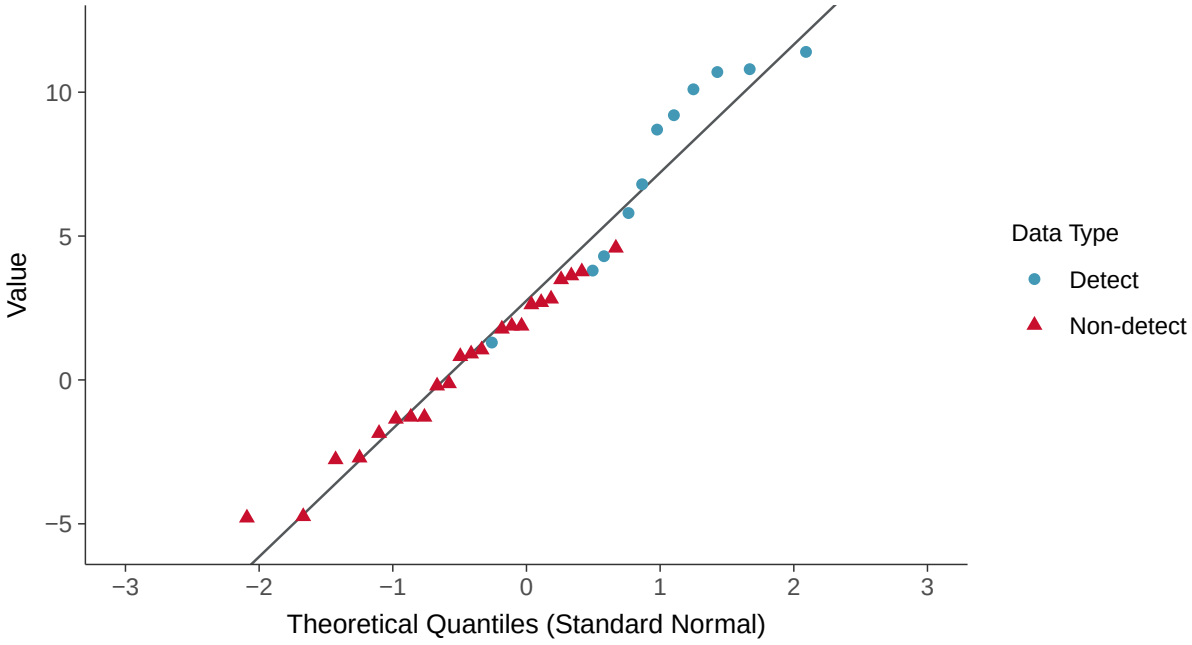
Boxplot by Season

Antimony, MW-3 (ug/L)



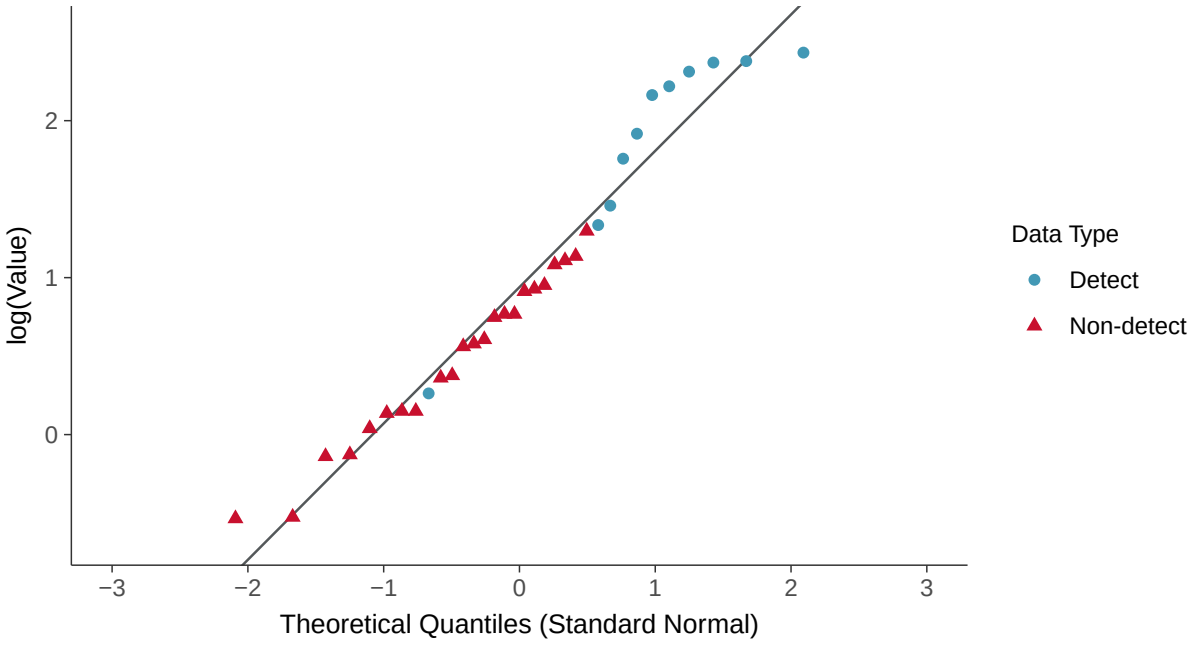
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



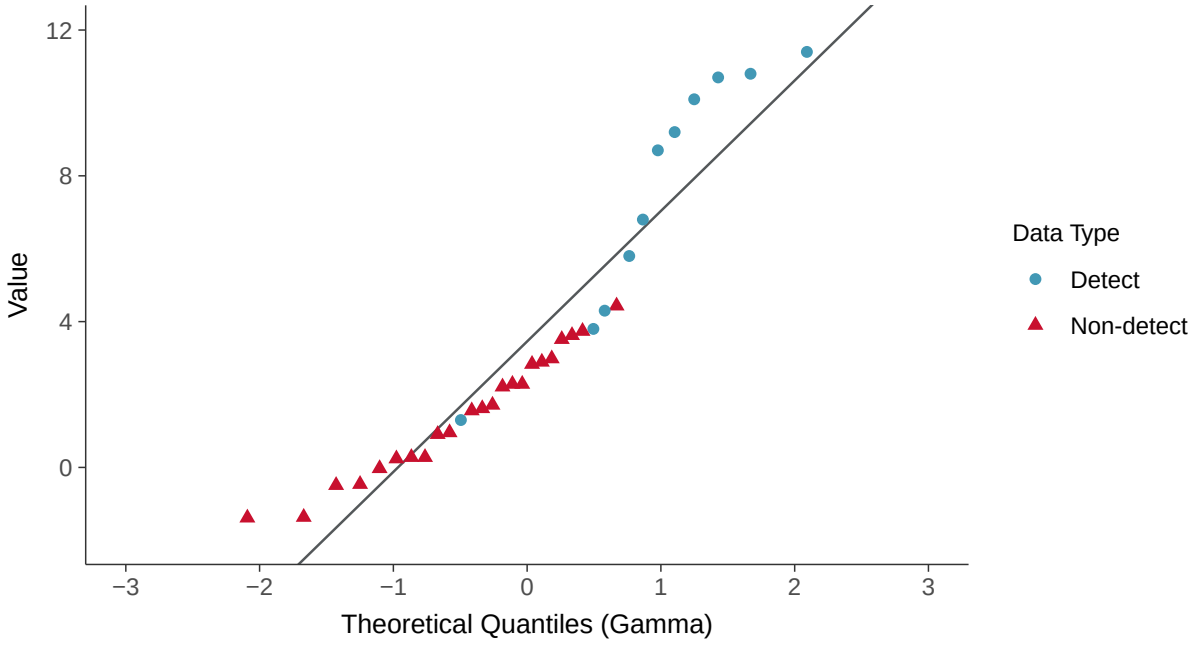
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



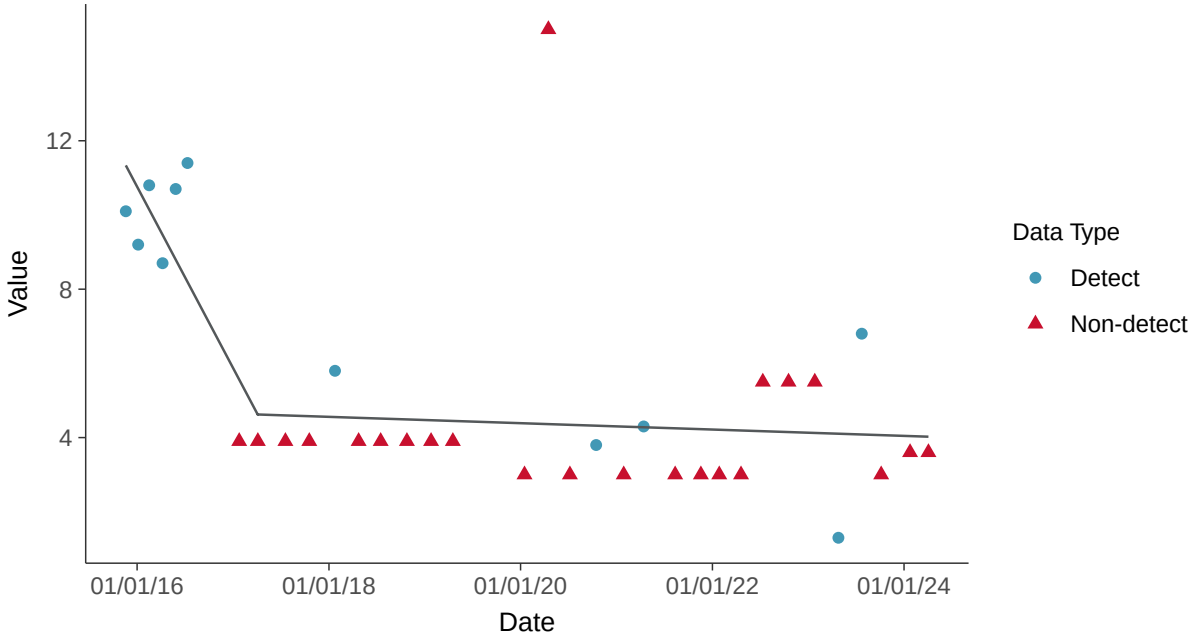
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



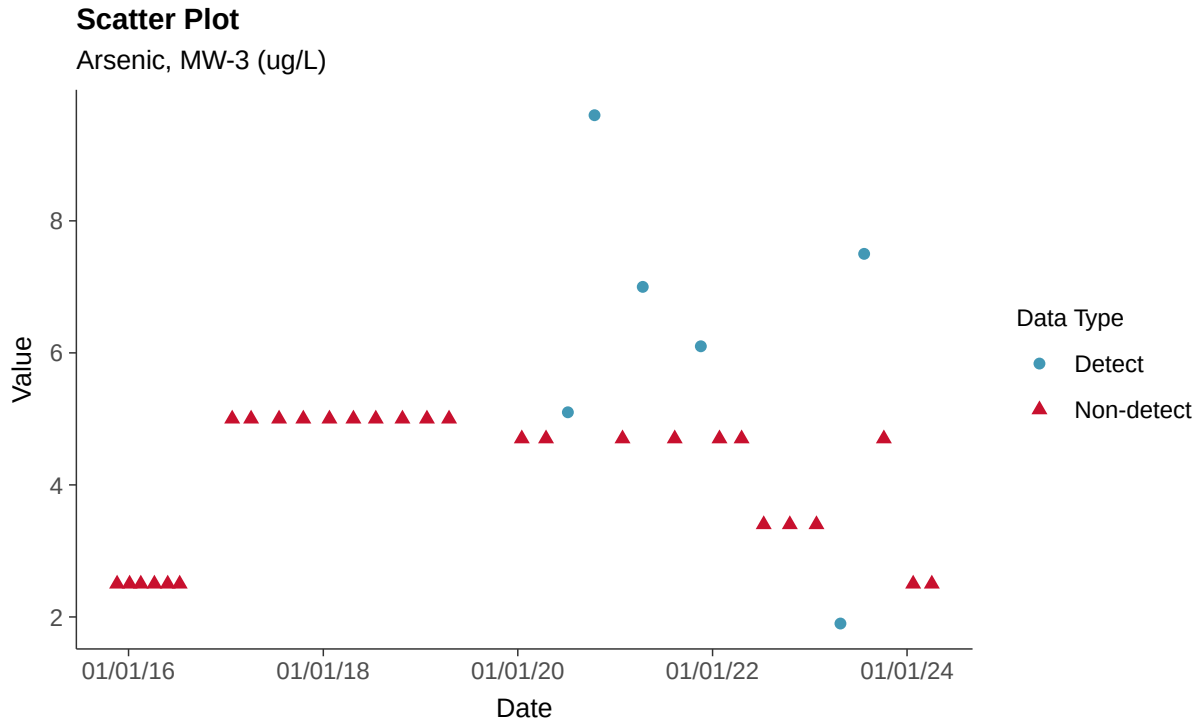
Trend Regression: Piecewise Linear-Linear

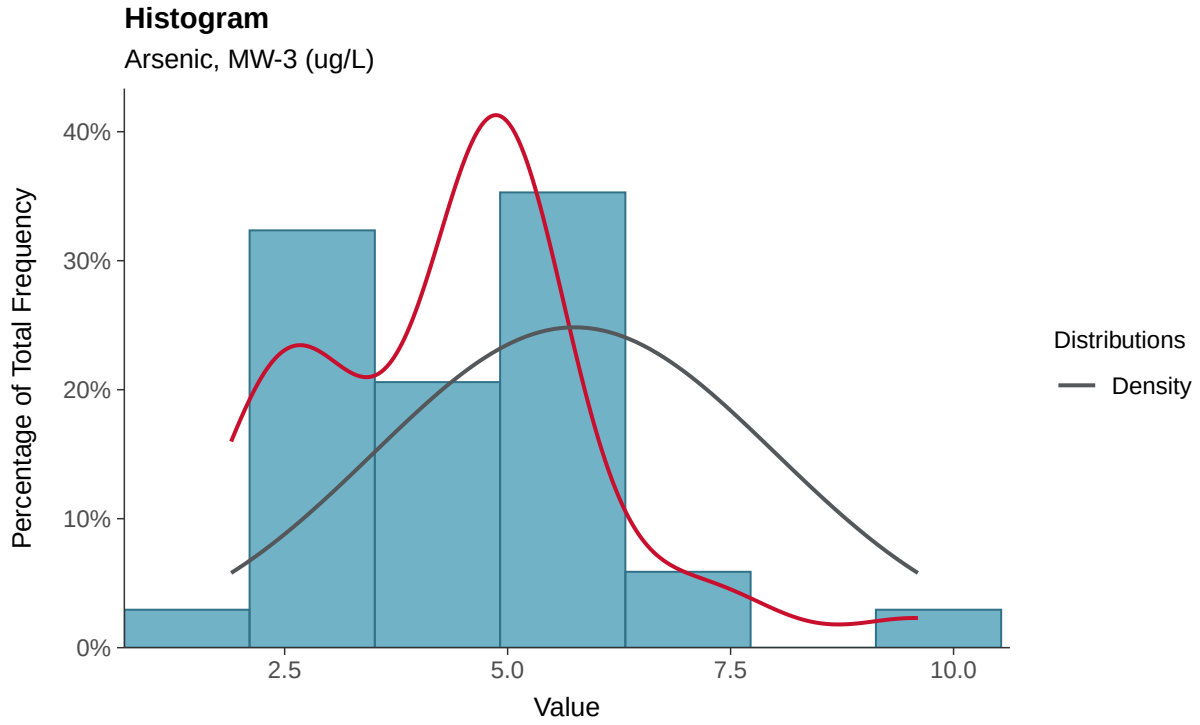
Antimony, MW-3 (ug/L)



App. IV: Arsenic, MW-3

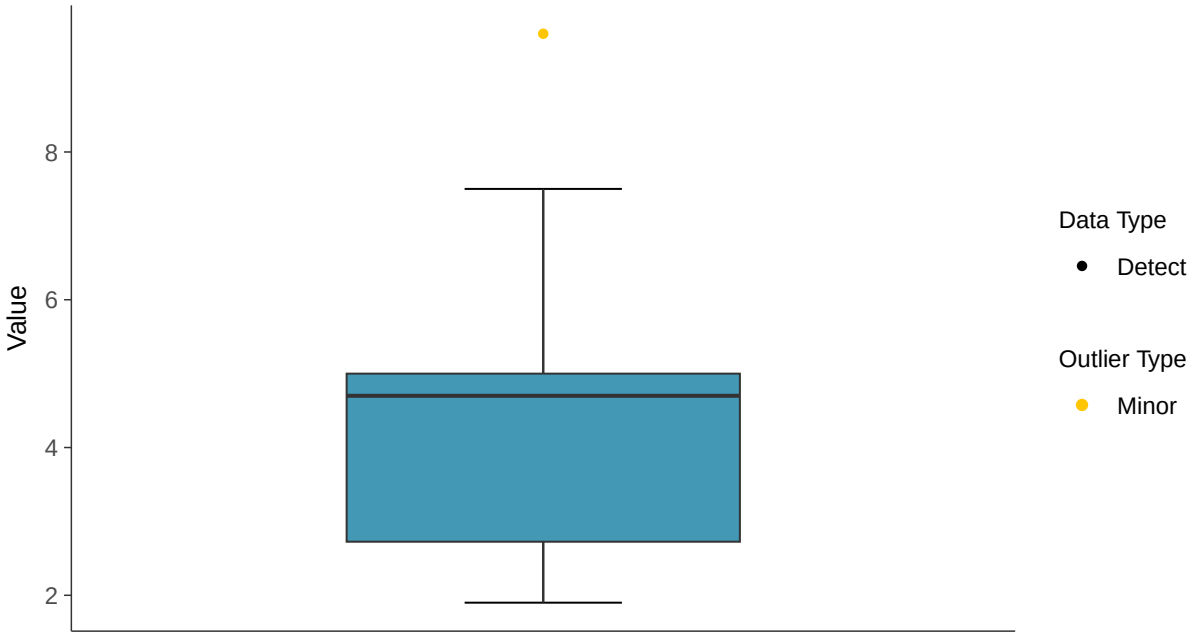
ID: 6_3_102





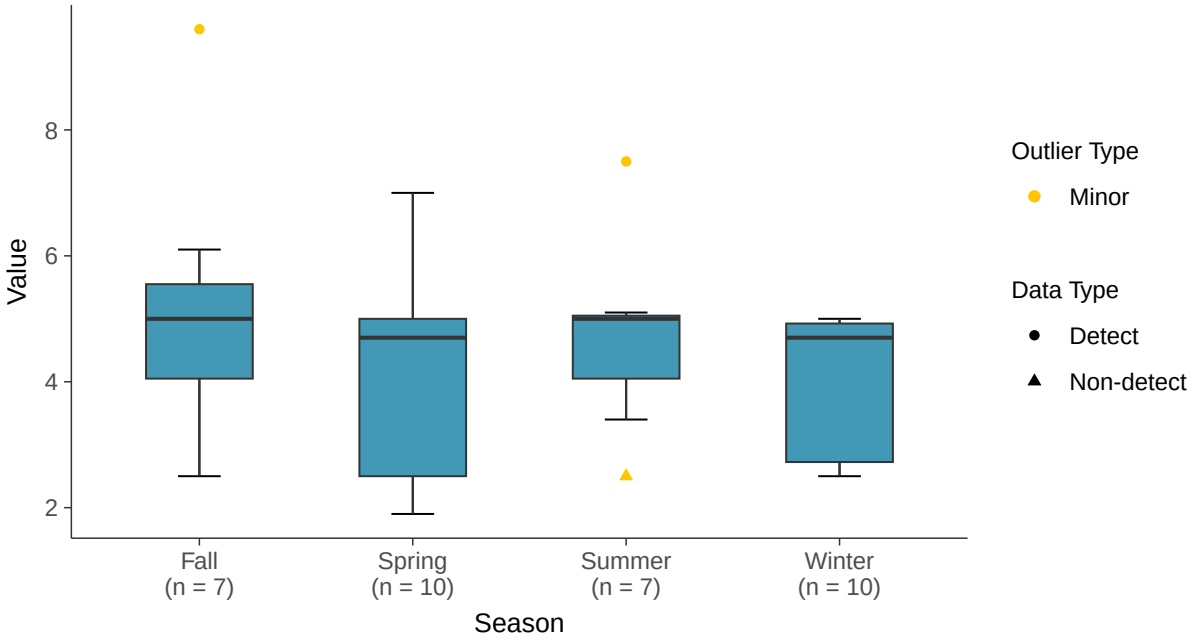
Boxplot

Arsenic, MW-3 (ug/L)



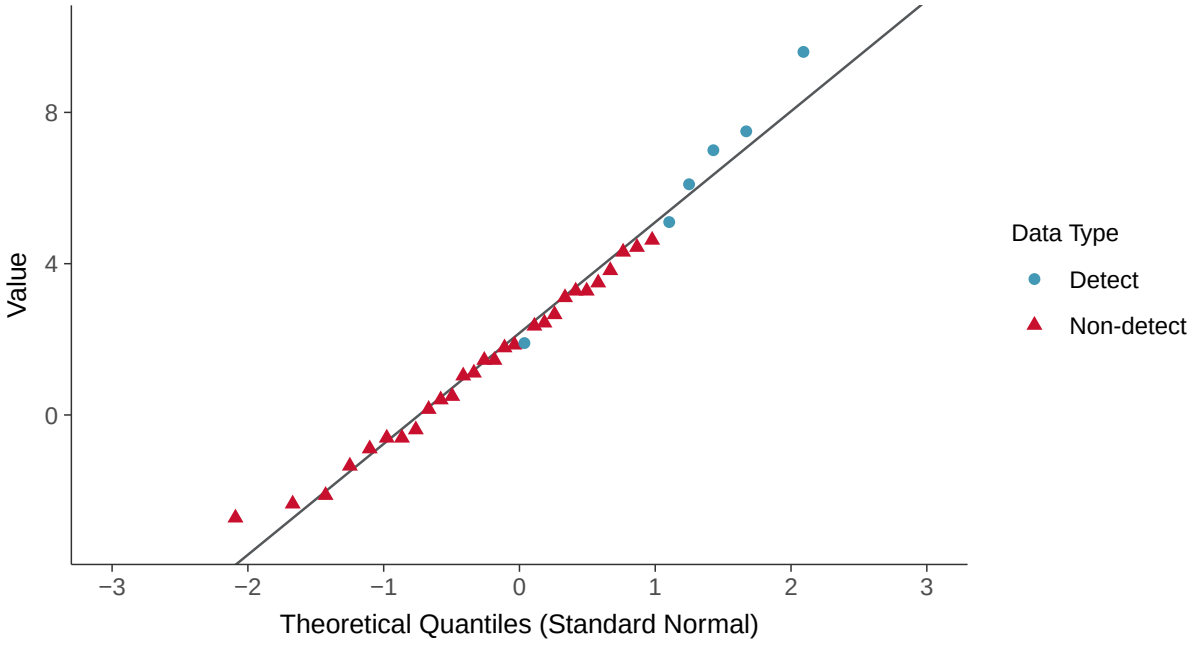
Boxplot by Season

Arsenic, MW-3 (ug/L)



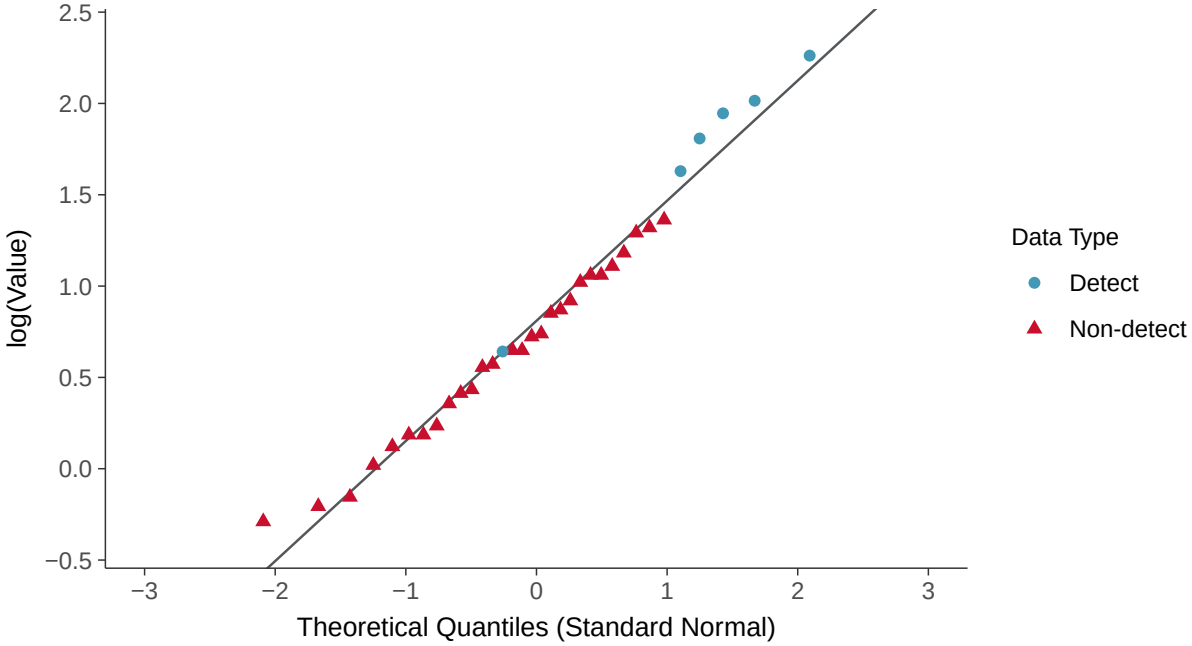
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



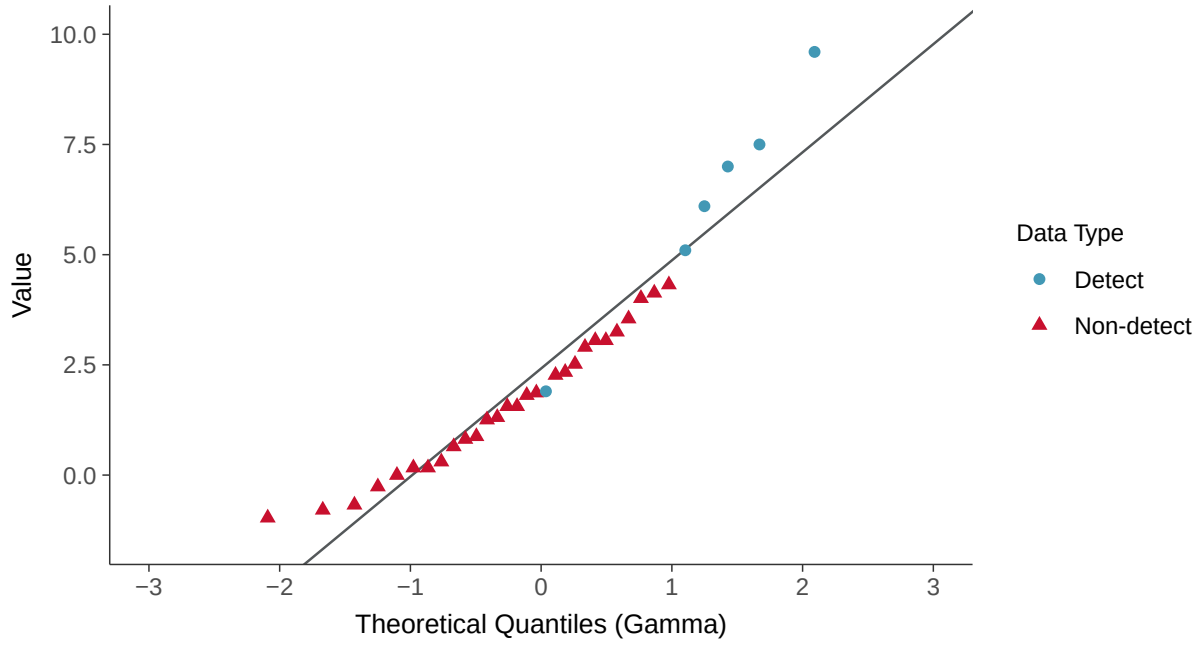
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



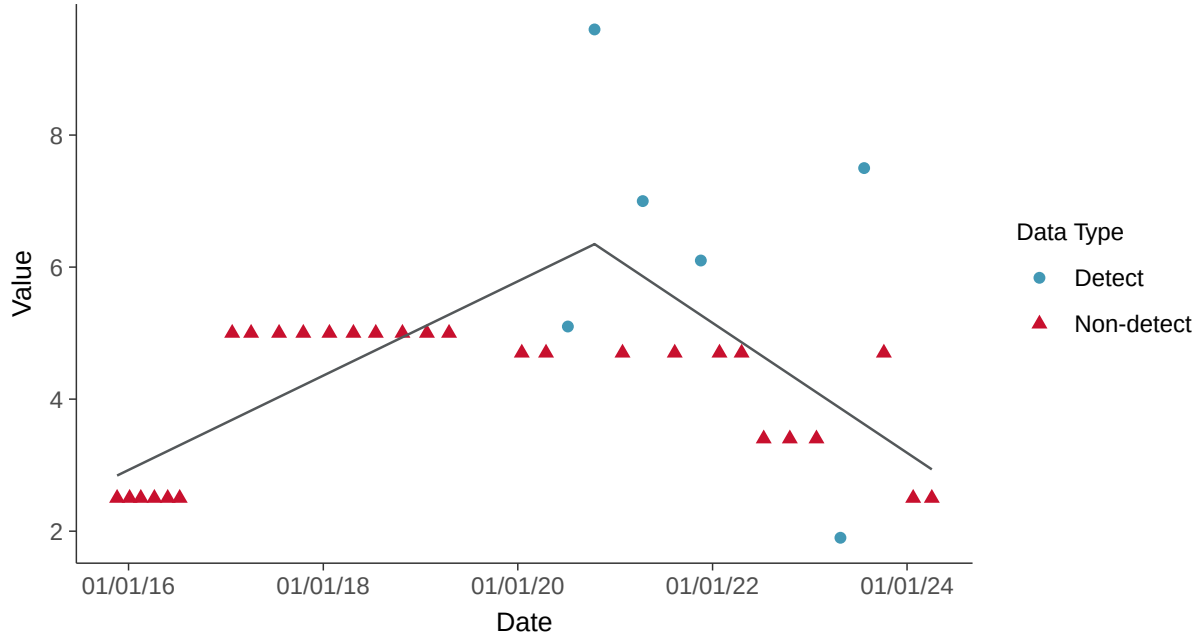
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



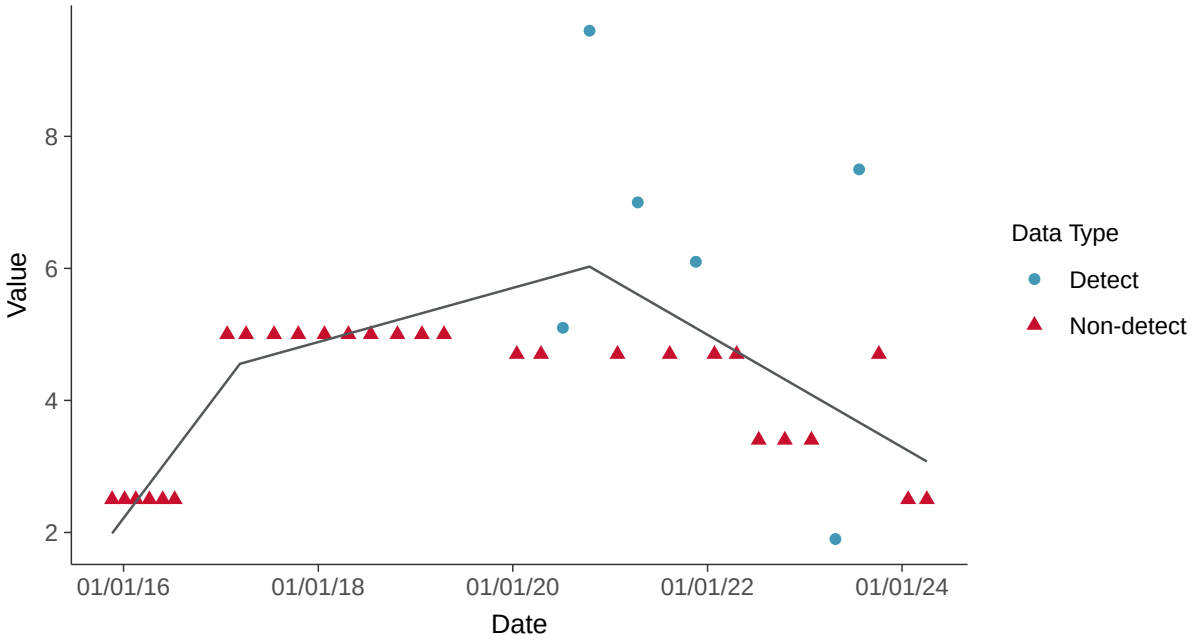
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-3 (ug/L)



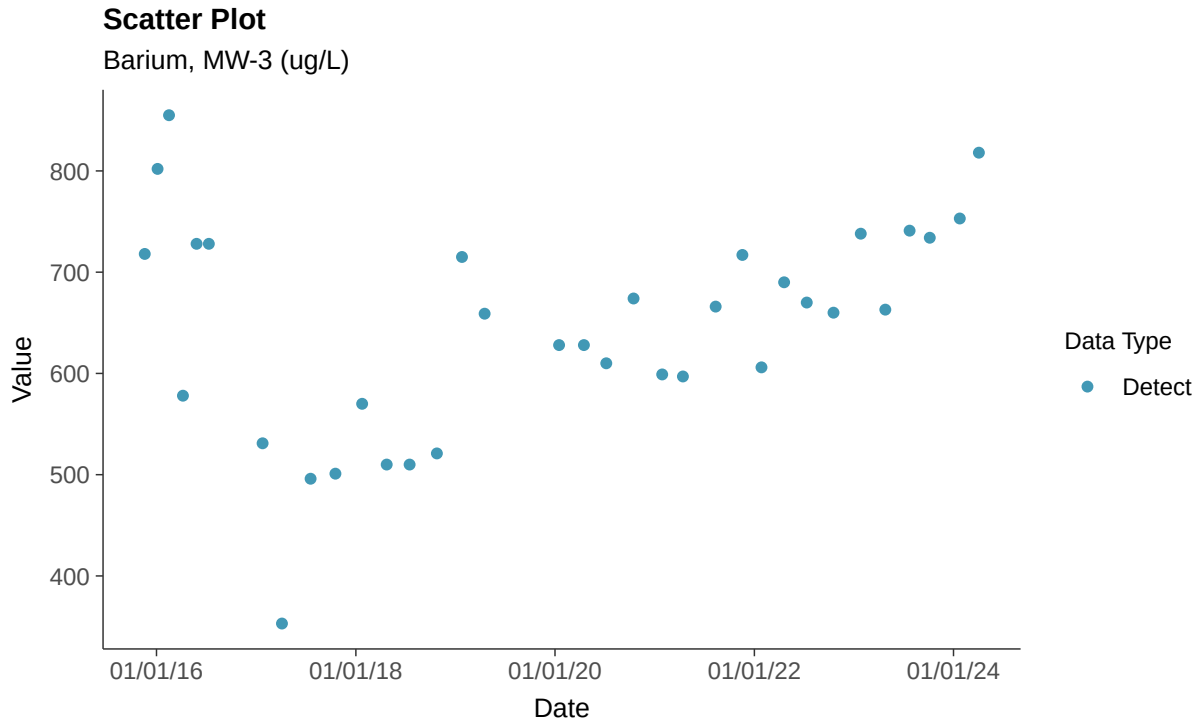
Trend Regression: Piecewise Linear-Linear-Linear

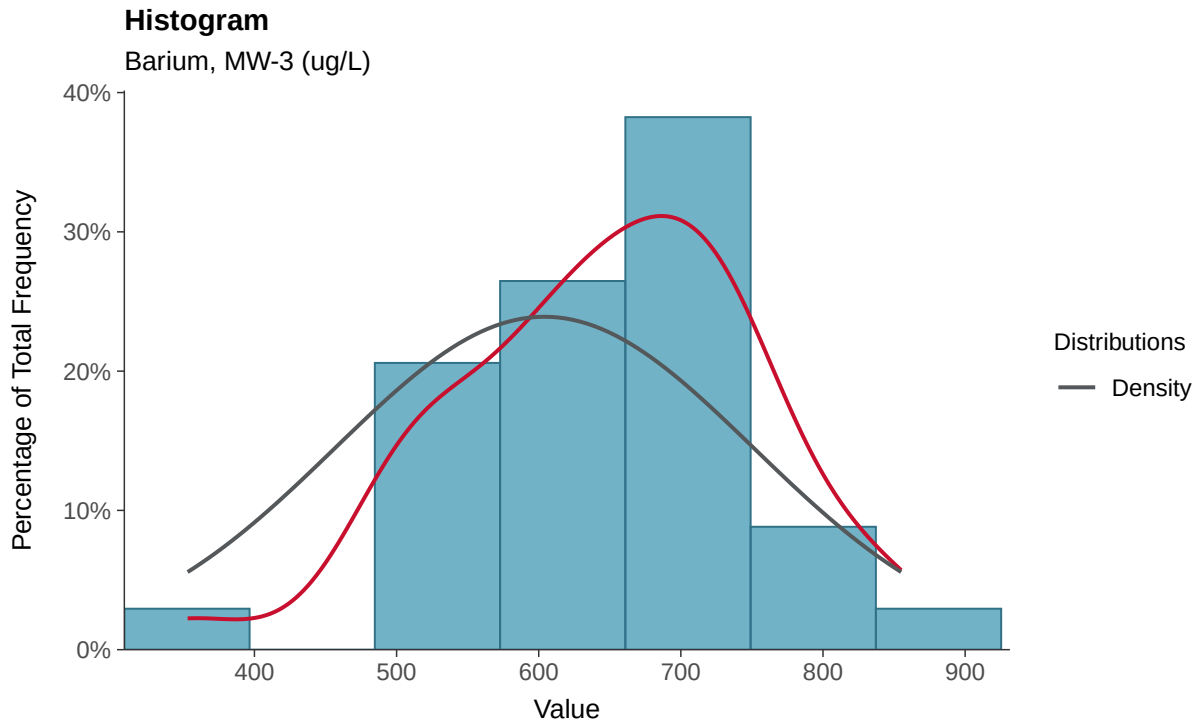
Arsenic, MW-3 (ug/L)



App. IV: Barium, MW-3

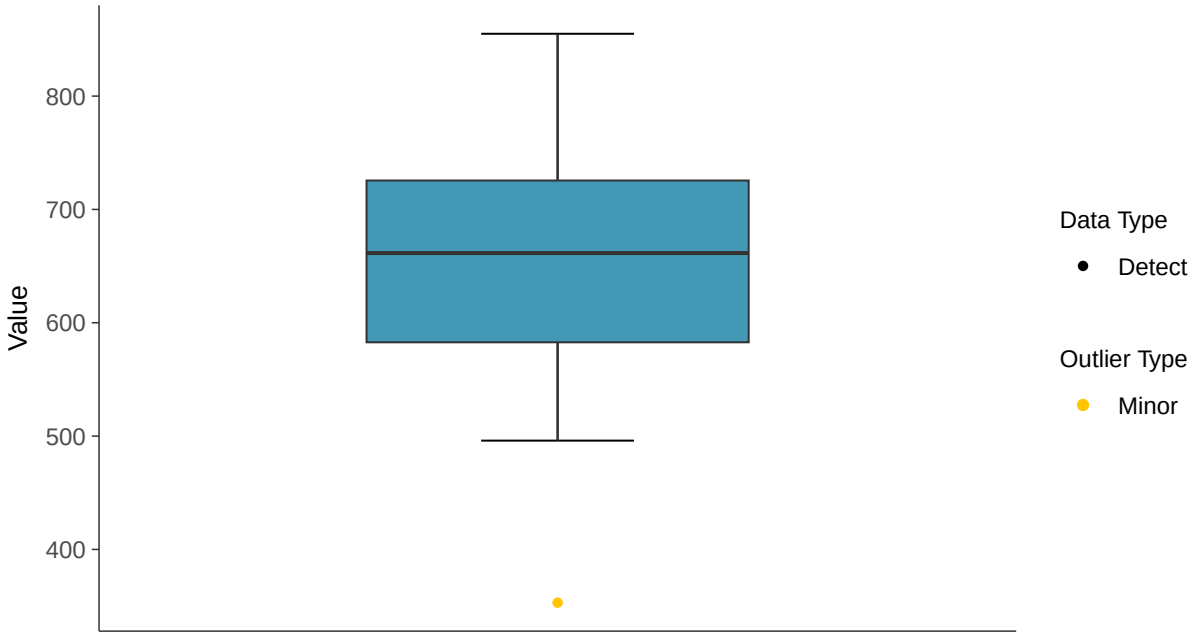
ID: 6_3_103





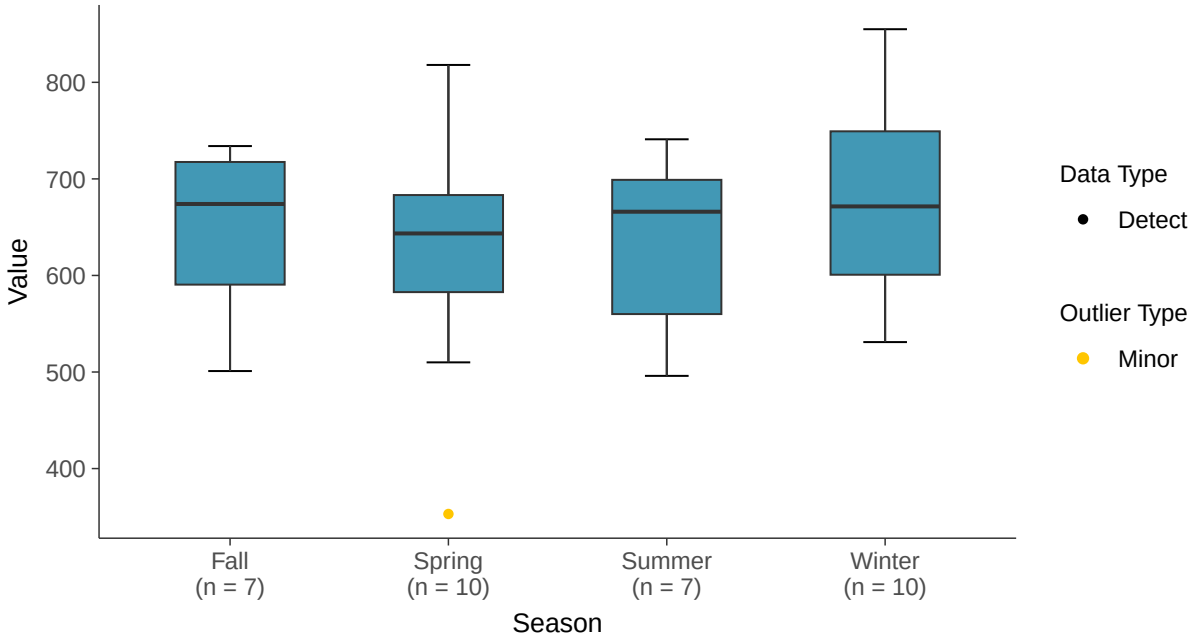
Boxplot

Barium, MW-3 (ug/L)



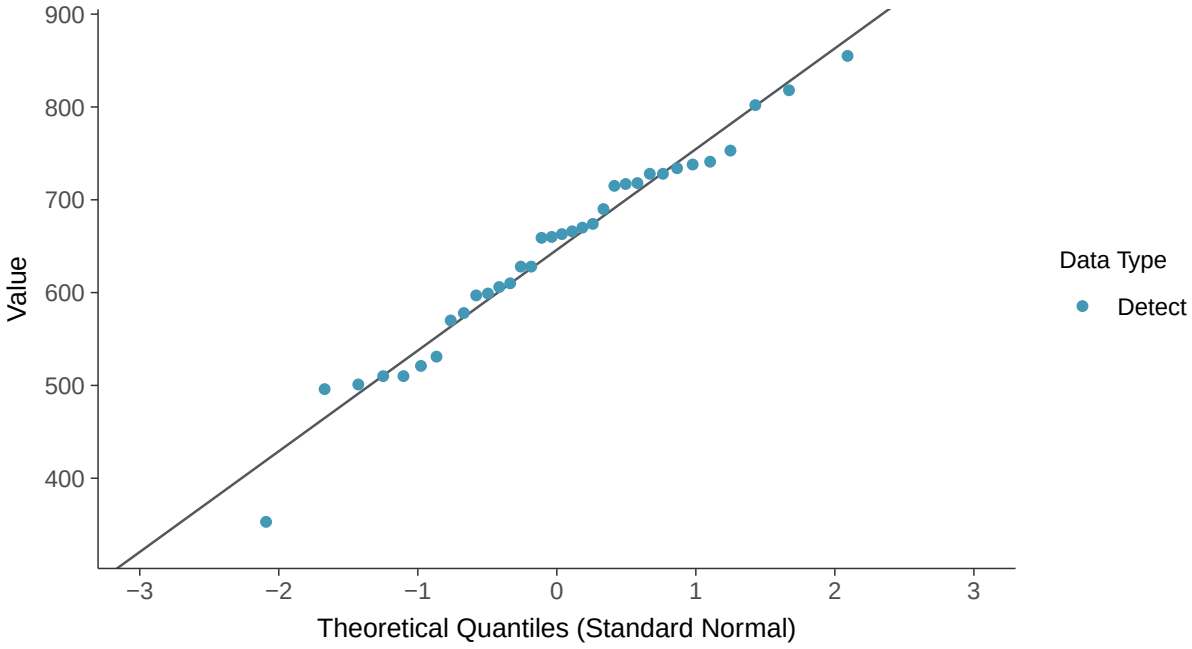
Boxplot by Season

Barium, MW-3 (ug/L)



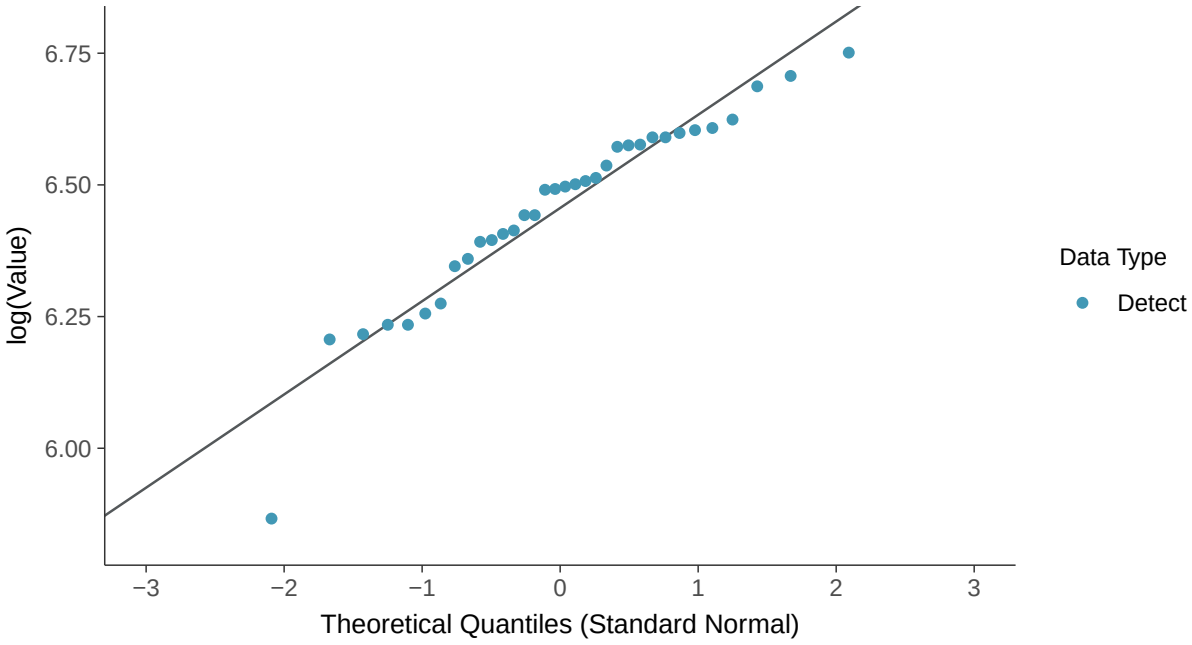
Normal Q-Q plot

Barium, MW-3 (ug/L)



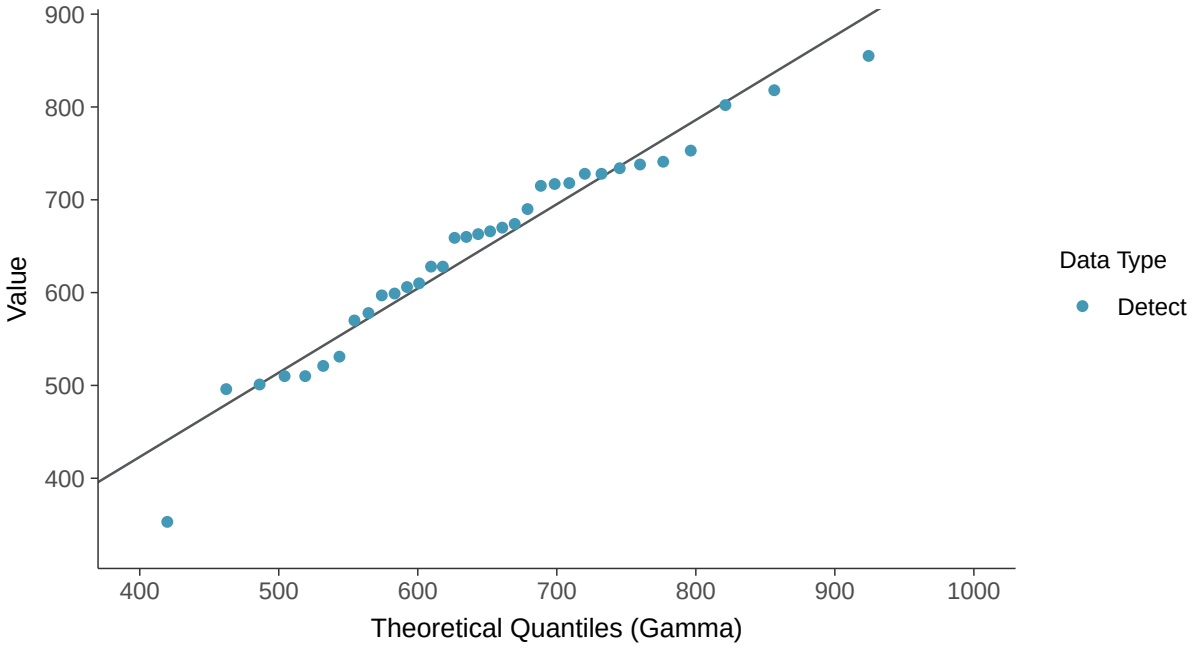
Lognormal Q-Q plot

Barium, MW-3 (ug/L)



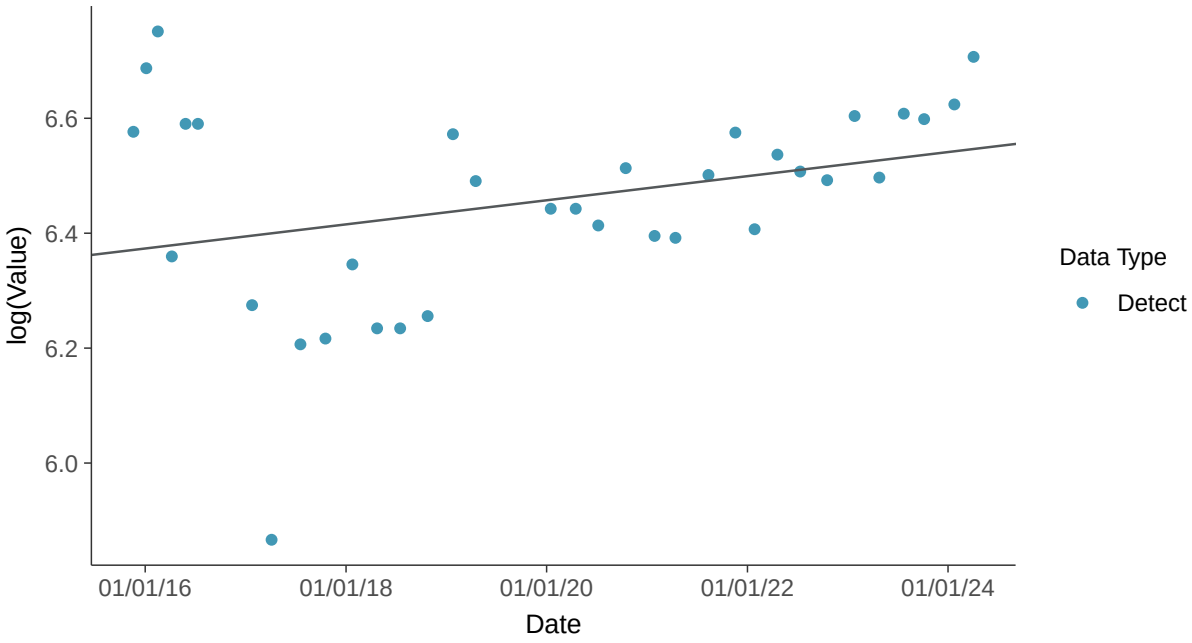
Gamma Q-Q plot

Barium, MW-3 (ug/L)



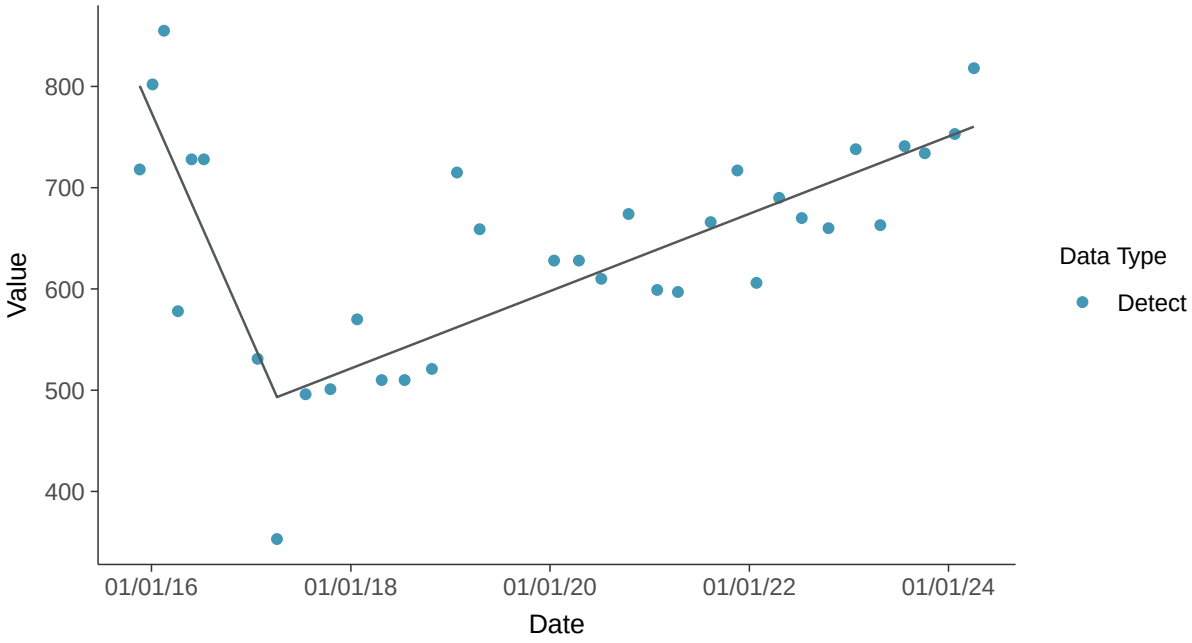
Trend Regression: Lognormal MLE

Barium, MW-3 (ug/L)



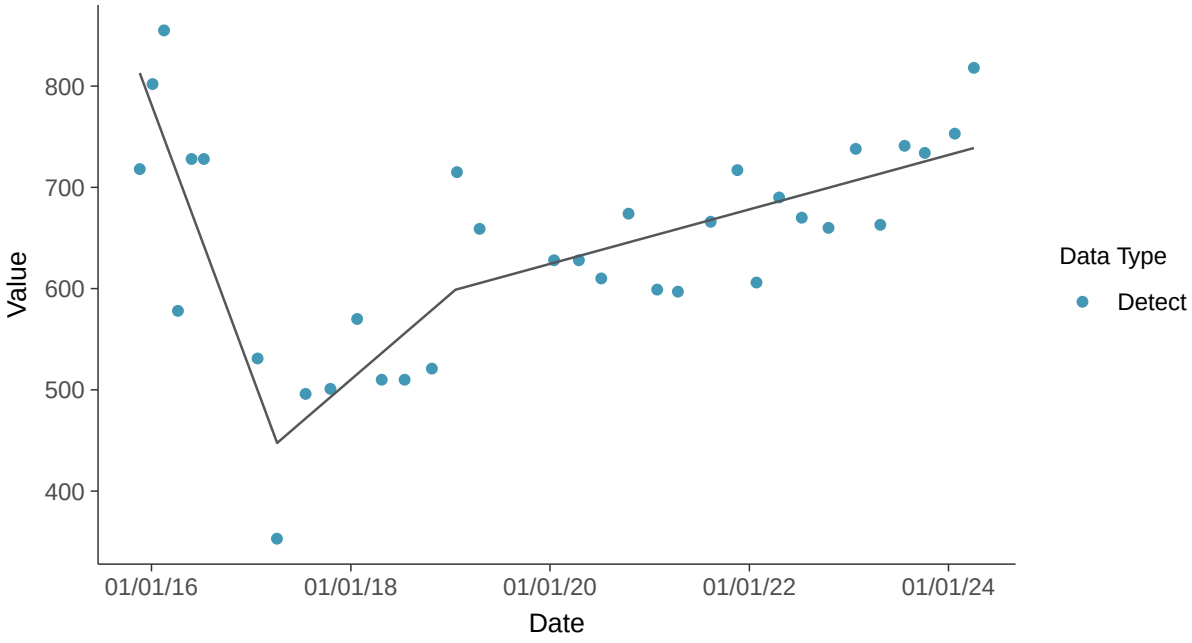
Trend Regression: Piecewise Linear-Linear

Barium, MW-3 (ug/L)



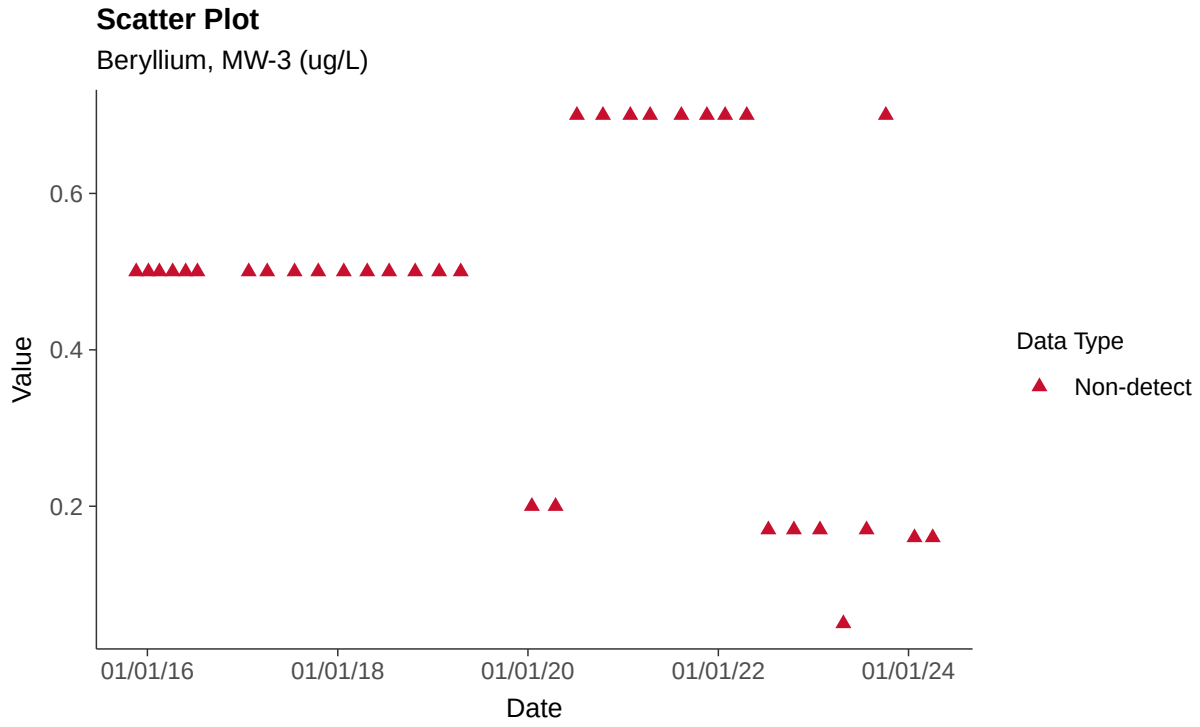
Trend Regression: Piecewise Linear-Linear-Linear

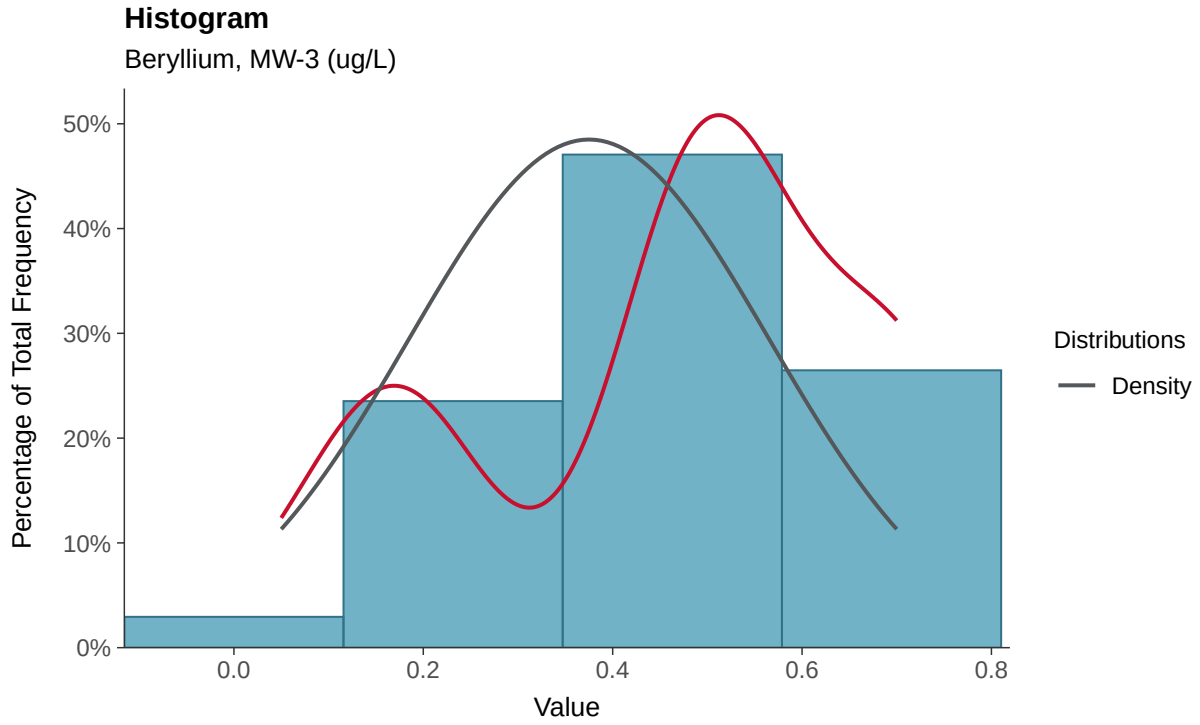
Barium, MW-3 (ug/L)



App. IV: Beryllium, MW-3

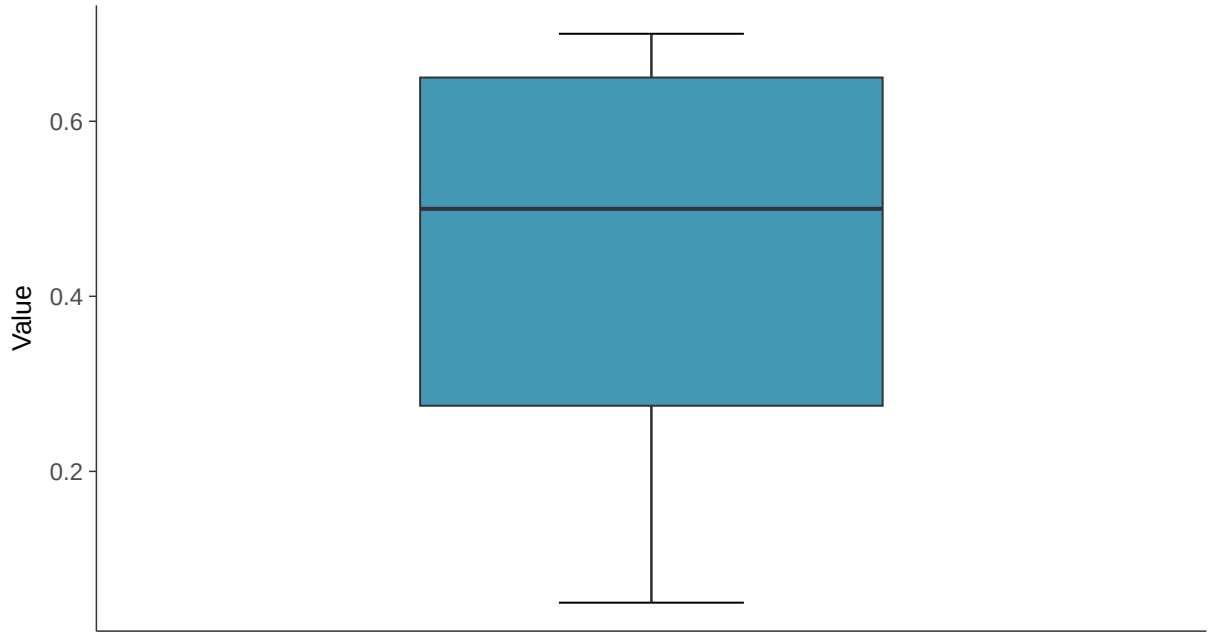
ID: 6_3_104





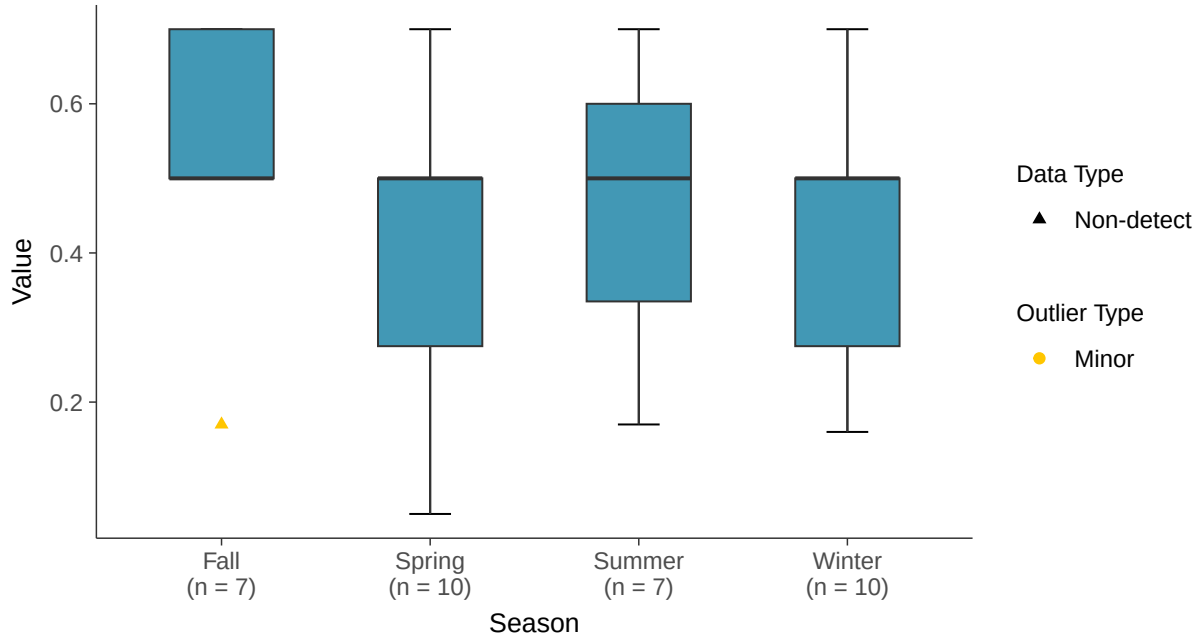
Boxplot

Beryllium, MW-3 (ug/L)



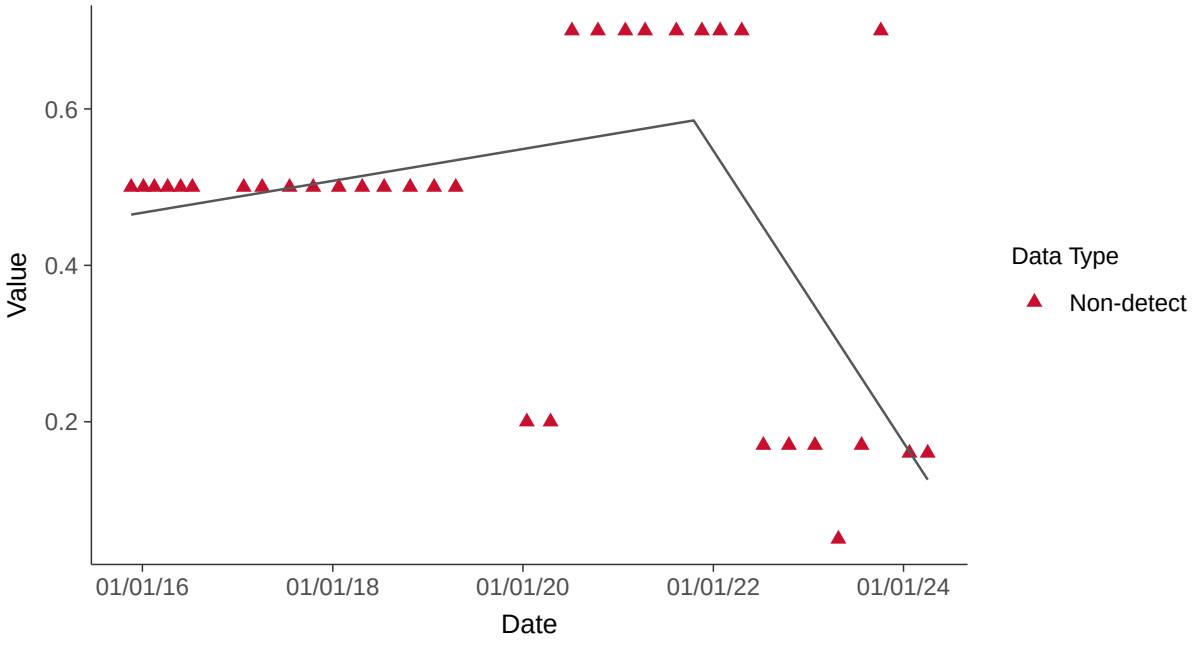
Boxplot by Season

Beryllium, MW-3 (ug/L)



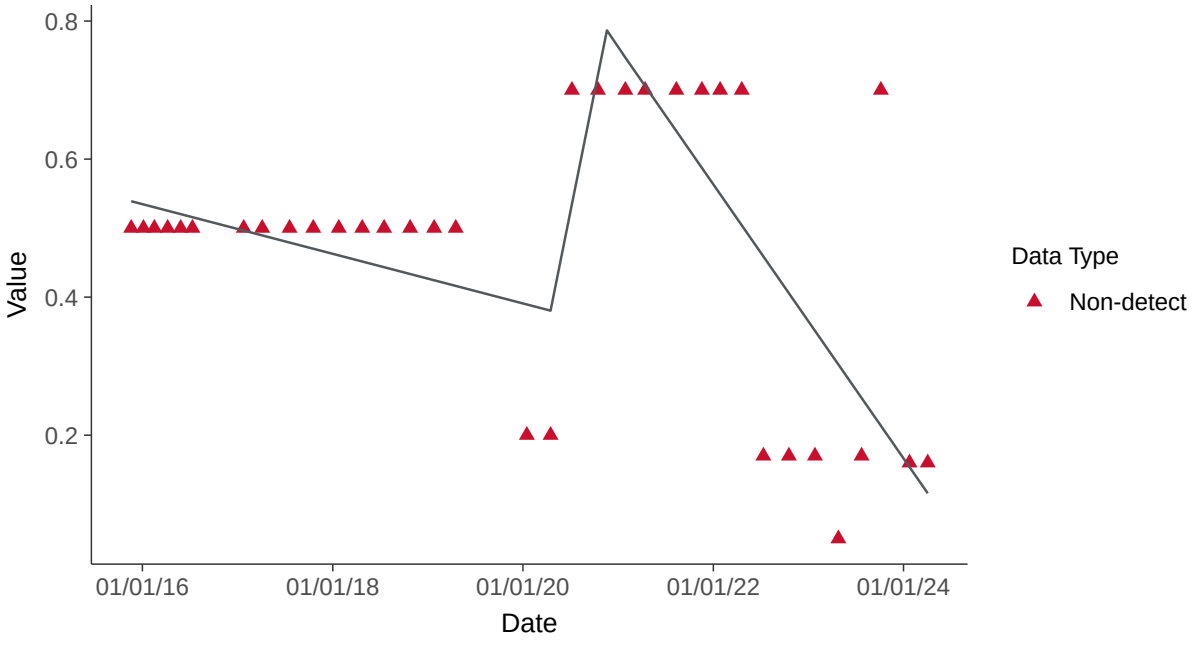
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-3 (ug/L)



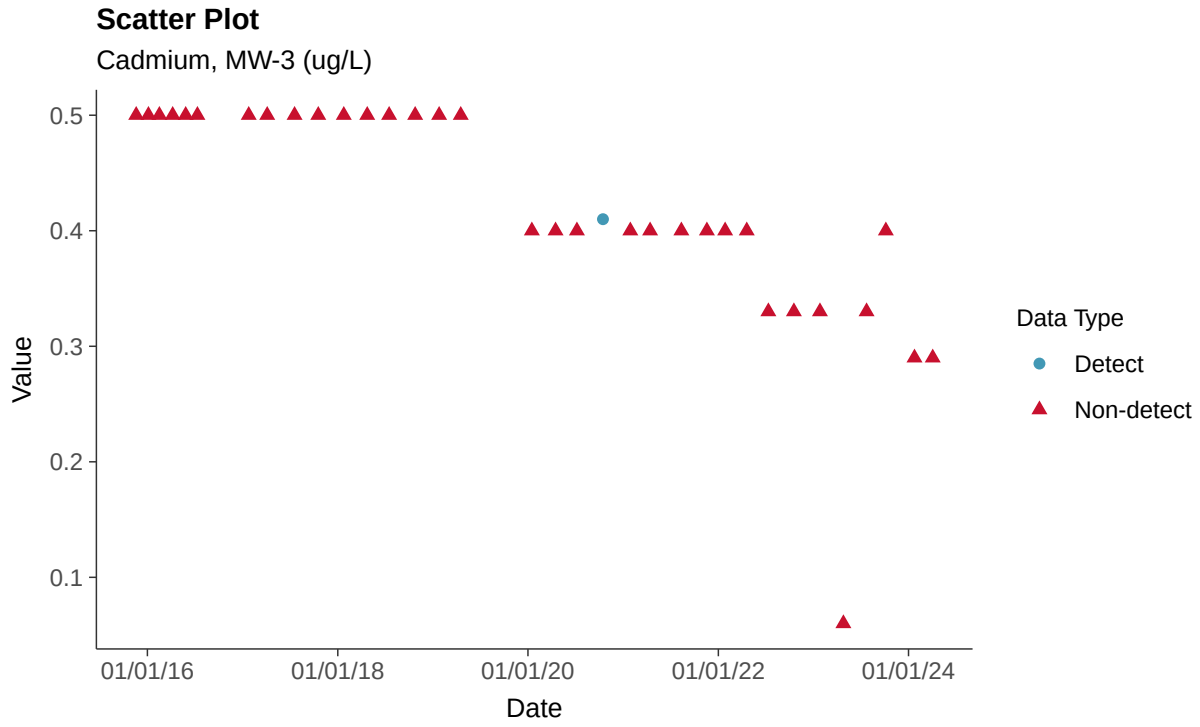
Trend Regression: Piecewise Linear-Linear-Linear

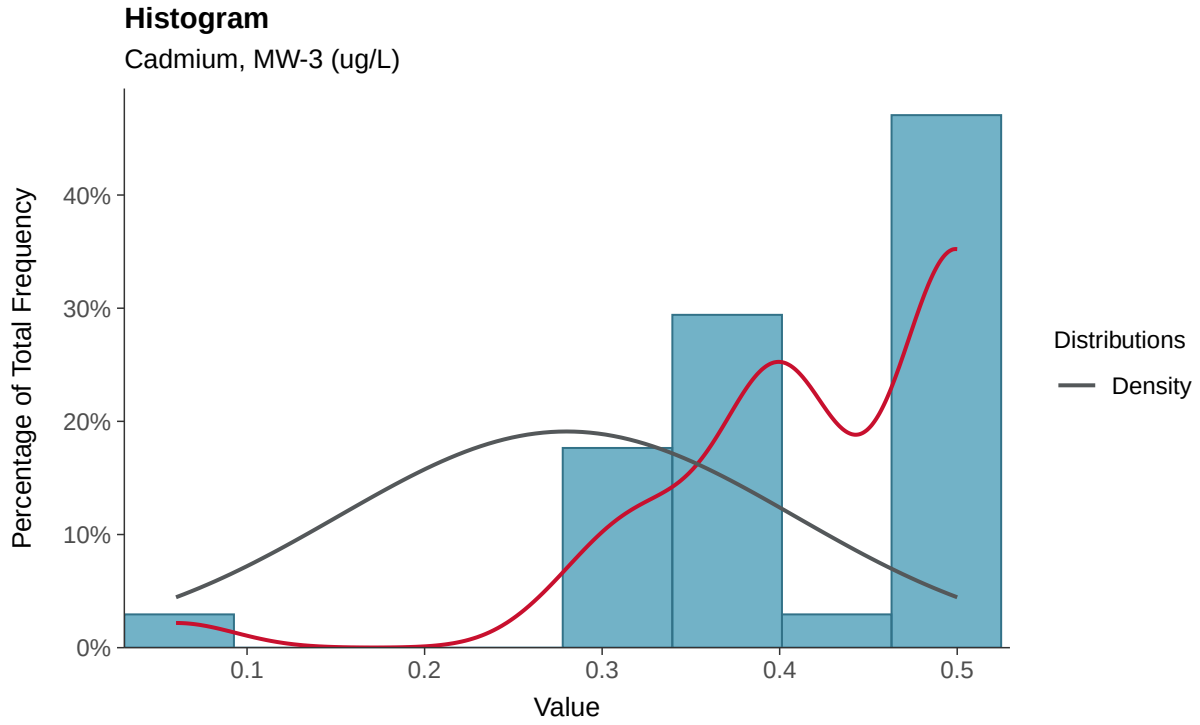
Beryllium, MW-3 (ug/L)



App. IV: Cadmium, MW-3

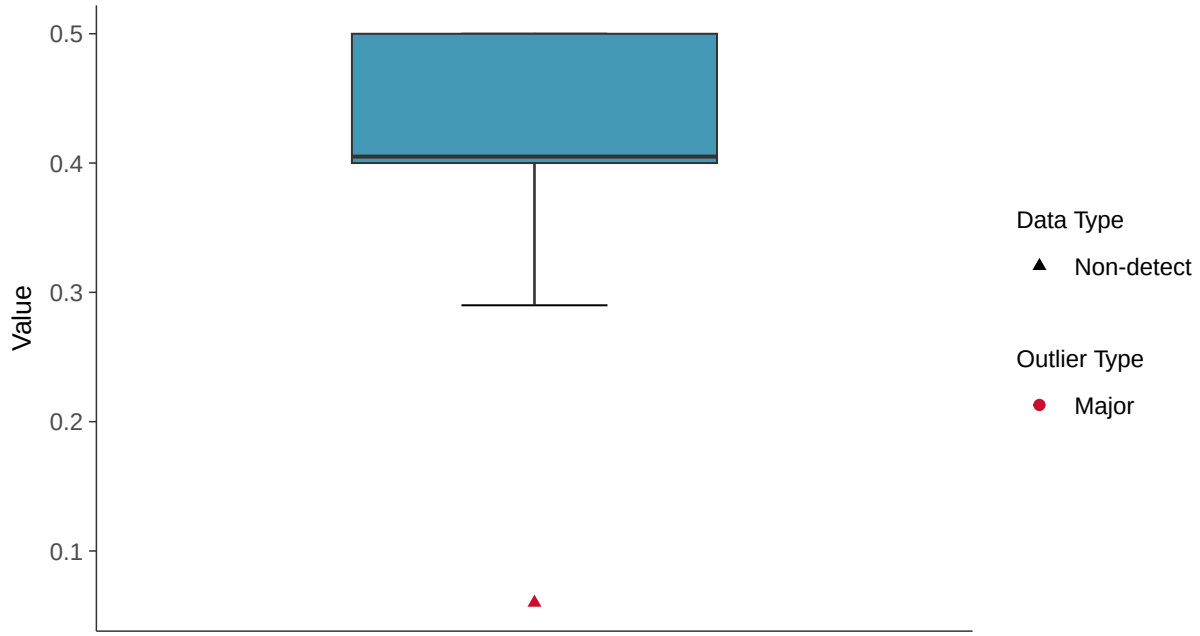
ID: 6_3_106





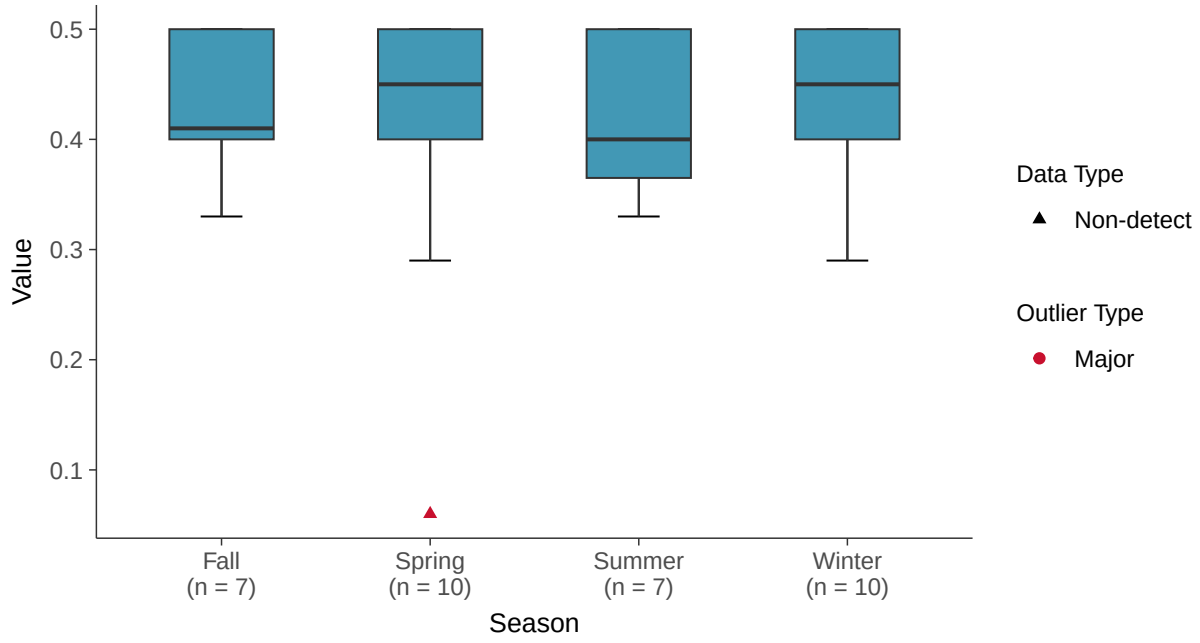
Boxplot

Cadmium, MW-3 (ug/L)



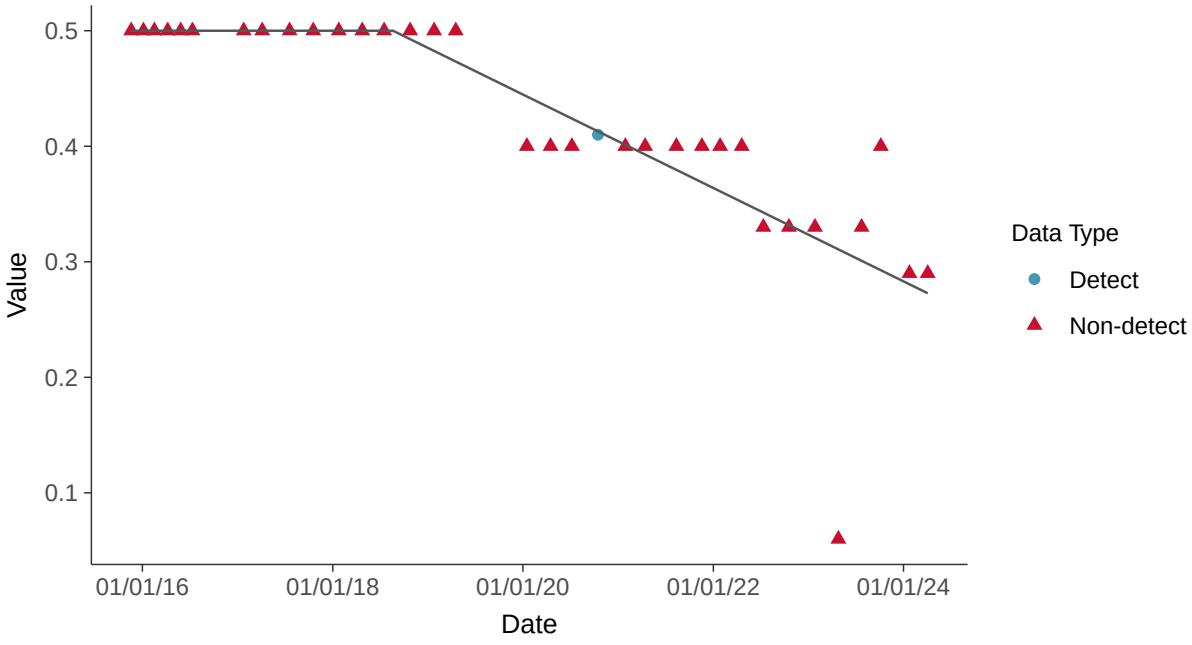
Boxplot by Season

Cadmium, MW-3 (ug/L)



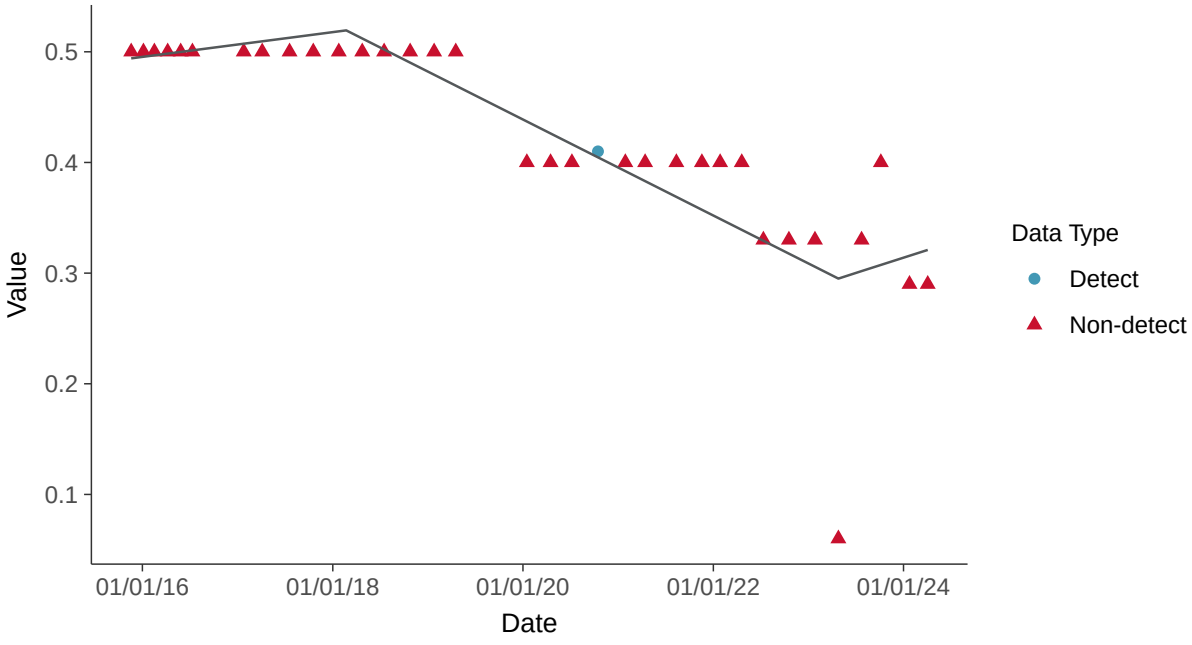
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-3 (ug/L)

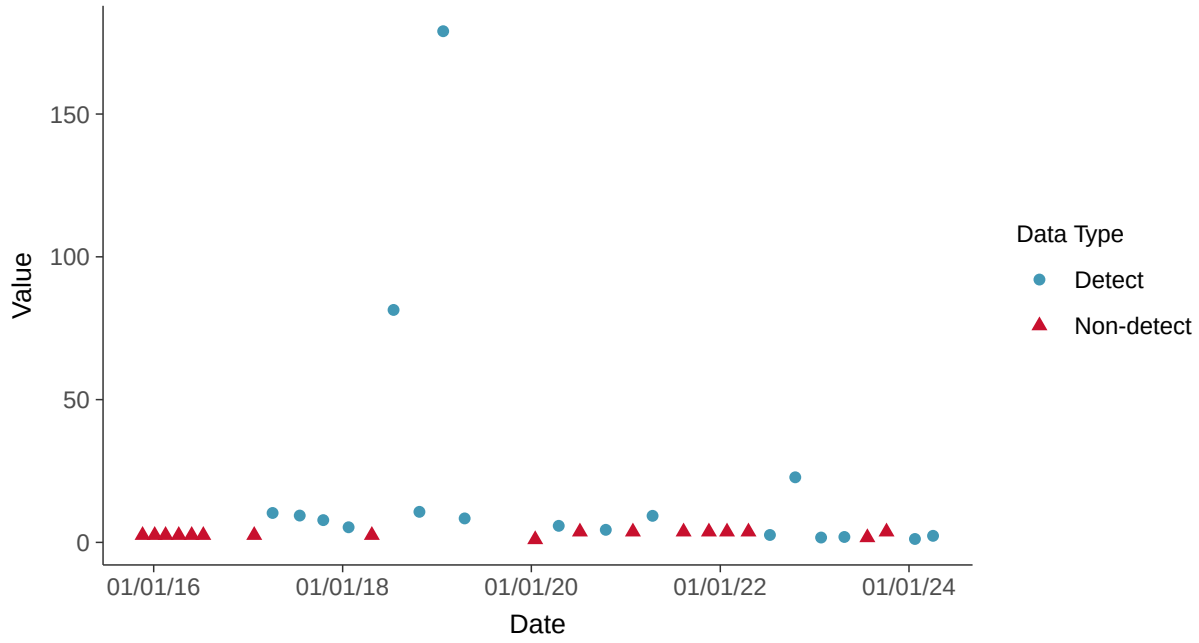


App. IV: Chromium, MW-3

ID: 6_3_109

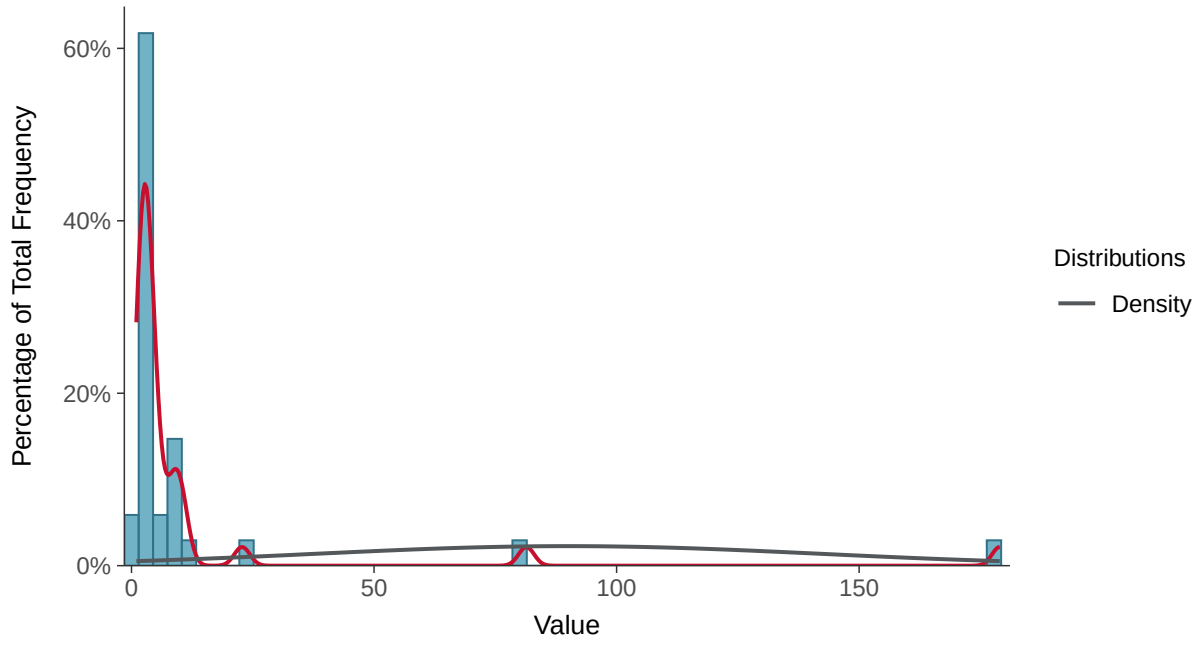
Scatter Plot

Chromium, MW-3 (ug/L)



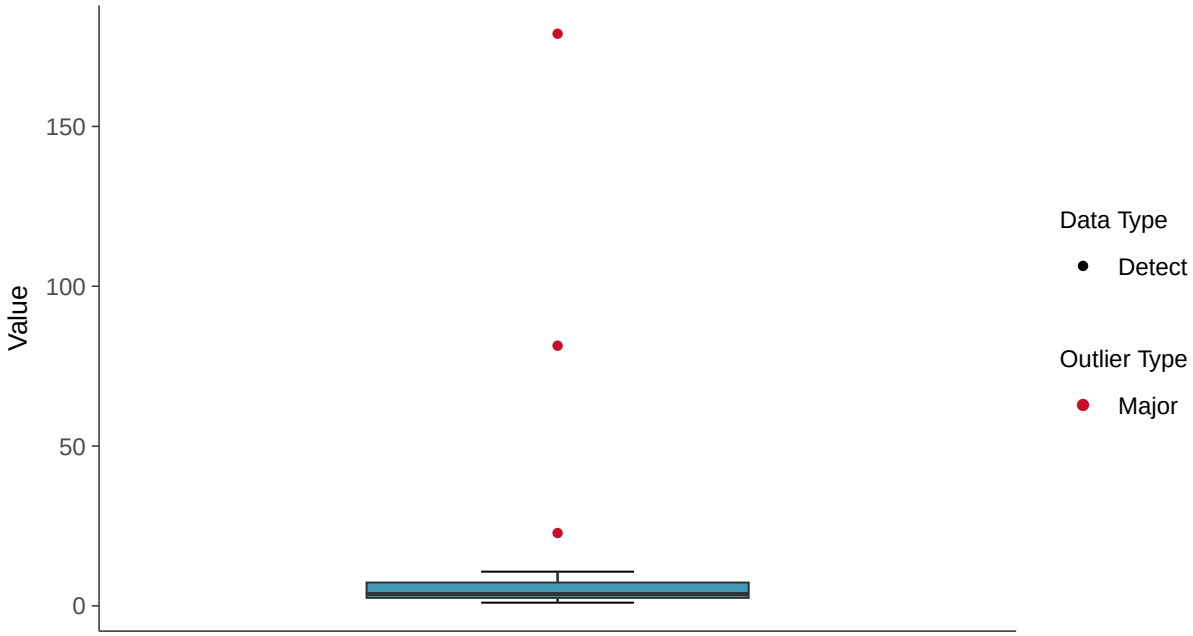
Histogram

Chromium, MW-3 (ug/L)



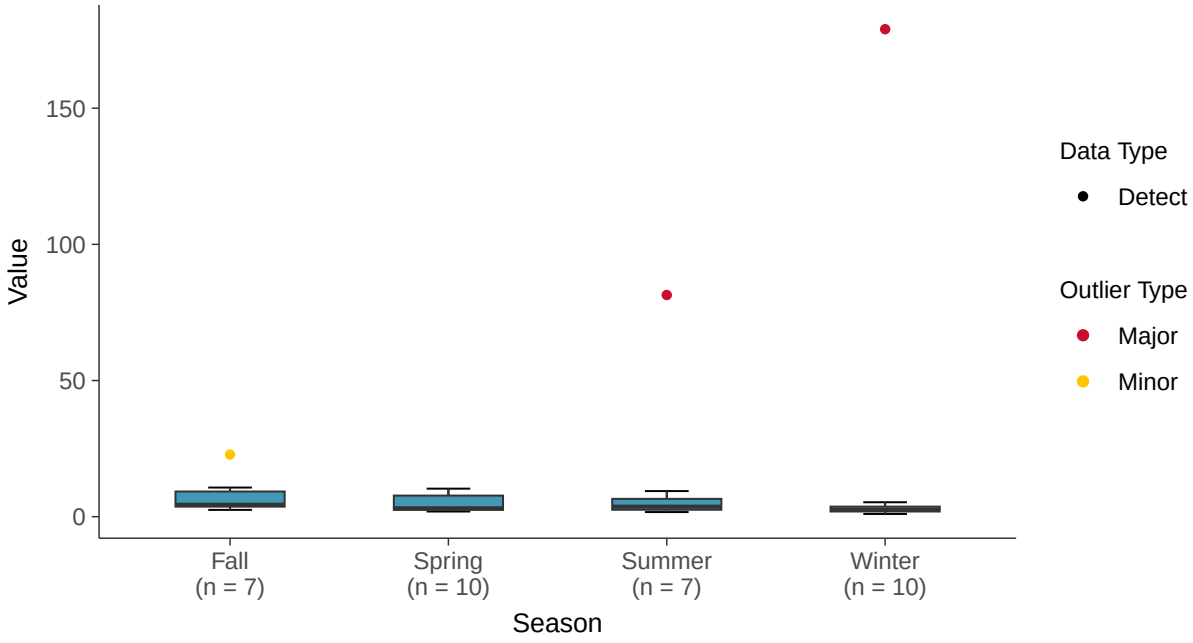
Boxplot

Chromium, MW-3 (ug/L)



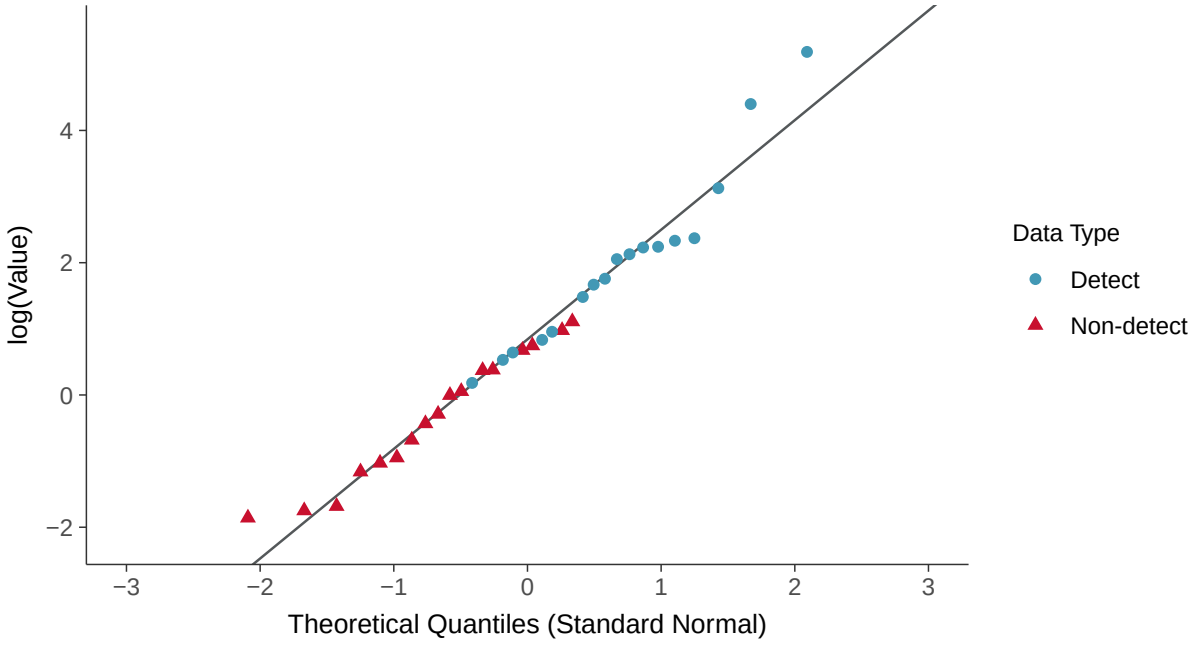
Boxplot by Season

Chromium, MW-3 (ug/L)



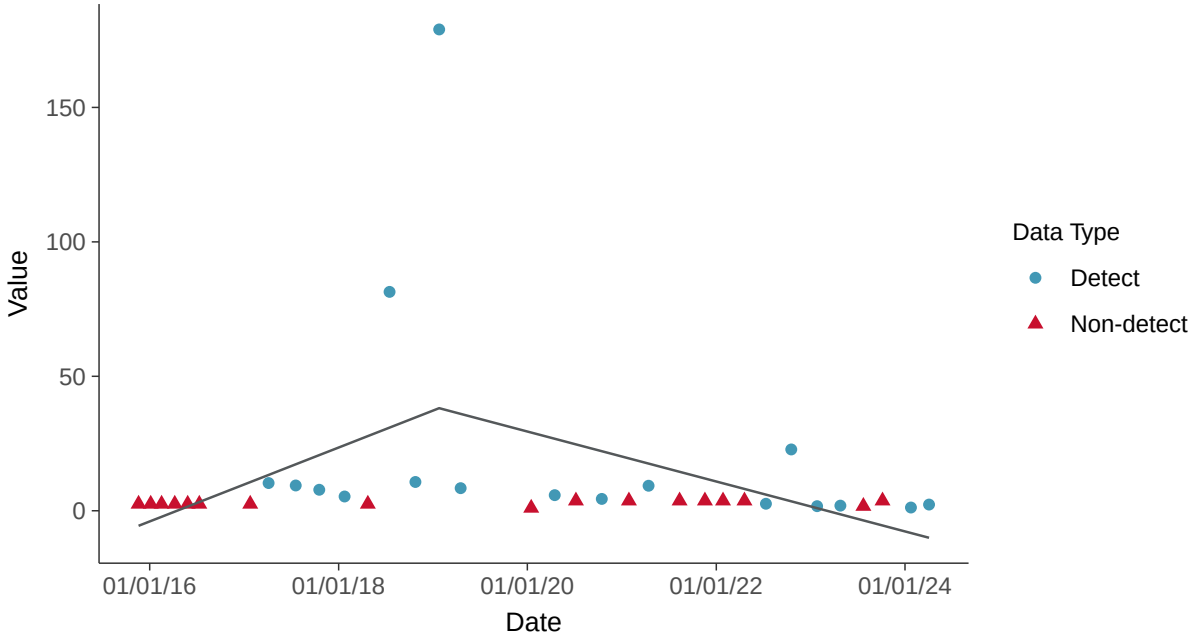
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-3 (ug/L)



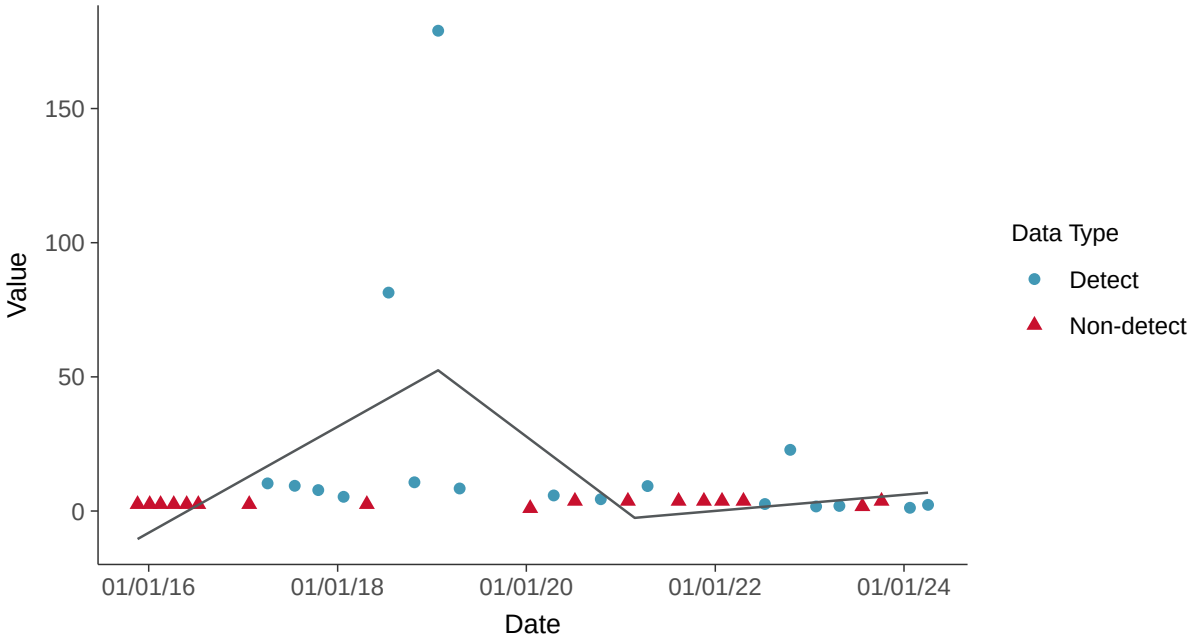
Trend Regression: Piecewise Linear-Linear

Chromium, MW-3 (ug/L)



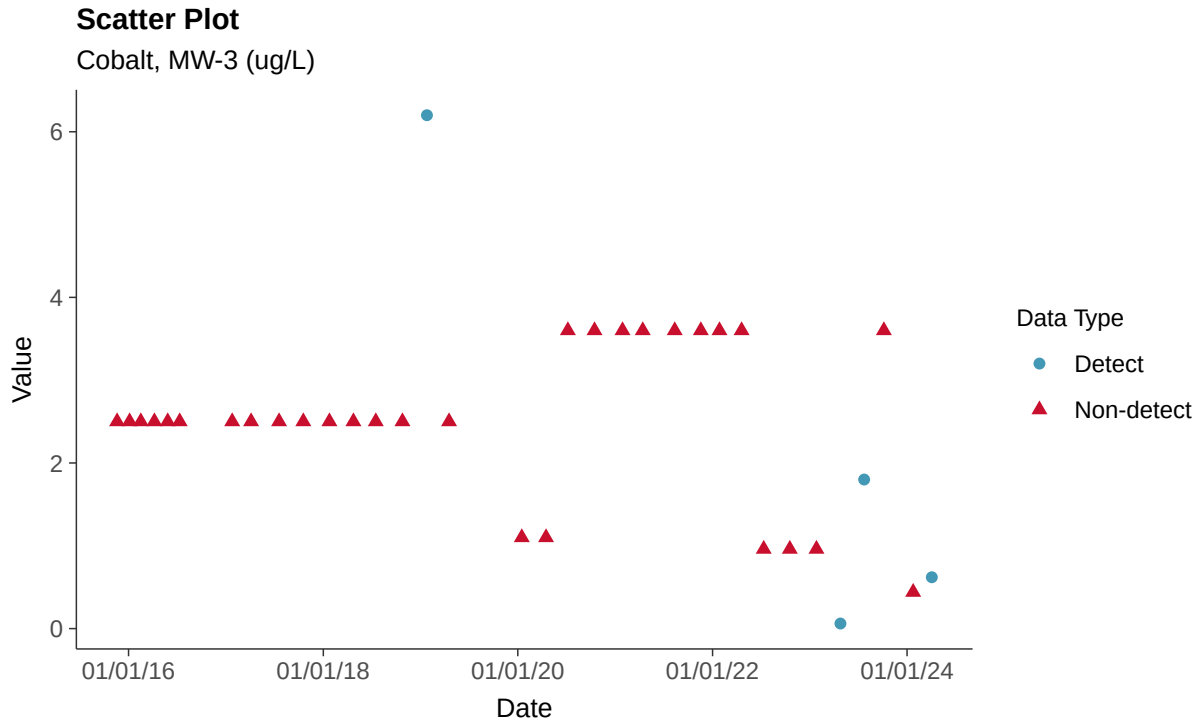
Trend Regression: Piecewise Linear-Linear-Linear

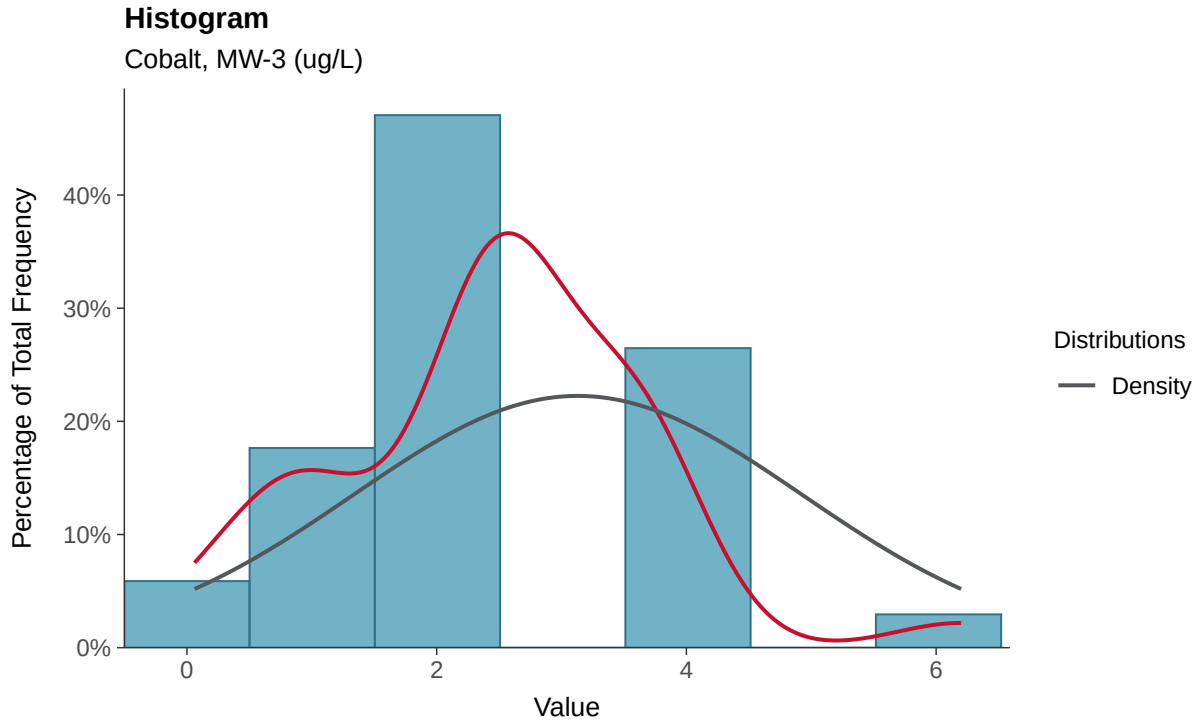
Chromium, MW-3 (ug/L)



App. IV: Cobalt, MW-3

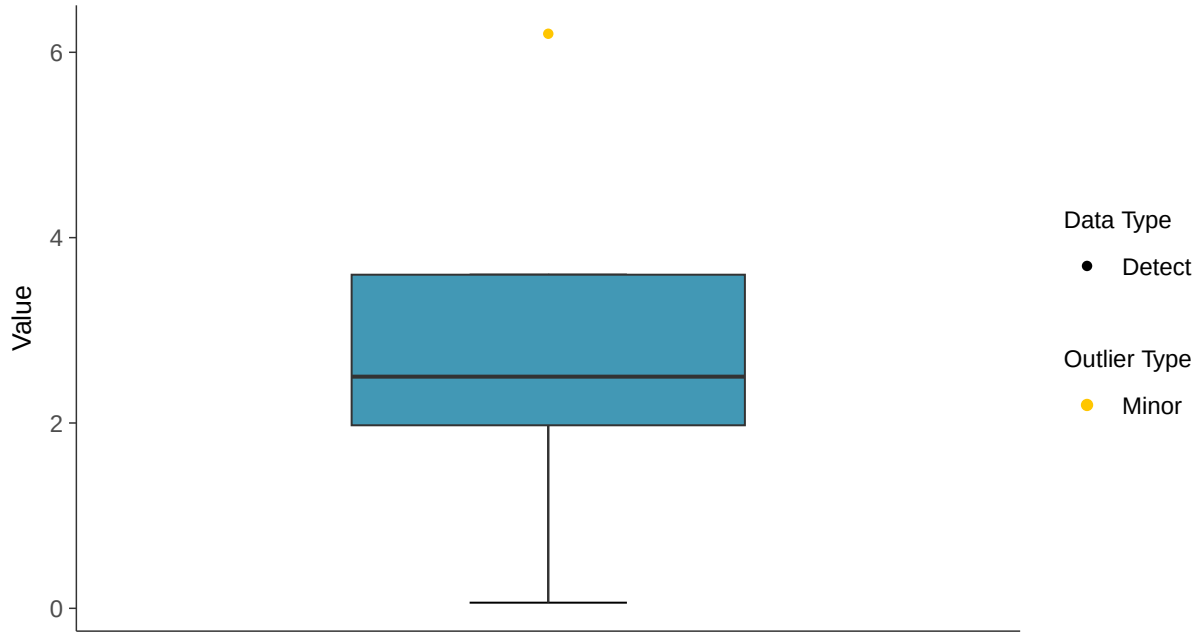
ID: 6_3_110





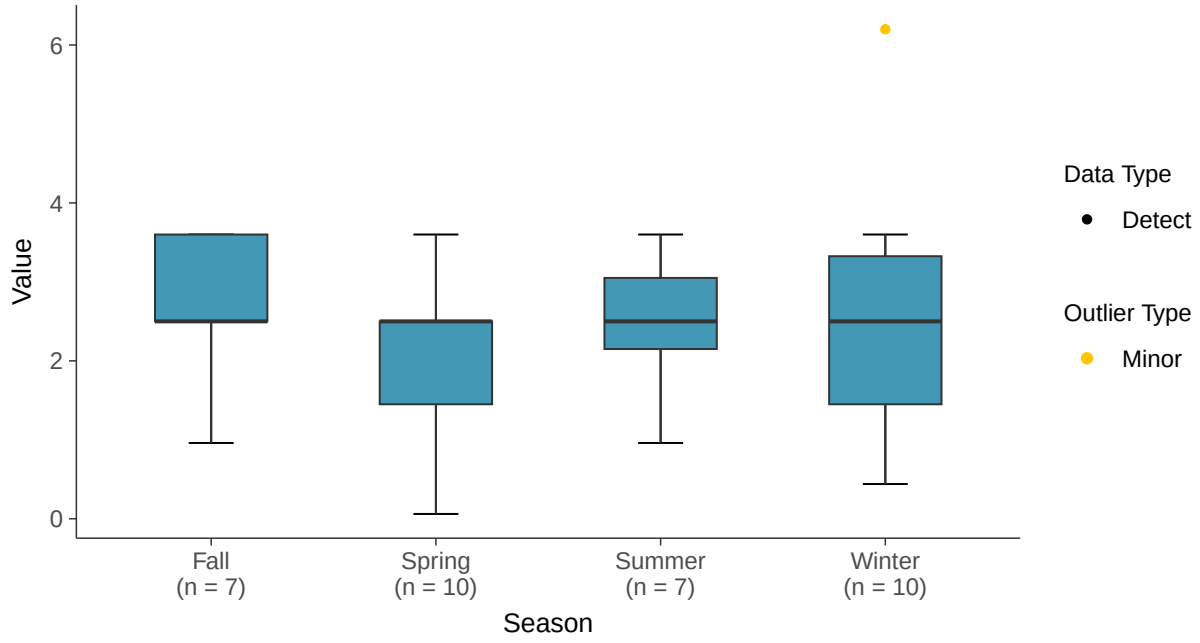
Boxplot

Cobalt, MW-3 (ug/L)



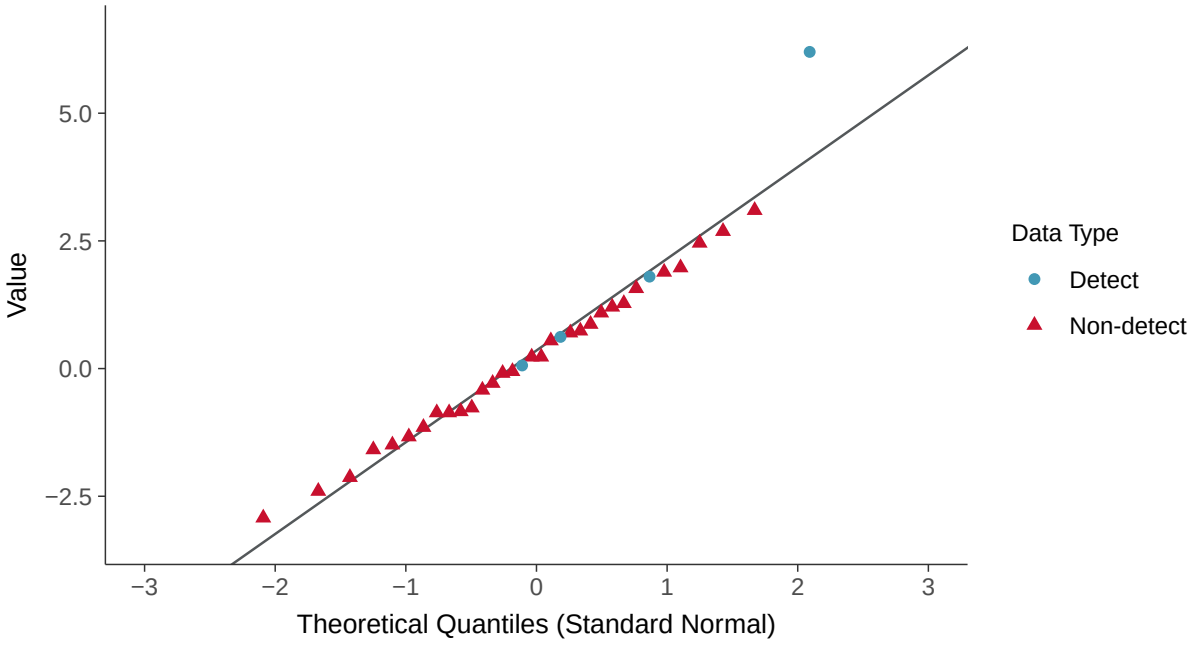
Boxplot by Season

Cobalt, MW-3 (ug/L)



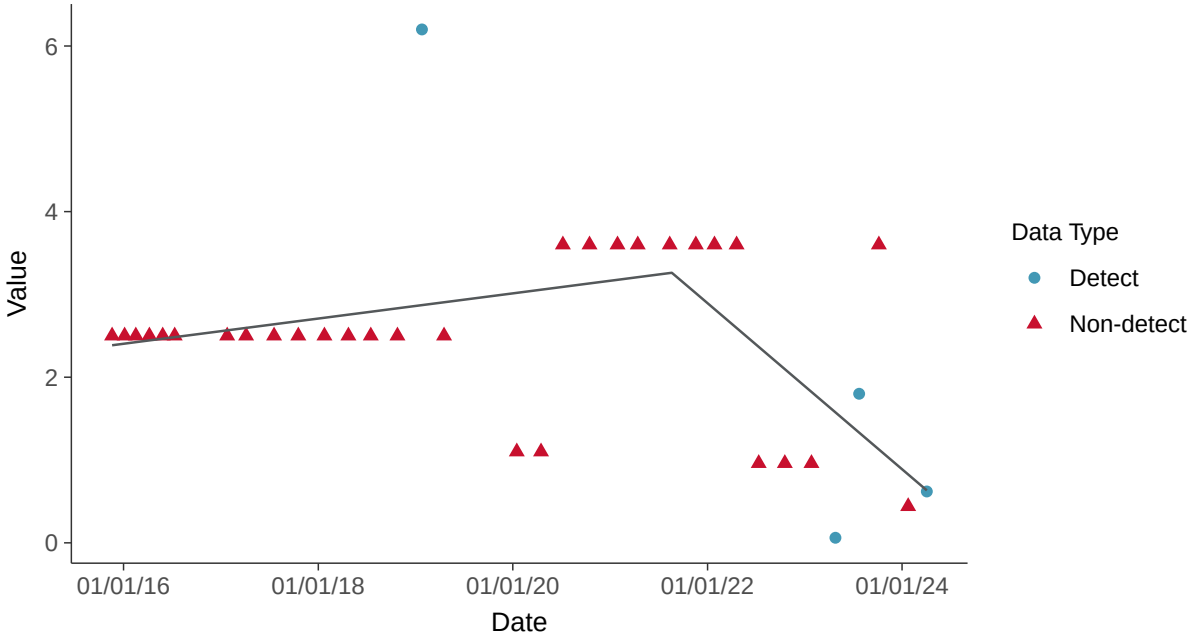
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-3 (ug/L)



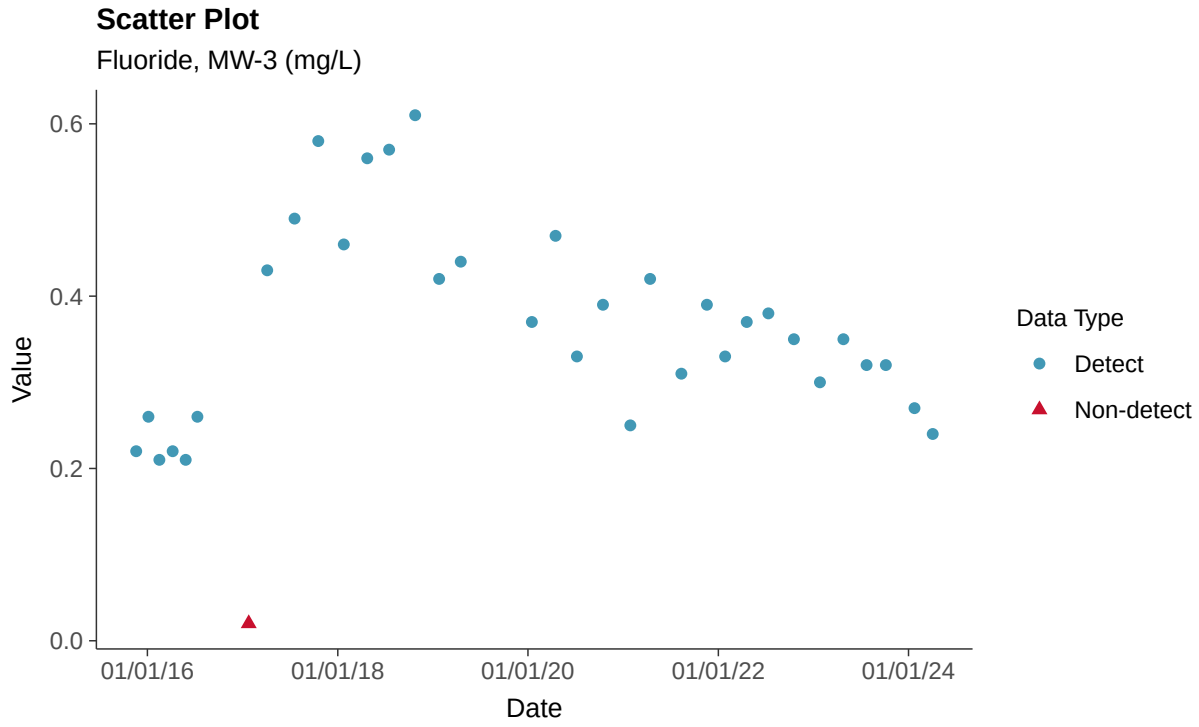
Trend Regression: Piecewise Linear-Linear

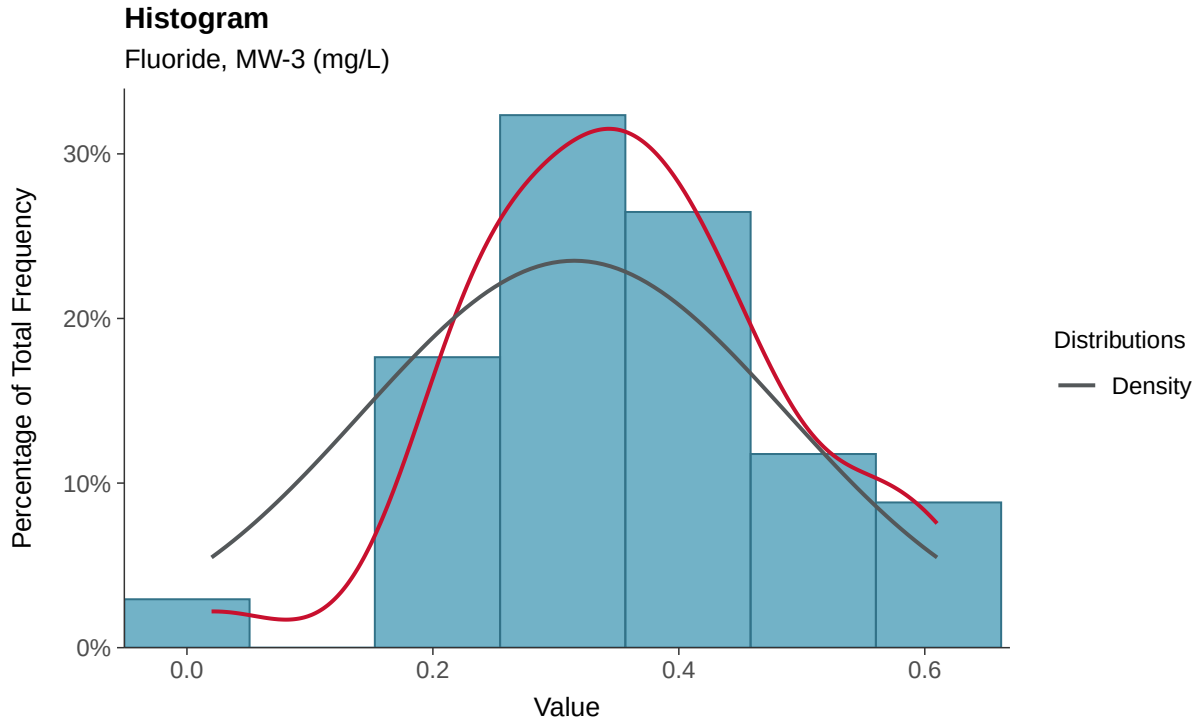
Cobalt, MW-3 (ug/L)



App. IV: Fluoride, MW-3

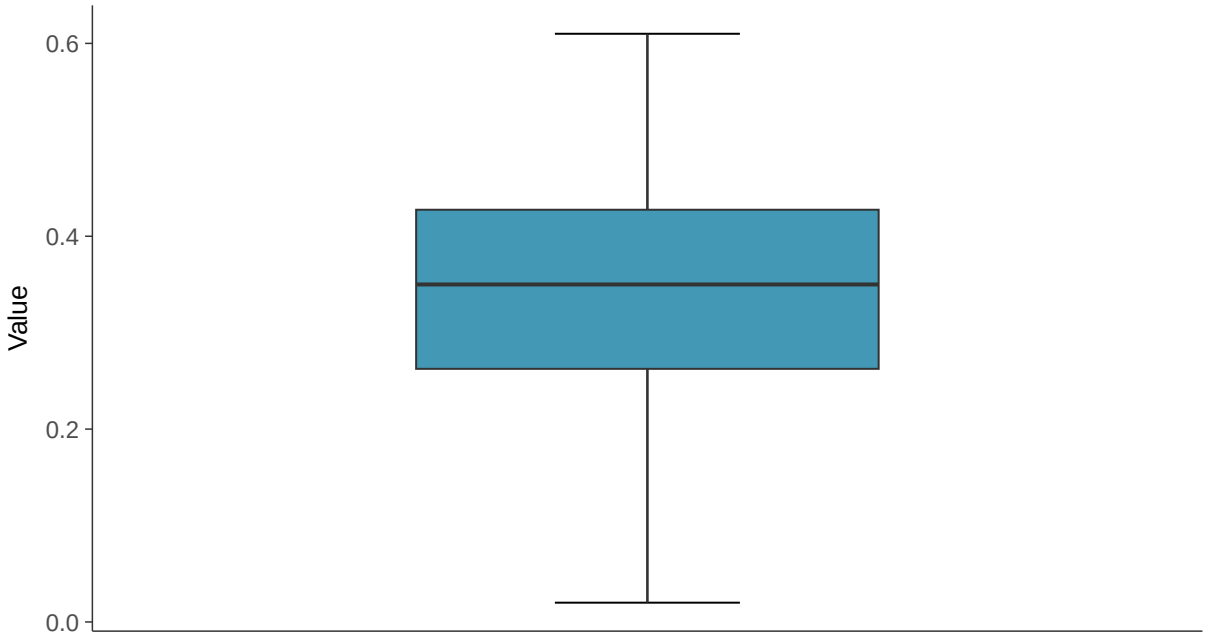
ID: 6_3_112





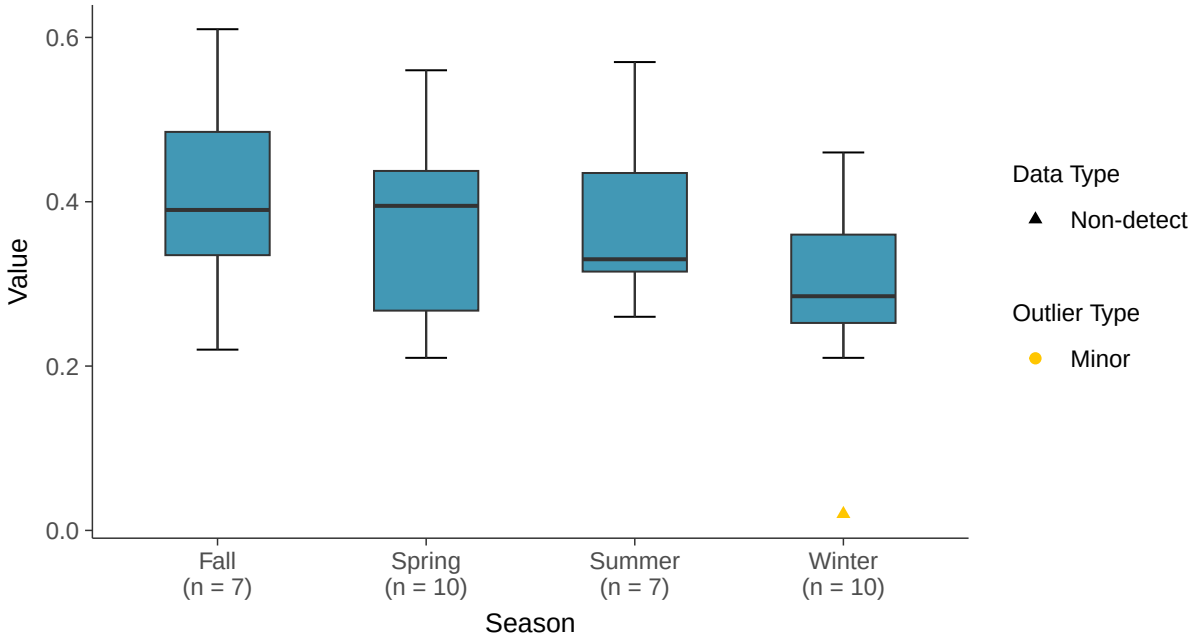
Boxplot

Fluoride, MW-3 (mg/L)



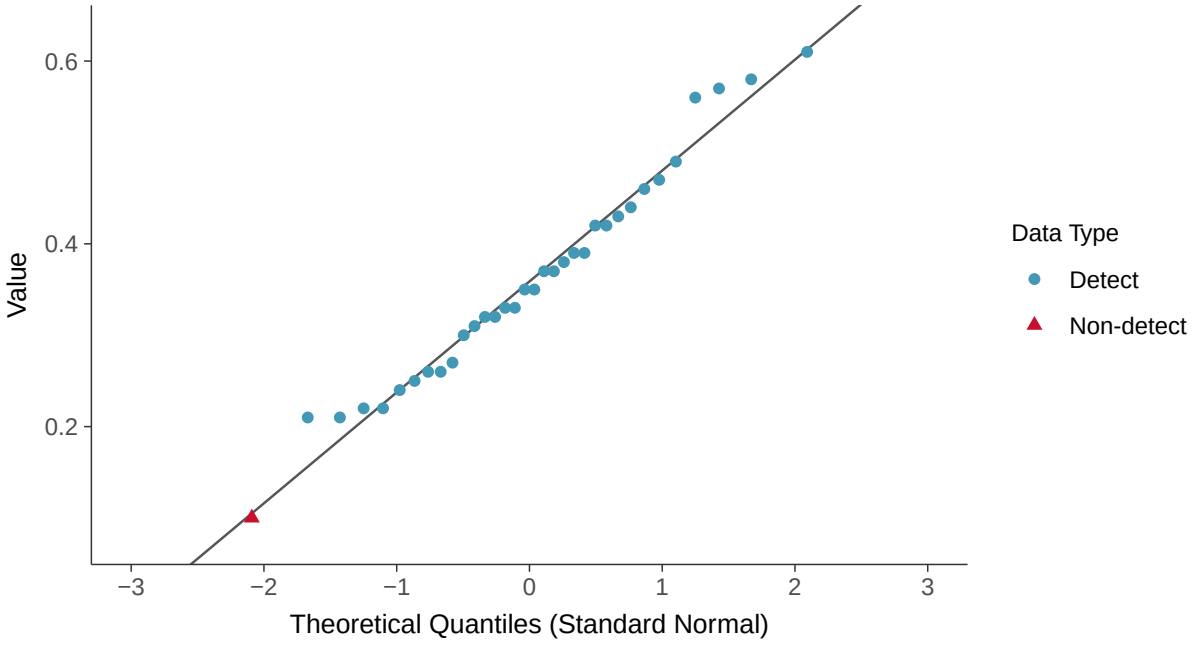
Boxplot by Season

Fluoride, MW-3 (mg/L)



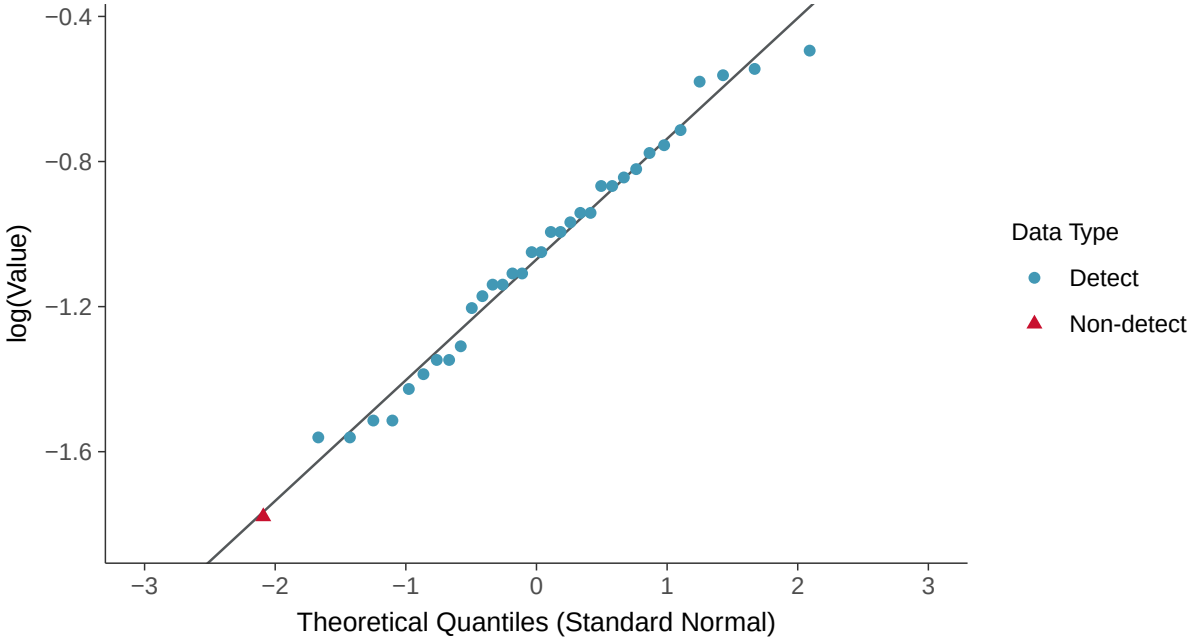
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



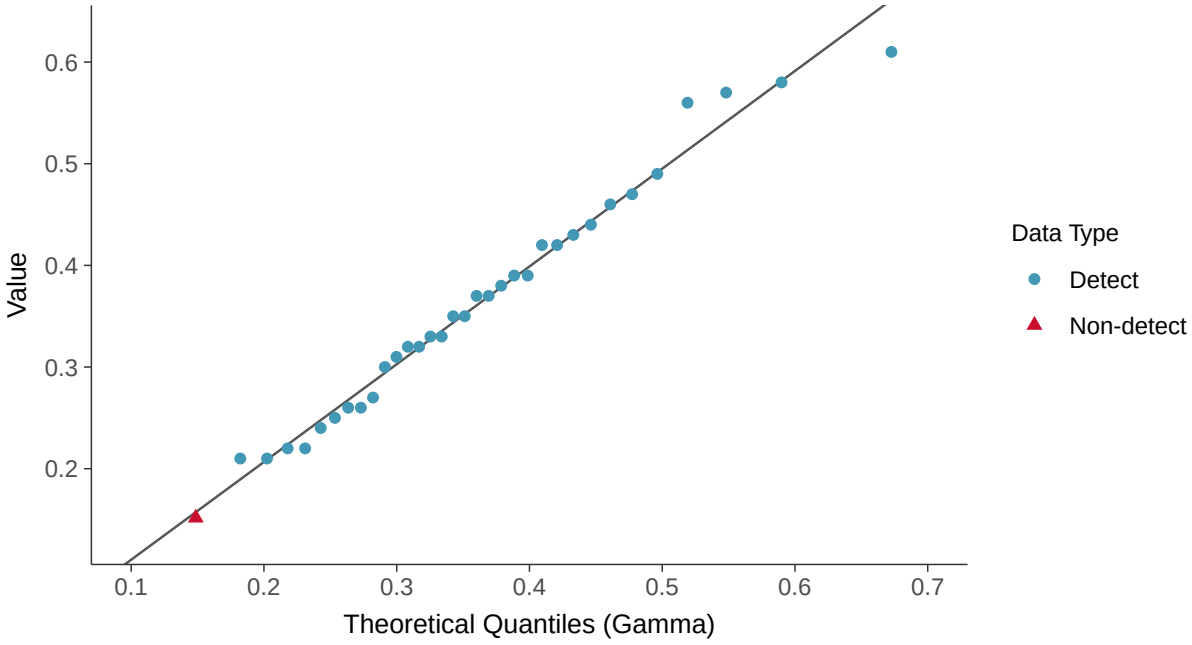
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



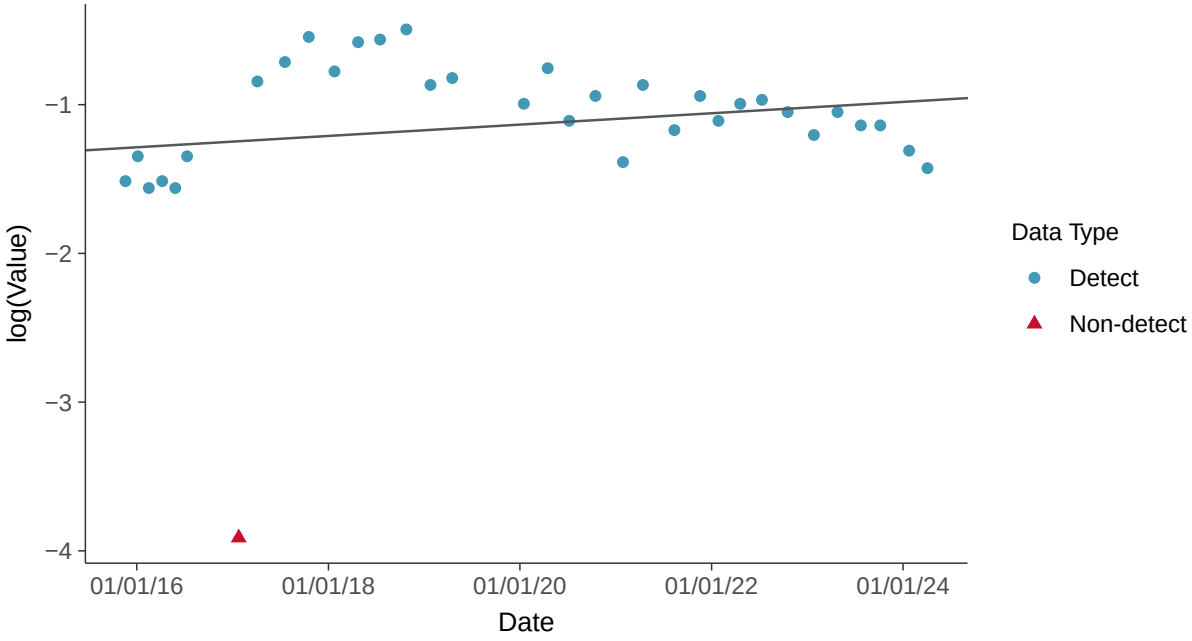
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



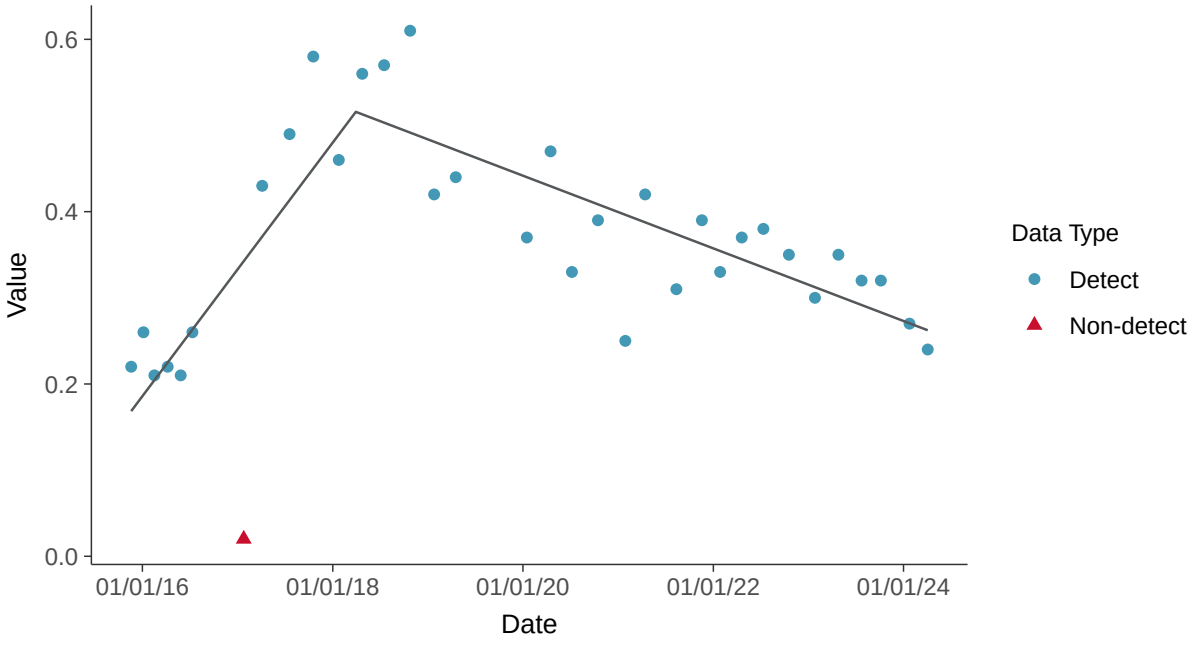
Trend Regression: Lognormal MLE

Fluoride, MW-3 (mg/L)



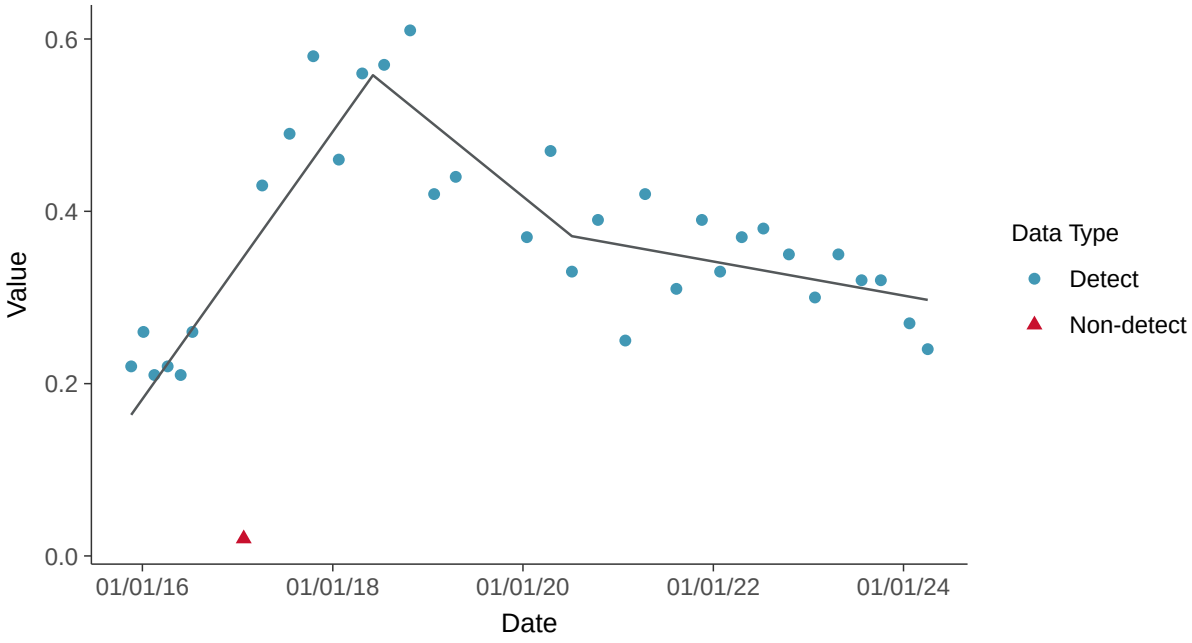
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-3 (mg/L)



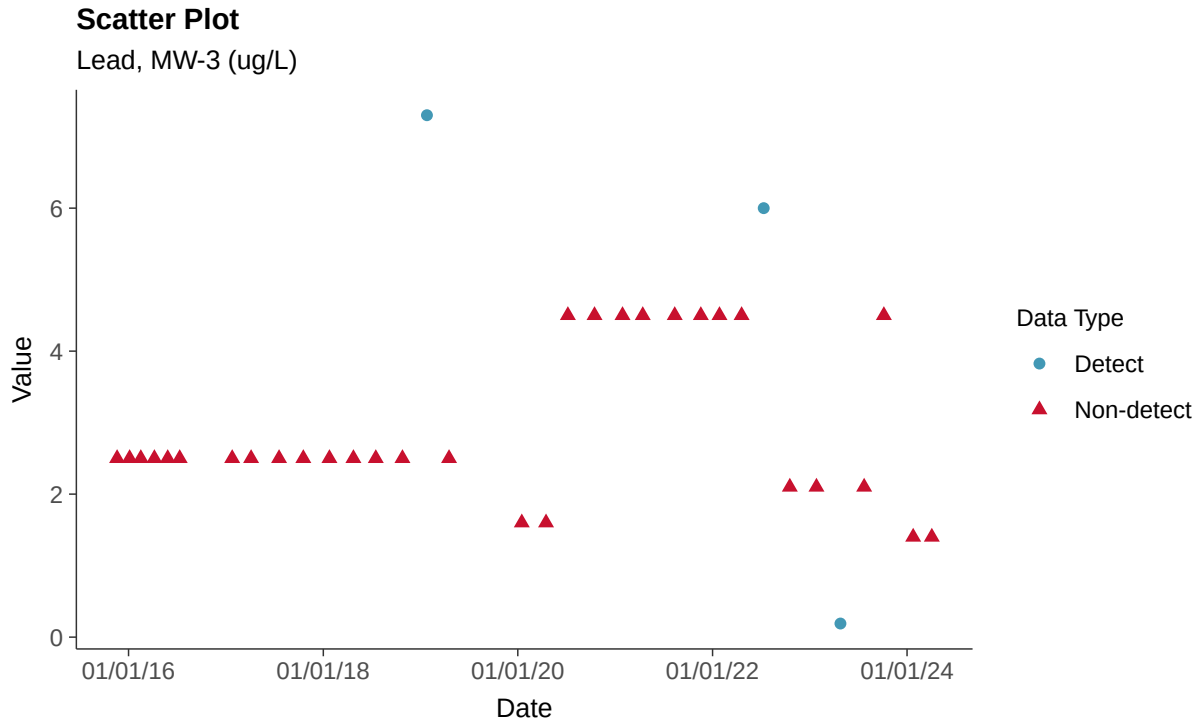
Trend Regression: Piecewise Linear-Linear-Linear

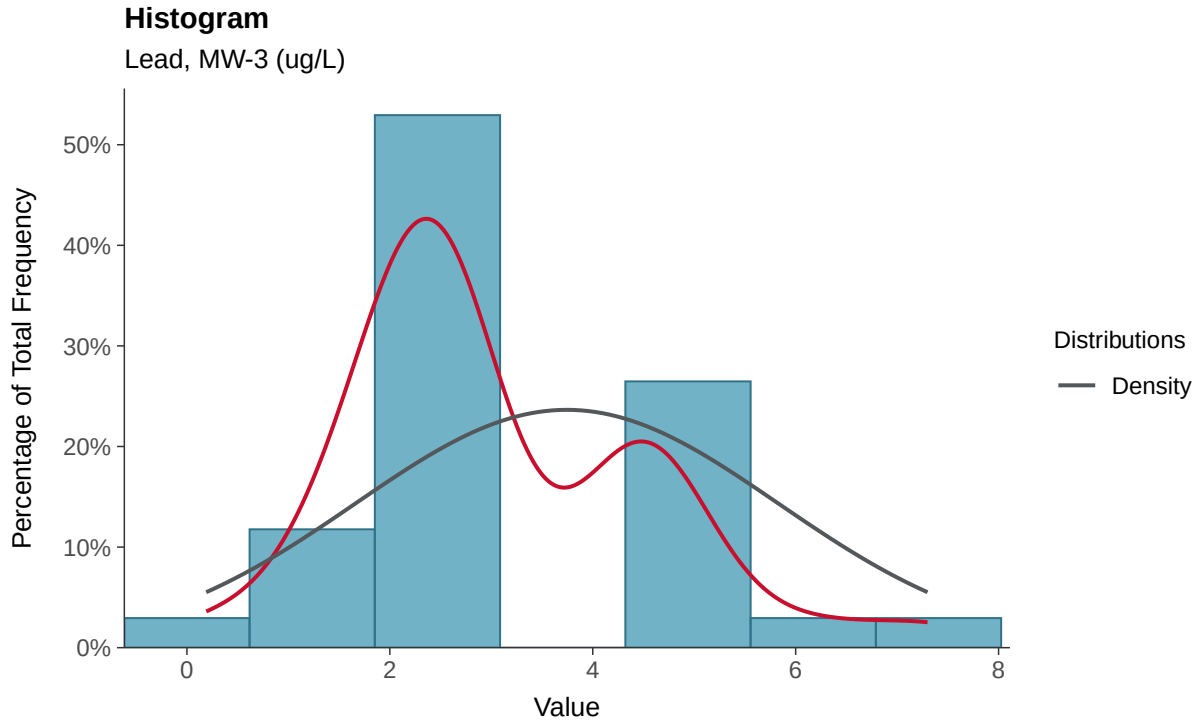
Fluoride, MW-3 (mg/L)



App. IV: Lead, MW-3

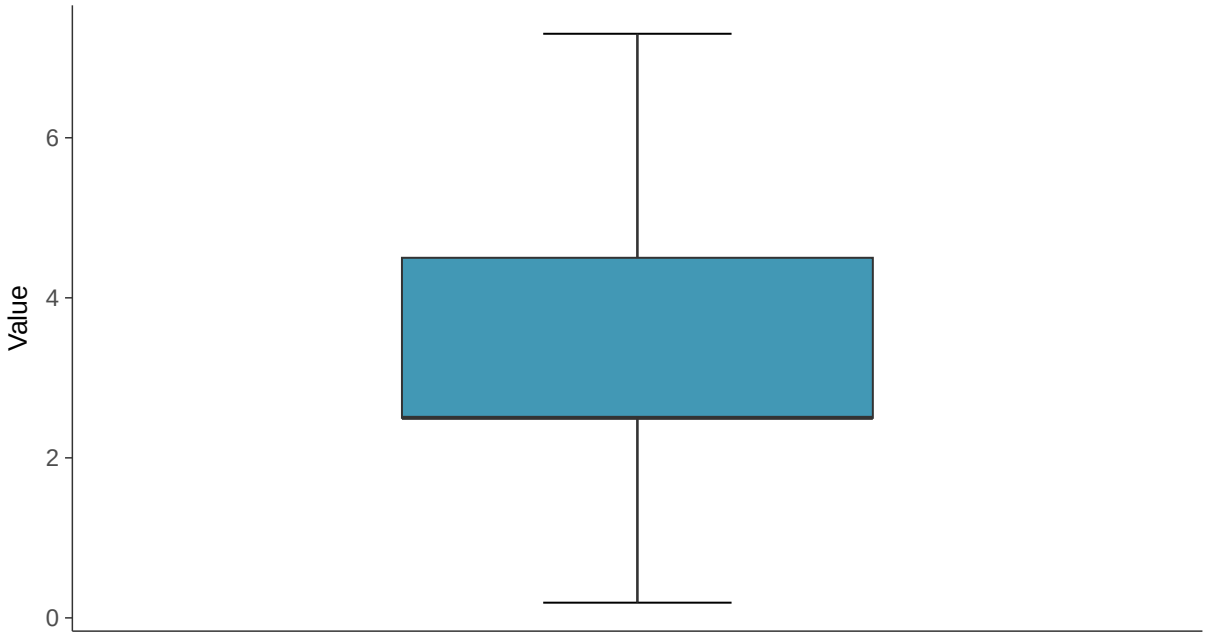
ID: 6_3_113





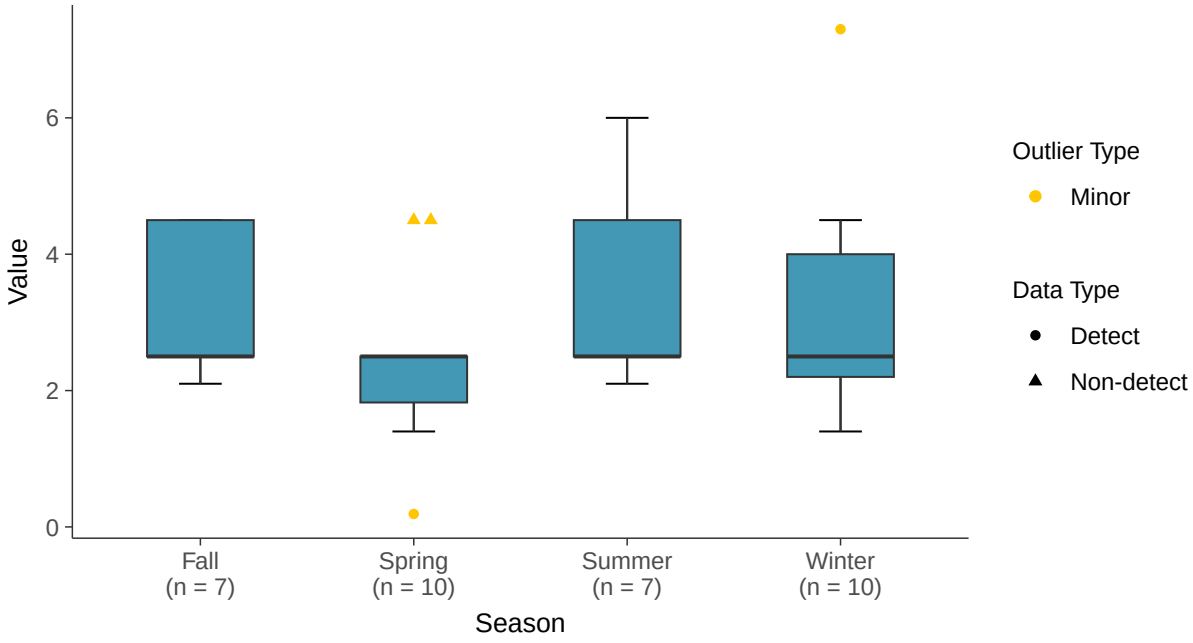
Boxplot

Lead, MW-3 (ug/L)



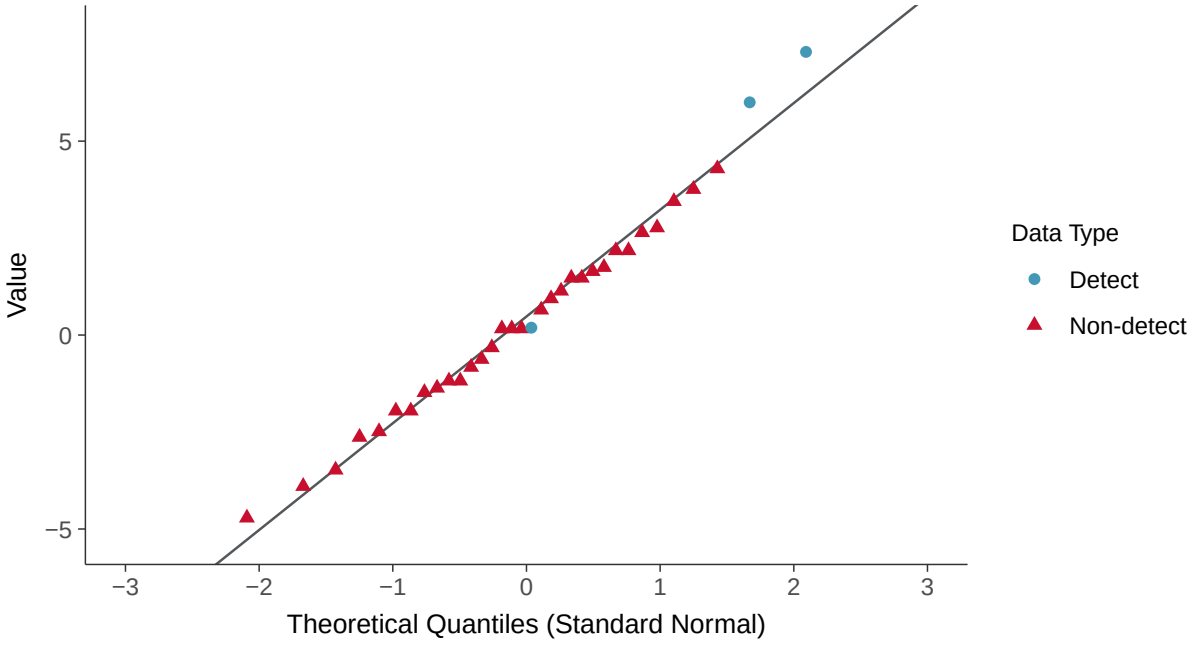
Boxplot by Season

Lead, MW-3 (ug/L)



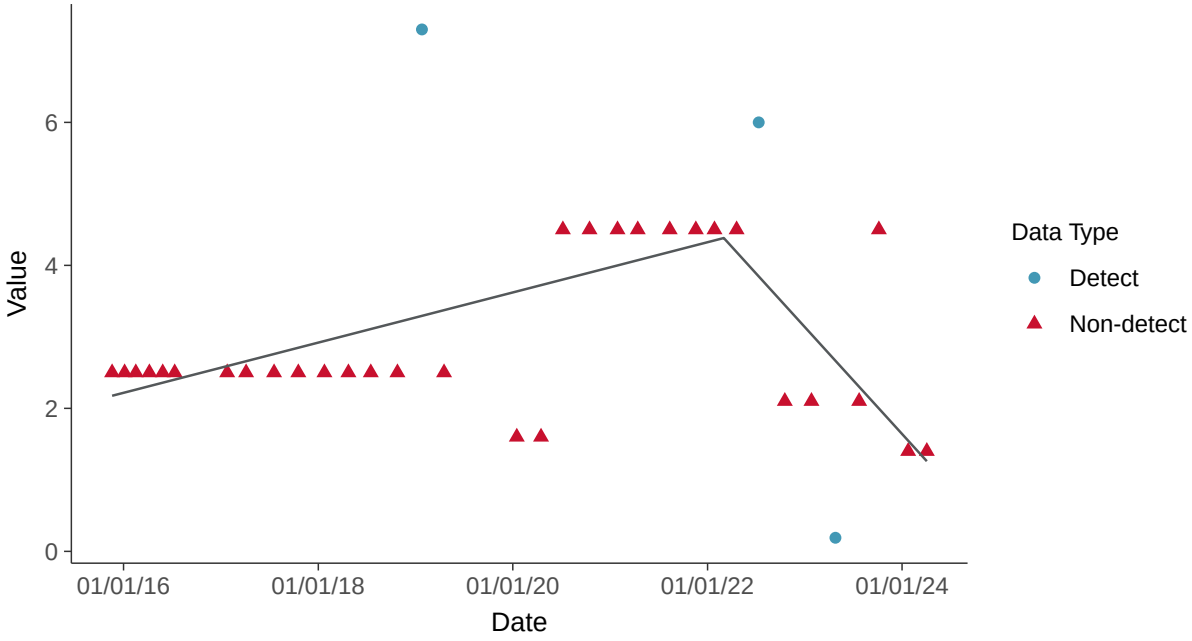
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-3 (ug/L)



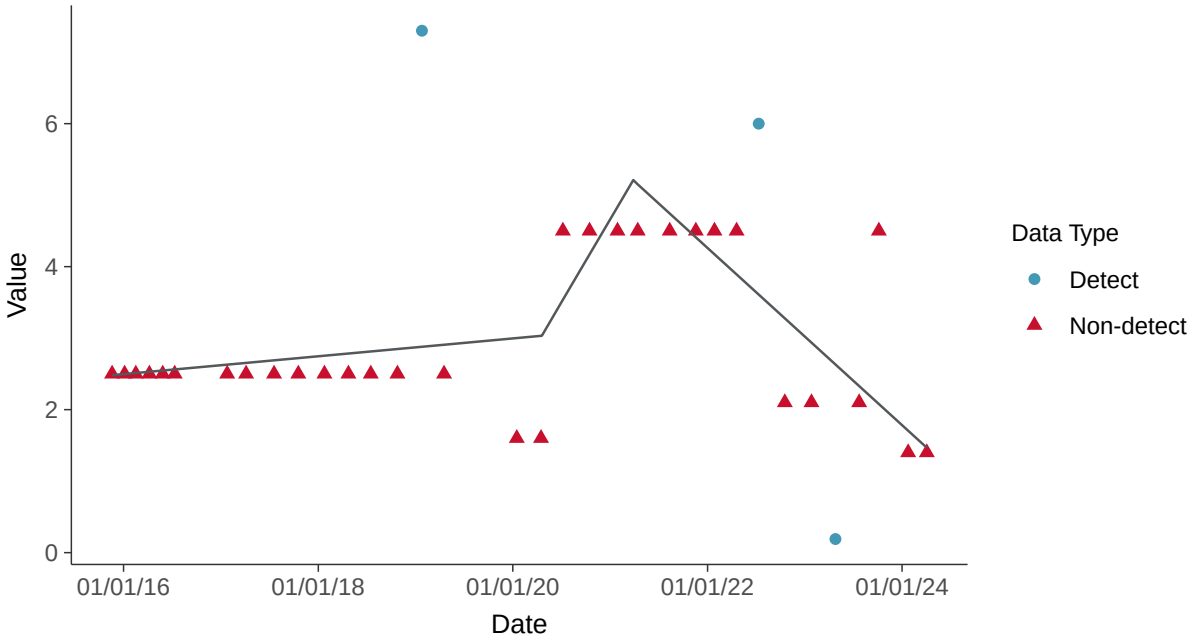
Trend Regression: Piecewise Linear-Linear

Lead, MW-3 (ug/L)



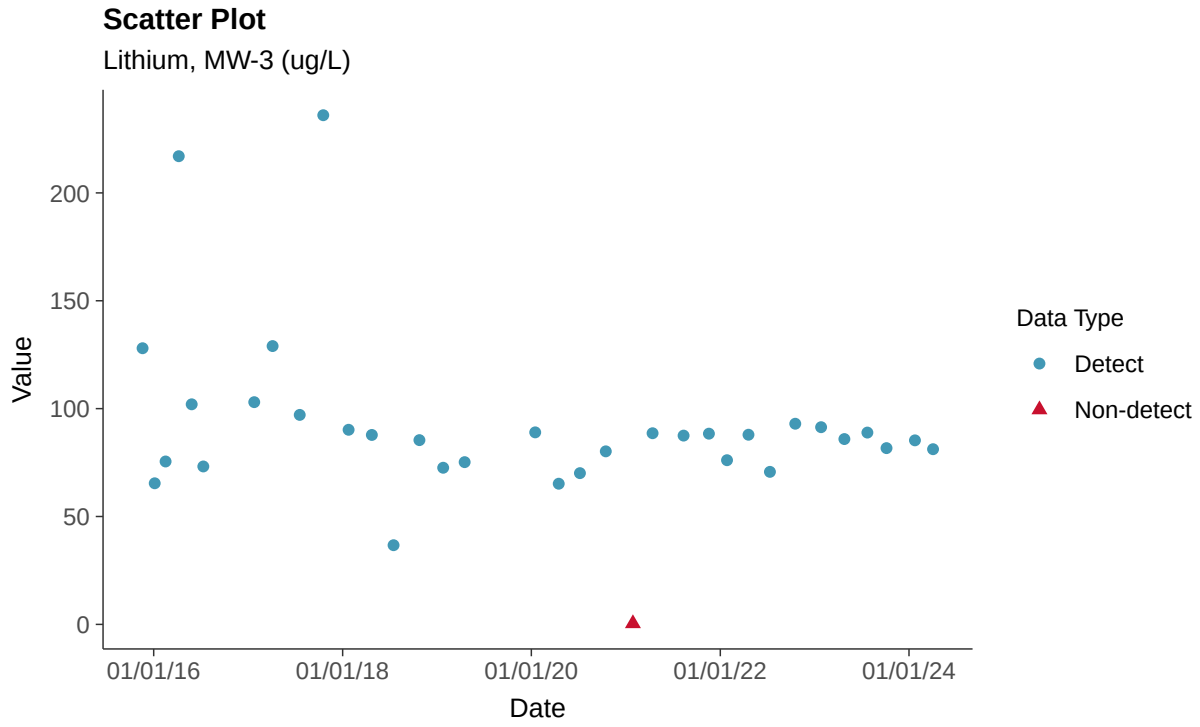
Trend Regression: Piecewise Linear-Linear-Linear

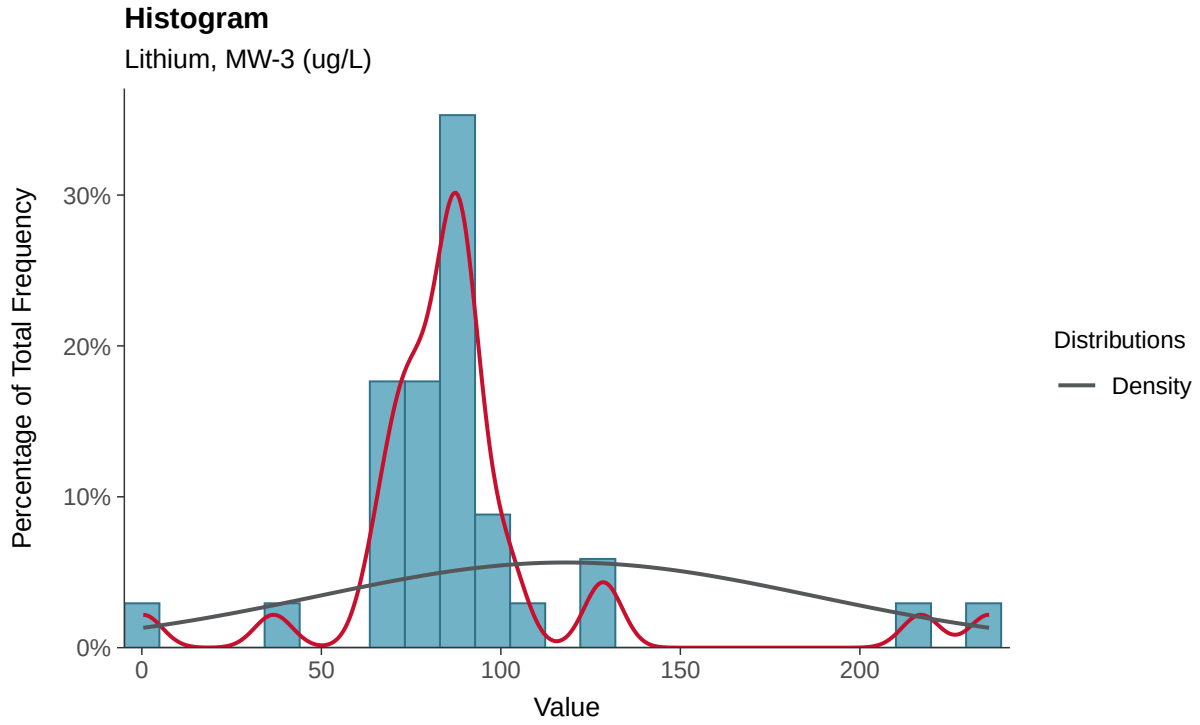
Lead, MW-3 (ug/L)



App. IV: Lithium, MW-3

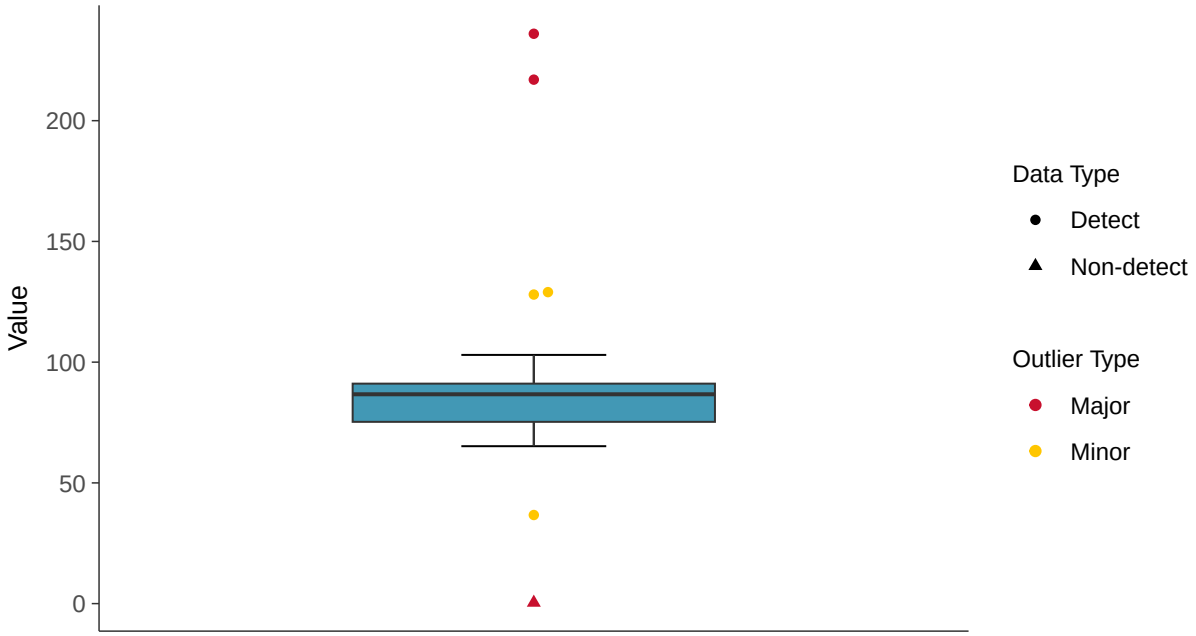
ID: 6_3_114





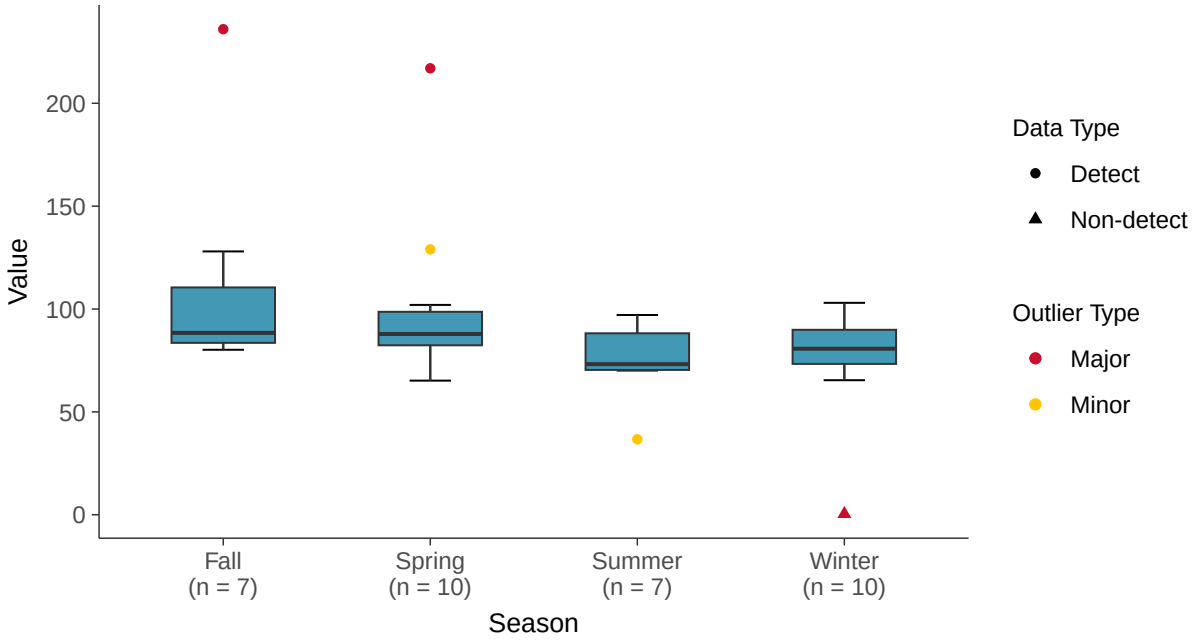
Boxplot

Lithium, MW-3 (ug/L)



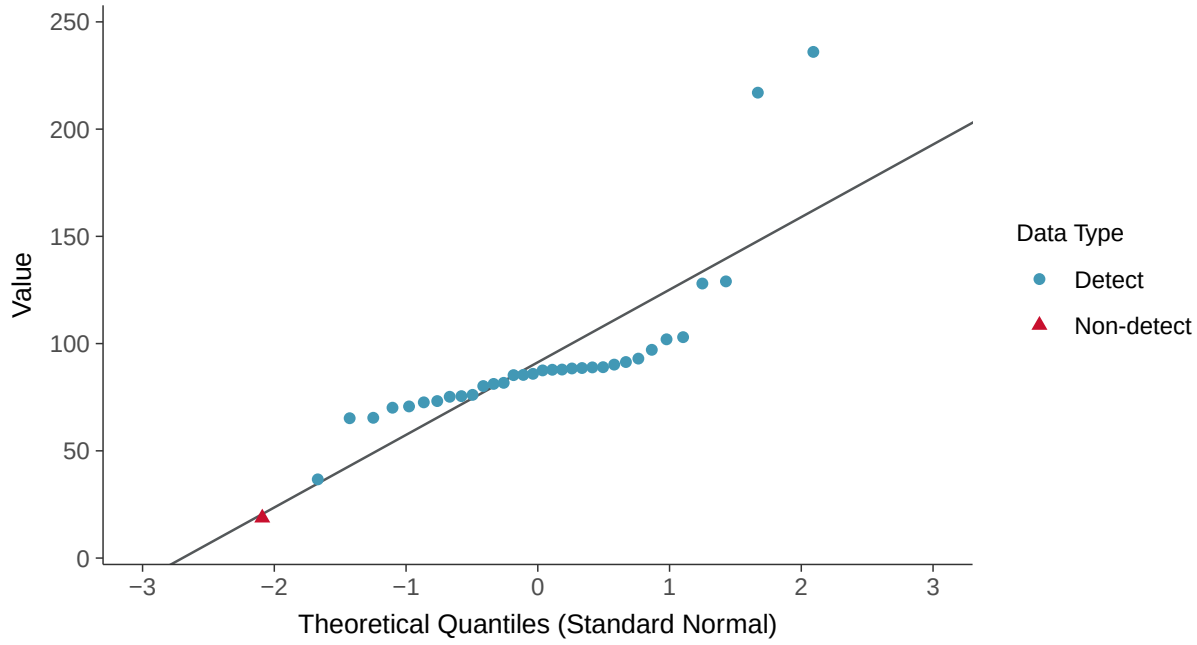
Boxplot by Season

Lithium, MW-3 (ug/L)



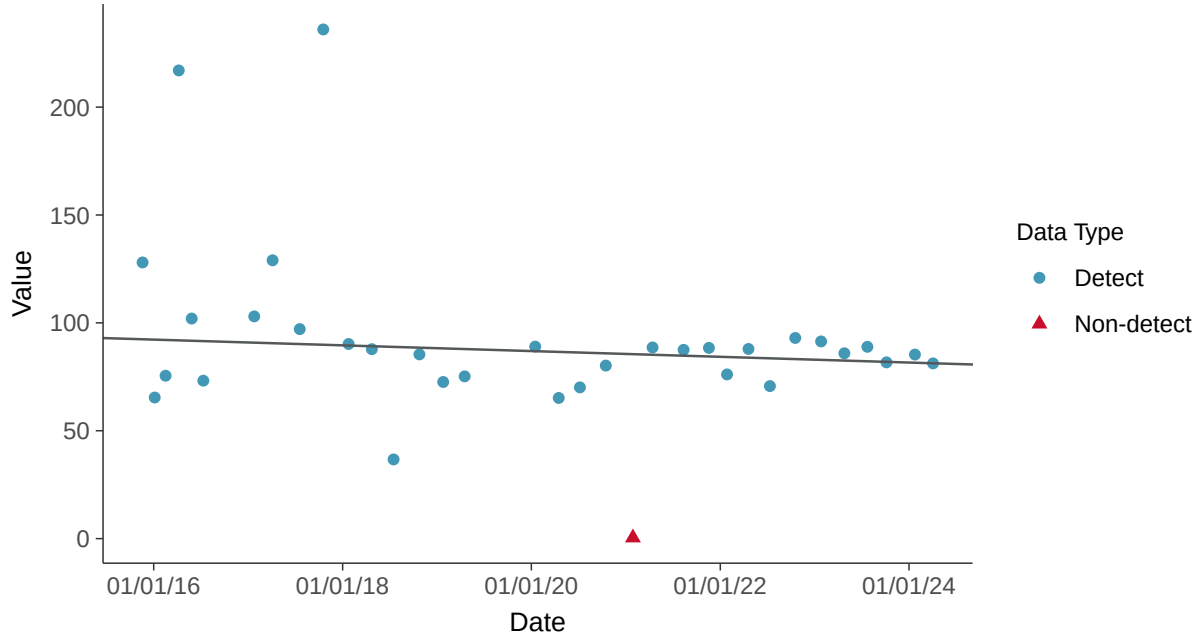
Normal Q-Q plot using ROS Imputed Estimates

Lithium, MW-3 (ug/L)



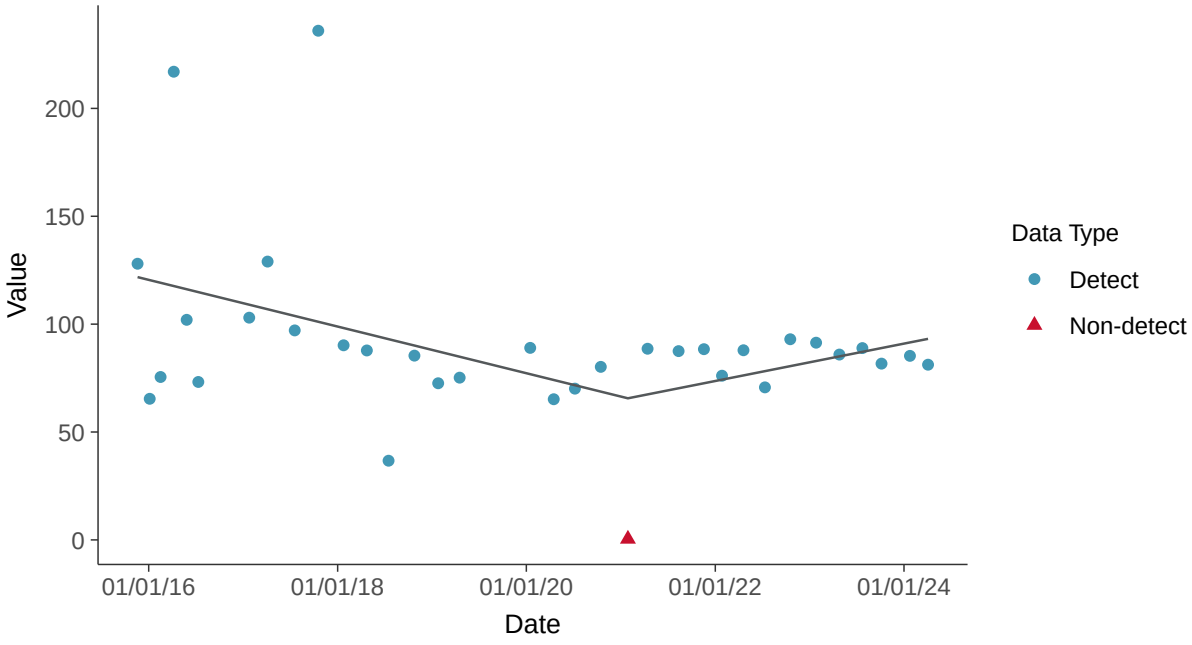
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-3 (ug/L)



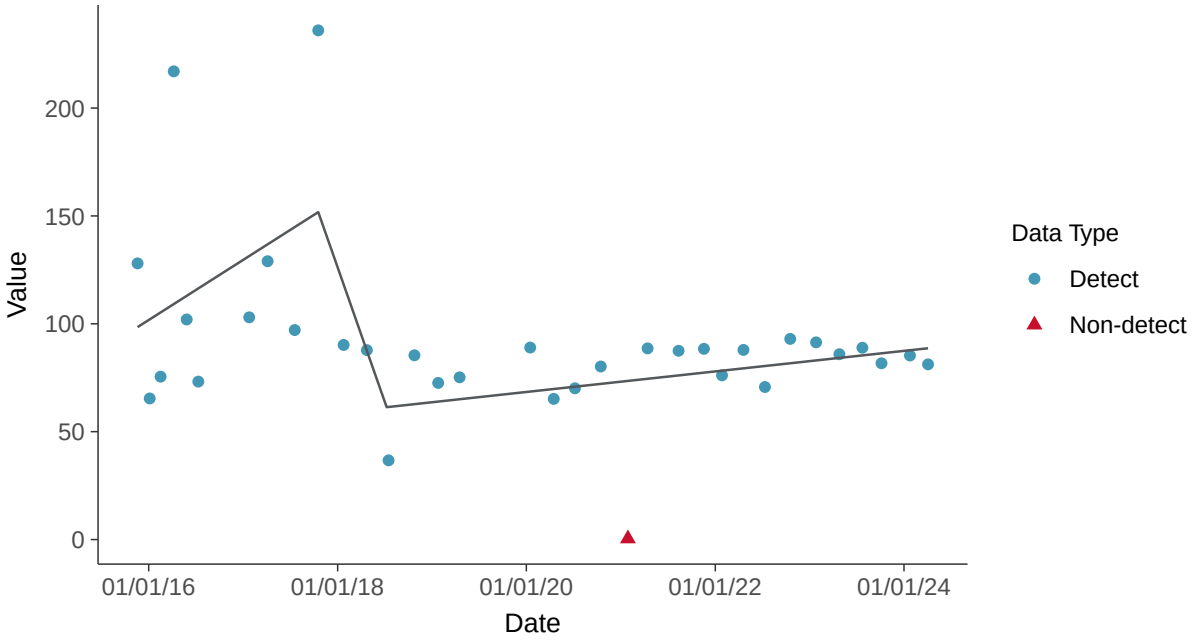
Trend Regression: Piecewise Linear-Linear

Lithium, MW-3 (ug/L)



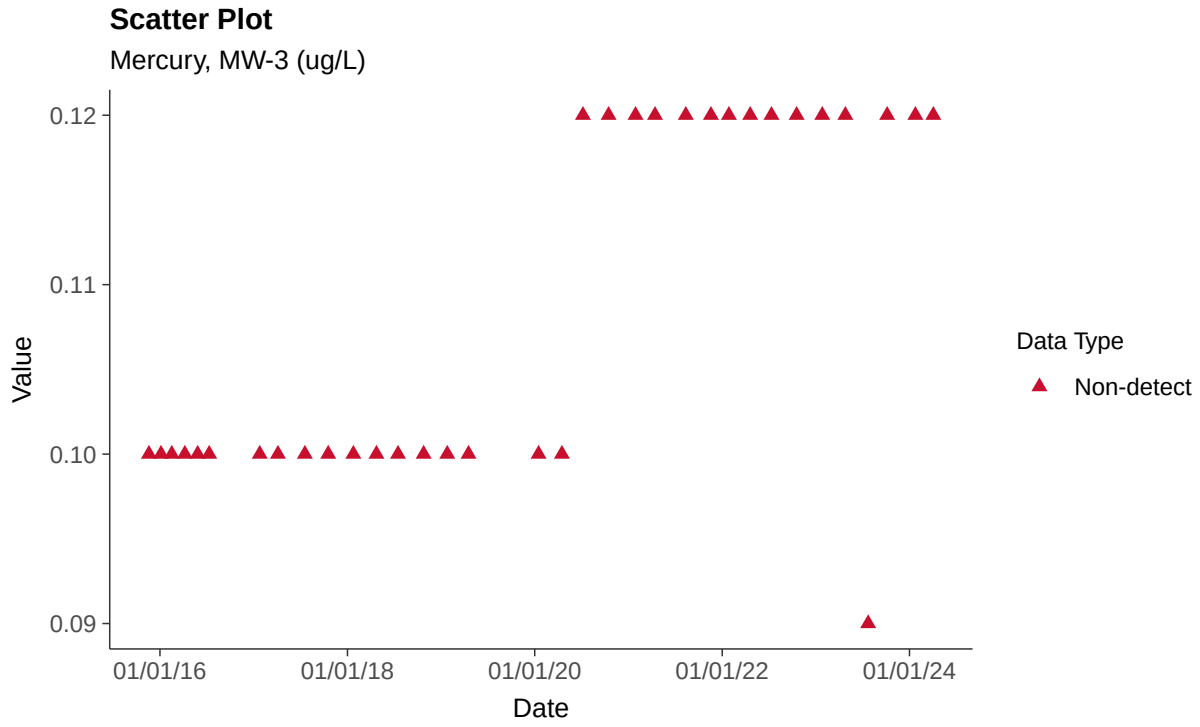
Trend Regression: Piecewise Linear-Linear-Linear

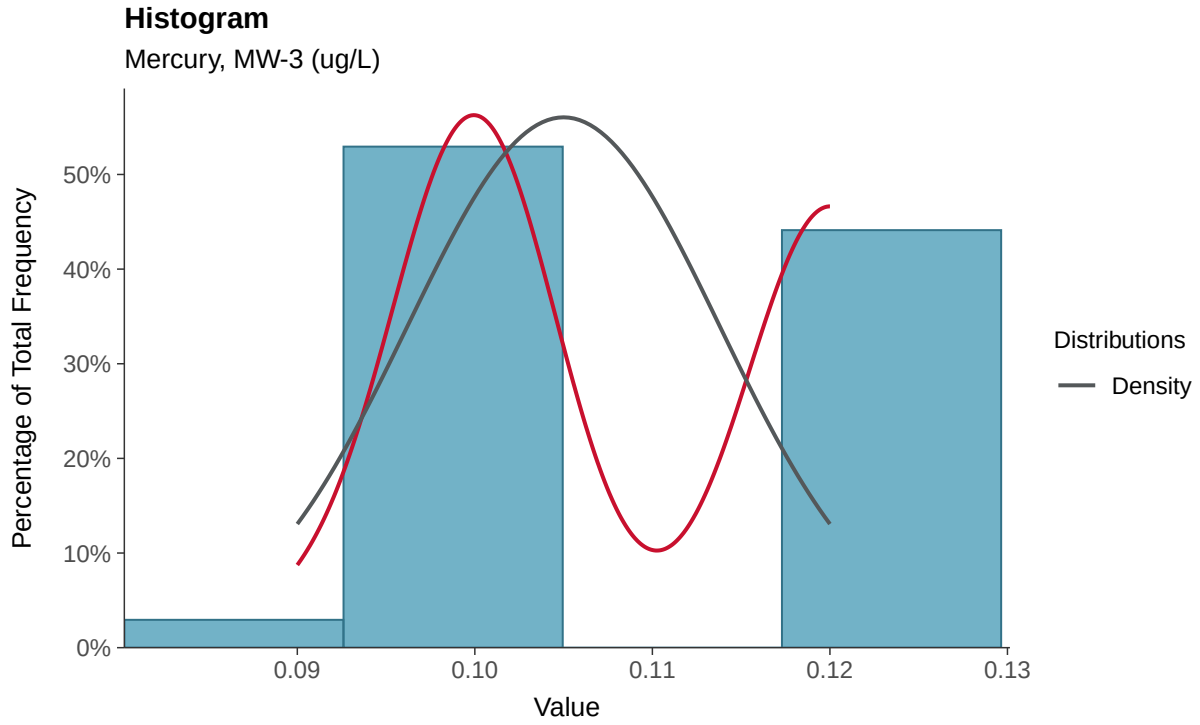
Lithium, MW-3 (ug/L)



App. IV: Mercury, MW-3

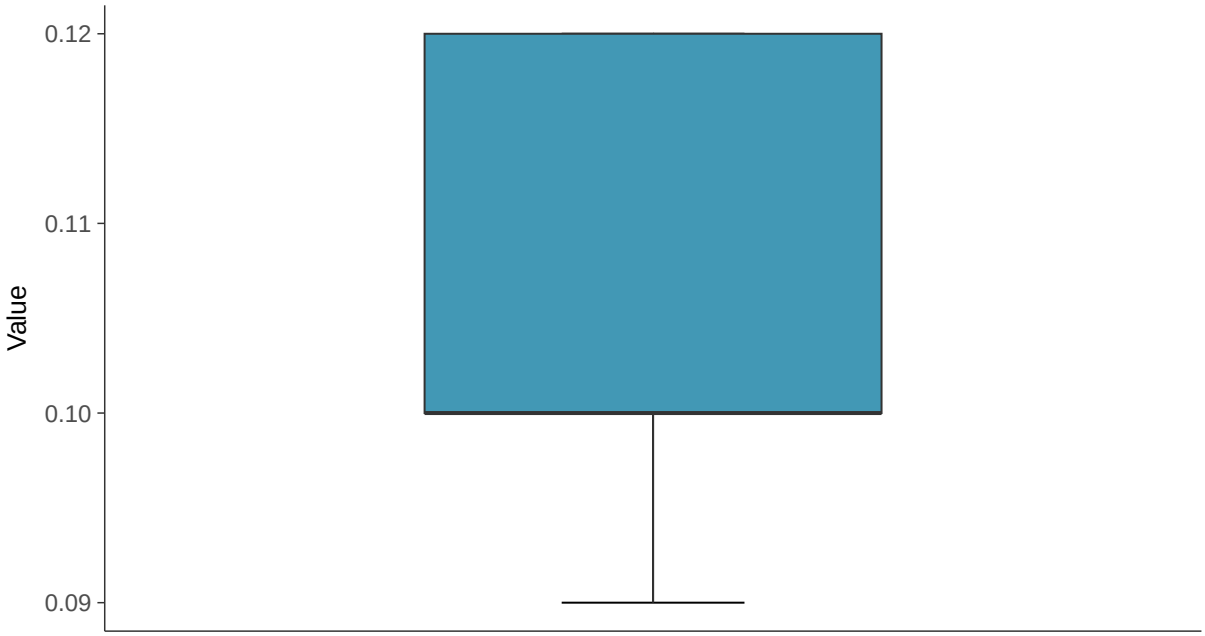
ID: 6_3_115





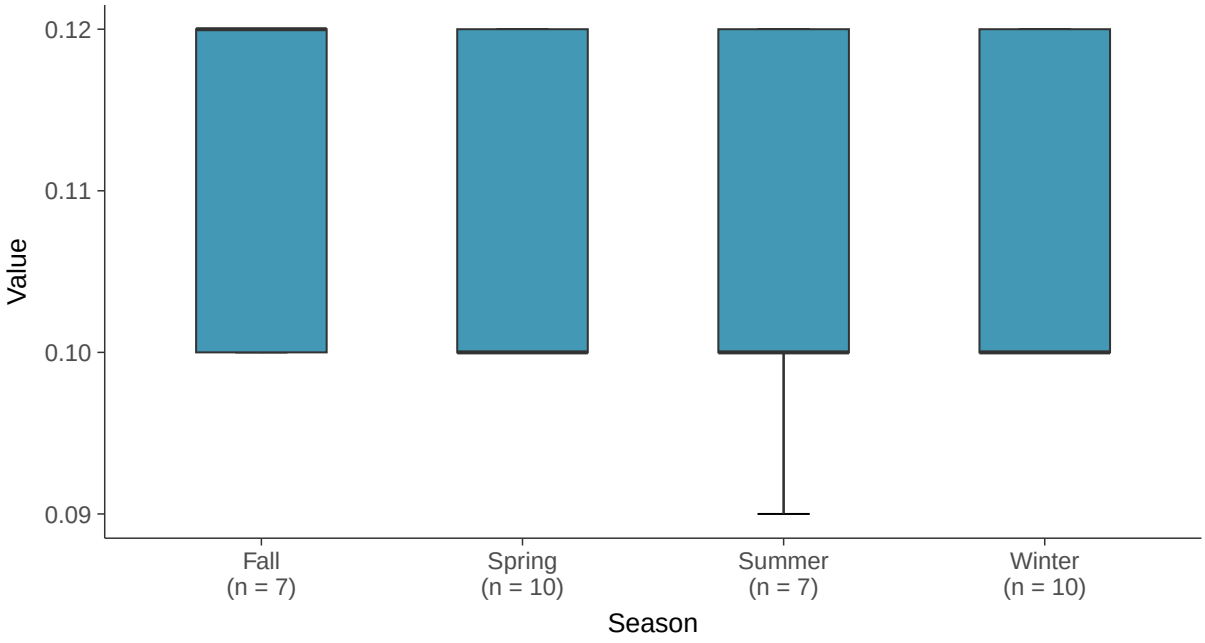
Boxplot

Mercury, MW-3 (ug/L)



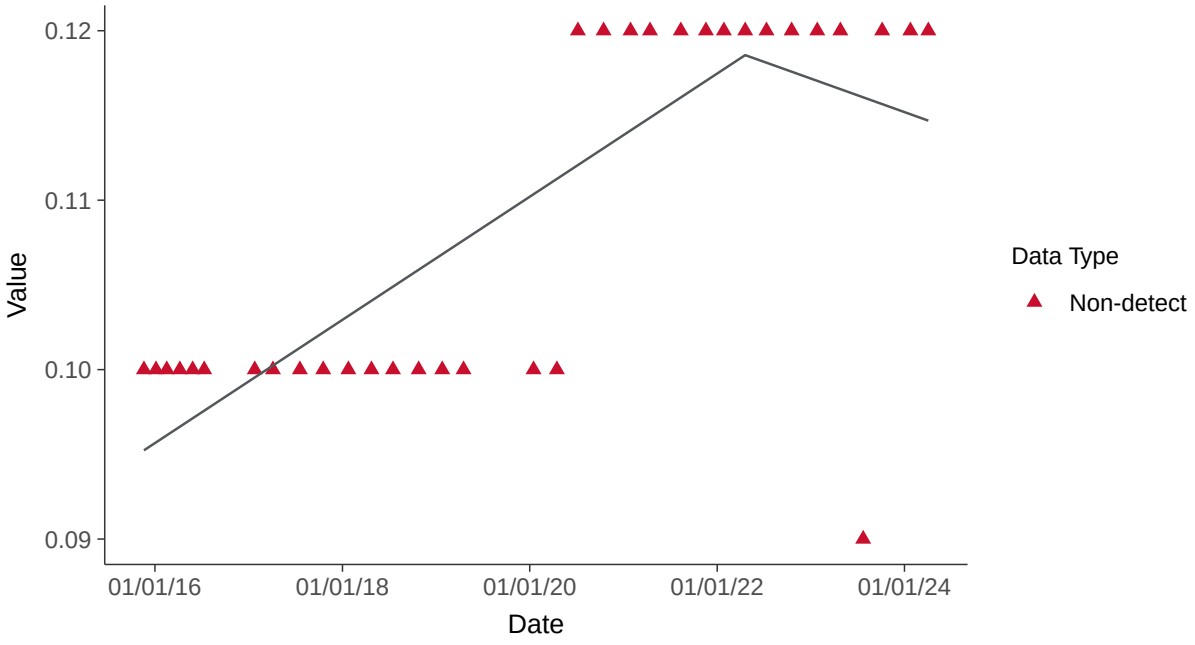
Boxplot by Season

Mercury, MW-3 (ug/L)



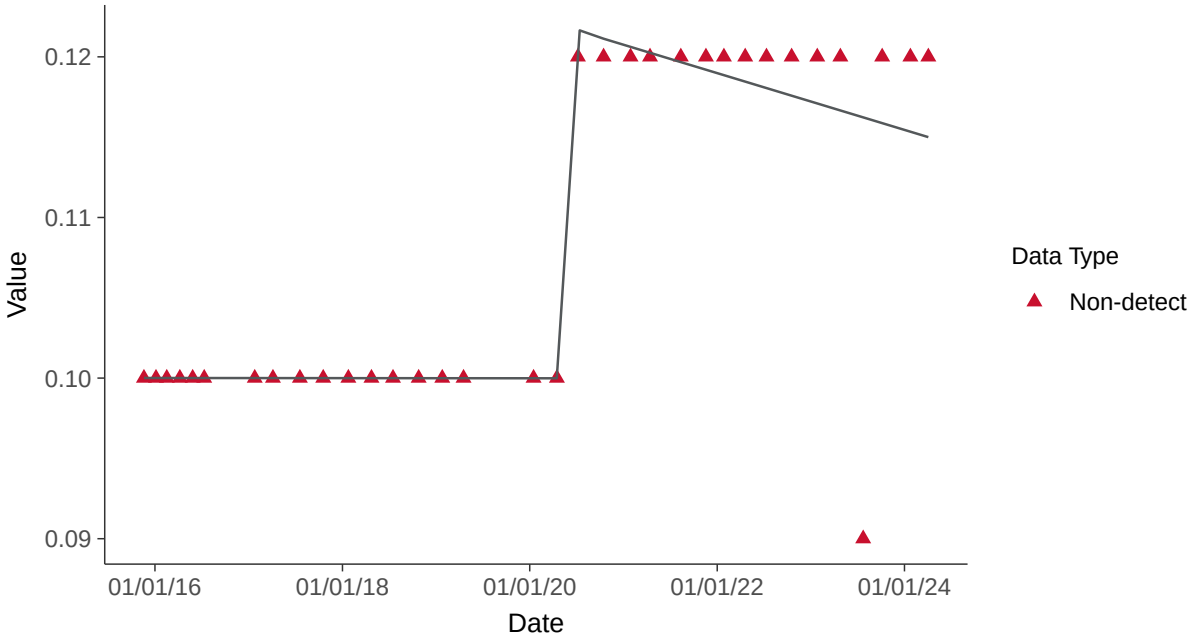
Trend Regression: Piecewise Linear-Linear

Mercury, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-3 (ug/L)

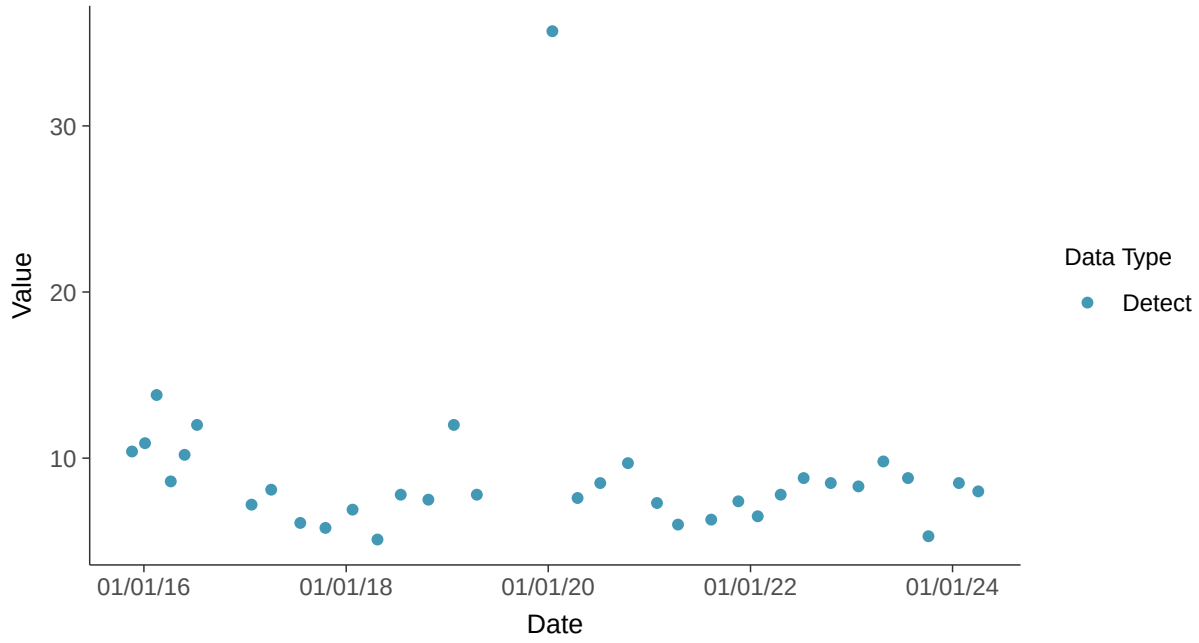


App. IV: Molybdenum, MW-3

ID: 6_3_116

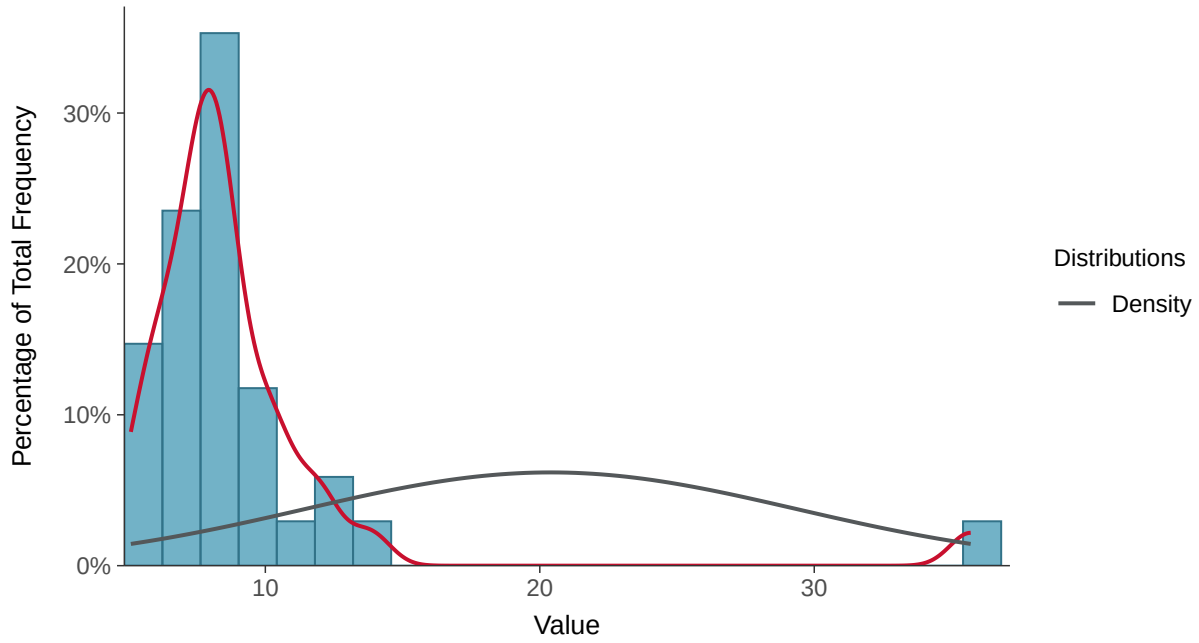
Scatter Plot

Molybdenum, MW-3 (ug/L)



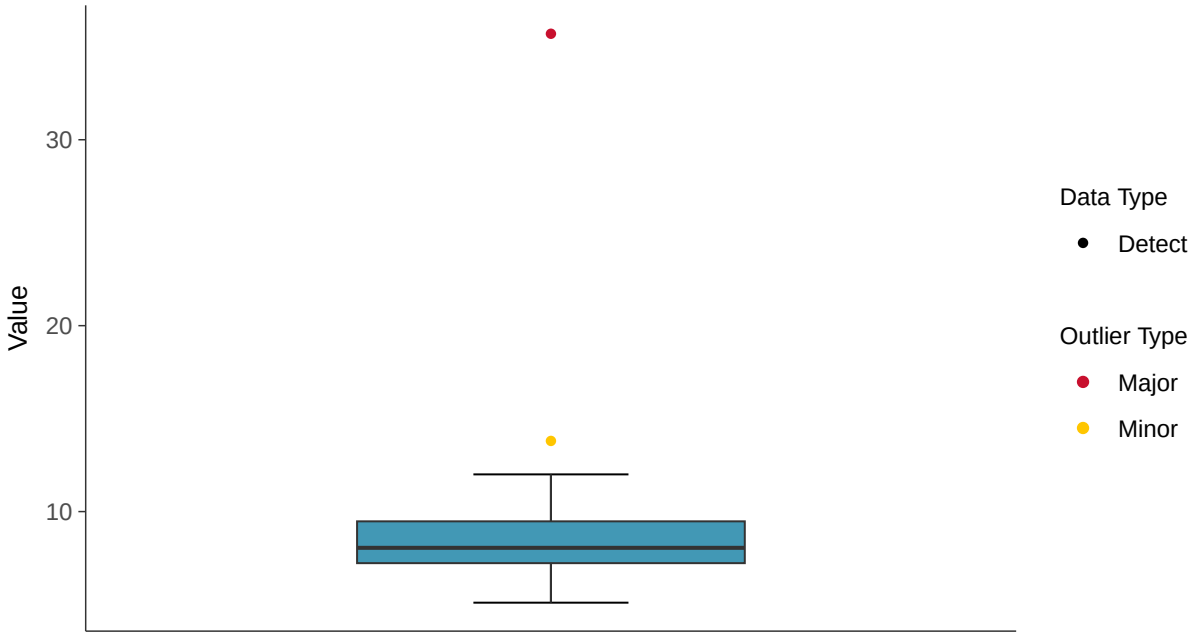
Histogram

Molybdenum, MW-3 (ug/L)



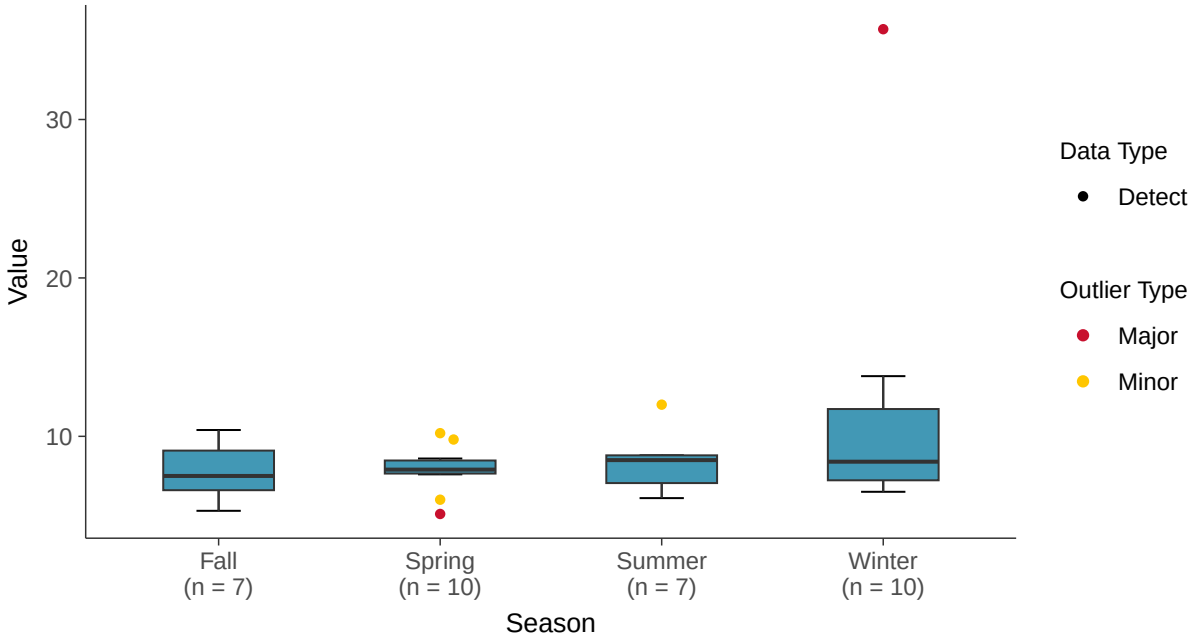
Boxplot

Molybdenum, MW-3 (ug/L)



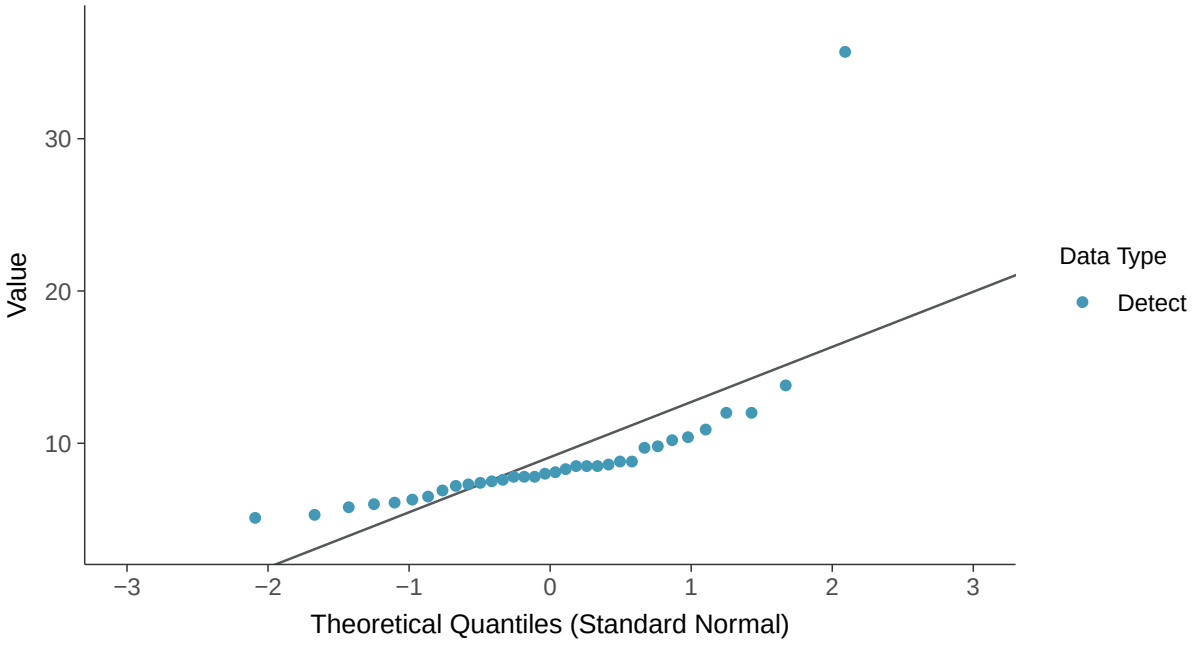
Boxplot by Season

Molybdenum, MW-3 (ug/L)



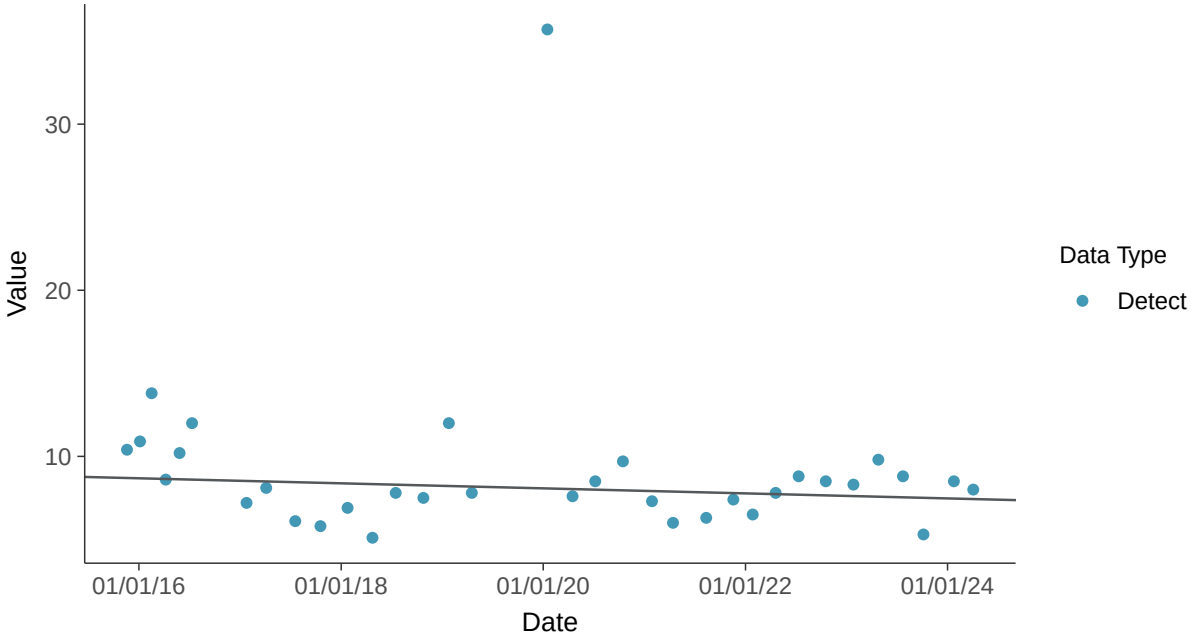
Normal Q-Q plot

Molybdenum, MW-3 (ug/L)



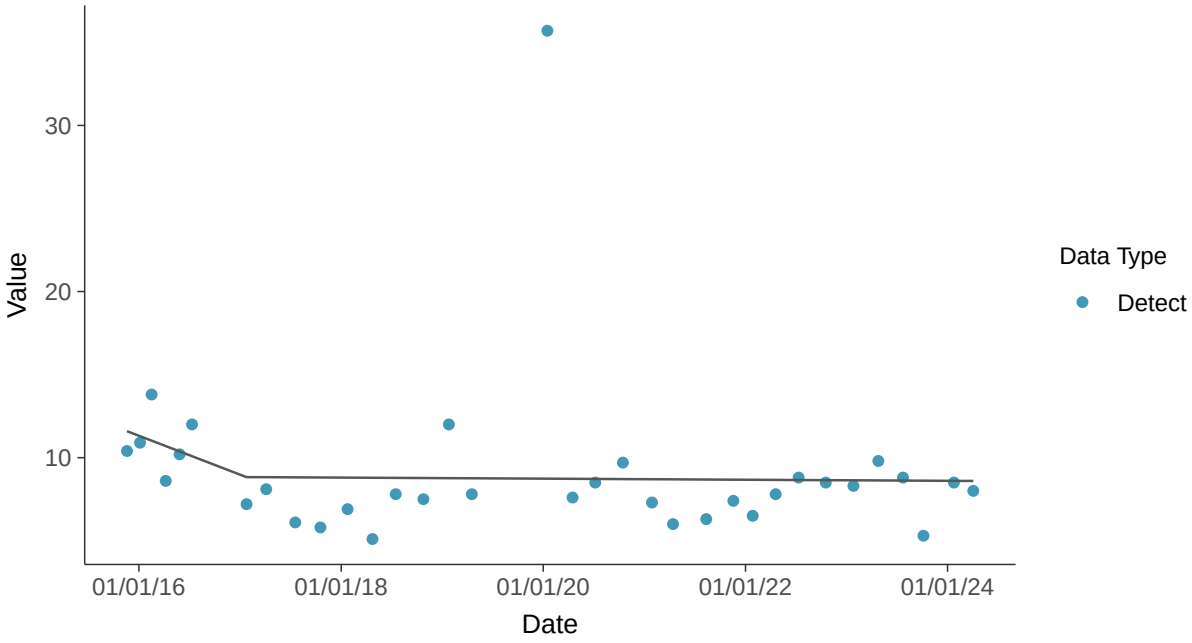
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Molybdenum, MW-3 (ug/L)



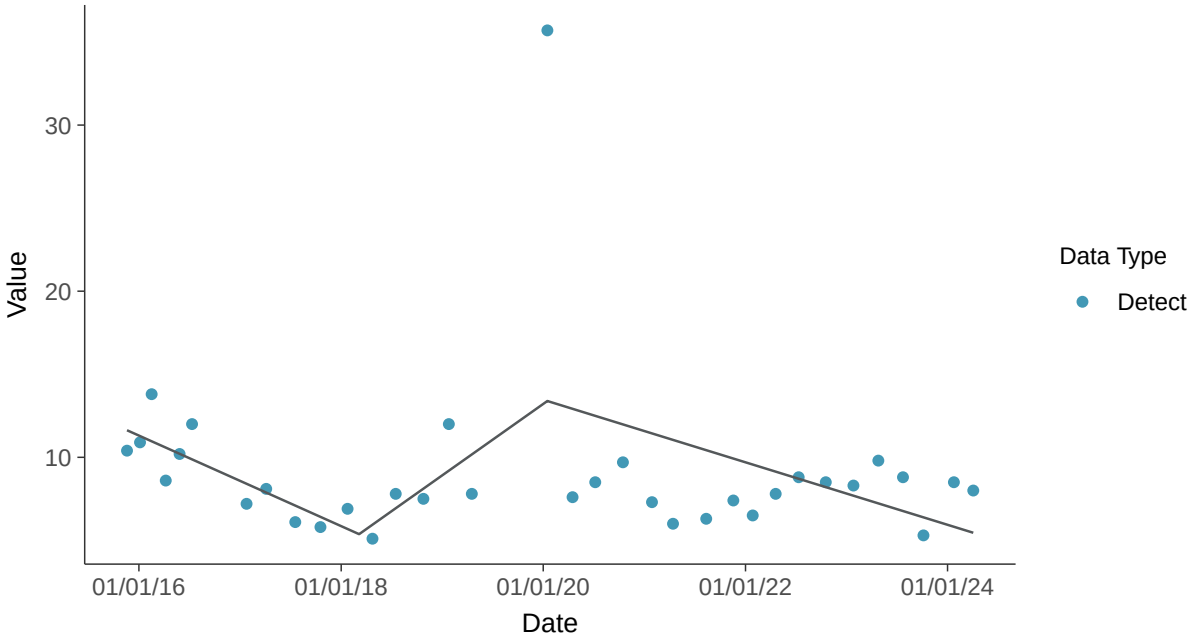
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-3 (ug/L)



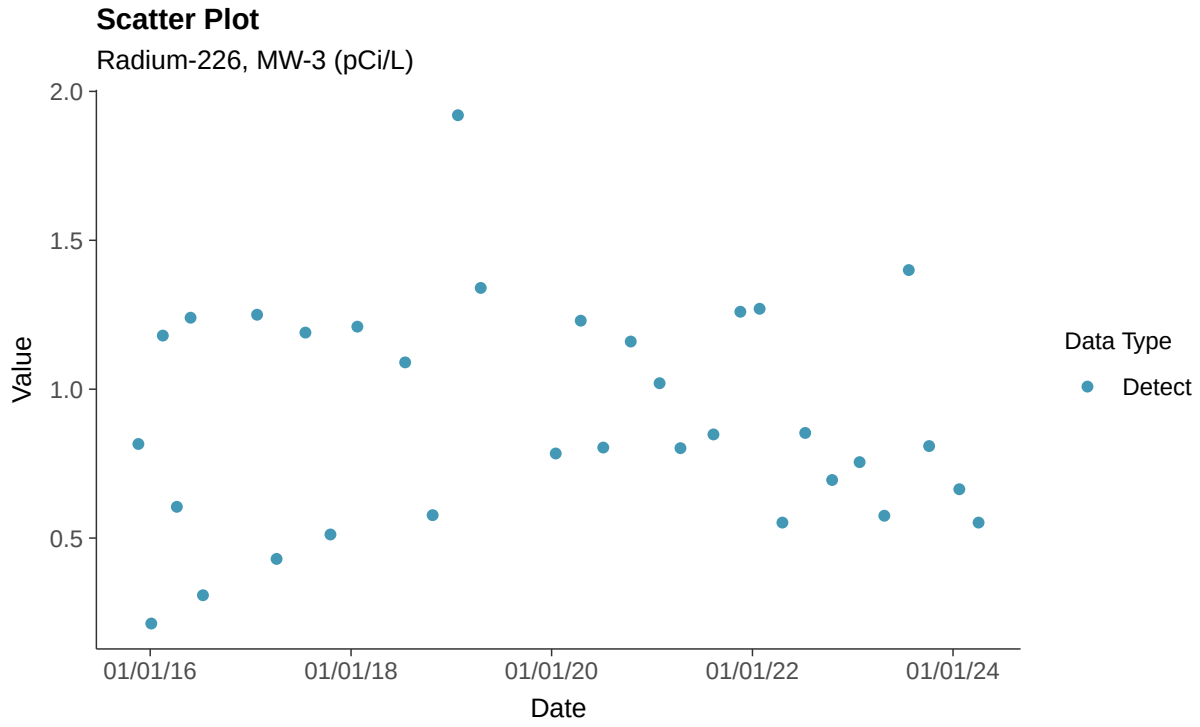
Trend Regression: Piecewise Linear-Linear-Linear

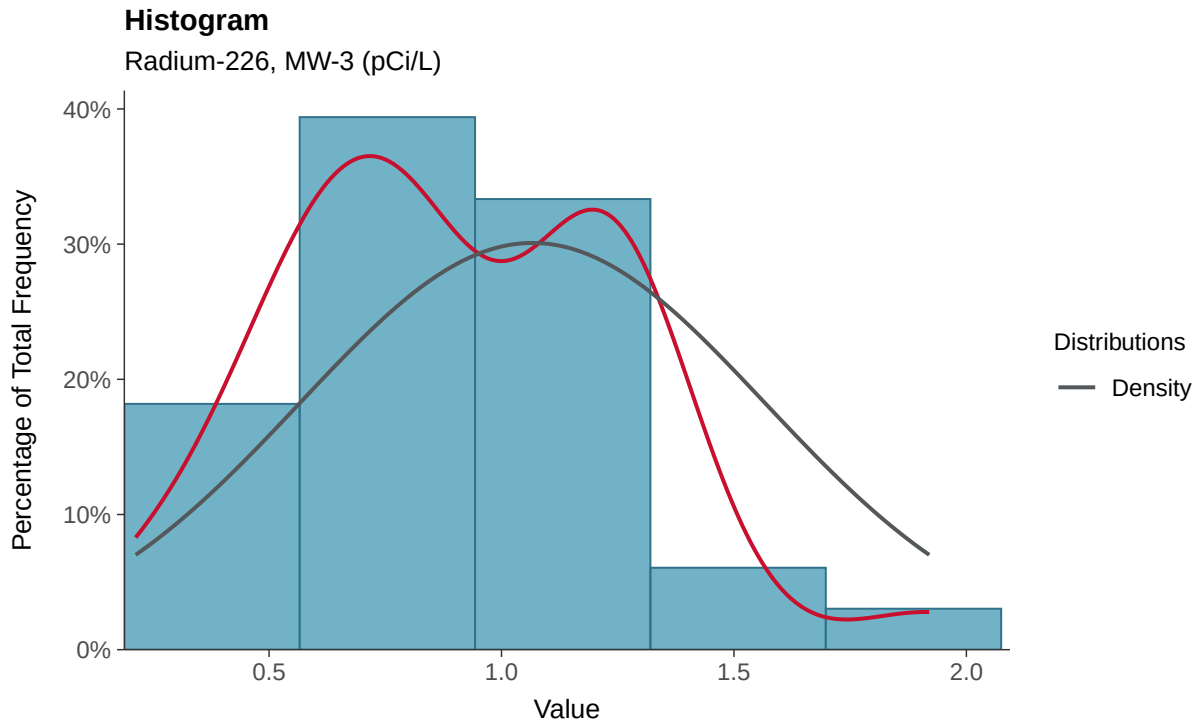
Molybdenum, MW-3 (ug/L)



App. IV: Radium-226, MW-3

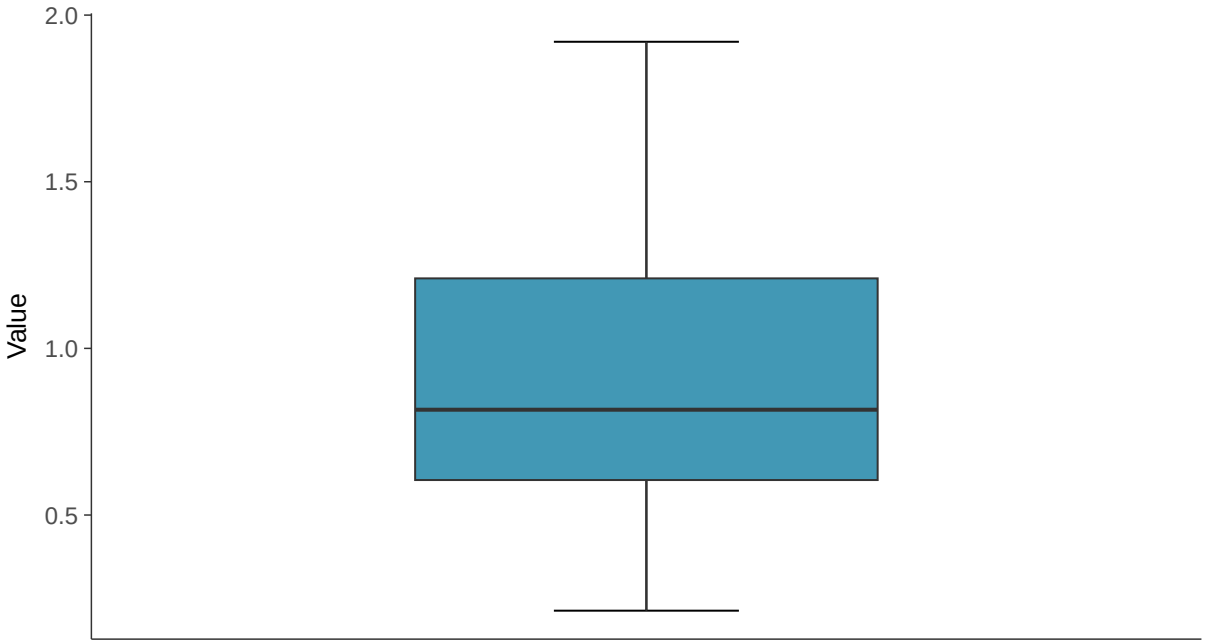
ID: 6_3_119





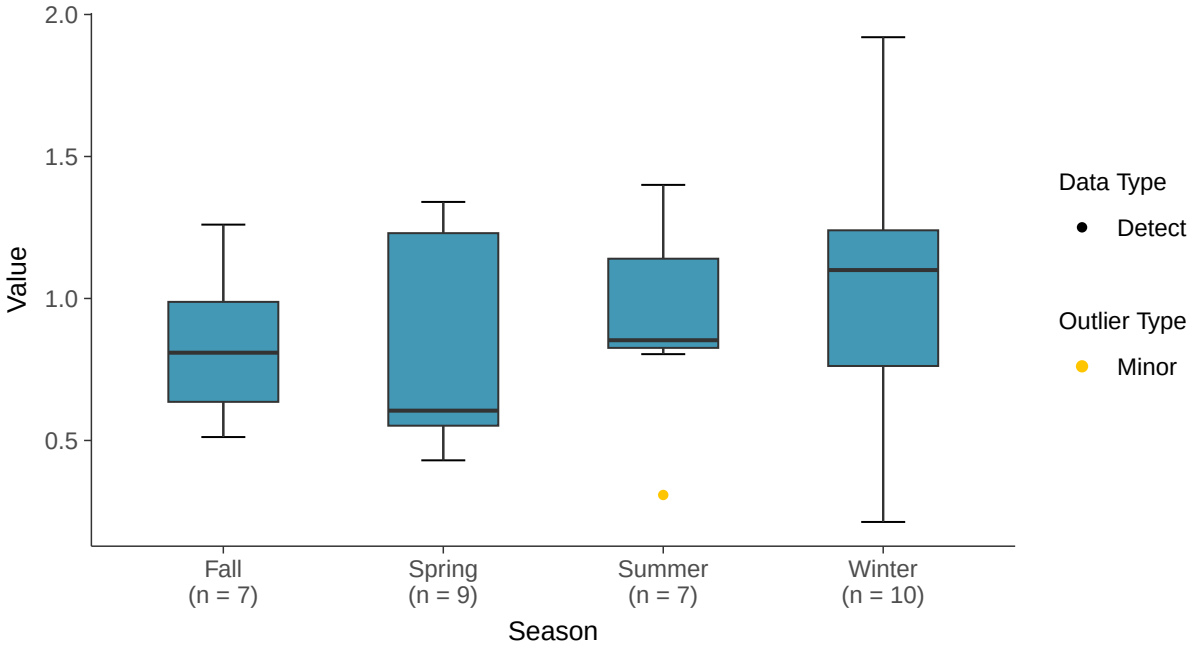
Boxplot

Radium-226, MW-3 (pCi/L)



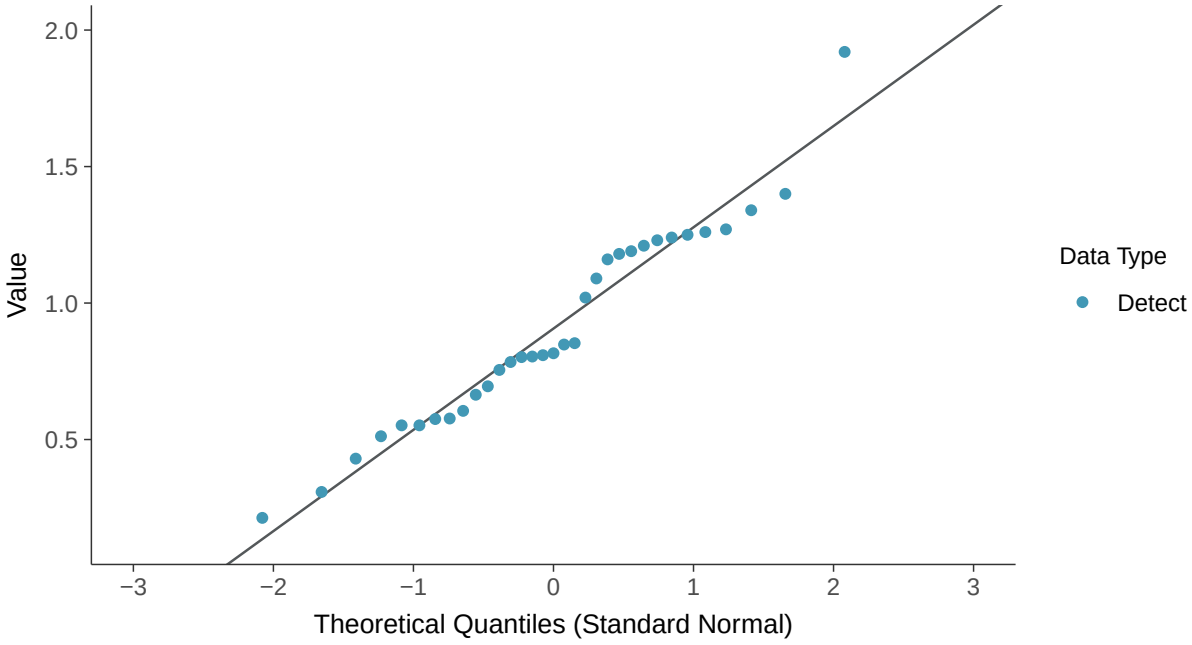
Boxplot by Season

Radium-226, MW-3 (pCi/L)



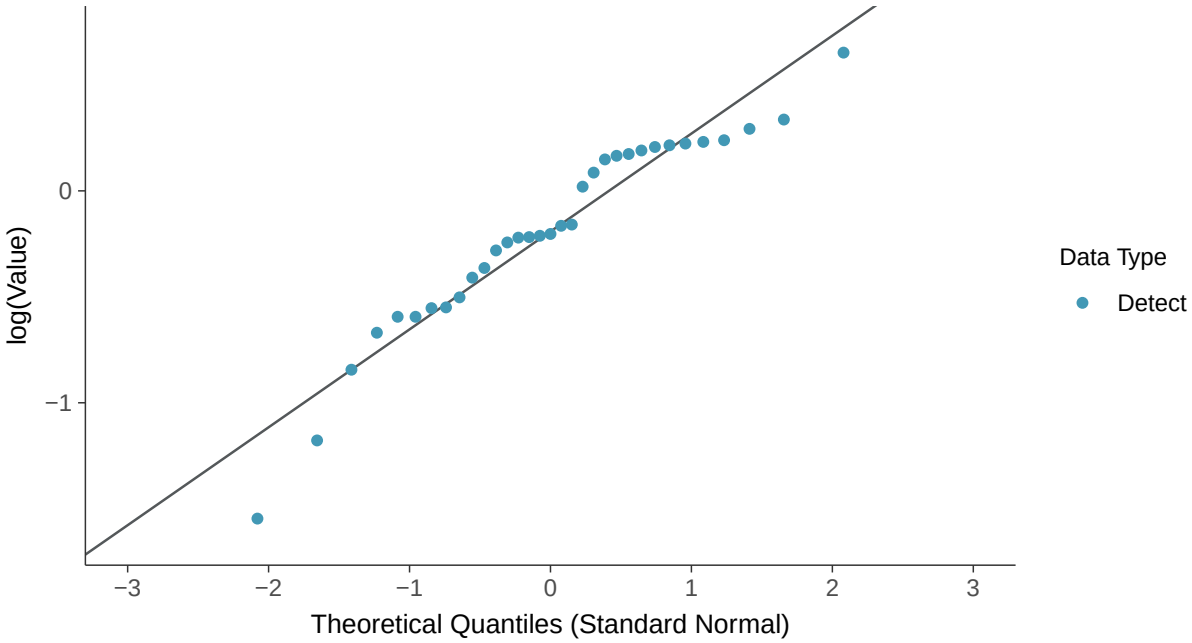
Normal Q-Q plot

Radium-226, MW-3 (pCi/L)



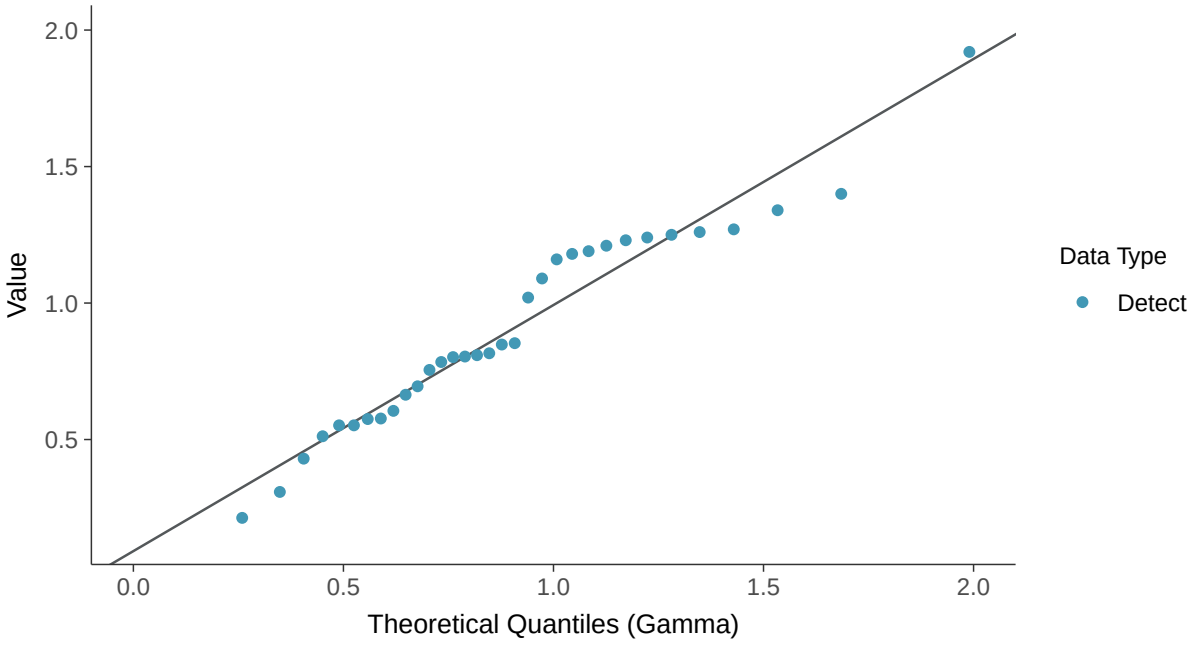
Lognormal Q-Q plot

Radium-226, MW-3 (pCi/L)



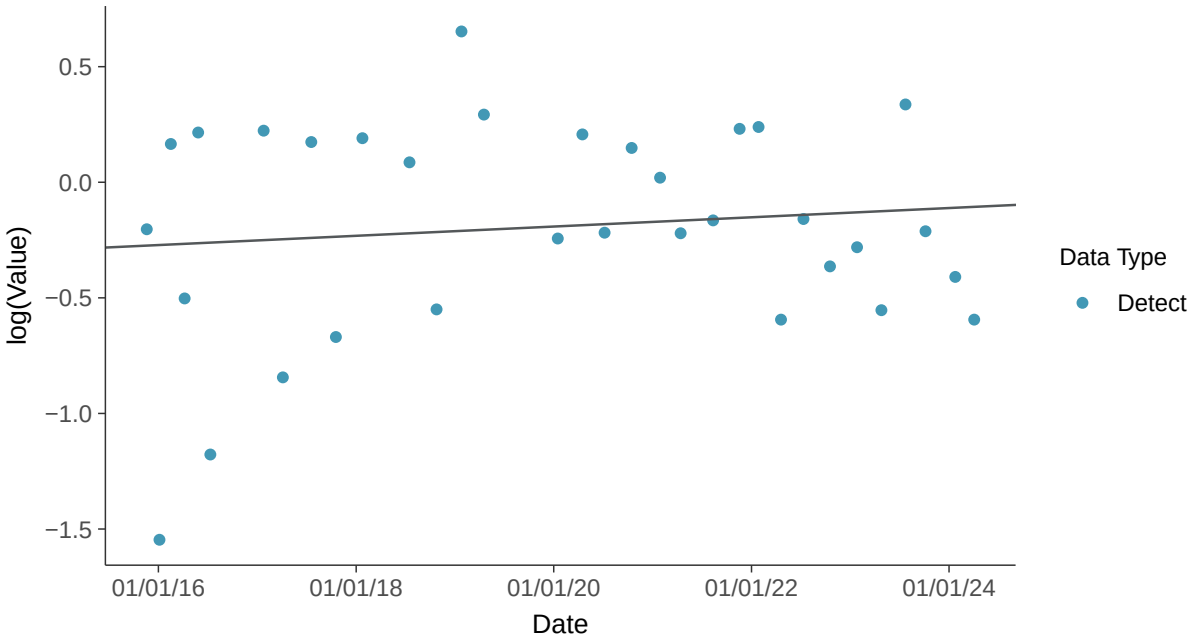
Gamma Q-Q plot

Radium-226, MW-3 (pCi/L)



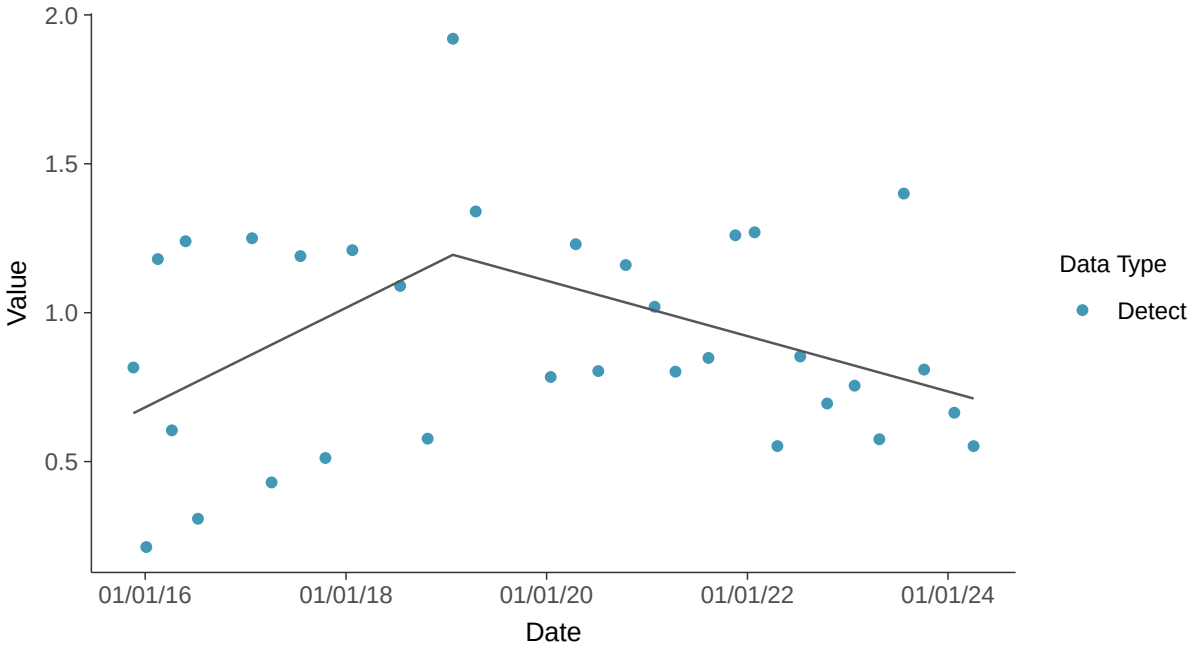
Trend Regression: Lognormal MLE

Radium-226, MW-3 (pCi/L)



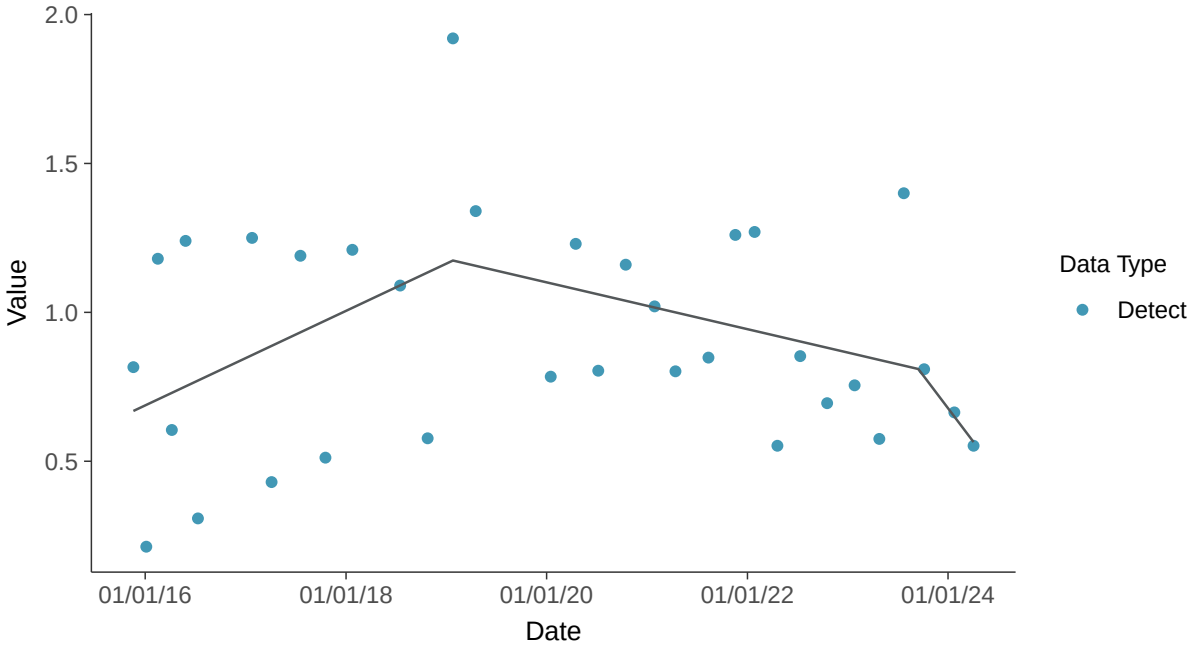
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-3 (pCi/L)



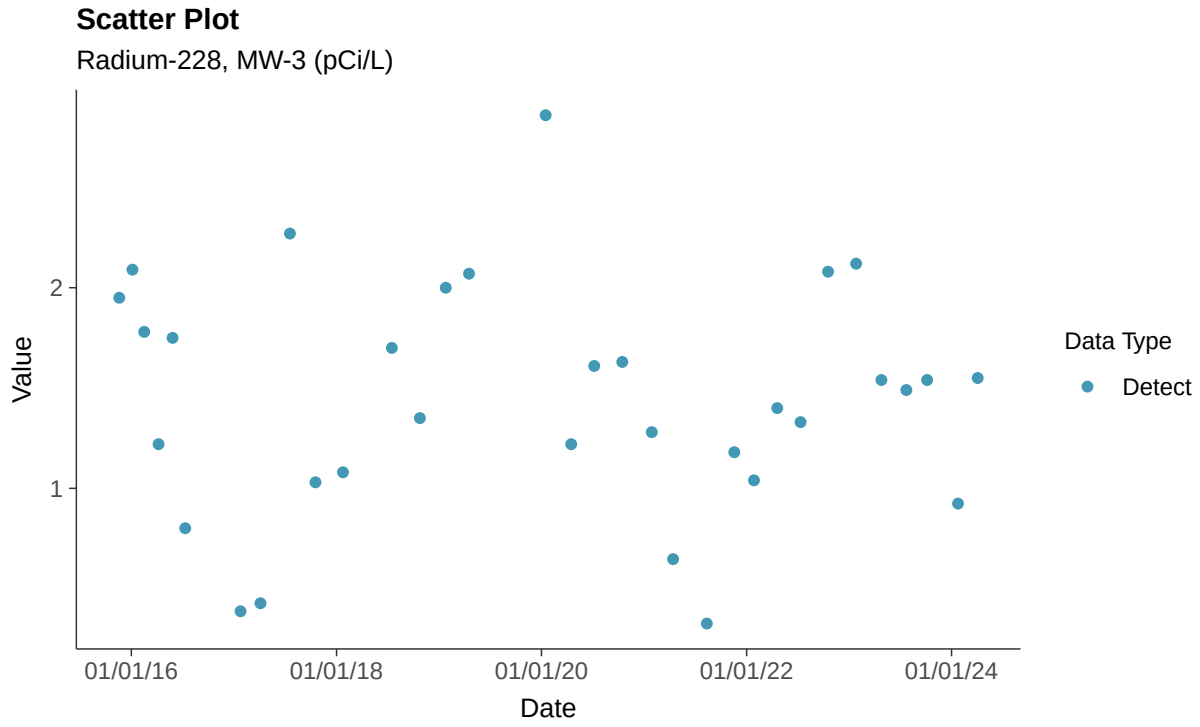
Trend Regression: Piecewise Linear-Linear-Linear

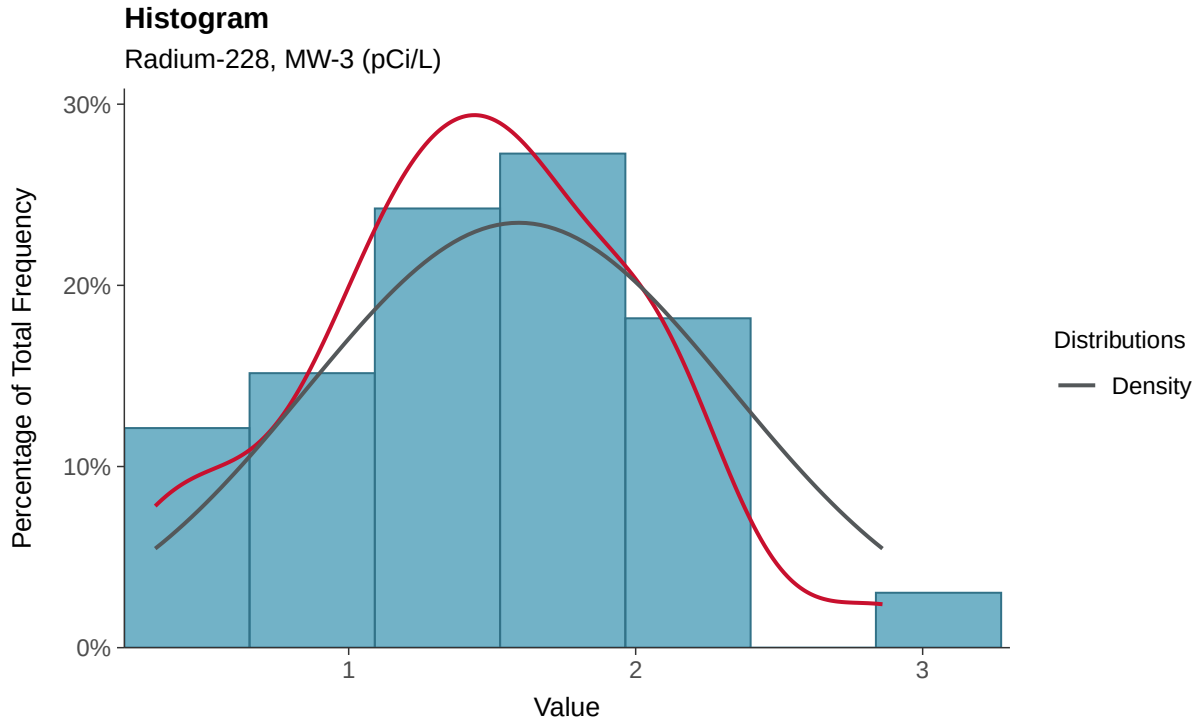
Radium-226, MW-3 (pCi/L)



App. IV: Radium-228, MW-3

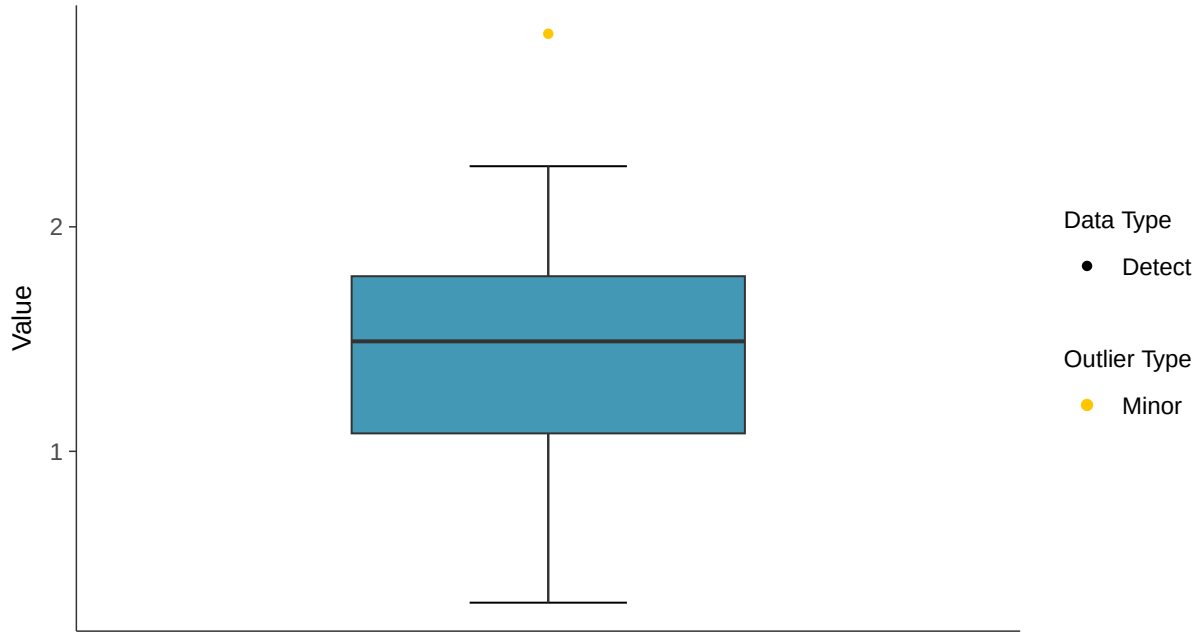
ID: 6_3_120





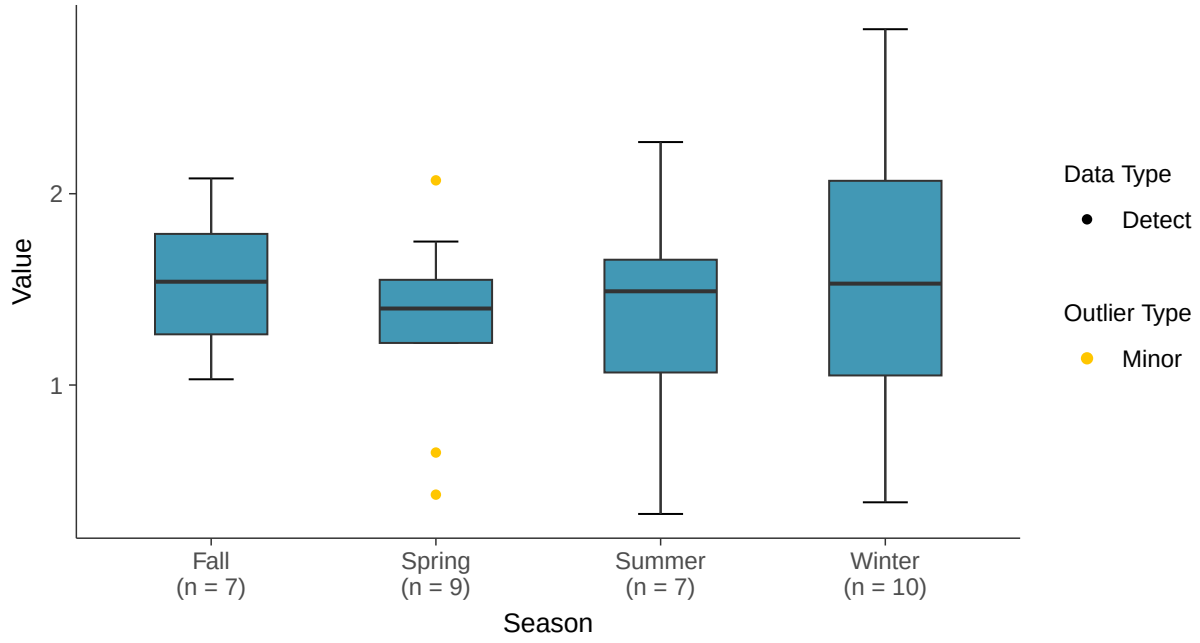
Boxplot

Radium-228, MW-3 (pCi/L)



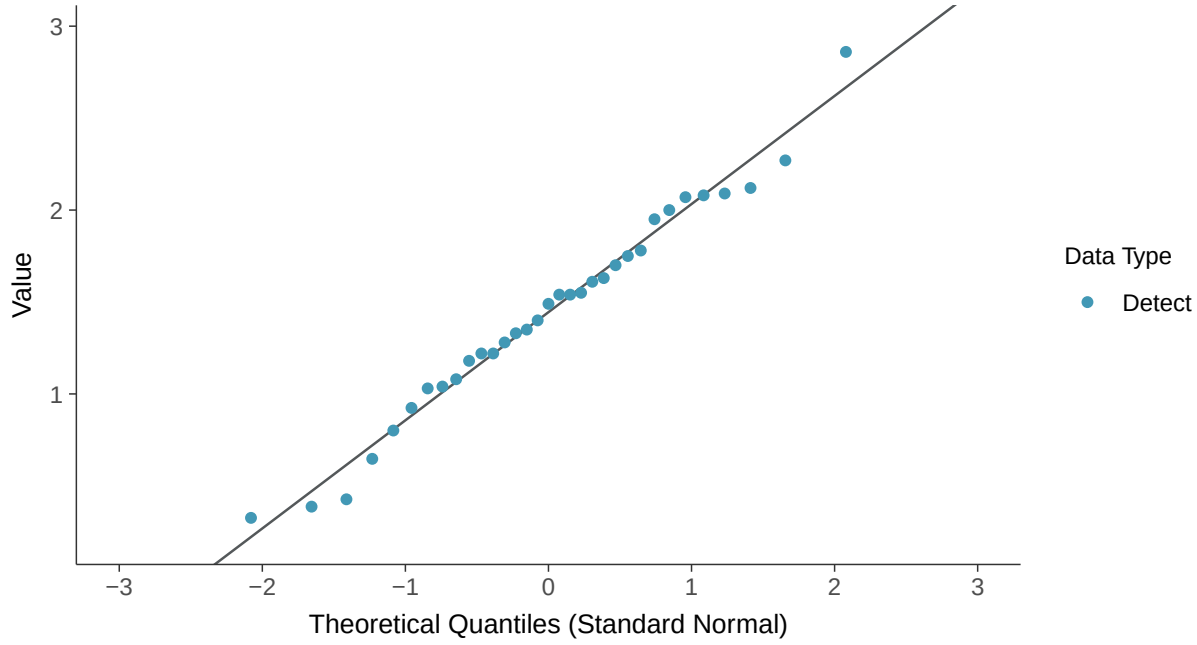
Boxplot by Season

Radium-228, MW-3 (pCi/L)



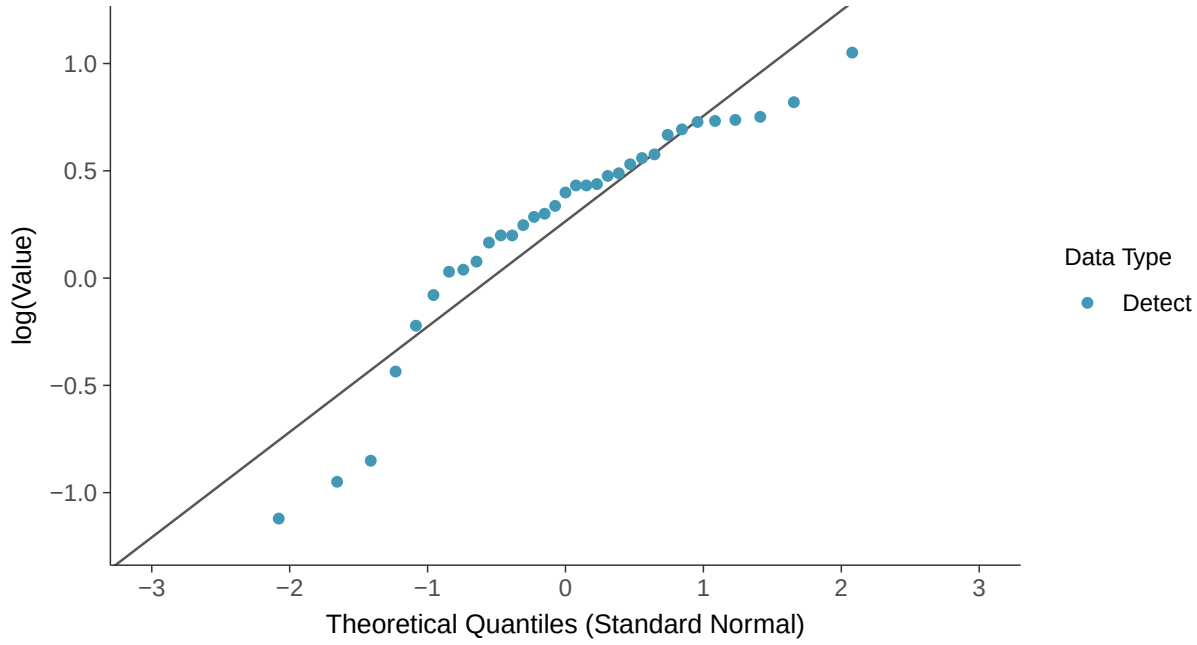
Normal Q-Q plot

Radium-228, MW-3 (pCi/L)



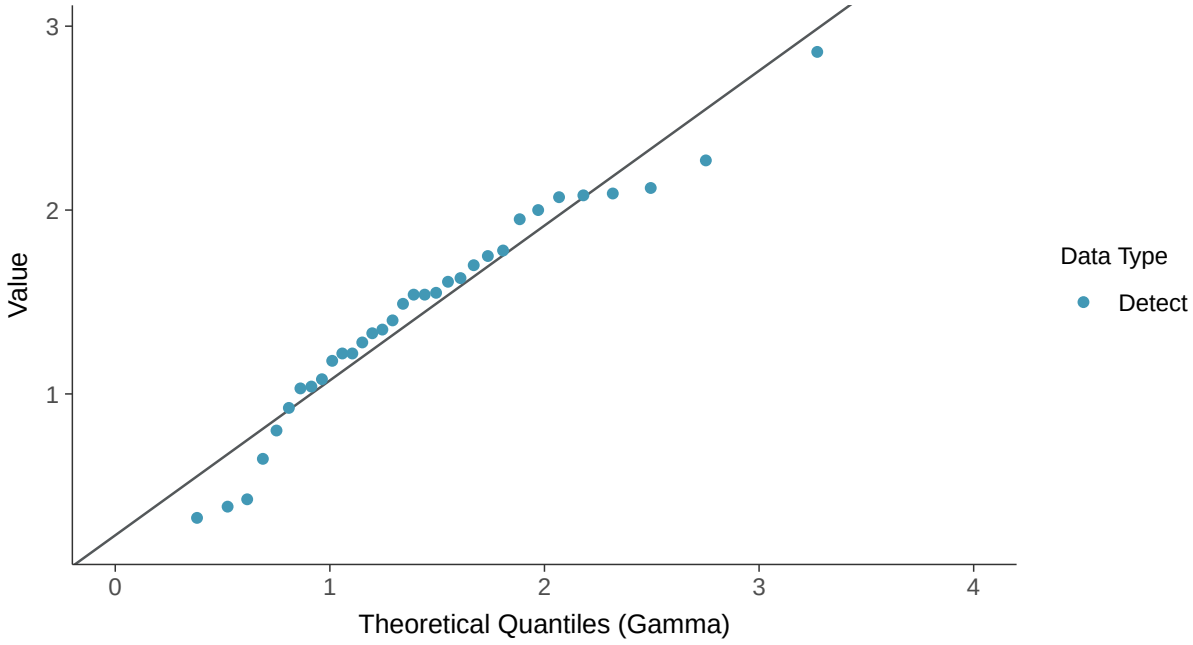
Lognormal Q-Q plot

Radium-228, MW-3 (pCi/L)



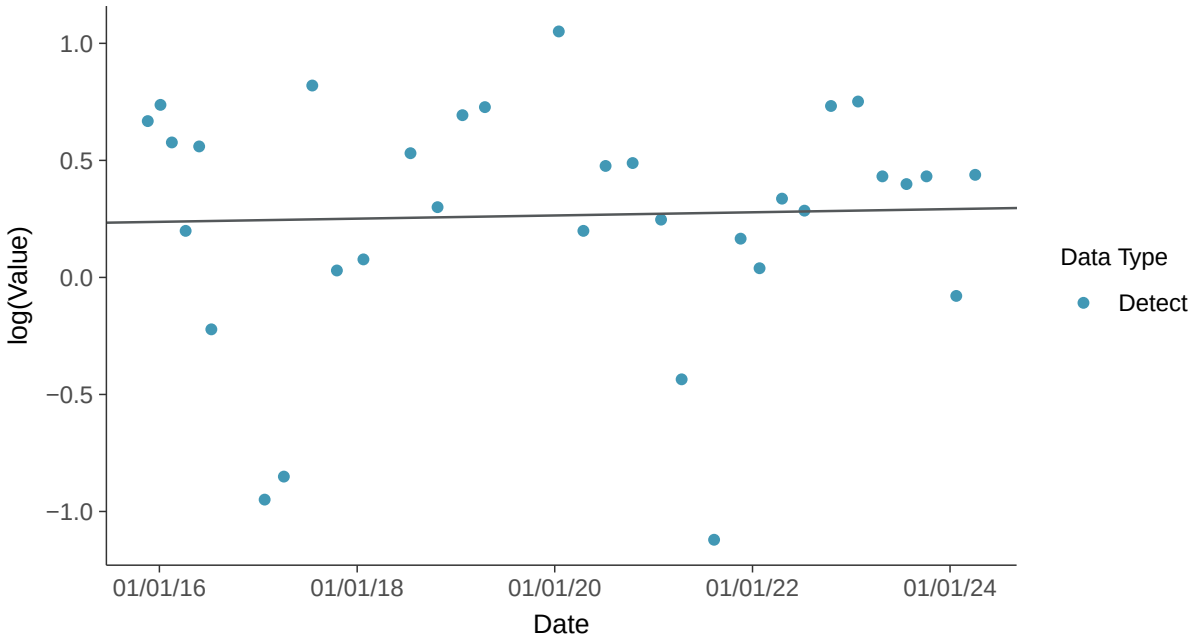
Gamma Q-Q plot

Radium-228, MW-3 (pCi/L)



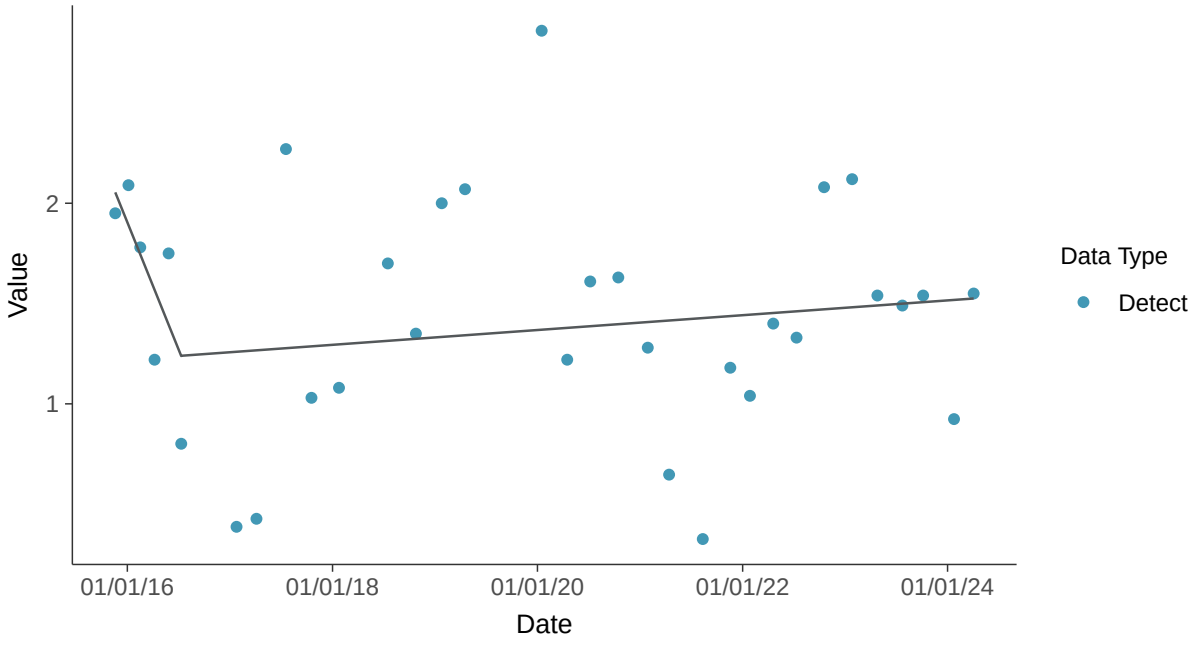
Trend Regression: Lognormal MLE

Radium-228, MW-3 (pCi/L)



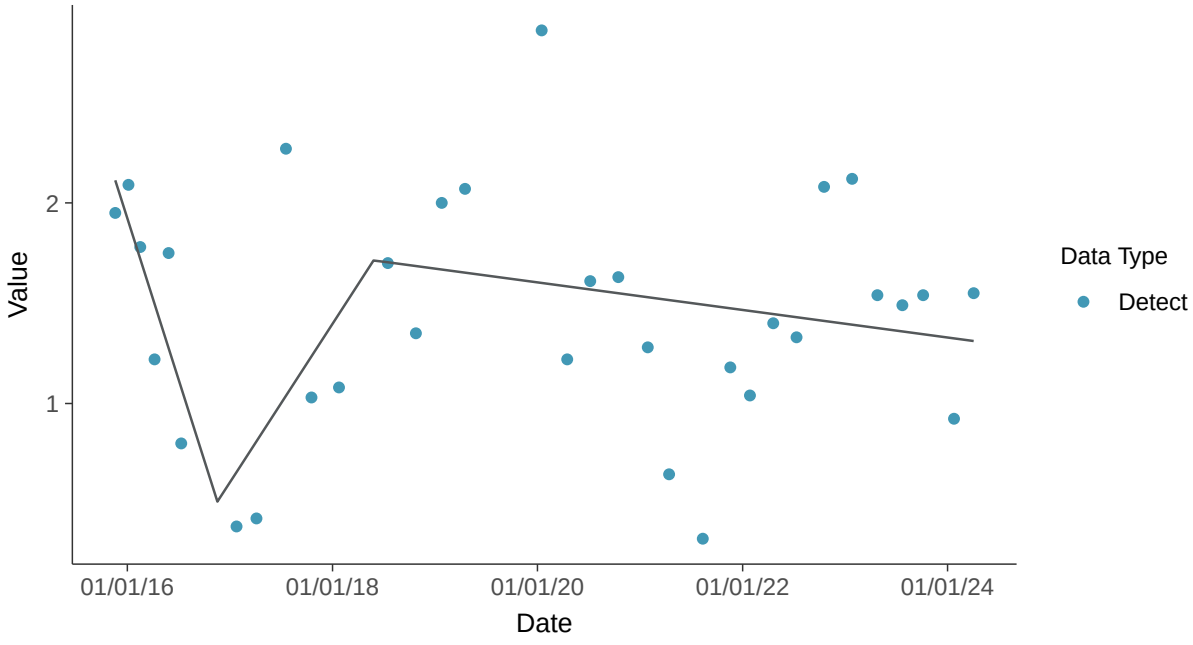
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-3 (pCi/L)



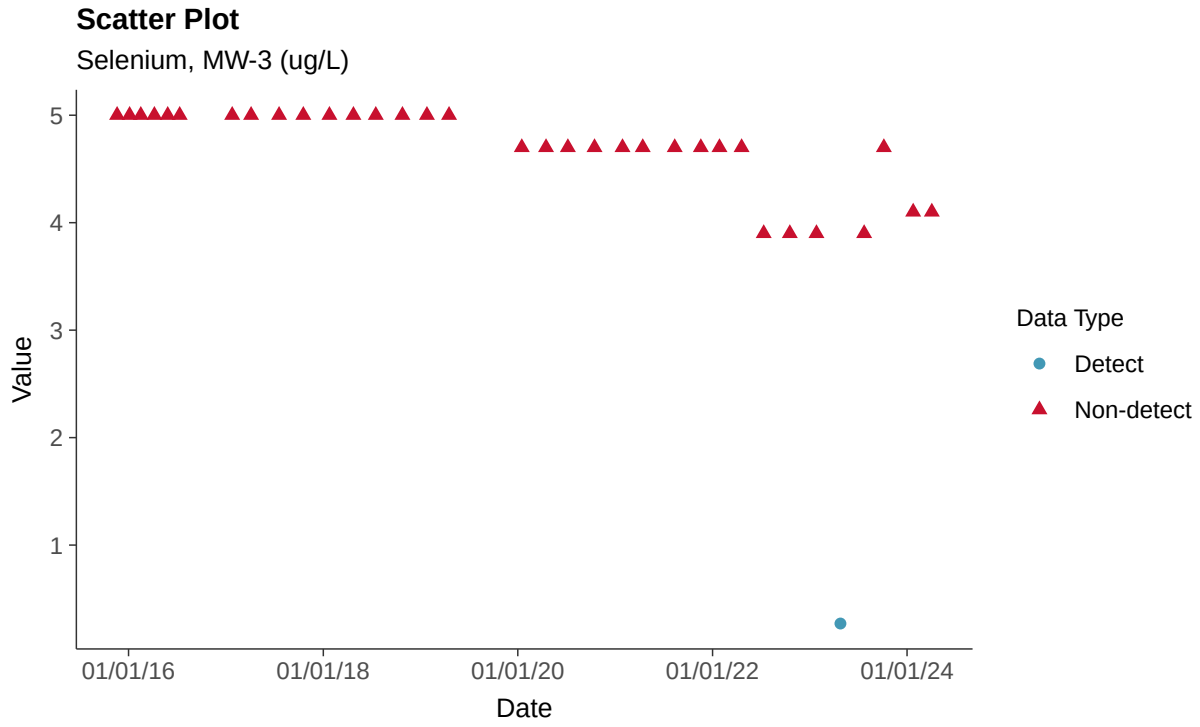
Trend Regression: Piecewise Linear-Linear-Linear

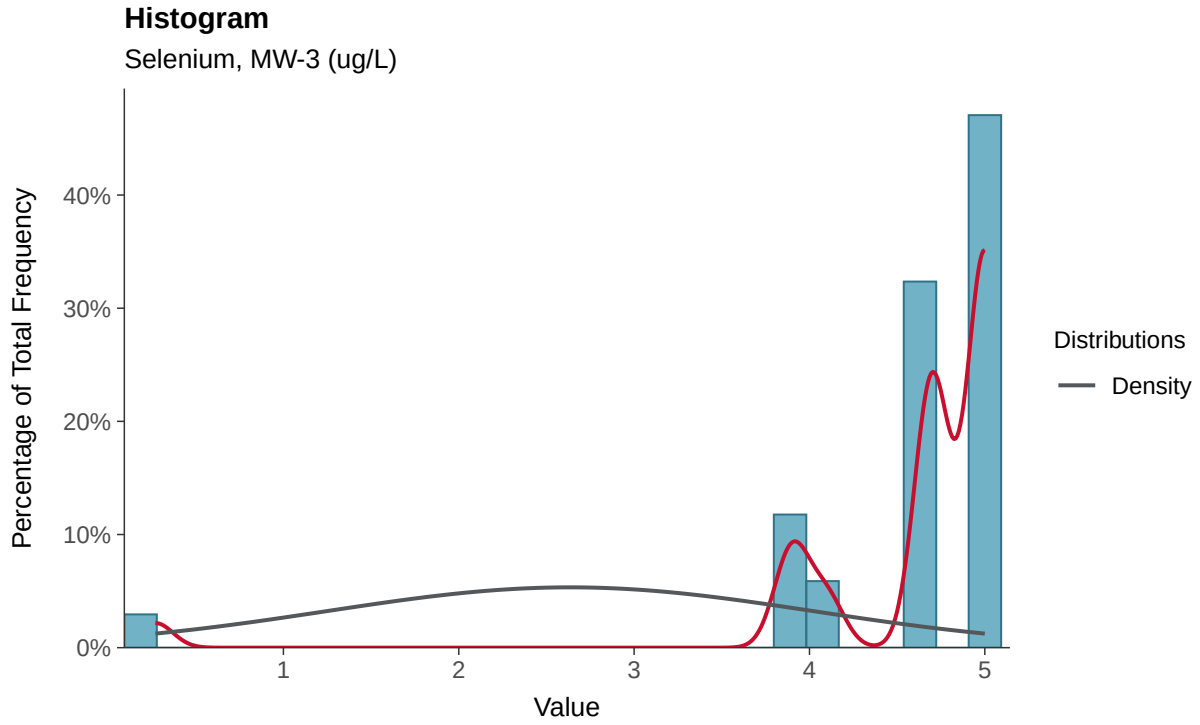
Radium-228, MW-3 (pCi/L)



App. IV: Selenium, MW-3

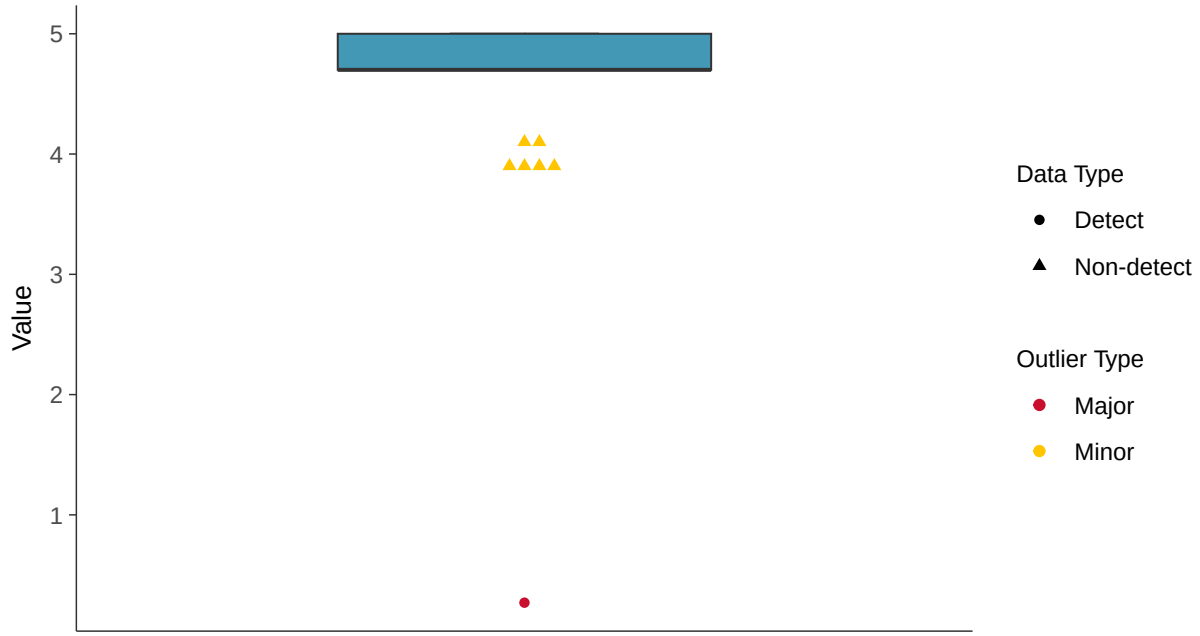
ID: 6_3_121





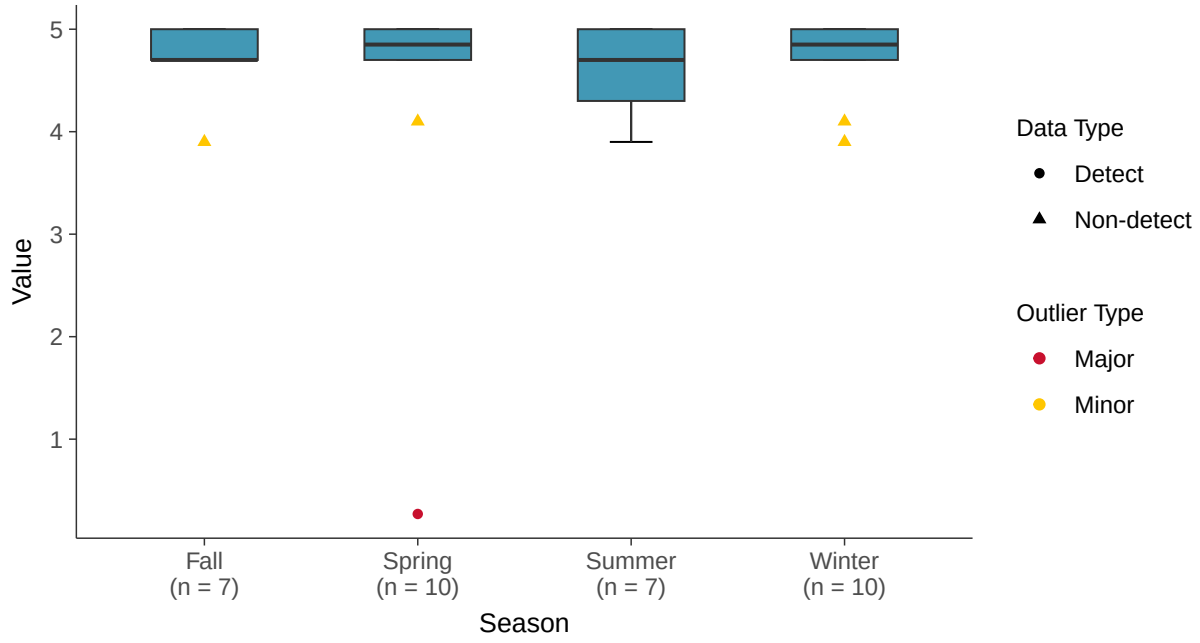
Boxplot

Selenium, MW-3 (ug/L)



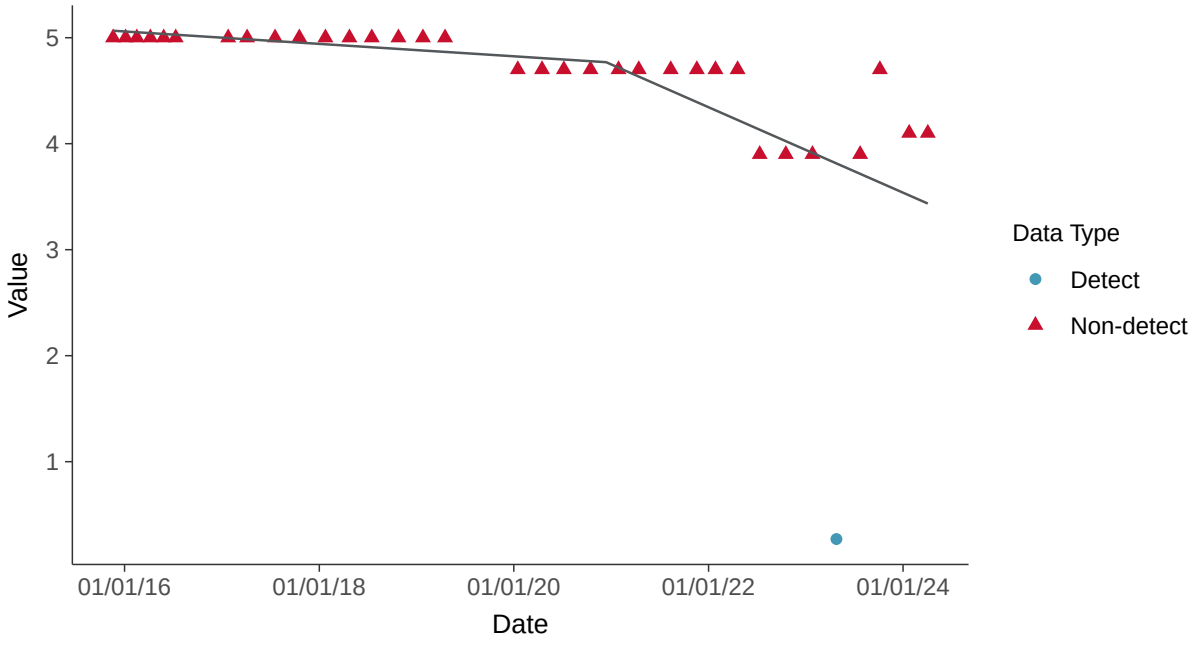
Boxplot by Season

Selenium, MW-3 (ug/L)



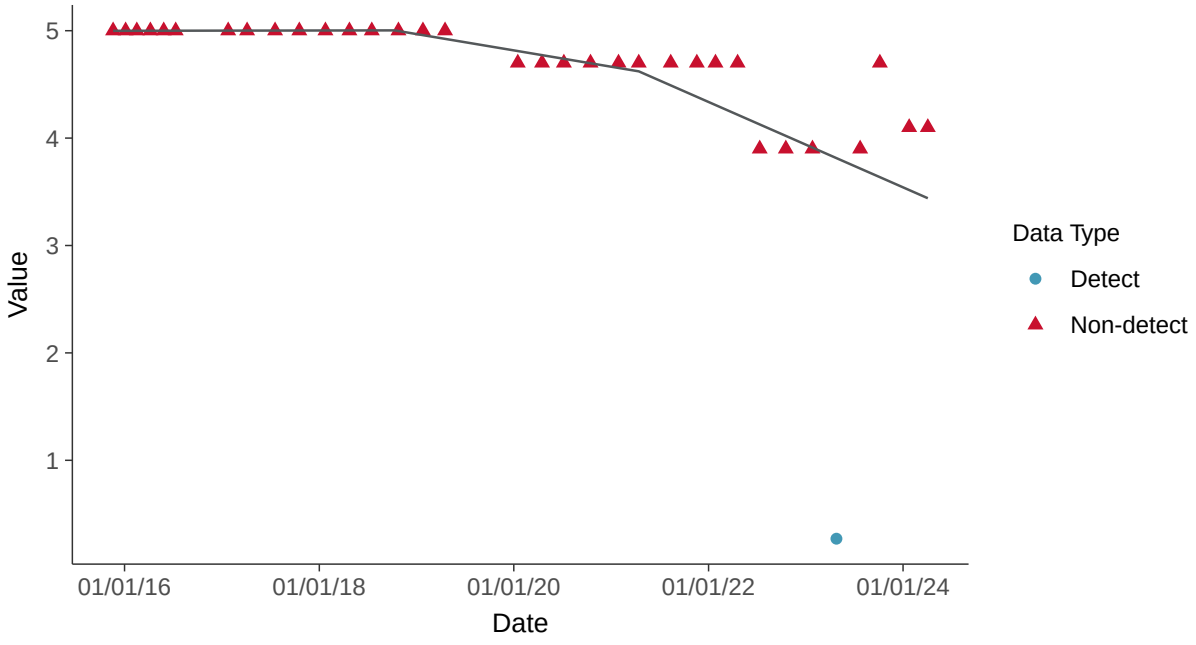
Trend Regression: Piecewise Linear-Linear

Selenium, MW-3 (ug/L)



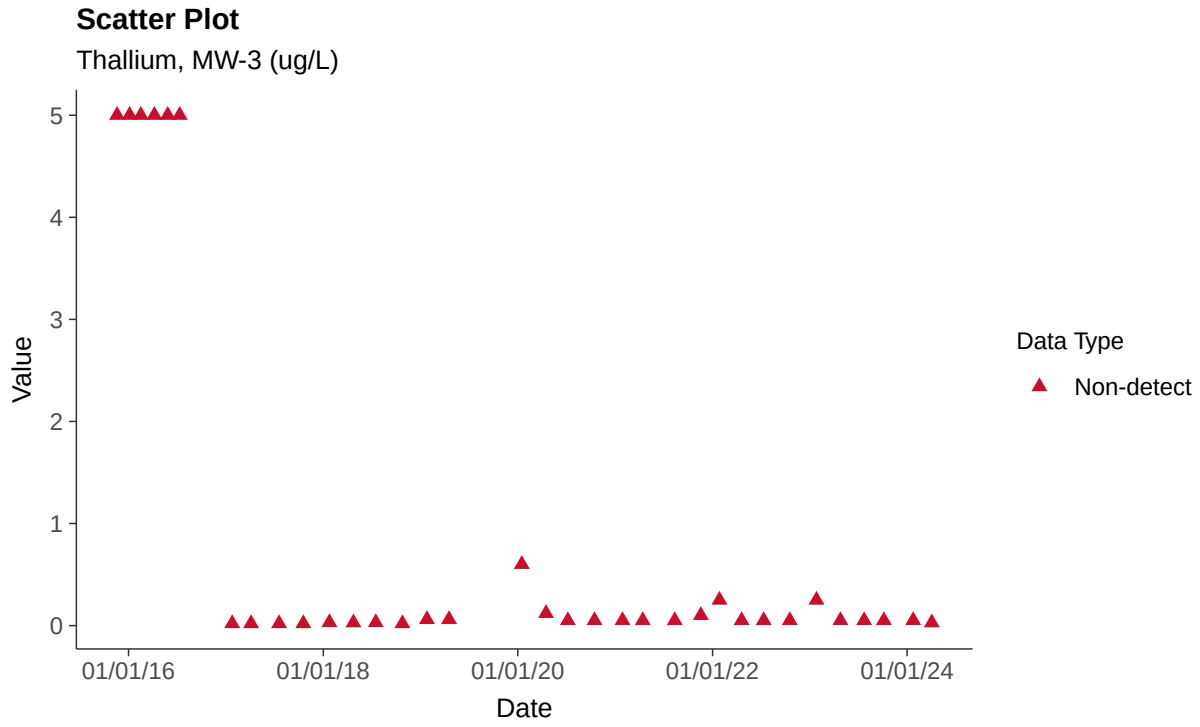
Trend Regression: Piecewise Linear-Linear-Linear

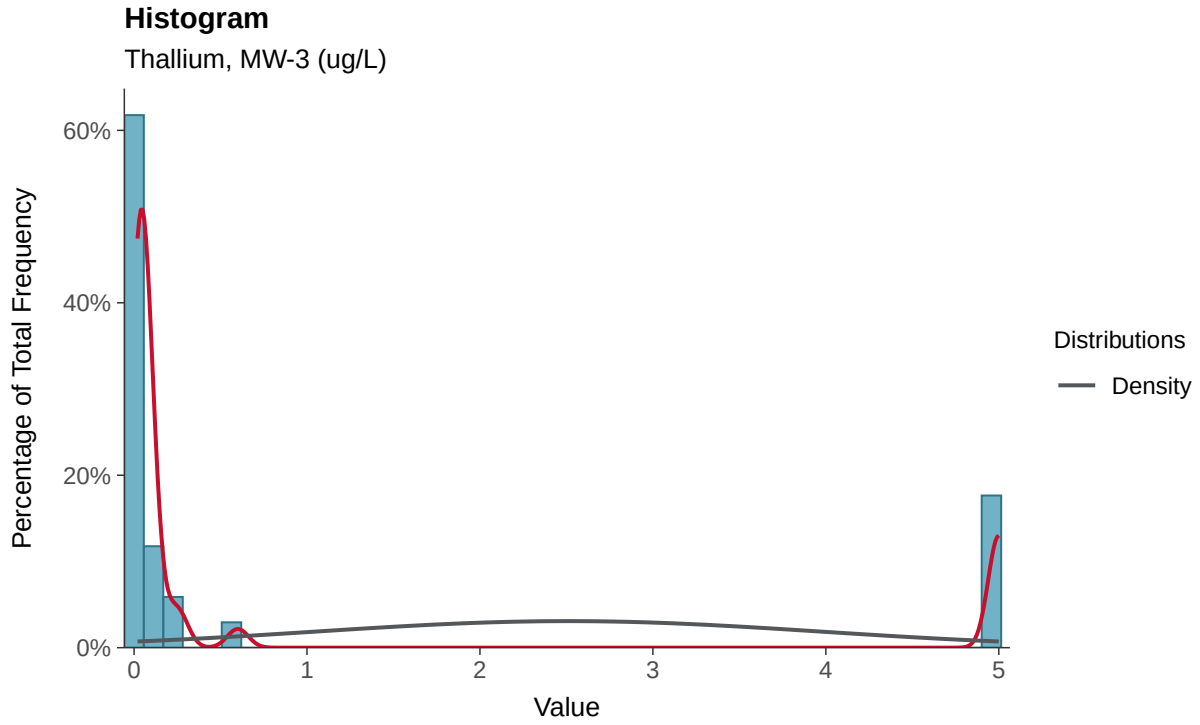
Selenium, MW-3 (ug/L)



App. IV: Thallium, MW-3

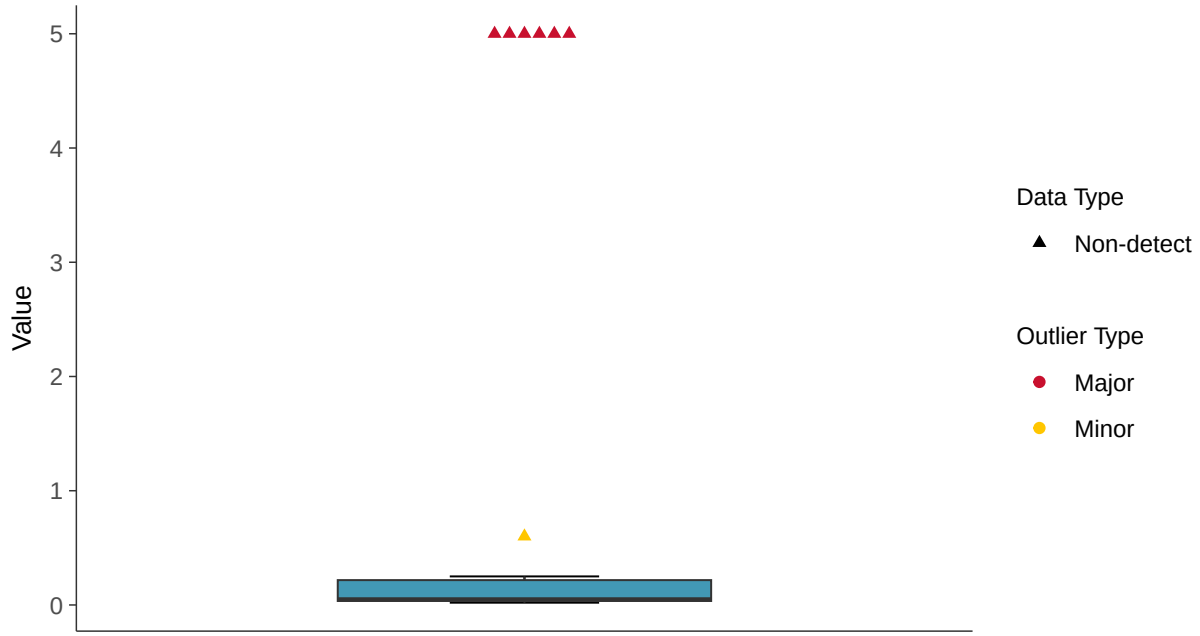
ID: 6_3_124





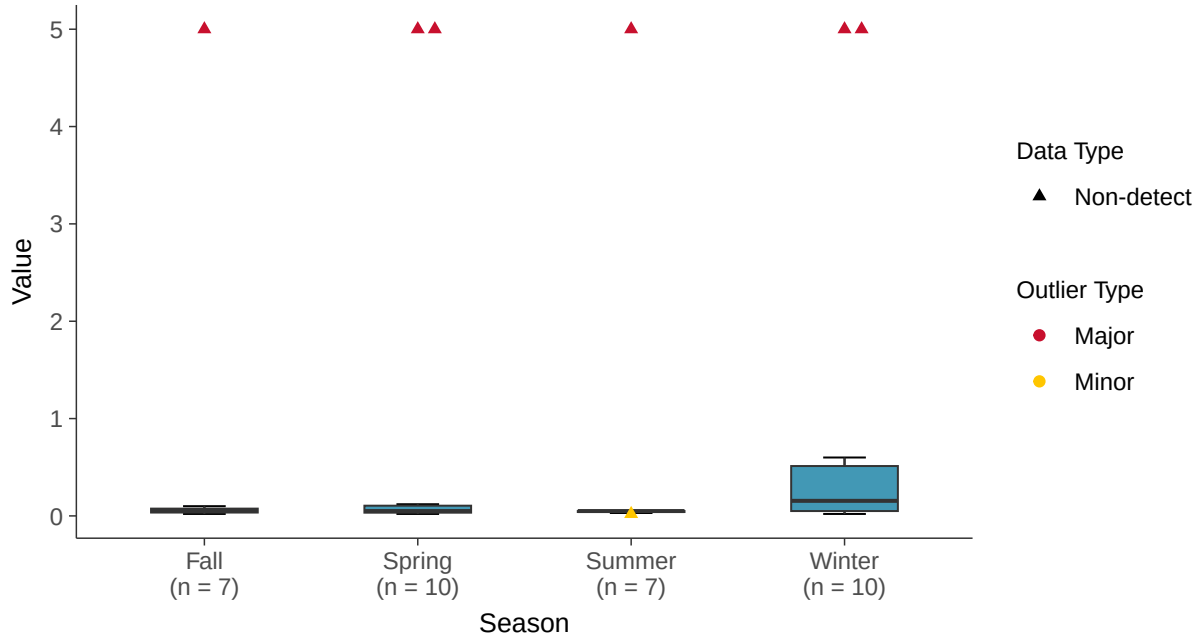
Boxplot

Thallium, MW-3 (ug/L)



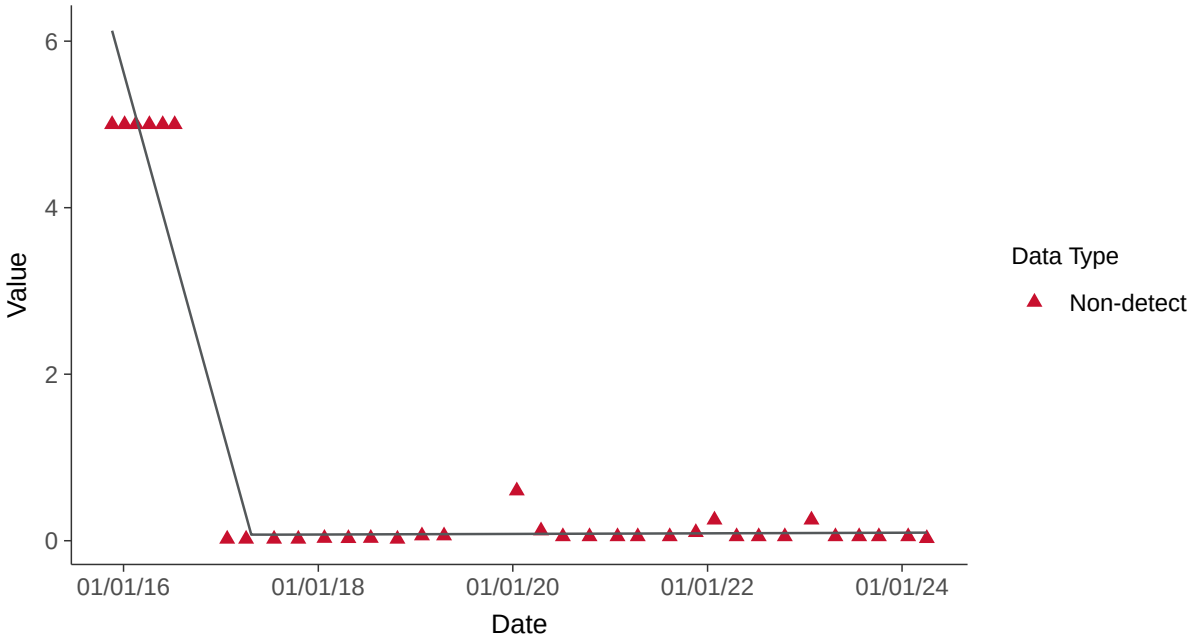
Boxplot by Season

Thallium, MW-3 (ug/L)



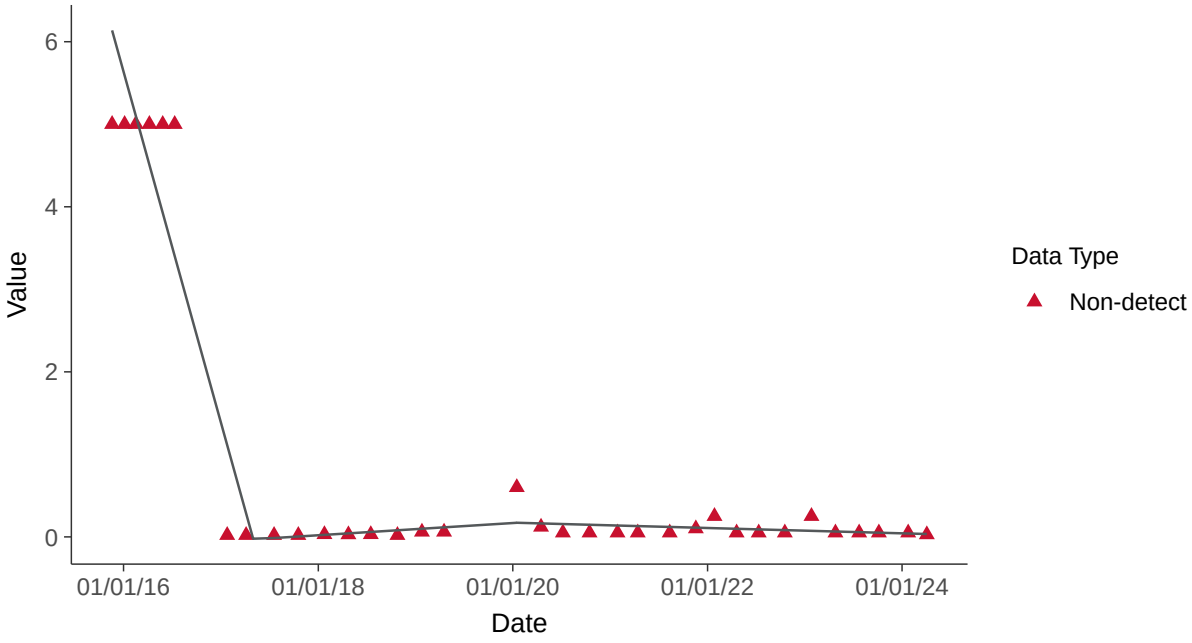
Trend Regression: Piecewise Linear-Linear

Thallium, MW-3 (ug/L)



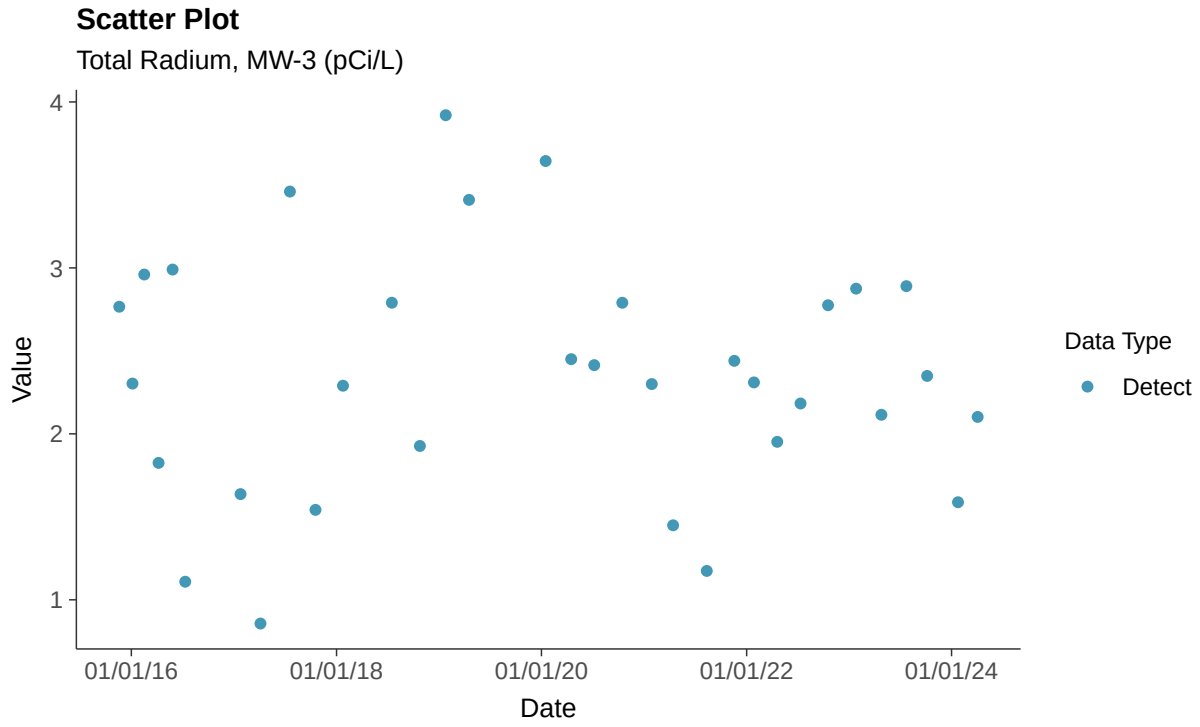
Trend Regression: Piecewise Linear-Linear-Linear

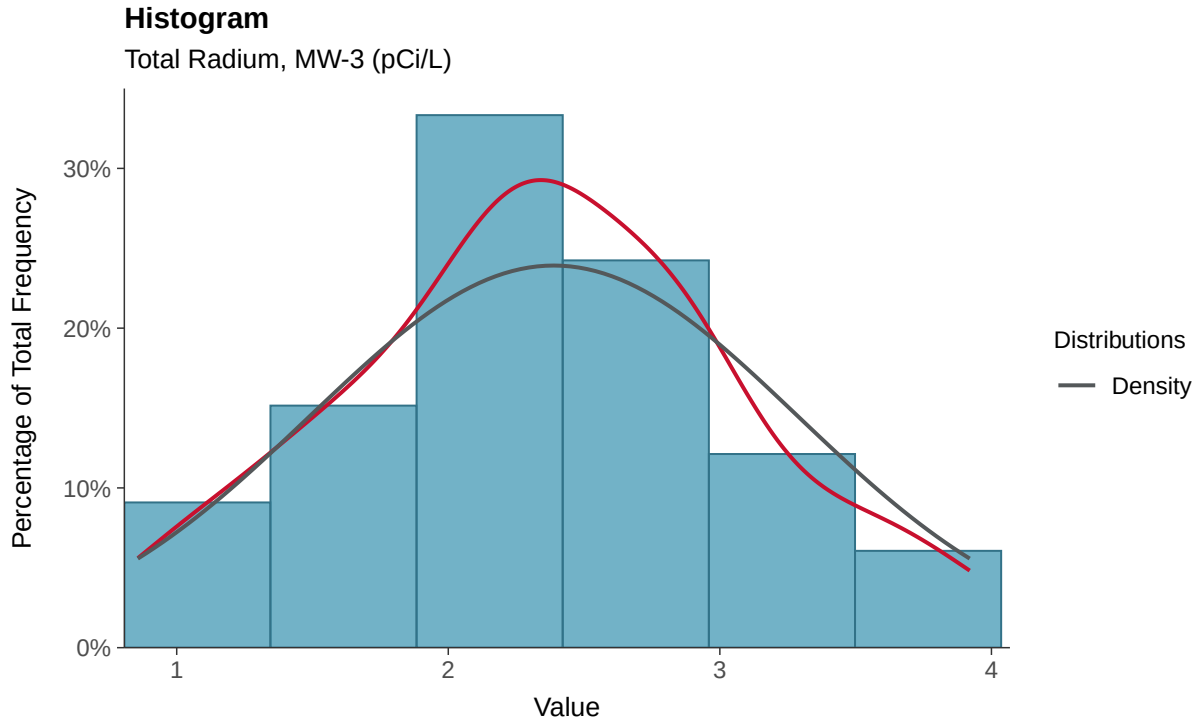
Thallium, MW-3 (ug/L)



App. IV: Total Radium, MW-3

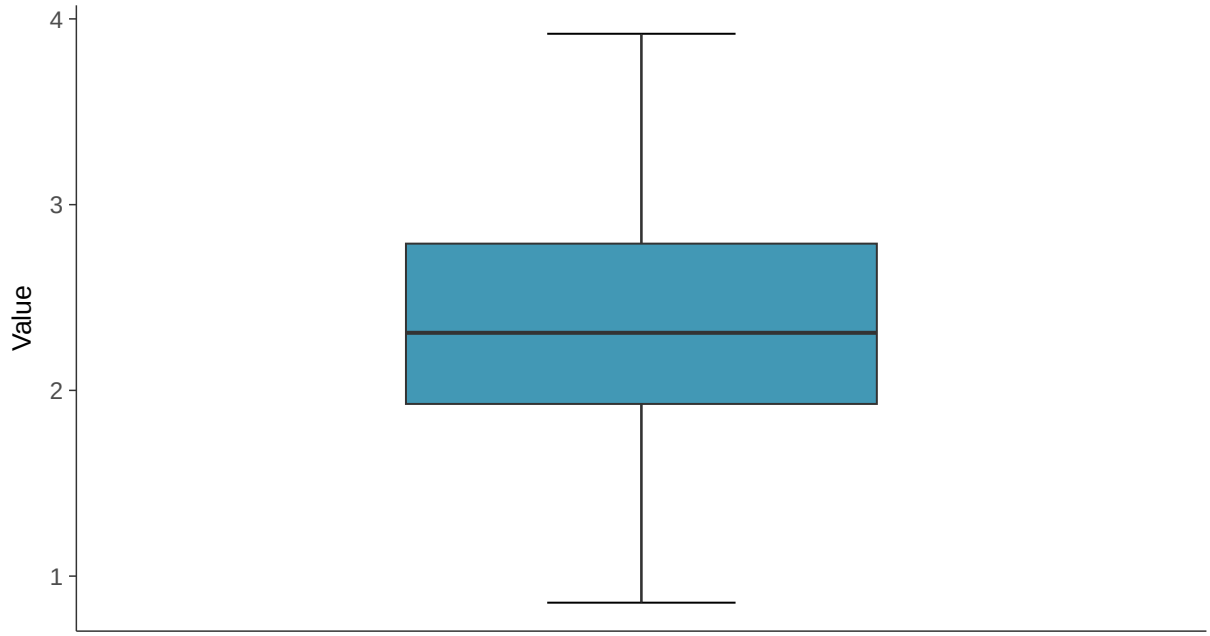
ID: 6_3_126





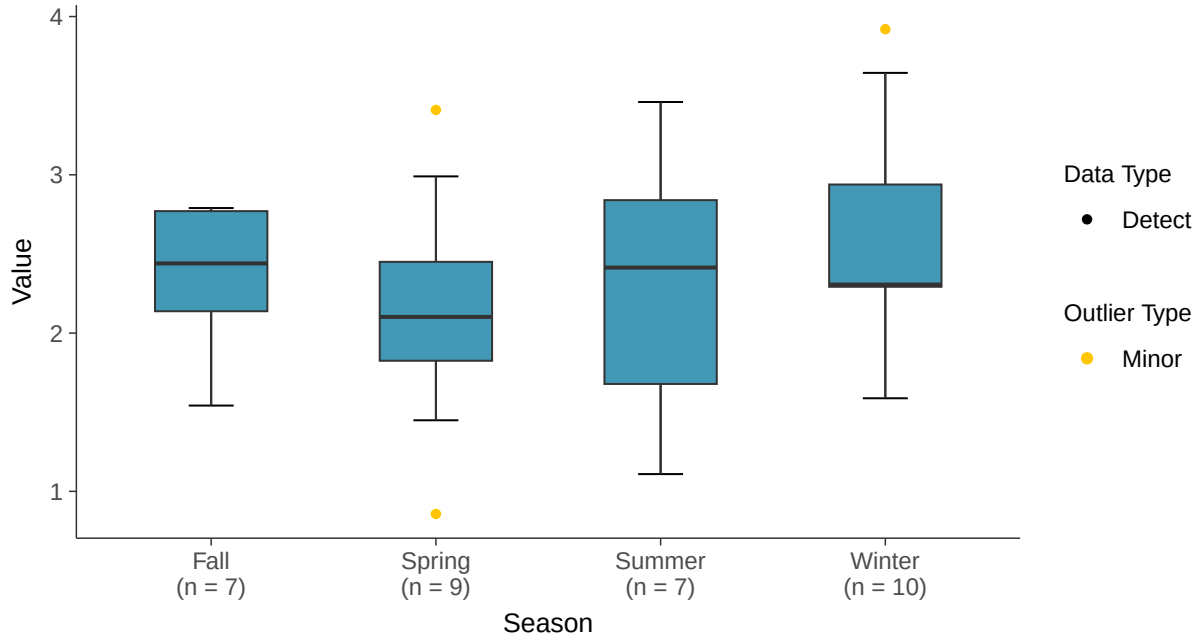
Boxplot

Total Radium, MW-3 (pCi/L)



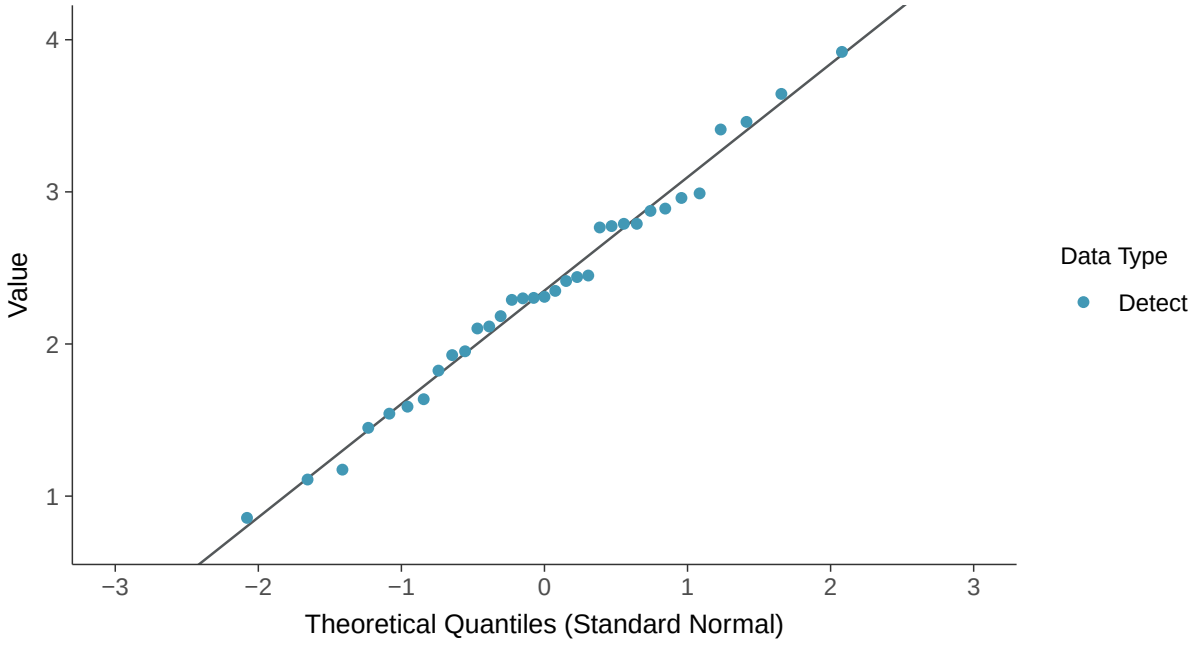
Boxplot by Season

Total Radium, MW-3 (pCi/L)



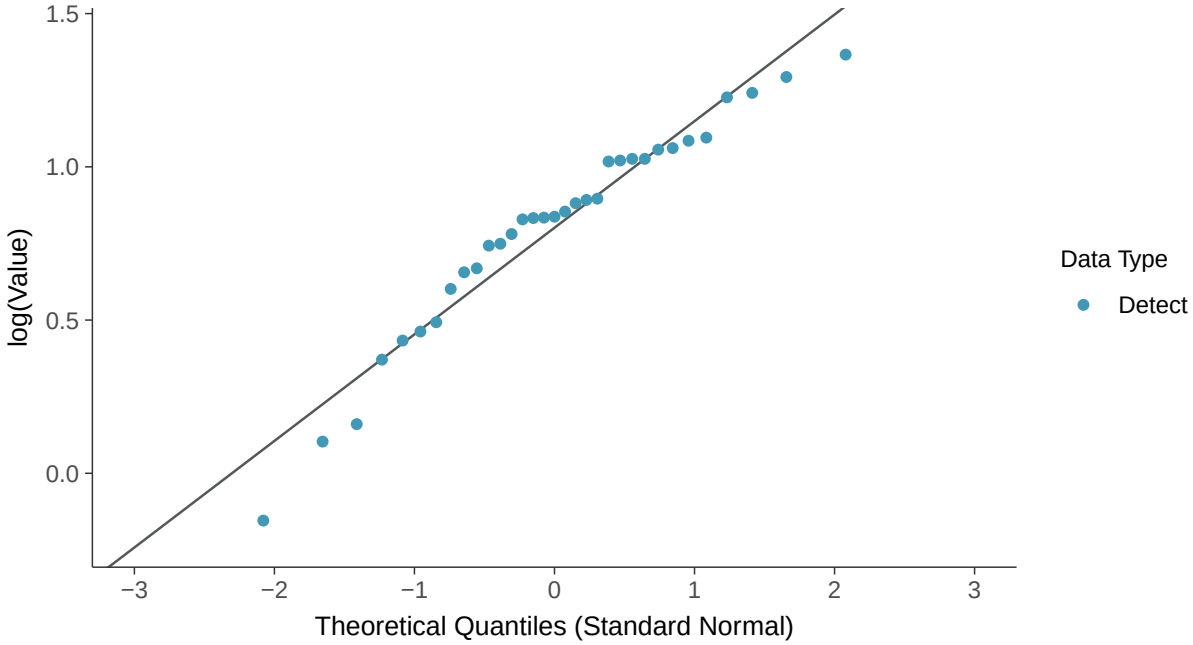
Normal Q-Q plot

Total Radium, MW-3 (pCi/L)



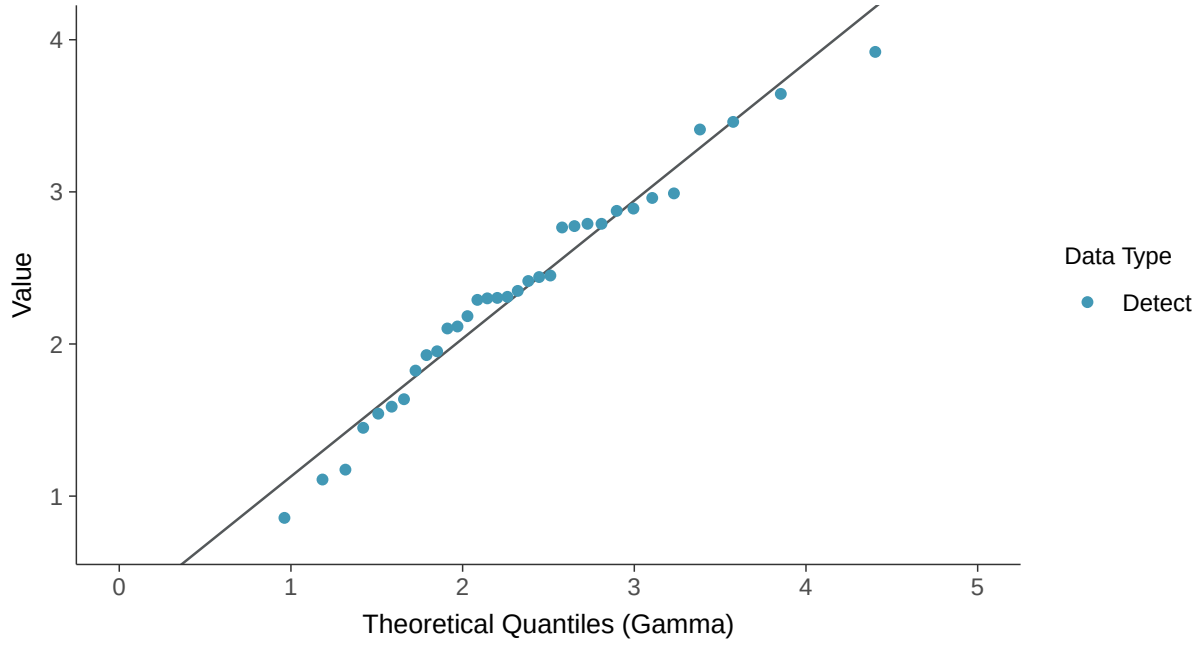
Lognormal Q-Q plot

Total Radium, MW-3 (pCi/L)



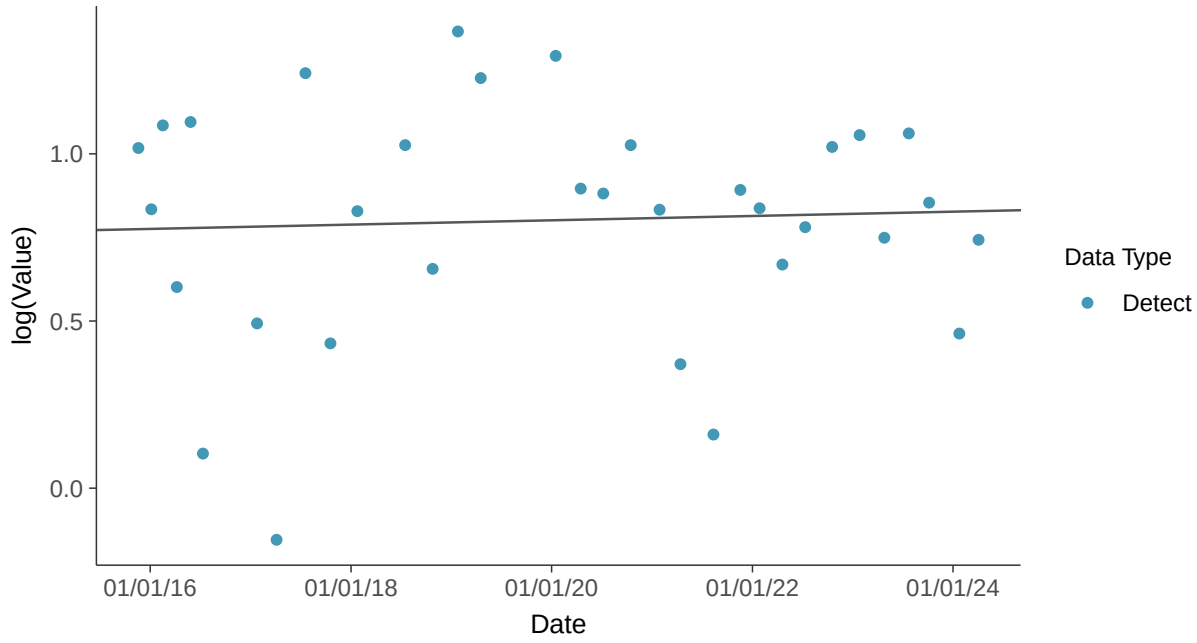
Gamma Q-Q plot

Total Radium, MW-3 (pCi/L)



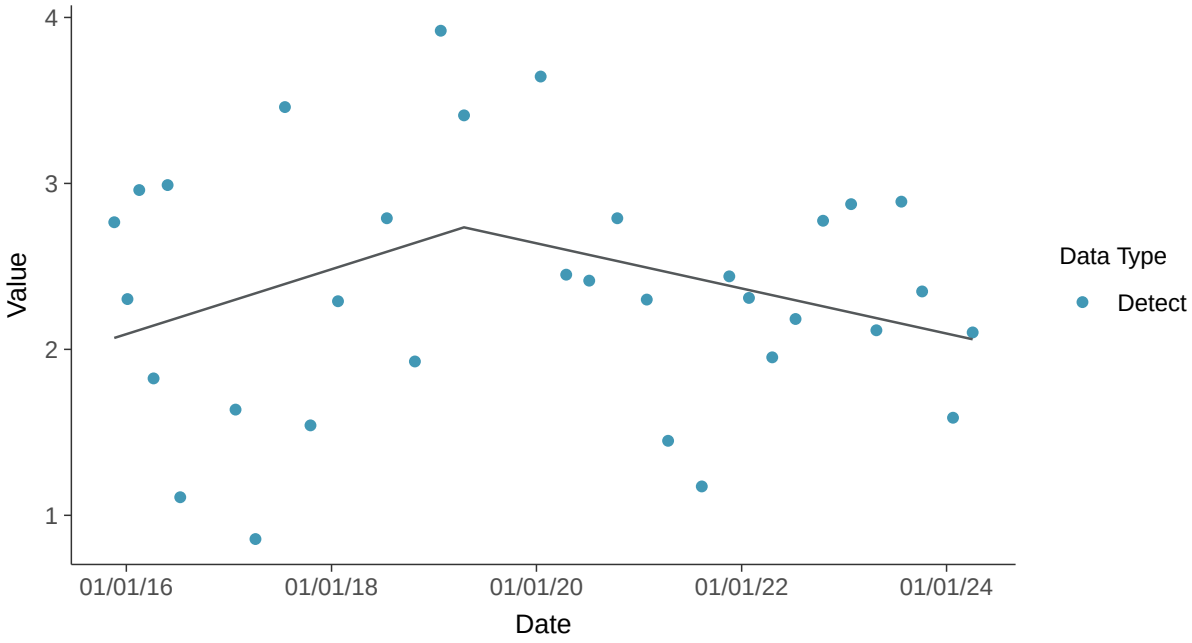
Trend Regression: Lognormal MLE

Total Radium, MW-3 (pCi/L)



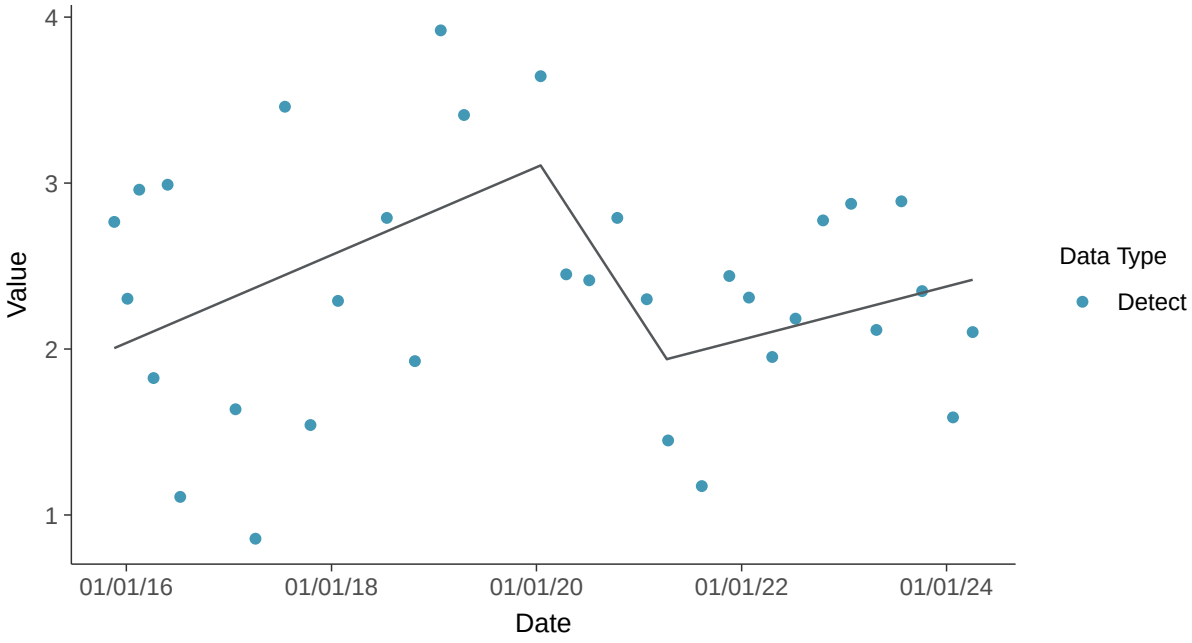
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-3 (pCi/L)



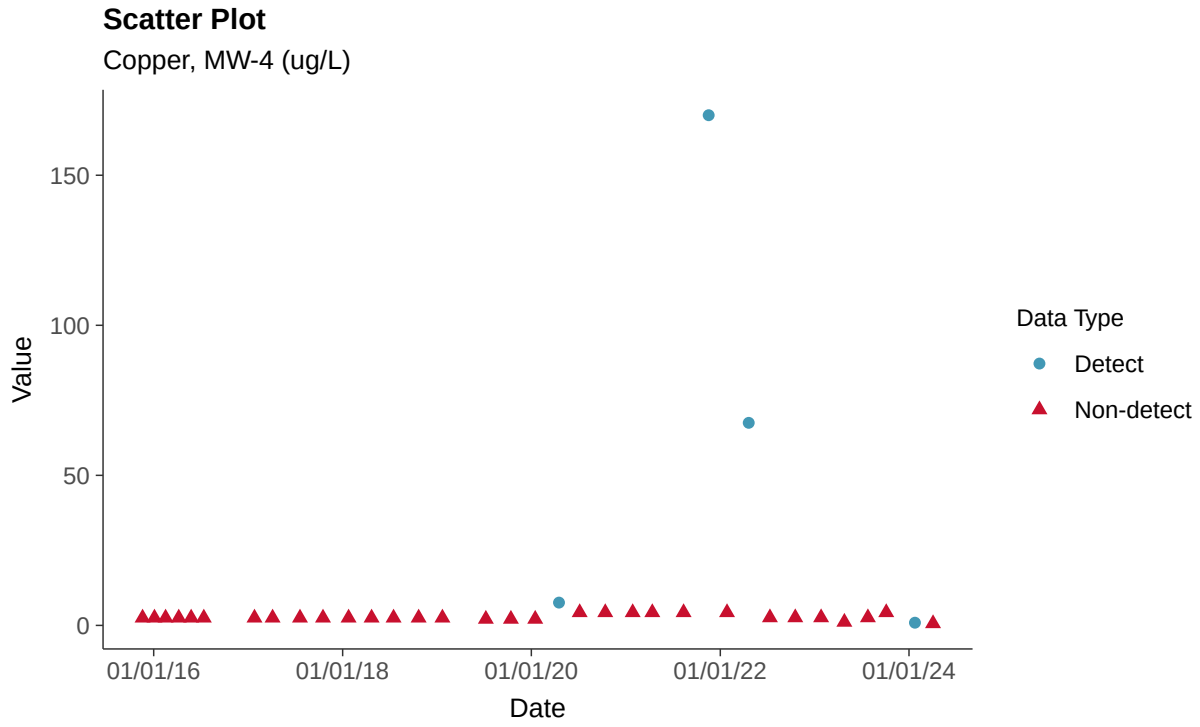
Trend Regression: Piecewise Linear-Linear-Linear

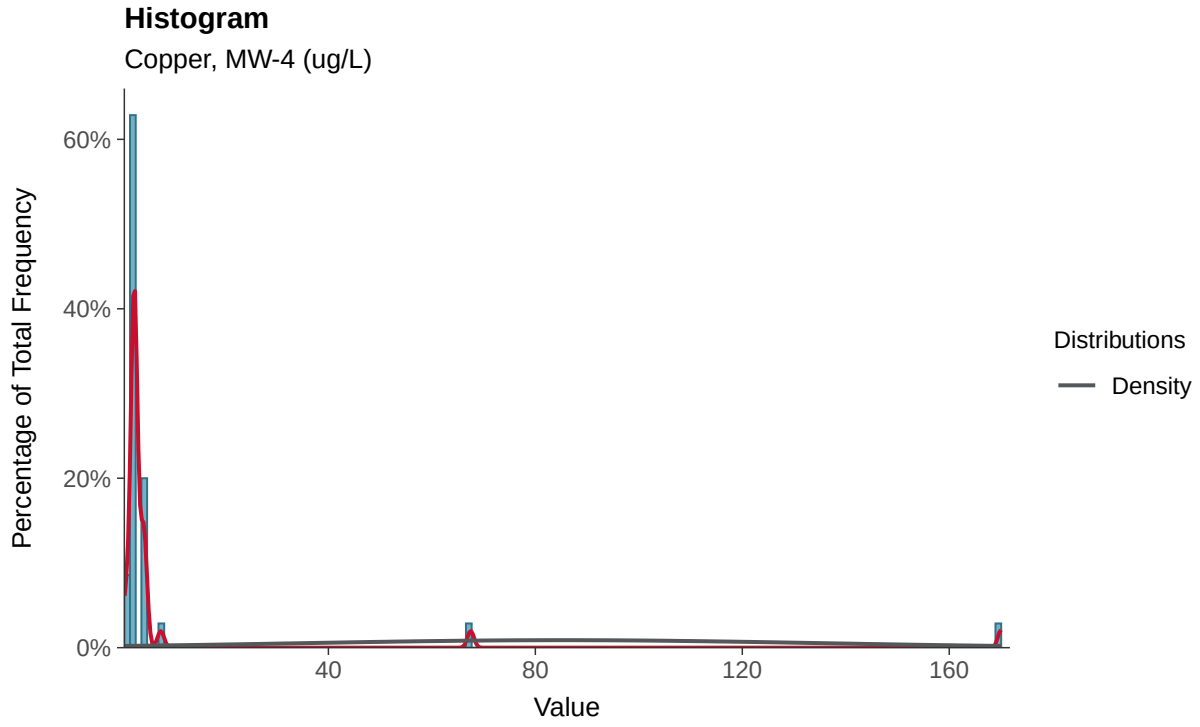
Total Radium, MW-3 (pCi/L)



App. I Metals: Copper, MW-4

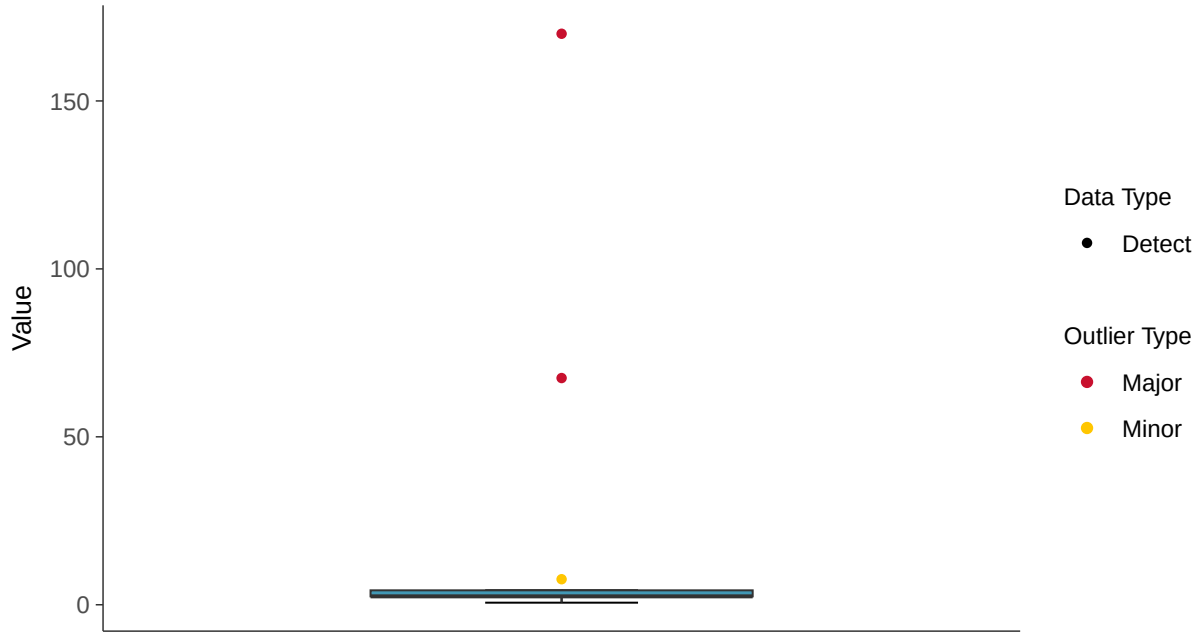
ID: 7_1_111





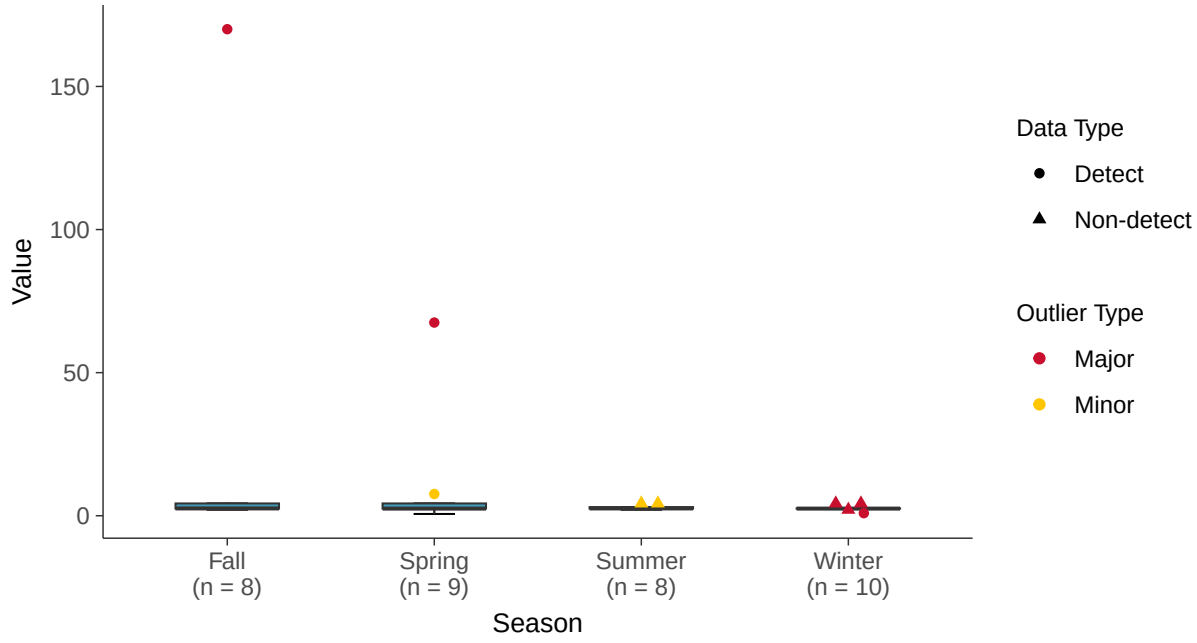
Boxplot

Copper, MW-4 (ug/L)



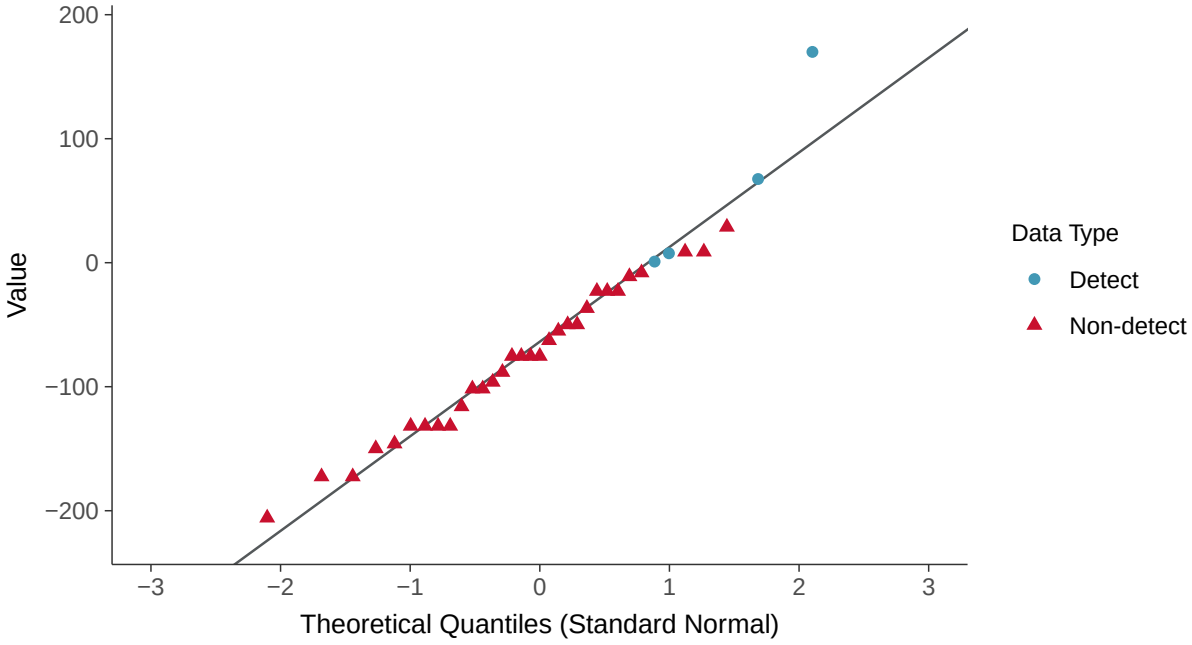
Boxplot by Season

Copper, MW-4 (ug/L)



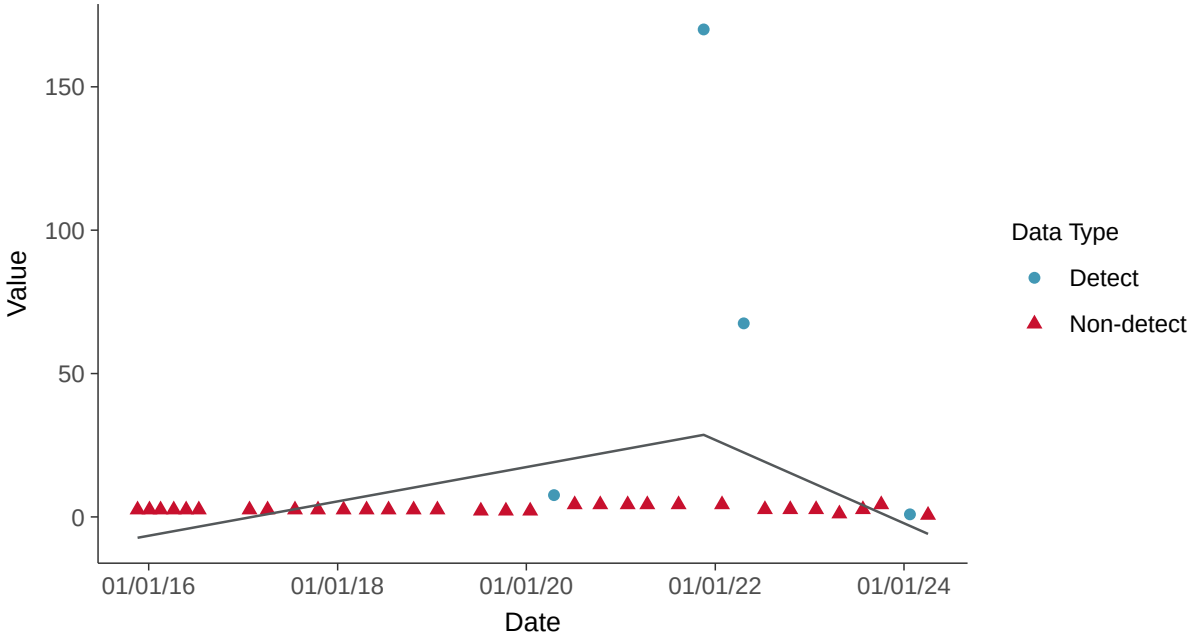
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-4 (ug/L)



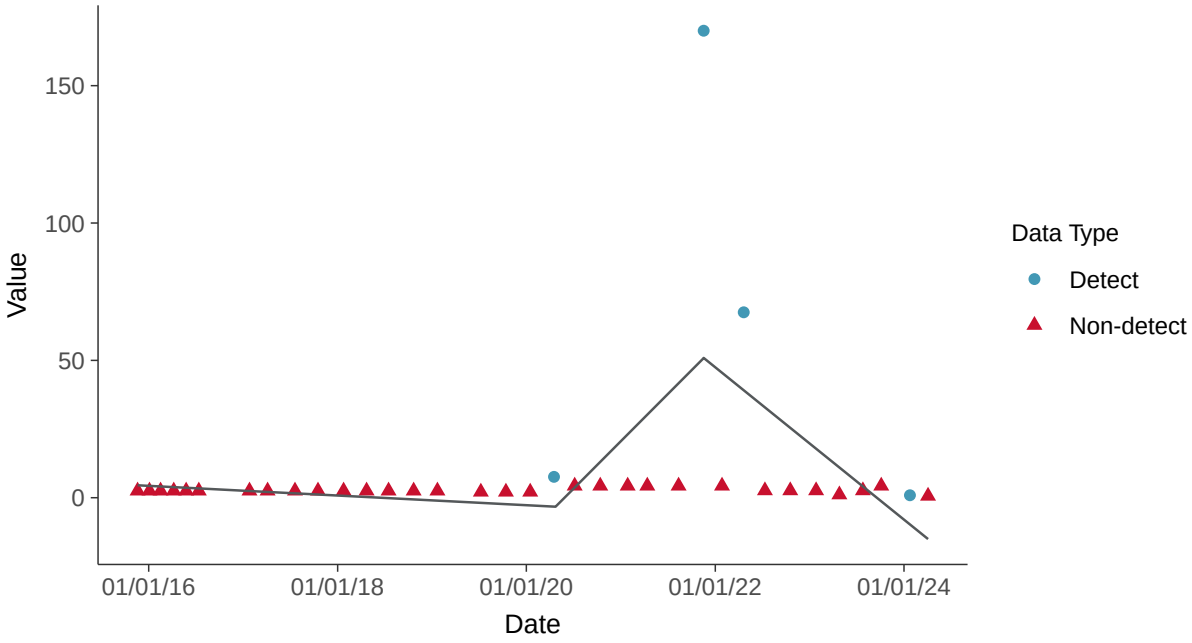
Trend Regression: Piecewise Linear-Linear

Copper, MW-4 (ug/L)



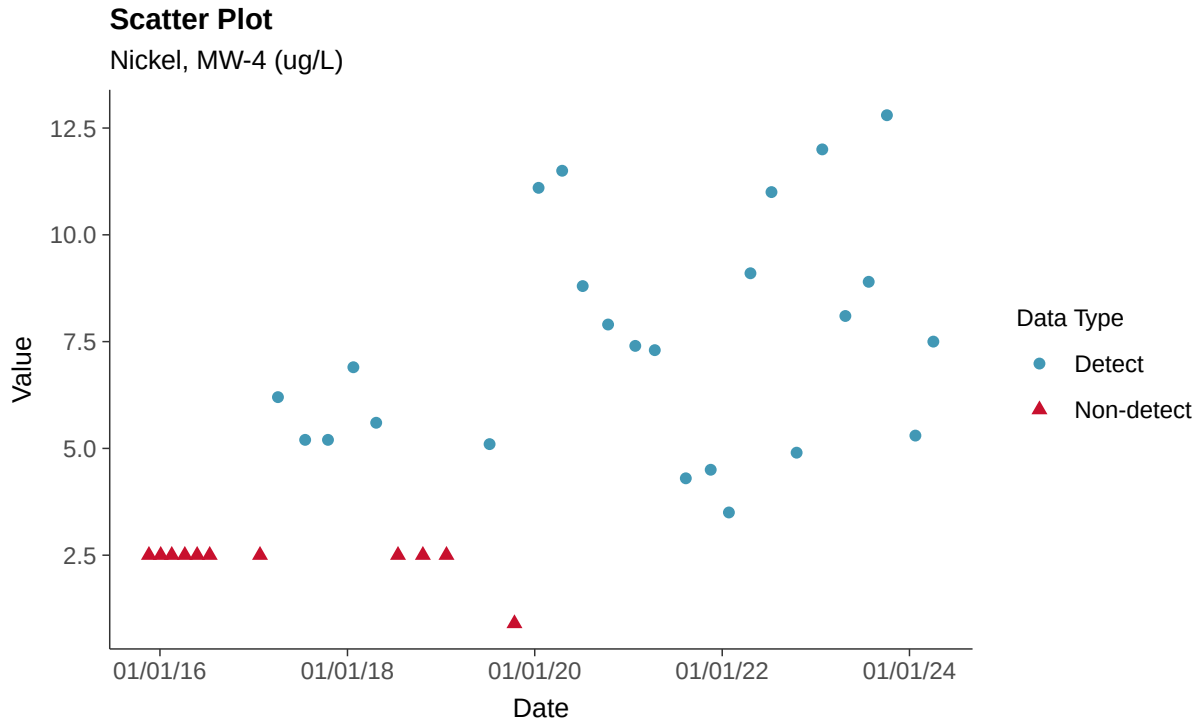
Trend Regression: Piecewise Linear-Linear-Linear

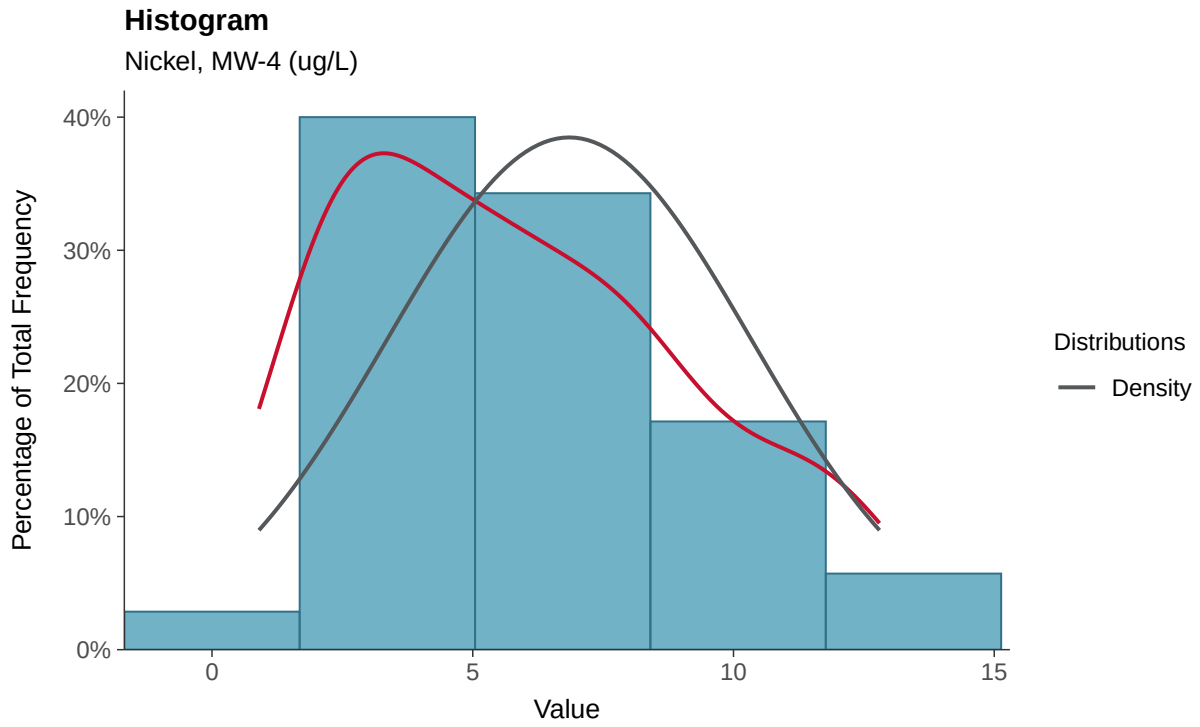
Copper, MW-4 (ug/L)



App. I Metals: Nickel, MW-4

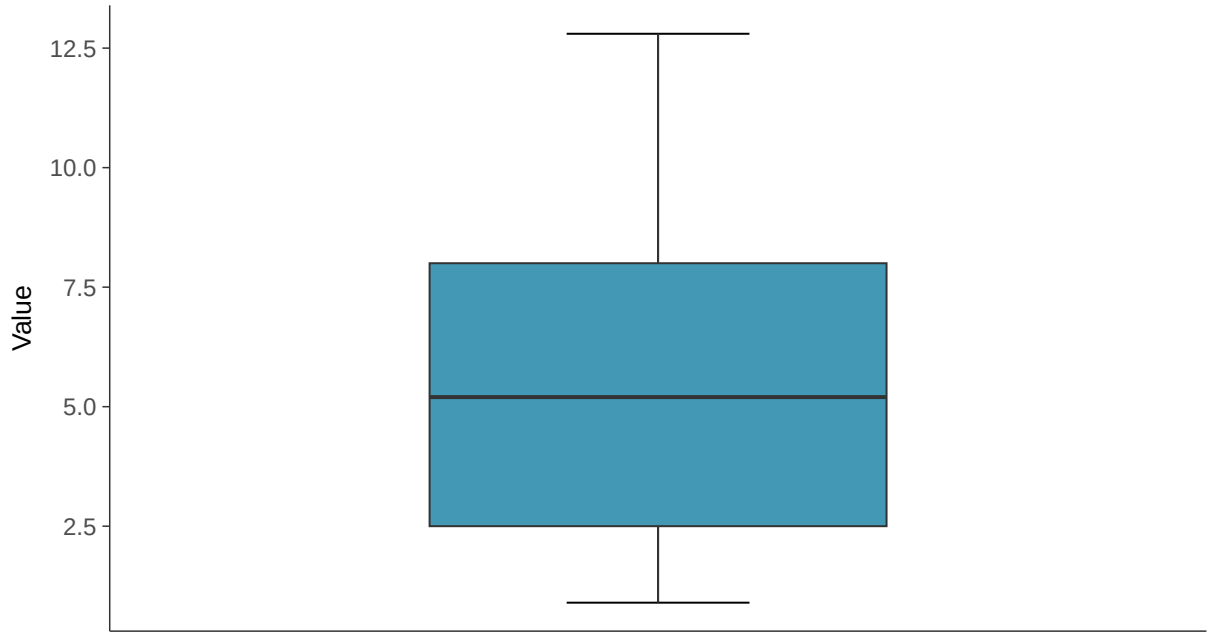
ID: 7_1_117





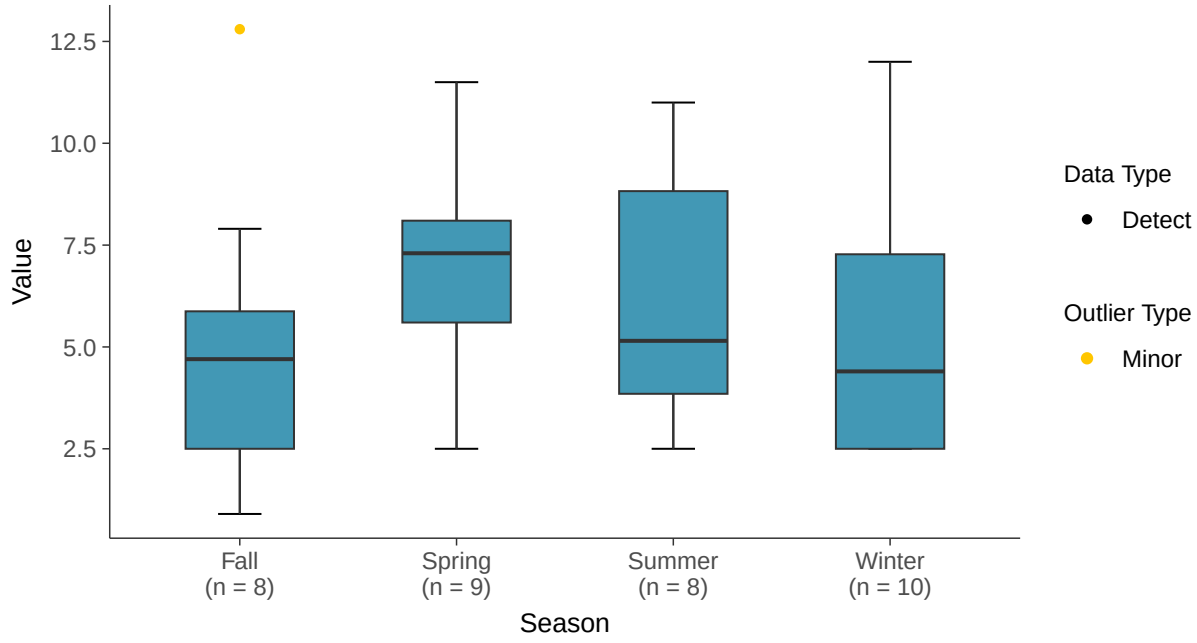
Boxplot

Nickel, MW-4 (ug/L)



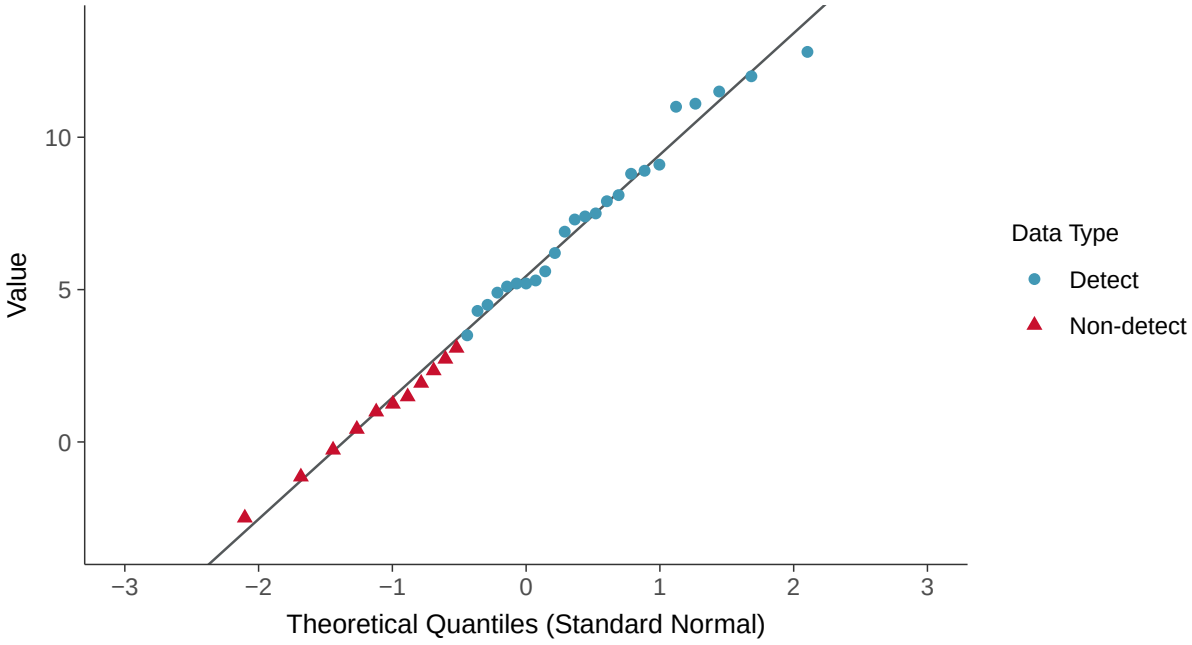
Boxplot by Season

Nickel, MW-4 (ug/L)



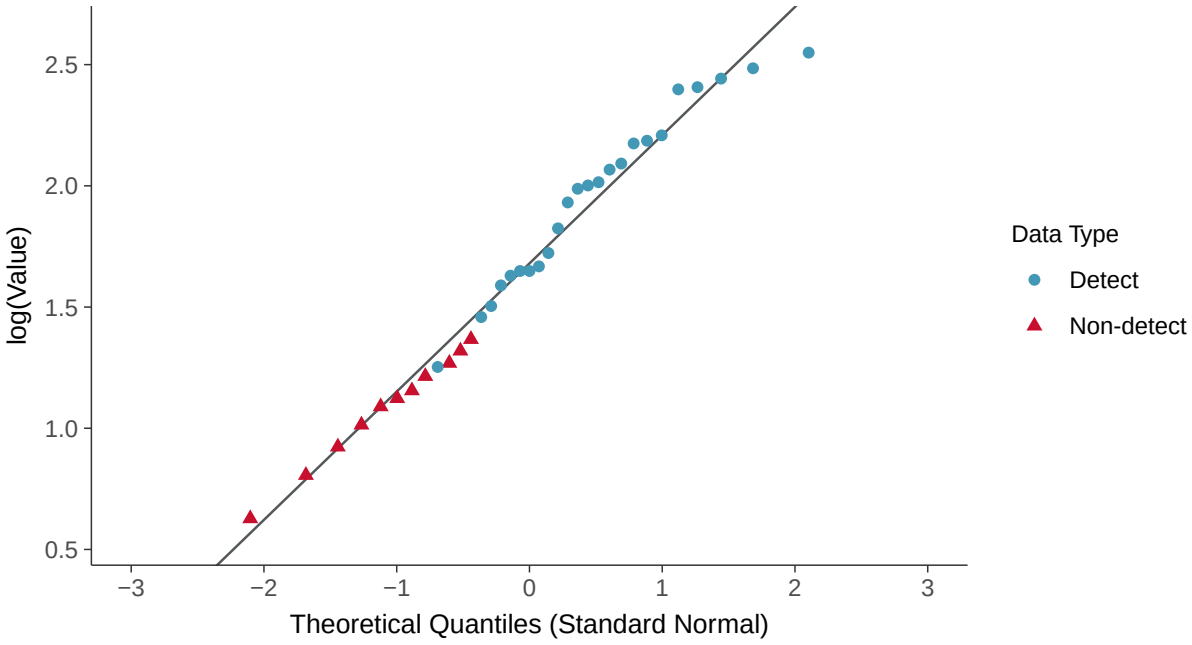
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



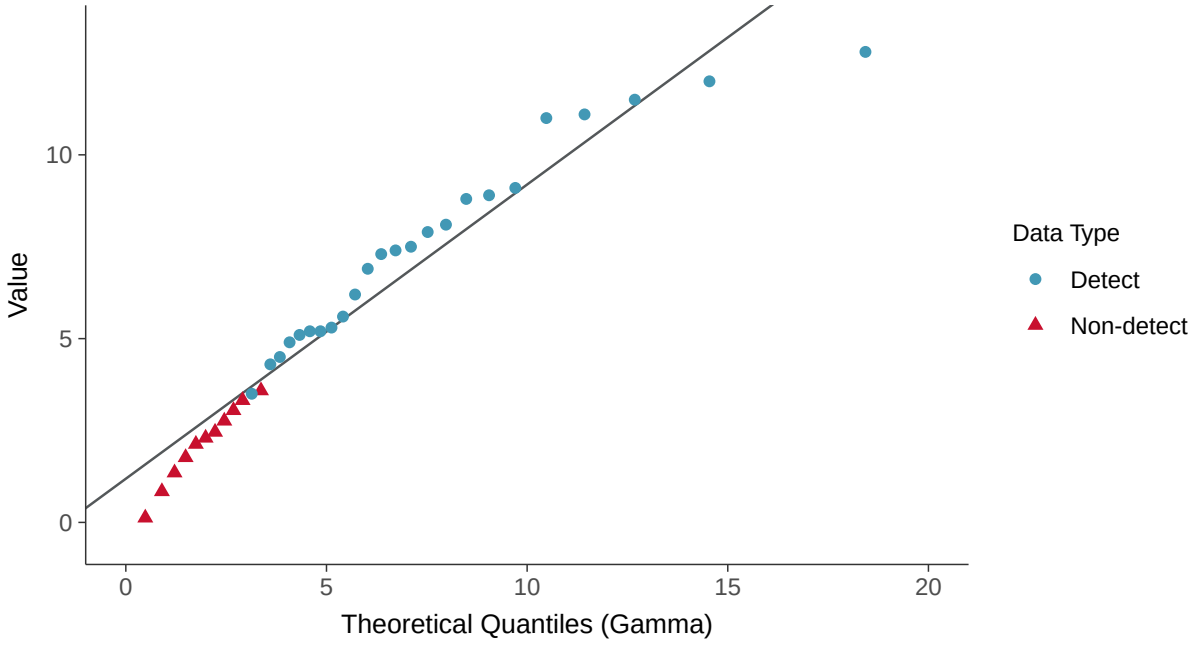
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



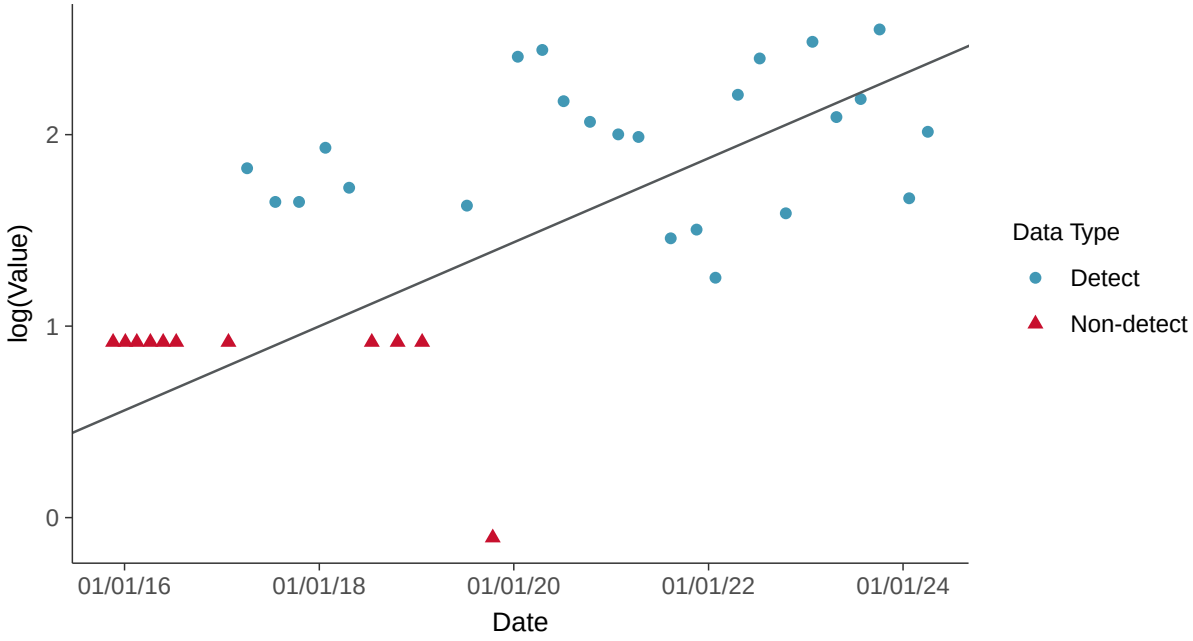
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



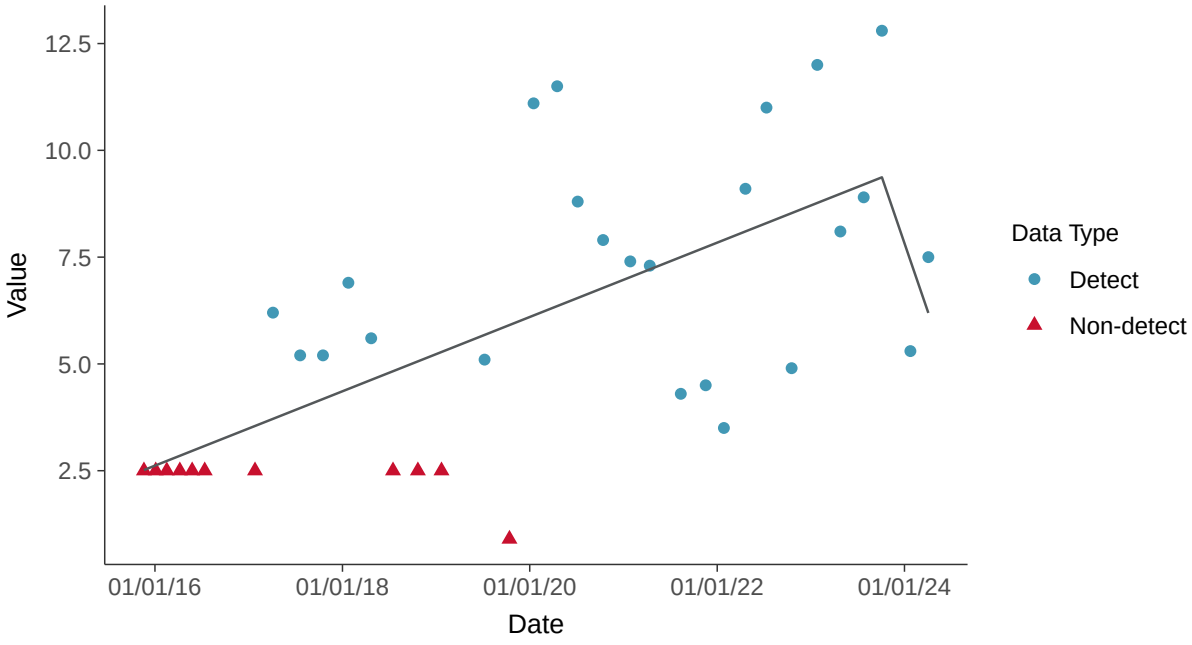
Trend Regression: Lognormal MLE

Nickel, MW-4 (ug/L)



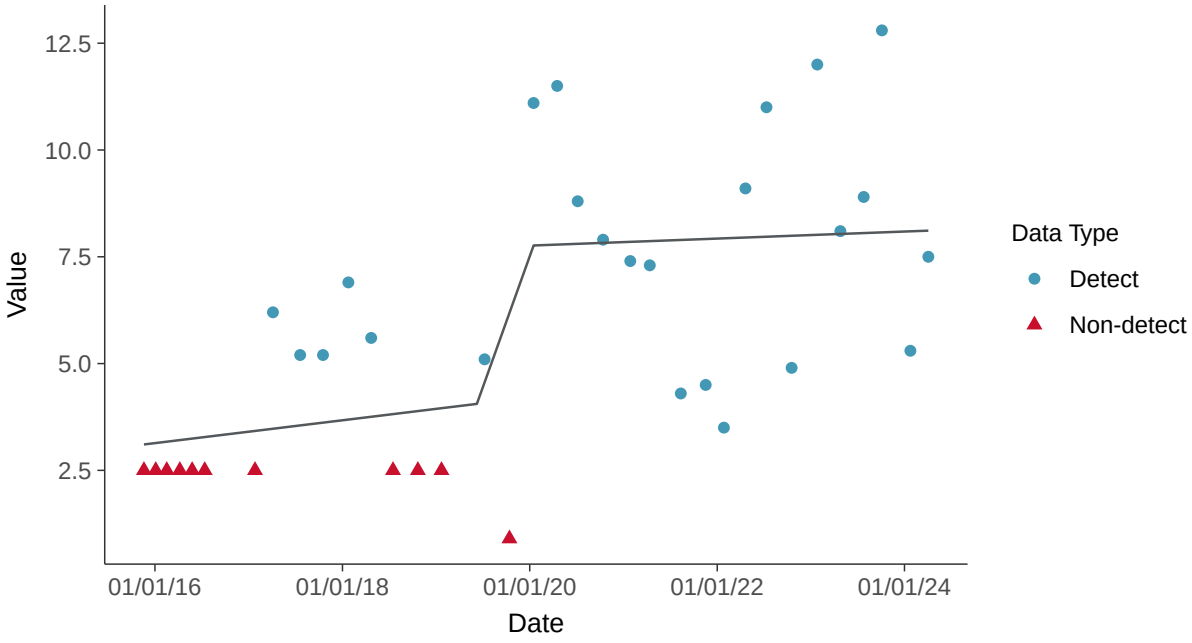
Trend Regression: Piecewise Linear-Linear

Nickel, MW-4 (ug/L)



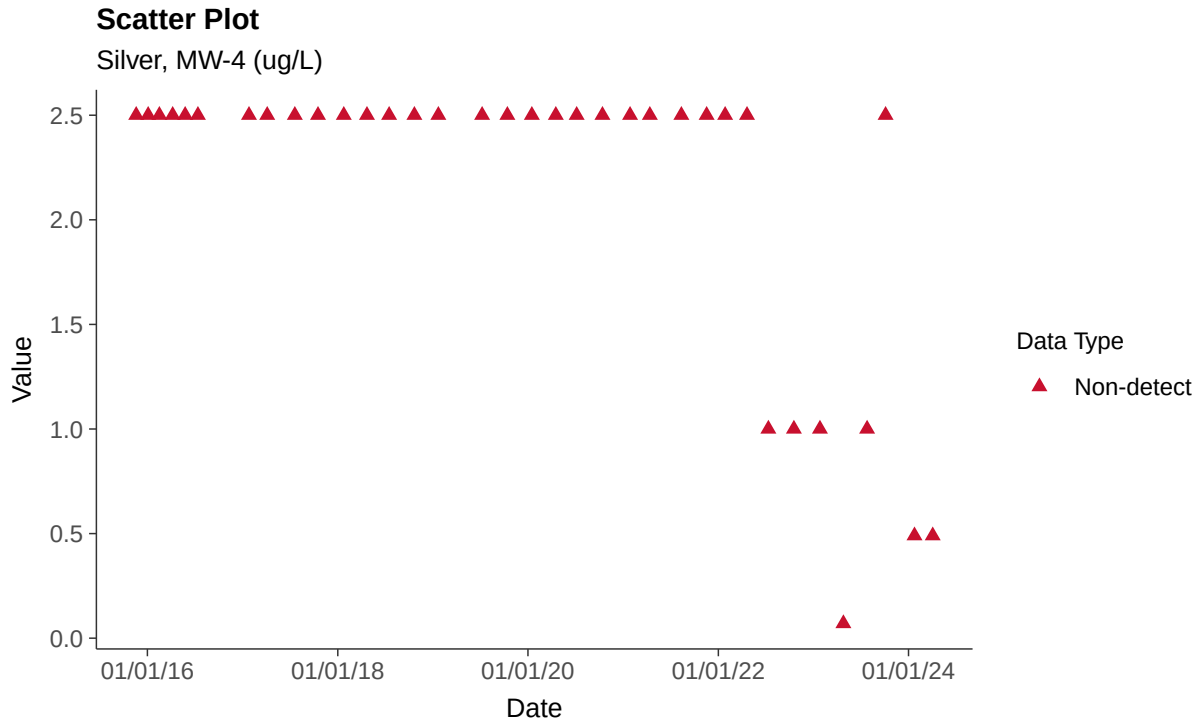
Trend Regression: Piecewise Linear-Linear-Linear

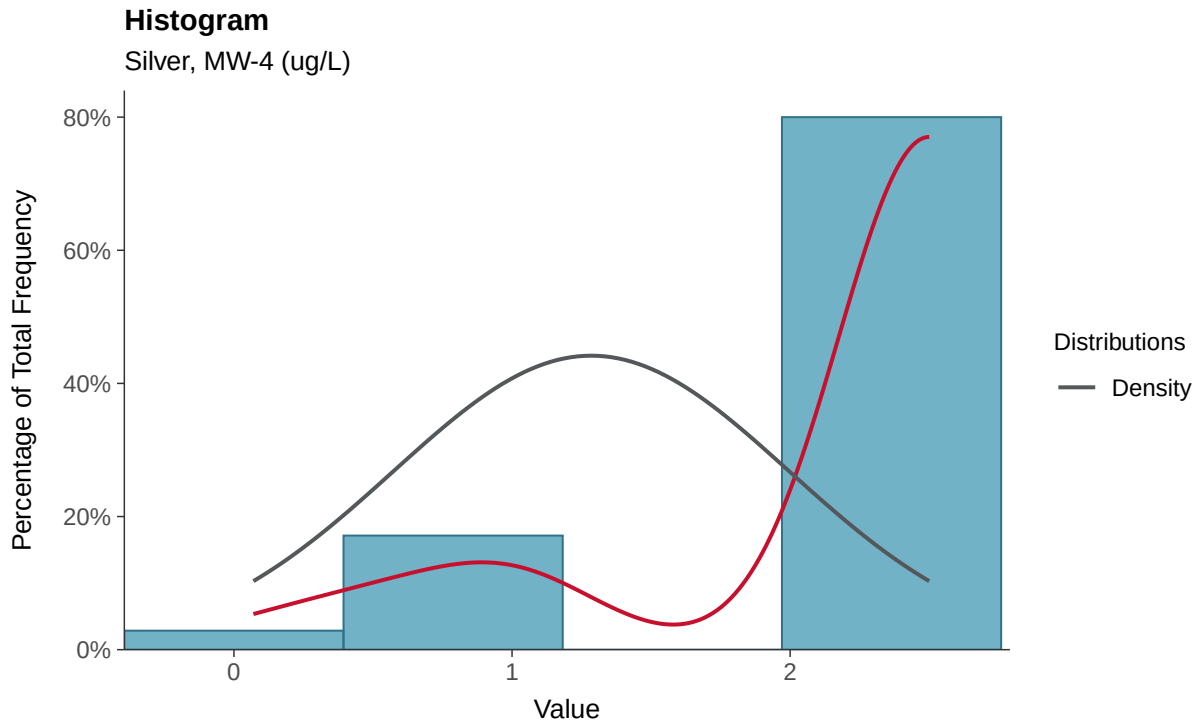
Nickel, MW-4 (ug/L)



App. I Metals: Silver, MW-4

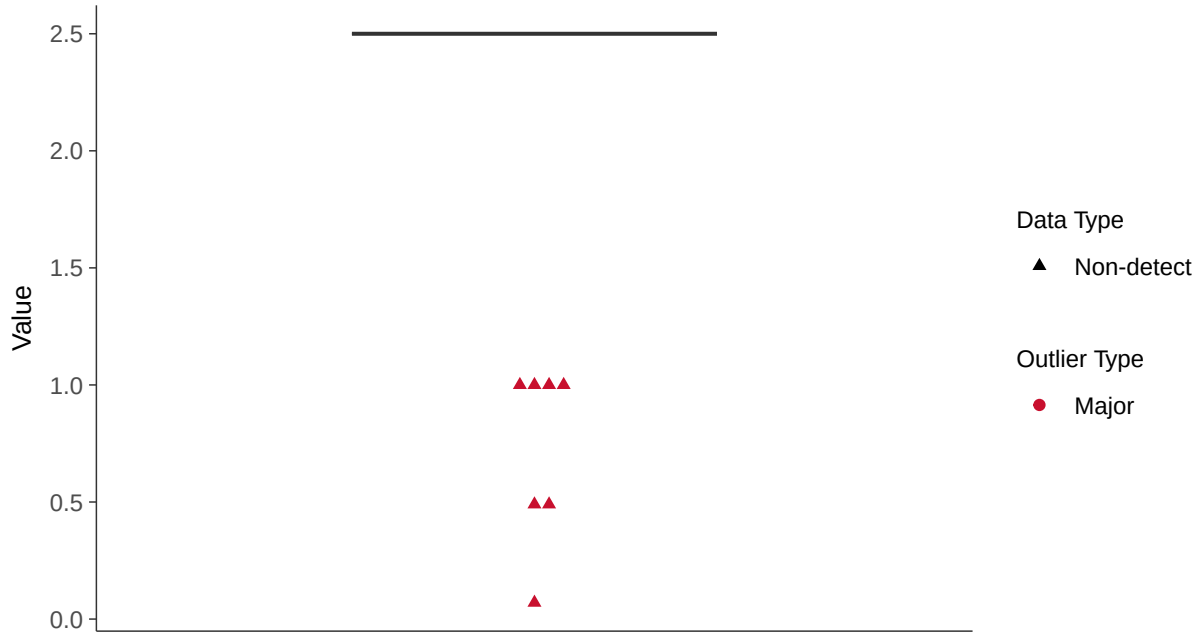
ID: 7_1_122





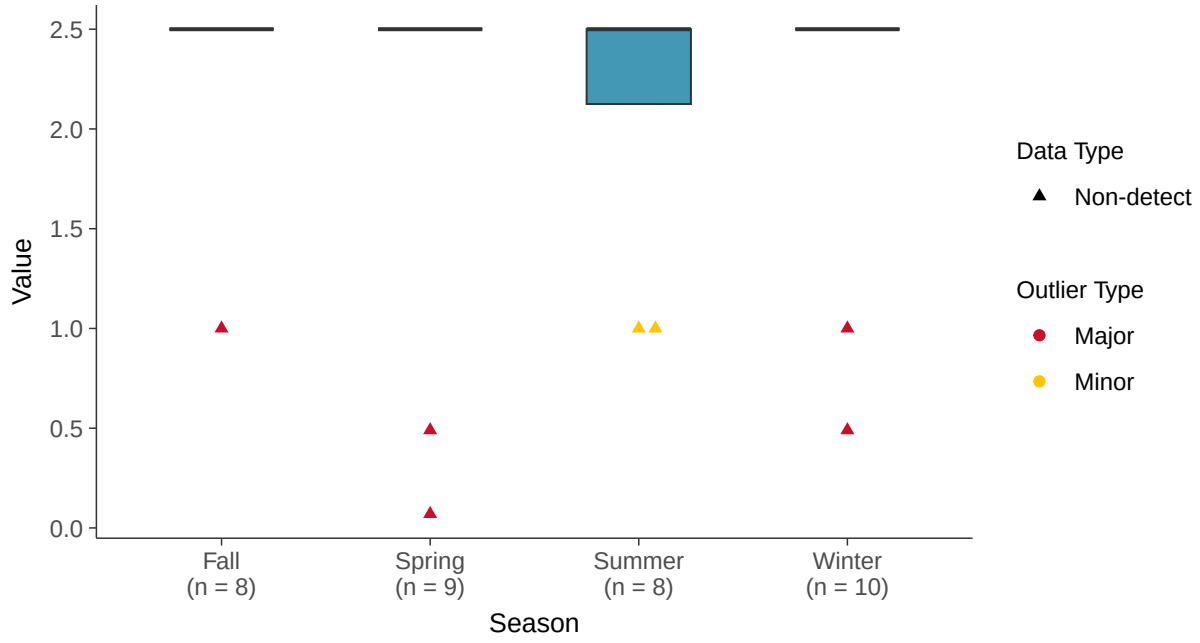
Boxplot

Silver, MW-4 (ug/L)



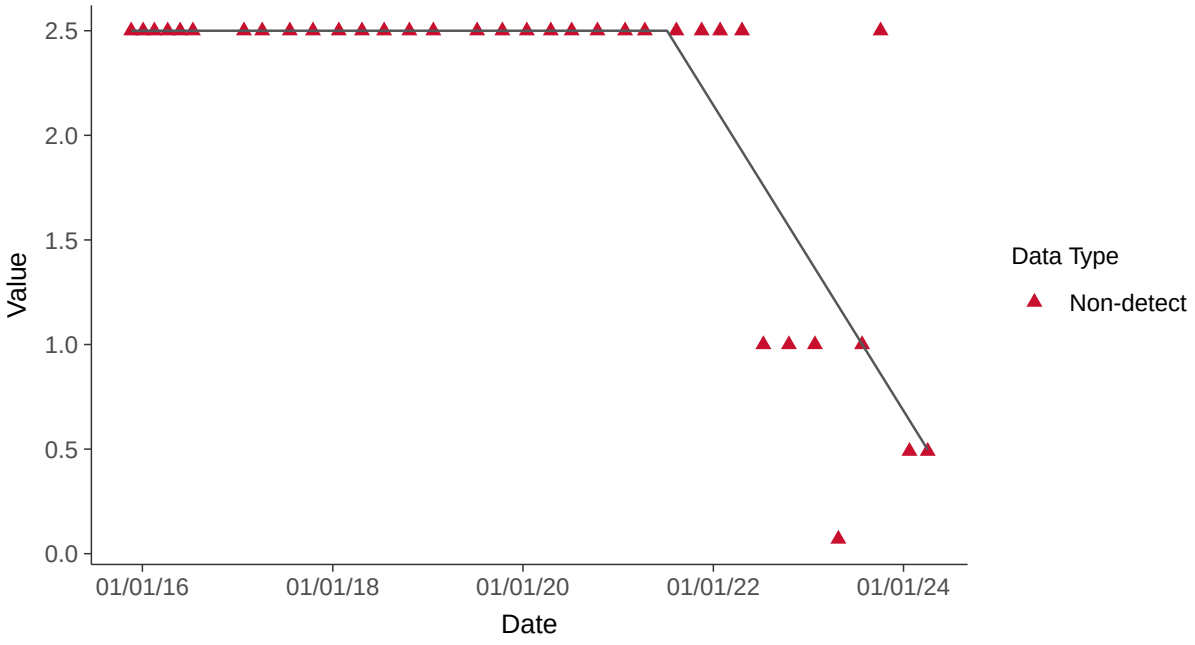
Boxplot by Season

Silver, MW-4 (ug/L)



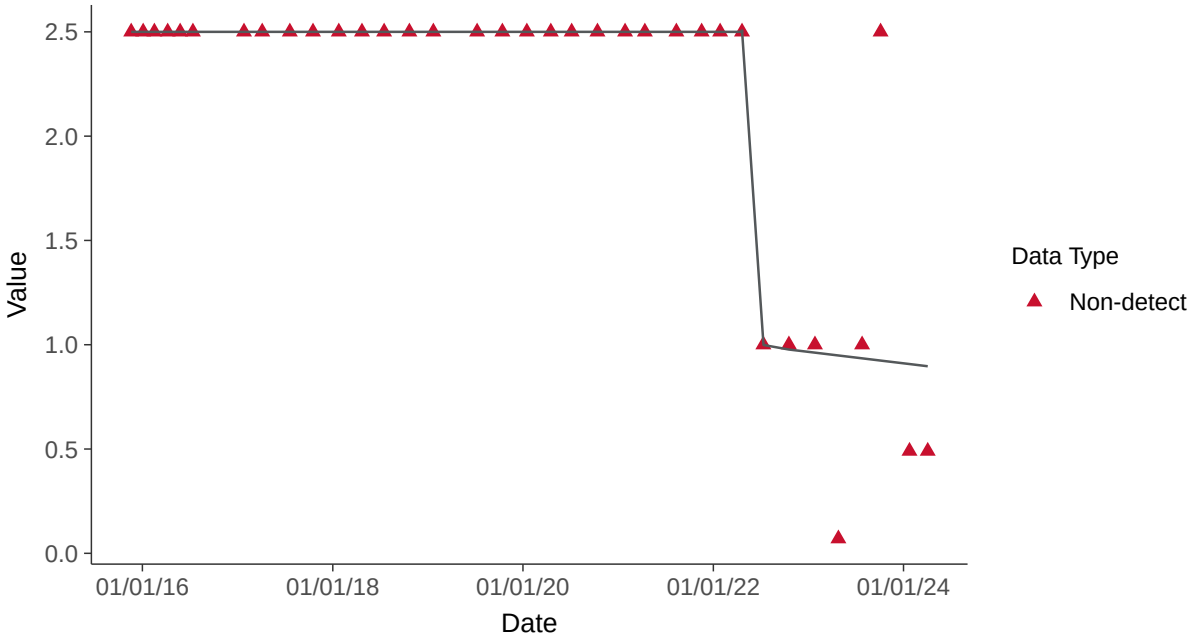
Trend Regression: Piecewise Linear-Linear

Silver, MW-4 (ug/L)



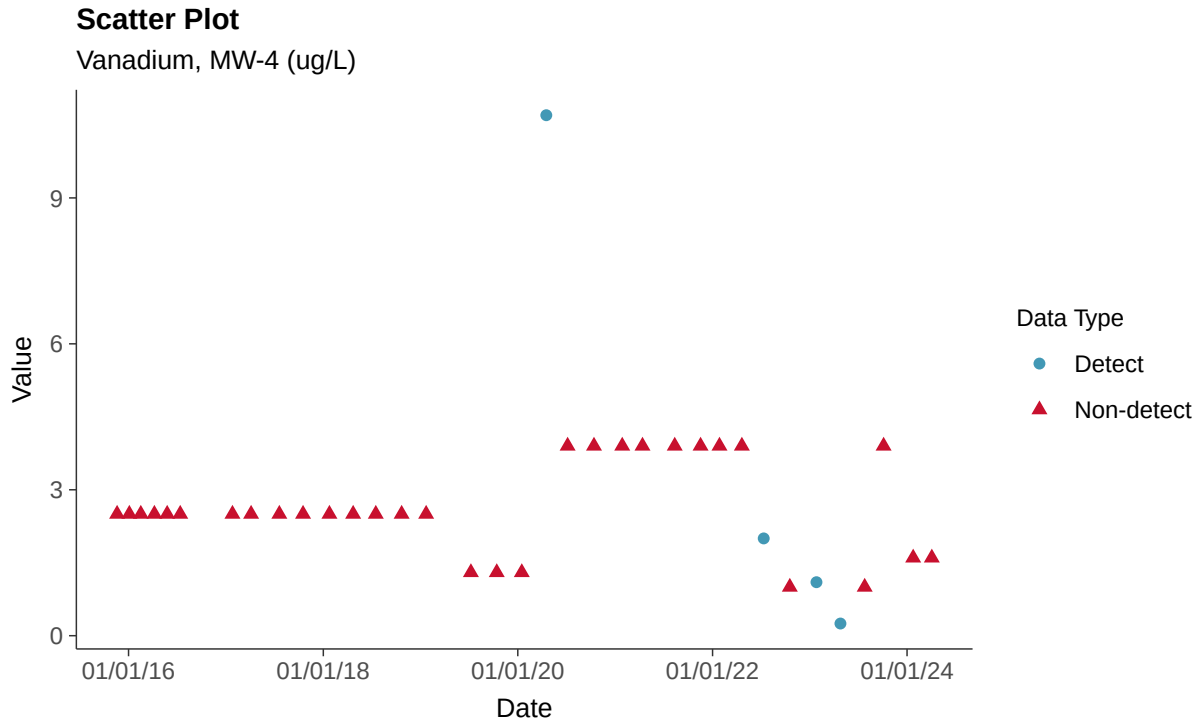
Trend Regression: Piecewise Linear-Linear-Linear

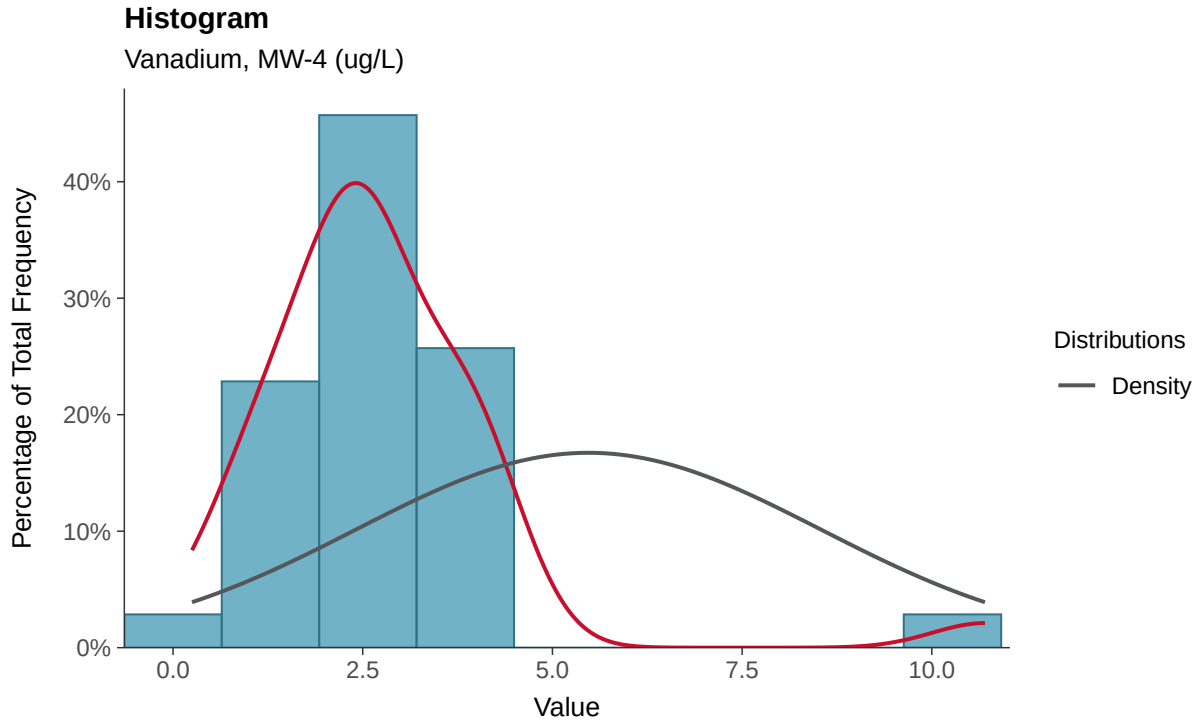
Silver, MW-4 (ug/L)



App. I Metals: Vanadium, MW-4

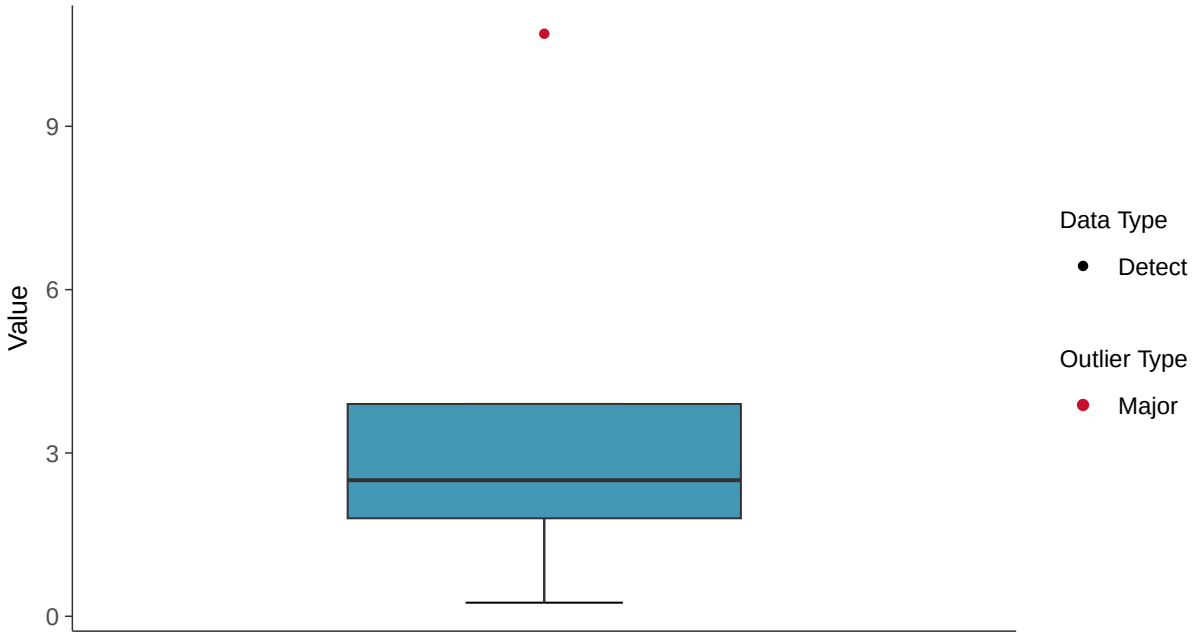
ID: 7_1_127





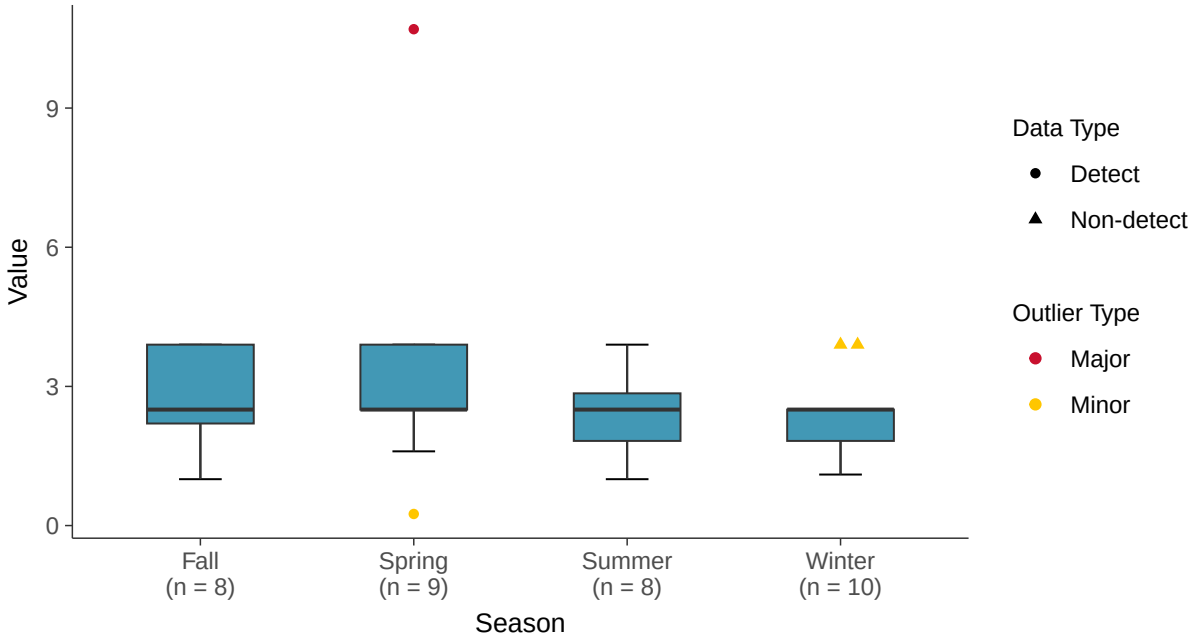
Boxplot

Vanadium, MW-4 (ug/L)



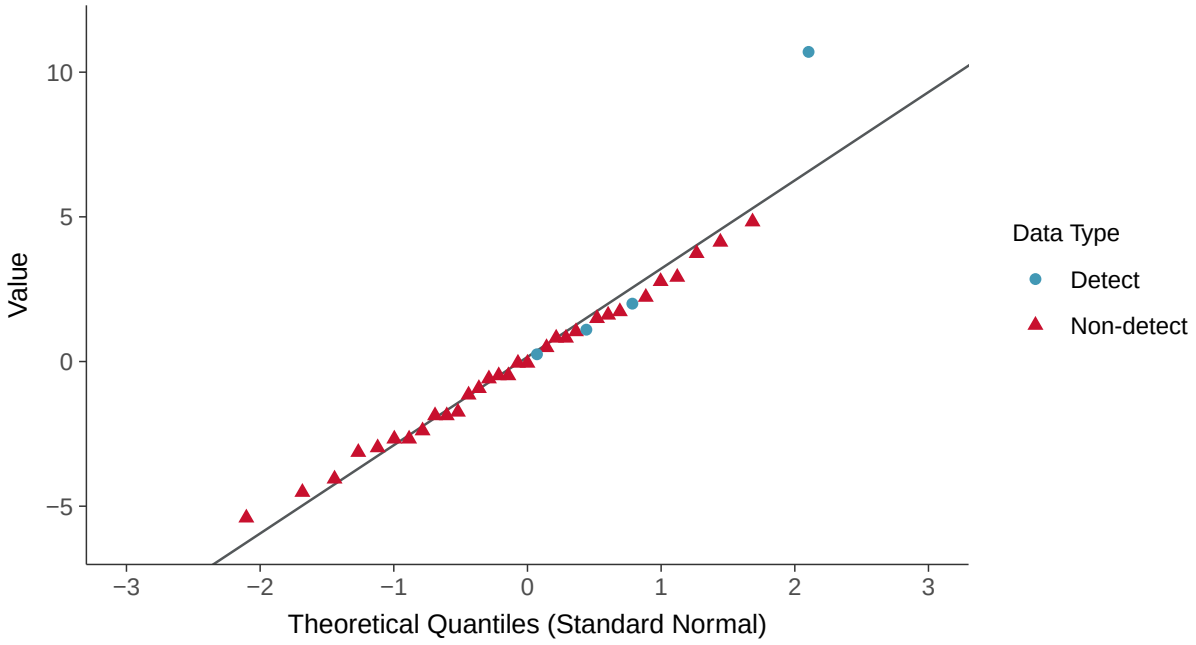
Boxplot by Season

Vanadium, MW-4 (ug/L)



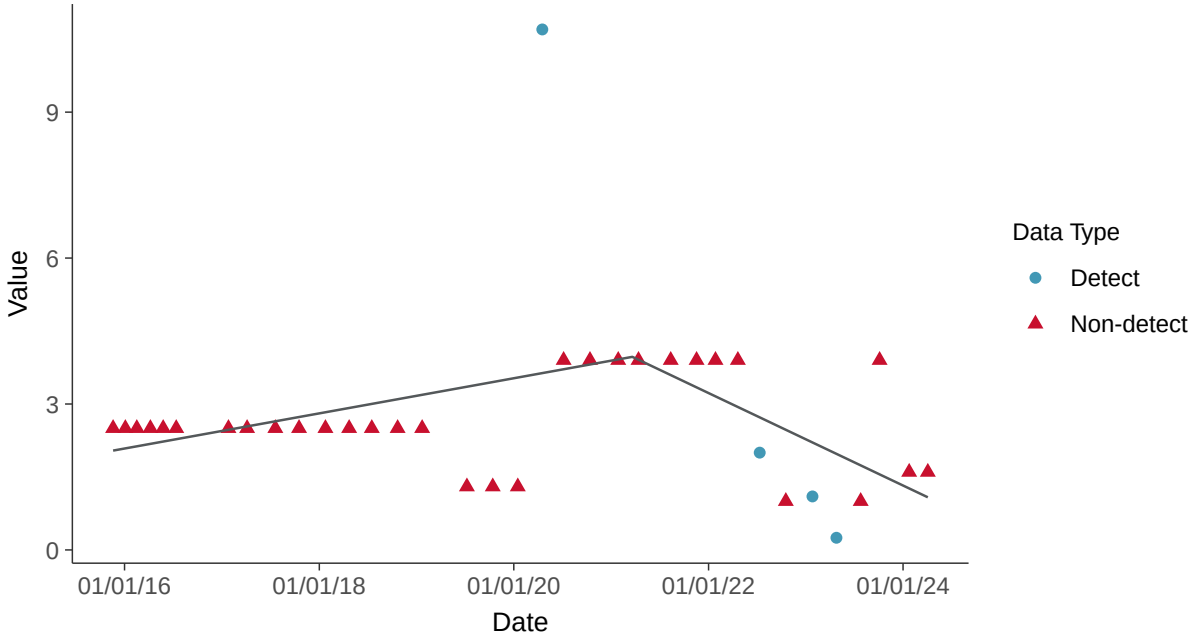
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-4 (ug/L)



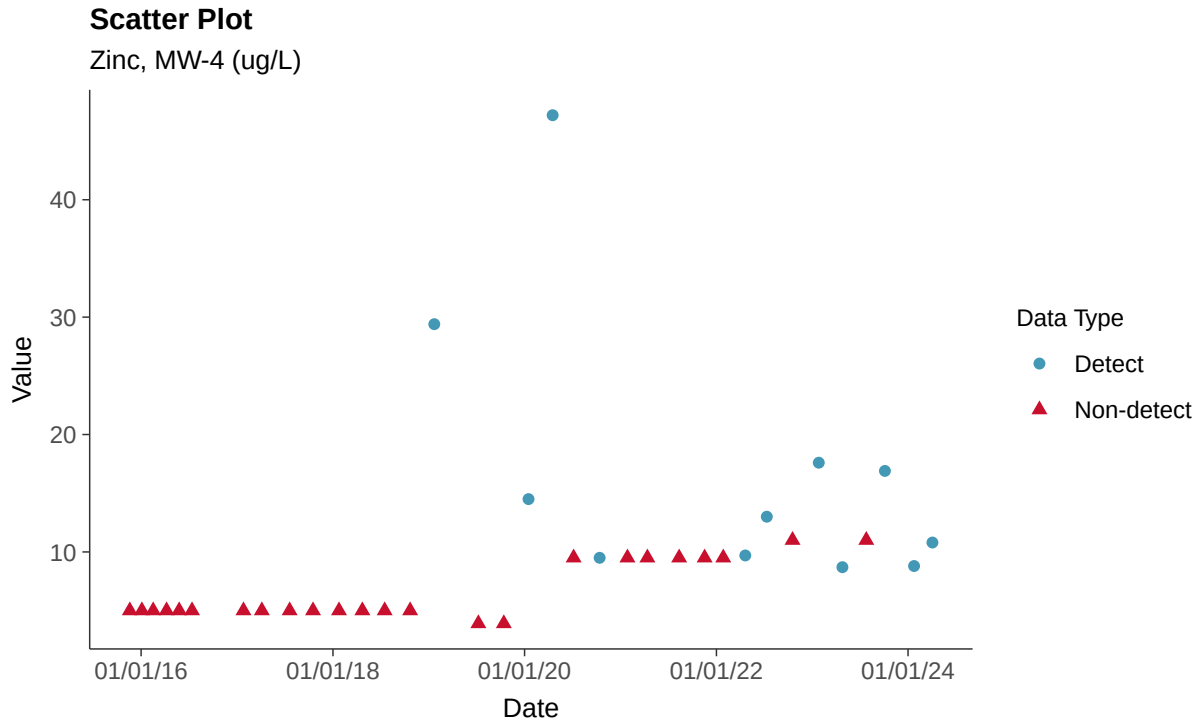
Trend Regression: Piecewise Linear-Linear

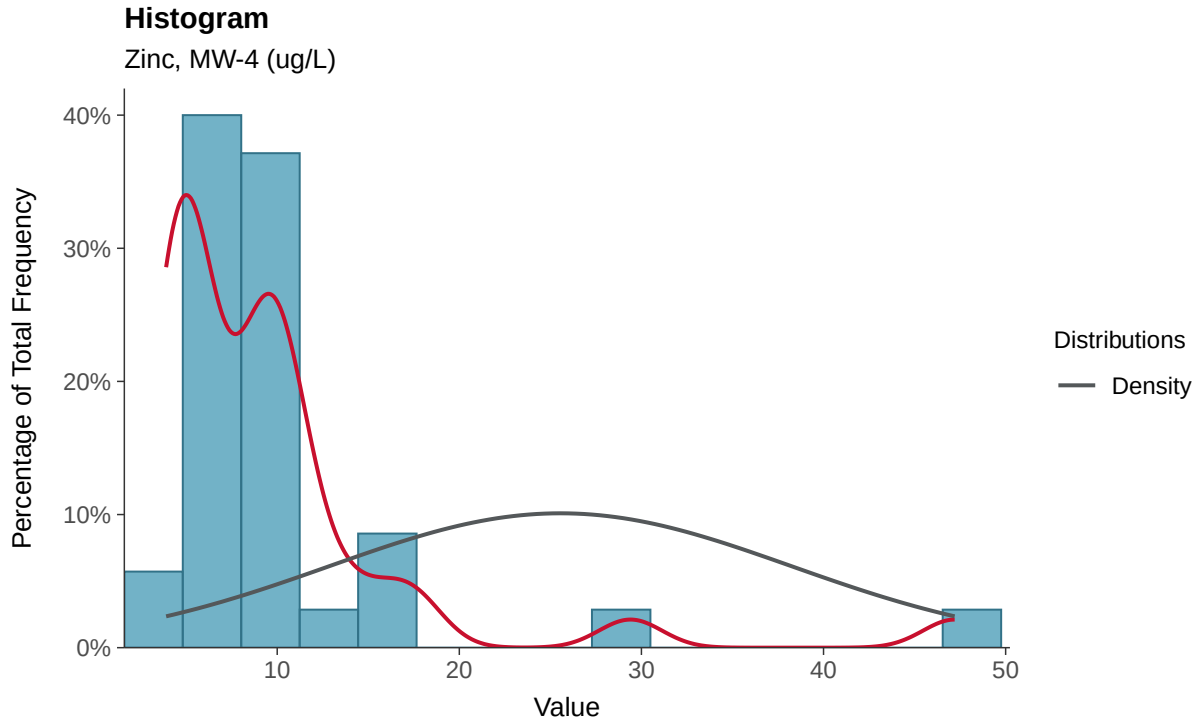
Vanadium, MW-4 (ug/L)



App. I Metals: Zinc, MW-4

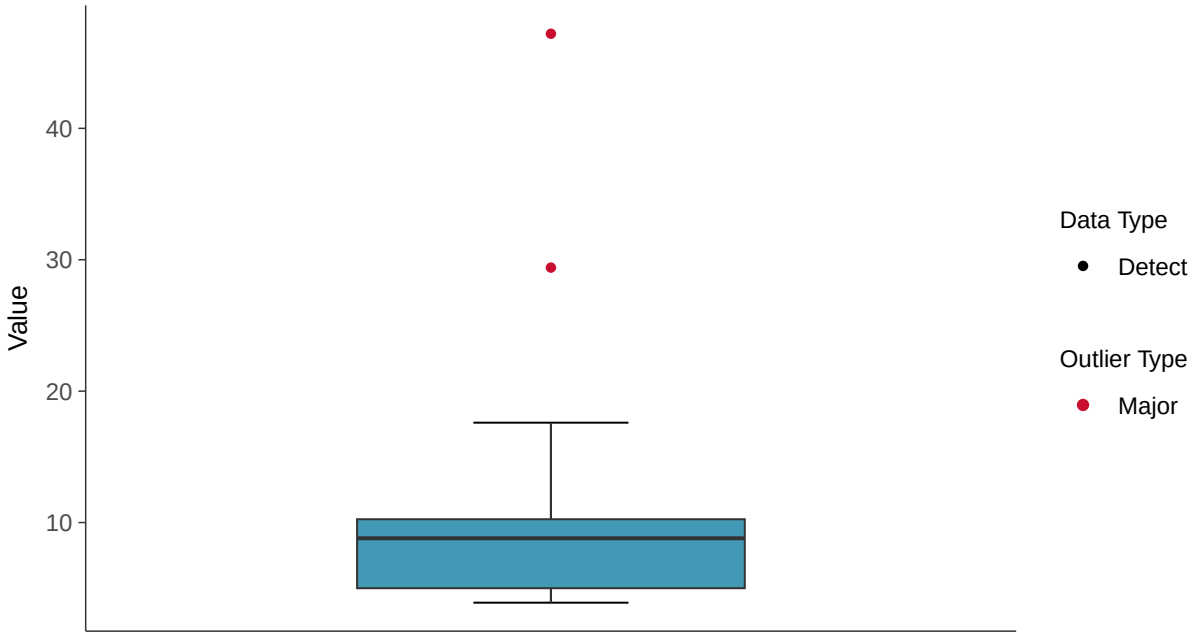
ID: 7_1_128





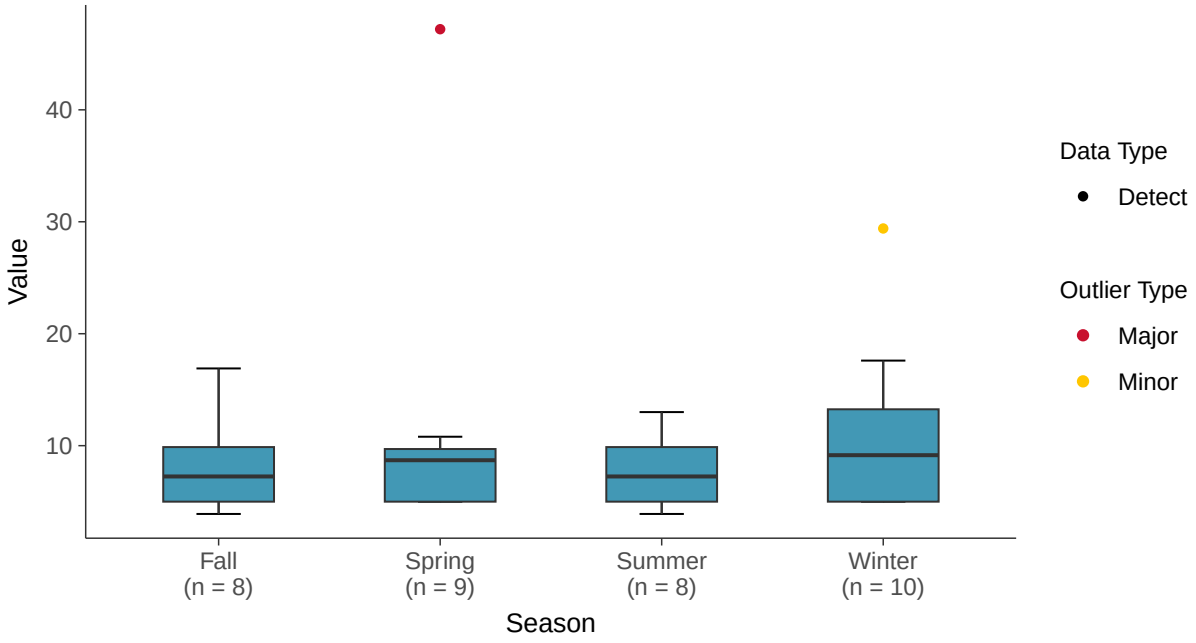
Boxplot

Zinc, MW-4 (ug/L)



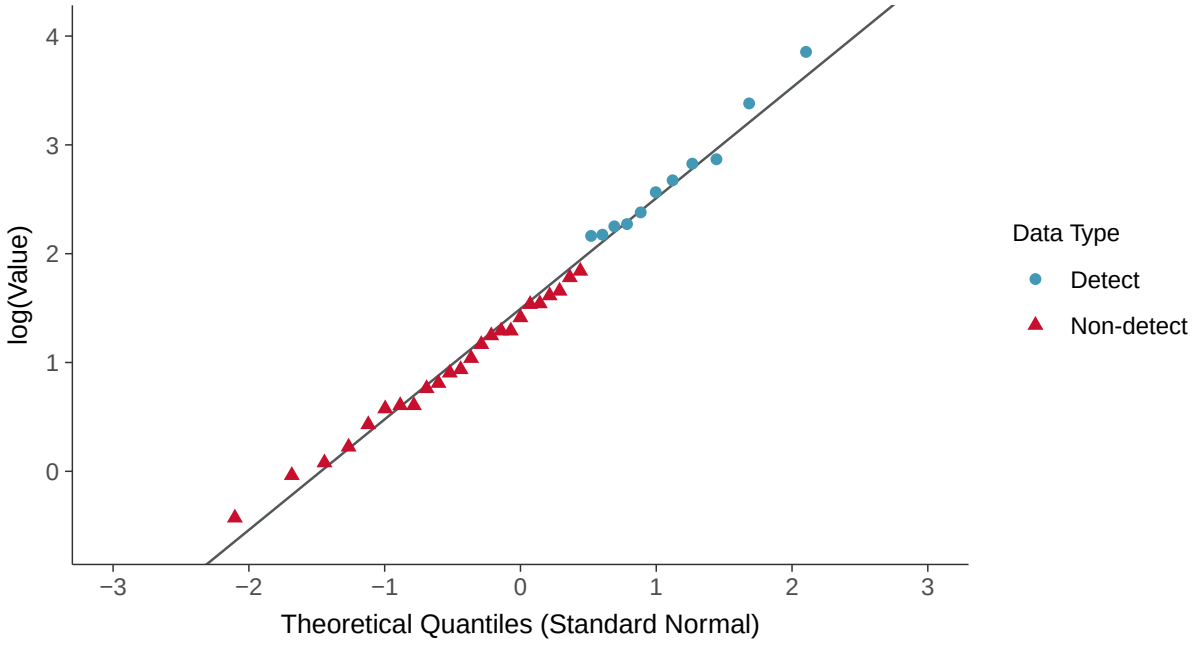
Boxplot by Season

Zinc, MW-4 (ug/L)



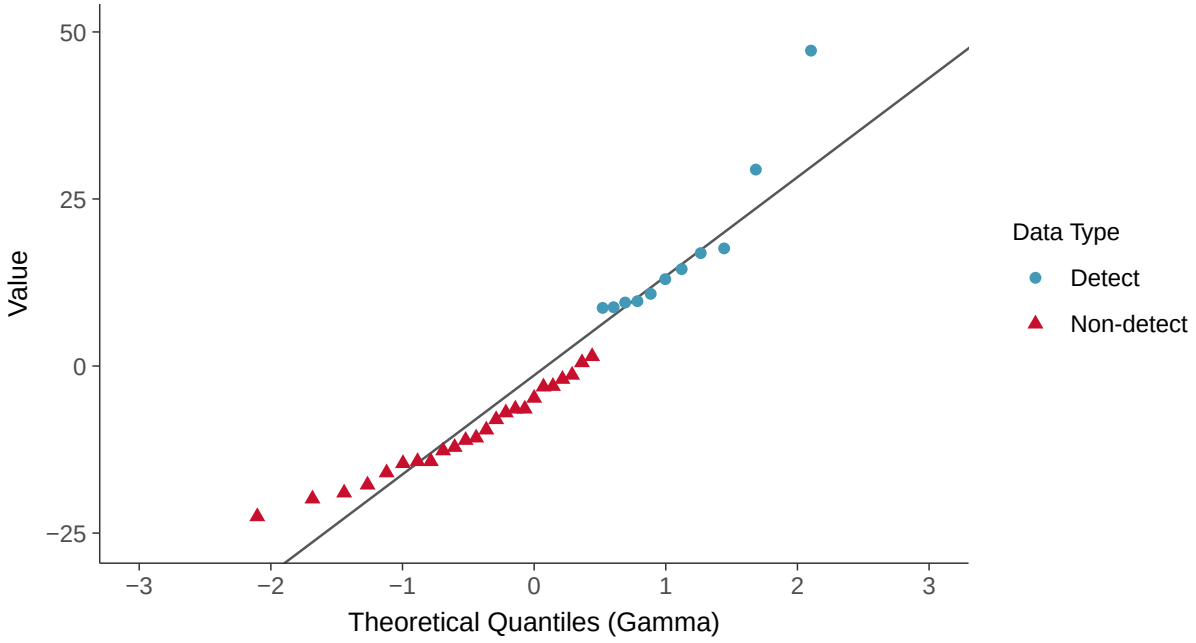
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-4 (ug/L)



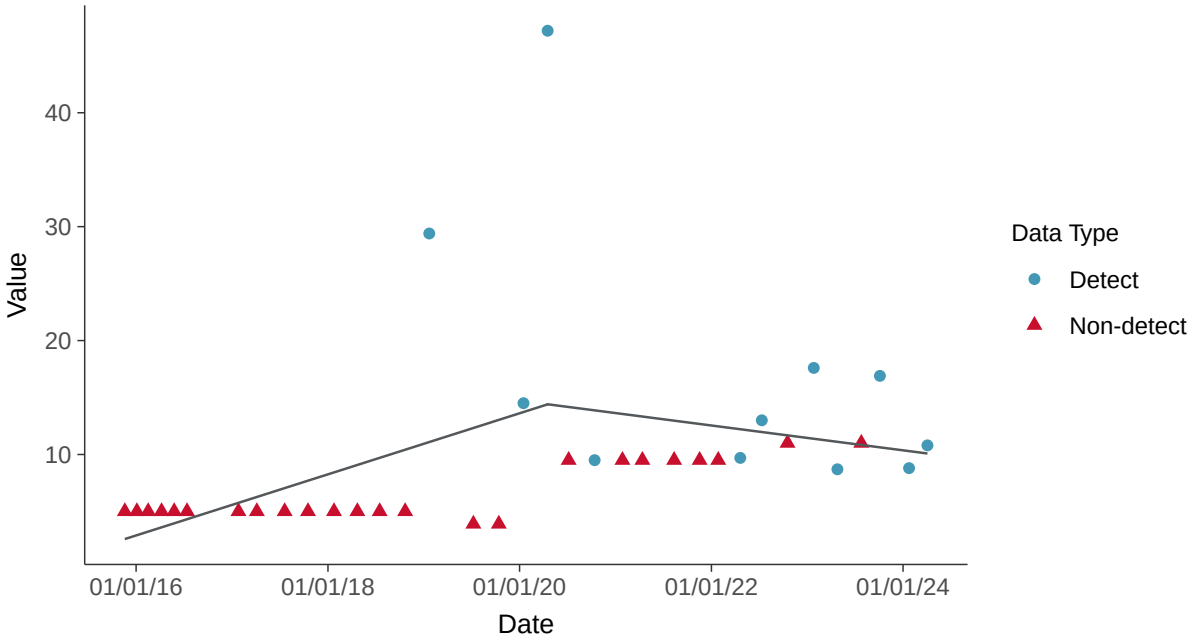
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-4 (ug/L)



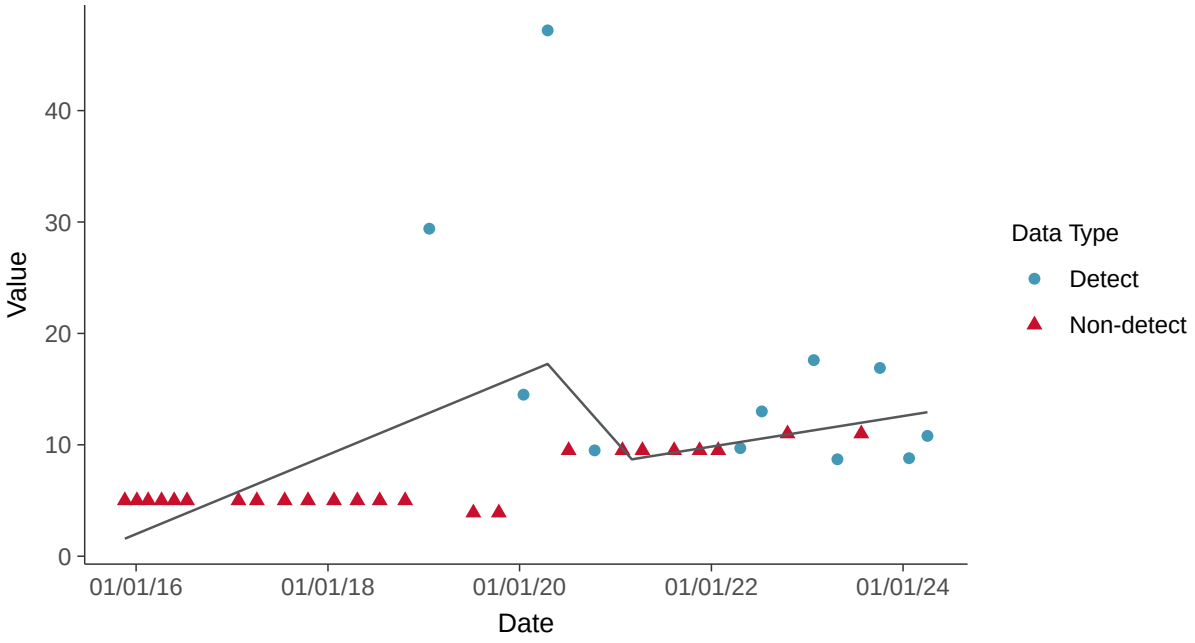
Trend Regression: Piecewise Linear-Linear

Zinc, MW-4 (ug/L)



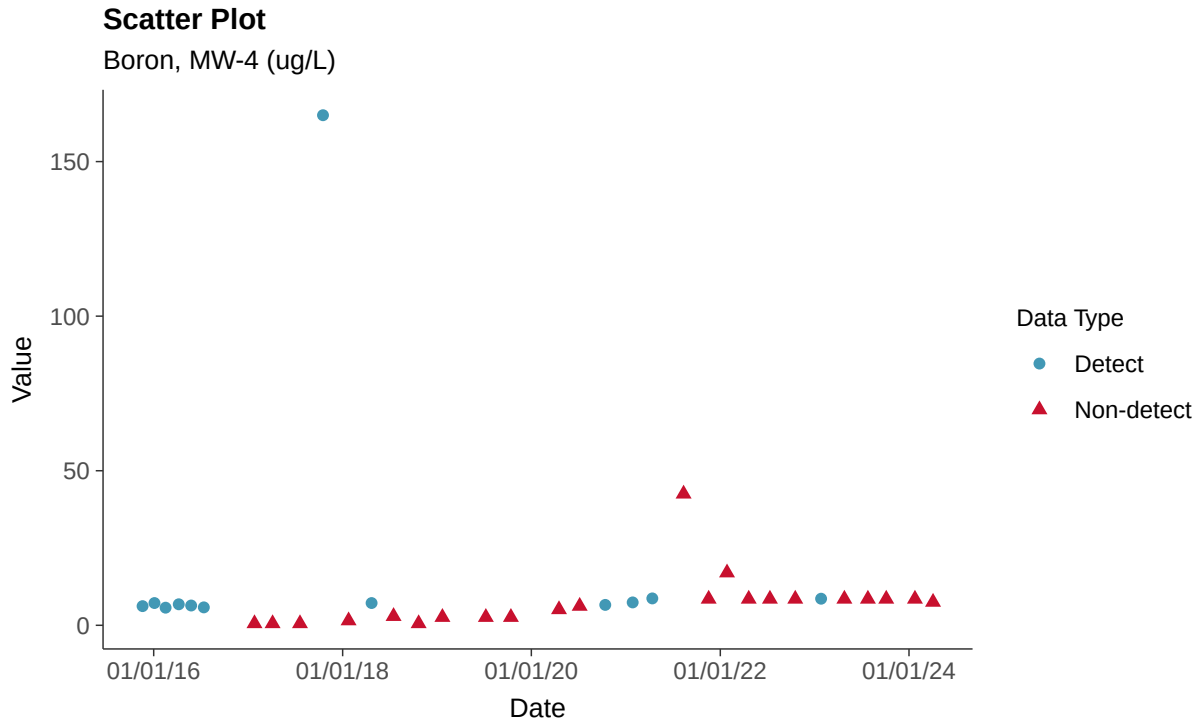
Trend Regression: Piecewise Linear-Linear-Linear

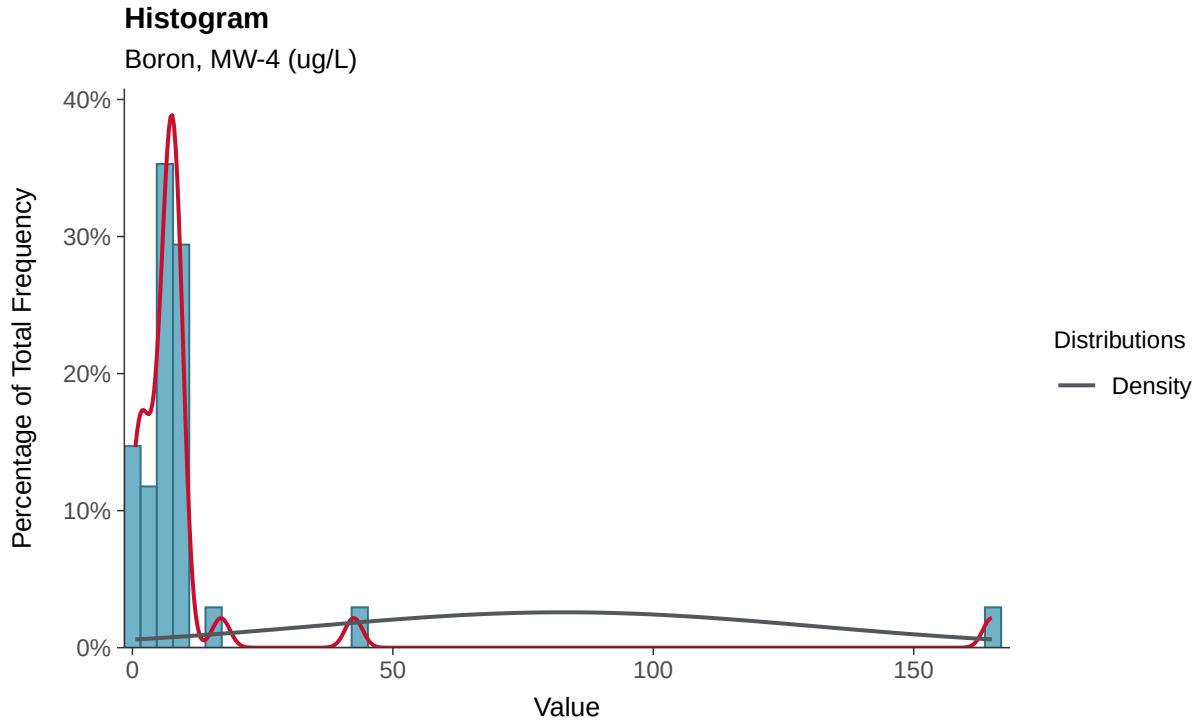
Zinc, MW-4 (ug/L)



App. III: Boron, MW-4

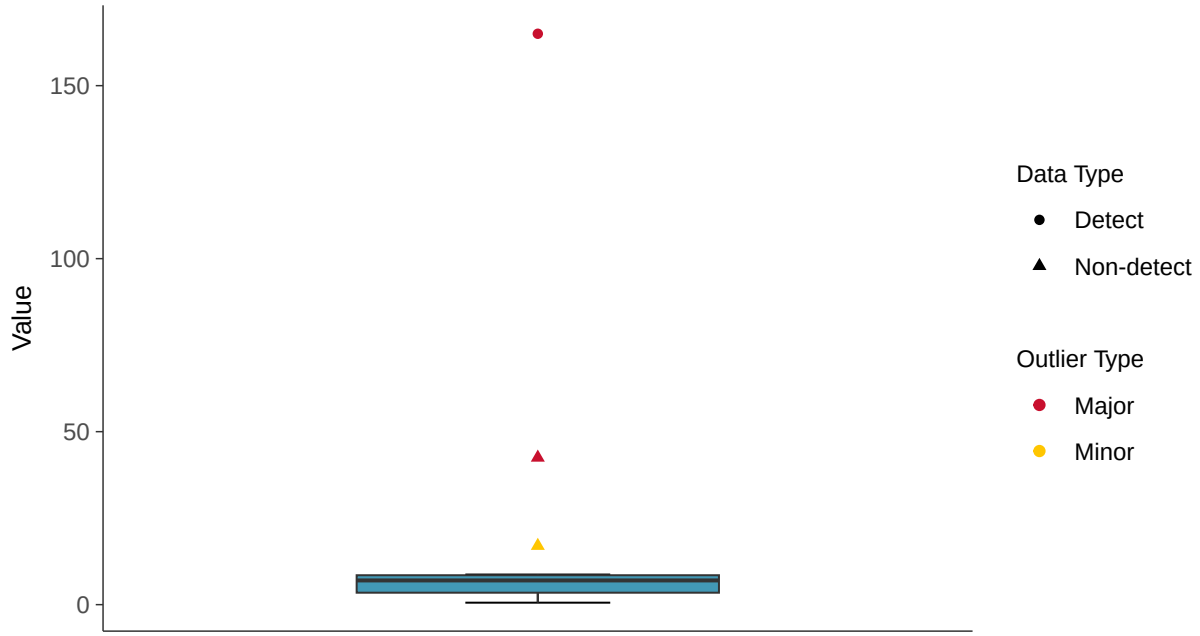
ID: 7_2_105





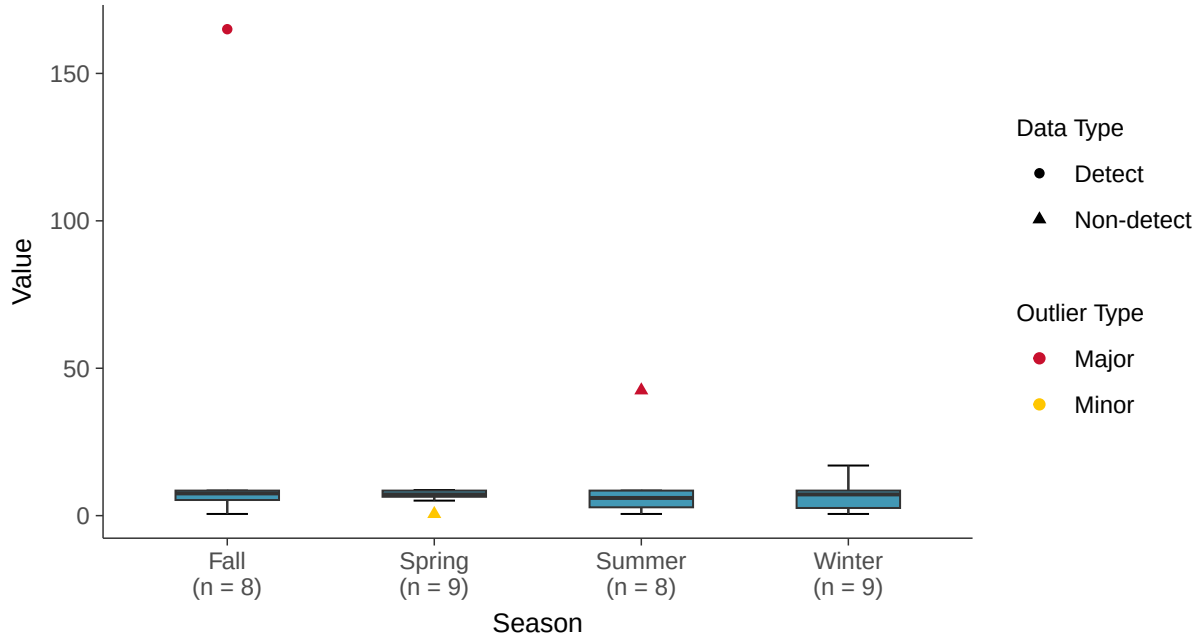
Boxplot

Boron, MW-4 (ug/L)



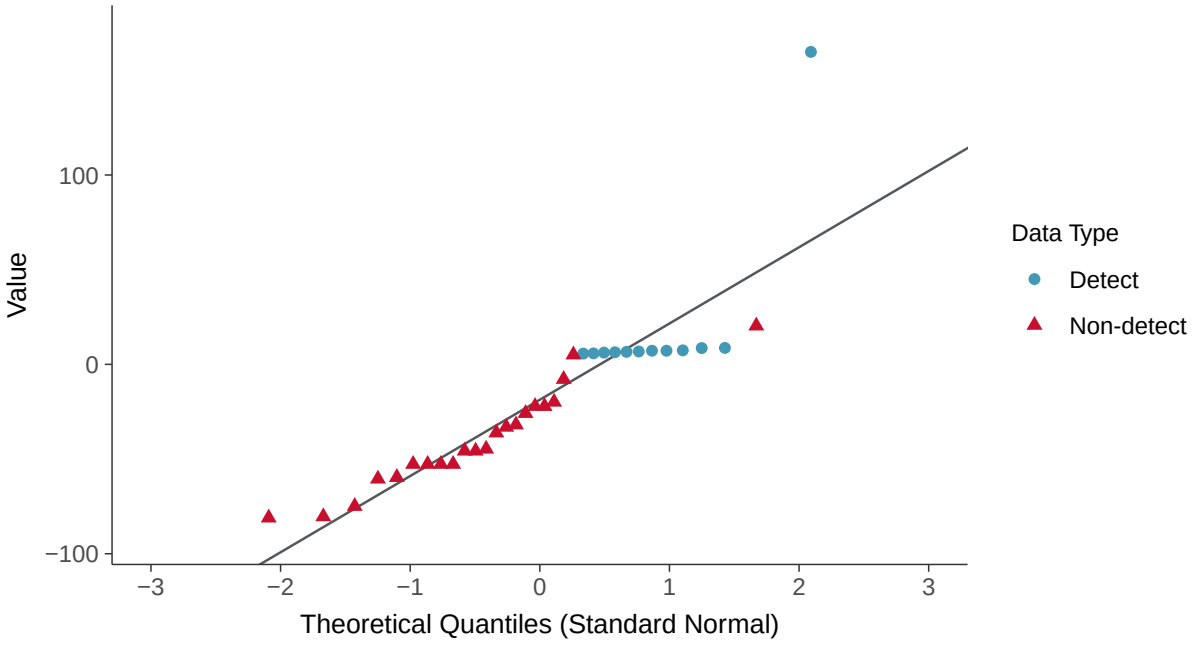
Boxplot by Season

Boron, MW-4 (ug/L)



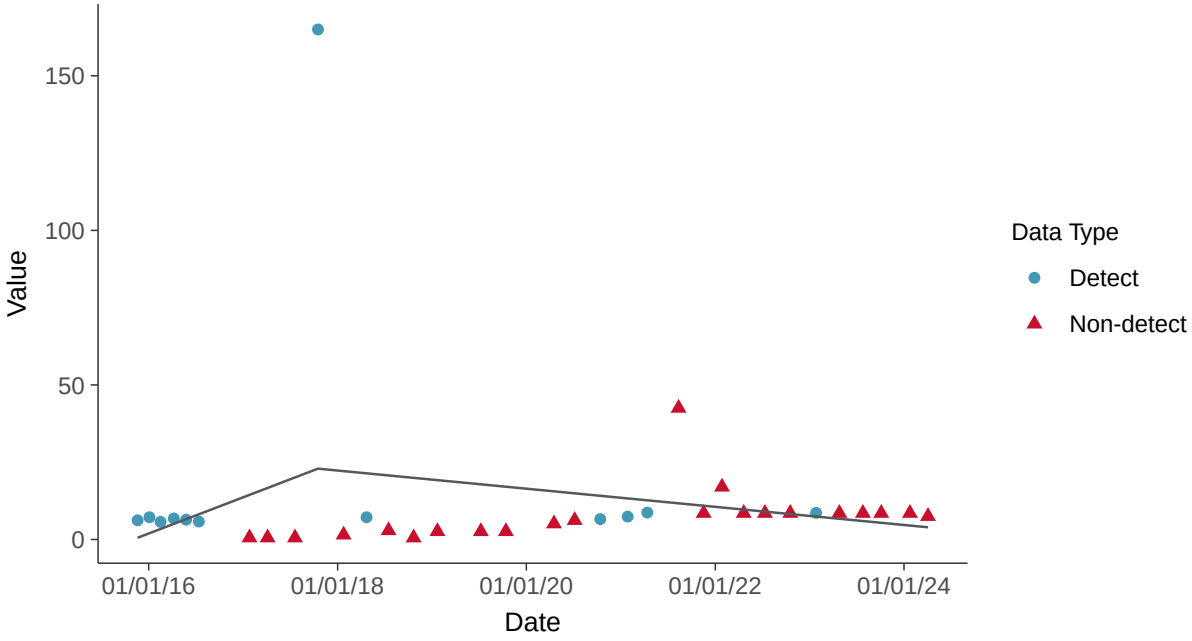
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-4 (ug/L)



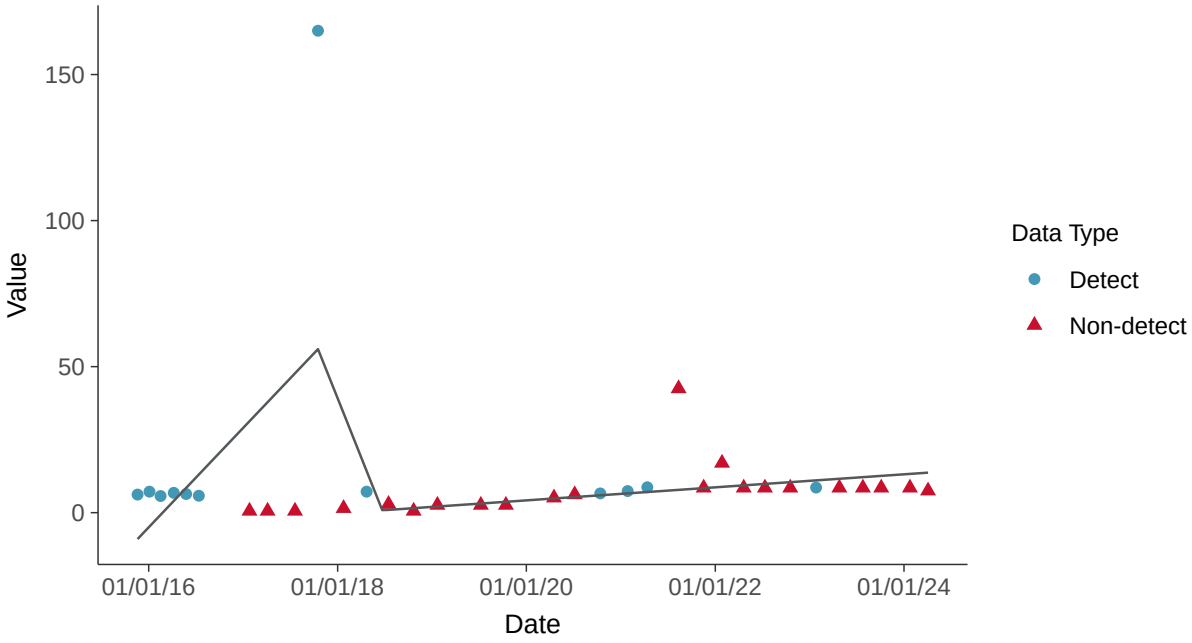
Trend Regression: Piecewise Linear-Linear

Boron, MW-4 (ug/L)



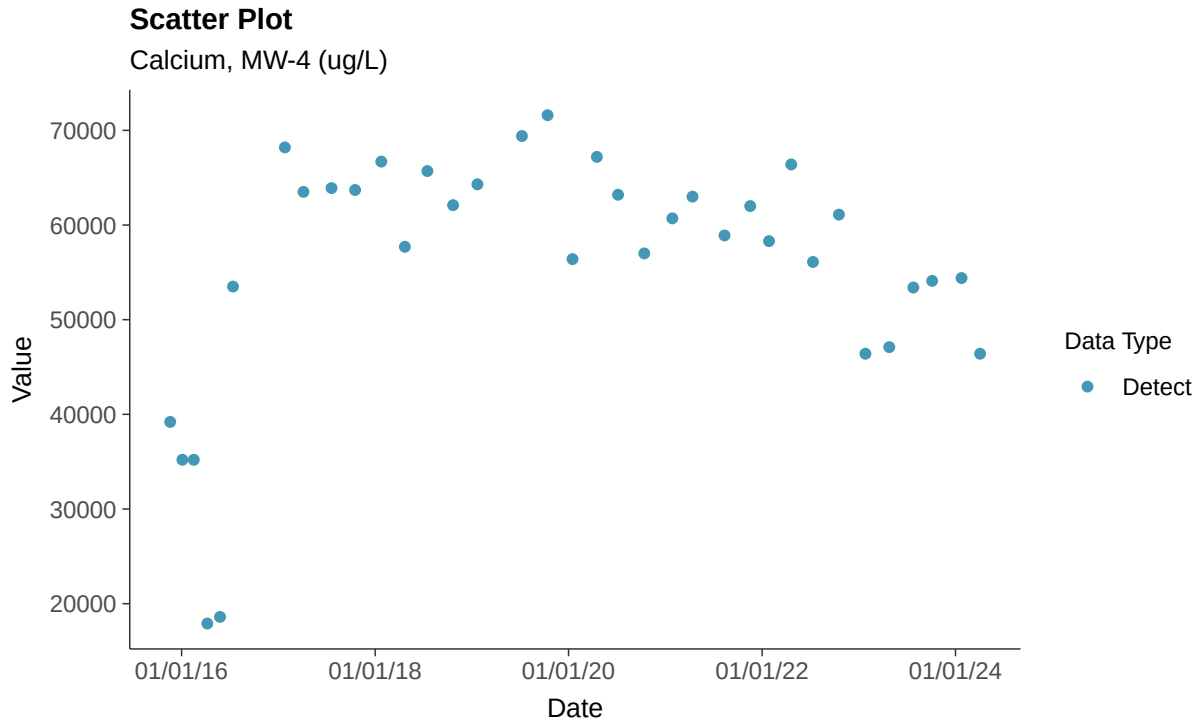
Trend Regression: Piecewise Linear-Linear-Linear

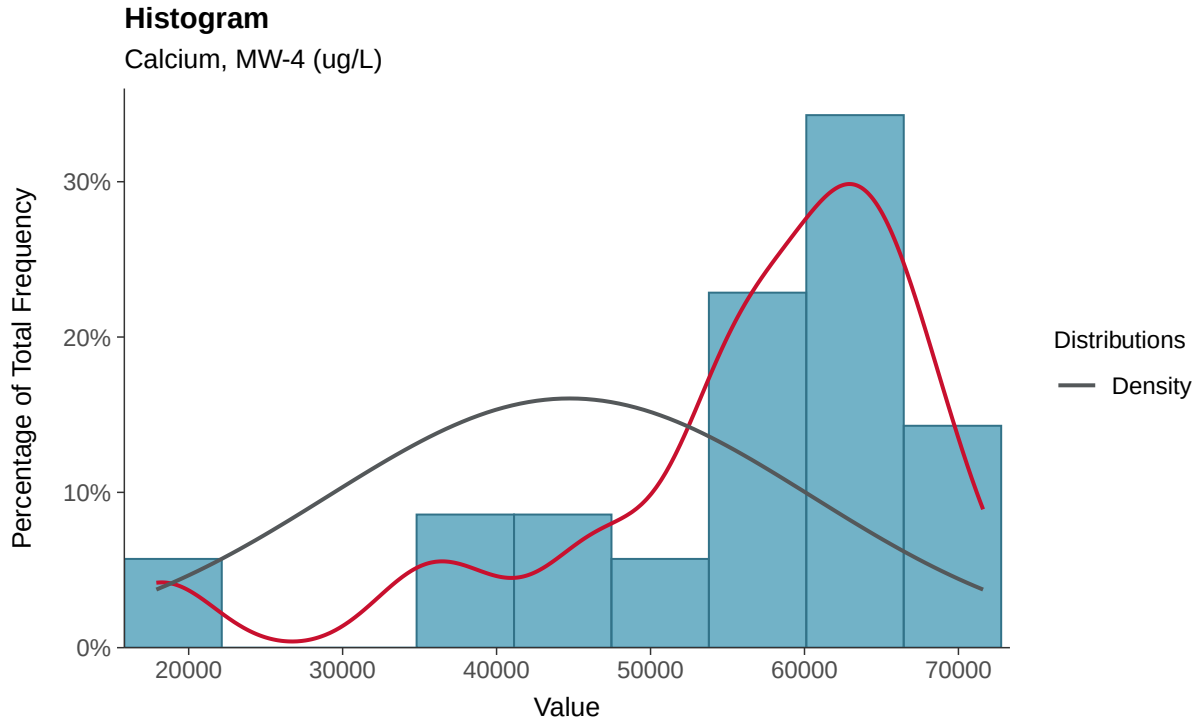
Boron, MW-4 (ug/L)



App. III: Calcium, MW-4

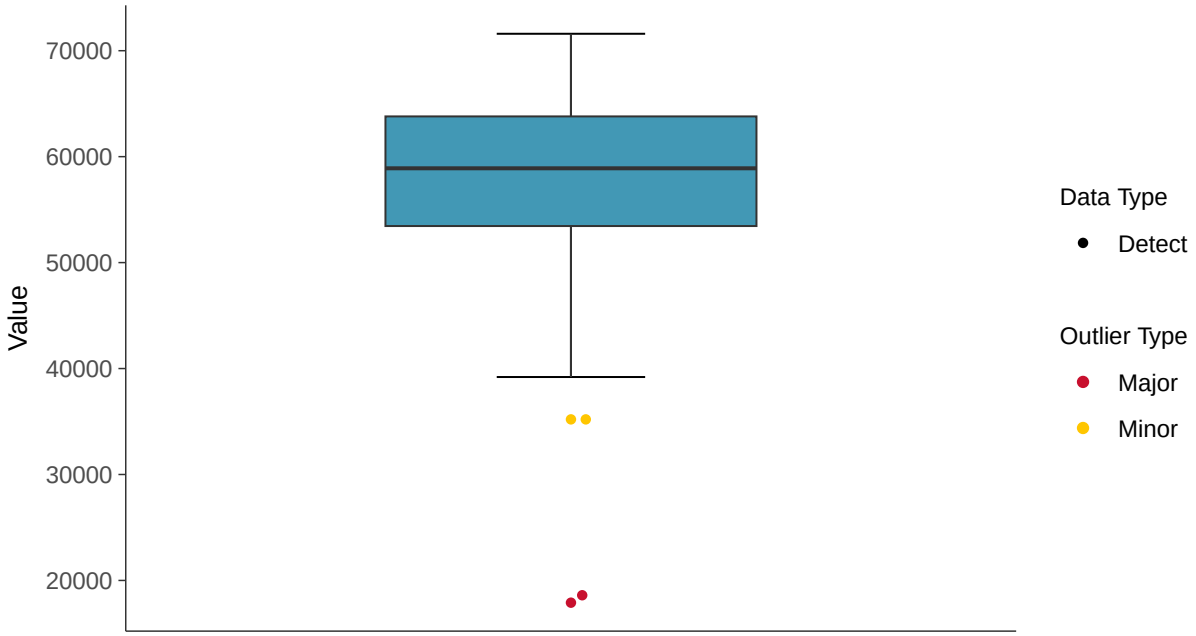
ID: 7_2_107





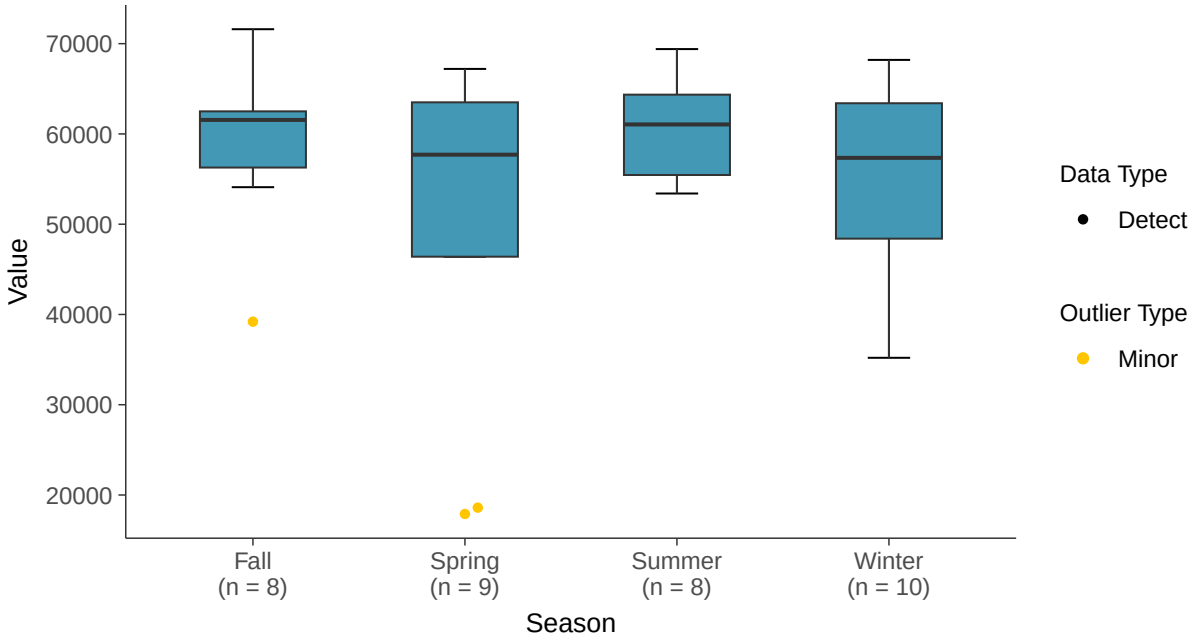
Boxplot

Calcium, MW-4 (ug/L)



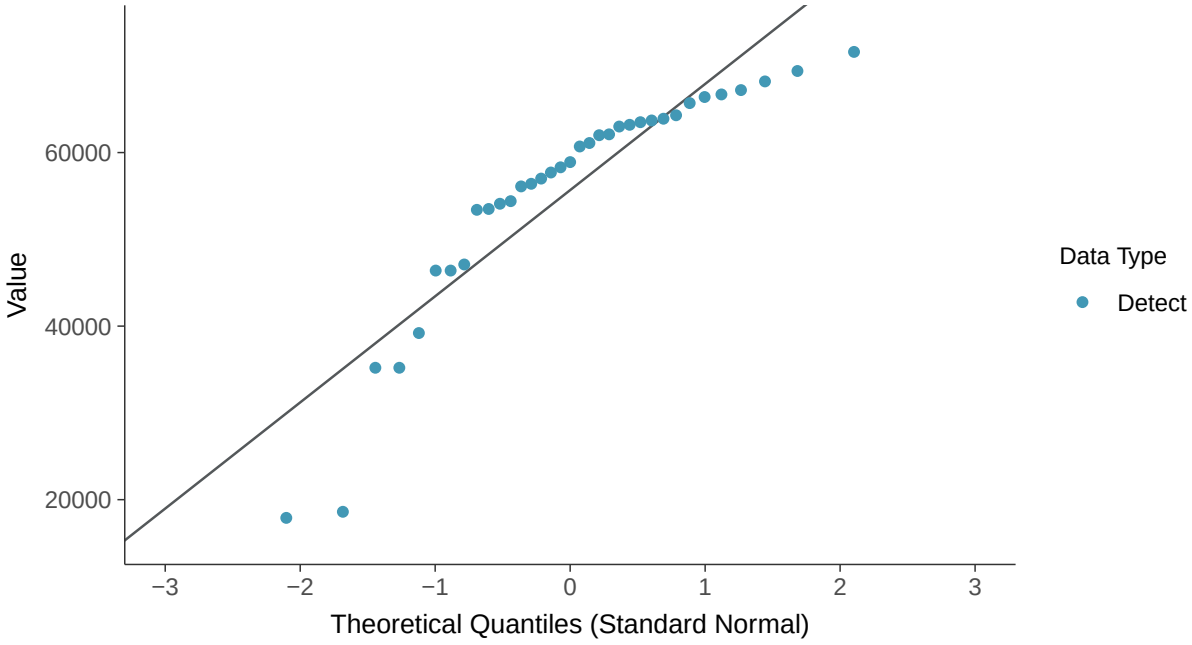
Boxplot by Season

Calcium, MW-4 (ug/L)



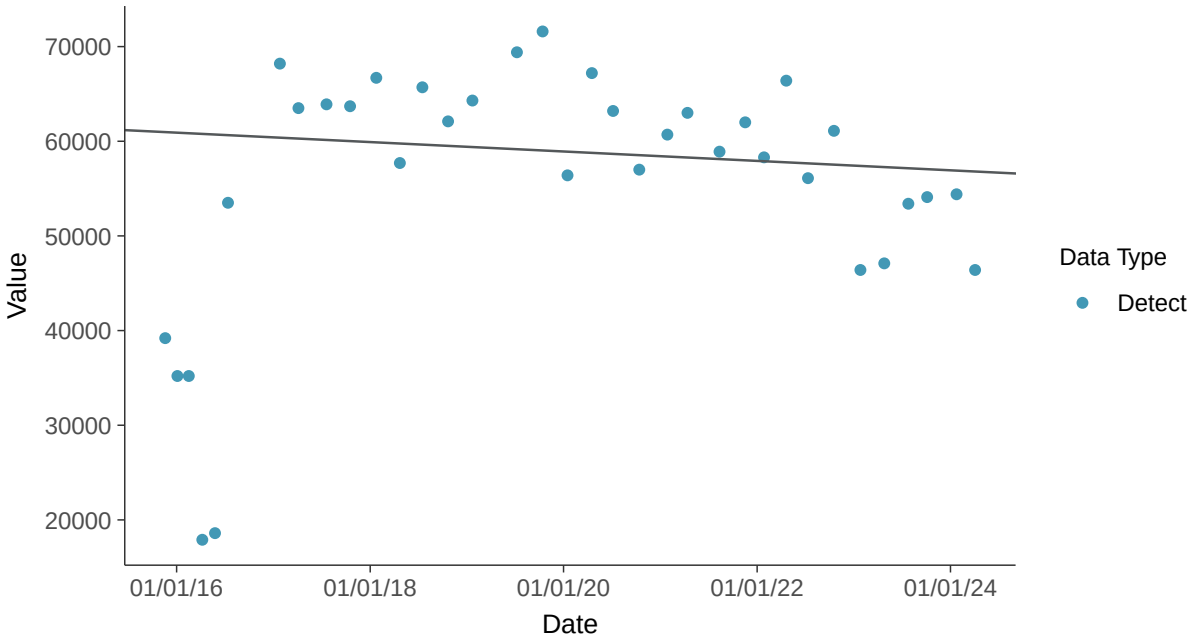
Normal Q-Q plot

Calcium, MW-4 (ug/L)



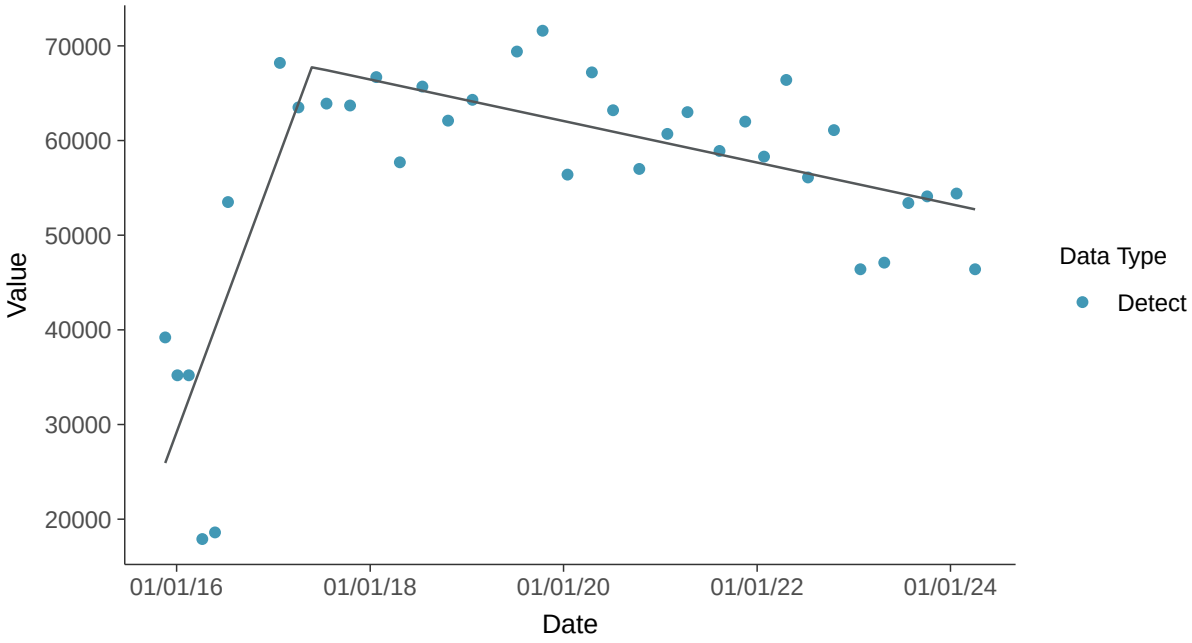
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-4 (ug/L)



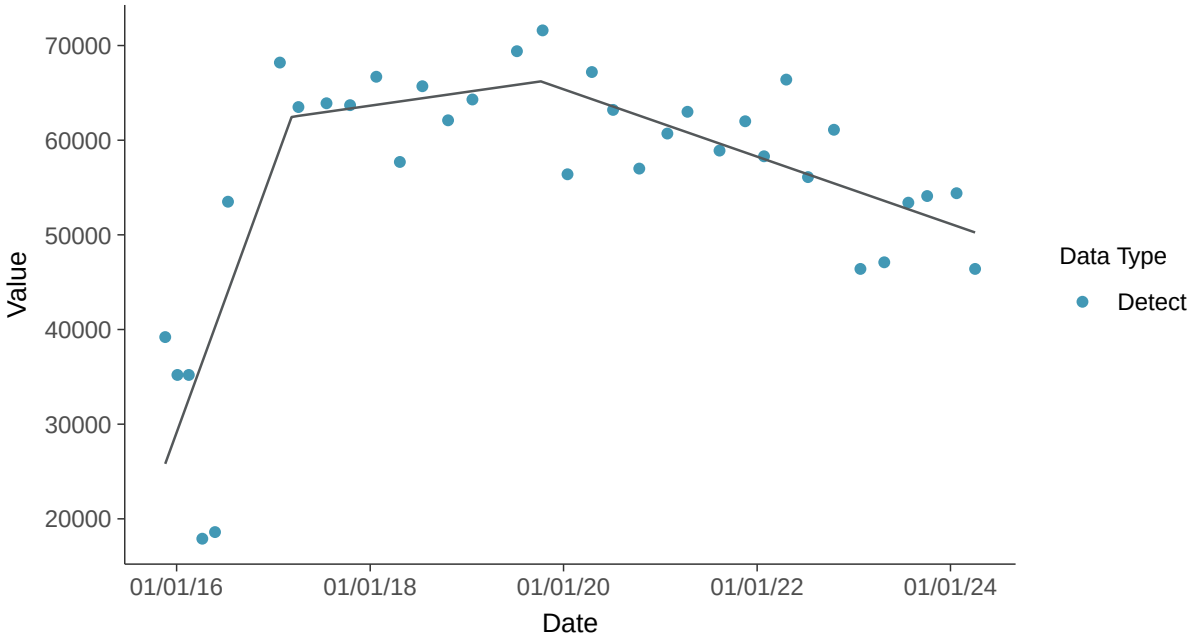
Trend Regression: Piecewise Linear-Linear

Calcium, MW-4 (ug/L)



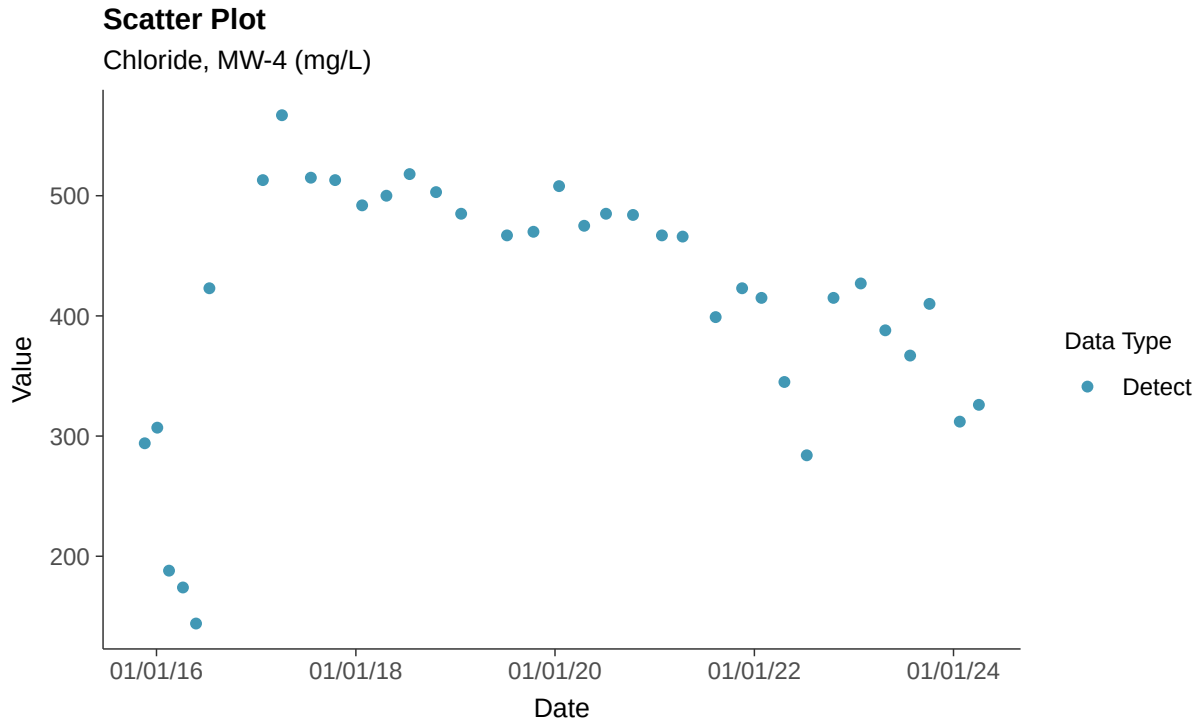
Trend Regression: Piecewise Linear-Linear-Linear

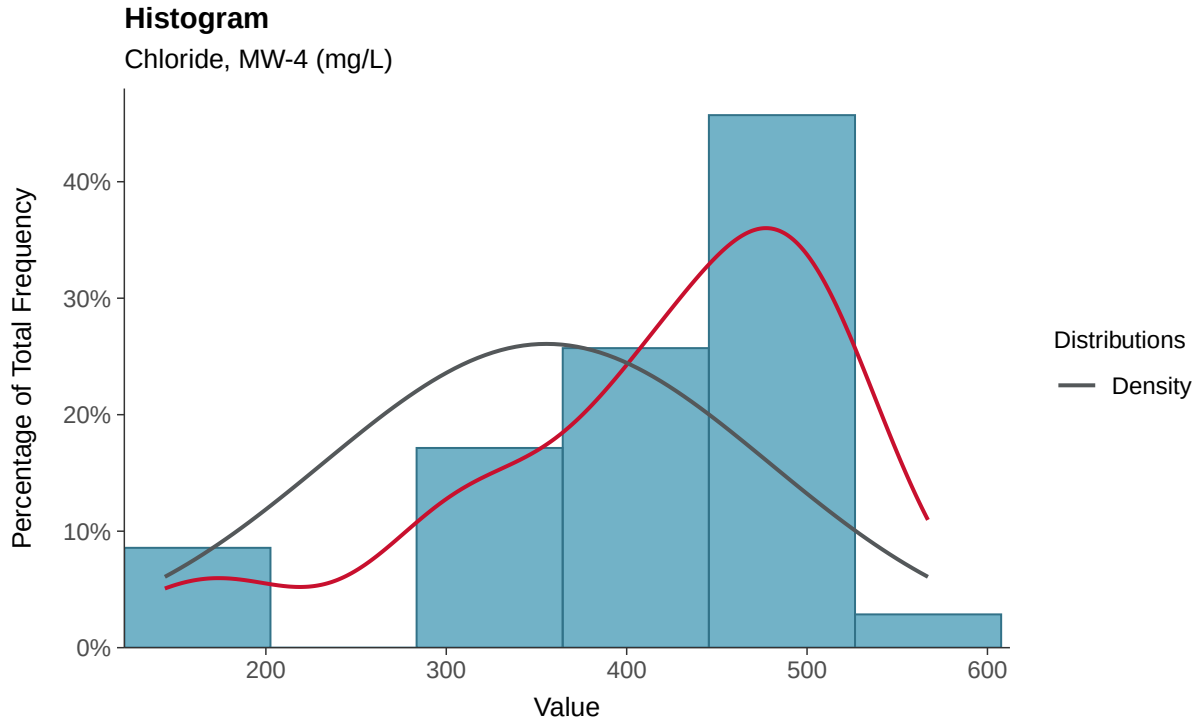
Calcium, MW-4 (ug/L)



App. III: Chloride, MW-4

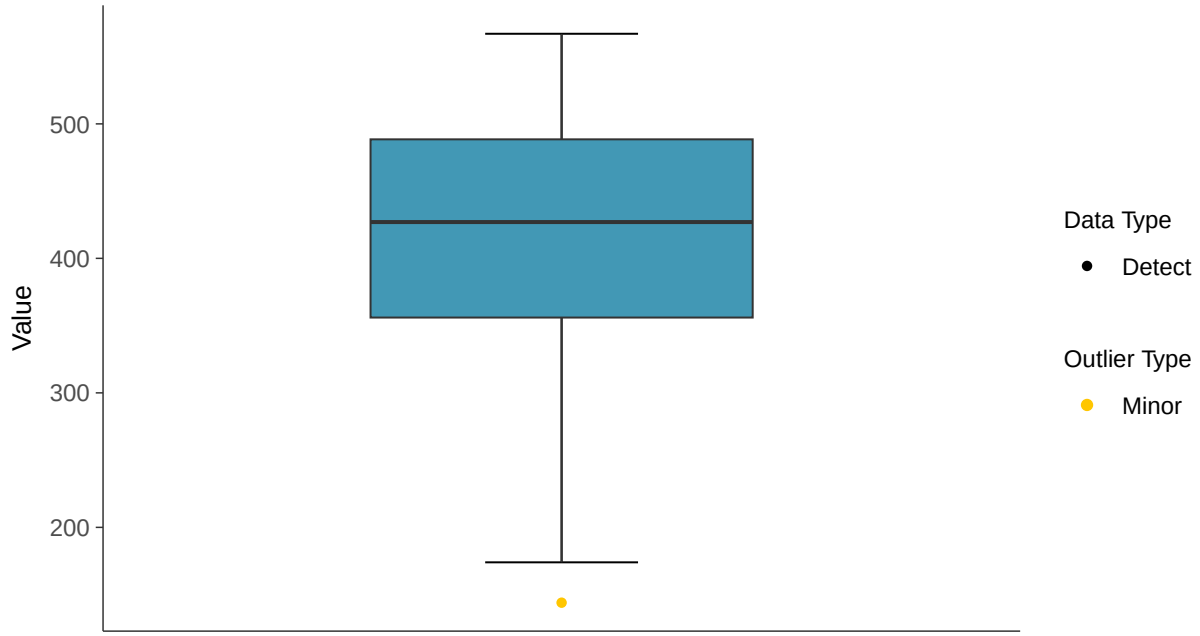
ID: 7_2_108





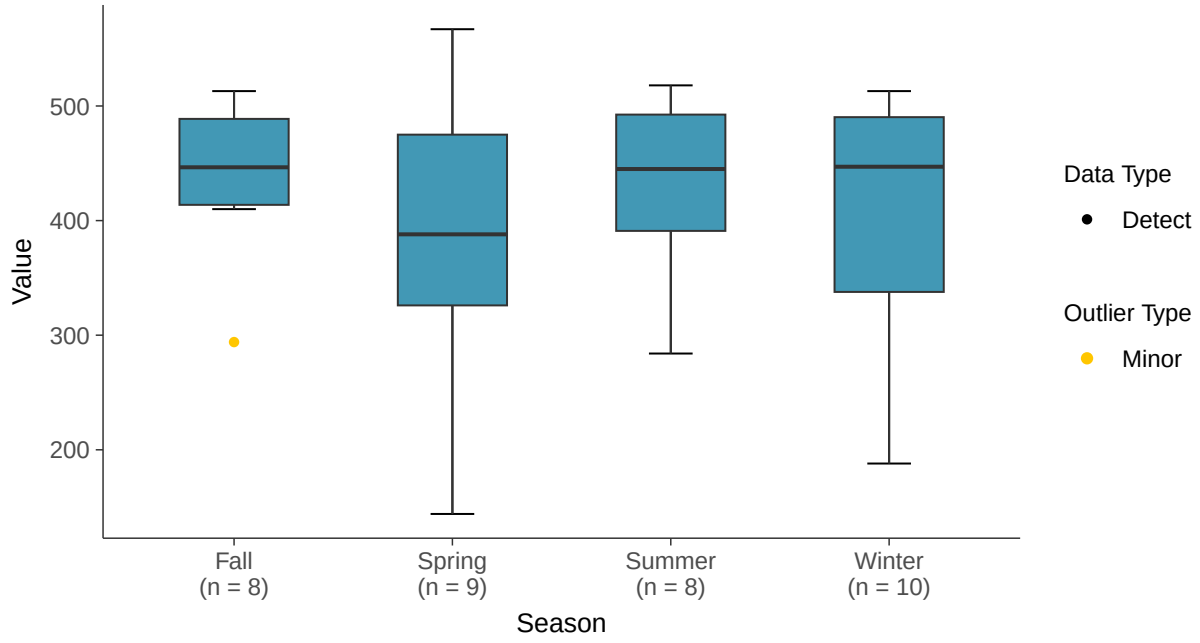
Boxplot

Chloride, MW-4 (mg/L)



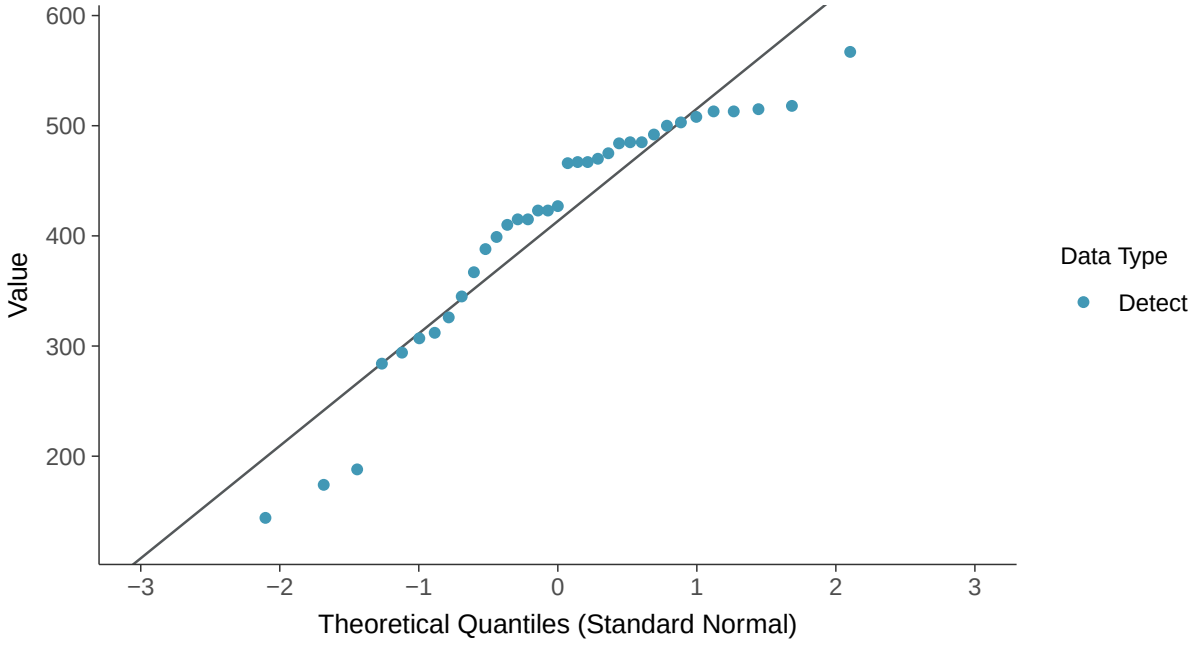
Boxplot by Season

Chloride, MW-4 (mg/L)



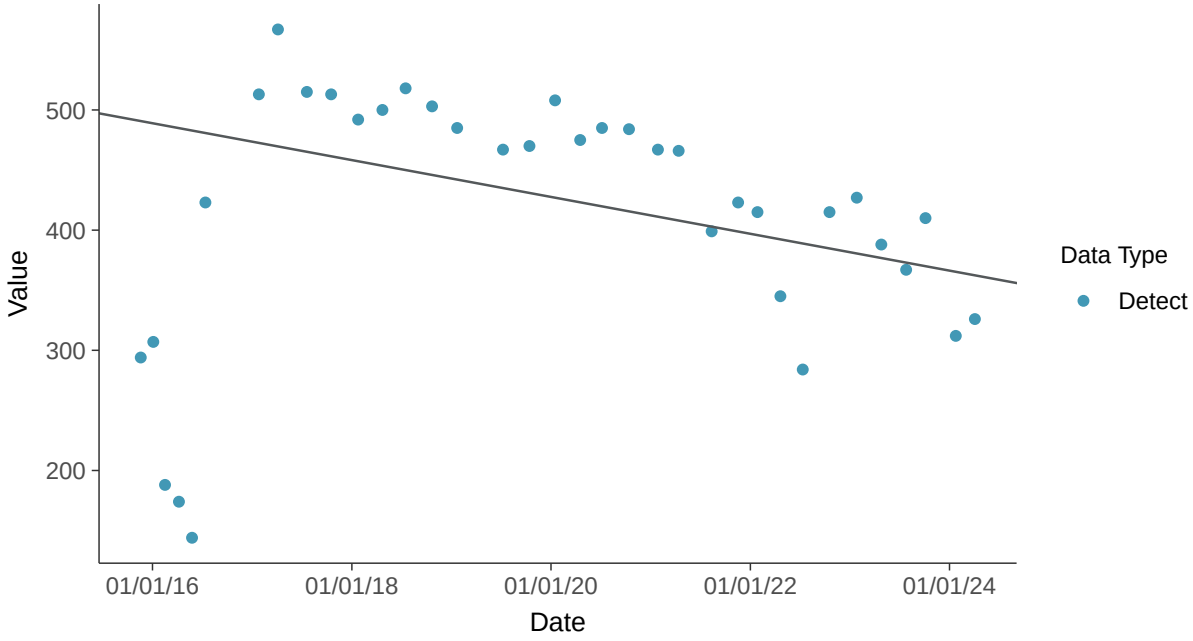
Normal Q-Q plot

Chloride, MW-4 (mg/L)



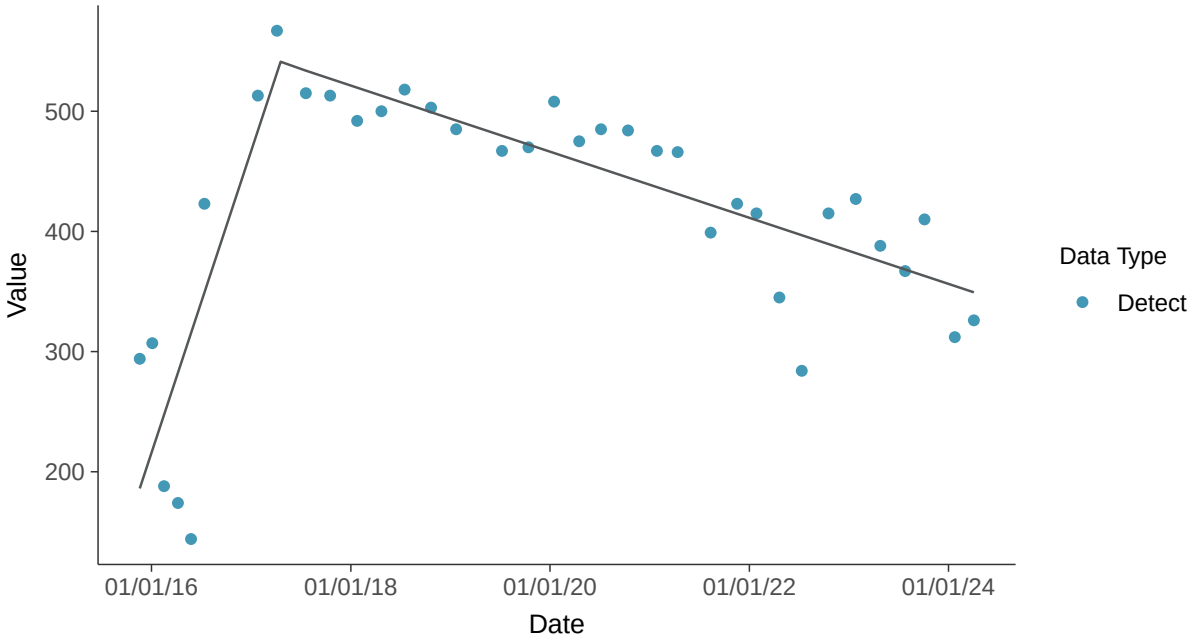
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-4 (mg/L)



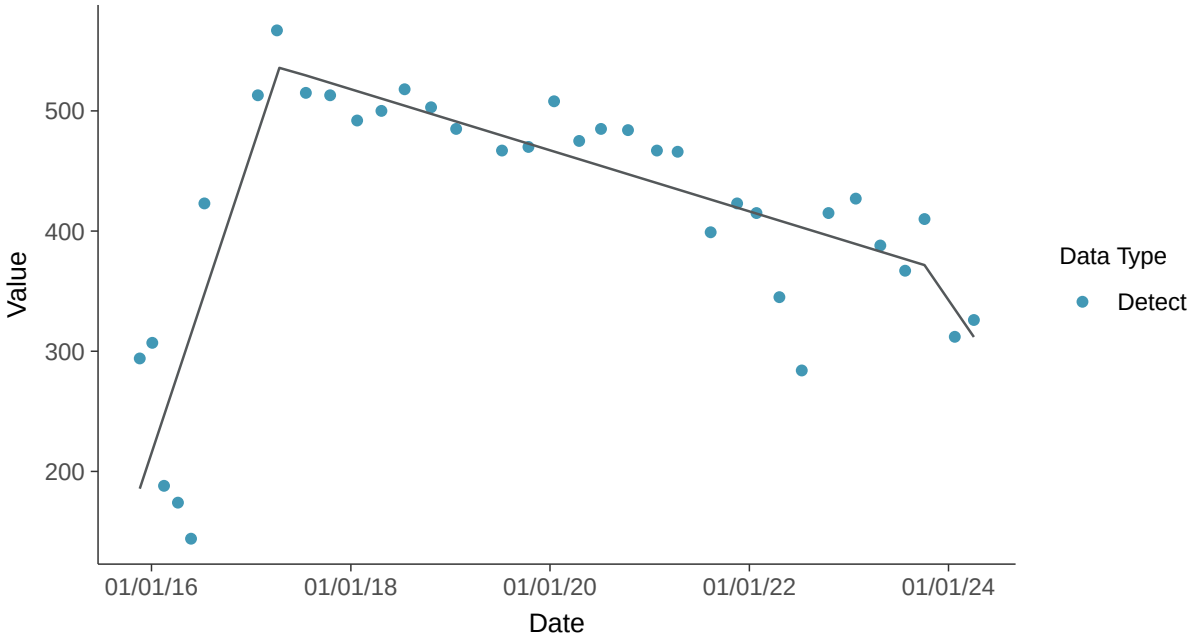
Trend Regression: Piecewise Linear-Linear

Chloride, MW-4 (mg/L)



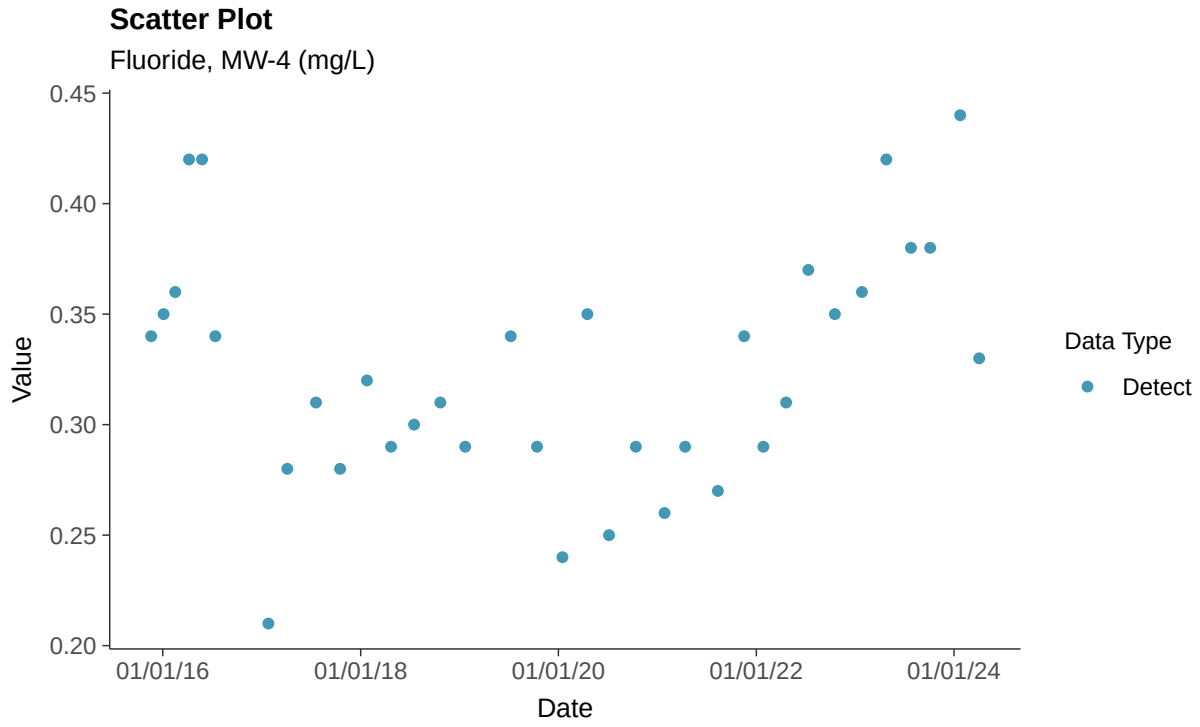
Trend Regression: Piecewise Linear-Linear-Linear

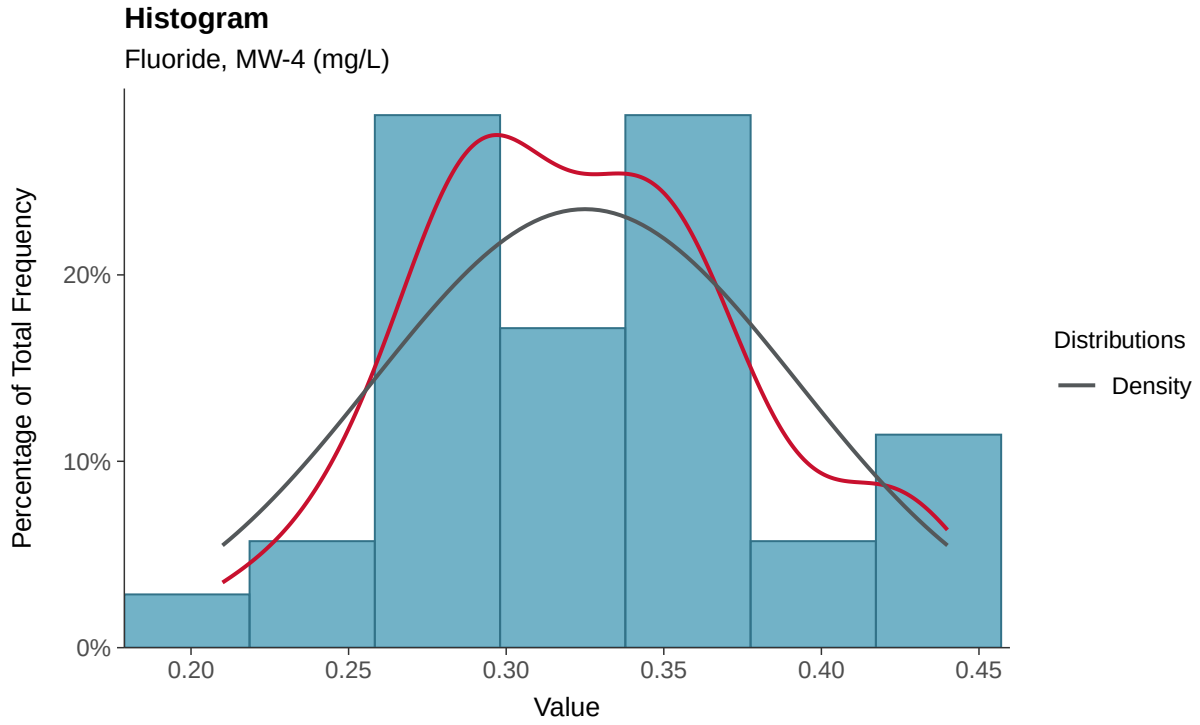
Chloride, MW-4 (mg/L)



App. III: Fluoride, MW-4

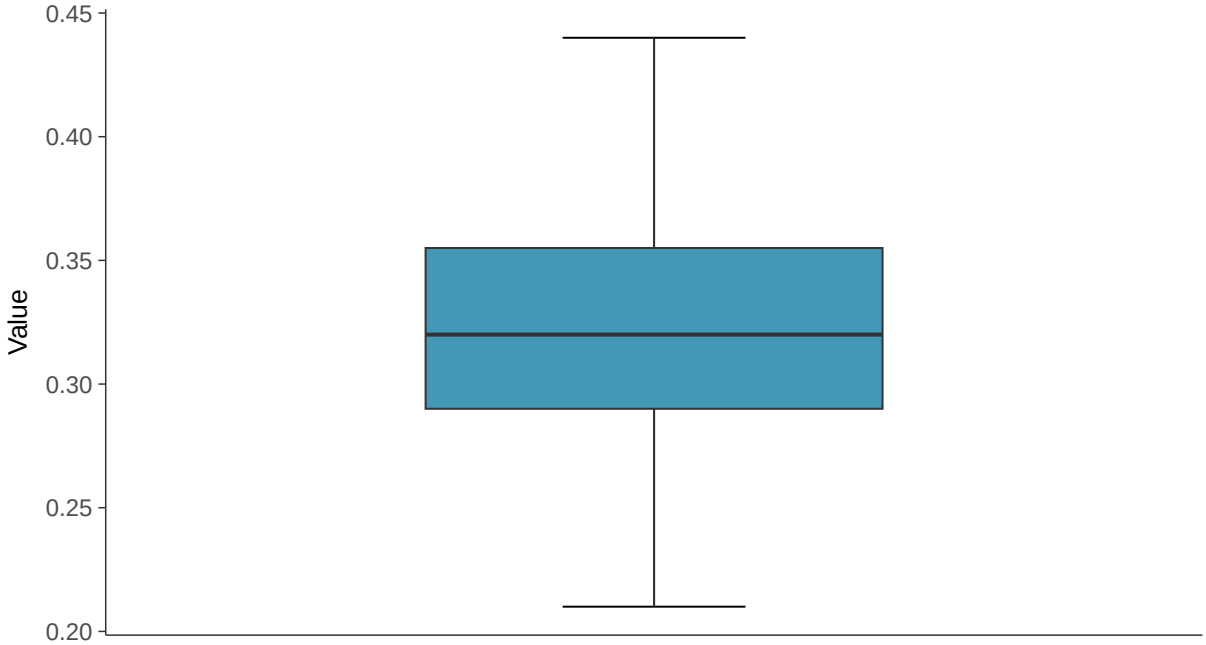
ID: 7_2_112





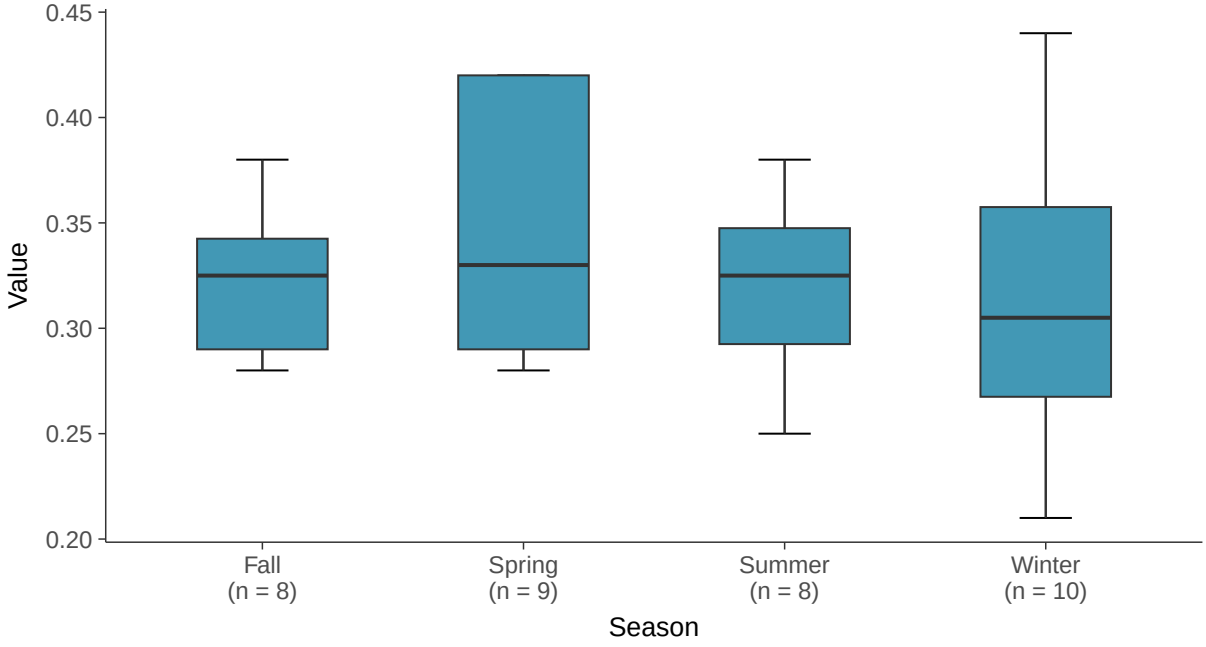
Boxplot

Fluoride, MW-4 (mg/L)



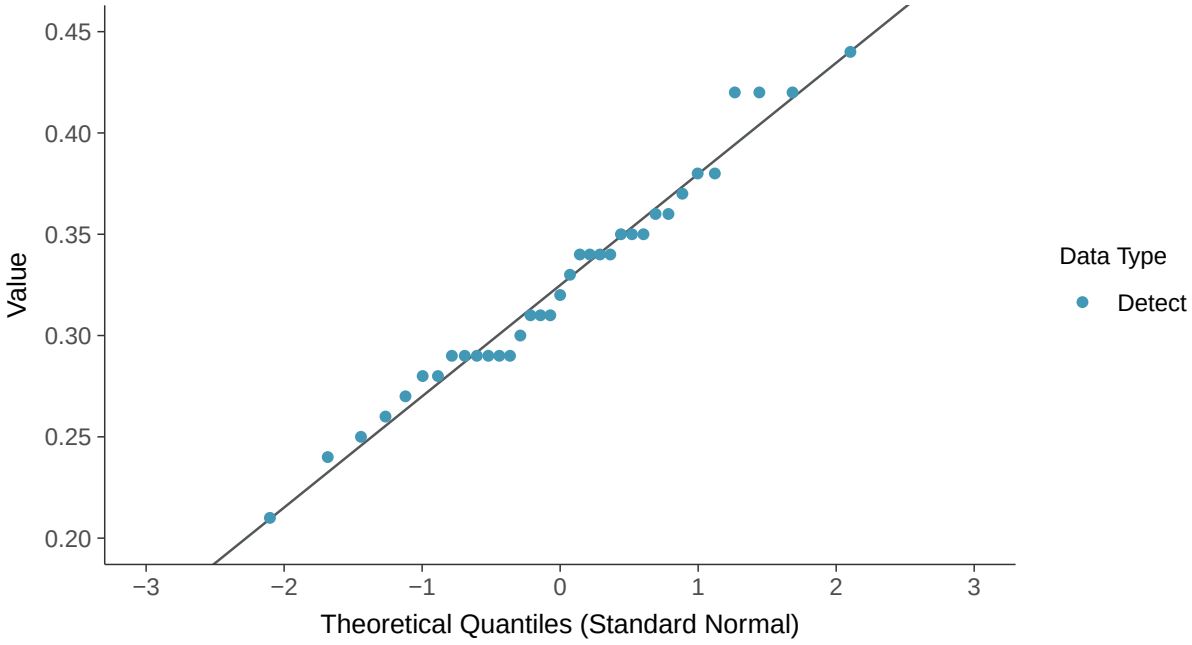
Boxplot by Season

Fluoride, MW-4 (mg/L)



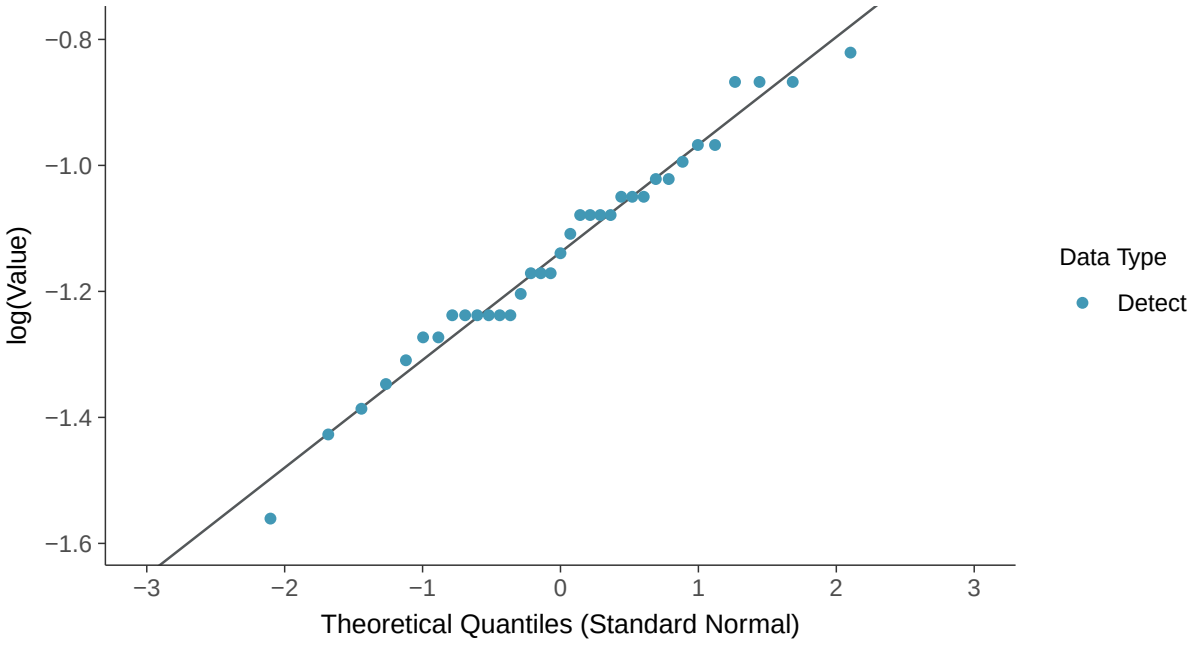
Normal Q-Q plot

Fluoride, MW-4 (mg/L)



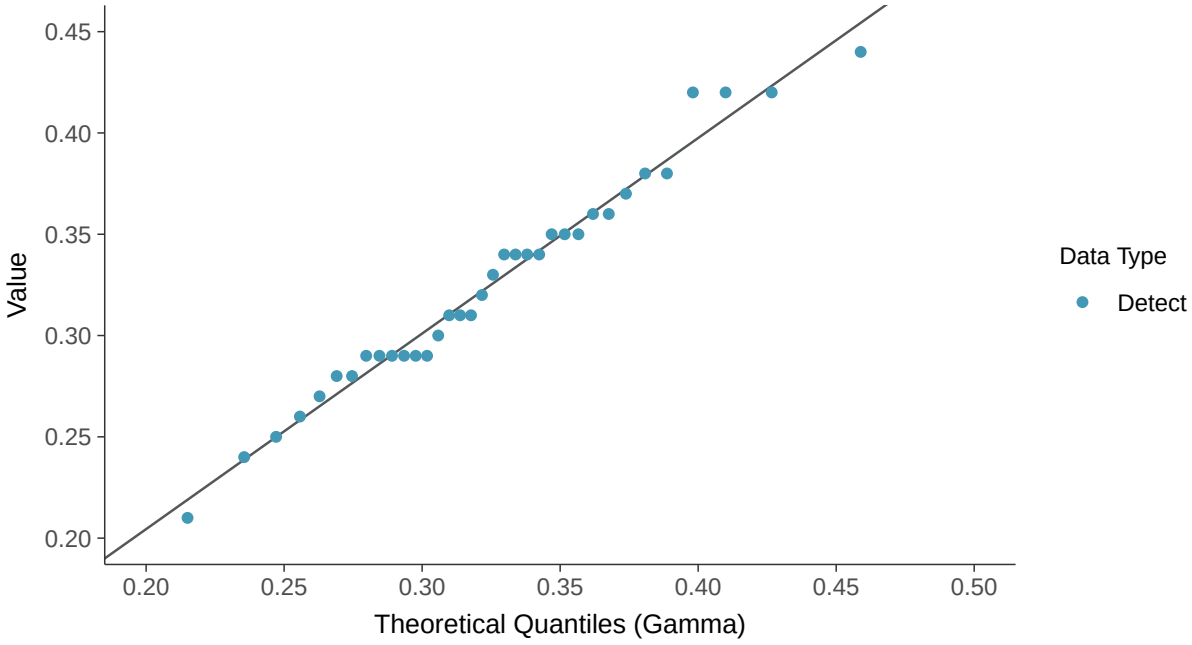
Lognormal Q-Q plot

Fluoride, MW-4 (mg/L)



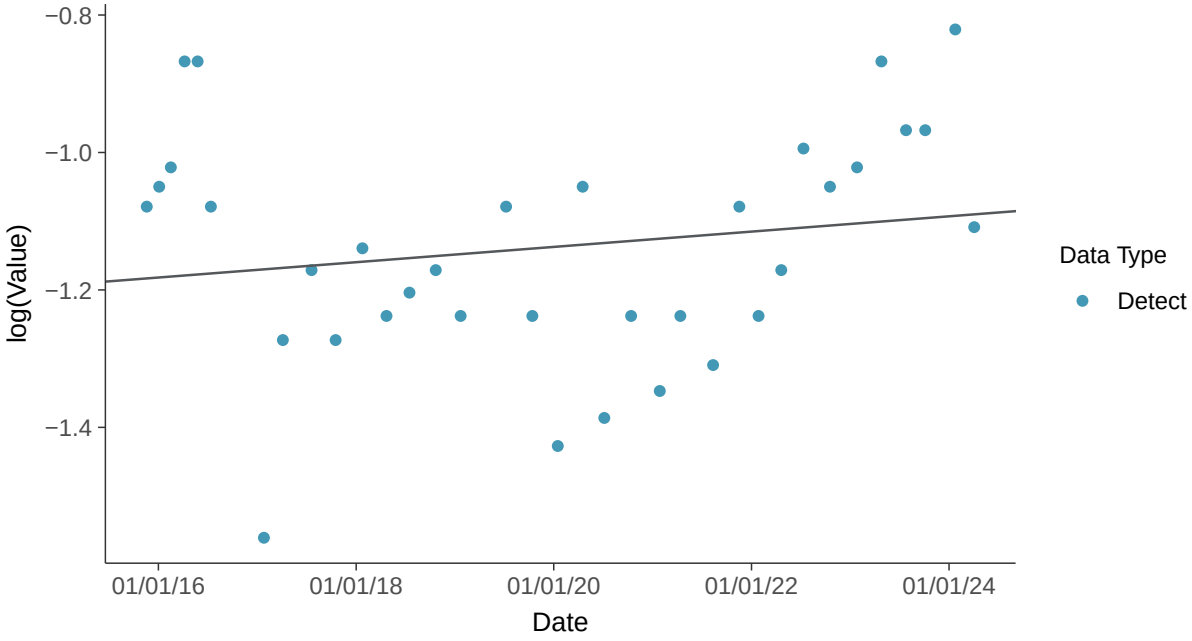
Gamma Q-Q plot

Fluoride, MW-4 (mg/L)



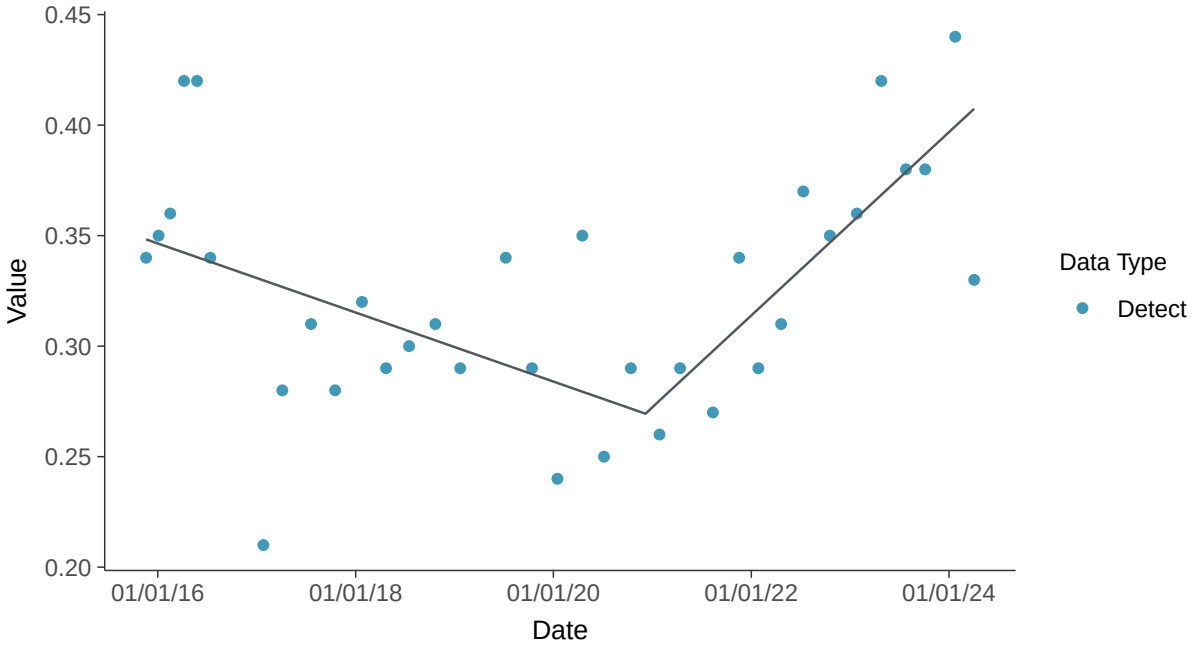
Trend Regression: Lognormal MLE

Fluoride, MW-4 (mg/L)



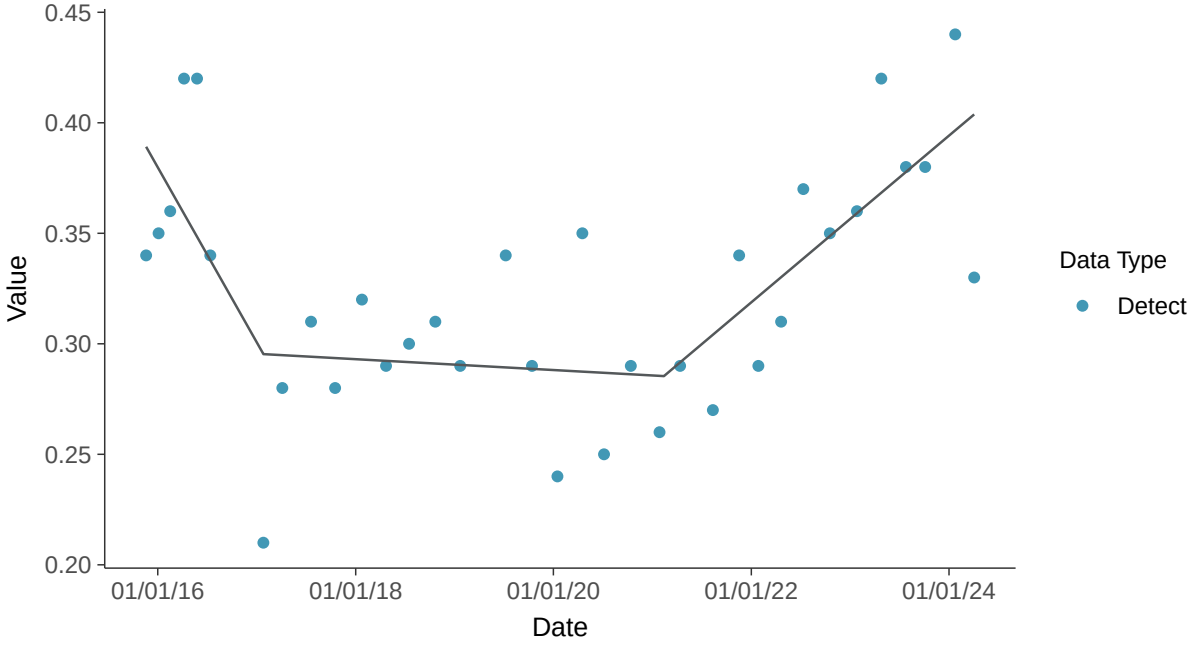
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-4 (mg/L)



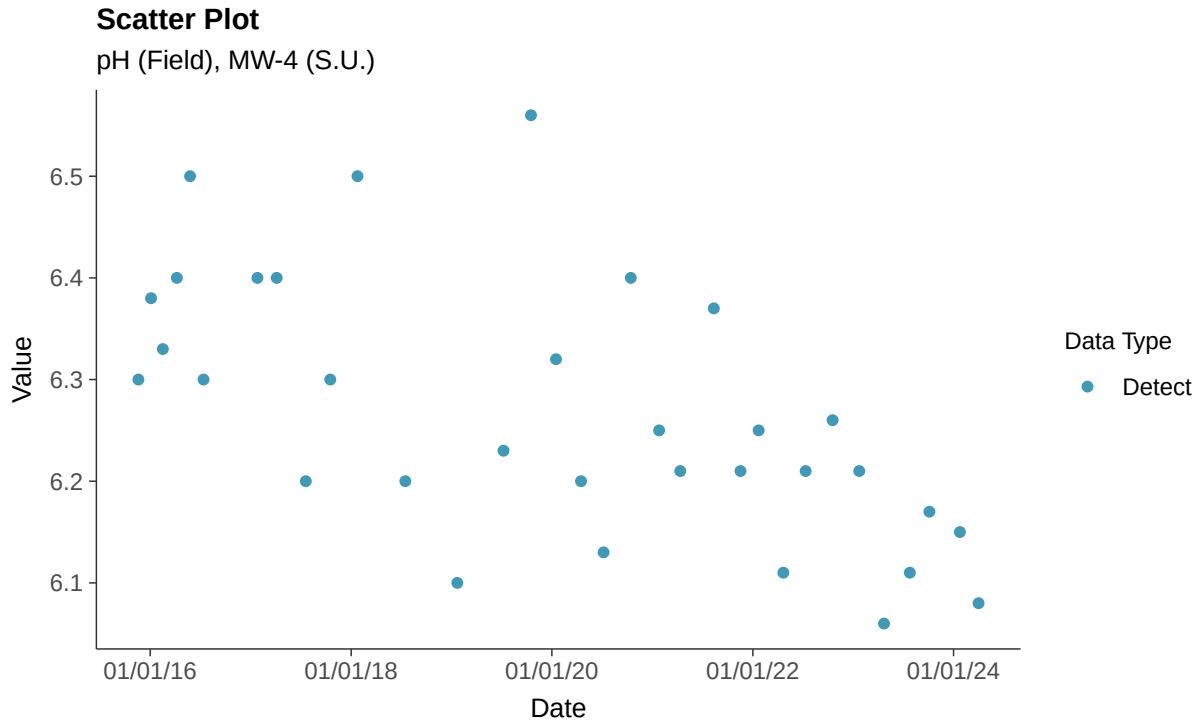
Trend Regression: Piecewise Linear-Linear-Linear

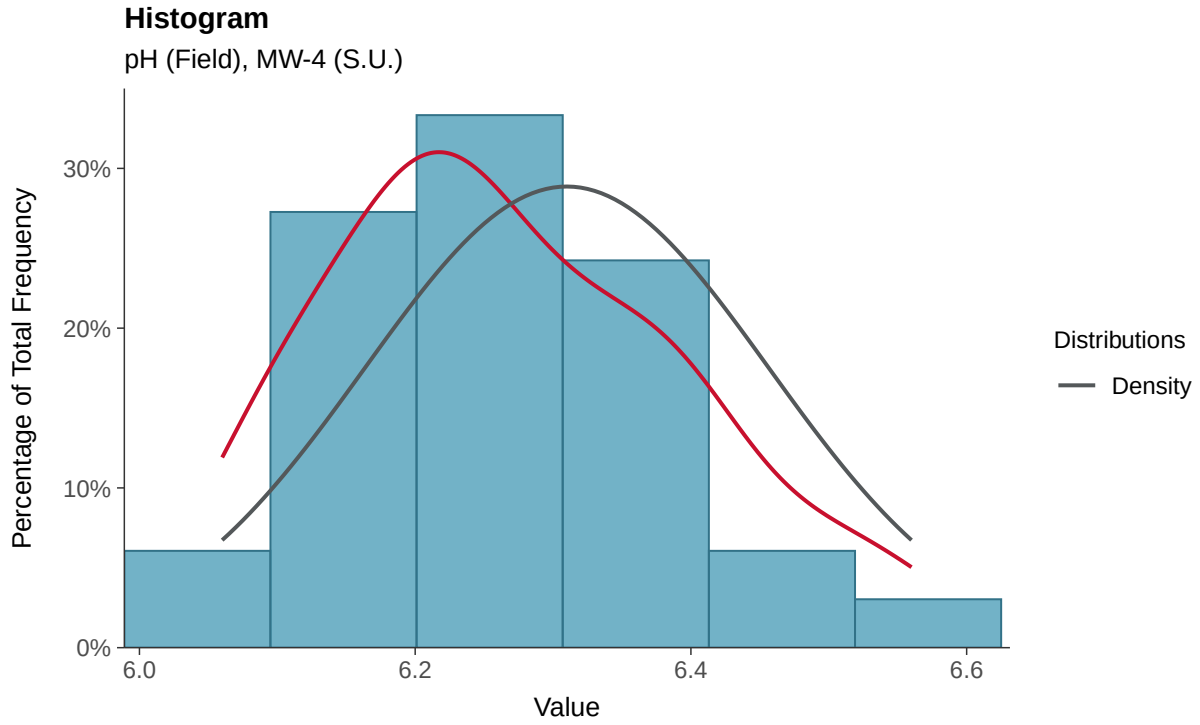
Fluoride, MW-4 (mg/L)



App. III: pH (Field), MW-4

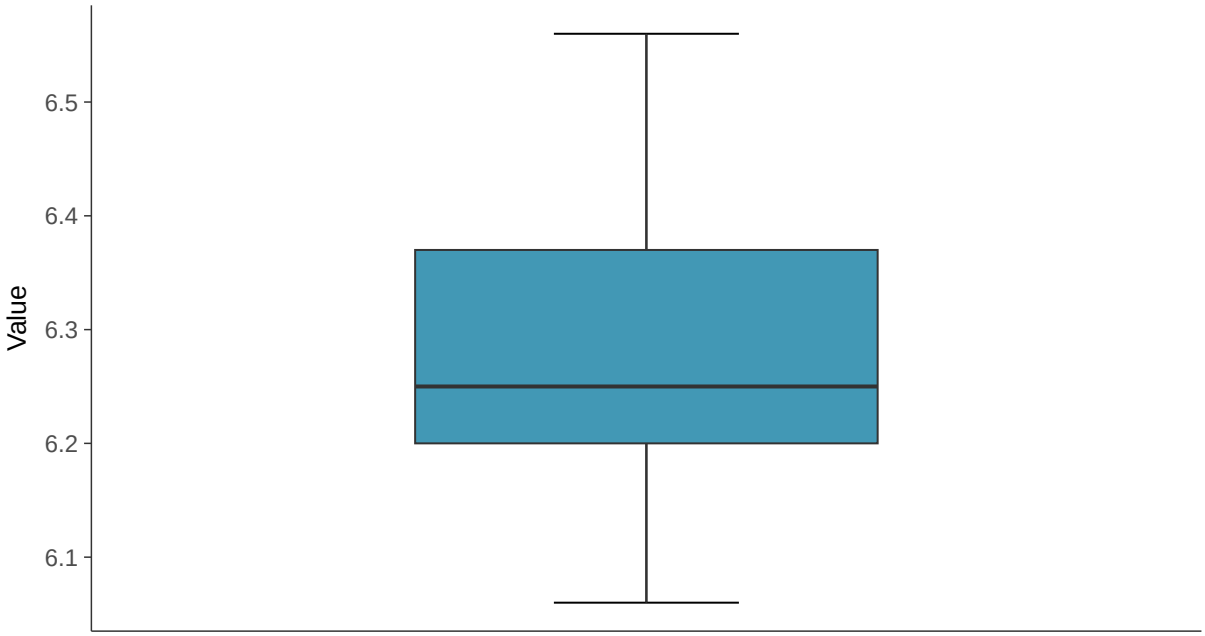
ID: 7_2_118





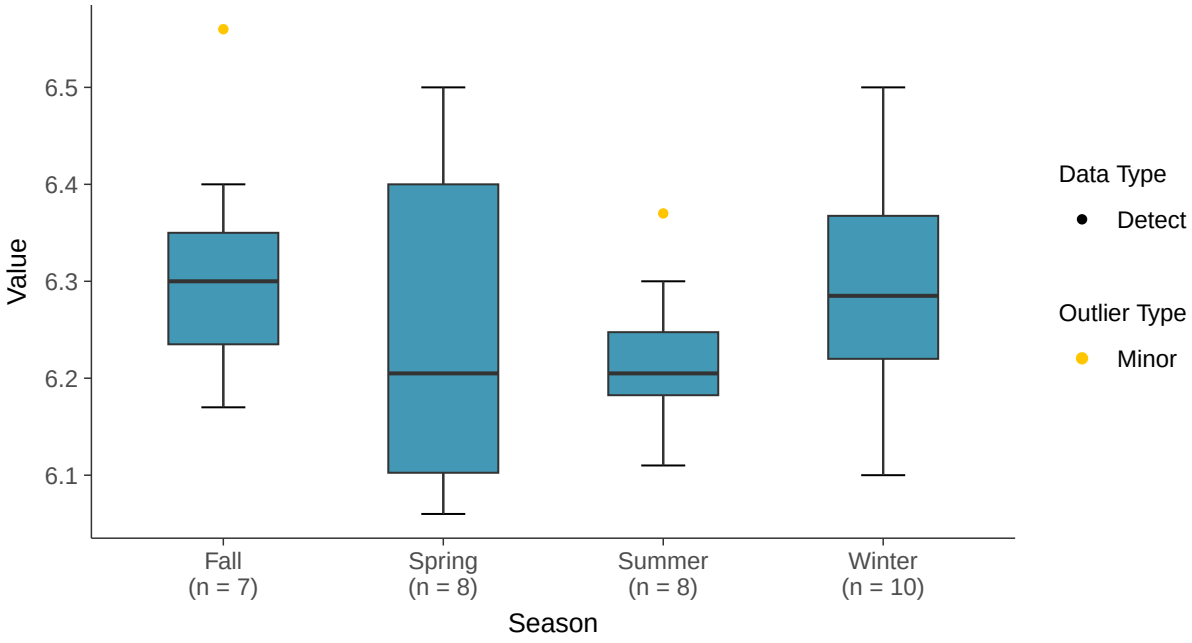
Boxplot

pH (Field), MW-4 (S.U.)



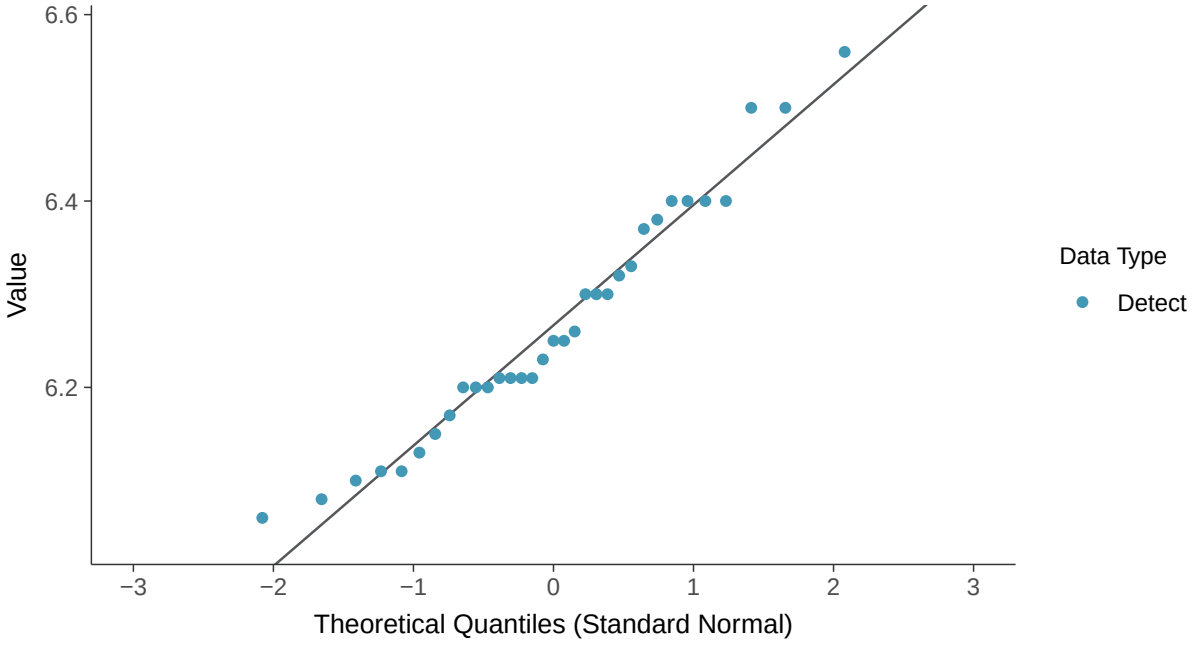
Boxplot by Season

pH (Field), MW-4 (S.U.)



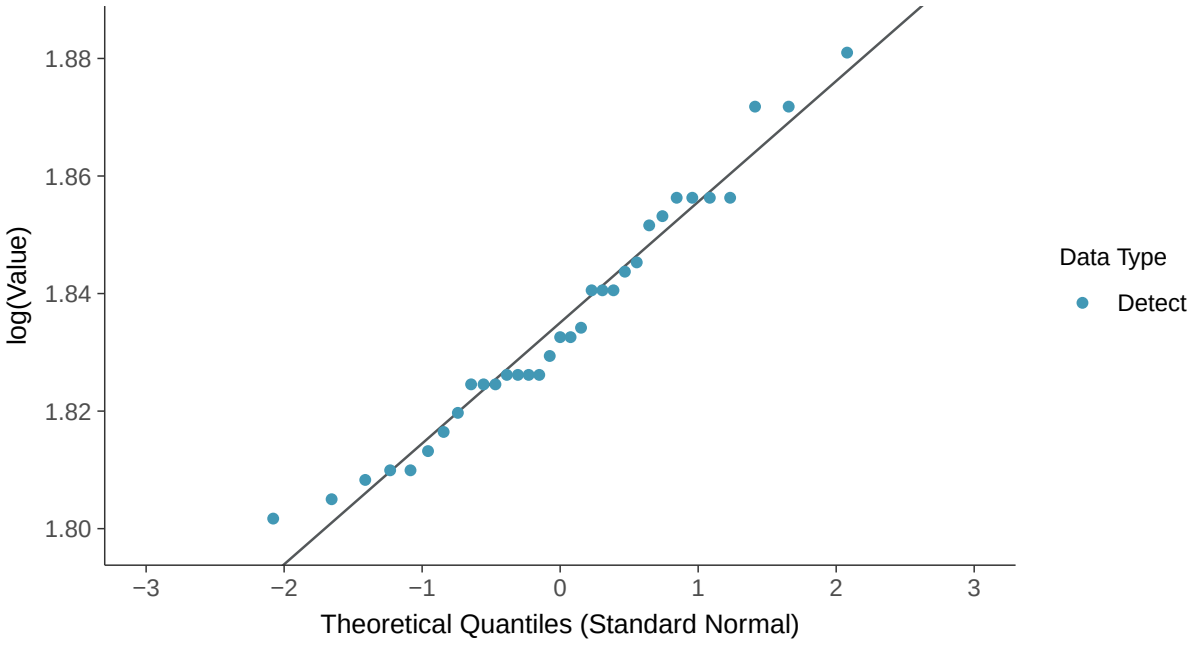
Normal Q-Q plot

pH (Field), MW-4 (S.U.)



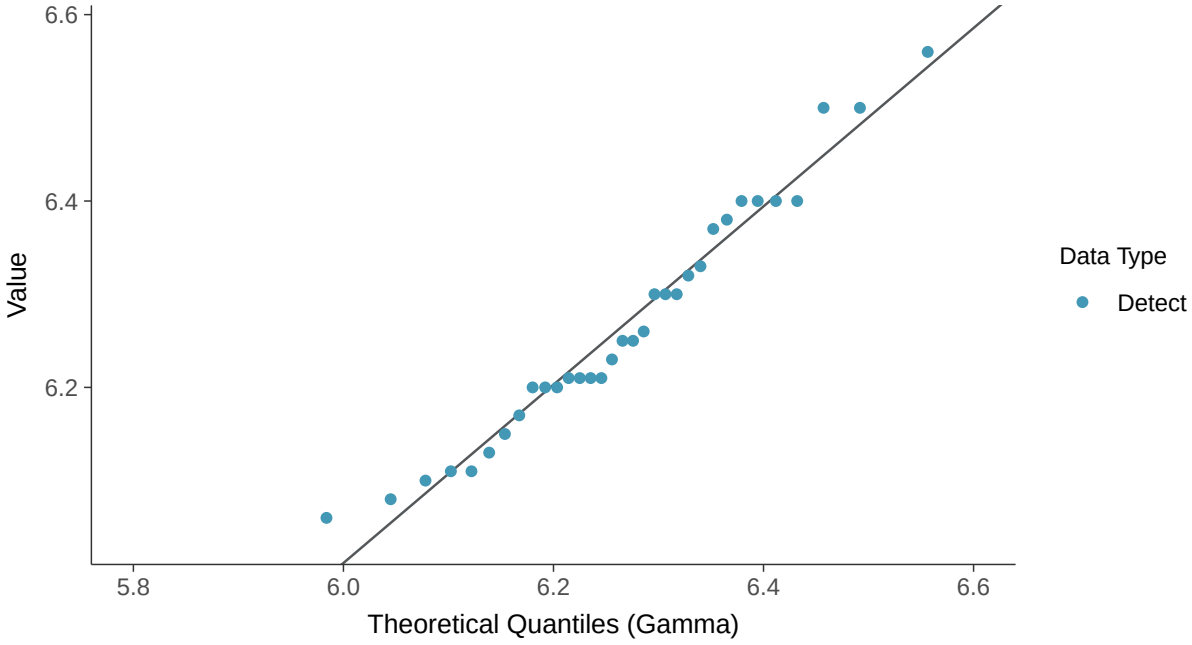
Lognormal Q-Q plot

pH (Field), MW-4 (S.U.)



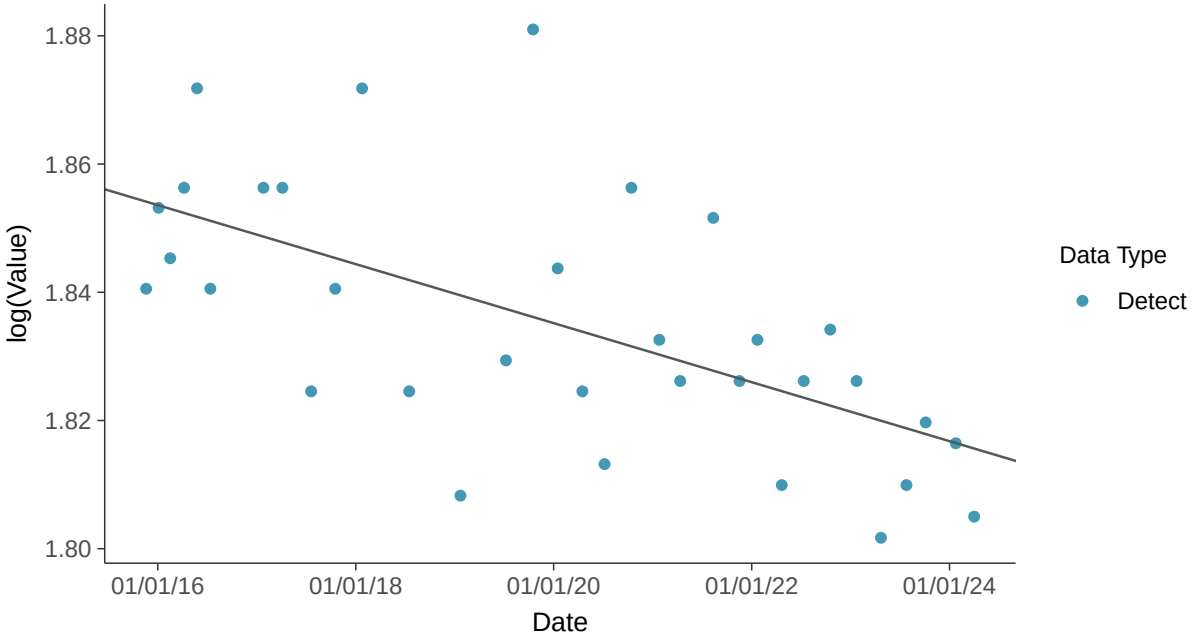
Gamma Q-Q plot

pH (Field), MW-4 (S.U.)



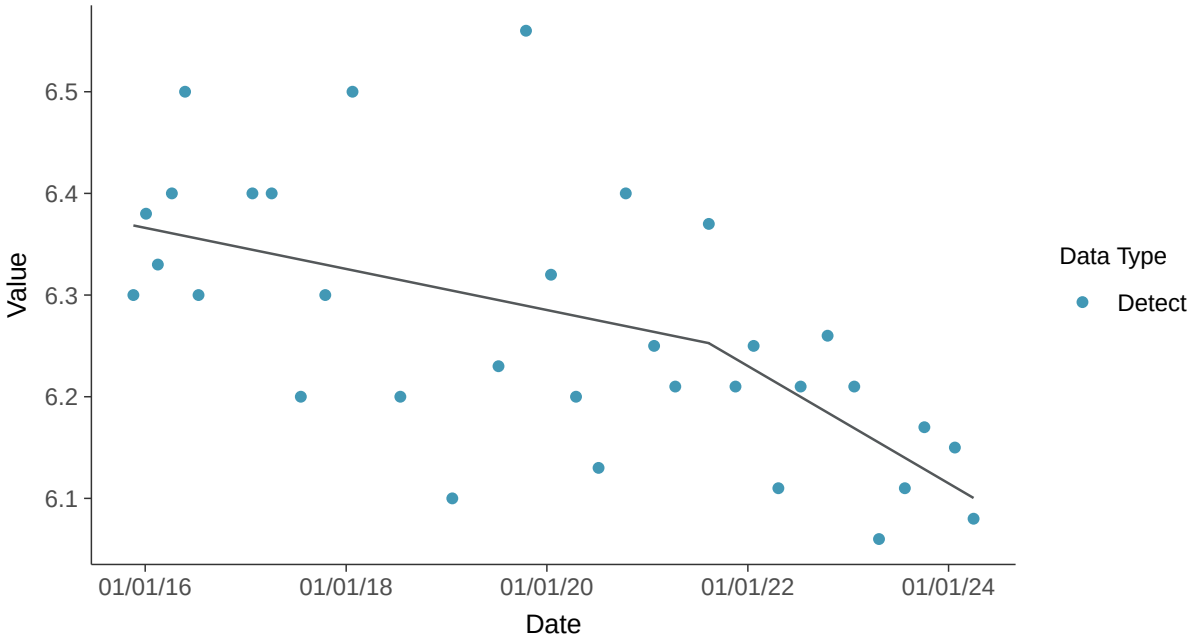
Trend Regression: Lognormal MLE

pH (Field), MW-4 (S.U.)



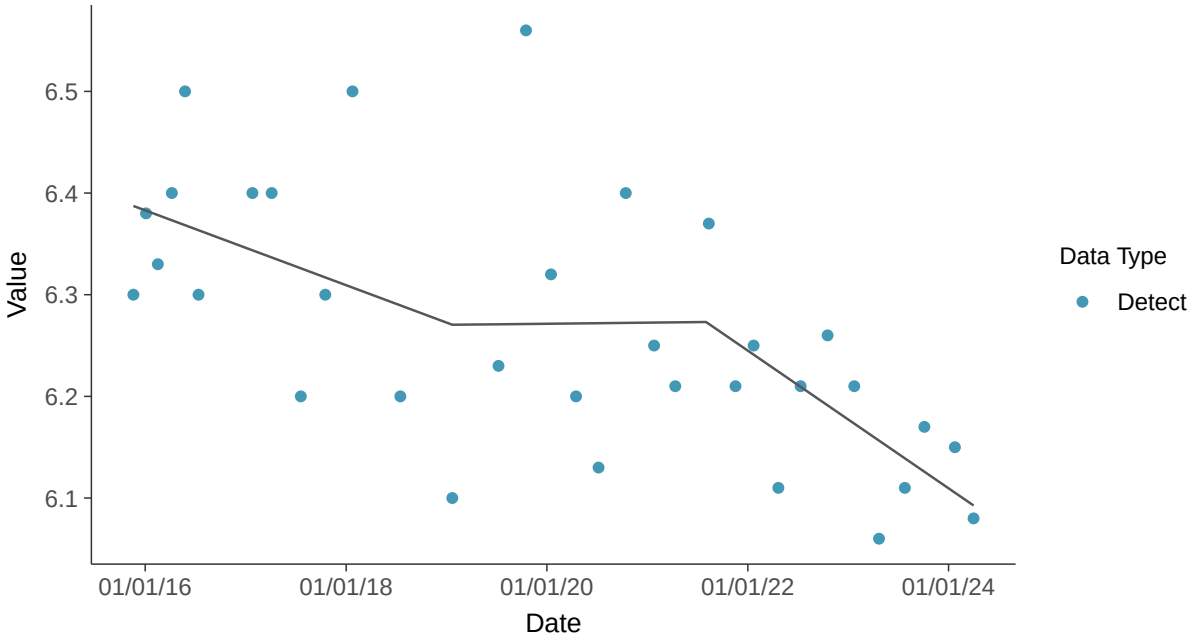
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-4 (S.U.)



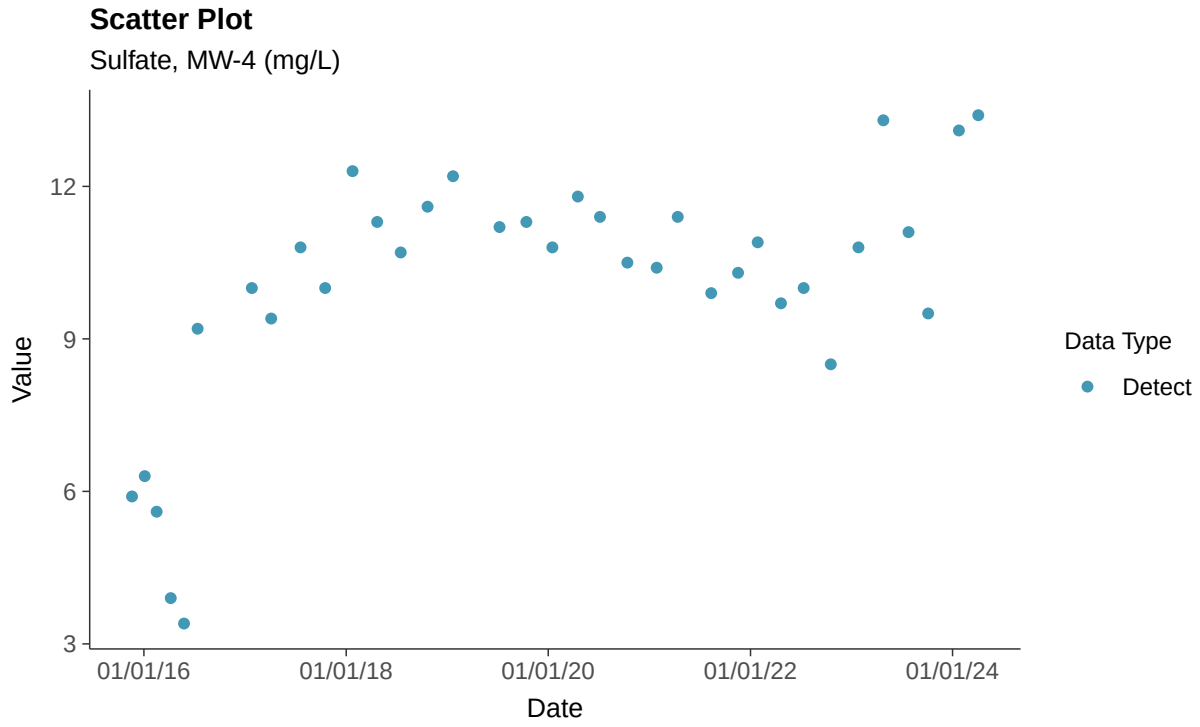
Trend Regression: Piecewise Linear-Linear-Linear

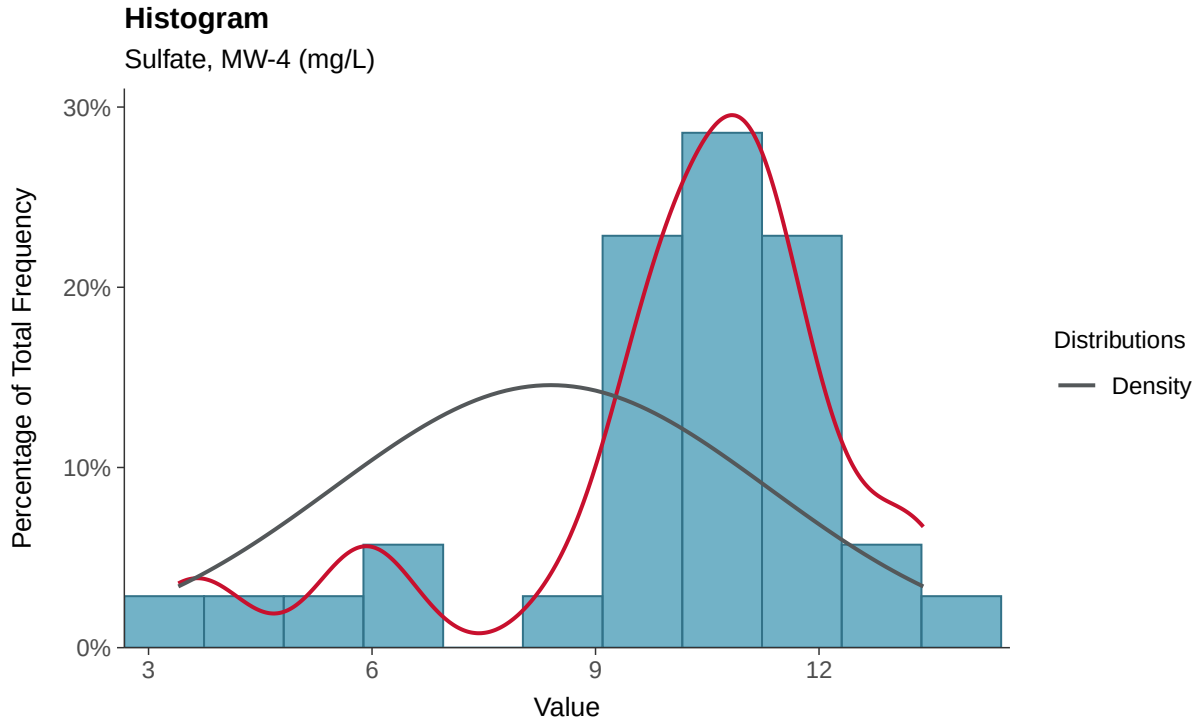
pH (Field), MW-4 (S.U.)



App. III: Sulfate, MW-4

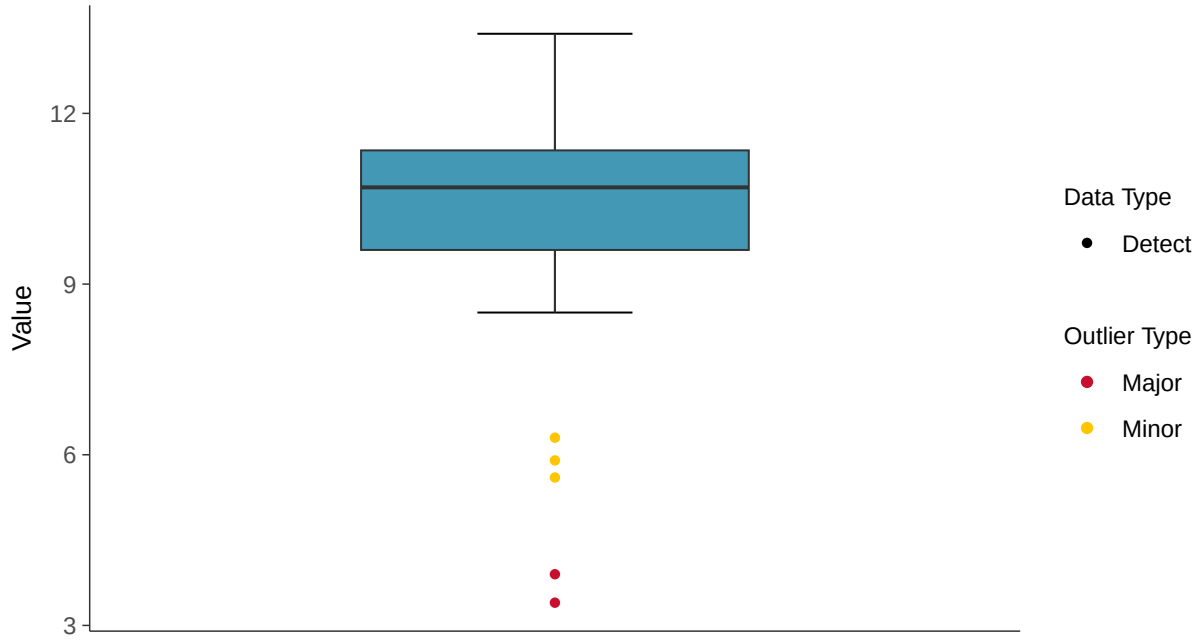
ID: 7_2_123





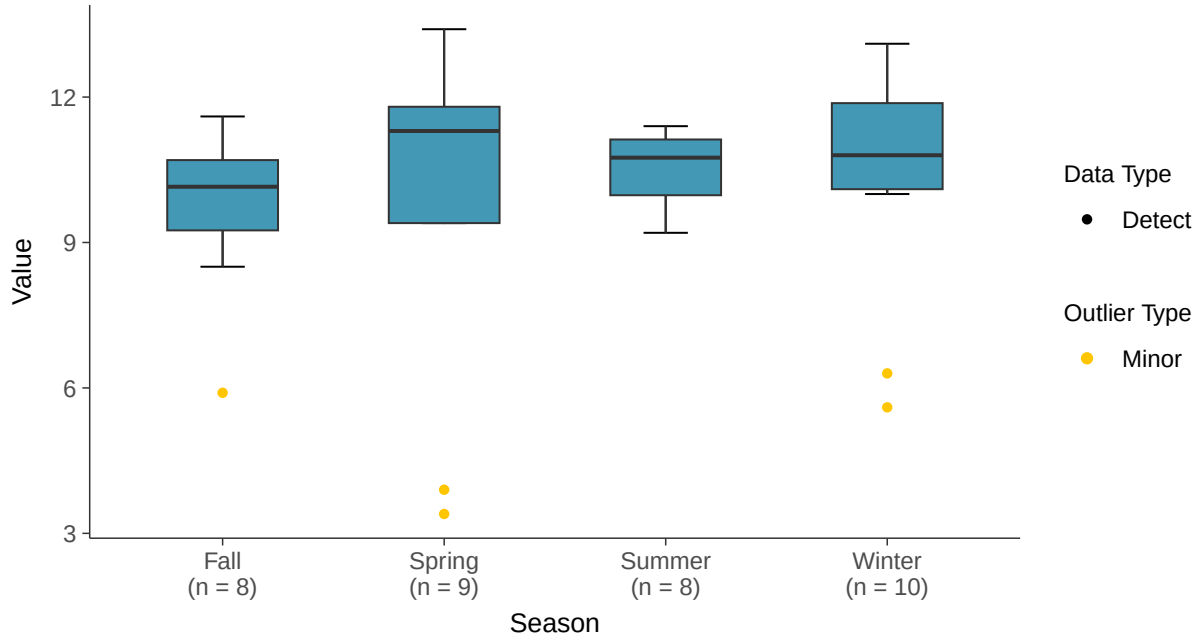
Boxplot

Sulfate, MW-4 (mg/L)



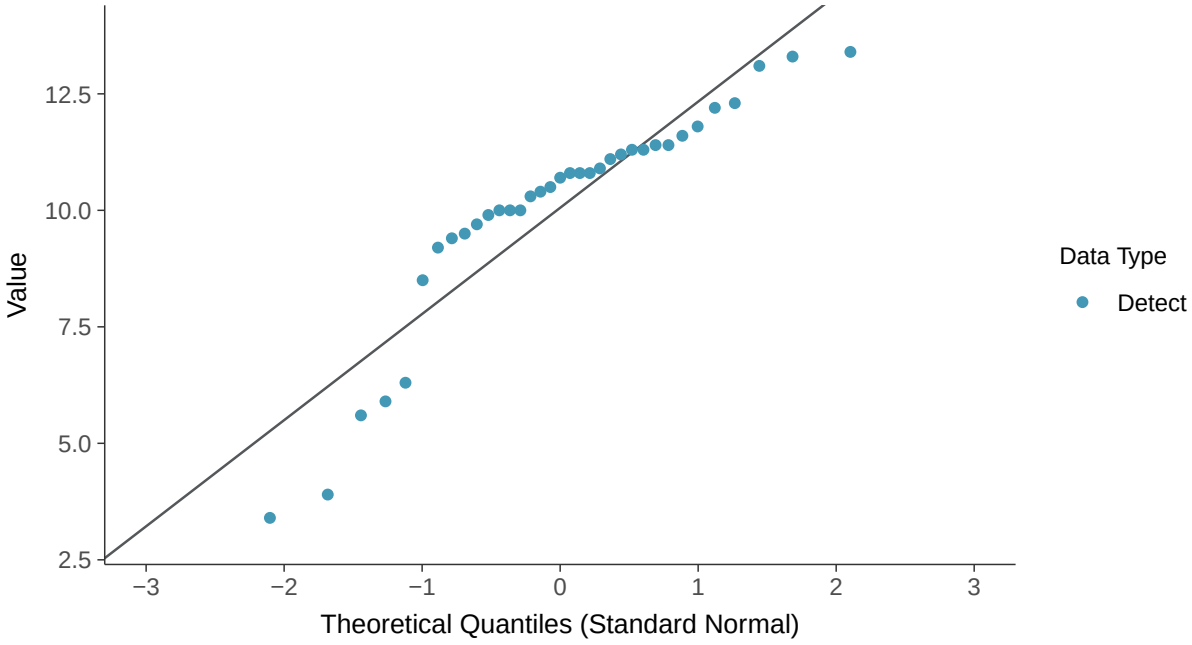
Boxplot by Season

Sulfate, MW-4 (mg/L)



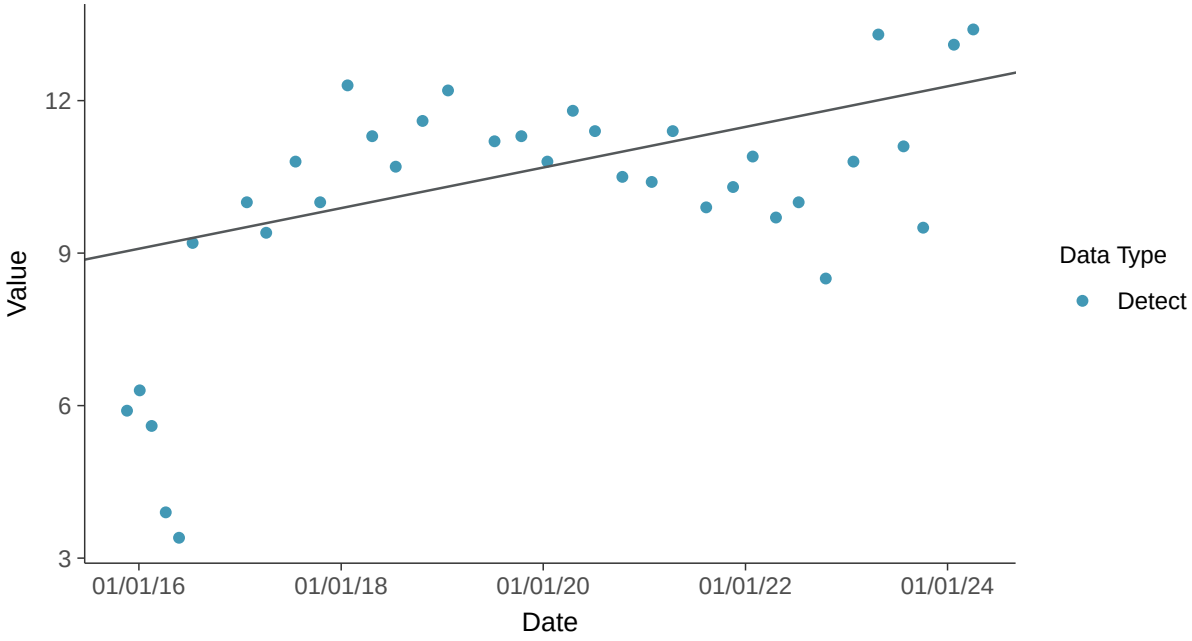
Normal Q-Q plot

Sulfate, MW-4 (mg/L)



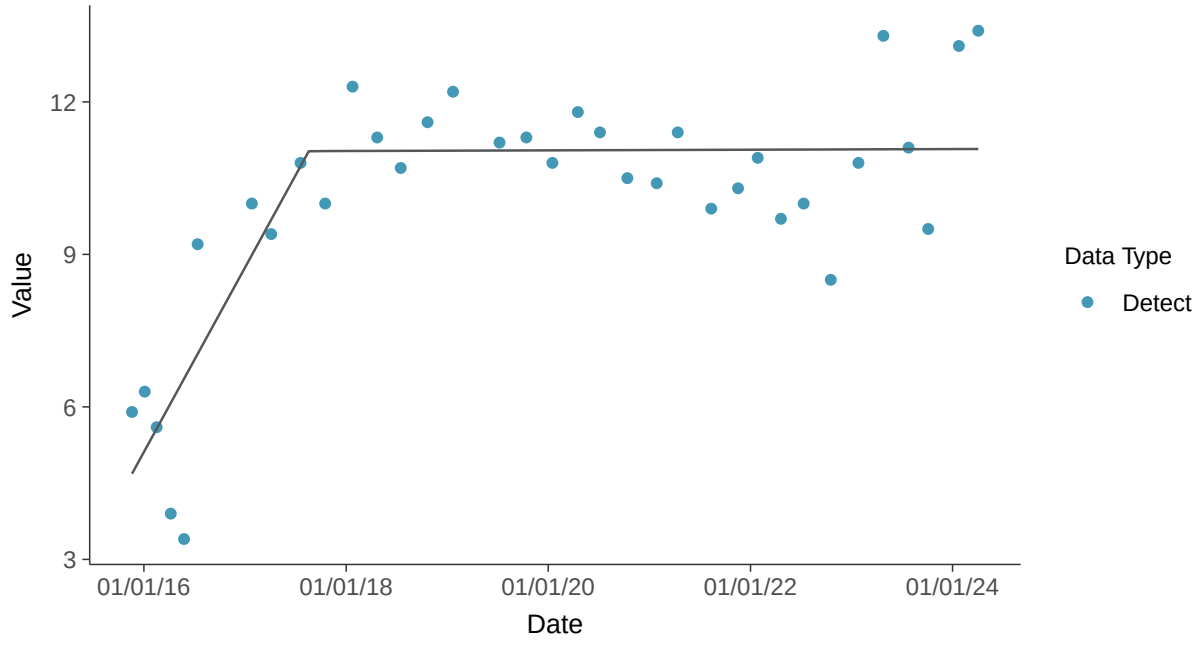
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-4 (mg/L)



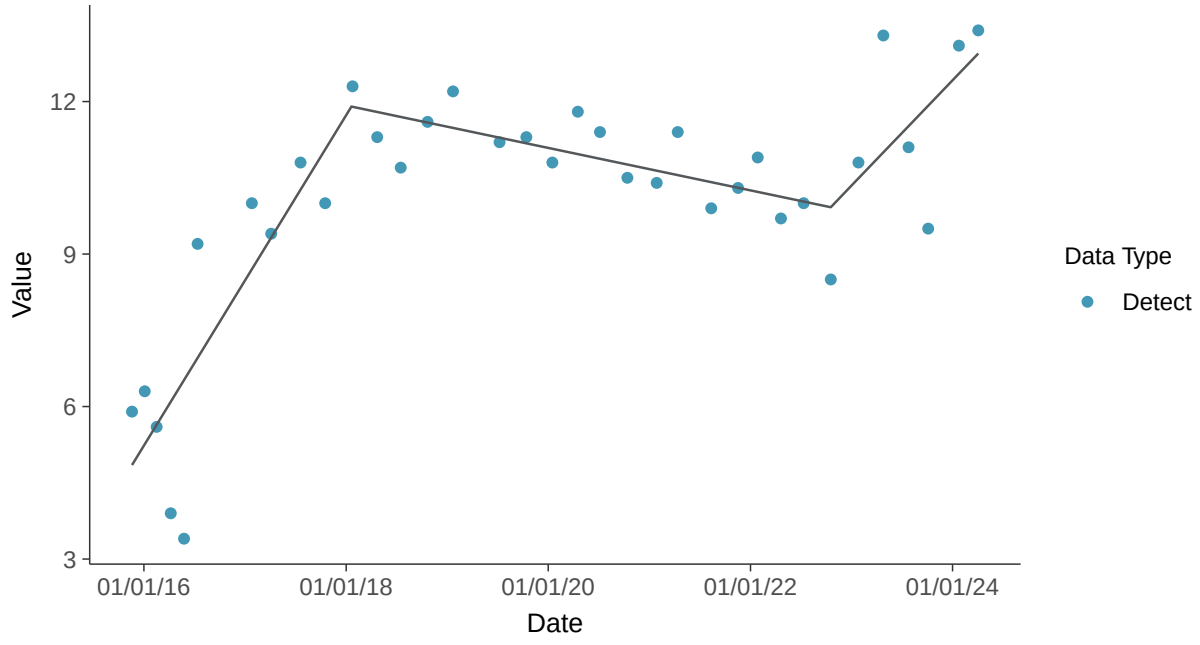
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-4 (mg/L)

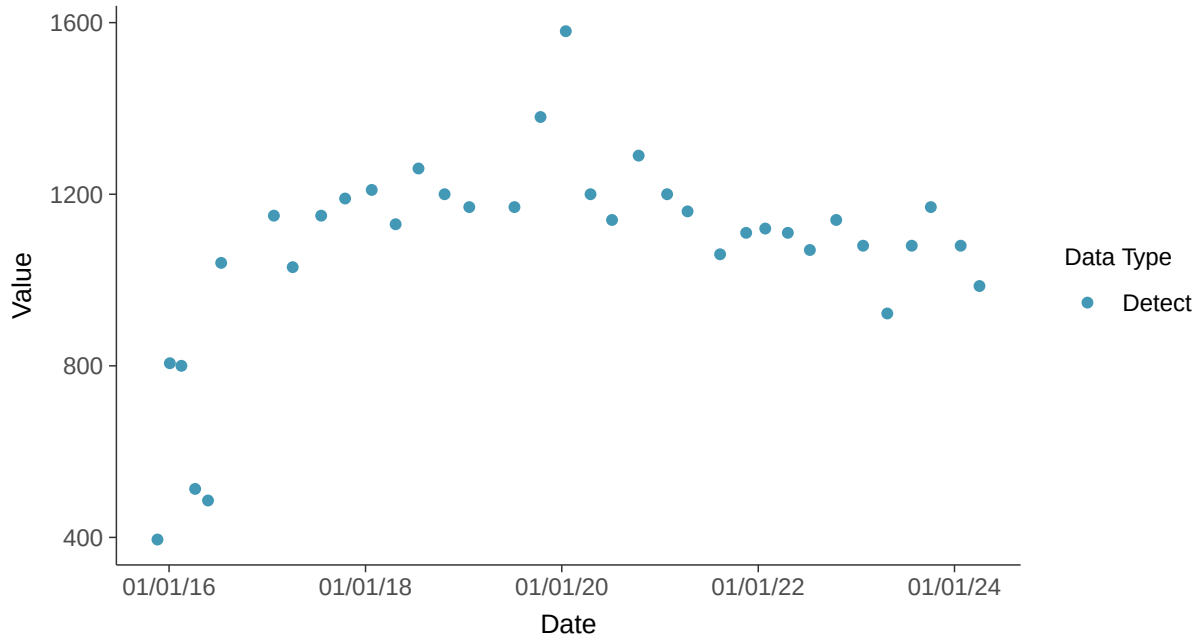


App. III: Total Dissolved Solids, MW-4

ID: 7_2_125

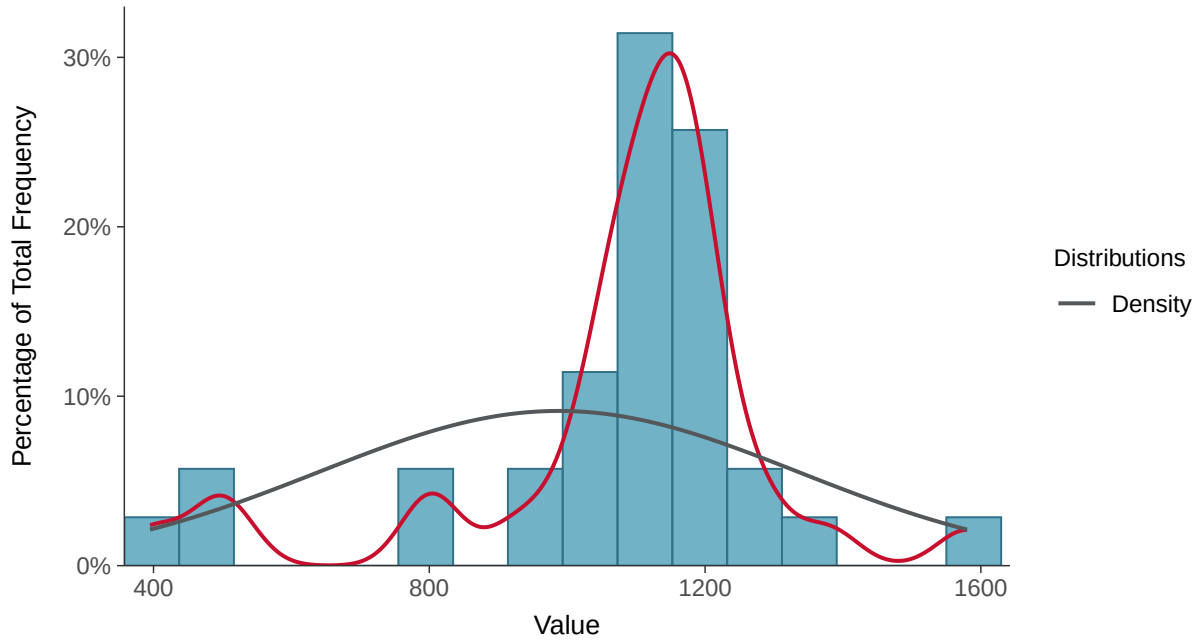
Scatter Plot

Total Dissolved Solids, MW-4 (mg/L)



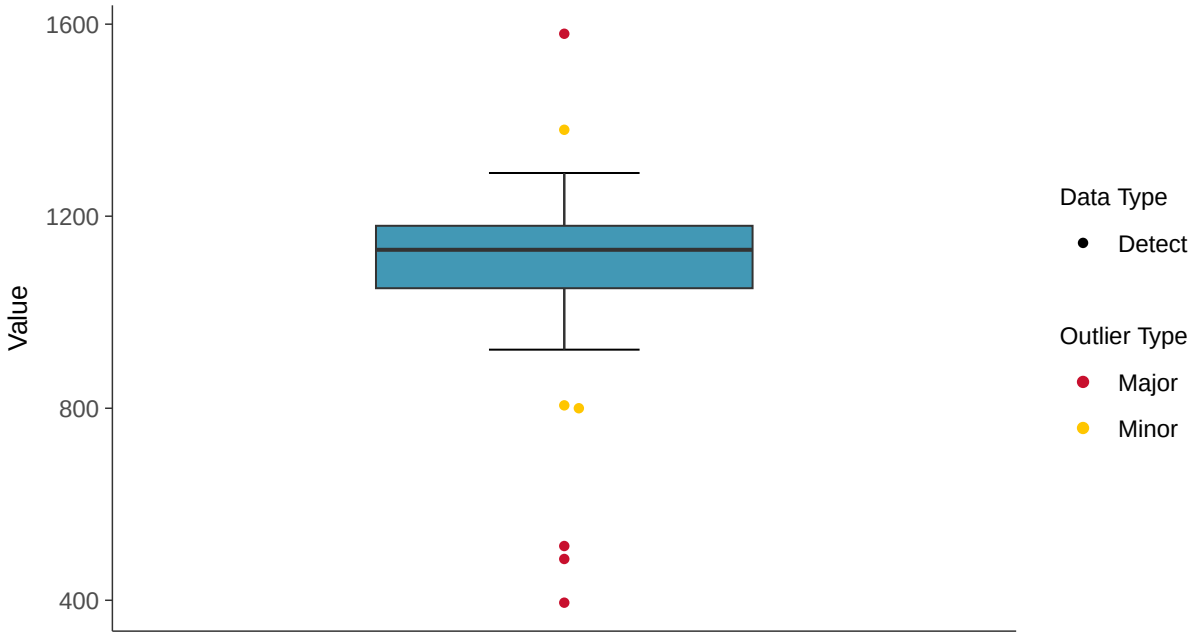
Histogram

Total Dissolved Solids, MW-4 (mg/L)



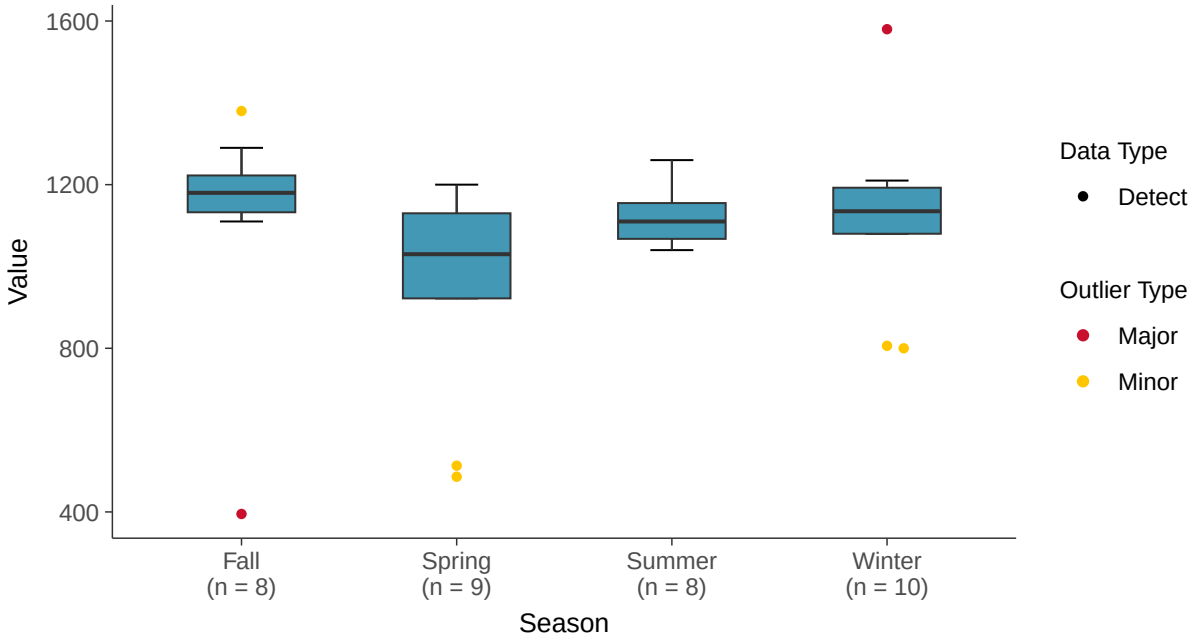
Boxplot

Total Dissolved Solids, MW-4 (mg/L)



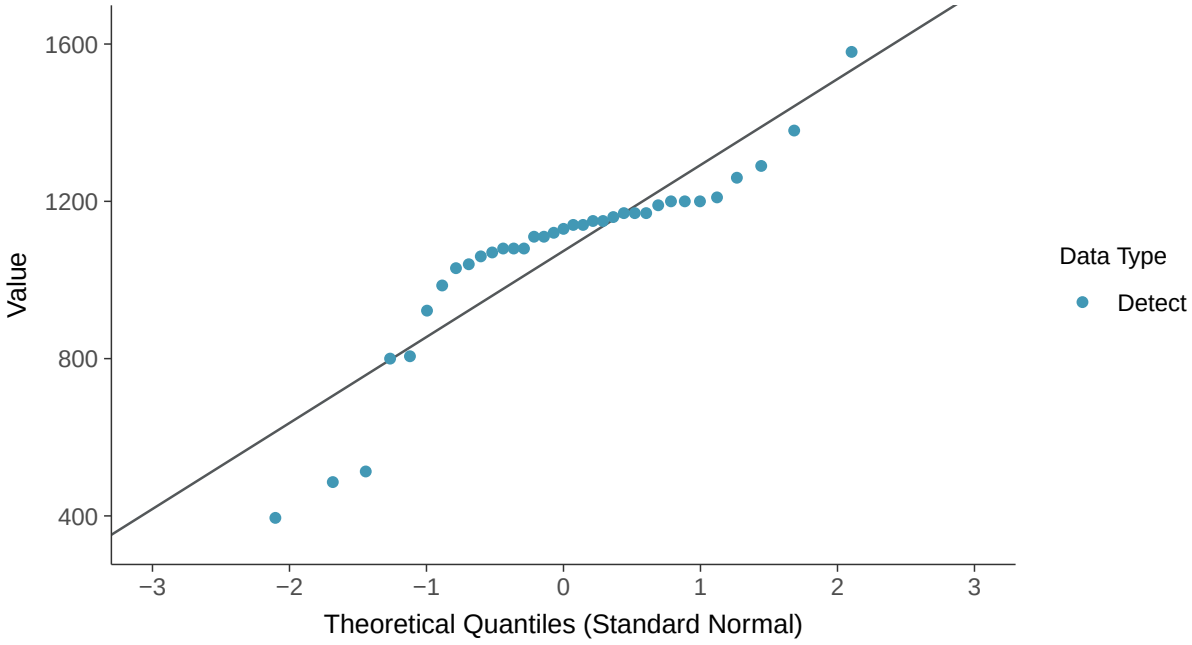
Boxplot by Season

Total Dissolved Solids, MW-4 (mg/L)



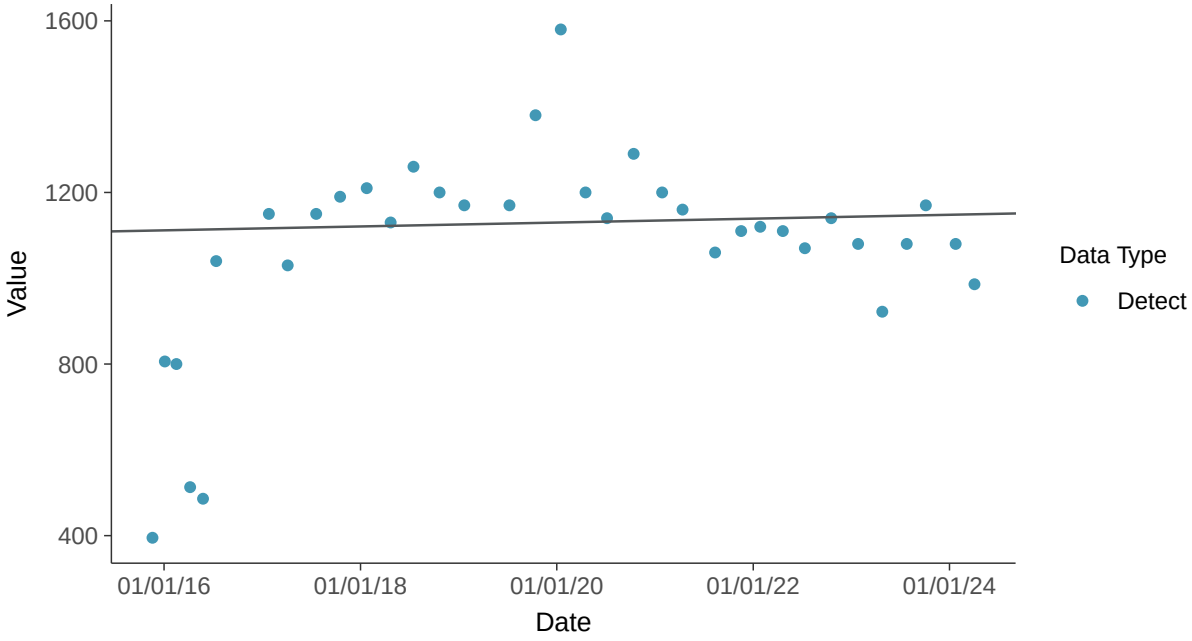
Normal Q-Q plot

Total Dissolved Solids, MW-4 (mg/L)



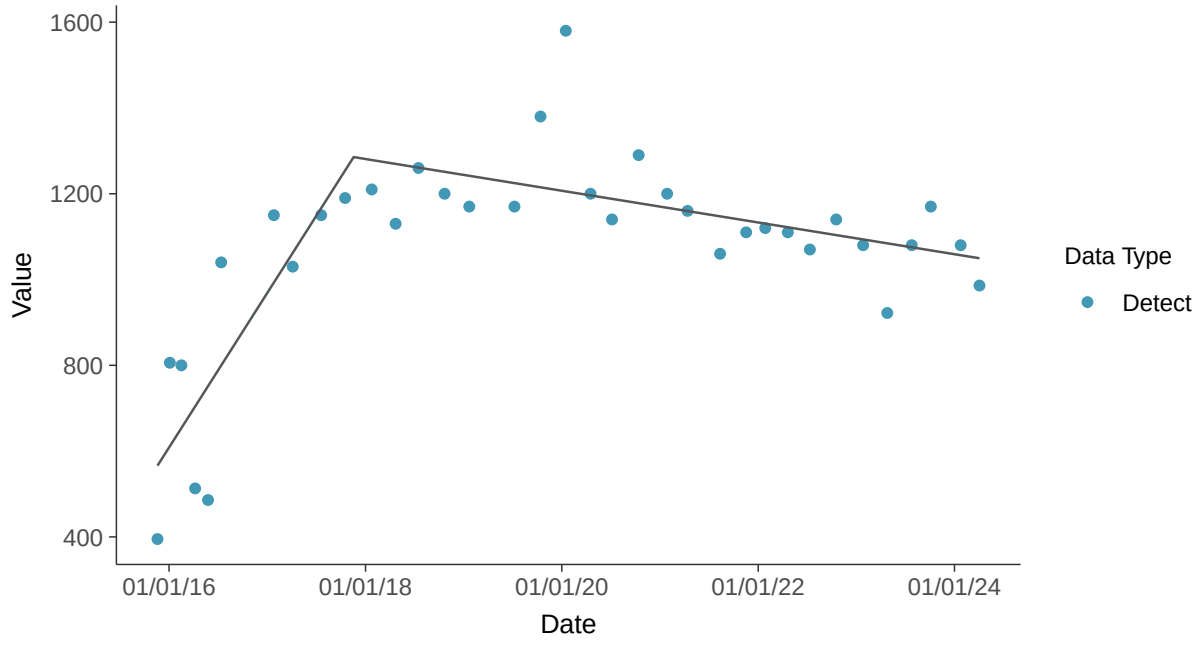
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-4 (mg/L)



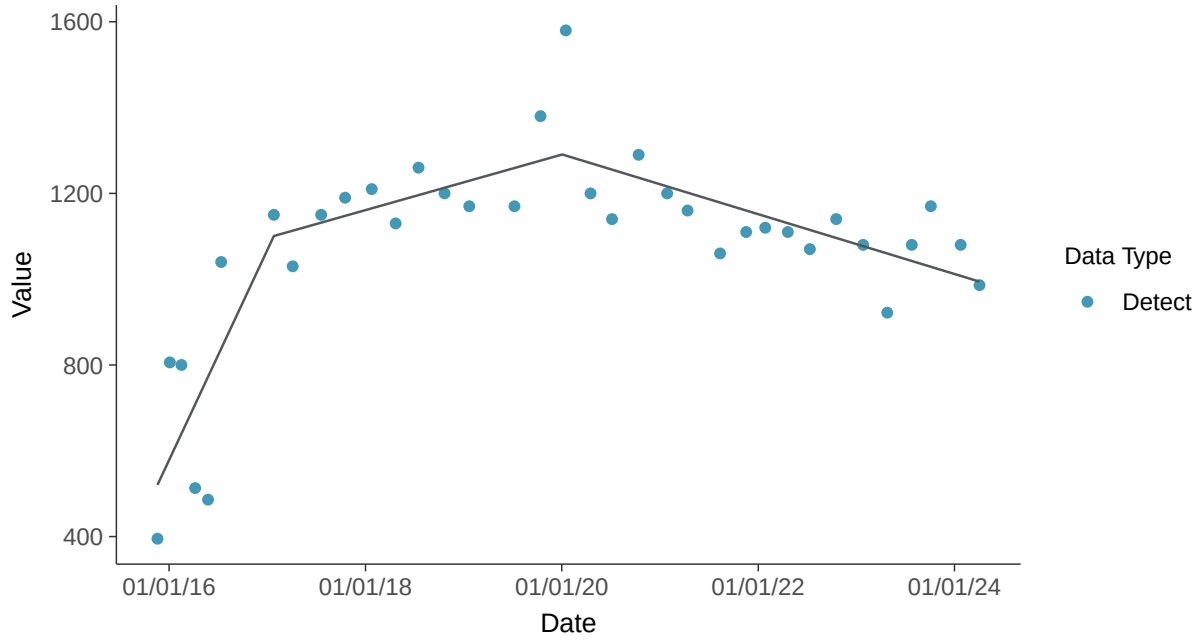
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-4 (mg/L)



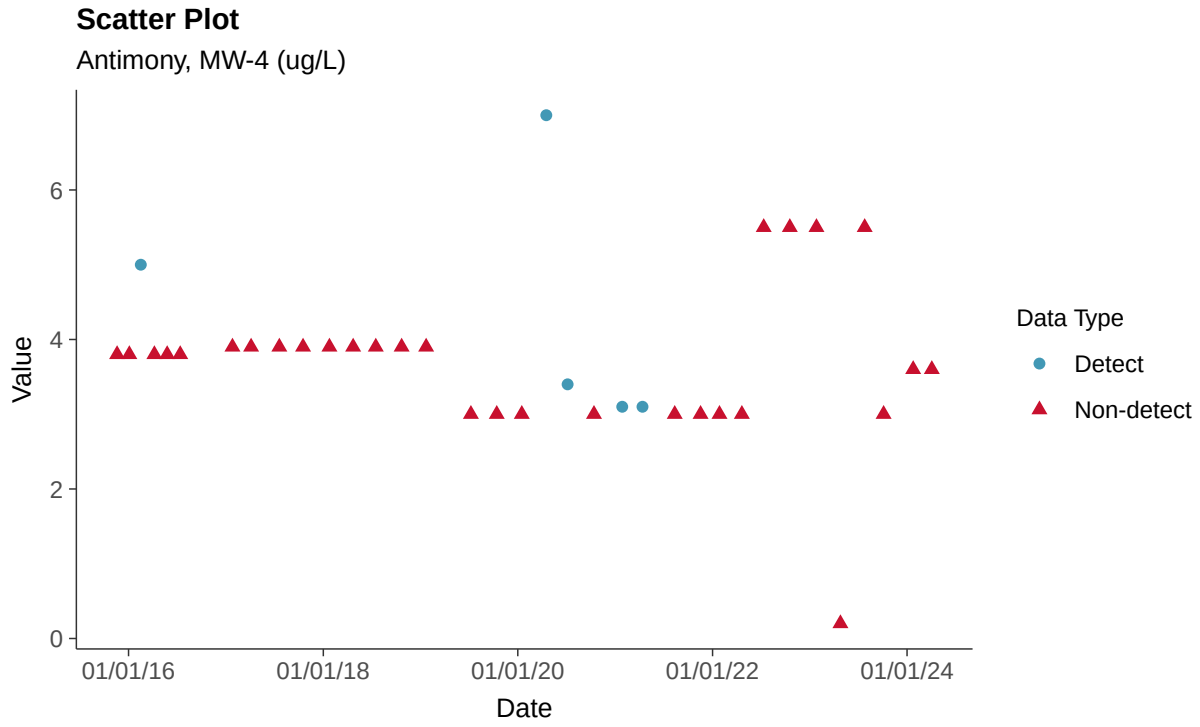
Trend Regression: Piecewise Linear-Linear-Linear

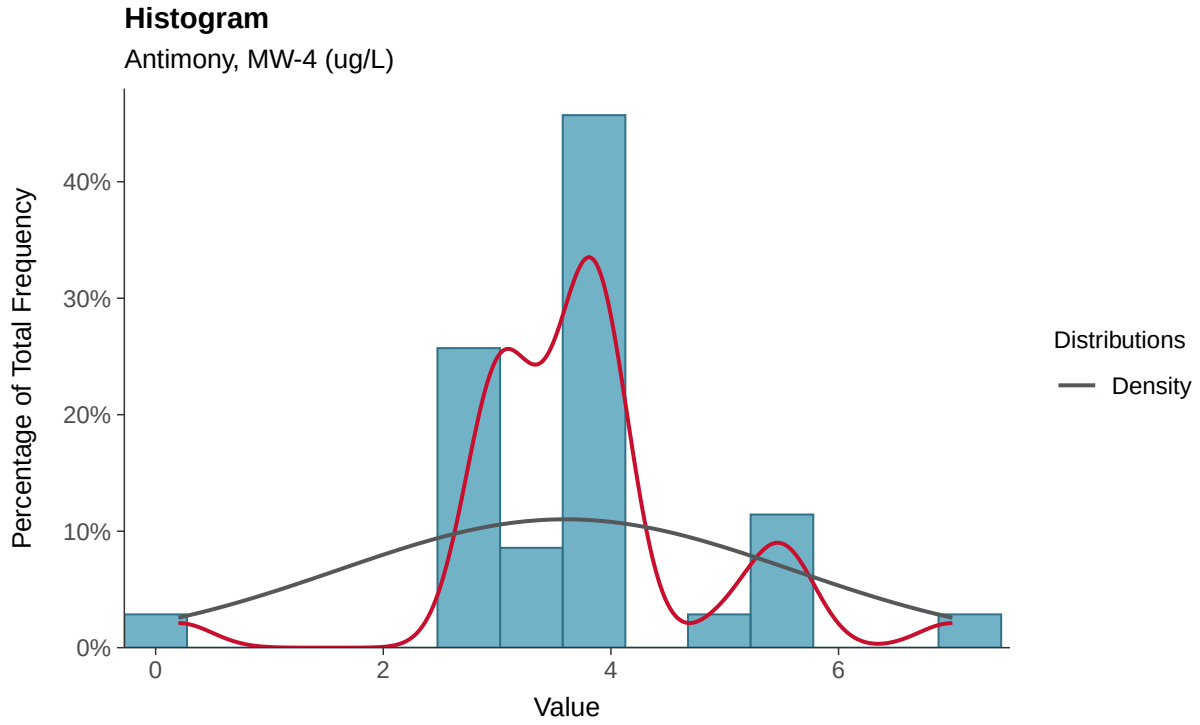
Total Dissolved Solids, MW-4 (mg/L)



App. IV: Antimony, MW-4

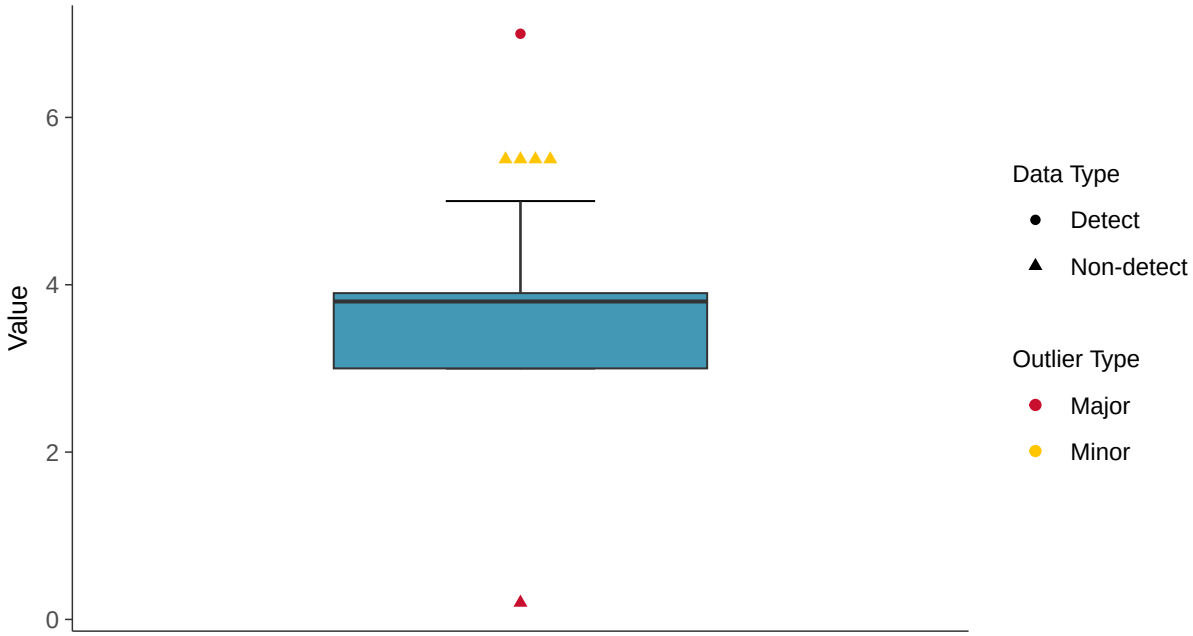
ID: 7_3_101





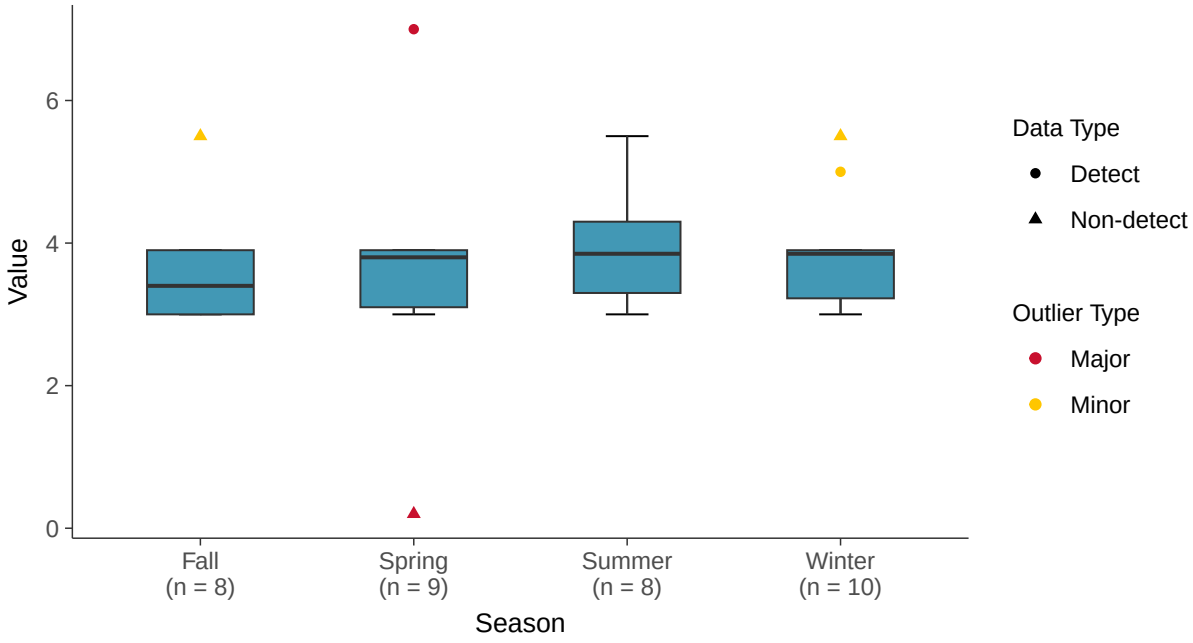
Boxplot

Antimony, MW-4 (ug/L)



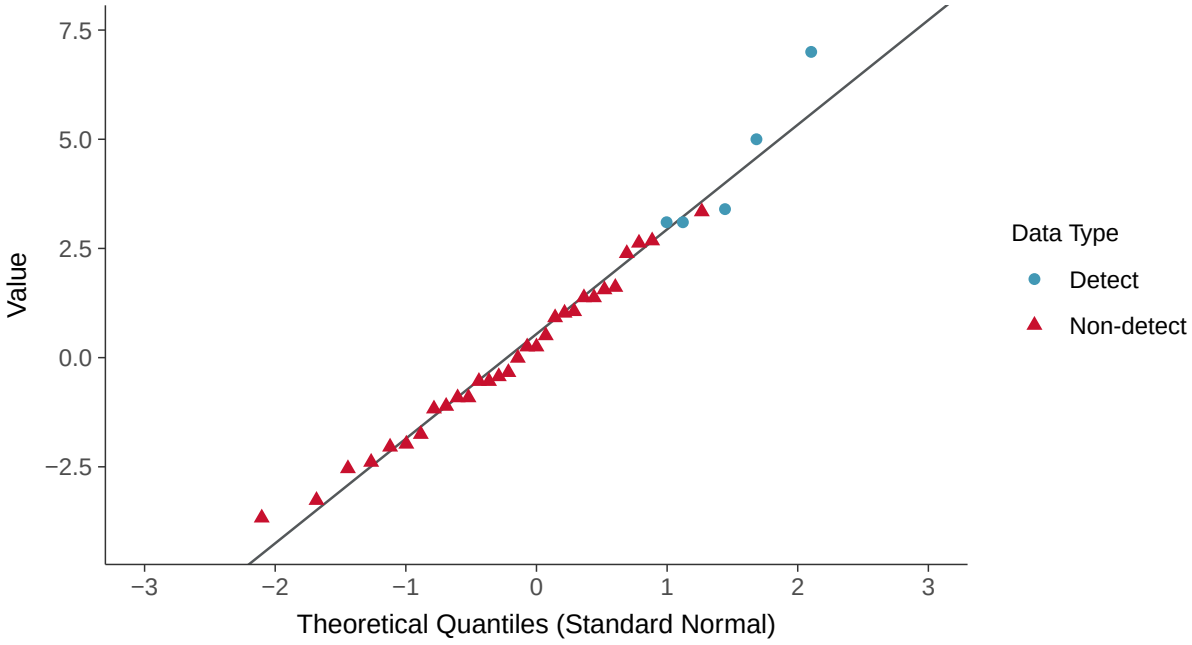
Boxplot by Season

Antimony, MW-4 (ug/L)



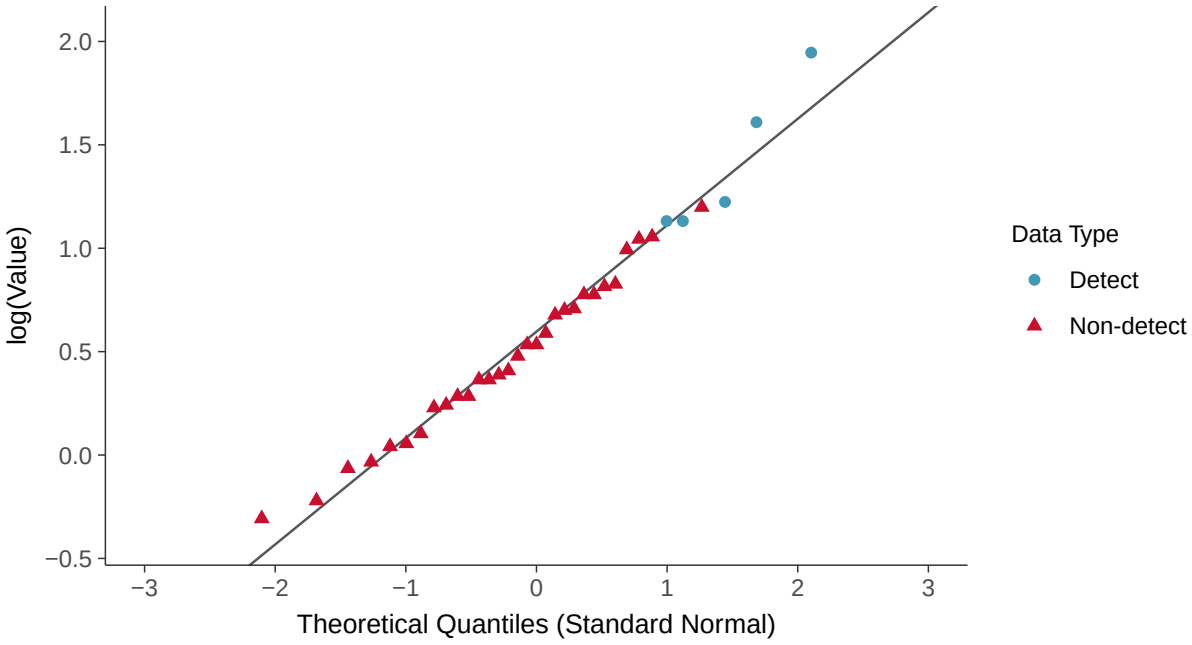
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



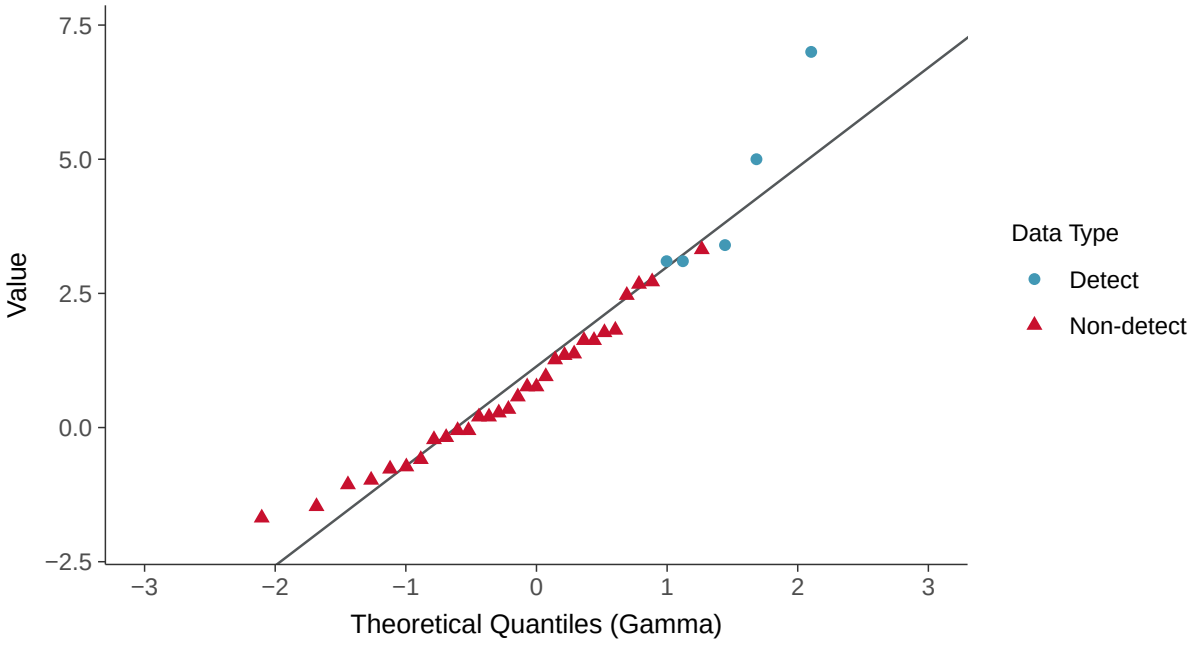
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



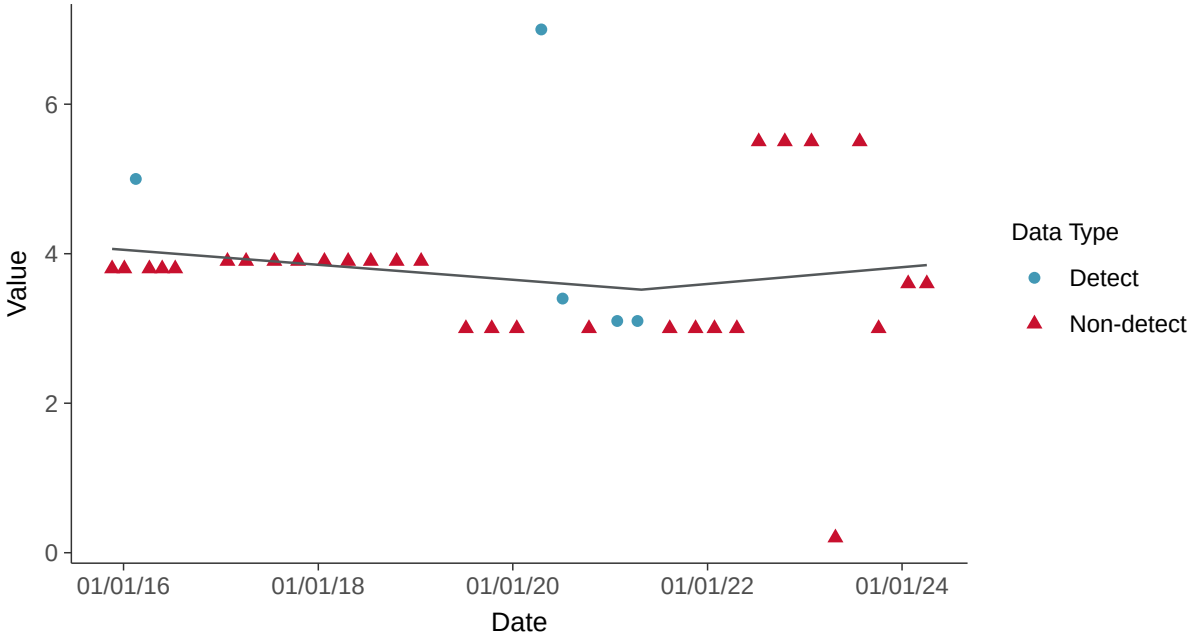
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



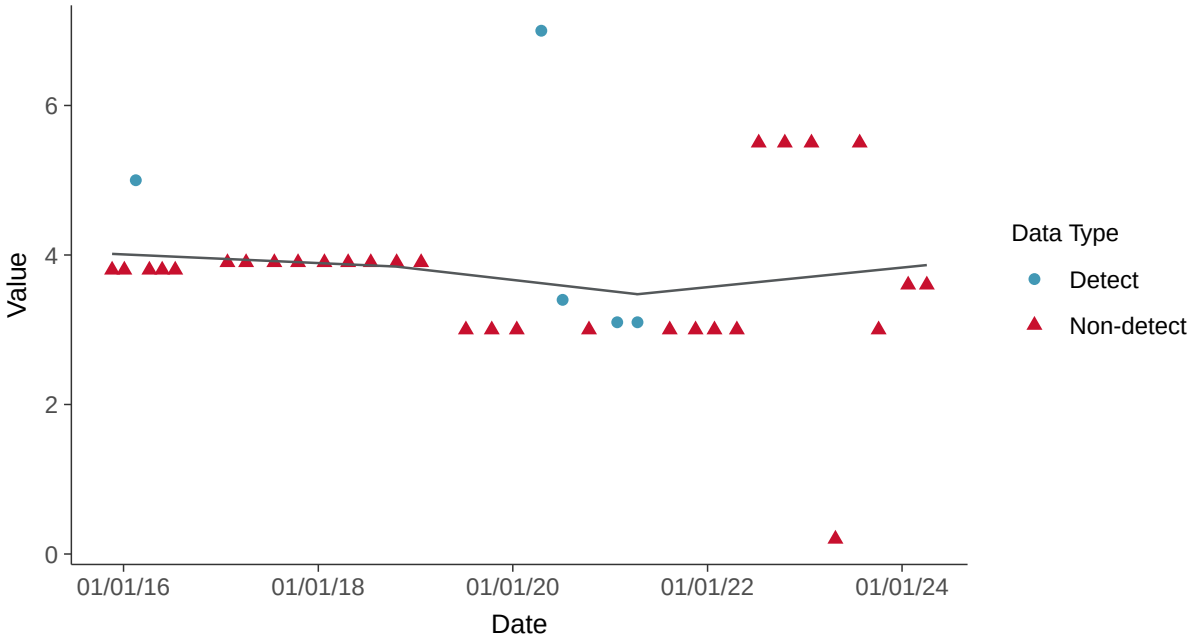
Trend Regression: Piecewise Linear-Linear

Antimony, MW-4 (ug/L)



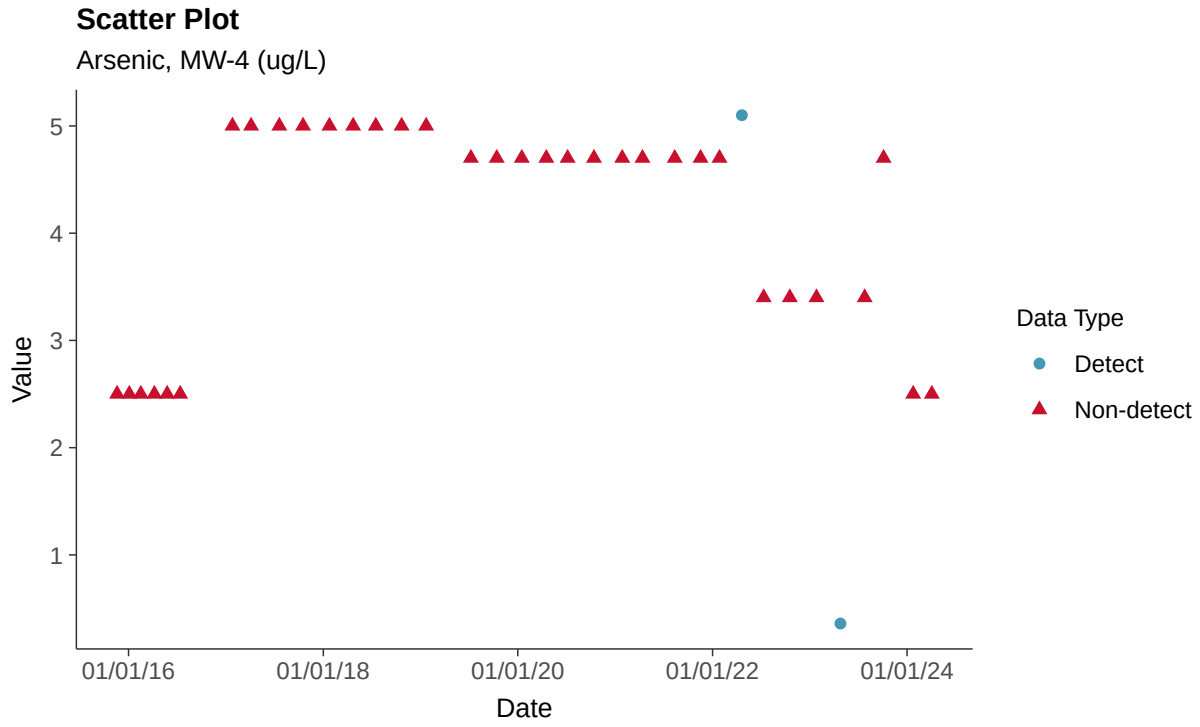
Trend Regression: Piecewise Linear-Linear-Linear

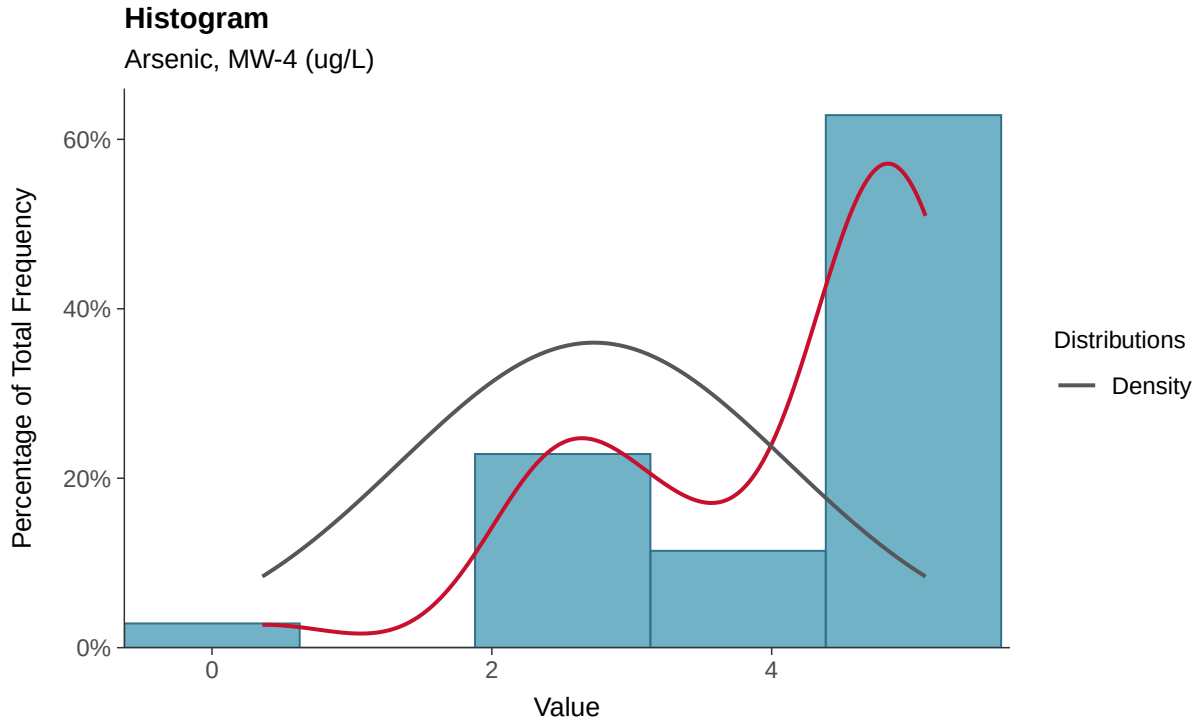
Antimony, MW-4 (ug/L)



App. IV: Arsenic, MW-4

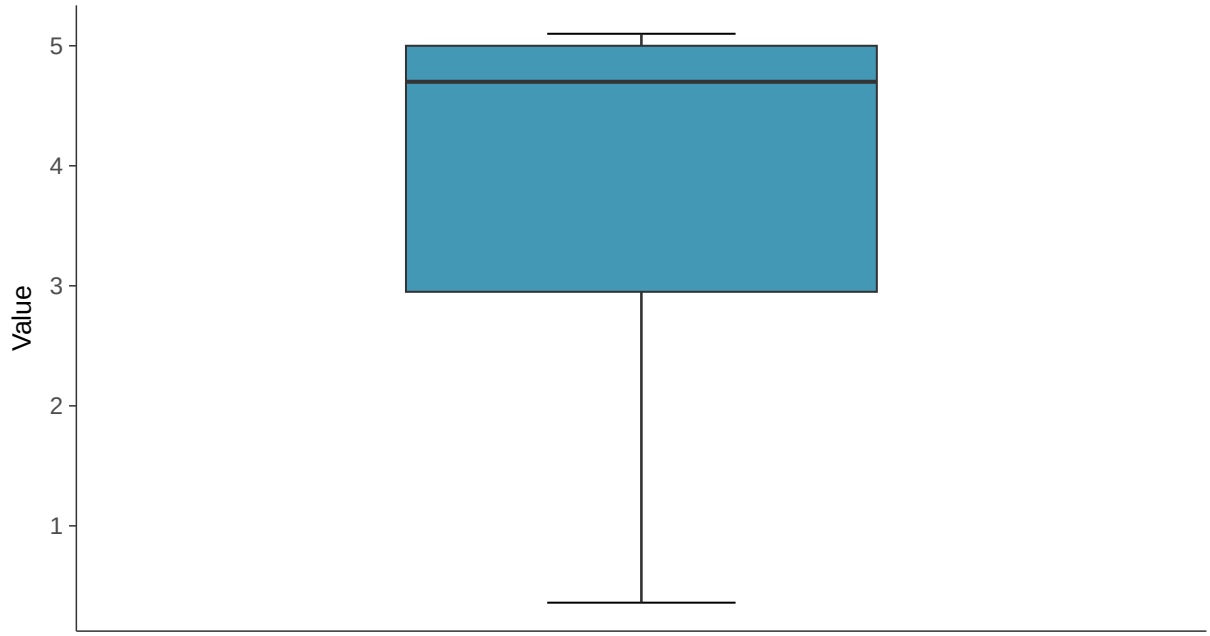
ID: 7_3_102





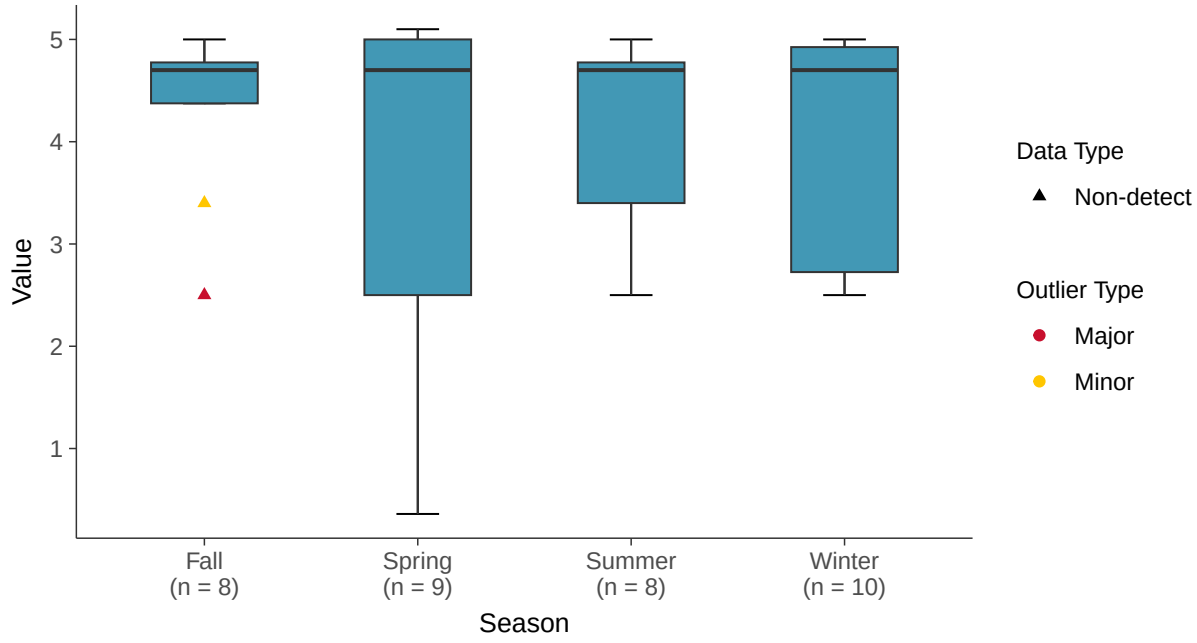
Boxplot

Arsenic, MW-4 (ug/L)



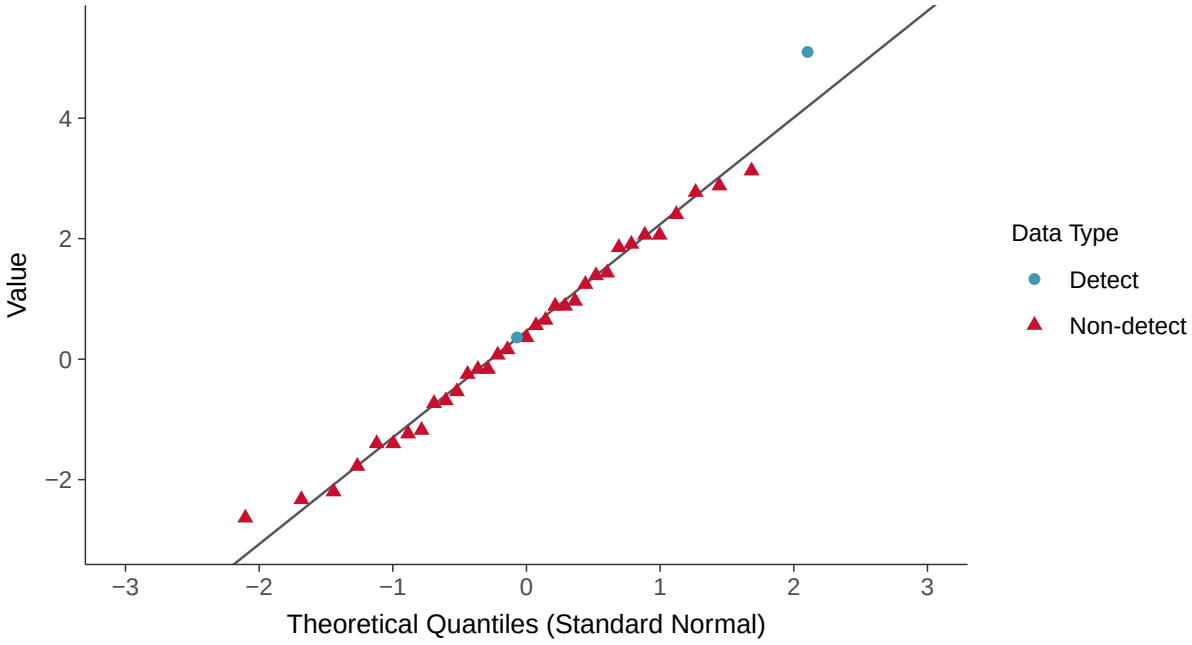
Boxplot by Season

Arsenic, MW-4 (ug/L)



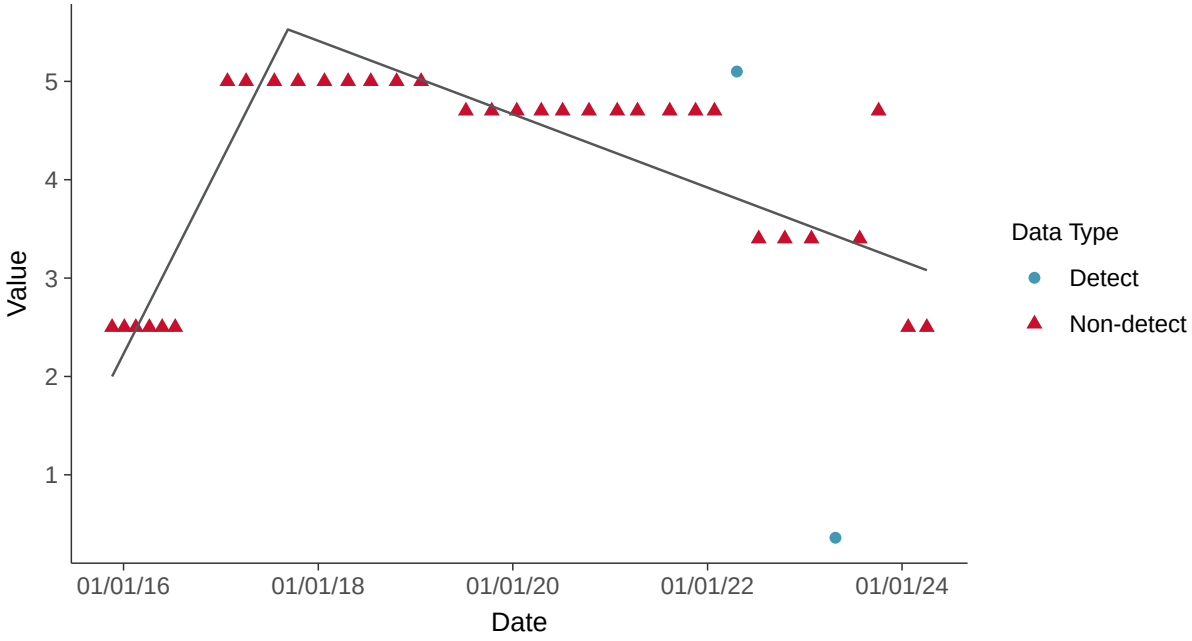
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-4 (ug/L)



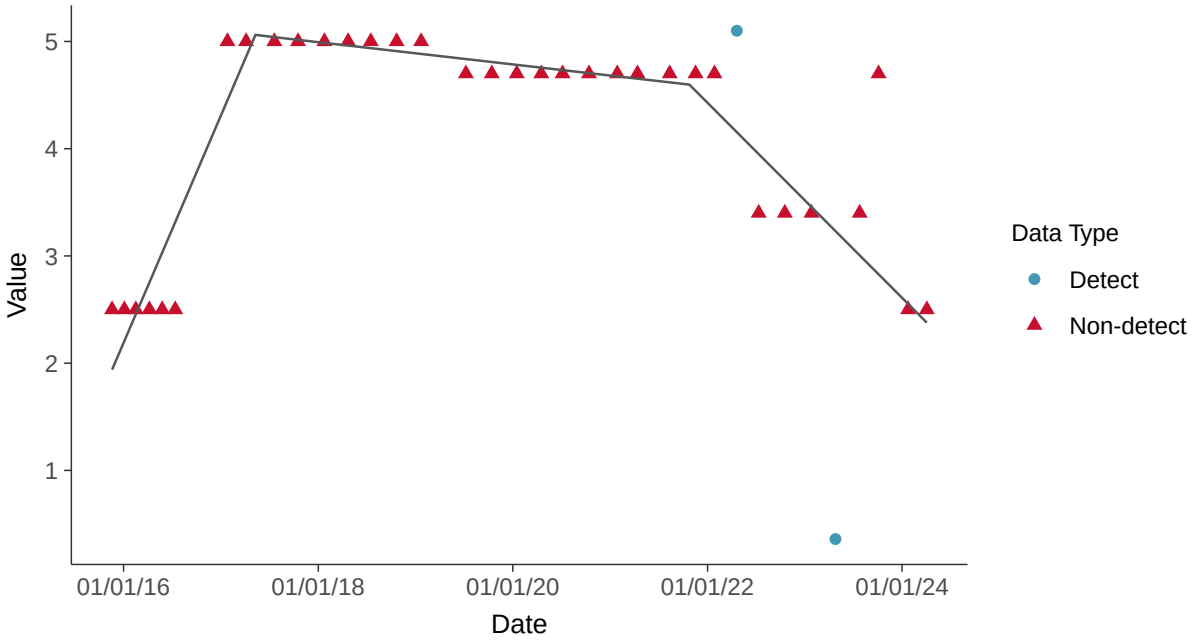
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-4 (ug/L)



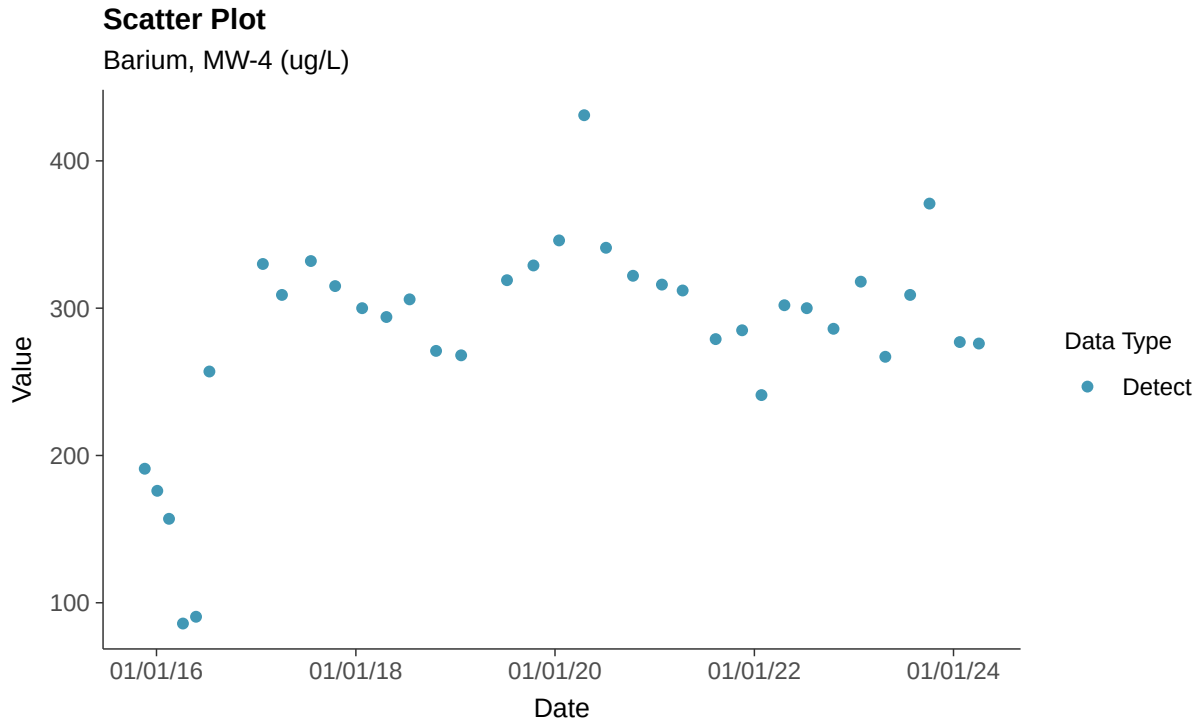
Trend Regression: Piecewise Linear-Linear-Linear

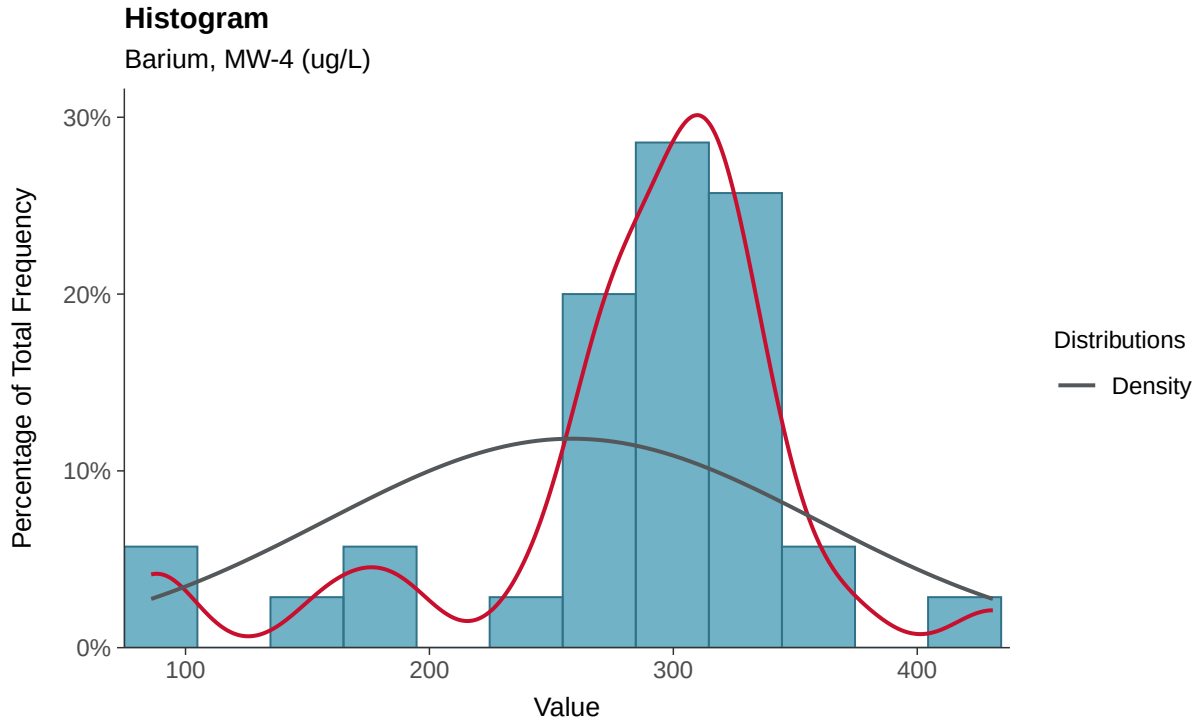
Arsenic, MW-4 (ug/L)



App. IV: Barium, MW-4

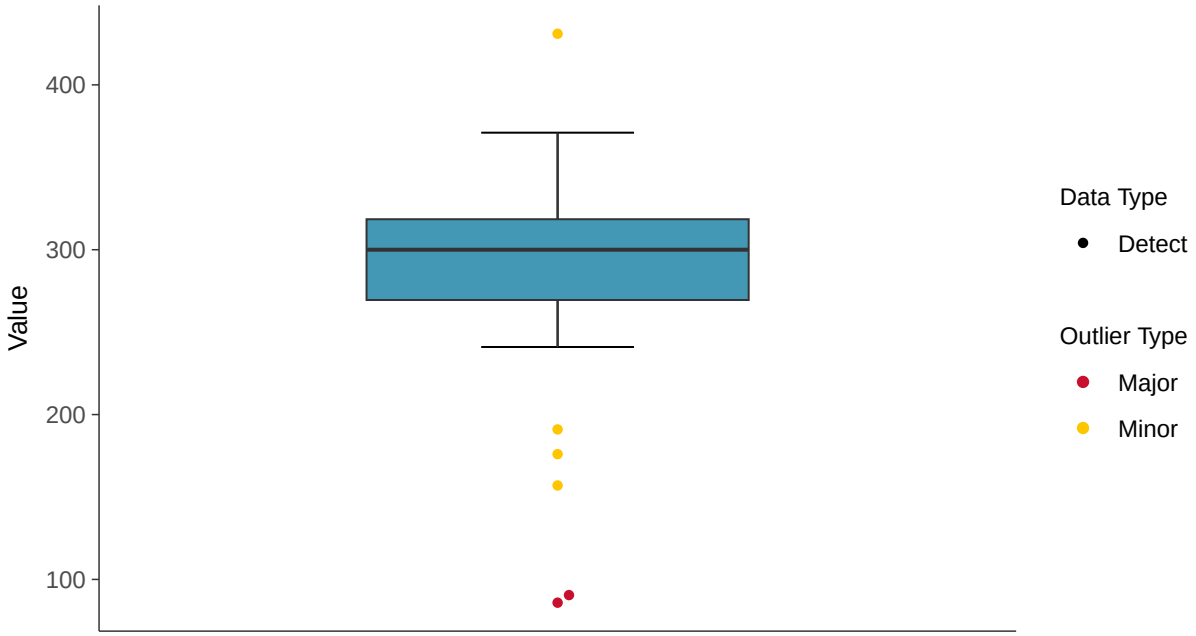
ID: 7_3_103





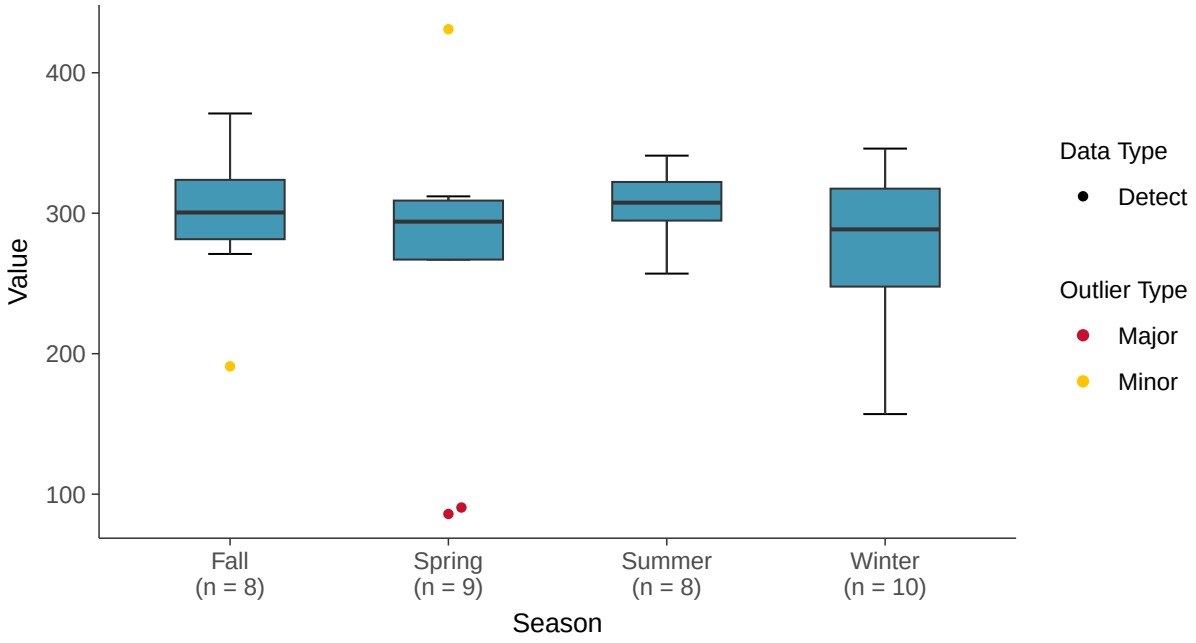
Boxplot

Barium, MW-4 (ug/L)



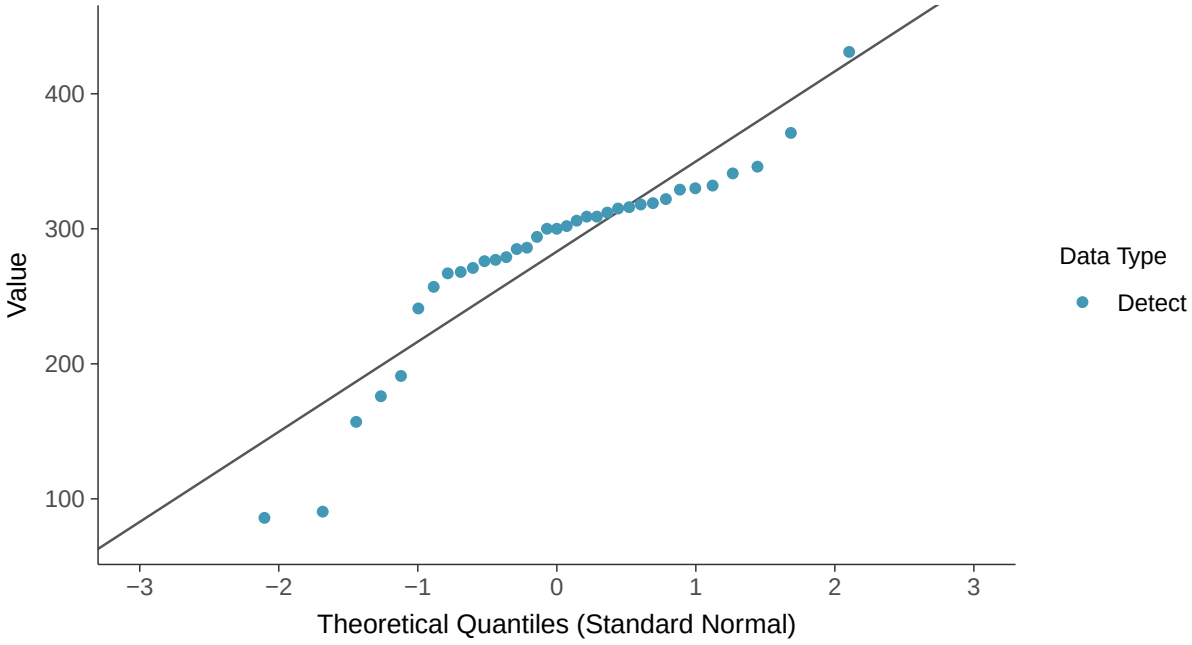
Boxplot by Season

Barium, MW-4 (ug/L)



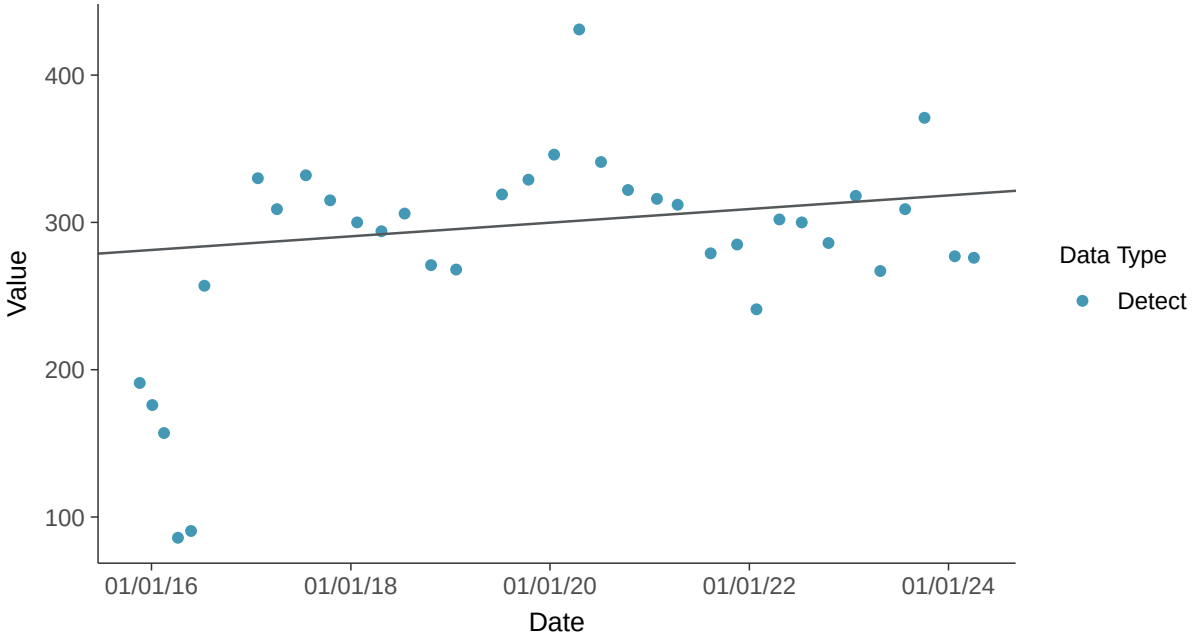
Normal Q-Q plot

Barium, MW-4 (ug/L)



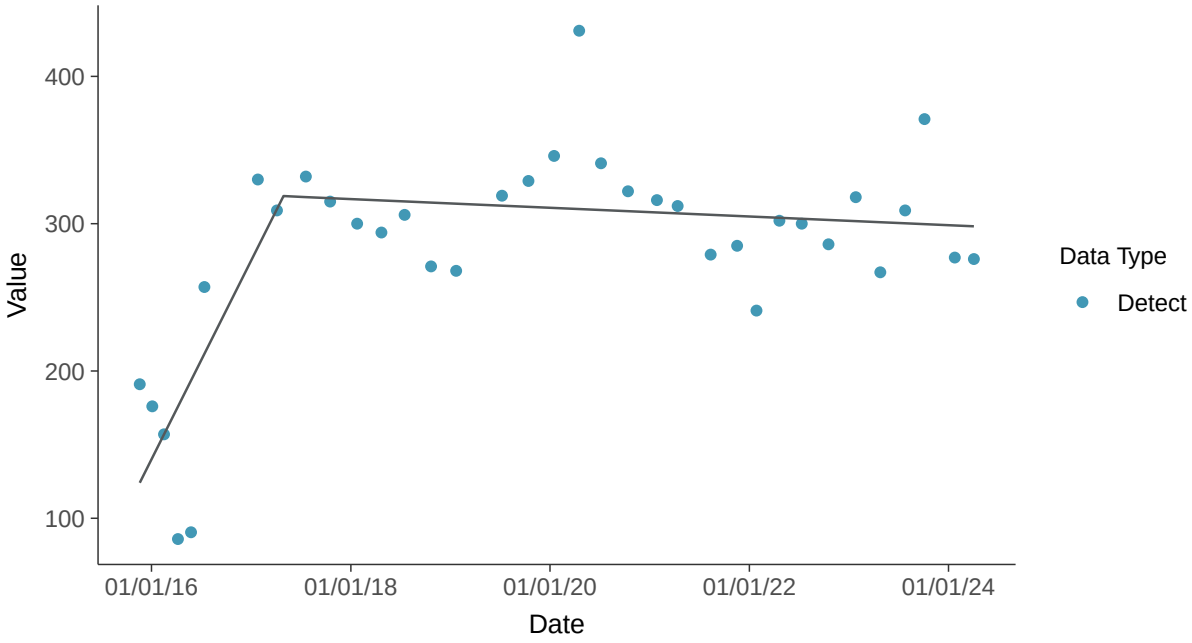
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-4 (ug/L)



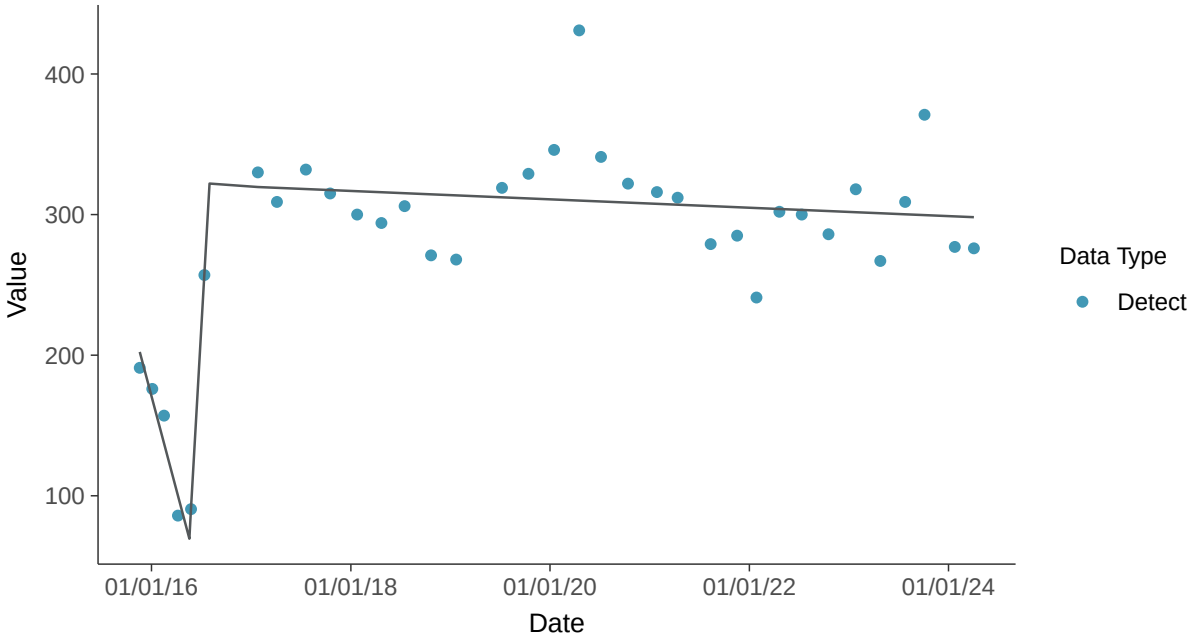
Trend Regression: Piecewise Linear-Linear

Barium, MW-4 (ug/L)



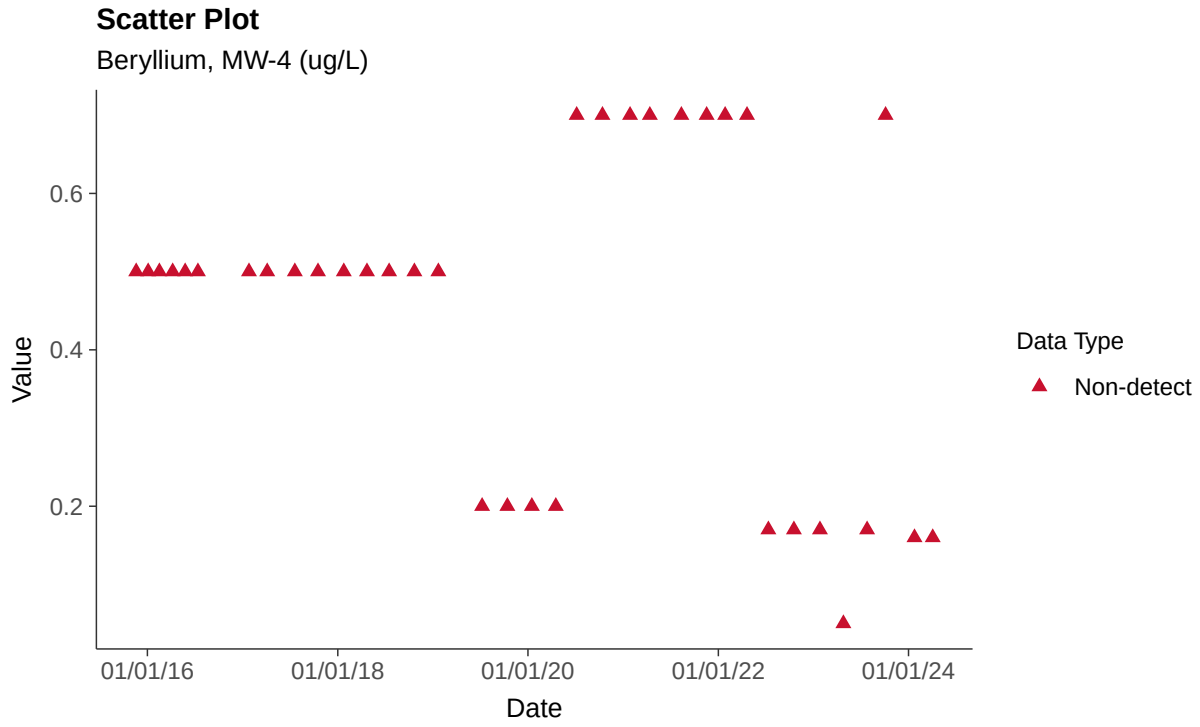
Trend Regression: Piecewise Linear-Linear-Linear

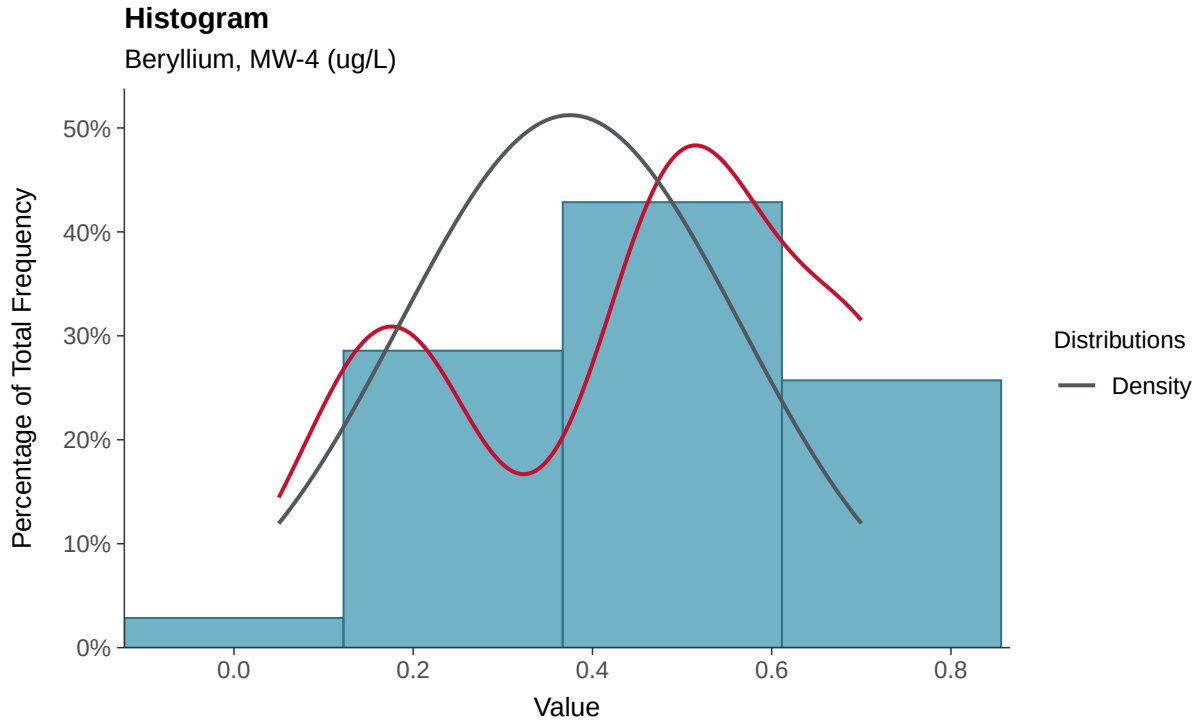
Barium, MW-4 (ug/L)



App. IV: Beryllium, MW-4

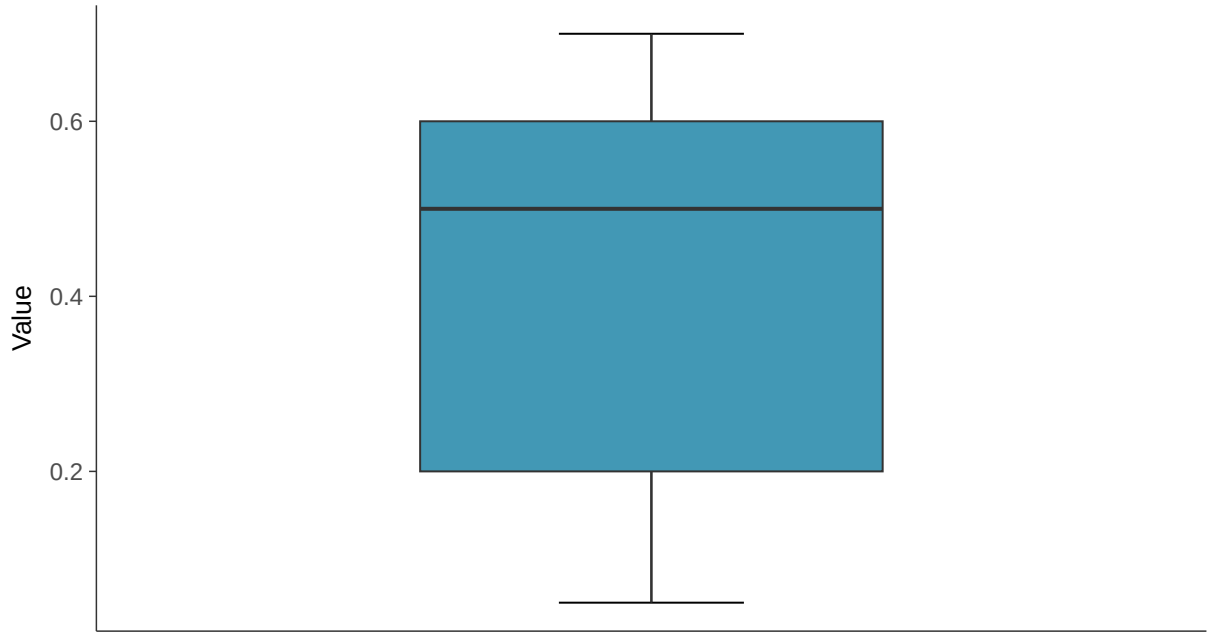
ID: 7_3_104





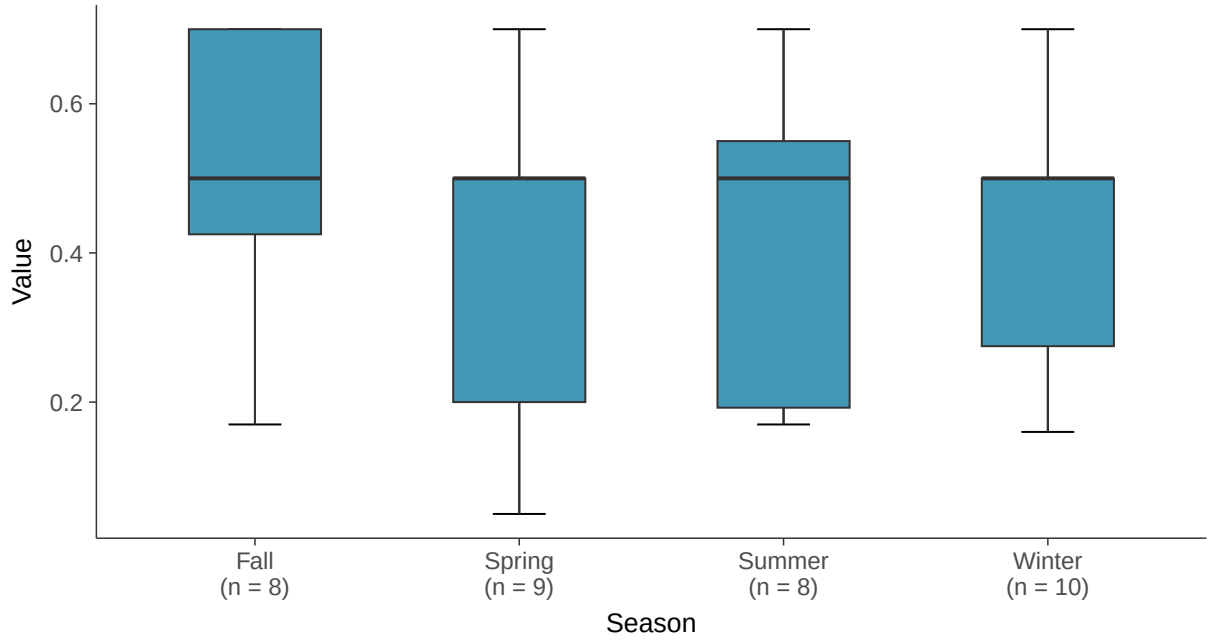
Boxplot

Beryllium, MW-4 (ug/L)



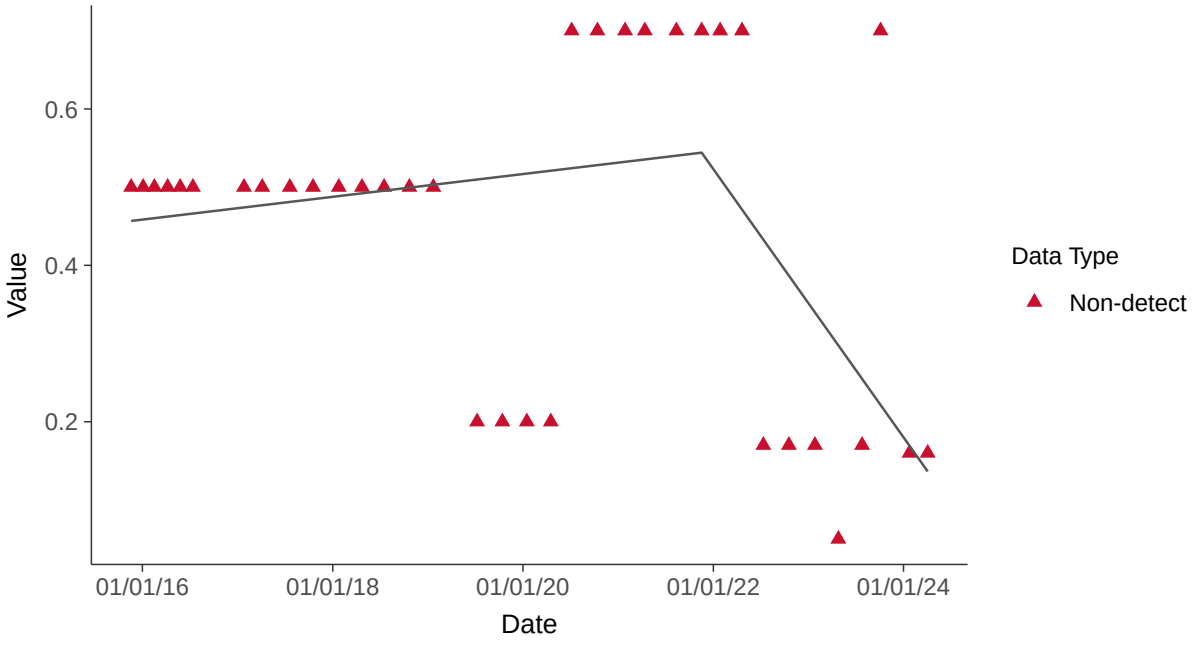
Boxplot by Season

Beryllium, MW-4 (ug/L)



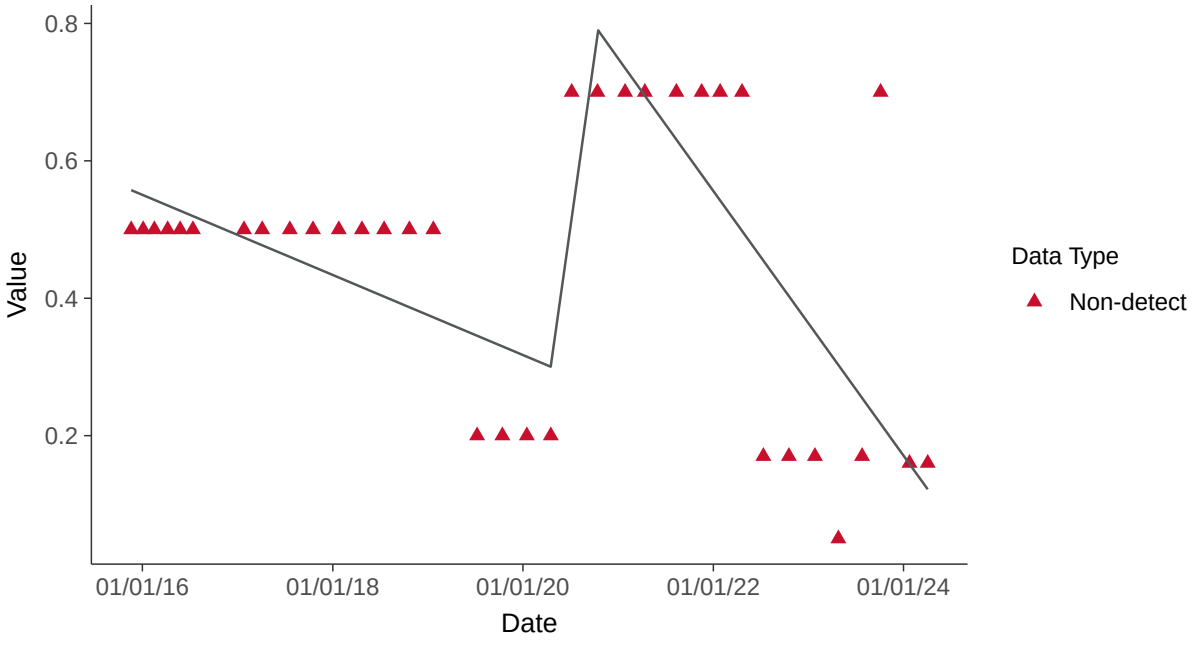
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-4 (ug/L)



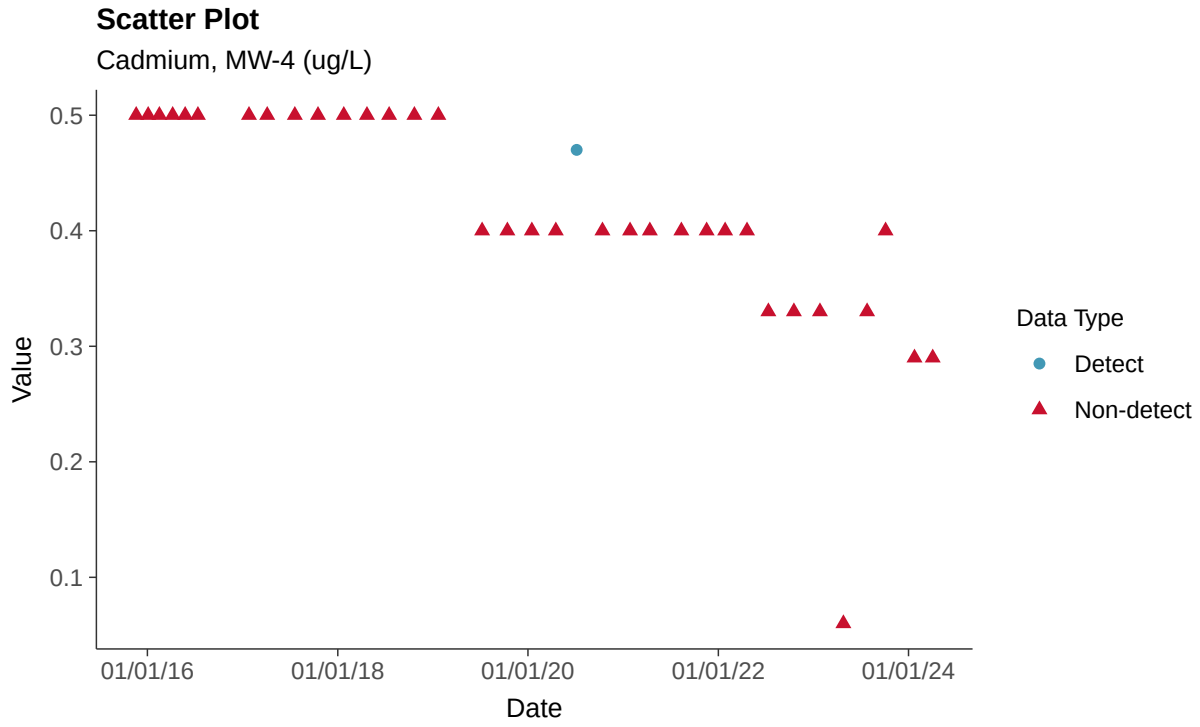
Trend Regression: Piecewise Linear-Linear-Linear

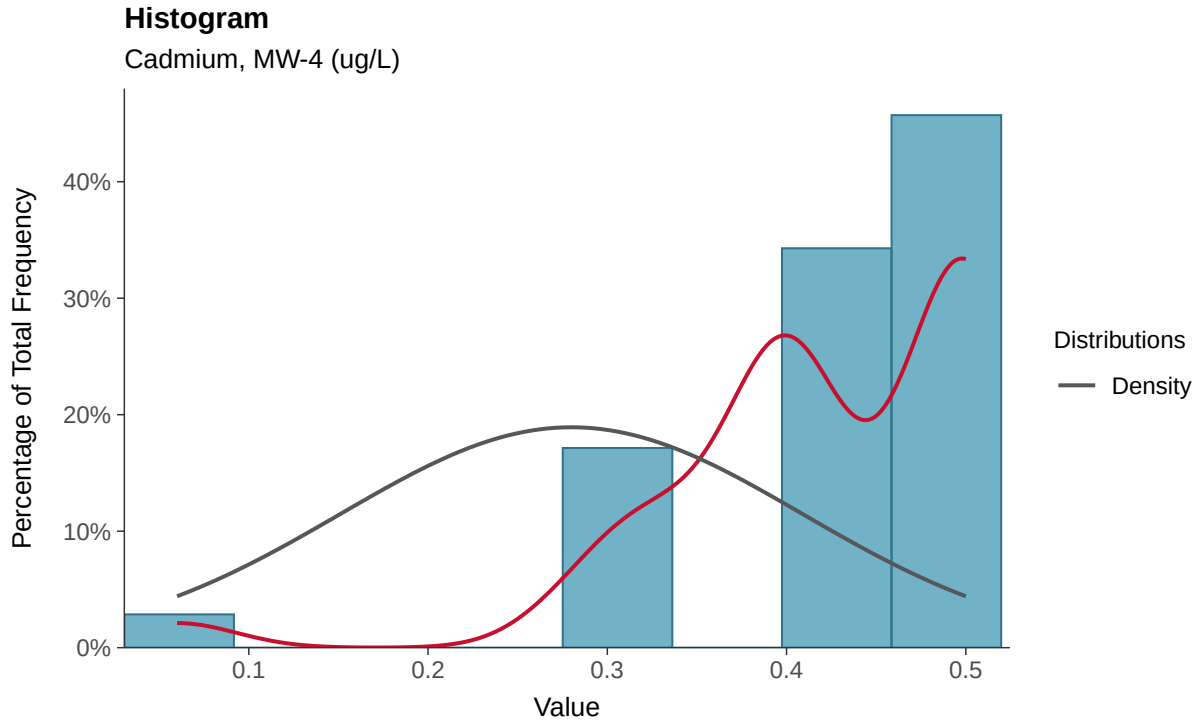
Beryllium, MW-4 (ug/L)



App. IV: Cadmium, MW-4

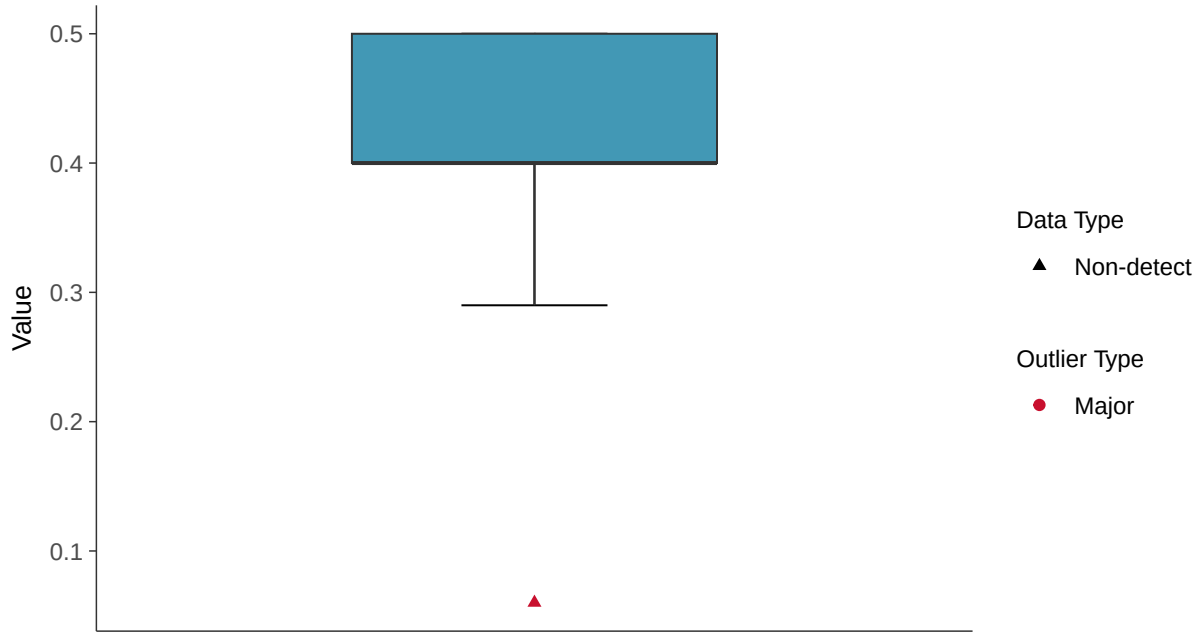
ID: 7_3_106





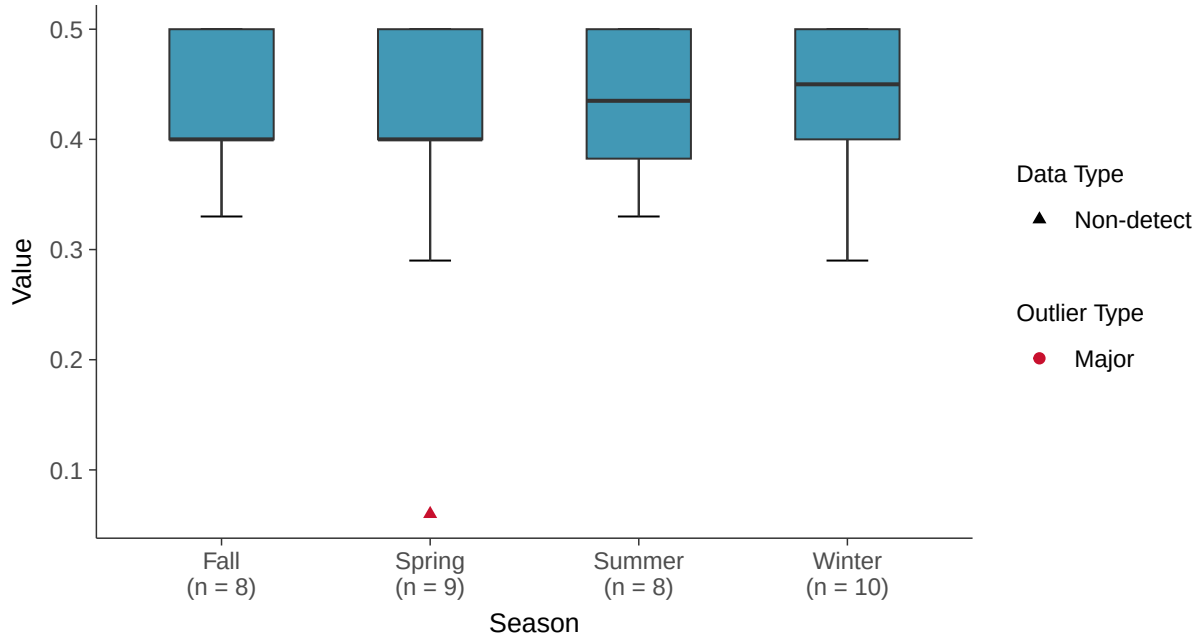
Boxplot

Cadmium, MW-4 (ug/L)



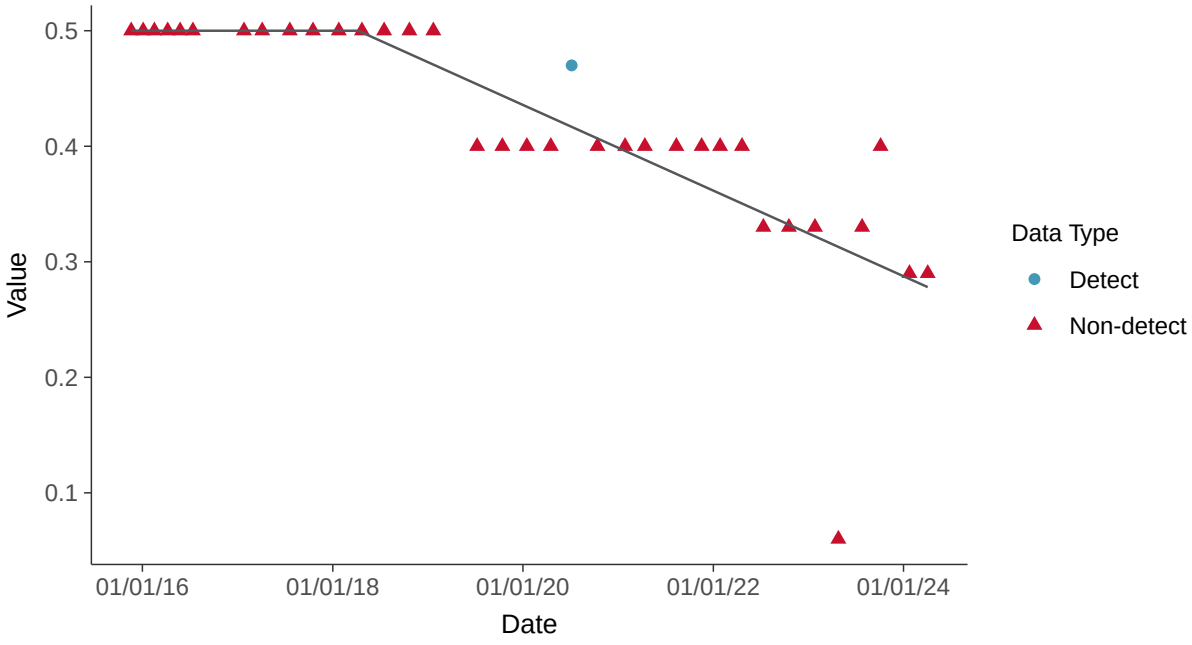
Boxplot by Season

Cadmium, MW-4 (ug/L)



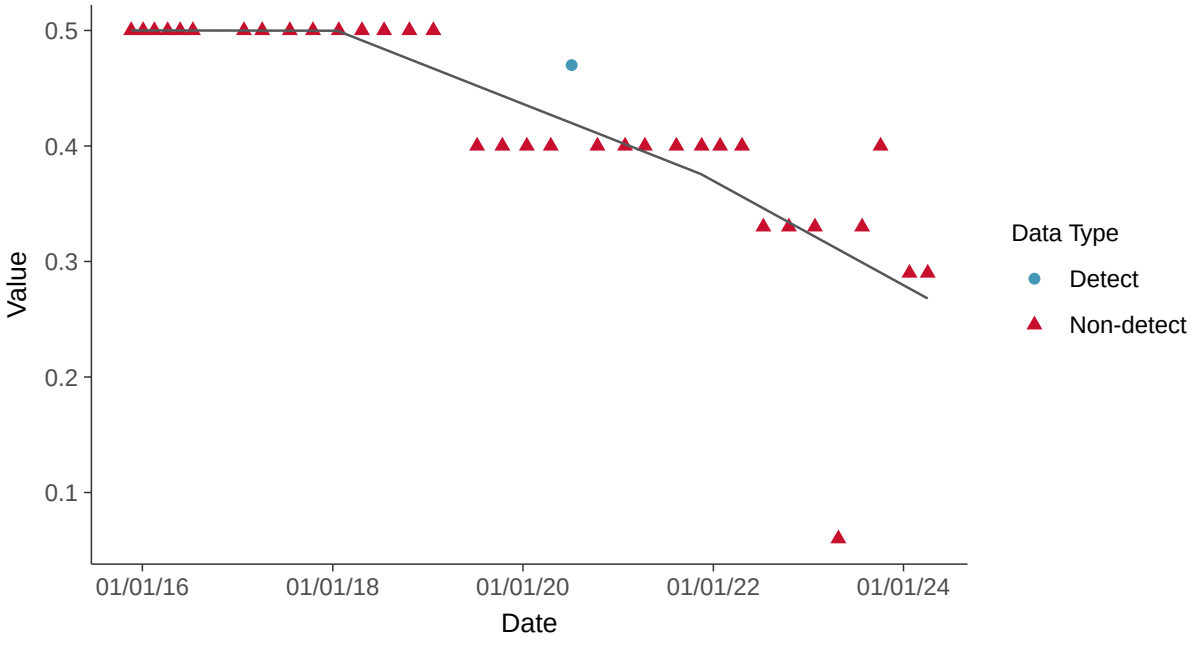
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-4 (ug/L)

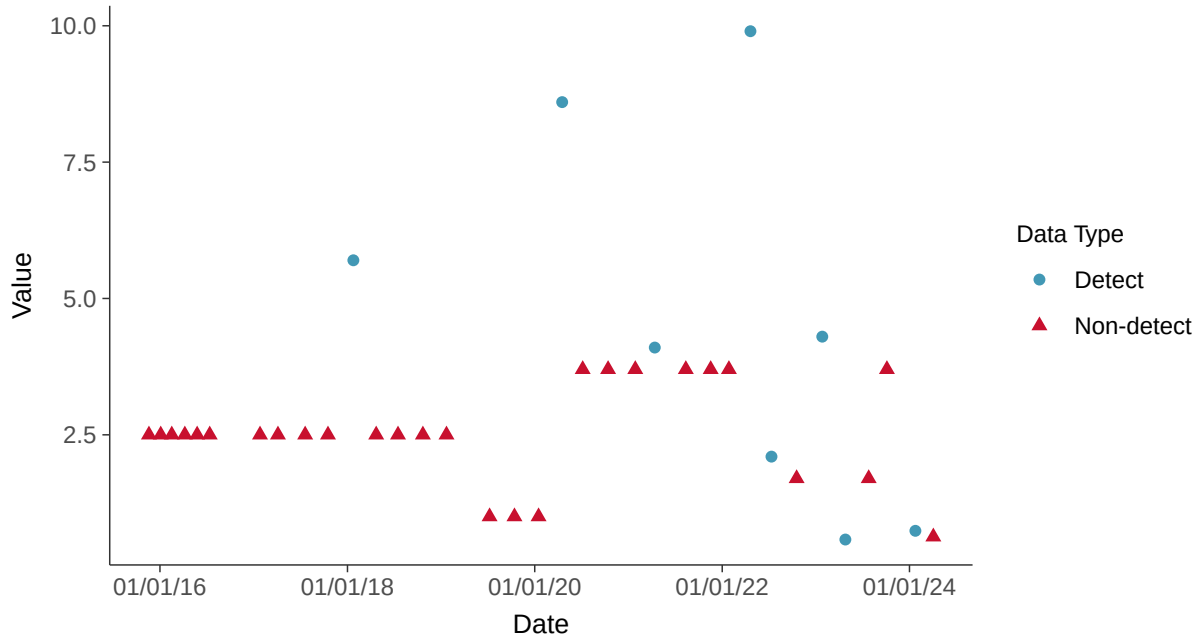


App. IV: Chromium, MW-4

ID: 7_3_109

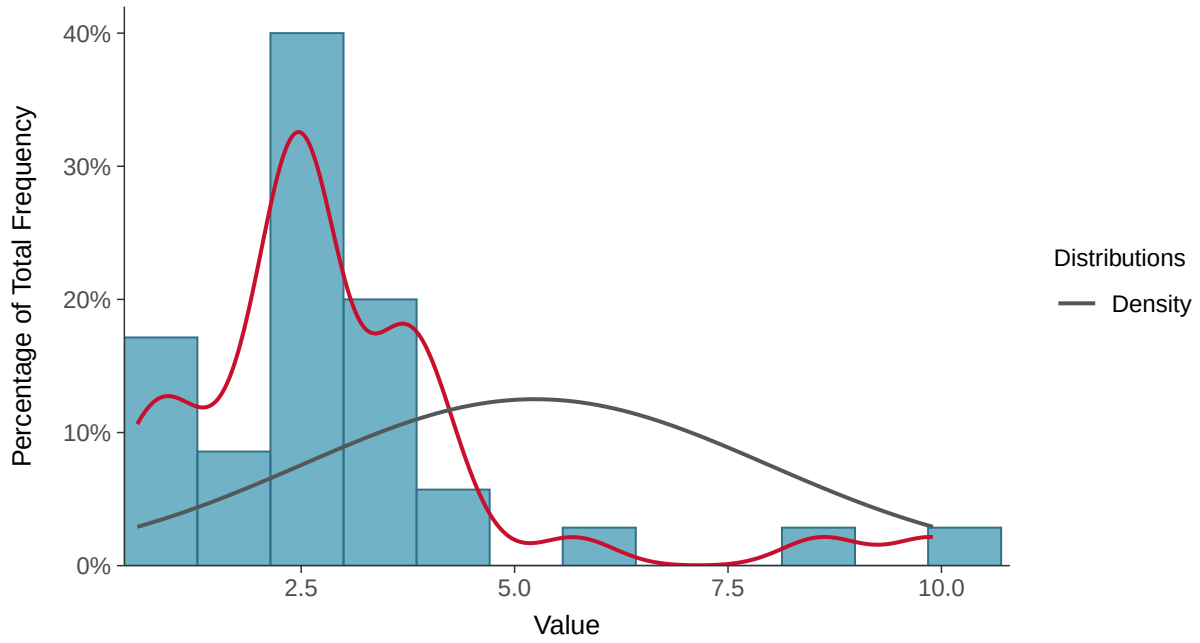
Scatter Plot

Chromium, MW-4 (ug/L)



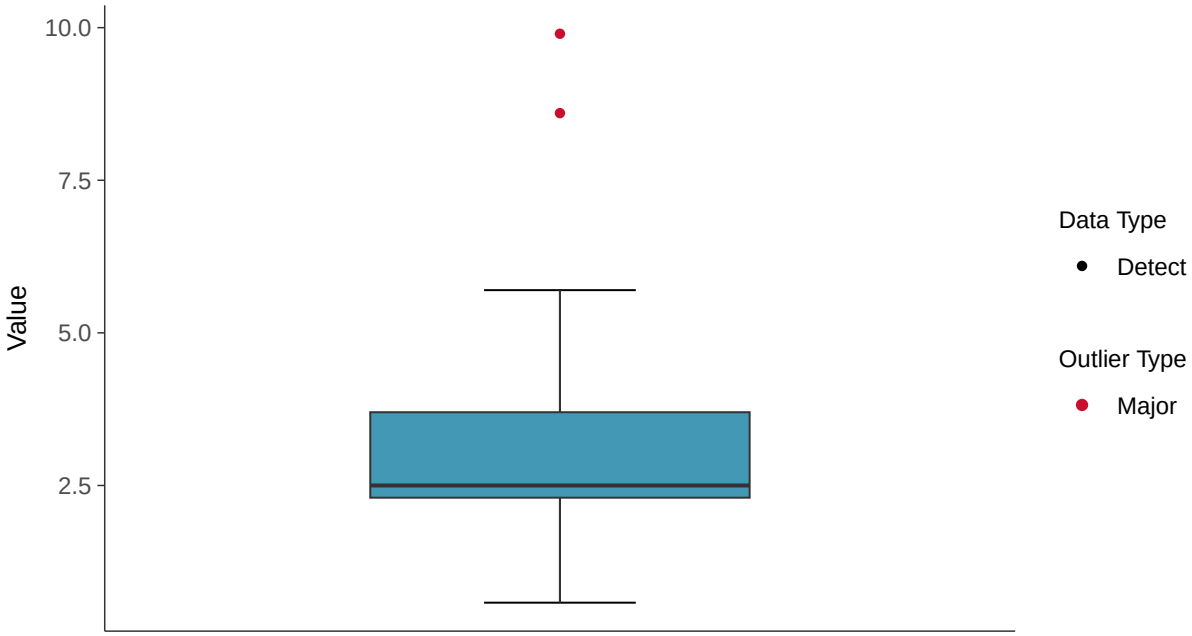
Histogram

Chromium, MW-4 (ug/L)



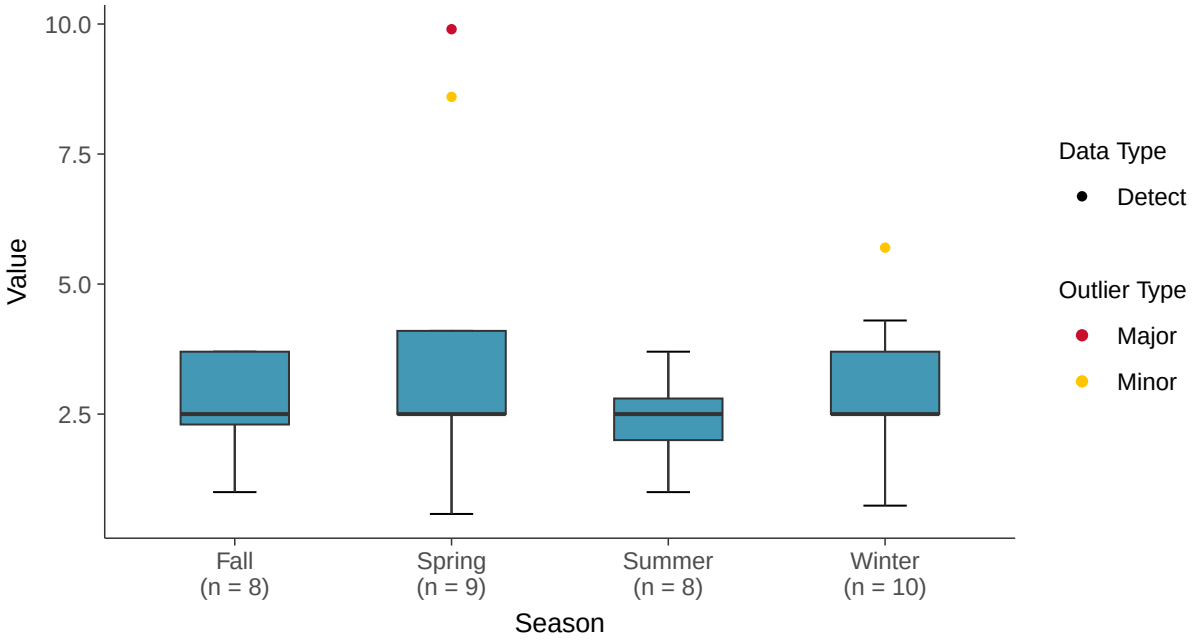
Boxplot

Chromium, MW-4 (ug/L)



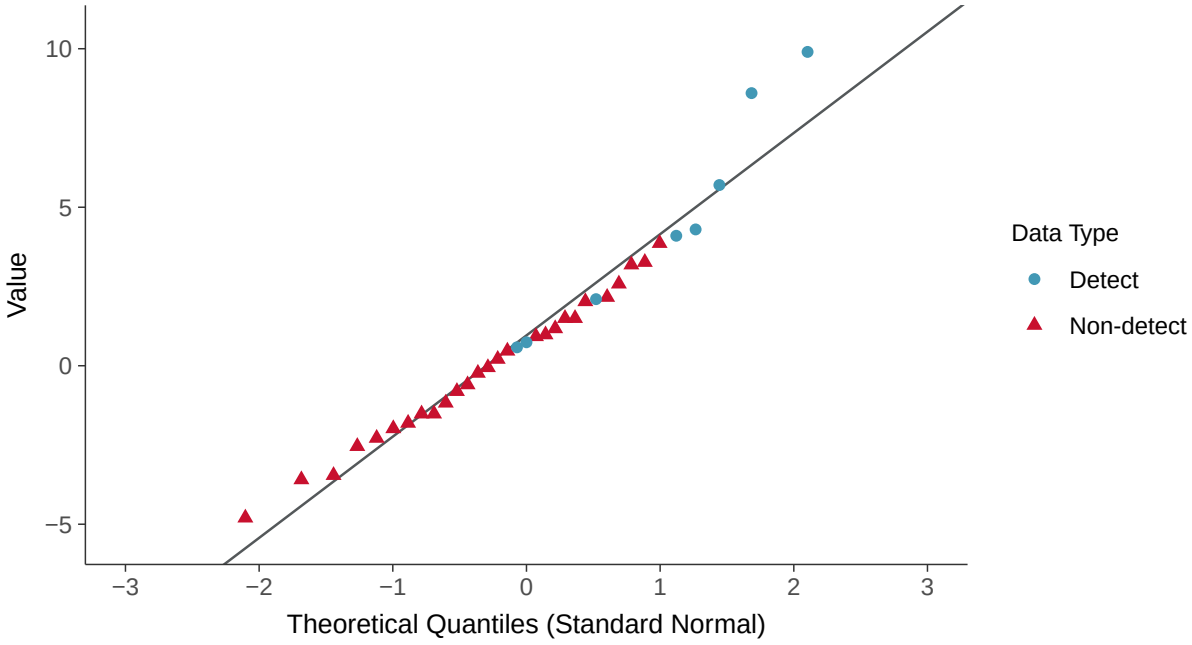
Boxplot by Season

Chromium, MW-4 (ug/L)



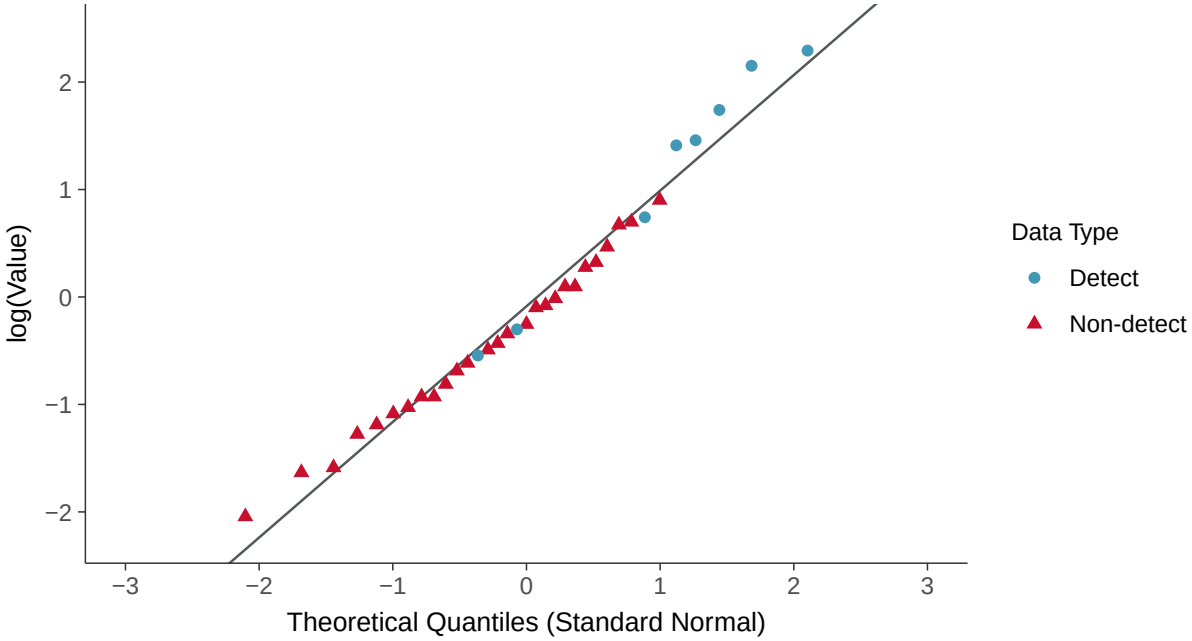
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



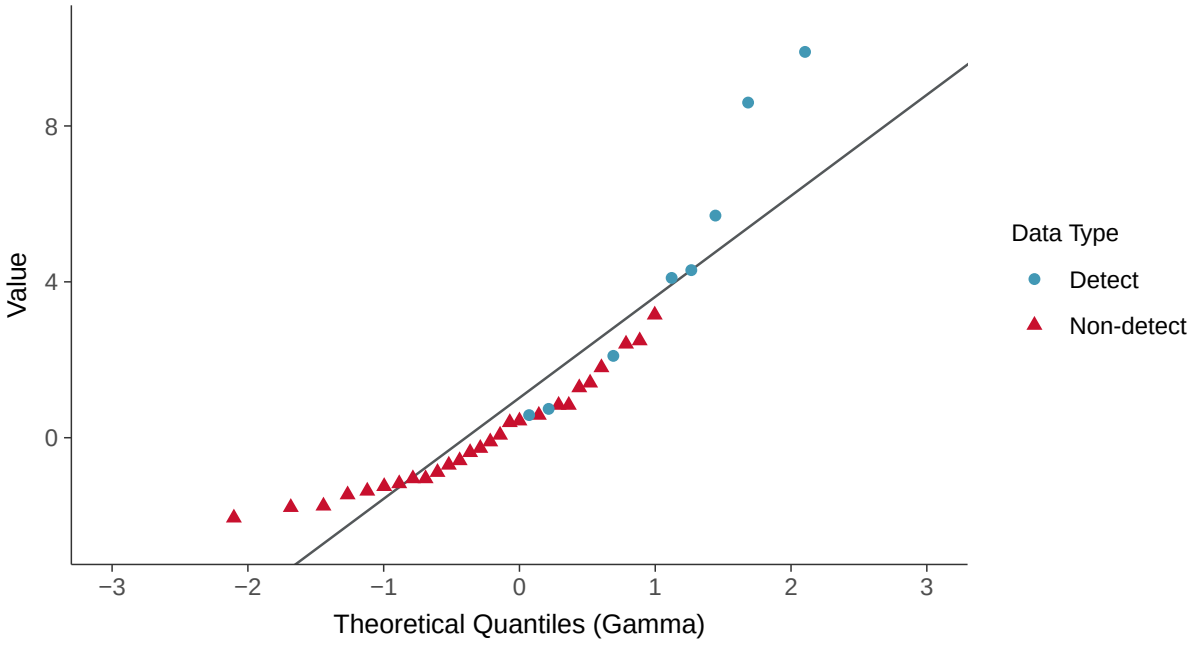
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



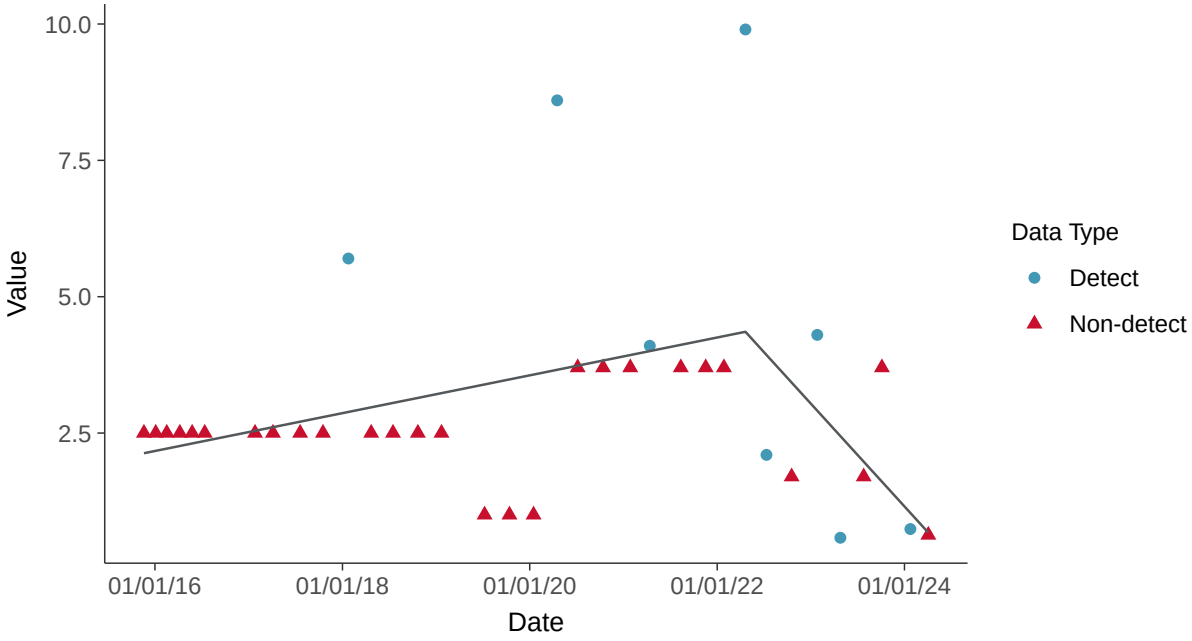
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



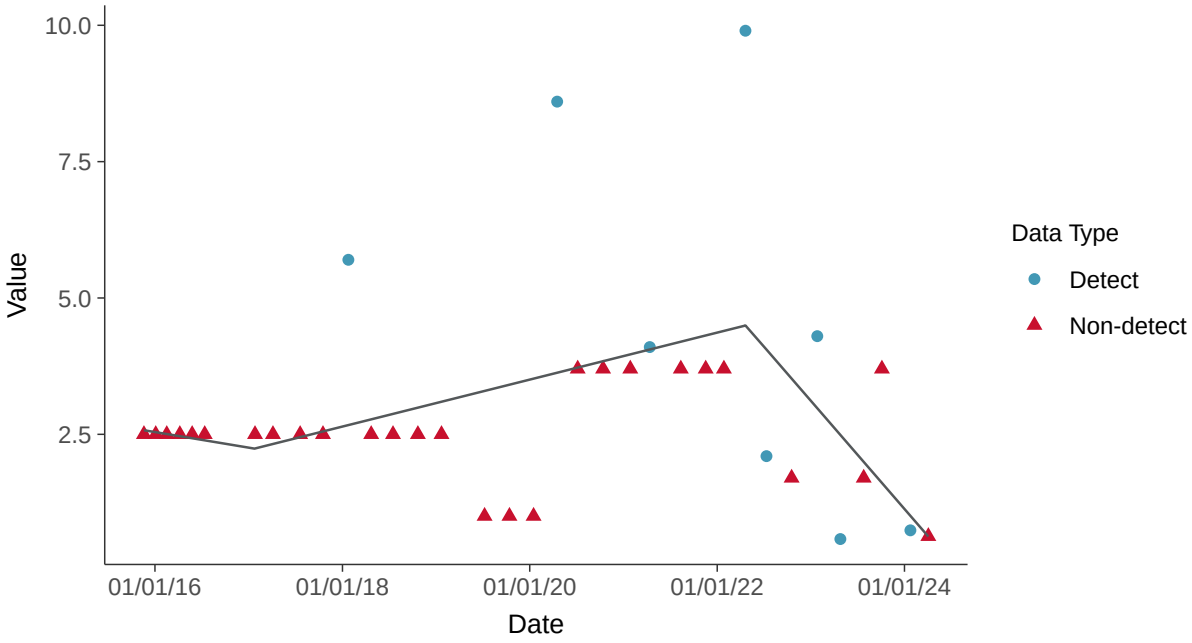
Trend Regression: Piecewise Linear-Linear

Chromium, MW-4 (ug/L)



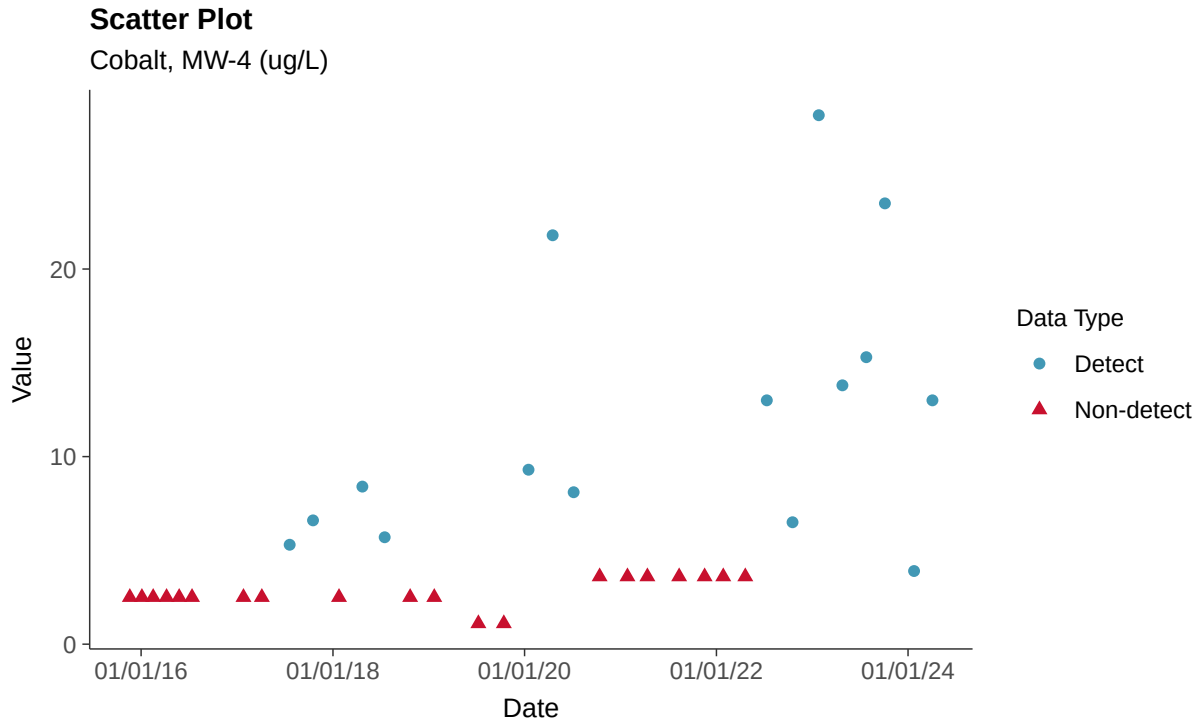
Trend Regression: Piecewise Linear-Linear-Linear

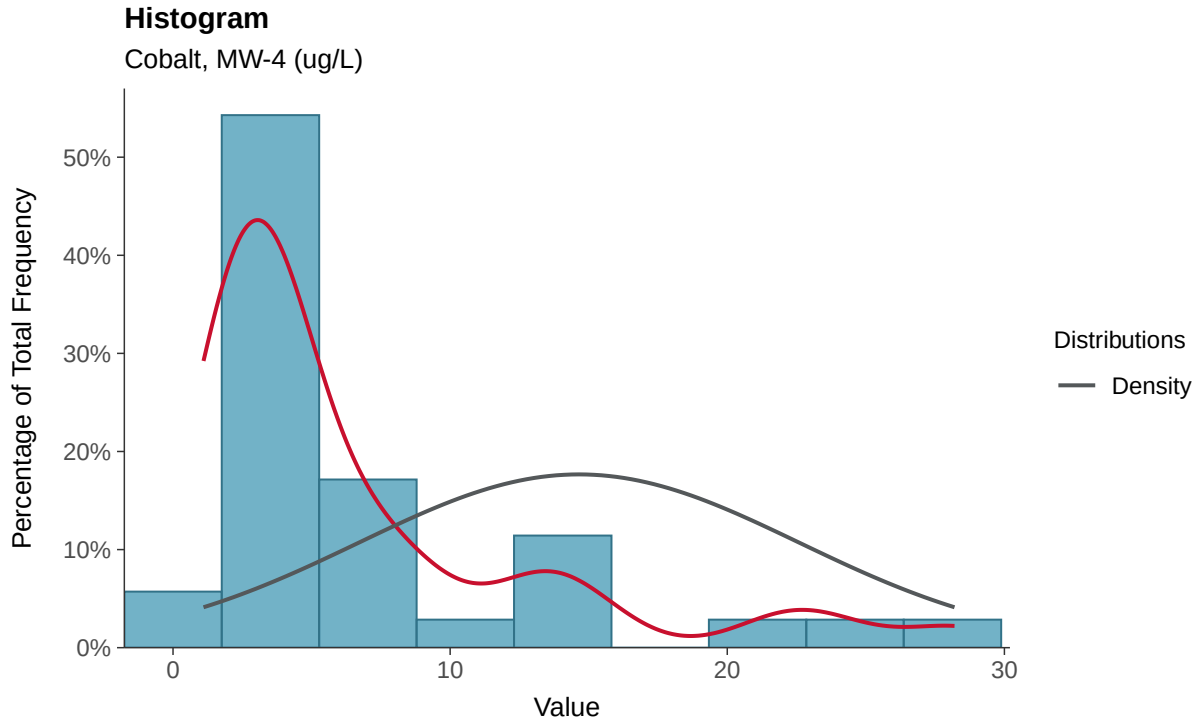
Chromium, MW-4 (ug/L)



App. IV: Cobalt, MW-4

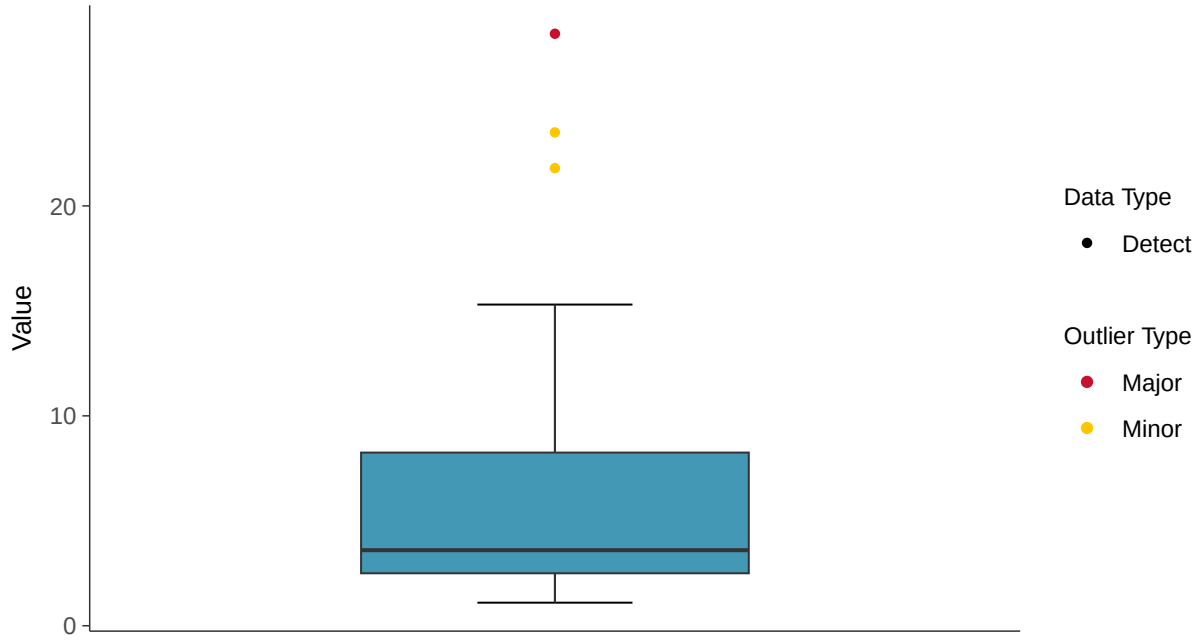
ID: 7_3_110





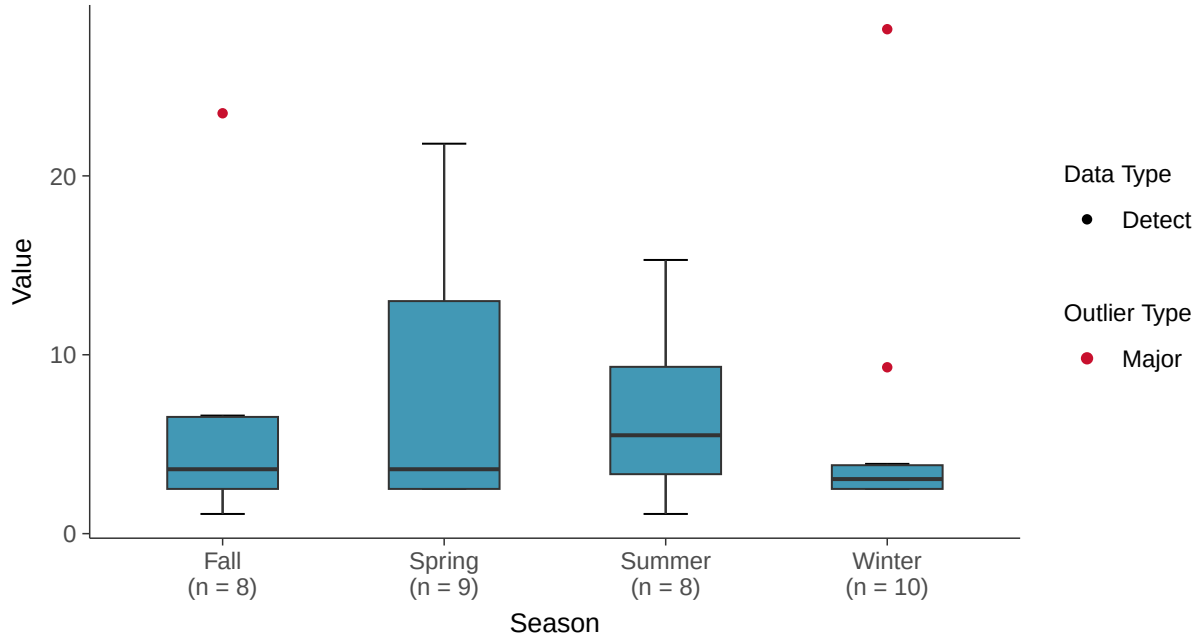
Boxplot

Cobalt, MW-4 (ug/L)



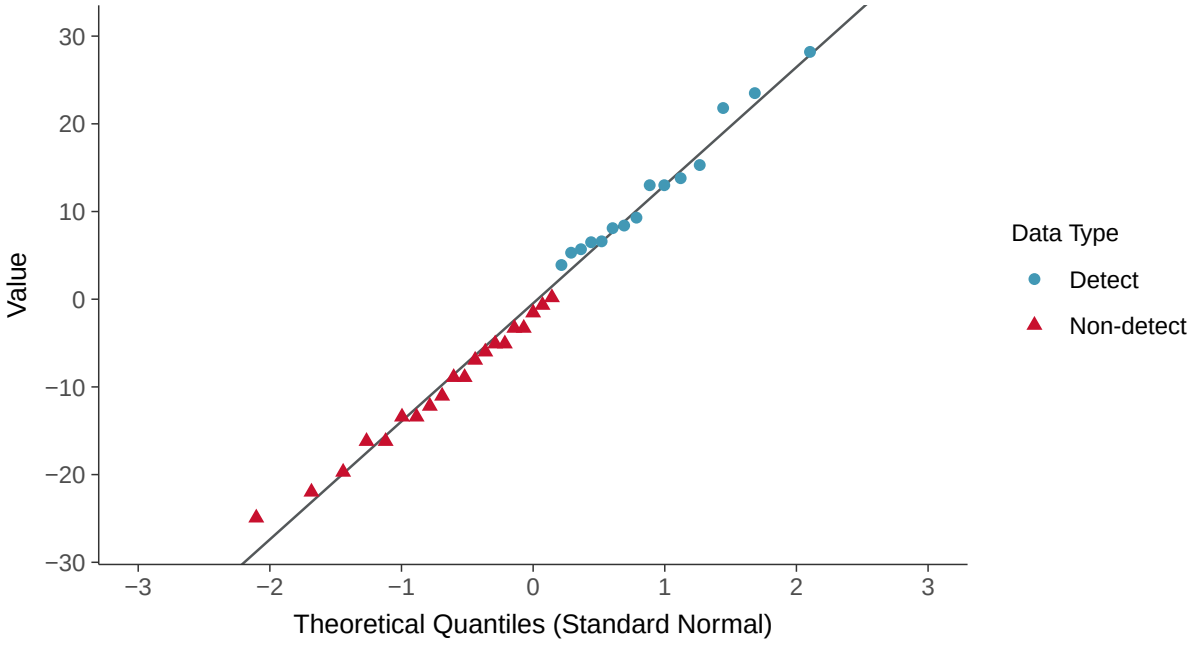
Boxplot by Season

Cobalt, MW-4 (ug/L)



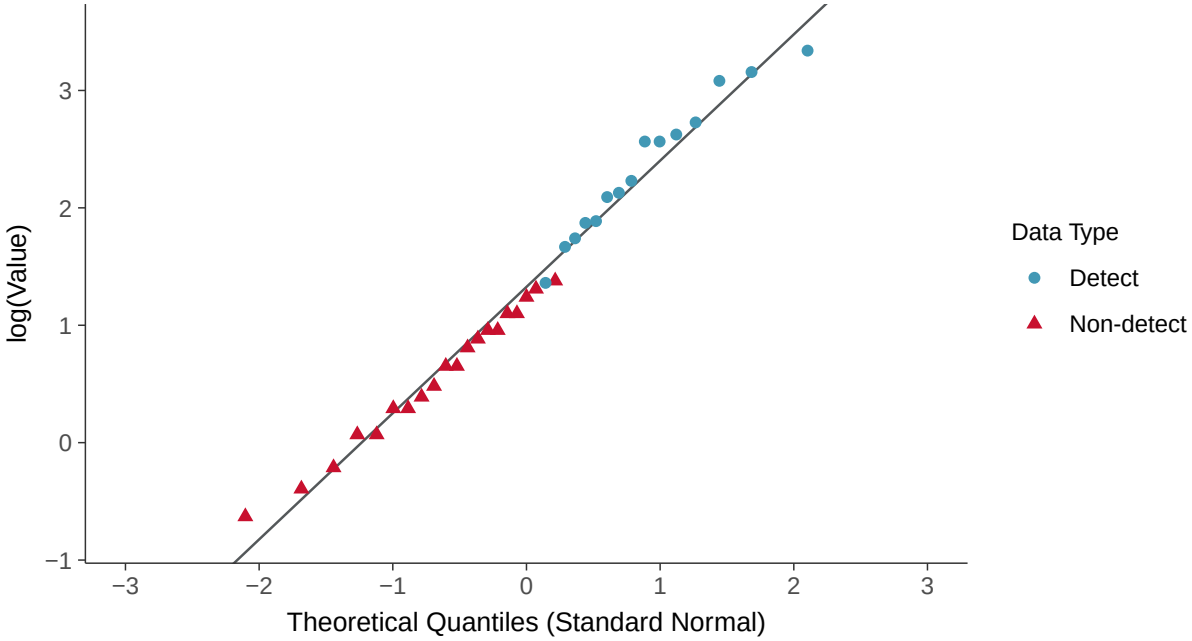
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



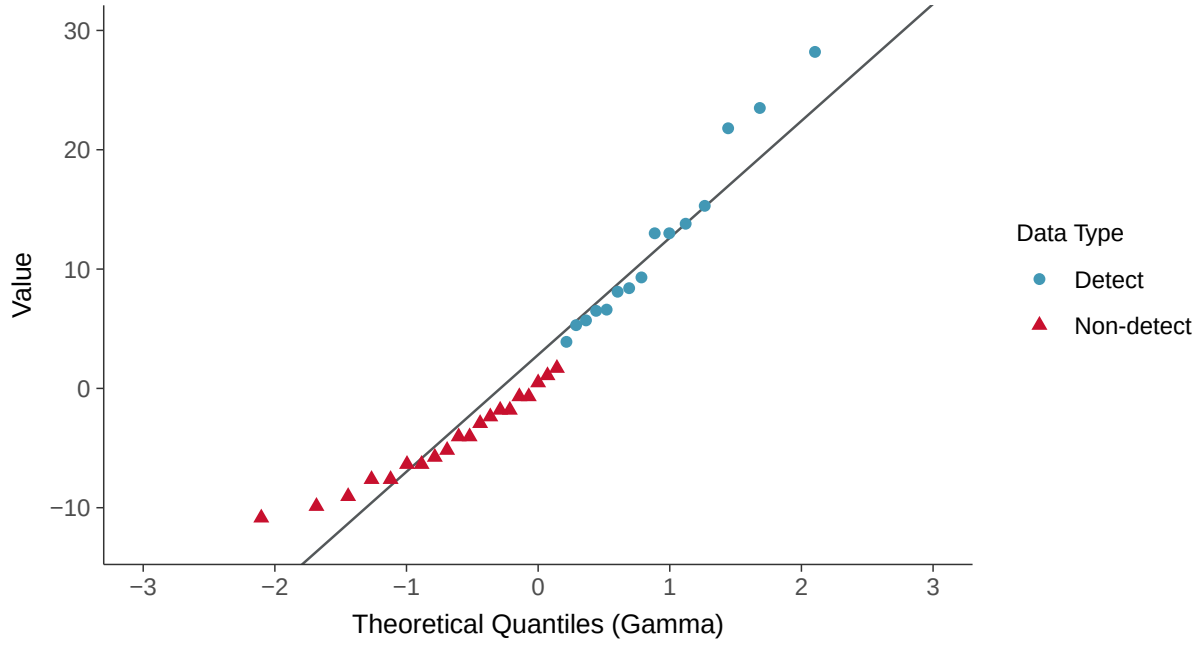
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



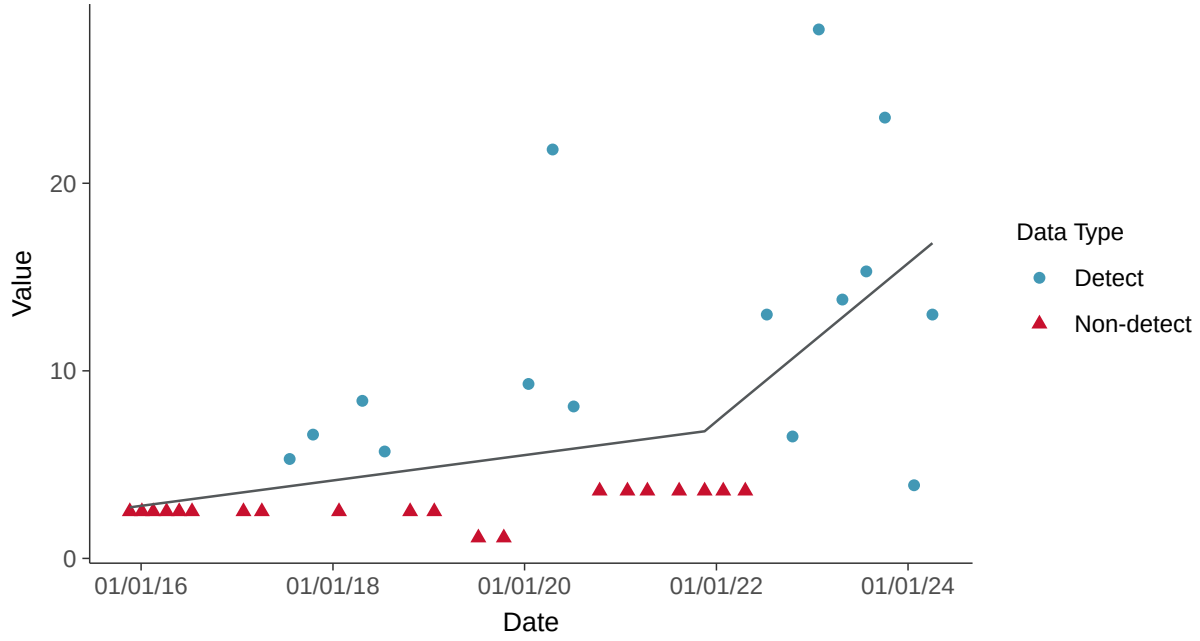
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



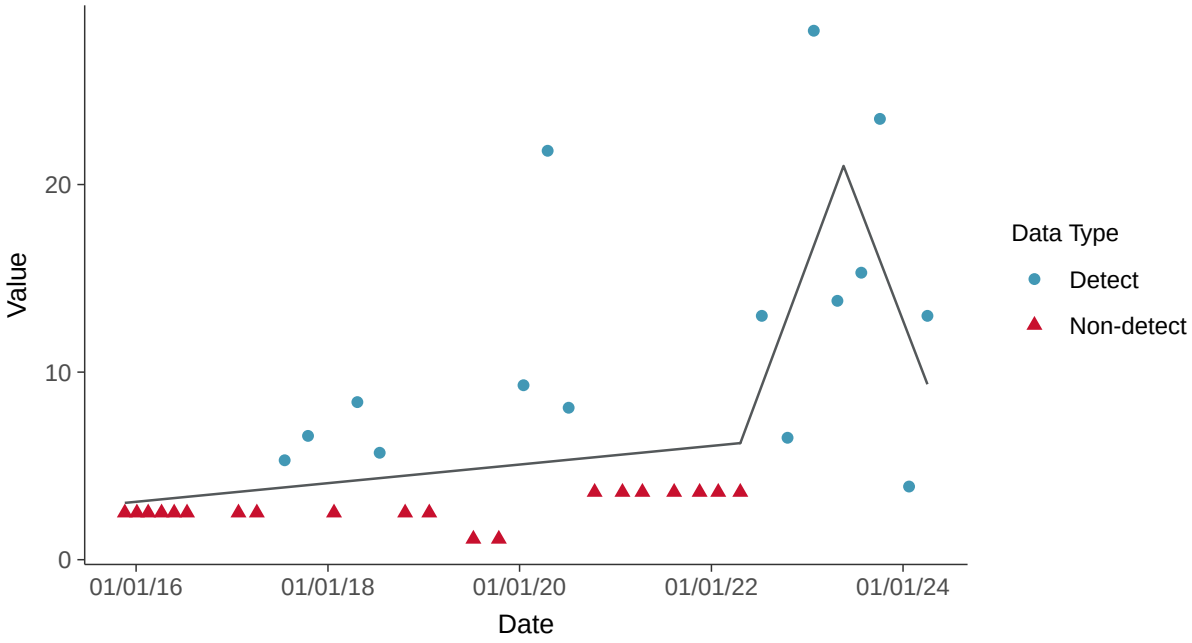
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-4 (ug/L)



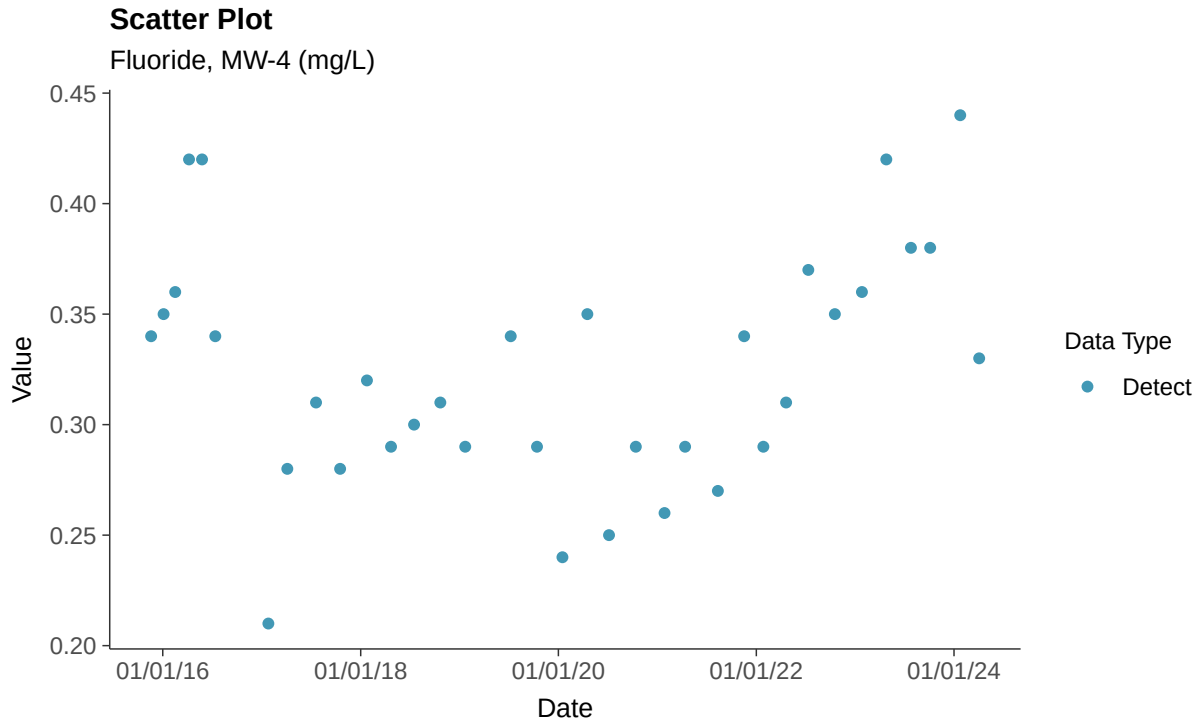
Trend Regression: Piecewise Linear-Linear-Linear

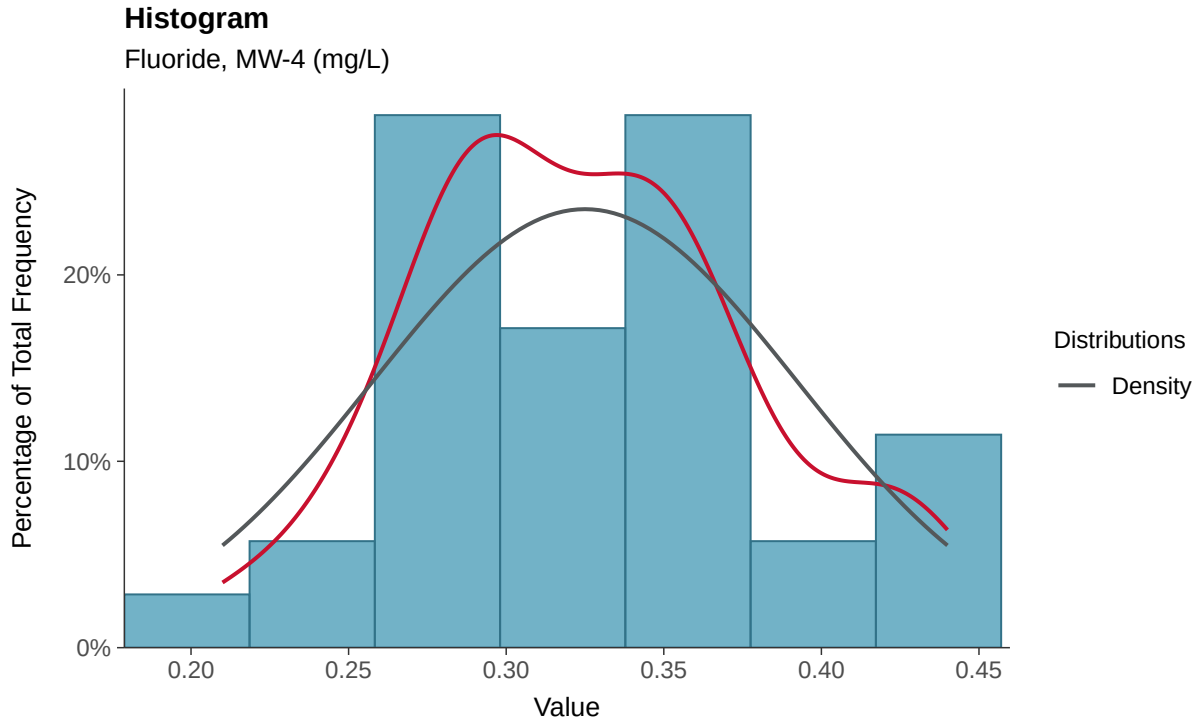
Cobalt, MW-4 (ug/L)



App. IV: Fluoride, MW-4

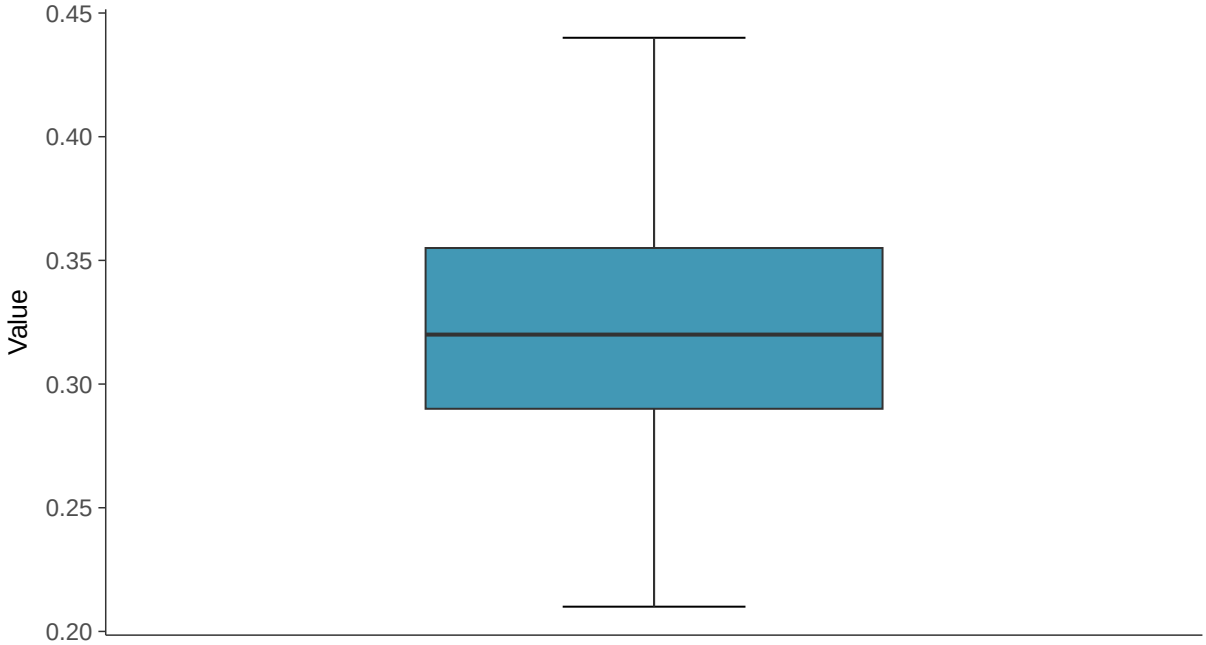
ID: 7_3_112





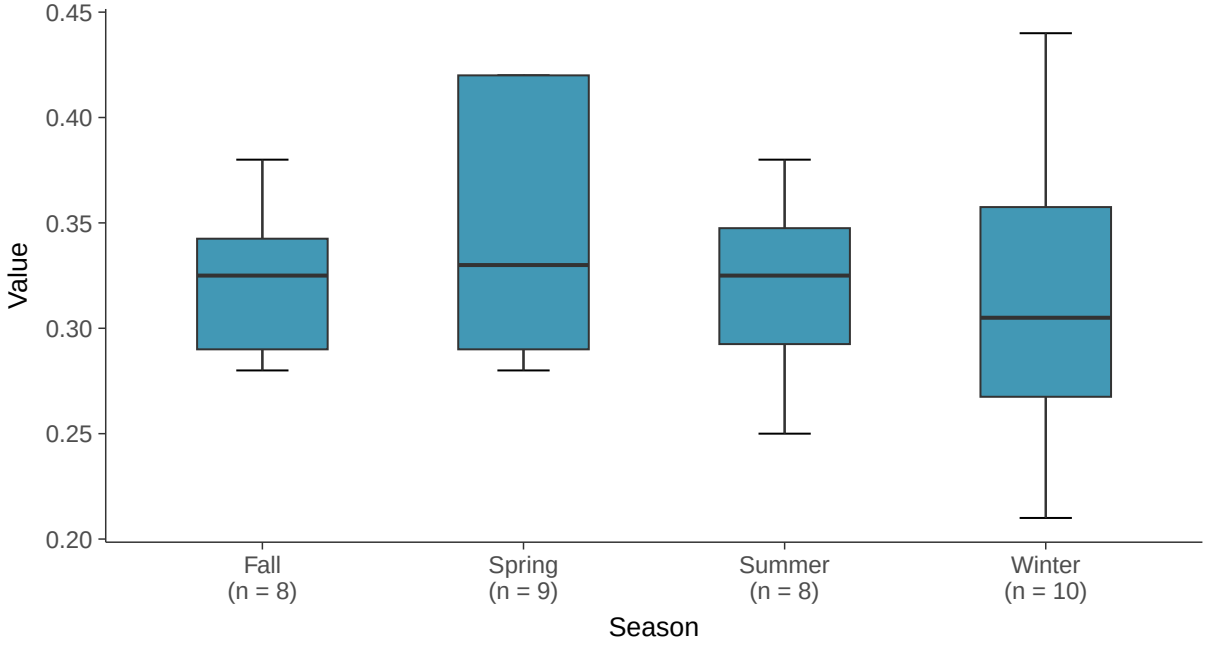
Boxplot

Fluoride, MW-4 (mg/L)



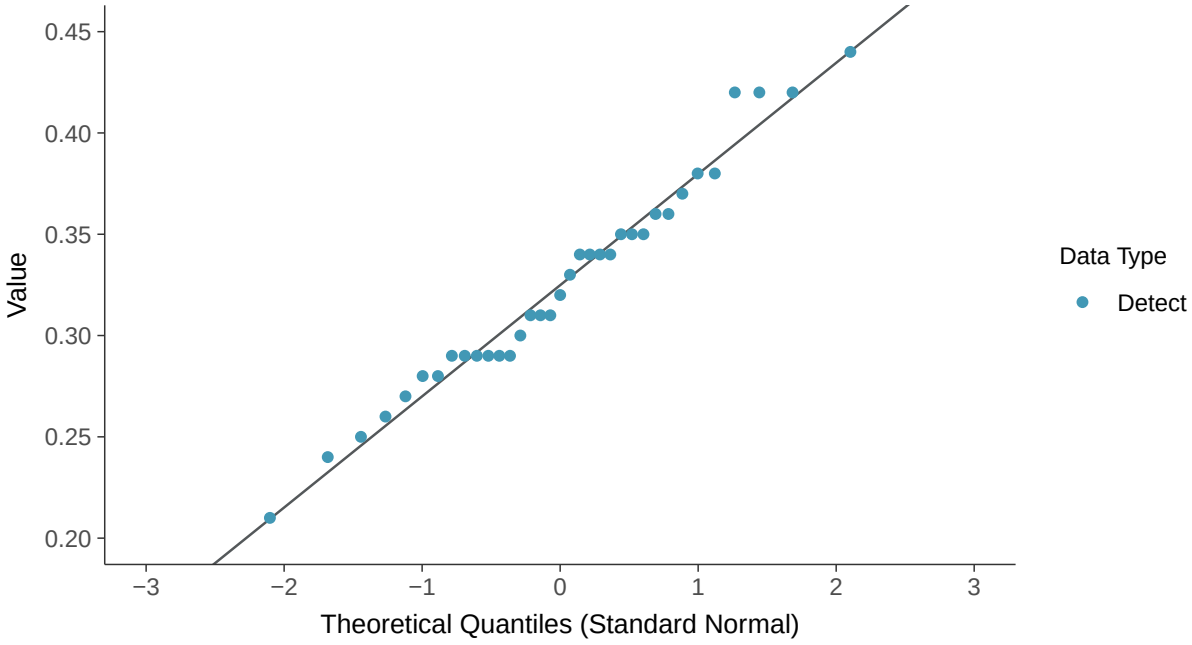
Boxplot by Season

Fluoride, MW-4 (mg/L)



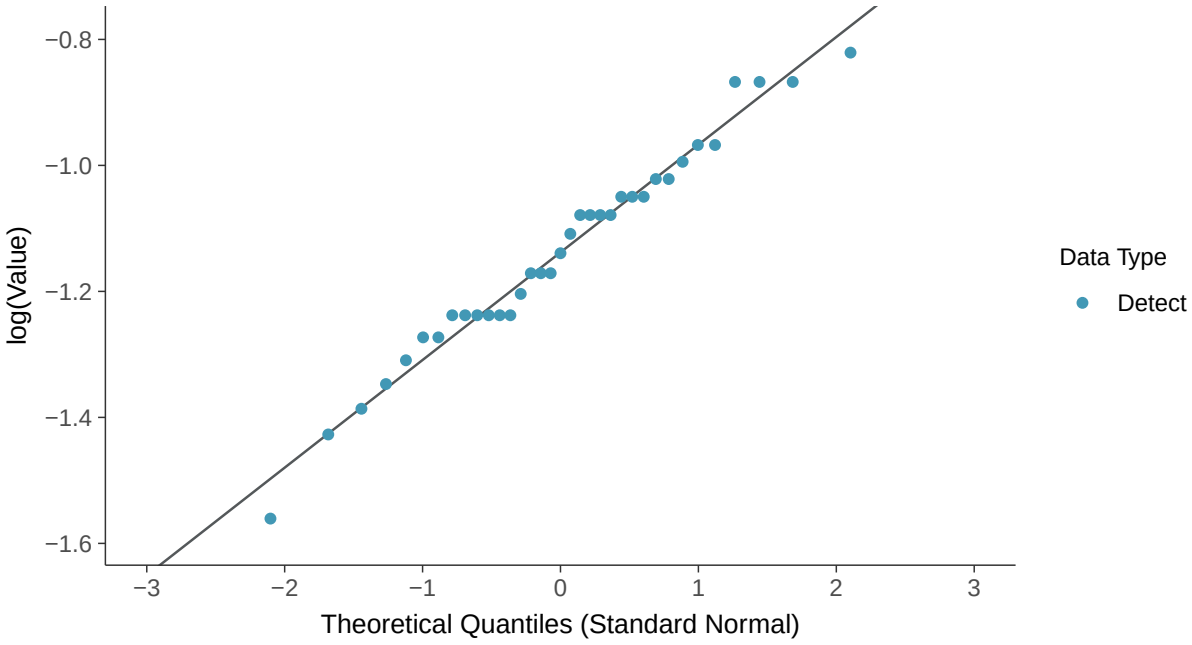
Normal Q-Q plot

Fluoride, MW-4 (mg/L)



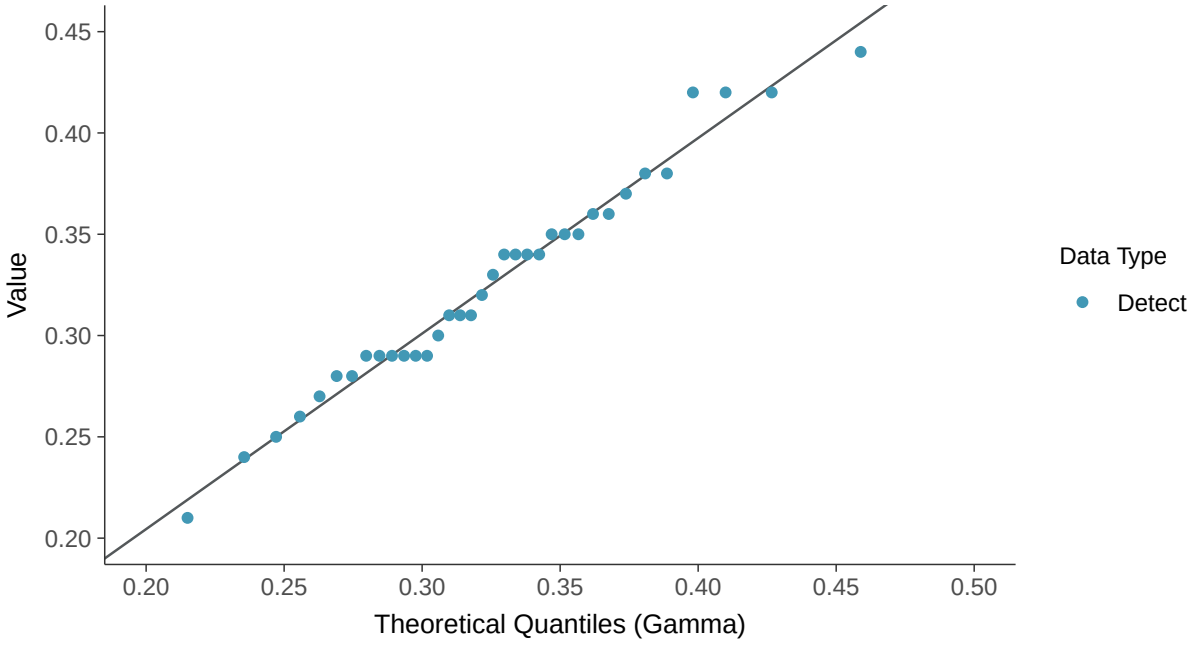
Lognormal Q-Q plot

Fluoride, MW-4 (mg/L)



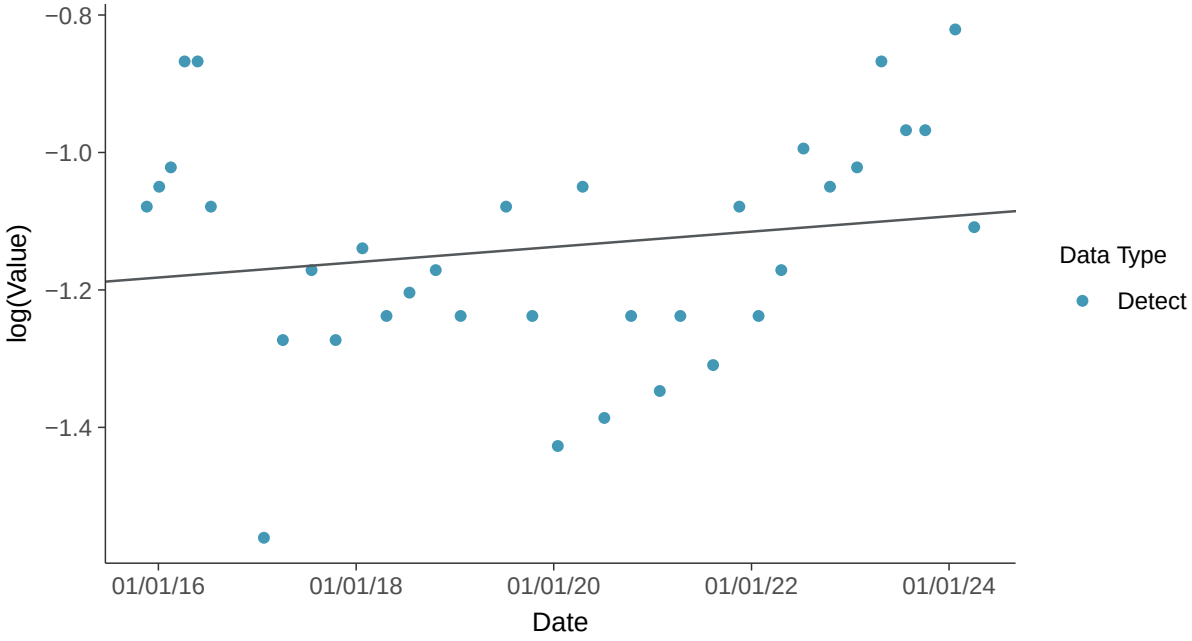
Gamma Q-Q plot

Fluoride, MW-4 (mg/L)



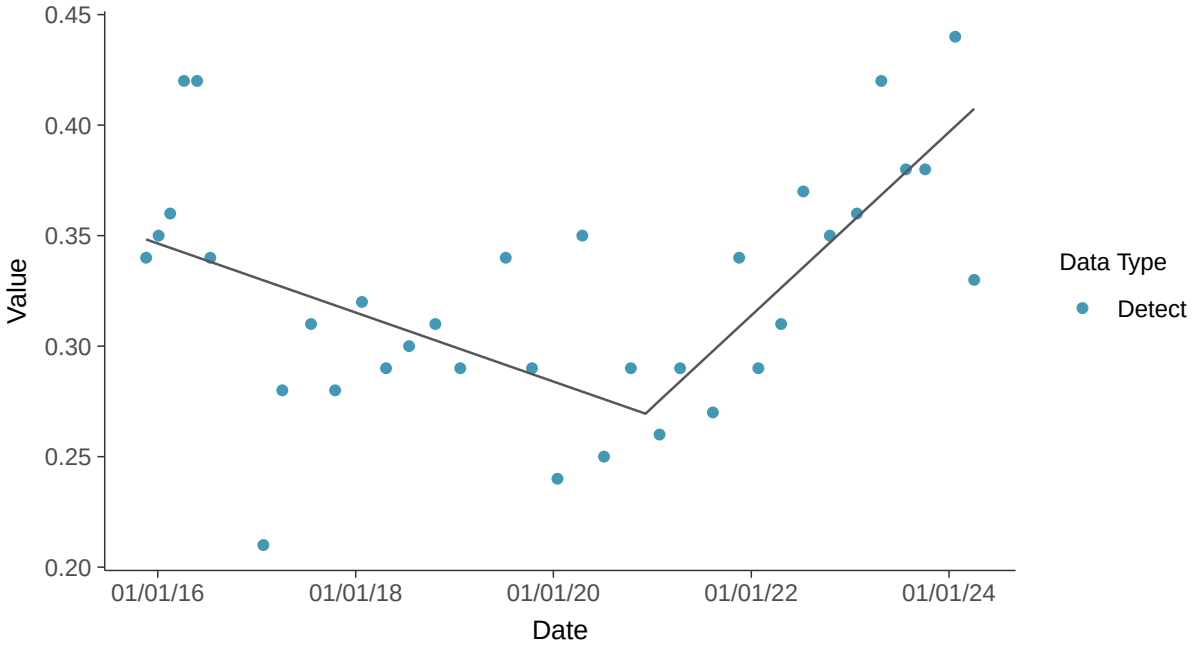
Trend Regression: Lognormal MLE

Fluoride, MW-4 (mg/L)



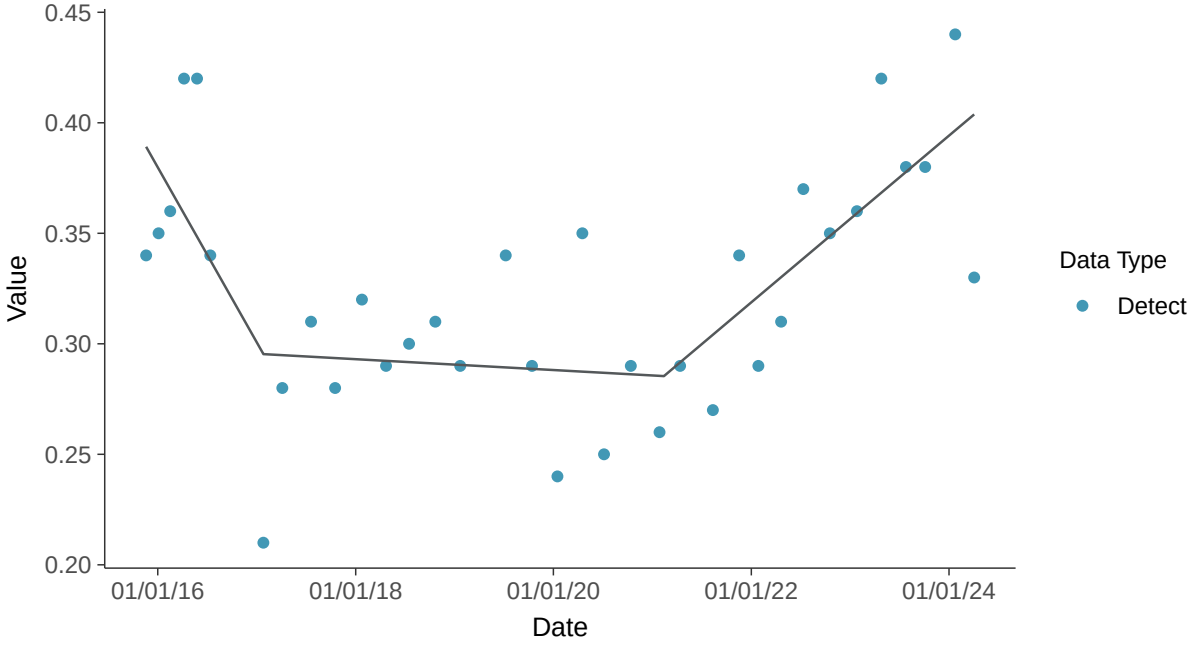
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-4 (mg/L)



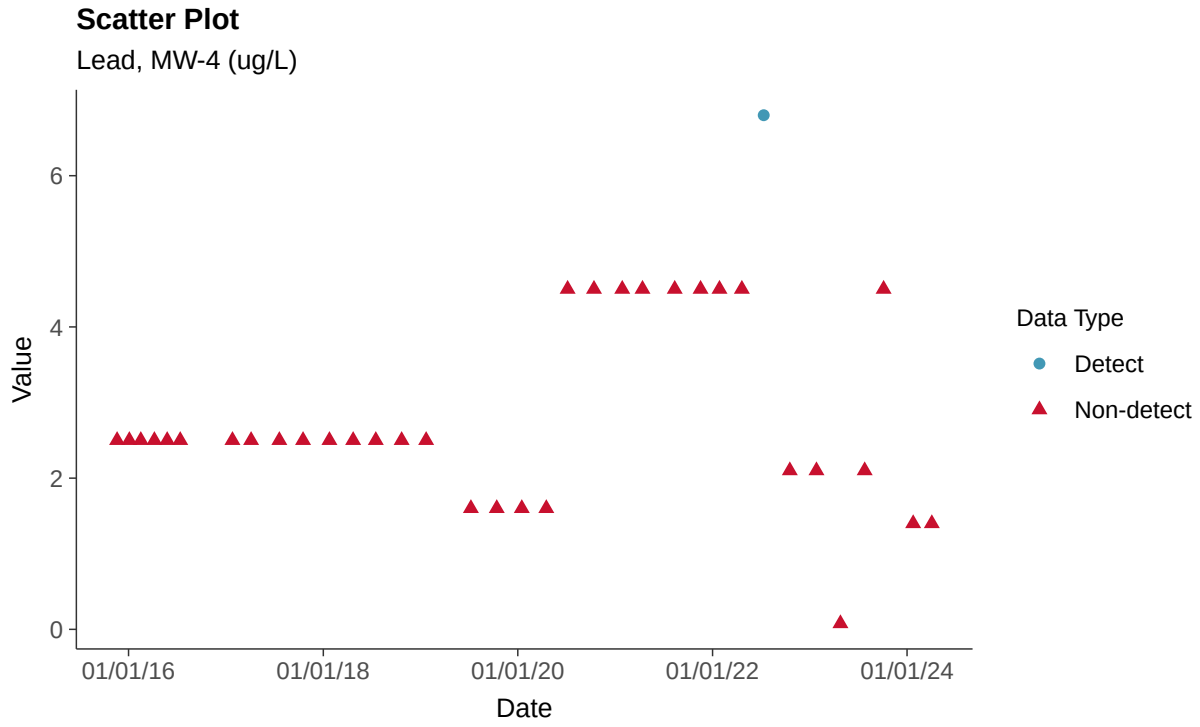
Trend Regression: Piecewise Linear-Linear-Linear

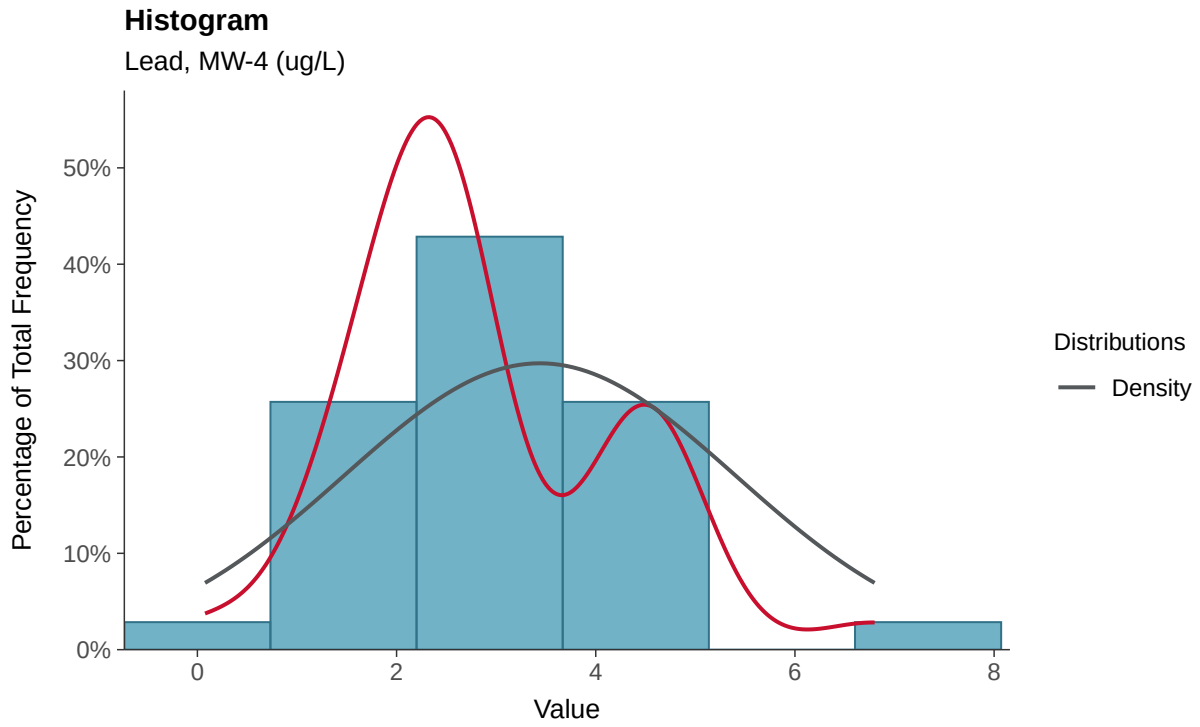
Fluoride, MW-4 (mg/L)



App. IV: Lead, MW-4

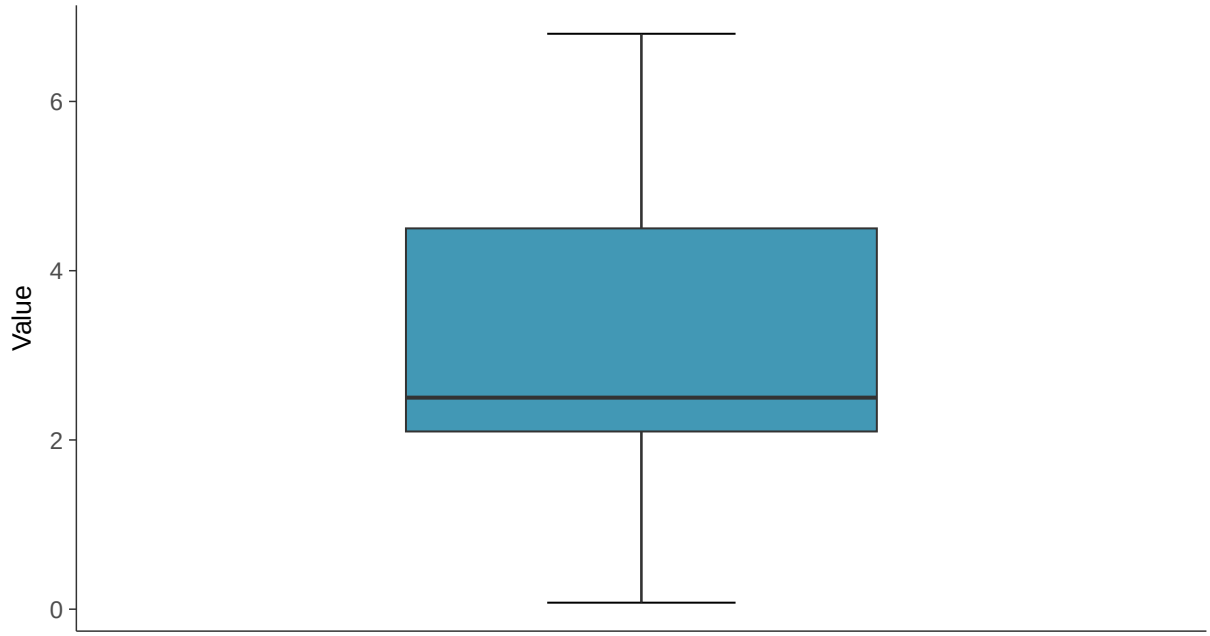
ID: 7_3_113





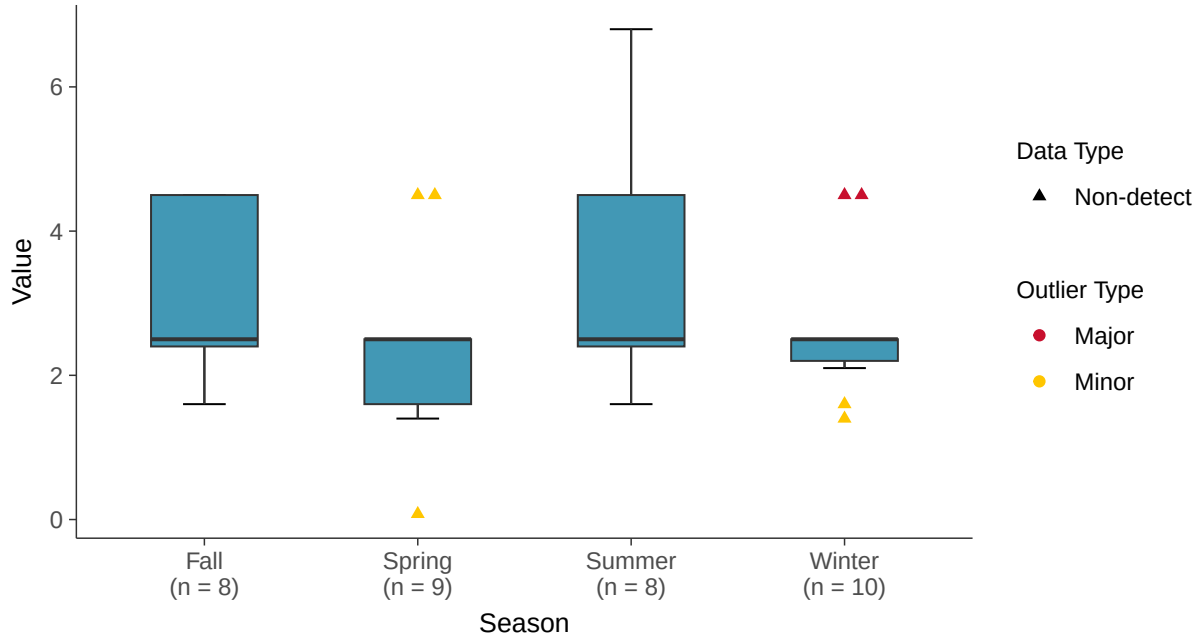
Boxplot

Lead, MW-4 (ug/L)



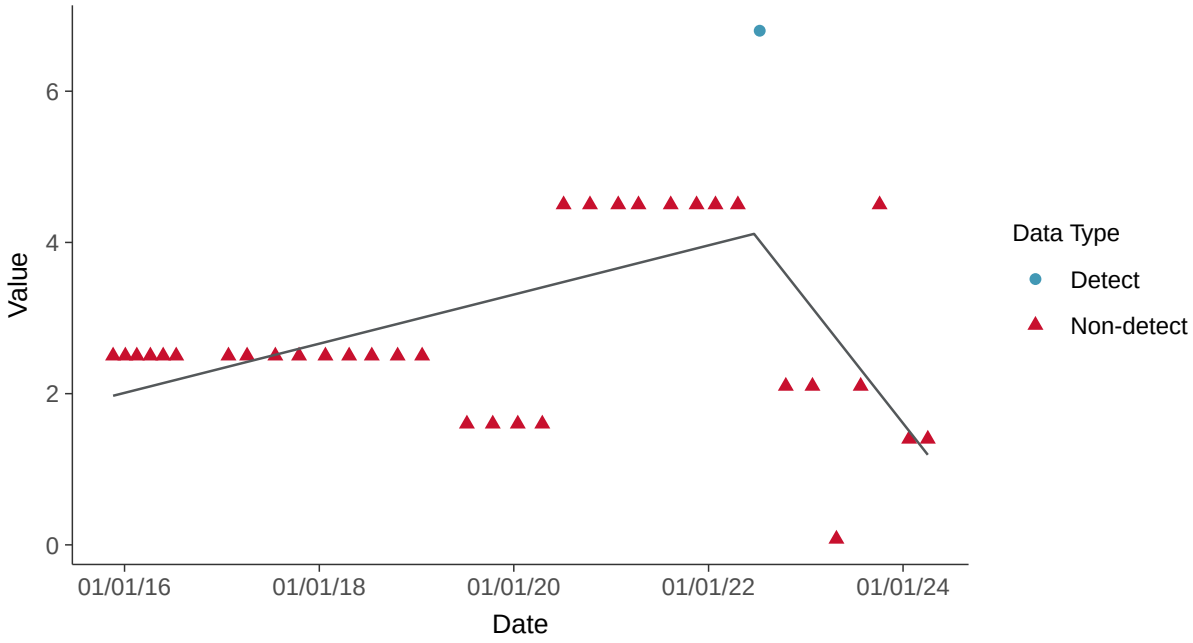
Boxplot by Season

Lead, MW-4 (ug/L)



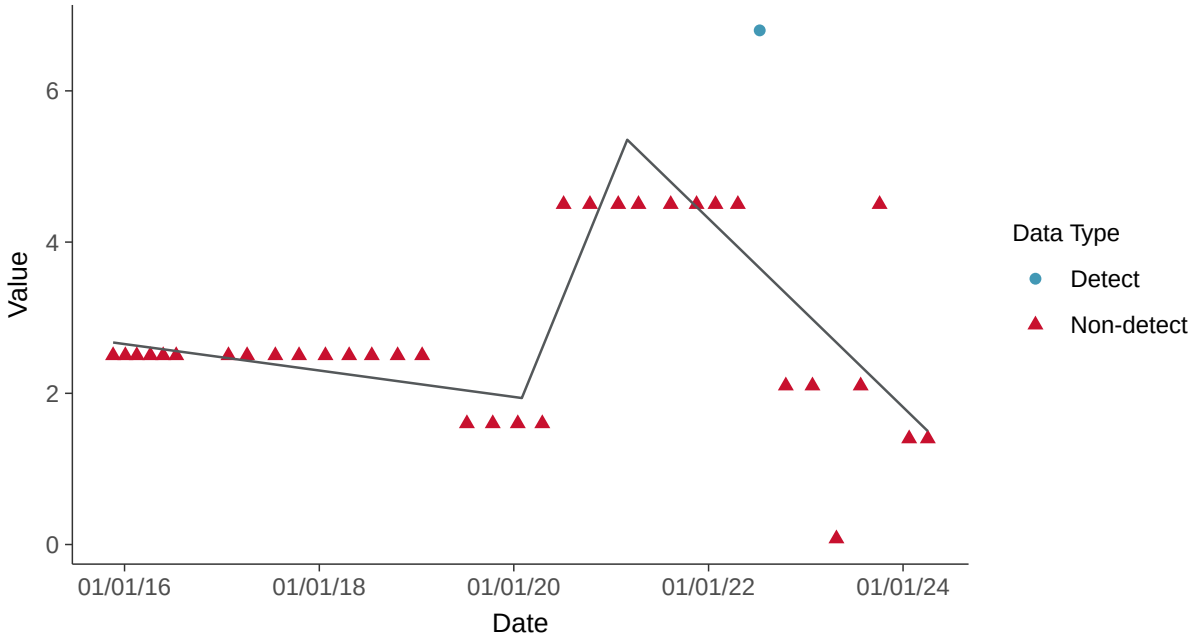
Trend Regression: Piecewise Linear-Linear

Lead, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-4 (ug/L)

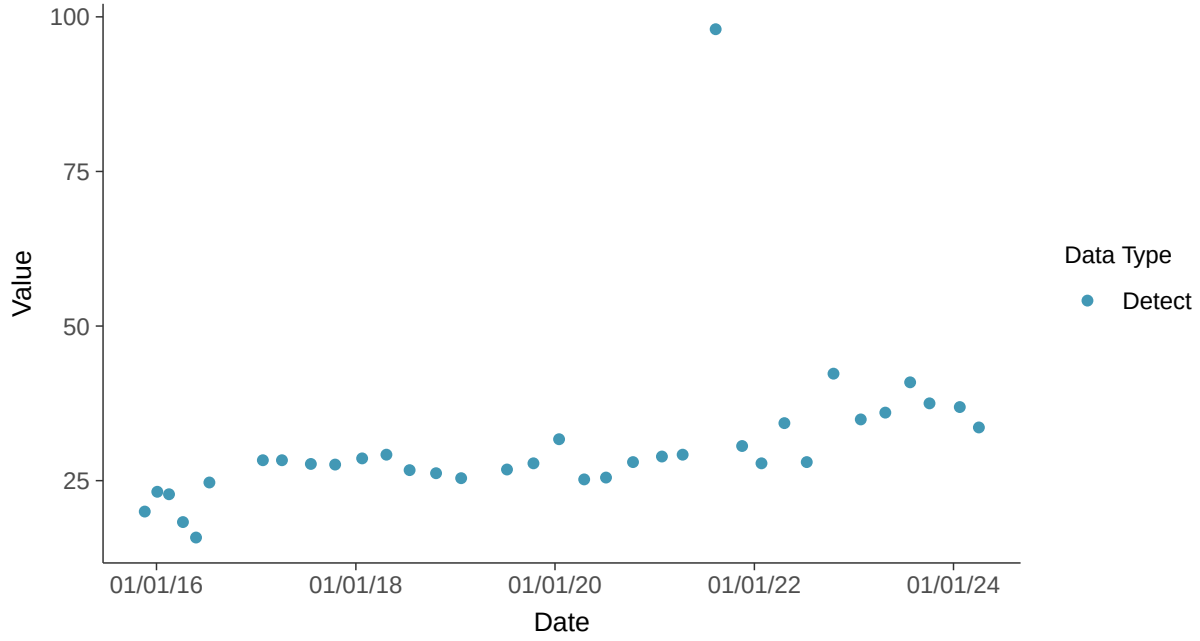


App. IV: Lithium, MW-4

ID: 7_3_114

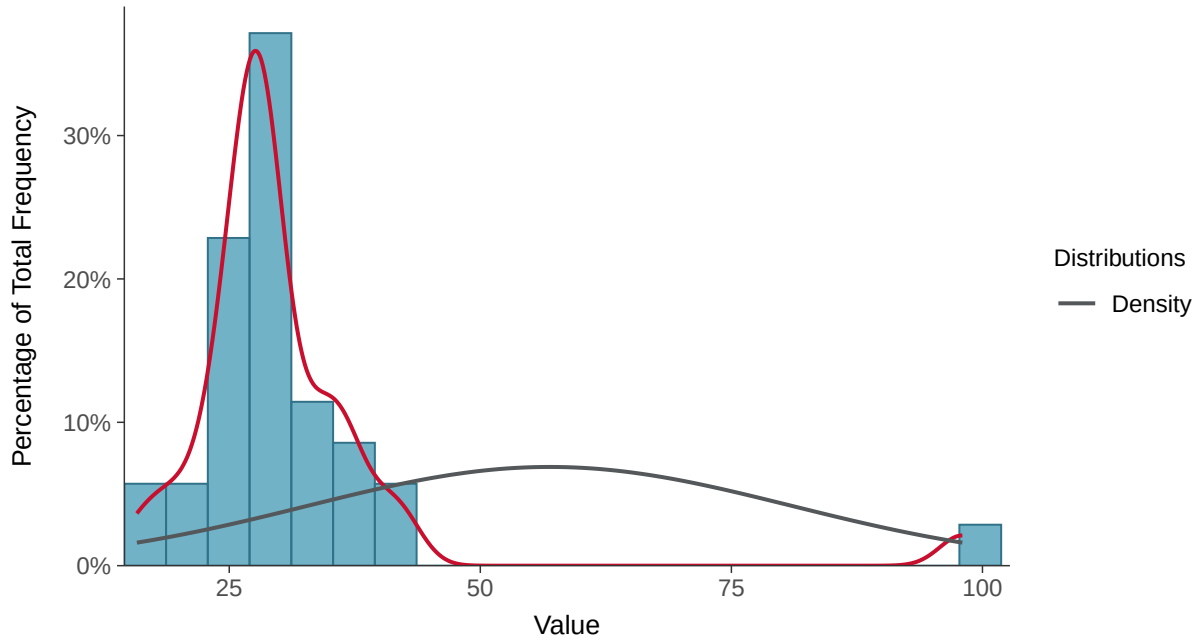
Scatter Plot

Lithium, MW-4 (ug/L)



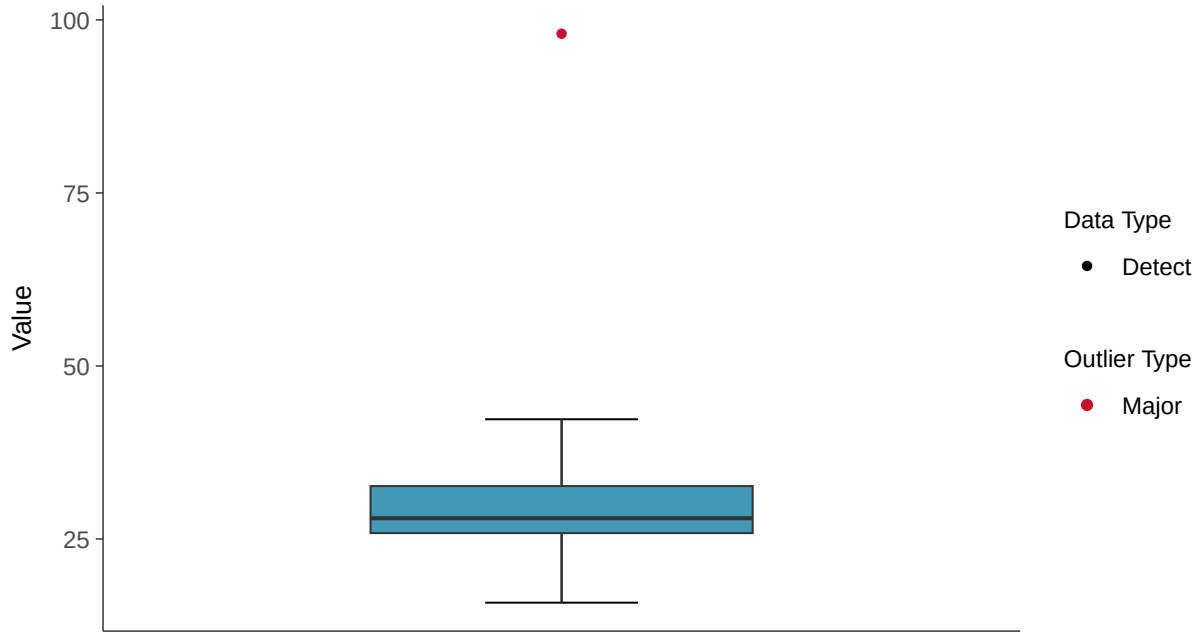
Histogram

Lithium, MW-4 (ug/L)



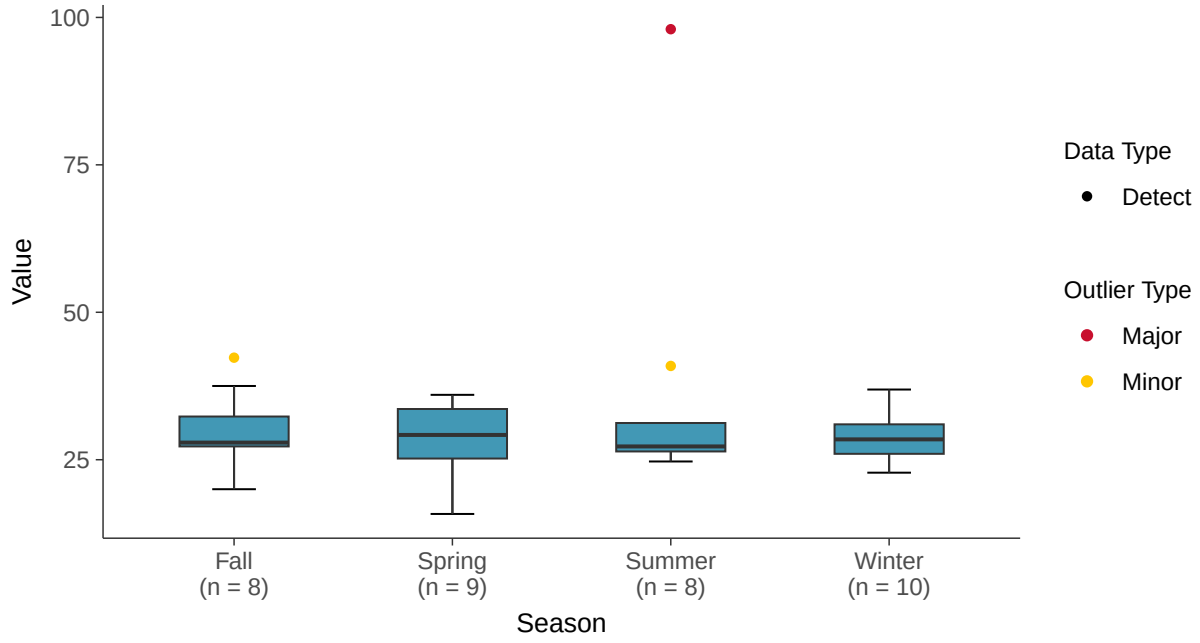
Boxplot

Lithium, MW-4 (ug/L)



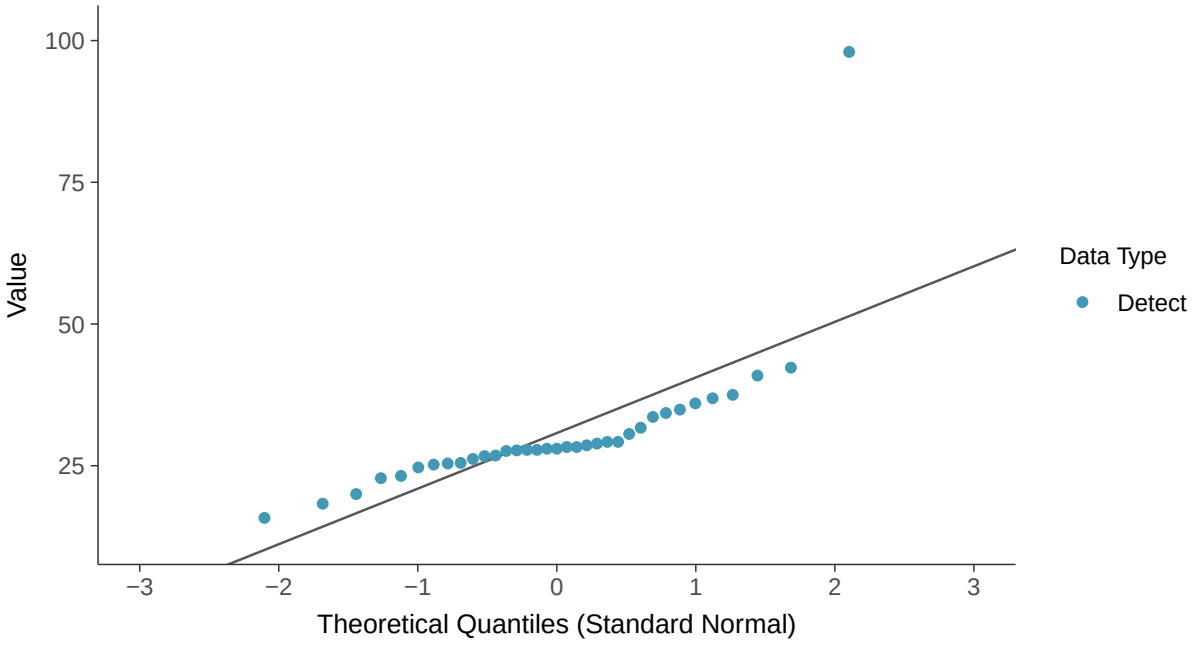
Boxplot by Season

Lithium, MW-4 (ug/L)



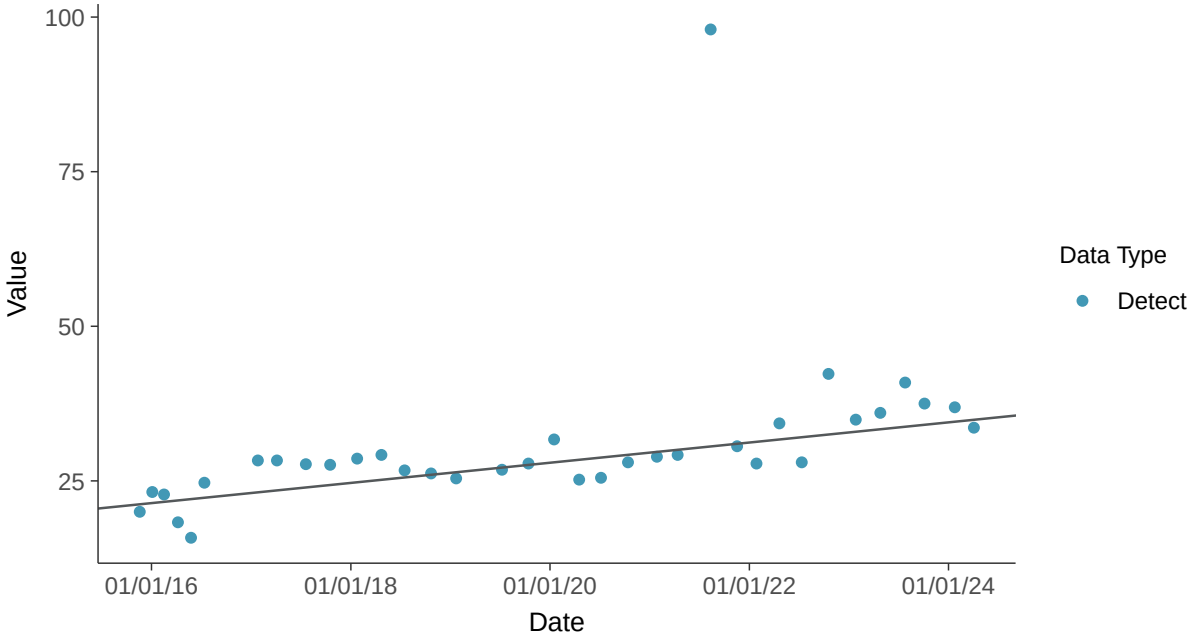
Normal Q-Q plot

Lithium, MW-4 (ug/L)



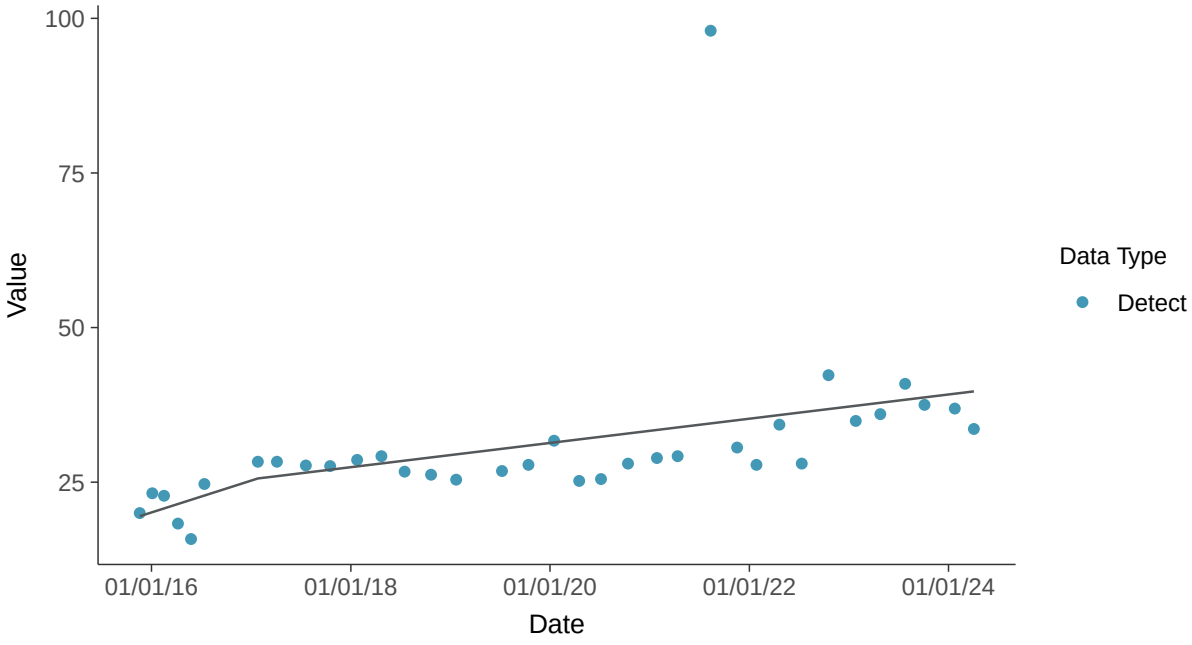
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-4 (ug/L)



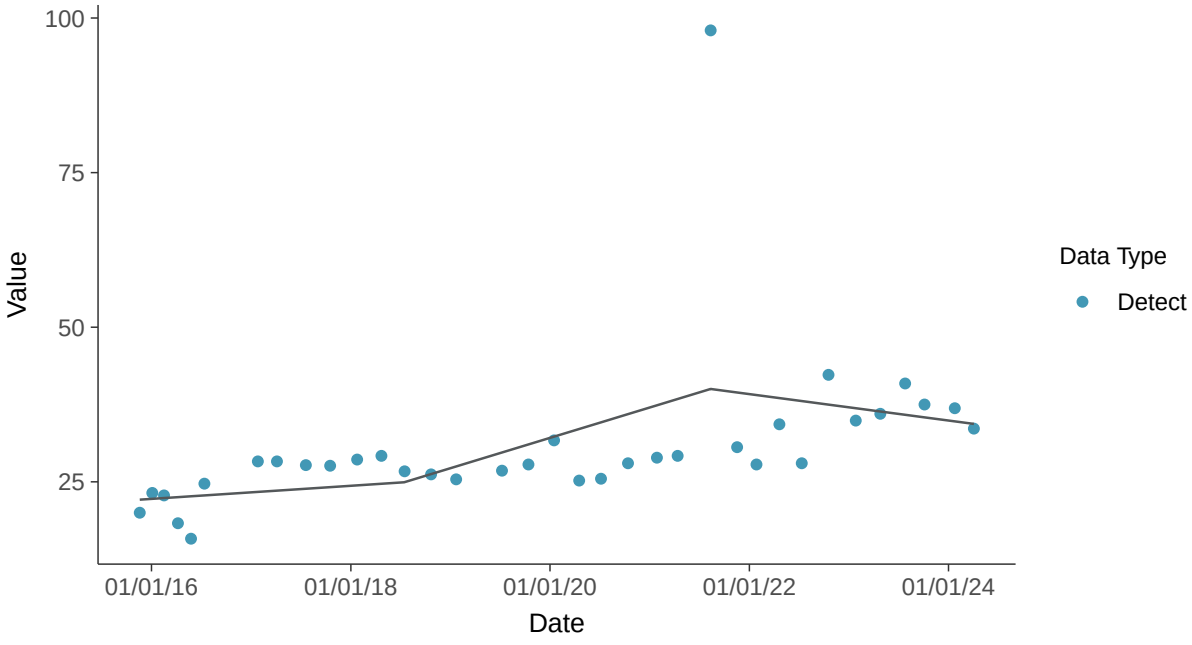
Trend Regression: Piecewise Linear-Linear

Lithium, MW-4 (ug/L)



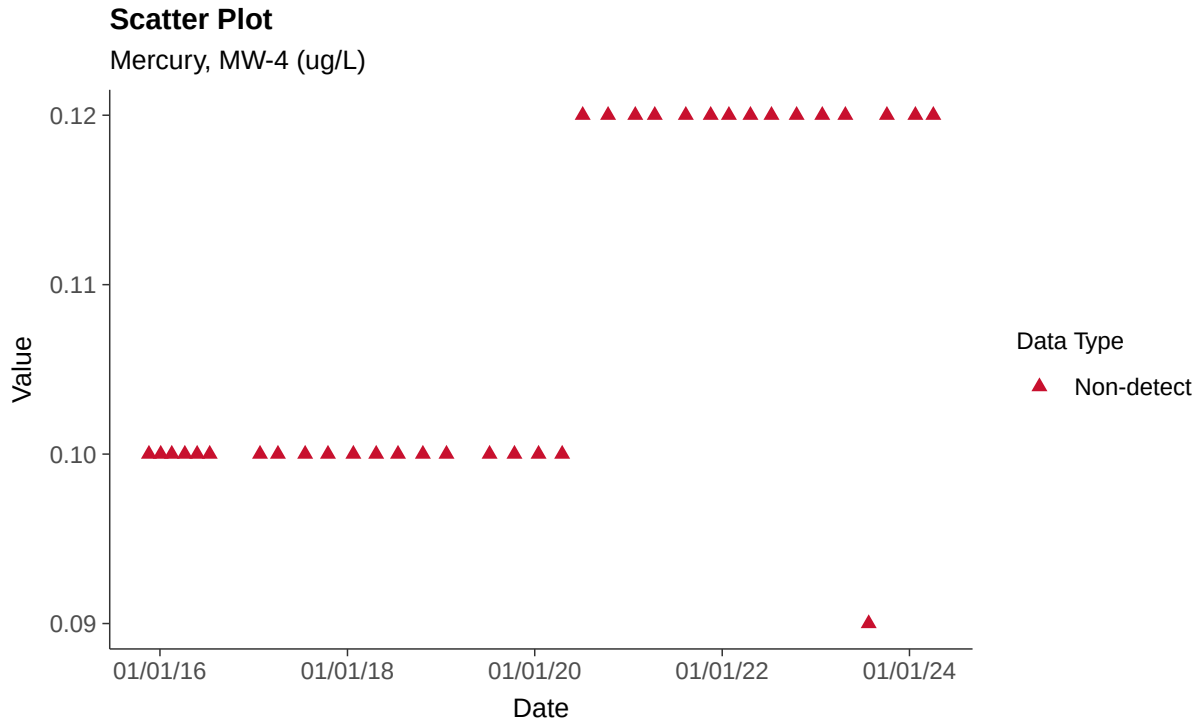
Trend Regression: Piecewise Linear-Linear-Linear

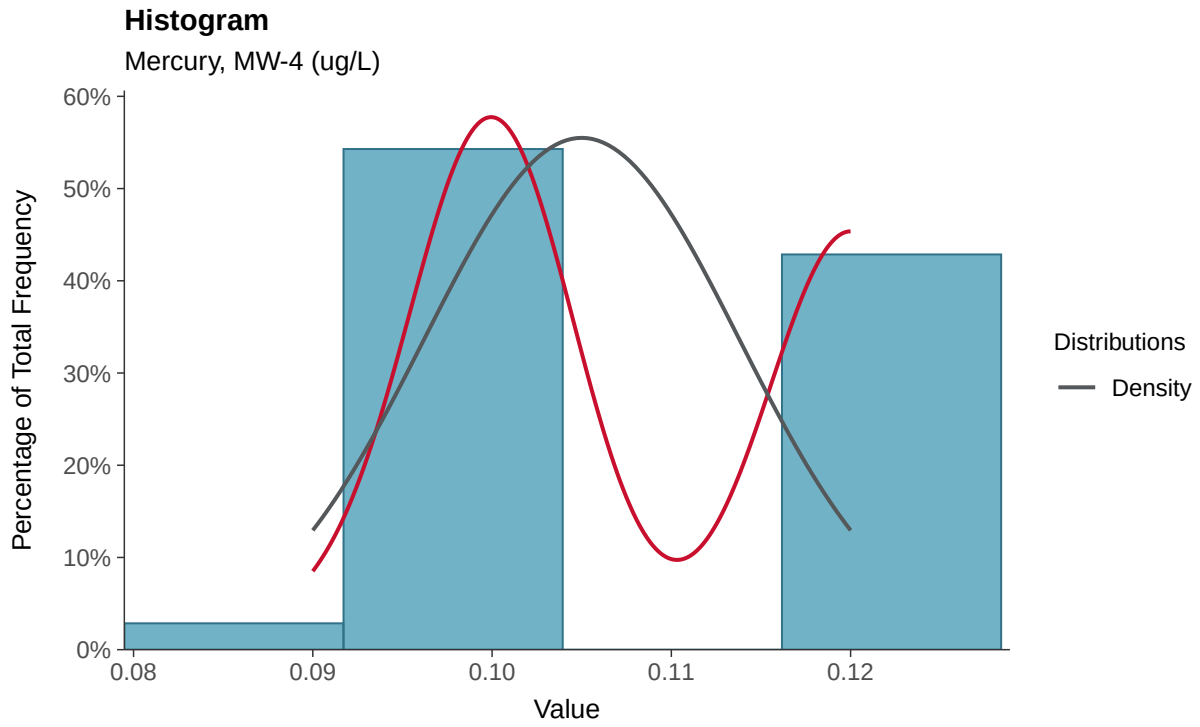
Lithium, MW-4 (ug/L)



App. IV: Mercury, MW-4

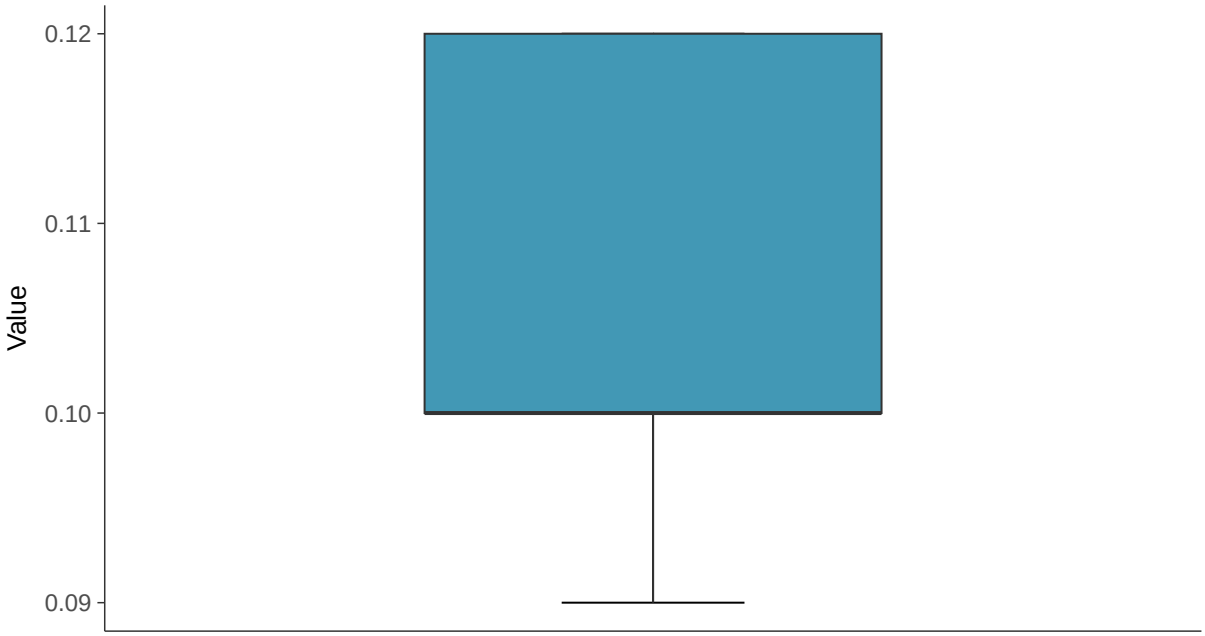
ID: 7_3_115





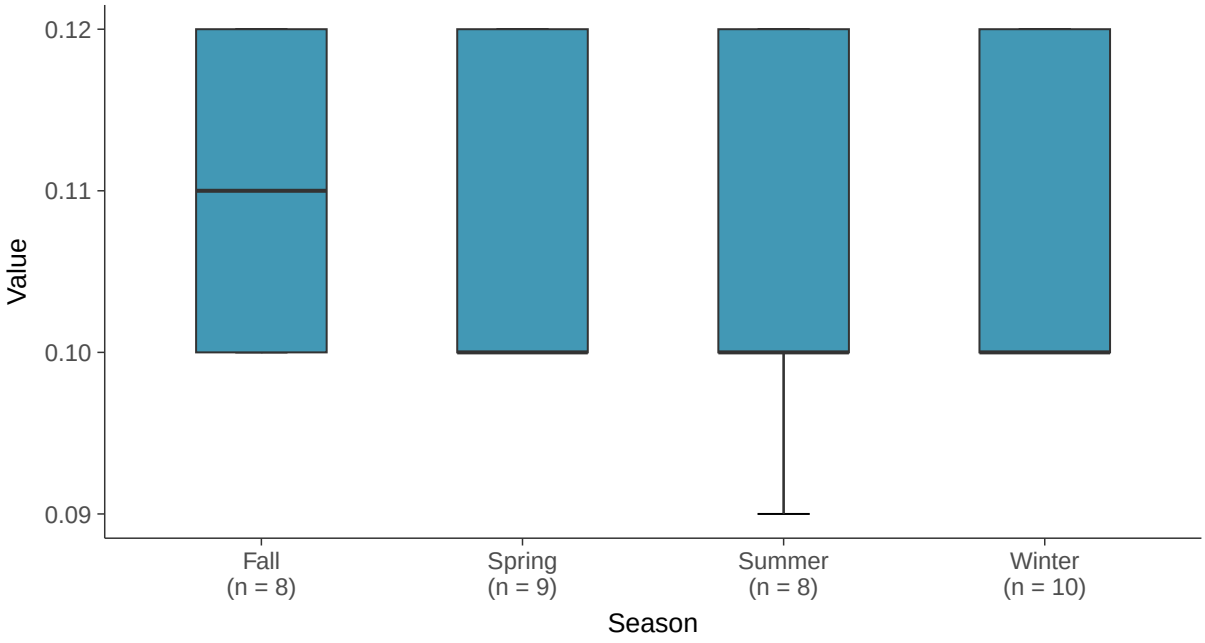
Boxplot

Mercury, MW-4 (ug/L)



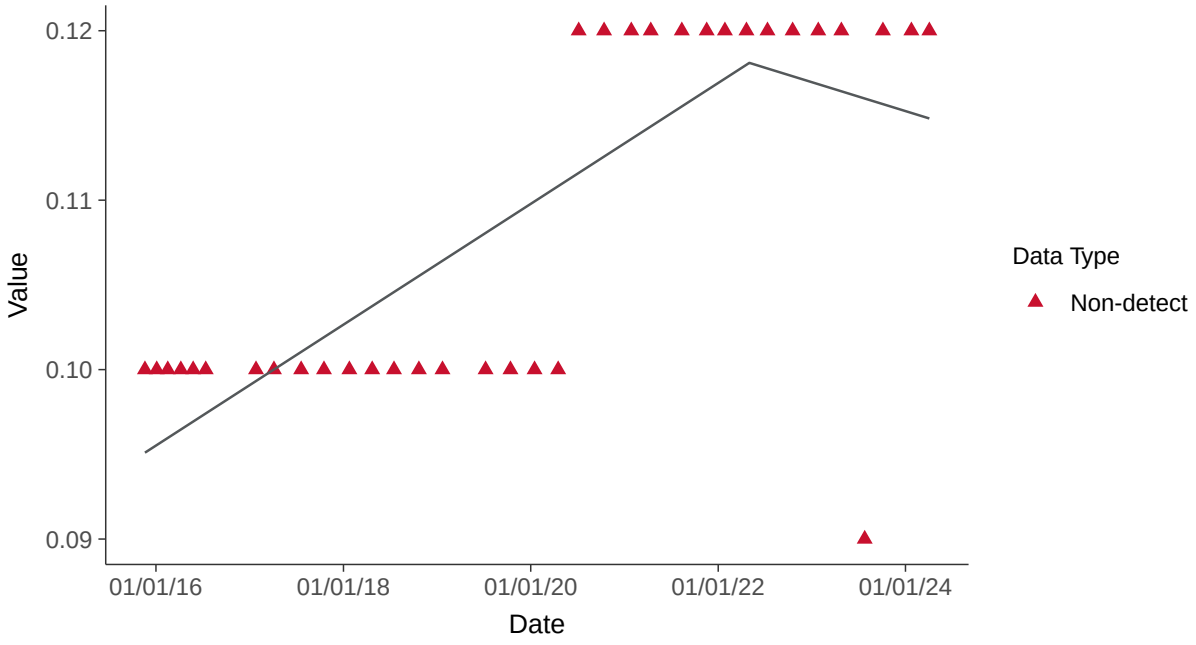
Boxplot by Season

Mercury, MW-4 (ug/L)



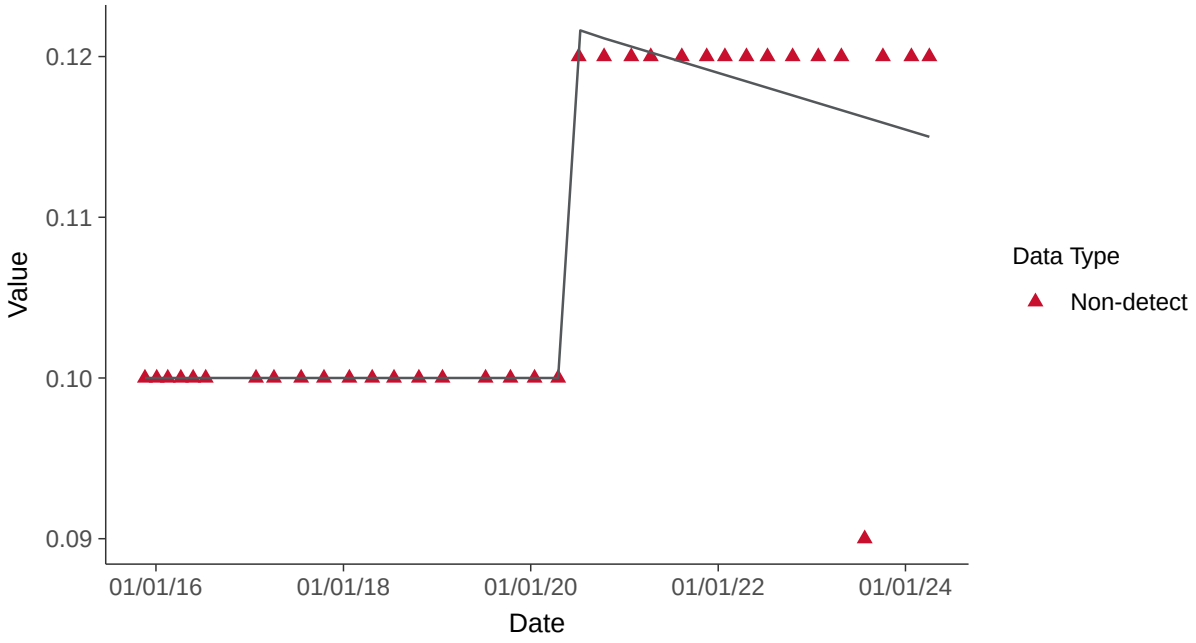
Trend Regression: Piecewise Linear-Linear

Mercury, MW-4 (ug/L)



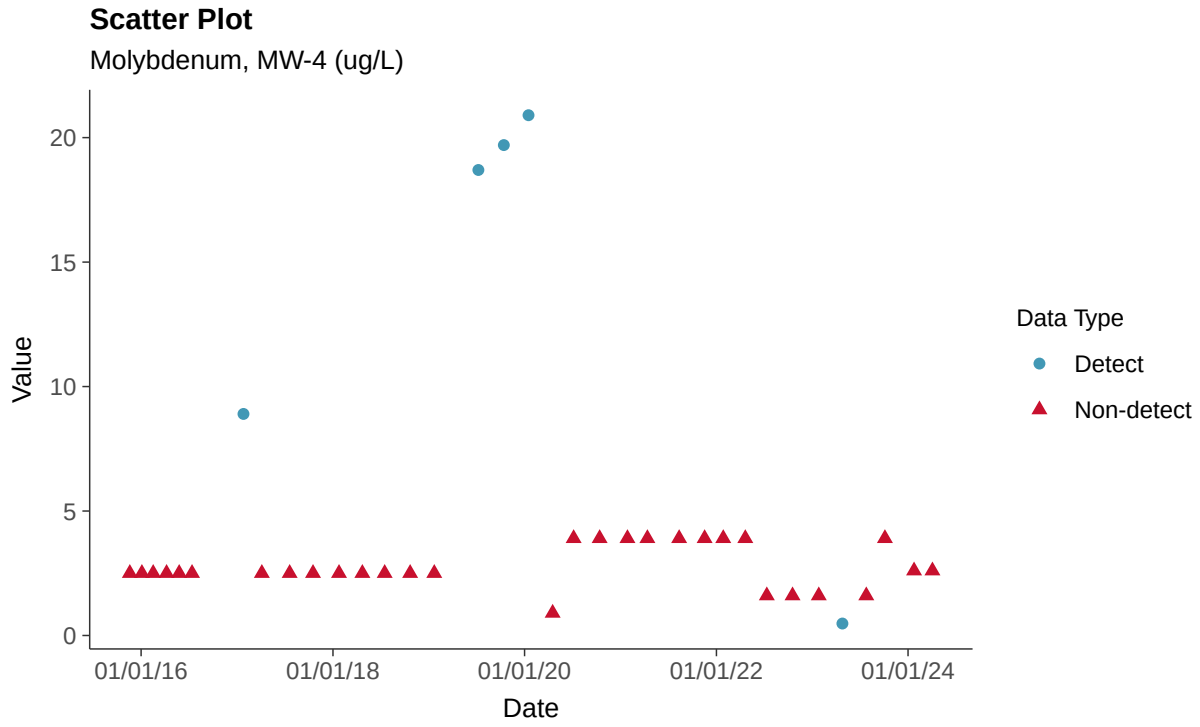
Trend Regression: Piecewise Linear-Linear-Linear

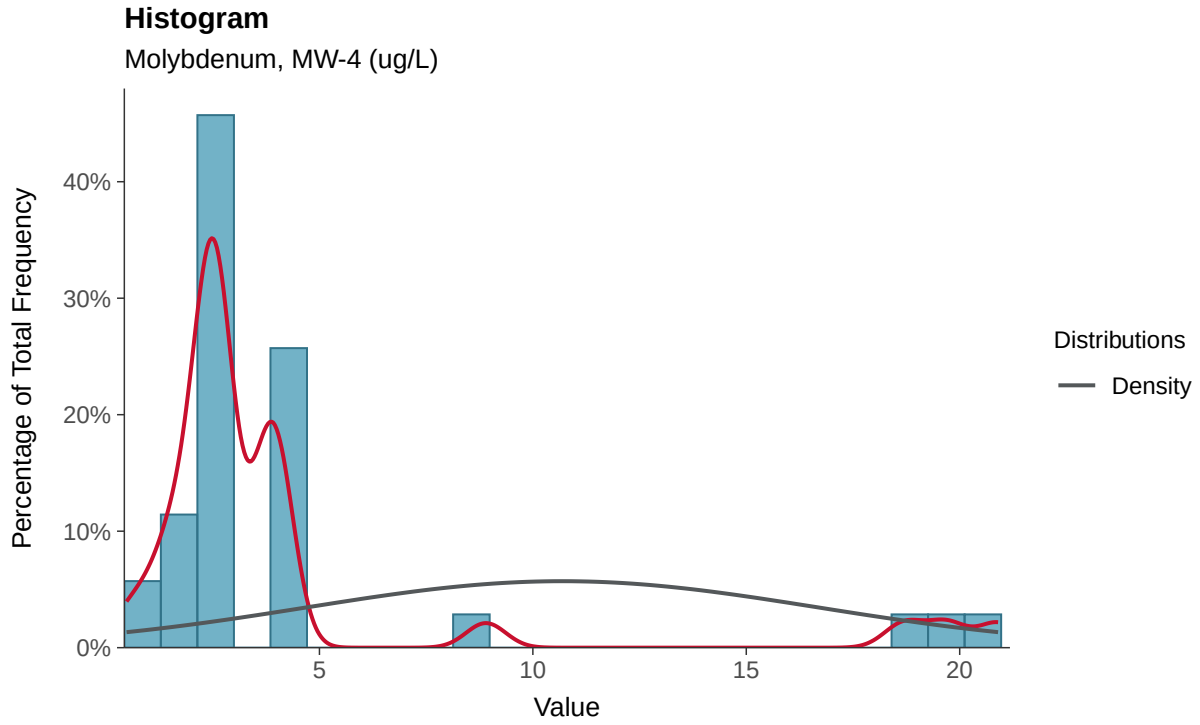
Mercury, MW-4 (ug/L)



App. IV: Molybdenum, MW-4

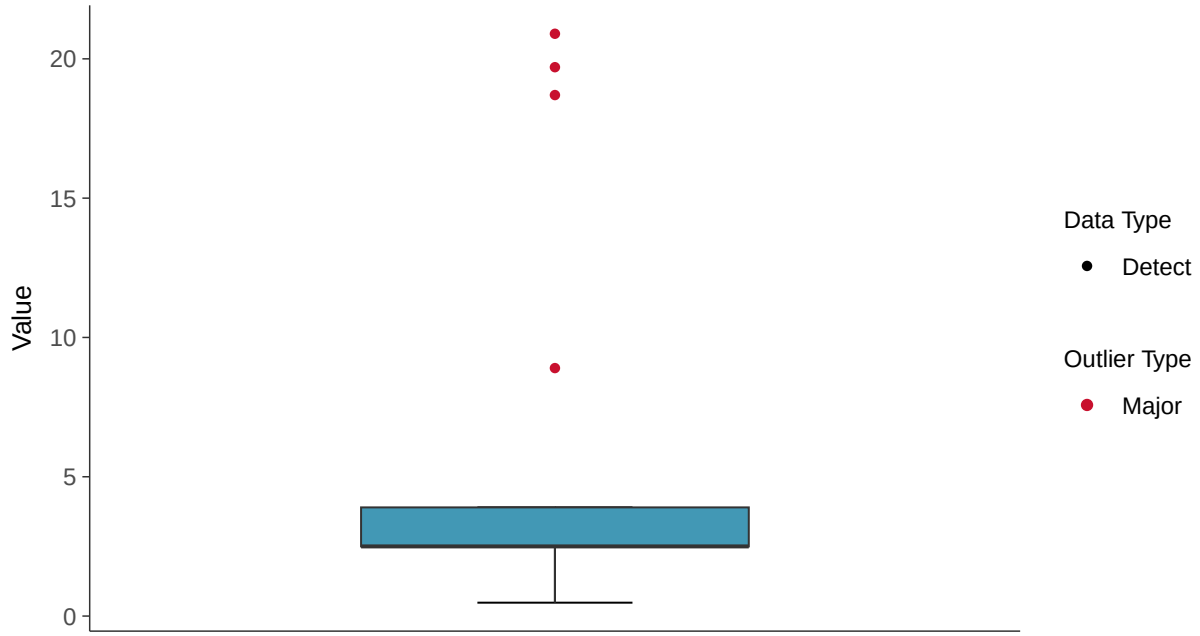
ID: 7_3_116





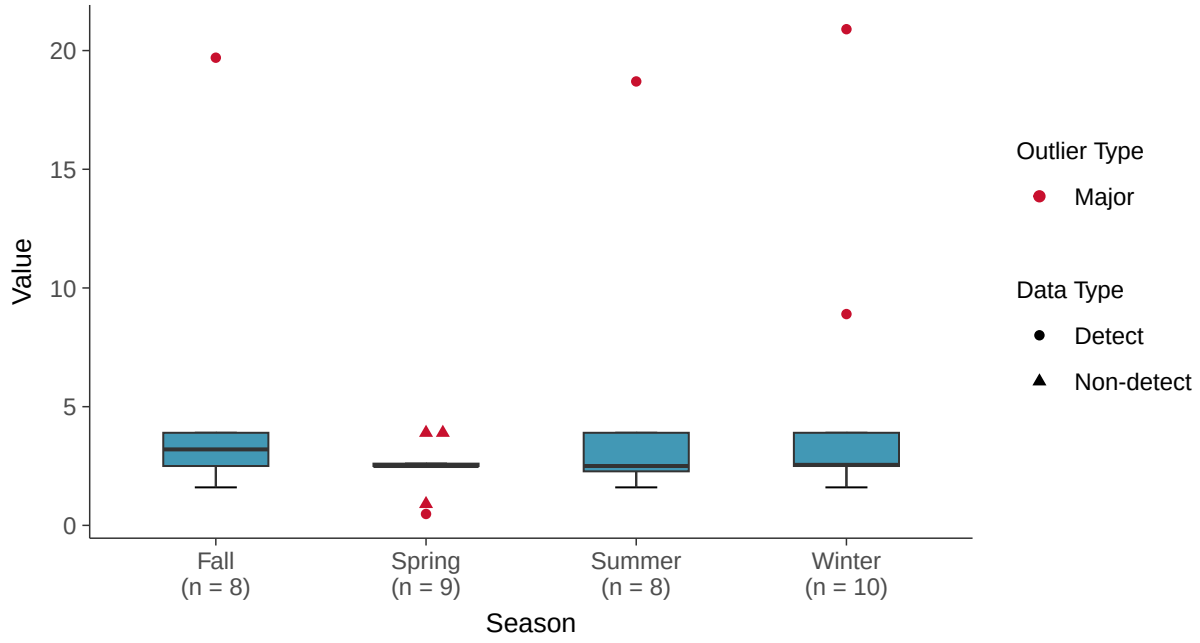
Boxplot

Molybdenum, MW-4 (ug/L)



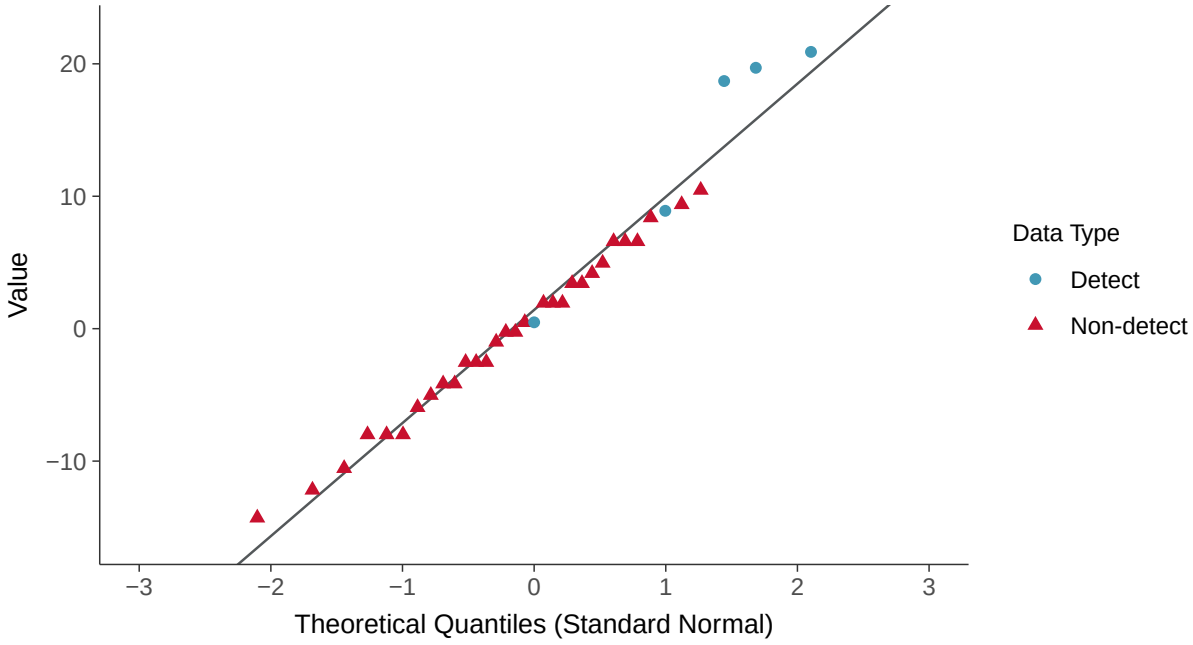
Boxplot by Season

Molybdenum, MW-4 (ug/L)



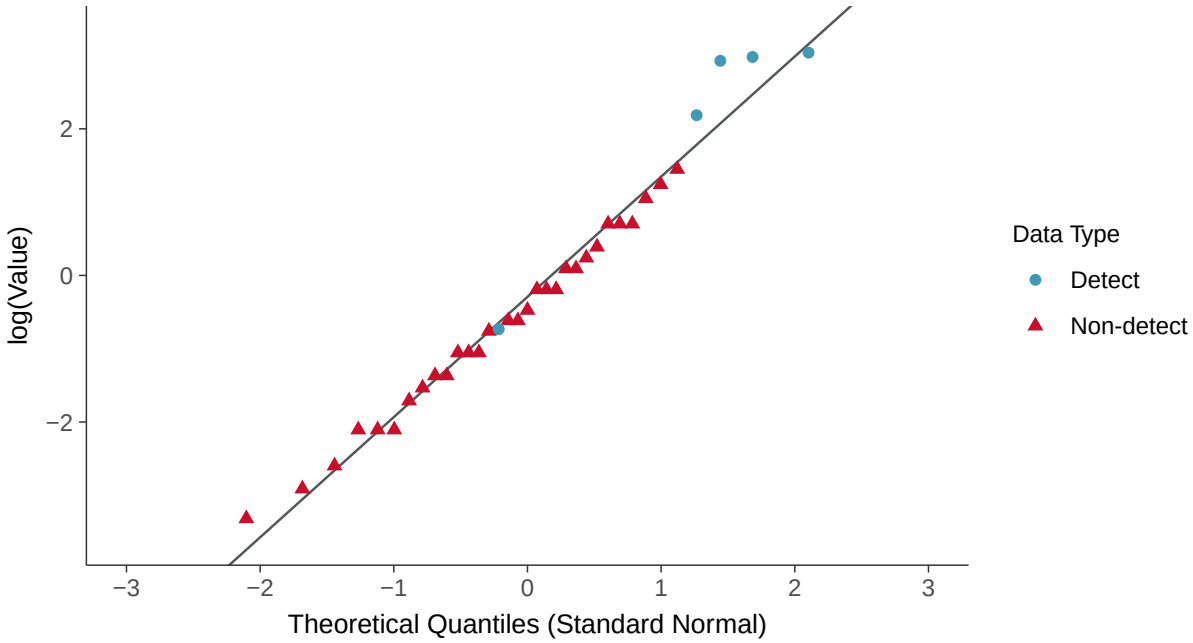
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



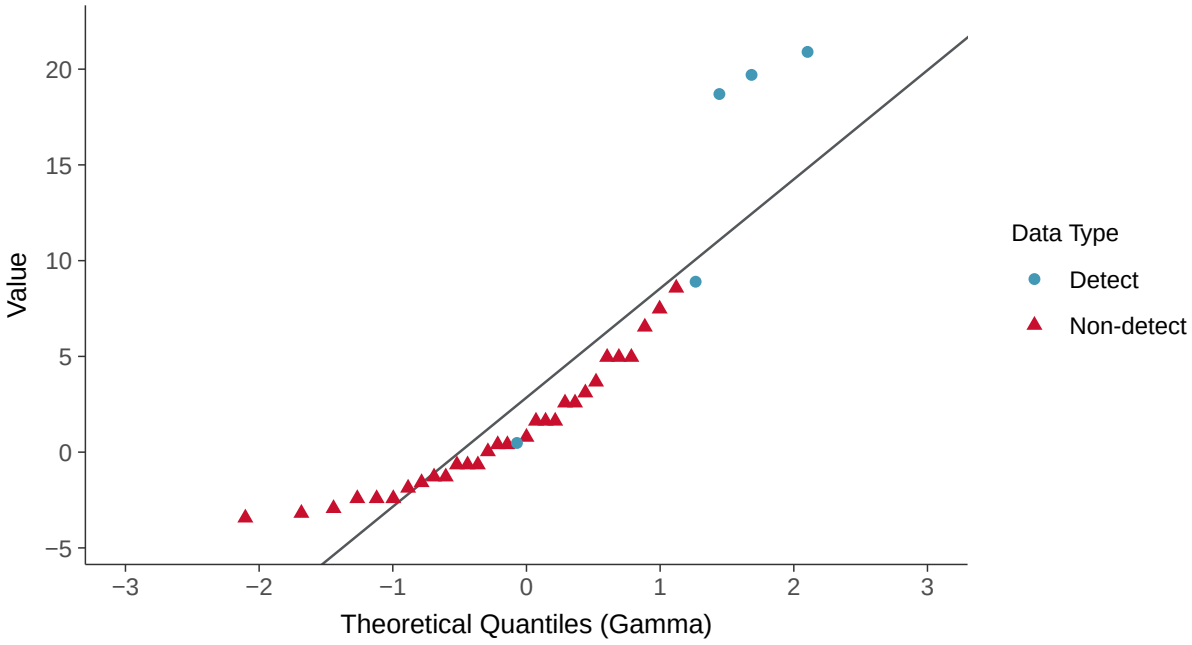
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



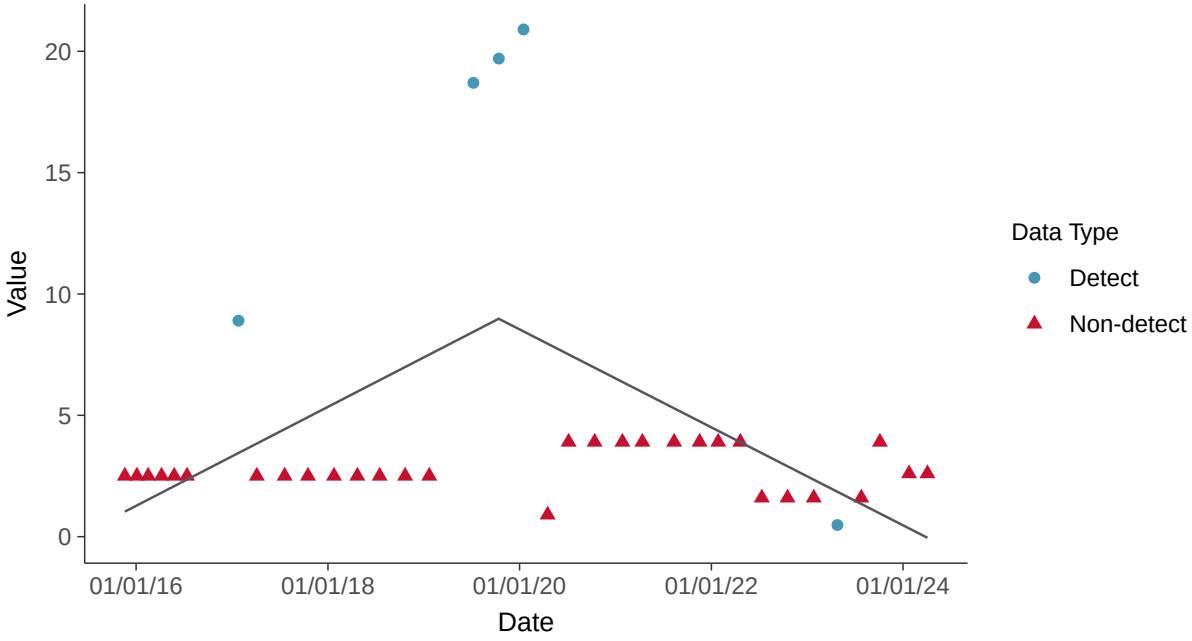
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



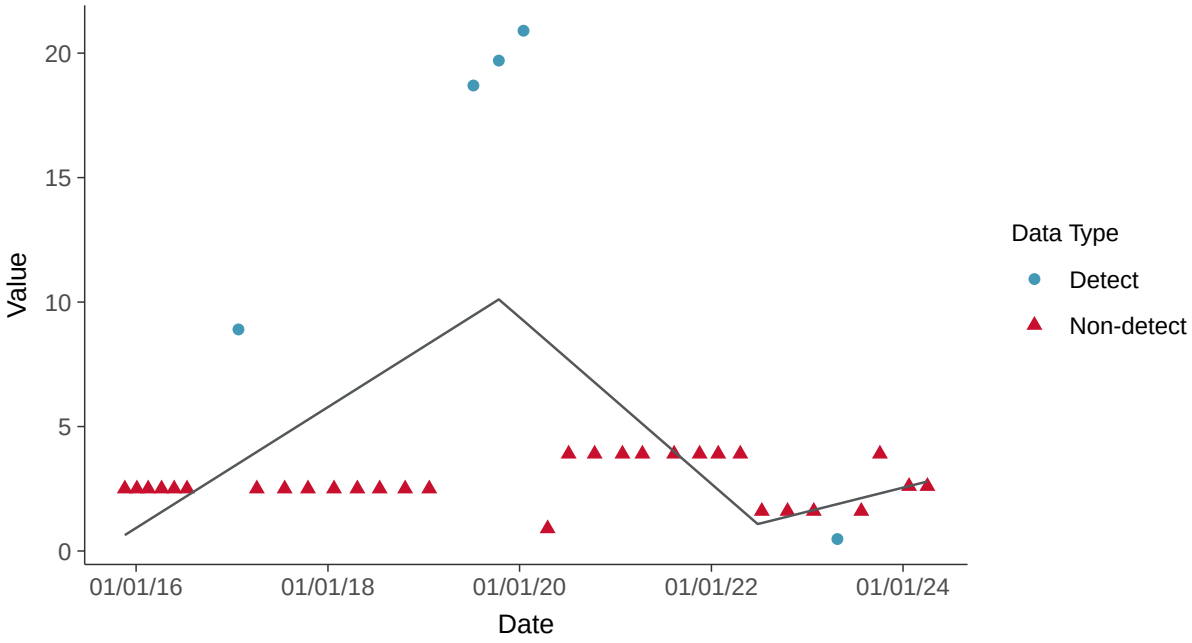
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-4 (ug/L)

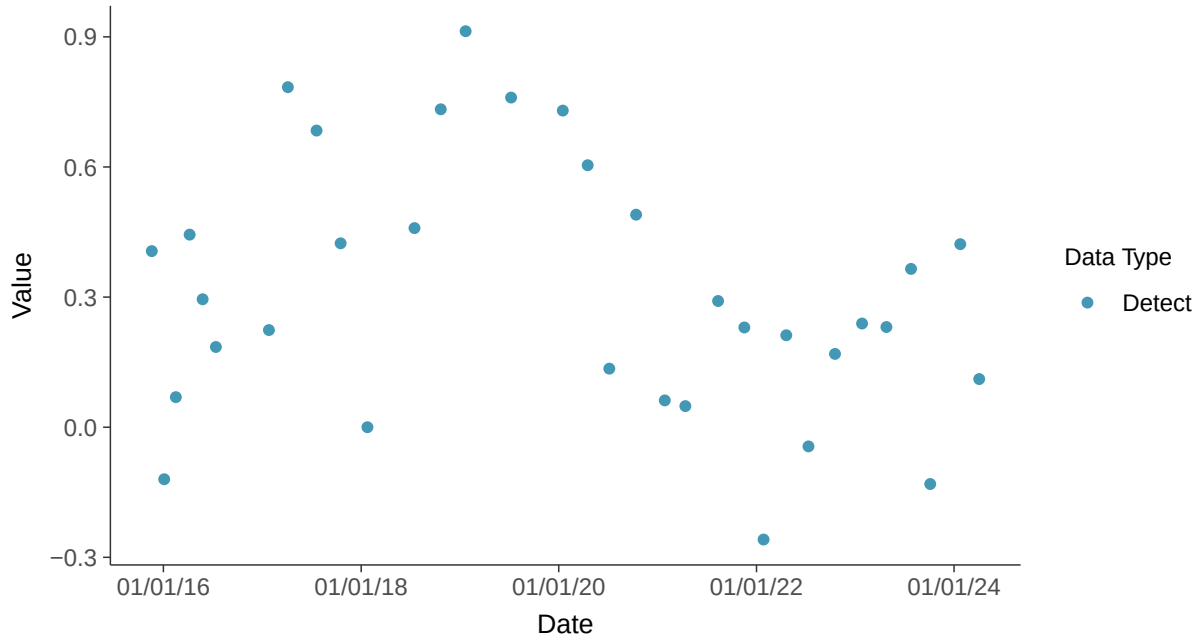


App. IV: Radium-226, MW-4

ID: 7_3_119

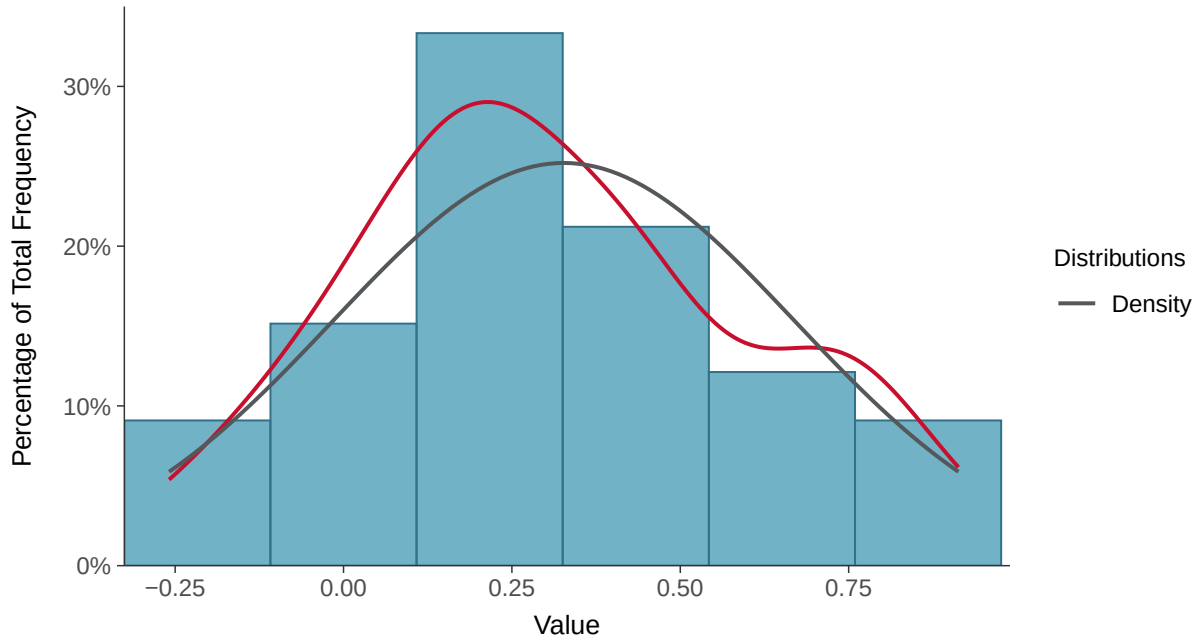
Scatter Plot

Radium-226, MW-4 (pCi/L)



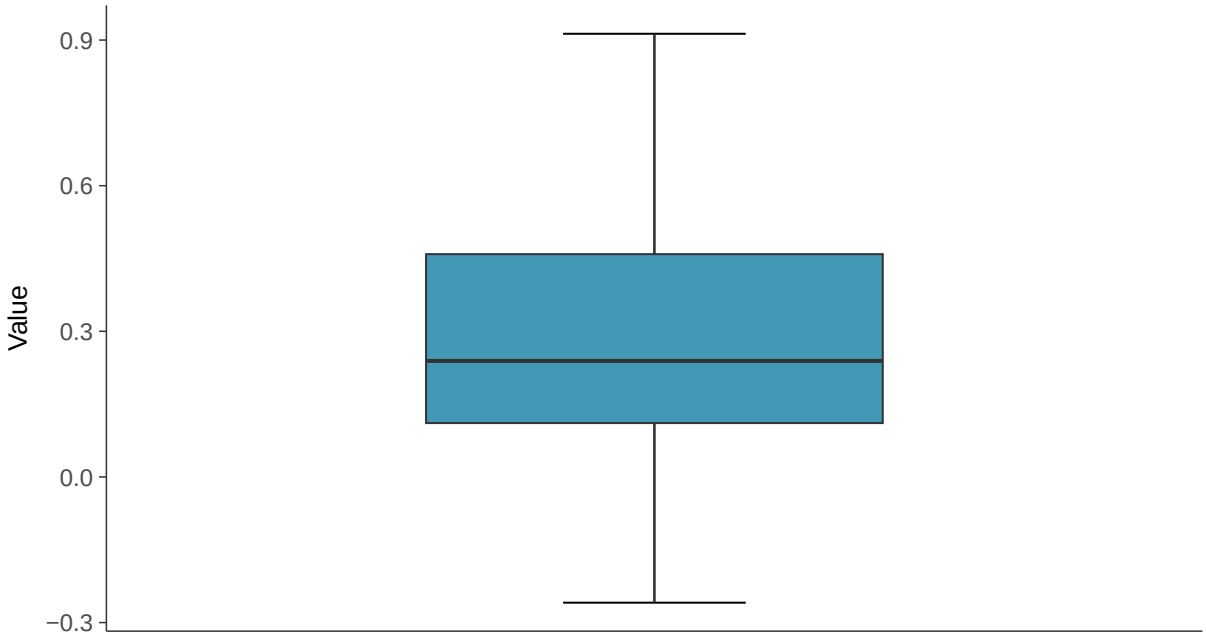
Histogram

Radium-226, MW-4 (pCi/L)



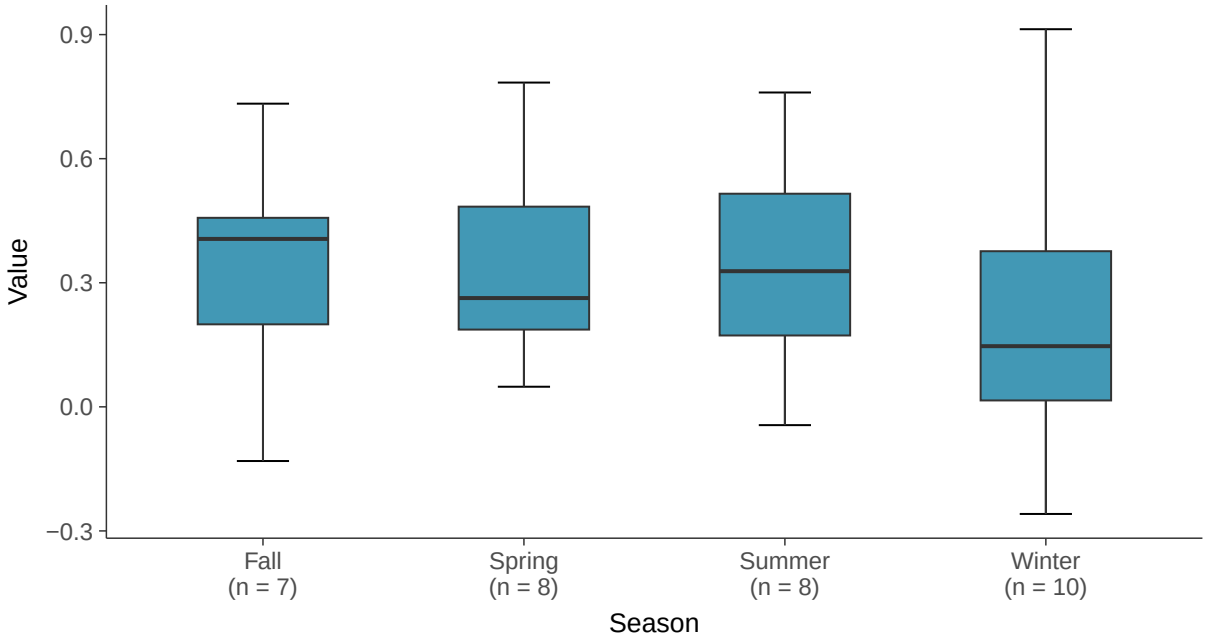
Boxplot

Radium-226, MW-4 (pCi/L)



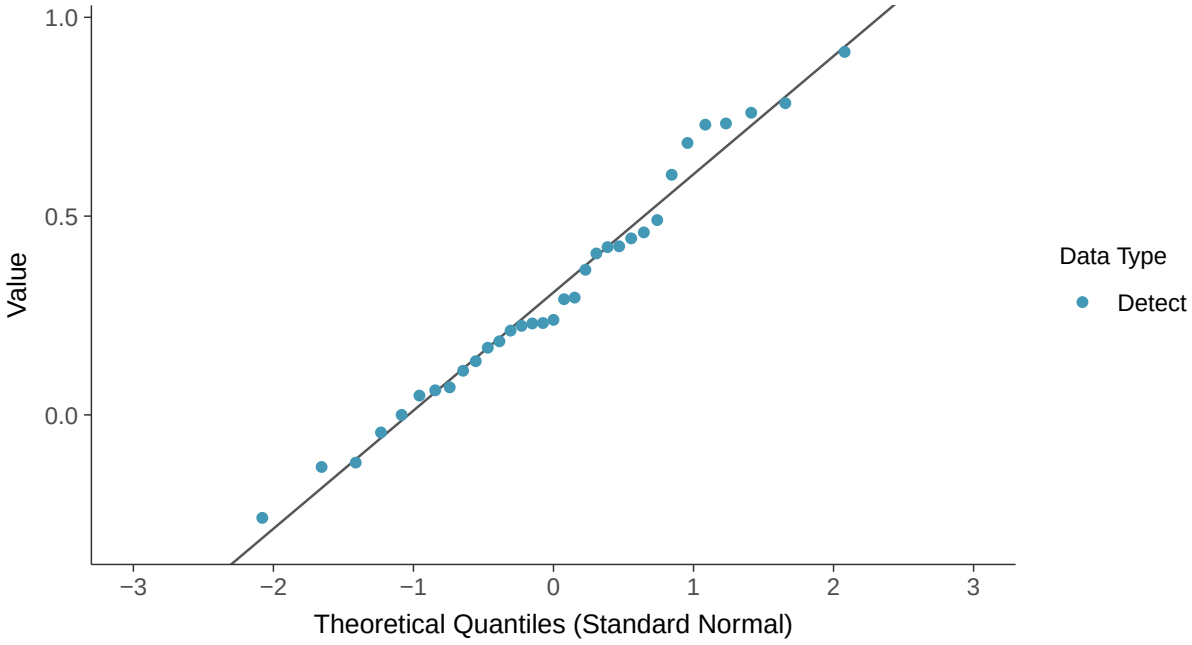
Boxplot by Season

Radium-226, MW-4 (pCi/L)



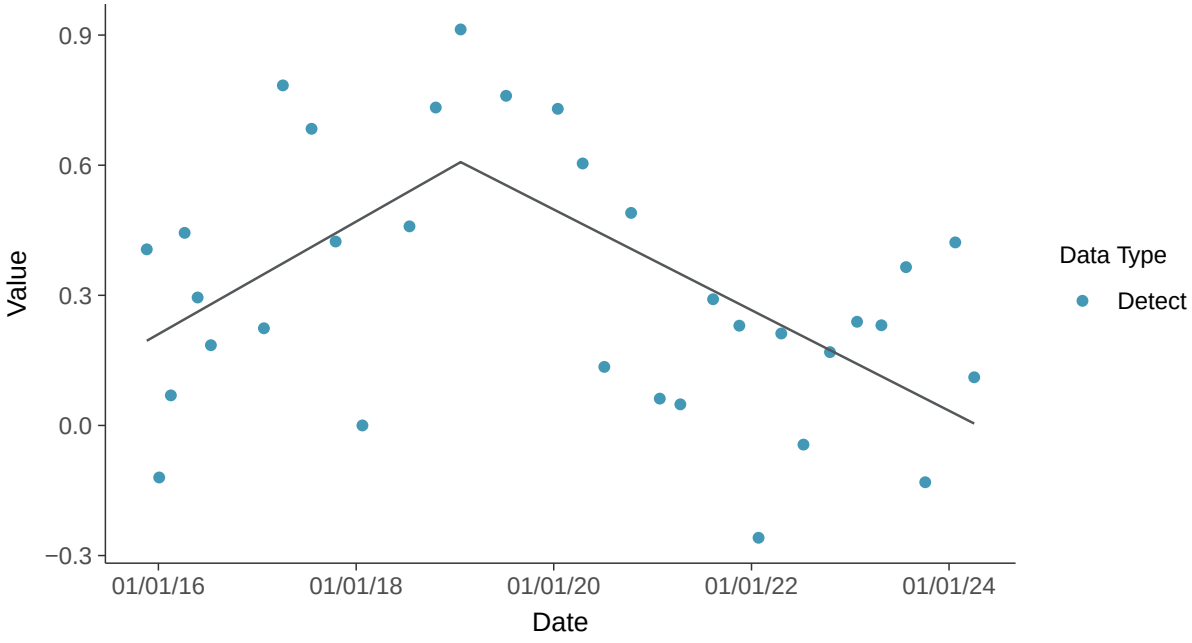
Normal Q-Q plot

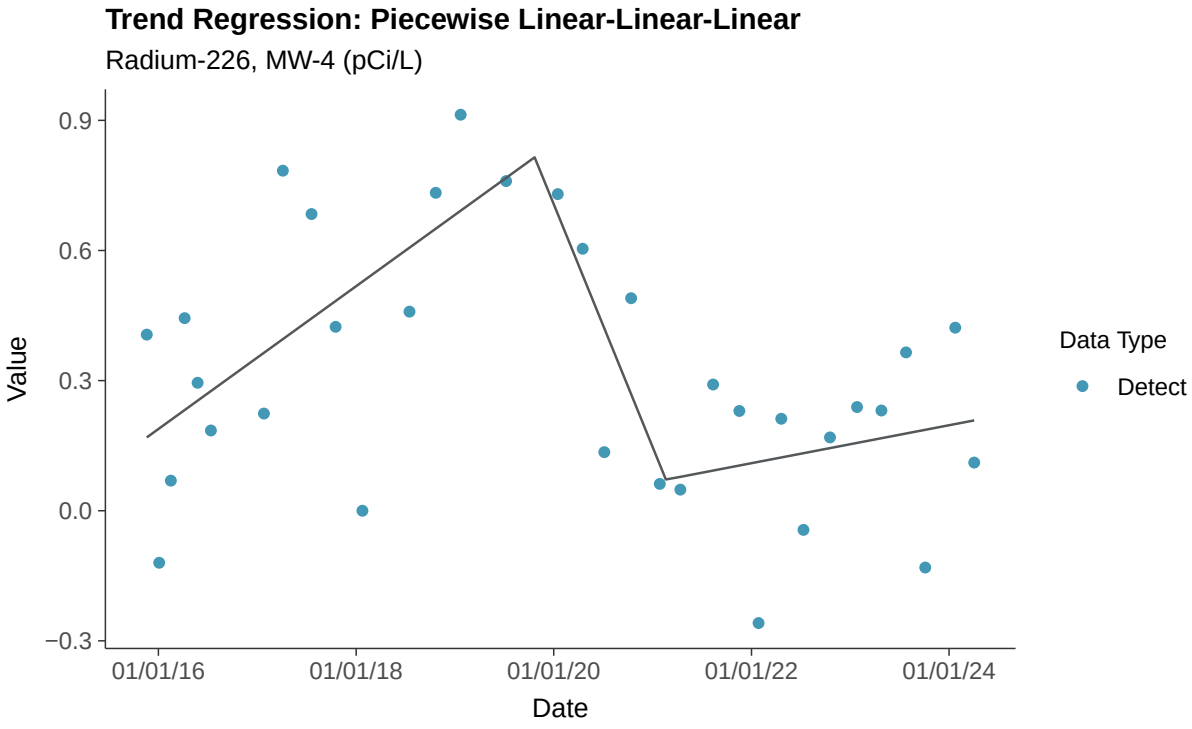
Radium-226, MW-4 (pCi/L)



Trend Regression: Piecewise Linear-Linear

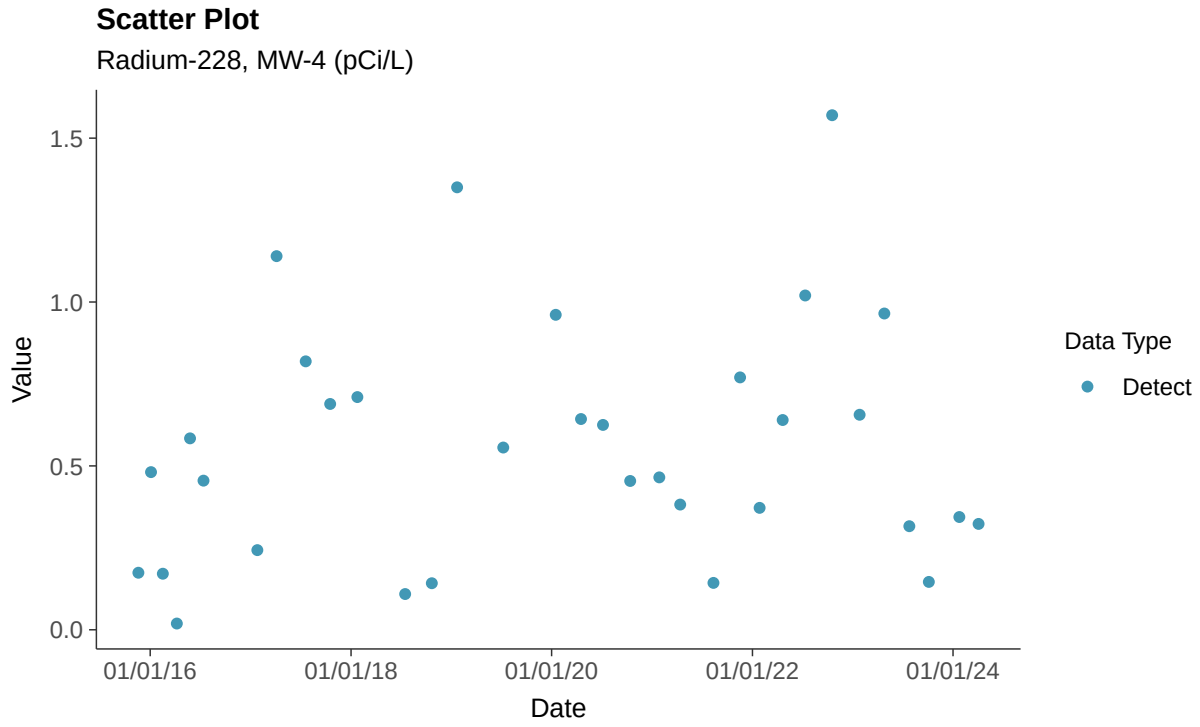
Radium-226, MW-4 (pCi/L)

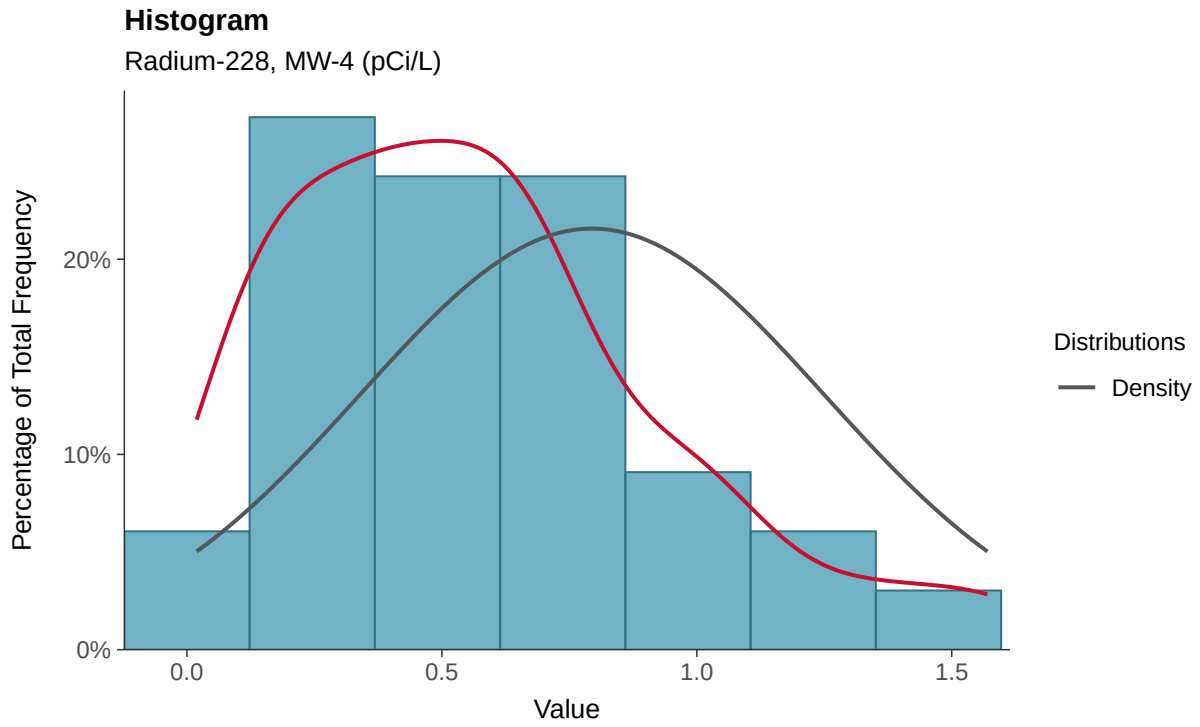



Trend Regression: Piecewise Linear-Linear-Linear
Radium-226, MW-4 (pCi/L)
Value
0.9
0.6
0.3
0.0
−0.3
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect

App. IV: Radium-228, MW-4

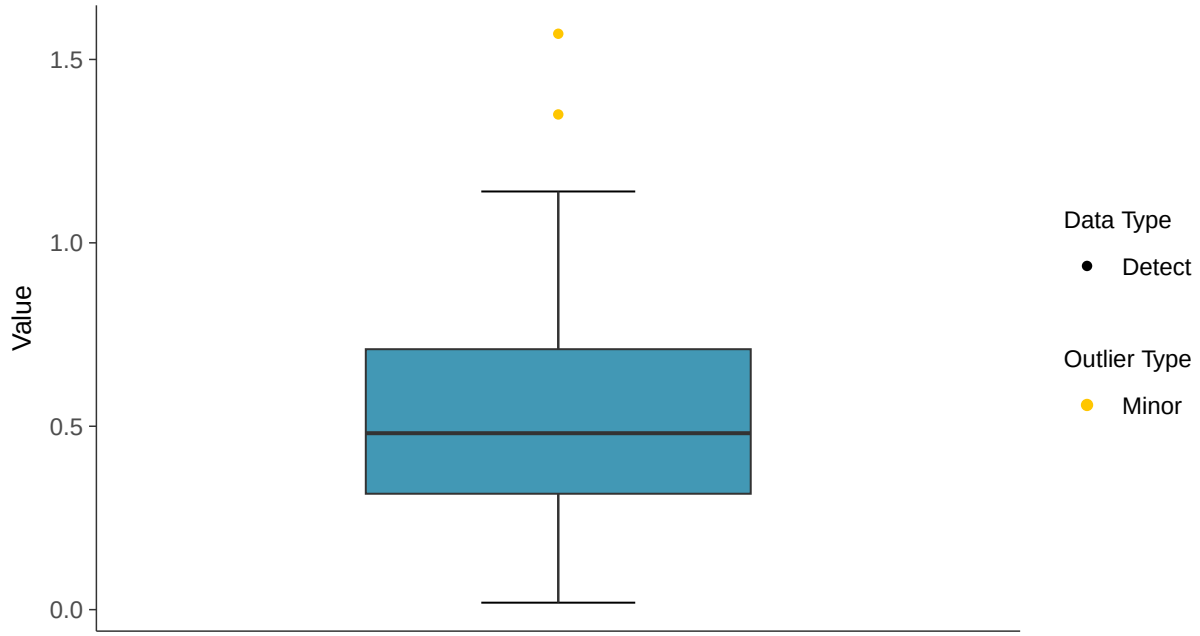
ID: 7_3_120





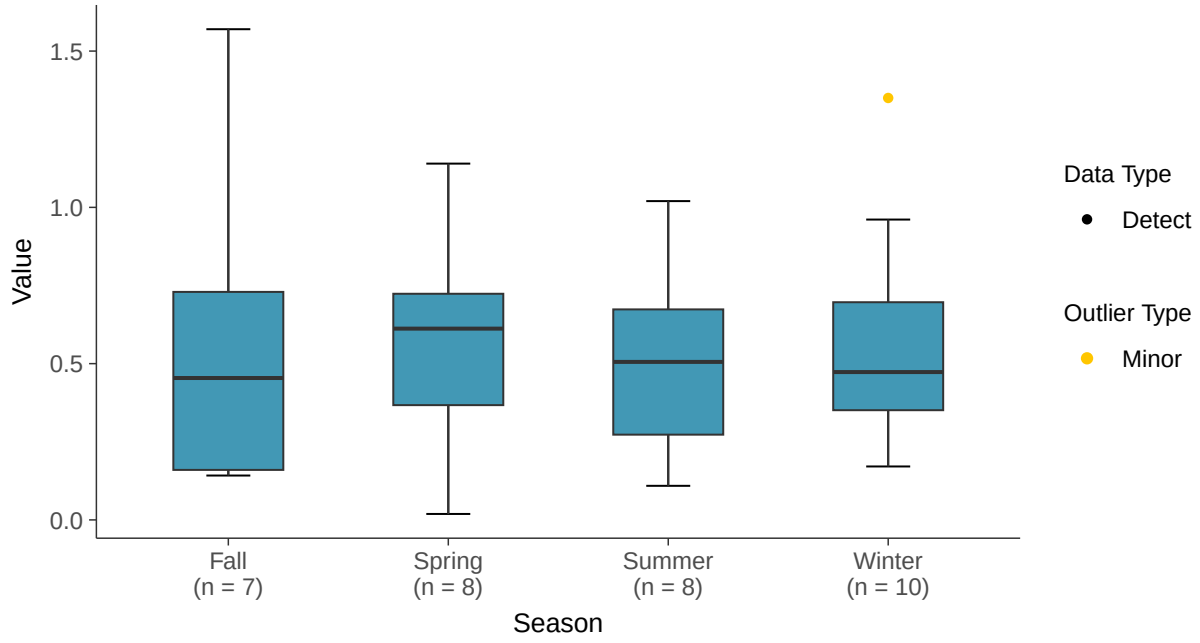
Boxplot

Radium-228, MW-4 (pCi/L)



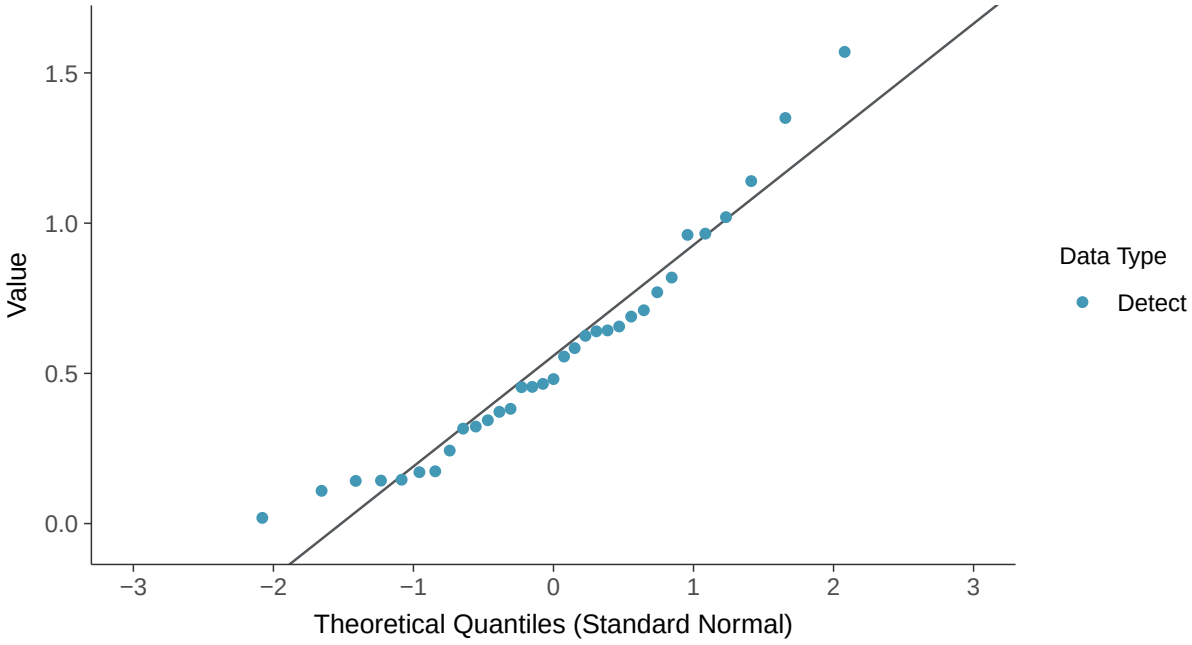
Boxplot by Season

Radium-228, MW-4 (pCi/L)



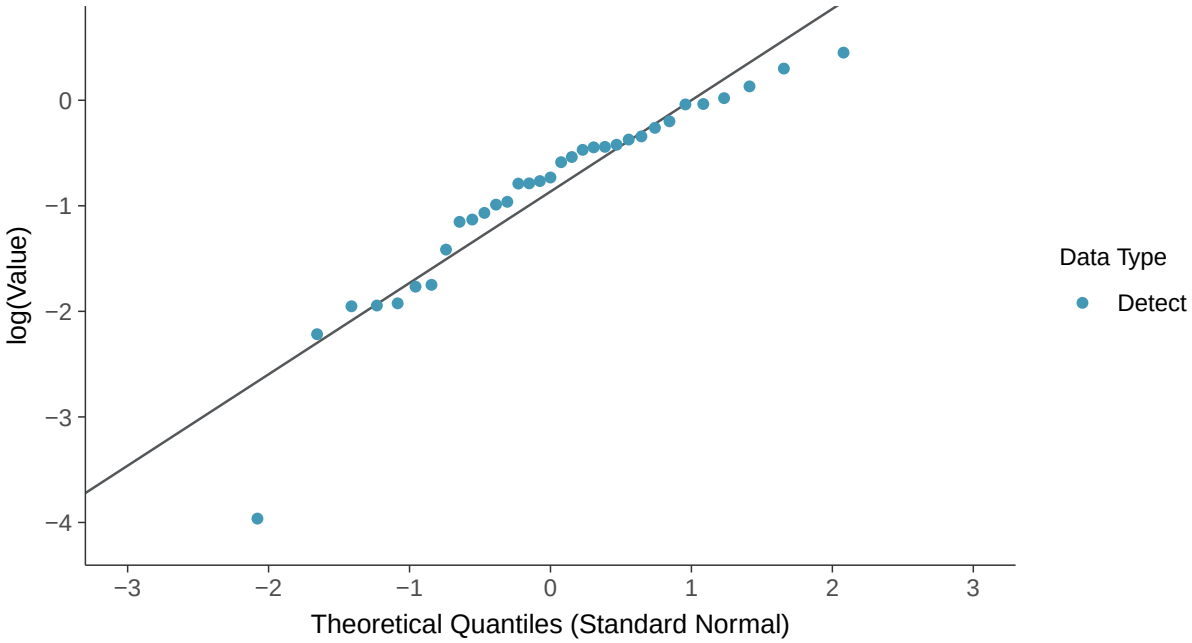
Normal Q-Q plot

Radium-228, MW-4 (pCi/L)



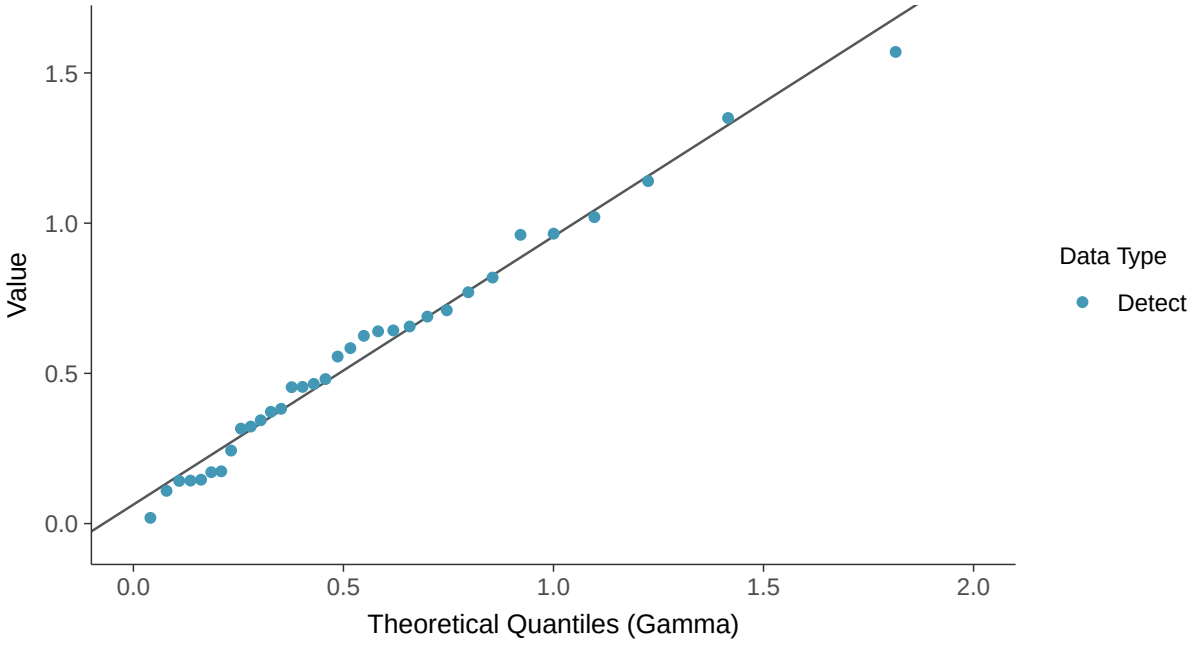
Lognormal Q-Q plot

Radium-228, MW-4 (pCi/L)



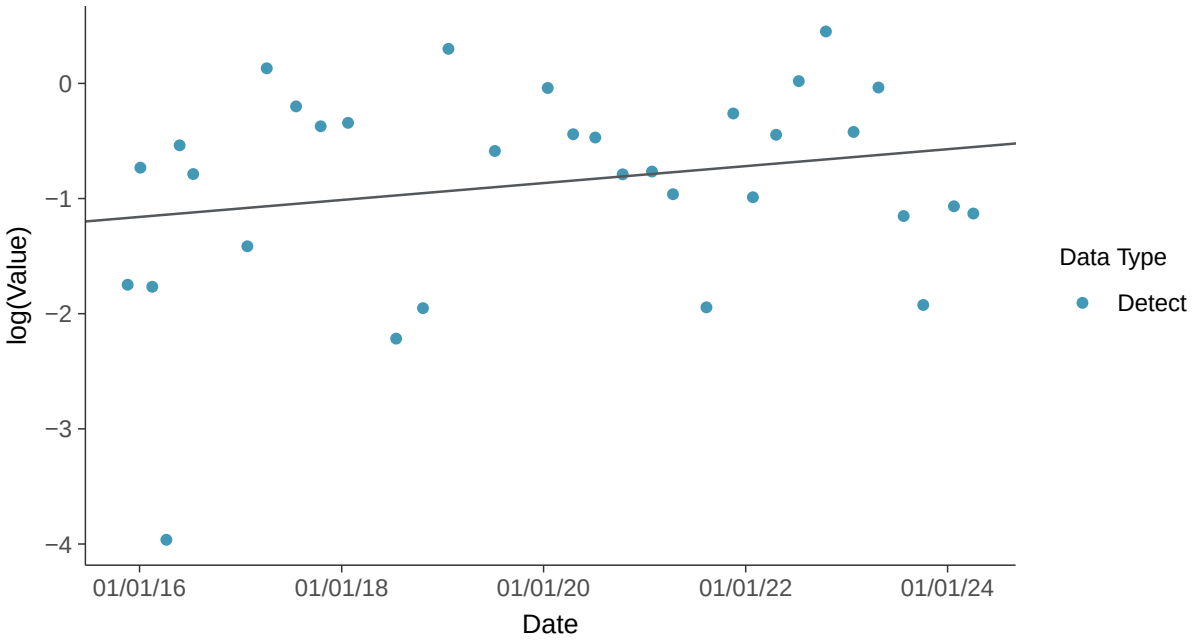
Gamma Q-Q plot

Radium-228, MW-4 (pCi/L)



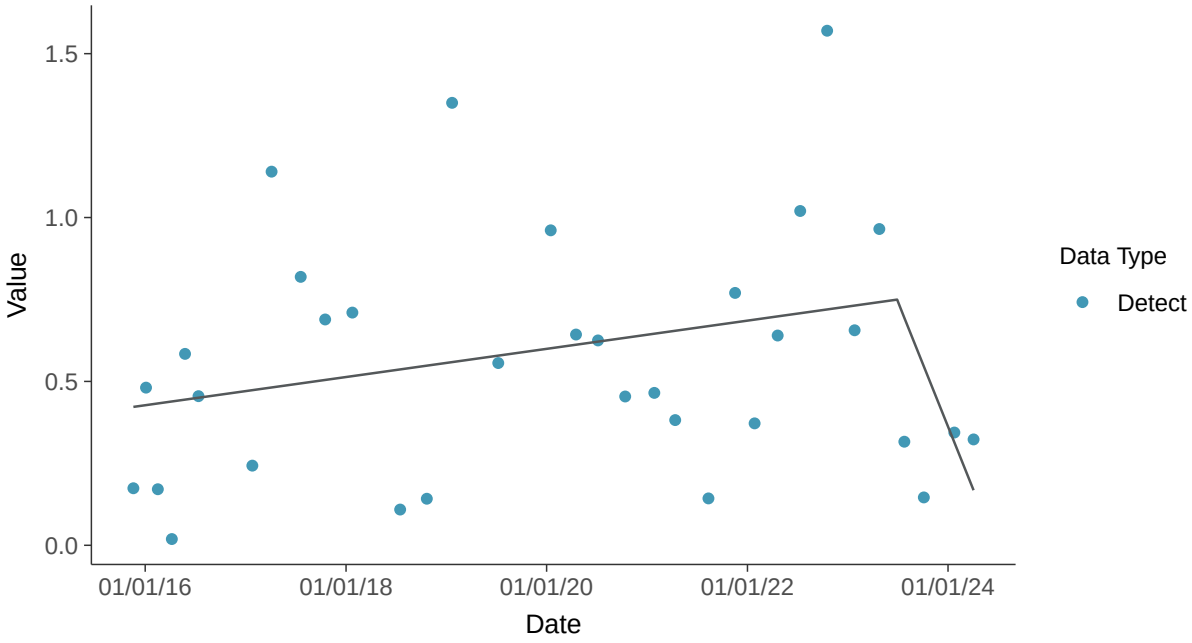
Trend Regression: Lognormal MLE

Radium-228, MW-4 (pCi/L)



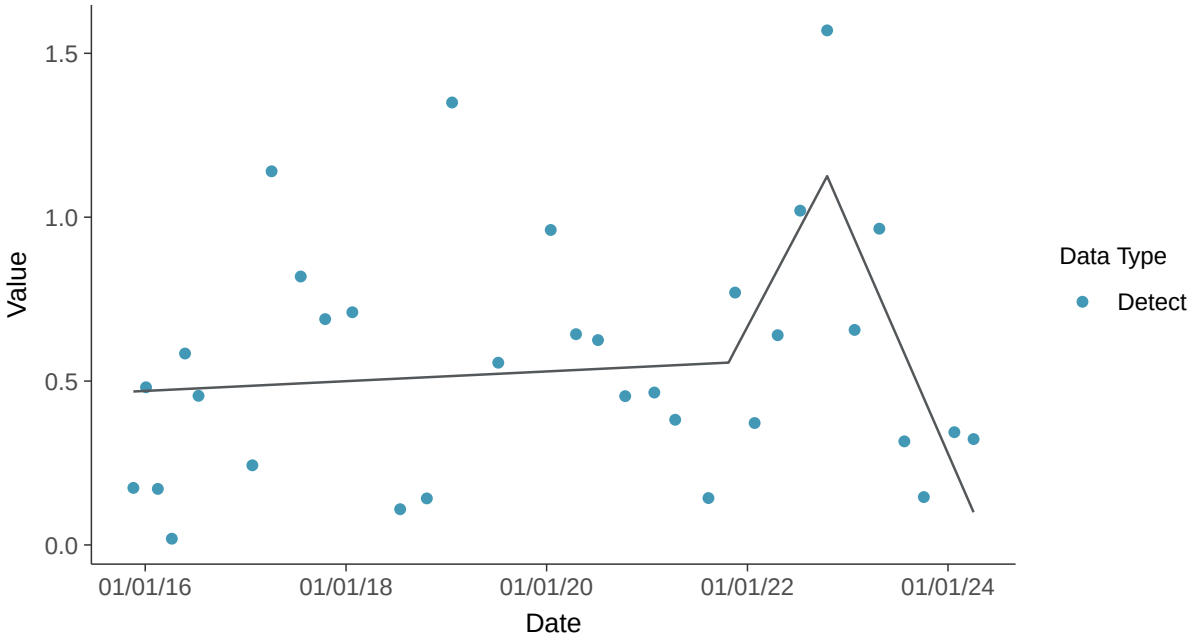
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-4 (pCi/L)



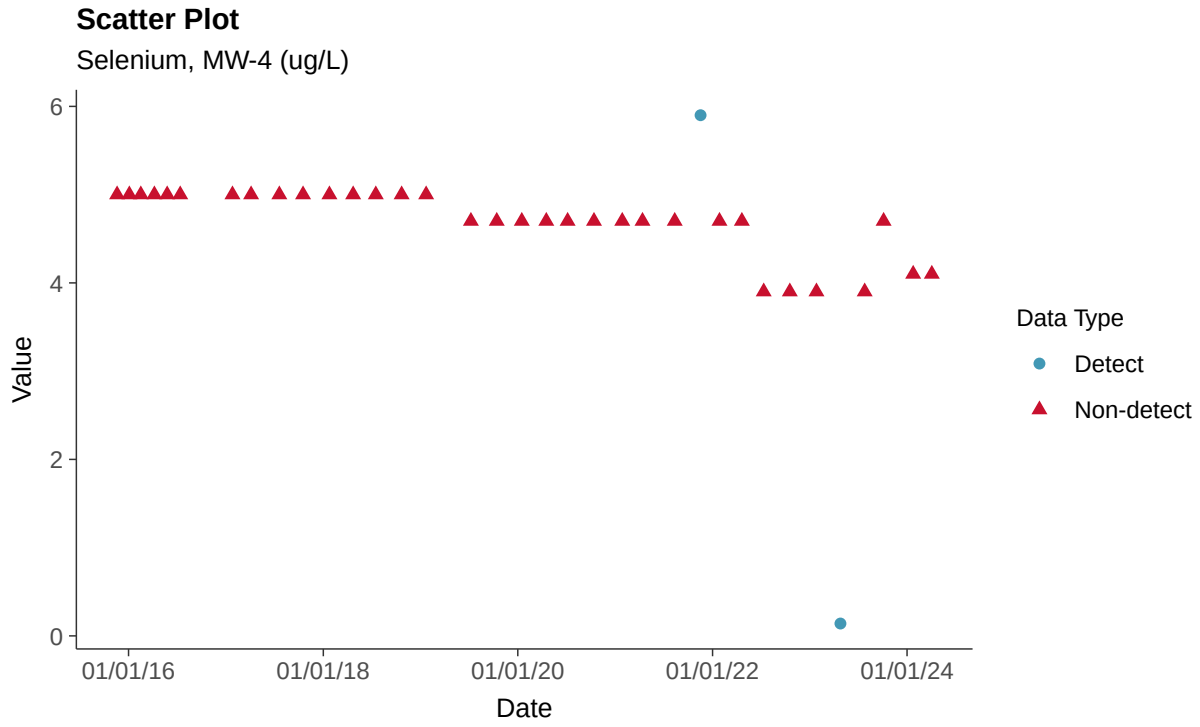
Trend Regression: Piecewise Linear-Linear-Linear

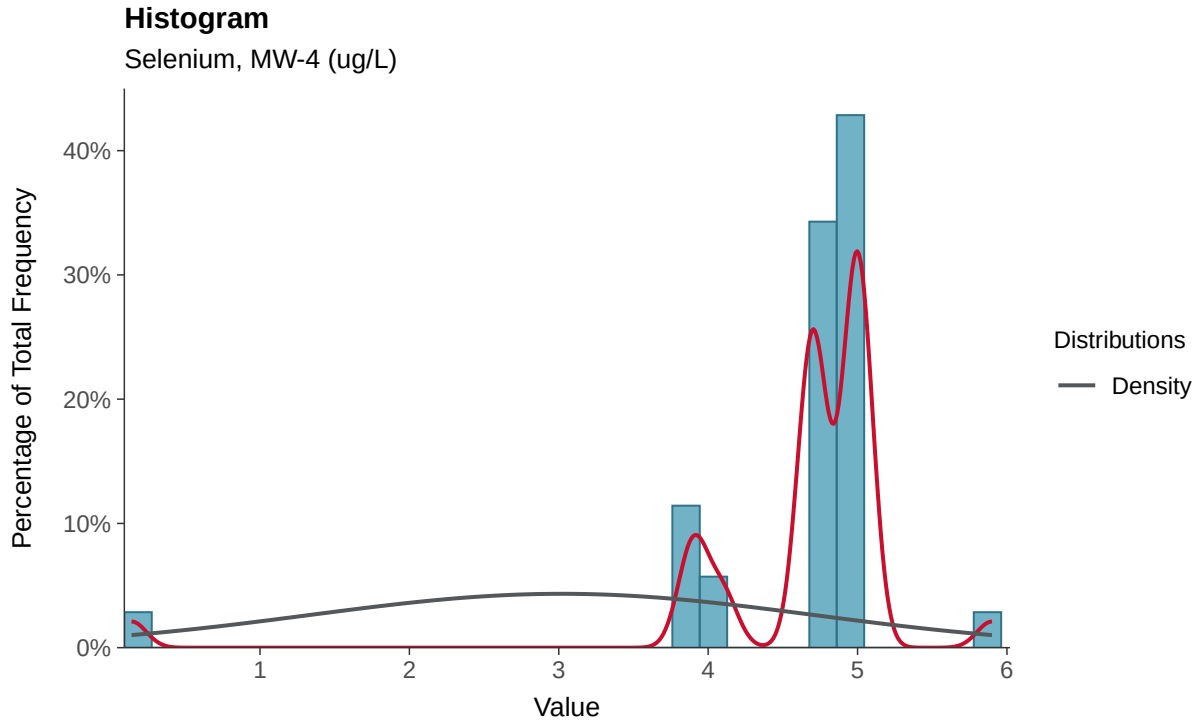
Radium-228, MW-4 (pCi/L)



App. IV: Selenium, MW-4

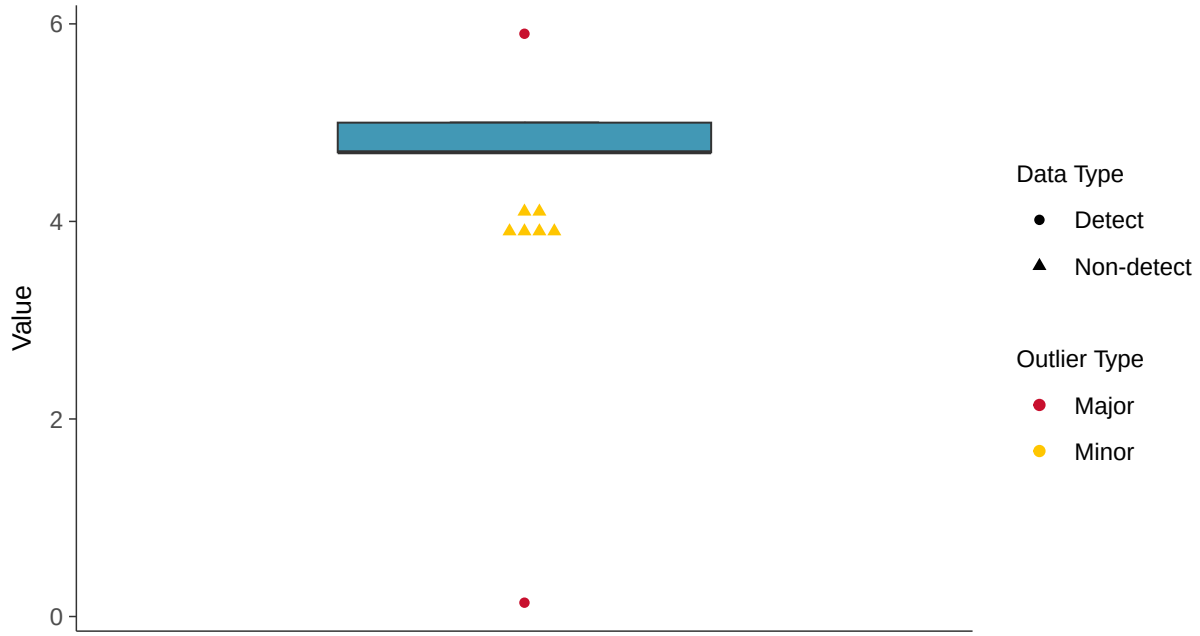
ID: 7_3_121





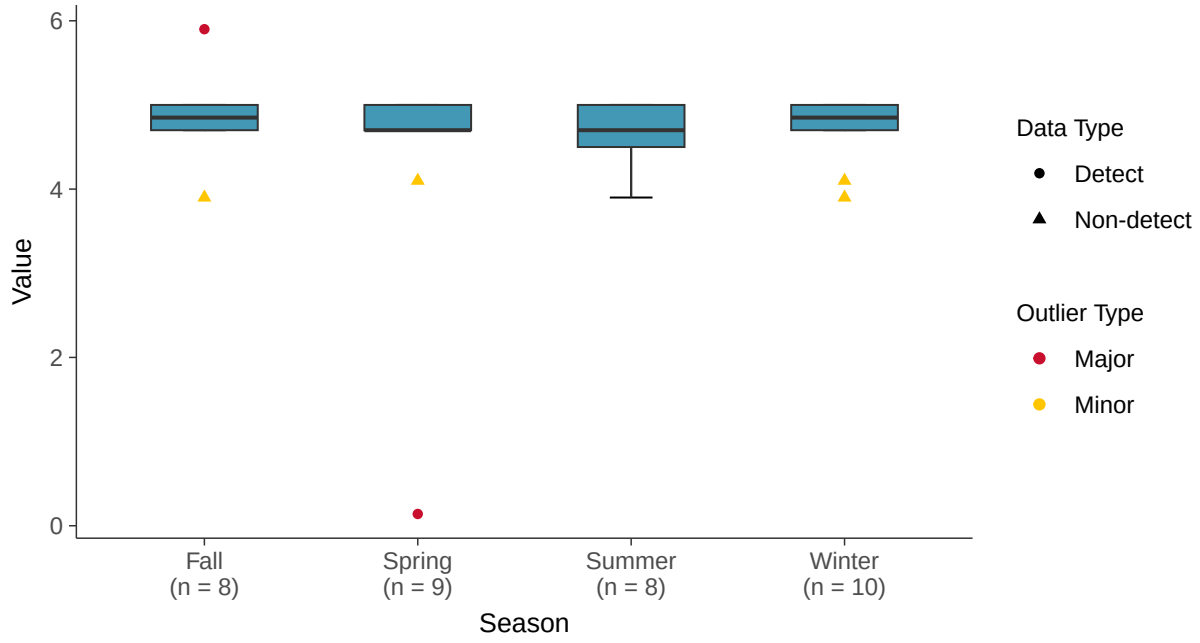
Boxplot

Selenium, MW-4 (ug/L)



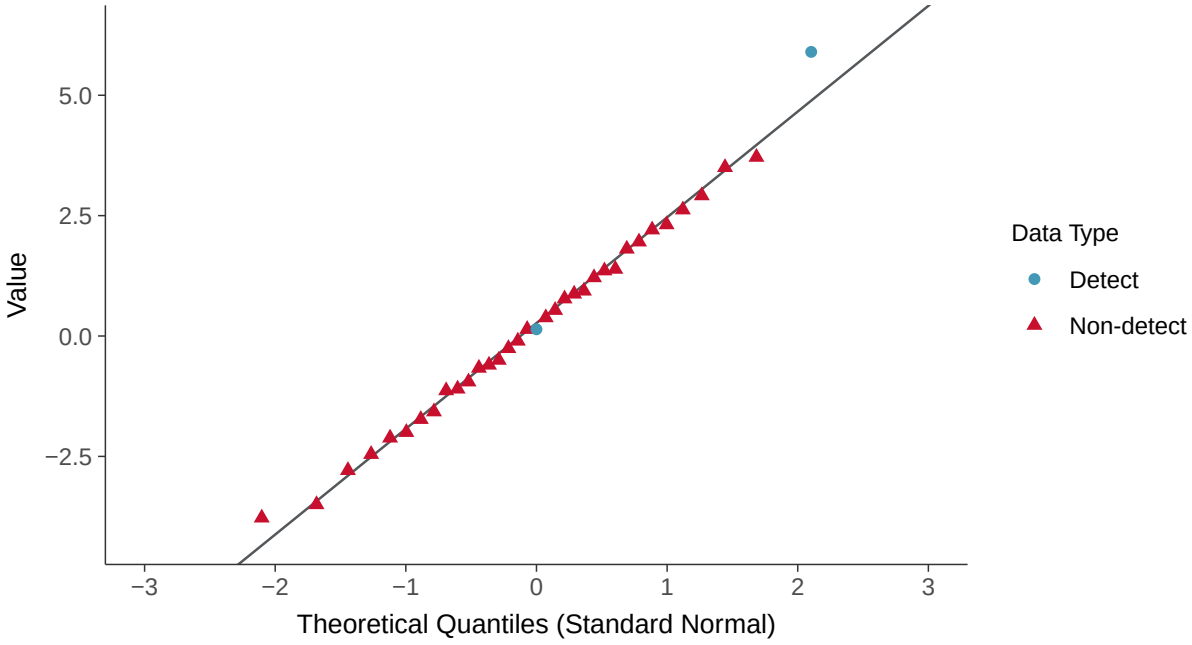
Boxplot by Season

Selenium, MW-4 (ug/L)



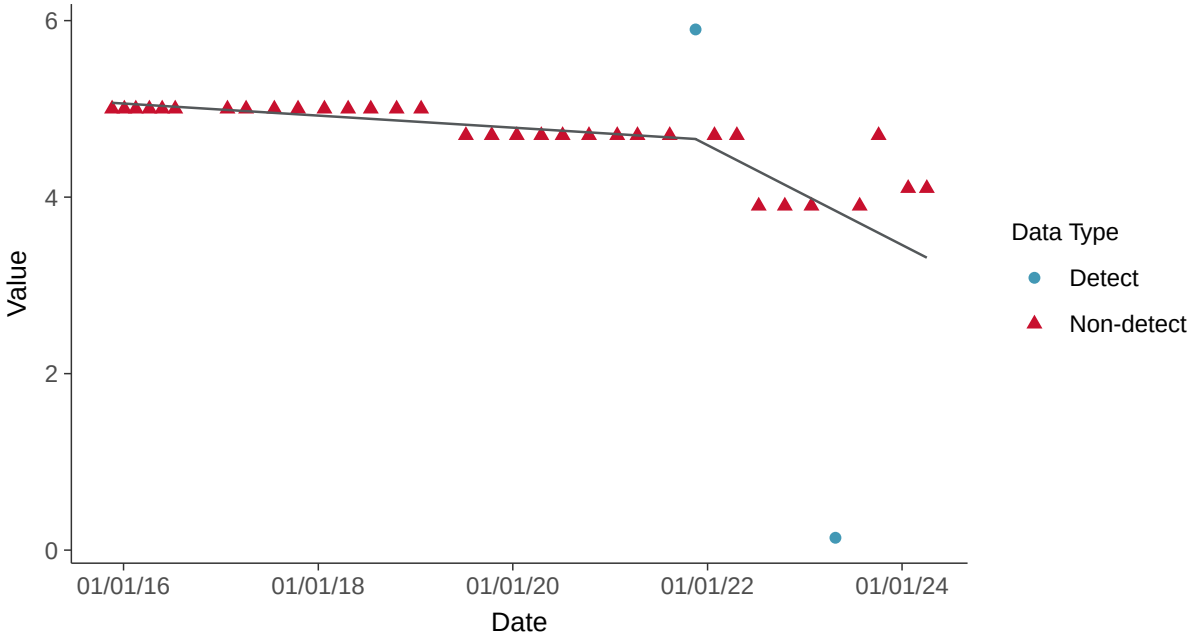
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-4 (ug/L)



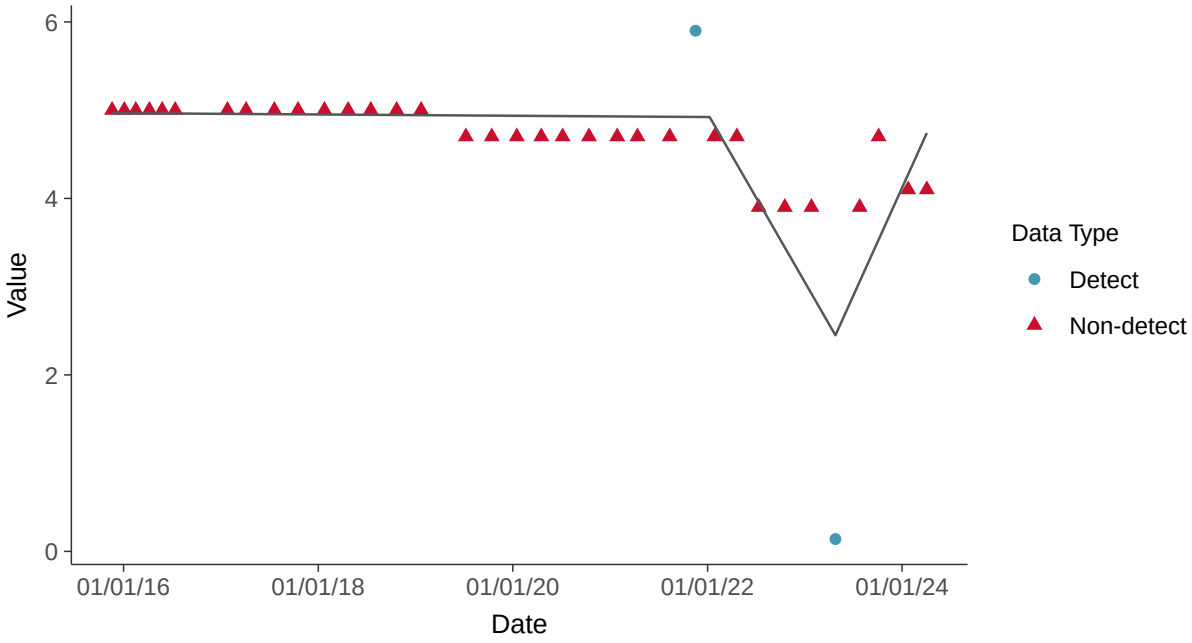
Trend Regression: Piecewise Linear-Linear

Selenium, MW-4 (ug/L)



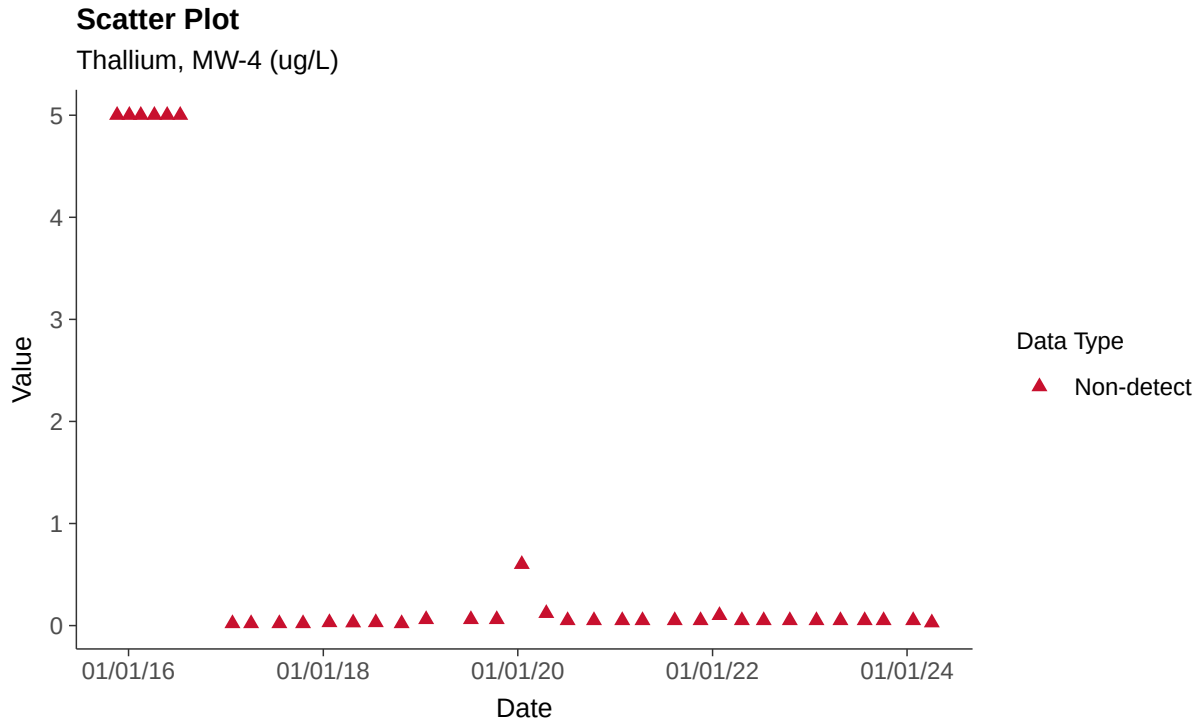
Trend Regression: Piecewise Linear-Linear-Linear

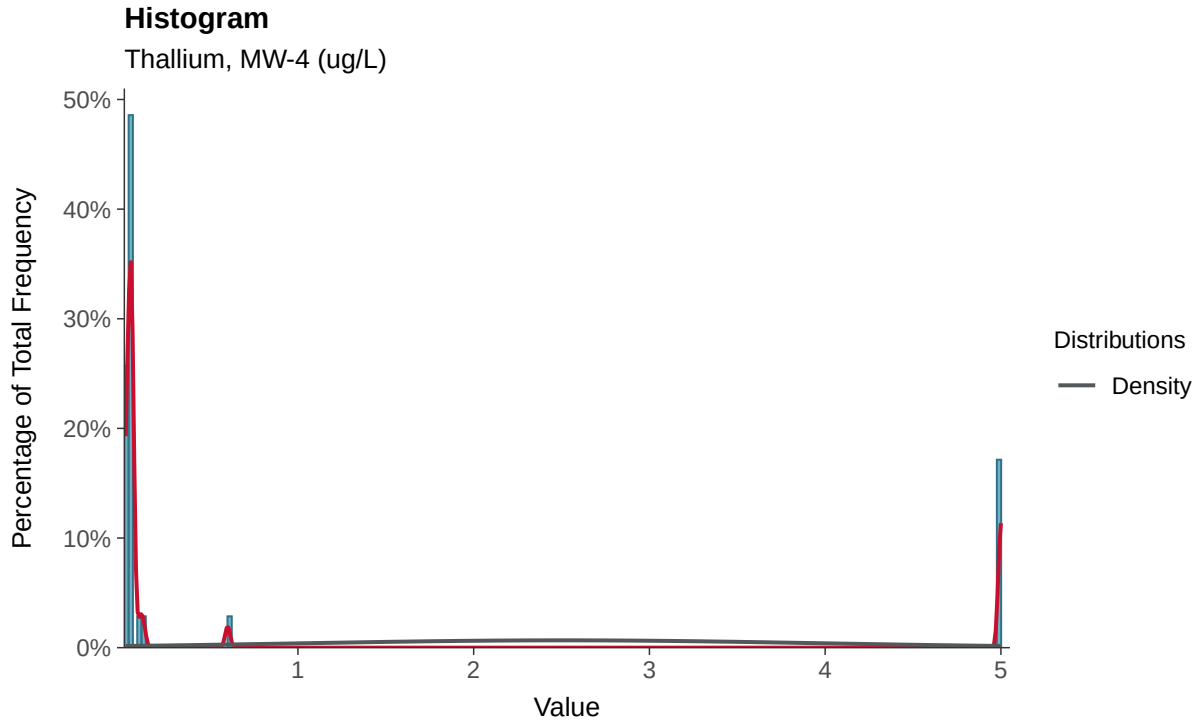
Selenium, MW-4 (ug/L)



App. IV: Thallium, MW-4

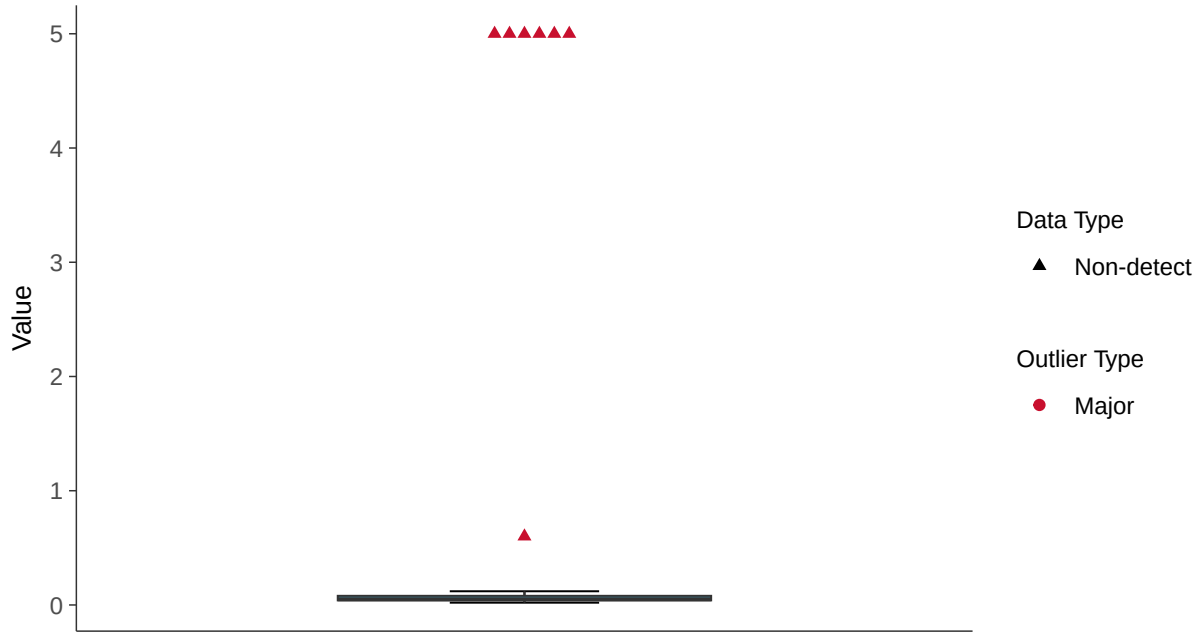
ID: 7_3_124





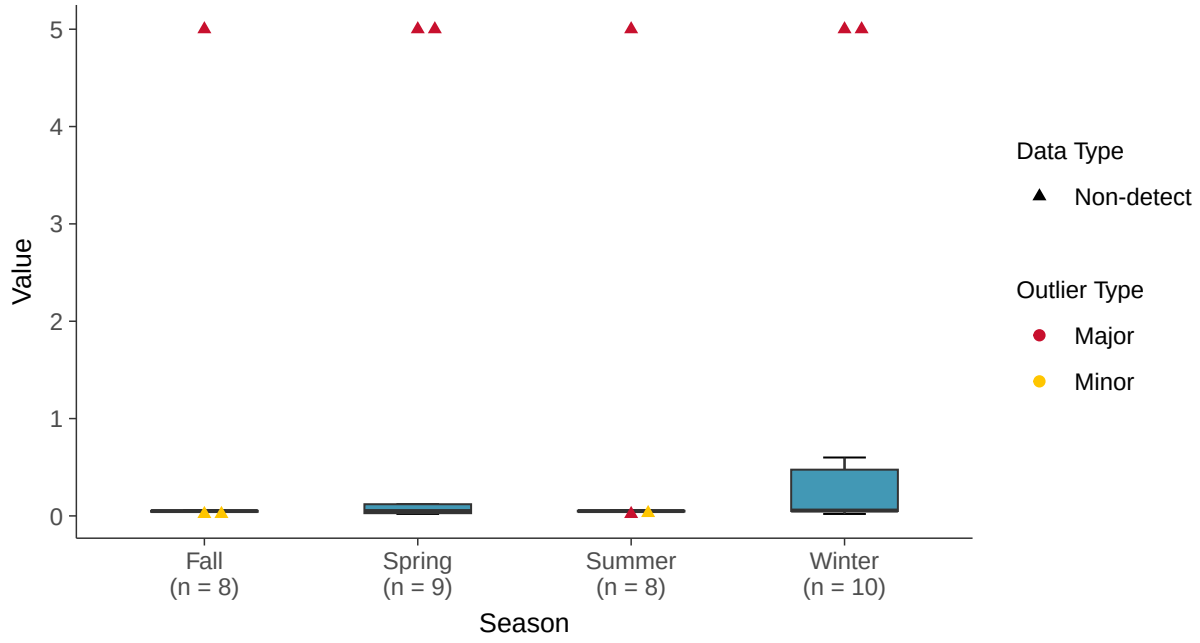
Boxplot

Thallium, MW-4 (ug/L)



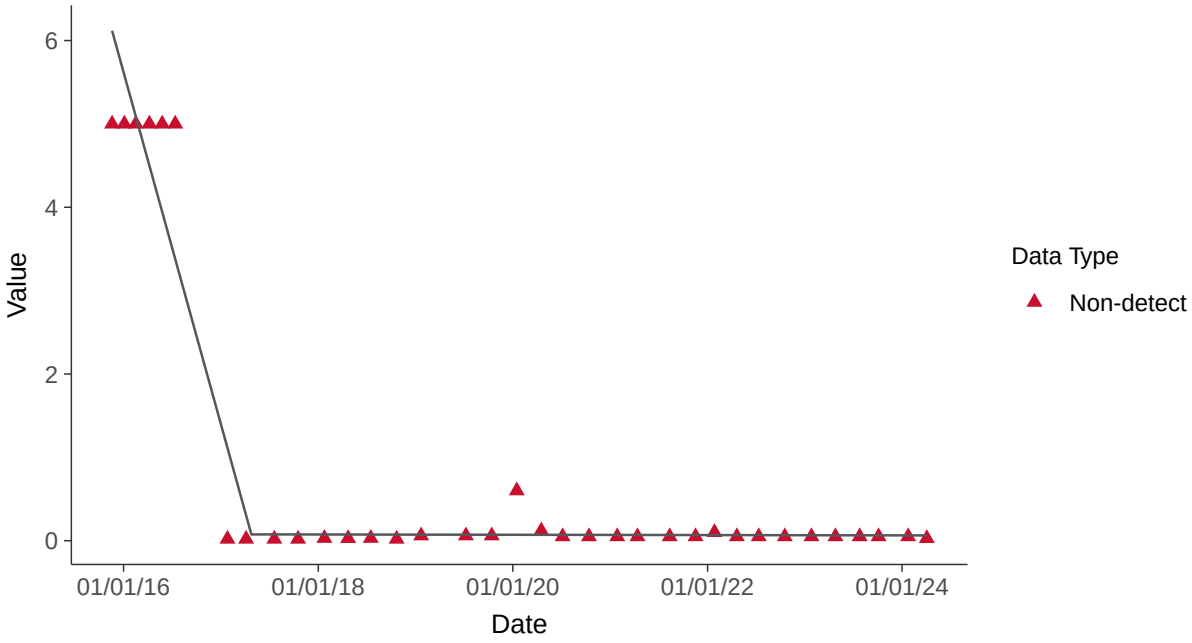
Boxplot by Season

Thallium, MW-4 (ug/L)



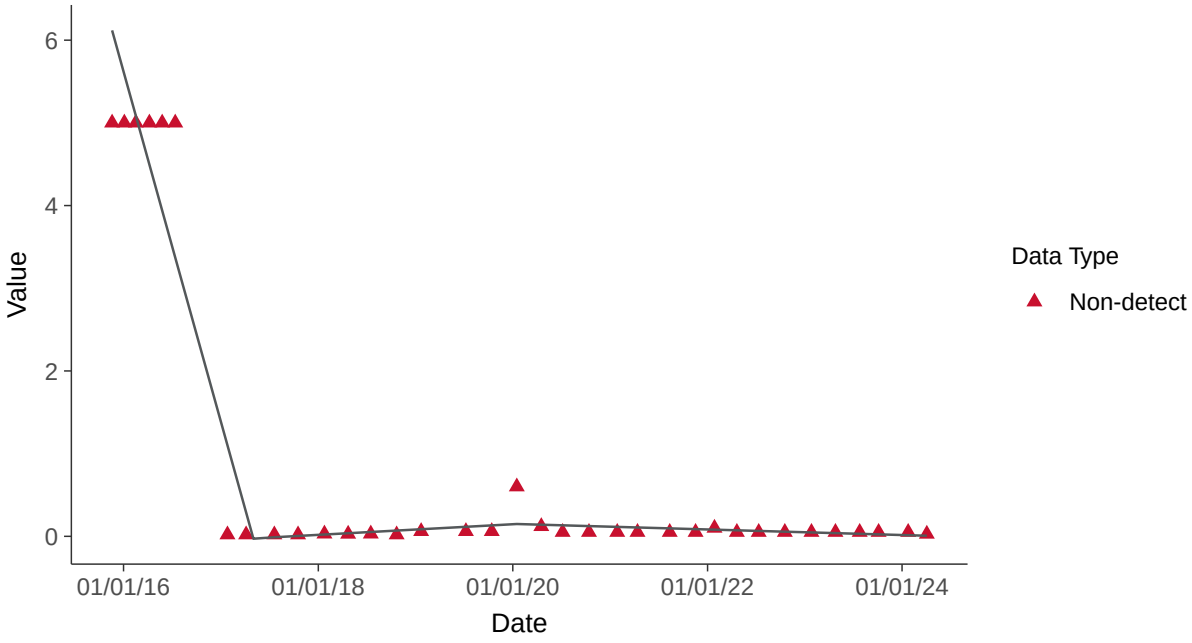
Trend Regression: Piecewise Linear-Linear

Thallium, MW-4 (ug/L)



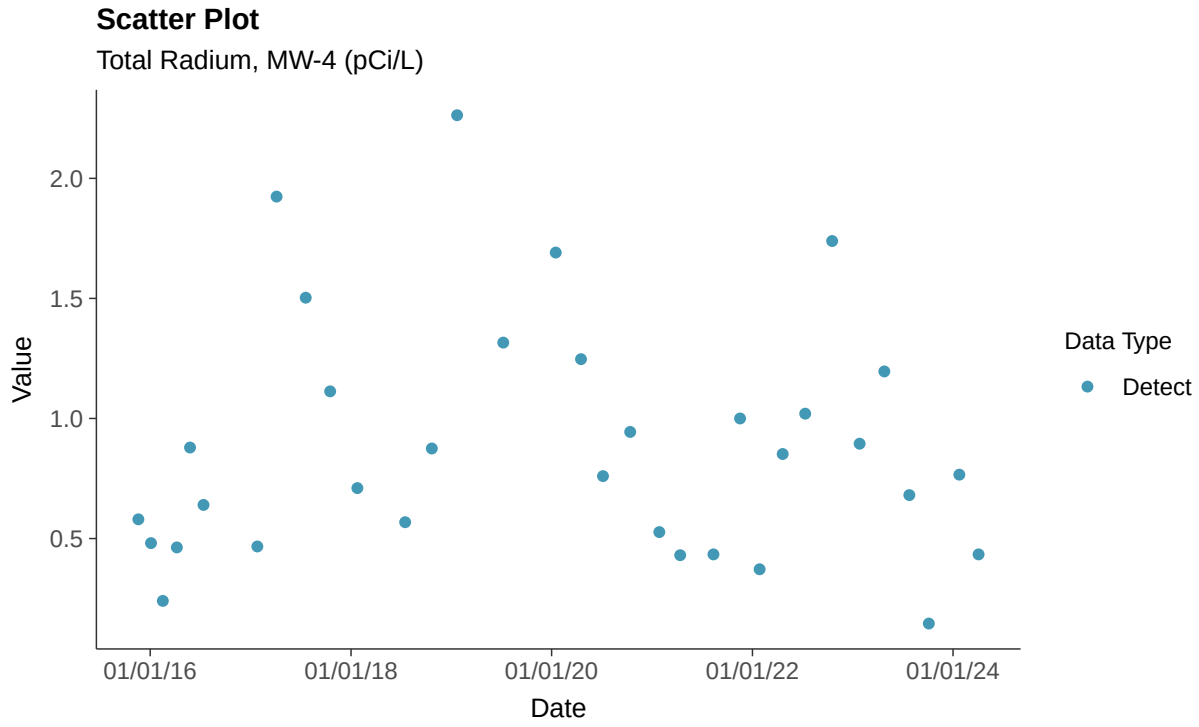
Trend Regression: Piecewise Linear-Linear-Linear

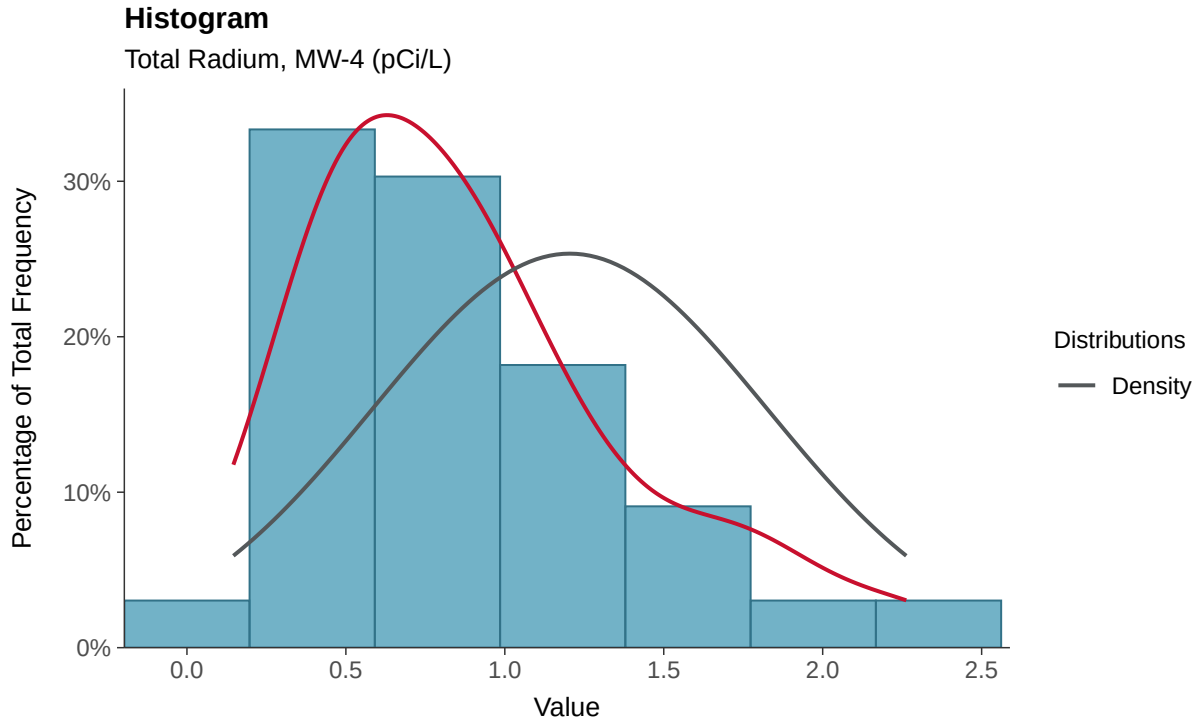
Thallium, MW-4 (ug/L)



App. IV: Total Radium, MW-4

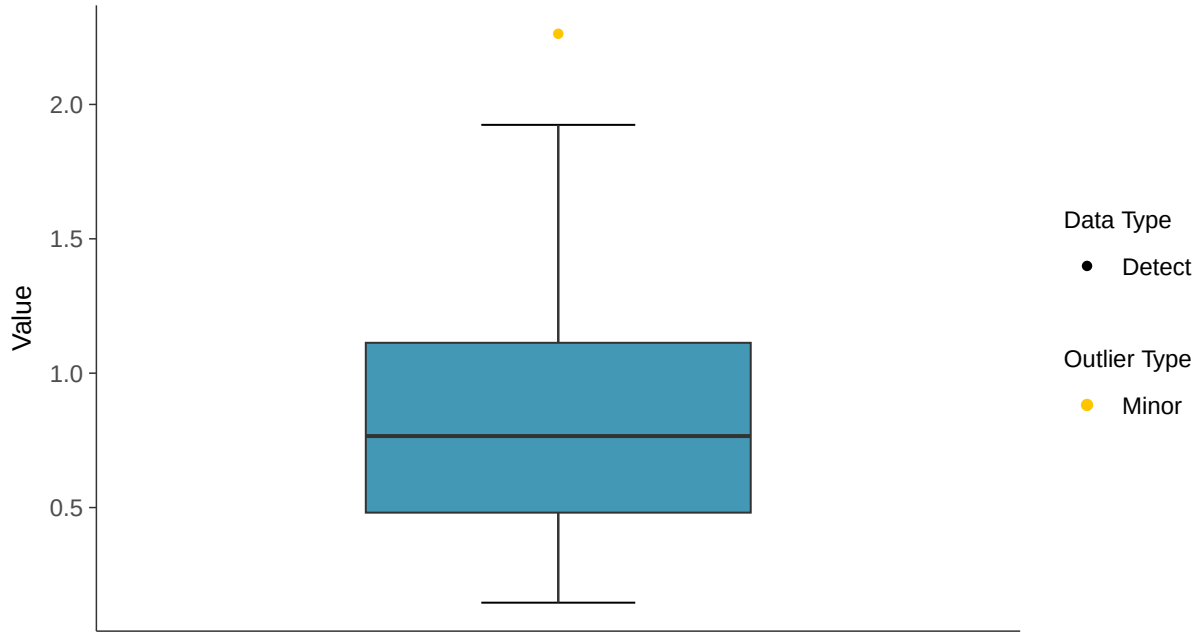
ID: 7_3_126





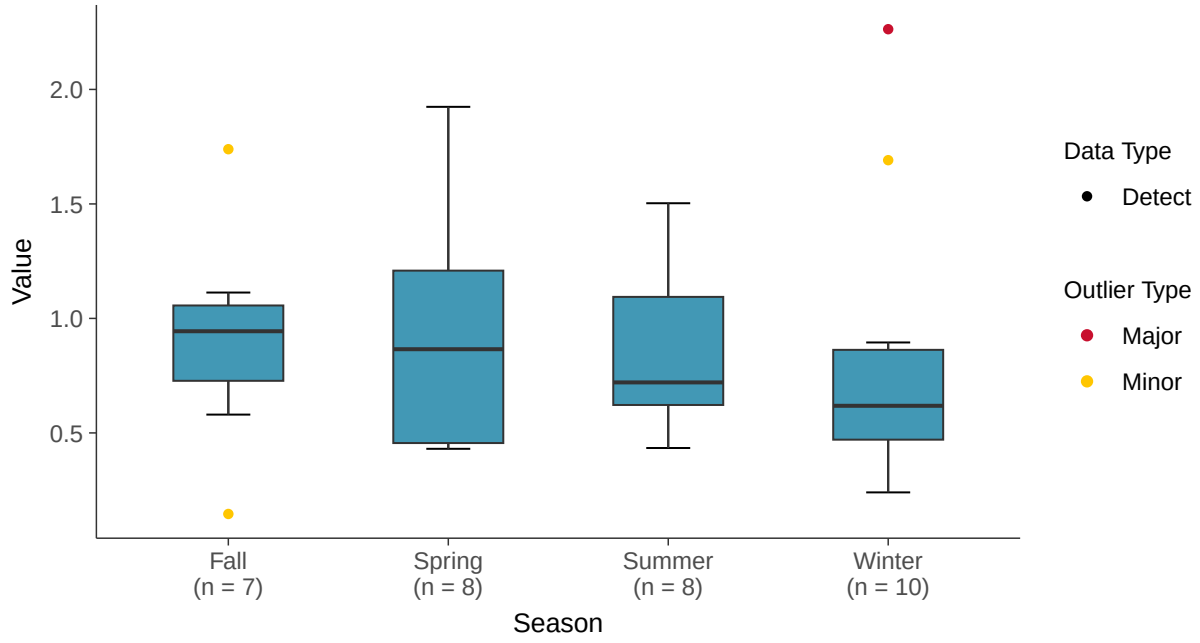
Boxplot

Total Radium, MW-4 (pCi/L)



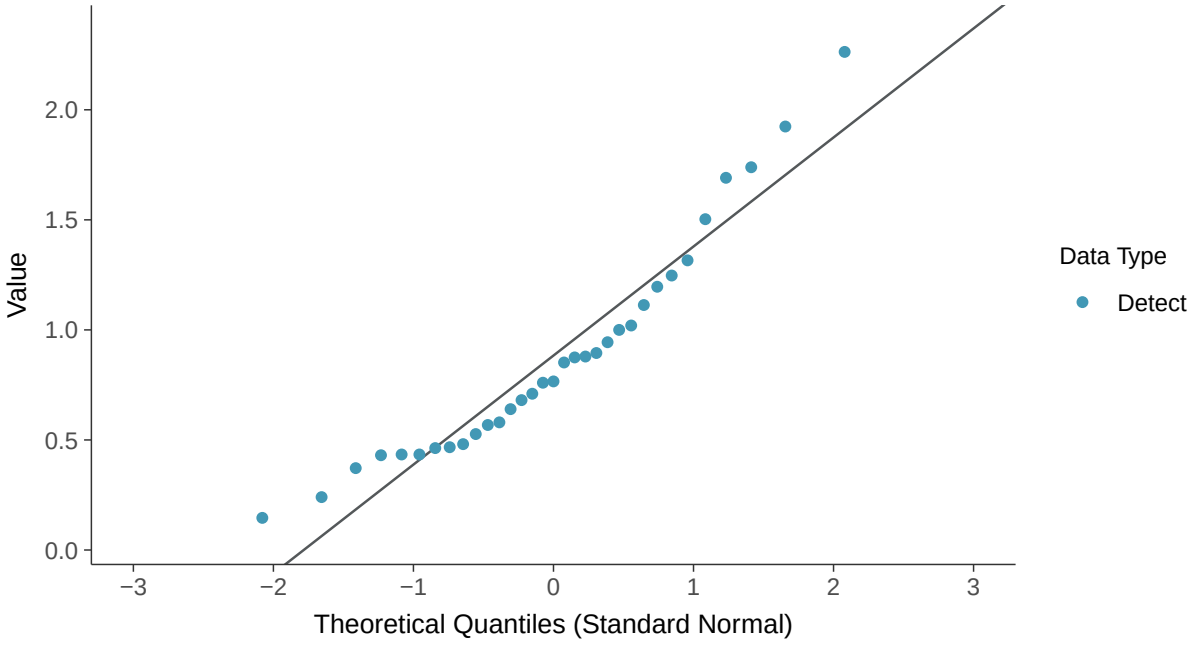
Boxplot by Season

Total Radium, MW-4 (pCi/L)



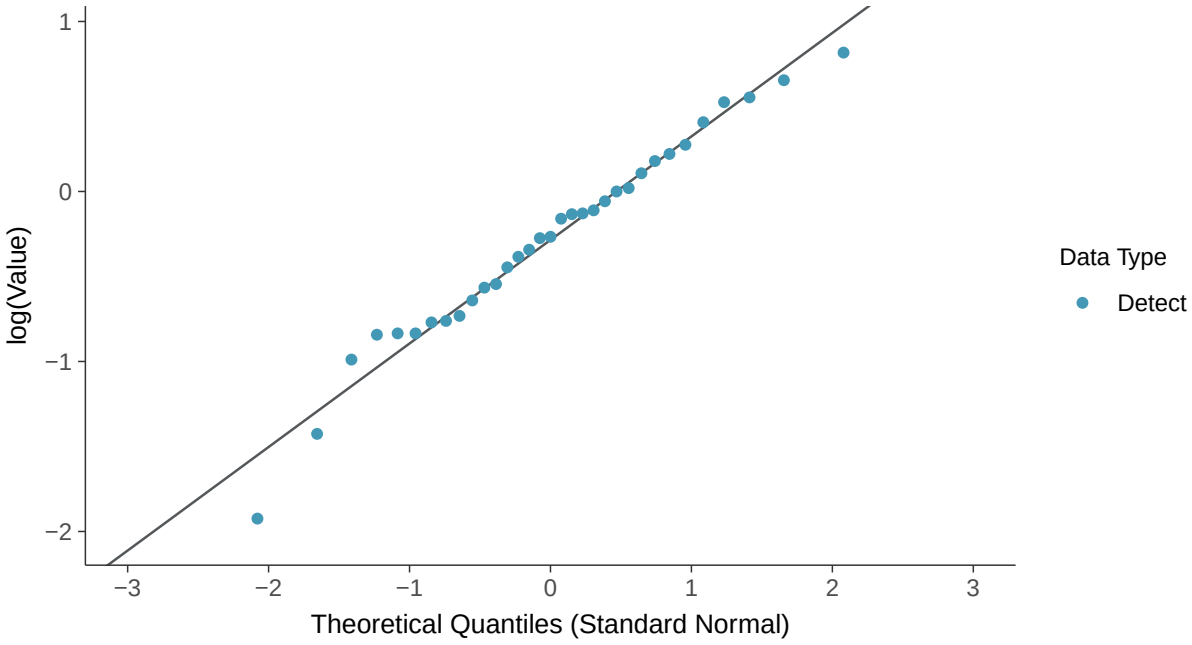
Normal Q-Q plot

Total Radium, MW-4 (pCi/L)



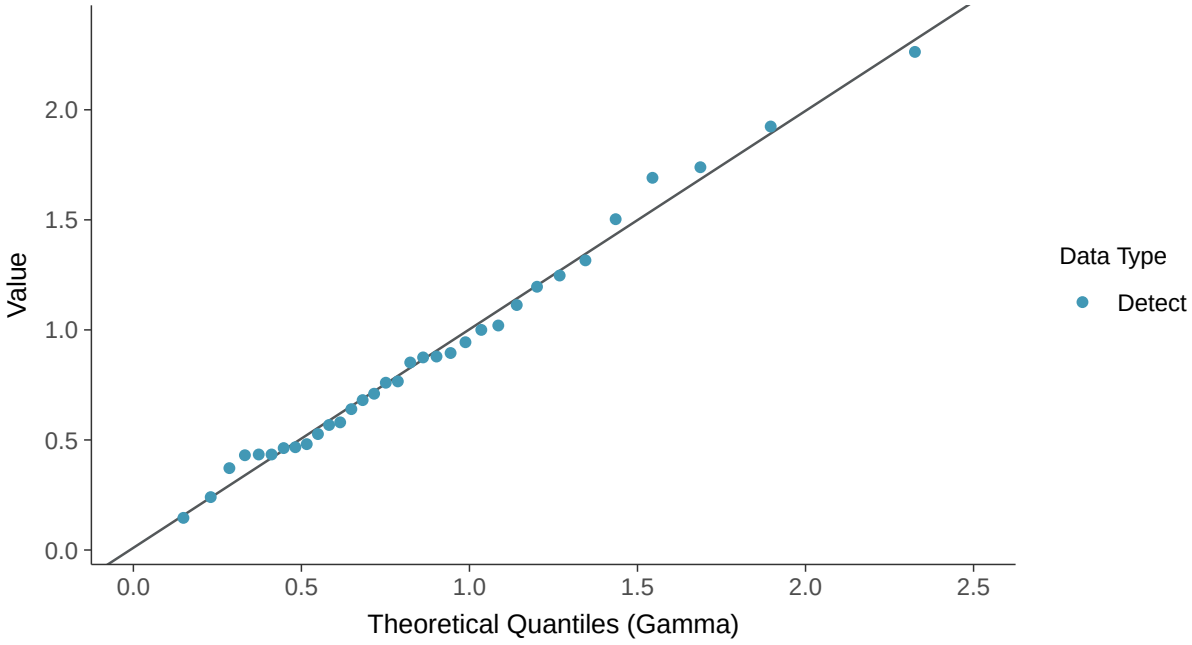
Lognormal Q-Q plot

Total Radium, MW-4 (pCi/L)



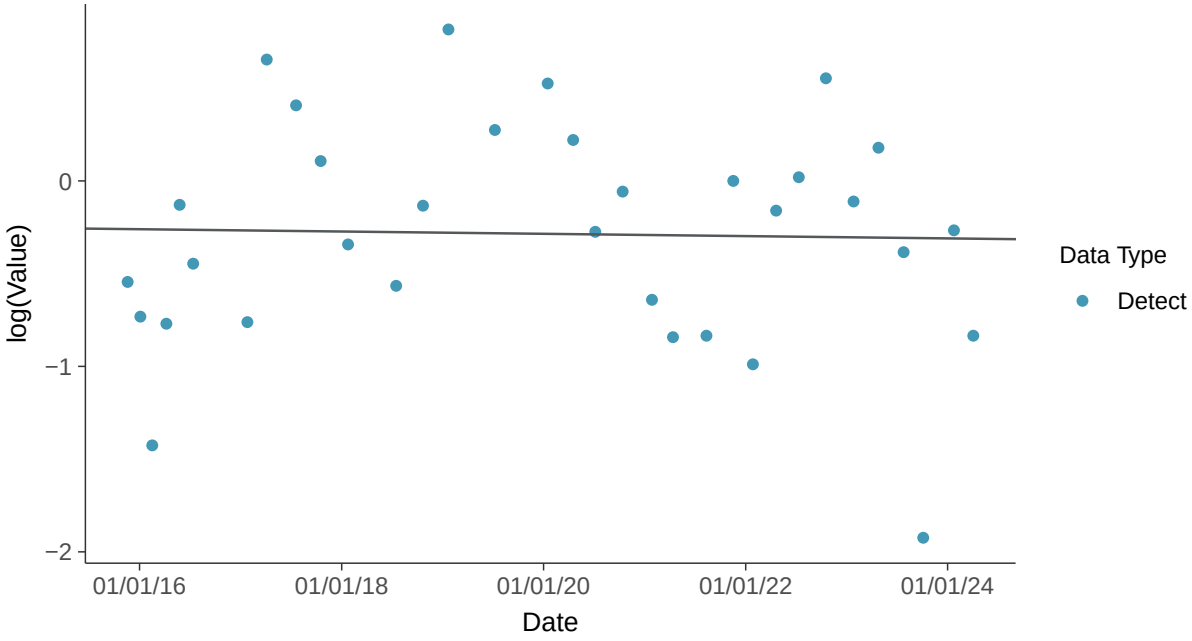
Gamma Q-Q plot

Total Radium, MW-4 (pCi/L)



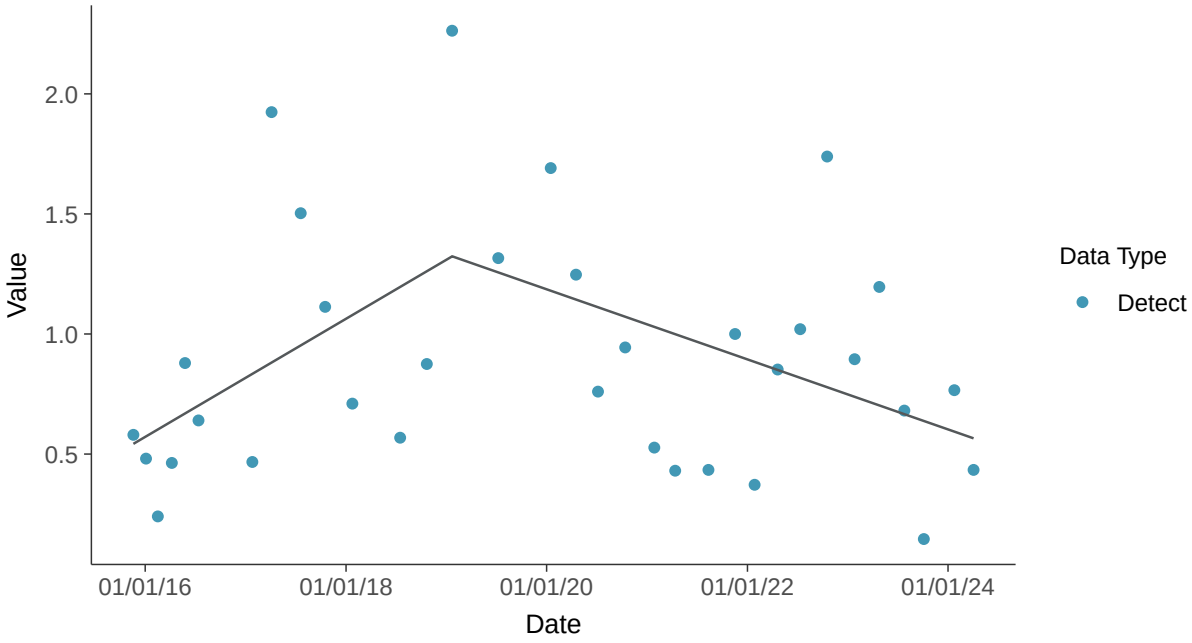
Trend Regression: Lognormal MLE

Total Radium, MW-4 (pCi/L)



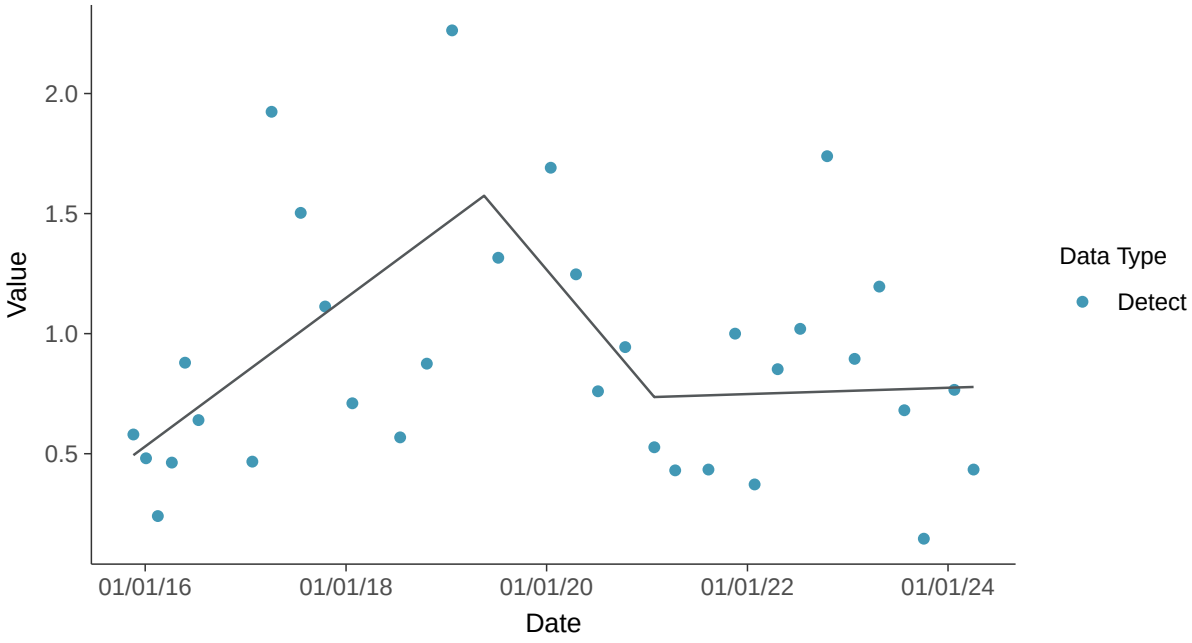
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-4 (pCi/L)



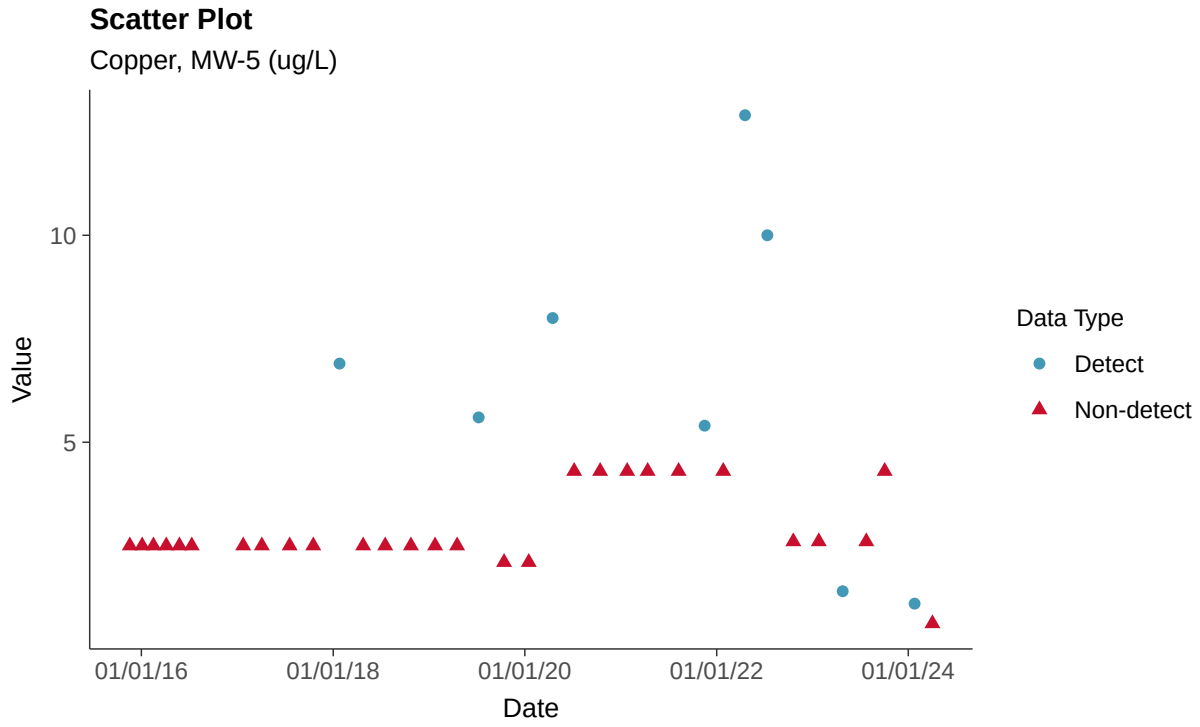
Trend Regression: Piecewise Linear-Linear-Linear

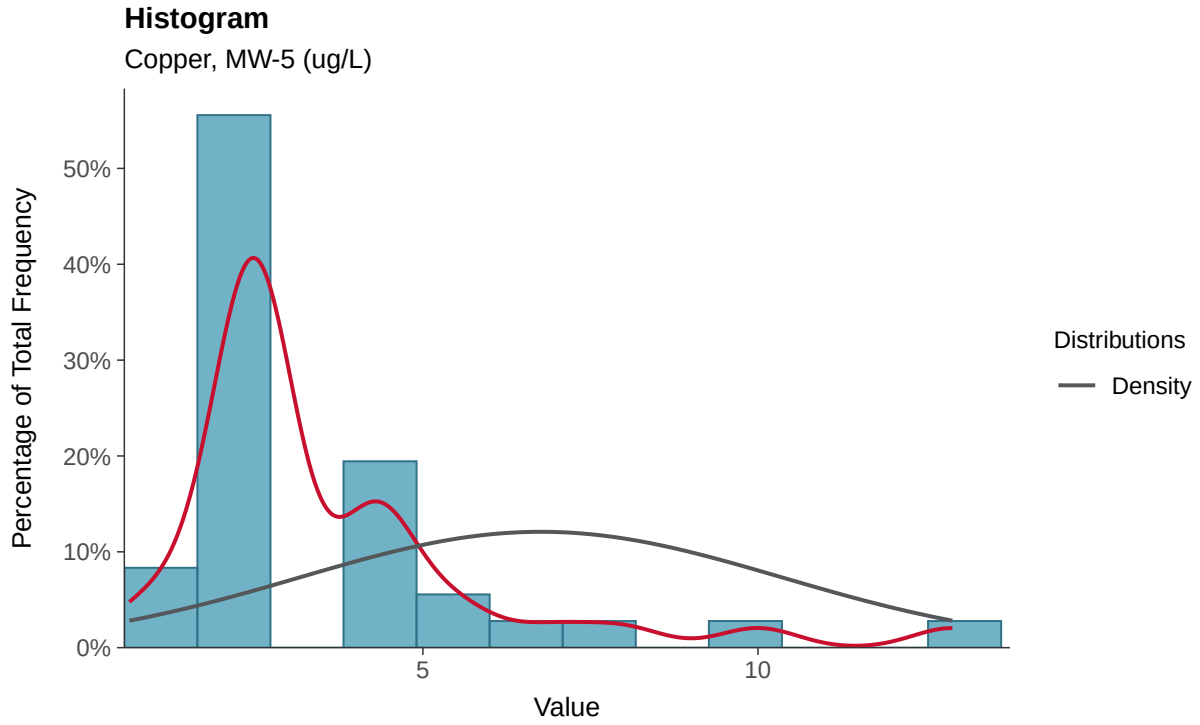
Total Radium, MW-4 (pCi/L)



App. I Metals: Copper, MW-5

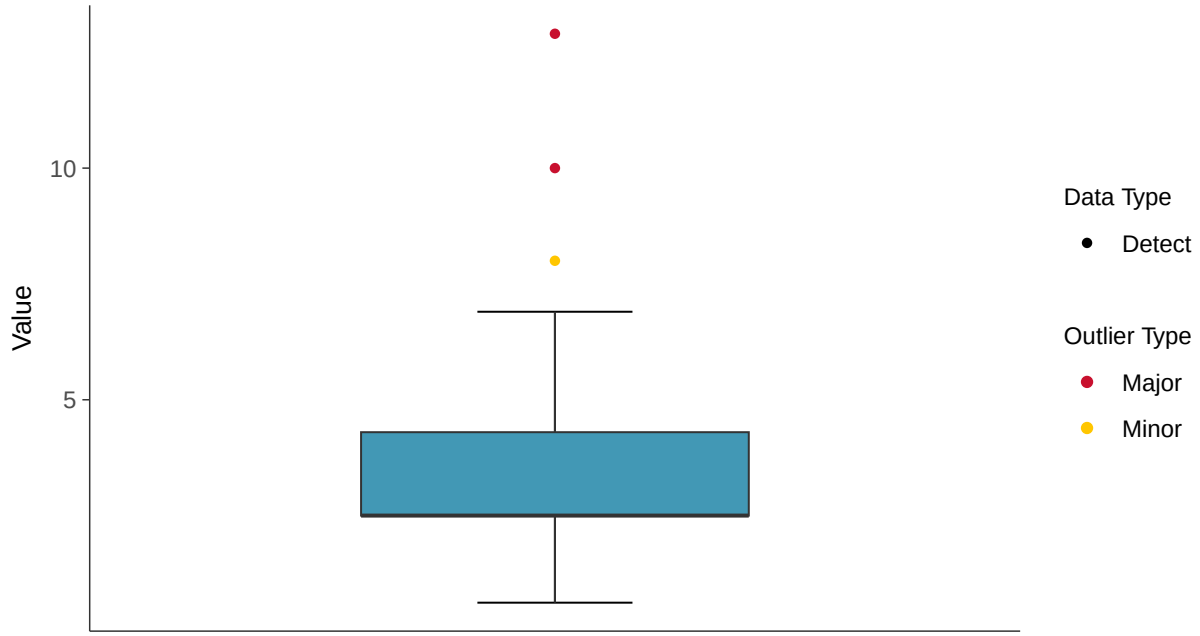
ID: 8_1_111





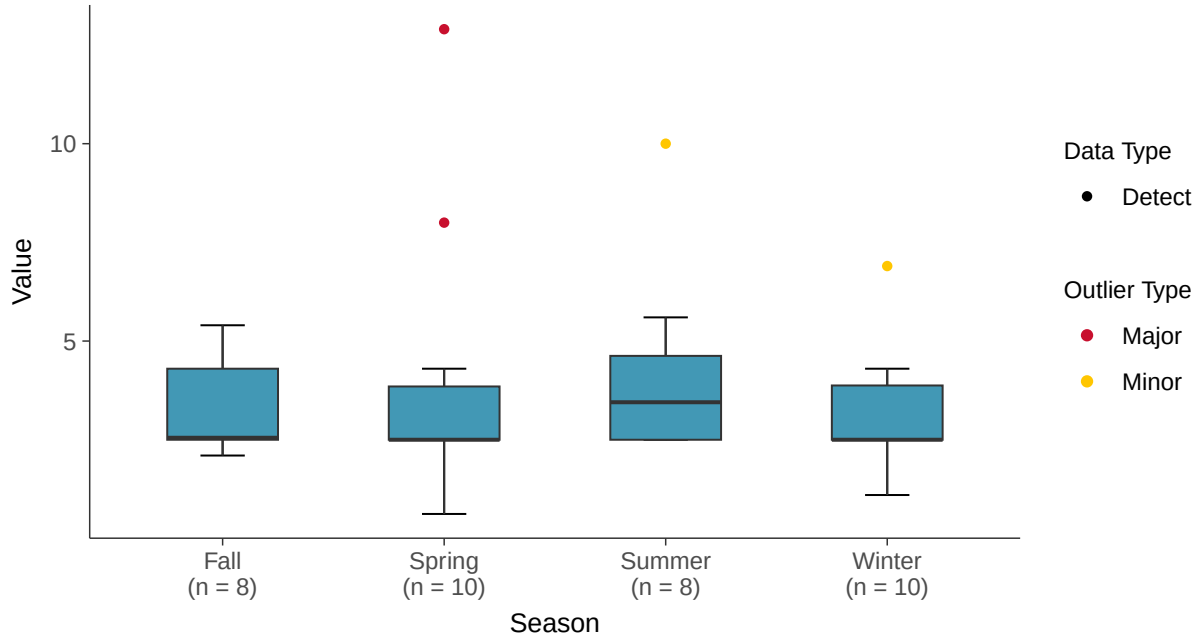
Boxplot

Copper, MW-5 (ug/L)



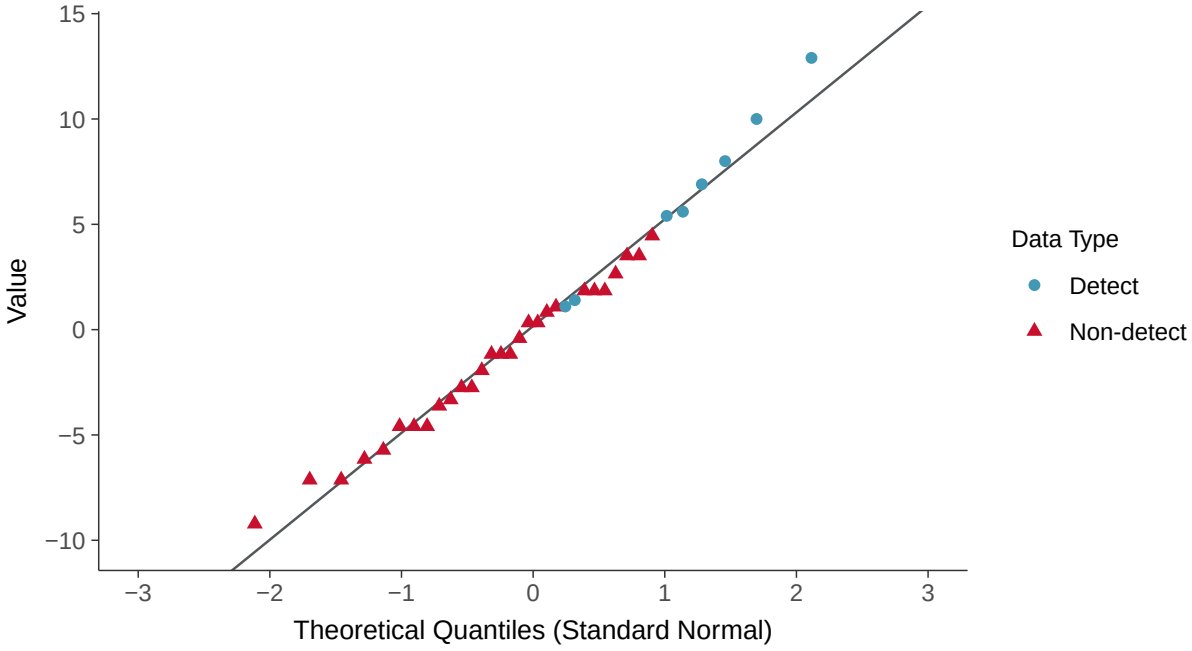
Boxplot by Season

Copper, MW-5 (ug/L)



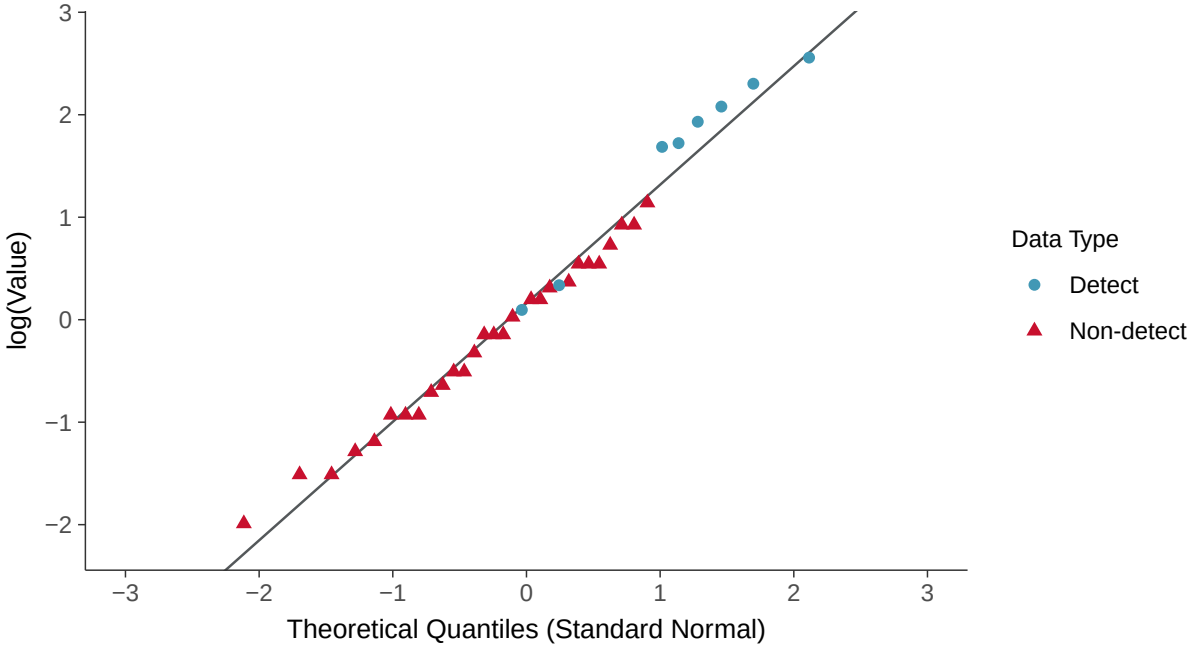
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



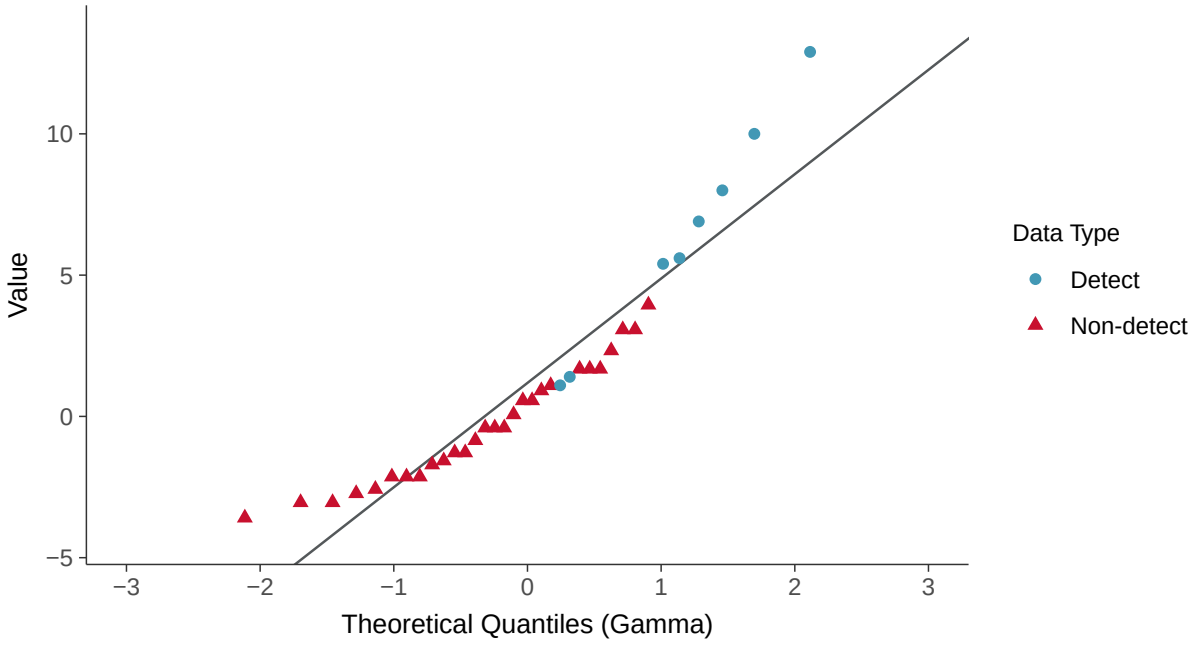
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



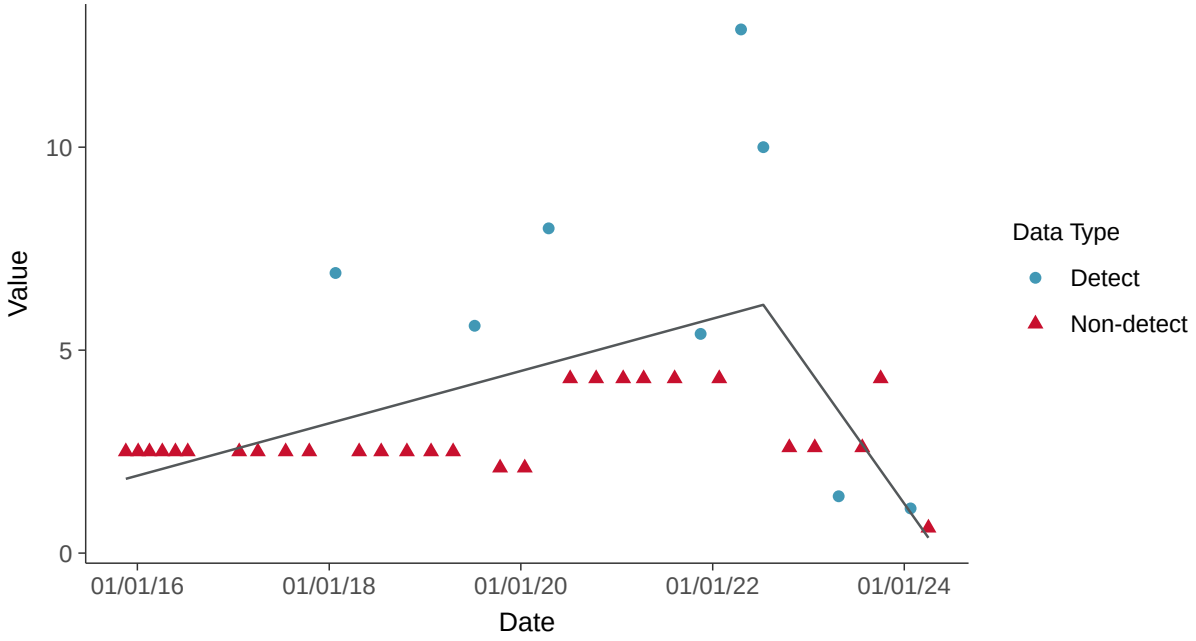
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



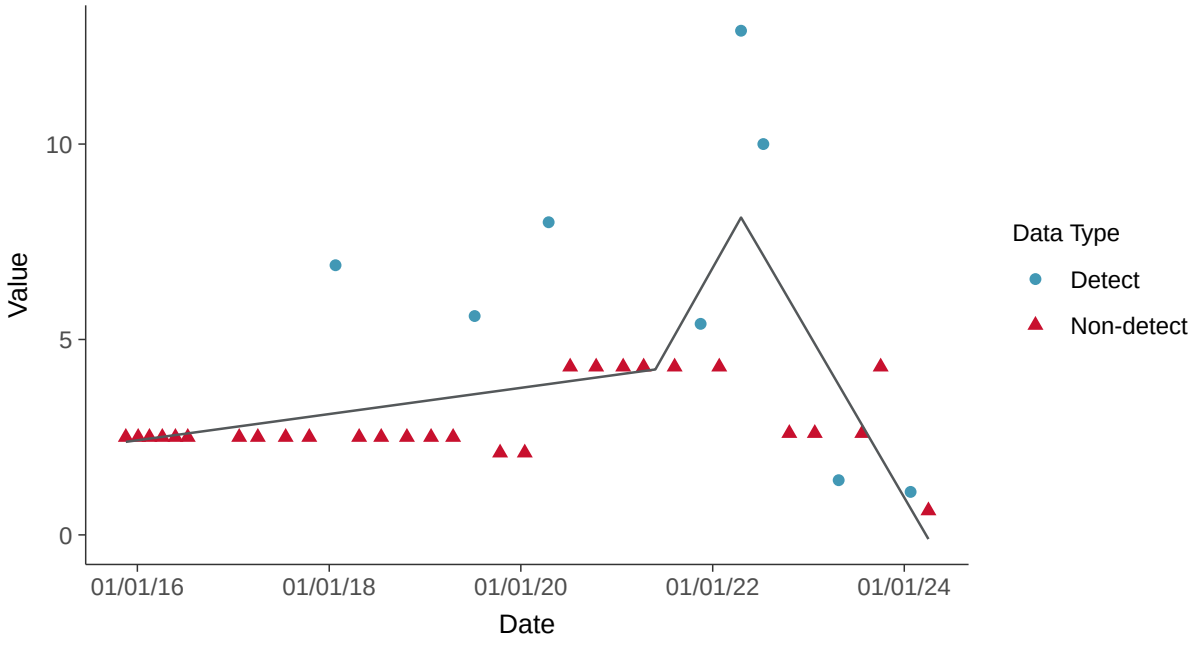
Trend Regression: Piecewise Linear-Linear

Copper, MW-5 (ug/L)



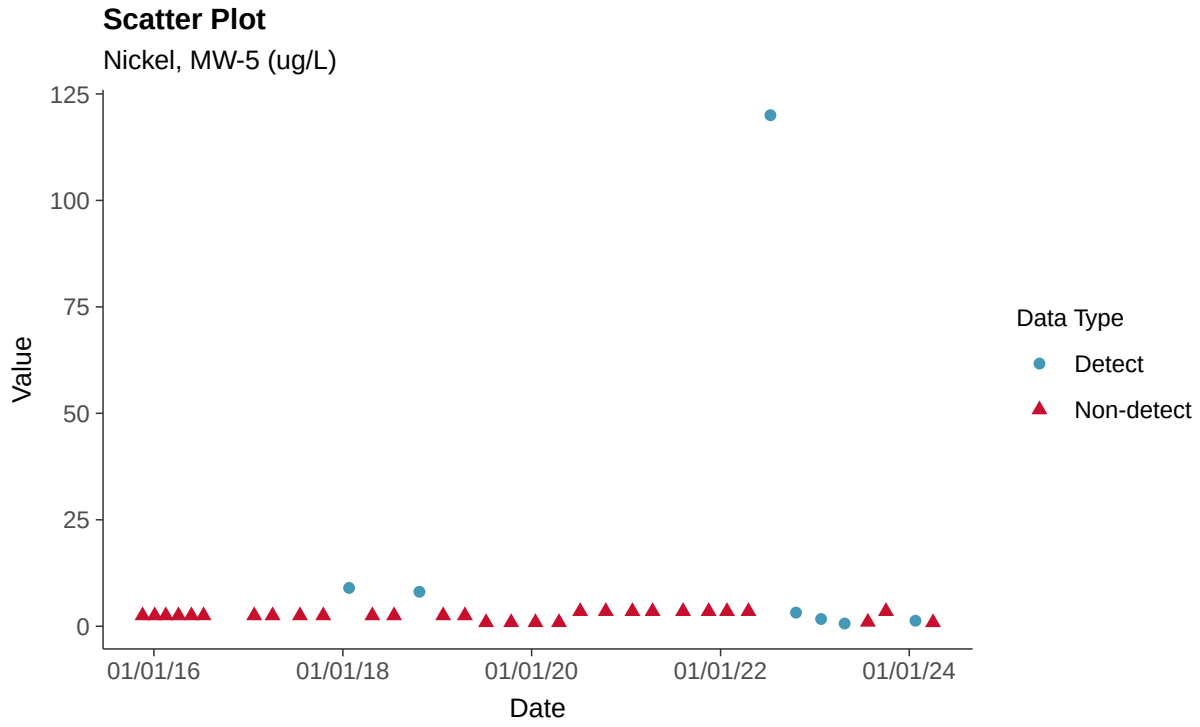
Trend Regression: Piecewise Linear-Linear-Linear

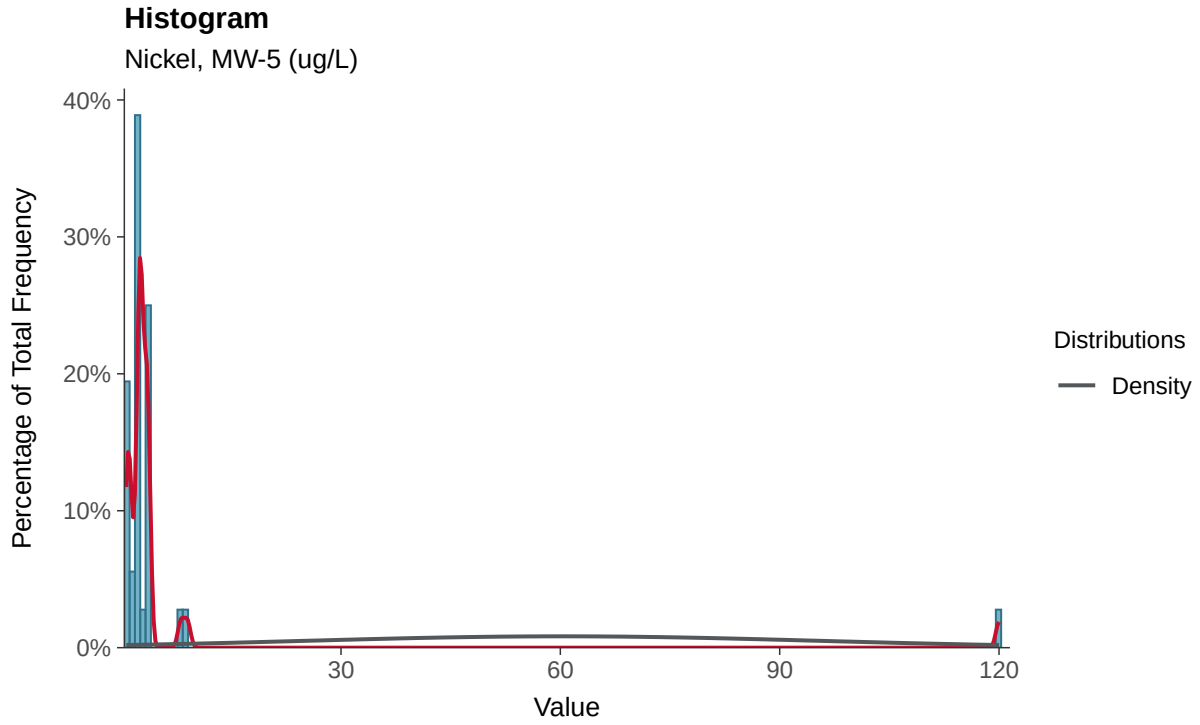
Copper, MW-5 (ug/L)



App. I Metals: Nickel, MW-5

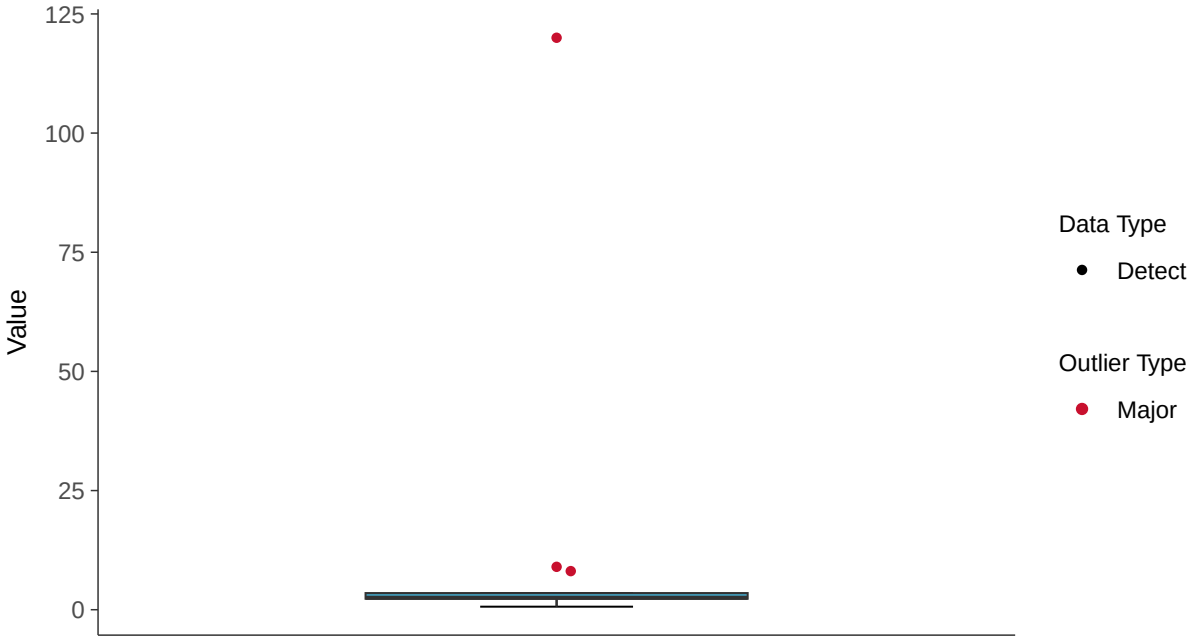
ID: 8_1_117





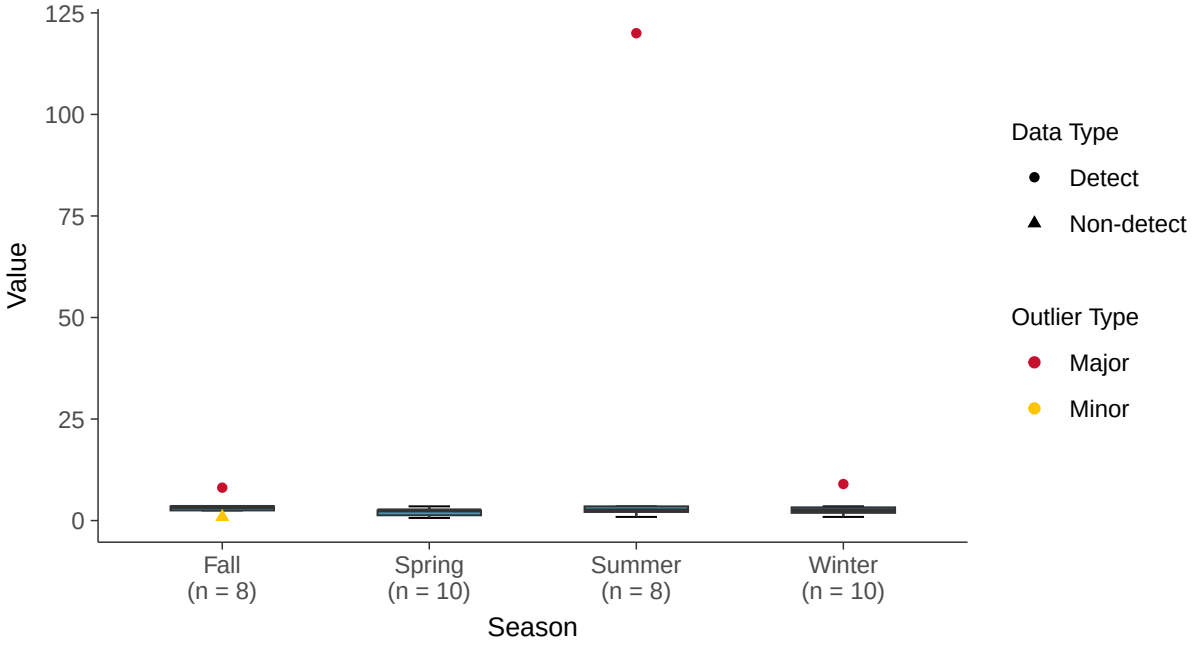
Boxplot

Nickel, MW-5 (ug/L)



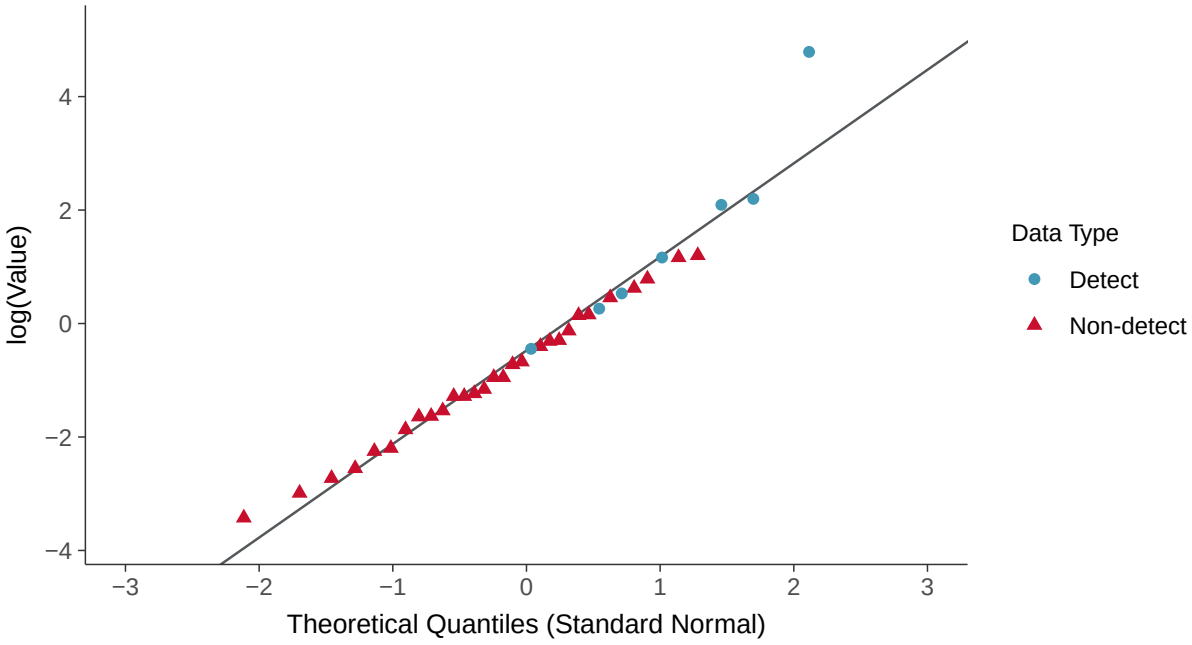
Boxplot by Season

Nickel, MW-5 (ug/L)



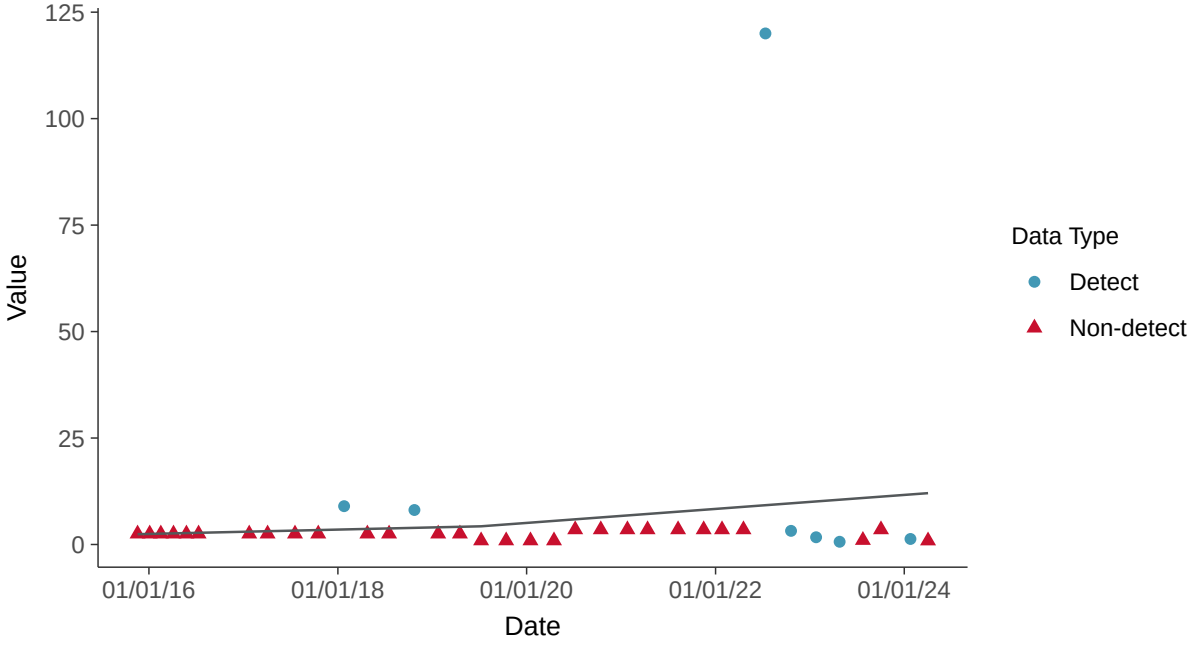
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-5 (ug/L)



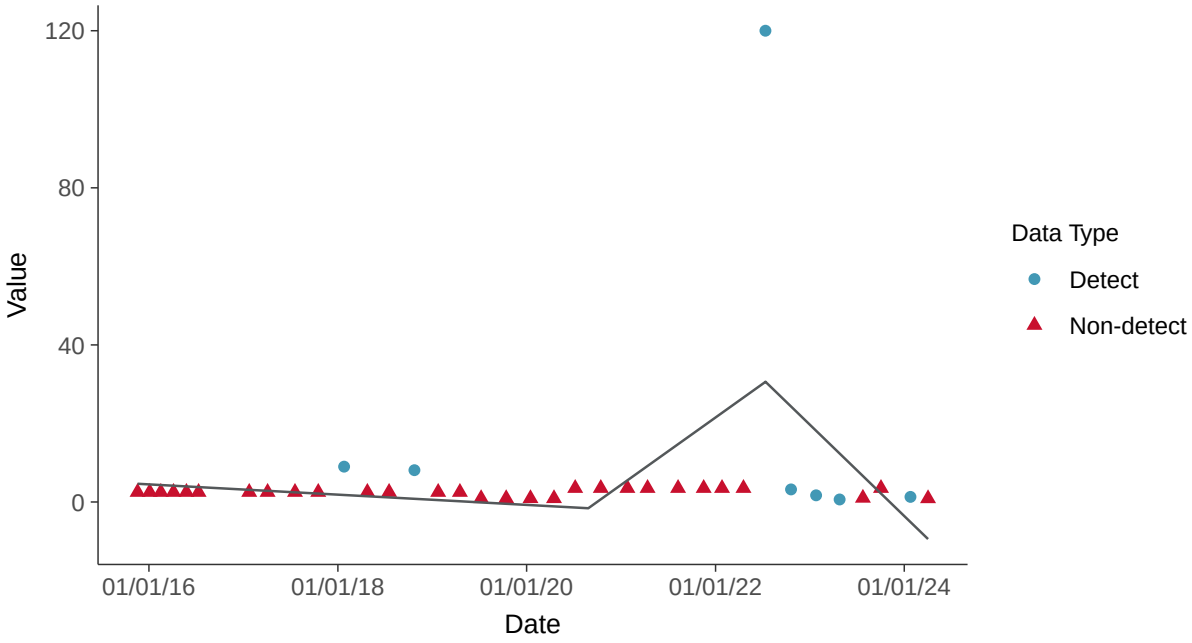
Trend Regression: Piecewise Linear-Linear

Nickel, MW-5 (ug/L)



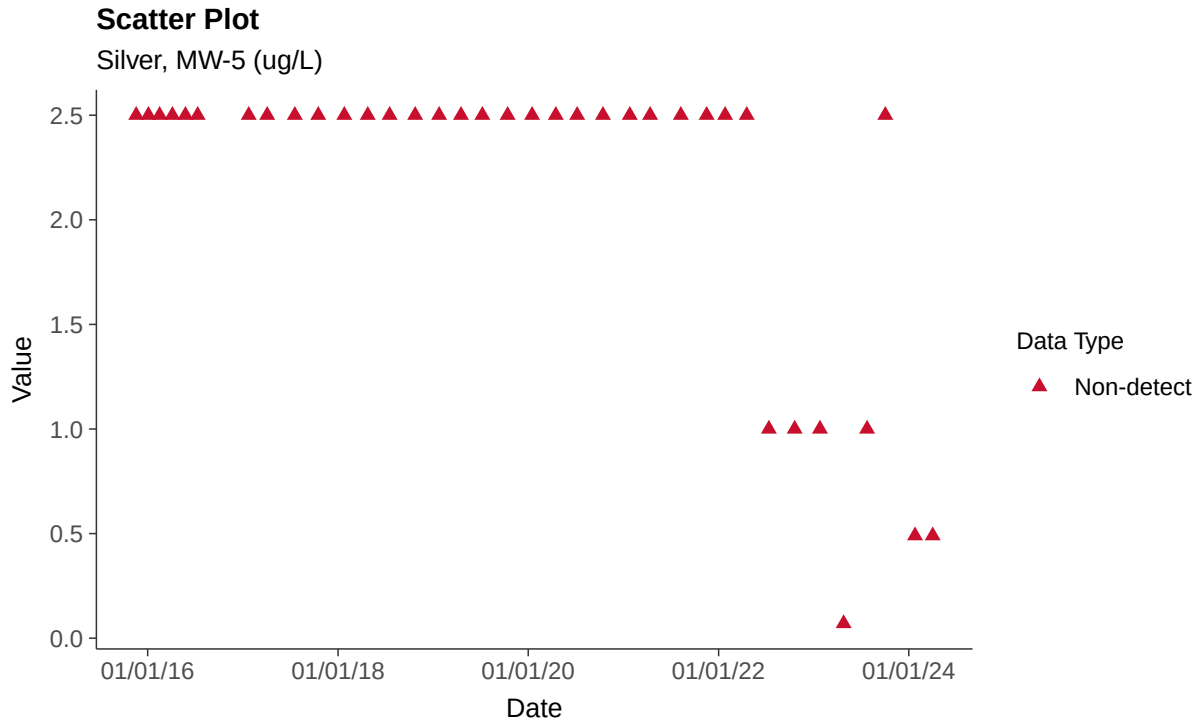
Trend Regression: Piecewise Linear-Linear-Linear

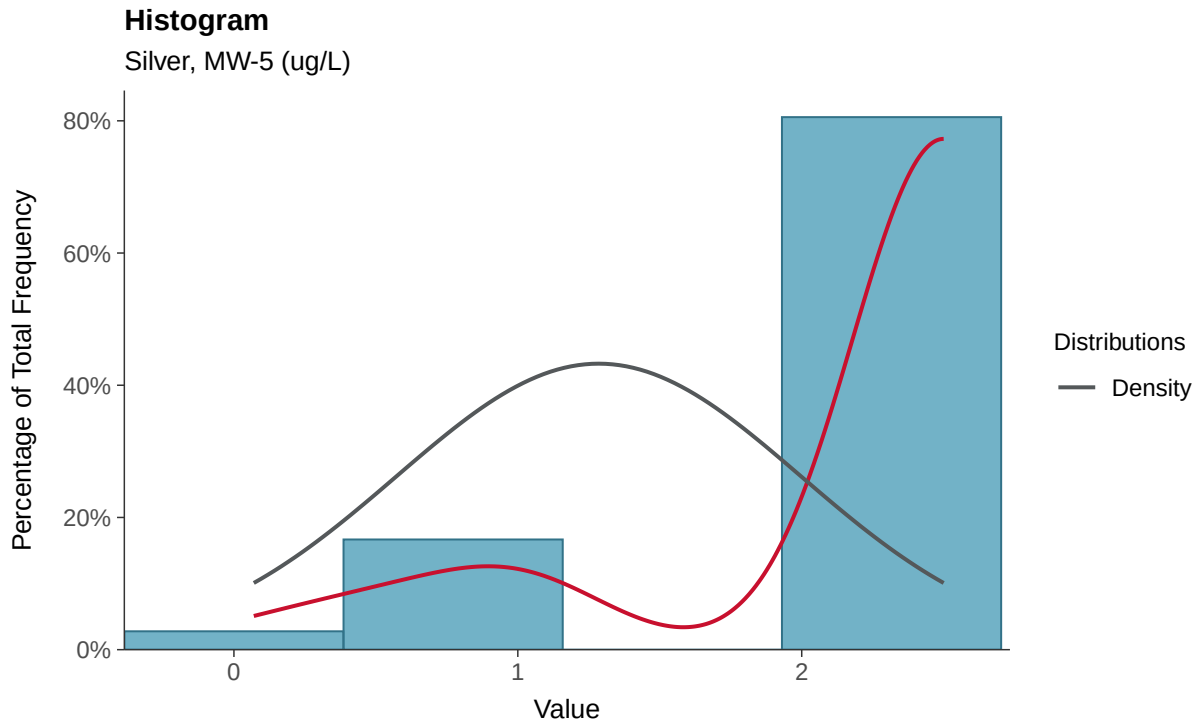
Nickel, MW-5 (ug/L)



App. I Metals: Silver, MW-5

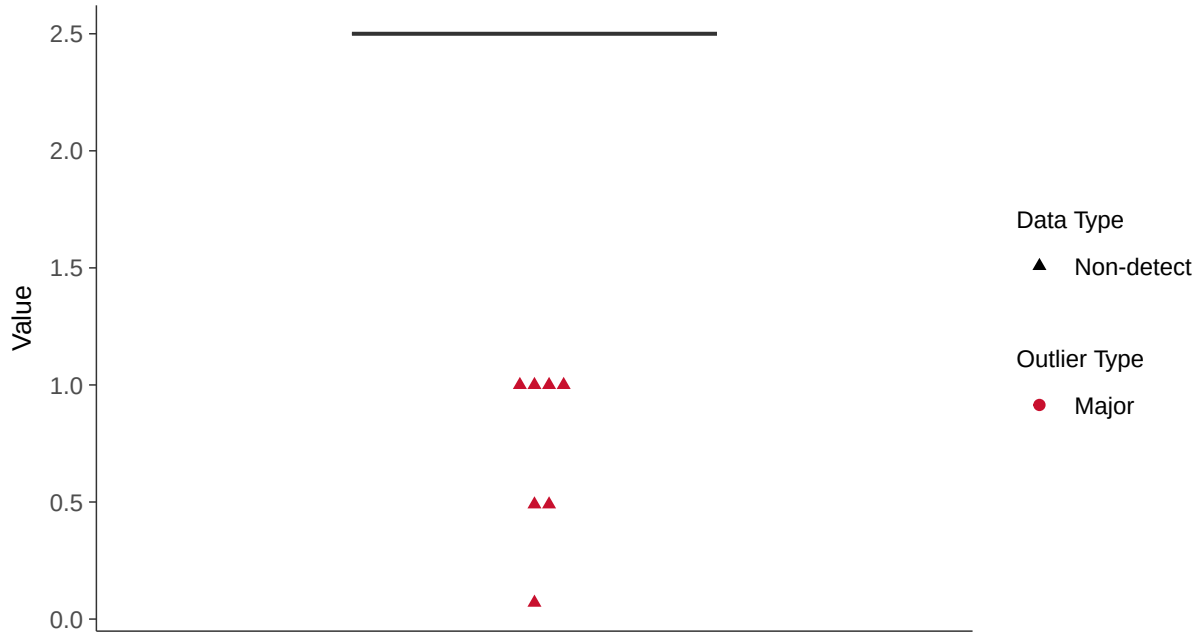
ID: 8_1_122





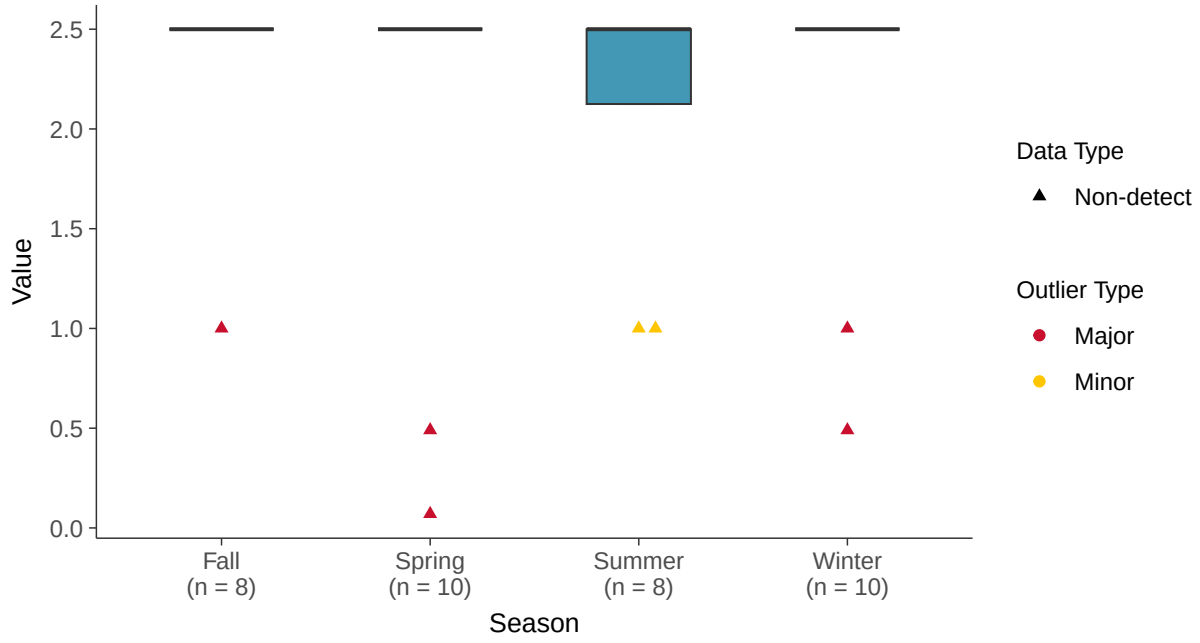
Boxplot

Silver, MW-5 (ug/L)



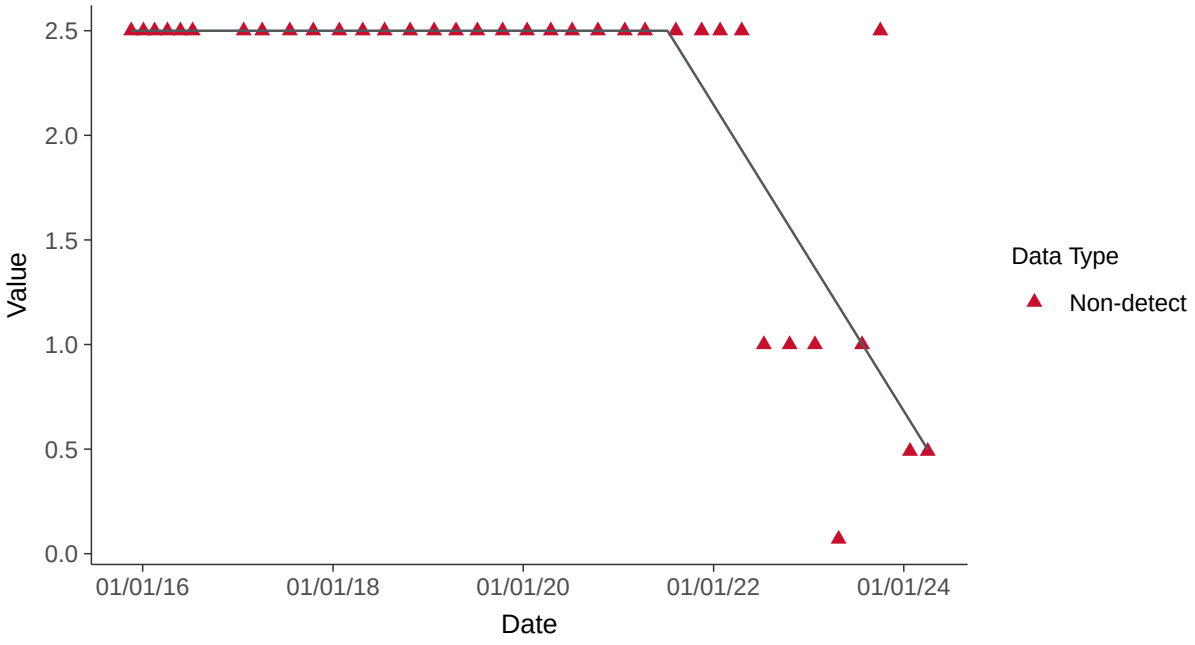
Boxplot by Season

Silver, MW-5 (ug/L)



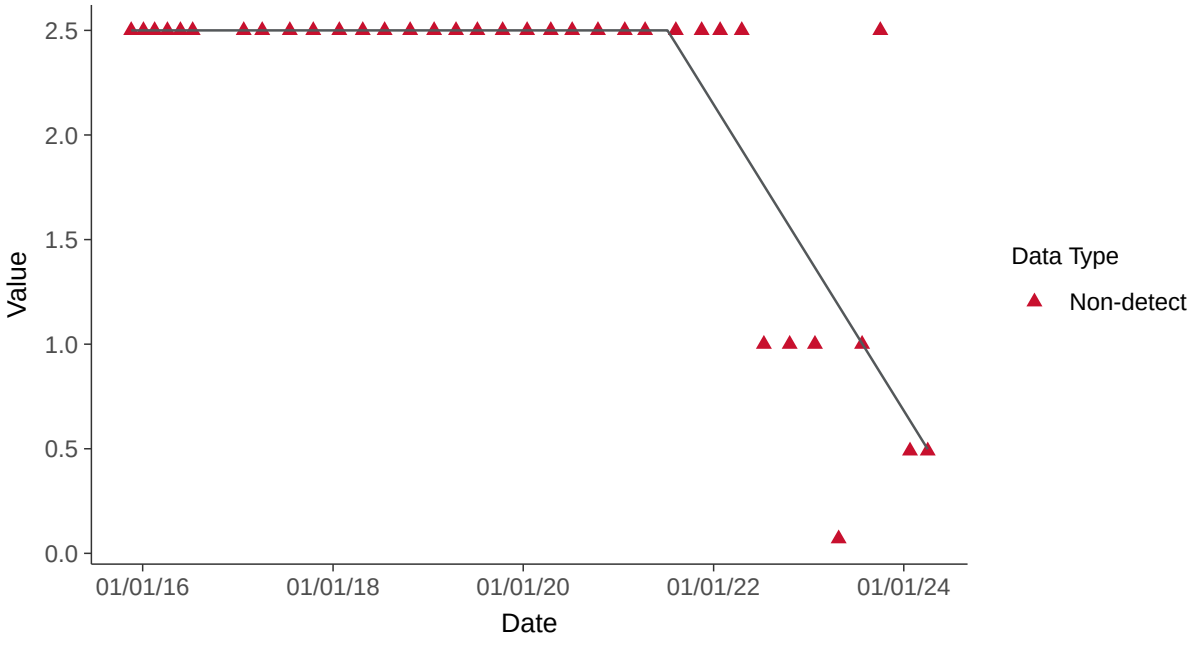
Trend Regression: Piecewise Linear-Linear

Silver, MW-5 (ug/L)



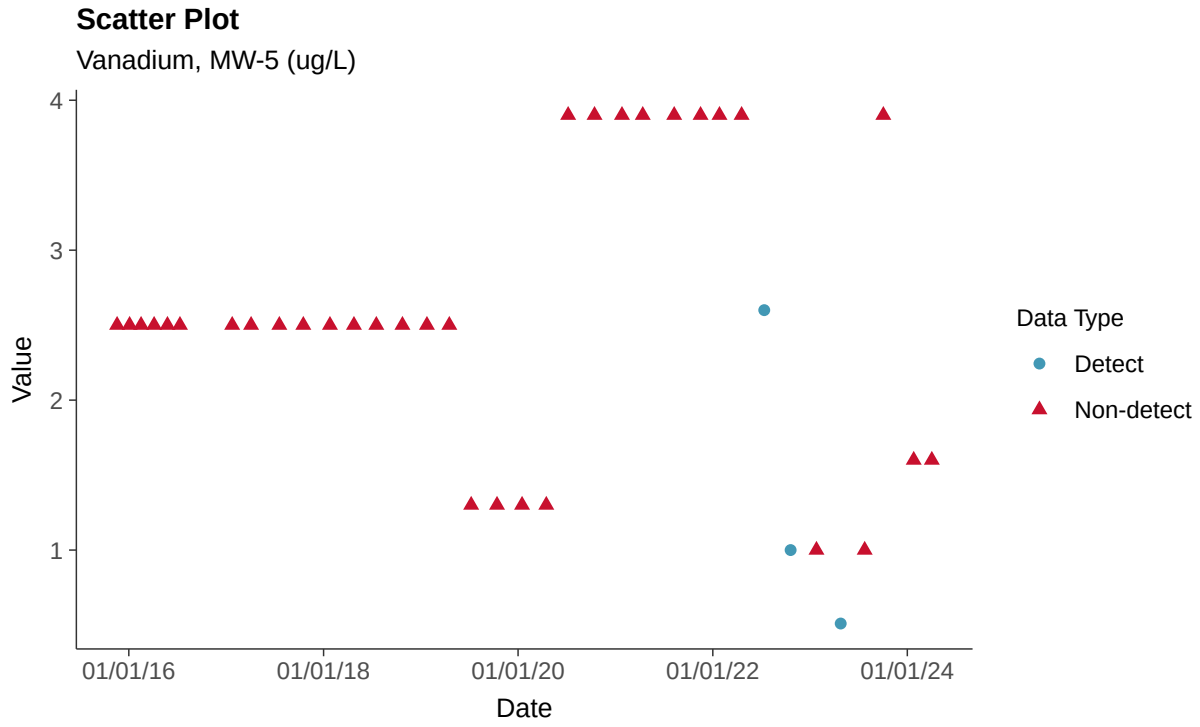
Trend Regression: Piecewise Linear-Linear-Linear

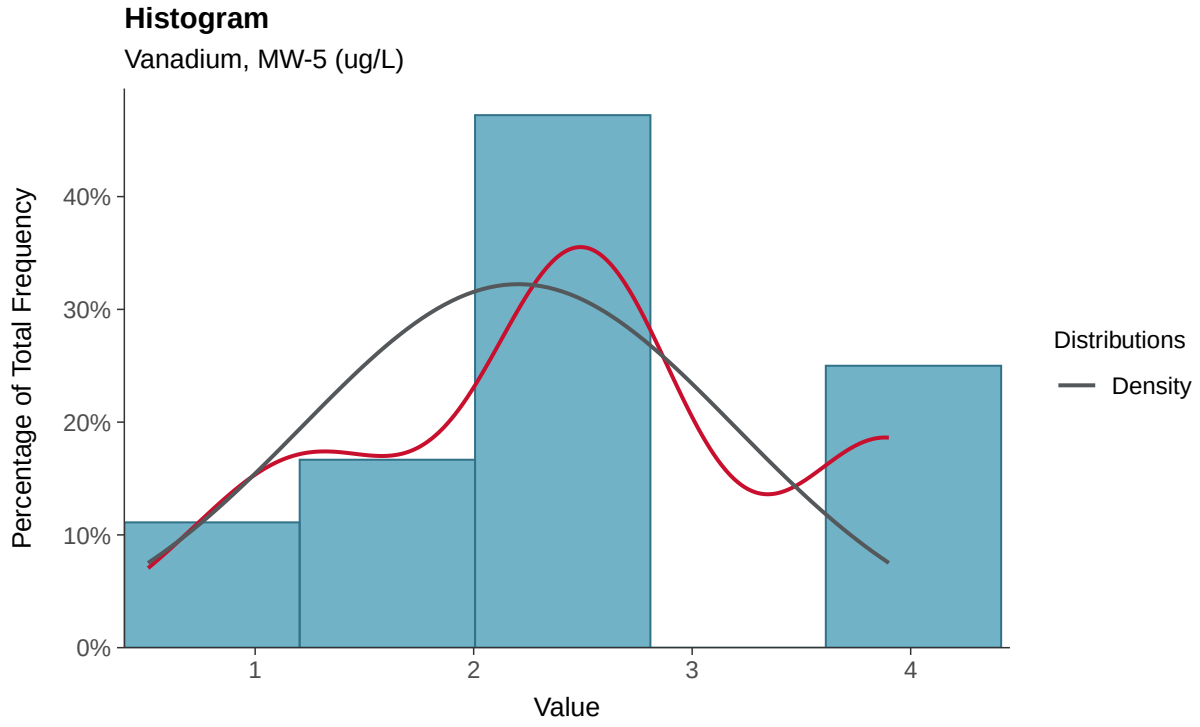
Silver, MW-5 (ug/L)



App. I Metals: Vanadium, MW-5

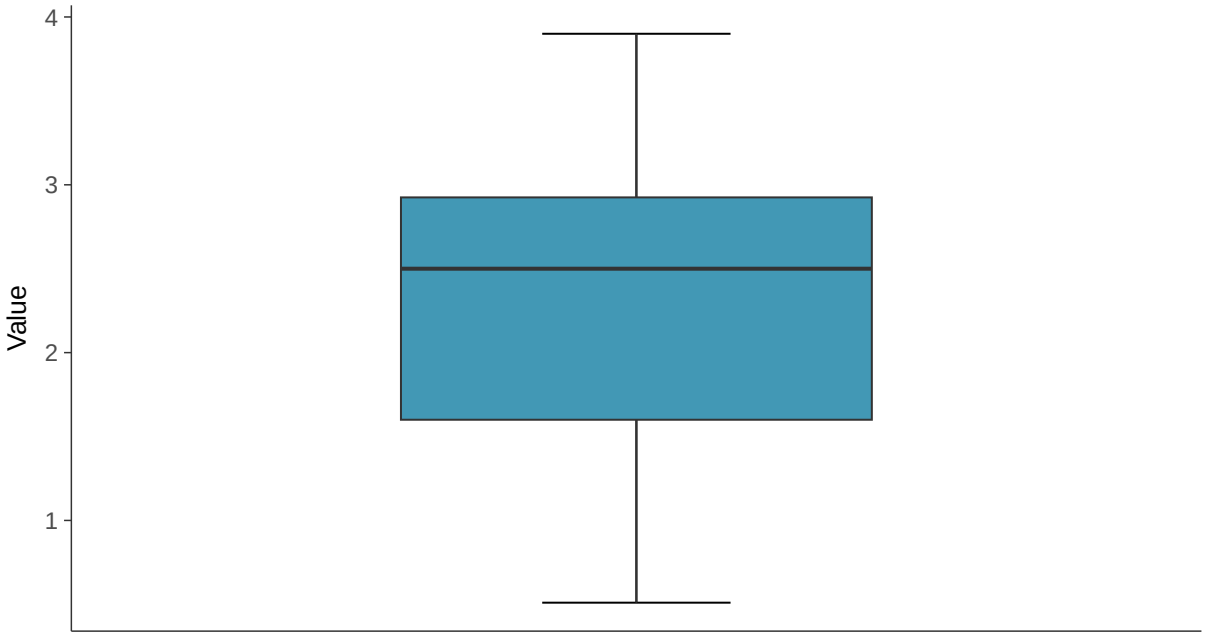
ID: 8_1_127





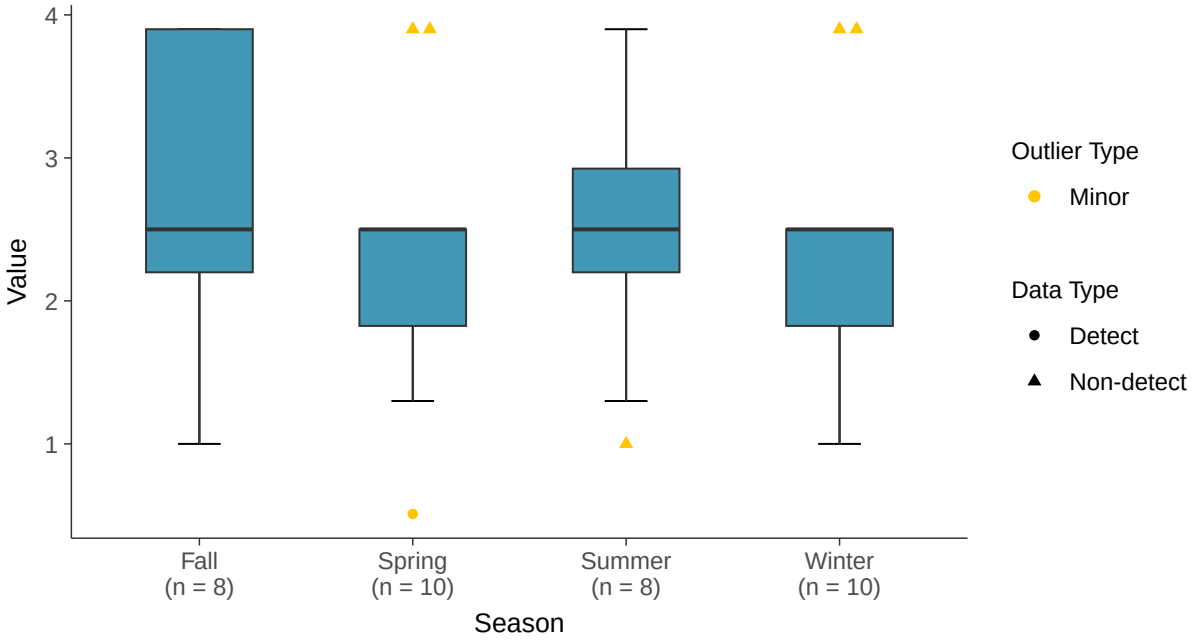
Boxplot

Vanadium, MW-5 (ug/L)



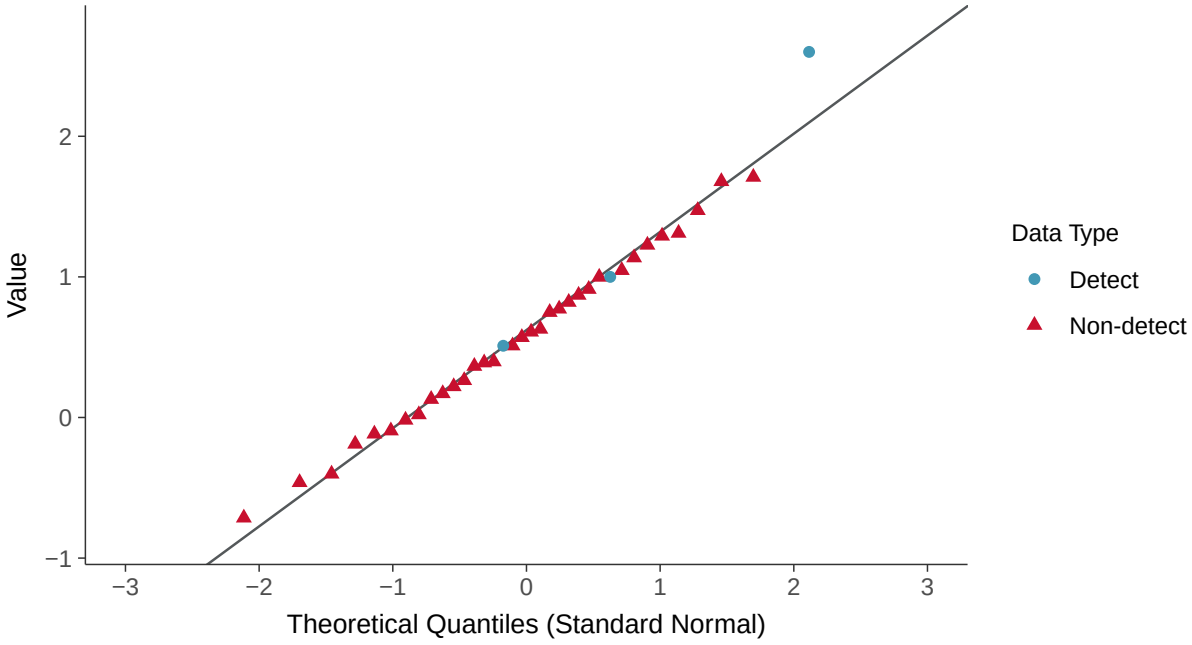
Boxplot by Season

Vanadium, MW-5 (ug/L)



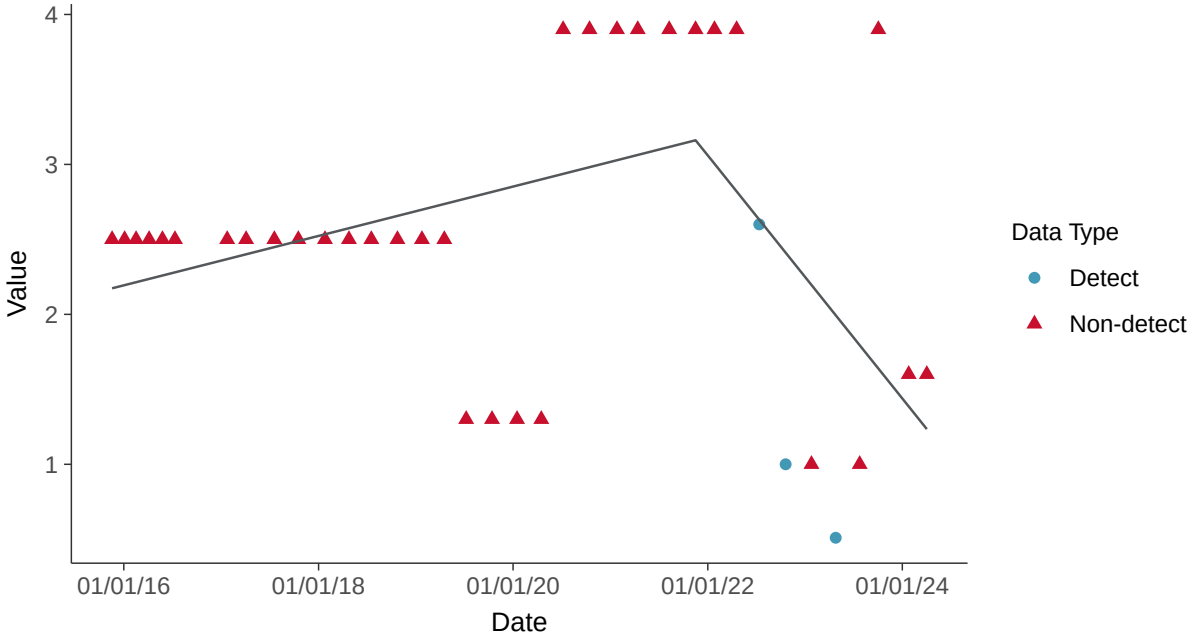
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-5 (ug/L)



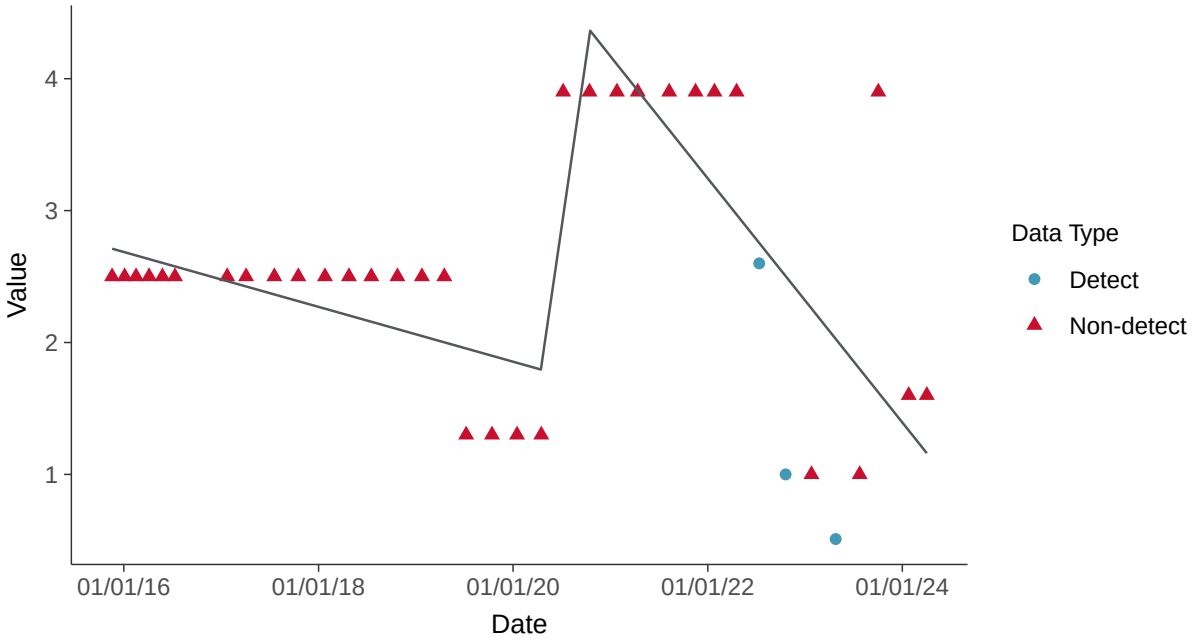
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-5 (ug/L)



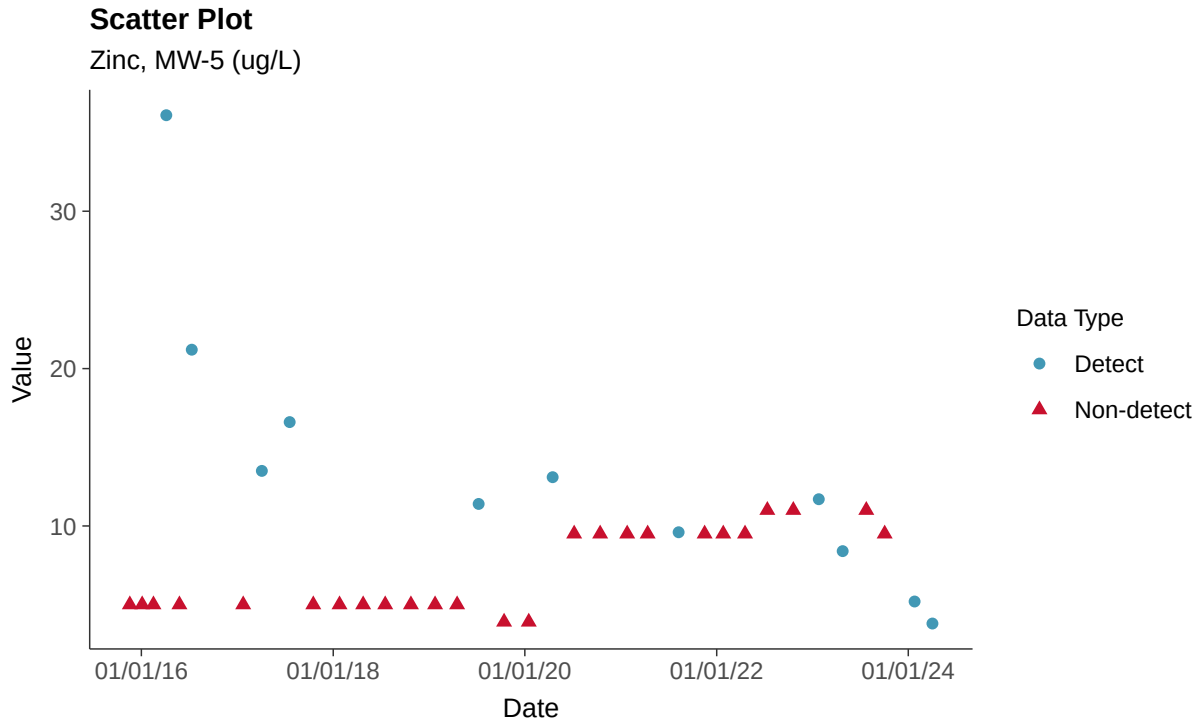
Trend Regression: Piecewise Linear-Linear-Linear

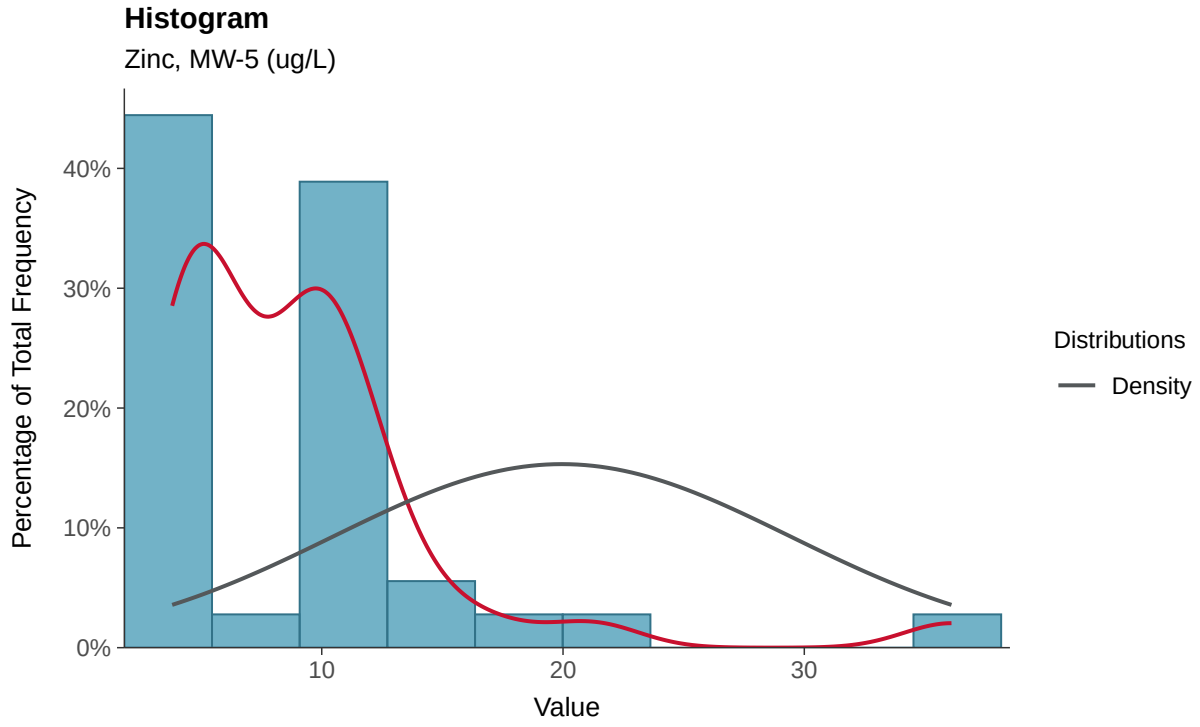
Vanadium, MW-5 (ug/L)



App. I Metals: Zinc, MW-5

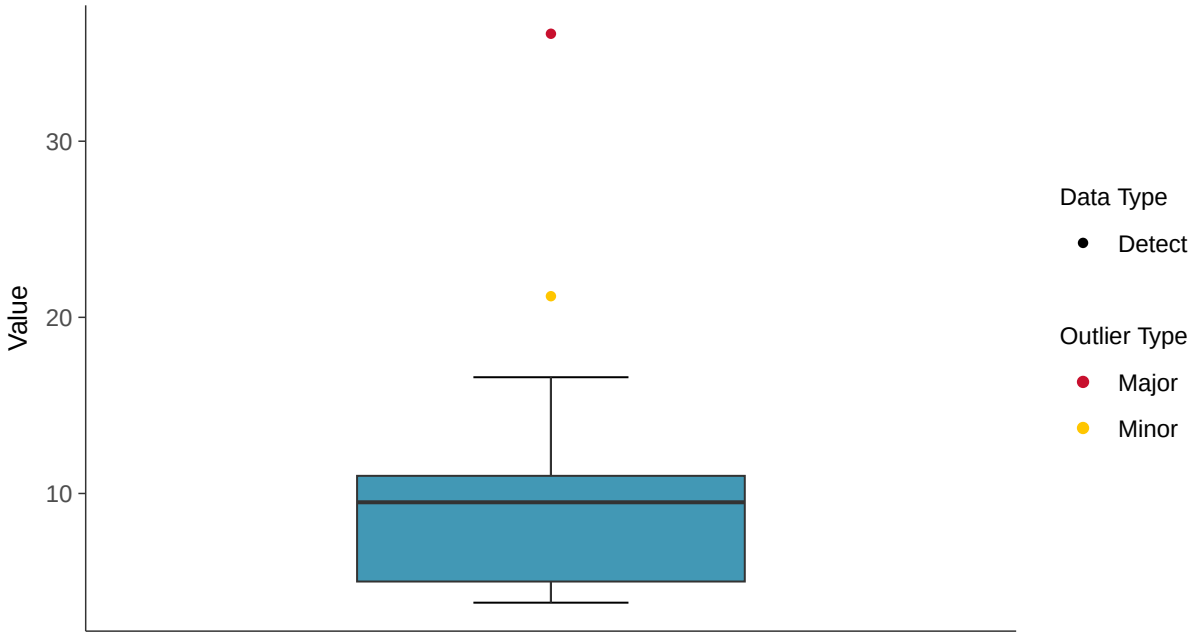
ID: 8_1_128





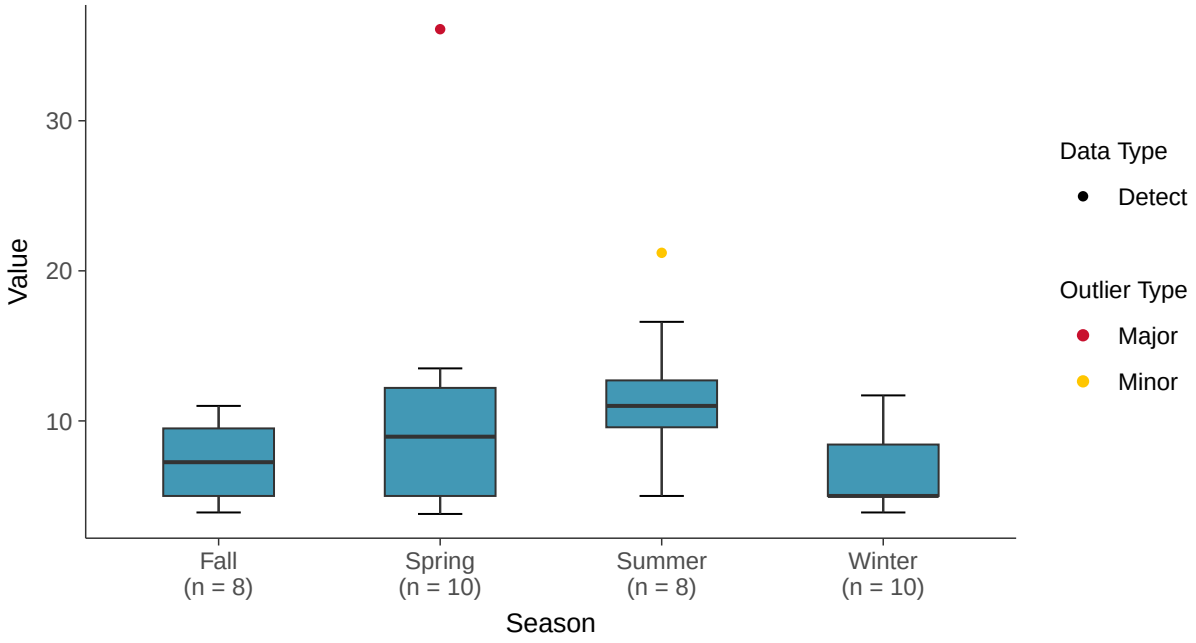
Boxplot

Zinc, MW-5 (ug/L)



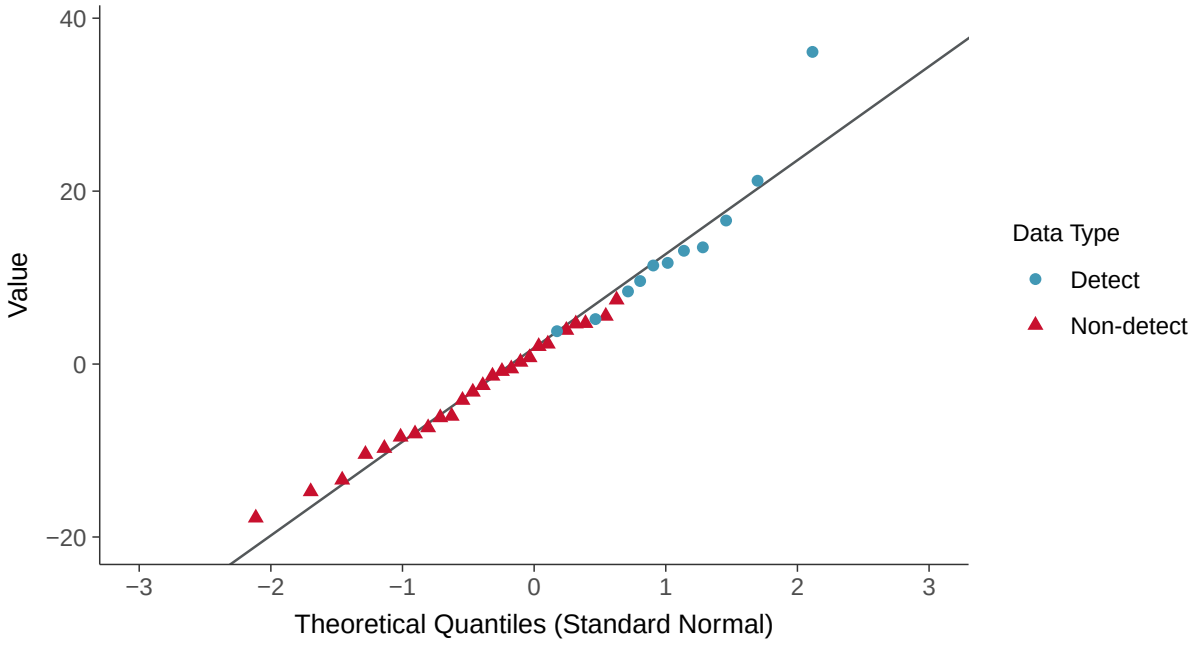
Boxplot by Season

Zinc, MW-5 (ug/L)



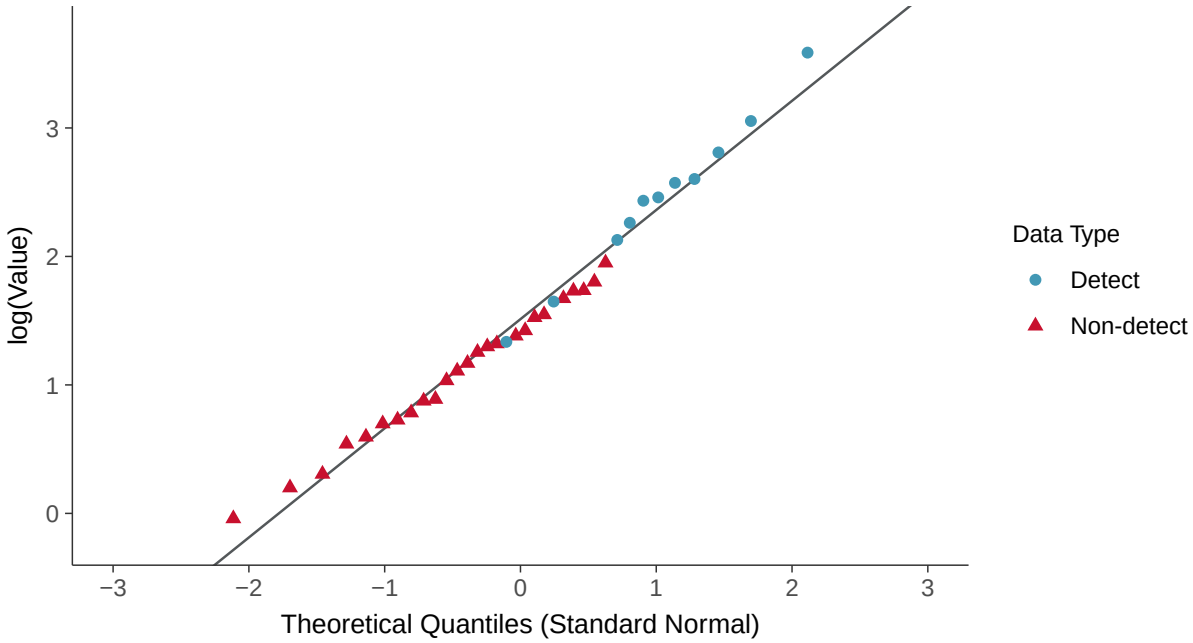
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-5 (ug/L)



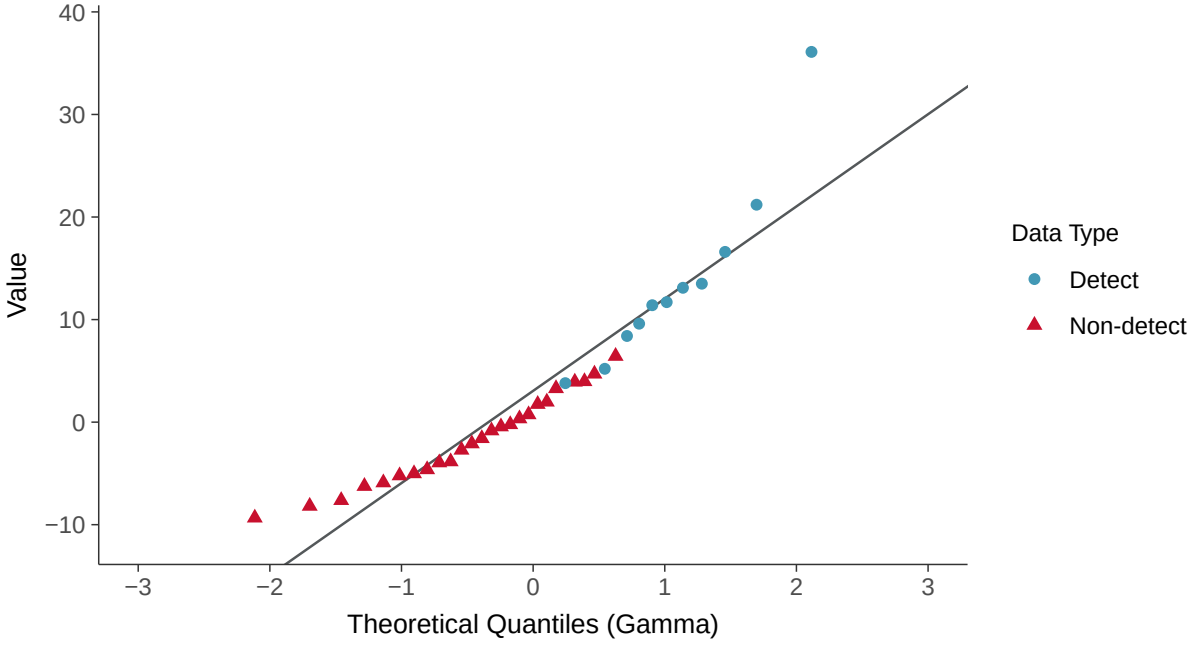
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-5 (ug/L)



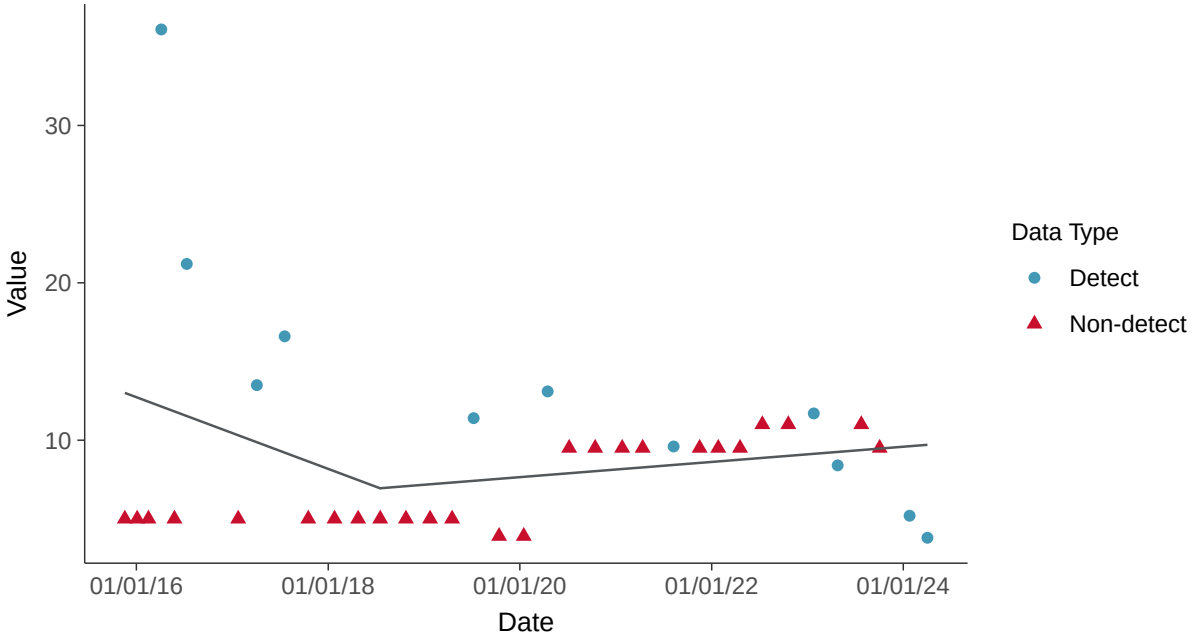
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-5 (ug/L)



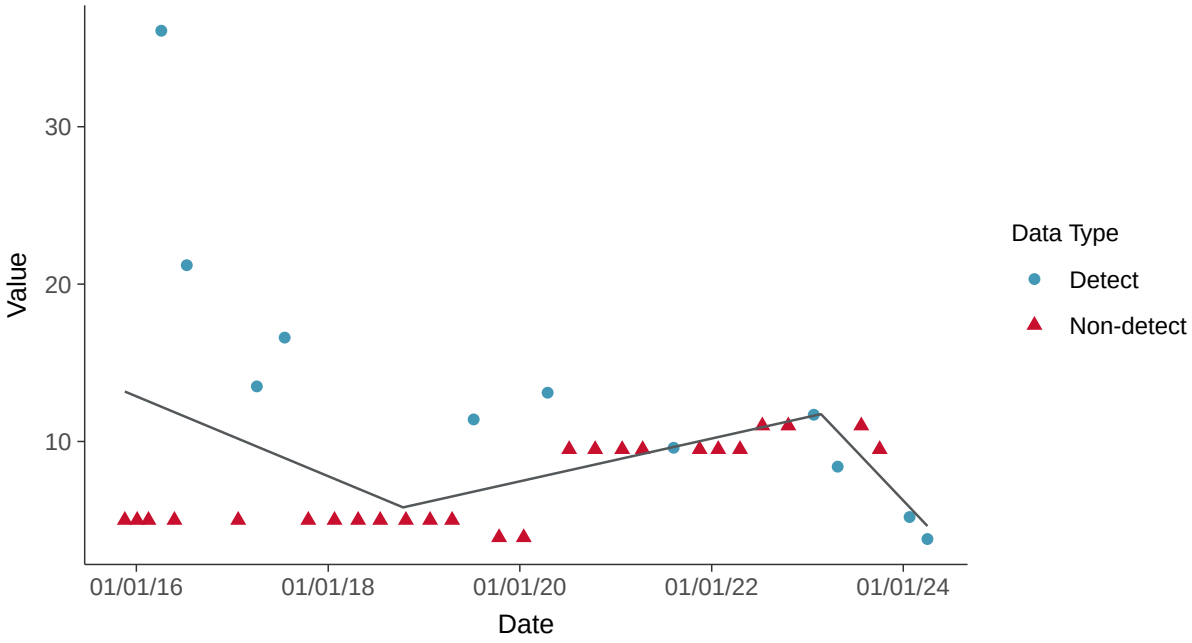
Trend Regression: Piecewise Linear-Linear

Zinc, MW-5 (ug/L)



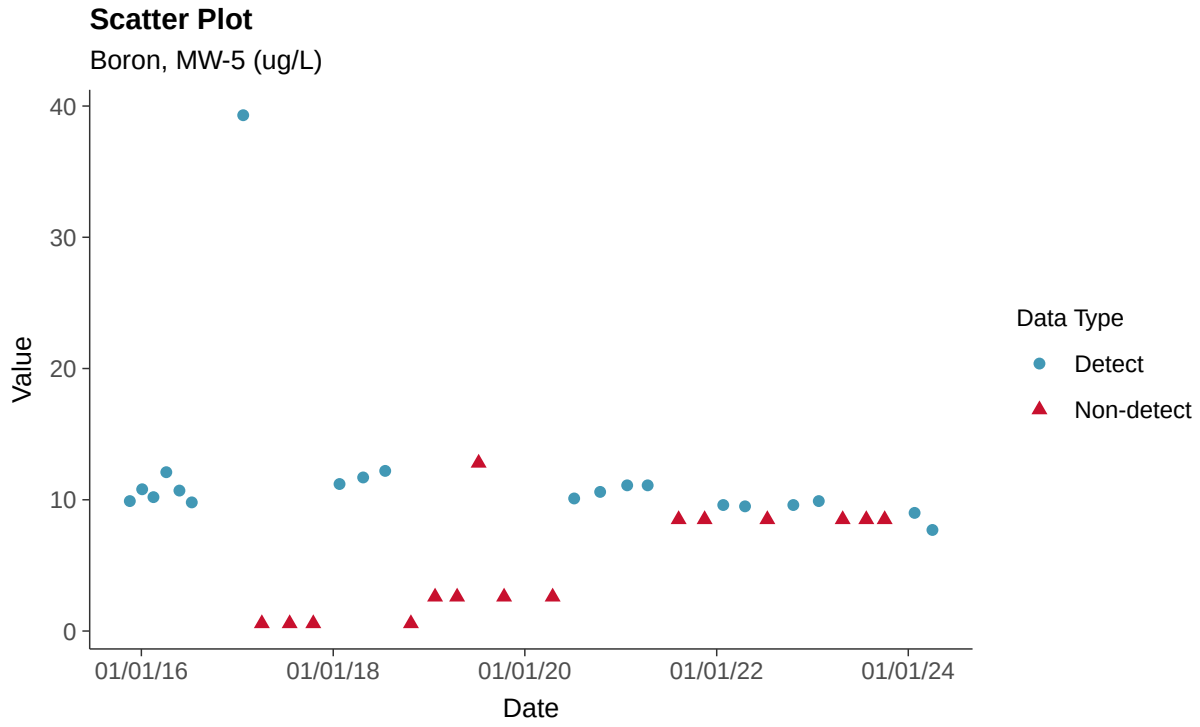
Trend Regression: Piecewise Linear-Linear-Linear

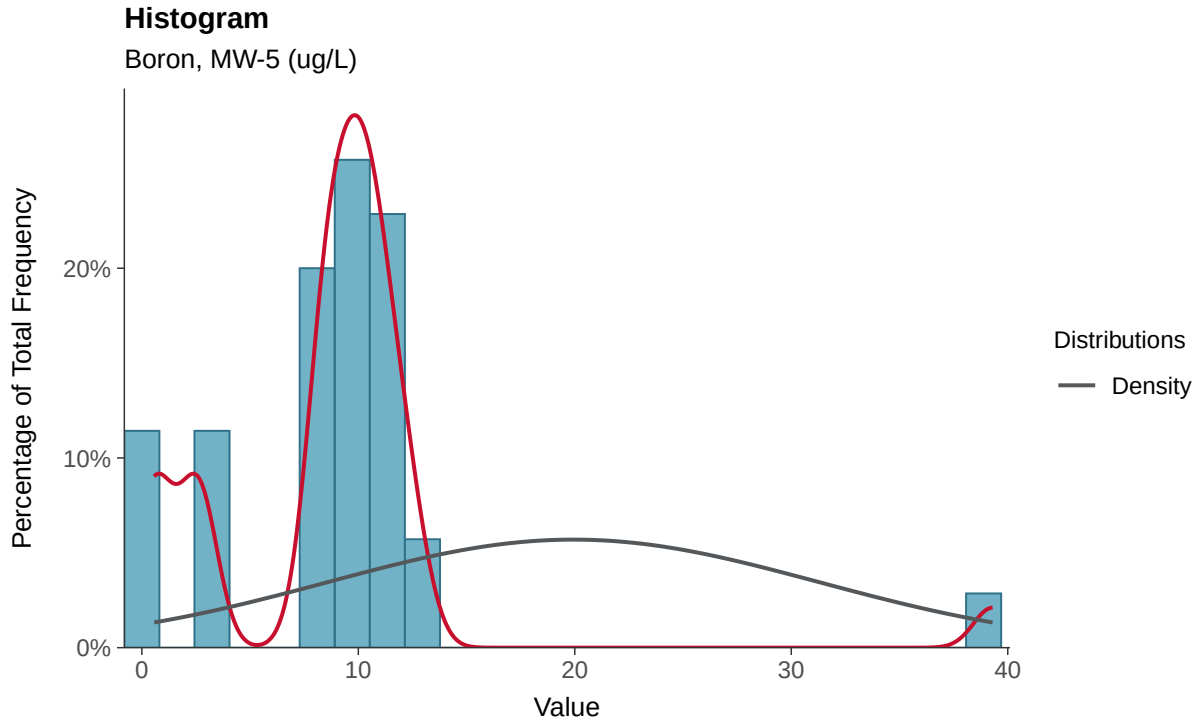
Zinc, MW-5 (ug/L)



App. III: Boron, MW-5

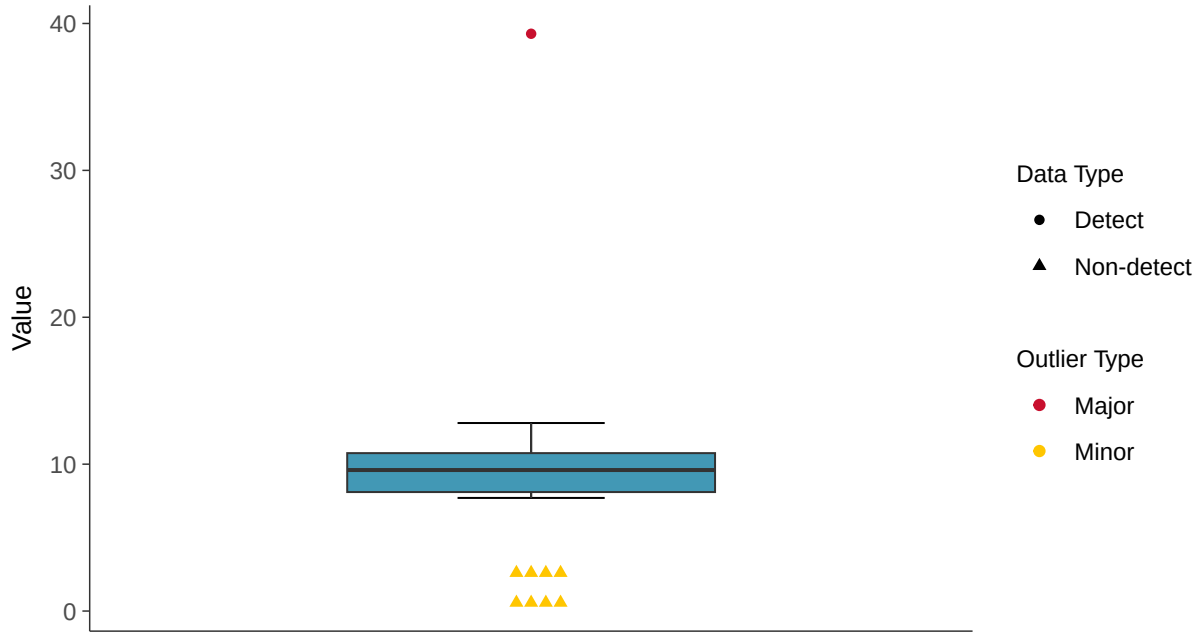
ID: 8_2_105





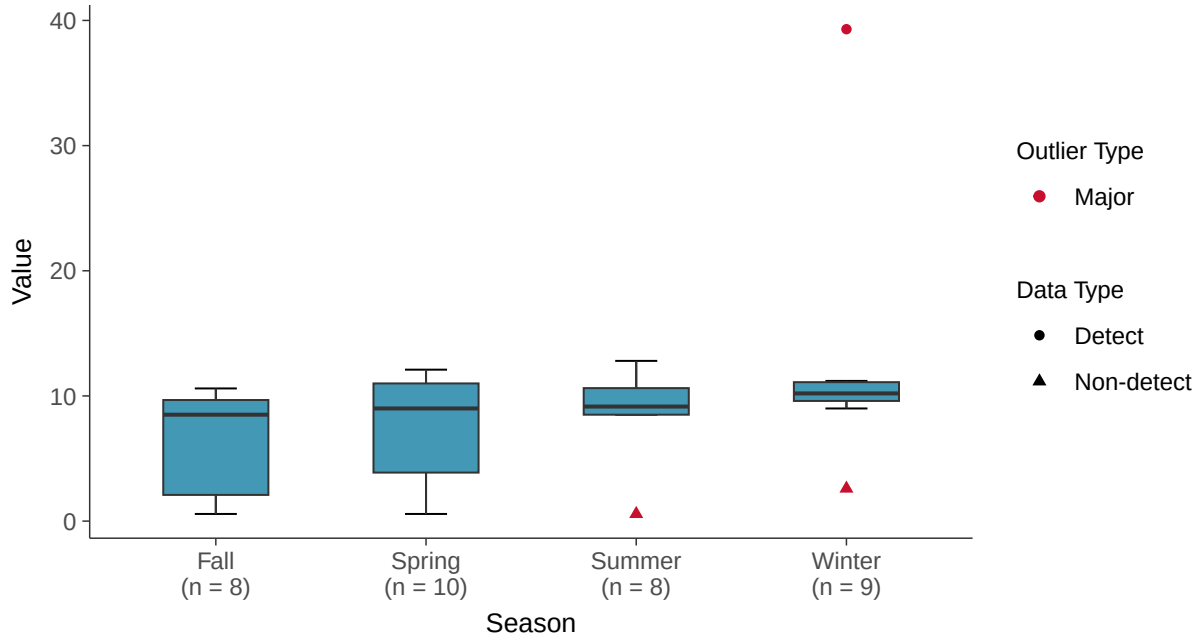
Boxplot

Boron, MW-5 (ug/L)



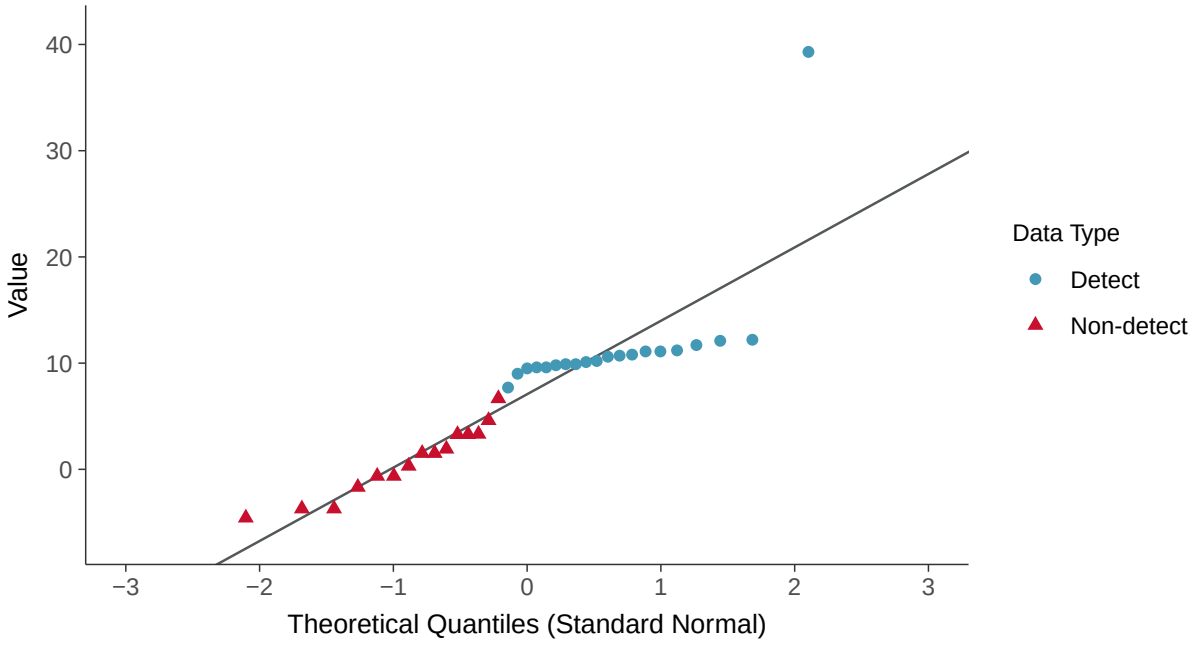
Boxplot by Season

Boron, MW-5 (ug/L)



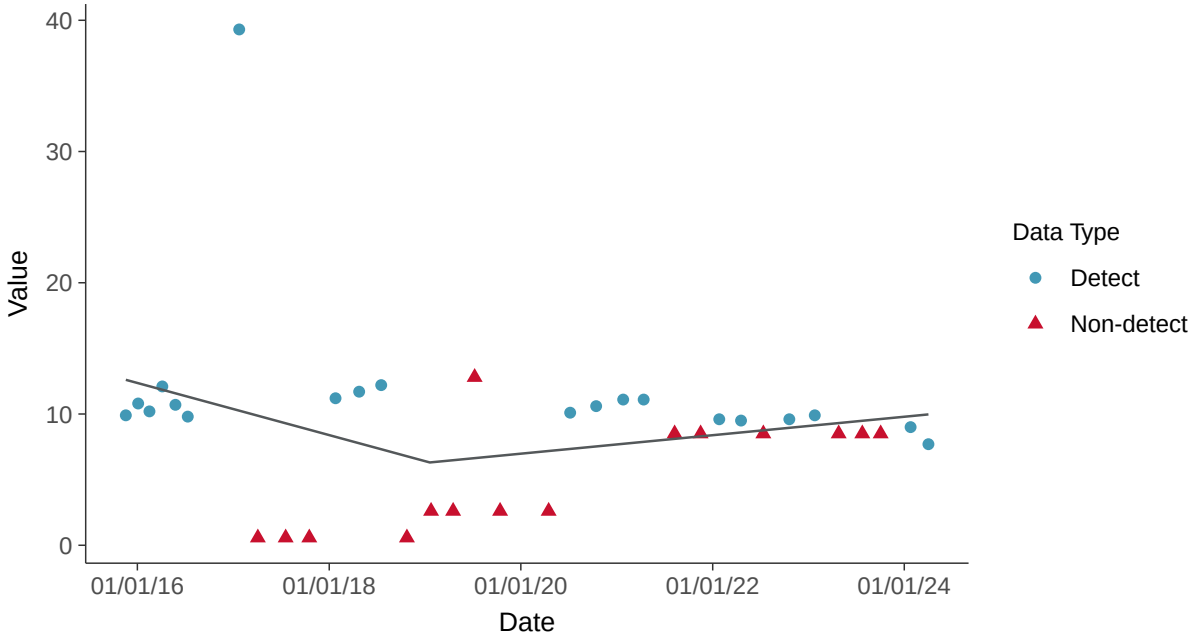
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-5 (ug/L)



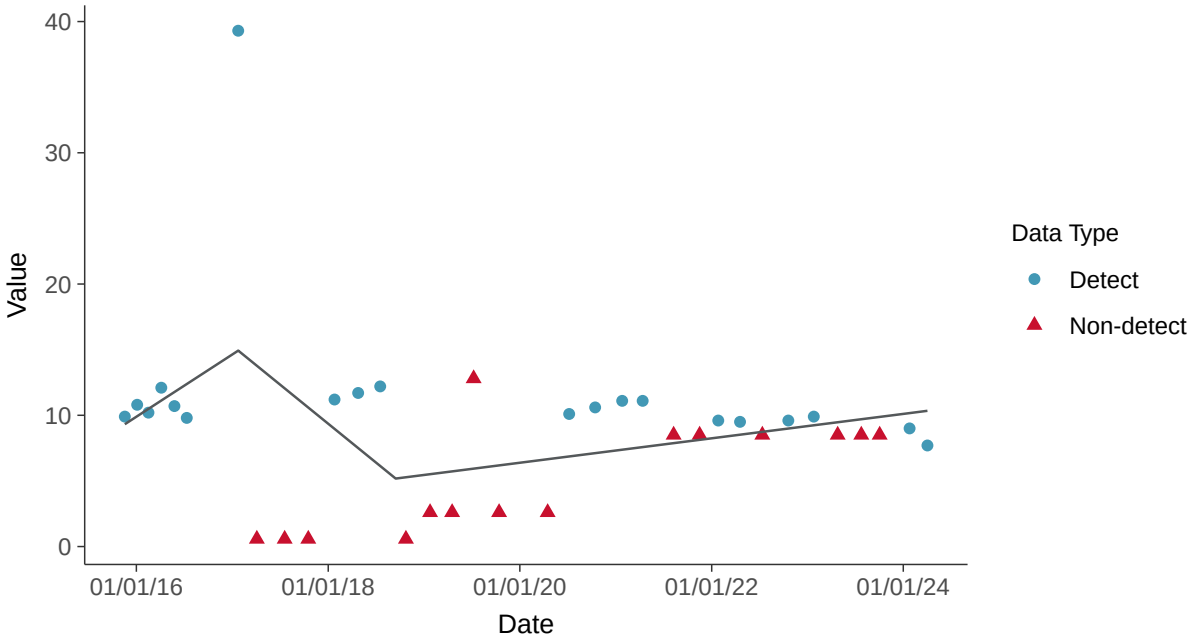
Trend Regression: Piecewise Linear-Linear

Boron, MW-5 (ug/L)



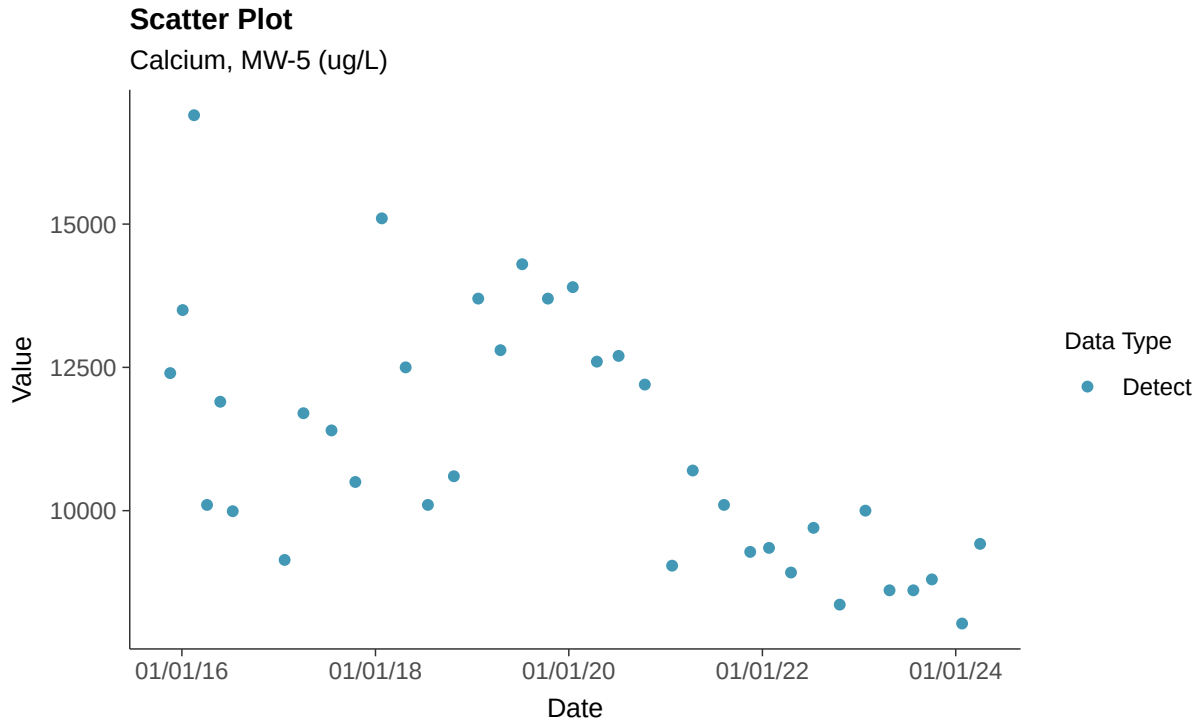
Trend Regression: Piecewise Linear-Linear-Linear

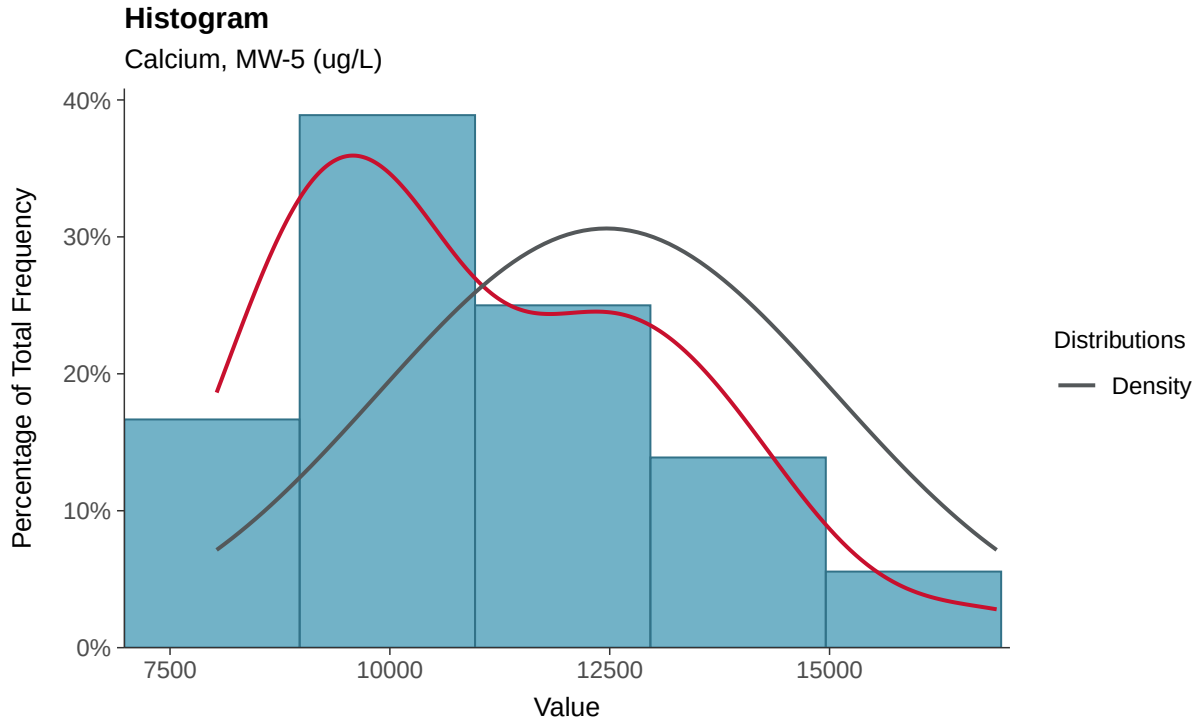
Boron, MW-5 (ug/L)



App. III: Calcium, MW-5

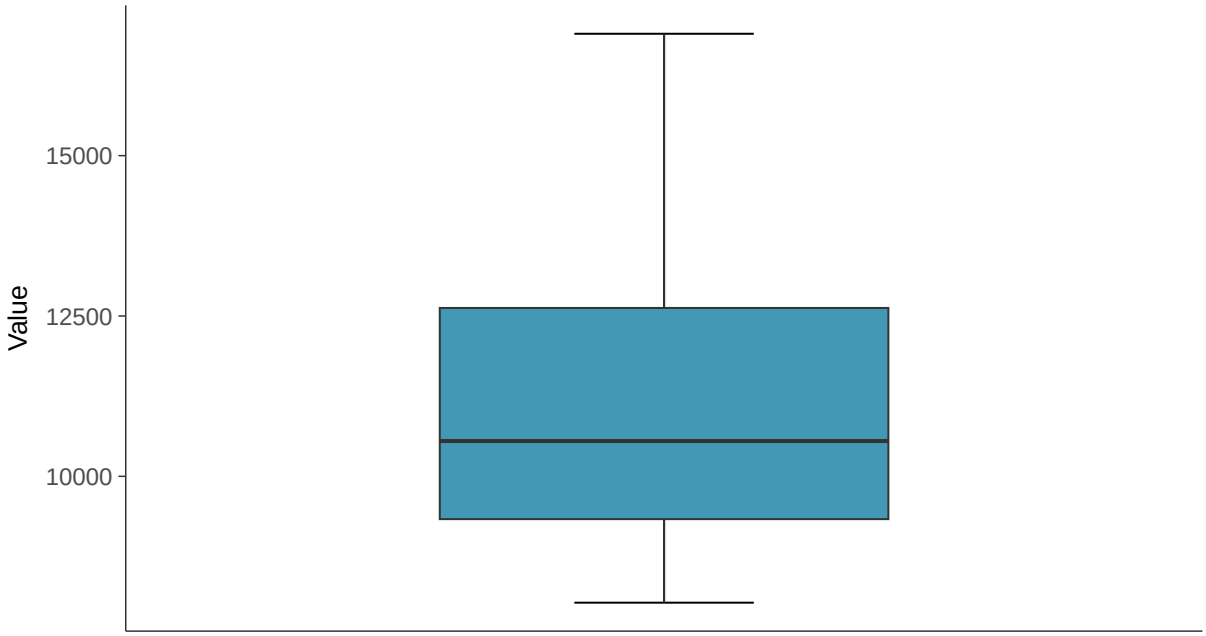
ID: 8_2_107





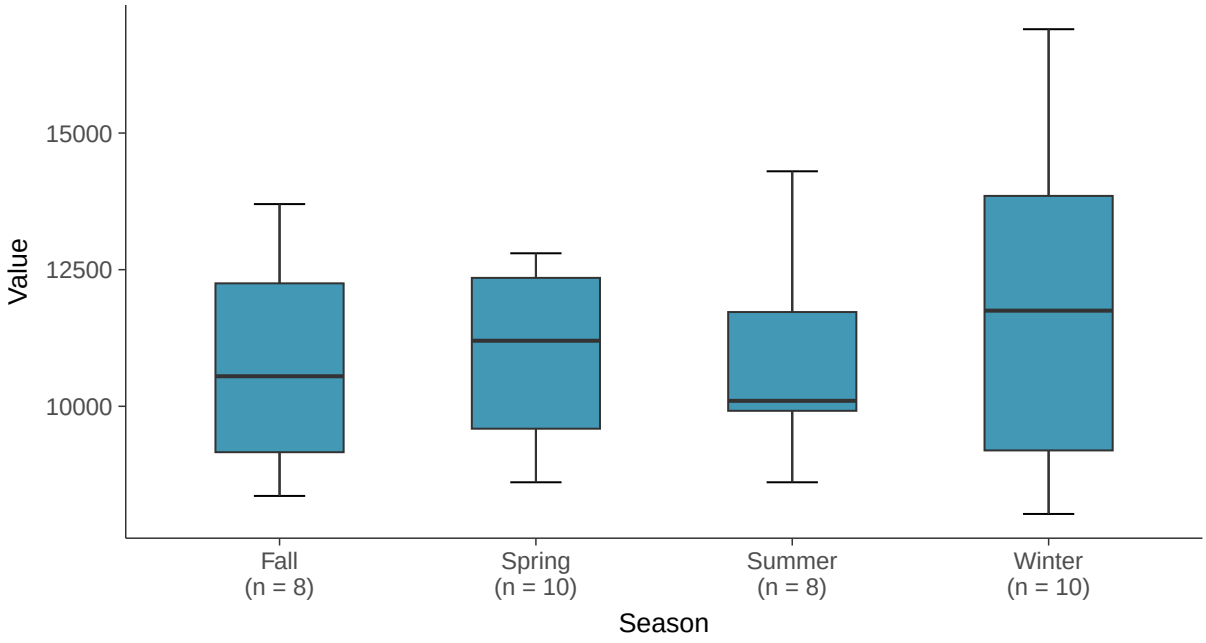
Boxplot

Calcium, MW-5 (ug/L)



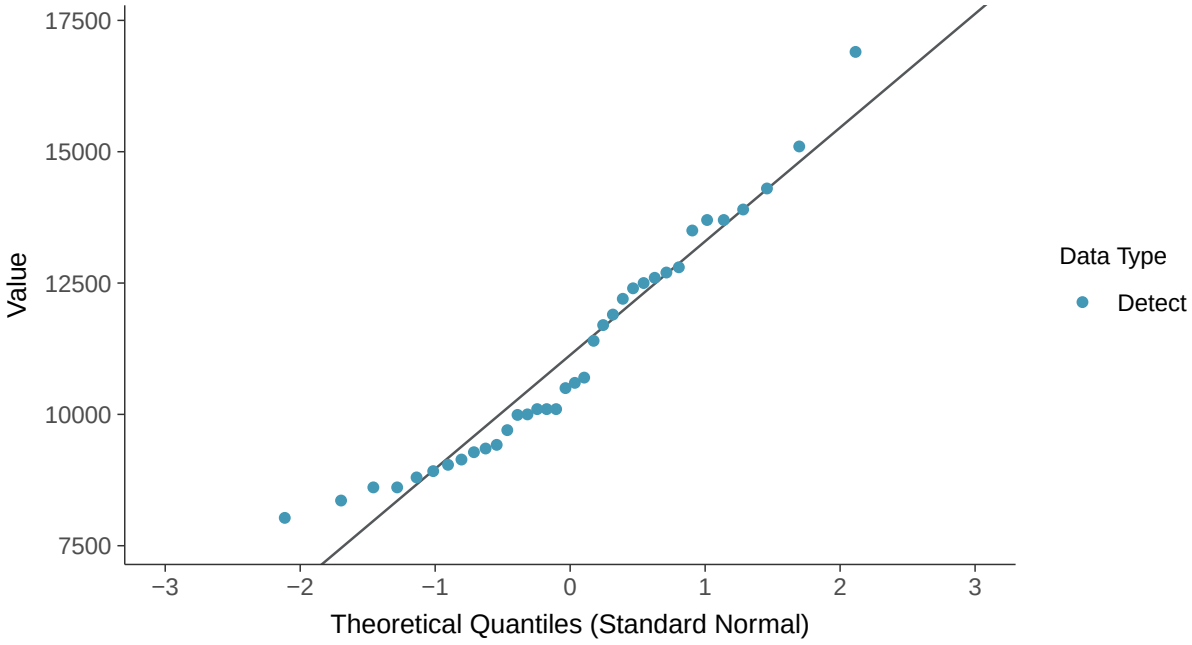
Boxplot by Season

Calcium, MW-5 (ug/L)



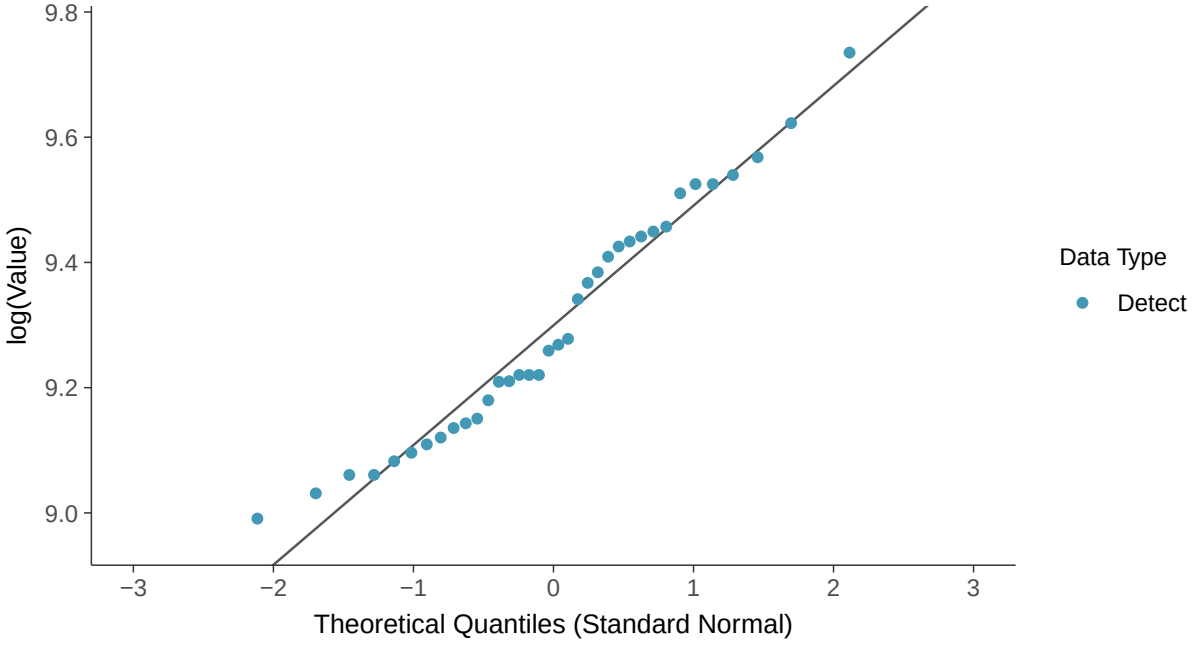
Normal Q-Q plot

Calcium, MW-5 (ug/L)



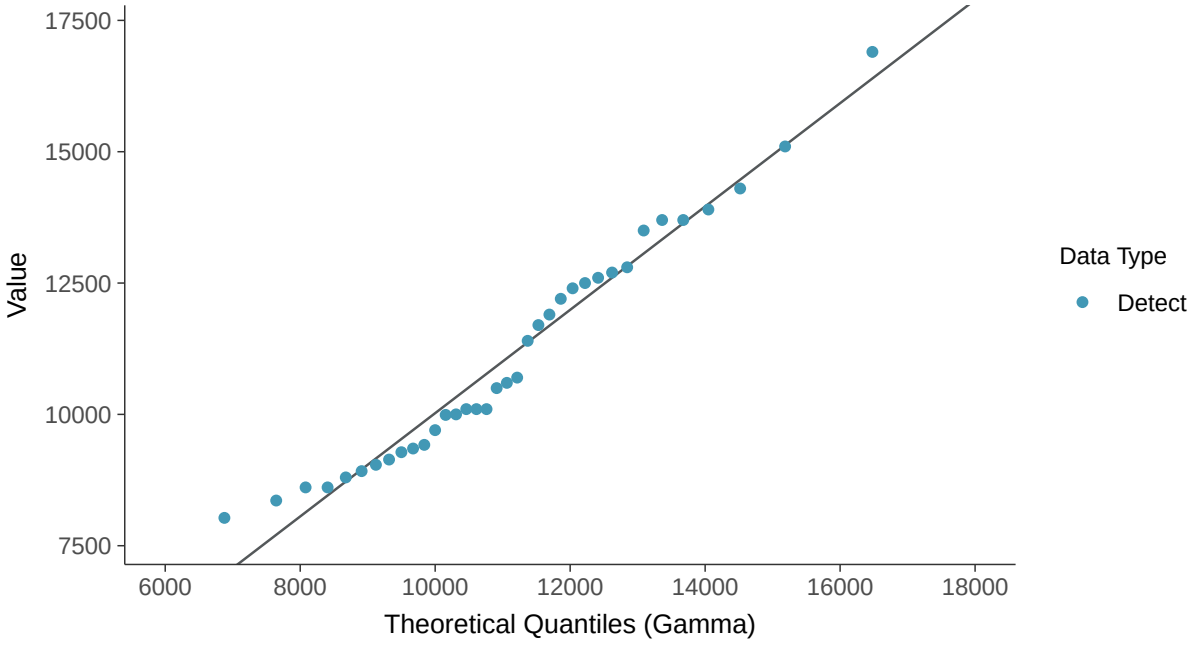
Lognormal Q-Q plot

Calcium, MW-5 (ug/L)



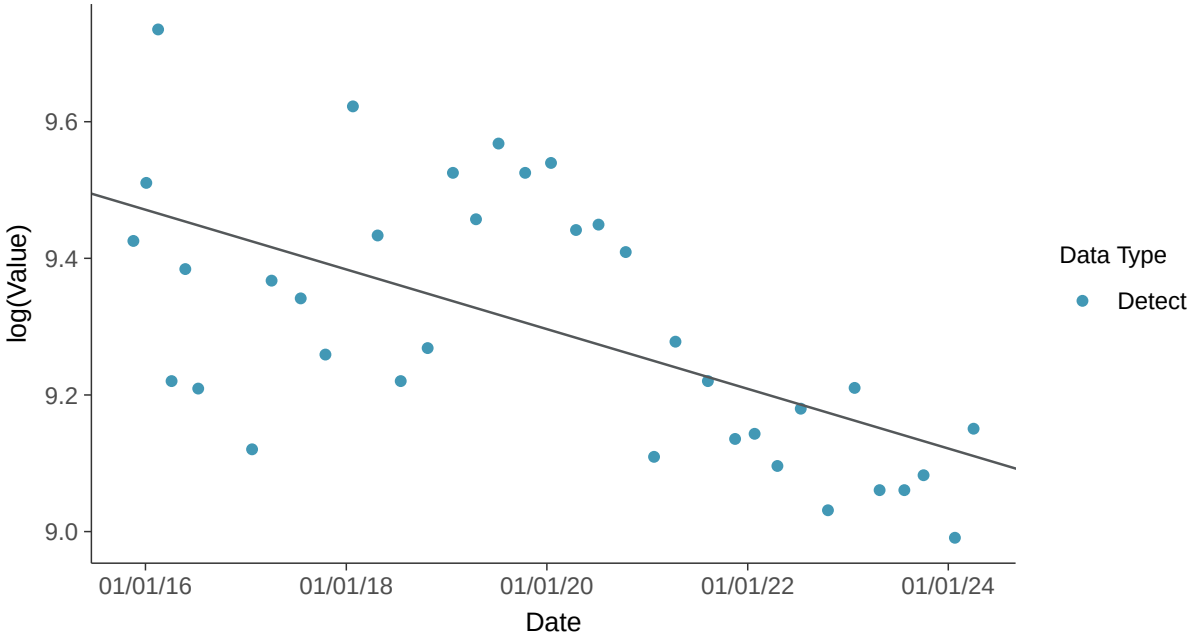
Gamma Q-Q plot

Calcium, MW-5 (ug/L)



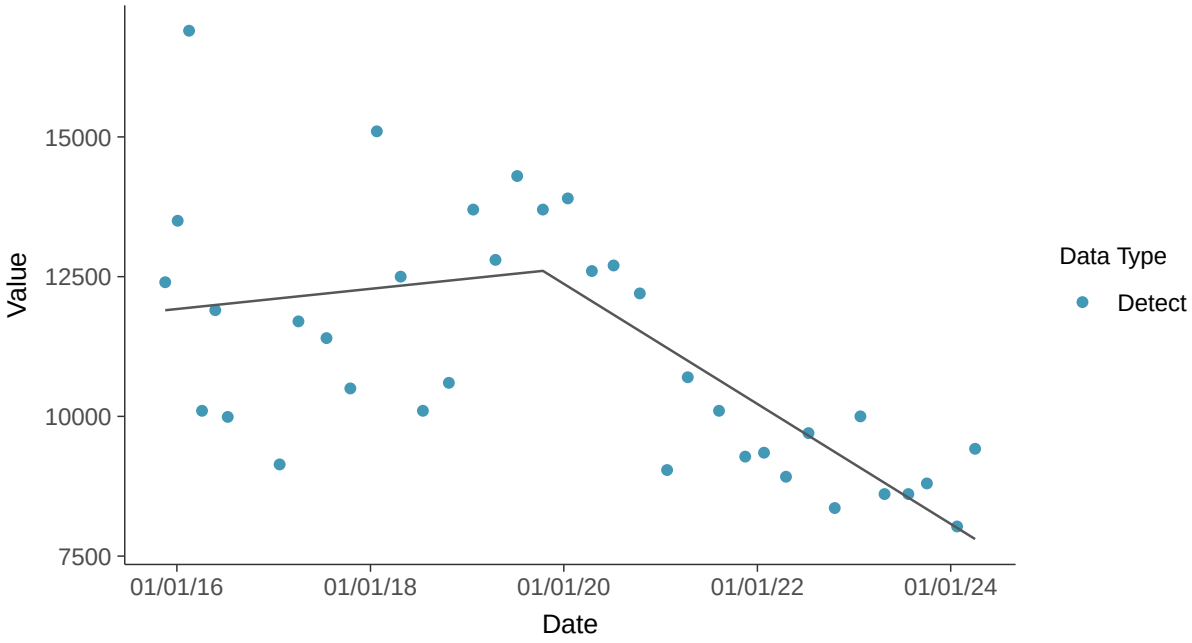
Trend Regression: Lognormal MLE

Calcium, MW-5 (ug/L)



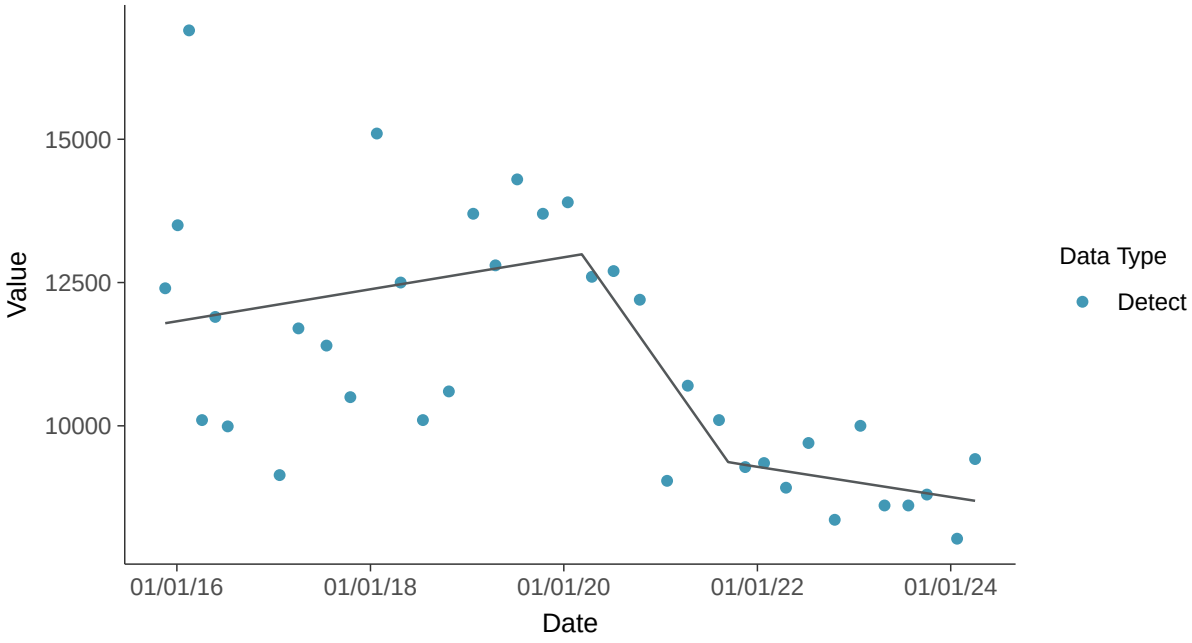
Trend Regression: Piecewise Linear-Linear

Calcium, MW-5 (ug/L)



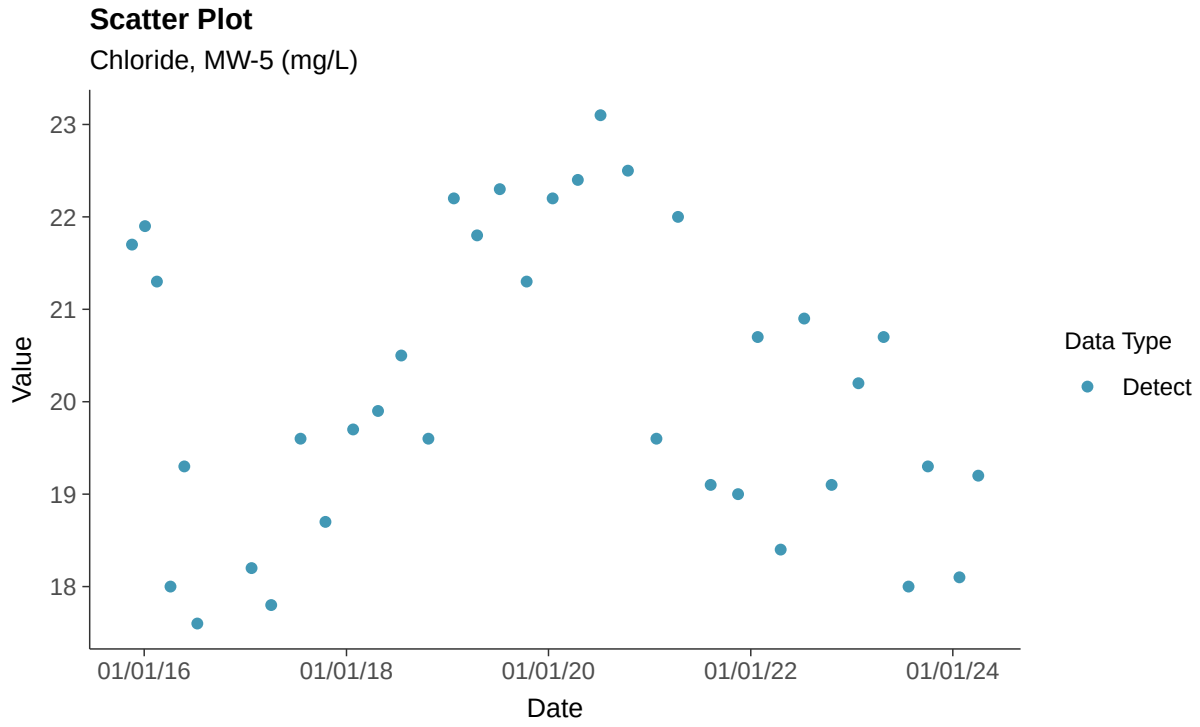
Trend Regression: Piecewise Linear-Linear-Linear

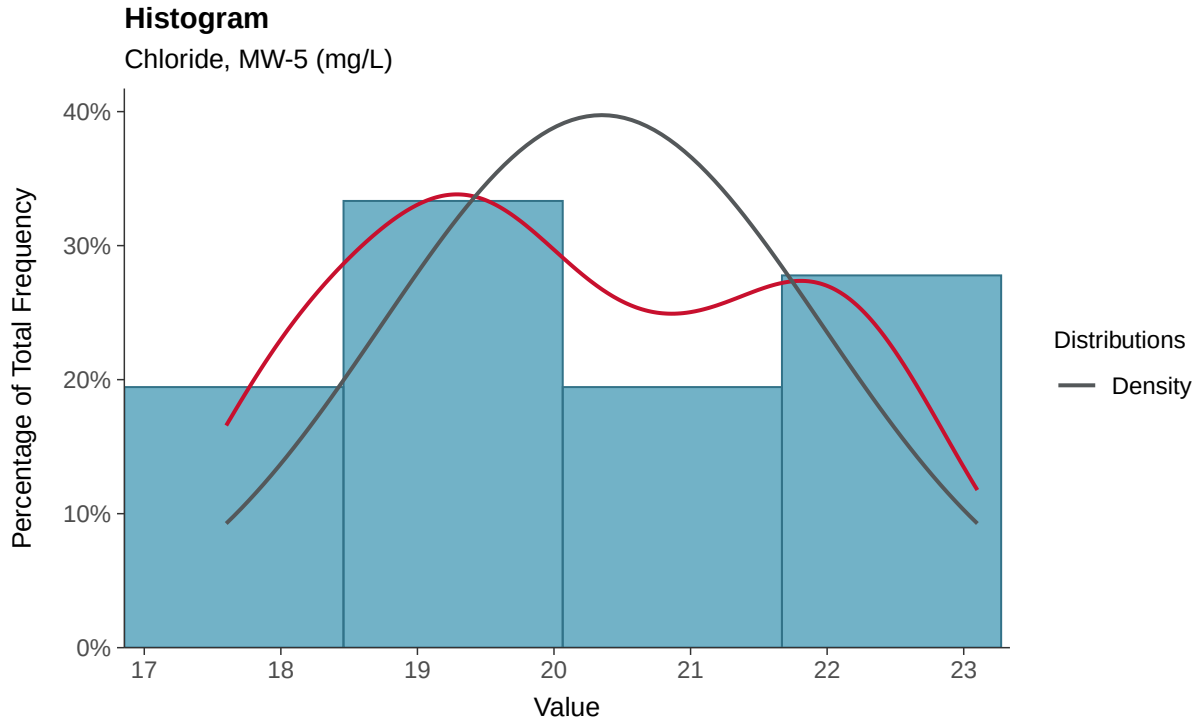
Calcium, MW-5 (ug/L)



App. III: Chloride, MW-5

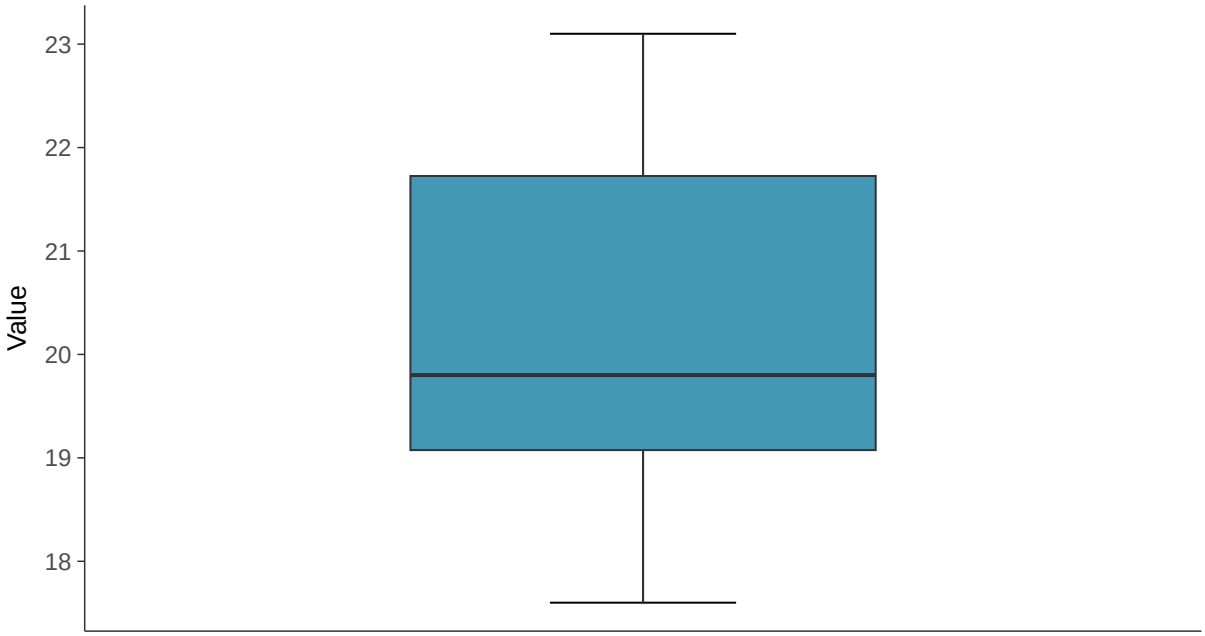
ID: 8_2_108





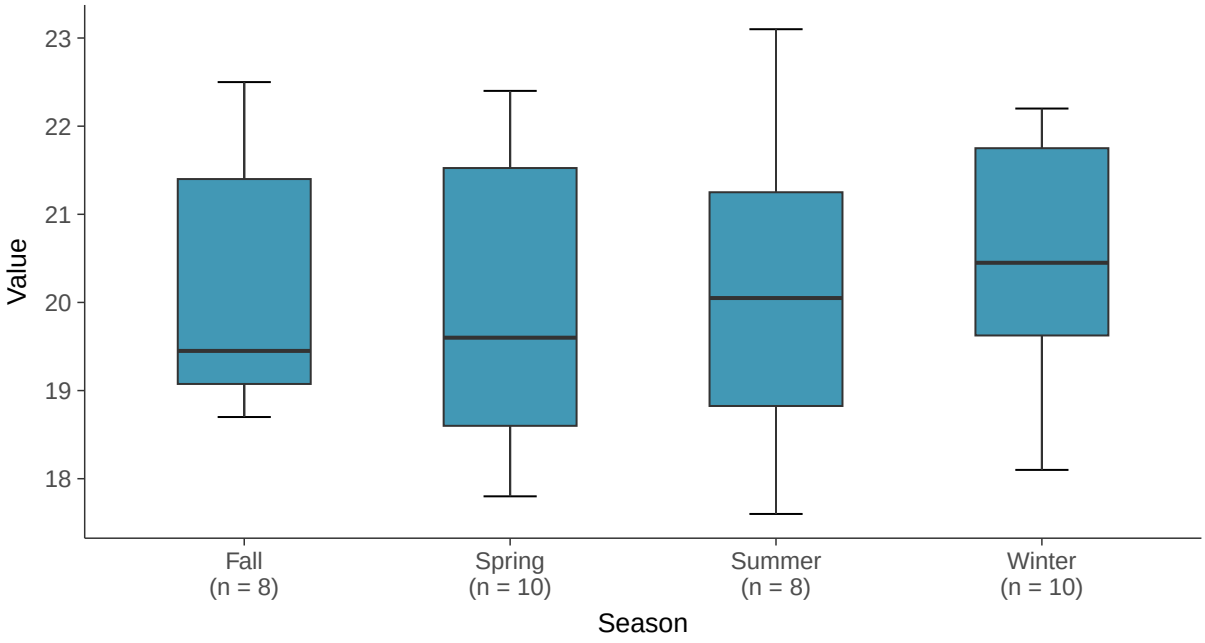
Boxplot

Chloride, MW-5 (mg/L)



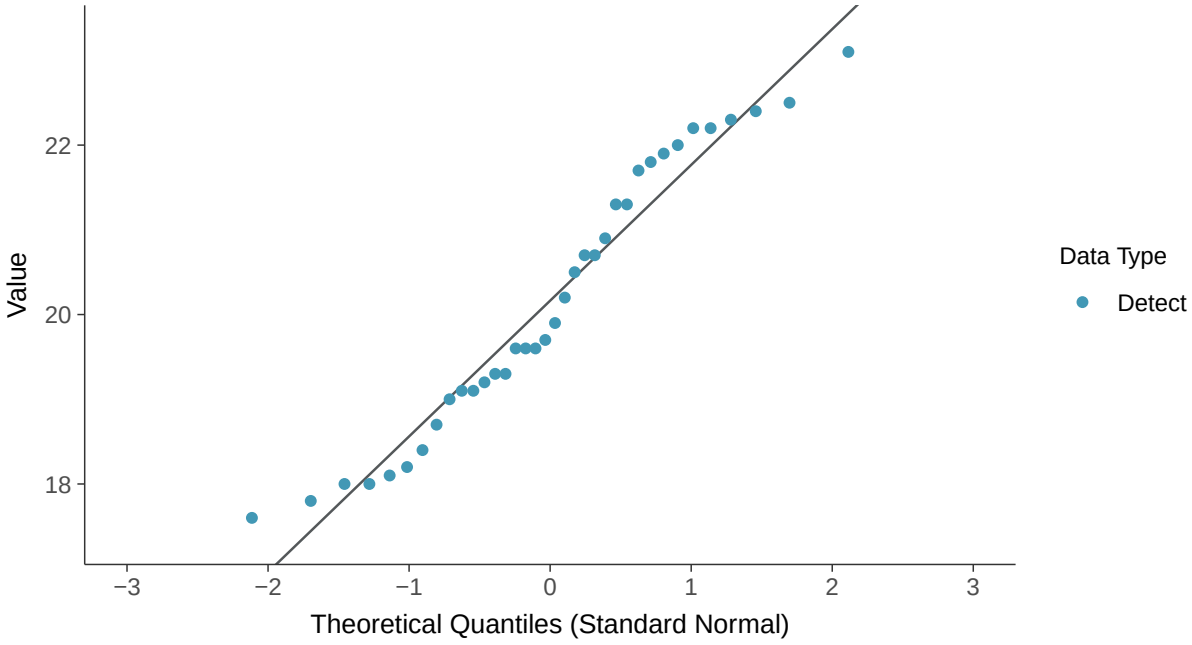
Boxplot by Season

Chloride, MW-5 (mg/L)



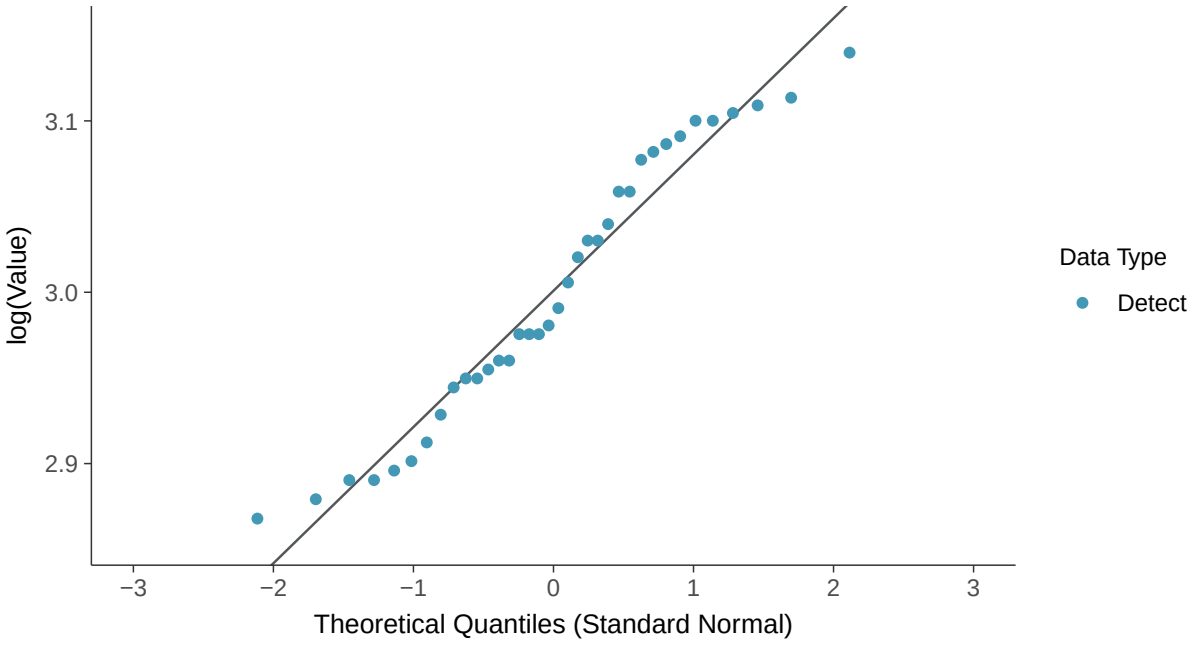
Normal Q-Q plot

Chloride, MW-5 (mg/L)



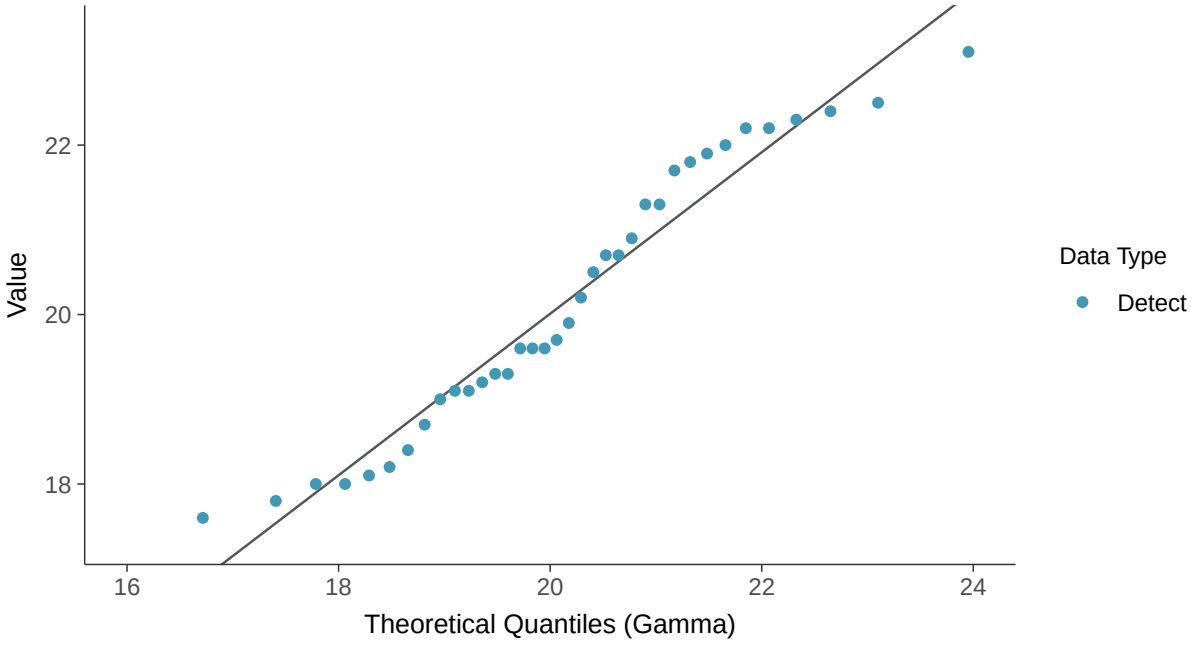
Lognormal Q-Q plot

Chloride, MW-5 (mg/L)



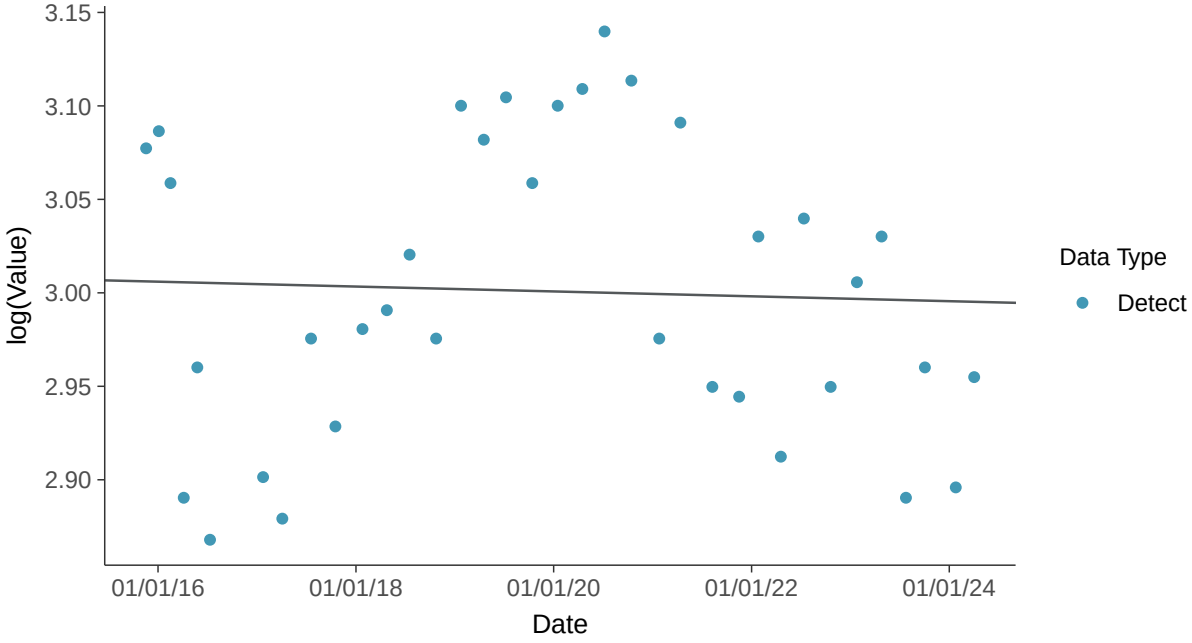
Gamma Q-Q plot

Chloride, MW-5 (mg/L)



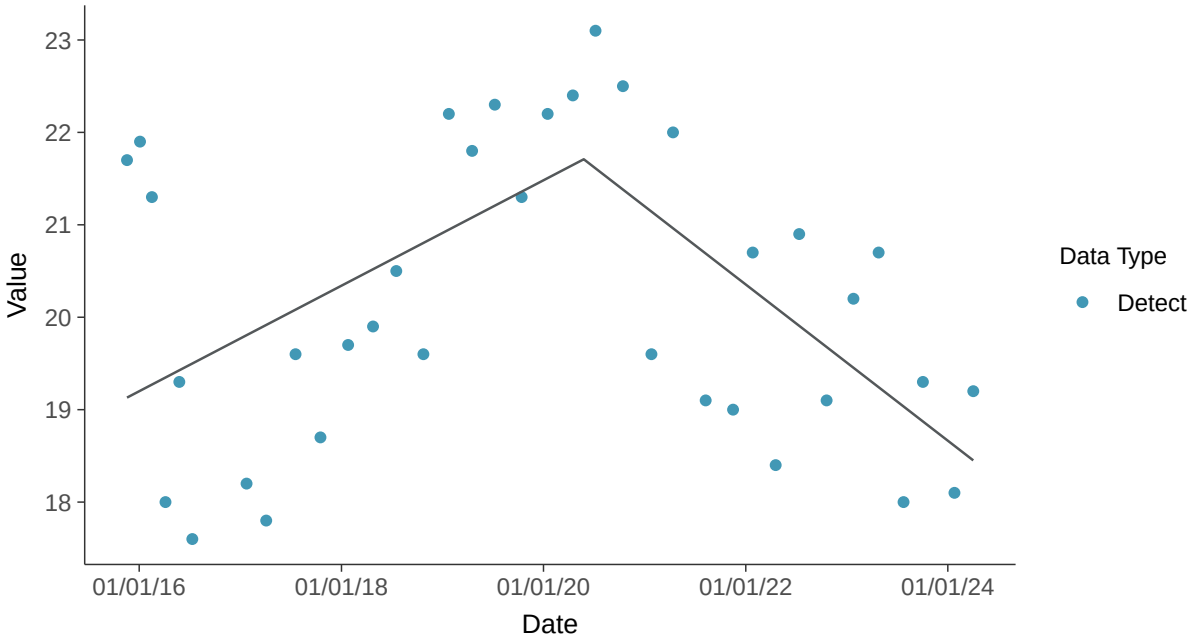
Trend Regression: Lognormal MLE

Chloride, MW-5 (mg/L)



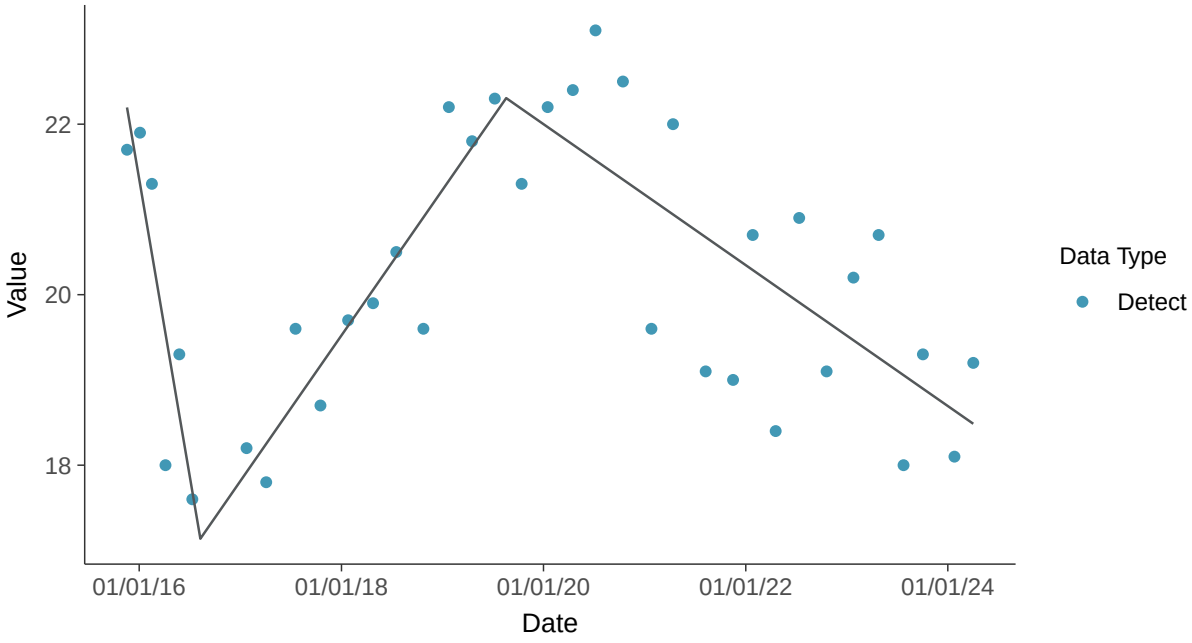
Trend Regression: Piecewise Linear-Linear

Chloride, MW-5 (mg/L)



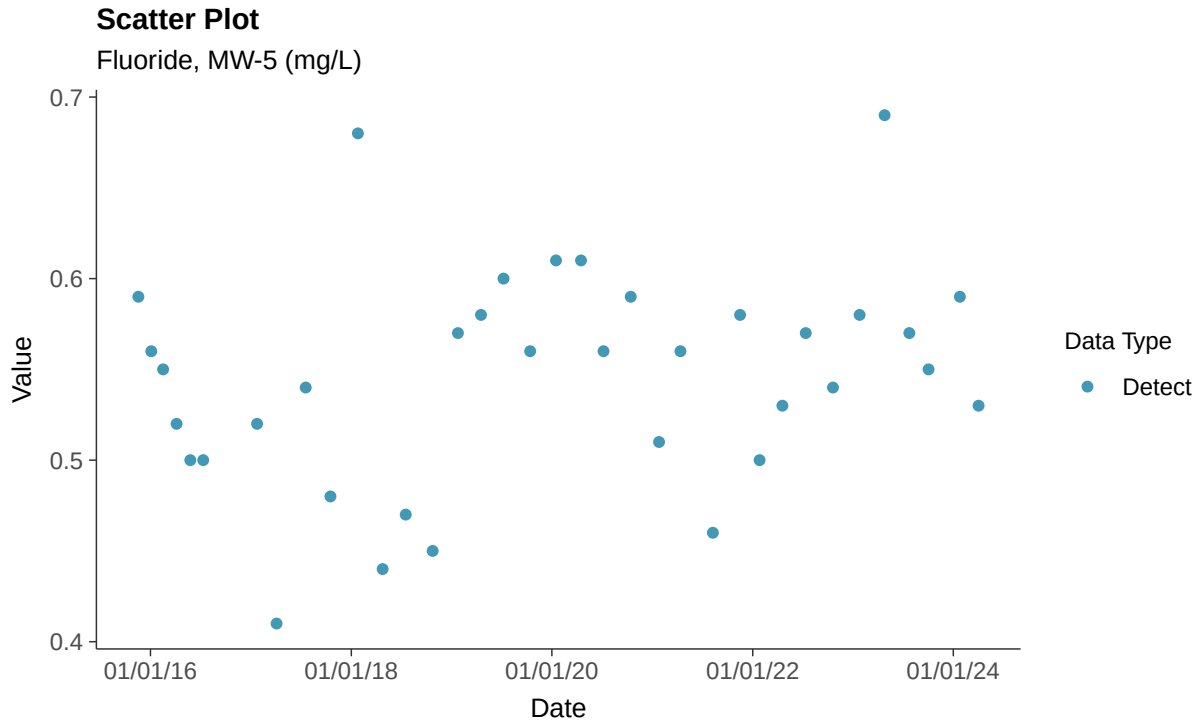
Trend Regression: Piecewise Linear-Linear-Linear

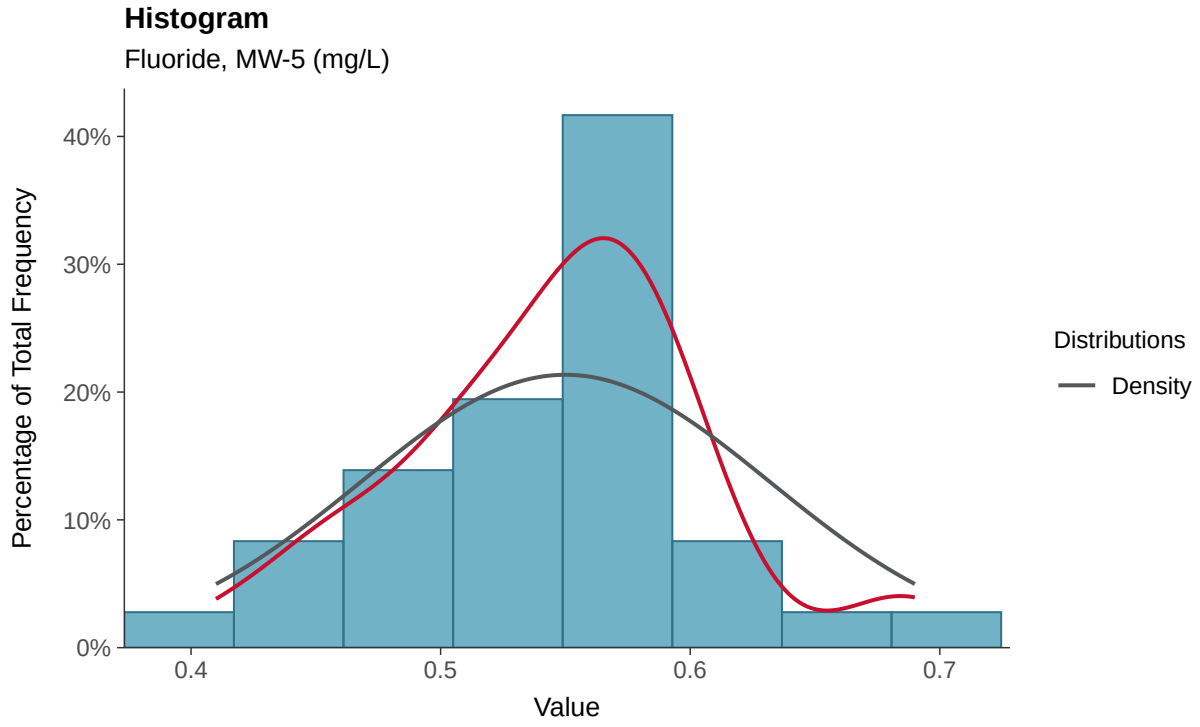
Chloride, MW-5 (mg/L)



App. III: Fluoride, MW-5

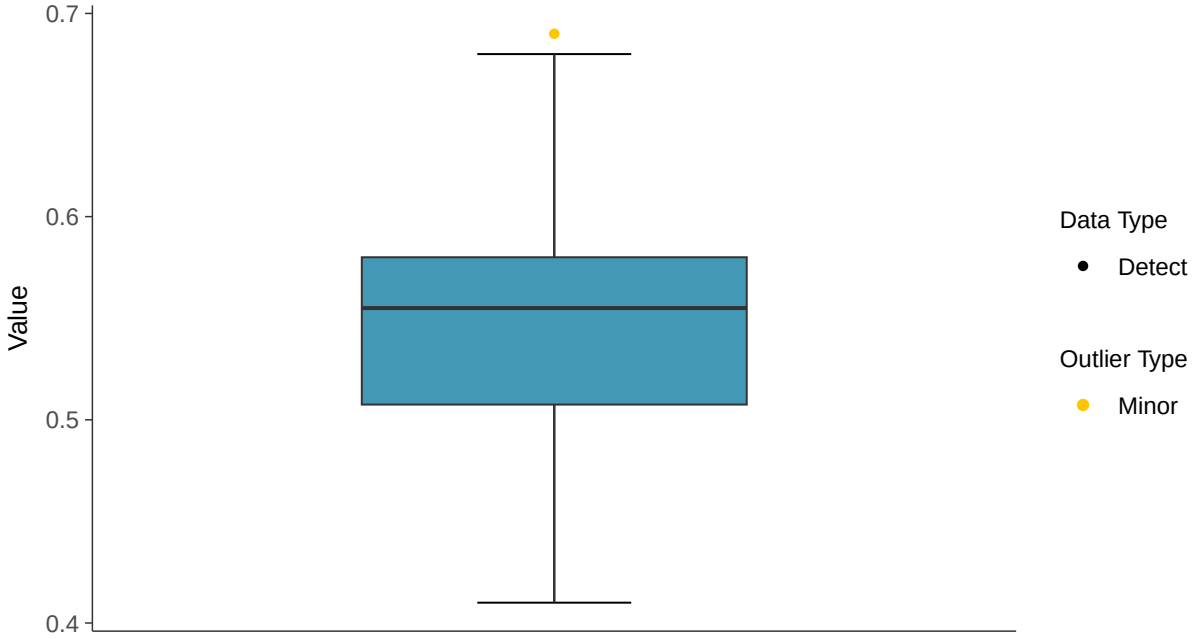
ID: 8_2_112





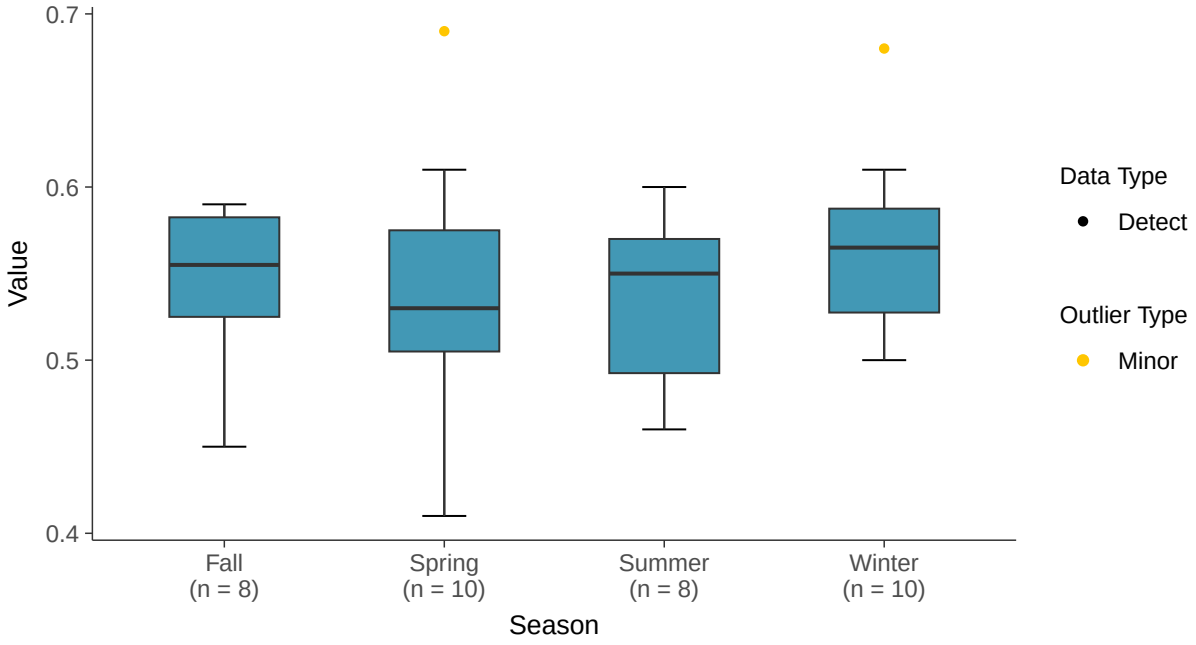
Boxplot

Fluoride, MW-5 (mg/L)



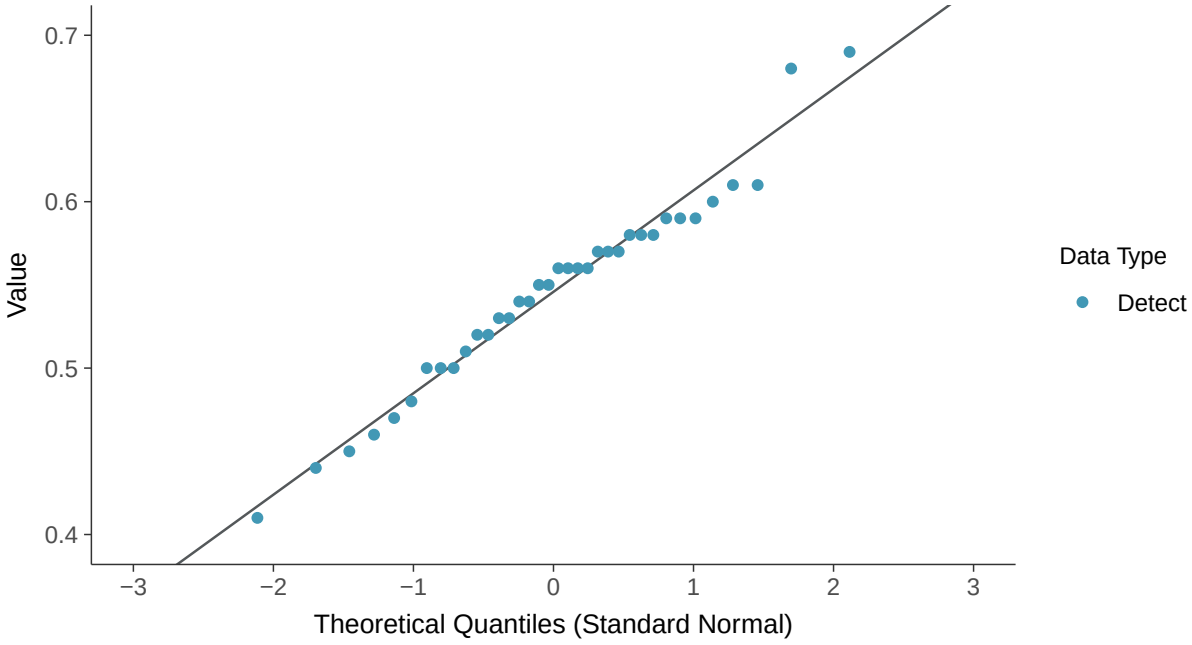
Boxplot by Season

Fluoride, MW-5 (mg/L)



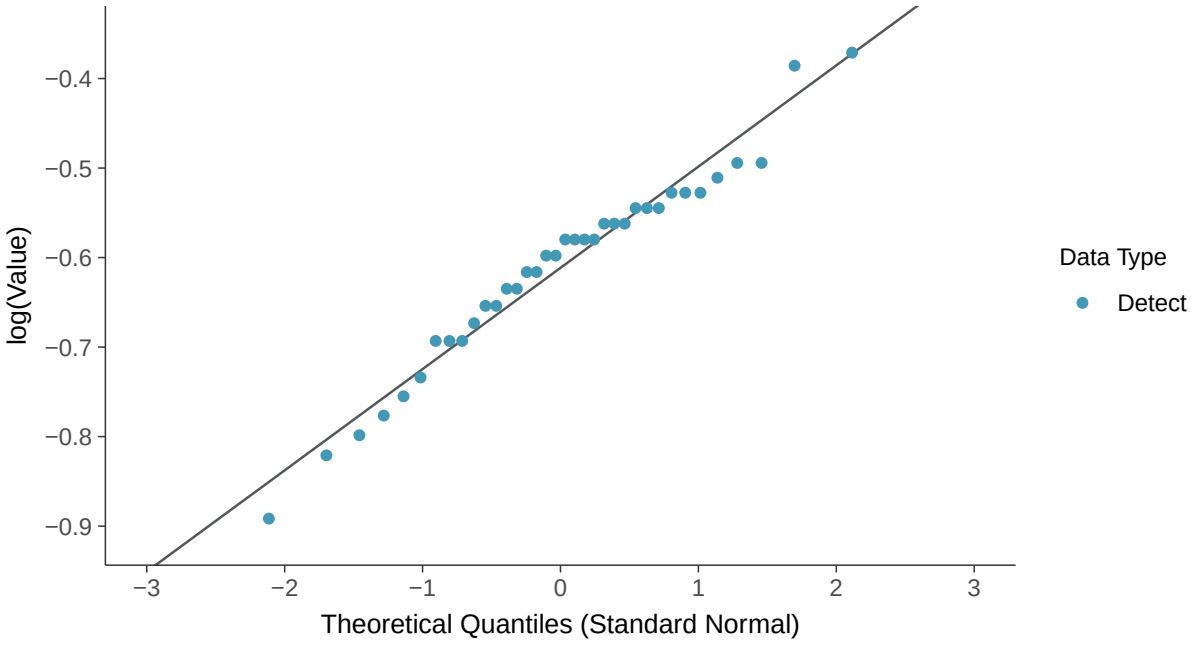
Normal Q-Q plot

Fluoride, MW-5 (mg/L)



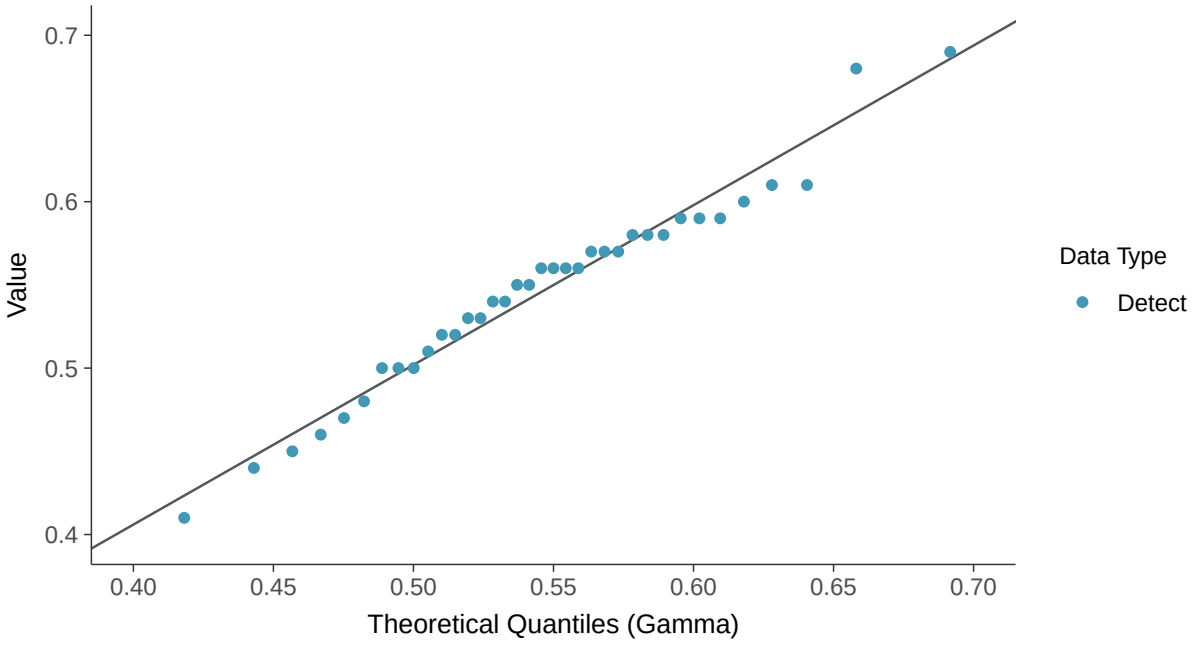
Lognormal Q-Q plot

Fluoride, MW-5 (mg/L)



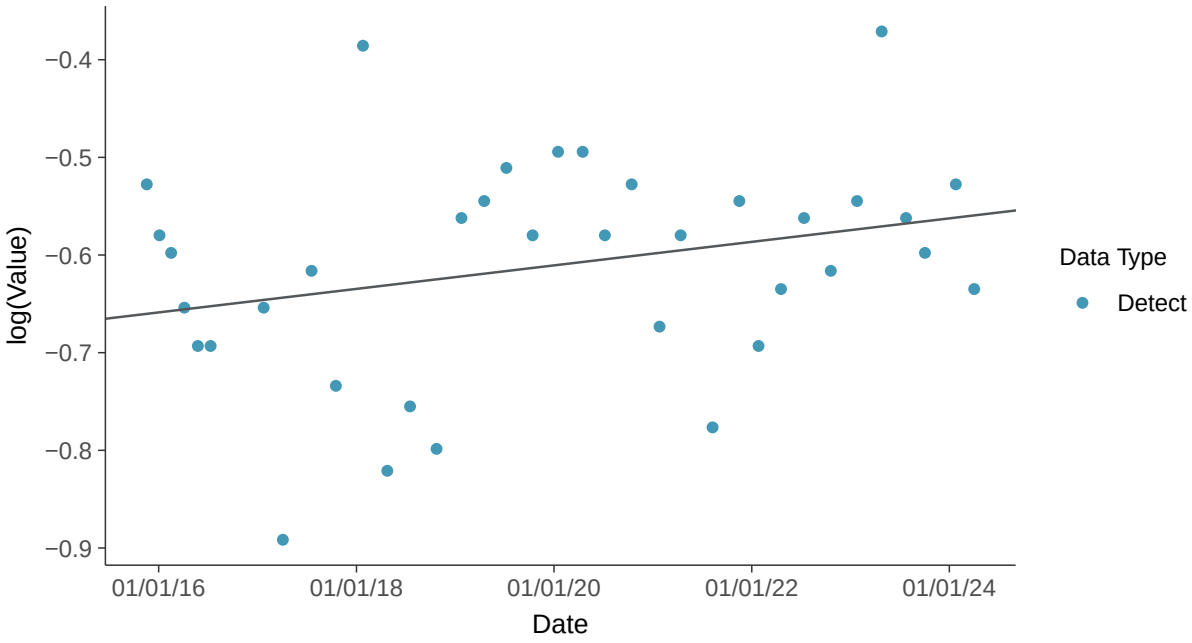
Gamma Q-Q plot

Fluoride, MW-5 (mg/L)



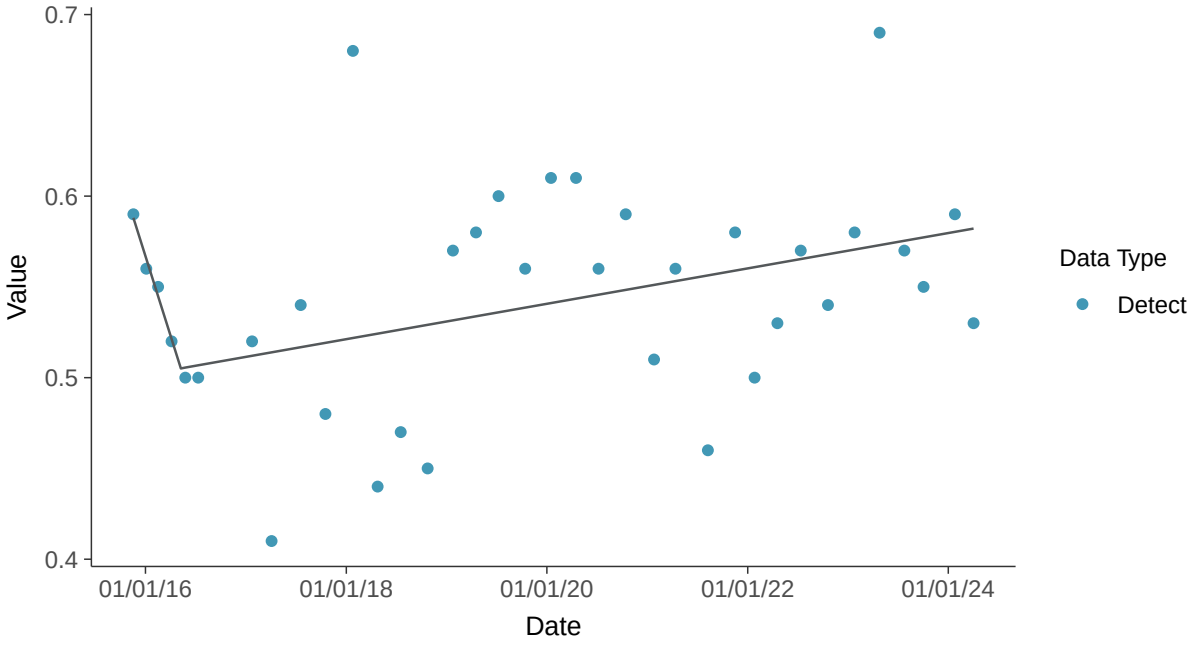
Trend Regression: Lognormal MLE

Fluoride, MW-5 (mg/L)



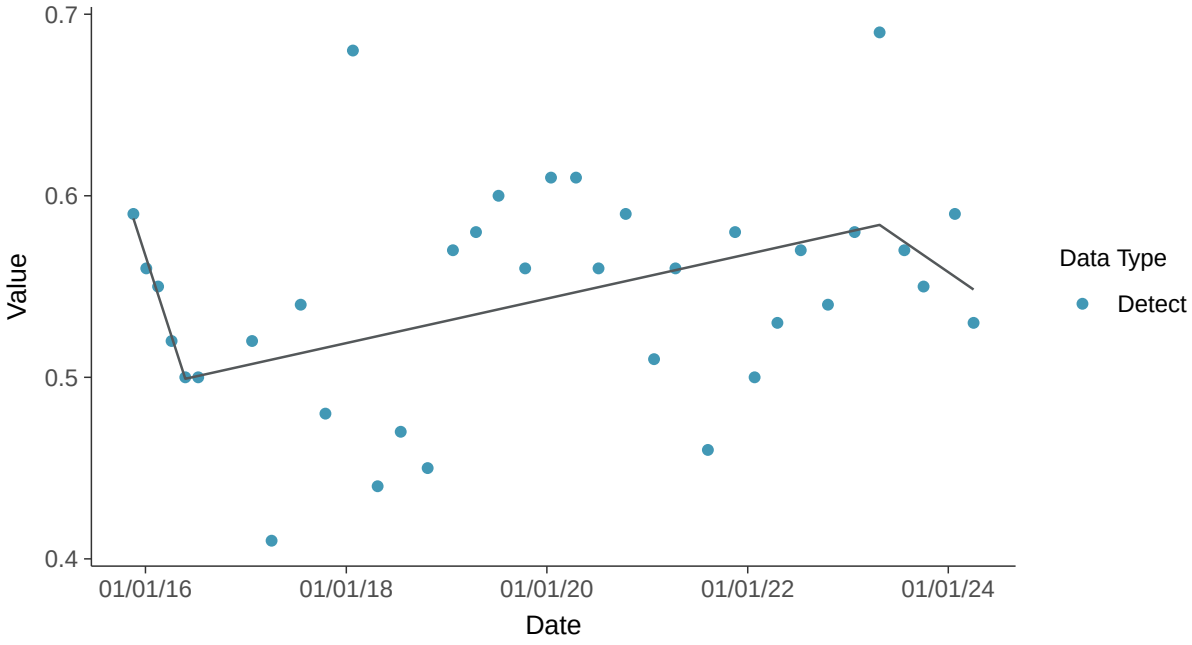
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-5 (mg/L)



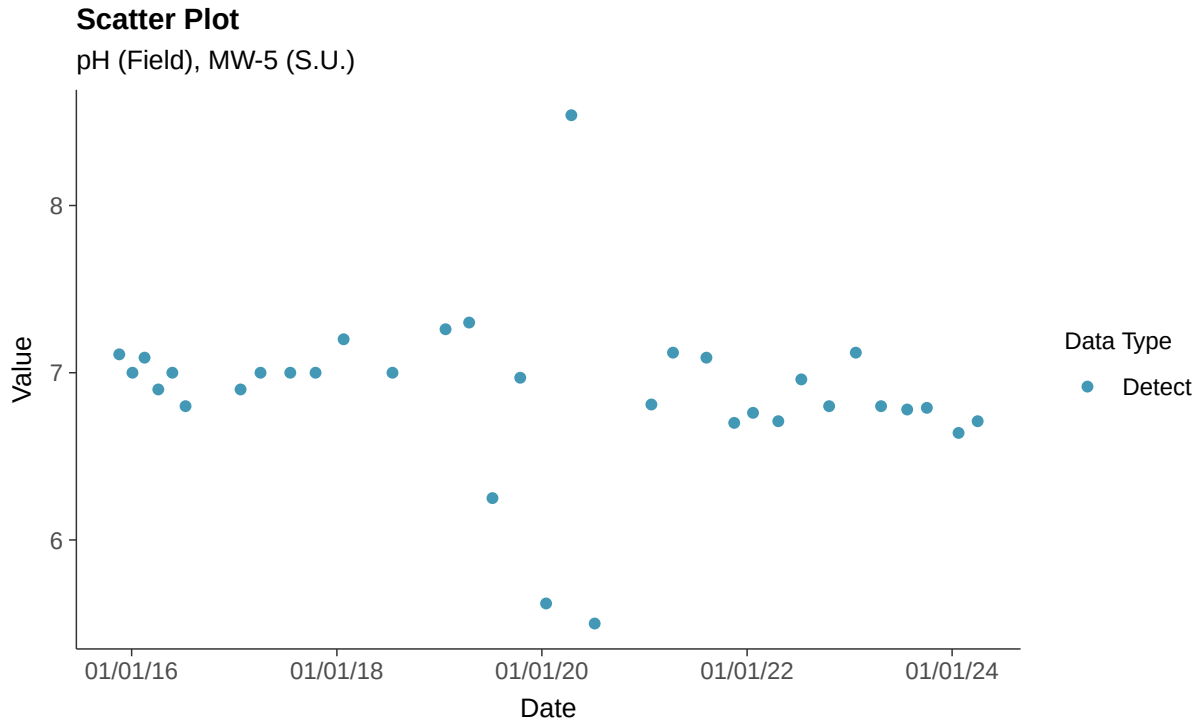
Trend Regression: Piecewise Linear-Linear-Linear

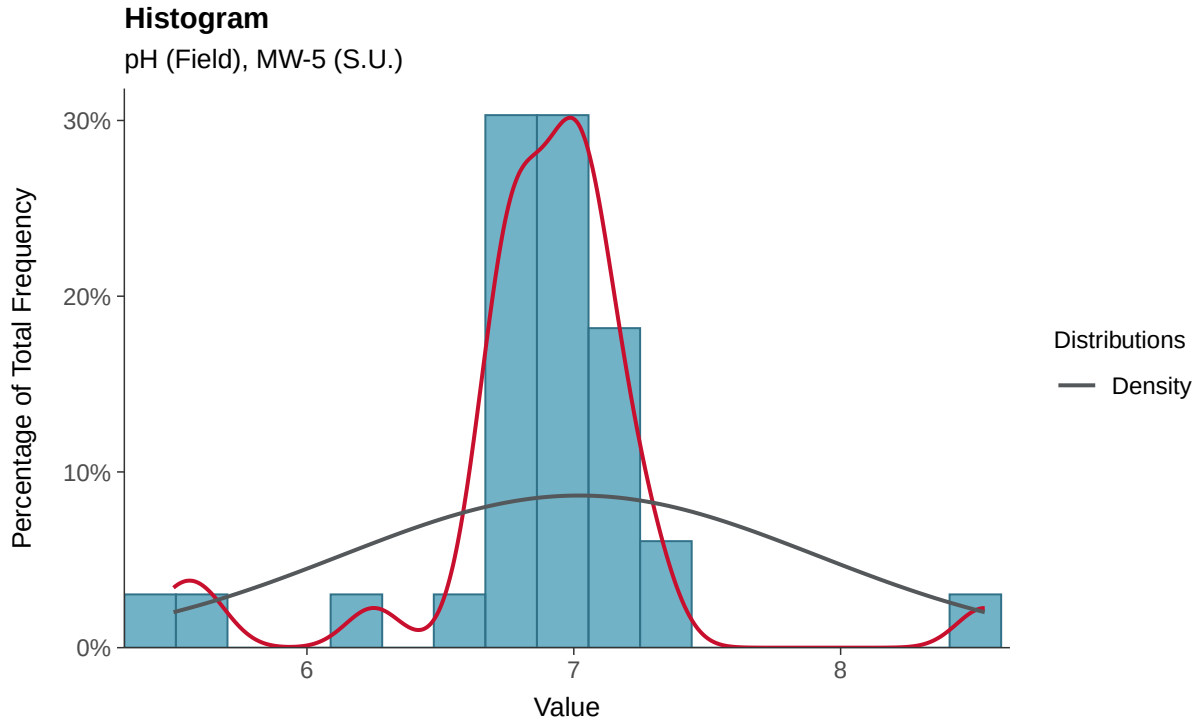
Fluoride, MW-5 (mg/L)



App. III: pH (Field), MW-5

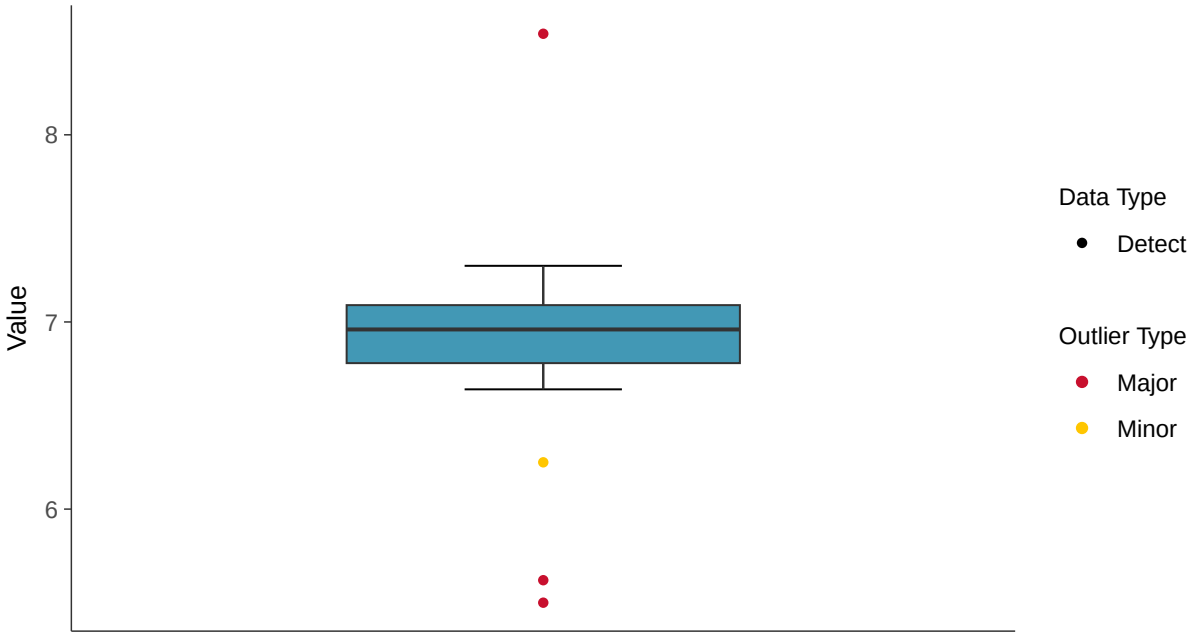
ID: 8_2_118





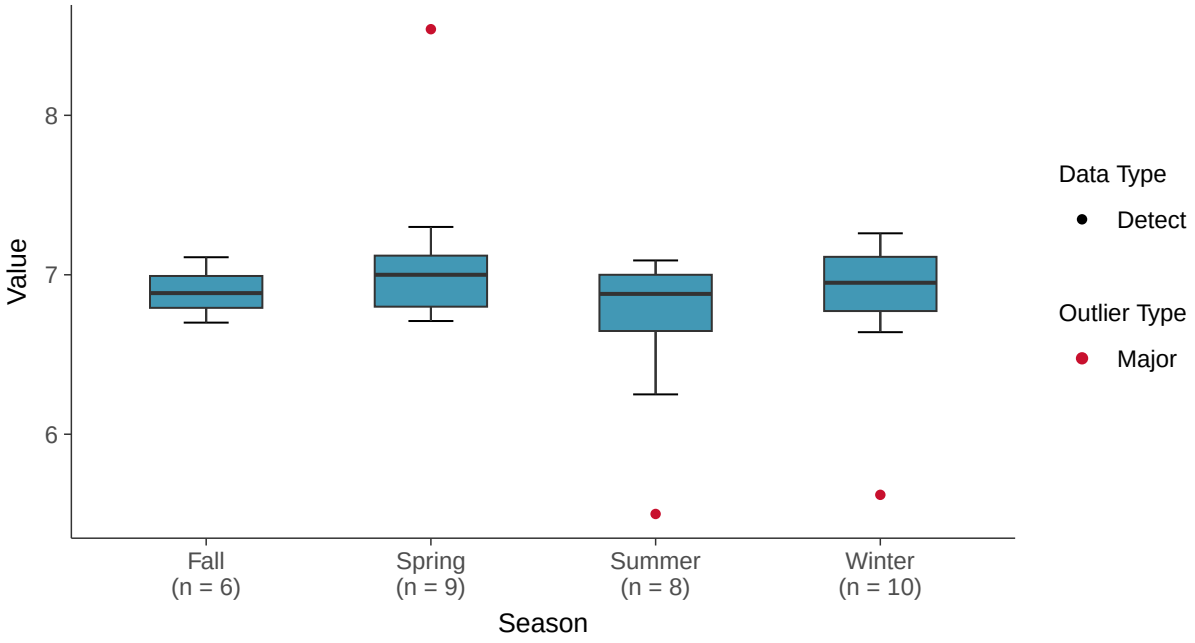
Boxplot

pH (Field), MW-5 (S.U.)



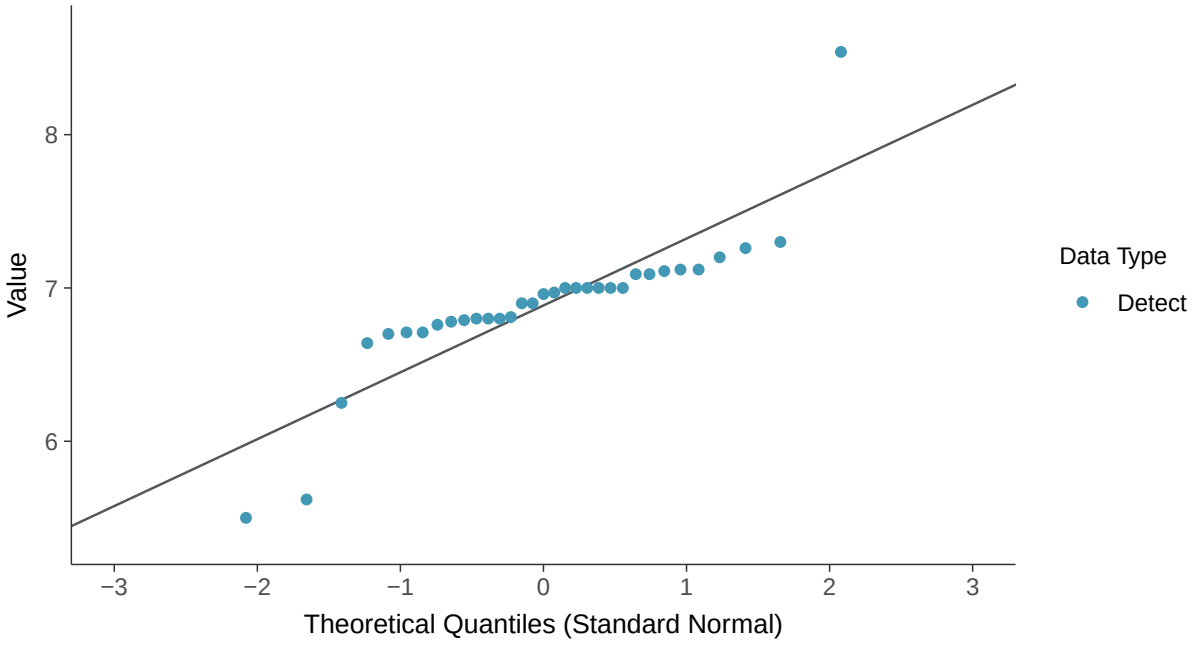
Boxplot by Season

pH (Field), MW-5 (S.U.)



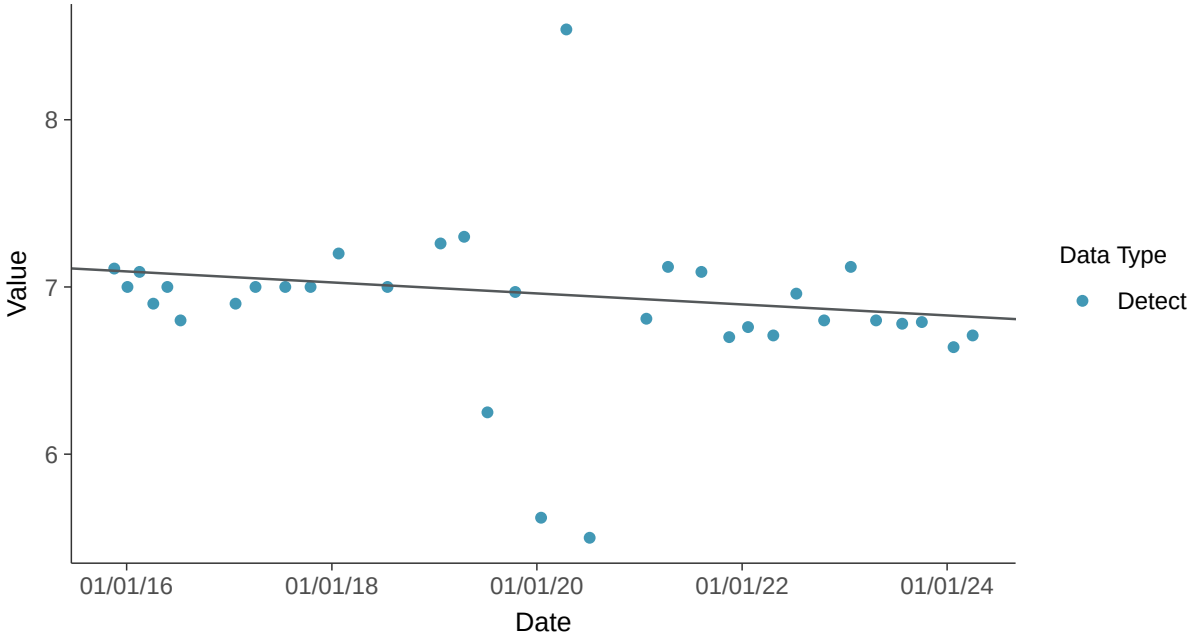
Normal Q-Q plot

pH (Field), MW-5 (S.U.)



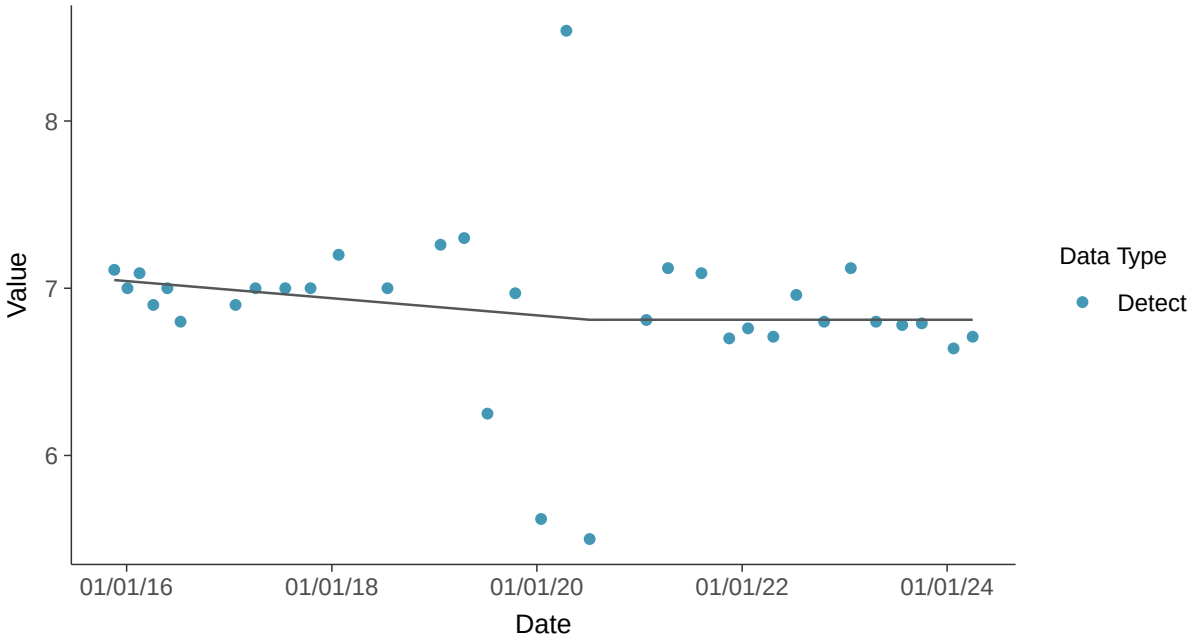
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-5 (S.U.)



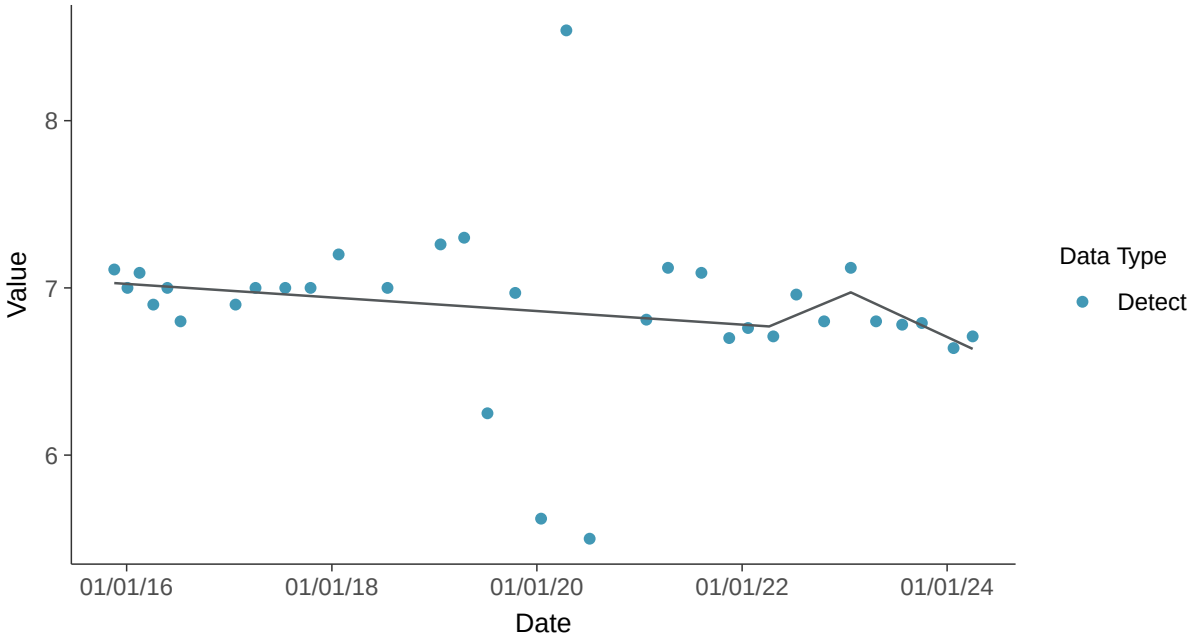
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-5 (S.U.)



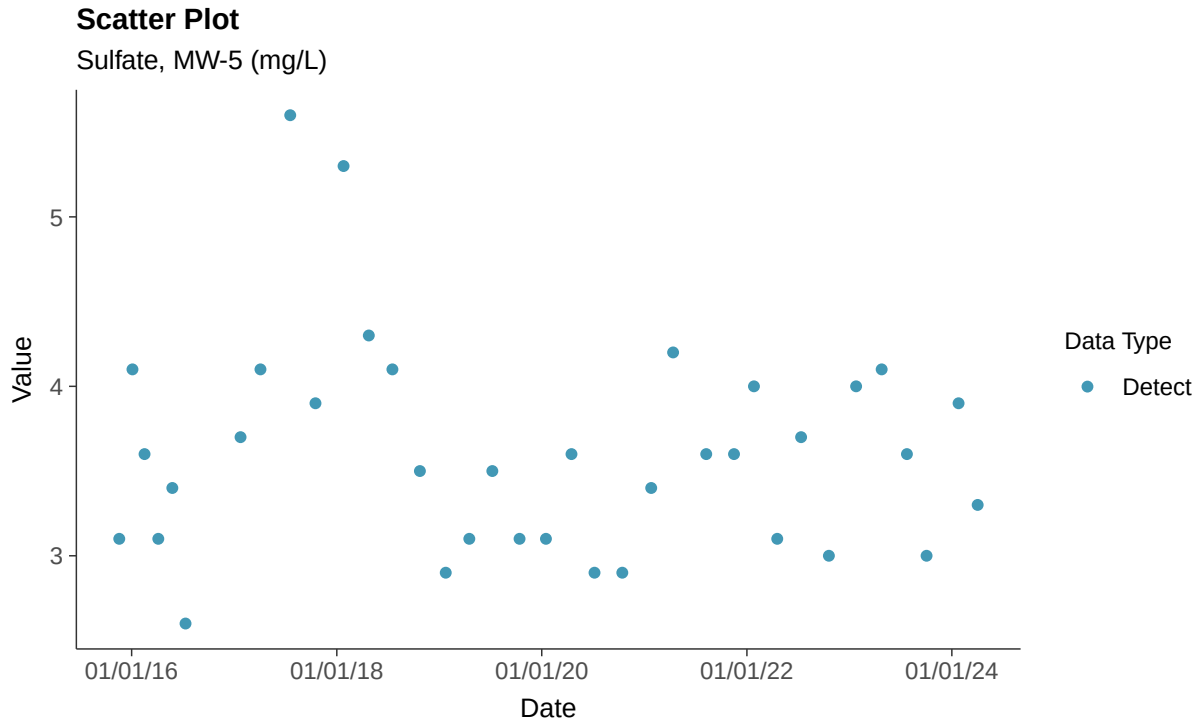
Trend Regression: Piecewise Linear-Linear-Linear

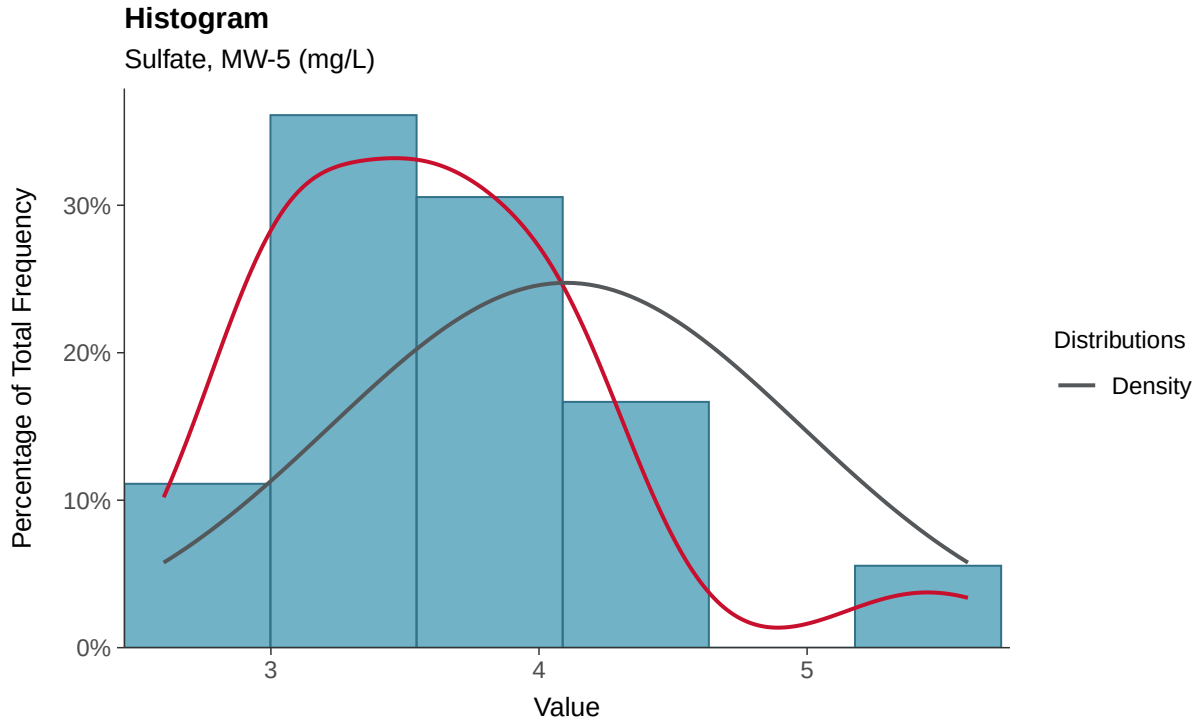
pH (Field), MW-5 (S.U.)



App. III: Sulfate, MW-5

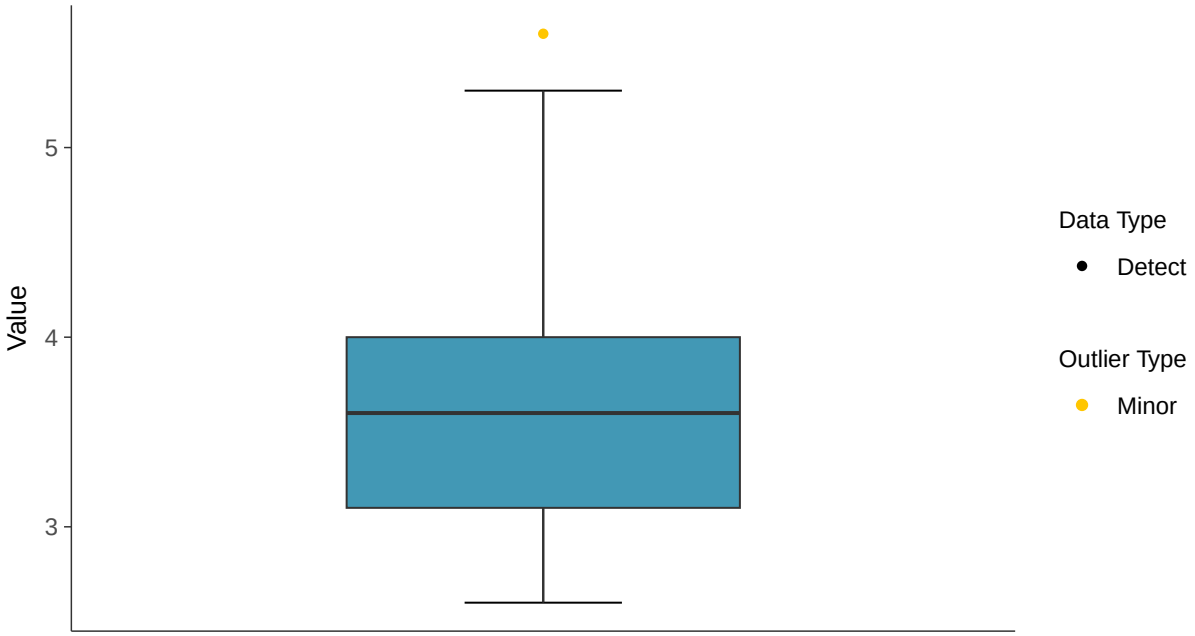
ID: 8_2_123





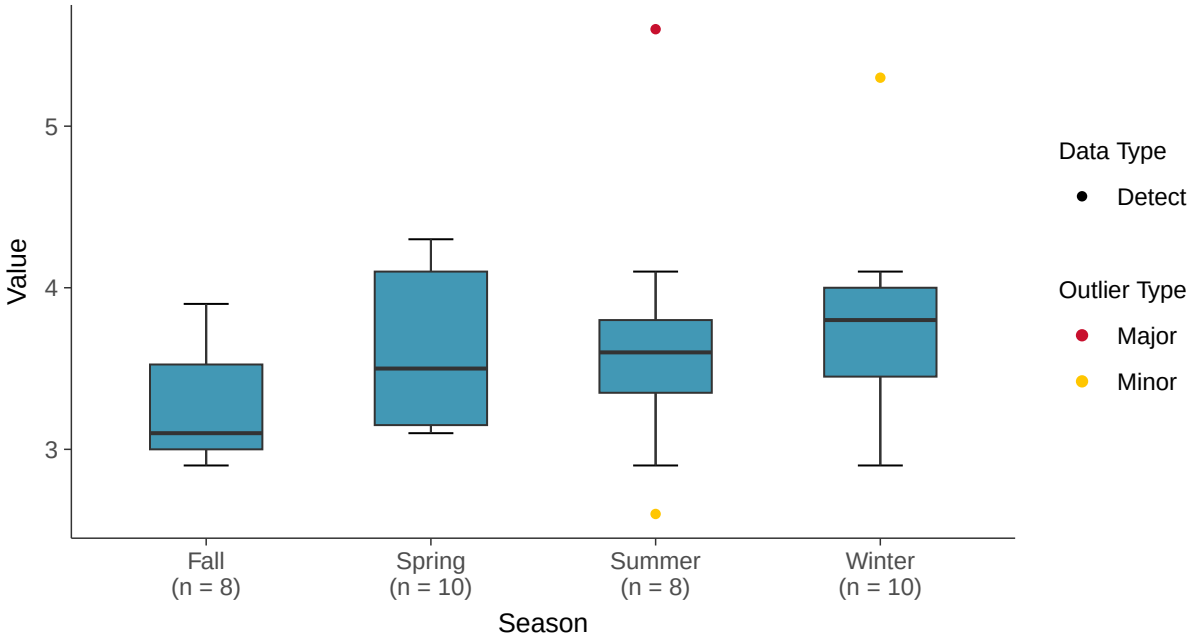
Boxplot

Sulfate, MW-5 (mg/L)



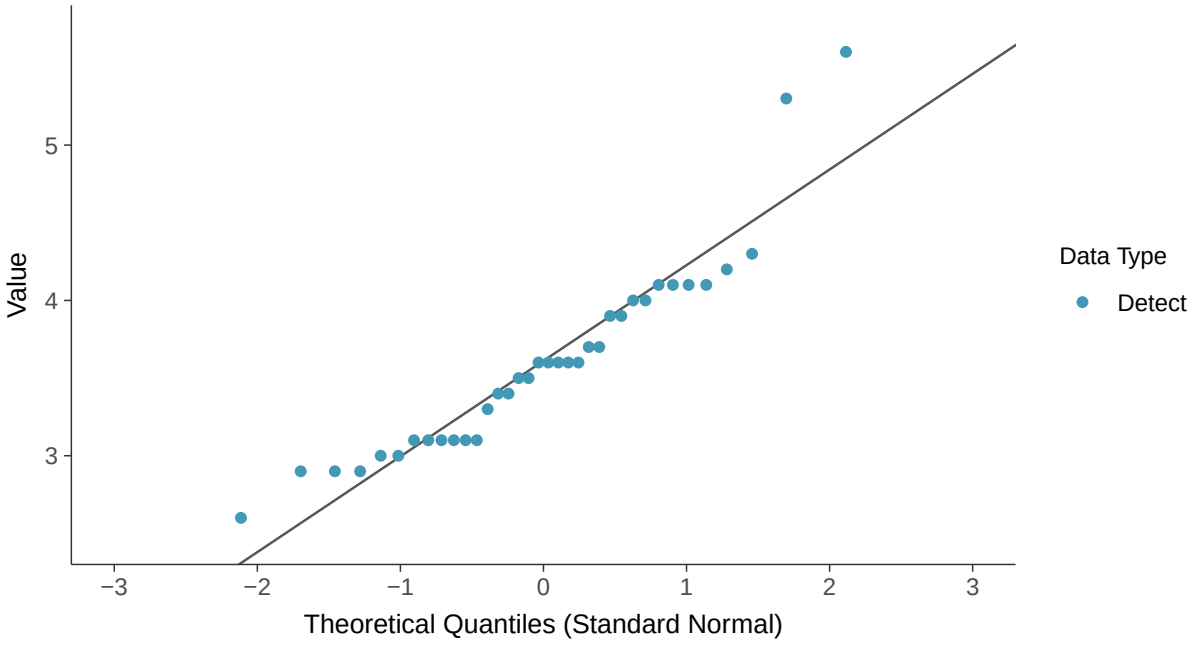
Boxplot by Season

Sulfate, MW-5 (mg/L)



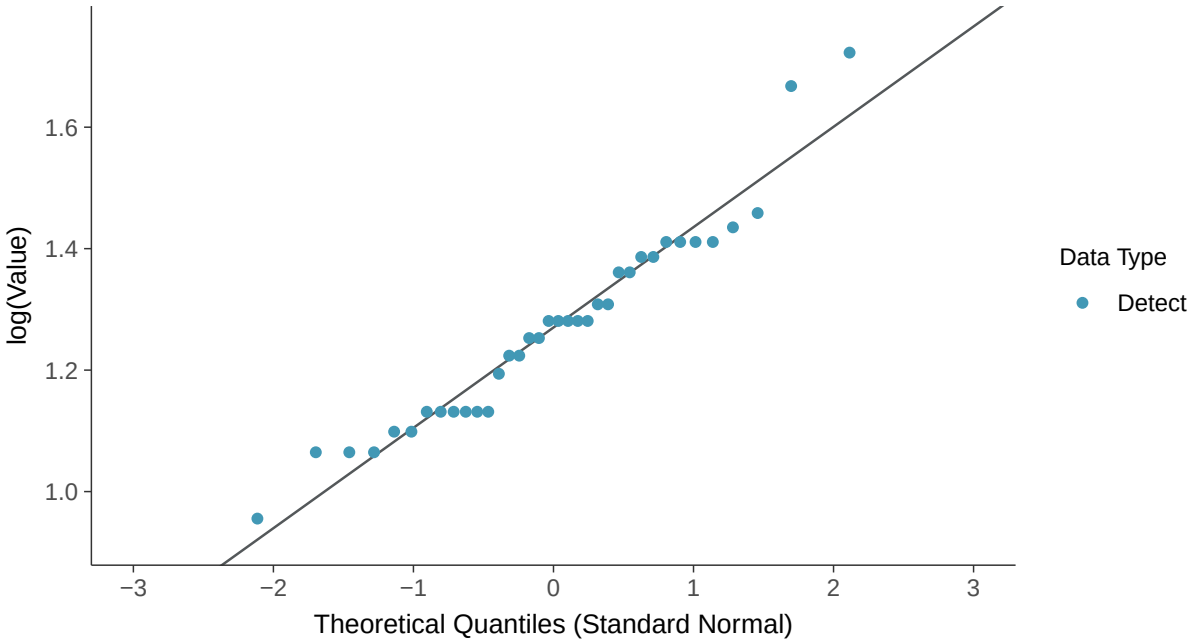
Normal Q-Q plot

Sulfate, MW-5 (mg/L)



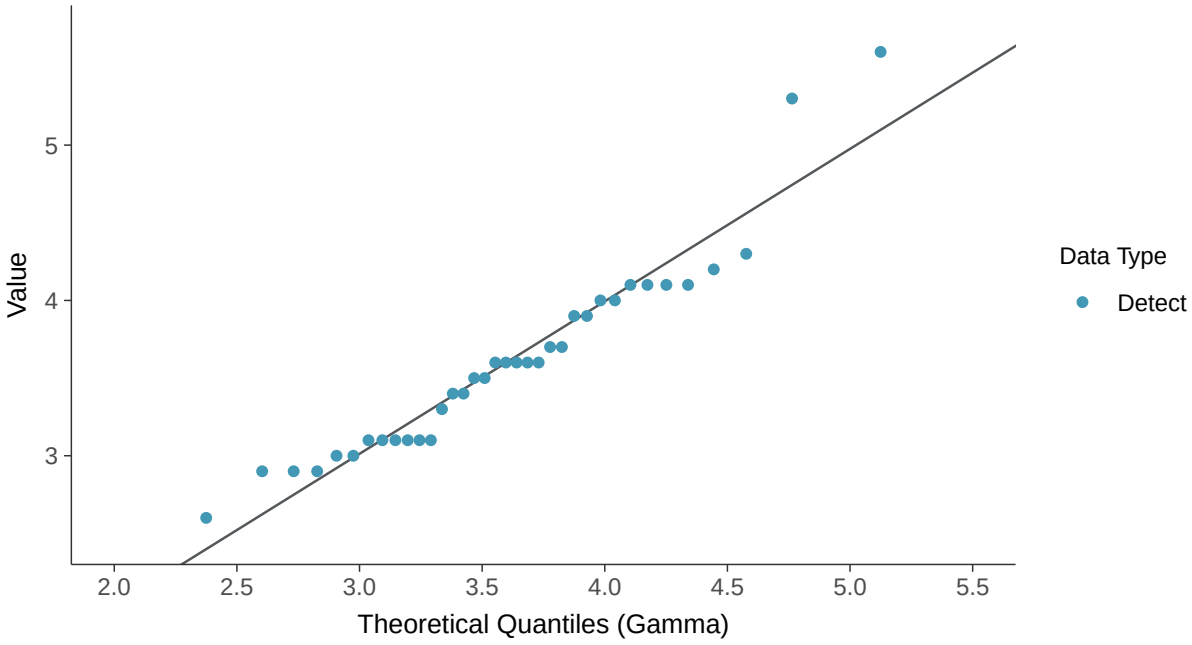
Lognormal Q-Q plot

Sulfate, MW-5 (mg/L)



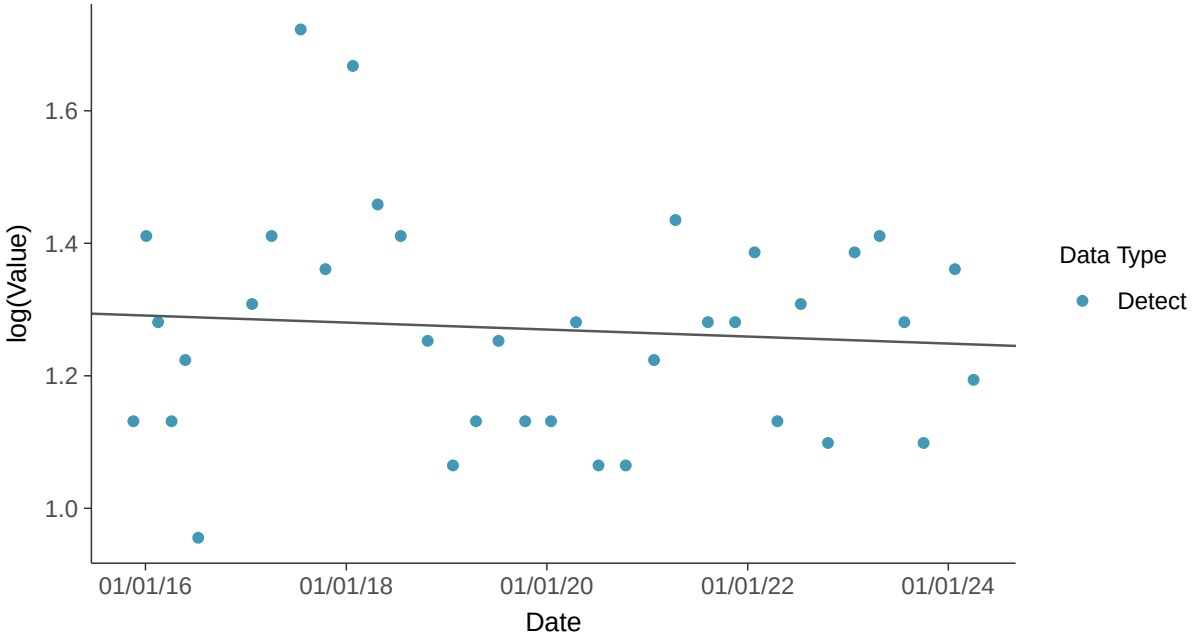
Gamma Q-Q plot

Sulfate, MW-5 (mg/L)



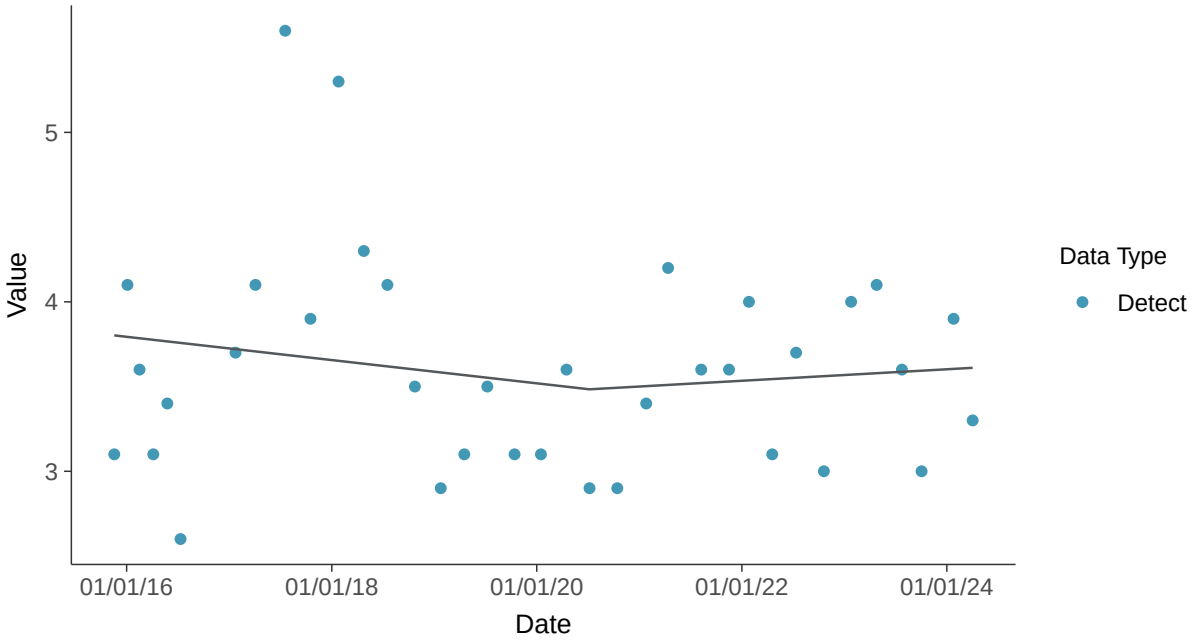
Trend Regression: Lognormal MLE

Sulfate, MW-5 (mg/L)



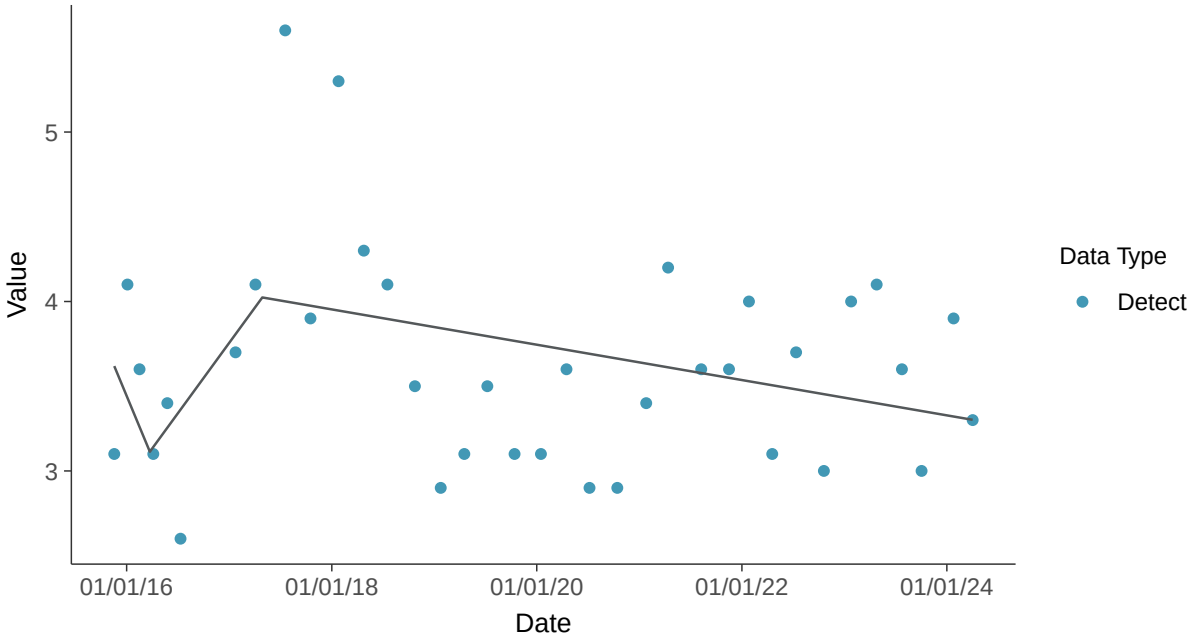
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-5 (mg/L)



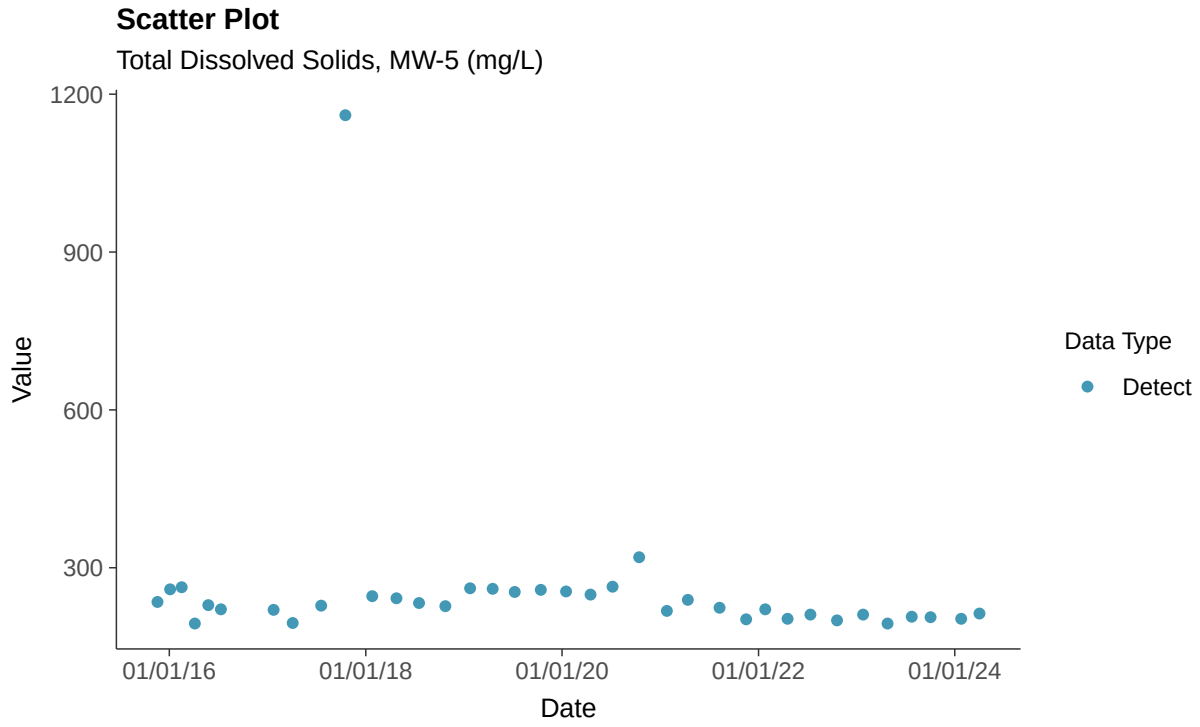
Trend Regression: Piecewise Linear-Linear-Linear

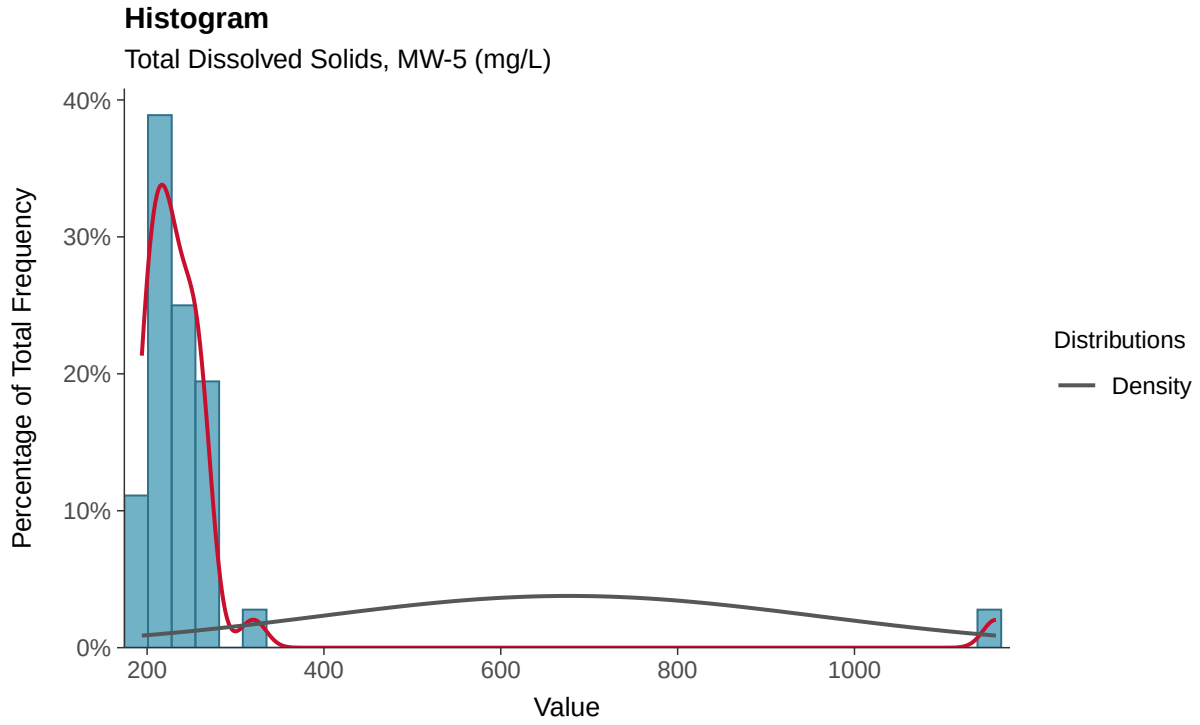
Sulfate, MW-5 (mg/L)



App. III: Total Dissolved Solids, MW-5

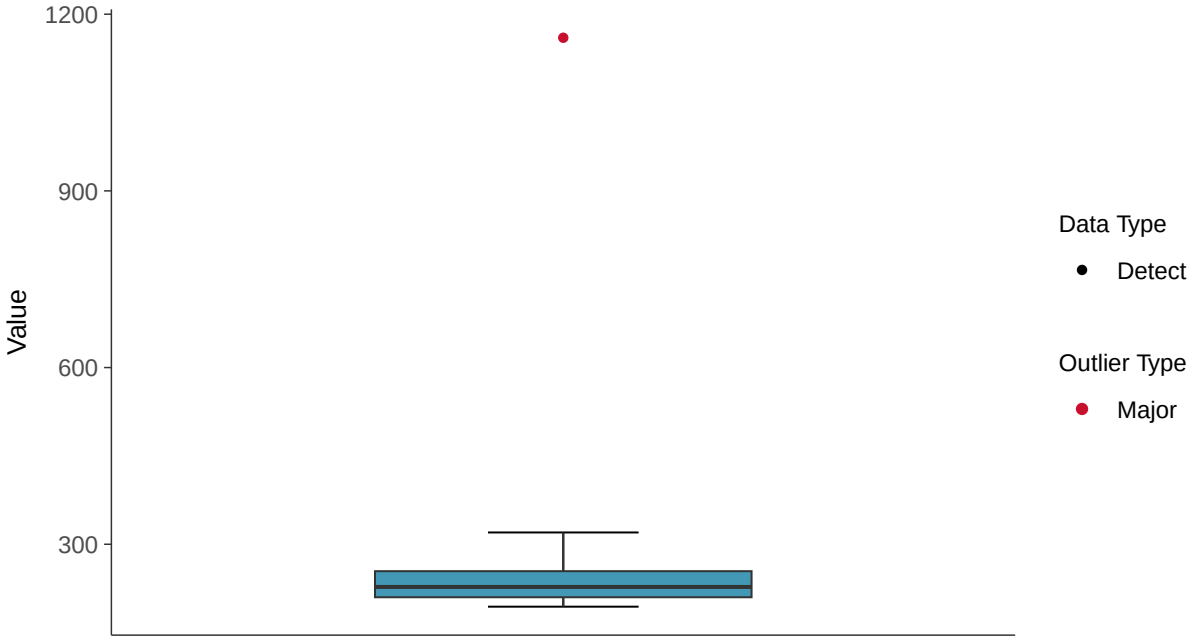
ID: 8_2_125





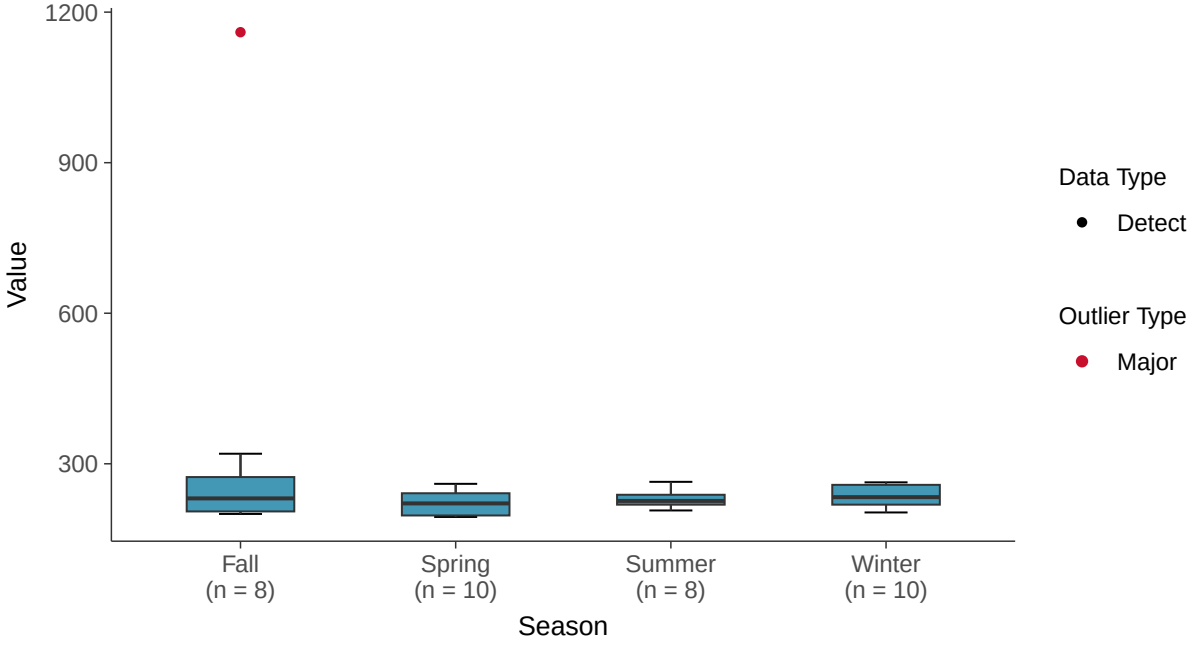
Boxplot

Total Dissolved Solids, MW-5 (mg/L)



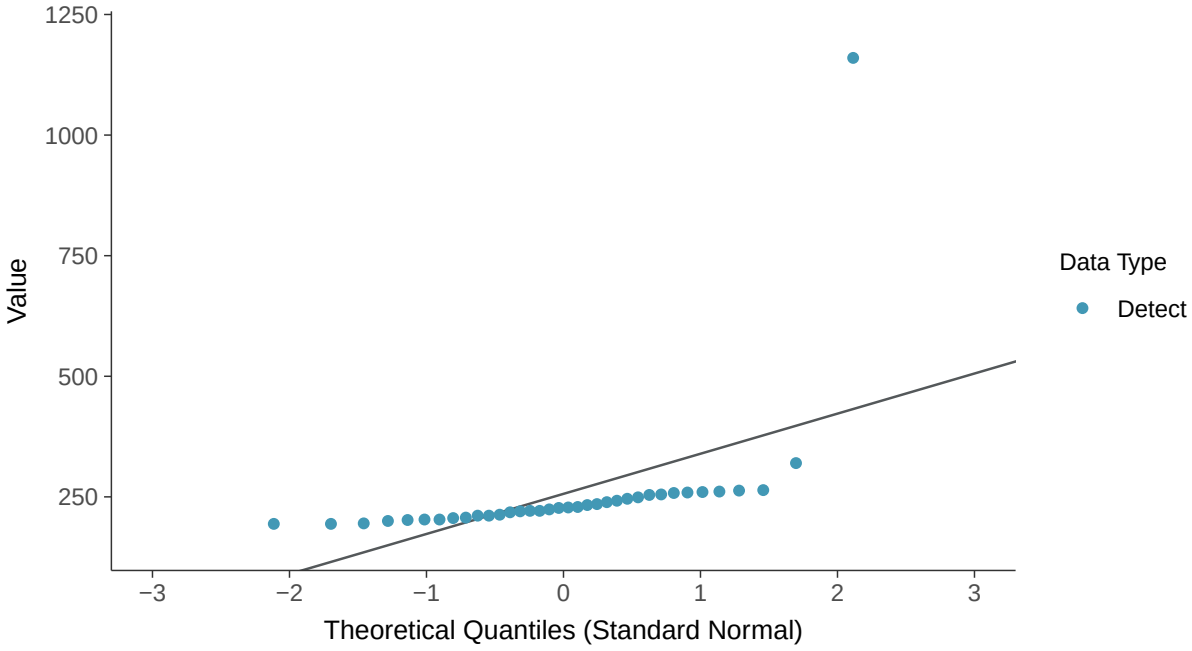
Boxplot by Season

Total Dissolved Solids, MW-5 (mg/L)



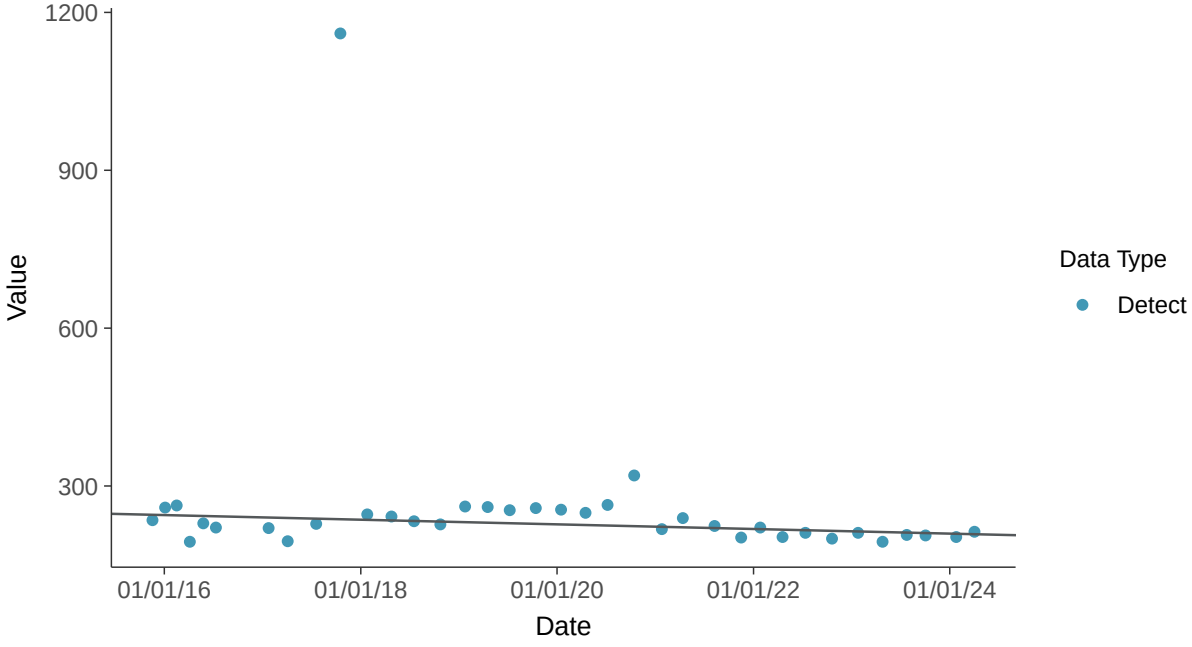
Normal Q-Q plot

Total Dissolved Solids, MW-5 (mg/L)



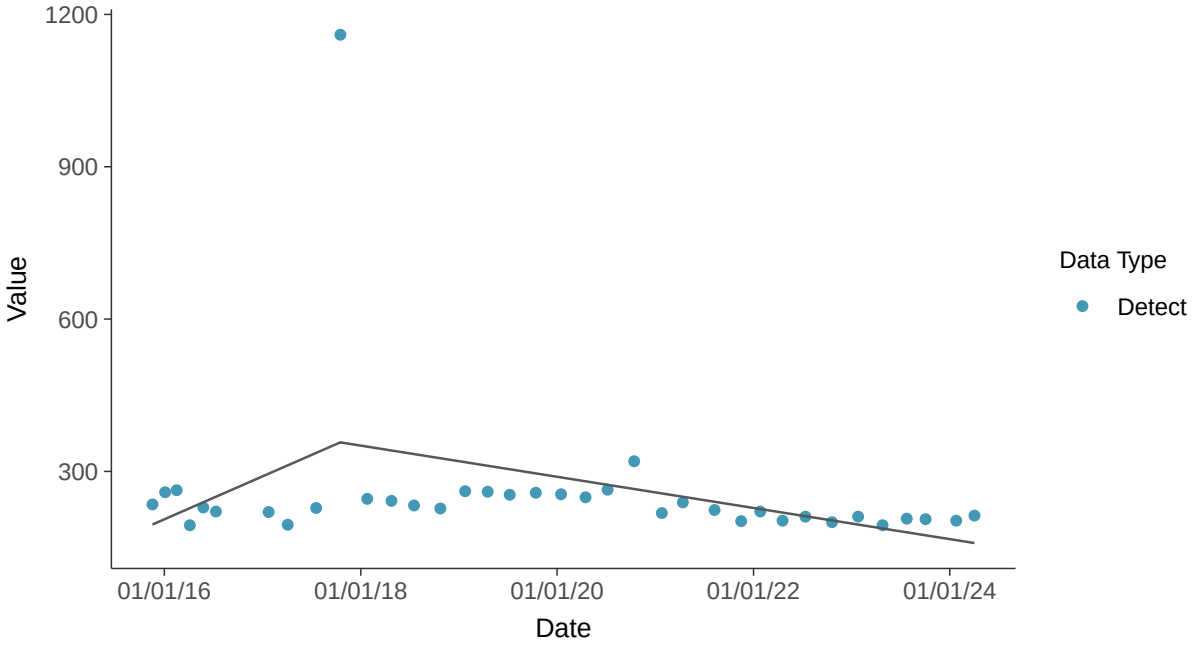
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-5 (mg/L)



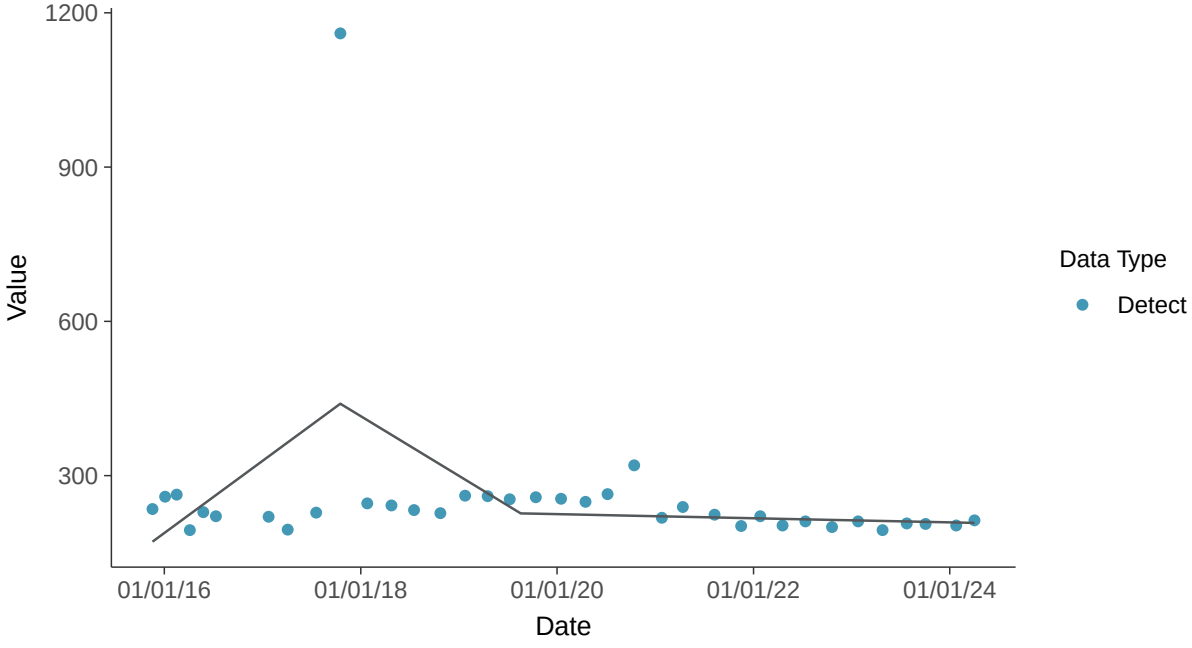
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-5 (mg/L)



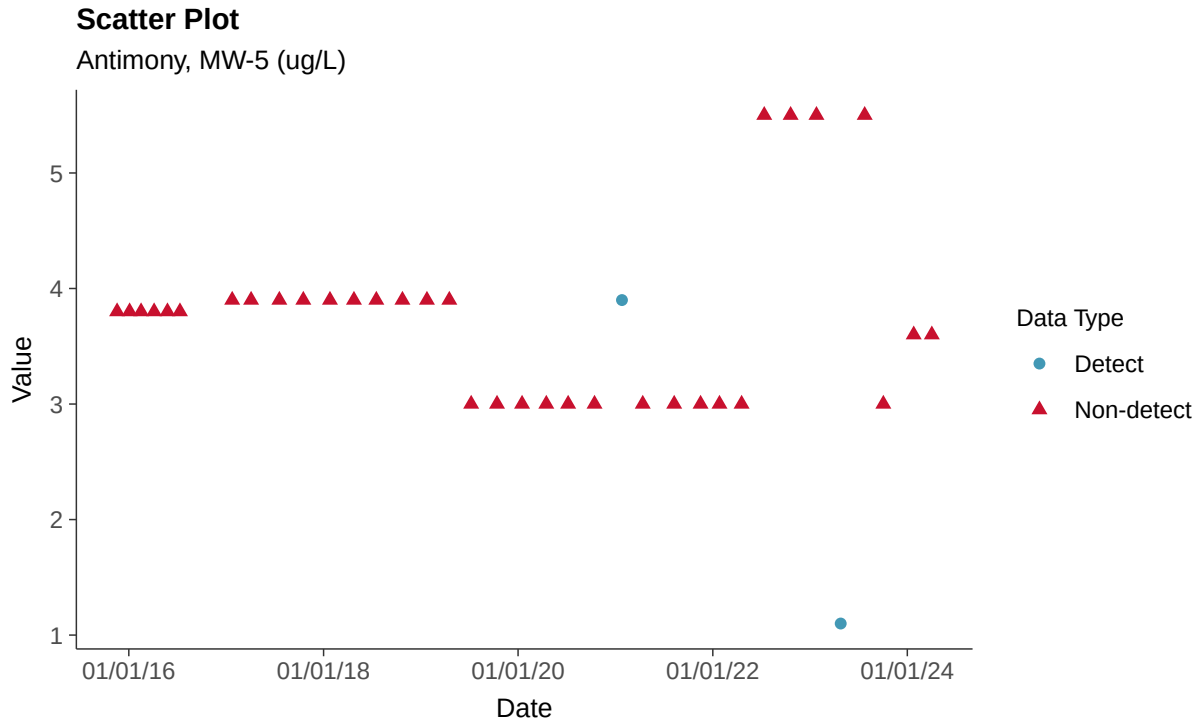
Trend Regression: Piecewise Linear-Linear-Linear

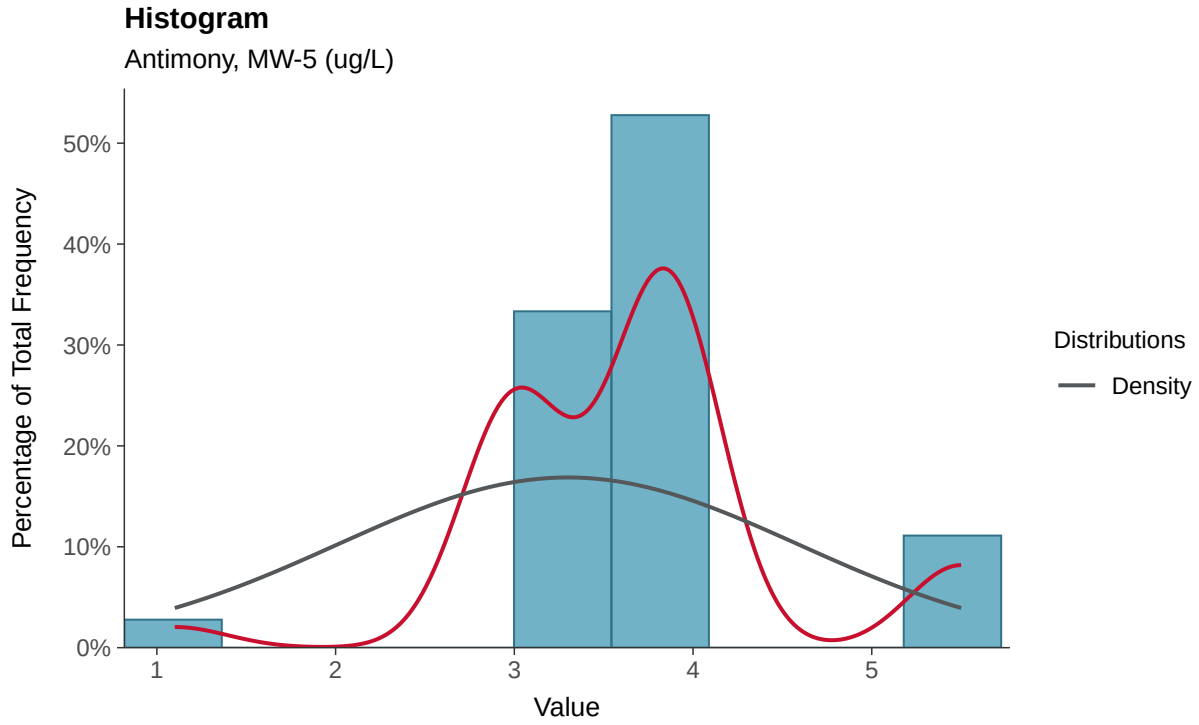
Total Dissolved Solids, MW-5 (mg/L)



App. IV: Antimony, MW-5

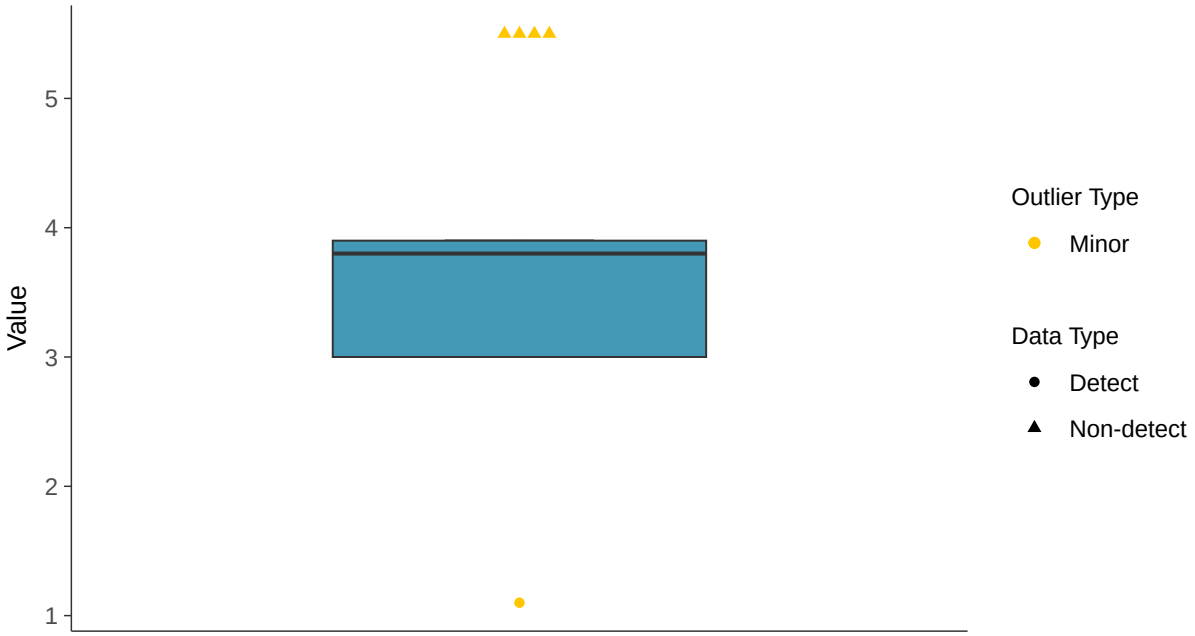
ID: 8_3_101





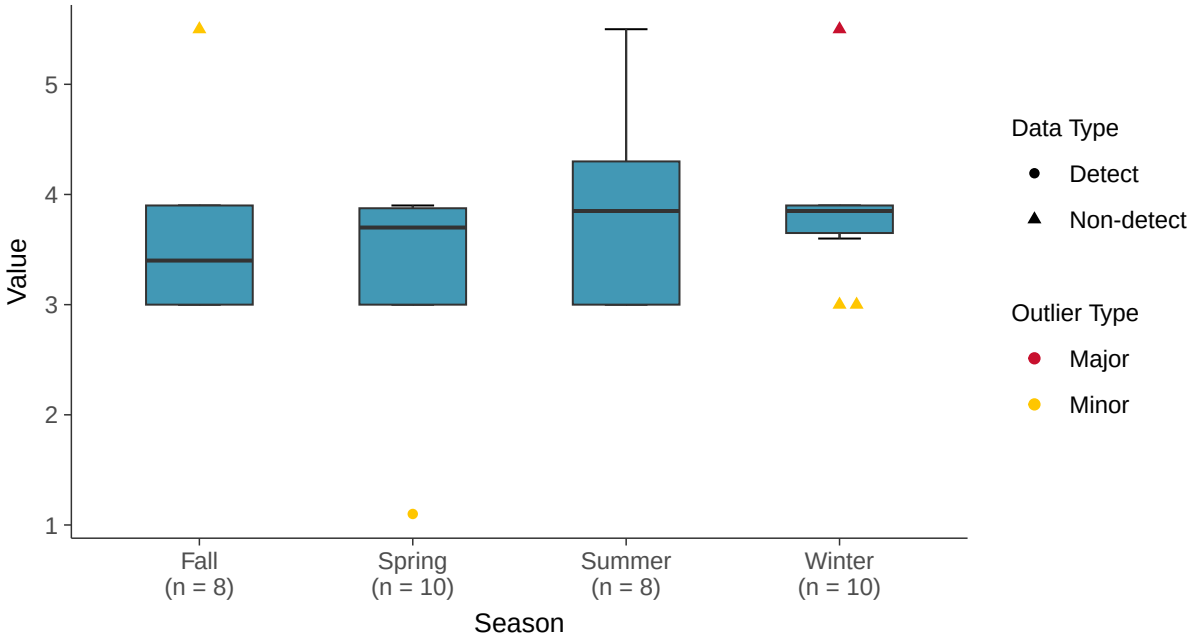
Boxplot

Antimony, MW-5 (ug/L)



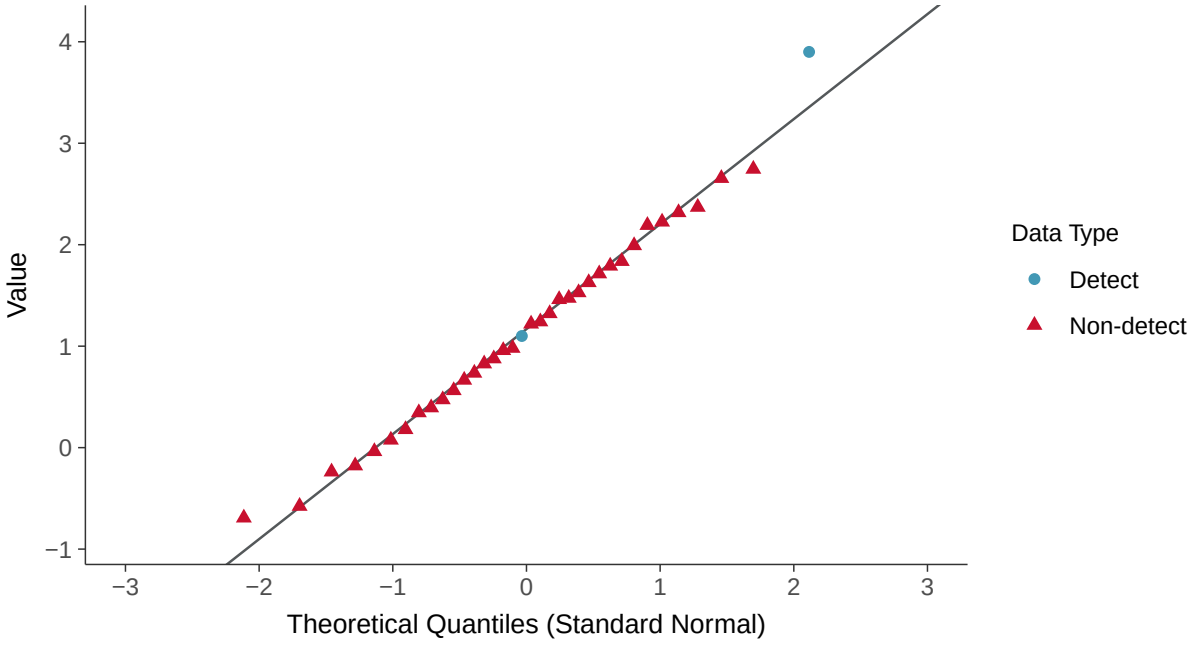
Boxplot by Season

Antimony, MW-5 (ug/L)



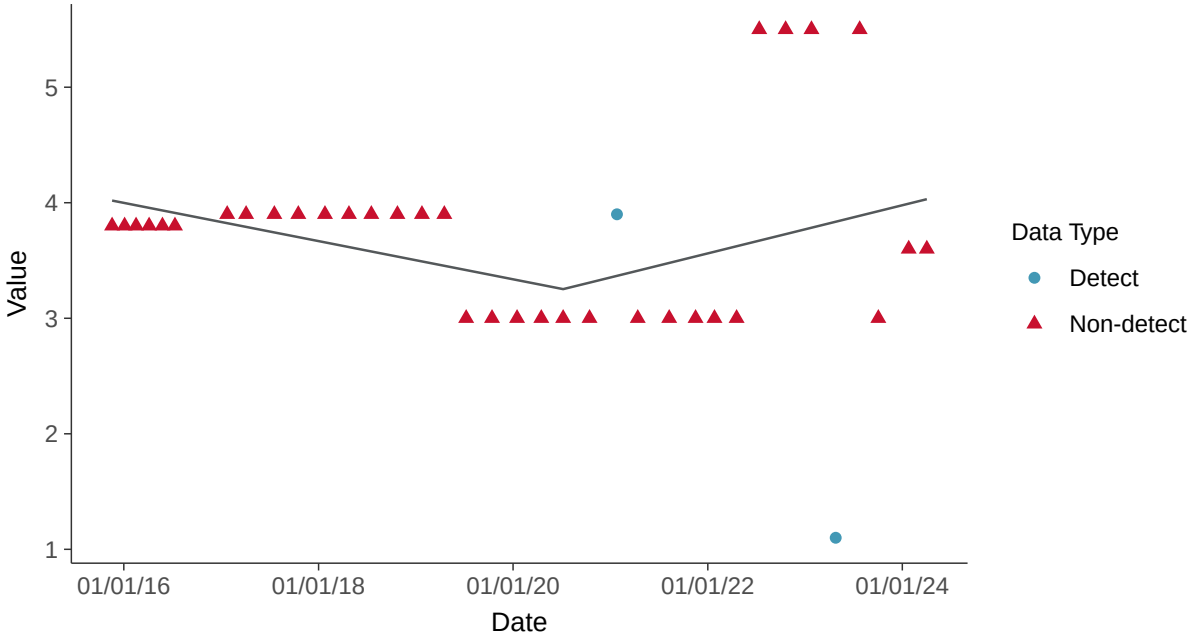
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-5 (ug/L)



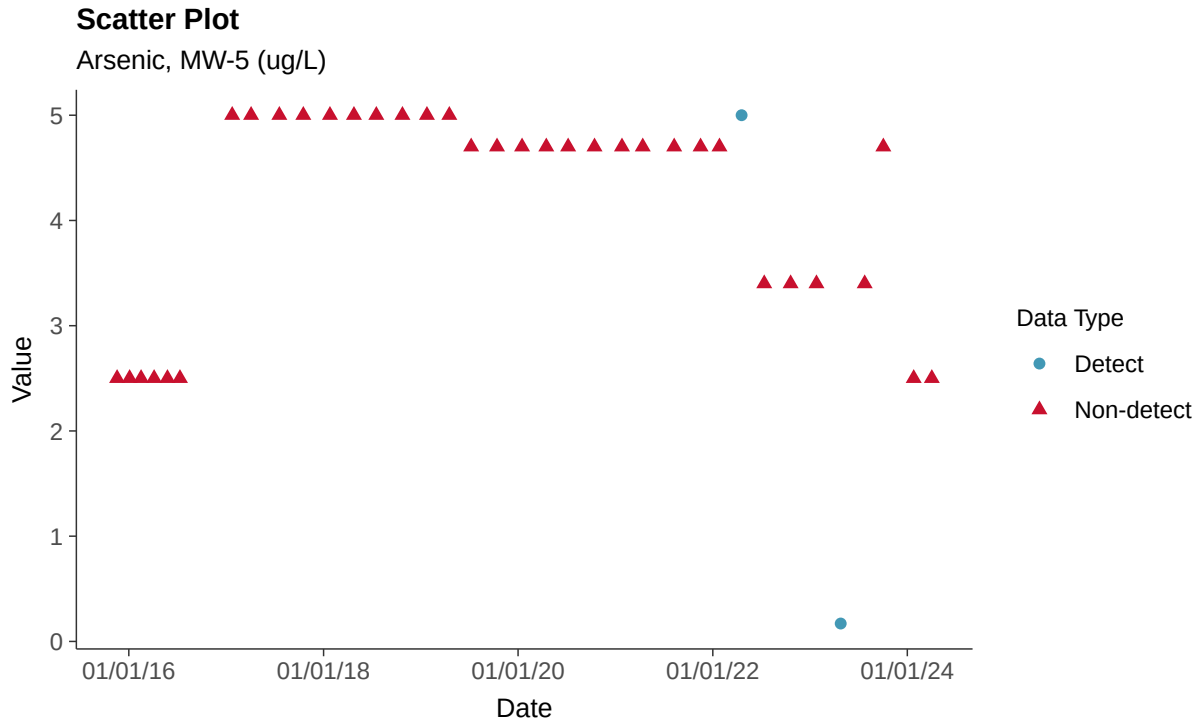
Trend Regression: Piecewise Linear-Linear

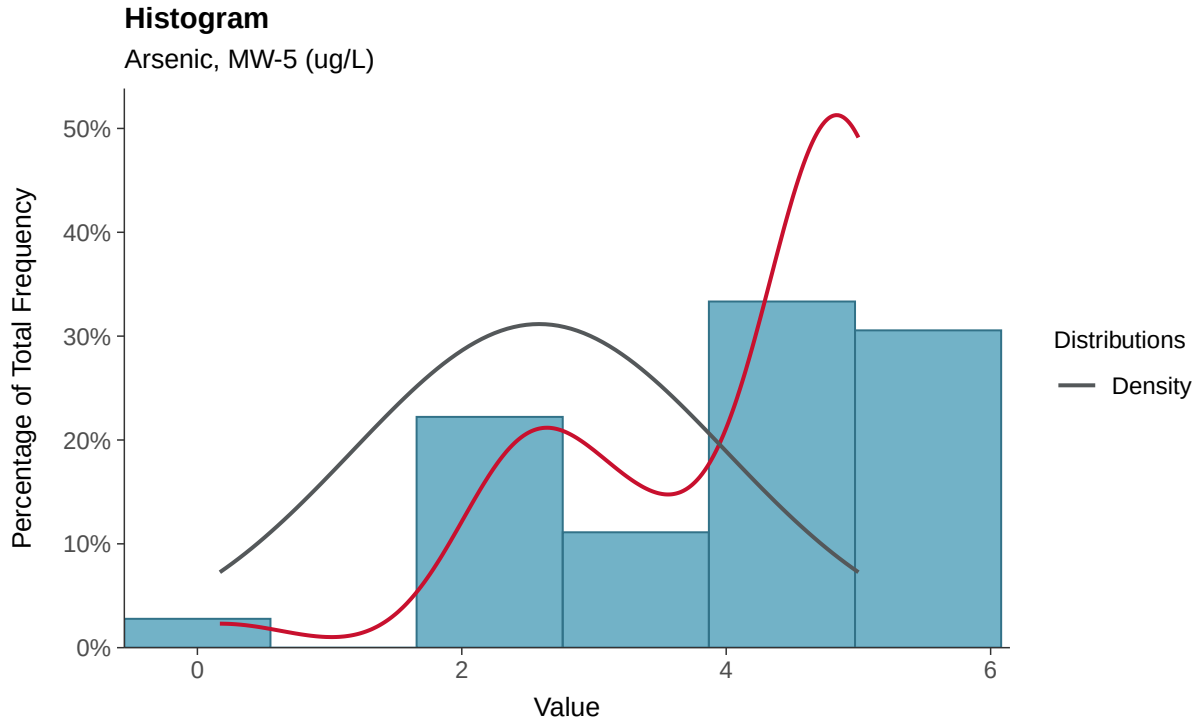
Antimony, MW-5 (ug/L)



App. IV: Arsenic, MW-5

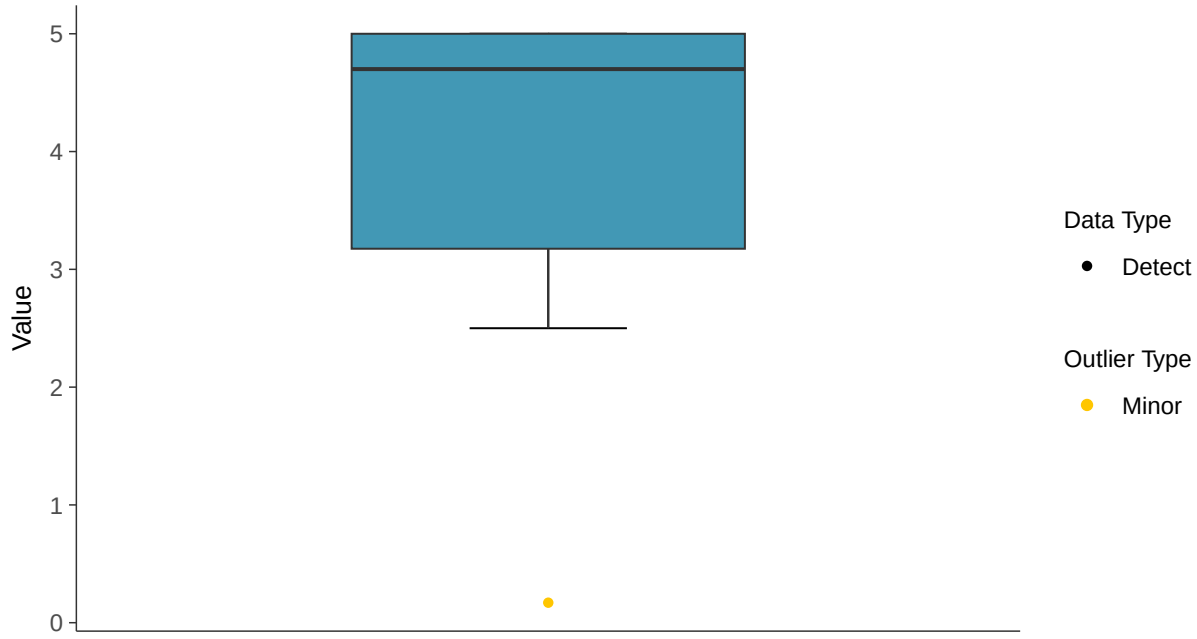
ID: 8_3_102





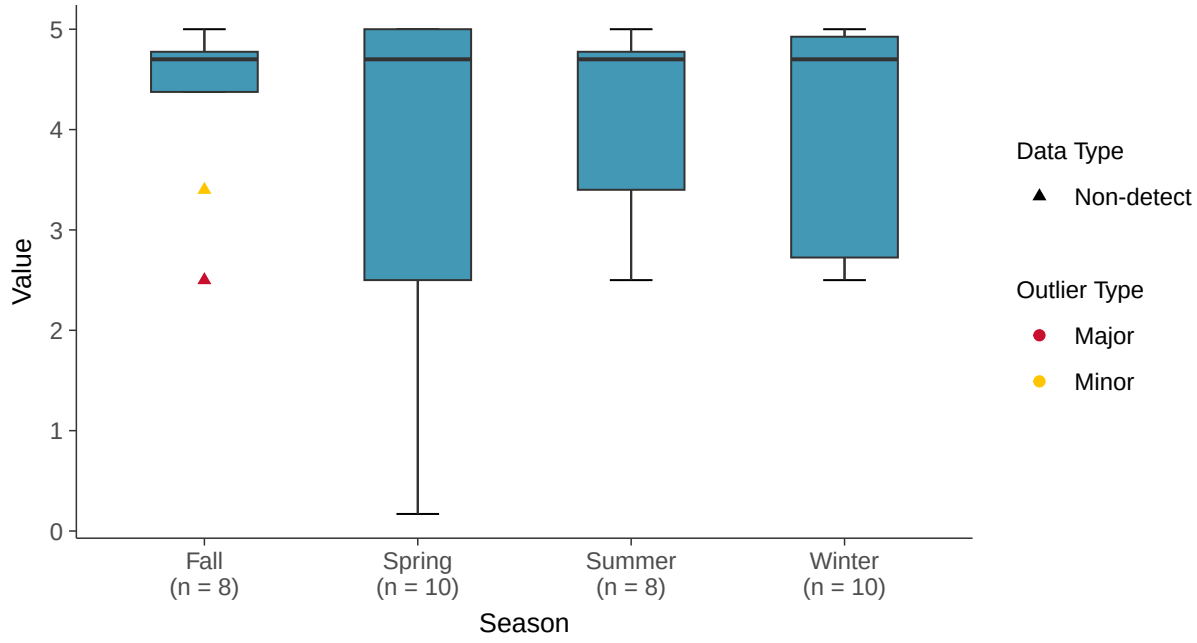
Boxplot

Arsenic, MW-5 (ug/L)



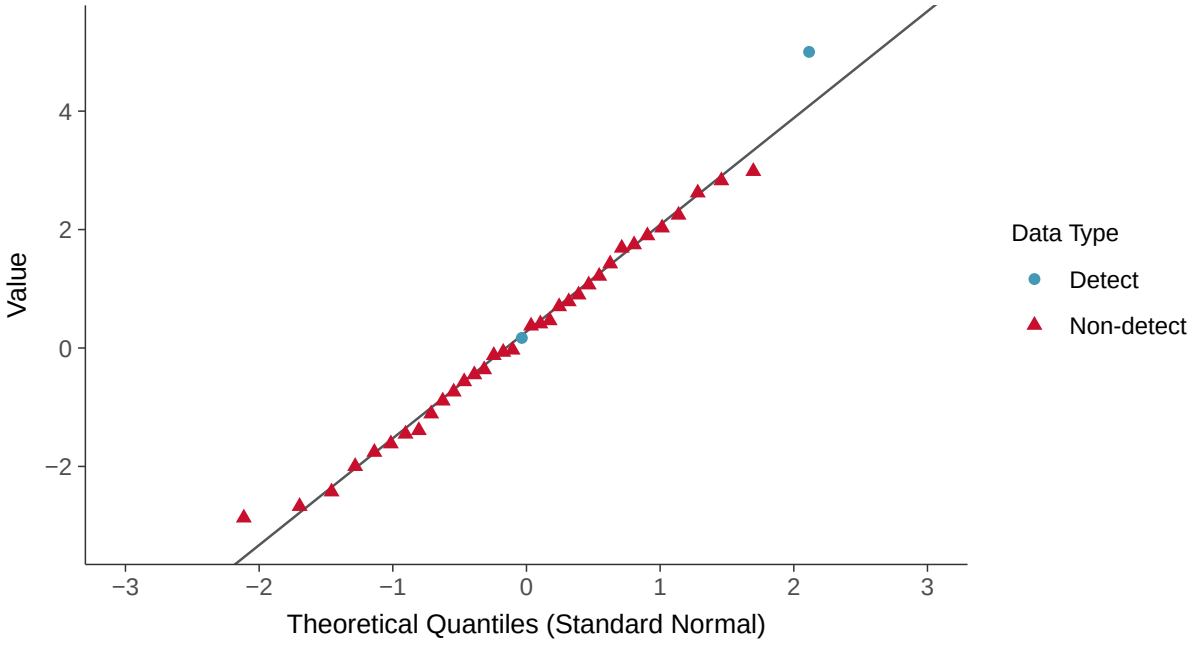
Boxplot by Season

Arsenic, MW-5 (ug/L)



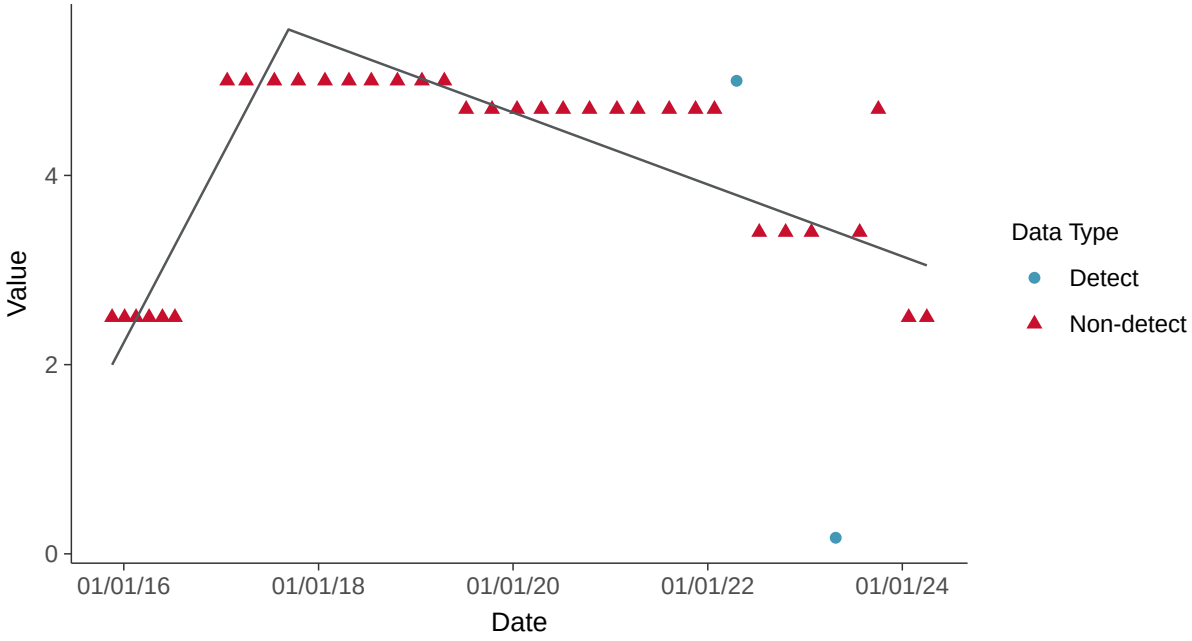
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-5 (ug/L)



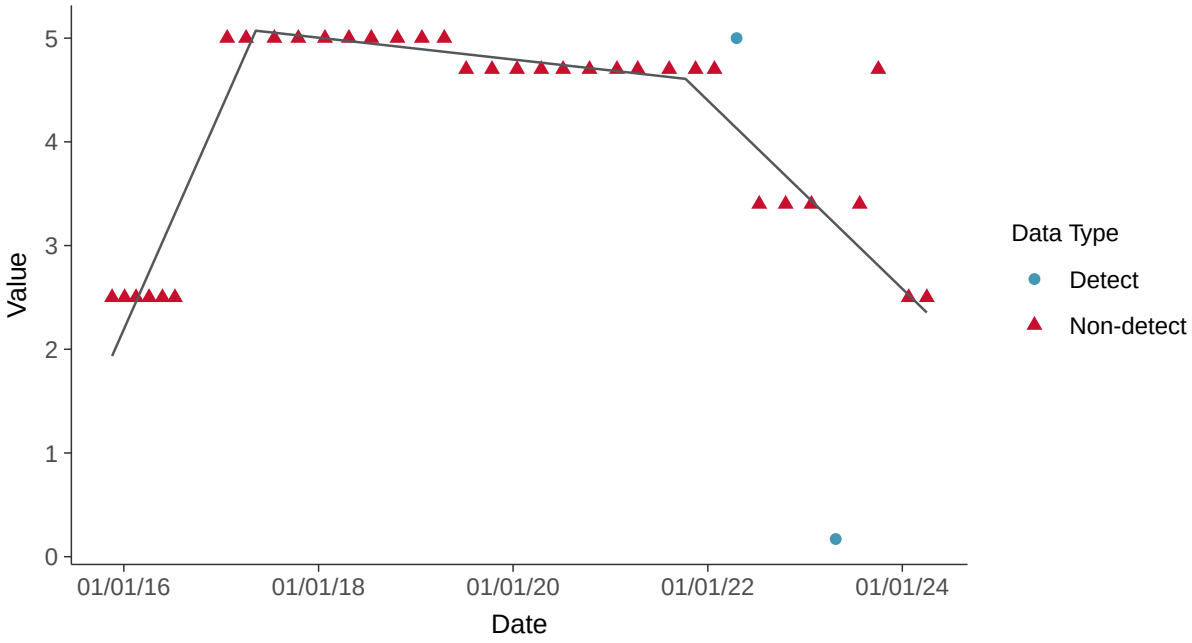
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-5 (ug/L)



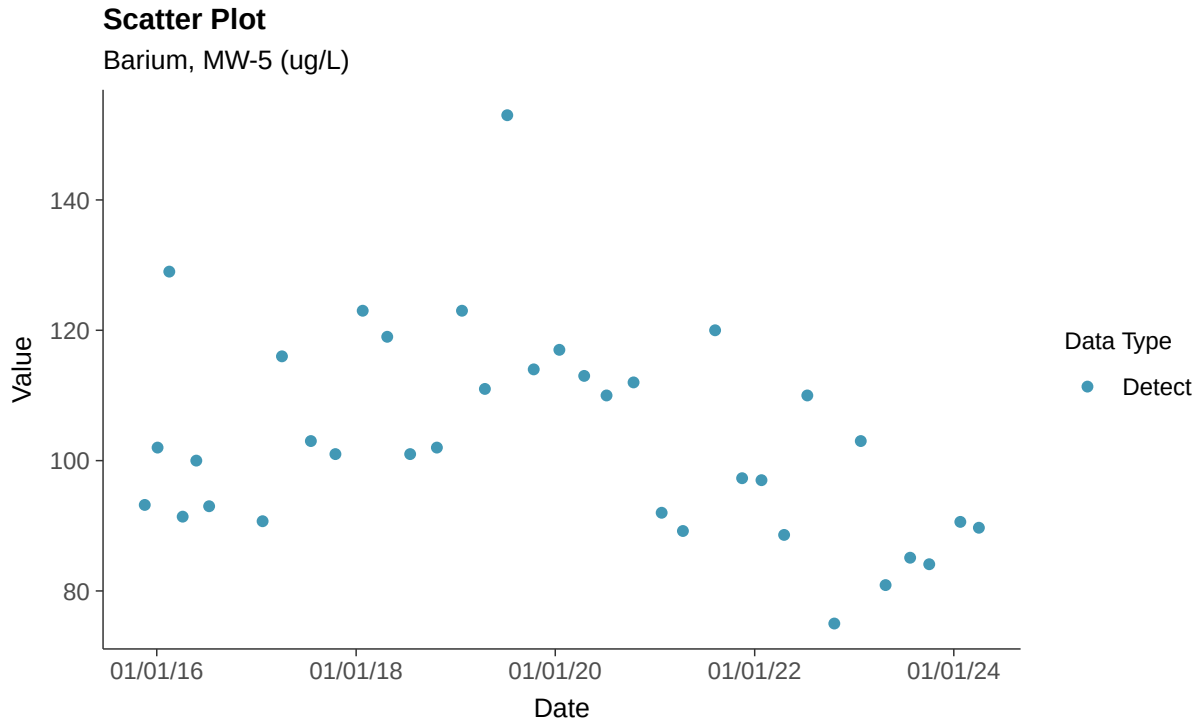
Trend Regression: Piecewise Linear-Linear-Linear

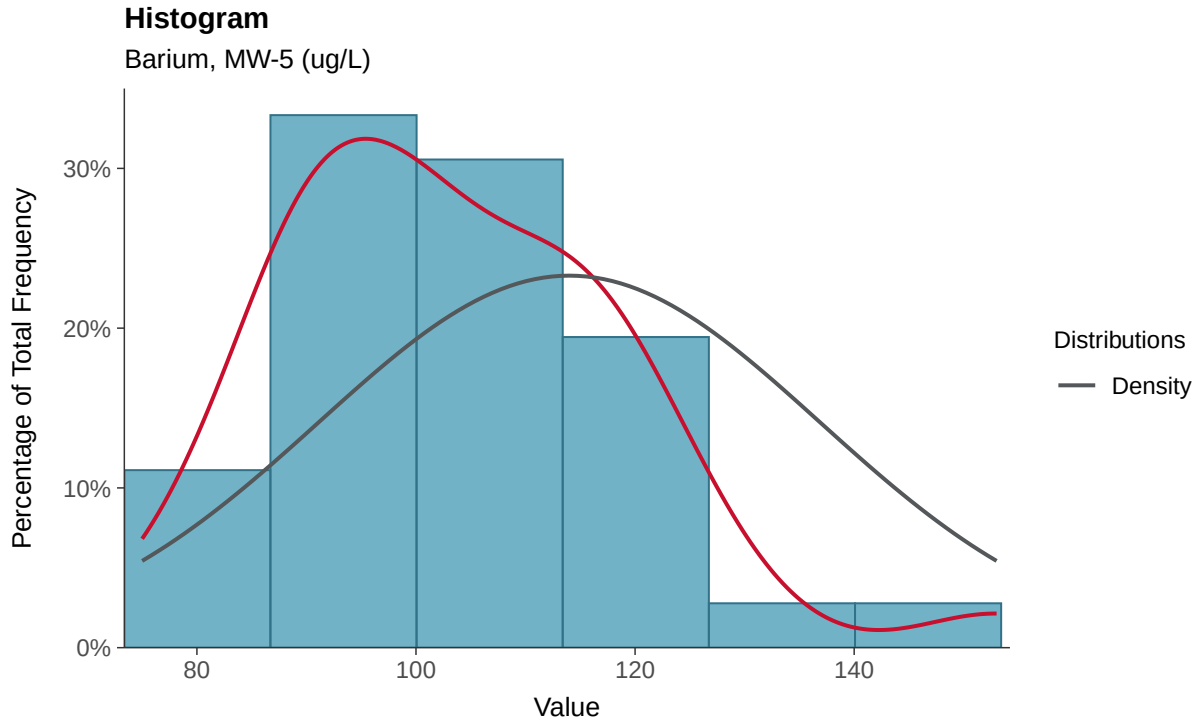
Arsenic, MW-5 (ug/L)



App. IV: Barium, MW-5

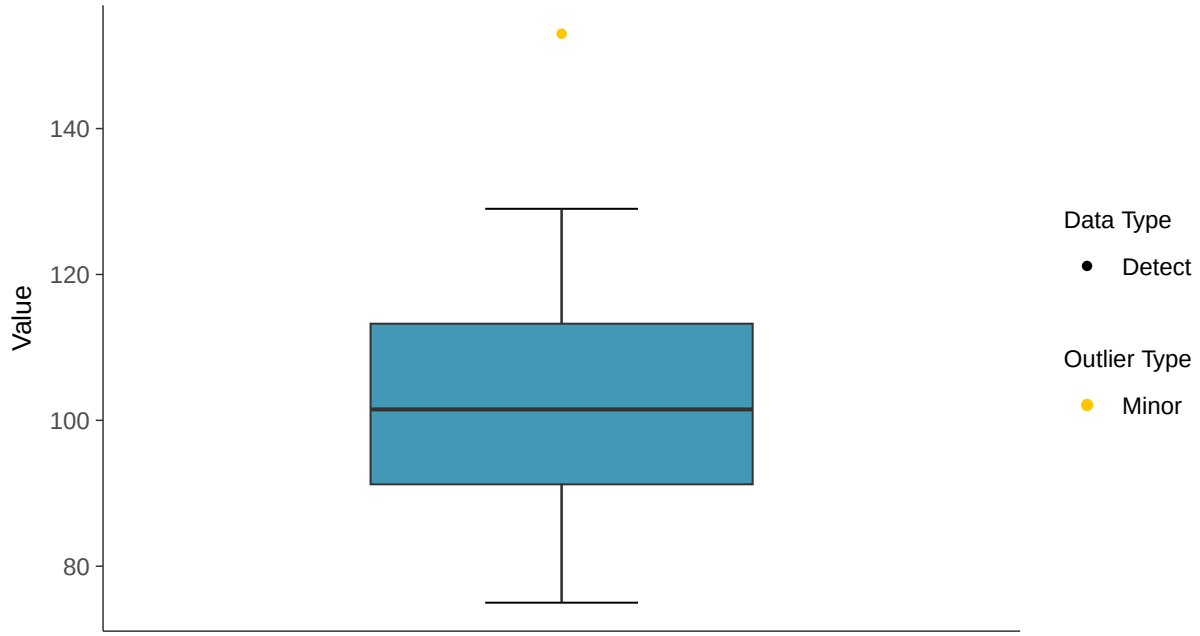
ID: 8_3_103





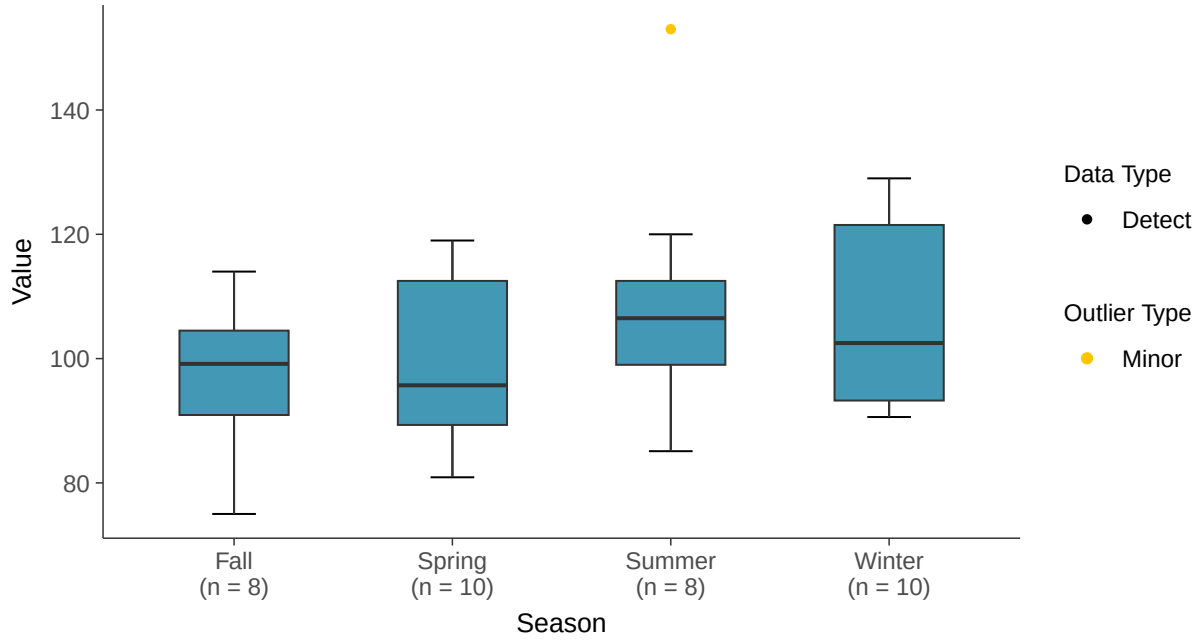
Boxplot

Barium, MW-5 (ug/L)



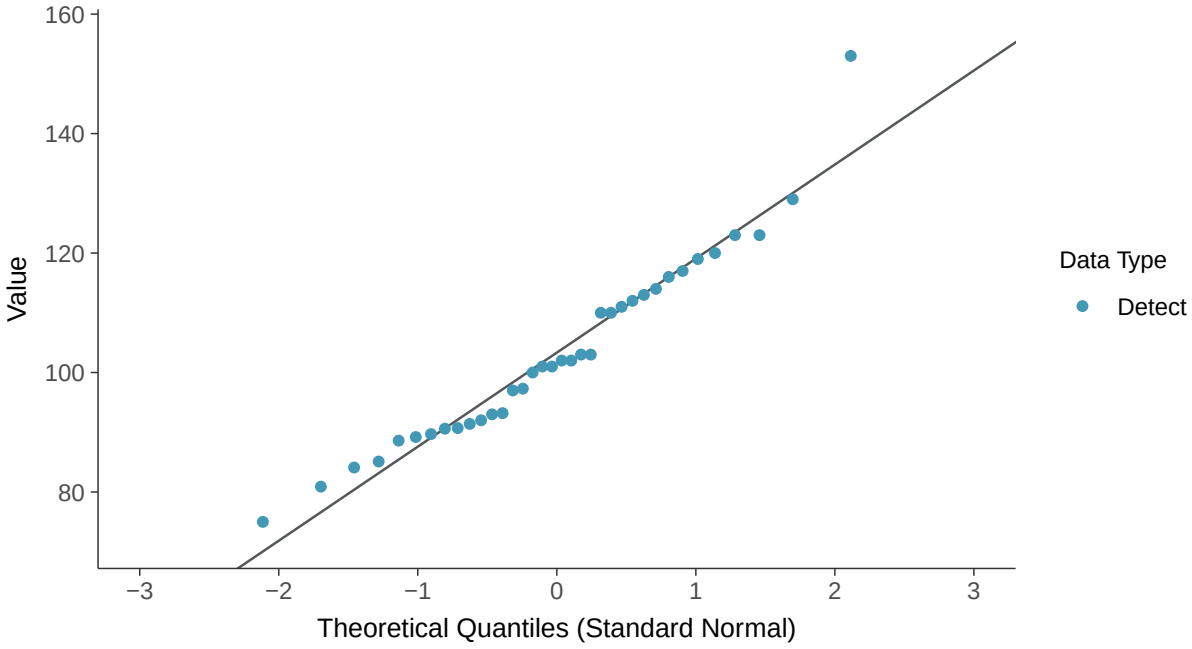
Boxplot by Season

Barium, MW-5 (ug/L)



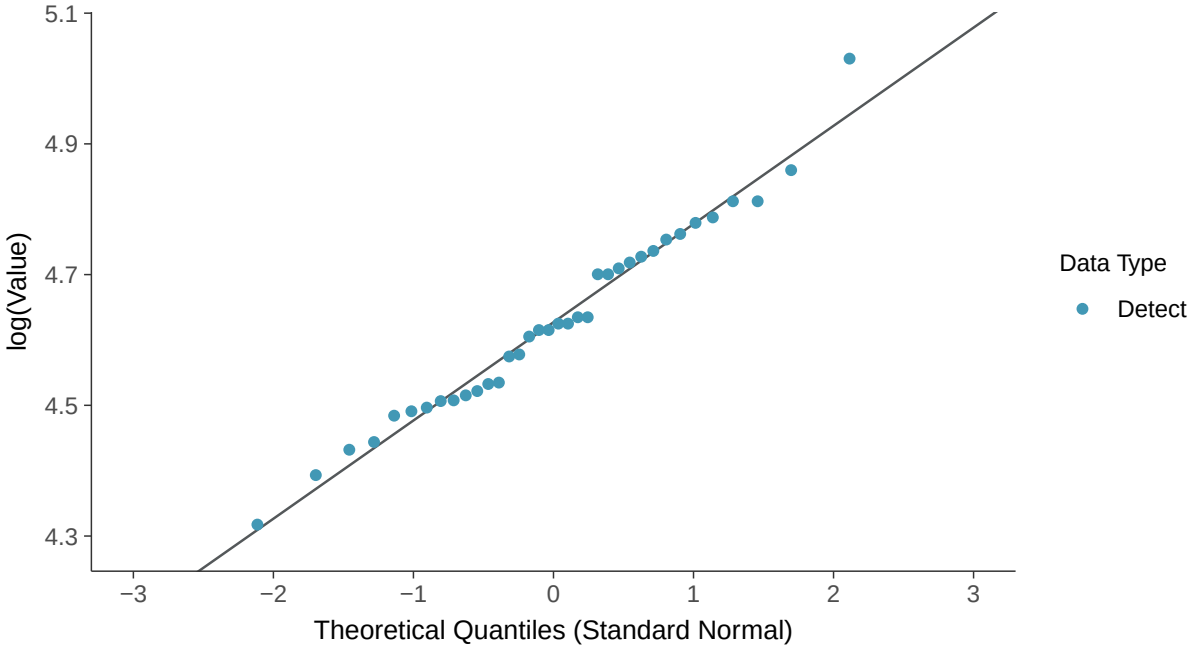
Normal Q-Q plot

Barium, MW-5 (ug/L)



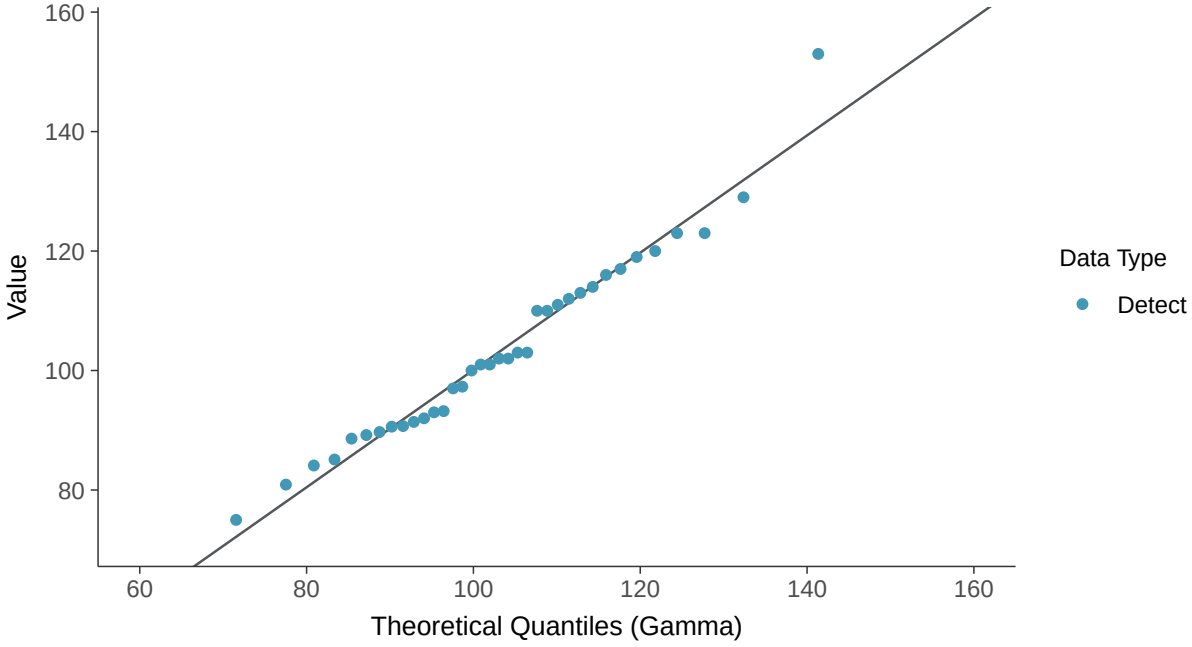
Lognormal Q-Q plot

Barium, MW-5 (ug/L)



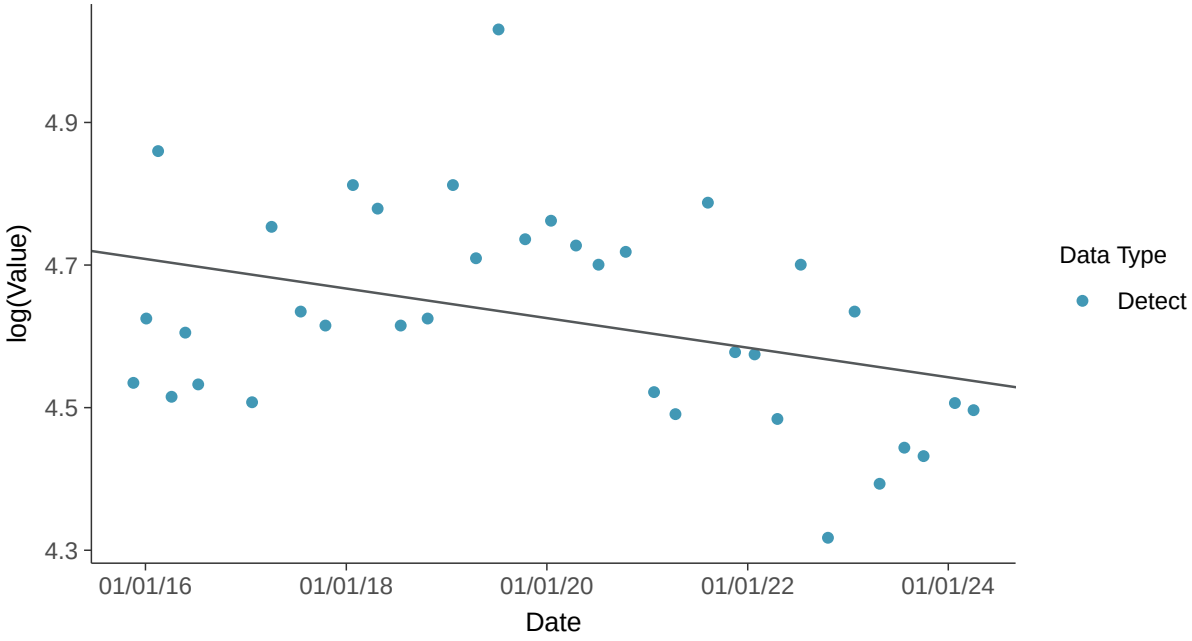
Gamma Q-Q plot

Barium, MW-5 (ug/L)



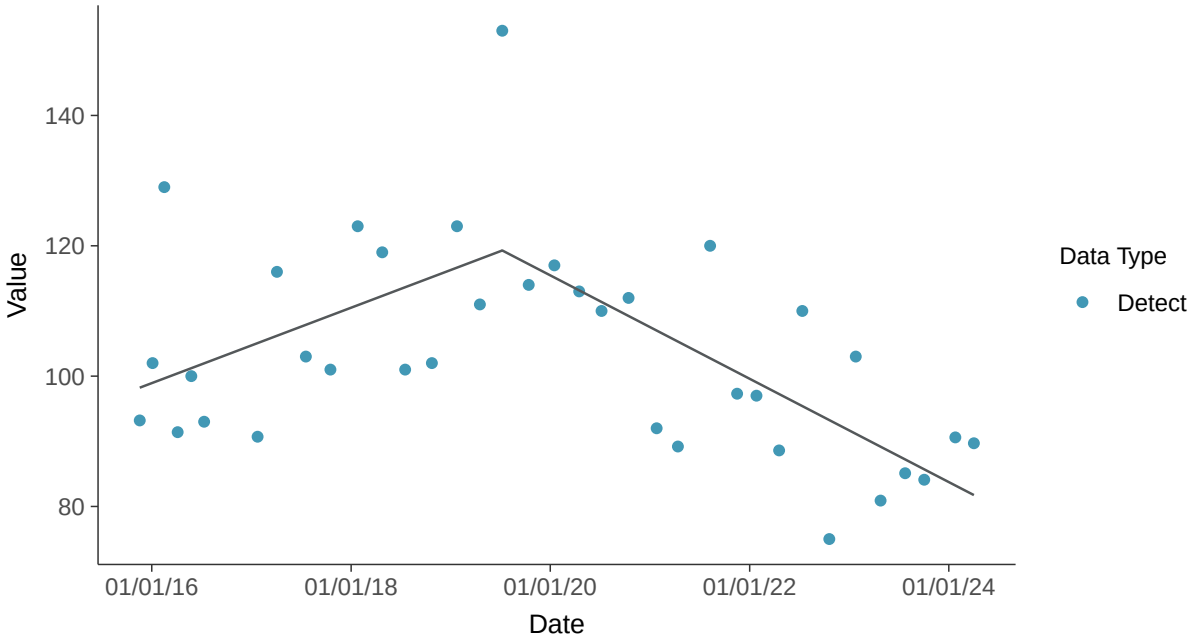
Trend Regression: Lognormal MLE

Barium, MW-5 (ug/L)



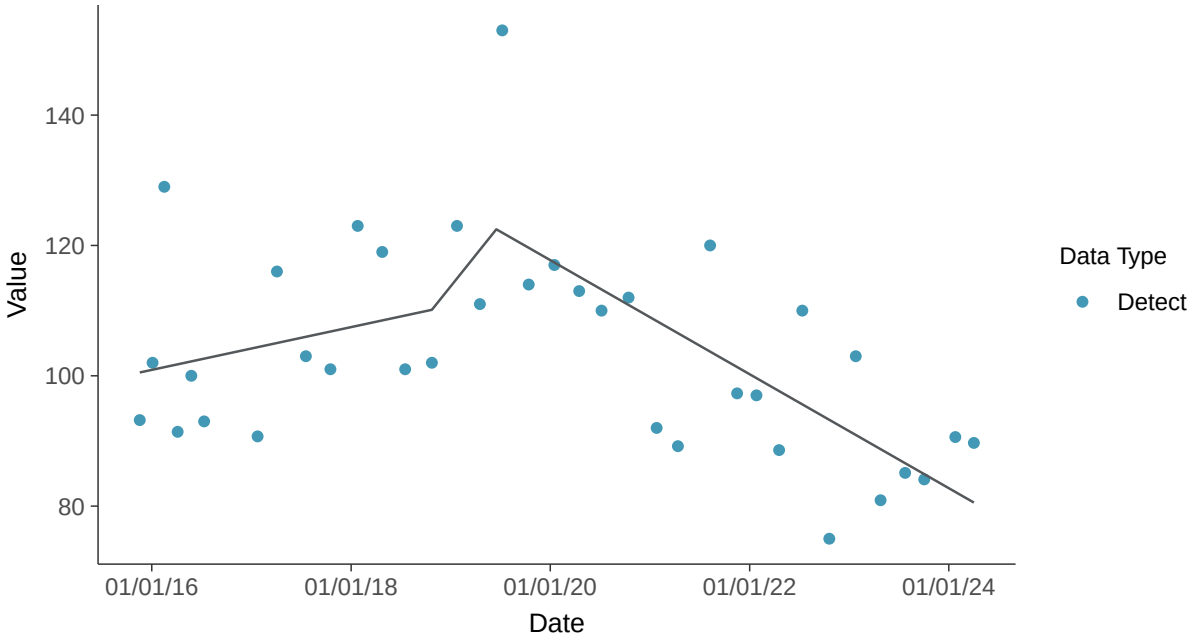
Trend Regression: Piecewise Linear-Linear

Barium, MW-5 (ug/L)



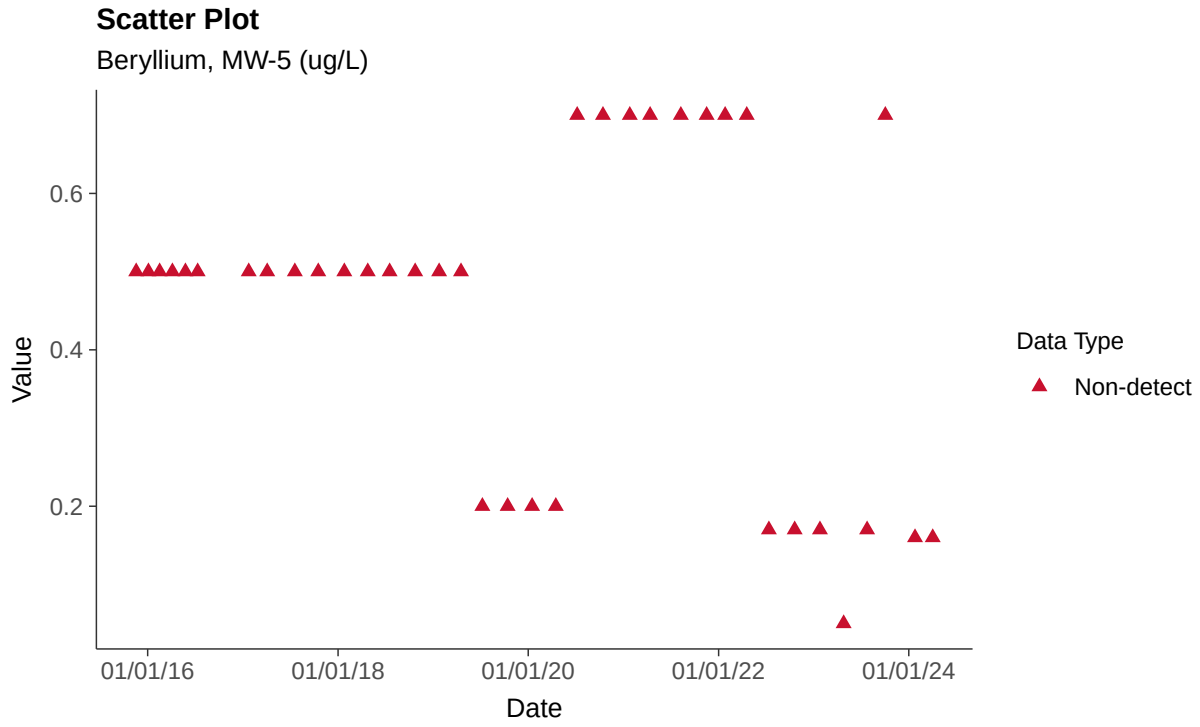
Trend Regression: Piecewise Linear-Linear-Linear

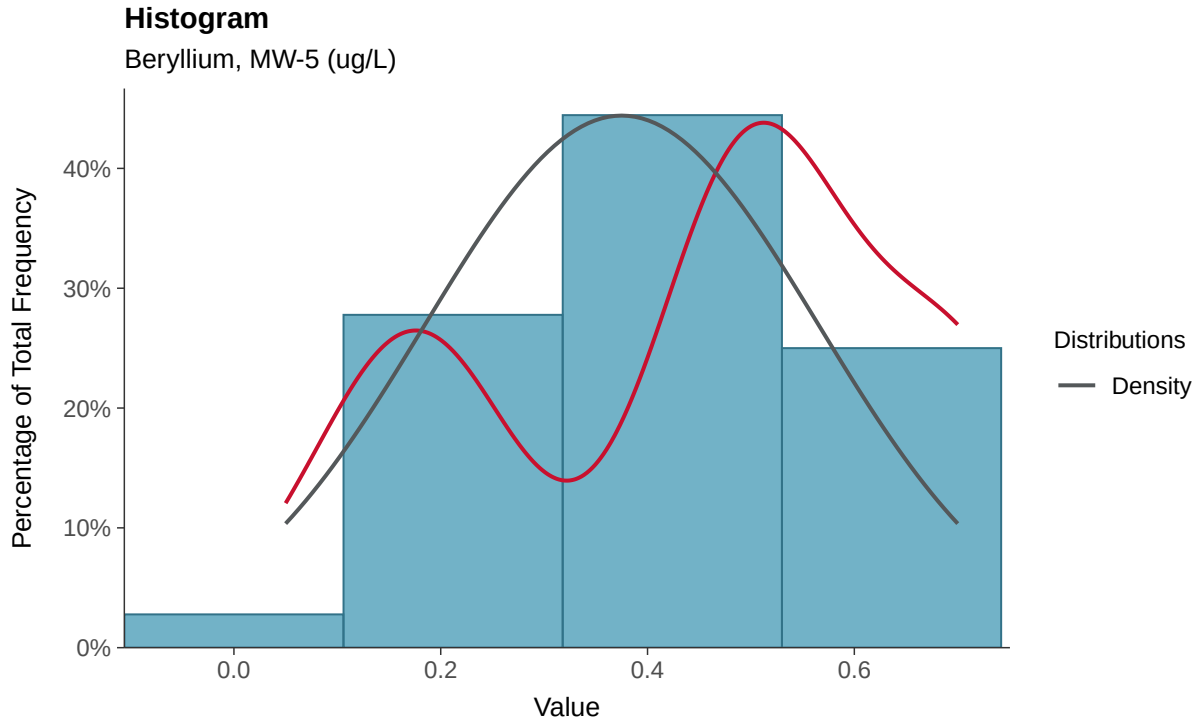
Barium, MW-5 (ug/L)



App. IV: Beryllium, MW-5

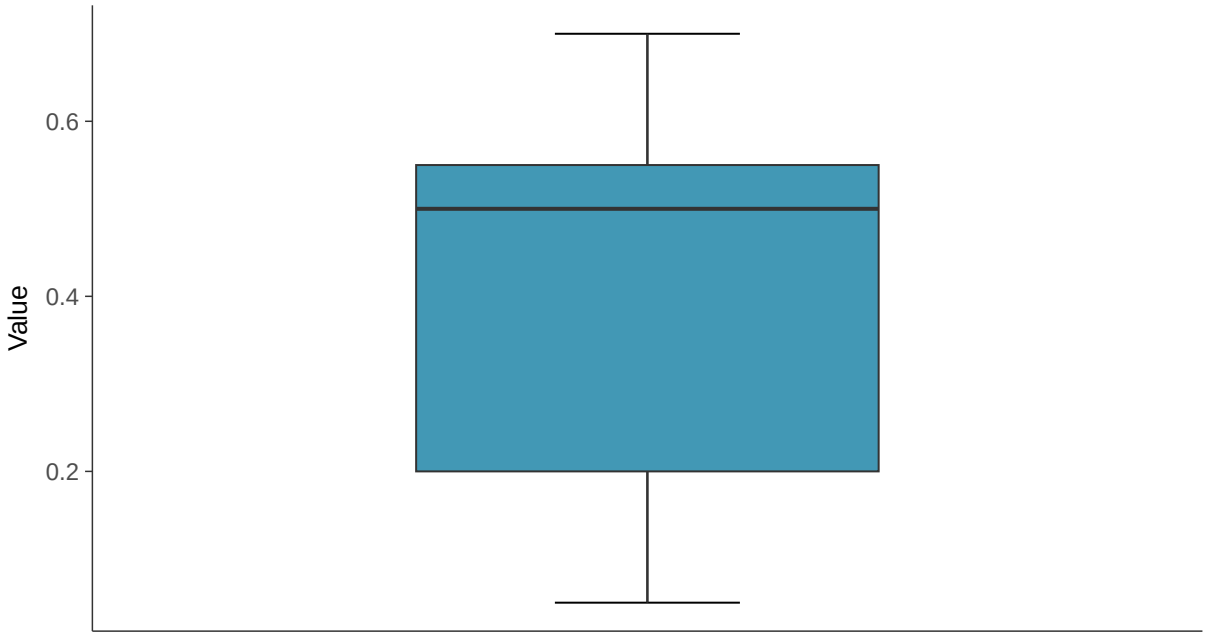
ID: 8_3_104





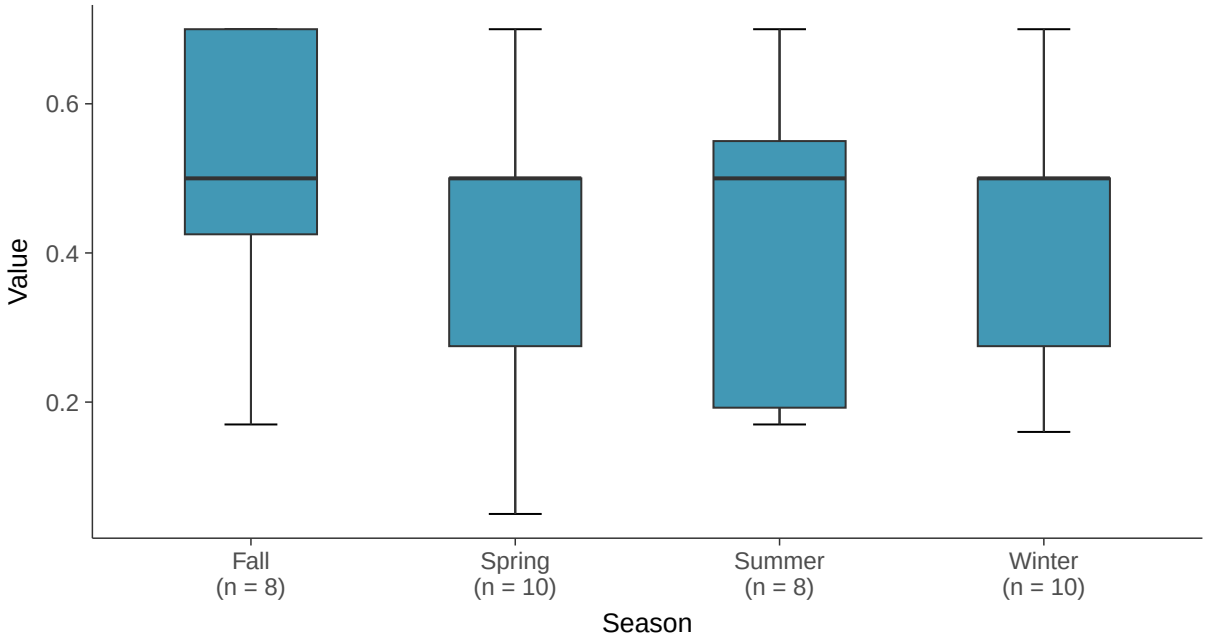
Boxplot

Beryllium, MW-5 (ug/L)



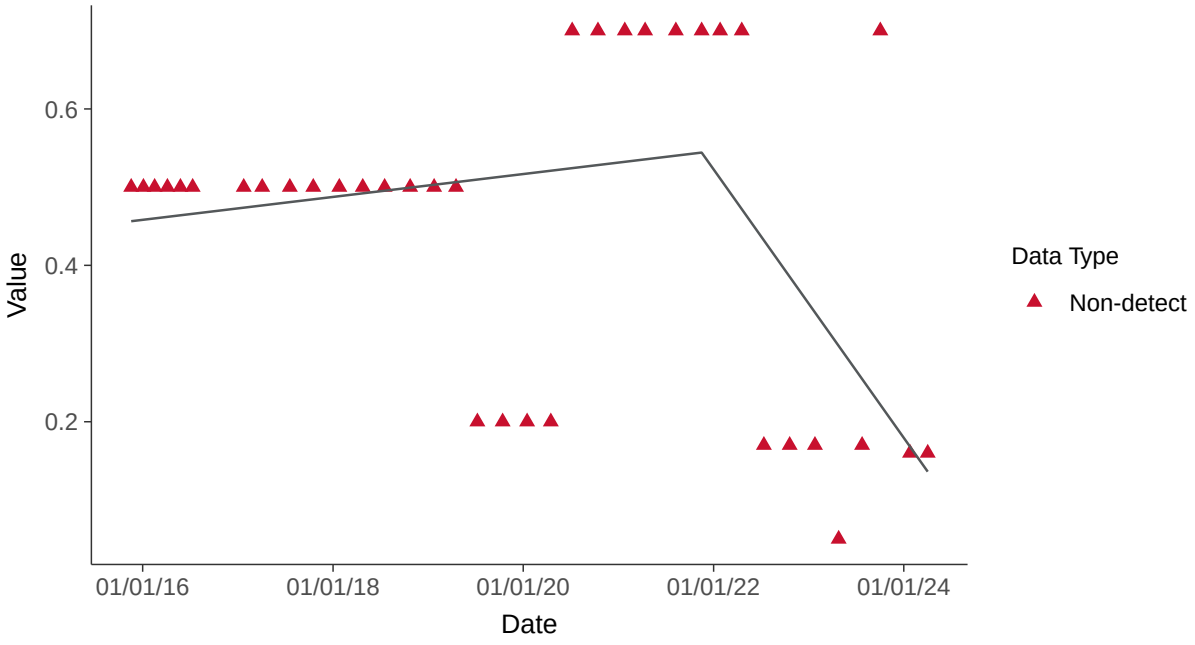
Boxplot by Season

Beryllium, MW-5 (ug/L)



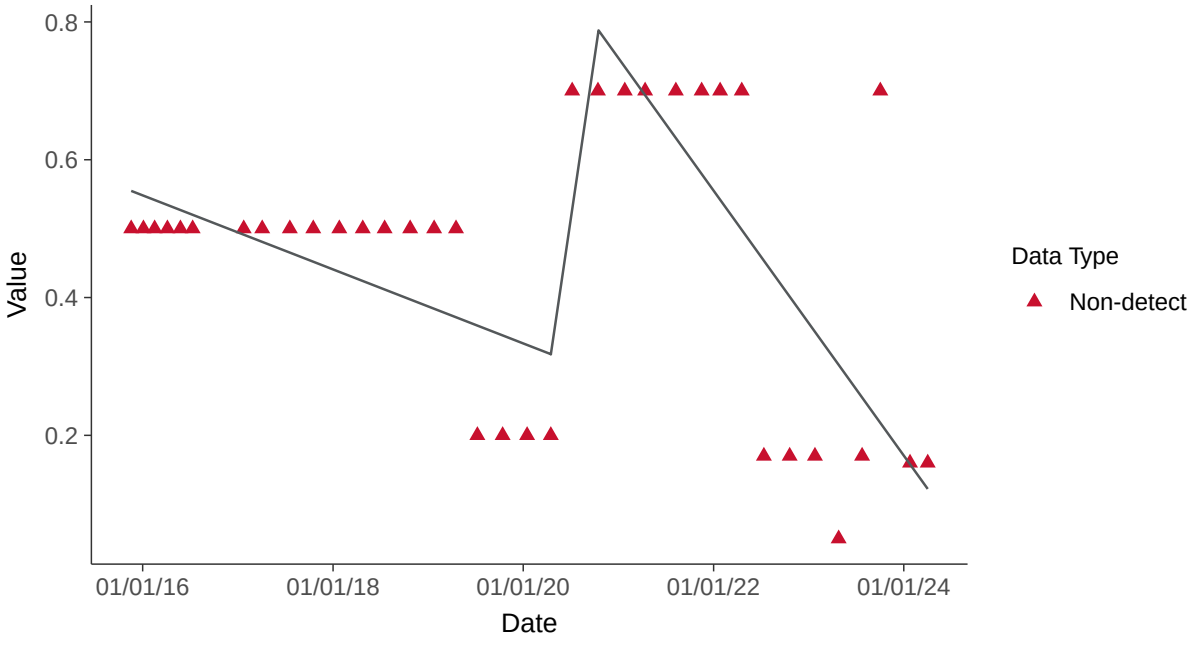
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-5 (ug/L)



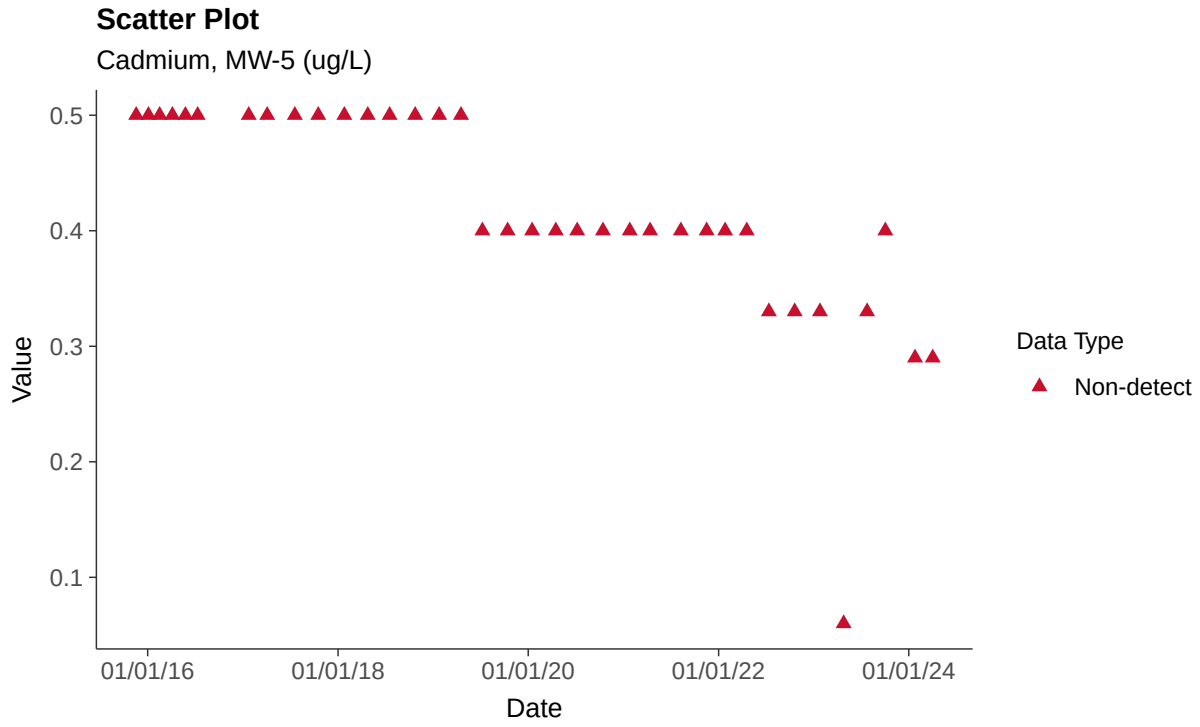
Trend Regression: Piecewise Linear-Linear-Linear

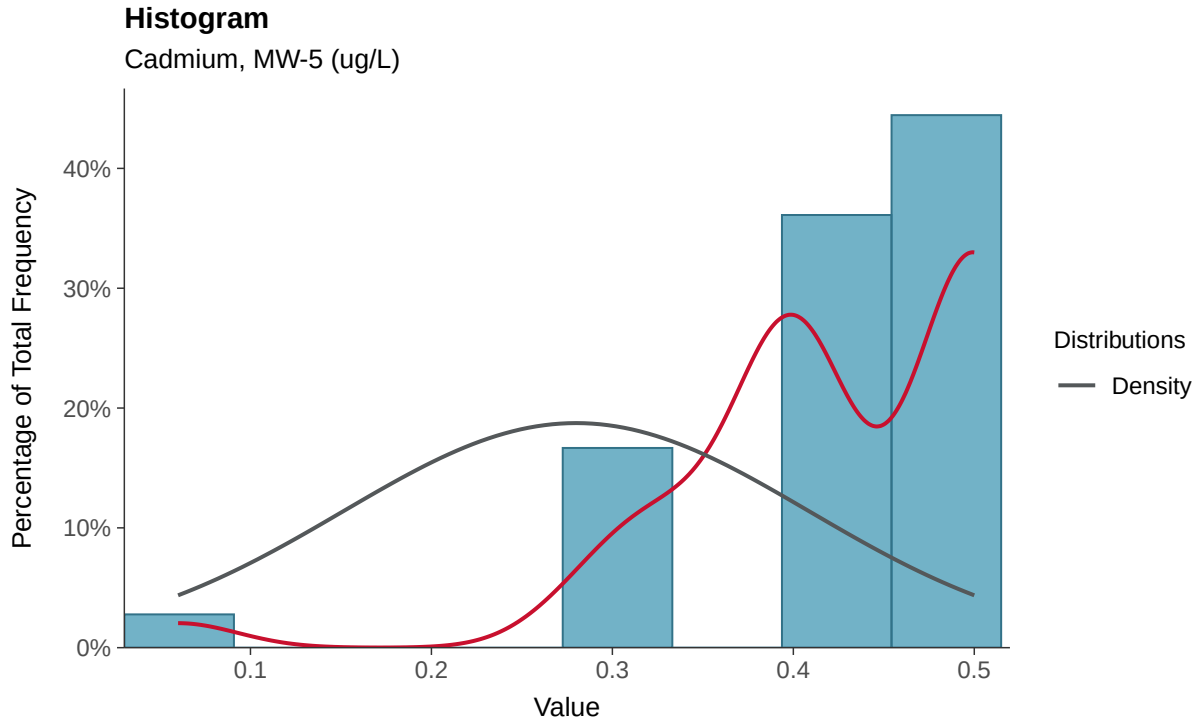
Beryllium, MW-5 (ug/L)



App. IV: Cadmium, MW-5

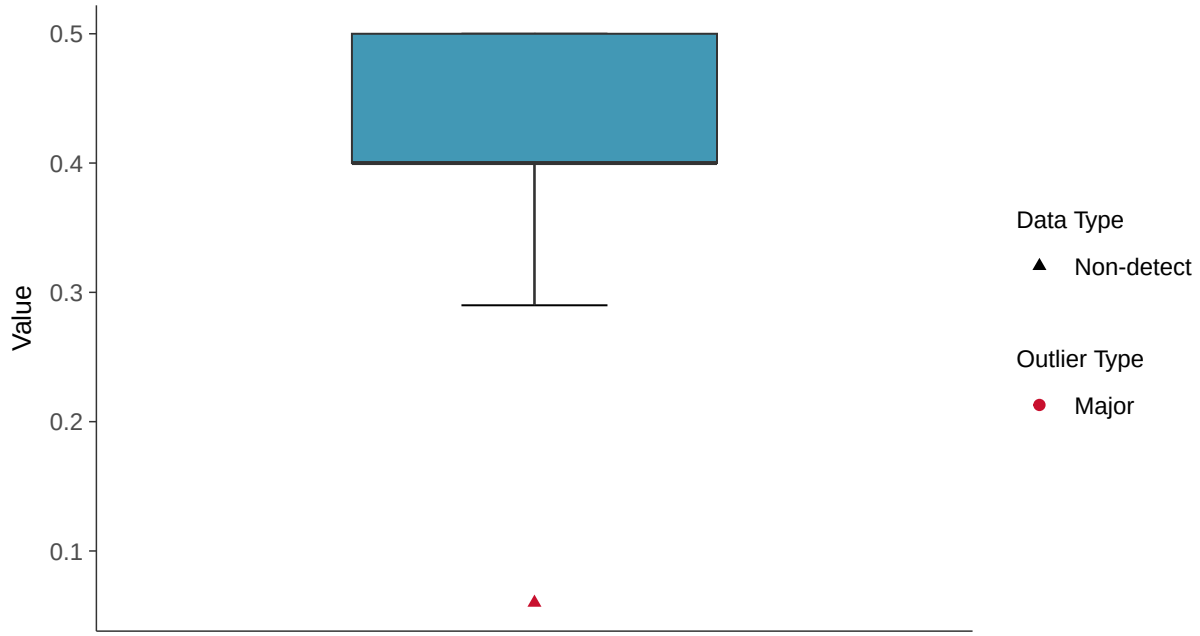
ID: 8_3_106





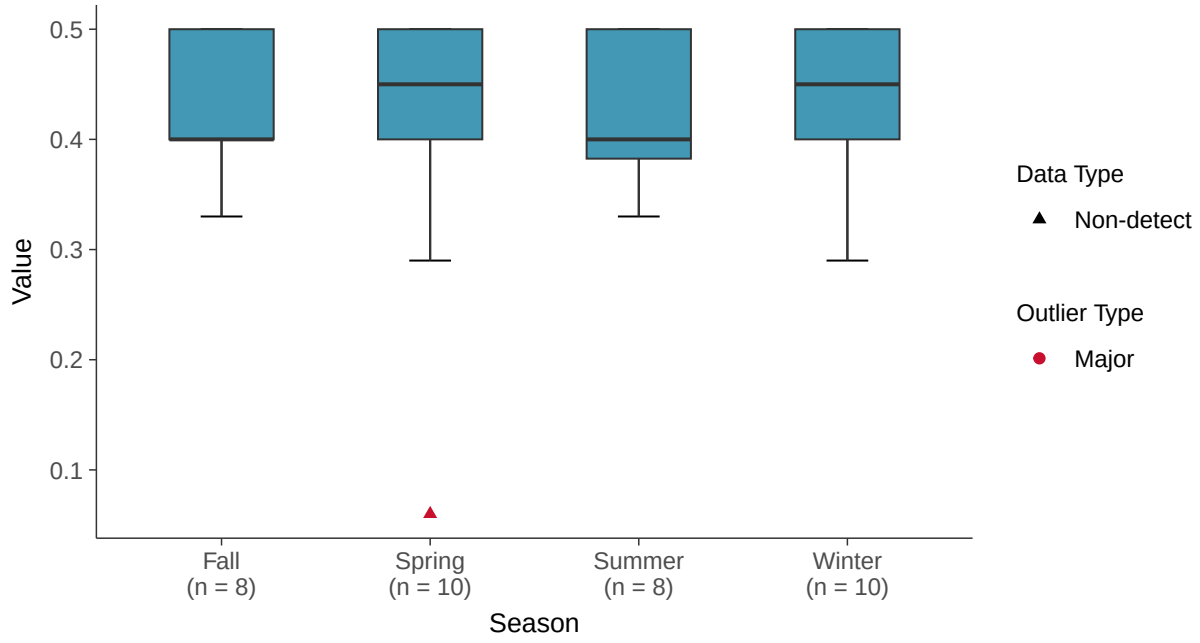
Boxplot

Cadmium, MW-5 (ug/L)



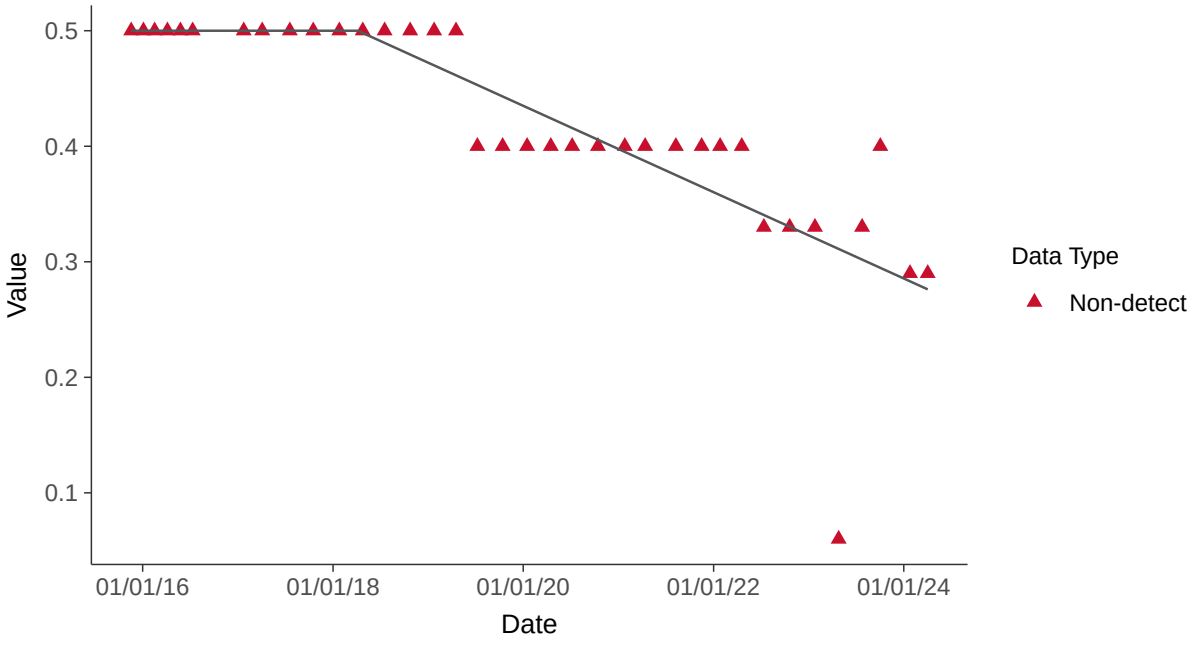
Boxplot by Season

Cadmium, MW-5 (ug/L)



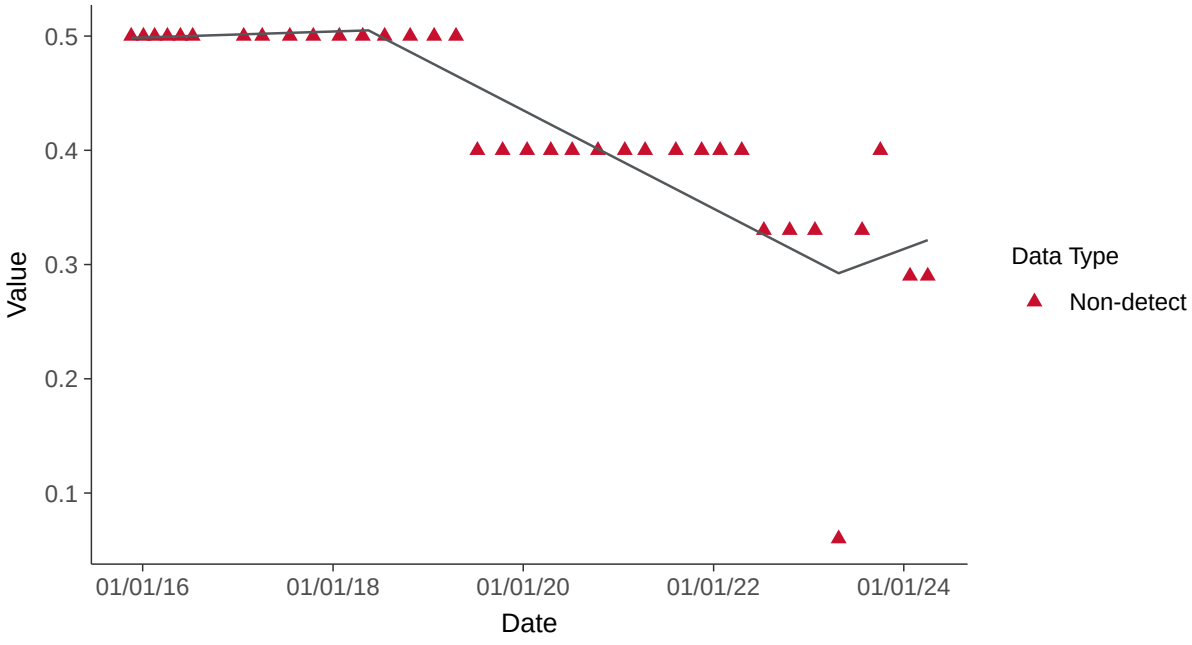
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-5 (ug/L)

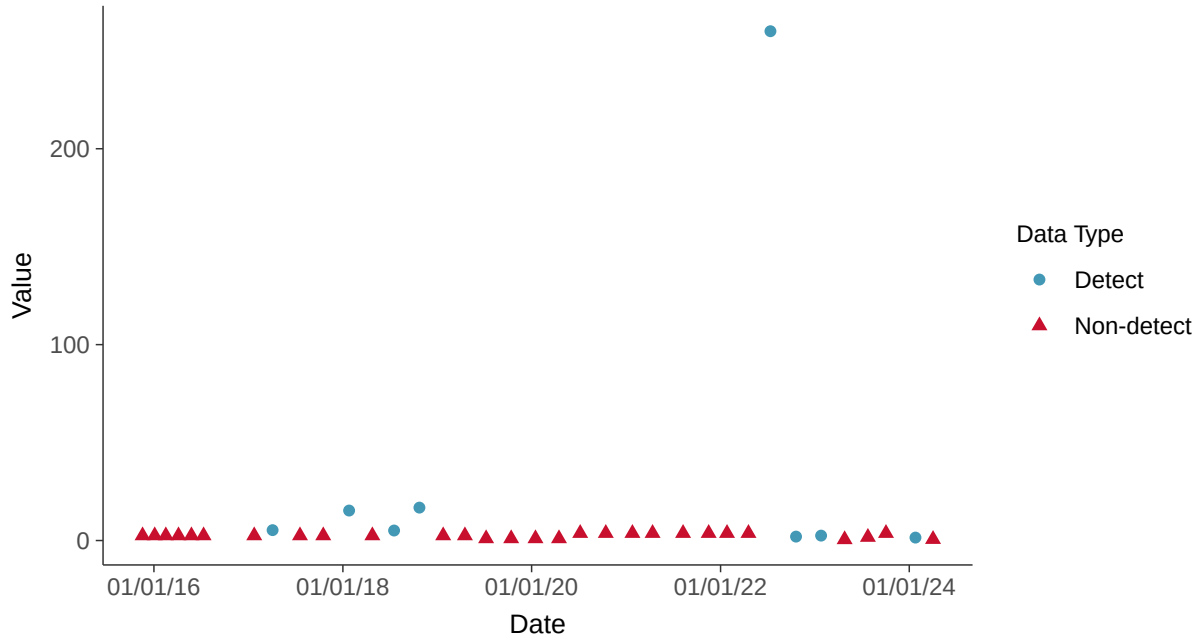


App. IV: Chromium, MW-5

ID: 8_3_109

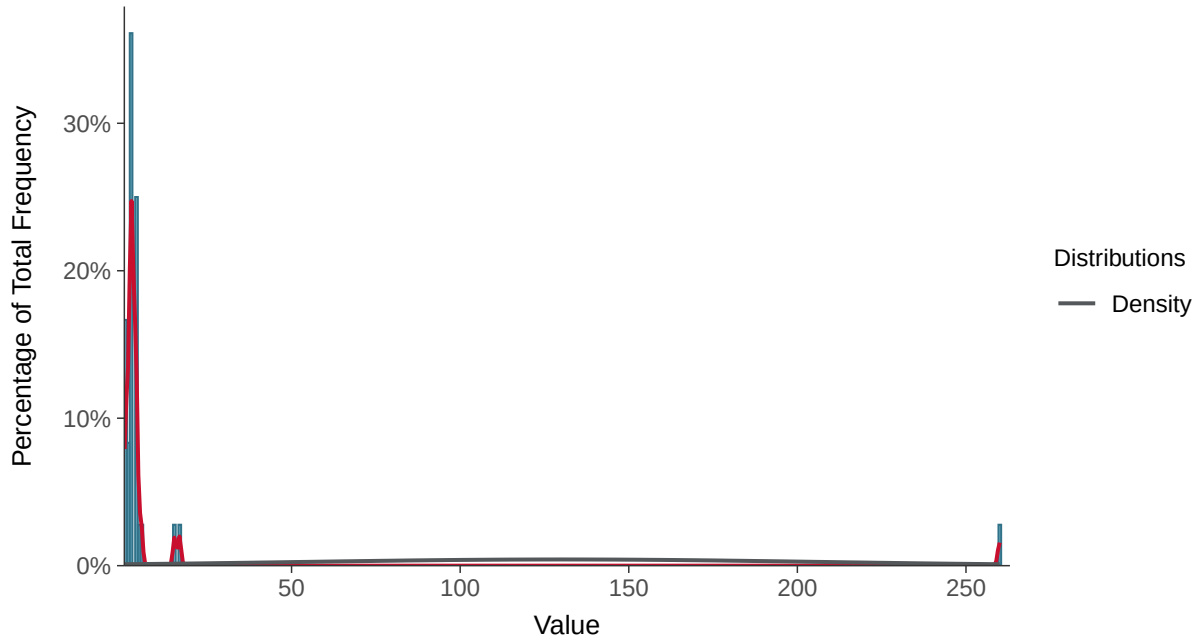
Scatter Plot

Chromium, MW-5 (ug/L)



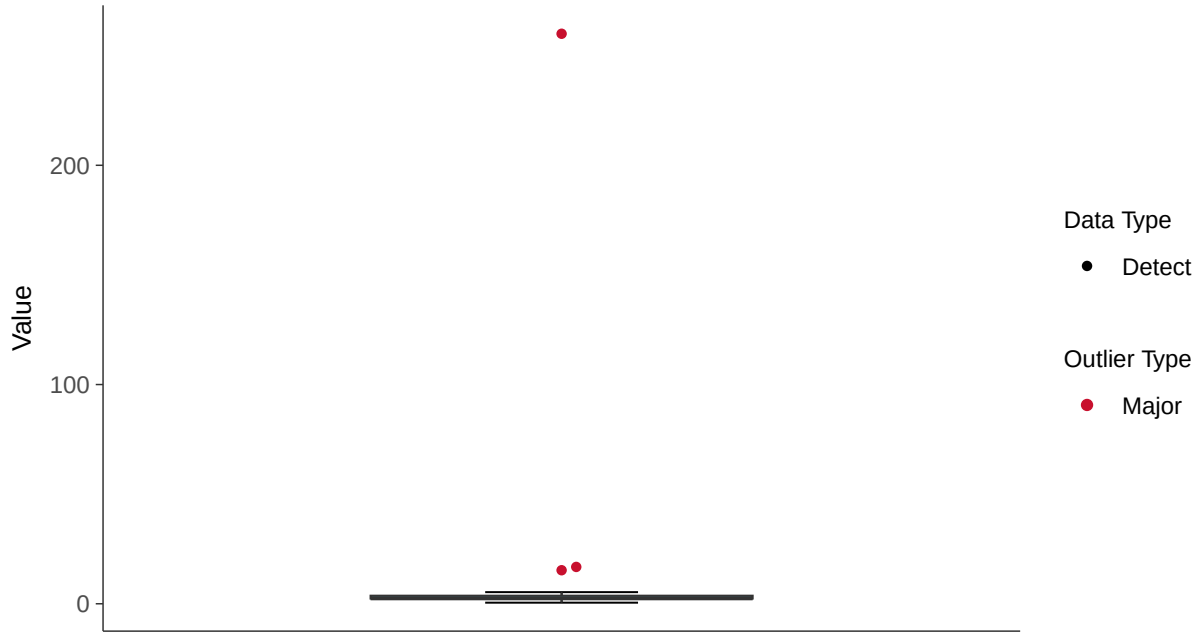
Histogram

Chromium, MW-5 (ug/L)



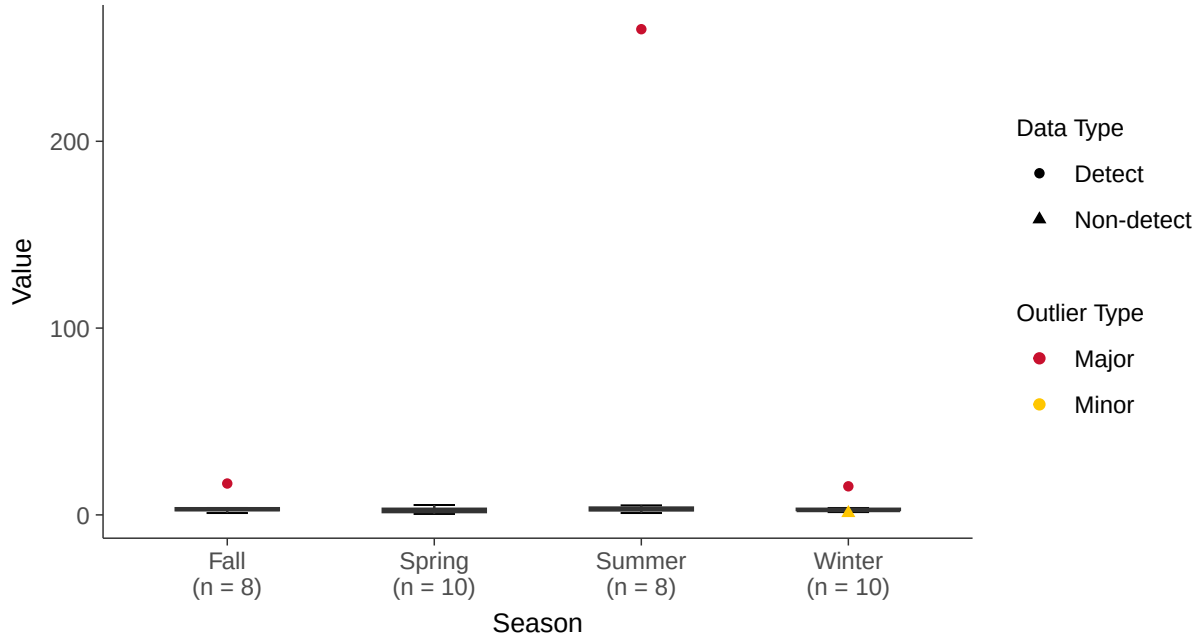
Boxplot

Chromium, MW-5 (ug/L)



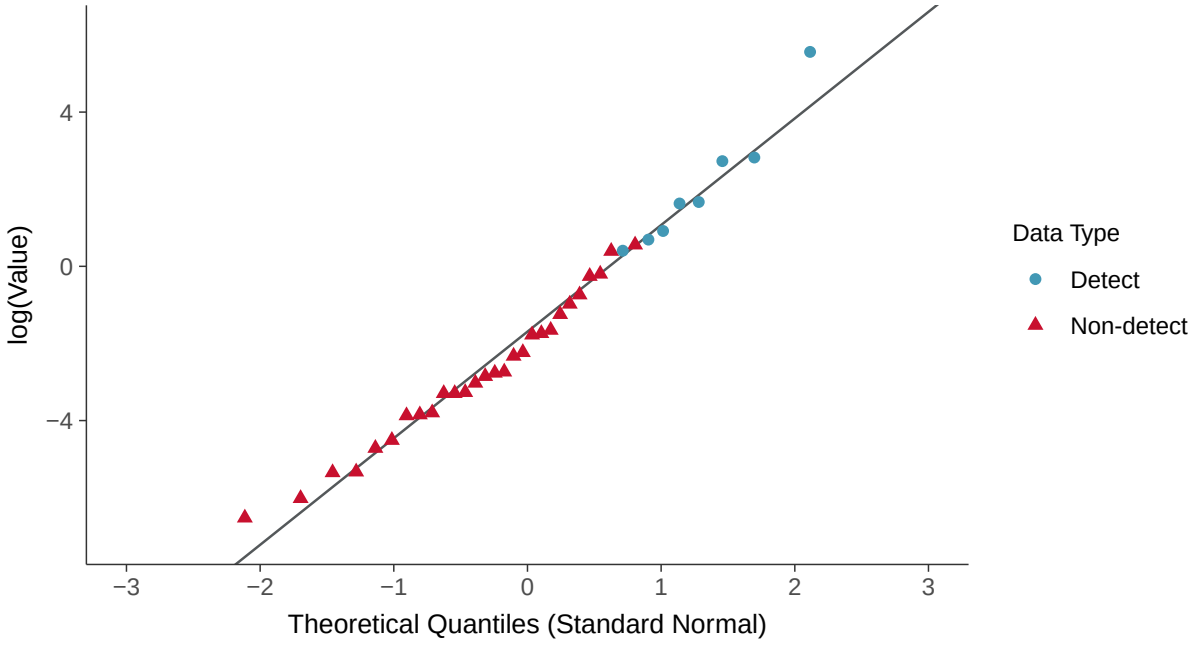
Boxplot by Season

Chromium, MW-5 (ug/L)



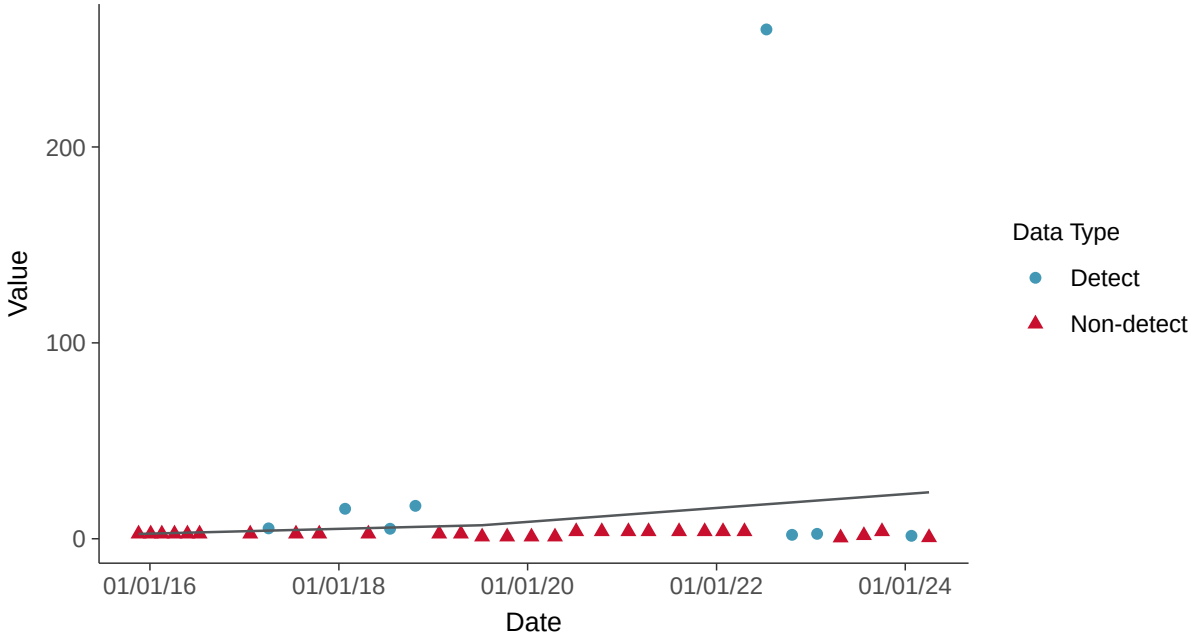
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-5 (ug/L)



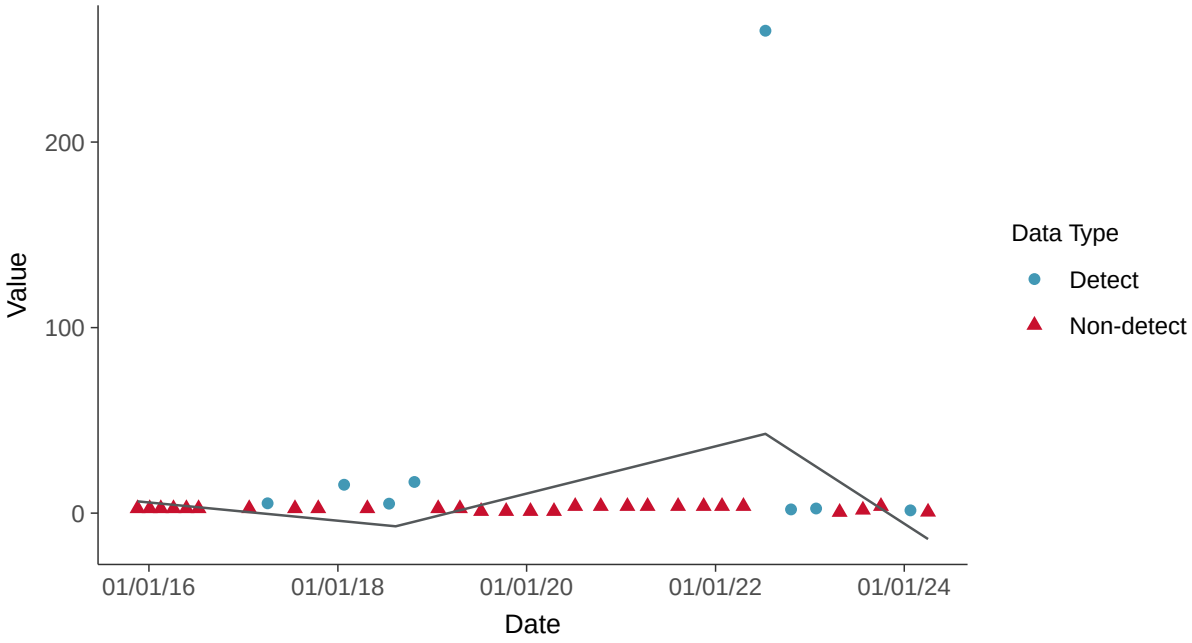
Trend Regression: Piecewise Linear-Linear

Chromium, MW-5 (ug/L)



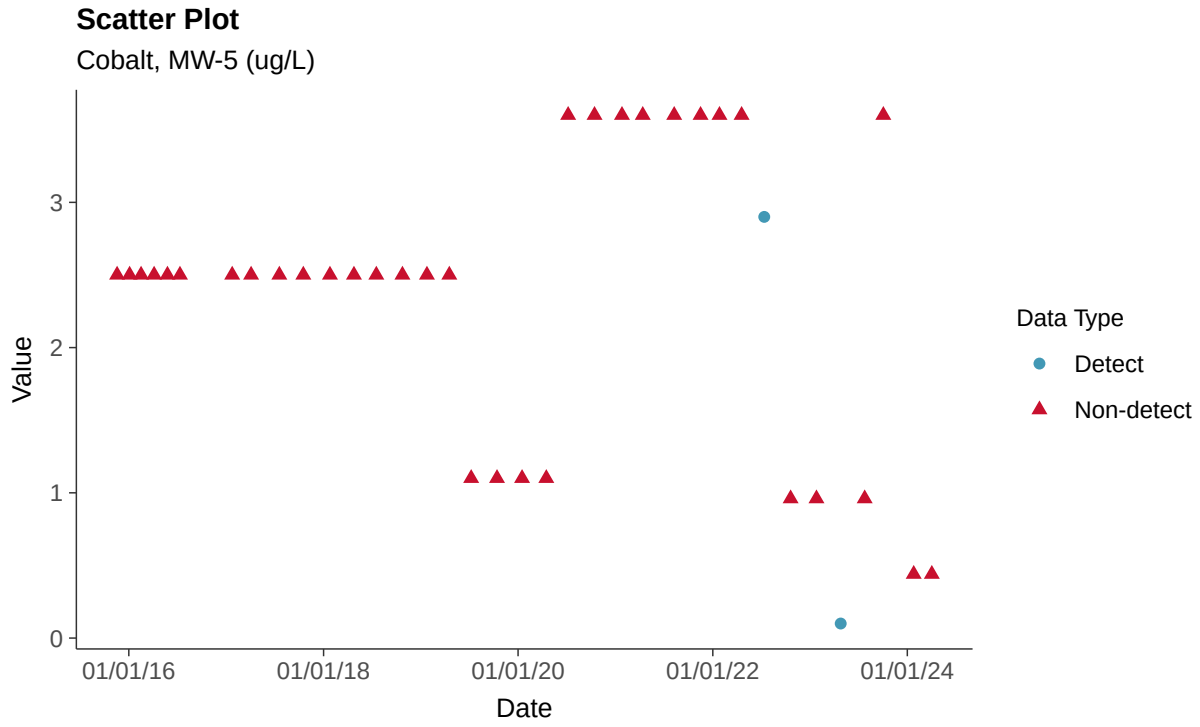
Trend Regression: Piecewise Linear-Linear-Linear

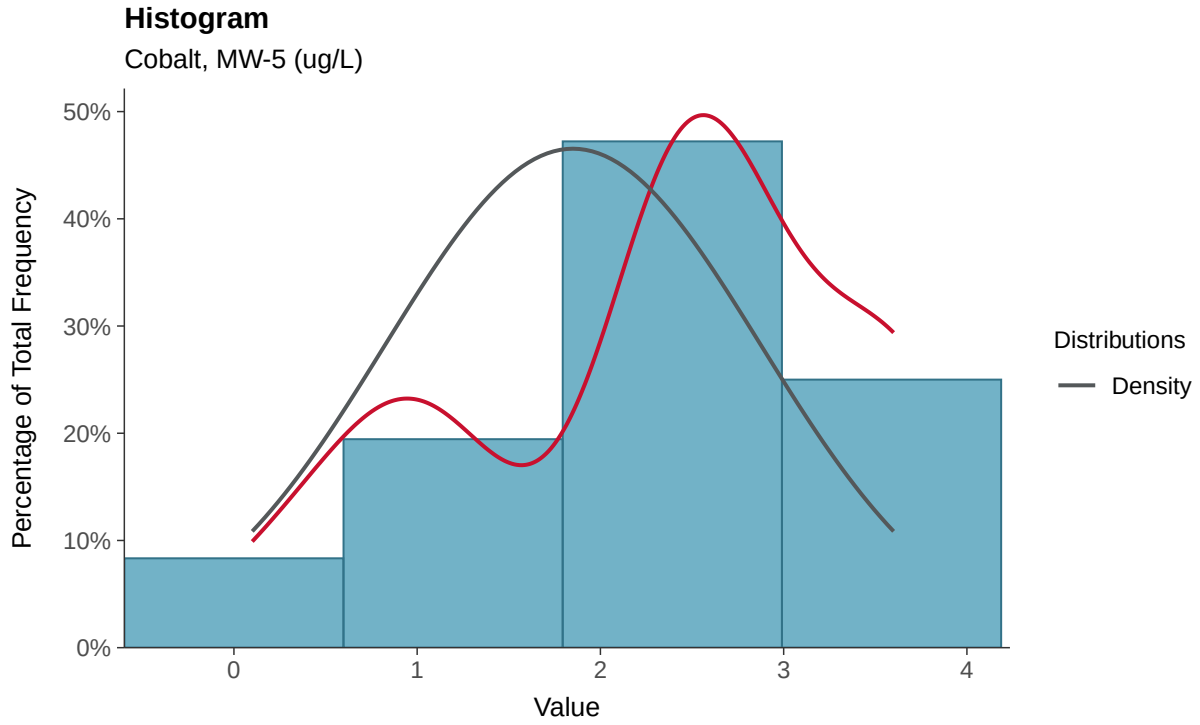
Chromium, MW-5 (ug/L)



App. IV: Cobalt, MW-5

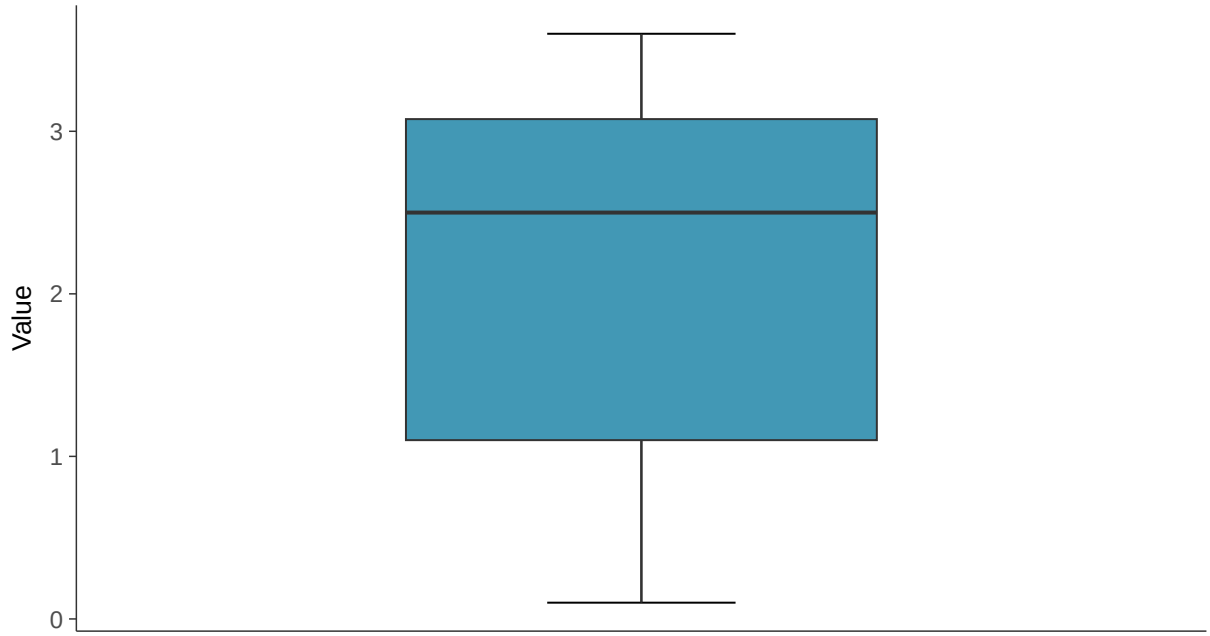
ID: 8_3_110





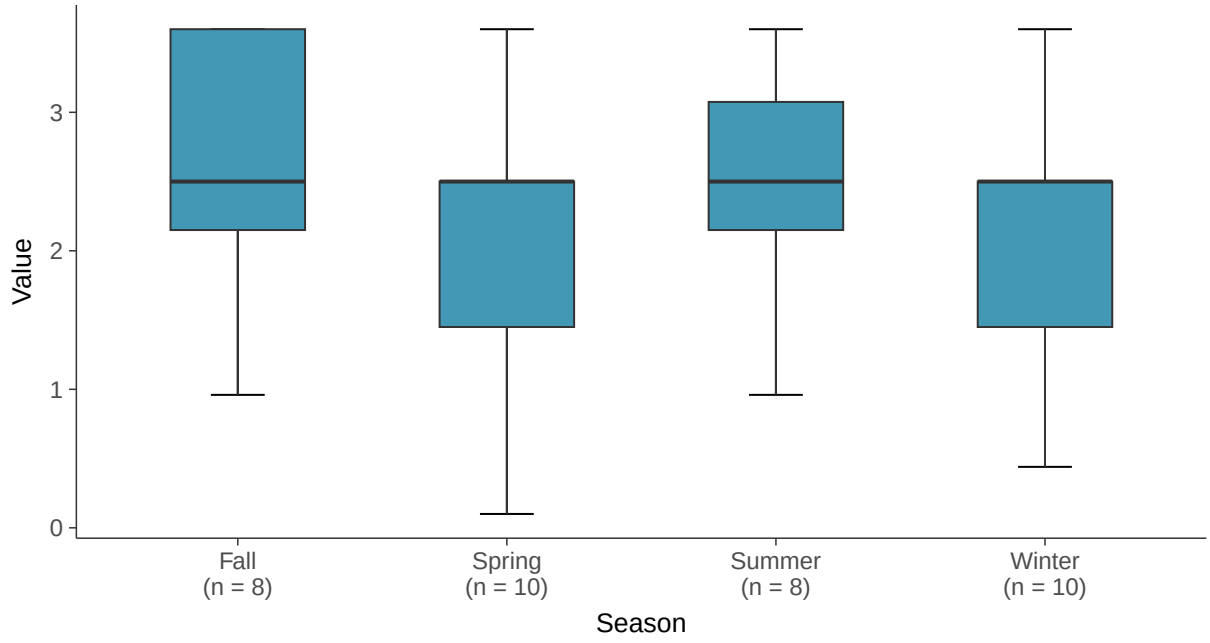
Boxplot

Cobalt, MW-5 (ug/L)



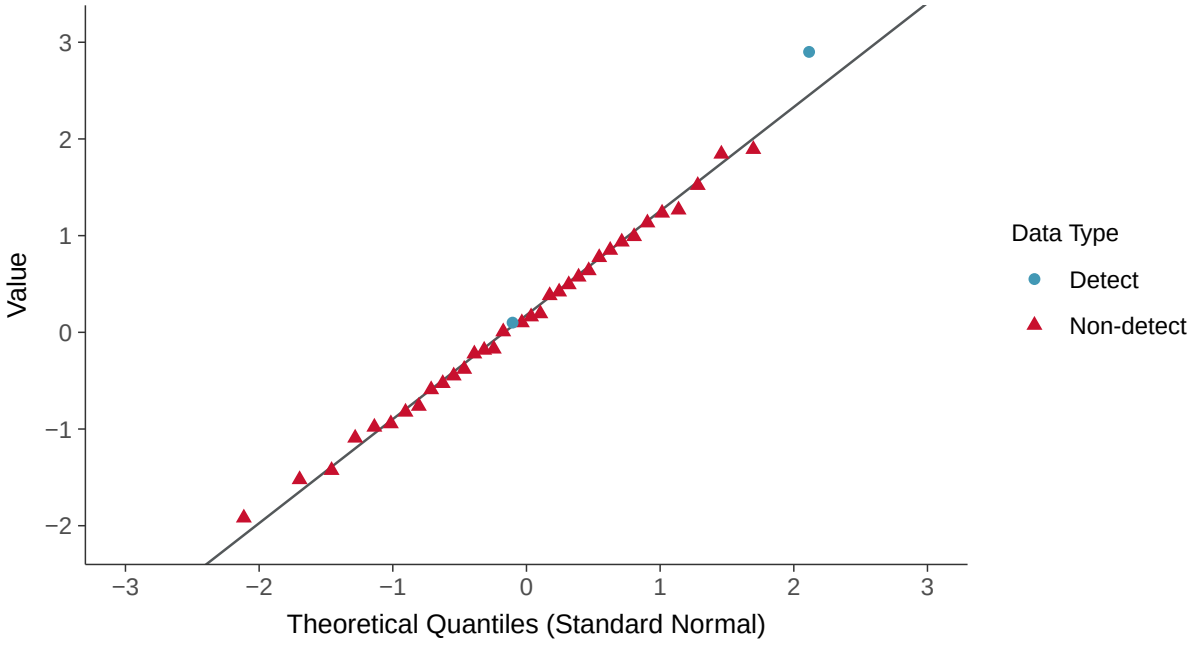
Boxplot by Season

Cobalt, MW-5 (ug/L)



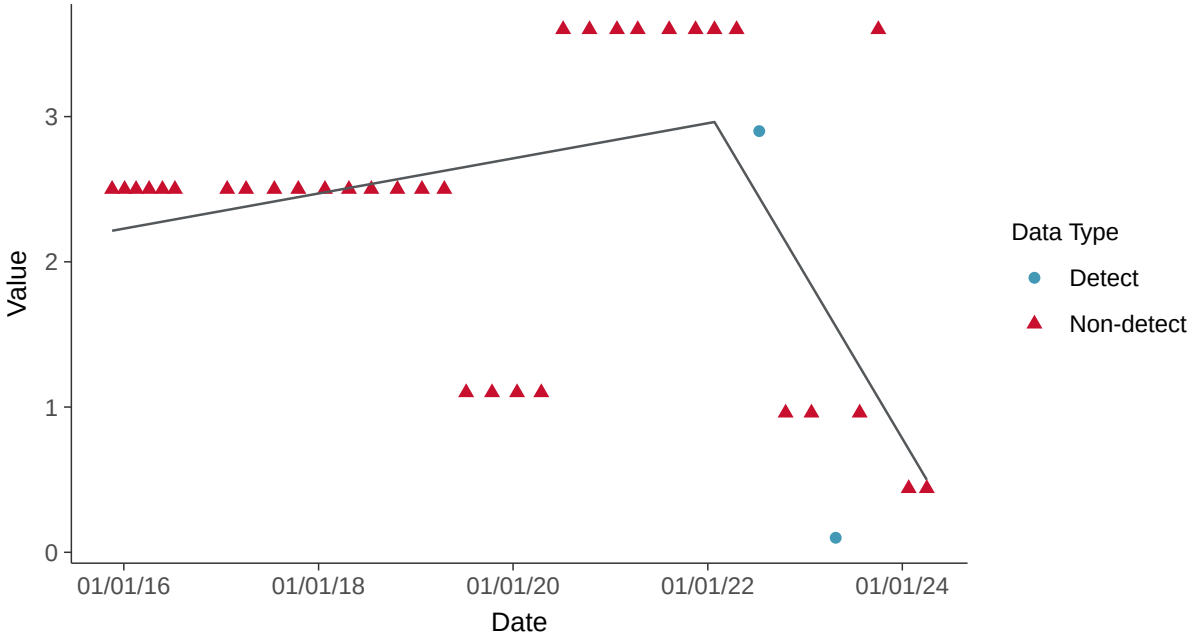
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-5 (ug/L)



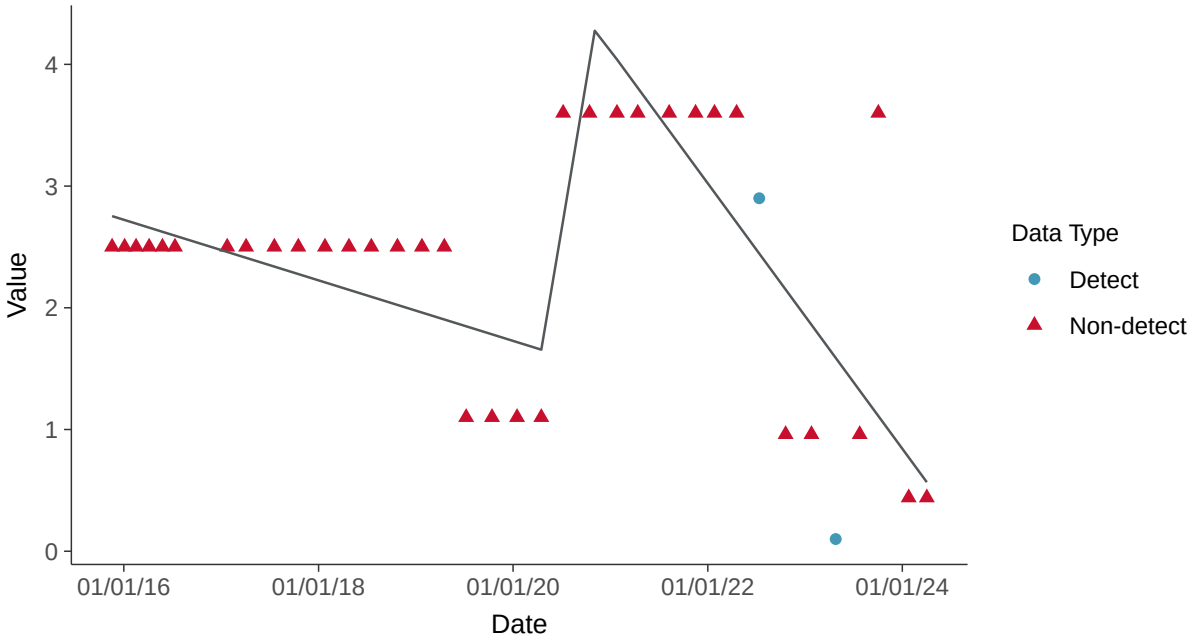
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-5 (ug/L)



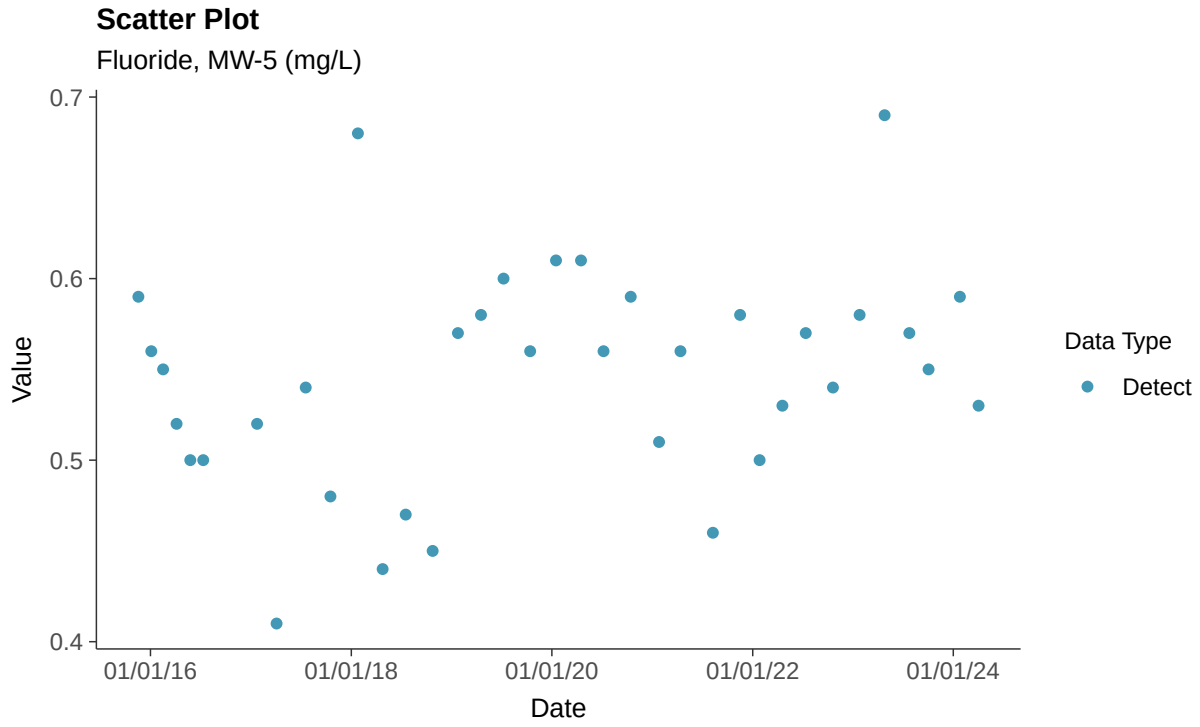
Trend Regression: Piecewise Linear-Linear-Linear

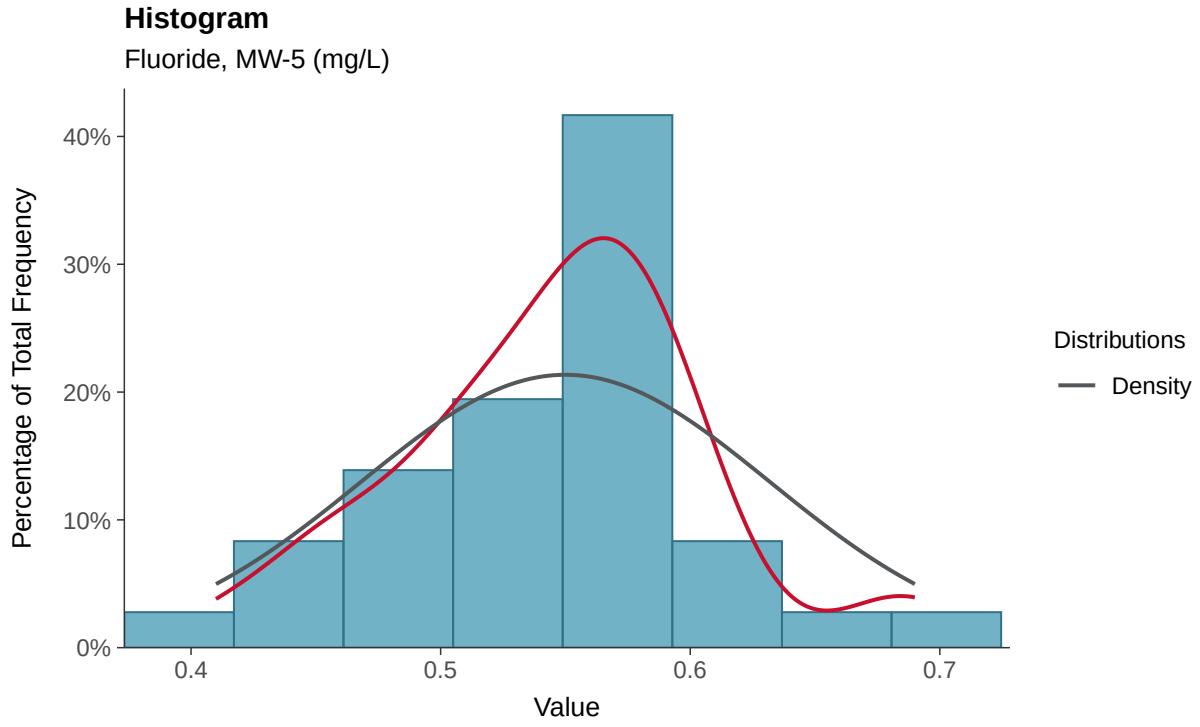
Cobalt, MW-5 (ug/L)



App. IV: Fluoride, MW-5

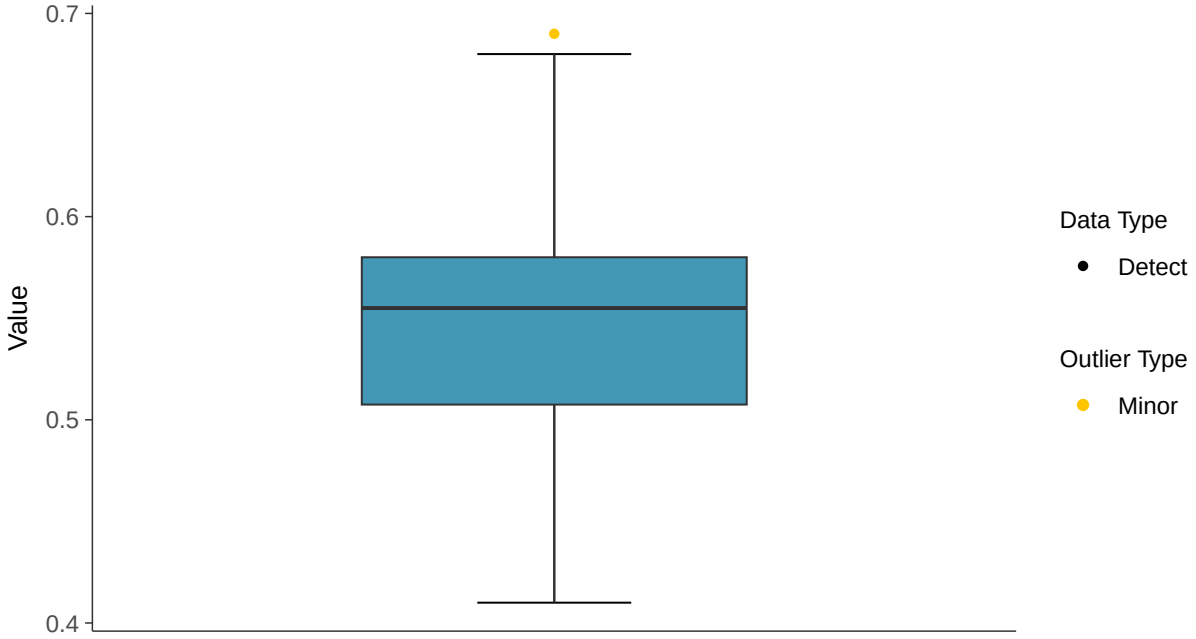
ID: 8_3_112





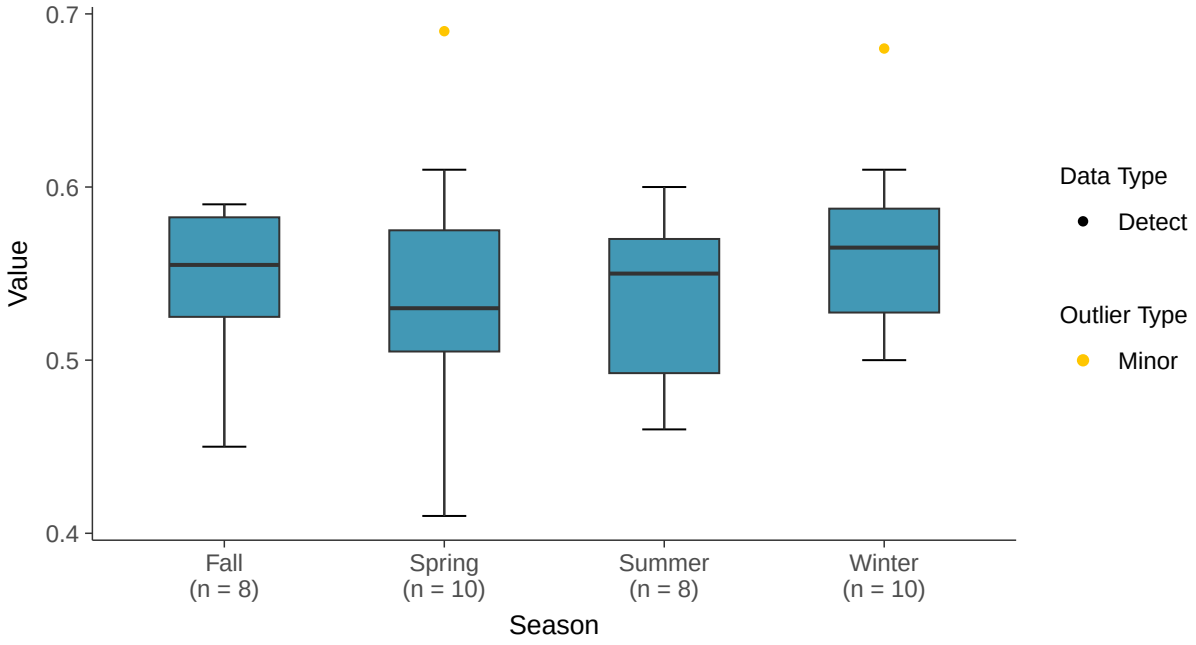
Boxplot

Fluoride, MW-5 (mg/L)



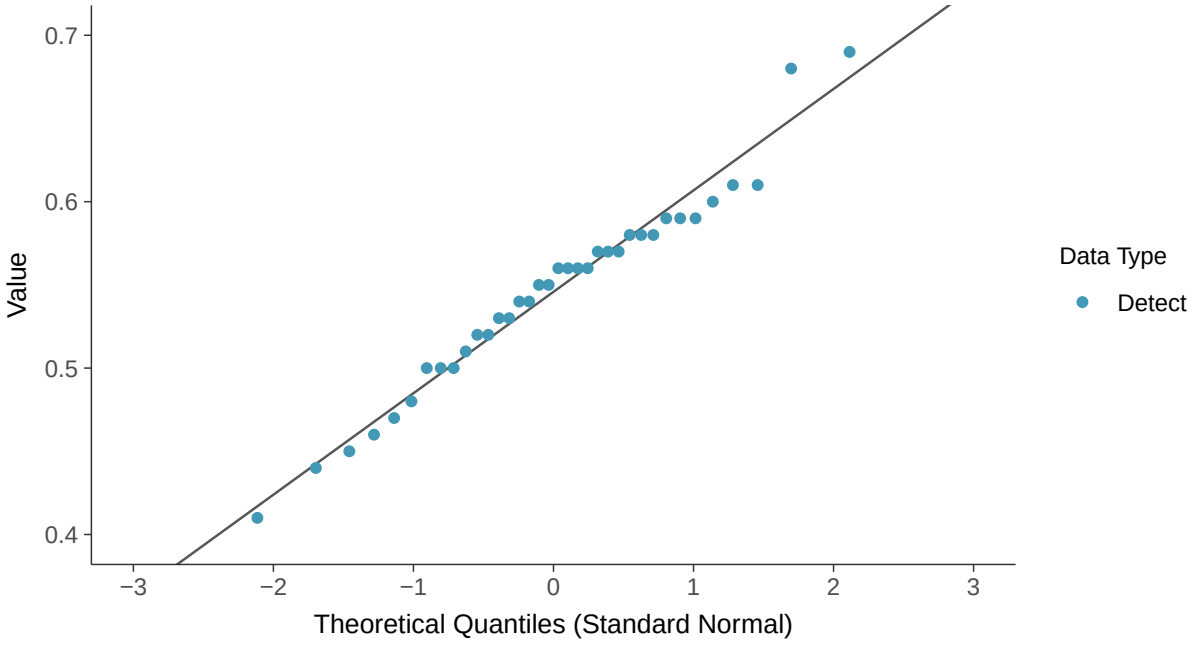
Boxplot by Season

Fluoride, MW-5 (mg/L)



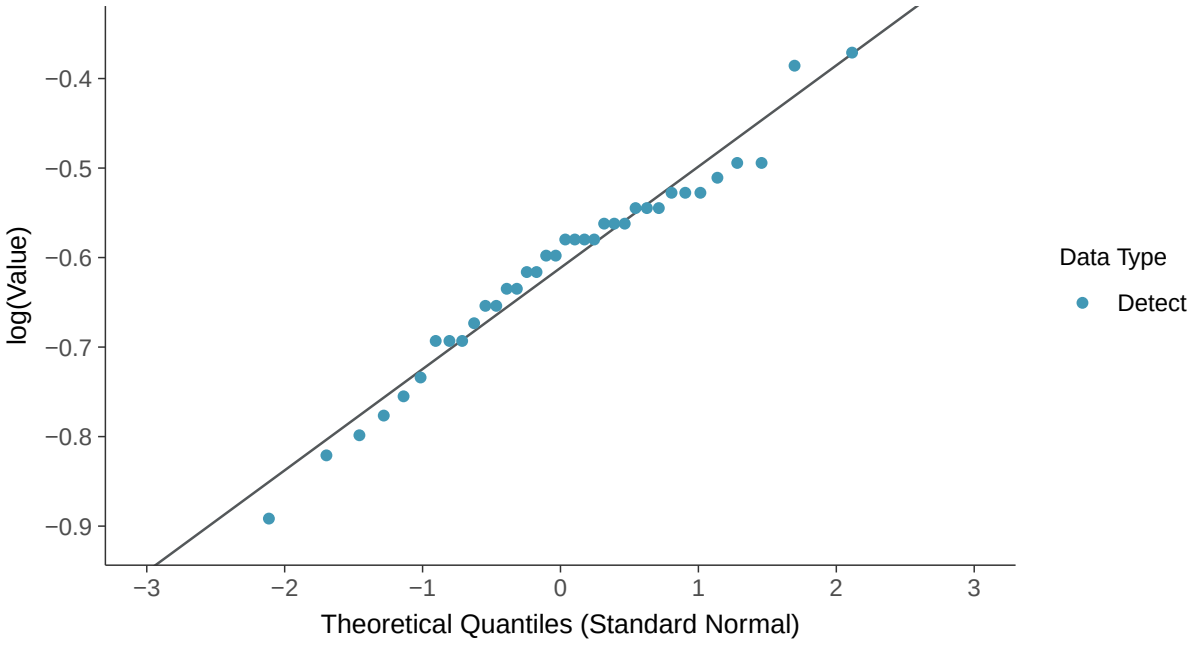
Normal Q-Q plot

Fluoride, MW-5 (mg/L)



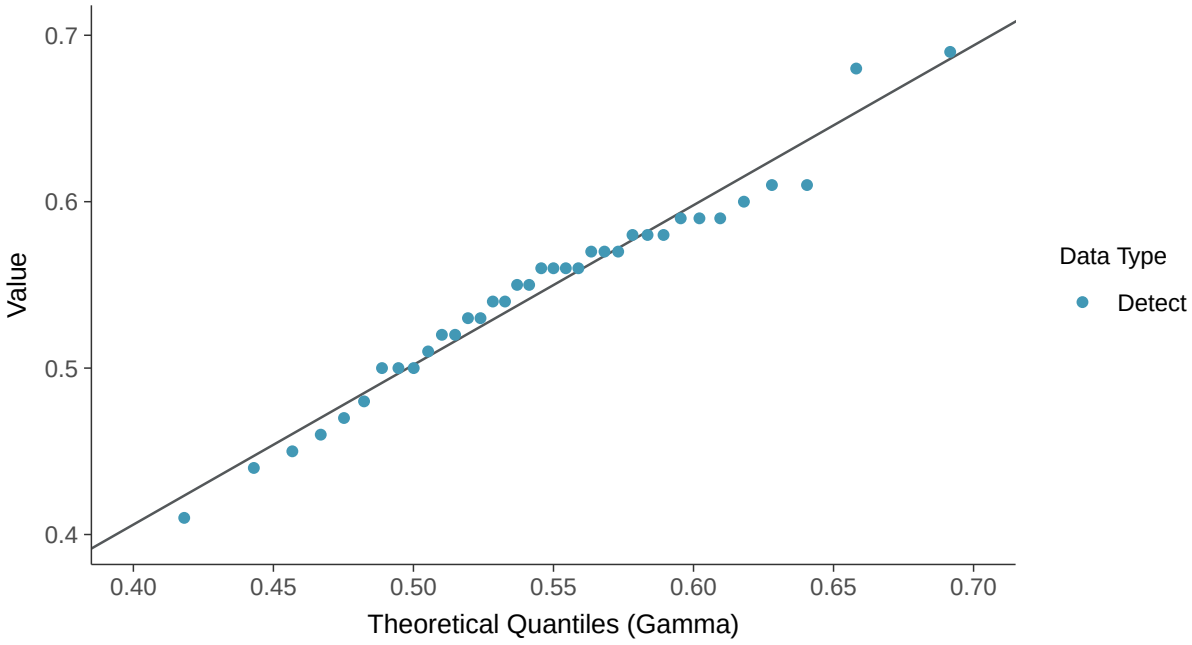
Lognormal Q-Q plot

Fluoride, MW-5 (mg/L)



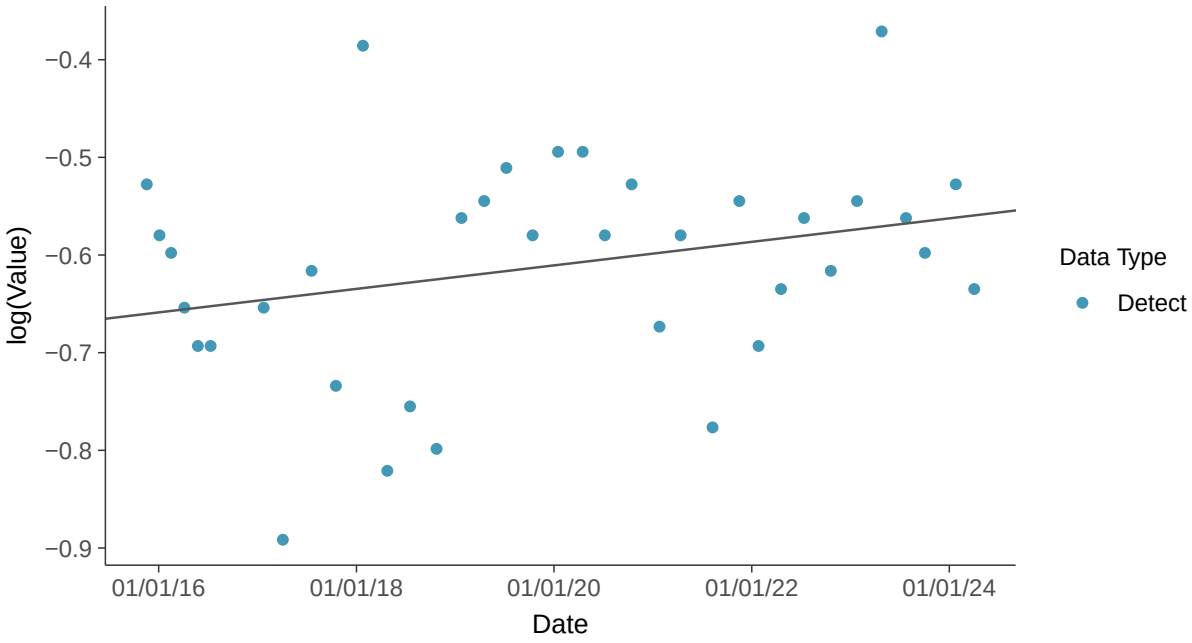
Gamma Q-Q plot

Fluoride, MW-5 (mg/L)



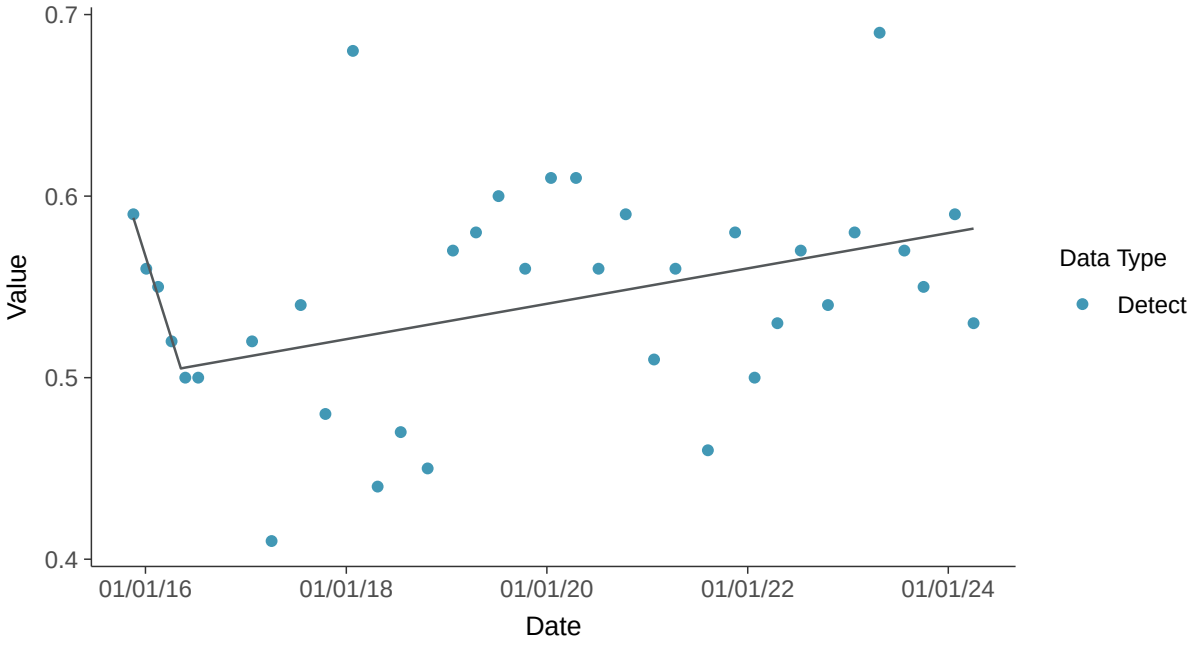
Trend Regression: Lognormal MLE

Fluoride, MW-5 (mg/L)



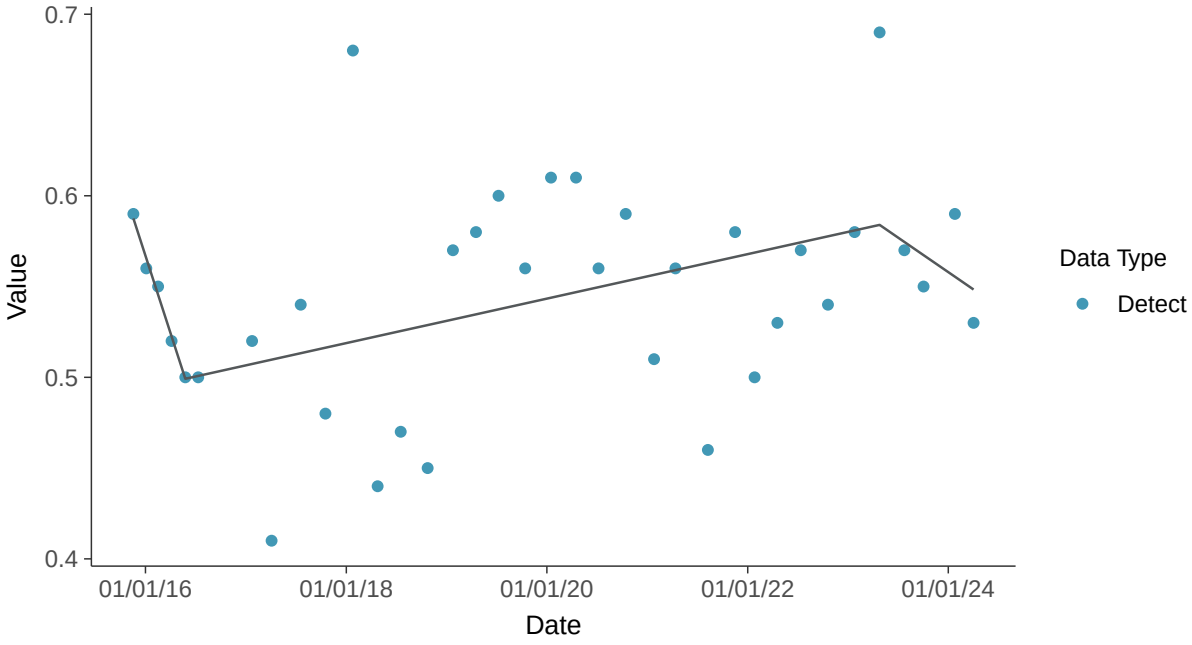
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-5 (mg/L)



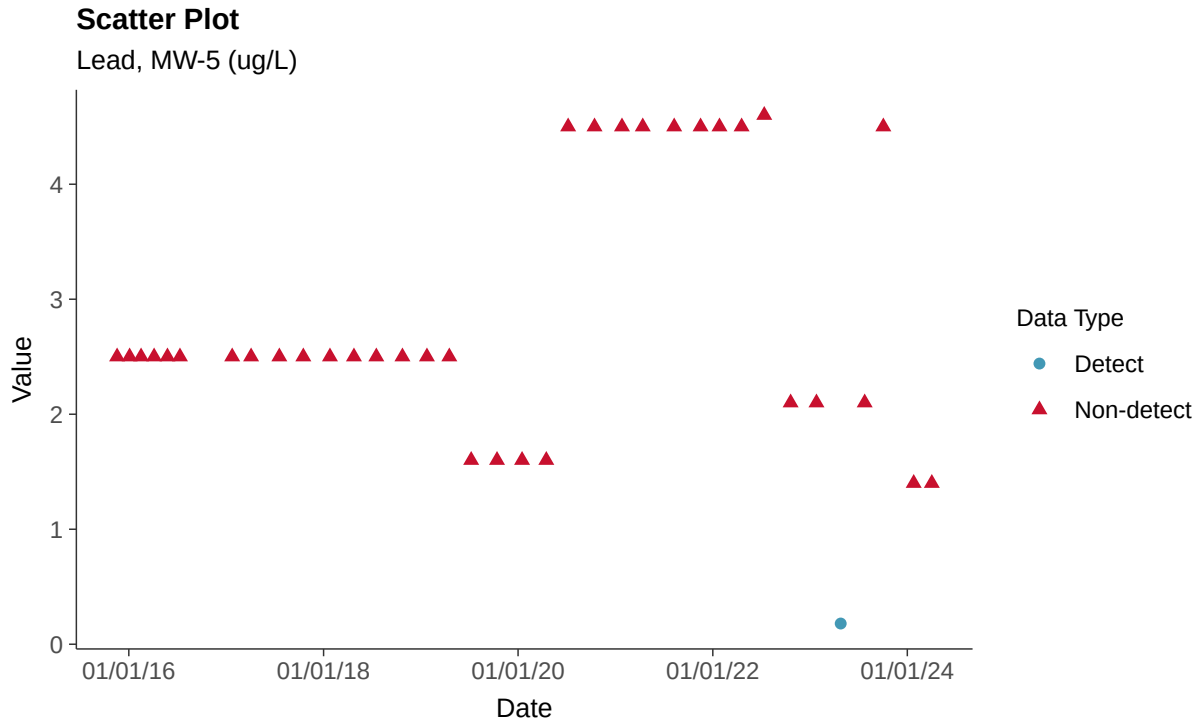
Trend Regression: Piecewise Linear-Linear-Linear

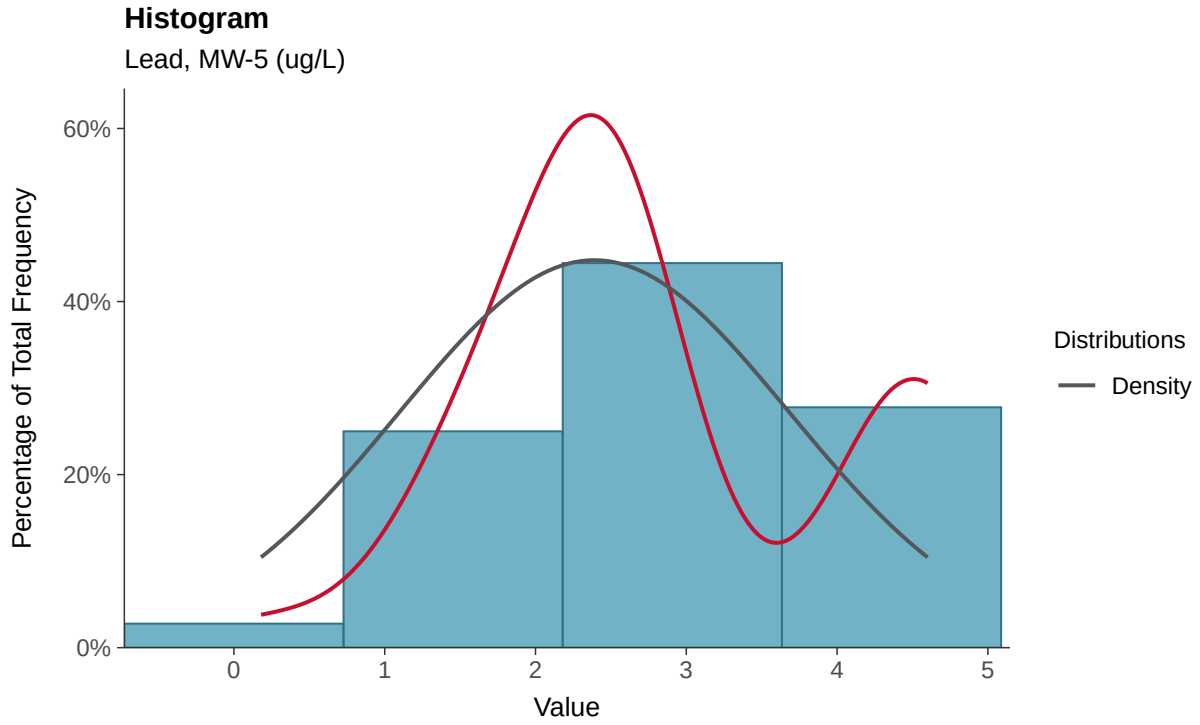
Fluoride, MW-5 (mg/L)



App. IV: Lead, MW-5

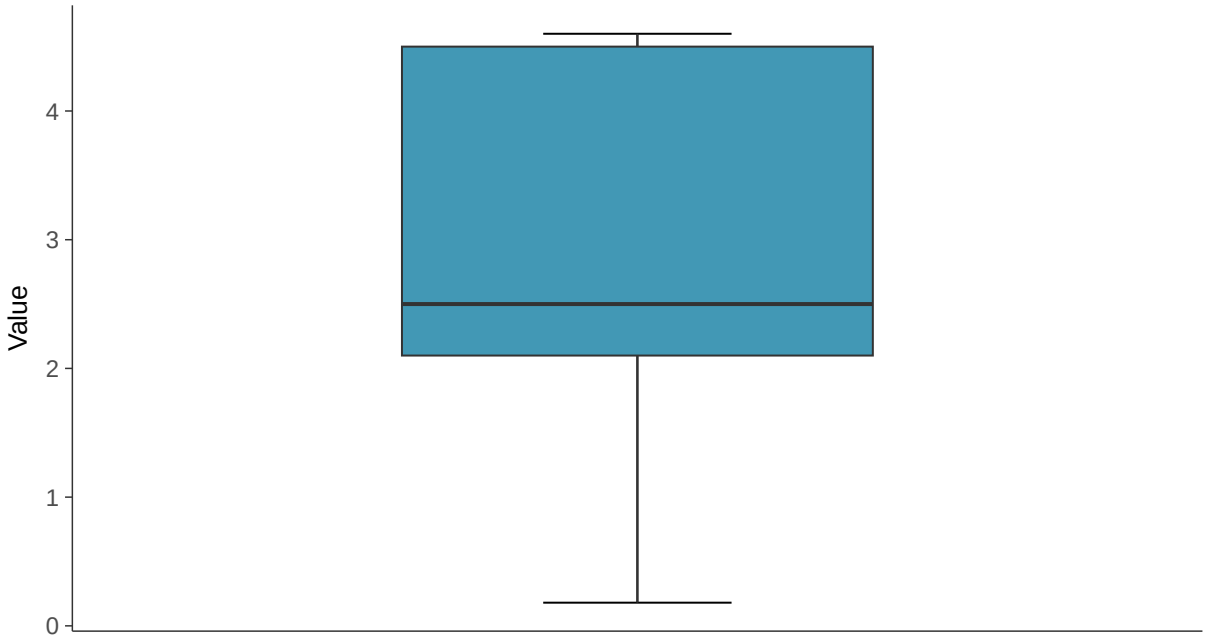
ID: 8_3_113





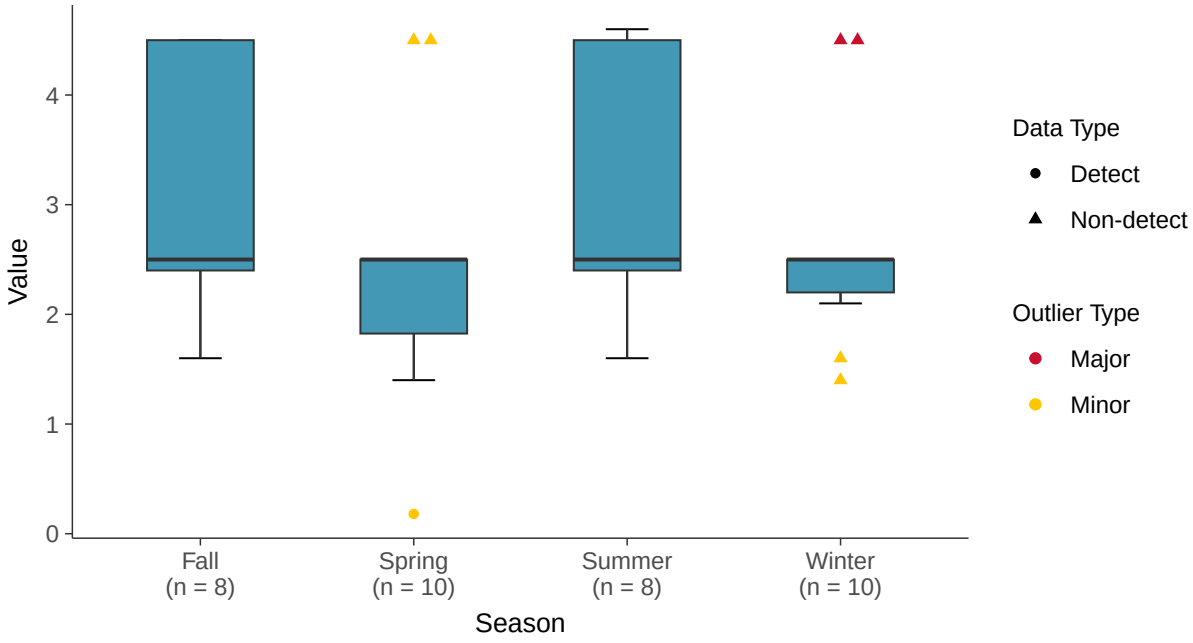
Boxplot

Lead, MW-5 (ug/L)



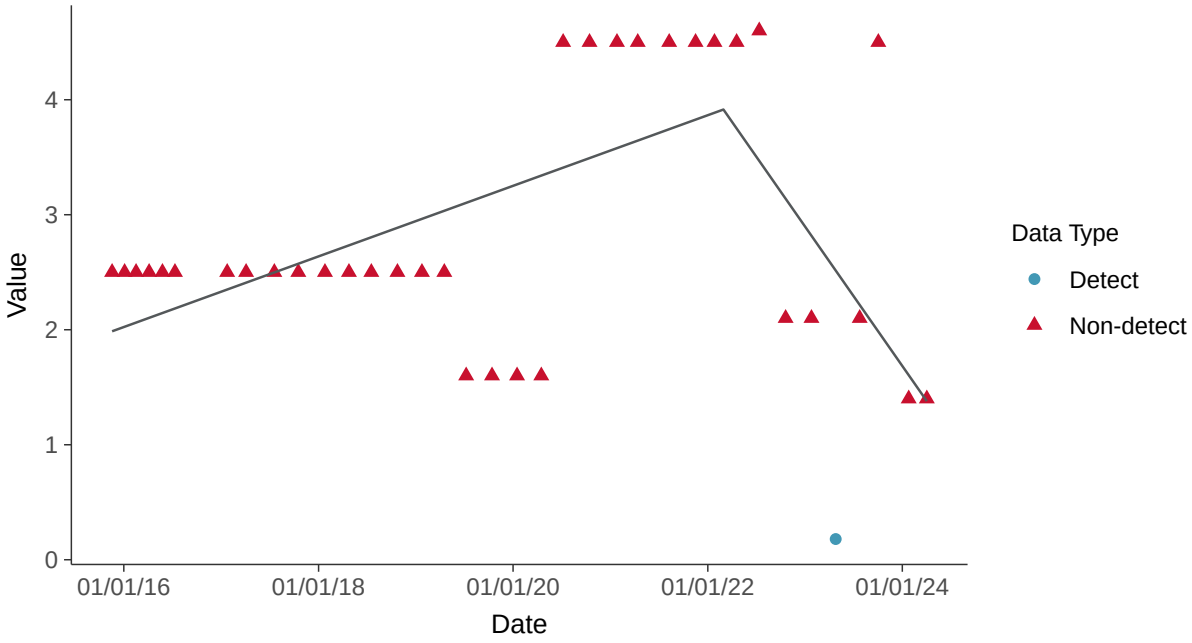
Boxplot by Season

Lead, MW-5 (ug/L)



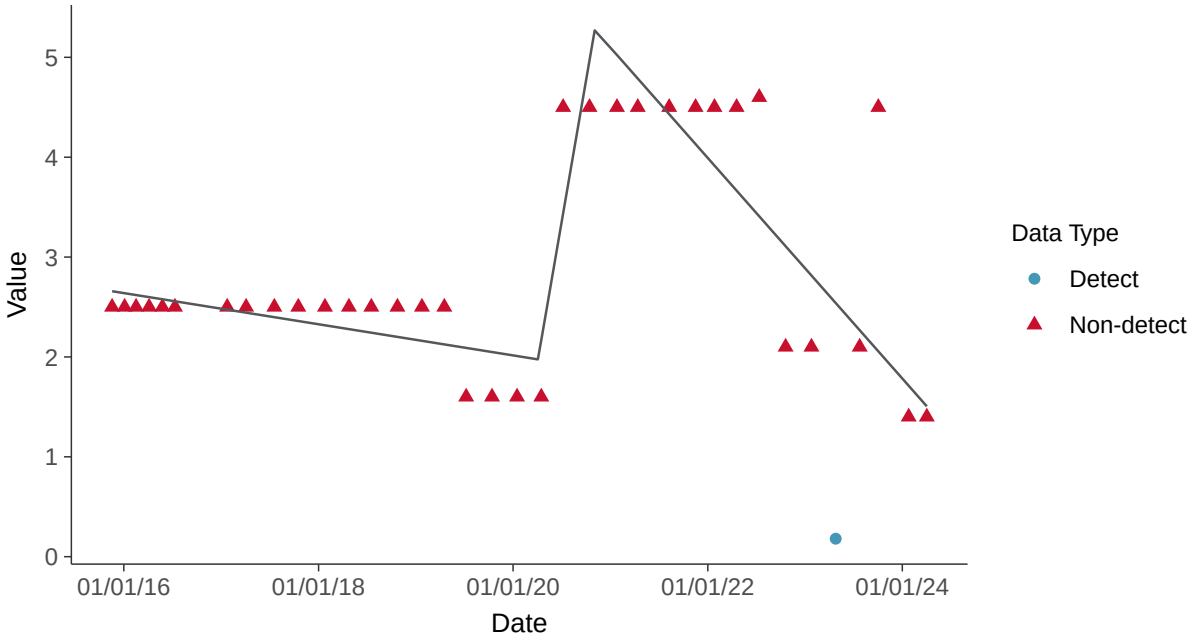
Trend Regression: Piecewise Linear-Linear

Lead, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-5 (ug/L)

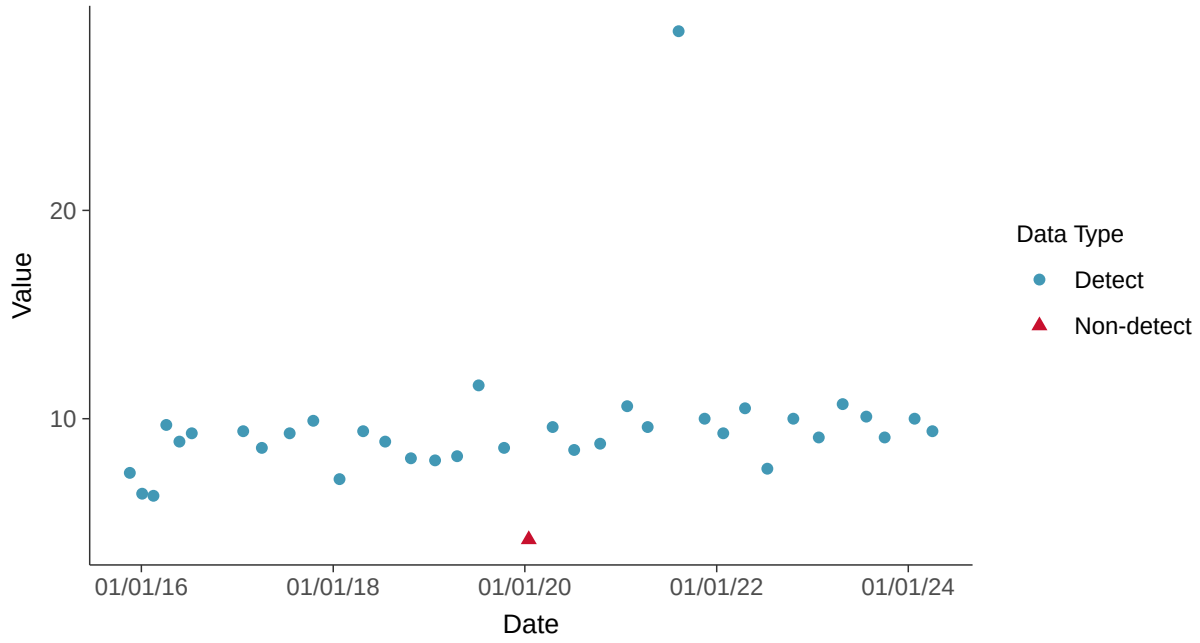


App. IV: Lithium, MW-5

ID: 8_3_114

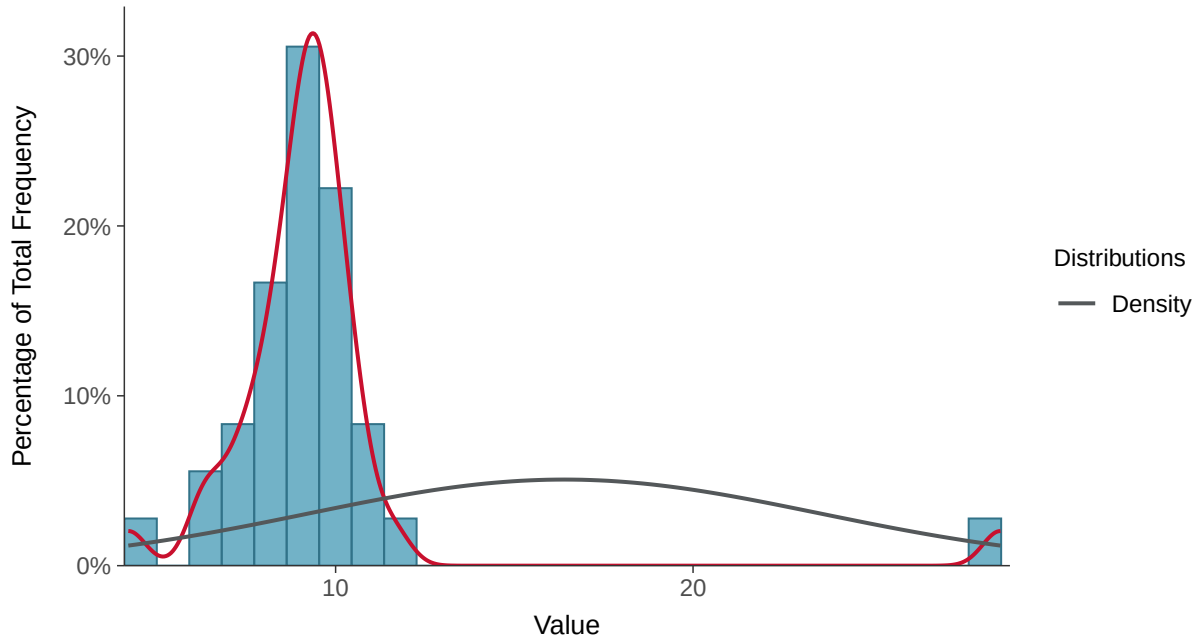
Scatter Plot

Lithium, MW-5 (ug/L)



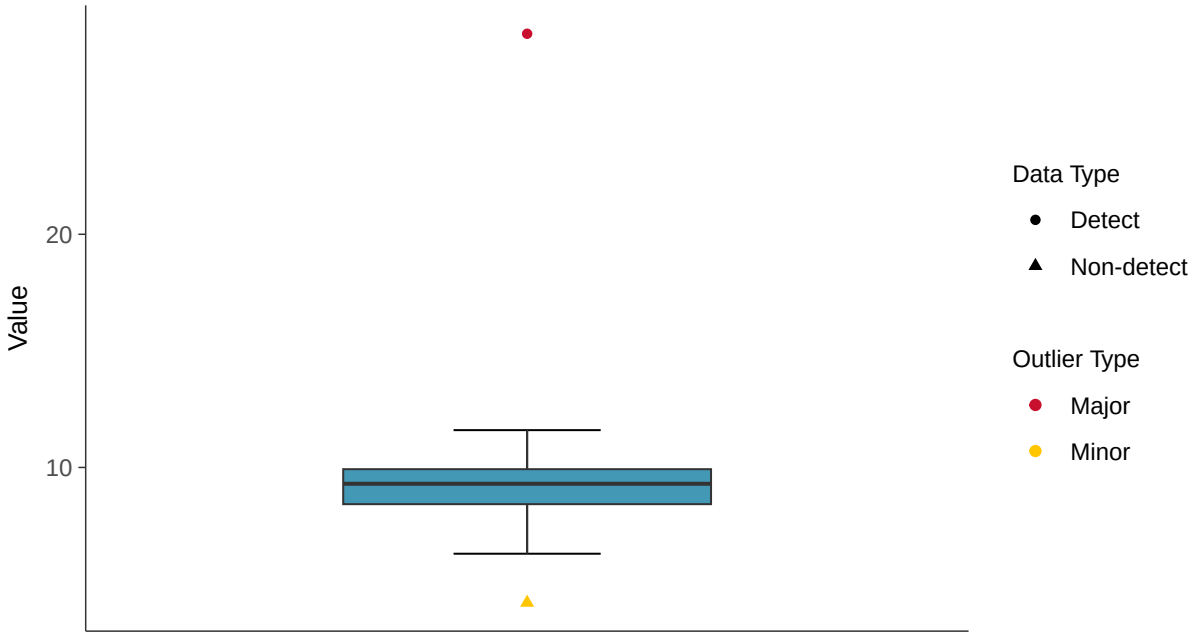
Histogram

Lithium, MW-5 (ug/L)



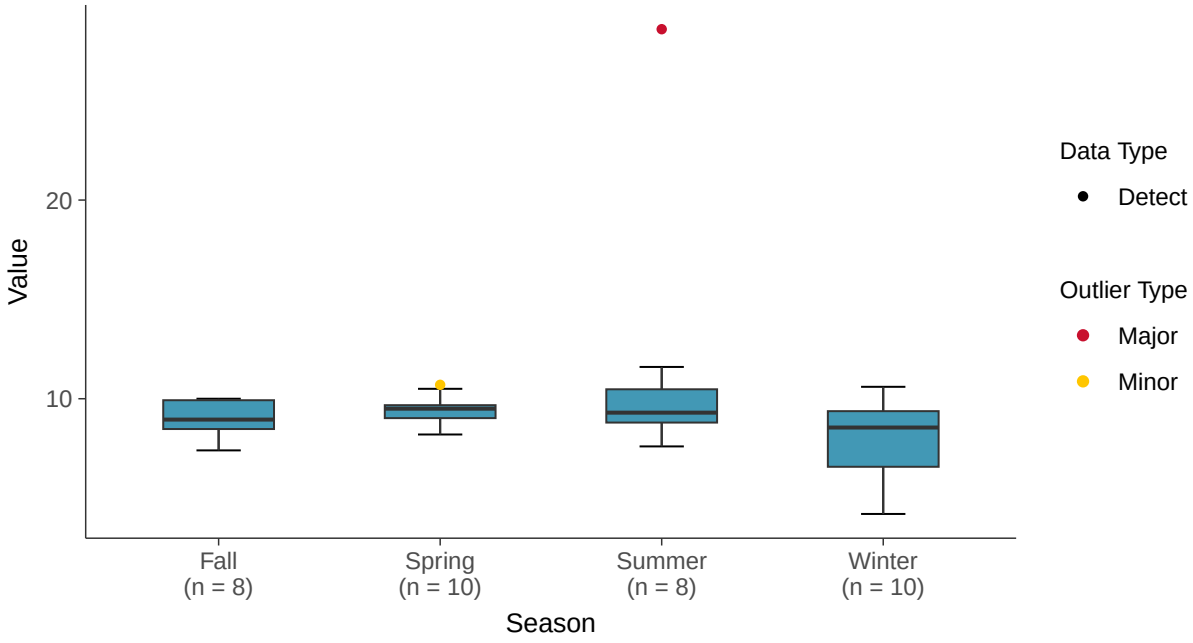
Boxplot

Lithium, MW-5 (ug/L)



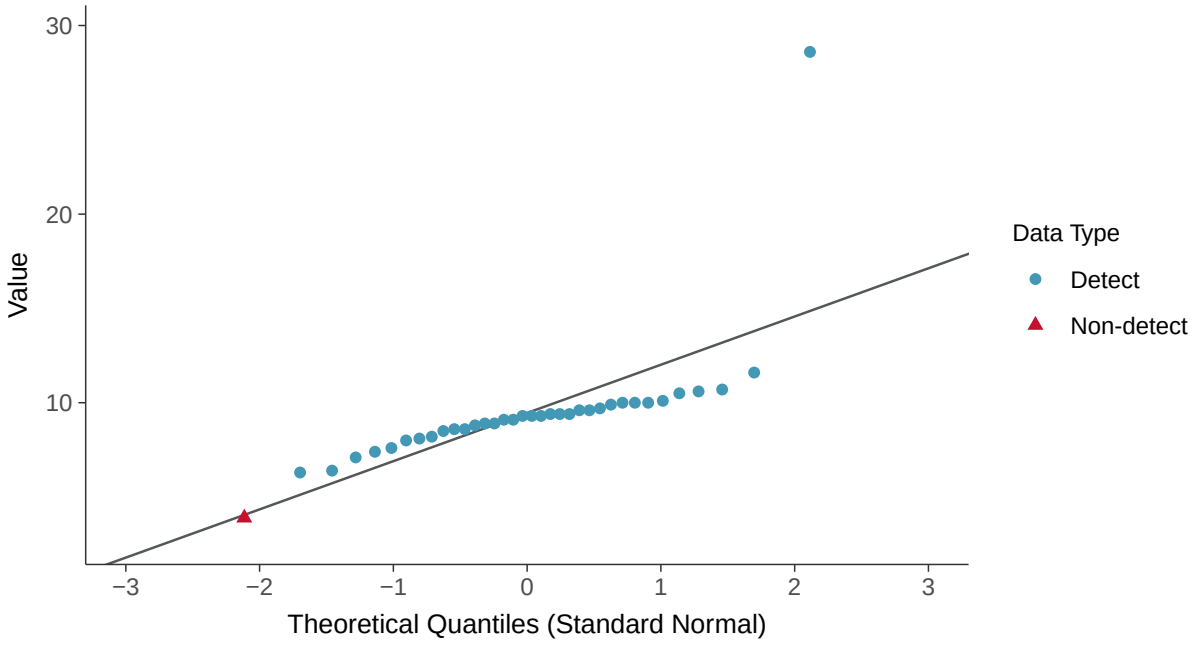
Boxplot by Season

Lithium, MW-5 (ug/L)



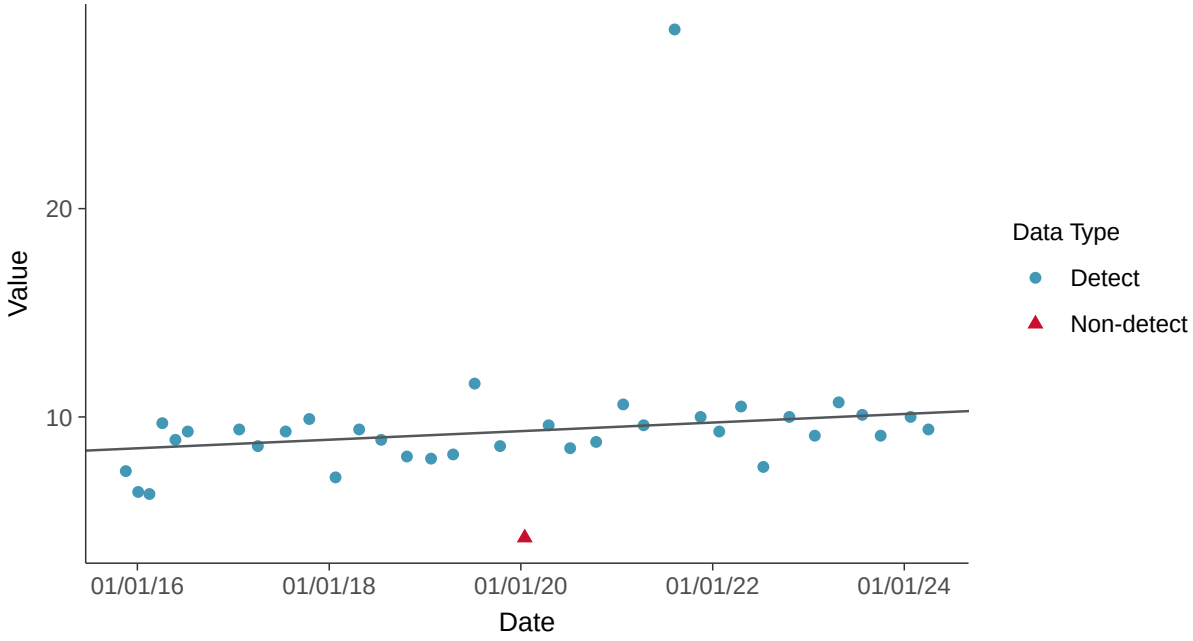
Normal Q-Q plot using ROS Imputed Estimates

Lithium, MW-5 (ug/L)



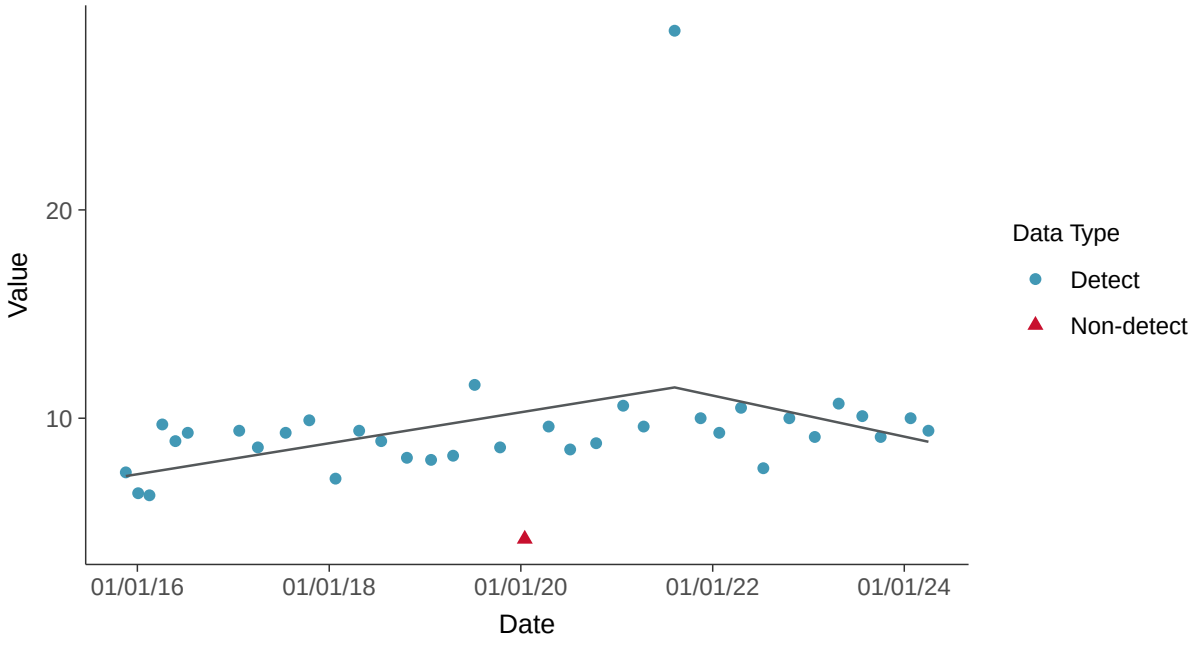
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-5 (ug/L)



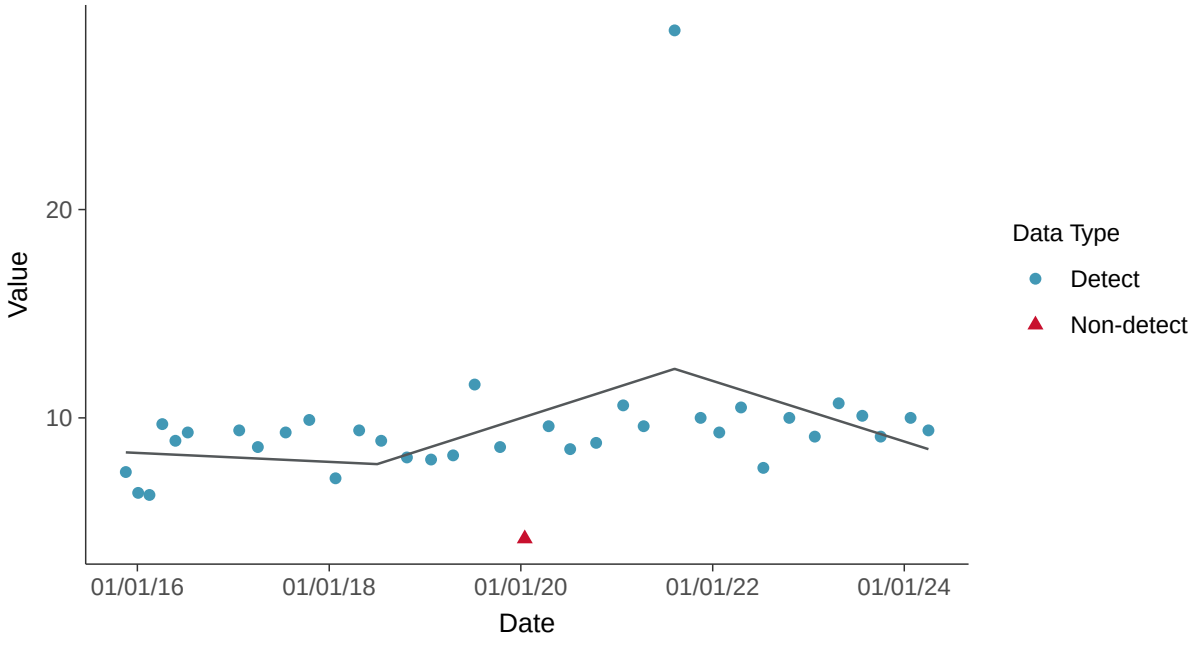
Trend Regression: Piecewise Linear-Linear

Lithium, MW-5 (ug/L)



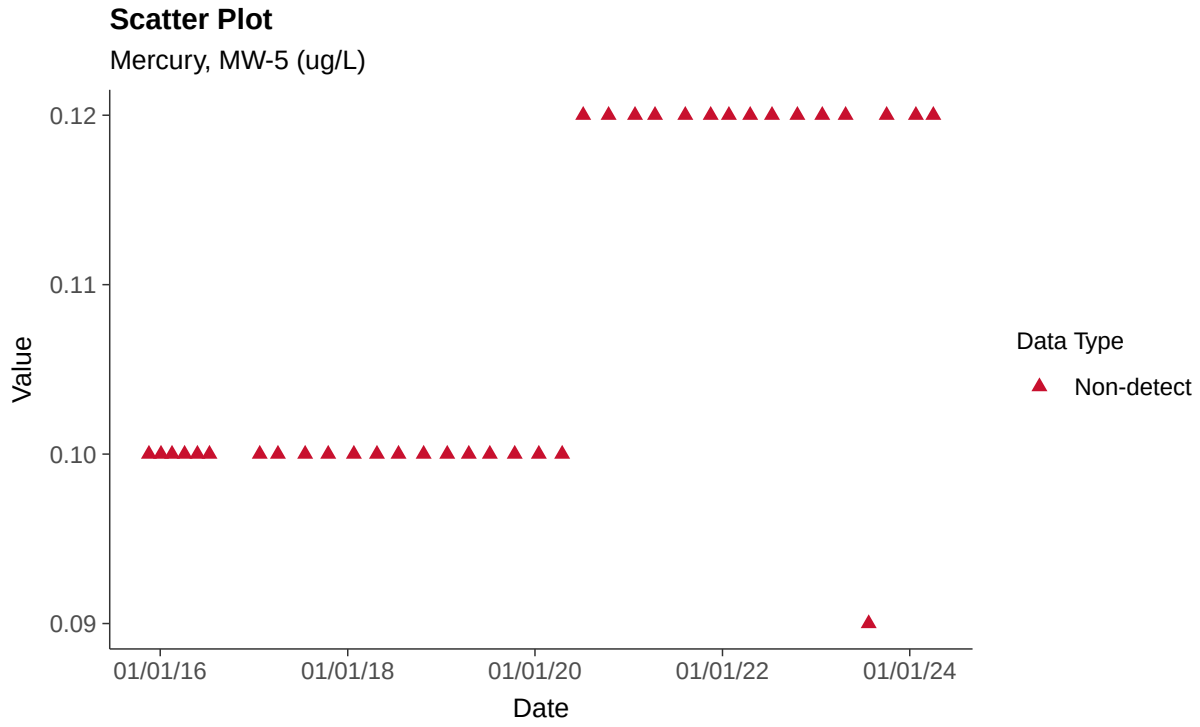
Trend Regression: Piecewise Linear-Linear-Linear

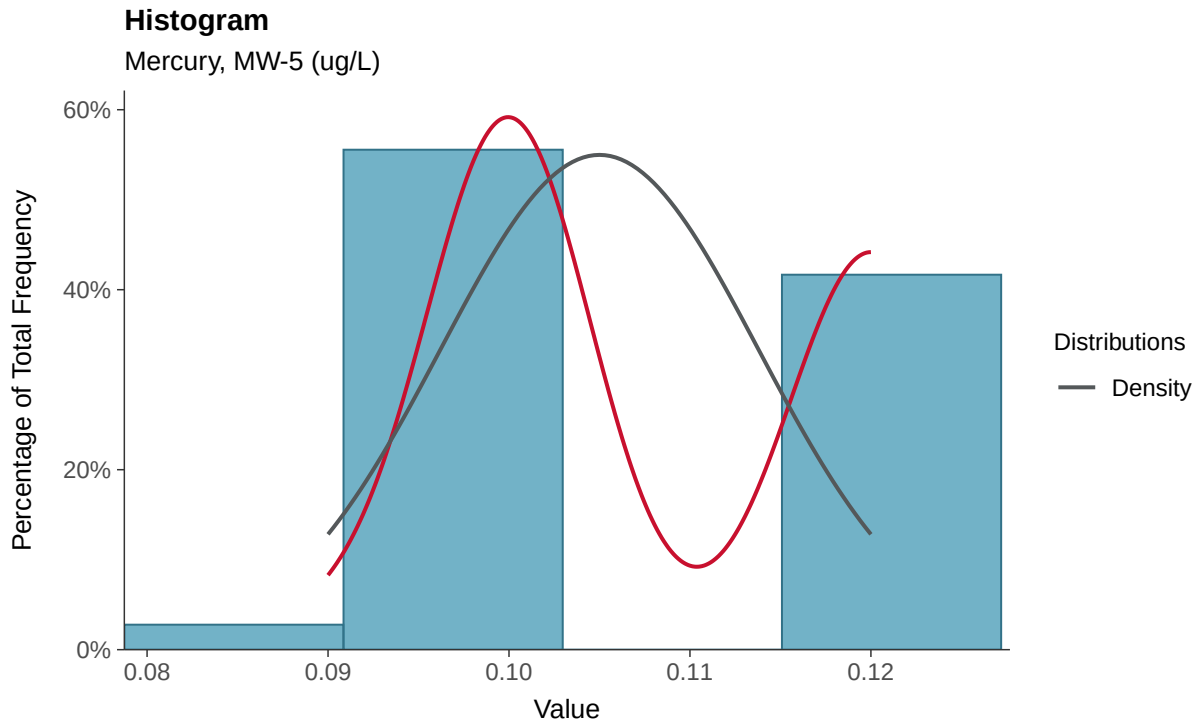
Lithium, MW-5 (ug/L)



App. IV: Mercury, MW-5

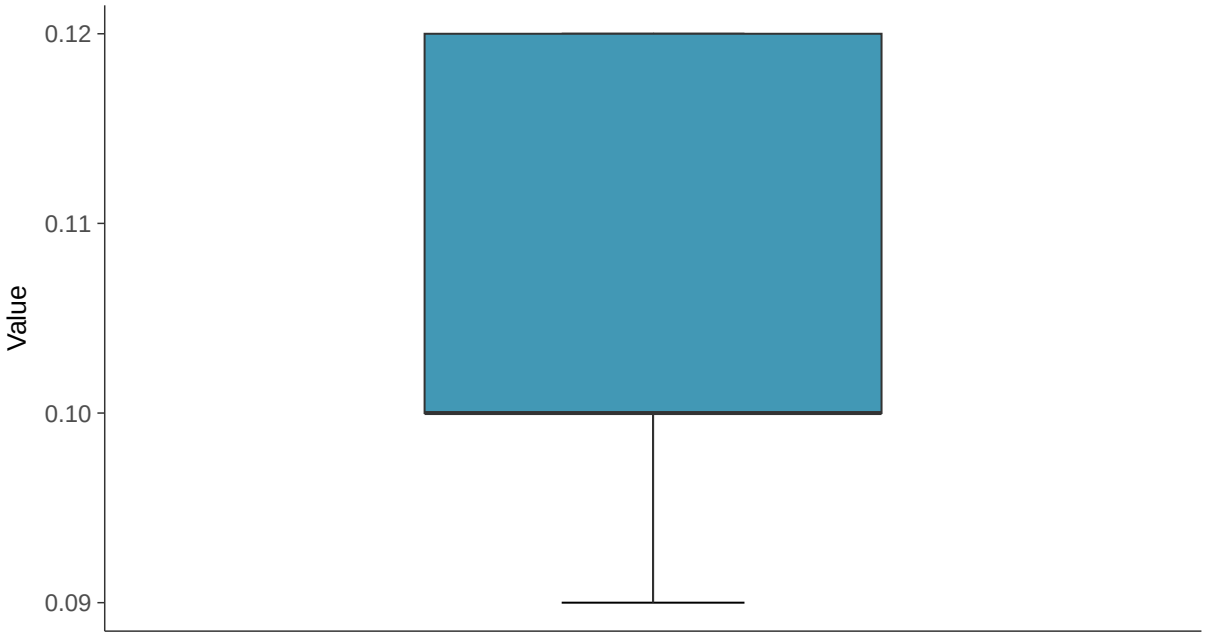
ID: 8_3_115





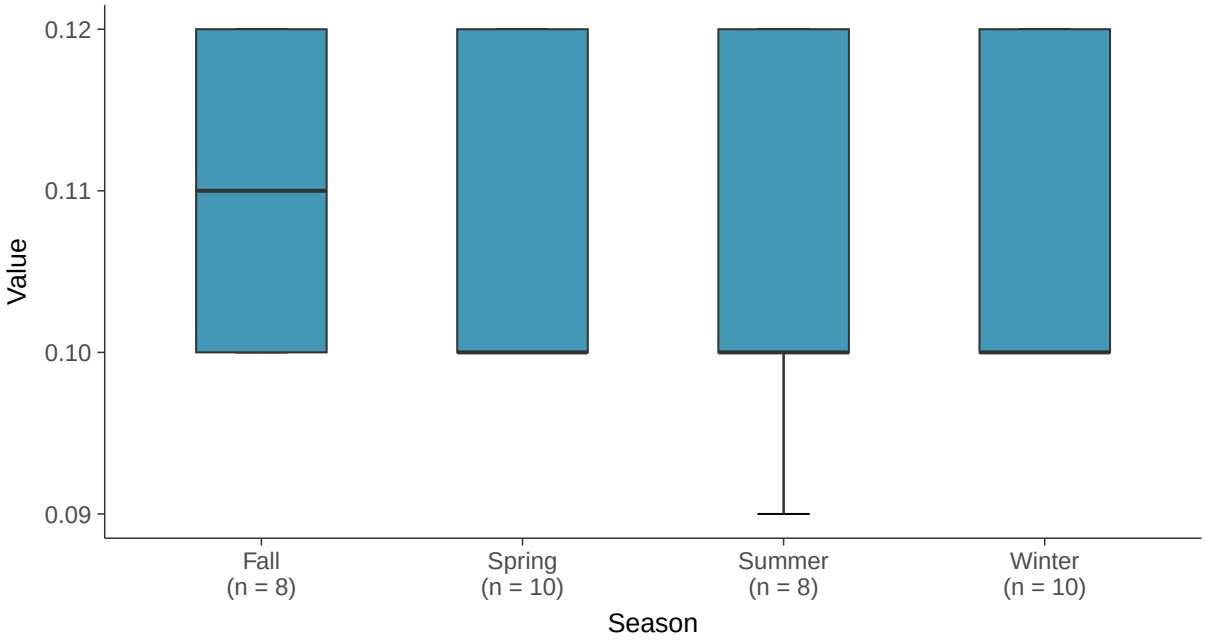
Boxplot

Mercury, MW-5 (ug/L)



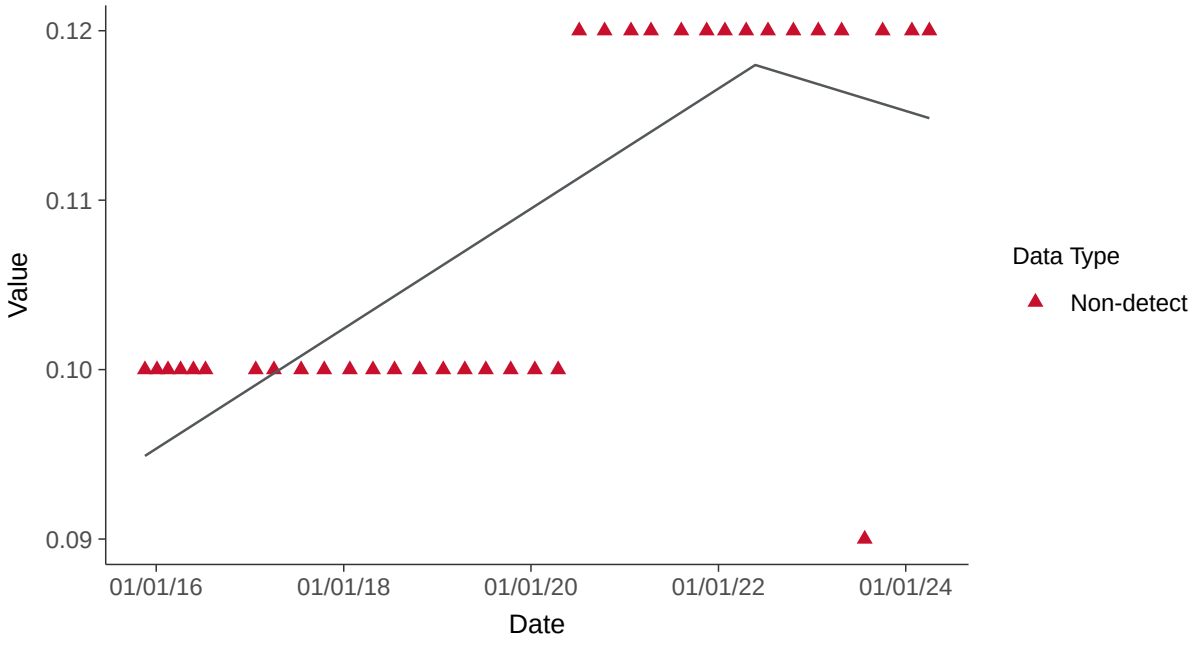
Boxplot by Season

Mercury, MW-5 (ug/L)



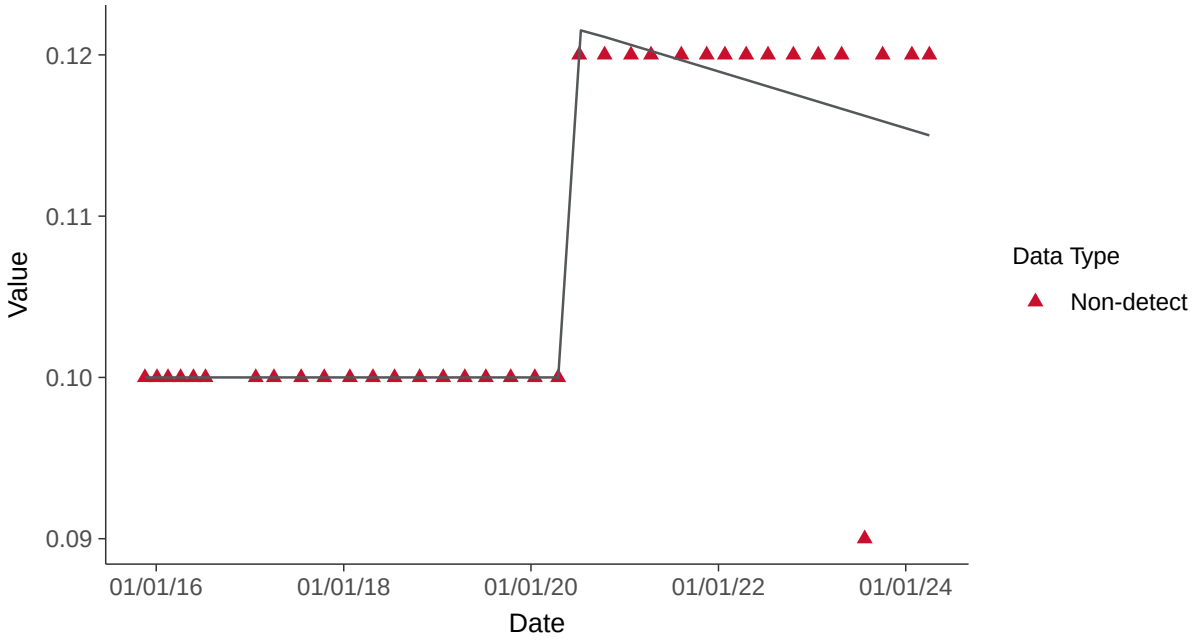
Trend Regression: Piecewise Linear-Linear

Mercury, MW-5 (ug/L)



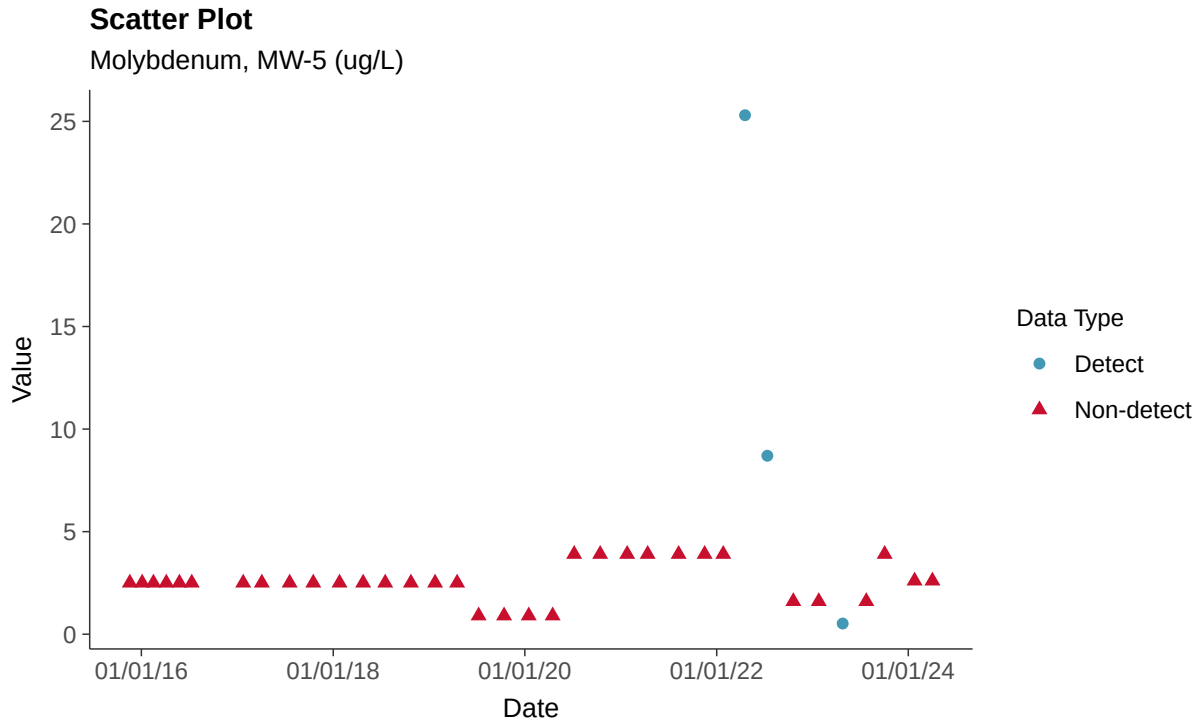
Trend Regression: Piecewise Linear-Linear-Linear

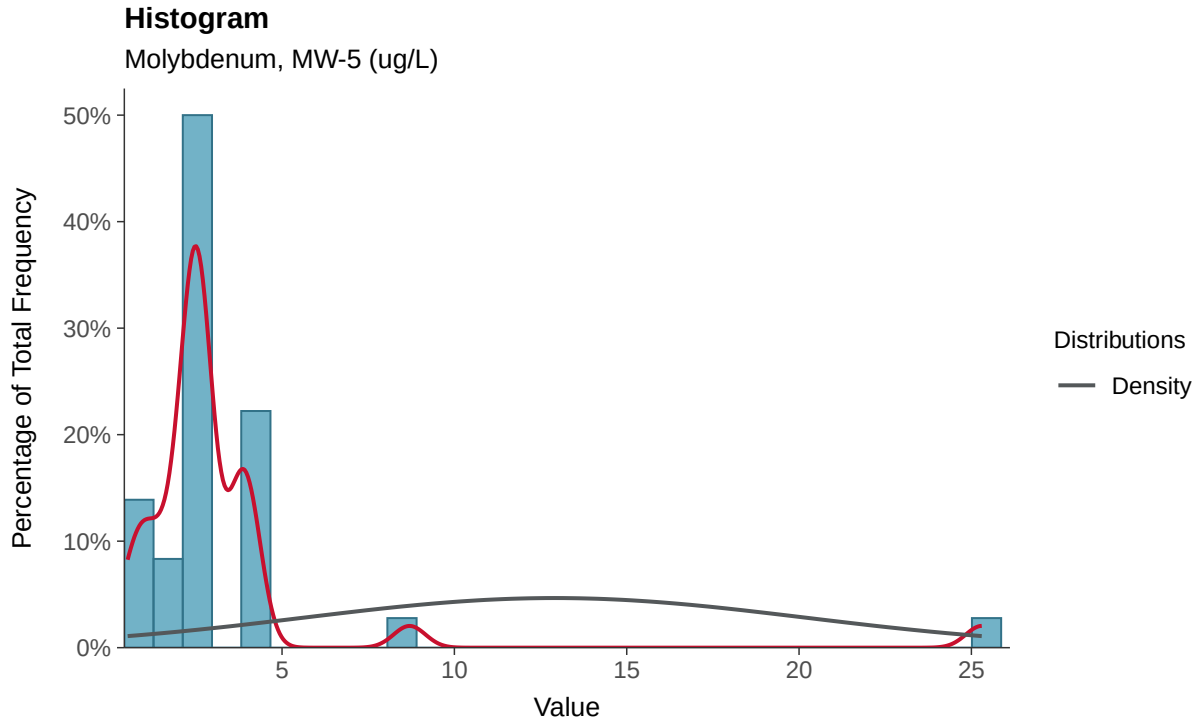
Mercury, MW-5 (ug/L)



App. IV: Molybdenum, MW-5

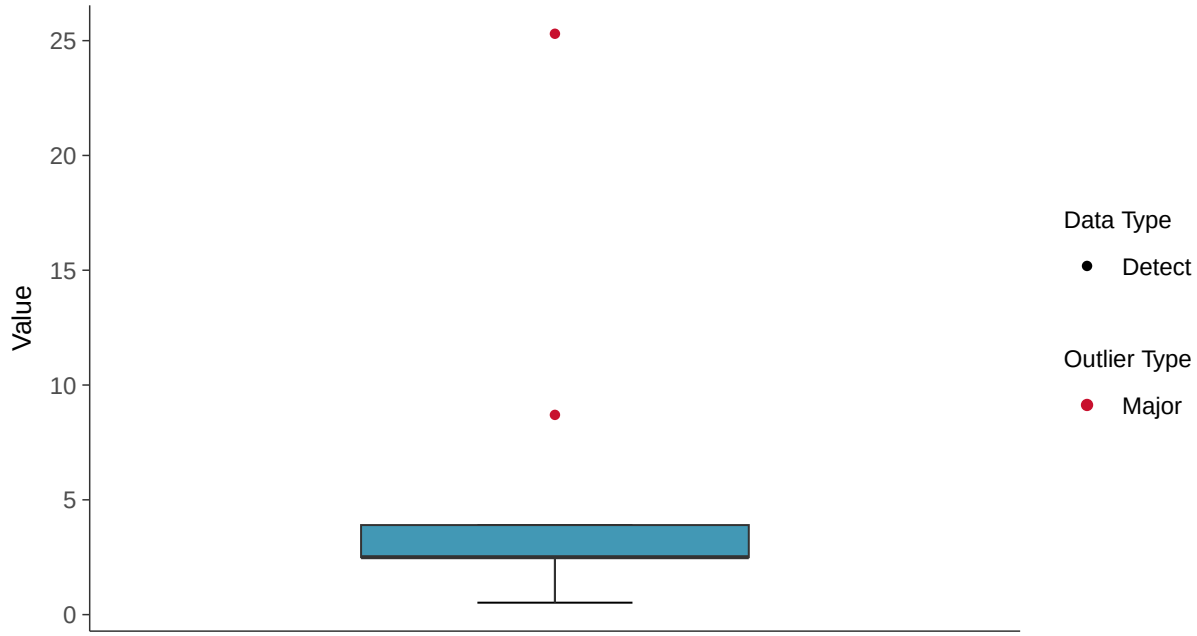
ID: 8_3_116





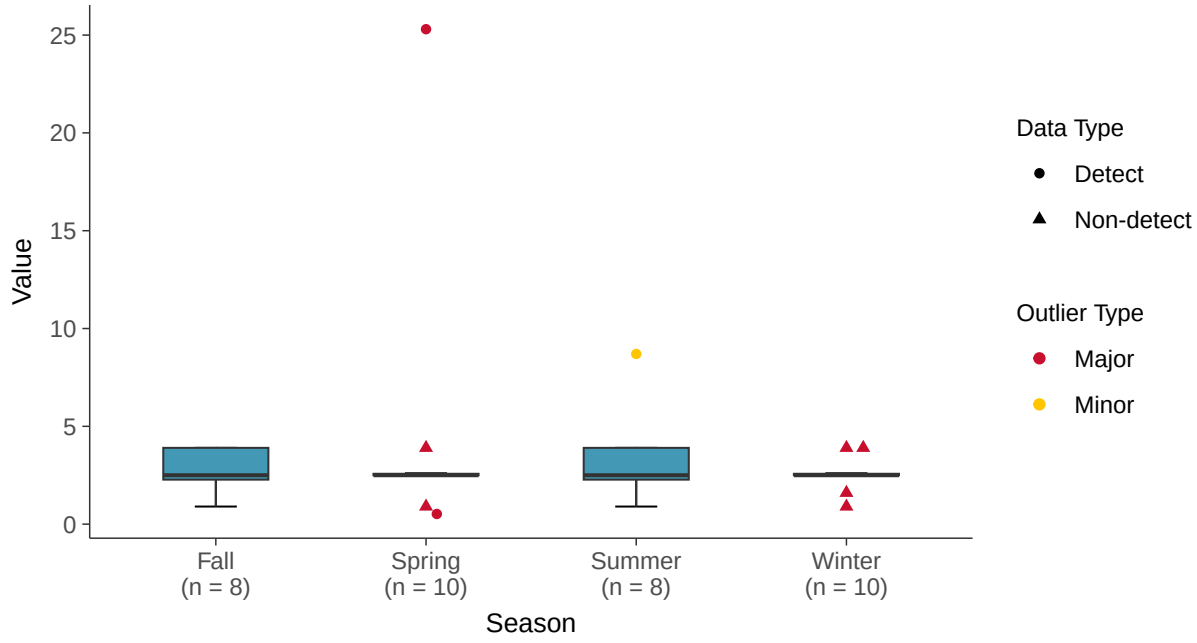
Boxplot

Molybdenum, MW-5 (ug/L)



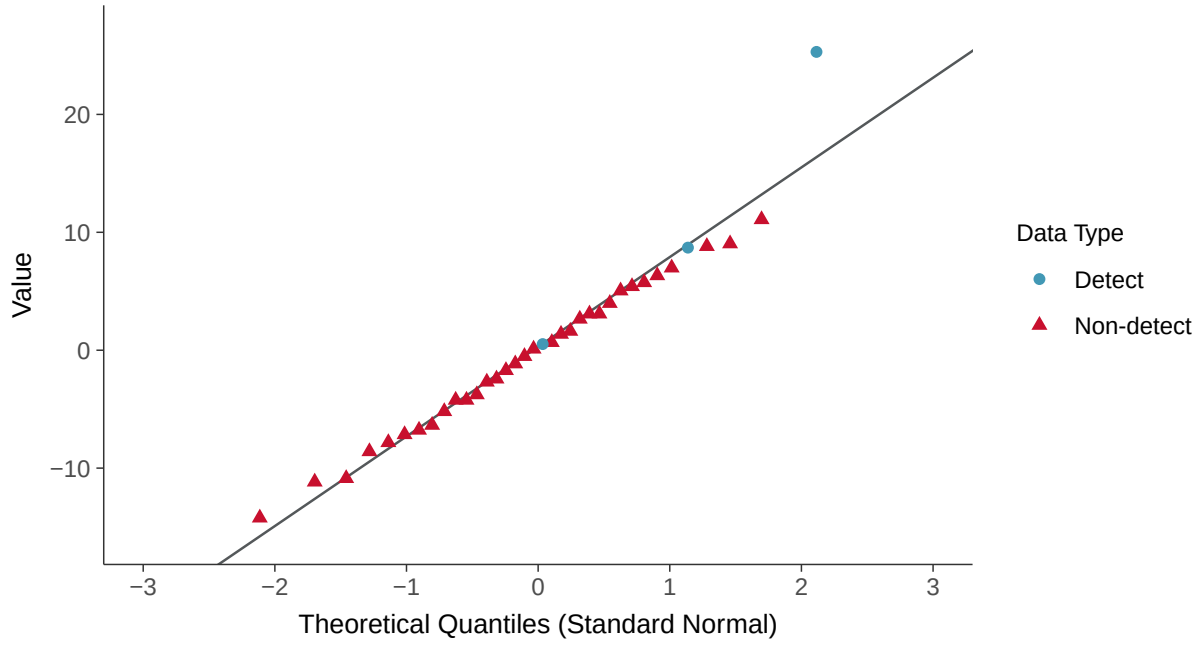
Boxplot by Season

Molybdenum, MW-5 (ug/L)



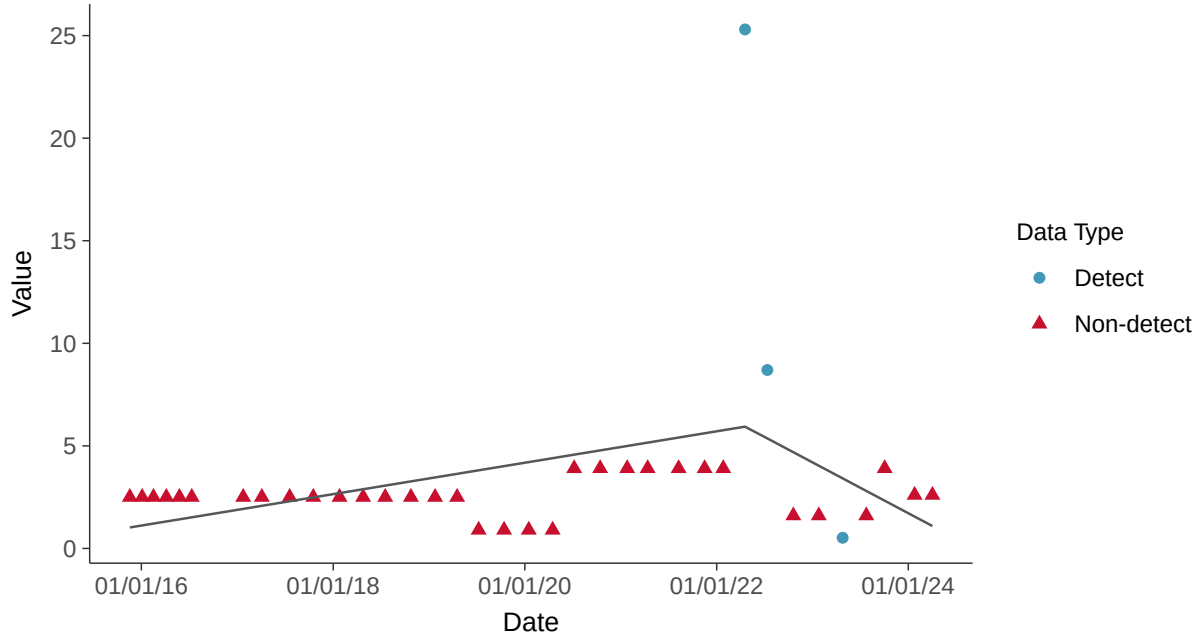
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-5 (ug/L)



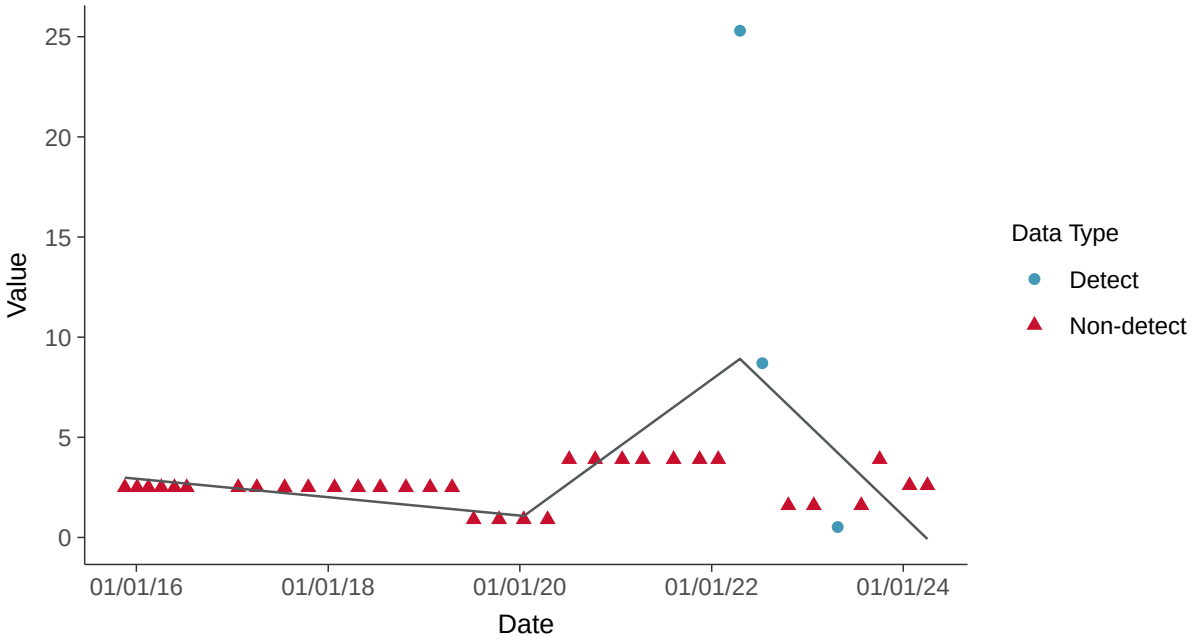
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-5 (ug/L)



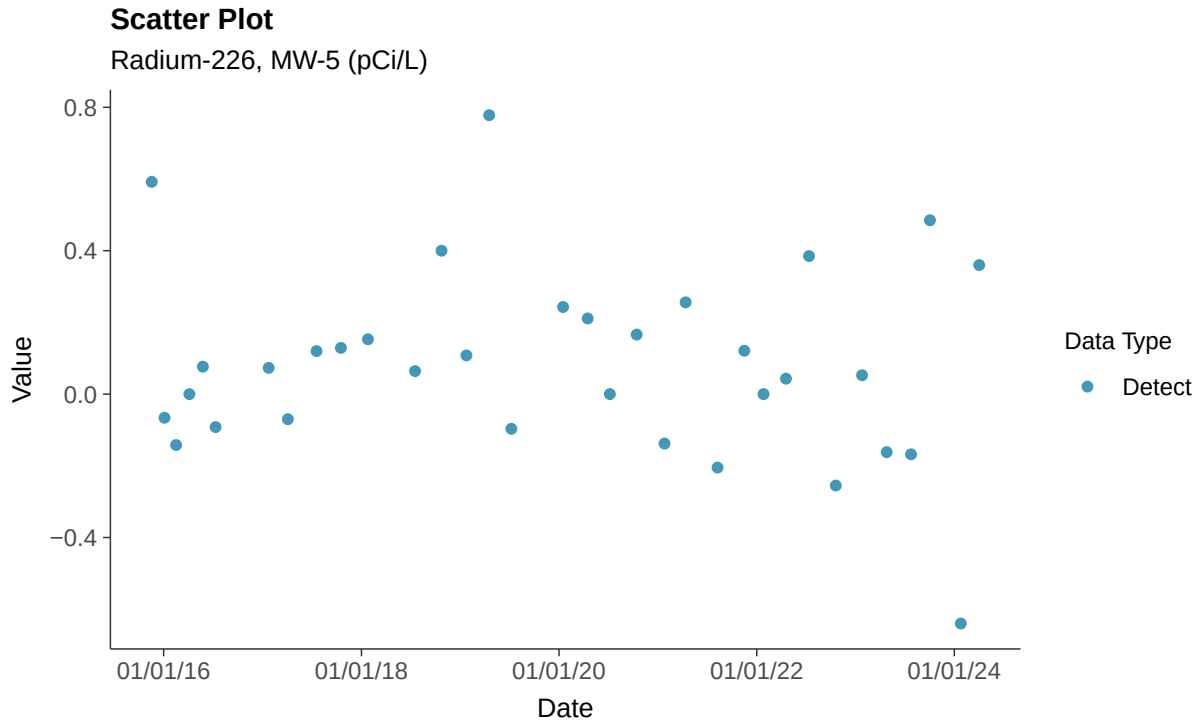
Trend Regression: Piecewise Linear-Linear-Linear

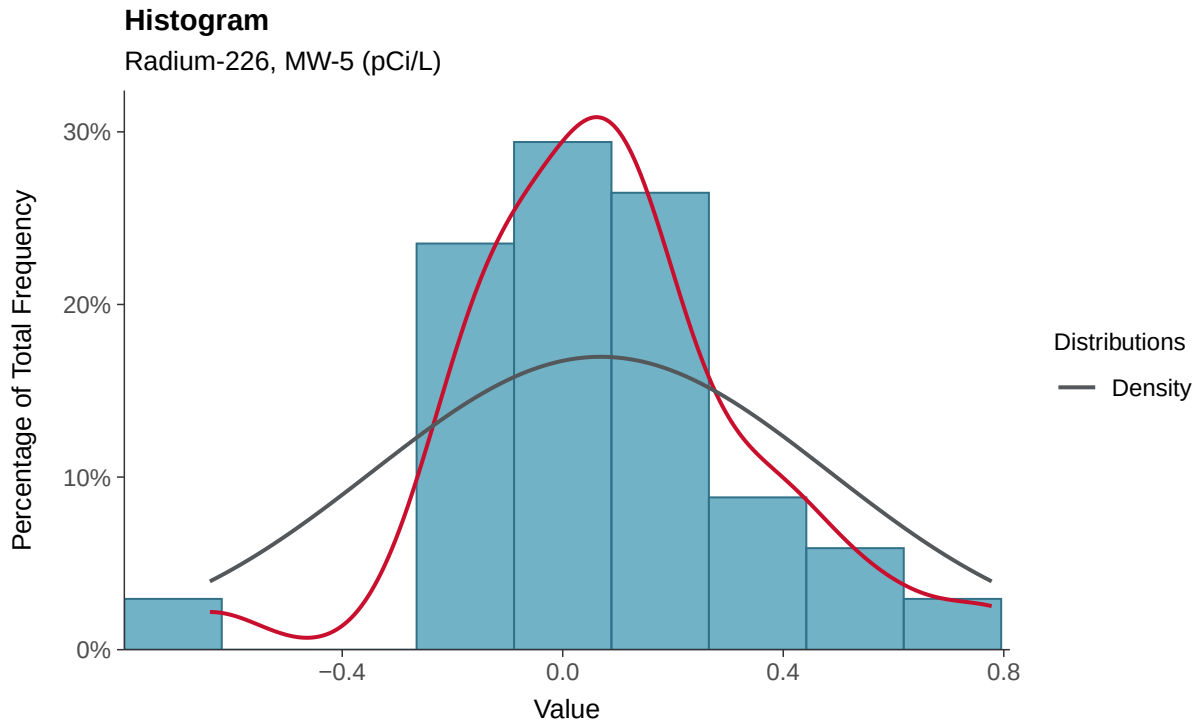
Molybdenum, MW-5 (ug/L)



App. IV: Radium-226, MW-5

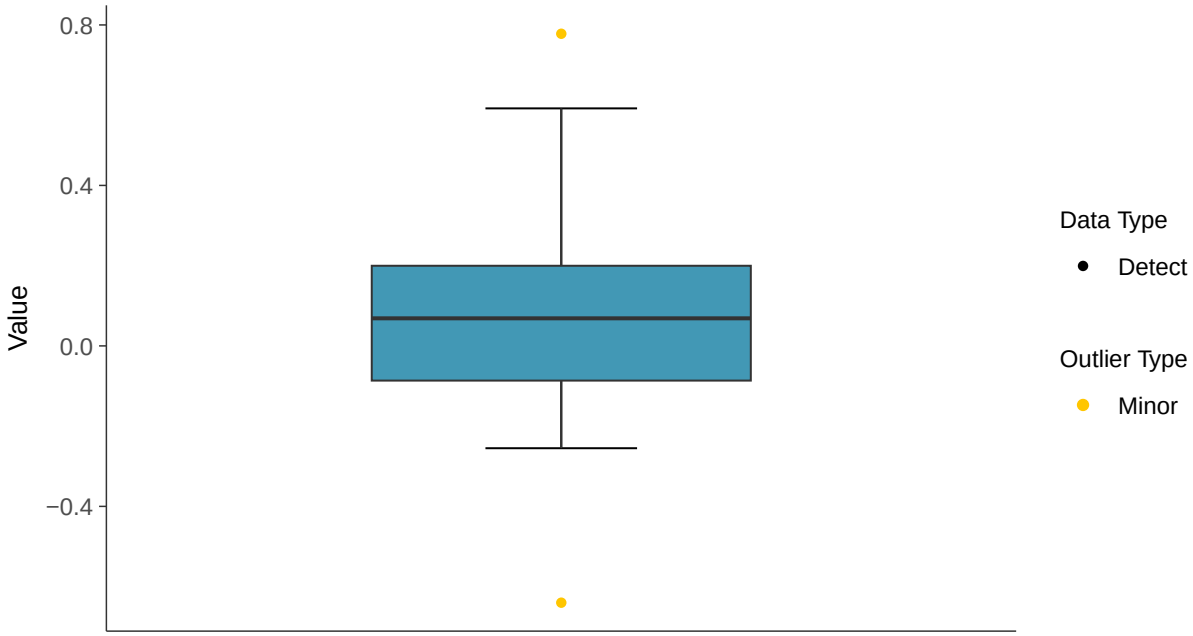
ID: 8_3_119





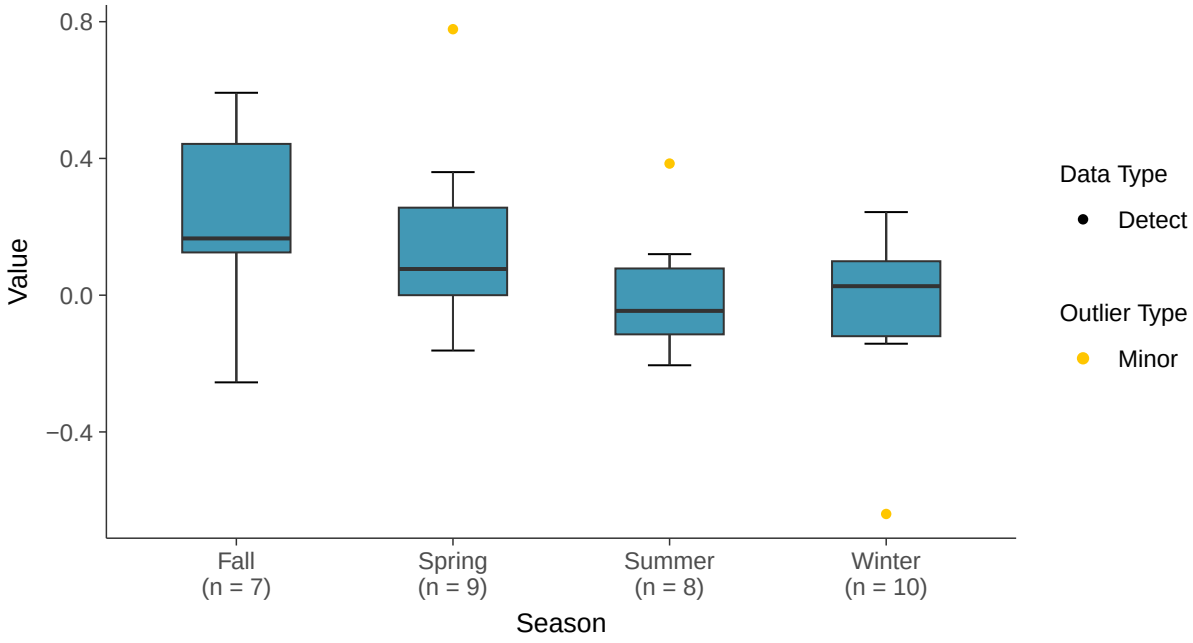
Boxplot

Radium-226, MW-5 (pCi/L)



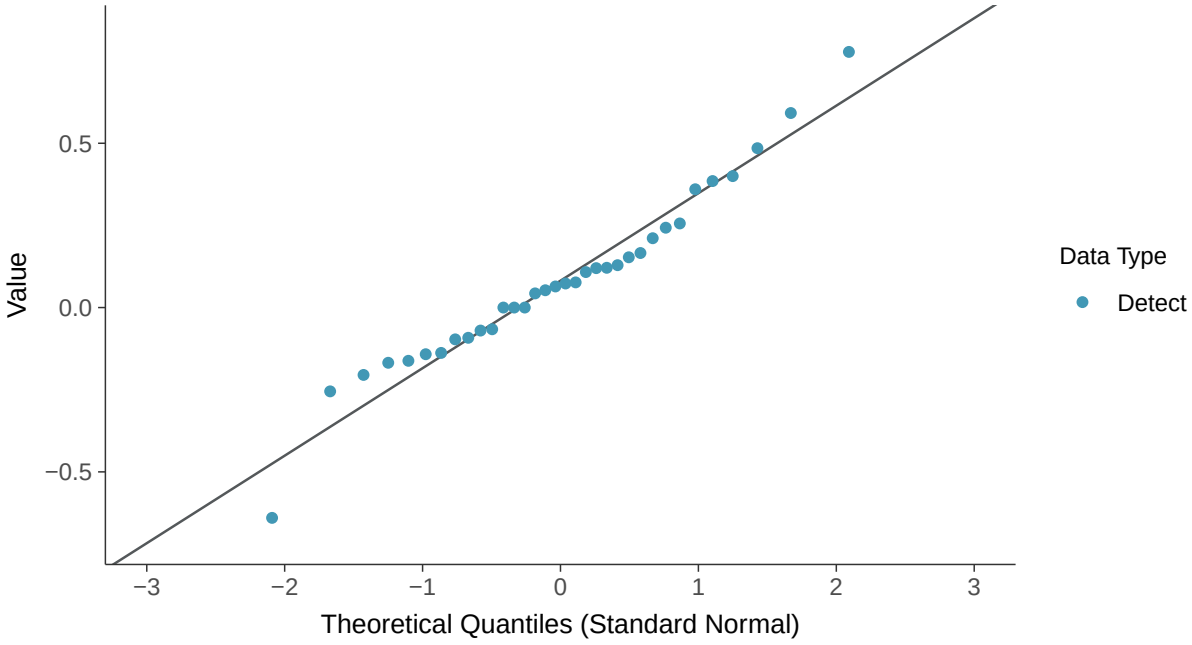
Boxplot by Season

Radium-226, MW-5 (pCi/L)



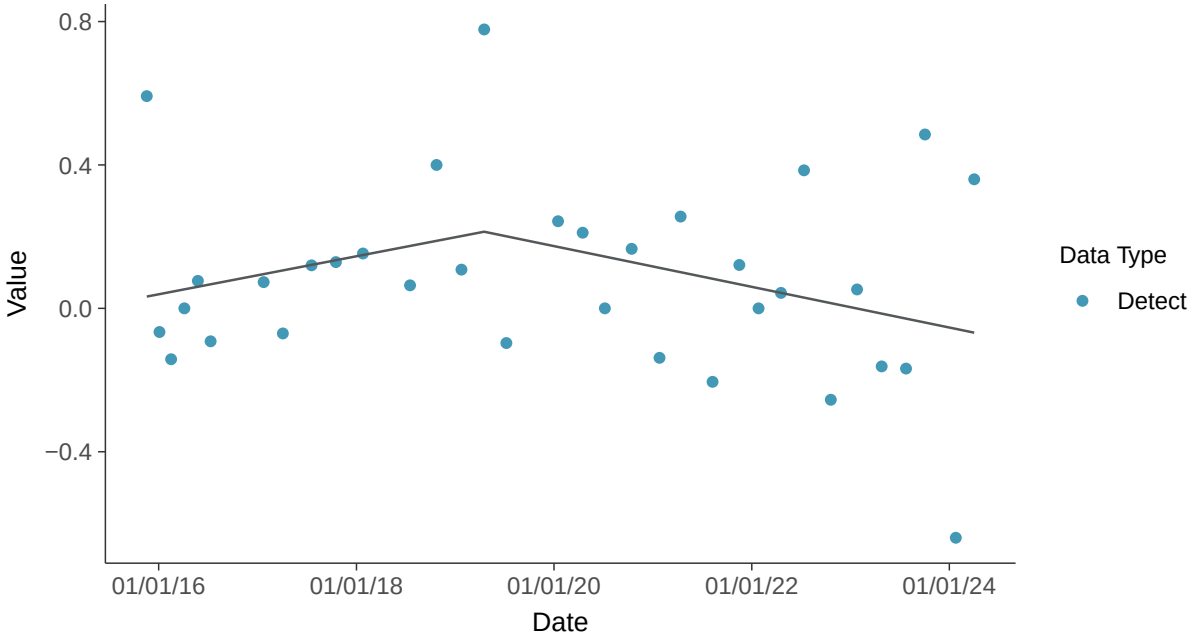
Normal Q-Q plot

Radium-226, MW-5 (pCi/L)



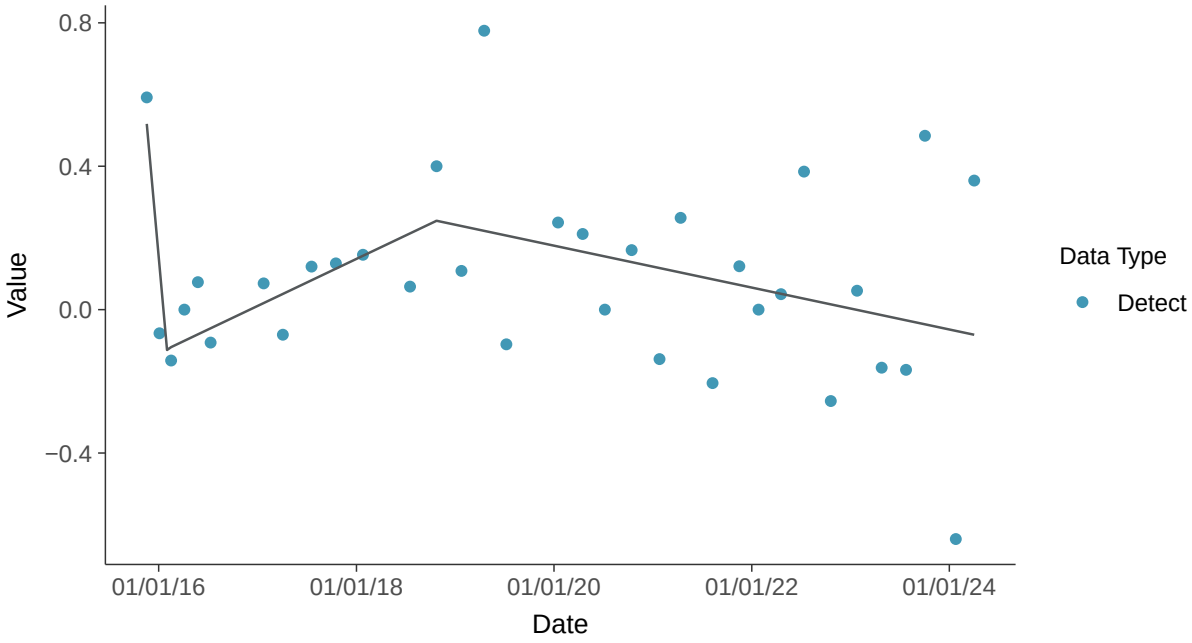
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-5 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-5 (pCi/L)

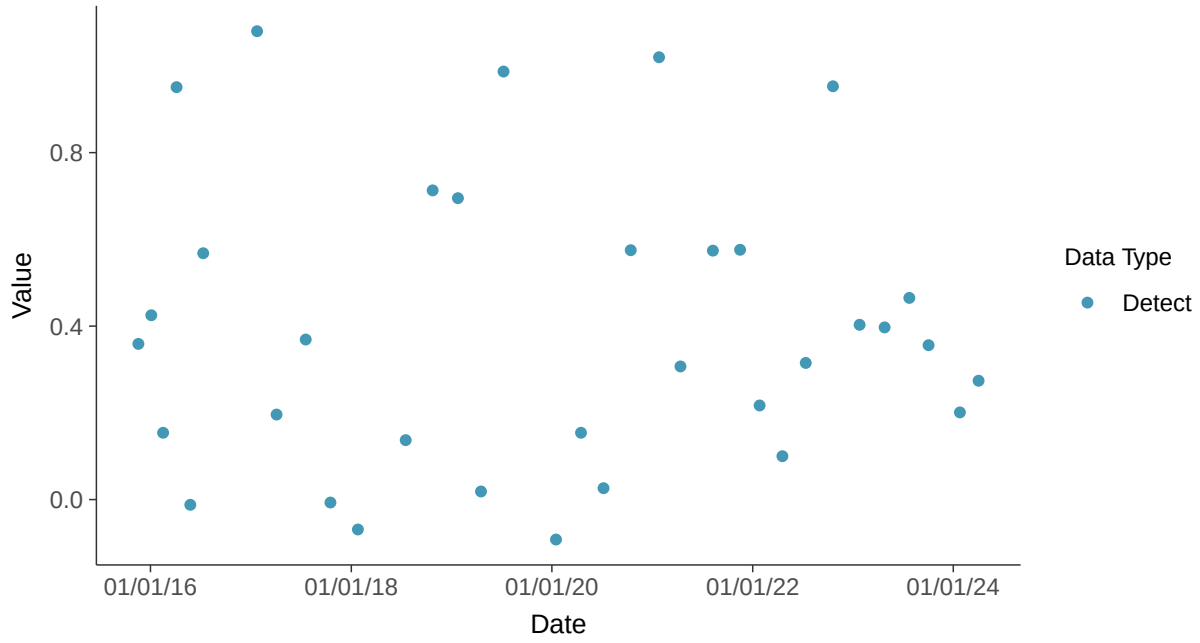


App. IV: Radium-228, MW-5

ID: 8_3_120

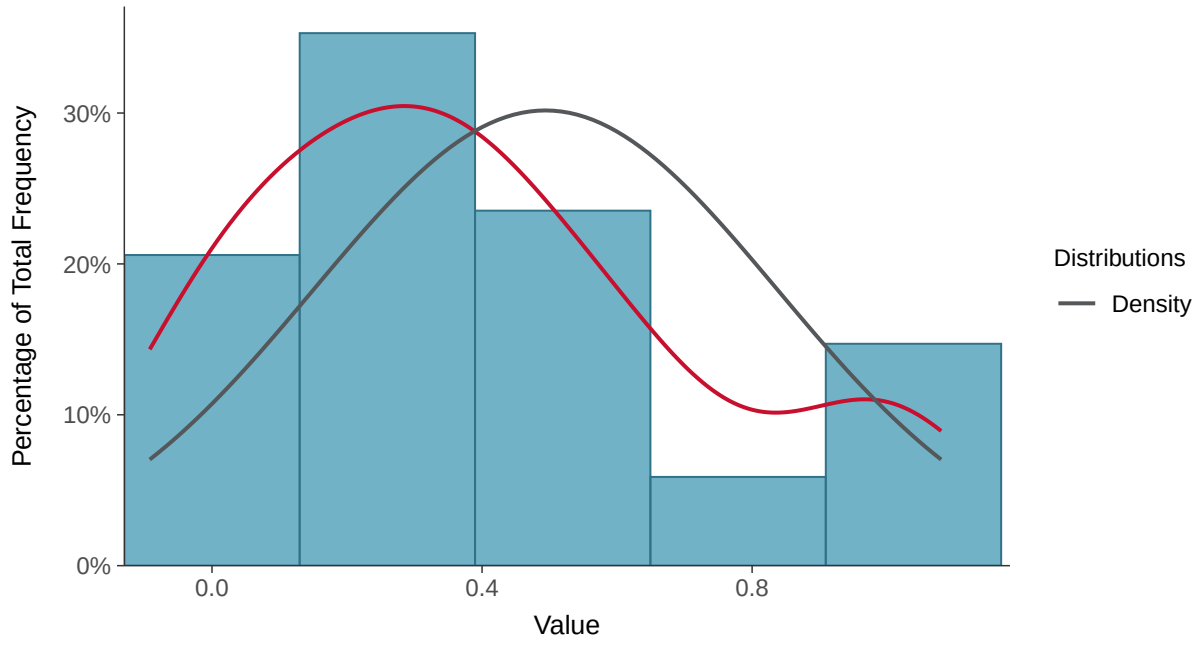
Scatter Plot

Radium-228, MW-5 (pCi/L)



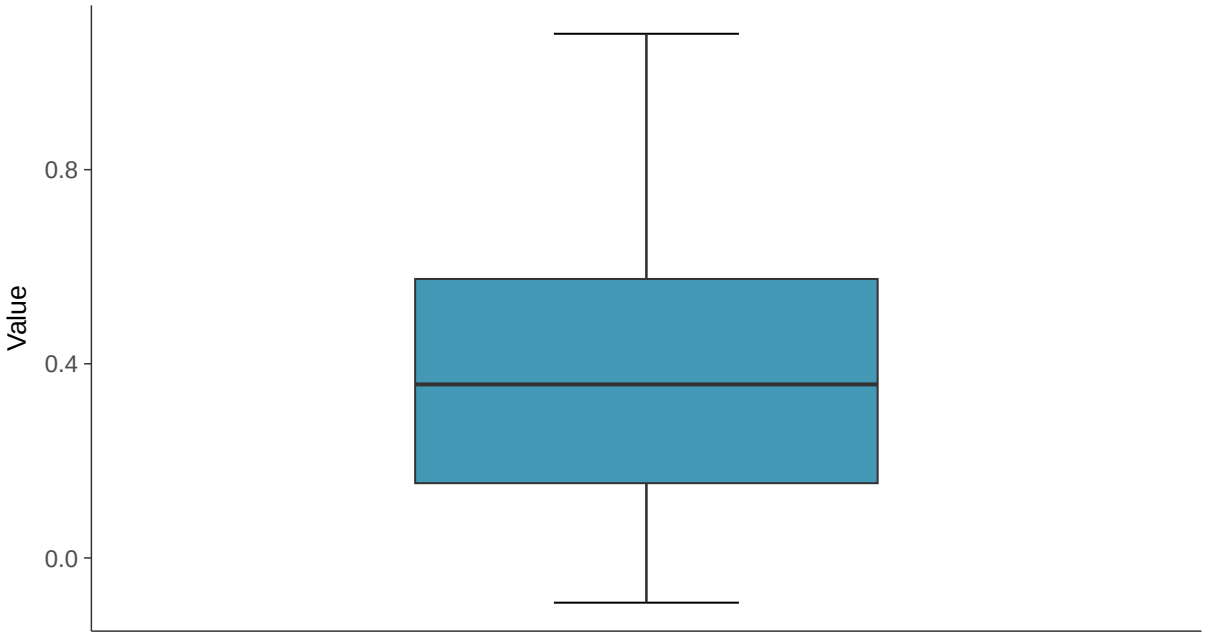
Histogram

Radium-228, MW-5 (pCi/L)



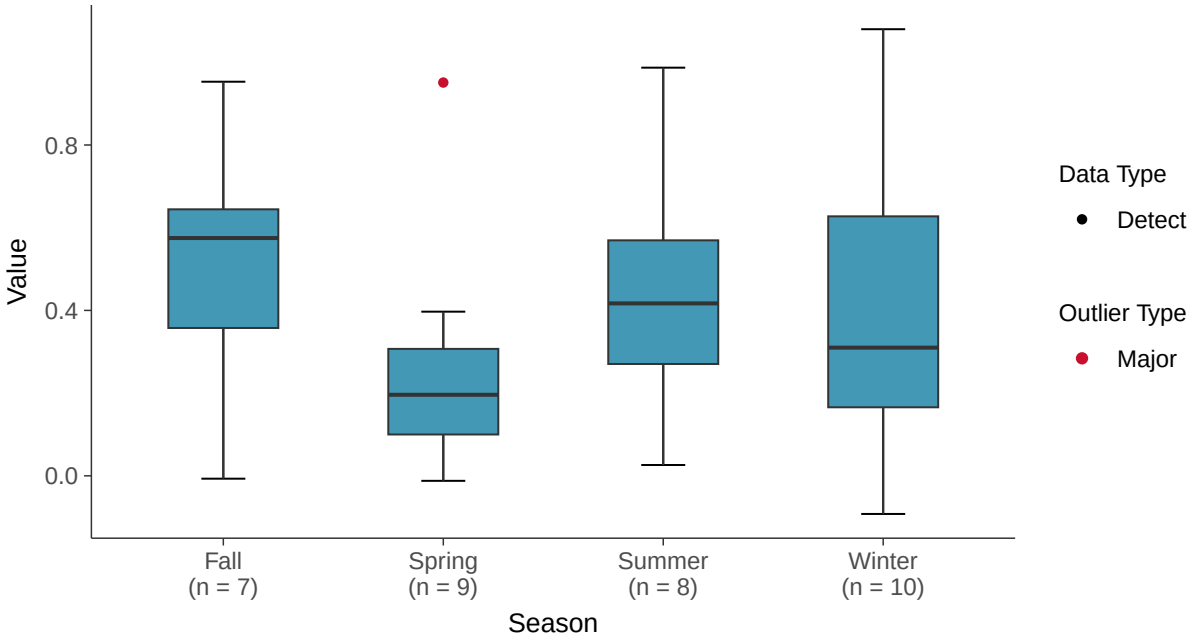
Boxplot

Radium-228, MW-5 (pCi/L)



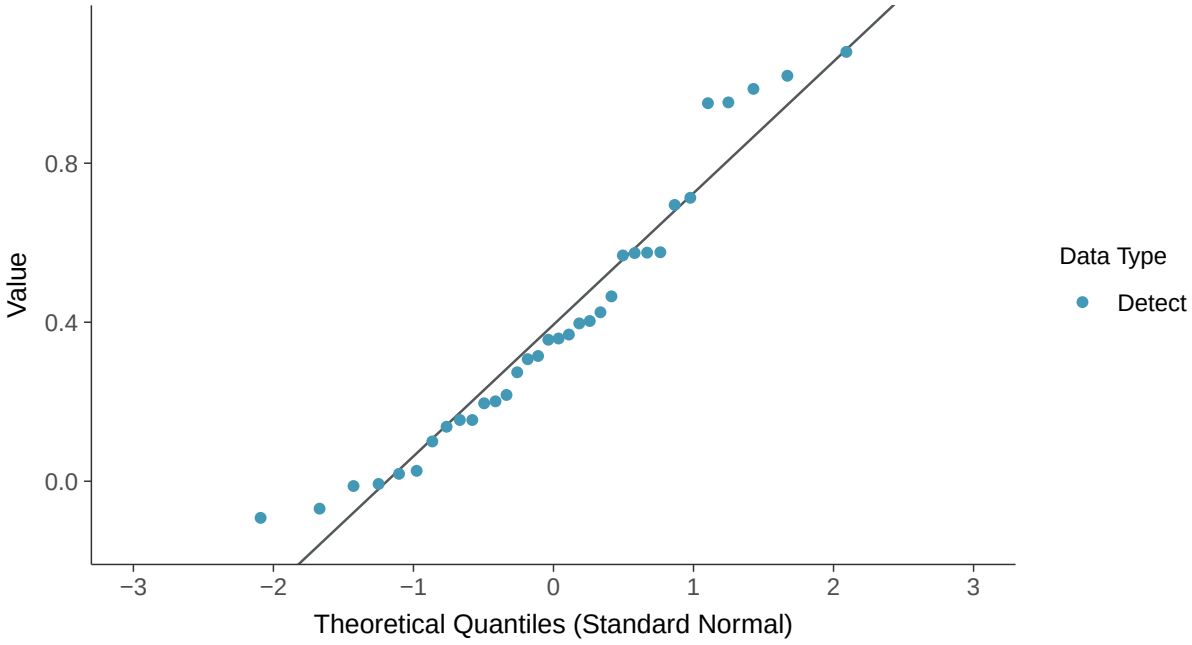
Boxplot by Season

Radium-228, MW-5 (pCi/L)



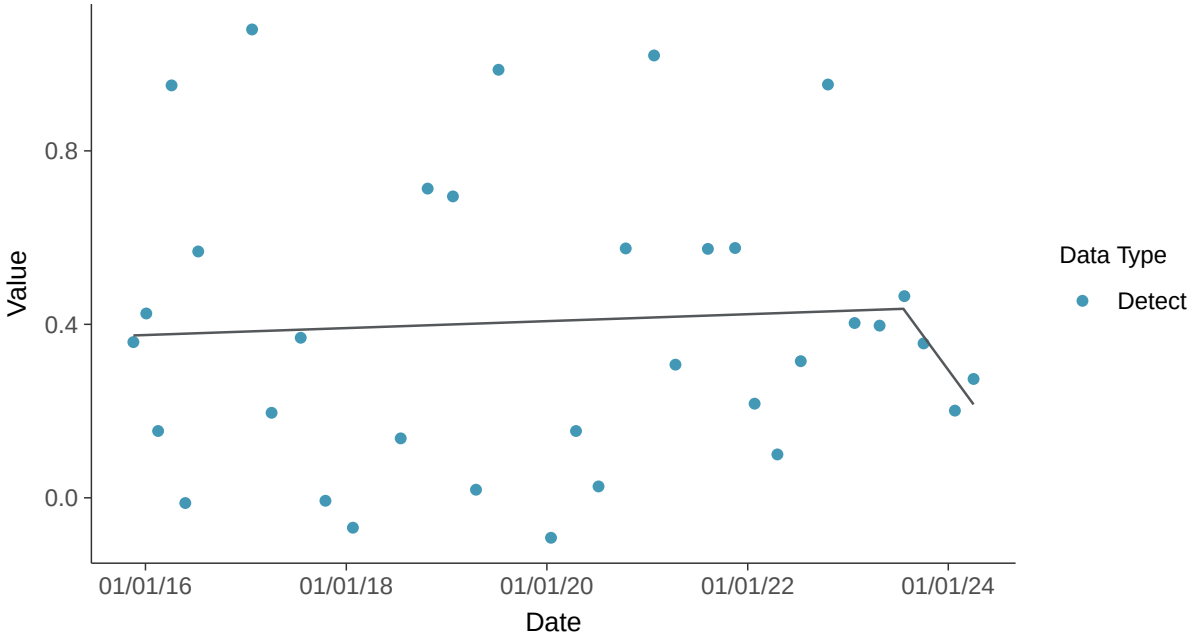
Normal Q-Q plot

Radium-228, MW-5 (pCi/L)



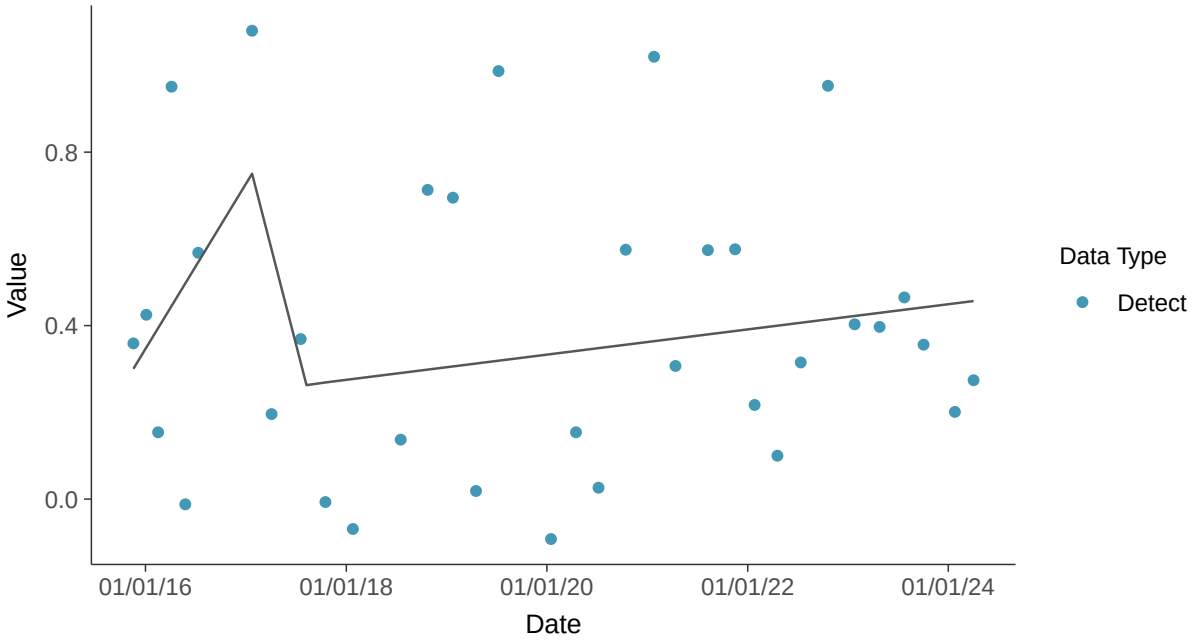
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-5 (pCi/L)



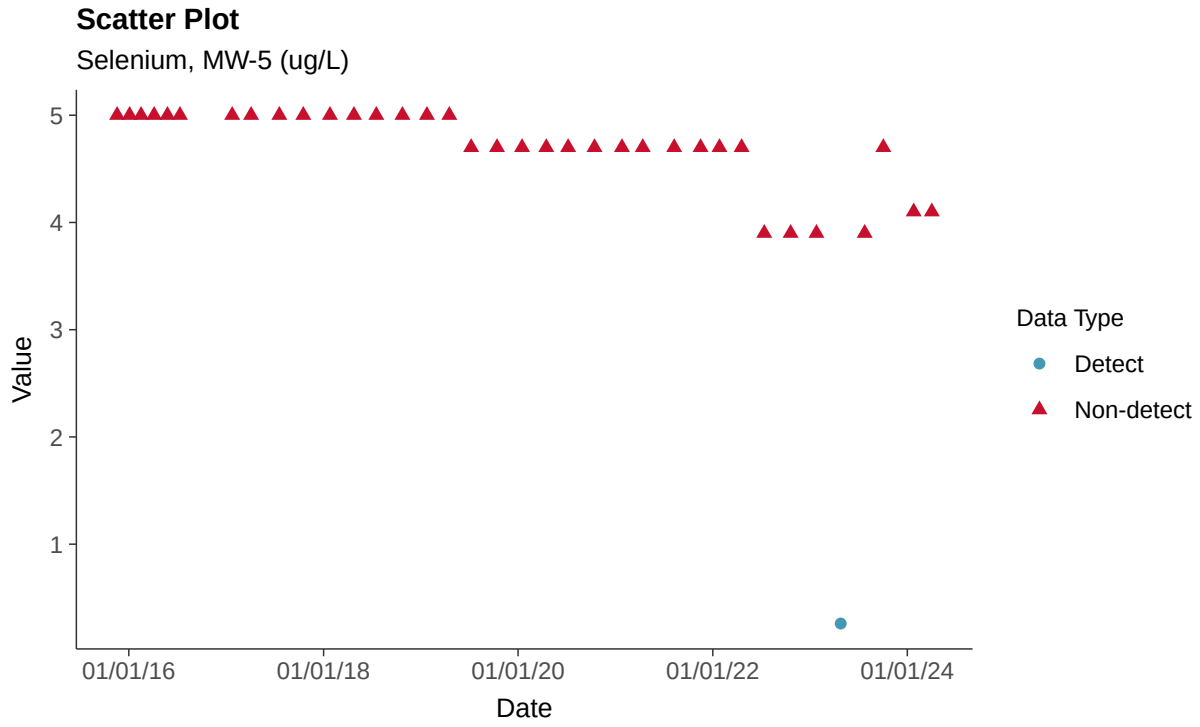
Trend Regression: Piecewise Linear-Linear-Linear

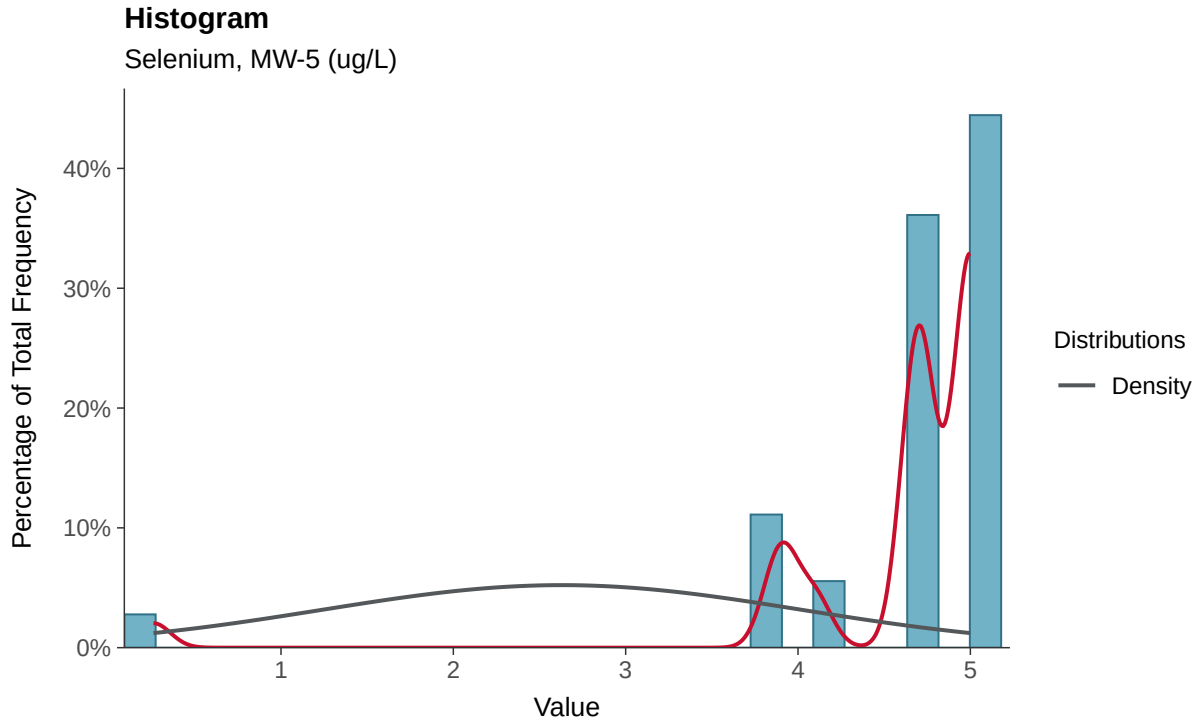
Radium-228, MW-5 (pCi/L)



App. IV: Selenium, MW-5

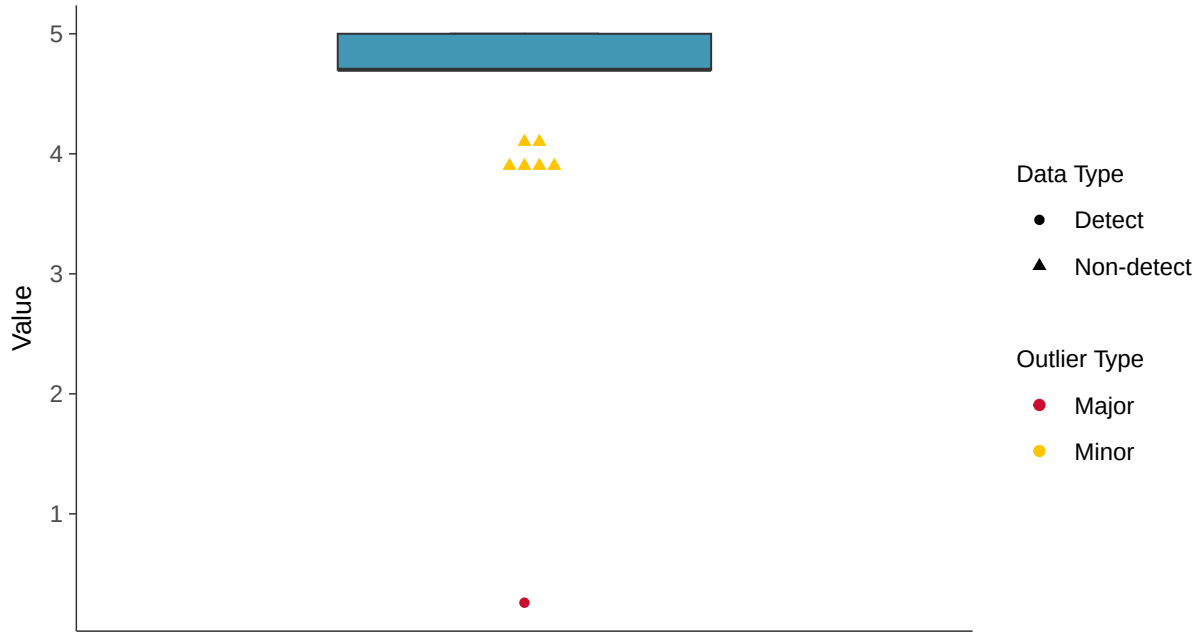
ID: 8_3_121





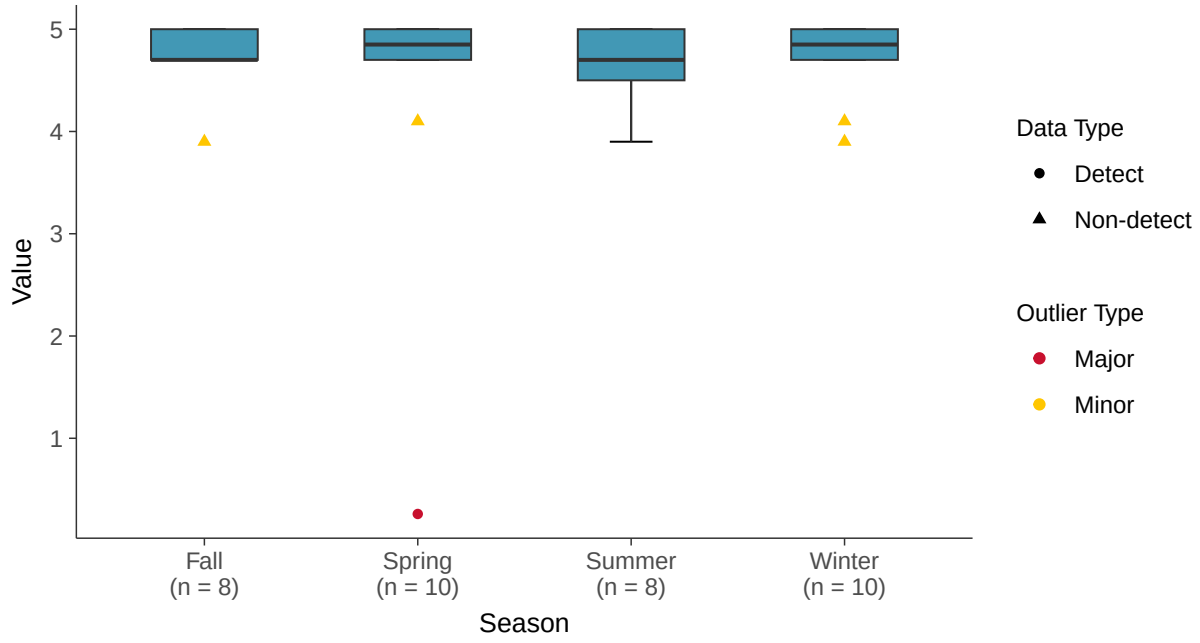
Boxplot

Selenium, MW-5 (ug/L)



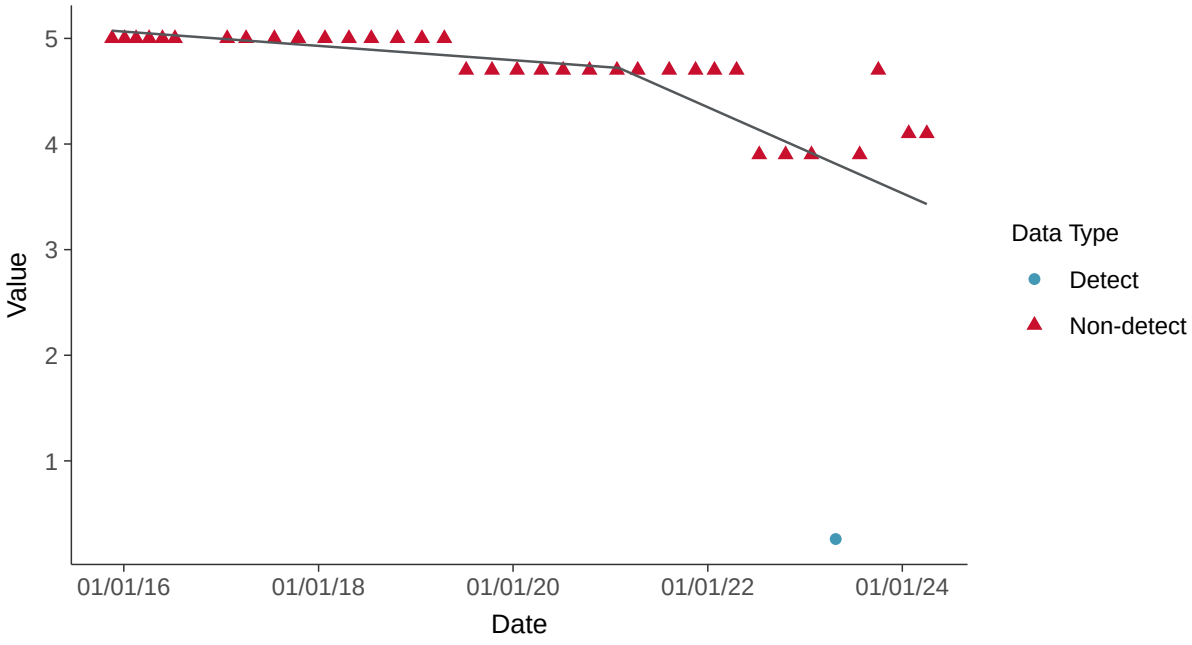
Boxplot by Season

Selenium, MW-5 (ug/L)



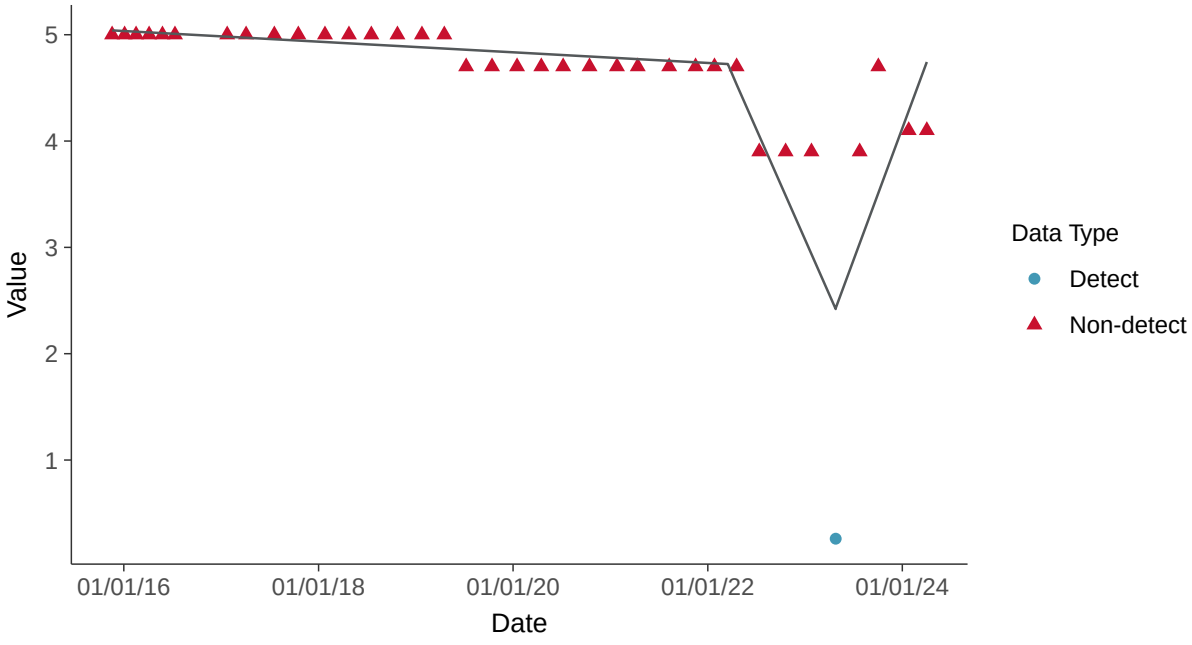
Trend Regression: Piecewise Linear-Linear

Selenium, MW-5 (ug/L)



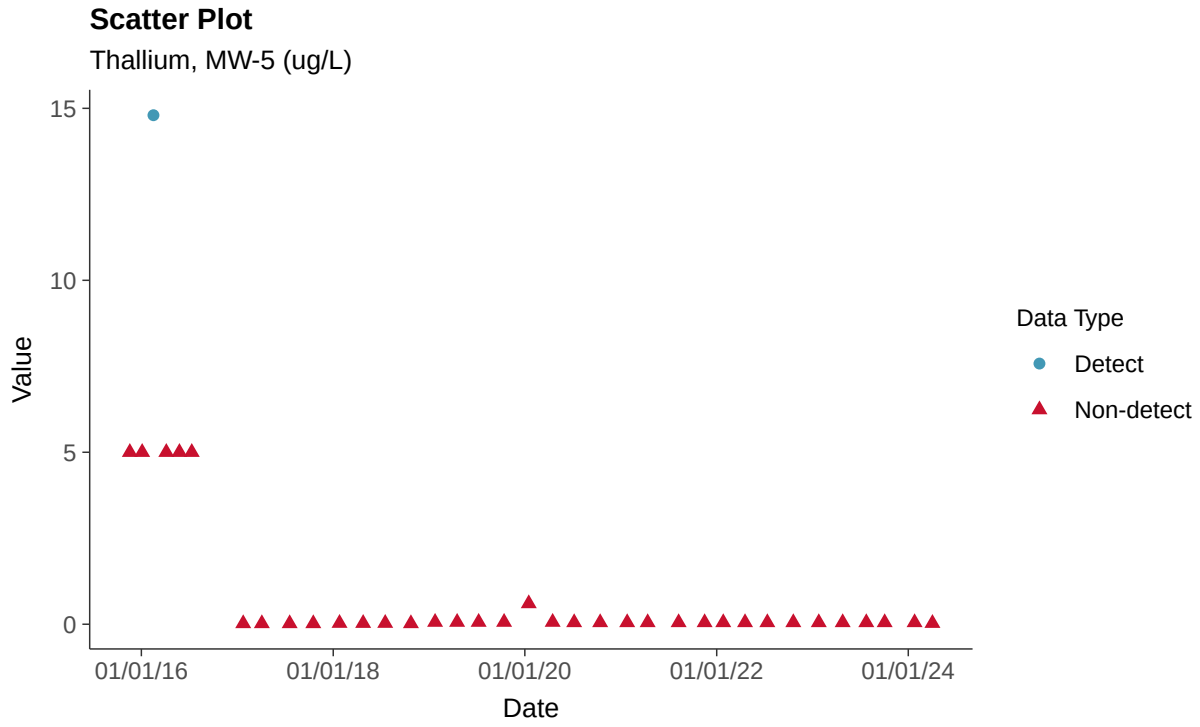
Trend Regression: Piecewise Linear-Linear-Linear

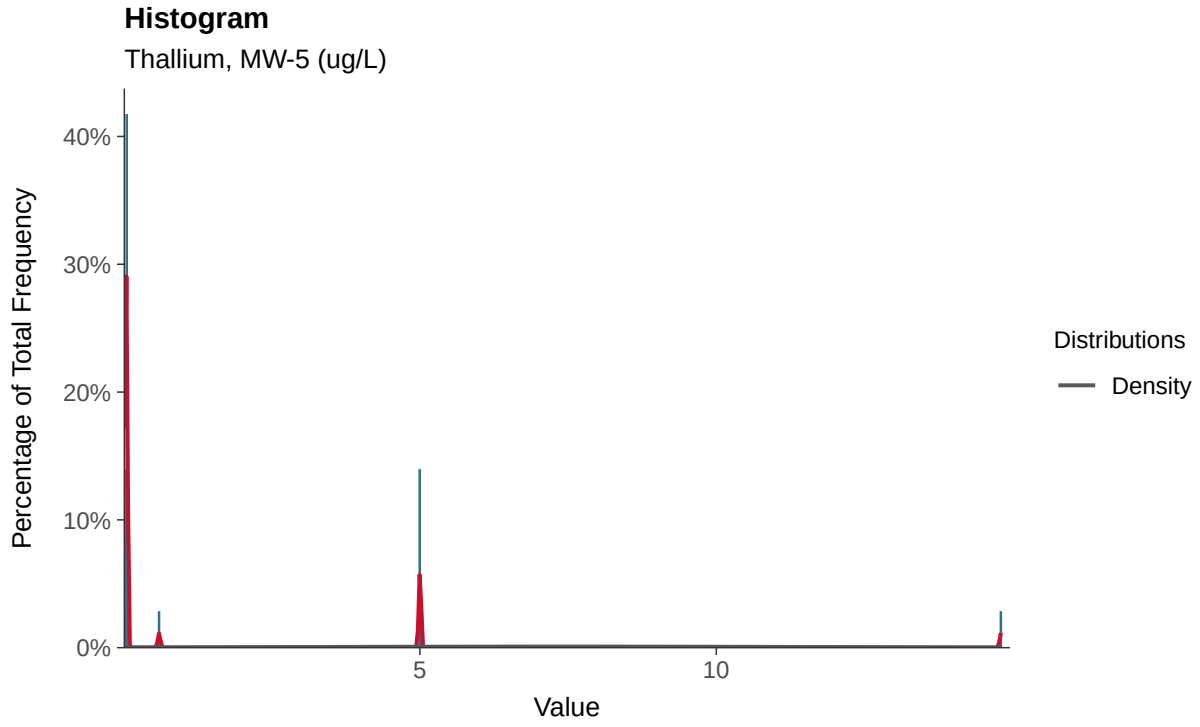
Selenium, MW-5 (ug/L)



App. IV: Thallium, MW-5

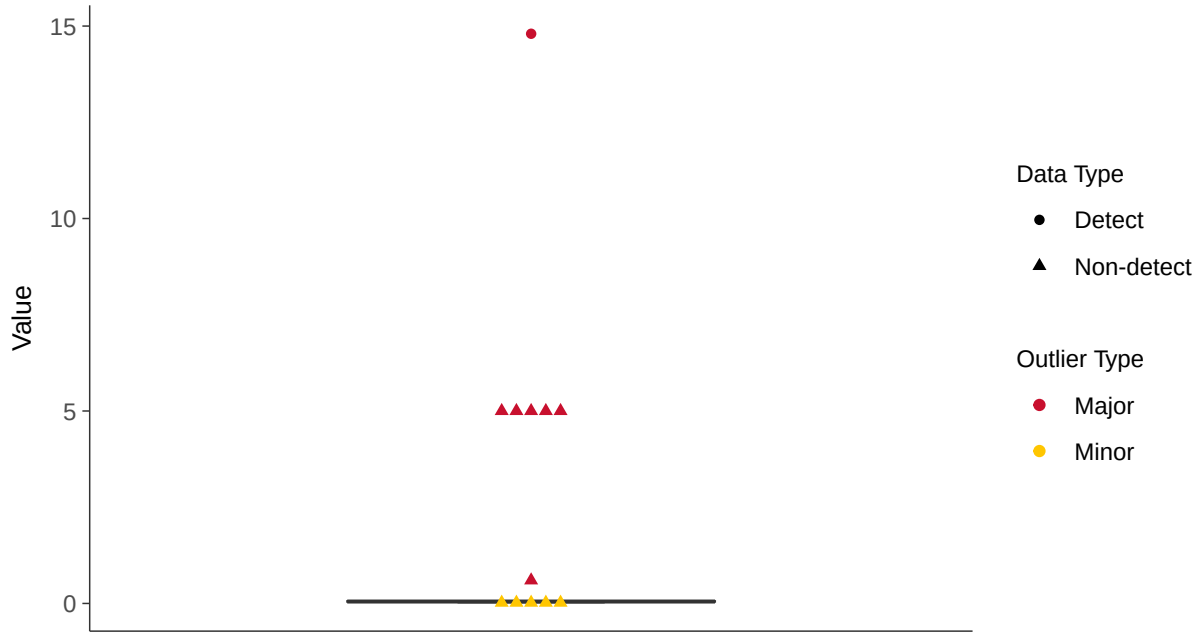
ID: 8_3_124





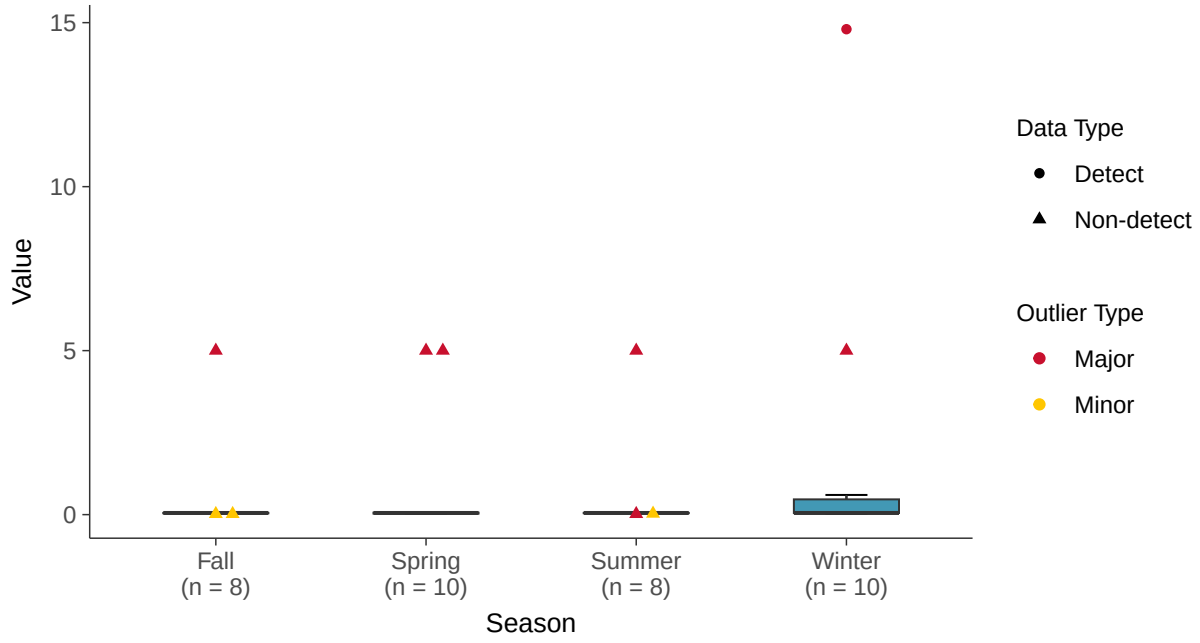
Boxplot

Thallium, MW-5 (ug/L)



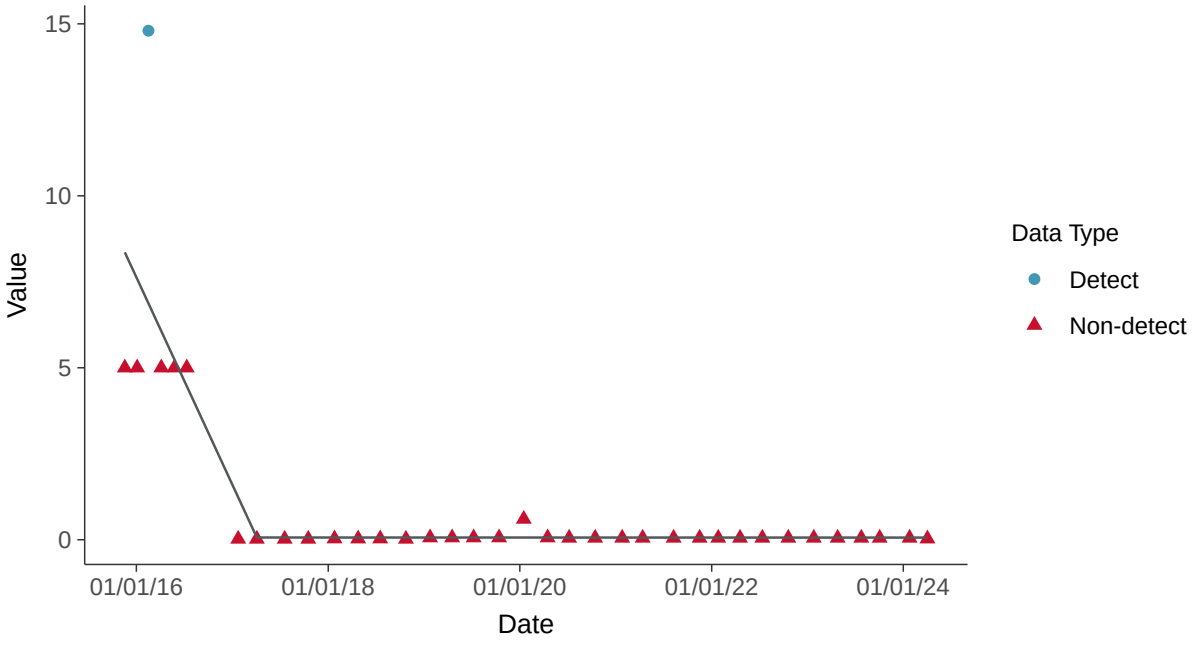
Boxplot by Season

Thallium, MW-5 (ug/L)



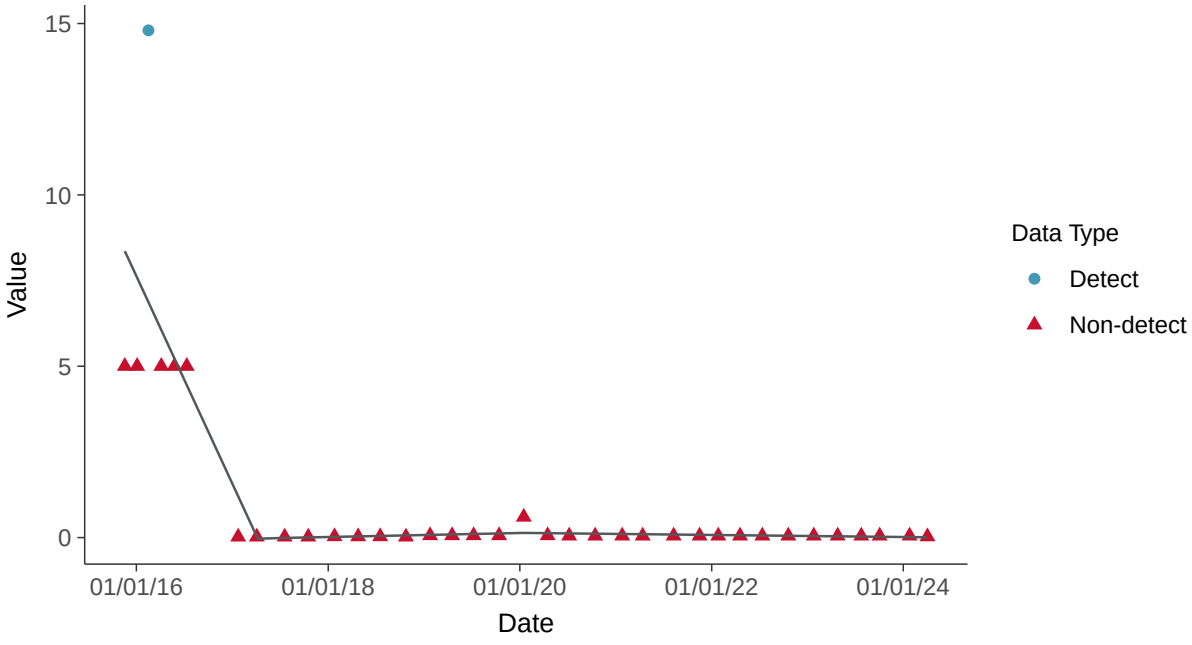
Trend Regression: Piecewise Linear-Linear

Thallium, MW-5 (ug/L)



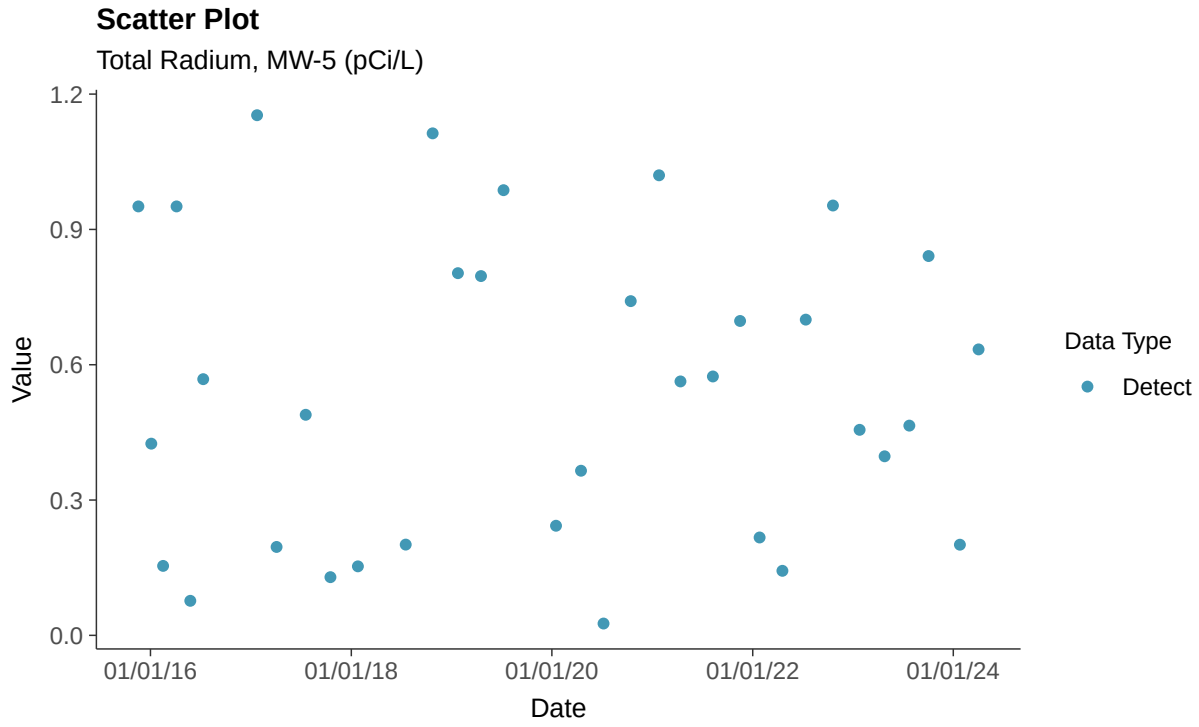
Trend Regression: Piecewise Linear-Linear-Linear

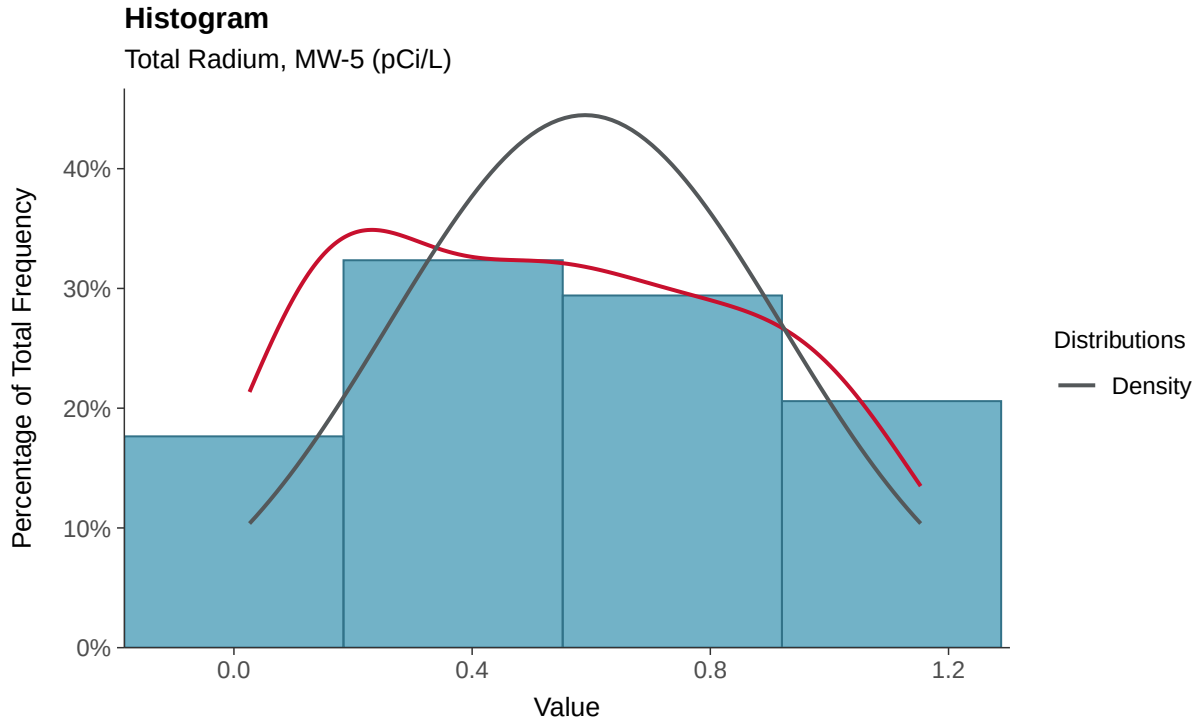
Thallium, MW-5 (ug/L)



App. IV: Total Radium, MW-5

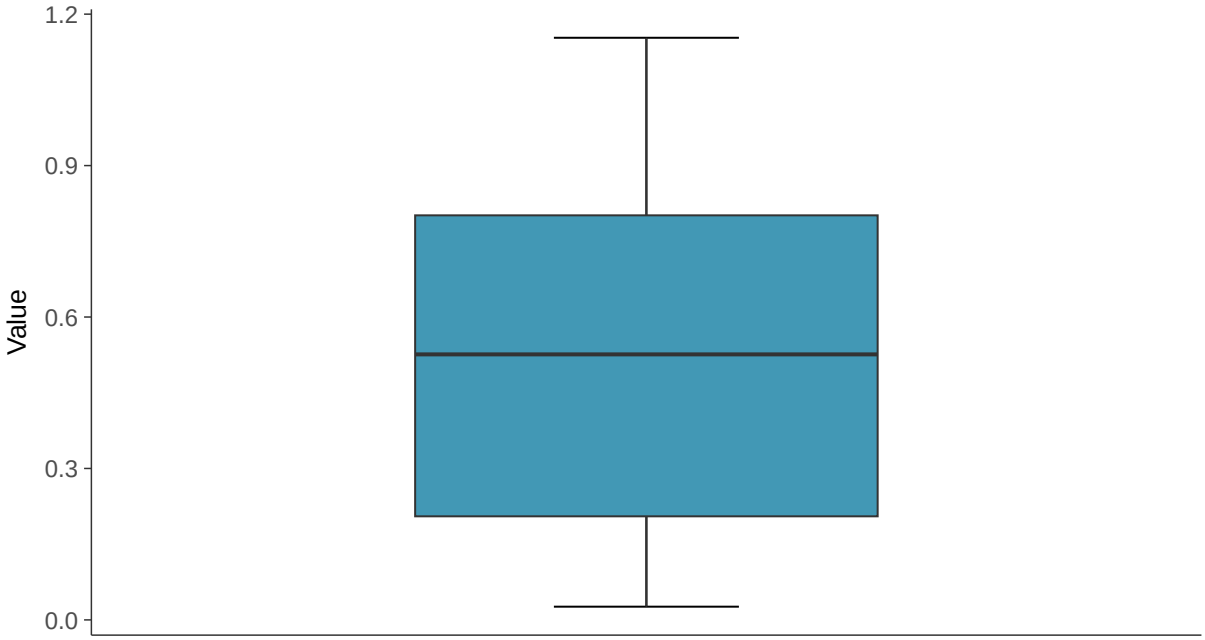
ID: 8_3_126





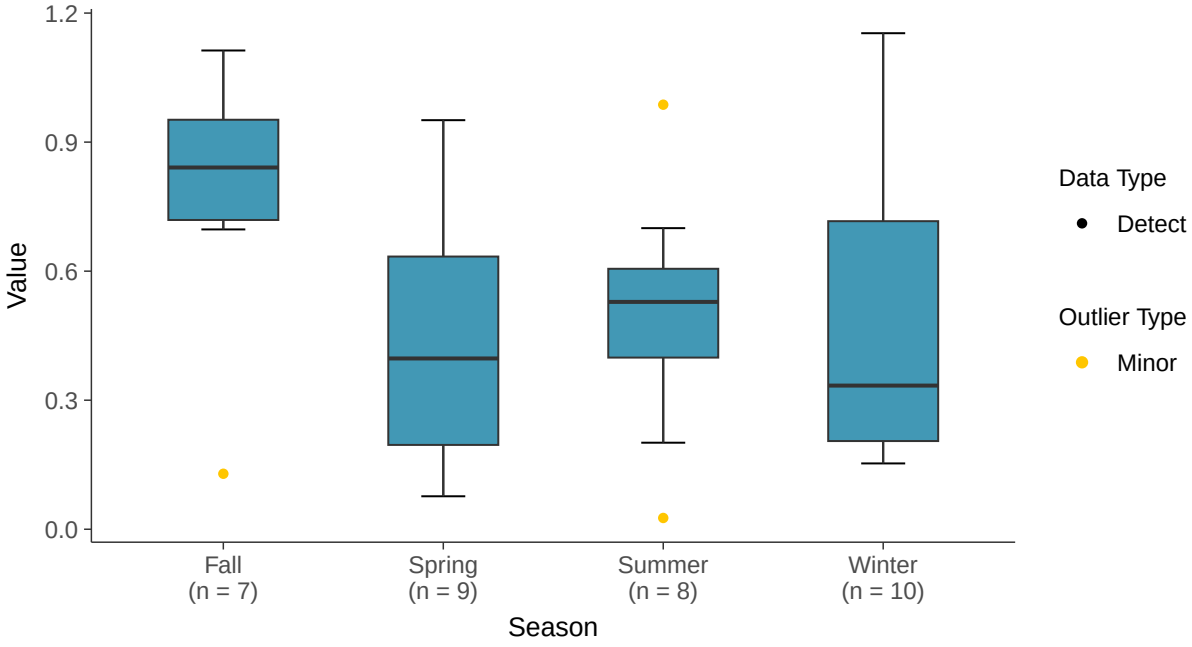
Boxplot

Total Radium, MW-5 (pCi/L)



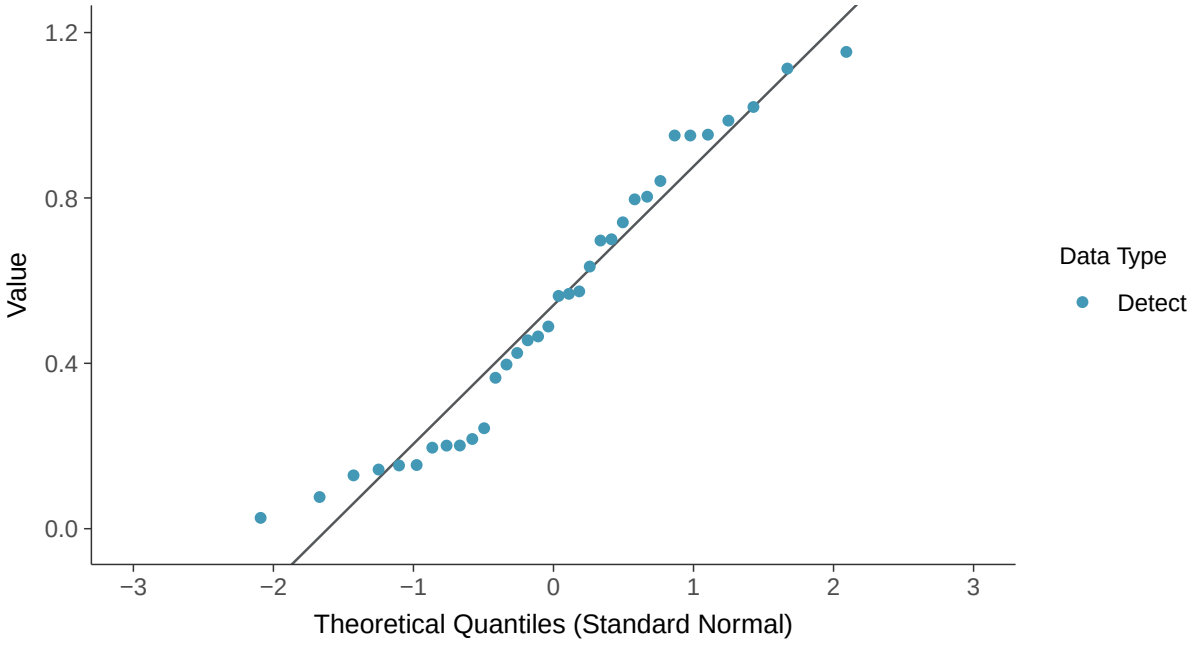
Boxplot by Season

Total Radium, MW-5 (pCi/L)



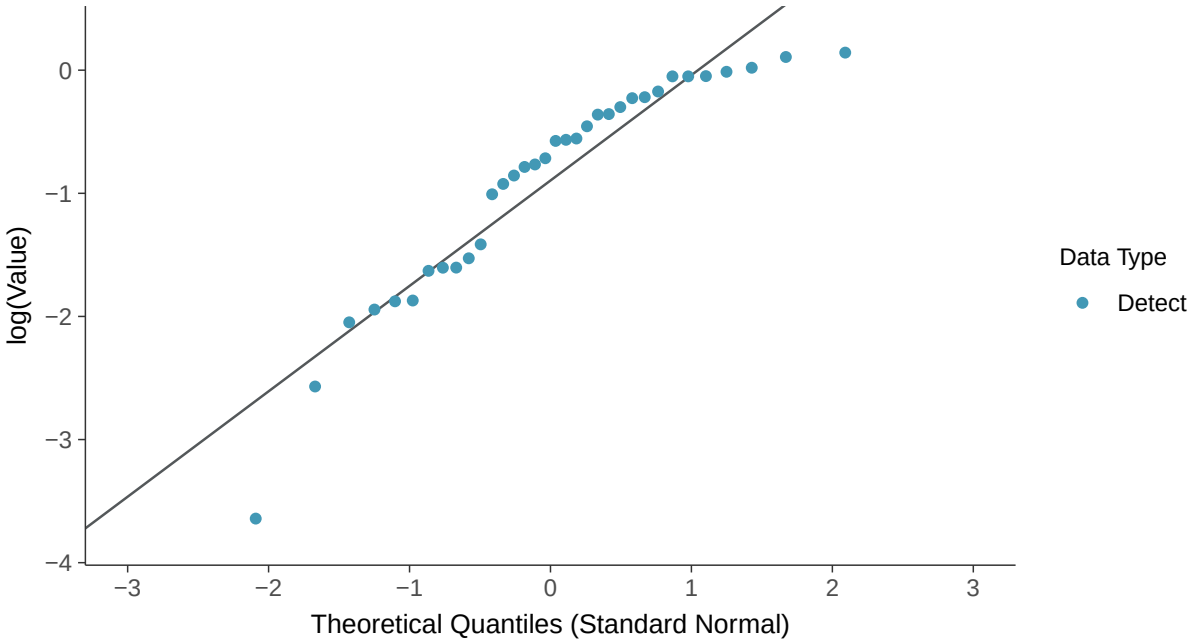
Normal Q-Q plot

Total Radium, MW-5 (pCi/L)



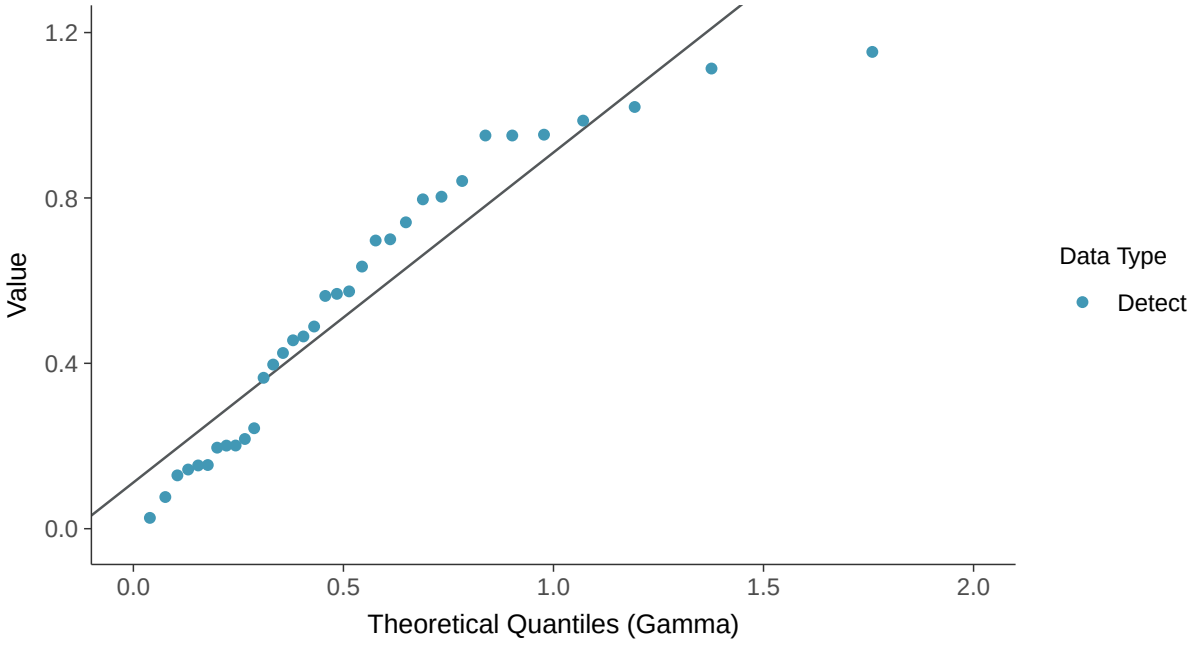
Lognormal Q-Q plot

Total Radium, MW-5 (pCi/L)



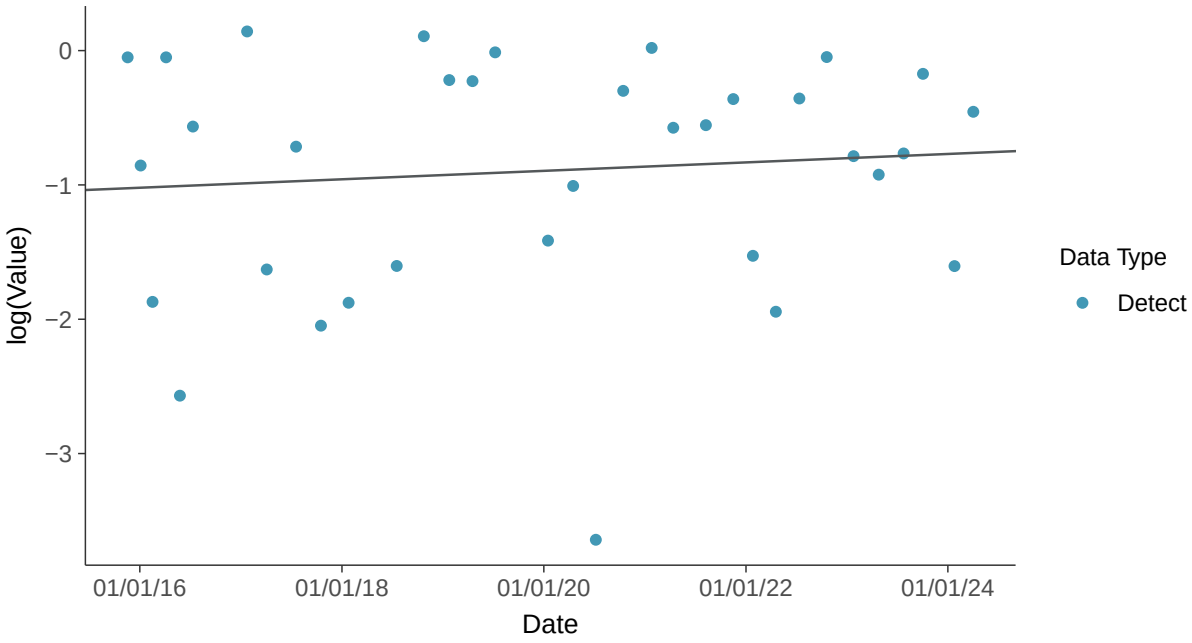
Gamma Q-Q plot

Total Radium, MW-5 (pCi/L)



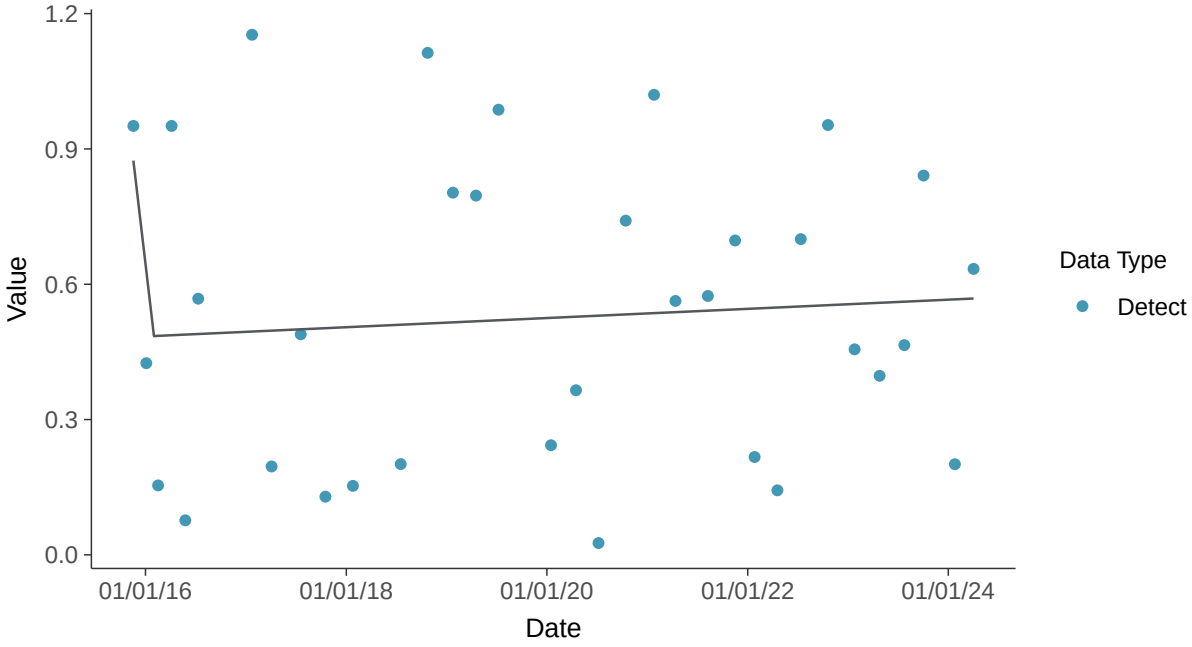
Trend Regression: Lognormal MLE

Total Radium, MW-5 (pCi/L)



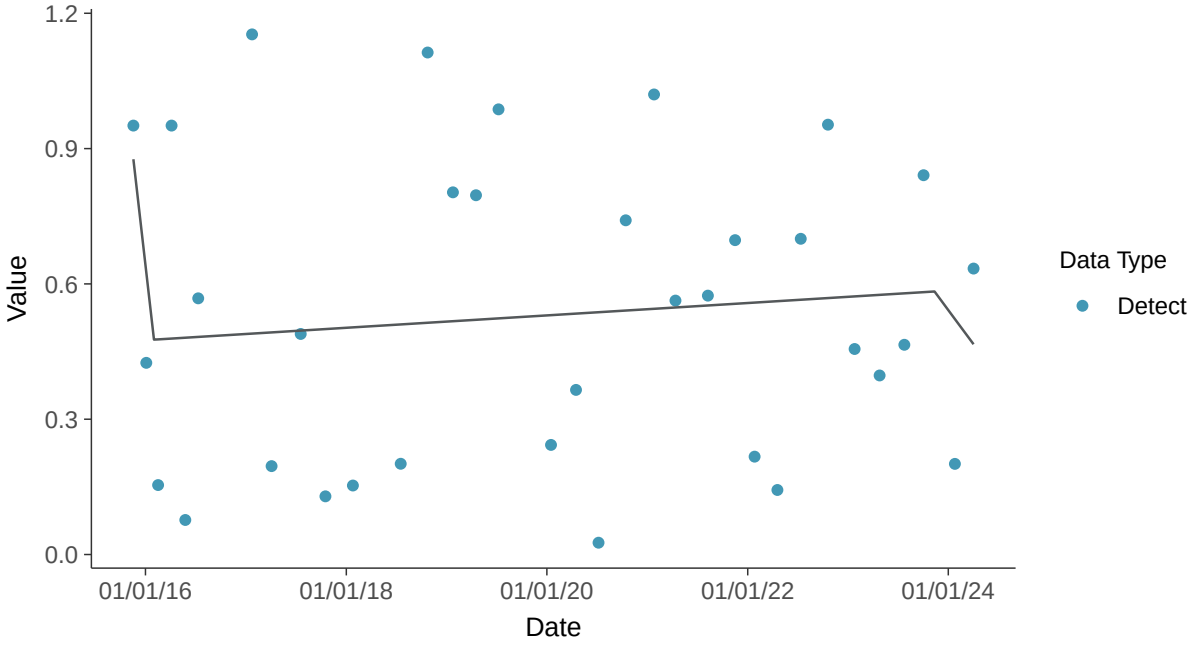
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-5 (pCi/L)



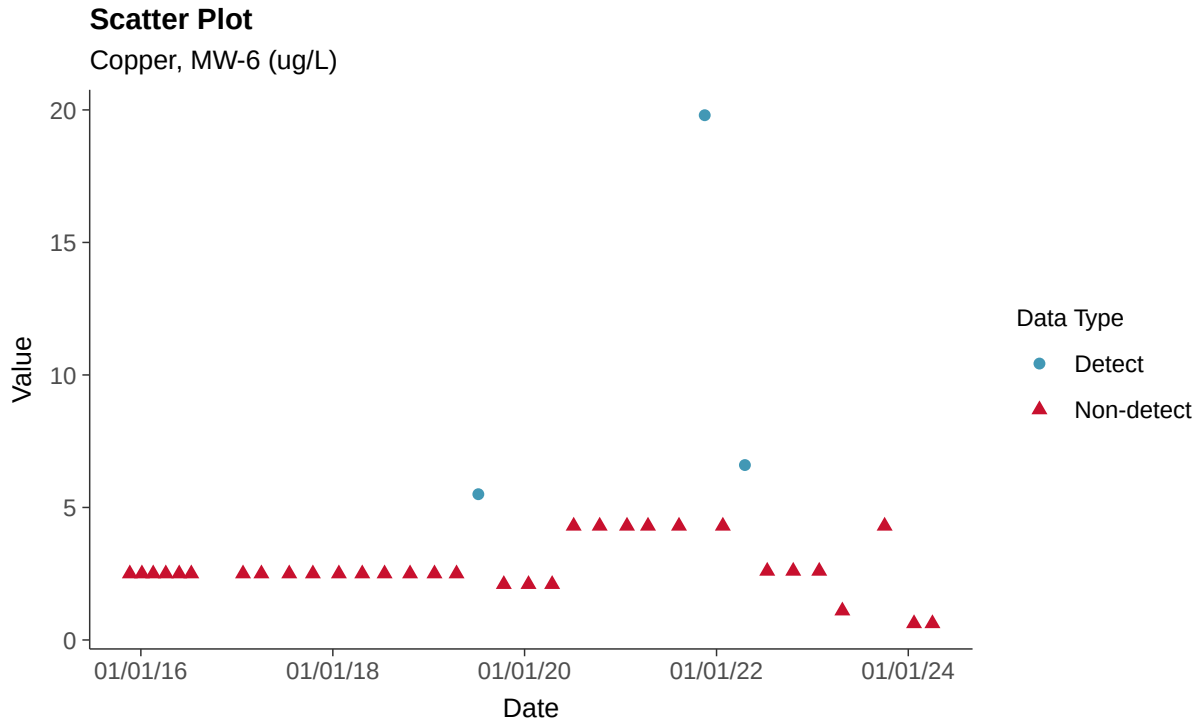
Trend Regression: Piecewise Linear-Linear-Linear

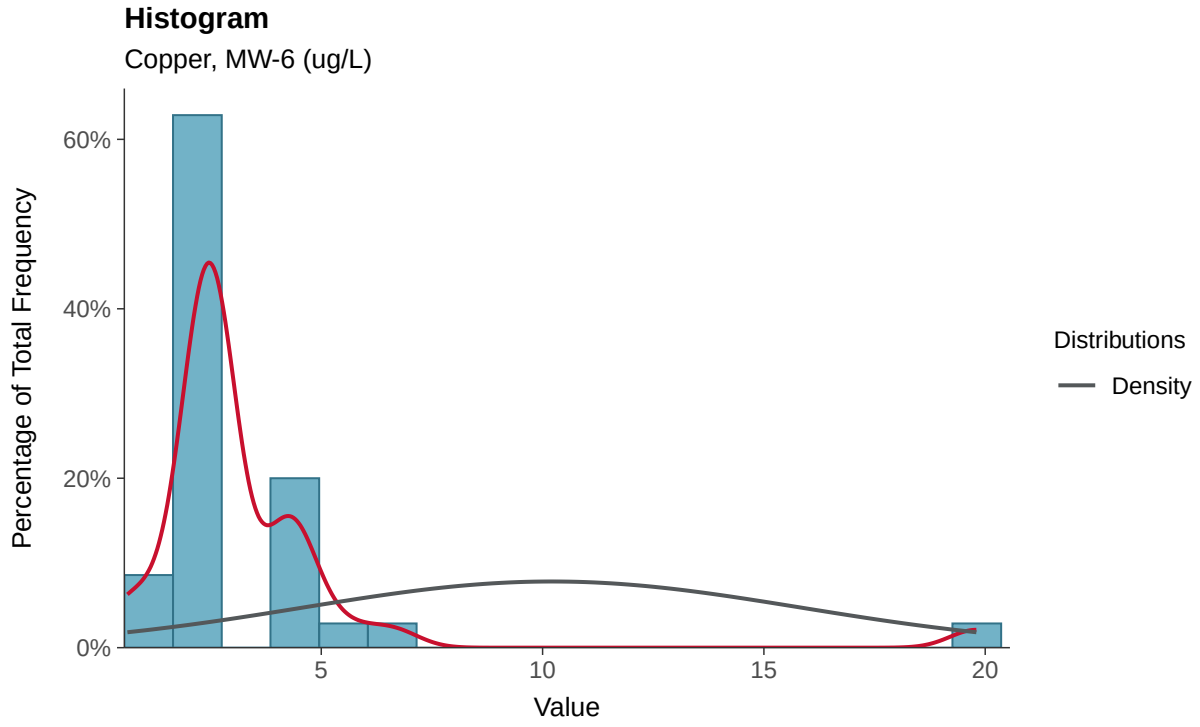
Total Radium, MW-5 (pCi/L)



App. I Metals: Copper, MW-6

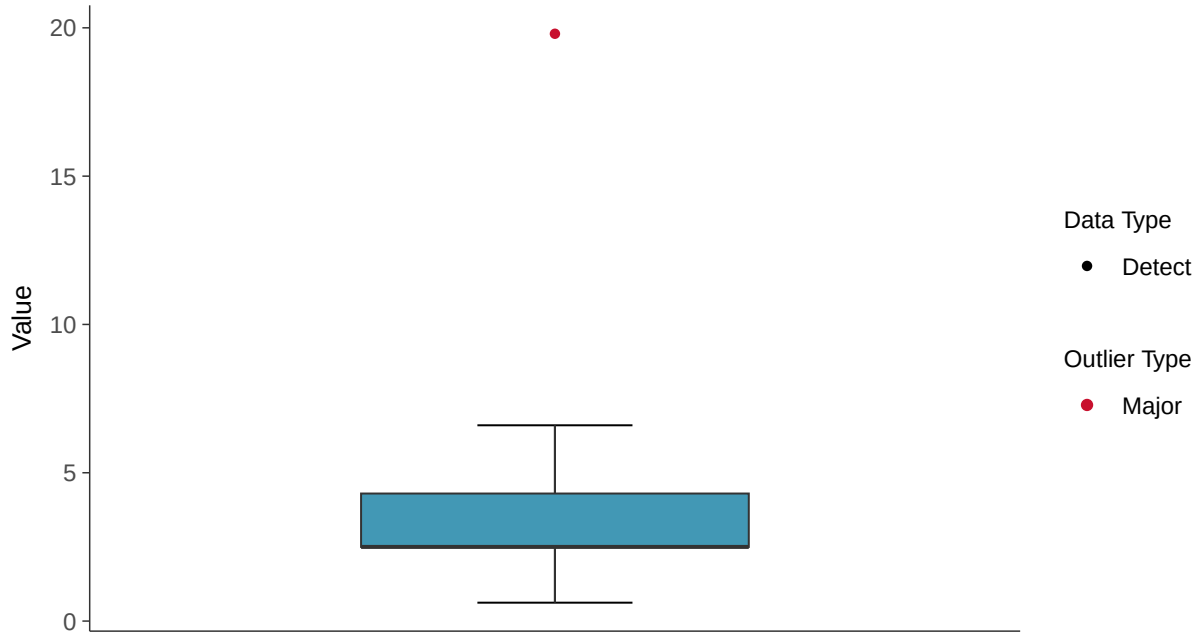
ID: 9_1_111





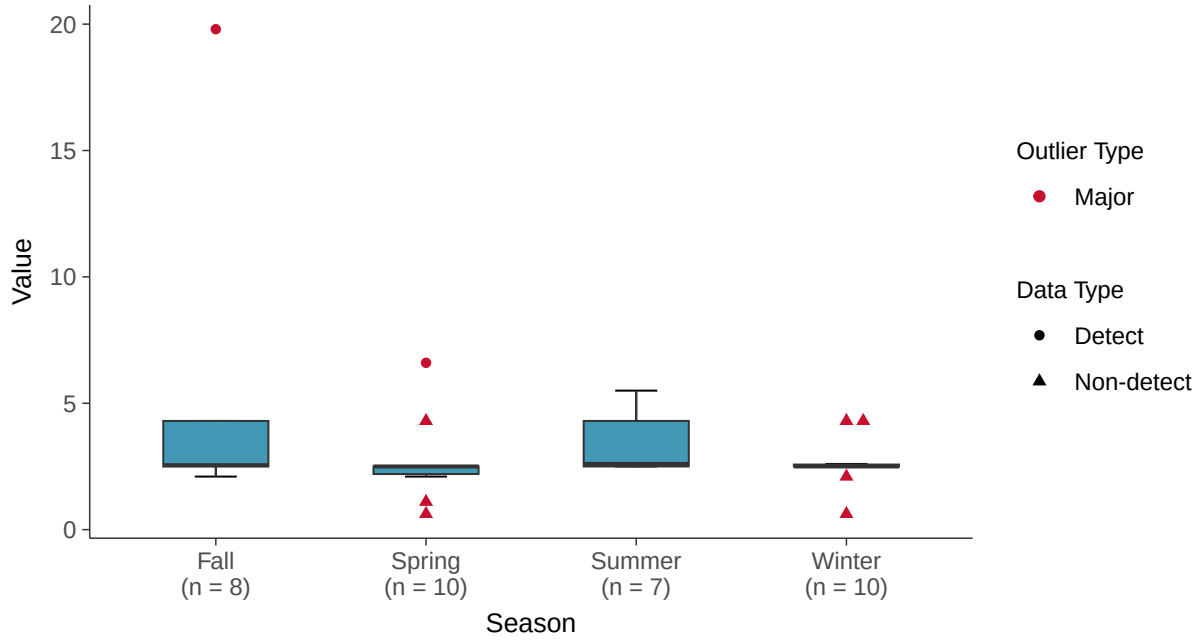
Boxplot

Copper, MW-6 (ug/L)



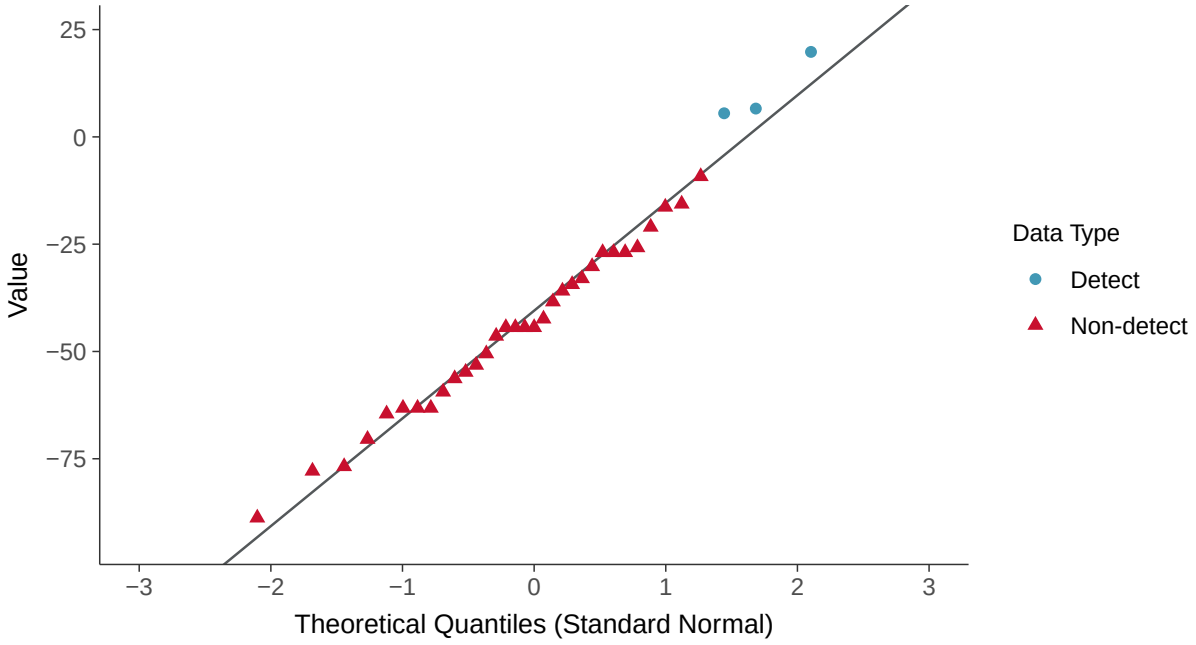
Boxplot by Season

Copper, MW-6 (ug/L)



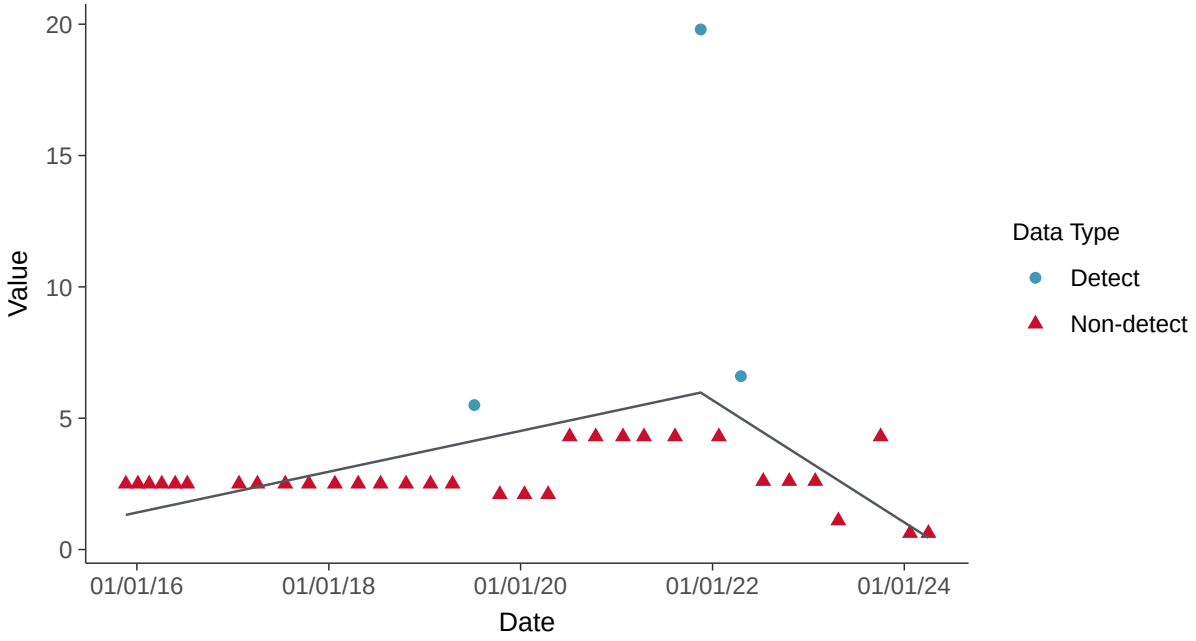
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-6 (ug/L)



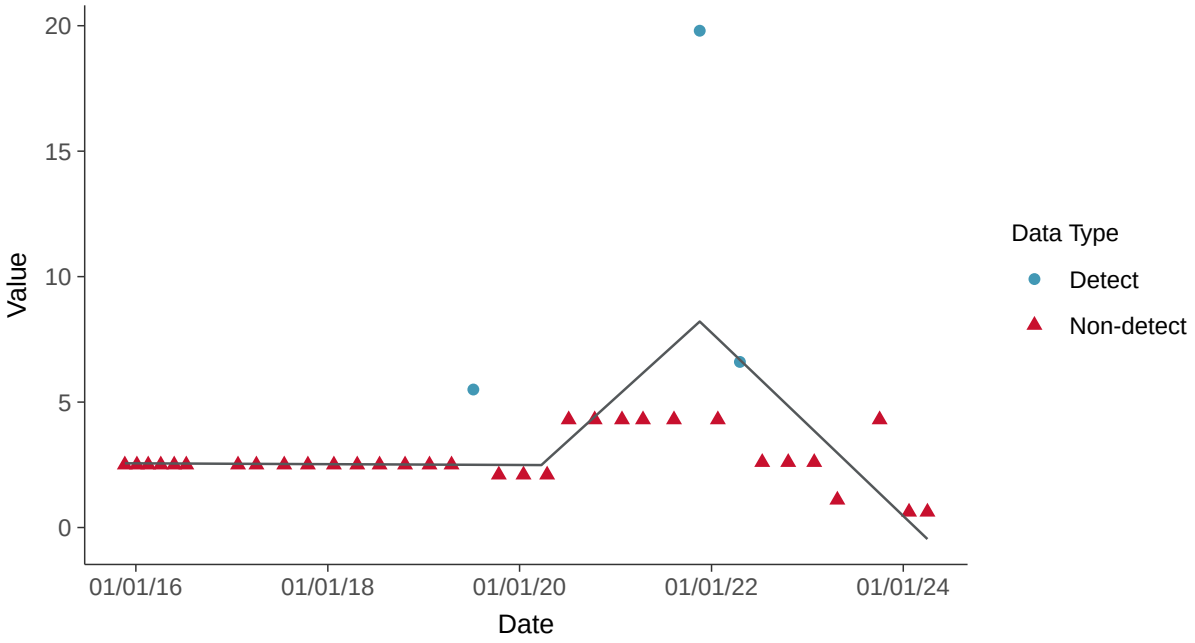
Trend Regression: Piecewise Linear-Linear

Copper, MW-6 (ug/L)



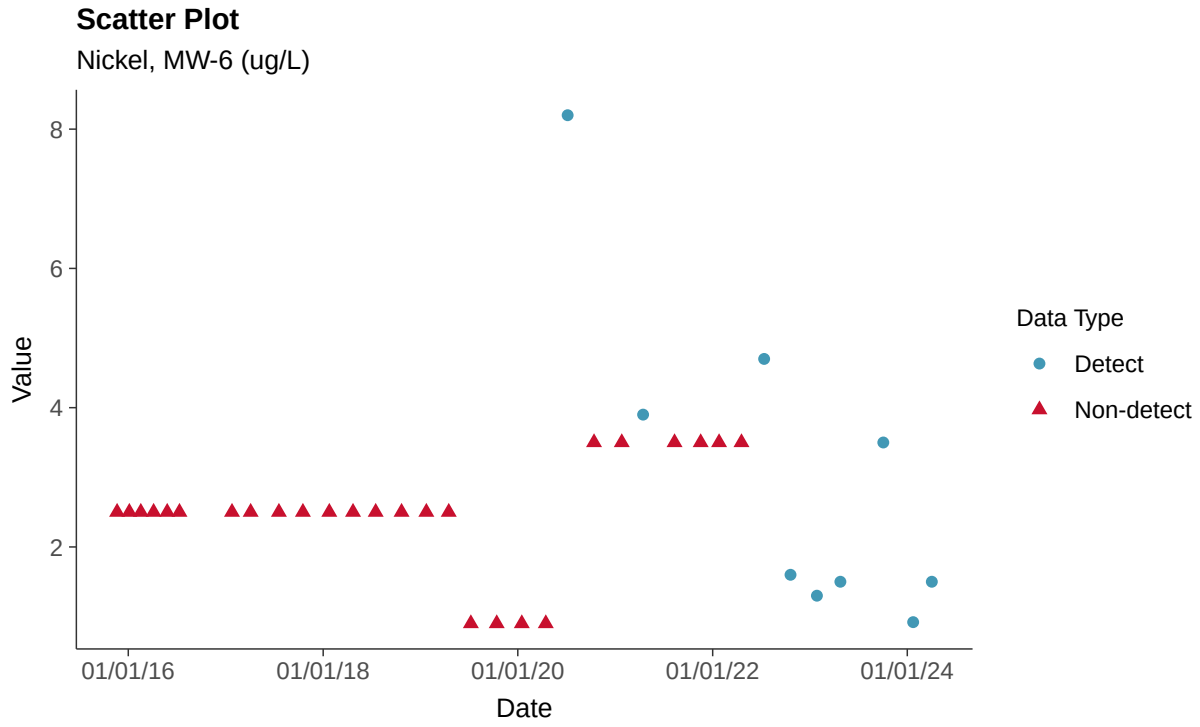
Trend Regression: Piecewise Linear-Linear-Linear

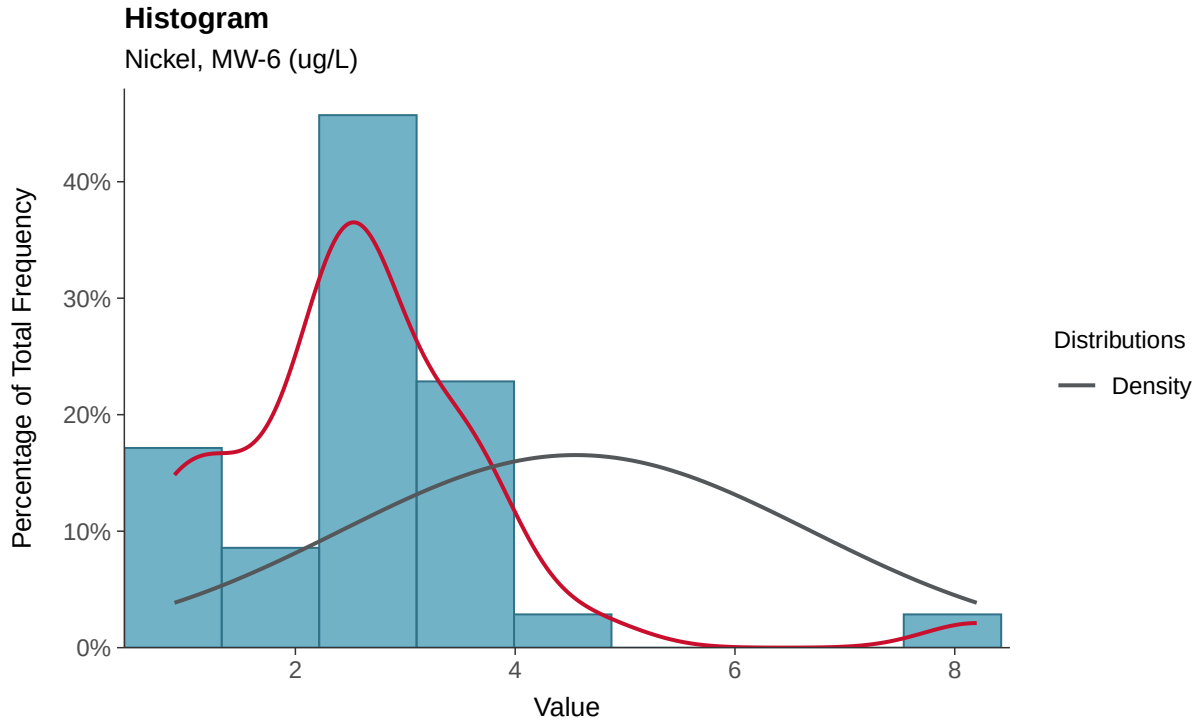
Copper, MW-6 (ug/L)



App. I Metals: Nickel, MW-6

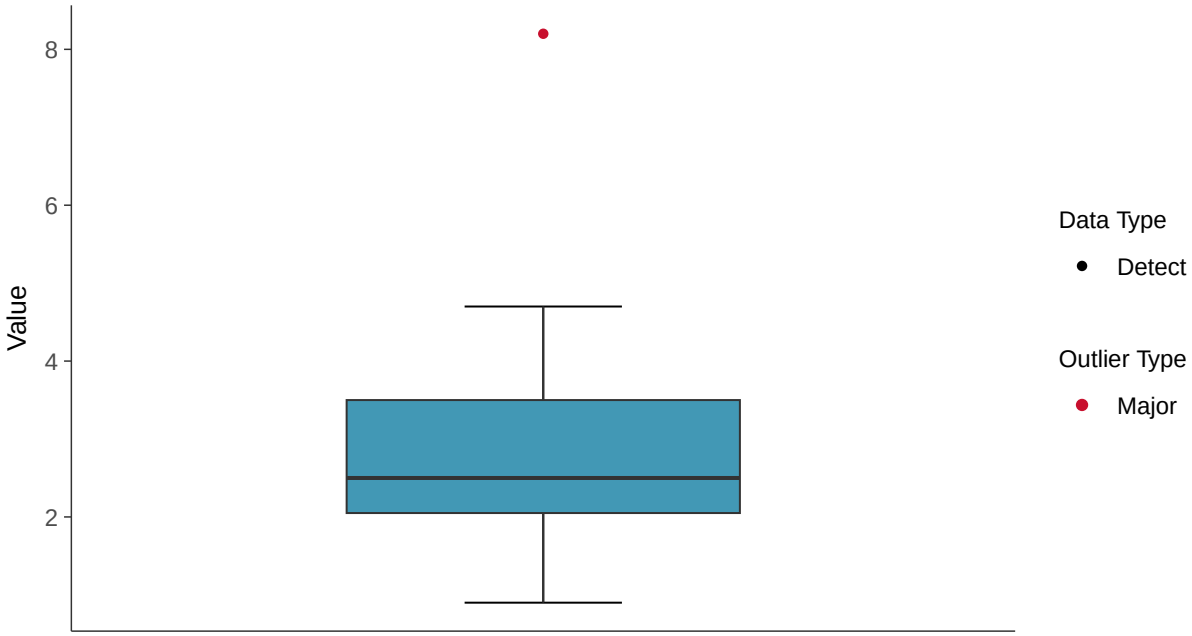
ID: 9_1_117





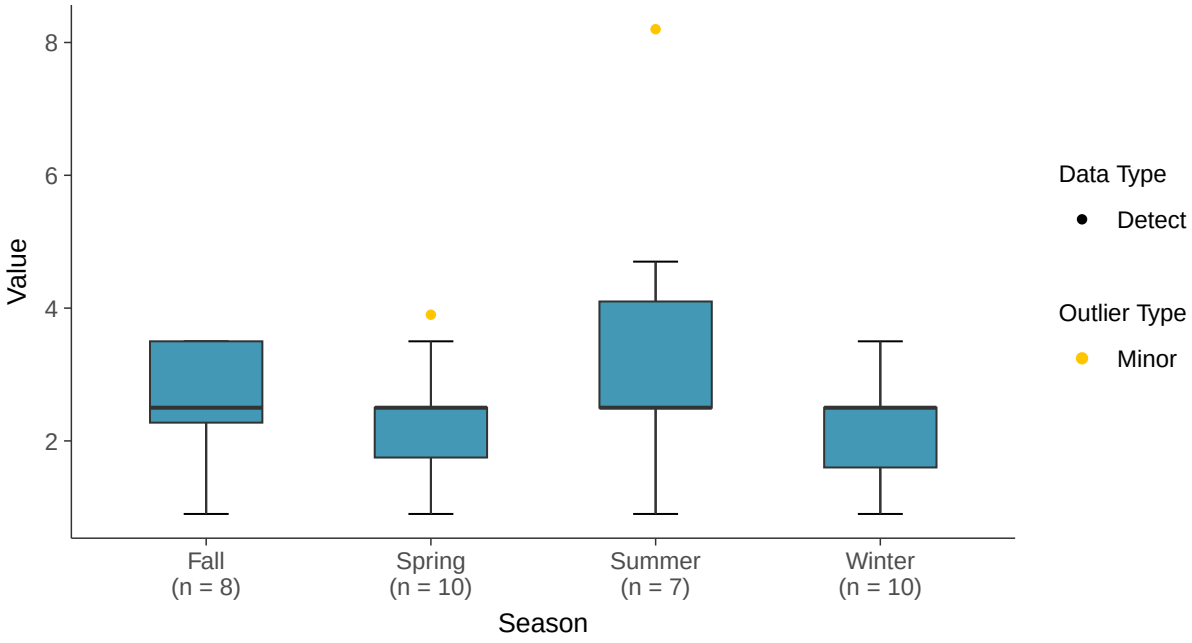
Boxplot

Nickel, MW-6 (ug/L)



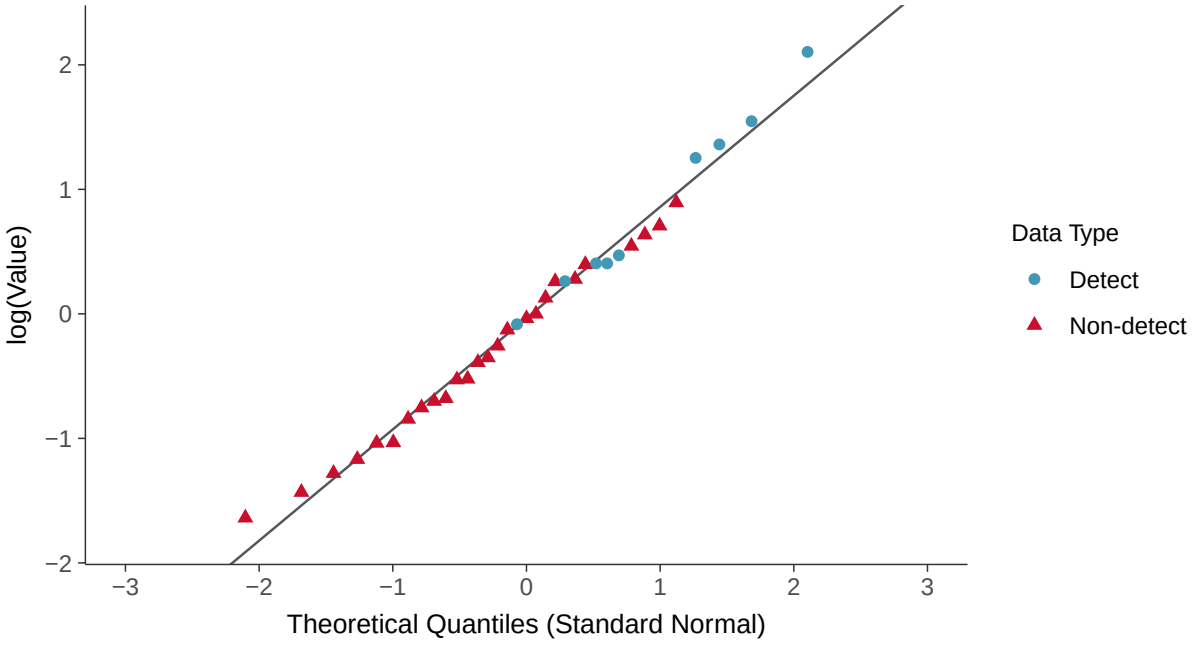
Boxplot by Season

Nickel, MW-6 (ug/L)



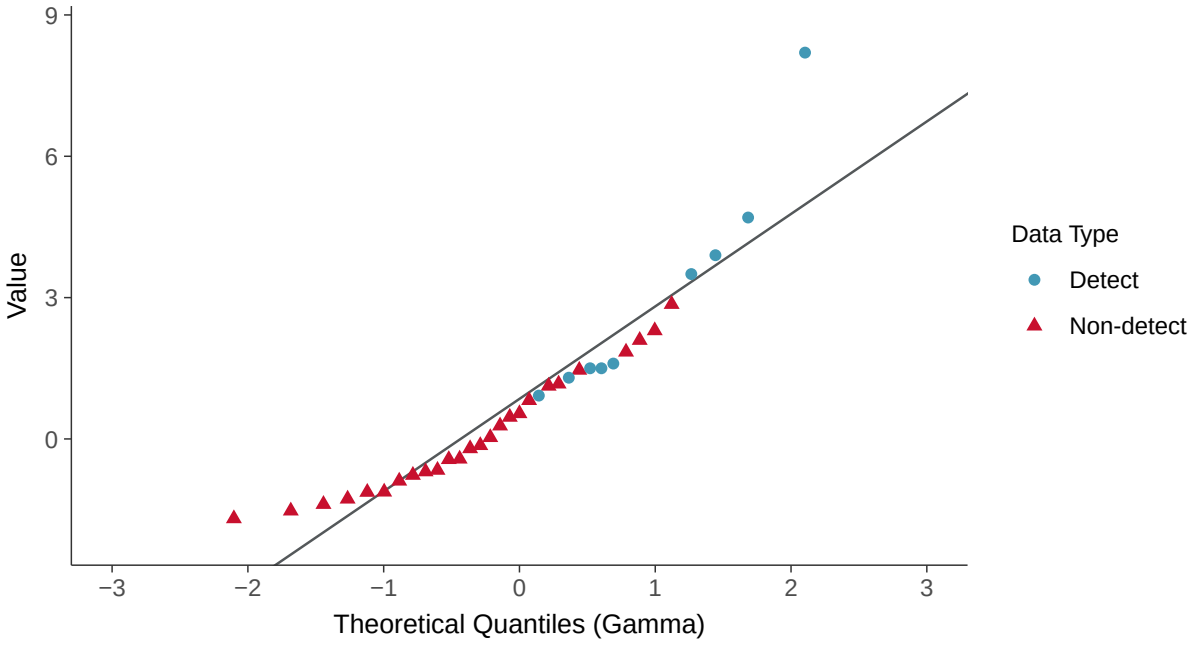
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-6 (ug/L)



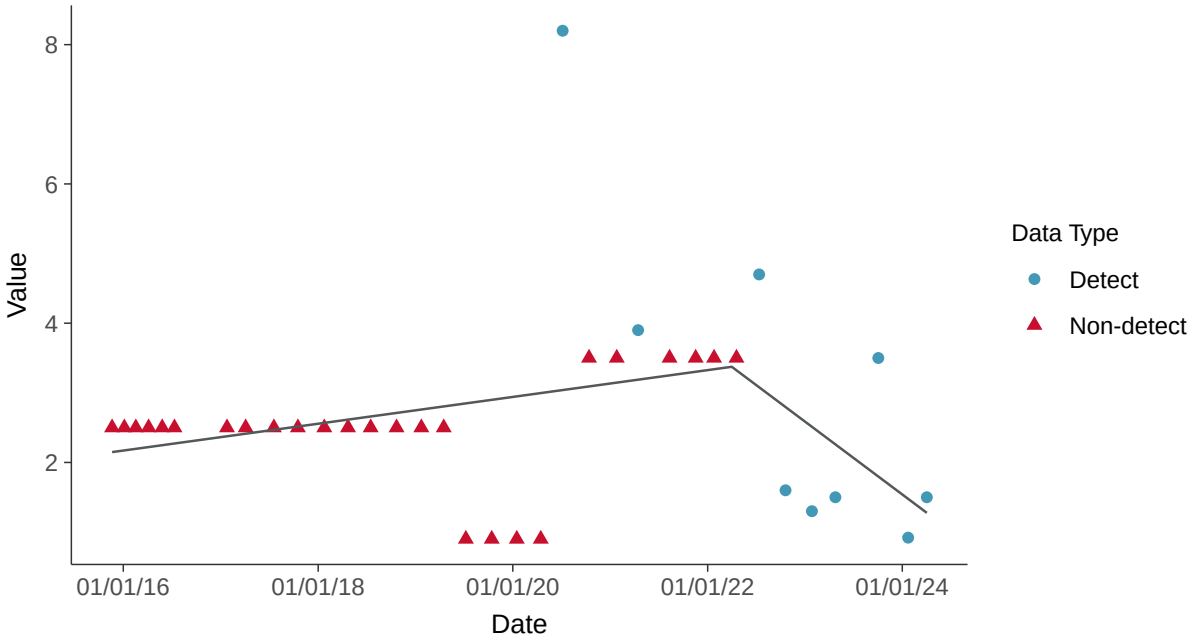
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-6 (ug/L)



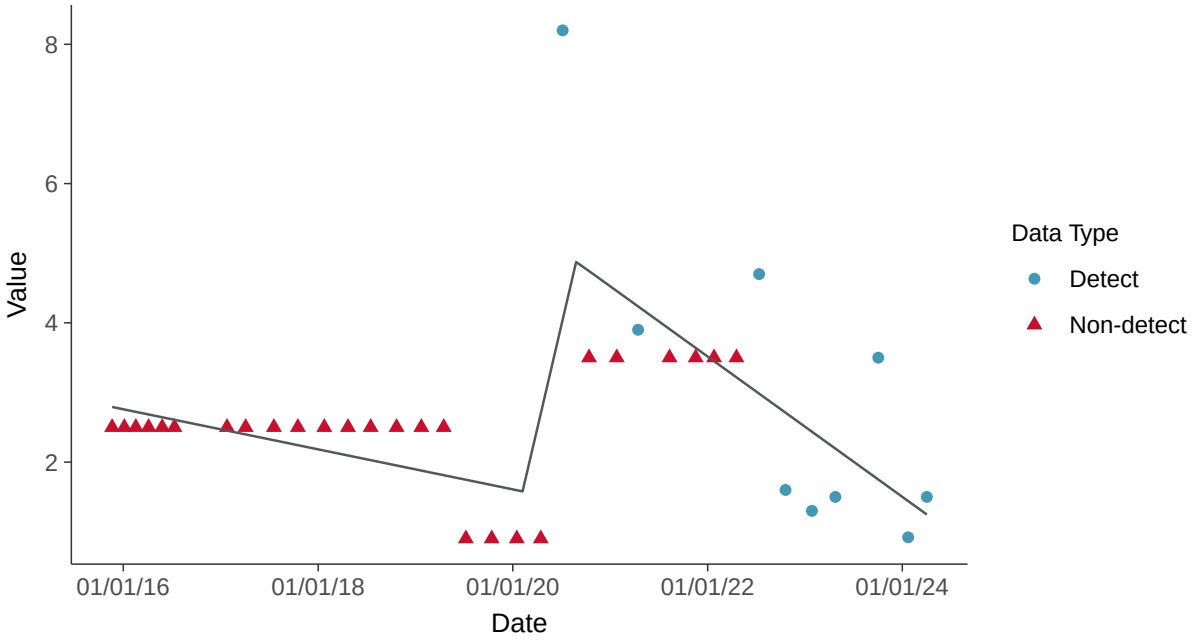
Trend Regression: Piecewise Linear-Linear

Nickel, MW-6 (ug/L)



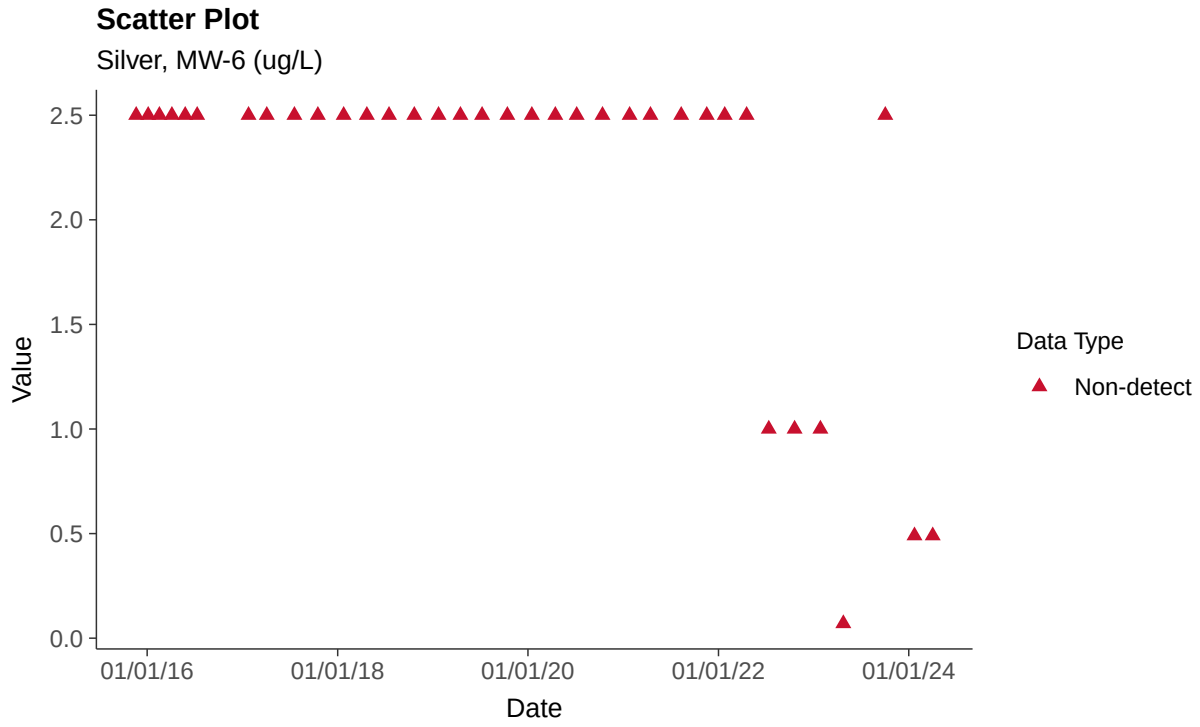
Trend Regression: Piecewise Linear-Linear-Linear

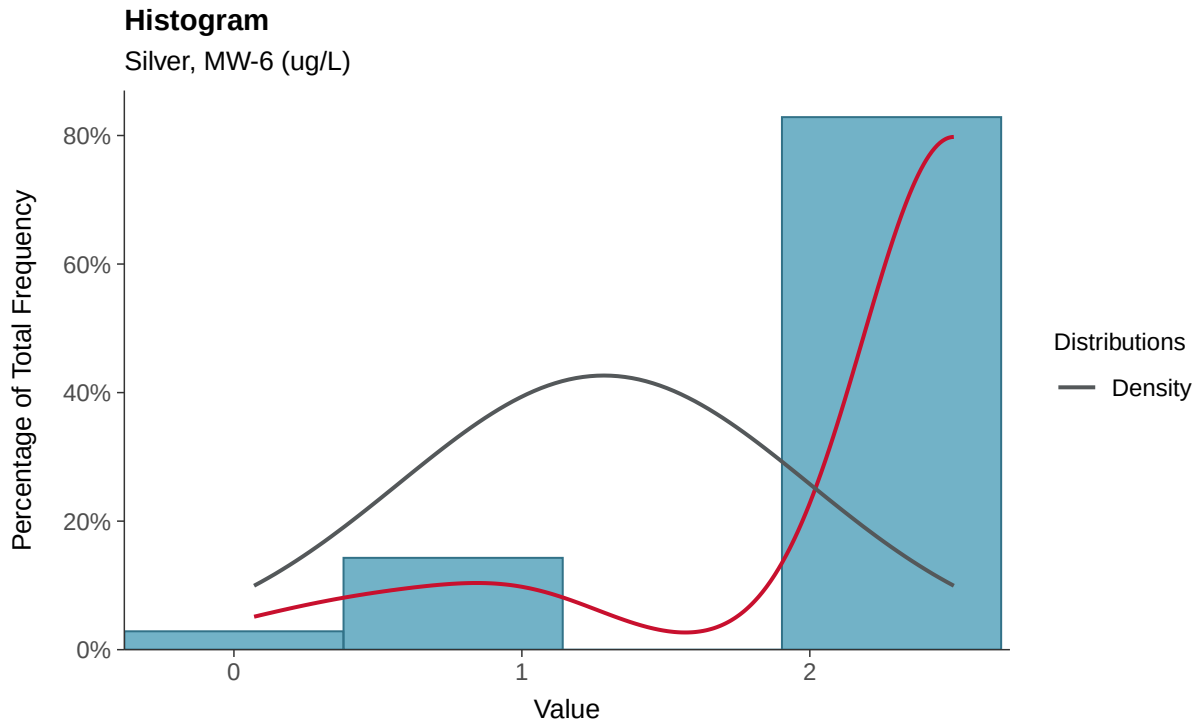
Nickel, MW-6 (ug/L)



App. I Metals: Silver, MW-6

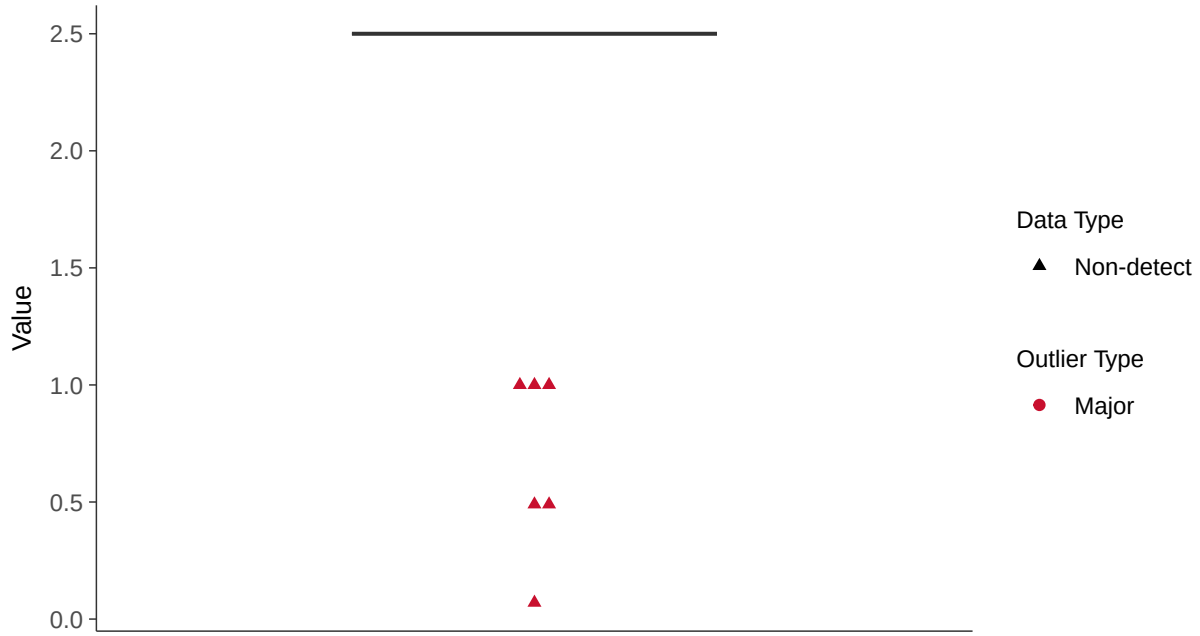
ID: 9_1_122





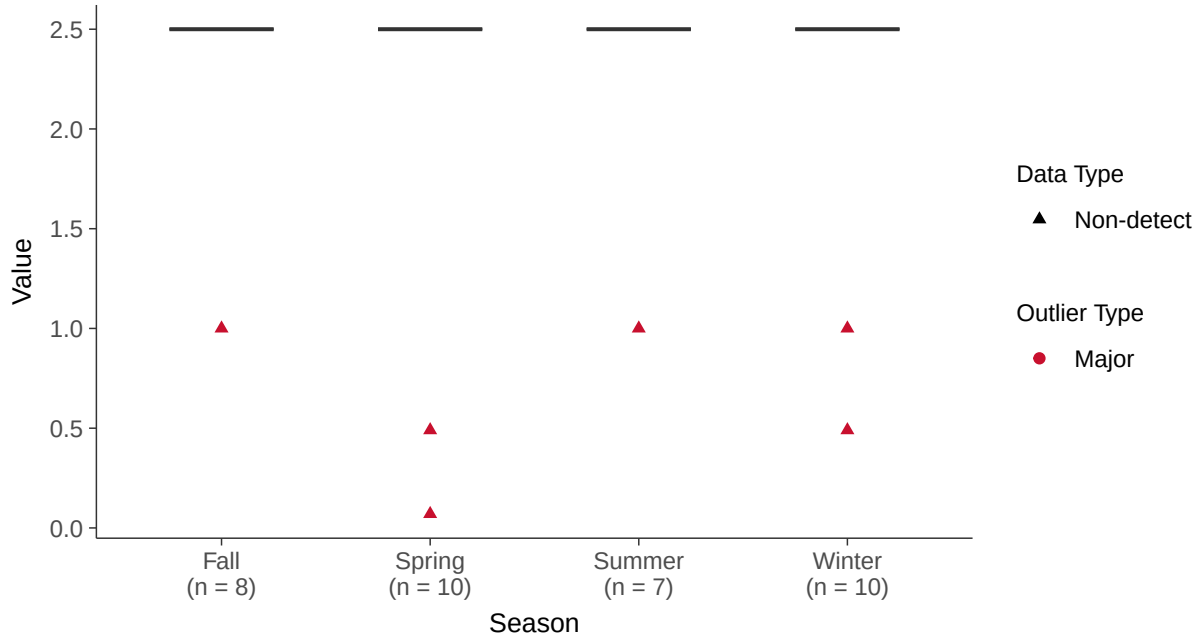
Boxplot

Silver, MW-6 (ug/L)



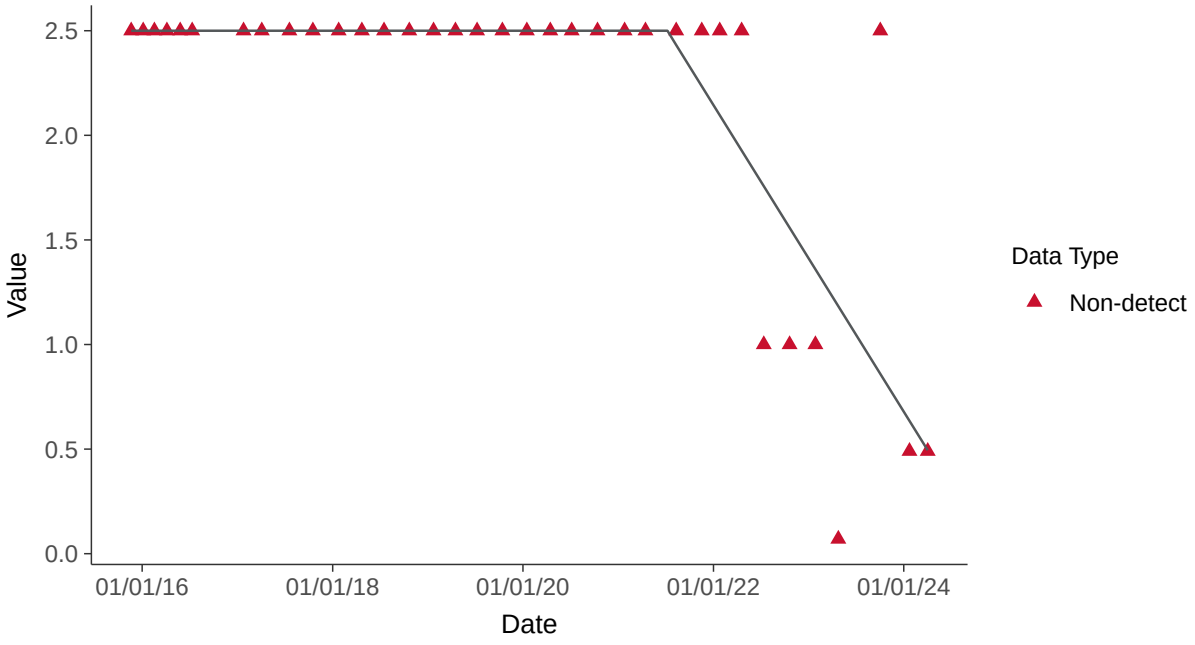
Boxplot by Season

Silver, MW-6 (ug/L)



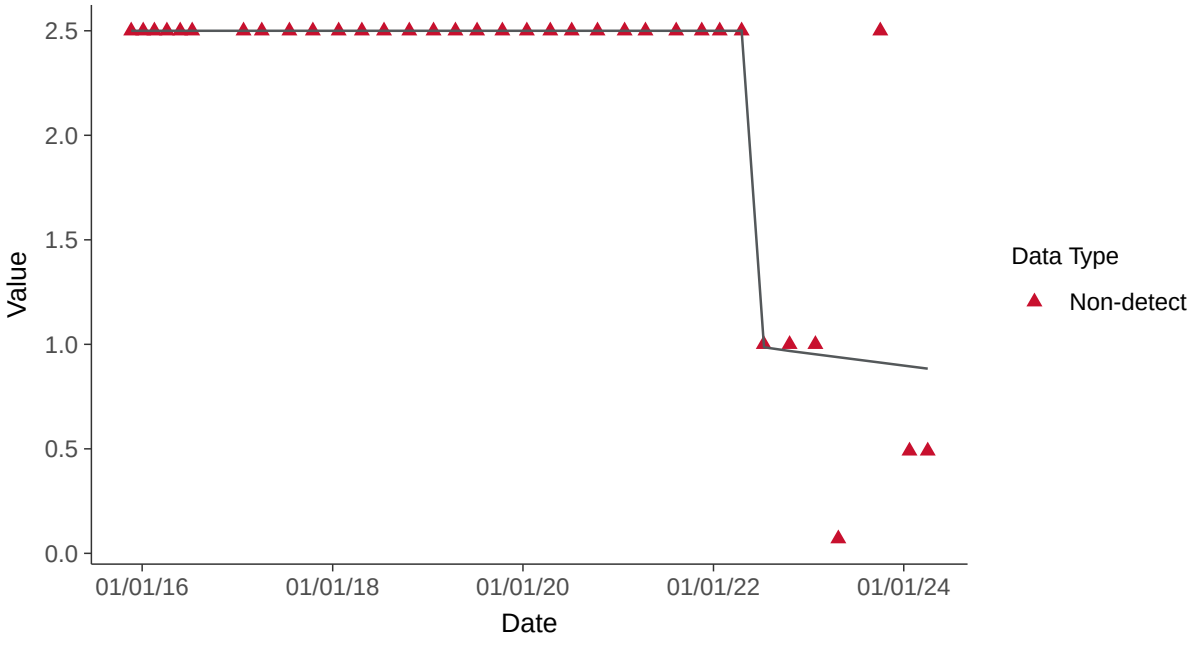
Trend Regression: Piecewise Linear-Linear

Silver, MW-6 (ug/L)



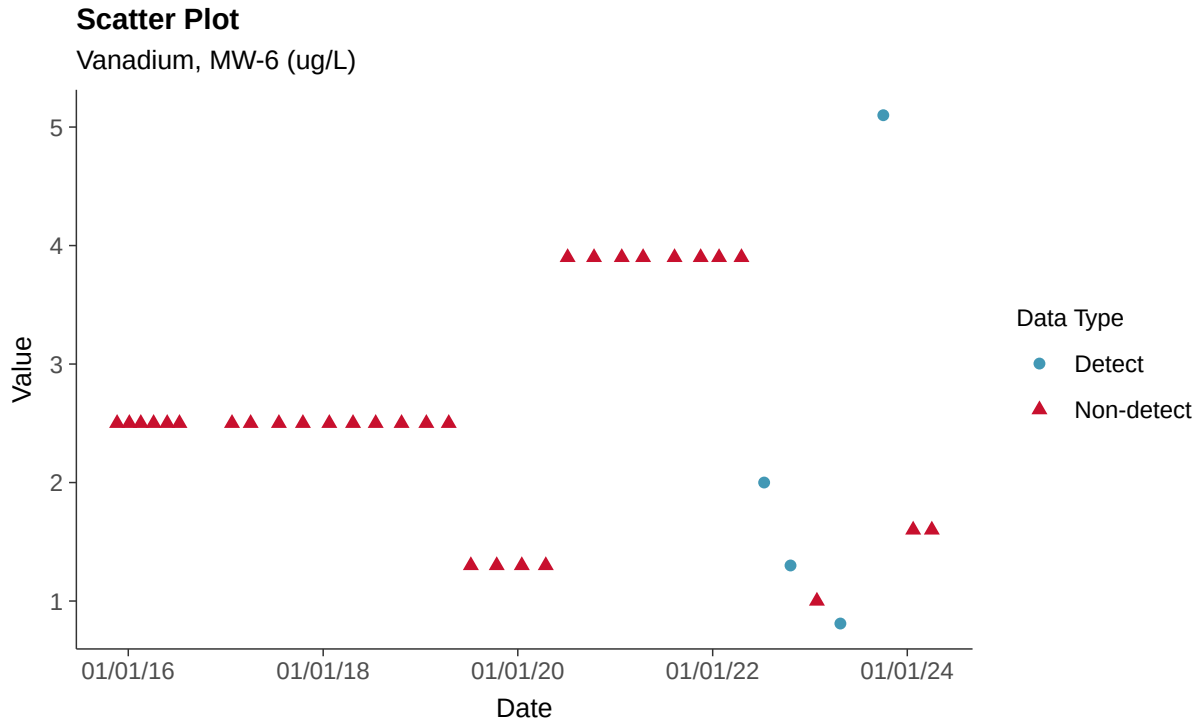
Trend Regression: Piecewise Linear-Linear-Linear

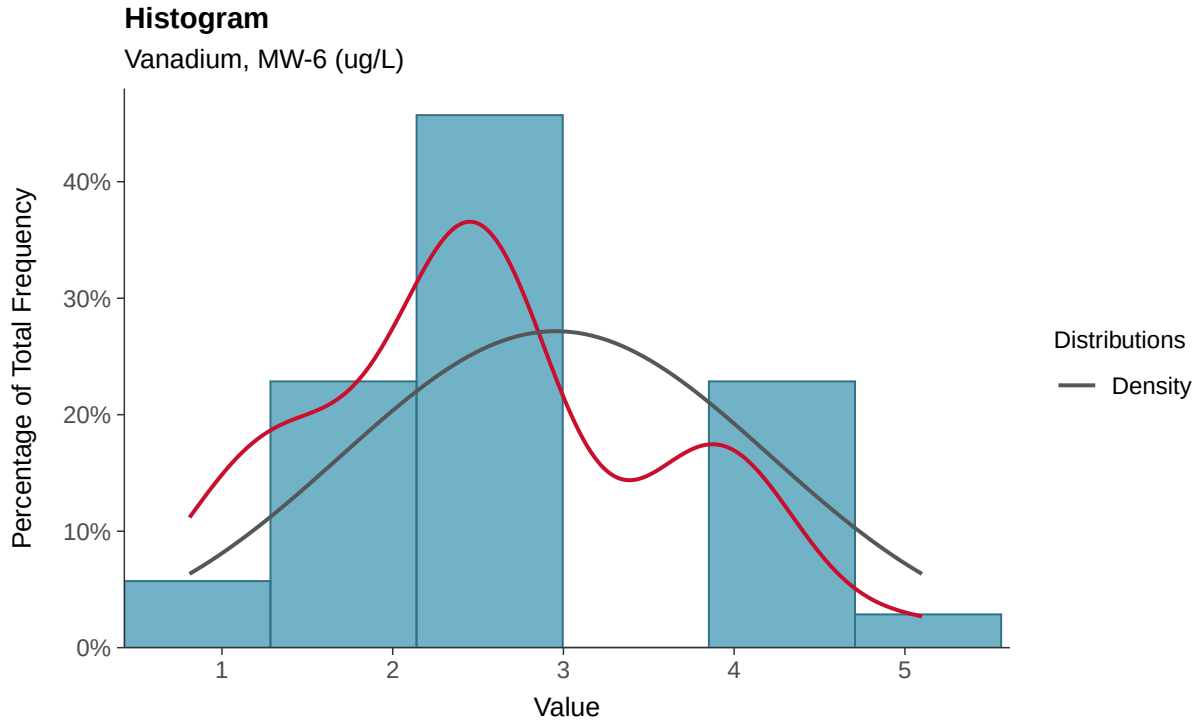
Silver, MW-6 (ug/L)



App. I Metals: Vanadium, MW-6

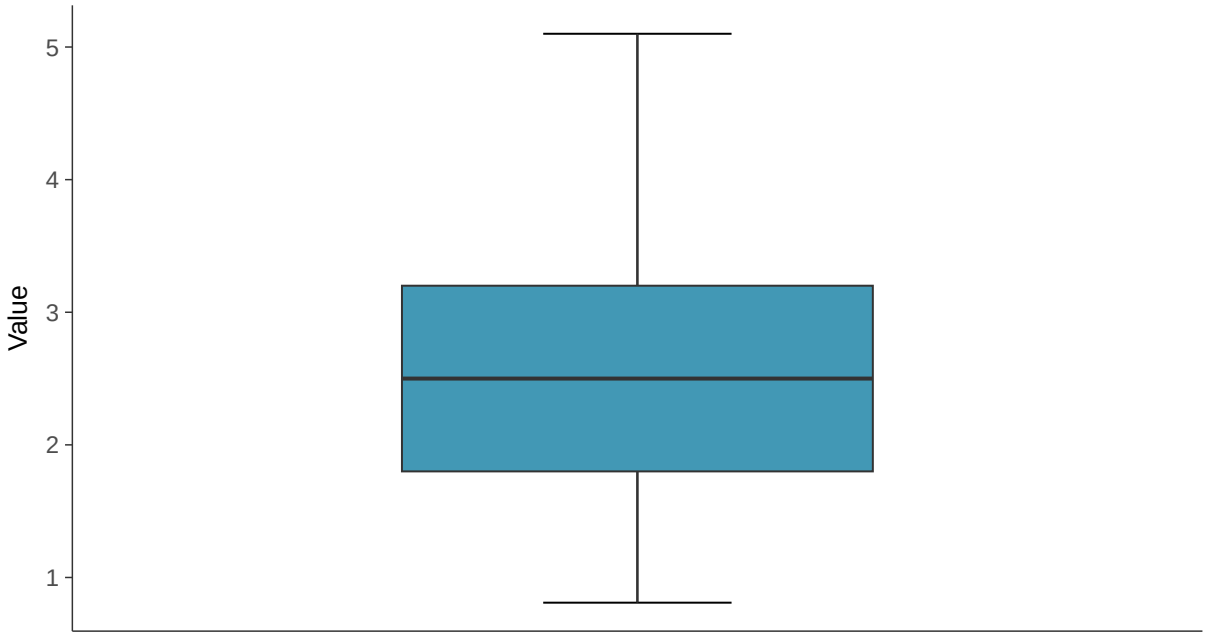
ID: 9_1_127





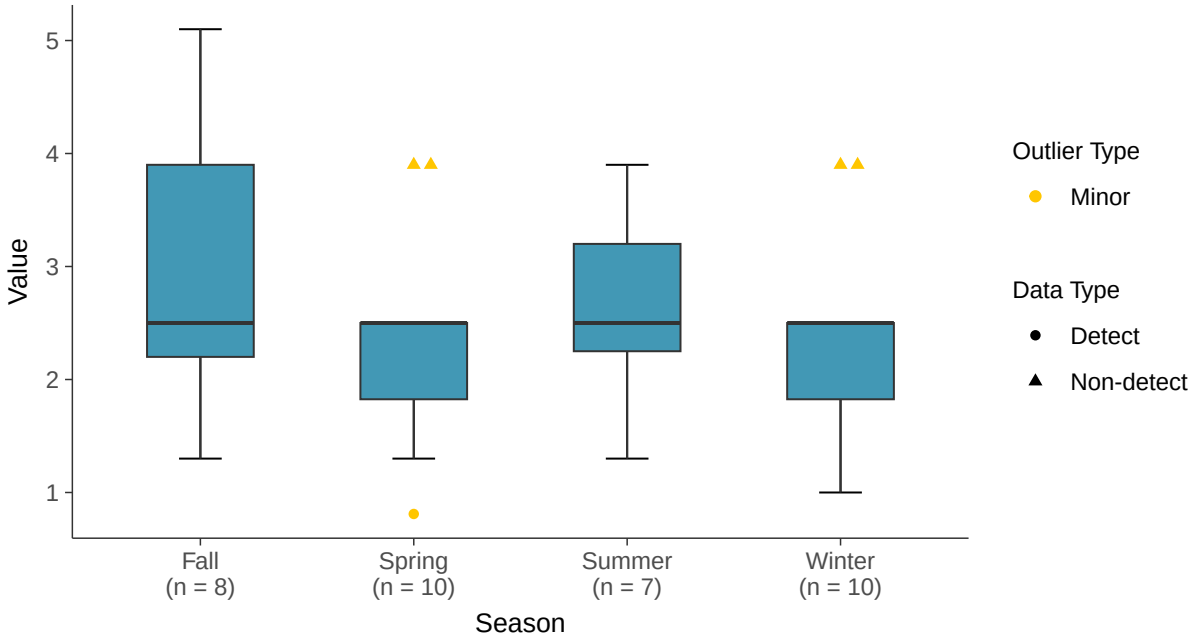
Boxplot

Vanadium, MW-6 (ug/L)



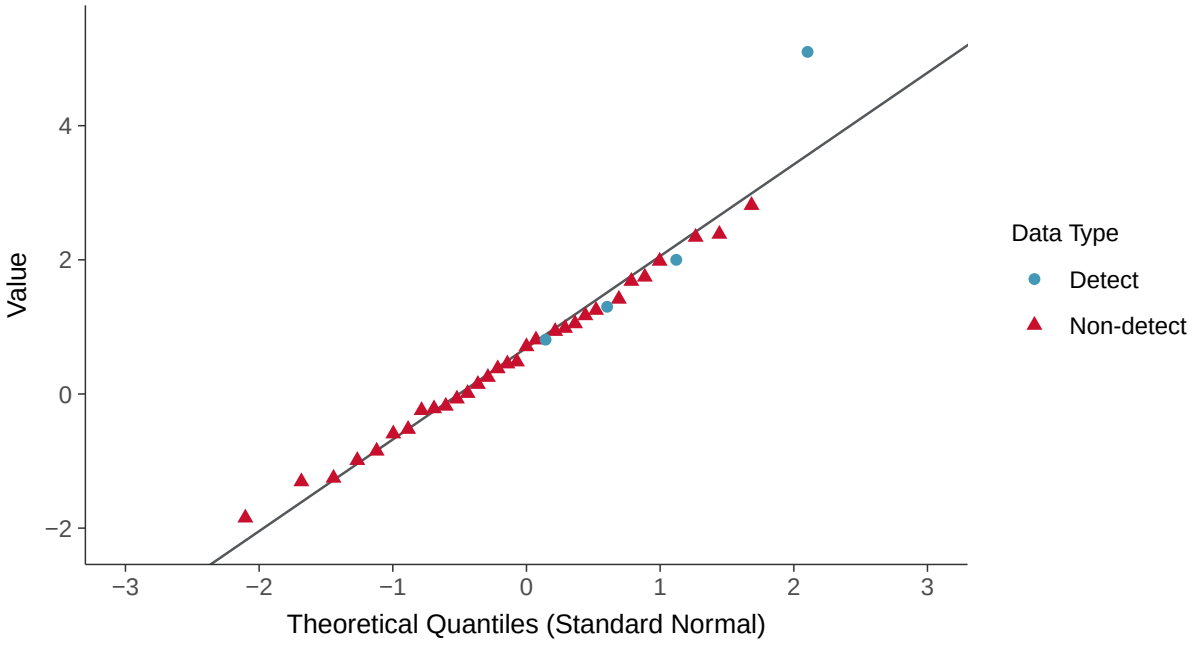
Boxplot by Season

Vanadium, MW-6 (ug/L)



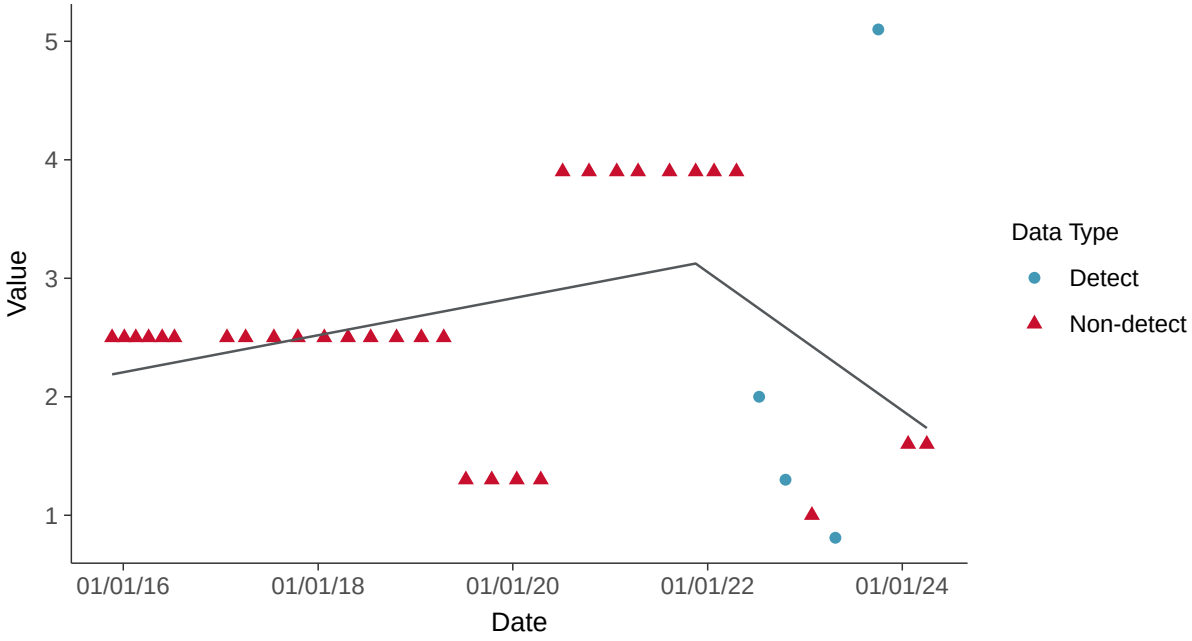
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-6 (ug/L)



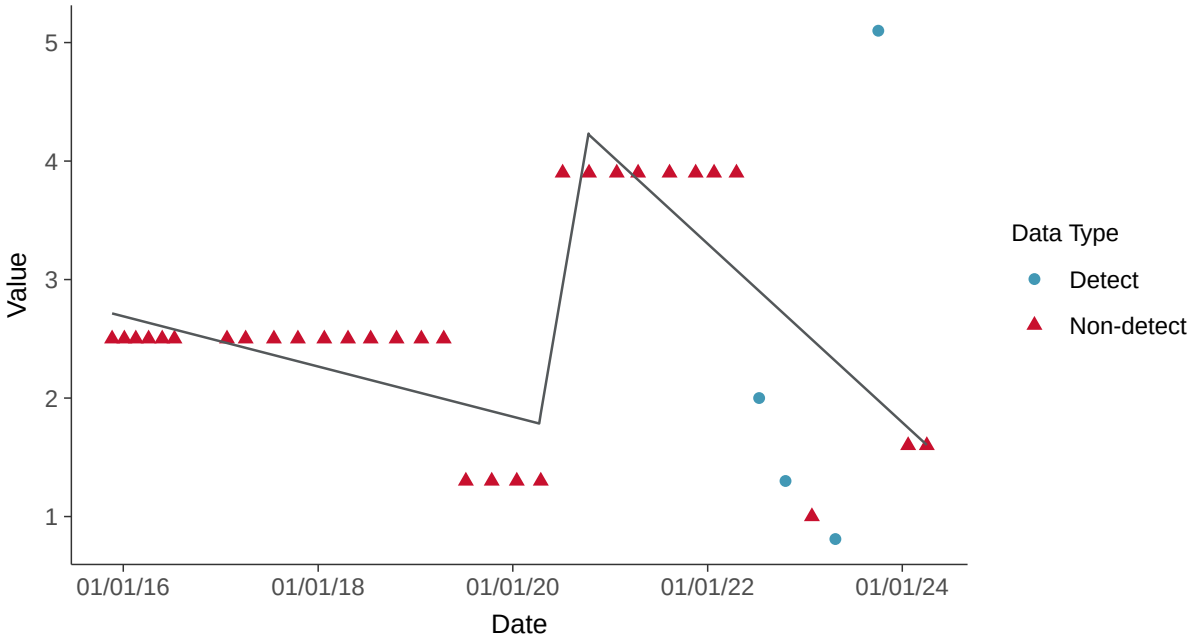
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-6 (ug/L)



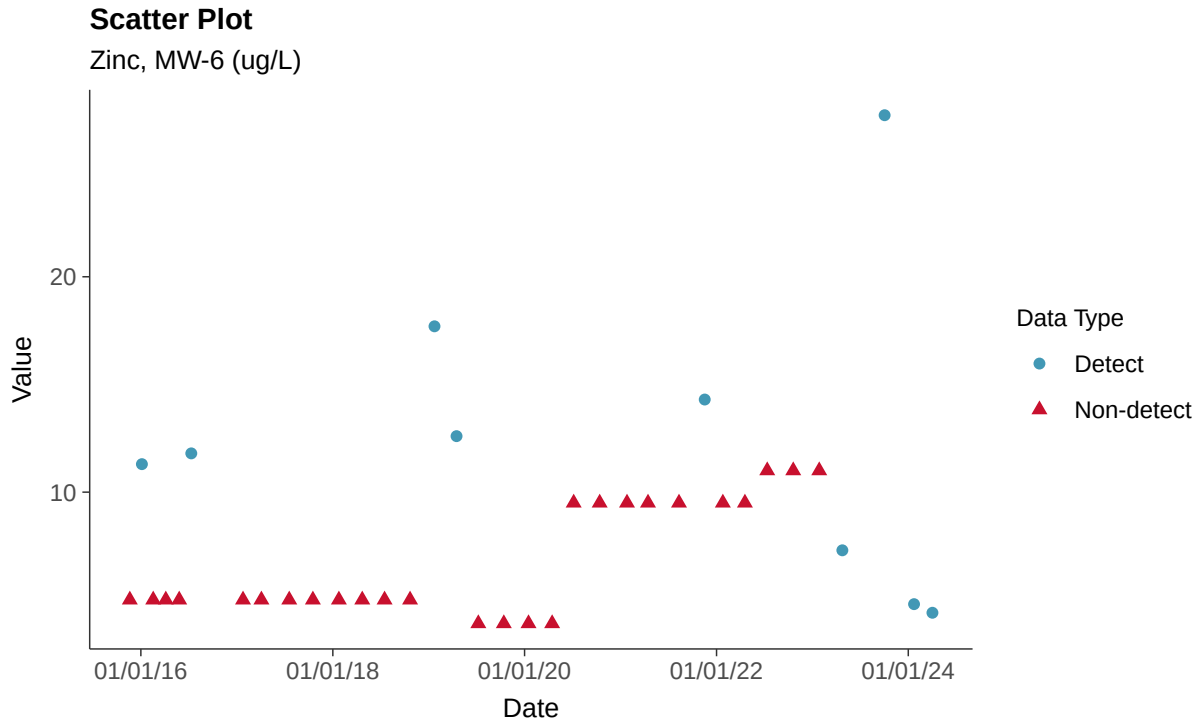
Trend Regression: Piecewise Linear-Linear-Linear

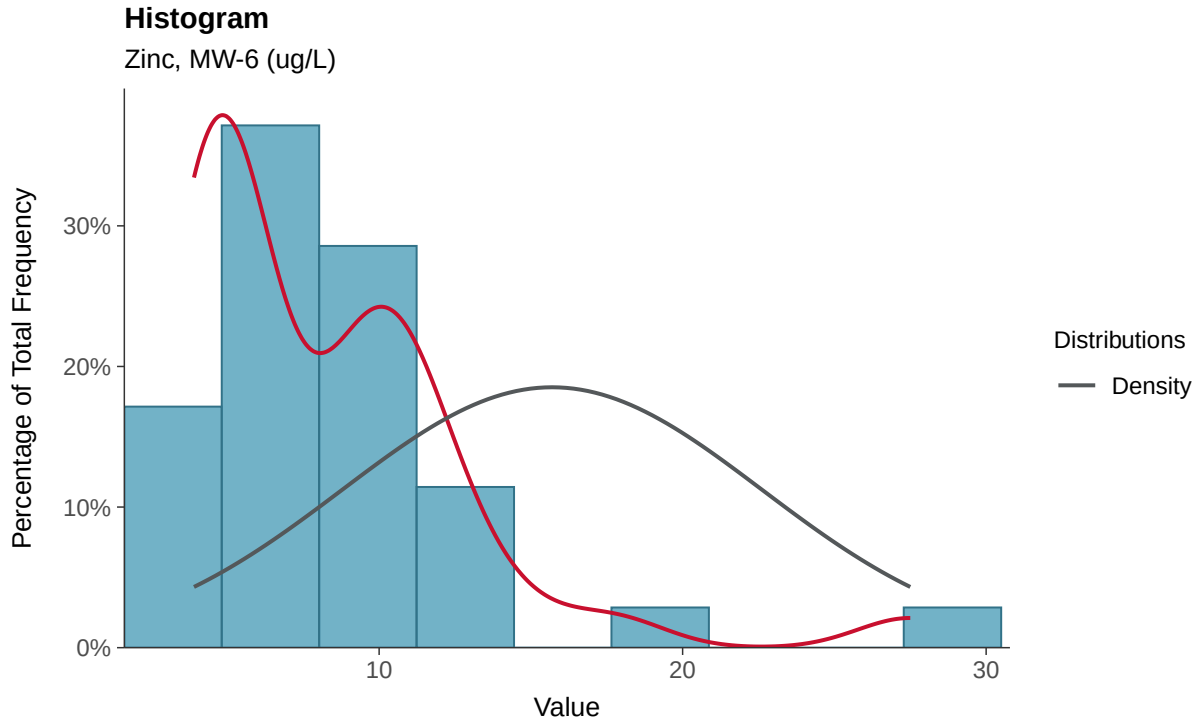
Vanadium, MW-6 (ug/L)



App. I Metals: Zinc, MW-6

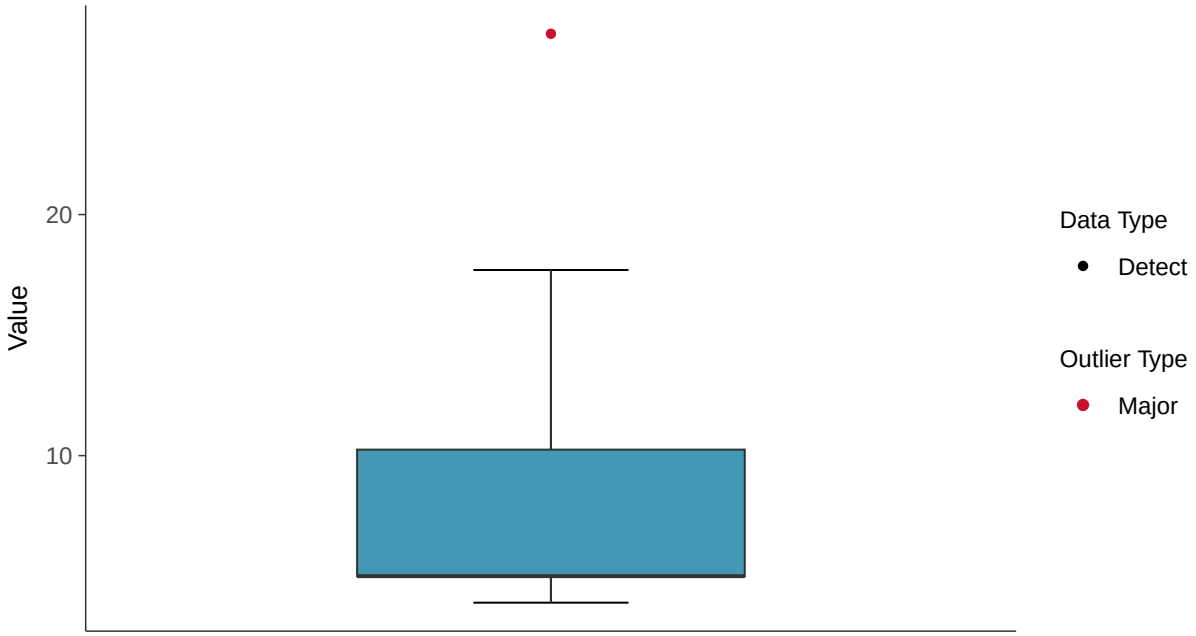
ID: 9_1_128





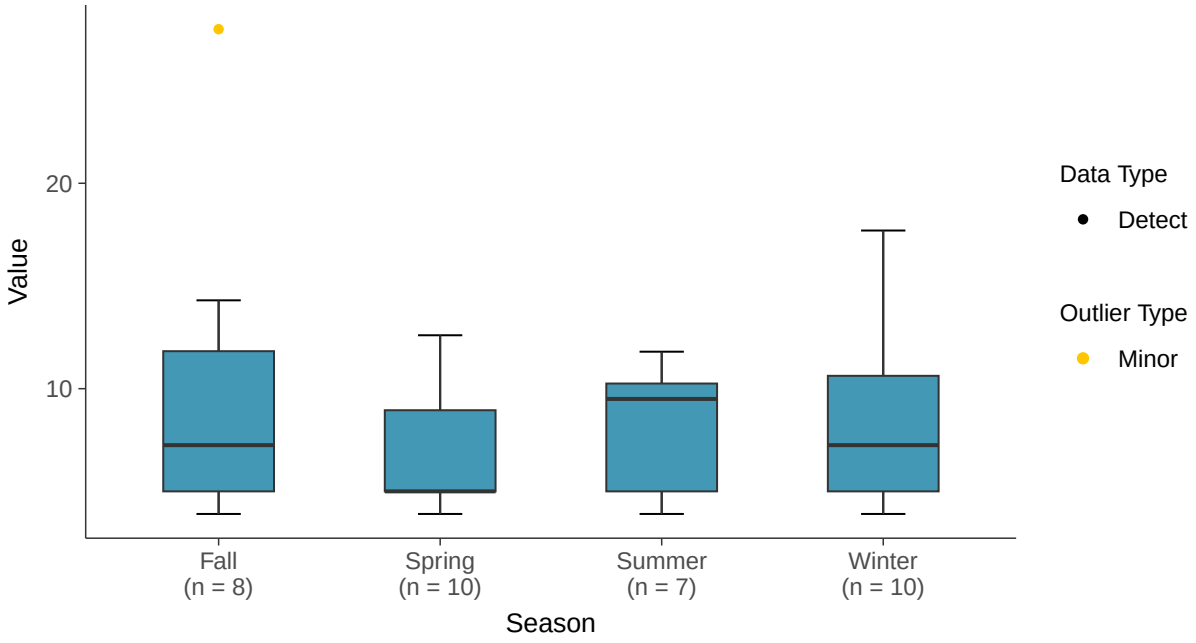
Boxplot

Zinc, MW-6 (ug/L)



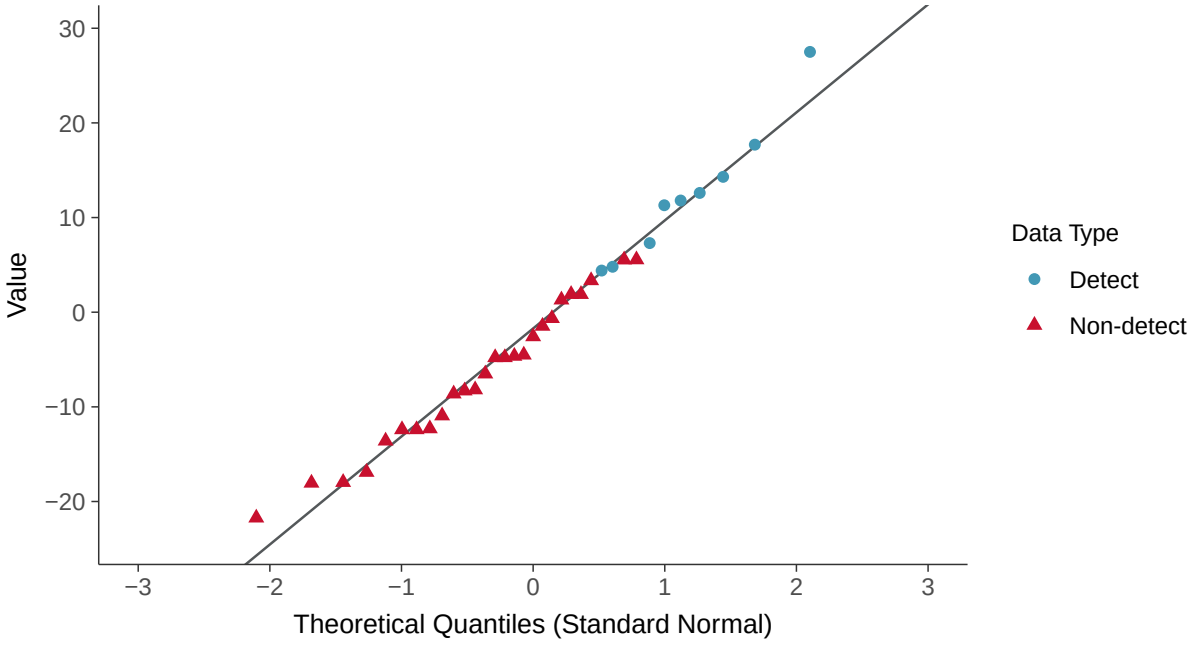
Boxplot by Season

Zinc, MW-6 (ug/L)



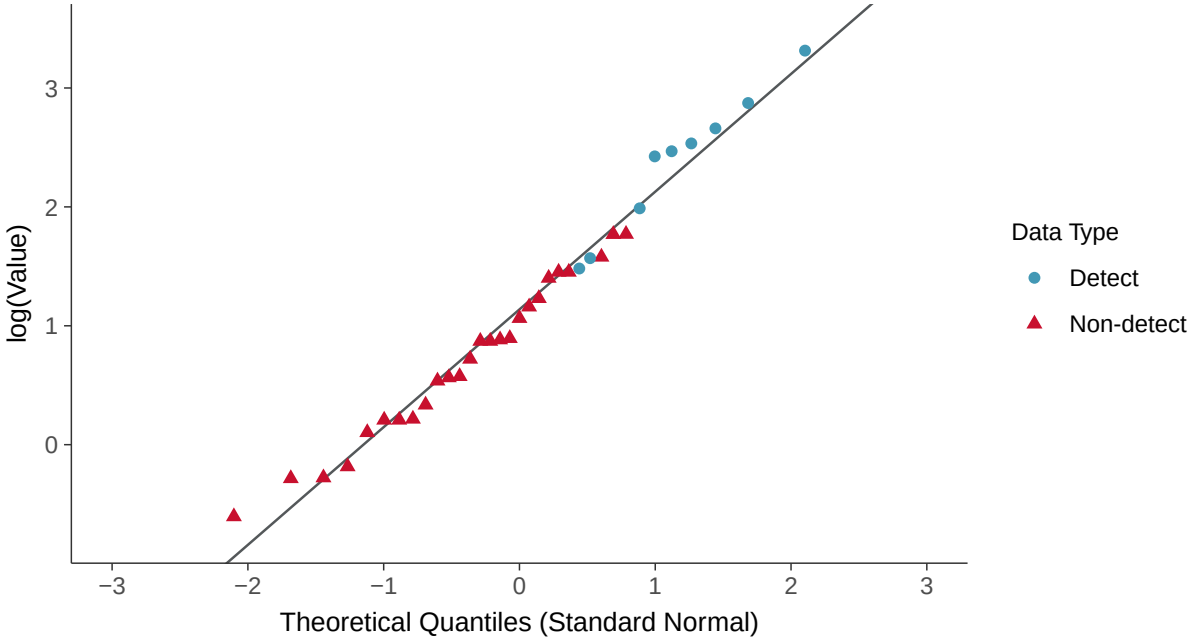
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



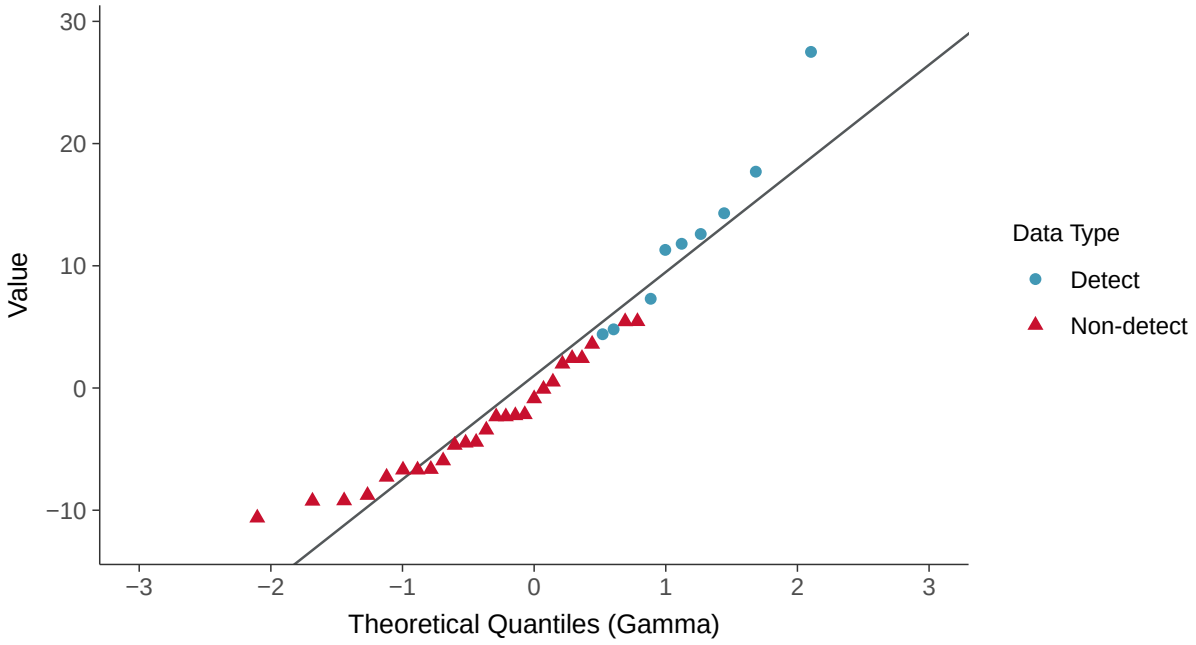
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



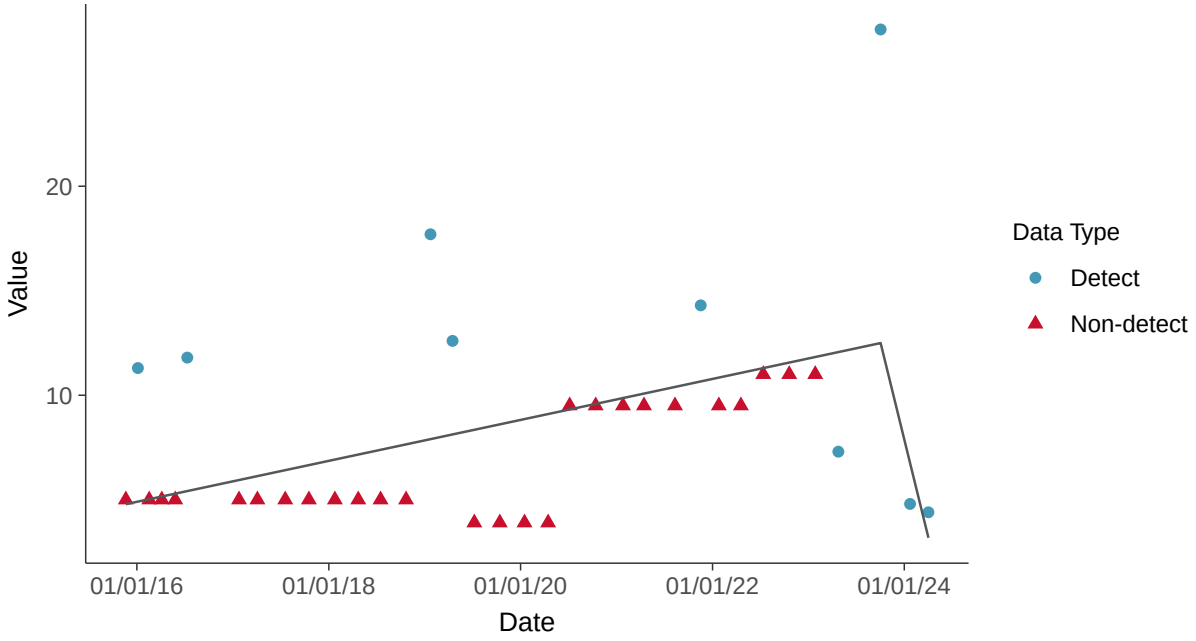
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



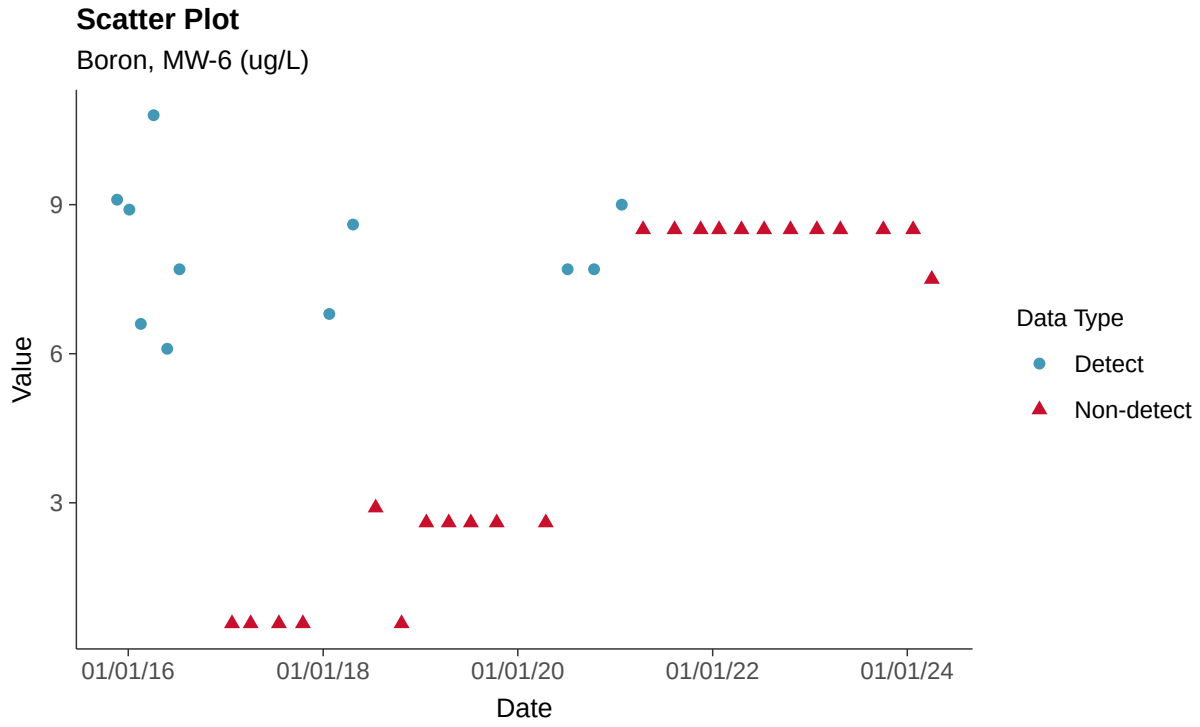
Trend Regression: Piecewise Linear-Linear

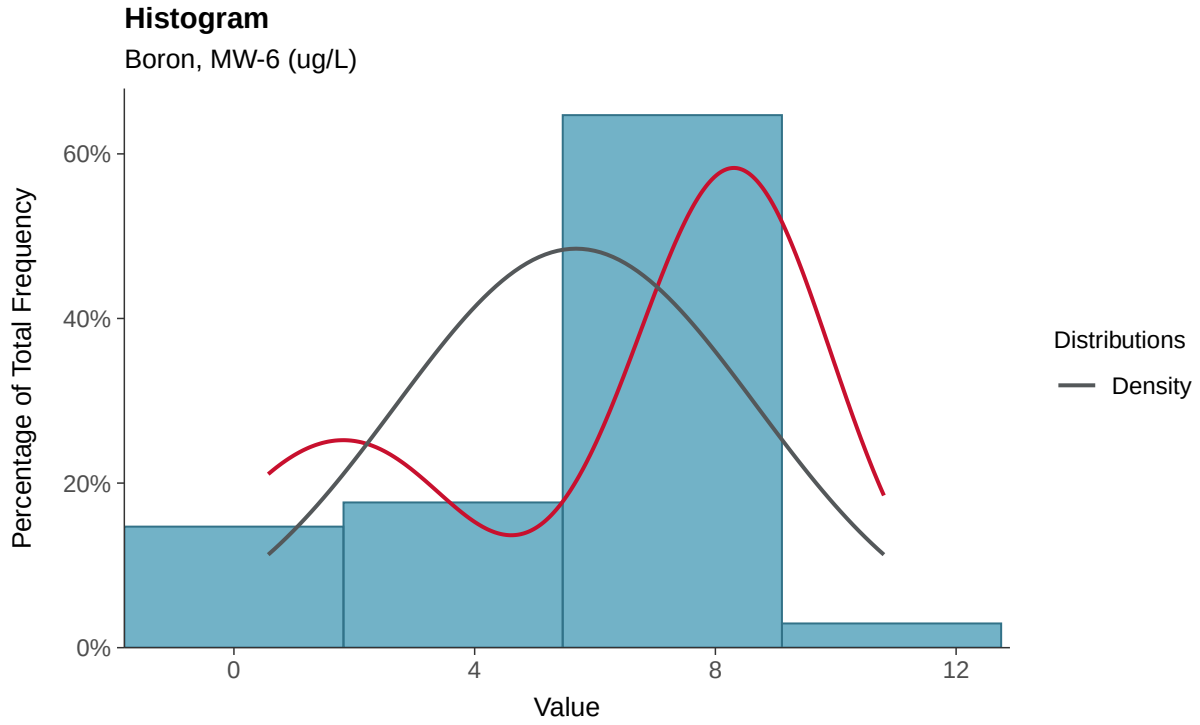
Zinc, MW-6 (ug/L)



App. III: Boron, MW-6

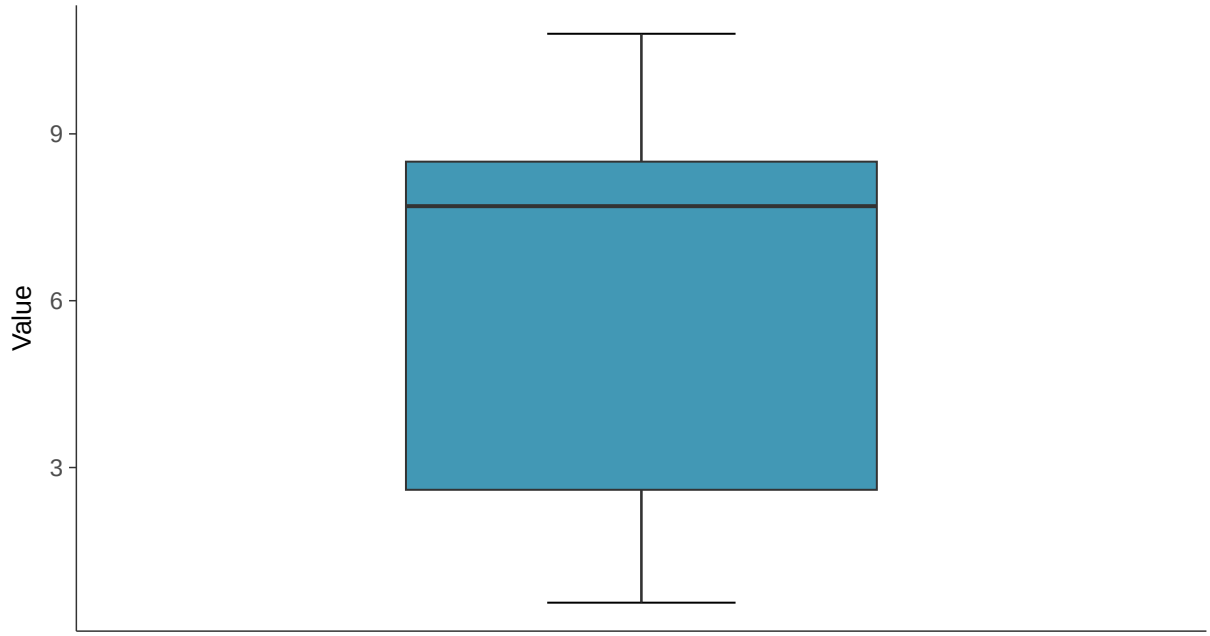
ID: 9_2_105





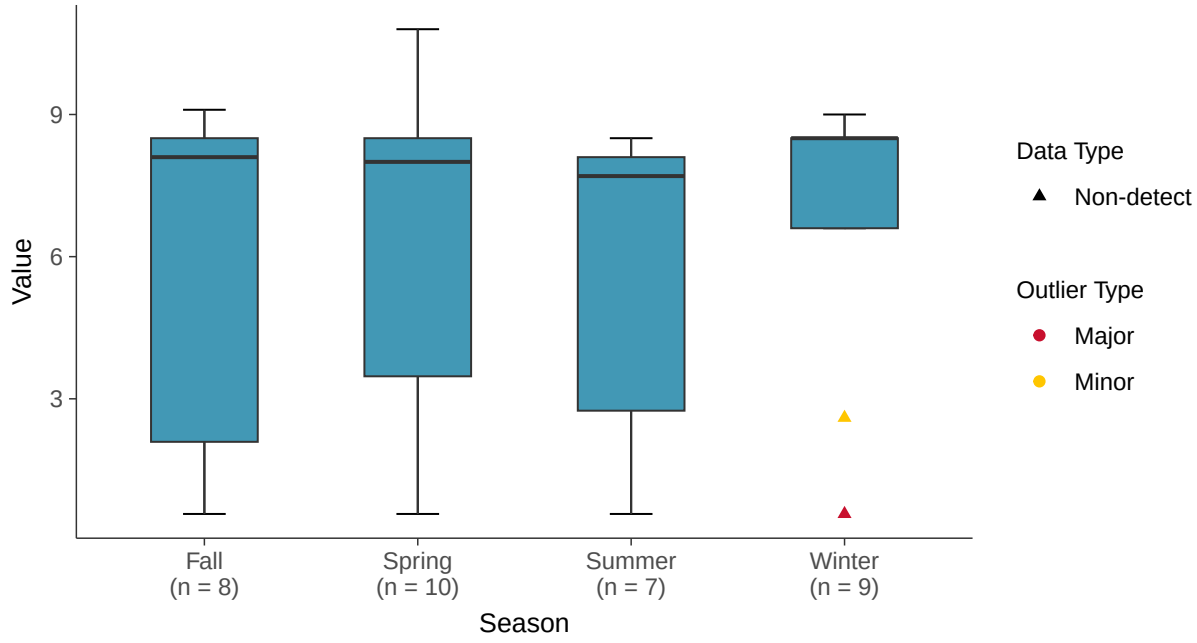
Boxplot

Boron, MW-6 (ug/L)



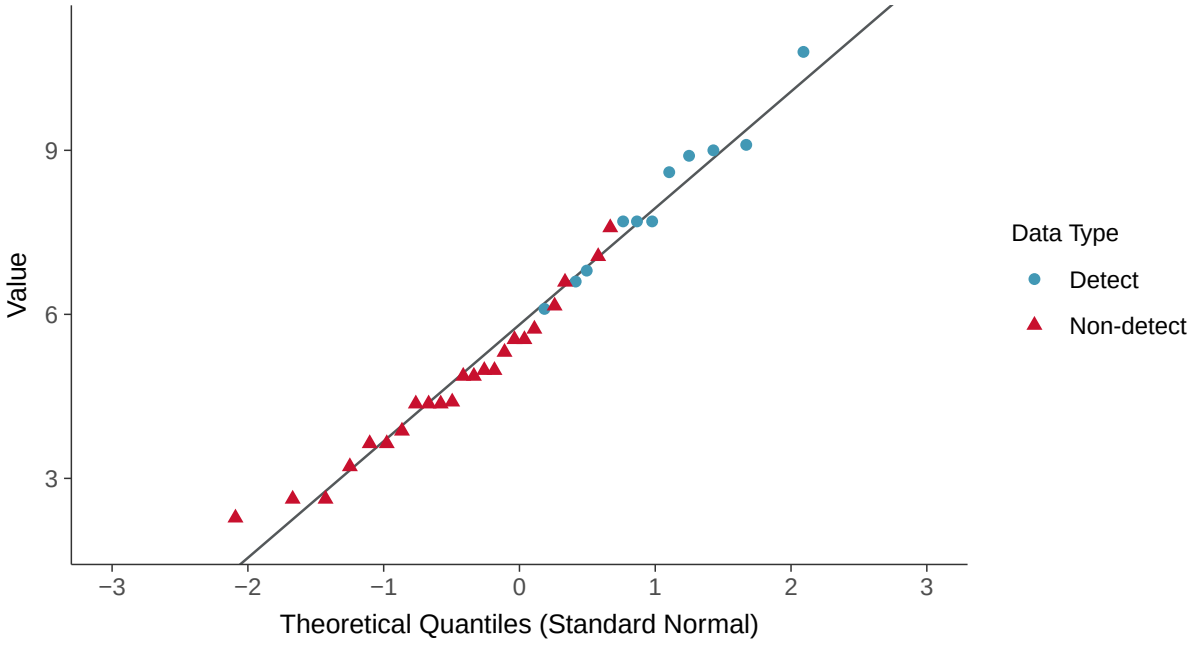
Boxplot by Season

Boron, MW-6 (ug/L)



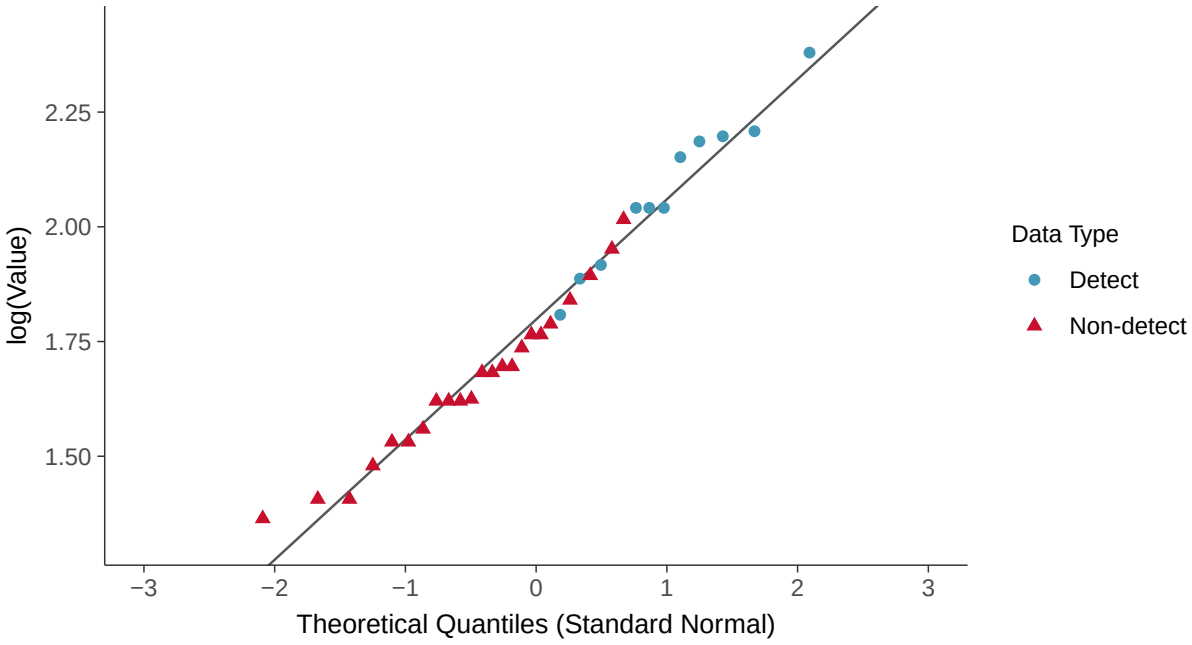
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



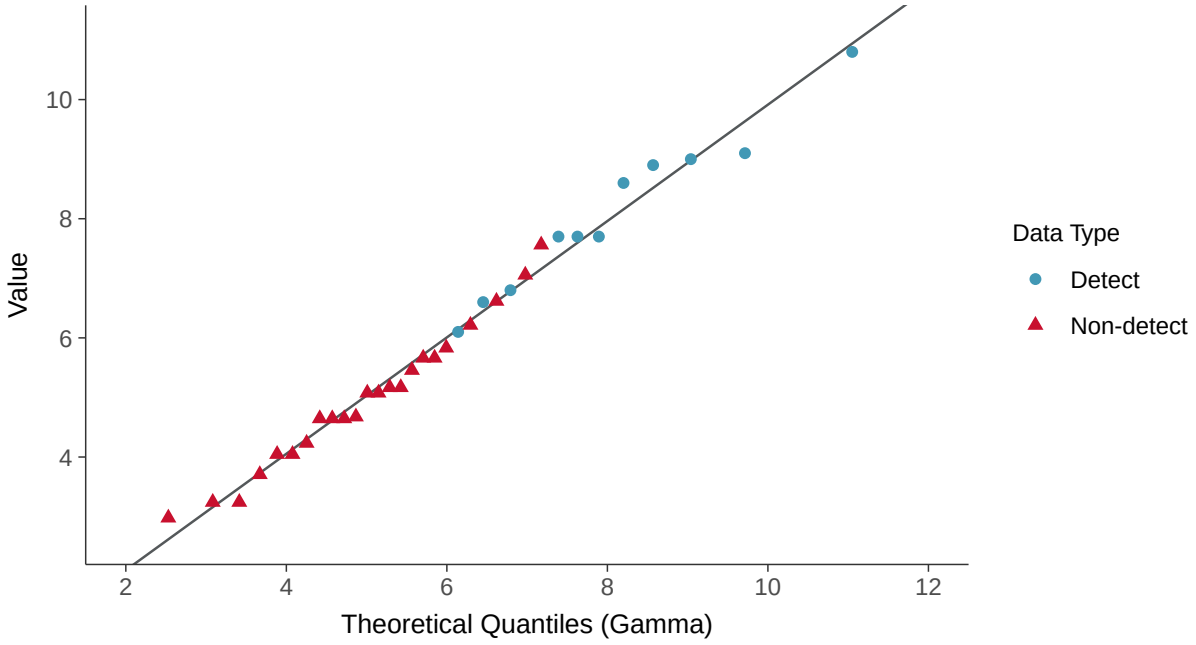
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



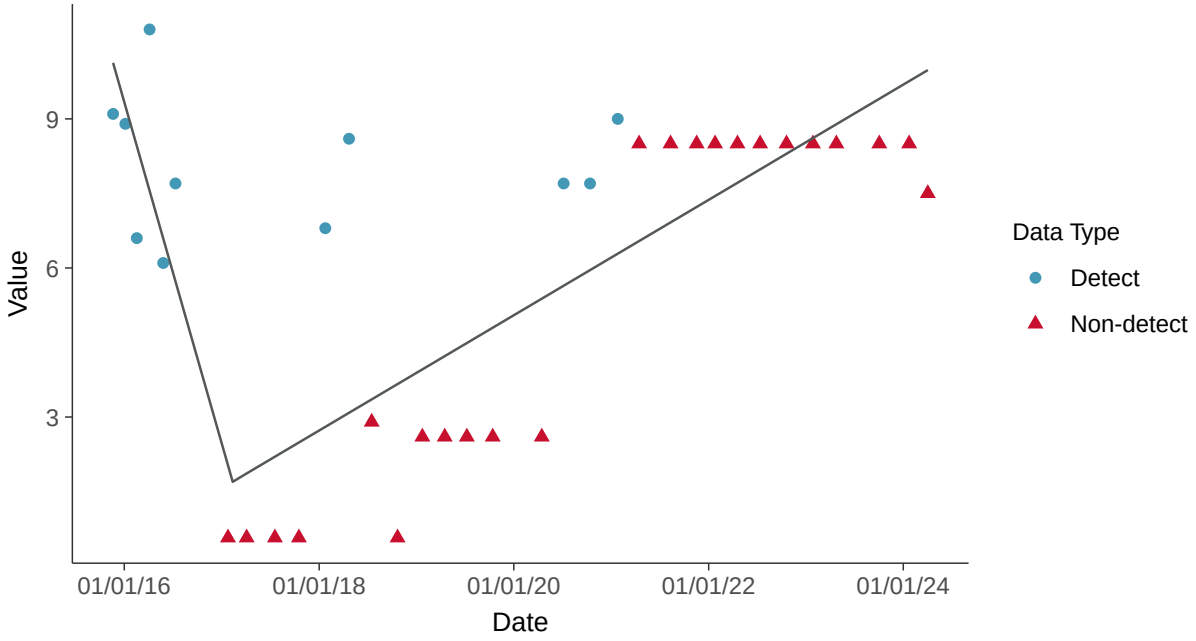
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



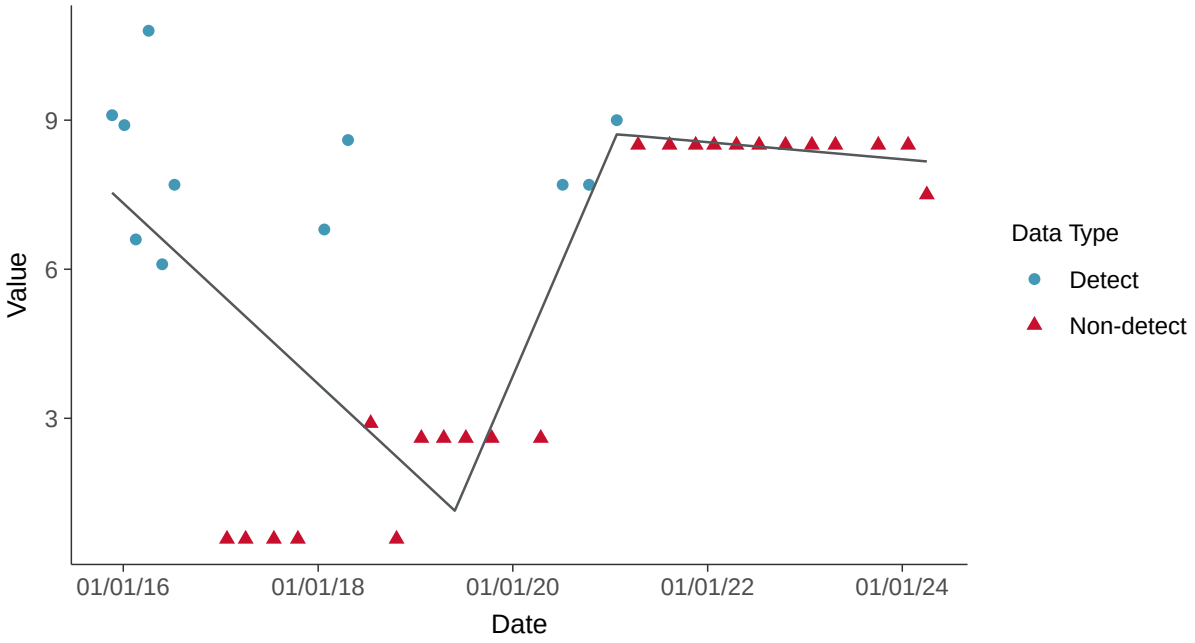
Trend Regression: Piecewise Linear-Linear

Boron, MW-6 (ug/L)



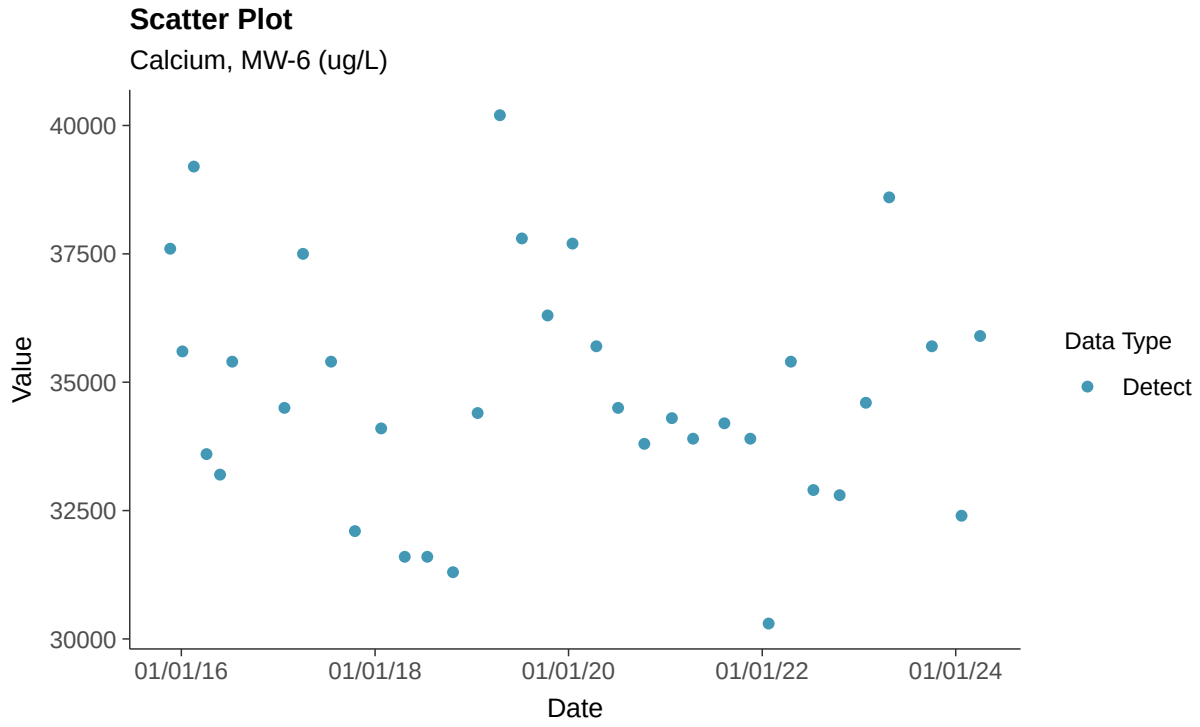
Trend Regression: Piecewise Linear-Linear-Linear

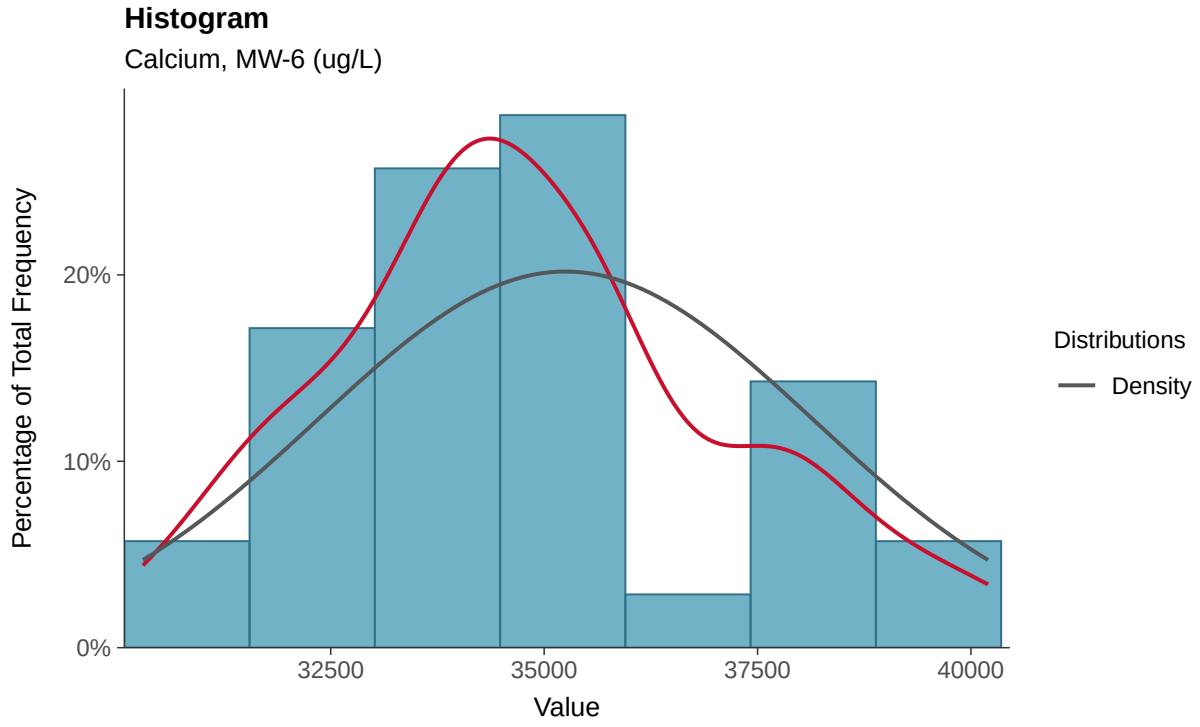
Boron, MW-6 (ug/L)



App. III: Calcium, MW-6

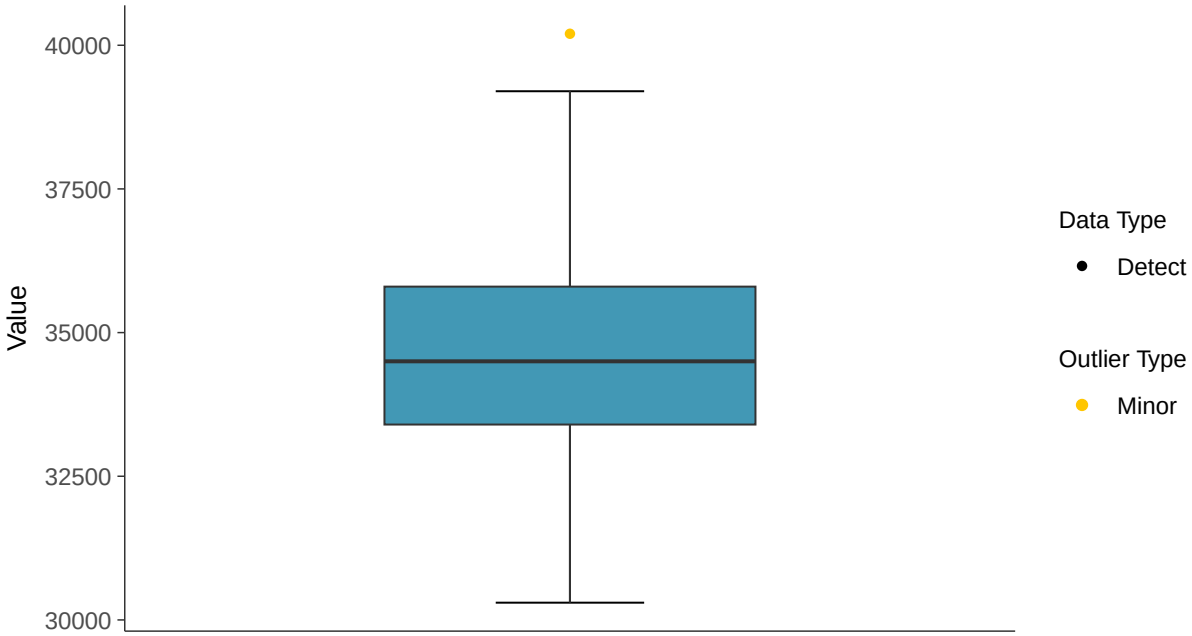
ID: 9_2_107





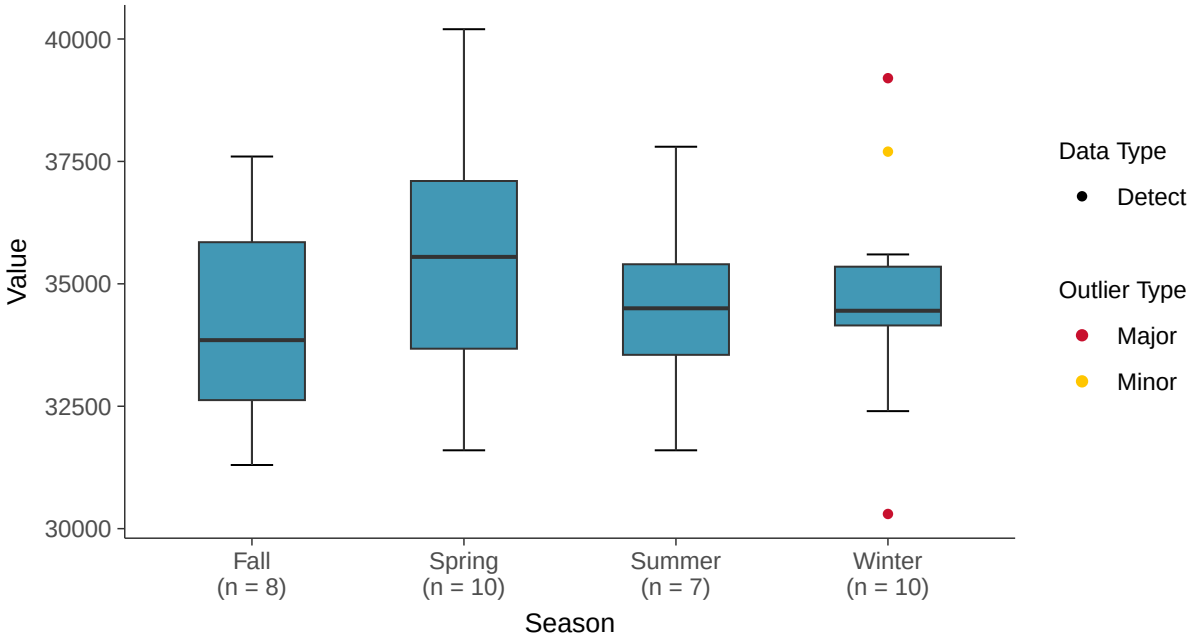
Boxplot

Calcium, MW-6 (ug/L)



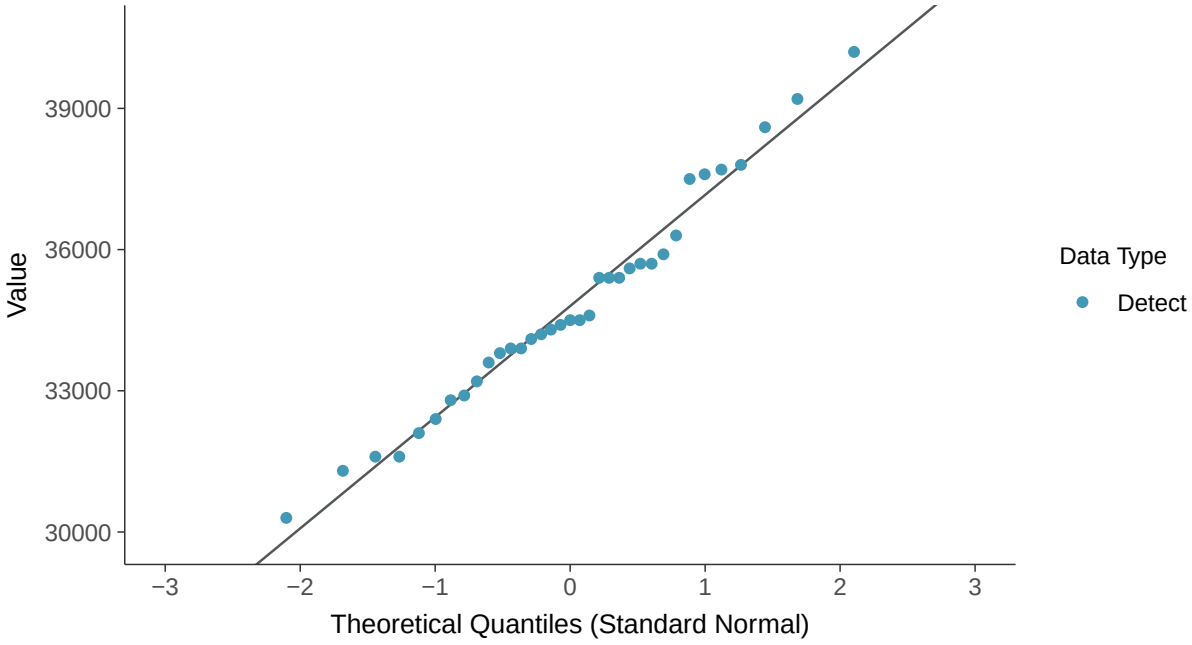
Boxplot by Season

Calcium, MW-6 (ug/L)



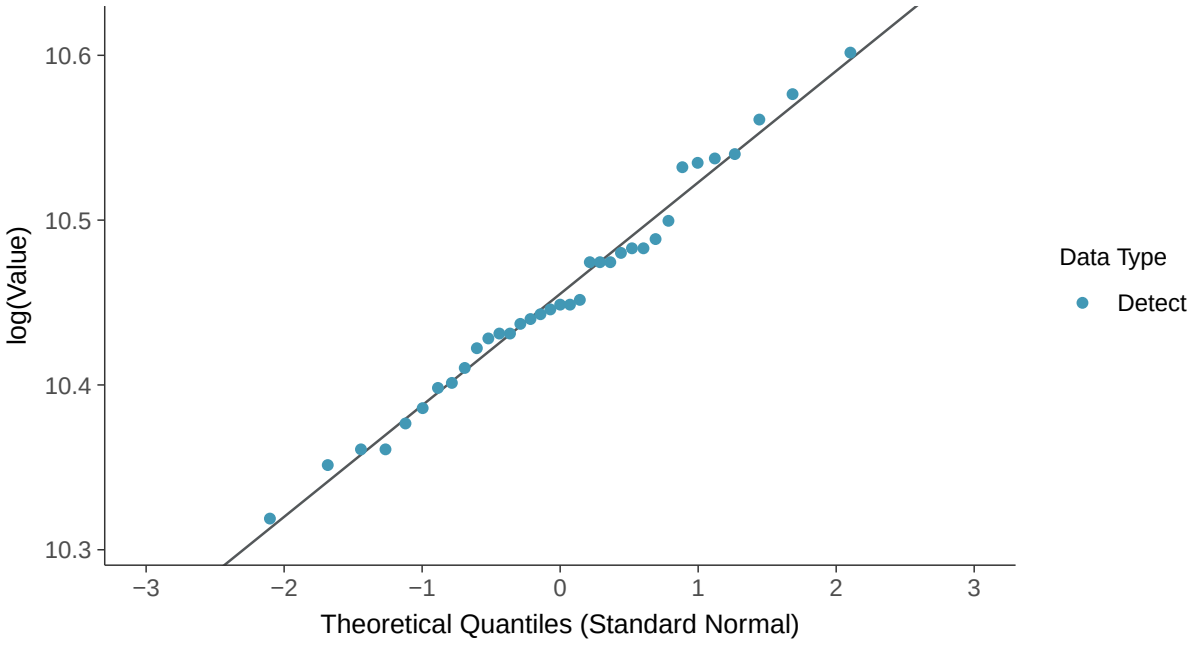
Normal Q-Q plot

Calcium, MW-6 (ug/L)



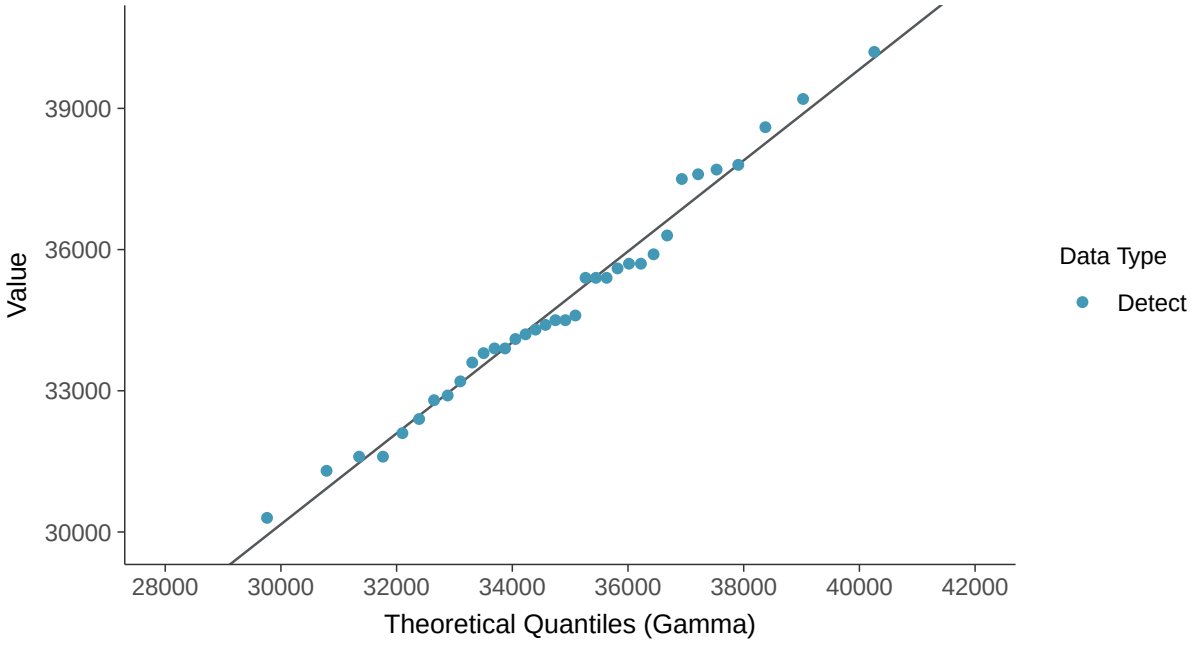
Lognormal Q-Q plot

Calcium, MW-6 (ug/L)



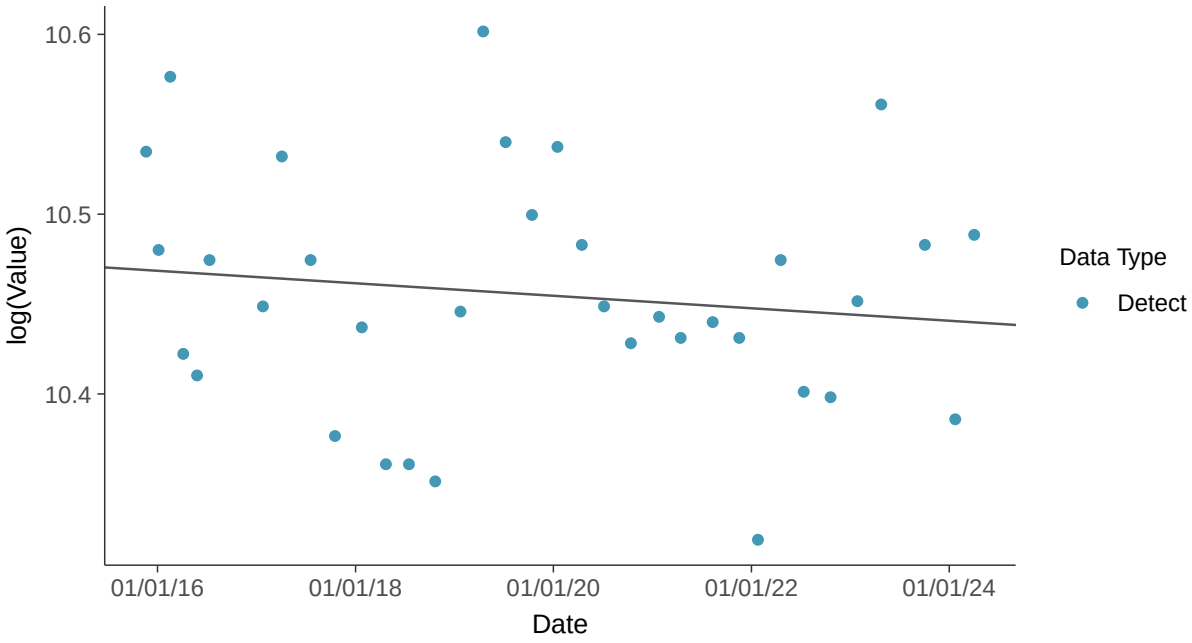
Gamma Q-Q plot

Calcium, MW-6 (ug/L)



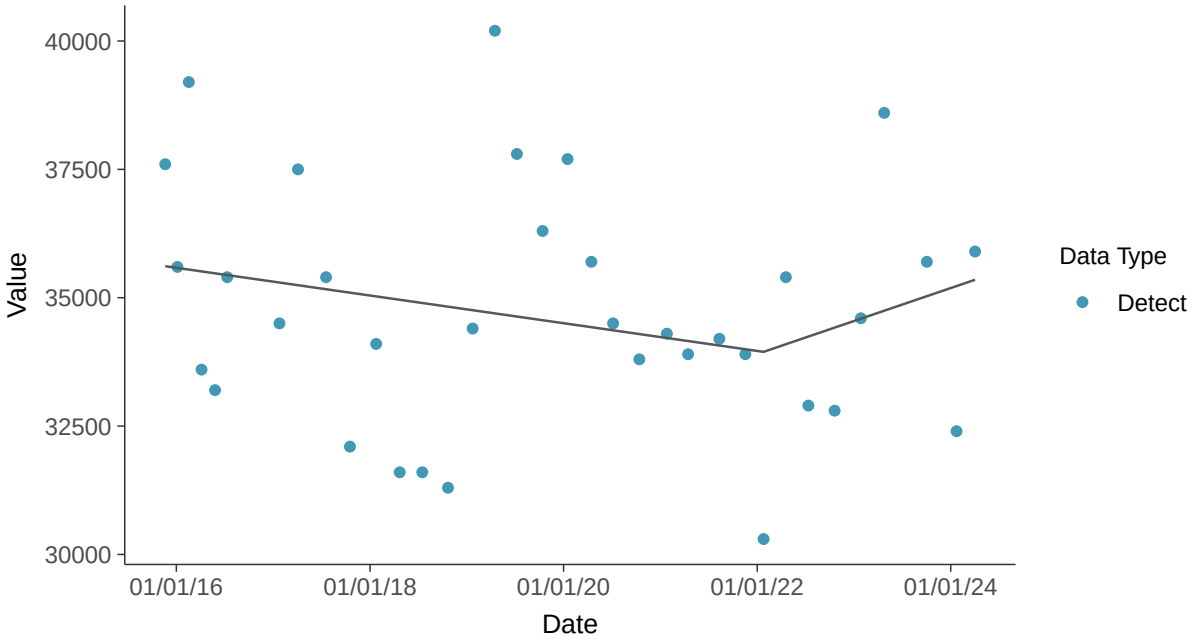
Trend Regression: Lognormal MLE

Calcium, MW-6 (ug/L)



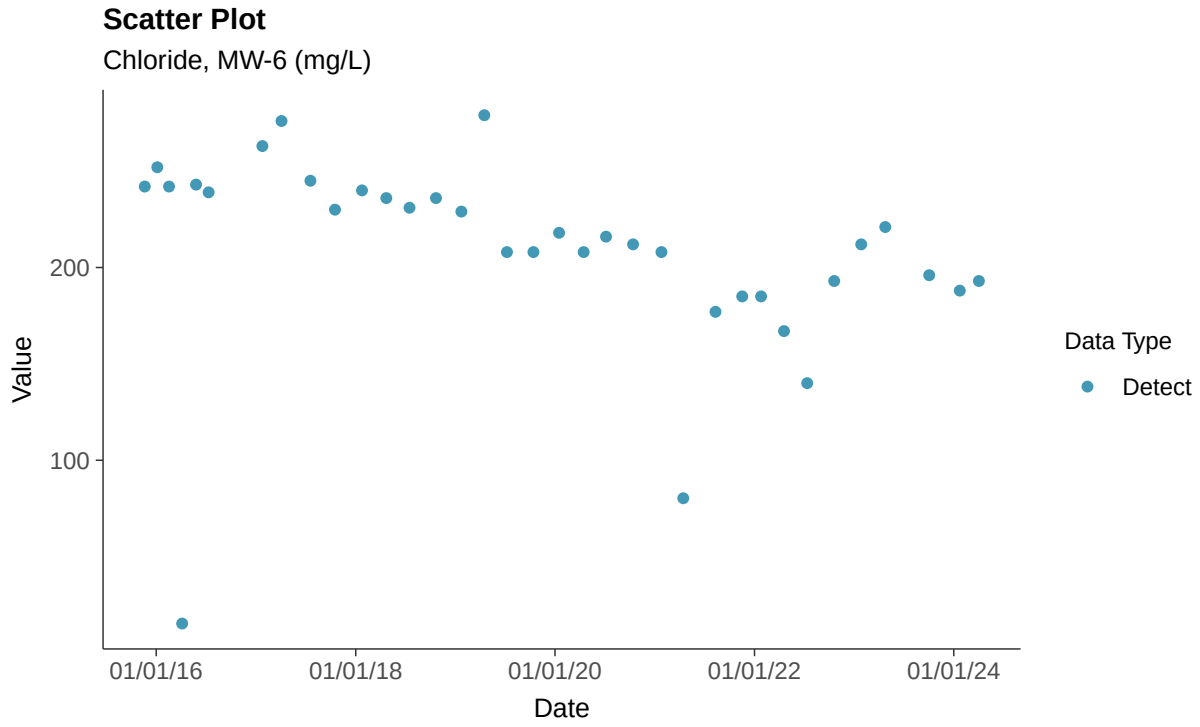
Trend Regression: Piecewise Linear-Linear

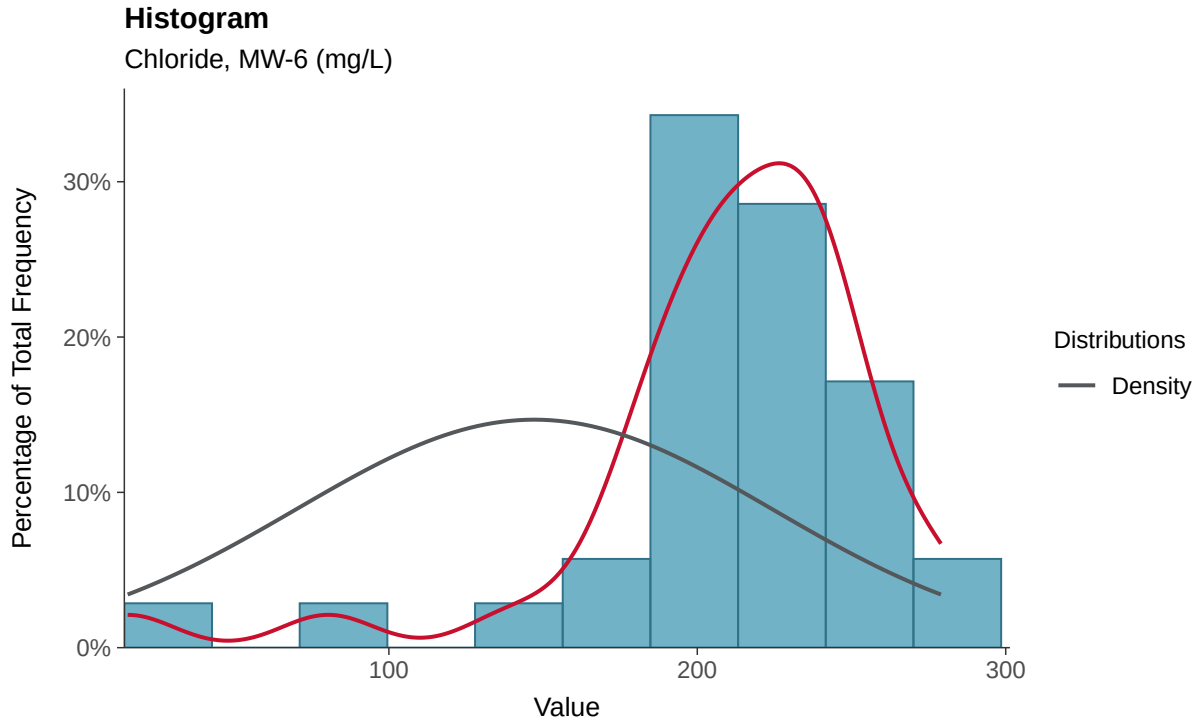
Calcium, MW-6 (ug/L)



App. III: Chloride, MW-6

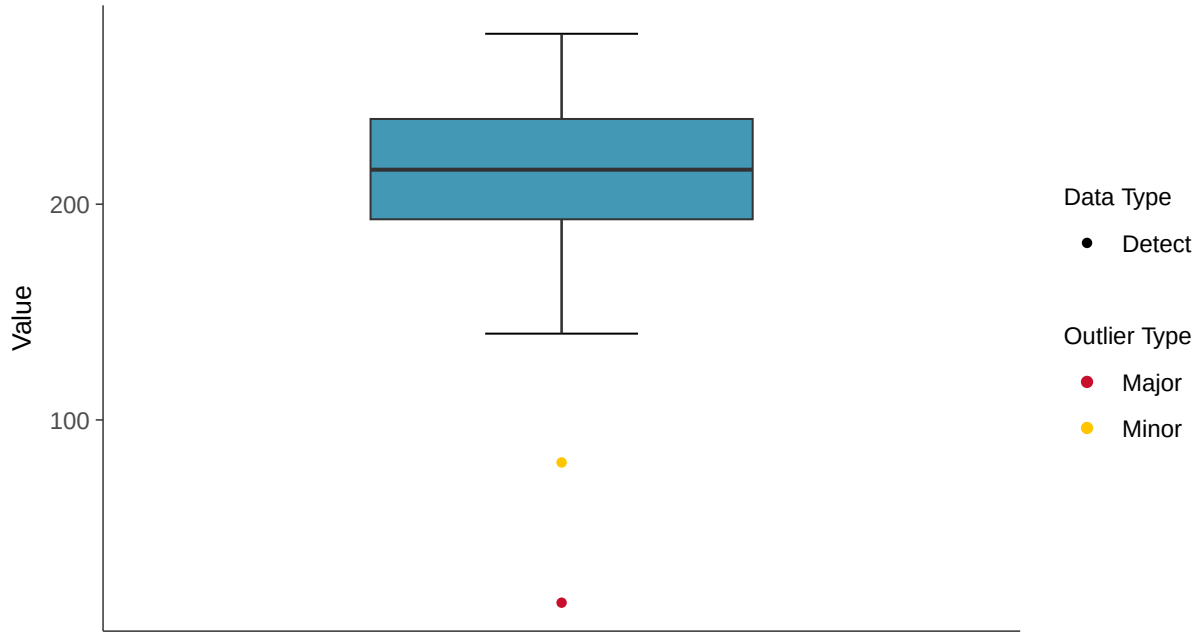
ID: 9_2_108





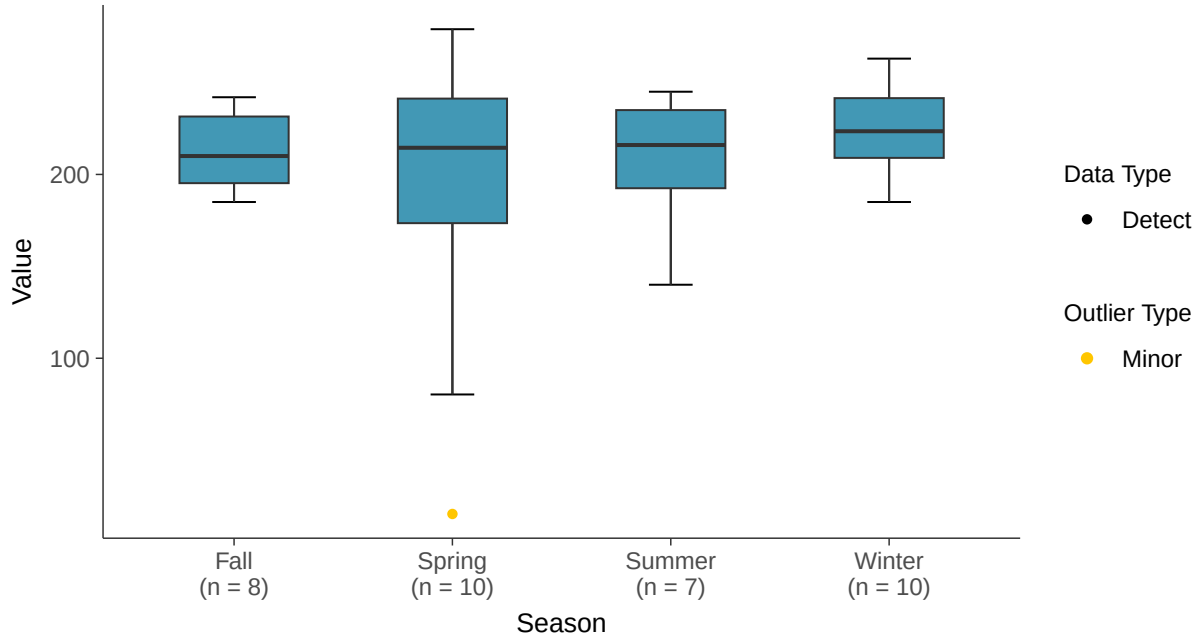
Boxplot

Chloride, MW-6 (mg/L)



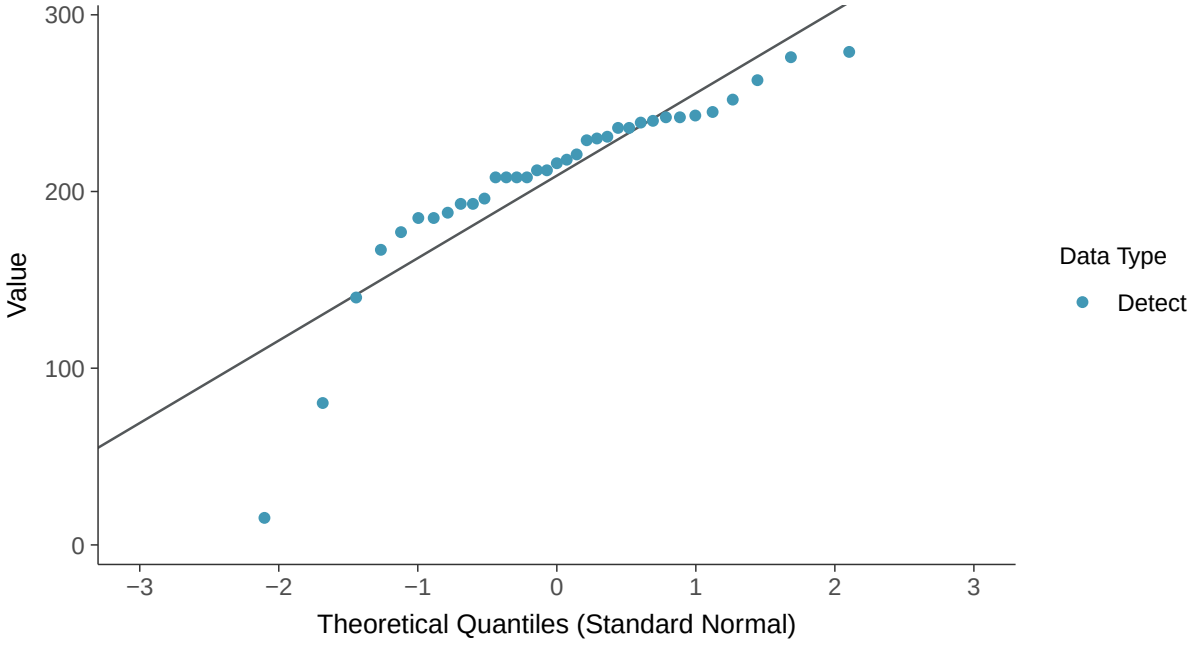
Boxplot by Season

Chloride, MW-6 (mg/L)



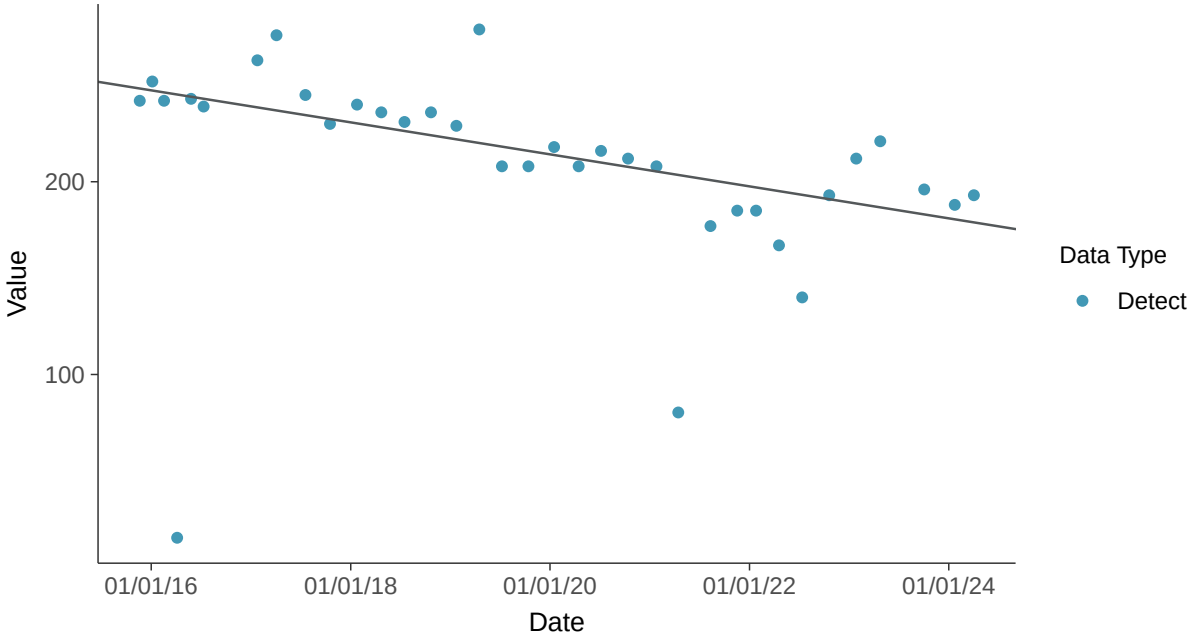
Normal Q-Q plot

Chloride, MW-6 (mg/L)



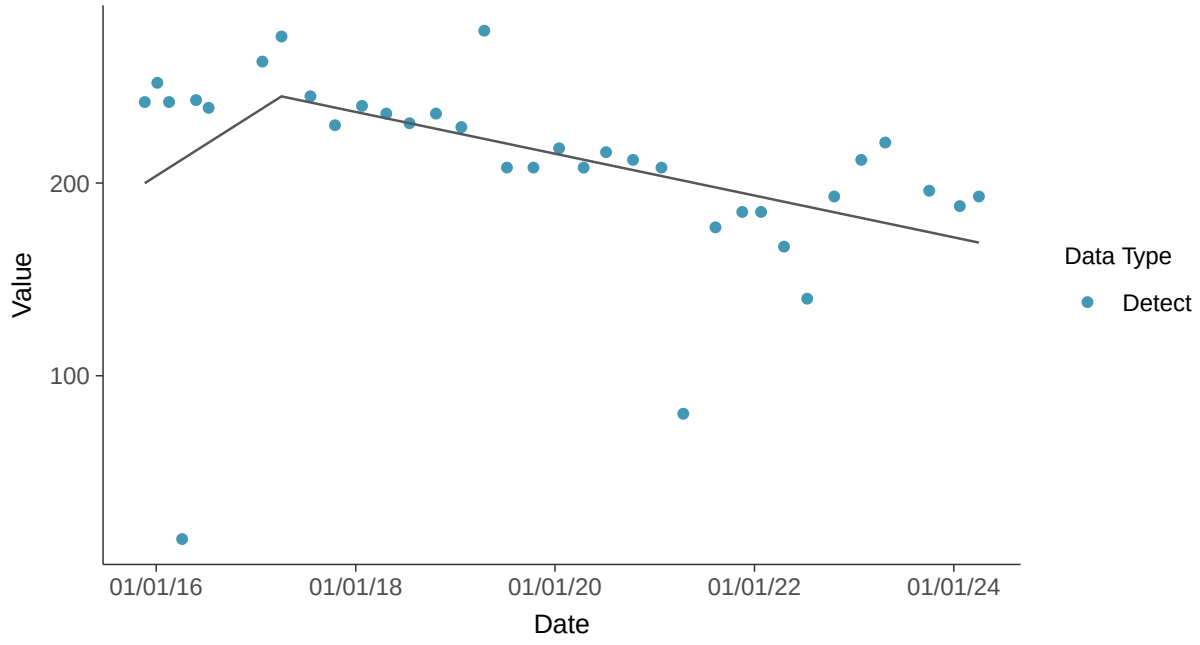
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-6 (mg/L)



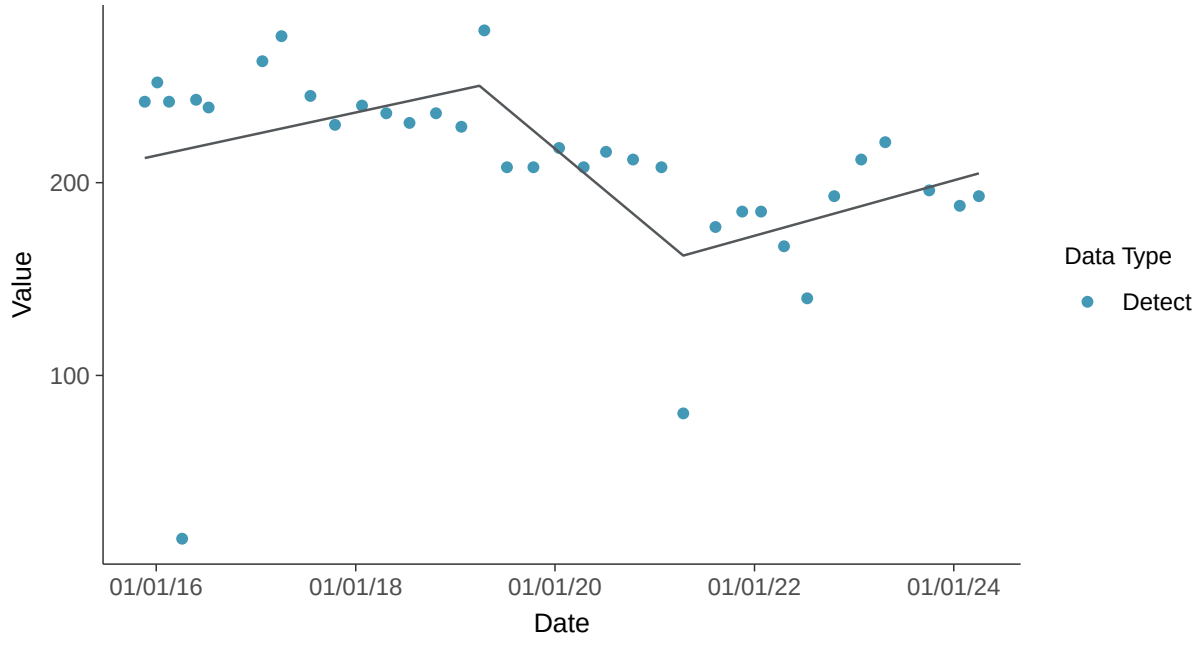
Trend Regression: Piecewise Linear-Linear

Chloride, MW-6 (mg/L)



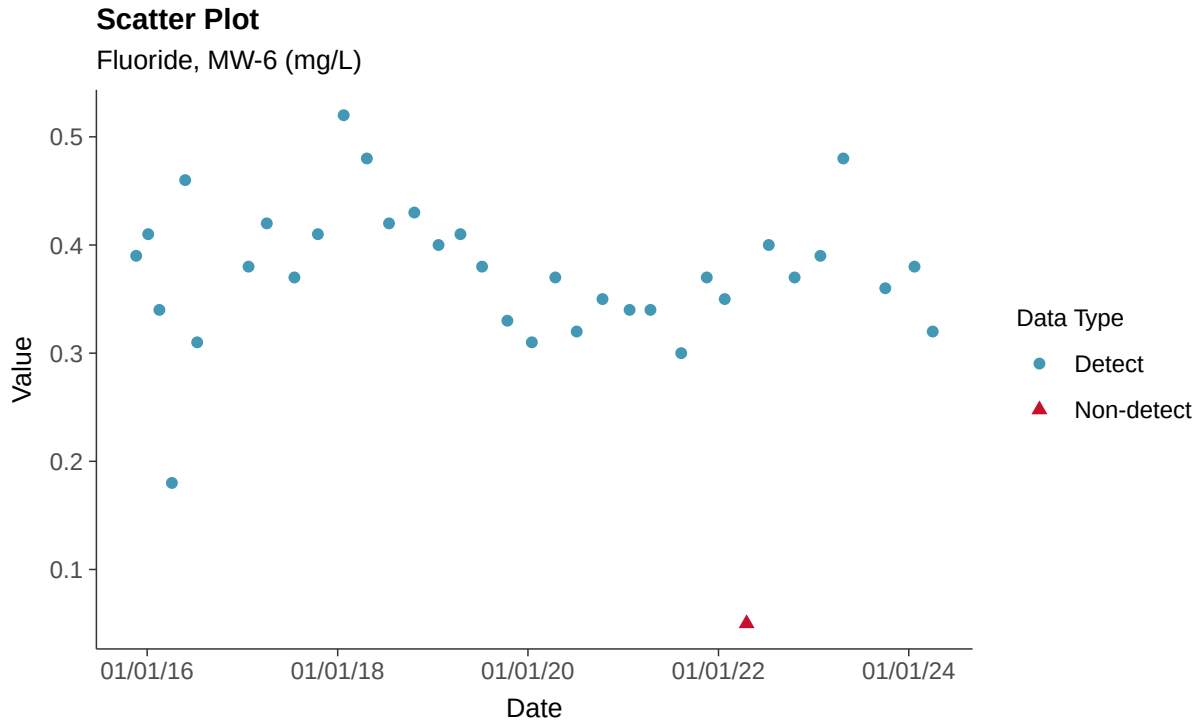
Trend Regression: Piecewise Linear-Linear-Linear

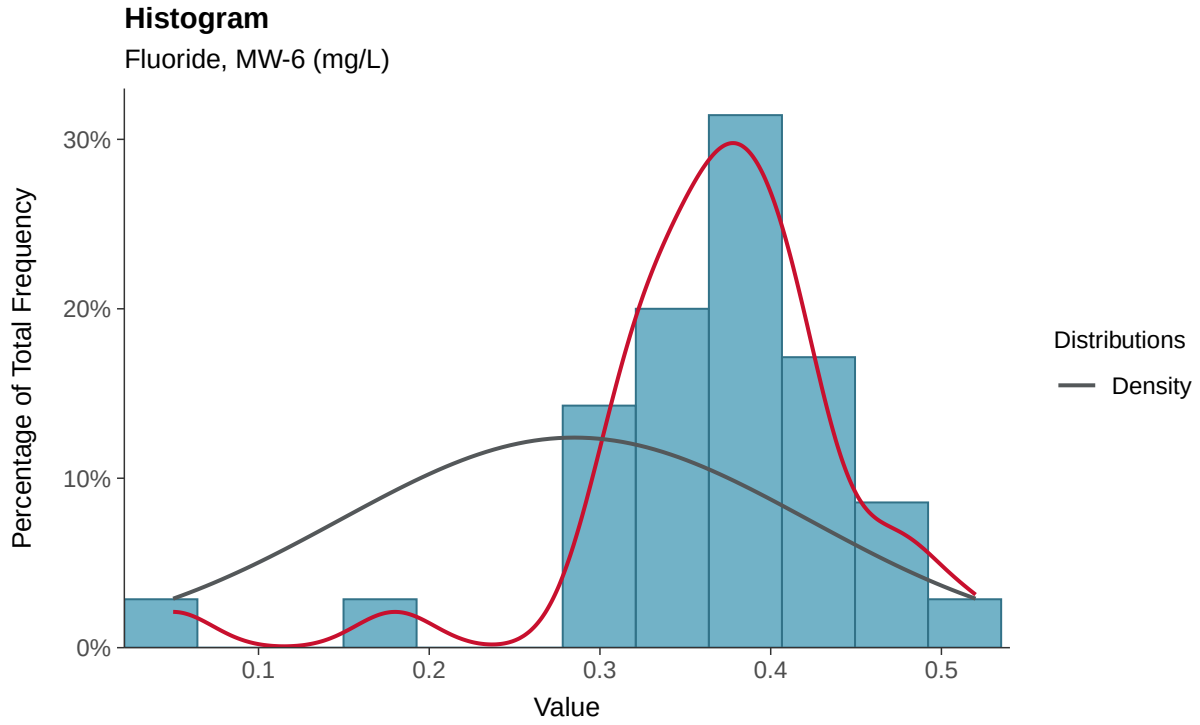
Chloride, MW-6 (mg/L)



App. III: Fluoride, MW-6

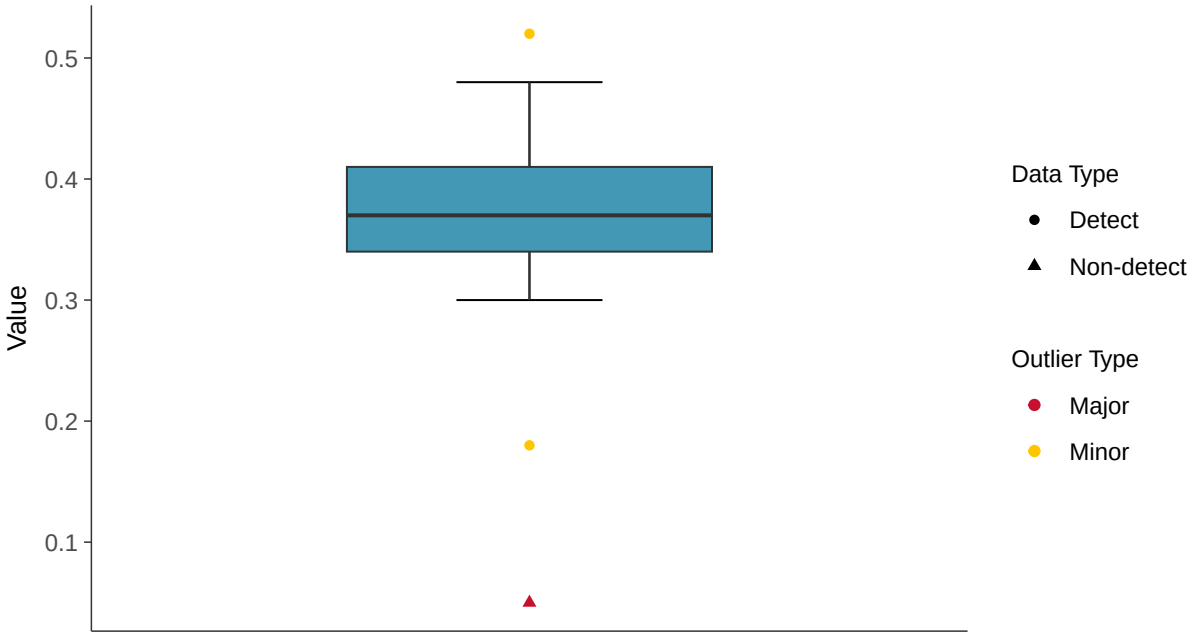
ID: 9_2_112





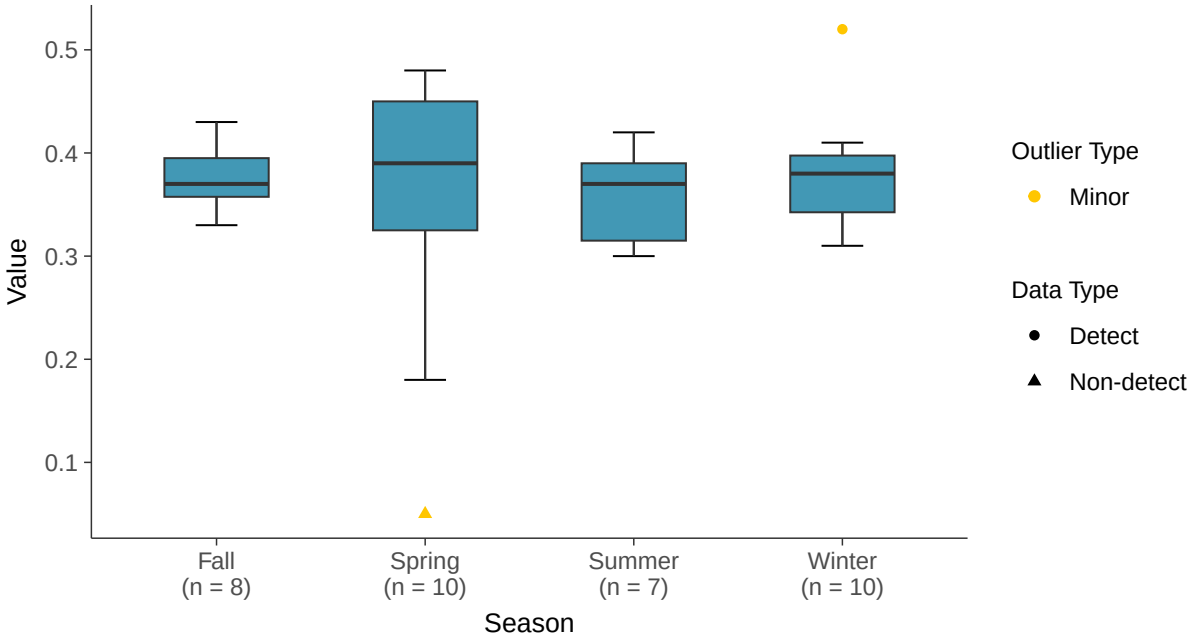
Boxplot

Fluoride, MW-6 (mg/L)



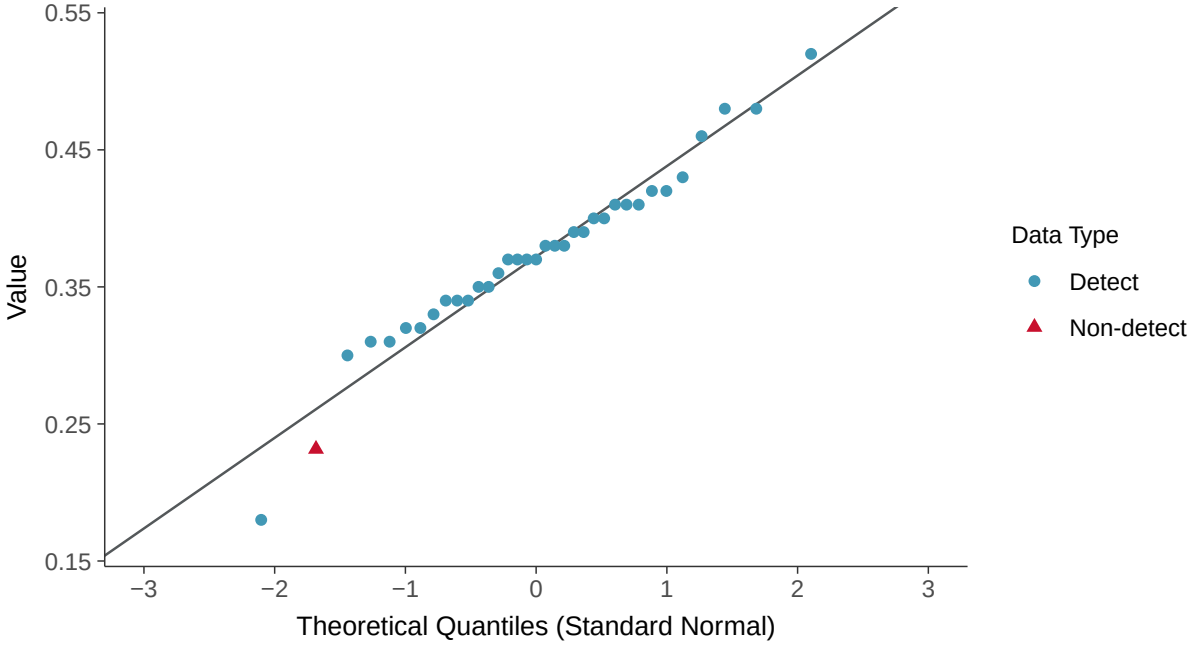
Boxplot by Season

Fluoride, MW-6 (mg/L)



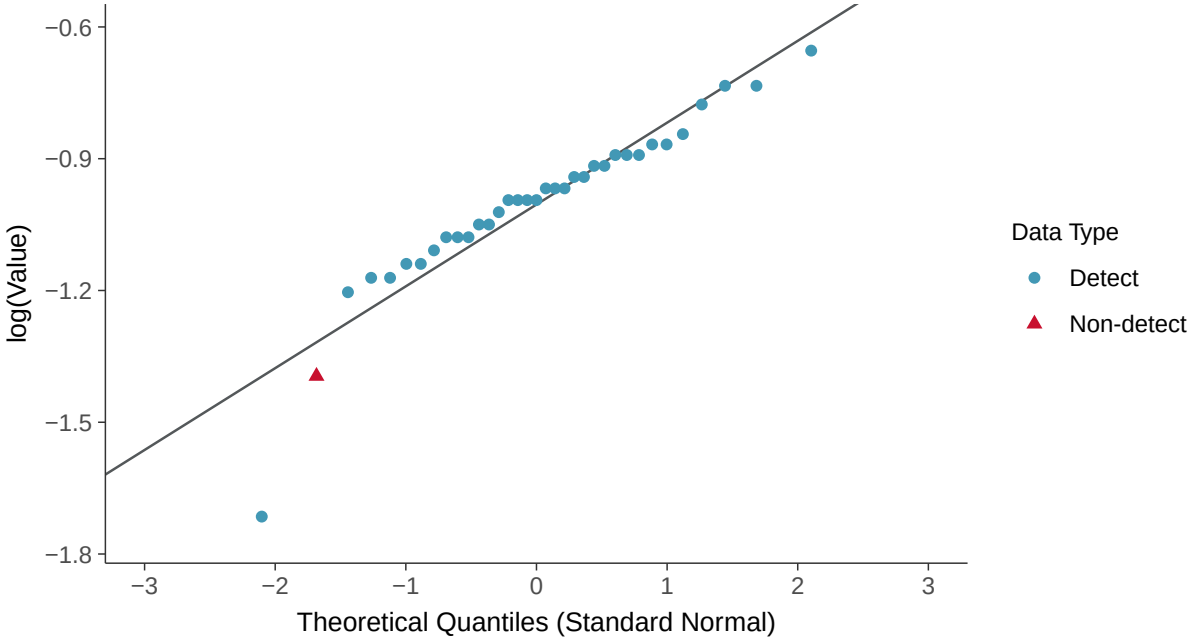
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



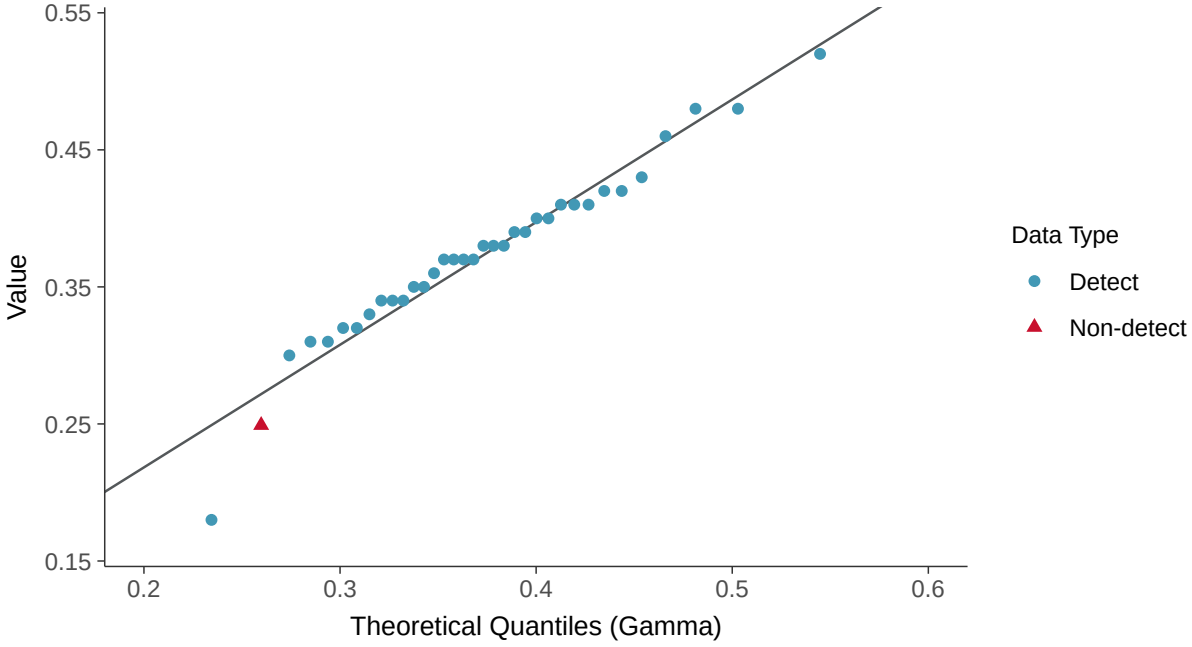
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



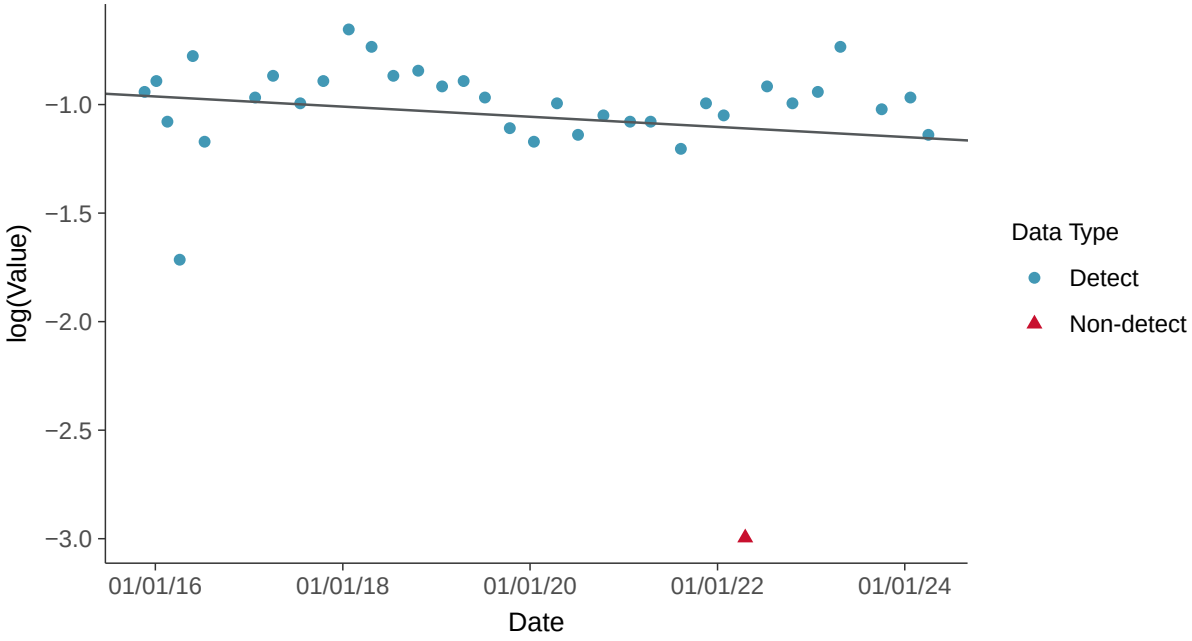
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



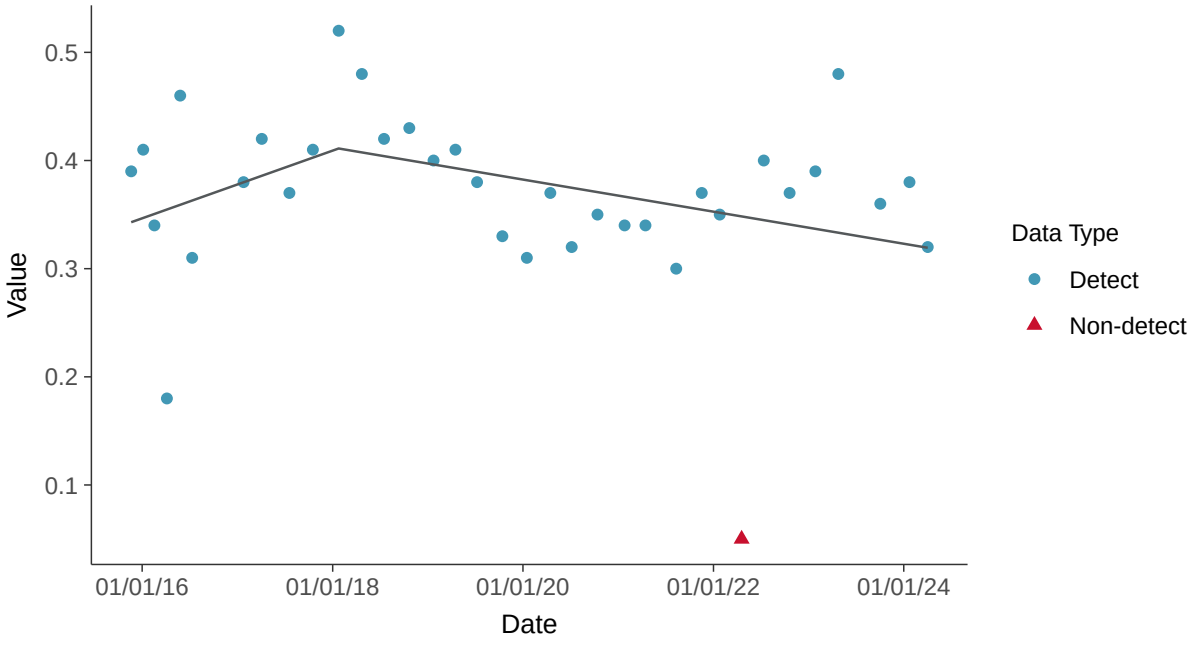
Trend Regression: Lognormal MLE

Fluoride, MW-6 (mg/L)



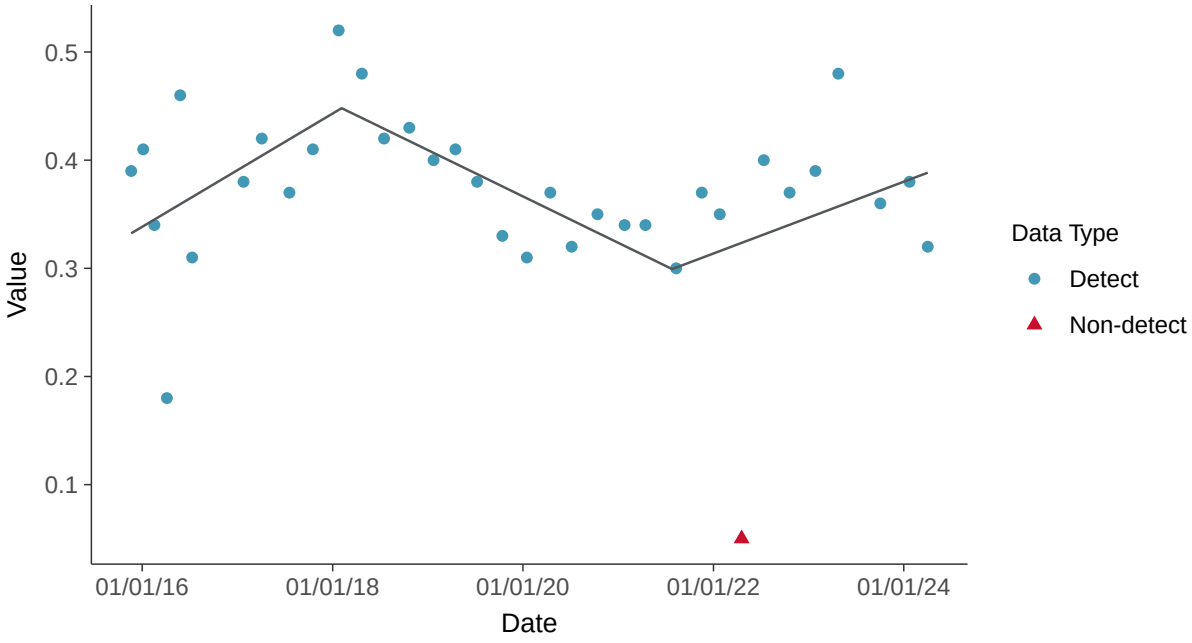
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-6 (mg/L)



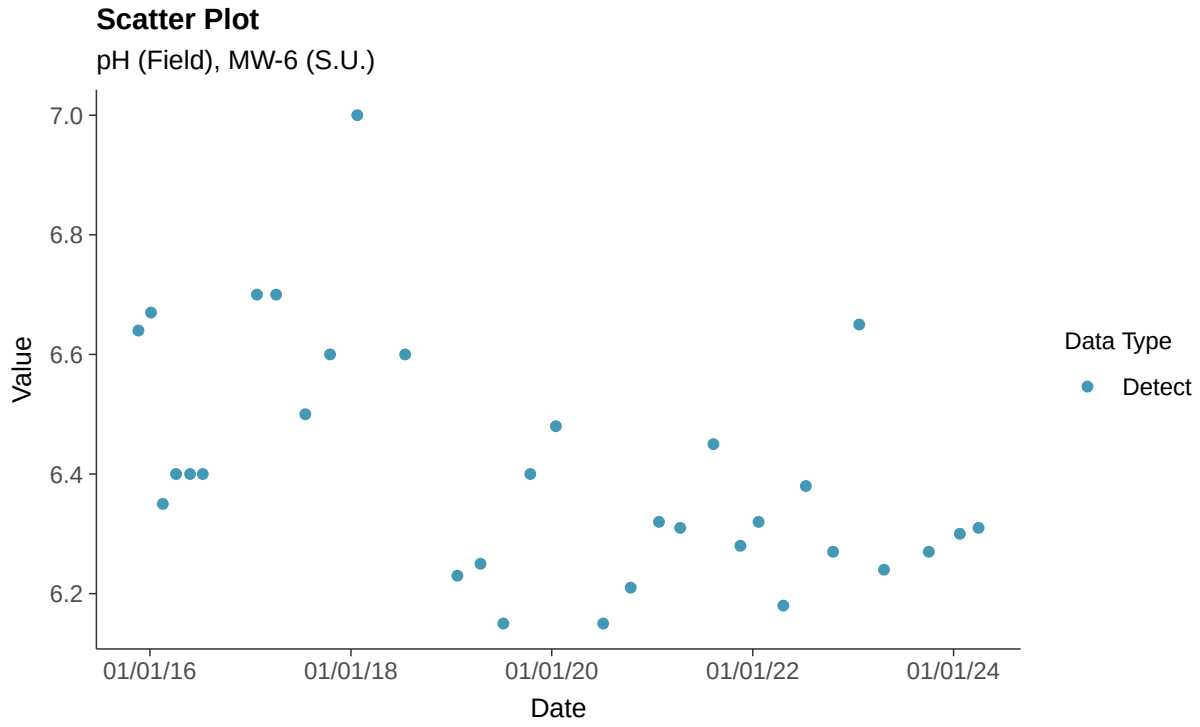
Trend Regression: Piecewise Linear-Linear-Linear

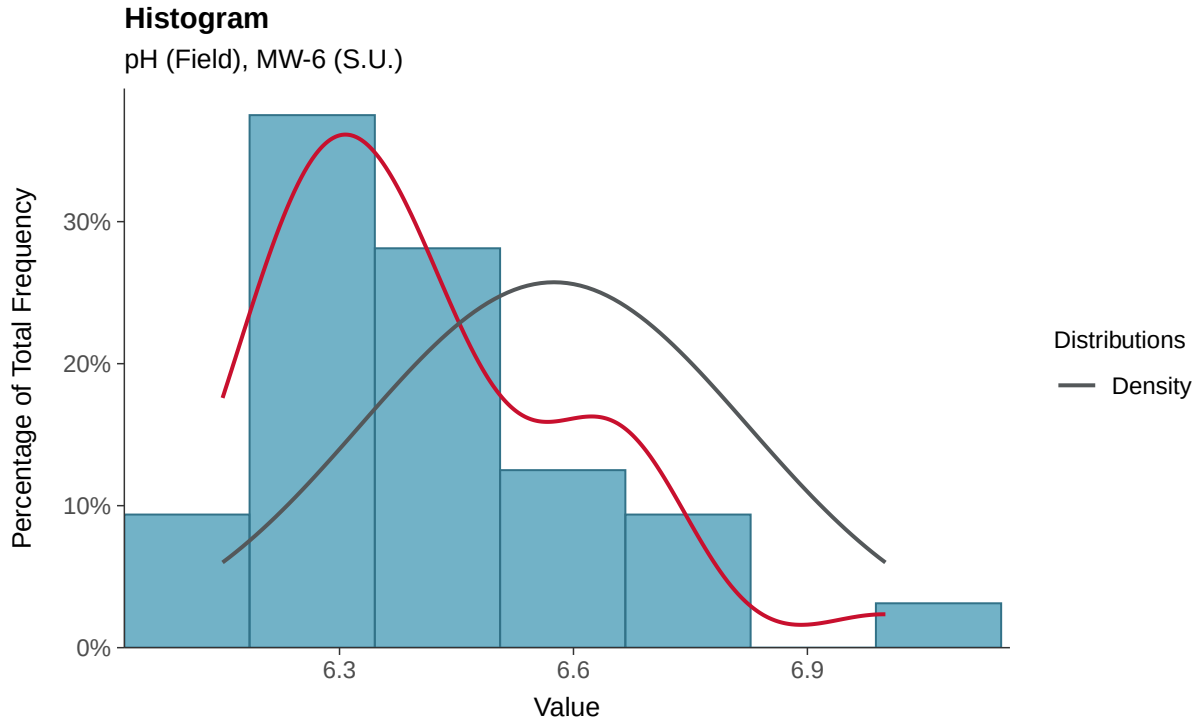
Fluoride, MW-6 (mg/L)



App. III: pH (Field), MW-6

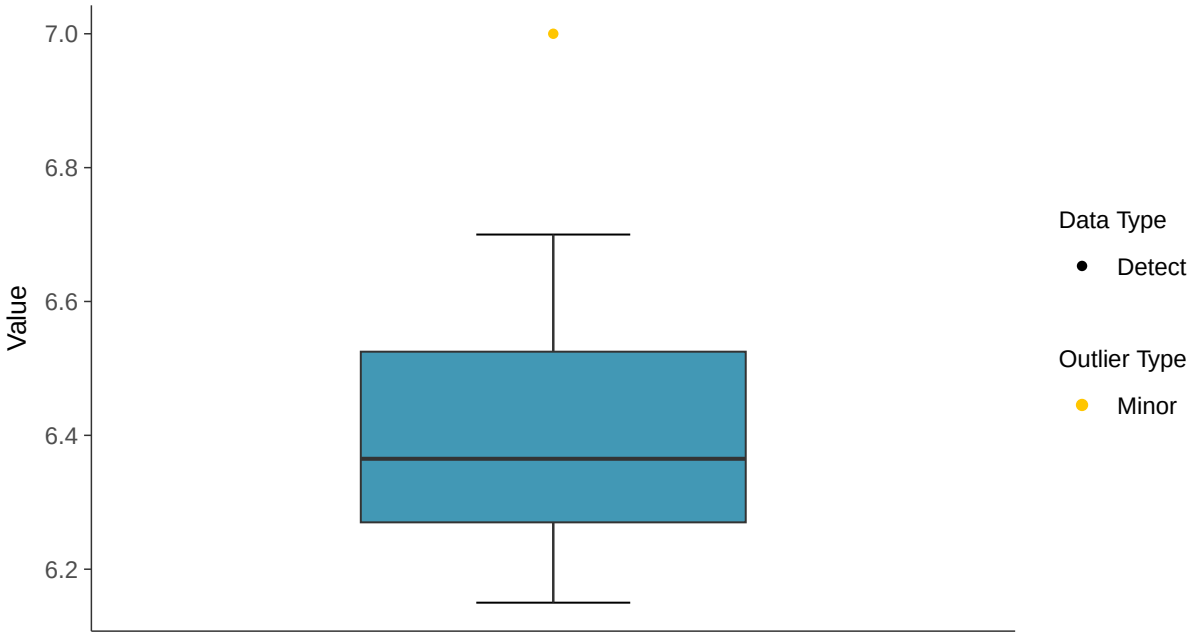
ID: 9_2_118





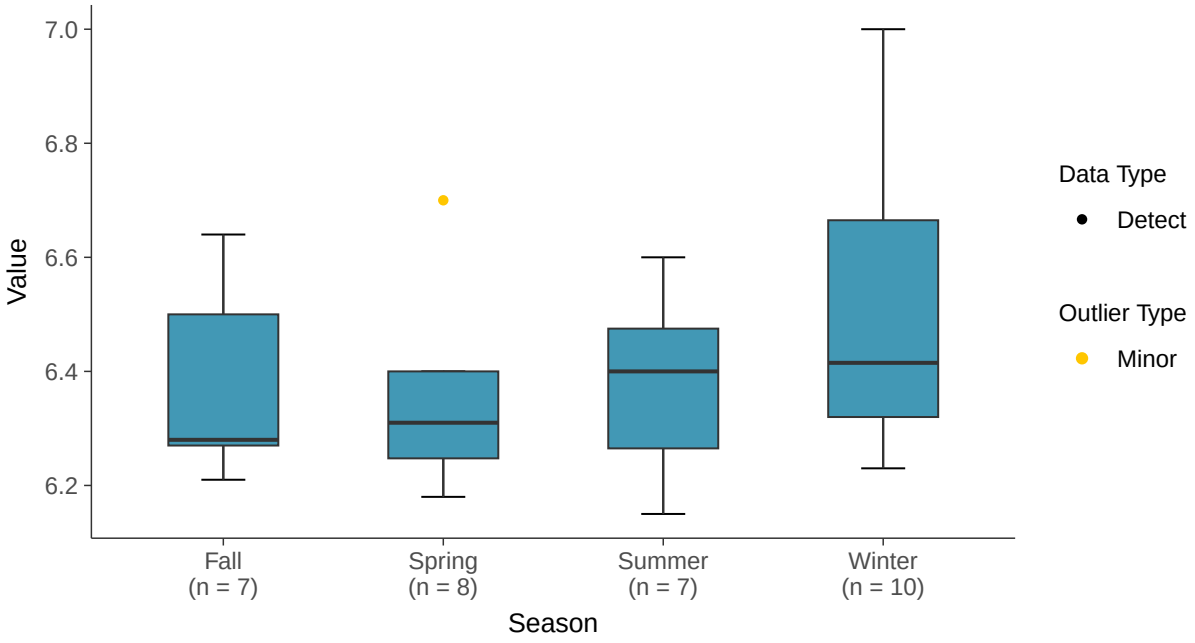
Boxplot

pH (Field), MW-6 (S.U.)



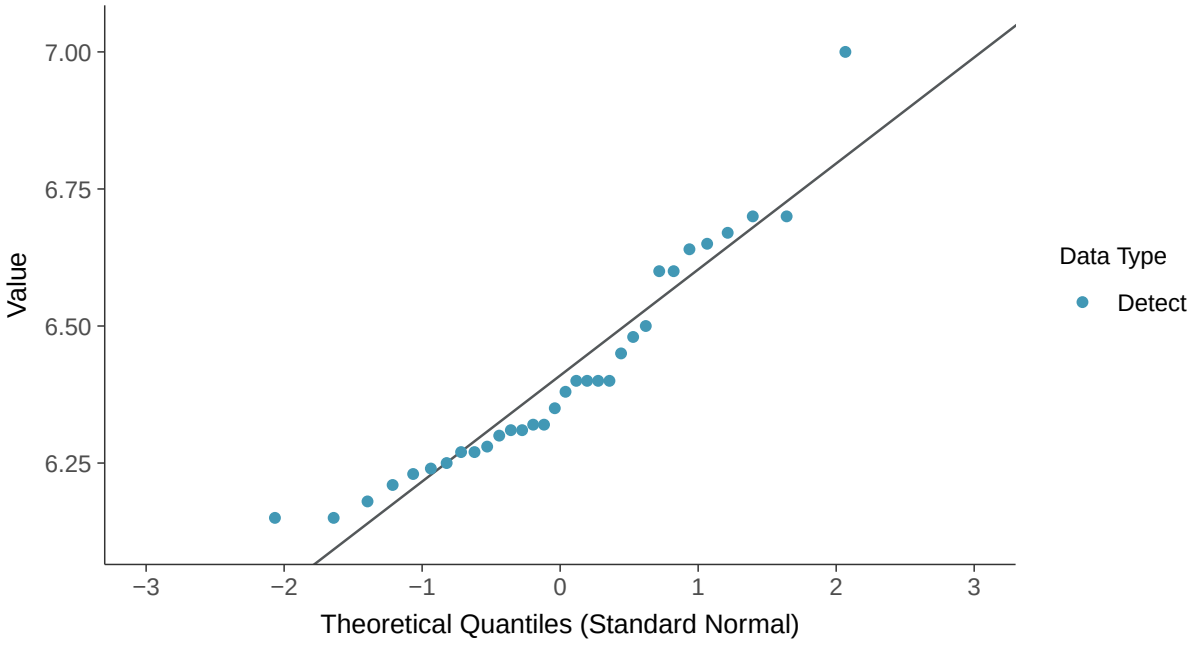
Boxplot by Season

pH (Field), MW-6 (S.U.)



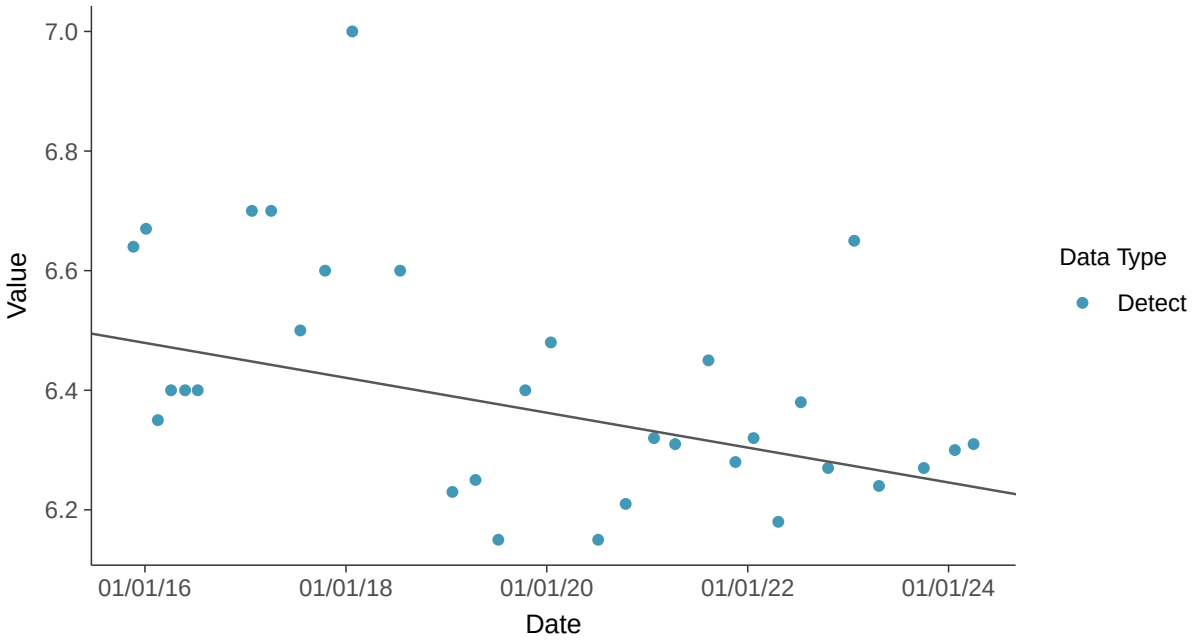
Normal Q-Q plot

pH (Field), MW-6 (S.U.)



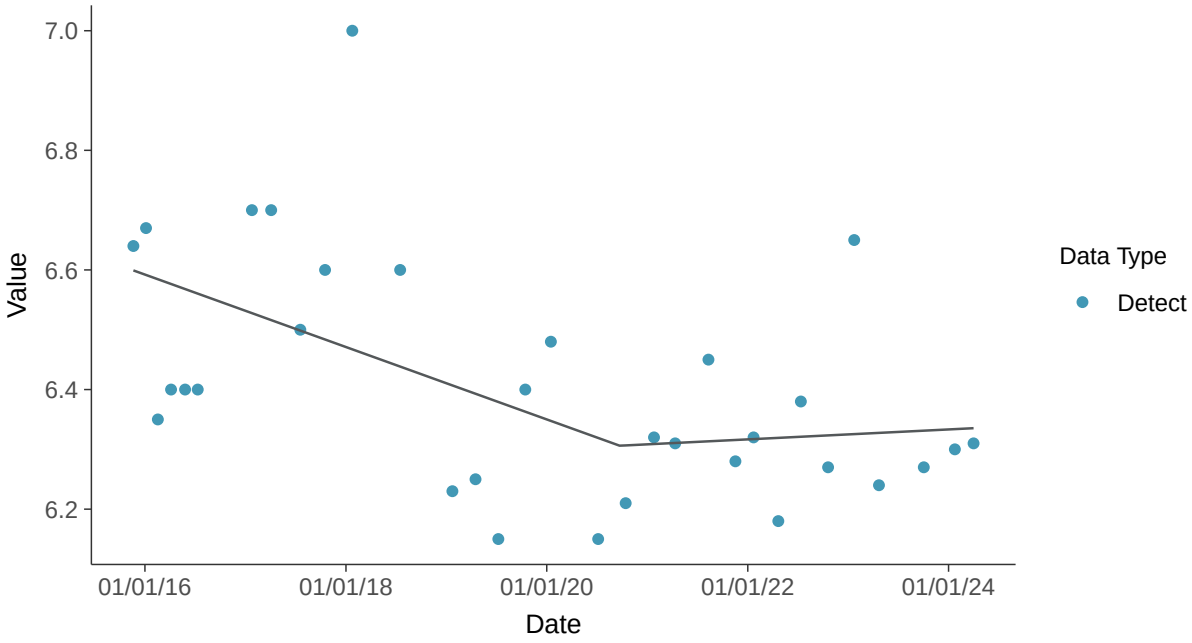
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-6 (S.U.)



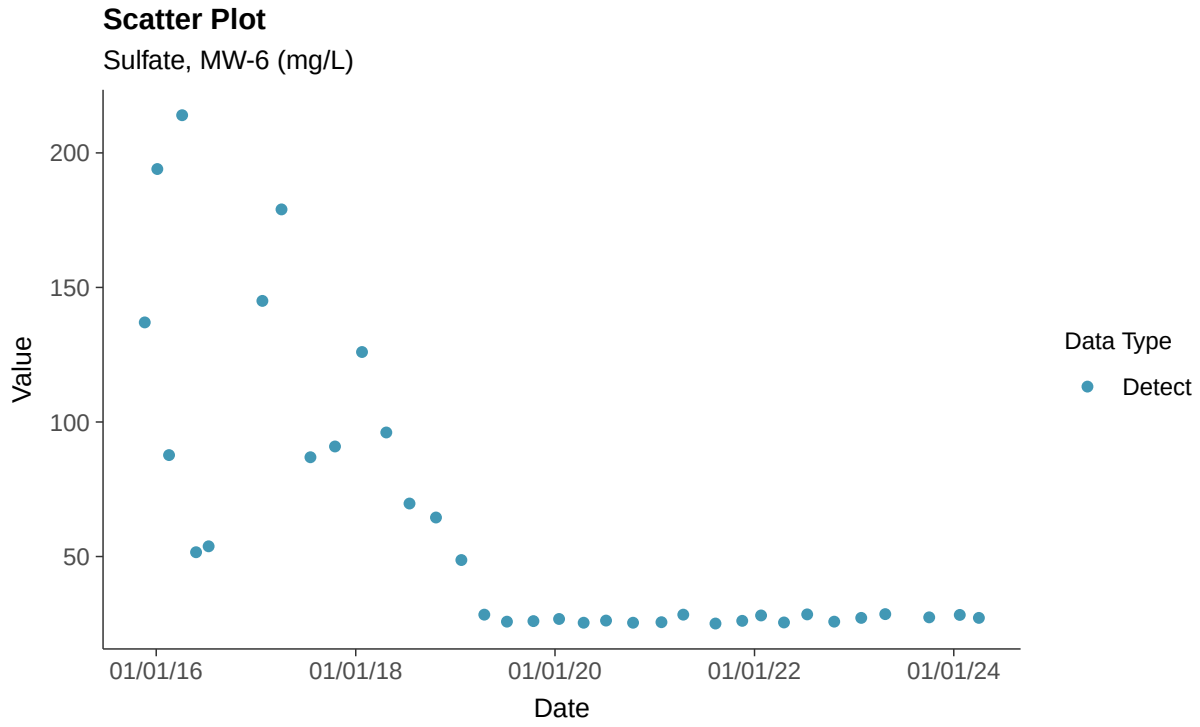
Trend Regression: Piecewise Linear-Linear

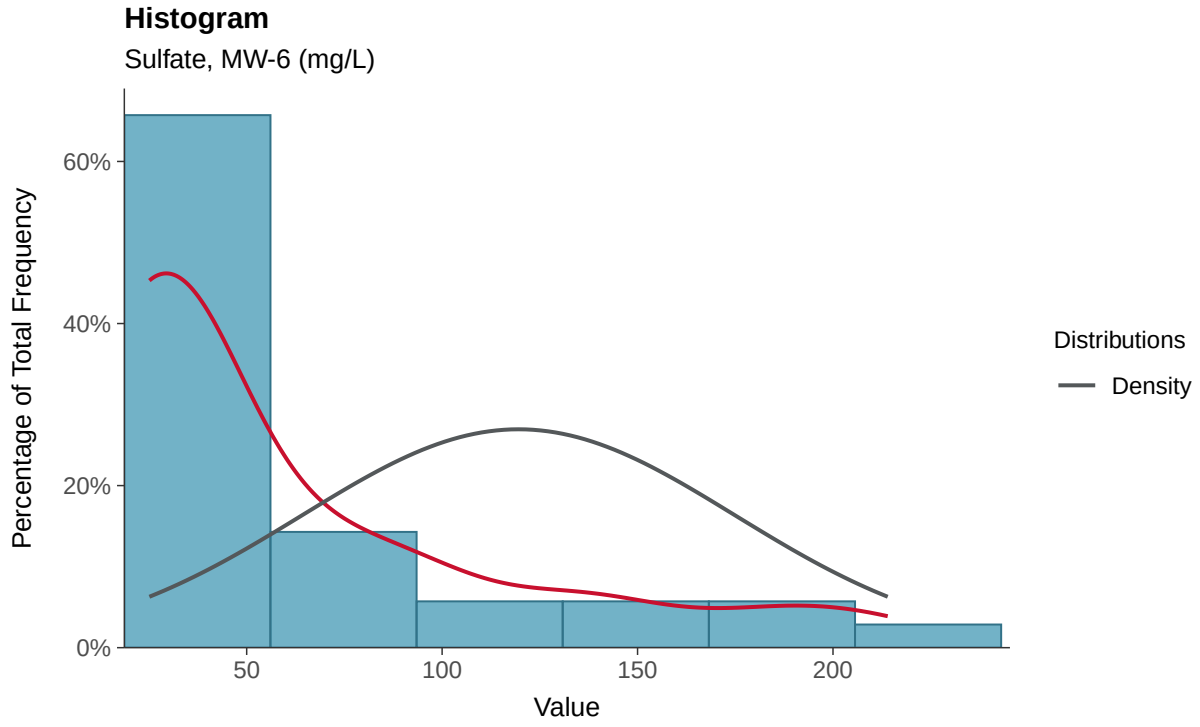
pH (Field), MW-6 (S.U.)



App. III: Sulfate, MW-6

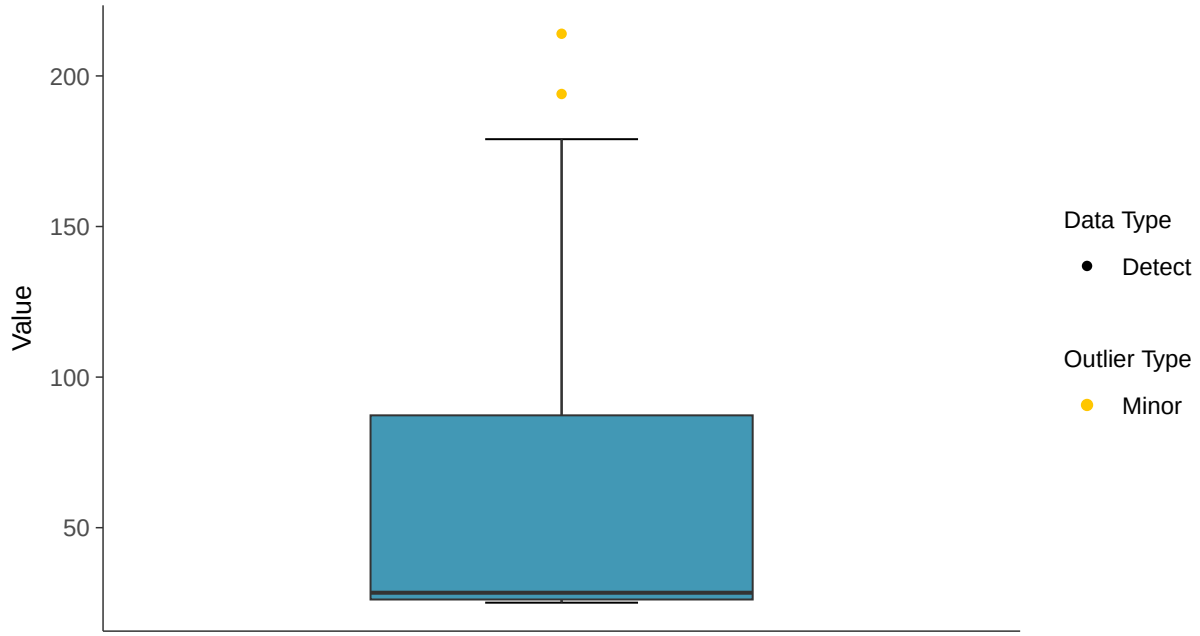
ID: 9_2_123





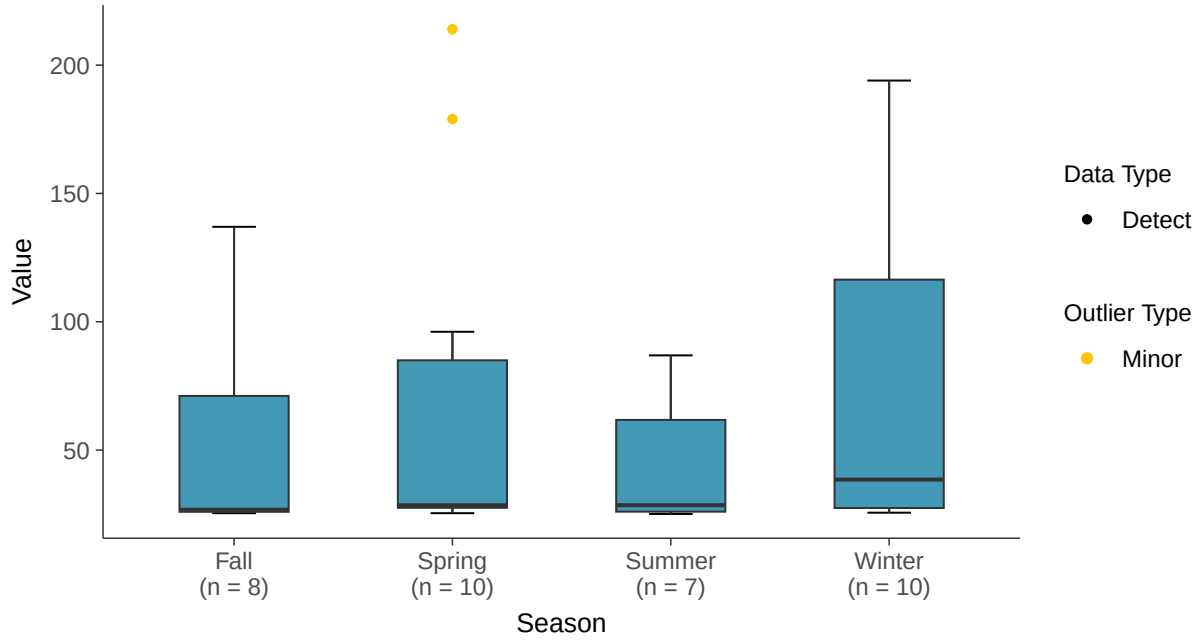
Boxplot

Sulfate, MW-6 (mg/L)



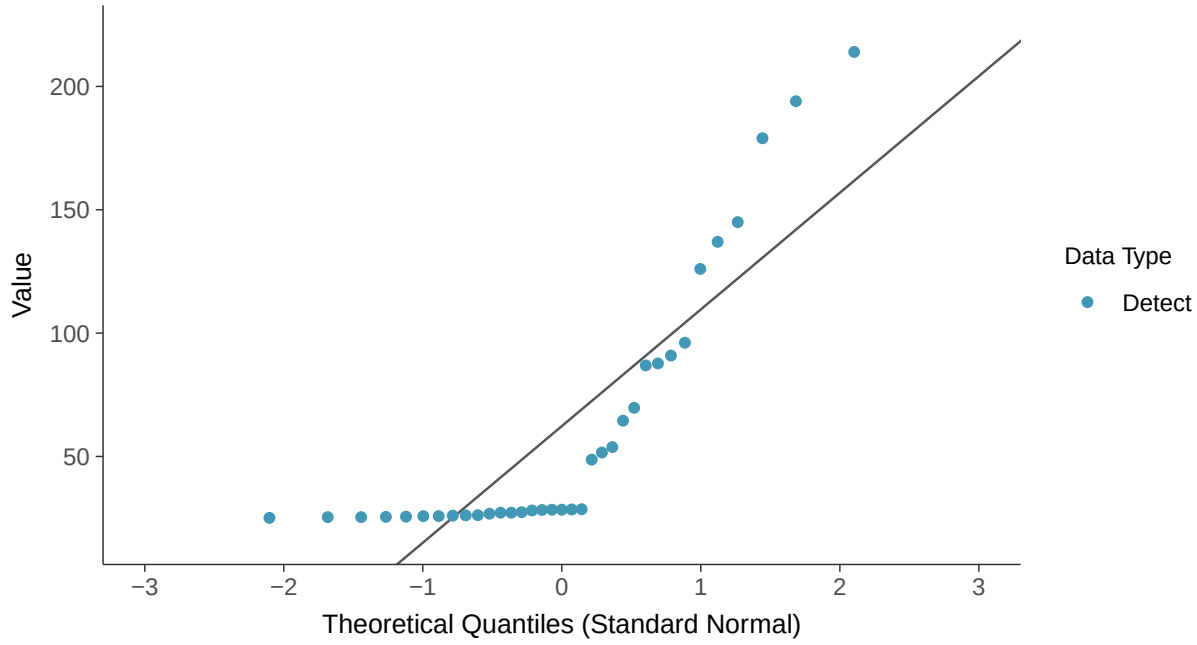
Boxplot by Season

Sulfate, MW-6 (mg/L)



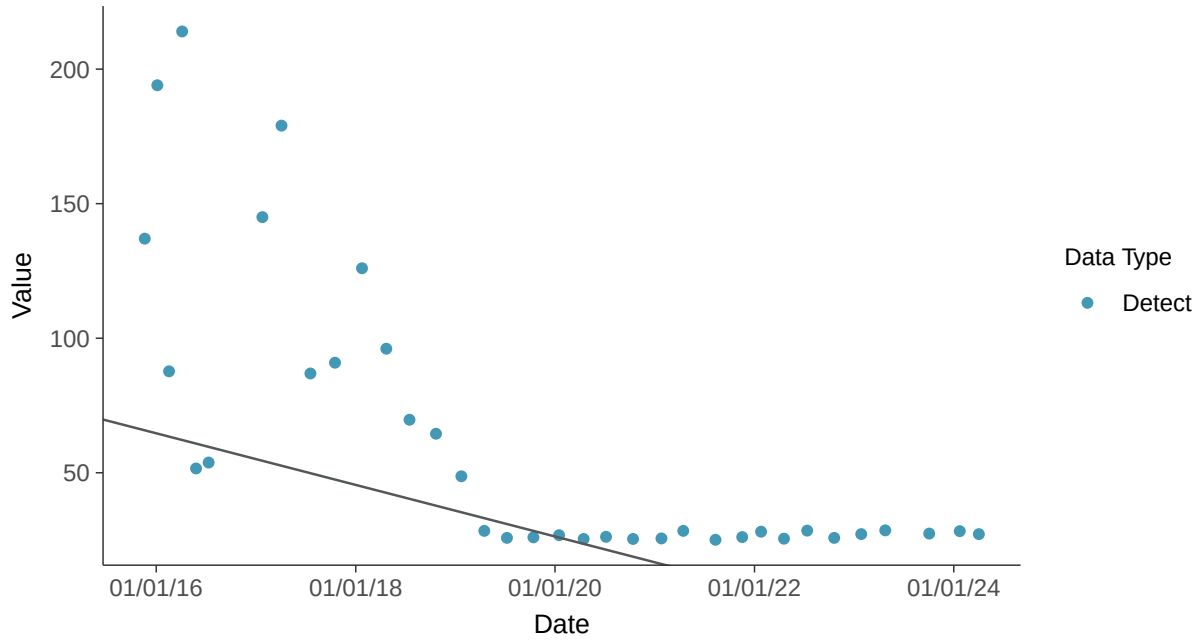
Normal Q-Q plot

Sulfate, MW-6 (mg/L)



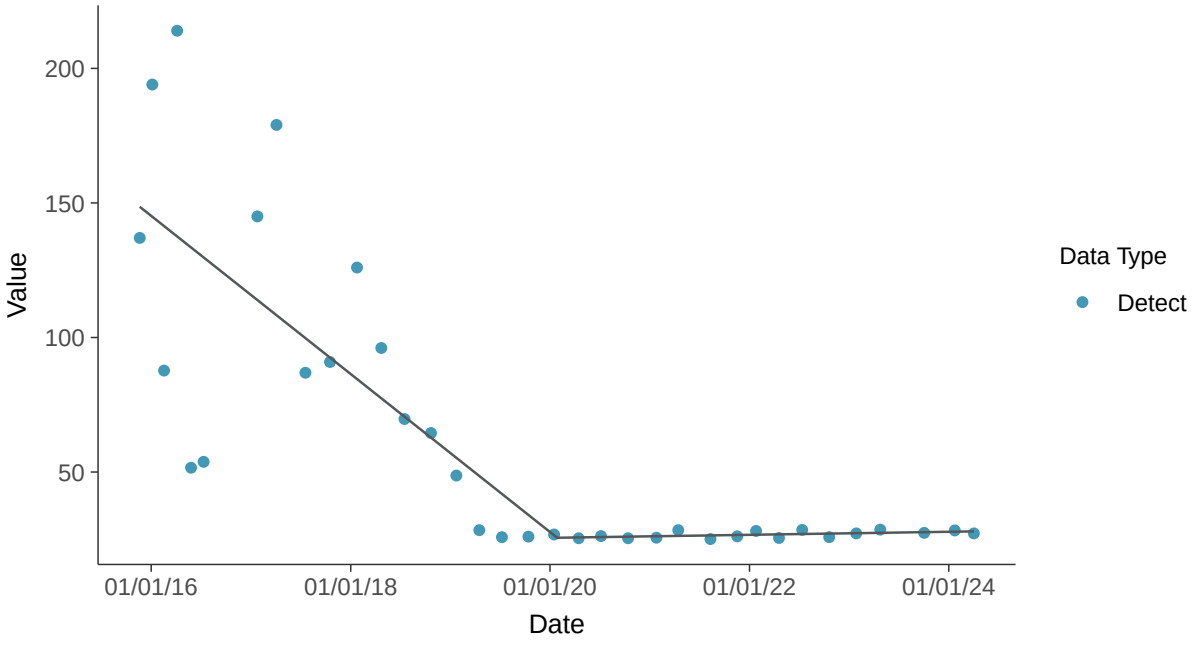
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-6 (mg/L)



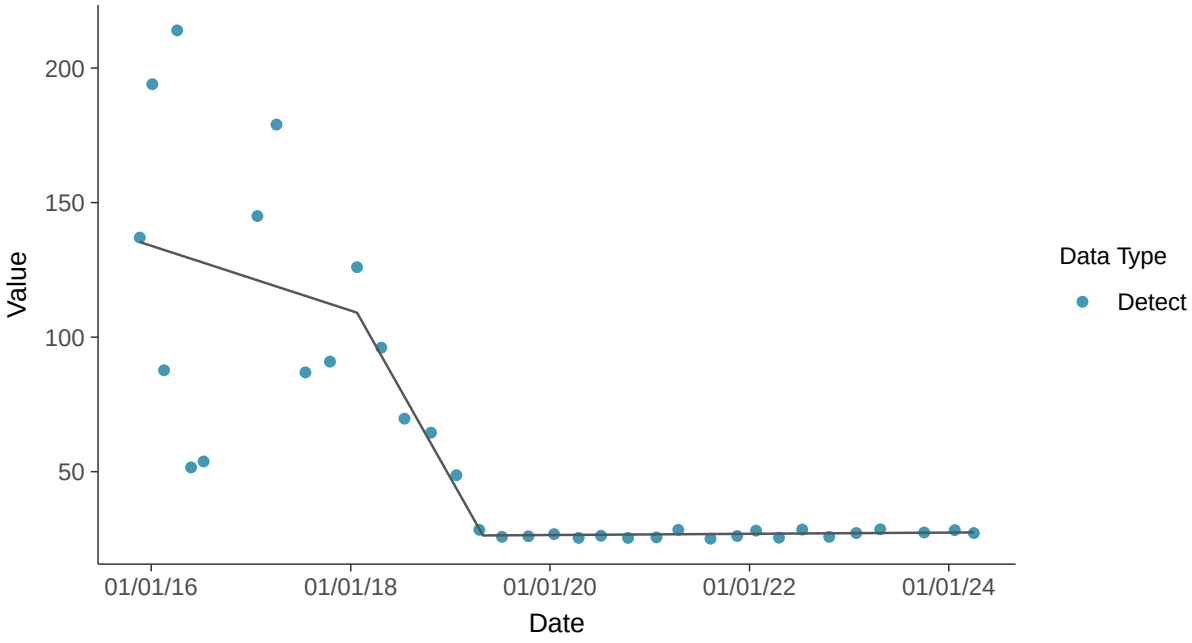
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-6 (mg/L)

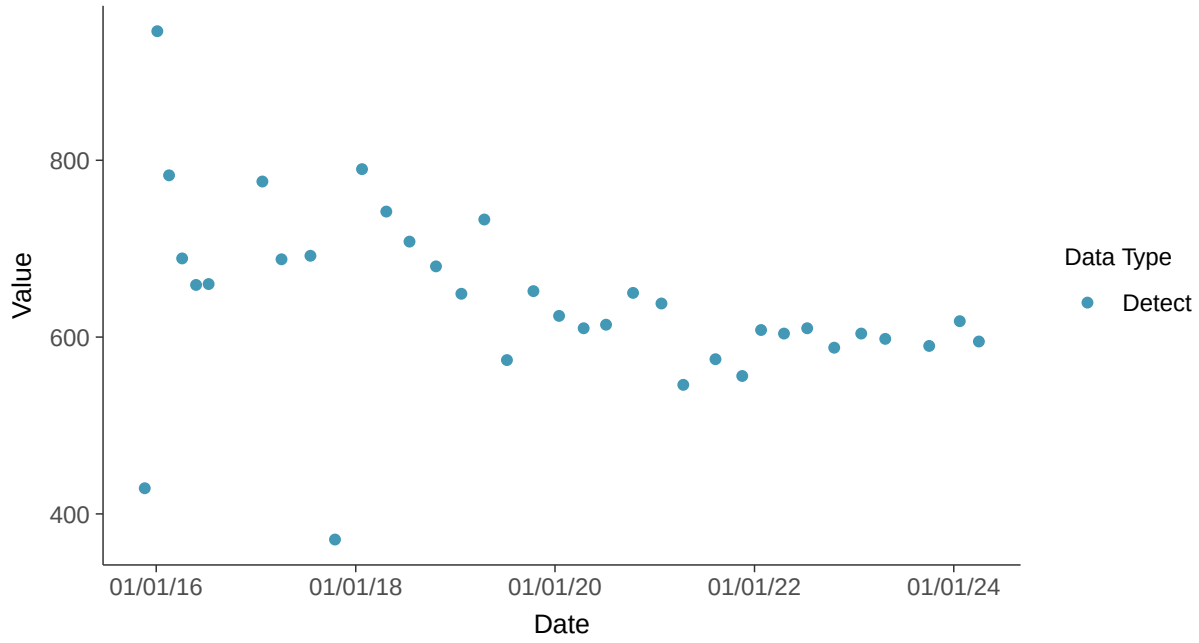


App. III: Total Dissolved Solids, MW-6

ID: 9_2_125

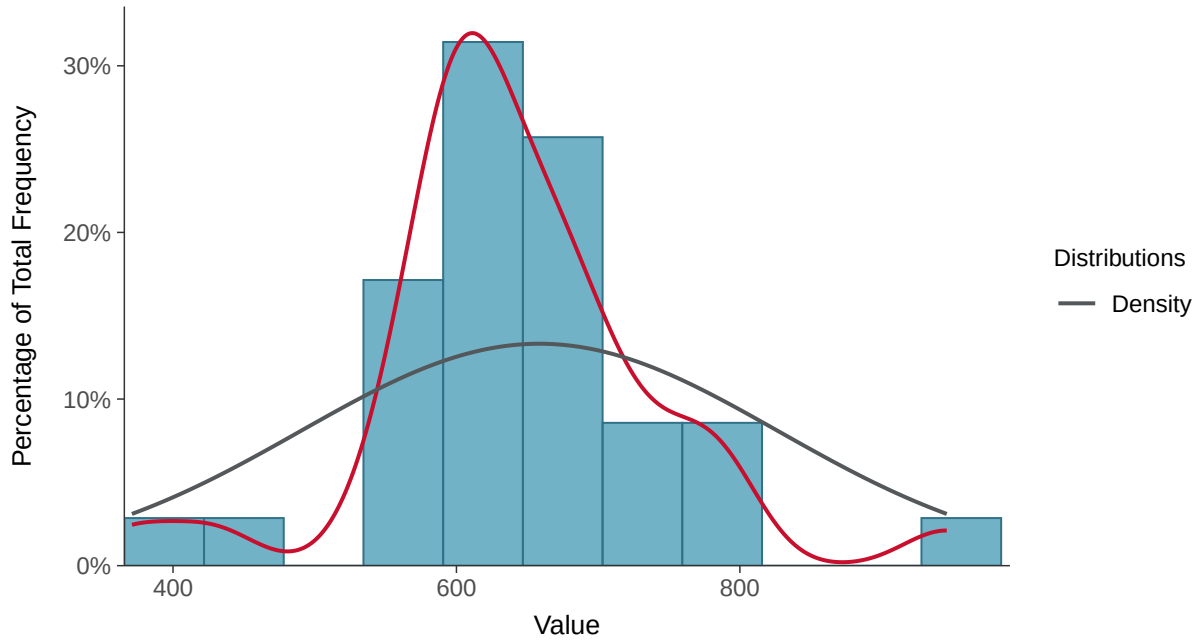
Scatter Plot

Total Dissolved Solids, MW-6 (mg/L)



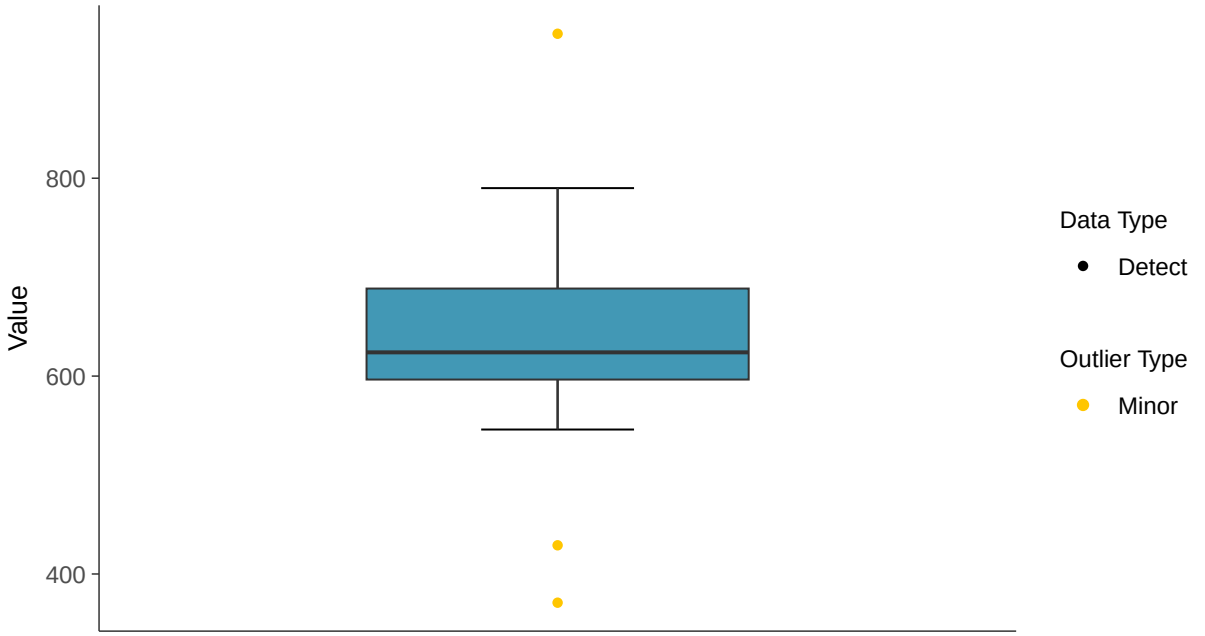
Histogram

Total Dissolved Solids, MW-6 (mg/L)



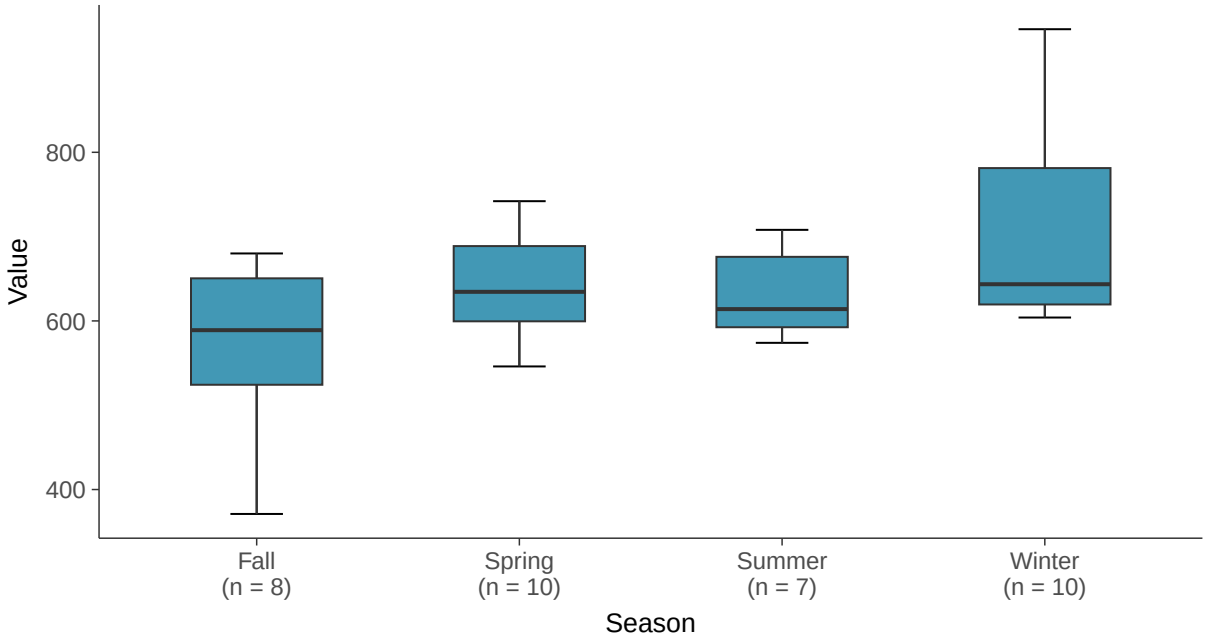
Boxplot

Total Dissolved Solids, MW-6 (mg/L)



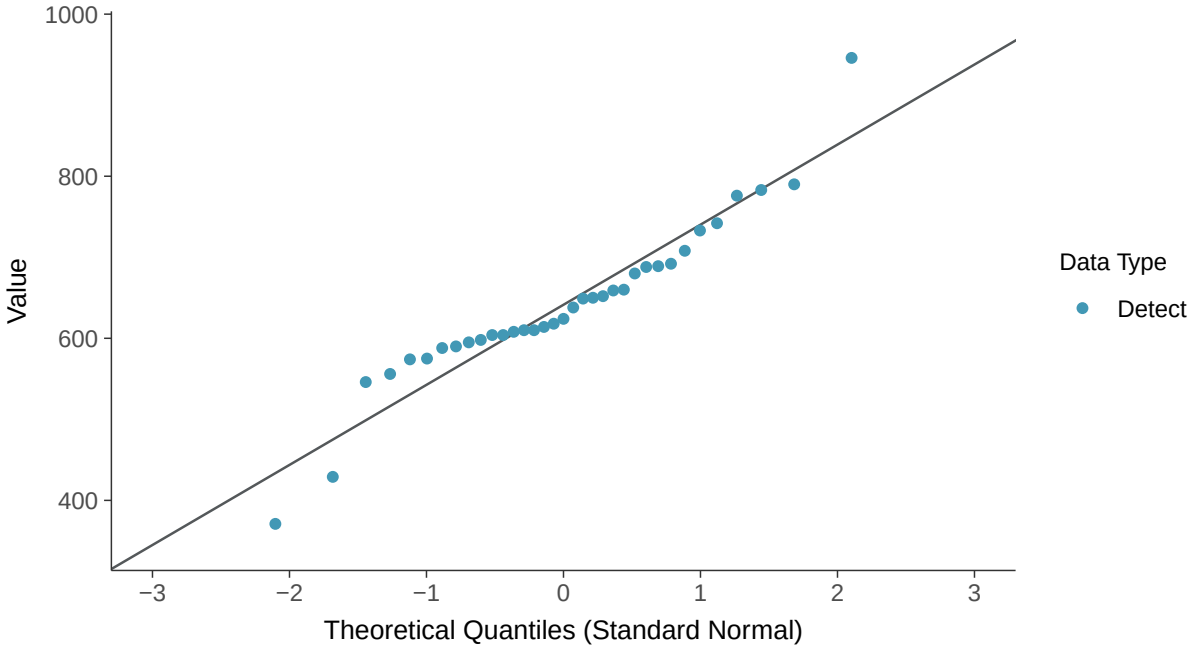
Boxplot by Season

Total Dissolved Solids, MW-6 (mg/L)



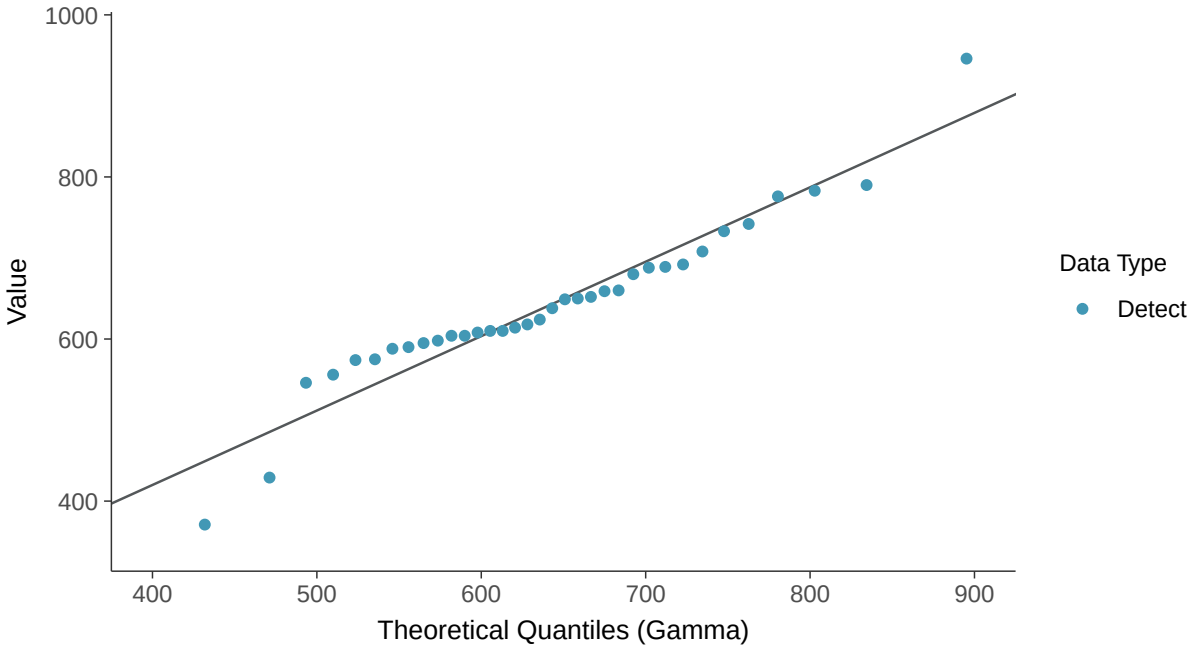
Normal Q-Q plot

Total Dissolved Solids, MW-6 (mg/L)



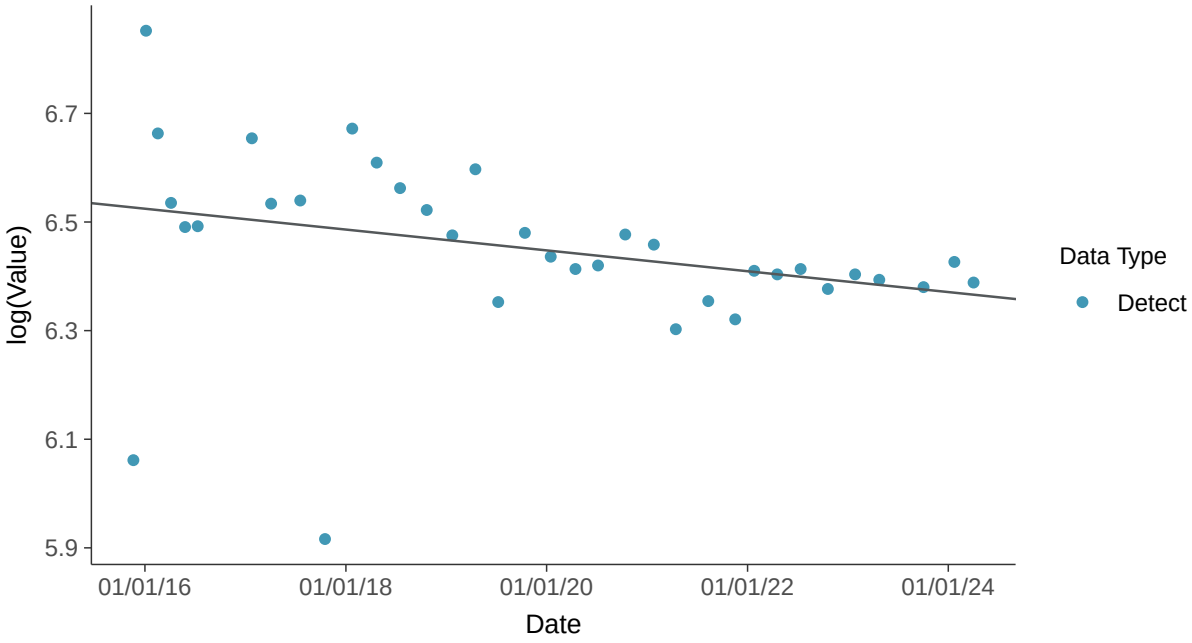
Gamma Q-Q plot

Total Dissolved Solids, MW-6 (mg/L)



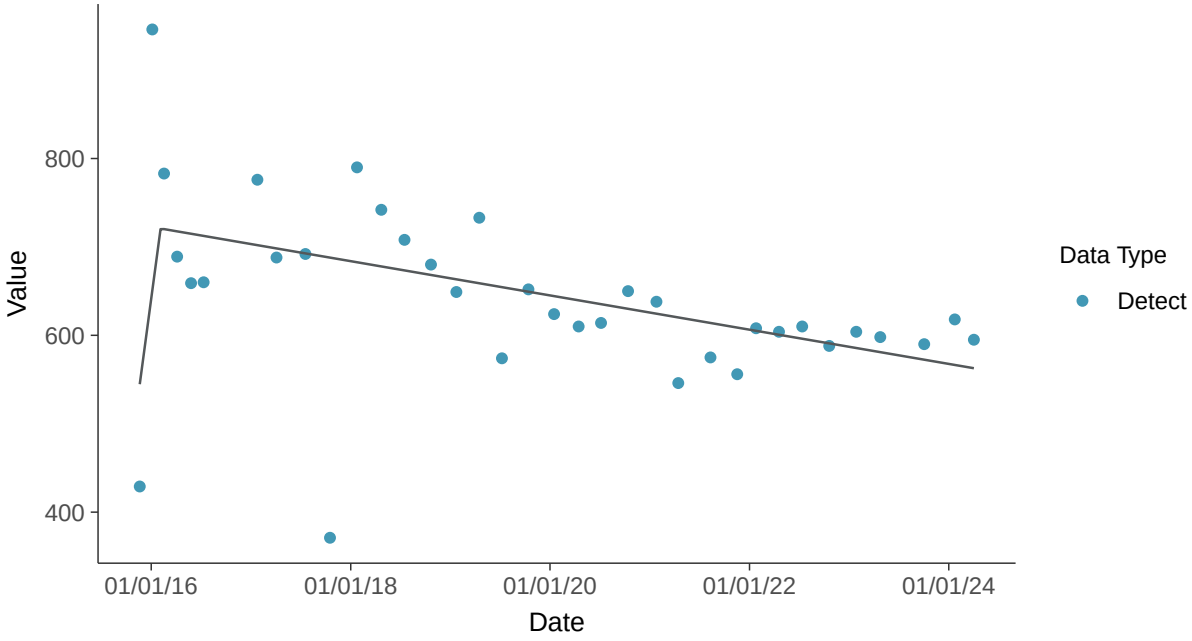
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-6 (mg/L)



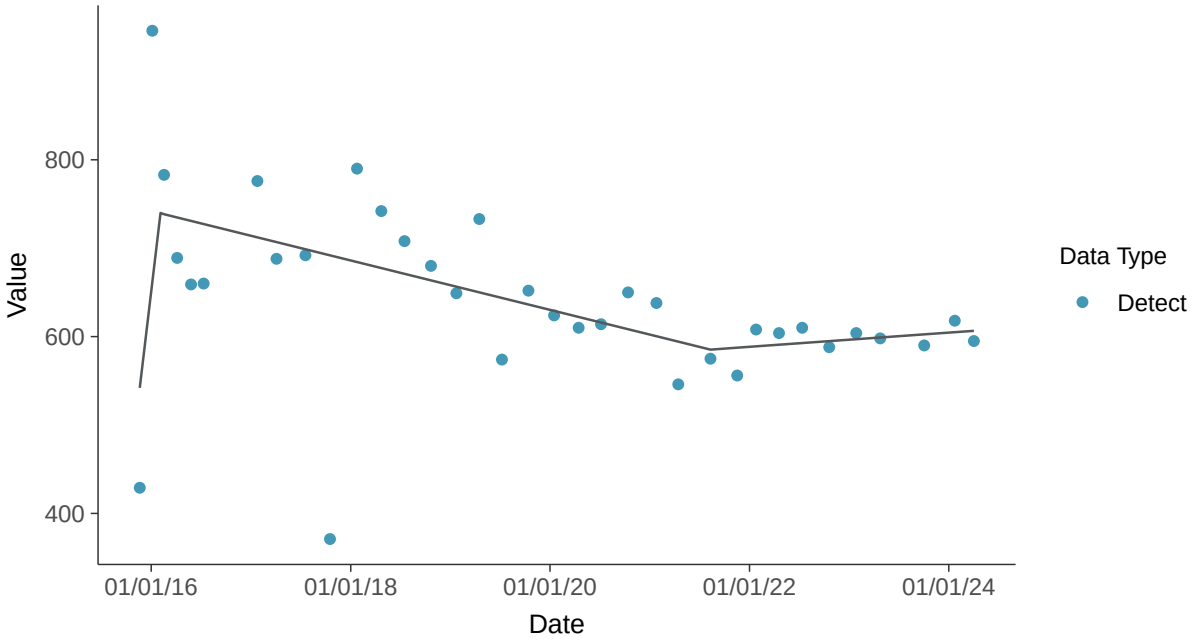
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-6 (mg/L)



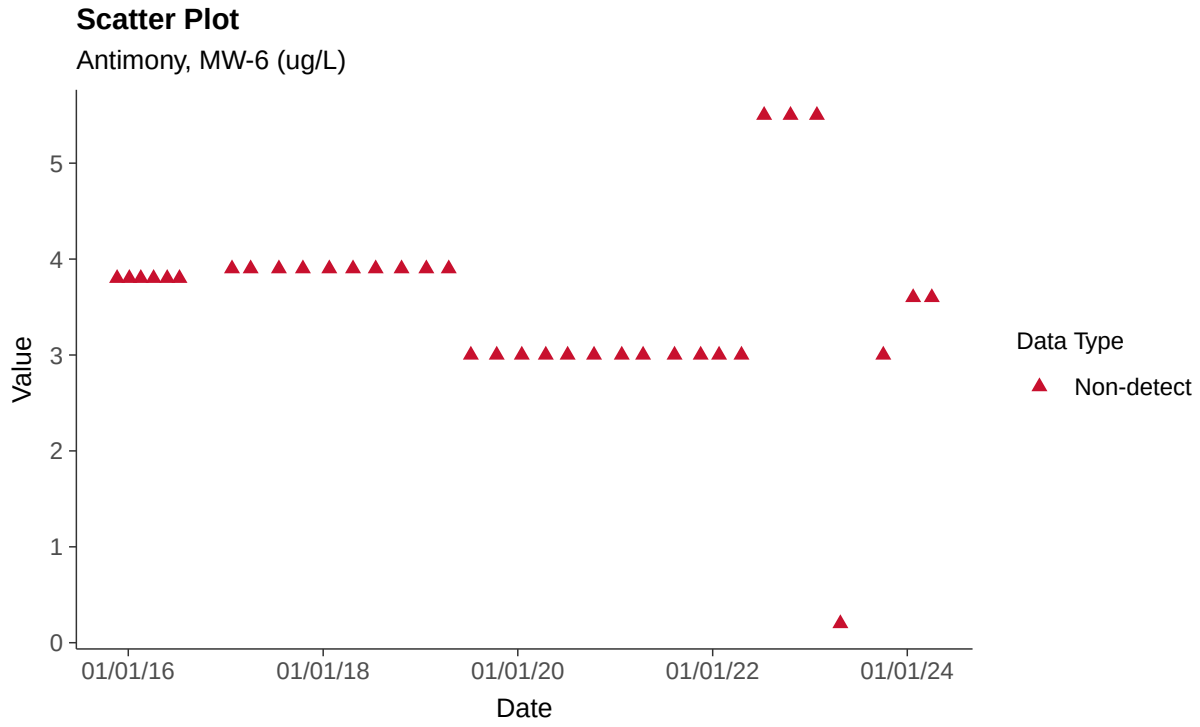
Trend Regression: Piecewise Linear-Linear-Linear

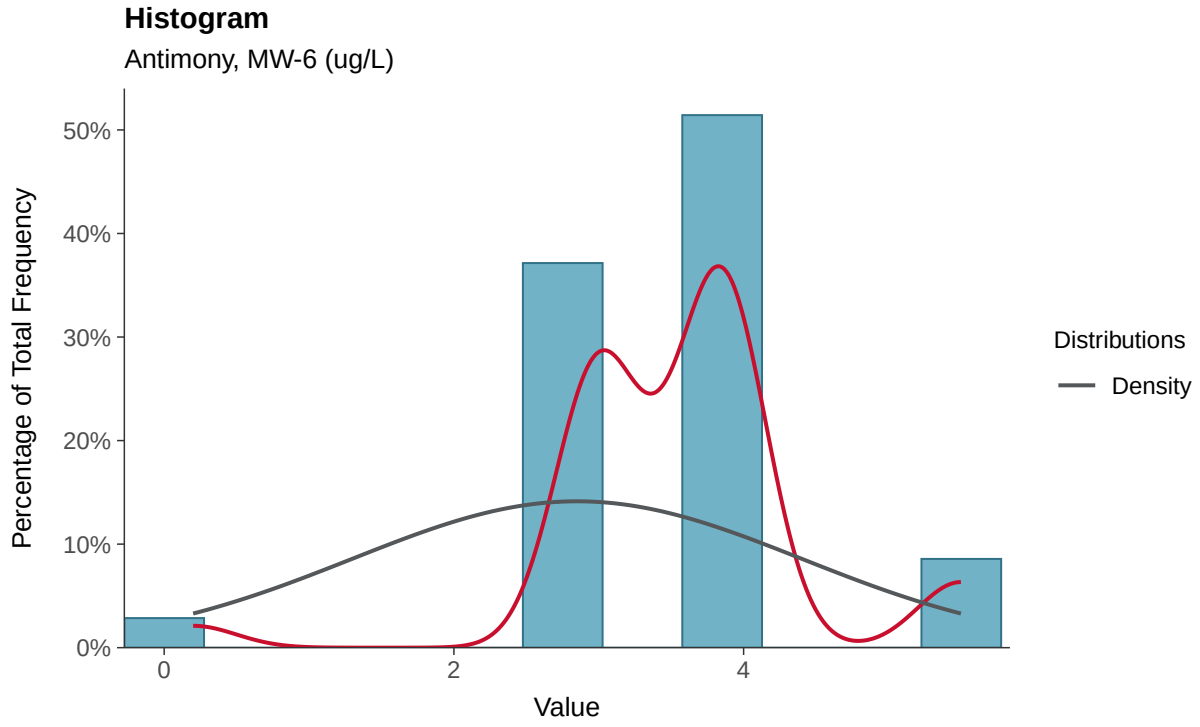
Total Dissolved Solids, MW-6 (mg/L)



App. IV: Antimony, MW-6

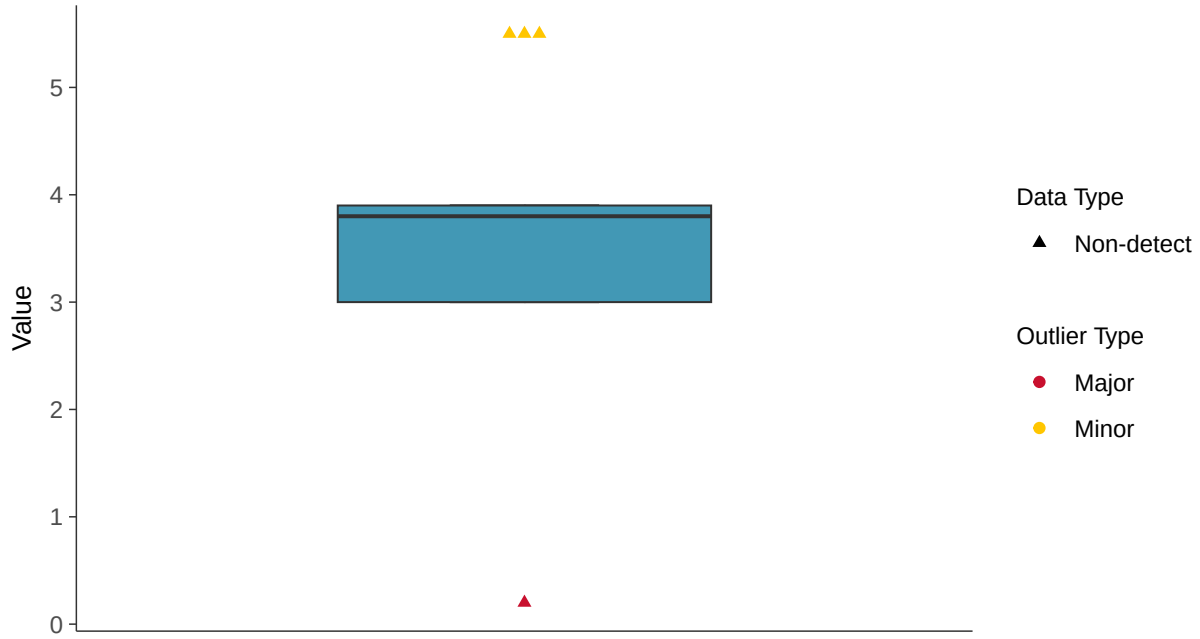
ID: 9_3_101





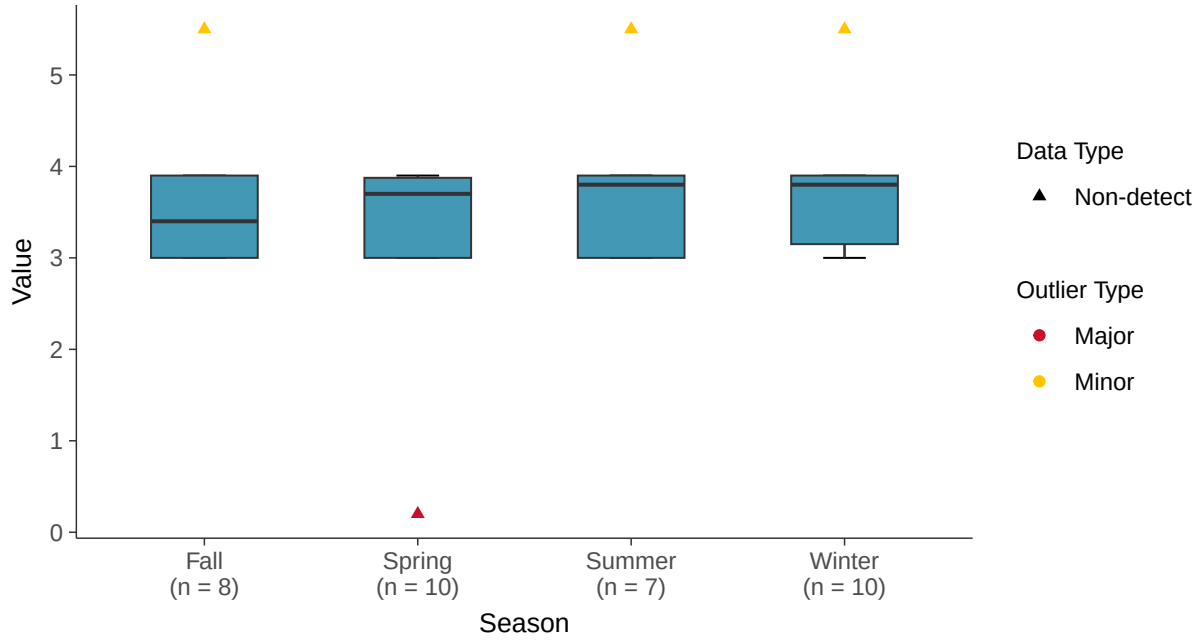
Boxplot

Antimony, MW-6 (ug/L)



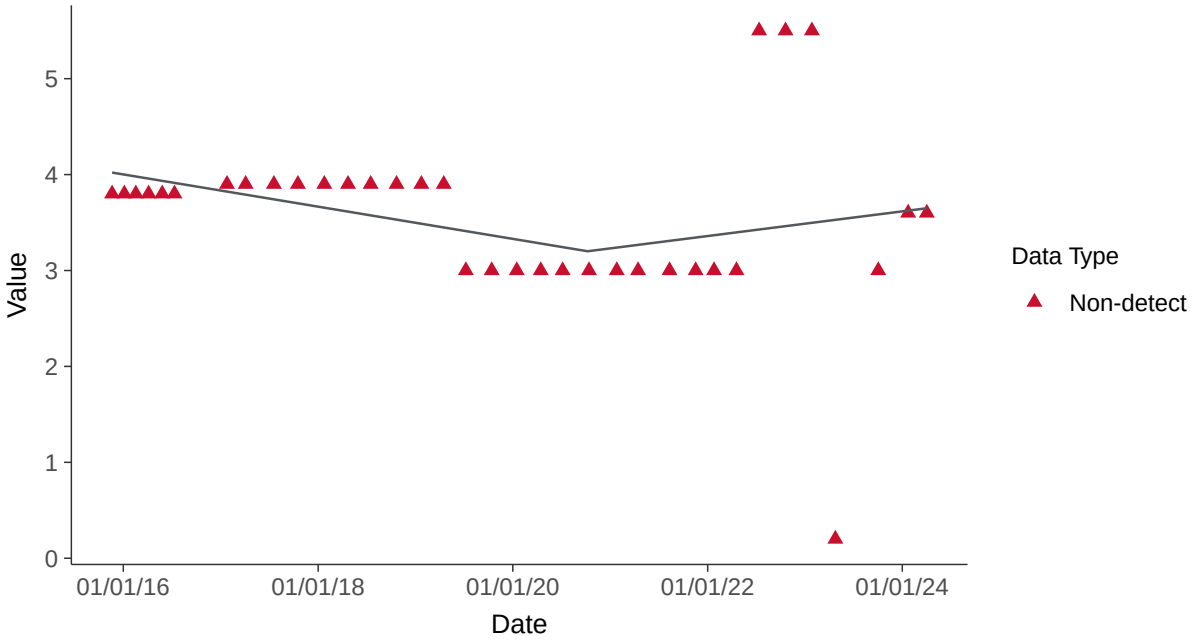
Boxplot by Season

Antimony, MW-6 (ug/L)



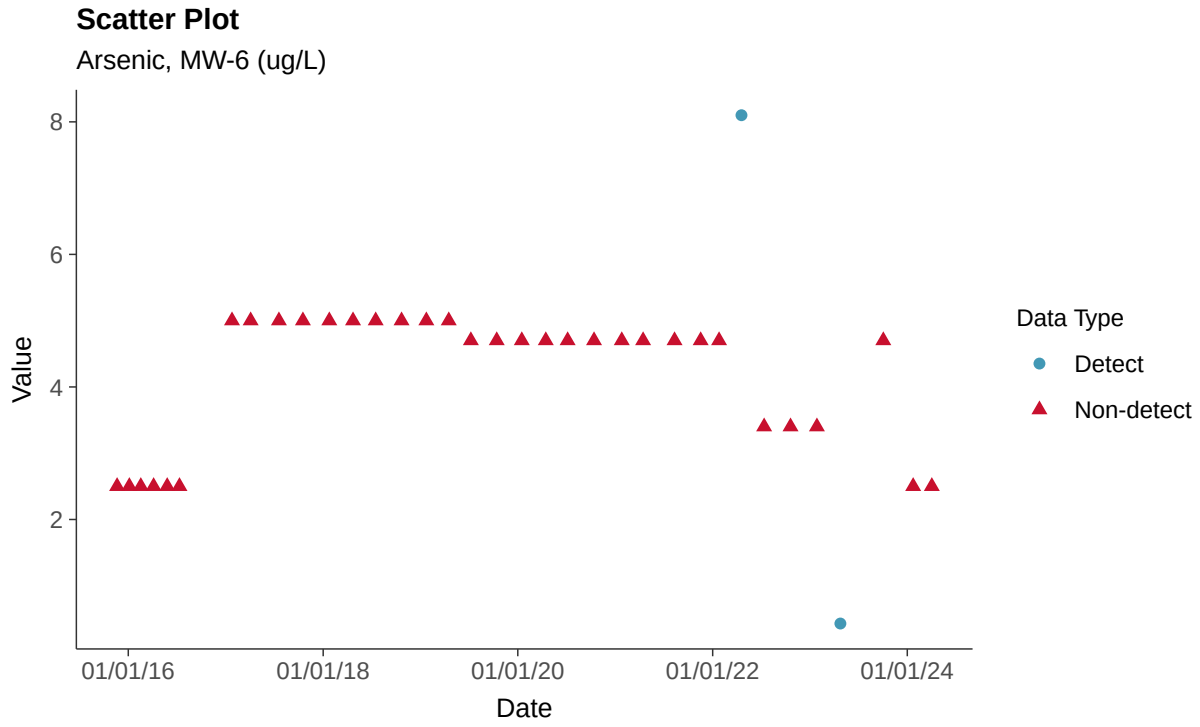
Trend Regression: Piecewise Linear-Linear

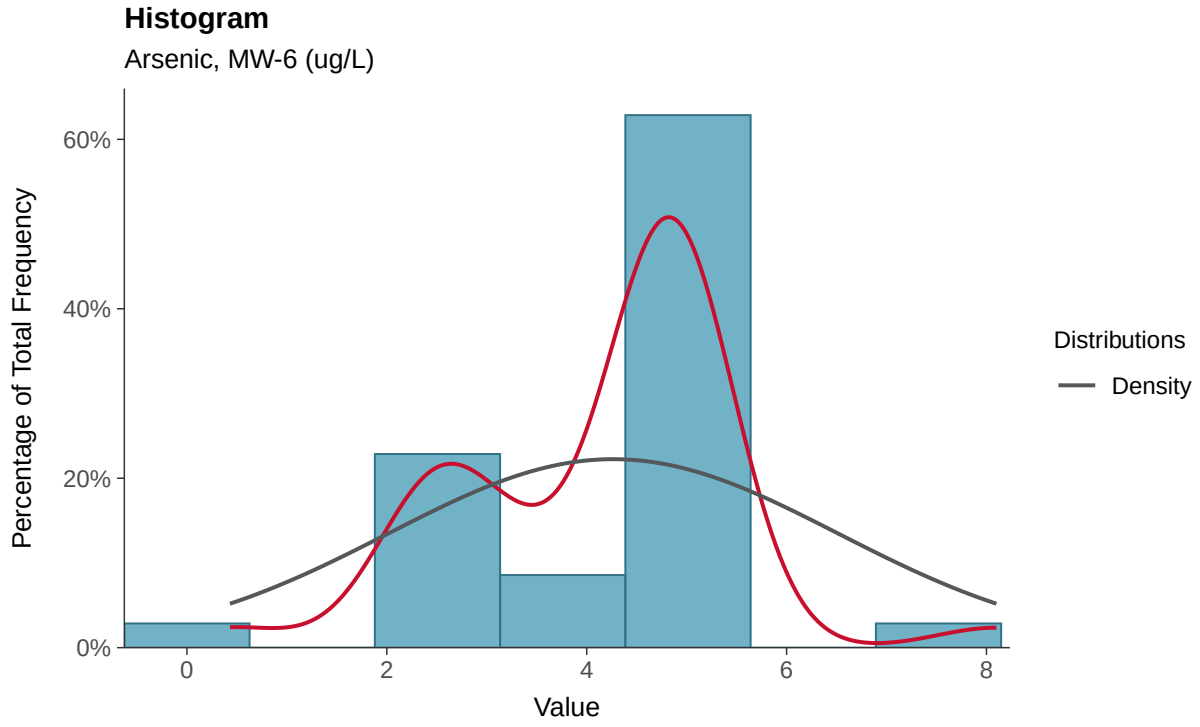
Antimony, MW-6 (ug/L)



App. IV: Arsenic, MW-6

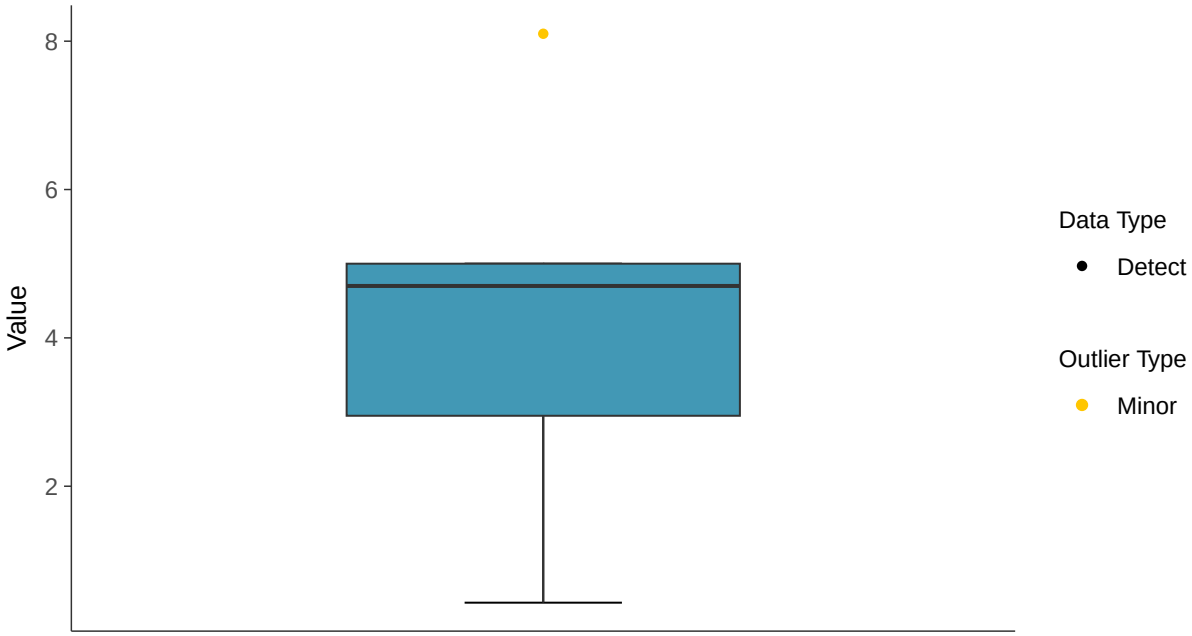
ID: 9_3_102





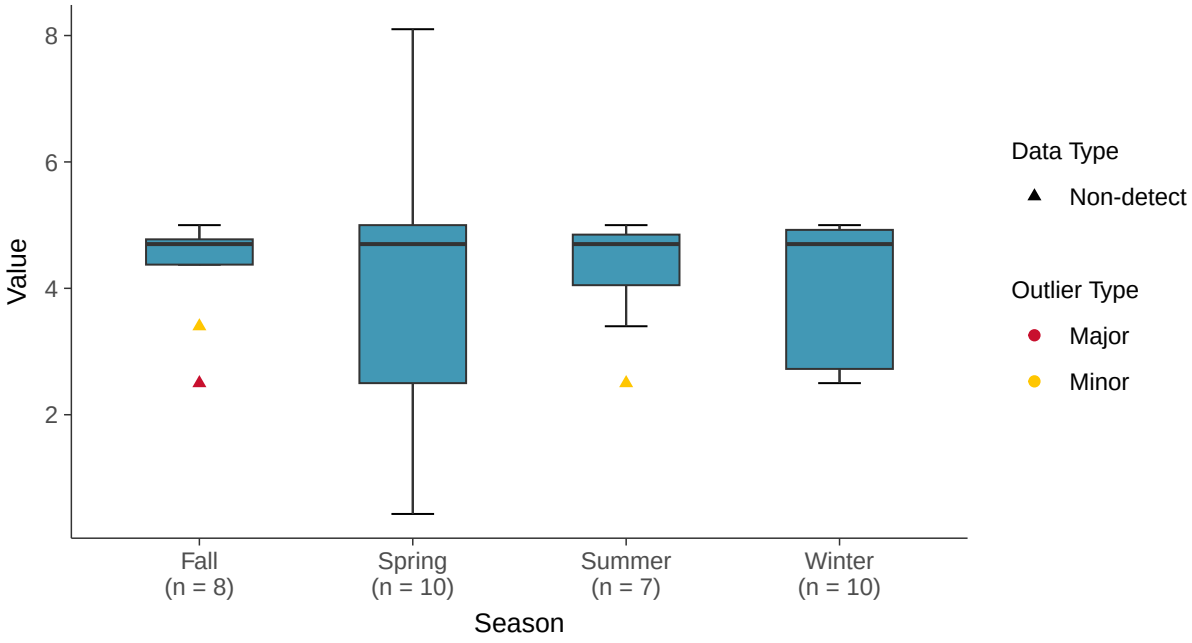
Boxplot

Arsenic, MW-6 (ug/L)



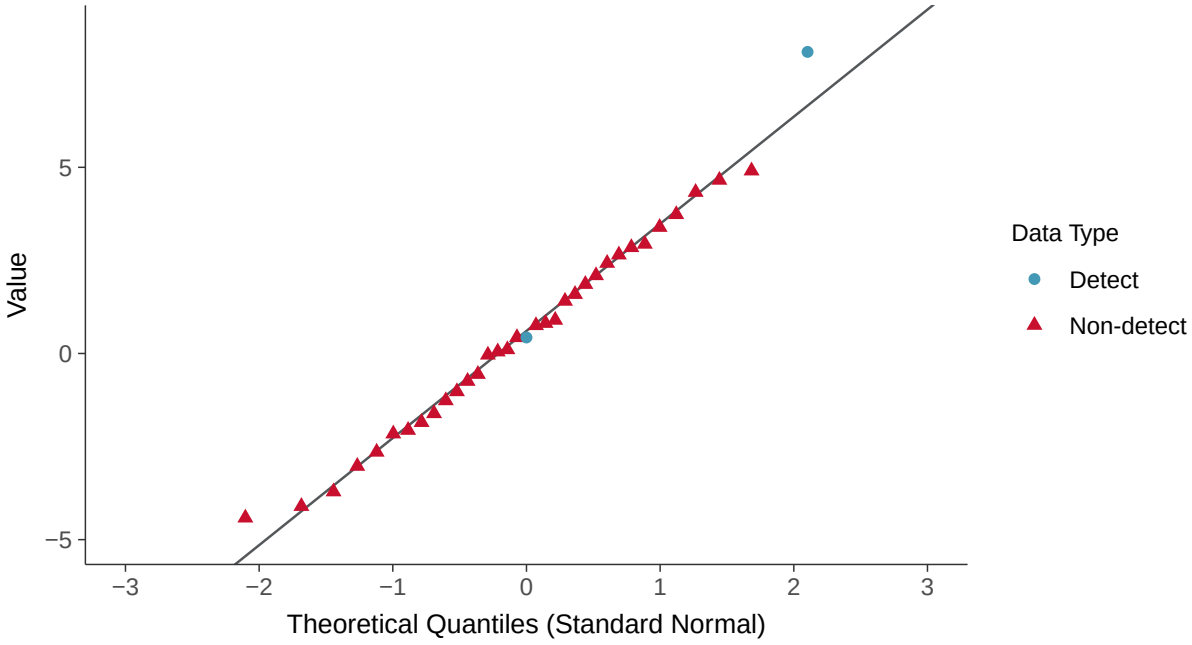
Boxplot by Season

Arsenic, MW-6 (ug/L)



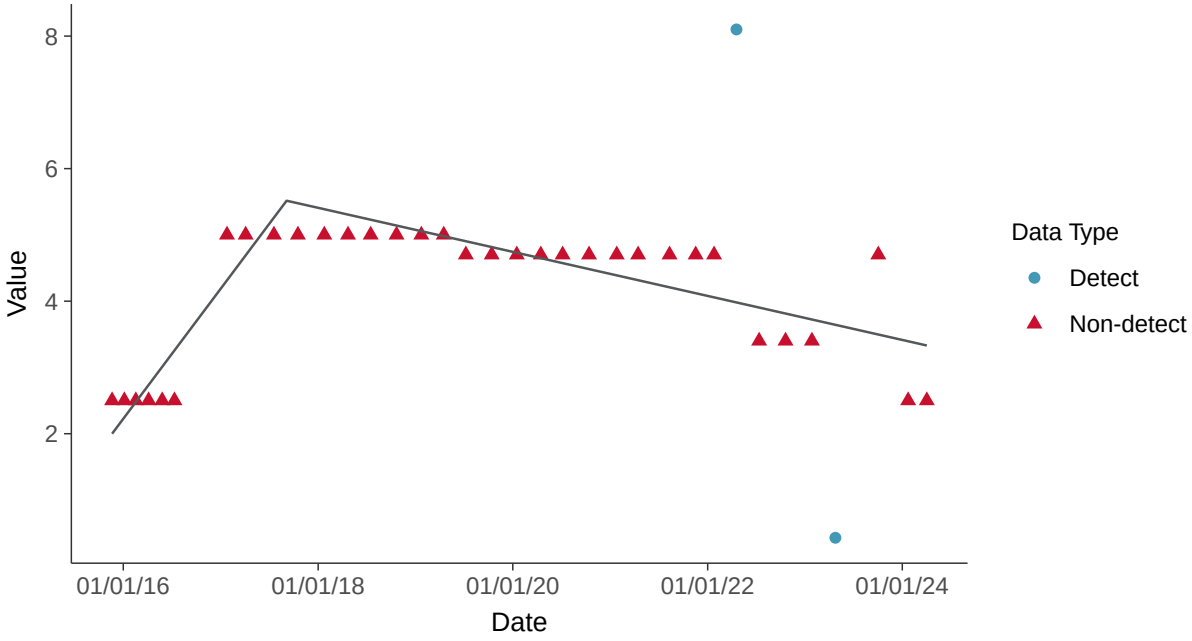
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-6 (ug/L)



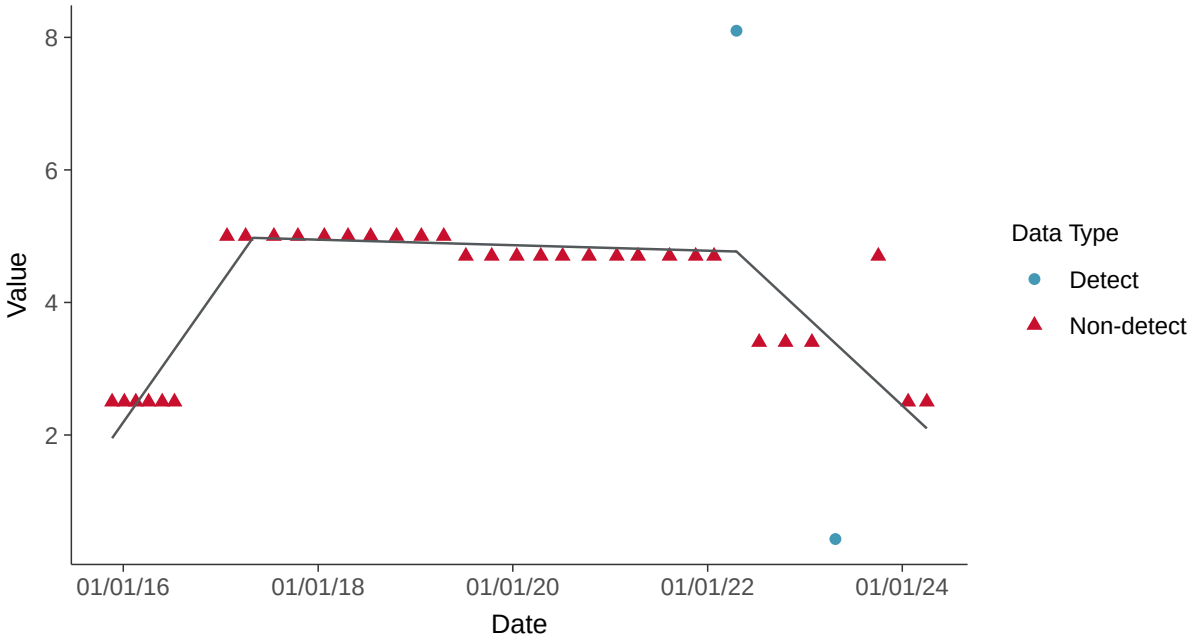
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-6 (ug/L)



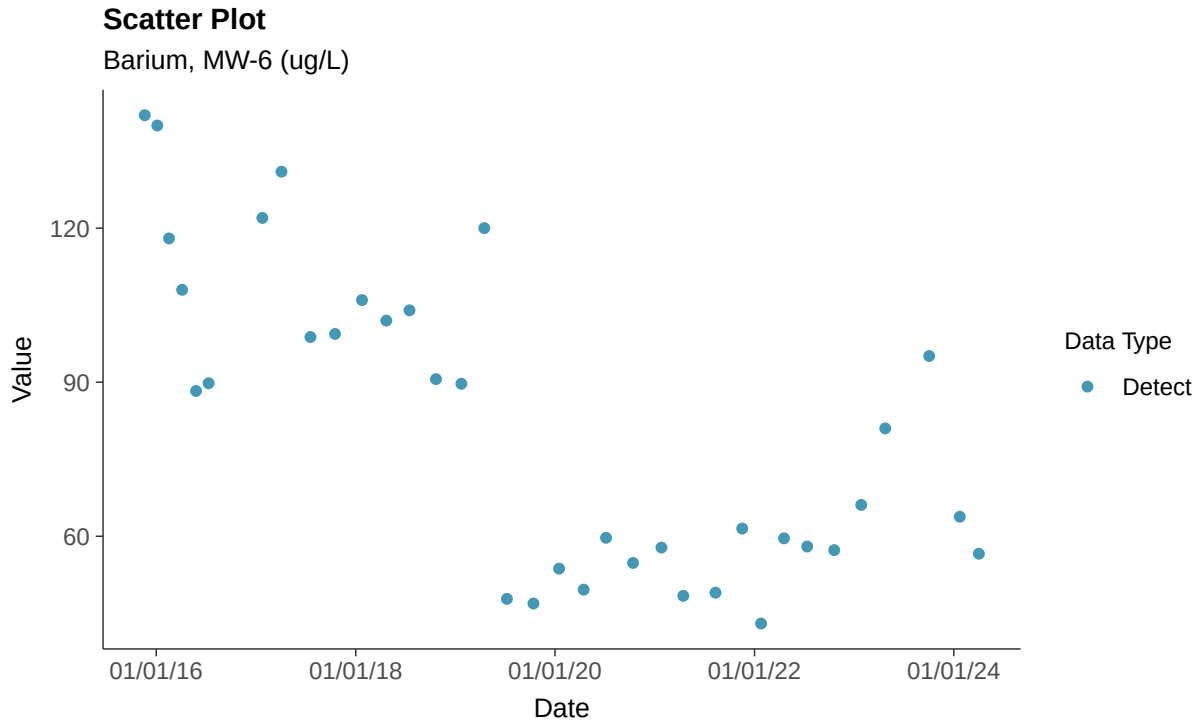
Trend Regression: Piecewise Linear-Linear-Linear

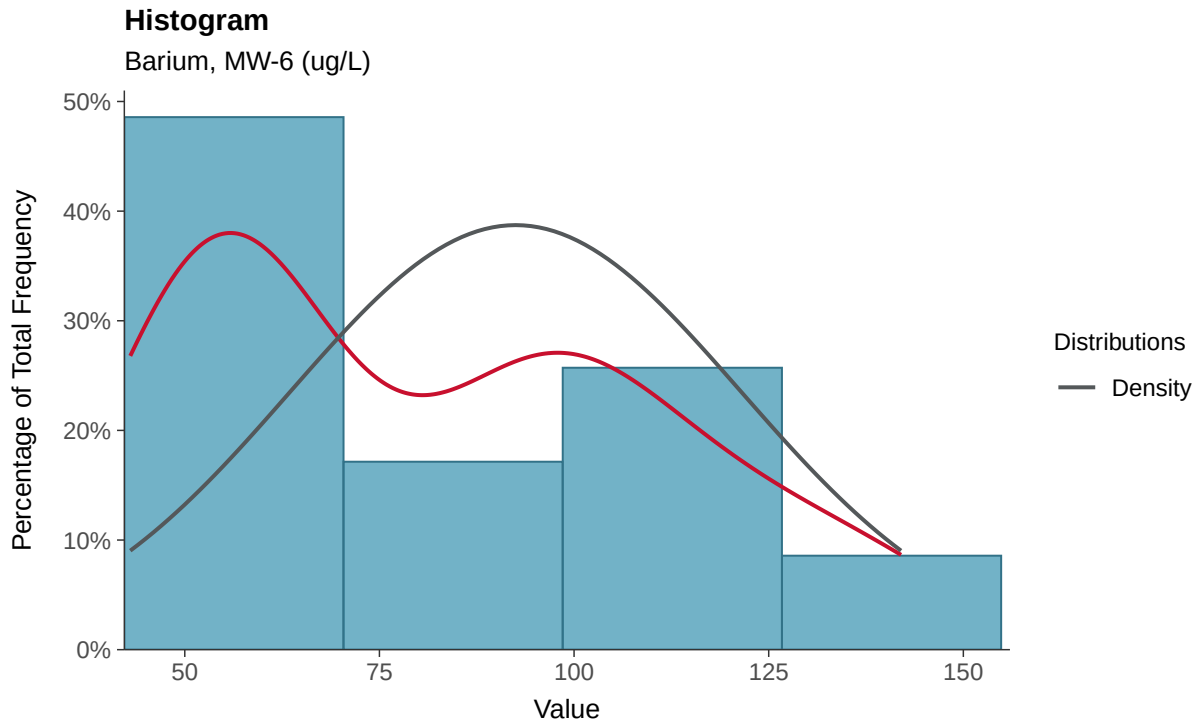
Arsenic, MW-6 (ug/L)



App. IV: Barium, MW-6

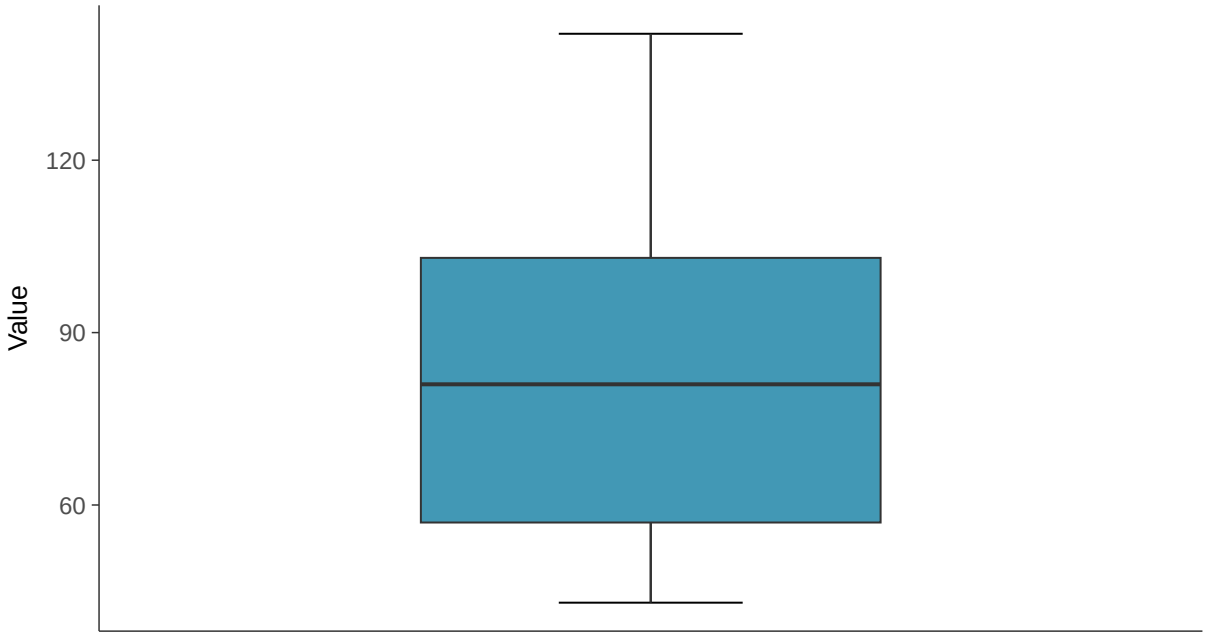
ID: 9_3_103





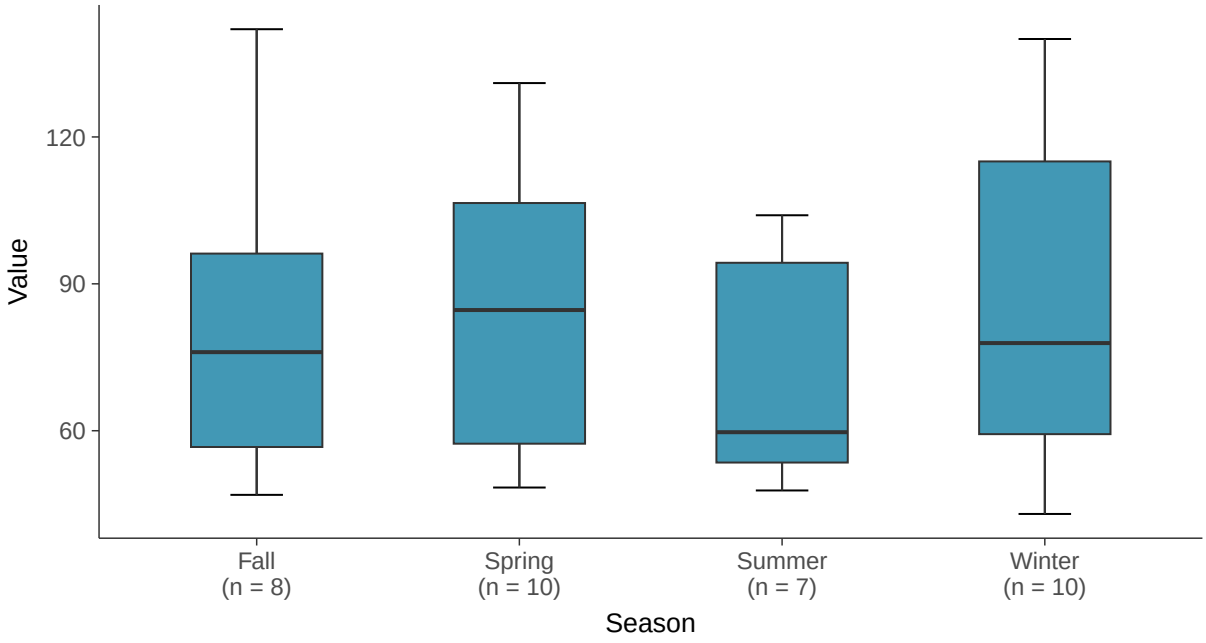
Boxplot

Barium, MW-6 (ug/L)



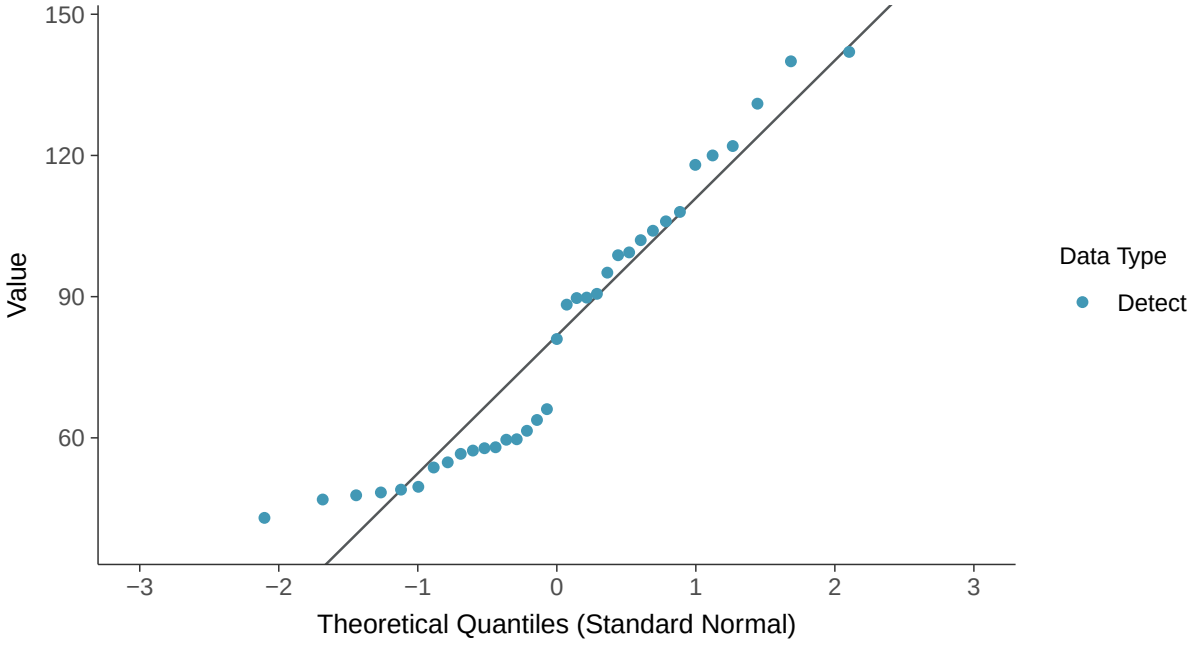
Boxplot by Season

Barium, MW-6 (ug/L)



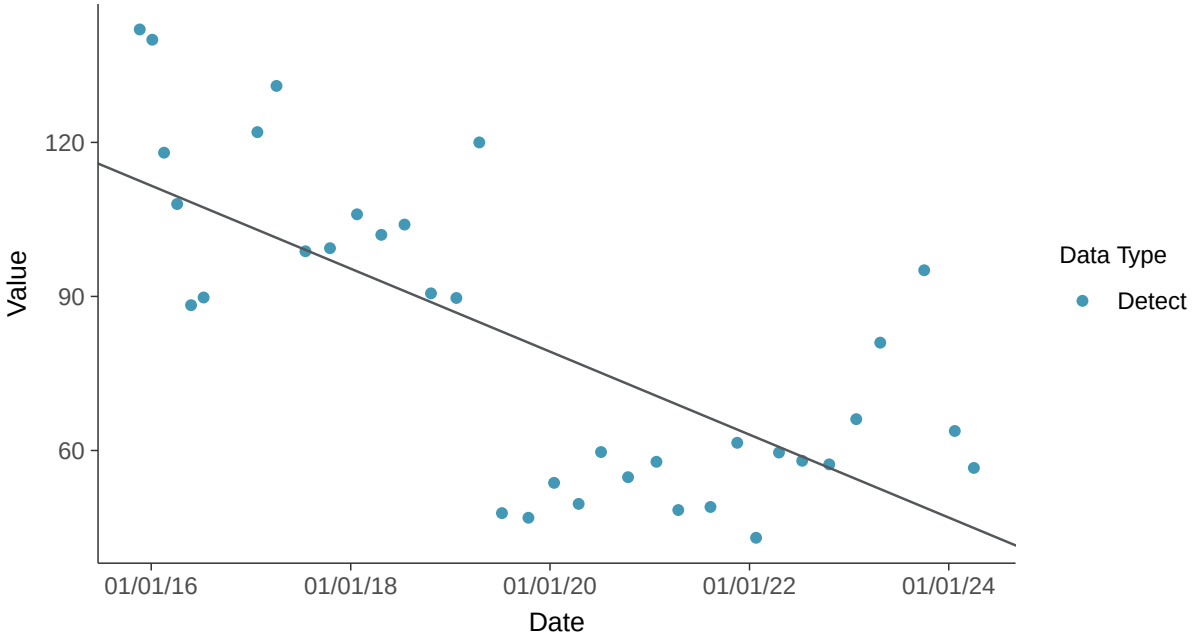
Normal Q-Q plot

Barium, MW-6 (ug/L)



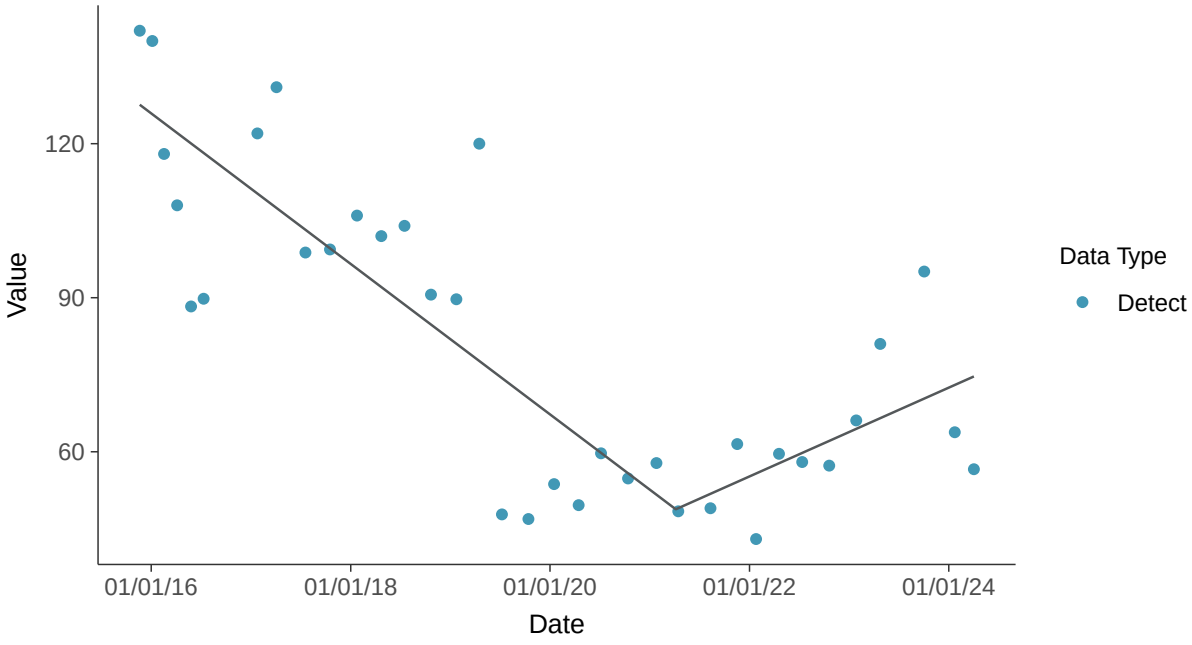
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-6 (ug/L)



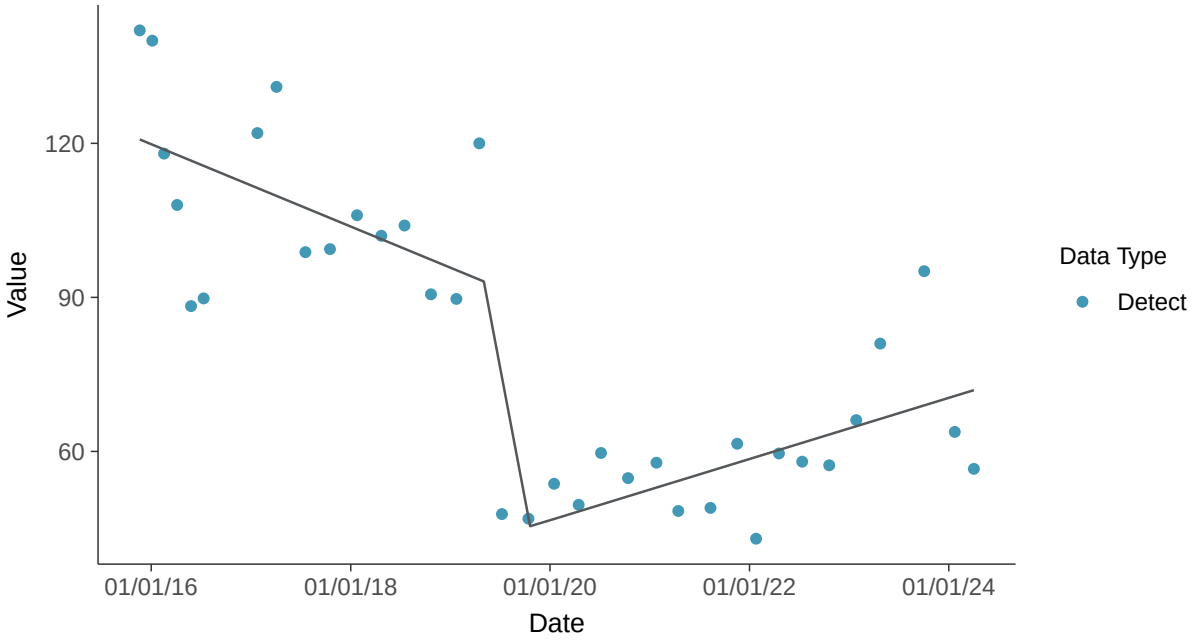
Trend Regression: Piecewise Linear-Linear

Barium, MW-6 (ug/L)



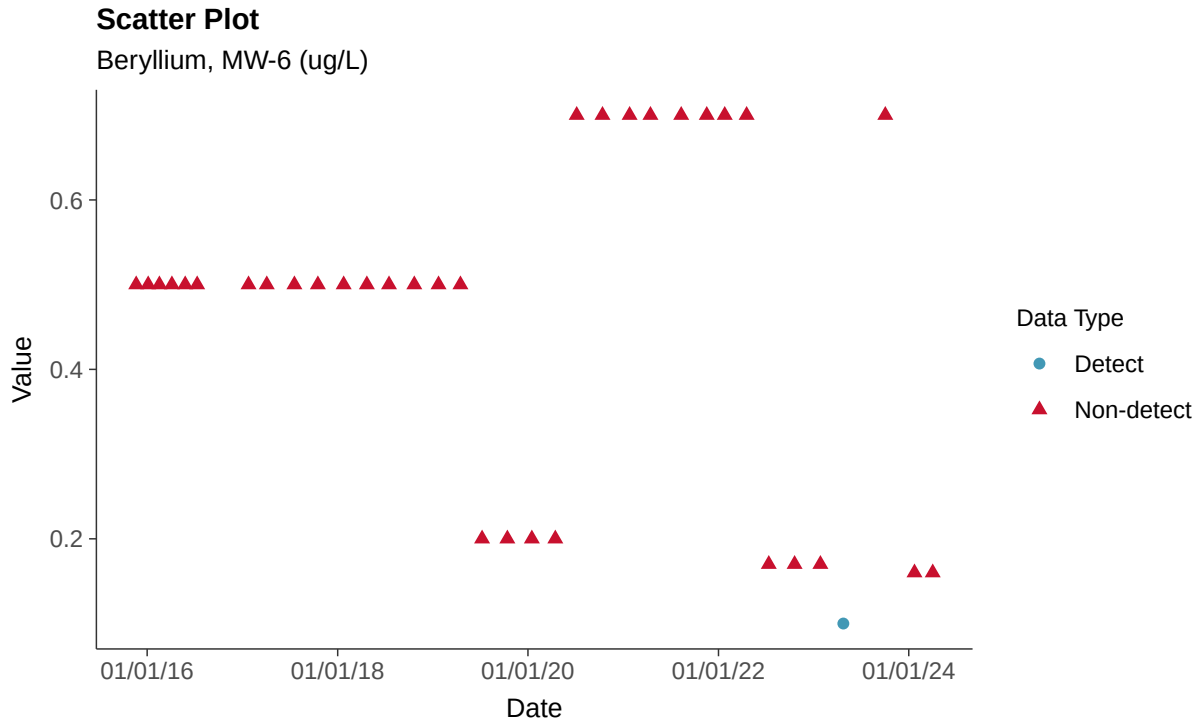
Trend Regression: Piecewise Linear-Linear-Linear

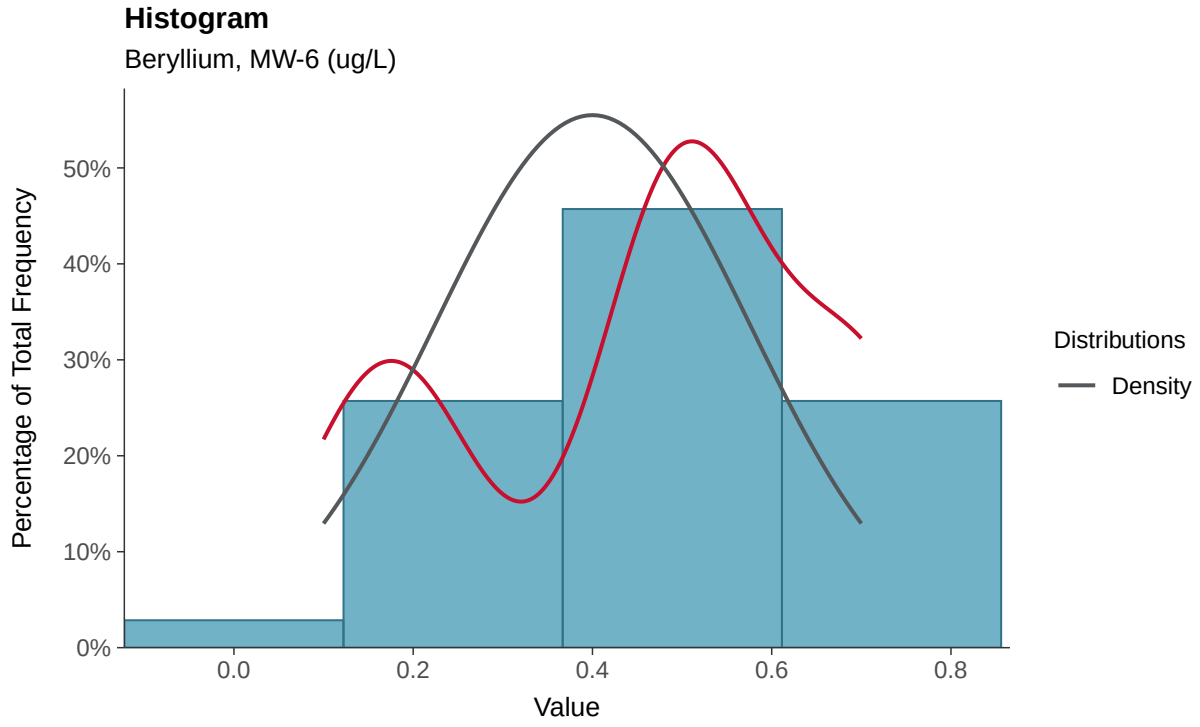
Barium, MW-6 (ug/L)



App. IV: Beryllium, MW-6

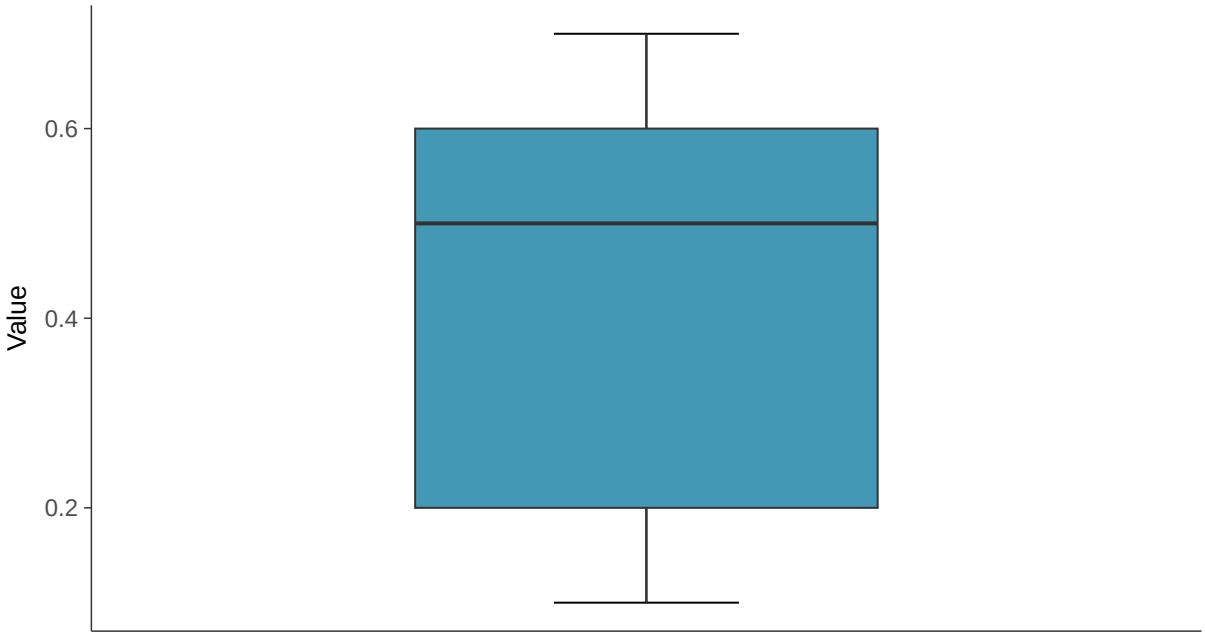
ID: 9_3_104





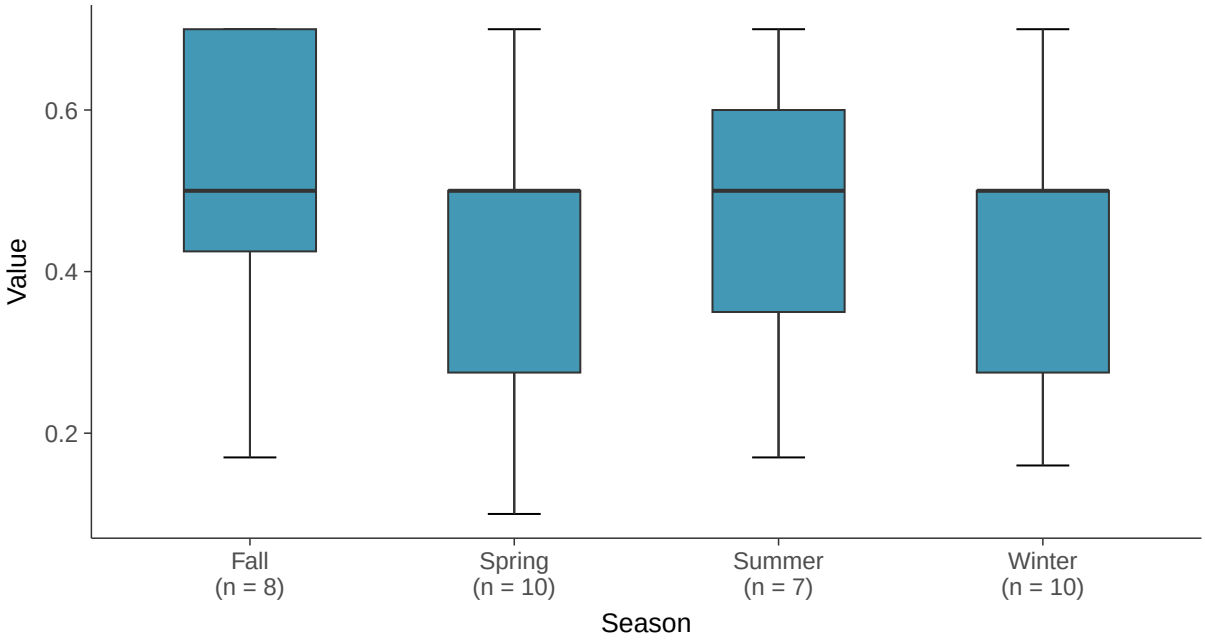
Boxplot

Beryllium, MW-6 (ug/L)



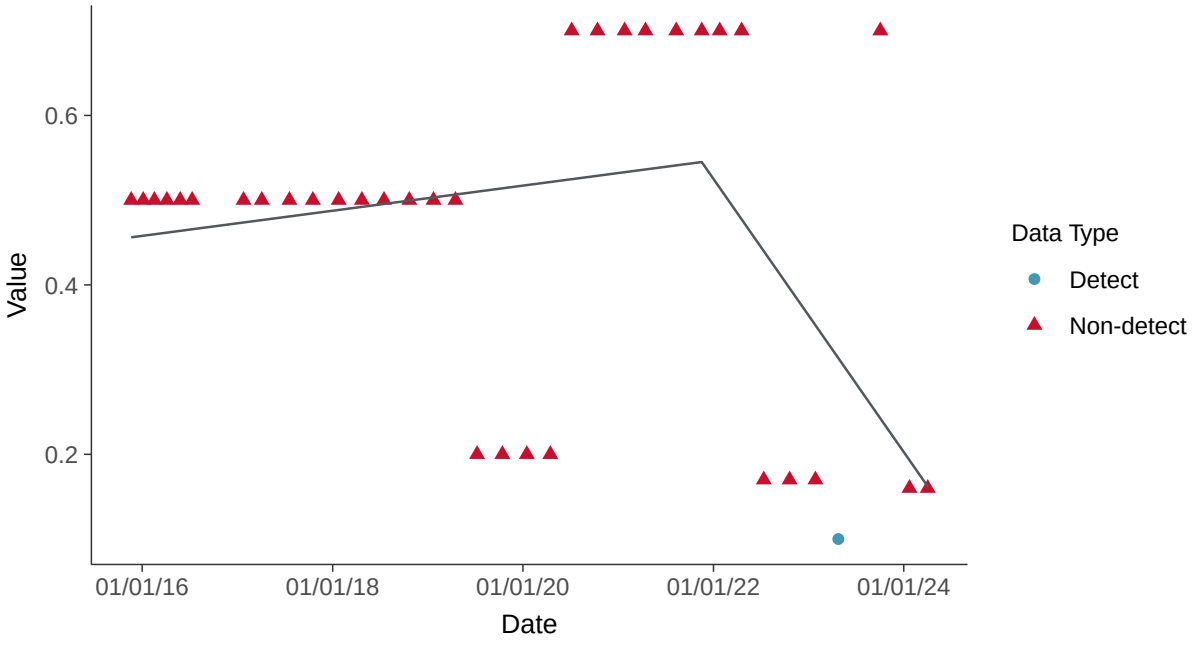
Boxplot by Season

Beryllium, MW-6 (ug/L)



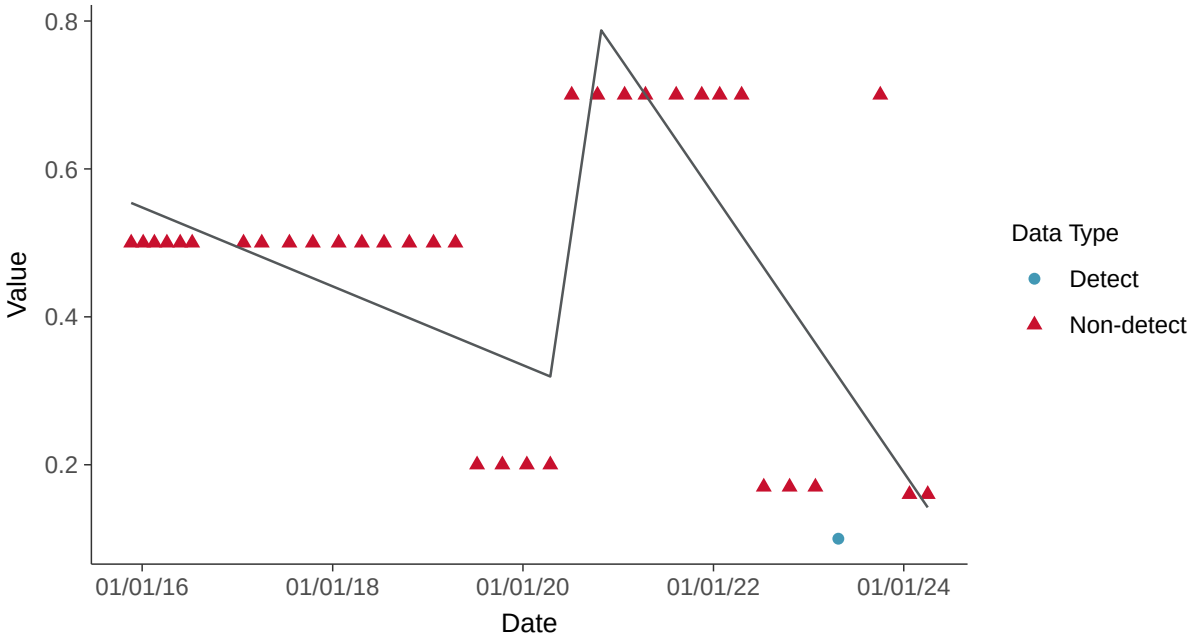
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-6 (ug/L)



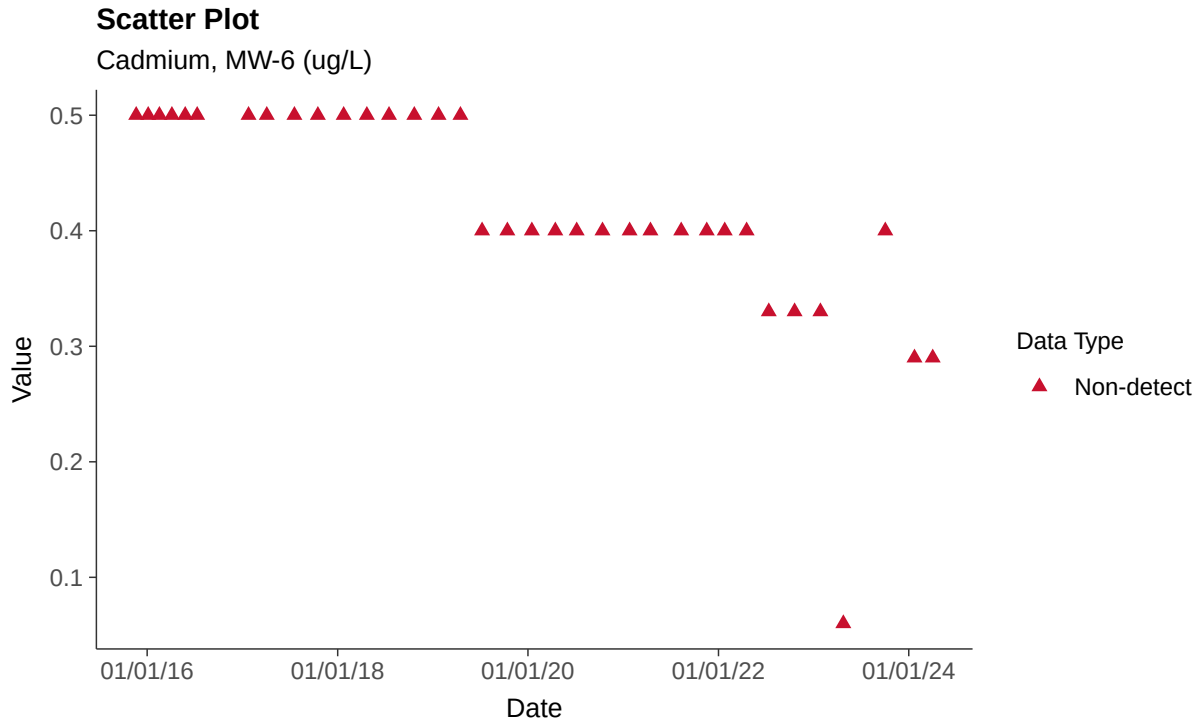
Trend Regression: Piecewise Linear-Linear-Linear

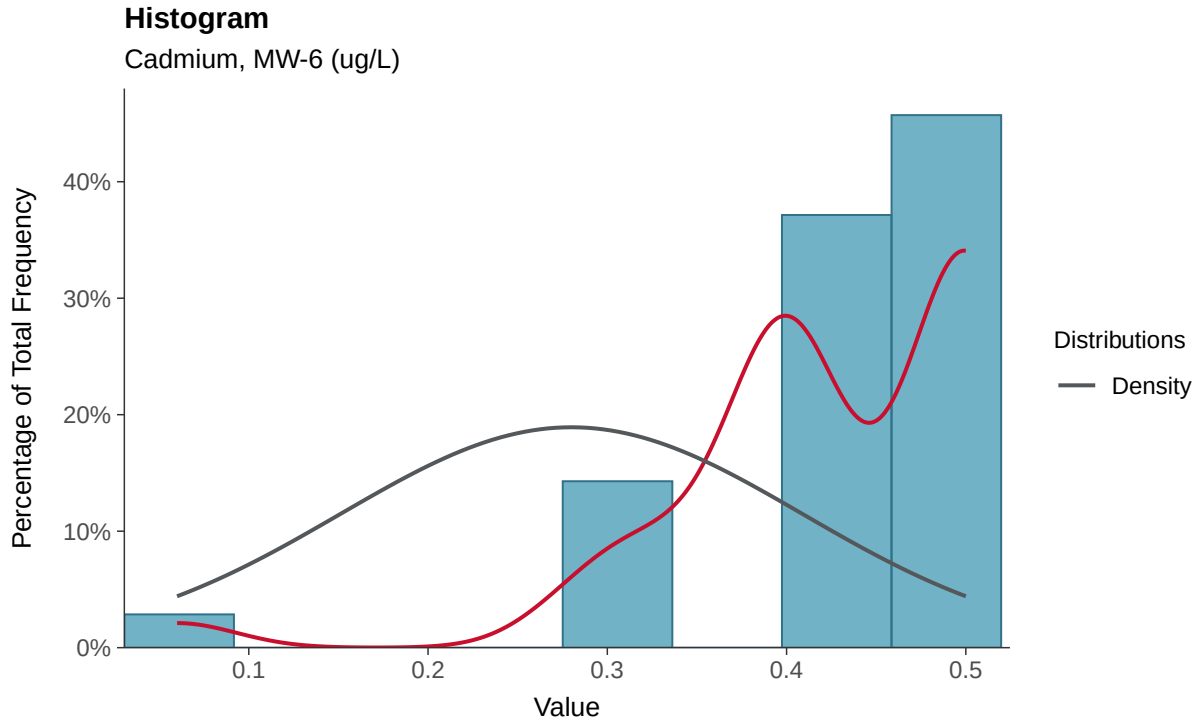
Beryllium, MW-6 (ug/L)



App. IV: Cadmium, MW-6

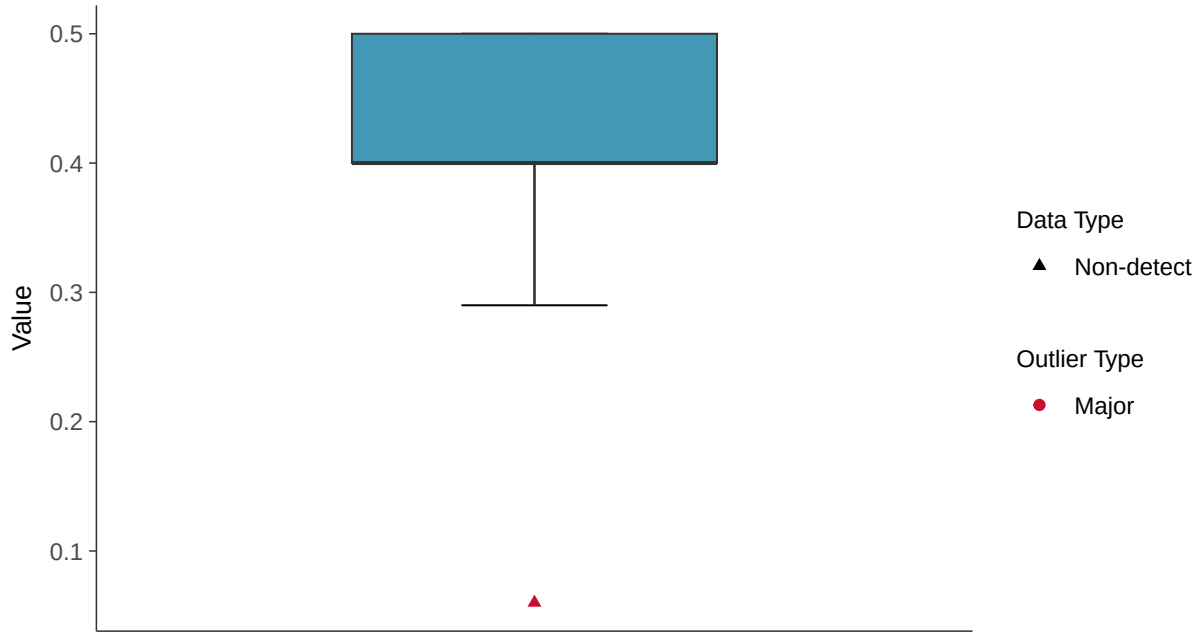
ID: 9_3_106





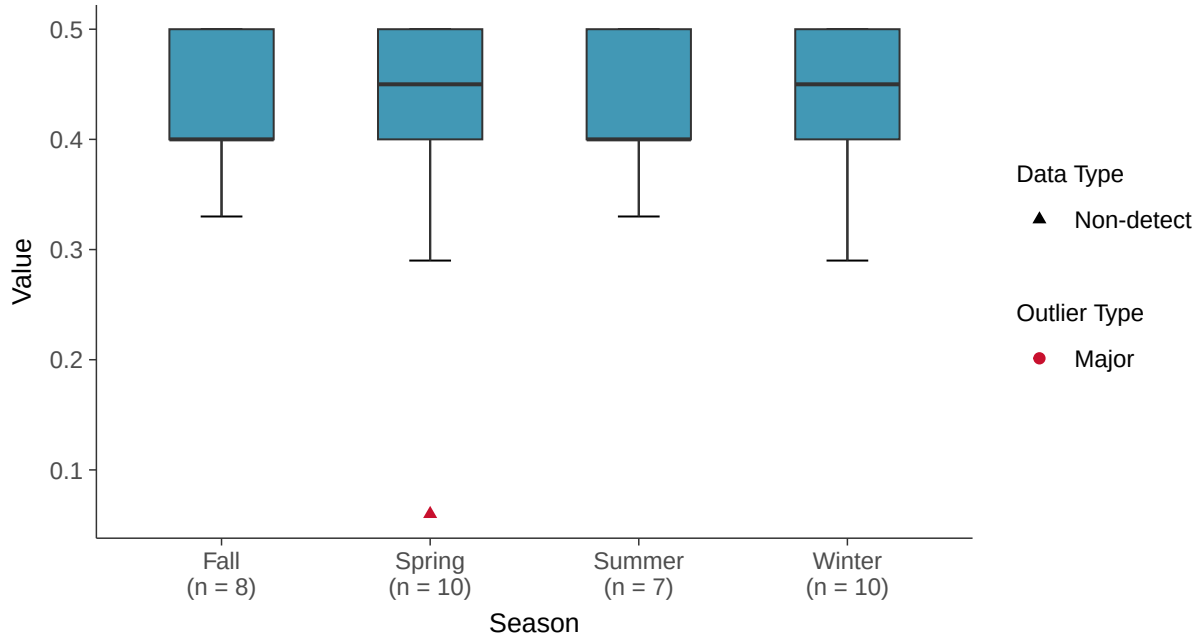
Boxplot

Cadmium, MW-6 (ug/L)



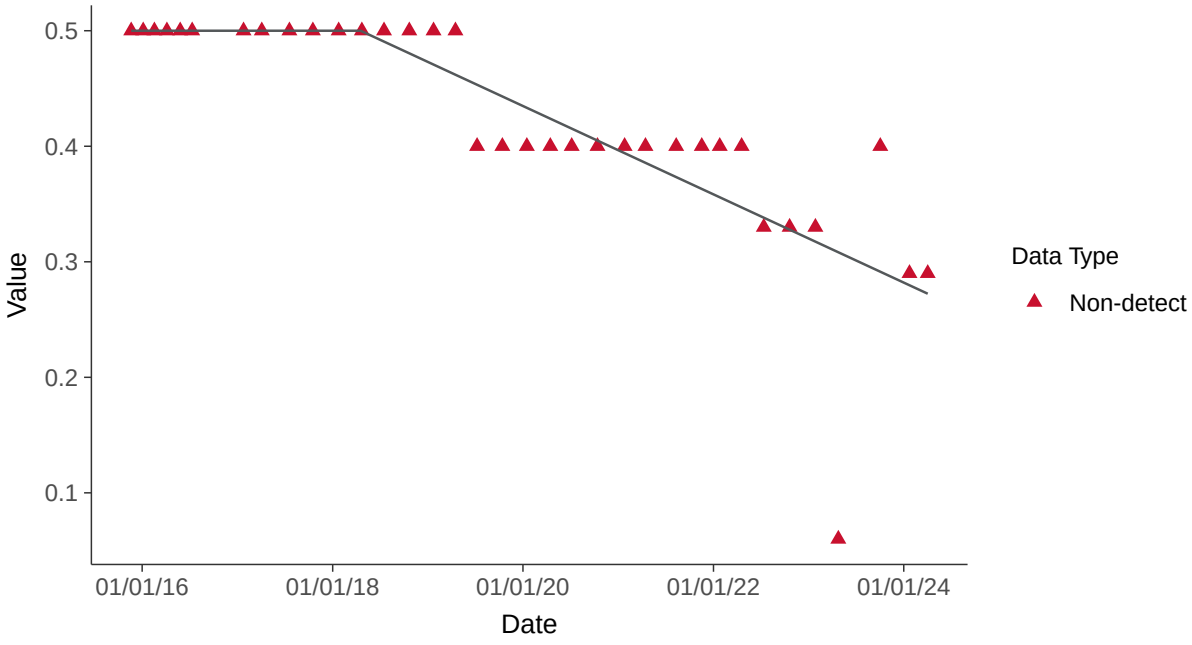
Boxplot by Season

Cadmium, MW-6 (ug/L)



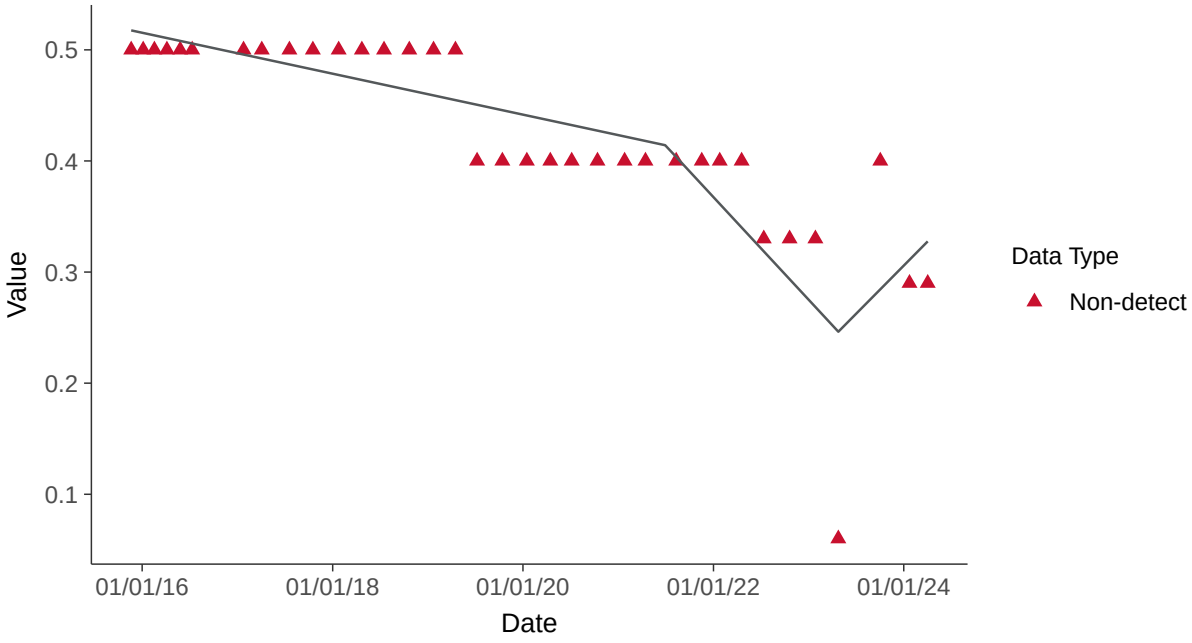
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-6 (ug/L)

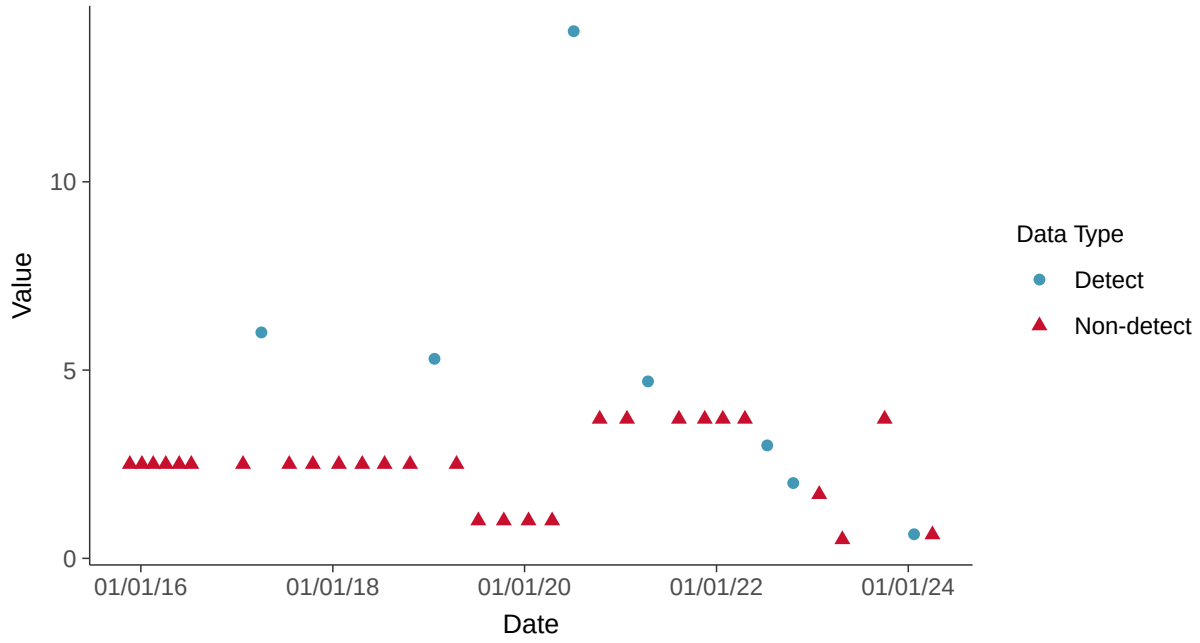


App. IV: Chromium, MW-6

ID: 9_3_109

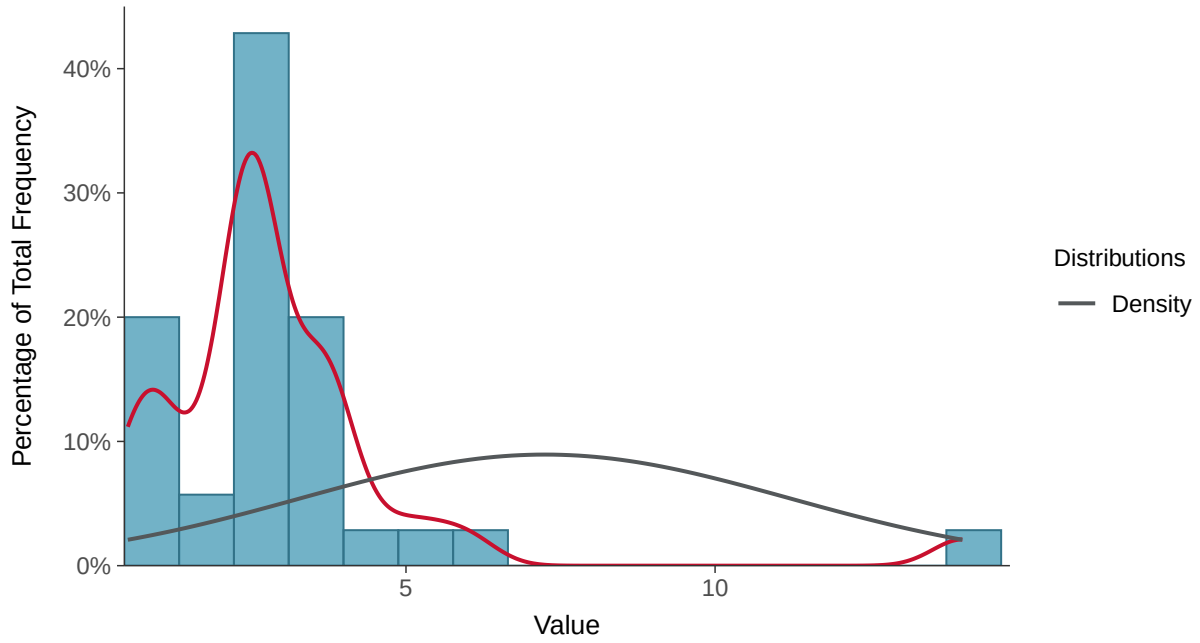
Scatter Plot

Chromium, MW-6 (ug/L)



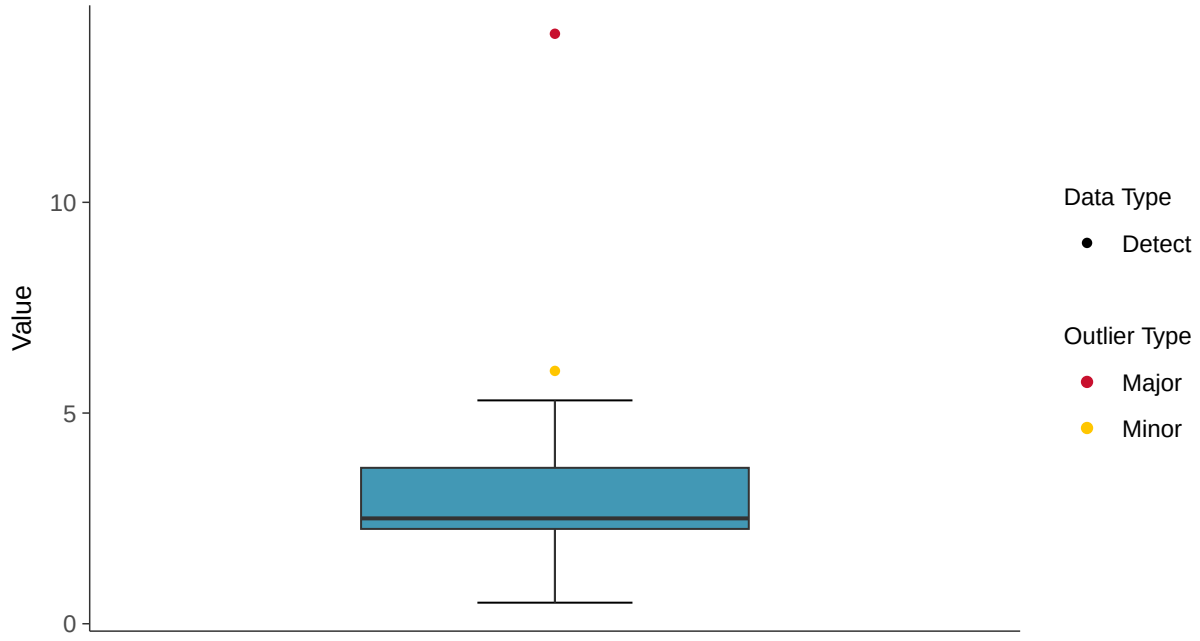
Histogram

Chromium, MW-6 (ug/L)



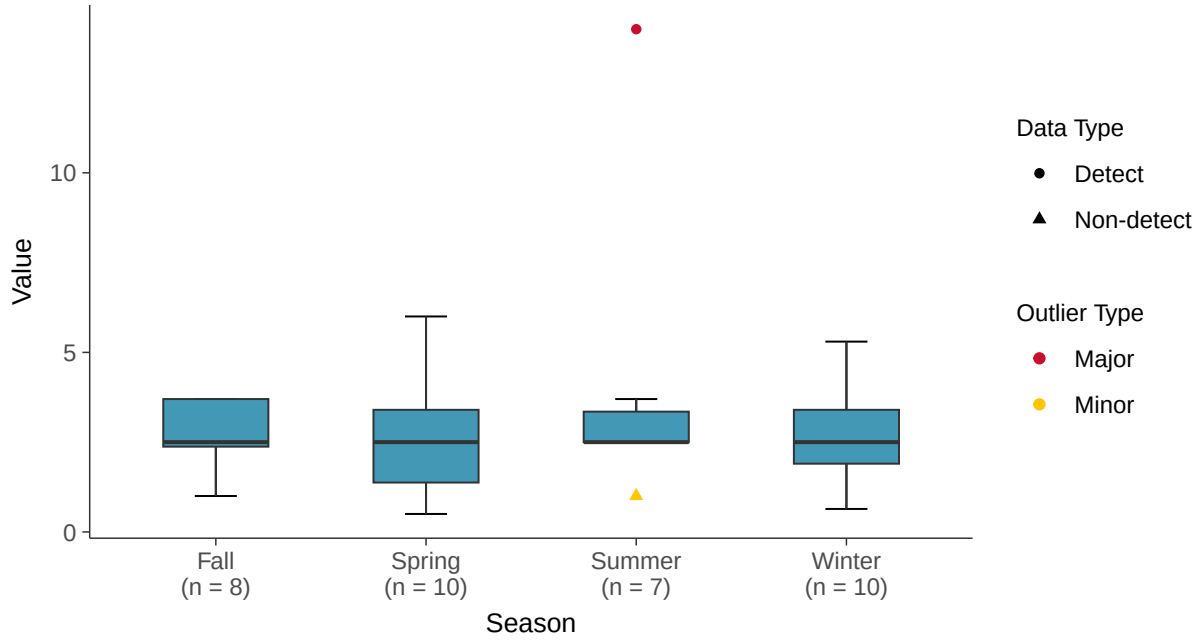
Boxplot

Chromium, MW-6 (ug/L)



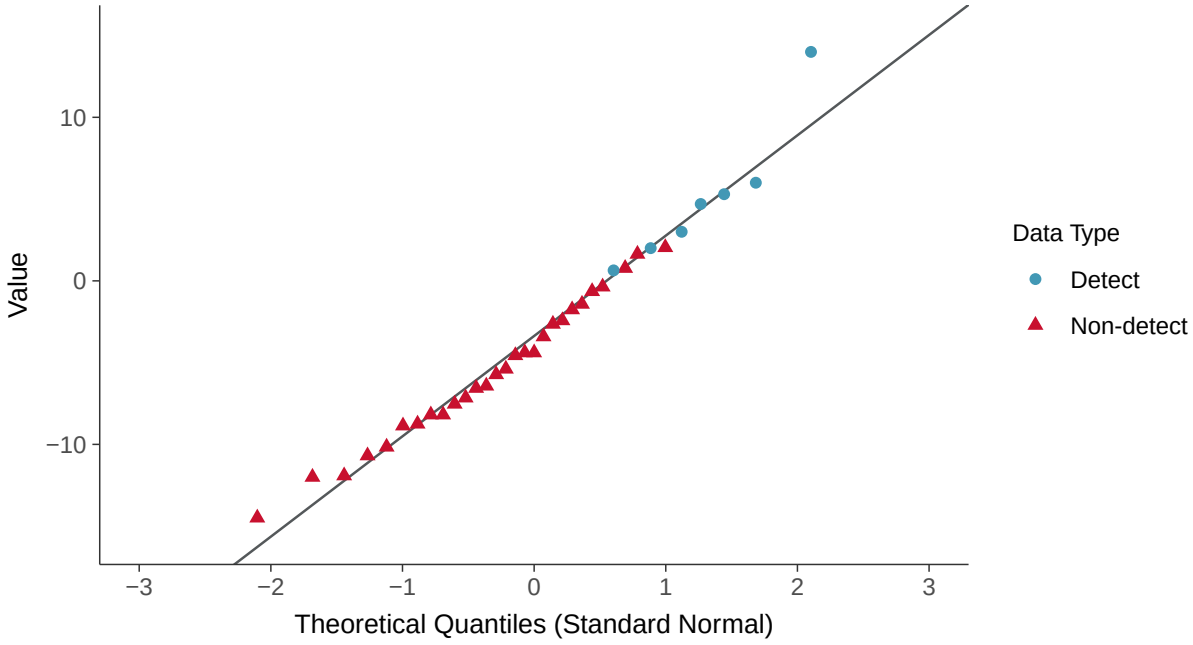
Boxplot by Season

Chromium, MW-6 (ug/L)



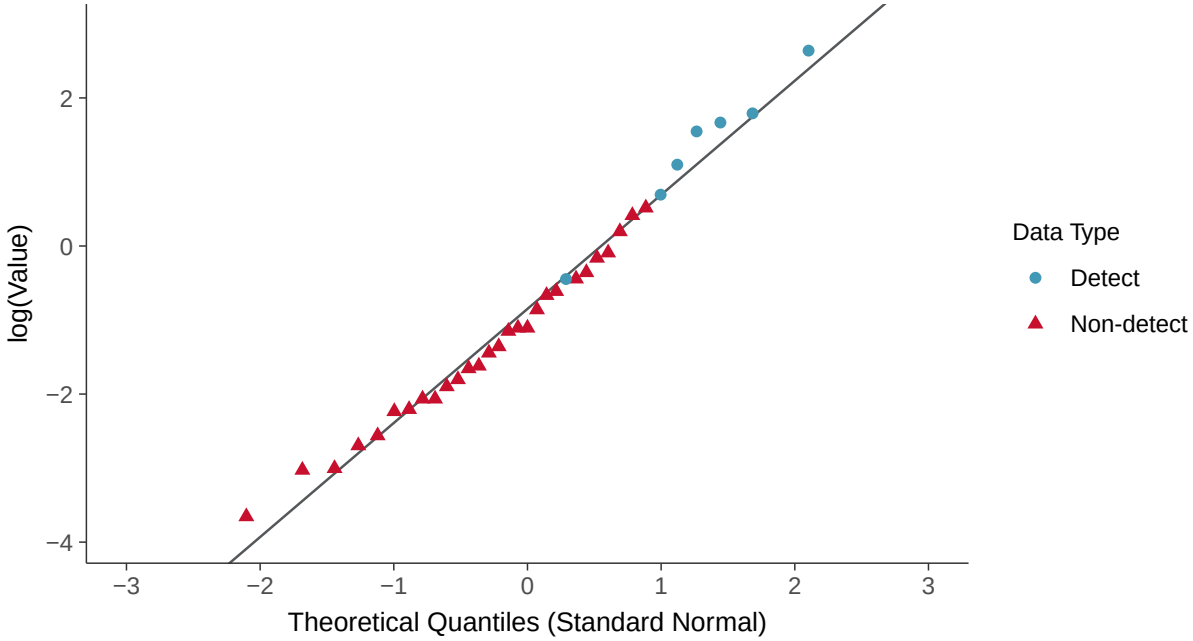
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



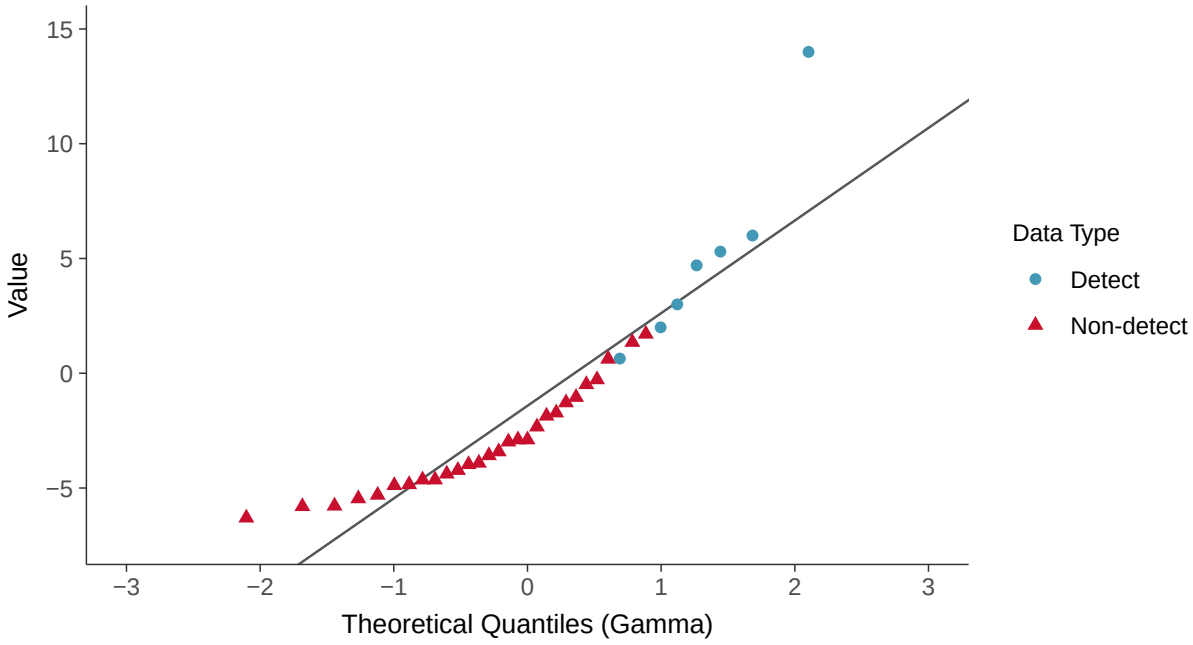
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



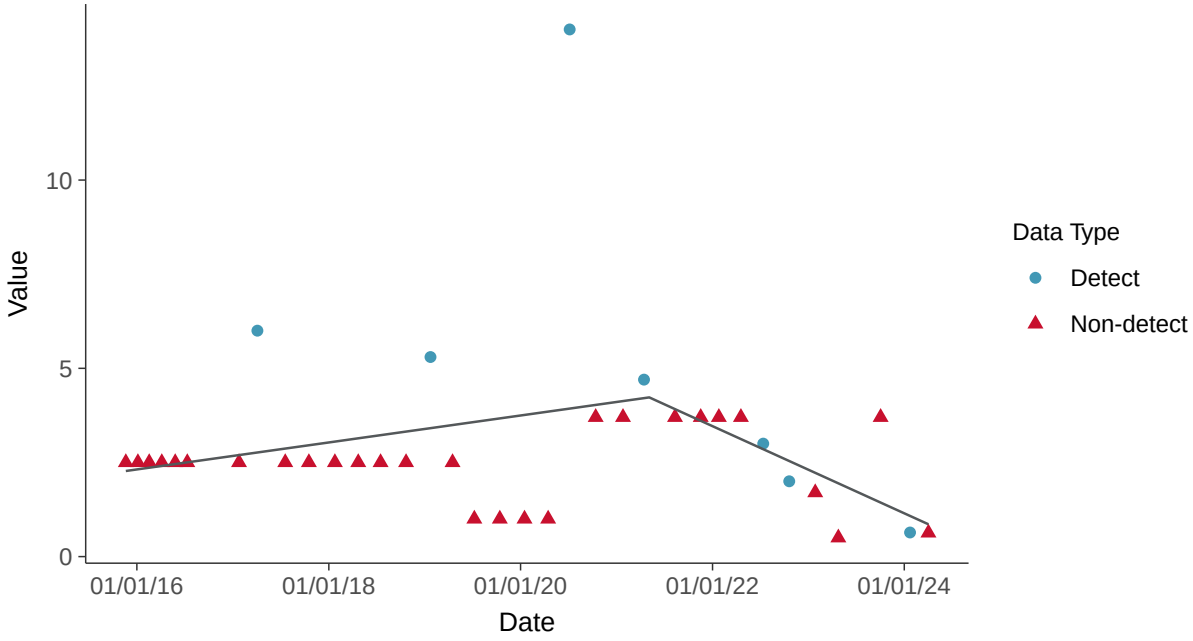
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



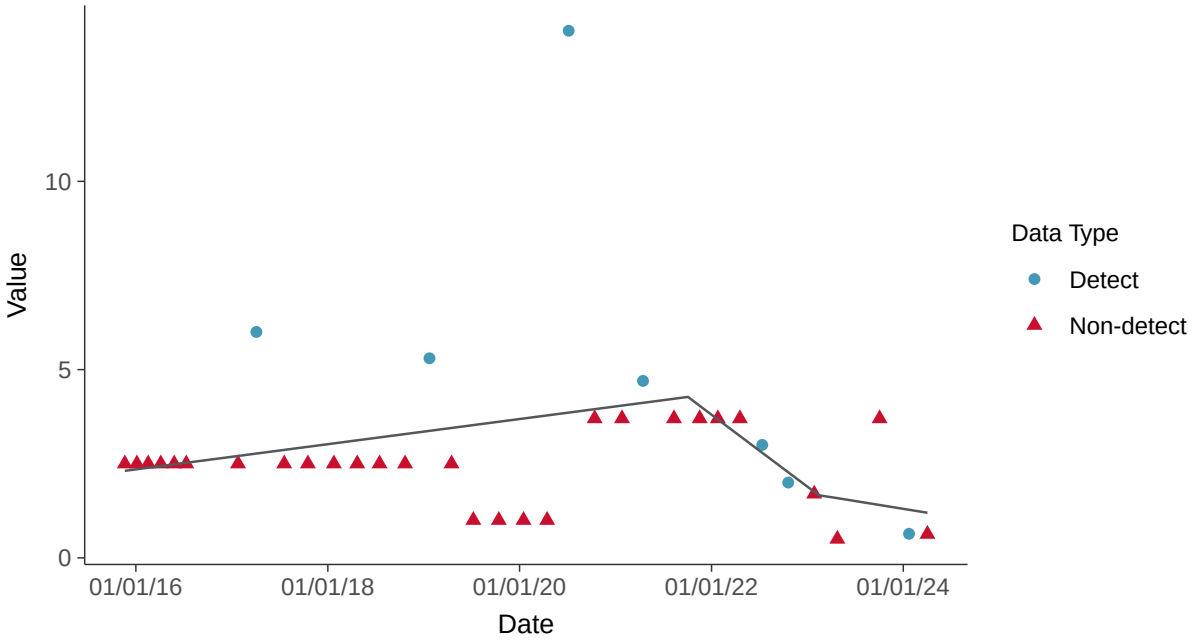
Trend Regression: Piecewise Linear-Linear

Chromium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-6 (ug/L)

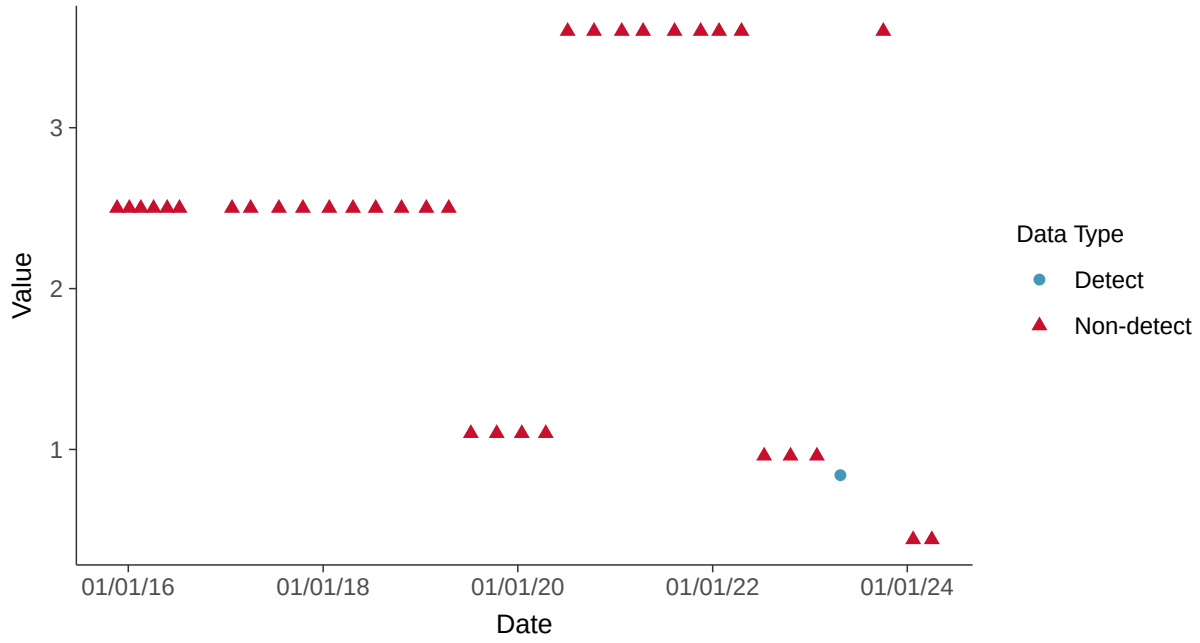


App. IV: Cobalt, MW-6

ID: 9_3_110

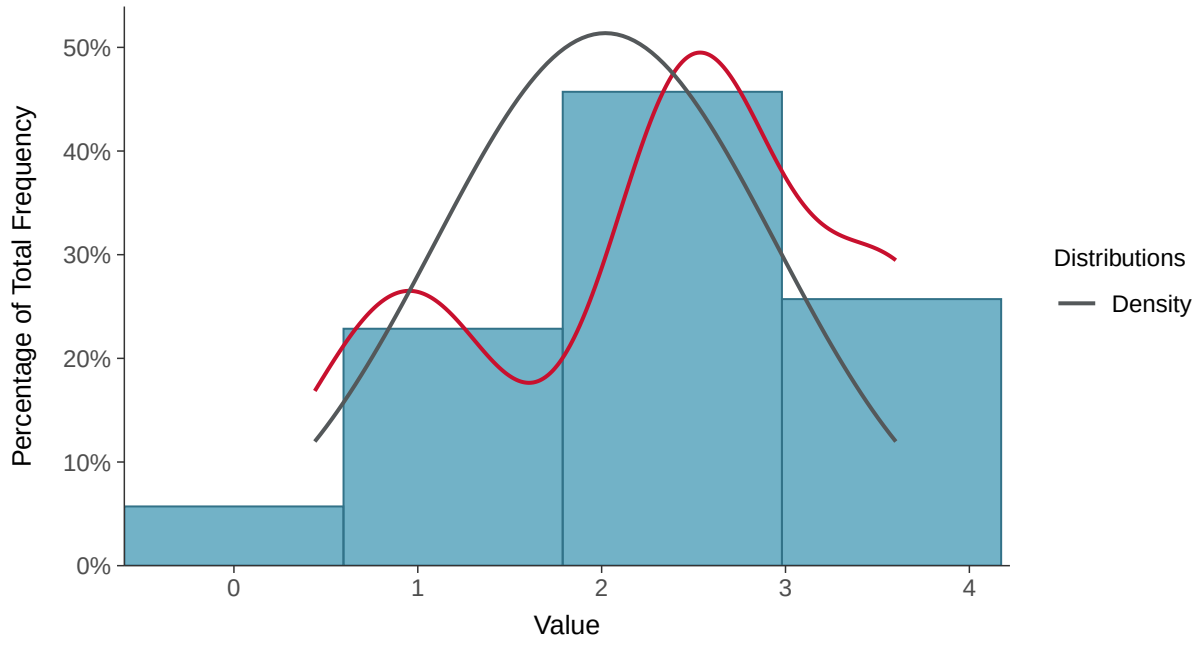
Scatter Plot

Cobalt, MW-6 (ug/L)



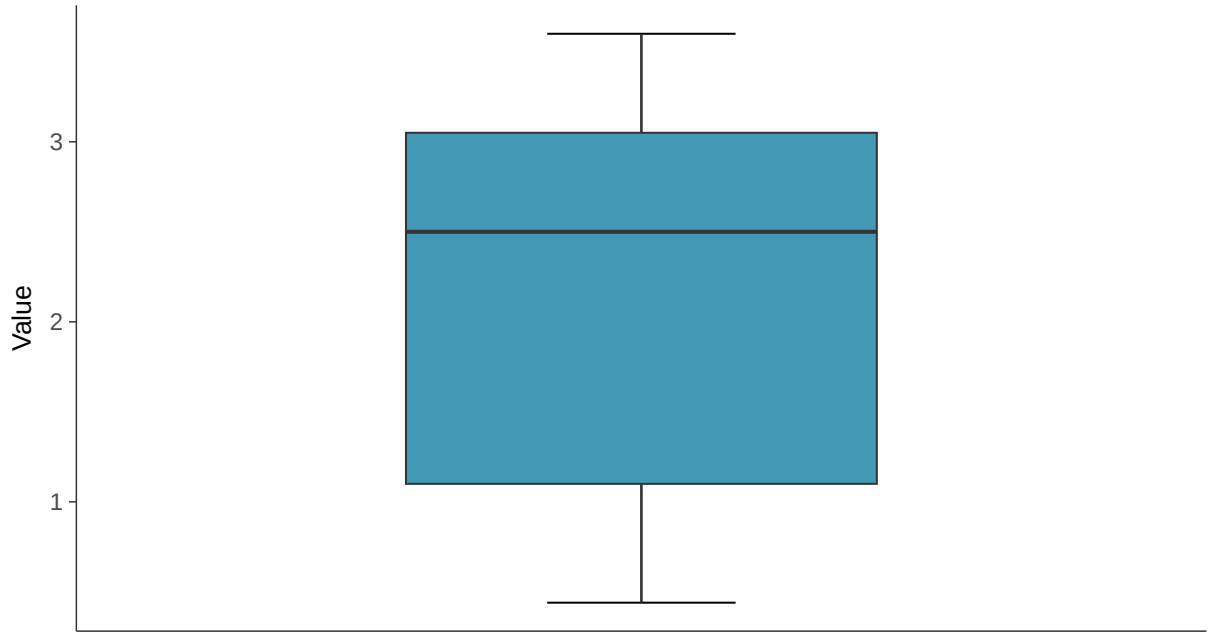
Histogram

Cobalt, MW-6 (ug/L)



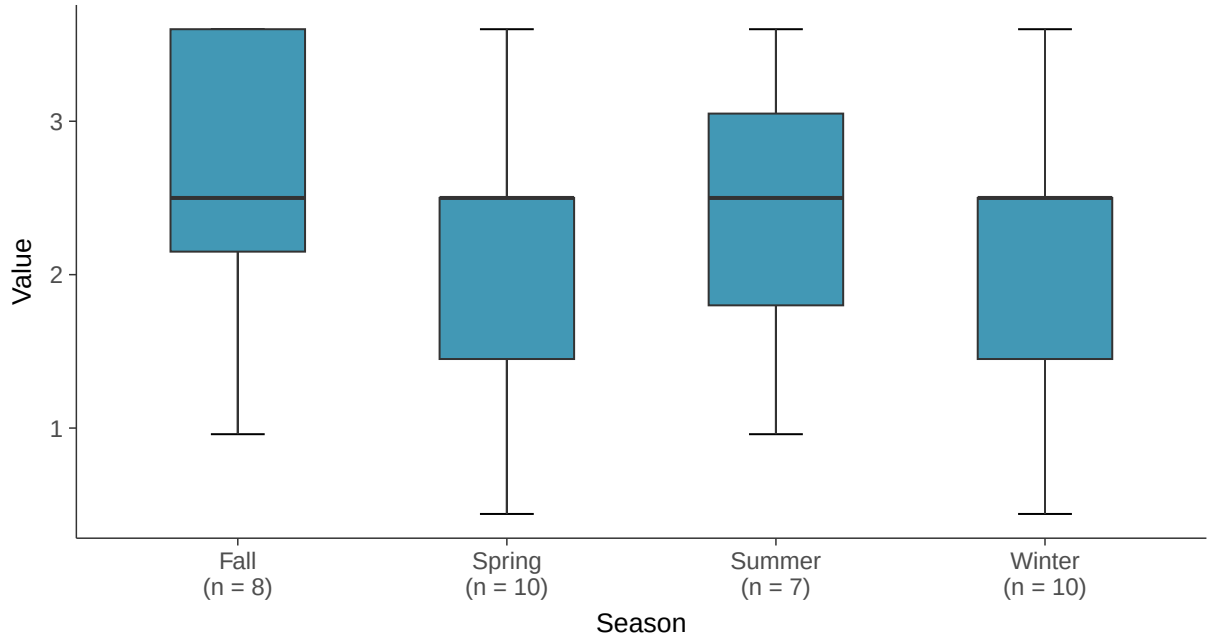
Boxplot

Cobalt, MW-6 (ug/L)



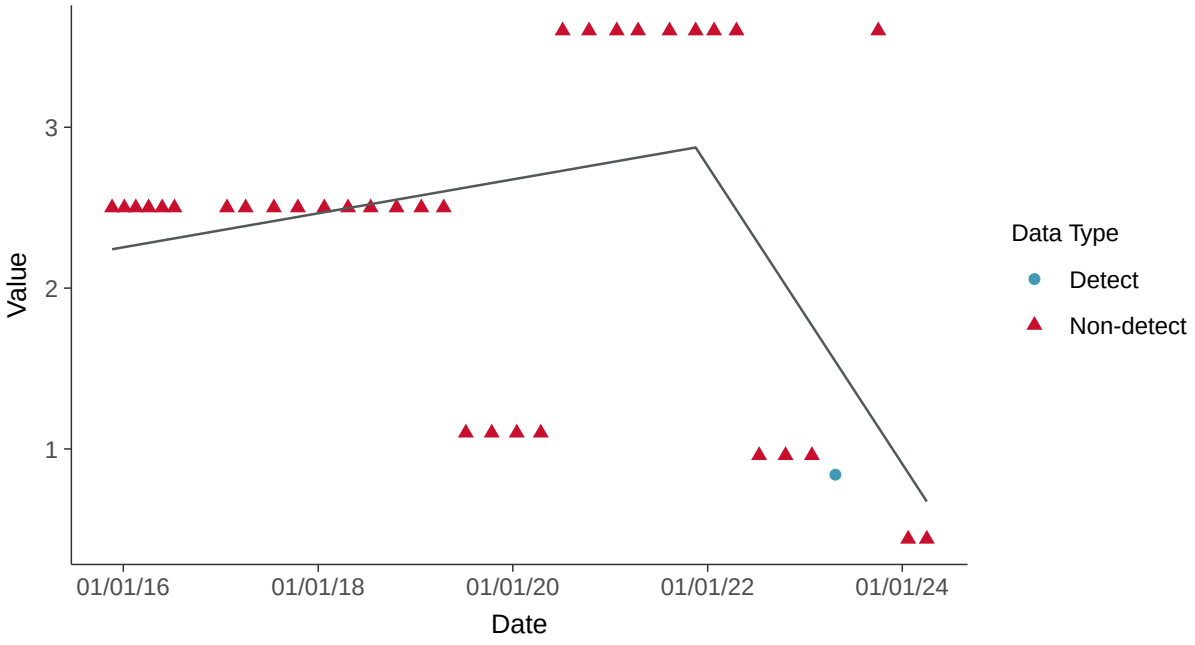
Boxplot by Season

Cobalt, MW-6 (ug/L)



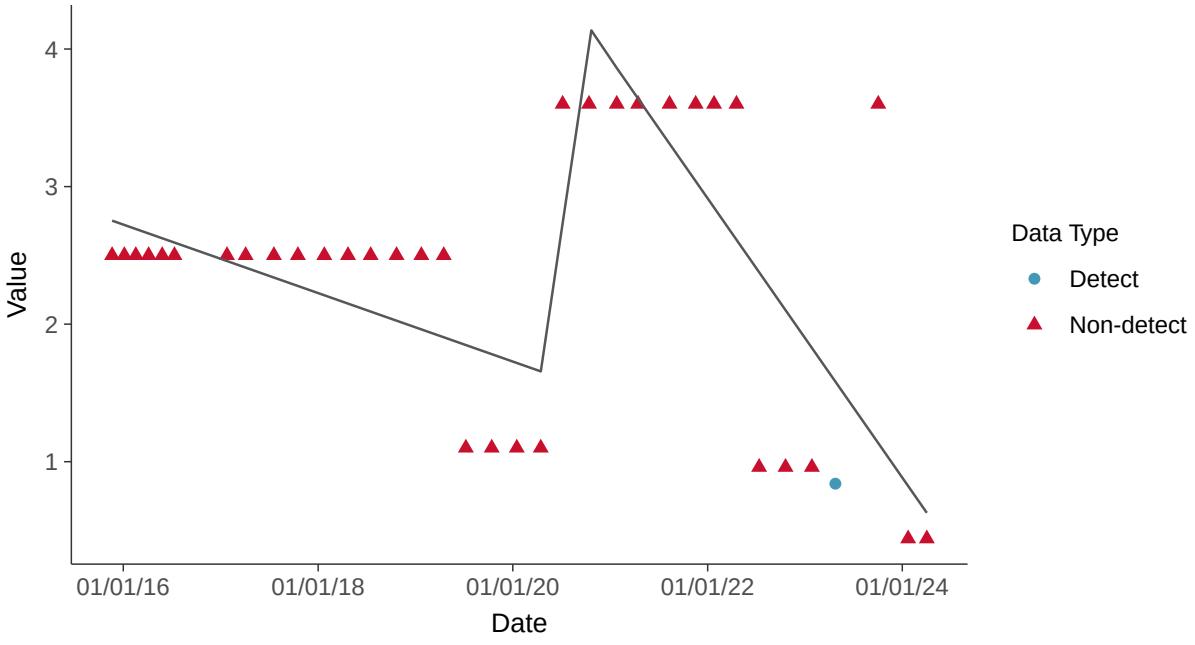
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-6 (ug/L)



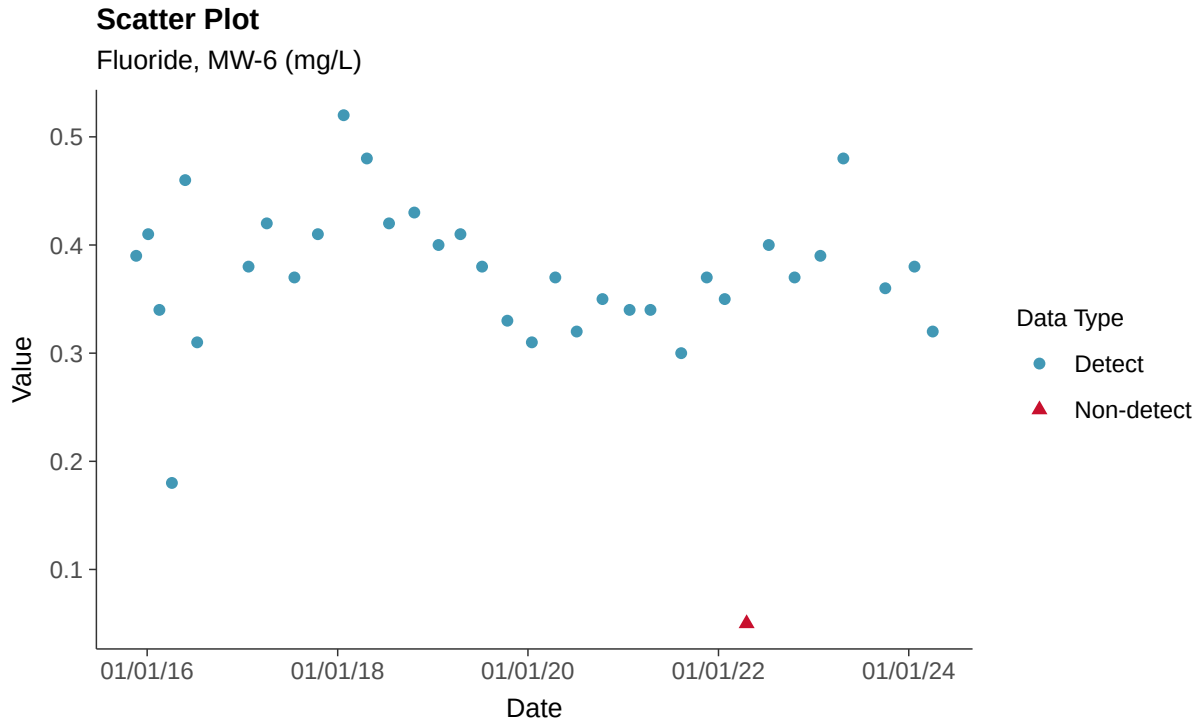
Trend Regression: Piecewise Linear-Linear-Linear

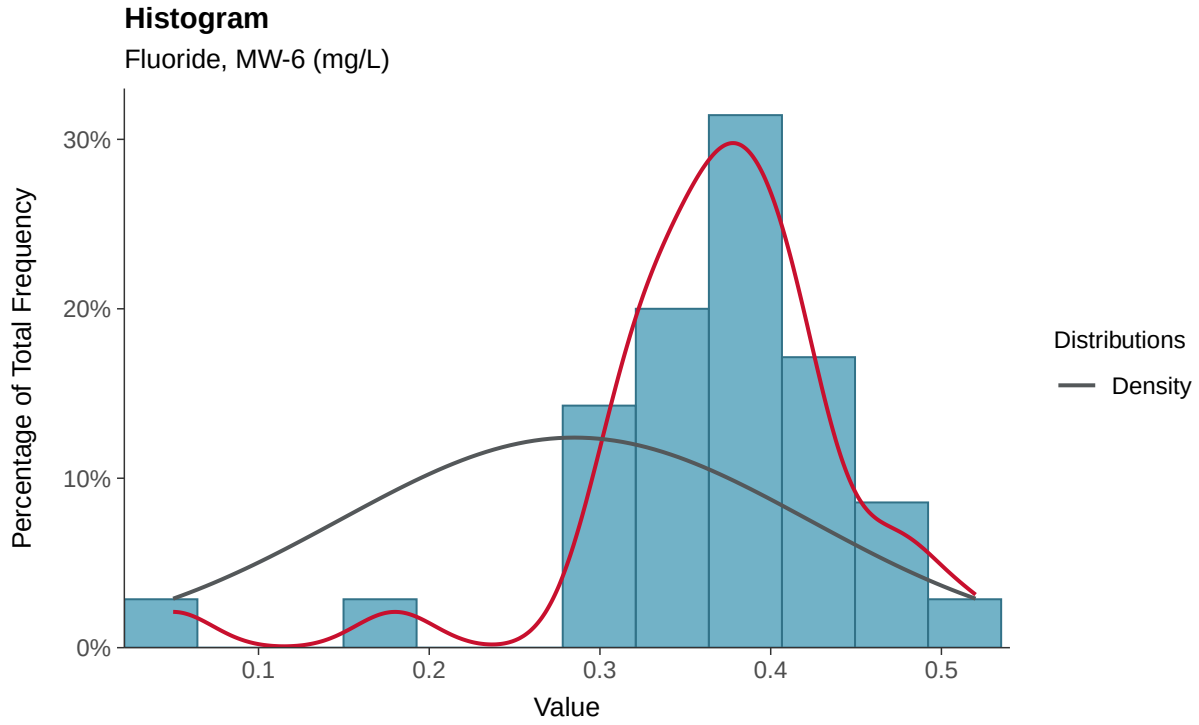
Cobalt, MW-6 (ug/L)



App. IV: Fluoride, MW-6

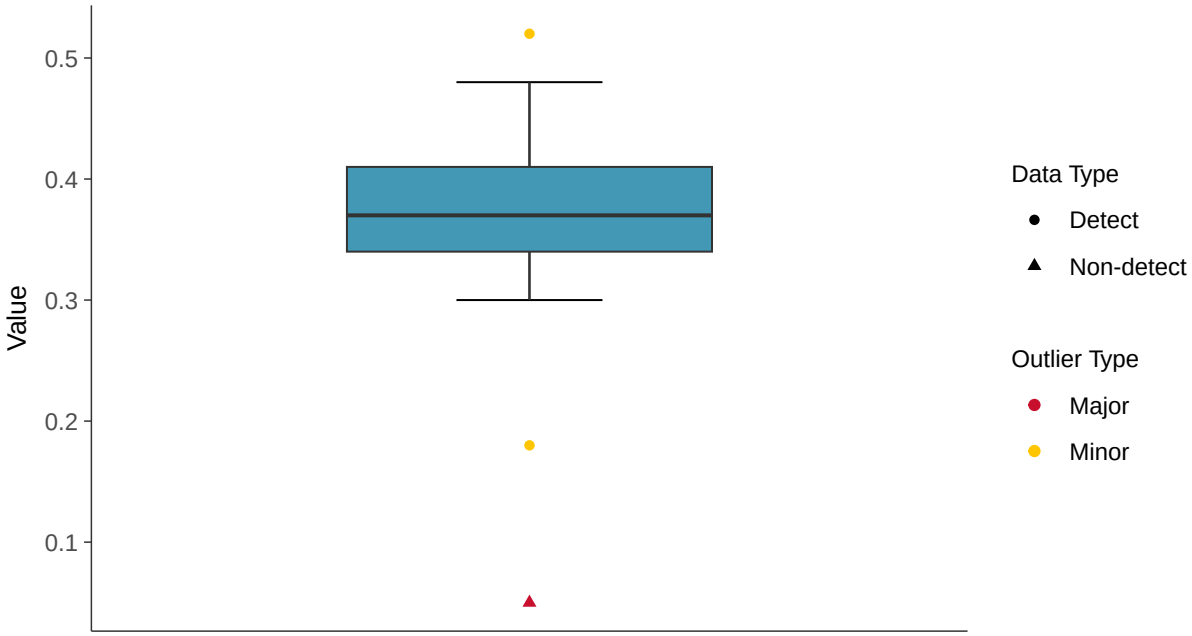
ID: 9_3_112





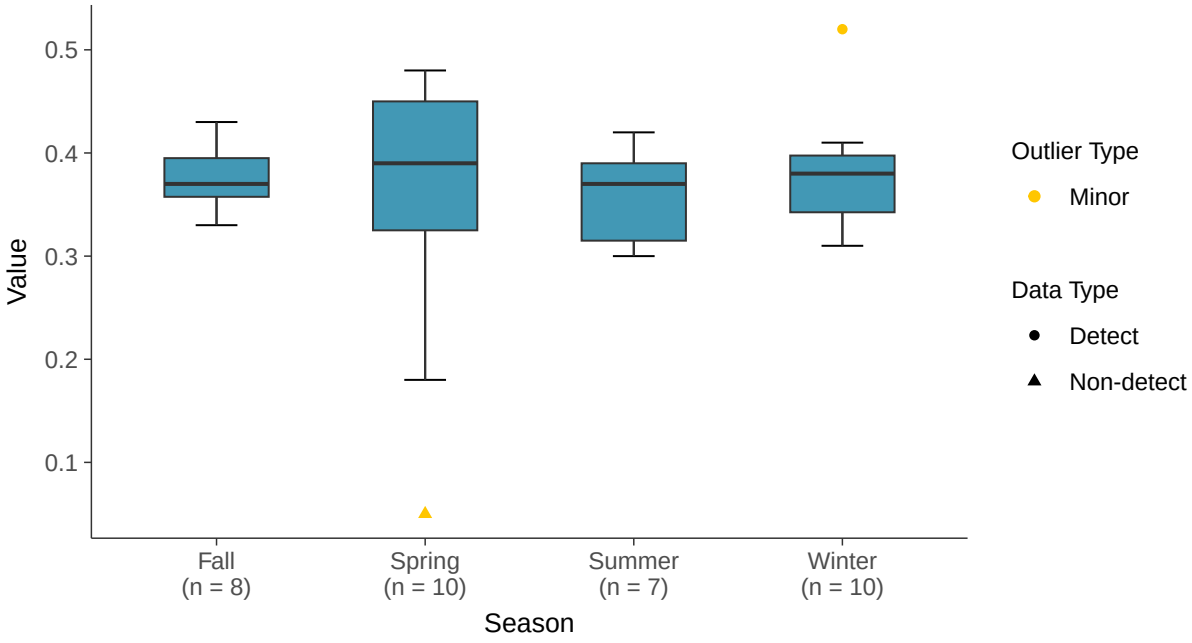
Boxplot

Fluoride, MW-6 (mg/L)



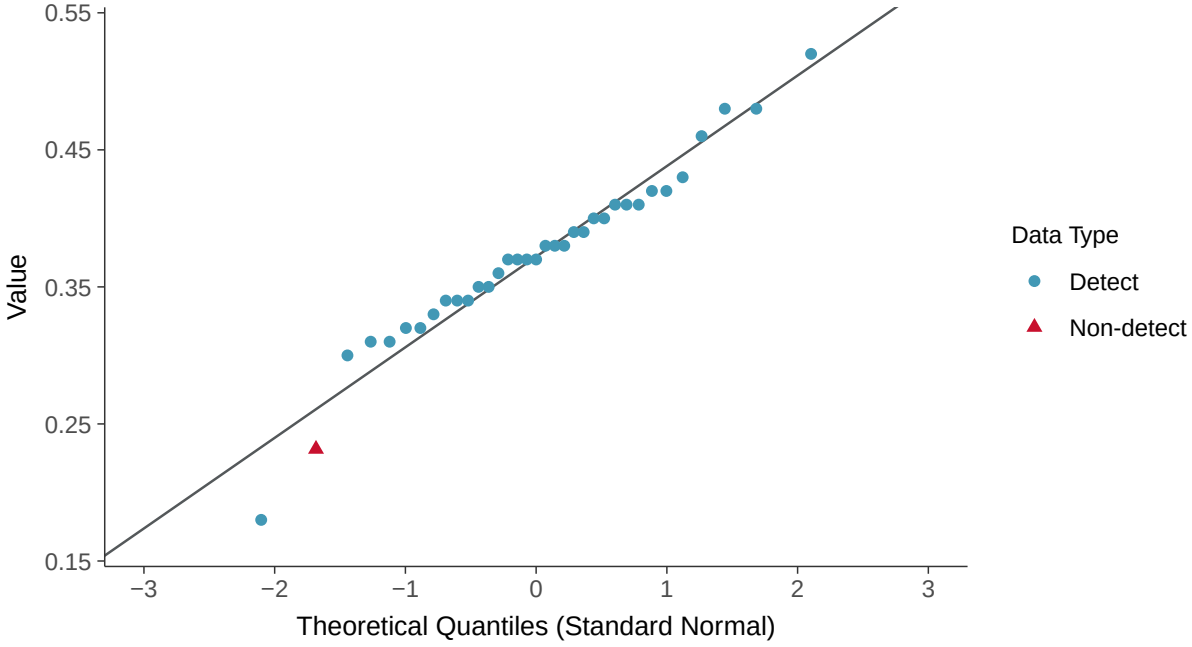
Boxplot by Season

Fluoride, MW-6 (mg/L)



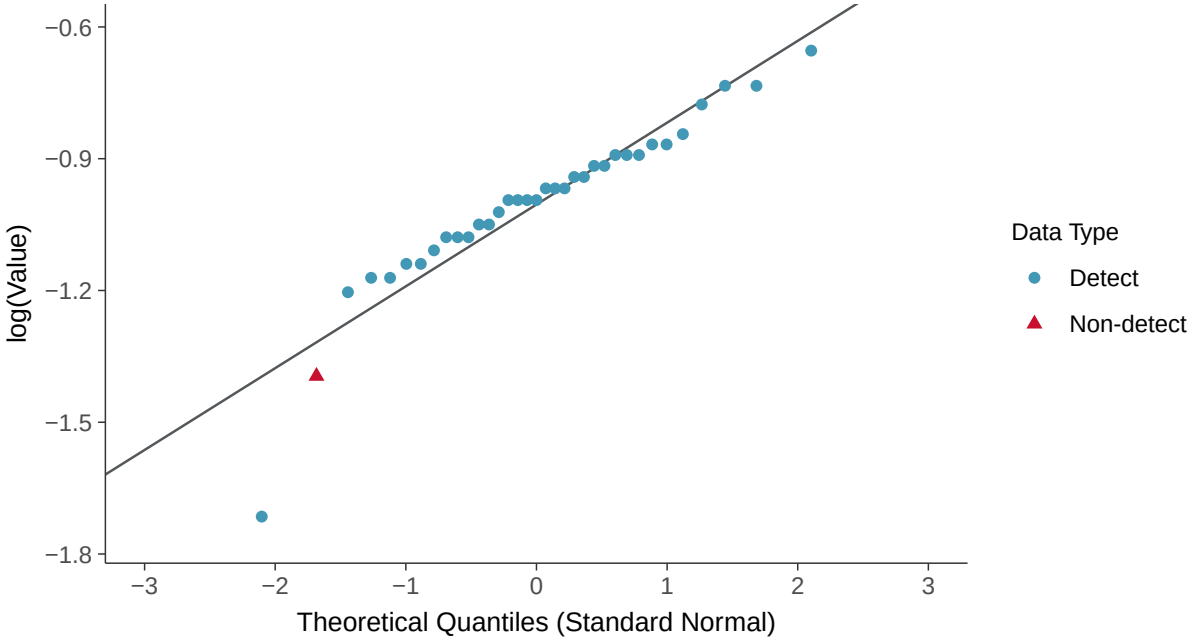
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



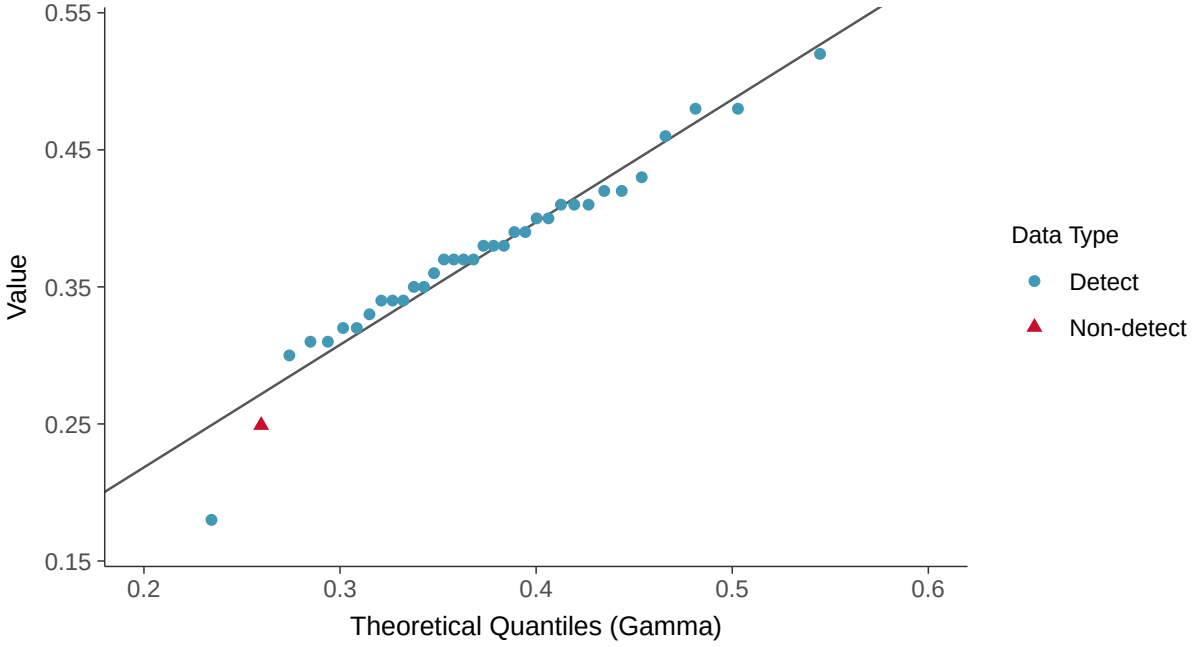
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



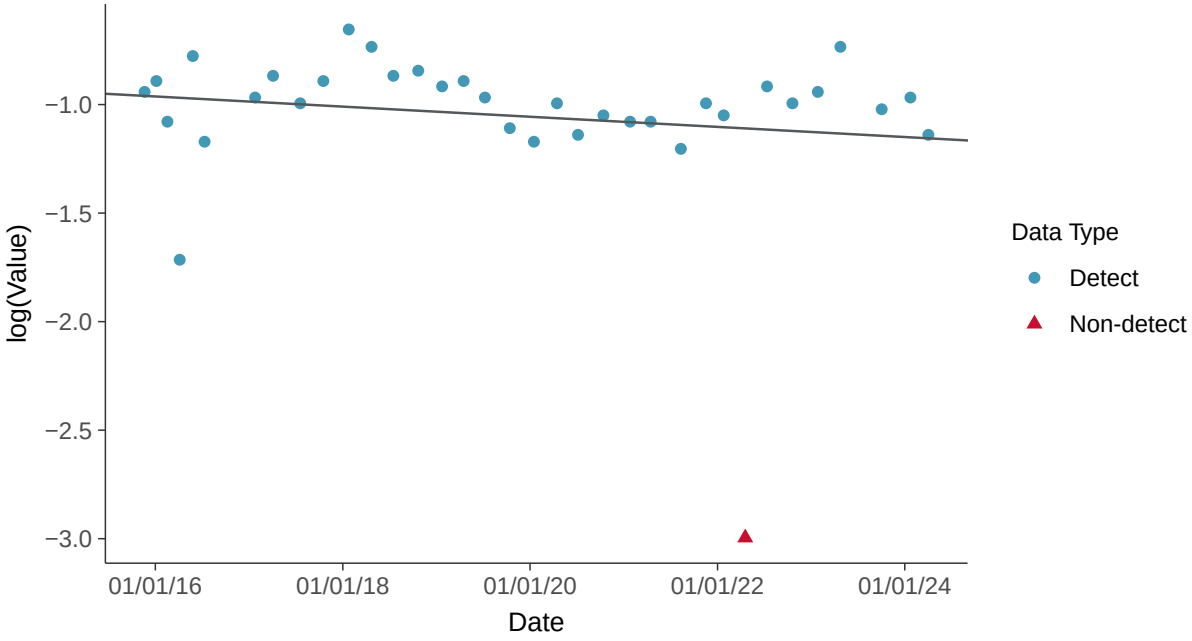
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



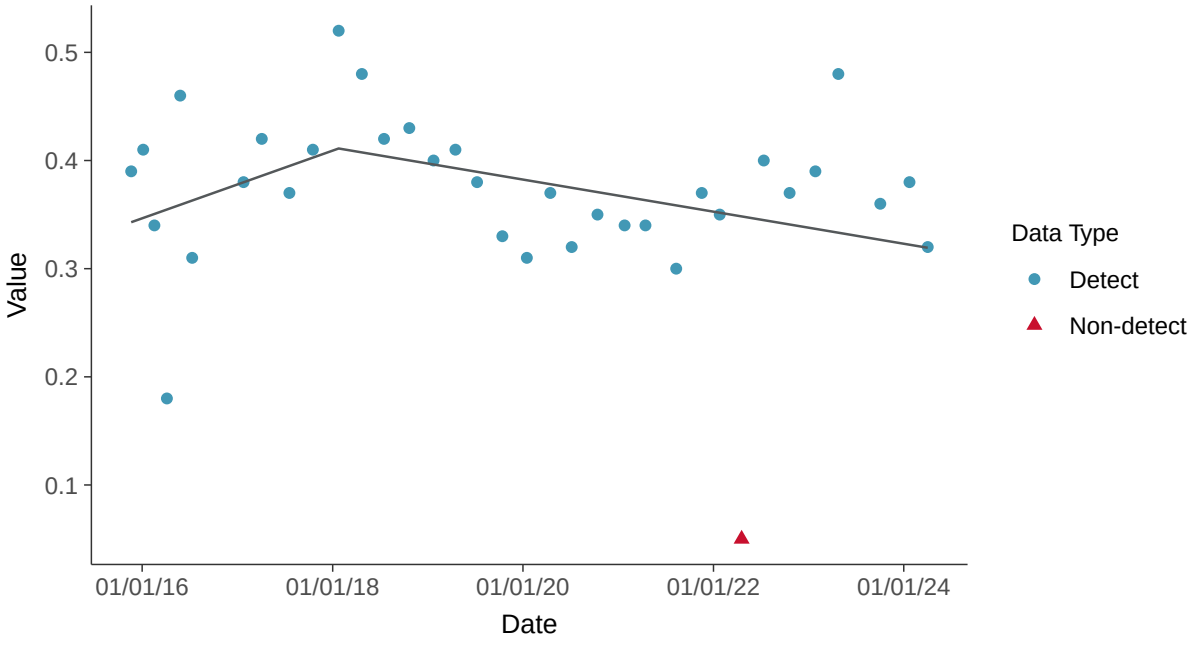
Trend Regression: Lognormal MLE

Fluoride, MW-6 (mg/L)



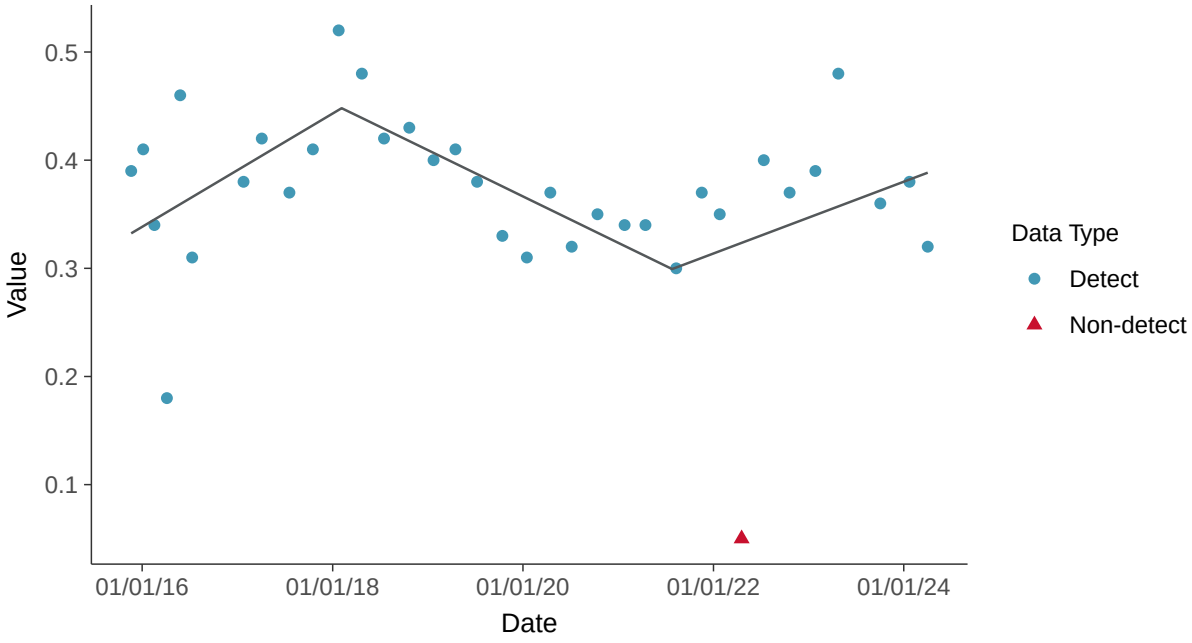
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-6 (mg/L)



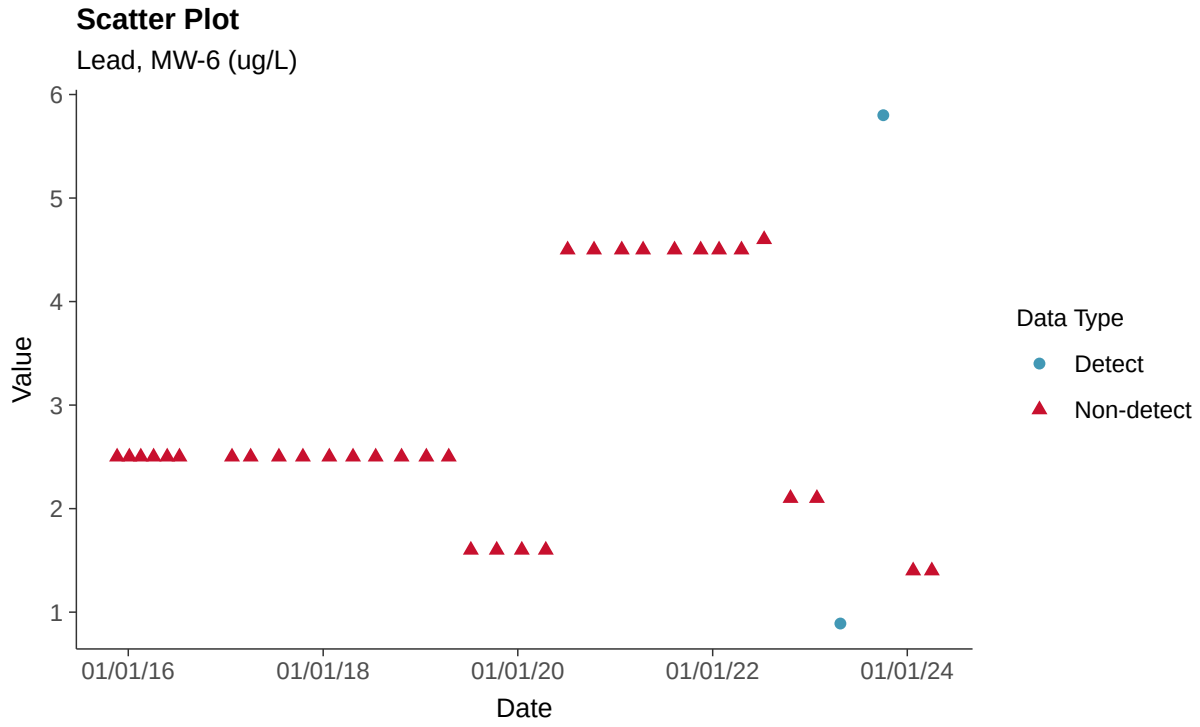
Trend Regression: Piecewise Linear-Linear-Linear

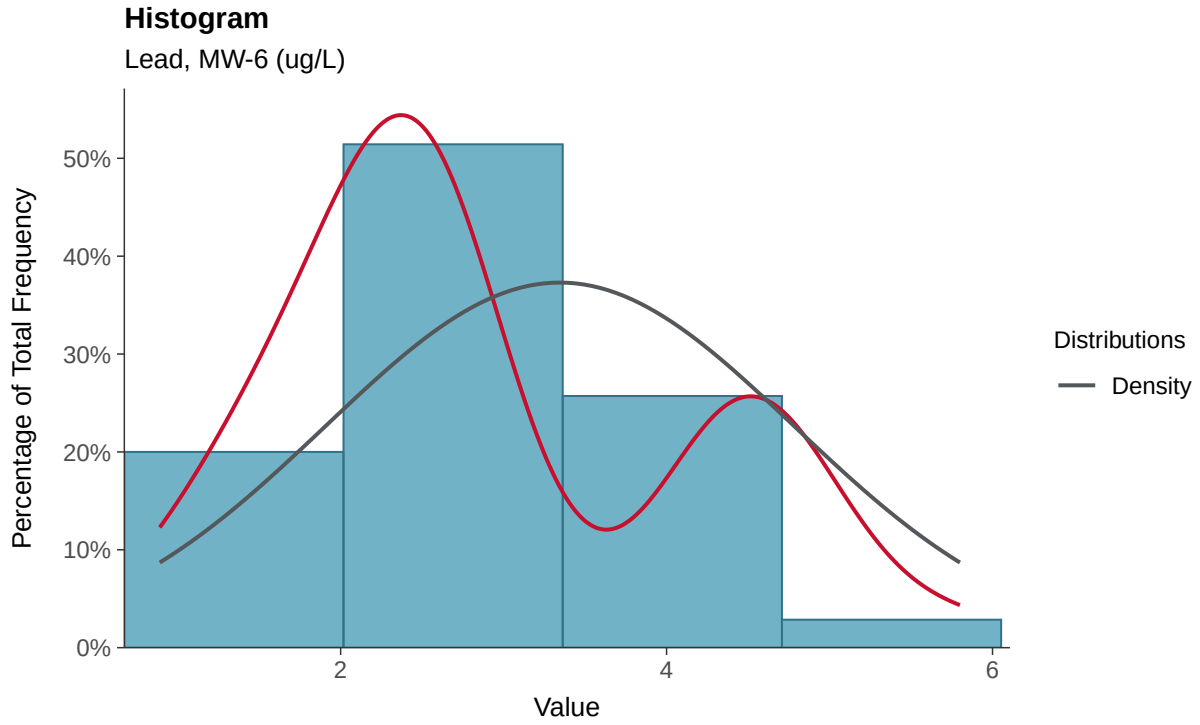
Fluoride, MW-6 (mg/L)



App. IV: Lead, MW-6

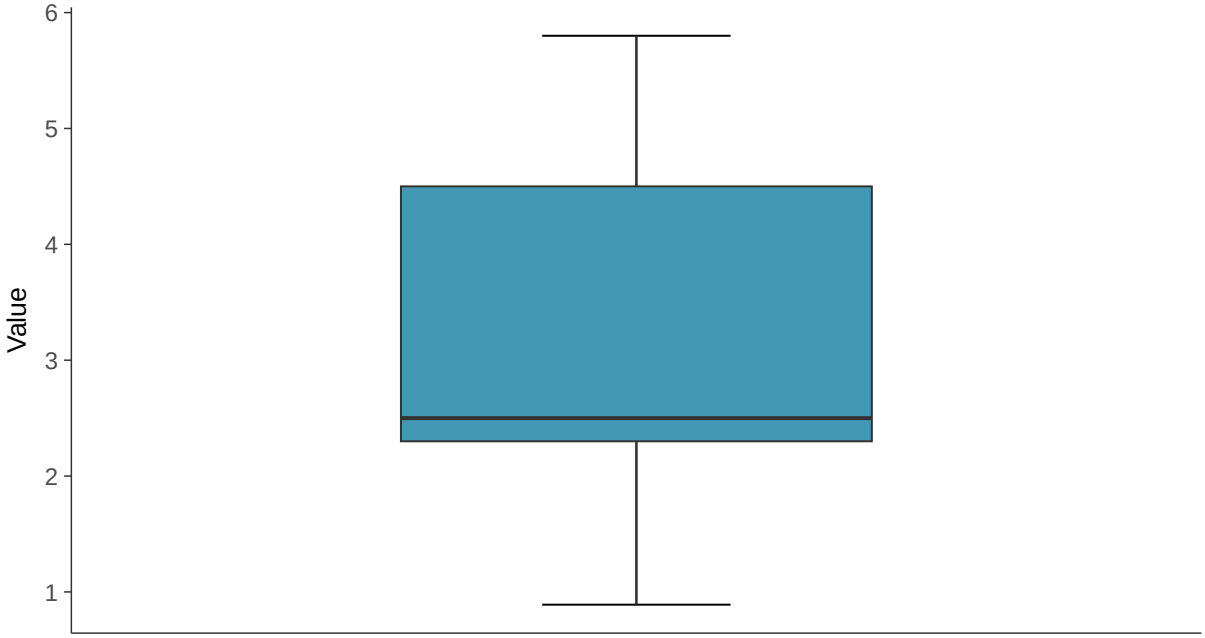
ID: 9_3_113





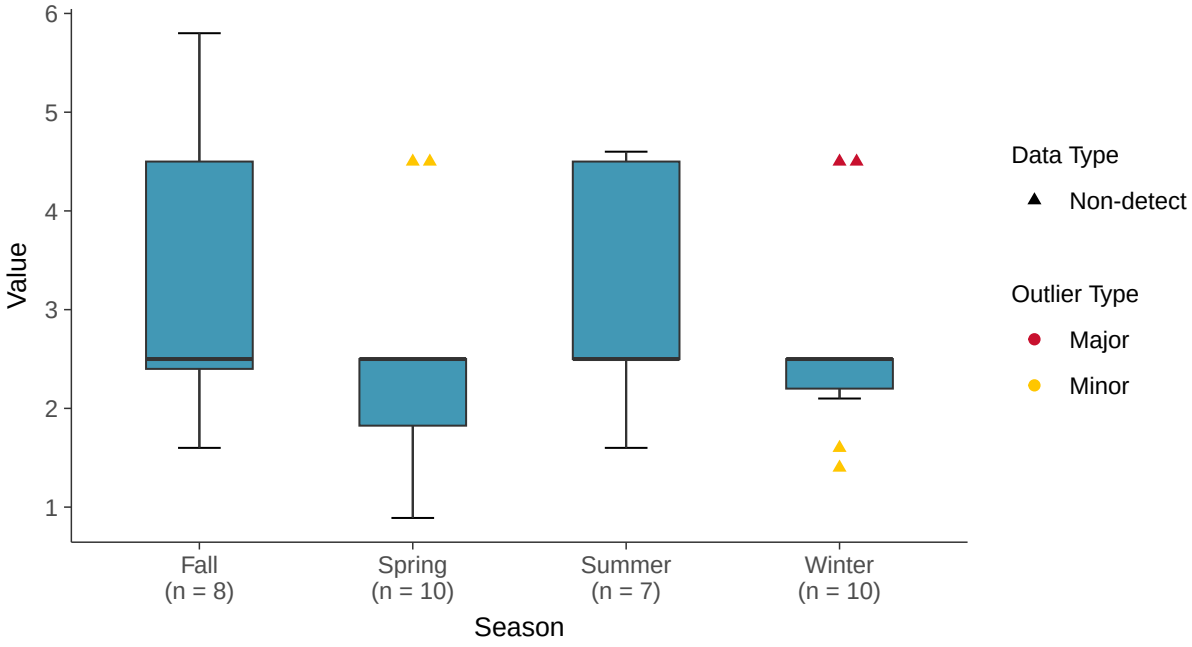
Boxplot

Lead, MW-6 (ug/L)



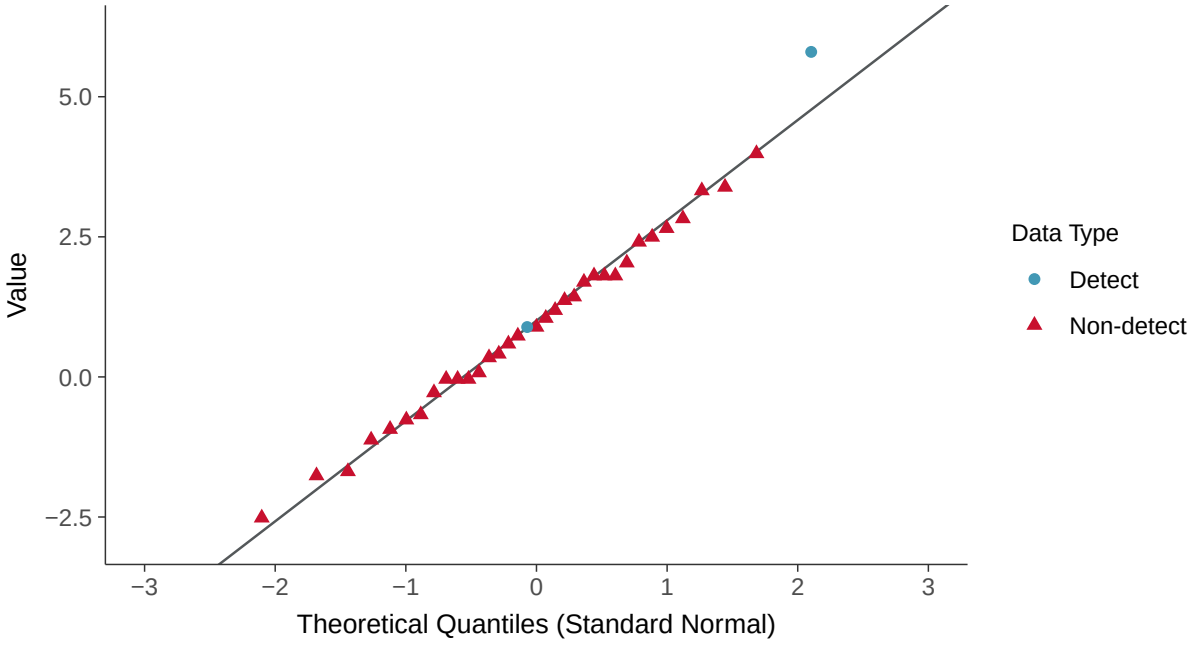
Boxplot by Season

Lead, MW-6 (ug/L)



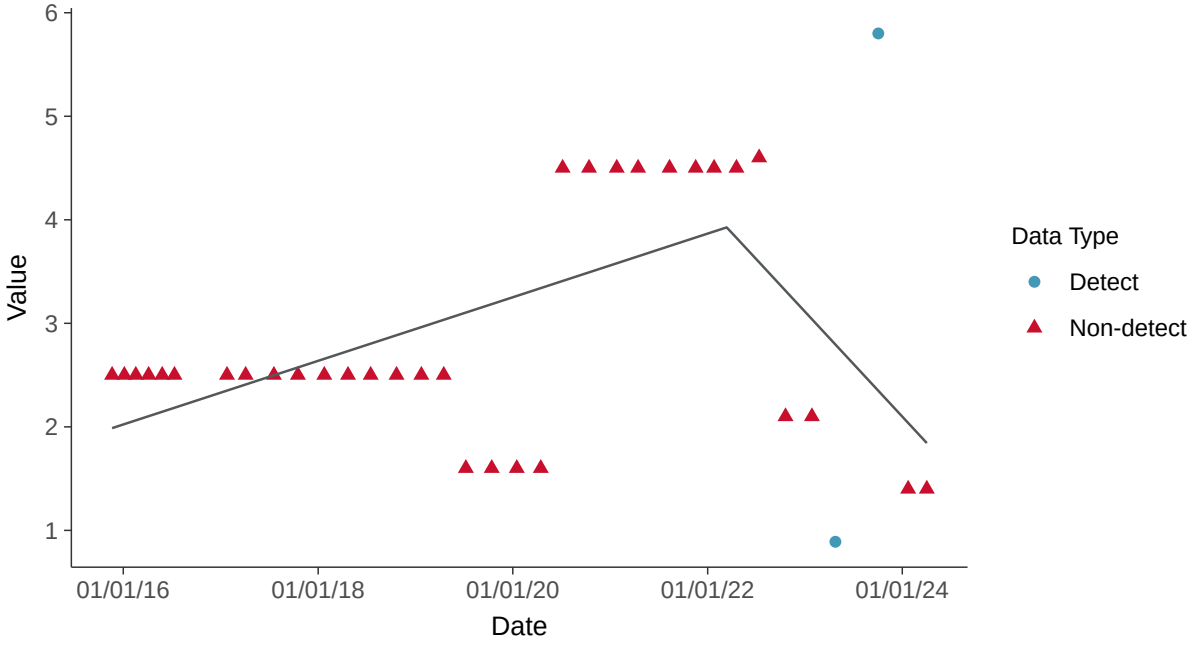
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-6 (ug/L)



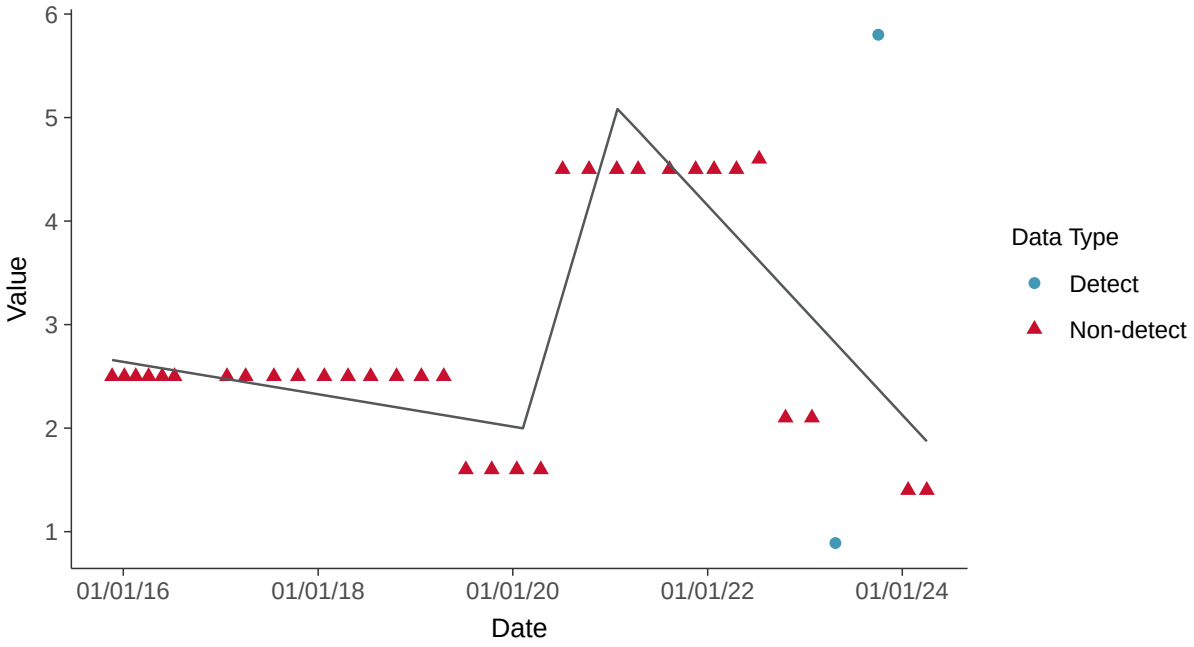
Trend Regression: Piecewise Linear-Linear

Lead, MW-6 (ug/L)



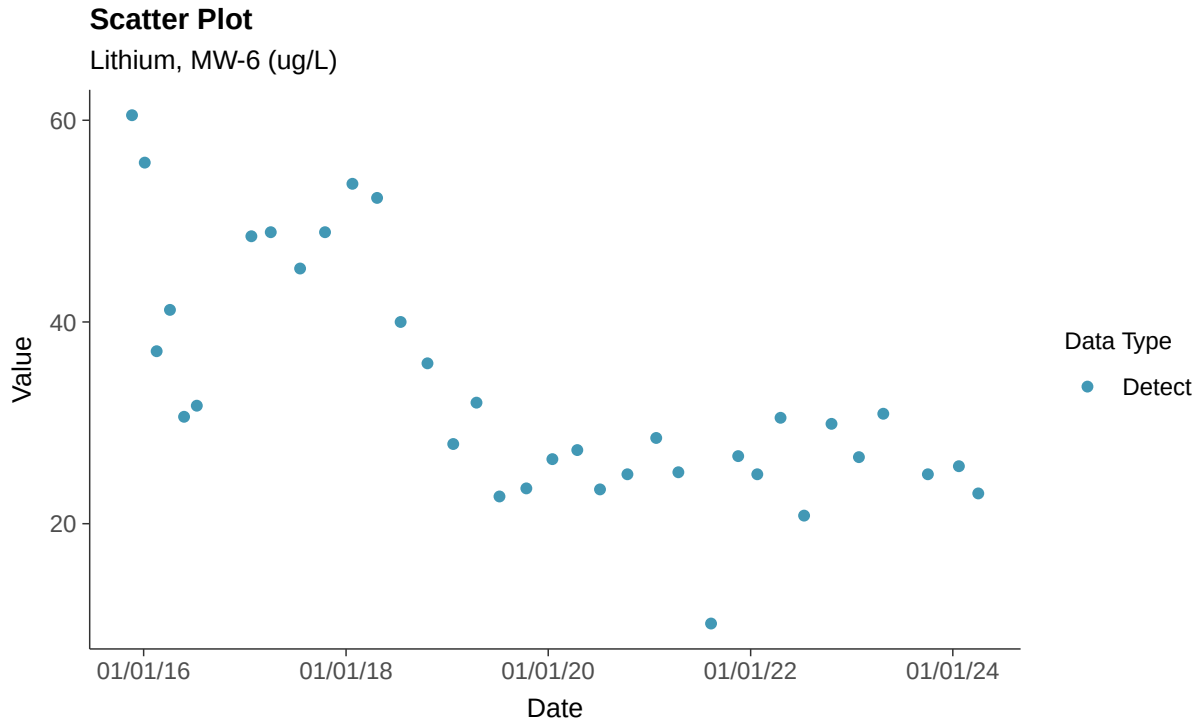
Trend Regression: Piecewise Linear-Linear-Linear

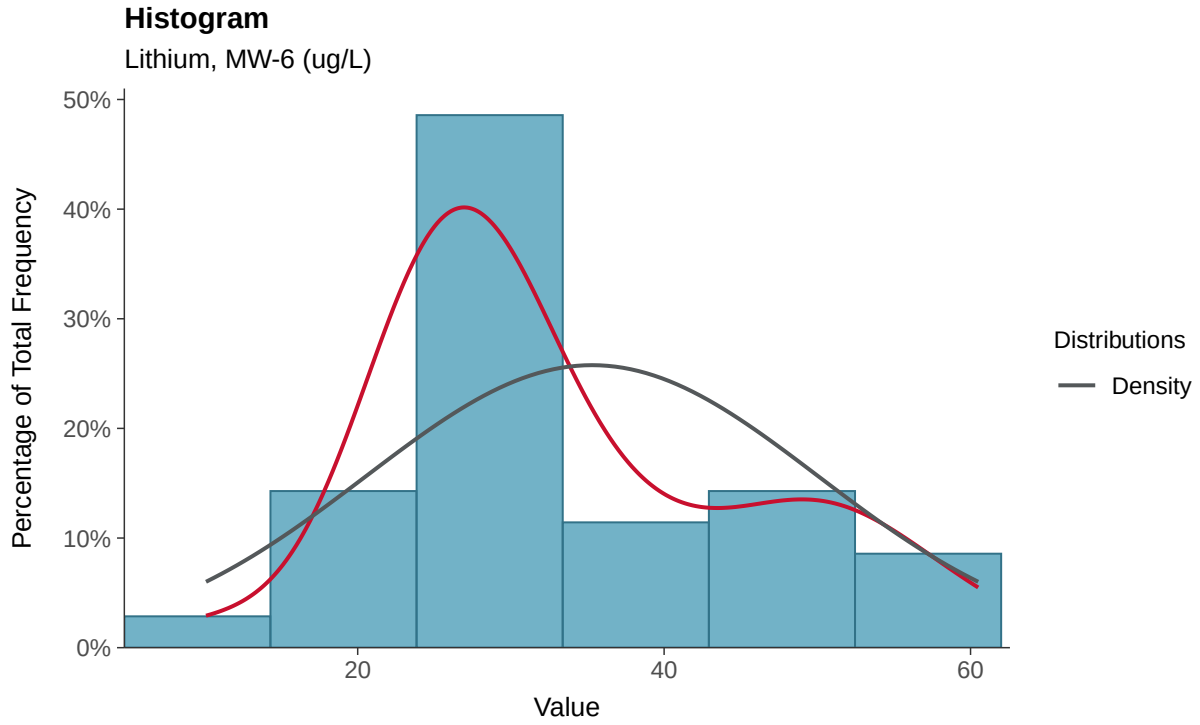
Lead, MW-6 (ug/L)



App. IV: Lithium, MW-6

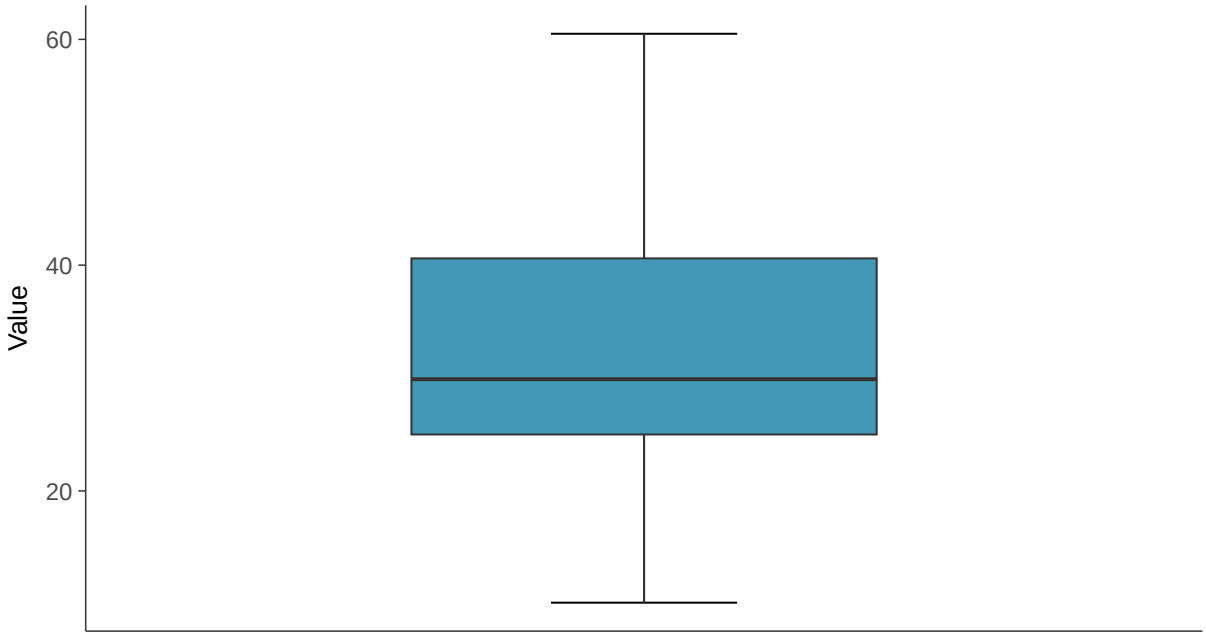
ID: 9_3_114





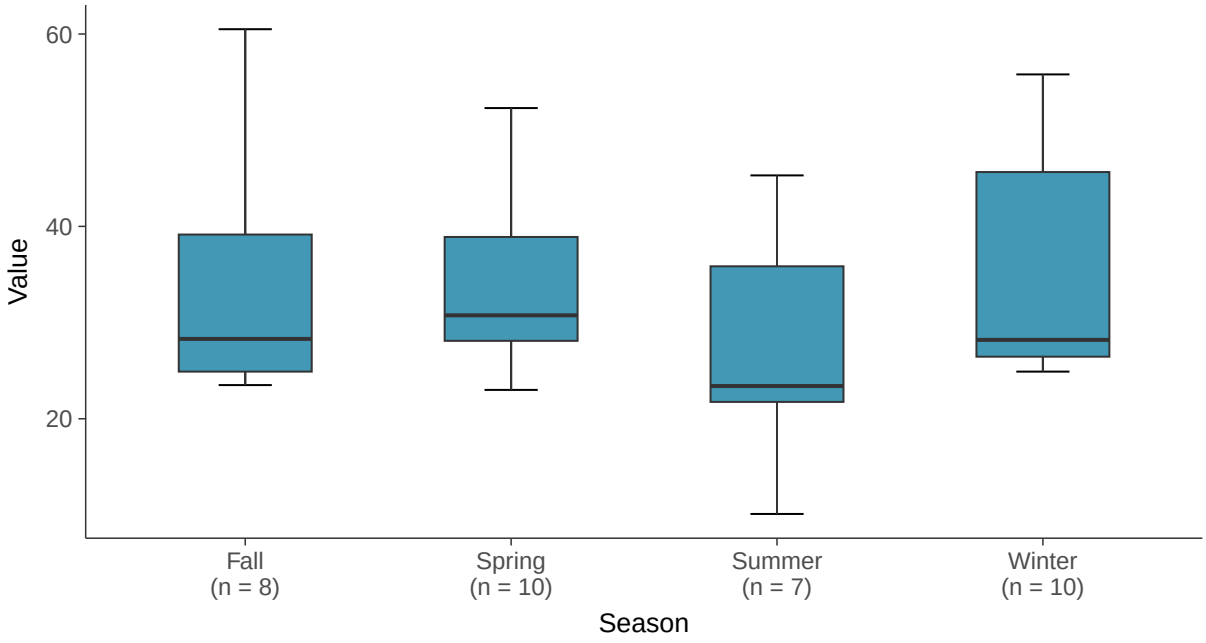
Boxplot

Lithium, MW-6 (ug/L)



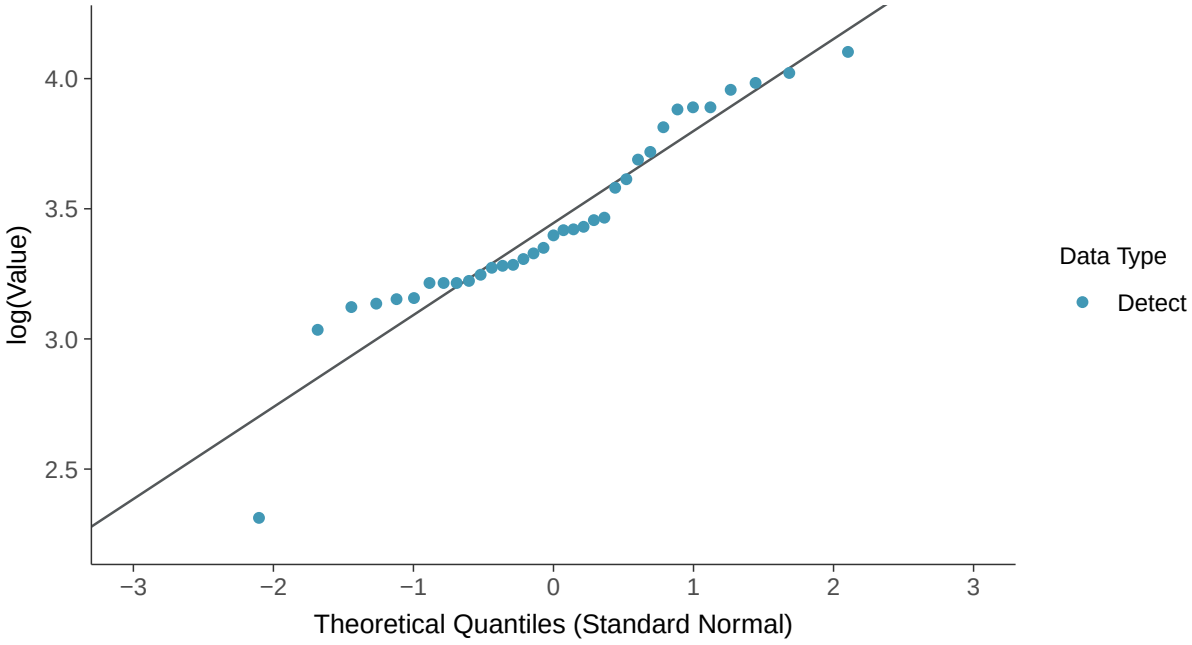
Boxplot by Season

Lithium, MW-6 (ug/L)



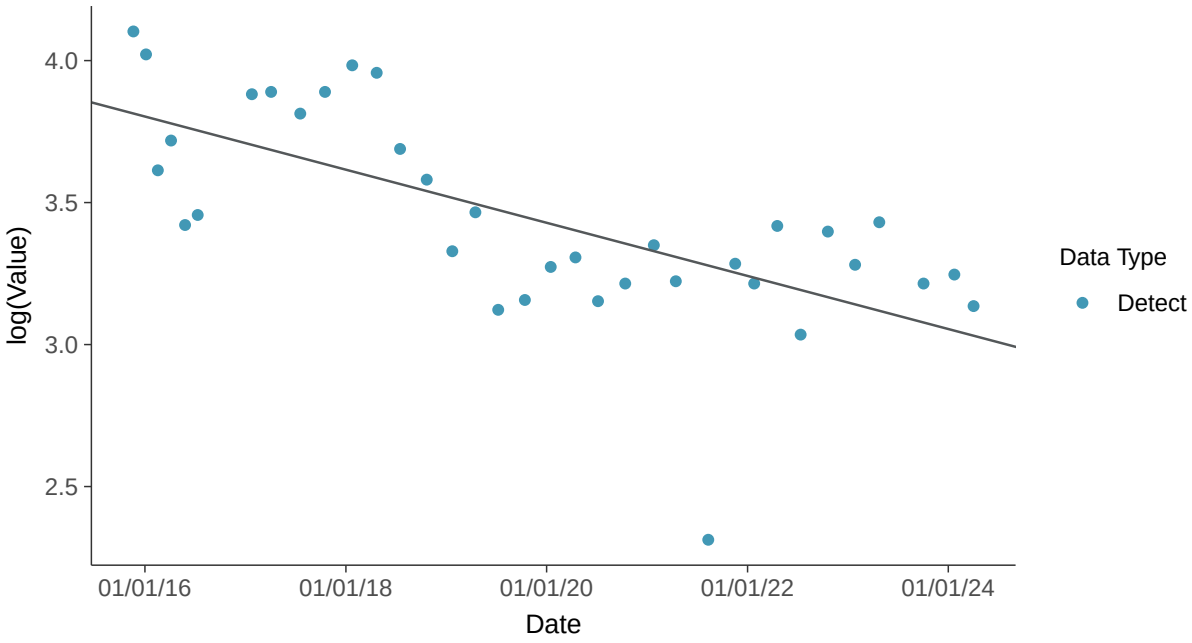
Lognormal Q-Q plot

Lithium, MW-6 (ug/L)



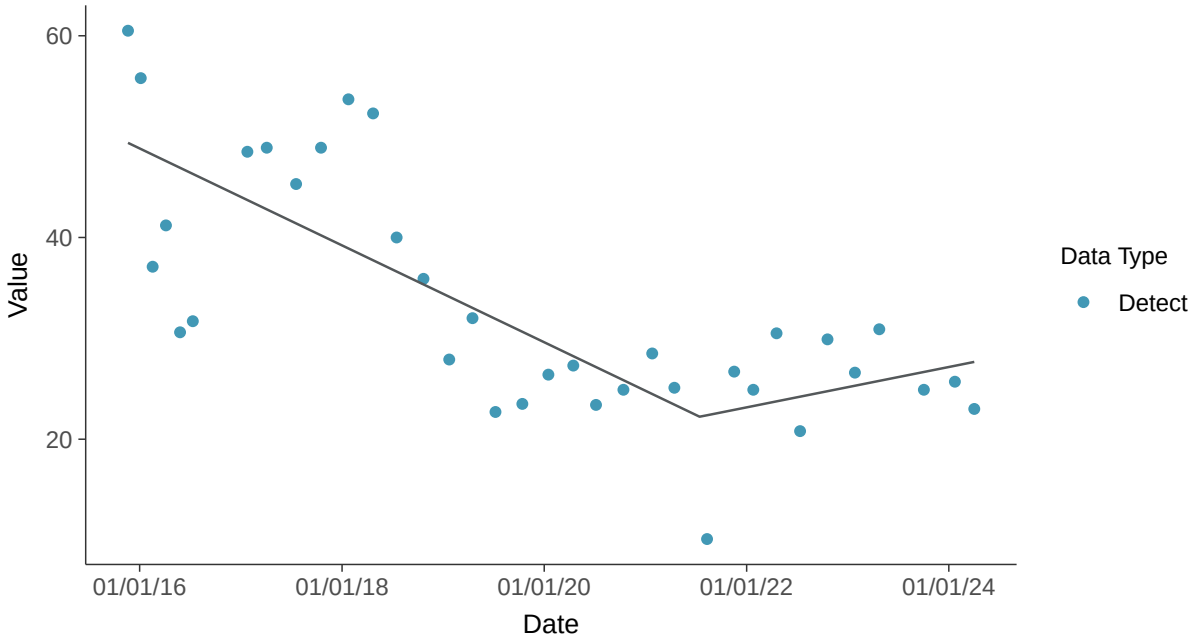
Trend Regression: Lognormal MLE

Lithium, MW-6 (ug/L)



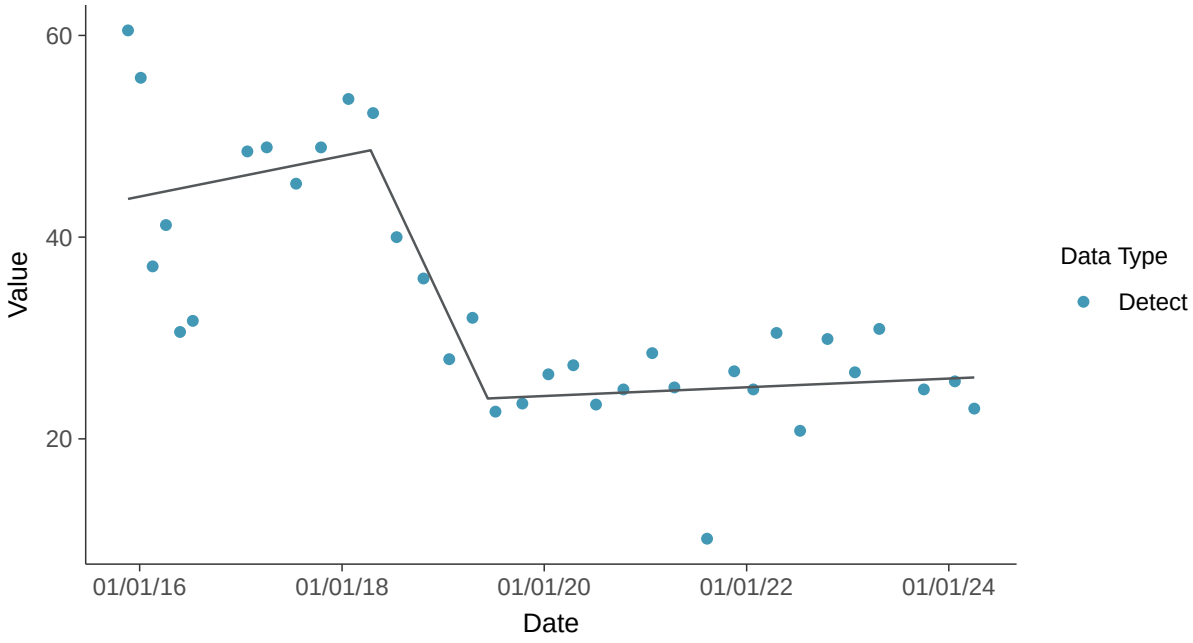
Trend Regression: Piecewise Linear-Linear

Lithium, MW-6 (ug/L)



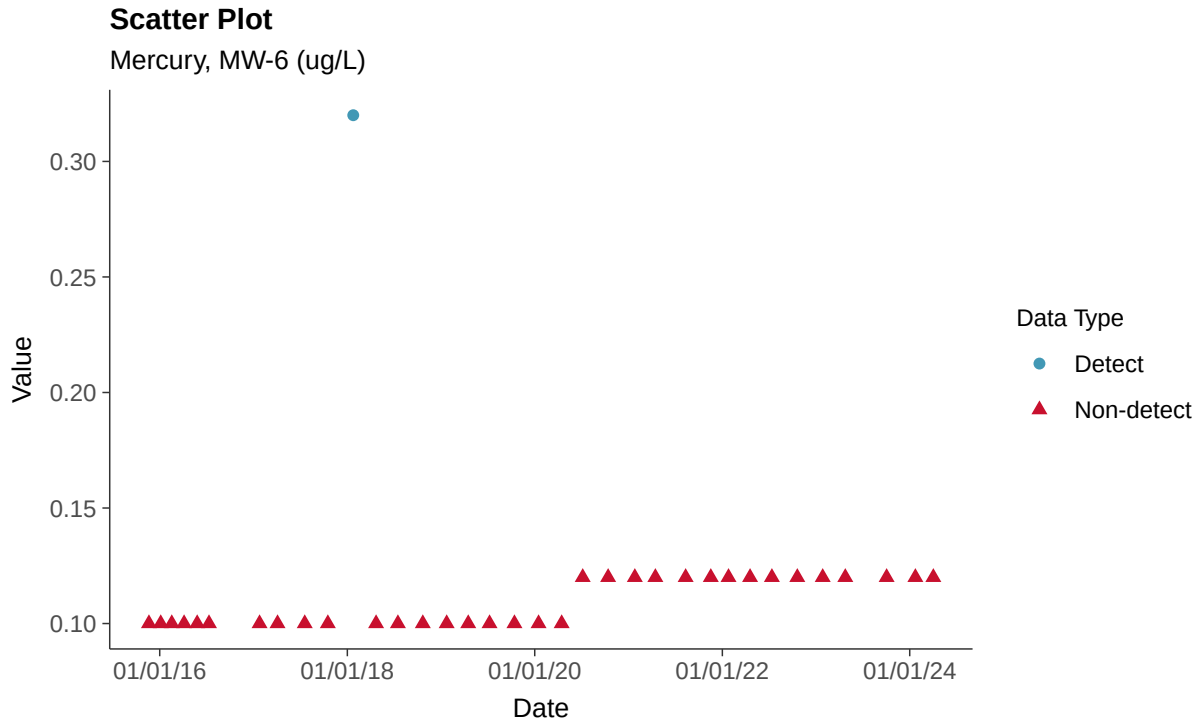
Trend Regression: Piecewise Linear-Linear-Linear

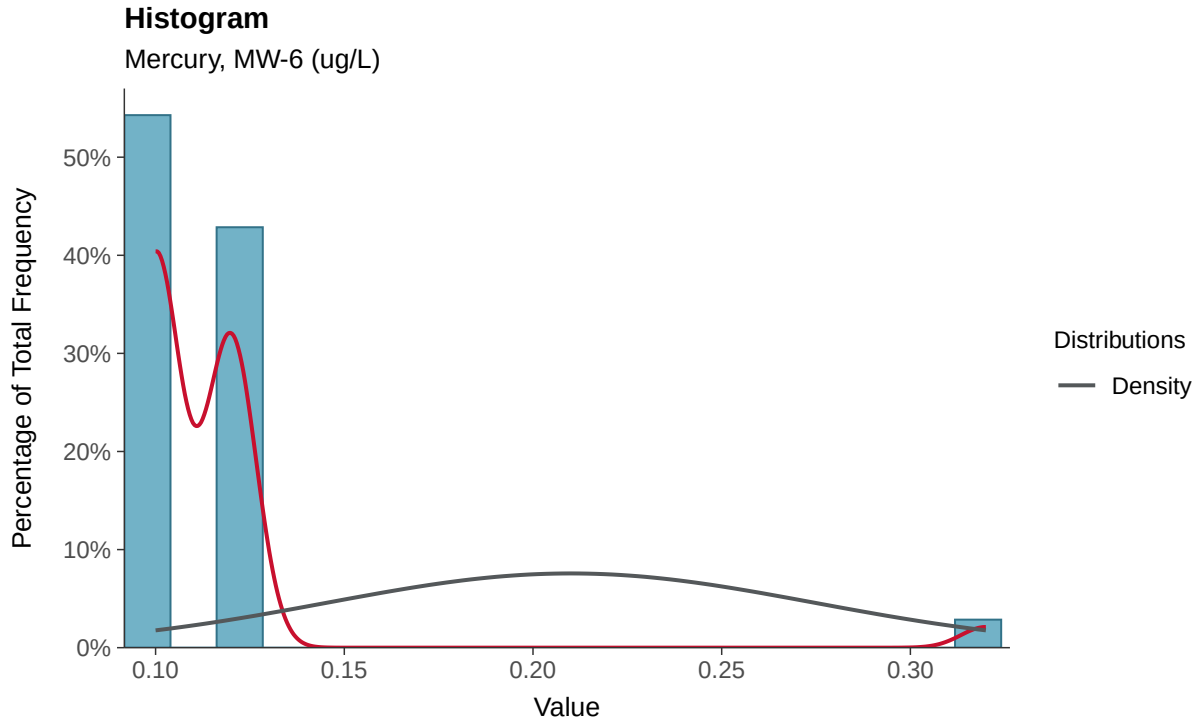
Lithium, MW-6 (ug/L)



App. IV: Mercury, MW-6

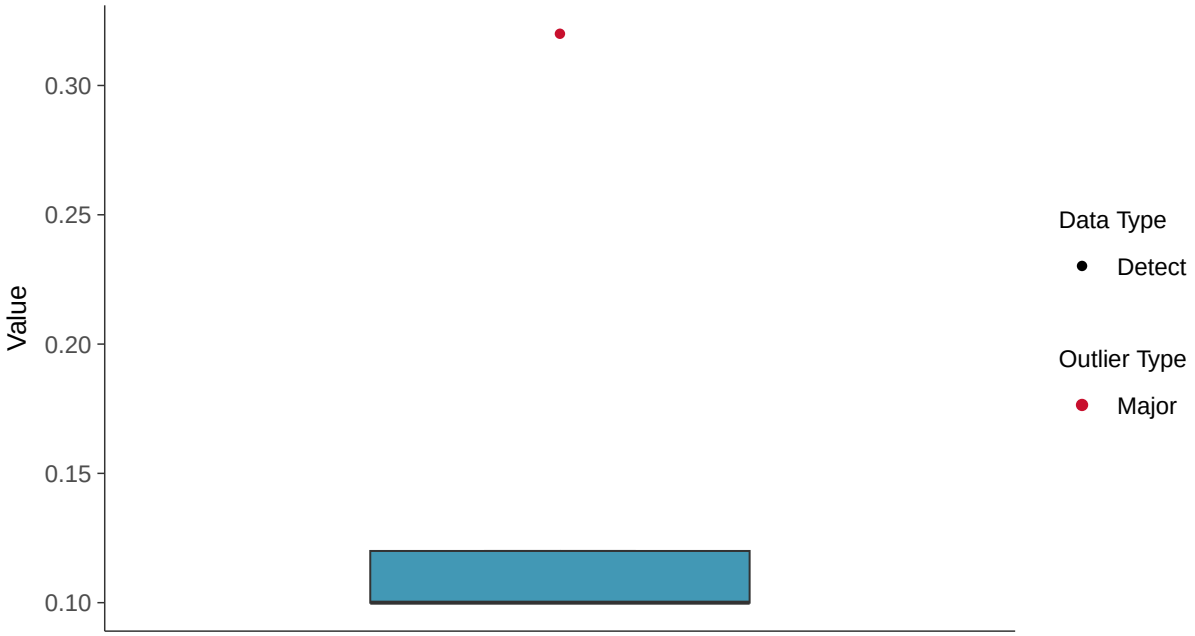
ID: 9_3_115





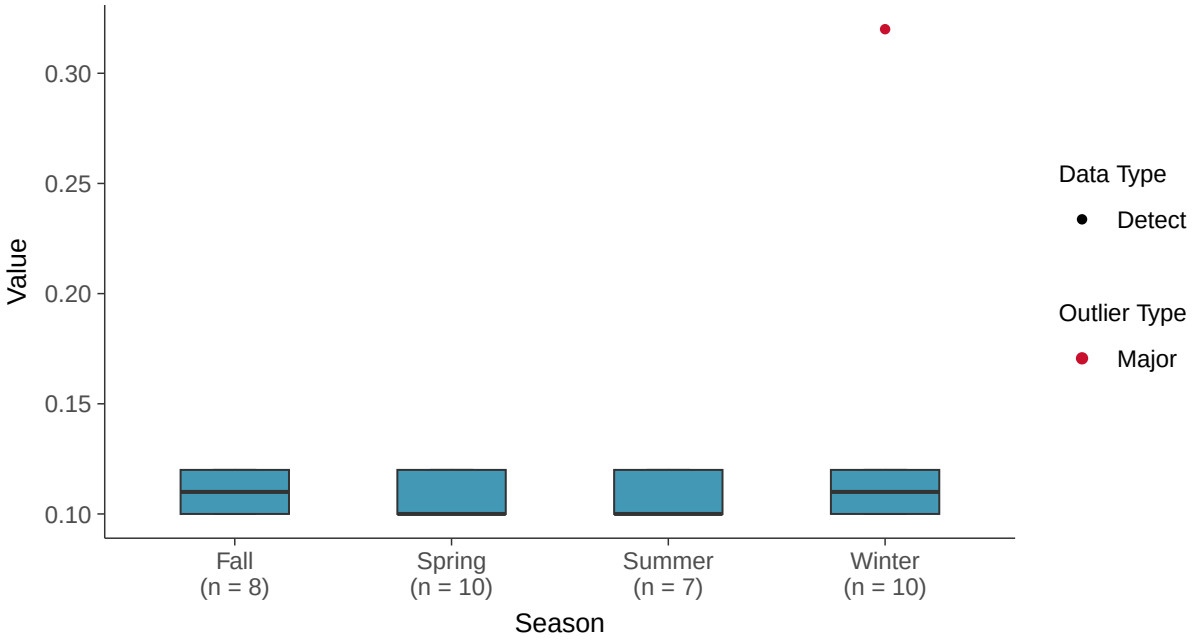
Boxplot

Mercury, MW-6 (ug/L)



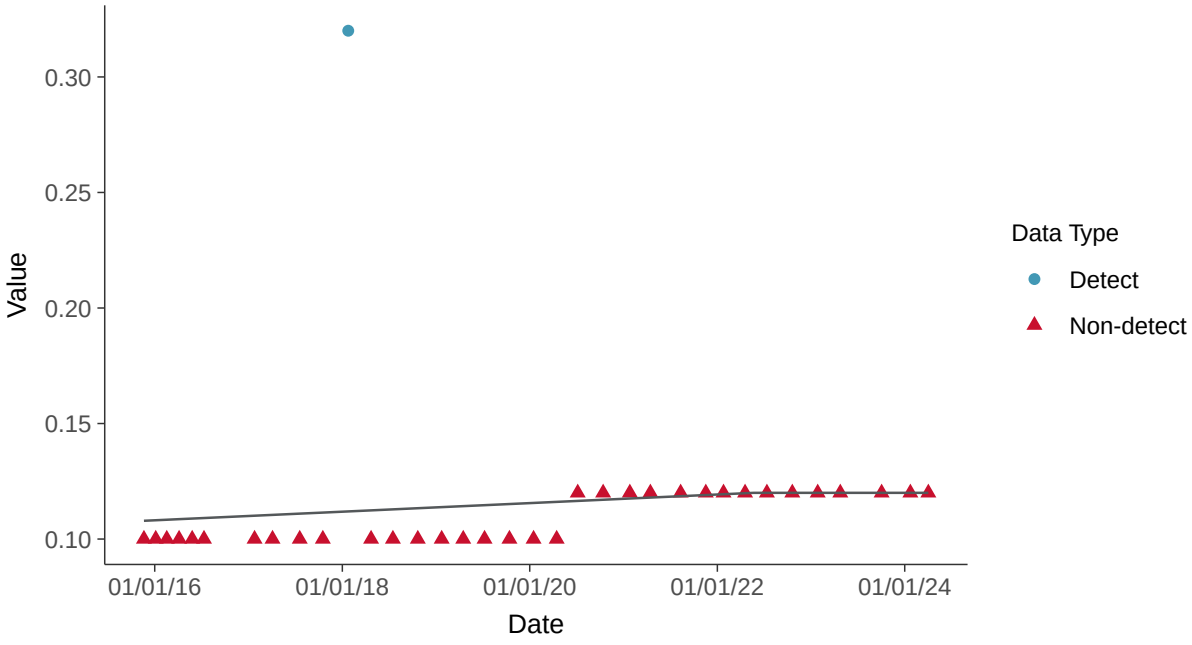
Boxplot by Season

Mercury, MW-6 (ug/L)



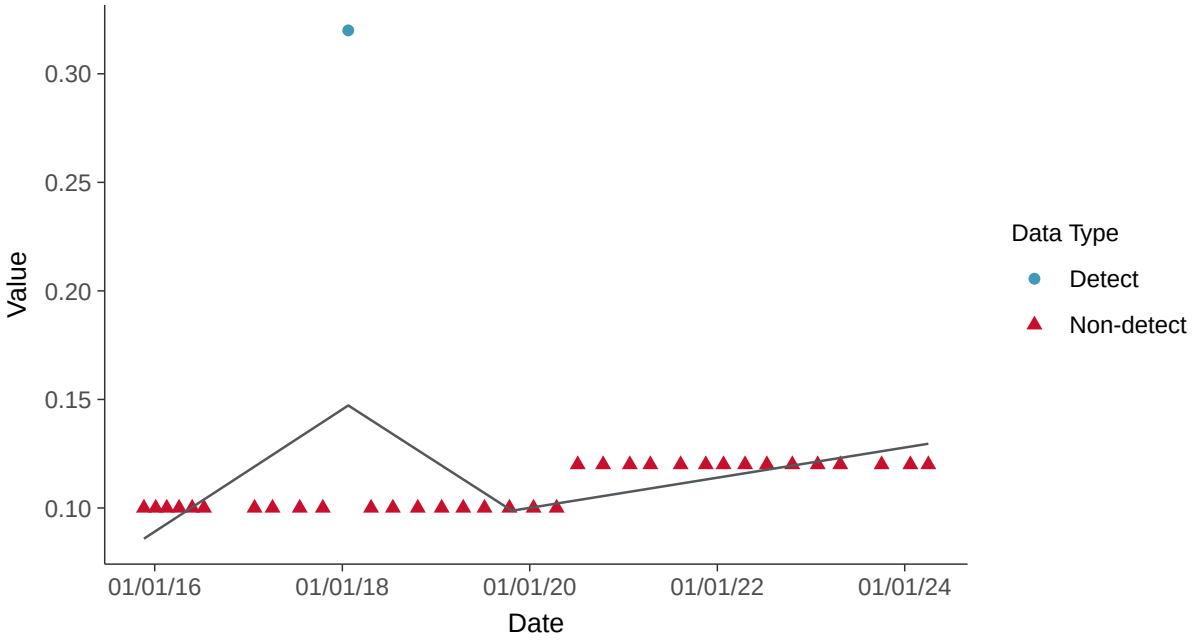
Trend Regression: Piecewise Linear-Linear

Mercury, MW-6 (ug/L)



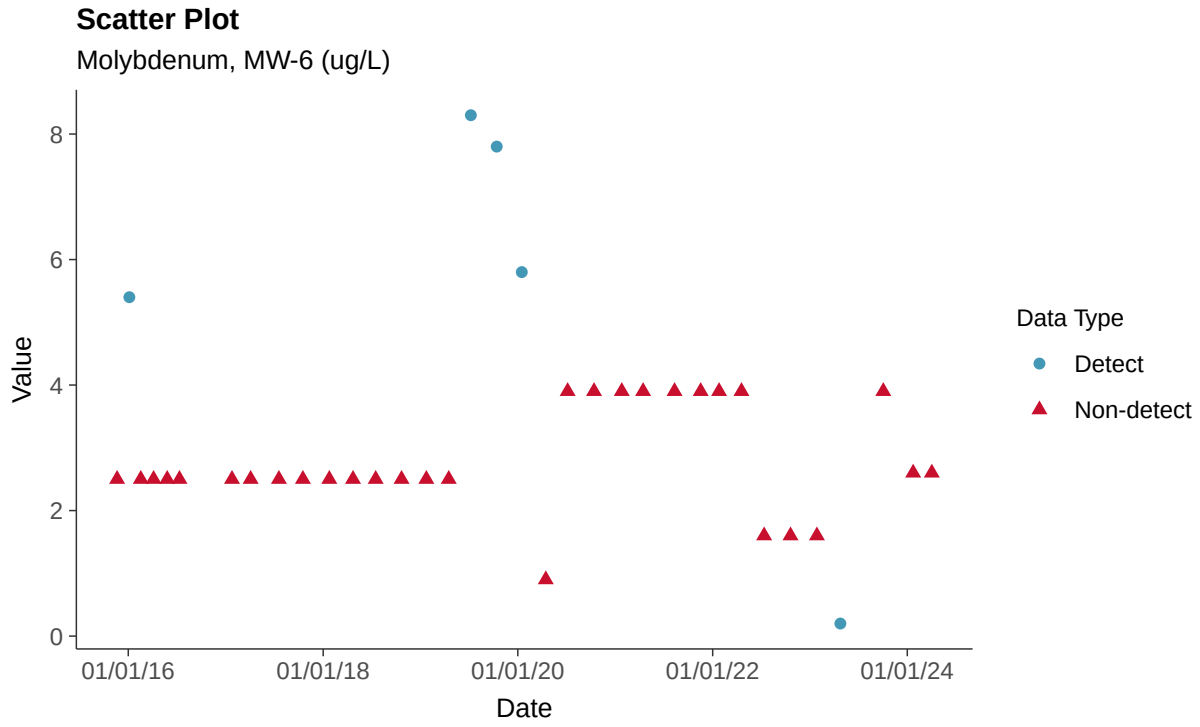
Trend Regression: Piecewise Linear-Linear-Linear

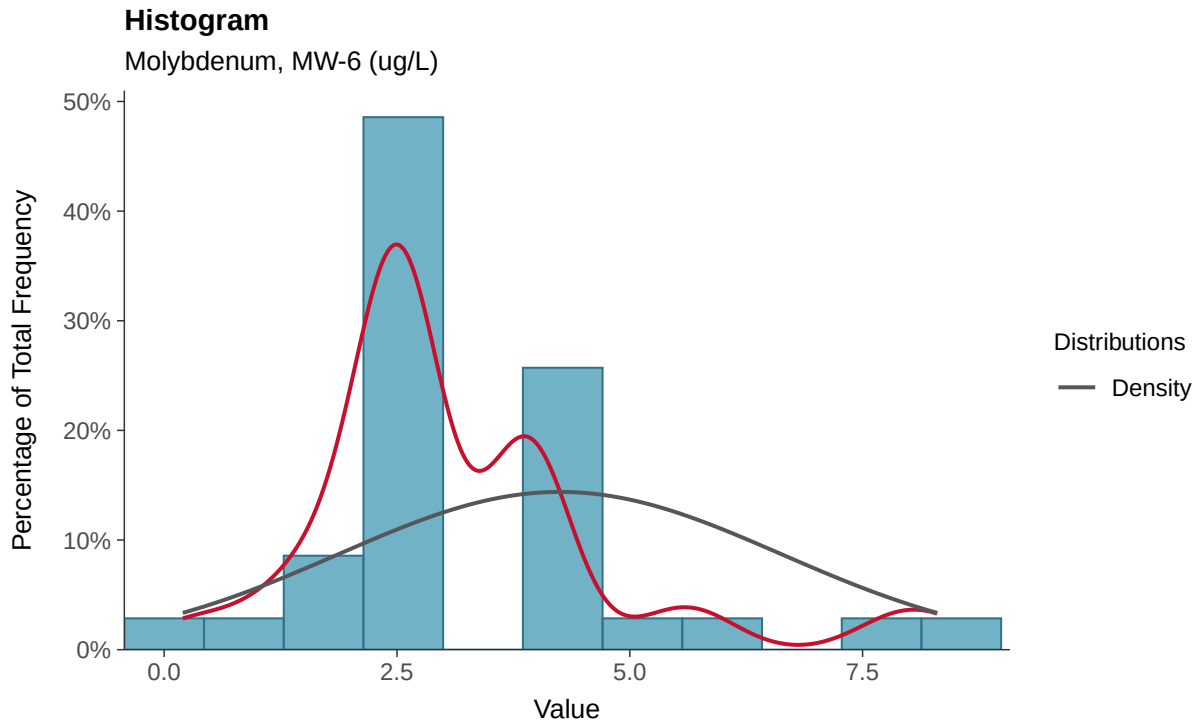
Mercury, MW-6 (ug/L)



App. IV: Molybdenum, MW-6

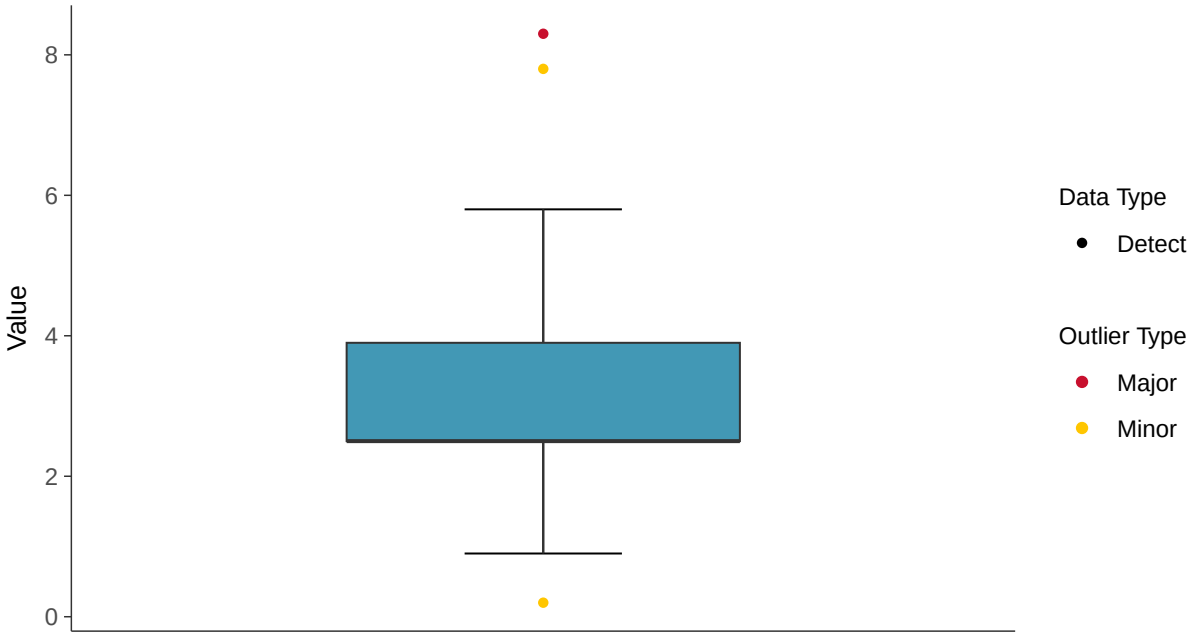
ID: 9_3_116





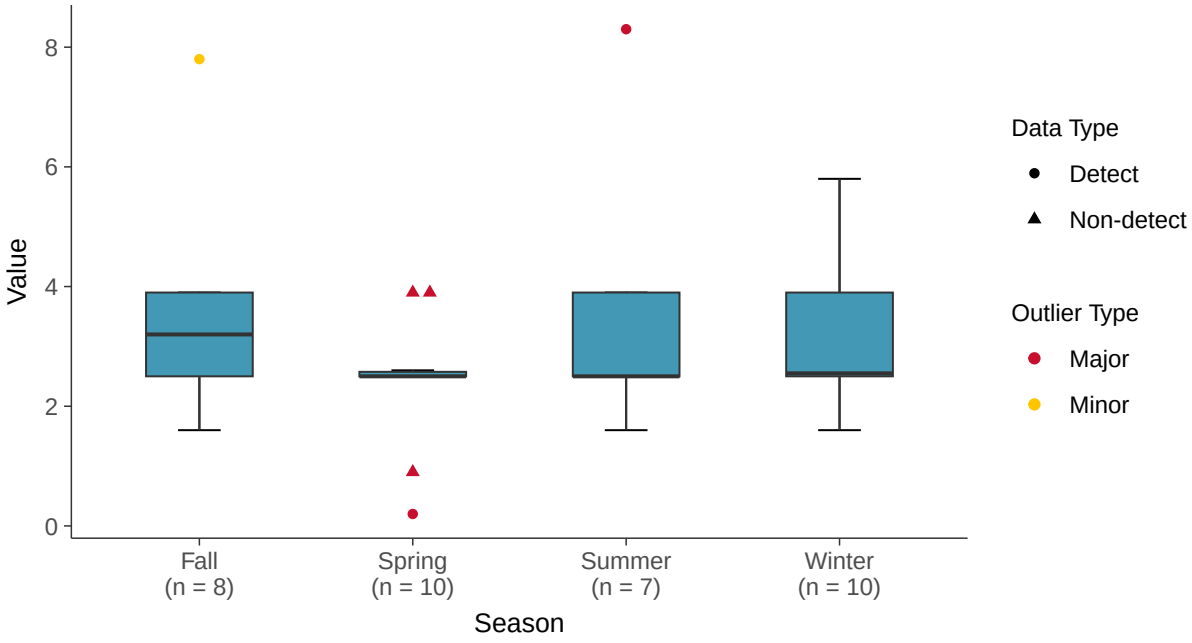
Boxplot

Molybdenum, MW-6 (ug/L)



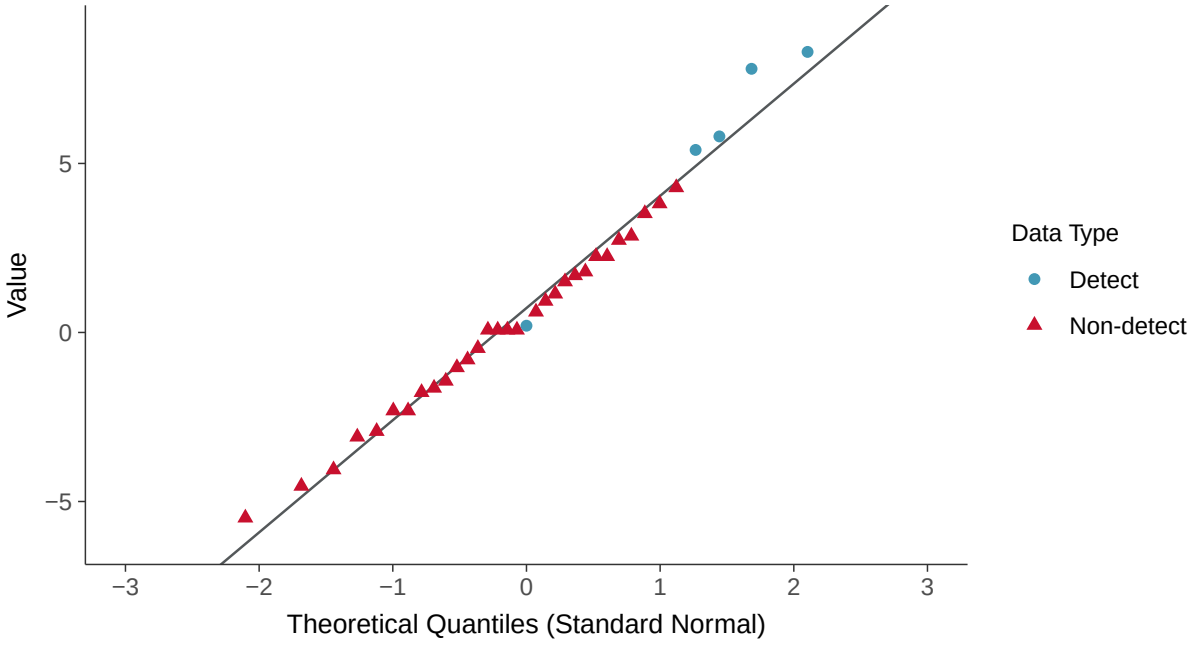
Boxplot by Season

Molybdenum, MW-6 (ug/L)



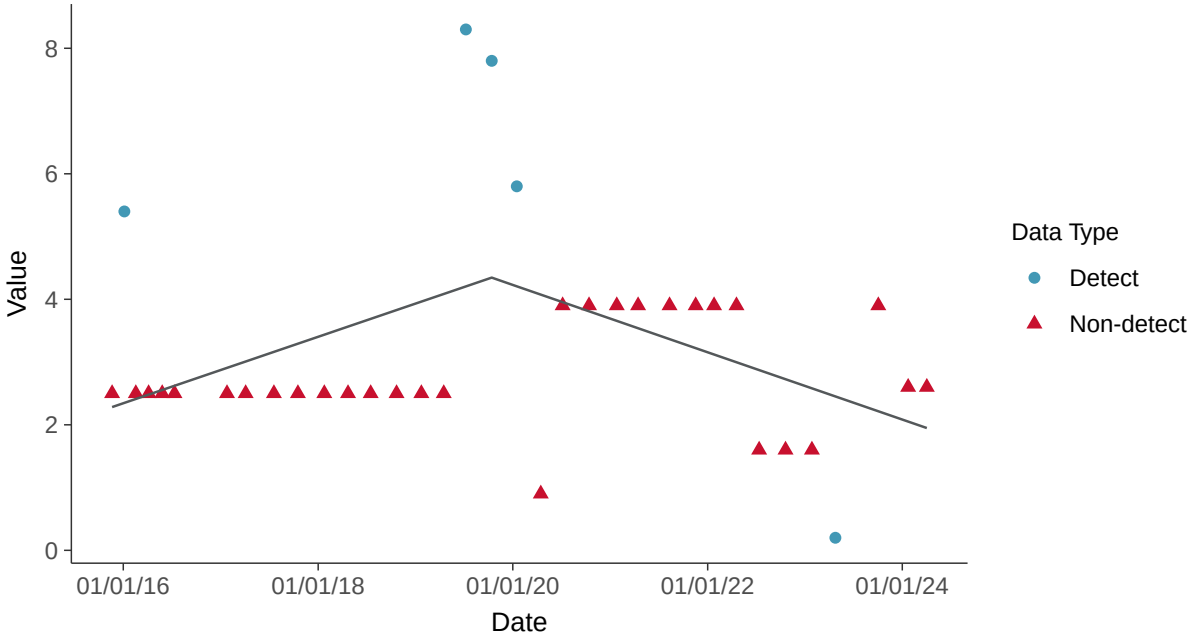
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-6 (ug/L)



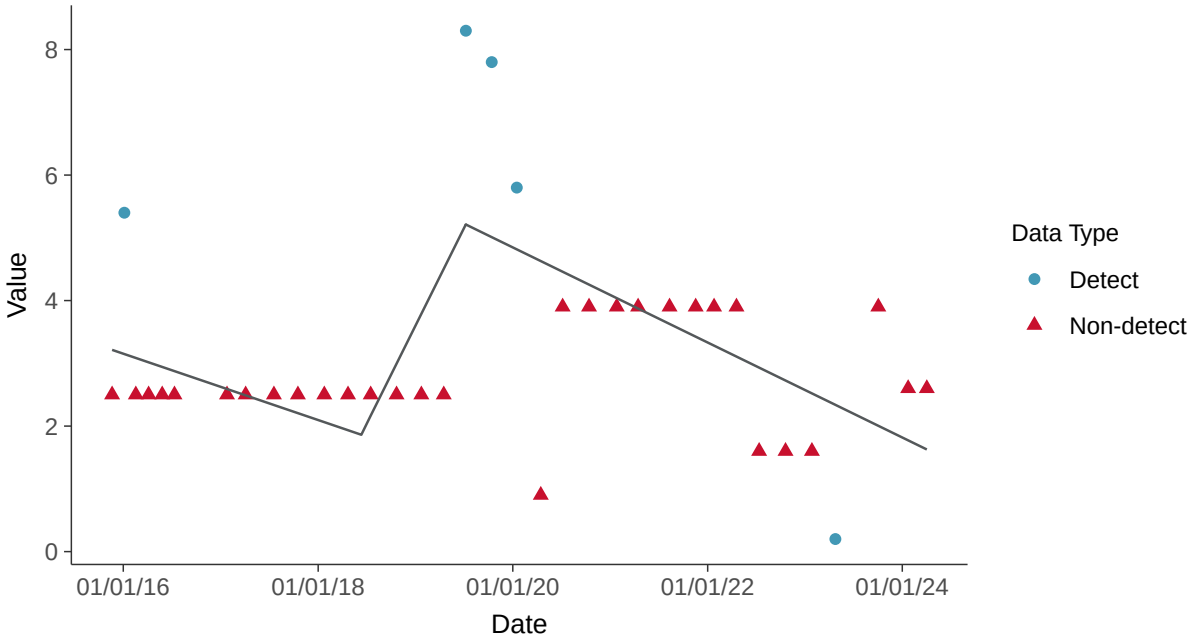
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-6 (ug/L)



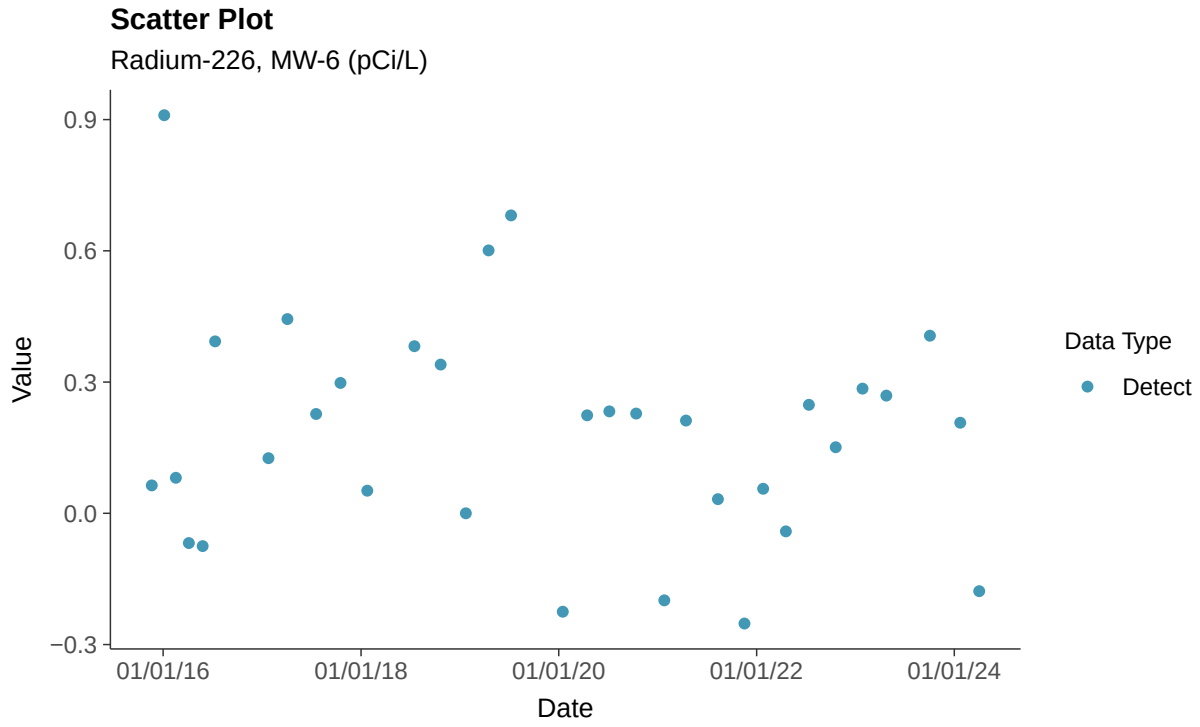
Trend Regression: Piecewise Linear-Linear-Linear

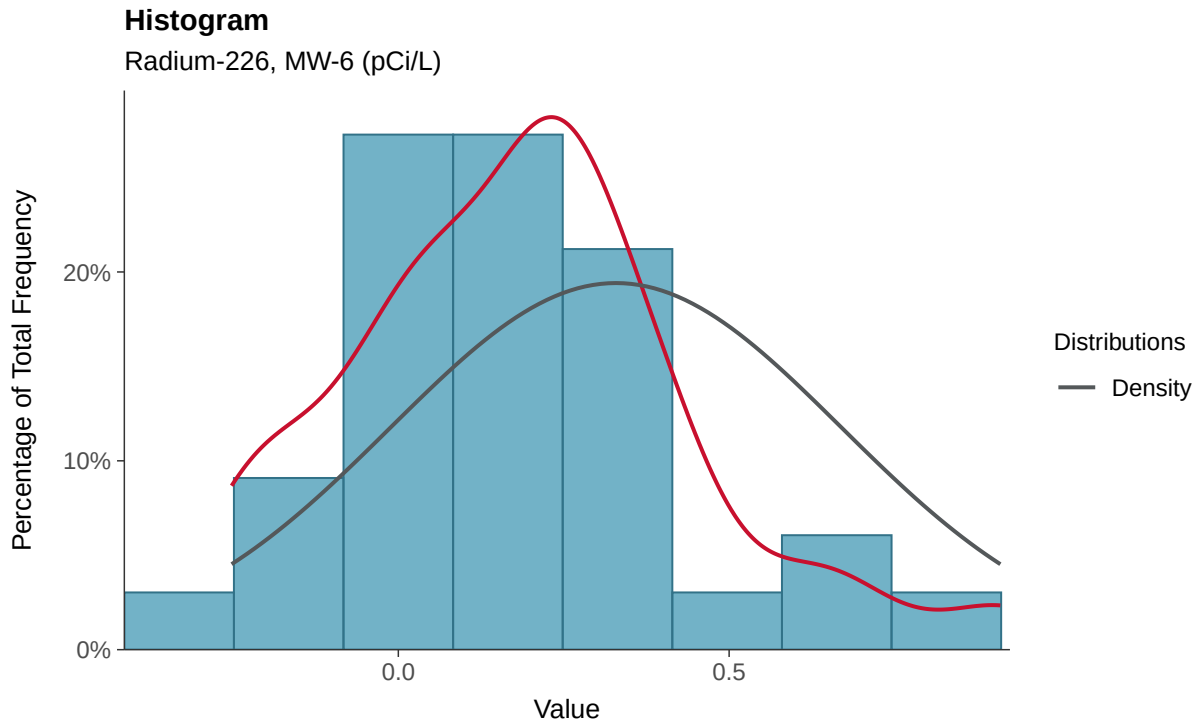
Molybdenum, MW-6 (ug/L)



App. IV: Radium-226, MW-6

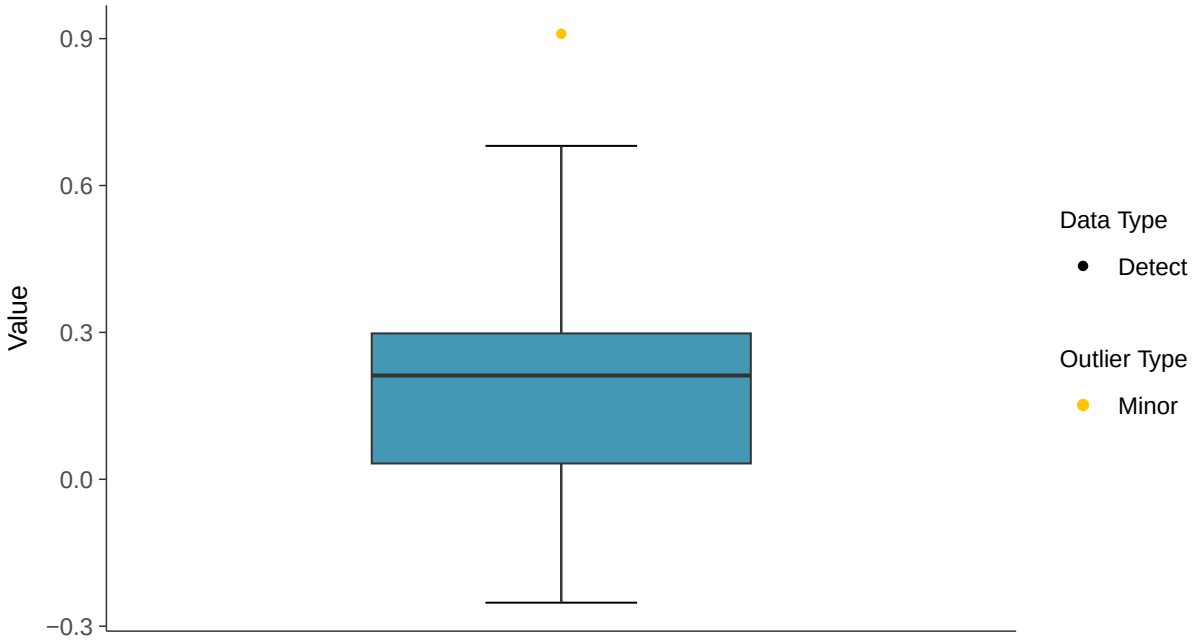
ID: 9_3_119





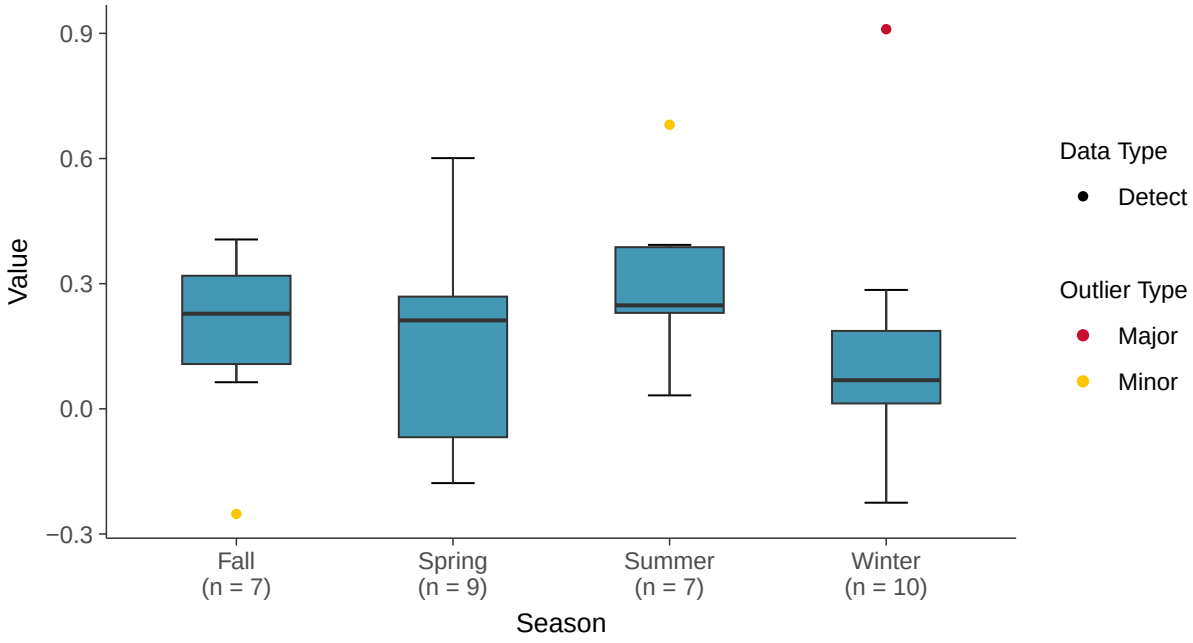
Boxplot

Radium-226, MW-6 (pCi/L)



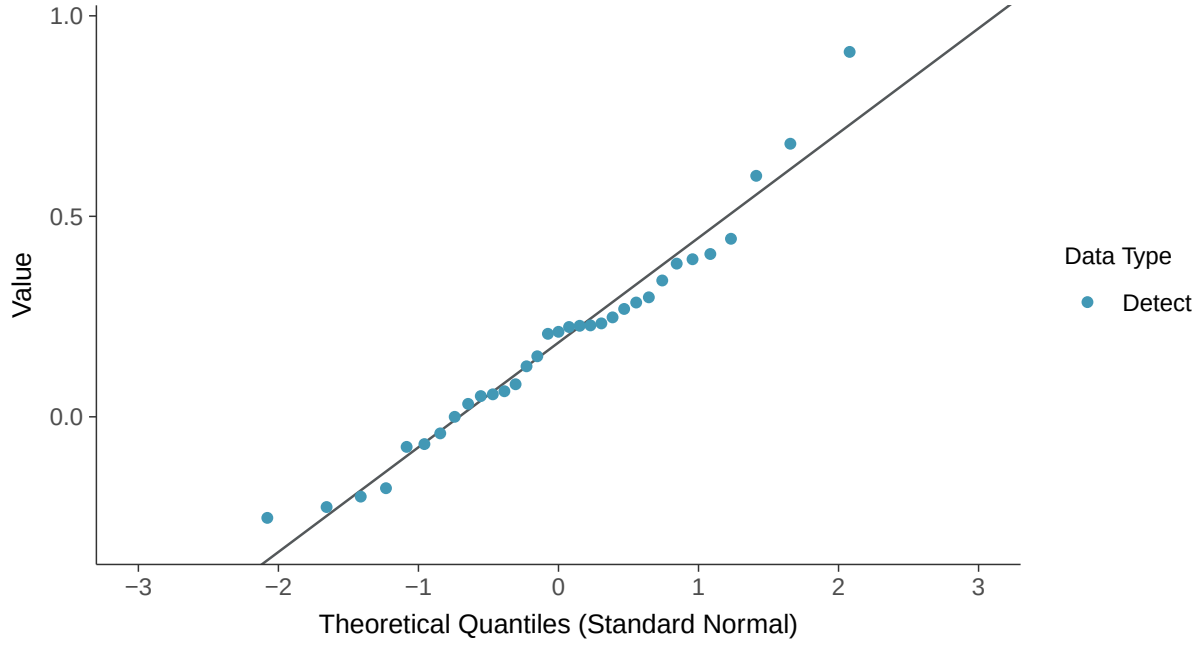
Boxplot by Season

Radium-226, MW-6 (pCi/L)



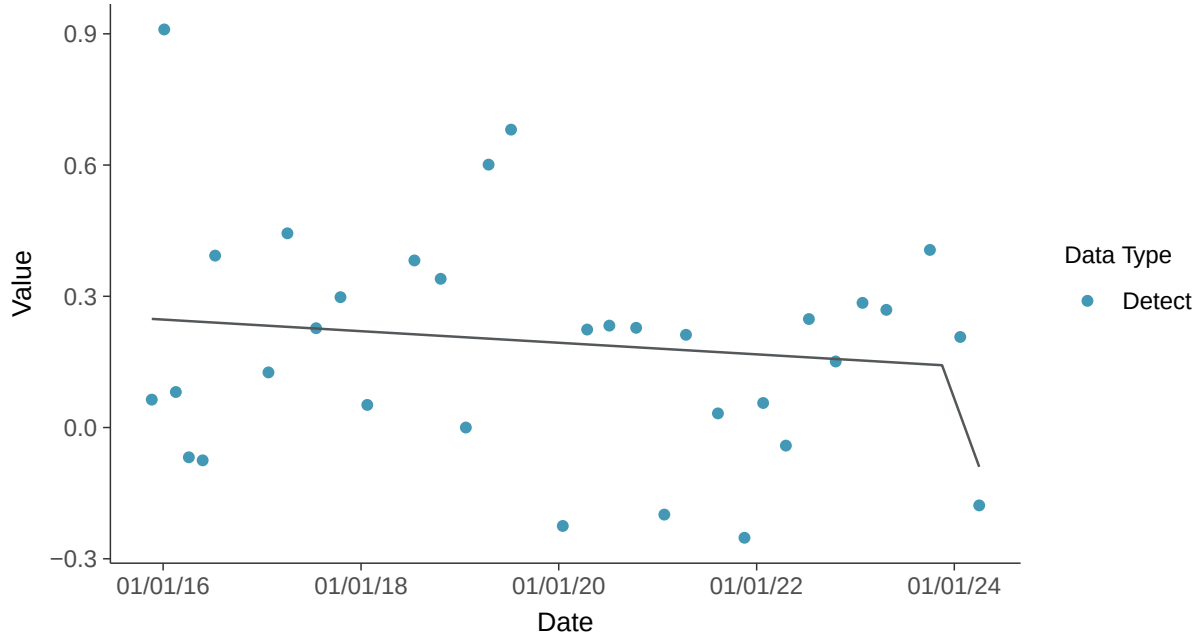
Normal Q-Q plot

Radium-226, MW-6 (pCi/L)



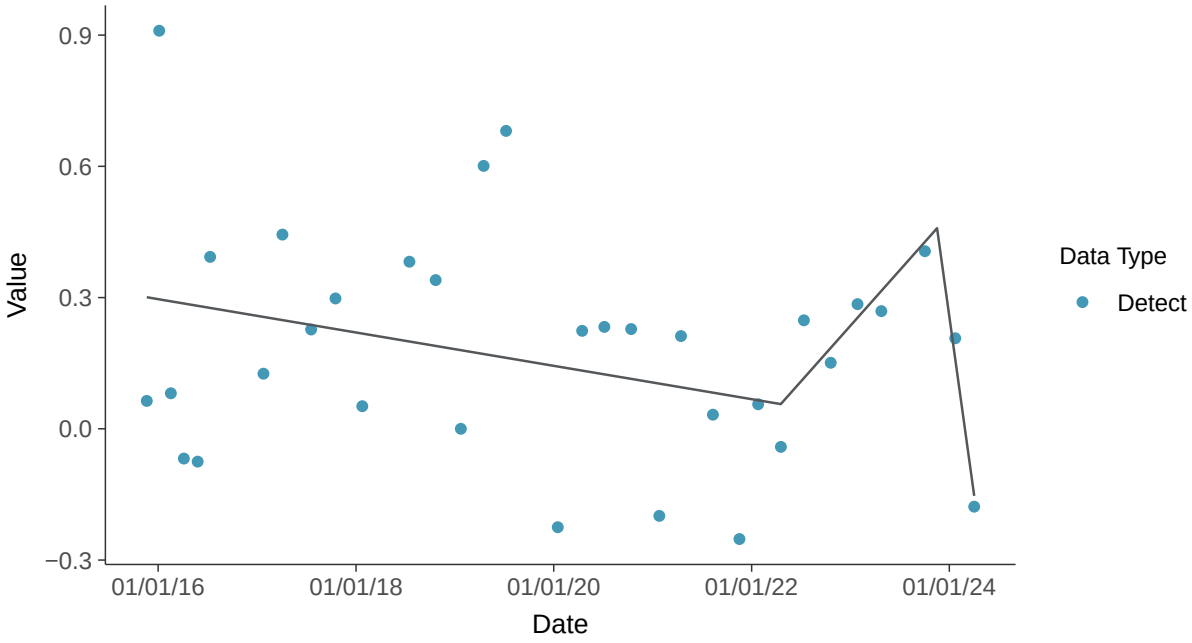
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-6 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-6 (pCi/L)

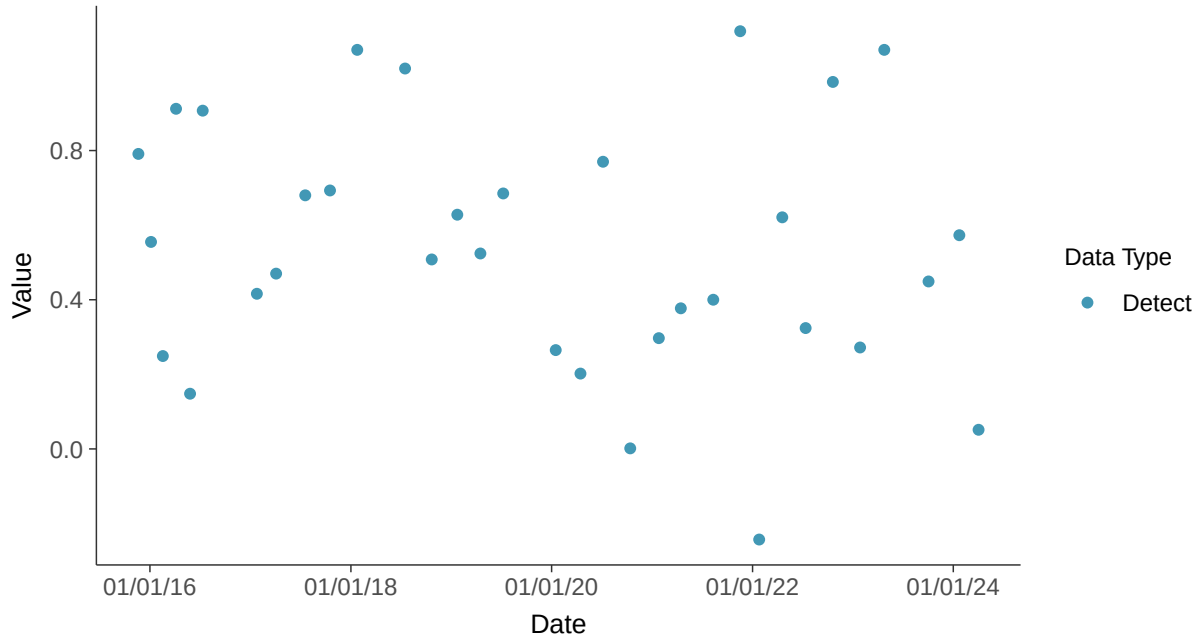


App. IV: Radium-228, MW-6

ID: 9_3_120

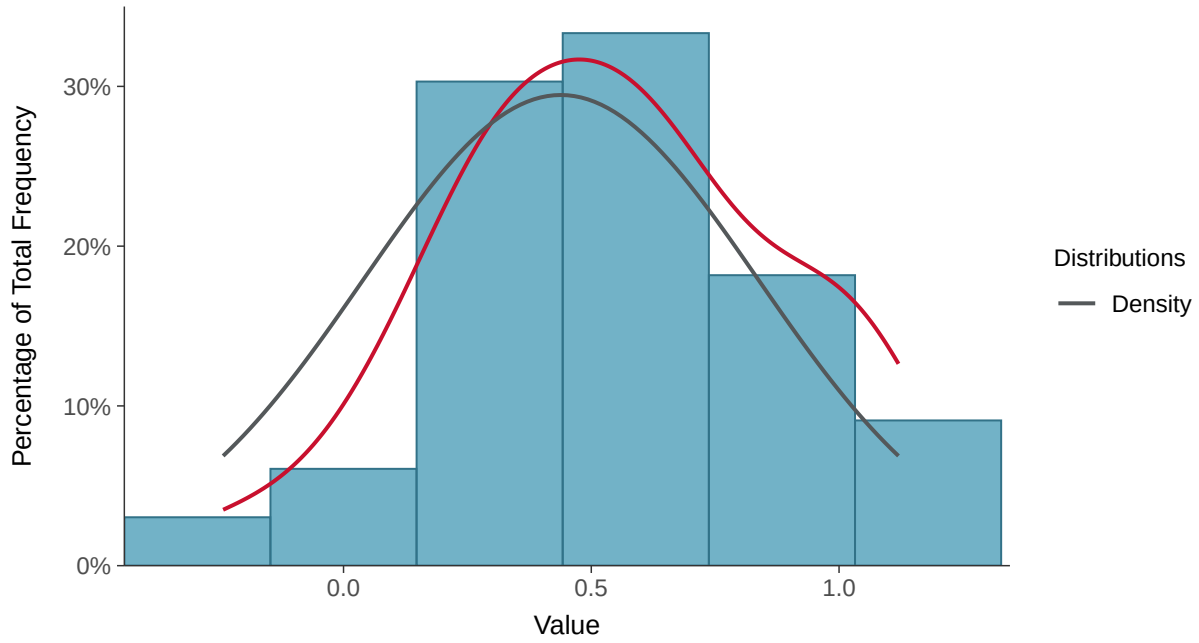
Scatter Plot

Radium-228, MW-6 (pCi/L)



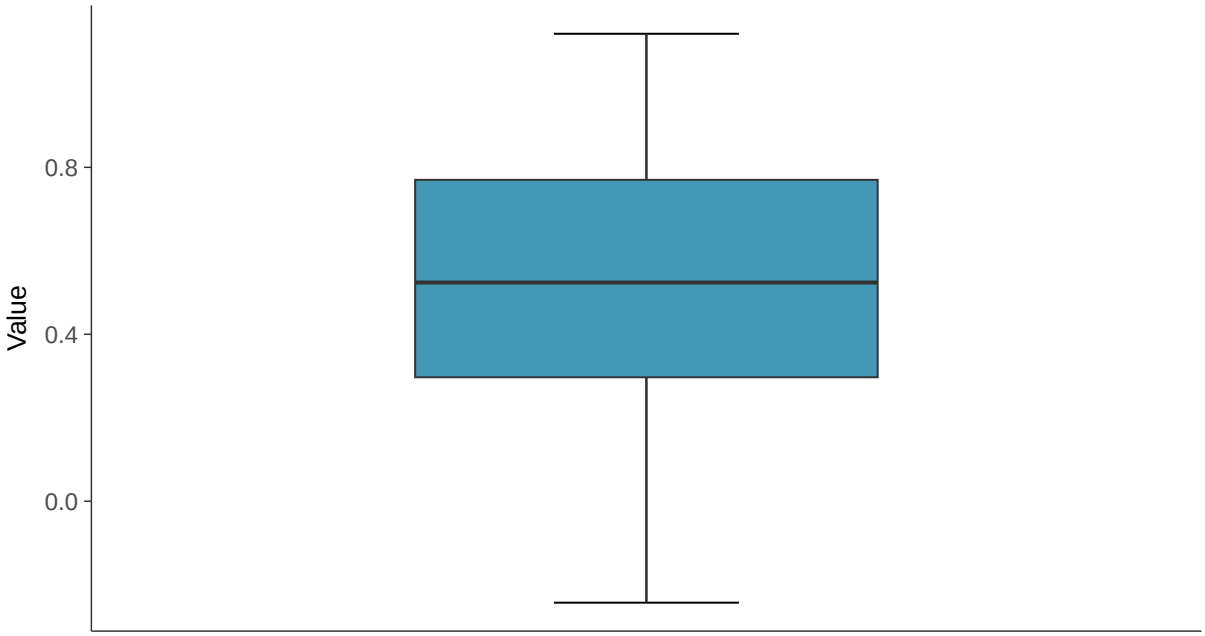
Histogram

Radium-228, MW-6 (pCi/L)



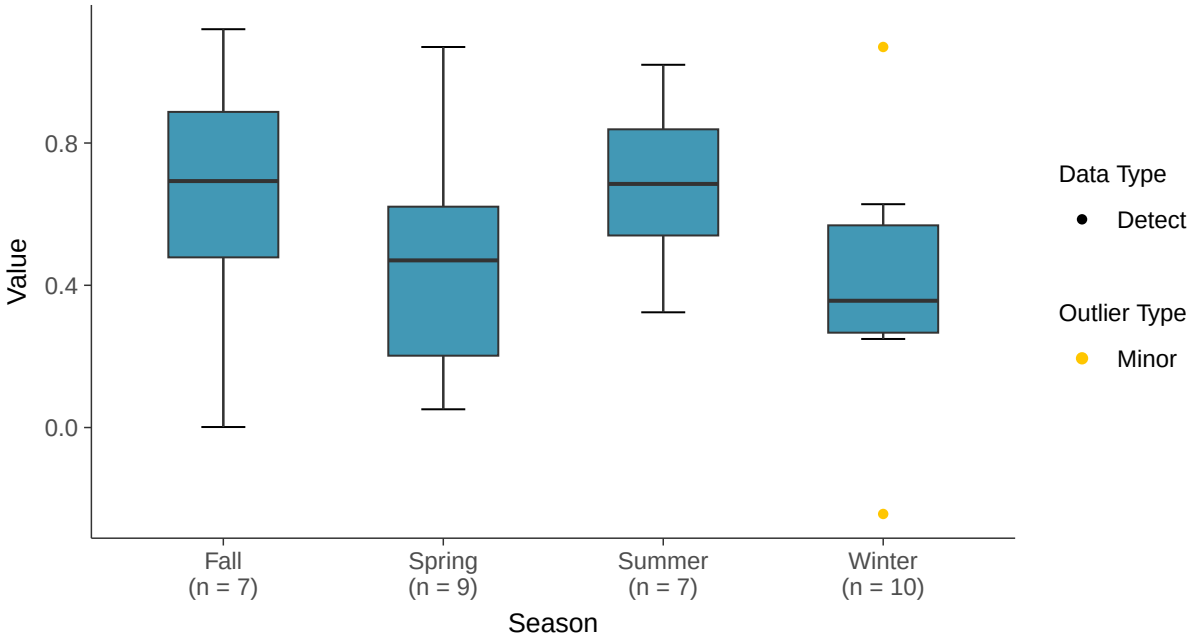
Boxplot

Radium-228, MW-6 (pCi/L)



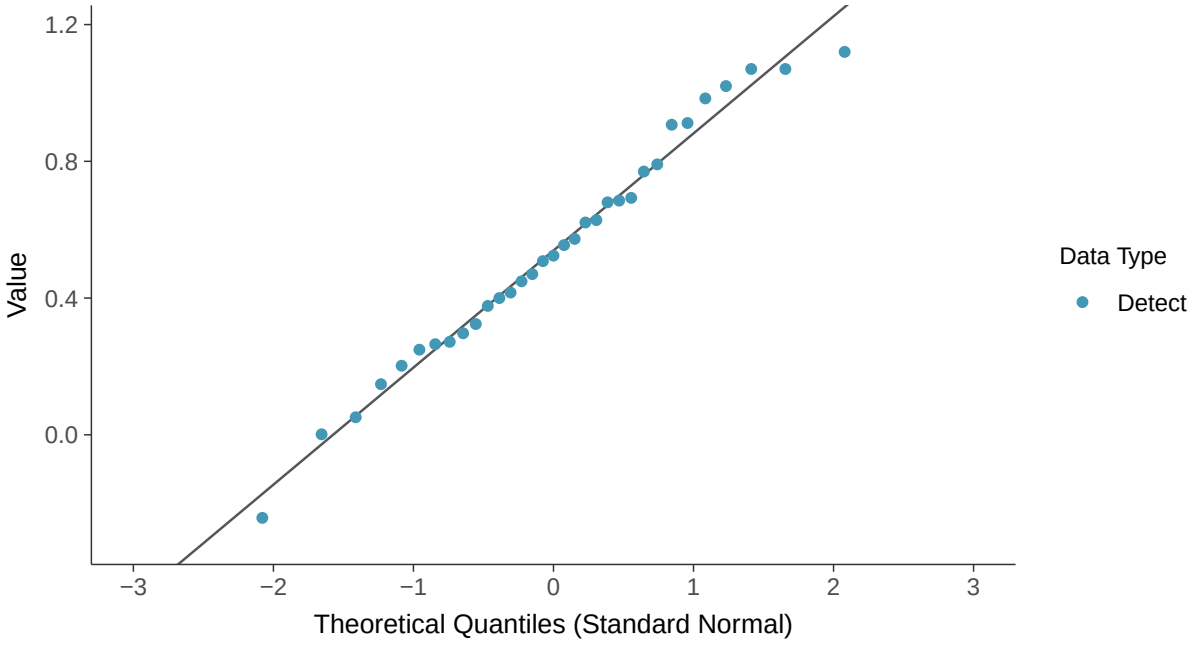
Boxplot by Season

Radium-228, MW-6 (pCi/L)



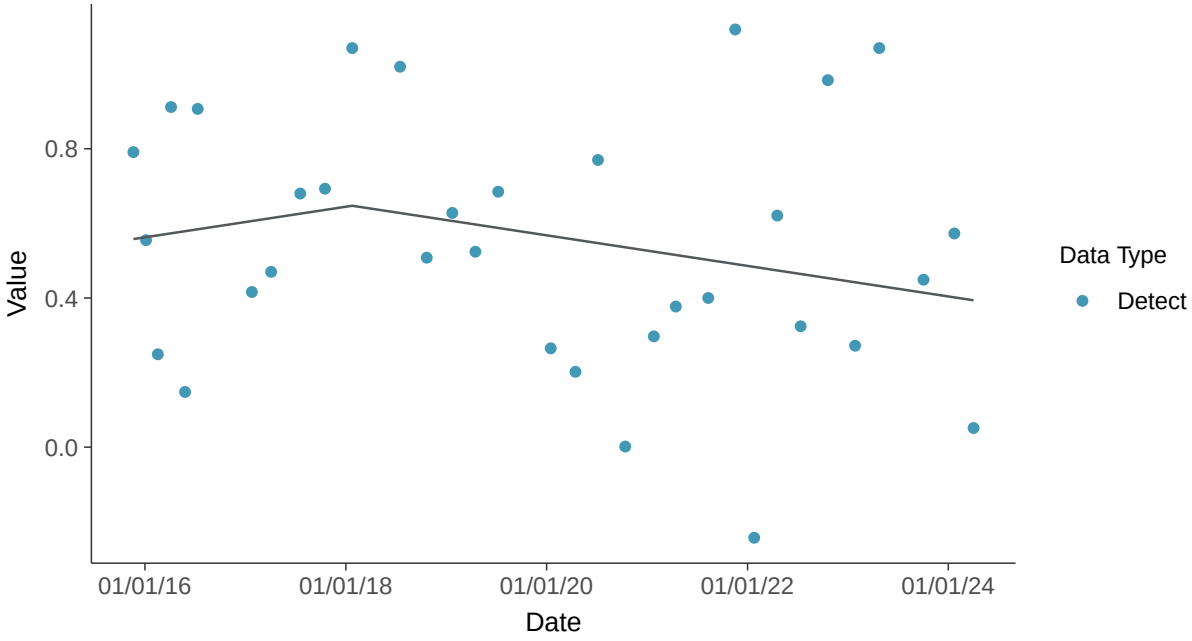
Normal Q-Q plot

Radium-228, MW-6 (pCi/L)



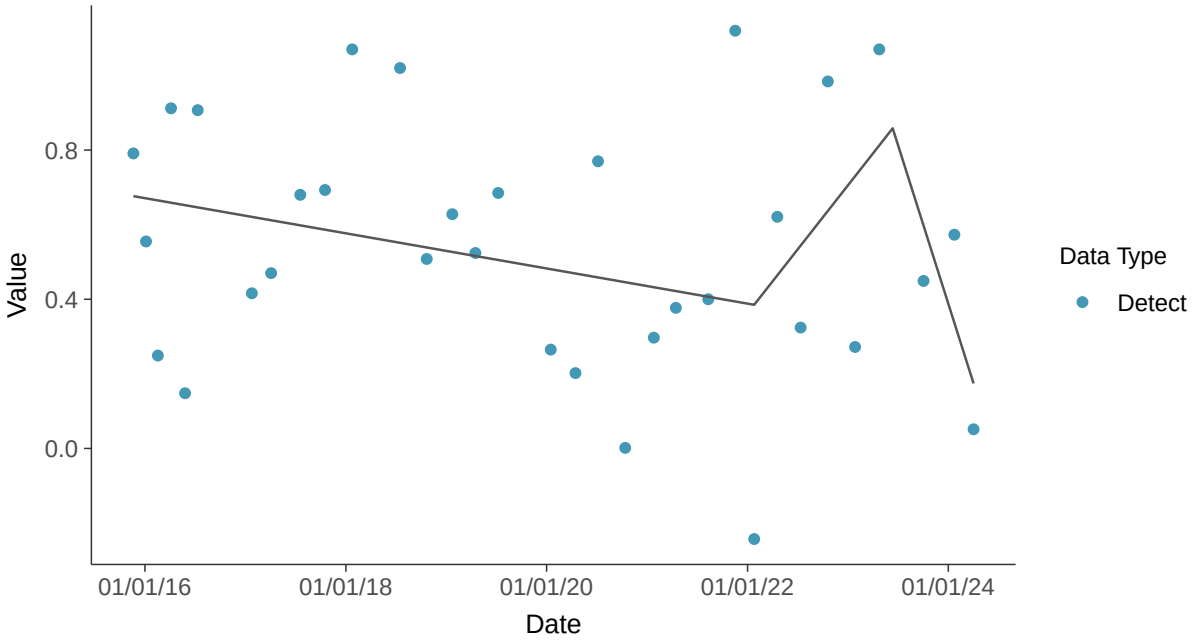
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-6 (pCi/L)



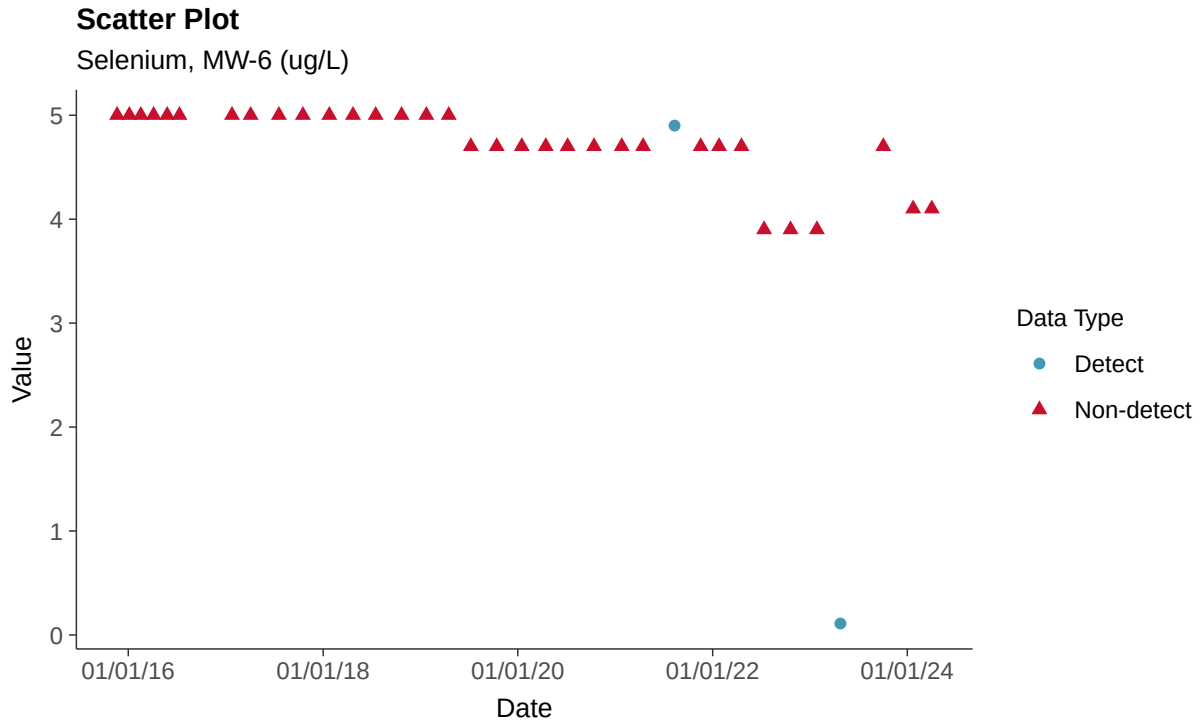
Trend Regression: Piecewise Linear-Linear-Linear

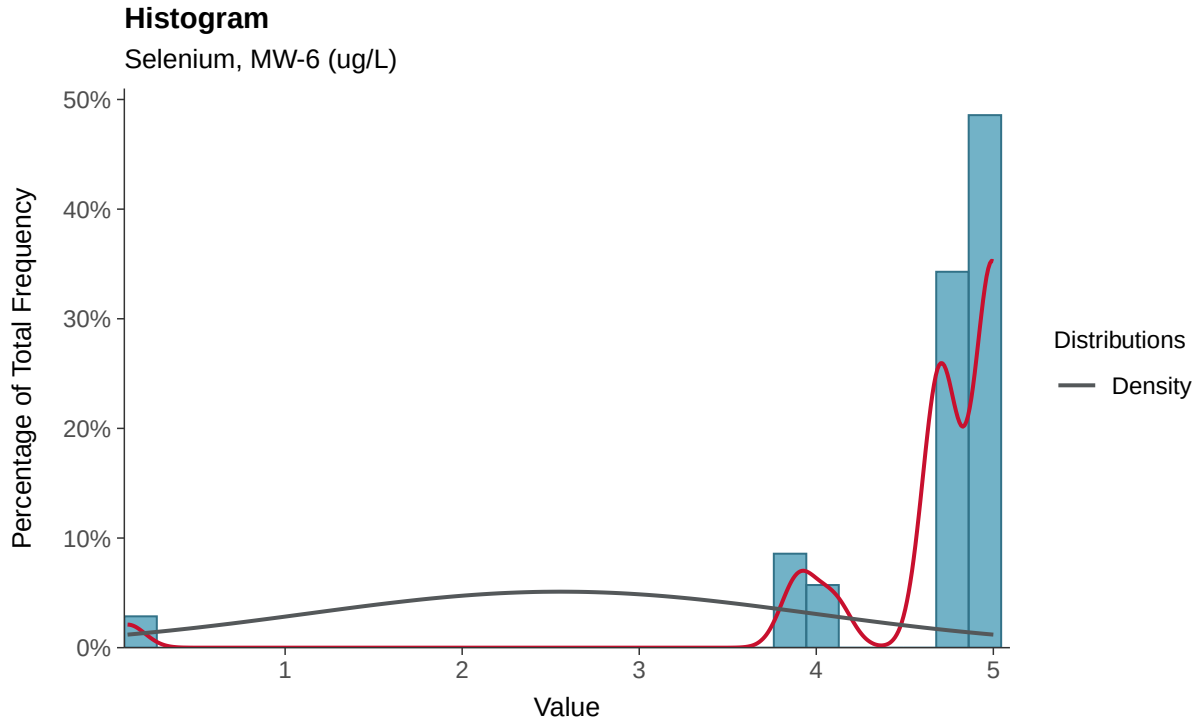
Radium-228, MW-6 (pCi/L)



App. IV: Selenium, MW-6

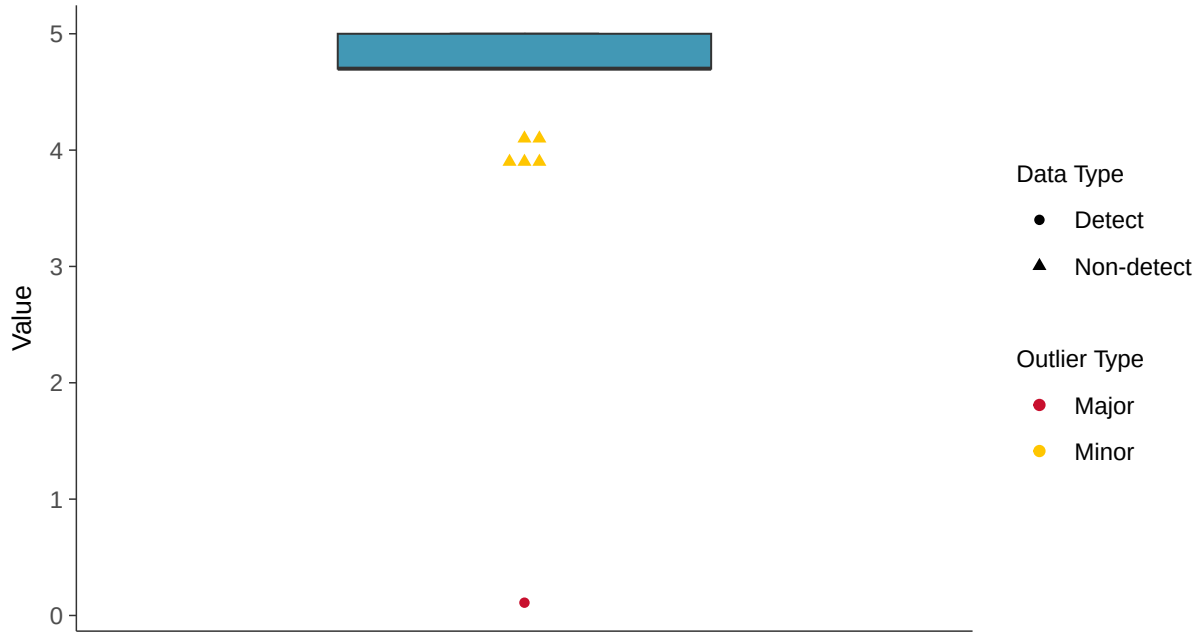
ID: 9_3_121





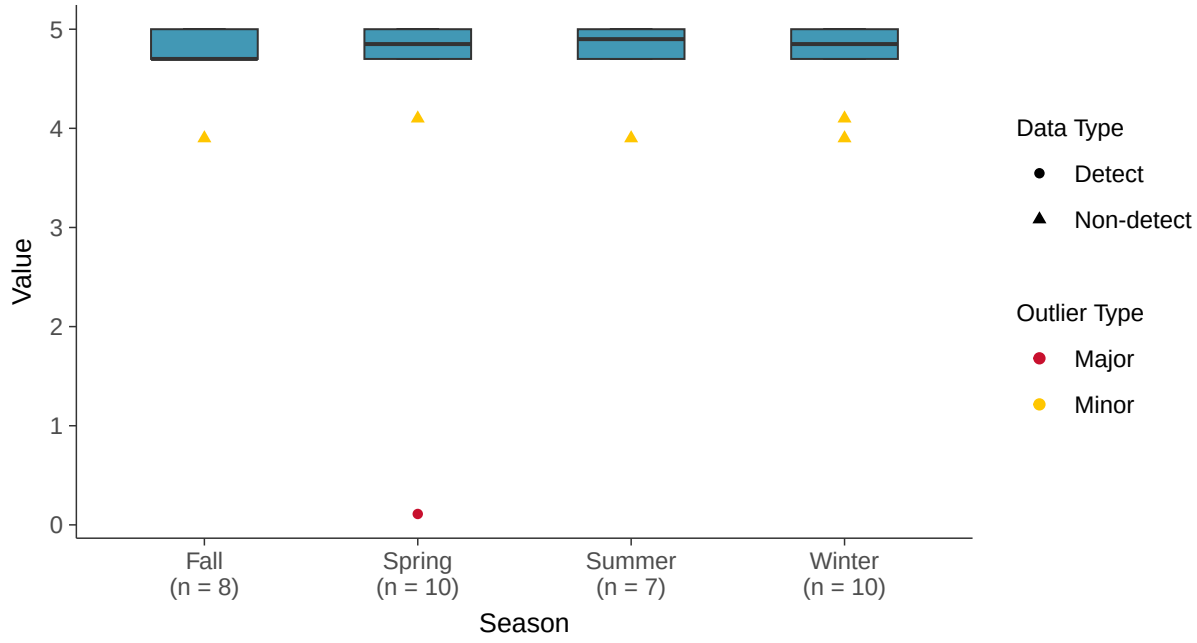
Boxplot

Selenium, MW-6 (ug/L)



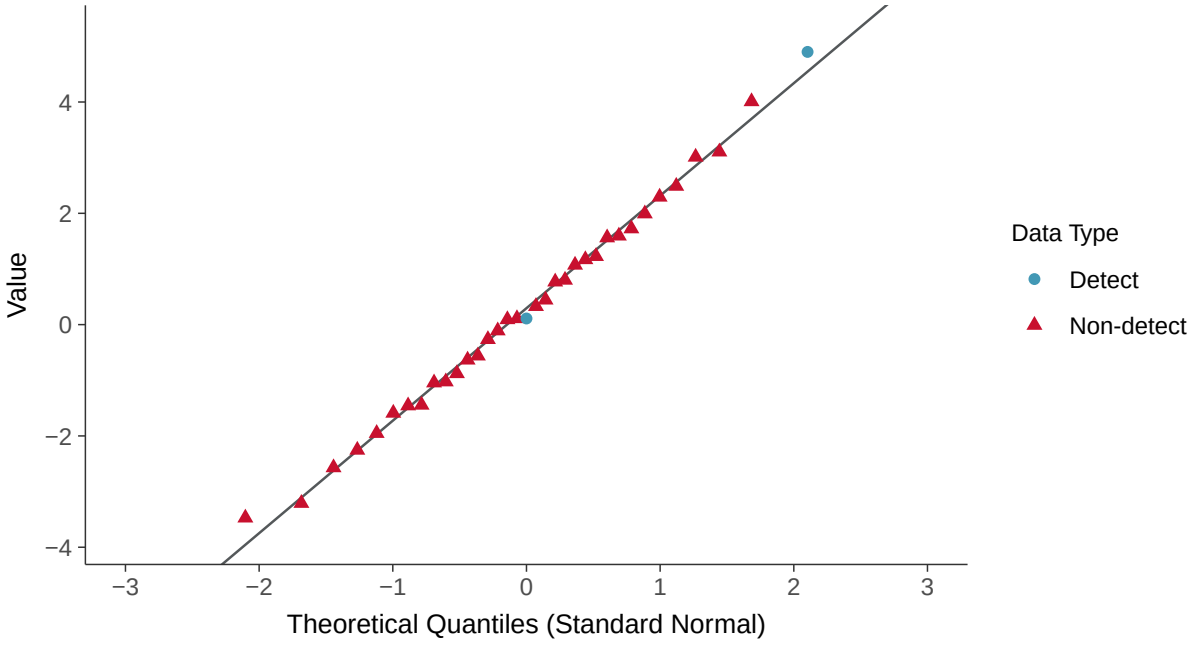
Boxplot by Season

Selenium, MW-6 (ug/L)



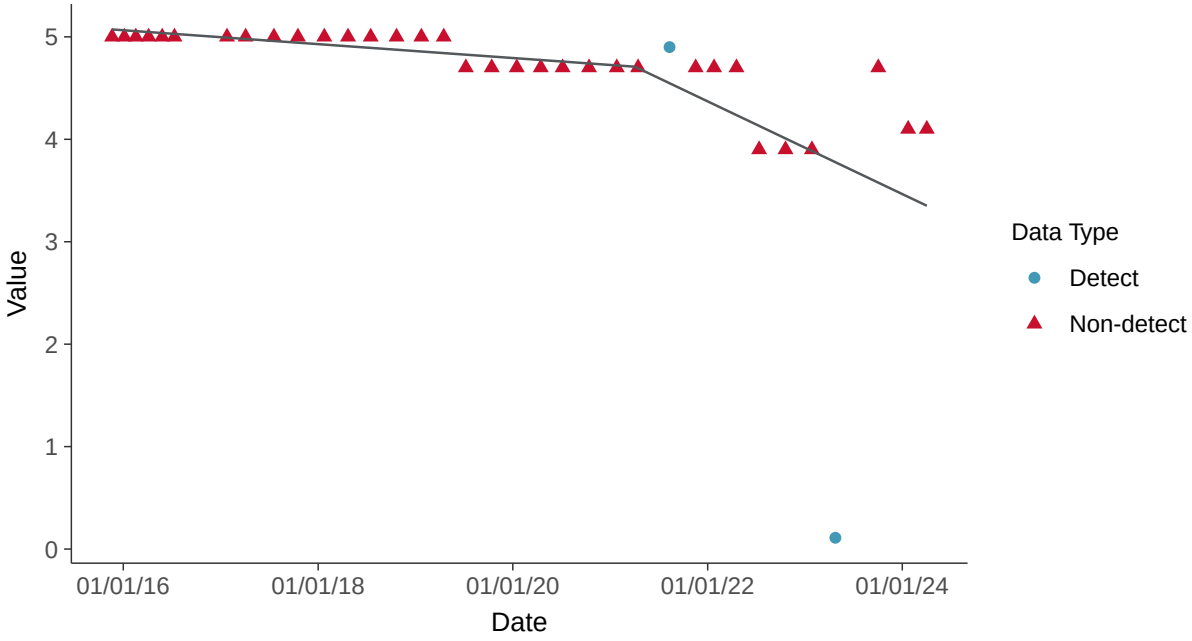
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-6 (ug/L)



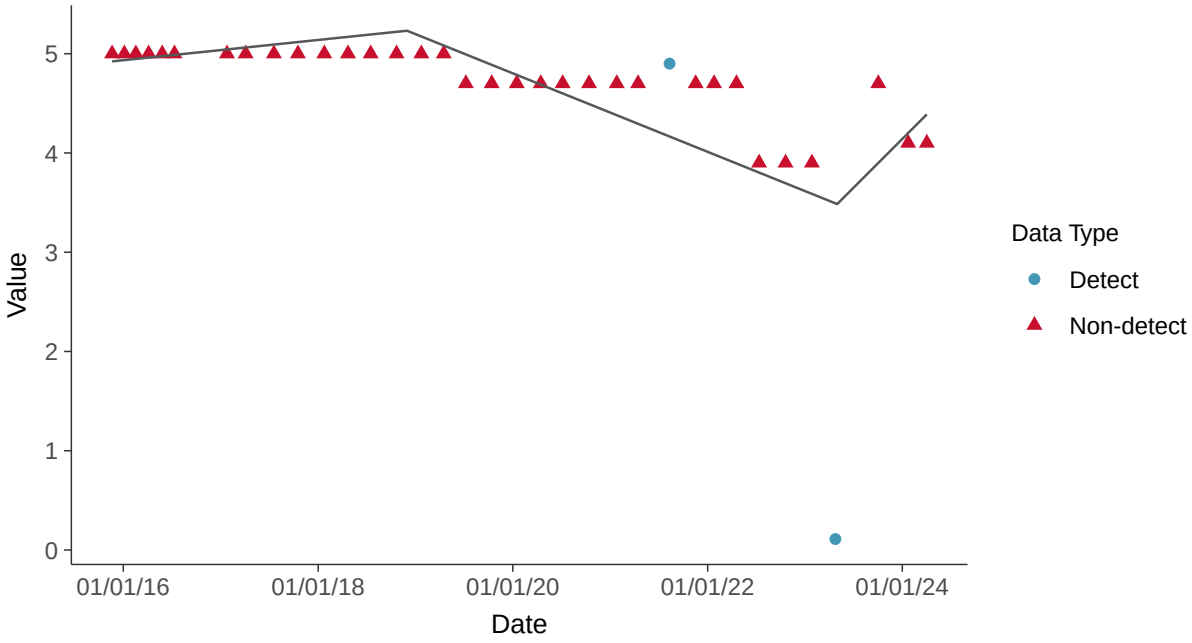
Trend Regression: Piecewise Linear-Linear

Selenium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-6 (ug/L)

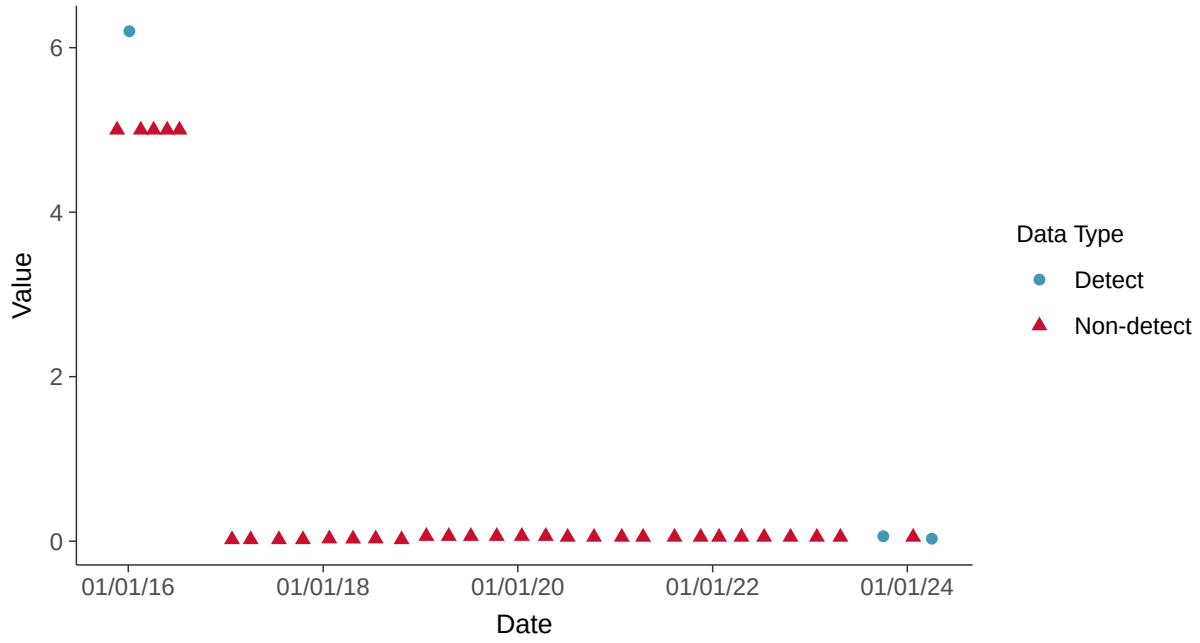


App. IV: Thallium, MW-6

ID: 9_3_124

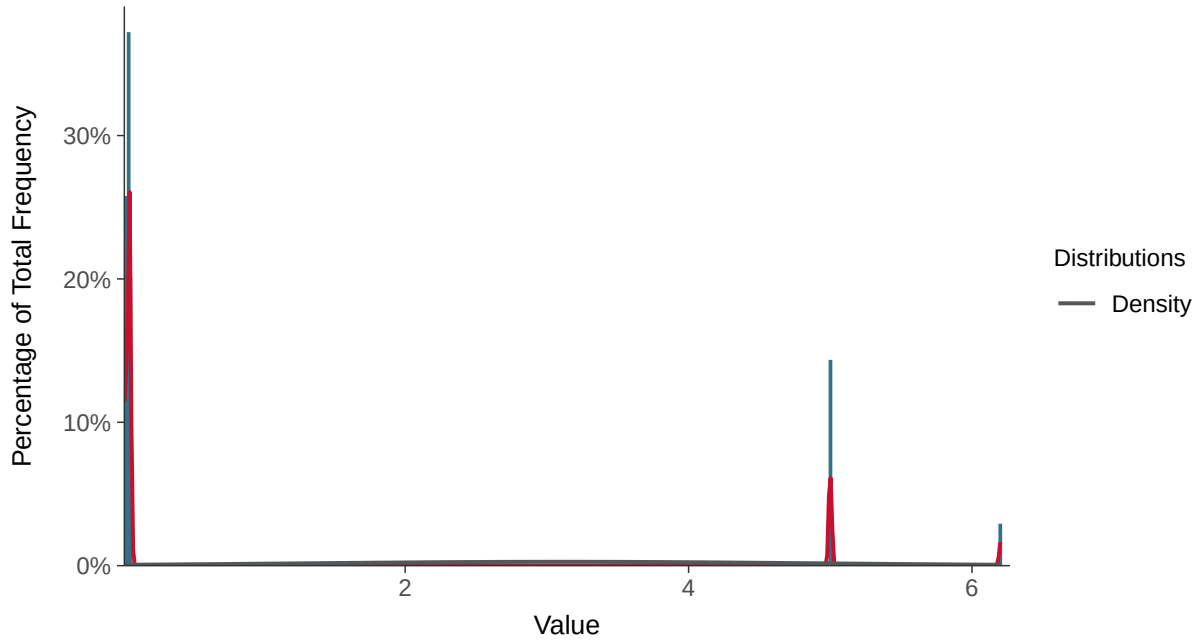
Scatter Plot

Thallium, MW-6 (ug/L)



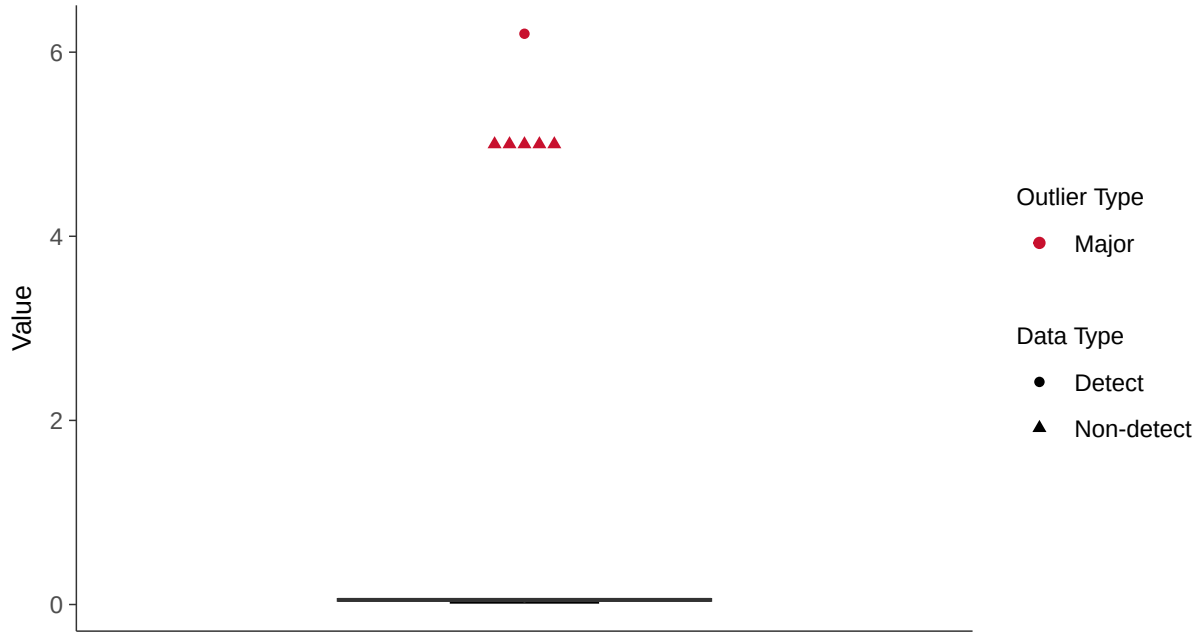
Histogram

Thallium, MW-6 (ug/L)



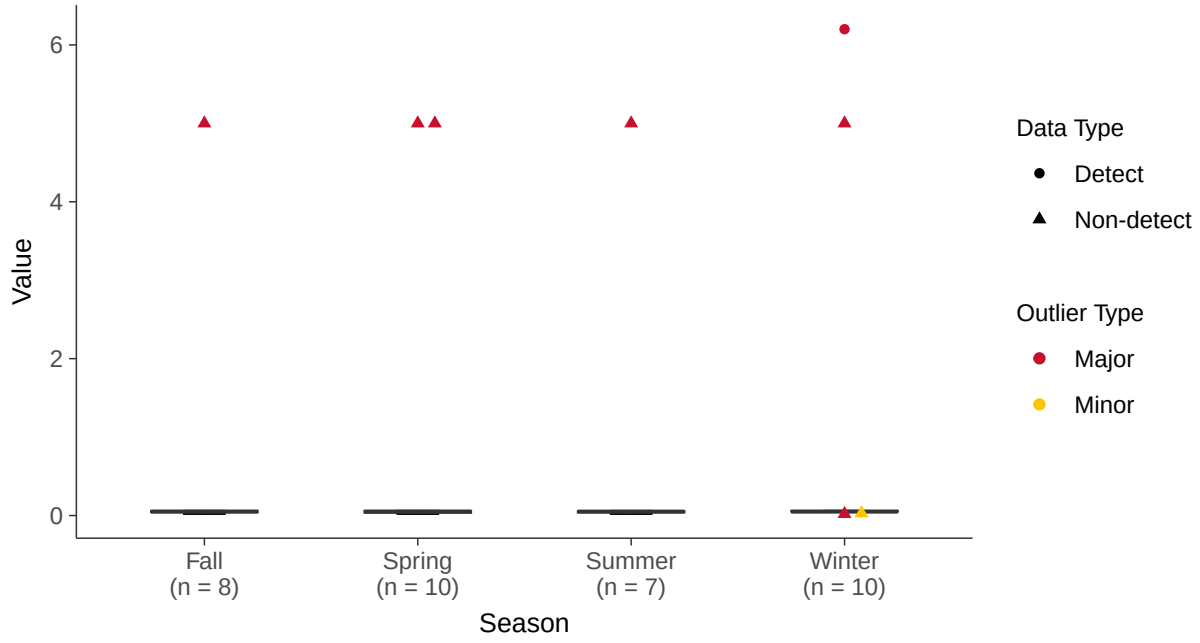
Boxplot

Thallium, MW-6 (ug/L)



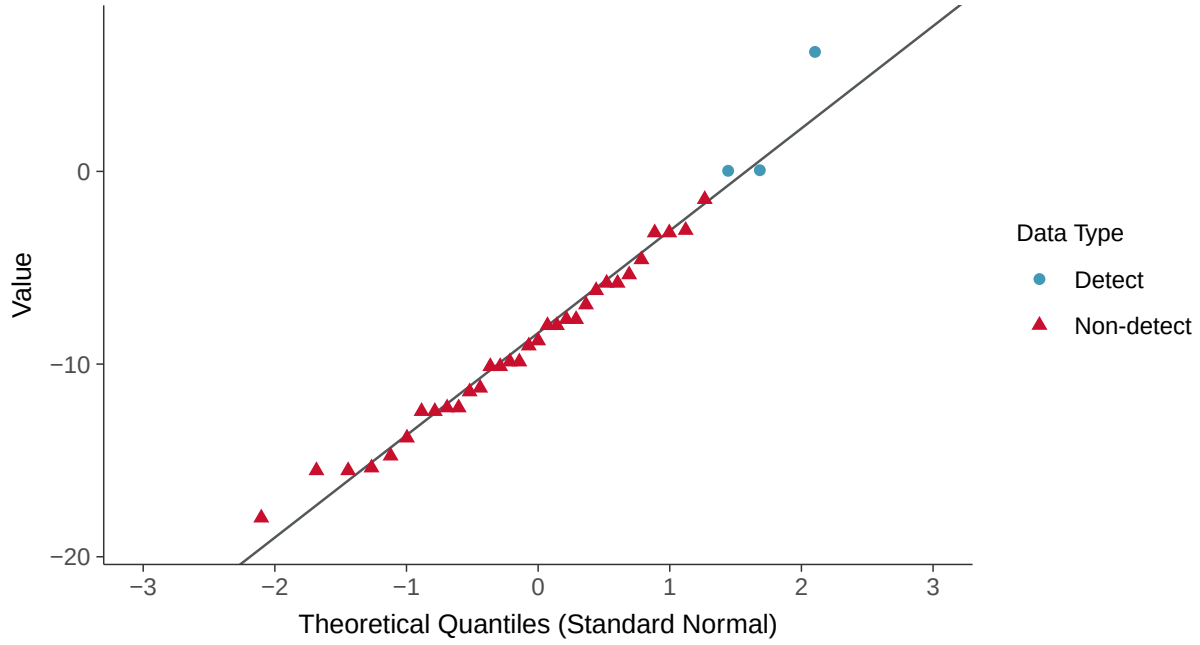
Boxplot by Season

Thallium, MW-6 (ug/L)



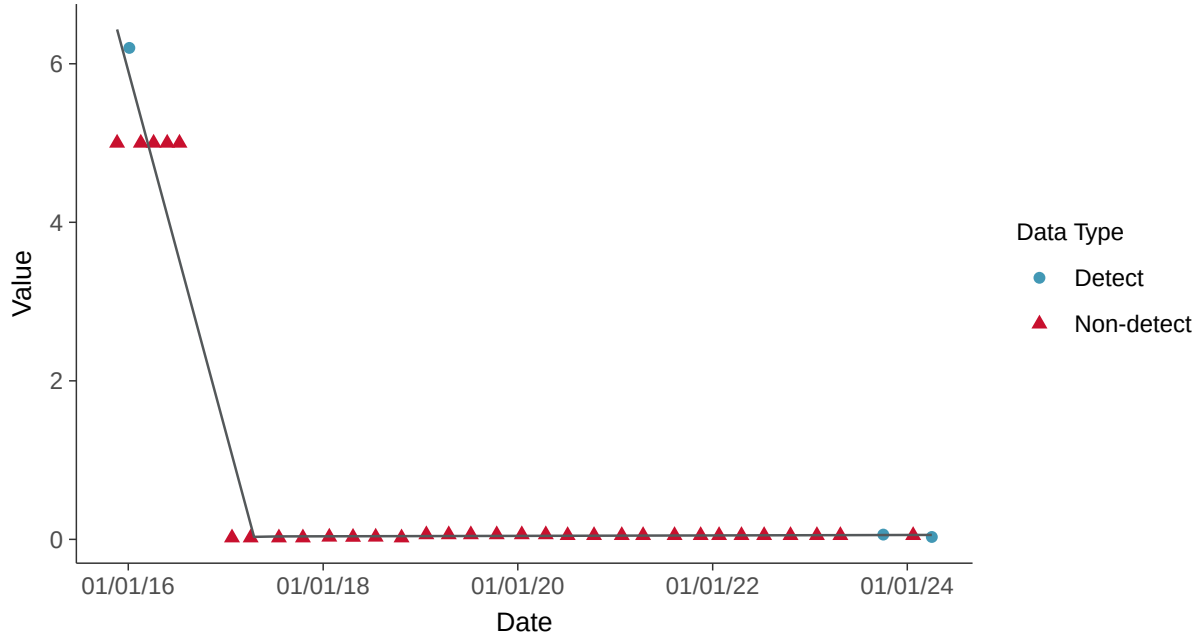
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-6 (ug/L)



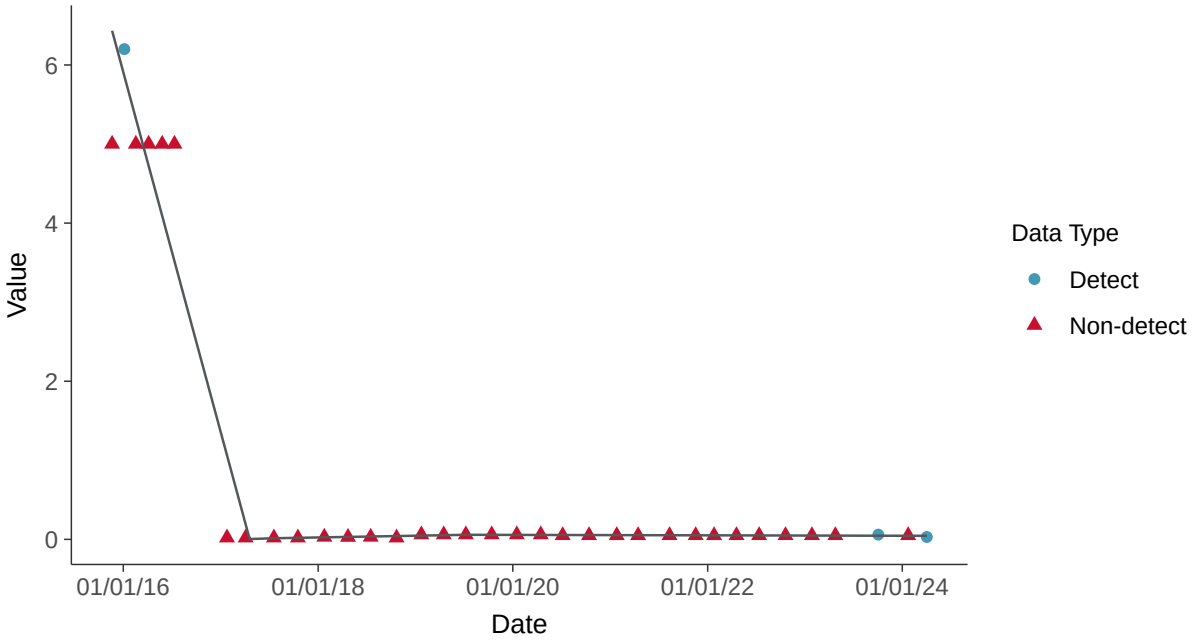
Trend Regression: Piecewise Linear-Linear

Thallium, MW-6 (ug/L)



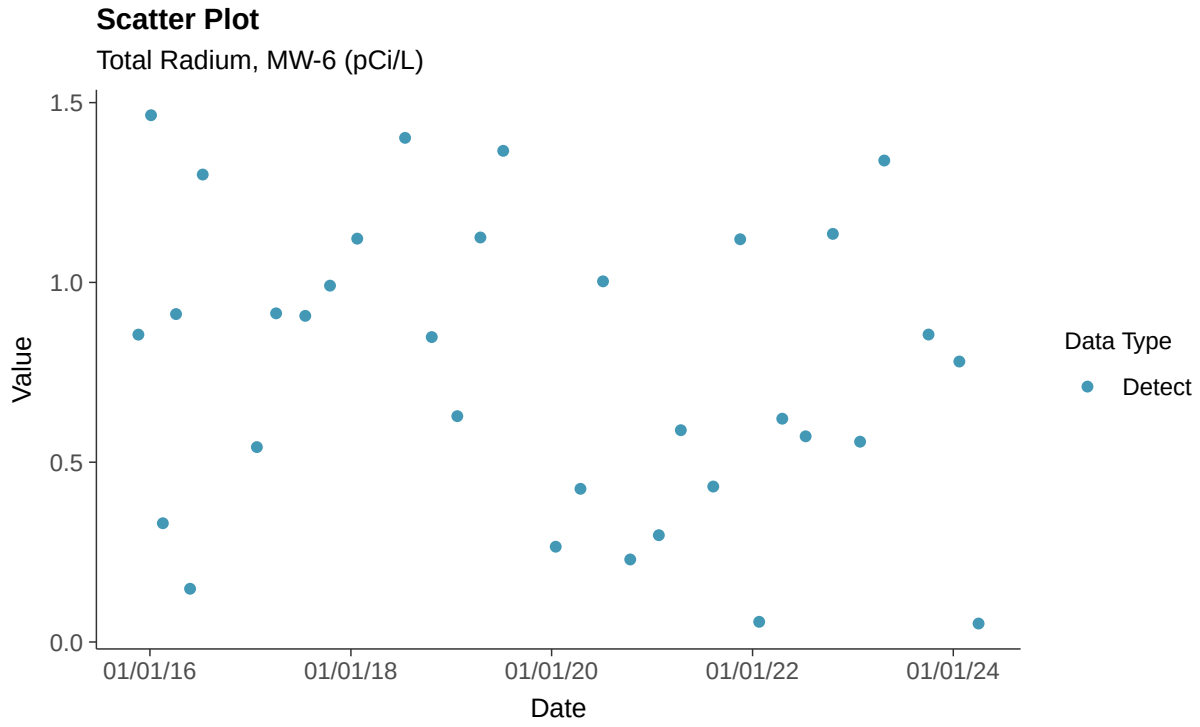
Trend Regression: Piecewise Linear-Linear-Linear

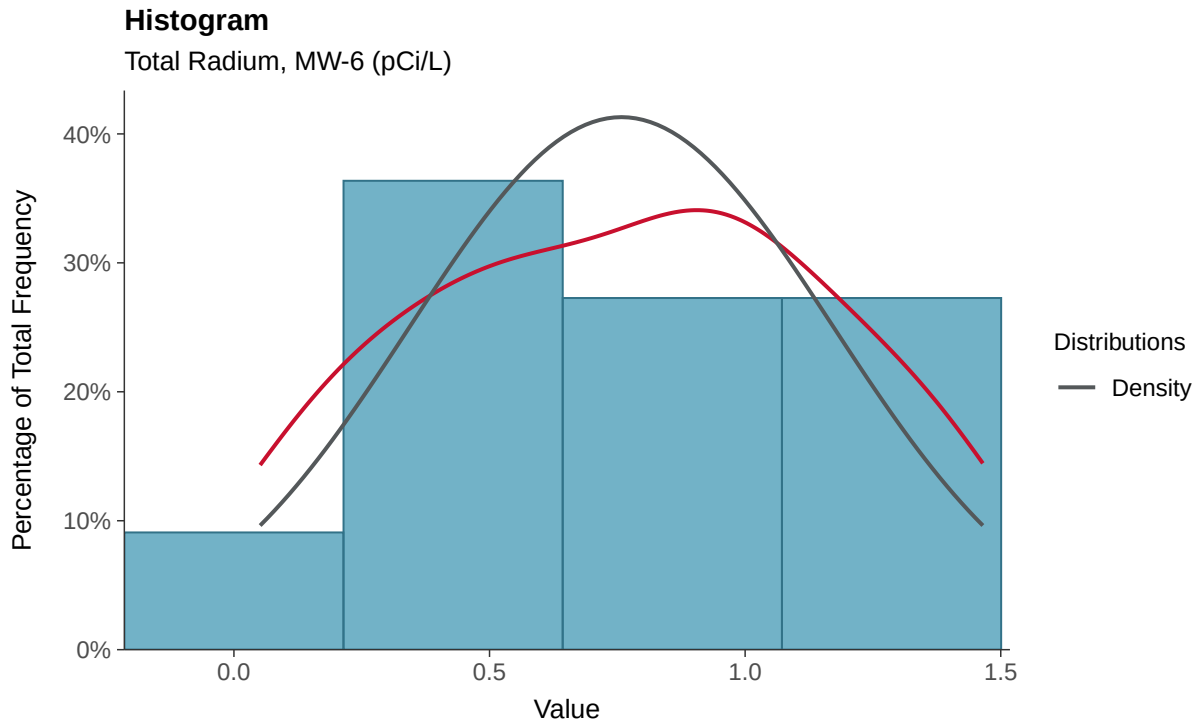
Thallium, MW-6 (ug/L)



App. IV: Total Radium, MW-6

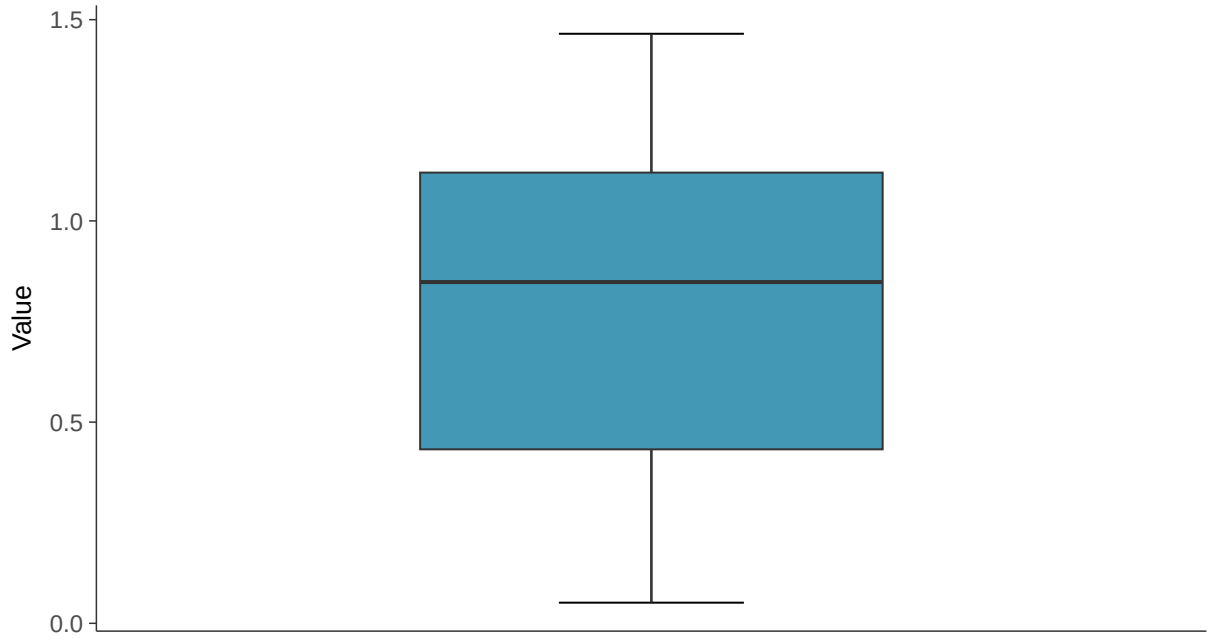
ID: 9_3_126





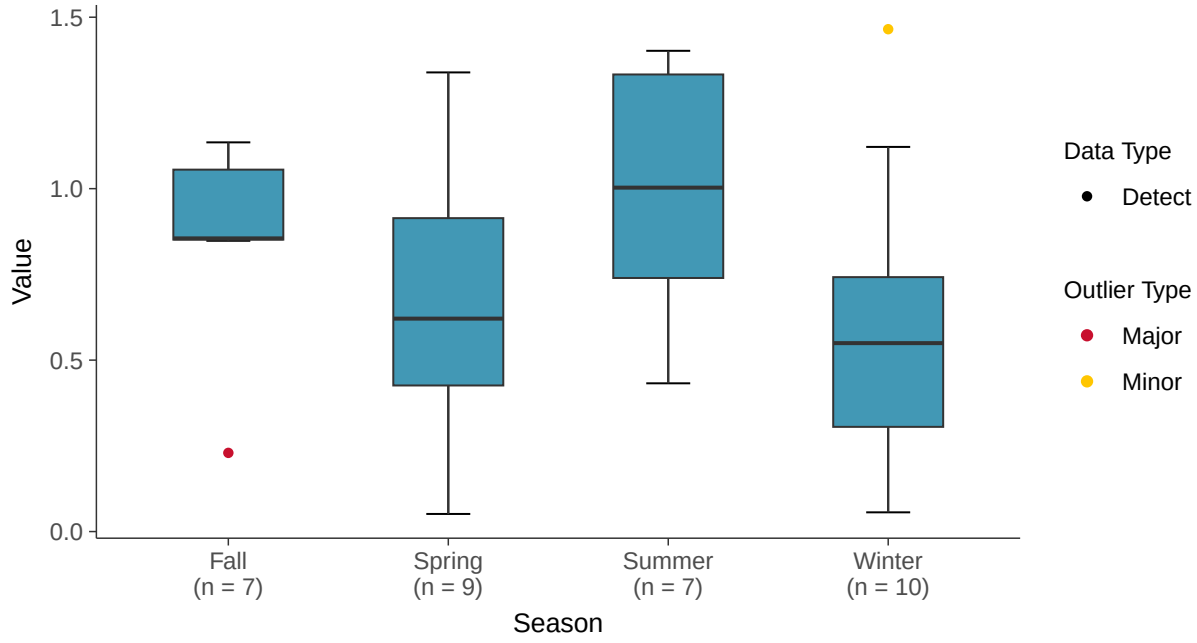
Boxplot

Total Radium, MW-6 (pCi/L)



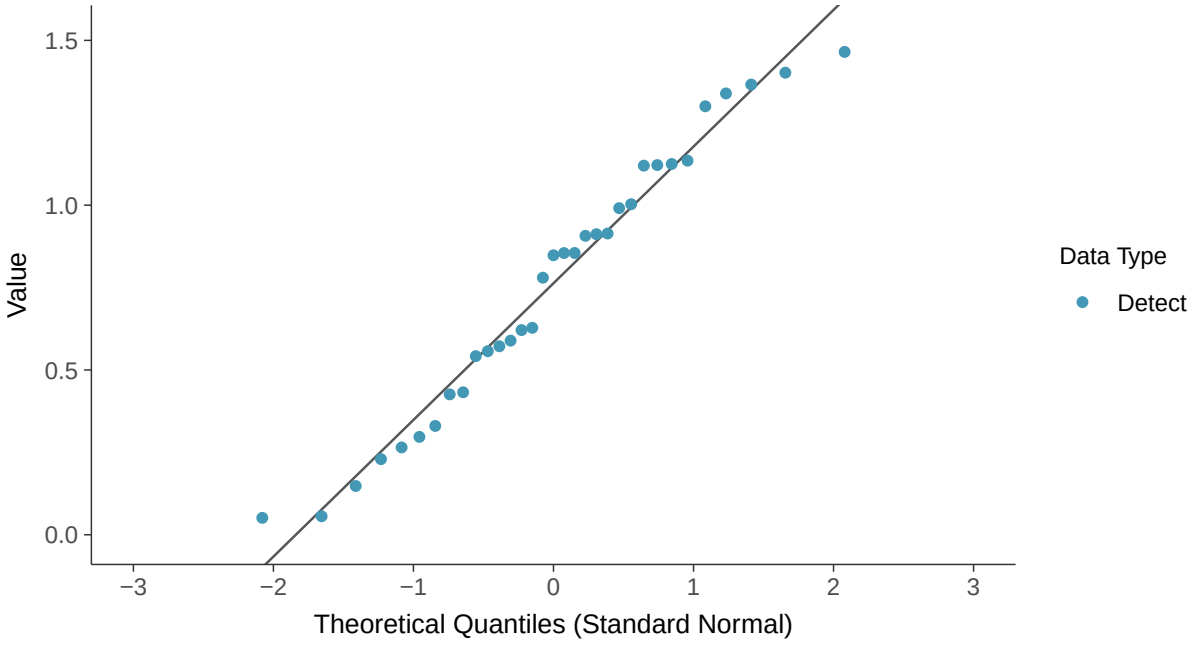
Boxplot by Season

Total Radium, MW-6 (pCi/L)



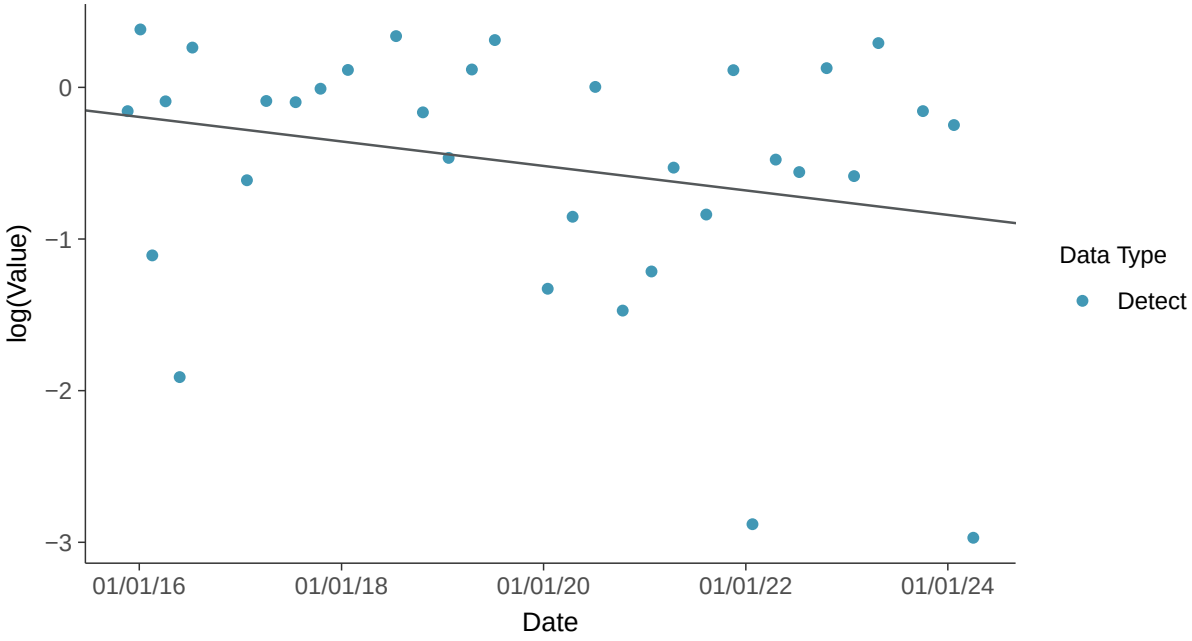
Normal Q-Q plot

Total Radium, MW-6 (pCi/L)



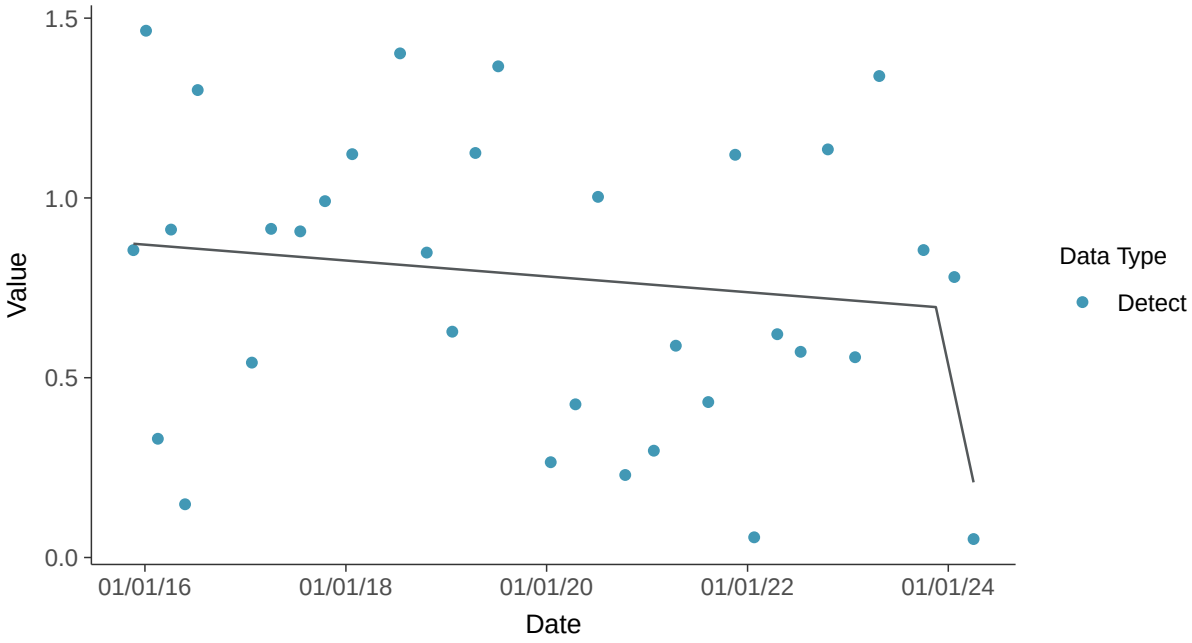
Trend Regression: Lognormal MLE

Total Radium, MW-6 (pCi/L)



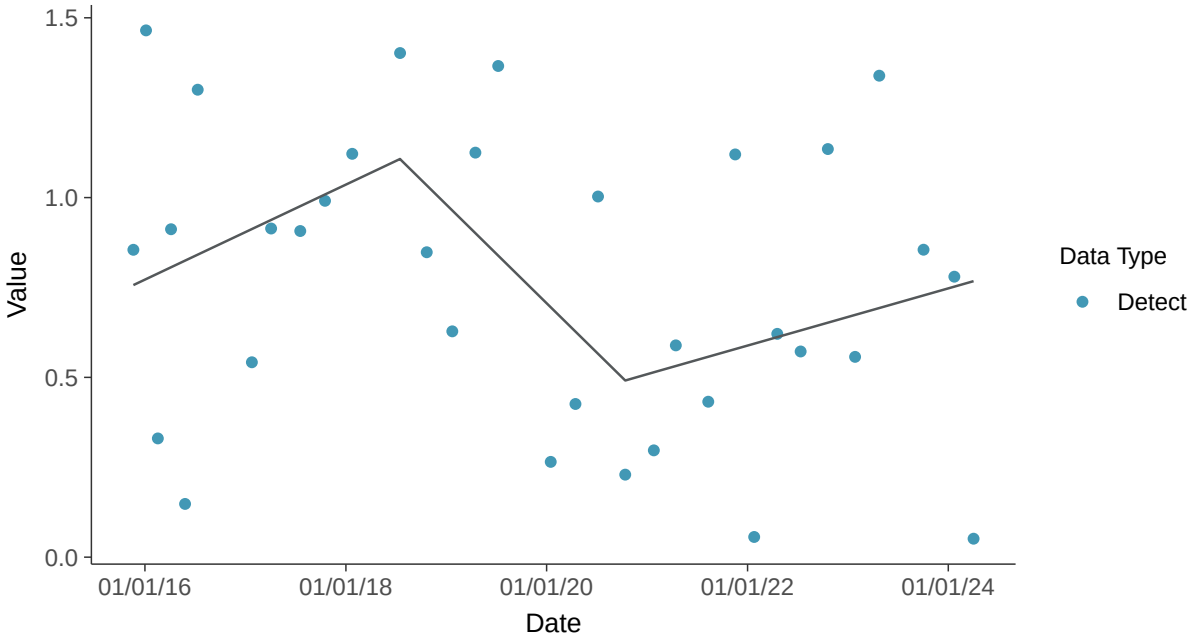
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-6 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, MW-6 (pCi/L)



This page intentionally left blank.

E

Appendix E – AM UPLs

This page intentionally left blank.

Charah Brickhaven, Pooled Background Wells BG-1 & BG-2 as of April, 2024
UPLs for Assessment Monitoring

ID	Dates	Constituent Type	Constituent	Units	n	NDs	% NDs	Unique Obs.	Normal		Lognormal		Gamma		Nonparametric	Average UPL by Distribution				Maximum	Maximum Detect	Log SD of Detects	Distributions Fit (based on detected data)	Recommended Distribution[1]	Nonparametric UPL Specification[2]		Parametric UPL Specification[3]		No. of Verification Samples[4]	UPL	Notes
									UPL	KM UPL	UPL	KM UPL	UPL	KM UPL	Rank-based UPL	Normal	Lognormal	Gamma	Nonparametric						Retests	Rank	Retests	K			
1 111	2015-10-15 to 2024-04-01	App. I Metals	Copper	ug/L	59	53	89.8%	10		5.59		4.39		4.48	7.10	5.59	4.39	4.48	7.10	11.4	11.4	0.905	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	7.10	a
1 117	2015-10-15 to 2024-04-01	App. I Metals	Nickel	ug/L	59	48	81.4%	17		5.88		6.30		5.64	4.20	5.88	6.30	5.64	4.20	14.1	14.1	0.705	Gamma; Lognormal	Nonparametric	3	2	2	2.37	2	4.20	a
1 122	2015-10-15 to 2024-04-01	App. I Metals	Silver	ug/L	59	59	100.0%	4							2.50				2.50	2.50				Nonparametric	3	2	2	2.37	2	2.50	a, b
1 127	2015-10-15 to 2024-04-01	App. I Metals	Vanadium	ug/L	59	33	55.9%	23		8.93		17.1		12.9	8.30	8.93	17.1	12.9	8.30	8.40	8.40	0.578	Nonparametric	Nonparametric	3	2	2	2.37	2	8.30	a
1 128	2015-10-15 to 2024-04-01	App. I Metals	Zinc	ug/L	59	48	81.4%	16		19.9		17.4		17.7	32.4	19.9	17.4	17.7	32.4	34.2	34.2	0.710	Gamma; Lognormal	Nonparametric	3	2	2	2.37	2	32.4	a
2 105	2015-10-15 to 2024-04-01	App. III	Boron	ug/L	58	29	50.0%	34		31.1		112		56.4	36.2	31.1	112	56.4	36.2	56.5	56.5	0.596	Nonparametric	Nonparametric	3	2	2	2.37	2	36.2	
2 107	2015-10-15 to 2024-04-01	App. III	Calcium	ug/L	59	0	0.0%	47	158.000		246.000		206.000		124.000	158.000	246.000	206.000	124.000	124.000	124.000	0.716	Nonparametric	Nonparametric	3	2	2	2.37	2	124.000	
2 108	2015-10-15 to 2024-04-01	App. III	Chloride	mg/L	59	0	0.0%	48	325		345		339		303	325	345	339	303	311	311	0.164	Gamma; Lognormal; Normal	Normal	3	2	2	2.37	1	325	
2 112	2015-10-15 to 2024-04-01	App. III	Fluoride	mg/L	59	0	0.0%	20	0.314		0.346		0.334		0.330	0.314	0.346	0.334	0.330	0.340	0.340	0.280	Gamma; Lognormal	Gamma	3	2	2	2.37	1	0.334	
2 118	2015-10-15 to 2024-04-01	App. III	pH (Field), LPL	S.U.	57	0	0.0%	41	5.59		5.66		5.64		6.14	5.59	5.66	5.64	6.14	6.10	6.10	0.0375	Gamma; Lognormal; Normal	Normal	3	2	2	2.37	1	5.59	e
2 118	2015-10-15 to 2024-04-01	App. III	pH (Field), UPL	S.U.	57	0	0.0%	41	7.59		7.67		7.65		7.01	7.59	7.67	7.65	7.01	7.11	7.11	0.0375	Gamma; Lognormal; Normal	Normal	3	2	2	2.37	1	7.59	e
2 123	2015-10-15 to 2024-04-01	App. III	Sulfate	mg/L	59	0	0.0%	51	207		363		283		204	207	363	283	204	211	211	0.929	Nonparametric	Nonparametric	3	2	2	2.37	2	204	
2 125	2015-10-15 to 2024-04-01	App. III	Total Dissolved Solids	mg/L	58	0	0.0%	53	1,390		1,520		1,480		1,270	1,390	1,520	1,480	1,270	1,450	1,450	0.301	Nonparametric	Nonparametric	3	2	2	2.37	2	1,270	
3 101	2015-10-15 to 2024-04-01	App. IV	Antimony	ug/L	59	58	98.3%	7							5.50				5.50	5.50	0.790			Nonparametric	3	2	2	2.37	2	0.790	a, c, d
3 102	2015-10-15 to 2024-04-01	App. IV	Arsenic	ug/L	59	54	91.5%	10		4.14		2.79		2.92	8.80	4.14	2.79	2.92	8.80	34.0	8.80	1.41	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	8.80	a, d
3 103	2015-10-15 to 2024-04-01	App. IV	Barium	ug/L	59	0	0.0%	56	501		972		730		377	501	972	730	377	443	443	0.702	Nonparametric	Nonparametric	3	2	2	2.37	2	377	
3 104	2015-10-15 to 2024-04-01	App. IV	Beryllium	ug/L	59	59	100.0%	6							0.700				0.700	0.700				Nonparametric	3	2	2	2.37	2	0.700	a, b
3 106	2015-10-15 to 2024-04-01	App. IV	Cadmium	ug/L	59	57	96.6%	5							0.500				0.500	0.500	0.500	0.158		Nonparametric	3	2	2	2.37	2	0.500	a, c
3 109	2015-10-15 to 2024-04-01	App. IV	Chromium	ug/L	59	51	86.4%	13		9.53		4.71		4.85	7.20	9.53	4.71	4.85	7.20	26.5	26.5	1.15	Lognormal	Nonparametric	3	2	2	2.37	2	7.20	a
3 110	2015-10-15 to 2024-04-01	App. IV	Cobalt	ug/L	59	51	86.4%	11		2.11		7.31		3.95	3.60	2.11	7.31	3.95	3.60	3.60	2.30	1.10	Gamma; Normal	Nonparametric	3	2	2	2.37	2	2.30	a, d
3 112	2015-10-15 to 2024-04-01	App. IV	Fluoride	mg/L	59	0	0.0%	20	0.314		0.346		0.334		0.330	0.314	0.346	0.334	0.330	0.340	0.340	0.280	Gamma; Lognormal	Gamma	3	2	2	2.37	1	0.334	
3 113	2015-10-15 to 2024-04-01	App. IV	Lead	ug/L	59	56	94.9%	10							5.60				5.60	14.1	14.1	1.36		Nonparametric	3	2	2	2.37	2	14.1	a, c
3 114	2015-10-15 to 2024-04-01	App. IV	Lithium	ug/L	59	3	5.1%	49		37.3		126		59.6	43.7	37.3	126	59.6	43.7	51.1	51.1	0.283	Nonparametric	Nonparametric	3	2	2	2.37	2	43.7	
3 115	2015-10-15 to 2024-04-01	App. IV	Mercury	ug/L	59	51	86.4%	7		0.148		0.144		0.145	0.170	0.148	0.144	0.145	0.170	0.200	0.200	0.236	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	0.170	a
3 116	2015-10-15 to 2024-04-01	App. IV	Molybdenum	ug/L	59	47	79.7%	18		9.22		15.1		12.2	13.6	9.22	15.1	12.2	13.6	16.0	13.6	1.19	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	13.6	a, d
3 119	2015-10-15 to 2024-04-01	App. IV	Radium-226	pCi/L	56	0	0.0%	50							0.800				0.800	1.22	1.22		Normal	Nonparametric	3	2	2	2.38	2	0.800	
3 120	2015-10-15 to 2024-04-01	App. IV	Radium-228	pCi/L	56	0	0.0%	55							1.35				1.35	1.96	1.96		Normal	Nonparametric	3	2	2	2.38	2	1.35	
3 121	2015-10-15 to 2024-04-01	App. IV	Selenium	ug/L	59	56	94.9%	7							5.00				5.00	6.00	6.00	2.49		Nonparametric	3	2	2	2.37	2	6.00	a, c
3 124	2015-10-15 to 2024-04-01	App. IV	Thallium	ug/L	59	56	94.9%	9							5.00				5.00	13.7	13.7	3.15		Nonparametric	3	2	2	2.37	2	13.7	a, c
3 126	2015-10-15 to 2024-04-01	App. IV	Total Radium	pCi/L	56	0	0.0%	53							2.09				2.09	2.59	2.59		Normal	Nonparametric	3	2	2	2.38	2	2.09	

Notes
a: Nonparametric methods were used since the percent below MDL is greater than 50%.
b: Constituent is 100% non-detects so the maximum detection limit is chosen as the BTV. Double Quantification Rule (DQR) is recommended for determining if an exceedance has occurred.
c: Maximum detected value was chosen as the UPL as the number of detects is less than 4.
d: Sample contains MDLs that are greater than the maximum detect value.
e: Limits are based on a two-sided prediction interval.

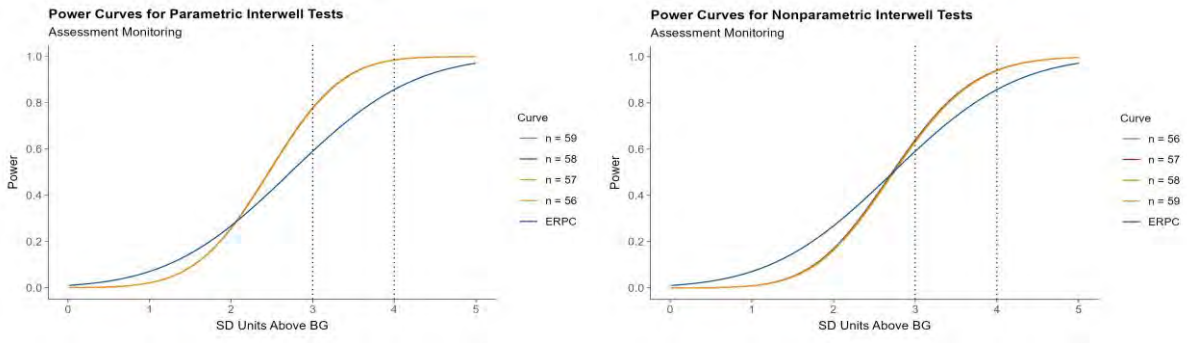
[1] To optimize the process for estimating a reference background concentration when there are multiple forms of the UPL formulae for data sets with assumed distributional properties, the averaging of the results over the multiple methods is done. The formulae are comparable and each one offers advantages and also has inherent errors in their methods. The action of averaging these estimates produces a pooled estimated closest to the unknown common truth based on how this error is perceived. For example, the UPL with assumed gamma distributional properties with non-detects has Kaplan-Meier (KM) and regression on order statistics (ROS) for estimating the UPL for samples with non-detects. The averaging of the two estimates is done to produce one recommended estimate for the UPL. In situations where a method's estimate is notably different from the other methods' results (assessed based on subject matter expertise), then that particular method is excluded from the averaging.

[2] The number of retests and the rank of the order statistic for nonparametric UPLs are chosen such that the confidence level does not exceed the per-constituent false positive rate of 0.004044, and such that the test power exceeds the EPA Reference Power Curve (ERPC) at either 3 standard deviations (SDs) above background, 4 SDs above background, or both. The maximum per-constituent false positive rate is computed based on a site-wide false positive rate of 10% subdivided across 26 constituents. Test power varies by sample size, and is plotted below for all samples sizes in the data alongside the ERPC.

[3] The number of retests and the value of the K factor are chosen such that the confidence level does not exceed the per-test false positive rate of 0.000368 and such that the test power exceeds the ERPC at either 3 SDs above background, 4 SDs above background, or both. The maximum per-test false positive rate is computed based on a site-wide false positive rate of 10% subdivided across 26 constituents and 11 downgradient wells. Test power varies by sample size, and is plotted below for all sample sizes in the data alongside the ERPC.

[4] The number of verification samples is equal to *(m - 1)* , where *m* represents the number of retests in a 1-of-*m* retesting plan. For each row, if the recommended distribution is parametric then the value in this column is based on the number of retests under a parametric UPL specification. Otherwise, it is based on the number of retests under a nonparametric specification.

[5] The normal distribution is assumed even though the SD of the logged detects is greater than one. The small sample size may not capture representative variation. The gamma UPL estimate is higher than reasonably expected given maximum detect.



This page intentionally left blank.

F

Appendix F – DM UPLs

This page intentionally left blank.

Charah Brickhaven, Pooled Background Wells BG-1 & BG-2 as of April, 2024
UPLs for Detection Monitoring

ID	Dates	Constituent Type	Constituent	Units	n	NDs	% NDs	Unique Obs.	Normal		Lognormal		Gamma		Nonparametric	Average UPL by Distribution				Maximum	Maximum Detect	Log SD of Detects	Distributions Fit (based on detected data)	Recommended Distribution[1]	Nonparametric UPL Specification[2]		Parametric UPL Specification[3]		No. of Verification Samples[4]	UPL	Notes
									UPL	KM UPL	UPL	KM UPL	UPL	KM UPL	Rank-based UPL	Normal	Lognormal	Gamma	Nonparametric						Retests	Rank	Retests	K			
1_111	2015-10-15 to 2024-04-01	App. I Metals	Copper	ug/L	59	53	89.8%	10		5.59		4.39		4.48	7.10	5.59	4.39	4.48	7.10	11.4	11.4	0.905	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	7.10	a
1_117	2015-10-15 to 2024-04-01	App. I Metals	Nickel	ug/L	59	48	81.4%	17		5.88		6.30		5.64	4.20	5.88	6.30	5.64	4.20	14.1	14.1	0.705	Gamma; Lognormal	Nonparametric	3	2	2	2.37	2	4.20	a
1_122	2015-10-15 to 2024-04-01	App. I Metals	Silver	ug/L	59	59	100.0%	4							2.50				2.50	2.50				Nonparametric	3	2	2	2.37	2	2.50	a, b
1_127	2015-10-15 to 2024-04-01	App. I Metals	Vanadium	ug/L	59	33	55.9%	23		8.93		17.1		12.9	8.30	8.93	17.1	12.9	8.30	8.40	8.40	0.578	Nonparametric	Nonparametric	3	2	2	2.37	2	8.30	a
1_128	2015-10-15 to 2024-04-01	App. I Metals	Zinc	ug/L	59	48	81.4%	16		19.9		17.4		17.7	32.4	19.9	17.4	17.7	32.4	34.2	34.2	0.710	Gamma; Lognormal	Nonparametric	3	2	2	2.37	2	32.4	a
2_105	2015-10-15 to 2024-04-01	App. III	Boron	ug/L	58	29	50.0%	34		31.1		112		56.4	36.2	31.1	112	56.4	36.2	56.5	56.5	0.596	Nonparametric	Nonparametric	3	2	2	2.37	2	36.2	
2_107	2015-10-15 to 2024-04-01	App. III	Calcium	ug/L	59	0	0.0%	47	158,000		246,000		206,000		124,000	158,000	246,000	206,000	124,000	124,000	124,000	0.716	Nonparametric	Nonparametric	3	2	2	2.37	2	124,000	
2_108	2015-10-15 to 2024-04-01	App. III	Chloride	mg/L	59	0	0.0%	48	325		345		339		303	325	345	339	303	311	311	0.164	Gamma; Lognormal; Normal	Normal	3	2	2	2.37	1	325	
2_112	2015-10-15 to 2024-04-01	App. III	Fluoride	mg/L	59	0	0.0%	20	0.314		0.346		0.334		0.330	0.314	0.346	0.334	0.330	0.340	0.340	0.280	Gamma; Lognormal	Gamma	3	2	2	2.37	1	0.334	
2_118	2015-10-15 to 2024-04-01	App. III	pH (Field), LPL	S.U.	57	0	0.0%	41	5.59		5.66		5.64		6.14	5.59	5.66	5.64	6.14	6.10	6.10	0.0375	Gamma; Lognormal; Normal	Normal	3	2	2	2.37	1	5.59	e
2_118	2015-10-15 to 2024-04-01	App. III	pH (Field), UPL	S.U.	57	0	0.0%	41	7.59		7.67		7.65		7.01	7.59	7.67	7.65	7.01	7.11	7.11	0.0375	Gamma; Lognormal; Normal	Normal	3	2	2	2.37	1	7.59	e
2_123	2015-10-15 to 2024-04-01	App. III	Sulfate	mg/L	59	0	0.0%	51	207		363		283		204	207	363	283	204	211	211	0.929	Nonparametric	Nonparametric	3	2	2	2.37	2	204	
2_125	2015-10-15 to 2024-04-01	App. III	Total Dissolved Solids	mg/L	58	0	0.0%	53	1,390		1,520		1,490		1,270	1,390	1,520	1,490	1,270	1,450	1,450	0.301	Nonparametric	Nonparametric	3	2	2	2.37	2	1,270	
3_101	2015-10-15 to 2024-04-01	App. IV	Antimony	ug/L	59	58	98.3%	7							5.50				5.50	5.50	5.50	0.790		Nonparametric	3	2	2	2.37	2	0.790	a, c, d
3_102	2015-10-15 to 2024-04-01	App. IV	Arsenic	ug/L	59	54	91.5%	10		4.14		2.79		2.92	8.80	4.14	2.79	2.92	8.80	34.0	8.80	1.41	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	8.80	a, d
3_103	2015-10-15 to 2024-04-01	App. IV	Barium	ug/L	59	0	0.0%	56	501		972		730		377	501	972	730	377	443	443	0.702	Nonparametric	Nonparametric	3	2	2	2.37	2	377	
3_104	2015-10-15 to 2024-04-01	App. IV	Beryllium	ug/L	59	59	100.0%	6							0.700				0.700	0.700				Nonparametric	3	2	2	2.37	2	0.700	a, b
3_106	2015-10-15 to 2024-04-01	App. IV	Cadmium	ug/L	59	57	96.6%	5							0.500				0.500	0.500	0.500	0.158		Nonparametric	3	2	2	2.37	2	0.500	a, c
3_109	2015-10-15 to 2024-04-01	App. IV	Chromium	ug/L	59	51	86.4%	13		9.53		4.71		4.85	7.20	9.53	4.71	4.85	7.20	26.5	26.5	1.15	Lognormal	Nonparametric	3	2	2	2.37	2	7.20	a
3_110	2015-10-15 to 2024-04-01	App. IV	Cobalt	ug/L	59	51	86.4%	11		2.11		7.31		3.95	3.60	2.11	7.31	3.95	3.60	3.60	2.30	1.10	Gamma; Normal	Nonparametric	3	2	2	2.37	2	2.30	a, d
3_112	2015-10-15 to 2024-04-01	App. IV	Fluoride	mg/L	59	0	0.0%	20	0.314		0.346		0.334		0.330	0.314	0.346	0.334	0.330	0.340	0.340	0.280	Gamma; Lognormal	Gamma	3	2	2	2.37	1	0.334	
3_113	2015-10-15 to 2024-04-01	App. IV	Lead	ug/L	59	56	94.9%	10							5.60				5.60	14.1	14.1	1.36		Nonparametric	3	2	2	2.37	2	14.1	a, c
3_114	2015-10-15 to 2024-04-01	App. IV	Lithium	ug/L	59	3	5.1%	49		37.3		126		59.6	43.7	37.3	126	59.6	43.7	51.1	51.1	0.283	Nonparametric	Nonparametric	3	2	2	2.37	2	43.7	
3_115	2015-10-15 to 2024-04-01	App. IV	Mercury	ug/L	59	51	86.4%	7		0.148		0.144		0.145	0.170	0.148	0.144	0.145	0.170	0.200	0.200	0.236	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	0.170	a
3_116	2015-10-15 to 2024-04-01	App. IV	Molybdenum	ug/L	59	47	79.7%	18		9.22		15.1		12.2	13.6	9.22	15.1	12.2	13.6	16.0	13.6	1.19	Gamma; Lognormal; Normal	Nonparametric	3	2	2	2.37	2	13.6	a, d
3_119	2015-10-15 to 2024-04-01	App. IV	Radium-226	pCi/L	56	0	0.0%	50							0.800				0.800	1.22	1.22		Normal	Nonparametric	3	2	2	2.38	2	0.800	
3_120	2015-10-15 to 2024-04-01	App. IV	Radium-228	pCi/L	56	0	0.0%	55							1.35				1.35	1.96	1.96		Normal	Nonparametric	3	2	2	2.38	2	1.35	
3_121	2015-10-15 to 2024-04-01	App. IV	Selenium	ug/L	59	56	94.9%	7							5.00				5.00	6.00	6.00	2.49		Nonparametric	3	2	2	2.37	2	6.00	a, c
3_124	2015-10-15 to 2024-04-01	App. IV	Thallium	ug/L	59	56	94.9%	9							5.00				5.00	13.7	13.7	3.15		Nonparametric	3	2	2	2.37	2	13.7	a, c
3_126	2015-10-15 to 2024-04-01	App. IV	Total Radium	pCi/L	56	0	0.0%	53							2.09				2.09	2.59	2.59		Normal	Nonparametric	3	2	2	2.38	2	2.09	

Notes

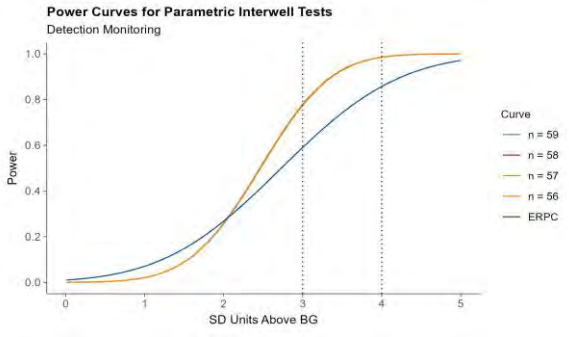
a: Nonparametric methods were used since the percent below MDL is greater than 50%.
b: Constituent is 100% non-detects so the maximum detection limit is chosen as the BTV. Double Quantification Rule (DQR) is recommended for determining if an exceedance has occurred.
c: Maximum detected value was chosen as the UPL as the number of detects is less than 4.
d: Sample contains MDLs that are greater than the maximum detect value.
e: Limits are based on a two-sided prediction interval.

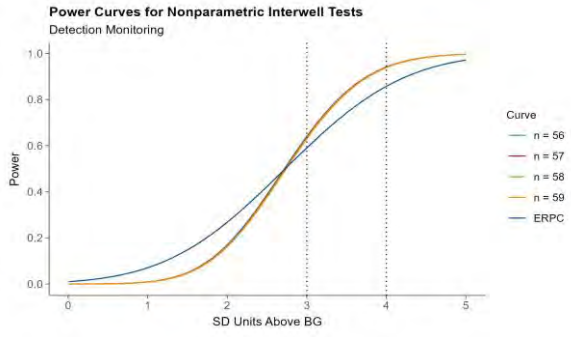
[1] To optimize the process for estimating a reference background concentration when there are multiple forms of the UPL formulae for data sets with assumed distributional properties, the averaging of the results over the multiple methods is done. The formulae are comparable and each one offers advantages and also has inherent errors in their methods. The action of averaging these estimates produces a pooled estimated closest to the unknown common truth based on how this error is perceived. For example, the UPL with assumed gamma distributional properties with non-detects has Kaplan-Meier (KM) and regression on order statistics (ROS) for estimating the UPL for samples with non-detects. The averaging of the two estimates is done to produce one recommended estimate for the UPL. In situations where a method's estimate is notably different from the other methods' results (assessed based on subject matter expertise), then that particular method is excluded from the averaging.

[2] The number of retests and the rank of the order statistic for nonparametric UPLs are chosen such that the confidence level does not exceed the per-constituent false positive rate of 0.004044, and such that the test power exceeds the EPA Reference Power Curve (ERPC) at either 3 standard deviations (SDs) above background, 4 SDs above background, or both. The maximum per-constituent false positive rate is computed based on a site-wide false positive rate of 10% subdivided across 26 constituents. Test power varies by sample size, and is plotted below for all samples sizes in the data alongside the ERPC.

[3] The number of retests and the value of the K factor are chosen such that the confidence level does not exceed the per-test false positive rate of 0.000368, and such that the test power exceeds the ERPC at either 3 SDs above background, 4 SDs above background, or both. The maximum per-test false positive rate is computed based on a site-wide false positive rate of 10% subdivided across 26 constituents and 11 downgradient wells. Test power varies by sample size, and is plotted below for all sample sizes in the data alongside the ERPC.

[4] The number of verification samples is equal to *(m - 1)*, where *m* represents the number of retests in a 1-of-*m* retesting plan. For each row, if the recommended distribution is parametric then the value in this column is based on the number of retests under a parametric UPL specification. Otherwise, it is based on the number of retests under a nonparametric specification.





This page intentionally left blank.

HDR Engineering, Inc. of the Carolinas
440 S Church Street, Suite 1200
Charlotte, NC 28202-2075
704.338.6700
NC License F0116

hdrinc.com

© 2024 HDR, Inc., all rights reserved

B

Attachment B – 2024 Second Semi-Annual Detection Monitoring Report

DENR USE ONLY: ☐ Paper Report ☐ Electronic Data - Email CD (data loaded: Yes / No) Doc/Event #:

NC DENR
Division of Waste Management - Solid Waste

Environmental Monitoring Reporting Form

Notice: This form and any information attached to it are "Public Records" as defined in NC General Statute 132-1. As such, these documents are available for inspection and examination by any person upon request (NC General Statute 132-6).

Instructions:

- **Prepare one form for each individually monitored unit.**
- **Please type or print legibly.**
- Attach a notification table with values that attain or exceed NC 2L groundwater standards or NC 2B surface water standards. The notification must include a preliminary analysis of the cause and significance of each value. (e.g. naturally occurring, off-site source, pre-existing condition, etc.).
- Attach a notification table of any groundwater or surface water values that equal or exceed the reporting limits.
- Attach a notification table of any methane gas values that attain or exceed explosive gas levels. This includes any structures on or nearby the facility (NCAC 13B .1629 (4)(a)(i).
- Send the original signed and sealed form, any tables, and Electronic Data Deliverable to: Compliance Unit, NCDENR-DWM, Solid Waste Section, 1646 Mail Service Center, Raleigh, NC 27699-1646.

Solid Waste Monitoring Data Submittal Information

Name of entity submitting data (laboratory, consultant, facility owner):

Green Meadow - Charah Solutions, Inc.

Contact for questions about data formatting. Include data preparer's name, telephone number and E-mail address:

Name: Mark Filardi Phone: 704.338.6787

E-mail: mark.filardi@hdrinc.com

Facility name:	Facility Address:	Facility Permit #	NC Landfill Rule: (.0500 or .1600)	Actual sampling dates (e.g., October 20-24, 2006)
Charah, LLC Brichaven No. 2 Mine Tract "A"	1271 Moncure-Flatwood Road Chatham County Moncure, NC	1910- STRUT-2015	CAMA	July 24-27, 2024 & October 28-31, 2024

Environmental Status: (Check all that apply)

☐ Initial/Background Monitoring ☒ Detection Monitoring ☐ Assessment Monitoring ☐ Corrective Action

Type of data submitted: (Check all that apply)

☒ Groundwater monitoring data from monitoring wells
☐ Groundwater monitoring data from private water supply wells
☒ Leachate monitoring data
☒ Surface water monitoring data
☐ Methane gas monitoring data
☐ Corrective action data (specify) _____
☐ Other(specify) _____

Notification attached?

☐ No. No groundwater or surface water standards were exceeded.
☒ Yes, a notification of values exceeding a groundwater or surface water standard is attached. It includes a list of groundwater and surface water monitoring points, dates, analytical values, NC 2L groundwater standard, NC 2B surface water standard or NC Solid Waste GWPS and preliminary analysis of the cause and significance of any concentration.
☐ Yes, a notification of values exceeding an explosive methane gas limit is attached. It includes the methane monitoring points, dates, sample values and explosive methane gas limits.

Certification

To the best of my knowledge, the information reported and statements made on this data submittal and attachments are true and correct. Furthermore, I have attached complete notification of any sampling values meeting or exceeding groundwater standards or explosive gas levels, and a preliminary analysis of the cause and significance of concentrations exceeding groundwater standards. I am aware that there are significant penalties for making any false statement, representation, or certification including the possibility of a fine and imprisonment.

Mark Filardi | Senior Geologist | 704.338.6787

Facility Representative Name (Print) | Title | (Area Code) Telephone Number

Filardi, Mark

Digitally signed by Filardi, Mark
Date: 2025.01.28 07:34:51 -05'00'

1/28/2025

Signature | Date

Affix North Carolina Professional Geologist Seal

NORTH CAROLINA LICENSED SEAL 1886 GEOLOGIST MARK FILARDI

HEDR Engineering, Inc. of the Carolinas, 440 S. Church St., Ste. 1200, Charlotte, NC 28202

Facility Representative Address

F0116

NC PE Firm License Number (if applicable effective May 1, 2009)

Revised 6/2009

2024 Second Semi-Annual Detection Monitoring Report

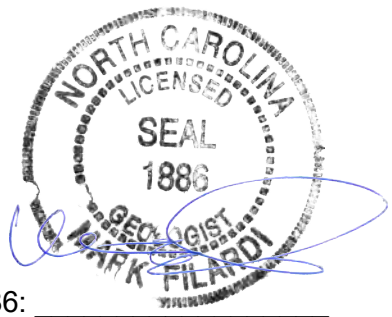
Brickhaven No.2 Mine Tract “A” Structural Fill

Charah Solutions, Inc.

Facility Permit #1910-STRUT-2015

Moncure, Chatham County, North Carolina

January 27, 2025



Mark Filardi, L.G. #1886: _____

HDR Engineering, Inc. of the Carolinas
440 S. Church Street, Suite 1200, Charlotte, NC 28202
704.338.6700
NC License F01116

This page intentionally left blank.

Contents

Select Acronyms iii
1 Introduction 1
2 Background 2
2.1 Site Location and Operation 2
2.2 Groundwater Monitoring System 3
2.3 Surface Water Monitoring System 4
2.4 Leachate Monitoring System 4
2.5 Site Topography and Geographical Setting 4
2.6 Geologic and Hydrogeologic Setting 4
2.6.1 Regional Geology 4
2.6.2 Site Geology 5
2.6.3 Regional Hydrogeology 6
3 Detection Monitoring 7
3.1 Well Gauging 7
3.1.1 July 2024 Event 7
3.1.2 October 2024 Event 7
3.1.3 Horizontal Hydraulic Gradients 8
3.1.4 Groundwater Flow Velocity 8
4 Sampling Activities 9
4.1 Groundwater Sampling 9
4.1.1 July 2024 Event 9
4.1.2 October 2024 Event 10
4.2 Surface Water Sampling 10
4.3 Leachate Sampling 10
5 Water Quality 11
5.1 Background Site Conditions 11
5.2 Groundwater Analytical Results 11
5.2.1 July 2024 Event 11
5.2.2 October 2024 Event 13
5.3 Surface Water Analytical Results 15
5.3.1 July 2024 Event 15
5.3.2 October 2024 Event 15
5.4 Leachate Analytical Results 16
6 Statistics 16
6.1 Methodology 16
6.1.1 Statistical Analysis 17
6.1.2 Outliers 17
6.1.3 Data Distribution 18
6.1.4 Trends 18
6.1.5 Spatial Variability 20
6.2 Evaluation for SSIs over Background 20

6.3 Statistical Summary 21
7 Summary and Conclusions 22
7.1 Summary 22
7.1.1 Groundwater 22
7.1.2 Surface Water 23
7.1.3 Leachate 23
7.2 Conclusions 23
8 Recommendations 24
9 References 25

Tables

Table 1. July 2024 Groundwater Elevations
Table 2. October 2024 Groundwater Elevations
Table 3. Horizontal Hydraulic Gradients and Seepage Velocity
Table 4. Analytical Results – July 2024 and October 2024

Figures

Figure 1. Regional Site Location Map
Figure 2. Sample Location Map
Figure 3. Regional Topographic Map
Figure 4. Historical Groundwater Elevations
Figure 5. Potentiometric Surface Map – July 2024
Figure 6. Potentiometric Surface Map – October 2024

Appendices

Appendix A – Field Data Sheets
Appendix B – Laboratory Results, Chains of Custody, and Quality Control Data
Appendix C – Electronic Data Deliverables (electronic only)
Appendix D – Statistical Analysis Memo

Select Acronyms

µg/L	micrograms per liter
BGS	below ground surface
BTOC	below top of casing
BTV	background threshold value
CAMA	North Carolina Coal Ash Management Act of 2014
CCP	coal combustion products
CFR	Code of Federal Regulations
DO	dissolved oxygen
DQR	double quantification rule
DTW	depth-to-water
GOF	Goodness-of-fit-test
MDL	method detection limit
MLE	maximum likelihood estimate
MRL	method reporting limit
MSL	mean sea level
NCDENR	North Carolina Department of Environment and Natural Resources
NCDEQ	North Carolina Department of Environmental Quality
ND	Non-detects
NTU	Nephelometric turbidity unit
ORP	oxidation-reduction potential
SSI	statistically significant increase
SU	scientific unit
TD	total depth
TDS	total dissolved solids
TOC	top of casing
USCS	Unified Soil Classification System
USEPA	United States Environmental Protection Agency
VOC	volatile organic compound

This page intentionally left blank.

1 Introduction

The purpose of this *2024 Second Semi-Annual Detection Monitoring Report* is to summarize the third and fourth quarterly detection monitoring results conducted at the Brickhaven No. 2 Mine Tract "A" Structural Fill (Site) in Moncure, Chatham County, North Carolina. The sampling events were conducted between July 24 and 27, 2024 and between October 28 and 31, 2024, respectively.

Operating under Facility Permit #1910-STRUT-2015, Charah is required to monitor groundwater and surface water quality at designated locations, in accordance with the following rules, regulations, and guidelines:

- North Carolina – Coal Ash Management Act (CAMA) of 2014 (Senate Bill 729).
- Water Quality Monitoring Plan, Brickhaven No.2 Mine Tract "A" Structural Fill, approved March 2015 (Buxton 2015a).
- North Carolina Department of Environment and Natural Resources (NCDENR)[1] Permit No. 1910-STRUC-2015, issued June 5, 2015.
- NCDENR Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling, April 2008 including Groundwater Rules .1600.
- NCDENR Division of Water Management memorandum concerning electronic document submittal for routine groundwater and surface water monitoring, November 5, 2014.
- U.S. Environmental Protection Agency (USEPA) Region 1, *Low Stress (low flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells*, revised September 19, 2017.

Groundwater monitoring and sampling at the Site is also conducted in general accordance with the USEPA's "Disposal of Coal Combustion Residuals from Electric Utilities" rule (CCR Rule).

On June 21, 2019, Charah received correspondence from the North Carolina Department of Environmental Quality (NCDEQ) Solid Waste Section requesting that Charah submit an assessment work plan in accordance with 15A NCAC 02L .0106 and 15A NCAC 02B .0211 and .0216. NCDEQ cited exceedances of North Carolina 2L Groundwater Protection Standards (2L Standards) for barium, chloride, chromium, cobalt, total dissolved solids (TDS), and vanadium, and exceedances of North Carolina Surface Water & Wetland Standards established under T15A NCAC 02B (2B Standards) for arsenic, cobalt, copper, lead, TDS, and zinc as cause for the plan. On behalf of Charah, HDR submitted a *Groundwater and Surface Water Assessment Monitoring Plan* to NCDEQ on August 16, 2019 (HDR 2019). The plan was approved by NCDEQ in correspondence dated September 16, 2019, and amended on October 4, 2019. Between November 2019 and July 2020, Charah implemented the monitoring plan, which was documented in an Assessment Monitoring Report dated July 24, 2020 (HDR 2020).

[1] On September 18, 2015, the North Carolina Department of Environment and Natural Resources (NCDENR) became the North Carolina Department of Environmental Quality (NCDEQ). Both naming conventions are used in this report, as appropriate.

On April 9, 2021, Charah received a response letter to the Assessment Monitoring Report from NCDEQ requiring additional activities. During the first and second quarters of 2021, HDR addressed these requirements on behalf of Charah, as summarized below, and provided responses to NCDEQ comments in a Response Letter dated May 7, 2021.

NCDEQ Comment	Charah Response	Date of Action
Redevelop (or replace) monitoring wells MW-2 and MW-3 to improve recharge into the wells	Wells MW-2 and MW-3 were redeveloped for 6 to 7 hours via surging	March 18 and 19, 2021
Collect a surface water sample (SW-6) upstream of SW-1 to delineate off-site impacts to surface water	Collected surface water sample SW-6 upstream of SW-1 at the Charah property line	Initial sample collected 2Q2021 and each quarterly event thereafter
Reinstall previously dry monitoring wells MW-9 and MW-10 as close to the original locations as practicable	Reinstalled wells MW-9 and MW-10 at top of bedrock (36 feet and 47 feet bgs, respectively)	March 17, 2021
Install bedrock monitoring wells adjacent to MW-2 and at a second location approved by NCDEQ	Installed well MW-2D to 144 feet bgs and well MW-11D to 65 feet bgs	March 19, 2021 (MW-2D) March 22, 2021 (MW-11D)

Per the approved Water Quality Monitoring Plan, and additional requirements set forth by NCDEQ since 2015, Charah is required to monitor the following network and report the results semi-annually.

Sampling Locations	Date Initiated	Purpose
MW-1 through MW-6, MW-7R, MW-8, and BG-1; SW-1 and SW-2; leachate	2015	Detection Monitoring
BG-2	2018	Detection Monitoring
MW-11; SW-3, SW-4, and SW-5	2020	Detection Monitoring
MW-2D, MW-9, MW-10, MW-11D; SW-6	2021	Detection Monitoring

Samples are analyzed for constituents listed in NCDEQ Solid Waste Appendix I (except volatile organic compounds [VOCs]) and II, 40 CFR 257 Appendix III, and 40 CFR 257 Appendix IV. On January 8, 2020, NCDEQ approved the discontinuation of Appendix I VOC analysis based on historical non-detection of VOC constituents. Per the Water Quality Monitoring Plan, if sampling results indicate impacts to groundwater or surface water, Charah must notify NCDEQ within 14 days. If no impacts are observed, Charah must submit a report of the sampling results to NCDEQ within 120 days of the semi-annual sampling event.

2 Background

2.1 Site Location and Operation

The Site is located approximately four miles southeast of Moncure, in Chatham County North Carolina (**Figure 1**). The owner of the Site is Green Meadow, LLC (Green Meadow) and Charah Solutions, Inc. (Charah) is responsible for the operation and maintenance of the Site. The mine property is approximately 301 acres in total; of which 145 acres is permitted for structural fill placement of coal combustion products (CCP).

The property located within the structural fill area was previously owned by General Shale Brick, Inc., which operated the Site and an adjacent property as a mine beginning in 1985 for their off-site brick manufacturing facility. Mined material was stockpiled and then transported approximately 3.5 miles south to Brickhaven, North Carolina for brick manufacturing.

The area immediately surrounding the Site primarily consists of rural residential, commercial, industrial, wooded, and agricultural property. According to information obtained from the Chatham County GIS website (October 2015), municipal water is available to the surrounding area.

Charah began CCP placement in the first composite liner containment system (Cell 1, Sub Cell 1A) on October 23, 2015. Placement of approximately 7.3 million tons of CCP material has occurred in Cell 1, Cell 2, Cell 6A and Cell 6B. CCP materials (including fly ash, bottom ash, boiler slag, and/or flue gas desulfurization materials) were initially brought to the Site by truck through October 2015 until transportation was changed to rail in January 2016. The Site ceased accepting CCP on July 11, 2019, and closure of the structural fill concluded in January 2020. The CCP originated at the Duke Energy Carolinas Riverbend Steam Station and Duke Energy Progress L.V. Sutton Energy Complex (Sutton Plant) sites.

Leachate (i.e., product generated from the liquids present in the fill at the time of placement and/or stormwater that infiltrates the fill) is managed on-site through the collection, storage, and disposal of the resultant liquid. Green Meadow has approved pump and haul permits to dispose of leachate at the City of Sanford's Big Buffalo Creek Wastewater Treatment Plant and the Town of Spring Lake's South Harnett Regional Wastewater Treatment Plant.

2.2 Groundwater Monitoring System

The groundwater monitoring system was designed to provide background groundwater quality data prior to the placement of CCP in the structural fill and early detection of potential CCP constituents subsequent to CCP placement to be protective of human health and the environment. The groundwater monitoring system was originally comprised of 10 wells: eight wells are located down-gradient/cross-gradient (MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7R and MW-8) and two wells are considered to represent background groundwater quality (BG-1 and BG-2). Since 2015, the NCDEQ has required installation of five additional monitoring wells (MW-9, MW-10, MW-11, MW-2D, and MW-11D) to further evaluate groundwater quality conditions.

Background monitoring well BG-1 was installed in July of 2015 near the entrance of the Site along Moncure-Flatwood Road. This location was selected to provide groundwater quality data in an area of the Site presumed to not be affected by historical or current usage of the property. Upon statistical analysis of groundwater quality data collected pre- and post-CCP placement, concentrations of target constituents in well BG-1 appear to be anomalously low when compared to pre-CCP conditions elsewhere on-site. With approval from NCDEQ, Charah installed a second background well (BG-2) southwest of the structural fill in December 2018 to evaluate spatial variability of inorganic concentrations across the Site.

Well MW-7R was installed in April of 2017 as a replacement for monitoring well MW-7, as documented and approved in a memorandum submitted to the NCDEQ Solid Waste Section on May 25, 2017. Well MW-7 has remained onsite for water level gauging purposes only.

Well MW-11, located down-gradient/cross-gradient of the structural fill, was installed in March 2020 during assessment monitoring. Monitoring wells MW-2D, MW-9, MW-10, and MW-11D, located down-gradient/cross-gradient, were installed in March 2021. Monitoring well locations are shown on **Figure 2**.

2.3 Surface Water Monitoring System

Surface water locations SW-1 and SW-2 were sampled during the initial sampling event in August 2015. Surface water locations SW-3 (background location) and SW-4 (on-site location) were proposed by Charah in the Groundwater and Surface Water Assessment Work Plan (dated August 16, 2019) in response to NCDEQ's request to delineate exceedances of surface water standards at surface water location SW-1. Based on additional discussions with NCDEQ, surface water locations SW-5 and SW-6 were added to the monitoring program in 2020 to evaluate potential contribution of contaminants from off-site sources north and east of the structural fill. Surface water monitoring locations are shown on **Figure 2**.

2.4 Leachate Monitoring System

The leachate sample is collected from the on-site holding tank located just north of wells MW-11 and MW-11D.

2.5 Site Topography and Geographical Setting

Based on review of the 1993 USGS topographic quadrangle (**Figure 3**) and GIS mapping, the topography of the site and immediately surrounding area is characterized by moderately rolling hills, which are dissected by dendritic creeks. Prior to mining by General Shale, a topographic ridge was present within the Site, extending from the northwestern corner of the present-day structural fill toward the southeast. Thus, historical drainage was assumed to be to the north/northwest/west and to the northeast/east/southeast away from the ridge.

2.6 Geologic and Hydrogeologic Setting

2.6.1 Regional Geology

The Site is located within the Piedmont physiographical province of North Carolina, which is a northeast-southwest trending region extending from New York to Alabama.

According to the 1985 North Carolina Geologic Map prepared by the North Carolina Geological Survey, the Site is located in the Triassic Basin Belt of the Piedmont physiographic province. The basement rocks of the Triassic Basin Belt include conglomerate, sandstone, mudstone, limestone, coal, and shale. The majority of the Site is underlain by the Sanford Formation which is comprised of conglomerate, fanglomerate, sandstone, and mudstone. The far western portion of the Site is underlain by the Cummock Formation, which is comprised of sandstone, mudstone, gray and black coal, and carbonaceous shale. The Triassic Basin is bounded by felsic metavolcanic rock within the Carolina Slate Belt approximately 6.5 miles to the northwest;

and is contacted by metamorphosed granite and biotite gneiss and schist of the Raleigh Belt along a normal fault approximately 2.5 miles to the southeast. The Triassic Basin formations have been intruded by north/northwest-south/southeast trending igneous diabase dikes during the Jurassic Period (~144 to 208 Ma) and contain northeast-southwest trending normal faults. However, none of these faults were mapped beneath the Site on the 1985 geologic map (NCDENR 1985).

In the Piedmont, the bedrock is typically overlain by a mantle of weathered rock (residuum/saprolite), which has an average thickness of approximately 25 feet. The residuum/saprolite consists of varying amounts of unconsolidated clays, silts, and sands, with lesser amounts of rock fragments. Due to the range of the parent rock composition and the variable susceptibility to weathering of each rock type, the residuum/saprolite range widely in color, texture, and thickness. Generally, the residuum/saprolite is thickest near inter-stream divides (ridges) and thins toward stream beds. In profile, the residuum/saprolite normally grades from clayey soils near the land surface to sandier, partially weathered rock above competent bedrock (Buxton 2015a).

2.6.2 Site Geology

The geology of the Site can be subdivided into six units which include fill, flood plain, soil horizon, residuum, partially weathered rock, and layered rock. These units generally grade downward from a soil horizon, to residuum, to partially weathered rock and finally layered rock. Fill materials were limited to the road bed and berm located around the east and west sides of MW-4. Flood plain sediments were only identified at MW-4 on the southeast corner of the Site. The following summary of site-specific units is based on boring logs originally included in the *Design Hydrogeologic Report* (Buxton 2016).

2.6.2.1 FILL

Fill materials were primarily identified in the road bed and berm located around the east and west sides near MW-4 and generally consisted of mottled reddish yellow, orange, brown, and light gray sandy silty clay with quartz gravel.

2.6.2.2 FLOOD PLAIN

Flood plain sediments were identified adjacent to MW-4 on the southeast corner of the Site. Sediments were associated with a former adjacent intermittent tributary creek and can generally be characterized as mottled light gray fine sandy silty clay. The flood plain sediments were approximately five feet thick in this area and had been deposited above residuum. Based on geotechnical laboratory data, the flood plain sediments were classified as lean clay under the Unified Soil Classification System (USCS).

2.6.2.3 RESIDUUM

Residuum was formed from the continued weathering and biologic reworking of saprolite, and ranges from 2 to 15 feet in thickness, when present on-site. Residuum was characterized as mottled yellowish, brown, orange, and red silty clay and clayey silt. Root structures were common. Based on geotechnical laboratory data, the residuum is comprised of clayey sand, elastic silt, and lean clay and had a calculated hydraulic conductivity of 2.86×10^{-7} cm/sec.

2.6.2.4 SAPROLITE

Saprolite generally retains the remnant texture, structure, and mineral content of the rock from which it was formed and is characteristically fissile, often breaking in horizontal sheets. Saprolite encountered on-site was characterized as mottled (black and gray) red and reddish brown sandy silty clay with infrequent quartz gravel and cobbles and ranged from five to 15 feet in thickness. Saprolite had a standard penetration resistance of less than 100 blows per foot during standard penetration testing (SPT). Based on geotechnical laboratory data, the saprolite consisted of lean clay with hydraulic conductivities ranging from 7.69×10^{-8} cm/sec to 3.69×10^{-9} cm/sec.

2.6.2.5 PARTIALLY WEATHERED ROCK

Partially weathered rock generally retains the remnant texture, structure, and mineral content of the rock from which it was formed. Partially weathered rock is defined as having SPT values of 100 blows per foot or greater and can generally be drilled with standard hollow-stem auger drilling technology. Where encountered on-site, partially weathered rock was characterized as mottled (light green and purple) brown, reddish gray, and weak red silty clay and weathered mudstone, which are often fissile, and ranged from five to 40 feet in thickness. Based on geotechnical laboratory data, partially weathered rock consisted of lean clay. Hydraulic conductivity ranged from 2.433×10^{-4} cm/sec to 7.154×10^{-8} cm/sec, according to slug or recovery test data (for wells screened solely in partially weathered rock).

2.6.2.6 BEDROCK

Bedrock generally occurs as horizontally oriented and relatively thin intermittent layers (especially within the upper 15 feet of contacting layered rock) across the Site. Bedrock contained horizontal to near vertical fracturing. Large fractures, oriented approximately N 40º to 60º E at 70 º northwest, were observed in weathered mudstone immediately northeast of well MW-8. The occurrence of layered rock at the Site was generally defined by auger refusal.

Based on rock coring activities conducted near MW-7/MW-7R, visual inspection of the rock exposed on the north side of the MW-4 area, and rock fragments produced during installation of wells MW-2D and MW-11D, bedrock at the Site is primarily composed of reddish to light tan gray mudstone, cross-bedded muddy sandstone, muddy sandy conglomerate (rounded quartz gravel and cobbles), and gray to brown siltstone.

2.6.3 Regional Hydrogeology

The occurrence and movement of groundwater in the Piedmont physiographic province are within two separate but interconnected water-bearing zones that typically comprise one aquifer. A shallow water-bearing zone typically occurs within the residuum/saprolite and a deeper zone occurs within the underlying bedrock.

Groundwater in the residuum/saprolite zone occurs in the interstitial pore spaces between the individual sediment grains. Groundwater in this zone generally flows from topographic highs to topographic lows. The occurrence and movement of groundwater in the underlying bedrock zone are controlled by joints and fractures within the bedrock. Groundwater within this deeper zone may occur under confined or semi-confined conditions, depending on the extent of

fracturing at the saprolite/bedrock interface. Deeper groundwater movement is typically controlled by the distribution of openings in the bedrock and can be variable.

3 Detection Monitoring

On behalf of Charah, HDR conducted two detection monitoring events in July and October 2024 that included monitoring well gauging and sampling, surface water sampling, and leachate sampling.

3.1 Well Gauging

3.1.1 July 2024 Event

On July 15, 2024, depth to groundwater in shallow wells ranged from 8.75 feet below ground surface (bgs) in well MW-3 to 61.50 feet bgs in well MW-1. Groundwater elevations calculated from these measurements ranged from 180.38 feet (BG-2) to 224.08 feet (MW-10) in shallow wells. Depth to water in deep wells ranged from 9.41 feet bgs (MW-11D) to 142.06 feet bgs (MW-2D). Corresponding groundwater elevations ranged from 209.99 feet (MW-11D) to 90.81 feet (MW-2D). It should be noted that the groundwater elevation at MW-2 (202.70) was anomalously low compared to past events. Groundwater gauging data and elevations for the July 2024 event are presented in **Table 1**. Historical and current groundwater elevations are shown on **Figure 4**.

During the assessment monitoring phase of work, HDR developed a groundwater model using the groundwater modeling pre- and post-processing software Groundwater Modeling System (GMS) 10.3.4 (Aquaveo; https://www.aquaveo.com/software/gms-groundwater-modeling-system-introduction) as well as ArcMap 10.4.1 (ESRI; https://www.esri.com/en-us/arcgis/products/index). For the groundwater flow model, MODFLOW-2005 (Harbaugh 2005; https://pubs.usgs.gov/tm/2005/tm6A16/) was used to solve the groundwater-flow equations that quantify the flow of groundwater in three dimensions.

A potentiometric surface map was created using the Kriging method of interpolating groundwater contours (**Figure 5**) and groundwater measurements collected on July 15, 2024. Regional groundwater flow near the Site generally flows northeast to southwest. The Kriging results indicated groundwater highs at MW-5, MW-6, MW-7R, and MW-10, and groundwater lows at wells MW-4, MW-8, and BG-2. Groundwater elevations for wells MW-2D and MW-11D were not used to generate potentiometric contours for the surficial aquifer during the July 2024 event as MW-2D and MW-11D were installed to monitor groundwater in the bedrock aquifer, thus, potentially not representative of shallow groundwater conditions. Monitoring wells MW-2 and MW-9 were not used to generate potentiometric contours for the surficial aquifer during the July 2024 event, as these groundwater elevations were anomalous.

3.1.2 October 2024 Event

On October 28, 2024, depth to groundwater in shallow wells ranged from 7.83 feet bgs in well MW-3 to 61.69 feet in well MW-1. Groundwater elevations calculated from these measurements ranged from 181.24 feet (BG-2) to 224.87 feet (MW-5) in shallow wells. Depth to water in deep wells ranged from 7.48 feet bgs in well MW-11D to 141.23 feet in well MW-2D. Corresponding

groundwater elevations ranged from 211.92 feet (MW-11D) to 91.64 feet (MW-2D). Well gauging data and groundwater elevations for the October 28, 2024, event are presented in **Table 2**. Historical and current groundwater elevations are shown on **Figure 4**.

A potentiometric surface map was created using groundwater measurements collected on October 28, 2024, via the Kriging method of interpolating groundwater contours (**Figure 6**). Regional groundwater flow near the Site generally flows northeast to southwest. The results indicated groundwater highs at MW-5, MW-6, MW-7R and MW-10, and groundwater lows at wells MW-4, MW-8, and BG-2. Groundwater elevations from wells MW-2D and MW-11D were not used to generate potentiometric contours for the surficial aquifer as MW-2D and MW-11D were installed to monitor groundwater in the bedrock aquifer, thus, potentially not representative of shallow groundwater conditions. The groundwater elevation from well MW-9 was not used to generate potentiometric contours for the surficial aquifer during the October 2024 event, as the groundwater elevation was anomalous.

3.1.3 Horizontal Hydraulic Gradients

Horizontal hydraulic gradient is calculated by taking the difference in hydraulic head over the length of the flow path between two wells of similar construction and (generally) perpendicular to flow. Since groundwater flow direction can vary slightly between gauging events, it is difficult to install permanent monitoring wells in locations consistently perpendicular to groundwater flow. Horizontal hydraulic gradient was calculated between well pairs MW-5/MW-4 and MW-6/BG-2, recognizing that these well pairs are not truly perpendicular to flow, as shown on **Figure 5** and **Figure 6**. Groundwater monitoring wells from the northern portion of the site were not used to calculate the hydraulic gradient on site because they are most likely to have significant alterations to natural groundwater recharge caused by the structural fill cap. Hydraulic gradients calculated from data obtained during the July 2024 and October 2024 sampling events are presented in **Table 3**.

3.1.4 Groundwater Flow Velocity

The average linear velocity, or seepage velocity, of groundwater between wells at the site was calculated using Darcy's Law, as follows:

$$V_S = \frac{Ki}{P_e}$$

Where:

V_s = seepage velocity
K = horizontal hydraulic conductivity
i = horizontal hydraulic gradient
P_e = effective porosity

Seepage velocities for groundwater were calculated using horizontal hydraulic gradients, as referenced above, average horizontal hydraulic conductivity and average effective porosity values. Average horizontal hydraulic conductivity (9.79×10^{-5} cm/sec) was calculated during geotechnical testing from on-site wells, except BG-2, MW-7R, and MW-11. Average effective porosity (0.093) values were calculated from geotechnical testing and from the literature where geotechnical data was not available (Buxton 2014; Sinhal and Gupta 2010).

Seepage velocity varies on a well-by-well basis and was calculated between the MW-5/MW-4 and MW-6/BG-2 well pairs, representing the two well pairs that are approximately perpendicular to the direction of groundwater flow and located farthest from the effects of the structural fill cap. Seepage velocity was calculated at 16.6 feet per year between MW-5 and MW-4, and 14.6 feet per year between MW-6 and BG-2 for the July 2024 sampling event. For the October 2024 sampling event, seepage velocity was calculated at 19.3 feet per year between MW-5 and MW-4 and 14.8 feet per year between MW-6 and BG-2. Flow rates listed above are estimations; actual rates will vary across the Site with local hydrogeologic conditions. Seepage velocities are shown in **Table 3**.

4 Sampling Activities

4.1 Groundwater Sampling

4.1.1 July 2024 Event

HDR collected groundwater samples from monitoring wells MW-1, MW-2, MW-2D, MW-3, MW-4, MW-5, MW-6, MW-7R, MW-8, MW-9, MW-10, MW-11, MW-11D, BG-1, and BG-2 between July 15 and 18, 2024.

Purging was conducted via low-flow methods, except for MW-2D and MW-9 where hand bailing was conducted, and was considered complete when the depth to water and field parameters had stabilized in accordance with the targets specified below.

- Turbidity (10 percent for values greater than 10 nephelometric turbidity units (NTUs) (if three turbidity values are less than 10 NTU, the values are considered stabilized)
- Dissolved oxygen (DO) (10 percent for values greater than 2.0 mg/L, if DO values are below 2.0 mg/L, values are considered stable if three readings are within +/- 0.2 mg/L. If three DO values are less than 0.5 mg/L, the values are considered stabilized)
- Specific conductance (5 percent)
- Temperature (3 percent)
- pH (± 0.1 unit)
- Oxygen reduction potential (ORP) (± 20 millivolts)

In cases where water level in the well would not stabilize, the well was pumped for as long as possible leaving enough water in the water column to fill groundwater sample bottles. Field data sheets are provided in **Appendix A**.

Non-disposable sampling equipment was decontaminated after each use by washing in a Liquinox® detergent solution followed by a tap-water rinse. Purge water was discharged to the ground surface adjacent to each well.

One equipment blank sample and one duplicate sample were collected in the field to evaluate effectiveness of field decontamination and consistency of laboratory analytical methods, respectively.

Samples were transferred under chain-of-custody procedures to Pace Analytical Services, LLC (Pace) for analysis. Sample handling and custody were performed in accordance with the USEPA Guidance for Field Samplers.

4.1.2 October 2024 Event

HDR collected groundwater samples from monitoring wells MW-1, MW-2, MW-2D, MW-3, MW-4, MW-5, MW-6, MW-7R, MW-8, MW-9, MW-10, MW-11, MW-11D, BG-1, and BG-2 between October 28 and 31, 2024.

Purging was conducted via low-flow methods, except for MW-2D and MW-9 where hand bailing was conducted, and was considered complete when the depth to water and field parameters had stabilized.

One equipment blank sample and one duplicate sample were collected in the field to evaluate effectiveness of field decontamination and consistency of laboratory analytical methods, respectively.

Purging and sampling methods were consistent with the methods described in **Section 4.1.1**. Field data sheets are provided in **Appendix A**.

4.2 Surface Water Sampling

Surface water samples were collected from locations outside of the structural fill boundary to evaluate potential groundwater to surface water interaction. Surface water locations SW-1 and SW-5 were sampled during both the July and October 2024 sampling events, and SW-6 was sampled during the October 2024 sampling event. Surface water locations SW-2, SW-3, SW-4, and SW-6 were not sampled during the July 2024 sampling event, and SW-2, SW-3, and SW-4 were not sampled during the October 2024 sampling event due to either being dry or stagnant. Surface water sampling locations are described as follows:

- SW-1 was sampled approximately 500 feet south of MW-4, outside of the property boundary, from an unnamed tributary of Gulf Creek.
- SW-5 was sampled approximately 1,600 feet southeast of SW-4, outside the property boundary, west of Moncure-Flatwood Road, from an unnamed tributary of Gulf Creek.
- SW-6 was sampled approximately 350 feet north of MW-4 from an unnamed tributary of Gulf Creek.

Prior to sample collection, field parameters (temperature, specific conductance, DO, pH, turbidity, and ORP) were measured with a water quality meter and recorded on field data sheets for the October 2024 sampling event (**Appendix A**). Surface water sampling locations are shown on **Figure 2**.

4.3 Leachate Sampling

One leachate grab sample (leachate) was collected directly from the on-site holding tanks via a built-in spigot (**Figure 2**) during the July and October 2024 sampling events.

5 Water Quality

5.1 Background Site Conditions

Two groundwater sampling events were conducted prior to CCP placement (August and October 2015). The background sampling events consisted of sample collection and analysis from nine monitoring wells (MW-1 through MW-8 and BG-1) and two surface water sample locations (SW-1 and SW-2).

During these initial background monitoring events, chloride, pH, TDS, and vanadium were detected at concentrations that exceeded their 2L Standard or interim maximum allowable concentration (IMAC) in groundwater samples collected from background monitoring well BG-1. Antimony, barium, chloride, chromium, cobalt, pH, TDS, and vanadium were detected at concentrations that exceeded their respective 2L Standards or IMACs in other monitoring wells prior to ash placement. Additional target constituents were detected in the samples from well BG-1 and other wells; however, these concentrations did not exceed applicable standards.

Copper and cobalt concentrations that exceeded their respective 2B Standards were reported in surface water samples collected during the initial background monitoring events, prior to CCP placement. Additionally, all USEPA Appendix III constituents were detected in the surface water samples collected prior to CCP material placement, but at concentrations below their respective 2B Standards (if applicable).

During the first monitoring event (August 2015), bromodichloromethane and dibromochloromethane were detected at concentrations above their respective 2L Standards in groundwater samples collected from MW-2, MW-3, and MW-7. VOCs, including trihalomethanes, are not present naturally at the Site. These detections are attributed to the use of municipal water during previous well development activities. VOCs were not detected above laboratory method detection limits (MDLs) in any subsequent (second through eighth) background sampling events.

A detailed discussion of background groundwater conditions can be found in the *2016 Background Sampling Report* (HDR 2016b). Additional discussion of the statistical results can be found in **Section 6** of this report for a better understanding of predictive limits for the background well locations (BG-1 and BG-2), as well as interwell interactions.

5.2 Groundwater Analytical Results

5.2.1 July 2024 Event

5.2.1.1 COMPARISON TO GROUNDWATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2L Standards, as established in 15A NCAC 02L .0202 (effective April 1, 2022), in samples collected from one or more monitoring wells during the July 2024 sampling event:

- Arsenic exceeded the 2L Standard (10 µg /L) in the sample collected from MW-2D.
- Barium exceeded the 2L Standard (700 µg/L) in the samples collected from MW-3 and MW-8.
- Chloride exceeded the 2L Standard (250 mg/L) in the samples collected from BG-2, MW-1, MW-2, MW-3, MW-4, MW-7R, and MW-8.
- Cobalt exceeded the 2L Standard (1 µg/L) in the sample collected from MW-4.
- Fluoride exceeded the 2L Standard (2 mg/L) in the sample collected from MW-2D.
- Field-measured pH values did not fall within the 2L Standard range (6.5 – 8.5 standard units [SU]) while collecting samples from BG-1, MW-2D, MW-4, and MW-6.
- TDS exceeded the 2L Standard (500 mg/L) in the samples collected from BG-1, BG-2, MW-1, MW-2, MW-3, MW-4, MW-6, MW-7R, and MW-8.
- Vanadium exceeded the 2L Standard (7 µg/L) in the sample collected from MW-2D.

Note that antimony and cobalt results were reported with method reporting limits (MRLs) that exceeded the 2L Standard. Radium samples were not collected from MW-9 due to low water volume in the well.

5.2.1.2 COMPARISON TO SITE-SPECIFIC BACKGROUD THRESHOLD VALUES

Concentration of the following constituents exceeded the background threshold values (BTVs) in samples collected from one or more of the monitoring wells during the July 2024 sampling event:

- Arsenic exceeded the BTV (8.80 µg/L) in the sample collected from MW-2D.
- Barium exceeded the BTV (377 µg/L) in the samples collected from MW-3 and MW-8.
- Boron exceeded the BTV (36.2 µg/L) in the sample collected from MW-2. Note that the laboratory reporting limit (RL) was higher than the BTV for samples collected from wells MW-2D, MW-3, and MW-11D, resulting in estimated concentrations (J-flags) above the BTV; however, regulatory decisions cannot be made based on estimated concentrations.
- Calcium exceeded the BTV (124,000 µg/L) in the samples collected from MW-1, MW-2, and MW-3.
- Chloride exceeded the BTV (325 mg/L) in the samples collected from MW-1, MW-2, MW-3, MW-4, and MW-8.
- Chromium exceeded the BTV (7.20 µg/L) in the sample collected from MW-2D.
- Cobalt exceeded the BTV (2.30 µg/L) in the sample collected from MW-4.
- Combined Radium exceeded the BTV (2.09 pCi/L) in the sample collected from MW-3.
- Fluoride exceeded the BTV (0.334 mg/L) in the samples collected from MW-2D, MW-4, MW-5, MW-10, and MW-11D.
- Lithium exceeded the BTV (43.7 µg/L) in the samples collected from MW-2, MW-2D, and MW-3.

- Molybdenum exceeded the BTV (13.6 µg/L) in the samples collected from MW-2D, MW-9, and MW-10.
- Nickel exceeded the BTV (4.20 µg/L) in the sample collected from MW-4.
- Field-measured pH values did not fall within the BTV range of 5.59 – 7.59 SU while collecting samples from MW-2D, MW-10, and MW-11D.
- Radium-226 exceeded the BTV (0.80 pCi/L) in the sample collected from MW-3.
- Radium-228 exceeded the BTV (1.35 pCi/L) in the sample collected from MW-3.
- Selenium exceeded the BTV (6.00 µg/L) in the sample collected from MW-2D. Note that the laboratory RL for the sample collected from MW-9 was greater than the BTV, resulting in an estimated concentration above the BTV in the sample collected from MW-9.
- Sulfate exceeded the BTV (204 mg/L) in the sample collected from BG-2.
- TDS exceeded the BTV (1,270 mg/L) in the samples collected from BG-2, MW-1, MW-2, and MW-3.
- Vanadium exceeded the BTV (8.30 µg/L) in the sample collected from MW-2D.

Note that 10 constituents were reported with RLs that exceeded the BTV (antimony, arsenic, beryllium, boron, cadmium, cobalt, mercury, nickel, selenium, and silver). Analytical results are presented in **Table 4**. The laboratory report for the July 2024 sampling event is provided in **Appendix B**. Electronic data deliverables are provided in **Appendix C**.

5.2.2 October 2024 Event

5.2.2.1 COMPARISON TO GROUNDWATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2L Standards in samples collected from one or more of the monitoring wells during the October 2024 sampling event:

- Arsenic exceeded the 2L Standard (10 µg/L) in the sample collected from MW-2D.
- Barium exceeded the 2L Standard (700 µg/L) in the samples collected from MW-3 and MW-8.
- Chloride exceeded the 2L Standard (250 mg/L) in the samples collected from BG-2, MW-1, MW-2, MW-3, MW-4, MW-7R, and MW-8.
- Chromium exceeded the 2L Standard (10 µg/L) in the sample collected from MW-2D.
- Cobalt exceeded the 2L Standard (1µg/L) in the sample collected from MW-4. Note that the RL for cobalt in samples collected from wells BG-2, MW-2, and MW-2D was greater than the 2L Standard, resulting in estimated concentrations (J-flags) above the 2L Standard.
- Field measured pH values did not fall within the 2L Standard range (6.5 – 8.5 SU) in groundwater while collecting samples from MW-4 and MW-6.
- Fluoride exceeded the 2L Standard (2 mg/L) in the sample collected from MW-2D.

- TDS exceeded the 2L Standard (500 mg/L) in the samples collected from each monitoring well except for MW-5, MW-10, MW-11, and MW-11D.
- Vanadium exceeded the 2L Standard (7 µg/L) in the sample collected from MW-2D.
- Zinc exceeded the 2L Standard (1 mg/L) in the sample collected from MW-2.

Note that antimony, cobalt, and lead results were reported with RLs that exceeded the 2L Standard. Radium samples were not collected from MW-9 due to low water volume in the well.

5.2.2.2 COMPARISON TO SITE-SPECIFIC BTVs

Concentrations of the following constituents exceeded the BTVs in samples collected from one or more of the monitoring wells during the October 2024 sampling event:

- Arsenic exceeded the BTV (8.80 µg/L) in the sample collected from MW-2D.
- Barium exceeded the BTV (377 µg/L) in the samples collected from MW-3 and MW-8.
- The laboratory RL for boron was greater than the BTV (36.2 µg/L) in the samples collected from MW-2, MW-2D, MW-3, and MW-11D, resulting in estimated concentrations (J-flags) above the BTV.
- The laboratory RL for cadmium was greater than the BTV (0.500 µg/L) in the sample collected from MW-2, resulting in an estimated concentration (J-flags) above the BTV.
- Calcium exceeded the BTV (124,000 µg/L) in the samples collected from MW-1, MW-2, and MW-3.
- Chloride exceeded the BTV (325 mg/L) in the samples collected from MW-1, MW-2, MW-3, and MW-4.
- Chromium exceeded the BTV (7.20 µg/L) in the sample collected from MW-2D.
- Cobalt exceeded the BTV (2.3 µg/L) in the sample collected from MW-4. The laboratory RL for the sample collected from MW-2 was greater than the BTV, resulting in an estimated concentration (J-flag) above the RL.
- Combined radium exceeded the BTV (2.09 pCi/L) in the sample from MW-3.
- Copper exceeded the BTV (0.0071 mg/L) in the sample collected from MW-2D.
- Field-measured pH values did not fall within the BTV range of 5.59 – 7.59 SU while collecting samples from MW-2, MW-7R, MW-10, and MW-11D.
- Fluoride exceeded the BTV (0.334 mg/L) in the samples collected from BG-2, MW-2D, MW-4, MW-5, MW-6, MW-10, and MW-11D.
- Lithium exceeded the BTV (43.7 µg/L) in the samples collected from MW-2, MW-2D, and MW-3.
- Molybdenum exceeded the BTV (13.6 µg/L) in the samples collected from MW-2D, MW-9, and MW-10.
- Nickel exceeded the BTV (4.20 µg/L) in the samples collected from MW-2, MW-2D, and MW-4.
- Radium-228 exceeded the BTV (1.35 pCi/L) in the samples collected from MW-3.

- Selenium exceeded the BTV (6.00 µg/L) in the sample collected from MW-9. Note that the laboratory RL for the sample collected from MW-2D was greater than the BTV, resulting in an estimated concentration (J-flag) above the BTV.
- TDS exceeded the BTV (1,270 µg/L) in the samples collected from MW-1, MW-2, and MW-3.
- Vanadium exceeded the BTV (8.30 µg/L) in the sample collected from MW-2D.
- Zinc exceeded the BTV (0.0324 mg/L) in the samples collected from MW-2 and MW-2D.

Note that 13 constituents were reported with RLs that exceeded the BTV (antimony, arsenic, beryllium, boron, cadmium, cobalt, copper, lead, mercury, nickel, selenium, silver, and zinc). Analytical results are presented in **Table 4**Table 1. The laboratory report for the October 2024 sampling event is provided in **Appendix B**. Electronic data deliverables are provided in **Appendix C**.

The presence of naturally occurring inorganic constituents above regulatory criteria is common in North Carolina due to various geologic conditions. The presence of naturally occurring metals is discussed in more detail in the *Initial Background Groundwater & Surface Water Monitoring Event* (Buxton 2015c).

5.3 Surface Water Analytical Results

Surface water sample results were compared to the 2B Standards or the USEPA National Criteria Standard (used by the North Carolina Division of Water Quality as default standards for parameters not listed in 15A NCAC 02B).

5.3.1 July 2024 Event

5.3.1.1 COMPARISON TO SURFACE WATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples during the July 2024 event:

- Copper exceeded the 2B Standard (0.007 mg/L) in the surface water sample collected from SW-1.
- TDS exceeded the 2B Standard (500 mg/L) in surface water sample SW-1.

Note that four constituents (cobalt, mercury, selenium, and silver) were reported with RLs that exceeded the 2B Standards. Standards have not been established under T15A NCAC 02B for the following constituents detected: calcium, combined radium, lithium, radium-226, radium-228, and vanadium. No exceedances of 2B Standards were reported among the constituents analyzed in surface water samples from SW-5. Laboratory results are presented in **Table 4**.

5.3.2 October 2024 Event

5.3.2.1 COMPARISON TO SURFACE WATER QUALITY STANDARDS

Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples during the October 2024 event:

- Cobalt exceeded the 2B Standard (3 µg/L) in the surface water sample collected from SW-1.
- Copper exceeded the 2B Standard (0.007 mg/L) in the surface water samples collected from SW-1.
- Field-measured pH values did not fall within the 2B Standard range of 6.0 – 9.0 SU while collecting samples from SW-5 and SW-6.
- Lead exceeded the 2B Standard (25 µg/L) in the surface water sample collected from SW-1.
- Nickel exceeded the 2B Standard (25 µg/L) in the surface water sample collected from SW-1.
- TDS exceeded the 2B Standard (500 mg/L) in the surface water sample collected from SW-6.
- Zinc exceeded the 2B Standard (0.05 mg/L) in the surface water sample collected from SW-1.

Note that seven constituents (cobalt, copper, lead, mercury, selenium, silver, and zinc) were reported with RLs that exceeded the 2B Standards. Standards have not been established under T15A NCAC 02B for the following constituents detected: calcium, lithium, radium-226, radium-228, combined radium, and vanadium. Laboratory results are presented in **Table 4**.

5.4 Leachate Analytical Results

Leachate generated on-site was collected and analyzed during the July 2024 and October 2024 monitoring events. Analytical results (**Table 1**) were generally consistent with historical concentrations.

6 Statistics

6.1 Methodology

Background groundwater quality was evaluated to establish statistically derived background concentrations for the site. Groundwater quality in downgradient wells was then compared to background concentrations to evaluate if a statistically significant increase (SSI) over background has occurred, as required by Section .1600 of the North Carolina Solid Waste Management Rules 15A NCAC 13B.

Sampling results used to establish BTVs were obtained during 37 monitoring events performed between October 2015 and April 2024. Downgradient sampling results from the detection monitoring event in October 2024 were used to evaluate the potential for SSIs. Software packages R and SPSS were used in the production of the statistics (R is a free software environment; SPSS is a licensed software package).

Groundwater samples collected as part of the 15A NCAC 13B .1600 monitoring program were analyzed for NCDEQ Solid Waste Appendix I (except VOCs) and 40 CFR 257 Appendix III and

IV constituents. Only non-filtered sample results were utilized for the statistical analysis of monitored constituents.

6.1.1 Statistical Analysis

The background sample size (i.e., quantity of qualifying samples) was evaluated per constituent. Descriptive statistics were calculated for the background data set including and excluding non-detect (ND) values. When NDs were included in the dataset, the MDL was substituted as the ND value for simple descriptive statistics. The analysis was performed with NDs removed to better understand the central tendency and range of the detected values. Note that for the trend analyses in **Section 6.1.4** and for the establishment of statistically derived background concentration levels in **Section 6.2**, imputation methods using the maximum likelihood method (MLE) for NDs, regression on order statistics or Kaplan-Meier methods were used, where appropriate.

Following the calculation of descriptive statistics, statistical analyses for the background data set were performed to evaluate for outliers, data distributions, trends, and spatial variability between the background wells for Appendix I metals, Appendix III and Appendix IV constituents, where data quantity and quality permit. A total of 63 samples were included for the descriptive analysis of the background monitoring well results for the monitored constituents. The first round sampled in August 2015 was not included in the analysis as it was deemed unrepresentative of the other monitoring events as the samples were tested at a different laboratory. The sample collected April 3, 2017, for TDS in well BG-1 is considered an outlier and was removed from the analysis. January 2020 samples for boron were removed from the analysis as they were diluted and could not be properly detected.

For downgradient monitoring results, the analysis included the calculation of descriptive statistics for Appendix I metals, Appendix III and Appendix IV constituents, (for the data sets including and excluding ND values), followed by an evaluation of outliers and trends. A total of up to 38 monitoring events performed between November 2015 and October 2024 were included for the descriptive analysis of the downgradient monitoring well results for the monitored constituents.

6.1.2 Outliers

Outliers are values that are not representative of the population from which they are sampled. The background and downgradient datasets were screened for outliers using the Dixon’s and Rosner’s outlier tests. Dixon’s outlier test is suitable for datasets containing less than 25 samples, while Rosner’s test is suitable for datasets with 25 or more samples. Since all current background samples have greater than 25 observations based on the pooling of data from BG-1 and BG-2, Rosner’s test was used. For downgradient data, since sample sizes vary by well both Dixon’s and Rosner’s tests were used depending on the well-constituent pair sample size. The outlier test was conducted using a significance of one percent. For constituents that had NDs, the NDs were removed prior to testing for outliers.

Ten occurrences of nickel, vanadium, boron, chromium, lithium, selenium, thallium, and/or total radium in background well BG-1 were identified as statistical outliers. Five occurrences of vanadium and/or boron in background well BG-2 were identified as statistical outliers.

The statistical outliers were investigated as possible data entry or measurement errors. The remaining values were all within one order of magnitude of other observations and deemed correct. Although the elevated values appear as statistical outliers, it is within a reasonable range of the remaining concentrations throughout the monitoring period and should not be removed from the data set at this time for purposes of determining background concentrations. Given the variable nature of groundwater samples and that it is common for groundwater quality samples to have very low or very high concentrations over time, statistical outliers are expected but do not necessarily signify that the outliers are from different distributions. As additional background samples are collected over time, the variability in concentrations will be better understood. Outlier test results may change, and earlier observations thought to be outliers may no longer be outliers.

Statistical outliers were identified for Appendix I metals, Appendix III, and Appendix IV constituents in the data sets evaluated for downgradient monitoring wells throughout the monitoring period. Results of the outlier test of the background data set is listed in **Table 3** of **Appendix D** and results of the downgradient data set is listed in **Table 4** of **Appendix D.**

6.1.3 Data Distribution

Groundwater data was fitted to known distribution models using Goodness-of-Fit (GOF) tests. The Shapiro-Wilk and Lilliefors tests is used to test for normal distribution. Note that these two tests can be used to test for lognormal distributions after the data are transformed using the natural log function. The empirical distribution function (EDF) based methods, the Kolmogorov-Smirnov (K-S) and Anderson-Darling (A-D) test, are used to test for a gamma distribution. Normal, lognormal and gamma distributions are parametric distributions. If a dataset cannot be fit with any of these three parametric distributions, it is considered to follow a nonparametric distribution. In addition, if more than 50 percent of the observations are non-detects, then the dataset is assumed to follow a nonparametric distribution. Finally, the data distributions for radium 226, radium 228, and total radium are set to nonparametric for evaluation purposes as non-detect values were not flagged by the laboratory. Data distributions are listed in **Table 5** of **Appendix D**.

6.1.4 Trends

Background constituent concentrations in groundwater should demonstrate stationary conditions through time, free of trends. Constituents were analyzed for trends within the dataset using a maximum likelihood estimate (MLE) regression for constituents which followed parametric distributions and Mann-Kendall tests for those that were treated under nonparametric distributional assumptions. The MLE regression can be applied to datasets that can be fitted to a specific distribution model and that contain NDs with multiple MDLs. The Mann-Kendall test is suitable for data series with no discernable distributions and only one MDL value for NDs.

Constituents treated under nonparametric data assumptions (either tested as nonparametric or having greater than or equal to 50 percent NDs) and with multiple MDLs or with less than three detected values were not assessed for trends. A summary of the trend analysis results for constituents with sufficient detected values in the background data set is provided in **Table 6** of **Appendix D**. A one-percent significance level was used to detect statistically significant trends.

The background well regression analysis showed a potential increasing trend for boron (Appendix III), fluoride (an Appendix III and Appendix IV constituent), and sulfate (Appendix III), and a potential decreasing trend for chloride (Appendix III) and barium (Appendix IV). There were no increasing or decreasing trends identified for other monitoring constituents with sufficient data quantity and quality for testing with the MLE analysis or Mann-Kendall test.

Trends were also evaluated for constituents in each downgradient well using the same methods as described above for the background data set. Trends identified for select constituents at select monitoring well locations should be monitored as additional downgradient groundwater data are collected at the site. A summary of the statistical trends identified within the downgradient dataset is provided in **Table 7** of **Appendix D**. As with the background datasets, one-percent significance level was used to detect statistically significant trends. No trends were detected for constituents with sufficient data at MW-11. Trends observed in the downgradient dataset for the current monitoring period are as follows:

- Arsenic: Decreasing trend observed in MW-11D.
- Barium: Increasing trends observed in MW-2, MW-7R, and MW-10. Decreasing trend observed in MW-6.
- Calcium: Increasing trends observed in MW-3 and MW-7R. Decreasing trend observed in MW-5.
- Chloride: Decreasing trends observed in MW-2, MW-4, MW-6, MW-8, and MW-11D.
- Fluoride: Increasing trend observed in MW-1.
- Lithium: Increasing trends observed in MW-4, MW-5, and MW-10. Decreasing trends observed in MW-6 and MW-11D.
- Molybdenum: Decreasing trends observed in MW-2, MW-10, and MW-11D.
- Nickel: Increasing trend observed in MW-4.
- pH (field): Increasing trend observed in MW-8. Decreasing trends observed in MW-2, MW-4, and MW-11D.
- Sulfate: Increasing trend observed in MW-8. Decreasing trends observed in MW-1, MW-2, MW-3, MW-6, MW-7R and MW-10.
- TDS: Increasing trend observed in MW-7R. Decreasing trends observed in MW-5 and MW-11D.
- Total Radium: Decreasing trend observed in MW-11D.

6.1.5 Spatial Variability

Spatial variability refers to identifying whether or not there are statistically identifiable differences in mean concentrations or variance levels across the well field (i.e., the pooled background data). Parametric and nonparametric analysis of variance (ANOVA) tests and visual aids (i.e., side-by-side box plots and scatter plots), as needed, were used to evaluate for spatial variability within the background dataset to check that results from background wells BG-1 and BG-2 were appropriate for pooling and calculating background concentrations for constituents.

Statistical tests at the one percent level of statistical significance indicated that six Appendix III constituents (boron, calcium, fluoride, pH [field], sulfate, and total dissolved solids) exhibited spatial variability. Statistical spatial variability was also identified for two Appendix IV constituents (barium and fluoride), and one Appendix I metal (vanadium). Review of side-by-side box plots for the constituents listed above indicated that the statistically-identified variability in concentrations are reasonable and the mean concentrations calculated for the monitoring wells are generally within the natural variability of concentrations of the well field conditions for Appendix III and IV constituents or within or close to one order of magnitude of the other (See **Figure 9** through **Figure 16** in **Appendix D**). Therefore, the concentration distribution across the background wells should be considered reflective of the hydrogeological regime at the site and the background results are appropriate for pooling and calculating background concentrations at this time. Spatial variability will continue to be monitored with each background update and downgradient assessment.

6.2 Evaluation for SSIs over Background

The BTVs developed during the First Semi-Annual Report for Appendix I metals, Appendix III and Appendix IV constituents at the site are used to determine if concentration for Appendix I metals, Appendix III and Appendix IV constituents as of the October 2024 sampling round are SSIs. BTVs are estimated based on data available as of April 2024. For constituents that have all ND background values, the maximum MDL is chosen to represent background and the double quantification rule (DQR) is used to evaluate whether there is an SSI. The BTV provided for detection monitoring constituents is the statistically derived background concentration (i.e., upper prediction limit [UPL]), the maximum detected value or the maximum MDL depending on the level of censorship in each of the background samples.

Downgradient sampling results from the April 2024 detection monitoring event were used to test for SSIs. For constituents that have all ND background values, the DQR is applied; that is, an SSI is registered for the well-constituent pair if the downgradient concentrations exhibit detects in two consecutive sampling events. Downgradient sampling results from the July 2024 and October 2024 sampling events were used to test for SSIs for constituents that have all ND background values. Downgradient concentrations were compared to the BTVs and are summarized in **Table 11** through **Table 13** of **Appendix D**.

SSIs were found for three Appendix I metal (nickel, silver, and zinc), six Appendix III constituents (boron, calcium, chloride, fluoride, pH [field], and TDS), and eight Appendix IV constituents (barium, cobalt, fluoride, lithium, molybdenum, radium-226, radium-228, and total radium). Note that for antimony, the latest samples are all non-detects with an MDL value of

3.60 mg/L. While the MDL for antimony is higher than the detected value which serves as the BTV, it is unclear if an SSI has occurred.

6.3 Statistical Summary

A summary of the statistical analysis results is provided in **Table 8** and **Table 9** of **Appendix D** and discussed below.

- Note that for the purposes of the SSI analysis, the BTVs used are from the First Semi-Annual Report evaluation (samples up to April 2024). The PDA results for background statistics have been updated using Q3 and Q4 sampling results for information purposes.
- The statistical outliers identified for nickel, vanadium, boron, chromium, lithium, selenium, thallium and total radium are considered representative of background. During the next BTV update with the addition of the July 2024 and October 2024 samples, the full datasets will be re-assessed for statistical outliers.
- For the background data set, there are currently sufficient data to fit the Appendix III constituents to known parametric distribution models (e.g., gamma, lognormal, or normal) using GOF test, except for calcium, sulfate, and TDS, which are nonparametric.
- For the background data set, 11 of the 17 Appendix IV constituents exhibited high percentages of NDs and will be treated under nonparametric distribution assumptions with the maximum detected value selected to represent background, until additional results can be included in the data sets. The data sets for radium-226, radium-228, and total radium are set to nonparametric distribution for inferential purposes in both background and downgradient datasets. This is because the NDs were not indicated based on the analytical protocols used by the laboratory and some observations had negative values. Currently, the background datasets for boron, chloride, fluoride, and pH [field] can be fit to known parametric models using GOF test.
- Downgradient samples as of October 2024 were used to evaluated SSIs. The statistically-derived background concentrations and the evaluation for SSIs over background for Appendix I metals, Appendix III and Appendix IV constituents are included in **Section 4** of **Appendix D**.
- While multiple statistical outliers have been flagged at the downgradient wells for various constituents, the outliers can indicate contamination from the structural fill or alternative sources. Unless an alternative source can be confirmed, the values remain in the sample as representing downgradient groundwater quality at the time of measurement.
- SSIs were found for three Appendix I metal (nickel, silver, and zinc), six Appendix III constituents (boron, calcium, chloride, fluoride, pH [field], and TDS), and eight Appendix IV constituents (barium, cobalt, fluoride, lithium, molybdenum, radium-226, radium-228, and total radium).

When the October 2024 sampling event results are compared to the pre-ash sampling results from the eight downgradient wells, current downgradient groundwater constituent concentrations are generally similar to concentrations reported prior to ash placement. In some

cases, the BTV is not contained within the pre-ash placement range indicating that natural variability may lie beyond what was captured prior to the ash placement. Depending on the data distribution of the constituent, the BTVs have been computed to allow for one to two verification samples, should an opportunity for additional sampling take place. The validity of the initial exceedance can be confirmed by verification sampling; however, for practical purposes, should the initial sampling event of interest exceed the respective BTV, the event is considered an SSI. Additional details regarding statistical methodology and results are provided in **Appendix D**.

7 Summary and Conclusions

7.1 Summary

The third and fourth quarterly groundwater monitoring events in 2024 were conducted at the Brickhaven No. 2 Mine Tract "A" Structural Fill site from July 15 - 18, 2024, and October 28 - 31, 2024, respectively. A summary of the findings from these events is provided below**.**

7.1.1 Groundwater

7.1.1.1 JULY 2024 EVENT

- Concentrations of the following constituents exceeded 2L Standards in samples collected from one or more of the monitoring wells: arsenic, barium, chloride, cobalt, fluoride, pH (field), TDS, and vanadium.
- Concentrations of the following constituents exceeded BTVs in samples from one or more of the monitoring wells: arsenic, barium, boron, calcium, chloride, chromium, cobalt, combined radium, fluoride, lithium, molybdenum, nickel, pH (field), radium-226, radium-228, selenium, sulfate, TDS, and vanadium.

7.1.1.2 OCTOBER 2024 EVENT

- Concentrations of the following constituents exceeded 2L Standards in samples collected from one or more of the monitoring wells: arsenic, barium, chloride, chromium, cobalt, fluoride, pH (field), TDS, vanadium, and zinc.
- Concentrations of the following constituents exceeded the BTVs in samples collected from one or more of the monitoring wells: arsenic, barium, calcium, chloride, chromium, cobalt, combined radium, copper, fluoride, lithium, molybdenum, nickel, pH (field), radium-228, selenium, TDS, vanadium, and zinc.
- Comparing the results of the October 2024 monitoring event to the pre-ash sampling results from the eight downgradient wells, current down-gradient groundwater constituent concentrations are generally similar to concentrations reported prior to ash placement.

7.1.1.3 STATISTICAL EVALUATION

- Ten occurrences of nickel, vanadium, boron, chromium, lithium, selenium, thallium, and/or total radium in background well BG-1 were identified as statistical outliers. Five occurrences of vanadium and/or boron in background well BG-2 were identified as statistical outliers.

- The statistical outliers identified for nickel, vanadium, boron, chromium, lithium, selenium, thallium, and total radium are considered representative of background. During the next BTV update with the addition of the July 2024 and October 2024 samples, the full datasets will be re-assessed for statistical outliers.

- Groundwater quality in wells was compared to background concentrations to determine if an SSI over background has occurred:
  - SSIs were found for three Appendix I metals (nickel, silver, and zinc), six Appendix III constituents (boron, calcium, chloride, fluoride, pH [field], and TDS, and eight Appendix IV constituents (barium, cobalt, fluoride, lithium, molybdenum, radium-226, radium-228, and total radium).

7.1.2 Surface Water

7.1.2.1 JANUARY 2024 EVENT

- Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples: copper and TDS.
- No exceedances of 2B Standards were reported in the samples collected from SW-5
- Surface water sample locations SW-2, SW-3, SW-4, and SW-6 were not sampled due to being dry or stagnant.

7.1.2.2 OCTOBER 2024 EVENT

- Concentrations of the following constituents exceeded 2B Standards in one or more surface water samples: cobalt, copper, pH (field), lead, nickel, TDS, and zinc.
- Surface water sample locations SW-2, SW-3, and SW-4 were not sampled due to being dry or stagnant.

7.1.3 Leachate

Concentrations of the analyzed constituents (**Table 1**) were generally within range of historical results, with some minor fluctuations observed.

7.2 Conclusions

Based upon the data analyzed during this event and historical events, HDR has made the following conclusions:

- The presence of SSIs is largely the result of low background concentrations that may not represent data collected prior to CCP placement (August and October 2015 sampling events) and is influenced by natural and seasonal variations at the site. In general, the SSIs reported during this sampling event are either consistent with those evaluated in the Alternate Source Demonstration (March 29, 2019) or are potential SSIs to be verified during the next sampling event.
- Groundwater modeling during assessment monitoring in 2020 calculated that, due to the low hydraulic conductivity of the clay-rich soil of the former clay mine, groundwater and constituents found in the groundwater will move slowly through the aquifer materials. Model-estimated groundwater velocities are too low for constituents to have been

transported from the structural fill to the monitoring wells or surface waters where they have been detected at the time of first detection. It was calculated that a hypothetical plume would have migrated approximately 250 feet in six years between 2014 and 2020. Using the average seepage rate of approximately 16 feet in the year 2024, and adding it to the 250 feet the plum moved from 2014 to 2020, the total potential migration distance of a plume since the placement of structural fill would be approximately 330 feet or less. Therefore, tracer constituents would have reached downgradient monitoring wells within 330 feet of the fill boundary if a plume were migrating from the unit.

- Tracer constituents, such as boron, are not present at significant concentrations in either the groundwater or the surface water. Boron is a conservative tracer, so its ratio to the less mobile constituents (e.g., arsenic) should increase down-gradient of the structural fill. However, boron is at low concentrations or not present in down-gradient groundwater. This shows that the ash and leachate, which are a source of boron, are not the source of the other constituents in groundwater and/or surface water.
- Historically, results of surface water sampling indicate exceedances of 2B Standards in the sample collected from SW-6. This location is immediately downstream of the General Shale property and away from ash handling activities performed on the Brickhaven site prior to closure of the structural fill. Thus, it appears that the presence of inorganics in surface water samples collected downstream (locations SW-1 and SW-5) are likely the result of off-site impacts, and not from activities on the Brickhaven site.
- The structural fill is engineered and lined with an active leachate collection system. By collecting and disposing of the leachate off-site, the likelihood that leachate escaped the liner is greatly reduced.

8 Recommendations

Based on the findings, HDR makes the following recommendations:

- Continue semi-annual detection monitoring and reporting, and laboratory electronic data deliverables during non-reporting quarters, in accordance with permit requirements.
- Evaluate the validity of SSIs by further assessing sampling protocols/performance, spatial variability, and seasonality of constituent concentrations as additional sampling rounds are conducted.

9 References

Buxton Environmental. 2015a. Water Quality Monitoring Plan for Brickhaven No.2 Mine Tract "A" Structural Fill.

Buxton Environmental. 2015b. Compliance Groundwater Well Installation, Development, Surveying and Hydraulic Conductivity Determination Activities Report for Brickhaven No.2 Mine Tract "A" Structural Fill.

Buxton Environmental. 2015c. Initial Background Groundwater & Surface Water Monitoring Event. October 2015.

Buxton Environmental. 2016. Design Hydrogeologic Report for Brickhaven No.2 Mine Tract "A" Structural Fill. Addendum 2, March 2016.

HDR. 2016a. 2016 First Semi-Annual Groundwater, Surface Water, and Leachate Sampling Report. May 2016.

HDR. 2016b. Background Sampling Report. November 2016.

HDR. 2019. Groundwater and Surface Water Assessment Work Plan. August 2019.

HDR. 2020. Assessment Monitoring Report. July 2020.

NCSS, LLC. 2013. NCSS 9 Statistical Software. Kaysville, Utah, USA, ncss.com/software/ncss.

NCDEQ. 2008. Solid Waste Section Guidelines for Groundwater, Soil, and Surface Water Sampling.

North Carolina Department of Natural Resources and Community Development. 1985. North Carolina Geologic Map.

North Carolina General Assembly. Coal Ash Management Act (CAMA) of 2014 (Senate Bill 729). Ratified.

R Core Team. 2018. R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL https://www.R-project.org/.

Singh, A. and Ashok Singh. 2015. ProUCL 5.1.002 Technical Guide Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. EPA/600/R07/041.

Singhal, B. B.S. and R. P. Gupta. 2010. Applied Hydrogeology of Fractured Rocks: Springer, 2nd Edition, 408p. (Table 8-1, p. 140) United States Geological Survey. 2004. Arsenic, Nitrate, and Chloride in Groundwater, Oakland County, Michigan.

This page intentionally left blank.

Tables

Table 1. July 2024 Groundwater Elevations
Table 2. October 2024 Groundwater Elevations
Table 3. Horizontal Hydraulic Gradients and Seepage Velocity
Table 4. Analytical Results – July 2024 and October 2024

This page intentionally left blank.

Table 1
Well Construction Details & Groundwater Elevations
July 15, 2024
Charah Solutions, Inc. - Brickhaven No.2 Mine Tract "A" Structural Fill
Moncure, Chatham County, North Carolina

Well ID	*Northing*	*Easting*	*TOC elev. (ft)*	*TD BGS (ft)*	*TD BTOC (ft)*	*Screen length (ft)*	*Screen Interval (ft)*	*DTW (ft BTOC)*	*GW Elevation (ft MSL)*	*Lithologic Unit*
BG-1	670898.50	1996348.25	228.19	41.00	43.55	15	26 - 41	12.54	215.65	Layered Rock/PWR*
BG-2	669278.99	1990476.10	194.23	23.00	25.82	10	13 -23	13.85	180.38	Layered Rock/PWR*
MW-1	674737.98	1993417.69	280.08	72.00	74.80	15	57 - 72	61.50	218.58	Layered Rock/PWR*
MW-2	673677.07	1994537.54	231.76	48.00	50.49	15	33 - 48	29.06	202.70	Layered Rock/PWR*
MW-2D	673650.31	1994535.97	232.87	144.00	147.14	15	129 - 144	142.06	90.81	Layered Rock/PWR*
MW-3	672474.63	1994834.76	222.56	40.00	42.56	15	25 - 40	8.75	213.81	PWR
MW-4	671326.48	1994974.40	217.13	22.70	25.34	10	13 - 23	14.39	202.74	Residuum/PWR
MW-5	671081.19	1993779.03	244.86	44.00	46.14	10	34 - 44	23.47	221.39	PWR
MW-6	671267.71	1992793.49	230.95	27.00	29.33	15	12 - 27	9.44	221.51	Residuum/PWR
MW-7	672306.28	1992642.35	231.71	15.00	17.18	10	5 - 15	15.11	216.60	Residuum/PWR
MW-7R	672221.96	1992702.98	242.22	36.00	38.23	10	26 - 36	21.18	221.04	Residuum/PWR
MW-8	673304.83	1992200.37	236.47	46.00	49.06	15	31 - 46	33.36	203.11	PWR
MW-9	672747.21	1993936.20	240.36	36.00	39.03	10	26 - 36	37.29	203.07	PWR
MW-10	672421.01	1993269.14	257.74	47.00	50.00	10	37 - 47	33.66	224.08	PWR
MW-11	670446.25	1993476.57	219.23	40.00	42.70	15	25 - 40	13.29	205.94	PWR
MW-11D	670447.41	1993466.72	219.40	65.00	67.38	15	50 - 65	9.41	209.99	Layered Rock/PWR*

Created by: ZH, QC'd by: CG

Notes:

1. Wells MW-4 (PZM-1), MW-5 (MZM-22), and MW-7 (PZM-27) were surveyed by Lawrence Surveying of Monroe, NC. Wells BG-1, BG-2, MW-1, MW-2, MW-2D MW-3, MW-6, MW-7R, MW-8, MW-9, MW-10, MW-11, and MW-11D were surveyed by McAdams of Durham, NC. Well Locations and elevations based on NAD 83 horizontal datum and NGVD88 vertical datum.

2. TD = Total Depth; BGS = Below Ground Surface; TOC = Top of Casing; DTW = Depth to Water; BTOC = Below Top of Casing; GW = Groundwater; MSL = Mean Sea Level

3. DTW measurements obtained on July 15, 2024, to the nearest 0.01 foot with a water-level meter.

4. * = Interpreted lithologic unit based on relative drilling hardness and geologic judgment during well installation.

Table 2
Well Construction Details & Groundwater Elevations
October 28, 2024
Charah Solutions, Inc. - Brickhaven No.2 Mine Tract "A" Structural Fill
Moncure, Chatham County, North Carolina

Well ID	*Northing*	*Easting*	*TOC elev. (ft)*	*TD BGS (ft)*	*TD BTOC (ft)*	*Screen length (ft)*	*Screen Interval (ft)*	*DTW (ft BTOC)*	*GW Elevation (ft MSL)*	*Lithologic Unit*
BG-1	670898.50	1996348.25	228.19	41.00	43.55	15	26 - 41	10.53	217.66	Layered Rock/PWR*
BG-2	669278.99	1990476.10	194.23	23.00	25.82	10	13 -23	12.99	181.24	Layered Rock/PWR*
MW-1	674737.98	1993417.69	280.08	72.00	74.80	15	57 - 72	61.69	218.39	Layered Rock/PWR*
MW-2	673677.07	1994537.54	231.76	48.00	50.49	15	33 - 48	20.19	211.57	Layered Rock/PWR*
MW-2D	673650.31	1994535.97	232.87	144.00	147.14	15	129 - 144	141.23	91.64	Layered Rock/PWR*
MW-3	672474.63	1994834.76	222.56	40.00	42.56	15	25 - 40	7.83	214.73	PWR
MW-4	671326.48	1994974.40	217.13	22.70	25.34	10	13 - 23	14.01	203.12	Residuum/PWR
MW-5	671081.19	1993779.03	244.86	44.00	46.14	10	34 - 44	19.99	224.87	PWR
MW-6	671267.71	1992793.49	230.95	27.00	29.33	15	12 - 27	8.02	222.93	Residuum/PWR
MW-7	672306.28	1992642.35	231.71	15.00	17.18	10	5 - 15	17.78	213.93	Residuum/PWR
MW-7R	672221.96	1992702.98	242.22	36.00	38.23	10	26 - 36	21.17	221.05	Residuum/PWR
MW-8	673304.83	1992200.37	236.47	46.00	49.06	15	31 - 46	33.23	203.24	PWR
MW-9	672747.21	1993936.20	240.36	36.00	39.03	10	26 - 36	37.24	203.12	PWR
MW-10	672421.01	1993269.14	257.74	47.00	50.00	10	37 - 47	33.95	223.79	PWR
MW-11	670446.25	1993476.57	219.23	40.00	42.70	15	25 - 40	11.68	207.55	PWR
MW-11D	670447.41	1993466.72	219.40	65.00	67.38	15	50 - 65	7.48	211.92	Layered Rock/PWR*

Created by: CG; QC'd by: ZH

Notes:

1. Wells MW-4 (PZM-1), MW-5 (MZM-22), and MW-7 (PZM-27) were surveyed by Lawrence Surveying of Monroe, NC. Wells BG-1, BG-2, MW-1, MW-2, MW-2D MW-3, MW-6, MW-7R, MW-8, MW-9, MW-10, MW-11, and MW-11D were surveyed by McAdams of Durham, NC. Well Locations and elevations based on NAD 83 horizontal datum and NGVD88 vertical datum.

2. TD = Total Depth; BGS = Below Ground Surface; TOC = Top of Casing; DTW = Depth to Water; BTOC = Below Top of Casing; GW = Groundwater; MSL = Mean Sea Level

3. DTW measurements obtained on October 28, 2024 to the nearest 0.01 foot with a water-level meter.

4. * = Interpreted lithologic unit based on relative drilling hardness and geologic judgment during well installation.

Table 3
Horizontal Hydraulic Gradient & Groundwater Flow Velocity
July 15, 2024 & October 28, 2024
Charah Solutions, Inc. - Brickhaven No.2 Mine Tract "A" Structural Fill
Moncure, Chatham County, North Carolina

Sampling Event	Upgradient Well	Downgradient Well	Upgradient Groundwater Elevation (ft)	Downgradient Groundwater Elevation (ft)	Linear Flow Distance (ft)	Hydraulic Gradient	Seepage Velocity (ft/yr)
Jul-24	MW-5	MW-4	221.39	202.74	1,220	0.015	16.6
	MW-6	BG-2	221.51	180.38	3,054	0.013	14.6
Oct-24	MW-5	MW-4	224.87	203.12	1,220	0.018	19.3
	MW-6	BG-2	222.93	181.24	3,054	0.014	14.8

Created by: CG; QC'd by: ZH

Notes:

1. Horizontal hydraulic gradients calculated by dividing the difference in hydraulic head between a well pair by the length of the flow path between the well pair. (i= dh/dl).
2. All well pairs assumed to be screened in same surficial aquifer unit.
3. Groundwater elevations calculated using measurements obtained on July 15, 2024 (Jul-24) and October 28, 2024 (Oct-24).
4. The average linear velocity, or seepage velocity, of groundwater between wells at the site was calculated using Darcy's Law, as follows: Vs = (Ki)/Pe

V = Seepage Velocity (ft/yr) i = Horizontal Hydraulic Gradient

K = Horizontal Hydraulic Conductivity Pe = Effective Porosity

This page intentionally left blank.

Table 4: Analytical Results July 2024 and October 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Groundwater Analysis															
				BG-1		BG-2		MW-1		MW-2		MW-2D		MW-3		MW-4		MW-5	
				Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24
EPA APPENDIX III																			
Boron (µg/L)	7440-42-8	*700*	*36.2*	12.9 J	8.0 J	19.2 J	15.3 J	15.8 J	13.7 J	**50.0**	38.6 J	38.8 J	39.4 J	49.6 J	41.9 J	11.8 J	<50.0	13.1 J	10.4 J
Calcium (µg/L)	7440-70-2	*NE*	*124,000*	25,000	24,500	123,000	96,500	**199,000**	**192,000**	**188,000**	**151,000**	12,400	15,200	**192,000**	**182,000**	47,100	59,700	7,990	9,070
Chloride (mg/L)	16887-00-6	*250*	*325*	192	180	264	273	**794**	**657**	**1,020**	**880**	109	109	**1,020**	**901**	**348**	315	19.5	19.6
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	0.19	0.23	0.30	**0.41**	0.16	0.18	0.21	0.23	**3.6**	**3.2**	0.27	0.31	**0.34**	**0.50**	**0.53**	**0.62**
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	6.49	6.57	6.80	6.97	6.68	6.86	7.38	**7.67**	**10.74**	NA	7.38	7.58	5.91	6.35	6.84	7.35
Sulfate (mg/L)	14808-79-8	*250*	*204*	21.7	22.7	**210**	202	6.3	6.3	71.3	87.4	40.7	35.9	13.0	13.0	10.0	10.7	4.1	3.5
Total Dissolved Solids (mg/L)	TDS	*500*	*1,270*	575	545	**1,400**	1,270	**1,320**	**1,540**	**2,300**	**2,160**	498	514	**2,260**	**2,300**	1,100	1,160	198	214
EPA APPENDIX IV																			
Antimony (µg/L)	7440-36-0	*1*	*0.79*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Arsenic (µg/L)	7440-38-2	*10*	*8.80*	<10.0	<10.0	<10.0	<10.0	<10.0	2.5 J	3.8 J	<10.0	**17.6**	**21.4**	<10.0	2.5 J	<10.0	<10.0	<10.0	<10.0
Barium (µg/L)	7440-39-3	*700*	*377*	293	298	51.5	49.9	255	238	336	278	103	108	**767**	**768**	351	361	106	83.2
Beryllium (µg/L)	7440-41-7	*4*	*0.700*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium (µg/L)	7440-43-9	*2*	*0.500*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	0.68 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (µg/L)	7440-47-3	*10*	*7.20*	<5.0	0.65 J	<5.0	<5.0	2.5 J	0.76 J	3.0 J	4.3 J	**9.2**	**28.1**	<5.0	1.1 J	1.2 J	<5.0	1.1 J	0.92 J
Cobalt (µg/L)	7440-48-4	*1*	*2.30*	<5.0	<5.0	<5.0	1.2 J	0.75 J	<5.0	<5.0	3.2 J	<5.0	1.2 J	<5.0	<5.0	**22.6**	**14.6**	<5.0	<5.0
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	0.19	0.23	0.30	**0.41**	0.16	0.18	0.21	0.23	**3.6**	**3.2**	0.27	0.31	**0.34**	**0.50**	**0.53**	**0.62**
Lead (µg/L)	7439-92-1	*15*	*14.1*	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0
Lithium (µg/L)	7439-93-2	*NE*	*43.7*	29.8	16.0	25.1	24.2	37.7	36.4	**128**	**126**	**172**	**197**	**87.0**	**84.0**	38.9	40.7	11.4	9.9
Mercury (µg/L)	7439-97-6	*1*	*0.170*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Molybdenum (µg/L)	7439-98-7	*NE*	*13.6*	<5.0	<5.0	4.3 J	6.1	<5.0	<5.0	4.6 J	5.3	**272**	**264**	8.0	7.3	<5.0	<5.0	<5.0	<5.0
Selenium (µg/L)	7782-49-2	*20*	*6.00*	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	**11.2**	9.5 J	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Thallium (µg/L)	7440-28-0	*2*	*13.7*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	0.049 J	0.091 J	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Radium 226 (pCi/L)	13982-63-3	*NE*	*0.80*	-0.351	-0.703	-0.0879	0.591	-0.255	0.0630	0.723	0.484	-0.328	-0.748	**1.11**	0.668	0.388	0.233	0.0428	0.574
Radium 228 (pCi/L)	15262-20-1	*NE*	*1.35*	0.682	0.299	0.378	0.742	0.613	0.477	0.664	0.843	0.342	0.562	**1.65**	**1.61**	0.372	0.0941	0.502	0.658
Combined Radium (pCi/L)	7440-14-4	*NE**	*2.09*	0.682	0.30	0.378	1.33	0.613	0.540	1.39	1.33	0.342	0.562	**2.76**	**2.28**	0.760	0.327	0.545	1.23
EPA APPENDIX I METALS																			
Copper (mg/L)	7440-50-8	*1*	*0.0071*	0.00080 J	0.00082 J	0.00093 J	0.00064 J	0.0018 J	0.00086 J	0.0030 J	0.0062	0.0054	**0.0142**	0.0014 J	0.0025 J	0.00092 J	<0.0050	0.0020 J	0.0015 J
Nickel (µg/L)	7440-02-0	*100*	*4.20*	0.98 J	<5.0	1.5 J	1.4 J	2.7 J	<5.0	3.1 J	**5.0**	3.1 J	**11.1**	1.1 J	1.8 J	**12.7**	**10.0**	1.8 J	1.2 J
Silver (µg/L)	7440-22-4	*20*	*2.50*	<5.0	<5.0	<5.0	<5.0	0.73 J	1.0 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vanadium (µg/L)	7440-62-2	*7*	*8.30*	4.6 J	5.9	<5.0	<5.0	4.1 J	2.1 J	1.6 J	<5.0	**74.4**	**123**	<5.0	2.3 J	<5.0	<5.0	<5.0	<5.0
Zinc (mg/L)	7440-66-6	*1*	*0.0324*	0.0041 J	<0.0100	0.0052 J	<0.0100	0.0138 J	0.0050 J	0.0060 J	**1.590**	<0.0100	**0.312**	0.0050 J	<0.0100	0.0151	0.0074 J	0.0102	0.0068 J

Notes:

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for October 2024

NE = not established

NA = not analyzed

µg/L = micrograms per liter

pCi/L = picocuries per liter

mg/L = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Shaded = concentration reported above (or below for pH) established 2L Standard, IMAC, or 2B Standard

Bold = concentration exceeded BTV

2L Standard = North Carolina Groundwater Protection Standard (T15A NCAC 02L .0202)

IMAC = Interim Allowable Maximum Concentration

2B Standard = North Carolina Surface Water and Wetland Standards (15A NCAC 02B) for Gulf Creek (SW-1) and Shaddox Creek (SW-2) which are both Class WS-IV Waters or are National Criteria per EPA

pH was field tested

Groundwater, surface water, and leachate samples collected for **July 2024 from July 15-18** and for **October 2024 from October 28-31** and analyzed for above parameters by Pace Analytical Services, LLC

Constituents are only considered exceeding the BTV if the sampling event in question and the previous sampling event had detections for that constituent

Secondary USEPA Maximun Contaminant Levels (MCL) used where other regulatory criteria not established.

Table 4: Analytical Results July 2024 and October 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Groundwater Analysis													
				MW-6		MW-7R		MW-8		MW-9		MW-10		MW-11		MW-11D	
				Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24
EPA APPENDIX III																	
Boron (µg/L)	7440-42-8	*700*	*36.2*	8.5 J	8.3 J	10.5 J	9.8 J	11.8 J	10.8 J	32.8 J	30.0 J	27.0 J	28.2 J	18.7 J	17.9J	45.9 J	46.3 J
Calcium (µg/L)	7440-70-2	*NE*	*124,000*	33,400	35,900	91,200	98,500	113,000	113,000	34,500	35,200	20,700	22,100	25,200	26,300	15,500	16,400
Chloride (mg/L)	16887-00-6	*250*	*325*	177	180	255	263	**332**	**380**	10.2	10.7	29.8	30.4	119	127	54.8	57.1
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	0.32	**0.40**	0.14	0.16	0.10	0.11	0.26	0.30	**0.44**	**0.48**	0.17	0.19	**0.43**	**0.48**
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	6.32	6.45	7.40	**7.60**	7.07	7.09	7.30	NA	**7.77**	**7.98**	6.66	6.75	**8.13**	**8.41**
Sulfate (mg/L)	14808-79-8	*250*	*204*	27.5	27.6	14.9	14.5	7.3	7.0	68.1	69.4	1.7	2.0	2.3	2.3	14.8	15.3
Total Dissolved Solids (mg/L)	TDS	*500*	*1,270*	572	600	905	948	889	1,080	494	506	347	354	407	426	323	322
EPA APPENDIX IV																	
Antimony (µg/L)	7440-36-0	*1*	*0.79*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Arsenic (µg/L)	7440-38-2	*10*	*8.80*	<10.0	<10.0	<10.0	<10.0	2.5 J	<10.0	<10.0	<10.0	2.7 J	2.7 J	<10.0	<10.0	<10.0	3.5 J
Barium (µg/L)	7440-39-3	*700*	*377*	47.9	47.2	312	329	**1,140**	**1,110**	192	192	95.8	92.3	39.8	35.5	113	119
Beryllium (µg/L)	7440-41-7	*4*	*0.700*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Cadmium (µg/L)	7440-43-9	*2*	*0.500*	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium (µg/L)	7440-47-3	*10*	*7.20*	<5.0	<5.0	1.7 J	2.3 J	4.0 J	1.2 J	2.5 J	4.5 J	<5.0	0.96 J	<5.0	0.78 J	<5.0	<5.0
Cobalt (µg/L)	7440-48-4	*1*	*2.30*	<5.0	<5.0	<5.0	<5.0	0.63 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	0.53 J	<5.0	<5.0
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	0.32	**0.40**	0.14	0.16	0.10	0.11	0.26	0.30	**0.44**	**0.48**	0.17	0.19	**0.43**	**0.48**
Lead (µg/L)	7439-92-1	*15*	*14.1*	<5.0	<50.0	<5.0	<50.0	2.80 J	<50.0	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0	<5.0	<50.0
Lithium (µg/L)	7439-93-2	*NE*	*43.7*	25.1	24.2	28.1	28.2	29.4	29.5	3.2	3.9	5.2	5.6	10.1	8.3	18.1	16.0
Mercury (µg/L)	7439-97-6	*1*	*0.170*	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Molybdenum (µg/L)	7439-98-7	*NE*	*13.6*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	**21.8**	**21.8**	**17.0**	**20.2**	<5.0	<5.0	3.6 J	4.0 J
Selenium (µg/L)	7782-49-2	*20*	*6.00*	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	8.2 J	**12.7**	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Thallium (µg/L)	7440-28-0	*2*	*13.7*	<0.20	<0.20	<0.20	<0.20	0.033 J	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Radium 226 (pCi/L)	13982-63-3	*NE*	*0.80*	-0.579	0.169	-0.186	0.0614	0.273	0.219	NA	NA	0.410	0.316	0.0925	0.351	0.0934	0.692
Radium 228 (pCi/L)	15262-20-1	*NE*	*1.35*	0.533	1.07	0.517	0.958	0.759	1.00	NA	NA	0.364	0.711	0.391	1.08	0.308	0.655
Combined Radium (pCi/L)	7440-14-4	*NE**	*2.09*	0.533	1.24	0.517	1.02	1.03	1.22	NA	NA	0.774	1.03	0.484	1.43	0.401	1.35
EPA APPENDIX I METALS																	
Copper (mg/L)	7440-50-8	*1*	*0.0071*	0.0011 J	0.00064 J	0.0011 J	0.00099 J	0.0034 J	0.00076 J	0.0050 J	0.0029 J	0.00068 J	<0.0050	0.0010 J	0.0010 J	<0.0050	<0.0050
Nickel (µg/L)	7440-02-0	*100*	*4.20*	1.8 J	1.8 J	1.0 J	1.0 J	3.5 J	1.4 J	2.2 J	2.4 J	1.5 J	1.1 J	0.95 J	1.4 J	<5.0	<5.0
Silver (µg/L)	7440-22-4	*20*	*2.50*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Vanadium (µg/L)	7440-62-2	*7*	*8.30*	<5.0	<5.0	2.8 J	3.2 J	3.9 J	<5.0	<5.0	2.3 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Zinc (mg/L)	7440-66-6	*1*	*0.0324*	0.0062 J	0.0036 J	<0.0100	0.0054 J	0.0154	0.0032 J	0.0058 J	0.0060 J	<0.0100	<0.0100	<0.0100	0.0031 J	0.0055 J	<0.0100

Notes:

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for October 2024

NE = not established

NA = not analyzed

µg/L = micrograms per liter

pCi/L = picocuries per liter

mg/L = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Shaded = concentration reported above (or below for pH) established 2L Standard, IMAC, or 2B Standard

Bold = concentration exceeded BTV

2L Standard = North Carolina Groundwater Protection Standard (T15A NCAC 02L .0202)

IMAC = Interim Allowable Maximum Concentration

2B Standard = North Carolina Surface Water and Wetland Standards (15A NCAC 02B) for Gulf Creek (SW-1) and Shaddox Creek (SW-2) which are both Class WS-IV Waters or are National Criteria per EPA

pH was field tested

Groundwater,

Constituents are only considered exceeding the BTV if the sampling event in question and the previous sampling event had detections for that constituent

Secondary USEPA Maximun Contaminant Levels (MCL) used where other regulatory criteria not established.

Table 4: Analytical Results July 2024 and October 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Quality Control			
				EQBL		DUP (MW-6)	
				Jul-24	Oct-24	Jul-24	Oct-24
EPA APPENDIX III							
Boron (µg/L)	7440-42-8	*700*	*36.2*	<50.0	<50.0	10.6 J	8.3 J
Calcium (µg/L)	7440-70-2	*NE*	*124,000*	<100	26.2 J	34,200	37,800
Chloride (mg/L)	16887-00-6	*250*	*325*	<1.0	<1.0	170	177
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	<0.10	<0.10	0.32	**0.39**
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	NA	NA	6.32	6.45
Sulfate (mg/L)	14808-79-8	*250*	*204*	<1.0	<1.0	27.7	27.4
Total Dissolved Solids (mg/L)	TDS	*500*	*1,270*	<25.0	<25.0	595	598
EPA APPENDIX IV							
Antimony (µg/L)	7440-36-0	*1*	*0.79*	<5.0	<5.0	<5.0	<5.0
Arsenic (µg/L)	7440-38-2	*10*	*8.80*	<10.0	<10.0	<10.0	<10.0
Barium (µg/L)	7440-39-3	*700*	*377*	<5.0	<5.0	51.0	49.8
Beryllium (µg/L)	7440-41-7	*4*	*0.700*	<1.0	<1.0	<1.0	<1.0
Cadmium (µg/L)	7440-43-9	*2*	*0.500*	<1.0	<1.0	<1.0	<1.0
Chromium (µg/L)	7440-47-3	*10*	*7.20*	<5.0	<5.0	<5.0	<5.0
Cobalt (µg/L)	7440-48-4	*1*	*2.30*	<5.0	<5.0	<5.0	<5.0
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	<0.10	<0.10	0.32	**0.39**
Lead (µg/L)	7439-92-1	*15*	*14.1*	<5.0	<5.0	<5.0	<50.0
Lithium (µg/L)	7439-93-2	*NE*	*43.7*	<2.5	<2.5	25.6	24.4
Mercury (µg/L)	7439-97-6	*1*	*0.170*	<0.20	<0.20	<0.20	<0.20
Molybdenum (µg/L)	7439-98-7	*NE*	*13.6*	<5.0	<5.0	<5.0	<5.0
Selenium (µg/L)	7782-49-2	*20*	*6.00*	<10.0	<10.0	<10.0	<10.0
Thallium (µg/L)	7440-28-0	*2*	*13.7*	<0.20	<0.20	<0.20	<0.20
Radium 226 (pCi/L)	13982-63-3	*NE*	*0.80*	-0.0978	-0.127	0.0485	0.528
Radium 228 (pCi/L)	15262-20-1	*NE*	*1.35*	0.0996	0.937	-0.0362	0.310
Combined Radium (pCi/L)	7440-14-4	*NE**	*2.09*	0.0996	0.937	0.0485	0.838
EPA APPENDIX I METALS							
Copper (mg/L)	7440-50-8	*1*	*0.0071*	<0.0050	<0.0050	0.0015 J	0.00073 J
Nickel (µg/L)	7440-02-0	*100*	*4.20*	<5.0	<5.0	1.9 J	1.6 J
Silver (µg/L)	7440-22-4	*20*	*2.50*	<5.0	<5.0	<5.0	<5.0
Vanadium (µg/L)	7440-62-2	*7*	*8.30*	<5.0	<5.0	<5.0	<5.0
Zinc (mg/L)	7440-66-6	*1*	*0.0324*	<0.0100	<0.0100	0.0076 J	0.0037 J

Notes:

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for October 2024

NE = not established

NA = not analyzed

µg/L = micrograms per liter

pCi/L = picocuries per liter

mg/L = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Table 4: Analytical Results July 2024 and October 2024

Analyte	CAS Number	2L Standard / IMAC	BTV (2Q2024)	Surface Water Analysis													Leachate Analysis	
				SW-1		SW-2		SW-3		SW-4		SW-5		SW-6		2B Standard	LEACHATE	
				Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24	Jul-24	Oct-24		Jul-24	Oct-24
EPA APPENDIX III																		
Boron (µg/L)	7440-42-8	*700*	*36.2*	21.2 J	9.0 J	NS	NS	NS	NS	NS	NS	11.2 J	8.7 J	NS	7.7 J	*7,300*	3,270	3,420
Calcium (µg/L)	7440-70-2	*NE*	*124,000*	4,930	8,890	NS	NS	NS	NS	NS	NS	4,140	3,110	NS	1,850	*NE*	306,000	239,000
Chloride (mg/L)	16887-00-6	*250*	*325*	10.8	6.7	NS	NS	NS	NS	NS	NS	4.8	7.2	NS	6.5	*250*	19.9	19.5
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	0.25	0.29	NS	NS	NS	NS	NS	NS	0.12	0.26	NS	0.30	*1.8*	0.24	0.29
pH (standard units)	pH	*6.5-8.5*	*5.59 - 7.59*	NA	6.07	NS	NS	NS	NS	NS	NS	NA	5.13	NS	5.27	*6.0-9.0*	8.74	NA
Sulfate (mg/L)	14808-79-8	*250*	*204*	3.1	1.2	NS	NS	NS	NS	NS	NS	1.1	0.93 J	NS	1.2	*250*	459	419
Total Dissolved Solids (mg/L)	TDS	*500*	*1,270*	791	434	NS	NS	NS	NS	NS	NS	72.0	493	NS	503	*500*	1,400	1,350
EPA APPENDIX IV																		
Antimony (µg/L)	7440-36-0	*1*	*0.79*	<5.0	<5.0	NS	NS	NS	NS	NS	NS	<5.0	<5.0	NS	<5.0	*5.6*	<5.0	<5.0
Arsenic (µg/L)	7440-38-2	*10*	*8.80*	4.8 J	10.0	NS	NS	NS	NS	NS	NS	<10.0	3.7 J	NS	4.2 J	*10*	11.6	9.6 J
Barium (µg/L)	7440-39-3	*700*	*377*	330	788	NS	NS	NS	NS	NS	NS	52.4	219	NS	236	*1,000*	50.6	42.2
Beryllium (µg/L)	7440-41-7	*4*	*0.700*	1.3	3.3	NS	NS	NS	NS	NS	NS	<1.0	0.63 J	NS	0.51 J	*6.5*	<1.0	<1.0
Cadmium (µg/L)	7440-43-9	*2*	*0.500*	<1.0	0.82 J	NS	NS	NS	NS	NS	NS	<1.0	<1.0	NS	<1.0	*2*	<1.0	<1.0
Chromium (µg/L)	7440-47-3	*10*	*7.20*	11.5	15.1	NS	NS	NS	NS	NS	NS	<5.0	6.3	NS	5.7	*50*	<5.0	<5.0
Cobalt (µg/L)	7440-48-4	*1*	*2.30*	0.89 J	182	NS	NS	NS	NS	NS	NS	1.3 J	<5.0	NS	0.56 J	*3*	<5.0	<5.0
Fluoride (mg/L)	16984-48-8	*2*	*0.334*	0.25	0.29	NS	NS	NS	NS	NS	NS	0.12	0.26	NS	0.30	*1.8*	0.24	0.29
Lead (µg/L)	7439-92-1	*15*	*14.1*	22.5	52.6	NS	NS	NS	NS	NS	NS	<5.0	18.2 J	NS	15.1	*25*	<5.0	<50.0
Lithium (µg/L)	7439-93-2	*NE*	*43.7*	6.0	11.8	NS	NS	NS	NS	NS	NS	0.78 J	3.1	NS	2.9	*NE*	63.3	63.9
Mercury (µg/L)	7439-97-6	*1*	*0.170*	<0.20	<0.20	NS	NS	NS	NS	NS	NS	<0.20	<0.20	NS	<0.20	*0.012*	<0.20	<0.20
Molybdenum (µg/L)	7439-98-7	*NE*	*13.6*	<5.0	2.9 J	NS	NS	NS	NS	NS	NS	<5.0	<5.0	NS	<5.0	*160*	262	223
Selenium (µg/L)	7782-49-2	*20*	*6.00*	<10.0	<10.0	NS	NS	NS	NS	NS	NS	<10.0	<10.0	NS	<10.0	*5*	<10.0	<10.0
Thallium (µg/L)	7440-28-0	*2*	*13.7*	0.10 J	0.19 J	NS	NS	NS	NS	NS	NS	<0.20	0.064 J	NS	0.075 J	*2*	0.17 J	<1.0
Radium 226 (pCi/L)	13982-63-3	*NE*	*0.80*	0.131	0.744	NS	NS	NS	NS	NS	NS	0.175	0.364	NS	0.995	*NE*	-0.431	0.125
Radium 228 (pCi/L)	15262-20-1	*NE*	*1.35*	0.847	0.953	NS	NS	NS	NS	NS	NS	-0.302	0.940	NS	2.03	*NE*	0.115	0.523
Combined Radium (pCi/L)	7440-14-4	*NE**	*2.09*	0.978	1.70	NS	NS	NS	NS	NS	NS	0.175	1.30	NS	3.03	*NE*	0.115	0.648
EPA APPENDIX I METALS																		
Copper (mg/L)	7440-50-8	*1*	*0.0071*	0.0126	0.0305	NS	NS	NS	NS	NS	NS	0.0016 J	0.0053	NS	0.0044 J	*0.007*	0.0012 J	<0.0050
Nickel (µg/L)	7440-02-0	*100*	*4.20*	8.5	37.9	NS	NS	NS	NS	NS	NS	2.0 J	4.0 J	NS	3.1 J	*25*	2.9 J	1.1 J
Silver (µg/L)	7440-22-4	*20*	*2.50*	<5.0	<5.0	NS	NS	NS	NS	NS	NS	<5.0	<5.0	NS	<5.0	*0.06*	<5.0	<5.0
Vanadium (µg/L)	7440-62-2	*7*	*8.30*	42.6	65.4	NS	NS	NS	NS	NS	NS	<5.0	24.4	NS	28.6	*NE*	1.6 J	<5.0
Zinc (mg/L)	7440-66-6	*1*	*0.0324*	0.0437	0.155	NS	NS	NS	NS	NS	NS	0.0484	0.0254	NS	0.0234	*0.05*	<0.0100	<0.0100

Prepared by: CG; Checked by: ZH

Notes:

* = no established 2L Standard. 5 pCi/l is the Federal Standard

BTV = background threshold value calculated for October 2024

NE = not established

NA = not analyzed

µg/L = micrograms per liter

pCi/L = picocuries per liter

mg/L = miligrams per liter

EQBL = Equipment Blank

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit

NS =Not Sampled

Shaded = concentration reported above (or below for pH) established 2L Standard, IMAC, or 2B Standard

Bold = concentration exceeded BTV

2L Standard = North Carolina Groundwater Protection Standard (T15A NCAC 02L .0202)

IMAC = Interim Allowable Maximum Concentration

2B Standard = North Carolina Surface Water and Wetland Standards (15A NCAC 02B) for Gulf Creek (SW-1) and Shaddox Creek (SW-2) which are both Class WS-IV Waters or are National Criteria per EPA

pH was field tested

Groundwater, surface water, and leachate samples collected for **July 2024 from July 15-18** and for **October 2024 from October 28-31** and analyzed for above parameters by Pace Analytical Services, LLC

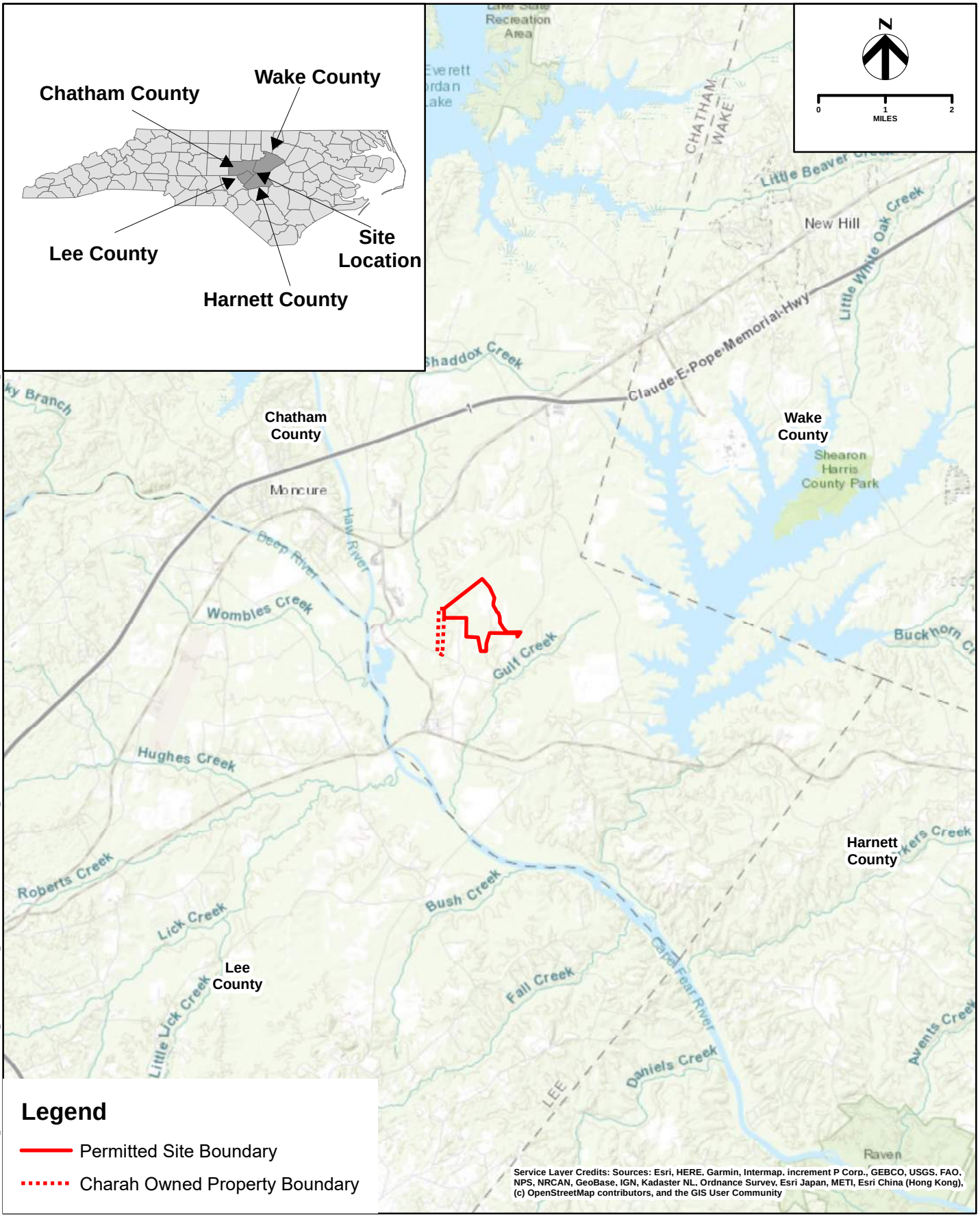
Constituents are only considered exceeding the BTV if the sampling event in question and the previous sampling event had detections for that constituent

Secondary USEPA Maximun Contaminant Levels (MCL) used where other regulatory criteria not established.

Figures

Figure 1. Regional Site Location Map
Figure 2. Sample Location Map
Figure 3. Regional Topographic Map
Figure 4. Historical Groundwater Elevations
Figure 5. Potentiometric Surface Map – July 2024
Figure 6. Potentiometric Surface Map – October 2024

This page intentionally left blank.



PATH: \\CLTSMAIN\GIS_DATA\GIS\PROJECTS\453925_CHARAH\NC\0237673_MONCURE\MINERECLAMATION\P-DIMAP_DOCS\MXD\GROUNDWATER MONITORING REPORT FIGURES\2021.04 SEMI-ANNUAL REPORT\FIGURE 1 REGIONAL MAP_BRICKHAVEN.MXD - USER: CGRUENBERG - DATE: 7/9/2021

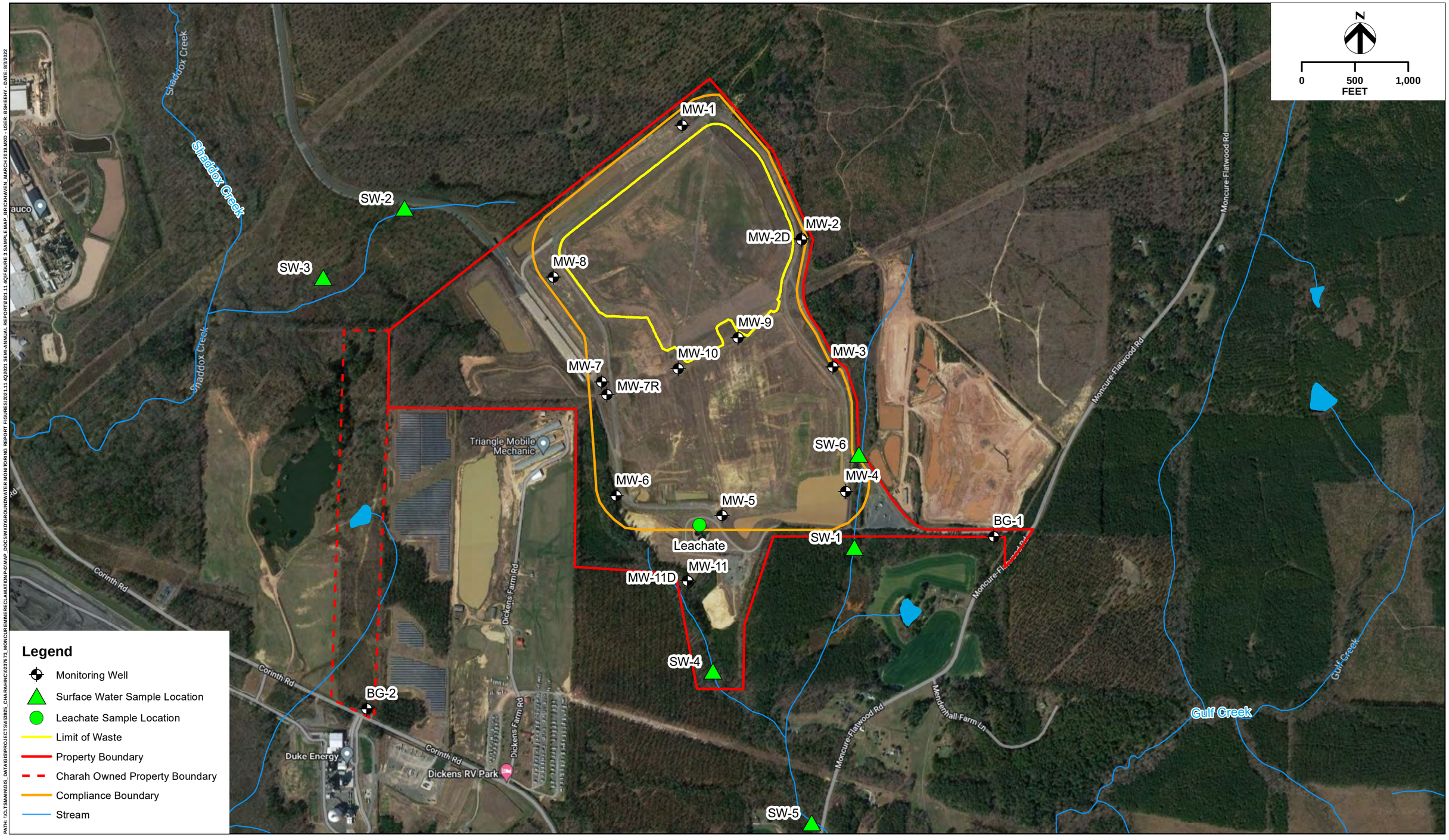
REGIONAL SITE LOCATION MAP
CHARAH SOLUTIONS, INC
MONCURE, NORTH CAROLINA

BRICKHAVEN NO. 2 MINE TRACT "A"

DATE
December 2024

FIGURE
1

This page intentionally left blank.



PATH: \\CLT\SMAINGIS_DATA\GIS\PROJECTS\415\925_CHARAH\NC\02376\73_MONCURE\MINERECLAMATION\P-D\MAP_DOCS\MXD\GROUNDWATER MONITORING REPORT FIGURES\2021.11 4Q\2021 SEMI-ANNUAL REPORT\2021.11 4Q\FIGURE 3 SAMPLE MAP_BRICKHAVEN_MARCH-2019.MXD - USER: BSHEEHY - DATE: 6/3/2022

SAMPLE LOCATION MAP
CHARAH SOLUTIONS, INC.
MONCURE, NORTH CAROLINA

BRICKHAVEN NO. 2 MINE TRACT "A"

DATE
December 2024

FIGURE
2

This page intentionally left blank.

PATH: \\CLTSMAIN\GIS_DATA\GIS\PROJECTS\453925_CHARAH\NC\02376\73_MONCURE\MINEREC\LAMATION\P-DIMAP_DOCS\MXD\GROUNDWATER MONITORING REPORT FIGURES\2021.04 SEMI-ANNUAL REPORT\FIGURE 2 USGS TOPO MAP_BRICKHAVEN.MXD - USER: CGRUENBERG - DATE: 7/9/2021

REGIONAL TOPOGRAPHIC MAP
CHARAH SOLUTIONS, INC
MONCURE, NORTH CAROLINA

BRICKHAVEN NO. 2 MINE TRACT "A"

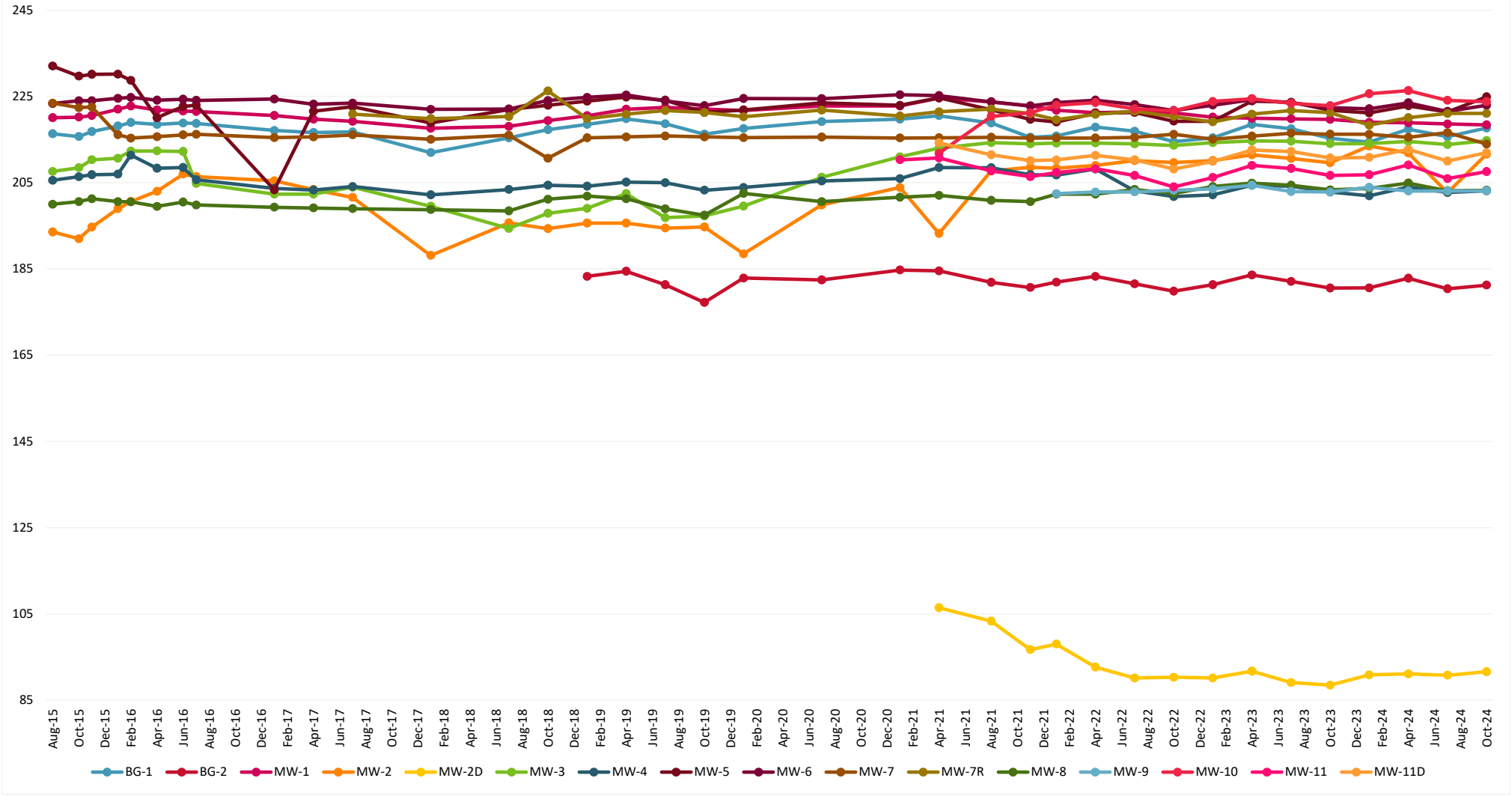
DATE

December 2024

FIGURE

3

Figure 4: Historical Groundwater Elevations



LEGEND

- Monitoring Wells
- Potentiometric Contours (5' Interval)
- Inferred Potentiometric Contours (5' Interval)
- Streams (NHD)
- Limit of Waste
- Permitted Site Boundary
- Charah Owned Property Boundary

MW-1 218.58
MW-2 202.70
MW-2D 90.81
MW-3 213.81
MW-4 202.74
MW-5 221.39
MW-6 221.51
MW-7 216.60
MW-7R 221.04
MW-8 203.11
MW-9 203.07
MW-10 224.08
MW-11 205.94
MW-11D 209.99
BG-1 215.65
BG-2 180.38

220 215 210 205 200 195 190 185

0 800 1,600 2,400 3,200 Feet

1" = 800'

NOTES:
1. GROUNDWATER ELEVATIONS DERIVED FROM DEPTH TO WATER MEASUREMENTS COLLECTED ON JULY 15, 2024.
2. MONITORING WELLS MW-2D, MW-9, AND MW-11D WERE NOT USED FOR CONTOURS AS THEY SCREENED IN BEDROCK. MONITORING WELL MW-2 WAS NOT USED FOR CONTOURS AS THE GROUNDWATER ELEVATION AT THIS LOCATIONS WAS ANOMALOUS.
3. TOPOGRAPHY DATA FOR THE SITE WAS OBTAINED FROM NC ONEMAP GEOGRAPHIC INFORMATION SYSTEM (GIS) WEBSITE (DATED 2020).
4. AERIAL IMAGERY OBTAINED FROM MICROSOFT BING WEB SERVICE VIA ESRI ARCGIS ONLINE.

HDR Engineering, Inc. of the Carolinas License Number: F-0116
440 S Church Street, Suite 1000 Charlotte, NC 28202-2075

GROUNDWATER CONTOUR MAP - JULY 15, 2024
BRICKHAVEN NO. 2 MINE TRACT "A"
CHARAH SOLUTIONS, INC.
MONCURE, NORTH CAROLINA

DATE
DECEMBER 2024

FIGURE
5

PATH: C:\USERS\VRIOSPEREZ\DOCUMENTS\ARCGIS\PROJECTS\ARCGIS PROJECT - BRICKHAVEN17-2_WIP\MAP_DOCS\BRICKHAVEN_GW2025_WIP.APRX - USER: VRIOSPEREZ - DATE: 1/3/2025

LEGEND

- Monitoring Wells
- Potentiometric Contours (5' Interval)
- Inferred Potentiometric Contours (5' Interval)
- Streams (NHD)
- Limit of Waste
- Permitted Site Boundary
- Charah Owned Property Boundary

MW-1 218.39
MW-2 211.57
MW-2D 91.64
MW-3 214.73
MW-4 203.12
MW-5 224.87
MW-6 222.93
MW-7 213.93
MW-7R 221.05
MW-8 203.24
MW-9 203.12
MW-10 223.79
MW-11 207.55
MW-11D 211.92
BG-1 217.66
BG-2 181.24

220 215 210 205 200 195 190 185

0 800 1,600 2,400 3,200 Feet

1" = 800'

NOTES:
1. GROUNDWATER ELEVATIONS DERIVED FROM DEPTH TO WATER MEASUREMENTS COLLECTED ON OCTOBER 28, 2024.
2. MONITORING WELLS MW-2D, MW-9, AND MW-11D WERE NOT USED FOR CONTOURS AS THEY SCREENED IN BEDROCK.
3. TOPOGRAPHY DATA FOR THE SITE WAS OBTAINED FROM NC ONEMAP GEOGRAPHIC INFORMATION SYSTEM (GIS) WEBSITE (DATED 2020).
4. AERIAL IMAGERY OBTAINED FROM MICROSOFT BING WEB SERVICE VIA ESRI ARCGIS ONLINE.

HDR Engineering, Inc. of the Carolinas License Number: F-0116
440 S Church Street, Suite 1000 Charlotte, NC 28202-2075

GROUNDWATER CONTOUR MAP - OCTOBER 28, 2024
BRICKHAVEN NO. 2 MINE TRACT "A"
CHARAH SOLUTIONS, INC.
MONCURE, NORTH CAROLINA

DATE
DECEMBER 2024

FIGURE
6

PATH: C:\USERS\VROSPEREZ\DOCUMENTS\ARCGIS\PROJECTS\ARCGIS PROJECT - BRICKHAVEN\7.2_WIP\MAP_DOCS\BRICKHAVEN_GW2025_WIP.APRX - USER: VROSPEREZ - DATE: 1/3/2025

A

Appendix A – Field Data Sheets

This page intentionally left blank.

GROUNDWATER DEPTH

Project Name: Charah – Brickhaven

Date: 7/15/24

Project Address: Moncure

Project No:

Time Started: 9:40

Time Finished: 12:30

Personnel: Cameron Hosmer

Well ID	Depth to Water	Total Depth
BG-1	12.59	43.05
BG-2	13.65	26.11
MW-1	61.50	75.30
MW-2D	142.06	~~150.15~~ 145
MW-2D	29.06	145 ~~60.15~~
MW-3	8.751	43.36
MW-4	14.39	25.34
MW-5	23.47	46.14
MW-6	9.44	29.47
MW-7	15.11	17.18
MW-7R	21.18	39.94
MW-8	33.36	49.06
MW-9	37.29	38.9
MW-10	33.66	47
MW-11	13.29	43.5
MW-11D	9.41	68.1

Well ID	Depth to Water	Total Depth

Groundwater Sampling Form

Sample ID: LEACHATE

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/16/24	**Weather:** 90°F Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s): YSI Pro Quatro #16509E

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
16:30	—	—	—	—	8.74	—	4.61	---	-94.6	—	tan

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
LEACHATE	16:35	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 16:00
Date Sampled: 7/16/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: BG-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/15/24	**Weather:** Sunny 99°F

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 26' - 41'	**Pump Type:** ESP
Well Depth (ft): 43.05'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 12.55	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
*1 Well Volume = (Total Depth - Static Water Level) * Well Capacity*	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 15:25

Parameter Instrument(s): YSI Pro Quatro # 14630 ES

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:30	.75	.75	175	12.58	6.53	23.5	1042	3.41	19.0	9.45	Clear
15:35	.75	1.5	175	12.59	6.51	24.5	1034	3.45	20.6	9.61	Clear
15:40	.75	2.25	175	12.61	6.50	24.0	1033	3.82	19.1	8.66	clear
15:45	.75	3	175	12.63	6.50	24.3	1027	4.00	18.4	6.86	clear
15:50	.75	3.75	175	12.65	6.49	23.9	1025	3.30	14.7	4.65	Clear
15:55	.75	4.50	175	12.68	6.49	23.8	1022	3.72	8.1	2.46	clear
16:00	.75	5.25	175	12.71	6.49	23.9	1023	3.64	8.2	1.94	clear
16:05	.75	6.00	175	12.74	6.49	24.9	1024	3.69	8.1	1.68	clear
Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-1	16:10	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 14:10

Date Sampled: 7/15/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate= 6.0 -

Groundwater Sampling Form

Sample ID: BG-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/15/24	**Weather:** 92°F Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): 26.11'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 13.85	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 13:00

Parameter Instrument(s): YSI Pro Quatro #1830

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
13:05	.75	0.375	[illegible]	13.85	6.76	17.7	3179	2.17	-46.5	34.3	Clear
13:10	.75	1.75	175	13.87	6.76	18.6	3169	1.41	-42.4	30.7	Clear
13:15	.75	2.62	175	13.89	6.78	18.7	3167	1.79	-41.3	24.6	Clear
13:20	.75	3.5	175	13.91	6.78	19.5	3159	1.50	-42.4	19.2	Clear
13:25	.75	4.375	175	13.93	6.78	19.5	3114	1.36	-43.4	22.2	Clear
13:30	.75	5.25	175	13.94	6.79	17.5	3034	1.06	-56.4	22.3	Clear
13:35	.75	6.125	175	13.97	6.79	18.2	3009	1.02	-58.7	22.4	Clear
13:40	.75	7	175	13.99	6.79	17.7	2944	0.89	-61.9	17.7	Clear
13:45	.75	7.875	175	14.02	6.79	17.9	2936	0.81	-65.6	15.9	Clear
13:50	.75	8.75	175	14.05	6.79	17.7	2832	0.69	-66.6	15.1	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-2	14:30	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 14:30

Date Sampled: 7/15/24 **Sampler Signature:** [signature]

Notes: Pumprate= 6.3 - 6.2

Groundwater Sampling Form

Sample ID: BG-2

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
13:55	.75	9.625	175	14.07	6.79	18.4	2829	0.42	-70.6	14.9	Clear
14:00	.75	10.5	175	14.09	6.79	19.0	2816	0.57	-80.3	17.1	Clear
14:05	.75	2.5 gal	175	14.12	6.80	18.7	2677	0.42	-85.5	16.4	Clear
14:10	.75	2.66g	175	14.15	6.80	19.0	2645	0.34	-90.1	19.2	Clear
14:15	.75	2.800g	175	14.17	6.80	17.9	2592	0.27	-100.6	14.1	Clear
14:20	.75	2.925	175	14.19	6.80	18.1	2572	0.26	-106.4	9.90	Clear
14:25	.75	3.0 gal	175	14.21	6.80	18.0	2569	0.25	-103.9	9.24	Clear
Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Groundwater Sampling Form

Sample ID: MW-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/18/24	**Weather:** 80°F Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 57' - 72'	**Pump Type:** ESP
Well Depth (ft): 75.30'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): ~~61.58~~ 61.50	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 9:35

Parameter Instrument(s): YSI

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
9:40	.25	6.25	125	~~61.58~~	7.17	23.1	653	2.24	-84.2	199	murky
9:45	.75	1.375	150	61.52	7.18	22.9	649	1.91	-99.1	192	SAA
9:50	.75	2.125	150	61.53	7.17	22.4	644	1.63	-95.4	190	SAA
9:55	.75	2.875	150	61.55	7.18	21.6	645	1.77	-98.2	211	SAA
10:00	.75	3.625	150	61.57	7.13	20.9	656	1.41	-95.5	111	SAA
10:05	.75	4.375	150	61.59	7.12	21.2	729	1.55	-93.8	101	SAA
10:10	.75	5.125	150	61.62	7.15	21.3	732	1.53	-94.1	68.8	SAA
10:15	.75	5.875	200	61.64	7.16	21.9	719	1.76	-92.1	52.6	SAA
10:20	.75	6.625	200	61.67	7.16	21.6	704	1.79	-92.6	44.0	less murky
10:25	.75	7.375	200	61.69	7.16	23.0	730	1.66	-93.7	71.4	murky

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-1	11:45	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 11:45
Date Sampled: 7/18/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate= 14.3

Groundwater Sampling Form

Sample ID: MW-1

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)	
10:30	.750	8.125	150	61.72	7.11	22.6	743	2.30	-88.1	61.1	clear	
10:35	.150	8.875	150	61.74	6.96	21.7	1118	1.59	-93.1	76.7	clear some solids	
10:40	.150	9.625	150	61.76	6.89	22.8	1455	1.42	-91.1	63.6	Some Solids	
10:45	.150	10.375	150	61.79	6.86	23.7	1621	1.28	-83.6	59.4	clear some solids	
10:50	.150	11.125	150	61.80	6.82	26.9	1784	1.21	-83.1	31.3	clearing	
10:55	.150	11.875	150	61.83	6.79	26.4	2084	1.21	-80.1	21.5	clearer	
11:00	.150	12.625	150	61.85	6.76	26.1	2106	1.08	-86.4	19.1	clear	
11:05	.150	4.59	150	61.87	6.73	25.4	2131	1.07	-89.9	19.2	Clear	
11:10	.150	14.125	150	61.89	6.71	23.9	2450	1.05	-91.4	13.6	clear	
11:15	.150	14.875	150	61.91	6.71	24.2	2490	0.99	-91.9	13.3	clear	
11:20	.150	15.625	150	61.92	6.71	23.6	2497	0.97	-90.9	15.7	clear	
11:25	.150	16.375	150	61.93	6.69	22.4	2694	0.91	-92.3	21.4	clear + solids	
11:30	.150	17.125	150	61.93	6.69	23.5	2695	0.90	-91.5	14.4	clear + solids	
11:35	.750	17.875	150	61.93	6.68	23.9	2699	0.89	-90.1	16.2	clear + Solids	
11:40	.150	15.625	150	61.93	6.68	24.2	2704	0.88	-89.3	17.3	clear + Solids	
2-hours Sample	Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

-14.4 -14.1

Groundwater Sampling Form

Sample ID: MW-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Horner
Date: 7/16/24	**Weather:** ~~AM~~ 98°F Sunny - 102°F

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 32' - 47'	**Pump Type:** ESP
Well Depth (ft): 50.15'	**Pump Depth (ft-bTOC):** 35.5
Depth-to-Water (ft-bTOC): 29.06	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purged @ 13:35

Parameter Instrument(s): YSI Pro Quatro #16305E

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)	
13:40	.75	.75	150	29.06	7.40	23.7	4151	2.94	-83.7	119	yellowish	
13:45	.75	1.50	150	29.10	7.40	26.3	4260	2.26	-80.4	111	SAA	
13:50	.75	2.25	150	29.12	7.40	26.4	4299	1.95	-73.9	103	SAA	Solids
13:55	.62	2.675	125	29.14	7.40	26.3	4379	2.04	-71.8	62.3	clearer	
14:00	.67	3.5	125	29.16	7.40	28.9	4384	2.09	-58.3	54.5	SAA	
14:05	.62	4.125	125	29.19	7.40	28.8	4333	2.17	-42.5	36.2	SAA	
14:10	.62	4.75	125	29.22	7.39	31.2	4333	2.13	-36.7	15.9	Clear	Few Solids
14:15	.62	5.375	125	29.23	7.37	33.7	4339	1.865	-46.3	14.2	Clear	Few Solids
14:20	.62	6	125	29.24	7.37	33.9	4359	1.854	-49.4	12.7	SAA	
14:25	.62	6.625	125	29.27	7.37	33.8	4362	1.900	-50.3	10.3	Clear	

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2	14:40	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Horner **Sample Time:** 14:40

Date Sampled: 7/16/24 **Sampler Signature:** Cameron Horner

Notes: Pumprate= Monsoon 6.2 - 6.4

Groundwater Sampling Form

Sample ID: MW-2

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)	
14:30	.62	7.25	125	29.29	7.38	32.4	4334	1.89	-52.6	11.1	clear	Sew Solids
14:35	.62	7.875	125	29.31	7.38	32.6	4341	1.88	-54.4	9.00	clear!	
sample												

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Groundwater Sampling Form

Sample ID: MW-2D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/18/24	**Weather:** 96° F Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 129' - 144'	**Pump Type:** ESP
Well Depth (ft): 147.4'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 142.06	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
		Baled	—	142.06	10.74	22.6	945	2.64	-114.9	4.36	Clear
	Partial	Turbid	Sample	in	TDS	&	RADS				
		Partial	TDS	only							

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2D	13:15	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 13:15
Date Sampled: 7/18/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-3

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/18/24	**Weather:** 79°F Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 25' - 40'	**Pump Type:** ESP
Well Depth (ft): 43.36'	**Pump Depth (ft-bTOC):** 23.5'
Depth-to-Water (ft-bTOC): 8.74	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 750

Parameter Instrument(s): YSI Pro Quatro #18330 ES

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
7:55	.875	0.875	175	8.75	7.42	22.3	4178	2.36	-119.5	14.4	Clear some solids
8:00	.675	1.75	~~175~~ 150	8.77	7.39	21.9	4162	2.36	-117.9	19.9	clear some solids
8:05	.675	2.625	~~175~~ 150	8.79	7.38	22.4	4153	2.36	-115.8	11.6	Clear some Solids
8:10	.4575	3.5	~~175~~ 150	8.81	7.37	22.1	4160	2.30	-114.6	4.14	clear some Solids
8:15	.875	4.375	150	8.83	7.37	22.4	4145	2.08	-107.1	5.75	Clear w/ Solids
8:20	.625	5.25	150	8.85	7.37	22.9	4189	1.84	-104.6	4.44	clear w/ Solids
8:25	.625	6.125	150	8.88	7.37	23.2	4190	1.79	-96.9	9.17	SAA
8:30	.625	7	150	8.89	7.37	23.3	4194	1.74	-93.8	8.64	SAA
8:35	.625	7.875	150	8.91	7.36	23.5	4196	1.76	-92.7	1.80	SAA Clear
8:40	.625	8.75	150	9.94	7.36	23.6	4205	1.80	-90.1	2.63	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Could sample here but SOG hasn't arrived w/ bottles yet. [illegible]

Sample Information				
Sample Number	Collection Time	Parameter	Container	Preservative
MW-3	8:50	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 8:50

Date Sampled: 7/18/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate= 5.8 - 7.4 - 8.4

Groundwater Sampling Form

Sample ID: MW-3

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
8:45	1625	9.25	150	8.47	7.36	24.1	4203	1.79	-89.3	1.69	Clear
Sample											

5:30 Arrives

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

-11.1

Groundwater Sampling Form

Sample ID: MW-4

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/16/24	**Weather:** 99°F Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): 25.34'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 14.63	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 17:25

Parameter Instrument(s): YSI ProQuatro #18305E

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
17:30	0.875	0.875	175	14.63	5.91	23.6	1999	0.84	-14.2	34.2	clear
17:35	0.875	1.75	175	14.67	5.92	24.6	2002	0.70	-12.8	22.9	clear
17:40	0.875	2.625	175	14.70	5.93	25.3	2012	0.26	-30.1	26.7	clear
17:45	0.875	3.5	175	14.72	5.93	25.9	2003	0.27	-30.1	18.4	clear
17:50	0.875	4.375	175	14.75	5.92	27.4	2021	0.26	-23.8	23.1	clear
17:55	0.875	5.25	175	14.77	5.93	28.46	2051	0.29	-16.9	21.5	clear
18:00	0.875	6.125	175	14.79	5.88	27.2	2063	0.29	-13.2	20.2	clear
18:05	0.875	7	175	14.81	5.86	26.6	2060	0.34	-11.4	19.0	clear
18:10	0.875	7.875	175	14.82	5.89	27.0	2046	0.24	-11.9	10.6	clear
18:15	0.875	8.75	175	14.85	5.90	27.9	2048	0.23	-12.1		

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-4	18:25	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 18:25

Date Sampled: 7/16/24 **Sampler Signature:** Cam Hosm

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-4

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:20	0.875	9.625	175	14.48	5.91	27.7	2050	0.23	-11.1		

Groundwater Sampling Form

Sample ID: MW-5

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/16/24	**Weather:** 95°F

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 34' - 44'	**Pump Type:** ESP
Well Depth (ft): 46.14'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 23.47	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purged 15:45

Parameter Instrument(s): YSI Pro Quatro #18705E

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
15:50	.675	.675	.175	23.50	6.46	27.9	399.5	3.97	20.4	24.9	Clear
15:55	.675	1.35	175	23.51	6.86	27.7	374.4	4.24	20.1	24.0	clear
16:00	.675	2.025	175	23.55	6.81	27.9	351.6	4.44	19.9	22.6	clear
16:05	.675	3.5	175	23.57	6.85	27.7	314.1	4.69	19.8	17.4	clear
16:10	.675	4.375	175	23.59	6.84	27.9	314.3	4.39	19.9	14.6	Clear
16:15	.675	5.25	175	23.61	6.84	27.1	315.2	4.47	17.6	12.2	clear
16:20	.675	6.125	175	23.64	6.84	28.9	316.9	4.39	12.5	13.6	clear
16:25	.675	7	175	23.66	6.84	28.9	316.4	4.38	13.6	11.7	Clear
16:30	.675	7.875	175	23.69	6.84	27.1	319.1	4.31	14.5	9.38	clear
Sample 16:35	Sample										

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-5	16:35	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 16:35

Date Sampled: 7/16/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-6

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/16/24	**Weather:** 88°F Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 12' - 27'	**Pump Type:** ESP
Well Depth (ft): 29.47'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 9.45	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 8:00

Parameter Instrument(s): YSI ProQuatro #16305

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
8:05	.875	.875	175	9.47	6.32	20.9	1018	0.56	-117.4	11.8	clear
8:10	.875	1.75	175	9.50	6.32	21.1	1022	0.46	-117.0	10.4	clear
8:15	0.875	2.625	175	9.52	6.32	19.9	1014	0.16	-149.3	7.05	Clear
8:20	1	3.62	200	9.54	6.32	21.1	1015	0.18	-144.3	9.24	clear
8:25	1	4.62	200	9.56	6.32	21.2	1013	0.12	-138.7	14.2	clear
8:30	1	5.62	200	9.59	6.32	23.0	1011	0.21	-118.4	8.61	clear
8:35	1	6.62	200	9.61	6.32	24.5	1016	0.34	-98.0	7.04	clear
8:40	1	7.62	200	9.63	6.33	25.6	1023	0.50	-68.4	6.90	clear
8:45	1	8.62	200	9.65	6.33	26.2	1024	0.53	-51.8	6.64	clear
8:50	1	9.62	200	9.67	6.32	26.1	1030	0.50	-59.6	4.68	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample @ 9:00

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-6 (DUP)	9:00	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 9:00
Date Sampled: 7/16/24	**Sampler Signature:** Cam Hosmer

Notes: Pumprate= 5.1 —

Groundwater Sampling Form

Sample ID: MW-7R

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/16/24	**Weather:** 92°F Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 26' - 36'	**Pump Type:** ESP
Well Depth (ft): 39.94'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 21.18	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge@ 10:00

Parameter Instrument(s): YSI PID

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10:05	1	1	200	21.17	7.39	23.9	1563	3.61	34.5	22.4	clear
10:10	1	2	200	21.21	7.40	25.2	1569	3.33	30.1	24.6	clear
10:15	1	3	200	21.23	7.40	26.0	1573	3.25	25.3	29.4	clear
10:20	1	4	200	21.25	7.40	23.9	1588	3.45	23.7	26.9	clear
10:25	1	5	200	21.28	7.41	24.4	1566	3.19	21.3	27.6	clear
10:30	1	6	200	21.30	7.41	24.6	1567	3.13	19.2	13.6	clear
10:35	1	7	200	21.32	7.41	24.6	1572	3.20	19.6	11.6	clear
10:40	1	6	200	21.35	7.41	24.5	1572	3.18	19.2	10.4	clear
10:45	1	8	200	21.40	7.40	24.4	1570	3.17	19.3	7.35	clear
Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-7R	10:50	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 10:50
Date Sampled: 7/16/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate= 7.2 - 7.6

Groundwater Sampling Form

Sample ID: ~~SW-8~~ MW-8

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/17/24	**Weather:** 95°F Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A 33.36	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 13:30

Parameter Instrument(s): YSI Pro Quatro #18390 ES

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
13:35	0.625	0.625	125	33.34	6.93	25.0	2390	1.13	-29.7	651	Reddish orange, murky
13:40	0.750	1.375	150	33.36	6.94	27.4	2394	1.11	-36.6	549	Saa
13:45	0.625	2	125	33.38	6.95	27.4	2397	1.00	-44.9	465	Saa
13:50	.625	2.625	125	33.40	6.95	26.9	2387	0.63	-51.3	341	SAA
13:55	.625	3.25	125	33.41	6.94	27.2	2394	0.49	-47.6	296	SAA
14:00	.625	3.875	125	33.42	6.93	27.8	2410	0.36	-41.3	255	less murky
14:05	.625	4.5	125	33.47	6.93	26.9	2394	0.38	-39.3	184	less red
14:10	.625	5.125	125	33.49	6.95	24.9	2337	0.24	-69.4	164	less red
14:15	.625	5.75	125	33.51	6.96	25.1	2294	0.20	-90.9	145	less murky
14:20	.625	6.375	125	33.52	6.97	26.0	2240	0.10	-69.5	139	SAA

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-8	15:25	Radium 226/228	2 - 1 L Poly	HNO3
~~SW-2~~		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 15:25

Date Sampled: 7/17/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate= 10.4 - 10.9 - 10.6

Groundwater Sampling Form

Sample ID: ~~SW-2~~ MW-8

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
14:25	.625	7	125	33.53	6.98	25.9	2197	0.12	-86.7	87.5	Cloudy
14:30	.625	7.625	125	33.54	6.99	26.4	2076	0.10	-104.7	52.1	clearer
14:35	.625	8.25	125	33.55	6.98	24.8	2145	0.11	-102.2	46.8	clearer
14:40	.625	9.0(0)	150	33.58	6.99	24.6	2019	0.09	-111.2	35.3	SAA
14:45	.625	9.75	150	33.61	7.01	24.7	1989	0.06	-113.6	24.7	SAA
14:50	.625	10.5	150	33.63	7.03	24.6	1728	0.09	-100.1	26.4	SAA
14:55	.625	11.25	150	33.64	7.04	24.5	1716	0.08	-100.1	18.7	Clearer
15:00	.625	12	150	33.66	7.05	24.7	1697	0.06	-111.6	20.1	clear
15:05	.625	12.75	150	33.64	7.06	22.6	1629	0.07	-120.1	14.2	clear
15:10	.625	13.5	150	33.69	7.06	23.4	1646	0.07	-119.8	13.5	clear
15:15	.625	14.25	150	33.71	7.07	23.9	1665	0.06	-122.4	10.4	clear
15:20	.625	15	150	33.72	7.07	23.6	1649	0.06	-126.2	9.3	clear
Sample											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Groundwater Sampling Form

Sample ID: MW-9

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: *Moncure, NC*	***Sampling Personnel:*** Cameron Hosmer
Date: 7/17/24	**Weather:** 95° & Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 26' - 36'	**Pump Type:** ESP
Well Depth (ft): ~~38~~ 38.00 38.09	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 37.30	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Bailer

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
11:05		Bailed		37.30	7.30	34.	931	7.05	-27.1	2.28	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-9	12:05	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 12:05

Date Sampled: 7/17/24 **Sampler Signature:** Cameron Hosmer

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: MW-10

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/17/24	**Weather:** 95°F

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 37' - 47'	**Pump Type:** ESP
Well Depth (ft): 49.91	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 33.66	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 16:05

Parameter Instrument(s): YSI Pro Quatro #16305E

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
16:10	0.625	.625	125	33.60	7.75	25.4	614	0.52	-171.4	3.66	clear
16:15	0.625	1.25	125	33.63	7.78	24.9	619	0.76	-170.9	4.24	clear
16:20	0.625	1.875	125	33.67	7.77	25.2	608	1.19	-149.8	4.41	clear
16:25	0.625	2.5	125	33.69	7.79	25.6	609	2.01	-142.6	5.22	clear
16:30	0.625	3.125	125	33.71	7.76	24.9	602	1.75	-145.8	3.54	clear
16:35	0.625	3.75	125	33.74	7.77	24.2	604	1.36	-142.8	4.14	clear
16:40	0.625	4.375	125	33.76	7.77	24.7	610	1.40	-146.9	2.83	clear
16:45	0.625	5	125	33.79	7.77	24.3	611	1.41	-146.6	2.19	clear
16:50	0.625	5.625	125	33.81	7.77	24.7	619	1.40	-147.2	3.13	clear
Sample		6.25									

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-10	16:55	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer	**Sample Time:** 16:55
Date Sampled: 7/17/24	**Sampler Signature:** Cameron Hosmer

Notes: Pumprate= 10.5 - 11.2/3

Groundwater Sampling Form

Sample ID: MW-11

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Horner
Date: 7/17/24	**Weather:** 80°F Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 28.50' - 43.50'	**Pump Type:** ESP
Well Depth (ft): 43.50'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 13.30	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge 8:05

Parameter Instrument(s): YSI Pro Quatro #1 #1830 ES

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
8:10	0.675	0.675	175	13.30	6.63	19.6	754	1.69	-78.7	14.2	Some Flocks
8:15	.675	1.75	175	13.32	6.65	20.6	755	1.71	-72.9	15.1	Some Silt
8:20	0.625	2.375	125	13.34	6.67	21.7	755	1.75	-70.6	17.0	Some silt
8:25	0.625	3	125	13.35	6.67	22.5	757	1.56	-68.2	14.8	clearer
8:30	0.625	3.625	125	13.38	6.67	23.2	762	1.30	-65.8	13.1	clear
8:35	0.625	4.25	125	13.40	6.67	23.1	766	1.27	-69.4	11.7	clear
8:40	0.625	4.875	125	13.42	6.66	23.1	764	1.25	-70.1	9.7	clear
~~8:45~~	Sample										
8:50											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11	8:45	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Horner	**Sample Time:** 08:45
Date Sampled: 7/17/24	**Sampler Signature:** Cameron Horner

Notes: Pumprate= ~~7.4~~ 6.8

7.4 - 8.8 - 11.1 —

Pump Issue? Controller Issue?

Replacement coming soon

Groundwater Sampling Form

Sample ID: MW-11D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Cameron Hosmer
Date: 7/17/24	**Weather:** 85°F Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 50' - 65'	**Pump Type:** ESP
Well Depth (ft): 68.18'	**Pump Depth (ft-bTOC):**
Depth-to-Water (ft-bTOC): 9.40	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information Purge @ 09:20

Parameter Instrument(s): YSI Pro Quatro #18330 ES

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
09:25	0.625	.625	125	9.40	8.10	22.3	572	3.31	-74.1	2.67	Clear
09:30	0.625	1.25	125	9.42	8.11	22.4	575	3.34	-75.3	4.11	Clear
9:35	0.625	1.875	125	9.45	8.12	23.8	573	2.57	-49.2	1.76	clear
9:40	0.625	2.5	125	9.47	8.12	24.3	576	2.41	-36.9	2.44	Clear
9:45	0.625	3.125	125	9.48	8.12	24.3	574	2.30	-34.9	4.20	Clear
9:50	0.625	3.75	125	9.50	8.12	24.4	579	2.17	-35.1	2.48	Clear
9:55	0.625	4.375	125	9.51	8.12	24.6	582	2.48	-36.3	5.16	Clear
10:00	0.625	5	125	9.53	8.12	23.9	579	2.28	-42.4	3.22	clear
10:05	0.625	5.625	125	9.55	8.12	24.5	575	2.22	-50.1	1.14	clear
10:10	0.625	6.25	125	9.58	8.13	23.9	580	2.21	-52.6	0.89	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11D	10:15	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Cameron Hosmer **Sample Time:** 10:15

Date Sampled: 7/17/24 **Sampler Signature** Cameron Hosmer

Notes: Pumprate= 6.4 on Monsoon = Start

Water Quality Instrument Calibration Log

Project Name: Charah 3Q

Event: 3Q GWS

Solution Standard	Lot Number	Expiration Date	Standard Concentration	Temp. (°C)	Pre-Calibration Reading	Calibrated Reading	Initials
Instrument: YSI PRO Quatro 1	Serial Number	18300ES	10F100251	Date: 7/15/24		Time: 17:05	
pH 7.0 (S.U.)	8401525	1/31/26	7.00	30.4	7.04	7.01	CH
pH 10.0 (S.U.)	6310010	10/14/25	10.00	30.6	20.00	10.00	CH
pH 4.0 (S.U.)	83 12481	1/17/26	4.00	32.1	4.21	4.01	CH
Sp. Conductance (µS/cm)	84023358	3/7/26	1413	32.2	1402	1410	CH
ORP (mV)	8311538	9/9/24	200	31.9	198	200	CH
Instrument: SAA		Serial Number SAA		Date: 7/16/24		Time: ~~07:50~~ 18:50	
pH 7.0 (S.U.)	SAA	SAA	7.00	26.8	7.14	7.03	CH
pH 10.0 (S.U.)	SAA	SAA	10.00	26.7	10.00	10.00	CH
pH 4.0 (S.U.)	SAA	SAA	4.00	25.9	4.10	4.01	CH
Sp. Conductance (µS/cm)	SAA	SAA	1413	26.0	1431	1414	CH
ORP (mV)	SAA	SAA	200	26.2	208	201	CH
Instrument: SAA		Serial Number SAA		Date: 7/17/24		Time: 17:20	
pH 7.0 (S.U.)	SAA	SAA	7.00	24.9	7.11	7.05	CH
pH 10.0 (S.U.)	SAA	SAA	10.00	25.2	9.84	10.01	CH
pH 4.0 (S.U.)	SAA	SAA	4.00	25.6	4.18	4.03	CH
Sp. Conductance (µS/cm)	SAA	SAA	1413	25.8	1409	1413	CH
ORP (mV)	SAA	SAA	200	26.1	192	200	CH
Instrument: YSI PRO Quatro		Serial Number 10F100251		Date: 7/18/24		Time: 15:50	
pH 7.0 (S.U.)	SAA	SAA	7.00	30.2	7.11	7.02	CH
pH 10.0 (S.U.)	SAA	SAA	10.00	31.8	10.04	10.01	CH
pH 4.0 (S.U.)	SAA	SAA	4.00	31.2	4.22	4.09	CH
Sp. Conductance (µS/cm)	SAA	SAA	1413	31.1	1419	1413	CH
ORP (mV)	SAA	SAA	200	30.4	159	203	CH
Instrument:		Serial Number		Date:		Time:	
pH 7.0 (S.U.)							
pH 10.0 (S.U.)							
pH 4.0 (S.U.)							
Sp. Conductance (µS/cm)							
ORP (mV)							

Sampler Signature: _____ Page ___ of ___

GROUNDWATER DEPTH

Project Name: Charah – Brickhaven
Project Address: Moncure
Time Started:
Personnel: Z. Hecht / STG

Date: 10/28/24
Project No:
Time Finished:

Well ID	Depth to Water	Total Depth
BG-1	10.53	43.05
BG-2	12.99	26.11
MW-1	61.69	75.30
MW-2	20.19	50.15
MW-2D	141.23	145
MW-3	7.43	43.36
MW-4	14.01	25.34
MW-5	19.99	46.14
MW-6	8.02	29.47
MW-7	~~17.78~~	17.18
MW-7R	21.17	39.94
MW-8	33.23	49.06
MW-9	37.24	38.9
MW-10	33.95	47
MW-11	11.68	43.5
MW-11D	7.48	68.1

last

NS

last

Well ID	Depth to Water	Total Depth

Groundwater Sampling Form

Sample ID: BG-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecker
Date: 10/29/24	**Weather:** 60's cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 26' - 41'	**Pump Type:** ESP
Well Depth (ft): 43.05'	**Pump Depth (ft-bTOC):** 37
Depth-to-Water (ft-bTOC): 10.53	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; (2") = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hanna Turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10/28/24 1200											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-1	1115	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecker	**Sample Time:** 1115
Date Sampled: 10/29/24	**Sampler Signature:**

Notes: Pumprate=

Purge time:

*See back of page

*Purge started on 10/28/24, turbidity >1000, resumed purge today (10/29)

Groundwater Sampling Form

Sample ID: BG-1

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED ~~(Liters)~~ Gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. ~~(µS/cm)~~ (5%) mS/cm	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
10/29/24 0912		0.1	100	11.25	6.74	17.49	0.767	2.79	109	165	orange/cloudy
* 0917	—	Clear flow through cell									
0923		0.2	150	11.76	6.85	17.58	0.771	4.46	114	~~165~~ 224	cloudy
0929		0.3	150	11.65	6.52	17.29	0.775	2.32	117	211	cloudy/orange
0933		0.5	150	11.74	6.47	17.19	0.776	2.12	117	157	cloudy/orange
0938		0.6	200	~~12.06~~	6.44	17.24	0.777	1.80	117	133	cloudy/orange
0943		0.8	200	12.46	6.43	17.24	0.778	1.34	116	185	cloudy/orange
0948		1.1	200	12.26	6.43	17.07	0.779	1.15	116	160	cloudy
* 0951	—	EMPTY/ FLOW Through									
0956		1.4	175	12.02	6.57	16.70	0.781	2.31	123	67.6	cloudy
1001		1.6	~~200~~ 175	11.92	6.46	16.64	0.781	1.32	120	42.8	cloudy
1006		1.9	175	11.86	6.46	16.59	0.780	1.20	118	32.3	cloudy
1011		2.1	175	11.94	6.47	16.81	0.777	1.03	117	30.7	cloudy
1016		2.6	175	11.69	6.48	16.62	0.774	0.92	115	31.4	cloudy
1021		2.8	175	11.92	6.50	16.92	0.772	0.86	114	44.0	cloudy
1026		3.0	150	11.80	6.51	16.92	0.769	0.79	112	39.5	cloudy
1031		3.1	150	11.75	6.53	16.92	0.770	0.70	111	30.1	clear
1036		3.2	180	11.65	6.52	16.80	0.766	0.59	110	29.8	clear
1039	—	~~3.3~~	~~120~~	Empty	Flow thru cell						
1050		3.5	120	11.76	6.60	16.87	0.764	1.10	118	23.1	clear
1055		3.7	80	11.69	6.59	16.96	0.764	0.84	116	28.6	clear
1100		3.8	100	11.65	6.57	16.91	0.763	0.90	116	32.5	cloudy
1105		3.9	120	11.74	6.57	16.95	0.763	0.80	116	30.9	cloudy
1110		4.0	120	11.49	6.51	17.07	0.762	0.64	116	31.8	slightly cloudy

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

10.59 DTW on 10/29/24

Groundwater Sampling Form

Sample ID: BG-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecker / STG
Date: 10/28/24	**Weather:** 60's Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): 26.11'	**Pump Depth (ft-bTOC):** 20
Depth-to-Water (ft-bTOC): 12.99	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba meter / Manna turb meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED ~~(Liters)~~ gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. ~~(µS/cm)~~ (5%) mS/cm	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1325		0.1	~~300~~	13.30	6.06	17.55	2.40	5.98	150	90.5	clear/sh
1330		0.2	~125	13.54	6.94	17.50	2.51	7.99	139	56.9	"
1335		0.3	~150	13.55	6.93	17.55	2.55	7.62	133	35.5	"
1340		0.4	~125	13.55	6.92	17.55	2.59	7.29	127	27.3	"
1345		0.5	~125	13.59	6.91	17.53	2.61	7.01	123	21.8	"
1350		0.6	~125	13.63	6.92	17.57	2.62	6.95	119	18.4	"
1355		0.7	~125	13.64	6.93	17.58	2.62	6.51	116	20.5	slightly cloudy
1400		0.8	~125	13.63	6.95	17.61	2.62	6.28	113	14.4	clear
1405		0.9	~125	13.64	6.96	17.60	2.61	6.08	110	13.3	clear
1410		1.1	~125	13.59	6.97	17.63	2.59	5.92	108	12.0	Clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
BG-2	1425	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecker / STG **Sample Time:** 1425

Date Sampled: 10/28/24 **Sampler Signature:**

Notes: Pumprate=

1322 Purge time

Groundwater Sampling Form

Sample ID: BG-2

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED ~~(Liters)~~ Gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1415		1.2	125	13.55	6.99	17.68	2.58	5.76	107	12.1	clear
1420		1.3	125	13.56	6.97	17.70	2.57	5.61	104	9.8	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Groundwater Sampling Form

Sample ID: MW-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector
Date: 10/30/24	**Weather:** 70's Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 57' - 72'	**Pump Type:** ESP
Well Depth (ft): 75.30'	**Pump Depth (ft-bTOC):** 71
Depth-to-Water (ft-bTOC): 61.68	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hanna Turbidimeter (STG owned)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (~~Liters~~ gal)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (~~µS~~ mS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1810		~6	200	61.87	6.86	21.06	2.51	1.25	112	5.79	cloudy
											cloudy
											clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-1	1815	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector **Sample Time:** 1815

Date Sampled: 10/30/24 **Sampler Signature:**

Notes: Pumprate= 200 ml/min

Purge time: 1635

5 gal @ 1745

Groundwater Sampling Form

Sample ID: MW-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector
Date: 10/31/24	**Weather:** 70's sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 32' - 47'	**Pump Type:** ESP
Well Depth (ft): 50.15'	**Pump Depth (ft-bTOC):** ~42
Depth-to-Water (ft-bTOC):	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; (2") = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hanna Turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters) gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. ~~(µS/cm)~~ mS (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1320		0.1	100	20.94	7.49	24.70	3.44	3.70	92	33.8	cloudy
1515		3.0	100		7.07	23.53	4.24	1.87	83	14.1	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2	1520	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector | **Sample Time:** 1520

Date Sampled: 10/31/24 | **Sampler Signature:**

Notes: Pumprate=

Purge time: 1314

3 gal purged

*st 6 led event

Groundwater Sampling Form

Sample ID: MW-2D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector / Will from STG
Date: 10/31/24	**Weather:** 70's sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** ~~Mega Monsoon Pro~~ Bailer
Screened Interval (ft): 129' - 144'	**Pump Type:** ~~ESP~~
Well Depth (ft): 147.4'	~~**Pump Depth (ft-bTOC):**~~
Depth-to-Water (ft-bTOC): 142.06	~~**Tubing Diameter (in):** 3/8" X~~ 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; (2") = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Hanna Turbidimeter (STG owned)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1435										734	Cloudy/Pink
	* Well was dry before field parameters could be collected										

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-2D	1435	Radium 226/228	1 x 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A
		→ well dry after 1 Rad bottle		

Sampled By: Z. Hector	**Sample Time:** 1435
Date Sampled: 10/31/24	**Sampler Signature:**

Notes: ~~Pumprate~~

*STG used pink dyed mason twine to sample well. Turned water pink.

Groundwater Sampling Form

Sample ID: MW-3

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecka
Date: 10/31/24	**Weather:** 60's Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 25' - 40'	**Pump Type:** ESP
Well Depth (ft): 43.36'	**Pump Depth (ft-bTOC):** 31
Depth-to-Water (ft-bTOC): 7.88	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; (2") = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hann turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) mS (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1111		0.1	82.50	8.06	7.50	20.96	4.37	4.20	51	17.9	clear
1116		0.2	200			20.					clear
1121		0.3	150	10.05	7.58	20.22	4.41	2.61	54	17.1	clear
1126		0.3	100	10.46	7.57	20.96	4.40	2.41	55	19.8	clear
1131		0.3	100	10.85	7.57	21.27	4.39	2.42	57	15.5	clear
1136		0.4	100	11.52	7.57	21.60	4.39	2.46	59	13.2	clear
1141		0.45	100	12.19	7.58	21.75	4.39	2.40	62	18.1	clear
1146		0.5	100	12.45	7.59	21.94	4.38	2.38	63	9.22	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-3	1150	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecka	**Sample Time:** 1150
Date Sampled: 10/31/24	**Sampler Signature:**

Notes: Pumprate=

1108 Purge time

Groundwater Sampling Form

Sample ID: MW-4

Site Information	
Site Name: Charah Brickhaven	**Project Number:** ~~10337473~~
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecker
Date: 10/31/24	**Weather:** 60's sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 13' - 23'	**Pump Type:** ESP
Well Depth (ft): 25.34'	**Pump Depth (ft-bTOC):** 21.2
Depth-to-Water (ft-bTOC): 14.03	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; (2") = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hanna Turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED ~~(Liters)~~ gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. ~~(mS/cm)~~ mS (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0840		0.1	150	14.99	6.49	18.53	1.42	4.65	16	66.4	cloudy
1020 ~~0845~~		6.5	150	15.98	6.35	19.33	1.98	6.35	6	8.66	clear
~~0850~~											
~~0855~~											
~~0900~~											
~~0905~~											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-4	~~0911~~ 1020	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecker	**Sample Time:** ~~0911~~ 1020
Date Sampled: 10/31/24	**Sampler Signature:**

Notes: Pumprate=

Purge time: 0838

6.5 gal purged

*Stabled event

Groundwater Sampling Form

Sample ID: MW-5

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecker / STG
Date: 10/28/24	**Weather:** 60's Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 34' - 44'	**Pump Type:** ESP
Well Depth (ft): 46.14'	**Pump Depth (ft-bTOC):** 40
Depth-to-Water (ft-bTOC):	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; (2") = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Hor. pq / Manta duck meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED ~~(Liters)~~ gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. ~~(µS/cm)~~ mS (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1525			~200	22.20	7.78	19.96	0.257	4.39	86	26.4	
1530				22.48	7.75	20.29	0.250	3.42	89	43.3	
1535				22.66	7.61	20.61	0.234	3.15	92	46.8	
1540				23.10	7.54	20.92	0.230	2.77	94	31.6	
1545				23.25	7.47	21.36	0.244	2.65	94	31.5	
1550				23.75	7.34	21.69	0.204	2.62	96	30.7	
1555				24.01	7.23	22.05	0.237	2.49	98	27.9	
1600				24.61	7.04	22.27	0.230	2.32	100	26.4	
1605				25.05	6.85	22.38	0.226	2.16	101	21.1	
1610				25.70	6.74	22.40	0.222	2.04	103	17.8	

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-5	1655	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecker	**Sample Time:** 1655
Date Sampled: 10/28/24	**Sampler Signature:**

Notes: Pumprate=

Purge time: 1523

* STG leading event

Groundwater Sampling Form

Sample ID: MW-5

Purging Information (Page 2)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1615				26.11	6.74	22.36	0.219	1.90	102	13.7	clear
1620				26.7	7.50	22.32	0.221	1.78	102	20.1	
1625				27.14	7.31	22.28	0.229	1.70	109	13.0	
1630				27.71	7.34	22.28	0.224	1.61	107	18.8	
1635				28.15	7.33	22.29	0.221	1.55	107	15.4	
1640				28.45	7.34	22.34	0.219	1.51	108	12.9	
1645				28.73	7.35	22.39	0.216	1.48	104	14.6	
1650				29.03	7.35	22.46	0.225	1.41	104	9.91	

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Groundwater Sampling Form

Sample ID: MW-6

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecker
Date: 10/30/24	**Weather:** 60's Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 12' - 27'	**Pump Type:** ESP
Well Depth (ft): 29.47'	**Pump Depth (ft-bTOC):** 25
Depth-to-Water (ft-bTOC): 6.14	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Manna Turbidimeter (ST6 owned)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters) Gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1020		0.1	175	8.74	7.43	22.06	0.769	6.24	130	21.5	clear
1215 ~~1025~~		4.6	175	9.14	6.45	23.18	0.714	0.46	117	13.9	~~cloudy~~ clear
~~1030~~											
~~1035~~											
~~1040~~											

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-6 (DUP)	1220	Radium 226/228	2 - 1 L Poly	HNO3
	↑	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By:	Z. Hecker	**Sample Time:**	1220
Date Sampled:	10/30/24	**Sampler Signature:**	

Notes: Pumprate=

Purge time: 1013

4.6 gal purged

ST6 led event

Groundwater Sampling Form

Sample ID: MW-7R

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector
Date: 10/30/24	**Weather:**

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 26' - 36'	**Pump Type:** ESP
Well Depth (ft): 39.94'	**Pump Depth (ft-bTOC):** 35
Depth-to-Water (ft-bTOC): 21.26	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hanna turbmeter (STC owned)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED ~~(Liters)~~ gal	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. ~~(µS/cm)~~ mS (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
~~0850~~		0.1	180	21.79	8.19	15.92	1.19	8.16	134	31.8	Clear
0855		0.2		22.46	7.74	16.86	1.17	5.50	134	52.9	
0900		0.4		22.92	7.65	17.12	1.18	5.04	136	48.5	
0905		0.6		23.22	7.61	17.43	1.17	4.45	135	31.8	
0910		0.8		24.04	7.61	17.69	1.46	4.43	133	22.1	
0915		1.0		24.74	7.61	17.95	1.46	4.17	132	14.6	
0920		1.1		25.01	7.59	18.13	1.45	3.90	131	11.9	
0925		1.2		25.58	7.60	18.29	1.45	3.80	130	7.25	

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-7R	0930	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector	**Sample Time:** 0930
Date Sampled: 10/30/24	**Sampler Signature:**

Notes: Pumprate= 180

Purge time: 0847

Groundwater Sampling Form

Sample ID: MW-8

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecker
Date: 10/30/24	**Weather:** 70's mostly cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment: Mega Monsoon Pro**
Screened Interval (ft): 31' - 46'	**Pump Type:** ESP
Well Depth (ft): 49.06'	**Pump Depth (ft-bTOC):** 45
Depth-to-Water (ft-bTOC):	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hanna Turbidimeter (SRC owned)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (~~Liters~~)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (~~µS/cm~~ mS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1330		0.1		33.95	7.57	29.50	2.25	3.78	114	~~33.95~~ 33.5	~~33.45~~ Slight cloudy
1530		5.5		34.5	7.09	26.56	1.67	0.32	96	34.5	34.5

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-8	1534	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecker	**Sample Time:** 1535
Date Sampled: 10/30/24	**Sampler Signature:**

Notes: Pumprate= ~150

Purgetime: 329

5gal @ 1517

* 516 led event

Groundwater Sampling Form

Sample ID: MW-9

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecht
Date: 10/31/24	**Weather:** 70's Sunny

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** ~~Mega-Monsoon Pro~~ Bailer
Screened Interval (ft): 26' - 36'	**Pump Type:** ~~ESP~~
Well Depth (ft): 36'	~~**Pump Depth (ft-bTOC):**~~
Depth-to-Water (ft-bTOC): 37.24	~~**Tubing Diameter (in):** 3/8" X 1/2"~~
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Hanna Turbidimeter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-9	1530	~~Radium 226/228~~	~~2 - 1 L Poly~~	~~HNO3~~
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecht **Sample Time:** 1530

Date Sampled: 10/31/24 **Sampler Signature:**

Notes: ~~Pumprate~~

* ST6 sampled w/ bailer. well Dry before field parameters could be collected

Groundwater Sampling Form

Sample ID: MW-10

Site Information	
Site Name: Charah Brickhaven	**Project Number:** ~~10337473~~
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector
Date: 10/29/24	**Weather:** 60's Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 37' - 47'	**Pump Type:** ESP
Well Depth (ft): 49.91	**Pump Depth (ft-bTOC):** 46
Depth-to-Water (ft-bTOC): 33.86	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; (2" = 0.16); 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Manna turbmeter (SRG owned)

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. ~~(µS/cm)~~ (5%) mS/cm	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1635			125	35.42	7.61	20.53	0.455	2.54	-14	20.5	clear
1640				35.43	7.85	19.61	0.45	2.25	-53	15.0	
1645				36.45	7.44	19.75	0.449	1.71	-69	9.99	
1650				36.73	7.91	20.29	0.443	1.52	-71	8.78	
1655				37.51	7.98	20.31	0.447	1.63	-81	6.85	

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-10	1700	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector	**Sample Time:** 1700
Date Sampled: 10/29/24	**Sampler Signature:**

Notes: Pumprate=

Purge time: 1633

Groundwater Sampling Form

Sample ID: MW-11

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Wheeler
Date: 10/29/24	**Weather:** 60's cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 28.50' - 43.50'	**Pump Type:** ESP
Well Depth (ft): 43.50'	**Pump Depth (ft-bTOC):** 38
Depth-to-Water (ft-bTOC): 11.73	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s): Horiba / Hanna turb meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1520				14.91	6.75	18.58	~~0.417~~ 0.562	0.52	59	9.40	clear

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11	1525	Radium 226/228	2 - 1 L Poly	HNO3
	↑	6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Wheeler	**Sample Time:** 15 25
Date Sampled: 10/29/24	**Sampler Signature:**

Notes: Pumprate=

Purge Time: 1331

Groundwater Sampling Form

Sample ID: MW-11D

Site Information	
Site Name: Charah Brickhaven	**Project Number:** ~~10337473~~
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector
Date: 10/29/24	**Weather:** 60's Partly Cloudy

Well Information	
Well Diameter (in): 2"	**Purge Equipment:** Mega Monsoon Pro
Screened Interval (ft): 50' - 65'	**Pump Type:** ESP
Well Depth (ft): 68.18'	**Pump Depth (ft-bTOC):** 55
Depth-to-Water (ft-bTOC): 7.53	**Tubing Diameter (in):** 3/8" X 1/2"
Water Column Thickness (ft):	**Well Volume (ft^3):**
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): Horiba / Manna Turb meter

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (~~µS/cm~~) (5%) mS/cm	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1225			150		7.73	18.02	0.441	3.63	115	5.12	Clear
1230			"	8.25	8.16	18.10	0.435	2.53	104	4.76	"
1235			"	"	8.31	18.37	0.434	1.96	99	3.40	"
1240			"	"	8.38	18.37	0.434	1.89	95	3.76	"
1245			"	"	8.41	18.82	0.433	1.55	91	2.39	"

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
MW-11D	1250	Radium 226/228	2 - 1 L Poly	HNO3
	"	6010/6020/7470	1 - 250 mL Poly	HNO3
	"	Cl, F, SO4	1 - 250 mL Poly	N/A
	"	TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector **Sample Time:** 1250

Date Sampled: 10/29/24 **Sampler Signature:**

Notes: Pumprate=150

Purge time: 1222

Groundwater Sampling Form

Sample ID: LEACHATE

Site Information	
Site Name: Charah Brickhaven	**Project Number:** 10337473
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecht
Date: 10/31/24	**Weather:** 70's Sunny

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1125	-	N/A									

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
LEACHATE	1125	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hecht	**Sample Time:** 1125
Date Sampled: 10/31/24	**Sampler Signature:**

Notes: Pumprate=-

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: BG-1 (att.1)

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): 44.5
Depth to Water (ft.): 10.53
Casing Diameter (in.): 2
Casing Material: PVC
Water Column Length (ft.): 34
Multiplication Factor:
One Well Volume (gals.):
Three Well Volumes (gals.):

ACCEPTANCE CRITERIA:

Min.required vols purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/28/24 Time Start: 1158 Time Finish:
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make: Monsoon Model: Pro Serial Number: 25032

150 mL/min

37.3 pump depth

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)
1200	19.75	0.00	16.07	5.07	288	593	Whitish	none	12.05
1207	19.96	0.742	~~16.07~~	~~6.74~~	147	970	whitish	none	11.79
1212	19.07	.741	2.36	6.78	146	807	light orange	none	11.23
1217	19.07	.743	2.22	6.86	145	741	white/orange	none	11.20
1222	~~19~~	emptied flow-through cell, no readings							
1227	18.76	0.791	1.65	6.89	144	384	White/orange	none	11.60
1232	18.78	0.746	1.51	6.80	146	431	whitish	Slight/yeasty	11.66
1237	18.77	0.753	1.26	6.66	146	4120	light orange	none	12.10
1242	emptied flow-through cell, no readings						Orange		~~11.85~~
1247	18.58	0.747	0.53	6.69	147	>1000	orange	none	11.95
1252	18.48	0.744	0.59	6.79	146	>1000	Orange	none	
paused due to consistent high turbidity									

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: BG-1 (att. 2)

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.):
Depth to Water (ft.): 10.59
Casing Diameter (in.): 2
Casing Material: PVC
Water Column Length (ft.):
Multiplication Factor:
One Well Volume (gals.):
Three Well Volumes (gals.):

ACCEPTANCE CRITERIA:

Min required vols purged: 3 Vols.
Max allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/29/24 Time Start: 0910 Time Finish: 1110
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
0912	17.41	0.767	2.79	6.74	109	165	orange/cloudy	none		11.25
0917	Clear	Flow - through chamber								
0923	17.58	0.771	4.48	6.85	114	224	Cloudy	none		11.78
0928	17.29	0.775	2.32	6.52	117	211	orange/cloudy	none		11.65
0933	17.19	0.776	2.12	6.44	117	157	orange/cloudy	none		11.74
0938	17.24	0.777	1.80	6.44	117	133	orange/cloudy	none		12.06
0943	17.24	0.778	1.34	6.43	116	185	orange/cloudy	none		12.46
0948	17.07	0.778	1.15	6.43	116	160	Cloudy	none		12.26
0951	Clear	Flow-through Chamber								
0956	16.70	0.781	2.31	6.57	123	67.6	Cloudy	none		12.02
1001	16.64	0.781	1.32	6.46	120	42.8	Cloudy	none		11.92
1006	16.59	0.780	1.20	6.46	118	37.3	Cloudy	none		11.86
1011	16.81	0.777	1.03	6.47	117	30.7	Cloudy	none		11.94
1016	16.92	0.774	0.92	6.48	115	31.4	Cloudy	none		11.99
1021	16.92	0.772	0.86	6.50	114	44.0	Cloudy	none		11.92
1026	16.92	0.769	0.79	6.51	112	39.5	Cloudy	none		11.80
1031	16.92	0.770	0.70	6.53	111	30.1	Clear	none		11.73
1036	16.80	0.766	0.59	6.52	110	29.8	Clear	none		11.65
1041	Clear	Flow-through chamber								
1050	16.87	0.764	1.10	6.60	118	23.1	clear	none		11.76
1055	16.96	0.764	0.84	6.59	116	28.6	clear	none		11.69
1100	16.91	0.763	0.90	6.57	116	32.5	Cloudy	none		11.65
1105	16.95	0.763	0.80	6.57	116	30.9	cloudy	none		11.74
1110	17.07	0.762	0.69	6.57	116	31.8	Clear/Sh	none		11.49

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions: Sunny, 65F
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: BG-2

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): 26
Depth to Water (ft.): 12.99
Casing Diameter (in.): 2
Casing Material: PVC
Water Column Length (ft.): 13
Multiplication Factor:
One Well Volume (gals.):
Three Well Volumes (gals.):

ACCEPTANCE CRITERIA:

Min.required vols purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

125 mL/min
original flow rate: 300 mL/min

WELL PURGING DATA:

Date Purged: 10/28/24 Time Start: 1322 Time Finish: 1420
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

20 Ft pump depth

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
1325	17.55	2.40	5.98	6.86	150	90.5	Clearish	none		13.50
1330	17.54	2.51	7.99	6.94	139	56.9	Clearish	none		13.54
1335	17.55	2.55	7.62	6.93	133	35.5	Clearish	none		
1340	17.55	2.59	7.29	6.92	127	27.3	Clearish	none		13.55
1345	17.55	2.61	7.01	6.91	123	21.8	Clear	none		13.59
1350	17.57	2.62	6.95	6.92	119	18.4	Clear	none		13.63
1355	17.58	2.62	6.51	6.93	116	20.5	Clear	none		13.64
1400	17.61	2.62	6.28	6.95	113	14.4	Clear	none		13.63
1405	17.60	2.61	6.08	6.96	110	13.3	Clear	none		13.64
1410	17.63	2.59	5.92	6.97	108	12.0	Clear	none		13.59
1415	17.68	2.58	5.76	6.98	107	12.1	Clear	none		13.57
1420	17.70	2.57	5.61	6.97	104	9.8	Clear	none		

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-1

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.):
Depth to Water (ft.): 61.68
Casing Diameter (in.): 2
Casing Material: PVC
Water Column Length (ft.):
Multiplication Factor:
One Well Volume (gals.):
Three Well Volumes (gals.):

ACCEPTANCE CRITERIA:

Min.required vols.purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/30/24 Time Start: 1635 Time Finish: 1810
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

200 mL/min

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)
1640	24.33	0.470	2.96	7.52	81	169	cloudy	none	61.80
1645	24.77	0.459	3.12	7.47	89	70.0	clearish	none	61.82
1650	23.94	0.467	2.39	7.34	89	88.7	clearish	none	61.83
1655	23.27	0.467	2.24	7.30	89	44.0	clear	none	61.85
1700	23.15	0.471	2.19	7.25	92	25.3	clear	none	61.85
1705	22.99	0.476	2.14	7.17	97	24.8	clear	none	61.85
1710	22.84	0.486	2.10	7.11	101	20.0	clear	none	61.86
1715	22.53	0.569	2.04	7.06	105	17.9	clear	none	61.88
1720	22.52	0.757	1.99	7.00	108	19.7	clear	none	61.88
1725	emptied		flow-	through	chamber,	no	readings		
1730	22.22	1.52	1.85	6.89	113	9.51	clear	none	
1735	22.02	1.80	1.63	6.84	113	9.45	clear	none	61.85
1740	22.02	1.96	1.54	6.85	112	9.71	clear	none	61.86
1745	21.97	2.08	1.47	6.86	111	7.27	clear	none	61.87
1750	21.48	2.28	1.40	6.86	111	6.42	clear	none	61.87
1755	21.36	2.36	1.37	6.86	111	6.59	clear	none	61.88
1800	21.30	2.44	1.30	6.86	111	7.01	clear	none	61.85
1805	21.25	2.48	1.30	6.87	111	5.78	clear	none	61.85
1810	21.06	2.51	1.25	6.86	112	5.79	clear	none	61.87

SMITH · GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-2

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): ____ Water Column Length (ft.): ____
Depth to Water (ft.): 20.17 Multiplication Factor: ____
Casing Diameter (in): 2 One Well Volume (gals.): ____
Casing Material: PVC Three Well Volumes (gals.): ____

ACCEPTANCE CRITERIA:

Min required vols.purged: 3 Vols
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/3/24 Time Start: 1314 Time Finish: 1514
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)
1320	29.70	3.44	3.70	7.89	92	53.8	clear	none	10.94
1325	26.95	3.99	3.30	7.79	91	160	cloudy	none	21.42
1330	26.44	4.19	3.05	7.73	89	149	cloudy	none	22.07
1335	26.24	4.18	2.81	7.71	88	111	clearish	none	22.64
1340	25.51	4.28	2.75	7.69	85	101	clearish	none	23.16
1345	25.24	4.21	2.47	7.69	84	80.6	clearish	none	23.90
1350	25.39	4.16	2.13	7.67	81	62.4	clearish	none	24.42
1355	25.44	4.17	2.18	7.67	81	59.8	clearish	none	24.76
1400	25.47	4.11	2.07	7.66	80	50.5	clearish	none	25.54
1405	25.82	4.06	1.93	7.64	78	49.8	clearish	none	26.19
1410	25.83	4.06	1.86	7.66	78	43.6	clearish	none	26.55
1415	29.40	4.05	1.73	7.66	77	30.9	clearish	none	27.04
1420	26.55	4.16	1.86	7.66	79	25.7	clearish	none	27.59
1425	25.90	4.16	1.86	7.67	78	27.2	clearish	none	29.00
1430	25.18	4.16	1.90	7.68	78	25.0	clearish	none	28.75
1435	25.21	4.20	1.90	7.67	79	24.8	clearish	none	29.31
1440	25.27	4.29	1.93	7.63	80	23.5	clearish	none	29.65
1445	25.20	4.30	1.80	7.63	80	20.9	clearish	none	30.04
1450	24.90	4.24	1.78	7.62	81	16.8	clearish	none	30.72
1455	23.75	4.16	1.75	7.62	82	20.4	clear	none	31.25
1500	—	Empty flow through cell					clear	none	
1504	25.04	4.13	1.81	7.69	84	16.7	clear	none	32.71
1510	23.69	4.27	1.83	7.68	84	21.9	clear	none	
1515	23.53	4.29	1.87	7.67	83	141	clear	none	
1520									

Temp
27.39
27.40
27.44
27.82
27.83

SMITH + GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-3

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): ____ Water Column Length (ft.): ____
Depth to Water (ft): 7.88 Multiplication Factor: ____
Casing Diameter (in): 2 One Well Volume (gals.): ____
Casing Material: PVC Three Well Volumes (gals.): ____

ACCEPTANCE CRITERIA:

Min.required vols.purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/31/24 Time Start: 1108 Time Finish: 1146
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

Pump depth: 31 Ft

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
1111	20.96	4.37	4.20	7.50	51	17.9	clear	none		8.06
1116	adj.	vsmy	flow rate, no readings			~~17.1~~	clear	none		
1121	20.22	4.41	2.61	7.58	54	~~15.8~~ 17.1	clear	none		10.05
1126	20.96	4.40	2.41	7.57	55	~~15.5~~ 19.8	clear	none		10.46
1131	21.27	4.39	2.42	7.57	57	~~13.2~~ 15.5	clear	none		10.85
1136	21.60	4.39	2.46	7.57	59	~~18.2~~ 13.2	clear	none		11.52
1141	21.75	4.39	2.40	7.58	62	18.1	clear	none		12.19
1146	21.98	4.38	2.38	7.58	63	9.22	clear	none		12.45

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-4

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft): _____ Water Column Length (ft.): _____
Depth to Water (ft): 14.03 Multiplication Factor: _____
Casing Diameter (in.): 2 One Well Volume (gals.): _____
Casing Material: PVC Three Well Volumes (gals.): _____

ACCEPTANCE CRITERIA:

Min required vols purged: 3 Vols.
Max allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/31/24 Time Start: 0838 Time Finish: 1020
Purge Method/Equipmer Low Flow
Field Testing Equipment Used: Make Model Serial Number

Pump depth: 21.2 ft
Flow rate: 150 mL/min

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
0840	18.53	1.92	4.65	6.49	16	66.9	Clearish	none		14.99
0845	18.58	2.00	2.51	6.06	27	62.5	Clearish	none		14.97
0850	18.68	2.01	2.43	5.98	31	36.2	clearish	none		15.28
0855	19.05	2.02	1.90	5.96	31	25.9	Clear	none		15.24
0900	19.13	2.02	1.74	5.96	31	15.1	Clear	none		15.22
0905	18.94	2.03	1.50	5.97	30	11.5	clear	none		15.14
0910	18.95	2.02	1.41	5.98	29	9.69	Clear	none		15.18
0915	19.03	2.02	1.20	6.01	27	8.13	Clear	none		15.29
0920	19.57	2.00	0.96	6.08	20	15.1	Clear	none		16.07
0925	19.32	2.01	0.74	6.19	10	11.4	Clear	none		16.05
0930	19.29	1.99	0.65	6.27	5	10.9	Clear	none		16.42
0935	19.25	1.99	0.54	6.27	6	19.3	Clear	none		16.65
0940	19.08	1.99	0.47	6.29	6	17.0	Clear	none		16.28
0945	19.04	1.99	0.45	6.31	5	14.6	Clear	none		16.03
0950	19.14	1.98	0.42	6.32	6	14.6	Clear	none		16.09
0955	19.19	1.98	0.38	6.33	6	16.9	Clear	none		16.05
1000	19.13	1.98	0.36	6.33	6	13.5	Clear	none		15.92
1005	19.26	1.98	0.35	6.34	6	14.2	Clear	none		16.00
1010	19.26	1.98	0.33	6.34	6	13.2	Clear	none		16.02
1015	19.26	1.98	0.31	6.35	6	11.1	Clear	none		15.95
1020	19.33	1.98	0.30	6.35	6	8.66	Clear	none		15.98

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-5

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): 47
Depth to Water (ft.): 19.99
Casing Diameter (in.): 2
Casing Material: PVC

Water Column Length (ft):
Multiplication Factor:
One Well Volume (gals.):
Three Well Volumes (gals):

ACCEPTANCE CRITERIA:

Min.required vols purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/28/24 Time Start: 1528 Time Finish: 1650
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

orig. Flow 275 mL/min

40 Ft pump depth

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
1525	19.96	0.257	4.59	7.78	86	26.4	clear	none		22.20
1530	20.29	0.250	3.42	7.75	89	45.5	clear	none		22.48
1535	20.61	0.234	3.15	7.61	92	46.8	clear	none		22.66
1540	20.92	0.230	2.77	7.54	94	31.6	clear	none		23.0
1545	21.36	0.244	2.65	7.47	94	31.5	clear	none		23.25
1550	21.69	0.204	2.67	7.39	96	30.7	clear	none		23.75
1555	22.05	0.237	2.49	7.23	98	27.9	clear	none		24.01
1600	22.27	0.230	2.32	7.04	100	26.4	clear	none		24.61
1605	22.38	0.226	2.18	6.85	101	21.1	clear	none		25.05
1610	22.40	0.222	2.04	6.78	103	17.8	clear	none		25.70
1615	22.36	0.219	1.90	6.78	102	13.7	clear	none		26.11
1620	22.32	0.221	1.78	7.50	107	20.1	clear	none		26.7
1625	22.28	0.229	1.70	7.31	109	13.0	clear	none		27.14
1630	22.28	0.224	1.61	7.34	107	18.8	clear	none		~~27.71~~
1635	22.29	0.221	1.55	7.33	107	15.4	clear	none		28.15
1640	22.34	0.219	1.51	7.34	108	12.9	clear	none		28.45
1645	22.39	0.216	1.48	7.35	108	16.6	clear	none		28.73
1650	22.46	0.225	1.41	7.35	108	9.91	clear	none		29.03

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-6

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): _____ Water Column Length (ft.): _____
Depth to Water (ft.): 8.18 Multiplication Factor: _____
Casing Diameter (in.): 2 One Well Volume (gals.): _____
Casing Material: PVC Three Well Volumes (gals.): _____

ACCEPTANCE CRITERIA:

Min required vols.purged: 3 Vols
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA: 1220 sample

Date Purged: 10-30-24 Time Start: 1018 Time Finish: _____
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

Flow rate: 175 mL/min
pump depth: 25 ft

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
1020	22.06	0.768	6.24	7.43	130	21.5	clear	none		8.75
1025	21.84	0.739	3.13	6.92	139	184	whitish	none		8.82
1030	21.68	0.753	2.15	6.61	142	189	whitish	none		8.86
1035	21.03	0.744	1.89	6.54	141	148	whitish	none		8.82
1040	emptied flow-through chamber, no readings									
1045	21.66	0.731	2.51	6.57	145	108	whitish	none		8.99
1050	20.86	0.741	1.84	6.49	141	98.6	whitish	none		9.12
1055	21.11	0.739	1.43	6.47	135	79.7	clearish	none		9.11
1100	21.46	0.736	1.20	6.46	132	60.0	clearish	none		9.11
1105	21.62	0.733	1.14	6.48	132	50.9	clearish	none		9.13
1110	21.60	0.731	1.02	6.47	132	47.1	clearish	none		9.15
1115	21.60	0.729	0.85	6.47	133	45.0	clearish	none		9.15
1120	21.83	0.728	0.74	6.46	131	36.1	clearish	none		9.18
1125	21.92	0.725	0.69	6.46	130	32.0	clearish	none		9.18
1130	Empty flow through cell									
1135	22.95	0.711	1.40	6.49	135	27.3	clear	none		9.18
1140	22.20	0.725	1.12	6.46	138	21.8	clear	none		9.17
1145	22.34	0.724	0.90	6.45	129	19.2	clear	none		9.14
1150	22.36	0.723	0.82	6.46	126	18.2	clear	none		9.13
1155	22.54	0.722	0.72	6.43	124	18.3	clear	none		9.14
1200	22.72	0.720	0.64	6.44	120	141.3	clear	none		9.18
1205	22.81	0.719	0.56	6.45	119	15.7	clear	none		9.17
1210	23.06	0.717	0.50	6.45	117	13.7	clear	none		9.18
1215	23.19	0.714	0.46	6.45	117	13.9	clear	none		9.14
1220										

SMITH-GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-7R

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): ____ Water Column Length (ft.): ____
Depth to Water (ft): 21.26 Multiplication Factor: ____
Casing Diameter (in.): 2 One Well Volume (gals.): ____
Casing Material: PVC Three Well Volumes (gals.): ____

ACCEPTANCE CRITERIA:

Min.required vols.purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10-30-24 Time Start: 0847 Time Finish: 0925
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

pump depth: 35 Ft
~180 mL/min

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)
0850	15.92	1.19	8.16	8.19	138	31.8	Clear	none	21.79
0855	16.86	1.17	5.50	7.74	138	52.9	Clearish	none	22.48
0900	17.17	1.18	5.04	7.65	136	48.5	Clearish	none	22.92
0905	17.43	1.17	4.85	7.61	135	31.8	Clear	none	23.22
0910	17.69	1.46	4.43	7.61	133	27.8	Clear	none	24.08
0915	17.95	1.46	4.17	7.61	132	14.6	Clear	none	24.78
0920	18.13	1.45	3.90	7.59	131	11.9	Clear	none	25.07
0925	18.29	1.45	3.80	7.60	130	7.25	Clear	none	25.58

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-8

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): ____ Water Column Length (ft.): ____
Depth to Water (ft.): 33.40 Multiplication Factor: ____
Casing Diameter (in.): 2 One Well Volume (gals.): ____
Casing Material: PVC Three Well Volumes (gals.): ____

ACCEPTANCE CRITERIA:

Min.required vols purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10/30/24 Time Start: 1329 Time Finish: 1530
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

pump depth: 45 ft

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
1330	26.80	2.25	3.28	7.57	144	120	Cloudy	none		33.95
1335	25.75	2.31	2.23	7.16	136	167	light brown	none		33.95
1340	26.44	2.33	2.17	7.10	128	166	Cloudy	none		34.09
1345	23.94	2.37	1.68	7.07	125	179	light brown	none		34.19
1350	26.04	2.27	2.48	7.33	119	158	light brown	none		34.07
1355	26.70	2.28	1.64	7.18	118	127	Cloudy	none		33.95
1400	27.08	2.30	1.59	7.15	115	138	Cloudy	none		33.89
1405	27.29	2.30	1.47	7.16	115	117	Cloudy	none		33.91
1410	27.41	2.27	1.37	7.15	114	121	Cloudy	none		33.90
1415	27.10	2.26	1.24	7.11	113	131	Cloudy	none		34.07
1420	26.44	2.22	0.94	7.13	110	158	Cloudy	none		34.10
1425	26.89	2.15	2.02	7.45	109	709	opaque light brown	none		34.21
1430	27.18	2.14	1.14	7.44	113	767	opq lt brn	none		34.15
1435	27.22	2.15	0.96	7.35	114	386	opq. lt brn	none		34.16
1440	27.16	2.14	0.83	7.29	112	251	Cloudy	none		34.15
1445	27.21	2.14	0.76	7.26	110	155	Cloudy	none		34.16
1450	27.34	2.09	0.67	7.27	107	104	Cloudy	none		34.27
1455	27.47	2.00	0.62	7.25	104	72.6	Whitish	none		34.35
1500	27.53	1.92	0.54	7.24	101	59.3	Clearish	none		34.10
1505	27.55	1.87	0.45	7.23	100	45.4	Clearish	none		34.41
1510	27.43	1.81	0.40	7.20	99	39.4	Clearish	none		34.51
1515	27.12	1.74	0.33	7.18	96	34.6	Clearish	none		34.44
1520	26.91	1.72	0.33	7.12	97	27.2	Clearish	none		34.47
1525	26.73	1.69	0.36	7.11	96	18.2	Clear	none		34.48
1530	26.56	1.67	0.32	7.09	96	17.9	Clear	none		34.51

SMITH · GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-10

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): 49
Depth to Water (ft.): 33.86
Casing Diameter (in.): 2
Casing Material: PVC
Water Column Length (ft.):
Multiplication Factor:
One Well Volume (gals.):
Three Well Volumes (gals.):

ACCEPTANCE CRITERIA:

Min.required vols.purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 %
or: 0.2 °C
DO stabilize within: 10 %
or: <0.5 mg/L
pH stabilize within: 0.1 pH units

125 mL/min

WELL PURGING DATA:

Date Purged: 10-29-24 Time Start: ~1633 Time Finish: 1655
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

Pump depth: 46 Ft

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)
1635	20.53	0.455	2.54	7.61	-14	20.5	Clear	none	35.42
1640	19.61	0.452	2.25	7.85	-53	15.0	Clear	none	35.93
1645	19.75	0.449	1.71	7.94	-69	9.99	Clear	none	36.45
1650	20.29	0.445	1.52	7.97	-71	8.78	Clear	none	36.73
1655	20.31	0.447	1.63	7.98	-81	6.45	Clear	none	37.51

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW - 11

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): ____ Water Column Length (ft.): ____
Depth to Water (ft.): 11.73 Multiplication Factor: ____
Casing Diameter (in.): 2 One Well Volume (gals.): ____
Casing Material: PVC Three Well Volumes (gals.): ____

ACCEPTANCE CRITERIA:

Min. required vols. purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 10-29-24 Time Start: ~~1328~~ 1331 Time Finish: 1520
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

Pump depth: 36 ft

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)	
1335	21.11	0.496	3.38	8.05	112	13.1	Clear	none		11.73
1340	19.91	0.542	2.72	7.17	114	63.8	Clearish	none		
1345	19.37	0.552	2.34	6.96	100	200	White/clear	none		13.22
1350	19.17	0.557	1.85	6.87	90	212	white/clear	none		13.33
1355	18.92	0.563	1.76	6.85	83	234	white/clear	none		13.76
1400	Flow-through chamber cleared, no sample									
1405	20.23	0.551	2.24	6.96	88	216	white/clear	none		13.91
1410	20.38	0.551	1.80	6.88	77	210	white/clear	none		13.93
1415	20.41	0.552	1.53	6.85	73	165	white/clear	none		13.99
1420	20.40	0.552	1.36	6.84	71	172	white/clear	none		
1425	20.38	0.552	1.22	6.84	69	136	clearish	none		
1430	20.35	0.552	1.17	6.83	68	97.6	clearish	none		14.02
1435	20.23	0.551	1.02	6.83	67	83.8	clearish	none		14.18
1440	20.08	0.551	0.92	6.83	66	53.3	clearish	none		14.29
1445	20.04	0.550	0.78	6.83	65	48.5	clearish	none		14.19
1450	19.94	0.552	0.74	6.82	64	38.4	clear	none		14.09
1455	19.12	0.561	0.84	6.81	62	27.2	clear	none		14.55
1500	18.79	0.561	0.72	6.81	61	20.4	clear	none		14.80
1505	18.65	0.561	0.62	6.78	60	15.4	clear	none		15.0
1510	18.63	0.561	0.57	6.78	59	13.6	clear	none		14.95
1515	18.58	0.562	0.54	6.76	59	11.6	clear	none		14.89
1520	18.58	0.562	0.52	6.75	59	9.40	clear	none		14.91

SMITH GARDNER

Ground Water Sample Collection Record

Client:
Project Name/Number: Charah Brickhaven - Chatham-23-4
Site Location: Charah Brickhaven, Moncure-Flatwood Road
Weather Conditions:
Collector(s): Smith + Gardner, HDR

Well/Peizometer ID: MW-11D

WATER LEVEL DATA: (measured from Top of Casing)

Total Well Depth (ft.): 68
Depth to Water (ft): 7.53
Casing Diameter (in.): 2
Casing Material: PVC
Water Column Length (ft.):
Multiplication Factor:
One Well Volume (gals.):
Three Well Volumes (gals.):

ACCEPTANCE CRITERIA:

Min.required vols.purged: 3 Vols.
Max. allowable turbidity: 5 NTUs
Conductivity stabilize within: 3 %
Temperature stabilize within: 5 % or: 0.2 °C
DO stabilize within: 10 % or: <0.5 mg/L
pH stabilize within: 0.1 pH units

WELL PURGING DATA:

Date Purged: 11-29-24 Time Start: 1222 Time Finish: 1245
Purge Method/Equipmer: Low Flow
Field Testing Equipment Used: Make Model Serial Number

pump depth: 55 ft
Flow rate: 150 mL/min

Time	Temp. (°C)	Spec. Cond. (mS)	DO (mg/L)	pH (s.u.)	ORP (mV)	Turbidity (NTUs)	Color	Odor	Volume Removed (gal)
1225	18.02	0.441	3.63	7.73	115	5.20	Clear	none	
1230	18.10	0.435	2.53	8.16	104	4.76	Clear	none	
1235	18.37	0.434	1.96	8.31	99	3.40	Clear	none	
1240	14.57	0.434	1.99	8.38	95	3.76	Clear	none	
1245	18.82	0.433	1.55	8.41	91	2.33	Clear	none	

8.25

Groundwater Sampling Form

Sample ID: SW-1

Site Information	
Site Name: Charah Brickhaven	**Project Number:**
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector / Will (SHL)
Date: 10/29/24	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
0915	—	—	—	—	6.07	11.7	40.3	9.72	66.5		

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-1	0915	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector / Will (Smithbond) **Sample Time:** 0915

Date Sampled: 10/29/24 **Sampler Signature:**

Notes: ~~Pumprate=~~

Groundwater Sampling Form

Sample ID: SW-2

Site Information	
Site Name: Charah Brickhaven	**Project Number:**
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector / Will (SH6)
Date: 10/24/24	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
		DRY			NO SAMPLE						

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-2		Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By:	**Sample Time:**
Date Sampled:	**Sampler Signature:**

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-3

Site Information	
Site Name: Charah Brickhaven	**Project Number:**
Site Location: Moncure, NC	**Sampling Personnel:** Z, Hector / Will (SHG)
Date: 10/29/24	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
		Stagnant, NO SAMPLE									

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-3		Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By:	**Sample Time:**
Date Sampled:	**Sampler Signature:**

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-4

Site Information	
Site Name: Charah Brickhaven	**Project Number:**
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hecht / Will (STG)
Date: 10/29/24	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s):

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
		DRY, NO SAMPLE									

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-4		Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By:	**Sample Time:**
Date Sampled:	**Sampler Signature:**

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-5

Site Information	
Site Name: Charah Brickhaven	**Project Number:**
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector / Will (5+6)
Date: 10/29/24	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A
1 Well Volume = (Total Depth - Static Water Level) * Well Capacity	
Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47	

Purging Information

Parameter Instrument(s): YSI

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1135	—			—	5.13	12.0	~~40.8~~	9.14	49.0		

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-5	1135	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector / Will (5+6)	**Sample Time:** 1135
Date Sampled: 10/29/24	**Sampler Signature:**

Notes: Pumprate=

Groundwater Sampling Form

Sample ID: SW-6

Site Information	
Site Name: Charah Brickhaven	**Project Number:**
Site Location: Moncure, NC	**Sampling Personnel:** Z. Hector / Will (SH6)
Date: 10/29/24	**Weather:**

Well Information	
Well Diameter (in): N/A	**Purge Equipment:** N/A
Screened Interval (ft): N/A	**Pump Type:** N/A
Well Depth (ft): N/A	**Pump Depth (ft-bTOC):** N/A
Depth-to-Water (ft-bTOC): N/A	**Tubing Diameter (in):** N/A
Water Column Thickness (ft): N/A	**Well Volume (ft^3):** N/A

1 Well Volume = (Total Depth - Static Water Level) * Well Capacity

Well Capacity (gallons per feet): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3' = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47

Purging Information

Parameter Instrument(s): YSI

TIME	VOLUME PURGED (Liters)	CUMULATIVE VOLUME PURGED (Liters)	PURGE RATE (mL/min)	DEPTH TO WATER (ft-bTOC)	pH (SU) (±0.1)	TEMP. (C°)	COND. (µS/cm) (5%)	DISSOLVED OXYGEN (mg/L) (10%)*	ORP (mV) (±20mV)	TURBIDITY (NTUs) (≤10 or 10%)	COLOR/ ODOR (describe)
1115					5.27	14.4	30.9	7.76	69.9		

* DO below 2.0 mg/L is stable at ±0.2 mg/L; DO below 0.5 mg/L is stable

Sample Information

Sample Number	Collection Time	Parameter	Container	Preservative
SW-6	1115	Radium 226/228	2 - 1 L Poly	HNO3
		6010/6020/7470	1 - 250 mL Poly	HNO3
		Cl, F, SO4	1 - 250 mL Poly	N/A
		TDS	1 - 500 mL Poly	N/A

Sampled By: Z. Hector / Will (SH6) **Sample Time:** 1115

Date Sampled: 10/29/24 **Sampler Signature:**

Notes: Pumprate=

B

Appendix B – Laboratory Results, Chains of Custody, and Quality Control Data

This page intentionally left blank.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

August 23, 2024

Mark Filardi
HDR
440 S. Church St
Suite 900
Charlotte, NC 28202

RE: Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Dear Mark Filardi:

Enclosed are the analytical results for sample(s) received by the laboratory on July 19, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Nicole D'Oleo

Nicole D'Oleo for
Angela Baioni
angela.baioni@pacelabs.com
612-473-6801
Project Manager

Enclosures

cc: Mark Filardi, HDR Engineering

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92742983001	**BG-1**	Water	07/15/24 16:10	07/19/24 11:45
92742983002	**BG-2**	Water	07/15/24 14:30	07/19/24 11:45
92742983003	**DUP**	Water	07/16/24 09:10	07/19/24 11:45
92742983004	**EQBL**	Water	07/18/24 15:35	07/19/24 11:45
92742983005	**LEACHATE**	Water	07/16/24 16:00	07/19/24 11:45
92742983006	**MW-1**	Water	07/18/24 11:45	07/19/24 11:45
92742983007	**MW-2**	Water	07/18/24 14:40	07/19/24 11:45
92742983008	**MW-2D**	Water	07/18/24 13:15	07/19/24 11:45
92742983009	**MW-3**	Water	07/18/24 08:50	07/19/24 11:45
92742983010	**MW-4**	Water	07/16/24 18:25	07/19/24 11:45
92742983011	**MW-5**	Water	07/16/24 16:35	07/19/24 11:45
92742983012	**MW-6**	Water	07/16/24 09:00	07/19/24 11:45
92742983013	**MW-7R**	Water	07/16/24 10:50	07/19/24 11:45
92742983014	**MW-8**	Water	07/17/24 15:25	07/19/24 11:45
92742983015	**MW-9**	Water	07/17/24 12:05	07/19/24 11:45
92742983016	**MW-10**	Water	07/17/24 16:55	07/19/24 11:45
92742983017	**MW-11**	Water	07/17/24 08:45	07/19/24 11:45
92742983018	**MW-11D**	Water	07/17/24 10:15	07/19/24 11:45
92742983019	**SW-1**	Water	07/17/24 09:15	07/19/24 11:45
92742983020	**SW-5**	Water	07/17/24 08:15	07/19/24 11:45

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92742983001	**BG-1**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	MDW	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983002	**BG-2**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	MDW	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983003	**DUP**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AA	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983004	**EQBL**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983005	**LEACHATE**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AA	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983006	**MW-1**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983007	**MW-2**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983008	**MW-2D**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983009	**MW-3**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983010	**MW-4**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AA	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983011	**MW-5**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AA	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983012	**MW-6**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AA	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983013	**MW-7R**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AA	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983014	**MW-8**	EPA 6010D	CRW, DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983015	**MW-9**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983016	**MW-10**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983017	**MW-11**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983018	**MW-11D**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983019	**SW-1**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92742983020	**SW-5**	EPA 6010D	CRW	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	KML	1	PASI-A
		EPA 903.1	LL1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JJY	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-PA = Pace Analytical Services - Greensburg

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983001	**BG-1**					
EPA 6010D	Barium	293	ug/L	5.0	08/09/24 11:27	
EPA 6010D	Calcium	25000	ug/L	100	08/09/24 11:27	
EPA 6010D	Copper	0.80J	ug/L	5.0	08/09/24 11:27	
EPA 6010D	Nickel	0.98J	ug/L	5.0	08/09/24 11:27	
EPA 6010D	Vanadium	4.6J	ug/L	5.0	08/09/24 11:27	
EPA 6010D	Zinc	4.1J	ug/L	10.0	08/09/24 11:27	
EPA 6020B	Boron	12.9J	ug/L	50.0	07/23/24 17:37	
EPA 6020B	Lithium	29.8	ug/L	2.5	07/23/24 00:03	
EPA 903.1	Radium-226	-0.351 ± 0.546 (1.12) C:NA T:92%	pCi/L		08/14/24 14:34	
EPA 904.0	Radium-228	0.682 ± 0.356 (0.617) C:75% T:92%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	0.682 ± 0.902 (1.74)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	575	mg/L	25.0	07/21/24 09:19	
EPA 300.0 Rev 2.1 1993	Chloride	192	mg/L	4.0	07/22/24 16:07	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	07/22/24 04:05	
EPA 300.0 Rev 2.1 1993	Sulfate	21.7	mg/L	1.0	07/22/24 04:05	
92742983002	**BG-2**					
EPA 6010D	Barium	51.5	ug/L	5.0	08/09/24 11:38	
EPA 6010D	Calcium	123000	ug/L	500	08/12/24 11:23	
EPA 6010D	Copper	0.93J	ug/L	5.0	08/09/24 11:38	
EPA 6010D	Molybdenum	4.3J	ug/L	5.0	08/09/24 11:38	
EPA 6010D	Nickel	1.5J	ug/L	5.0	08/09/24 11:38	
EPA 6010D	Zinc	5.2J	ug/L	10.0	08/09/24 11:38	
EPA 6020B	Boron	19.2J	ug/L	50.0	07/23/24 18:04	
EPA 6020B	Lithium	25.1	ug/L	2.5	07/23/24 00:30	
EPA 903.1	Radium-226	-0.0879 ± 0.422 (0.856) C:NA T:90%	pCi/L		08/14/24 14:34	
EPA 904.0	Radium-228	0.378 ± 0.302 (0.591) C:83% T:90%	pCi/L		08/08/24 13:13	
Total Radium Calculation	Total Radium	0.378 ± 0.724 (1.45)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	1400	mg/L	50.0	07/21/24 09:19	
EPA 300.0 Rev 2.1 1993	Chloride	264	mg/L	6.0	07/22/24 16:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.30	mg/L	0.10	07/22/24 04:20	
EPA 300.0 Rev 2.1 1993	Sulfate	210	mg/L	6.0	07/22/24 16:22	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983003	**DUP**					
EPA 6010D	Barium	51.0	ug/L	5.0	08/09/24 11:41	
EPA 6010D	Calcium	34200	ug/L	100	08/09/24 11:41	
EPA 6010D	Copper	1.5J	ug/L	5.0	08/09/24 11:41	
EPA 6010D	Nickel	1.9J	ug/L	5.0	08/09/24 11:41	
EPA 6010D	Zinc	7.6J	ug/L	10.0	08/09/24 11:41	
EPA 6020B	Boron	10.6J	ug/L	50.0	07/23/24 18:08	
EPA 6020B	Lithium	25.6	ug/L	2.5	07/23/24 00:33	
EPA 903.1	Radium-226	0.0485 ± 0.529 (1.01) C:NA T:91%	pCi/L		08/14/24 14:34	
EPA 904.0	Radium-228	-0.0362 ± 0.255 (0.607) C:82% T:91%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	0.0485 ± 0.784 (1.62)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	595	mg/L	25.0	07/22/24 13:48	
EPA 300.0 Rev 2.1 1993	Chloride	170	mg/L	4.0	07/22/24 16:37	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.32	mg/L	0.10	07/22/24 04:35	
EPA 300.0 Rev 2.1 1993	Sulfate	27.7	mg/L	1.0	07/22/24 04:35	
92742983004	**EQBL**					
EPA 903.1	Radium-226	-0.0978 ± 0.621 (1.20) C:NA T:91%	pCi/L		08/14/24 14:34	
EPA 904.0	Radium-228	0.0996 ± 0.363 (0.818) C:77% T:91%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	0.0996 ± 0.984 (2.02)	pCi/L		08/14/24 15:55	
92742983005	**LEACHATE**					
EPA 6010D	Arsenic	11.6	ug/L	10.0	08/09/24 11:52	
EPA 6010D	Barium	50.6	ug/L	5.0	08/09/24 11:52	
EPA 6010D	Calcium	306000	ug/L	500	08/12/24 11:25	
EPA 6010D	Copper	1.2J	ug/L	5.0	08/09/24 11:52	
EPA 6010D	Molybdenum	262	ug/L	5.0	08/09/24 11:52	
EPA 6010D	Nickel	2.9J	ug/L	5.0	08/09/24 11:52	
EPA 6010D	Vanadium	1.6J	ug/L	5.0	08/09/24 11:52	
EPA 6020B	Boron	3270	ug/L	1500	07/23/24 18:16	
EPA 6020B	Lithium	63.3	ug/L	2.5	07/23/24 00:40	
EPA 6020B	Thallium	0.17J	ug/L	0.20	07/23/24 00:40	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983005	**LEACHATE**					
EPA 903.1	Radium-226	-0.431 ± 0.599 (1.27) C:NA T:79%	pCi/L		08/14/24 14:34	
EPA 904.0	Radium-228	0.115 ± 0.423 (0.955) C:74% T:79%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	0.115 ± 1.02 (2.23)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	1400	mg/L	25.0	07/22/24 13:48	
EPA 300.0 Rev 2.1 1993	Chloride	19.9	mg/L	1.0	07/22/24 11:12	
EPA 300.0 Rev 2.1 1993	Fluoride	0.24	mg/L	0.10	07/22/24 11:12	
EPA 300.0 Rev 2.1 1993	Sulfate	459	mg/L	11.0	07/22/24 20:32	
92742983006	**MW-1**					
EPA 6010D	Barium	255	ug/L	5.0	08/09/24 11:55	
EPA 6010D	Calcium	199000	ug/L	500	08/12/24 11:28	
EPA 6010D	Chromium	2.5J	ug/L	5.0	08/09/24 11:55	
EPA 6010D	Cobalt	0.75J	ug/L	5.0	08/09/24 11:55	
EPA 6010D	Copper	1.8J	ug/L	5.0	08/09/24 11:55	
EPA 6010D	Nickel	2.7J	ug/L	5.0	08/09/24 11:55	
EPA 6010D	Silver	0.73J	ug/L	5.0	08/09/24 11:55	
EPA 6010D	Vanadium	4.1J	ug/L	5.0	08/09/24 11:55	
EPA 6010D	Zinc	13.8	ug/L	10.0	08/09/24 11:55	
EPA 6020B	Boron	15.8J	ug/L	50.0	07/23/24 18:20	
EPA 6020B	Lithium	37.7	ug/L	2.5	07/23/24 00:44	
EPA 903.1	Radium-226	-0.255 ± 0.625 (1.25) C:NA T:88%	pCi/L		08/14/24 14:34	
EPA 904.0	Radium-228	0.613 ± 0.412 (0.803) C:83% T:88%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	0.613 ± 1.04 (2.05)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	1320	mg/L	50.0	07/24/24 14:47	
EPA 300.0 Rev 2.1 1993	Chloride	794	mg/L	19.0	07/22/24 17:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	07/22/24 05:20	
EPA 300.0 Rev 2.1 1993	Sulfate	6.3	mg/L	1.0	07/22/24 05:20	
92742983007	**MW-2**					
EPA 6010D	Arsenic	3.8J	ug/L	10.0	08/09/24 11:58	
EPA 6010D	Barium	336	ug/L	5.0	08/09/24 11:58	
EPA 6010D	Calcium	188000	ug/L	500	08/12/24 11:31	
EPA 6010D	Chromium	3.0J	ug/L	5.0	08/09/24 11:58	
EPA 6010D	Copper	3.0J	ug/L	5.0	08/09/24 11:58	
EPA 6010D	Molybdenum	4.6J	ug/L	5.0	08/09/24 11:58	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983007	**MW-2**					
EPA 6010D	Nickel	3.1J	ug/L	5.0	08/09/24 11:58	
EPA 6010D	Vanadium	1.6J	ug/L	5.0	08/09/24 11:58	
EPA 6010D	Zinc	6.0J	ug/L	10.0	08/09/24 11:58	
EPA 6020B	Boron	50.0	ug/L	50.0	07/23/24 18:23	
EPA 6020B	Lithium	128	ug/L	2.5	07/23/24 00:48	
EPA 6020B	Thallium	0.049J	ug/L	0.20	07/23/24 00:48	
EPA 903.1	Radium-226	0.723 ± 0.763 (1.24) C:NA T:84%	pCi/L		08/14/24 14:34	
EPA 904.0	Radium-228	0.664 ± 0.403 (0.757) C:81% T:84%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	1.39 ± 1.17 (2.00)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	2300	mg/L	50.0	07/24/24 14:47	
EPA 300.0 Rev 2.1 1993	Chloride	1020	mg/L	24.0	07/22/24 17:35	
EPA 300.0 Rev 2.1 1993	Fluoride	0.21	mg/L	0.10	07/22/24 05:35	
EPA 300.0 Rev 2.1 1993	Sulfate	71.3	mg/L	1.0	07/22/24 05:35	
92742983008	**MW-2D**					
EPA 6010D	Arsenic	17.6	ug/L	10.0	08/09/24 12:01	
EPA 6010D	Barium	103	ug/L	5.0	08/09/24 12:01	
EPA 6010D	Calcium	12400	ug/L	100	08/09/24 12:01	
EPA 6010D	Chromium	9.2	ug/L	5.0	08/09/24 12:01	
EPA 6010D	Copper	5.4	ug/L	5.0	08/09/24 12:01	
EPA 6010D	Molybdenum	272	ug/L	5.0	08/09/24 12:01	
EPA 6010D	Nickel	3.1J	ug/L	5.0	08/09/24 12:01	
EPA 6010D	Selenium	11.2	ug/L	10.0	08/09/24 12:01	
EPA 6010D	Vanadium	74.4	ug/L	5.0	08/09/24 12:01	
EPA 6020B	Boron	38.8J	ug/L	50.0	07/23/24 18:27	
EPA 6020B	Lithium	172	ug/L	2.5	07/23/24 00:52	
EPA 903.1	Radium-226	-0.328 ± 0.442 (0.970) C:NA T:85%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	0.342 ± 0.322 (0.653) C:76% T:85%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	0.342 ± 0.764 (1.62)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	498	mg/L	50.0	07/24/24 14:47	
EPA 300.0 Rev 2.1 1993	Chloride	109	mg/L	3.0	07/22/24 17:50	
EPA 300.0 Rev 2.1 1993	Fluoride	3.6	mg/L	0.10	07/22/24 05:50	
EPA 300.0 Rev 2.1 1993	Sulfate	40.7	mg/L	1.0	07/22/24 05:50	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983009	**MW-3**					
EPA 6010D	Barium	767	ug/L	5.0	08/09/24 12:04	
EPA 6010D	Calcium	192000	ug/L	500	08/12/24 11:34	
EPA 6010D	Copper	1.4J	ug/L	5.0	08/09/24 12:04	
EPA 6010D	Molybdenum	8.0	ug/L	5.0	08/09/24 12:04	
EPA 6010D	Nickel	1.1J	ug/L	5.0	08/09/24 12:04	
EPA 6010D	Zinc	5.0J	ug/L	10.0	08/09/24 12:04	
EPA 6020B	Boron	49.6J	ug/L	50.0	07/23/24 18:31	
EPA 6020B	Lithium	87.0	ug/L	2.5	07/23/24 00:55	
EPA 903.1	Radium-226	1.11 ± 0.556 (0.630) C:NA T:87%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	1.65 ± 0.508 (0.596) C:77% T:87%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	2.76 ± 1.06 (1.23)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	2260	mg/L	50.0	07/24/24 14:47	
EPA 300.0 Rev 2.1 1993	Chloride	1020	mg/L	24.0	07/22/24 18:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.27	mg/L	0.10	07/22/24 06:04	
EPA 300.0 Rev 2.1 1993	Sulfate	13.0	mg/L	1.0	07/22/24 06:04	
92742983010	**MW-4**					
EPA 6010D	Barium	351	ug/L	5.0	08/09/24 12:06	
EPA 6010D	Calcium	47100	ug/L	100	08/09/24 12:06	
EPA 6010D	Chromium	1.2J	ug/L	5.0	08/09/24 12:06	
EPA 6010D	Cobalt	22.6	ug/L	5.0	08/09/24 12:06	
EPA 6010D	Copper	0.92J	ug/L	5.0	08/09/24 12:06	
EPA 6010D	Nickel	12.7	ug/L	5.0	08/09/24 12:06	
EPA 6010D	Zinc	15.1	ug/L	10.0	08/09/24 12:06	
EPA 6020B	Boron	11.8J	ug/L	50.0	07/23/24 18:35	
EPA 6020B	Lithium	38.9	ug/L	2.5	07/23/24 00:59	
EPA 903.1	Radium-226	0.388 ± 0.487 (0.808) C:NA T:87%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	0.372 ± 0.327 (0.658) C:79% T:87%	pCi/L		08/08/24 12:22	
Total Radium Calculation	Total Radium	0.760 ± 0.814 (1.47)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	1100	mg/L	50.0	07/22/24 13:49	
EPA 300.0 Rev 2.1 1993	Chloride	348	mg/L	8.0	07/22/24 18:19	
EPA 300.0 Rev 2.1 1993	Fluoride	0.34	mg/L	0.10	07/22/24 07:09	
EPA 300.0 Rev 2.1 1993	Sulfate	10.0	mg/L	1.0	07/22/24 07:09	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983011	**MW-5**					
EPA 6010D	Barium	106	ug/L	5.0	08/09/24 12:09	
EPA 6010D	Calcium	7990	ug/L	100	08/09/24 12:09	
EPA 6010D	Chromium	1.1J	ug/L	5.0	08/09/24 12:09	
EPA 6010D	Copper	2.0J	ug/L	5.0	08/09/24 12:09	
EPA 6010D	Nickel	1.8J	ug/L	5.0	08/09/24 12:09	
EPA 6010D	Zinc	10.2	ug/L	10.0	08/09/24 12:09	
EPA 6020B	Boron	13.1J	ug/L	50.0	07/23/24 18:39	
EPA 6020B	Lithium	11.4	ug/L	2.5	07/23/24 01:03	
EPA 903.1	Radium-226	0.0428 ± 0.302 (0.603) C:NA T:93%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	0.502 ± 0.336 (0.638) C:75% T:93%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	0.545 ± 0.638 (1.24)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	198	mg/L	25.0	07/22/24 13:49	
EPA 300.0 Rev 2.1 1993	Chloride	19.5	mg/L	1.0	07/22/24 07:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.53	mg/L	0.10	07/22/24 07:24	
EPA 300.0 Rev 2.1 1993	Sulfate	4.1	mg/L	1.0	07/22/24 07:24	
92742983012	**MW-6**					
EPA 6010D	Barium	47.9	ug/L	5.0	08/09/24 12:12	
EPA 6010D	Calcium	33400	ug/L	100	08/09/24 12:12	
EPA 6010D	Copper	1.1J	ug/L	5.0	08/09/24 12:12	
EPA 6010D	Nickel	1.8J	ug/L	5.0	08/09/24 12:12	
EPA 6010D	Zinc	6.2J	ug/L	10.0	08/09/24 12:12	
EPA 6020B	Boron	8.5J	ug/L	50.0	07/23/24 01:14	
EPA 6020B	Lithium	25.1	ug/L	2.5	07/23/24 01:14	
EPA 903.1	Radium-226	-0.579 ± 0.475 (1.07) C:NA T:90%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	0.533 ± 0.423 (0.853) C:78% T:90%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	0.533 ± 0.898 (1.92)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	572	mg/L	25.0	07/22/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	177	mg/L	4.0	07/22/24 19:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.32	mg/L	0.10	07/22/24 07:39	
EPA 300.0 Rev 2.1 1993	Sulfate	27.5	mg/L	1.0	07/22/24 07:39	
92742983013	**MW-7R**					
EPA 6010D	Barium	312	ug/L	5.0	08/09/24 12:15	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983013	**MW-7R**					
EPA 6010D	Calcium	91200	ug/L	100	08/09/24 12:15	
EPA 6010D	Chromium	1.7J	ug/L	5.0	08/09/24 12:15	
EPA 6010D	Copper	1.1J	ug/L	5.0	08/09/24 12:15	
EPA 6010D	Nickel	1.0J	ug/L	5.0	08/09/24 12:15	
EPA 6010D	Vanadium	2.8J	ug/L	5.0	08/09/24 12:15	
EPA 6020B	Boron	10.5J	ug/L	50.0	07/23/24 01:18	
EPA 6020B	Lithium	28.1	ug/L	2.5	07/23/24 01:18	
EPA 903.1	Radium-226	-0.186 ± 0.516 (1.04) C:NA T:90%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	0.517 ± 0.375 (0.742) C:85% T:90%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	0.517 ± 0.891 (1.78)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	905	mg/L	25.0	07/22/24 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	255	mg/L	6.0	07/22/24 19:18	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	07/22/24 07:54	
EPA 300.0 Rev 2.1 1993	Sulfate	14.9	mg/L	1.0	07/22/24 07:54	
92742983014	**MW-8**					
EPA 6010D	Arsenic	2.5J	ug/L	10.0	08/09/24 12:24	
EPA 6010D	Barium	1140	ug/L	5.0	08/09/24 12:24	
EPA 6010D	Calcium	113000	ug/L	500	08/12/24 11:43	
EPA 6010D	Chromium	4.0J	ug/L	5.0	08/09/24 12:24	
EPA 6010D	Cobalt	0.63J	ug/L	5.0	08/09/24 12:24	
EPA 6010D	Copper	3.4J	ug/L	5.0	08/09/24 12:24	
EPA 6010D	Lead	2.8J	ug/L	5.0	08/09/24 12:24	
EPA 6010D	Nickel	3.5J	ug/L	5.0	08/09/24 12:24	
EPA 6010D	Vanadium	3.9J	ug/L	5.0	08/09/24 12:24	
EPA 6010D	Zinc	15.4	ug/L	10.0	08/09/24 12:24	
EPA 6020B	Boron	11.8J	ug/L	50.0	07/23/24 01:22	
EPA 6020B	Lithium	29.4	ug/L	2.5	07/23/24 01:22	
EPA 6020B	Thallium	0.033J	ug/L	0.20	07/23/24 01:22	
EPA 903.1	Radium-226	0.273 ± 0.633 (1.13) C:NA T:90%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	0.759 ± 0.413 (0.753) C:79% T:90%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	1.03 ± 1.05 (1.88)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	889	mg/L	25.0	07/23/24 10:46	1g
EPA 300.0 Rev 2.1 1993	Chloride	332	mg/L	8.0	07/22/24 20:02	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983014	**MW-8**					
EPA 300.0 Rev 2.1 1993	Fluoride	0.10	mg/L	0.10	07/22/24 08:38	
EPA 300.0 Rev 2.1 1993	Sulfate	7.3	mg/L	1.0	07/22/24 08:38	
92742983015	**MW-9**					
EPA 6010D	Barium	192	ug/L	5.0	08/09/24 12:26	
EPA 6010D	Calcium	34500	ug/L	100	08/09/24 12:26	
EPA 6010D	Chromium	2.5J	ug/L	5.0	08/09/24 12:26	
EPA 6010D	Copper	5.0J	ug/L	5.0	08/09/24 12:26	
EPA 6010D	Molybdenum	21.8	ug/L	5.0	08/09/24 12:26	
EPA 6010D	Nickel	2.2J	ug/L	5.0	08/09/24 12:26	
EPA 6010D	Selenium	8.2J	ug/L	10.0	08/09/24 12:26	
EPA 6010D	Zinc	5.8J	ug/L	10.0	08/09/24 12:26	
EPA 6020B	Boron	32.8J	ug/L	50.0	07/23/24 01:26	
EPA 6020B	Lithium	3.2	ug/L	2.5	07/23/24 01:26	
SM 2540C-2015	Total Dissolved Solids	494	mg/L	25.0	07/23/24 10:46	
EPA 300.0 Rev 2.1 1993	Chloride	10.2	mg/L	1.0	07/22/24 08:53	
EPA 300.0 Rev 2.1 1993	Fluoride	0.26	mg/L	0.10	07/22/24 08:53	
EPA 300.0 Rev 2.1 1993	Sulfate	68.1	mg/L	1.0	07/22/24 08:53	
92742983016	**MW-10**					
EPA 6010D	Arsenic	2.7J	ug/L	10.0	08/09/24 12:29	
EPA 6010D	Barium	95.8	ug/L	5.0	08/09/24 12:29	
EPA 6010D	Calcium	20700	ug/L	100	08/09/24 12:29	
EPA 6010D	Copper	0.68J	ug/L	5.0	08/09/24 12:29	
EPA 6010D	Molybdenum	17.0	ug/L	5.0	08/09/24 12:29	
EPA 6010D	Nickel	1.5J	ug/L	5.0	08/09/24 12:29	
EPA 6020B	Boron	27.0J	ug/L	50.0	07/23/24 01:29	
EPA 6020B	Lithium	5.2	ug/L	2.5	07/23/24 01:29	
EPA 903.1	Radium-226	0.410 ± 0.652 (1.12) C:NA T:91%	pCi/L		08/14/24 14:47	
EPA 904.0	Radium-228	0.364 ± 0.389 (0.812) C:77% T:91%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	0.774 ± 1.04 (1.93)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	347	mg/L	25.0	07/23/24 10:47	
EPA 300.0 Rev 2.1 1993	Chloride	29.8	mg/L	1.0	07/22/24 09:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.44	mg/L	0.10	07/22/24 09:08	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	07/22/24 09:08	
92742983017	**MW-11**					
EPA 6010D	Barium	39.8	ug/L	5.0	08/09/24 12:32	
EPA 6010D	Calcium	25200	ug/L	100	08/09/24 12:32	
EPA 6010D	Copper	1.0J	ug/L	5.0	08/09/24 12:32	
EPA 6010D	Nickel	0.95J	ug/L	5.0	08/09/24 12:32	
EPA 6020B	Boron	18.7J	ug/L	50.0	07/23/24 01:33	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983017	**MW-11**					
EPA 6020B	Lithium	10.1	ug/L	2.5	07/23/24 01:33	
EPA 903.1	Radium-226	0.0925 ± 0.385 (0.733) C:NA T:87%	pCi/L		08/14/24 14:59	
EPA 904.0	Radium-228	0.391 ± 0.351 (0.712) C:79% T:87%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	0.484 ± 0.736 (1.45)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	407	mg/L	25.0	07/23/24 10:47	
EPA 300.0 Rev 2.1 1993	Chloride	119	mg/L	3.0	07/22/24 20:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	07/22/24 10:13	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	07/22/24 10:13	
92742983018	**MW-11D**					
EPA 6010D	Barium	113	ug/L	5.0	08/09/24 12:35	
EPA 6010D	Calcium	15500	ug/L	100	08/09/24 12:35	
EPA 6010D	Molybdenum	3.6J	ug/L	5.0	08/09/24 12:35	
EPA 6010D	Zinc	5.5J	ug/L	10.0	08/09/24 12:35	
EPA 6020B	Boron	45.9J	ug/L	50.0	07/23/24 01:37	
EPA 6020B	Lithium	18.1	ug/L	2.5	07/23/24 01:37	
EPA 903.1	Radium-226	0.0934 ± 0.343 (0.659) C:NA T:88%	pCi/L		08/14/24 14:59	
EPA 904.0	Radium-228	0.308 ± 0.355 (0.745) C:73% T:88%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	0.401 ± 0.698 (1.40)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	323	mg/L	25.0	07/23/24 10:47	
EPA 300.0 Rev 2.1 1993	Chloride	54.8	mg/L	1.0	07/22/24 10:28	
EPA 300.0 Rev 2.1 1993	Fluoride	0.43	mg/L	0.10	07/22/24 10:28	
EPA 300.0 Rev 2.1 1993	Sulfate	14.8	mg/L	1.0	07/22/24 10:28	
92742983019	**SW-1**					
EPA 6010D	Arsenic	4.8J	ug/L	10.0	08/09/24 12:38	
EPA 6010D	Barium	330	ug/L	5.0	08/09/24 12:38	
EPA 6010D	Beryllium	1.3	ug/L	1.0	08/09/24 12:38	
EPA 6010D	Calcium	4930	ug/L	100	08/09/24 12:38	
EPA 6010D	Chromium	11.5	ug/L	5.0	08/09/24 12:38	
EPA 6010D	Cobalt	0.89J	ug/L	5.0	08/09/24 12:38	
EPA 6010D	Copper	12.6	ug/L	5.0	08/09/24 12:38	
EPA 6010D	Lead	22.5	ug/L	5.0	08/09/24 12:38	
EPA 6010D	Nickel	8.5	ug/L	5.0	08/09/24 12:38	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92742983019	**SW-1**					
EPA 6010D	Vanadium	42.6	ug/L	5.0	08/09/24 12:38	
EPA 6010D	Zinc	43.7	ug/L	10.0	08/09/24 12:38	
EPA 6020B	Boron	21.2J	ug/L	50.0	07/23/24 01:41	
EPA 6020B	Lithium	6.0	ug/L	2.5	07/23/24 01:41	
EPA 6020B	Thallium	0.10J	ug/L	0.20	07/23/24 01:41	
EPA 903.1	Radium-226	0.131 ± 0.445 (0.822) C:NA T:95%	pCi/L		08/14/24 14:59	
EPA 904.0	Radium-228	0.847 ± 0.371 (0.610) C:83% T:95%	pCi/L		08/08/24 12:23	
Total Radium Calculation	Total Radium	0.978 ± 0.816 (1.43)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	791	mg/L	25.0	07/23/24 10:47	
EPA 300.0 Rev 2.1 1993	Chloride	10.8	mg/L	1.0	07/22/24 10:43	
EPA 300.0 Rev 2.1 1993	Fluoride	0.25	mg/L	0.10	07/22/24 10:43	
EPA 300.0 Rev 2.1 1993	Sulfate	3.1	mg/L	1.0	07/22/24 10:43	
92742983020	**SW-5**					
EPA 6010D	Barium	52.4	ug/L	5.0	08/09/24 12:41	
EPA 6010D	Calcium	4140	ug/L	100	08/09/24 12:41	
EPA 6010D	Cobalt	1.3J	ug/L	5.0	08/09/24 12:41	
EPA 6010D	Copper	1.6J	ug/L	5.0	08/09/24 12:41	
EPA 6010D	Nickel	2.0J	ug/L	5.0	08/09/24 12:41	
EPA 6010D	Zinc	48.4	ug/L	10.0	08/09/24 12:41	
EPA 6020B	Boron	11.2J	ug/L	50.0	07/23/24 01:44	
EPA 6020B	Lithium	0.78J	ug/L	2.5	07/23/24 01:44	
EPA 903.1	Radium-226	0.175 ± 0.364 (0.656) C:NA T:91%	pCi/L		08/14/24 14:59	
EPA 904.0	Radium-228	-0.302 ± 0.316 (0.784) C:79% T:91%	pCi/L		08/08/24 12:24	
Total Radium Calculation	Total Radium	0.175 ± 0.680 (1.44)	pCi/L		08/14/24 15:55	
SM 2540C-2015	Total Dissolved Solids	72.0	mg/L	25.0	07/23/24 10:47	
EPA 300.0 Rev 2.1 1993	Chloride	4.8	mg/L	1.0	07/22/24 10:58	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	07/22/24 10:58	
EPA 300.0 Rev 2.1 1993	Sulfate	1.1	mg/L	1.0	07/22/24 10:58	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: BG-1 **Lab ID: 92742983001** Collected: 07/15/24 16:10 Received: 07/19/24 11:45 Matrix: Water

Comments: • The sampler's name and signature were not listed on the COC.
• Sample 015 on COC says 1 BP1N. Did not receive volume forthe samples (tests not marked; COC indicates 19 total samples)).

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 11:27	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 11:27	7440-38-2	
Barium	**293**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 11:27	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 11:27	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 11:27	7440-43-9	
Calcium	**25000**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 11:27	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 11:27	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 11:27	7440-48-4	
Copper	**0.80J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 11:27	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 11:27	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 11:27	7439-98-7	
Nickel	**0.98J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 11:27	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 11:27	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 11:27	7440-22-4	
Vanadium	**4.6J**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 11:27	7440-62-2	
Zinc	**4.1J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 11:27	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**12.9J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 17:37	7440-42-8	
Lithium	**29.8**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:03	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 11:48	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**575**	mg/L	25.0	25.0	1		07/21/24 09:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**192**	mg/L	4.0	2.4	4		07/22/24 16:07	16887-00-6	
Fluoride	**0.19**	mg/L	0.10	0.050	1		07/22/24 04:05	16984-48-8	
Sulfate	**21.7**	mg/L	1.0	0.50	1		07/22/24 04:05	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: BG-2 **Lab ID: 92742983002** Collected: 07/15/24 14:30 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 11:38	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 11:38	7440-38-2	
Barium	**51.5**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 11:38	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 11:38	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 11:38	7440-43-9	
Calcium	**123000**	ug/L	500	73.7	5	07/22/24 12:40	08/12/24 11:23	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 11:38	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 11:38	7440-48-4	
Copper	**0.93J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 11:38	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 11:38	7439-92-1	
Molybdenum	**4.3J**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 11:38	7439-98-7	
Nickel	**1.5J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 11:38	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 11:38	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 11:38	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 11:38	7440-62-2	
Zinc	**5.2J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 11:38	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**19.2J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:04	7440-42-8	
Lithium	**25.1**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:30	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:30	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 11:50	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1400**	mg/L	50.0	50.0	1		07/21/24 09:19		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**264**	mg/L	6.0	3.6	6		07/22/24 16:22	16887-00-6	
Fluoride	**0.30**	mg/L	0.10	0.050	1		07/22/24 04:20	16984-48-8	
Sulfate	**210**	mg/L	6.0	3.0	6		07/22/24 16:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: DUP **Lab ID: 92742983003** Collected: 07/16/24 09:10 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 11:41	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 11:41	7440-38-2	
Barium	**51.0**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 11:41	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 11:41	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 11:41	7440-43-9	
Calcium	**34200**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 11:41	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 11:41	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 11:41	7440-48-4	
Copper	**1.5J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 11:41	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 11:41	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 11:41	7439-98-7	
Nickel	**1.9J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 11:41	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 11:41	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 11:41	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 11:41	7440-62-2	
Zinc	**7.6J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 11:41	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**10.6J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:08	7440-42-8	
Lithium	**25.6**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:33	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 11:57	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**595**	mg/L	25.0	25.0	1		07/22/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**170**	mg/L	4.0	2.4	4		07/22/24 16:37	16887-00-6	M1
Fluoride	**0.32**	mg/L	0.10	0.050	1		07/22/24 04:35	16984-48-8	
Sulfate	**27.7**	mg/L	1.0	0.50	1		07/22/24 04:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: EQBL **Lab ID: 92742983004** Collected: 07/18/24 15:35 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 11:49	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 11:49	7440-38-2	
Barium	ND	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 11:49	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 11:49	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 11:49	7440-43-9	
Calcium	ND	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 11:49	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 11:49	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 11:49	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 11:49	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 11:49	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 11:49	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 11:49	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 11:49	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 11:49	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 11:49	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 11:49	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:12	7440-42-8	
Lithium	ND	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:37	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 11:59	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		07/24/24 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		07/21/24 20:38	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		07/21/24 20:38	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		07/21/24 20:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: LEACHATE **Lab ID: 92742983005** Collected: 07/16/24 16:00 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 11:52	7440-36-0	
Arsenic	**11.6**	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 11:52	7440-38-2	
Barium	**50.6**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 11:52	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 11:52	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 11:52	7440-43-9	
Calcium	**306000**	ug/L	500	73.7	5	07/22/24 12:40	08/12/24 11:25	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 11:52	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 11:52	7440-48-4	
Copper	**1.2J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 11:52	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 11:52	7439-92-1	
Molybdenum	**262**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 11:52	7439-98-7	
Nickel	**2.9J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 11:52	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 11:52	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 11:52	7440-22-4	
Vanadium	**1.6J**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 11:52	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 11:52	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**3270**	ug/L	1500	225	30	07/22/24 12:40	07/23/24 18:16	7440-42-8	
Lithium	**63.3**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:40	7439-93-2	
Thallium	**0.17J**	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:40	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:01	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1400**	mg/L	25.0	25.0	1		07/22/24 13:48		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**19.9**	mg/L	1.0	0.60	1		07/22/24 11:12	16887-00-6	
Fluoride	**0.24**	mg/L	0.10	0.050	1		07/22/24 11:12	16984-48-8	
Sulfate	**459**	mg/L	11.0	5.5	11		07/22/24 20:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-1 **Lab ID: 92742983006** Collected: 07/18/24 11:45 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 11:55	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 11:55	7440-38-2	
Barium	**255**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 11:55	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 11:55	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 11:55	7440-43-9	
Calcium	**199000**	ug/L	500	73.7	5	07/22/24 12:40	08/12/24 11:28	7440-70-2	
Chromium	**2.5J**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 11:55	7440-47-3	
Cobalt	**0.75J**	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 11:55	7440-48-4	
Copper	**1.8J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 11:55	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 11:55	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 11:55	7439-98-7	
Nickel	**2.7J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 11:55	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 11:55	7782-49-2	
Silver	**0.73J**	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 11:55	7440-22-4	
Vanadium	**4.1J**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 11:55	7440-62-2	
Zinc	**13.8**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 11:55	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**15.8J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:20	7440-42-8	
Lithium	**37.7**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:44	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:03	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1320**	mg/L	50.0	50.0	1		07/24/24 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**794**	mg/L	19.0	11.4	19		07/22/24 17:21	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	0.050	1		07/22/24 05:20	16984-48-8	
Sulfate	**6.3**	mg/L	1.0	0.50	1		07/22/24 05:20	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-2 **Lab ID: 92742983007** Collected: 07/18/24 14:40 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 11:58	7440-36-0	
Arsenic	**3.8J**	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 11:58	7440-38-2	
Barium	**336**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 11:58	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 11:58	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 11:58	7440-43-9	
Calcium	**188000**	ug/L	500	73.7	5	07/22/24 12:40	08/12/24 11:31	7440-70-2	
Chromium	**3.0J**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 11:58	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 11:58	7440-48-4	
Copper	**3.0J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 11:58	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 11:58	7439-92-1	
Molybdenum	**4.6J**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 11:58	7439-98-7	
Nickel	**3.1J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 11:58	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 11:58	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 11:58	7440-22-4	
Vanadium	**1.6J**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 11:58	7440-62-2	
Zinc	**6.0J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 11:58	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**50.0**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:23	7440-42-8	
Lithium	**128**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:48	7439-93-2	
Thallium	**0.049J**	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**2300**	mg/L	50.0	50.0	1		07/24/24 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1020**	mg/L	24.0	14.4	24		07/22/24 17:35	16887-00-6	
Fluoride	**0.21**	mg/L	0.10	0.050	1		07/22/24 05:35	16984-48-8	
Sulfate	**71.3**	mg/L	1.0	0.50	1		07/22/24 05:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-2D **Lab ID: 92742983008** Collected: 07/18/24 13:15 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:01	7440-36-0	
Arsenic	**17.6**	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:01	7440-38-2	
Barium	**103**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:01	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:01	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:01	7440-43-9	
Calcium	**12400**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:01	7440-70-2	
Chromium	**9.2**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:01	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:01	7440-48-4	
Copper	**5.4**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:01	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:01	7439-92-1	
Molybdenum	**272**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:01	7439-98-7	
Nickel	**3.1J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:01	7440-02-0	
Selenium	**11.2**	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:01	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:01	7440-22-4	
Vanadium	**74.4**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:01	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:01	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**38.8J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:27	7440-42-8	
Lithium	**172**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:52	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:11	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**498**	mg/L	50.0	50.0	1		07/24/24 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**109**	mg/L	3.0	1.8	3		07/22/24 17:50	16887-00-6	
Fluoride	**3.6**	mg/L	0.10	0.050	1		07/22/24 05:50	16984-48-8	
Sulfate	**40.7**	mg/L	1.0	0.50	1		07/22/24 05:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-3 **Lab ID: 92742983009** Collected: 07/18/24 08:50 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:04	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:04	7440-38-2	
Barium	**767**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:04	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:04	7440-43-9	
Calcium	**192000**	ug/L	500	73.7	5	07/22/24 12:40	08/12/24 11:34	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:04	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:04	7440-48-4	
Copper	**1.4J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:04	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:04	7439-92-1	
Molybdenum	**8.0**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:04	7439-98-7	
Nickel	**1.1J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:04	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:04	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:04	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:04	7440-62-2	
Zinc	**5.0J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:04	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**49.6J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:31	7440-42-8	
Lithium	**87.0**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:55	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:13	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**2260**	mg/L	50.0	50.0	1		07/24/24 14:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**1020**	mg/L	24.0	14.4	24		07/22/24 18:05	16887-00-6	
Fluoride	**0.27**	mg/L	0.10	0.050	1		07/22/24 06:04	16984-48-8	
Sulfate	**13.0**	mg/L	1.0	0.50	1		07/22/24 06:04	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-4 **Lab ID: 92742983010** Collected: 07/16/24 18:25 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:06	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:06	7440-38-2	
Barium	**351**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:06	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:06	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:06	7440-43-9	
Calcium	**47100**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:06	7440-70-2	
Chromium	**1.2J**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:06	7440-47-3	
Cobalt	**22.6**	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:06	7440-48-4	
Copper	**0.92J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:06	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:06	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:06	7439-98-7	
Nickel	**12.7**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:06	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:06	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:06	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:06	7440-62-2	
Zinc	**15.1**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:06	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**11.8J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:35	7440-42-8	
Lithium	**38.9**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 00:59	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 00:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1100**	mg/L	50.0	50.0	1		07/22/24 13:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**348**	mg/L	8.0	4.8	8		07/22/24 18:19	16887-00-6	
Fluoride	**0.34**	mg/L	0.10	0.050	1		07/22/24 07:09	16984-48-8	
Sulfate	**10.0**	mg/L	1.0	0.50	1		07/22/24 07:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-5 **Lab ID: 92742983011** Collected: 07/16/24 16:35 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:09	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:09	7440-38-2	
Barium	**106**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:09	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:09	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:09	7440-43-9	
Calcium	**7990**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:09	7440-70-2	
Chromium	**1.1J**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:09	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:09	7440-48-4	
Copper	**2.0J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:09	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:09	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:09	7439-98-7	
Nickel	**1.8J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:09	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:09	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:09	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:09	7440-62-2	
Zinc	**10.2**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:09	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**13.1J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 18:39	7440-42-8	
Lithium	**11.4**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:03	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**198**	mg/L	25.0	25.0	1		07/22/24 13:49		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**19.5**	mg/L	1.0	0.60	1		07/22/24 07:24	16887-00-6	
Fluoride	**0.53**	mg/L	0.10	0.050	1		07/22/24 07:24	16984-48-8	
Sulfate	**4.1**	mg/L	1.0	0.50	1		07/22/24 07:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-6 **Lab ID: 92742983012** Collected: 07/16/24 09:00 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:12	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:12	7440-38-2	
Barium	**47.9**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:12	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:12	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:12	7440-43-9	
Calcium	**33400**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:12	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:12	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:12	7440-48-4	
Copper	**1.1J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:12	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:12	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:12	7439-98-7	
Nickel	**1.8J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:12	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:12	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:12	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:12	7440-62-2	
Zinc	**6.2J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:12	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.5J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:14	7440-42-8	
Lithium	**25.1**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:14	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:20	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**572**	mg/L	25.0	25.0	1		07/22/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**177**	mg/L	4.0	2.4	4		07/22/24 19:04	16887-00-6	
Fluoride	**0.32**	mg/L	0.10	0.050	1		07/22/24 07:39	16984-48-8	
Sulfate	**27.5**	mg/L	1.0	0.50	1		07/22/24 07:39	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-7R **Lab ID: 92742983013** Collected: 07/16/24 10:50 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:15	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:15	7440-38-2	
Barium	**312**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:15	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:15	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:15	7440-43-9	
Calcium	**91200**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:15	7440-70-2	
Chromium	**1.7J**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:15	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:15	7440-48-4	
Copper	**1.1J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:15	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:15	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:15	7439-98-7	
Nickel	**1.0J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:15	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:15	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:15	7440-22-4	
Vanadium	**2.8J**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:15	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:15	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**10.5J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:18	7440-42-8	
Lithium	**28.1**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:18	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:18	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:22	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**905**	mg/L	25.0	25.0	1		07/22/24 13:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**255**	mg/L	6.0	3.6	6		07/22/24 19:18	16887-00-6	M1
Fluoride	**0.14**	mg/L	0.10	0.050	1		07/22/24 07:54	16984-48-8	
Sulfate	**14.9**	mg/L	1.0	0.50	1		07/22/24 07:54	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-8 **Lab ID: 92742983014** Collected: 07/17/24 15:25 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:24	7440-36-0	
Arsenic	**2.5J**	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:24	7440-38-2	
Barium	**1140**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:24	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:24	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:24	7440-43-9	
Calcium	**113000**	ug/L	500	73.7	5	07/22/24 12:40	08/12/24 11:43	7440-70-2	
Chromium	**4.0J**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:24	7440-47-3	
Cobalt	**0.63J**	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:24	7440-48-4	
Copper	**3.4J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:24	7440-50-8	
Lead	**2.8J**	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:24	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:24	7439-98-7	
Nickel	**3.5J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:24	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:24	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:24	7440-22-4	
Vanadium	**3.9J**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:24	7440-62-2	
Zinc	**15.4**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:24	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**11.8J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:22	7440-42-8	
Lithium	**29.4**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:22	7439-93-2	
Thallium	**0.033J**	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:22	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:24	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**889**	mg/L	25.0	25.0	1		07/23/24 10:46		1g
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**332**	mg/L	8.0	4.8	8		07/22/24 20:02	16887-00-6	
Fluoride	**0.10**	mg/L	0.10	0.050	1		07/22/24 08:38	16984-48-8	
Sulfate	**7.3**	mg/L	1.0	0.50	1		07/22/24 08:38	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-9 **Lab ID: 92742983015** Collected: 07/17/24 12:05 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:26	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:26	7440-38-2	
Barium	**192**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:26	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:26	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:26	7440-43-9	
Calcium	**34500**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:26	7440-70-2	
Chromium	**2.5J**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:26	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:26	7440-48-4	
Copper	**5.0J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:26	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:26	7439-92-1	
Molybdenum	**21.8**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:26	7439-98-7	
Nickel	**2.2J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:26	7440-02-0	
Selenium	**8.2J**	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:26	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:26	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:26	7440-62-2	
Zinc	**5.8J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:26	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**32.8J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:26	7440-42-8	
Lithium	**3.2**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:26	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:26	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:26	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**494**	mg/L	25.0	25.0	1		07/23/24 10:46		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**10.2**	mg/L	1.0	0.60	1		07/22/24 08:53	16887-00-6	
Fluoride	**0.26**	mg/L	0.10	0.050	1		07/22/24 08:53	16984-48-8	
Sulfate	**68.1**	mg/L	1.0	0.50	1		07/22/24 08:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-10 **Lab ID: 92742983016** Collected: 07/17/24 16:55 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:29	7440-36-0	
Arsenic	**2.7J**	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:29	7440-38-2	
Barium	**95.8**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:29	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:29	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:29	7440-43-9	
Calcium	**20700**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:29	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:29	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:29	7440-48-4	
Copper	**0.68J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:29	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:29	7439-92-1	
Molybdenum	**17.0**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:29	7439-98-7	
Nickel	**1.5J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:29	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:29	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:29	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:29	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:29	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**27.0J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:29	7440-42-8	
Lithium	**5.2**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:29	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:29	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**347**	mg/L	25.0	25.0	1		07/23/24 10:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**29.8**	mg/L	1.0	0.60	1		07/22/24 09:08	16887-00-6	
Fluoride	**0.44**	mg/L	0.10	0.050	1		07/22/24 09:08	16984-48-8	
Sulfate	**1.7**	mg/L	1.0	0.50	1		07/22/24 09:08	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-11 **Lab ID: 92742983017** Collected: 07/17/24 08:45 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:32	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:32	7440-38-2	
Barium	**39.8**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:32	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:32	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:32	7440-43-9	
Calcium	**25200**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:32	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:32	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:32	7440-48-4	
Copper	**1.0J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:32	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:32	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:32	7439-98-7	
Nickel	**0.95J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:32	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:32	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:32	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:32	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:32	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**18.7J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:33	7440-42-8	
Lithium	**10.1**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:33	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:33	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:34	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**407**	mg/L	25.0	25.0	1		07/23/24 10:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**119**	mg/L	3.0	1.8	3		07/22/24 20:17	16887-00-6	
Fluoride	**0.17**	mg/L	0.10	0.050	1		07/22/24 10:13	16984-48-8	
Sulfate	**2.3**	mg/L	1.0	0.50	1		07/22/24 10:13	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-11D **Lab ID: 92742983018** Collected: 07/17/24 10:15 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:35	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:35	7440-38-2	
Barium	**113**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:35	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:35	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:35	7440-43-9	
Calcium	**15500**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:35	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:35	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:35	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:35	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:35	7439-92-1	
Molybdenum	**3.6J**	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:35	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:35	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:35	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:35	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:35	7440-62-2	
Zinc	**5.5J**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:35	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**45.9J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:37	7440-42-8	
Lithium	**18.1**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:37	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**323**	mg/L	25.0	25.0	1		07/23/24 10:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**54.8**	mg/L	1.0	0.60	1		07/22/24 10:28	16887-00-6	
Fluoride	**0.43**	mg/L	0.10	0.050	1		07/22/24 10:28	16984-48-8	
Sulfate	**14.8**	mg/L	1.0	0.50	1		07/22/24 10:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: SW-1 **Lab ID: 92742983019** Collected: 07/17/24 09:15 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:38	7440-36-0	
Arsenic	**4.8J**	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:38	7440-38-2	
Barium	**330**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:38	7440-39-3	
Beryllium	**1.3**	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:38	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:38	7440-43-9	
Calcium	**4930**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:38	7440-70-2	
Chromium	**11.5**	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:38	7440-47-3	
Cobalt	**0.89J**	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:38	7440-48-4	
Copper	**12.6**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:38	7440-50-8	
Lead	**22.5**	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:38	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:38	7439-98-7	
Nickel	**8.5**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:38	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:38	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:38	7440-22-4	
Vanadium	**42.6**	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:38	7440-62-2	
Zinc	**43.7**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:38	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**21.2J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:41	7440-42-8	
Lithium	**6.0**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:41	7439-93-2	
Thallium	**0.10J**	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:41	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:39	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**791**	mg/L	25.0	25.0	1		07/23/24 10:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**10.8**	mg/L	1.0	0.60	1		07/22/24 10:43	16887-00-6	
Fluoride	**0.25**	mg/L	0.10	0.050	1		07/22/24 10:43	16984-48-8	
Sulfate	**3.1**	mg/L	1.0	0.50	1		07/22/24 10:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: SW-5 **Lab ID: 92742983020** Collected: 07/17/24 08:15 Received: 07/19/24 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	07/22/24 12:40	08/09/24 12:41	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	07/22/24 12:40	08/09/24 12:41	7440-38-2	
Barium	**52.4**	ug/L	5.0	0.79	1	07/22/24 12:40	08/09/24 12:41	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	07/22/24 12:40	08/09/24 12:41	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	07/22/24 12:40	08/09/24 12:41	7440-43-9	
Calcium	**4140**	ug/L	100	14.7	1	07/22/24 12:40	08/09/24 12:41	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	07/22/24 12:40	08/09/24 12:41	7440-47-3	
Cobalt	**1.3J**	ug/L	5.0	0.44	1	07/22/24 12:40	08/09/24 12:41	7440-48-4	
Copper	**1.6J**	ug/L	5.0	0.62	1	07/22/24 12:40	08/09/24 12:41	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	07/22/24 12:40	08/09/24 12:41	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	07/22/24 12:40	08/09/24 12:41	7439-98-7	
Nickel	**2.0J**	ug/L	5.0	0.88	1	07/22/24 12:40	08/09/24 12:41	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	07/22/24 12:40	08/09/24 12:41	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	07/22/24 12:40	08/09/24 12:41	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	07/22/24 12:40	08/09/24 12:41	7440-62-2	
Zinc	**48.4**	ug/L	10.0	3.0	1	07/22/24 12:40	08/09/24 12:41	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**11.2J**	ug/L	50.0	7.5	1	07/22/24 12:40	07/23/24 01:44	7440-42-8	
Lithium	**0.78J**	ug/L	2.5	0.33	1	07/22/24 12:40	07/23/24 01:44	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	07/22/24 12:40	07/23/24 01:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	07/26/24 17:55	07/29/24 12:41	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**72.0**	mg/L	25.0	25.0	1		07/23/24 10:47		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**4.8**	mg/L	1.0	0.60	1		07/22/24 10:58	16887-00-6	
Fluoride	**0.12**	mg/L	0.10	0.050	1		07/22/24 10:58	16984-48-8	
Sulfate	**1.1**	mg/L	1.0	0.50	1		07/22/24 10:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 870321
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

METHOD BLANK: 4484999
Matrix: Water
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	07/29/24 11:44	

LABORATORY CONTROL SAMPLE: 4485000

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.7	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4485001 4485002

Parameter	Units	92742983002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.6	2.7	104	107	75-125	2	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 869985
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

METHOD BLANK: 4483703
Matrix: Water
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.6	08/09/24 11:21	
Arsenic	ug/L	ND	10.0	2.5	08/09/24 11:21	
Barium	ug/L	ND	5.0	0.79	08/09/24 11:21	
Beryllium	ug/L	ND	1.0	0.16	08/09/24 11:21	
Cadmium	ug/L	ND	1.0	0.29	08/09/24 11:21	
Calcium	ug/L	ND	100	14.7	08/09/24 11:21	
Chromium	ug/L	ND	5.0	0.63	08/09/24 11:21	
Cobalt	ug/L	ND	5.0	0.44	08/09/24 11:21	
Copper	ug/L	ND	5.0	0.62	08/09/24 11:21	
Lead	ug/L	ND	5.0	1.4	08/09/24 11:21	
Molybdenum	ug/L	ND	5.0	2.6	08/09/24 11:21	
Nickel	ug/L	ND	5.0	0.88	08/09/24 11:21	
Selenium	ug/L	ND	10.0	4.1	08/09/24 11:21	
Silver	ug/L	ND	5.0	0.49	08/09/24 11:21	
Vanadium	ug/L	ND	5.0	1.6	08/09/24 11:21	
Zinc	ug/L	ND	10.0	3.0	08/09/24 11:21	

LABORATORY CONTROL SAMPLE: 4483704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	506	101	80-120	
Arsenic	ug/L	500	518	104	80-120	
Barium	ug/L	500	516	103	80-120	
Beryllium	ug/L	500	522	104	80-120	
Cadmium	ug/L	500	511	102	80-120	
Calcium	ug/L	5000	5000	100	80-120	
Chromium	ug/L	500	512	102	80-120	
Cobalt	ug/L	500	513	103	80-120	
Copper	ug/L	500	511	102	80-120	
Lead	ug/L	500	507	101	80-120	
Molybdenum	ug/L	500	506	101	80-120	
Nickel	ug/L	500	510	102	80-120	
Selenium	ug/L	500	521	104	80-120	
Silver	ug/L	250	253	101	80-120	
Vanadium	ug/L	500	508	102	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

LABORATORY CONTROL SAMPLE: 4483704

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Zinc	ug/L	500	512	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4483705 4483706

Parameter	Units	92742983001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	527	521	105	104	75-125	1	20	
Arsenic	ug/L	ND	500	500	530	526	106	105	75-125	1	20	
Barium	ug/L	293	500	500	828	811	107	104	75-125	2	20	
Beryllium	ug/L	ND	500	500	529	525	106	105	75-125	1	20	
Cadmium	ug/L	ND	500	500	504	501	101	100	75-125	1	20	
Calcium	ug/L	25000	5000	5000	30200	29600	104	92	75-125	2	20	
Chromium	ug/L	ND	500	500	508	503	101	101	75-125	1	20	
Cobalt	ug/L	ND	500	500	510	504	102	101	75-125	1	20	
Copper	ug/L	0.80J	500	500	542	537	108	107	75-125	1	20	
Lead	ug/L	ND	500	500	502	499	100	100	75-125	1	20	
Molybdenum	ug/L	ND	500	500	503	498	100	100	75-125	1	20	
Nickel	ug/L	0.98J	500	500	507	503	101	100	75-125	1	20	
Selenium	ug/L	ND	500	500	546	543	109	108	75-125	1	20	
Silver	ug/L	ND	250	250	260	257	104	103	75-125	1	20	
Vanadium	ug/L	4.6J	500	500	521	516	103	102	75-125	1	20	
Zinc	ug/L	4.1J	500	500	514	509	102	101	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 869983
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

METHOD BLANK: 4483699 Matrix: Water
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	50.0	7.5	07/23/24 17:29	
Lithium	ug/L	ND	2.5	0.33	07/22/24 23:55	
Thallium	ug/L	ND	0.20	0.028	07/22/24 23:55	

LABORATORY CONTROL SAMPLE: 4483700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	50	51.7	103	80-120	
Lithium	ug/L	50	51.8	104	80-120	
Thallium	ug/L	25	24.9	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4483701 4483702

Parameter	Units	92742983001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	12.9J	50	50	60.9	62.1	96	98	75-125	2	20	
Lithium	ug/L	29.8	50	50	81.4	81.6	103	104	75-125	0	20	
Thallium	ug/L	ND	25	25	25.9	25.4	104	101	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 869854
QC Batch Method: SM 2540C-2015
Analysis Method: SM 2540C-2015
Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983001, 92742983002

METHOD BLANK: 4483345 Matrix: Water
Associated Lab Samples: 92742983001, 92742983002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	07/21/24 09:18	

LABORATORY CONTROL SAMPLE: 4483346

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	252	101	90-110	

SAMPLE DUPLICATE: 4483347

Parameter	Units	92742148001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	370	369	0	25	

SAMPLE DUPLICATE: 4483348

Parameter	Units	92741736001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	249	251	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 869901 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983003, 92742983005, 92742983010, 92742983011, 92742983012, 92742983013

METHOD BLANK: 4483491 Matrix: Water
Associated Lab Samples: 92742983003, 92742983005, 92742983010, 92742983011, 92742983012, 92742983013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	07/22/24 13:39	

LABORATORY CONTROL SAMPLE: 4483492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	250	100	90-110	

SAMPLE DUPLICATE: 4483493

Parameter	Units	92742282001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	504	506	0	25	

SAMPLE DUPLICATE: 4483494

Parameter	Units	92742983003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	595	606	2	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 870239 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

METHOD BLANK: 4484728 Matrix: Water
Associated Lab Samples: 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	07/23/24 10:45	

LABORATORY CONTROL SAMPLE: 4484729

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	242	97	90-110	

SAMPLE DUPLICATE: 4484730

Parameter	Units	92742678001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	522	565	8	25	

SAMPLE DUPLICATE: 4484731

Parameter	Units	92742983017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	407	402	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 870554 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983004, 92742983006, 92742983007, 92742983008, 92742983009

METHOD BLANK: 4486113 Matrix: Water
Associated Lab Samples: 92742983004, 92742983006, 92742983007, 92742983008, 92742983009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	07/24/24 14:45	

LABORATORY CONTROL SAMPLE: 4486114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	244	97	90-110	

SAMPLE DUPLICATE: 4486115

Parameter	Units	92742848016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	158	163	3	25	

SAMPLE DUPLICATE: 4486116

Parameter	Units	92742983006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1320	1350	2	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 869898
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983001, 92742983002

METHOD BLANK: 4483479 Matrix: Water
Associated Lab Samples: 92742983001, 92742983002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	07/21/24 18:53	
Fluoride	mg/L	ND	0.10	0.050	07/21/24 18:53	
Sulfate	mg/L	ND	1.0	0.50	07/21/24 18:53	

LABORATORY CONTROL SAMPLE: 4483480

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.9	100	90-110	
Fluoride	mg/L	2.5	2.4	94	90-110	
Sulfate	mg/L	50	51.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4483481 4483482

Parameter	Units	92742848006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	3.9	50	50	53.0	54.3	98	101	90-110	2	10	
Fluoride	mg/L	0.065J	2.5	2.5	2.1	2.1	80	82	90-110	2	10	M1
Sulfate	mg/L	143	50	50	185	186	83	85	90-110	1	10	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4483483 4483484

Parameter	Units	92742848016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	17.7	50	50	66.5	67.6	98	100	90-110	2	10	
Fluoride	mg/L	0.072J	2.5	2.5	2.2	2.3	86	88	90-110	2	10	M1
Sulfate	mg/L	22.9	50	50	73.4	74.5	101	103	90-110	1	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 869900
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

METHOD BLANK: 4483485 Matrix: Water
Associated Lab Samples: 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983015, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	07/21/24 19:23	
Fluoride	mg/L	ND	0.10	0.050	07/21/24 19:23	
Sulfate	mg/L	ND	1.0	0.50	07/21/24 19:23	

LABORATORY CONTROL SAMPLE: 4483486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.0	100	90-110	
Fluoride	mg/L	2.5	2.4	94	90-110	
Sulfate	mg/L	50	51.9	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4483487 4483488

Parameter	Units	92742983003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	170	50	50	208	209	77	78	90-110	0	10	M1
Fluoride	mg/L	0.32	2.5	2.5	2.6	2.6	91	91	90-110	0	10	
Sulfate	mg/L	27.7	50	50	78.0	78.2	101	101	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4483489 4483490

Parameter	Units	92742983013 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	255	50	50	292	292	73	75	90-110	0	10	M1
Fluoride	mg/L	0.14	2.5	2.5	2.4	2.4	92	91	90-110	0	10	
Sulfate	mg/L	14.9	50	50	66.2	66.3	103	103	90-110	0	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: BG-1 **Lab ID: 92742983001** Collected: 07/15/24 16:10 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Comments: • The sampler's name and signature were not listed on the COC.
• Sample 015 on COC says 1 BP1N. Did not receive volume forthe samples (tests not marked; COC indicates 19 total samples)).

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.351 ± 0.546 (1.12) C:NA T:92%**	pCi/L	08/14/24 14:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.682 ± 0.356 (0.617) C:75% T:92%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.682 ± 0.902 (1.74)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: BG-2 **Lab ID: 92742983002** Collected: 07/15/24 14:30 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0879 ± 0.422 (0.856) C:NA T:90%**	pCi/L	08/14/24 14:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.378 ± 0.302 (0.591) C:83% T:90%**	pCi/L	08/08/24 13:13	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.378 ± 0.724 (1.45)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: DUP **Lab ID: 92742983003** Collected: 07/16/24 09:10 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0485 ± 0.529 (1.01) C:NA T:91%**	pCi/L	08/14/24 14:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.0362 ± 0.255 (0.607) C:82% T:91%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0485 ± 0.784 (1.62)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: EQBL **Lab ID: 92742983004** Collected: 07/18/24 15:35 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.0978 ± 0.621 (1.20) C:NA T:91%**	pCi/L	08/14/24 14:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0996 ± 0.363 (0.818) C:77% T:91%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.0996 ± 0.984 (2.02)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: LEACHATE **Lab ID: 92742983005** Collected: 07/16/24 16:00 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.431 ± 0.599 (1.27) C:NA T:79%**	pCi/L	08/14/24 14:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.115 ± 0.423 (0.955) C:74% T:79%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.115 ± 1.02 (2.23)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-1 **Lab ID: 92742983006** Collected: 07/18/24 11:45 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.255 ± 0.625 (1.25) C:NA T:88%**	pCi/L	08/14/24 14:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.613 ± 0.412 (0.803) C:83% T:88%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.613 ± 1.04 (2.05)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-2 **Lab ID: 92742983007** Collected: 07/18/24 14:40 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.723 ± 0.763 (1.24) C:NA T:84%**	pCi/L	08/14/24 14:34	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.664 ± 0.403 (0.757) C:81% T:84%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.39 ± 1.17 (2.00)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-2D **Lab ID: 92742983008** Collected: 07/18/24 13:15 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.328 ± 0.442 (0.970) C:NA T:85%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.342 ± 0.322 (0.653) C:76% T:85%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.342 ± 0.764 (1.62)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-3 **Lab ID: 92742983009** Collected: 07/18/24 08:50 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**1.11 ± 0.556 (0.630) C:NA T:87%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.65 ± 0.508 (0.596) C:77% T:87%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.76 ± 1.06 (1.23)**	pCi/L	08/14/24 15:55	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-4 **Lab ID: 92742983010** Collected: 07/16/24 18:25 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.388 ± 0.487 (0.808) C:NA T:87%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.372 ± 0.327 (0.658) C:79% T:87%**	pCi/L	08/08/24 12:22	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.760 ± 0.814 (1.47)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-5 **Lab ID: 92742983011** Collected: 07/16/24 16:35 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0428 ± 0.302 (0.603) C:NA T:93%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.502 ± 0.336 (0.638) C:75% T:93%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.545 ± 0.638 (1.24)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-6 **Lab ID: 92742983012** Collected: 07/16/24 09:00 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.579 ± 0.475 (1.07) C:NA T:90%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.533 ± 0.423 (0.853) C:78% T:90%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.533 ± 0.898 (1.92)**	pCi/L	08/14/24 15:55	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-7R **Lab ID: 92742983013** Collected: 07/16/24 10:50 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.186 ± 0.516 (1.04) C:NA T:90%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.517 ± 0.375 (0.742) C:85% T:90%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.517 ± 0.891 (1.78)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-8 **Lab ID: 92742983014** Collected: 07/17/24 15:25 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.273 ± 0.633 (1.13) C:NA T:90%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.759 ± 0.413 (0.753) C:79% T:90%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.03 ± 1.05 (1.88)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-10 **Lab ID: 92742983016** Collected: 07/17/24 16:55 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.410 ± 0.652 (1.12) C:NA T:91%**	pCi/L	08/14/24 14:47	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.364 ± 0.389 (0.812) C:77% T:91%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.774 ± 1.04 (1.93)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-11 **Lab ID: 92742983017** Collected: 07/17/24 08:45 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0925 ± 0.385 (0.733) C:NA T:87%**	pCi/L	08/14/24 14:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.391 ± 0.351 (0.712) C:79% T:87%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.484 ± 0.736 (1.45)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: MW-11D **Lab ID: 92742983018** Collected: 07/17/24 10:15 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0934 ± 0.343 (0.659) C:NA T:88%**	pCi/L	08/14/24 14:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.308 ± 0.355 (0.745) C:73% T:88%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.401 ± 0.698 (1.40)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: SW-1 **Lab ID: 92742983019** Collected: 07/17/24 09:15 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.131 ± 0.445 (0.822) C:NA T:95%**	pCi/L	08/14/24 14:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.847 ± 0.371 (0.610) C:83% T:95%**	pCi/L	08/08/24 12:23	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.978 ± 0.816 (1.43)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Sample: SW-5 **Lab ID: 92742983020** Collected: 07/17/24 08:15 Received: 07/19/24 11:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.175 ± 0.364 (0.656) C:NA T:91%**	pCi/L	08/14/24 14:59	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**-0.302 ± 0.316 (0.784) C:79% T:91%**	pCi/L	08/08/24 12:24	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.175 ± 0.680 (1.44)**	pCi/L	08/14/24 15:55	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 684913
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

METHOD BLANK: 3334719
Matrix: Water
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.226 (0.506) C:NA T:90%	pCi/L	08/14/24 14:34	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

QC Batch: 684914
QC Batch Method: EPA 904.0
Analysis Method: EPA 904.0
Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

METHOD BLANK: 3334720
Matrix: Water
Associated Lab Samples: 92742983001, 92742983002, 92742983003, 92742983004, 92742983005, 92742983006, 92742983007, 92742983008, 92742983009, 92742983010, 92742983011, 92742983012, 92742983013, 92742983014, 92742983016, 92742983017, 92742983018, 92742983019, 92742983020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.335 ± 0.305 (0.616) C:79% T:90%	pCi/L	08/08/24 12:22	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1g	Constant weight could not be achieved for this sample after 4 drying cycles. The final weight change was .0034 grams.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92742983001	**BG-1**	EPA 3010A	869985	EPA 6010D	870084
92742983002	**BG-2**	EPA 3010A	869985	EPA 6010D	870084
92742983003	**DUP**	EPA 3010A	869985	EPA 6010D	870084
92742983004	**EQBL**	EPA 3010A	869985	EPA 6010D	870084
92742983005	**LEACHATE**	EPA 3010A	869985	EPA 6010D	870084
92742983006	**MW-1**	EPA 3010A	869985	EPA 6010D	870084
92742983007	**MW-2**	EPA 3010A	869985	EPA 6010D	870084
92742983008	**MW-2D**	EPA 3010A	869985	EPA 6010D	870084
92742983009	**MW-3**	EPA 3010A	869985	EPA 6010D	870084
92742983010	**MW-4**	EPA 3010A	869985	EPA 6010D	870084
92742983011	**MW-5**	EPA 3010A	869985	EPA 6010D	870084
92742983012	**MW-6**	EPA 3010A	869985	EPA 6010D	870084
92742983013	**MW-7R**	EPA 3010A	869985	EPA 6010D	870084
92742983014	**MW-8**	EPA 3010A	869985	EPA 6010D	870084
92742983015	**MW-9**	EPA 3010A	869985	EPA 6010D	870084
92742983016	**MW-10**	EPA 3010A	869985	EPA 6010D	870084
92742983017	**MW-11**	EPA 3010A	869985	EPA 6010D	870084
92742983018	**MW-11D**	EPA 3010A	869985	EPA 6010D	870084
92742983019	**SW-1**	EPA 3010A	869985	EPA 6010D	870084
92742983020	**SW-5**	EPA 3010A	869985	EPA 6010D	870084
92742983001	**BG-1**	EPA 3010A	869983	EPA 6020B	870082
92742983002	**BG-2**	EPA 3010A	869983	EPA 6020B	870082
92742983003	**DUP**	EPA 3010A	869983	EPA 6020B	870082
92742983004	**EQBL**	EPA 3010A	869983	EPA 6020B	870082
92742983005	**LEACHATE**	EPA 3010A	869983	EPA 6020B	870082
92742983006	**MW-1**	EPA 3010A	869983	EPA 6020B	870082
92742983007	**MW-2**	EPA 3010A	869983	EPA 6020B	870082
92742983008	**MW-2D**	EPA 3010A	869983	EPA 6020B	870082
92742983009	**MW-3**	EPA 3010A	869983	EPA 6020B	870082
92742983010	**MW-4**	EPA 3010A	869983	EPA 6020B	870082
92742983011	**MW-5**	EPA 3010A	869983	EPA 6020B	870082
92742983012	**MW-6**	EPA 3010A	869983	EPA 6020B	870082
92742983013	**MW-7R**	EPA 3010A	869983	EPA 6020B	870082
92742983014	**MW-8**	EPA 3010A	869983	EPA 6020B	870082
92742983015	**MW-9**	EPA 3010A	869983	EPA 6020B	870082
92742983016	**MW-10**	EPA 3010A	869983	EPA 6020B	870082
92742983017	**MW-11**	EPA 3010A	869983	EPA 6020B	870082
92742983018	**MW-11D**	EPA 3010A	869983	EPA 6020B	870082
92742983019	**SW-1**	EPA 3010A	869983	EPA 6020B	870082
92742983020	**SW-5**	EPA 3010A	869983	EPA 6020B	870082
92742983001	**BG-1**	EPA 7470A	870321	EPA 7470A	871417
92742983002	**BG-2**	EPA 7470A	870321	EPA 7470A	871417
92742983003	**DUP**	EPA 7470A	870321	EPA 7470A	871417
92742983004	**EQBL**	EPA 7470A	870321	EPA 7470A	871417
92742983005	**LEACHATE**	EPA 7470A	870321	EPA 7470A	871417
92742983006	**MW-1**	EPA 7470A	870321	EPA 7470A	871417
92742983007	**MW-2**	EPA 7470A	870321	EPA 7470A	871417
92742983008	**MW-2D**	EPA 7470A	870321	EPA 7470A	871417

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92742983009	**MW-3**	EPA 7470A	870321	EPA 7470A	871417
92742983010	**MW-4**	EPA 7470A	870321	EPA 7470A	871417
92742983011	**MW-5**	EPA 7470A	870321	EPA 7470A	871417
92742983012	**MW-6**	EPA 7470A	870321	EPA 7470A	871417
92742983013	**MW-7R**	EPA 7470A	870321	EPA 7470A	871417
92742983014	**MW-8**	EPA 7470A	870321	EPA 7470A	871417
92742983015	**MW-9**	EPA 7470A	870321	EPA 7470A	871417
92742983016	**MW-10**	EPA 7470A	870321	EPA 7470A	871417
92742983017	**MW-11**	EPA 7470A	870321	EPA 7470A	871417
92742983018	**MW-11D**	EPA 7470A	870321	EPA 7470A	871417
92742983019	**SW-1**	EPA 7470A	870321	EPA 7470A	871417
92742983020	**SW-5**	EPA 7470A	870321	EPA 7470A	871417
92742983001	**BG-1**	EPA 903.1	684913		
92742983002	**BG-2**	EPA 903.1	684913		
92742983003	**DUP**	EPA 903.1	684913		
92742983004	**EQBL**	EPA 903.1	684913		
92742983005	**LEACHATE**	EPA 903.1	684913		
92742983006	**MW-1**	EPA 903.1	684913		
92742983007	**MW-2**	EPA 903.1	684913		
92742983008	**MW-2D**	EPA 903.1	684913		
92742983009	**MW-3**	EPA 903.1	684913		
92742983010	**MW-4**	EPA 903.1	684913		
92742983011	**MW-5**	EPA 903.1	684913		
92742983012	**MW-6**	EPA 903.1	684913		
92742983013	**MW-7R**	EPA 903.1	684913		
92742983014	**MW-8**	EPA 903.1	684913		
92742983016	**MW-10**	EPA 903.1	684913		
92742983017	**MW-11**	EPA 903.1	684913		
92742983018	**MW-11D**	EPA 903.1	684913		
92742983019	**SW-1**	EPA 903.1	684913		
92742983020	**SW-5**	EPA 903.1	684913		
92742983001	**BG-1**	EPA 904.0	684914		
92742983002	**BG-2**	EPA 904.0	684914		
92742983003	**DUP**	EPA 904.0	684914		
92742983004	**EQBL**	EPA 904.0	684914		
92742983005	**LEACHATE**	EPA 904.0	684914		
92742983006	**MW-1**	EPA 904.0	684914		
92742983007	**MW-2**	EPA 904.0	684914		
92742983008	**MW-2D**	EPA 904.0	684914		
92742983009	**MW-3**	EPA 904.0	684914		
92742983010	**MW-4**	EPA 904.0	684914		
92742983011	**MW-5**	EPA 904.0	684914		
92742983012	**MW-6**	EPA 904.0	684914		
92742983013	**MW-7R**	EPA 904.0	684914		
92742983014	**MW-8**	EPA 904.0	684914		
92742983016	**MW-10**	EPA 904.0	684914		
92742983017	**MW-11**	EPA 904.0	684914		
92742983018	**MW-11D**	EPA 904.0	684914		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92742983019	**SW-1**	EPA 904.0	684914		
92742983020	**SW-5**	EPA 904.0	684914		
92742983001	**BG-1**	Total Radium Calculation	689435		
92742983002	**BG-2**	Total Radium Calculation	689435		
92742983003	**DUP**	Total Radium Calculation	689435		
92742983004	**EQBL**	Total Radium Calculation	689435		
92742983005	**LEACHATE**	Total Radium Calculation	689435		
92742983006	**MW-1**	Total Radium Calculation	689435		
92742983007	**MW-2**	Total Radium Calculation	689435		
92742983008	**MW-2D**	Total Radium Calculation	689435		
92742983009	**MW-3**	Total Radium Calculation	689435		
92742983010	**MW-4**	Total Radium Calculation	689435		
92742983011	**MW-5**	Total Radium Calculation	689435		
92742983012	**MW-6**	Total Radium Calculation	689435		
92742983013	**MW-7R**	Total Radium Calculation	689435		
92742983014	**MW-8**	Total Radium Calculation	689435		
92742983016	**MW-10**	Total Radium Calculation	689435		
92742983017	**MW-11**	Total Radium Calculation	689435		
92742983018	**MW-11D**	Total Radium Calculation	689435		
92742983019	**SW-1**	Total Radium Calculation	689435		
92742983020	**SW-5**	Total Radium Calculation	689435		
92742983001	**BG-1**	SM 2540C-2015	869854		
92742983002	**BG-2**	SM 2540C-2015	869854		
92742983003	**DUP**	SM 2540C-2015	869901		
92742983004	**EQBL**	SM 2540C-2015	870554		
92742983005	**LEACHATE**	SM 2540C-2015	869901		
92742983006	**MW-1**	SM 2540C-2015	870554		
92742983007	**MW-2**	SM 2540C-2015	870554		
92742983008	**MW-2D**	SM 2540C-2015	870554		
92742983009	**MW-3**	SM 2540C-2015	870554		
92742983010	**MW-4**	SM 2540C-2015	869901		
92742983011	**MW-5**	SM 2540C-2015	869901		
92742983012	**MW-6**	SM 2540C-2015	869901		
92742983013	**MW-7R**	SM 2540C-2015	869901		
92742983014	**MW-8**	SM 2540C-2015	870239		
92742983015	**MW-9**	SM 2540C-2015	870239		
92742983016	**MW-10**	SM 2540C-2015	870239		
92742983017	**MW-11**	SM 2540C-2015	870239		
92742983018	**MW-11D**	SM 2540C-2015	870239		
92742983019	**SW-1**	SM 2540C-2015	870239		
92742983020	**SW-5**	SM 2540C-2015	870239		
92742983001	**BG-1**	EPA 300.0 Rev 2.1 1993	869898		
92742983002	**BG-2**	EPA 300.0 Rev 2.1 1993	869898		
92742983003	**DUP**	EPA 300.0 Rev 2.1 1993	869900		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 3rd Quarter GW Monitori
Pace Project No.: 92742983

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92742983004	**EQBL**	EPA 300.0 Rev 2.1 1993	869900		
92742983005	**LEACHATE**	EPA 300.0 Rev 2.1 1993	869900		
92742983006	**MW-1**	EPA 300.0 Rev 2.1 1993	869900		
92742983007	**MW-2**	EPA 300.0 Rev 2.1 1993	869900		
92742983008	**MW-2D**	EPA 300.0 Rev 2.1 1993	869900		
92742983009	**MW-3**	EPA 300.0 Rev 2.1 1993	869900		
92742983010	**MW-4**	EPA 300.0 Rev 2.1 1993	869900		
92742983011	**MW-5**	EPA 300.0 Rev 2.1 1993	869900		
92742983012	**MW-6**	EPA 300.0 Rev 2.1 1993	869900		
92742983013	**MW-7R**	EPA 300.0 Rev 2.1 1993	869900		
92742983014	**MW-8**	EPA 300.0 Rev 2.1 1993	869900		
92742983015	**MW-9**	EPA 300.0 Rev 2.1 1993	869900		
92742983016	**MW-10**	EPA 300.0 Rev 2.1 1993	869900		
92742983017	**MW-11**	EPA 300.0 Rev 2.1 1993	869900		
92742983018	**MW-11D**	EPA 300.0 Rev 2.1 1993	869900		
92742983019	**SW-1**	EPA 300.0 Rev 2.1 1993	869900		
92742983020	**SW-5**	EPA 300.0 Rev 2.1 1993	869900		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

Client Name: HPA Engineering

Project #: **WO# : 92742983**

92742983

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☑ Client ☐ Commercial ☑ Pace ☐ Other:____ APL

Custody Seal Present? ☐ Yes ☐ No Seals Intact? ☐ Yes ☐ No ☑ N/A

Date/Initials Person Examining Contents: APL 7-19-24

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 92T076

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 0.4, 0.6, 4.6, 1.8 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 0.4, 0.6, 4.6, 1.8

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # (1)

WO# : 92742983

PM: AMB Due Date: 08/13/24
CLIENT: 92-HDR

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐ Atlanta ☐

Client HPA Engineering Profile/EZ (Circle one) 313939 Notes

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BPIN	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC		AS	AS		YI		AS																								
1		1	1		1		1																								
2																															
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # (2)

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client_____ Profile/EZ (Circle one)_____ Notes_____

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BPIN	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC		AS	AS		SI		AS																							
1		1	1		1		1																							
2																														
3																														
4																														
5																														
6					1																									
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace Analytical

Sample Receiving Non-Conformance Form (NCF)

Date: 7-19-24	Evaluated by: APL
Client: HDR	

Aff WO#: 92742983 ce r

PM: AMB Due Date: 08/13/24

CLIENT: 92-HDR

1. If Chain-of-Custody (COC) is not received: contact client and if necessary, fill out a COC and indicate that it was filled out by lab personnel. Note issues on this NCF.

2. If COC is incomplete, check applicable issues below and add details where appropriate:

	Collection date/time missing or incorrect		Analyses or analytes: missing or clarification needed		Samples listed on COC do not match samples received (missing, additional, etc.)
	Sample IDs on COC do not match sample labels		Required trip blanks were not received		Required signatures are missing

Comments/Details/Other Issues not listed above:

BPIN on MW-9 received empty.

3. Sample integrity issues: check applicable issues below and add details where appropriate:

	Samples: Past holding time		Samples: Condition needs to be brought to lab personnel's attention (details below)		Preservation: Improper
	Samples: Not field filtered		Containers: Broken or compromised		Temperature: not within acceptance criteria (typically 0-6C)
	Samples: Insufficient volume received		Containers: Incorrect		Temperature: Samples arrived frozen
	Samples: Cooler damaged or compromised		Custody Seals: Missing or compromised on samples, trip blanks or coolers		Vials received with improper headspace
	Samples: contain chlorine or sulfides		Packing Material: Insufficient/Improper		Other:

Comments/Details:

4. If Samples not preserved properly and Sample Receiving adjusts pH, add details below:

Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:
Sample ID:	Date/Time:	Amount/type pres added:
Preserved by:	Initial and Final pH:	Lot # of pres added:

5. Client Contact: If client is contacted for any issue listed above, fill in details below:

Client:	Contacted per:	
PM Initials:	Date/Time:	

Client Comments/Instructions:

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR Engineering	Contact/Report To:	Mark Filardi
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	mark.filardi@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Charah 3rd Quarter GW Monitoring	Invoice To:	Accounts Payable
		Invoice E-Mail:	saaccounting@hdrinc.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	1000100102528
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [✓] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 2 3 3 1

Identify Container Preservative Type***: 1 1 2 2

Analysis Requested

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2540C Total Dissolved Solids	300.0 IC Anions 28 Days	6010; 6020; 7470 Metals	RAD 226/228, Total RAD	Sample Comment
BG-1	WT	G			7/15/24	16:10				X	X	X	X	
BG-2	WT	G			7/15/24	14:30				X	X	X	X	
DUP	WT	G			7/16/24	09:10				X	X	X	X	Partial TDS 300 Anions sample.
EQBL	WT	G			7/16/24	15:35				X	X	X	X	
LEACHATE	WT	G			7/16/24	16:00				X	X	X	X	
MW-1	WT	G			7/16/24	11:45				X	X	X	X	Biased high TDS turbidity
MW-2	WT	G			7/16/24	14:40				X	X	X	X	
MW-2D	WT	G			7/16/24	13:15				X	X	X	X	Biased high Turbidity in RAD's TDS
MW-3	WT	G			7/16/24	08:50				X	X	X	X	
MW-4	WT	G			7/16/24	14:25				X	X	X	X	

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Angela Baioni

AcctNum / Client ID:

Table #:

Profile / Template: 7672

Prelog / Bottle Ord. ID: EZ 3131939

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By: (Printed Name) Cameron Hosmer

Signature: Cameron Hosmer

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Cameron Hosmer	11:45 7/19/24	ATC Pace	7-19-24 1145	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR Engineering	Contact/Report To:	Mark Filardi
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	mark.filardi@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Charah 3rd Quarter GW Monitoring	Invoice To:	Accounts Payable
		Invoice E-Mail:	saaccounting@hdrinc.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	1000100102528
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [✓] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **: 2 3 3 1

Identify Container Preservative Type***: 1 1 2 2

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only: Proj. Mgr: Angela Baioni; AcctNum / Client ID:; Table #:; Profile / Template: 7672; Prelog / Bottle Ord. ID: EZ 3131939

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2540C Total Dissolved Solids	300.0 IC Anions 28 Days	6010; 6020; 7470 Metals	RAD 226/228, Total RAD	Sample Comment	Preservation non-conformance identified for sample.
MW-5	WT	G			7/16/24	16:35				X	X	X	X		
MW-6	WT	G			7/16/24	09:00				X	X	X	X		
MW-7R	WT	G			7/16/24	10:50				X	X	X	X		
MW-8	WT	G			7/17/24	15:25				X	X	X	X		
MW-9	WT	G			7/17/24	12:05				X	X	X	X	No Radium sample Bailed Dry	
MW-10	WT	G			7/17/24	16:55				X	X	X	X		
MW-11	WT	G			7/17/24	09:45				X	X	X	X		
MW-11D	WT	G			7/17/24	10:15				X	X	X	X		
SW-1	WT	G			7/17/24	09:15				X	X	X	X		
~~SW-2~~	~~WT~~	~~G~~								~~X~~	~~X~~	~~X~~	~~X~~	Dry NO sample	

Additional Instructions from Pace®:

Collected By: (Printed Name) Cameron Hosmer

Signature: Cameron Hosmer

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Cameron Hosmer	11:45 7/19/24	APPac	7-19-24 1145	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR Engineering	Contact/Report To:	Mark Filardi
Street Address:	440 S. Church St, Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	mark.filardi@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Charah 3rd Quarter GW Monitoring	Invoice To:	Accounts Payable
		Invoice E-Mail:	saaccounting@hdrinc.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	1000100102528
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [V] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested:

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2540C Total Dissolved Solids	300.0 IC Anions 28 Days	6010; 6020; 7470 Metals	RAD 226/228, Total RAD	Sample Comment
Specify Container Size **										2	3	3	1	
Identify Container Preservative Type***										1	1	2	2	
~~SW-3~~	~~WT~~									X	X	X	X	Dry ~~No~~ Sample
~~SW-4~~	WT									~~X~~	~~X~~	~~X~~	~~X~~	Dry No Sample
SW-5	WT				7/17/24	0815				X	X	X	X	
~~SW-6~~	~~WT~~									~~X~~	~~X~~	~~X~~	~~X~~	No sample Turbid not flowing

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: Angela Baioni

AcctNum / Client ID:

Table #:

Profile / Template: 7672

Prelog / Bottle Ord. ID: EZ 3131939

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:

Collected By: (Printed Name) Cameron Hosmer

Signature: Cameron Hosmer

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
Cameron Hosmer	11:45 7/19/24	APC Pace/HH	7-19-24 1145	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEX [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 3 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

November 22, 2024

Mark Filardi
HDR
440 S. Church St
Suite 900
Charlotte, NC 28202

RE: Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Dear Mark Filardi:

Enclosed are the analytical results for sample(s) received by the laboratory on November 01, 2024. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angela M. Baioni

Angela Baioni
angela.baioni@pacelabs.com
612-473-6801
Project Manager

Enclosures

cc: Mark Filardi, HDR Engineering

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

CERTIFICATIONS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Pace Analytical Services Pennsylvania
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
ANABISO/IEC 17025:2017 Rad Cert#: L24170
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 2950
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA010
Louisiana DEQ/TNI Certification #: 04086
Maine Certification #: 2023021
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991
Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572023-03
New Hampshire/TNI Certification #: 297622
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-015
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN02867
Texas/TNI Certification #: T104704188-22-18
Utah/TNI Certification #: PA014572223-14
USDA Soil Permit #: 525-23-67-77263
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad

Pace Analytical Services Asheville
2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE SUMMARY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92761329001	**BG-1**	Water	10/29/24 11:15	11/01/24 10:20
92761329002	**BG-2**	Water	10/28/24 14:25	11/01/24 10:20
92761329003	**DUP**	Water	10/30/24 00:01	11/01/24 10:20
92761329004	**EQBL**	Water	10/31/24 16:25	11/01/24 10:20
92761329005	**LEACHATE**	Water	10/31/24 11:25	11/01/24 10:20
92761329006	**MW-1**	Water	10/30/24 18:15	11/01/24 10:20
92761329007	**MW-2**	Water	10/31/24 15:20	11/01/24 10:20
92761329008	**MW-2D**	Water	10/31/24 14:35	11/01/24 10:20
92761329009	**MW-3**	Water	10/31/24 11:50	11/01/24 10:20
92761329010	**MW-4**	Water	10/31/24 10:25	11/01/24 10:20
92761329011	**MW-5**	Water	10/28/24 16:55	11/01/24 10:20
92761329012	**MW-6**	Water	10/30/24 12:20	11/01/24 10:20
92761329013	**MW-7R**	Water	10/30/24 09:30	11/01/24 10:20
92761329014	**MW-8**	Water	10/30/24 15:35	11/01/24 10:20
92761329015	**MW-9**	Water	10/31/24 15:30	11/01/24 10:20
92761329016	**MW-10**	Water	10/29/24 17:00	11/01/24 10:20
92761329017	**MW-11**	Water	10/29/24 15:25	11/01/24 10:20
92761329018	**MW-11D**	Water	10/29/24 12:50	11/01/24 10:20
92761329019	**SW-1**	Water	10/29/24 09:15	11/01/24 10:20
92761329020	**SW-5**	Water	10/29/24 11:35	11/01/24 10:20
92761329021	**SW-6**	Water	10/29/24 11:15	11/01/24 10:20

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92761329001	**BG-1**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329002	**BG-2**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329003	**DUP**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329004	**EQBL**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329005	**LEACHATE**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329006	**MW-1**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329007	**MW-2**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329008	**MW-2D**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329009	**MW-3**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329010	**MW-4**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329011	**MW-5**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329012	**MW-6**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329013	**MW-7R**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329014	**MW-8**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329015	**MW-9**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329016	**MW-10**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329017	**MW-11**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329018	**MW-11D**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329019	**SW-1**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SAMPLE ANALYTE COUNT

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329020	**SW-5**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92761329021	**SW-6**	EPA 6010D	DBB1	16	PASI-A
		EPA 6020B	CRW, KRL	3	PASI-A
		EPA 7470A	MAB2	1	PASI-A
		EPA 903.1	REH1	1	PASI-PA
		EPA 904.0	ZPC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C-2015	AGM	1	PASI-A
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329001	**BG-1**					
EPA 6010D	Barium	298	ug/L	5.0	11/21/24 11:04	
EPA 6010D	Calcium	24500	ug/L	100	11/21/24 11:04	
EPA 6010D	Chromium	0.65J	ug/L	5.0	11/21/24 11:04	
EPA 6010D	Copper	0.82J	ug/L	5.0	11/21/24 11:04	
EPA 6010D	Vanadium	5.9	ug/L	5.0	11/21/24 11:04	
EPA 6020B	Boron	8.0J	ug/L	50.0	11/13/24 22:02	
EPA 6020B	Lithium	16.0	ug/L	2.5	11/13/24 22:02	
EPA 903.1	Radium-226	-0.703 ± 0.580 (1.36) C:NA T:90%	pCi/L		11/20/24 14:38	
EPA 904.0	Radium-228	0.299 ± 0.262 (0.523) C:84% T:88%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	0.299 ± 0.842 (1.88)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	545	mg/L	25.0	11/03/24 12:21	
EPA 300.0 Rev 2.1 1993	Chloride	180	mg/L	4.0	11/03/24 03:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.23	mg/L	0.10	11/02/24 17:40	
EPA 300.0 Rev 2.1 1993	Sulfate	22.7	mg/L	1.0	11/02/24 17:40	
92761329002	**BG-2**					
EPA 6010D	Barium	49.9	ug/L	5.0	11/21/24 11:16	
EPA 6010D	Calcium	96500	ug/L	1000	11/18/24 18:51	
EPA 6010D	Cobalt	1.2J	ug/L	5.0	11/21/24 11:16	
EPA 6010D	Copper	0.64J	ug/L	5.0	11/21/24 11:16	
EPA 6010D	Molybdenum	6.1	ug/L	5.0	11/21/24 11:16	
EPA 6010D	Nickel	1.4J	ug/L	5.0	11/21/24 11:16	
EPA 6020B	Boron	15.3J	ug/L	50.0	11/13/24 22:06	
EPA 6020B	Lithium	24.2	ug/L	2.5	11/13/24 22:06	
EPA 903.1	Radium-226	0.591 ± 0.827 (1.40) C:NA T:86%	pCi/L		11/20/24 14:38	
EPA 904.0	Radium-228	0.742 ± 0.337 (0.535) C:82% T:87%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	1.33 ± 1.16 (1.94)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	1270	mg/L	50.0	11/03/24 12:21	
EPA 300.0 Rev 2.1 1993	Chloride	273	mg/L	6.0	11/03/24 02:36	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.41	mg/L	0.10	11/02/24 16:38	
EPA 300.0 Rev 2.1 1993	Sulfate	202	mg/L	6.0	11/03/24 02:36	M1
92761329003	**DUP**					
EPA 6010D	Barium	49.8	ug/L	5.0	11/21/24 11:19	
EPA 6010D	Calcium	37800	ug/L	100	11/21/24 11:19	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329003	**DUP**					
EPA 6010D	Copper	0.73J	ug/L	5.0	11/21/24 11:19	
EPA 6010D	Nickel	1.6J	ug/L	5.0	11/21/24 11:19	
EPA 6010D	Zinc	3.7J	ug/L	10.0	11/21/24 11:19	
EPA 6020B	Boron	8.3J	ug/L	50.0	11/13/24 22:09	
EPA 6020B	Lithium	24.4	ug/L	2.5	11/13/24 22:09	
EPA 903.1	Radium-226	0.528 ± 0.800 (1.37) C:NA T:91%	pCi/L		11/20/24 14:38	
EPA 904.0	Radium-228	0.310 ± 0.295 (0.601) C:81% T:87%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	0.838 ± 1.10 (1.97)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	598	mg/L	25.0	11/03/24 12:23	
EPA 300.0 Rev 2.1 1993	Chloride	177	mg/L	4.0	11/03/24 03:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.39	mg/L	0.10	11/02/24 18:26	
EPA 300.0 Rev 2.1 1993	Sulfate	27.4	mg/L	1.0	11/02/24 18:26	
92761329004	**EQBL**					
EPA 6010D	Calcium	26.2J	ug/L	100	11/18/24 19:08	
EPA 903.1	Radium-226	-0.127 ± 0.658 (1.31) C:NA T:87%	pCi/L		11/20/24 14:38	
EPA 904.0	Radium-228	0.937 ± 0.452 (0.789) C:80% T:85%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	0.937 ± 1.11 (2.10)	pCi/L		11/21/24 14:58	
92761329005	**LEACHATE**					
EPA 6010D	Arsenic	9.6J	ug/L	10.0	11/21/24 11:21	
EPA 6010D	Barium	42.2	ug/L	5.0	11/21/24 11:21	
EPA 6010D	Calcium	239000	ug/L	1000	11/18/24 19:11	
EPA 6010D	Molybdenum	223	ug/L	5.0	11/21/24 11:21	
EPA 6010D	Nickel	1.1J	ug/L	5.0	11/21/24 11:21	
EPA 6020B	Boron	3420	ug/L	2500	11/14/24 15:44	
EPA 6020B	Lithium	63.9	ug/L	12.5	11/13/24 22:17	
EPA 903.1	Radium-226	0.125 ± 0.651 (1.22) C:NA T:86%	pCi/L		11/20/24 14:38	
EPA 904.0	Radium-228	0.523 ± 0.387 (0.758) C:83% T:86%	pCi/L		11/18/24 11:42	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329005	**LEACHATE**					
Total Radium Calculation	Total Radium	0.648 ± 1.04 (1.98)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	1350	mg/L	50.0	11/03/24 12:15	
EPA 300.0 Rev 2.1 1993	Chloride	19.5	mg/L	1.0	11/02/24 18:41	
EPA 300.0 Rev 2.1 1993	Fluoride	0.29	mg/L	0.10	11/02/24 18:41	
EPA 300.0 Rev 2.1 1993	Sulfate	419	mg/L	10.0	11/03/24 03:51	
92761329006	**MW-1**					
EPA 6010D	Arsenic	2.5J	ug/L	10.0	11/21/24 11:24	
EPA 6010D	Barium	238	ug/L	5.0	11/21/24 11:24	
EPA 6010D	Calcium	192000	ug/L	1000	11/18/24 19:14	
EPA 6010D	Chromium	0.76J	ug/L	5.0	11/21/24 11:24	
EPA 6010D	Copper	0.86J	ug/L	5.0	11/21/24 11:24	
EPA 6010D	Silver	1.0J	ug/L	5.0	11/21/24 11:24	
EPA 6010D	Vanadium	2.1J	ug/L	5.0	11/21/24 11:24	
EPA 6010D	Zinc	5.0J	ug/L	10.0	11/21/24 11:24	
EPA 6020B	Boron	13.7J	ug/L	50.0	11/13/24 22:21	
EPA 6020B	Lithium	36.4	ug/L	2.5	11/13/24 22:21	
EPA 903.1	Radium-226	0.0630 ± 0.409 (0.825) C:NA T:88%	pCi/L		11/20/24 14:38	
EPA 904.0	Radium-228	0.477 ± 0.391 (0.793) C:84% T:91%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	0.540 ± 0.800 (1.62)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	1540	mg/L	50.0	11/03/24 12:23	1g
EPA 300.0 Rev 2.1 1993	Chloride	657	mg/L	16.0	11/03/24 04:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.18	mg/L	0.10	11/02/24 18:57	
EPA 300.0 Rev 2.1 1993	Sulfate	6.3	mg/L	1.0	11/02/24 18:57	
92761329007	**MW-2**					
EPA 6010D	Barium	278	ug/L	5.0	11/21/24 11:27	
EPA 6010D	Cadmium	0.68J	ug/L	1.0	11/21/24 11:27	
EPA 6010D	Calcium	151000	ug/L	1000	11/18/24 19:17	
EPA 6010D	Chromium	4.3J	ug/L	5.0	11/21/24 11:27	
EPA 6010D	Cobalt	3.2J	ug/L	5.0	11/21/24 11:27	
EPA 6010D	Copper	6.2	ug/L	5.0	11/21/24 11:27	
EPA 6010D	Molybdenum	5.3	ug/L	5.0	11/21/24 11:27	
EPA 6010D	Nickel	5.0	ug/L	5.0	11/21/24 11:27	
EPA 6010D	Zinc	1590	ug/L	10.0	11/21/24 11:27	
EPA 6020B	Boron	38.6J	ug/L	50.0	11/13/24 22:25	
EPA 6020B	Lithium	126	ug/L	2.5	11/13/24 22:25	
EPA 6020B	Thallium	0.091J	ug/L	0.20	11/13/24 22:25	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329007	**MW-2**					
EPA 903.1	Radium-226	0.484 ± 0.806 (1.39) C:NA T:86%	pCi/L		11/20/24 14:38	
EPA 904.0	Radium-228	0.843 ± 0.410 (0.709) C:84% T:83%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	1.33 ± 1.22 (2.10)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	2160	mg/L	50.0	11/03/24 12:15	
EPA 300.0 Rev 2.1 1993	Chloride	880	mg/L	20.0	11/03/24 15:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.23	mg/L	0.10	11/02/24 19:12	
EPA 300.0 Rev 2.1 1993	Sulfate	87.4	mg/L	1.0	11/02/24 19:12	
92761329008	**MW-2D**					
EPA 6010D	Arsenic	21.4	ug/L	10.0	11/21/24 11:30	
EPA 6010D	Barium	108	ug/L	5.0	11/21/24 11:30	
EPA 6010D	Calcium	15200	ug/L	100	11/21/24 11:30	
EPA 6010D	Chromium	28.1	ug/L	5.0	11/21/24 11:30	
EPA 6010D	Cobalt	1.2J	ug/L	5.0	11/21/24 11:30	
EPA 6010D	Copper	14.2	ug/L	5.0	11/21/24 11:30	
EPA 6010D	Molybdenum	264	ug/L	5.0	11/21/24 11:30	
EPA 6010D	Nickel	11.1	ug/L	5.0	11/21/24 11:30	
EPA 6010D	Selenium	9.5J	ug/L	10.0	11/21/24 11:30	
EPA 6010D	Vanadium	123	ug/L	5.0	11/21/24 11:30	
EPA 6010D	Zinc	312	ug/L	10.0	11/21/24 11:30	
EPA 6020B	Boron	39.4J	ug/L	50.0	11/13/24 22:28	
EPA 6020B	Lithium	197	ug/L	2.5	11/13/24 22:28	
EPA 903.1	Radium-226	-0.748 ± 0.778 (1.98) C:NA T:84%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	0.562 ± 0.399 (0.761) C:80% T:83%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	0.562 ± 1.18 (2.74)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	514	mg/L	50.0	11/03/24 12:16	
EPA 300.0 Rev 2.1 1993	Chloride	109	mg/L	3.0	11/03/24 04:36	
EPA 300.0 Rev 2.1 1993	Fluoride	3.2	mg/L	0.10	11/02/24 19:27	
EPA 300.0 Rev 2.1 1993	Sulfate	35.9	mg/L	1.0	11/02/24 19:27	
92761329009	**MW-3**					
EPA 6010D	Arsenic	2.5J	ug/L	10.0	11/21/24 11:39	
EPA 6010D	Barium	768	ug/L	5.0	11/21/24 11:39	
EPA 6010D	Calcium	182000	ug/L	1000	11/18/24 19:22	
EPA 6010D	Chromium	1.1J	ug/L	5.0	11/21/24 11:39	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329009	**MW-3**					
EPA 6010D	Copper	2.5J	ug/L	5.0	11/21/24 11:39	
EPA 6010D	Molybdenum	7.3	ug/L	5.0	11/21/24 11:39	
EPA 6010D	Nickel	1.8J	ug/L	5.0	11/21/24 11:39	
EPA 6010D	Vanadium	2.3J	ug/L	5.0	11/21/24 11:39	
EPA 6020B	Boron	41.9J	ug/L	50.0	11/13/24 22:32	
EPA 6020B	Lithium	84.0	ug/L	2.5	11/13/24 22:32	
EPA 903.1	Radium-226	0.668 ± 0.524 (0.729) C:NA T:89%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	1.61 ± 0.510 (0.624) C:74% T:87%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	2.28 ± 1.03 (1.35)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	2300	mg/L	125	11/03/24 12:16	
EPA 300.0 Rev 2.1 1993	Chloride	901	mg/L	100	11/03/24 04:51	
EPA 300.0 Rev 2.1 1993	Fluoride	0.31	mg/L	0.10	11/02/24 19:43	
EPA 300.0 Rev 2.1 1993	Sulfate	13.0	mg/L	1.0	11/02/24 19:43	
92761329010	**MW-4**					
EPA 6010D	Barium	361	ug/L	5.0	11/21/24 11:41	
EPA 6010D	Calcium	59700	ug/L	100	11/21/24 11:41	
EPA 6010D	Cobalt	14.6	ug/L	5.0	11/21/24 11:41	
EPA 6010D	Nickel	10	ug/L	5.0	11/21/24 11:41	
EPA 6010D	Zinc	7.4J	ug/L	10.0	11/21/24 11:41	
EPA 6020B	Lithium	40.7	ug/L	2.5	11/13/24 22:44	
EPA 903.1	Radium-226	0.233 ± 0.396 (0.699) C:NA T:92%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	0.0941 ± 0.319 (0.721) C:81% T:83%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	0.327 ± 0.715 (1.42)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	1160	mg/L	50.0	11/03/24 12:16	
EPA 300.0 Rev 2.1 1993	Chloride	315	mg/L	7.0	11/03/24 05:37	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.50	mg/L	0.10	11/02/24 20:28	M1
EPA 300.0 Rev 2.1 1993	Sulfate	10.7	mg/L	1.0	11/02/24 20:28	
92761329011	**MW-5**					
EPA 6010D	Barium	83.2	ug/L	5.0	11/21/24 11:44	
EPA 6010D	Calcium	9070	ug/L	100	11/21/24 11:44	
EPA 6010D	Chromium	0.92J	ug/L	5.0	11/21/24 11:44	
EPA 6010D	Copper	1.5J	ug/L	5.0	11/21/24 11:44	
EPA 6010D	Nickel	1.2J	ug/L	5.0	11/21/24 11:44	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329011	**MW-5**					
EPA 6010D	Zinc	6.8J	ug/L	10.0	11/21/24 11:44	
EPA 6020B	Boron	10.4J	ug/L	50.0	11/13/24 22:47	
EPA 6020B	Lithium	9.9	ug/L	2.5	11/13/24 22:47	
EPA 903.1	Radium-226	0.574 ± 0.507 (0.752) C:NA T:90%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	0.658 ± 0.355 (0.629) C:78% T:90%	pCi/L		11/18/24 11:42	
Total Radium Calculation	Total Radium	1.23 ± 0.862 (1.38)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	214	mg/L	25.0	11/03/24 12:21	
EPA 300.0 Rev 2.1 1993	Chloride	19.6	mg/L	1.0	11/02/24 17:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.62	mg/L	0.10	11/02/24 17:24	
EPA 300.0 Rev 2.1 1993	Sulfate	3.5	mg/L	1.0	11/02/24 17:24	
92761329012	**MW-6**					
EPA 6010D	Barium	47.2	ug/L	5.0	11/21/24 11:47	
EPA 6010D	Calcium	35900	ug/L	100	11/21/24 11:47	
EPA 6010D	Copper	0.64J	ug/L	5.0	11/21/24 11:47	
EPA 6010D	Nickel	1.8J	ug/L	5.0	11/21/24 11:47	
EPA 6010D	Zinc	3.6J	ug/L	10.0	11/21/24 11:47	
EPA 6020B	Boron	8.3J	ug/L	50.0	11/13/24 22:51	
EPA 6020B	Lithium	24.2	ug/L	2.5	11/13/24 22:51	
EPA 903.1	Radium-226	0.169 ± 0.552 (1.02) C:NA T:91%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	1.07 ± 0.506 (0.894) C:82% T:83%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.24 ± 1.06 (1.91)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	600	mg/L	50.0	11/03/24 12:23	
EPA 300.0 Rev 2.1 1993	Chloride	180	mg/L	4.0	11/03/24 06:22	
EPA 300.0 Rev 2.1 1993	Fluoride	0.40	mg/L	0.10	11/02/24 21:45	
EPA 300.0 Rev 2.1 1993	Sulfate	27.6	mg/L	1.0	11/02/24 21:45	
92761329013	**MW-7R**					
EPA 6010D	Barium	329	ug/L	5.0	11/21/24 11:50	
EPA 6010D	Calcium	98500	ug/L	100	11/21/24 11:50	
EPA 6010D	Chromium	2.3J	ug/L	5.0	11/21/24 11:50	
EPA 6010D	Copper	0.99J	ug/L	5.0	11/21/24 11:50	
EPA 6010D	Nickel	1.0J	ug/L	5.0	11/21/24 11:50	
EPA 6010D	Vanadium	3.2J	ug/L	5.0	11/21/24 11:50	
EPA 6010D	Zinc	5.4J	ug/L	10.0	11/21/24 11:50	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329013	**MW-7R**					
EPA 6020B	Boron	9.8J	ug/L	50.0	11/13/24 22:55	
EPA 6020B	Lithium	28.2	ug/L	2.5	11/13/24 22:55	
EPA 903.1	Radium-226	0.0614 ± 0.577 (1.11) C:NA T:95%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	0.958 ± 0.433 (0.736) C:81% T:92%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.02 ± 1.01 (1.85)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	948	mg/L	50.0	11/03/24 12:23	
EPA 300.0 Rev 2.1 1993	Chloride	263	mg/L	6.0	11/03/24 06:37	
EPA 300.0 Rev 2.1 1993	Fluoride	0.16	mg/L	0.10	11/02/24 22:01	
EPA 300.0 Rev 2.1 1993	Sulfate	14.5	mg/L	1.0	11/02/24 22:01	
92761329014	**MW-8**					
EPA 6010D	Barium	1110	ug/L	5.0	11/21/24 11:53	
EPA 6010D	Calcium	113000	ug/L	1000	11/18/24 19:42	
EPA 6010D	Chromium	1.2J	ug/L	5.0	11/21/24 11:53	
EPA 6010D	Copper	0.76J	ug/L	5.0	11/21/24 11:53	
EPA 6010D	Nickel	1.4J	ug/L	5.0	11/21/24 11:53	
EPA 6010D	Zinc	3.2J	ug/L	10.0	11/21/24 11:53	
EPA 6020B	Boron	10.8J	ug/L	50.0	11/13/24 22:59	
EPA 6020B	Lithium	29.5	ug/L	2.5	11/13/24 22:59	
EPA 903.1	Radium-226	0.219 ± 0.645 (1.17) C:NA T:95%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	1.00 ± 0.484 (0.853) C:75% T:92%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.22 ± 1.13 (2.02)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	1080	mg/L	50.0	11/03/24 12:23	
EPA 300.0 Rev 2.1 1993	Chloride	380	mg/L	9.0	11/03/24 06:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	11/02/24 22:16	
EPA 300.0 Rev 2.1 1993	Sulfate	7.0	mg/L	1.0	11/02/24 22:16	
92761329015	**MW-9**					
EPA 6010D	Barium	192	ug/L	5.0	11/21/24 11:56	
EPA 6010D	Calcium	35200	ug/L	100	11/21/24 11:56	
EPA 6010D	Chromium	4.5J	ug/L	5.0	11/21/24 11:56	
EPA 6010D	Copper	2.9J	ug/L	5.0	11/21/24 11:56	
EPA 6010D	Molybdenum	21.8	ug/L	5.0	11/21/24 11:56	
EPA 6010D	Nickel	2.4J	ug/L	5.0	11/21/24 11:56	
EPA 6010D	Selenium	12.7	ug/L	10.0	11/21/24 11:56	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329015	**MW-9**					
EPA 6010D	Vanadium	2.3J	ug/L	5.0	11/21/24 11:56	
EPA 6010D	Zinc	6.0J	ug/L	10.0	11/21/24 11:56	
EPA 6020B	Boron	30.0J	ug/L	50.0	11/13/24 23:02	
EPA 6020B	Lithium	3.9	ug/L	2.5	11/13/24 23:02	
SM 2540C-2015	Total Dissolved Solids	506	mg/L	50.0	11/03/24 12:16	
EPA 300.0 Rev 2.1 1993	Chloride	10.7	mg/L	1.0	11/02/24 22:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.30	mg/L	0.10	11/02/24 22:31	
EPA 300.0 Rev 2.1 1993	Sulfate	69.4	mg/L	1.0	11/02/24 22:31	
92761329016	**MW-10**					
EPA 6010D	Arsenic	2.7J	ug/L	10.0	11/21/24 11:58	
EPA 6010D	Barium	92.3	ug/L	5.0	11/21/24 11:58	
EPA 6010D	Calcium	22100	ug/L	100	11/21/24 11:58	
EPA 6010D	Chromium	0.96J	ug/L	5.0	11/21/24 11:58	
EPA 6010D	Molybdenum	20.2	ug/L	5.0	11/21/24 11:58	
EPA 6010D	Nickel	1.1J	ug/L	5.0	11/21/24 11:58	
EPA 6020B	Boron	28.2J	ug/L	50.0	11/13/24 23:06	
EPA 6020B	Lithium	5.6	ug/L	2.5	11/13/24 23:06	
EPA 903.1	Radium-226	0.316 ± 0.758 (1.34) C:NA T:96%	pCi/L		11/20/24 14:50	
EPA 904.0	Radium-228	0.711 ± 0.445 (0.846) C:83% T:87%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.03 ± 1.20 (2.19)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	354	mg/L	25.0	11/03/24 12:21	
EPA 300.0 Rev 2.1 1993	Chloride	30.4	mg/L	1.0	11/02/24 22:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.48	mg/L	0.10	11/02/24 22:46	
EPA 300.0 Rev 2.1 1993	Sulfate	2.0	mg/L	1.0	11/02/24 22:46	
92761329017	**MW-11**					
EPA 6010D	Barium	35.5	ug/L	5.0	11/21/24 12:01	
EPA 6010D	Calcium	26300	ug/L	100	11/21/24 12:01	
EPA 6010D	Chromium	0.78J	ug/L	5.0	11/21/24 12:01	
EPA 6010D	Cobalt	0.53J	ug/L	5.0	11/21/24 12:01	
EPA 6010D	Copper	1.0J	ug/L	5.0	11/21/24 12:01	
EPA 6010D	Nickel	1.4J	ug/L	5.0	11/21/24 12:01	
EPA 6010D	Zinc	3.1J	ug/L	10.0	11/21/24 12:01	
EPA 6020B	Boron	17.9J	ug/L	50.0	11/12/24 14:19	
EPA 6020B	Lithium	8.3	ug/L	2.5	11/12/24 03:48	
EPA 903.1	Radium-226	0.351 ± 0.431 (0.702) C:NA T:89%	pCi/L		11/20/24 15:06	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329017	**MW-11**					
EPA 904.0	Radium-228	1.08 ± 0.443 (0.698) C:79% T:89%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.43 ± 0.874 (1.40)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	426	mg/L	25.0	11/03/24 12:22	
EPA 300.0 Rev 2.1 1993	Chloride	127	mg/L	3.0	11/03/24 07:07	
EPA 300.0 Rev 2.1 1993	Fluoride	0.19	mg/L	0.10	11/02/24 23:02	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	11/02/24 23:02	
92761329018	**MW-11D**					
EPA 6010D	Arsenic	3.5J	ug/L	10.0	11/21/24 12:04	
EPA 6010D	Barium	119	ug/L	5.0	11/21/24 12:04	
EPA 6010D	Calcium	16400	ug/L	100	11/21/24 12:04	
EPA 6010D	Molybdenum	4.0J	ug/L	5.0	11/21/24 12:04	
EPA 6020B	Boron	46.3J	ug/L	50.0	11/12/24 14:23	
EPA 6020B	Lithium	16.0	ug/L	2.5	11/12/24 03:52	
EPA 903.1	Radium-226	0.692 ± 0.596 (0.887) C:NA T:88%	pCi/L		11/20/24 15:06	
EPA 904.0	Radium-228	0.655 ± 0.374 (0.678) C:79% T:86%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.35 ± 0.970 (1.57)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	322	mg/L	25.0	11/03/24 12:22	
EPA 300.0 Rev 2.1 1993	Chloride	57.1	mg/L	1.0	11/02/24 23:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.48	mg/L	0.10	11/02/24 23:17	
EPA 300.0 Rev 2.1 1993	Sulfate	15.3	mg/L	1.0	11/02/24 23:17	
92761329019	**SW-1**					
EPA 6010D	Arsenic	10.0	ug/L	10.0	11/21/24 12:13	
EPA 6010D	Barium	788	ug/L	5.0	11/21/24 12:13	
EPA 6010D	Beryllium	3.3	ug/L	1.0	11/21/24 12:13	
EPA 6010D	Cadmium	0.82J	ug/L	1.0	11/21/24 12:13	
EPA 6010D	Calcium	8890	ug/L	100	11/21/24 12:13	
EPA 6010D	Chromium	15.1	ug/L	5.0	11/21/24 12:13	
EPA 6010D	Cobalt	182	ug/L	5.0	11/21/24 12:13	
EPA 6010D	Copper	30.5	ug/L	5.0	11/21/24 12:13	
EPA 6010D	Lead	52.6	ug/L	50.0	11/18/24 19:57	D3
EPA 6010D	Molybdenum	2.9J	ug/L	5.0	11/21/24 12:13	
EPA 6010D	Nickel	37.9	ug/L	5.0	11/21/24 12:13	
EPA 6010D	Vanadium	65.4	ug/L	5.0	11/21/24 12:13	
EPA 6010D	Zinc	155	ug/L	10.0	11/21/24 12:13	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329019	**SW-1**					
EPA 6020B	Boron	9.0J	ug/L	50.0	11/12/24 14:27	
EPA 6020B	Lithium	11.8	ug/L	2.5	11/12/24 03:56	
EPA 6020B	Thallium	0.19J	ug/L	0.20	11/12/24 03:56	
EPA 903.1	Radium-226	0.744 ± 0.806 (1.32) C:NA T:90%	pCi/L		11/20/24 15:06	
EPA 904.0	Radium-228	0.953 ± 0.420 (0.695) C:78% T:89%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.70 ± 1.23 (2.02)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	434	mg/L	25.0	11/03/24 12:22	
EPA 300.0 Rev 2.1 1993	Chloride	6.7	mg/L	1.0	11/02/24 23:32	
EPA 300.0 Rev 2.1 1993	Fluoride	0.29	mg/L	0.10	11/02/24 23:32	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	11/02/24 23:32	
92761329020	**SW-5**					
EPA 6010D	Arsenic	3.7J	ug/L	10.0	11/21/24 12:15	
EPA 6010D	Barium	219	ug/L	5.0	11/21/24 12:15	
EPA 6010D	Beryllium	0.63J	ug/L	1.0	11/21/24 12:15	
EPA 6010D	Calcium	3110	ug/L	100	11/21/24 12:15	
EPA 6010D	Chromium	6.3	ug/L	5.0	11/21/24 12:15	
EPA 6010D	Copper	5.3	ug/L	5.0	11/21/24 12:15	
EPA 6010D	Lead	18.2J	ug/L	50.0	11/18/24 19:59	D3
EPA 6010D	Nickel	4.0J	ug/L	5.0	11/21/24 12:15	
EPA 6010D	Vanadium	24.4	ug/L	5.0	11/21/24 12:15	
EPA 6010D	Zinc	25.4	ug/L	10.0	11/21/24 12:15	
EPA 6020B	Boron	8.7J	ug/L	50.0	11/12/24 14:30	
EPA 6020B	Lithium	3.1	ug/L	2.5	11/12/24 03:59	
EPA 6020B	Thallium	0.064J	ug/L	0.20	11/12/24 03:59	
EPA 903.1	Radium-226	0.364 ± 0.584 (1.01) C:NA T:93%	pCi/L		11/20/24 15:06	
EPA 904.0	Radium-228	0.940 ± 0.452 (0.785) C:78% T:85%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	1.30 ± 1.04 (1.80)	pCi/L		11/21/24 14:58	
SM 2540C-2015	Total Dissolved Solids	493	mg/L	25.0	11/03/24 12:22	
EPA 300.0 Rev 2.1 1993	Chloride	7.2	mg/L	1.0	11/02/24 23:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.26	mg/L	0.10	11/02/24 23:48	
EPA 300.0 Rev 2.1 1993	Sulfate	0.93J	mg/L	1.0	11/02/24 23:48	
92761329021	**SW-6**					
EPA 6010D	Arsenic	4.2J	ug/L	10.0	11/14/24 19:44	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

SUMMARY OF DETECTION

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92761329021	**SW-6**					
EPA 6010D	Barium	236	ug/L	5.0	11/14/24 19:44	
EPA 6010D	Beryllium	0.51J	ug/L	1.0	11/14/24 19:44	
EPA 6010D	Calcium	1850	ug/L	100	11/14/24 19:44	
EPA 6010D	Chromium	5.7	ug/L	5.0	11/14/24 19:44	
EPA 6010D	Cobalt	0.56J	ug/L	5.0	11/14/24 19:44	
EPA 6010D	Copper	4.4J	ug/L	5.0	11/14/24 19:44	
EPA 6010D	Lead	15.1	ug/L	5.0	11/14/24 19:44	
EPA 6010D	Nickel	3.1J	ug/L	5.0	11/14/24 19:44	
EPA 6010D	Vanadium	28.6	ug/L	5.0	11/14/24 19:44	
EPA 6010D	Zinc	23.4	ug/L	10.0	11/14/24 19:44	
EPA 6020B	Boron	7.7J	ug/L	50.0	11/12/24 14:34	
EPA 6020B	Lithium	2.9	ug/L	2.5	11/12/24 04:03	
EPA 6020B	Thallium	0.075J	ug/L	0.20	11/12/24 04:03	
EPA 903.1	Radium-226	0.995 ± 0.761 (1.14) C:NA T:91%	pCi/L		11/20/24 15:06	
EPA 904.0	Radium-228	2.03 ± 0.613 (0.764) C:77% T:89%	pCi/L		11/18/24 11:43	
Total Radium Calculation	Total Radium	3.03 ± 1.37 (1.90)	pCi/L		11/21/24 14:59	
SM 2540C-2015	Total Dissolved Solids	503	mg/L	25.0	11/03/24 12:22	
EPA 300.0 Rev 2.1 1993	Chloride	6.5	mg/L	1.0	11/03/24 00:34	
EPA 300.0 Rev 2.1 1993	Fluoride	0.30	mg/L	0.10	11/03/24 00:34	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	11/03/24 00:34	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: BG-1 **Lab ID: 92761329001** Collected: 10/29/24 11:15 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:04	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:04	7440-38-2	
Barium	**298**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:04	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:04	7440-43-9	
Calcium	**24500**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:04	7440-70-2	
Chromium	**0.65J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:04	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:04	7440-48-4	
Copper	**0.82J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:04	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 18:40	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:04	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:04	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:04	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:04	7440-22-4	
Vanadium	**5.9**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:04	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:04	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.0J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:02	7440-42-8	
Lithium	**16.0**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:02	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/09/24 18:53	11/13/24 13:23	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**545**	mg/L	25.0	25.0	1		11/03/24 12:21		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**180**	mg/L	4.0	2.4	4		11/03/24 03:21	16887-00-6	
Fluoride	**0.23**	mg/L	0.10	0.050	1		11/02/24 17:40	16984-48-8	
Sulfate	**22.7**	mg/L	1.0	0.50	1		11/02/24 17:40	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: BG-2 **Lab ID: 92761329002** Collected: 10/28/24 14:25 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:16	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:16	7440-38-2	
Barium	**49.9**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:16	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:16	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:16	7440-43-9	
Calcium	**96500**	ug/L	1000	147	10	11/07/24 15:45	11/18/24 18:51	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:16	7440-47-3	
Cobalt	**1.2J**	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:16	7440-48-4	
Copper	**0.64J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:16	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 18:51	7439-92-1	D3
Molybdenum	**6.1**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:16	7439-98-7	
Nickel	**1.4J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:16	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:16	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:16	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:16	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:16	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**15.3J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:06	7440-42-8	
Lithium	**24.2**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:06	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:09	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1270**	mg/L	50.0	50.0	1		11/03/24 12:21		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**273**	mg/L	6.0	3.6	6		11/03/24 02:36	16887-00-6	M1
Fluoride	**0.41**	mg/L	0.10	0.050	1		11/02/24 16:38	16984-48-8	
Sulfate	**202**	mg/L	6.0	3.0	6		11/03/24 02:36	14808-79-8	M1

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: DUP **Lab ID: 92761329003** Collected: 10/30/24 00:01 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:19	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:19	7440-38-2	
Barium	**49.8**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:19	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:19	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:19	7440-43-9	
Calcium	**37800**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:19	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:19	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:19	7440-48-4	
Copper	**0.73J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:19	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 18:54	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:19	7439-98-7	
Nickel	**1.6J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:19	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:19	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:19	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:19	7440-62-2	
Zinc	**3.7J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:19	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.3J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:09	7440-42-8	
Lithium	**24.4**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:09	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:09	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:15	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**598**	mg/L	25.0	25.0	1		11/03/24 12:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**177**	mg/L	4.0	2.4	4		11/03/24 03:36	16887-00-6	
Fluoride	**0.39**	mg/L	0.10	0.050	1		11/02/24 18:26	16984-48-8	
Sulfate	**27.4**	mg/L	1.0	0.50	1		11/02/24 18:26	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: EQBL **Lab ID: 92761329004** Collected: 10/31/24 16:25 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/18/24 19:08	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/18/24 19:08	7440-38-2	
Barium	ND	ug/L	5.0	0.79	1	11/07/24 15:45	11/18/24 19:08	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/18/24 19:08	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/18/24 19:08	7440-43-9	
Calcium	**26.2J**	ug/L	100	14.7	1	11/07/24 15:45	11/18/24 19:08	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	11/07/24 15:45	11/18/24 19:08	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/18/24 19:08	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	11/07/24 15:45	11/18/24 19:08	7440-50-8	
Lead	ND	ug/L	5.0	1.4	1	11/07/24 15:45	11/18/24 19:08	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/18/24 19:08	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	11/07/24 15:45	11/18/24 19:08	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/18/24 19:08	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/18/24 19:08	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/18/24 19:08	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	11/07/24 15:45	11/18/24 19:08	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:13	7440-42-8	
Lithium	ND	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:13	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:16	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		11/03/24 12:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		11/02/24 12:48	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		11/02/24 12:48	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		11/02/24 12:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: LEACHATE **Lab ID: 92761329005** Collected: 10/31/24 11:25 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:21	7440-36-0	
Arsenic	**9.6J**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:21	7440-38-2	
Barium	**42.2**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:21	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:21	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:21	7440-43-9	
Calcium	**239000**	ug/L	1000	147	10	11/07/24 15:45	11/18/24 19:11	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:21	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:21	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:21	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:11	7439-92-1	D3
Molybdenum	**223**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:21	7439-98-7	
Nickel	**1.1J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:21	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:21	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:21	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:21	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:21	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**3420**	ug/L	2500	375	50	11/05/24 12:50	11/14/24 15:44	7440-42-8	
Lithium	**63.9**	ug/L	12.5	1.7	5	11/05/24 12:50	11/13/24 22:17	7439-93-2	
Thallium	ND	ug/L	1.0	0.14	5	11/05/24 12:50	11/13/24 22:17	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1350**	mg/L	50.0	50.0	1		11/03/24 12:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**19.5**	mg/L	1.0	0.60	1		11/02/24 18:41	16887-00-6	
Fluoride	**0.29**	mg/L	0.10	0.050	1		11/02/24 18:41	16984-48-8	
Sulfate	**419**	mg/L	10.0	5.0	10		11/03/24 03:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-1 **Lab ID: 92761329006** Collected: 10/30/24 18:15 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:24	7440-36-0	
Arsenic	**2.5J**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:24	7440-38-2	
Barium	**238**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:24	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:24	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:24	7440-43-9	
Calcium	**192000**	ug/L	1000	147	10	11/07/24 15:45	11/18/24 19:14	7440-70-2	
Chromium	**0.76J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:24	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:24	7440-48-4	
Copper	**0.86J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:24	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:14	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:24	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:24	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:24	7782-49-2	
Silver	**1.0J**	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:24	7440-22-4	
Vanadium	**2.1J**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:24	7440-62-2	
Zinc	**5.0J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:24	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**13.7J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:21	7440-42-8	
Lithium	**36.4**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:21	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:21	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:20	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1540**	mg/L	50.0	50.0	1		11/03/24 12:23		1g
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**657**	mg/L	16.0	9.6	16		11/03/24 04:06	16887-00-6	
Fluoride	**0.18**	mg/L	0.10	0.050	1		11/02/24 18:57	16984-48-8	
Sulfate	**6.3**	mg/L	1.0	0.50	1		11/02/24 18:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-2 **Lab ID: 92761329007** Collected: 10/31/24 15:20 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:27	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:27	7440-38-2	
Barium	**278**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:27	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:27	7440-41-7	
Cadmium	**0.68J**	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:27	7440-43-9	
Calcium	**151000**	ug/L	1000	147	10	11/07/24 15:45	11/18/24 19:17	7440-70-2	
Chromium	**4.3J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:27	7440-47-3	
Cobalt	**3.2J**	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:27	7440-48-4	
Copper	**6.2**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:27	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:17	7439-92-1	D3
Molybdenum	**5.3**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:27	7439-98-7	
Nickel	**5.0**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:27	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:27	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:27	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:27	7440-62-2	
Zinc	**1590**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:27	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**38.6J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:25	7440-42-8	
Lithium	**126**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:25	7439-93-2	
Thallium	**0.091J**	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:25	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:22	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**2160**	mg/L	50.0	50.0	1		11/03/24 12:15		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**880**	mg/L	20.0	12.0	20		11/03/24 15:22	16887-00-6	
Fluoride	**0.23**	mg/L	0.10	0.050	1		11/02/24 19:12	16984-48-8	
Sulfate	**87.4**	mg/L	1.0	0.50	1		11/02/24 19:12	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-2D **Lab ID: 92761329008** Collected: 10/31/24 14:35 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:30	7440-36-0	
Arsenic	**21.4**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:30	7440-38-2	
Barium	**108**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:30	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:30	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:30	7440-43-9	
Calcium	**15200**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:30	7440-70-2	
Chromium	**28.1**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:30	7440-47-3	
Cobalt	**1.2J**	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:30	7440-48-4	
Copper	**14.2**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:30	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:20	7439-92-1	D3
Molybdenum	**264**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:30	7439-98-7	
Nickel	**11.1**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:30	7440-02-0	
Selenium	**9.5J**	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:30	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:30	7440-22-4	
Vanadium	**123**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:30	7440-62-2	
Zinc	**312**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:30	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**39.4J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:28	7440-42-8	
Lithium	**197**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:28	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:27	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**514**	mg/L	50.0	50.0	1		11/03/24 12:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**109**	mg/L	3.0	1.8	3		11/03/24 04:36	16887-00-6	
Fluoride	**3.2**	mg/L	0.10	0.050	1		11/02/24 19:27	16984-48-8	
Sulfate	**35.9**	mg/L	1.0	0.50	1		11/02/24 19:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-3 **Lab ID: 92761329009** Collected: 10/31/24 11:50 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:39	7440-36-0	
Arsenic	**2.5J**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:39	7440-38-2	
Barium	**768**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:39	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:39	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:39	7440-43-9	
Calcium	**182000**	ug/L	1000	147	10	11/07/24 15:45	11/18/24 19:22	7440-70-2	
Chromium	**1.1J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:39	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:39	7440-48-4	
Copper	**2.5J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:39	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:22	7439-92-1	D3
Molybdenum	**7.3**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:39	7439-98-7	
Nickel	**1.8J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:39	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:39	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:39	7440-22-4	
Vanadium	**2.3J**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:39	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:39	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**41.9J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:32	7440-42-8	
Lithium	**84.0**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:32	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:32	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:29	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**2300**	mg/L	125	125	1		11/03/24 12:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**901**	mg/L	100	60.0	100		11/03/24 04:51	16887-00-6	
Fluoride	**0.31**	mg/L	0.10	0.050	1		11/02/24 19:43	16984-48-8	
Sulfate	**13.0**	mg/L	1.0	0.50	1		11/02/24 19:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-4 **Lab ID: 92761329010** Collected: 10/31/24 10:25 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:41	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:41	7440-38-2	
Barium	**361**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:41	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:41	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:41	7440-43-9	
Calcium	**59700**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:41	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:41	7440-47-3	
Cobalt	**14.6**	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:41	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:41	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:25	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:41	7439-98-7	
Nickel	**10**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:41	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:41	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:41	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:41	7440-62-2	
Zinc	**7.4J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:41	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	ND	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:44	7440-42-8	
Lithium	**40.7**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:44	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:30	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1160**	mg/L	50.0	50.0	1		11/03/24 12:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**315**	mg/L	7.0	4.2	7		11/03/24 05:37	16887-00-6	M1
Fluoride	**0.50**	mg/L	0.10	0.050	1		11/02/24 20:28	16984-48-8	M1
Sulfate	**10.7**	mg/L	1.0	0.50	1		11/02/24 20:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-5 **Lab ID: 92761329011** Collected: 10/28/24 16:55 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:44	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:44	7440-38-2	
Barium	**83.2**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:44	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:44	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:44	7440-43-9	
Calcium	**9070**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:44	7440-70-2	
Chromium	**0.92J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:44	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:44	7440-48-4	
Copper	**1.5J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:44	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:28	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:44	7439-98-7	
Nickel	**1.2J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:44	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:44	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:44	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:44	7440-62-2	
Zinc	**6.8J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:44	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**10.4J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:47	7440-42-8	
Lithium	**9.9**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:47	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:32	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**214**	mg/L	25.0	25.0	1		11/03/24 12:21		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**19.6**	mg/L	1.0	0.60	1		11/02/24 17:24	16887-00-6	
Fluoride	**0.62**	mg/L	0.10	0.050	1		11/02/24 17:24	16984-48-8	
Sulfate	**3.5**	mg/L	1.0	0.50	1		11/02/24 17:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-6 **Lab ID: 92761329012** Collected: 10/30/24 12:20 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:47	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:47	7440-38-2	
Barium	**47.2**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:47	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:47	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:47	7440-43-9	
Calcium	**35900**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:47	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:47	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:47	7440-48-4	
Copper	**0.64J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:47	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:31	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:47	7439-98-7	
Nickel	**1.8J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:47	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:47	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:47	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:47	7440-62-2	
Zinc	**3.6J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:47	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.3J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:51	7440-42-8	
Lithium	**24.2**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:51	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:51	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:34	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**600**	mg/L	50.0	50.0	1		11/03/24 12:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**180**	mg/L	4.0	2.4	4		11/03/24 06:22	16887-00-6	
Fluoride	**0.40**	mg/L	0.10	0.050	1		11/02/24 21:45	16984-48-8	
Sulfate	**27.6**	mg/L	1.0	0.50	1		11/02/24 21:45	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-7R **Lab ID: 92761329013** Collected: 10/30/24 09:30 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:50	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:50	7440-38-2	
Barium	**329**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:50	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:50	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:50	7440-43-9	
Calcium	**98500**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:50	7440-70-2	
Chromium	**2.3J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:50	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:50	7440-48-4	
Copper	**0.99J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:50	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:34	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:50	7439-98-7	
Nickel	**1.0J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:50	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:50	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:50	7440-22-4	
Vanadium	**3.2J**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:50	7440-62-2	
Zinc	**5.4J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:50	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**9.8J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:55	7440-42-8	
Lithium	**28.2**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:55	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:55	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:36	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**948**	mg/L	50.0	50.0	1		11/03/24 12:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**263**	mg/L	6.0	3.6	6		11/03/24 06:37	16887-00-6	
Fluoride	**0.16**	mg/L	0.10	0.050	1		11/02/24 22:01	16984-48-8	
Sulfate	**14.5**	mg/L	1.0	0.50	1		11/02/24 22:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-8 **Lab ID: 92761329014** Collected: 10/30/24 15:35 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:53	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:53	7440-38-2	
Barium	**1110**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:53	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:53	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:53	7440-43-9	
Calcium	**113000**	ug/L	1000	147	10	11/07/24 15:45	11/18/24 19:42	7440-70-2	
Chromium	**1.2J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:53	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:53	7440-48-4	
Copper	**0.76J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:53	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:42	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:53	7439-98-7	
Nickel	**1.4J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:53	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:53	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:53	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:53	7440-62-2	
Zinc	**3.2J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:53	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**10.8J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 22:59	7440-42-8	
Lithium	**29.5**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 22:59	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 22:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:37	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**1080**	mg/L	50.0	50.0	1		11/03/24 12:23		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**380**	mg/L	9.0	5.4	9		11/03/24 06:52	16887-00-6	
Fluoride	**0.11**	mg/L	0.10	0.050	1		11/02/24 22:16	16984-48-8	
Sulfate	**7.0**	mg/L	1.0	0.50	1		11/02/24 22:16	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-9 **Lab ID: 92761329015** Collected: 10/31/24 15:30 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:56	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:56	7440-38-2	
Barium	**192**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:56	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:56	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:56	7440-43-9	
Calcium	**35200**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:56	7440-70-2	
Chromium	**4.5J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:56	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:56	7440-48-4	
Copper	**2.9J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:56	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:45	7439-92-1	D3
Molybdenum	**21.8**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:56	7439-98-7	
Nickel	**2.4J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:56	7440-02-0	
Selenium	**12.7**	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:56	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:56	7440-22-4	
Vanadium	**2.3J**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:56	7440-62-2	
Zinc	**6.0J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:56	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**30.0J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 23:02	7440-42-8	
Lithium	**3.9**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 23:02	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 23:02	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:39	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**506**	mg/L	50.0	50.0	1		11/03/24 12:16		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**10.7**	mg/L	1.0	0.60	1		11/02/24 22:31	16887-00-6	
Fluoride	**0.30**	mg/L	0.10	0.050	1		11/02/24 22:31	16984-48-8	
Sulfate	**69.4**	mg/L	1.0	0.50	1		11/02/24 22:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-10 **Lab ID: 92761329016** Collected: 10/29/24 17:00 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 11:58	7440-36-0	
Arsenic	**2.7J**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 11:58	7440-38-2	
Barium	**92.3**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 11:58	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 11:58	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 11:58	7440-43-9	
Calcium	**22100**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 11:58	7440-70-2	
Chromium	**0.96J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 11:58	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 11:58	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 11:58	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:48	7439-92-1	D3
Molybdenum	**20.2**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 11:58	7439-98-7	
Nickel	**1.1J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 11:58	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 11:58	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 11:58	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 11:58	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 11:58	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**28.2J**	ug/L	50.0	7.5	1	11/05/24 12:50	11/13/24 23:06	7440-42-8	
Lithium	**5.6**	ug/L	2.5	0.33	1	11/05/24 12:50	11/13/24 23:06	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/05/24 12:50	11/13/24 23:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:41	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**354**	mg/L	25.0	25.0	1		11/03/24 12:21		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**30.4**	mg/L	1.0	0.60	1		11/02/24 22:46	16887-00-6	
Fluoride	**0.48**	mg/L	0.10	0.050	1		11/02/24 22:46	16984-48-8	
Sulfate	**2.0**	mg/L	1.0	0.50	1		11/02/24 22:46	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-11 **Lab ID: 92761329017** Collected: 10/29/24 15:25 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 12:01	7440-36-0	
Arsenic	ND	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 12:01	7440-38-2	
Barium	**35.5**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 12:01	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 12:01	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 12:01	7440-43-9	
Calcium	**26300**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 12:01	7440-70-2	
Chromium	**0.78J**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 12:01	7440-47-3	
Cobalt	**0.53J**	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 12:01	7440-48-4	
Copper	**1.0J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 12:01	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:51	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 12:01	7439-98-7	
Nickel	**1.4J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 12:01	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 12:01	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 12:01	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 12:01	7440-62-2	
Zinc	**3.1J**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 12:01	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**17.9J**	ug/L	50.0	7.5	1	11/07/24 15:45	11/12/24 14:19	7440-42-8	
Lithium	**8.3**	ug/L	2.5	0.33	1	11/07/24 15:45	11/12/24 03:48	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/07/24 15:45	11/12/24 03:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:43	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**426**	mg/L	25.0	25.0	1		11/03/24 12:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**127**	mg/L	3.0	1.8	3		11/03/24 07:07	16887-00-6	
Fluoride	**0.19**	mg/L	0.10	0.050	1		11/02/24 23:02	16984-48-8	
Sulfate	**2.3**	mg/L	1.0	0.50	1		11/02/24 23:02	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-11D **Lab ID: 92761329018** Collected: 10/29/24 12:50 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 12:04	7440-36-0	
Arsenic	**3.5J**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 12:04	7440-38-2	
Barium	**119**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 12:04	7440-39-3	
Beryllium	ND	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 12:04	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 12:04	7440-43-9	
Calcium	**16400**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 12:04	7440-70-2	
Chromium	ND	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 12:04	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 12:04	7440-48-4	
Copper	ND	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 12:04	7440-50-8	
Lead	ND	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:54	7439-92-1	D3
Molybdenum	**4.0J**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 12:04	7439-98-7	
Nickel	ND	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 12:04	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 12:04	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 12:04	7440-22-4	
Vanadium	ND	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 12:04	7440-62-2	
Zinc	ND	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 12:04	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**46.3J**	ug/L	50.0	7.5	1	11/07/24 15:45	11/12/24 14:23	7440-42-8	
Lithium	**16.0**	ug/L	2.5	0.33	1	11/07/24 15:45	11/12/24 03:52	7439-93-2	
Thallium	ND	ug/L	0.20	0.028	1	11/07/24 15:45	11/12/24 03:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:48	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**322**	mg/L	25.0	25.0	1		11/03/24 12:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**57.1**	mg/L	1.0	0.60	1		11/02/24 23:17	16887-00-6	
Fluoride	**0.48**	mg/L	0.10	0.050	1		11/02/24 23:17	16984-48-8	
Sulfate	**15.3**	mg/L	1.0	0.50	1		11/02/24 23:17	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: SW-1 **Lab ID: 92761329019** Collected: 10/29/24 09:15 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 12:13	7440-36-0	
Arsenic	**10.0**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 12:13	7440-38-2	
Barium	**788**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 12:13	7440-39-3	
Beryllium	**3.3**	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 12:13	7440-41-7	
Cadmium	**0.82J**	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 12:13	7440-43-9	
Calcium	**8890**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 12:13	7440-70-2	
Chromium	**15.1**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 12:13	7440-47-3	
Cobalt	**182**	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 12:13	7440-48-4	
Copper	**30.5**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 12:13	7440-50-8	
Lead	**52.6**	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:57	7439-92-1	D3
Molybdenum	**2.9J**	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 12:13	7439-98-7	
Nickel	**37.9**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 12:13	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 12:13	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 12:13	7440-22-4	
Vanadium	**65.4**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 12:13	7440-62-2	
Zinc	**155**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 12:13	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**9.0J**	ug/L	50.0	7.5	1	11/07/24 15:45	11/12/24 14:27	7440-42-8	
Lithium	**11.8**	ug/L	2.5	0.33	1	11/07/24 15:45	11/12/24 03:56	7439-93-2	
Thallium	**0.19J**	ug/L	0.20	0.028	1	11/07/24 15:45	11/12/24 03:56	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:50	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**434**	mg/L	25.0	25.0	1		11/03/24 12:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.7**	mg/L	1.0	0.60	1		11/02/24 23:32	16887-00-6	
Fluoride	**0.29**	mg/L	0.10	0.050	1		11/02/24 23:32	16984-48-8	
Sulfate	**1.2**	mg/L	1.0	0.50	1		11/02/24 23:32	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: SW-5 **Lab ID: 92761329020** Collected: 10/29/24 11:35 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/21/24 12:15	7440-36-0	
Arsenic	**3.7J**	ug/L	10.0	2.5	1	11/07/24 15:45	11/21/24 12:15	7440-38-2	
Barium	**219**	ug/L	5.0	0.79	1	11/07/24 15:45	11/21/24 12:15	7440-39-3	
Beryllium	**0.63J**	ug/L	1.0	0.16	1	11/07/24 15:45	11/21/24 12:15	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/21/24 12:15	7440-43-9	
Calcium	**3110**	ug/L	100	14.7	1	11/07/24 15:45	11/21/24 12:15	7440-70-2	
Chromium	**6.3**	ug/L	5.0	0.63	1	11/07/24 15:45	11/21/24 12:15	7440-47-3	
Cobalt	ND	ug/L	5.0	0.44	1	11/07/24 15:45	11/21/24 12:15	7440-48-4	
Copper	**5.3**	ug/L	5.0	0.62	1	11/07/24 15:45	11/21/24 12:15	7440-50-8	
Lead	**18.2J**	ug/L	50.0	13.7	10	11/07/24 15:45	11/18/24 19:59	7439-92-1	D3
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/21/24 12:15	7439-98-7	
Nickel	**4.0J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/21/24 12:15	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/21/24 12:15	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/21/24 12:15	7440-22-4	
Vanadium	**24.4**	ug/L	5.0	1.6	1	11/07/24 15:45	11/21/24 12:15	7440-62-2	
Zinc	**25.4**	ug/L	10.0	3.0	1	11/07/24 15:45	11/21/24 12:15	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**8.7J**	ug/L	50.0	7.5	1	11/07/24 15:45	11/12/24 14:30	7440-42-8	
Lithium	**3.1**	ug/L	2.5	0.33	1	11/07/24 15:45	11/12/24 03:59	7439-93-2	
Thallium	**0.064J**	ug/L	0.20	0.028	1	11/07/24 15:45	11/12/24 03:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:52	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**493**	mg/L	25.0	25.0	1		11/03/24 12:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**7.2**	mg/L	1.0	0.60	1		11/02/24 23:48	16887-00-6	
Fluoride	**0.26**	mg/L	0.10	0.050	1		11/02/24 23:48	16984-48-8	
Sulfate	**0.93J**	mg/L	1.0	0.50	1		11/02/24 23:48	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: SW-6 **Lab ID: 92761329021** Collected: 10/29/24 11:15 Received: 11/01/24 10:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Antimony	ND	ug/L	5.0	3.6	1	11/07/24 15:45	11/14/24 19:44	7440-36-0	
Arsenic	**4.2J**	ug/L	10.0	2.5	1	11/07/24 15:45	11/14/24 19:44	7440-38-2	
Barium	**236**	ug/L	5.0	0.79	1	11/07/24 15:45	11/14/24 19:44	7440-39-3	
Beryllium	**0.51J**	ug/L	1.0	0.16	1	11/07/24 15:45	11/14/24 19:44	7440-41-7	
Cadmium	ND	ug/L	1.0	0.29	1	11/07/24 15:45	11/14/24 19:44	7440-43-9	
Calcium	**1850**	ug/L	100	14.7	1	11/07/24 15:45	11/14/24 19:44	7440-70-2	
Chromium	**5.7**	ug/L	5.0	0.63	1	11/07/24 15:45	11/14/24 19:44	7440-47-3	
Cobalt	**0.56J**	ug/L	5.0	0.44	1	11/07/24 15:45	11/14/24 19:44	7440-48-4	
Copper	**4.4J**	ug/L	5.0	0.62	1	11/07/24 15:45	11/14/24 19:44	7440-50-8	
Lead	**15.1**	ug/L	5.0	1.4	1	11/07/24 15:45	11/14/24 19:44	7439-92-1	
Molybdenum	ND	ug/L	5.0	2.6	1	11/07/24 15:45	11/14/24 19:44	7439-98-7	
Nickel	**3.1J**	ug/L	5.0	0.88	1	11/07/24 15:45	11/14/24 19:44	7440-02-0	
Selenium	ND	ug/L	10.0	4.1	1	11/07/24 15:45	11/14/24 19:44	7782-49-2	
Silver	ND	ug/L	5.0	0.49	1	11/07/24 15:45	11/14/24 19:44	7440-22-4	
Vanadium	**28.6**	ug/L	5.0	1.6	1	11/07/24 15:45	11/14/24 19:44	7440-62-2	
Zinc	**23.4**	ug/L	10.0	3.0	1	11/07/24 15:45	11/14/24 19:44	7440-66-6	
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3010A Pace Analytical Services - Asheville								
Boron	**7.7J**	ug/L	50.0	7.5	1	11/07/24 15:45	11/12/24 14:34	7440-42-8	
Lithium	**2.9**	ug/L	2.5	0.33	1	11/07/24 15:45	11/12/24 04:03	7439-93-2	
Thallium	**0.075J**	ug/L	0.20	0.028	1	11/07/24 15:45	11/12/24 04:03	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Asheville								
Mercury	ND	ug/L	0.20	0.12	1	11/13/24 21:03	11/14/24 12:53	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C-2015 Pace Analytical Services - Asheville								
Total Dissolved Solids	**503**	mg/L	25.0	25.0	1		11/03/24 12:22		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	**6.5**	mg/L	1.0	0.60	1		11/03/24 00:34	16887-00-6	
Fluoride	**0.30**	mg/L	0.10	0.050	1		11/03/24 00:34	16984-48-8	
Sulfate	**1.2**	mg/L	1.0	0.50	1		11/03/24 00:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 894903
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329001

METHOD BLANK: 4607328 Matrix: Water
Associated Lab Samples: 92761329001

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	11/13/24 12:42	

LABORATORY CONTROL SAMPLE: 4607329

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4607330 4607331

Parameter	Units	92762273001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.4	2.5	97	99	75-125	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 895325
QC Batch Method: EPA 7470A
Analysis Method: EPA 7470A
Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

METHOD BLANK: 4608986 Matrix: Water
Associated Lab Samples: 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	0.12	11/14/24 12:06	

LABORATORY CONTROL SAMPLE: 4608987

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	2.5	2.4	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4608988 4608989

Parameter	Units	92761329002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	2.5	2.5	2.4	2.4	94	94	75-125	0	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 894370
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92761329021

METHOD BLANK: 4604421 Matrix: Water

Associated Lab Samples: 92761329021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.6	11/14/24 18:08	
Arsenic	ug/L	ND	10.0	2.5	11/14/24 18:08	
Barium	ug/L	ND	5.0	0.79	11/14/24 18:08	
Beryllium	ug/L	ND	1.0	0.16	11/14/24 18:08	
Cadmium	ug/L	ND	1.0	0.29	11/14/24 18:08	
Calcium	ug/L	ND	100	14.7	11/14/24 18:08	
Chromium	ug/L	ND	5.0	0.63	11/14/24 18:08	
Cobalt	ug/L	ND	5.0	0.44	11/14/24 18:08	
Copper	ug/L	ND	5.0	0.62	11/14/24 18:08	
Lead	ug/L	ND	5.0	1.4	11/14/24 18:08	
Molybdenum	ug/L	ND	5.0	2.6	11/14/24 18:08	
Nickel	ug/L	ND	5.0	0.88	11/14/24 18:08	
Selenium	ug/L	ND	10.0	4.1	11/14/24 18:08	
Silver	ug/L	ND	5.0	0.49	11/14/24 18:08	
Vanadium	ug/L	ND	5.0	1.6	11/14/24 18:08	
Zinc	ug/L	ND	10.0	3.0	11/14/24 18:08	

LABORATORY CONTROL SAMPLE: 4604422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	483	97	80-120	
Arsenic	ug/L	500	486	97	80-120	
Barium	ug/L	500	530	106	80-120	
Beryllium	ug/L	500	484	97	80-120	
Cadmium	ug/L	500	484	97	80-120	
Calcium	ug/L	5000	5260	105	80-120	
Chromium	ug/L	500	486	97	80-120	
Cobalt	ug/L	500	488	98	80-120	
Copper	ug/L	500	496	99	80-120	
Lead	ug/L	500	485	97	80-120	
Molybdenum	ug/L	500	489	98	80-120	
Nickel	ug/L	500	484	97	80-120	
Selenium	ug/L	500	471	94	80-120	
Silver	ug/L	250	245	98	80-120	
Vanadium	ug/L	500	489	98	80-120	
Zinc	ug/L	500	479	96	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4604423 4604424

Parameter	Units	92762207001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<5.0	500	500	514	513	103	103	75-125	0	20	
Arsenic	ug/L	<10.0	500	500	511	512	102	102	75-125	0	20	
Barium	ug/L	13.4	500	500	552	535	108	104	75-125	3	20	
Beryllium	ug/L	0.16J	500	500	511	512	102	102	75-125	0	20	
Cadmium	ug/L	<1.0	500	500	501	500	100	100	75-125	0	20	
Calcium	ug/L	26100	5000	5000	31400	31500	106	106	75-125	0	20	
Chromium	ug/L	0.88J	500	500	501	502	100	100	75-125	0	20	
Cobalt	ug/L	<5.0	500	500	493	494	99	99	75-125	0	20	
Copper	ug/L	<5.0	500	500	506	508	101	101	75-125	0	20	
Lead	ug/L	<5.0	500	500	496	496	99	99	75-125	0	20	
Molybdenum	ug/L	<5.0	500	500	505	506	101	101	75-125	0	20	
Nickel	ug/L	0.94J	500	500	489	490	98	98	75-125	0	20	
Selenium	ug/L	<10.0	500	500	524	522	104	104	75-125	0	20	
Silver	ug/L	<5.0	250	250	255	256	102	103	75-125	0	20	
Vanadium	ug/L	3.1J	500	500	508	509	101	101	75-125	0	20	
Zinc	ug/L	<10.0	500	500	496	497	99	99	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 894371
QC Batch Method: EPA 3010A
Analysis Method: EPA 6010D
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020

METHOD BLANK: 4604430
Matrix: Water
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	ug/L	ND	5.0	3.6	11/18/24 18:34	
Arsenic	ug/L	ND	10.0	2.5	11/18/24 18:34	
Barium	ug/L	ND	5.0	0.79	11/18/24 18:34	
Beryllium	ug/L	ND	1.0	0.16	11/18/24 18:34	
Cadmium	ug/L	ND	1.0	0.29	11/18/24 18:34	
Calcium	ug/L	ND	100	14.7	11/18/24 18:34	
Chromium	ug/L	ND	5.0	0.63	11/18/24 18:34	
Cobalt	ug/L	ND	5.0	0.44	11/18/24 18:34	
Copper	ug/L	ND	5.0	0.62	11/18/24 18:34	
Lead	ug/L	ND	5.0	1.4	11/18/24 18:34	
Molybdenum	ug/L	ND	5.0	2.6	11/18/24 18:34	
Nickel	ug/L	ND	5.0	0.88	11/18/24 18:34	
Selenium	ug/L	ND	10.0	4.1	11/18/24 18:34	
Silver	ug/L	ND	5.0	0.49	11/18/24 18:34	
Vanadium	ug/L	ND	5.0	1.6	11/18/24 18:34	
Zinc	ug/L	ND	10.0	3.0	11/18/24 18:34	

LABORATORY CONTROL SAMPLE: 4604431

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	509	102	80-120	
Arsenic	ug/L	500	513	103	80-120	
Barium	ug/L	500	486	97	80-120	
Beryllium	ug/L	500	510	102	80-120	
Cadmium	ug/L	500	507	101	80-120	
Calcium	ug/L	5000	4800	96	80-120	
Chromium	ug/L	500	504	101	80-120	
Cobalt	ug/L	500	502	100	80-120	
Copper	ug/L	500	498	100	80-120	
Lead	ug/L	500	502	100	80-120	
Molybdenum	ug/L	500	505	101	80-120	
Nickel	ug/L	500	504	101	80-120	
Selenium	ug/L	500	504	101	80-120	
Silver	ug/L	250	245	98	80-120	
Vanadium	ug/L	500	502	100	80-120	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

LABORATORY CONTROL SAMPLE: 4604431

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Zinc	ug/L	500	508	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4604432 4604433

Parameter	Units	92761329001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	500	500	556	555	111	111	75-125	0	20	
Arsenic	ug/L	ND	500	500	553	551	110	110	75-125	0	20	
Barium	ug/L	298	500	500	829	826	106	106	75-125	0	20	
Beryllium	ug/L	ND	500	500	553	550	111	110	75-125	0	20	
Cadmium	ug/L	ND	500	500	534	533	107	107	75-125	0	20	
Calcium	ug/L	24500	5000	5000	29700	29500	103	100	75-125	1	20	
Chromium	ug/L	0.65J	500	500	534	532	107	106	75-125	0	20	
Cobalt	ug/L	ND	500	500	537	532	107	106	75-125	1	20	
Copper	ug/L	0.82J	500	500	565	564	113	113	75-125	0	20	
Lead	ug/L	ND	500	500	526	526	104	104	75-125	0	20	
Molybdenum	ug/L	ND	500	500	537	535	107	107	75-125	0	20	
Nickel	ug/L	ND	500	500	535	533	107	106	75-125	0	20	
Selenium	ug/L	ND	500	500	561	552	112	110	75-125	2	20	
Silver	ug/L	ND	250	250	257	258	103	103	75-125	0	20	
Vanadium	ug/L	5.9	500	500	547	544	108	108	75-125	1	20	
Zinc	ug/L	ND	500	500	546	544	109	108	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 893619
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016

METHOD BLANK: 4600258 Matrix: Water
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	50.0	7.5	11/14/24 15:17	
Lithium	ug/L	ND	2.5	0.33	11/13/24 21:09	
Thallium	ug/L	ND	0.20	0.028	11/13/24 21:09	

LABORATORY CONTROL SAMPLE: 4600259

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	50	55.9	112	80-120	
Lithium	ug/L	50	54.6	109	80-120	
Thallium	ug/L	25	25.7	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4600260 4600261

Parameter	Units	92759556038 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	ND	50	50	75.5J	77.8J	117	121	75-125		20	
Lithium	ug/L	303	50	50	362	362	119	118	75-125	0	20	
Thallium	ug/L	ND	25	25	26.8	26.7	107	106	75-125	0	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 894362
QC Batch Method: EPA 3010A
Analysis Method: EPA 6020B
Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

METHOD BLANK: 4604359 Matrix: Water
Associated Lab Samples: 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Boron	ug/L	ND	50.0	7.5	11/12/24 13:45	
Lithium	ug/L	ND	2.5	0.33	11/12/24 02:27	
Thallium	ug/L	ND	0.20	0.028	11/12/24 02:27	

LABORATORY CONTROL SAMPLE: 4604360

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	50	53.1	106	80-120	
Lithium	ug/L	50	48.1	96	80-120	
Thallium	ug/L	25	26.2	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4604361 4604362

Parameter	Units	92762268001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	13.7J	50	50	66.0	66.9	105	106	75-125	1	20	
Lithium	ug/L	1.7J	50	50	49.2	49.7	95	96	75-125	1	20	
Thallium	ug/L	0.073J	25	25	25.9	26.8	103	107	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 893317 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329006, 92761329011, 92761329012, 92761329013, 92761329014, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

METHOD BLANK: 4598941 Matrix: Water
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329006, 92761329011, 92761329012, 92761329013, 92761329014, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	11/03/24 12:21	

LABORATORY CONTROL SAMPLE: 4598942

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	248	99	90-110	

SAMPLE DUPLICATE: 4598970

Parameter	Units	92761329002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1270	1380	8	25	

SAMPLE DUPLICATE: 4598971

Parameter	Units	92761329018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	322	325	1	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 893318 | Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 | Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329004, 92761329005, 92761329007, 92761329008, 92761329009, 92761329010, 92761329015

METHOD BLANK: 4598943 Matrix: Water
Associated Lab Samples: 92761329004, 92761329005, 92761329007, 92761329008, 92761329009, 92761329010, 92761329015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	2.5	2.5	11/03/24 12:14	

LABORATORY CONTROL SAMPLE: 4598944

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	246	98	90-110	

SAMPLE DUPLICATE: 4598945

Parameter	Units	92760506006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1060	1010	5	25	

SAMPLE DUPLICATE: 4598946

Parameter	Units	92760506016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1040	1020	2	25	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 893255
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329011

METHOD BLANK: 4598755 Matrix: Water
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	11/02/24 12:17	
Fluoride	mg/L	ND	0.10	0.050	11/02/24 12:17	
Sulfate	mg/L	ND	1.0	0.50	11/02/24 12:17	

LABORATORY CONTROL SAMPLE: 4598756

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.8	104	90-110	
Fluoride	mg/L	2.5	2.6	106	90-110	
Sulfate	mg/L	50	52.1	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4598757 4598758

Parameter	Units	92761131001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	57.7	50	50	92.2	93.1	69	71	90-110	1	10	M1
Fluoride	mg/L	ND	2.5	2.5	2.9	2.9	112	113	90-110	1	10	M1
Sulfate	mg/L	1.1	50	50	51.6	52.1	101	102	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4598759 4598760

Parameter	Units	92761329002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	273	50	50	300	301	55	57	90-110	0	10	M1
Fluoride	mg/L	0.41	2.5	2.5	3.1	3.1	107	108	90-110	1	10	
Sulfate	mg/L	202	50	50	232	232	60	61	90-110	0	10	M1

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 893256
QC Batch Method: EPA 300.0 Rev 2.1 1993
Analysis Method: EPA 300.0 Rev 2.1 1993
Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92761329010, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

METHOD BLANK: 4598761 Matrix: Water
Associated Lab Samples: 92761329010, 92761329012, 92761329013, 92761329014, 92761329015, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	11/02/24 19:58	
Fluoride	mg/L	ND	0.10	0.050	11/02/24 19:58	
Sulfate	mg/L	ND	1.0	0.50	11/02/24 19:58	

LABORATORY CONTROL SAMPLE: 4598762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.4	105	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	52.5	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4598763 4598764

Parameter	Units	92761329010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	315	50	50	343	350	55	69	90-110	2	10	M1
Fluoride	mg/L	0.50	2.5	2.5	3.4	3.4	115	115	90-110	0	10	M1
Sulfate	mg/L	10.7	50	50	62.8	63.2	104	105	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4598765 4598766

Parameter	Units	92761329021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	6.5	50	50	58.4	57.2	104	101	90-110	2	10	
Fluoride	mg/L	0.30	2.5	2.5	3.0	2.9	107	103	90-110	3	10	
Sulfate	mg/L	1.2	50	50	52.5	51.3	103	100	90-110	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: BG-1 **Lab ID: 92761329001** Collected: 10/29/24 11:15 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.703 ± 0.580 (1.36) C:NA T:90%**	pCi/L	11/20/24 14:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.299 ± 0.262 (0.523) C:84% T:88%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.299 ± 0.842 (1.88)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: BG-2 **Lab ID: 92761329002** Collected: 10/28/24 14:25 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.591 ± 0.827 (1.40) C:NA T:86%**	pCi/L	11/20/24 14:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.742 ± 0.337 (0.535) C:82% T:87%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.33 ± 1.16 (1.94)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: DUP **Lab ID: 92761329003** Collected: 10/30/24 00:01 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.528 ± 0.800 (1.37) C:NA T:91%**	pCi/L	11/20/24 14:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.310 ± 0.295 (0.601) C:81% T:87%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.838 ± 1.10 (1.97)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: EQBL **Lab ID: 92761329004** Collected: 10/31/24 16:25 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.127 ± 0.658 (1.31) C:NA T:87%**	pCi/L	11/20/24 14:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.937 ± 0.452 (0.789) C:80% T:85%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.937 ± 1.11 (2.10)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: LEACHATE **Lab ID: 92761329005** Collected: 10/31/24 11:25 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.125 ± 0.651 (1.22) C:NA T:86%**	pCi/L	11/20/24 14:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.523 ± 0.387 (0.758) C:83% T:86%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.648 ± 1.04 (1.98)**	pCi/L	11/21/24 14:58	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-1 **Lab ID: 92761329006** Collected: 10/30/24 18:15 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0630 ± 0.409 (0.825) C:NA T:88%**	pCi/L	11/20/24 14:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.477 ± 0.391 (0.793) C:84% T:91%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.540 ± 0.800 (1.62)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-2 **Lab ID: 92761329007** Collected: 10/31/24 15:20 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.484 ± 0.806 (1.39) C:NA T:86%**	pCi/L	11/20/24 14:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.843 ± 0.410 (0.709) C:84% T:83%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.33 ± 1.22 (2.10)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-2D **Lab ID: 92761329008** Collected: 10/31/24 14:35 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**-0.748 ± 0.778 (1.98) C:NA T:84%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.562 ± 0.399 (0.761) C:80% T:83%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.562 ± 1.18 (2.74)**	pCi/L	11/21/24 14:58	7440-14-4	

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-3 **Lab ID: 92761329009** Collected: 10/31/24 11:50 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.668 ± 0.524 (0.729) C:NA T:89%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.61 ± 0.510 (0.624) C:74% T:87%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**2.28 ± 1.03 (1.35)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-4 **Lab ID: 92761329010** Collected: 10/31/24 10:25 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.233 ± 0.396 (0.699) C:NA T:92%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.0941 ± 0.319 (0.721) C:81% T:83%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**0.327 ± 0.715 (1.42)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-5 **Lab ID: 92761329011** Collected: 10/28/24 16:55 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.574 ± 0.507 (0.752) C:NA T:90%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.658 ± 0.355 (0.629) C:78% T:90%**	pCi/L	11/18/24 11:42	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.23 ± 0.862 (1.38)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-6 **Lab ID: 92761329012** Collected: 10/30/24 12:20 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.169 ± 0.552 (1.02) C:NA T:91%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.07 ± 0.506 (0.894) C:82% T:83%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.24 ± 1.06 (1.91)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-7R **Lab ID: 92761329013** Collected: 10/30/24 09:30 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.0614 ± 0.577 (1.11) C:NA T:95%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.958 ± 0.433 (0.736) C:81% T:92%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.02 ± 1.01 (1.85)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-8 **Lab ID: 92761329014** Collected: 10/30/24 15:35 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.219 ± 0.645 (1.17) C:NA T:95%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.00 ± 0.484 (0.853) C:75% T:92%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.22 ± 1.13 (2.02)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-10 **Lab ID: 92761329016** Collected: 10/29/24 17:00 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.316 ± 0.758 (1.34) C:NA T:96%**	pCi/L	11/20/24 14:50	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.711 ± 0.445 (0.846) C:83% T:87%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.03 ± 1.20 (2.19)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-11 **Lab ID: 92761329017** Collected: 10/29/24 15:25 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.351 ± 0.431 (0.702) C:NA T:89%**	pCi/L	11/20/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**1.08 ± 0.443 (0.698) C:79% T:89%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.43 ± 0.874 (1.40)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: MW-11D **Lab ID: 92761329018** Collected: 10/29/24 12:50 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.692 ± 0.596 (0.887) C:NA T:88%**	pCi/L	11/20/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.655 ± 0.374 (0.678) C:79% T:86%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.35 ± 0.970 (1.57)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: SW-1 **Lab ID: 92761329019** Collected: 10/29/24 09:15 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.744 ± 0.806 (1.32) C:NA T:90%**	pCi/L	11/20/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.953 ± 0.420 (0.695) C:78% T:89%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.70 ± 1.23 (2.02)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: SW-5 **Lab ID: 92761329020** Collected: 10/29/24 11:35 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.364 ± 0.584 (1.01) C:NA T:93%**	pCi/L	11/20/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**0.940 ± 0.452 (0.785) C:78% T:85%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**1.30 ± 1.04 (1.80)**	pCi/L	11/21/24 14:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Sample: SW-6 **Lab ID: 92761329021** Collected: 10/29/24 11:15 Received: 11/01/24 10:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 903.1	**0.995 ± 0.761 (1.14) C:NA T:91%**	pCi/L	11/20/24 15:06	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 904.0	**2.03 ± 0.613 (0.764) C:77% T:89%**	pCi/L	11/18/24 11:43	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	**3.03 ± 1.37 (1.90)**	pCi/L	11/21/24 14:59	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 707404
QC Batch Method: EPA 903.1
Analysis Method: EPA 903.1
Analysis Description: 903.1 Radium-226
Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

METHOD BLANK: 3443701
Matrix: Water
Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.143 ± 0.280 (0.511) C:NA T:89%	pCi/L	11/20/24 14:38	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL - RADIOCHEMISTRY

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

QC Batch: 707405 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

METHOD BLANK: 3443702 Matrix: Water

Associated Lab Samples: 92761329001, 92761329002, 92761329003, 92761329004, 92761329005, 92761329006, 92761329007, 92761329008, 92761329009, 92761329010, 92761329011, 92761329012, 92761329013, 92761329014, 92761329016, 92761329017, 92761329018, 92761329019, 92761329020, 92761329021

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.621 ± 0.335 (0.587) C:81% T:86%	pCi/L	11/18/24 11:42	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALIFIERS

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

1g	Constant weight could not be achieved for this sample after 4 drying cycles. The final weight change was 0.0168 g.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92761329001	**BG-1**	EPA 3010A	894371	EPA 6010D	894494
92761329002	**BG-2**	EPA 3010A	894371	EPA 6010D	894494
92761329003	**DUP**	EPA 3010A	894371	EPA 6010D	894494
92761329004	**EQBL**	EPA 3010A	894371	EPA 6010D	894494
92761329005	**LEACHATE**	EPA 3010A	894371	EPA 6010D	894494
92761329006	**MW-1**	EPA 3010A	894371	EPA 6010D	894494
92761329007	**MW-2**	EPA 3010A	894371	EPA 6010D	894494
92761329008	**MW-2D**	EPA 3010A	894371	EPA 6010D	894494
92761329009	**MW-3**	EPA 3010A	894371	EPA 6010D	894494
92761329010	**MW-4**	EPA 3010A	894371	EPA 6010D	894494
92761329011	**MW-5**	EPA 3010A	894371	EPA 6010D	894494
92761329012	**MW-6**	EPA 3010A	894371	EPA 6010D	894494
92761329013	**MW-7R**	EPA 3010A	894371	EPA 6010D	894494
92761329014	**MW-8**	EPA 3010A	894371	EPA 6010D	894494
92761329015	**MW-9**	EPA 3010A	894371	EPA 6010D	894494
92761329016	**MW-10**	EPA 3010A	894371	EPA 6010D	894494
92761329017	**MW-11**	EPA 3010A	894371	EPA 6010D	894494
92761329018	**MW-11D**	EPA 3010A	894371	EPA 6010D	894494
92761329019	**SW-1**	EPA 3010A	894371	EPA 6010D	894494
92761329020	**SW-5**	EPA 3010A	894371	EPA 6010D	894494
92761329021	**SW-6**	EPA 3010A	894370	EPA 6010D	894493
92761329001	**BG-1**	EPA 3010A	893619	EPA 6020B	893720
92761329002	**BG-2**	EPA 3010A	893619	EPA 6020B	893720
92761329003	**DUP**	EPA 3010A	893619	EPA 6020B	893720
92761329004	**EQBL**	EPA 3010A	893619	EPA 6020B	893720
92761329005	**LEACHATE**	EPA 3010A	893619	EPA 6020B	893720
92761329006	**MW-1**	EPA 3010A	893619	EPA 6020B	893720
92761329007	**MW-2**	EPA 3010A	893619	EPA 6020B	893720
92761329008	**MW-2D**	EPA 3010A	893619	EPA 6020B	893720
92761329009	**MW-3**	EPA 3010A	893619	EPA 6020B	893720
92761329010	**MW-4**	EPA 3010A	893619	EPA 6020B	893720
92761329011	**MW-5**	EPA 3010A	893619	EPA 6020B	893720
92761329012	**MW-6**	EPA 3010A	893619	EPA 6020B	893720
92761329013	**MW-7R**	EPA 3010A	893619	EPA 6020B	893720
92761329014	**MW-8**	EPA 3010A	893619	EPA 6020B	893720
92761329015	**MW-9**	EPA 3010A	893619	EPA 6020B	893720
92761329016	**MW-10**	EPA 3010A	893619	EPA 6020B	893720
92761329017	**MW-11**	EPA 3010A	894362	EPA 6020B	894496
92761329018	**MW-11D**	EPA 3010A	894362	EPA 6020B	894496
92761329019	**SW-1**	EPA 3010A	894362	EPA 6020B	894496
92761329020	**SW-5**	EPA 3010A	894362	EPA 6020B	894496
92761329021	**SW-6**	EPA 3010A	894362	EPA 6020B	894496
92761329001	**BG-1**	EPA 7470A	894903	EPA 7470A	894931
92761329002	**BG-2**	EPA 7470A	895325	EPA 7470A	895930
92761329003	**DUP**	EPA 7470A	895325	EPA 7470A	895930
92761329004	**EQBL**	EPA 7470A	895325	EPA 7470A	895930

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92761329005	**LEACHATE**	EPA 7470A	895325	EPA 7470A	895930
92761329006	**MW-1**	EPA 7470A	895325	EPA 7470A	895930
92761329007	**MW-2**	EPA 7470A	895325	EPA 7470A	895930
92761329008	**MW-2D**	EPA 7470A	895325	EPA 7470A	895930
92761329009	**MW-3**	EPA 7470A	895325	EPA 7470A	895930
92761329010	**MW-4**	EPA 7470A	895325	EPA 7470A	895930
92761329011	**MW-5**	EPA 7470A	895325	EPA 7470A	895930
92761329012	**MW-6**	EPA 7470A	895325	EPA 7470A	895930
92761329013	**MW-7R**	EPA 7470A	895325	EPA 7470A	895930
92761329014	**MW-8**	EPA 7470A	895325	EPA 7470A	895930
92761329015	**MW-9**	EPA 7470A	895325	EPA 7470A	895930
92761329016	**MW-10**	EPA 7470A	895325	EPA 7470A	895930
92761329017	**MW-11**	EPA 7470A	895325	EPA 7470A	895930
92761329018	**MW-11D**	EPA 7470A	895325	EPA 7470A	895930
92761329019	**SW-1**	EPA 7470A	895325	EPA 7470A	895930
92761329020	**SW-5**	EPA 7470A	895325	EPA 7470A	895930
92761329021	**SW-6**	EPA 7470A	895325	EPA 7470A	895930
92761329001	**BG-1**	EPA 903.1	707404		
92761329002	**BG-2**	EPA 903.1	707404		
92761329003	**DUP**	EPA 903.1	707404		
92761329004	**EQBL**	EPA 903.1	707404		
92761329005	**LEACHATE**	EPA 903.1	707404		
92761329006	**MW-1**	EPA 903.1	707404		
92761329007	**MW-2**	EPA 903.1	707404		
92761329008	**MW-2D**	EPA 903.1	707404		
92761329009	**MW-3**	EPA 903.1	707404		
92761329010	**MW-4**	EPA 903.1	707404		
92761329011	**MW-5**	EPA 903.1	707404		
92761329012	**MW-6**	EPA 903.1	707404		
92761329013	**MW-7R**	EPA 903.1	707404		
92761329014	**MW-8**	EPA 903.1	707404		
92761329016	**MW-10**	EPA 903.1	707404		
92761329017	**MW-11**	EPA 903.1	707404		
92761329018	**MW-11D**	EPA 903.1	707404		
92761329019	**SW-1**	EPA 903.1	707404		
92761329020	**SW-5**	EPA 903.1	707404		
92761329021	**SW-6**	EPA 903.1	707404		
92761329001	**BG-1**	EPA 904.0	707405		
92761329002	**BG-2**	EPA 904.0	707405		
92761329003	**DUP**	EPA 904.0	707405		
92761329004	**EQBL**	EPA 904.0	707405		
92761329005	**LEACHATE**	EPA 904.0	707405		
92761329006	**MW-1**	EPA 904.0	707405		
92761329007	**MW-2**	EPA 904.0	707405		
92761329008	**MW-2D**	EPA 904.0	707405		
92761329009	**MW-3**	EPA 904.0	707405		
92761329010	**MW-4**	EPA 904.0	707405		
92761329011	**MW-5**	EPA 904.0	707405		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92761329012	**MW-6**	EPA 904.0	707405		
92761329013	**MW-7R**	EPA 904.0	707405		
92761329014	**MW-8**	EPA 904.0	707405		
92761329016	**MW-10**	EPA 904.0	707405		
92761329017	**MW-11**	EPA 904.0	707405		
92761329018	**MW-11D**	EPA 904.0	707405		
92761329019	**SW-1**	EPA 904.0	707405		
92761329020	**SW-5**	EPA 904.0	707405		
92761329021	**SW-6**	EPA 904.0	707405		
92761329001	**BG-1**	Total Radium Calculation	711220		
92761329002	**BG-2**	Total Radium Calculation	711220		
92761329003	**DUP**	Total Radium Calculation	711220		
92761329004	**EQBL**	Total Radium Calculation	711220		
92761329005	**LEACHATE**	Total Radium Calculation	711220		
92761329006	**MW-1**	Total Radium Calculation	711220		
92761329007	**MW-2**	Total Radium Calculation	711220		
92761329008	**MW-2D**	Total Radium Calculation	711220		
92761329009	**MW-3**	Total Radium Calculation	711220		
92761329010	**MW-4**	Total Radium Calculation	711220		
92761329011	**MW-5**	Total Radium Calculation	711220		
92761329012	**MW-6**	Total Radium Calculation	711220		
92761329013	**MW-7R**	Total Radium Calculation	711220		
92761329014	**MW-8**	Total Radium Calculation	711220		
92761329016	**MW-10**	Total Radium Calculation	711220		
92761329017	**MW-11**	Total Radium Calculation	711220		
92761329018	**MW-11D**	Total Radium Calculation	711220		
92761329019	**SW-1**	Total Radium Calculation	711220		
92761329020	**SW-5**	Total Radium Calculation	711220		
92761329021	**SW-6**	Total Radium Calculation	711220		
92761329001	**BG-1**	SM 2540C-2015	893317		
92761329002	**BG-2**	SM 2540C-2015	893317		
92761329003	**DUP**	SM 2540C-2015	893317		
92761329004	**EQBL**	SM 2540C-2015	893318		
92761329005	**LEACHATE**	SM 2540C-2015	893318		
92761329006	**MW-1**	SM 2540C-2015	893317		
92761329007	**MW-2**	SM 2540C-2015	893318		
92761329008	**MW-2D**	SM 2540C-2015	893318		
92761329009	**MW-3**	SM 2540C-2015	893318		
92761329010	**MW-4**	SM 2540C-2015	893318		
92761329011	**MW-5**	SM 2540C-2015	893317		
92761329012	**MW-6**	SM 2540C-2015	893317		
92761329013	**MW-7R**	SM 2540C-2015	893317		
92761329014	**MW-8**	SM 2540C-2015	893317		
92761329015	**MW-9**	SM 2540C-2015	893318		
92761329016	**MW-10**	SM 2540C-2015	893317		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace Analytical Services, LLC
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Charah 4th Quarter GW Monitori
Pace Project No.: 92761329

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92761329017	**MW-11**	SM 2540C-2015	893317		
92761329018	**MW-11D**	SM 2540C-2015	893317		
92761329019	**SW-1**	SM 2540C-2015	893317		
92761329020	**SW-5**	SM 2540C-2015	893317		
92761329021	**SW-6**	SM 2540C-2015	893317		
92761329001	**BG-1**	EPA 300.0 Rev 2.1 1993	893255		
92761329002	**BG-2**	EPA 300.0 Rev 2.1 1993	893255		
92761329003	**DUP**	EPA 300.0 Rev 2.1 1993	893255		
92761329004	**EQBL**	EPA 300.0 Rev 2.1 1993	893255		
92761329005	**LEACHATE**	EPA 300.0 Rev 2.1 1993	893255		
92761329006	**MW-1**	EPA 300.0 Rev 2.1 1993	893255		
92761329007	**MW-2**	EPA 300.0 Rev 2.1 1993	893255		
92761329008	**MW-2D**	EPA 300.0 Rev 2.1 1993	893255		
92761329009	**MW-3**	EPA 300.0 Rev 2.1 1993	893255		
92761329010	**MW-4**	EPA 300.0 Rev 2.1 1993	893256		
92761329011	**MW-5**	EPA 300.0 Rev 2.1 1993	893255		
92761329012	**MW-6**	EPA 300.0 Rev 2.1 1993	893256		
92761329013	**MW-7R**	EPA 300.0 Rev 2.1 1993	893256		
92761329014	**MW-8**	EPA 300.0 Rev 2.1 1993	893256		
92761329015	**MW-9**	EPA 300.0 Rev 2.1 1993	893256		
92761329016	**MW-10**	EPA 300.0 Rev 2.1 1993	893256		
92761329017	**MW-11**	EPA 300.0 Rev 2.1 1993	893256		
92761329018	**MW-11D**	EPA 300.0 Rev 2.1 1993	893256		
92761329019	**SW-1**	EPA 300.0 Rev 2.1 1993	893256		
92761329020	**SW-5**	EPA 300.0 Rev 2.1 1993	893256		
92761329021	**SW-6**	EPA 300.0 Rev 2.1 1993	893256		

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Pace	DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt
	Effective Date: 05/24/2024

Laboratory receiving samples:

Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Sample Condition Upon Receipt

Client Name: HOR

Project #: WO# : 92761329

92761329

Courier: ☐ Commercial ☐ Fed Ex ☐ Pace ☐ UPS ☐ USPS ☐ Other:____ ☑ Client

Custody Seal Present? ☐ Yes ☑ No Seals Intact? ☐ Yes ☐ No ☑ N/A

Date/Initials Person Examining Contents: CAMS 11/1/24

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☑ Other

Biological Tissue Frozen? ☐ Yes ☐ No ☑ N/A

Thermometer: ☑ IR Gun ID: 92708Z

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: 3.8, 1.7, 1.3, 0.9, 2.2 Correction Factor: Add/Subtract (°C) 0

Cooler Temp Corrected (°C): 3.8, 1.7, 1.3, 0.9, 2.2

Temp should be above freezing to 6°C

☐ Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

				Comments/Discrepancy:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	2.
Short Hold Time Analysis (<72 hr.)?	☐ Yes	☑ No	☐ N/A	3.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	4.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	5.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	6.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	7.
Dissolved analysis: Samples Field Filtered?	☐ Yes	☐ No	☑ N/A	8.
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WT				
Headspace in VOA Vials (>5-6mm)?	☐ Yes	☐ No	☑ N/A	10.
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	11.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? ☐ Yes ☐ No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # WO#: 92761329
PM: AMB Due Date: 11/26/24
CLIENT: 92-HDR

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☑ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client_____ Profile/EZ (Circle one)_____ Notes_____

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP1N	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC																														
1		1	1		2		1																							
2		1	1		2		1																							
3		1	1		2		1																							
4		1	1		2		1																							
5		1	1		2		1																							
6		1	1		2		1																							
7		1	1		2		1																							
8		1	1		1		1																							
9		1	1		2		1																							
10		1	1		2		1																							
11																														
12																														

BU-1
MW-20
MW-4

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace	DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt
	Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # 92761329

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client_____ Profile/EZ (Circle one)_____ Notes_____

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4N	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC																														
1 MW-5		1	1		2		1																							
2		1	1		2		1																							
3		1	1		2		1																							
4		1	1		2		1																							
5 MW-4		1	1				1																							
6		1	1		2		1																							
7		1	1		2		1																							
8		1	1		2		1																							
9 SW-1		1	1		2		1																							
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace	DC#_Title: ENV-FRM-HUN1-0083 v05_Sample Condition Upon Receipt
	Effective Date: 05/24/2024

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg
**Bottom half of box is to list number of bottles
***Check all unpreserved Nitrates for chlorine

Project # 92741329

3

Laboratory Receiving Location: Asheville ☐ Eden ☐ Greenwood ☐ Huntersville ☐ Raleigh ☐ Mechanicsville ☐ Atlanta ☐ Kernersville ☐

Client_____ Profile/EZ (Circle one)_____ Notes_____

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4N	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-40 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	KP7U-50 mL Plastic Unpreserved (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A – lab)	SP2T-250 mL Sterile Plastic (N/A – lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)
CC																														
1																														
2																														
3		1	1		2		1		Orig 11/13																					
4		1	1		2		1																							
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR Engineering	Contact/Report To:	Mark Filardi
Street Address:	440 S. Church St Suite 900 Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	mark.filardi@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Charah 4th Quarter GW Monitoring	Invoice To:	Accounts Payable
		Invoice E-Mail:	saaccounting@hdrinc.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	10393250, Task 002
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): North Carolina

Data Deliverables: [ ] Level II [ ] Level III [ ] Level IV [ ] EQUIS [ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required): [ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested: Standard TAT

Field Filtered (if applicable): [ ] Yes [X] No

Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2540C Total Dissolved Solids	300.0 IC Anions 28 Days	6010; 6020; 7470 Metals	RAD 226/228, Total RAD	Sample Comment
BG-1	WT	G	10/29/24	1115			5			X	X	X	X	92761329 001
BG-2	WT	G	10/28/24	1425			5			X	X	X	X	002
DUP	WT	G	10/30/24				5			X	X	X	X	003
EQBL	WT	G	10/31/24	1625			5			X	X	X	X	004
LEACHATE	WT	G	10/31/24	1125			5			X	X	X	X	005
MW-1	WT	G	10/30/24	1815			5			X	X	X	X	006
MW-2	WT	G	10/31/24	1520			5			X	X	X	X	007
MW-2D	WT	G	10/31/24	1435			4			X	X	X	X	-Well went dry, couldn't sample 2 Rad bottles 008
MW-3	WT	G	10/31/24	1150			5			X	X	X	X	009
MW-4	WT	G	10/31/24	1025			5			X	X	X	X	010

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Angela Baioni**

AcctNum / Client ID:

Table #:

Profile / Template: **7672**

Prelog / Bottle Ord. ID: **EZ 3161993**

Preservation non-conformance identified for sample.

Additional Instructions from Pace®:
300.0-Cl, Fl, SO4
6010 metals-Ca, Sb, As, Ba, Be4, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn
6020 metals-B, Li, Tl

Collected By: (Printed Name) Z, Hector

Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:
	925042	0	3.8, 2.7, 3.3, 0.9, 2.2		

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
HDR	11/1/24@1020	HJB Pace HVL	11/1/24 1020	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 1 of 3

Page 84 of 86

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR Engineering	Contact/Report To:	Mark Filardi
Street Address:	440 S. Church St Suite 900 Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	mark.filardi@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Charah 4th Quarter GW Monitoring	Invoice To:	Accounts Payable
		Invoice E-Mail:	saaccounting@hdrinc.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	10393250, Task 002
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): North Carolina

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested: Standard TAT

Field Filtered (if applicable): [ ] Yes [X] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only
Proj. Mgr: **Angela Baioni**
AcctNum / Client ID:
Table #:
Profile / Template: **7672**
Prelog / Bottle Ord. ID: **EZ 3161993**

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2540C Total Dissolved Solids	300.0 IC Anions 28 Days	6010; 6020; 7470 Metals	RAD 226/228, Total RAD	Sample Comment	Preservation non-conformance identified for sample.
MW-5	WT	G	10/28/24	1655			5			X	X	X	X	92761329 011	
MW-6	WT	G	10/30/24	1220			5			X	X	X	X	012	
MW-7R	WT	G	10/30/24	0930			5			X	X	X	X	013	
MW-8	WT	G	10/30/24	1535			5			X	X	X	~~X~~	014	
MW-9	WT	G	10/31/24	1530			3			X	X	X	~~X~~	015	
MW-10	WT	G	10/29/24	1700			5			X	X	X	X	016	
MW-11	WT	G	10/29/24	1525			5			X	X	X	X	017	
MW-11D	WT	G	10/29/24	1250			5			X	X	X	X	018	
SW-1	WT	G	10/29/24	0915			5			X	X	X	X	019	
~~SW-2~~	WT									X	X	X	X	020	

Additional Instructions from Pace®:
300.0-Cl, Fl, SO4
6010 metals-Ca, Sb, As, Ba, Be4, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn
6020 metals-B, Li, Tl

Collected By: (Printed Name) Z, Hector
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Tracking Number:
HDR	11/1/24 @ 1020	HJB Pace ~~Face~~ HVL	11/1/24 1020	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In- Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 2 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

Pace® Location Requested (City/State):
Pace Analytical Charlotte
9800 Kincey Ave. Suite 100, Huntersville, NC 28078

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevant fields

LAB USE ONLY- Affix Workorder/Login Label Here

Scan QR Code for instructions

Company Name:	HDR Engineering	Contact/Report To:	Mark Filardi
Street Address:	440 S. Church St Suite 900 Charlotte, NC 28202	Phone #:	(704)338-6787
		E-Mail:	mark.filardi@hdrinc.com
		Cc E-Mail:	
Customer Project #:			
Project Name:	Charah 4th Quarter GW Monitoring	Invoice To:	Accounts Payable
		Invoice E-Mail:	saaccounting@hdrinc.com
Site Collection Info/Facility ID (as applicable):		Purchase Order # (if applicable):	10393250, Task 002
		Quote #:	

Time Zone Collected: [ ] AK [ ] PT [ ] MT [ ] CT [X] ET

County / State origin of sample(s): North Carolina

Data Deliverables:
[ ] Level II [ ] Level III [ ] Level IV
[ ] EQUIS
[ ] Other

Regulatory Program (DW, RCRA, etc.) as applicable: Reportable [ ] Yes [ ] No

Rush (Pre-approval required):
[ ] Same Day [ ] 1 Day [ ] 2 Day [ ] 3 Day [ ] Other _____

DW PWSID # or WW Permit # as applicable:

Date Results Requested: Standard TAT

Field Filtered (if applicable): [ ] Yes [X] No
Analysis:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Waste Water (WW), Product (P), Soil/Solid (SS), Oil (OL), Wipe (WP), Tissue (TS), Bioassay (B), Vapor (V), Surface Water (SW),Sediment (SED), Sludge (SL), Caulk (CK), Leachate (LL), Biosolid (BS), Other (OT)

Specify Container Size **

Identify Container Preservative Type***

Analysis Requested

**Container Size: (1) 1L, (2) 500mL, (3) 250mL, (4) 125mL, (5) 100mL, (6) 40mL vial, (7) EnCore, (8) TerraCore, (9) 90mL, (10) Other

*** Preservative Types: (1) None, (2) HNO3, (3) H2SO4, (4) HCl, (5) NaOH, (6) Zn Acetate, (7) NaHSO4, (8) Sod. Thiosulfate, (9) Ascorbic Acid, (10) MeOH, (11) Other

Lab Use Only

Proj. Mgr: **Angela Baioni**
AcctNum / Client ID:
Table #:
Profile / Template: **7672**
Prelog / Bottle Ord. ID: **EZ 3161993**

Customer Sample ID	Matrix *	Comp / Grab	Composite Start Date	Composite Start Time	Collected or Composite End Date	Collected or Composite End Time	# Cont.	Res. Chlorine Results	Res. Chlorine Units	2540C Total Dissolved Solids	300.0 IC Anions 28 Days	6010; 6020; 7470 Metals	RAD 226/228, Total RAD	Sample Comment	Preservation non-conformance identified for sample.
~~SW-3~~	~~WT~~									X	X	X	X	92761329	
~~SW-4~~	~~WT~~									X	X	X	X		
SW-5	WT	G	10/24/24	1135			5			X	X	X	X	020	
SW-6	WT	G	10/24/24	1115			5			X	X	X	X	021	

Additional Instructions from Pace®:
300.0-Cl, Fl, SO4
6010 metals-Ca, Sb, As, Ba, Be4, Cd, Cr, Co, Pb, Mo, Se, Cu, Ni, Ag, V, Zn
6020 metals-B, Li, Tl

Collected By: (Printed Name) Z. Hecker
Signature:

Customer Remarks / Special Conditions / Possible Hazards:

# Coolers:	Thermometer ID:	Correction Factor (°C):	Obs. Temp. (°C)	Corrected Temp. (°C)	On Ice:

Relinquished by/Company: (Signature) Z. HDR	Date/Time: 10/1/24 @ 1020	Received by/Company: (Signature) HJB Pace HVL	Date/Time: 11/1/24 1020	Tracking Number:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Delivered by: [ ] In-Person [ ] Courier
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	[ ] FedEx [ ] UPS [ ] Other
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	Page: 3 of 3

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace® Terms and Conditions found at https://www.pacelabs.com/resource-library/resource/pace-terms-and-conditions/

This page intentionally left blank.

C

Appendix C – Electronic Data Deliverables (electronic only)

This page intentionally left blank.

D

Appendix D – Statistical Analysis Memo

This page intentionally left blank.

Summary of Statistical Analysis and Evaluation for SSIs for 2024: Second Semi-Annual Report

Background and Downgradient Wells

Charah, LLC

Moncure, Chatham County, North Carolina

December 23, 2024

This page intentionally left blank.

Contents

1 Introduction 3
2 Statistical Analysis 4
1.1 Outliers 5
1.1.1 Background 5
1.1.2 Downgradient 11
1.2 Data Distribution 14
1.3 Trends 15
1.3.1 Background 15
1.3.2 Downgradient 16
1.4 Spatial Variability 18
2 Summary of Statistical Analysis 22
3 Evaluation for SSIs over Background 29

Tables

Table 1. Brickhaven Mine Monitoring Well Network 3
Table 2. Brickhaven Mine Monitored Constituents 4
Table 3. Outlier Test Results – Background 5
Table 4. Outlier Test Results – Downgradient 11
Table 5. Data Distributions – Background 14
Table 6. Summary of Trend Analysis Results – Background 16
Table 7. Summary of Trend Analysis Results – Downgradient 17
Table 8. Summary of Background Preliminary Data Analysis 24
Table 9. Summary of Downgradient Preliminary Data Analysis 25
Table 10. Background Concentrations for Detection Monitoring Constituents 30
Table 11. Summary of Evaluation for SSIs over Background for Appendix I Metals (Detection Monitoring) 31
Table 12. Summary of Evaluation for SSIs over Background for Appendix III Constituents (Detection Monitoring) 32
Table 13. Summary of Evaluation for SSIs over Background for Appendix IV Constituents (Detection Monitoring) 33

Figures

Figure 1. Nickel Concentrations (ug/L) vs Time 7
Figure 2. Vanadium Concentrations (ug/L) vs. Time 7
Figure 3. Boron Concentrations (ug/L) vs. Time 8
Figure 4. Chromium Concentrations (ug/L) vs. Time 8
Figure 5. Lithium Concentrations (ug/L) vs. Time 9
Figure 6. Selenium Concentrations (ug/L) vs. Time 9
Figure 7. Thallium Concentrations (ug/L) vs. Time 10
Figure 8. Total Radium Concentrations (pCi/L) vs. Time 10
Figure 9. Boron Concentrations (ug/L) Side-by-Side Box Plots by Background Well 18
Figure 10. Calcium Concentrations (ug/L) Side-by-Side Box Plots by Background Well 19
Figure 11. Fluoride Concentrations (mg/L) Side-by-Side Box Plots by Background Well 19
Figure 12. pH (Field) Concentrations (S.U.) Side-by-Side Box Plots by Background Well 20
Figure 13. Sulfate Concentrations (mg/L) Side-by-Side Box Plots by Background Well 20
Figure 14. Total Dissolved Solids Concentration (mg/L) Side-by-Side Box Plots by Background Well 21
Figure 15. Barium Concentration (ug/L) Side-by-Side Box Plots by Background Well 21
Figure 16. Vanadium Concentration (ug/L) Side-by-Side Box Plots by Background Well 22

Appendices

Appendix A – Background Wells BG-1 and BG-2 Tables
Appendix B – Background Wells BG-1 and BG-2 Plots
Appendix C – Downgradient Wells Tables
Appendix D – Downgradient Wells Plots
Appendix E – Downgradient Wells Tables
Appendix F – Downgradient Wells Plots

1 Introduction

This report summarizes the statistical analysis of background and downgradient groundwater quality for the Charah, LLC Brickhaven No. Mine Tract 'A' Site (Brickhaven Mine) and operating under the Facility Permit #1910-STRUC-2015 as a municipal solid waste landfill (MSWLF). Background groundwater quality was evaluated such that statistically-derived background concentrations could be established for the site. Groundwater quality in downgradient wells was then compared to background concentrations to determine if a statistically significant increase (SSI) over background has occurred, as required by Section .1600 rules of the North Carolina Solid Waste Management Rules 15A NCAC 13B .1600. Sampling results used to establish background threshold values (BTVs) were obtained during 37 monitoring events performed between October 2015 and April 2024. The BTVs for the Appendix I, Appendix III, and Appendix IV constituents were developed based on the pooling of data from the site's two background wells, BG-1, and BG-2. The assumption for pooling groundwater data is that the constituent concentrations sampled at multiple background wells, when pooled, serve as an estimate of overall well field conditions for the Appendix I, III, and IV constituents.

Downgradient sampling results from the detection monitoring event in October 2024 were used to evaluate for SSIs. The current groundwater monitoring network with enough data points for statistical analysis is presented in **Table 1**.

Software packages R [1] and SPSS [2] were used in the production of the statistics. R is a free software package and SPSS is a licensed software package.

Table 1. Brickhaven Mine Monitoring Well Network

Background	Downgradient
BG-1	MW-1
BG-2	MW-2
	MW-3
	MW-4
	MW-5
	MW-6
	MW-7R
	MW-8
	MW-10
	MW-11
	MW-11D

Groundwater samples collected as part of the 15A NCAC 13B .1600 monitoring program were analyzed for EPA Appendix III and Appendix IV constituents, and Appendix I metals. Only non-filtered sample results were utilized for the statistical analysis of monitored constituents. A summary of constituents included in the data analysis is provided in **Table 2**.

Table 2. Brickhaven Mine Monitored Constituents

Appendix I Metals	Appendix III Constituents	Appendix IV Constituents
Copper	Boron	Antimony
Nickel	Calcium	Arsenic
Silver	Chloride	Barium
Vanadium	Fluoride	Beryllium
Zinc	pH (Field)	Cadmium
	Sulfate	Chromium
	Total Dissolved Solids	Cobalt
		Fluoride
		Lead
		Lithium
		Mercury
		Molybdenum
		Radium-226
		Radium-228
		Selenium
		Thallium
		Total Radium

2 Statistical Analysis

The background sample size (i.e., quantity of qualifying samples) was evaluated per constituent. Descriptive statistics were calculated for the background data set including non-detect (ND) values and excluding ND values. When NDs were included in the data set, the method detection limit (MDL) was substituted as the ND value for simple descriptive statistics. The analysis was performed with NDs removed to better understand the central tendency and range of the detected values. A summary of the descriptive statistics for the background data set is provided in **Appendix A**. Its corresponding plots are in **Appendix B.** Note that for the trend analyses in Section 2.3 and for the establishment of statistically-derived background concentration levels in Section 4, imputation methods using the maximum likelihood method (MLE) for NDs, regression on order statistics (ROS) or Kaplan-Meier (KM) methods, where appropriate, were used.

Following the calculation of descriptive statistics, the statistical analysis for the background data set was performed to evaluate for outliers, data distributions, trends, and spatial variability between the background wells for Appendix I metals, Appendix III and IV constituents, where data quantity and quality permit. The establishment of background is based on the pooled observations from BG-1 and BG-2. Spatial variability between the background wells was evaluated for each constituent having at least fifty percent detected data to assess whether the data can be pooled for establishing background concentrations. Analysis of variance tests for spatial variability can be found in **Appendix A**. A total of up to 63 samples were included for the descriptive analysis of the background monitoring well results for the monitored constituents.

The first monitoring event sampled in August 2015 was not included in the analysis as it was deemed unrepresentative of the other monitoring events as the samples were tested at a different lab. The sample collected April 3, 2017, for total dissolved solids in well BG-1 is considered an outlier and removed from the analysis. The January 2020 samples for boron were removed from the analysis as they were diluted and could not be properly detected.

For downgradient monitoring results, the data analysis included the calculation of descriptive statistics for Appendix I metals, Appendix III and IV constituents (for the data sets including and excluding ND values), followed by an evaluation of outliers and trends. A total of up to 38 monitoring events performed between November 2015 and October 2024 were included for the descriptive analysis of the downgradient monitoring well results for the monitored constituents. **Appendix C** shows a full summary of the descriptive statistics for each downgradient constituent-well pair and corresponding plots are in **Appendix D.**

1.1 Outliers

Outliers are values that are not representative of the population from which they are sampled. The background and downgradient data sets were screened for outliers using Dixon's and Rosner's outlier tests. Dixon's outlier test is suitable for datasets containing less than 25 samples, while Rosner's test is suitable for datasets with 25 or more samples. Since all current background samples based on the pooling of data from BG-1 and BG-2 have greater than 25 observations, Rosner's test was used. For downgradient data, since sample sizes vary by well both Dixon's and Rosner's tests were used depending on the well-constituent pair sample size. With respect to Rosner's test, the test can detect up to 10 potential outliers. Note that these outlier tests assume the underlying distributions are normally distributed. Applying these tests on data that are not normally distributed may results in false positives; however, the flagged values are worth questioning as part of data quality. All outlier tests were conducted using a significance of one percent. For constituents that had NDs, the NDs were removed prior to testing for outliers.

1.1.1 Background

The statistical outliers identified in the pooled background data set are listed in **Table 3**. Ten concentrations from background well BG-1; Appendix I Metals constituents nickel and vanadium, Appendix III constituent boron, and Appendix IV constituents chromium, lithium, selenium, thallium, and total radium were identified as statistical outliers. Five concentrations from background well BG-2; Appendix I Metals constituent vanadium, and Appendix III constituent boron were identified as statistical outliers.

Table 3. Outlier Test Results – Background

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution Factor	Potential Outlier Value
BG-1	App. I Metals	Nickel	ug/L	63	78%	10/17/2022	1	14.1
BG-2	App. I Metals	Vanadium	ug/L	63	56%	4/24/2023	1	0.810
BG-2	App. I Metals	Vanadium	ug/L	63	56%	1/24/2023	1	1.10
BG-2	App. I Metals	Vanadium	ug/L	63	56%	7/11/2022	1	1.40

BG-1	App. I Metals	Vanadium	ug/L	63	56%	1/24/2023	1	8.40
BG-2	App. I Metals	Vanadium	ug/L	63	56%	10/14/2019	1	8.30
BG-1	App. III	Boron	ug/L	62	47%	4/12/2021	1	56.5
BG-2	App. III	Boron	ug/L	62	47%	4/12/2021	1	36.2
BG-1	App. IV	Chromium	ug/L	63	86%	10/17/2022	1	26.5
BG-1	App. IV	Lithium	ug/L	63	5%	1/23/2024	1	51.1
BG-1	App. IV	Lithium	ug/L	63	5%	4/27/2023	1	43.7
BG-1	App. IV	Lithium	ug/L	63	5%	4/5/2016		36.8
BG-1	App. IV	Selenium	ug/L	63	95%	4/1/2024	1	6.00
BG-1	App. IV	Thallium	ug/L	63	95%	2/16/2016		13.7
BG-1	App. IV	Total Radium	pCi/L	60	0%	7/11/2022	1	2.59

A visual inspection of concentration vs. time scatter plots for nickel (**Figure 1**), vanadium (**Figure 2**), boron (**Figure 3**), chromium (**Figure 4**), lithium (**Figure 5**), selenium (**Figure 6**), thallium (**Figure 7**), and total radium (**Figure 8**) reveal the presence of the potential outliers. The statistical outliers were investigated as possible data entry or measurement errors. The remaining values were all within one order of magnitude of other observations and deemed correct. Although the elevated values appear as statistical outliers, it is within a reasonable range of the remaining concentrations throughout the monitoring period and should not be removed from the data set at this time for purposes of determining background concentrations. Given the variable nature of groundwater samples and that it is common for groundwater quality samples to have very low or very high concentrations over time, statistical outliers are expected but do not necessarily signify that the outliers are from different distributions. As additional background samples are collected over time, the variability in concentrations will be better understood. Outlier test results may change, and earlier observations thought to be outliers may no longer be outliers. **Appendix B** contains additional visualizations of the background data.

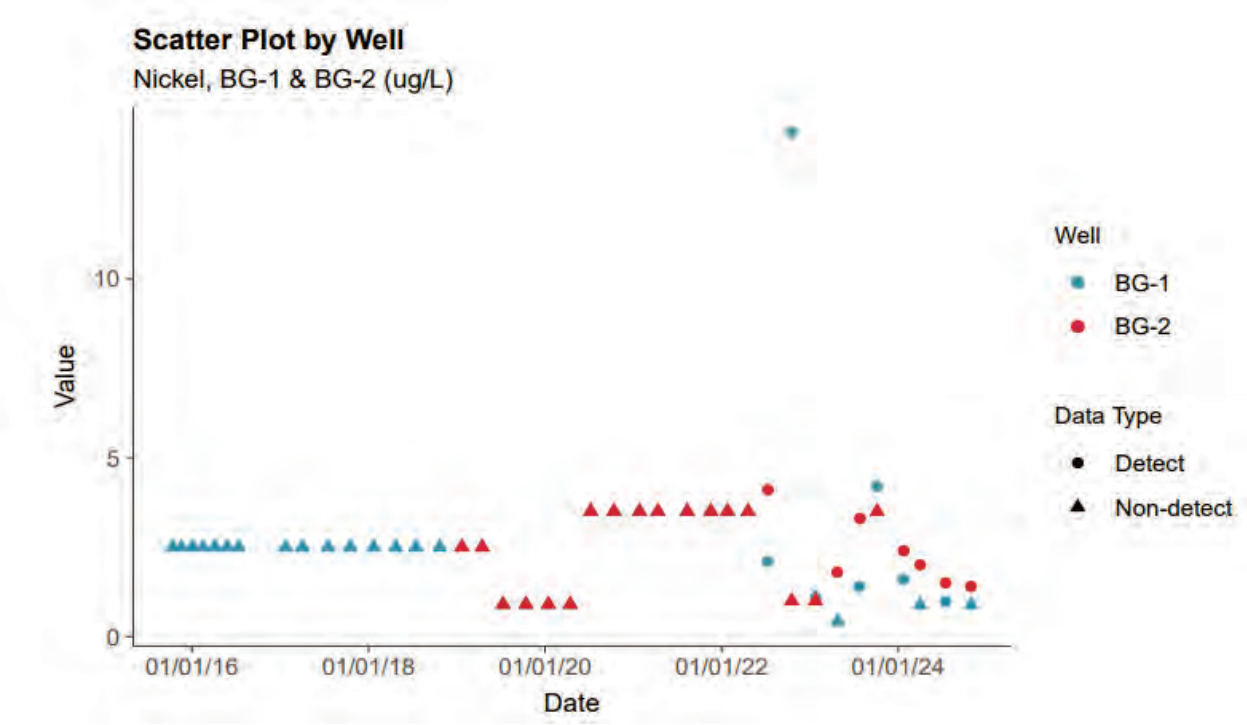


Figure 1. Nickel Concentrations (ug/L) vs Time

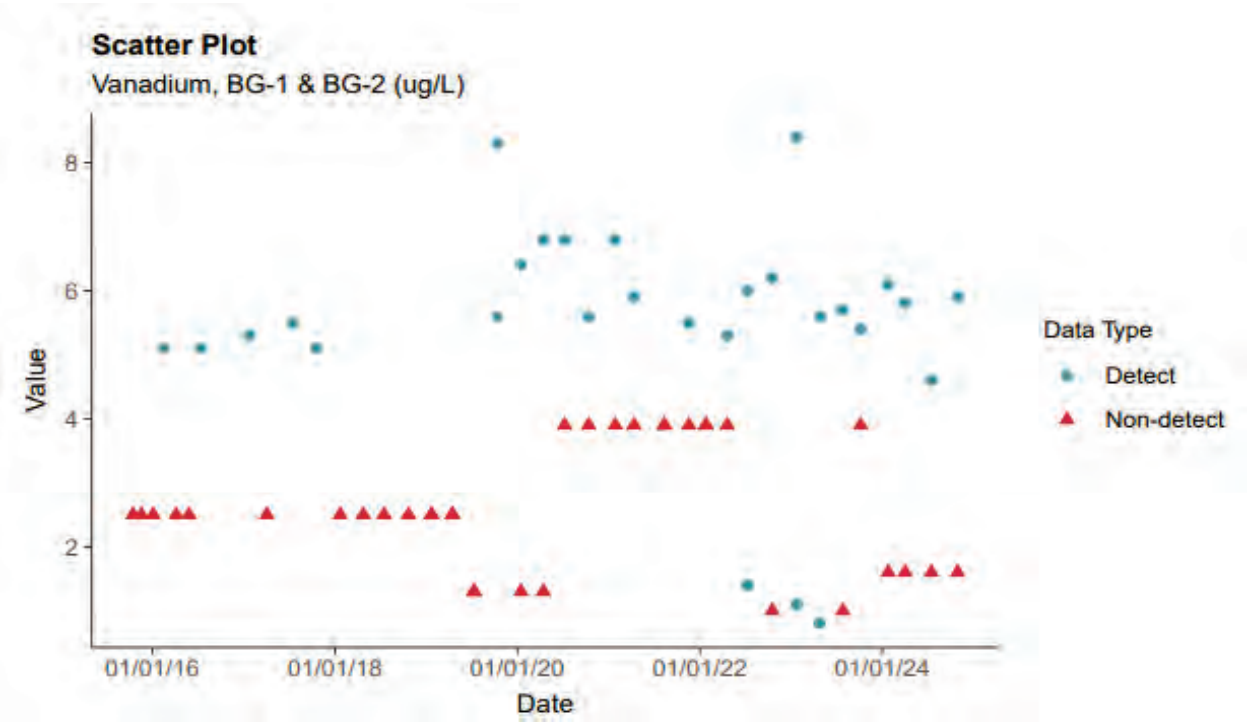


Figure 2. Vanadium Concentrations (ug/L) vs. Time

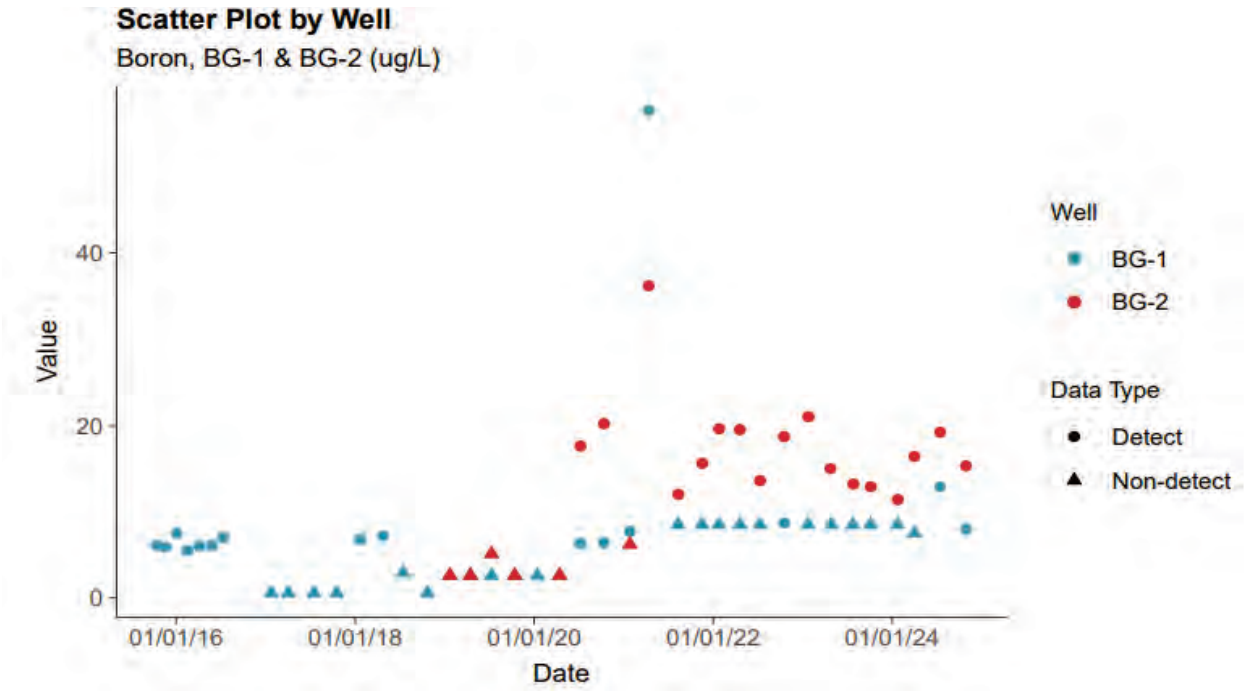


Figure 3. Boron Concentrations (ug/L) vs. Time

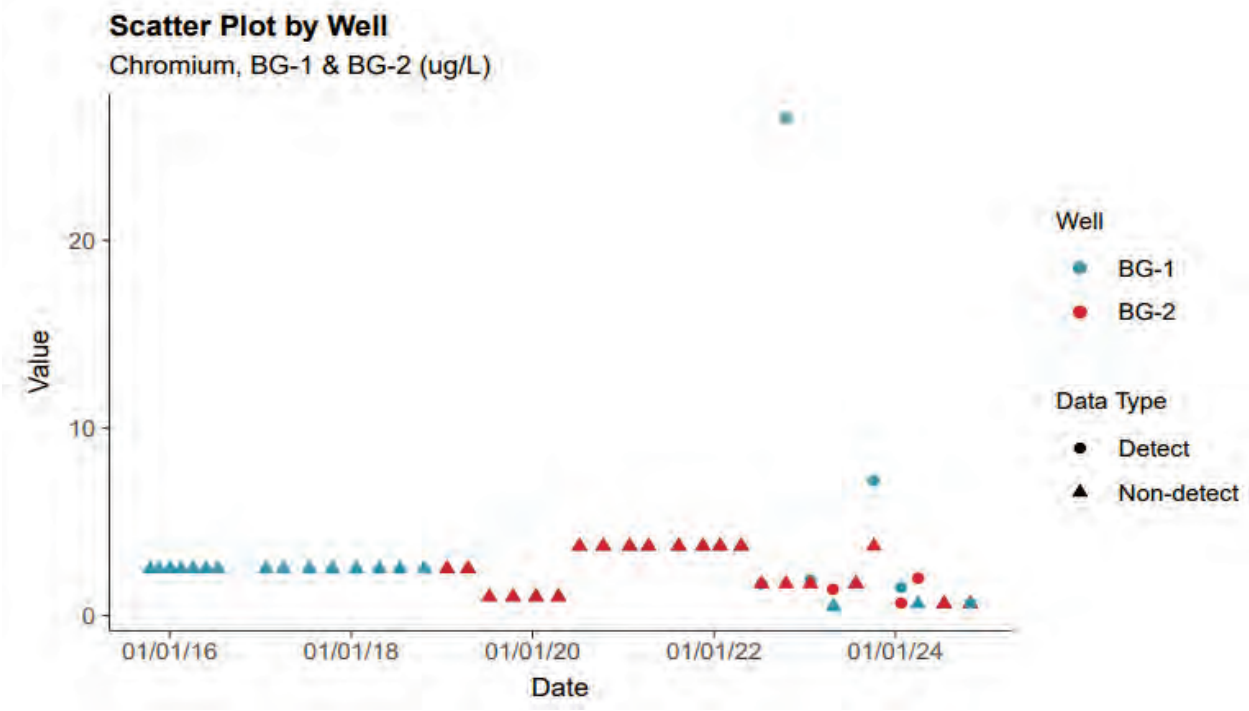


Figure 4. Chromium Concentrations (ug/L) vs. Time

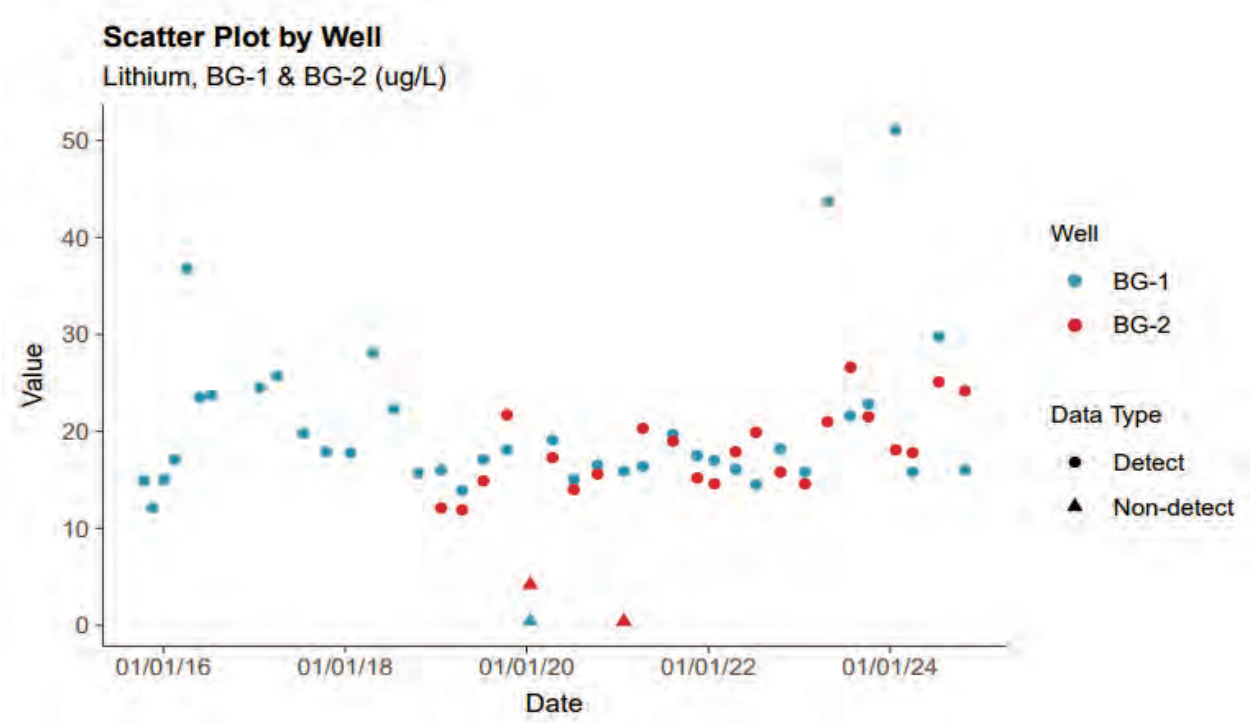


Figure 5. Lithium Concentrations (ug/L) vs. Time

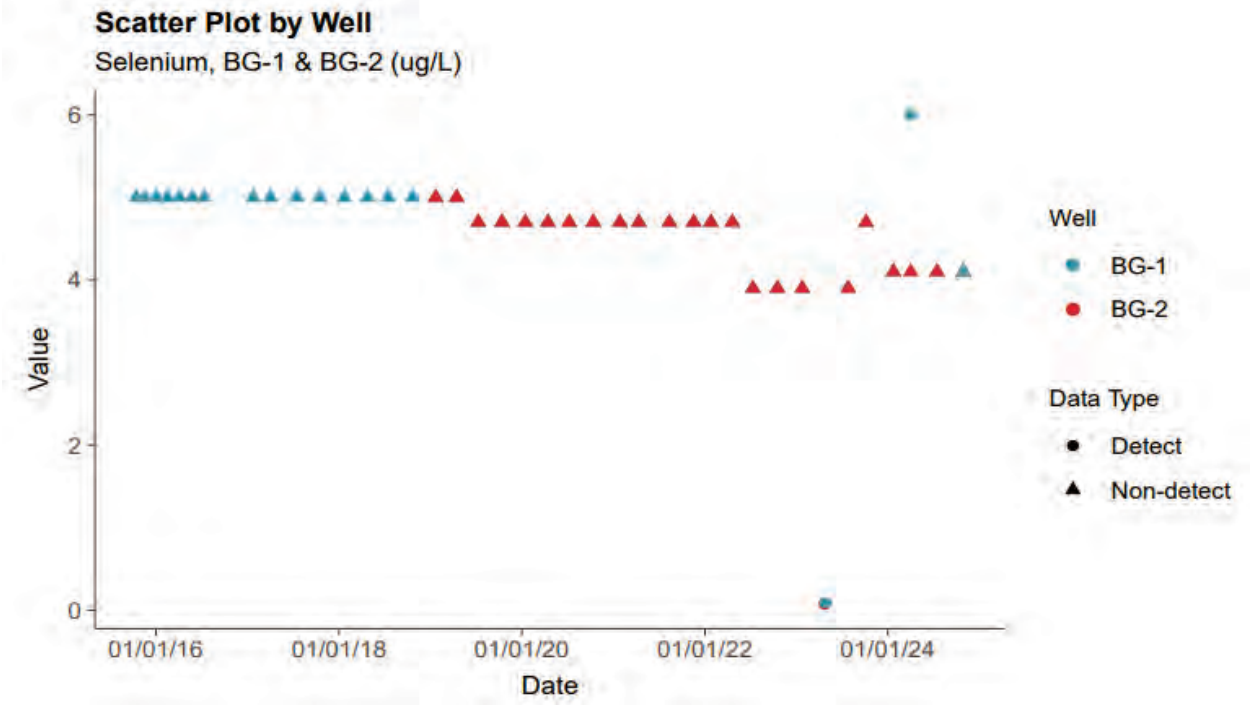


Figure 6. Selenium Concentrations (ug/L) vs. Time

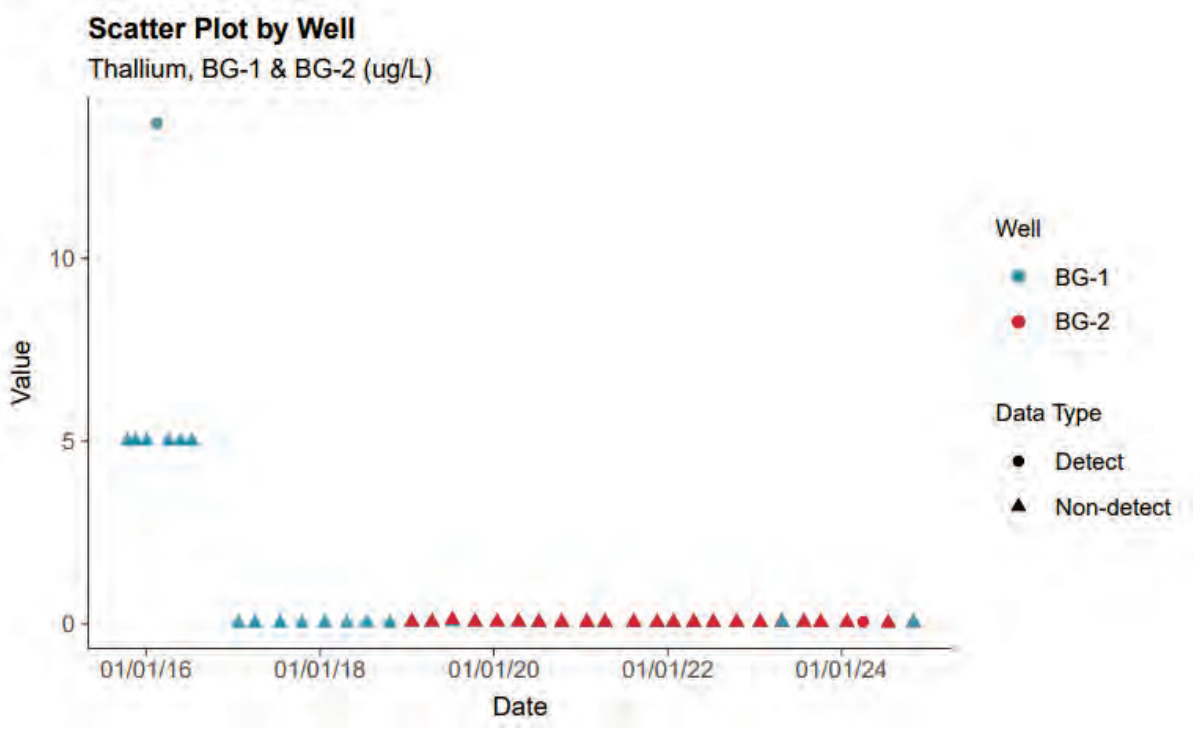


Figure 7. Thallium Concentrations (ug/L) vs. Time

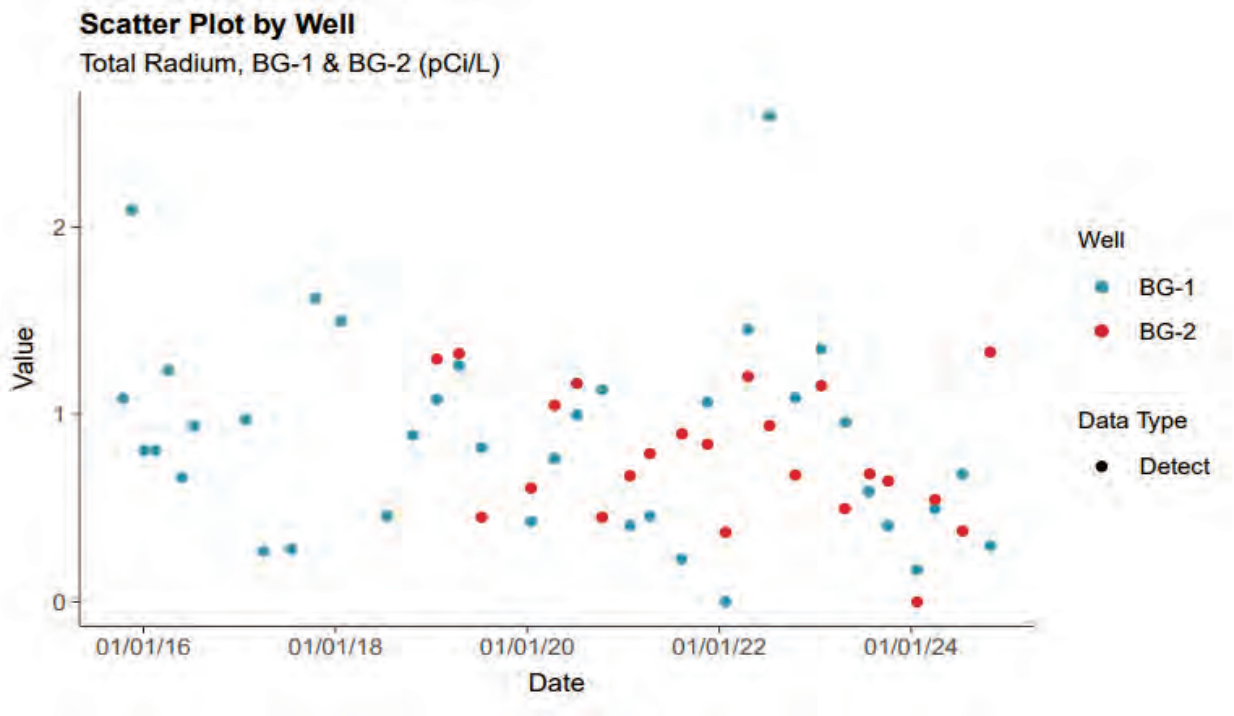


Figure 8. Total Radium Concentrations (pCi/L) vs. Time

1.1.2 Downgradient

Statistical outliers were identified for Appendix I metals, Appendix III and Appendix IV constituents in the data sets evaluated for downgradient monitoring wells throughout the monitoring period and are listed in **Table 4**.

Table 4. Outlier Test Results – Downgradient

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution	Value
MW-1	App. III	Boron	ug/L	37	59%	10/4/2023	1	44.6
MW-1	App. IV	Cadmium	ug/L	38	92%	10/14/2020	1	0.670
MW-1	App. IV	Total Radium	pCi/L	36	0%	7/10/2019	1	2.48
MW-2	App. I Metals	Copper	ug/L	33	45%	11/18/2021	1	294
MW-2	App. I Metals	Nickel	ug/L	33	36%	10/19/2022	1	115
MW-2	App. I Metals	Vanadium	ug/L	33	70%	10/4/2023	1	37.2
MW-2	App. I Metals	Zinc	ug/L	33	48%	10/31/2024	1	1,590
MW-2	App. III	Calcium	ug/L	33	0%	1/26/2024	1	34,300
MW-2	App. III	Chloride	mg/L	33	0%	1/26/2024	11	489
MW-2	App. III	Chloride	mg/L	33	0%	7/12/2022	26	552
MW-2	App. III	Fluoride	mg/L	33	6%	7/18/2017		0.400
MW-2	App. III	pH (Field)	S.U.	29	0%	1/24/2024		9.29
MW-2	App. III	pH (Field)	S.U.	29	0%	7/12/2016		8.50
MW-2	App. III	Total Dissolved Solids	mg/L	33	0%	1/17/2020	1	11,700
MW-2	App. III	Total Dissolved Solids	mg/L	33	0%	11/19/2015		257
MW-2	App. III	Total Dissolved Solids	mg/L	33	0%	1/28/2021	1	428
MW-2	App. IV	Chromium	ug/L	33	18%	10/19/2022	1	130
MW-2	App. IV	Chromium	ug/L	33	18%	10/25/2018	1	84.0
MW-2	App. IV	Chromium	ug/L	33	18%	1/25/2018		56.8
MW-2	App. IV	Chromium	ug/L	33	18%	4/5/2017		48.8
MW-2	App. IV	Chromium	ug/L	33	18%	10/4/2023	1	46.2
MW-2	App. IV	Cobalt	ug/L	33	82%	10/4/2023	1	34.8
MW-2	App. IV	Fluoride	mg/L	33	6%	7/18/2017		0.400
MW-2	App. IV	Lithium	ug/L	33	0%	8/10/2021	5	512
MW-2	App. IV	Lithium	ug/L	33	0%	7/12/2016		356
MW-2	App. IV	Lithium	ug/L	33	0%	5/27/2016		350
MW-2	App. IV	Molybdenum	ug/L	33	15%	1/17/2020	1	41.0
MW-2	App. IV	Thallium	ug/L	33	70%	2/17/2016		10.3
MW-3	App. I Metals	Copper	ug/L	36	58%	4/20/2022	1	137
MW-3	App. I Metals	Nickel	ug/L	36	53%	1/25/2019	1	86.0
MW-3	App. III	Chloride	mg/L	36	0%	7/12/2022	25	565
MW-3	App. III	pH (Field)	S.U.	32	0%	7/7/2020		6.18
MW-3	App. III	Total Dissolved Solids	mg/L	36	0%	11/19/2015		256
MW-3	App. III	Total Dissolved Solids	mg/L	36	0%	1/24/2017		303
MW-3	App. III	Total Dissolved Solids	mg/L	36	0%	1/24/2018		1,060
MW-3	App. IV	Chromium	ug/L	36	50%	1/25/2019	1	179

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution	Value
MW-3	App. IV	Lithium	ug/L	36	3%	10/18/2017		236
MW-3	App. IV	Lithium	ug/L	36	3%	4/7/2016		217
MW-3	App. IV	Lithium	ug/L	36	3%	7/17/2018		36.7
MW-3	App. IV	Lithium	ug/L	36	3%	4/5/2017		129
MW-3	App. IV	Lithium	ug/L	36	3%	11/19/2015		128
MW-3	App. IV	Molybdenum	ug/L	36	0%	1/16/2020	1	35.7
MW-4	App. I Metals	Zinc	ug/L	37	65%	4/17/2020	1	47.2
MW-4	App. III	Boron	ug/L	36	64%	10/17/2017		165
MW-4	App. III	Calcium	ug/L	37	0%	4/7/2016		17,900
MW-4	App. III	Calcium	ug/L	37	0%	5/25/2016		18,600
MW-4	App. III	Total Dissolved Solids	mg/L	37	0%	11/19/2015		395
MW-4	App. III	Total Dissolved Solids	mg/L	37	0%	5/25/2016		486
MW-4	App. III	Total Dissolved Solids	mg/L	37	0%	4/7/2016		513
MW-4	App. IV	Lithium	ug/L	37	0%	8/12/2021	5	98.0
MW-5	App. I Metals	Nickel	ug/L	38	76%	7/13/2022	1	120
MW-5	App. I Metals	Zinc	ug/L	38	66%	4/5/2016		36.1
MW-5	App. III	Boron	ug/L	37	41%	1/23/2017		39.3
MW-5	App. III	pH (Field)	S.U.	35	0%	4/15/2020		8.54
MW-5	App. III	pH (Field)	S.U.	35	0%	7/7/2020		5.50
MW-5	App. III	pH (Field)	S.U.	35	0%	1/16/2020		5.62
MW-5	App. III	Total Dissolved Solids	mg/L	38	0%	10/17/2017		1,160
MW-5	App. IV	Chromium	ug/L	38	74%	7/13/2022	1	260
MW-5	App. IV	Lithium	ug/L	38	3%	8/9/2021	1	28.6
MW-6	App. III	Chloride	mg/L	37	0%	4/5/2016		15.3
MW-6	App. III	Chloride	mg/L	37	0%	4/15/2021	4	80.3
MW-6	App. III	Sulfate	mg/L	37	0%	4/5/2016		214
MW-6	App. III	Sulfate	mg/L	37	0%	1/5/2016		194
MW-6	App. III	Sulfate	mg/L	37	0%	4/4/2017		179
MW-6	App. III	Sulfate	mg/L	37	0%	1/24/2017		145
MW-6	App. III	Sulfate	mg/L	37	0%	11/20/2015		137
MW-6	App. III	Sulfate	mg/L	37	0%	1/24/2018		126
MW-6	App. III	Sulfate	mg/L	37	0%	4/23/2018		96.1
MW-6	App. III	Sulfate	mg/L	37	0%	10/17/2017		90.9
MW-6	App. III	Sulfate	mg/L	37	0%	2/17/2016		87.7
MW-6	App. III	Sulfate	mg/L	37	0%	7/19/2017		86.9
MW-6	App. IV	Thallium	ug/L	37	92%	1/5/2016		6.20
MW-7R	App. I Metals	Copper	ug/L	28	71%	7/10/2019	1	79.3
MW-7R	App. I Metals	Nickel	ug/L	28	43%	7/10/2019	1	880
MW-7R	App. III	Chloride	mg/L	28	0%	7/14/2022	7	194
MW-7R	App. III	Fluoride	mg/L	28	4%	7/20/2017		0.320
MW-7R	App. III	pH (Field)	S.U.	28	0%	7/20/2017		9.60
MW-7R	App. III	Sulfate	mg/L	28	0%	7/20/2017		51.2

Well	Constituent Type	Constituent	Unit	n	% NDs	Date	Dilution	Value
MW-7R	App. IV	Barium	ug/L	28	0%	7/20/2017		50.1
MW-7R	App. IV	Chromium	ug/L	28	29%	7/10/2019	1	1,940
MW-7R	App. IV	Fluoride	mg/L	28	4%	7/20/2017		0.320
MW-7R	App. IV	Lithium	ug/L	28	0%	7/20/2017		5.60
MW-8	App. I Metals	Copper	ug/L	38	79%	4/27/2023	1	116
MW-8	App. I Metals	Nickel	ug/L	38	50%	4/27/2023	1	157
MW-8	App. I Metals	Vanadium	ug/L	38	82%	4/27/2023	1	9.50
MW-8	App. III	Calcium	ug/L	38	0%	1/27/2021	10	4,170
MW-8	App. III	Chloride	mg/L	38	0%	11/20/2015		939
MW-8	App. IV	Barium	ug/L	38	0%	4/27/2023	10	1,880
MW-8	App. IV	Radium-226	pCi/L	36	0%	4/27/2023	1	2.51
MW-8	App. IV	Radium-228	pCi/L	36	0%	4/27/2023	1	4.72
MW-8	App. IV	Total Radium	pCi/L	36	0%	4/27/2023	1	7.23
MW-10	App. I Metals	Copper	ug/L	14	64%	4/21/2022	1	103
MW-10	App. I Metals	Nickel	ug/L	14	29%	10/4/2023	1	27.9
MW-10	App. I Metals	Vanadium	ug/L	14	50%	10/4/2023	1	18.2
MW-10	App. III	Boron	ug/L	14	0%	10/4/2023	1	43.4
MW-10	App. IV	Arsenic	ug/L	14	71%	4/27/2023	1	1.20
MW-10	App. IV	Barium	ug/L	14	0%	10/4/2023	1	195
MW-10	App. IV	Chromium	ug/L	14	29%	10/4/2023	1	56.7
MW-11	App. I Metals	Copper	ug/L	17	59%	11/17/2021	1	20.1
MW-11	App. III	Calcium	ug/L	17	0%	1/24/2024	1	69,400
MW-11	App. III	Chloride	mg/L	17	0%	1/24/2024	1	74.5
MW-11	App. III	pH (Field)	S.U.	16	0%	1/24/2024		11.7
MW-11	App. III	Total Dissolved Solids	mg/L	17	0%	1/29/2021	1	2,760
MW-11	App. IV	Barium	ug/L	17	0%	1/24/2024	1	130
MW-11	App. IV	Lithium	ug/L	17	0%	1/24/2024	1	19.5
MW-11	App. IV	Radium-228	pCi/L	17	0%	4/13/2021	1	2.13
MW-11	App. IV	Total Radium	pCi/L	17	0%	4/13/2021	1	2.39
MW-11D	App. I Metals	Nickel	ug/L	15	73%	7/13/2022	1	6.20
MW-11D	App. III	Boron	ug/L	15	0%	8/12/2021	2	109
MW-11D	App. III	Calcium	ug/L	15	0%	8/12/2021	1	94,400
MW-11D	App. III	Chloride	mg/L	15	0%	8/12/2021	12	530
MW-11D	App. III	Fluoride	mg/L	15	0%	4/24/2023	1	0.640
MW-11D	App. III	Sulfate	mg/L	15	7%	8/12/2021	12	523
MW-11D	App. III	Total Dissolved Solids	mg/L	15	0%	8/12/2021	1	1,740
MW-11D	App. IV	Fluoride	mg/L	15	0%	4/24/2023	1	0.640
MW-11D	App. IV	Lithium	ug/L	15	0%	8/12/2021	2	80.7
MW-11D	App. IV	Molybdenum	ug/L	15	0%	8/12/2021	1	127
MW-11D	App. IV	Radium-228	pCi/L	15	0%	4/13/2021	1	2.23

A visual inspection of concentration vs. time scatter plots for constituents included in the outliers slisted in **Table 4** reveal the presence of the potential outliers. See **Appendix D** for scatter plots of constituents with downgradient statistically-derived outliers as well as other downgradient data visualizations. Following review of the sampling protocols and field sampling records, there were no obvious reasons for the outliers noted on the sampling dates except for pH at MW-11 on January 24, 2024. Its value is high at 11.7 S.U. indicating a possible transcription error and is removed from further analysis. For the remaining statistical outliers in **Table 4**, the values are within a reasonable range of the remaining concentrations for each constituent throughout the monitoring period. The variability in concentrations will be better understood as additional samples are obtained.

Summary statistics and visualizations for the dataset with the pH outlier removed are available in **Appendices E** and **F**.

1.2 Data Distribution

Groundwater data were fitted to known distribution models using Goodness-of-Fit (GOF) tests. The Shapiro-Wilk and Lilliefors tests is used to test for normal distribution. Note that these two tests can be used to test for lognormal distributions after the data are transformed using the natural log function. The empirical distribution function (EDF) based methods, the Kolmogorov-Smirnov (K-S) and Anderson-Darling (A-D) test, are used to test for a gamma distribution. Normal, lognormal and gamma distributions are parametric distributions. If a data set cannot be fit with any of these three parametric distributions, it is considered to follow a nonparametric distribution. In addition, if more than 50 percent of the observations are non-detects, then the dataset is assumed to follow a nonparametric distribution. Finally, the data distributions for radium 226, radium 228, and total radium are set to nonparametric for evaluation purposes as non-detect values were not flagged by the laboratory. Data distributions are listed in **Table 5**. Downgradient data distributions for each constituent-well pair are reported in **Appendix E**.

Table 5. Data Distributions – Background

Constituent	Sample Size	No. of NDs	Distribution Fit[1]
Appendix I Metals			
Copper	63	53	Nonparametric
Nickel	63	49	Nonparametric
Silver	63	63	Nonparametric
Vanadium	63	35	Nonparametric
Zinc	63	50	Nonparametric
Appendix III Constituents			
Boron	62	29	Gamma
Calcium	63	0	Nonparametric
Chloride	63	0	Normal
Fluoride	63	0	Gamma
pH (Field)	61	0	Normal
Sulfate	63	0	Nonparametric
Total Dissolved Solids	62	0	Nonparametric

Constituent	Sample Size	No. of NDs	Distribution Fit[1]
Appendix IV Constituents			
Antimony	63	62	Nonparametric
Arsenic	63	58	Nonparametric
Barium	63	0	Nonparametric
Beryllium	63	63	Nonparametric
Cadmium	63	61	Nonparametric
Chromium	63	54	Nonparametric
Cobalt	63	54	Nonparametric
Fluoride	63	0	Gamma
Lead	63	60	Nonparametric
Lithium	63	3	Nonparametric
Mercury	63	55	Nonparametric
Molybdenum	63	49	Nonparametric
Radium-226	60	0	Normal
Radium-228	60	0	Normal
Selenium	63	60	Nonparametric
Thallium	63	60	Nonparametric
Total Radium	60	0	Normal

[1]Distribution fit is based on detected data.

1.3 Trends

1.3.1 Background

Background constituent concentrations in groundwater should demonstrate stationary conditions through time, free of trends. Constituents were analyzed for trends within the dataset using a maximum likelihood estimate (MLE) regression for constituents which followed parametric distributions and Mann-Kendall tests for those that were treated under nonparametric distributional assumptions. The MLE regression can be applied to datasets that can be fitted to a specific distribution model and that contain NDs with multiple MDLs. The Mann-Kendall test is suitable for data series with no discernable distributions and only one MDL value for NDs.

Constituents treated under nonparametric data assumptions (either tested as nonparametric or having greater than or equal to 50 percent NDs) and with multiple MDLs or with less than three detected values were not assessed for trends. A summary of the trend analysis results for constituents with sufficient detected values in the background data set is provided in **Table 6**. A one-percent significance level was used to detect statistically significant trends.

The background well regression analysis showed a potential increasing trend for boron (Appendix III), fluoride (an Appendix III and Appendix IV constituent) and sulfate (Appendix III), and a potential decreasing trend for chloride (Appendix III) and barium (Appendix IV). A review of these constituents' trends using the piecewise linear-linear regression analysis (Table 10 of **Appendix A**) indicated that the overall appearance of trends were related to MLE or MK

regression methods assuming an overall average increasing or decreasing slope and ignores localized trend differences. The most recent data segmented by the piecewise linear-linear regression approach indicated no continued statistically significant upwards or downwards trends. There were no increasing or decreasing trends identified for other monitoring constituents with sufficient data quantity and quality for testing with the MLE analysis or Mann-Kendall test. The analysis of trends will continue to be monitored as more sampling events are collected at the site.

Table 6. Summary of Trend Analysis Results – Background

Constituent	Trend
Appendix III Constituents	
Boron	↑
Calcium	↔
Chloride	↓
Fluoride	↑
pH (Field)	↔
Sulfate	↑
Total Dissolved Solids	↔
Appendix IV Constituents	
Barium	↓
Fluoride	↑

1.3.2 Downgradient

Trends were also evaluated for constituents in each downgradient well using the same methods as described above for the background data set. Trends identified for select constituents at select monitoring well locations should be monitored as additional downgradient groundwater data are collected at the site. A summary of the statistical trends identified within the downgradient data set is provided in **Table 7**. As with the background data sets, one-percent significance level was used to detect statistically significant trends.

Table 7. Summary of Trend Analysis Results – Downgradient

Constituent	Downgradient Well with Increasing or Decreasing Trend										
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7R	MW-8	MW-10	MW-11	MW-11D
Appendix I Metals											
Nickel				↑							
Appendix III Constituents											
Calcium			↑		↓		↑				
Fluoride	↑										
Chloride		↓		↓		↓		↓			↓
pH (Field)		↓		↓				↑			↓
Sulfate	↓	↓	↓			↓	↓	↑	↓		
TDS					↓		↑				↓
Appendix IV Constituents											
Arsenic											↓
Barium		↑				↓	↑		↑		
Fluoride	↑										
Lithium				↑	↑	↓			↑		↓
Molybdenum		↓							↓		↓
Total Radium											↓

1.4 Spatial Variability

Spatial variability refers to identifying whether or not there are statistically identifiable differences in mean concentrations or variance levels across the well field (i.e., the pooled background data). Parametric and nonparametric analysis of variance (ANOVA) tests and visual aids (i.e., side-by-side box plots and scatter plots), as needed, were used to evaluate for spatial variability within the background data set to check that results from background wells BG-1 and BG-2 were appropriate for pooling and calculating background concentrations for constituents.

Statistical tests at the one percent level of statistical significance indicated that six Appendix III constituents (boron, calcium, fluoride, pH [field], sulfate, and total dissolved solids) exhibited spatial variability. Statistical spatial variability was also identified for two Appendix IV constituent (barium and fluoride), and one Appendix I metal (vanadium). Review of side-by-side box plots for the constituents listed above indicated that the statistically-identified variability in concentrations are reasonable and the mean concentrations calculated for the monitoring wells are generally within the natural variability of concentrations of the well field conditions for Appendix III and IV constituents or within or close to one order of magnitude of the other (See **Figure 9** to **Figure 16**). Therefore, the concentration distribution across the background wells should be considered reflective of the hydrogeological regime at the site and the background results are appropriate for pooling and calculating background concentrations at this time. Note that this spatial variability analysis is updated to include data up to October 2024. Spatial variability will continue to be monitored with each background update and downgradient assessment.

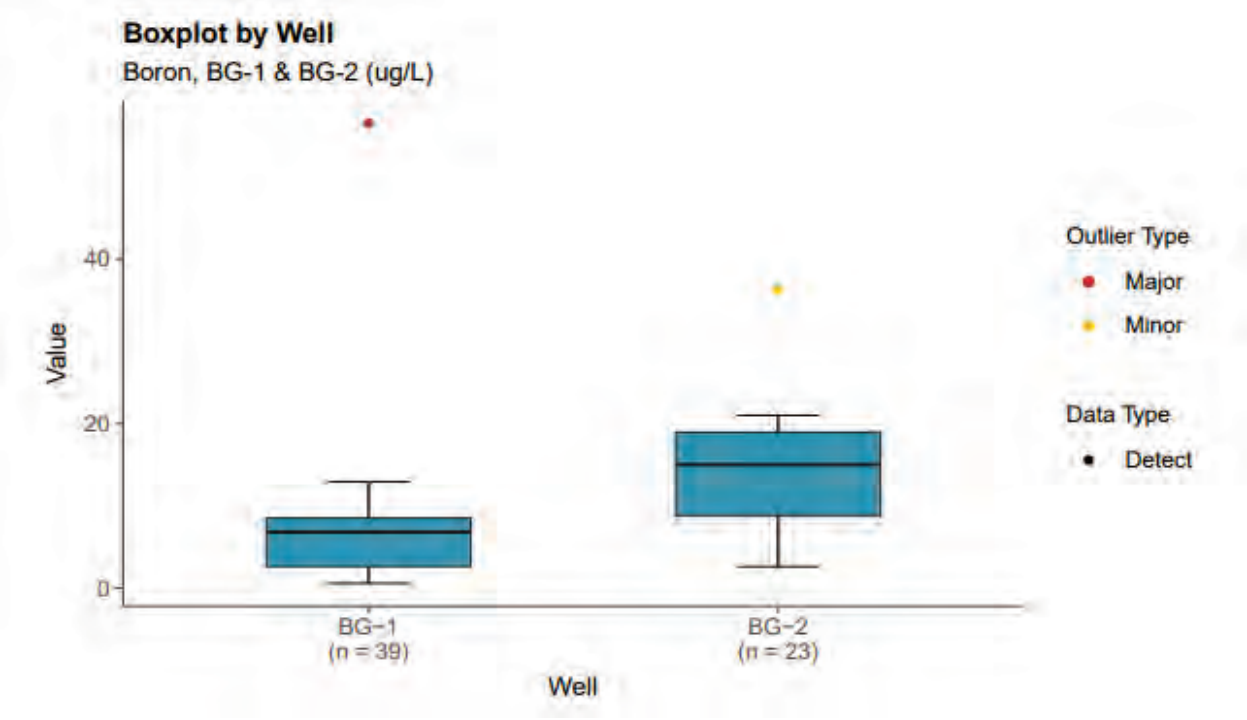


Figure 9. Boron Concentrations (ug/L) Side-by-Side Box Plots by Background Well

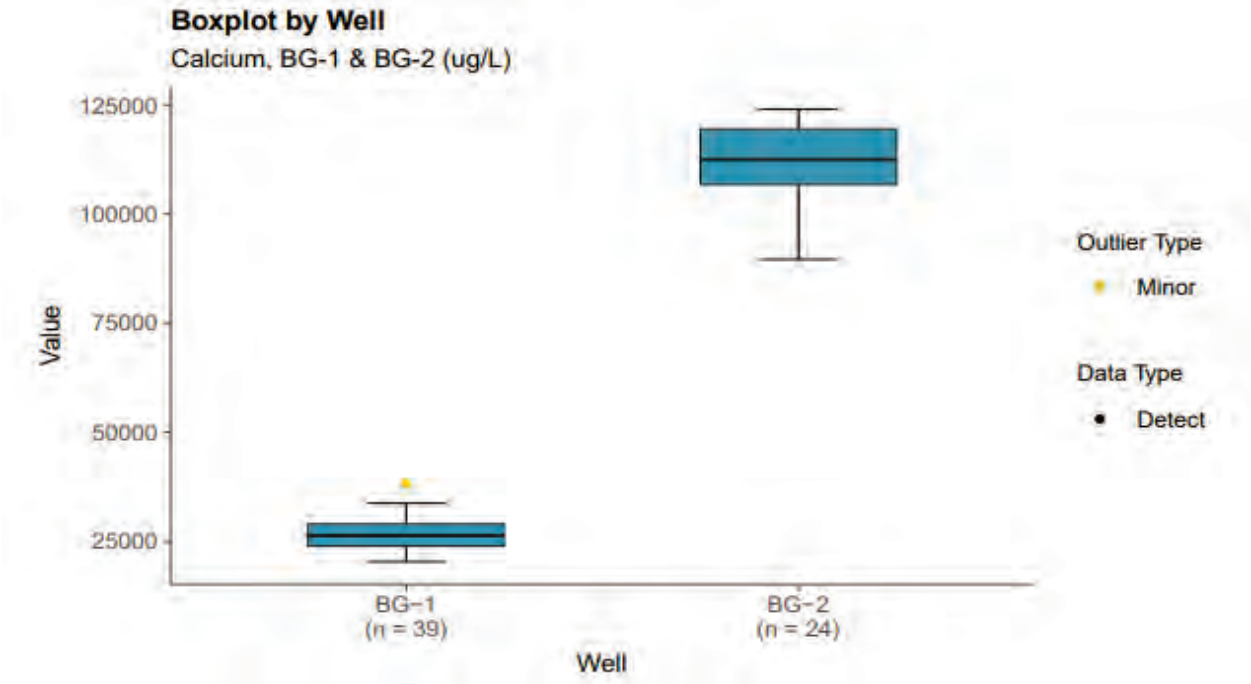


Figure 10. Calcium Concentrations (ug/L) Side-by-Side Box Plots by Background Well

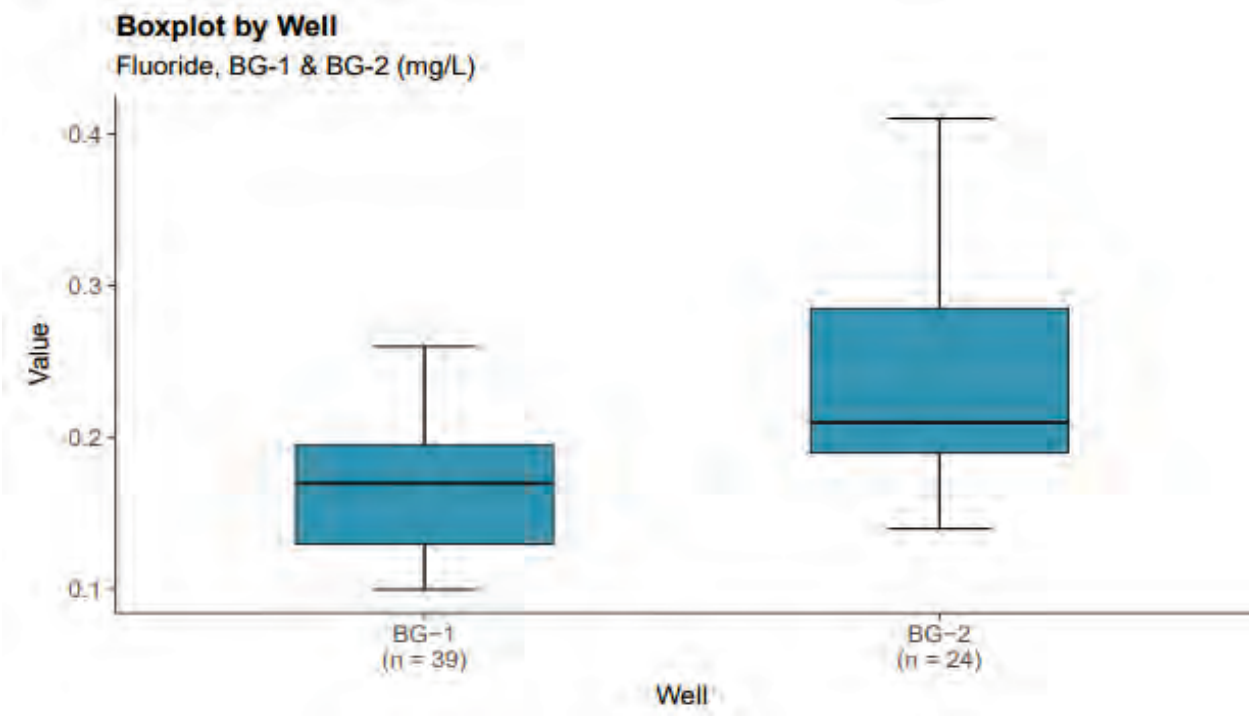


Figure 11. Fluoride Concentrations (mg/L) Side-by-Side Box Plots by Background Well

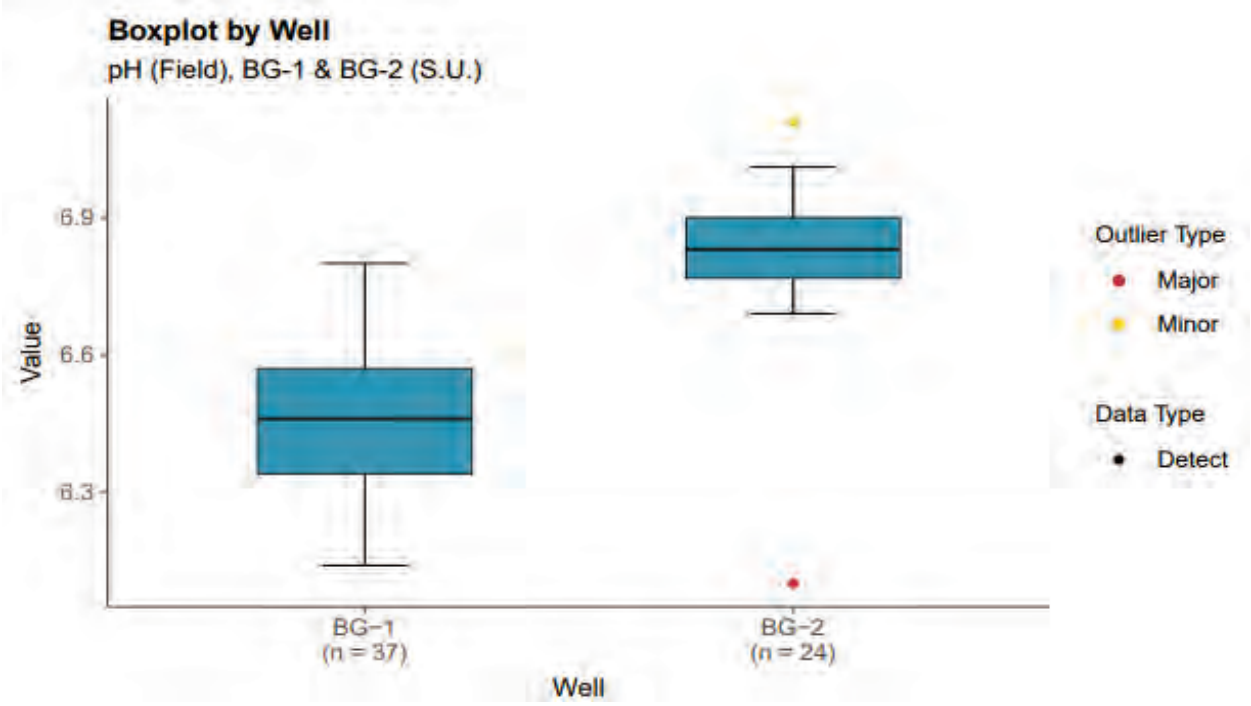


Figure 12. pH (Field) Concentrations (S.U.) Side-by-Side Box Plots by Background Well

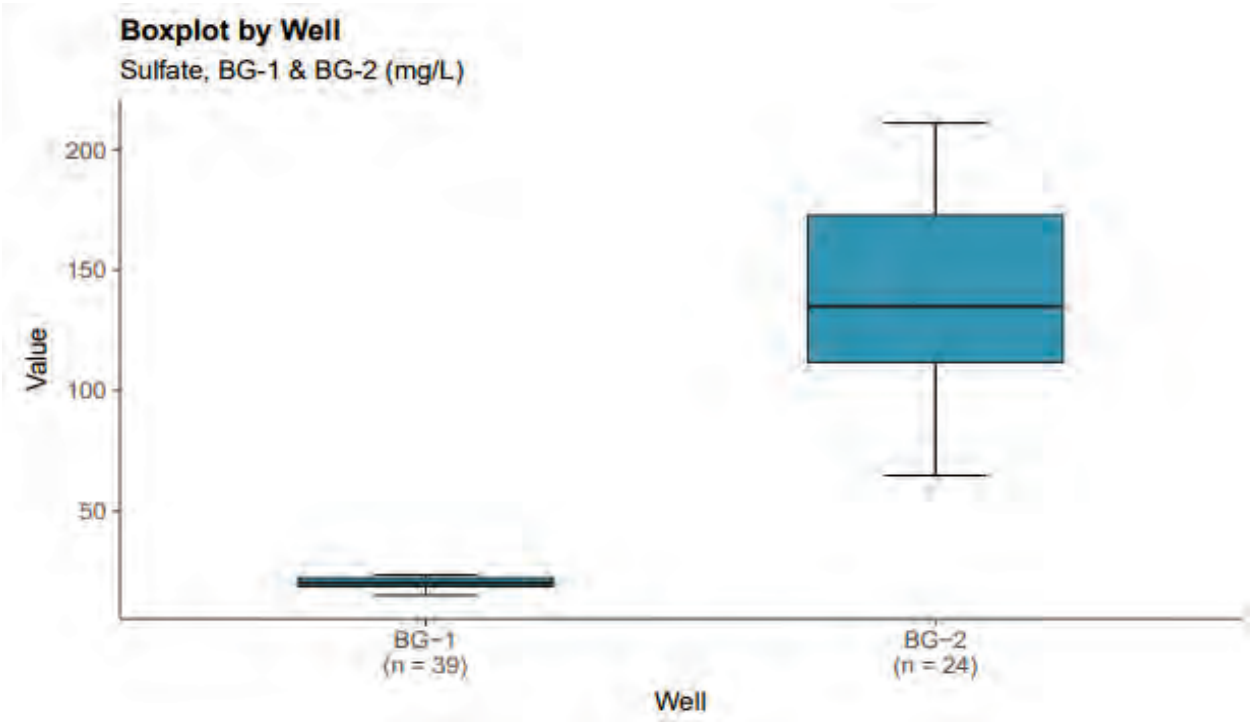


Figure 13. Sulfate Concentrations (mg/L) Side-by-Side Box Plots by Background Well

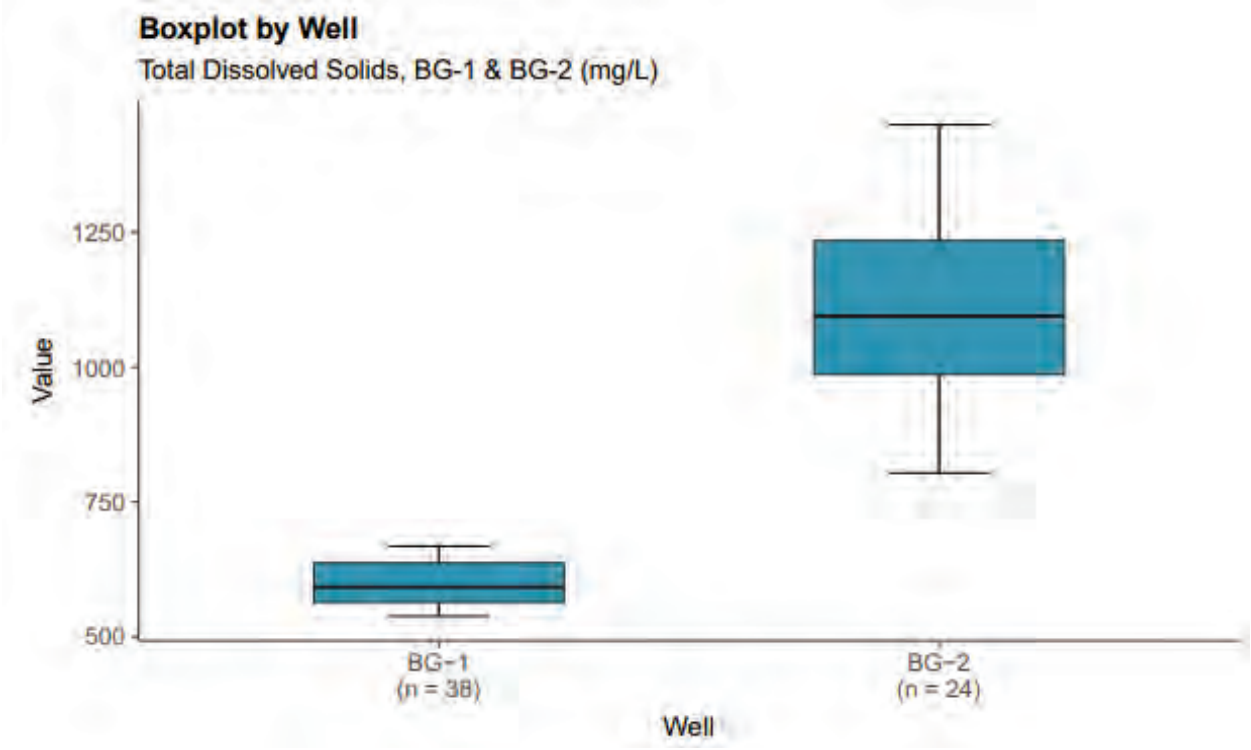


Figure 14. Total Dissolved Solids Concentration (mg/L) Side-by-Side Box Plots by Background Well

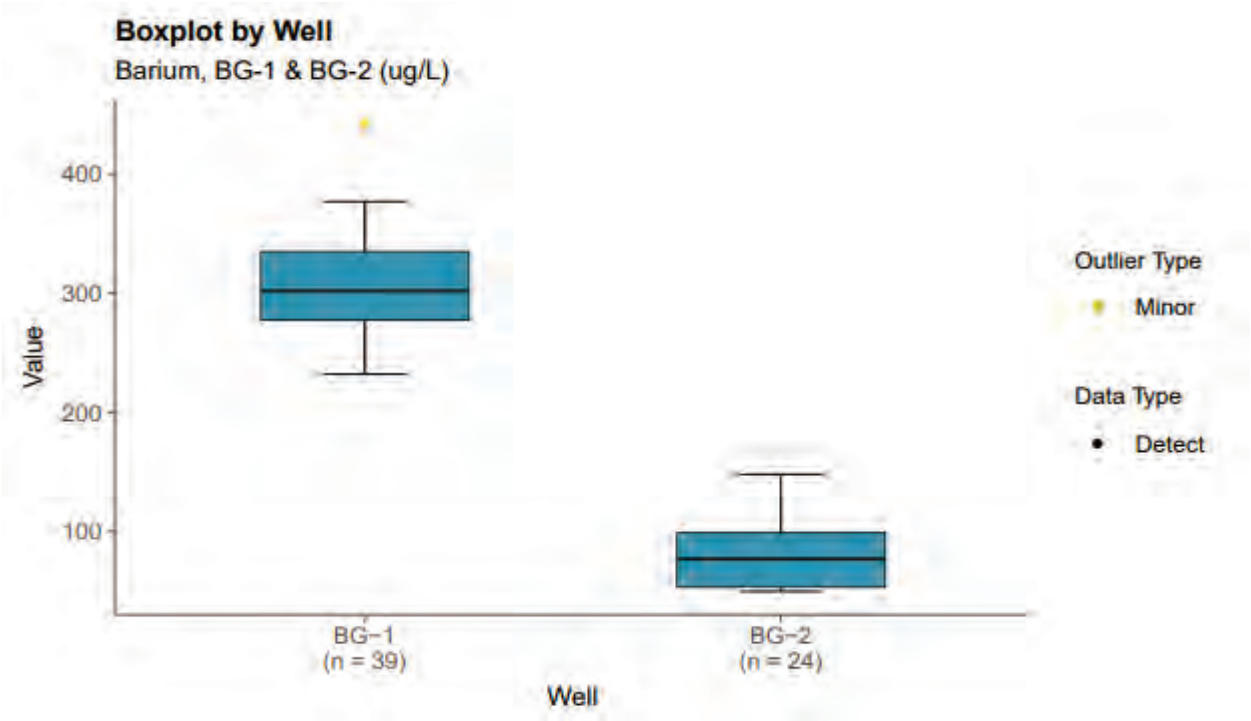


Figure 15. Barium Concentration (ug/L) Side-by-Side Box Plots by Background Well

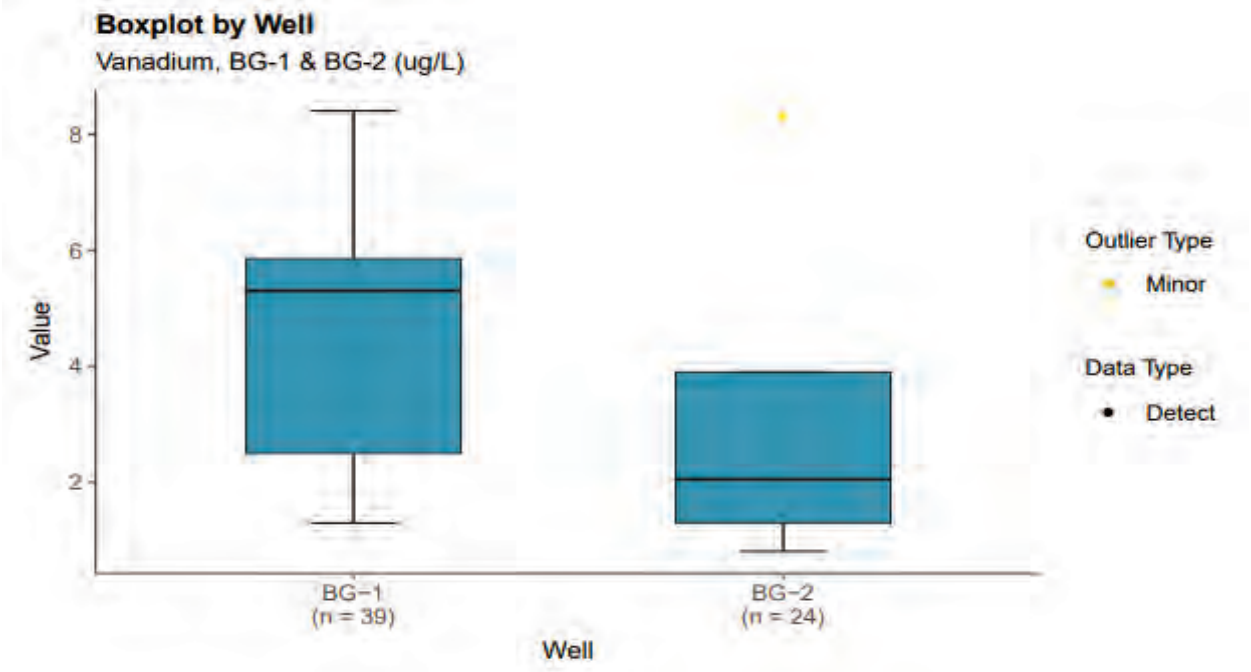


Figure 16. Vanadium Concentration (ug/L) Side-by-Side Box Plots by Background Well

2 Summary of Statistical Analysis

A summary of the statistical analysis results is provided in **Table 8** and **Table 9,** and discussed below.

- Note that for the purposes of the SSI analysis, the BTVs used are from the First Semi-Annual Report evaluation (samples up to April 2024). The PDA results for background statistics have been updated using the Q3 and Q4 sampling results for information purposes.
- The statistical outliers identified for nickel, vanadium, boron, chromium, lithium, selenium, thallium, and total radium are considered representative of background. During the next BTV update, with the addition of the July and October 2024, and January and April 2025 samples, the full datasets will be reassessed for statistical outliers.
- For the background data set, there are currently sufficient data to fit the Appendix III constituents to known parametric distribution models (e.g., gamma, lognormal, or normal) using GOF tests, except for calcium, sulfate, and TDS, which are nonparametric.
- For the background data set, 11 of the 17 Appendix IV constituents exhibited high percentages of NDs and will be treated under nonparametric distribution assumptions with the maximum detected value chosen to represent background, until additional results can be included in the datasets. The datasets for radium-226, radium-228, and total radium are set to nonparametric distribution for inferential purposes in both

background and downgradient datasets. This is because the NDs were not indicated based on the analytical protocols used by the laboratory and some observations had negative values. Currently, the background datasets for boron, chloride, fluoride, and pH can be fit to known parametric distribution models using GOF tests.

- Downgradient samples as of October 2024 were used to evaluate SSIs. The statistically-derived background concentrations and the evaluation for SSIs over background for Appendix I metals, Appendix III, and Appendix IV constituents are included in **Section 4**.
- While multiple statistical outliers have been flagged at the downgradient wells for various constituents, the outliers can indicate contamination from the structural fill or alternative sources. Unless an alternative source can be confirmed, the values remain in the sample as representing downgradient groundwater quality at the time of measurement.

Table 8. Summary of Background Preliminary Data Analysis

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend	Spatial Variability
Appendix I Metals				
Copper		ü		
Nickel	ü	ü		
Silver		ü		
Vanadium	ü	ü		ü
Zinc		ü		
Appendix III Constituents				
Boron	ü		ü	ü
Calcium		ü		ü
Chloride			ü	
Fluoride			ü	ü
pH (field)				ü
Sulfate		ü	ü	ü
Total Dissolved Solids	ü	ü		ü
Appendix IV Constituents				
Antimony		ü		
Arsenic		ü		
Barium		ü	ü	ü
Beryllium		ü		
Cadmium		ü		
Chromium	ü	ü		
Cobalt		ü		
Fluoride			ü	ü
Lead		ü		
Lithium	ü	ü		
Mercury		ü		
Molybdenum		ü		
Radium-226				
Radium-228				
Selenium	ü	ü		
Thallium	ü	ü		
Total Radium	ü			

✓Constituent was flagged during the statistical analysis of pooled wells BG-1 and BG-2

Table 9. Summary of Downgradient Preliminary Data Analysis

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Appendix I Metals			
Copper	MW-2 MW-3 MW-7R MW-8 MW-10 MW-11	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Nickel	MW-2 MW-3 MW-5 MW-7R MW-8 MW-10 MW-11D	MW-1 MW-3 MW-5 MW-6 MW-7R MW-8 MW-11 MW-11D	MW-4 (↑)
Silver		MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Vanadium	MW-2 MW-8 MW-10	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Zinc	MW-2 MW-4 MW-5	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Appendix III Constituents			
Boron	MW-1 MW-4 MW-5 MW-10 MW-11D	MW-1 MW-4 MW-5 MW-6 MW-11D	
Calcium	MW-2 MW-4 MW-8 MW-11 MW-11D	MW-2 MW-4 MW-8 MW-11 MW-11D	MW-3 (↑) MW-5 (↓) MW-7R (↑)
Chloride	MW-2 MW-3 MW-6 MW-7R MW-8 MW-11 MW-11D	MW-2 MW-4 MW-6 MW-7R MW-8	MW-6 (↓) **MW-8 (↓)** **MW-11D (↓)**
Fluoride	MW-2 MW-7R MW-11D	MW-1 MW-2 MW-7R MW-8	MW-1 (↑)
pH (field)	MW-2 MW-3 MW-5 MW-7R MW-11	MW-2 MW-3 MW-5 MW-6 MW-7R MW-11	MW-2 (↓) MW-4 (↓) MW-8 (↑) MW-11D (↓)
Sulfate	MW-6 MW-7R MW-11D	MW-1 MW-2 MW-3 MW-4 MW-6 MW-7R	MW-1 (↓) MW-2 (↓) MW-3 (↓) MW-6 (↓) MW-7R (↓) MW-8 (↑) MW-10 (↓)
Total Dissolved Solids	MW-2 MW-3 MW-4 MW-5 MW-11 MW-11D	MW-2 MW-3 MW-4 MW-5 MW-8 MW-11	MW-7R (↑) MW-11D (↓)
Appendix IV Constituents			
Antimony		MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Arsenic	MW-10	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11	MW-11D (↓)
Barium	MW-7R MW-8 MW-10 MW-11	MW-2 MW-4 MW-6 MW-7R MW-8 MW-11	MW-2 (↑) MW-6 (↓) MW-7R (↑) MW-10 (↑)
Beryllium		MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Cadmium	MW-1	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Chromium	MW-2 MW-3 MW-5 MW-7R MW-10	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-11 MW-11D	

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Cobalt	MW-2	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Fluoride	MW-2 MW-7R MW-11D	MW-1 MW-2 MW-7R MW-8	MW-1 (↑)
Lead		MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Lithium	MW-2 MW-3 MW-4 MW-5 MW-7R MW-11 MW-11D	MW-2 MW-3 MW-4 MW-5 MW-11	MW-4 (↑) MW-5 (↑)MW-6 (↓) MW-10 (↑) MW-11D (↓)
Mercury		MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Molybdenum	MW-2 MW-3 MW-11D	MW-1 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-11	MW-2 (↓) MW-10 (↓) MW-11D (↓)

Constituent	Statistical Outlier	Nonparametric Data Distribution	Trend
Radium-226	MW-8	MW-7R	
Radium-228	MW-8 MW-11 MW-11D	MW-8 MW-11	
Selenium		MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Thallium	MW-2 MW-6	MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7R MW-8 MW-10 MW-11 MW-11D	
Total Radium	MW-1 MW-8 MW-11	MW-8	MW-11D (↓)

3 Evaluation for SSIs over Background

The background threshold values (BTVs) developed during the First Semi-annual Report for Appendix I metals, Appendix III, and Appendix IV constituents at the site are used to determine if concentrations for Appendix I metals, Appendix III, and Appendix IV constituents as of the October 2024 sampling round are SSIs. BTVs are estimated based on data available as of April 2024.

For constituents that have all ND background values, the maximum MDL is chosen to represent background and the double quantification rule (DQR) is used to evaluate whether or not there is an SSI. The BTV provided for detection monitoring constituents is the statistically-derived background concentration (i.e., upper prediction limit [UPL]), the maximum detected value, or the maximum MDL depending on the level of censorship in each of the background samples. For pH (field), both the UPL and the lower prediction limit (LPL) were computed as pH values above or below the prediction limits at the downgradient wells can be considered statistically significant. The test significance level per constituent has been estimated such that the cumulative false positive rate over all constituent-well pair comparisons is approximately ten percent.

The number of verification samples per constituent has been selected to provide sufficient statistical power to detect an SSI conditional to the background sample size, its distributional properties, and the total number of statistical test comparisons. The calculated background concentrations, or BTVs, for each detection monitoring constituent is provided below in **Table 10**.

Table 10. Background Concentrations for Detection Monitoring Constituents

Constituent	Unit	No. of Verification Samples.	BTV (UPL)
Appendix I Metals			
Copper	ug/L	2	7.10
Nickel	ug/L	2	4.20
Silver	ug/L	DQR	*2.50*
Vanadium	ug/L	2	8.30
Zinc	ug/L	2	32.4
Appendix III Constituents			
Boron	ug/L	2	36.2
Calcium	ug/L	2	124,000
Chloride	mg/L	1	325
Fluoride	mg/L	1	0.334
pH (Field)	S.U.	1	5.59-7.59*
Sulfate	mg/L	2	204
Total Dissolved Solids	mg/L	2	1,270
Appendix IV Constituents			
Antimony	ug/L	2	0.790
Arsenic	ug/L	2	8.80
Barium	ug/L	2	377
Beryllium	ug/L	DQR	*0.700*
Cadmium	ug/L	2	0.500
Chromium	ug/L	2	7.20
Cobalt	ug/L	2	2.30
Fluoride	mg/L	1	0.334
Lead	ug/L	2	14.1
Lithium	ug/L	2	43.7
Mercury	ug/L	2	0.170
Molybdenum	ug/L	2	13.6
Radium-226	pCi/L	2	0.800
Radium-228	pCi/L	2	1.35
Selenium	ug/L	2	6.00
Thallium	ug/L	2	13.7
Total Radium	pCi/L	2	2.09

Note:
Values are recorded with three significant figures for the sake of consistency. The laboratory reported values with varying significant figures.
* indicates the lower bound of the pH range is the lower prediction limit (LPL). The upper bound is the UPL.
Italic concentration indicates a non-detect value and that the DQR is recommended for statistical evaluation.

Downgradient sampling results from the October 2024 detection monitoring event were used to test for SSIs. For constituents that have all ND background values, the DQR is applied (an SSI is registered for the well-constituent pair if the downgradient concentrations exhibit detects in two consecutive sampling events). Downgradient sampling results from the July 2024 and October 2024 sampling events were used to test for SSIs for constituents that have all ND background values. Downgradient concentrations were compared to the BTVs and are summarized below in **Table 11** through **Table 13.** Eight monitoring wells (MW-1 through MW-8) were installed and sampled (October 2015) prior to ash placement, thus representing pre-ash conditions at the site. The range of the concentrations of the pre-ash conditions are included in the tables below as a relative comparison to the current downgradient conditions.

Table 11. Summary of Evaluation for SSIs over Background for Appendix I Metals (Detection Monitoring)

	Appendix I Metals				
	Copper	**Nickel**	**Silver**	**Vanadium**	**Zinc**
Unit	ug/L	ug/L	ug/L	ug/L	ug/L
BTV (UPL)	7.10	4.20	*2.50 (DQR)*	8.30	32.4
Pre-Ash Range	2.50 - 16.4	2.50 - 18.2	2.50 - 2.50	2.50 - 9.90	5.00 - 106
Second Detection Monitoring Round Results					
MW-1	0.860	*0.880*	**1.00**	2.10	5.00
MW-2	6.20	**5.00**	*0.490*	*1.60*	1.590
MW-3	2.50	1.80	*0.490*	2.30	*3.00*
MW-4	*0.620*	**10.0**	*0.490*	*1.60*	7.40
MW-5	1.50	1.20	*0.490*	*1.60*	6.80
MW-6	0.640	1.80	*0.490*	*1.60*	3.60
MW-7R	0.990	1.00	*0.490*	3.20	5.40
MW-8	0.760	1.40	*0.490*	*1.60*	3.20
MW-10	*0.620*	1.10	*0.490*	*1.60*	*3.00*
MW-11	1.00	1.40	*0.490*	*1.60*	3.10
MW-11D	*0.620*	*0.880*	*0.490*	*1.60*	*3.00*

Notes:
Underlined concentration indicates a detect value for constituents with 100 percent background non-detects.
Bold and underlined concentration indicates an SSI over background.
Italic concentration indicates a non-detect value.

Table 12. Summary of Evaluation for SSIs over Background for Appendix III Constituents (Detection Monitoring)

	Appendix III Constituents						
	Boron	**Calcium**	**Chloride**	**Fluoride**	**pH (Field)**	**Sulfate**	**TDS**
Unit	ug/L	ug/L	mg/L	mg/L	S.U.	mg/L	mg/L
BTV (UPL)	36.2	124,000	325	0.334	5.59 - 7.59**	204	1,270
Pre-Ash Range	6.20 - 53.1	16,900 - 185,000	22.2 - 1,160	0.0200 - 0.590	6.17 - 7.70	3.70 - 199	296 - 2,770
Second Detection Monitoring Round Results							
MW-1	13.7	**192000**	**657**	0.18	6.86	6.3	**1540**
MW-2	**38.6**	**151000**	**880**	0.23	**7.67**	87.4	**2160**
MW-3	**41.9**	**182000**	**901**	0.31	7.58	13	**2300**
MW-4	*7.5*	59700	315	**0.5**	6.35	10.7	1160
MW-5	10.4	9070	19.6	**0.62**	7.35	3.5	214
MW-6	8.3	35900	180	**0.4**	6.43	27.6	600
MW-7R	9.8	98500	263	0.16	**7.6**	14.5	948
MW-8	10.8	113000	**380**	0.11	7.09	7	1080
MW-10	28.2	22100	30.4	**0.48**	**7.98**	2	354
MW-11	17.9	26300	127	0.19	6.75	2.3	426
MW-11D	**46.3**	16400	57.1	**0.48**	**8.41**	15.3	322

Notes:
** indicates the lower bound of the pH range is the LPL. The upper bound is the UPL
Underlined concentration indicates a detect value for constituents with 100 percent background non-detects.
Bold and underlined concentration indicates an SSI over background.
Italic concentration indicates a non-detect value.

Table 13. Summary of Evaluation for SSIs over Background for Appendix IV Constituents (Detection Monitoring)

	Appendix IV Constituents																
	Antimony	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Fluoride**	**Lead**	**Lithium**	**Mercury**	**Molybdenum**	**Radium-226**	**Radium-228**	**Selenium**	**Thallium**	**Total Radium**
Unit	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	pCi/L	pCi/L	ug/L	ug/L	pCi/L
BTV (UPL)	0.790	8.80	377	*0.700 (DQR)*	0.500	7.20	2.30	0.334	14.1	43.7	0.170	13.6	0.800	1.35	6.00	13.7	2.09
Pre-Ash Range	3.80 - 12.0	2.50 - 2.50	117 - 1,240	0.500 - 0.500	0.500 - 0.500	2.50 - 33.9	2.50 - 7.00	0.0200 - 0.590	2.50 - 6.30	7.50 - 70.4	0.100 - 0.100	2.50 - 20.6	0.0774 - 0.820	0.0230 - 1.56	5.00 - 5.00	5.00 - 5.00	0.304 - 2.93
Second Detection Monitoring Round Results																	
MW-1	*3.60*	2.50	238	*0.160*	*0.290*	0.760	*0.440*	0.180	*13.7*	36.4	*0.12*	*2.6*	0.063	0.477	*4.10*	*0.028*	0.54
MW-2	*3.60*	*2.50*	278	*0.160*	**0.680**	4.30	**3.20**	0.230	*13.7*	**126**	*0.12*	5.3	0.484	0.843	*4.10*	0.091	1.33
MW-3	*3.60*	2.50	**768**	*0.160*	*0.290*	1.10	*0.440*	0.310	*13.7*	**84**	*0.12*	7.3	0.668	**1.61**	*4.10*	*0.028*	**2.28**
MW-4	*3.60*	*2.50*	361	*0.160*	*0.290*	*0.630*	**14.60**	**0.500**	*13.7*	40.7	*0.12*	*2.6*	0.233	0.0941	*4.10*	*0.028*	0.327
MW-5	*3.60*	*2.50*	83.2	*0.160*	*0.290*	0.920	*0.440*	**0.620**	*13.7*	9.9	*0.12*	*2.6*	0.574	0.658	*4.10*	*0.028*	1.23
MW-6	*3.60*	*2.50*	47.2	*0.160*	*0.290*	*0.630*	*0.440*	**0.400**	*13.7*	24.2	*0.12*	*2.6*	0.169	1.07	*4.10*	*0.028*	1.24
MW-7R	*3.60*	*2.50*	329	*0.160*	*0.290*	2.30	*0.440*	0.160	*13.7*	28.2	*0.12*	*2.6*	0.0614	0.958	*4.10*	*0.028*	1.02
MW-8	*3.60*	*2.50*	**1110**	*0.160*	*0.290*	1.20	*0.440*	0.110	*13.7*	29.5	*0.12*	*2.6*	0.219	1.00	*4.10*	*0.028*	1.22
MW-10	*3.60*	2.70	92.3	*0.160*	*0.290*	0.960	*0.440*	**0.480**	*13.7*	5.6	*0.12*	**20.2**	0.316	0.711	*4.10*	*0.028*	1.03
MW-11	*3.60*	*2.50*	35.5	*0.160*	*0.290*	0.780	0.530	0.190	*13.7*	8.3	*0.12*	*2.6*	0.351	1.08	*4.10*	*0.028*	1.43
MW-11D	*3.60*	3.50	119	*0.160*	*0.290*	*0.630*	*0.440*	**0.480**	*13.7*	16.0	*0.12*	4.00	0.692	0.655	*4.10*	*0.028*	1.35

Notes:
Underlined concentration indicates a detect value for constituents with 100 percent background non-detects.
Bold and underlined concentration indicates an SSI over background.
Italic concentration indicates a non-detect value.

This page intentionally left blank.

SSIs were found for two Appendix I metals (nickel and silver), six Appendix III constituents (boron, calcium, chloride, fluoride, pH [field], and TDS), and eight Appendix IV constituents (barium, cadmium, cobalt, fluoride, lithium, molybdenum, radium-228, and total radium). Of the two constituents that use the DQR, neither silver nor beryllium had two consecutive detects.

When the October 2024 sampling event results are compared to the pre-ash sampling results from the eleven downgradient wells, current downgradient groundwater constituent concentrations are generally similar to concentrations reported prior to ash placement. In some cases, the BTV is not contained within the pre-ash placement range indicating that natural variability may lie beyond what was captured prior to the ash placement. Depending on the data distribution of the constituent, the BTVs have been computed to allow for one to two verification samples, should an opportunity for additional sampling take place. The validity of the initial exceedance can be confirmed by verification sampling; however, for practical purposes, should a sampling event of interest exceed the respective BTV, the event is considered an SSI.

This page intentionally left blank.

A

Appendix A – Background Wells BG-1 and BG-2 Tables

This page intentionally left blank.

Table 1: Summary Statistics, Non-Detects Included

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	63	53	84%	2015-10-15 to 2024-10-29	Lognormal	Nonparametric	2.95	2.50	0.620	11.4	1.74	0.592	2.11	8.22
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	63	49	78%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	2.55	2.50	0.420	14.1	1.80	0.708	4.24	27.1
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	63	63	100%	2015-10-15 to 2024-10-29		Nonparametric	1.98	2.50	0.0700	2.50	0.851	0.430	-1.11	-0.569
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	3.87	3.90	0.810	8.40	1.97	0.510	0.247	-0.904
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	63	50	79%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	8.25	8.40	3.00	34.2	5.63	0.682	2.90	11.2
2_105	BG-1 & BG-2	App. III	Boron	ug/L	62	29	47%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	9.64	7.85	0.570	56.5	8.96	0.930	2.85	12.1
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	63	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	59021	29500	20300	124000	42314	0.717	0.544	-1.66
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	237	239	149	311	37.6	0.159	-0.204	-0.658
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	0.191	0.190	0.100	0.410	0.0616	0.322	1.28	2.09
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	61	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	6.60	6.60	6.10	7.11	0.245	0.0372	-0.0658	-0.883
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	66.2	22.6	15.1	211	64.5	0.974	0.982	-0.541
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	62	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	792	646	538	1450	270	0.340	0.886	-0.646
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	63	62	98%	2015-10-15 to 2024-10-29		Nonparametric	3.57	3.60	0.200	5.50	0.976	0.273	-0.131	2.79
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	63	58	92%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	4.50	4.70	0.360	34.0	4.00	0.889	6.62	49.3
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	63	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	221	265	49.5	443	118	0.533	-0.299	-1.48
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	63	63	100%	2015-10-15 to 2024-10-29		Nonparametric	0.420	0.500	0.0500	0.700	0.228	0.544	-0.0617	-1.61
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	63	61	97%	2015-10-15 to 2024-10-29		Nonparametric	0.398	0.400	0.0600	0.500	0.0956	0.240	-1.31	3.13
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	63	54	86%	2015-10-15 to 2024-10-29	Lognormal	Nonparametric	2.75	2.50	0.500	26.5	3.28	1.19	6.30	45.6
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	63	54	86%	2015-10-15 to 2024-10-29	Gamma; Normal	Nonparametric	2.19	2.50	0.0650	3.60	1.14	0.523	-0.129	-1.38
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	0.191	0.190	0.100	0.410	0.0616	0.322	1.28	2.09
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	63	60	95%	2015-10-15 to 2024-10-29		Nonparametric	3.39	2.50	0.0770	14.1	2.68	0.790	2.87	9.39
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	63	3	5%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	18.8	17.5	0.390	51.1	7.85	0.417	1.41	5.69
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	63	55	87%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.114	0.120	0.0900	0.200	0.0185	0.163	2.14	7.29
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	63	49	78%	2015-10-15 to 2024-10-29	Gamma; Normal	Nonparametric	3.86	2.60	0.170	16.0	2.91	0.756	2.40	6.35
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	60	0	0%	2015-10-15 to 2024-10-29	Normal	Nonparametric	0.193	0.183	-0.780	1.22	0.339	1.76	-0.0729	1.61
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	60	0	0%	2015-10-15 to 2024-10-29	Normal	Nonparametric	0.588	0.562	-0.271	1.96	0.387	0.658	0.753	1.68
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	63	60	95%	2015-10-15 to 2024-10-29		Nonparametric	4.50	4.70	0.0730	6.00	0.908	0.202	-3.75	16.9
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	63	60	95%	2015-10-15 to 2024-10-29		Nonparametric	0.736	0.0500	0.0200	13.7	2.21	3.01	4.03	19.2
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	60	0	0%	2015-10-15 to 2024-10-29	Normal	Nonparametric	0.839	0.808	0	2.59	0.478	0.569	0.986	2.21

[a] Non-detects are excluded from goodness-of-fit tests.

Table 2: Summary Statistics, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	63	53	84%	2015-10-15 to 2024-10-29	Lognormal	Nonparametric	3.56	1.35	0.640	11.4	3.74	1.05	1.21	0.495
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	63	49	78%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	3.0	1.90	0.980	14.1	3.36	1.12	3.17	10.8
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	5.43	5.60	0.810	8.40	1.75	0.323	-1.38	2.64
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	63	50	79%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	13.1	10.0	3.30	34.2	9.94	0.757	1.36	1.16
2_105	BG-1 & BG-2	App. III	Boron	ug/L	62	29	47%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	14.0	12.9	5.50	56.5	10.1	0.722	2.68	9.51
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	63	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	59021	29500	20300	124000	42314	0.717	0.544	-1.66
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	237	239	149	311	37.6	0.159	-0.204	-0.658
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	0.191	0.190	0.100	0.410	0.0616	0.322	1.28	2.09
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	61	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	6.60	6.60	6.10	7.11	0.245	0.0372	-0.0658	-0.883
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	66.2	22.6	15.1	211	64.5	0.974	0.982	-0.541
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	62	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	792	646	538	1450	270	0.340	0.886	-0.646
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	63	62	98%	2015-10-15 to 2024-10-29		Nonparametric	0.790	0.790	0.790	0.790	NA	NA	NA	NA
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	63	58	92%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	4.03	4.80	0.360	8.80	3.54	0.876	0.241	-1.40
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	63	0	0%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	221	265	49.5	443	118	0.533	-0.299	-1.48
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	63	61	97%	2015-10-15 to 2024-10-29		Nonparametric	0.450	0.450	0.400	0.500	0.0707	0.157	NA	NA
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	63	54	86%	2015-10-15 to 2024-10-29	Lognormal	Nonparametric	4.84	1.70	0.650	26.5	8.36	1.73	2.72	7.57
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	63	54	86%	2015-10-15 to 2024-10-29	Gamma; Normal	Nonparametric	1.18	1.10	0.0650	2.30	0.638	0.543	0.210	0.965
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	63	0	0%	2015-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	0.191	0.190	0.100	0.410	0.0616	0.322	1.28	2.09
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	63	60	95%	2015-10-15 to 2024-10-29		Nonparametric	6.89	5.60	0.970	14.1	6.66	0.967	0.839	NA
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	63	3	5%	2015-10-15 to 2024-10-29	Nonparametric	Nonparametric	19.7	17.8	11.9	51.1	6.99	0.355	2.52	8.09
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	63	55	87%	2015-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.144	0.140	0.0900	0.200	0.0325	0.226	0.153	0.996
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	63	49	78%	2015-10-15 to 2024-10-29	Gamma; Normal	Nonparametric	6.47	5.85	0.170	13.6	3.85	0.595	0.312	-0.615
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	60	0	0%	2015-10-15 to 2024-10-29	Normal	Nonparametric	0.193	0.183	-0.780	1.22	0.339	1.76	-0.0729	1.61
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	60	0	0%	2015-10-15 to 2024-10-29	Normal	Nonparametric	0.588	0.562	-0.271	1.96	0.387	0.658	0.753	1.68
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	63	60	95%	2015-10-15 to 2024-10-29		Nonparametric	2.05	0.0890	0.0730	6.00	3.42	1.66	1.73	NA
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	63	60	95%	2015-10-15 to 2024-10-29		Nonparametric	4.61	0.0600	0.0570	13.7	7.88	1.71	1.73	NA
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	60	0	0%	2015-10-15 to 2024-10-29	Normal	Nonparametric	0.839	0.808	0	2.59	0.478	0.569	0.986	2.21

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	63	53	84%	0.788	0.010	0.318	0.005	0.863	0.082	0.247	0.086	0.292	0.01 <= p < 0.05	0.779	0.01 <= p < 0.05	1.083	Lognormal	Nonparametric
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	63	49	78%	0.562	0.000	0.289	0.002	0.876	0.052	0.177	0.279	0.229	0.05 <= p < 0.10	1.107	< 0.01	0.694	Gamma; Lognormal	Nonparametric
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	63	63	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	0.806	0.000	0.282	0.000	0.607	0.000	0.384	0.000	0.360	< 0.01	3.930	< 0.01	0.557	Nonparametric	Nonparametric
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	63	50	79%	0.824	0.013	0.233	0.053	0.950	0.606	0.128	0.814	0.146	>= 0.10	0.362	>= 0.10	0.740	Gamma; Lognormal; Normal	Nonparametric
2_105	BG-1 & BG-2	App. III	Boron	ug/L	62	29	47%	0.716	0.000	0.200	0.002	0.921	0.019	0.143	0.083	0.148	0.05 <= p < 0.10	1.019	0.01 <= p < 0.05	0.571	Gamma; Lognormal	Gamma
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	63	0	0%	0.723	0.000	0.328	0.000	0.759	0.000	0.280	0.000	0.302	< 0.01	7.452	< 0.01	0.719	Nonparametric	Nonparametric
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	63	0	0%	0.981	0.449	0.085	0.312	0.966	0.076	0.109	0.062	0.104	0.05 <= p < 0.10	0.607	>= 0.10	0.166	Gamma; Lognormal; Normal	Normal
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	63	0	0%	0.902	0.000	0.143	0.003	0.975	0.234	0.084	0.330	0.102	>= 0.10	0.773	0.01 <= p < 0.05	0.299	Gamma; Lognormal	Gamma
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	61	0	0%	0.977	0.293	0.095	0.192	0.976	0.268	0.098	0.152	0.099	>= 0.10	0.548	>= 0.10	0.037	Gamma; Lognormal; Normal	Normal
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	63	0	0%	0.740	0.000	0.365	0.000	0.762	0.000	0.345	0.000	0.361	< 0.01	7.161	< 0.01	0.951	Nonparametric	Nonparametric
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	62	0	0%	0.818	0.000	0.291	0.000	0.843	0.000	0.261	0.000	0.274	< 0.01	4.336	< 0.01	0.314	Nonparametric	Nonparametric
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	63	62	98%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	63	58	92%	0.916	0.501	0.226	0.544	0.866	0.249	0.303	0.136	0.296	>= 0.10	0.429	>= 0.10	1.407	Gamma; Lognormal; Normal	Nonparametric
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	63	0	0%	0.867	0.000	0.196	0.000	0.817	0.000	0.278	0.000	0.259	< 0.01	4.560	< 0.01	0.722	Nonparametric	Nonparametric
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	63	63	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	63	61	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.158		Nonparametric
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	63	54	86%	0.547	0.000	0.411	0.000	0.848	0.070	0.308	0.014	0.381	< 0.01	1.117	< 0.01	1.170	Lognormal	Nonparametric
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	63	54	86%	0.933	0.511	0.263	0.073	0.696	0.001	0.322	0.008	0.271	0.05 <= p < 0.10	0.835	0.01 <= p < 0.05	1.039	Gamma; Normal	Nonparametric
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	63	0	0%	0.902	0.000	0.143	0.003	0.975	0.234	0.084	0.330	0.102	>= 0.10	0.773	0.01 <= p < 0.05	0.299	Gamma; Lognormal	Gamma
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	63	60	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.360		Nonparametric
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	63	3	5%	0.752	0.000	0.185	0.000	0.907	0.000	0.147	0.003	0.163	< 0.01	2.153	< 0.01	0.285	Nonparametric	Nonparametric
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	63	55	87%	0.958	0.790	0.204	0.421	0.943	0.643	0.245	0.169	0.230	>= 0.10	0.324	>= 0.10	0.236	Gamma; Lognormal; Normal	Nonparametric
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	63	49	78%	0.974	0.923	0.110	0.919	0.758	0.002	0.249	0.018	0.177	>= 0.10	0.476	>= 0.10	1.095	Gamma; Normal	Nonparametric
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	60	0	0%	0.973	0.196	0.084	0.358	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	60	0	0%	0.967	0.100	0.073	0.602	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	63	60	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.490		Nonparametric
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	63	60	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		3.150		Nonparametric
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	60	0	0%	0.947	0.011	0.078	0.483	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 4: Autocorrelation Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	63	53	84%	0.374	0.173	
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	63	49	78%	0.010	0.968	
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	0.125	0.485	
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	63	50	79%	-0.051	0.836	
2_105	BG-1 & BG-2	App. III	Boron	ug/L	62	29	47%	0.318	0.056	
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	63	0	0%	-0.543	0.000	***
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	63	0	0%	0.077	0.531	
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	63	0	0%	0.485	0.000	***
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	61	0	0%	-0.495	0.000	***
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	63	0	0%	-0.324	0.008	**
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	62	0	0%	-0.476	0.000	***
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	63	62	98%	NA	NA	
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	63	58	92%	0.056	0.868	
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	63	0	0%	-0.189	0.125	
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	63	61	97%	-0.500	0.157	
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	63	54	86%	-0.179	0.530	
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	63	54	86%	-0.204	0.474	
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	63	0	0%	0.485	0.000	***
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	63	60	95%	-0.019	0.959	
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	63	3	5%	0.249	0.048	*
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	63	55	87%	0.029	0.923	
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	63	49	78%	0.616	0.011	*
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	60	0	0%	0.137	0.278	
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	60	0	0%	0.152	0.228	
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	63	60	95%	-0.165	0.651	
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	63	60	95%	-0.167	0.648	
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	60	0	0%	0.247	0.050	*

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 5: Outlier Counts by Date

Date	Count
2016-02-16	1
2016-04-05	1
2019-10-14	1
2021-04-12	2
2022-07-11	2
2022-10-17	2
2023-01-24	2
2023-04-24	1
2023-04-27	1
2024-01-23	1
2024-04-01	1

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
1_117	BG-1	App. I Metals	Nickel	ug/L	63	49	78%	14	2022-10-17	1	14.1
1_127	BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	28	2023-04-24	1	0.810
1_127	BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	28	2023-01-24	1	1.10
1_127	BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	28	2022-07-11	1	1.40
1_127	BG-1	App. I Metals	Vanadium	ug/L	63	35	56%	28	2023-01-24	1	8.40
1_127	BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	28	2019-10-14	1	8.30
2_105	BG-1	App. III	Boron	ug/L	62	29	47%	33	2021-04-12	1	56.5
2_105	BG-2	App. III	Boron	ug/L	62	29	47%	33	2021-04-12	1	36.2
3_109	BG-1	App. IV	Chromium	ug/L	63	54	86%	9	2022-10-17	1	26.5
3_114	BG-1	App. IV	Lithium	ug/L	63	3	5%	60	2024-01-23	1	51.1
3_114	BG-1	App. IV	Lithium	ug/L	63	3	5%	60	2023-04-27	1	43.7
3_114	BG-1	App. IV	Lithium	ug/L	63	3	5%	60	2016-04-05	NA	36.8
3_121	BG-1	App. IV	Selenium	ug/L	63	60	95%	3	2024-04-01	1	6.00
3_124	BG-1	App. IV	Thallium	ug/L	63	60	95%	3	2016-02-16	NA	13.7
3_126	BG-1	App. IV	Total Radium	pCi/L	60	0	0%	60	2022-07-11	1	2.59

Table 7: Seasonality Tests

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	84%	16	16	15	16	63	0.307	0.125	0.463	0	3	2	5	10	0.425	0.315	0.411
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	78%	16	16	15	16	63	0.780	0.439	0.793	3	2	6	3	14	0.631	0.233	0.314
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	100%	16	16	15	16	63	0.851	0.863	0.630	NA	NA	NA	NA	NA	NA	NA	NA
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	56%	16	16	15	16	63	0.694	0.636	0.647	7	6	7	8	28	0.811	0.713	0.725
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	79%	16	16	15	16	63	0.780	0.634	0.747	2	6	3	2	13	0.691	0.597	0.719
2_105	BG-1 & BG-2	App. III	Boron	ug/L	47%	15	16	15	16	62	0.911	0.542	0.937	7	8	8	10	33	0.832	0.240	0.526
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	0%	16	16	15	16	63	0.764	0.964	0.984	16	16	15	16	63	0.764	0.964	0.984
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	0%	16	16	15	16	63	0.732	0.642	0.598	16	16	15	16	63	0.732	0.642	0.598
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	0%	16	16	15	16	63	0.885	0.905	0.948	16	16	15	16	63	0.885	0.905	0.948
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	0%	16	15	15	15	61	0.335	0.349	0.345	16	15	15	15	61	0.335	0.349	0.345
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	0%	16	16	15	16	63	0.848	0.754	0.951	16	16	15	16	63	0.848	0.754	0.951
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	0%	16	15	15	16	62	0.588	0.680	0.767	16	15	15	16	62	0.588	0.680	0.767
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	98%	16	16	15	16	63	0.525	0.099	0.083	0	1	0	0	1	NA	NA	NA
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	92%	16	16	15	16	63	0.932	0.437	0.412	1	3	1	0	5	0.766	0.912	0.716
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	0%	16	16	15	16	63	0.745	0.917	0.955	16	16	15	16	63	0.745	0.917	0.955
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	100%	16	16	15	16	63	0.851	0.846	0.792	NA	NA	NA	NA	NA	NA	NA	NA
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	97%	16	16	15	16	63	0.751	0.713	0.385	1	0	0	1	2	0.317	NA	NA
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	86%	16	16	15	16	63	0.655	0.245	0.560	3	2	1	3	9	0.849	0.500	0.595
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	86%	16	16	15	16	63	0.881	0.910	0.894	2	3	3	1	9	0.617	0.826	0.775
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	0%	16	16	15	16	63	0.885	0.905	0.948	16	16	15	16	63	0.885	0.905	0.948
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	95%	16	16	15	16	63	0.099	0.009 **	0.026 *	0	1	1	1	3	0.368	NA	NA
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	5%	16	16	15	16	63	0.054	0.176	0.028 *	13	16	15	16	60	0.245	0.472	0.380
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	87%	16	16	15	16	63	0.877	0.798	0.841	3	1	3	1	8	0.529	0.843	0.845
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	78%	16	16	15	16	63	0.264	0.121	0.147	3	4	4	3	14	0.143	0.118	0.251
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	0%	16	15	15	14	60	0.032 *	0.079	NA	16	15	15	14	60	0.032 *	0.079	NA
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	0%	16	15	15	14	60	0.928	0.984	NA	16	15	15	14	60	0.928	0.984	NA
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	95%	16	16	15	16	63	0.428	0.685	0.206	0	3	0	0	3	NA	NA	NA
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	95%	16	16	15	16	63	0.387	0.771	0.908	1	2	0	0	3	0.221	0.000 ***	0.005 **
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	0%	16	15	15	14	60	0.508	0.562	NA	16	15	15	14	60	0.508	0.562	NA

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 8: Spatial Variability Tests

						Full									Without Non-Detects							
						Sample Size			p-Value						Sample Size			p-Value				
ID	Well	Constituent Type	Constituent	Unit	% NDs	BG-1	BG-2	Total	Kruskal-Wallis		ANOVA		Log ANOVA		BG-1	BG-2	Total	Kruskal-Wallis		ANOVA		Log ANOVA	
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	84%	39	24	63	0.369		0.242		0.734		5	5	10	0.754		0.588		0.805	
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	78%	39	24	63	0.711		0.723		0.974		7	7	14	0.609		0.497		0.942	
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	100%	39	24	63	0.229		0.235		0.303		NA	NA	NA	NA		NA		NA	
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	56%	39	24	63	0.000	***	0.000	***	0.000	***	24	4	28	0.100		0.001	***	0.000	***
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	79%	39	24	63	0.028	*	0.067		0.039	*	7	6	13	0.116		0.390		0.222	
2_105	BG-1 & BG-2	App. III	Boron	ug/L	47%	39	23	62	0.000	***	0.003	**	0.001	***	16	17	33	0.000	***	0.039	*	0.000	***
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	0%	39	24	63	0.000	***	0.000	***	0.000	***	39	24	63	0.000	***	0.000	***	0.000	***
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	0%	39	24	63	0.033	*	0.026	*	0.014	*	39	24	63	0.033	*	0.026	*	0.014	*
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	0%	39	24	63	0.000	***	0.000	***	0.000	***	39	24	63	0.000	***	0.000	***	0.000	***
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	0%	37	24	61	0.000	***	0.000	***	0.000	***	37	24	61	0.000	***	0.000	***	0.000	***
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	0%	39	24	63	0.000	***	0.000	***	0.000	***	39	24	63	0.000	***	0.000	***	0.000	***
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	0%	38	24	62	0.000	***	0.000	***	0.000	***	38	24	62	0.000	***	0.000	***	0.000	***
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	98%	39	24	63	0.146		0.530		0.328		1	0	1	NA		NA		NA	
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	92%	39	24	63	0.988		0.235		0.634		3	2	5	0.564		0.642		0.614	
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	0%	39	24	63	0.000	***	0.000	***	0.000	***	39	24	63	0.000	***	0.000	***	0.000	***
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	100%	39	24	63	0.662		0.498		0.300		NA	NA	NA	NA		NA		NA	
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	97%	39	24	63	0.025	*	0.052		0.185		1	1	2	0.317		NA		NA	
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	86%	39	24	63	0.581		0.362		0.373		6	3	9	0.439		0.414		0.332	
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	86%	39	24	63	0.983		0.984		0.847		3	6	9	0.435		0.218		0.162	
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	0%	39	24	63	0.000	***	0.000	***	0.000	***	39	24	63	0.000	***	0.000	***	0.000	***
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	95%	39	24	63	0.621		0.181		0.275		0	3	3	NA		NA		NA	
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	5%	39	24	63	0.237		0.110		0.273		38	22	60	0.386		0.193		0.215	
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	87%	39	24	63	0.170		0.299		0.262		7	1	8	0.118		0.053		0.111	
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	78%	39	24	63	0.002	**	0.009	**	0.008	**	4	10	14	0.671		0.795		0.474	
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	0%	37	23	60	0.726		0.834		NA		37	23	60	0.726		0.834		NA	
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	0%	37	23	60	0.802		0.472		NA		37	23	60	0.802		0.472		NA	
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	95%	39	24	63	0.006	**	0.178		0.512		2	1	3	0.221		0.665		0.641	
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	95%	39	24	63	0.839		0.054		0.106		2	1	3	1.000		0.667		0.672	
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	0%	37	23	60	0.732		0.468		NA		37	23	60	0.732		0.468		NA	

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 9: Trend Tests: Lognormal MLE and MK

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
2_105	BG-1 & BG-2	App. III	Boron	ug/L	62	29	47%	Parametric	Lognormal MLE	0.000587	0.001	↑
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	63	0	0%	Nonparametric	MK	1.04	0.585	↔
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	63	0	0%	Parametric	Lognormal MLE	-0.0000770	0.000	↓
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	63	0	0%	Parametric	Lognormal MLE	0.000257	0.000	↑
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	61	0	0%	Parametric	Lognormal MLE	0.00000846	0.081	↔
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	63	0	0%	Nonparametric	MK	0.00421	0.000	↑
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	62	0	0%	Nonparametric	MK	0.0152	0.589	↔
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	63	0	0%	Nonparametric	MK	-0.0452	0.000	↓
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	63	0	0%	Parametric	Lognormal MLE	0.000257	0.000	↑
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	60	0	0%	Nonparametric	MK	-0.000144	0.001	↓
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	60	0	0%	Nonparametric	MK	-0.0000456	0.440	↔
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	60	0	0%	Nonparametric	MK	-0.000141	0.032	↔

Table 10: Trend Tests: Piecewise Linear-Linear

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	63	53	84%	0.00117	0.001	↑	-0.00376	0.000	↓	2021-11-16	0.380	↔
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	63	49	78%	0.000601	0.074	↔	-0.00324	0.128	↔	2022-10-17	0.111	↔
1_122	BG-1 & BG-2	App. I Metals	Silver	ug/L	63	63	100%	0.00000000000251	1.000	↔	-0.00181	0.000	↓	2021-05-27	0.747	↔
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	0.000782	0.167	↔	-0.000756	0.417	↔	2021-03-19	0.045	↔
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	63	50	79%	0.00293	0.001	↑	-0.0218	0.022	↔	2023-07-23	0.224	↔
2_105	BG-1 & BG-2	App. III	Boron	ug/L	62	29	47%	0.00626	0.006	↑	-0.000680	0.875	↔	2021-04-12	0.196	↔
2_107	BG-1 & BG-2	App. III	Calcium	ug/L	63	0	0%	28.4	0.050	↔	0.102	0.994	↔	2020-05-13	0.128	↔
2_108	BG-1 & BG-2	App. III	Chloride	mg/L	63	0	0%	-0.0447	0.000	↓	0.00786	0.479	↔	2020-05-30	0.340	↔
2_112	BG-1 & BG-2	App. III	Fluoride	mg/L	63	0	0%	0.0000452	0.000	↑	0.000583	0.127	↔	2024-07-04	0.603	↔
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	61	0	0%	0.00210	0.420	↔	0.0000387	0.307	↔	2016-02-16	0.072	↔
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	63	0	0%	0.0380	0.039	↔	0.0159	0.529	↔	2021-01-25	0.195	↔
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	62	0	0%	0.122	0.109	↔	0.0427	0.728	↔	2021-03-15	0.109	↔
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	63	62	98%	-0.000505	0.113	↔	0.000486	0.197	↔	2020-07-08	0.068	↔
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	63	58	92%	0.00156	0.046	↔	-0.00657	0.093	↔	2022-07-11	0.129	↔
3_103	BG-1 & BG-2	App. IV	Barium	ug/L	63	0	0%	-0.107	0.001	↓	0.00321	0.940	↔	2021-01-16	0.312	↔
3_104	BG-1 & BG-2	App. IV	Beryllium	ug/L	63	63	100%	0.0000467	0.338	↔	-0.000423	0.000	↓	2021-11-15	0.313	↔
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	63	61	97%	-0.0000577	0.002	↓	-0.000106	0.000	↓	2020-10-12	0.646	↓
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	63	54	86%	0.00108	0.081	↔	-0.00532	0.173	↔	2022-10-17	0.095	↔
3_110	BG-1 & BG-2	App. IV	Cobalt	ug/L	63	54	86%	0.000323	0.174	↔	-0.00217	0.001	↓	2021-11-16	0.309	↔
3_112	BG-1 & BG-2	App. IV	Fluoride	mg/L	63	0	0%	0.0000452	0.000	↑	0.000583	0.127	↔	2024-07-04	0.603	↔
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	63	60	95%	-0.0000260	0.928	↔	0.0903	0.000	↑	2024-07-04	0.477	↔
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	63	3	5%	-0.00457	0.040	↔	0.00914	0.004	↑	2020-12-12	0.209	↔
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	63	55	87%	0.0000160	0.000	↑	-0.0000111	0.236	↔	2021-11-15	0.299	↔
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	63	49	78%	0.00194	0.147	↔	-0.00109	0.179	↔	2019-10-13	0.069	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
3_119	BG-1 & BG-2	App. IV	Radium-226	pCi/L	60	0	0%	-0.0000982	0.099	↔	-0.000476	0.203	↔	2022-10-17	0.224	↔
3_120	BG-1 & BG-2	App. IV	Radium-228	pCi/L	60	0	0%	0.0000438	0.535	↔	-0.000583	0.308	↔	2023-01-24	0.055	↔
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	63	60	95%	-0.00000000000938	1.000	↔	-0.000579	0.002	↓	2018-10-19	0.224	↔
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	63	60	95%	-0.0132	0.000	↓	-0.000000783	0.997	↔	2017-05-13	0.746	↔
3_126	BG-1 & BG-2	App. IV	Total Radium	pCi/L	60	0	0%	-0.0000575	0.521	↔	-0.000619	0.276	↔	2023-01-02	0.093	↔

Table 11: Trend Tests: Piecewise Linear-Linear-Linear

								Line 1			Line 2			Line 3					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
1_111	BG-1 & BG-2	App. I Metals	Copper	ug/L	63	53	84%	-0.0000337	0.976	↔	0.00212	0.029	↔	-0.00426	0.000	↓	2018-10-20	2021-11-15	0.414	↔
1_117	BG-1 & BG-2	App. I Metals	Nickel	ug/L	63	49	78%	-0.000671	0.340	↔	0.00217	0.083	↔	-0.00467	0.008	↓	2019-10-14	2022-10-14	0.197	↔
1_127	BG-1 & BG-2	App. I Metals	Vanadium	ug/L	63	35	56%	-0.000651	0.516	↔	0.00570	0.395	↔	-0.00103	0.138	↔	2019-04-23	2020-05-21	0.102	↔
1_128	BG-1 & BG-2	App. I Metals	Zinc	ug/L	63	50	79%	-0.0127	0.549	↔	0.00366	0.004	↑	-0.0234	0.015	↔	2016-08-07	2023-07-23	0.245	↔
2_105	BG-1 & BG-2	App. III	Boron	ug/L	62	29	47%	-0.00308	0.312	↔	0.0333	0.029	↔	-0.00738	0.058	↔	2019-11-02	2021-04-12	0.392	↔
2_118	BG-1 & BG-2	App. III	pH (Field)	S.U.	61	0	0%	0.00195	0.271	↔	-0.0000753	0.497	↔	0.000139	0.143	↔	2016-04-17	2020-09-16	0.109	↔
2_123	BG-1 & BG-2	App. III	Sulfate	mg/L	63	0	0%	0.000111	0.998	↔	0.140	0.582	↔	0.0154	0.358	↔	2018-08-25	2019-08-30	0.209	↔
2_125	BG-1 & BG-2	App. III	Total Dissolved Solids	mg/L	62	0	0%	0.00930	0.952	↔	1.36	0.659	↔	0.0386	0.602	↔	2019-03-27	2019-07-25	0.124	↔
3_101	BG-1 & BG-2	App. IV	Antimony	ug/L	63	62	98%	0.000104	0.854	↔	-0.0105	0.353	↔	0.000535	0.051	↔	2019-04-12	2019-07-17	0.108	↔
3_102	BG-1 & BG-2	App. IV	Arsenic	ug/L	63	58	92%	0.00319	0.669	↔	0.00129	0.313	↔	-0.00631	0.112	↔	2017-04-25	2022-07-11	0.131	↔
3_106	BG-1 & BG-2	App. IV	Cadmium	ug/L	63	61	97%	0.0000162	0.787	↔	-0.000114	0.000	↓	0.00000746	0.943	↔	2018-03-16	2023-04-27	0.676	↔
3_109	BG-1 & BG-2	App. IV	Chromium	ug/L	63	54	86%	-0.000842	0.521	↔	0.00346	0.092	↔	-0.00754	0.052	↔	2019-10-21	2022-10-17	0.154	↔
3_113	BG-1 & BG-2	App. IV	Lead	ug/L	63	60	95%	0.00105	0.010	↑	-0.00403	0.028	↔	0.111	0.000	↑	2022-01-26	2024-07-04	0.597	↔
3_114	BG-1 & BG-2	App. IV	Lithium	ug/L	63	3	5%	0.0986	0.049	↔	-0.0111	0.004	↓	0.00783	0.001	↑	2016-04-05	2020-01-15	0.315	↔
3_115	BG-1 & BG-2	App. IV	Mercury	ug/L	63	55	87%	-0.00000173	0.764	↔	0.000207	0.184	↔	-0.0000133	0.009	↓	2020-01-14	2020-07-07	0.488	↔
3_116	BG-1 & BG-2	App. IV	Molybdenum	ug/L	63	49	78%	-0.00337	0.539	↔	0.00546	0.195	↔	-0.00132	0.081	↔	2017-07-07	2019-07-10	0.109	↔
3_121	BG-1 & BG-2	App. IV	Selenium	ug/L	63	60	95%	-0.000120	0.455	↔	-0.00406	0.019	↔	0.00383	0.000	↑	2022-01-01	2023-04-23	0.481	↔
3_124	BG-1 & BG-2	App. IV	Thallium	ug/L	63	60	95%	-0.0132	0.000	↓	0.0000705	0.967	↔	-0.0000127	0.967	↔	2017-05-16	2019-07-10	0.746	↔

This page intentionally left blank.

B

Appendix B – Background Wells BG-1 and BG-2 Plots

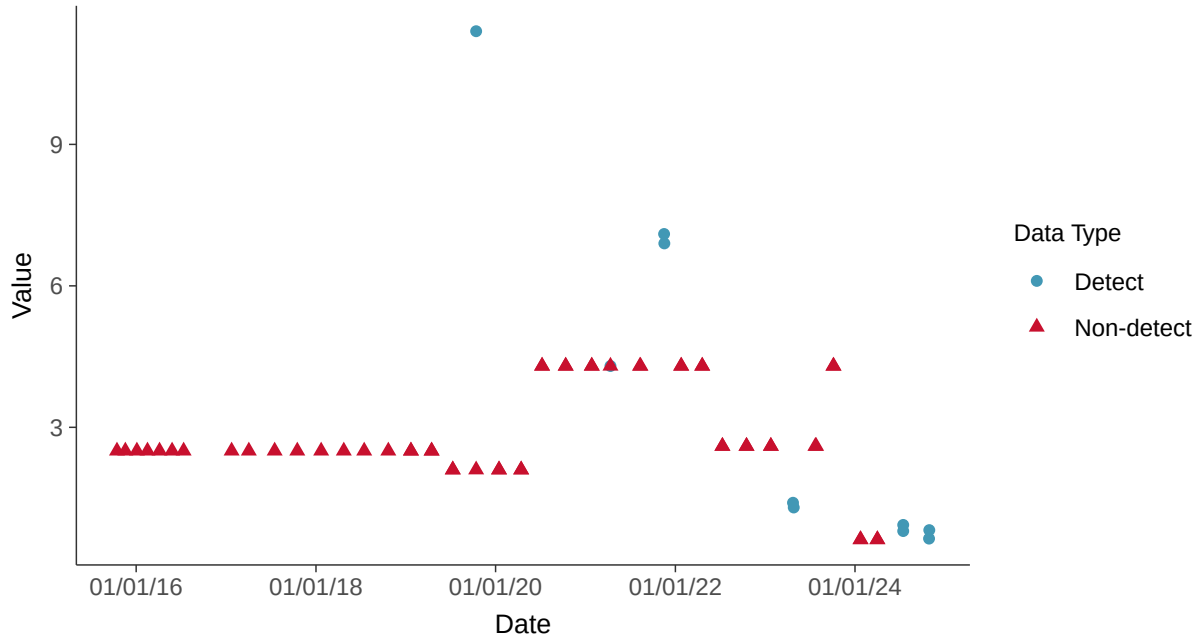
This page intentionally left blank.

App. I Metals: Copper, BG-1 & BG-2

ID: 1_111

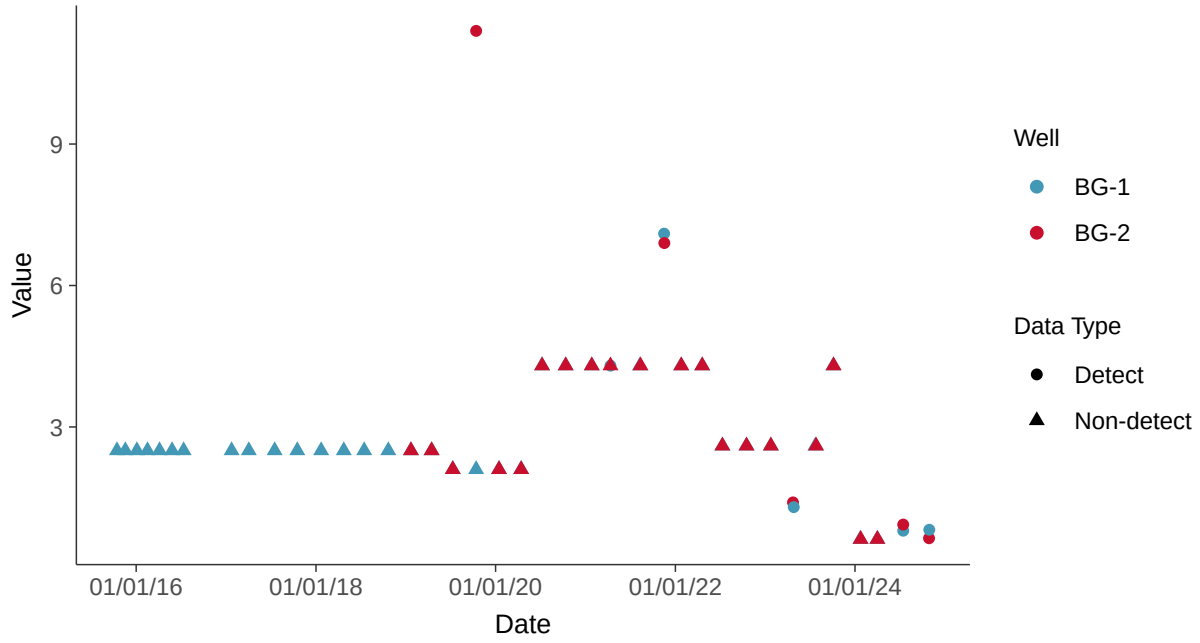
Scatter Plot

Copper, BG-1 & BG-2 (ug/L)



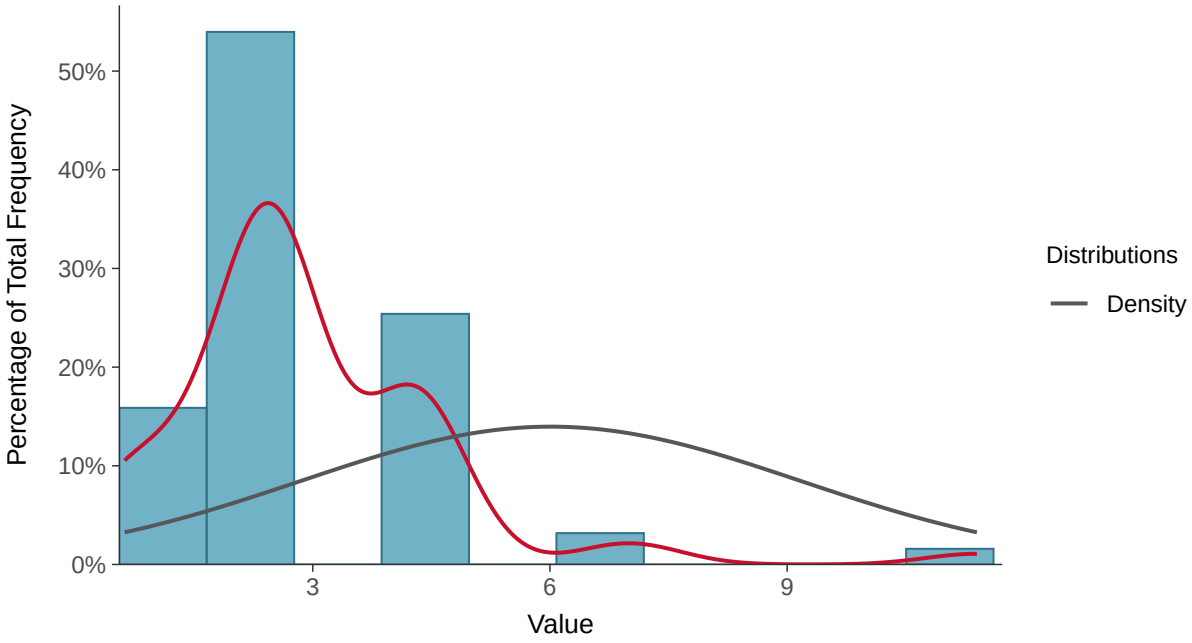
Scatter Plot by Well

Copper, BG-1 & BG-2 (ug/L)



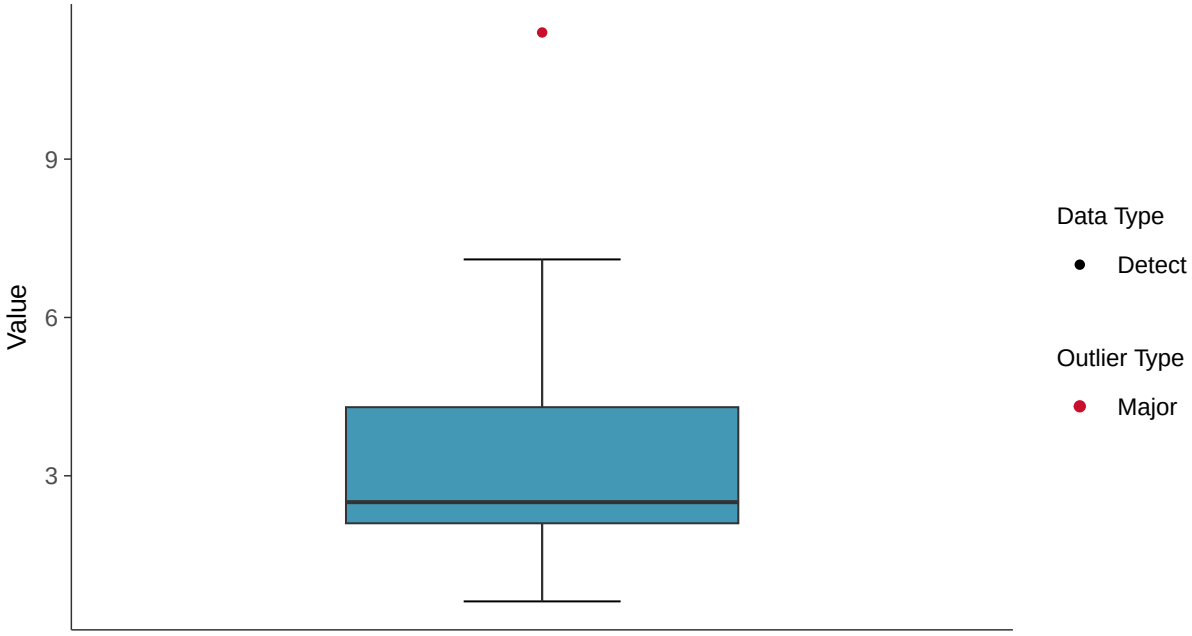
Histogram

Copper, BG-1 & BG-2 (ug/L)



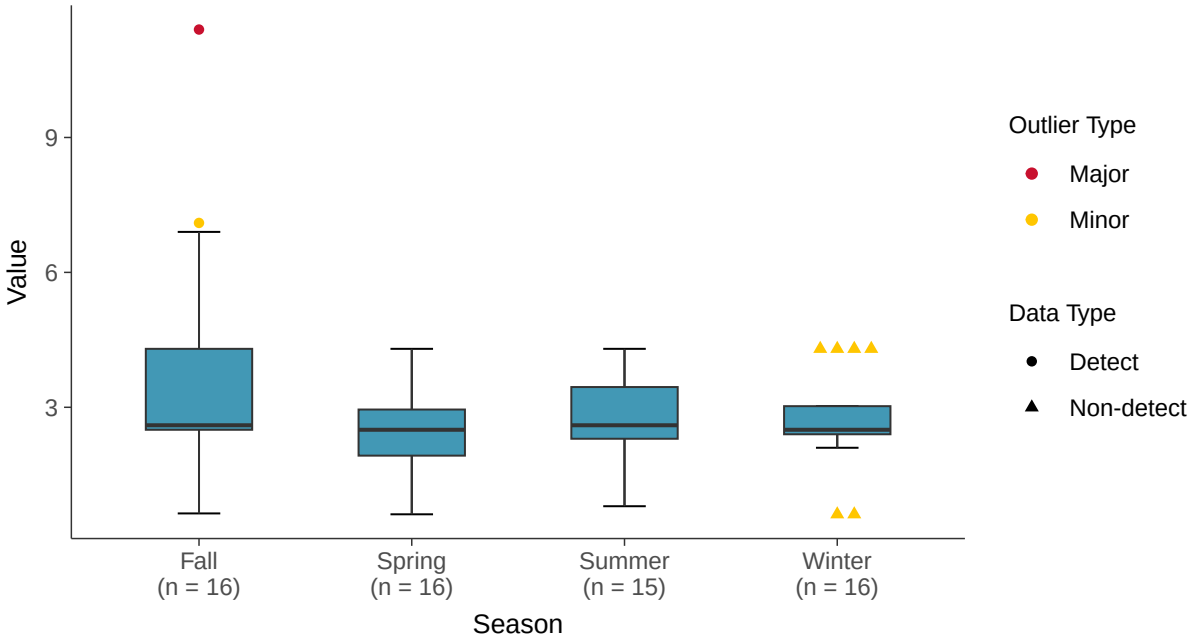
Boxplot

Copper, BG-1 & BG-2 (ug/L)



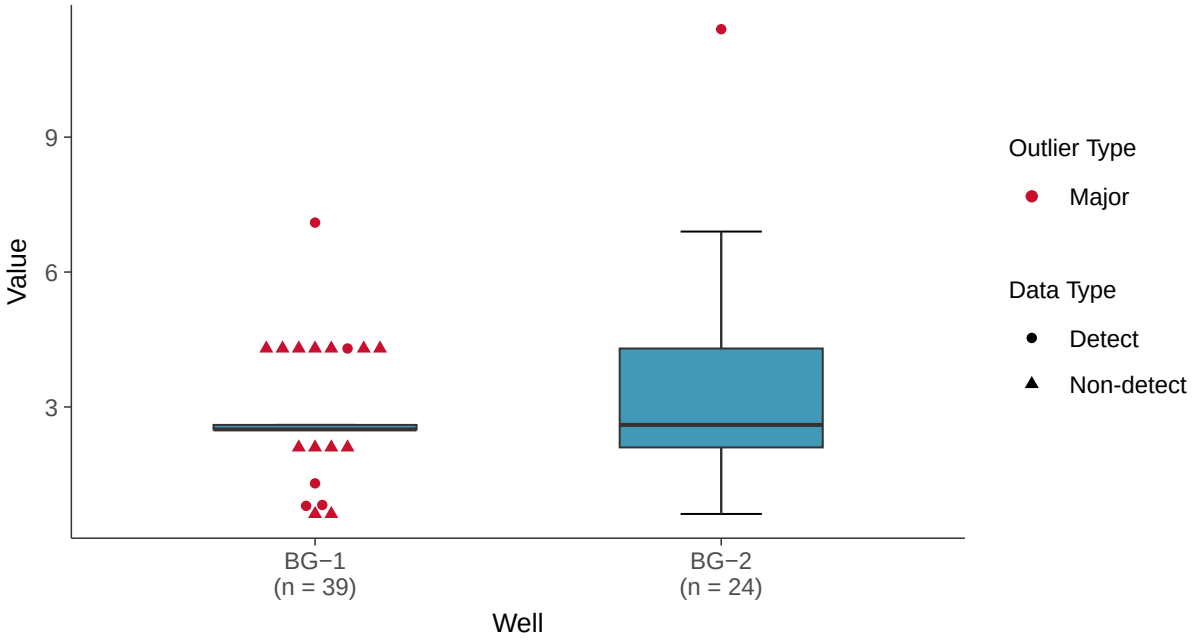
Boxplot by Season

Copper, BG-1 & BG-2 (ug/L)



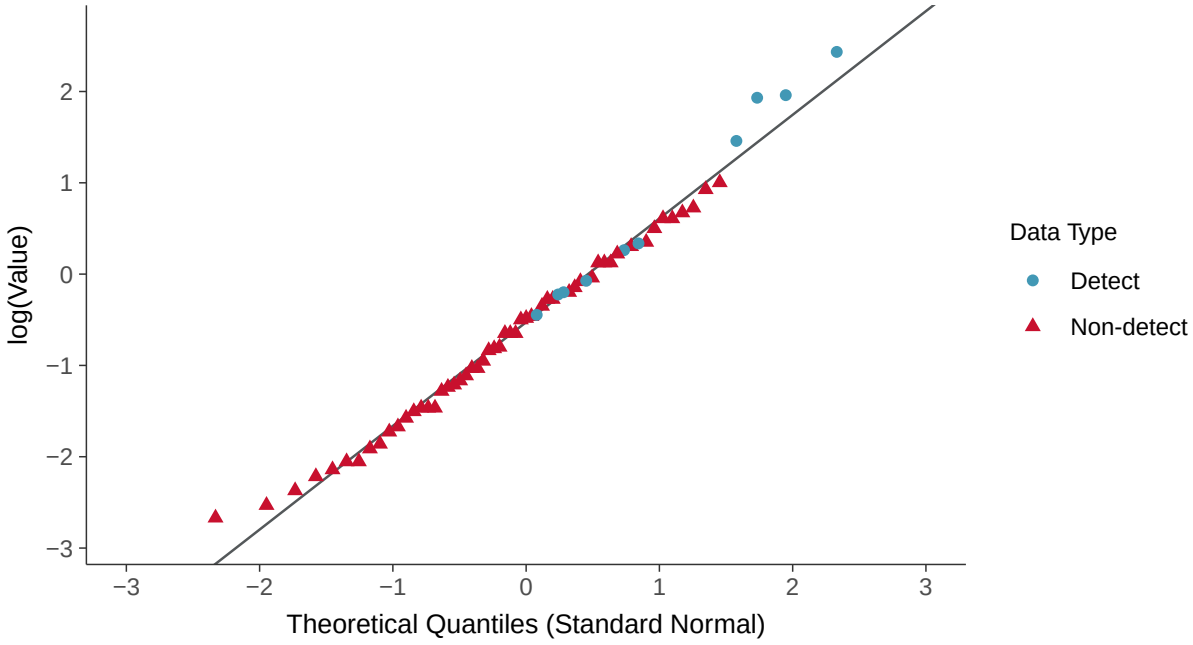
Boxplot by Well

Copper, BG-1 & BG-2 (ug/L)



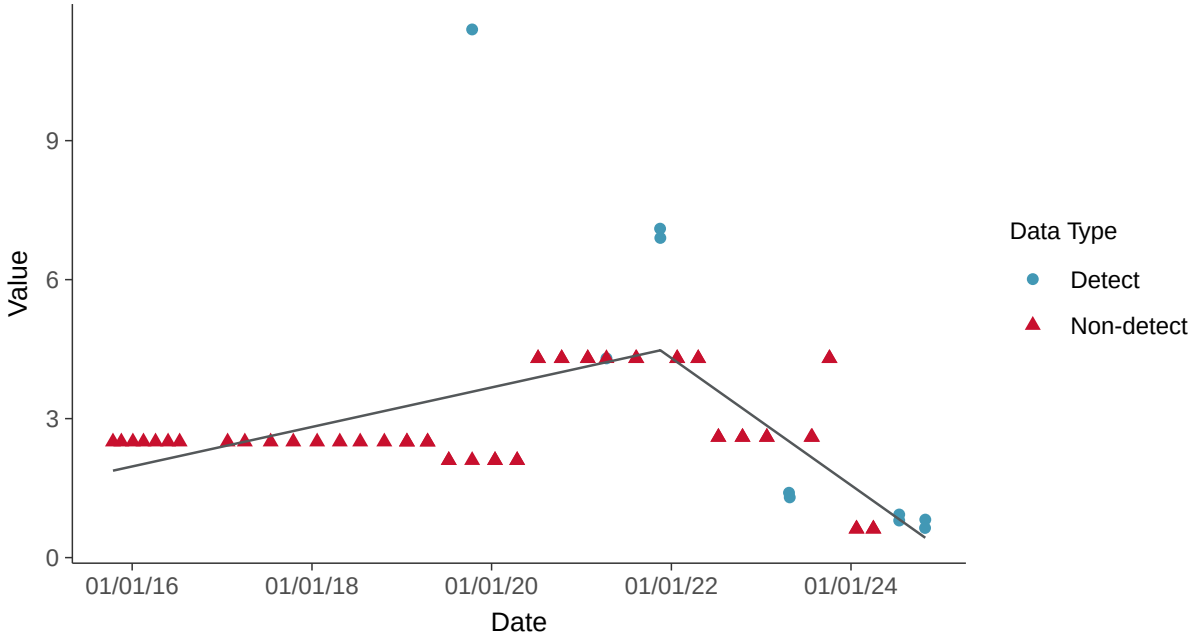
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, BG-1 & BG-2 (ug/L)



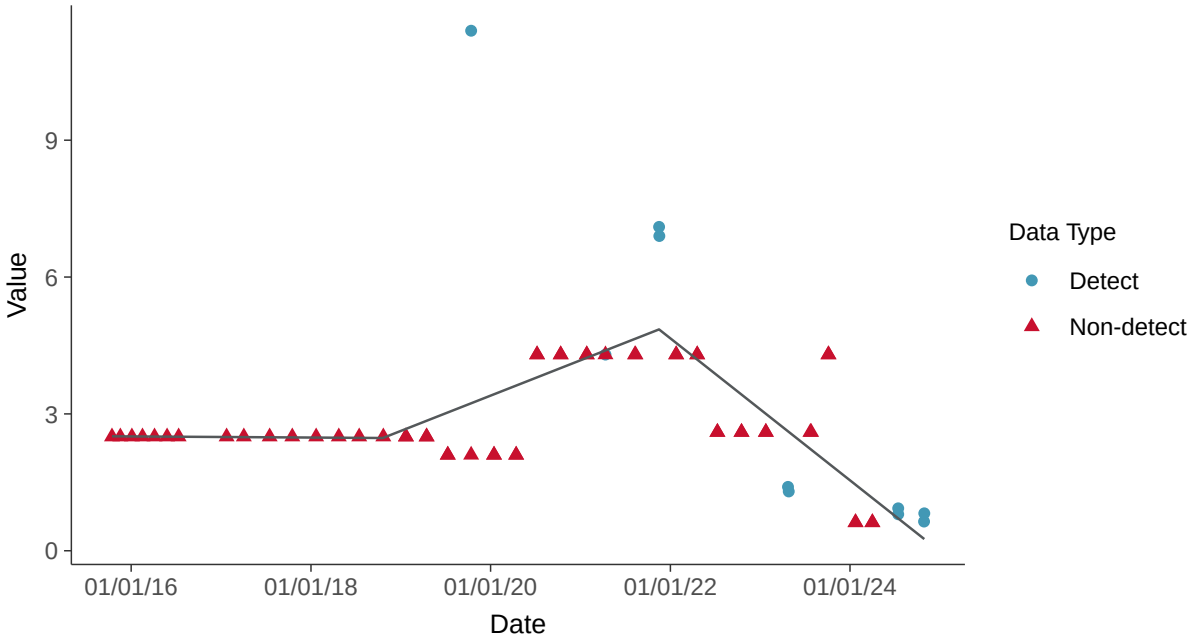
Trend Regression: Piecewise Linear-Linear

Copper, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, BG-1 & BG-2 (ug/L)

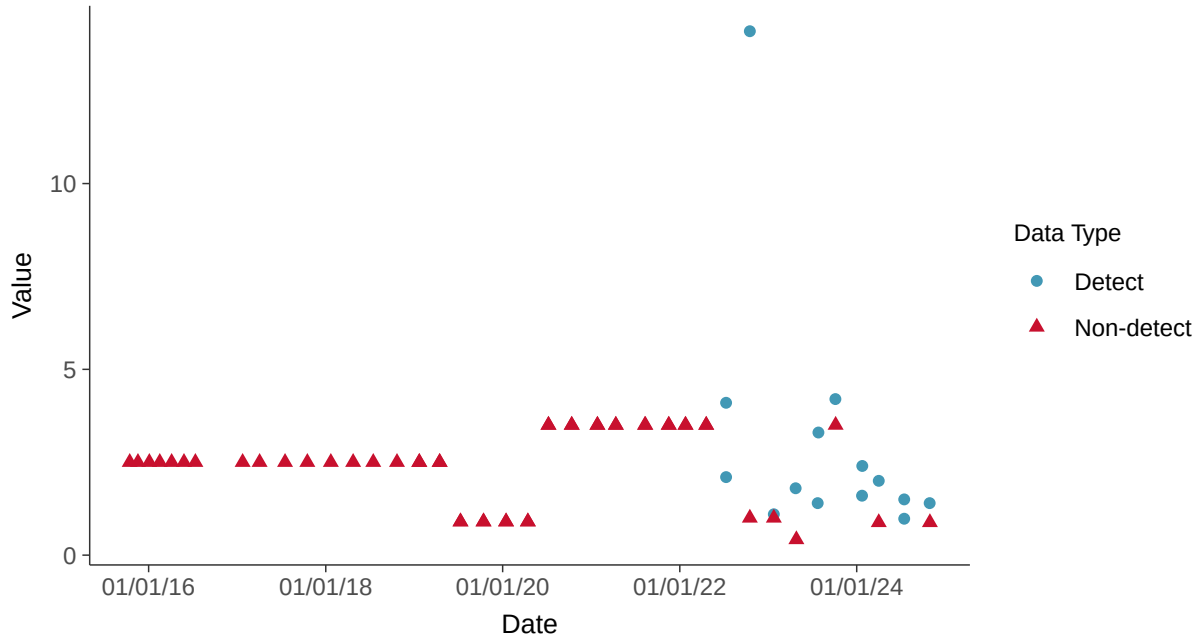


App. I Metals: Nickel, BG-1 & BG-2

ID: 1_117

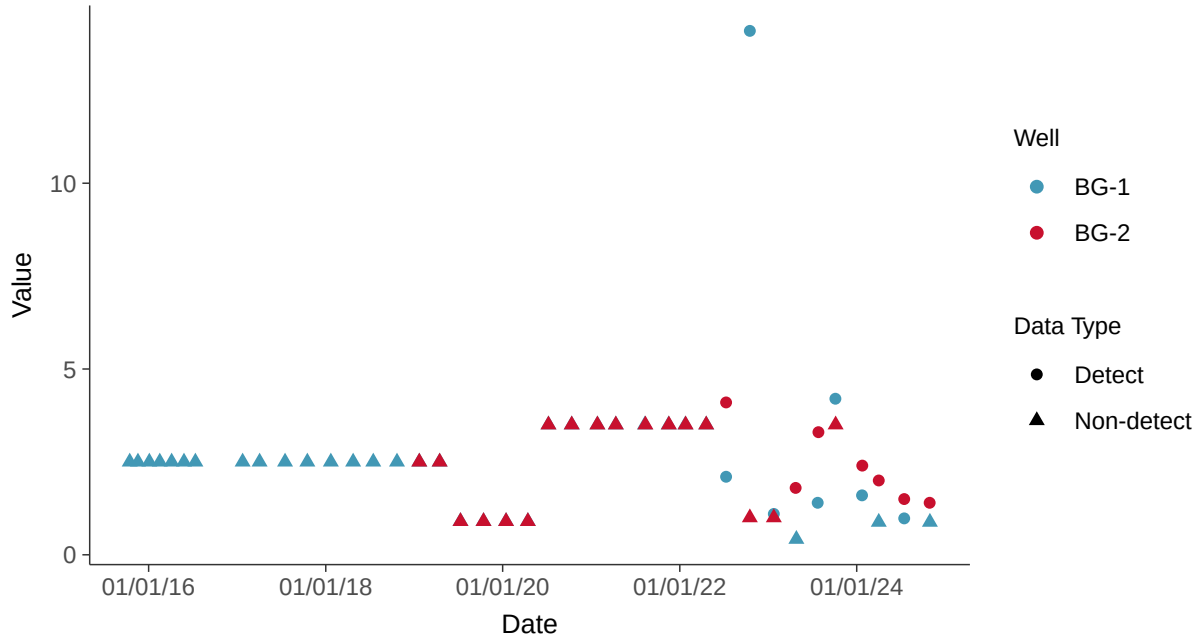
Scatter Plot

Nickel, BG-1 & BG-2 (ug/L)



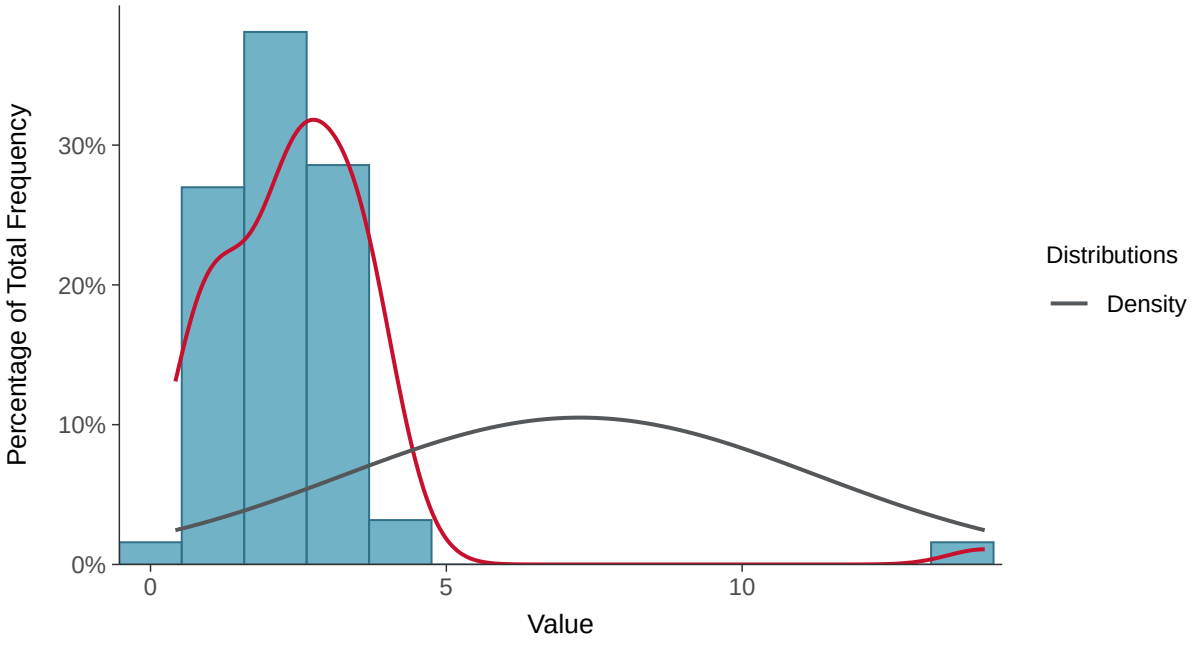
Scatter Plot by Well

Nickel, BG-1 & BG-2 (ug/L)



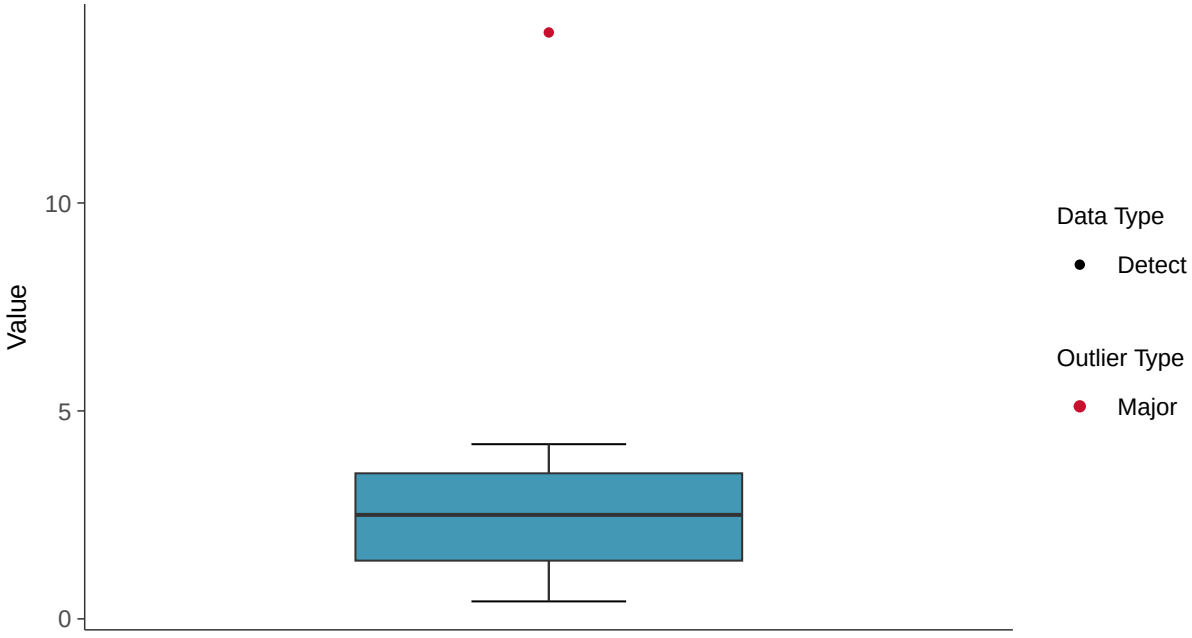
Histogram

Nickel, BG-1 & BG-2 (ug/L)



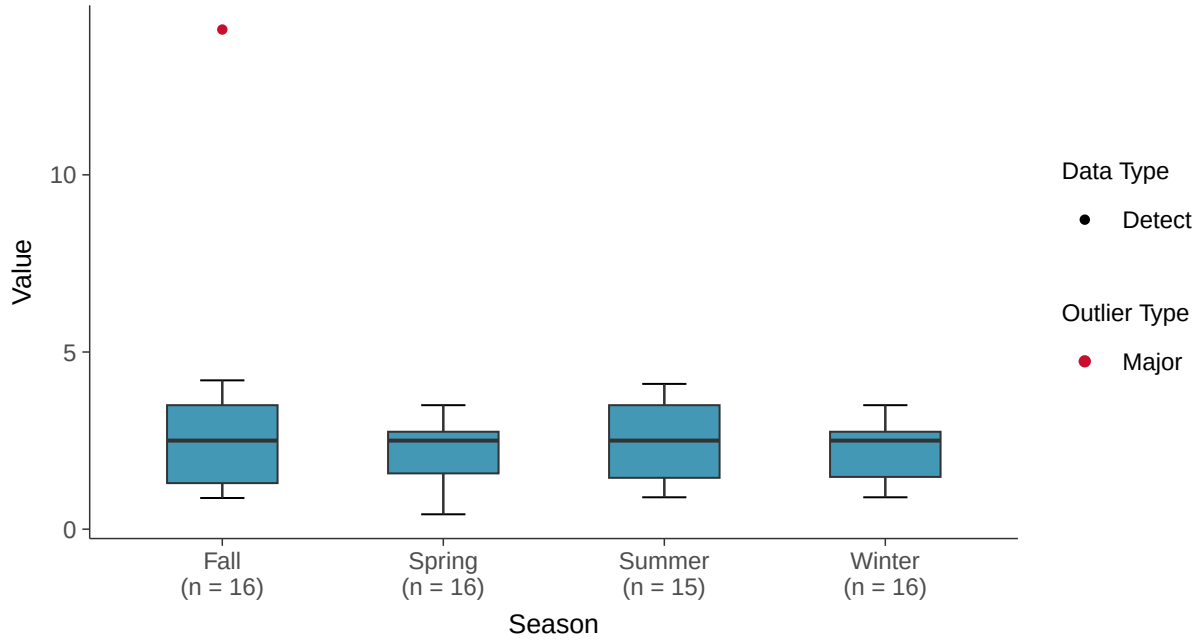
Boxplot

Nickel, BG-1 & BG-2 (ug/L)



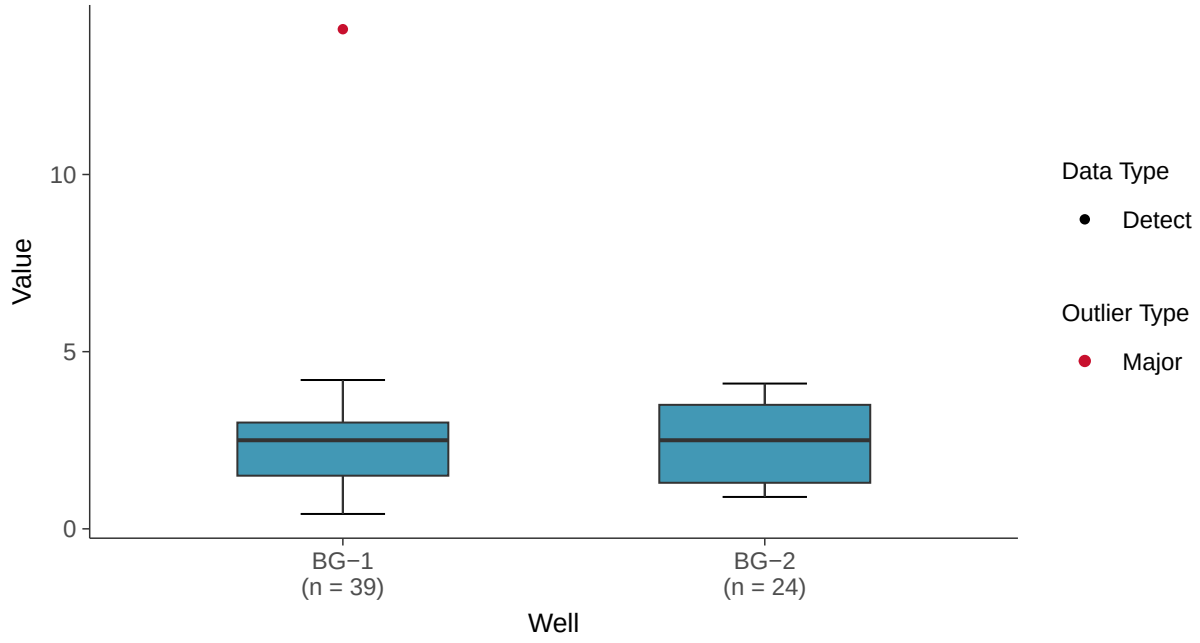
Boxplot by Season

Nickel, BG-1 & BG-2 (ug/L)



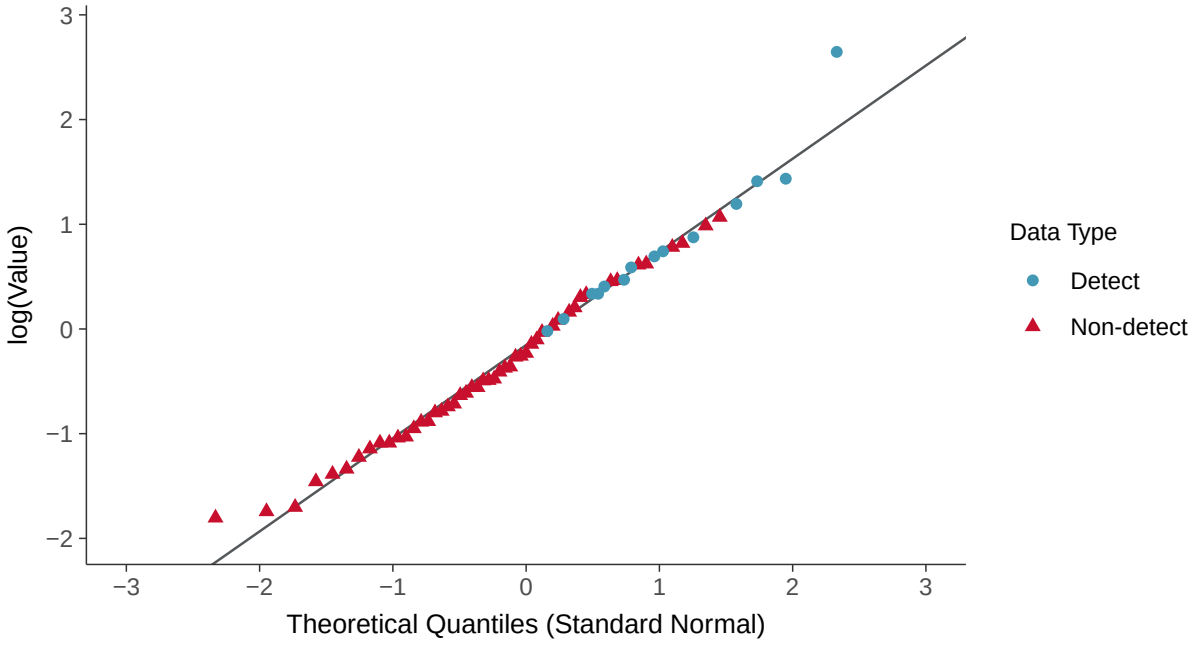
Boxplot by Well

Nickel, BG-1 & BG-2 (ug/L)



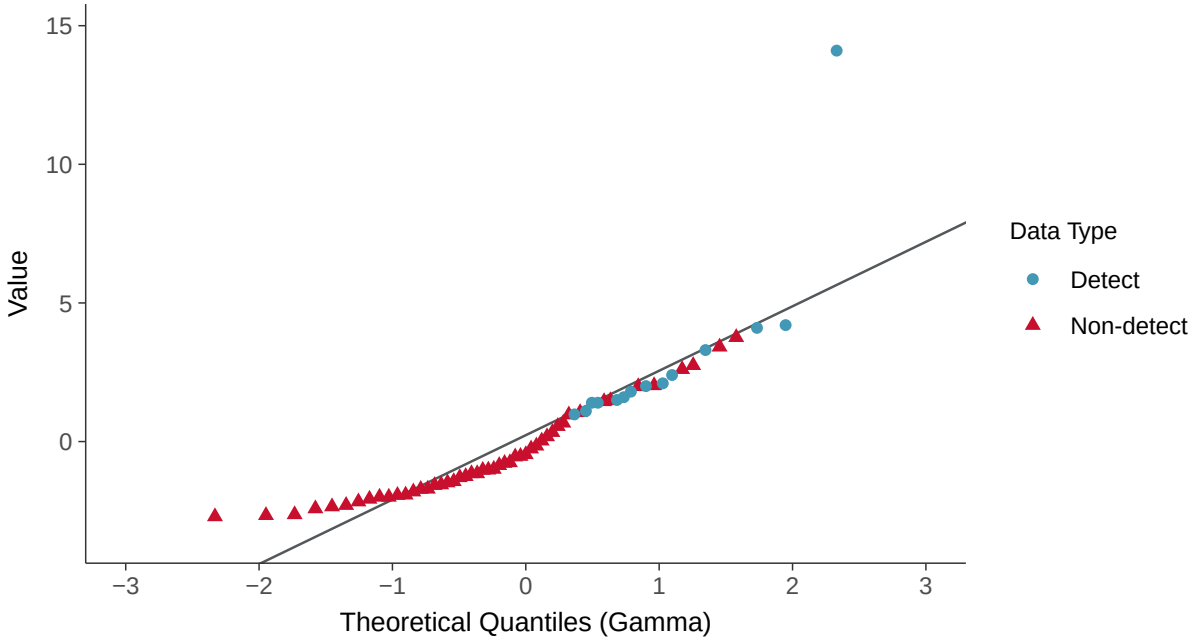
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, BG-1 & BG-2 (ug/L)



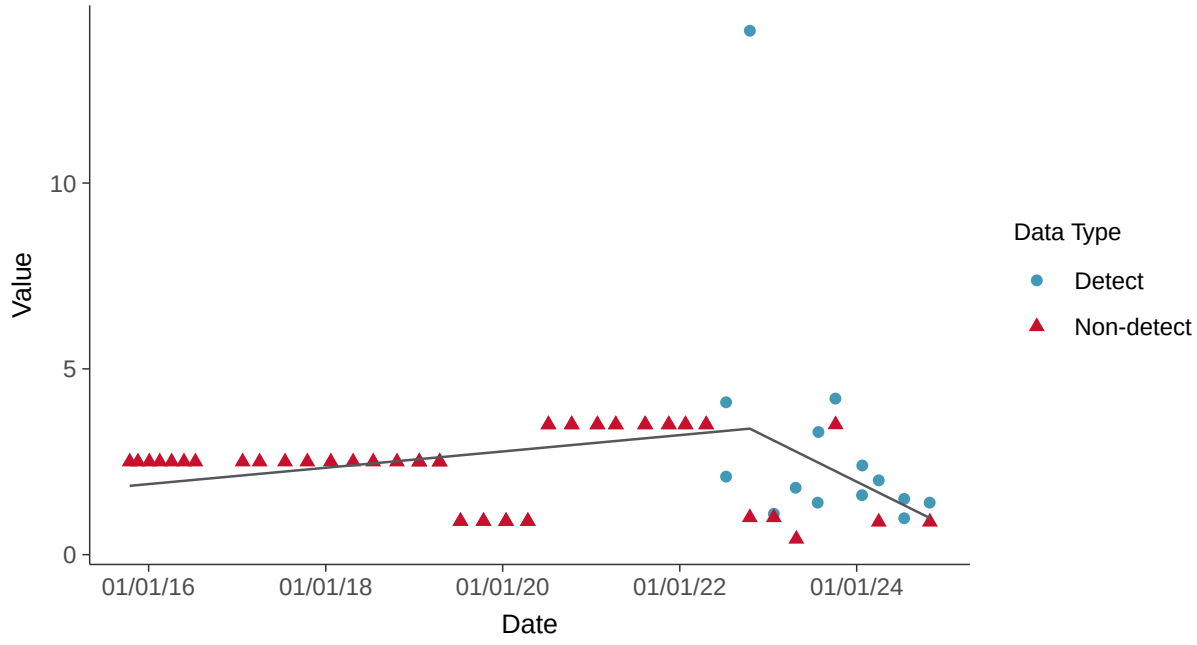
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, BG-1 & BG-2 (ug/L)



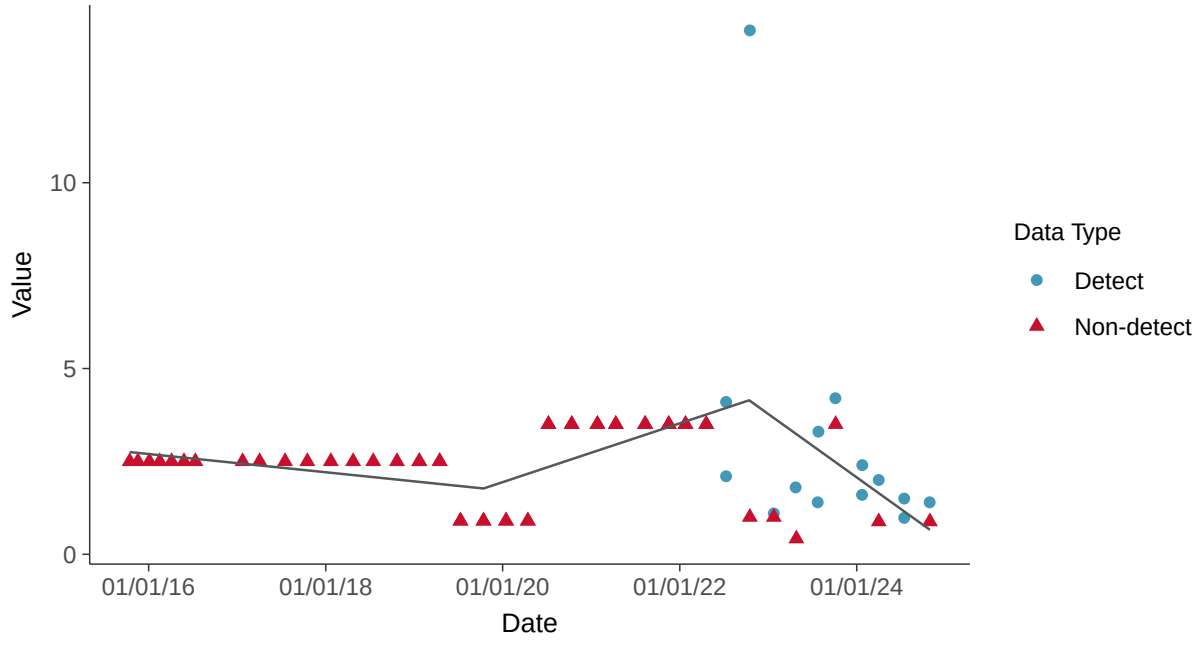
Trend Regression: Piecewise Linear-Linear

Nickel, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Nickel, BG-1 & BG-2 (ug/L)

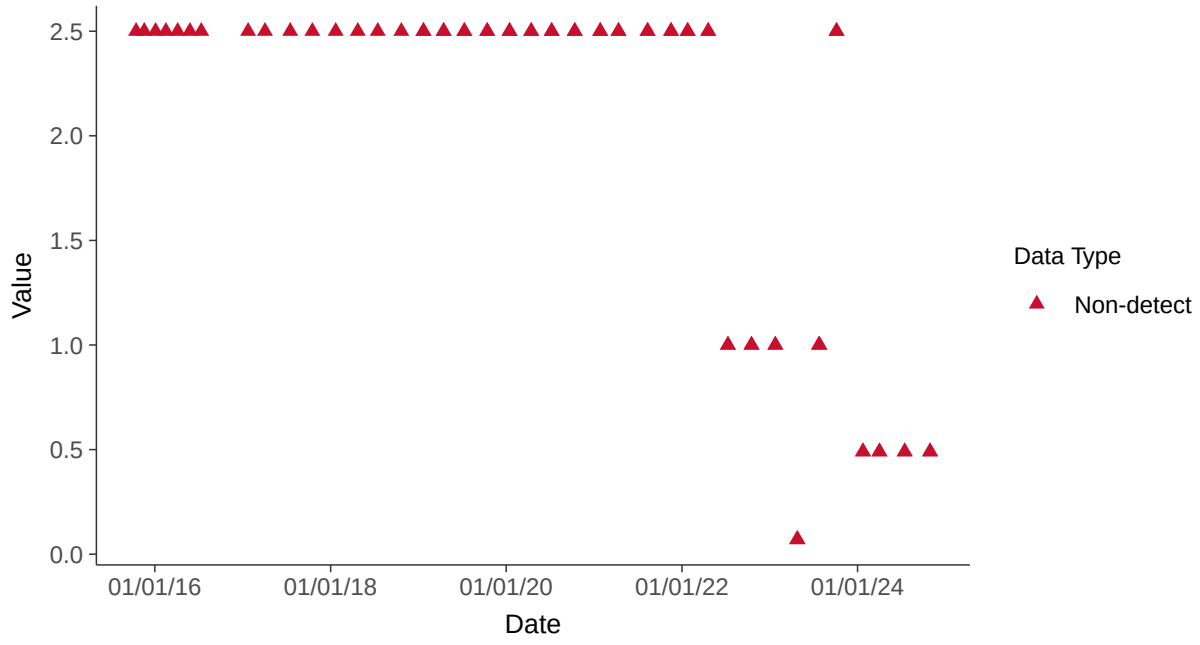


App. I Metals: Silver, BG-1 & BG-2

ID: 1_122

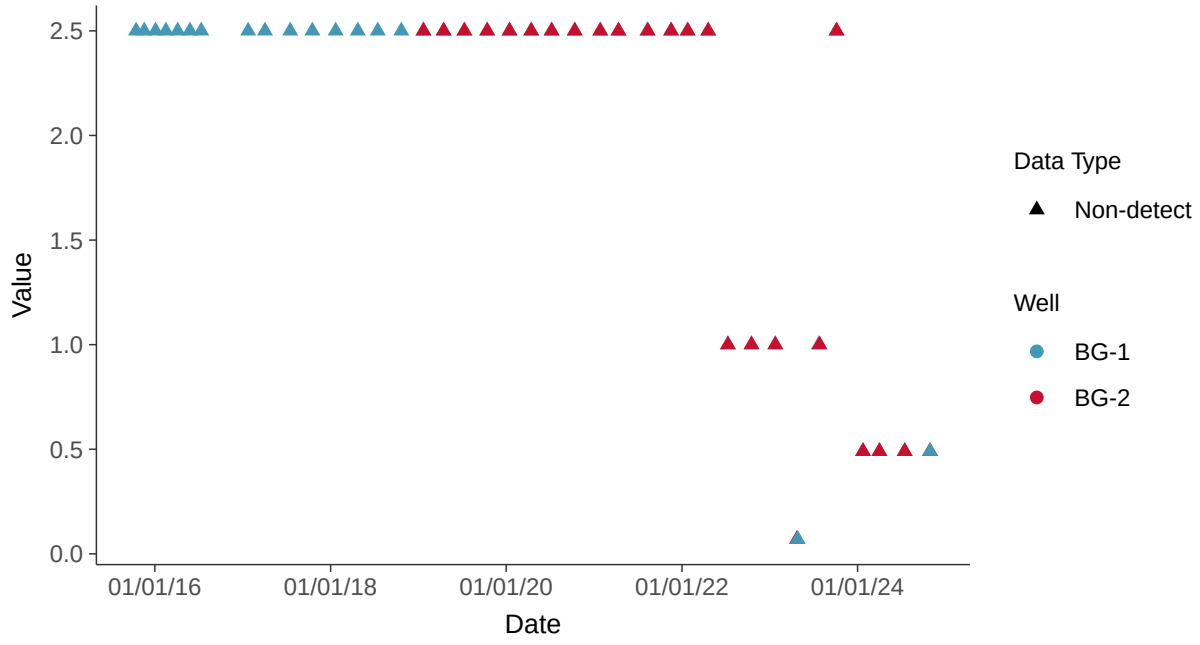
Scatter Plot

Silver, BG-1 & BG-2 (ug/L)



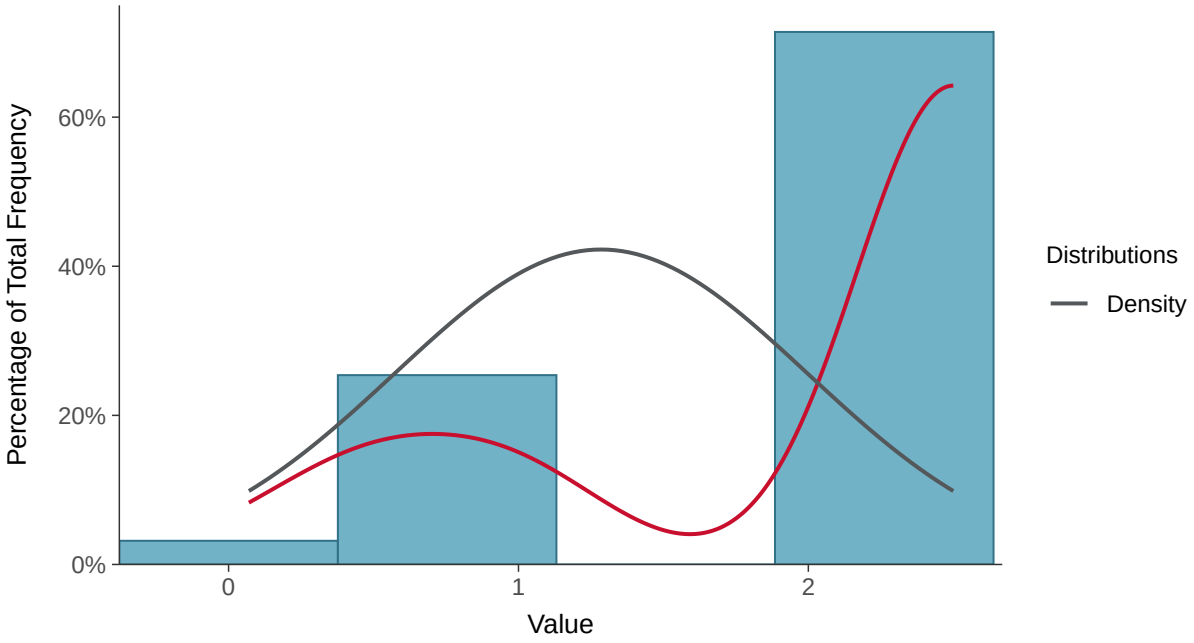
Scatter Plot by Well

Silver, BG-1 & BG-2 (ug/L)



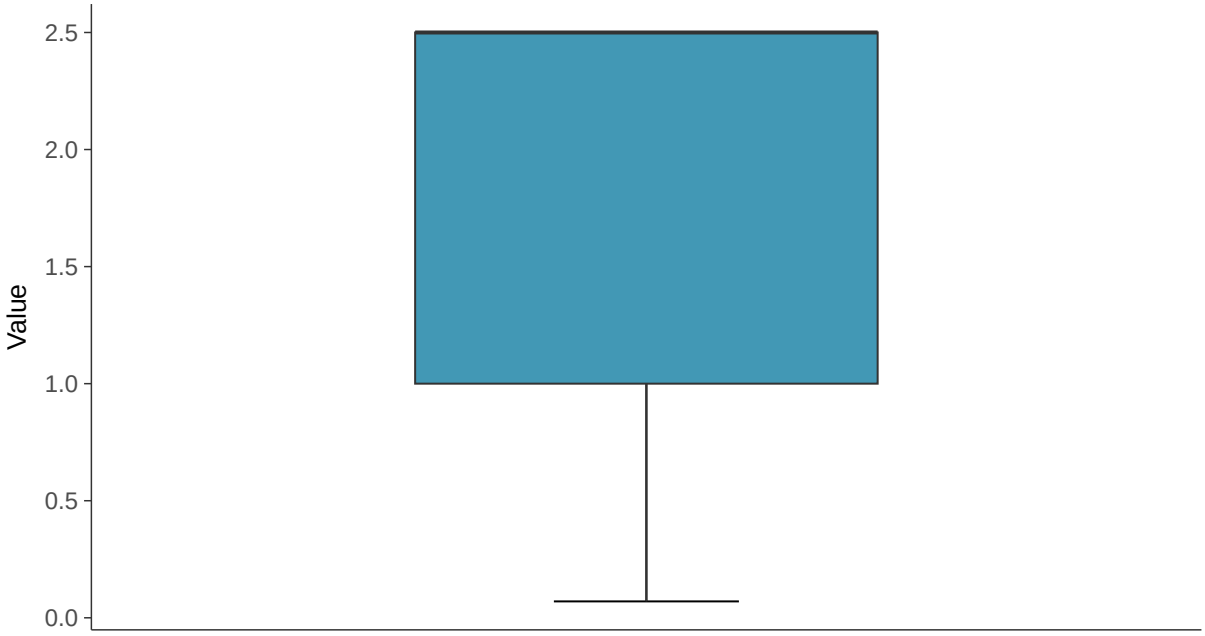
Histogram

Silver, BG-1 & BG-2 (ug/L)



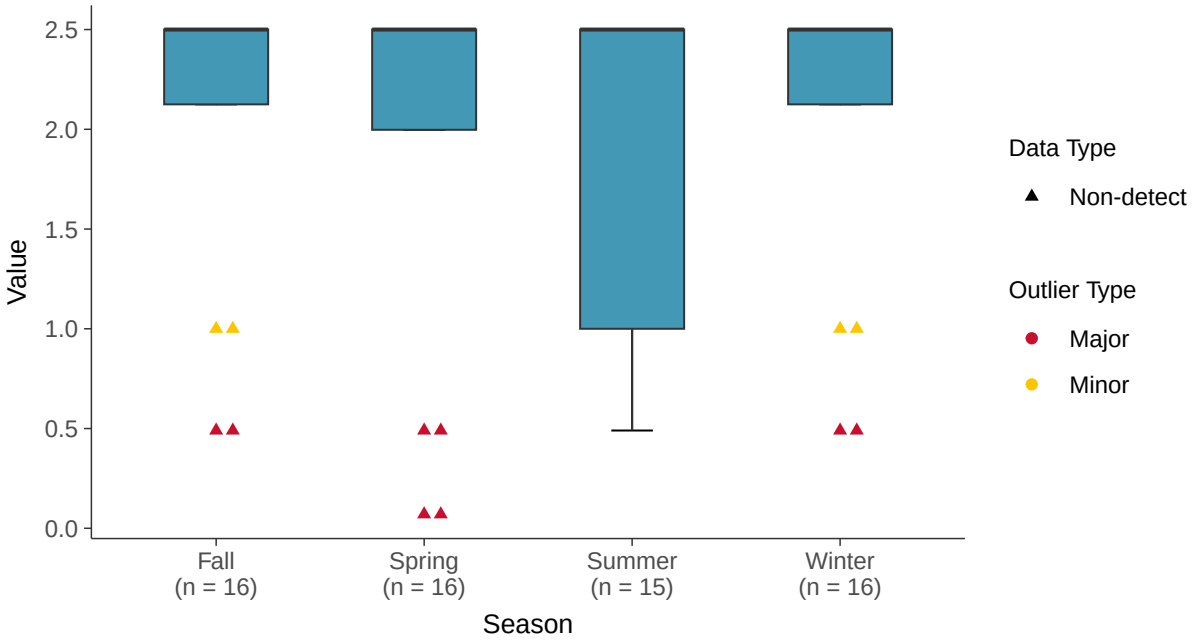
Boxplot

Silver, BG-1 & BG-2 (ug/L)



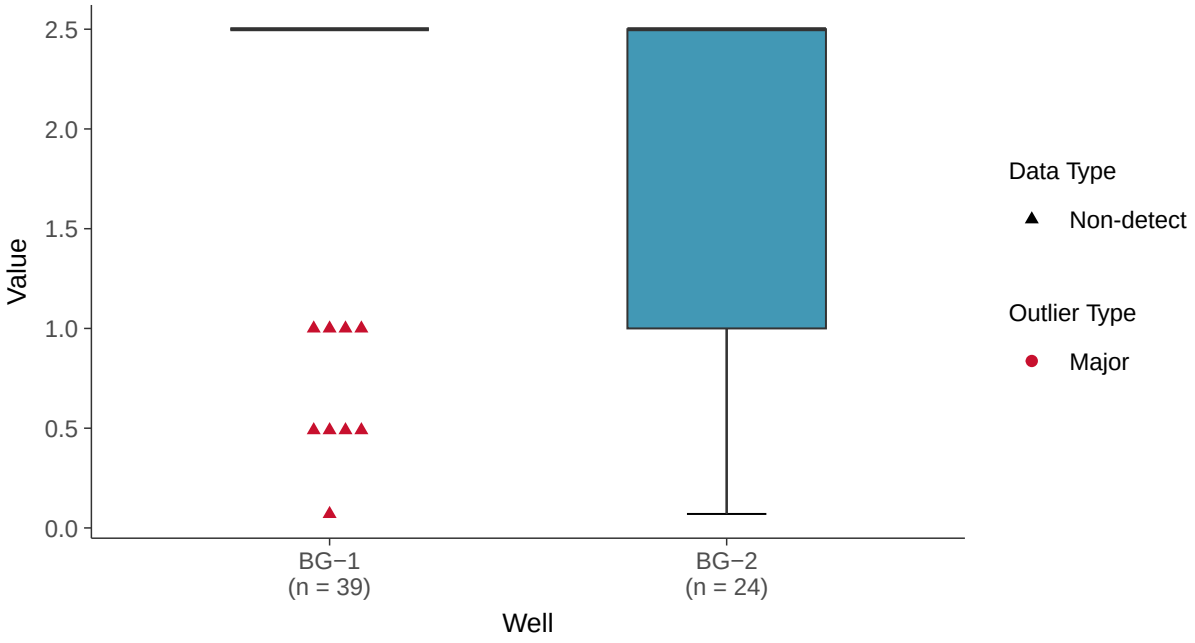
Boxplot by Season

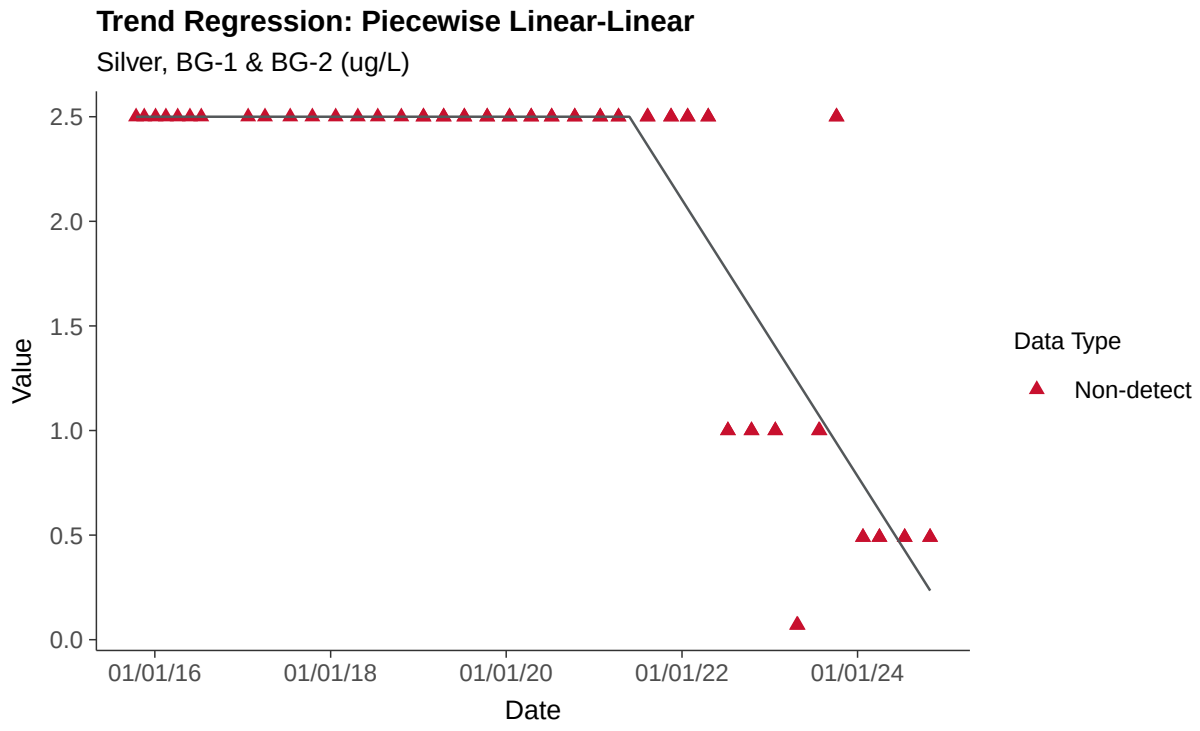
Silver, BG-1 & BG-2 (ug/L)



Boxplot by Well

Silver, BG-1 & BG-2 (ug/L)



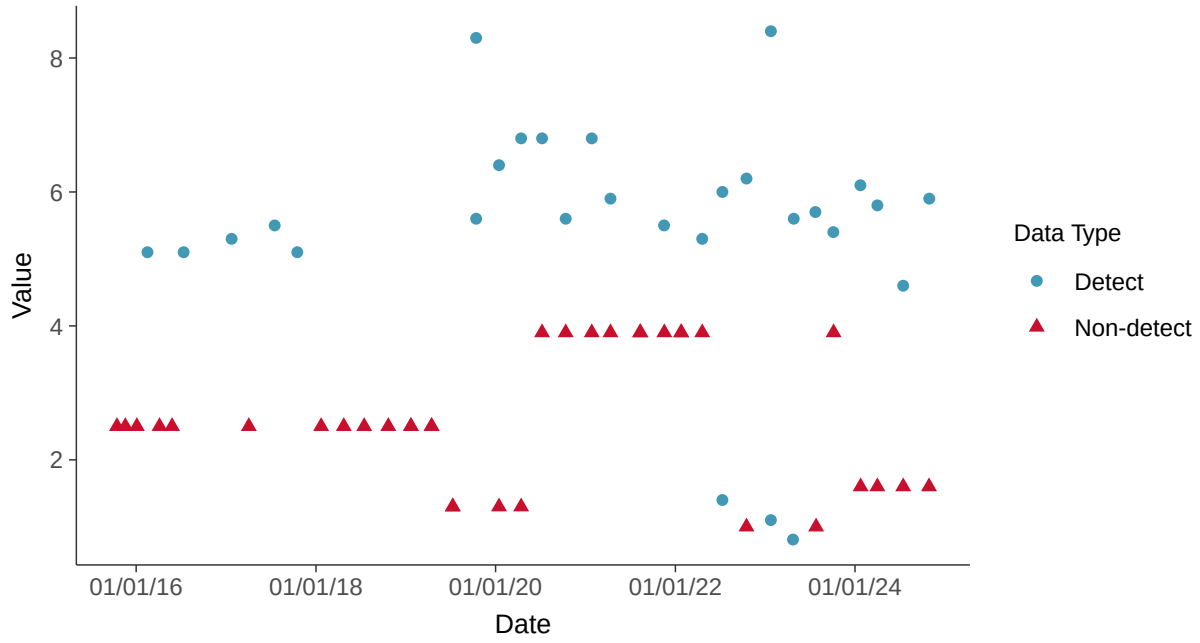

Trend Regression: Piecewise Linear-Linear
Silver, BG-1 & BG-2 (ug/L)
Value
2.5
2.0
1.5
1.0
0.5
0.0
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Non-detect

App. I Metals: Vanadium, BG-1 & BG-2

ID: 1_127

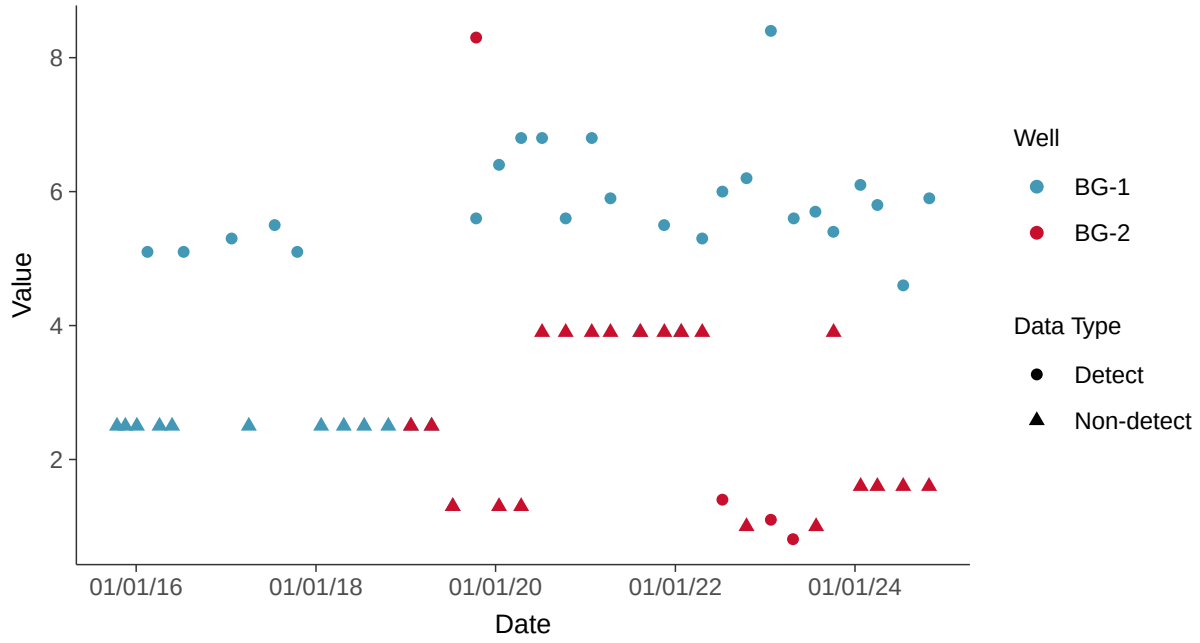
Scatter Plot

Vanadium, BG-1 & BG-2 (ug/L)



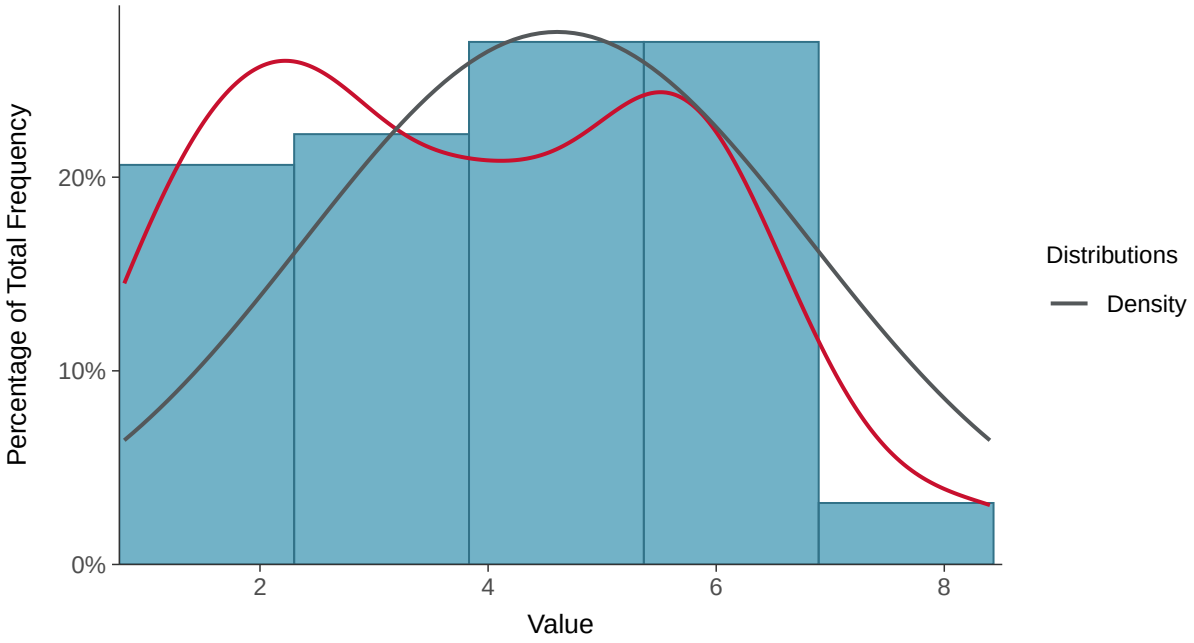
Scatter Plot by Well

Vanadium, BG-1 & BG-2 (ug/L)



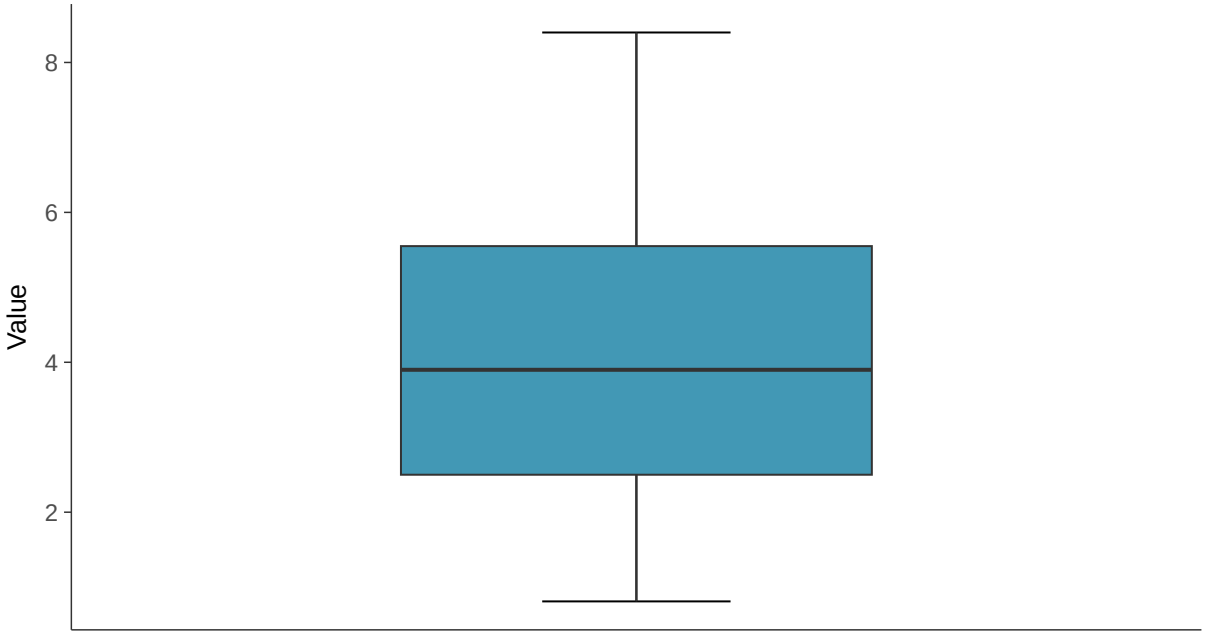
Histogram

Vanadium, BG-1 & BG-2 (ug/L)



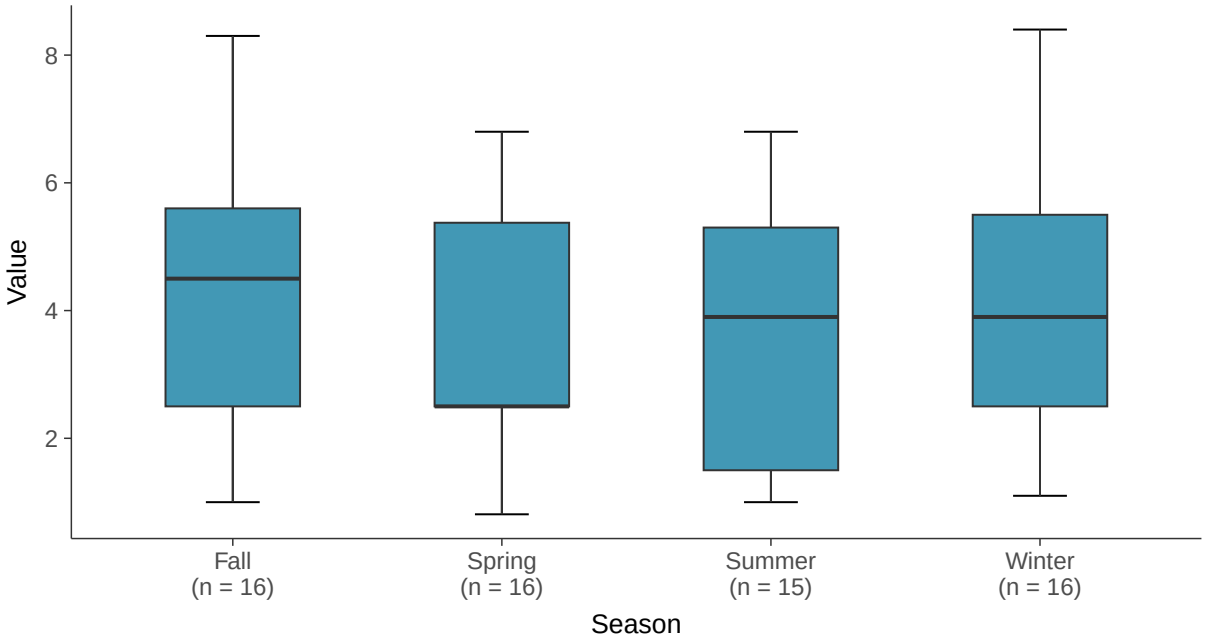
Boxplot

Vanadium, BG-1 & BG-2 (ug/L)



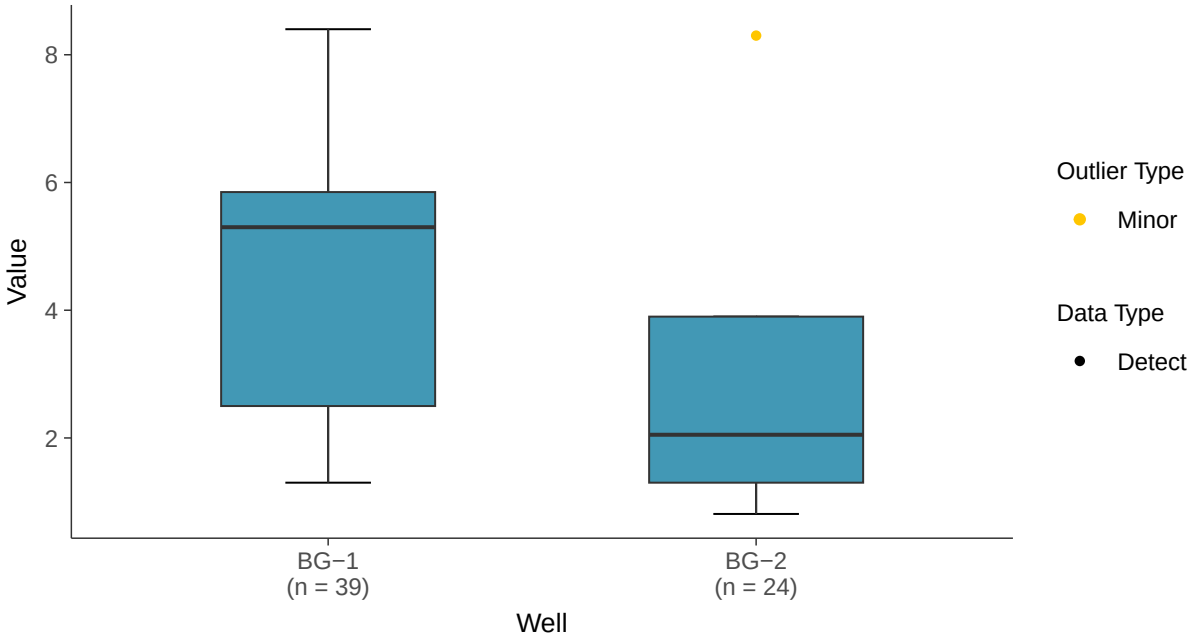
Boxplot by Season

Vanadium, BG-1 & BG-2 (ug/L)



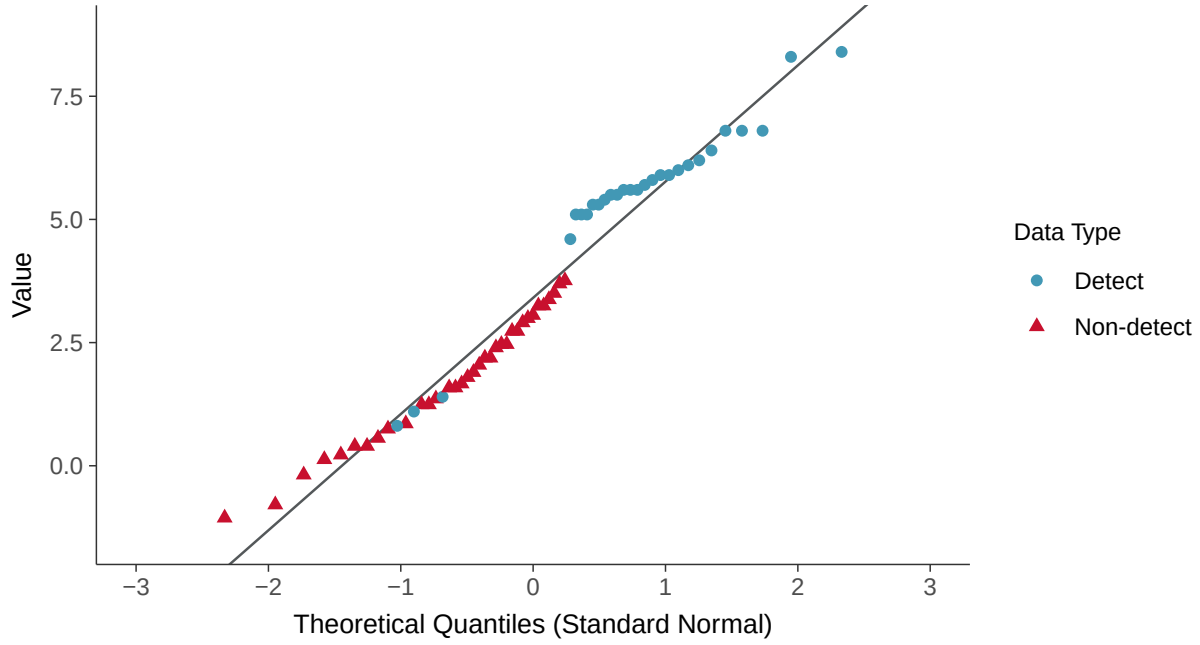
Boxplot by Well

Vanadium, BG-1 & BG-2 (ug/L)



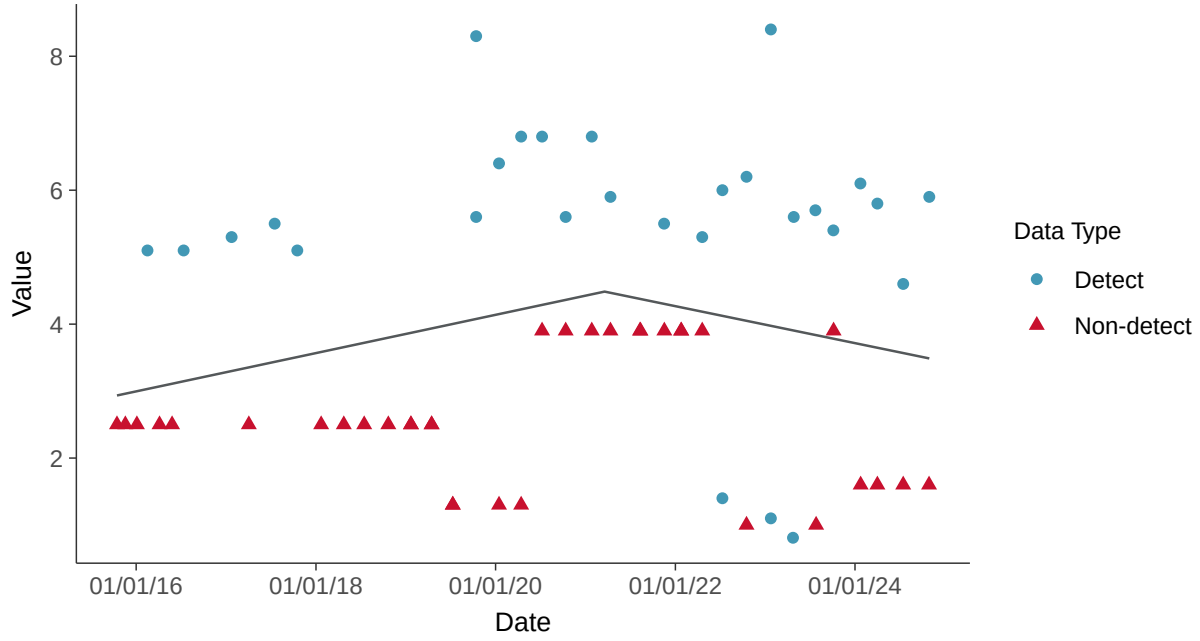
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, BG-1 & BG-2 (ug/L)



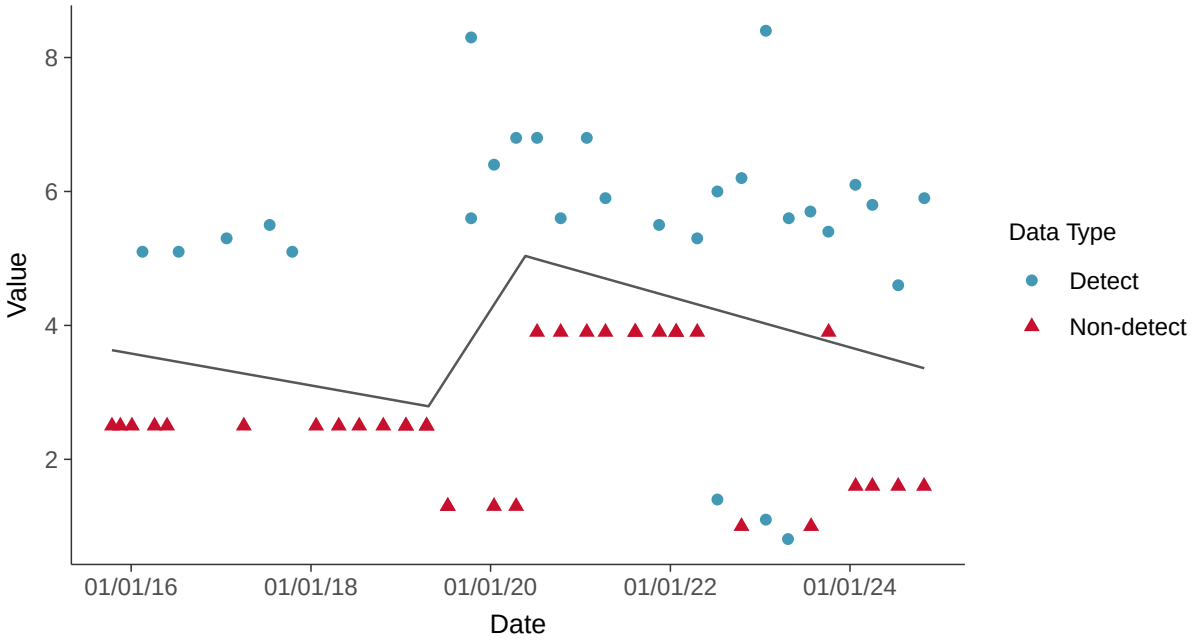
Trend Regression: Piecewise Linear-Linear

Vanadium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, BG-1 & BG-2 (ug/L)

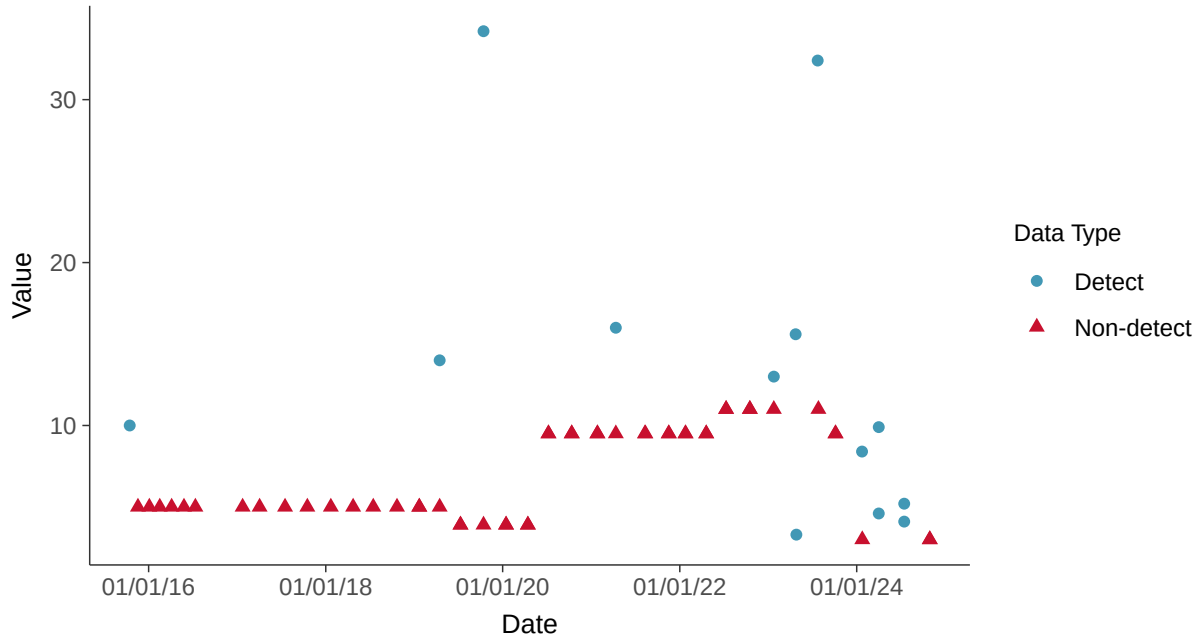


App. I Metals: Zinc, BG-1 & BG-2

ID: 1_128

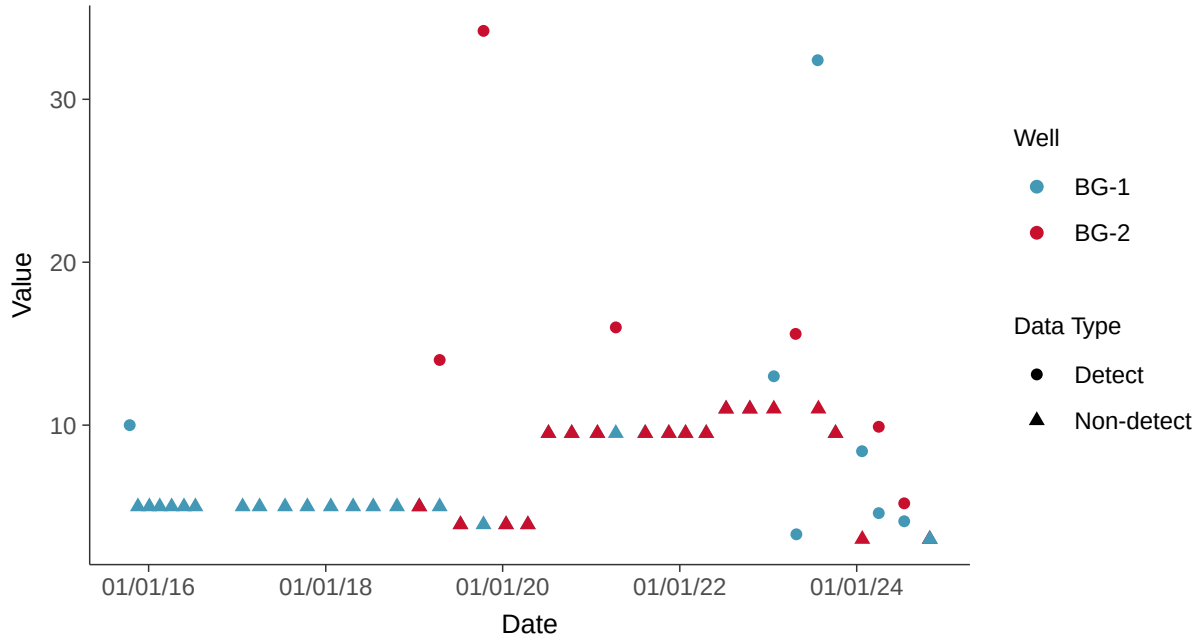
Scatter Plot

Zinc, BG-1 & BG-2 (ug/L)



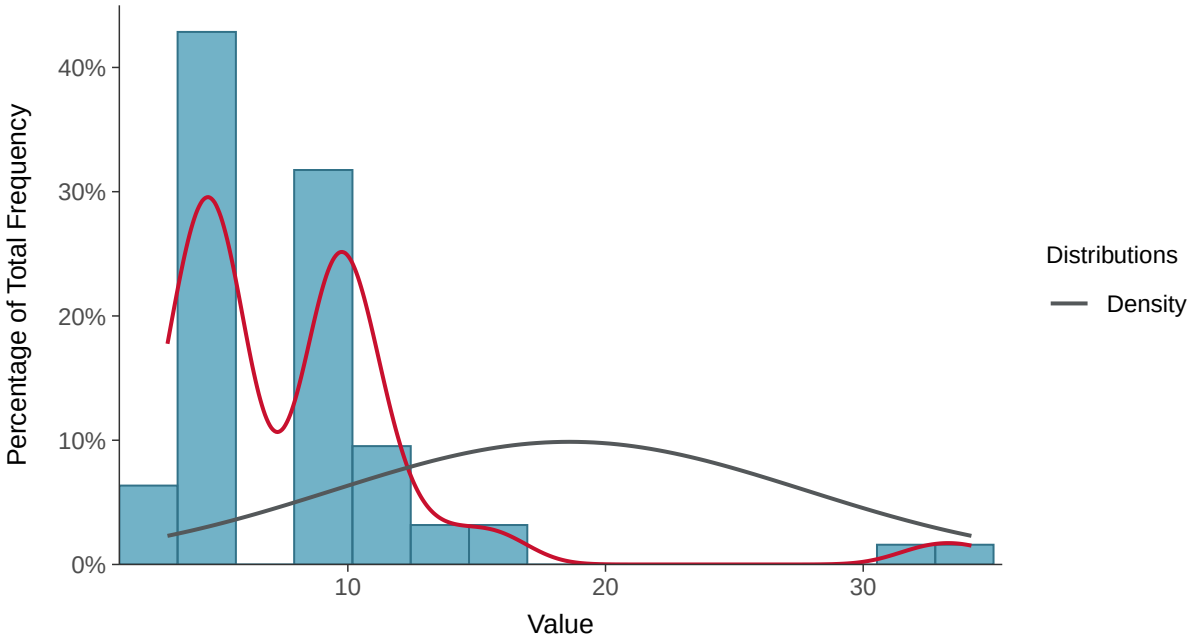
Scatter Plot by Well

Zinc, BG-1 & BG-2 (ug/L)



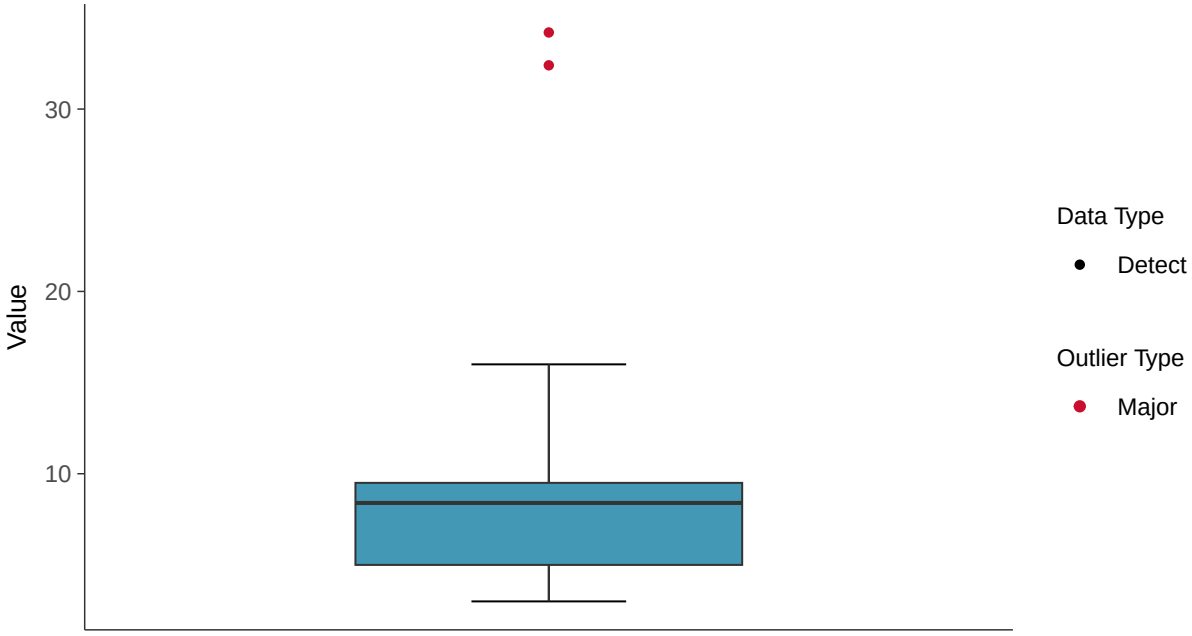
Histogram

Zinc, BG-1 & BG-2 (ug/L)



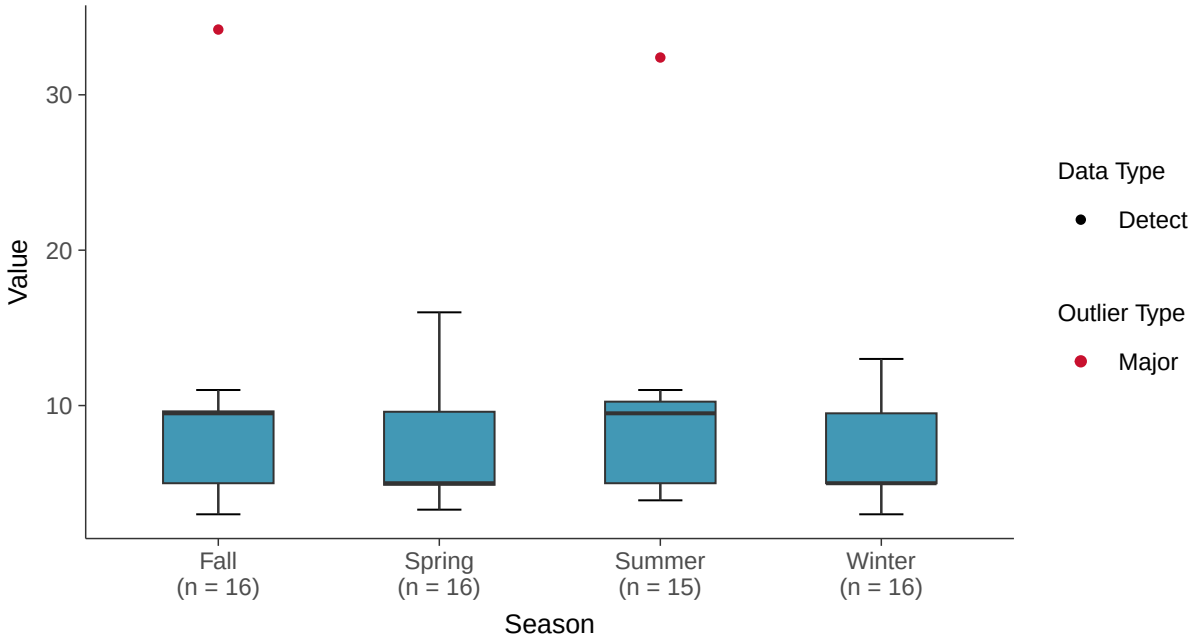
Boxplot

Zinc, BG-1 & BG-2 (ug/L)



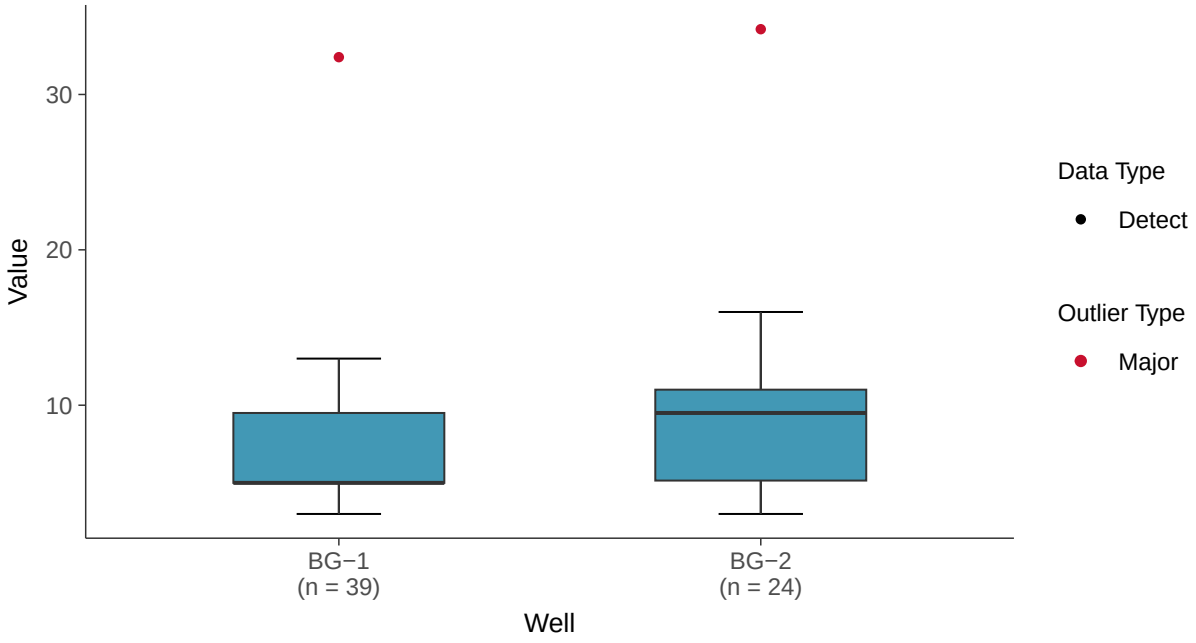
Boxplot by Season

Zinc, BG-1 & BG-2 (ug/L)



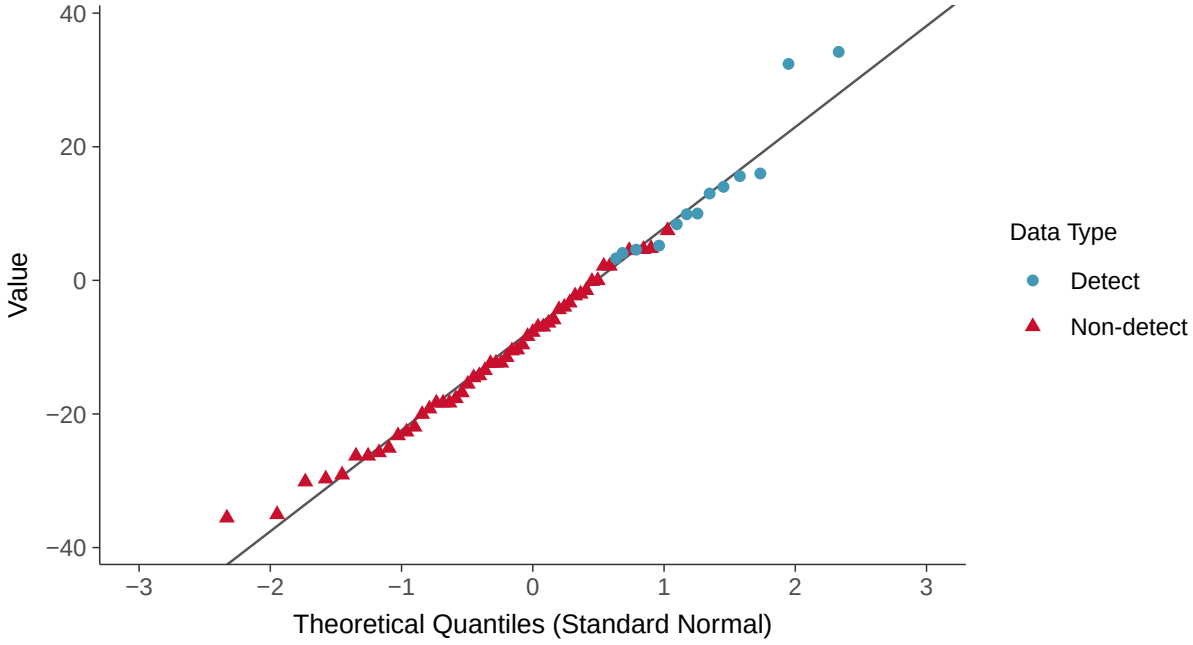
Boxplot by Well

Zinc, BG-1 & BG-2 (ug/L)



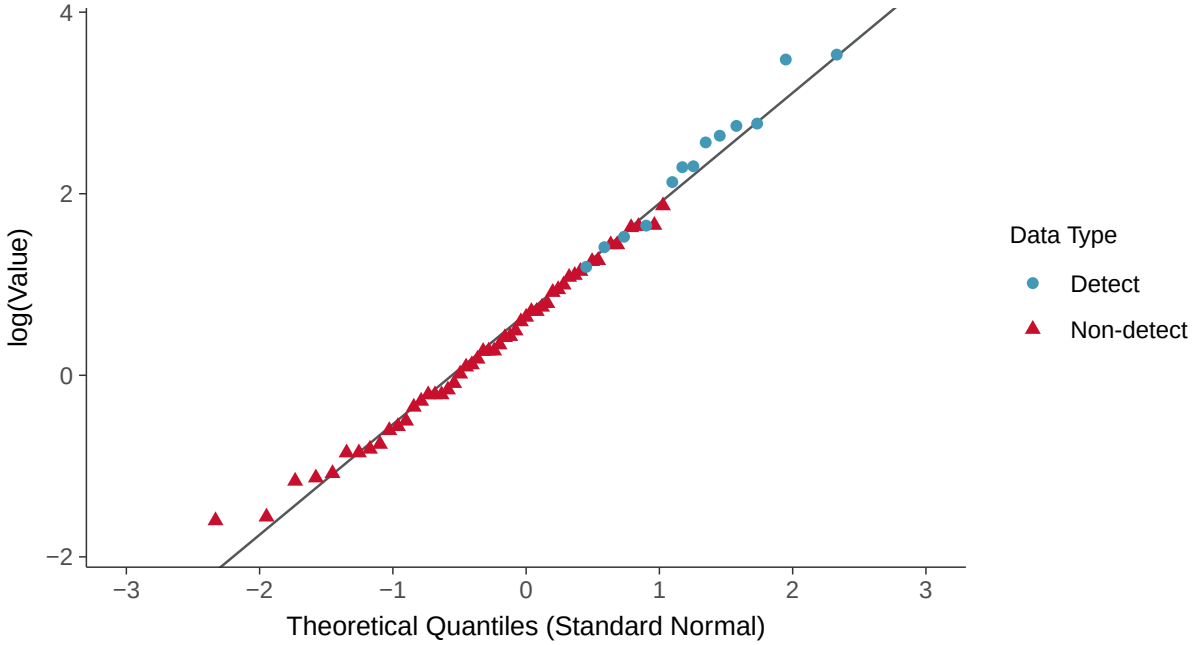
Normal Q-Q plot using ROS Imputed Estimates

Zinc, BG-1 & BG-2 (ug/L)



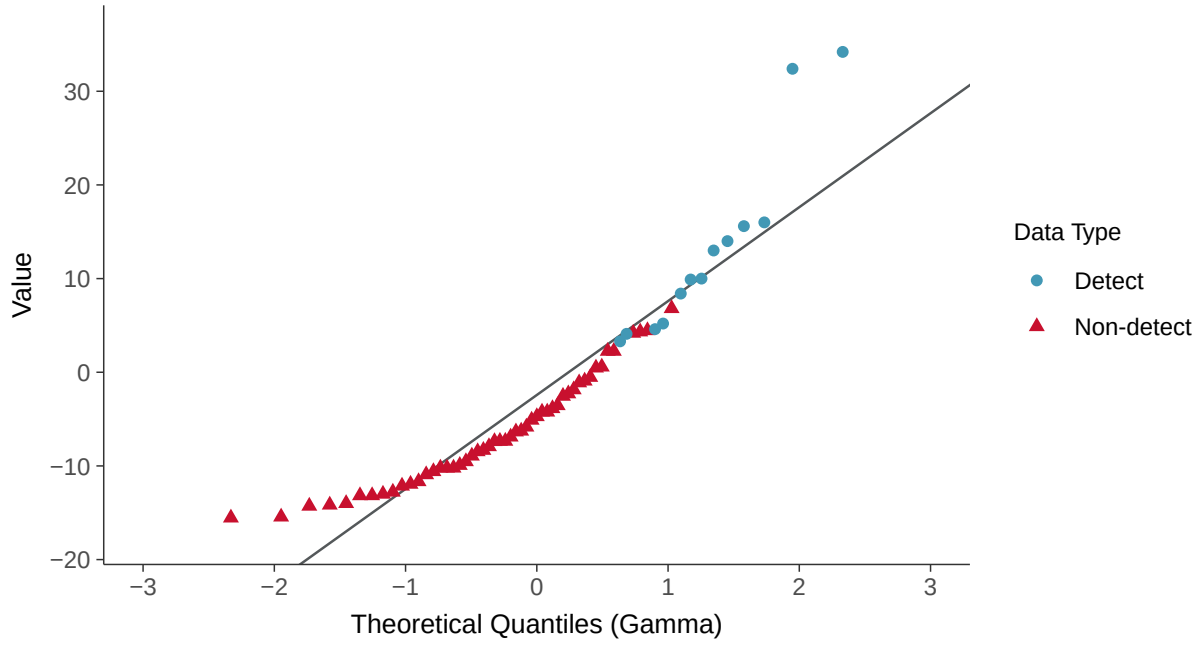
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, BG-1 & BG-2 (ug/L)



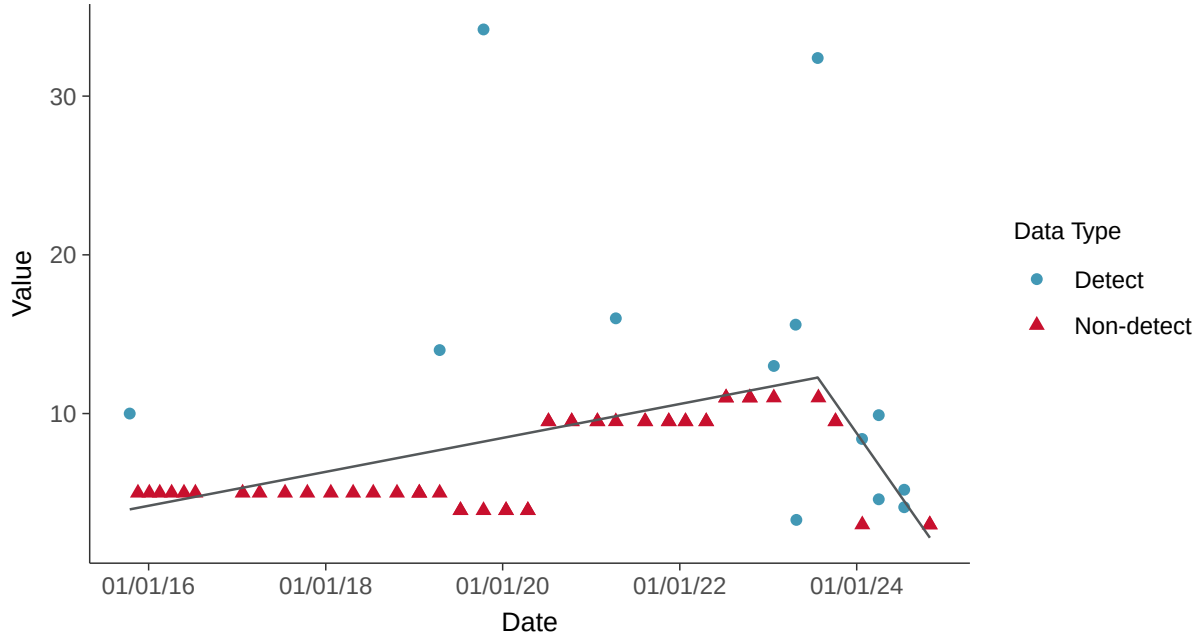
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, BG-1 & BG-2 (ug/L)



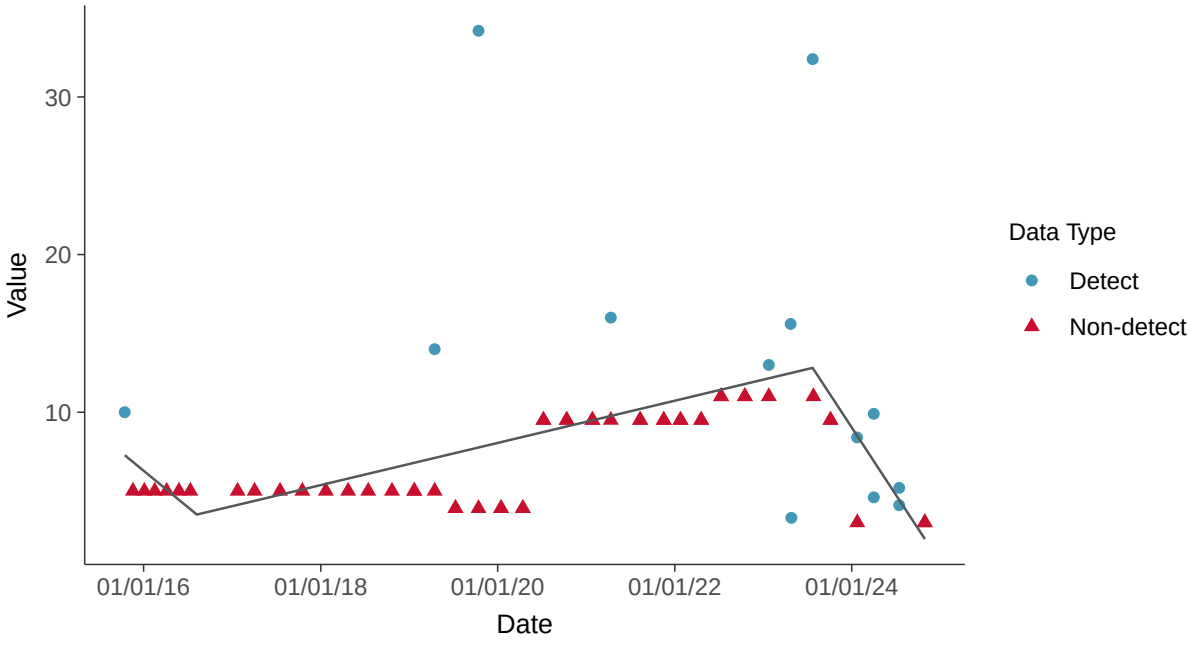
Trend Regression: Piecewise Linear-Linear

Zinc, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Zinc, BG-1 & BG-2 (ug/L)

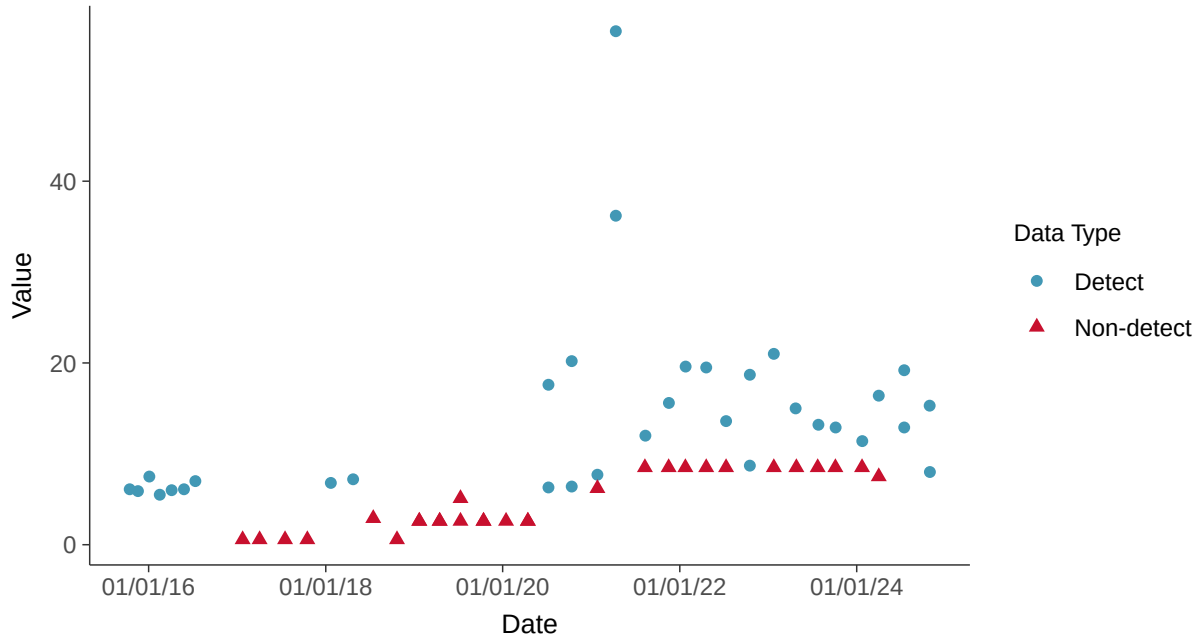


App. III: Boron, BG-1 & BG-2

ID: 2_105

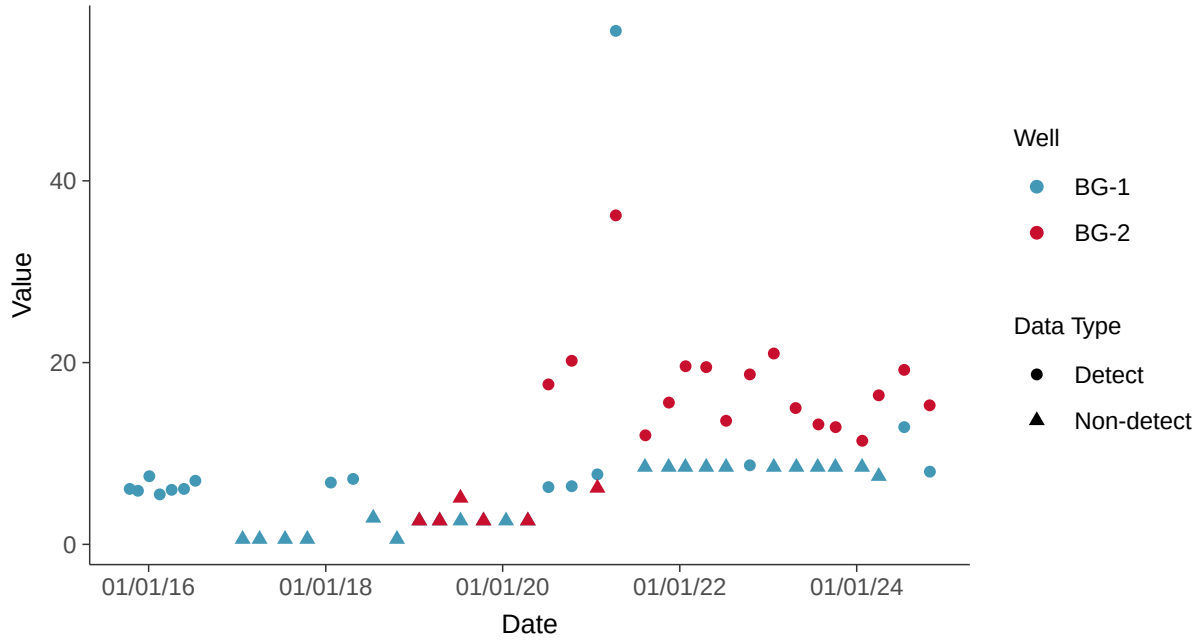
Scatter Plot

Boron, BG-1 & BG-2 (ug/L)



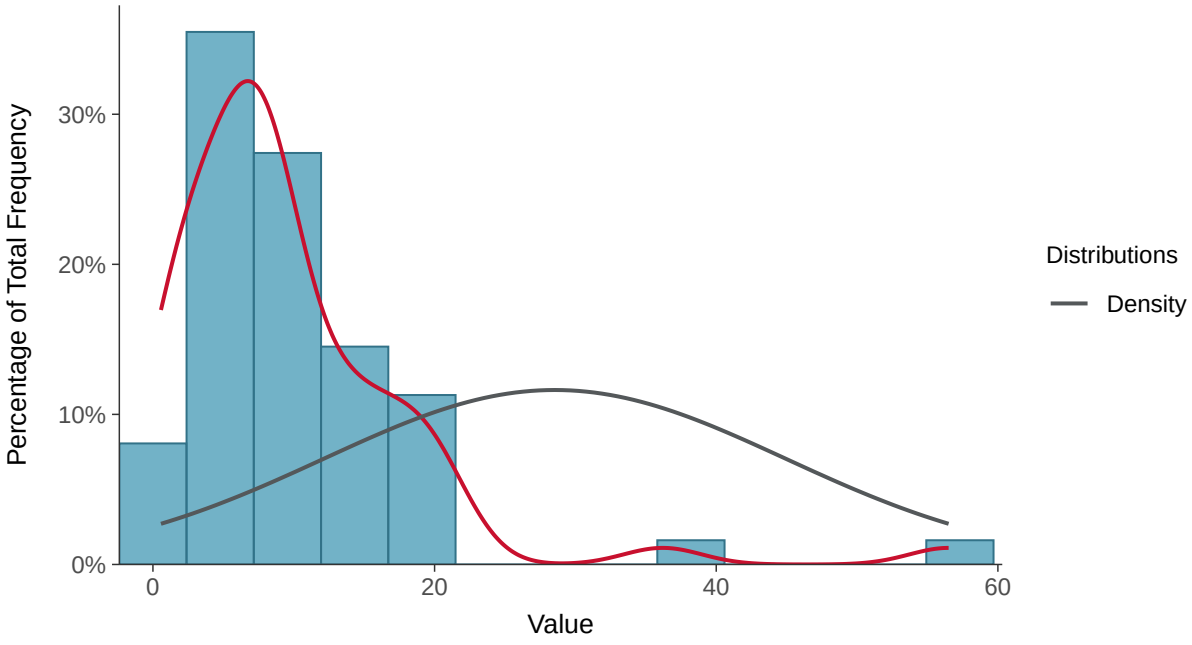
Scatter Plot by Well

Boron, BG-1 & BG-2 (ug/L)



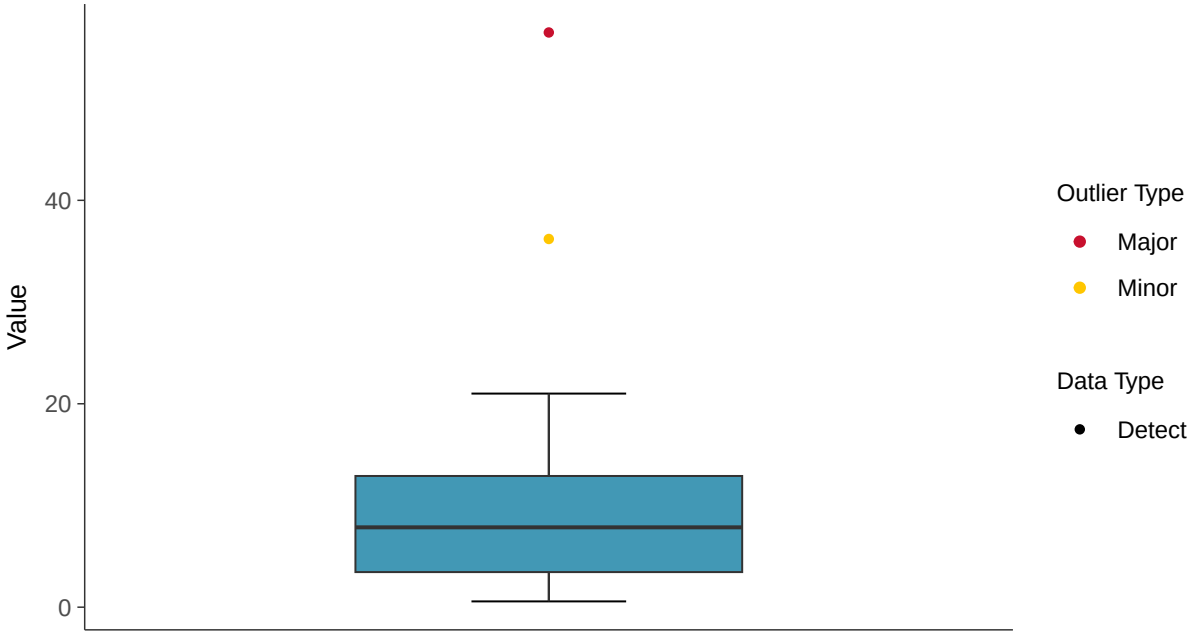
Histogram

Boron, BG-1 & BG-2 (ug/L)



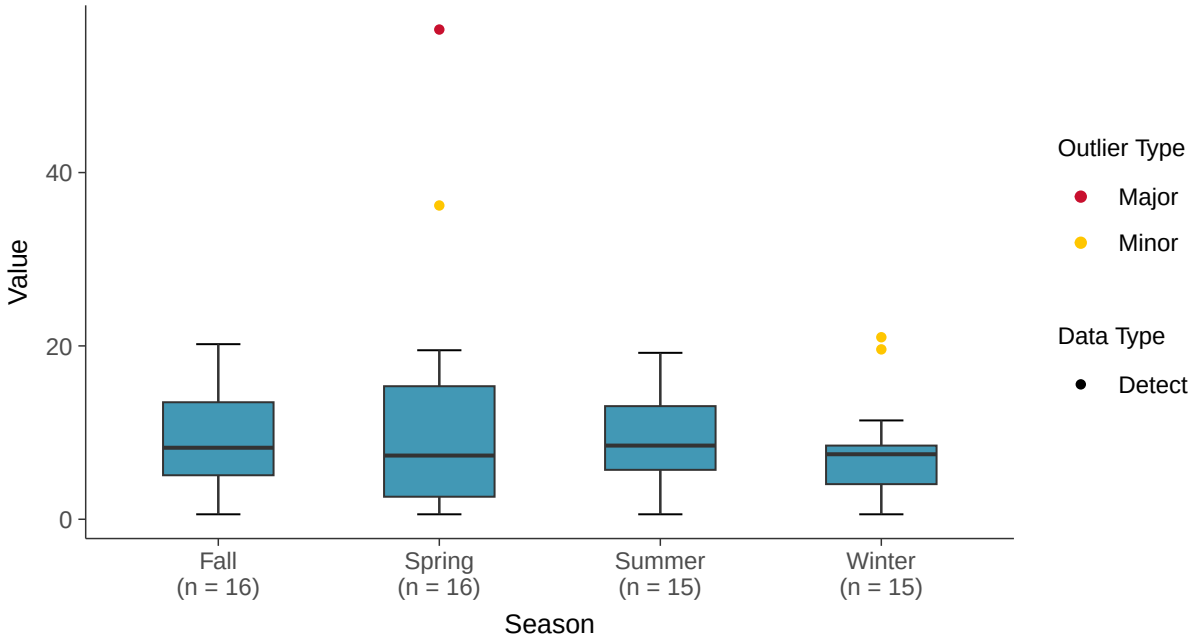
Boxplot

Boron, BG-1 & BG-2 (ug/L)



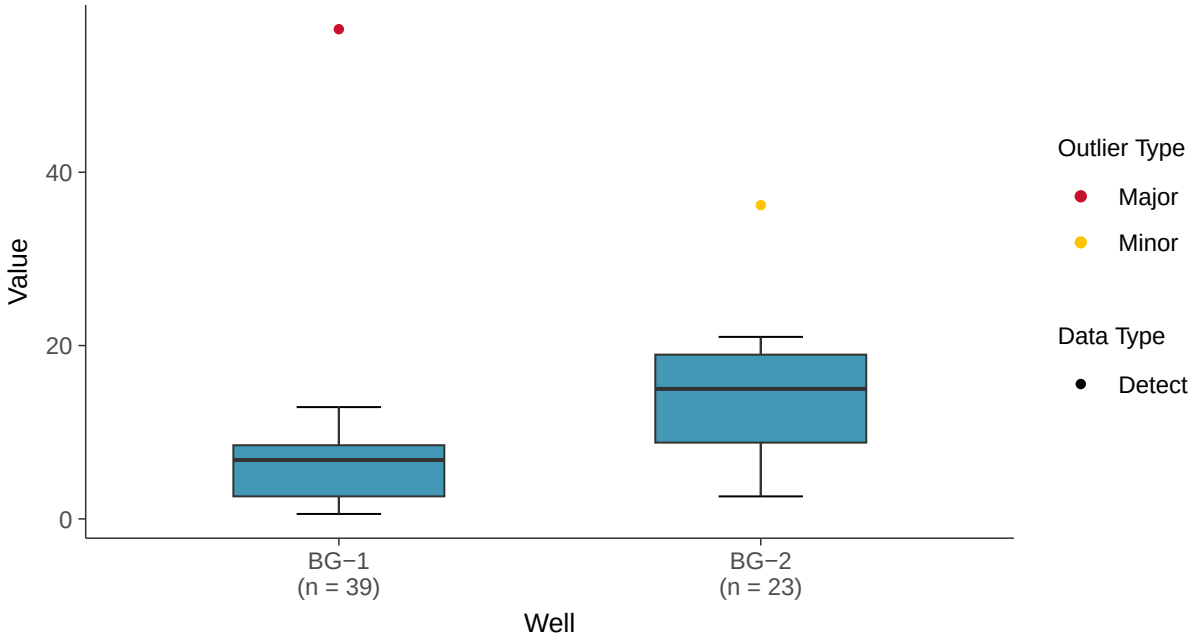
Boxplot by Season

Boron, BG-1 & BG-2 (ug/L)



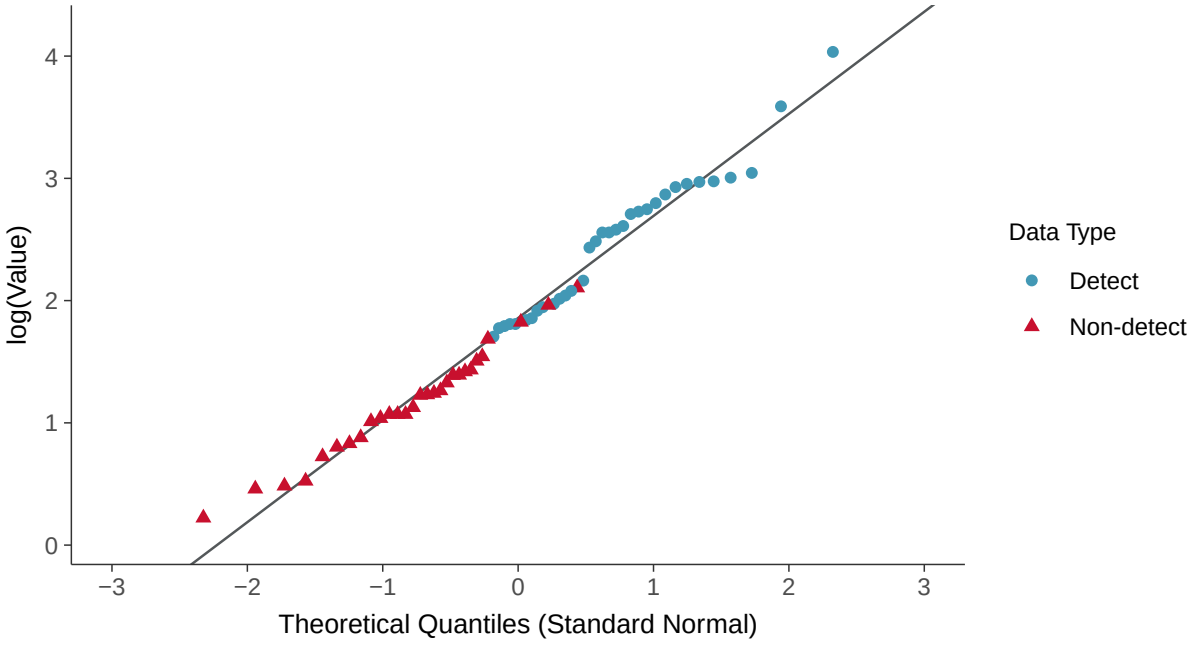
Boxplot by Well

Boron, BG-1 & BG-2 (ug/L)



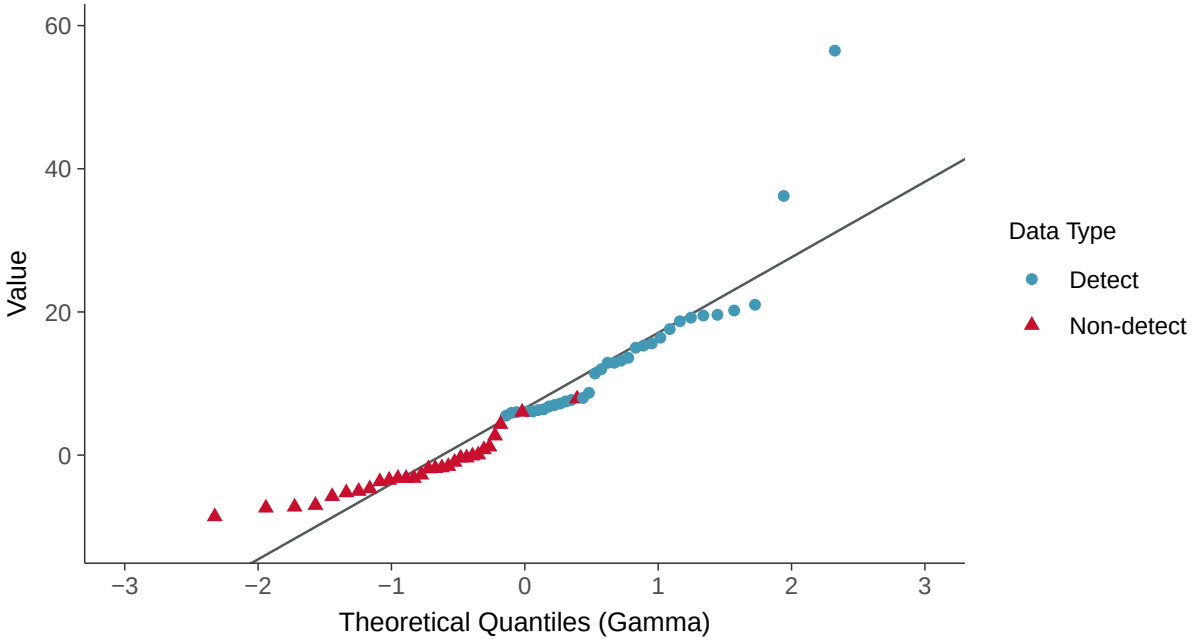
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, BG-1 & BG-2 (ug/L)



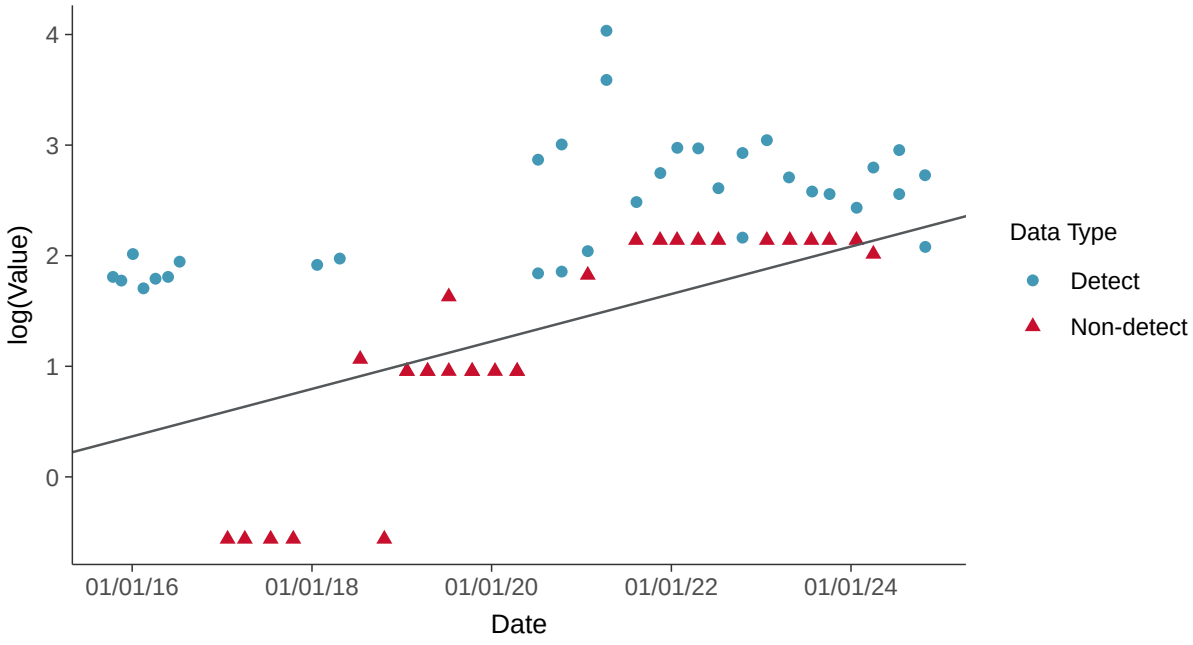
Gamma Q-Q plot using ROS Imputed Estimates

Boron, BG-1 & BG-2 (ug/L)



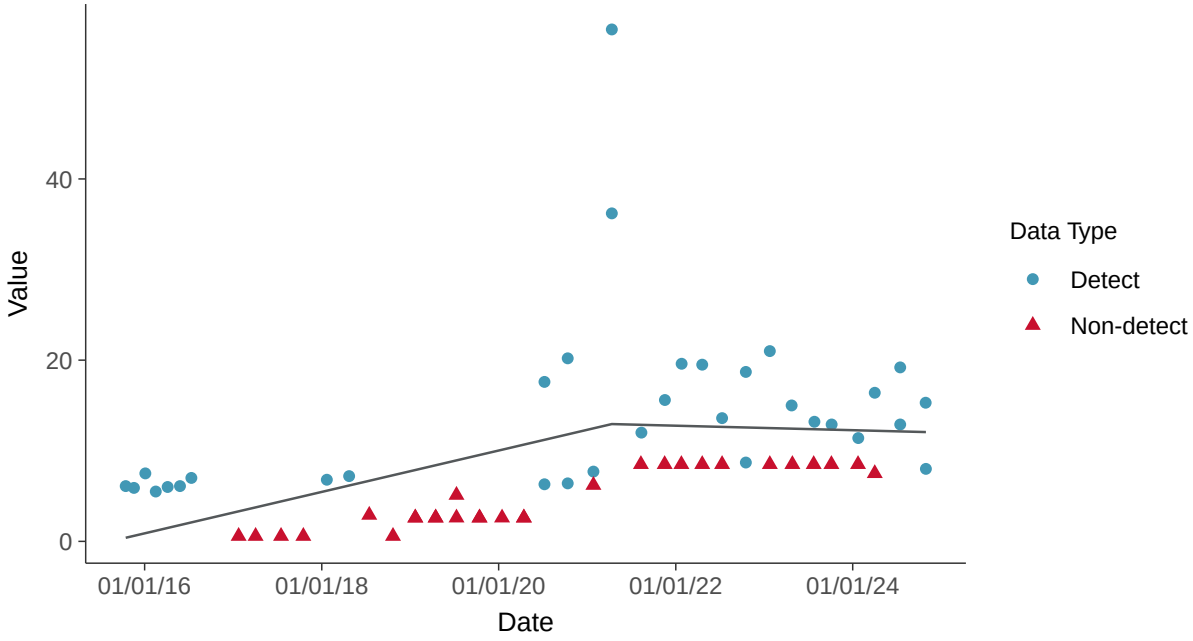
Trend Regression: Lognormal MLE

Boron, BG-1 & BG-2 (ug/L)



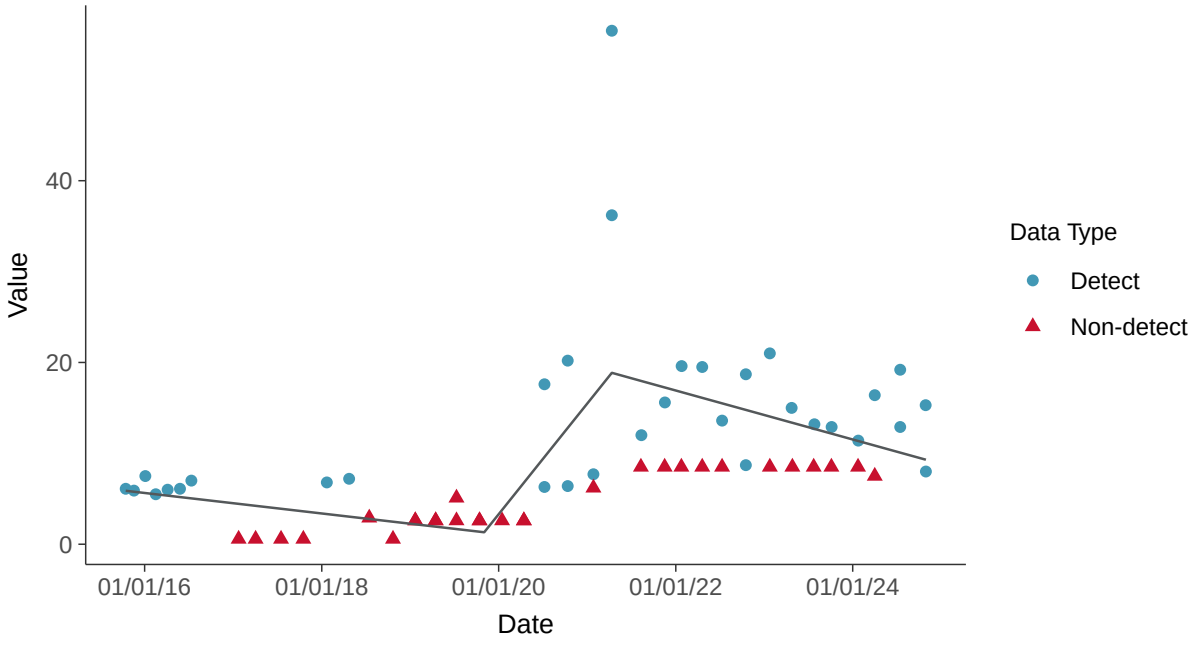
Trend Regression: Piecewise Linear-Linear

Boron, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, BG-1 & BG-2 (ug/L)

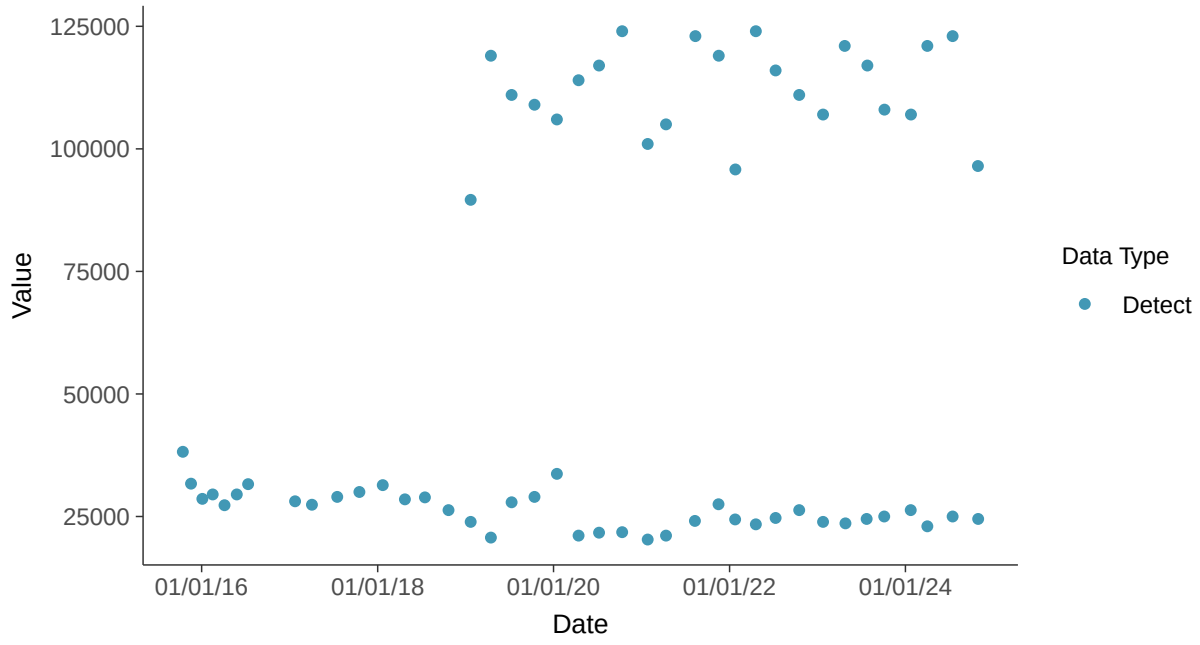


App. III: Calcium, BG-1 & BG-2

ID: 2_107

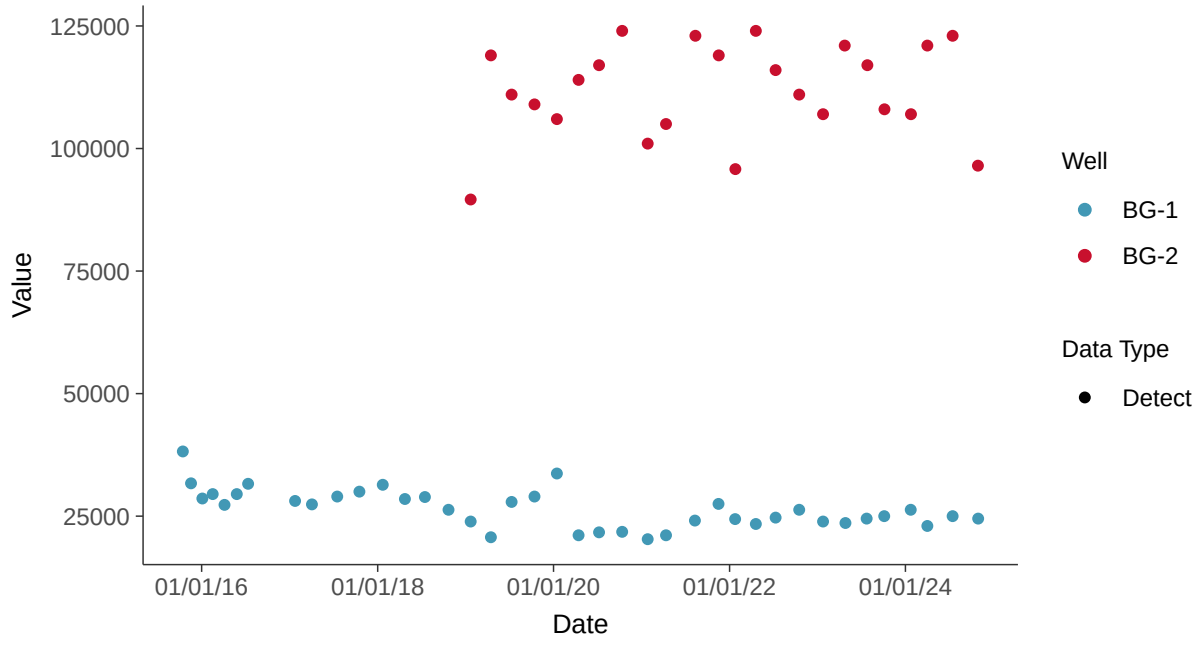
Scatter Plot

Calcium, BG-1 & BG-2 (ug/L)



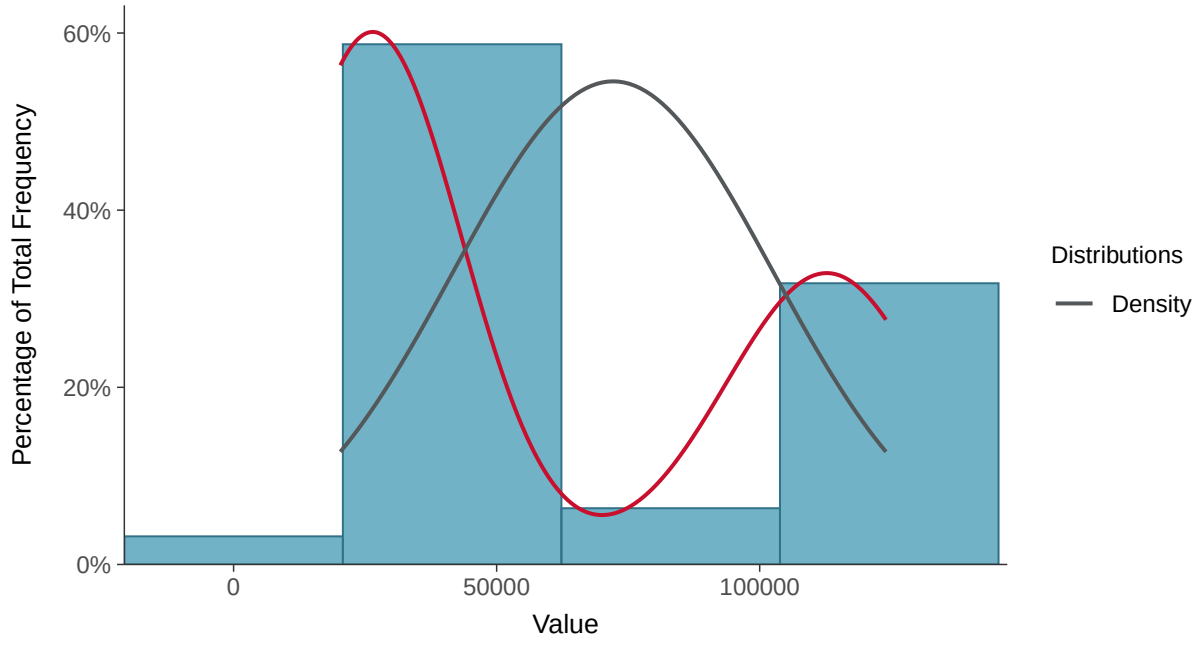
Scatter Plot by Well

Calcium, BG-1 & BG-2 (ug/L)



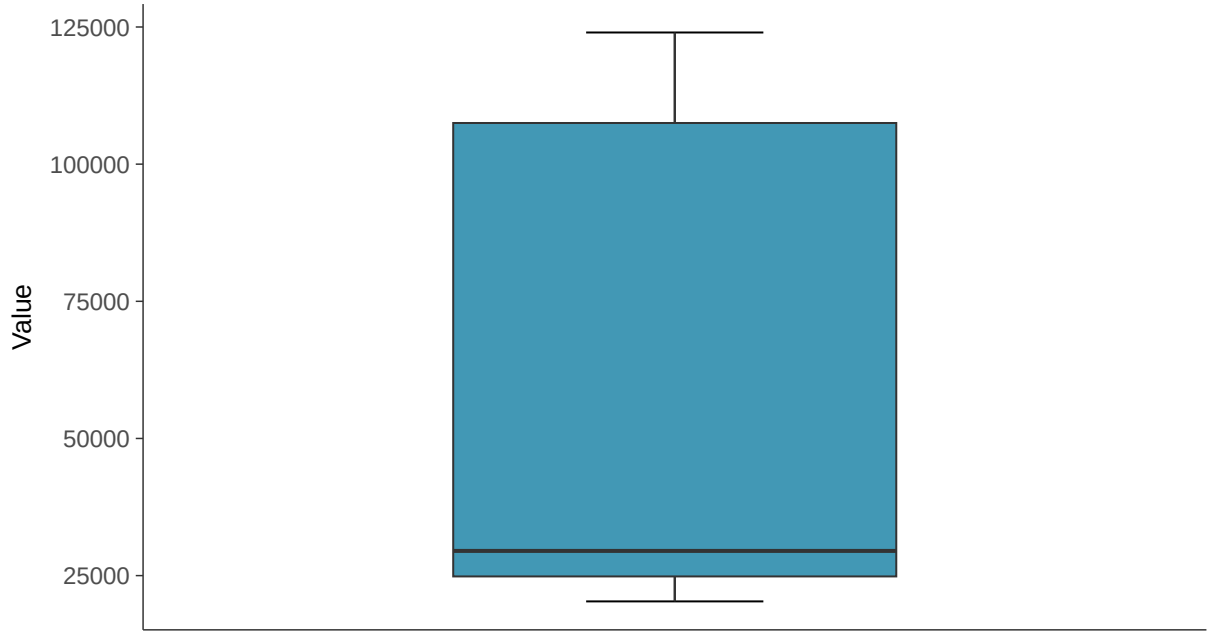
Histogram

Calcium, BG-1 & BG-2 (ug/L)



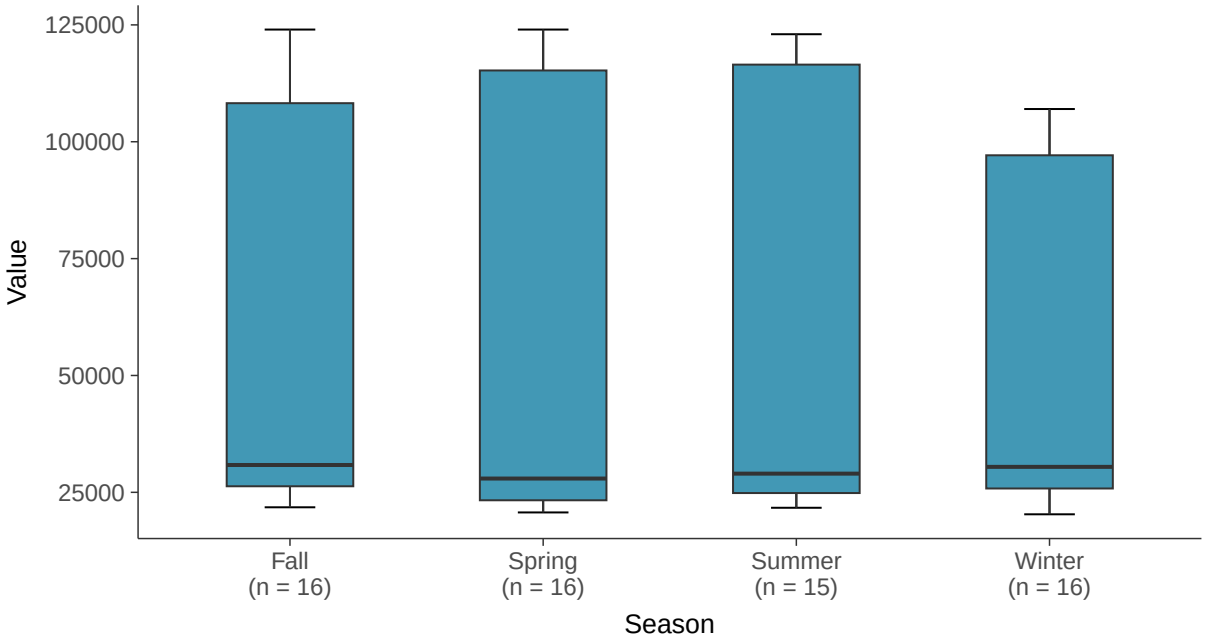
Boxplot

Calcium, BG-1 & BG-2 (ug/L)



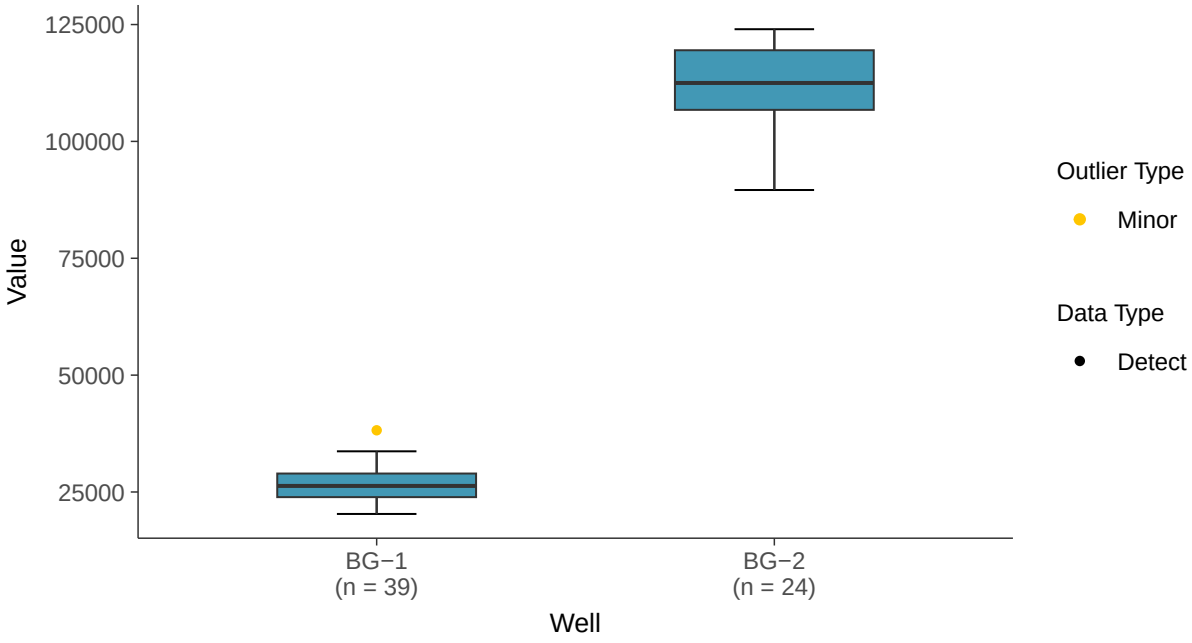
Boxplot by Season

Calcium, BG-1 & BG-2 (ug/L)



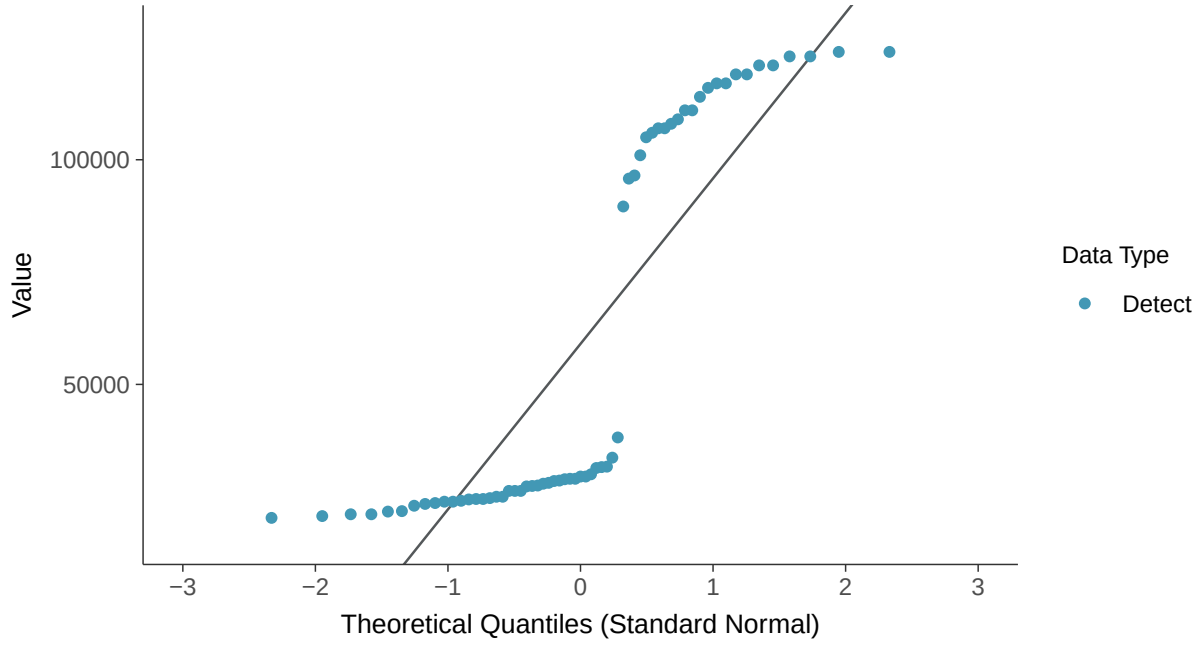
Boxplot by Well

Calcium, BG-1 & BG-2 (ug/L)



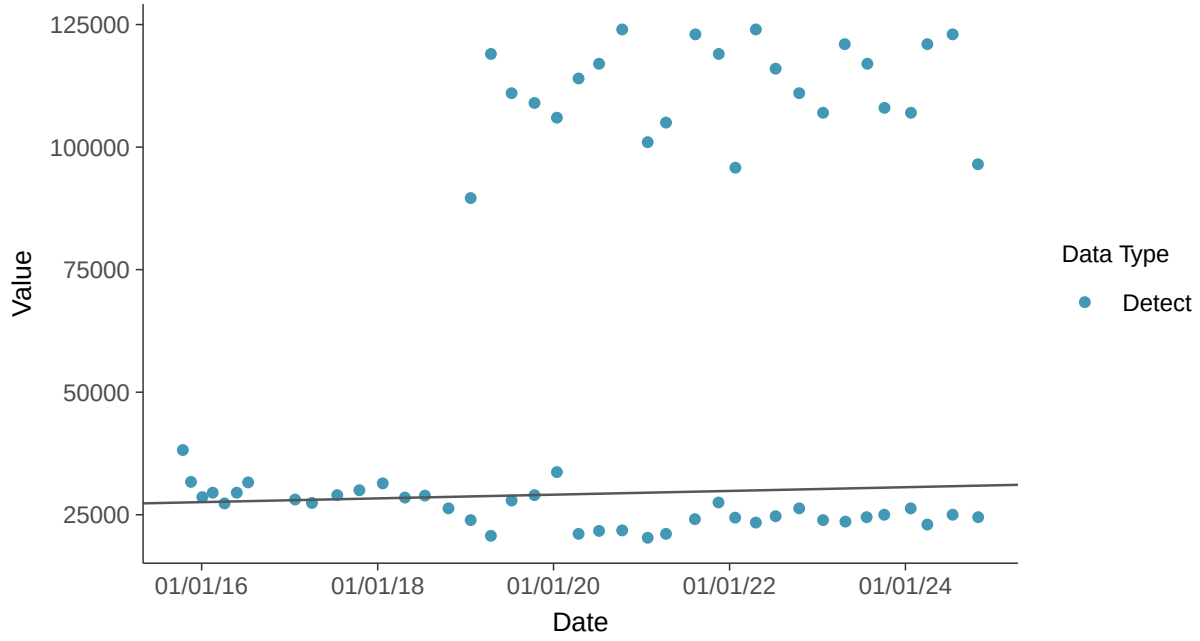
Normal Q-Q plot

Calcium, BG-1 & BG-2 (ug/L)



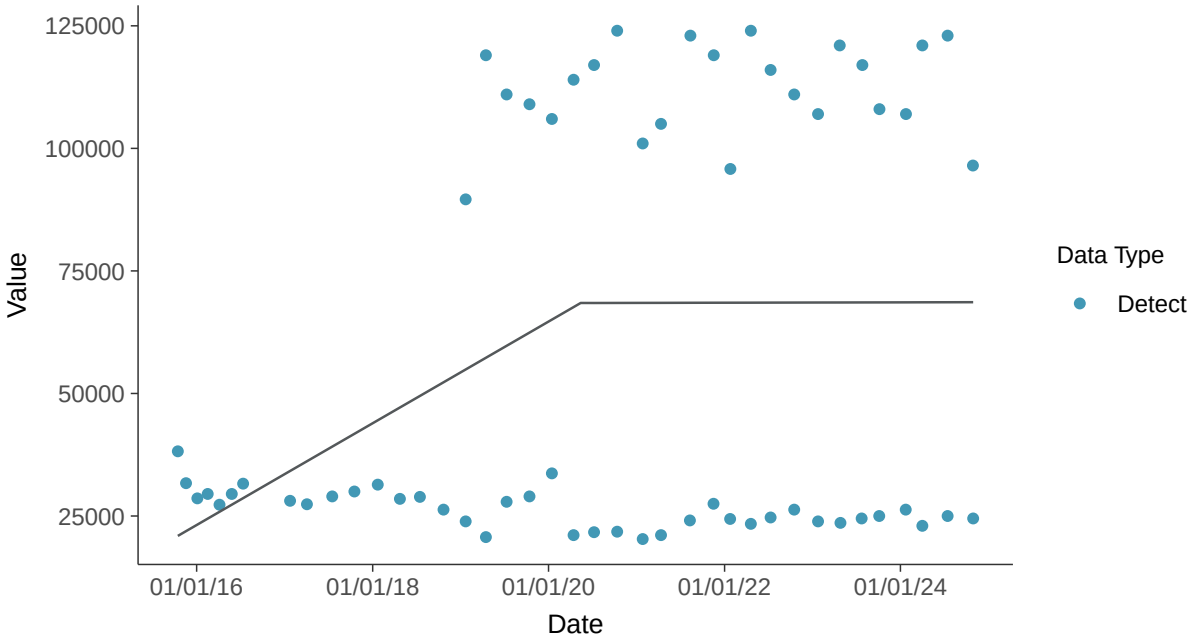
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, BG-1 & BG-2 (ug/L)

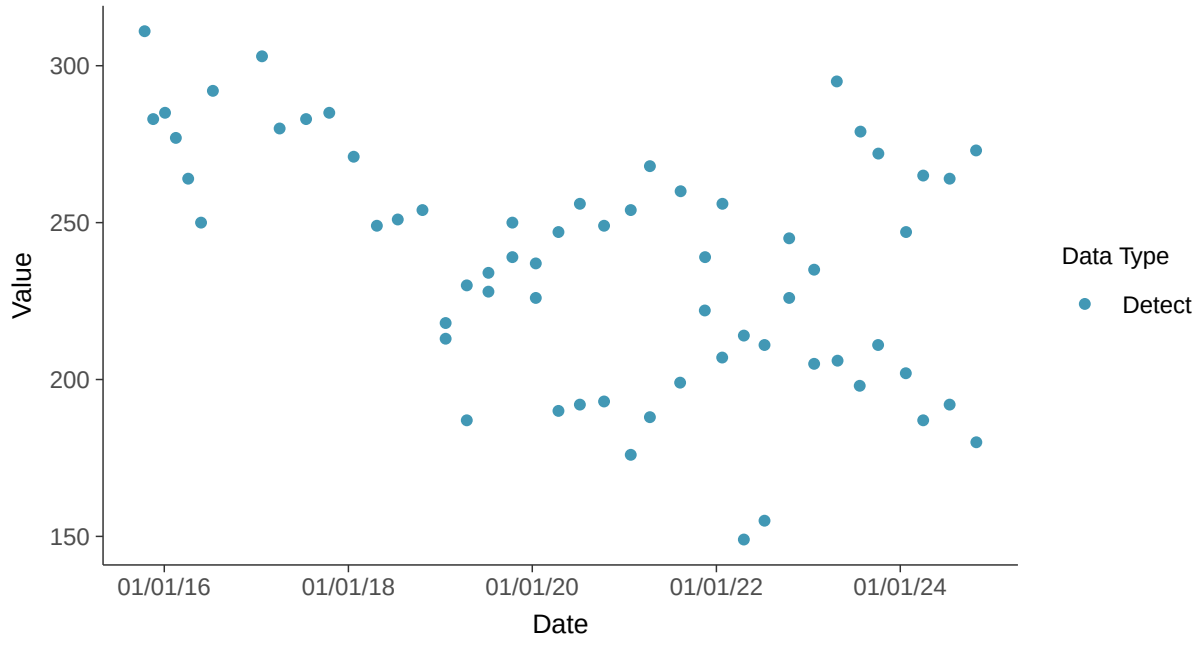


App. III: Chloride, BG-1 & BG-2

ID: 2_108

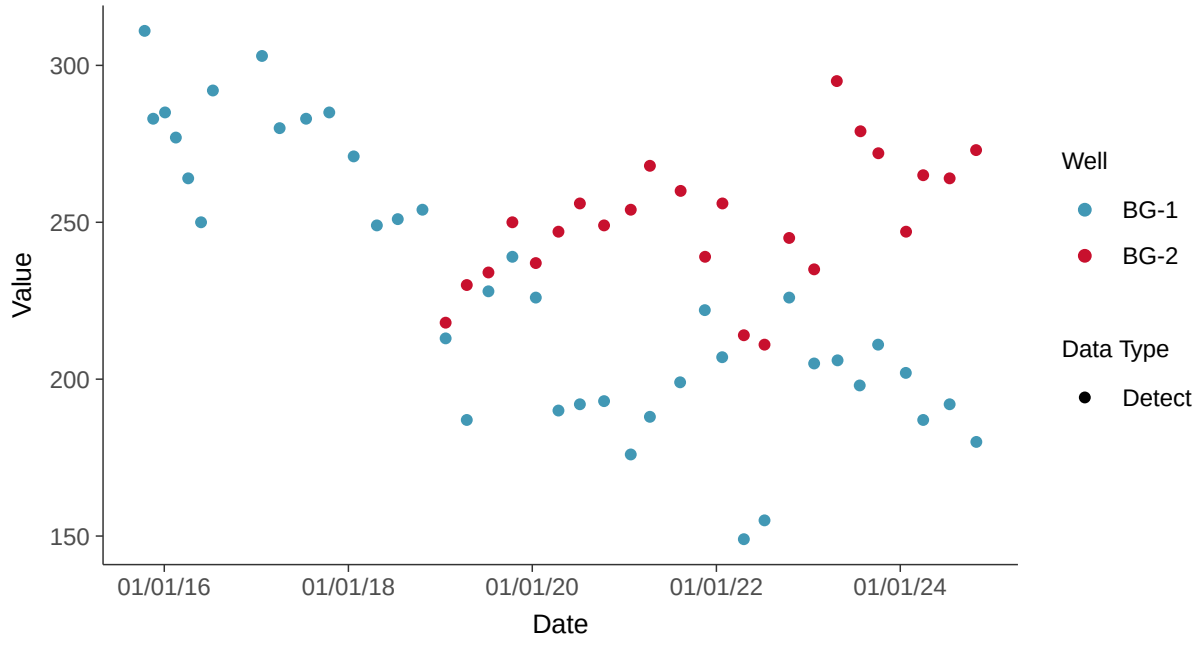
Scatter Plot

Chloride, BG-1 & BG-2 (mg/L)



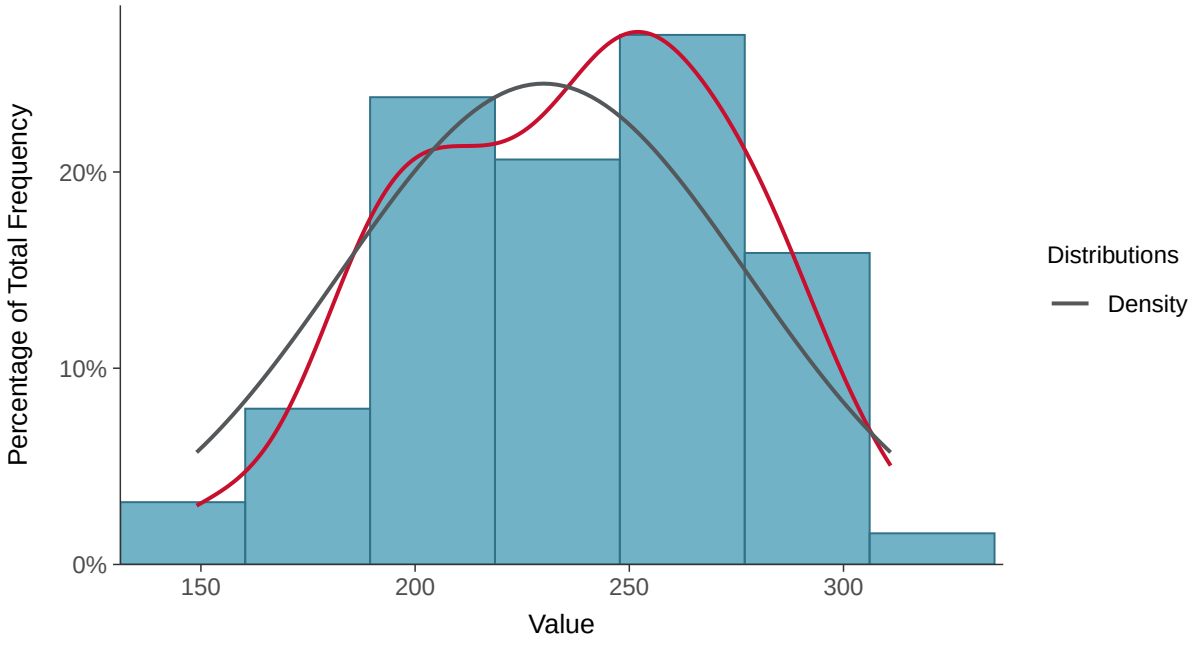
Scatter Plot by Well

Chloride, BG-1 & BG-2 (mg/L)



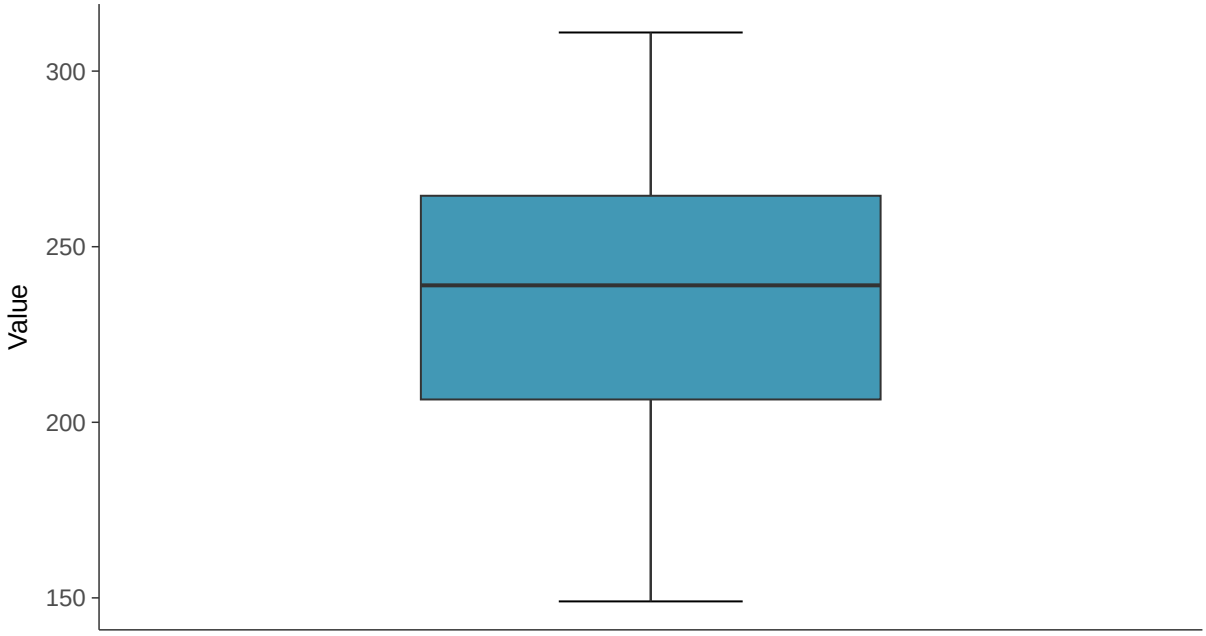
Histogram

Chloride, BG-1 & BG-2 (mg/L)



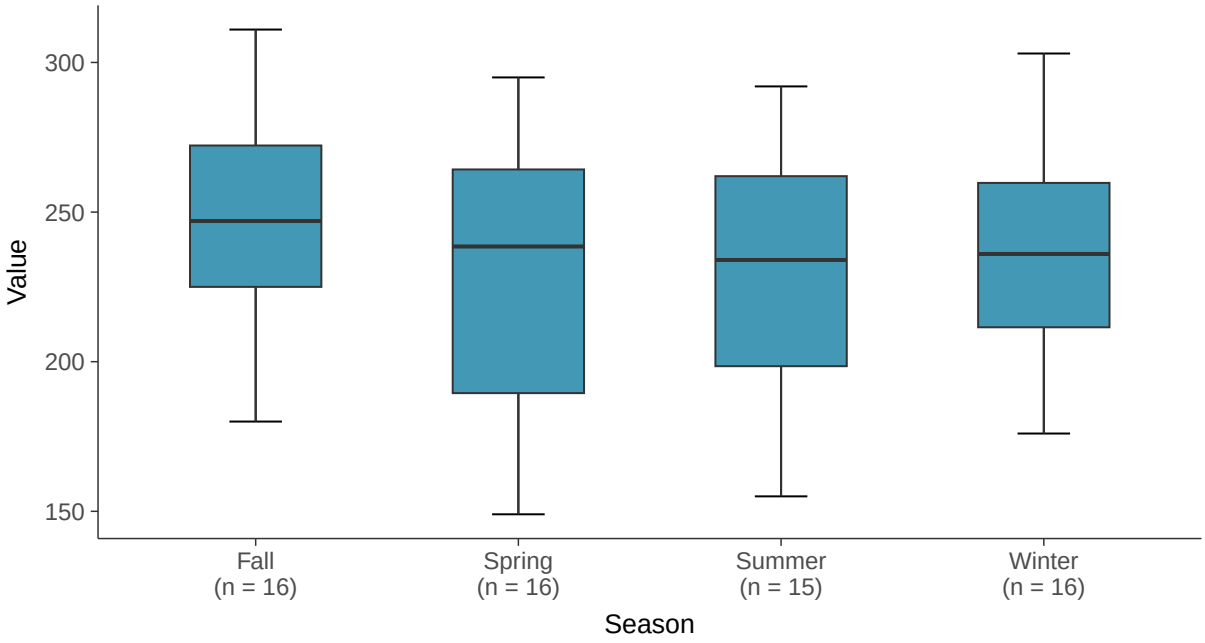
Boxplot

Chloride, BG-1 & BG-2 (mg/L)



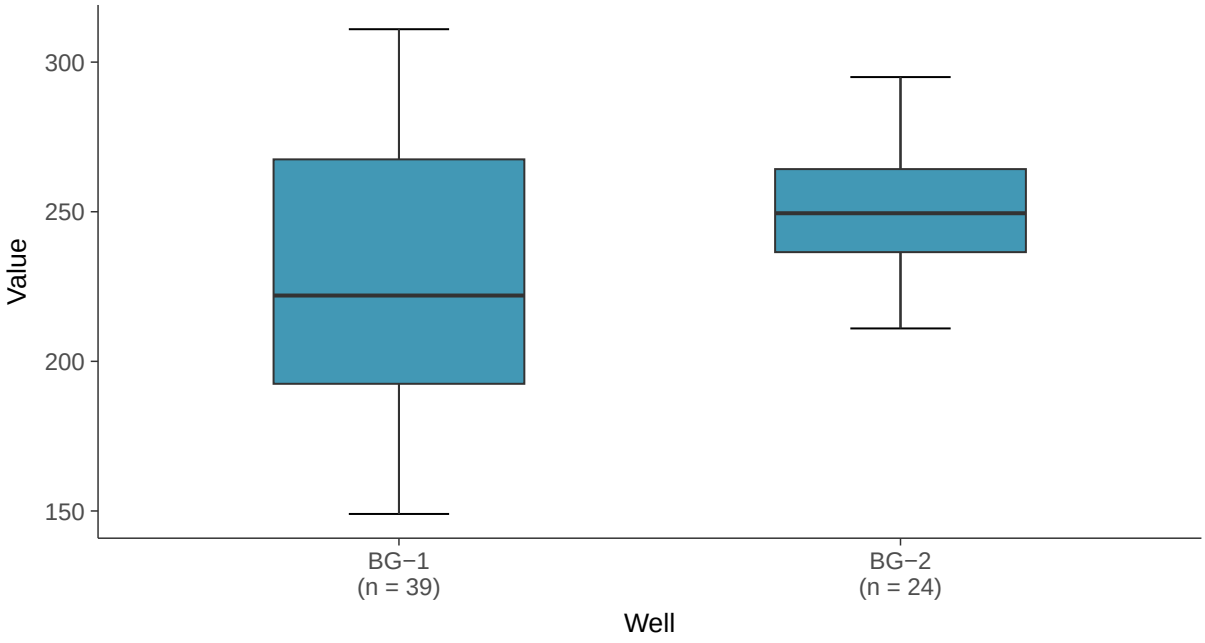
Boxplot by Season

Chloride, BG-1 & BG-2 (mg/L)



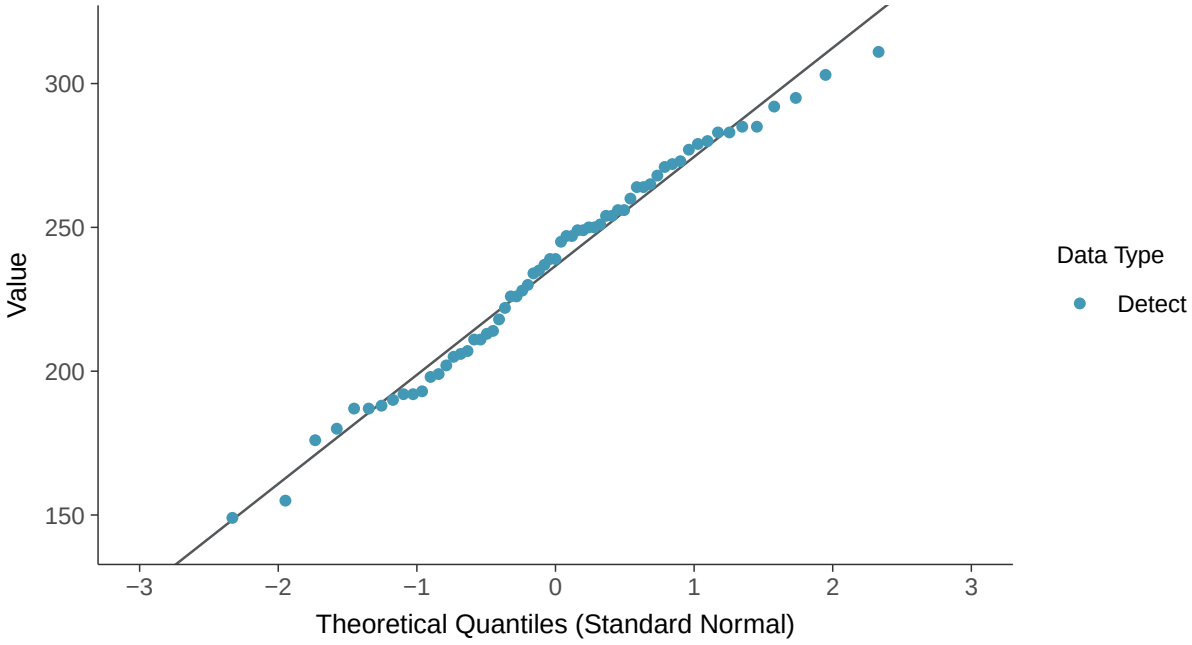
Boxplot by Well

Chloride, BG-1 & BG-2 (mg/L)



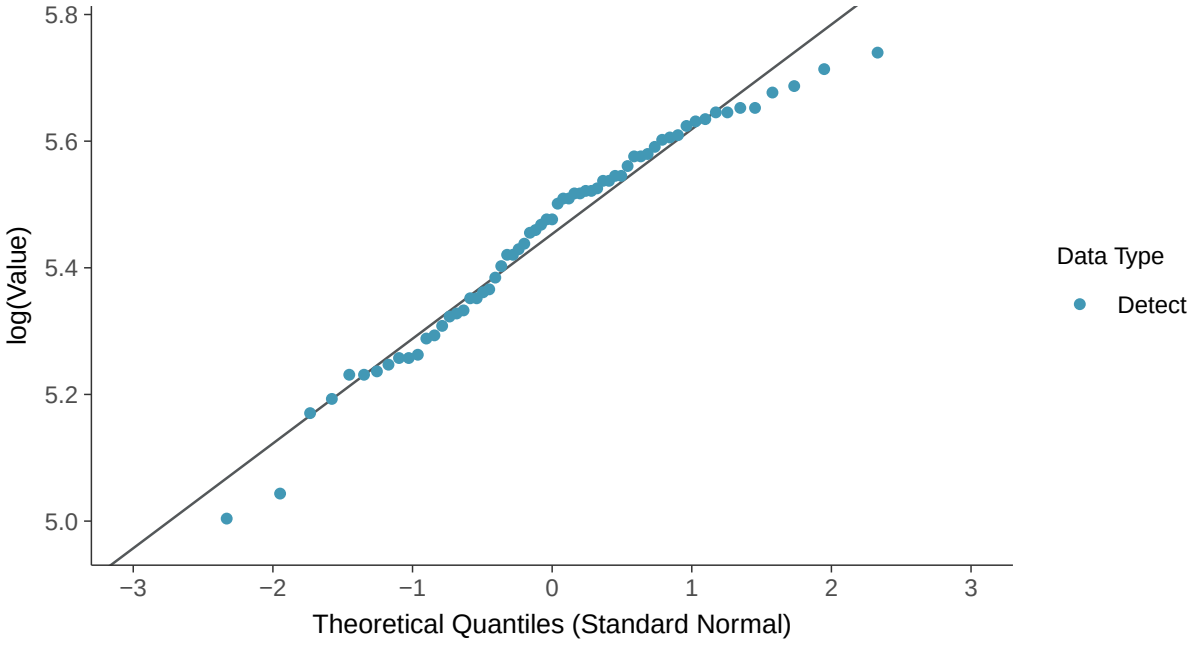
Normal Q-Q plot

Chloride, BG-1 & BG-2 (mg/L)



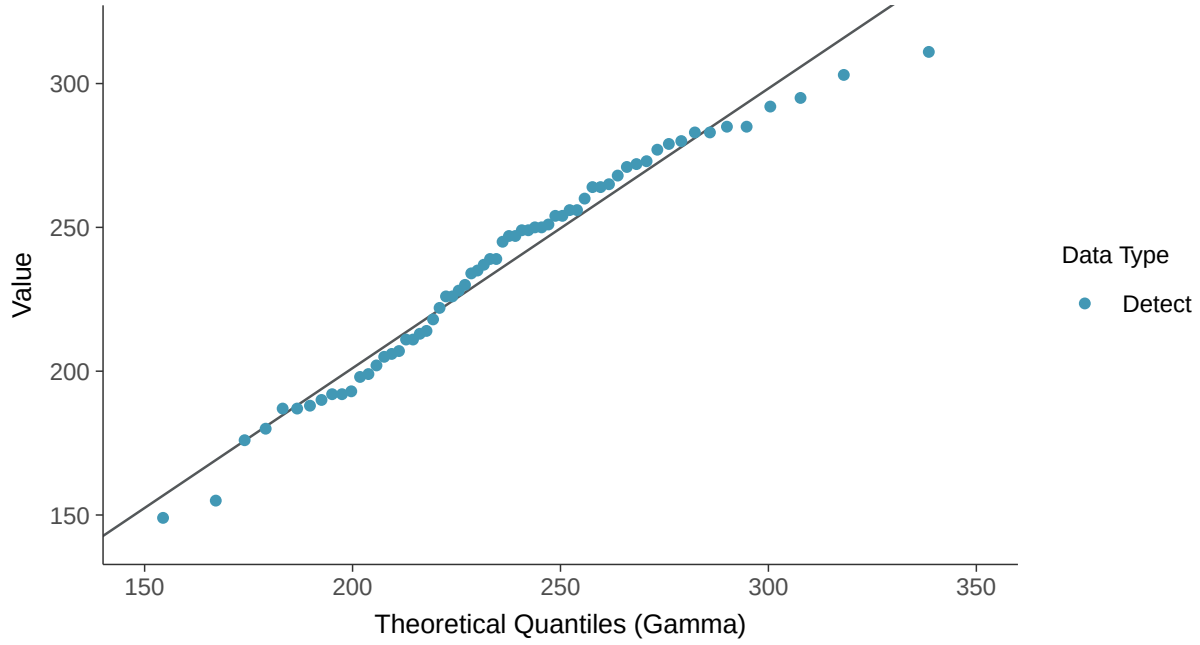
Lognormal Q-Q plot

Chloride, BG-1 & BG-2 (mg/L)



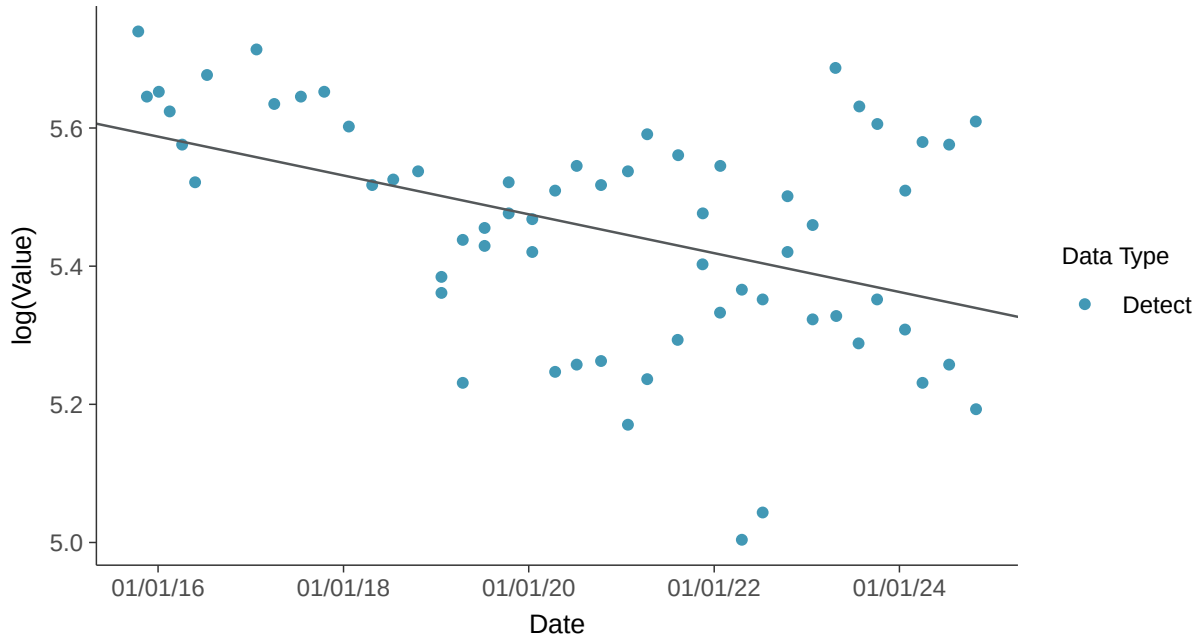
Gamma Q-Q plot

Chloride, BG-1 & BG-2 (mg/L)



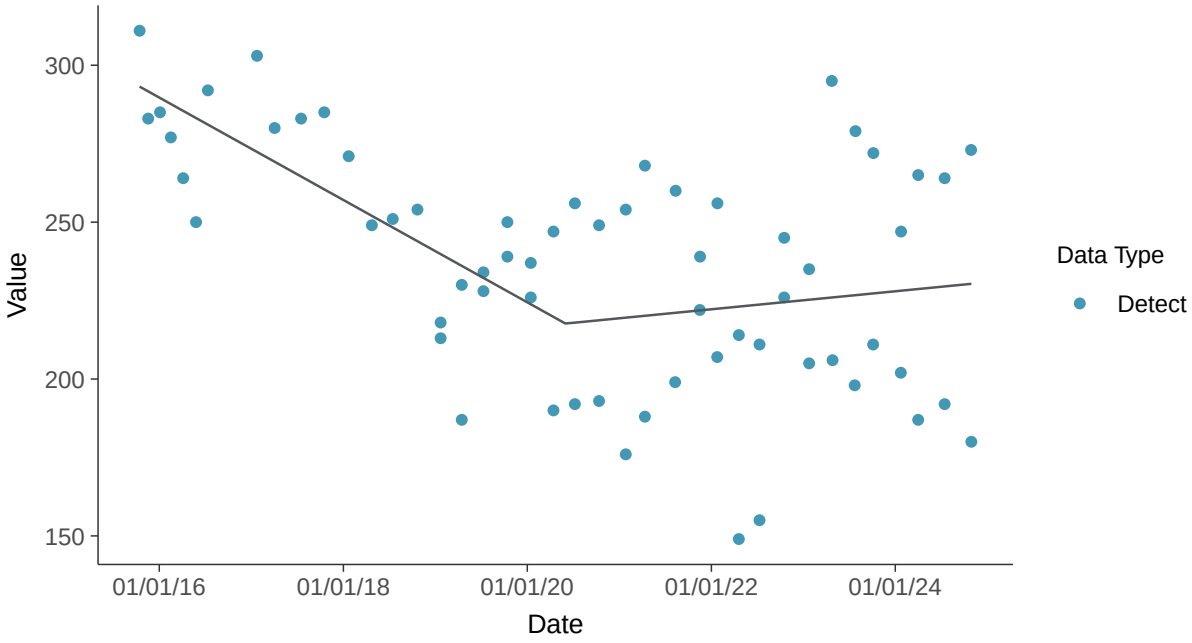
Trend Regression: Lognormal MLE

Chloride, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear

Chloride, BG-1 & BG-2 (mg/L)

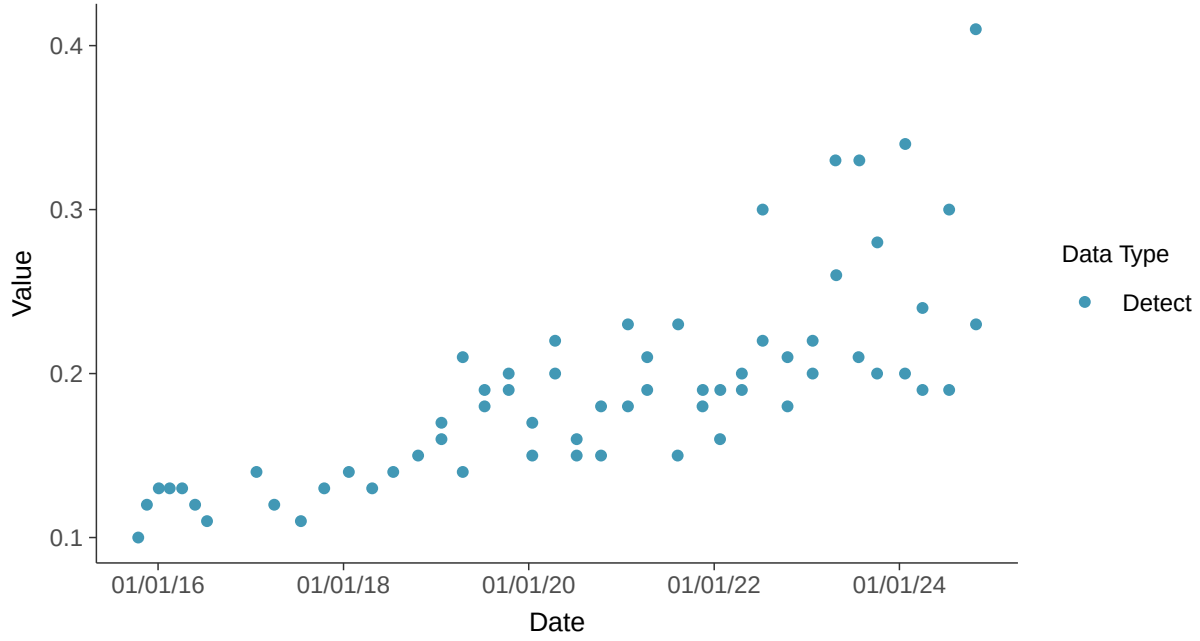


App. III: Fluoride, BG-1 & BG-2

ID: 2_112

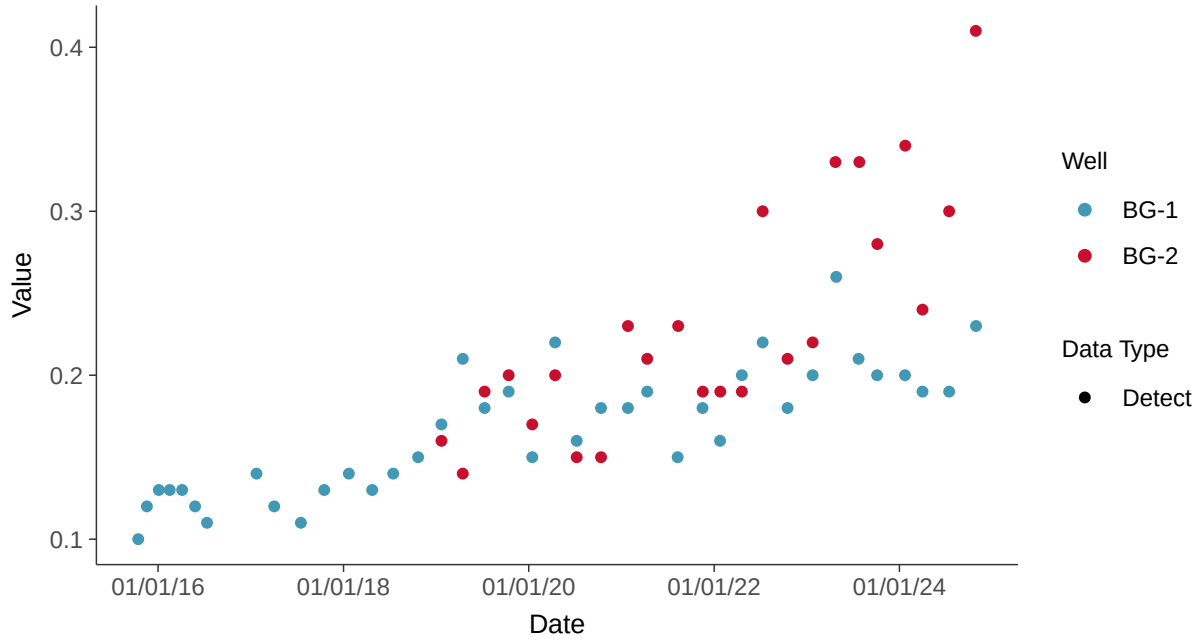
Scatter Plot

Fluoride, BG-1 & BG-2 (mg/L)



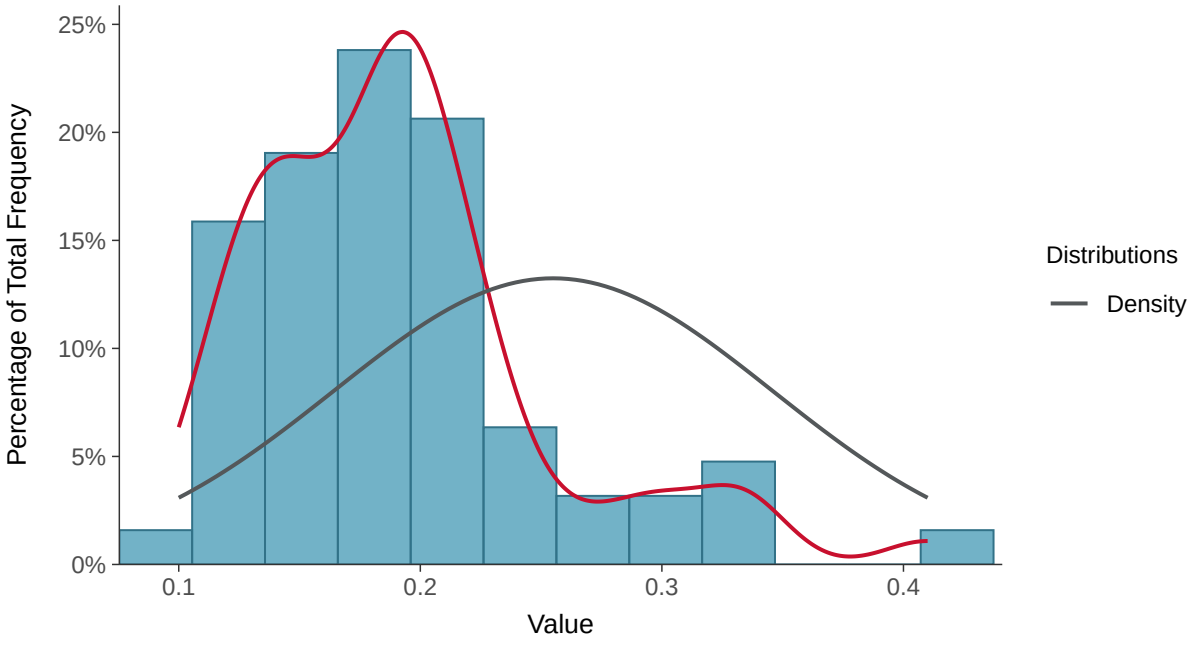
Scatter Plot by Well

Fluoride, BG-1 & BG-2 (mg/L)



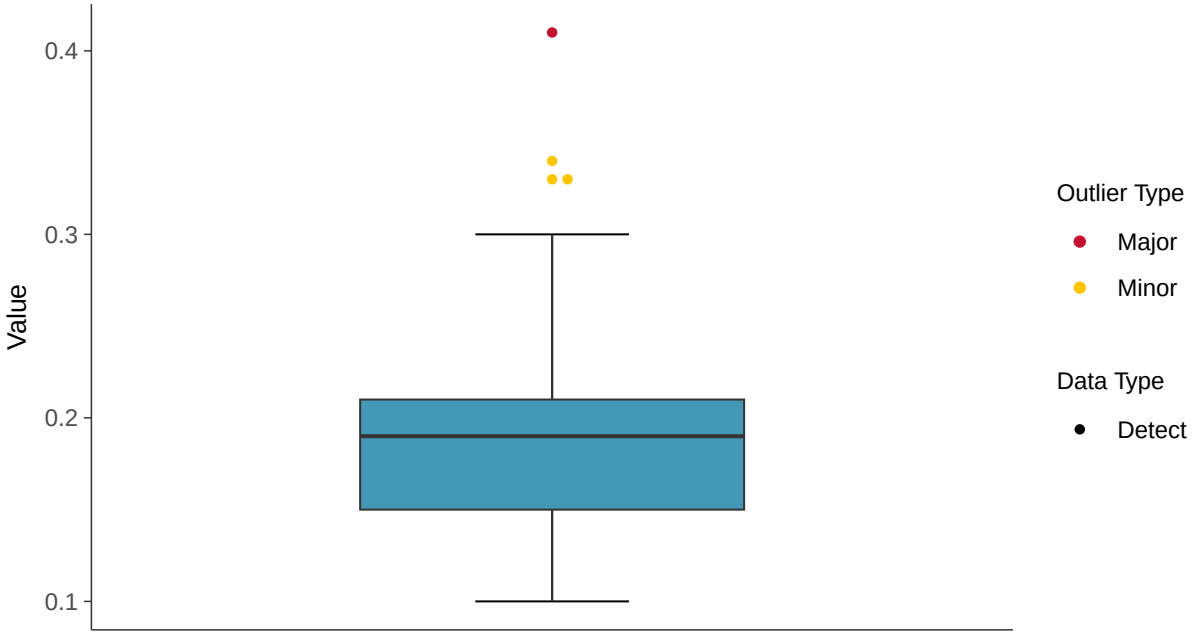
Histogram

Fluoride, BG-1 & BG-2 (mg/L)



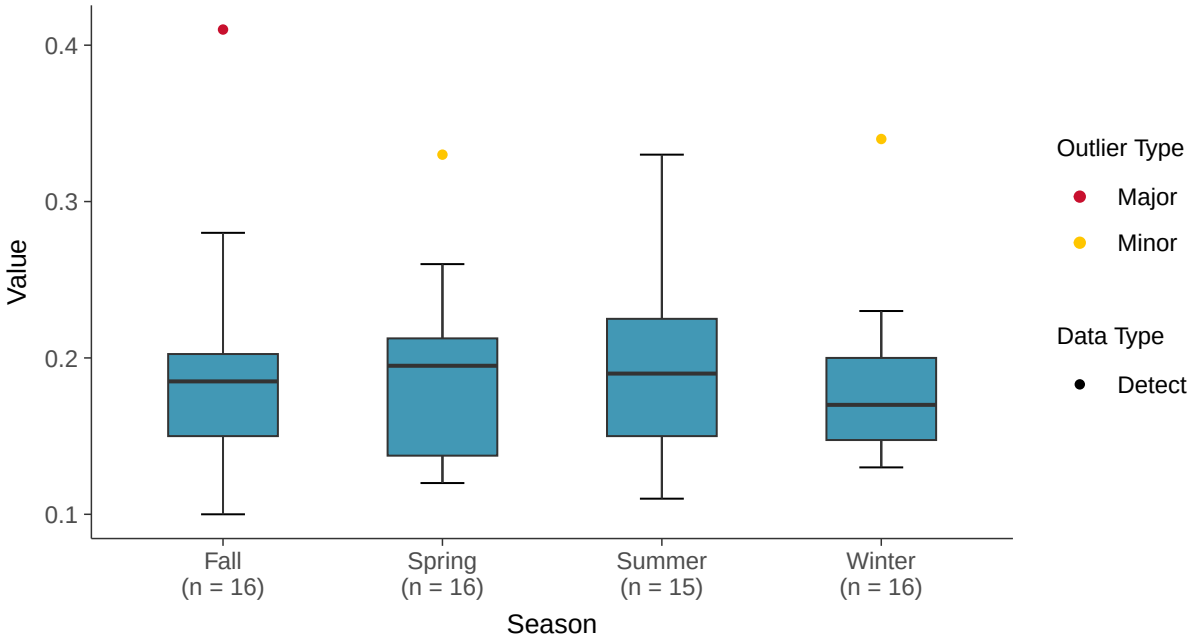
Boxplot

Fluoride, BG-1 & BG-2 (mg/L)



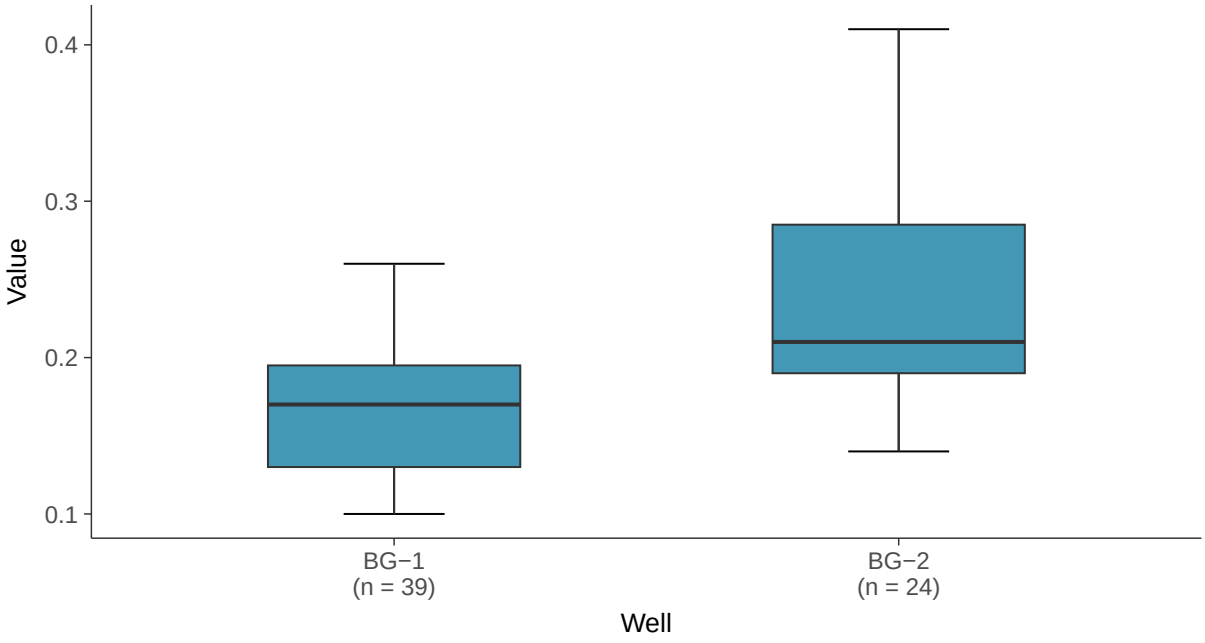
Boxplot by Season

Fluoride, BG-1 & BG-2 (mg/L)



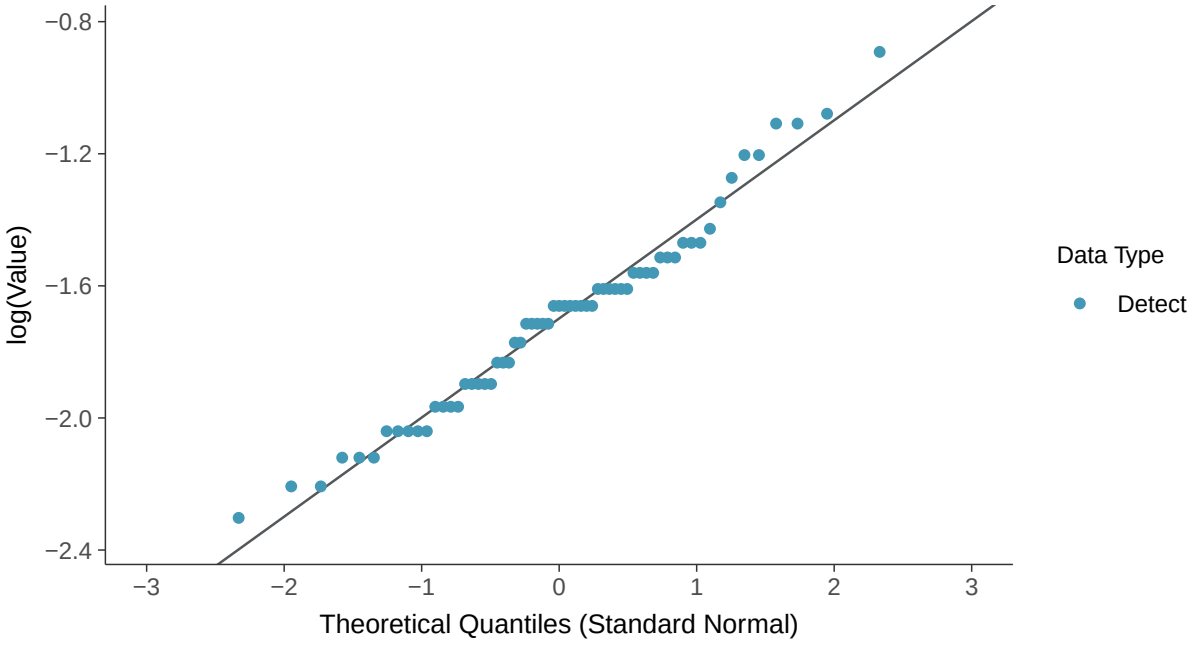
Boxplot by Well

Fluoride, BG-1 & BG-2 (mg/L)



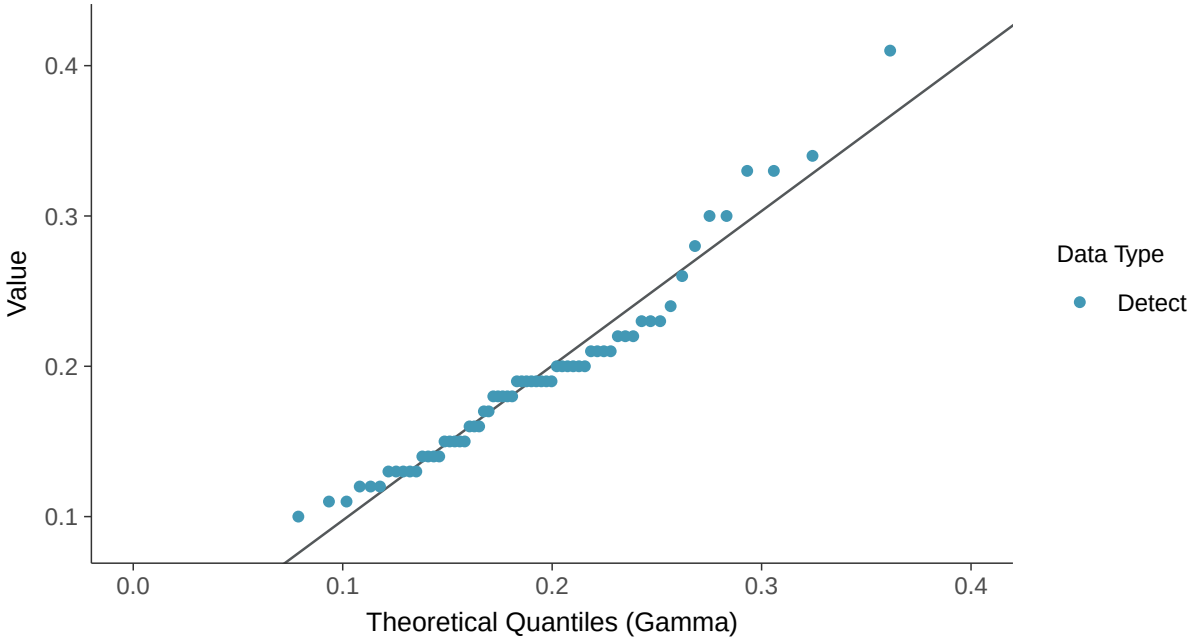
Lognormal Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



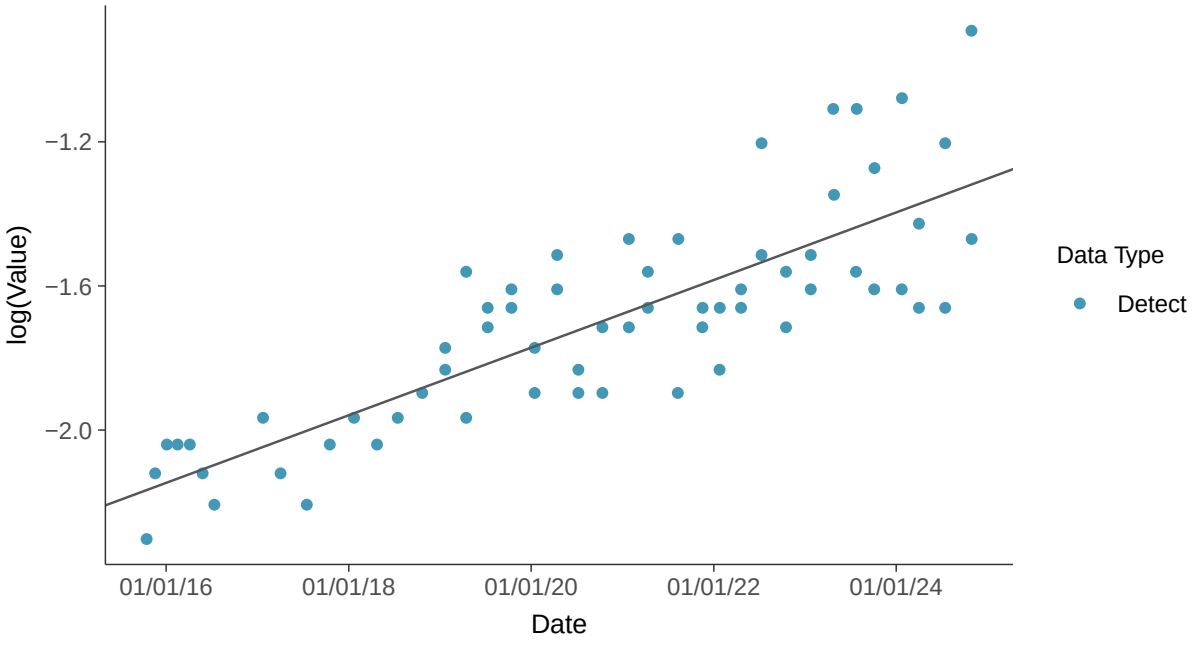
Gamma Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



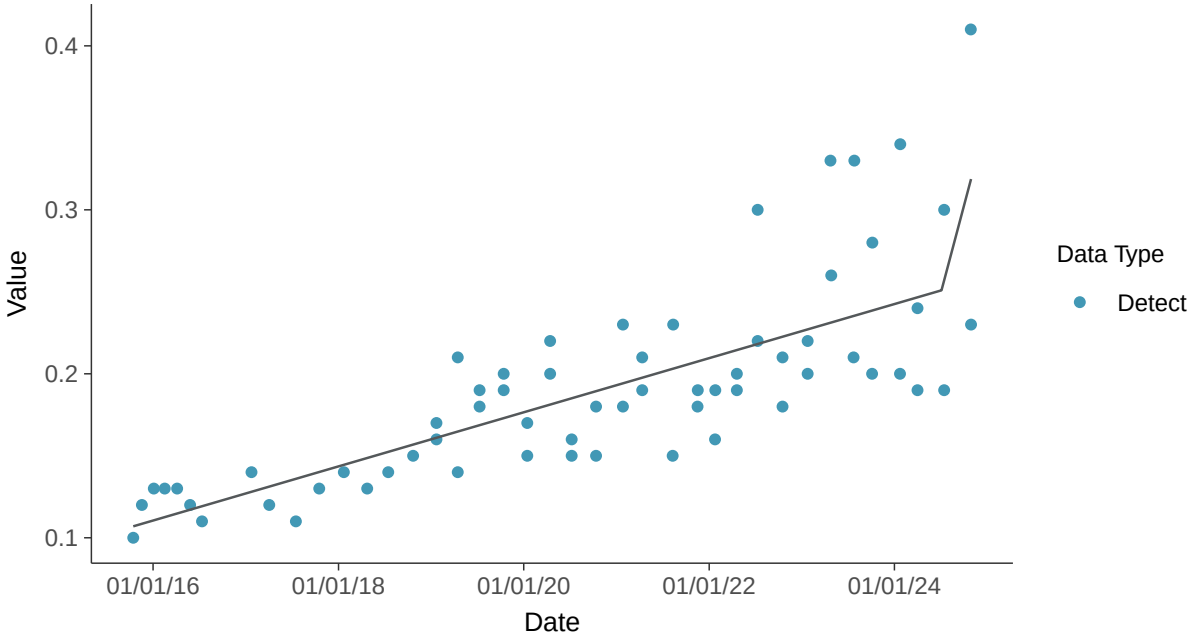
Trend Regression: Lognormal MLE

Fluoride, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear

Fluoride, BG-1 & BG-2 (mg/L)

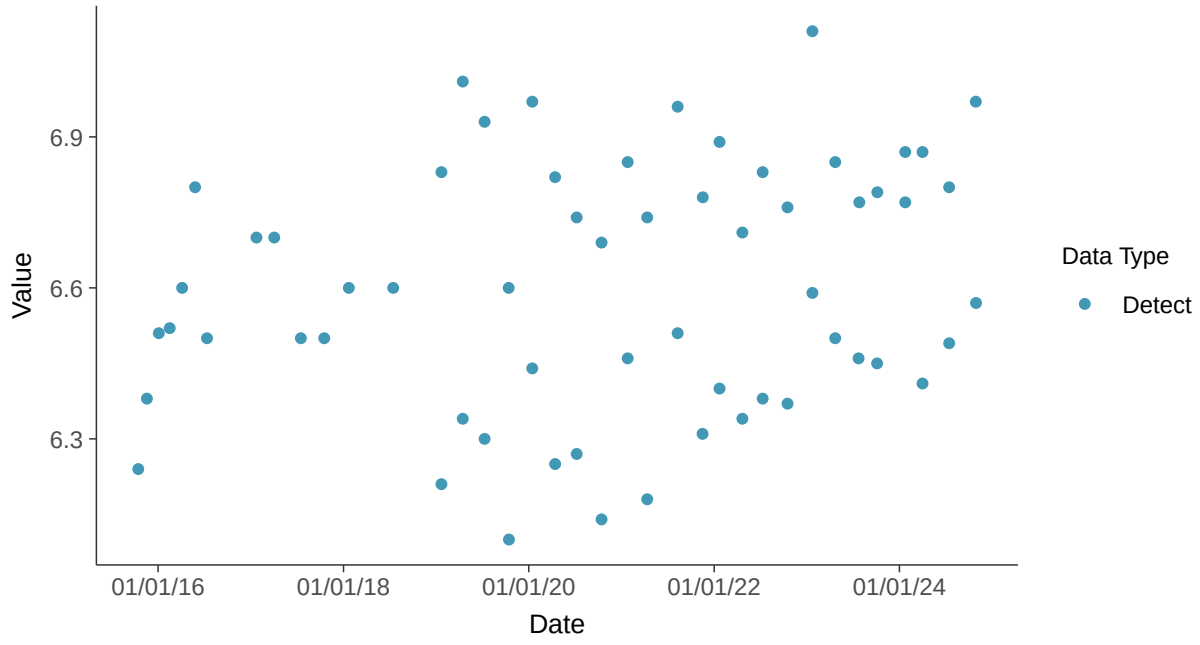


App. III: pH (Field), BG-1 & BG-2

ID: 2_118

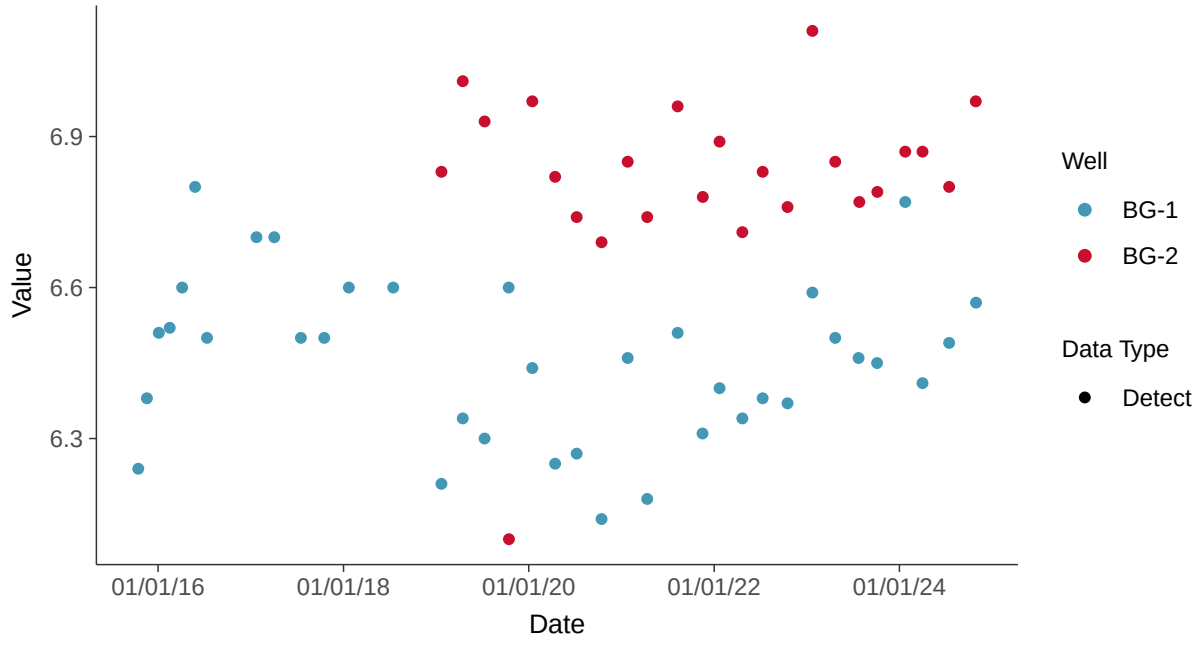
Scatter Plot

pH (Field), BG-1 & BG-2 (S.U.)



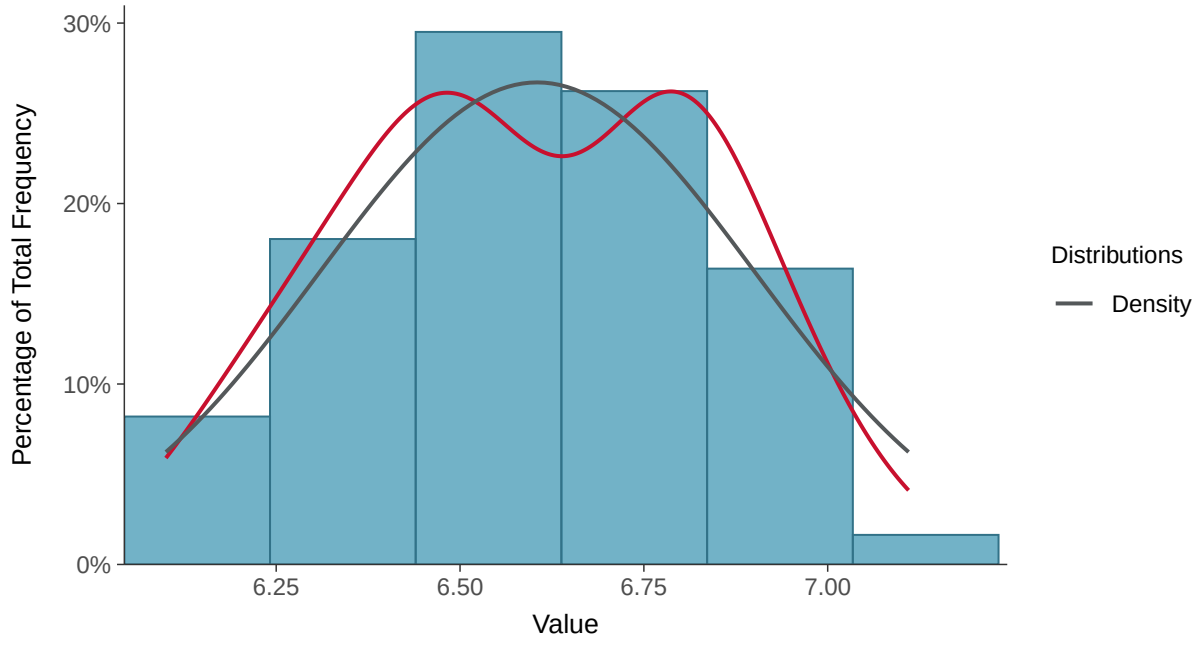
Scatter Plot by Well

pH (Field), BG-1 & BG-2 (S.U.)



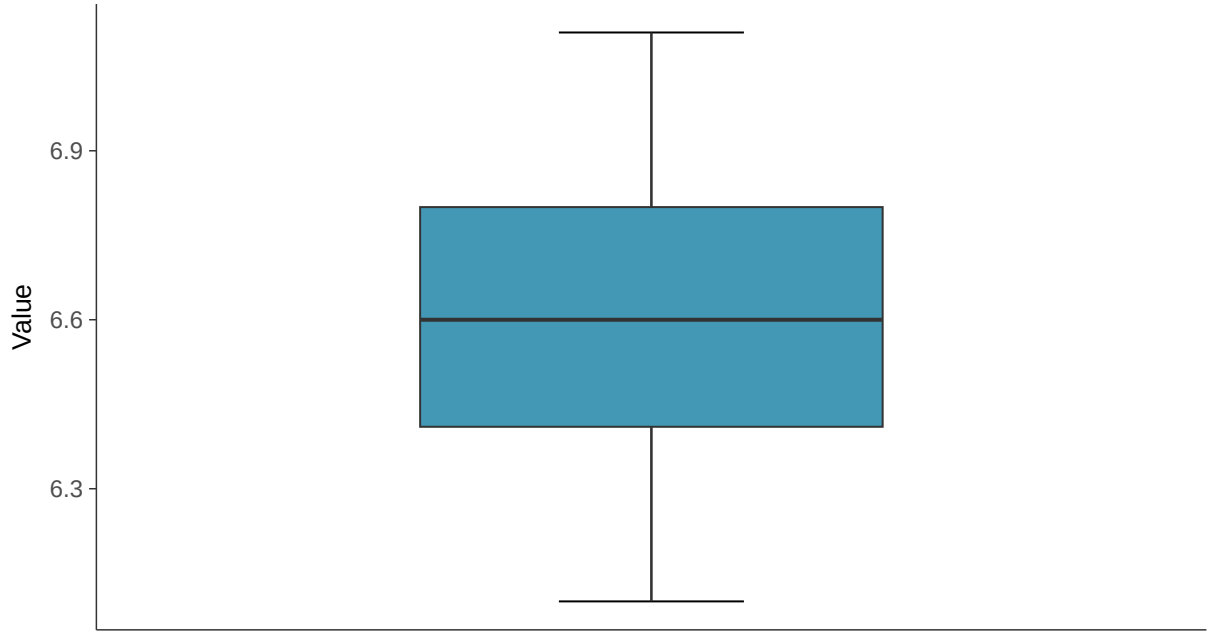
Histogram

pH (Field), BG-1 & BG-2 (S.U.)



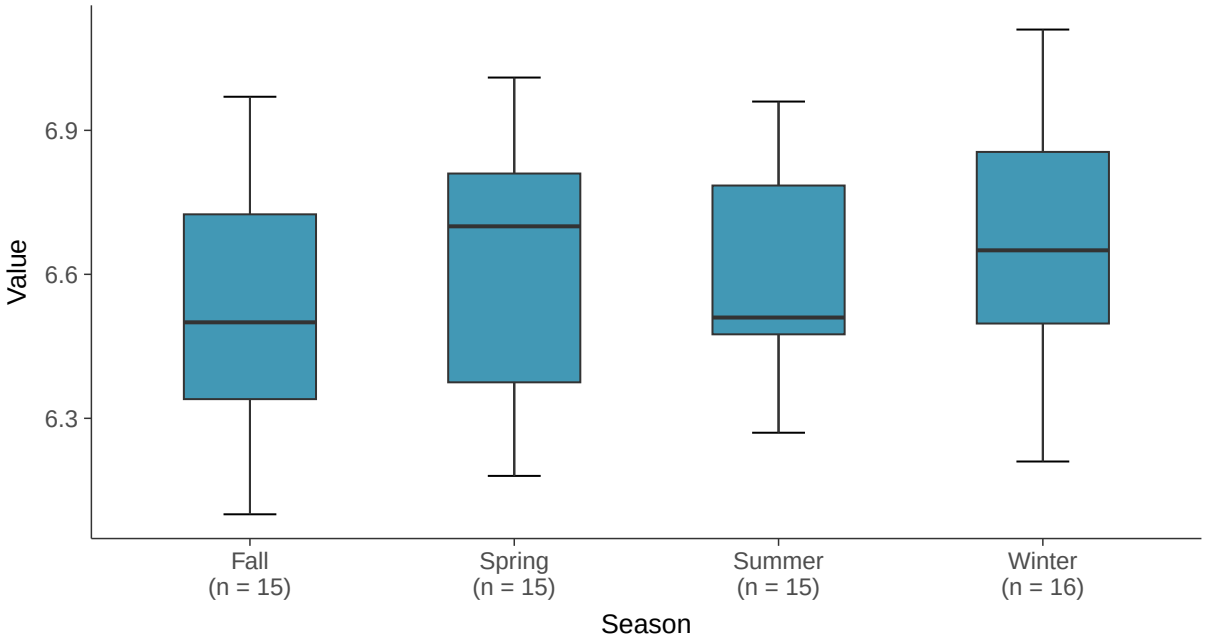
Boxplot

pH (Field), BG-1 & BG-2 (S.U.)



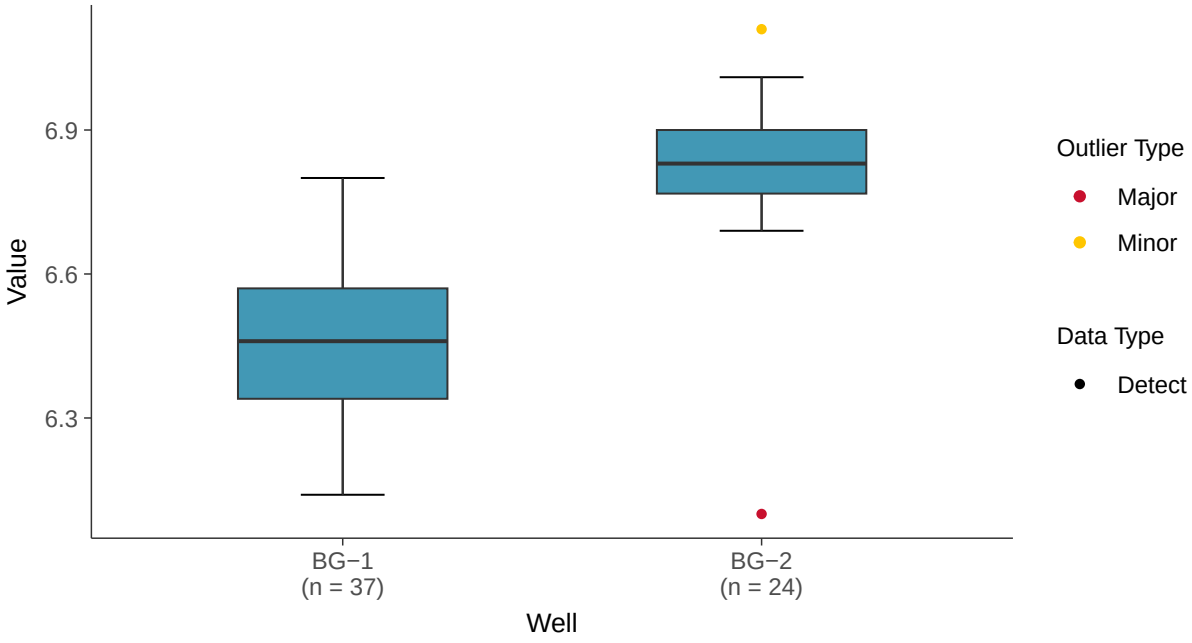
Boxplot by Season

pH (Field), BG-1 & BG-2 (S.U.)



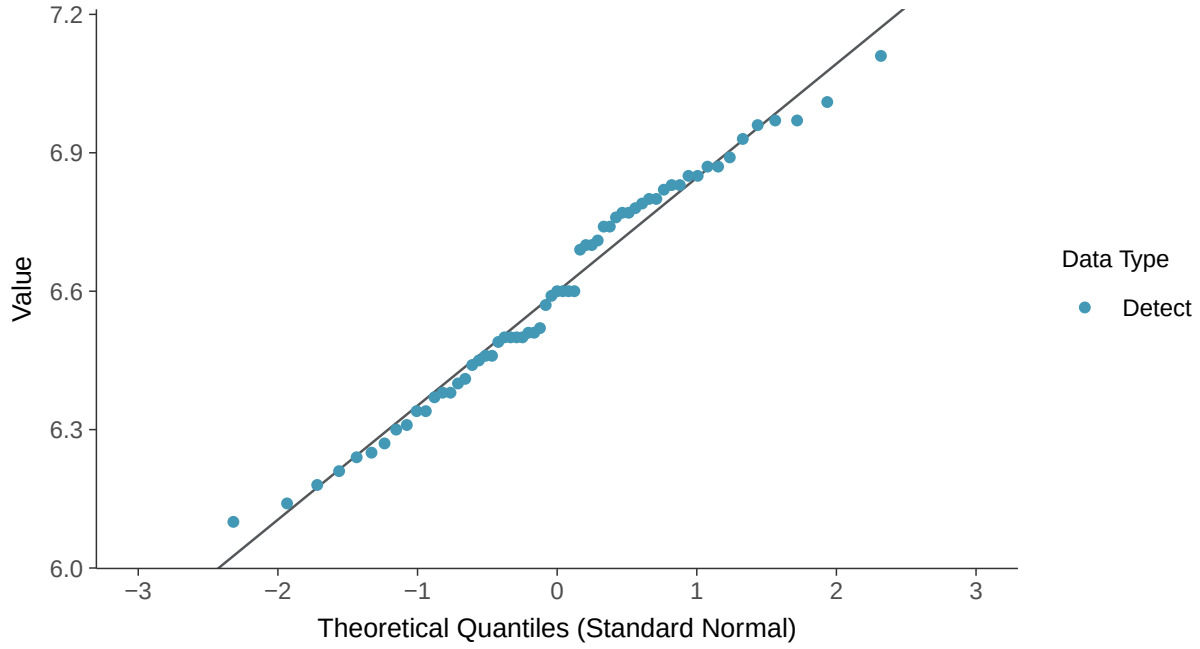
Boxplot by Well

pH (Field), BG-1 & BG-2 (S.U.)



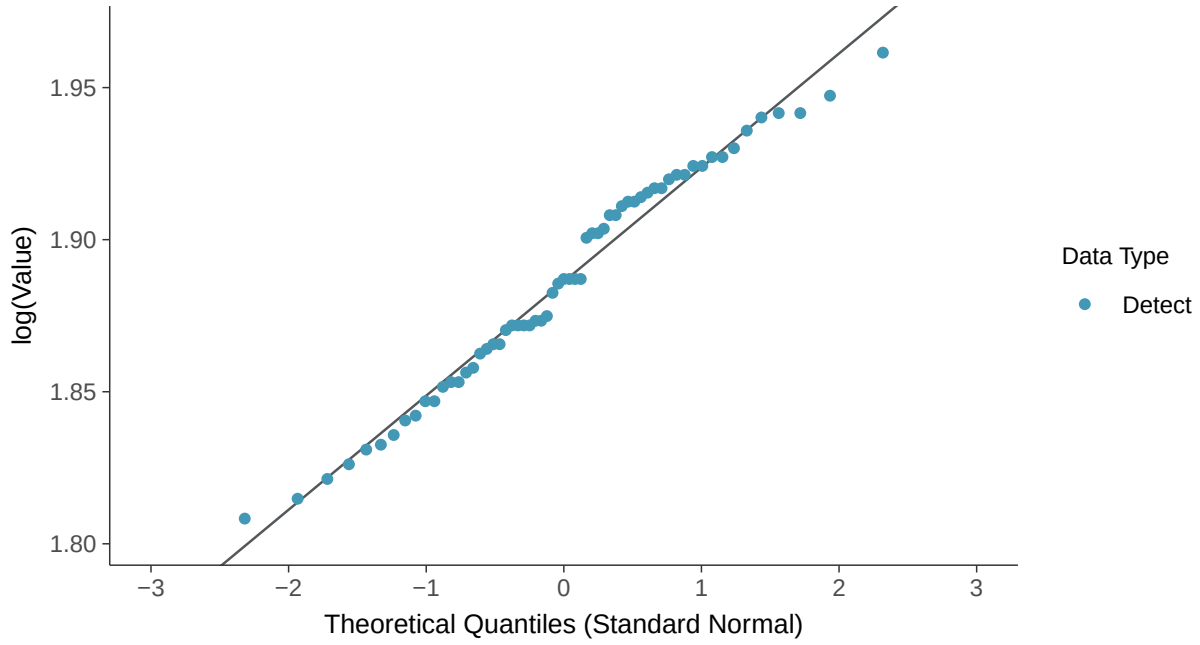
Normal Q-Q plot

pH (Field), BG-1 & BG-2 (S.U.)



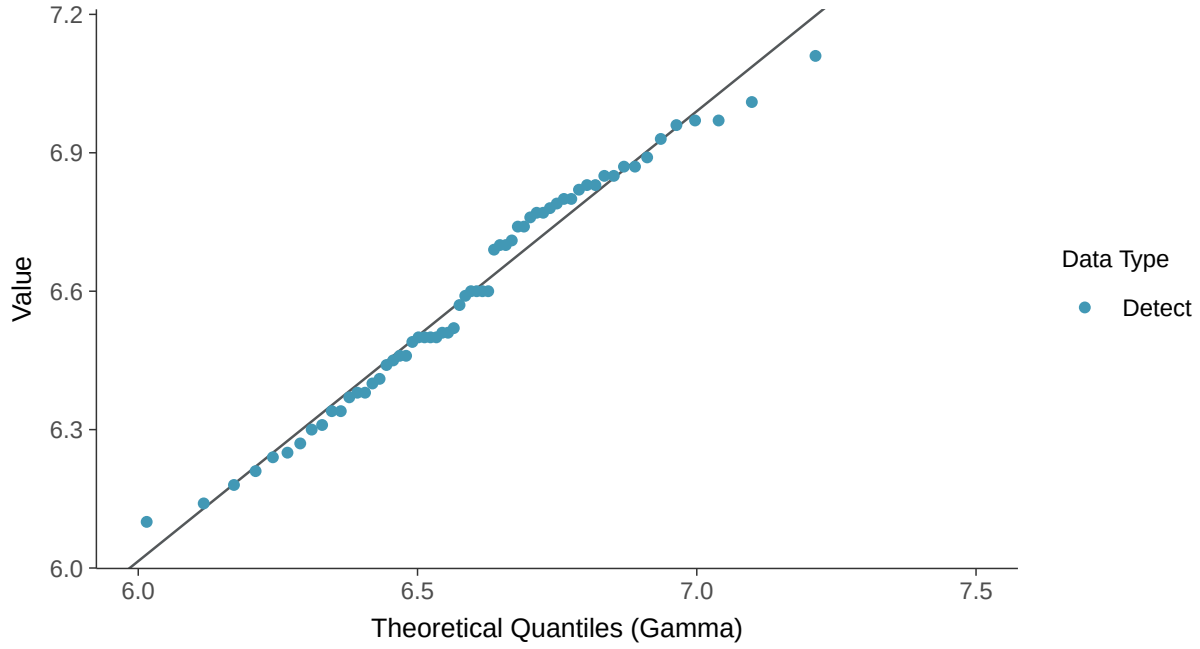
Lognormal Q-Q plot

pH (Field), BG-1 & BG-2 (S.U.)



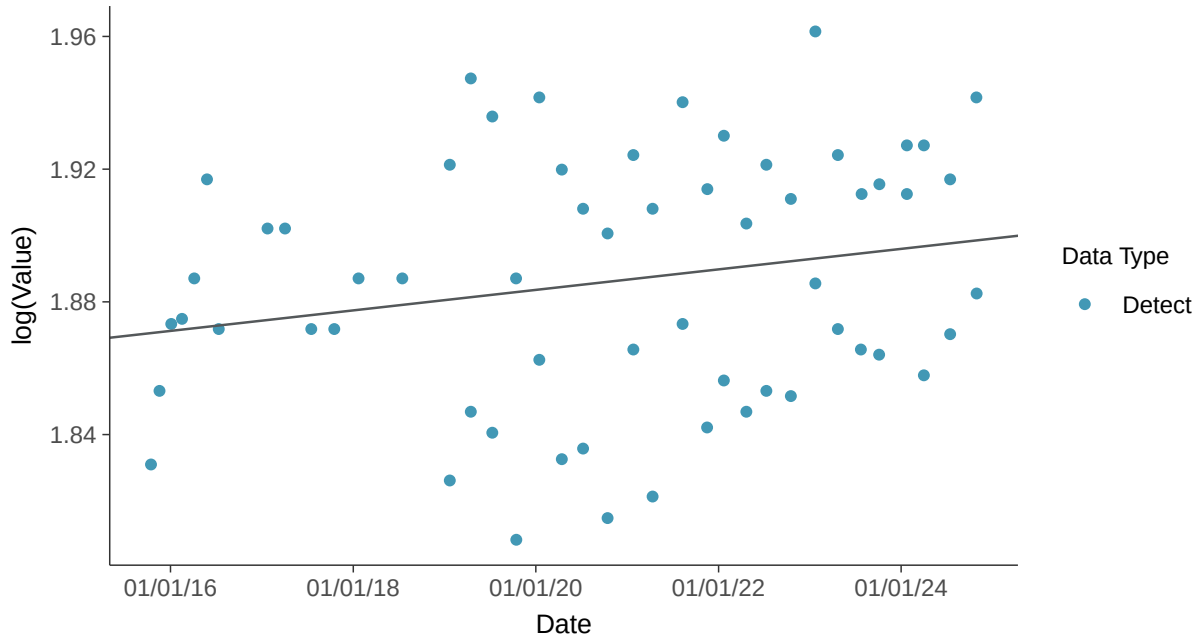
Gamma Q-Q plot

pH (Field), BG-1 & BG-2 (S.U.)



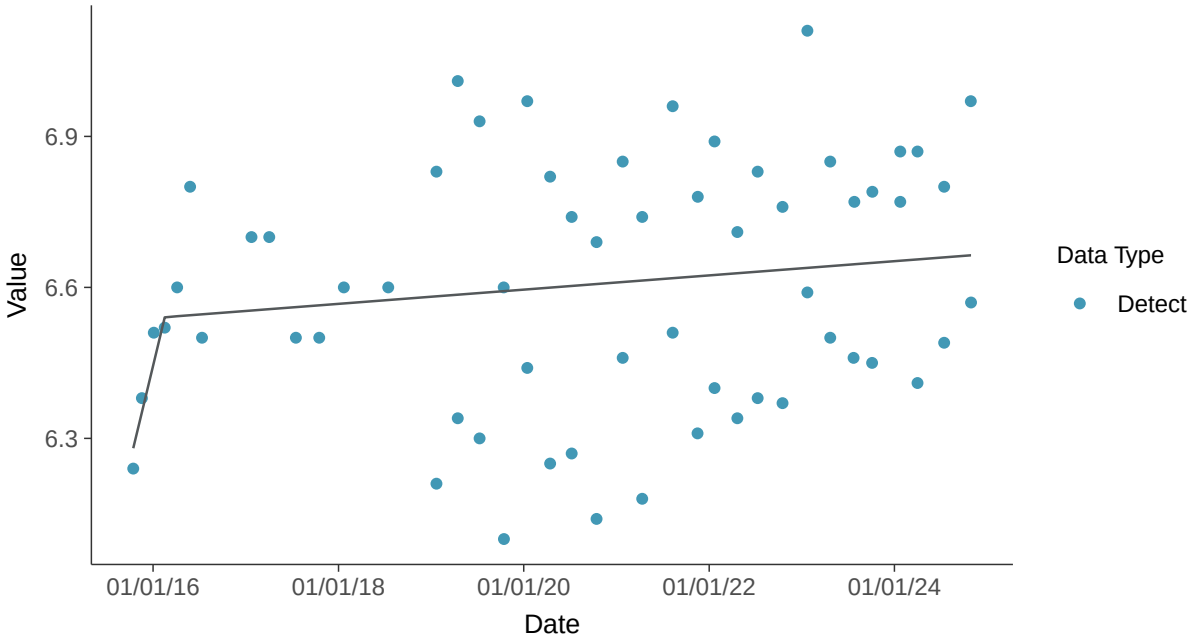
Trend Regression: Lognormal MLE

pH (Field), BG-1 & BG-2 (S.U.)



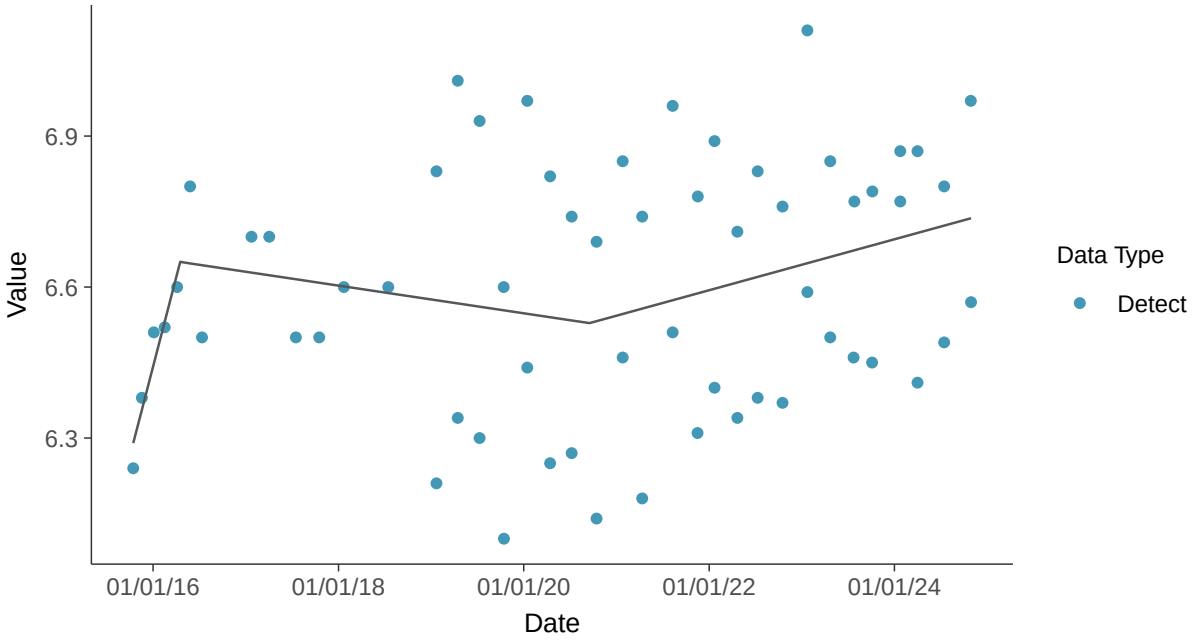
Trend Regression: Piecewise Linear-Linear

pH (Field), BG-1 & BG-2 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), BG-1 & BG-2 (S.U.)

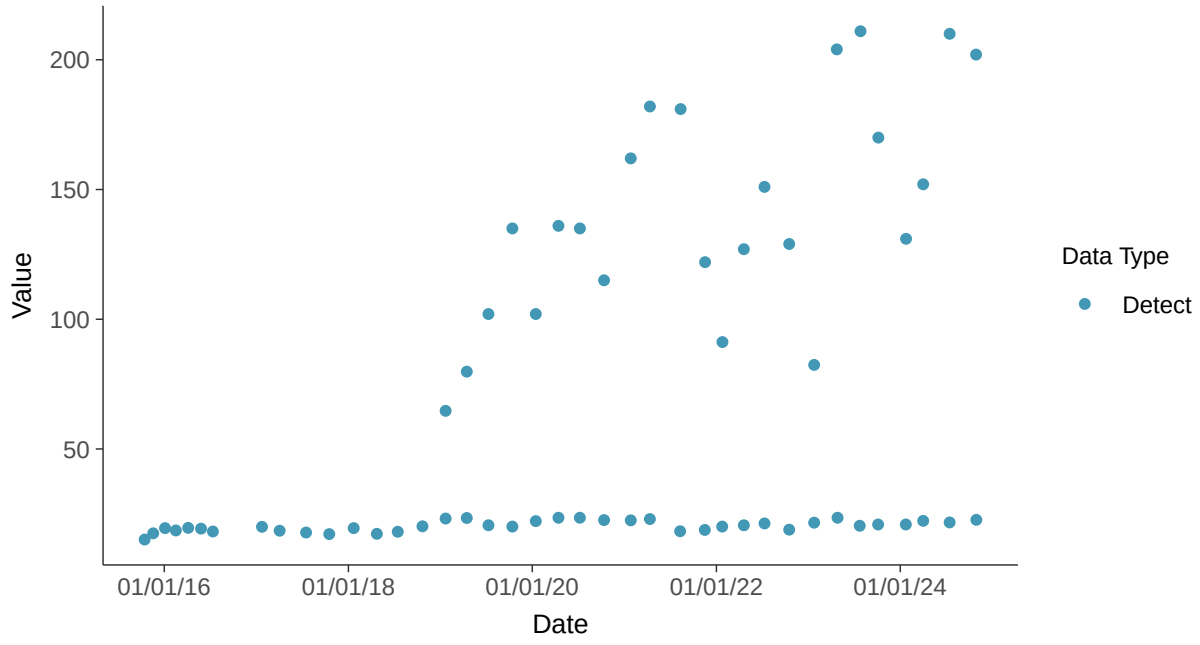


App. III: Sulfate, BG-1 & BG-2

ID: 2_123

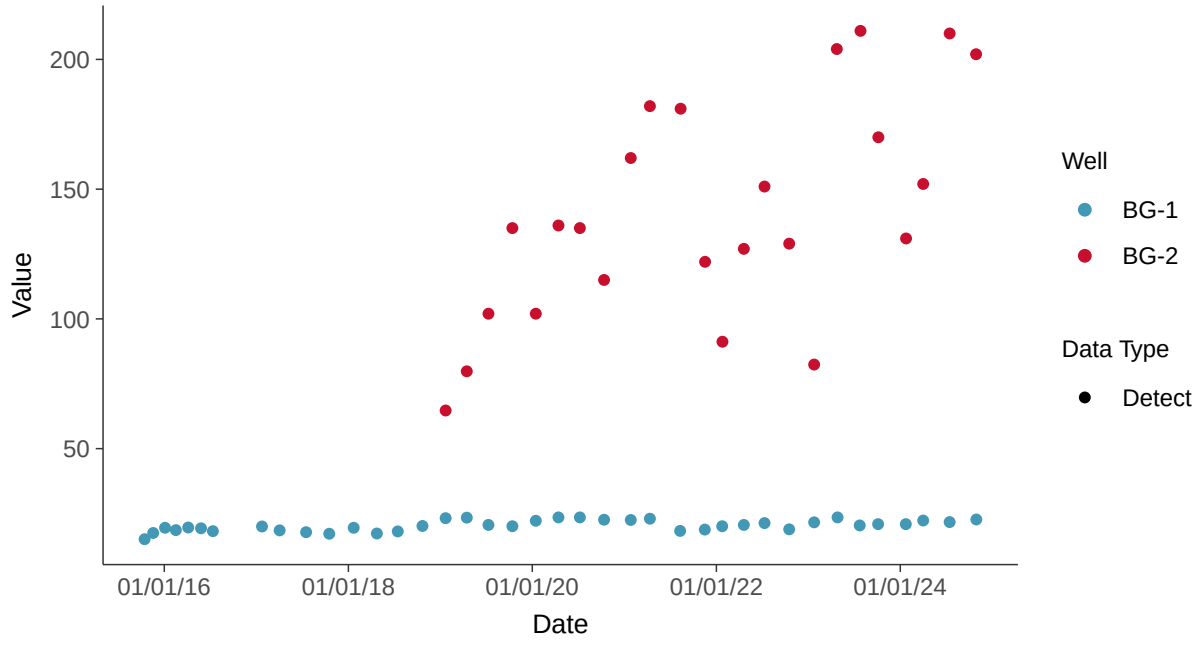
Scatter Plot

Sulfate, BG-1 & BG-2 (mg/L)



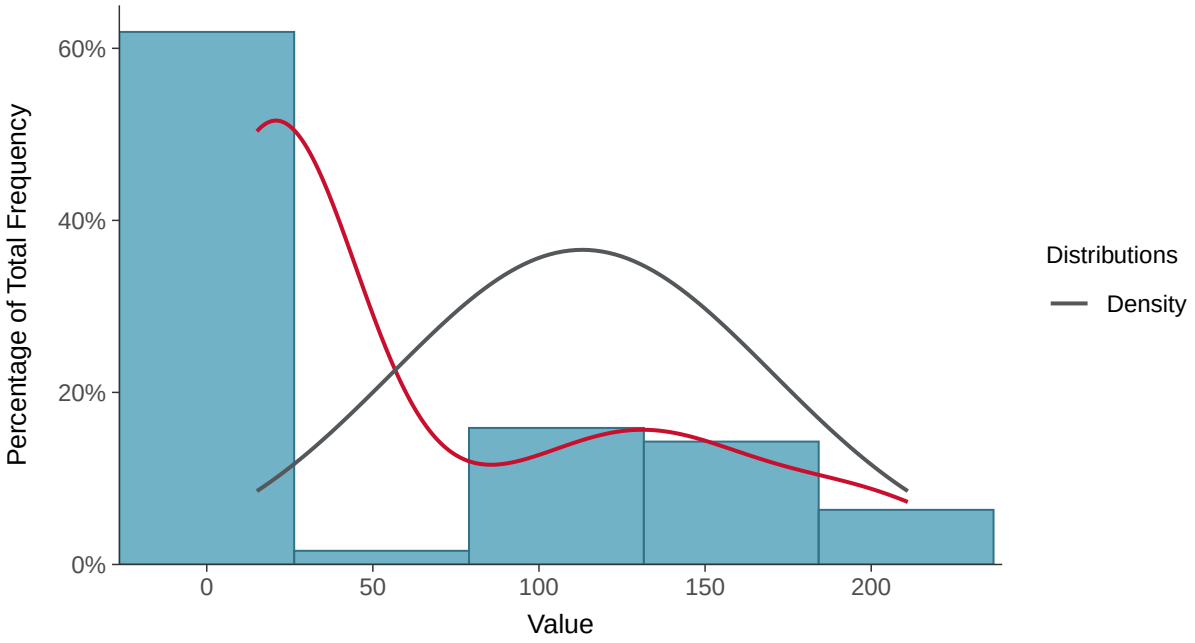
Scatter Plot by Well

Sulfate, BG-1 & BG-2 (mg/L)



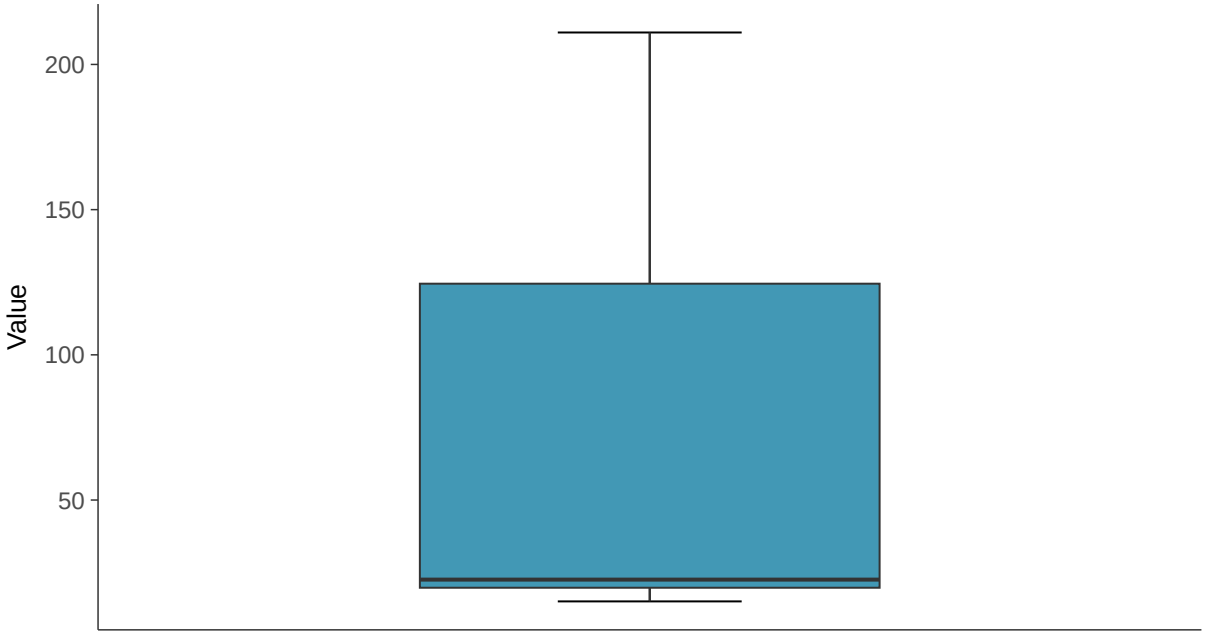
Histogram

Sulfate, BG-1 & BG-2 (mg/L)



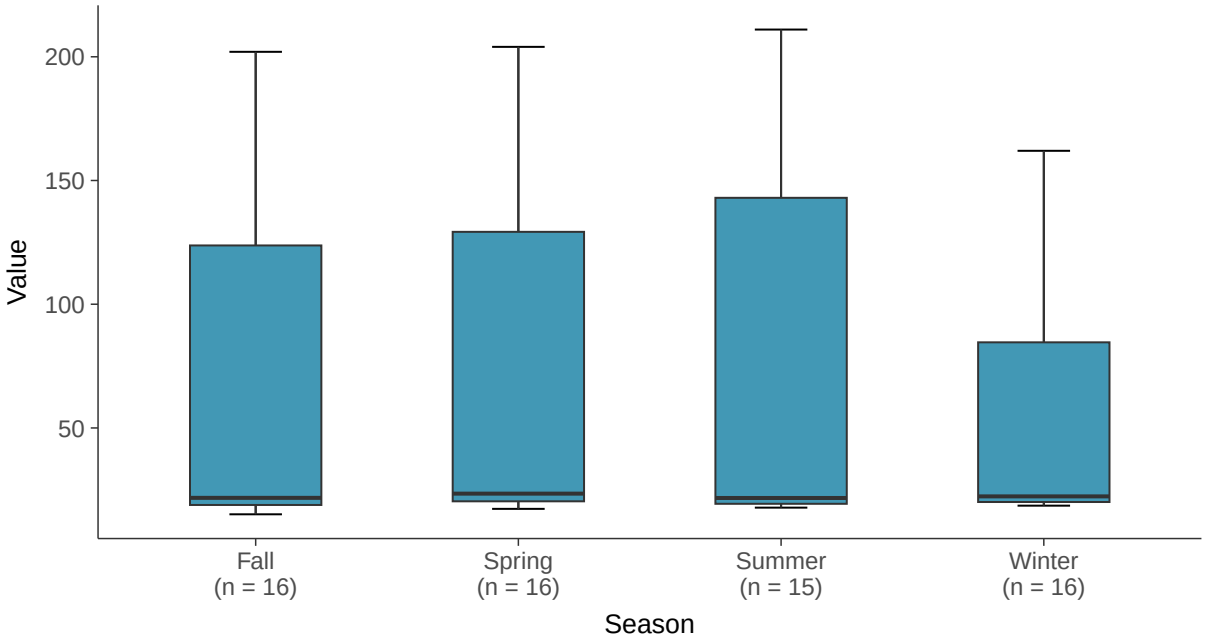
Boxplot

Sulfate, BG-1 & BG-2 (mg/L)



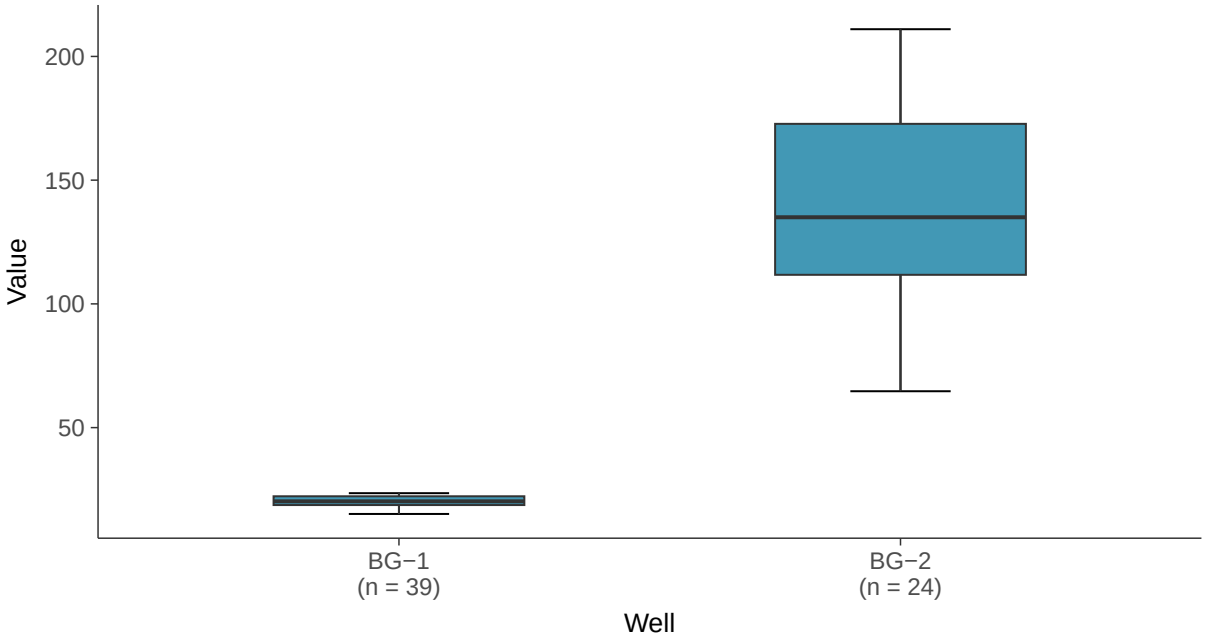
Boxplot by Season

Sulfate, BG-1 & BG-2 (mg/L)



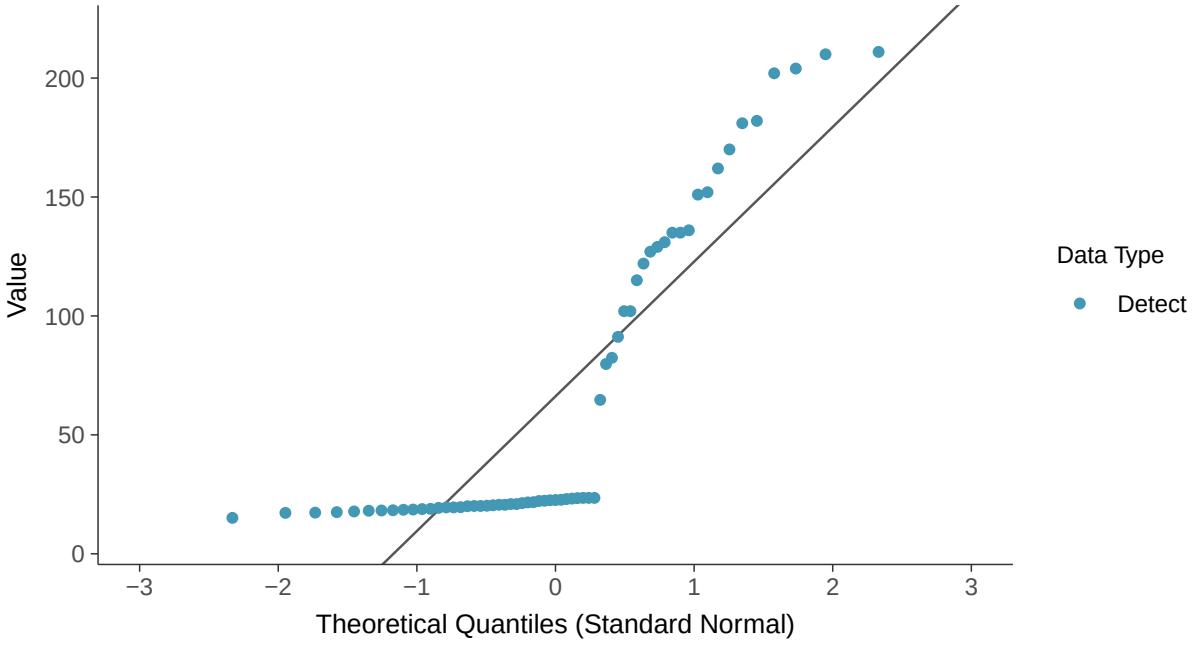
Boxplot by Well

Sulfate, BG-1 & BG-2 (mg/L)



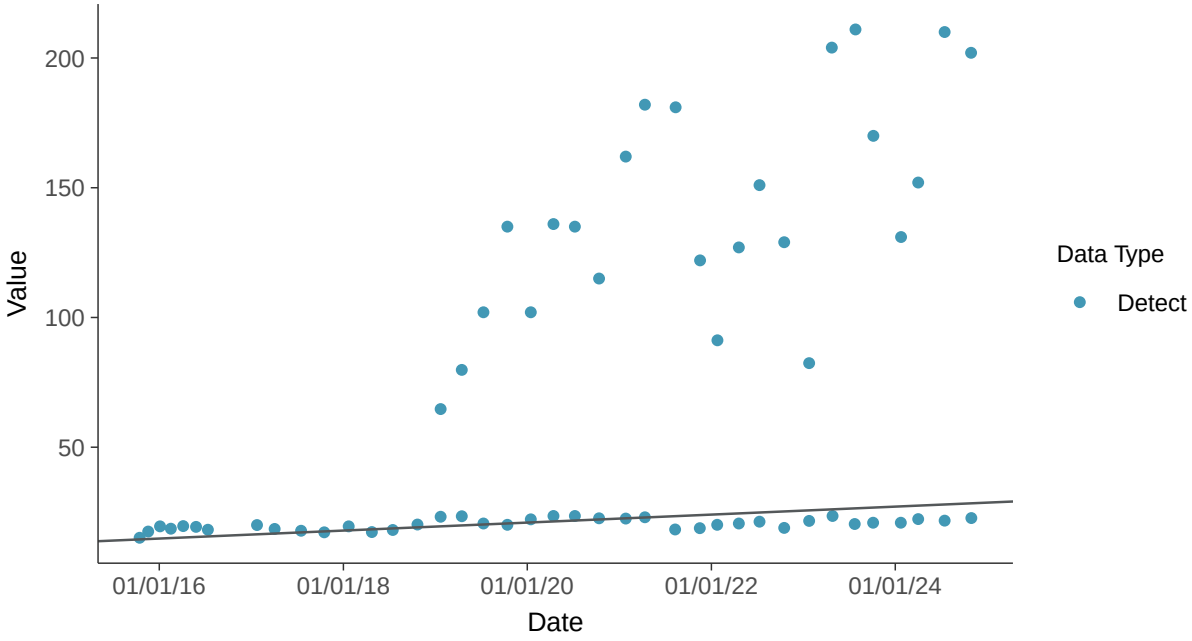
Normal Q-Q plot

Sulfate, BG-1 & BG-2 (mg/L)



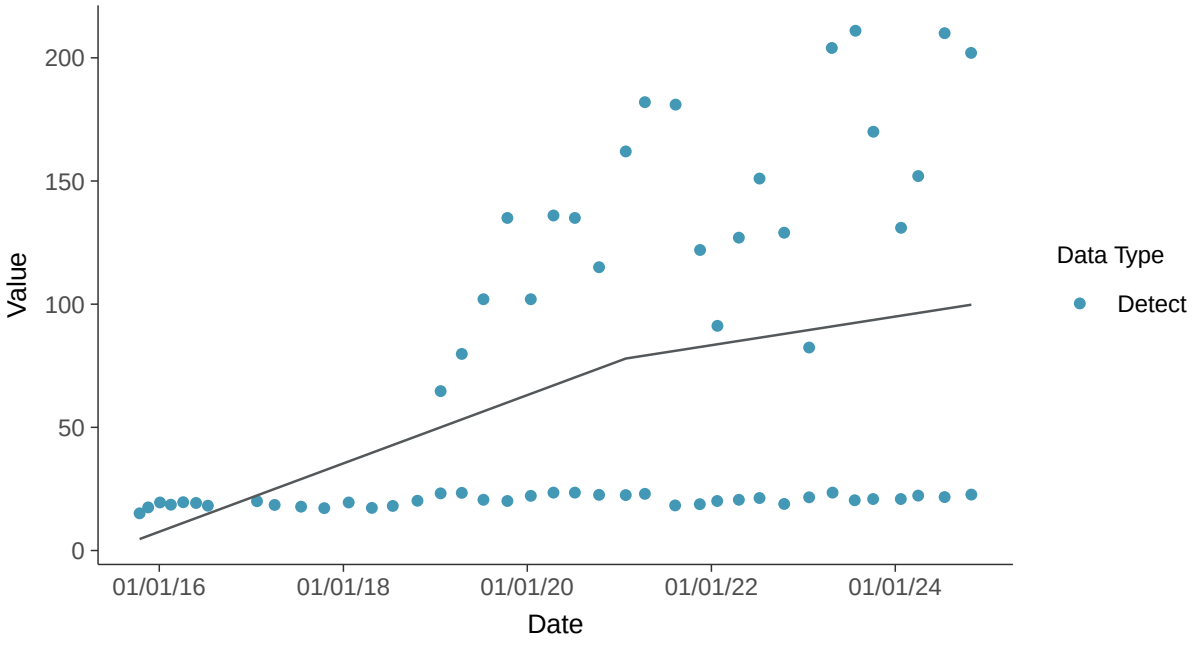
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, BG-1 & BG-2 (mg/L)



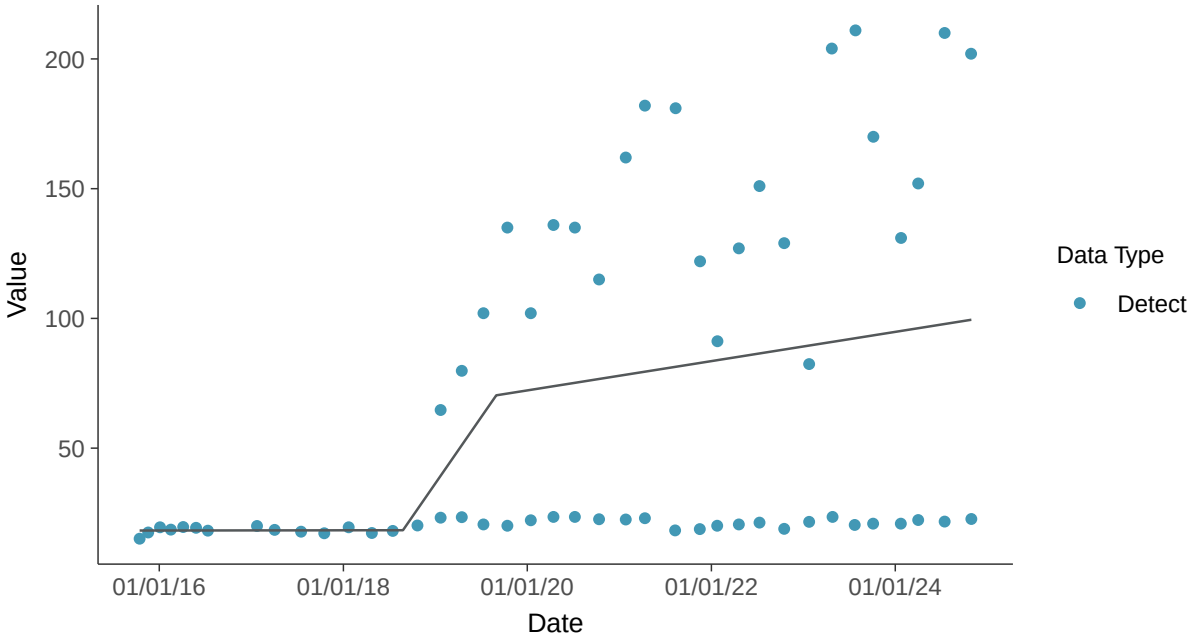
Trend Regression: Piecewise Linear-Linear

Sulfate, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, BG-1 & BG-2 (mg/L)

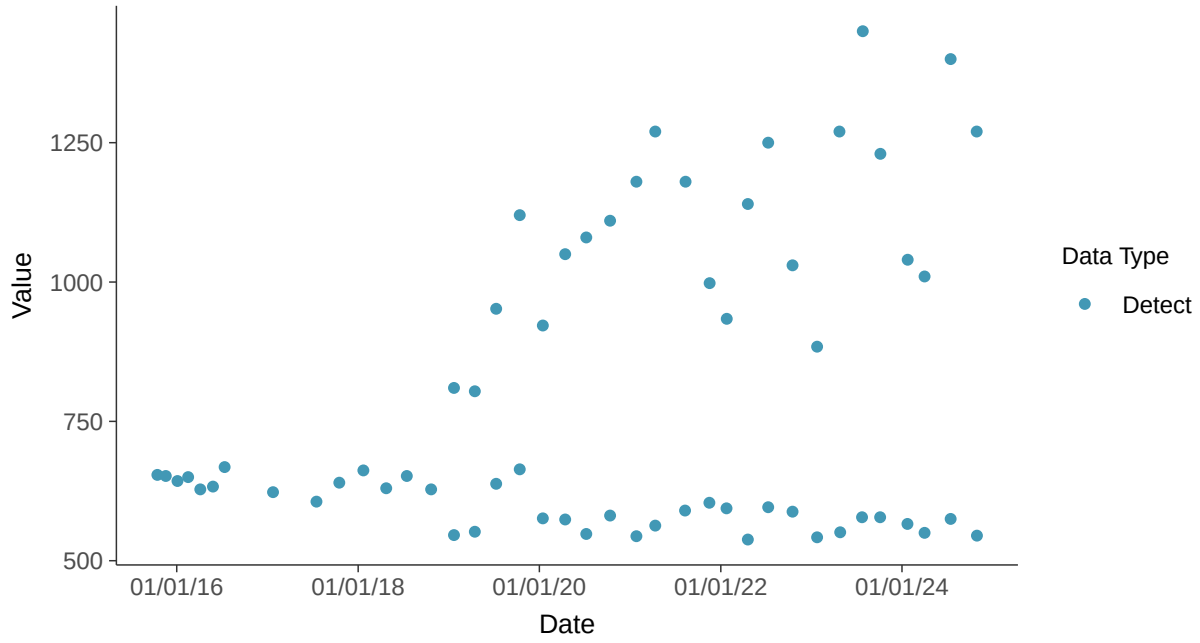


App. III: Total Dissolved Solids, BG-1 & BG-2

ID: 2_125

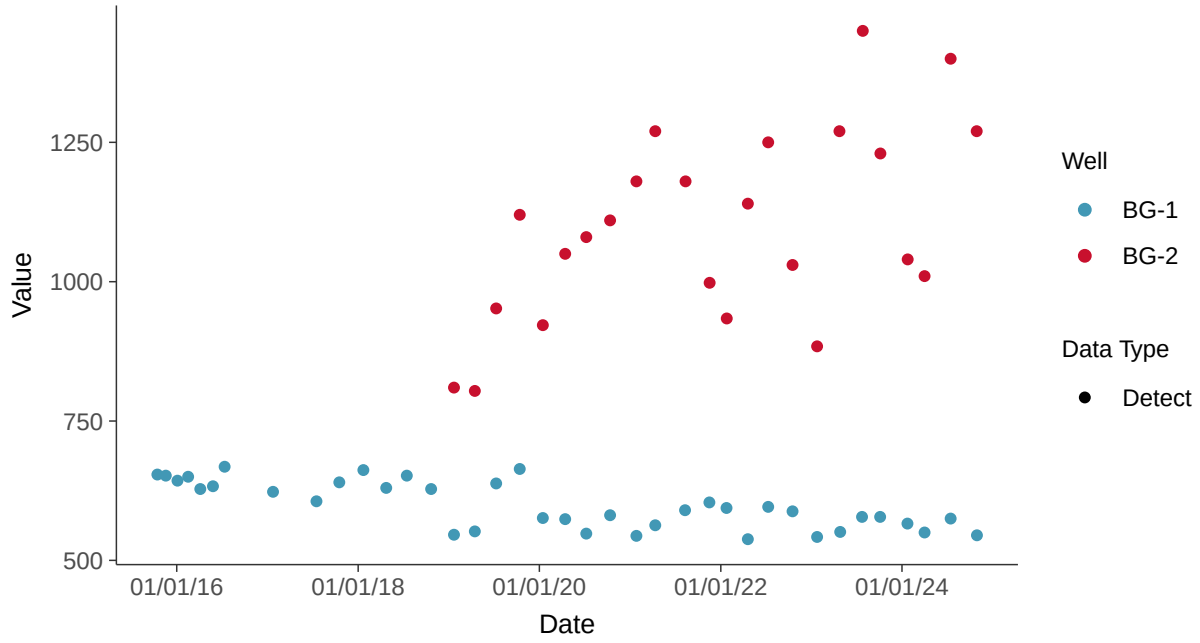
Scatter Plot

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



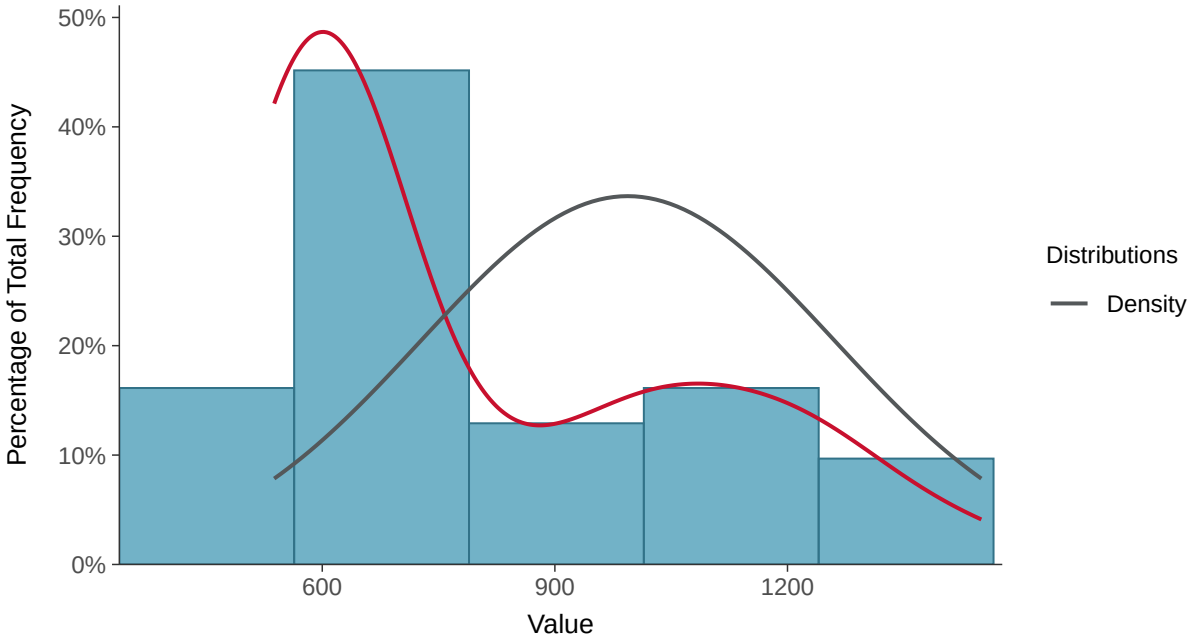
Scatter Plot by Well

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



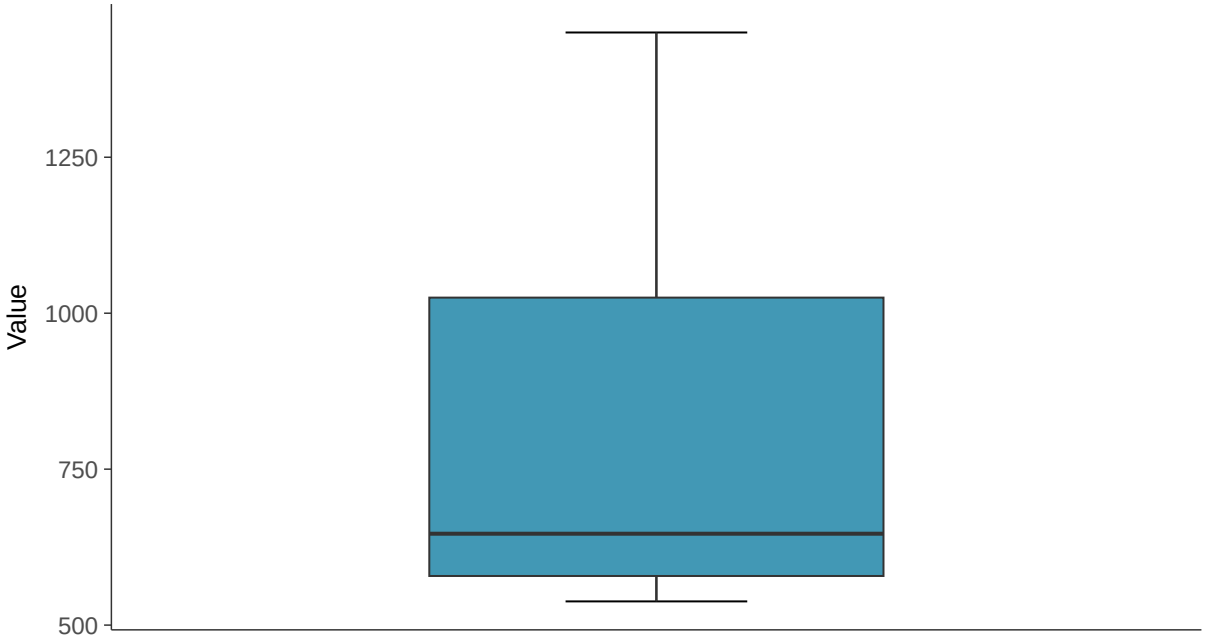
Histogram

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



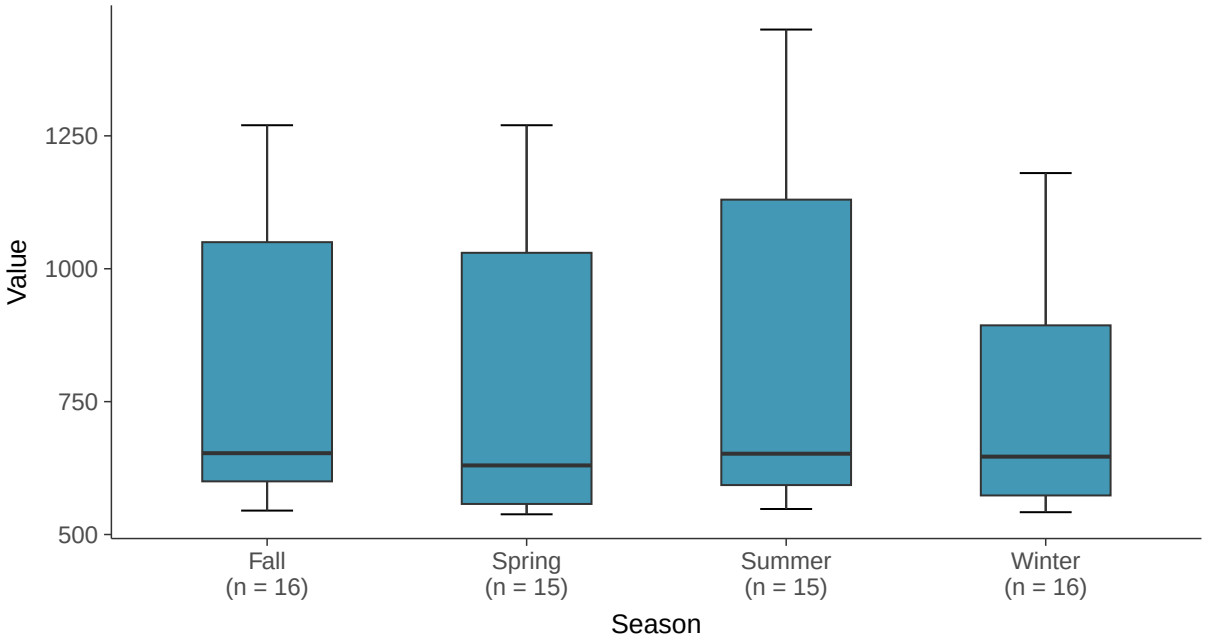
Boxplot

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



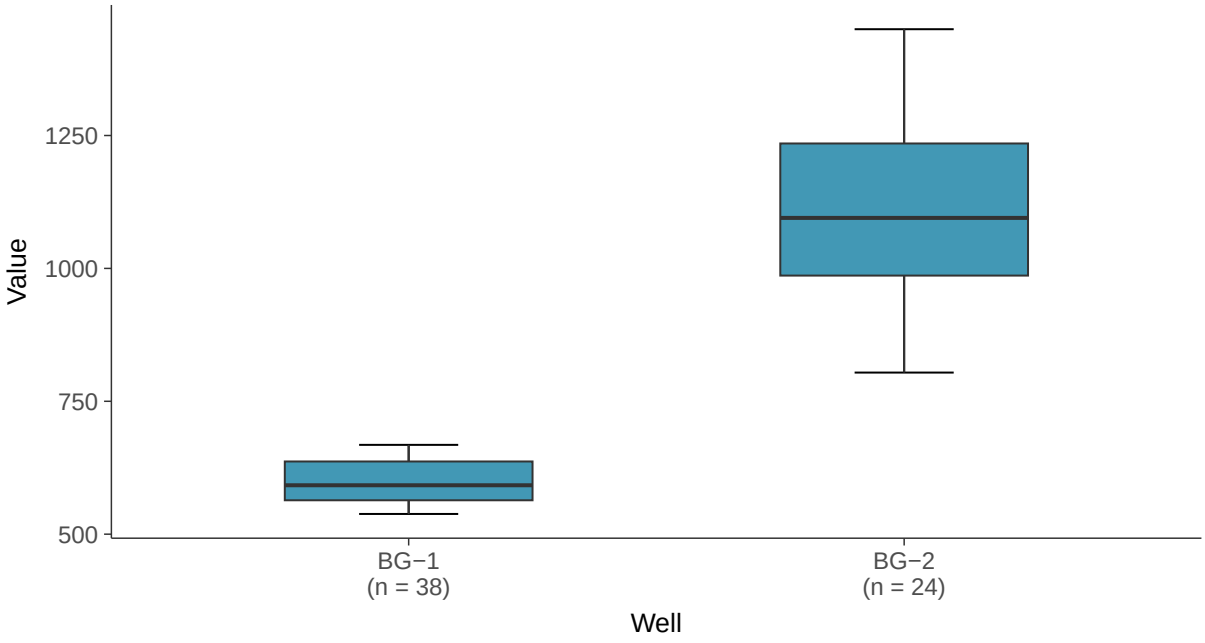
Boxplot by Season

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



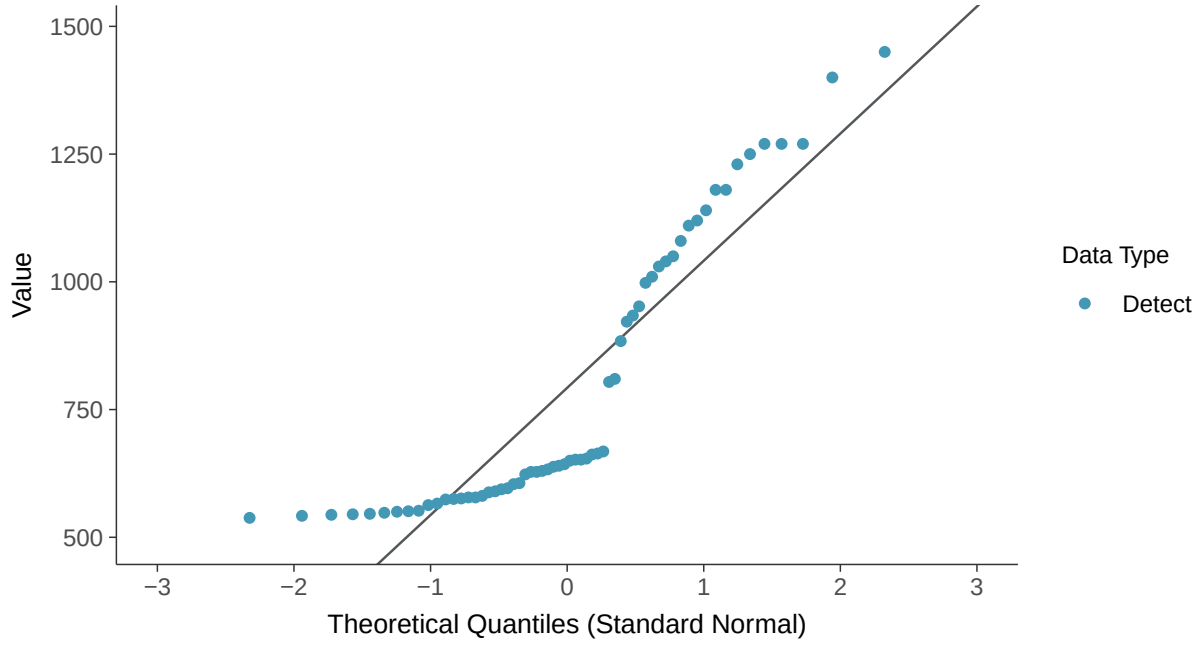
Boxplot by Well

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



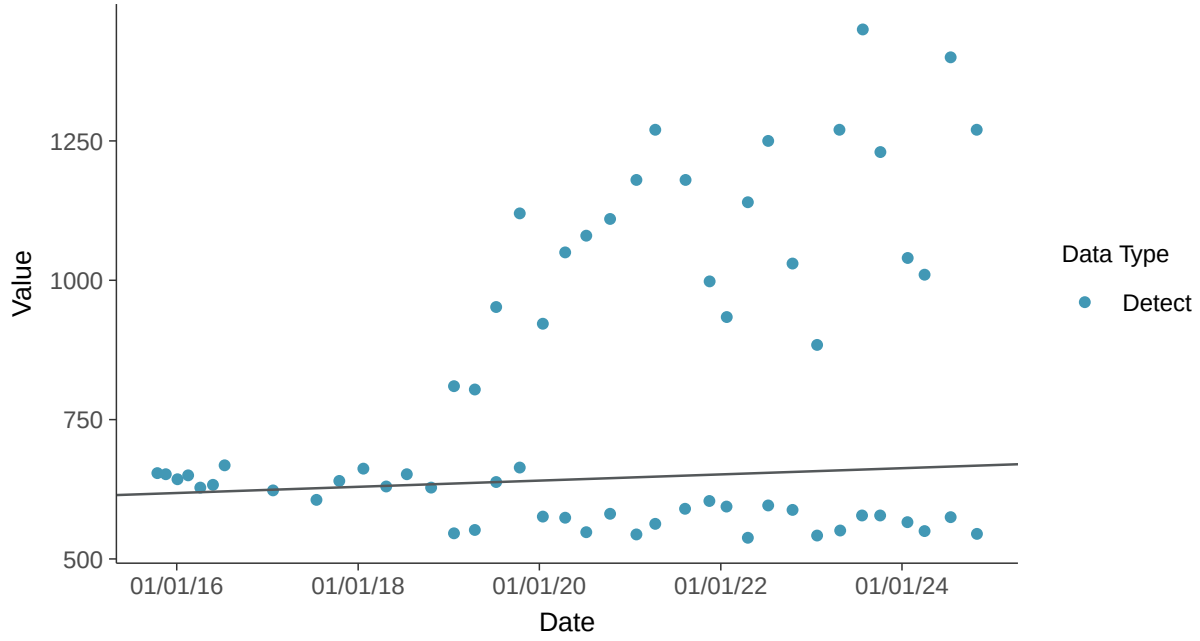
Normal Q-Q plot

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



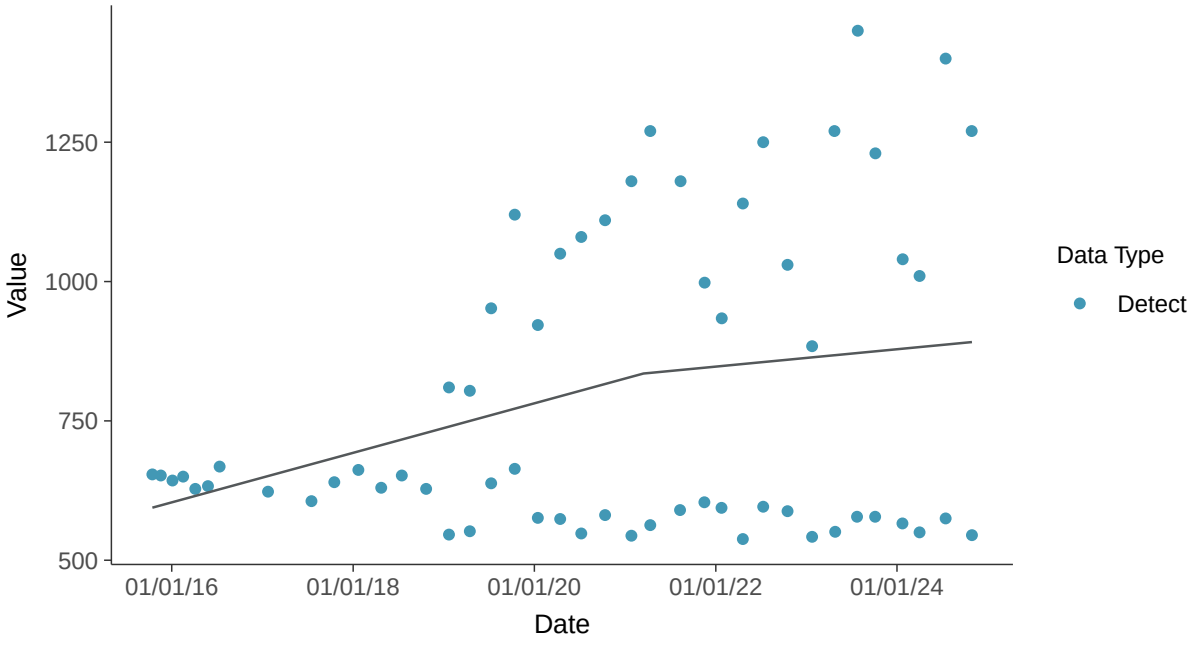
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



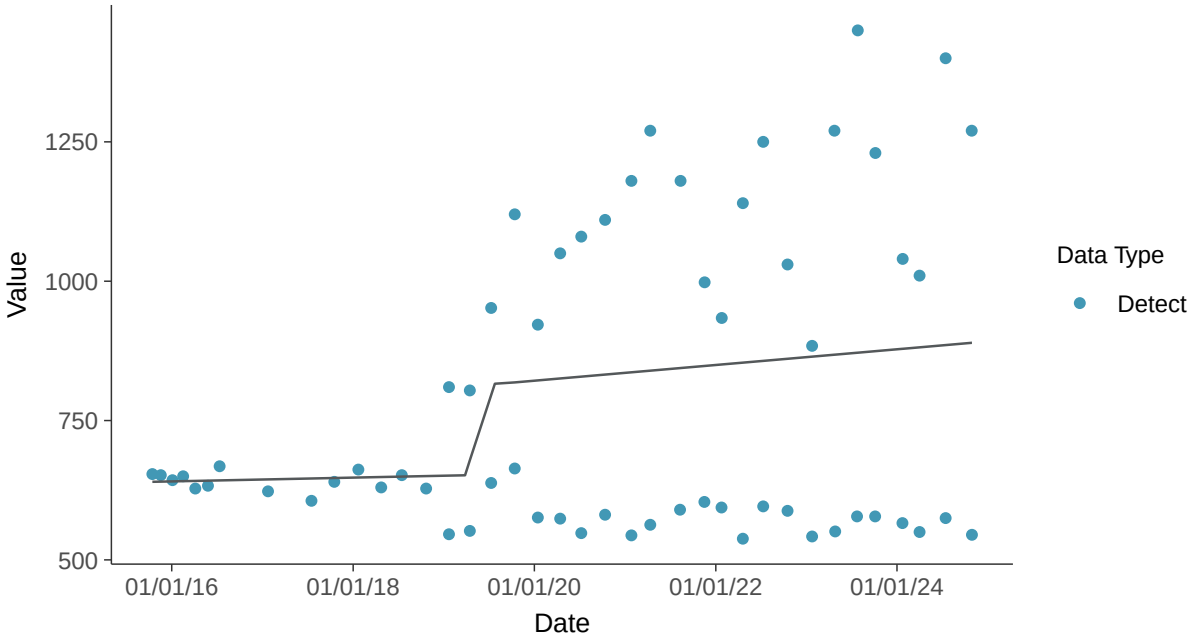
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, BG-1 & BG-2 (mg/L)

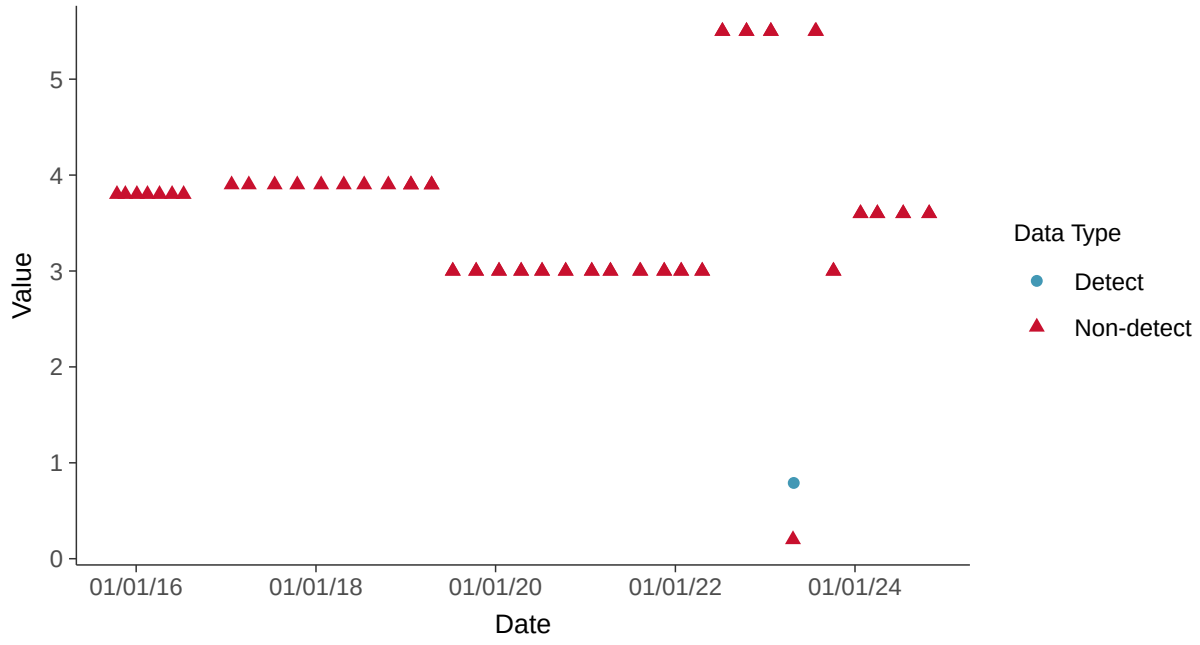


App. IV: Antimony, BG-1 & BG-2

ID: 3_101

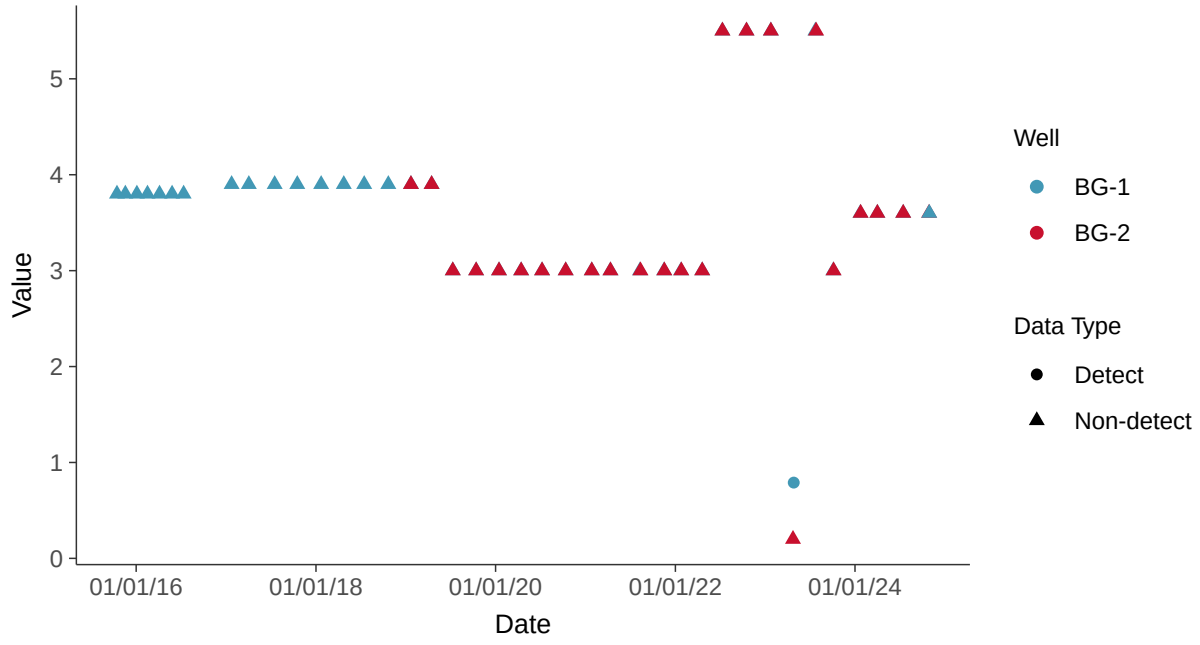
Scatter Plot

Antimony, BG-1 & BG-2 (ug/L)



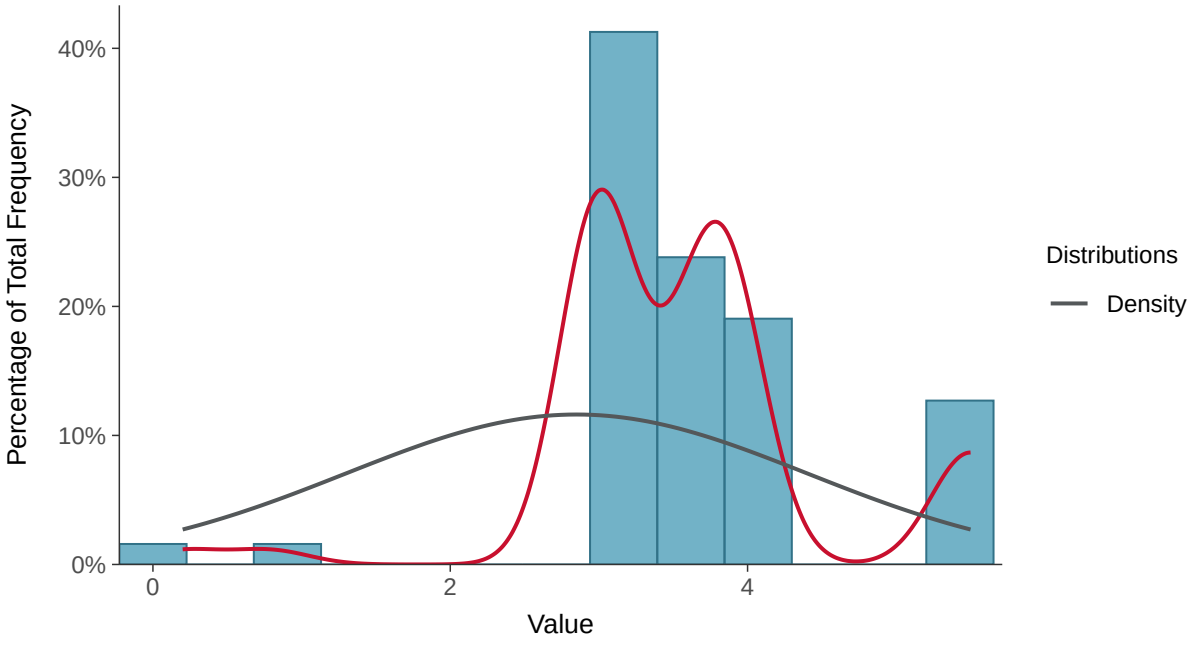
Scatter Plot by Well

Antimony, BG-1 & BG-2 (ug/L)



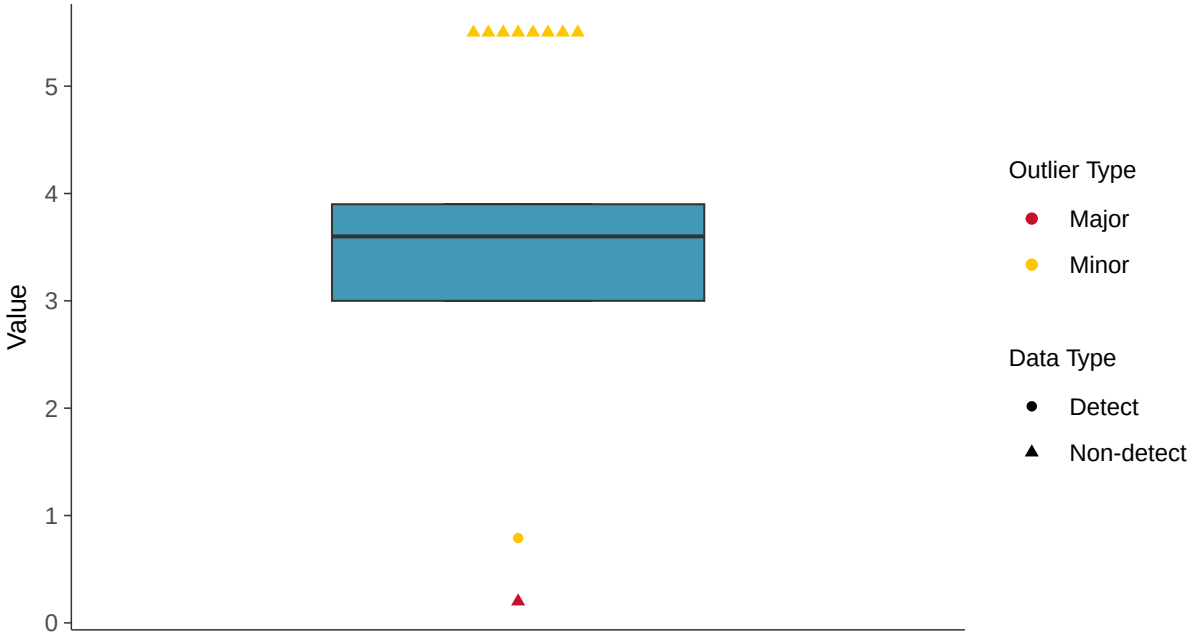
Histogram

Antimony, BG-1 & BG-2 (ug/L)



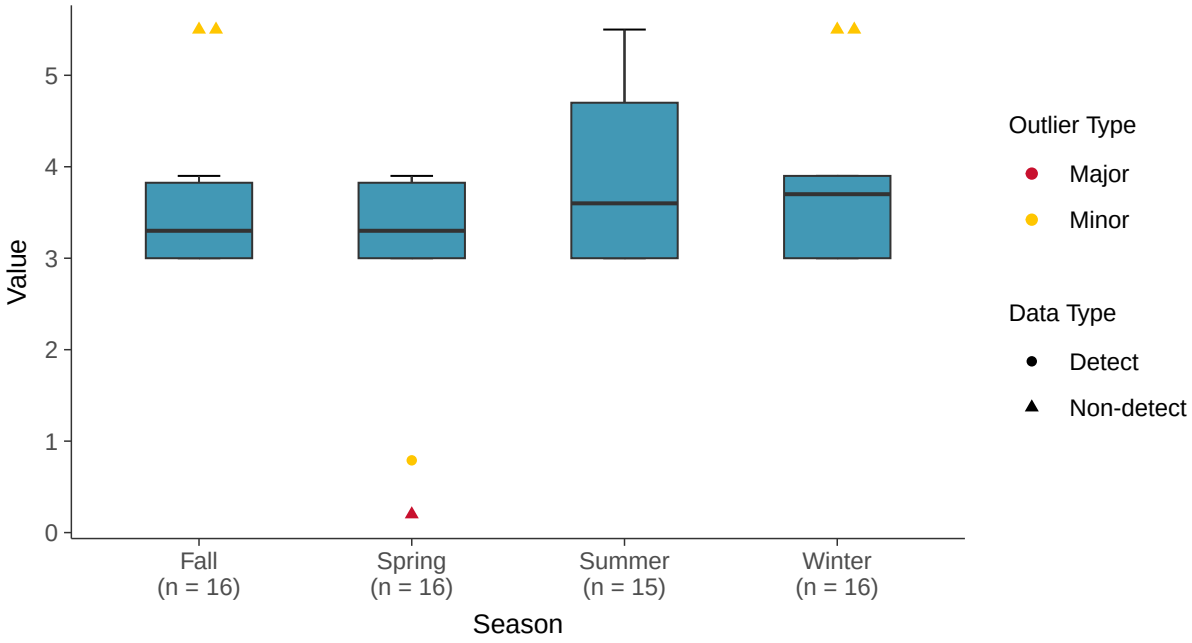
Boxplot

Antimony, BG-1 & BG-2 (ug/L)



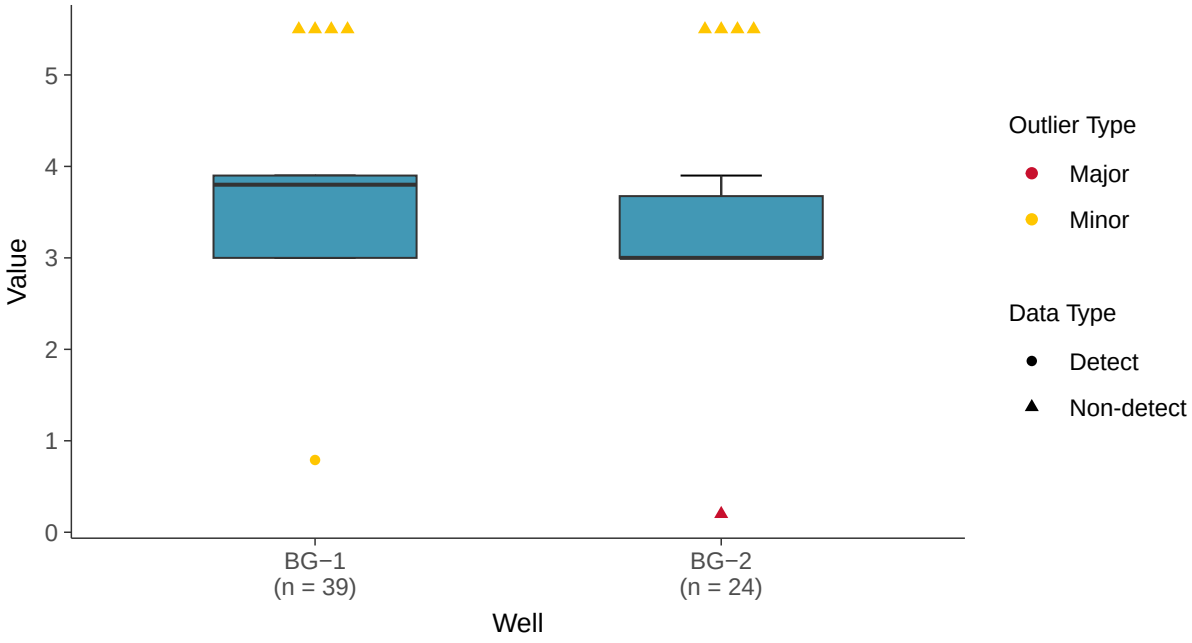
Boxplot by Season

Antimony, BG-1 & BG-2 (ug/L)



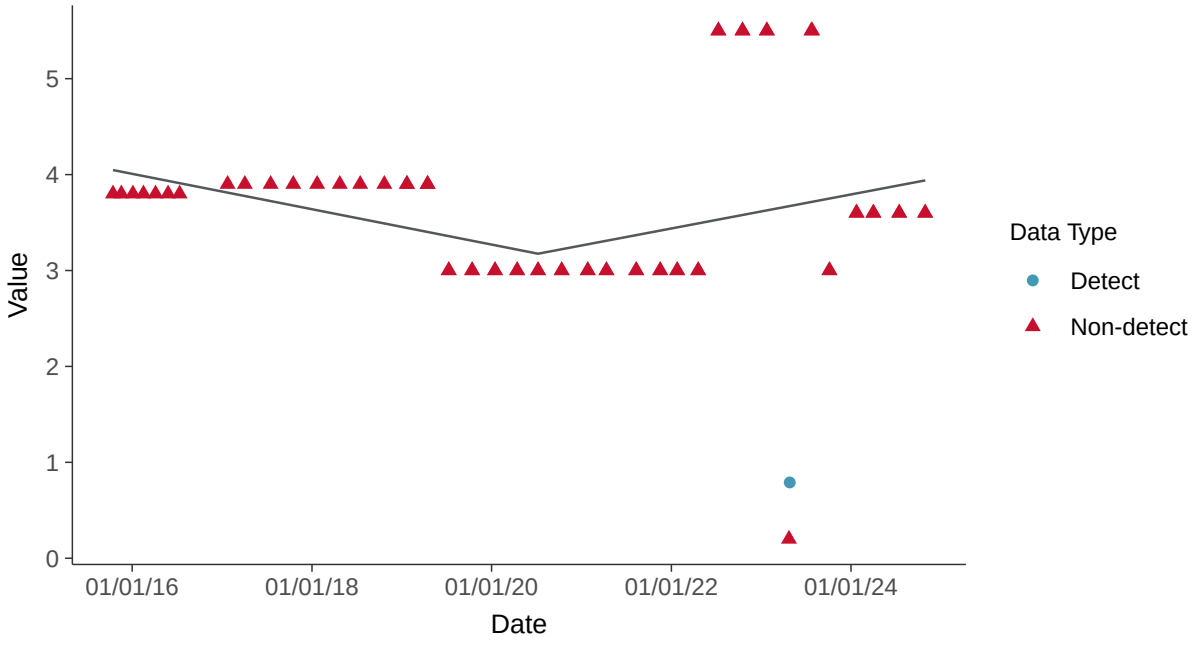
Boxplot by Well

Antimony, BG-1 & BG-2 (ug/L)



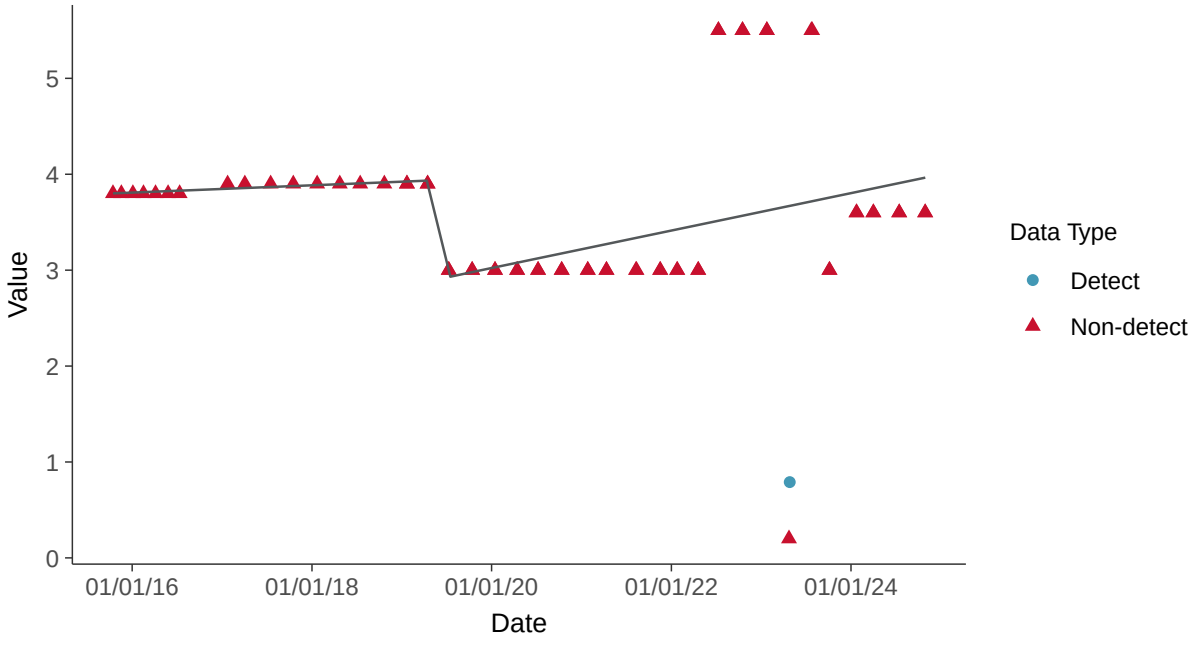
Trend Regression: Piecewise Linear-Linear

Antimony, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, BG-1 & BG-2 (ug/L)

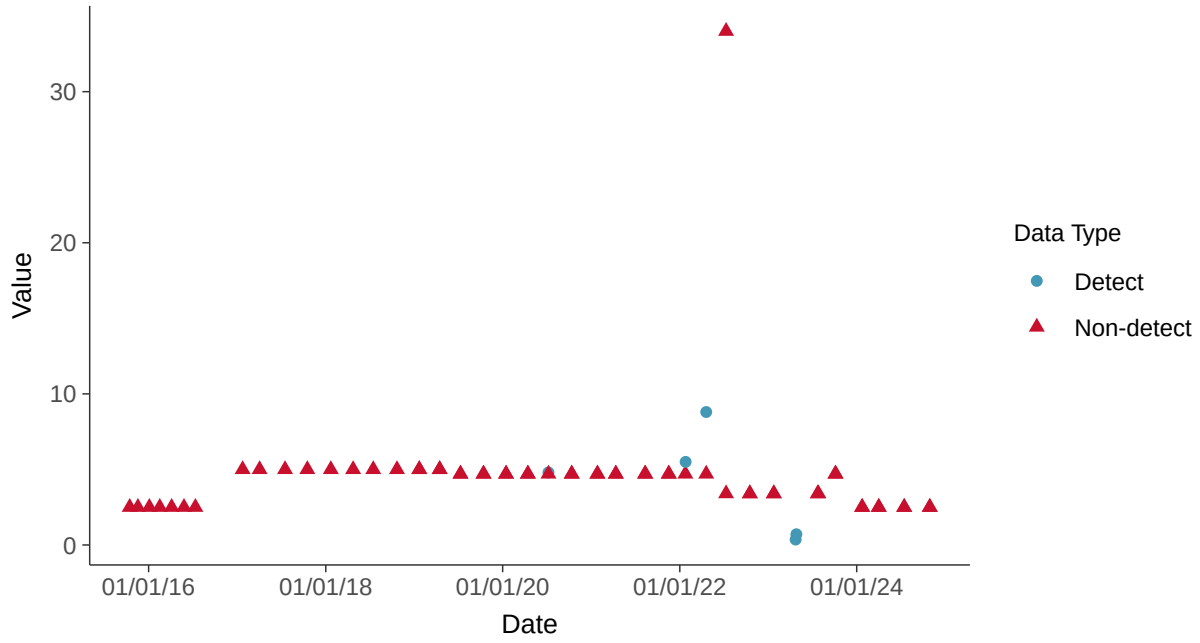


App. IV: Arsenic, BG-1 & BG-2

ID: 3_102

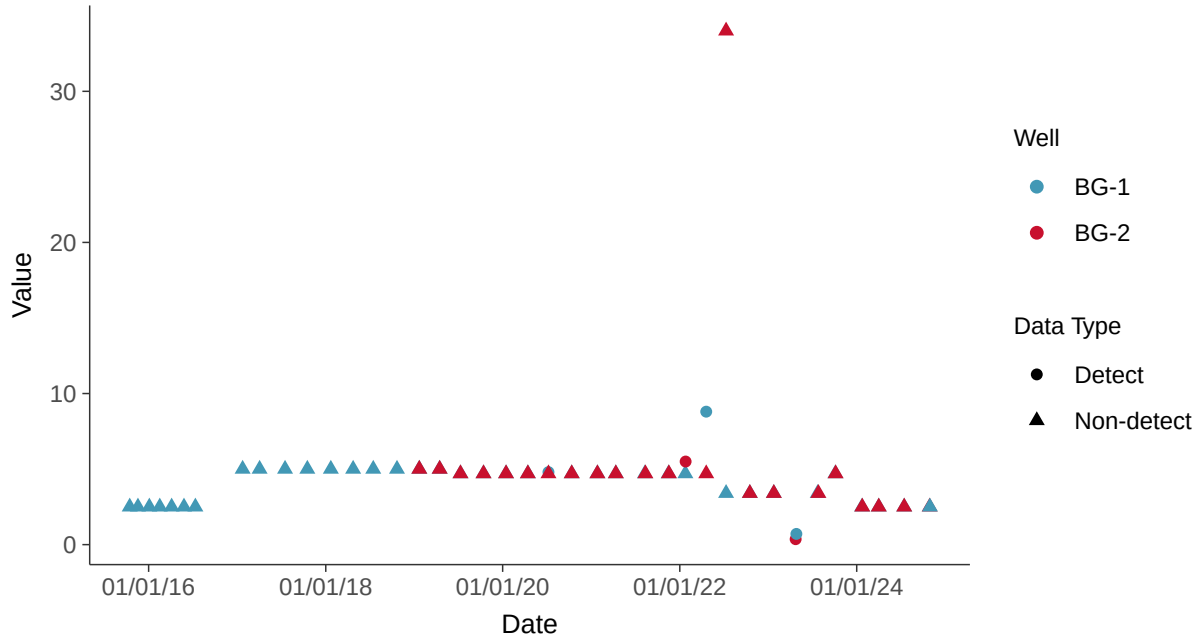
Scatter Plot

Arsenic, BG-1 & BG-2 (ug/L)



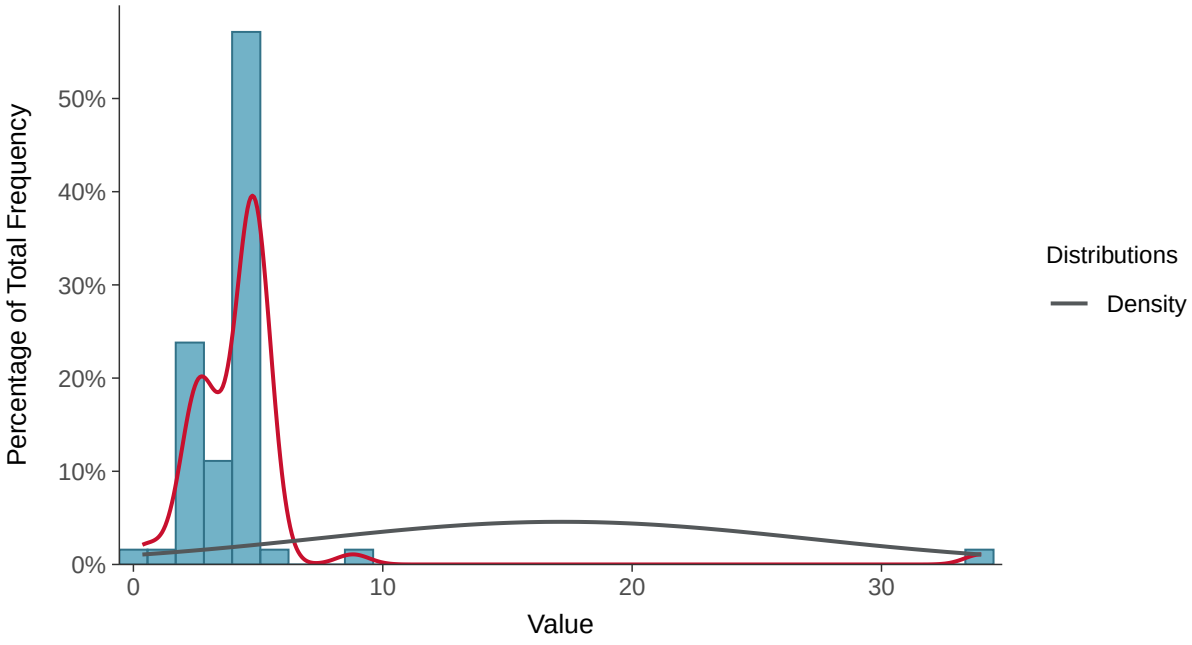
Scatter Plot by Well

Arsenic, BG-1 & BG-2 (ug/L)



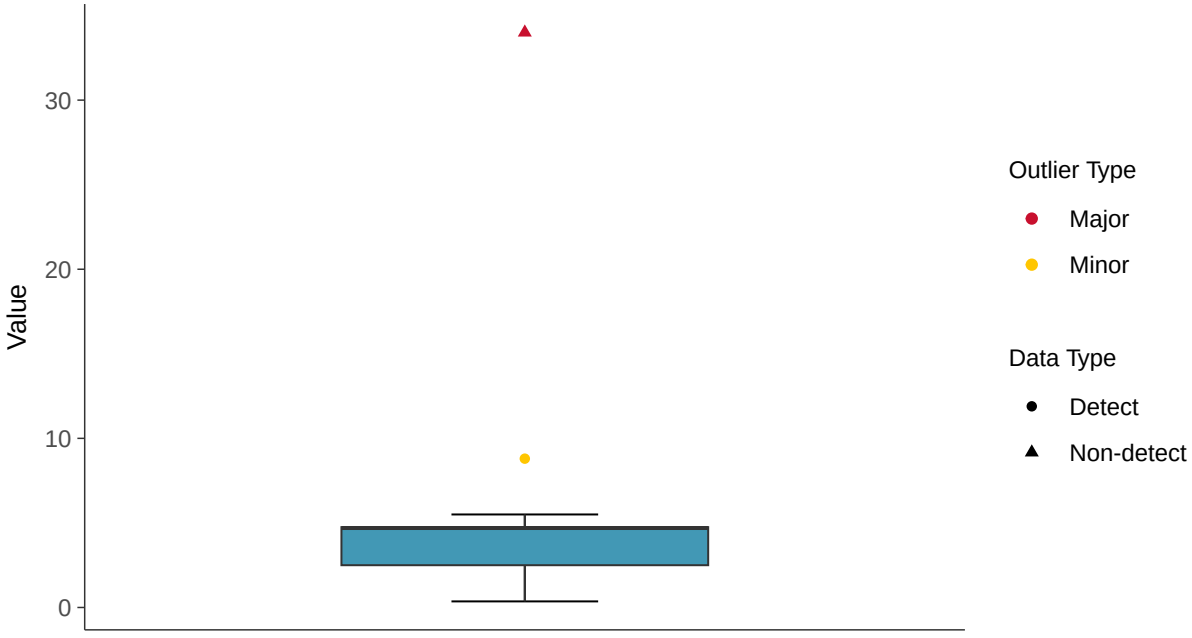
Histogram

Arsenic, BG-1 & BG-2 (ug/L)



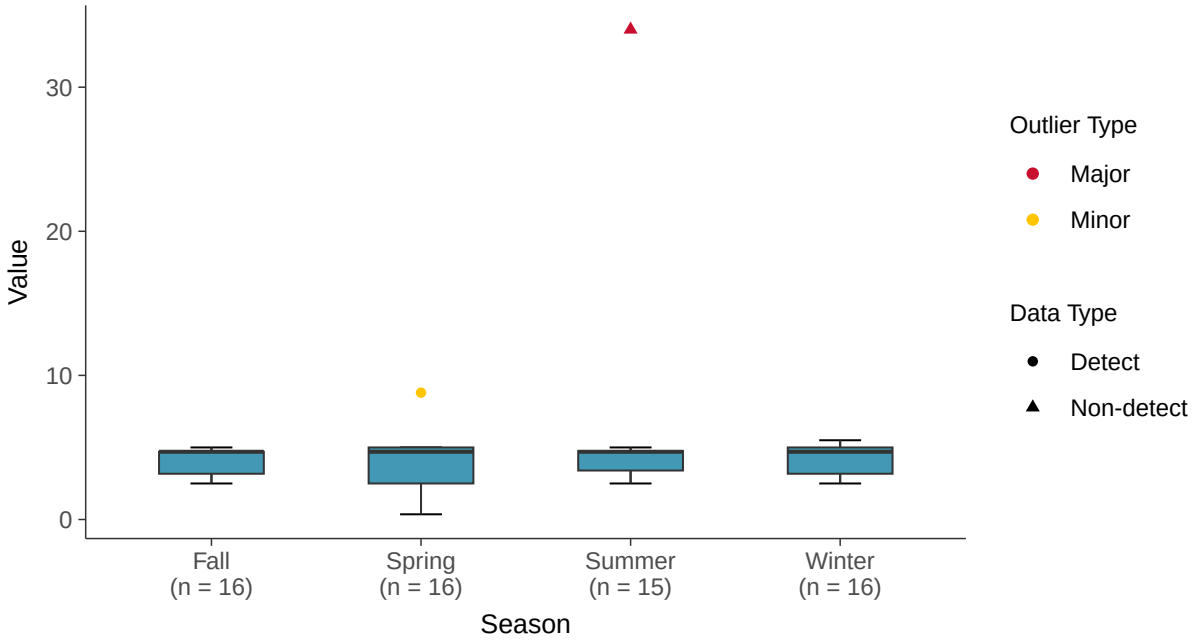
Boxplot

Arsenic, BG-1 & BG-2 (ug/L)



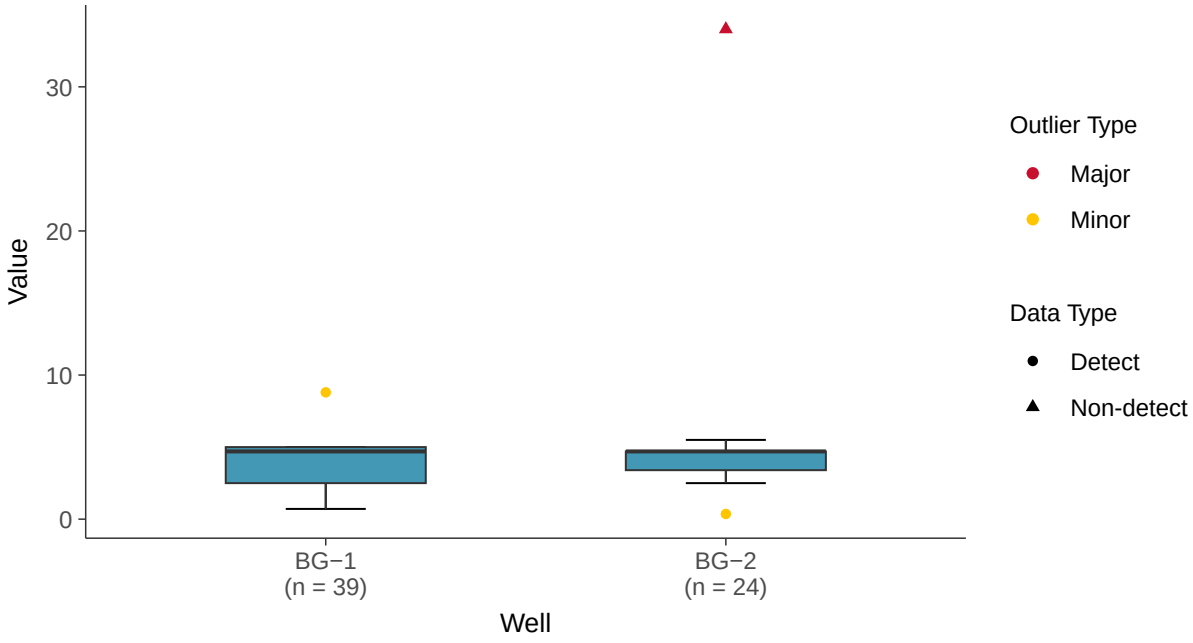
Boxplot by Season

Arsenic, BG-1 & BG-2 (ug/L)



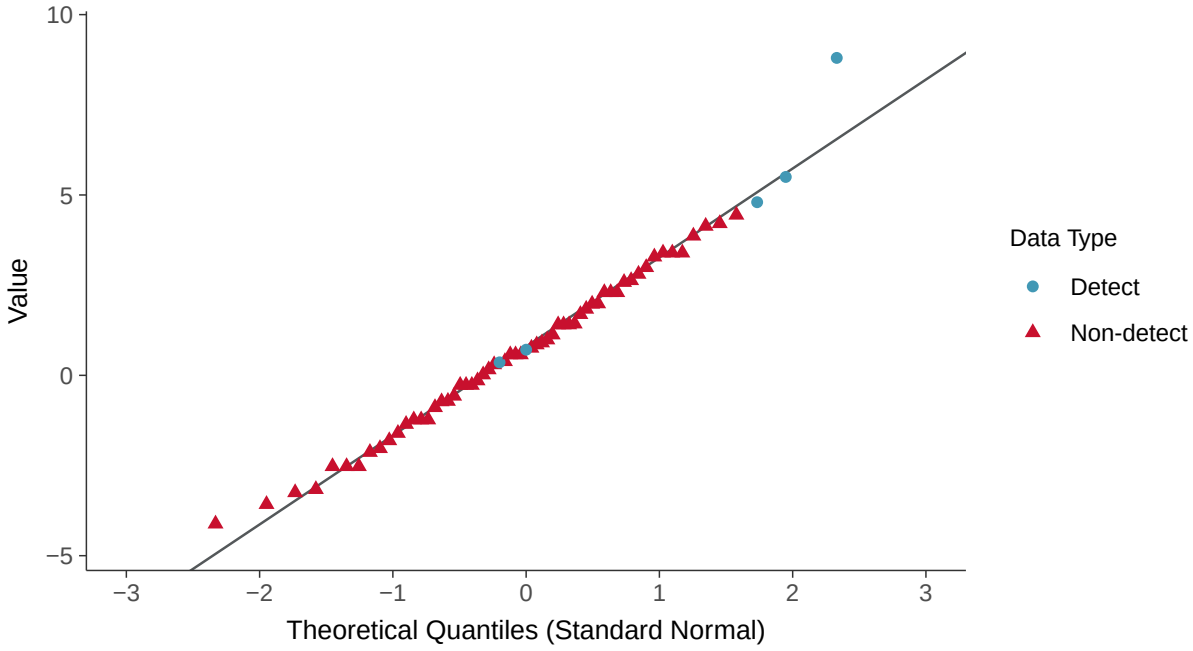
Boxplot by Well

Arsenic, BG-1 & BG-2 (ug/L)



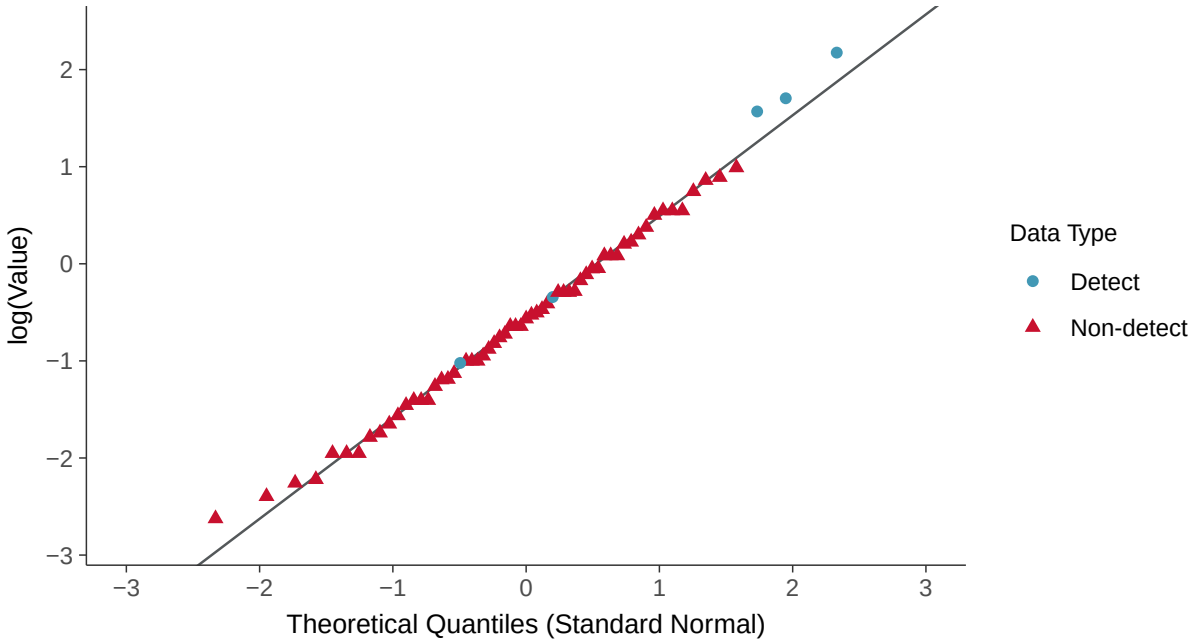
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, BG-1 & BG-2 (ug/L)



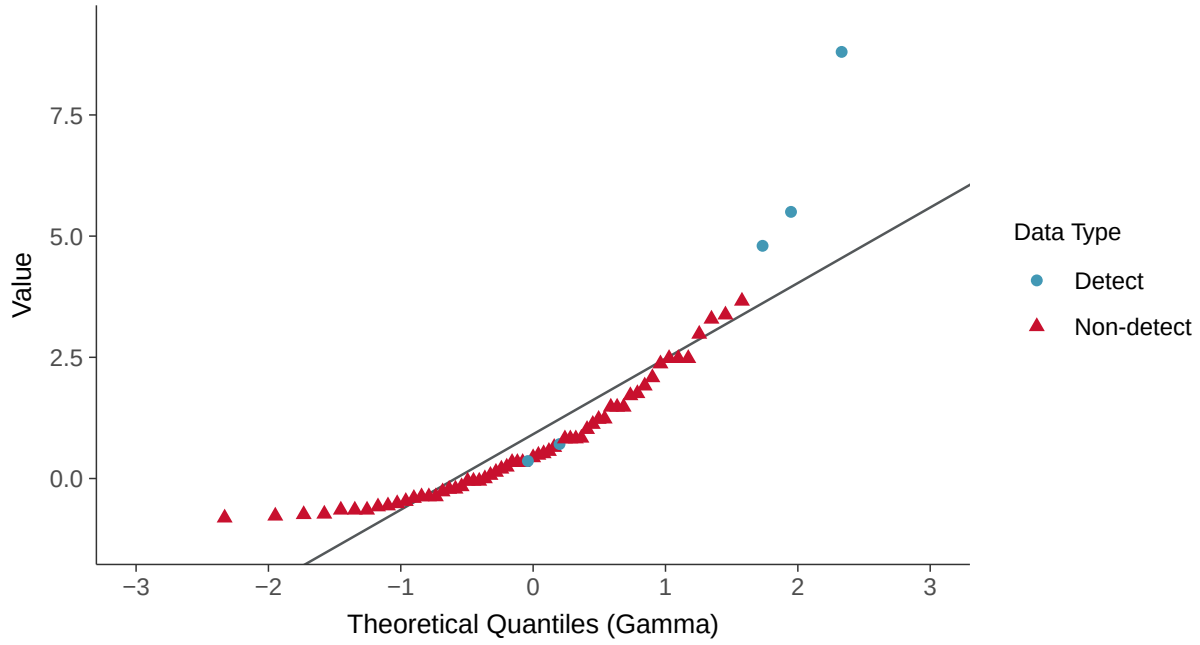
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, BG-1 & BG-2 (ug/L)



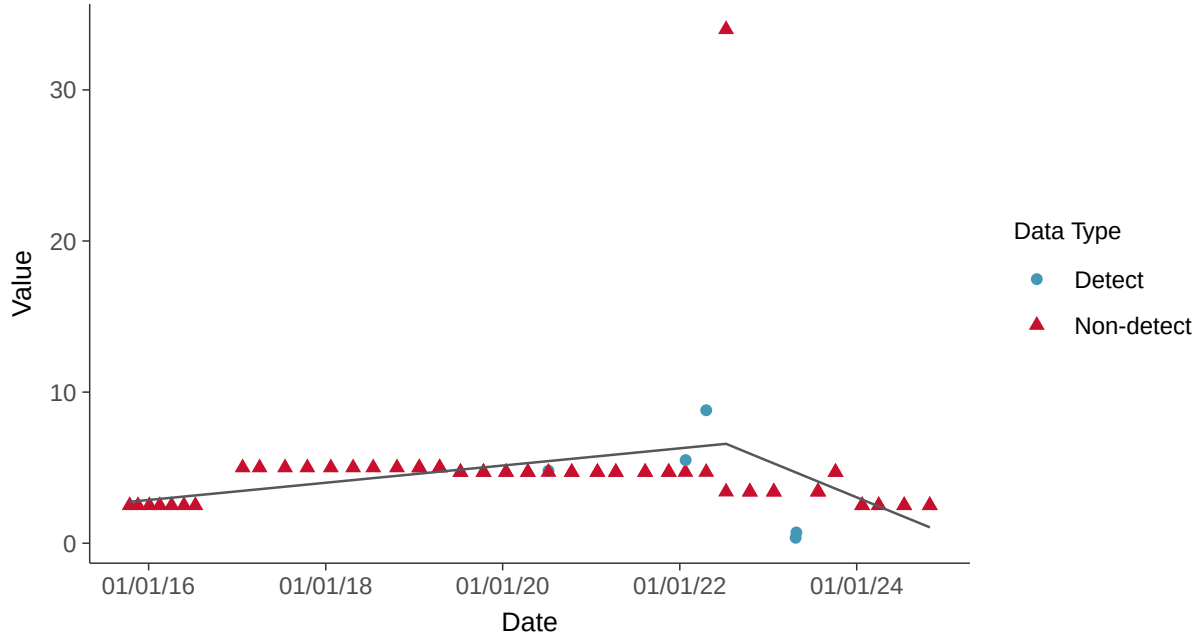
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, BG-1 & BG-2 (ug/L)



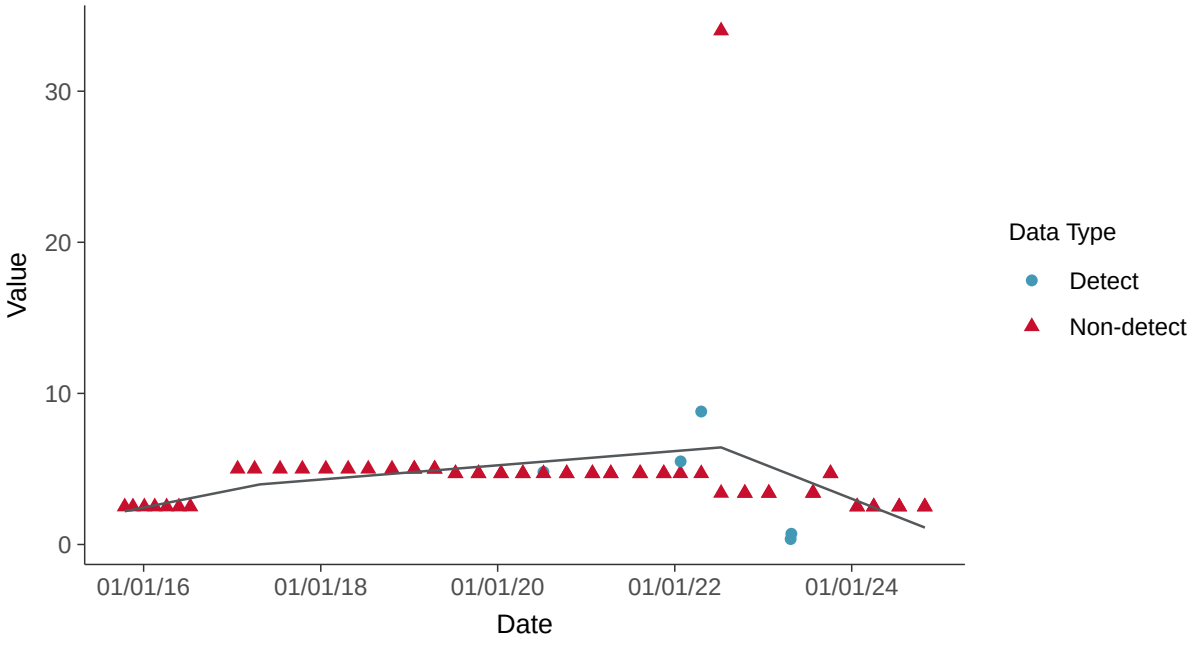
Trend Regression: Piecewise Linear-Linear

Arsenic, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, BG-1 & BG-2 (ug/L)

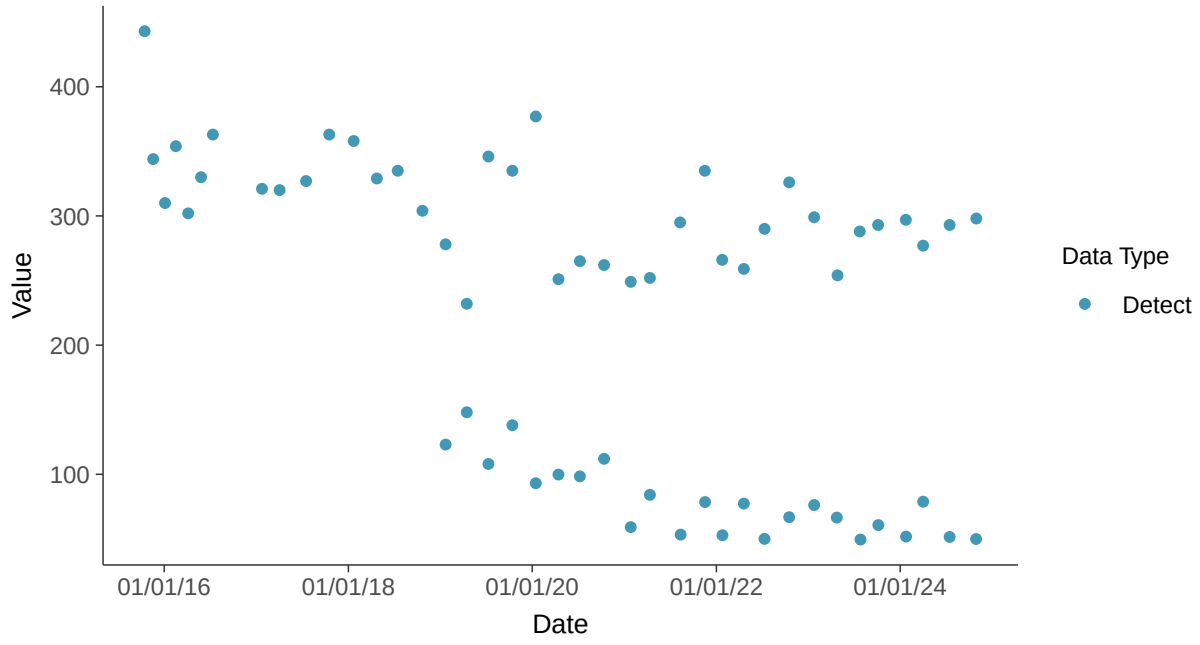


App. IV: Barium, BG-1 & BG-2

ID: 3_103

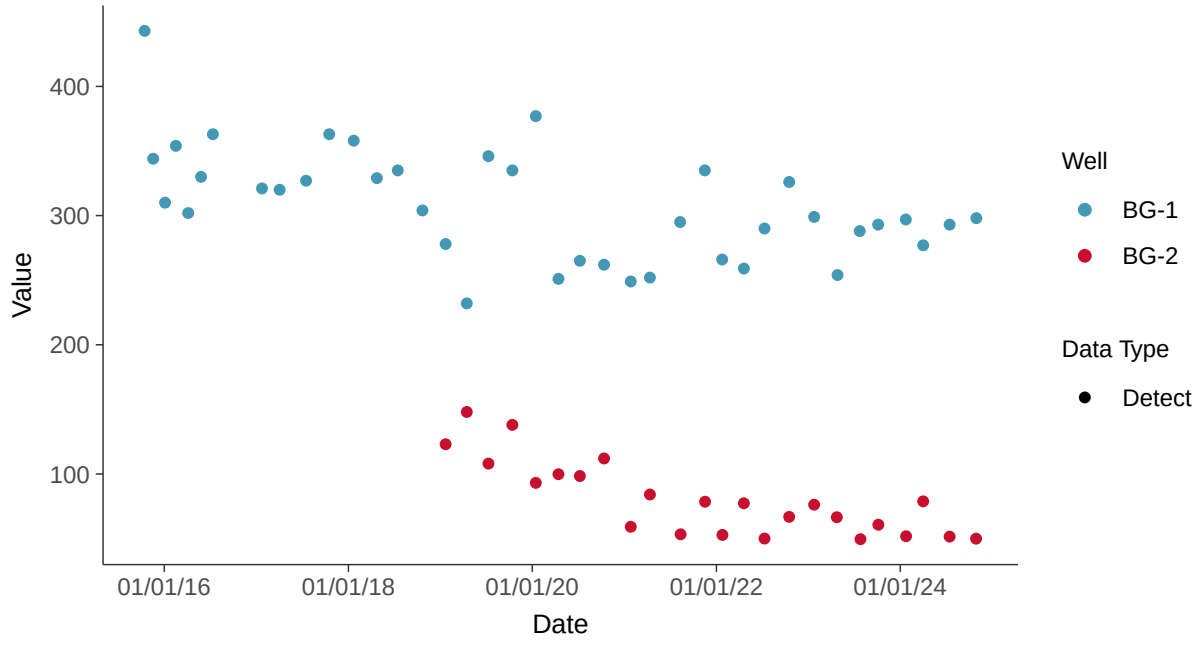
Scatter Plot

Barium, BG-1 & BG-2 (ug/L)



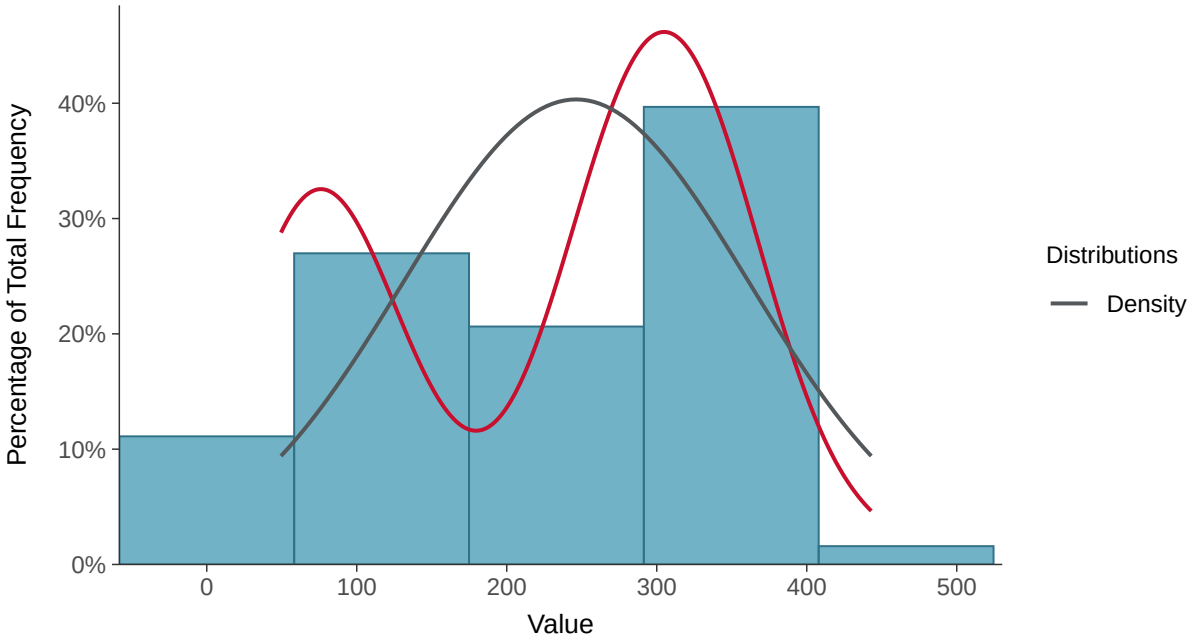
Scatter Plot by Well

Barium, BG-1 & BG-2 (ug/L)



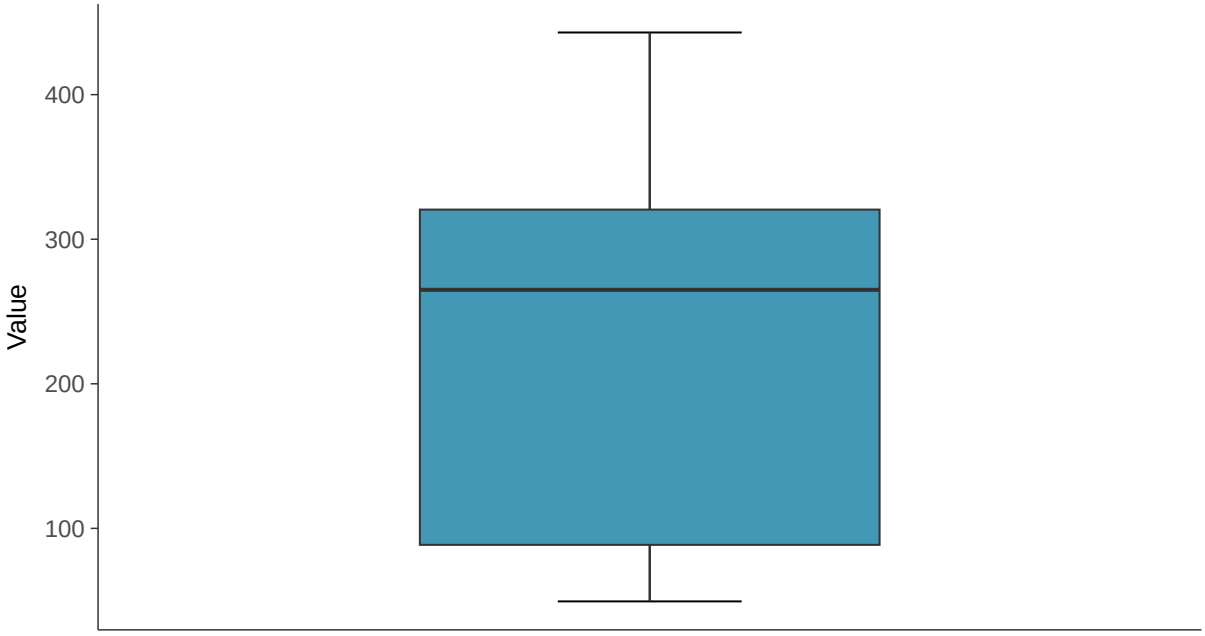
Histogram

Barium, BG-1 & BG-2 (ug/L)



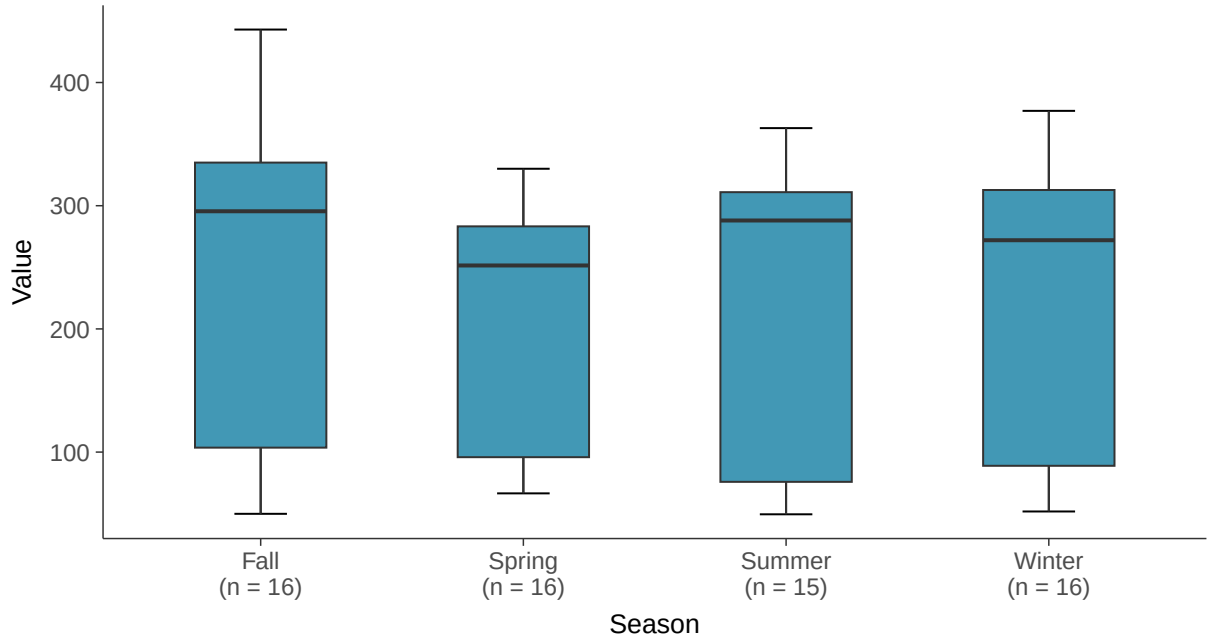
Boxplot

Barium, BG-1 & BG-2 (ug/L)



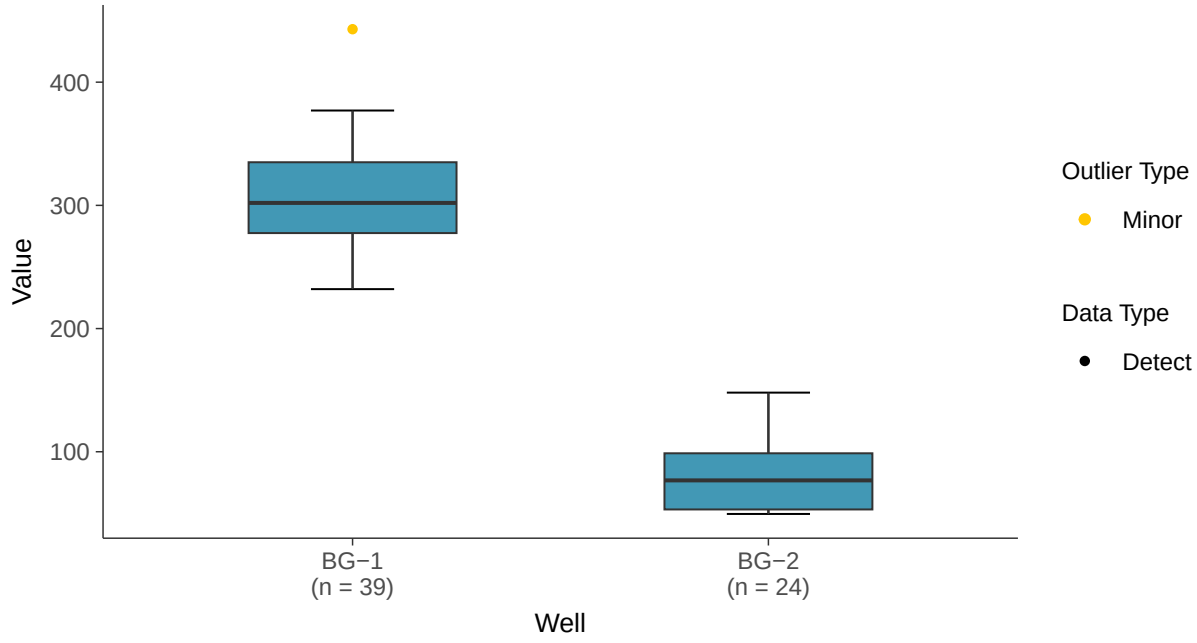
Boxplot by Season

Barium, BG-1 & BG-2 (ug/L)



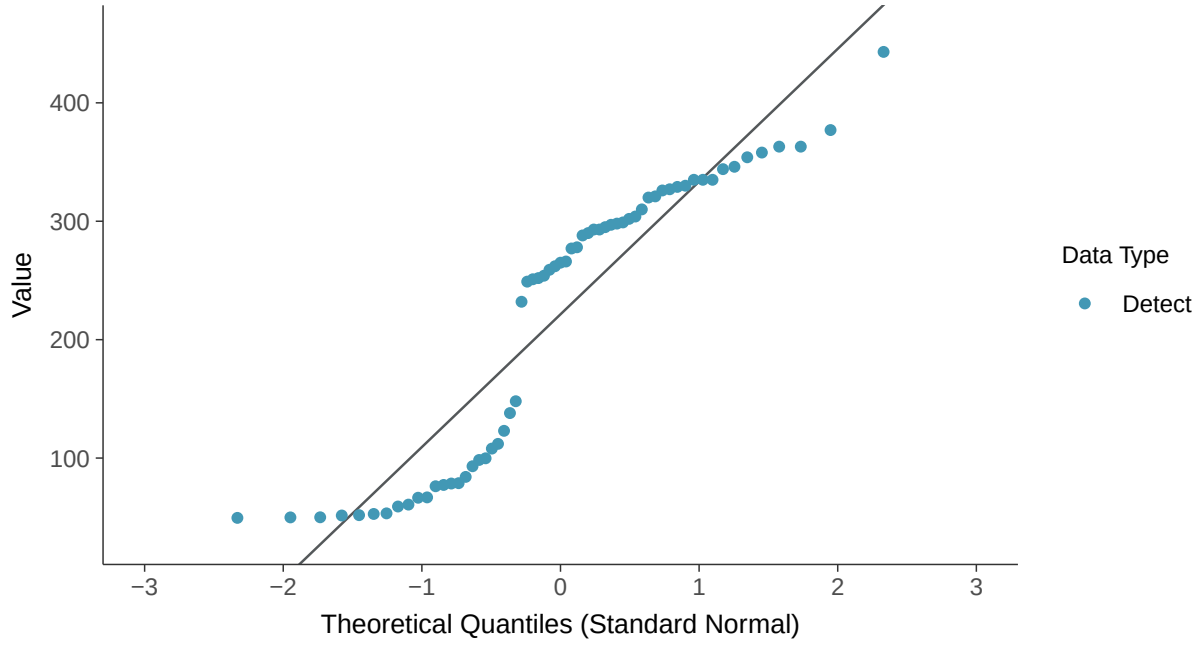
Boxplot by Well

Barium, BG-1 & BG-2 (ug/L)



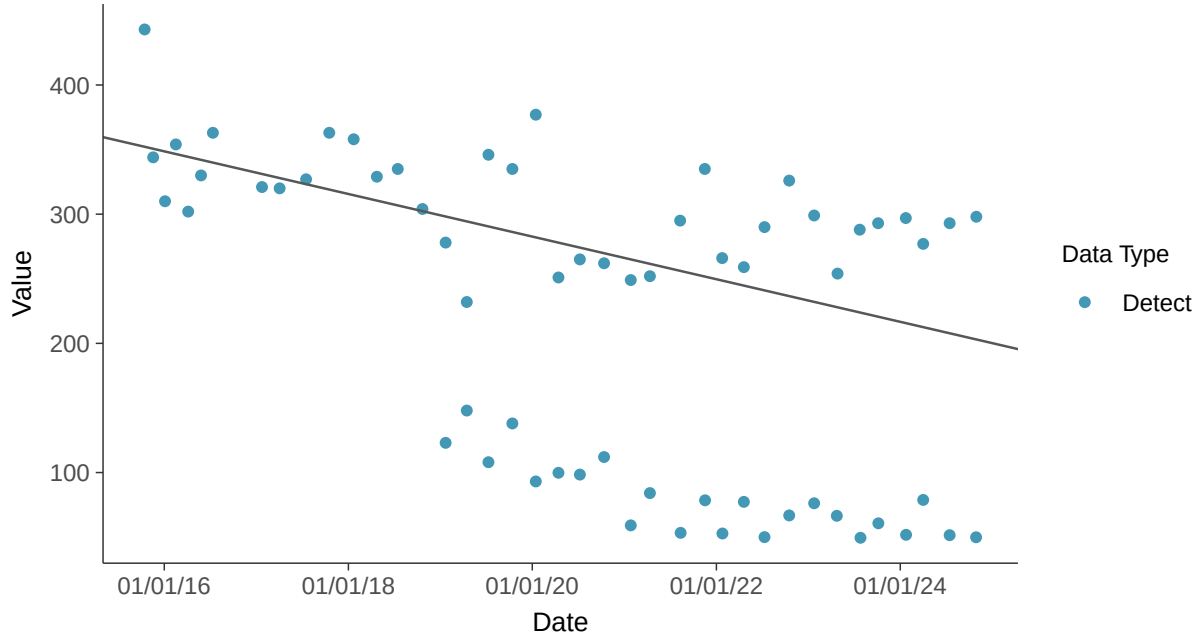
Normal Q-Q plot

Barium, BG-1 & BG-2 (ug/L)



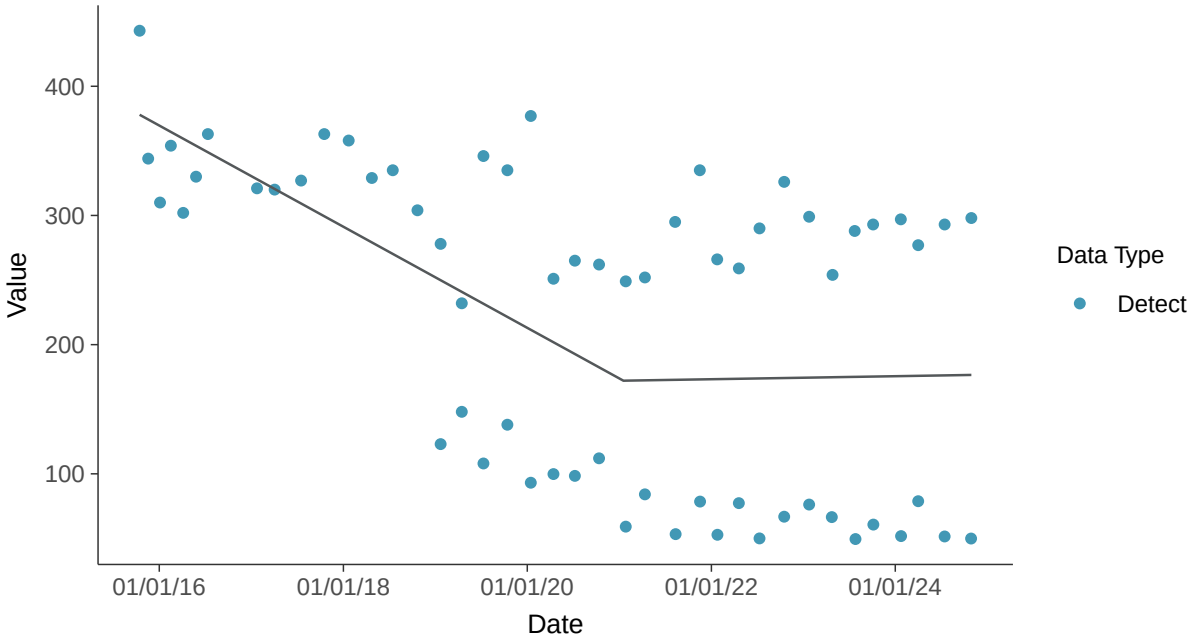
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Barium, BG-1 & BG-2 (ug/L)

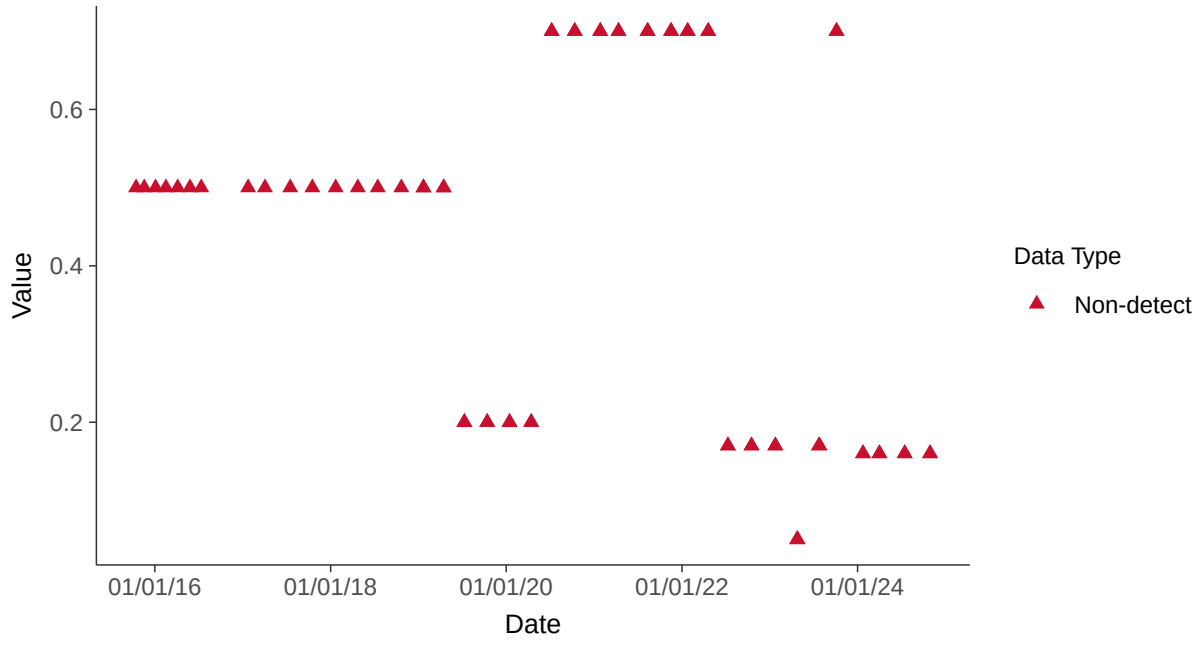


App. IV: Beryllium, BG-1 & BG-2

ID: 3_104

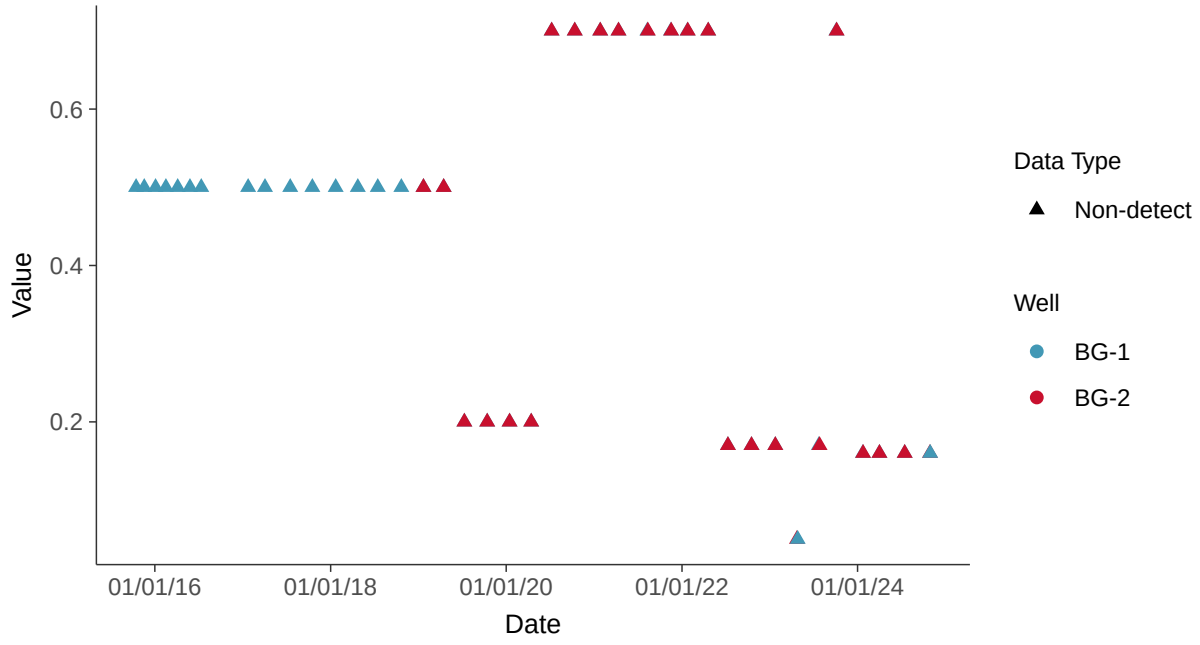
Scatter Plot

Beryllium, BG-1 & BG-2 (ug/L)



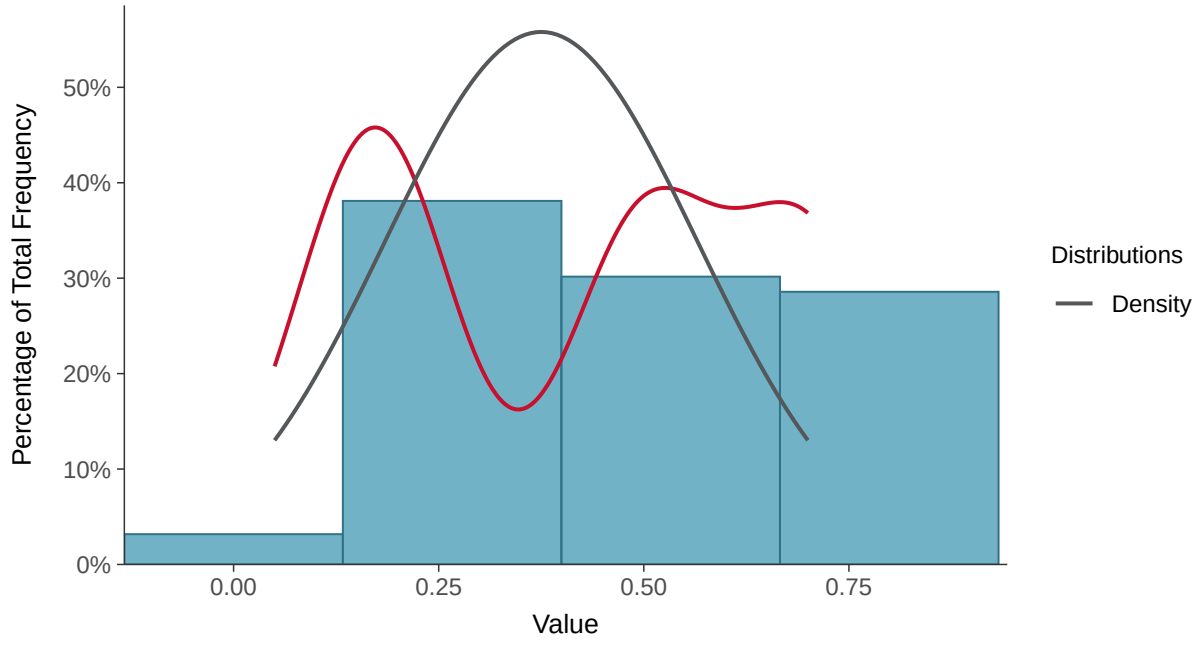
Scatter Plot by Well

Beryllium, BG-1 & BG-2 (ug/L)



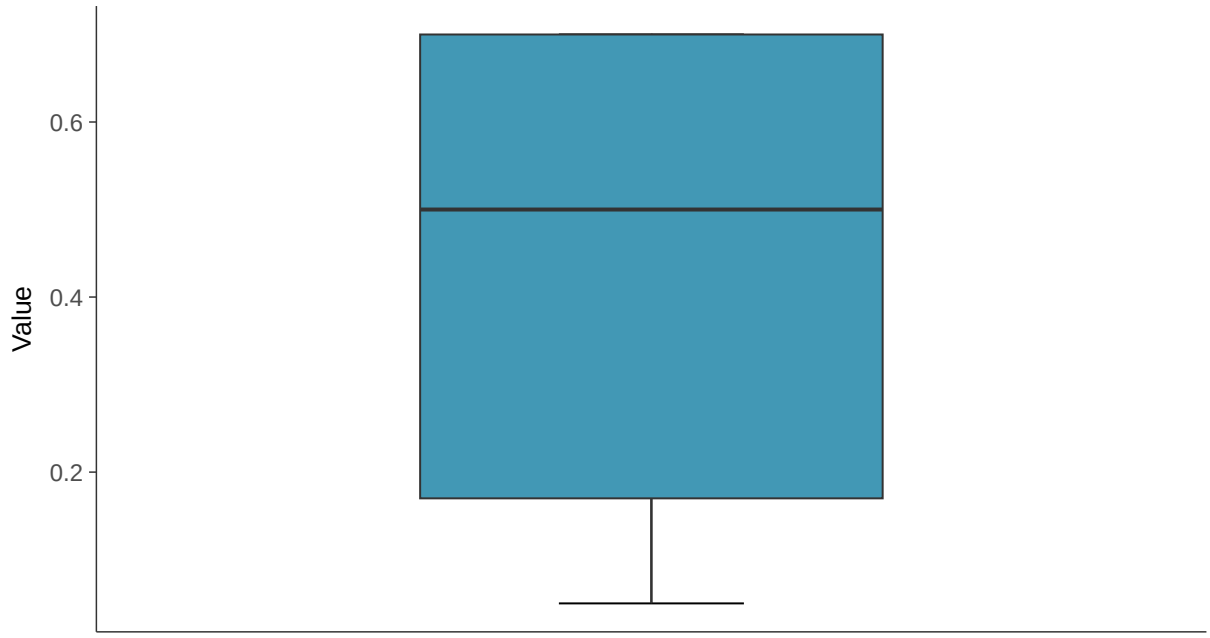
Histogram

Beryllium, BG-1 & BG-2 (ug/L)



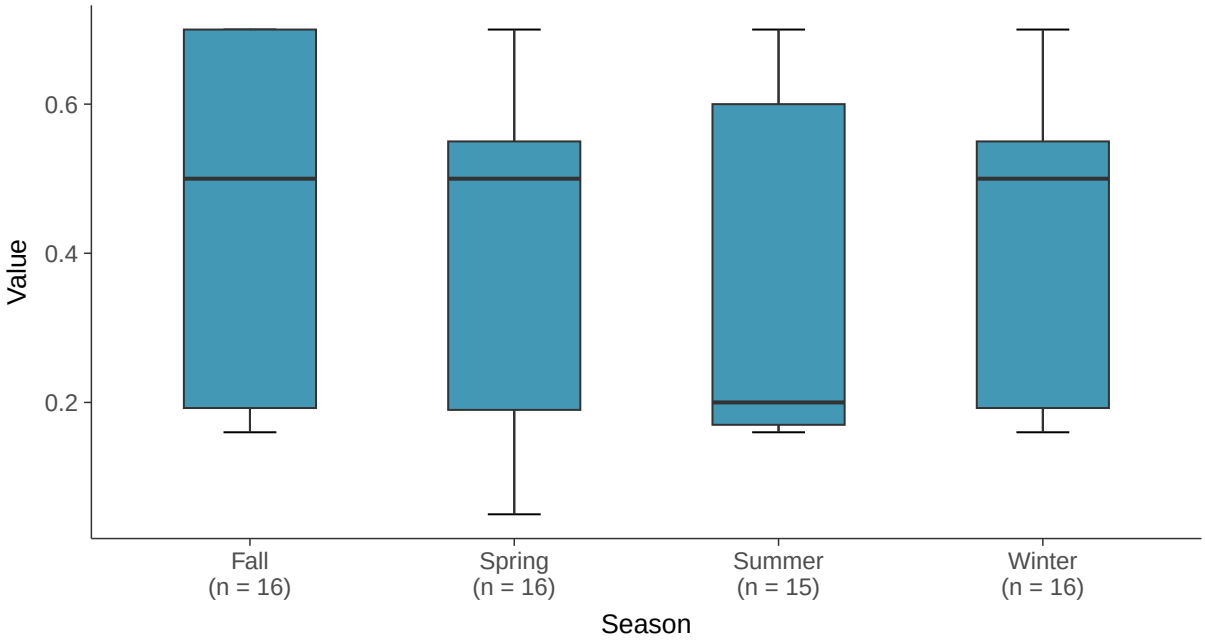
Boxplot

Beryllium, BG-1 & BG-2 (ug/L)



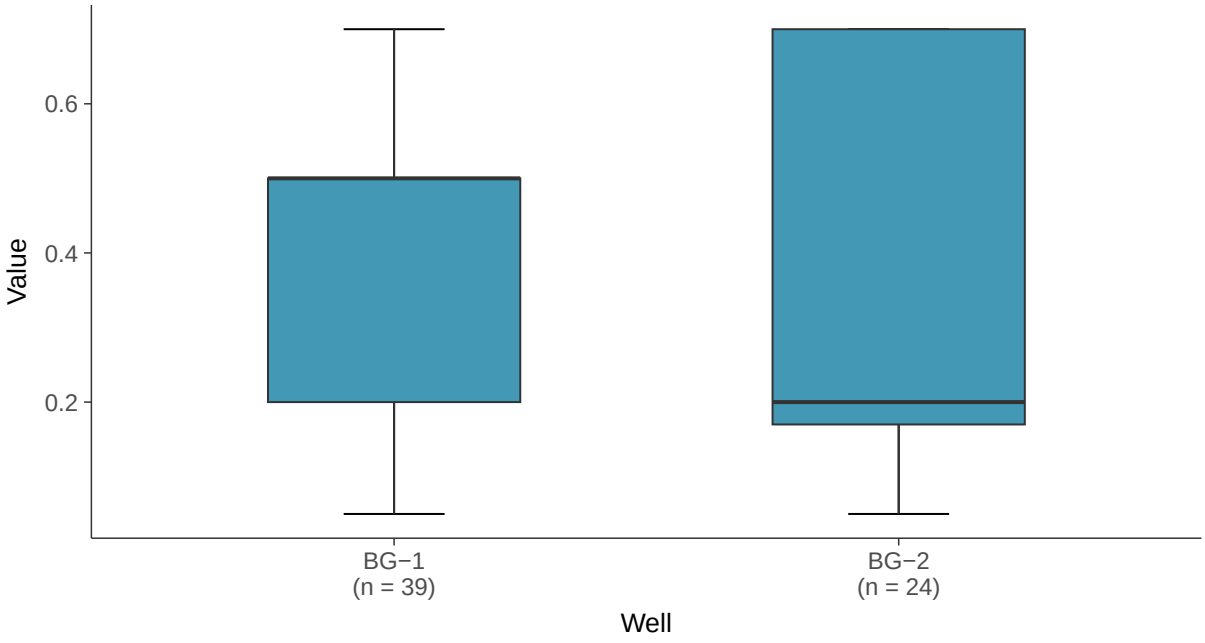
Boxplot by Season

Beryllium, BG-1 & BG-2 (ug/L)



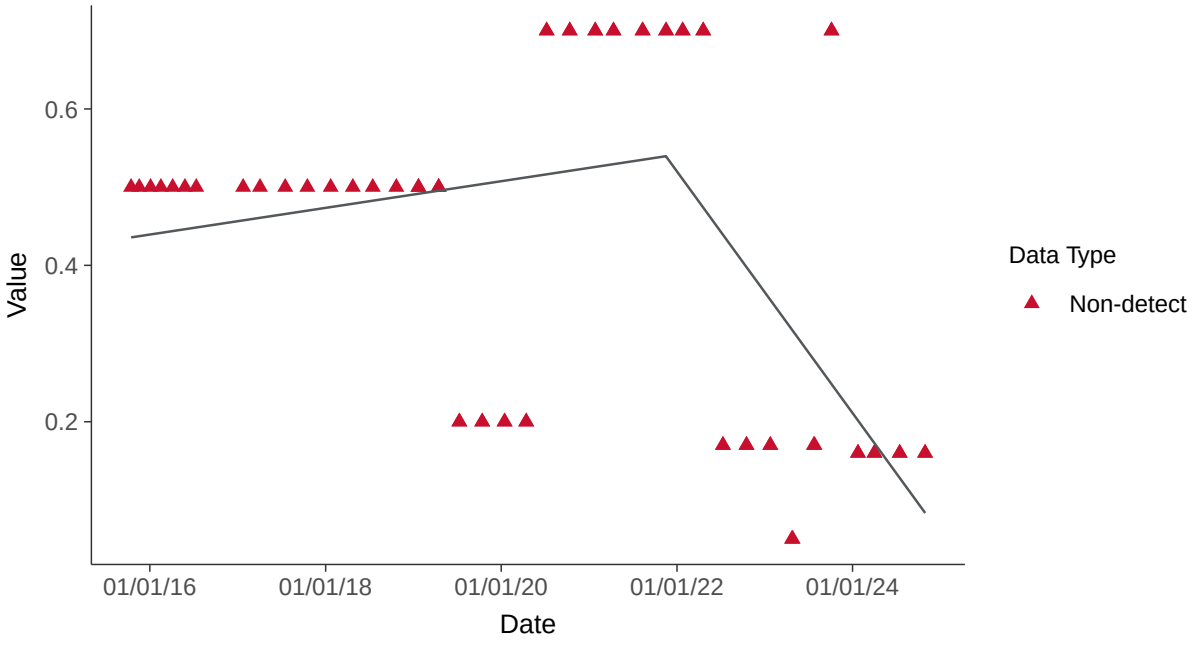
Boxplot by Well

Beryllium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Beryllium, BG-1 & BG-2 (ug/L)

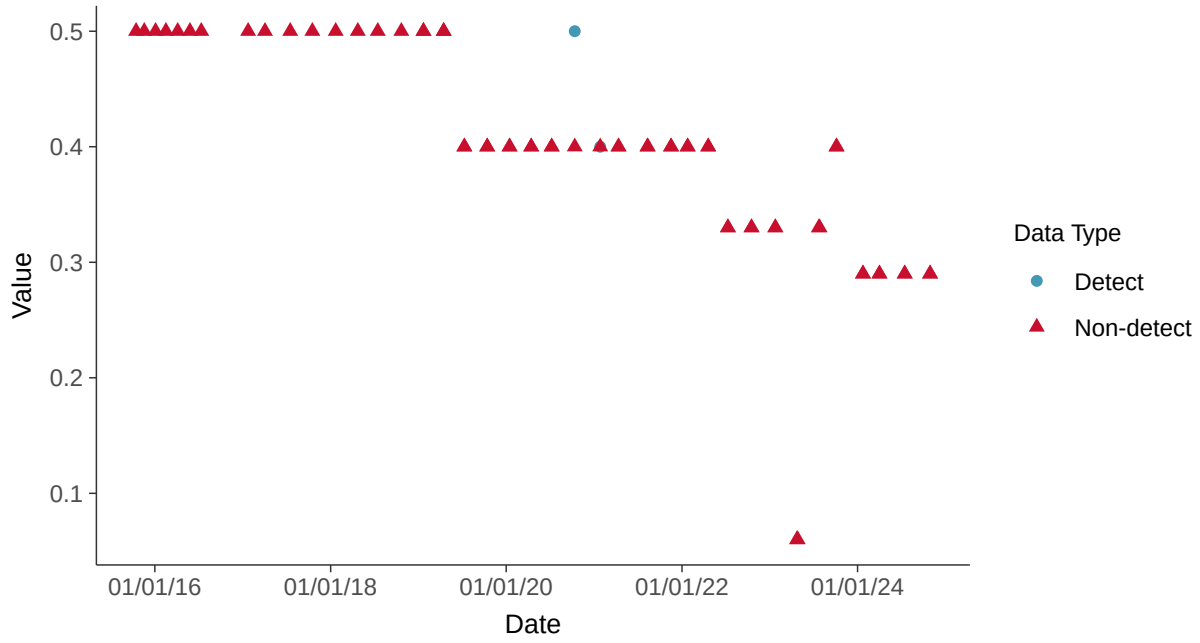


App. IV: Cadmium, BG-1 & BG-2

ID: 3_106

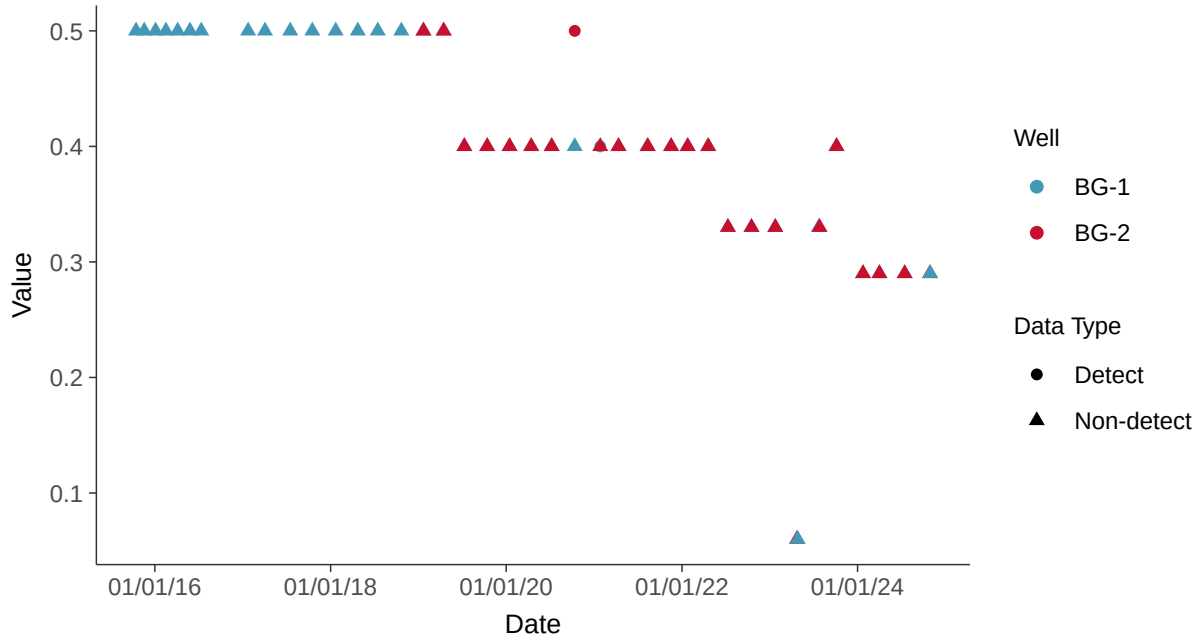
Scatter Plot

Cadmium, BG-1 & BG-2 (ug/L)



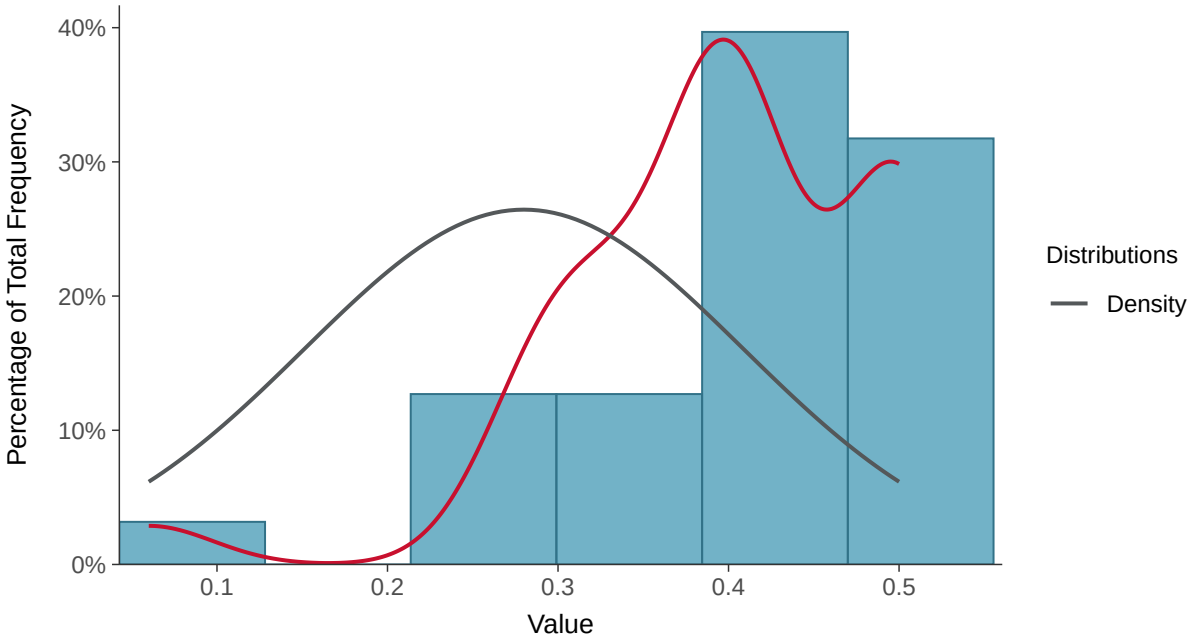
Scatter Plot by Well

Cadmium, BG-1 & BG-2 (ug/L)



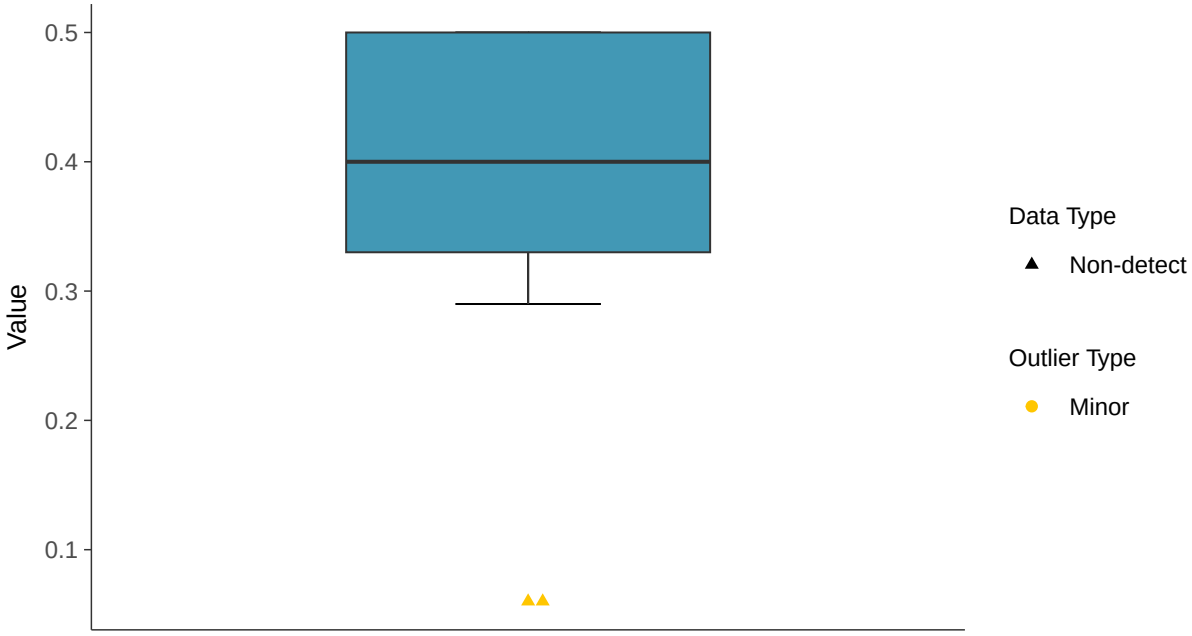
Histogram

Cadmium, BG-1 & BG-2 (ug/L)



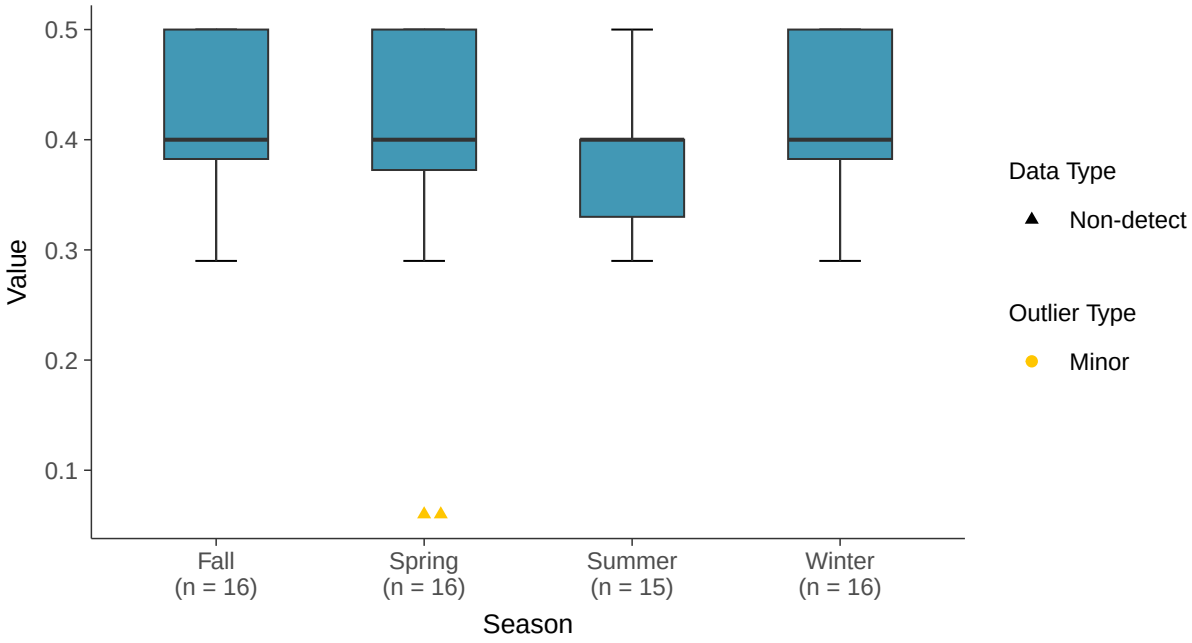
Boxplot

Cadmium, BG-1 & BG-2 (ug/L)



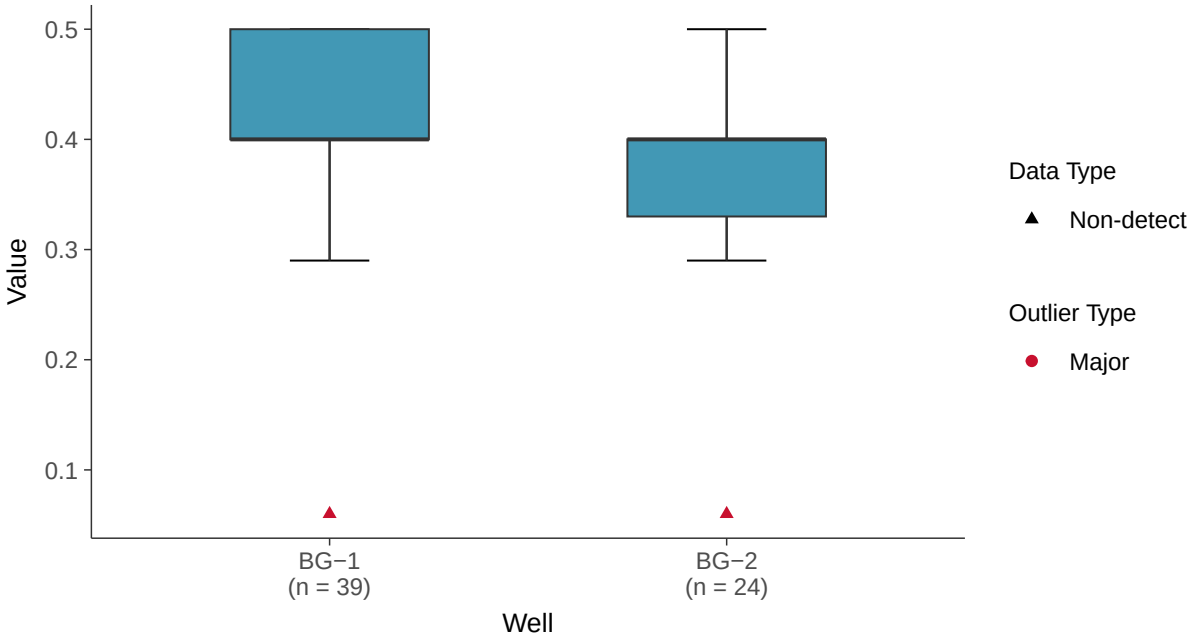
Boxplot by Season

Cadmium, BG-1 & BG-2 (ug/L)



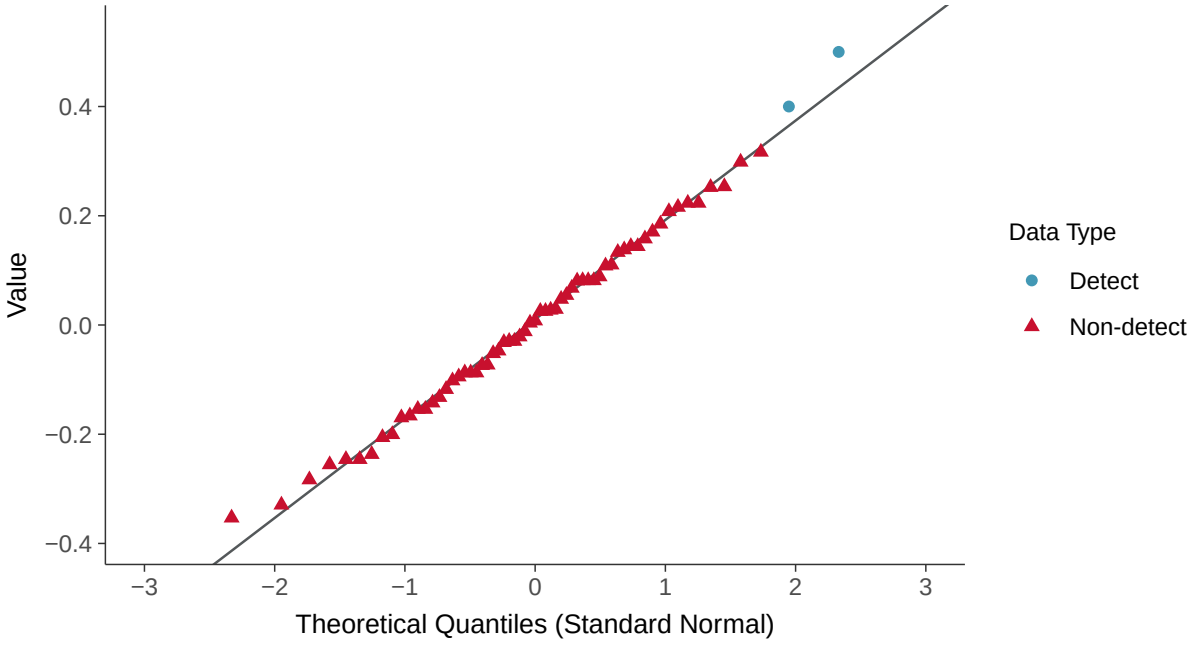
Boxplot by Well

Cadmium, BG-1 & BG-2 (ug/L)



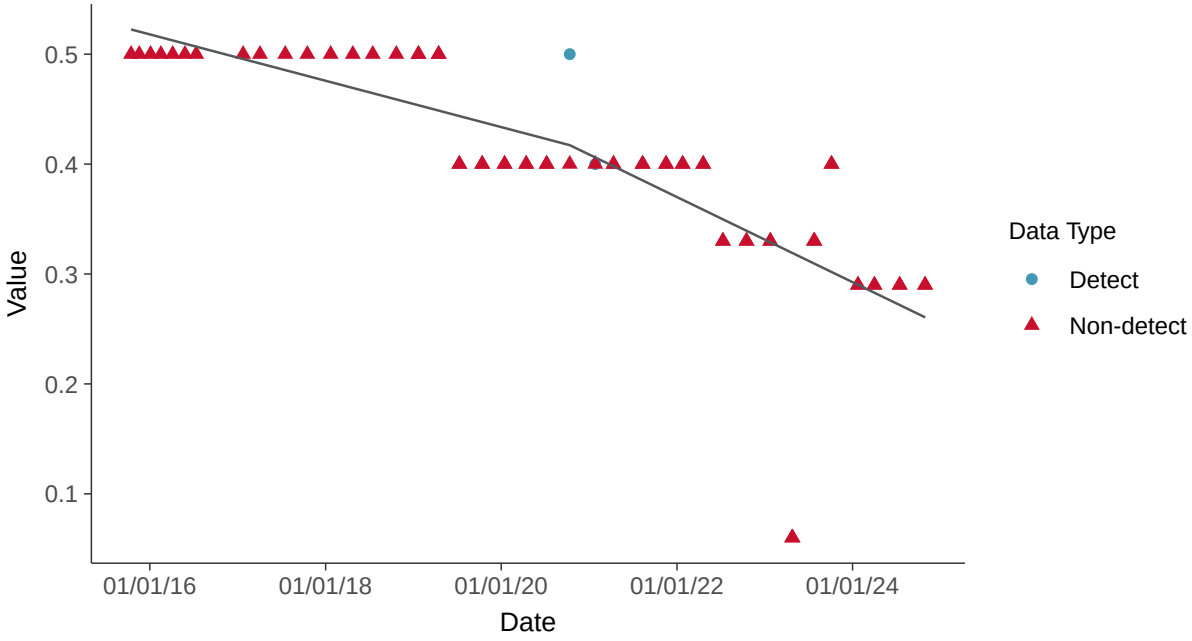
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, BG-1 & BG-2 (ug/L)



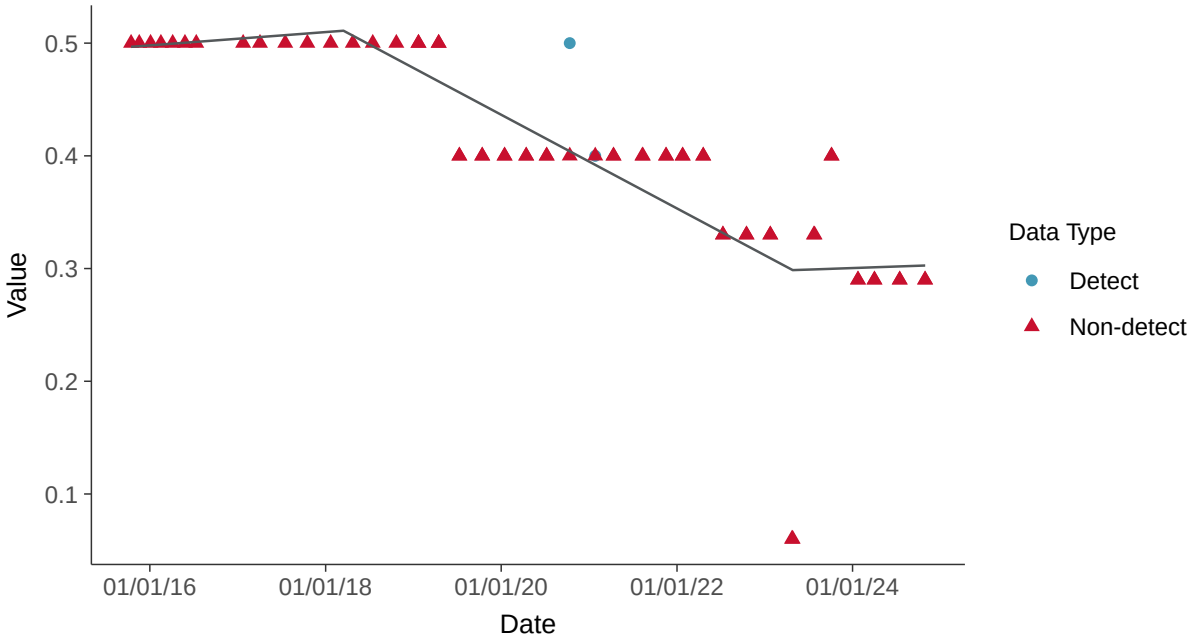
Trend Regression: Piecewise Linear-Linear

Cadmium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, BG-1 & BG-2 (ug/L)

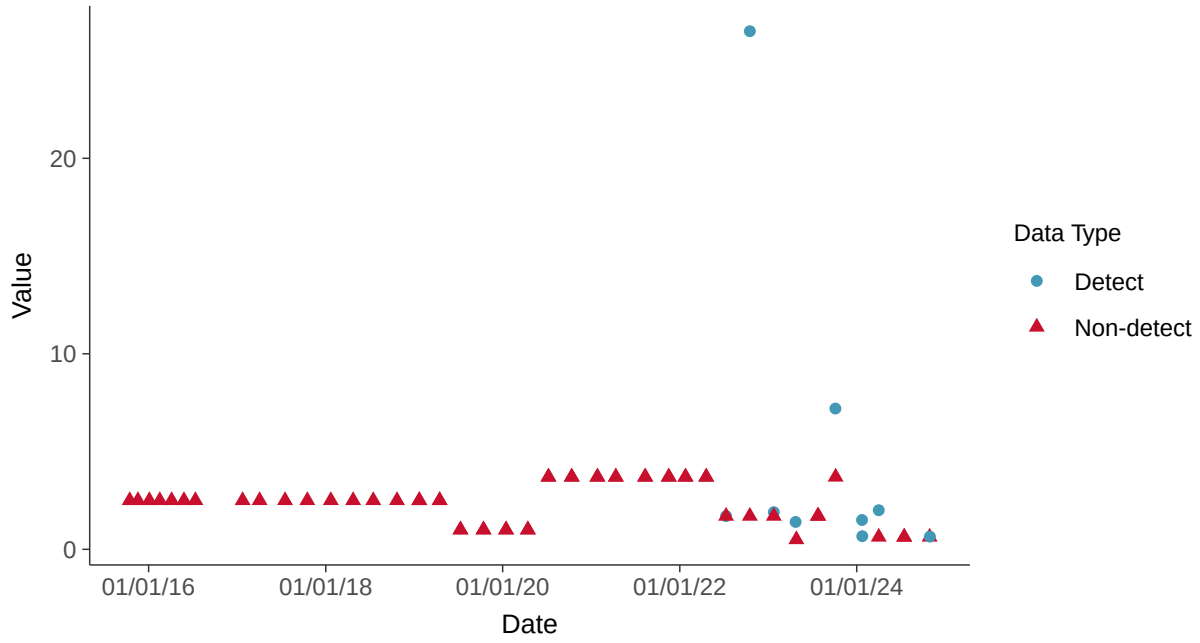


App. IV: Chromium, BG-1 & BG-2

ID: 3_109

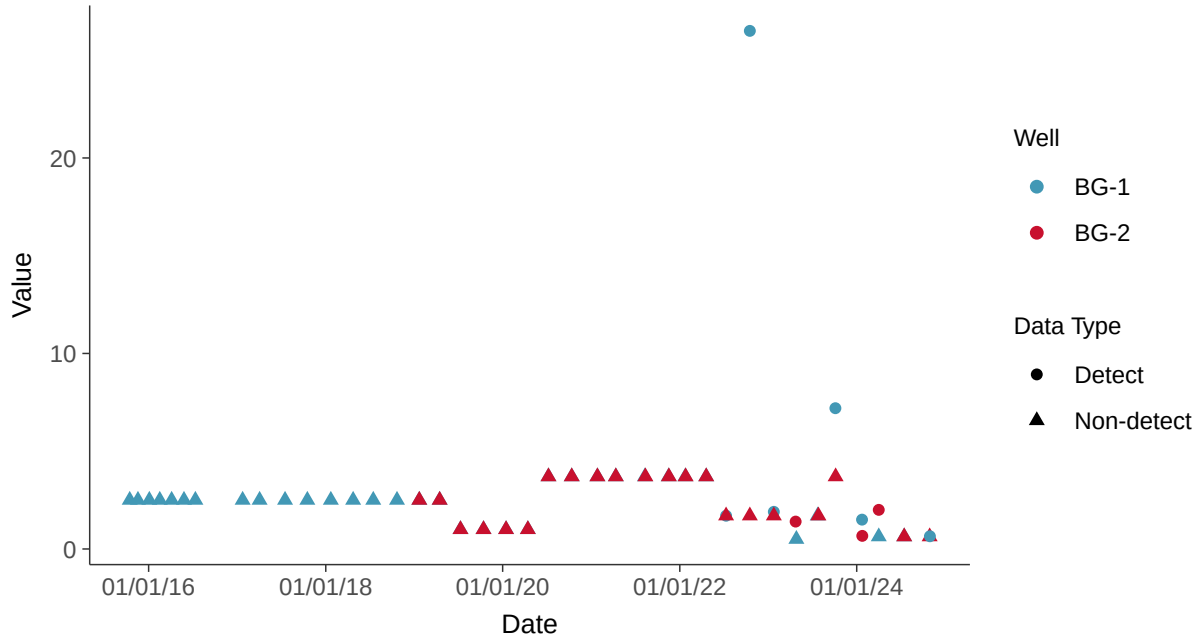
Scatter Plot

Chromium, BG-1 & BG-2 (ug/L)



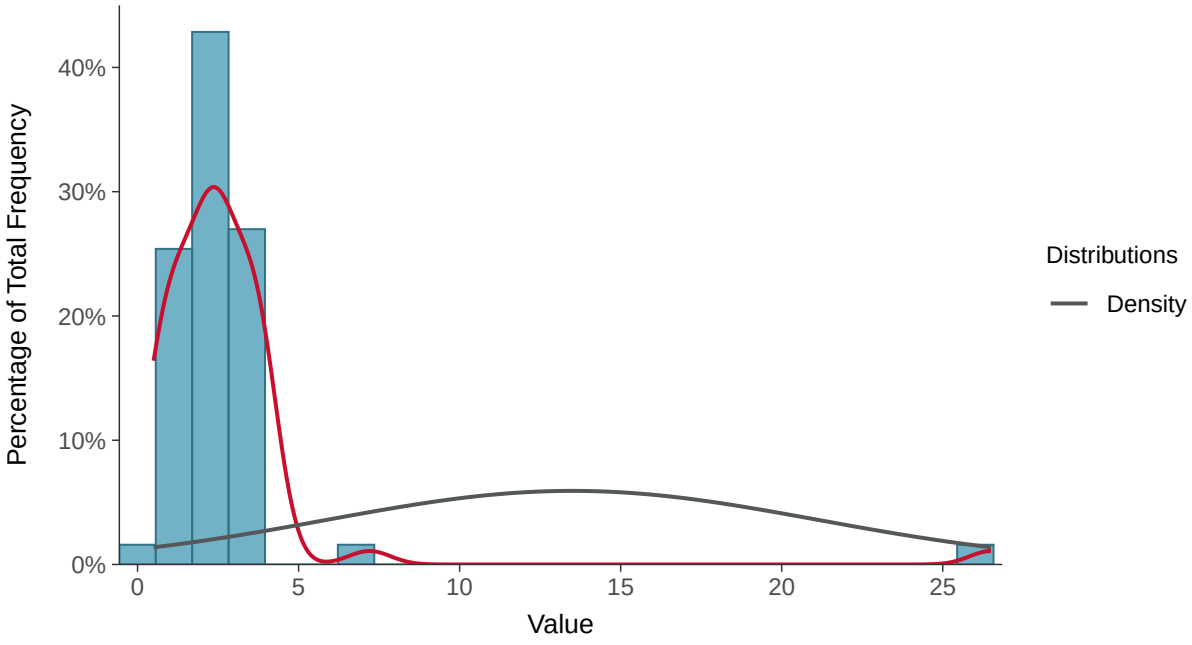
Scatter Plot by Well

Chromium, BG-1 & BG-2 (ug/L)



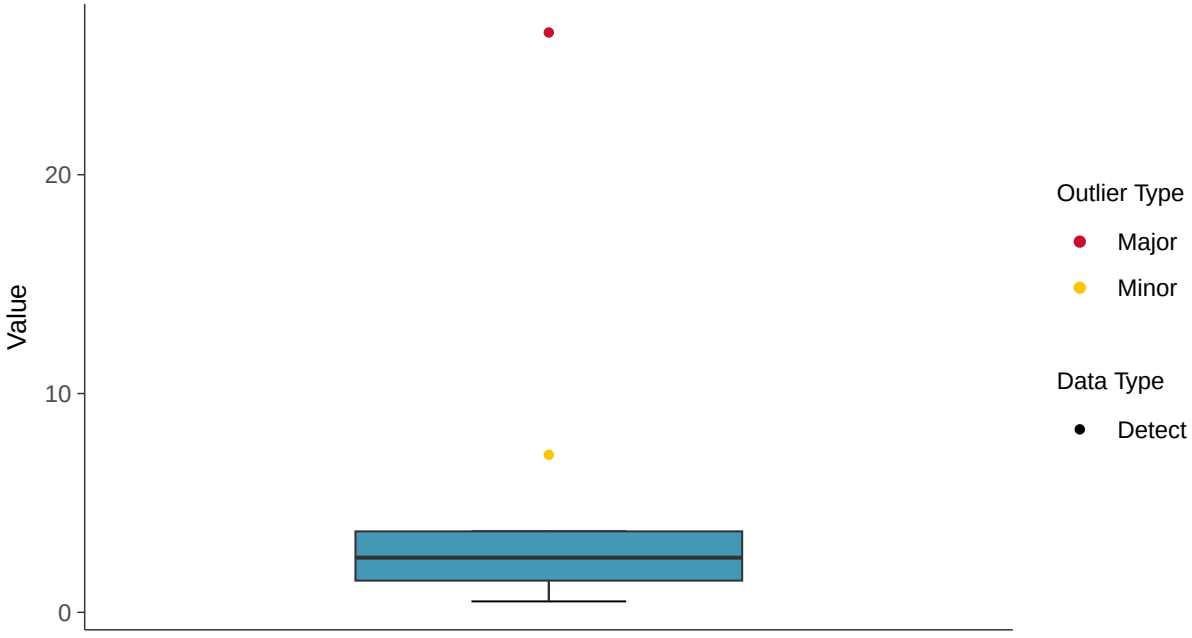
Histogram

Chromium, BG-1 & BG-2 (ug/L)



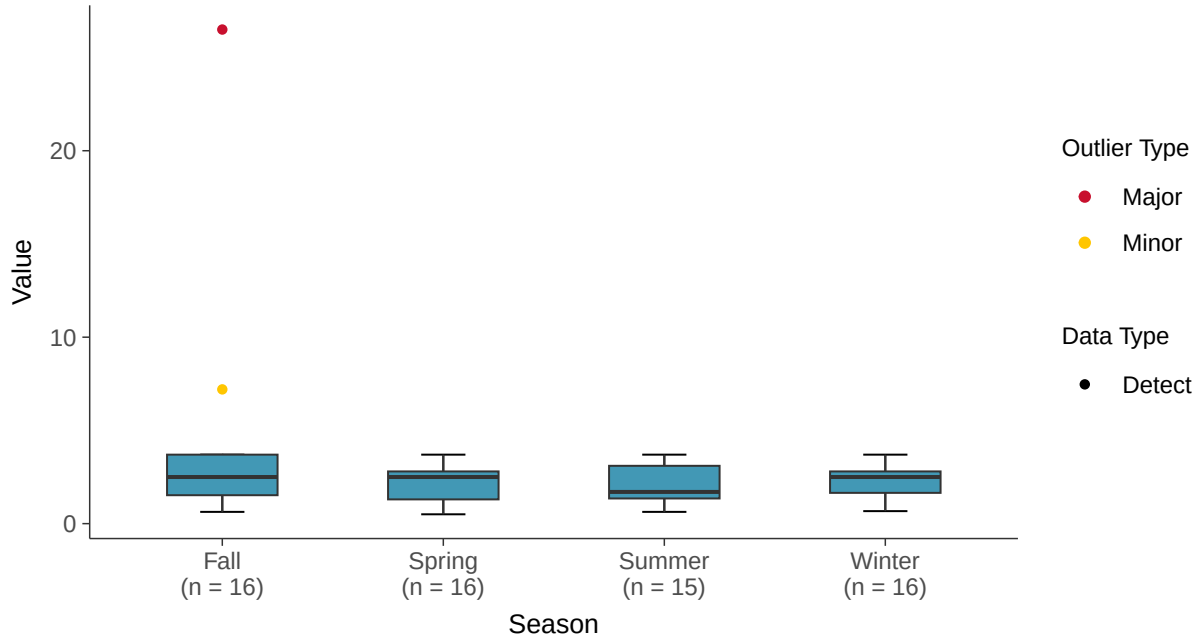
Boxplot

Chromium, BG-1 & BG-2 (ug/L)



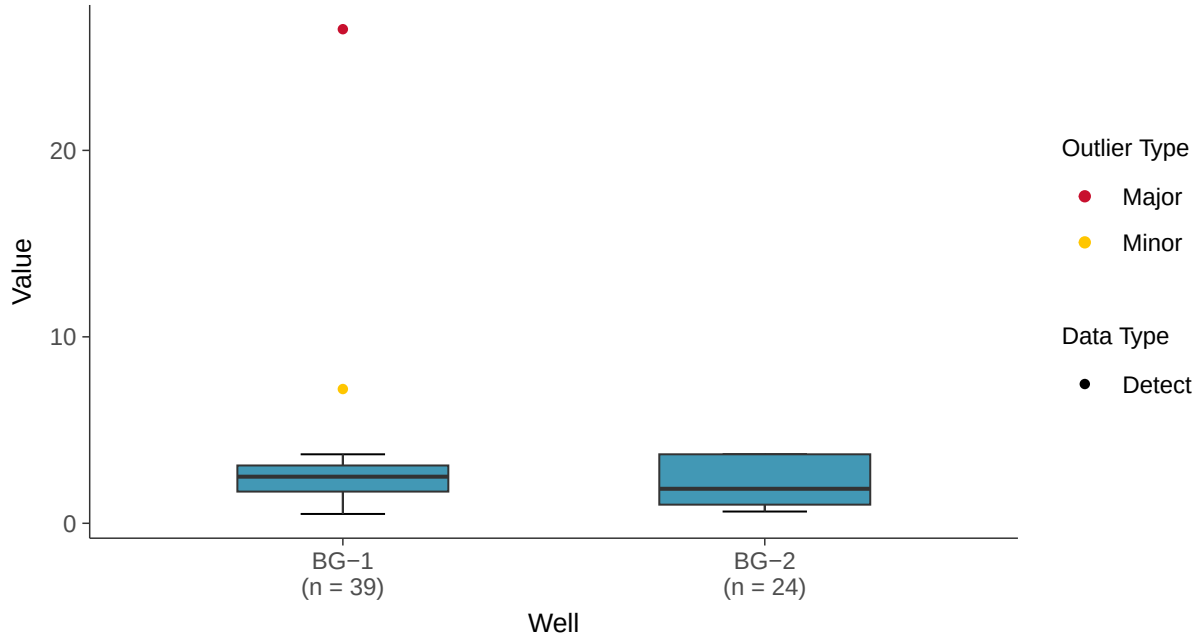
Boxplot by Season

Chromium, BG-1 & BG-2 (ug/L)



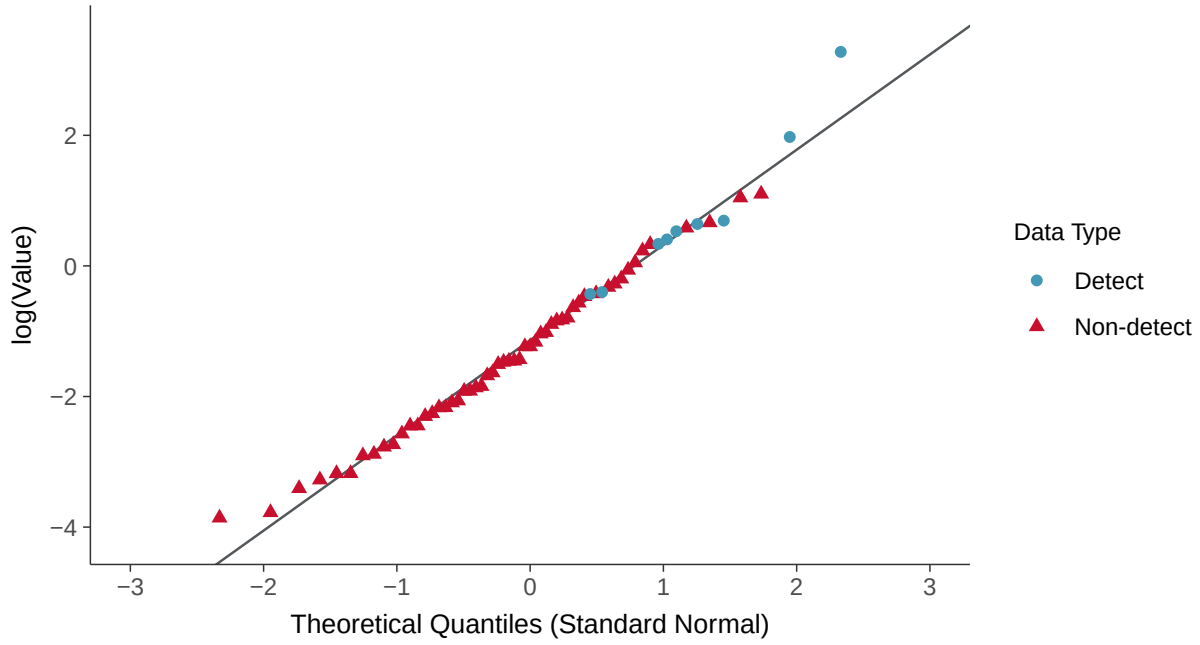
Boxplot by Well

Chromium, BG-1 & BG-2 (ug/L)



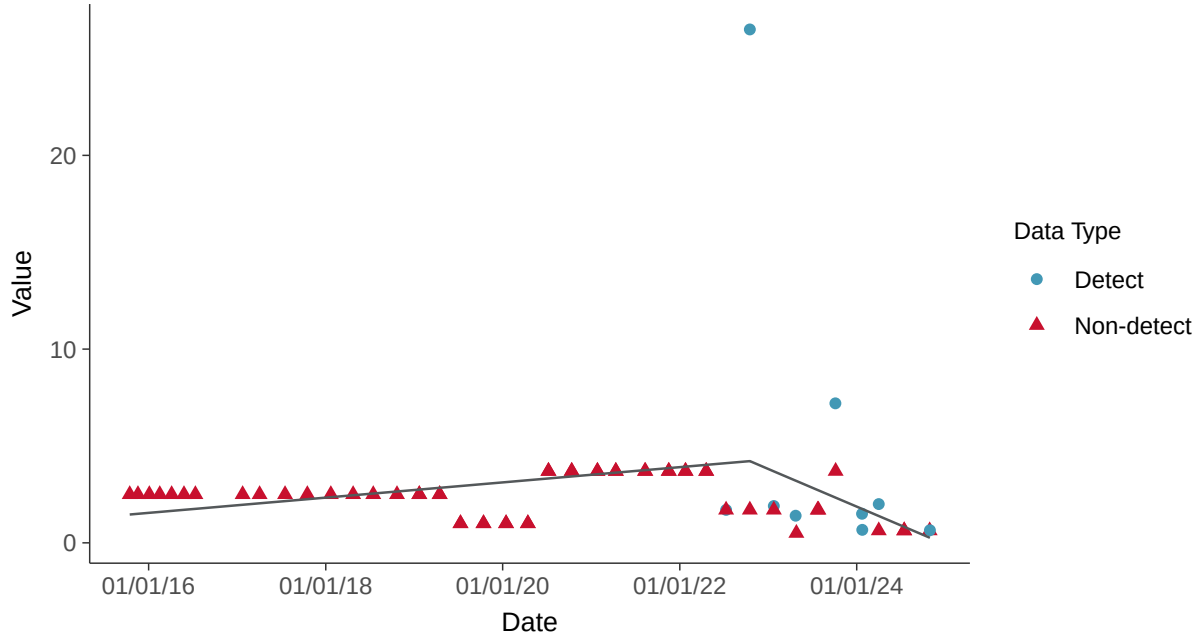
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, BG-1 & BG-2 (ug/L)



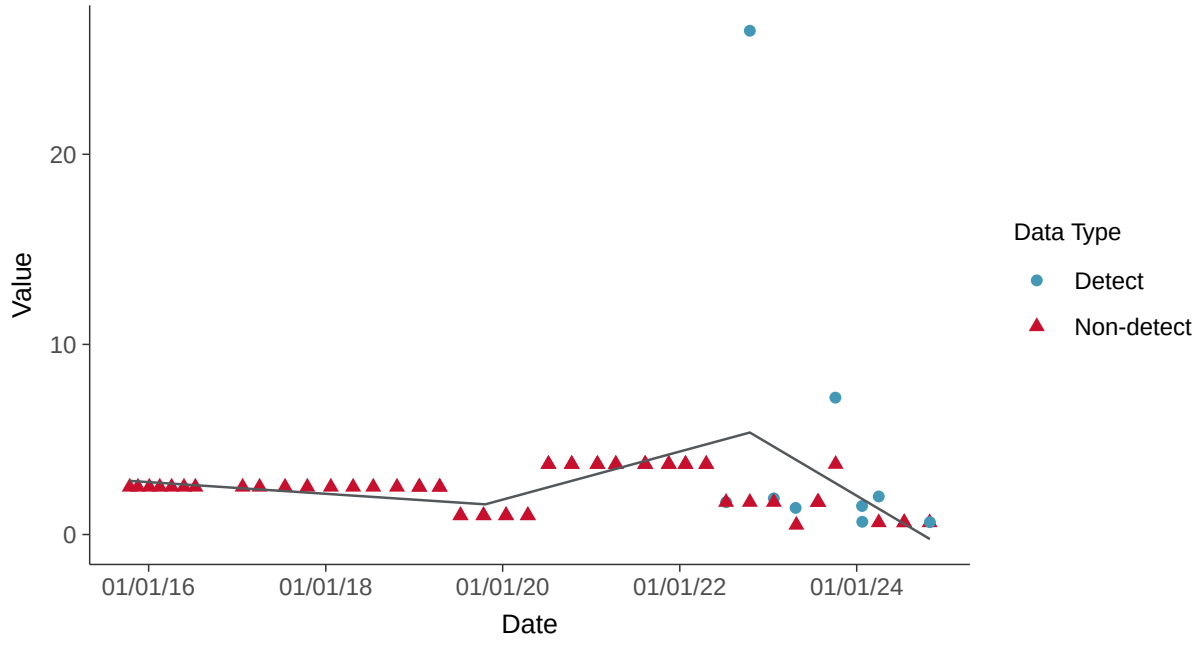
Trend Regression: Piecewise Linear-Linear

Chromium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, BG-1 & BG-2 (ug/L)

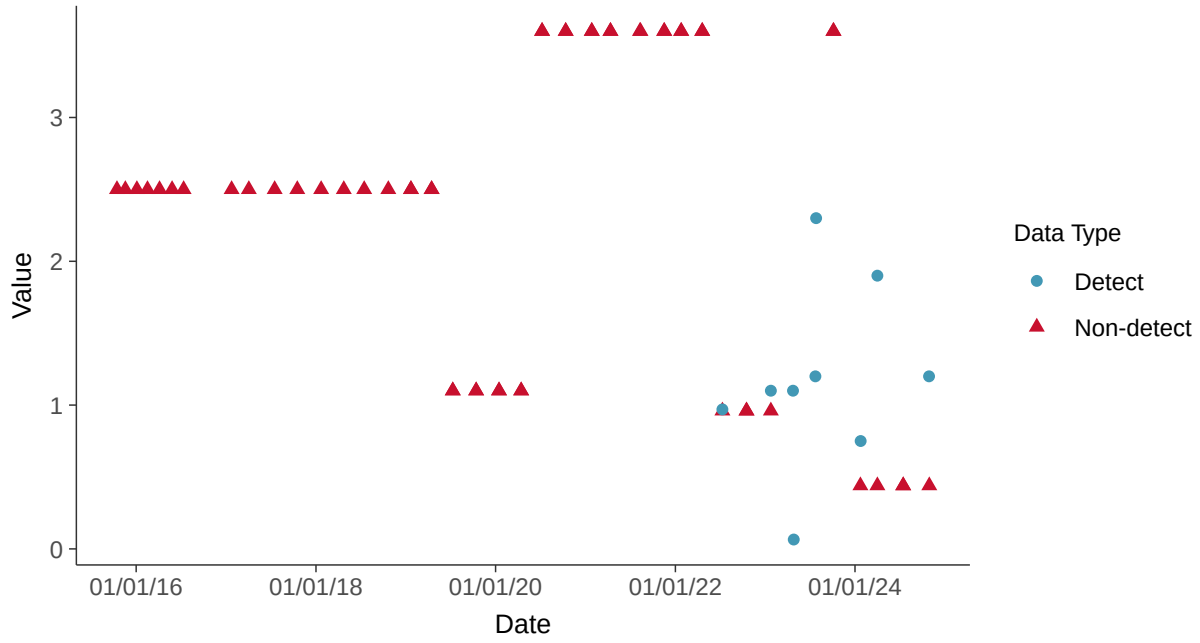


App. IV: Cobalt, BG-1 & BG-2

ID: 3_110

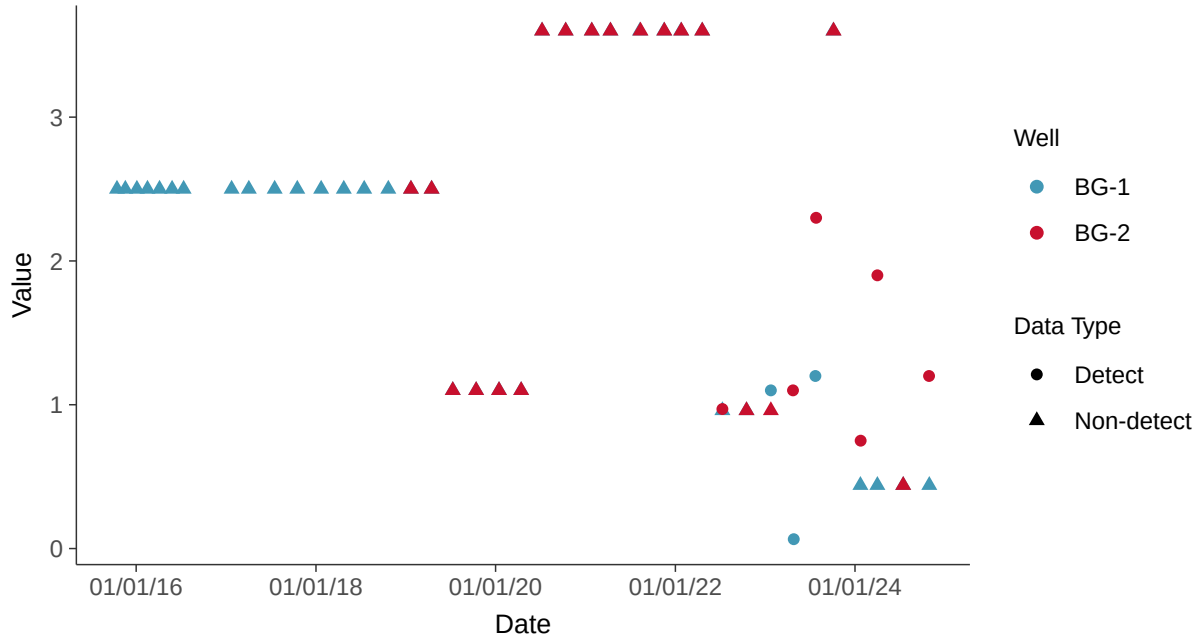
Scatter Plot

Cobalt, BG-1 & BG-2 (ug/L)



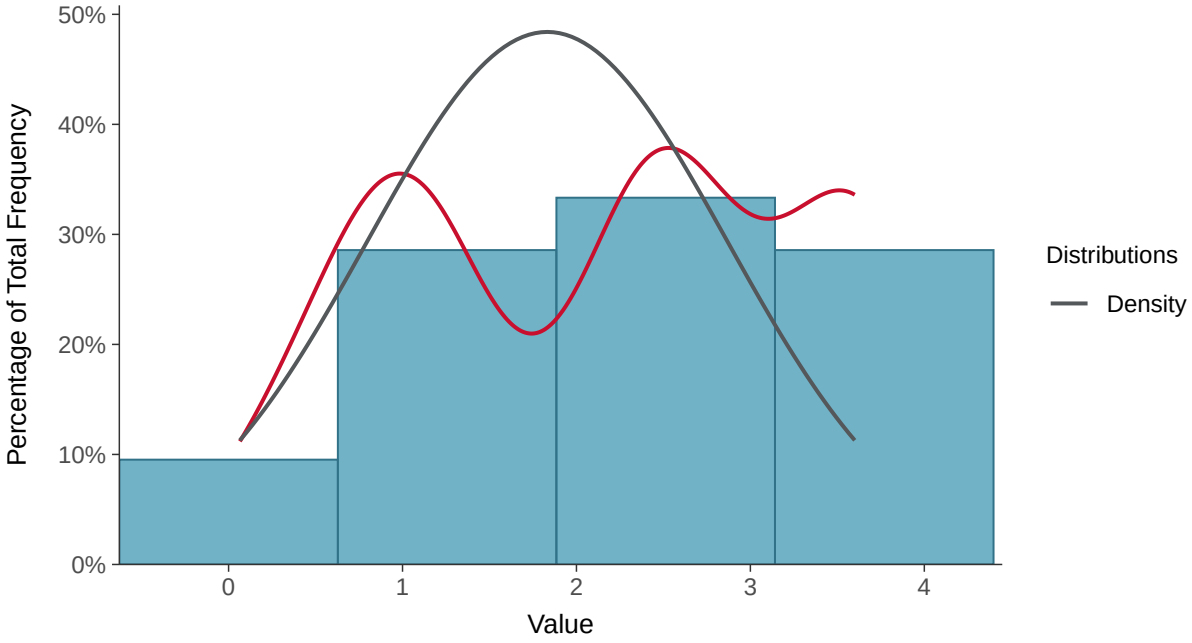
Scatter Plot by Well

Cobalt, BG-1 & BG-2 (ug/L)



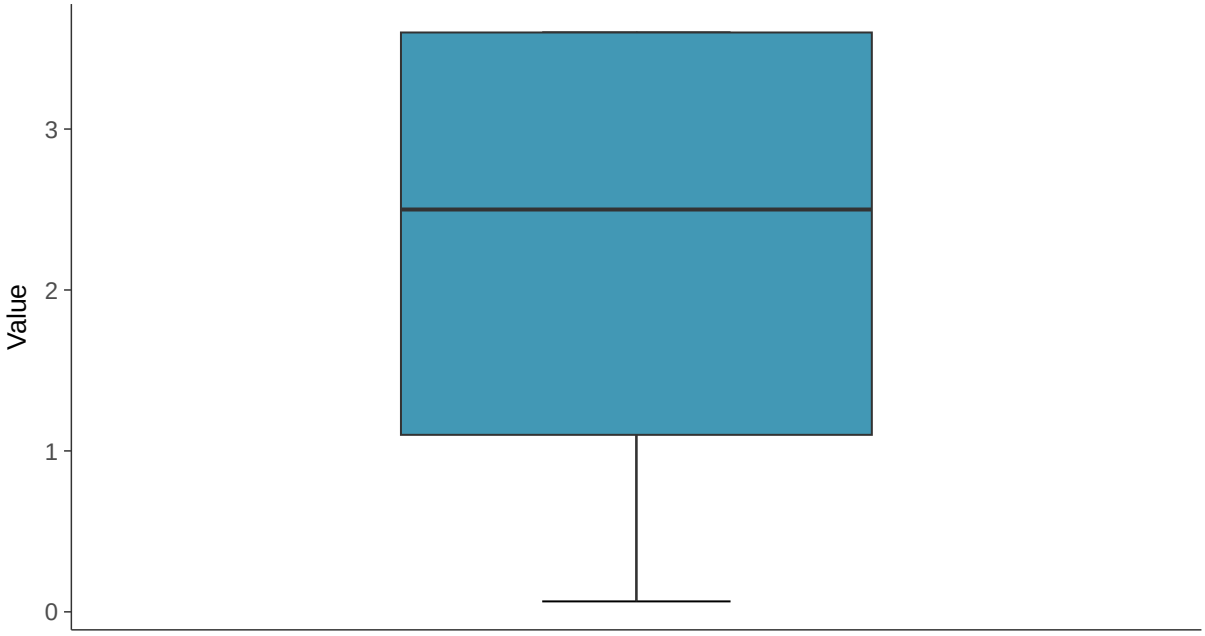
Histogram

Cobalt, BG-1 & BG-2 (ug/L)



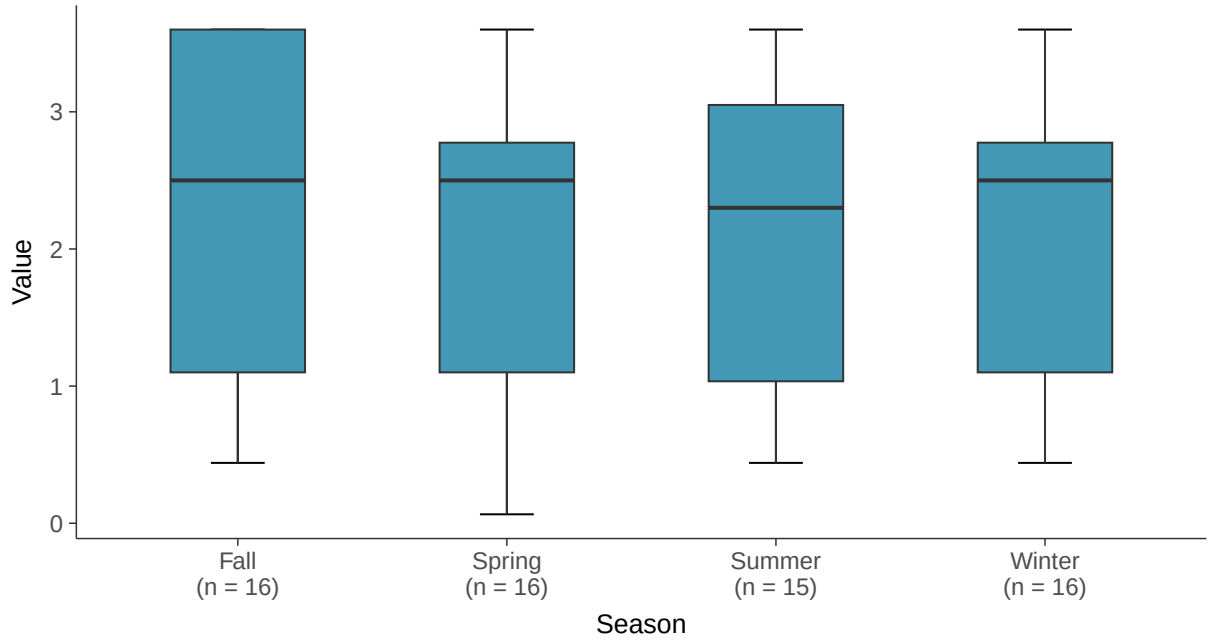
Boxplot

Cobalt, BG-1 & BG-2 (ug/L)



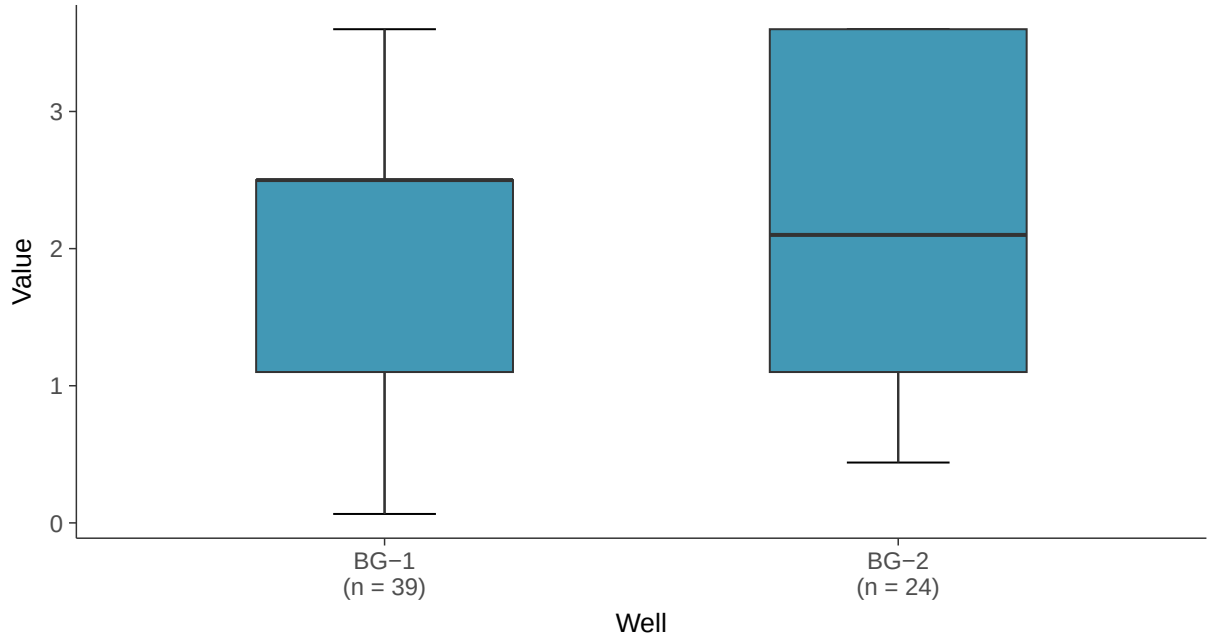
Boxplot by Season

Cobalt, BG-1 & BG-2 (ug/L)



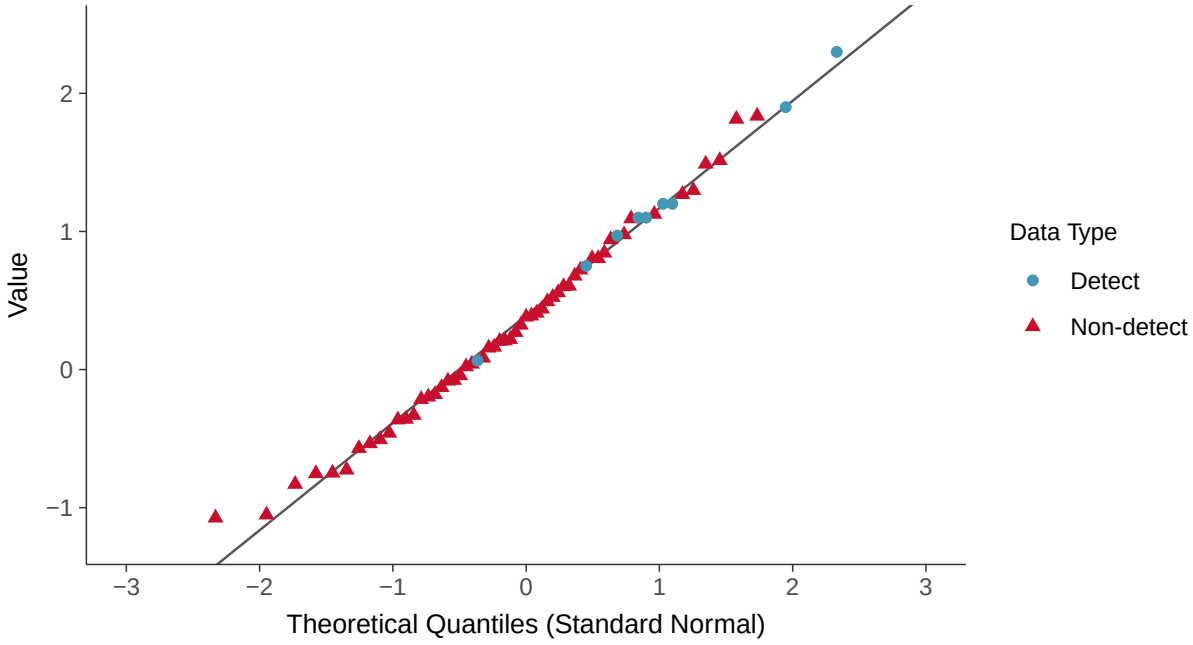
Boxplot by Well

Cobalt, BG-1 & BG-2 (ug/L)



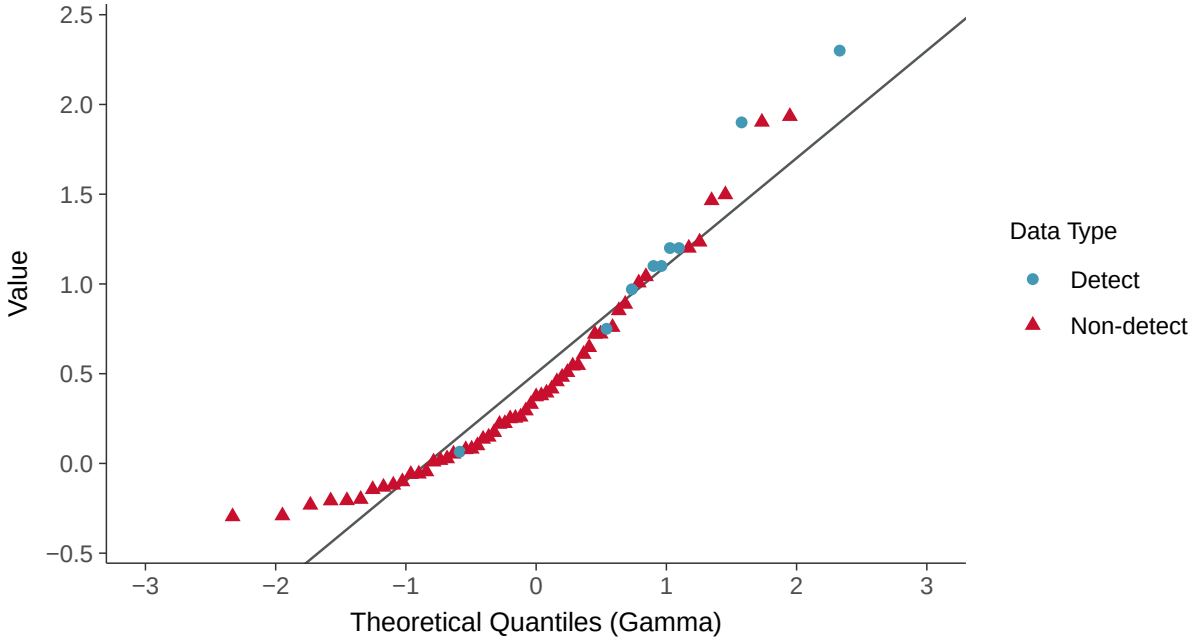
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, BG-1 & BG-2 (ug/L)



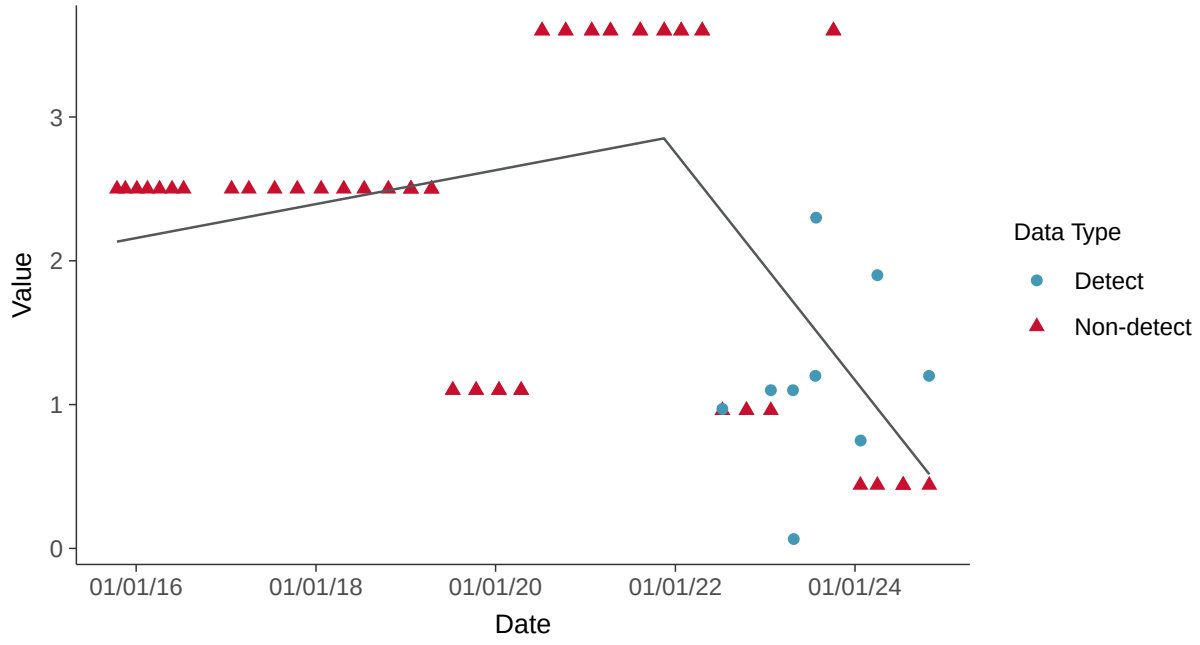
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, BG-1 & BG-2 (ug/L)

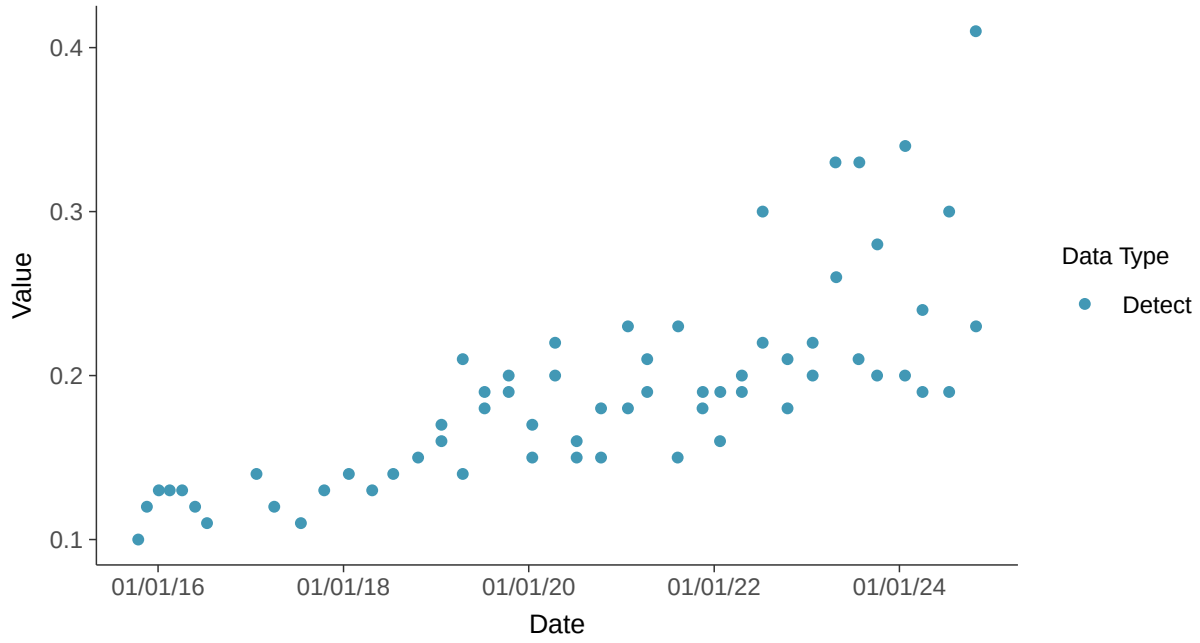


App. IV: Fluoride, BG-1 & BG-2

ID: 3_112

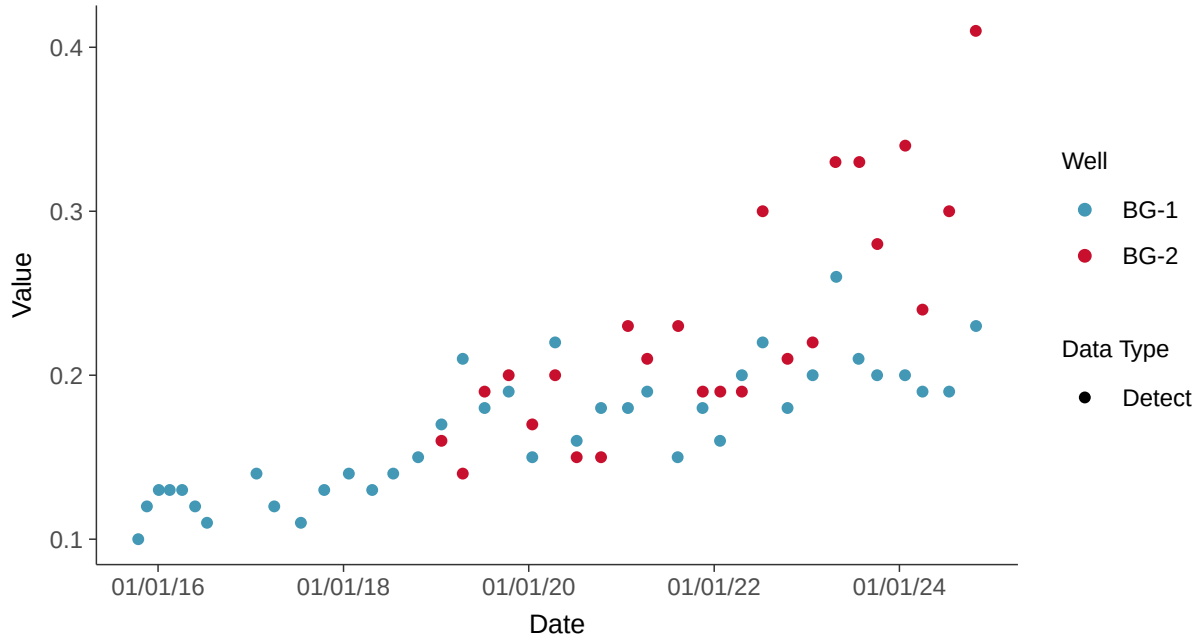
Scatter Plot

Fluoride, BG-1 & BG-2 (mg/L)



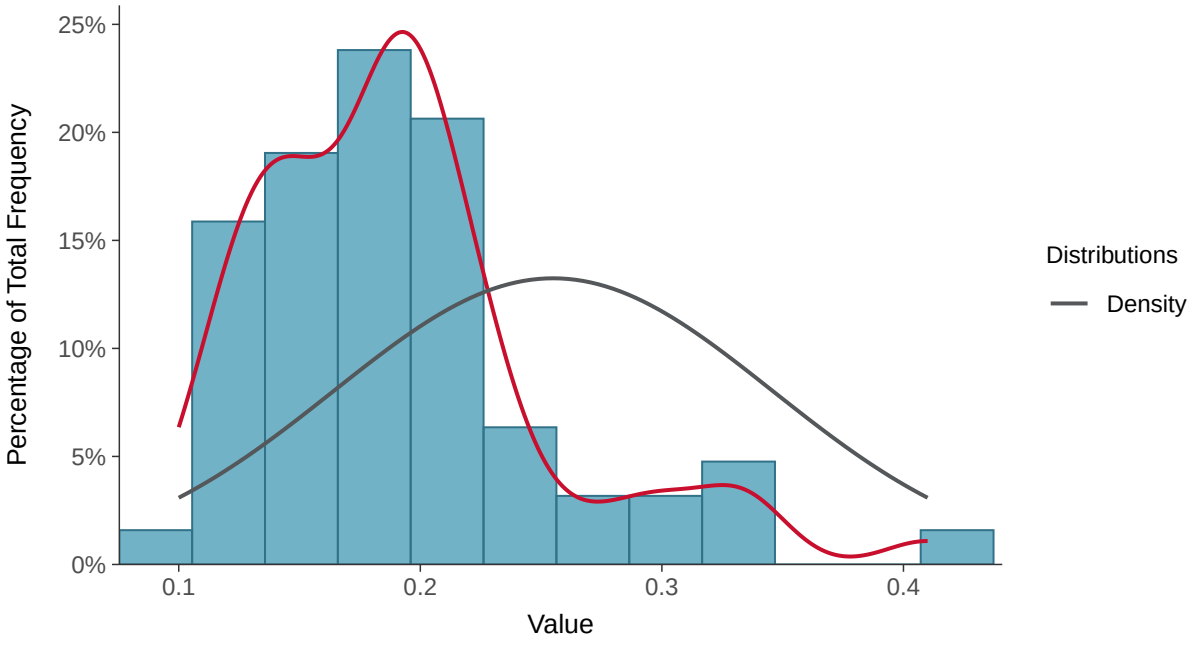
Scatter Plot by Well

Fluoride, BG-1 & BG-2 (mg/L)



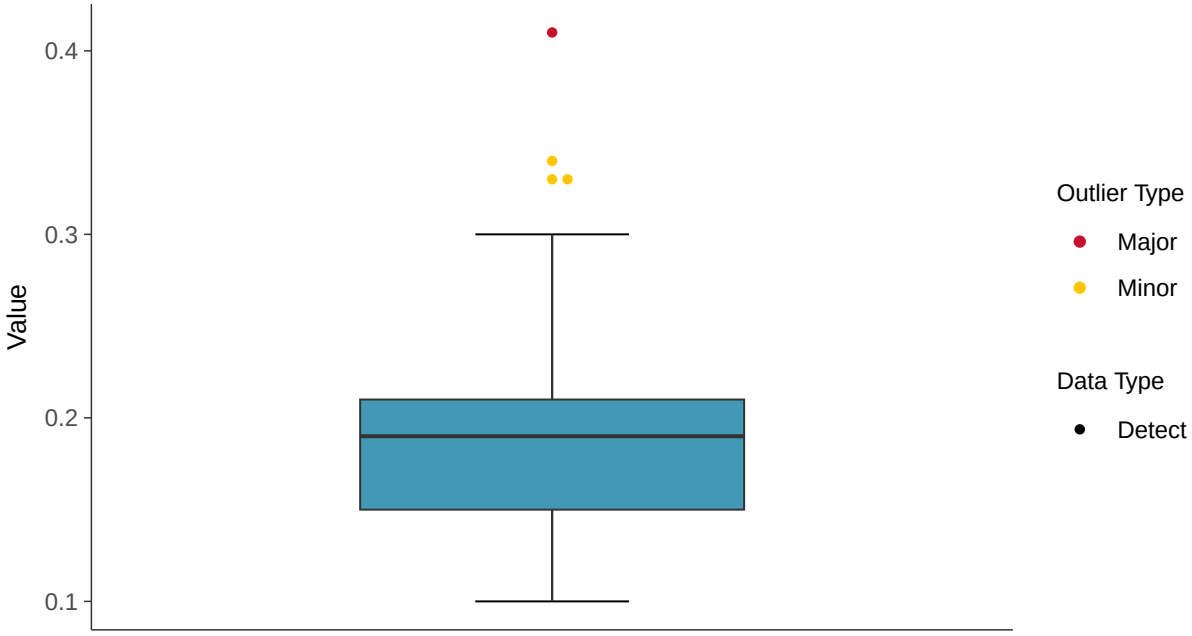
Histogram

Fluoride, BG-1 & BG-2 (mg/L)



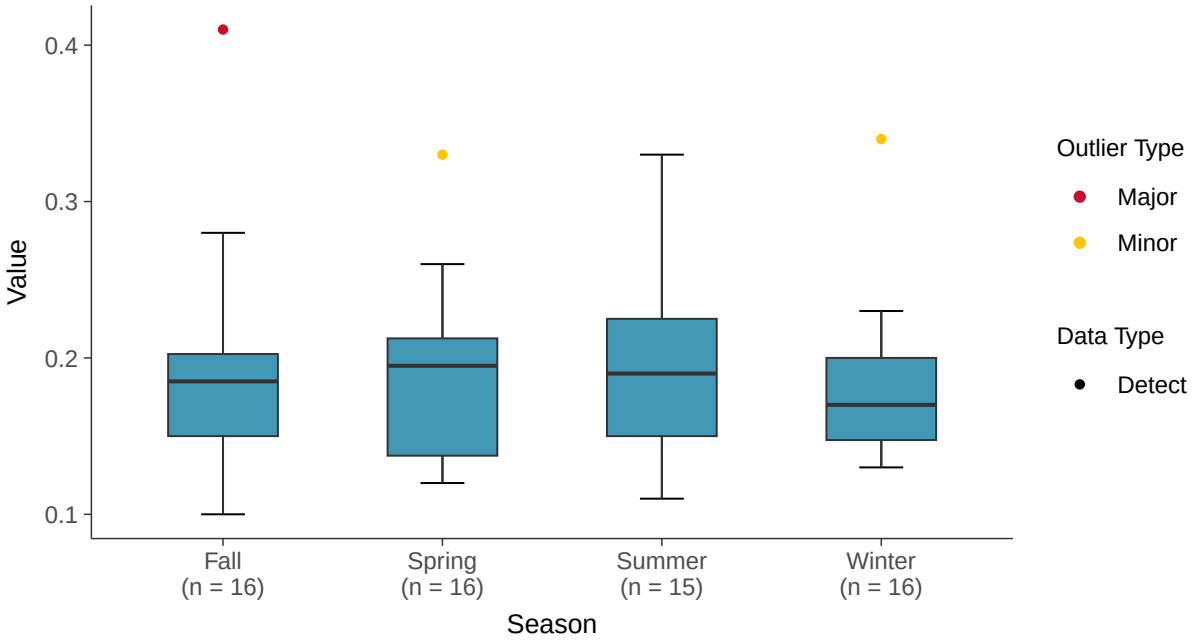
Boxplot

Fluoride, BG-1 & BG-2 (mg/L)



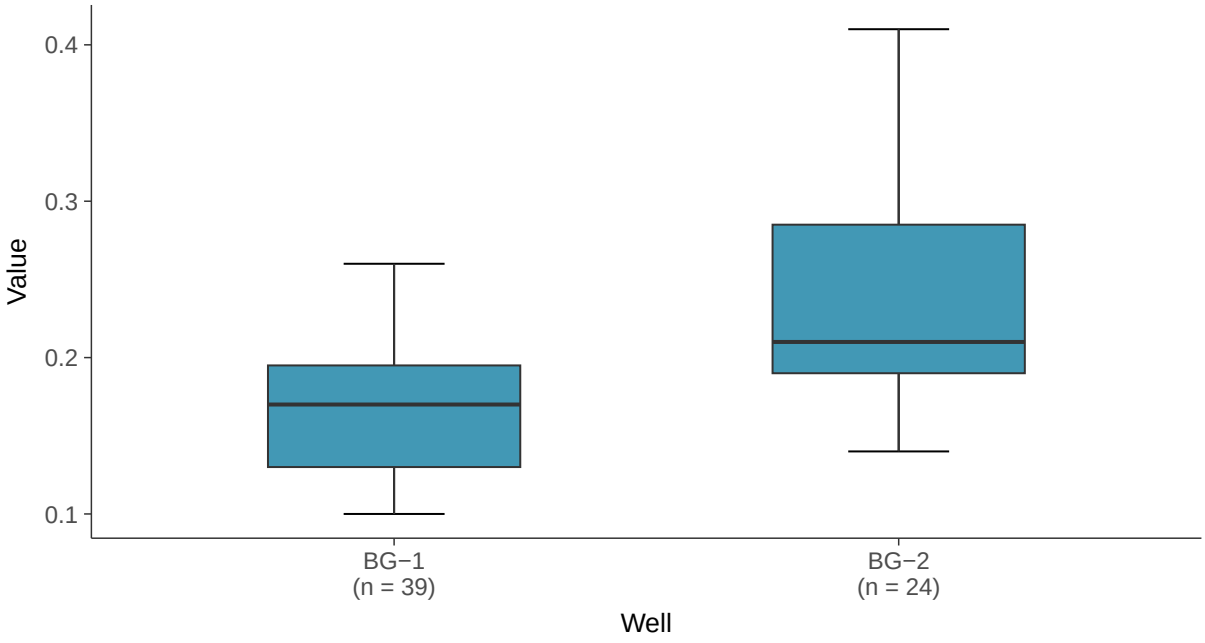
Boxplot by Season

Fluoride, BG-1 & BG-2 (mg/L)



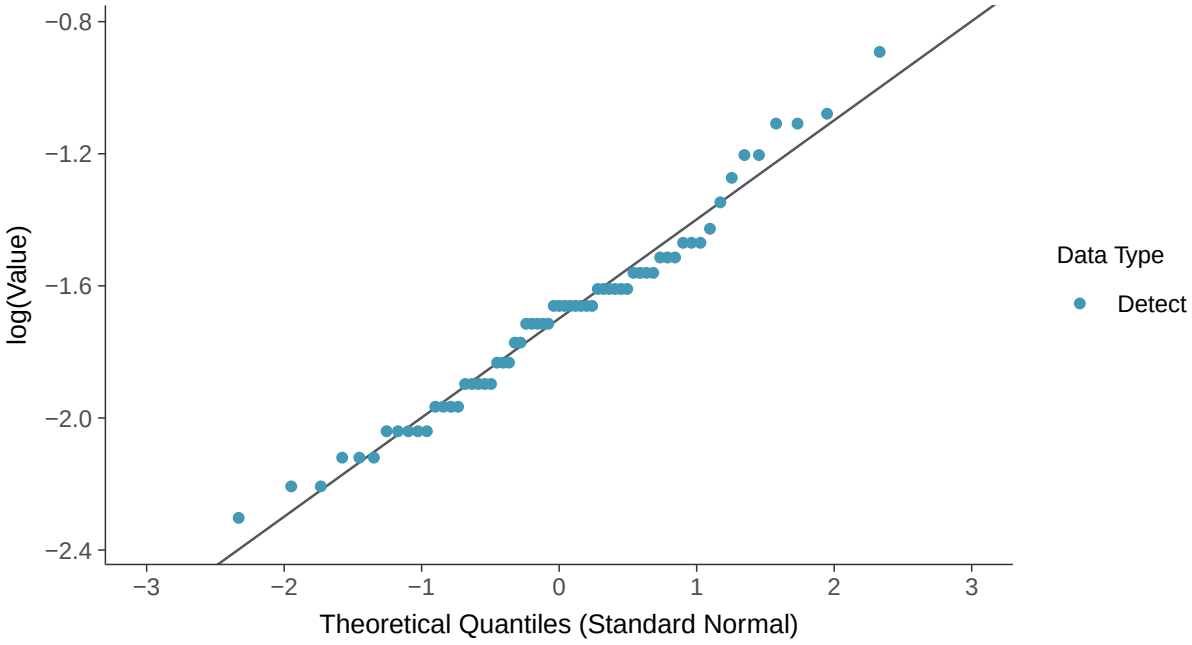
Boxplot by Well

Fluoride, BG-1 & BG-2 (mg/L)



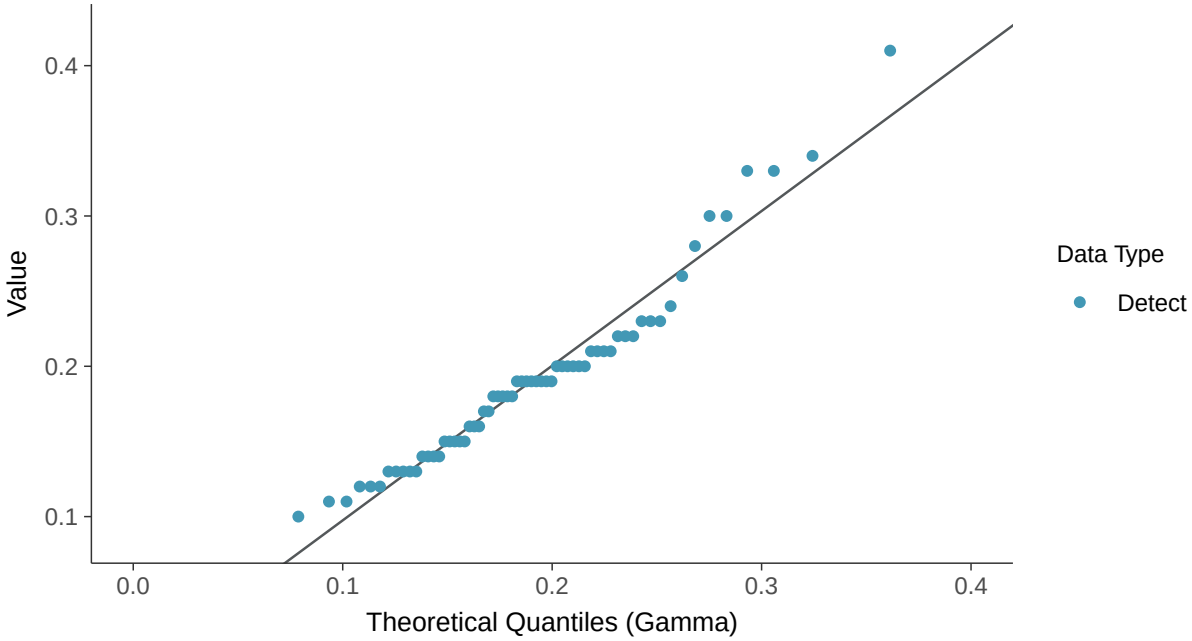
Lognormal Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



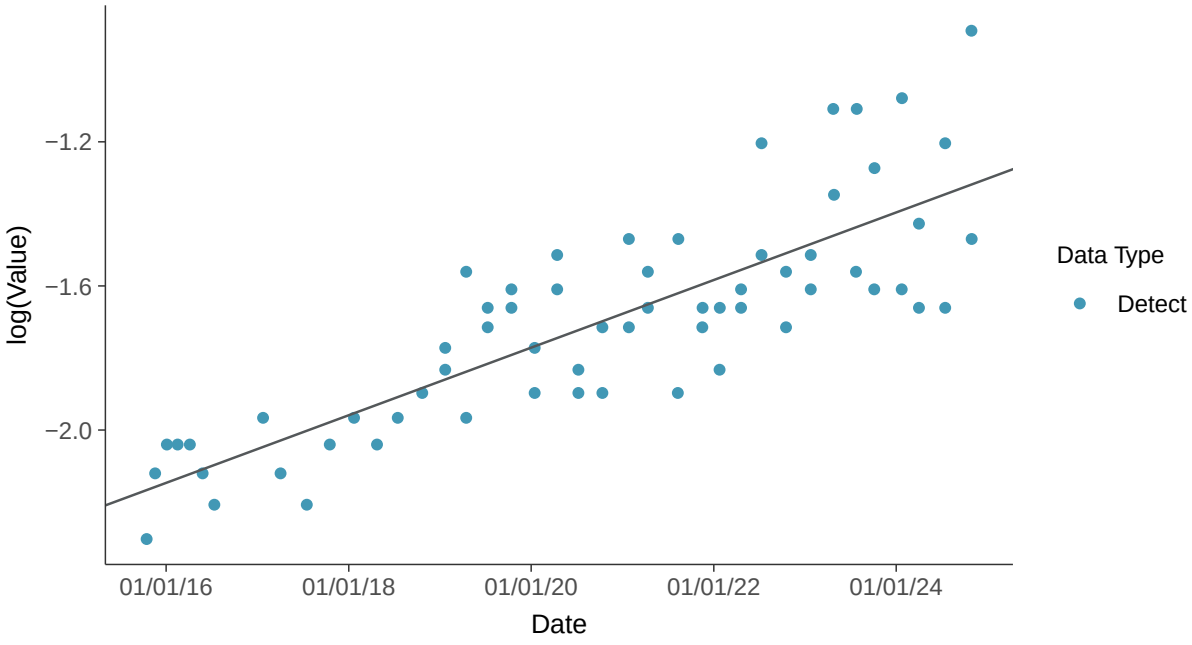
Gamma Q-Q plot

Fluoride, BG-1 & BG-2 (mg/L)



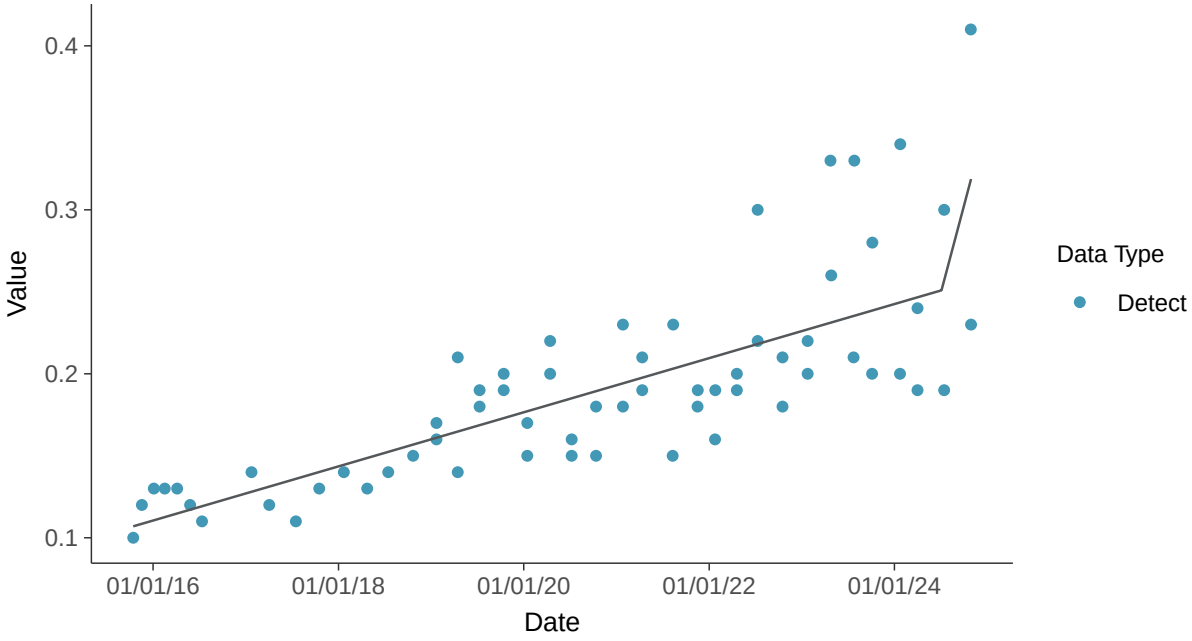
Trend Regression: Lognormal MLE

Fluoride, BG-1 & BG-2 (mg/L)



Trend Regression: Piecewise Linear-Linear

Fluoride, BG-1 & BG-2 (mg/L)

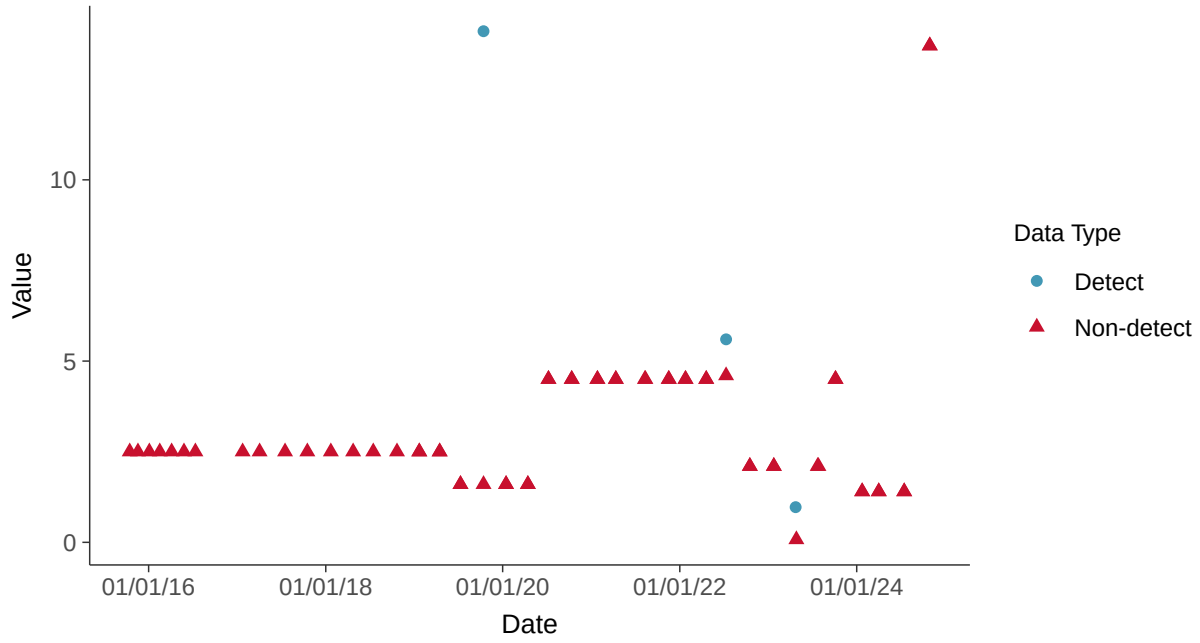


App. IV: Lead, BG-1 & BG-2

ID: 3_113

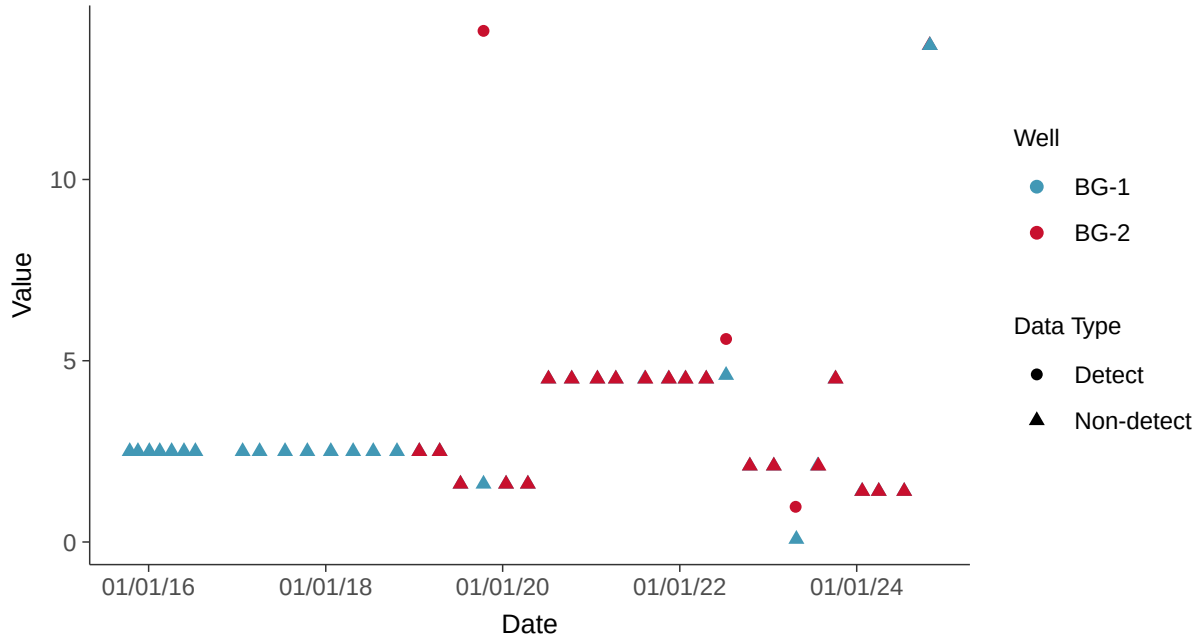
Scatter Plot

Lead, BG-1 & BG-2 (ug/L)



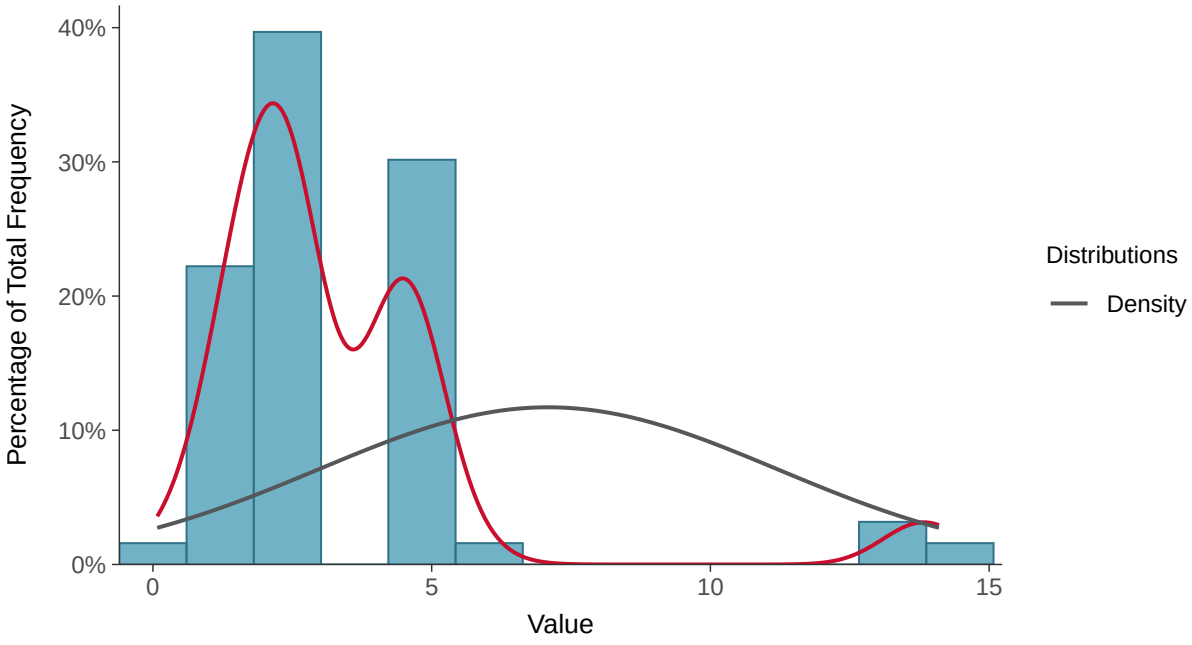
Scatter Plot by Well

Lead, BG-1 & BG-2 (ug/L)



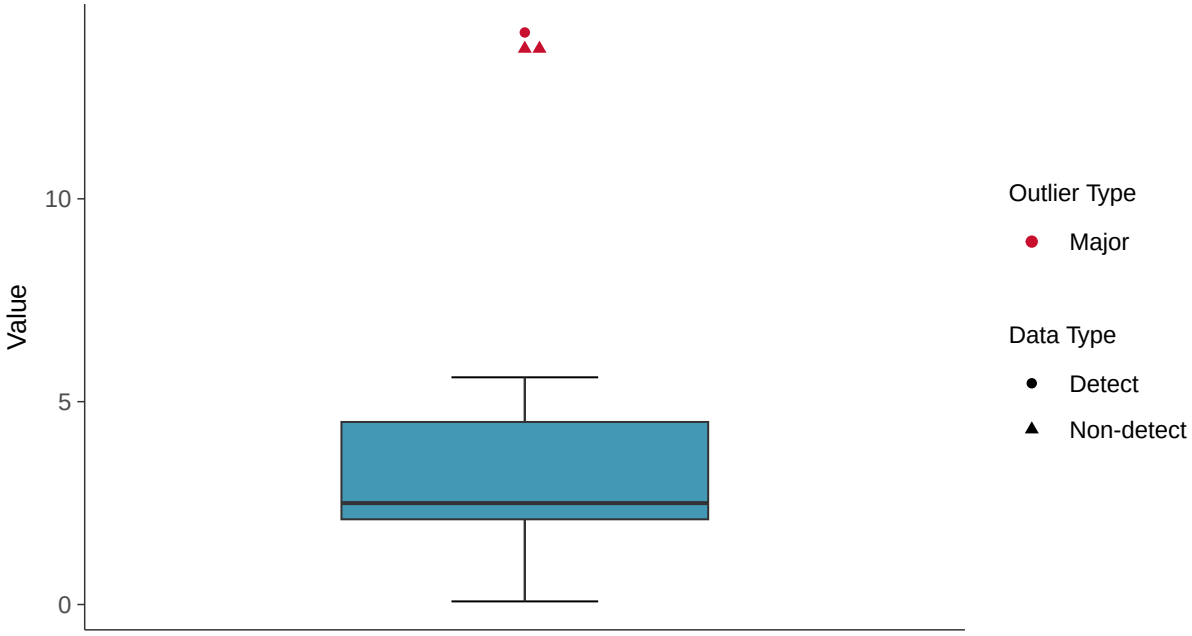
Histogram

Lead, BG-1 & BG-2 (ug/L)



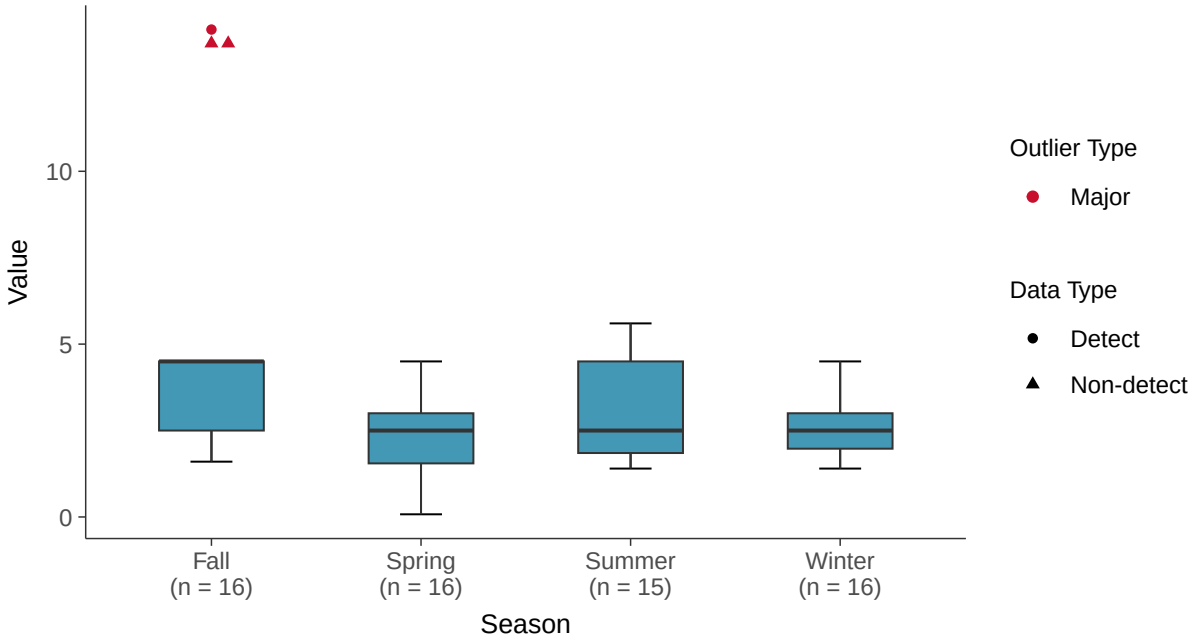
Boxplot

Lead, BG-1 & BG-2 (ug/L)



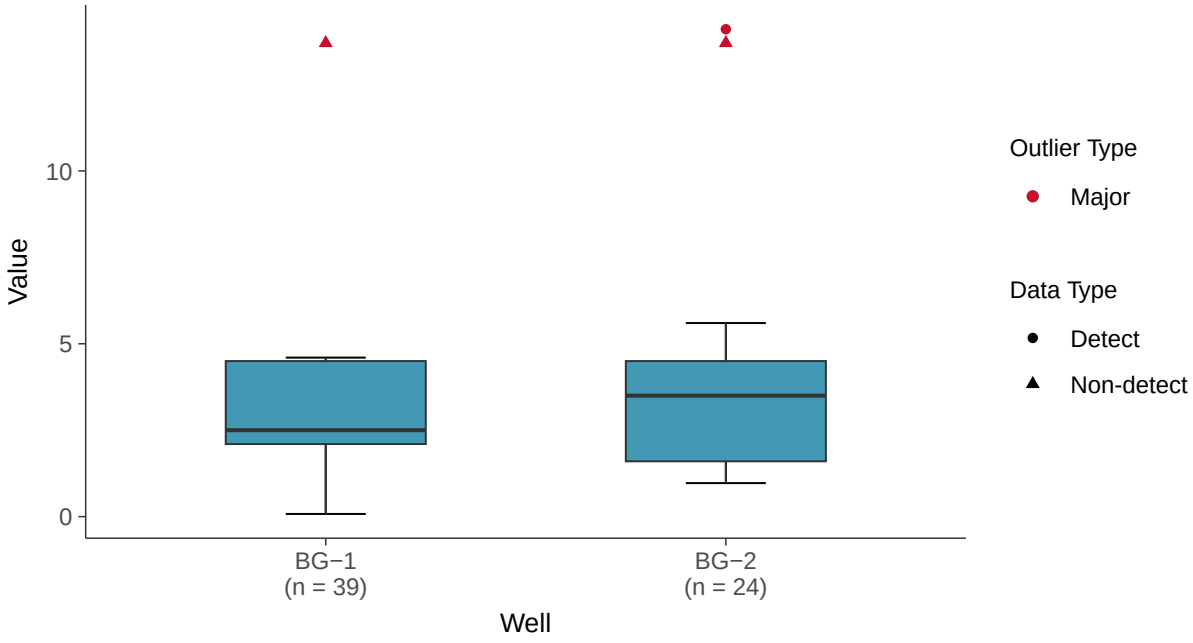
Boxplot by Season

Lead, BG-1 & BG-2 (ug/L)



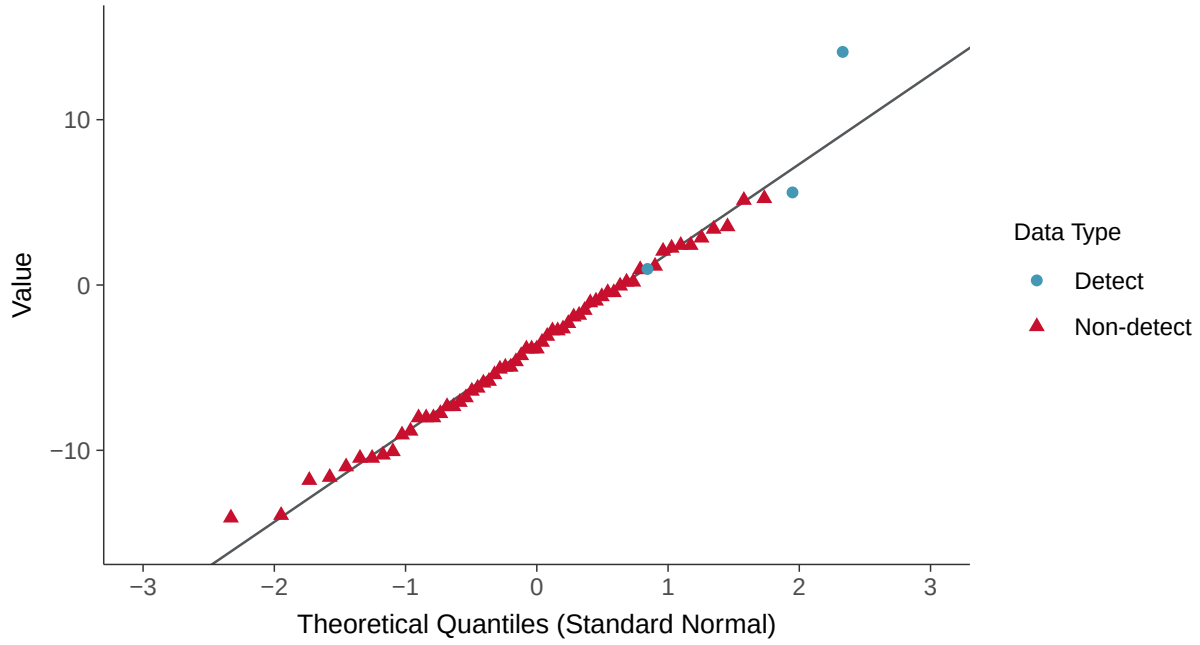
Boxplot by Well

Lead, BG-1 & BG-2 (ug/L)



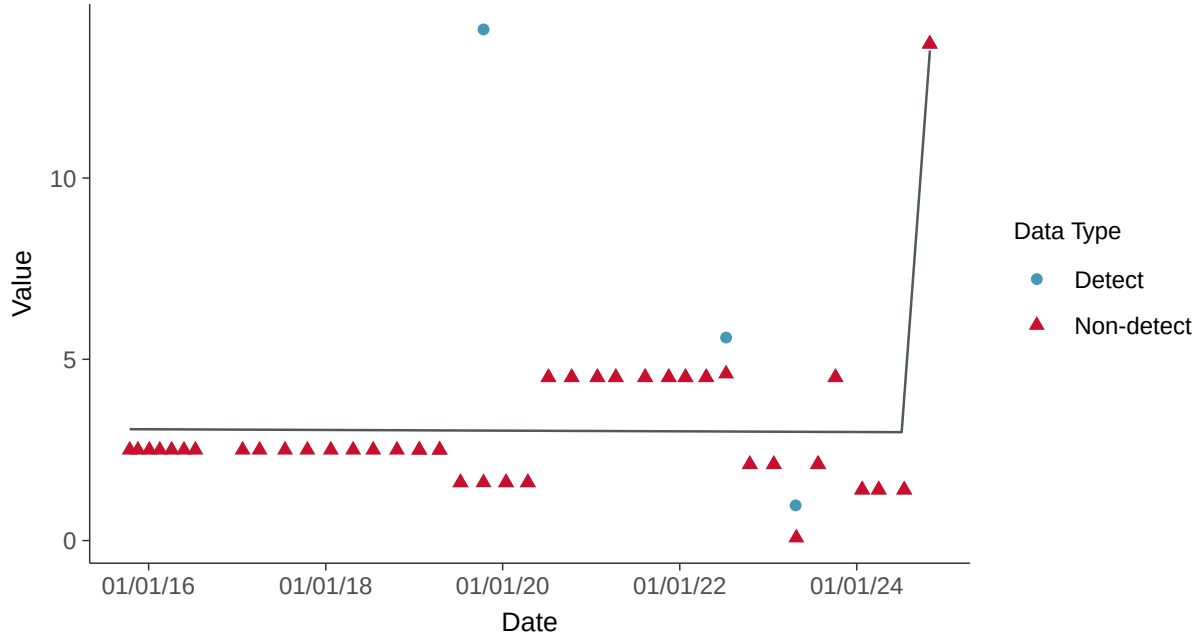
Normal Q-Q plot using ROS Imputed Estimates

Lead, BG-1 & BG-2 (ug/L)



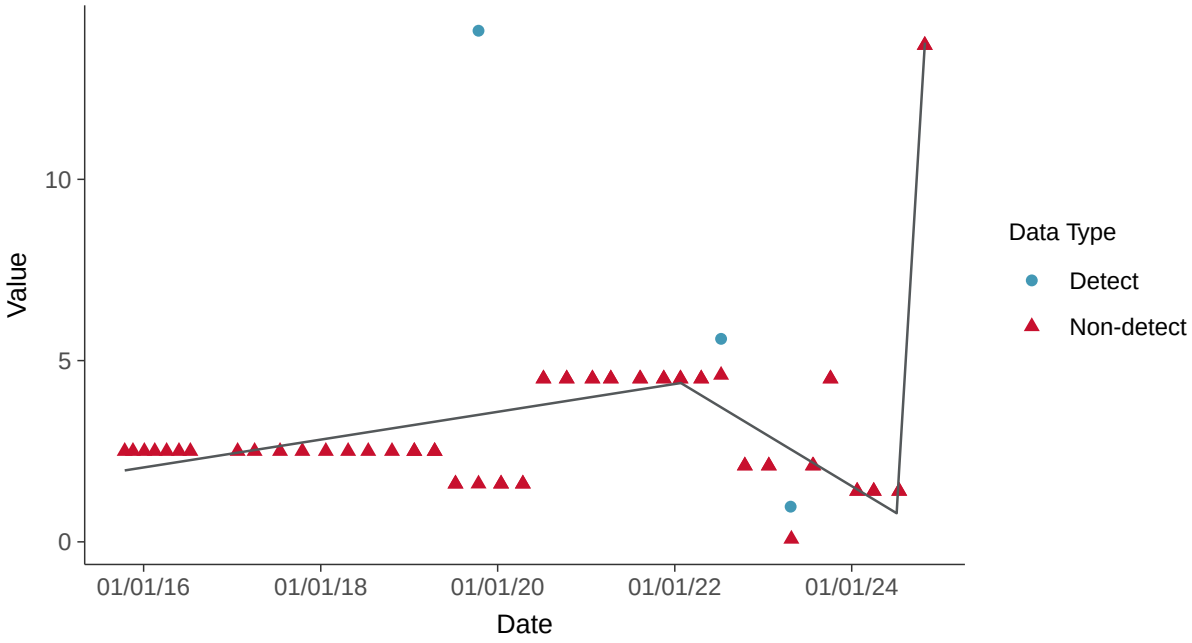
Trend Regression: Piecewise Linear-Linear

Lead, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, BG-1 & BG-2 (ug/L)

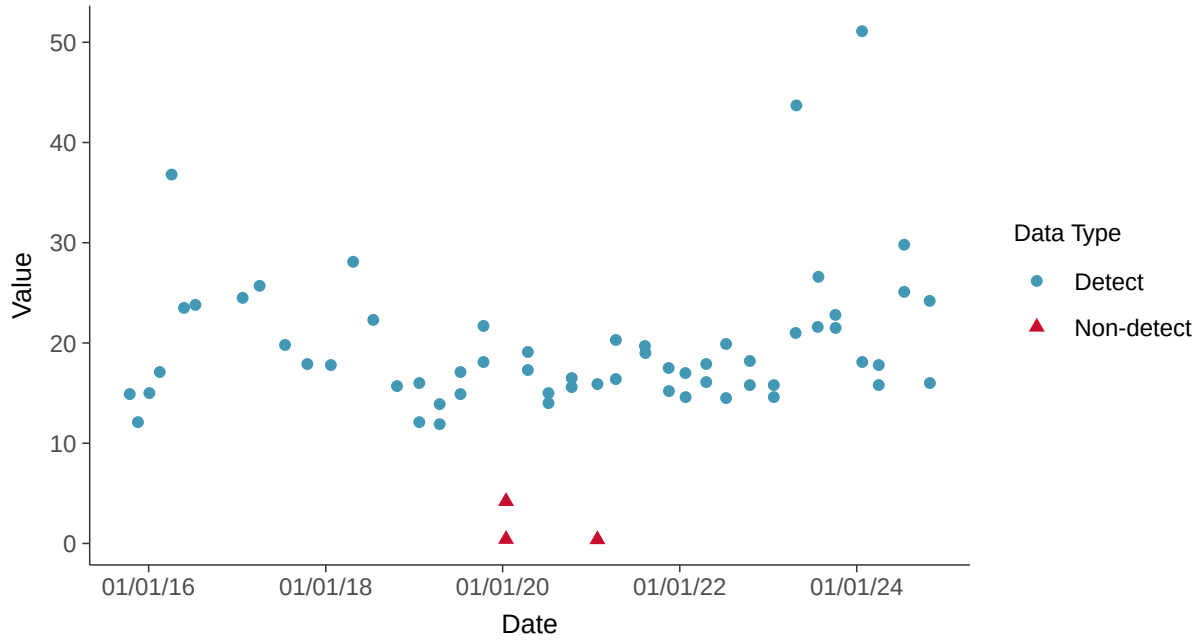


App. IV: Lithium, BG-1 & BG-2

ID: 3_114

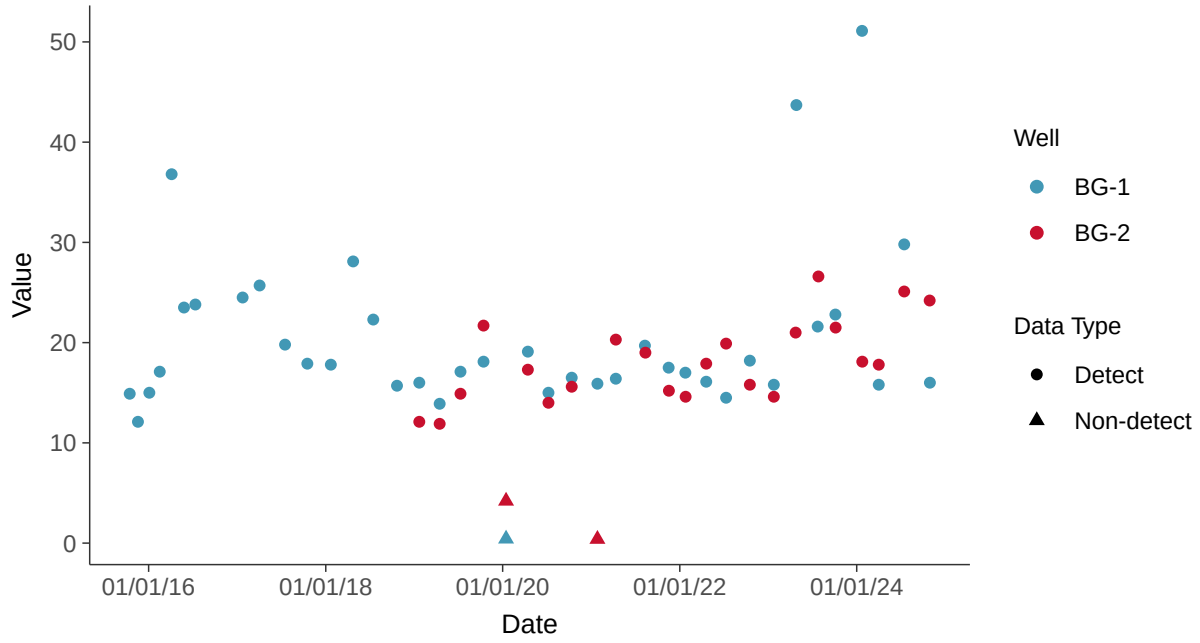
Scatter Plot

Lithium, BG-1 & BG-2 (ug/L)



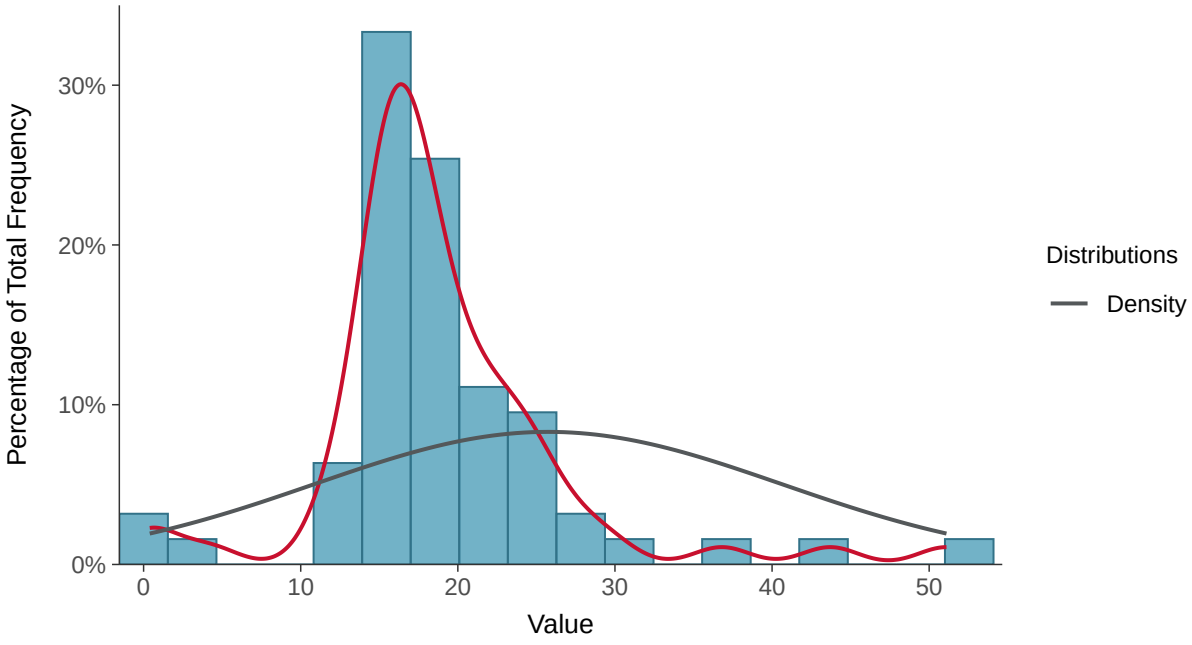
Scatter Plot by Well

Lithium, BG-1 & BG-2 (ug/L)



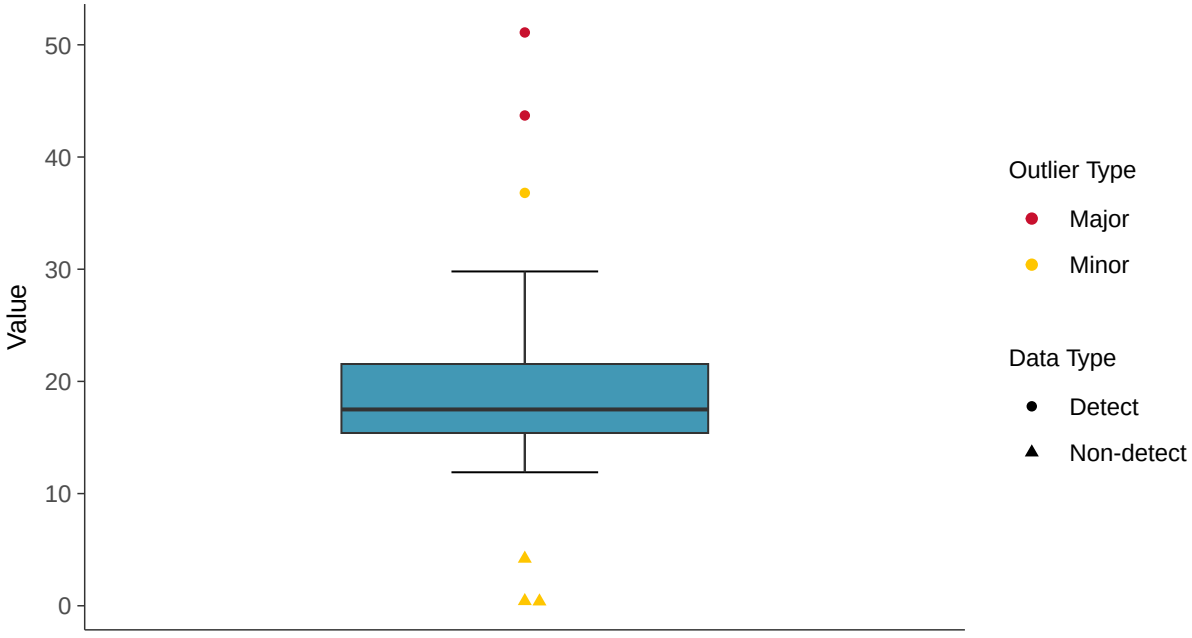
Histogram

Lithium, BG-1 & BG-2 (ug/L)



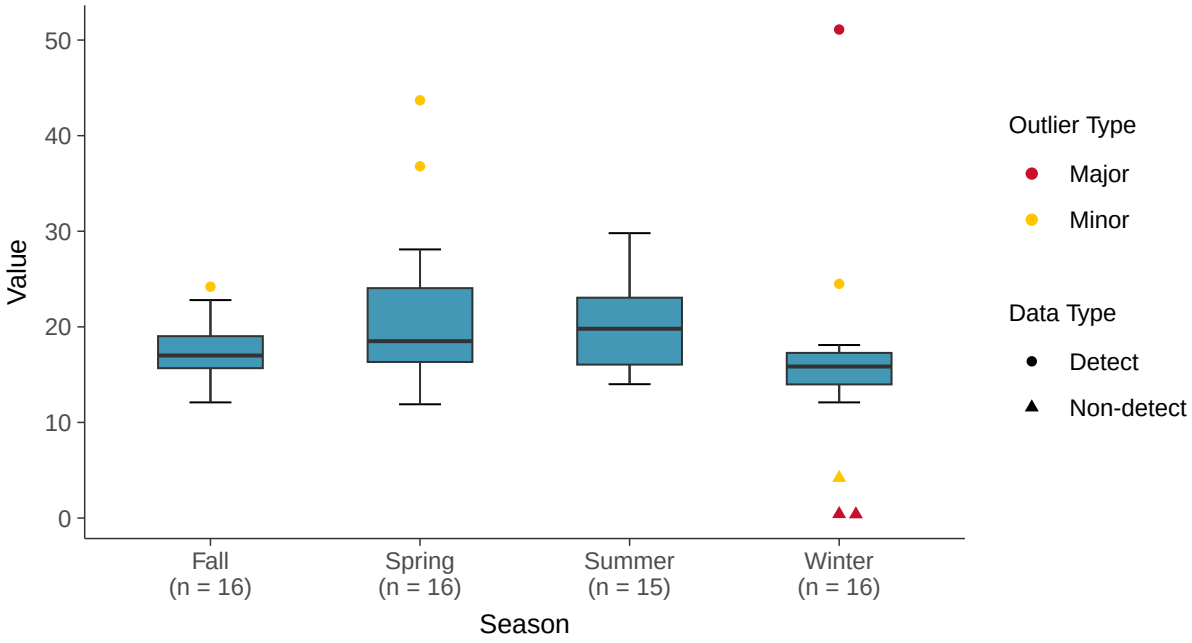
Boxplot

Lithium, BG-1 & BG-2 (ug/L)



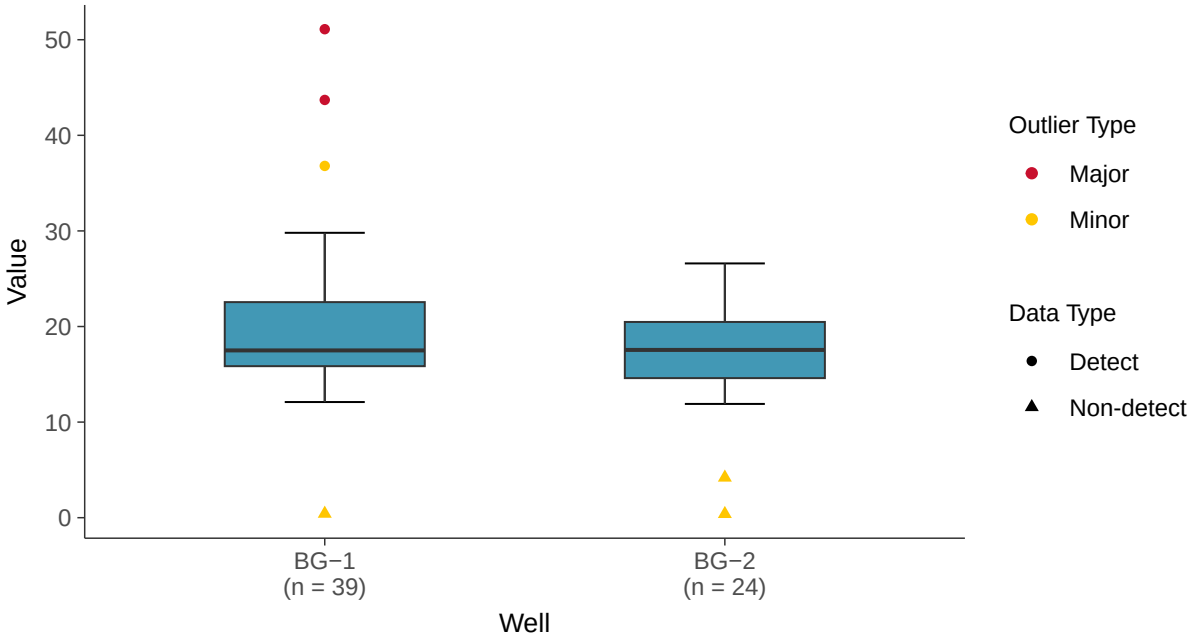
Boxplot by Season

Lithium, BG-1 & BG-2 (ug/L)



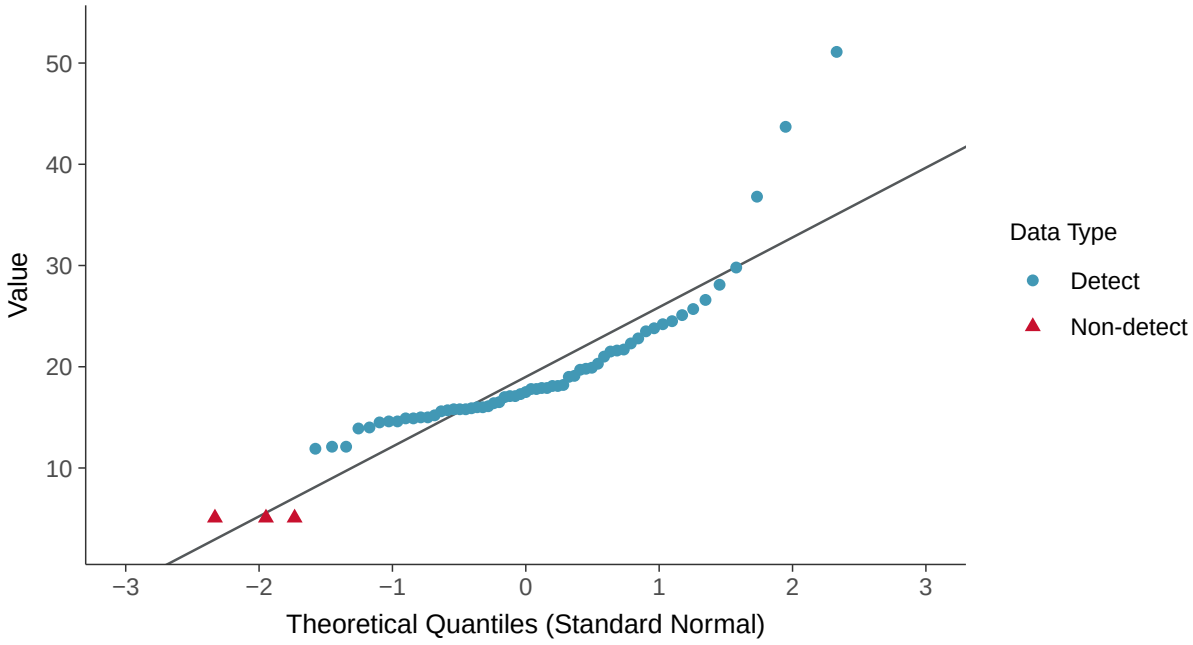
Boxplot by Well

Lithium, BG-1 & BG-2 (ug/L)



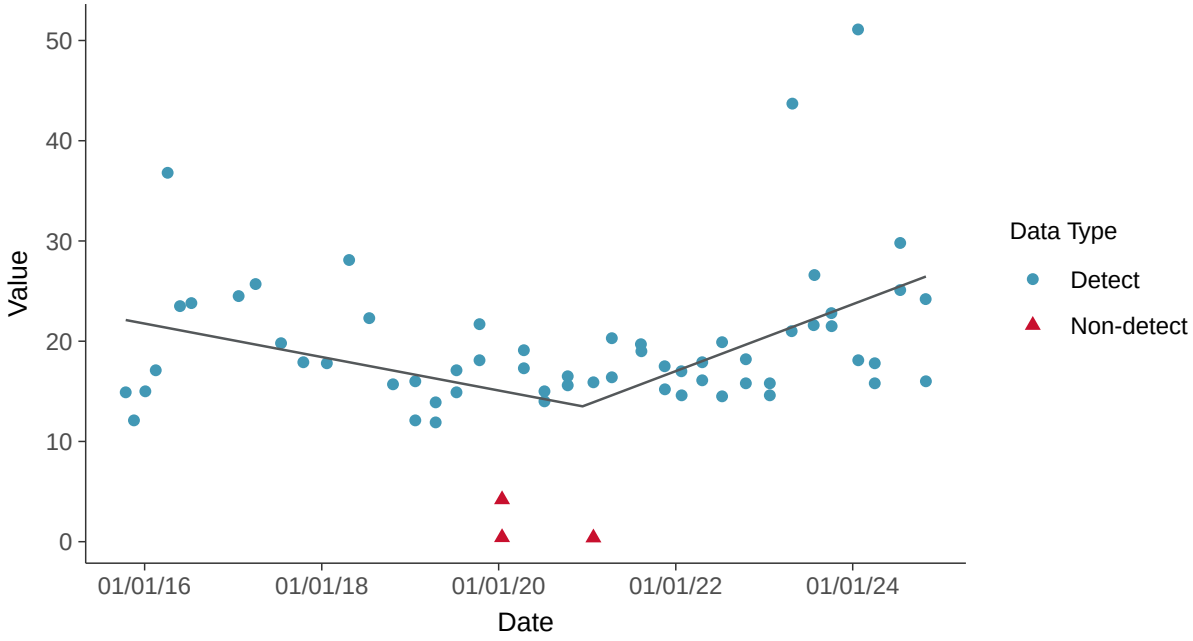
Normal Q-Q plot using ROS Imputed Estimates

Lithium, BG-1 & BG-2 (ug/L)



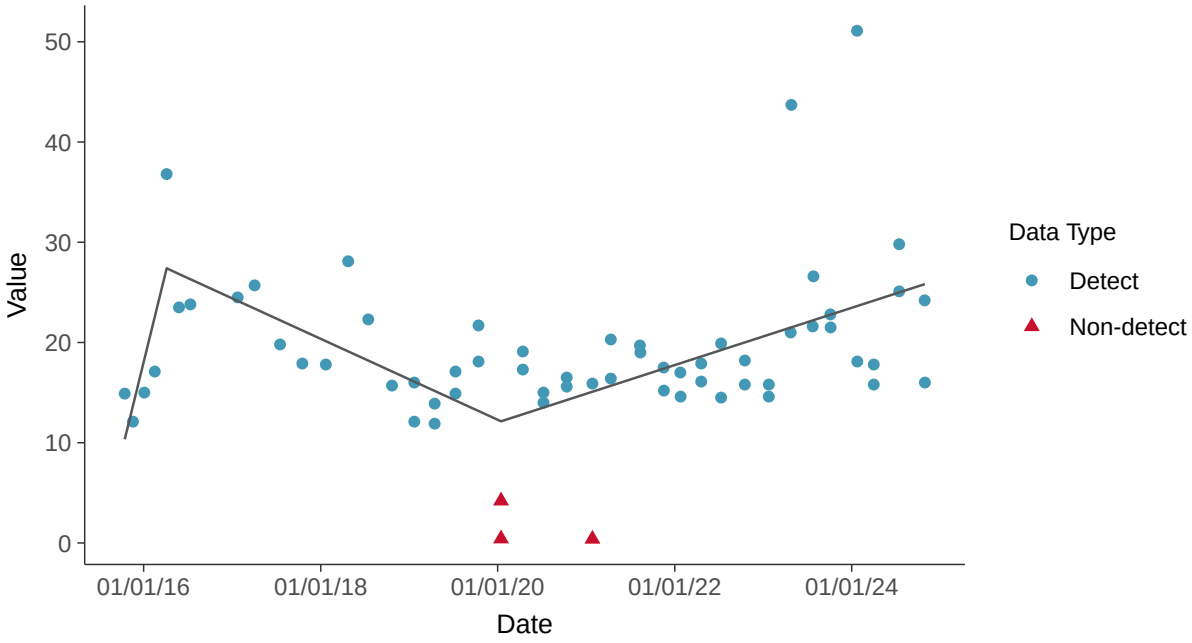
Trend Regression: Piecewise Linear-Linear

Lithium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lithium, BG-1 & BG-2 (ug/L)

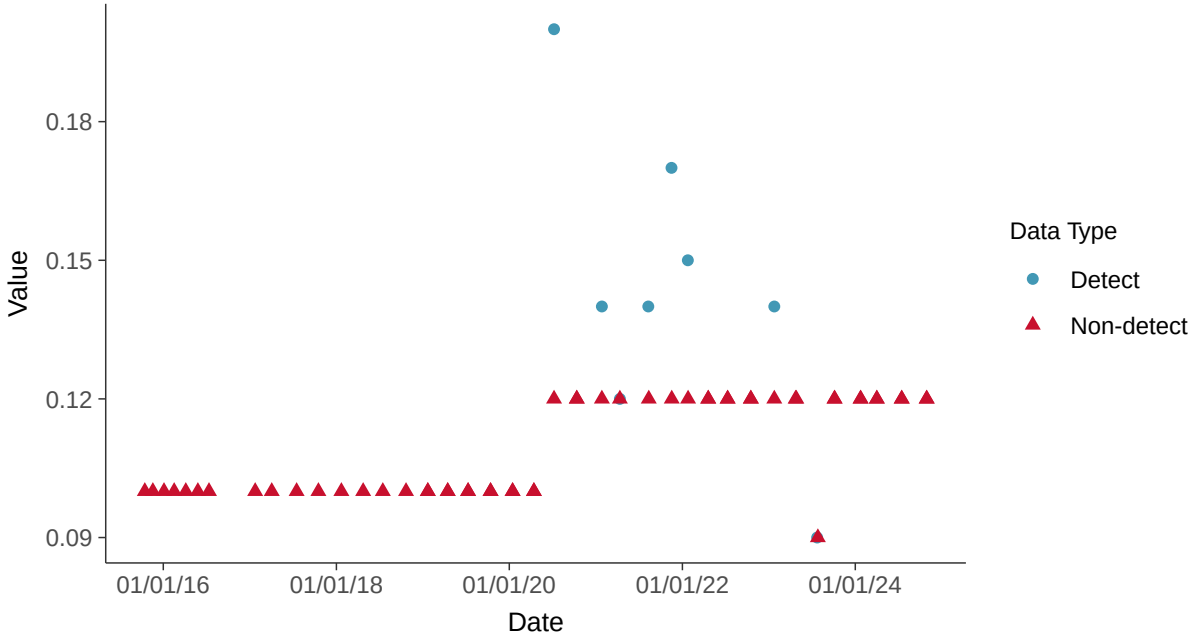


App. IV: Mercury, BG-1 & BG-2

ID: 3_115

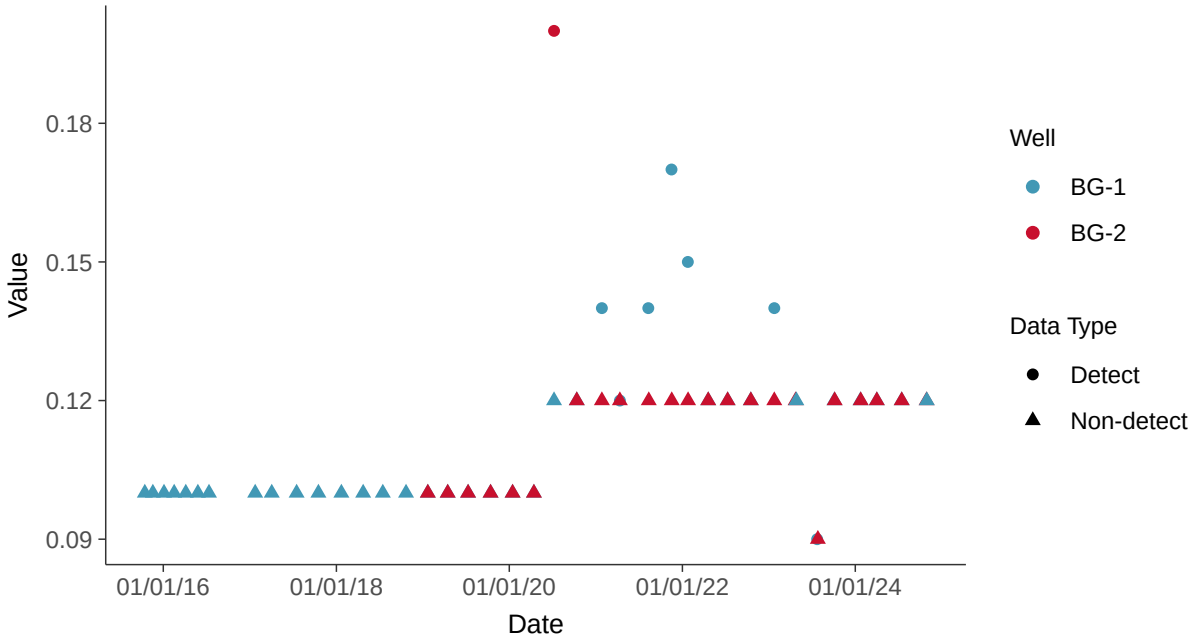
Scatter Plot

Mercury, BG-1 & BG-2 (ug/L)



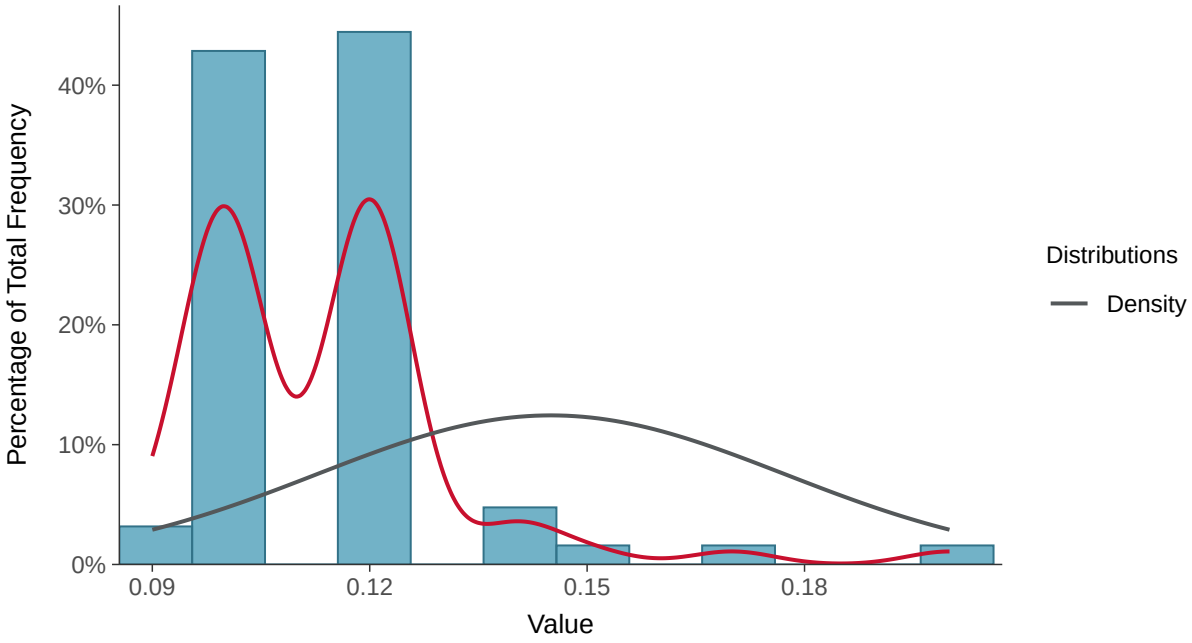
Scatter Plot by Well

Mercury, BG-1 & BG-2 (ug/L)



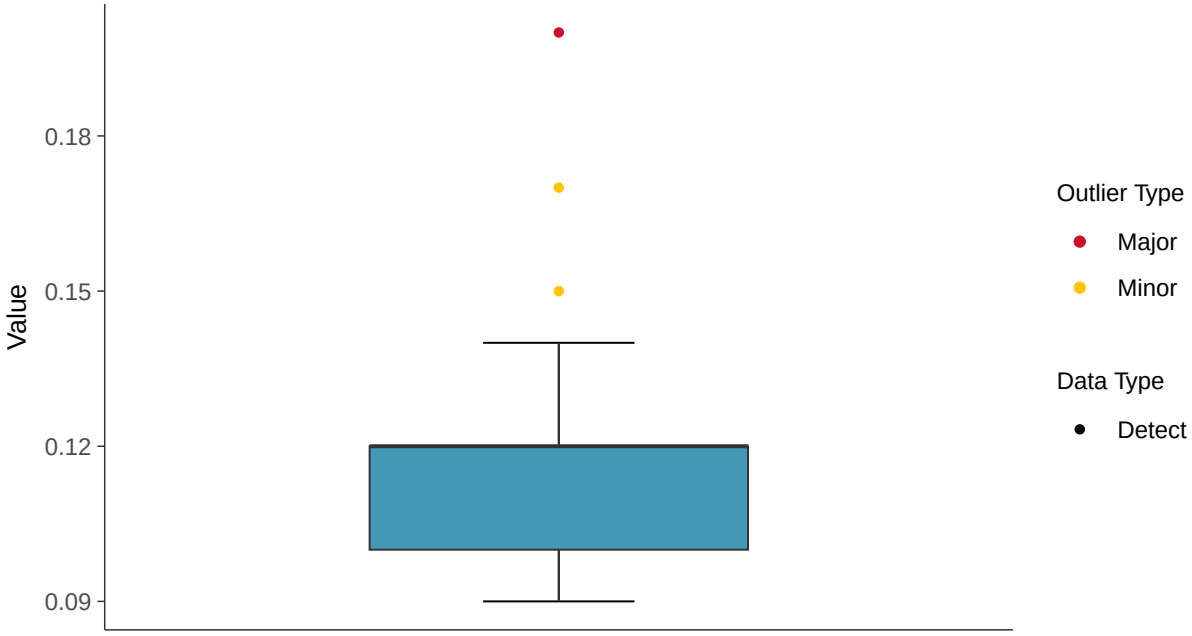
Histogram

Mercury, BG-1 & BG-2 (ug/L)



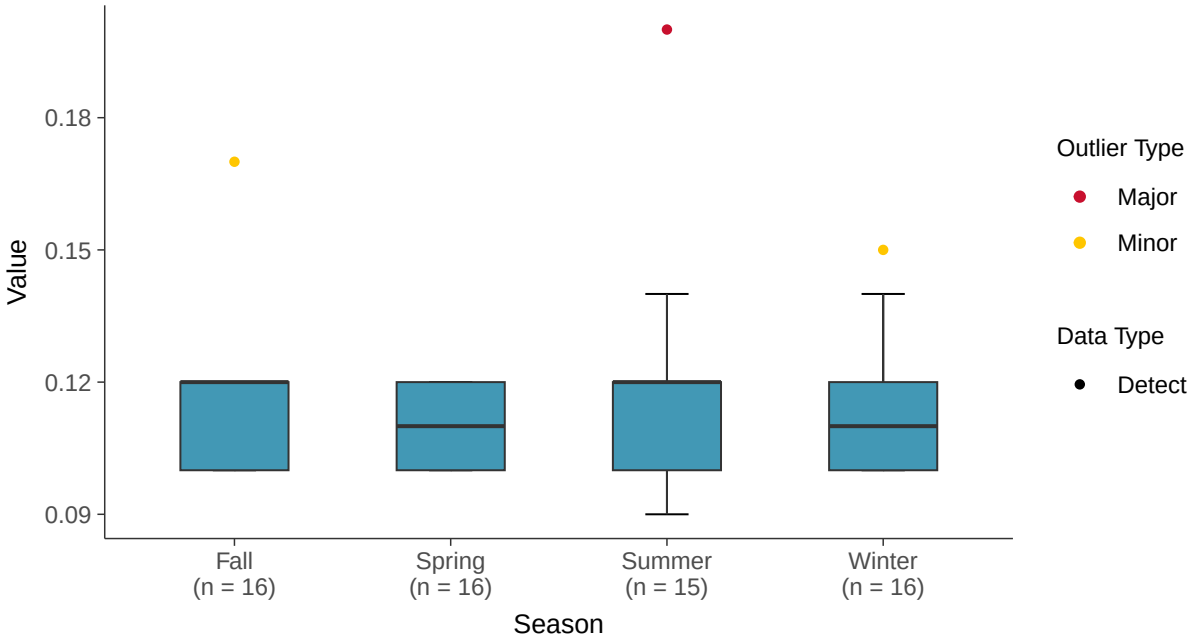
Boxplot

Mercury, BG-1 & BG-2 (ug/L)



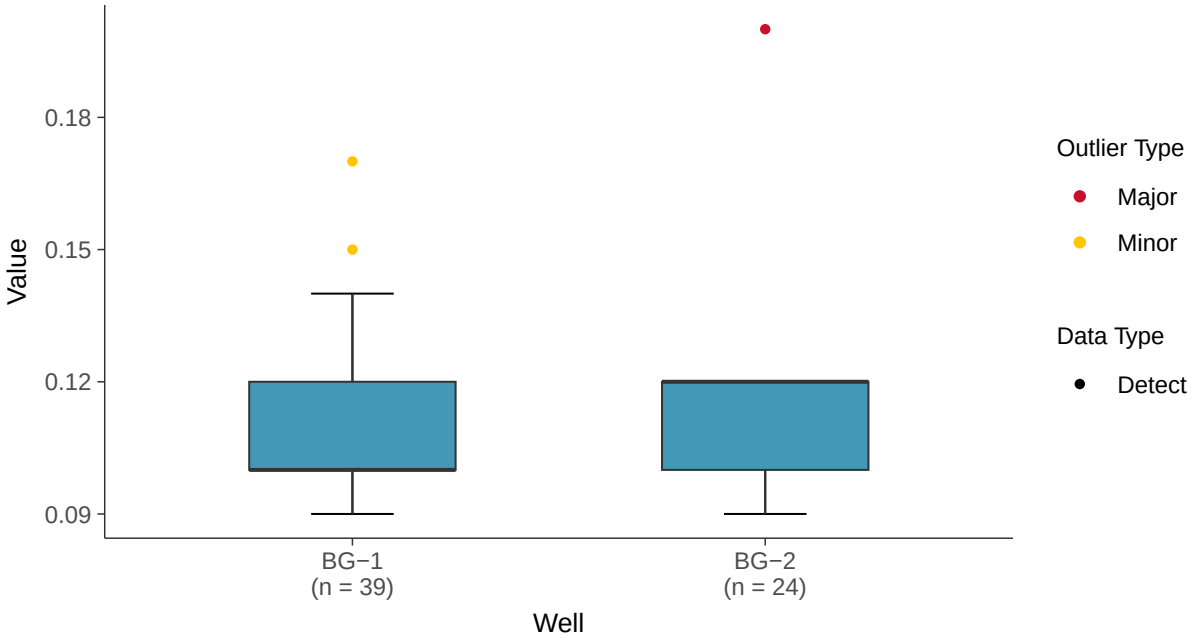
Boxplot by Season

Mercury, BG-1 & BG-2 (ug/L)



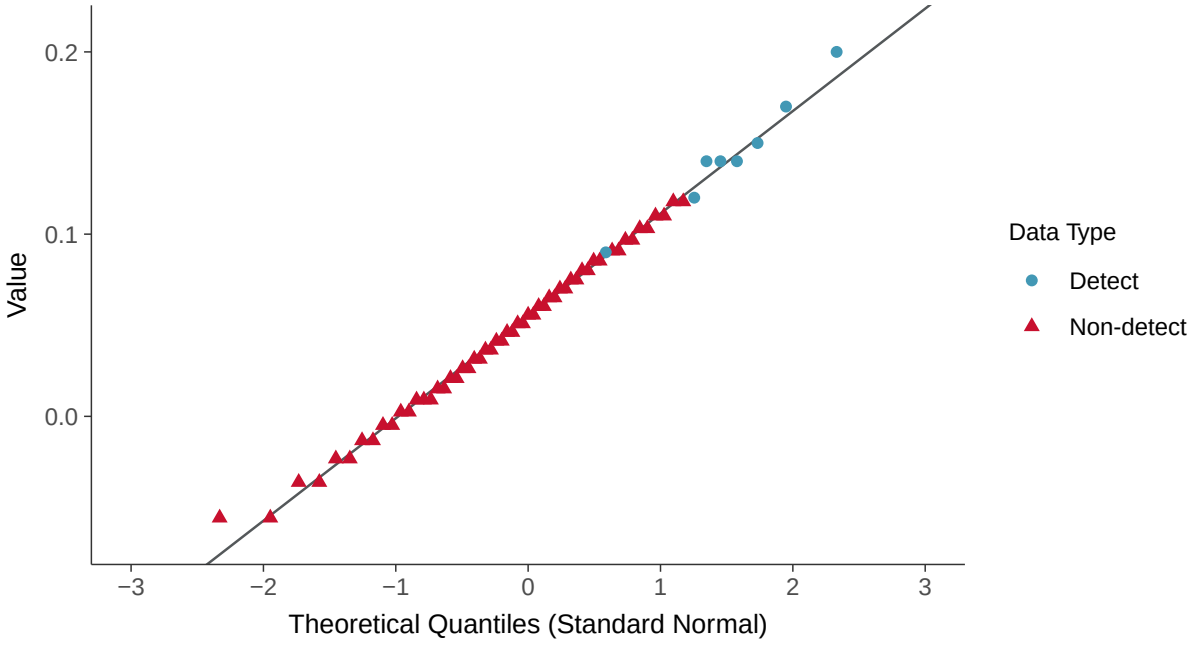
Boxplot by Well

Mercury, BG-1 & BG-2 (ug/L)



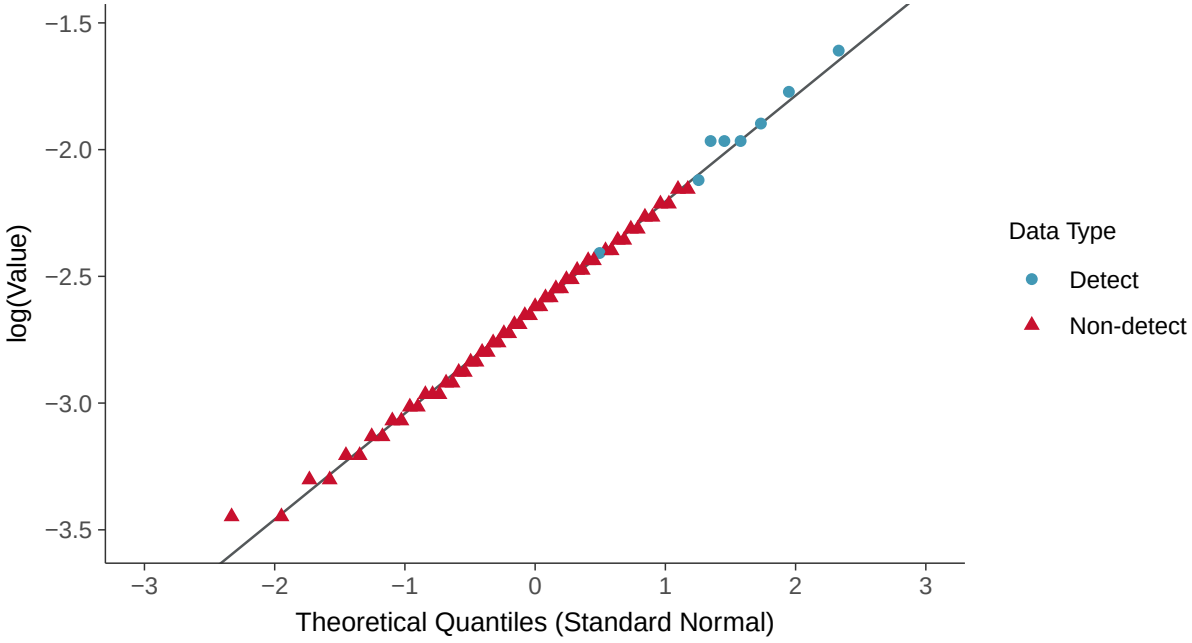
Normal Q-Q plot using ROS Imputed Estimates

Mercury, BG-1 & BG-2 (ug/L)



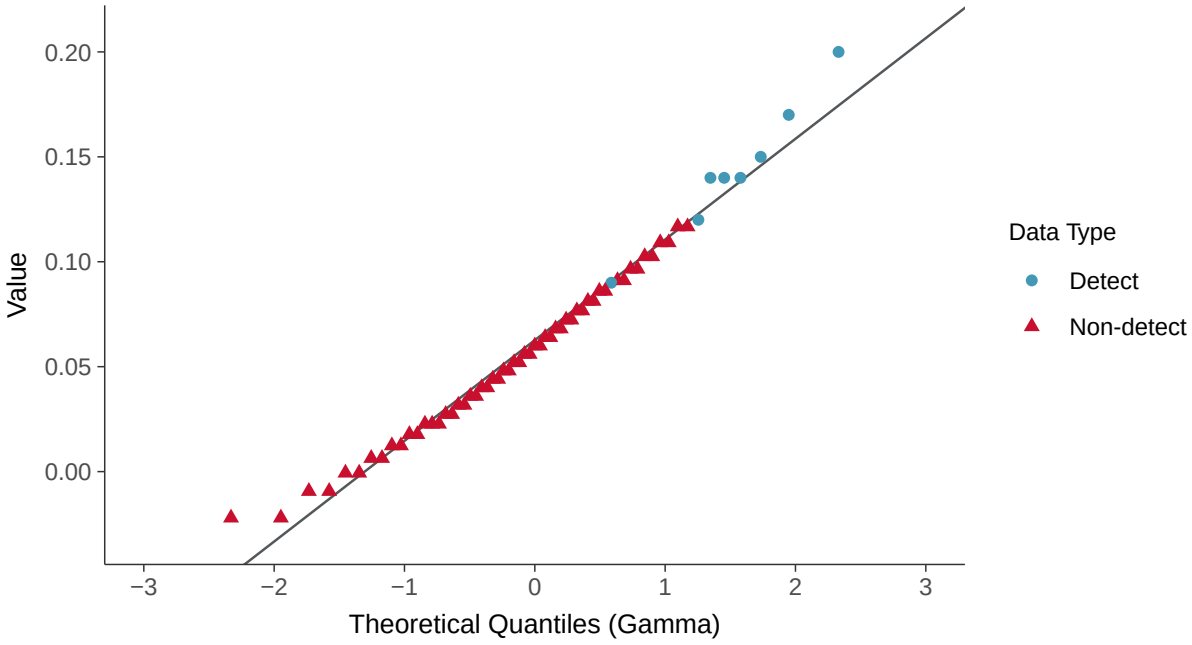
Lognormal Q-Q plot using ROS Imputed Estimates

Mercury, BG-1 & BG-2 (ug/L)



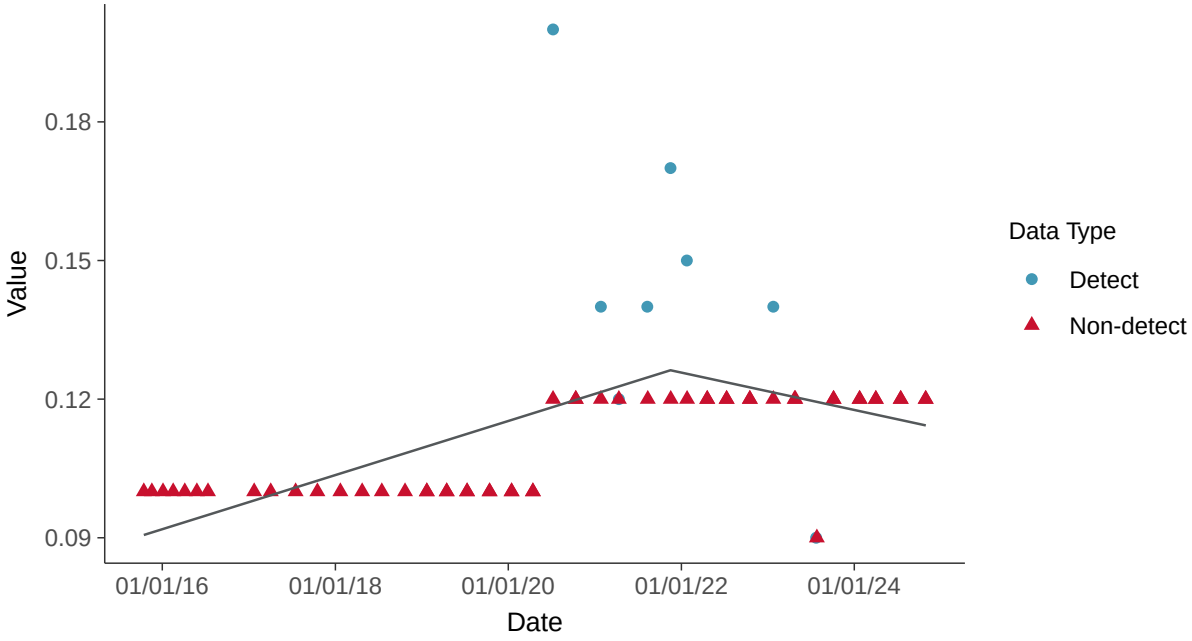
Gamma Q-Q plot using ROS Imputed Estimates

Mercury, BG-1 & BG-2 (ug/L)



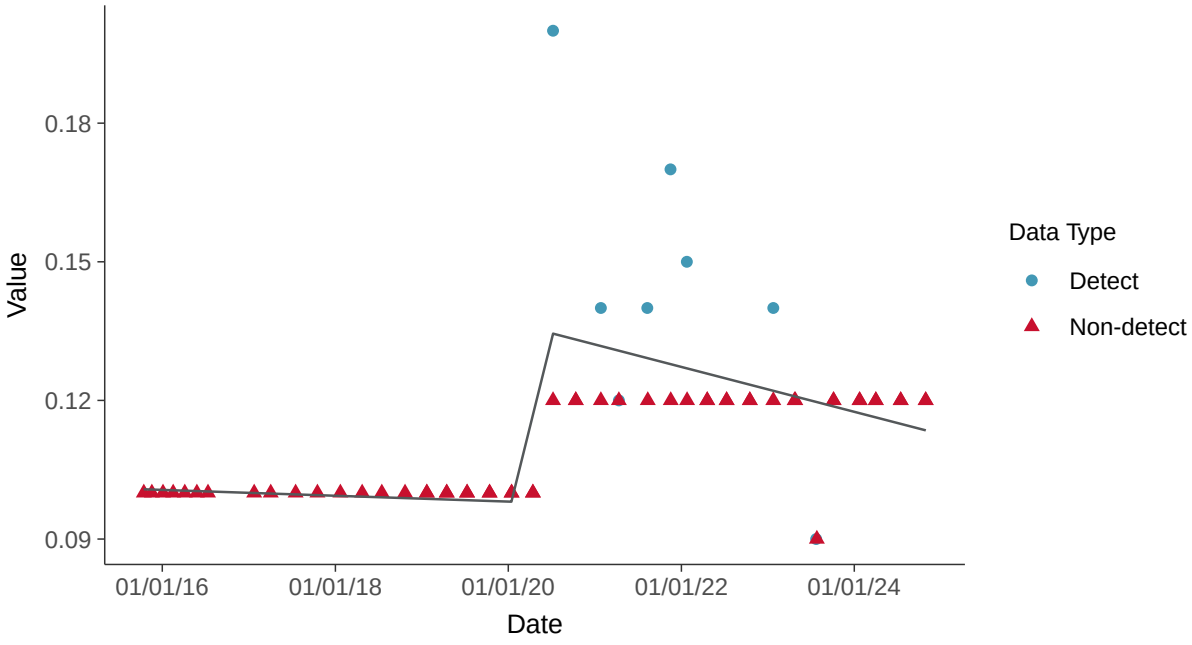
Trend Regression: Piecewise Linear-Linear

Mercury, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, BG-1 & BG-2 (ug/L)

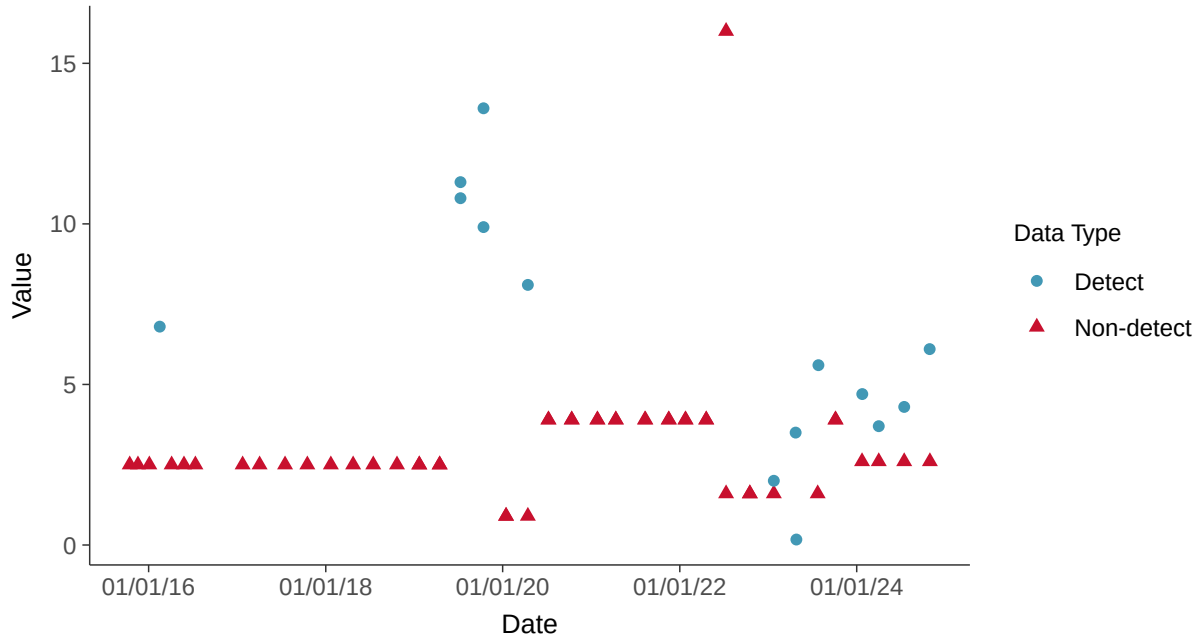


App. IV: Molybdenum, BG-1 & BG-2

ID: 3_116

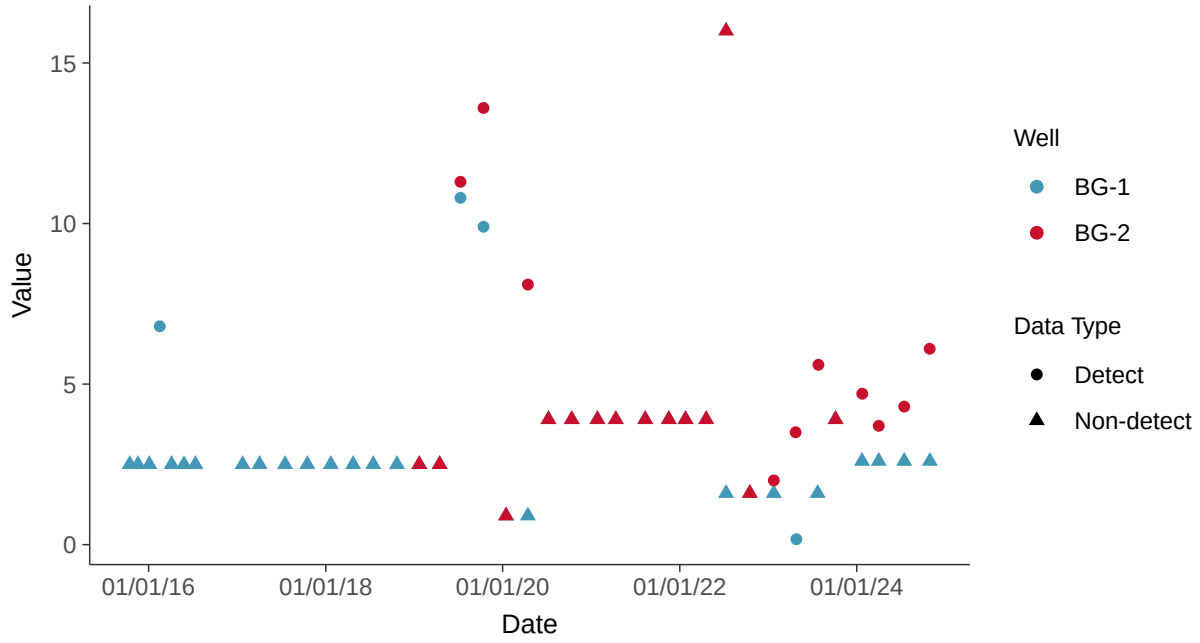
Scatter Plot

Molybdenum, BG-1 & BG-2 (ug/L)



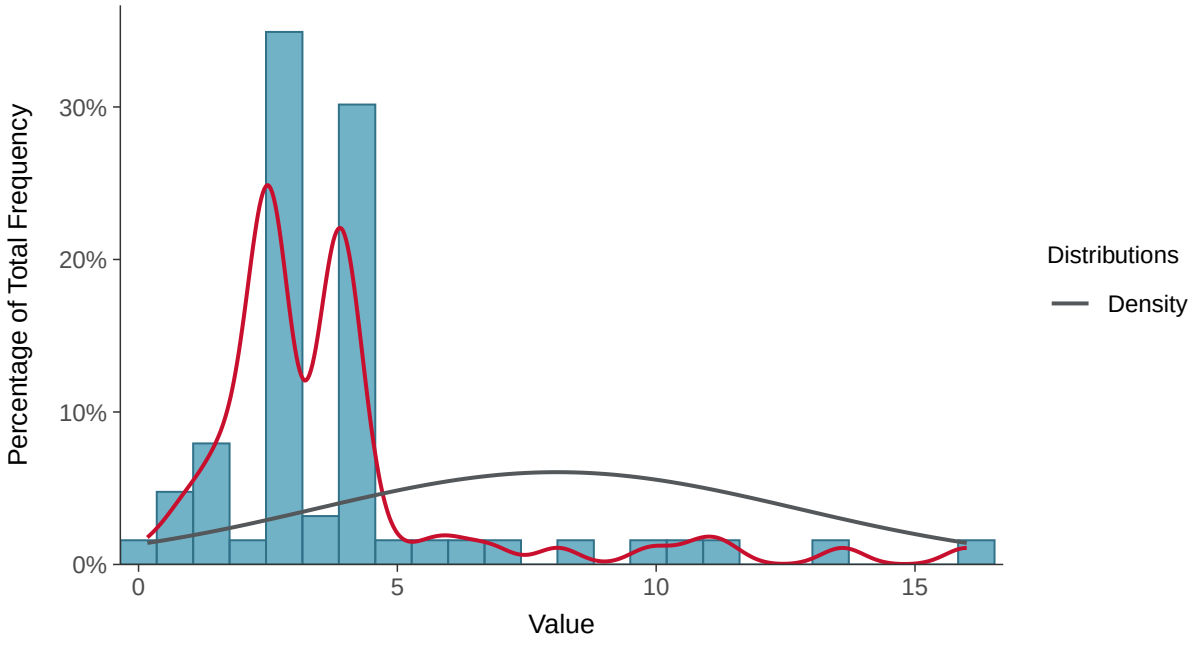
Scatter Plot by Well

Molybdenum, BG-1 & BG-2 (ug/L)



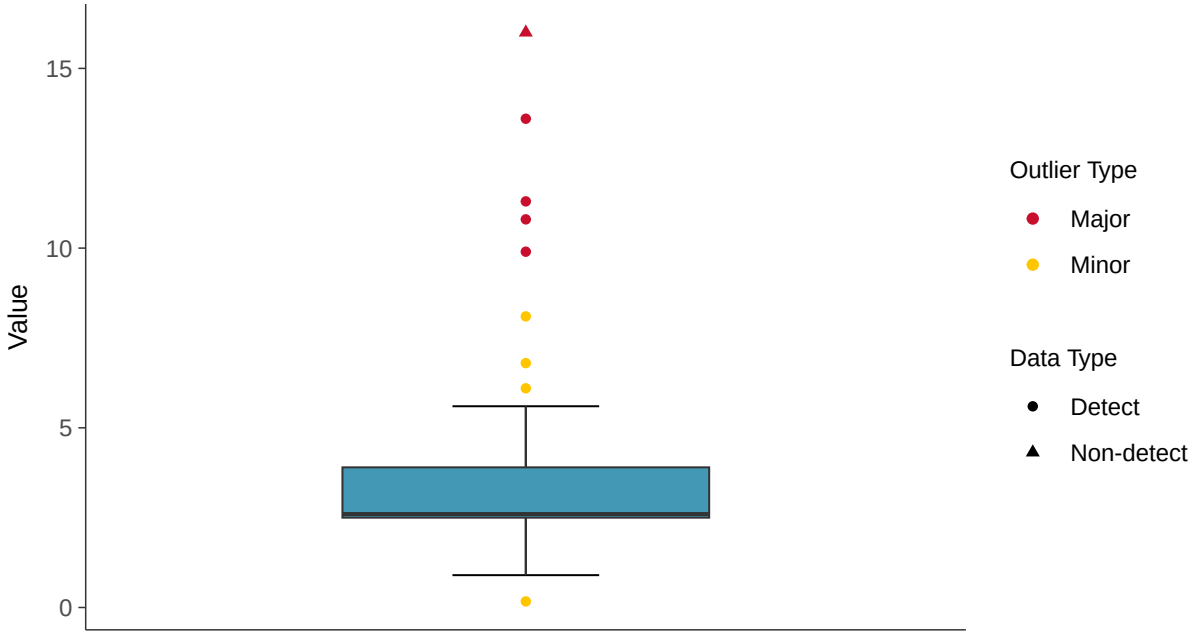
Histogram

Molybdenum, BG-1 & BG-2 (ug/L)



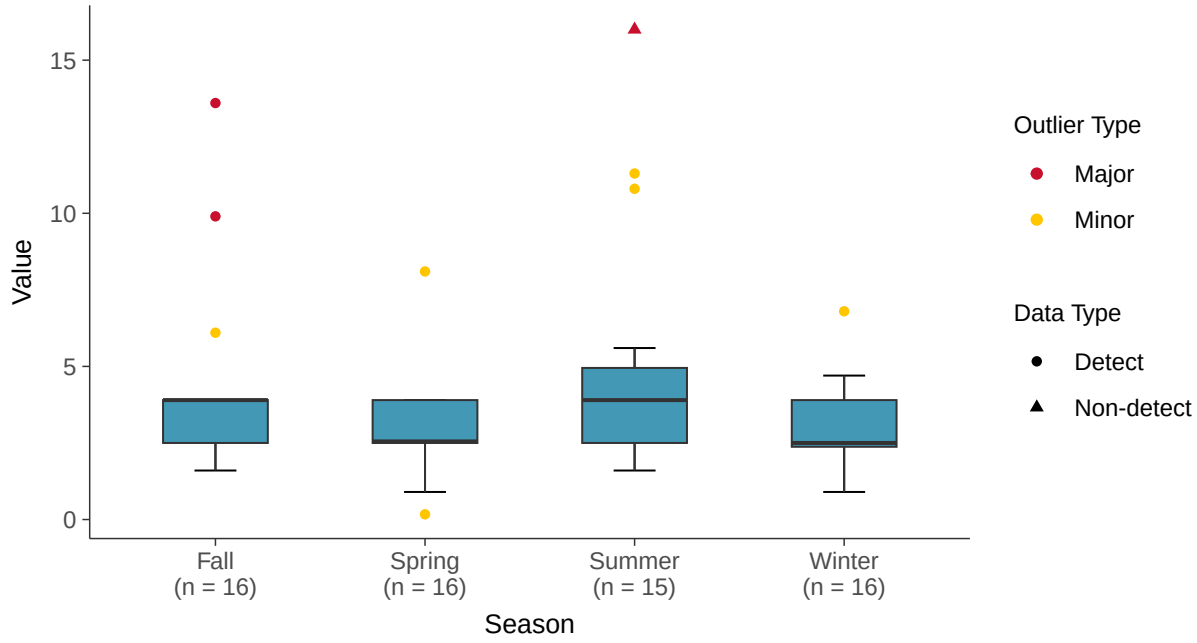
Boxplot

Molybdenum, BG-1 & BG-2 (ug/L)



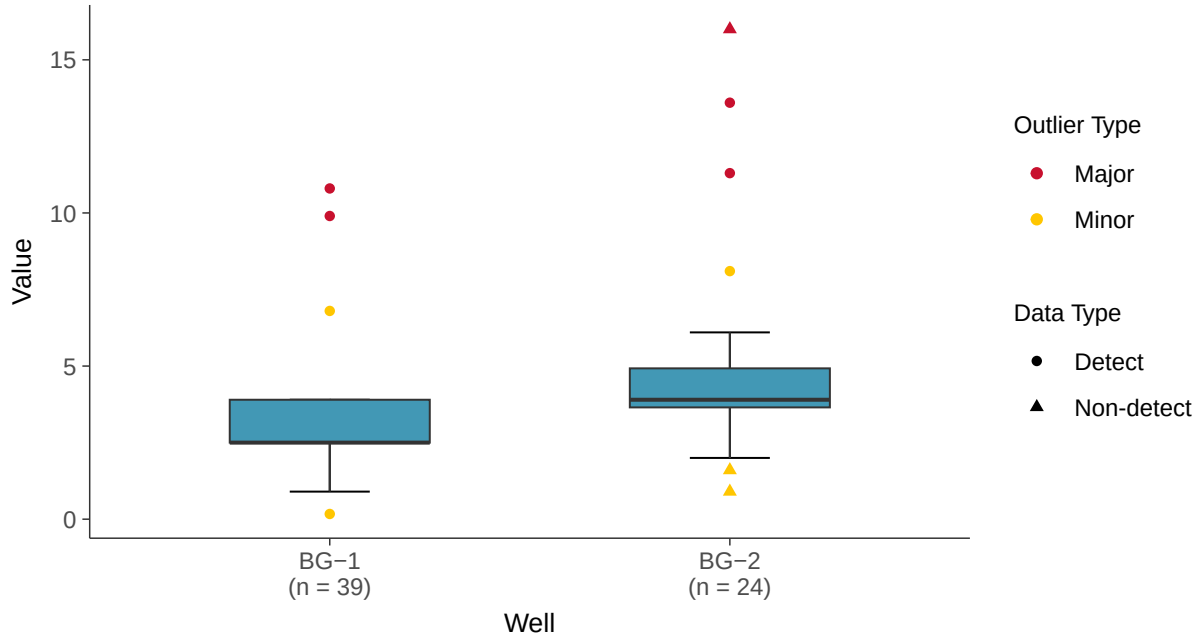
Boxplot by Season

Molybdenum, BG-1 & BG-2 (ug/L)



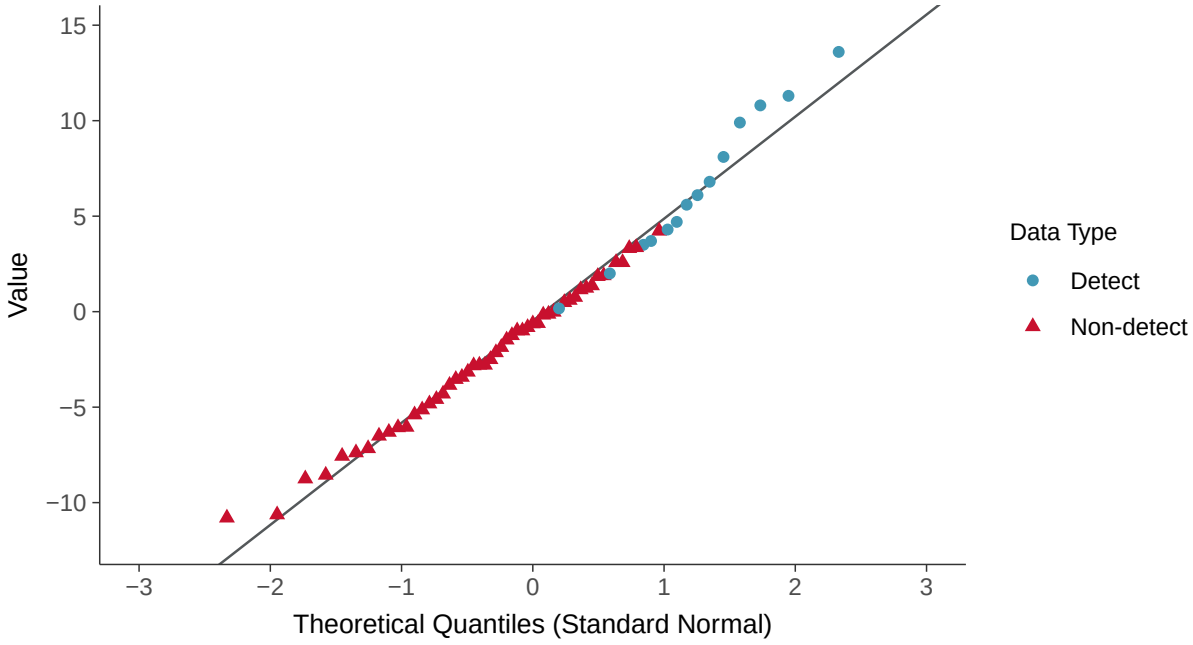
Boxplot by Well

Molybdenum, BG-1 & BG-2 (ug/L)



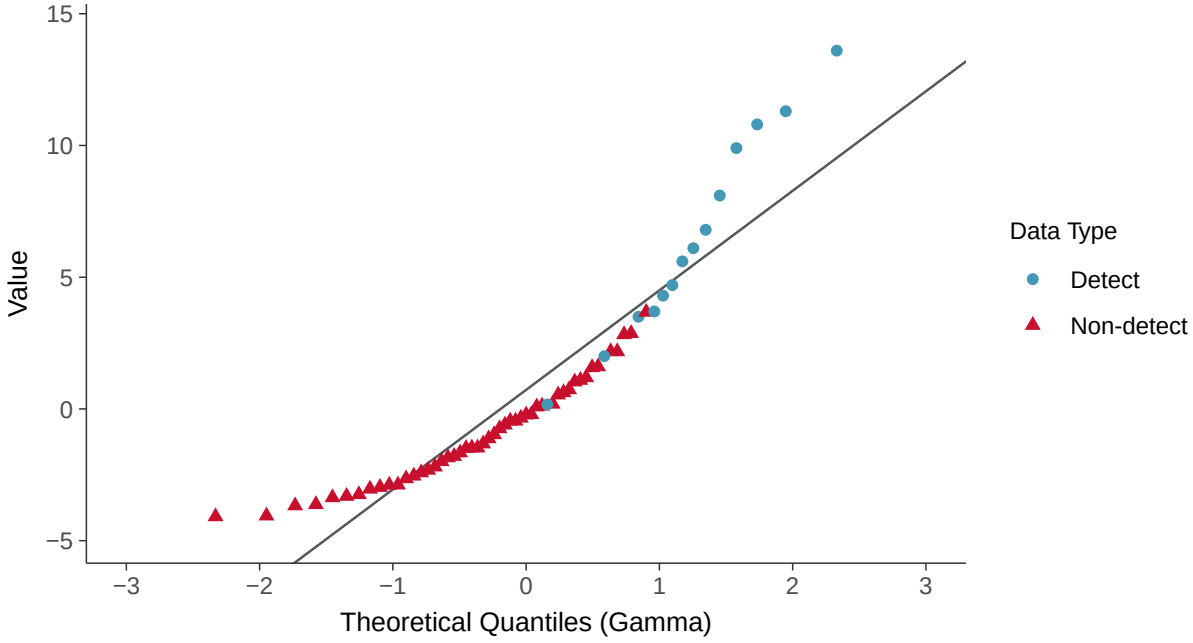
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, BG-1 & BG-2 (ug/L)



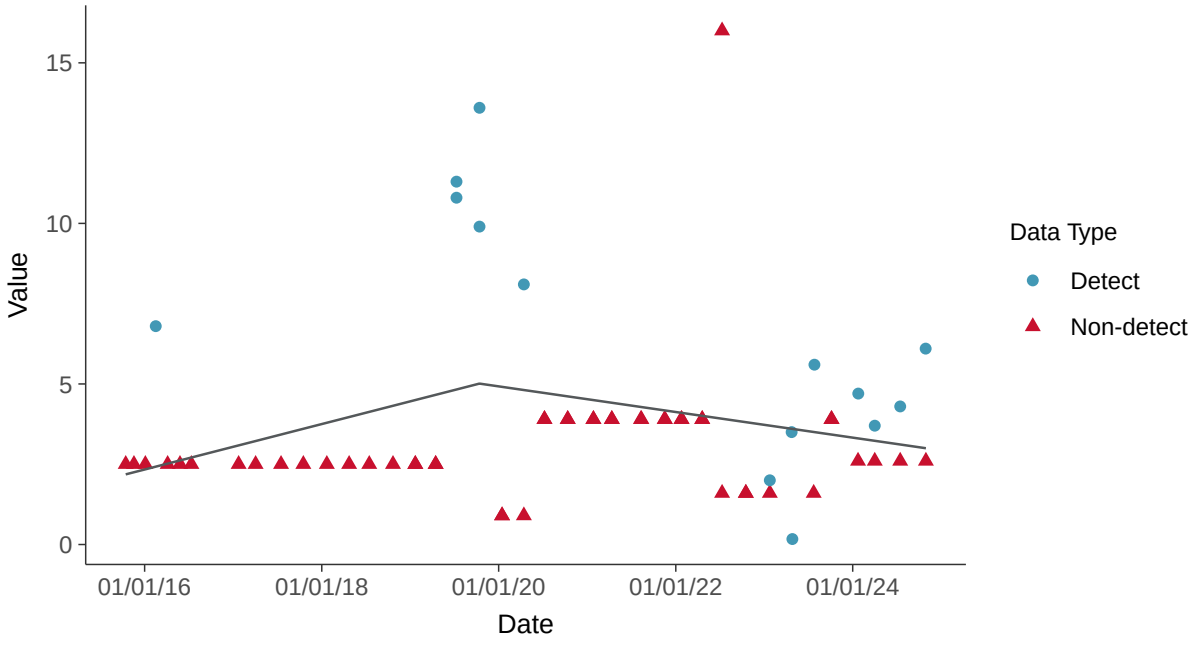
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, BG-1 & BG-2 (ug/L)



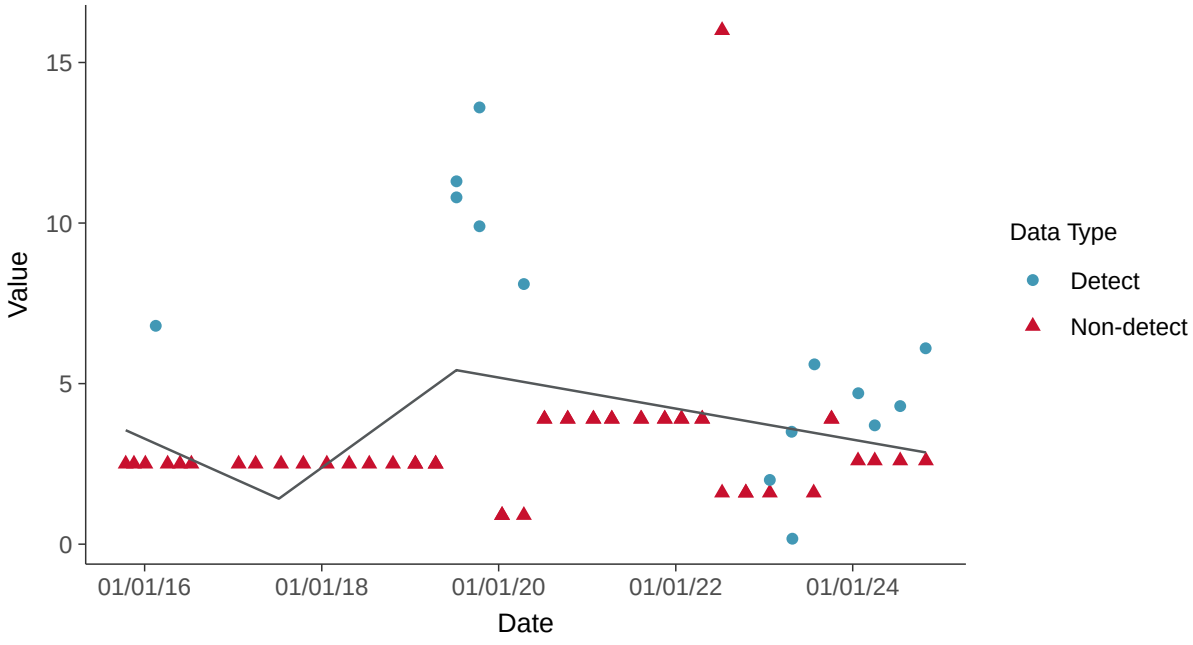
Trend Regression: Piecewise Linear-Linear

Molybdenum, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, BG-1 & BG-2 (ug/L)

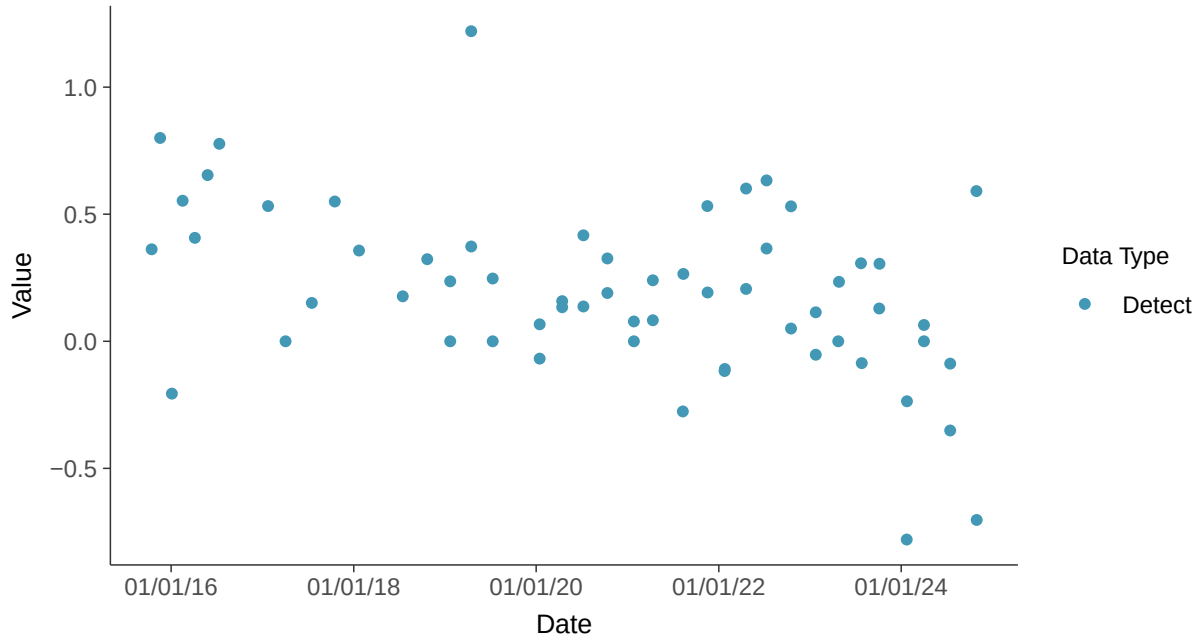


App. IV: Radium-226, BG-1 & BG-2

ID: 3_119

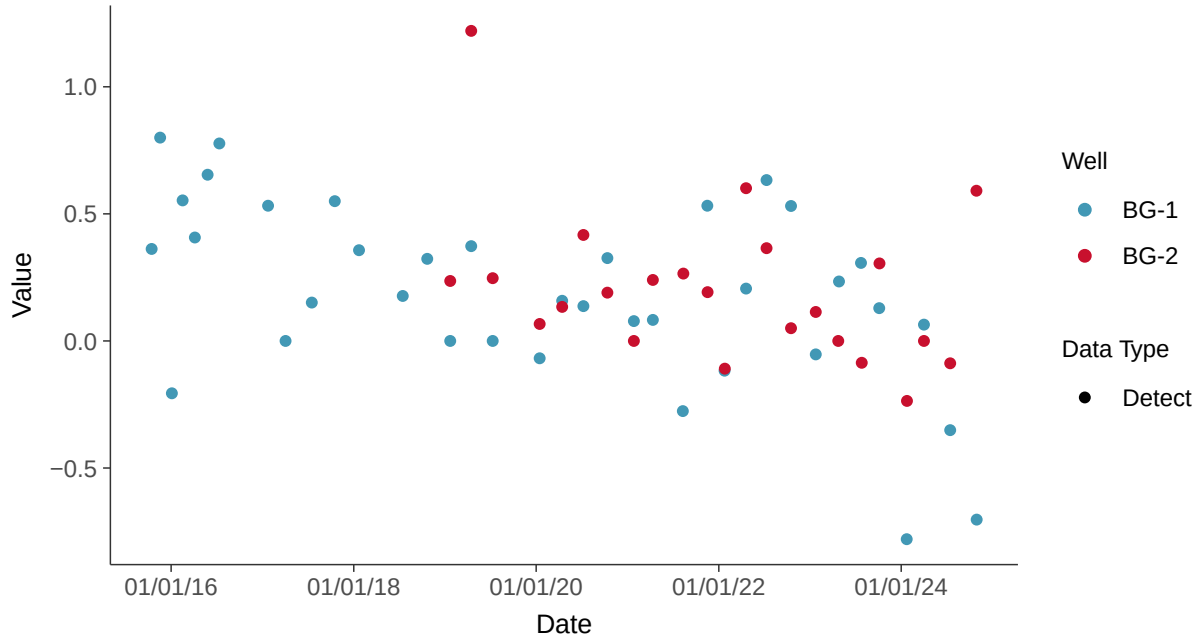
Scatter Plot

Radium-226, BG-1 & BG-2 (pCi/L)



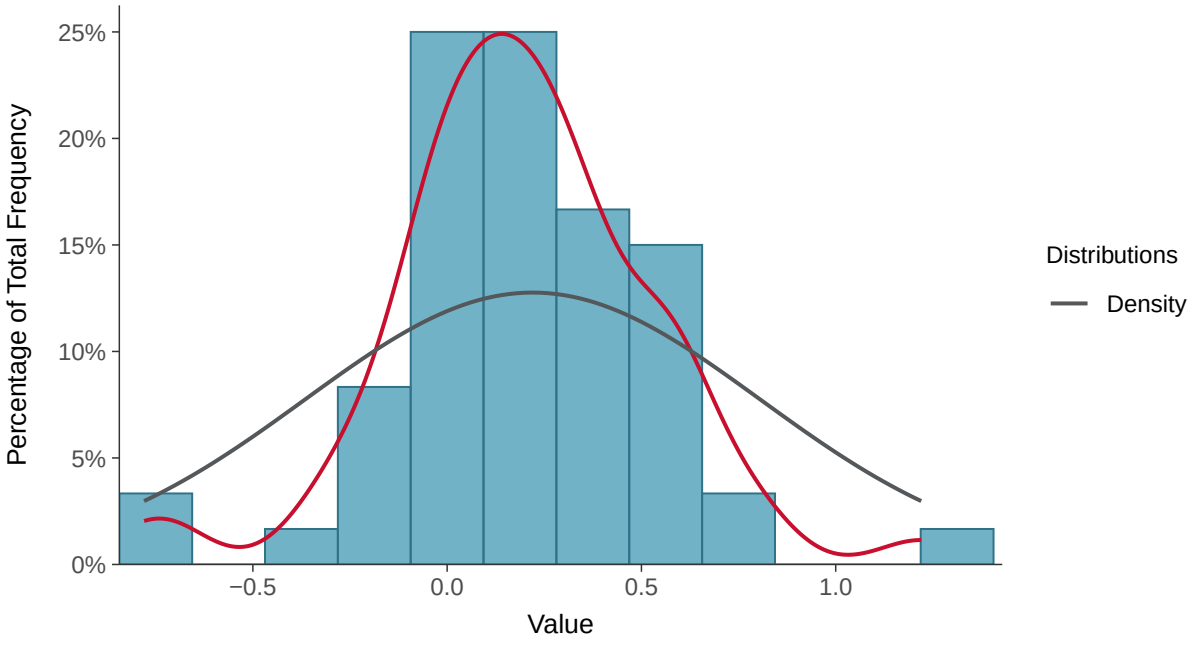
Scatter Plot by Well

Radium-226, BG-1 & BG-2 (pCi/L)



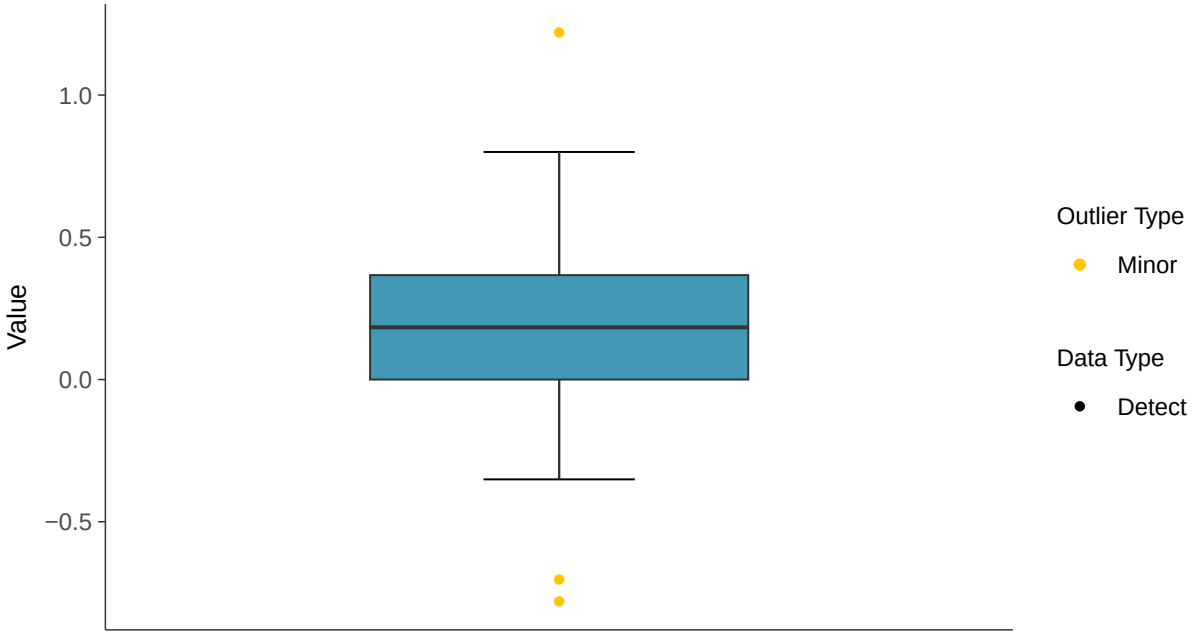
Histogram

Radium-226, BG-1 & BG-2 (pCi/L)



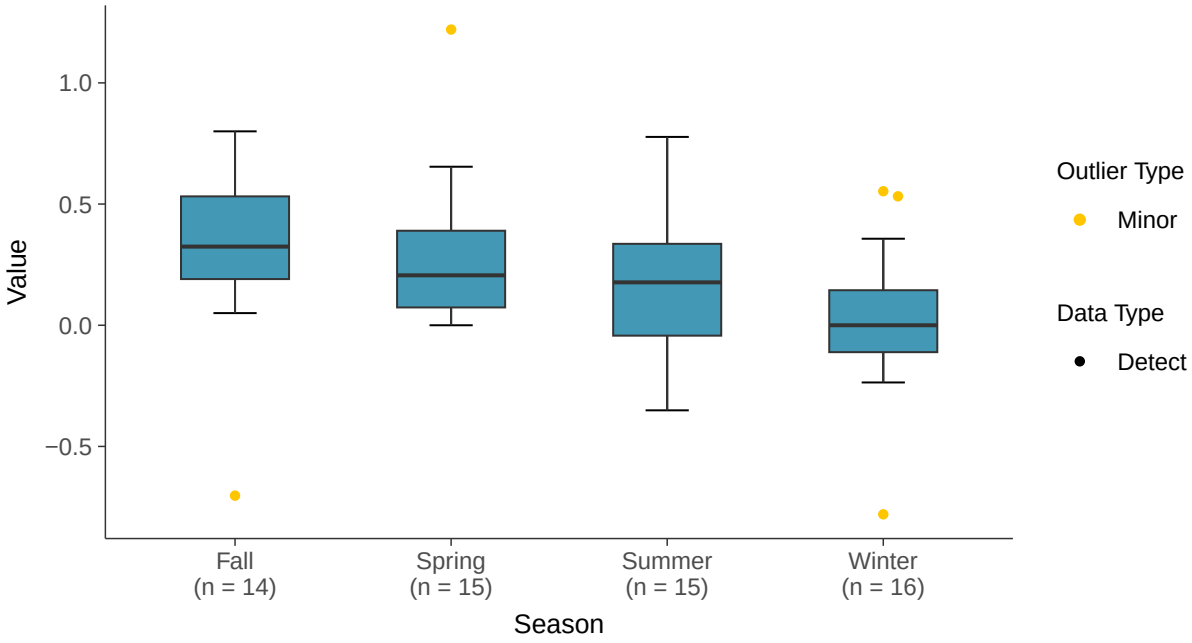
Boxplot

Radium-226, BG-1 & BG-2 (pCi/L)



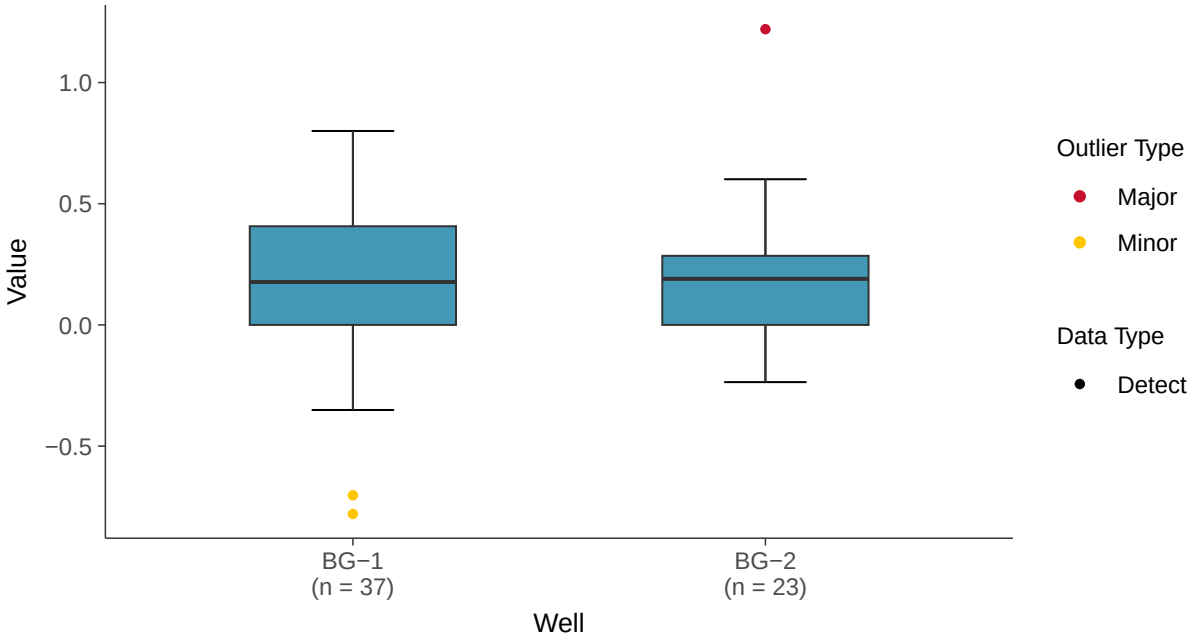
Boxplot by Season

Radium-226, BG-1 & BG-2 (pCi/L)



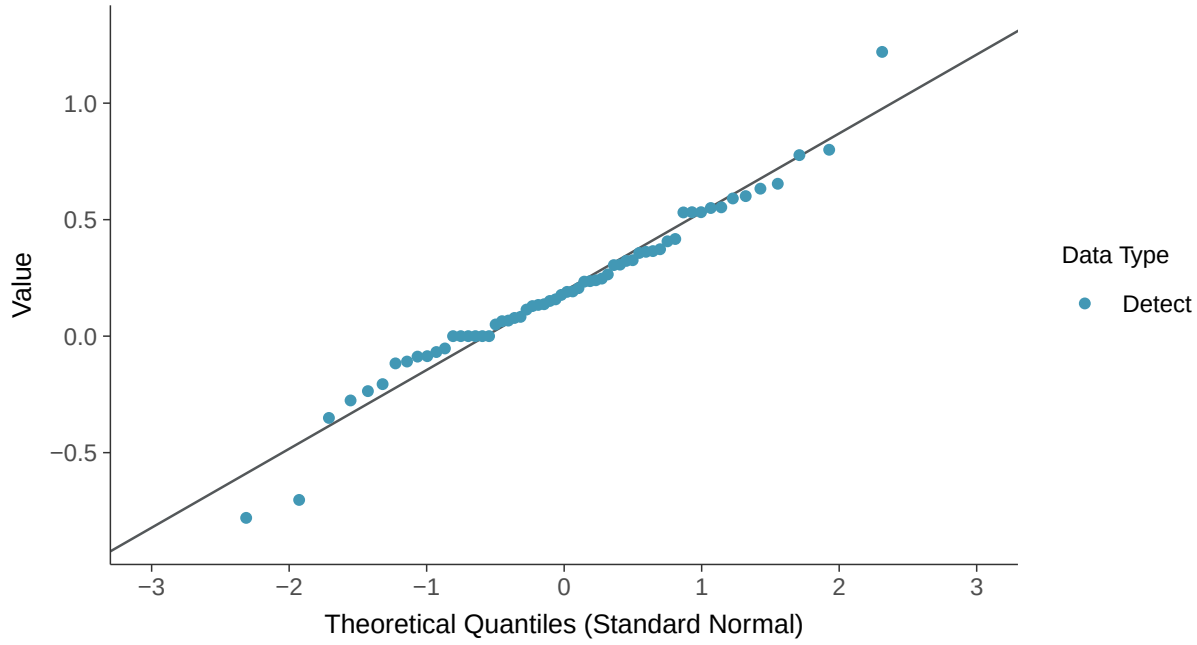
Boxplot by Well

Radium-226, BG-1 & BG-2 (pCi/L)



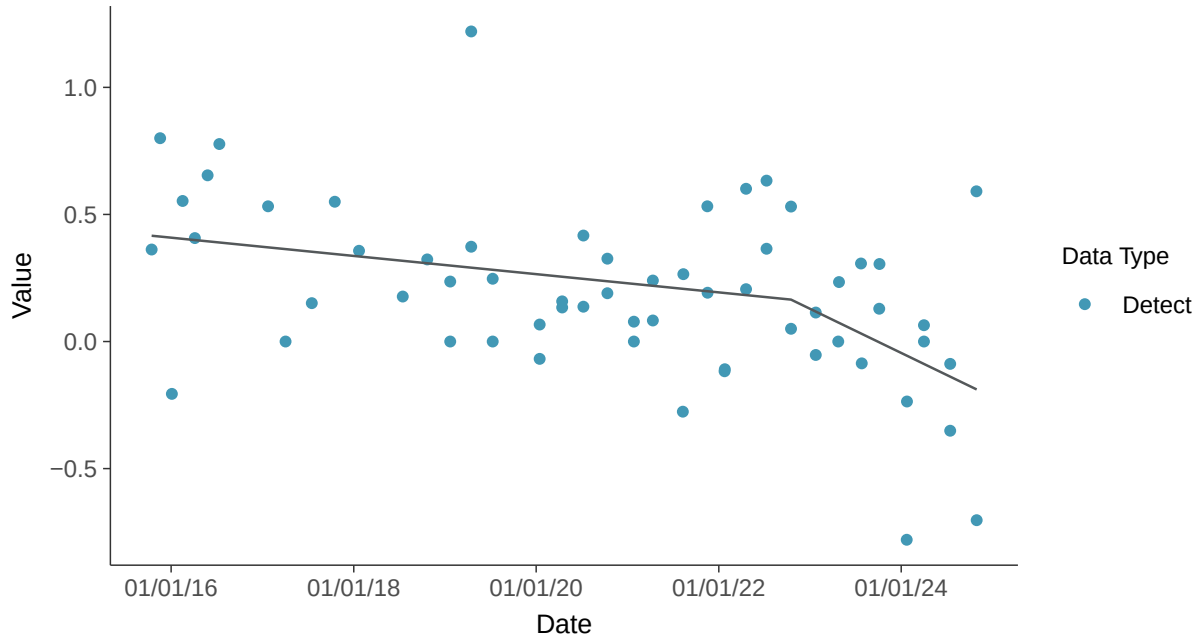
Normal Q-Q plot

Radium-226, BG-1 & BG-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, BG-1 & BG-2 (pCi/L)

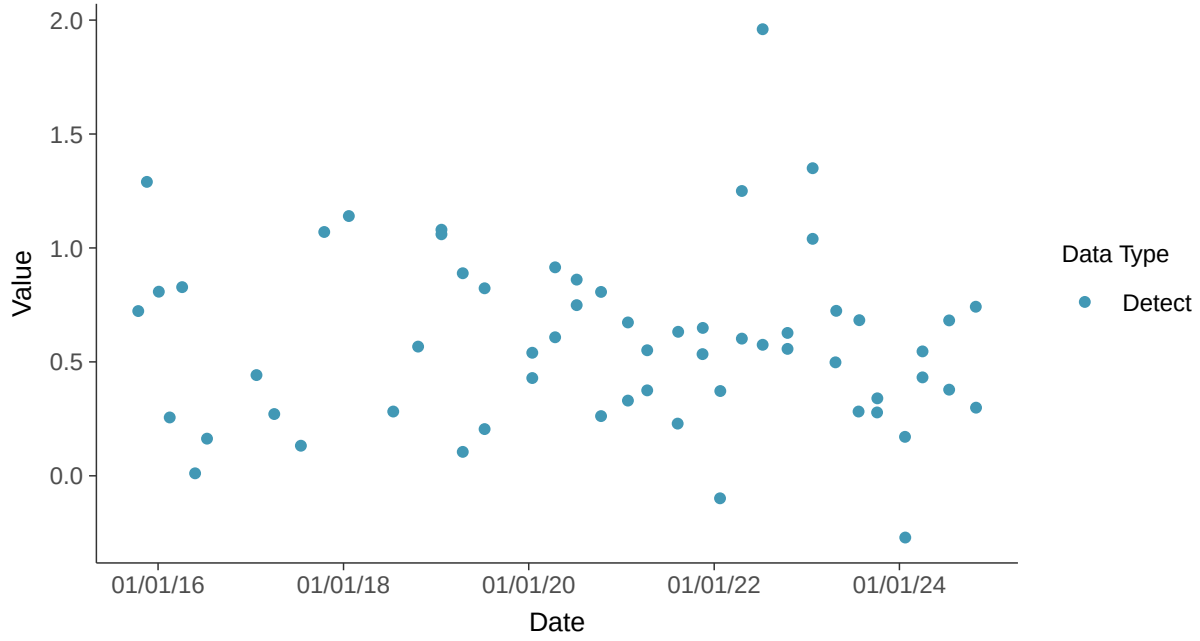


App. IV: Radium-228, BG-1 & BG-2

ID: 3_120

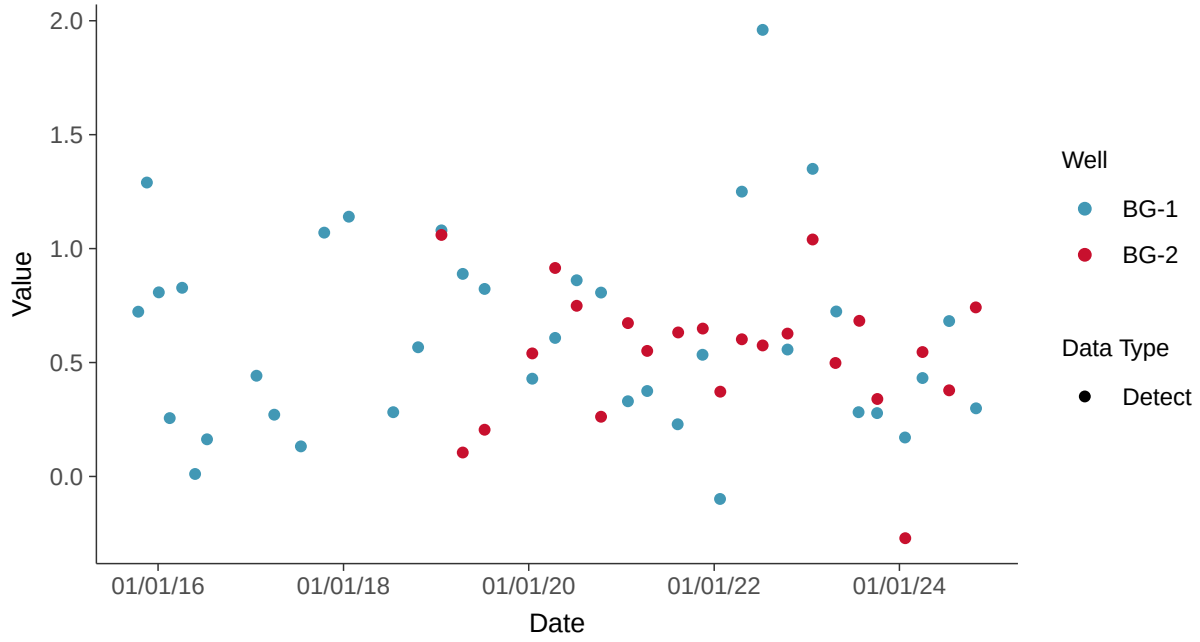
Scatter Plot

Radium-228, BG-1 & BG-2 (pCi/L)



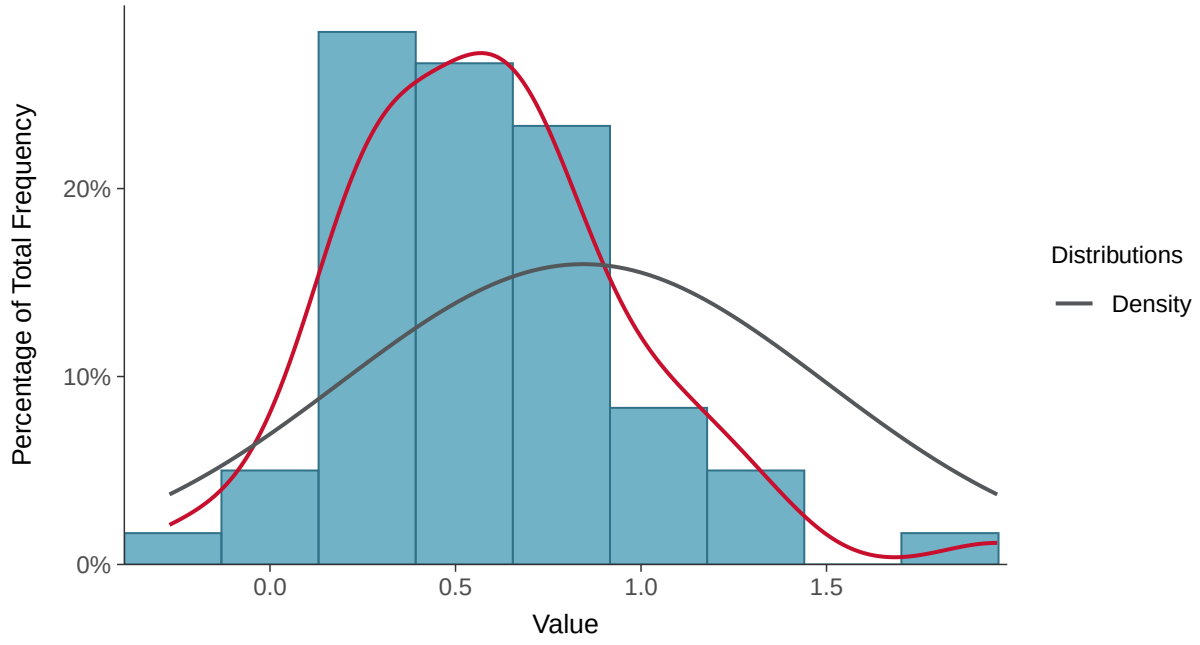
Scatter Plot by Well

Radium-228, BG-1 & BG-2 (pCi/L)



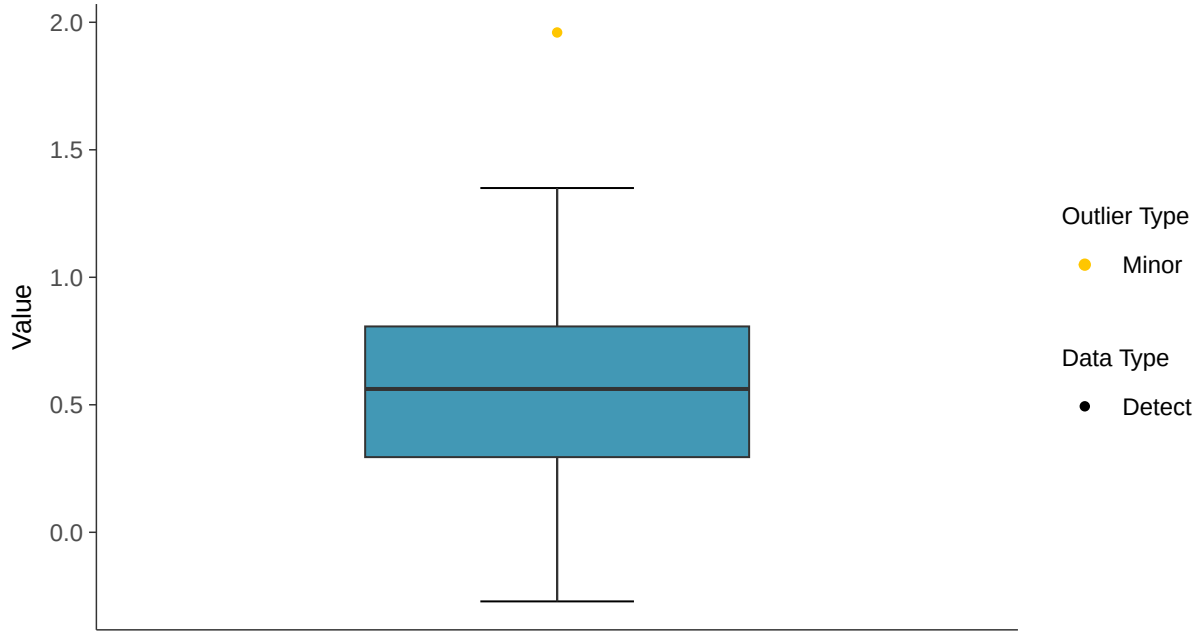
Histogram

Radium-228, BG-1 & BG-2 (pCi/L)



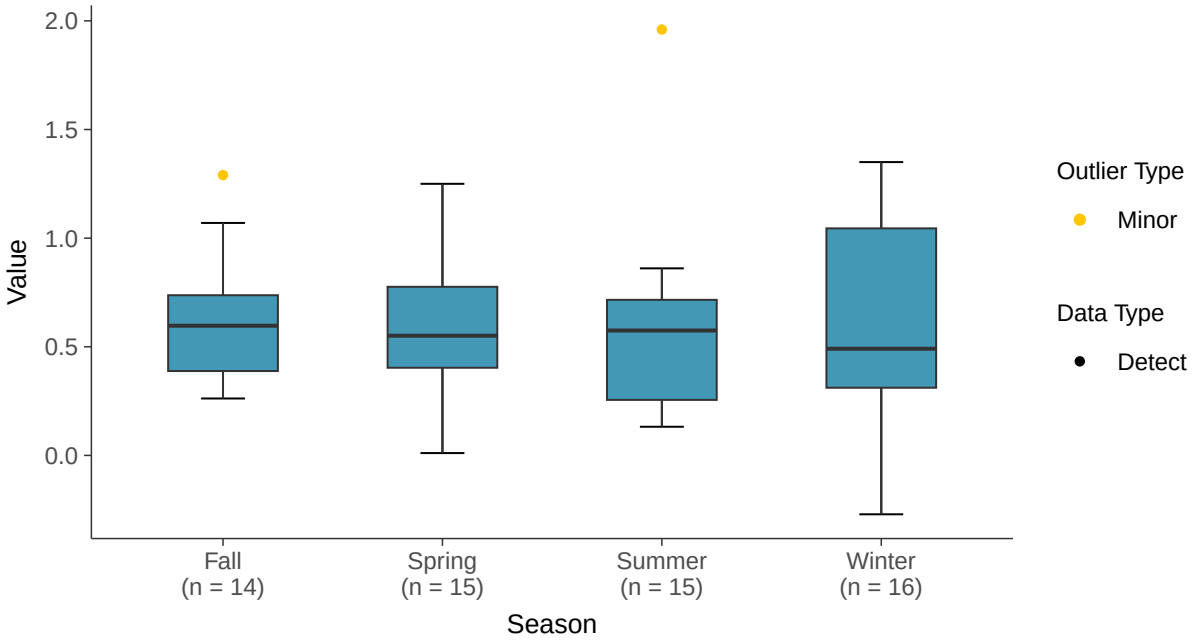
Boxplot

Radium-228, BG-1 & BG-2 (pCi/L)



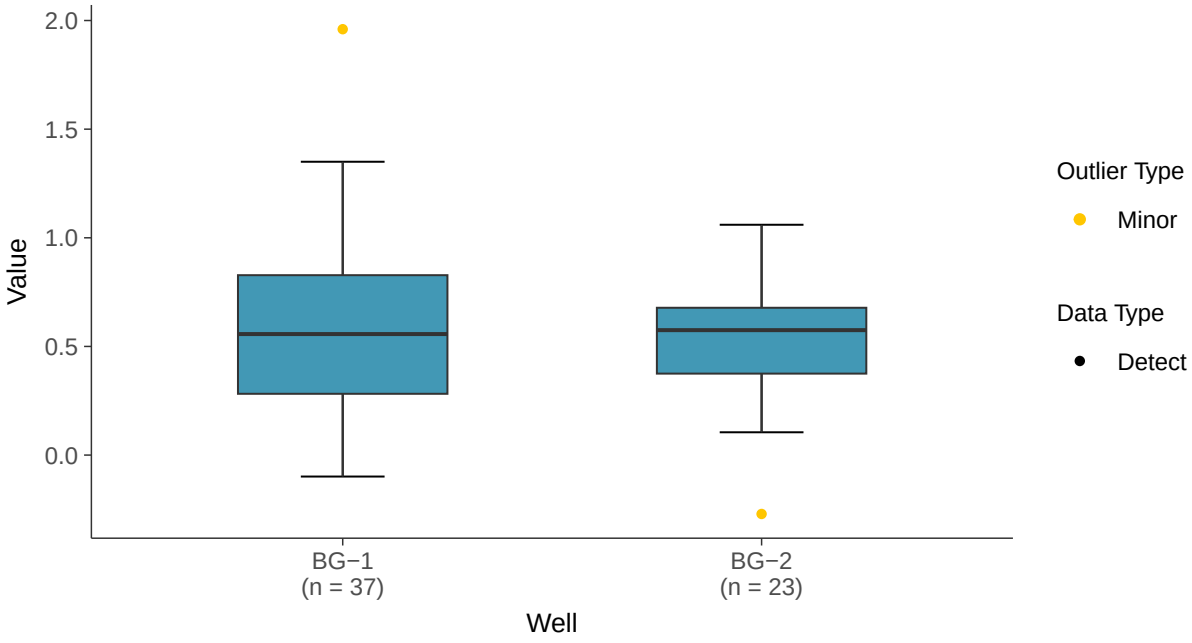
Boxplot by Season

Radium-228, BG-1 & BG-2 (pCi/L)



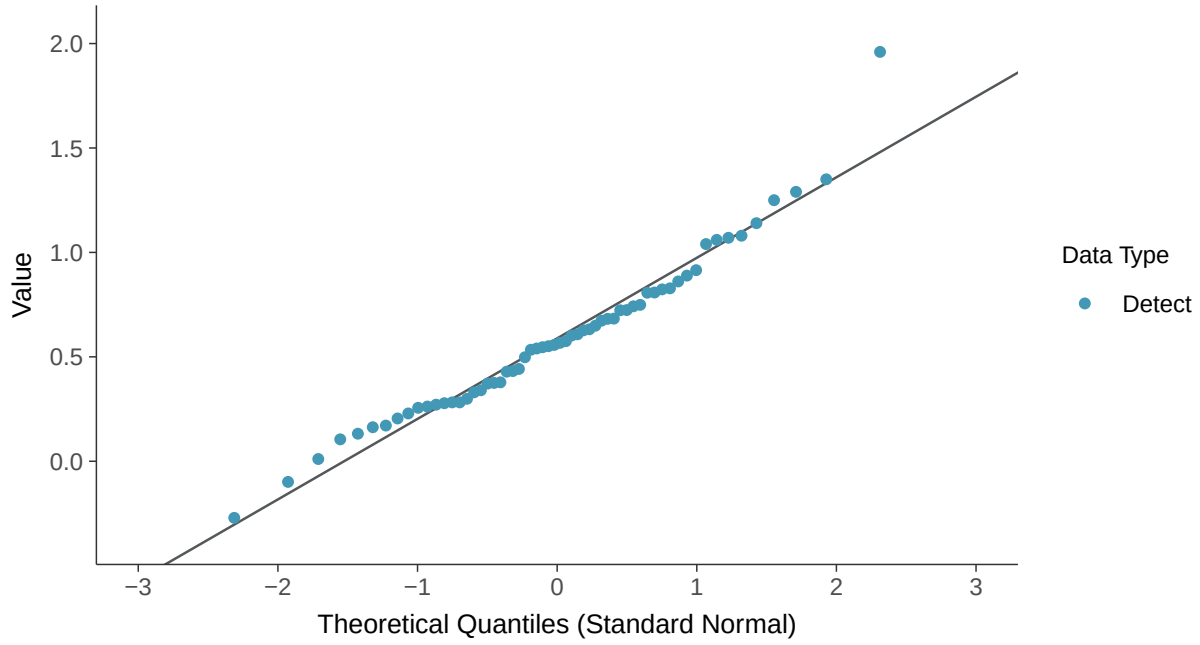
Boxplot by Well

Radium-228, BG-1 & BG-2 (pCi/L)



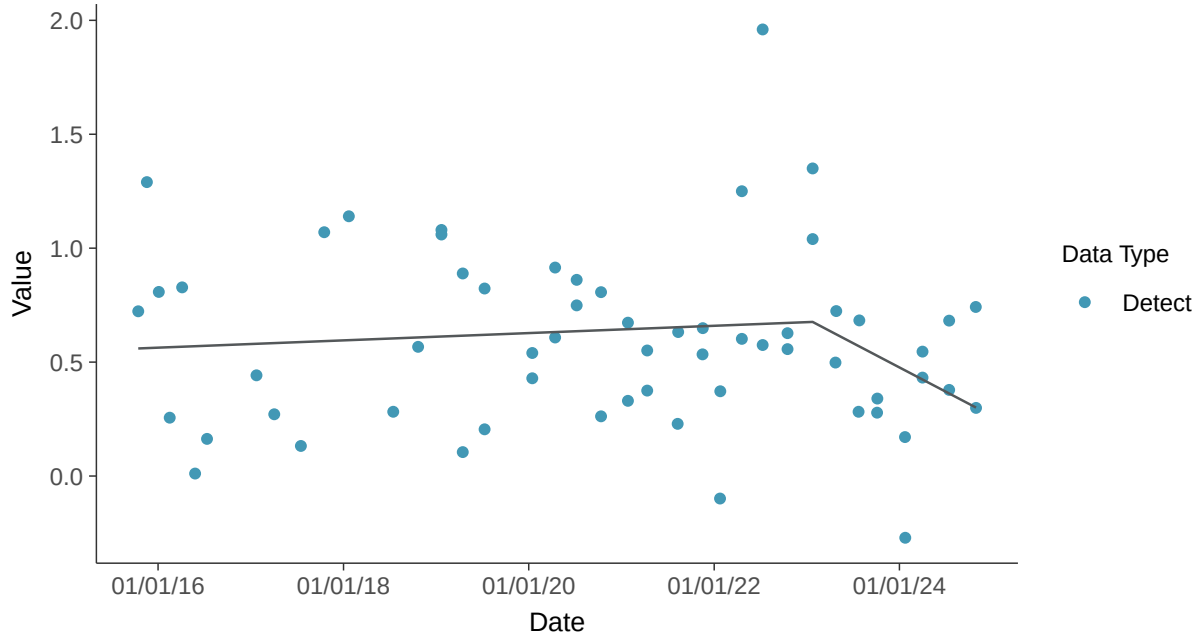
Normal Q-Q plot

Radium-228, BG-1 & BG-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-228, BG-1 & BG-2 (pCi/L)

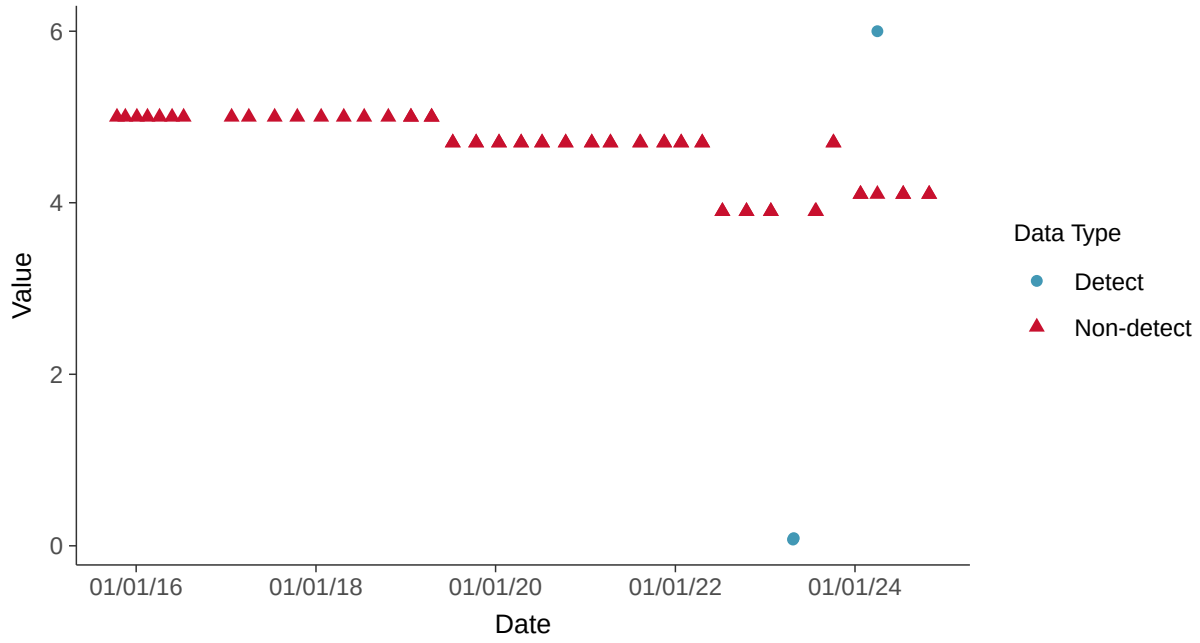


App. IV: Selenium, BG-1 & BG-2

ID: 3_121

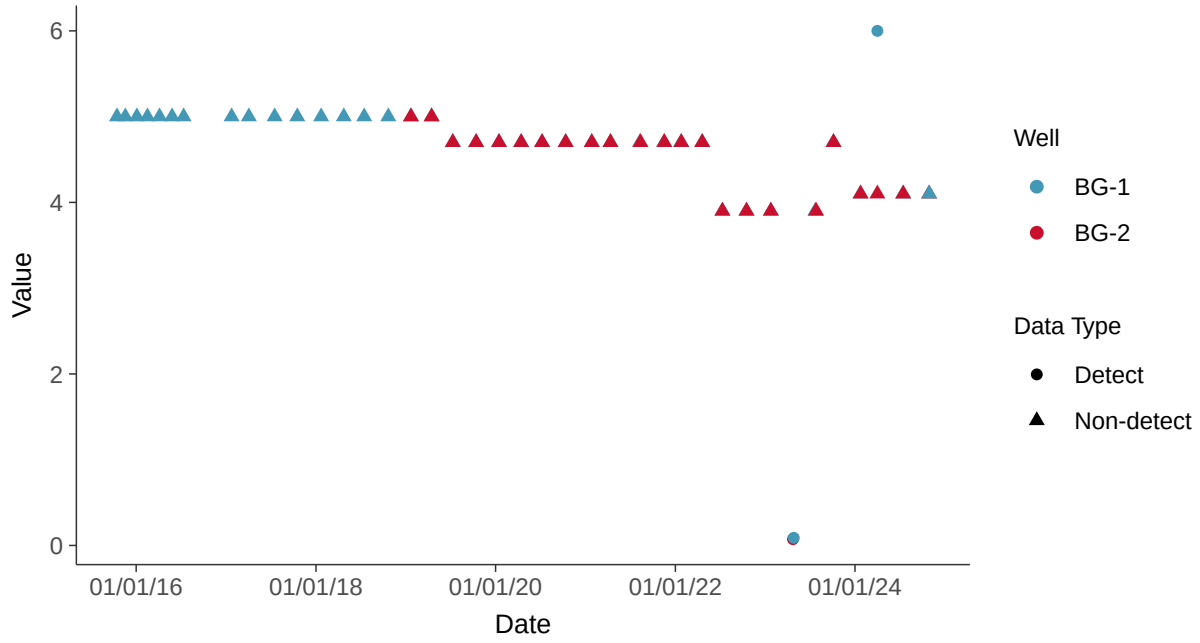
Scatter Plot

Selenium, BG-1 & BG-2 (ug/L)



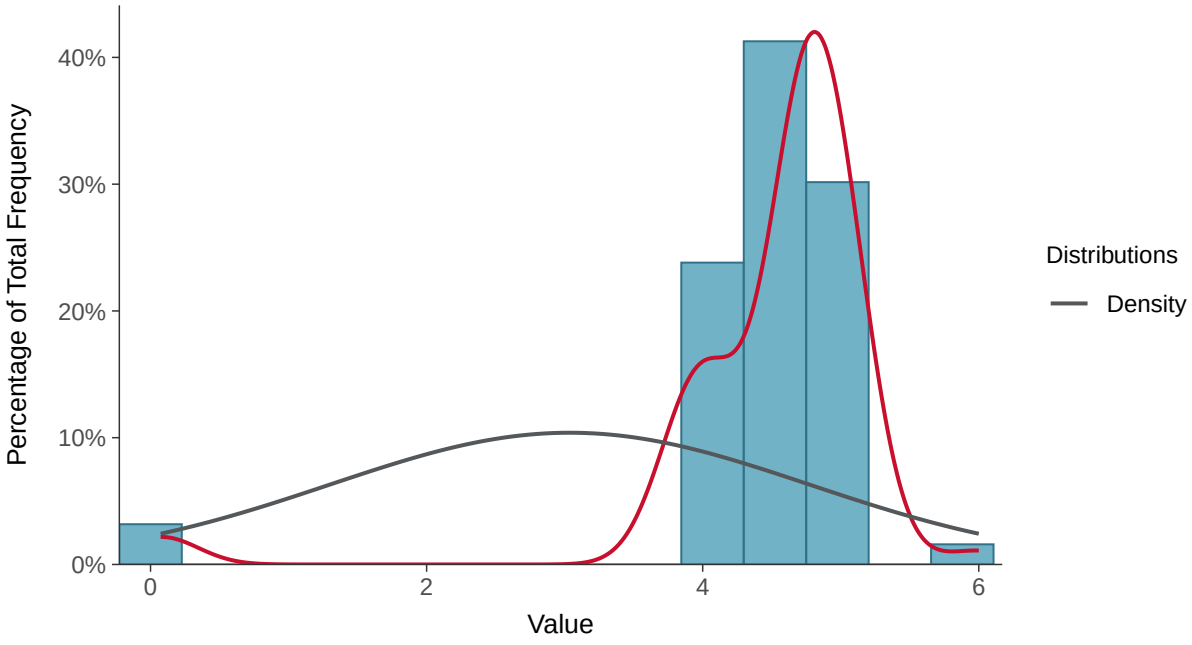
Scatter Plot by Well

Selenium, BG-1 & BG-2 (ug/L)



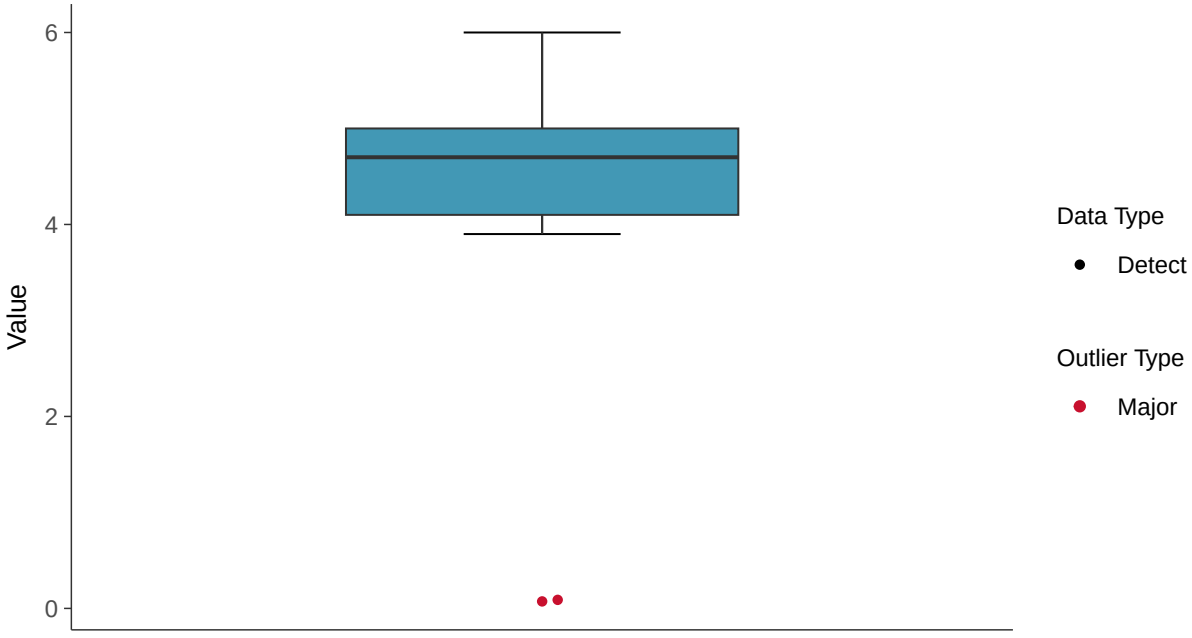
Histogram

Selenium, BG-1 & BG-2 (ug/L)



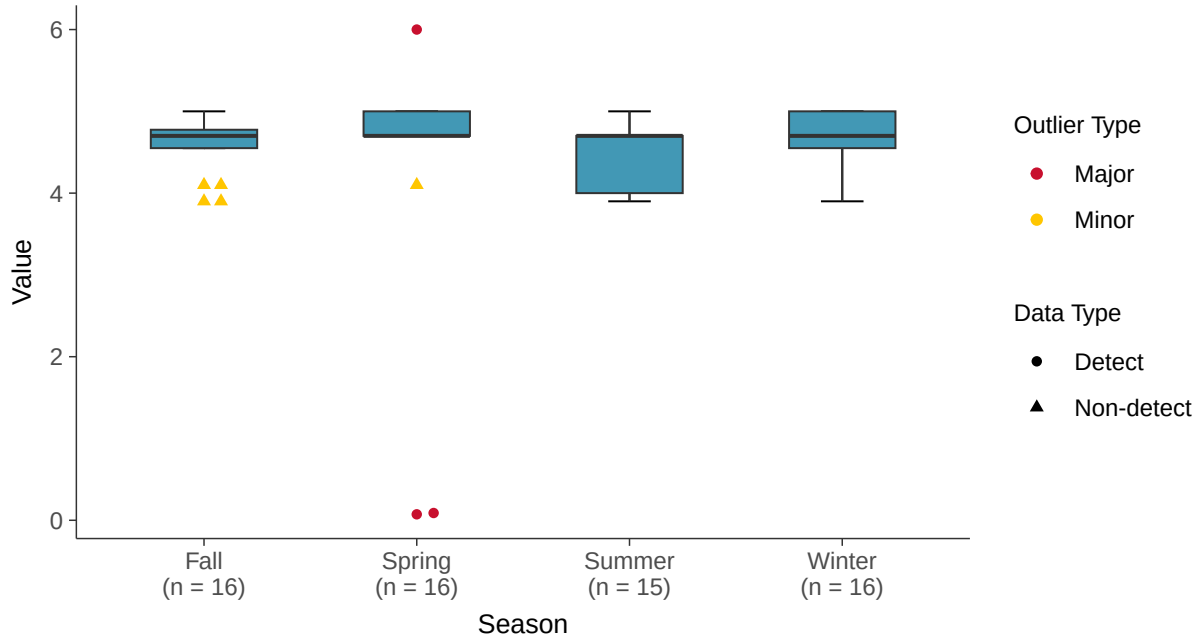
Boxplot

Selenium, BG-1 & BG-2 (ug/L)



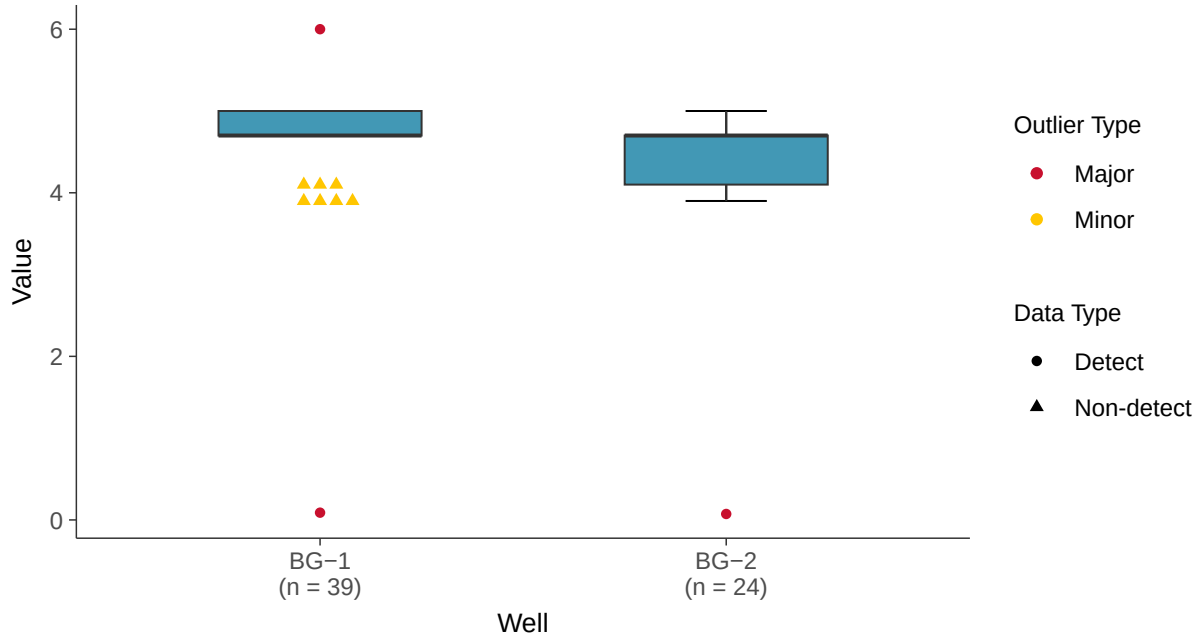
Boxplot by Season

Selenium, BG-1 & BG-2 (ug/L)



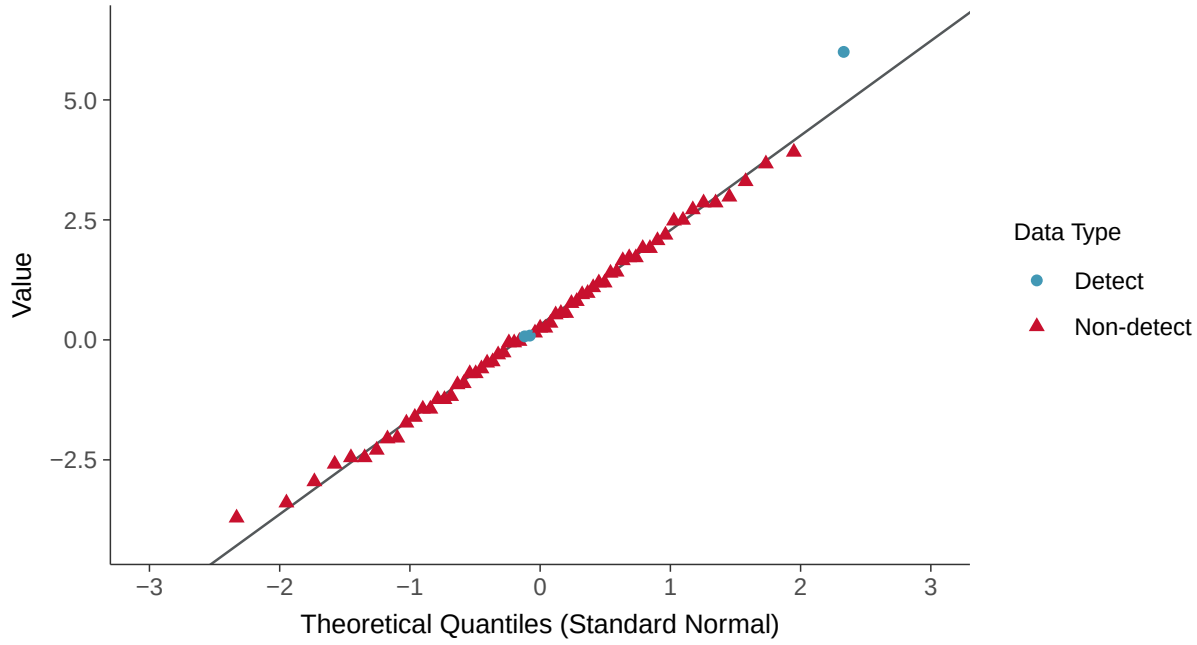
Boxplot by Well

Selenium, BG-1 & BG-2 (ug/L)



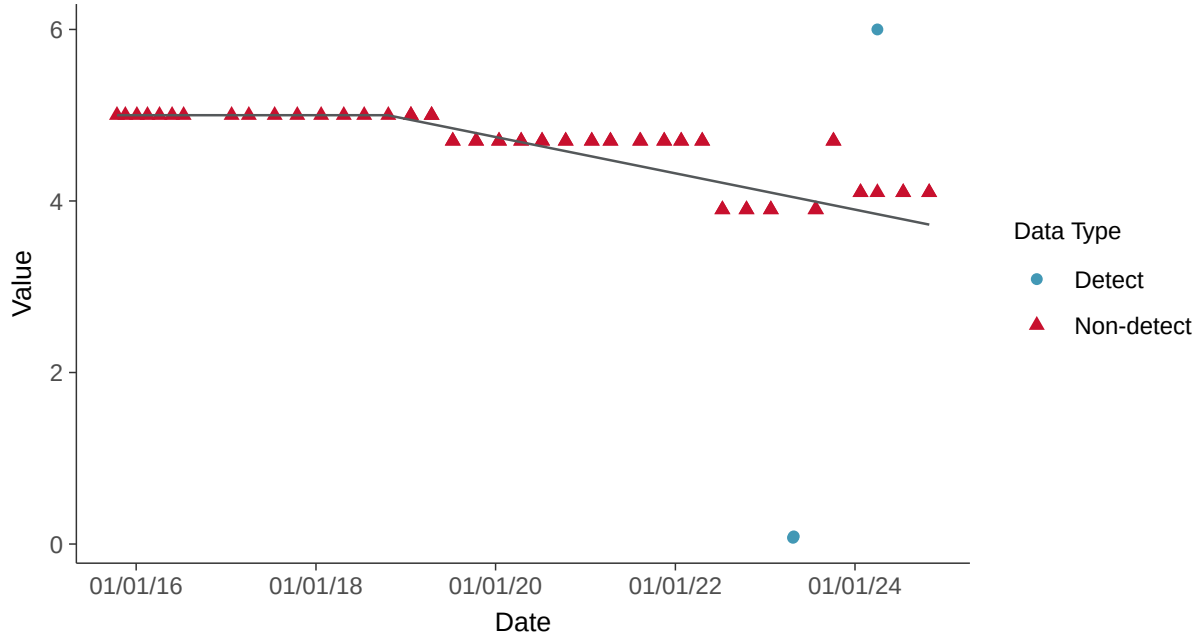
Normal Q-Q plot using ROS Imputed Estimates

Selenium, BG-1 & BG-2 (ug/L)



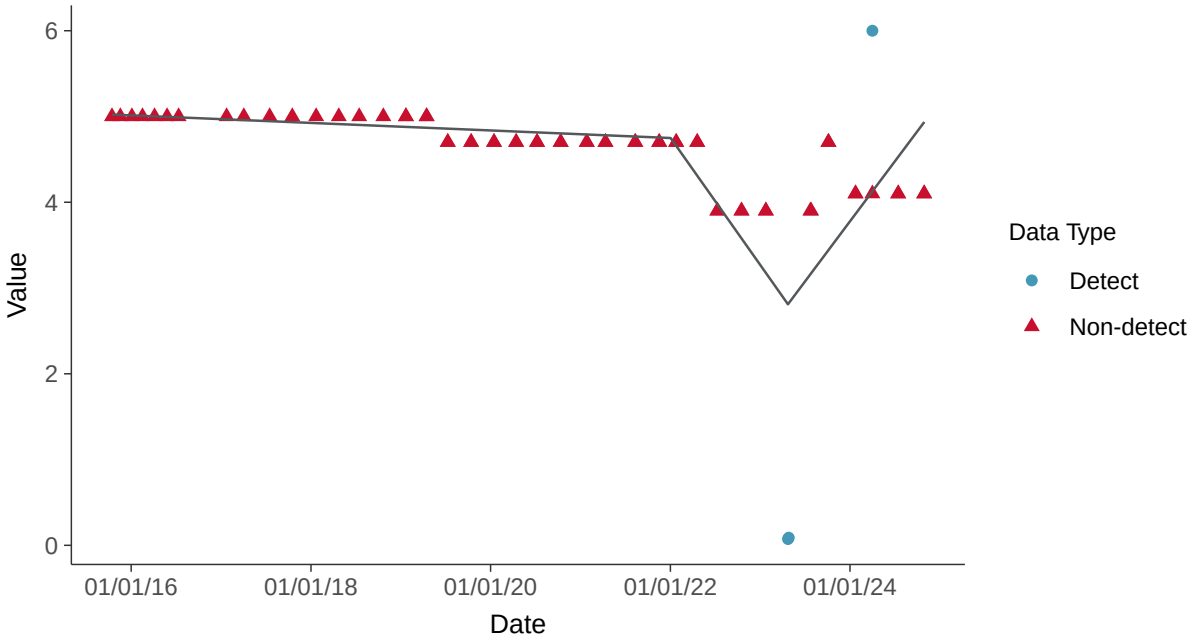
Trend Regression: Piecewise Linear-Linear

Selenium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, BG-1 & BG-2 (ug/L)

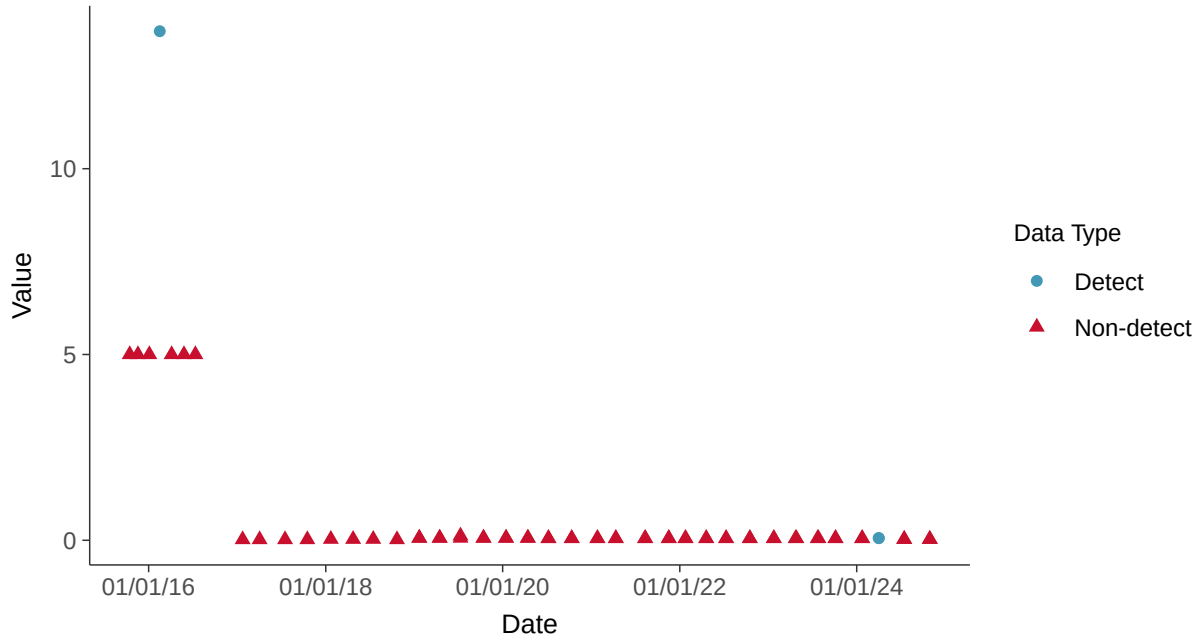


App. IV: Thallium, BG-1 & BG-2

ID: 3_124

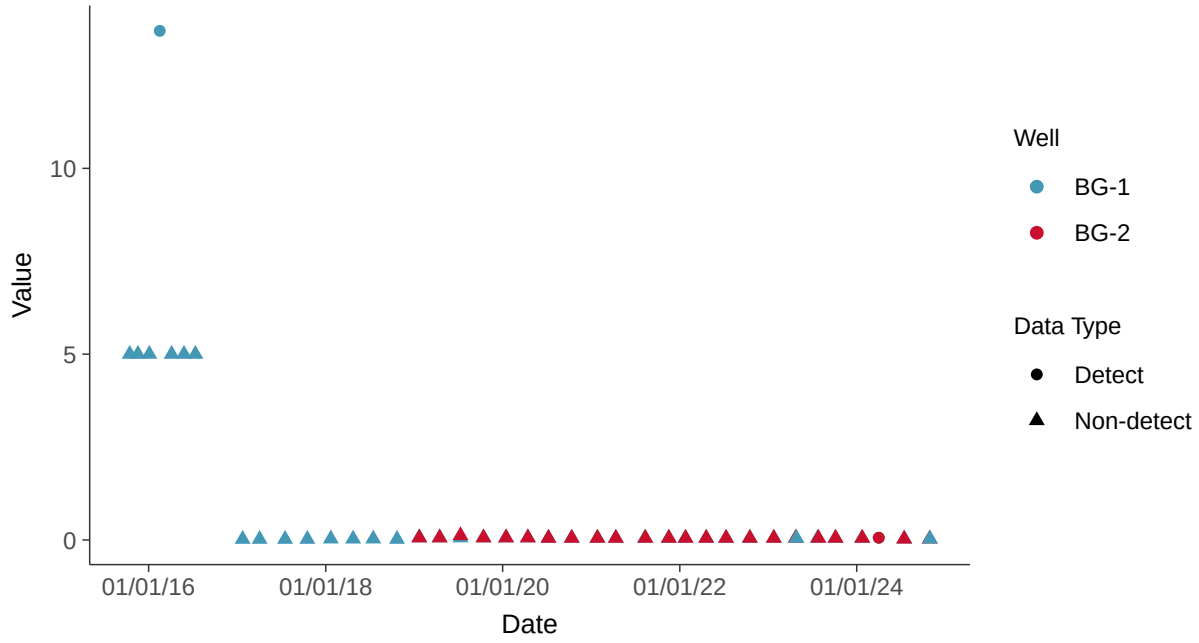
Scatter Plot

Thallium, BG-1 & BG-2 (ug/L)



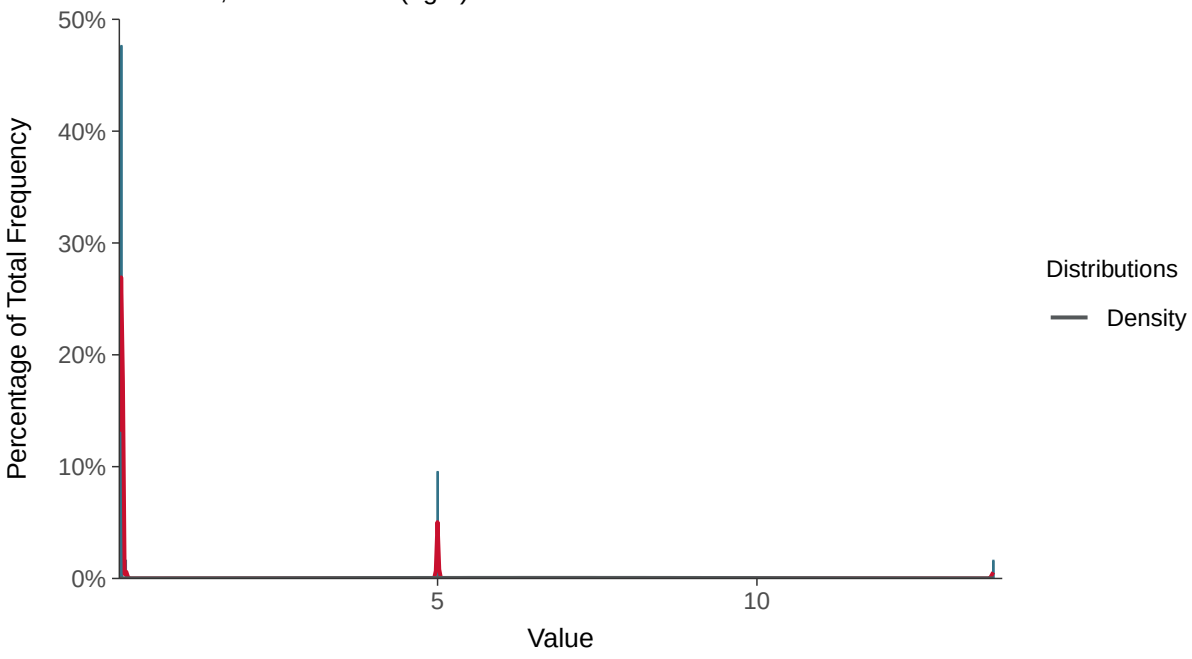
Scatter Plot by Well

Thallium, BG-1 & BG-2 (ug/L)



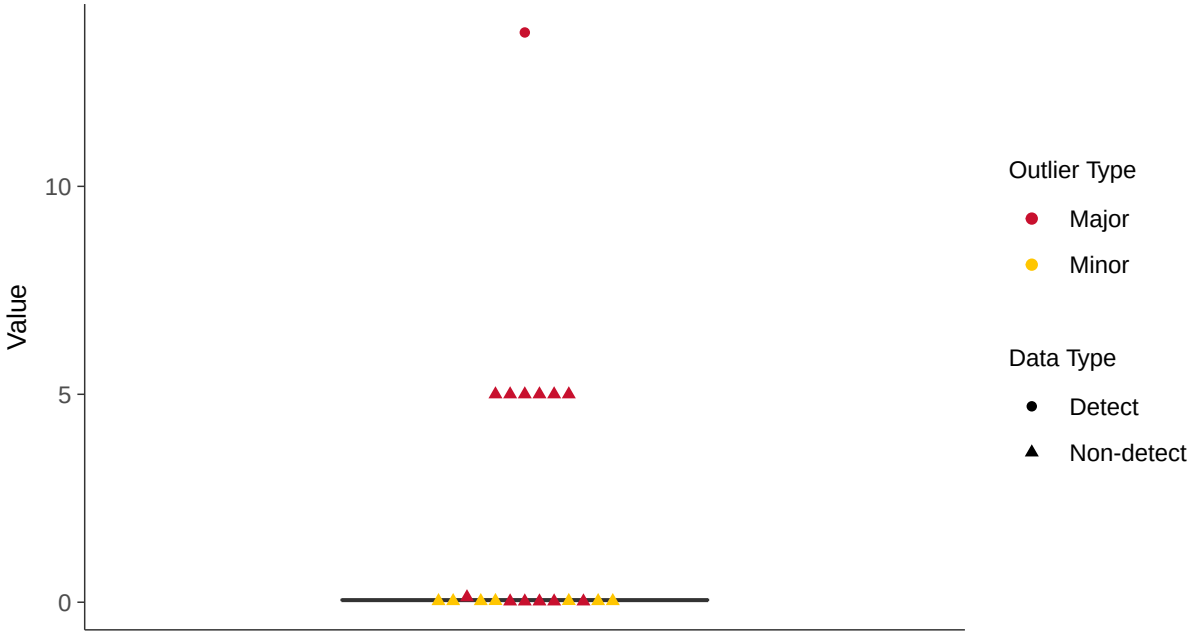
Histogram

Thallium, BG-1 & BG-2 (ug/L)



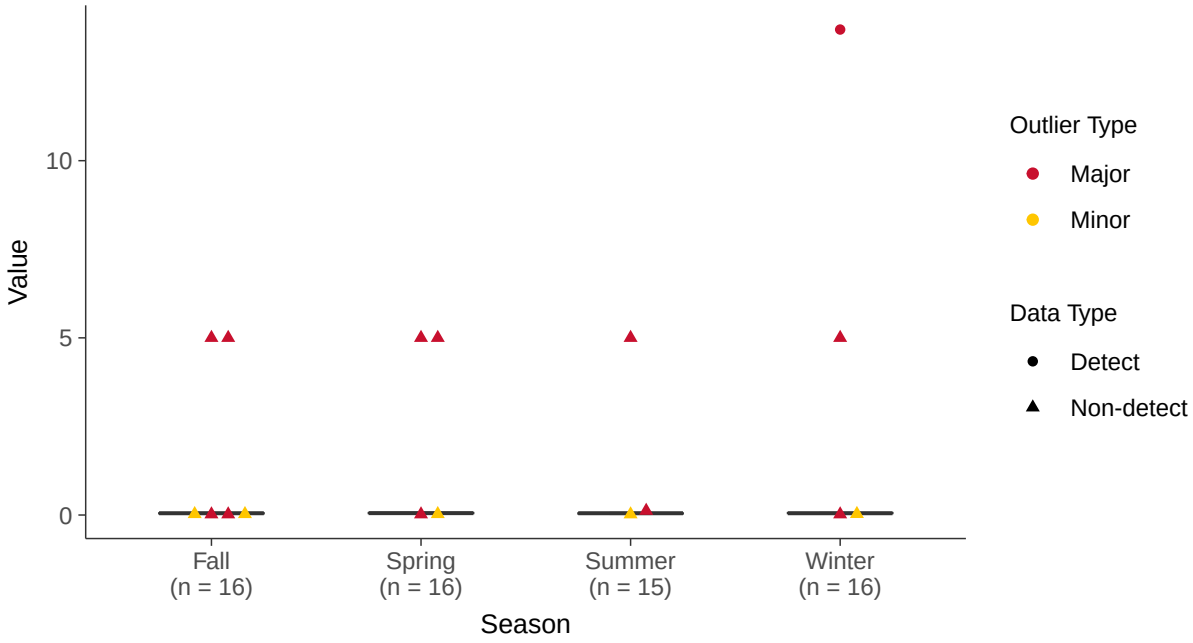
Boxplot

Thallium, BG-1 & BG-2 (ug/L)



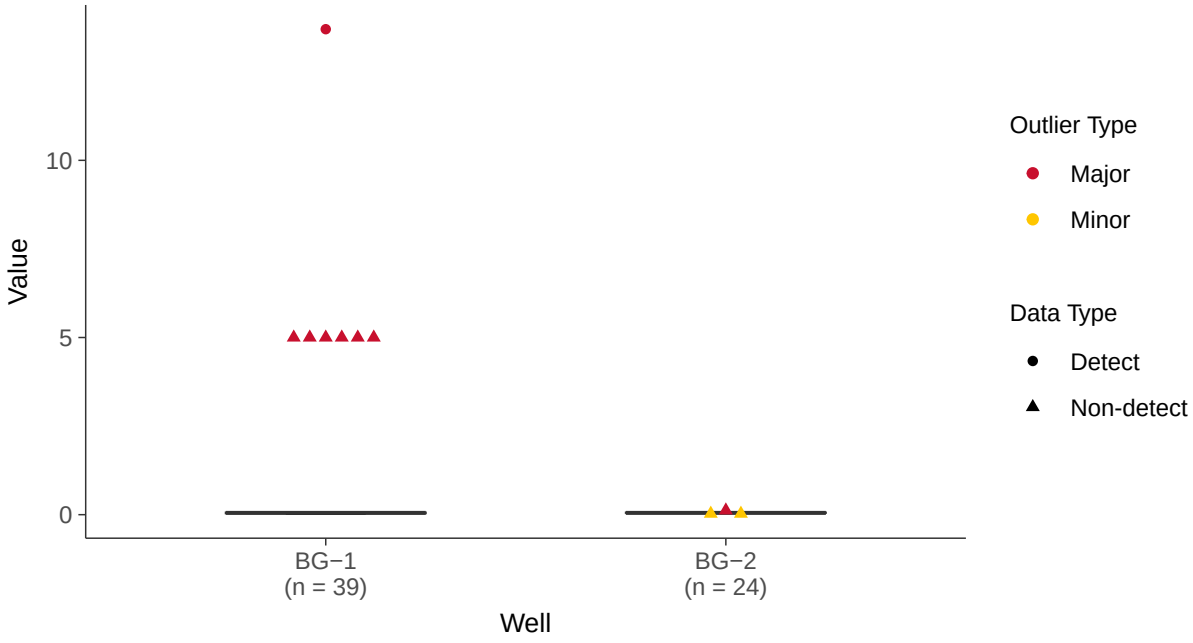
Boxplot by Season

Thallium, BG-1 & BG-2 (ug/L)



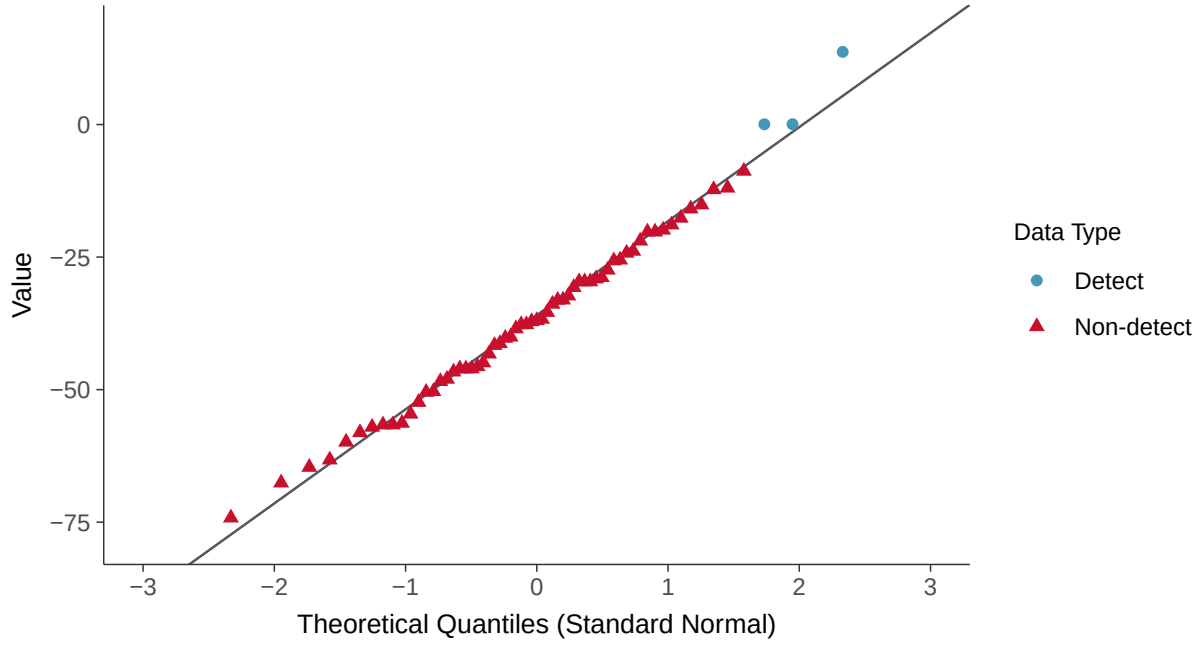
Boxplot by Well

Thallium, BG-1 & BG-2 (ug/L)



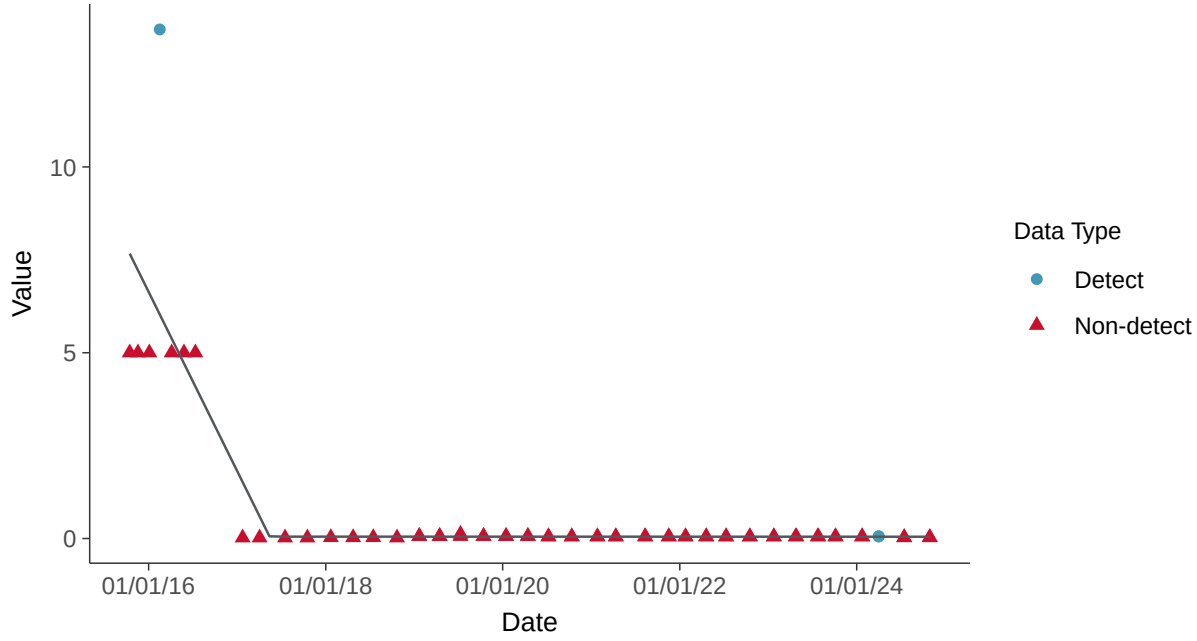
Normal Q-Q plot using ROS Imputed Estimates

Thallium, BG-1 & BG-2 (ug/L)



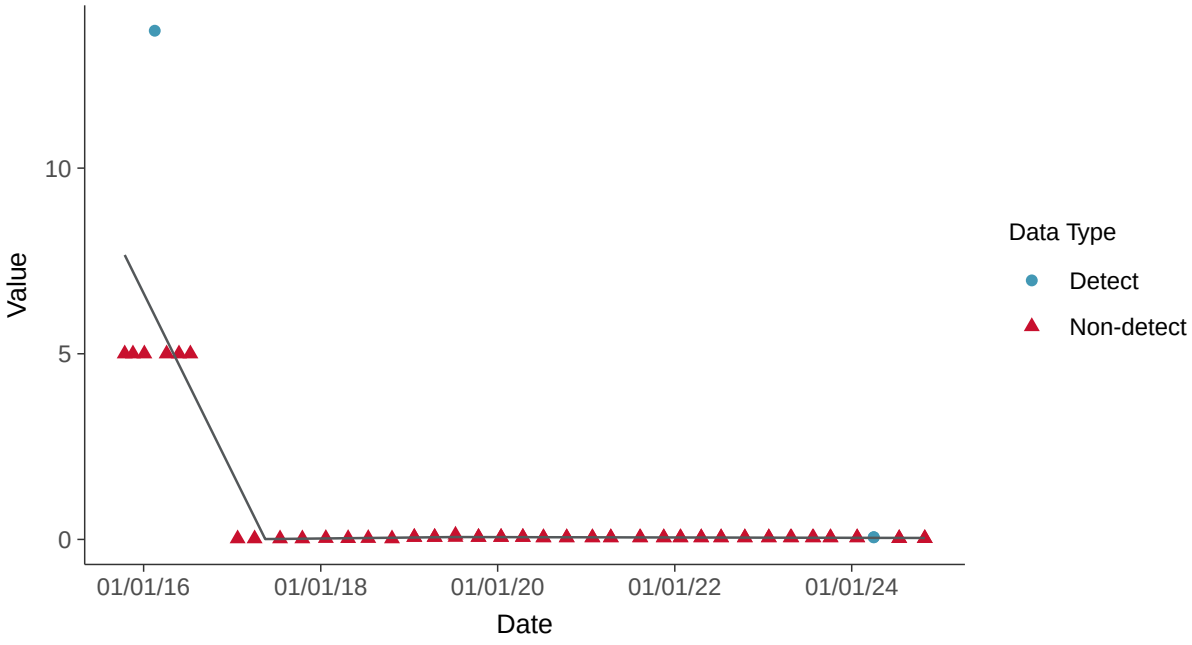
Trend Regression: Piecewise Linear-Linear

Thallium, BG-1 & BG-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, BG-1 & BG-2 (ug/L)

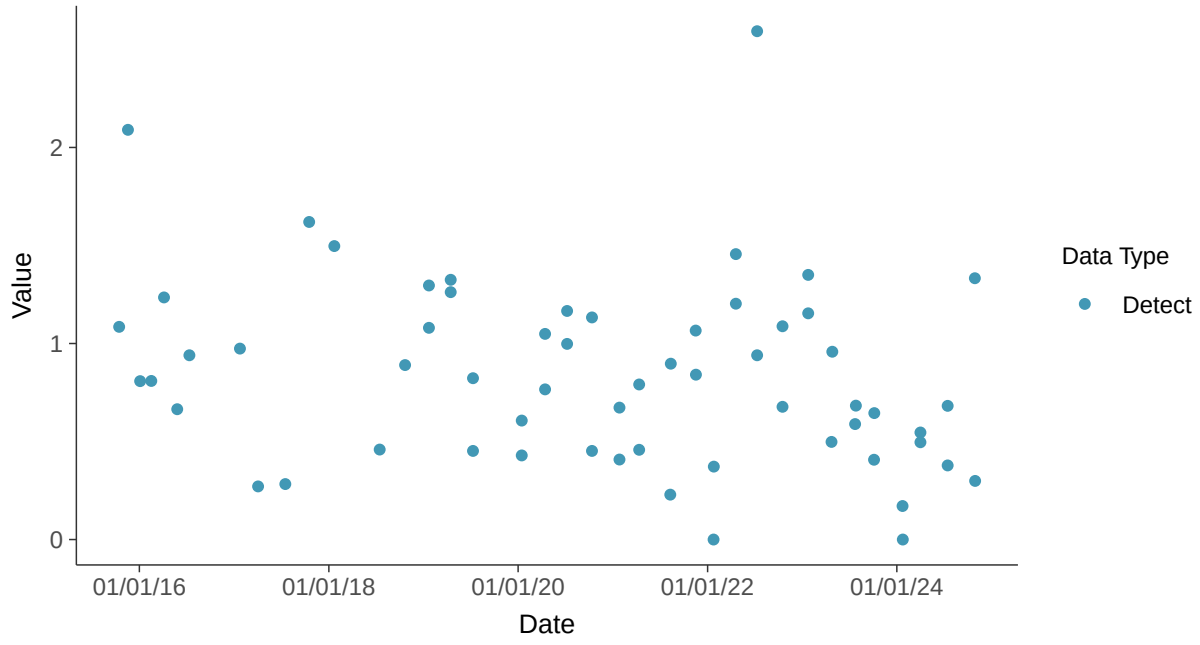


App. IV: Total Radium, BG-1 & BG-2

ID: 3_126

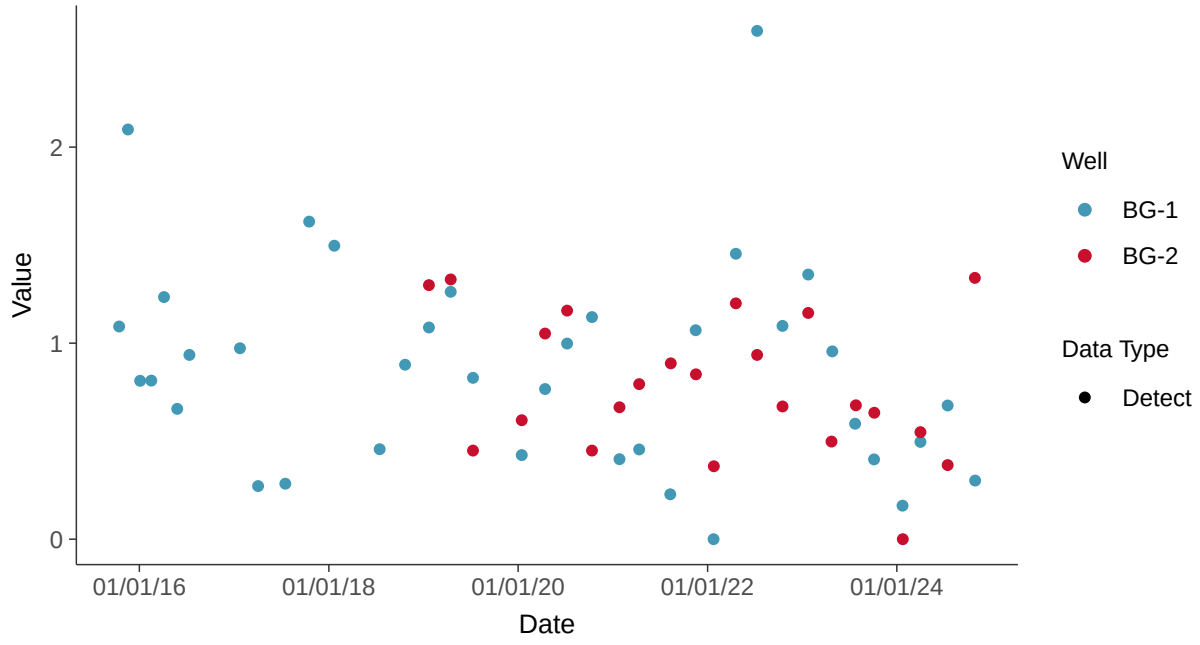
Scatter Plot

Total Radium, BG-1 & BG-2 (pCi/L)



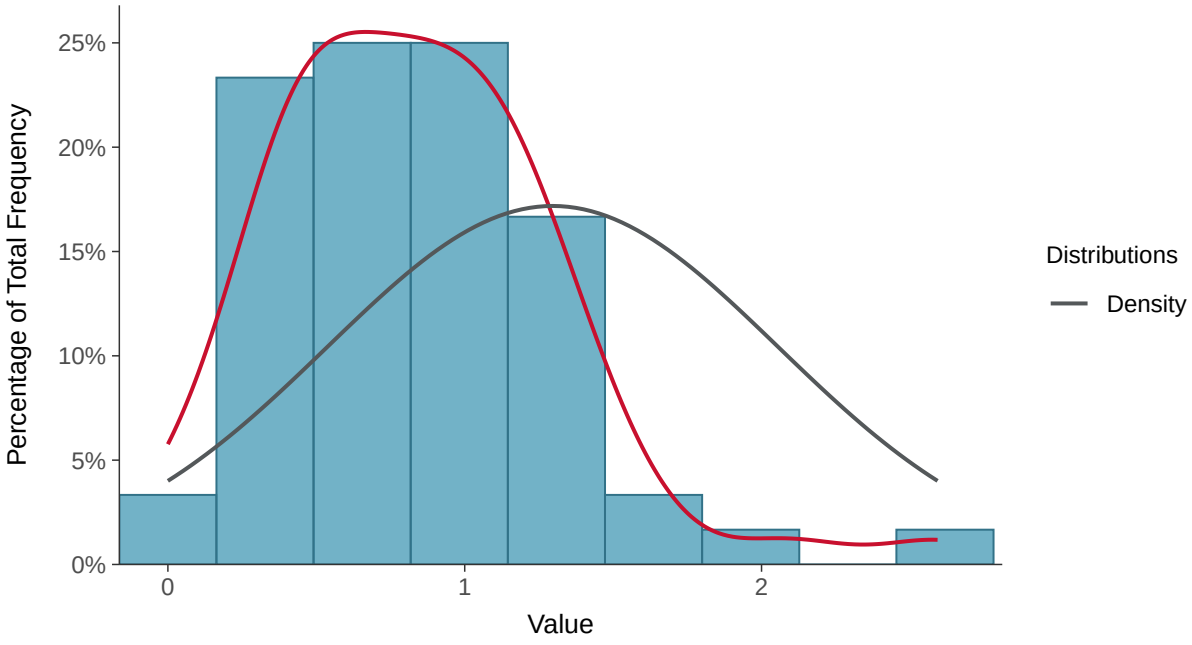
Scatter Plot by Well

Total Radium, BG-1 & BG-2 (pCi/L)



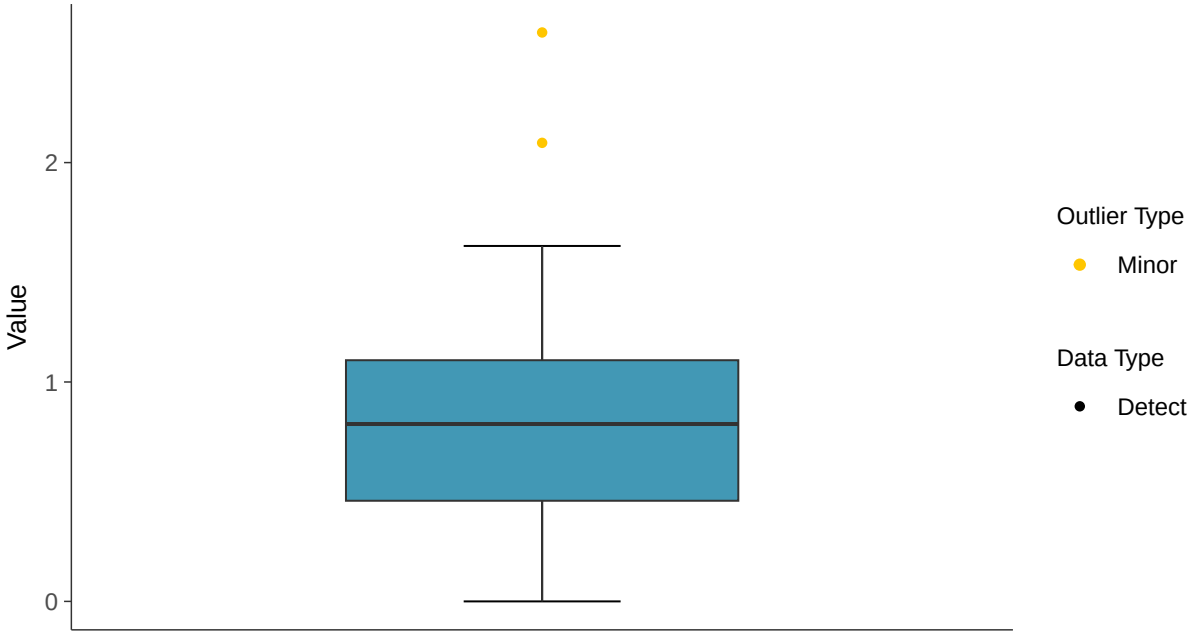
Histogram

Total Radium, BG-1 & BG-2 (pCi/L)



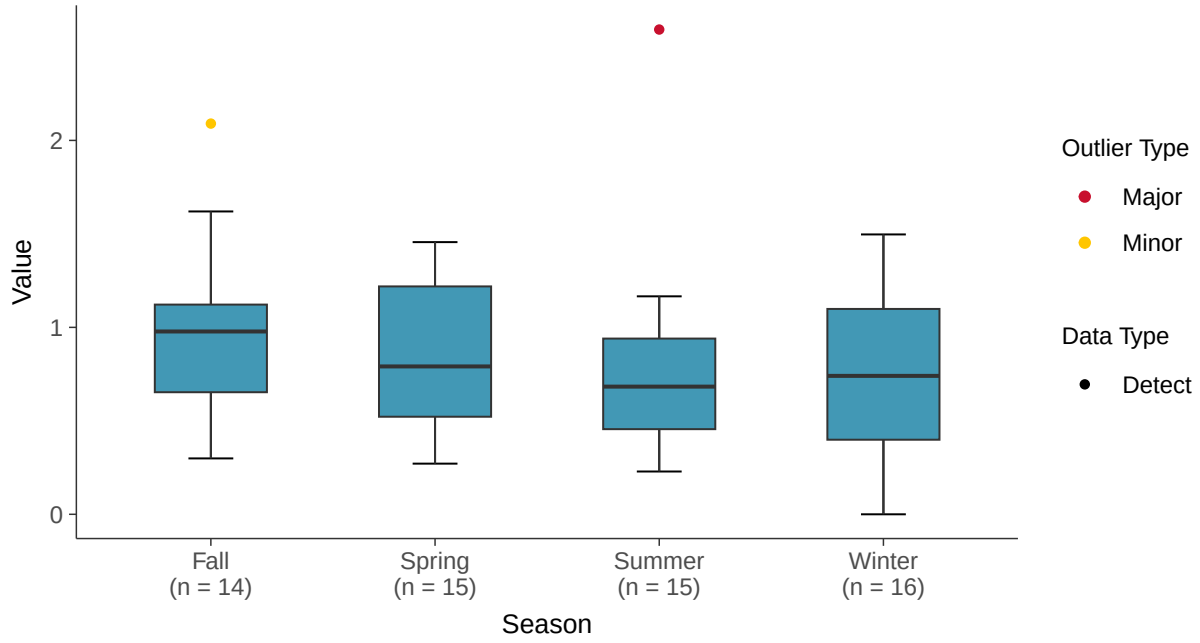
Boxplot

Total Radium, BG-1 & BG-2 (pCi/L)



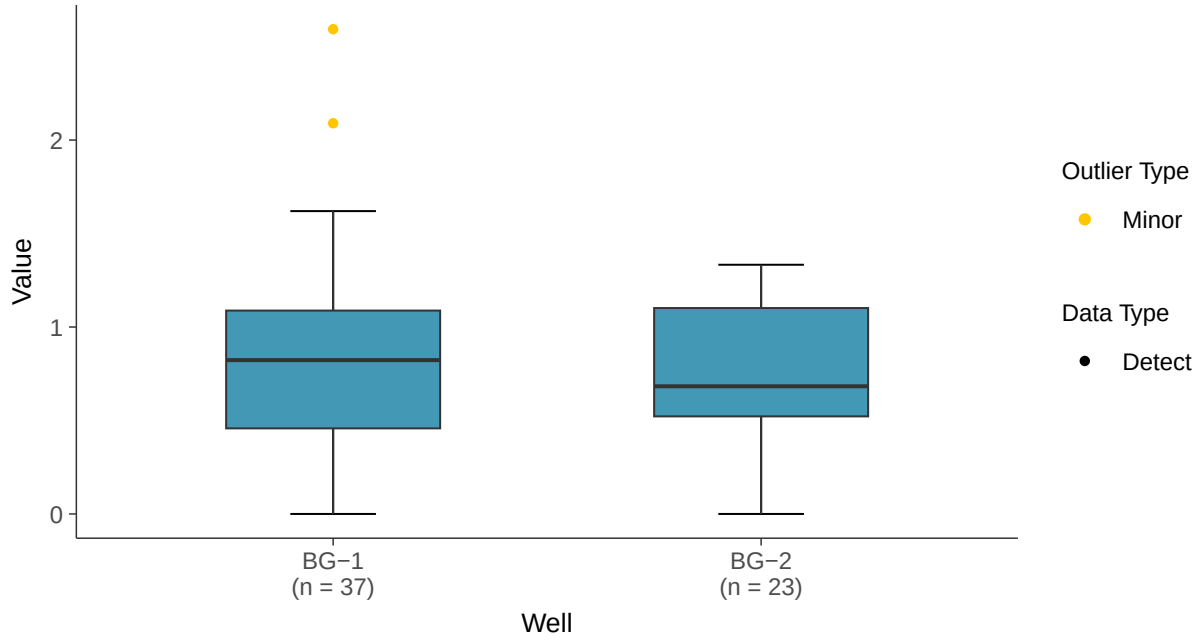
Boxplot by Season

Total Radium, BG-1 & BG-2 (pCi/L)



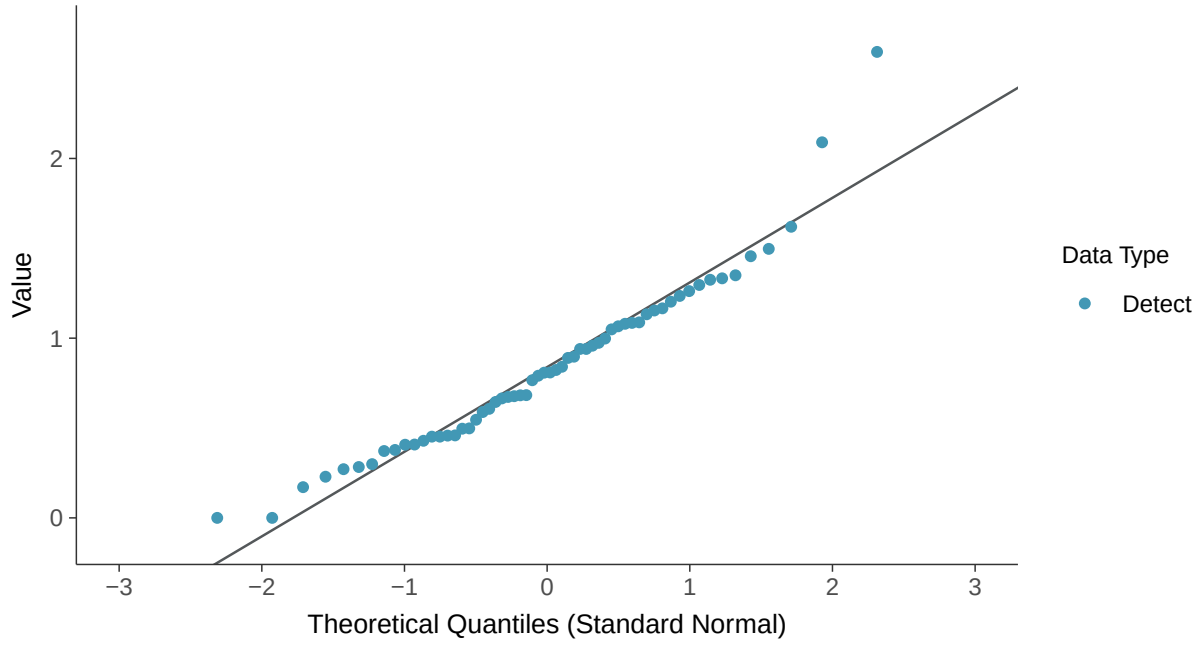
Boxplot by Well

Total Radium, BG-1 & BG-2 (pCi/L)



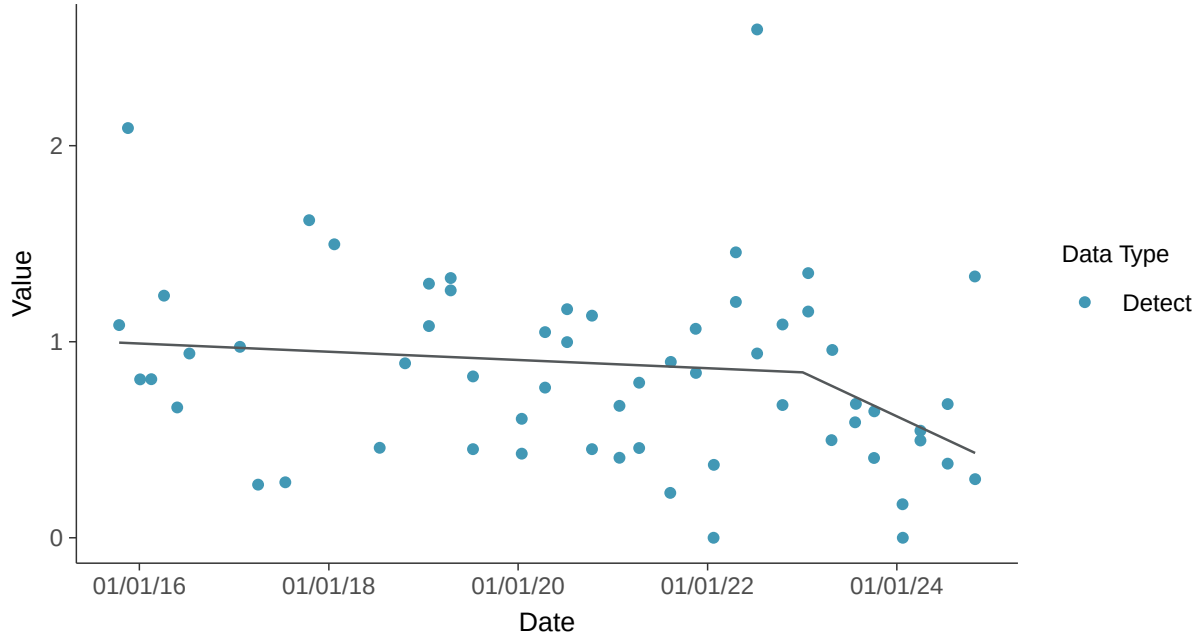
Normal Q-Q plot

Total Radium, BG-1 & BG-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Total Radium, BG-1 & BG-2 (pCi/L)



This page intentionally left blank.

C

Appendix C – Downgradient Wells Tables

This page intentionally left blank.

Table 1: Summary Statistics, Non-Detects Included

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.25	2.50	0.620	15.0	2.42	0.743	3.43	15.1
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.16	2.50	0.880	13.3	2.38	0.752	2.50	8.39
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.10	2.50	0.200	2.50	0.745	0.355	-1.47	0.494
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.39	2.50	1.30	9.80	1.75	0.517	1.81	4.39
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	10.3	9.50	2.70	35.3	7.40	0.715	1.85	3.56
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	8.94	8.50	0.570	44.6	9.30	1.04	2.90	9.57
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	165382	163000	43100	311000	75614	0.457	0.121	-0.869
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	604	636	83.9	1240	272	0.450	-0.0975	-0.398
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.148	0.155	0.0200	0.210	0.0319	0.216	-1.56	5.82
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.74	6.70	6.41	7.30	0.223	0.0330	0.747	0.0271
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	7.06	6.65	4.50	11.2	1.61	0.228	1.14	0.880
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	1449	1310	346	3390	727	0.502	0.575	-0.112
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	3.68	3.80	0.200	6.10	1.02	0.276	-0.181	3.61
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	4.0	4.70	1.70	5.20	1.12	0.281	-0.618	-1.38
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	213	216	36.3	421	99.7	0.468	0.240	-0.581
01_03_104	MW-1	App. IV	Beryllium	ug/L	38	38	100%	2015-11-20 to 2024-10-30		Nonparametric	0.433	0.500	0.0500	0.700	0.211	0.488	-0.263	-1.33
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	0.430	0.450	0.0600	0.670	0.109	0.253	-0.913	2.42
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.65	2.50	0.630	18.4	3.31	0.907	2.87	10.4
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	2.19	2.50	0.140	3.60	1.10	0.505	-0.280	-1.15
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.148	0.155	0.0200	0.210	0.0319	0.216	-1.56	5.82
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	3.11	2.50	0.250	13.7	2.19	0.703	3.26	14.5
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	32.9	33.0	19.2	47.5	5.94	0.180	-0.00405	0.381
01_03_115	MW-1	App. IV	Mercury	ug/L	38	38	100%	2015-11-20 to 2024-10-30		Nonparametric	0.109	0.100	0.0900	0.120	0.0104	0.0961	0.126	-1.88
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.47	2.50	0.340	15.1	3.02	0.871	3.10	9.82
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.250	0.234	-0.378	1.03	0.318	1.27	0.364	0.646
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.591	0.597	-0.0467	1.45	0.277	0.469	0.483	2.15
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	4.58	4.70	0.280	5.00	0.803	0.175	-4.38	22.9
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	2015-11-20 to 2024-10-30		Nonparametric	0.845	0.0500	0.0200	5.00	1.83	2.16	1.94	1.89
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.880	0.824	0.237	2.48	0.436	0.496	1.43	3.87
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	19.8	3.60	0.620	294	55.2	2.79	4.38	20.4
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Gamma	13.5	4.50	0.900	115	23.2	1.72	3.25	11.7
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	2.00	2.50	0.0730	2.50	0.841	0.420	-1.23	-0.284
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	4.05	2.50	1.30	37.2	6.09	1.50	5.35	29.8
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	70.3	10.7	3.60	1590	276	3.92	5.55	31.4
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	43.6	43.0	8.50	63.9	8.84	0.203	-1.61	7.83
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	183736	188000	34300	221000	33778	0.184	-2.88	11.7
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1084	1130	489	1360	192	0.177	-1.59	2.98
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.209	0.220	0.0200	0.400	0.0685	0.328	-0.340	2.71
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.69	7.60	7.35	9.29	0.392	0.0509	2.85	9.78
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	127	94.0	51.7	338	78.4	0.616	1.20	0.360
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2669	2560	257	11700	1746	0.654	4.42	23.9
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	6.04	3.90	0.610	30.0	5.06	0.837	3.56	16

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.60	4.70	2.50	11.5	2.02	0.440	1.82	4.60
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	299	308	90.8	565	85.0	0.285	0.620	2.91
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	0.467	0.500	0.160	1.10	0.224	0.479	0.301	0.497
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	2015-11-19 to 2024-10-31		Nonparametric	0.428	0.480	0.0780	0.680	0.107	0.251	-0.892	2.65
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	17.5	5.90	1.00	130	27.6	1.58	2.81	8.62
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	3.39	2.50	0.440	34.8	5.72	1.69	5.48	31
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.209	0.220	0.0200	0.400	0.0685	0.328	-0.340	2.71
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	2015-11-19 to 2024-10-31		Nonparametric	3.97	2.50	1.40	27.5	4.78	1.20	4.21	19.5
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	155	132	41.2	512	90.7	0.587	2.57	7.72
02_03_115	MW-2	App. IV	Mercury	ug/L	33	33	100%	2015-11-19 to 2024-10-31		Nonparametric	0.109	0.100	0.0900	0.120	0.0106	0.0968	-0.0412	-1.90
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	2015-11-19 to 2024-10-31	Lognormal	Lognormal	9.45	7.10	2.60	41.0	7.33	0.776	2.79	10.2
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.893	0.927	0.227	1.94	0.358	0.401	0.495	1.09
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	1.36	1.35	0.433	2.23	0.470	0.346	0.157	-0.770
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	4.57	4.70	0.940	5.00	0.763	0.167	-3.63	16.3
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1.15	0.0600	0.0200	10.3	2.43	2.11	2.38	5.58
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	2.25	2.37	1.10	3.35	0.683	0.303	-0.270	-1.07
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	9.87	2.85	0.620	137	24	2.43	4.69	23.9
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	7.30	2.50	0.900	86.0	15.9	2.17	4.26	19.0
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	2.06	2.50	0.0700	2.50	0.804	0.390	-1.44	0.355
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	3.42	2.50	1.30	13.9	2.30	0.672	3.22	12.4
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	8.73	5.00	3.00	42.7	7.21	0.825	3.43	14.5
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	2015-11-19 to 2024-10-31	Normal	Normal	27.1	31.1	0.570	49.6	17.2	0.636	-0.442	-1.33
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	173000	178500	117000	203000	19524	0.113	-0.856	0.604
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Normal	1063	1080	565	1280	137	0.128	-1.40	4.17
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.353	0.340	0.0200	0.610	0.123	0.349	0.0356	0.607
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.33	7.36	6.18	7.77	0.261	0.0356	-2.71	12.1
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	48.2	21.8	9.10	174	46.7	0.968	1.33	0.825
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2232	2370	256	3180	605	0.271	-2.01	4.94
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	5.22	3.90	1.30	15.0	3.09	0.592	1.59	1.93
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.31	4.70	1.90	9.60	1.66	0.384	0.886	1.64
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	653	664	353	855	108	0.166	-0.530	0.284
03_03_104	MW-3	App. IV	Beryllium	ug/L	36	36	100%	2015-11-19 to 2024-10-31		Nonparametric	0.446	0.500	0.0500	0.700	0.210	0.469	-0.399	-1.17
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	0.415	0.400	0.0600	0.500	0.0979	0.236	-1.47	3.36
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	11.5	3.70	0.630	179	31.7	2.75	4.76	23.9
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	2015-11-19 to 2024-10-31		Nonparametric	2.36	2.50	0.0610	6.20	1.28	0.544	0.325	0.895
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.353	0.340	0.0200	0.610	0.123	0.349	0.0356	0.607
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	2015-11-19 to 2024-10-31		Nonparametric	3.30	2.50	0.190	13.7	2.30	0.695	2.87	11.6
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	90.5	86.5	0.390	236	39.7	0.439	2.06	7.42
03_03_115	MW-3	App. IV	Mercury	ug/L	36	36	100%	2015-11-19 to 2024-10-31		Nonparametric	0.109	0.100	0.0900	0.120	0.0105	0.0964	0.0184	-1.90
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	9.01	8.00	5.10	35.7	4.96	0.551	4.69	25.3
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.905	0.816	0.213	1.92	0.363	0.401	0.399	0.279
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	1.46	1.54	0.326	2.86	0.563	0.387	-0.0423	0.215

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	4.55	4.70	0.270	5.00	0.833	0.183	-4.11	20.5
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	2015-11-19 to 2024-10-31		Nonparametric	0.898	0.0500	0.0200	5.00	1.86	2.08	1.86	1.55
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	2.36	2.31	0.857	3.92	0.712	0.302	-0.00199	-0.0996
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	9.02	2.50	0.620	170	29.2	3.24	5.13	27.4
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	6.18	5.30	0.900	12.8	3.45	0.558	0.430	-0.963
04_01_122	MW-4	App. I Metals	Silver	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	2.05	2.50	0.0700	2.50	0.812	0.395	-1.39	0.173
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-19 to 2024-10-31		Nonparametric	2.67	2.50	0.250	10.7	1.69	0.633	2.99	13.7
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	9.88	8.80	3.90	47.2	8.10	0.820	3.24	12.8
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	11.7	7.20	0.570	165	27.2	2.32	5.45	31.1
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	55549	58900	17900	71600	12766	0.230	-1.55	2.33
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	409	423	144	567	104	0.254	-0.932	0.320
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	6.26	6.25	5.91	6.56	0.139	0.0222	-0.00669	0.168
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	10.1	10.7	3.40	13.4	2.33	0.232	-1.41	1.96
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1077	1130	395	1580	229	0.212	-1.38	3.06
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	3.76	3.80	0.200	7.00	1.10	0.291	0.149	3.83
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	3.93	4.70	0.360	5.10	1.21	0.309	-0.942	0.0926
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	287	302	85.9	431	70.4	0.245	-1.29	2.36
04_03_104	MW-4	App. IV	Beryllium	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	0.432	0.500	0.0500	0.700	0.214	0.496	-0.235	-1.38
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	0.414	0.400	0.0600	0.500	0.0960	0.232	-1.48	3.56
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	2.86	2.50	0.580	9.90	1.95	0.682	1.97	5.26
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	7.42	3.60	1.10	28.2	7.11	0.958	1.54	1.50
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	3.12	2.50	0.0770	13.7	2.23	0.714	3.16	13.9
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	31.3	28.3	15.8	98.0	12.8	0.411	4.05	20.9
04_03_115	MW-4	App. IV	Mercury	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	0.109	0.100	0.0900	0.120	0.0105	0.0963	0.0734	-1.90
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.23	2.50	0.480	20.9	4.87	1.15	2.85	7.18
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	0.308	0.239	-0.259	0.913	0.284	0.923	0.249	-0.413
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.540	0.465	0.0190	1.57	0.369	0.682	0.923	0.688
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	4.58	4.70	0.140	5.90	0.867	0.189	-3.87	19.6
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	0.864	0.0500	0.0200	5.00	1.85	2.14	1.90	1.72
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.864	0.760	0.146	2.26	0.497	0.575	1.07	0.841
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	3.55	2.50	0.620	12.9	2.44	0.688	2.23	5.74
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	5.76	2.50	0.640	120	19.1	3.32	6.09	37.4
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	2.07	2.50	0.0700	2.50	0.804	0.389	-1.43	0.298
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	2.44	2.50	0.510	3.90	1.00	0.411	0.0935	-0.862
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Nonparametric	9.06	9.50	3.80	36.1	5.92	0.653	2.87	11.4
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	9.08	9.60	0.570	39.3	6.36	0.701	2.77	14
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Gamma	10992	10300	7990	16900	2198	0.200	0.691	-0.184
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	20.1	19.6	17.6	23.1	1.56	0.0775	0.188	-1.13
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	6.90	6.96	5.50	8.54	0.480	0.0696	-0.118	5.98

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	3.62	3.60	2.60	5.60	0.623	0.172	1.19	2.33
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	254	226	194	1160	153	0.605	5.87	35.5
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	3.66	3.80	1.10	5.50	0.840	0.229	0.222	2.56
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	3.95	4.70	0.170	5.00	1.22	0.310	-1.05	0.518
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	103	102	75.0	153	15.7	0.153	0.814	1.34
05_03_104	MW-5	App. IV	Beryllium	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	0.433	0.500	0.0500	0.700	0.211	0.488	-0.263	-1.33
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	0.414	0.400	0.0600	0.500	0.0953	0.230	-1.47	3.59
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	10.0	2.50	0.500	260	41.8	4.17	6.11	37.5
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	2.22	2.50	0.100	3.60	1.11	0.501	-0.408	-1.03
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	3.05	2.50	0.180	13.7	2.13	0.697	3.52	17.0
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	9.53	9.30	4.20	28.6	3.49	0.366	4.51	25.4
05_03_115	MW-5	App. IV	Mercury	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	0.109	0.100	0.0900	0.120	0.0104	0.0961	0.126	-1.88
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	3.28	2.50	0.520	25.3	3.92	1.20	5.10	28.7
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.0944	0.0687	-0.640	0.778	0.271	2.87	0.217	1.18
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.404	0.364	-0.0922	1.08	0.325	0.805	0.505	-0.513
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	4.56	4.70	0.260	5.00	0.813	0.178	-4.24	21.8
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	1.10	0.0500	0.0200	14.8	2.84	2.59	3.52	14.5
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	0.560	0.554	0.0262	1.23	0.345	0.616	0.234	-1.07
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.25	2.50	0.620	19.8	3.08	0.949	4.52	24.2
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	2.58	2.50	0.900	8.20	1.33	0.518	2.05	7.88
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	2015-11-20 to 2024-10-30		Nonparametric	2.10	2.50	0.0700	2.50	0.795	0.379	-1.57	0.715
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-20 to 2024-10-30		Nonparametric	2.51	2.50	0.810	5.10	1.03	0.410	0.485	-0.308
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	8.02	5.00	3.60	27.5	4.79	0.597	2.16	6.63
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	6.27	8.00	0.570	10.8	3.21	0.513	-0.809	-0.970
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	34792	34500	30300	40200	2280	0.0655	0.357	-0.0934
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	207	212	15.3	279	49.8	0.240	-1.97	5.88
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.366	0.370	0.0500	0.520	0.0808	0.220	-1.72	6.23
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	6.41	6.37	6.15	7.00	0.192	0.0299	1.08	1.24
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	60.4	28.4	25.1	214	53.1	0.879	1.62	1.71
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Normal	Normal	638	618	371	946	98.9	0.155	0.301	2.82
06_03_101	MW-6	App. IV	Antimony	ug/L	37	37	100%	2015-11-20 to 2024-10-30		Nonparametric	3.56	3.80	0.200	5.50	0.885	0.248	-0.774	5.94
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	4.06	4.70	0.430	8.10	1.38	0.341	-0.0972	1.30
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	79.8	66.1	43.0	142	29.9	0.374	0.539	-0.961
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.442	0.500	0.100	0.700	0.207	0.469	-0.293	-1.32
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	2015-11-20 to 2024-10-30		Nonparametric	0.416	0.400	0.0600	0.500	0.0955	0.229	-1.55	3.87
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.83	2.50	0.500	14.0	2.31	0.815	3.28	15.2
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	2.22	2.50	0.440	3.60	1.09	0.490	-0.302	-1.16
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.366	0.370	0.0500	0.520	0.0808	0.220	-1.72	6.23
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	3.13	2.50	0.890	13.7	2.16	0.690	3.43	15.8
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Lognormal	Lognormal	32.8	28.5	10.1	60.5	11.6	0.354	0.804	-0.0669
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.115	0.100	0.100	0.320	0.0360	0.313	5.36	31.1

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Normal	Nonparametric	3.14	2.50	0.200	8.30	1.61	0.514	1.54	3.40
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.163	0.207	-0.579	0.910	0.283	1.74	0.0582	1.28
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.554	0.533	-0.243	1.12	0.338	0.611	-0.110	-0.421
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	4.58	4.70	0.110	5.00	0.840	0.183	-4.44	23.2
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	2015-11-20 to 2024-10-30		Nonparametric	0.880	0.0500	0.0200	6.20	1.94	2.20	1.95	2.01
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.770	0.848	0.0513	1.47	0.407	0.528	-0.0649	-1.01
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	6.21	2.60	0.620	79.3	14.7	2.36	4.95	25.3
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	36.5	3.50	0.900	880	165	4.54	5.28	27.9
07_01_122	MW-7R	App. I Metals	Silver	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	1.91	2.50	0.0700	2.50	0.890	0.465	-0.957	-0.937
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	4.89	3.90	1.30	18.8	4.58	0.937	2.46	5.00
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	10.5	9.50	3.00	53.4	12.4	1.18	3.19	9.67
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	2017-07-20 to 2024-10-30	Lognormal	Lognormal	9.65	9.40	0.570	25.3	5.11	0.530	0.777	2.43
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	91543	91400	74000	104000	6784	0.0741	-0.450	0.474
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	282	284	194	313	21.9	0.0776	-2.37	9.25
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.132	0.120	0.0500	0.320	0.0443	0.336	2.83	12.4
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	7.47	7.35	7.13	9.60	0.445	0.0597	4.33	21.1
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	17.7	16.4	13.7	51.2	6.84	0.386	4.63	23.1
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	857	860	740	990	59.1	0.0689	0.123	-0.313
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	3.95	3.60	0.200	13.6	2.17	0.550	3.32	15.2
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	2017-07-20 to 2024-10-30		Nonparametric	4.15	4.70	0.770	5.00	1.10	0.266	-1.53	1.83
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	292	302	50.1	423	68.4	0.234	-1.51	5.17
07_03_104	MW-7R	App. IV	Beryllium	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	0.403	0.500	0.0500	0.700	0.237	0.588	0.0985	-1.73
07_03_106	MW-7R	App. IV	Cadmium	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	0.387	0.400	0.0600	0.500	0.0960	0.248	-1.32	3.70
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	78.0	3.70	1.00	1940	365	4.68	5.28	27.9
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.93	2.50	0.160	20.4	3.73	1.27	4.04	19
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.132	0.120	0.0500	0.320	0.0443	0.336	2.83	12.4
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	3.55	2.50	0.270	13.7	2.57	0.724	2.41	8.42
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Normal	Normal	26.4	27.9	5.60	33.8	5.53	0.210	-2.06	6.60
07_03_115	MW-7R	App. IV	Mercury	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	0.111	0.120	0.0900	0.120	0.0107	0.0960	-0.425	-1.70
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	2017-07-20 to 2024-10-30		Nonparametric	5.20	2.60	0.900	49.5	9.40	1.81	4.29	19.7
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.208	0.130	-0.194	1.05	0.319	1.53	1.29	1.67
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Normal	Nonparametric	0.589	0.509	-0.454	2.13	0.499	0.848	1.01	3.02
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	4.41	4.70	0.180	5.00	0.918	0.208	-3.86	17.6
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	0.0658	0.0500	0.0200	0.480	0.0840	1.28	4.77	24.0
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.849	0.645	0.0664	2.31	0.588	0.693	1.05	0.500
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	2015-11-20 to 2024-10-30	Lognormal	Nonparametric	6.21	2.50	0.620	116	18.4	2.96	6.07	37.2
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	9.67	2.50	0.900	157	25.8	2.67	5.37	30.8
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	2.12	2.50	0.490	2.50	0.732	0.345	-1.56	0.650
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.81	2.50	1.30	9.50	1.43	0.508	2.82	12.4
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	13.2	9.50	3.20	62.0	13.3	1.00	2.51	6.19
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	8.07	9.00	0.570	14.0	4.07	0.504	-0.859	-0.519
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	112347	108000	4170	194000	29774	0.265	-0.314	5.08

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	414	378	229	939	150	0.363	1.79	3.39
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0615	0.0500	0.0200	0.140	0.0307	0.499	0.411	-0.267
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	7.03	7.01	6.70	7.31	0.141	0.0201	0.113	0.224
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.84	6.90	4.40	8.40	0.837	0.122	-0.632	0.614
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	968	917	224	1530	234	0.242	-0.0860	2.23
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	4.31	3.90	0.200	10.1	1.87	0.434	1.13	1.85
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	4.28	4.70	2.50	7.40	1.37	0.320	0.296	-0.115
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1148	1090	880	1880	191	0.166	2.01	5.10
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.472	0.500	0.160	1.50	0.264	0.561	1.36	4.77
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.452	0.400	0.290	1.50	0.190	0.420	4.69	26.3
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	11.5	2.50	1.00	87.6	20.2	1.75	2.86	8.22
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	2015-11-20 to 2024-10-30		Nonparametric	2.30	2.50	0.440	3.80	1.06	0.461	-0.287	-1.11
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0615	0.0500	0.0200	0.140	0.0307	0.499	0.411	-0.267
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	3.17	2.50	1.40	13.7	2.05	0.647	3.82	18.9
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Gamma	27.3	26.6	4.20	50.1	7.91	0.289	0.368	2.52
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.116	0.100	0.0900	0.370	0.0436	0.377	5.62	33.5
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	2.74	2.50	0.900	5.60	1.10	0.399	0.530	0.350
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.443	0.337	-0.357	2.51	0.513	1.16	1.88	6.50
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.861	0.731	-0.351	4.72	0.762	0.884	3.81	19.4
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	4.57	4.70	0.330	5.00	0.800	0.175	-4.26	21.9
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	0.926	0.0500	0.0200	8.80	2.14	2.31	2.33	4.64
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1.34	1.22	0	7.23	1.12	0.838	4.28	22.8
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Nonparametric	12.2	2.60	0.620	103	26.8	2.20	3.45	12.3
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Lognormal	Lognormal	4.37	2.90	0.880	27.9	6.90	1.58	3.51	12.7
09_01_122	MW-10	App. I Metals	Silver	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	1.32	1.00	0.0700	2.50	0.948	0.716	0.391	-1.72
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	2021-08-09 to 2024-10-29	Nonparametric	Nonparametric	3.69	2.45	1.50	18.2	4.28	1.16	3.42	12.3
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	13.9	9.50	3.00	94.2	23.4	1.68	3.61	13.3
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	24.9	24.1	17.8	43.4	6.09	0.245	2.30	6.98
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	21807	21800	17700	26500	2167	0.0994	0.0653	1.24
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	29.8	29.6	28.0	32.4	1.12	0.0374	0.771	1.21
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	7.79	7.77	7.48	8.16	0.155	0.0199	0.582	1.93
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	3.76	3.15	1.70	8.00	1.82	0.485	1.10	0.703
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	349	351	318	368	12	0.0343	-1.20	2.77
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	3.73	3.60	0.760	5.50	1.36	0.365	-0.201	0.380
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	2021-08-09 to 2024-10-29		Nonparametric	3.49	3.40	1.20	4.70	1.10	0.314	-0.383	-0.408
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	80.8	78.7	43.2	195	37.4	0.463	2.31	7.10
09_03_104	MW-10	App. IV	Beryllium	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	0.348	0.170	0.0500	0.700	0.274	0.788	0.623	-1.81
09_03_106	MW-10	App. IV	Cadmium	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	0.324	0.330	0.0600	0.400	0.0892	0.275	-2.08	5.94
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	7.65	3.70	0.630	56.7	14.5	1.89	3.43	12.3
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	2.00	0.960	0.440	7.60	2.11	1.06	1.60	2.54
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	4.20	3.30	0.760	13.7	3.81	0.907	1.74	2.54
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	2.98	2.10	0.690	6.70	1.99	0.667	0.659	-1.11
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	0.118	0.120	0.0900	0.120	0.00802	0.0680	-3.74	14.0
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	22.7	20.4	15.4	36.2	6.52	0.287	0.896	-0.190
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.165	0.171	-0.305	0.537	0.258	1.56	-0.400	-0.920
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.581	0.499	-0.100	1.67	0.450	0.774	0.879	1.39
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	4.04	4.10	0.500	5.20	1.10	0.272	-2.80	9.47
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	0.0503	0.0500	0.0280	0.120	0.0221	0.440	2.54	8.65
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.801	0.823	0	1.74	0.429	0.535	0.170	0.986
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	4.22	4.30	0.620	20.1	4.39	1.04	3.24	12.1
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	2.86	3.50	0.790	7.60	1.67	0.584	1.19	3.00
10_01_122	MW-11	App. I Metals	Silver	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	1.53	1.00	0.0700	2.50	0.972	0.635	-0.0740	-1.96
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	2.50	1.60	0.440	3.90	1.39	0.554	-0.0159	-2.02
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	8.22	9.50	3.00	11.0	2.98	0.362	-0.981	-0.670
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	15.4	15.2	8.50	25.2	3.51	0.227	0.890	3.46
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	30876	26700	23200	69400	10965	0.355	3.03	10.3
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Normal	Normal	128	129	74.5	149	19.2	0.150	-1.36	2.65
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.160	0.170	0.0500	0.220	0.0362	0.226	-1.57	4.94
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	2021-01-29 to 2024-10-29	Nonparametric	Nonparametric	7.04	6.66	6.53	11.7	1.26	0.179	3.84	15.0
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	2.22	2.20	1.80	3.00	0.288	0.130	0.992	2.22
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	551	416	296	2760	571	1.04	4.08	16.8
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	3.58	3.00	0.320	5.50	1.33	0.370	-0.249	1.31
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	3.68	3.40	0.400	5.60	1.31	0.357	-0.848	0.756
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	49.2	41.5	34.3	130	22.6	0.459	3.19	11.3
10_03_104	MW-11	App. IV	Beryllium	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	0.410	0.170	0.0500	0.700	0.283	0.691	0.0957	-2.21
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	0.338	0.330	0.0600	0.400	0.0857	0.254	-2.24	6.62
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	2020-10-15 to 2024-10-29		Nonparametric	3.21	3.70	0.500	8.80	2.31	0.720	1.20	1.50
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	2.14	1.30	0.440	3.60	1.44	0.674	0.0570	-2.17
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.160	0.170	0.0500	0.220	0.0362	0.226	-1.57	4.94
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	3.82	4.50	0.190	13.7	2.97	0.778	2.32	7.77
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	10.7	10.1	8.30	19.5	2.53	0.236	2.86	9.67
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	0.118	0.120	0.0900	0.120	0.00728	0.0615	-4.12	17.0
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	2.86	2.60	0.410	3.90	1.14	0.399	-0.618	-0.740
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Normal	Nonparametric	0.0878	0.0925	-0.149	0.399	0.172	1.96	0.437	-1.04
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	0.485	0.500	-0.135	2.13	0.527	1.09	1.99	5.48
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	4.10	4.10	0.0720	4.70	1.10	0.268	-3.41	12.9
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	0.0495	0.0500	0.0280	0.0850	0.0117	0.236	1.11	6.17
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	0.614	0.500	0.124	2.39	0.550	0.897	2.45	6.78
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	4.13	2.60	0.620	15.4	4.60	1.11	1.97	3.11
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	2.40	1.70	0.880	6.20	1.60	0.665	0.874	0.362
11_01_122	MW-11D	App. I Metals	Silver	ug/L	15	15	100%	2021-04-13 to 2024-10-29		Nonparametric	1.40	1.00	0.0700	2.50	0.963	0.687	0.211	-1.89
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	2.37	1.60	0.690	3.90	1.32	0.559	0.309	-1.96

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	8.51	9.50	2.90	18.6	4.16	0.490	0.552	1.21
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	54.4	50.9	41.7	109	17.0	0.313	2.70	8.14
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	25847	18400	14000	94400	19927	0.771	3.28	11.7
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	126	81.4	52.3	530	122	0.971	2.90	9.37
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	8.41	8.39	8.06	8.92	0.246	0.0292	0.750	0.212
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	86.6	27.4	0.500	523	133	1.54	2.85	9.05
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	549	396	312	1740	369	0.673	2.72	8.30
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	2021-04-13 to 2024-10-29		Nonparametric	3.84	3.60	0.620	5.60	1.42	0.370	-0.367	0.281
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	6.46	4.70	2.50	16.5	4.61	0.713	1.34	0.548
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	105	113	65.7	124	18.1	0.172	-1.25	0.774
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.375	0.170	0.110	0.700	0.275	0.732	0.445	-2.09
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	2021-04-13 to 2024-10-29		Nonparametric	0.329	0.330	0.0600	0.400	0.0881	0.268	-2.13	6.11
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	2.72	3.20	0.630	8.00	1.98	0.728	1.19	2.39
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	1.83	0.960	0.210	3.60	1.52	0.830	0.376	-2.04
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	3.84	4.50	1.40	13.7	3.06	0.798	2.56	8.19
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Lognormal	Lognormal	29.6	25.3	16.0	80.7	17.5	0.591	2.27	5.09
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	2021-04-13 to 2024-10-29		Nonparametric	0.118	0.120	0.0900	0.120	0.00775	0.0656	-3.87	15.0
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	22.6	9.30	3.60	127	31.5	1.39	2.93	9.64
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Normal	Nonparametric	0.208	0.0934	-0.101	0.692	0.268	1.29	0.563	-1.04
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.600	0.502	0.0582	2.23	0.546	0.911	2.04	5.31
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	4.03	4.10	0.230	4.70	1.11	0.275	-3.20	11.4
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.0500	0.0500	0.0280	0.0940	0.0144	0.288	1.76	7.00
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.828	0.714	0.125	2.27	0.572	0.691	1.05	1.44

[a] Non-detects are excluded from goodness-of-fit tests.

Table 2: Summary Statistics, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.63	4.50	0.860	15.0	5.42	0.963	1.14	0.845
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.33	5.25	1.50	13.3	3.65	0.685	1.08	1.36
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.888	1.00	0.200	1.20	0.379	0.427	-1.47	2.04
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	4.45	3.85	1.90	9.80	2.30	0.516	1.10	0.834
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	17.1	13.8	5.00	35.3	8.85	0.519	0.909	-0.0370
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	12.5	9.70	6.20	44.6	9.27	0.744	3.37	12.2
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	165382	163000	43100	311000	75614	0.457	0.121	-0.869
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	604	636	83.9	1240	272	0.450	-0.0975	-0.398
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.151	0.160	0.110	0.210	0.0241	0.160	0.167	-0.508
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.74	6.70	6.41	7.30	0.223	0.0330	0.747	0.0271
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	7.06	6.65	4.50	11.2	1.61	0.228	1.14	0.880
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	1449	1310	346	3390	727	0.502	0.575	-0.112
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	5.85	5.85	5.60	6.10	0.354	0.0604	NA	NA
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	3.13	2.50	1.70	5.20	1.83	0.585	1.37	NA
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	213	216	36.3	421	99.7	0.468	0.240	-0.581
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	0.603	0.570	0.570	0.670	0.0577	0.0957	1.73	NA
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	6.13	5.80	0.760	18.4	4.98	0.812	1.39	2.40
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	0.697	0.750	0.140	1.20	0.532	0.764	-0.447	NA
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.151	0.160	0.110	0.210	0.0241	0.160	0.167	-0.508
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	2.88	1.60	0.250	6.80	3.46	1.20	1.44	NA
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	32.9	33.0	19.2	47.5	5.94	0.180	-0.00405	0.381
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	8.11	9.00	0.340	15.1	6.95	0.857	-0.175	-2.91
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.250	0.234	-0.378	1.03	0.318	1.27	0.364	0.646
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.591	0.597	-0.0467	1.45	0.277	0.469	0.483	2.15
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	2.34	2.34	0.280	4.40	2.91	1.24	NA	NA
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.880	0.824	0.237	2.48	0.436	0.496	1.43	3.87
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	34.0	6.45	0.950	294	72.5	2.13	3.18	10.6
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Gamma	19.8	9.70	2.30	115	27.4	1.38	2.56	7.05
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	0.587	0.587	0.0730	1.10	0.726	1.24	NA	NA
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	7.30	4.05	1.60	37.2	10.7	1.46	3.0	9.21
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	129	15.8	3.60	1590	380	2.94	3.99	16.2
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	44.7	43.3	34.5	63.9	6.20	0.139	1.04	1.67
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	183736	188000	34300	221000	33778	0.184	-2.88	11.7
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1084	1130	489	1360	192	0.177	-1.59	2.98
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.220	0.220	0.130	0.400	0.0533	0.242	1.07	3.39
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.69	7.60	7.35	9.29	0.392	0.0509	2.85	9.78
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	127	94.0	51.7	338	78.4	0.616	1.20	0.360
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2669	2560	257	11700	1746	0.654	4.42	23.9
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	7.39	6.90	0.610	12.3	3.12	0.423	-0.492	0.469
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	6.12	5.10	3.70	11.5	2.76	0.450	1.21	0.378
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	299	308	90.8	565	85.0	0.285	0.620	2.91
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	0.750	0.750	0.400	1.10	0.495	0.660	NA	NA
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	2015-11-19 to 2024-10-31		Nonparametric	0.413	0.480	0.0780	0.680	0.307	0.743	-0.941	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	20.8	8.80	1.80	130	29.6	1.42	2.52	6.80
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	7.53	2.45	0.890	34.8	13.4	1.78	2.42	5.88
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.220	0.220	0.130	0.400	0.0533	0.242	1.07	3.39
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	2015-11-19 to 2024-10-31		Nonparametric	10.2	5.75	1.80	27.5	11.7	1.15	1.82	3.45
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	155	132	41.2	512	90.7	0.587	2.57	7.72
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	2015-11-19 to 2024-10-31	Lognormal	Lognormal	10.1	8.40	4.40	41.0	7.52	0.748	2.89	10.3
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.893	0.927	0.227	1.94	0.358	0.401	0.495	1.09
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	1.36	1.35	0.433	2.23	0.470	0.346	0.157	-0.770
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	2.87	2.87	0.940	4.80	2.73	0.951	NA	NA
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1.11	0.0865	0.0370	10.3	3.23	2.90	3.16	9.99
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	2.25	2.37	1.10	3.35	0.683	0.303	-0.270	-1.07
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	19.7	5.60	1.40	137	35.5	1.80	2.98	9.48
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	12.4	4.80	1.10	86.0	22.3	1.80	2.81	7.89
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	1.60	1.60	1.60	1.60	NA	NA	NA	NA
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	4.45	2.70	1.90	13.9	3.53	0.793	1.87	3.55
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	14.9	12.2	4.30	42.7	13.2	0.882	1.59	2.38
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	2015-11-19 to 2024-10-31	Normal	Normal	35.3	35.9	9.70	49.6	10.4	0.295	-0.682	0.0212
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	173000	178500	117000	203000	19524	0.113	-0.856	0.604
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Normal	1063	1080	565	1280	137	0.128	-1.40	4.17
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.362	0.350	0.210	0.610	0.111	0.305	0.627	-0.309
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.33	7.36	6.18	7.77	0.261	0.0356	-2.71	12.1
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	48.2	21.8	9.10	174	46.7	0.968	1.33	0.825
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2232	2370	256	3180	605	0.271	-2.01	4.94
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	7.54	8.70	1.30	11.4	3.36	0.446	-0.601	-0.852
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	5.67	6.10	1.90	9.60	2.75	0.485	-0.186	-0.854
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	653	664	353	855	108	0.166	-0.530	0.284
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	0.410	0.410	0.410	0.410	NA	NA	NA	NA
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	20.3	6.80	1.10	179	43.7	2.15	3.32	11.4
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	2015-11-19 to 2024-10-31		Nonparametric	2.17	1.21	0.0610	6.20	2.78	1.28	1.62	2.59
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.362	0.350	0.210	0.610	0.111	0.305	0.627	-0.309
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	2015-11-19 to 2024-10-31		Nonparametric	4.50	6.00	0.190	7.30	3.79	0.842	-1.51	NA
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	93.0	87.0	36.7	236	37.1	0.399	2.82	9.08
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	9.01	8.00	5.10	35.7	4.96	0.551	4.69	25.3
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.905	0.816	0.213	1.92	0.363	0.401	0.399	0.279
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	1.46	1.54	0.326	2.86	0.563	0.387	-0.0423	0.215
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	0.270	0.270	0.270	0.270	NA	NA	NA	NA
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	2.36	2.31	0.857	3.92	0.712	0.302	-0.00199	-0.0996
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	49.4	7.60	0.900	170	73.0	1.48	1.56	1.94
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	7.80	7.45	3.50	12.8	2.80	0.359	0.360	-1.04
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-19 to 2024-10-31		Nonparametric	3.51	1.55	0.250	10.7	4.84	1.38	1.87	3.57
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	16.0	13.0	7.40	47.2	11.0	0.687	2.25	5.33
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	19.5	7.20	5.70	165	43.7	2.24	3.60	13
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	55549	58900	17900	71600	12766	0.230	-1.55	2.33

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	409	423	144	567	104	0.254	-0.932	0.320
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	6.26	6.25	5.91	6.56	0.139	0.0222	-0.00669	0.168
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	10.1	10.7	3.40	13.4	2.33	0.232	-1.41	1.96
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1077	1130	395	1580	229	0.212	-1.38	3.06
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.32	3.40	3.10	7.00	1.69	0.392	1.30	0.660
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	2.73	2.73	0.360	5.10	3.35	1.23	NA	NA
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	287	302	85.9	431	70.4	0.245	-1.29	2.36
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	0.470	0.470	0.470	0.470	NA	NA	NA	NA
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.14	4.10	0.580	9.90	3.40	0.823	0.680	-0.787
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	12.9	13.0	3.90	28.2	7.32	0.566	0.734	-0.505
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	6.80	6.80	6.80	6.80	NA	NA	NA	NA
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	31.3	28.3	15.8	98.0	12.8	0.411	4.05	20.9
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	13.7	18.7	0.480	20.9	8.81	0.642	-1.06	-0.553
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	0.308	0.239	-0.259	0.913	0.284	0.923	0.249	-0.413
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.540	0.465	0.0190	1.57	0.369	0.682	0.923	0.688
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	3.02	3.02	0.140	5.90	4.07	1.35	NA	NA
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.864	0.760	0.146	2.26	0.497	0.575	1.07	0.841
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	5.48	5.50	1.10	12.9	4.05	0.739	0.549	-0.661
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	16.3	1.80	0.640	120	39	2.39	2.96	8.84
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	1.37	1.00	0.510	2.60	1.09	0.798	1.35	NA
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Nonparametric	12.9	11.4	3.80	36.1	8.38	0.650	1.93	4.67
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	11.8	10.5	7.70	39.3	6.25	0.530	4.42	20.2
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Gamma	10992	10300	7990	16900	2198	0.200	0.691	-0.184
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	20.1	19.6	17.6	23.1	1.56	0.0775	0.188	-1.13
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	6.90	6.96	5.50	8.54	0.480	0.0696	-0.118	5.98
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	3.62	3.60	2.60	5.60	0.623	0.172	1.19	2.33
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	254	226	194	1160	153	0.605	5.87	35.5
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	2.50	2.50	1.10	3.90	1.98	0.792	NA	NA
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	2.58	2.58	0.170	5.00	3.42	1.32	NA	NA
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	103	102	75.0	153	15.7	0.153	0.814	1.34
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	31.1	3.80	0.920	260	80.7	2.60	3.13	9.86
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	1.50	1.50	0.100	2.90	1.98	1.32	NA	NA
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	0.180	0.180	0.180	0.180	NA	NA	NA	NA
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	9.67	9.30	6.30	28.6	3.42	0.353	4.90	27.7
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	11.5	8.70	0.520	25.3	12.6	1.10	0.951	NA
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.0944	0.0687	-0.640	0.778	0.271	2.87	0.217	1.18
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.404	0.364	-0.0922	1.08	0.325	0.805	0.505	-0.513
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	0.260	0.260	0.260	0.260	NA	NA	NA	NA
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	14.8	14.8	14.8	14.8	NA	NA	NA	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	0.560	0.554	0.0262	1.23	0.345	0.616	0.234	-1.07
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	6.73	5.50	0.640	19.8	7.76	1.15	1.63	2.86
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	2.79	1.80	0.920	8.20	2.17	0.777	1.78	3.25
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-20 to 2024-10-30		Nonparametric	2.30	1.65	0.810	5.10	1.93	0.837	1.63	2.72
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	11.0	11.3	3.60	27.5	7.10	0.643	1.25	1.78
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	8.14	8.30	6.10	10.8	1.24	0.153	0.317	0.564
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	34792	34500	30300	40200	2280	0.0655	0.357	-0.0934
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	207	212	15.3	279	49.8	0.240	-1.97	5.88
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.375	0.375	0.180	0.520	0.0614	0.164	-0.358	2.25
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	6.41	6.37	6.15	7.00	0.192	0.0299	1.08	1.24
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	60.4	28.4	25.1	214	53.1	0.879	1.62	1.71
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Normal	Normal	638	618	371	946	98.9	0.155	0.301	2.82
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	4.26	4.26	0.430	8.10	5.42	1.27	NA	NA
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	79.8	66.1	43.0	142	29.9	0.374	0.539	-0.961
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.100	0.100	0.100	0.100	NA	NA	NA	NA
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.09	4.70	0.640	14.0	4.36	0.857	1.63	3.37
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.840	0.840	0.840	0.840	NA	NA	NA	NA
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.375	0.375	0.180	0.520	0.0614	0.164	-0.358	2.25
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	3.35	3.35	0.890	5.80	3.47	1.04	NA	NA
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Lognormal	Lognormal	32.8	28.5	10.1	60.5	11.6	0.354	0.804	-0.0669
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.320	0.320	0.320	0.320	NA	NA	NA	NA
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Normal	Nonparametric	5.50	5.80	0.200	8.30	3.21	0.584	-1.44	2.29
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.163	0.207	-0.579	0.910	0.283	1.74	0.0582	1.28
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.554	0.533	-0.243	1.12	0.338	0.611	-0.110	-0.421
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	2.50	2.50	0.110	4.90	3.39	1.35	NA	NA
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	2015-11-20 to 2024-10-30		Nonparametric	2.10	0.0600	0.0300	6.20	3.55	1.69	1.73	NA
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.770	0.848	0.0513	1.47	0.407	0.528	-0.0649	-1.01
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	14.2	3.40	0.740	79.3	26.9	1.90	2.60	6.95
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	61.8	4.20	1.00	880	218	3.53	3.99	16
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	7.08	4.30	2.80	18.8	6.04	0.853	1.39	0.133
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	21.6	8.05	3.20	53.4	24.5	1.14	0.922	-1.88
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	2017-07-20 to 2024-10-30	Lognormal	Lognormal	12.4	10.5	8.10	25.3	4.38	0.353	2.08	4.94
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	91543	91400	74000	104000	6784	0.0741	-0.450	0.474
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	282	284	194	313	21.9	0.0776	-2.37	9.25
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.135	0.120	0.100	0.320	0.0421	0.312	3.51	14.9
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	7.47	7.35	7.13	9.60	0.445	0.0597	4.33	21.1
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	17.7	16.4	13.7	51.2	6.84	0.386	4.63	23.1
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	857	860	740	990	59.1	0.0689	0.123	-0.313
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	13.6	13.6	13.6	13.6	NA	NA	NA	NA
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	2017-07-20 to 2024-10-30		Nonparametric	2.29	2.29	0.770	3.80	2.14	0.938	NA	NA
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	292	302	50.1	423	68.4	0.234	-1.51	5.17
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	108	6.45	1.70	1940	431	4.0	4.47	20
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.89	1.50	0.160	20.4	8.52	1.44	1.78	3.04

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.135	0.120	0.100	0.320	0.0421	0.312	3.51	14.9
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	4.59	6.70	0.270	6.80	3.74	0.815	-1.73	NA
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Normal	Normal	26.4	27.9	5.60	33.8	5.53	0.210	-2.06	6.60
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	2017-07-20 to 2024-10-30		Nonparametric	20.2	15.1	1.10	49.5	20.9	1.04	1.26	1.76
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.208	0.130	-0.194	1.05	0.319	1.53	1.29	1.67
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Normal	Nonparametric	0.589	0.509	-0.454	2.13	0.499	0.848	1.01	3.02
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	0.180	0.180	0.180	0.180	NA	NA	NA	NA
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	0.237	0.120	0.110	0.480	0.211	0.891	1.73	NA
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.849	0.645	0.0664	2.31	0.588	0.693	1.05	0.500
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	2015-11-20 to 2024-10-30	Lognormal	Nonparametric	18.7	5.05	0.760	116	39.5	2.11	2.79	7.84
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	17.0	4.60	1.20	157	35.4	2.08	3.83	15.5
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	2.20	2.20	2.20	2.20	NA	NA	NA	NA
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.33	2.40	1.30	9.50	2.87	0.861	2.15	4.88
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	22.9	16.6	3.20	62.0	18.1	0.790	1.16	0.338
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	10.5	10.4	8.60	14.0	1.49	0.143	0.789	0.171
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	112347	108000	4170	194000	29774	0.265	-0.314	5.08
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	414	378	229	939	150	0.363	1.79	3.39
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0876	0.0845	0.0610	0.140	0.0207	0.236	0.882	0.699
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	7.03	7.01	6.70	7.31	0.141	0.0201	0.113	0.224
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.84	6.90	4.40	8.40	0.837	0.122	-0.632	0.614
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	968	917	224	1530	234	0.242	-0.0860	2.23
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	7.46	7.50	5.20	10.1	1.50	0.201	0.438	1.59
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.90	7.10	2.50	7.40	2.10	0.357	-1.42	1.25
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1148	1090	880	1880	191	0.166	2.01	5.10
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	1.50	1.50	1.50	1.50	NA	NA	NA	NA
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	1.50	1.50	1.50	1.50	NA	NA	NA	NA
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	20.6	8.40	1.20	87.6	25.7	1.25	1.82	2.73
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	2015-11-20 to 2024-10-30		Nonparametric	1.71	1.21	0.630	3.80	1.45	0.849	1.54	2.18
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0876	0.0845	0.0610	0.140	0.0207	0.236	0.882	0.699
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	3.10	3.10	2.80	3.40	0.424	0.137	NA	NA
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Gamma	28	26.8	18.7	50.1	7.00	0.250	1.32	1.94
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.370	0.370	0.370	0.370	NA	NA	NA	NA
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	4.07	5.20	1.40	5.60	2.32	0.570	-1.67	NA
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.443	0.337	-0.357	2.51	0.513	1.16	1.88	6.50
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.861	0.731	-0.351	4.72	0.762	0.884	3.81	19.4
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	2.31	2.31	0.330	4.30	2.81	1.21	NA	NA
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	4.42	4.42	0.0330	8.80	6.20	1.40	NA	NA
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1.34	1.22	0	7.23	1.12	0.838	4.28	22.8
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Nonparametric	30	16.4	0.680	103	41.4	1.38	2.08	4.50
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Lognormal	Lognormal	4.97	2.70	0.940	27.9	8.17	1.64	3.00	9.22
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	2021-08-09 to 2024-10-29	Nonparametric	Nonparametric	4.47	2.40	1.50	18.2	6.07	1.36	2.62	6.89
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	50.4	50.4	6.50	94.2	62.0	1.23	NA	NA
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	24.9	24.1	17.8	43.4	6.09	0.245	2.30	6.98

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	21807	21800	17700	26500	2167	0.0994	0.0653	1.24
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	29.8	29.6	28.0	32.4	1.12	0.0374	0.771	1.21
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	7.79	7.77	7.48	8.16	0.155	0.0199	0.582	1.93
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	3.76	3.15	1.70	8.00	1.82	0.485	1.10	0.703
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	349	351	318	368	12	0.0343	-1.20	2.77
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	0.760	0.760	0.760	0.760	NA	NA	NA	NA
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	2021-08-09 to 2024-10-29		Nonparametric	2.30	2.65	1.20	2.70	0.735	0.319	-1.98	3.91
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	80.8	78.7	43.2	195	37.4	0.463	2.31	7.10
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	10.0	5.00	0.960	56.7	16.7	1.67	2.93	8.88
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	4.02	4.02	0.440	7.60	5.06	1.26	NA	NA
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	5.98	5.98	0.760	11.2	7.38	1.23	NA	NA
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	2.98	2.10	0.690	6.70	1.99	0.667	0.659	-1.11
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	22.7	20.4	15.4	36.2	6.52	0.287	0.896	-0.190
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.165	0.171	-0.305	0.537	0.258	1.56	-0.400	-0.920
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.581	0.499	-0.100	1.67	0.450	0.774	0.879	1.39
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	2.85	2.85	0.500	5.20	3.32	1.17	NA	NA
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	0.120	0.120	0.120	0.120	NA	NA	NA	NA
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.801	0.823	0	1.74	0.429	0.535	0.170	0.986
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	5.61	4.50	1.00	20.1	6.72	1.20	2.13	4.96
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	2.44	1.55	0.790	7.60	2.28	0.933	2.06	4.32
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	0.980	1.20	0.440	1.30	0.470	0.480	-1.64	NA
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	4.57	5.10	3.10	5.50	1.29	0.282	-1.55	NA
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	15.9	15.5	11.5	25.2	3.12	0.197	1.72	4.91
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	30876	26700	23200	69400	10965	0.355	3.03	10.3
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Normal	Normal	128	129	74.5	149	19.2	0.150	-1.36	2.65
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.167	0.170	0.140	0.220	0.0233	0.140	0.613	0.0446
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	2021-01-29 to 2024-10-29	Nonparametric	Nonparametric	7.04	6.66	6.53	11.7	1.26	0.179	3.84	15.0
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	2.22	2.20	1.80	3.00	0.288	0.130	0.992	2.22
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	551	416	296	2760	571	1.04	4.08	16.8
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	2.06	2.06	0.320	3.80	2.46	1.19	NA	NA
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	3.00	3.00	0.400	5.60	3.68	1.23	NA	NA
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	49.2	41.5	34.3	130	22.6	0.459	3.19	11.3
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	2020-10-15 to 2024-10-29		Nonparametric	4.70	4.60	0.780	8.80	4.24	0.903	0.0258	-5.70
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.836	0.800	0.450	1.30	0.364	0.435	0.278	-2.12
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.167	0.170	0.140	0.220	0.0233	0.140	0.613	0.0446
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	0.190	0.190	0.190	0.190	NA	NA	NA	NA
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	10.7	10.1	8.30	19.5	2.53	0.236	2.86	9.67
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	1.10	1.10	0.410	1.80	0.983	0.889	NA	NA
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Normal	Nonparametric	0.0878	0.0925	-0.149	0.399	0.172	1.96	0.437	-1.04
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	0.485	0.500	-0.135	2.13	0.527	1.09	1.99	5.48
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	0.0850	0.0850	0.0850	0.0850	NA	NA	NA	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	0.614	0.500	0.124	2.39	0.550	0.897	2.45	6.78
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	10.6	14.4	2.00	15.4	7.46	0.704	-1.70	NA
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	2.60	1.50	1.20	6.20	2.41	0.927	1.95	3.83
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	1.23	1.40	0.690	1.60	0.478	0.389	-1.40	NA
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	7.90	5.05	2.90	18.6	7.21	0.913	1.86	3.59
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	54.4	50.9	41.7	109	17.0	0.313	2.70	8.14
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	25847	18400	14000	94400	19927	0.771	3.28	11.7
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	126	81.4	52.3	530	122	0.971	2.90	9.37
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	8.41	8.39	8.06	8.92	0.246	0.0292	0.750	0.212
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	92.7	34.5	14.6	523	136	1.47	2.78	8.57
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	549	396	312	1740	369	0.673	2.72	8.30
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	2021-04-13 to 2024-10-29		Nonparametric	3.11	3.11	0.620	5.60	3.52	1.13	NA	NA
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	8.56	7.00	3.20	16.5	4.94	0.577	0.655	-1.19
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	105	113	65.7	124	18.1	0.172	-1.25	0.774
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.110	0.110	0.110	0.110	NA	NA	NA	NA
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	4.23	3.20	1.50	8.00	3.37	0.796	1.25	NA
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.210	0.210	0.210	0.210	NA	NA	NA	NA
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	1.80	1.80	1.80	1.80	NA	NA	NA	NA
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Lognormal	Lognormal	29.6	25.3	16.0	80.7	17.5	0.591	2.27	5.09
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	22.6	9.30	3.60	127	31.5	1.39	2.93	9.64
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Normal	Nonparametric	0.208	0.0934	-0.101	0.692	0.268	1.29	0.563	-1.04
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.600	0.502	0.0582	2.23	0.546	0.911	2.04	5.31
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.230	0.230	0.230	0.230	NA	NA	NA	NA
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.0940	0.0940	0.0940	0.0940	NA	NA	NA	NA
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.828	0.714	0.125	2.27	0.572	0.691	1.05	1.44

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	0.850	0.158	0.260	0.230	0.918	0.493	0.238	0.353	0.268	>= 0.10	0.397	>= 0.10	1.114	Gamma; Lognormal; Normal	Nonparametric
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	0.898	0.211	0.164	0.622	0.940	0.551	0.176	0.507	0.162	>= 0.10	0.291	>= 0.10	0.733	Gamma; Lognormal; Normal	Nonparametric
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.836	0.121	0.283	0.140	0.710	0.008	0.314	0.065	0.324	0.05 <= p < 0.10	0.782	0.01 <= p < 0.05	0.686	Gamma; Lognormal; Normal	Nonparametric
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	0.906	0.137	0.144	0.597	0.973	0.913	0.110	0.918	0.115	>= 0.10	0.226	>= 0.10	0.495	Gamma; Lognormal; Normal	Nonparametric
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	0.896	0.119	0.235	0.048	0.951	0.609	0.153	0.555	0.173	>= 0.10	0.411	>= 0.10	0.528	Gamma; Lognormal; Normal	Nonparametric
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	0.536	0.000	0.313	0.000	0.782	0.002	0.257	0.009	0.288	< 0.01	1.628	< 0.01	0.461	Nonparametric	Nonparametric
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	0.966	0.303	0.096	0.499	0.929	0.018	0.116	0.218	0.104	>= 0.10	0.549	>= 0.10	0.546	Gamma; Lognormal; Normal	Normal
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.978	0.632	0.078	0.817	0.872	0.000	0.168	0.008	0.133	0.05 <= p < 0.10	1.066	< 0.01	0.617	Gamma; Normal	Normal
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	0.941	0.050	0.158	0.021	0.937	0.036	0.181	0.004	0.176	< 0.01	1.025	< 0.01	0.161	Nonparametric	Nonparametric
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	0.941	0.054	0.144	0.056	0.947	0.083	0.139	0.077	0.141	0.05 <= p < 0.10	0.644	0.05 <= p < 0.10	0.033	Gamma; Lognormal; Normal	Normal
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	0.883	0.001	0.228	0.000	0.940	0.041	0.183	0.002	0.198	< 0.01	1.251	< 0.01	0.213	Nonparametric	Nonparametric
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.963	0.246	0.097	0.491	0.966	0.299	0.078	0.805	0.070	>= 0.10	0.187	>= 0.10	0.563	Gamma; Lognormal; Normal	Normal
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.060		Nonparametric
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.568		Nonparametric
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.978	0.652	0.079	0.800	0.930	0.020	0.145	0.042	0.120	>= 0.10	0.359	>= 0.10	0.576	Gamma; Normal	Normal
01_03_104	MW-1	App. IV	Beryllium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.093		Nonparametric
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.880	0.088	0.158	0.555	0.965	0.856	0.172	0.423	0.140	>= 0.10	0.202	>= 0.10	0.924	Gamma; Lognormal; Normal	Nonparametric
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.129		Nonparametric
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	0.941	0.050	0.158	0.021	0.937	0.036	0.181	0.004	0.176	< 0.01	1.025	< 0.01	0.161	Nonparametric	Nonparametric
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.656		Nonparametric
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.983	0.816	0.108	0.323	0.964	0.251	0.140	0.058	0.122	>= 0.10	0.444	>= 0.10	0.189	Gamma; Lognormal; Normal	Normal
01_03_115	MW-1	App. IV	Mercury	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	0.864	0.244	0.225	0.551	0.848	0.188	0.286	0.197	0.278	>= 0.10	0.454	>= 0.10	1.658	Gamma; Lognormal; Normal	Nonparametric
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	0.966	0.331	0.078	0.838	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	0.959	0.199	0.104	0.415	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.948		Nonparametric
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.906	0.005	0.124	0.174	0.971	0.463	0.092	0.624	0.078	>= 0.10	0.221	>= 0.10	0.504	Gamma; Lognormal; Normal	Nonparametric
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	0.494	0.000	0.370	0.000	0.918	0.118	0.177	0.143	0.272	< 0.01	1.744	< 0.01	1.449	Lognormal	Nonparametric
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	0.647	0.000	0.292	0.000	0.953	0.394	0.104	0.796	0.180	>= 0.10	0.933	0.01 <= p < 0.05	1.090	Gamma; Lognormal	Gamma
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.918		Nonparametric
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	0.525	0.000	0.389	0.000	0.871	0.103	0.181	0.463	0.263	0.05 <= p < 0.10	1.069	< 0.01	0.882	Gamma; Lognormal	Nonparametric
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	0.352	0.000	0.406	0.000	0.896	0.058	0.167	0.239	0.314	< 0.01	2.232	< 0.01	1.502	Lognormal	Nonparametric
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	0.939	0.079	0.112	0.410	0.972	0.577	0.096	0.667	0.104	>= 0.10	0.350	>= 0.10	0.133	Gamma; Lognormal; Normal	Normal
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	0.734	0.000	0.207	0.001	0.479	0.000	0.284	0.000	0.259	< 0.01	3.899	< 0.01	0.317	Nonparametric	Nonparametric
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	0.856	0.000	0.179	0.009	0.749	0.000	0.213	0.001	0.204	< 0.01	2.177	< 0.01	0.219	Nonparametric	Nonparametric
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	0.898	0.006	0.168	0.027	0.931	0.048	0.193	0.005	0.179	0.01 <= p < 0.05	0.952	0.01 <= p < 0.05	0.237	Nonparametric	Nonparametric
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	0.690	0.000	0.252	0.000	0.721	0.000	0.242	0.000	0.246	< 0.01	2.533	< 0.01	0.048	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	0.816	0.000	0.233	0.000	0.901	0.005	0.169	0.018	0.187	< 0.01	1.720	< 0.01	0.549	Nonparametric	Nonparametric
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	0.467	0.000	0.363	0.000	0.642	0.000	0.310	0.000	0.285	< 0.01	4.486	< 0.01	0.597	Nonparametric	Nonparametric
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	0.965	0.835	0.124	0.848	0.695	0.000	0.266	0.013	0.202	>= 0.10	0.828	0.01 <= p < 0.05	0.763	Gamma; Normal	Nonparametric
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	0.830	0.033	0.203	0.287	0.893	0.184	0.155	0.707	0.176	>= 0.10	0.534	>= 0.10	0.408	Gamma; Lognormal; Normal	Nonparametric
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	0.919	0.017	0.163	0.026	0.880	0.002	0.171	0.015	0.156	0.01 <= p < 0.05	1.024	< 0.01	0.316	Nonparametric	Nonparametric
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.715		Nonparametric
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.163		Nonparametric
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	0.650	0.000	0.296	0.000	0.956	0.303	0.134	0.241	0.210	< 0.01	1.228	< 0.01	1.157	Lognormal	Nonparametric
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	0.567	0.000	0.454	0.000	0.845	0.142	0.293	0.111	0.387	0.01 <= p < 0.05	0.859	0.01 <= p < 0.05	1.316	Lognormal	Nonparametric
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	0.898	0.006	0.168	0.027	0.931	0.048	0.193	0.005	0.179	0.01 <= p < 0.05	0.952	0.01 <= p < 0.05	0.237	Nonparametric	Nonparametric
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.128		Nonparametric
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	0.702	0.000	0.285	0.000	0.904	0.007	0.179	0.009	0.212	< 0.01	1.823	< 0.01	0.472	Nonparametric	Nonparametric
02_03_115	MW-2	App. IV	Mercury	ug/L	33	33	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	0.677	0.000	0.248	0.000	0.911	0.021	0.125	0.314	0.172	0.01 <= p < 0.05	1.154	< 0.01	0.542	Lognormal	Lognormal
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	0.962	0.316	0.103	0.520	0.918	0.018	0.136	0.137	0.118	>= 0.10	0.502	>= 0.10	0.467	Gamma; Lognormal; Normal	Nonparametric
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	0.974	0.618	0.090	0.727	0.958	0.238	0.092	0.709	0.077	>= 0.10	0.212	>= 0.10	0.382	Gamma; Lognormal; Normal	Nonparametric
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.153		Nonparametric
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	0.379	0.000	0.514	0.000	0.673	0.000	0.326	0.003	0.473	< 0.01	2.389	< 0.01	1.611	Nonparametric	Nonparametric
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	0.939	0.070	0.127	0.212	0.901	0.007	0.187	0.006	0.169	0.01 <= p < 0.05	1.016	0.01 <= p < 0.05	0.340	Normal	Nonparametric
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.554	0.000	0.344	0.000	0.919	0.185	0.200	0.108	0.266	0.01 <= p < 0.05	1.211	< 0.01	1.274	Lognormal	Nonparametric
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.543	0.000	0.404	0.000	0.905	0.084	0.183	0.137	0.294	< 0.01	1.465	< 0.01	1.234	Lognormal	Nonparametric
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	0.755	0.002	0.254	0.021	0.879	0.069	0.206	0.137	0.229	0.05 <= p < 0.10	0.813	0.01 <= p < 0.05	0.648	Gamma; Lognormal	Nonparametric
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	0.807	0.034	0.293	0.041	0.911	0.360	0.201	0.446	0.206	>= 0.10	0.423	>= 0.10	0.836	Gamma; Lognormal	Nonparametric
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	0.944	0.180	0.142	0.214	0.840	0.001	0.202	0.010	0.186	0.01 <= p < 0.05	0.860	0.01 <= p < 0.05	0.377	Normal	Normal
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	0.947	0.086	0.131	0.121	0.914	0.008	0.143	0.061	0.145	0.05 <= p < 0.10	0.804	0.01 <= p < 0.05	0.120	Gamma; Lognormal; Normal	Normal
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	0.900	0.003	0.128	0.146	0.807	0.000	0.167	0.013	0.143	0.05 <= p < 0.10	1.093	< 0.01	0.147	Gamma; Normal	Normal
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	0.944	0.074	0.101	0.494	0.970	0.451	0.082	0.795	0.088	>= 0.10	0.271	>= 0.10	0.301	Gamma; Lognormal; Normal	Normal
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	0.745	0.000	0.233	0.000	0.711	0.000	0.242	0.000	0.236	< 0.01	2.052	< 0.01	0.037	Nonparametric	Nonparametric
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.785	0.000	0.236	0.000	0.896	0.003	0.182	0.004	0.208	< 0.01	1.871	< 0.01	0.918	Nonparametric	Nonparametric
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.790	0.000	0.206	0.000	0.527	0.000	0.324	0.000	0.294	< 0.01	4.959	< 0.01	0.525	Nonparametric	Nonparametric
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	0.921	0.324	0.181	0.402	0.815	0.015	0.216	0.159	0.220	>= 0.10	0.600	>= 0.10	0.655	Gamma; Lognormal; Normal	Nonparametric
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	0.955	0.778	0.161	0.840	0.891	0.279	0.232	0.305	0.200	>= 0.10	0.381	>= 0.10	0.600	Gamma; Lognormal; Normal	Nonparametric
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	0.971	0.459	0.106	0.382	0.926	0.018	0.137	0.086	0.128	>= 0.10	0.566	>= 0.10	0.180	Gamma; Lognormal; Normal	Normal
03_03_104	MW-3	App. IV	Beryllium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	0.466	0.000	0.420	0.000	0.919	0.123	0.198	0.061	0.322	< 0.01	1.659	< 0.01	1.355	Lognormal	Nonparametric
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.961		Nonparametric
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	0.944	0.074	0.101	0.494	0.970	0.451	0.082	0.795	0.088	>= 0.10	0.271	>= 0.10	0.301	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.052		Nonparametric
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	0.644	0.000	0.300	0.000	0.813	0.000	0.232	0.000	0.257	< 0.01	3.022	< 0.01	0.314	Nonparametric	Nonparametric
03_03_115	MW-3	App. IV	Mercury	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	0.497	0.000	0.267	0.000	0.811	0.000	0.192	0.002	0.224	< 0.01	2.403	< 0.01	0.335	Nonparametric	Nonparametric
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	0.960	0.236	0.129	0.148	0.938	0.048	0.127	0.165	0.124	>= 0.10	0.536	>= 0.10	0.457	Gamma; Lognormal; Normal	Nonparametric
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	0.981	0.777	0.074	0.896	0.877	0.001	0.154	0.036	0.123	>= 0.10	0.877	0.01 <= p < 0.05	0.496	Gamma; Normal	Nonparametric
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	0.985	0.893	0.084	0.770	0.940	0.057	0.147	0.055	0.126	>= 0.10	0.482	>= 0.10	0.340	Gamma; Lognormal; Normal	Nonparametric
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	0.774	0.049	0.316	0.102	0.880	0.309	0.232	0.502	0.239	>= 0.10	0.389	>= 0.10	2.409	Gamma; Lognormal; Normal	Nonparametric
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.941	0.140	0.130	0.310	0.958	0.352	0.115	0.501	0.124	>= 0.10	0.392	>= 0.10	0.371	Gamma; Lognormal; Normal	Normal
04_01_122	MW-4	App. I Metals	Silver	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.554		Nonparametric
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	0.720	0.001	0.290	0.004	0.898	0.124	0.169	0.398	0.208	>= 0.10	0.773	0.01 <= p < 0.05	0.526	Gamma; Lognormal	Nonparametric
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	0.341	0.000	0.493	0.000	0.504	0.000	0.370	0.000	0.439	< 0.01	3.538	< 0.01	0.890	Nonparametric	Nonparametric
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	0.849	0.000	0.190	0.002	0.709	0.000	0.255	0.000	0.237	< 0.01	2.827	< 0.01	0.313	Nonparametric	Nonparametric
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.914	0.007	0.168	0.010	0.821	0.000	0.177	0.005	0.172	< 0.01	1.692	< 0.01	0.317	Nonparametric	Nonparametric
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	0.967	0.333	0.099	0.474	0.986	0.924	0.088	0.669	0.095	>= 0.10	0.316	>= 0.10	0.179	Gamma; Lognormal; Normal	Normal
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	0.984	0.869	0.095	0.593	0.983	0.861	0.091	0.654	0.094	>= 0.10	0.251	>= 0.10	0.022	Gamma; Lognormal; Normal	Normal
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.853	0.000	0.201	0.001	0.731	0.000	0.270	0.000	0.248	< 0.01	3.128	< 0.01	0.307	Nonparametric	Nonparametric
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.825	0.000	0.230	0.000	0.704	0.000	0.291	0.000	0.273	< 0.01	3.755	< 0.01	0.276	Nonparametric	Nonparametric
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	0.812	0.100	0.307	0.127	0.834	0.150	0.296	0.158	0.322	>= 0.10	0.536	>= 0.10	0.359	Gamma; Lognormal; Normal	Nonparametric
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.874		Nonparametric
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.874	0.001	0.199	0.001	0.720	0.000	0.277	0.000	0.253	< 0.01	3.008	< 0.01	0.336	Nonparametric	Nonparametric
04_03_104	MW-4	App. IV	Beryllium	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	0.902	0.262	0.170	0.641	0.925	0.434	0.203	0.351	0.165	>= 0.10	0.283	>= 0.10	1.045	Gamma; Lognormal; Normal	Nonparametric
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	0.911	0.102	0.160	0.294	0.960	0.639	0.139	0.521	0.125	>= 0.10	0.344	>= 0.10	0.587	Gamma; Lognormal; Normal	Nonparametric
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	0.967	0.333	0.099	0.474	0.986	0.924	0.088	0.669	0.095	>= 0.10	0.316	>= 0.10	0.179	Gamma; Lognormal; Normal	Normal
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.600	0.000	0.212	0.000	0.860	0.000	0.172	0.007	0.191	< 0.01	1.842	< 0.01	0.295	Nonparametric	Nonparametric
04_03_115	MW-4	App. IV	Mercury	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	0.843	0.172	0.313	0.109	0.702	0.010	0.326	0.088	0.344	0.05 <= p < 0.10	0.746	0.01 <= p < 0.05	1.611	Gamma; Lognormal; Normal	Nonparametric
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.977	0.676	0.110	0.345	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.936	0.041	0.107	0.400	0.917	0.012	0.138	0.090	0.084	>= 0.10	0.259	>= 0.10	0.902	Gamma; Lognormal; Normal	Nonparametric
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.645		Nonparametric
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.919	0.013	0.132	0.125	0.984	0.869	0.072	0.913	0.064	>= 0.10	0.175	>= 0.10	0.600	Gamma; Lognormal; Normal	Nonparametric
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.912	0.292	0.205	0.274	0.893	0.185	0.232	0.133	0.204	>= 0.10	0.464	>= 0.10	0.907	Gamma; Lognormal; Normal	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	0.453	0.000	0.463	0.000	0.861	0.098	0.220	0.236	0.320	0.01 <= p < 0.05	1.271	< 0.01	1.584	Lognormal	Nonparametric
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.818		Nonparametric
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	0.823	0.013	0.240	0.039	0.985	0.995	0.130	0.789	0.163	>= 0.10	0.267	>= 0.10	0.585	Gamma; Lognormal	Nonparametric
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	0.391	0.000	0.384	0.000	0.580	0.000	0.284	0.000	0.325	< 0.01	3.695	< 0.01	0.305	Nonparametric	Nonparametric
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	0.937	0.033	0.158	0.018	0.958	0.161	0.133	0.085	0.144	0.01 <= p < 0.05	0.670	0.05 <= p < 0.10	0.194	Gamma; Lognormal	Gamma
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	0.948	0.078	0.135	0.077	0.951	0.098	0.122	0.162	0.128	>= 0.10	0.648	0.05 <= p < 0.10	0.077	Gamma; Lognormal; Normal	Normal
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	0.980	0.724	0.083	0.726	0.975	0.540	0.102	0.409	0.098	>= 0.10	0.364	>= 0.10	0.111	Gamma; Lognormal; Normal	Normal
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	0.799	0.000	0.226	0.000	0.789	0.000	0.239	0.000	0.231	< 0.01	2.579	< 0.01	0.071	Nonparametric	Nonparametric
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.905	0.003	0.119	0.193	0.951	0.098	0.124	0.147	0.114	>= 0.10	0.661	0.05 <= p < 0.10	0.163	Gamma; Lognormal; Normal	Normal
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.287	0.000	0.420	0.000	0.497	0.000	0.304	0.000	0.356	< 0.01	6.520	< 0.01	0.287	Nonparametric	Nonparametric
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.895		Nonparametric
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.391		Nonparametric
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.957	0.151	0.102	0.409	0.984	0.840	0.092	0.582	0.098	>= 0.10	0.260	>= 0.10	0.148	Gamma; Lognormal; Normal	Normal
05_03_104	MW-5	App. IV	Beryllium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	0.422	0.000	0.470	0.000	0.871	0.102	0.194	0.352	0.312	0.01 <= p < 0.05	1.367	< 0.01	1.708	Lognormal	Nonparametric
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.381		Nonparametric
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	0.980	0.724	0.083	0.726	0.975	0.540	0.102	0.409	0.098	>= 0.10	0.364	>= 0.10	0.111	Gamma; Lognormal; Normal	Normal
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	0.475	0.000	0.301	0.000	0.723	0.000	0.209	0.000	0.238	< 0.01	3.183	< 0.01	0.235	Nonparametric	Nonparametric
05_03_115	MW-5	App. IV	Mercury	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.007		Nonparametric
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	0.964	0.290	0.118	0.231	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	0.951	0.111	0.093	0.606	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	0.951	0.114	0.127	0.152	0.897	0.003	0.144	0.058	0.108	>= 0.10	0.656	0.05 <= p < 0.10	0.877	Gamma; Lognormal; Normal	Nonparametric
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	0.820	0.117	0.307	0.127	0.940	0.663	0.229	0.528	0.224	>= 0.10	0.288	>= 0.10	1.400	Gamma; Lognormal; Normal	Nonparametric
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	0.777	0.005	0.313	0.004	0.915	0.278	0.268	0.027	0.299	0.01 <= p < 0.05	0.686	0.05 <= p < 0.10	0.660	Gamma; Lognormal	Nonparametric
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.783		Nonparametric
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	0.888	0.131	0.156	0.645	0.962	0.801	0.171	0.489	0.139	>= 0.10	0.259	>= 0.10	0.639	Gamma; Lognormal; Normal	Nonparametric
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	0.961	0.772	0.143	0.662	0.966	0.836	0.155	0.533	0.142	>= 0.10	0.281	>= 0.10	0.154	Gamma; Lognormal; Normal	Nonparametric
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	0.981	0.753	0.101	0.442	0.986	0.918	0.089	0.652	0.093	>= 0.10	0.249	>= 0.10	0.065	Gamma; Lognormal; Normal	Normal
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.836	0.000	0.163	0.014	0.499	0.000	0.316	0.000	0.271	< 0.01	3.973	< 0.01	0.481	Nonparametric	Nonparametric
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.953	0.132	0.094	0.578	0.878	0.001	0.112	0.302	0.101	>= 0.10	0.616	>= 0.10	0.181	Gamma; Lognormal; Normal	Normal
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	0.913	0.010	0.163	0.022	0.921	0.017	0.157	0.032	0.159	0.01 <= p < 0.05	0.887	0.01 <= p < 0.05	0.030	Nonparametric	Nonparametric
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	0.708	0.000	0.320	0.000	0.775	0.000	0.336	0.000	0.340	< 0.01	3.842	< 0.01	0.715	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.927	0.018	0.143	0.054	0.906	0.004	0.163	0.015	0.148	0.01 <= p < 0.05	0.997	0.01 <= p < 0.05	0.160	Normal	Normal
06_03_101	MW-6	App. IV	Antimony	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.076		Nonparametric
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	0.899	0.003	0.191	0.002	0.915	0.008	0.159	0.019	0.174	< 0.01	1.267	< 0.01	0.371	Nonparametric	Nonparametric
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	0.852	0.128	0.275	0.113	0.959	0.811	0.178	0.721	0.174	>= 0.10	0.211	>= 0.10	0.974	Gamma; Lognormal; Normal	Nonparametric
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.953	0.132	0.094	0.578	0.878	0.001	0.112	0.302	0.101	>= 0.10	0.616	>= 0.10	0.181	Gamma; Lognormal; Normal	Normal
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.325		Nonparametric
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	0.895	0.002	0.205	0.000	0.917	0.009	0.138	0.073	0.160	0.01 <= p < 0.05	1.256	< 0.01	0.355	Lognormal	Lognormal
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	0.860	0.230	0.288	0.190	0.657	0.003	0.421	0.004	0.417	0.01 <= p < 0.05	0.880	0.01 <= p < 0.05	1.582	Normal	Nonparametric
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.977	0.671	0.088	0.707	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	0.975	0.602	0.080	0.824	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.685		Nonparametric
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.899		Nonparametric
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	0.964	0.310	0.094	0.609	0.833	0.000	0.176	0.007	0.158	0.01 <= p < 0.05	0.931	0.01 <= p < 0.05	0.828	Normal	Nonparametric
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.576	0.000	0.354	0.004	0.892	0.245	0.248	0.158	0.260	>= 0.10	0.698	0.05 <= p < 0.10	1.658	Gamma; Lognormal	Nonparametric
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	0.299	0.000	0.503	0.000	0.842	0.010	0.155	0.388	0.353	< 0.01	2.766	< 0.01	1.724	Lognormal	Nonparametric
07_01_122	MW-7R	App. I Metals	Silver	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	0.687	0.000	0.340	0.000	0.801	0.007	0.221	0.082	0.266	0.01 <= p < 0.05	1.429	< 0.01	0.705	Lognormal	Nonparametric
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	0.716	0.009	0.338	0.031	0.841	0.134	0.222	0.467	0.258	>= 0.10	0.663	0.05 <= p < 0.10	1.261	Gamma; Lognormal	Nonparametric
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	0.771	0.002	0.256	0.009	0.881	0.049	0.218	0.054	0.236	0.01 <= p < 0.05	0.887	0.01 <= p < 0.05	0.294	Lognormal	Lognormal
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	0.979	0.826	0.098	0.695	0.966	0.470	0.113	0.477	0.103	>= 0.10	0.271	>= 0.10	0.076	Gamma; Lognormal; Normal	Normal
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	0.793	0.000	0.200	0.006	0.720	0.000	0.226	0.001	0.207	< 0.01	1.503	< 0.01	0.087	Nonparametric	Nonparametric
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	0.607	0.000	0.241	0.000	0.769	0.000	0.198	0.008	0.203	< 0.01	2.008	< 0.01	0.233	Nonparametric	Nonparametric
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	0.498	0.000	0.293	0.000	0.539	0.000	0.270	0.000	0.285	< 0.01	3.890	< 0.01	0.054	Nonparametric	Nonparametric
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	0.430	0.000	0.325	0.000	0.615	0.000	0.254	0.000	0.280	< 0.01	3.613	< 0.01	0.243	Nonparametric	Nonparametric
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.985	0.945	0.087	0.852	0.985	0.954	0.100	0.674	0.095	>= 0.10	0.229	>= 0.10	0.069	Gamma; Lognormal; Normal	Normal
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.129		Nonparametric
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	0.875	0.003	0.176	0.026	0.603	0.000	0.247	0.000	0.222	< 0.01	2.332	< 0.01	0.376	Nonparametric	Nonparametric
07_03_104	MW-7R	App. IV	Beryllium	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_106	MW-7R	App. IV	Cadmium	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	0.257	0.000	0.504	0.000	0.816	0.002	0.174	0.115	0.350	< 0.01	3.929	< 0.01	1.620	Lognormal	Nonparametric
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.765	0.041	0.297	0.155	0.986	0.964	0.149	0.972	0.236	>= 0.10	0.247	>= 0.10	1.895	Gamma; Lognormal; Normal	Nonparametric
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	0.607	0.000	0.241	0.000	0.769	0.000	0.198	0.008	0.203	< 0.01	2.008	< 0.01	0.233	Nonparametric	Nonparametric
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.858		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.834	0.000	0.151	0.104	0.589	0.000	0.259	0.000	0.220	< 0.01	2.391	< 0.01	0.330	Normal	Normal
07_03_115	MW-7R	App. IV	Mercury	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.620		Nonparametric
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.878	0.005	0.175	0.039	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.919	0.043	0.151	0.133	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.827		Nonparametric
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.902	0.017	0.167	0.059	0.907	0.023	0.148	0.153	0.099	>= 0.10	0.333	>= 0.10	0.860	Gamma; Lognormal; Normal	Nonparametric
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	0.495	0.000	0.460	0.000	0.923	0.451	0.212	0.363	0.337	0.01 <= p < 0.05	0.897	0.01 <= p < 0.05	1.532	Lognormal	Nonparametric
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	0.457	0.000	0.338	0.000	0.933	0.200	0.125	0.607	0.182	>= 0.10	1.113	< 0.01	1.328	Gamma; Lognormal	Nonparametric
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	0.729	0.008	0.278	0.104	0.917	0.447	0.160	0.846	0.207	>= 0.10	0.481	>= 0.10	0.680	Gamma; Lognormal; Normal	Nonparametric
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	0.853	0.024	0.235	0.035	0.939	0.410	0.153	0.504	0.144	>= 0.10	0.357	>= 0.10	0.872	Gamma; Lognormal	Nonparametric
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	0.931	0.130	0.138	0.336	0.950	0.316	0.111	0.687	0.117	>= 0.10	0.372	>= 0.10	0.138	Gamma; Lognormal; Normal	Normal
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	0.828	0.000	0.212	0.000	0.425	0.000	0.383	0.000	0.326	< 0.01	4.414	< 0.01	0.566	Nonparametric	Nonparametric
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	0.813	0.000	0.232	0.000	0.924	0.013	0.175	0.005	0.197	< 0.01	1.570	< 0.01	0.311	Nonparametric	Nonparametric
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.909	0.083	0.173	0.167	0.939	0.277	0.162	0.243	0.172	>= 0.10	0.535	>= 0.10	0.226	Gamma; Lognormal; Normal	Nonparametric
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.965	0.306	0.115	0.263	0.966	0.325	0.115	0.268	0.113	>= 0.10	0.534	>= 0.10	0.020	Gamma; Lognormal; Normal	Normal
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.968	0.353	0.096	0.514	0.934	0.026	0.124	0.152	0.113	>= 0.10	0.509	>= 0.10	0.130	Gamma; Lognormal; Normal	Normal
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.924	0.013	0.145	0.043	0.755	0.000	0.209	0.000	0.179	< 0.01	1.243	< 0.01	0.304	Nonparametric	Nonparametric
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	0.957	0.795	0.191	0.613	0.963	0.846	0.180	0.707	0.165	>= 0.10	0.265	>= 0.10	0.203	Gamma; Lognormal; Normal	Nonparametric
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	0.800	0.081	0.316	0.103	0.752	0.031	0.311	0.116	0.336	0.05 <= p < 0.10	0.676	0.05 <= p < 0.10	0.463	Gamma; Lognormal; Normal	Nonparametric
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	0.807	0.000	0.201	0.000	0.876	0.001	0.172	0.006	0.182	< 0.01	1.872	< 0.01	0.148	Nonparametric	Nonparametric
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	0.736	0.000	0.259	0.002	0.953	0.448	0.133	0.510	0.189	0.05 <= p < 0.10	0.494	>= 0.10	1.334	Gamma; Lognormal	Nonparametric
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.802		Nonparametric
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.909	0.083	0.173	0.167	0.939	0.277	0.162	0.243	0.172	>= 0.10	0.535	>= 0.10	0.226	Gamma; Lognormal; Normal	Nonparametric
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.137		Nonparametric
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	0.897	0.002	0.162	0.015	0.961	0.222	0.115	0.252	0.131	>= 0.10	0.627	>= 0.10	0.230	Gamma; Lognormal	Gamma
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.780		Nonparametric
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	0.863	0.000	0.129	0.134	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	0.620	0.000	0.245	0.000	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.815		Nonparametric
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		3.950		Nonparametric
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	0.566	0.000	0.267	0.000	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	0.708	0.012	0.411	0.006	0.906	0.446	0.290	0.179	0.278	>= 0.10	0.360	>= 0.10	1.812	Gamma; Lognormal	Nonparametric
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	0.511	0.000	0.391	0.000	0.860	0.076	0.244	0.092	0.328	< 0.01	1.130	< 0.01	0.990	Lognormal	Lognormal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
09_01_122	MW-10	App. I Metals	Silver	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	0.522	0.000	0.472	0.000	0.692	0.003	0.391	0.002	0.446	< 0.01	1.388	< 0.01	0.838	Nonparametric	Nonparametric
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.891		Nonparametric
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	0.767	0.002	0.221	0.062	0.876	0.051	0.169	0.339	0.179	>= 0.10	0.731	0.05 <= p < 0.10	0.211	Gamma; Lognormal; Normal	Normal
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	0.956	0.658	0.158	0.450	0.952	0.587	0.176	0.279	0.168	>= 0.10	0.375	>= 0.10	0.100	Gamma; Lognormal; Normal	Normal
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	0.961	0.740	0.141	0.637	0.969	0.860	0.133	0.716	0.135	>= 0.10	0.244	>= 0.10	0.037	Gamma; Lognormal; Normal	Normal
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	0.940	0.413	0.154	0.495	0.947	0.508	0.156	0.468	0.148	>= 0.10	0.375	>= 0.10	0.086	Gamma; Lognormal; Normal	Normal
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	0.911	0.139	0.216	0.058	0.913	0.152	0.212	0.067	0.213	0.05 <= p < 0.10	0.702	0.05 <= p < 0.10	0.020	Gamma; Lognormal; Normal	Normal
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	0.896	0.100	0.192	0.176	0.966	0.816	0.124	0.811	0.153	>= 0.10	0.320	>= 0.10	0.458	Gamma; Lognormal; Normal	Normal
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.910	0.158	0.222	0.060	0.897	0.102	0.229	0.045	0.224	0.05 <= p < 0.10	0.564	>= 0.10	0.035	Gamma; Lognormal; Normal	Normal
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.400		Nonparametric
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.748	0.001	0.273	0.006	0.909	0.150	0.190	0.185	0.209	>= 0.10	0.629	0.05 <= p < 0.10	0.384	Gamma; Lognormal	Gamma
09_03_104	MW-10	App. IV	Beryllium	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_106	MW-10	App. IV	Cadmium	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	0.546	0.000	0.367	0.000	0.938	0.536	0.167	0.598	0.259	0.05 <= p < 0.10	0.712	0.05 <= p < 0.10	1.195	Gamma; Lognormal	Gamma
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.015		Nonparametric
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	0.940	0.413	0.154	0.495	0.947	0.508	0.156	0.468	0.148	>= 0.10	0.375	>= 0.10	0.086	Gamma; Lognormal; Normal	Normal
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.902		Nonparametric
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	0.874	0.049	0.243	0.024	0.940	0.414	0.177	0.272	0.185	>= 0.10	0.506	>= 0.10	0.718	Gamma; Lognormal	Gamma
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	0.904	0.129	0.193	0.171	0.943	0.455	0.155	0.481	0.172	>= 0.10	0.388	>= 0.10	0.272	Gamma; Lognormal; Normal	Normal
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	0.949	0.552	0.150	0.535	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	0.941	0.429	0.165	0.378	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.656		Nonparametric
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	0.964	0.794	0.136	0.693	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.716	0.006	0.340	0.014	0.904	0.357	0.190	0.626	0.211	>= 0.10	0.453	>= 0.10	1.110	Gamma; Lognormal	Nonparametric
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	0.738	0.006	0.292	0.043	0.931	0.525	0.168	0.731	0.214	>= 0.10	0.489	>= 0.10	0.751	Gamma; Lognormal	Nonparametric
10_01_122	MW-11	App. I Metals	Silver	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.604		Nonparametric
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.312		Nonparametric
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	0.855	0.016	0.221	0.036	0.930	0.243	0.181	0.175	0.190	>= 0.10	0.504	>= 0.10	0.180	Gamma; Lognormal	Gamma
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	0.618	0.000	0.259	0.003	0.751	0.000	0.236	0.012	0.242	0.01 <= p < 0.05	1.671	< 0.01	0.267	Nonparametric	Nonparametric
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	0.877	0.028	0.182	0.142	0.807	0.002	0.225	0.022	0.188	>= 0.10	0.767	0.01 <= p < 0.05	0.171	Gamma; Normal	Normal
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.911	0.121	0.141	0.543	0.919	0.161	0.142	0.526	0.142	>= 0.10	0.490	>= 0.10	0.137	Gamma; Lognormal; Normal	Normal
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	0.394	0.000	0.402	0.000	0.432	0.000	0.378	0.000	0.388	< 0.01	3.842	< 0.01	0.141	Nonparametric	Nonparametric
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	0.920	0.145	0.160	0.293	0.947	0.408	0.135	0.558	0.140	>= 0.10	0.389	>= 0.10	0.125	Gamma; Lognormal; Normal	Normal
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	0.324	0.000	0.465	0.000	0.458	0.000	0.408	0.000	0.442	< 0.01	4.468	< 0.01	0.475	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.750		Nonparametric
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.866		Nonparametric
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	0.585	0.000	0.332	0.000	0.748	0.000	0.289	0.001	0.310	< 0.01	1.783	< 0.01	0.323	Nonparametric	Nonparametric
10_03_104	MW-11	App. IV	Beryllium	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.239		Nonparametric
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	0.933	0.618	0.200	0.735	0.935	0.629	0.195	0.770	0.224	>= 0.10	0.284	>= 0.10	0.456	Gamma; Lognormal; Normal	Nonparametric
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.911	0.121	0.141	0.543	0.919	0.161	0.142	0.526	0.142	>= 0.10	0.490	>= 0.10	0.137	Gamma; Lognormal; Normal	Normal
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	0.679	0.000	0.268	0.002	0.794	0.002	0.228	0.019	0.243	< 0.01	1.286	< 0.01	0.193	Nonparametric	Nonparametric
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.046		Nonparametric
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	0.923	0.164	0.209	0.047	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	0.817	0.003	0.212	0.041	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	0.714	0.000	0.304	0.000	0.951	0.466	0.168	0.230	0.219	0.01 <= p < 0.05	0.631	>= 0.10	0.752	Gamma; Lognormal	Nonparametric
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.160		Nonparametric
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.764		Nonparametric
11_01_122	MW-11D	App. I Metals	Silver	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.452		Nonparametric
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.793		Nonparametric
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	0.665	0.000	0.313	0.000	0.783	0.002	0.249	0.013	0.269	< 0.01	1.331	< 0.01	0.247	Nonparametric	Nonparametric
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	0.548	0.000	0.303	0.001	0.778	0.002	0.226	0.038	0.242	0.01 <= p < 0.05	1.524	< 0.01	0.485	Nonparametric	Nonparametric
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	0.619	0.000	0.273	0.004	0.861	0.025	0.177	0.236	0.190	>= 0.10	1.051	< 0.01	0.655	Gamma; Lognormal	Gamma
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.870	0.034	0.182	0.200	0.911	0.138	0.163	0.347	0.169	>= 0.10	0.575	>= 0.10	0.101	Gamma; Lognormal; Normal	Normal
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	0.940	0.381	0.162	0.357	0.945	0.454	0.157	0.411	0.158	>= 0.10	0.344	>= 0.10	0.029	Gamma; Lognormal; Normal	Normal
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	0.623	0.000	0.283	0.003	0.890	0.082	0.179	0.257	0.210	>= 0.10	0.823	0.01 <= p < 0.05	1.154	Gamma; Lognormal	Gamma
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	0.653	0.000	0.261	0.007	0.835	0.011	0.191	0.150	0.204	>= 0.10	1.117	< 0.01	0.479	Gamma; Lognormal	Gamma
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.556		Nonparametric
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	0.886	0.183	0.243	0.129	0.934	0.517	0.161	0.717	0.179	>= 0.10	0.346	>= 0.10	0.597	Gamma; Lognormal; Normal	Normal
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	0.848	0.016	0.203	0.098	0.799	0.004	0.209	0.077	0.213	0.05 <= p < 0.10	1.073	< 0.01	0.195	Gamma; Lognormal; Normal	Normal
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.838		Nonparametric
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.870	0.034	0.182	0.200	0.911	0.138	0.163	0.347	0.169	>= 0.10	0.575	>= 0.10	0.101	Gamma; Lognormal; Normal	Normal
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	0.698	0.000	0.287	0.002	0.858	0.023	0.203	0.096	0.237	0.01 <= p < 0.05	1.112	< 0.01	0.447	Lognormal	Lognormal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	0.618	0.000	0.273	0.004	0.921	0.198	0.148	0.506	0.191	>= 0.10	0.712	0.05 <= p < 0.10	1.068	Gamma; Lognormal	Gamma
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	0.901	0.098	0.199	0.114	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	0.806	0.004	0.191	0.147	0.957	0.649	0.125	0.762	0.089	>= 0.10	0.202	>= 0.10	0.976	Gamma; Lognormal; Normal	Nonparametric
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	0.918	0.182	0.116	0.851	0.960	0.696	0.119	0.818	0.095	>= 0.10	0.192	>= 0.10	0.804	Gamma; Lognormal; Normal	Nonparametric

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 4: Autocorrelation Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	0.391	0.226	
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	0.103	0.707	
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.204	0.528	
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	0.105	0.664	
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	-0.348	0.160	
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	-0.056	0.810	
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	0.592	0.000	***
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.384	0.014	*
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	0.386	0.014	*
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	0.172	0.281	
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	0.722	0.000	***
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.651	0.000	***
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	-0.500	0.157	
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	-0.305	0.403	
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.498	0.001	**
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	-0.667	0.068	
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.192	0.454	
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	-0.448	0.220	
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	0.386	0.014	*
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	-0.290	0.427	
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.327	0.036	*
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	0.489	0.148	
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	0.240	0.134	
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	-0.104	0.515	
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	-0.500	0.157	
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.049	0.757	
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	0.266	0.221	
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	-0.119	0.559	
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	-0.500	0.157	
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	-0.251	0.359	
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	-0.028	0.901	
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	0.087	0.612	
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	0.060	0.720	
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	0.269	0.106	
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	0.042	0.805	
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	-0.106	0.549	
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	0.836	0.000	***
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	0.004	0.981	
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	0.474	0.056	
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	-0.137	0.617	
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	-0.051	0.759	
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	-0.500	0.157	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	-0.596	0.103	
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	-0.066	0.716	
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	-0.277	0.391	
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	0.042	0.805	
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	-0.236	0.505	
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	0.271	0.104	
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	0.062	0.731	
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	-0.225	0.182	
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	0.220	0.192	
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	-0.500	0.157	
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	-0.014	0.959	
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	-0.081	0.631	
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.171	0.465	
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.362	0.104	
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	NA	NA	
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	0.510	0.040	*
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	0.376	0.204	
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	0.512	0.007	**
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	0.536	0.001	***
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	0.533	0.001	***
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	0.692	0.000	***
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	-0.190	0.261	
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.864	0.000	***
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.176	0.272	
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	0.584	0.027	*
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	-0.238	0.441	
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	0.596	0.000	***
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	NA	NA	
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	-0.075	0.731	
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	-0.308	0.384	
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	0.692	0.000	***
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	-0.079	0.829	
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	0.041	0.800	
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	-0.007	0.968	
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	-0.314	0.053	
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	0.322	0.047	*
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	NA	NA	
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	0.074	0.646	
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	-0.065	0.848	
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.192	0.300	
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	0.009	0.979	
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	-0.130	0.600	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	-0.099	0.689	
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	0.710	0.000	***
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.768	0.000	***
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	0.391	0.013	*
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	0.301	0.063	
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.690	0.000	***
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.607	0.000	***
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	0.172	0.612	
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	-0.500	0.157	
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.704	0.000	***
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	NA	NA	
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	0.173	0.543	
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	-0.090	0.687	
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	0.391	0.013	*
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	NA	NA	
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.147	0.354	
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	-0.150	0.657	
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.387	0.017	*
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.217	0.181	
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	-0.500	0.157	
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.361	0.026	*
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.418	0.127	
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	-0.087	0.760	
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	-0.057	0.875	
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	0.413	0.096	
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	-0.047	0.815	
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	0.565	0.000	***
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	0.507	0.001	**
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	0.068	0.664	
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	-0.550	0.001	***
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.280	0.073	
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.005	0.976	
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	-0.500	0.157	
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	-0.500	0.157	
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.226	0.148	
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	-0.090	0.742	
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	-0.500	0.157	
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	0.068	0.664	
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	NA	NA	
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	0.053	0.735	
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	-0.025	0.946	
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	-0.358	0.025	*

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	-0.131	0.412	
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	NA	NA	
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	NA	NA	
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	-0.036	0.823	
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	0.072	0.832	
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	0.255	0.336	
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	-0.213	0.547	
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	-0.091	0.729	
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	-0.490	0.048	*
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	0.289	0.067	
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.181	0.251	
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.181	0.259	
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	0.419	0.011	*
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	0.580	0.000	***
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	-0.009	0.954	
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	-0.500	0.157	
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	0.734	0.000	***
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	NA	NA	
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	0.172	0.578	
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	NA	NA	
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.181	0.259	
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	-0.500	0.157	
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	0.707	0.000	***
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	NA	NA	
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	0.127	0.707	
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.051	0.755	
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	-0.283	0.080	
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	-0.500	0.157	
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	-0.164	0.653	
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	-0.118	0.466	
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.070	0.813	
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	-0.043	0.849	
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	0.676	0.006	**
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	0.225	0.486	
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	0.322	0.170	
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	0.435	0.015	*
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	-0.030	0.866	
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	0.046	0.802	
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	0.103	0.565	
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	0.208	0.247	
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.087	0.626	
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	NA	NA	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	-0.500	0.157	
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	0.371	0.038	*
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	-0.038	0.856	
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.190	0.575	
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	0.046	0.802	
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	-0.159	0.663	
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.220	0.220	
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	-0.089	0.800	
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.088	0.633	
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.019	0.917	
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	NA	NA	
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	-0.153	0.675	
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.048	0.795	
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	-0.203	0.492	
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	-0.123	0.562	
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	NA	NA	
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	-0.251	0.417	
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	-0.166	0.490	
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	0.347	0.082	
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	0.191	0.222	
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	0.599	0.000	***
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.580	0.008	**
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.263	0.100	
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.589	0.000	***
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.095	0.544	
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	0.016	0.957	
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	-0.132	0.697	
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	0.246	0.115	
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	NA	NA	
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	NA	NA	
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	-0.099	0.640	
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	0.131	0.711	
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.580	0.008	**
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	-0.500	0.157	
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	0.442	0.005	**
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	NA	NA	
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	-0.120	0.743	
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	0.048	0.766	
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	-0.092	0.564	
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	-0.500	0.157	
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	-0.500	0.157	
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	-0.053	0.743	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	-0.269	0.426	
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	-0.217	0.428	
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	-0.275	0.373	
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	-0.500	0.157	
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	-0.052	0.830	
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	0.195	0.419	
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	-0.525	0.029	*
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	0.176	0.464	
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	-0.284	0.226	
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	0.766	0.001	**
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.291	0.227	
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	NA	NA	
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	-0.031	0.930	
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.258	0.284	
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	-0.254	0.355	
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	-0.500	0.157	
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	0.176	0.464	
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	-0.500	0.157	
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	0.646	0.007	**
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	0.720	0.003	**
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	0.131	0.587	
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	-0.113	0.640	
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	-0.500	0.157	
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	NA	NA	
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	-0.027	0.911	
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.061	0.842	
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	-0.070	0.814	
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	-0.109	0.764	
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	-0.263	0.471	
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	-0.093	0.684	
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	-0.106	0.635	
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	0.047	0.834	
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.376	0.099	
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	-0.089	0.695	
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	-0.263	0.237	
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	-0.016	0.944	
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	-0.500	0.157	
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	-0.500	0.157	
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	-0.027	0.904	
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	0.288	0.415	
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	-0.541	0.110	
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.376	0.099	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	NA	NA	
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	-0.017	0.938	
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	-0.500	0.157	
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	-0.080	0.721	
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	-0.326	0.143	
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	NA	NA	
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	-0.154	0.488	
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	-0.130	0.723	
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	-0.014	0.968	
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	-0.063	0.863	
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	-0.518	0.143	
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	0.001	0.996	
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	-0.022	0.925	
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	0.227	0.332	
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.013	0.954	
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	0.580	0.013	*
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	0.375	0.120	
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	0.237	0.311	
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	-0.500	0.157	
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	0.041	0.886	
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	0.243	0.299	
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	NA	NA	
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	-0.047	0.898	
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	NA	NA	
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.013	0.954	
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	NA	NA	
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	0.497	0.034	*
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	0.187	0.424	
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	0.279	0.233	
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	0.075	0.749	
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	NA	NA	
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	NA	NA	
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	0.173	0.460	

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 5: Outlier Counts by Date

Date	Count
2015-11-19	4
2015-11-20	2
2016-01-05	2
2016-02-17	2
2016-04-05	3
2016-04-07	3
2016-05-25	2
2016-05-27	1
2016-07-12	2
2017-01-23	1
2017-01-24	2
2017-04-04	1
2017-04-05	2
2017-07-18	2
2017-07-19	1
2017-07-20	6
2017-10-17	3
2017-10-18	1
2018-01-24	2
2018-01-25	1
2018-04-23	1
2018-07-17	1
2018-10-25	1
2019-01-25	2
2019-07-10	4
2020-01-16	2
2020-01-17	2
2020-04-15	1
2020-04-17	1
2020-07-07	2
2020-10-14	1
2021-01-27	1
2021-01-28	1
2021-01-29	1
2021-04-13	3
2021-04-15	1
2021-08-09	1
2021-08-10	1
2021-08-12	8
2021-11-17	1
2021-11-18	1
2022-04-20	1
2022-04-21	1

(Table continues on next page)

Table 5: Outlier Counts by Date *(continued)*

Date	Count
2022-07-12	2
2022-07-13	3
2022-07-14	1
2022-10-19	2
2023-04-24	2
2023-04-27	8
2023-10-04	9
2024-01-24	6
2024-01-26	2
2024-10-31	1

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	15	2023-10-04	1	44.6
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	3	2020-10-14	1	0.670
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	36	2019-07-10	1	2.48
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	18	2021-11-18	1	294
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	21	2022-10-19	1	115
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	10	2023-10-04	1	37.2
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	17	2024-10-31	1	1590
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	33	2024-01-26	1	34300
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	33	2024-01-26	11	489
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	33	2022-07-12	26	552
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	31	2017-07-18	NA	0.400
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	29	2024-01-24	NA	9.29
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	29	2016-07-12	NA	8.50
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	33	2020-01-17	1	11700
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	33	2015-11-19	NA	257
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	33	2021-01-28	1	428
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2022-10-19	1	130
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2018-10-25	1	84.0
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2018-01-25	NA	56.8
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2017-04-05	NA	48.8
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2023-10-04	1	46.2
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	6	2023-10-04	1	34.8
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	31	2017-07-18	NA	0.400
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	33	2021-08-10	5	512
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	33	2016-07-12	NA	356
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	33	2016-05-27	NA	350
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	28	2020-01-17	1	41.0
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	10	2016-02-17	NA	10.3

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	15	2022-04-20	1	137
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	17	2019-01-25	1	86.0
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	36	2022-07-12	25	565
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	32	2020-07-07	NA	6.18
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	36	2015-11-19	NA	256
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	36	2017-01-24	NA	303
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	36	2018-01-24	NA	1060
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	18	2019-01-25	1	179
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2017-10-18	NA	236
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2016-04-07	NA	217
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2018-07-17	NA	36.7
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2017-04-05	NA	129
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2015-11-19	NA	128
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	36	2020-01-16	1	35.7
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	13	2020-04-17	1	47.2
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	13	2017-10-17	NA	165
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	37	2016-04-07	NA	17900
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	37	2016-05-25	NA	18600
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	37	2015-11-19	NA	395
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	37	2016-05-25	NA	486
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	37	2016-04-07	NA	513
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	37	2021-08-12	5	98.0
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	9	2022-07-13	1	120
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	13	2016-04-05	NA	36.1
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	22	2017-01-23	NA	39.3
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	35	2020-04-15	NA	8.54
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	35	2020-07-07	NA	5.50
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	35	2020-01-16	NA	5.62
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	38	2017-10-17	NA	1160
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	10	2022-07-13	1	260
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	37	2021-08-09	1	28.6
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	37	2016-04-05	NA	15.3
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	37	2021-04-15	4	80.3
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2016-04-05	NA	214
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2016-01-05	NA	194
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-04-04	NA	179
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-01-24	NA	145
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2015-11-20	NA	137
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2018-01-24	NA	126
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2018-04-23	NA	96.1
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-10-17	NA	90.9
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2016-02-17	NA	87.7
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-07-19	NA	86.9

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	3	2016-01-05	NA	6.20
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	8	2019-07-10	1	79.3
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	16	2019-07-10	1	880
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	28	2022-07-14	7	194
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	27	2017-07-20	NA	0.320
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	28	2017-07-20	NA	9.60
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	28	2017-07-20	NA	51.2
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	28	2017-07-20	NA	50.1
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	20	2019-07-10	1	1940
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	27	2017-07-20	NA	0.320
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	28	2017-07-20	NA	5.60
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	8	2023-04-27	1	116
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	19	2023-04-27	1	157
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	7	2023-04-27	1	9.50
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	38	2021-01-27	10	4170
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	38	2015-11-20	NA	939
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	38	2023-04-27	10	1880
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	36	2023-04-27	1	2.51
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	36	2023-04-27	1	4.72
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	36	2023-04-27	1	7.23
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	5	2022-04-21	1	103
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	10	2023-10-04	1	27.9
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	7	2023-10-04	1	18.2
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	14	2023-10-04	1	43.4
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	4	2023-04-27	1	1.20
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	14	2023-10-04	1	195
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	10	2023-10-04	1	56.7
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	7	2021-11-17	1	20.1
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	17	2024-01-24	1	69400
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	17	2024-01-24	1	74.5
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	16	2024-01-24	NA	11.7
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	17	2021-01-29	1	2760
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	17	2024-01-24	1	130
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	17	2024-01-24	1	19.5
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	17	2021-04-13	1	2.13
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	17	2021-04-13	1	2.39
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	4	2022-07-13	1	6.20
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	15	2021-08-12	2	109
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	15	2021-08-12	1	94400
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	15	2021-08-12	12	530
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	15	2023-04-24	1	0.640
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	14	2021-08-12	12	523
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	15	2021-08-12	1	1740

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	15	2023-04-24	1	0.640
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	15	2021-08-12	2	80.7
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	15	2021-08-12	1	127
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	15	2021-04-13	1	2.23

Table 7: Seasonality Tests

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
01_01_111	MW-1	App. I Metals	Copper	ug/L	84%	10	10	9	9	38	0.932	0.623	0.979	1	2	1	2	6	0.543	0.474	0.549
01_01_117	MW-1	App. I Metals	Nickel	ug/L	74%	10	10	9	9	38	0.640	0.555	0.695	2	2	4	2	10	0.295	0.168	0.354
01_01_122	MW-1	App. I Metals	Silver	ug/L	84%	10	10	9	9	38	0.941	0.950	0.868	1	1	2	2	6	0.468	0.260	0.088
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	63%	10	10	9	9	38	0.942	0.833	0.933	3	4	4	3	14	0.504	0.478	0.517
01_01_128	MW-1	App. I Metals	Zinc	ug/L	66%	10	10	9	9	38	0.312	0.579	0.394	4	3	3	3	13	0.514	0.853	0.712
01_02_105	MW-1	App. III	Boron	ug/L	59%	9	10	9	9	37	0.872	0.636	0.968	4	5	2	4	15	0.388	0.274	0.181
01_02_107	MW-1	App. III	Calcium	ug/L	0%	10	10	9	9	38	0.453	0.510	0.504	10	10	9	9	38	0.453	0.510	0.504
01_02_108	MW-1	App. III	Chloride	mg/L	0%	10	10	9	9	38	0.514	0.487	0.693	10	10	9	9	38	0.514	0.487	0.693
01_02_112	MW-1	App. III	Fluoride	mg/L	3%	10	10	9	9	38	0.494	0.562	0.495	10	9	9	9	37	0.487	0.495	0.499
01_02_118	MW-1	App. III	pH (Field)	S.U.	0%	10	9	9	8	36	0.346	0.443	0.442	10	9	9	8	36	0.346	0.443	0.442
01_02_123	MW-1	App. III	Sulfate	mg/L	0%	10	10	9	9	38	0.937	0.908	0.928	10	10	9	9	38	0.937	0.908	0.928
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	0%	10	10	9	9	38	0.419	0.393	0.470	10	10	9	9	38	0.419	0.393	0.470
01_03_101	MW-1	App. IV	Antimony	ug/L	95%	10	10	9	9	38	0.613	0.229	0.306	0	0	2	0	2	NA	NA	NA
01_03_102	MW-1	App. IV	Arsenic	ug/L	92%	10	10	9	9	38	0.919	0.929	0.885	0	1	0	2	3	0.221	0.527	0.446
01_03_103	MW-1	App. IV	Barium	ug/L	0%	10	10	9	9	38	0.328	0.418	0.427	10	10	9	9	38	0.328	0.418	0.427
01_03_104	MW-1	App. IV	Beryllium	ug/L	100%	10	10	9	9	38	0.947	0.950	0.938	NA	NA	NA	NA	NA	NA	NA	NA
01_03_106	MW-1	App. IV	Cadmium	ug/L	92%	10	10	9	9	38	0.922	0.817	0.647	1	0	1	1	3	0.368	NA	NA
01_03_109	MW-1	App. IV	Chromium	ug/L	68%	10	10	9	9	38	0.713	0.427	0.586	3	3	3	3	12	0.369	0.254	0.369
01_03_110	MW-1	App. IV	Cobalt	ug/L	92%	10	10	9	9	38	0.976	0.975	0.938	0	1	2	0	3	0.221	0.278	0.133
01_03_112	MW-1	App. IV	Fluoride	mg/L	3%	10	10	9	9	38	0.494	0.562	0.495	10	9	9	9	37	0.487	0.495	0.499
01_03_113	MW-1	App. IV	Lead	ug/L	92%	10	10	9	9	38	0.634	0.299	0.308	1	1	1	0	3	0.368	NA	NA
01_03_114	MW-1	App. IV	Lithium	ug/L	0%	10	10	9	9	38	0.306	0.471	0.482	10	10	9	9	38	0.306	0.471	0.482
01_03_115	MW-1	App. IV	Mercury	ug/L	100%	10	10	9	9	38	0.884	0.896	0.892	NA	NA	NA	NA	NA	NA	NA	NA
01_03_116	MW-1	App. IV	Molybdenum	ug/L	87%	10	10	9	9	38	0.623	0.566	0.318	1	1	2	1	5	0.362	0.771	0.576
01_03_119	MW-1	App. IV	Radium-226	pCi/L	0%	10	9	9	8	36	0.953	0.951	NA	10	9	9	8	36	0.953	0.951	NA
01_03_120	MW-1	App. IV	Radium-228	pCi/L	0%	10	9	9	8	36	0.951	0.852	NA	10	9	9	8	36	0.951	0.852	NA
01_03_121	MW-1	App. IV	Selenium	ug/L	95%	10	10	9	9	38	0.853	0.775	0.552	0	1	1	0	2	0.317	NA	NA
01_03_124	MW-1	App. IV	Thallium	ug/L	100%	10	10	9	9	38	0.574	0.891	0.668	NA	NA	NA	NA	NA	NA	NA	NA
01_03_126	MW-1	App. IV	Total Radium	pCi/L	0%	10	9	9	8	36	0.983	0.868	0.973	10	9	9	8	36	0.983	0.868	0.973
02_01_111	MW-2	App. I Metals	Copper	ug/L	45%	10	9	6	8	33	0.233	0.290	0.123	4	5	3	6	18	0.066	0.546	0.144
02_01_117	MW-2	App. I Metals	Nickel	ug/L	36%	10	9	6	8	33	0.509	0.083	0.354	7	4	4	6	21	0.543	0.146	0.401
02_01_122	MW-2	App. I Metals	Silver	ug/L	94%	10	9	6	8	33	0.741	0.767	0.802	0	1	1	0	2	0.317	NA	NA
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	70%	10	9	6	8	33	0.604	0.378	0.461	2	2	3	3	10	0.233	0.545	0.367
02_01_128	MW-2	App. I Metals	Zinc	ug/L	48%	10	9	6	8	33	0.475	0.273	0.240	5	4	3	5	17	0.406	0.415	0.240
02_02_105	MW-2	App. III	Boron	ug/L	3%	9	9	6	8	32	0.589	0.671	0.525	8	9	6	8	31	0.653	0.927	0.876
02_02_107	MW-2	App. III	Calcium	ug/L	0%	10	9	6	8	33	0.250	0.776	0.767	10	9	6	8	33	0.250	0.776	0.767
02_02_108	MW-2	App. III	Chloride	mg/L	0%	10	9	6	8	33	0.520	0.577	0.584	10	9	6	8	33	0.520	0.577	0.584
02_02_112	MW-2	App. III	Fluoride	mg/L	6%	10	9	6	8	33	0.952	0.690	0.738	9	9	6	7	31	0.945	0.635	0.704
02_02_118	MW-2	App. III	pH (Field)	S.U.	0%	10	7	6	6	29	0.540	0.685	0.687	10	7	6	6	29	0.540	0.685	0.687

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
02_02_123	MW-2	App. III	Sulfate	mg/L	0%	10	9	6	8	33	0.878	0.899	0.953	10	9	6	8	33	0.878	0.899	0.953
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	0%	10	9	6	8	33	0.257	0.699	0.530	10	9	6	8	33	0.257	0.699	0.530
02_03_101	MW-2	App. IV	Antimony	ug/L	61%	10	9	6	8	33	0.743	0.582	0.562	4	4	3	2	13	0.931	0.912	0.707
02_03_102	MW-2	App. IV	Arsenic	ug/L	70%	10	9	6	8	33	0.969	0.848	0.932	2	3	3	2	10	0.600	0.635	0.685
02_03_103	MW-2	App. IV	Barium	ug/L	0%	10	9	6	8	33	0.775	0.593	0.629	10	9	6	8	33	0.775	0.593	0.629
02_03_104	MW-2	App. IV	Beryllium	ug/L	94%	10	9	6	8	33	0.682	0.523	0.537	0	1	0	1	2	0.317	NA	NA
02_03_106	MW-2	App. IV	Cadmium	ug/L	91%	10	9	6	8	33	0.672	0.587	0.589	1	1	0	1	3	0.368	NA	NA
02_03_109	MW-2	App. IV	Chromium	ug/L	18%	10	9	6	8	33	0.524	0.165	0.365	7	8	5	7	27	0.259	0.175	0.196
02_03_110	MW-2	App. IV	Cobalt	ug/L	82%	10	9	6	8	33	0.112	0.239	0.071	0	2	1	3	6	0.117	0.633	0.284
02_03_112	MW-2	App. IV	Fluoride	mg/L	6%	10	9	6	8	33	0.952	0.690	0.738	9	9	6	7	31	0.945	0.635	0.704
02_03_113	MW-2	App. IV	Lead	ug/L	88%	10	9	6	8	33	0.413	0.120	0.122	0	2	1	1	4	0.259	0.105	0.355
02_03_114	MW-2	App. IV	Lithium	ug/L	0%	10	9	6	8	33	0.416	0.091	0.140	10	9	6	8	33	0.416	0.091	0.140
02_03_115	MW-2	App. IV	Mercury	ug/L	100%	10	9	6	8	33	0.814	0.830	0.826	NA	NA	NA	NA	NA	NA	NA	NA
02_03_116	MW-2	App. IV	Molybdenum	ug/L	15%	10	9	6	8	33	0.813	0.414	0.695	8	8	5	7	28	0.248	0.156	0.138
02_03_119	MW-2	App. IV	Radium-226	pCi/L	0%	10	8	6	8	32	0.057	0.032 *	0.035 *	10	8	6	8	32	0.057	0.032 *	0.035 *
02_03_120	MW-2	App. IV	Radium-228	pCi/L	0%	10	8	6	8	32	0.467	0.598	0.675	10	8	6	8	32	0.467	0.598	0.675
02_03_121	MW-2	App. IV	Selenium	ug/L	94%	10	9	6	8	33	0.586	0.867	0.754	0	2	0	0	2	NA	NA	NA
02_03_124	MW-2	App. IV	Thallium	ug/L	70%	10	9	6	8	33	0.585	0.858	0.798	2	3	2	3	10	0.186	0.283	0.225
02_03_126	MW-2	App. IV	Total Radium	pCi/L	0%	10	8	6	8	32	0.153	0.132	0.169	10	8	6	8	32	0.153	0.132	0.169
03_01_111	MW-3	App. I Metals	Copper	ug/L	58%	10	10	8	8	36	0.687	0.621	0.717	4	4	3	4	15	0.251	0.576	0.343
03_01_117	MW-3	App. I Metals	Nickel	ug/L	53%	10	10	8	8	36	0.568	0.787	0.930	3	6	5	3	17	0.974	0.506	0.985
03_01_122	MW-3	App. I Metals	Silver	ug/L	97%	10	10	8	8	36	0.915	0.968	0.899	0	0	1	0	1	NA	NA	NA
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	64%	10	10	8	8	36	0.986	0.829	0.910	3	4	3	3	13	0.887	0.763	0.923
03_01_128	MW-3	App. I Metals	Zinc	ug/L	78%	10	10	8	8	36	0.946	0.851	0.980	2	4	1	1	8	0.900	0.785	0.868
03_02_105	MW-3	App. III	Boron	ug/L	29%	9	10	8	8	35	0.843	0.790	0.922	5	7	6	7	25	0.837	0.895	0.856
03_02_107	MW-3	App. III	Calcium	ug/L	0%	10	10	8	8	36	0.676	0.657	0.628	10	10	8	8	36	0.676	0.657	0.628
03_02_108	MW-3	App. III	Chloride	mg/L	0%	10	10	8	8	36	0.531	0.359	0.357	10	10	8	8	36	0.531	0.359	0.357
03_02_112	MW-3	App. III	Fluoride	mg/L	3%	10	10	8	8	36	0.380	0.267	0.240	9	10	8	8	35	0.581	0.548	0.597
03_02_118	MW-3	App. III	pH (Field)	S.U.	0%	10	8	8	6	32	0.554	0.216	0.215	10	8	8	6	32	0.554	0.216	0.215
03_02_123	MW-3	App. III	Sulfate	mg/L	0%	10	10	8	8	36	0.901	0.924	0.934	10	10	8	8	36	0.901	0.924	0.934
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	0%	10	10	8	8	36	0.873	0.567	0.512	10	10	8	8	36	0.873	0.567	0.512
03_03_101	MW-3	App. IV	Antimony	ug/L	69%	10	10	8	8	36	0.931	0.879	0.978	3	4	2	2	11	0.626	0.775	0.696
03_03_102	MW-3	App. IV	Arsenic	ug/L	81%	10	10	8	8	36	0.743	0.709	0.812	0	2	2	3	7	0.738	0.822	0.743
03_03_103	MW-3	App. IV	Barium	ug/L	0%	10	10	8	8	36	0.752	0.705	0.677	10	10	8	8	36	0.752	0.705	0.677
03_03_104	MW-3	App. IV	Beryllium	ug/L	100%	10	10	8	8	36	0.914	0.925	0.914	NA	NA	NA	NA	NA	NA	NA	NA
03_03_106	MW-3	App. IV	Cadmium	ug/L	97%	10	10	8	8	36	0.925	0.932	0.788	0	0	0	1	1	NA	NA	NA
03_03_109	MW-3	App. IV	Chromium	ug/L	50%	10	10	8	8	36	0.573	0.727	0.964	4	6	3	5	18	0.771	0.495	0.860
03_03_110	MW-3	App. IV	Cobalt	ug/L	89%	10	10	8	8	36	0.923	0.879	0.845	1	2	1	0	4	0.259	0.082	0.483
03_03_112	MW-3	App. IV	Fluoride	mg/L	3%	10	10	8	8	36	0.380	0.267	0.240	9	10	8	8	35	0.581	0.548	0.597

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
03_03_113	MW-3	App. IV	Lead	ug/L	92%	10	10	8	8	36	0.462	0.277	0.226	1	1	1	0	3	0.368	NA	NA
03_03_114	MW-3	App. IV	Lithium	ug/L	3%	10	10	8	8	36	0.341	0.153	0.314	9	10	8	8	35	0.394	0.224	0.137
03_03_115	MW-3	App. IV	Mercury	ug/L	100%	10	10	8	8	36	0.787	0.801	0.802	NA	NA	NA	NA	NA	NA	NA	NA
03_03_116	MW-3	App. IV	Molybdenum	ug/L	0%	10	10	8	8	36	0.632	0.250	0.228	10	10	8	8	36	0.632	0.250	0.228
03_03_119	MW-3	App. IV	Radium-226	pCi/L	0%	10	9	8	8	35	0.506	0.523	0.789	10	9	8	8	35	0.506	0.523	0.789
03_03_120	MW-3	App. IV	Radium-228	pCi/L	0%	10	9	8	8	35	0.849	0.773	0.780	10	9	8	8	35	0.849	0.773	0.780
03_03_121	MW-3	App. IV	Selenium	ug/L	97%	10	10	8	8	36	0.855	0.804	0.598	0	1	0	0	1	NA	NA	NA
03_03_124	MW-3	App. IV	Thallium	ug/L	100%	10	10	8	8	36	0.403	0.932	0.629	NA	NA	NA	NA	NA	NA	NA	NA
03_03_126	MW-3	App. IV	Total Radium	pCi/L	0%	10	9	8	8	35	0.638	0.605	0.570	10	9	8	8	35	0.638	0.605	0.570
04_01_111	MW-4	App. I Metals	Copper	ug/L	86%	10	9	9	9	37	0.969	0.495	0.758	1	2	1	1	5	0.284	0.364	0.401
04_01_117	MW-4	App. I Metals	Nickel	ug/L	30%	10	9	9	9	37	0.748	0.833	0.683	6	7	7	6	26	0.958	0.993	0.967
04_01_122	MW-4	App. I Metals	Silver	ug/L	100%	10	9	9	9	37	0.943	0.950	0.818	NA	NA	NA	NA	NA	NA	NA	NA
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	89%	10	9	9	9	37	0.854	0.571	0.987	1	2	1	0	4	0.861	0.881	0.987
04_01_128	MW-4	App. I Metals	Zinc	ug/L	65%	10	9	9	9	37	0.930	0.741	0.854	4	4	2	3	13	0.663	0.841	0.821
04_02_105	MW-4	App. III	Boron	ug/L	64%	9	9	9	9	36	0.973	0.501	0.881	4	4	2	3	13	1.000	0.397	0.509
04_02_107	MW-4	App. III	Calcium	ug/L	0%	10	9	9	9	37	0.841	0.372	0.244	10	9	9	9	37	0.841	0.372	0.244
04_02_108	MW-4	App. III	Chloride	mg/L	0%	10	9	9	9	37	0.880	0.748	0.555	10	9	9	9	37	0.880	0.748	0.555
04_02_112	MW-4	App. III	Fluoride	mg/L	0%	10	9	9	9	37	0.790	0.584	0.527	10	9	9	9	37	0.790	0.584	0.527
04_02_118	MW-4	App. III	pH (Field)	S.U.	0%	10	8	9	8	35	0.212	0.204	0.200	10	8	9	8	35	0.212	0.204	0.200
04_02_123	MW-4	App. III	Sulfate	mg/L	0%	10	9	9	9	37	0.774	0.899	0.716	10	9	9	9	37	0.774	0.899	0.716
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	0%	10	9	9	9	37	0.149	0.300	0.351	10	9	9	9	37	0.149	0.300	0.351
04_03_101	MW-4	App. IV	Antimony	ug/L	86%	10	9	9	9	37	0.814	0.878	0.545	2	2	1	0	5	0.949	0.821	0.863
04_03_102	MW-4	App. IV	Arsenic	ug/L	95%	10	9	9	9	37	0.993	0.817	0.520	0	2	0	0	2	NA	NA	NA
04_03_103	MW-4	App. IV	Barium	ug/L	0%	10	9	9	9	37	0.380	0.417	0.290	10	9	9	9	37	0.380	0.417	0.290
04_03_104	MW-4	App. IV	Beryllium	ug/L	100%	10	9	9	9	37	0.945	0.948	0.917	NA	NA	NA	NA	NA	NA	NA	NA
04_03_106	MW-4	App. IV	Cadmium	ug/L	97%	10	9	9	9	37	0.929	0.877	0.658	0	0	1	0	1	NA	NA	NA
04_03_109	MW-4	App. IV	Chromium	ug/L	76%	10	9	9	9	37	0.752	0.402	0.893	3	4	2	0	9	0.638	0.401	0.692
04_03_110	MW-4	App. IV	Cobalt	ug/L	54%	10	9	9	9	37	0.697	0.896	0.762	3	4	6	4	17	0.915	0.960	0.906
04_03_112	MW-4	App. IV	Fluoride	mg/L	0%	10	9	9	9	37	0.790	0.584	0.527	10	9	9	9	37	0.790	0.584	0.527
04_03_113	MW-4	App. IV	Lead	ug/L	97%	10	9	9	9	37	0.615	0.315	0.289	0	0	1	0	1	NA	NA	NA
04_03_114	MW-4	App. IV	Lithium	ug/L	0%	10	9	9	9	37	0.944	0.386	0.429	10	9	9	9	37	0.944	0.386	0.429
04_03_115	MW-4	App. IV	Mercury	ug/L	100%	10	9	9	9	37	0.898	0.910	0.904	NA	NA	NA	NA	NA	NA	NA	NA
04_03_116	MW-4	App. IV	Molybdenum	ug/L	86%	10	9	9	9	37	0.586	0.643	0.324	2	1	1	1	5	0.532	0.588	0.237
04_03_119	MW-4	App. IV	Radium-226	pCi/L	0%	10	8	9	8	35	0.667	0.771	NA	10	8	9	8	35	0.667	0.771	NA
04_03_120	MW-4	App. IV	Radium-228	pCi/L	0%	10	8	9	8	35	0.798	0.935	0.847	10	8	9	8	35	0.798	0.935	0.847
04_03_121	MW-4	App. IV	Selenium	ug/L	95%	10	9	9	9	37	0.844	0.606	0.448	0	1	0	1	2	0.317	NA	NA
04_03_124	MW-4	App. IV	Thallium	ug/L	100%	10	9	9	9	37	0.611	0.869	0.709	NA	NA	NA	NA	NA	NA	NA	NA
04_03_126	MW-4	App. IV	Total Radium	pCi/L	0%	10	8	9	8	35	0.919	0.983	0.882	10	8	9	8	35	0.919	0.983	0.882
05_01_111	MW-5	App. I Metals	Copper	ug/L	74%	10	10	9	9	38	0.806	0.749	0.824	2	3	3	2	10	0.647	0.759	0.856

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
05_01_117	MW-5	App. I Metals	Nickel	ug/L	76%	10	10	9	9	38	0.624	0.406	0.629	3	1	2	3	9	0.362	0.396	0.488
05_01_122	MW-5	App. I Metals	Silver	ug/L	100%	10	10	9	9	38	0.942	0.956	0.877	NA	NA	NA	NA	NA	NA	NA	NA
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	92%	10	10	9	9	38	0.988	0.980	0.976	0	1	1	1	3	0.368	NA	NA
05_01_128	MW-5	App. I Metals	Zinc	ug/L	66%	10	10	9	9	38	0.036 *	0.135	0.051	2	5	5	1	13	0.550	0.746	0.660
05_02_105	MW-5	App. III	Boron	ug/L	41%	9	10	9	9	37	0.276	0.221	0.336	8	6	4	4	22	0.726	0.718	0.751
05_02_107	MW-5	App. III	Calcium	ug/L	0%	10	10	9	9	38	0.742	0.522	0.639	10	10	9	9	38	0.742	0.522	0.639
05_02_108	MW-5	App. III	Chloride	mg/L	0%	10	10	9	9	38	0.864	0.930	0.924	10	10	9	9	38	0.864	0.930	0.924
05_02_112	MW-5	App. III	Fluoride	mg/L	0%	10	10	9	9	38	0.599	0.612	0.586	10	10	9	9	38	0.599	0.612	0.586
05_02_118	MW-5	App. III	pH (Field)	S.U.	0%	10	9	9	7	35	0.636	0.285	0.295	10	9	9	7	35	0.636	0.285	0.295
05_02_123	MW-5	App. III	Sulfate	mg/L	0%	10	10	9	9	38	0.210	0.300	0.300	10	10	9	9	38	0.210	0.300	0.300
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	0%	10	10	9	9	38	0.615	0.340	0.352	10	10	9	9	38	0.615	0.340	0.352
05_03_101	MW-5	App. IV	Antimony	ug/L	95%	10	10	9	9	38	0.614	0.395	0.343	1	1	0	0	2	0.317	NA	NA
05_03_102	MW-5	App. IV	Arsenic	ug/L	95%	10	10	9	9	38	0.998	0.900	0.577	0	2	0	0	2	NA	NA	NA
05_03_103	MW-5	App. IV	Barium	ug/L	0%	10	10	9	9	38	0.294	0.246	0.235	10	10	9	9	38	0.294	0.246	0.235
05_03_104	MW-5	App. IV	Beryllium	ug/L	100%	10	10	9	9	38	0.947	0.950	0.938	NA	NA	NA	NA	NA	NA	NA	NA
05_03_106	MW-5	App. IV	Cadmium	ug/L	100%	10	10	9	9	38	0.865	0.922	0.775	NA	NA	NA	NA	NA	NA	NA	NA
05_03_109	MW-5	App. IV	Chromium	ug/L	74%	10	10	9	9	38	0.895	0.396	0.585	3	1	3	3	10	0.905	0.614	0.863
05_03_110	MW-5	App. IV	Cobalt	ug/L	95%	10	10	9	9	38	0.980	0.990	0.913	0	1	1	0	2	0.317	NA	NA
05_03_112	MW-5	App. IV	Fluoride	mg/L	0%	10	10	9	9	38	0.599	0.612	0.586	10	10	9	9	38	0.599	0.612	0.586
05_03_113	MW-5	App. IV	Lead	ug/L	97%	10	10	9	9	38	0.622	0.259	0.300	0	1	0	0	1	NA	NA	NA
05_03_114	MW-5	App. IV	Lithium	ug/L	3%	10	10	9	9	38	0.223	0.138	0.059	9	10	9	9	37	0.364	0.207	0.135
05_03_115	MW-5	App. IV	Mercury	ug/L	100%	10	10	9	9	38	0.884	0.896	0.892	NA	NA	NA	NA	NA	NA	NA	NA
05_03_116	MW-5	App. IV	Molybdenum	ug/L	92%	10	10	9	9	38	0.931	0.667	0.979	0	2	1	0	3	1.000	0.877	0.838
05_03_119	MW-5	App. IV	Radium-226	pCi/L	0%	10	9	9	8	36	0.053	0.050 *	NA	10	9	9	8	36	0.053	0.050 *	NA
05_03_120	MW-5	App. IV	Radium-228	pCi/L	0%	10	9	9	8	36	0.218	0.437	NA	10	9	9	8	36	0.218	0.437	NA
05_03_121	MW-5	App. IV	Selenium	ug/L	97%	10	10	9	9	38	0.806	0.784	0.561	0	1	0	0	1	NA	NA	NA
05_03_124	MW-5	App. IV	Thallium	ug/L	97%	10	10	9	9	38	0.698	0.644	0.729	1	0	0	0	1	NA	NA	NA
05_03_126	MW-5	App. IV	Total Radium	pCi/L	0%	10	9	9	8	36	0.124	0.083	0.305	10	9	9	8	36	0.124	0.083	0.305
06_01_111	MW-6	App. I Metals	Copper	ug/L	86%	10	10	8	9	37	0.628	0.516	0.772	0	1	2	2	5	0.741	0.801	0.917
06_01_117	MW-6	App. I Metals	Nickel	ug/L	70%	10	10	8	9	37	0.801	0.353	0.657	2	3	3	3	11	0.083	0.236	0.166
06_01_122	MW-6	App. I Metals	Silver	ug/L	100%	10	10	8	9	37	0.996	0.994	0.878	NA	NA	NA	NA	NA	NA	NA	NA
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	89%	10	10	8	9	37	0.972	0.902	0.942	0	1	1	2	4	0.407	0.805	0.713
06_01_128	MW-6	App. I Metals	Zinc	ug/L	70%	10	10	8	9	37	0.889	0.685	0.858	3	3	2	3	11	0.892	0.712	0.909
06_02_105	MW-6	App. III	Boron	ug/L	64%	9	10	8	9	36	0.903	0.959	0.943	4	3	3	3	13	0.907	0.910	0.933
06_02_107	MW-6	App. III	Calcium	ug/L	0%	10	10	8	9	37	0.774	0.659	0.678	10	10	8	9	37	0.774	0.659	0.678
06_02_108	MW-6	App. III	Chloride	mg/L	0%	10	10	8	9	37	0.662	0.572	0.374	10	10	8	9	37	0.662	0.572	0.374
06_02_112	MW-6	App. III	Fluoride	mg/L	3%	10	10	8	9	37	0.648	0.771	0.536	10	9	8	9	36	0.472	0.711	0.807
06_02_118	MW-6	App. III	pH (Field)	S.U.	0%	10	8	8	8	34	0.452	0.319	0.325	10	8	8	8	34	0.452	0.319	0.325
06_02_123	MW-6	App. III	Sulfate	mg/L	0%	10	10	8	9	37	0.594	0.552	0.699	10	10	8	9	37	0.594	0.552	0.699

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	0%	10	10	8	9	37	0.068	0.021 *	0.021 *	10	10	8	9	37	0.068	0.021 *	0.021 *
06_03_101	MW-6	App. IV	Antimony	ug/L	100%	10	10	8	9	37	0.890	0.534	0.422	NA	NA	NA	NA	NA	NA	NA	NA
06_03_102	MW-6	App. IV	Arsenic	ug/L	95%	10	10	8	9	37	1.000	0.998	0.824	0	2	0	0	2	NA	NA	NA
06_03_103	MW-6	App. IV	Barium	ug/L	0%	10	10	8	9	37	0.617	0.652	0.674	10	10	8	9	37	0.617	0.652	0.674
06_03_104	MW-6	App. IV	Beryllium	ug/L	97%	10	10	8	9	37	0.982	0.993	0.993	0	1	0	0	1	NA	NA	NA
06_03_106	MW-6	App. IV	Cadmium	ug/L	100%	10	10	8	9	37	0.930	0.942	0.771	NA	NA	NA	NA	NA	NA	NA	NA
06_03_109	MW-6	App. IV	Chromium	ug/L	81%	10	10	8	9	37	0.993	0.679	0.953	2	2	2	1	7	0.543	0.667	0.635
06_03_110	MW-6	App. IV	Cobalt	ug/L	97%	10	10	8	9	37	0.988	0.993	0.996	0	1	0	0	1	NA	NA	NA
06_03_112	MW-6	App. IV	Fluoride	mg/L	3%	10	10	8	9	37	0.648	0.771	0.536	10	9	8	9	36	0.472	0.711	0.807
06_03_113	MW-6	App. IV	Lead	ug/L	95%	10	10	8	9	37	0.520	0.223	0.298	0	1	0	1	2	0.317	NA	NA
06_03_114	MW-6	App. IV	Lithium	ug/L	0%	10	10	8	9	37	0.282	0.504	0.308	10	10	8	9	37	0.282	0.504	0.308
06_03_115	MW-6	App. IV	Mercury	ug/L	97%	10	10	8	9	37	0.908	0.516	0.592	1	0	0	0	1	NA	NA	NA
06_03_116	MW-6	App. IV	Molybdenum	ug/L	86%	10	10	8	9	37	0.527	0.415	0.221	2	1	1	1	5	0.284	0.056	0.020 *
06_03_119	MW-6	App. IV	Radium-226	pCi/L	0%	10	9	8	8	35	0.533	0.960	NA	10	9	8	8	35	0.533	0.960	NA
06_03_120	MW-6	App. IV	Radium-228	pCi/L	0%	10	9	8	8	35	0.176	0.205	NA	10	9	8	8	35	0.176	0.205	NA
06_03_121	MW-6	App. IV	Selenium	ug/L	95%	10	10	8	9	37	0.933	0.757	0.530	0	1	1	0	2	0.317	NA	NA
06_03_124	MW-6	App. IV	Thallium	ug/L	92%	10	10	8	9	37	0.806	0.911	0.896	1	1	0	1	3	0.368	NA	NA
06_03_126	MW-6	App. IV	Total Radium	pCi/L	0%	10	9	8	8	35	0.264	0.223	0.218	10	9	8	8	35	0.264	0.223	0.218
07_01_111	MW-7R	App. I Metals	Copper	ug/L	71%	7	6	8	7	28	0.276	0.565	0.461	2	1	2	3	8	0.868	0.570	0.836
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	43%	7	6	8	7	28	0.197	0.494	0.367	3	3	6	4	16	0.856	0.694	0.742
07_01_122	MW-7R	App. I Metals	Silver	ug/L	100%	7	6	8	7	28	0.961	0.961	0.708	NA	NA	NA	NA	NA	NA	NA	NA
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	54%	7	6	8	7	28	0.079	0.180	0.086	2	2	6	3	13	0.530	0.657	0.607
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	79%	7	6	8	7	28	0.143	0.447	0.204	1	2	1	2	6	0.232	0.504	0.452
07_02_105	MW-7R	App. III	Boron	ug/L	44%	6	6	8	7	27	0.244	0.171	0.220	5	3	4	3	15	0.300	0.280	0.299
07_02_107	MW-7R	App. III	Calcium	ug/L	0%	7	6	8	7	28	0.361	0.572	0.604	7	6	8	7	28	0.361	0.572	0.604
07_02_108	MW-7R	App. III	Chloride	mg/L	0%	7	6	8	7	28	0.258	0.270	0.265	7	6	8	7	28	0.258	0.270	0.265
07_02_112	MW-7R	App. III	Fluoride	mg/L	4%	7	6	8	7	28	0.170	0.262	0.201	7	5	8	7	27	0.219	0.341	0.275
07_02_118	MW-7R	App. III	pH (Field)	S.U.	0%	7	6	8	7	28	0.112	0.304	0.281	7	6	8	7	28	0.112	0.304	0.281
07_02_123	MW-7R	App. III	Sulfate	mg/L	0%	7	6	8	7	28	0.664	0.556	0.609	7	6	8	7	28	0.664	0.556	0.609
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	0%	7	6	8	7	28	0.257	0.195	0.221	7	6	8	7	28	0.257	0.195	0.221
07_03_101	MW-7R	App. IV	Antimony	ug/L	96%	7	6	8	7	28	0.357	0.216	0.179	0	0	1	0	1	NA	NA	NA
07_03_102	MW-7R	App. IV	Arsenic	ug/L	93%	7	6	8	7	28	0.990	0.848	0.598	0	1	1	0	2	0.317	NA	NA
07_03_103	MW-7R	App. IV	Barium	ug/L	0%	7	6	8	7	28	0.347	0.515	0.507	7	6	8	7	28	0.347	0.515	0.507
07_03_104	MW-7R	App. IV	Beryllium	ug/L	100%	7	6	8	7	28	0.862	0.910	0.829	NA	NA	NA	NA	NA	NA	NA	NA
07_03_106	MW-7R	App. IV	Cadmium	ug/L	100%	7	6	8	7	28	0.989	0.872	0.569	NA	NA	NA	NA	NA	NA	NA	NA
07_03_109	MW-7R	App. IV	Chromium	ug/L	29%	7	6	8	7	28	0.741	0.497	0.570	4	5	7	4	20	0.907	0.643	0.790
07_03_110	MW-7R	App. IV	Cobalt	ug/L	82%	7	6	8	7	28	0.600	0.546	0.574	0	2	2	1	5	0.223	0.616	0.314
07_03_112	MW-7R	App. IV	Fluoride	mg/L	4%	7	6	8	7	28	0.170	0.262	0.201	7	5	8	7	27	0.219	0.341	0.275
07_03_113	MW-7R	App. IV	Lead	ug/L	89%	7	6	8	7	28	0.100	0.077	0.049 *	0	1	1	1	3	0.368	NA	NA

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
07_03_114	MW-7R	App. IV	Lithium	ug/L	0%	7	6	8	7	28	0.314	0.172	0.208	7	6	8	7	28	0.314	0.172	0.208
07_03_115	MW-7R	App. IV	Mercury	ug/L	100%	7	6	8	7	28	0.788	0.800	0.791	NA	NA	NA	NA	NA	NA	NA	NA
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	86%	7	6	8	7	28	0.302	0.281	0.207	0	1	2	1	4	0.259	0.585	0.235
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	0%	7	5	8	6	26	0.737	0.612	NA	7	5	8	6	26	0.737	0.612	NA
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	0%	7	5	8	6	26	0.276	0.132	NA	7	5	8	6	26	0.276	0.132	NA
07_03_121	MW-7R	App. IV	Selenium	ug/L	96%	7	6	8	7	28	0.981	0.595	0.379	0	1	0	0	1	NA	NA	NA
07_03_124	MW-7R	App. IV	Thallium	ug/L	89%	7	6	8	7	28	0.820	0.617	0.755	1	0	1	1	3	0.368	NA	NA
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	0%	7	5	8	6	26	0.162	0.096	0.269	7	5	8	6	26	0.162	0.096	0.269
08_01_111	MW-8	App. I Metals	Copper	ug/L	79%	10	10	9	9	38	0.943	0.415	0.650	2	3	1	2	8	0.335	0.706	0.430
08_01_117	MW-8	App. I Metals	Nickel	ug/L	50%	10	10	9	9	38	0.791	0.502	0.734	6	4	5	4	19	0.413	0.293	0.394
08_01_122	MW-8	App. I Metals	Silver	ug/L	97%	10	10	9	9	38	0.901	0.825	0.883	0	1	0	0	1	NA	NA	NA
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	82%	10	10	9	9	38	0.900	0.699	0.868	2	1	3	1	7	0.258	0.026 *	0.129
08_01_128	MW-8	App. I Metals	Zinc	ug/L	63%	10	10	9	9	38	0.408	0.642	0.626	5	4	3	2	14	0.746	0.586	0.660
08_02_105	MW-8	App. III	Boron	ug/L	41%	9	10	9	9	37	0.812	0.722	0.796	7	6	4	5	22	0.974	0.940	0.941
08_02_107	MW-8	App. III	Calcium	ug/L	0%	10	10	9	9	38	0.657	0.839	0.663	10	10	9	9	38	0.657	0.839	0.663
08_02_108	MW-8	App. III	Chloride	mg/L	0%	10	10	9	9	38	0.208	0.337	0.246	10	10	9	9	38	0.208	0.337	0.246
08_02_112	MW-8	App. III	Fluoride	mg/L	53%	10	10	9	9	38	0.493	0.551	0.504	4	4	5	5	18	0.605	0.654	0.626
08_02_118	MW-8	App. III	pH (Field)	S.U.	0%	10	9	9	8	36	0.178	0.440	0.455	10	9	9	8	36	0.178	0.440	0.455
08_02_123	MW-8	App. III	Sulfate	mg/L	0%	10	10	9	9	38	0.960	0.981	0.968	10	10	9	9	38	0.960	0.981	0.968
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	0%	10	10	9	9	38	0.506	0.251	0.209	10	10	9	9	38	0.506	0.251	0.209
08_03_101	MW-8	App. IV	Antimony	ug/L	82%	10	10	9	9	38	0.948	0.998	0.774	2	3	1	1	7	0.508	0.364	0.504
08_03_102	MW-8	App. IV	Arsenic	ug/L	87%	10	10	9	9	38	0.831	0.791	0.914	1	2	1	1	5	0.284	0.043 *	0.027 *
08_03_103	MW-8	App. IV	Barium	ug/L	0%	10	10	9	9	38	0.152	0.319	0.305	10	10	9	9	38	0.152	0.319	0.305
08_03_104	MW-8	App. IV	Beryllium	ug/L	97%	10	10	9	9	38	0.783	0.518	0.640	0	1	0	0	1	NA	NA	NA
08_03_106	MW-8	App. IV	Cadmium	ug/L	97%	10	10	9	9	38	0.492	0.313	0.328	0	1	0	0	1	NA	NA	NA
08_03_109	MW-8	App. IV	Chromium	ug/L	50%	10	10	9	9	38	0.952	0.724	0.842	7	4	4	4	19	0.513	0.561	0.616
08_03_110	MW-8	App. IV	Cobalt	ug/L	89%	10	10	9	9	38	0.815	0.845	0.841	0	2	2	0	4	0.439	0.525	0.594
08_03_112	MW-8	App. IV	Fluoride	mg/L	53%	10	10	9	9	38	0.493	0.551	0.504	4	4	5	5	18	0.605	0.654	0.626
08_03_113	MW-8	App. IV	Lead	ug/L	95%	10	10	9	9	38	0.640	0.323	0.448	0	1	1	0	2	0.317	NA	NA
08_03_114	MW-8	App. IV	Lithium	ug/L	3%	10	10	9	9	38	0.715	0.839	0.890	9	10	9	9	37	0.448	0.485	0.460
08_03_115	MW-8	App. IV	Mercury	ug/L	97%	10	10	9	9	38	0.843	0.461	0.510	1	0	0	0	1	NA	NA	NA
08_03_116	MW-8	App. IV	Molybdenum	ug/L	92%	10	10	9	9	38	0.918	0.869	0.905	1	1	1	0	3	0.368	NA	NA
08_03_119	MW-8	App. IV	Radium-226	pCi/L	0%	10	9	9	8	36	0.323	0.361	NA	10	9	9	8	36	0.323	0.361	NA
08_03_120	MW-8	App. IV	Radium-228	pCi/L	0%	10	9	9	8	36	0.163	0.164	NA	10	9	9	8	36	0.163	0.164	NA
08_03_121	MW-8	App. IV	Selenium	ug/L	95%	10	10	9	9	38	0.792	0.816	0.589	0	2	0	0	2	NA	NA	NA
08_03_124	MW-8	App. IV	Thallium	ug/L	95%	10	10	9	9	38	0.749	0.818	0.869	1	0	1	0	2	0.317	NA	NA
08_03_126	MW-8	App. IV	Total Radium	pCi/L	0%	10	9	9	8	36	0.147	0.166	NA	10	9	9	8	36	0.147	0.166	NA
09_01_111	MW-10	App. I Metals	Copper	ug/L	64%	3	3	4	4	14	0.737	0.249	0.532	0	2	1	2	5	0.301	0.550	0.137
09_01_117	MW-10	App. I Metals	Nickel	ug/L	29%	3	3	4	4	14	0.774	0.534	0.678	1	3	3	3	10	0.729	0.623	0.751

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
09_01_122	MW-10	App. I Metals	Silver	ug/L	100%	3	3	4	4	14	0.764	0.895	0.576	NA	NA	NA	NA	NA	NA	NA	NA
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	50%	3	3	4	4	14	0.723	0.532	0.626	2	1	2	2	7	0.658	0.588	0.556
09_01_128	MW-10	App. I Metals	Zinc	ug/L	86%	3	3	4	4	14	0.622	0.527	0.682	0	1	0	1	2	0.317	NA	NA
09_02_105	MW-10	App. III	Boron	ug/L	0%	3	3	4	4	14	0.420	0.386	0.395	3	3	4	4	14	0.420	0.386	0.395
09_02_107	MW-10	App. III	Calcium	ug/L	0%	3	3	4	4	14	0.201	0.282	0.280	3	3	4	4	14	0.201	0.282	0.280
09_02_108	MW-10	App. III	Chloride	mg/L	0%	3	3	4	4	14	0.938	0.915	0.917	3	3	4	4	14	0.938	0.915	0.917
09_02_112	MW-10	App. III	Fluoride	mg/L	0%	3	3	4	4	14	0.757	0.785	0.780	3	3	4	4	14	0.757	0.785	0.780
09_02_118	MW-10	App. III	pH (Field)	S.U.	0%	3	4	4	4	15	0.263	0.256	0.251	3	4	4	4	15	0.263	0.256	0.251
09_02_123	MW-10	App. III	Sulfate	mg/L	0%	3	3	4	4	14	0.921	0.971	0.968	3	3	4	4	14	0.921	0.971	0.968
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	0%	3	3	4	4	14	0.069	0.101	0.108	3	3	4	4	14	0.069	0.101	0.108
09_03_101	MW-10	App. IV	Antimony	ug/L	93%	3	3	4	4	14	0.437	0.311	0.233	0	1	0	0	1	NA	NA	NA
09_03_102	MW-10	App. IV	Arsenic	ug/L	71%	3	3	4	4	14	0.689	0.714	0.531	0	2	1	1	4	0.264	0.778	0.790
09_03_103	MW-10	App. IV	Barium	ug/L	0%	3	3	4	4	14	0.852	0.583	0.667	3	3	4	4	14	0.852	0.583	0.667
09_03_104	MW-10	App. IV	Beryllium	ug/L	100%	3	3	4	4	14	0.764	0.923	0.831	NA	NA	NA	NA	NA	NA	NA	NA
09_03_106	MW-10	App. IV	Cadmium	ug/L	100%	3	3	4	4	14	0.764	0.480	0.361	NA	NA	NA	NA	NA	NA	NA	NA
09_03_109	MW-10	App. IV	Chromium	ug/L	29%	3	3	4	4	14	0.542	0.521	0.637	3	2	1	4	10	0.921	0.802	0.921
09_03_110	MW-10	App. IV	Cobalt	ug/L	86%	3	3	4	4	14	0.778	0.698	0.839	0	1	0	1	2	0.317	NA	NA
09_03_112	MW-10	App. IV	Fluoride	mg/L	0%	3	3	4	4	14	0.757	0.785	0.780	3	3	4	4	14	0.757	0.785	0.780
09_03_113	MW-10	App. IV	Lead	ug/L	86%	3	3	4	4	14	0.236	0.137	0.188	0	1	0	1	2	0.317	NA	NA
09_03_114	MW-10	App. IV	Lithium	ug/L	0%	3	3	4	4	14	0.767	0.790	0.848	3	3	4	4	14	0.767	0.790	0.848
09_03_115	MW-10	App. IV	Mercury	ug/L	100%	3	3	4	4	14	0.475	0.525	0.525	NA	NA	NA	NA	NA	NA	NA	NA
09_03_116	MW-10	App. IV	Molybdenum	ug/L	0%	3	3	4	4	14	0.995	0.964	0.974	3	3	4	4	14	0.995	0.964	0.974
09_03_119	MW-10	App. IV	Radium-226	pCi/L	0%	3	3	4	4	14	0.552	0.629	NA	3	3	4	4	14	0.552	0.629	NA
09_03_120	MW-10	App. IV	Radium-228	pCi/L	0%	3	3	4	4	14	0.402	0.495	NA	3	3	4	4	14	0.402	0.495	NA
09_03_121	MW-10	App. IV	Selenium	ug/L	86%	3	3	4	4	14	0.797	0.441	0.364	0	1	0	1	2	0.317	NA	NA
09_03_124	MW-10	App. IV	Thallium	ug/L	93%	3	3	4	4	14	0.804	0.678	0.788	0	0	0	1	1	NA	NA	NA
09_03_126	MW-10	App. IV	Total Radium	pCi/L	0%	3	3	4	4	14	0.686	0.756	NA	3	3	4	4	14	0.686	0.756	NA
10_01_111	MW-11	App. I Metals	Copper	ug/L	59%	4	4	4	5	17	0.497	0.478	0.497	1	2	1	3	7	0.543	0.797	0.744
10_01_117	MW-11	App. I Metals	Nickel	ug/L	53%	4	4	4	5	17	0.842	0.798	0.927	1	2	3	2	8	0.480	0.661	0.565
10_01_122	MW-11	App. I Metals	Silver	ug/L	100%	4	4	4	5	17	0.842	0.867	0.704	NA	NA	NA	NA	NA	NA	NA	NA
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	82%	4	4	4	5	17	0.784	0.818	0.816	0	1	1	1	3	0.368	NA	NA
10_01_128	MW-11	App. I Metals	Zinc	ug/L	82%	4	4	4	5	17	0.766	0.947	0.993	0	2	0	1	3	0.221	0.099	0.077
10_02_105	MW-11	App. III	Boron	ug/L	6%	4	4	4	5	17	0.270	0.272	0.319	3	4	4	5	16	0.116	0.206	0.161
10_02_107	MW-11	App. III	Calcium	ug/L	0%	4	4	4	5	17	0.047 *	0.108	0.066	4	4	4	5	17	0.047 *	0.108	0.066
10_02_108	MW-11	App. III	Chloride	mg/L	0%	4	4	4	5	17	0.326	0.321	0.322	4	4	4	5	17	0.326	0.321	0.322
10_02_112	MW-11	App. III	Fluoride	mg/L	6%	4	4	4	5	17	0.356	0.245	0.240	3	4	4	5	16	0.632	0.761	0.750
10_02_118	MW-11	App. III	pH (Field)	S.U.	0%	4	4	4	4	16	0.021 *	0.190	0.141	4	4	4	4	16	0.021 *	0.190	0.141
10_02_123	MW-11	App. III	Sulfate	mg/L	0%	4	4	4	5	17	0.856	0.766	0.826	4	4	4	5	17	0.856	0.766	0.826
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	0%	4	4	4	5	17	0.886	0.452	0.625	4	4	4	5	17	0.886	0.452	0.625

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
10_03_101	MW-11	App. IV	Antimony	ug/L	88%	4	4	4	5	17	0.317	0.225	0.233	1	1	0	0	2	0.317	NA	NA
10_03_102	MW-11	App. IV	Arsenic	ug/L	88%	4	4	4	5	17	0.793	0.715	0.505	1	1	0	0	2	0.317	NA	NA
10_03_103	MW-11	App. IV	Barium	ug/L	0%	4	4	4	5	17	0.032 *	0.136	0.080	4	4	4	5	17	0.032 *	0.136	0.080
10_03_104	MW-11	App. IV	Beryllium	ug/L	100%	4	4	4	5	17	0.842	0.834	0.825	NA	NA	NA	NA	NA	NA	NA	NA
10_03_106	MW-11	App. IV	Cadmium	ug/L	100%	4	4	4	5	17	0.842	0.614	0.470	NA	NA	NA	NA	NA	NA	NA	NA
10_03_109	MW-11	App. IV	Chromium	ug/L	76%	4	4	4	5	17	0.656	0.648	0.674	1	1	1	1	4	0.392	NA	NA
10_03_110	MW-11	App. IV	Cobalt	ug/L	71%	4	4	4	5	17	0.882	0.858	0.882	1	2	1	1	5	0.532	0.747	0.806
10_03_112	MW-11	App. IV	Fluoride	mg/L	6%	4	4	4	5	17	0.356	0.245	0.240	3	4	4	5	16	0.632	0.761	0.750
10_03_113	MW-11	App. IV	Lead	ug/L	94%	4	4	4	5	17	0.483	0.360	0.342	0	1	0	0	1	NA	NA	NA
10_03_114	MW-11	App. IV	Lithium	ug/L	0%	4	4	4	5	17	0.615	0.532	0.551	4	4	4	5	17	0.615	0.532	0.551
10_03_115	MW-11	App. IV	Mercury	ug/L	100%	4	4	4	5	17	0.355	0.383	0.383	NA	NA	NA	NA	NA	NA	NA	NA
10_03_116	MW-11	App. IV	Molybdenum	ug/L	88%	4	4	4	5	17	0.827	0.836	0.774	0	1	1	0	2	0.317	NA	NA
10_03_119	MW-11	App. IV	Radium-226	pCi/L	0%	4	4	4	5	17	0.847	0.924	NA	4	4	4	5	17	0.847	0.924	NA
10_03_120	MW-11	App. IV	Radium-228	pCi/L	0%	4	4	4	5	17	0.286	0.373	NA	4	4	4	5	17	0.286	0.373	NA
10_03_121	MW-11	App. IV	Selenium	ug/L	100%	4	4	4	5	17	0.766	0.553	0.420	NA	NA	NA	NA	NA	NA	NA	NA
10_03_124	MW-11	App. IV	Thallium	ug/L	94%	4	4	4	5	17	0.330	0.302	0.357	0	1	0	0	1	NA	NA	NA
10_03_126	MW-11	App. IV	Total Radium	pCi/L	0%	4	4	4	5	17	0.105	0.374	0.220	4	4	4	5	17	0.105	0.374	0.220
11_01_111	MW-11D	App. I Metals	Copper	ug/L	80%	3	4	4	4	15	0.917	0.704	0.905	0	2	0	1	3	0.221	0.624	0.648
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	73%	3	4	4	4	15	0.992	0.900	0.970	1	1	1	1	4	0.392	NA	NA
11_01_122	MW-11D	App. I Metals	Silver	ug/L	100%	3	4	4	4	15	0.955	0.965	0.854	NA	NA	NA	NA	NA	NA	NA	NA
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	80%	3	4	4	4	15	0.933	0.910	0.919	0	1	1	1	3	0.368	NA	NA
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	73%	3	4	4	4	15	0.386	0.459	0.488	1	1	2	0	4	0.259	0.741	0.627
11_02_105	MW-11D	App. III	Boron	ug/L	0%	3	4	4	4	15	0.971	0.780	0.883	3	4	4	4	15	0.971	0.780	0.883
11_02_107	MW-11D	App. III	Calcium	ug/L	0%	3	4	4	4	15	0.916	0.531	0.683	3	4	4	4	15	0.916	0.531	0.683
11_02_108	MW-11D	App. III	Chloride	mg/L	0%	3	4	4	4	15	0.939	0.718	0.930	3	4	4	4	15	0.939	0.718	0.930
11_02_112	MW-11D	App. III	Fluoride	mg/L	0%	3	4	4	4	15	0.934	0.898	0.916	3	4	4	4	15	0.934	0.898	0.916
11_02_118	MW-11D	App. III	pH (Field)	S.U.	0%	3	4	4	4	15	0.717	0.937	0.931	3	4	4	4	15	0.717	0.937	0.931
11_02_123	MW-11D	App. III	Sulfate	mg/L	7%	3	4	4	4	15	0.827	0.629	0.566	3	4	4	3	14	0.989	0.726	0.961
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	0%	3	4	4	4	15	0.818	0.654	0.708	3	4	4	4	15	0.818	0.654	0.708
11_03_101	MW-11D	App. IV	Antimony	ug/L	87%	3	4	4	4	15	0.085	0.080	0.149	0	1	1	0	2	0.317	NA	NA
11_03_102	MW-11D	App. IV	Arsenic	ug/L	40%	3	4	4	4	15	0.845	0.927	0.937	2	3	1	3	9	0.322	0.290	0.417
11_03_103	MW-11D	App. IV	Barium	ug/L	0%	3	4	4	4	15	0.835	0.974	0.947	3	4	4	4	15	0.835	0.974	0.947
11_03_104	MW-11D	App. IV	Beryllium	ug/L	93%	3	4	4	4	15	0.955	0.917	0.940	0	1	0	0	1	NA	NA	NA
11_03_106	MW-11D	App. IV	Cadmium	ug/L	100%	3	4	4	4	15	0.955	0.768	0.601	NA	NA	NA	NA	NA	NA	NA	NA
11_03_109	MW-11D	App. IV	Chromium	ug/L	80%	3	4	4	4	15	0.930	0.807	0.935	0	1	1	1	3	0.368	NA	NA
11_03_110	MW-11D	App. IV	Cobalt	ug/L	93%	3	4	4	4	15	0.955	0.946	0.964	0	1	0	0	1	NA	NA	NA
11_03_112	MW-11D	App. IV	Fluoride	mg/L	0%	3	4	4	4	15	0.934	0.898	0.916	3	4	4	4	15	0.934	0.898	0.916
11_03_113	MW-11D	App. IV	Lead	ug/L	93%	3	4	4	4	15	0.524	0.382	0.451	0	1	0	0	1	NA	NA	NA
11_03_114	MW-11D	App. IV	Lithium	ug/L	0%	3	4	4	4	15	0.959	0.755	0.835	3	4	4	4	15	0.959	0.755	0.835

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
11_03_115	MW-11D	App. IV	Mercury	ug/L	100%	3	4	4	4	15	0.432	0.474	0.474	NA	NA	NA	NA	NA	NA	NA	NA
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	0%	3	4	4	4	15	0.942	0.616	0.937	3	4	4	4	15	0.942	0.616	0.937
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	0%	3	4	4	4	15	0.356	0.377	NA	3	4	4	4	15	0.356	0.377	NA
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	0%	3	4	4	4	15	0.285	0.481	0.523	3	4	4	4	15	0.285	0.481	0.523
11_03_121	MW-11D	App. IV	Selenium	ug/L	93%	3	4	4	4	15	0.895	0.698	0.544	0	1	0	0	1	NA	NA	NA
11_03_124	MW-11D	App. IV	Thallium	ug/L	93%	3	4	4	4	15	0.360	0.348	0.377	0	1	0	0	1	NA	NA	NA
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	0%	3	4	4	4	15	0.774	0.851	0.804	3	4	4	4	15	0.774	0.851	0.804

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 8: Trend Tests: Lognormal MLE and MK

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	Parametric	Lognormal MLE	0.000171	0.040	↔
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000862	0.379	↔
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	Nonparametric	MK	0.0000138	0.001	↑
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	Parametric	Lognormal MLE	0.00000639	0.218	↔
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	Nonparametric	MK	-0.00109	0.000	↓
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	Parametric	Lognormal MLE	0.000121	0.168	↔
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	Parametric	Lognormal MLE	0.0000717	0.434	↔
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	Nonparametric	MK	0.0000138	0.001	↑
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	Parametric	Lognormal MLE	0.0000533	0.066	↔
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	Nonparametric	MK	-0.000116	0.013	↔
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	Nonparametric	MK	0.0000615	0.186	↔
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	Nonparametric	MK	-0.0000444	0.505	↔
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	Parametric	Lognormal MLE	0.000309	0.272	↔
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	Parametric	Lognormal MLE	-0.0000701	0.175	↔
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	Nonparametric	MK	-6.32	0.100	↔
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	Nonparametric	MK	-0.0660	0.008	↓
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	Nonparametric	MK	-0.0000748	0.009	↓
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	Nonparametric	MK	-0.0459	0.000	↓
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	Nonparametric	MK	-0.0126	0.865	↔
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	Nonparametric	MK	0.0287	0.006	↑
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	Nonparametric	MK	-0.000615	0.951	↔
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	Parametric	Lognormal MLE	-0.000404	0.000	↓
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	Nonparametric	MK	-0.0000295	0.638	↔
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	Nonparametric	MK	0.0000499	0.758	↔
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	Nonparametric	MK	0.0000237	0.910	↔
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	Parametric	Lognormal MLE	0.000582	0.049	↔
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	Parametric	Lognormal MLE	0.0000506	0.004	↑
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	Parametric	Lognormal MLE	-0.0000411	0.069	↔
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	Parametric	Lognormal MLE	0.0000797	0.384	↔
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	Nonparametric	MK	0.0000343	0.090	↔
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	Nonparametric	MK	-0.0272	0.000	↓
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	Nonparametric	MK	0.152	0.038	↔
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	Parametric	Lognormal MLE	0.0000650	0.015	↔
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	Parametric	Lognormal MLE	0.0000797	0.384	↔
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	Nonparametric	MK	-0.00280	0.215	↔
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	Nonparametric	MK	-0.000408	0.294	↔
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	Nonparametric	MK	-0.00000712	0.876	↔
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	Nonparametric	MK	0	0.989	↔
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	Nonparametric	MK	-0.0000192	0.787	↔
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	Parametric	Lognormal MLE	0.000586	0.000	↑
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	Nonparametric	MK	-1.57	0.417	↔
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	Nonparametric	MK	-0.0475	0.010	↓
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	Parametric	Lognormal MLE	0.0000483	0.081	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	Parametric	Lognormal MLE	-0.0000126	0.000	↓
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	Nonparametric	MK	0.000834	0.029	↔
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	Nonparametric	MK	0.0117	0.656	↔
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	Nonparametric	MK	0.0196	0.058	↔
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	Parametric	Lognormal MLE	0.0000483	0.081	↔
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	Nonparametric	MK	0.00483	0.000	↑
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	Nonparametric	MK	-0.0000628	0.268	↔
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	Nonparametric	MK	-0.00000840	0.921	↔
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	Nonparametric	MK	-0.0000345	0.629	↔
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	Parametric	Lognormal MLE	-0.000123	0.000	↓
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	Parametric	Lognormal MLE	-0.00000545	0.659	↔
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000330	0.053	↔
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	Nonparametric	MK	-0.0000651	0.098	↔
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	Parametric	Lognormal MLE	-0.00000715	0.784	↔
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	Nonparametric	MK	-0.0122	0.004	↓
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	Parametric	Lognormal MLE	-0.0000559	0.011	↔
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000330	0.053	↔
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	Nonparametric	MK	0.000642	0.003	↑
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	Nonparametric	MK	0	1.000	↔
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	Nonparametric	MK	0.0000304	0.496	↔
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	Nonparametric	MK	0.0000311	0.531	↔
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	Parametric	Lognormal MLE	-0.00000810	0.444	↔
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	Nonparametric	MK	-0.0225	0.000	↓
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	Parametric	Lognormal MLE	-0.0000508	0.415	↔
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	Nonparametric	MK	-0.0000622	0.028	↔
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	Nonparametric	MK	-0.0221	0.000	↓
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	Parametric	Lognormal MLE	-0.0000510	0.040	↔
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	Nonparametric	MK	-0.0218	0.000	↓
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	Parametric	Lognormal MLE	-0.0000508	0.415	↔
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	Parametric	Lognormal MLE	-0.000236	0.000	↓
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	Nonparametric	MK	-0.0000502	0.293	↔
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	Nonparametric	MK	-0.0000340	0.680	↔
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	Nonparametric	MK	-0.0000531	0.410	↔
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	Parametric	Lognormal MLE	0.000105	0.714	↔
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	Parametric	Lognormal MLE	0.0000460	0.004	↑
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	Nonparametric	MK	-0.00707	0.050	↔
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	Nonparametric	MK	0.0000106	0.042	↔
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	Nonparametric	MK	-0.0000436	0.352	↔
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	Nonparametric	MK	-0.00202	0.000	↓
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	Parametric	Lognormal MLE	0.0000475	0.001	↑
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	Nonparametric	MK	0.0370	0.001	↑
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	Nonparametric	MK	0.0000106	0.042	↔
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	Parametric	Lognormal MLE	0.000178	0.012	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	Nonparametric	MK	-0.0000893	0.332	↔
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	Nonparametric	MK	-0.0000247	0.860	↔
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	Nonparametric	MK	-0.000102	0.508	↔
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	Parametric	Lognormal MLE	0.000332	0.154	↔
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	Nonparametric	MK	-7.63	0.030	↔
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	Nonparametric	MK	-0.0620	0.000	↓
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	Parametric	Lognormal MLE	0.00000950	0.001	↑
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000603	0.001	↑
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	Nonparametric	MK	-0.0112	0.715	↔
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	Nonparametric	MK	-0.0527	0.016	↔
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	Parametric	Lognormal MLE	-0.0000682	0.265	↔
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	Nonparametric	MK	-0.000163	0.017	↔
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	Nonparametric	MK	0.000000904	0.989	↔
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	Nonparametric	MK	-0.000132	0.258	↔
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	Parametric	Lognormal MLE	-0.000368	0.653	↔
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	Parametric	Lognormal MLE	0.000307	0.014	↔
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	Parametric	Lognormal MLE	0.000137	0.026	↔
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	Parametric	Lognormal MLE	0.00000606	0.818	↔
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.000107	0.047	↔
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	Parametric	Lognormal MLE	0.00000976	0.430	↔
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.00116	0.000	↓
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	Parametric	Lognormal MLE	0.0000453	0.037	↔
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	Parametric	Lognormal MLE	0.000771	0.000	↑
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	Parametric	Lognormal MLE	-0.00196	0.060	↔
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.000107	0.047	↔
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	Parametric	Lognormal MLE	0.00160	0.000	↑
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	Parametric	Lognormal MLE	-0.000625	0.000	↓
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	Nonparametric	MK	-0.000105	0.661	↔
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	Nonparametric	MK	-0.0000526	0.827	↔
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	Nonparametric	MK	-0.000219	0.743	↔
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	Parametric	Lognormal MLE	0.0000636	0.617	↔
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	Nonparametric	MK	-1.10	0.592	↔
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	Parametric	Lognormal MLE	-0.000130	0.128	↔
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	Parametric	Lognormal MLE	0.00000395	0.982	↔
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	Nonparametric	MK	0.00000600	0.964	↔
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	Parametric	Lognormal MLE	0.0000547	0.401	↔
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	Nonparametric	MK	-0.0337	0.302	↔
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	Nonparametric	MK	-0.00583	0.322	↔
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	Parametric	Lognormal MLE	0.00000395	0.982	↔
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	Nonparametric	MK	-0.000709	0.282	↔
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	Nonparametric	MK	-0.0000305	0.434	↔
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	Nonparametric	MK	0.000304	0.202	↔
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	Nonparametric	MK	0.000251	0.232	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	Nonparametric	MK	-0.0117	0.042	↔
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	Nonparametric	MK	-10.4	0.010	↔
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.00125	0.000	↓
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.000102	0.083	↔
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	Parametric	Lognormal MLE	-0.0000529	0.000	↓
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	Parametric	Lognormal MLE	-0.00127	0.222	↔
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.000929	0.000	↓
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	Parametric	Lognormal MLE	-0.00147	0.001	↓
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	Parametric	Lognormal MLE	0.000253	0.018	↔
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.000102	0.083	↔
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	Parametric	Lognormal MLE	-0.000957	0.000	↓
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	Parametric	Lognormal MLE	-0.00221	0.000	↓
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	Nonparametric	MK	-0.000218	0.428	↔
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	Nonparametric	MK	-0.000372	0.166	↔
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	Nonparametric	MK	-0.000714	0.038	↔

Table 9: Trend Tests: Piecewise Linear-Linear

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	0.00160	0.009	↑	-0.00538	0.021	↔	2022-04-19	0.290	↔
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	0.000142	0.824	↔	-0.00140	0.640	↔	2022-04-29	0.017	↔
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.00000000000115	1.000	↔	-0.00162	0.000	↓	2021-05-07	0.740	↔
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	-0.000291	0.752	↔	0.000683	0.376	↔	2019-11-23	0.039	↔
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	0.00848	0.828	↔	0.000839	0.603	↔	2016-07-12	0.023	↔
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	-0.0262	0.127	↔	0.00682	0.001	↑	2017-04-27	0.331	↔
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	77.2	0.000	↑	-179	0.010	↓	2022-04-20	0.530	↔
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.293	0.000	↑	-0.424	0.012	↔	2021-06-18	0.423	↔
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	-0.000239	0.183	↔	0.0000226	0.000	↑	2016-06-12	0.385	↔
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	-0.000129	0.160	↔	0.000249	0.021	↔	2020-06-09	0.228	↔
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	-0.00687	0.003	↓	-0.000790	0.000	↓	2017-02-20	0.795	↓
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.759	0.000	↑	-1.91	0.001	↓	2022-03-20	0.571	↔
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	-0.000662	0.111	↔	0.000473	0.395	↔	2020-07-08	0.100	↔
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	0.00537	0.000	↑	-0.00104	0.000	↓	2017-09-15	0.736	↔
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.0800	0.001	↑	-0.239	0.022	↔	2022-06-07	0.371	↔
01_03_104	MW-1	App. IV	Beryllium	ug/L	38	38	100%	0.0000347	0.511	↔	-0.000418	0.017	↔	2021-11-16	0.324	↔
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	-0.0000129	0.661	↔	-0.000165	0.000	↓	2020-10-13	0.596	↔
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.00501	0.251	↔	-0.00172	0.043	↔	2018-01-24	0.148	↔
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	0.000257	0.332	↔	-0.00242	0.006	↓	2021-11-16	0.379	↔
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	-0.000239	0.183	↔	0.0000226	0.000	↑	2016-06-12	0.385	↔
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	0.000119	0.687	↔	0.0423	0.070	↔	2024-04-18	0.468	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.00470	0.002	↑	-0.0108	0.050	↔	2022-04-19	0.318	↔
01_03_115	MW-1	App. IV	Mercury	ug/L	38	38	100%	0.00000949	0.000	↑	-0.0000000805	0.991	↔	2022-04-19	0.585	↔
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	0.00333	0.023	↔	-0.00273	0.025	↔	2019-10-14	0.249	↔
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	0.000251	0.144	↔	-0.000354	0.002	↓	2019-07-09	0.345	↔
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	0.000244	0.121	↔	-0.0000616	0.597	↔	2019-07-10	0.121	↔
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	-0.00000000000245	1.000	↔	-0.000641	0.006	↓	2019-01-21	0.333	↔
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	-0.0116	0.000	↓	-0.00000172	0.987	↔	2017-04-24	0.942	↔
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.000460	0.080	↔	-0.000349	0.035	↔	2019-07-09	0.202	↔
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	0.0327	0.051	↔	-0.0609	0.219	↔	2021-11-18	0.167	↔
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	0.0196	0.775	↔	0.00111	0.842	↔	2017-04-04	0.026	↔
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	-0.00000000000534	1.000	↔	-0.00180	0.000	↓	2021-05-29	0.751	↔
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	-0.0000000000681	1.000	↔	0.00139	0.369	↔	2017-06-10	0.049	↔
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	-0.0143	0.481	↔	8.34	0.000	↑	2024-05-15	0.849	↔
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	0.0270	0.259	↔	-0.00456	0.024	↔	2017-03-17	0.207	↔
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	21.3	0.299	↔	-27.4	0.085	↔	2019-05-06	0.190	↔
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	0.634	0.180	↔	-0.135	0.001	↓	2017-01-26	0.343	↔
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	-0.00000554	0.666	↔	0.000182	0.852	↔	2024-05-15	0.010	↔
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	-0.000278	0.421	↔	0.000135	0.516	↔	2019-08-17	0.062	↔
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	-0.120	0.000	↓	-0.0122	0.539	↔	2019-09-26	0.755	↔
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	1.47	0.123	↔	-1.33	0.163	↔	2020-01-17	0.136	↔
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	-0.00785	0.110	↔	0.00171	0.308	↔	2018-06-23	0.153	↔
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	0.00581	0.148	↔	-0.0000994	0.828	↔	2017-06-06	0.235	↔
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	0.0644	0.031	↔	-0.0354	0.544	↔	2021-04-15	0.236	↔
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	0.0000720	0.286	↔	-0.000387	0.026	↔	2021-08-21	0.273	↔
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	-0.0000806	0.000	↓	0.00201	0.027	↔	2024-05-15	0.677	↔
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	0.0367	0.653	↔	-0.00471	0.478	↔	2017-04-04	0.031	↔
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	0.00155	0.175	↔	-0.0146	0.596	↔	2023-10-05	0.076	↔
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	-0.00000554	0.666	↔	0.000182	0.852	↔	2024-05-15	0.010	↔
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	0.000964	0.390	↔	0.00588	0.466	↔	2023-01-25	0.127	↔
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	0.0171	0.581	↔	-0.0708	0.360	↔	2021-08-10	0.054	↔
02_03_115	MW-2	App. IV	Mercury	ug/L	33	33	100%	0.00000985	0.000	↑	-0.000000930	0.881	↔	2022-01-26	0.633	↔
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	-0.0726	0.272	↔	-0.00214	0.107	↔	2016-04-06	0.255	↔
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	-0.000783	0.676	↔	-0.0000436	0.597	↔	2016-07-12	0.051	↔
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	0.000189	0.037	↔	-0.00273	0.060	↔	2023-10-01	0.266	↔
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	-0.0000000000105	1.000	↔	-0.000585	0.022	↔	2019-01-06	0.342	↔
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	-0.0143	0.000	↓	0.0000197	0.937	↔	2017-04-11	0.845	↔
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	0.000145	0.264	↔	-0.00336	0.287	↔	2023-10-04	0.163	↔
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.0124	0.045	↔	-0.0371	0.187	↔	2022-04-20	0.164	↔
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.0183	0.081	↔	-0.0108	0.072	↔	2019-01-25	0.174	↔
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	-0.000000000000210	1.000	↔	-0.00176	0.000	↓	2021-06-04	0.738	↔
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	0.00340	0.018	↔	-0.00203	0.014	↔	2019-04-17	0.291	↔
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	0.00971	0.038	↔	-0.00514	0.053	↔	2019-04-05	0.220	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	-0.0395	0.000	↓	0.0215	0.000	↑	2018-09-18	0.631	↔
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	-49.5	0.303	↔	14.2	0.001	↑	2017-04-04	0.332	↔
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	-0.486	0.059	↔	0.0139	0.620	↔	2017-06-05	0.317	↔
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	0.000403	0.000	↑	-0.000107	0.000	↓	2018-03-17	0.582	↔
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	-0.0000888	0.724	↔	0.000103	0.327	↔	2018-10-11	0.058	↔
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.355	0.005	↑	-0.0483	0.000	↓	2016-12-01	0.776	↔
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.369	0.111	↔	-0.0205	0.953	↔	2021-01-27	0.178	↔
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	-0.00265	0.017	↔	0.000280	0.864	↔	2020-10-31	0.304	↔
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	0.00196	0.001	↑	-0.00270	0.000	↓	2020-10-14	0.470	↔
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	-0.608	0.002	↓	0.103	0.000	↑	2017-04-04	0.691	↔
03_03_104	MW-3	App. IV	Beryllium	ug/L	36	36	100%	0.0000558	0.296	↔	-0.000431	0.004	↓	2021-08-23	0.409	↔
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	0.000000000000743	1.000	↔	-0.000104	0.000	↓	2018-06-28	0.739	↔
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	0.0358	0.087	↔	-0.0226	0.058	↔	2019-01-25	0.182	↔
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	0.000406	0.221	↔	-0.00261	0.005	↓	2021-08-12	0.394	↔
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	0.000403	0.000	↑	-0.000107	0.000	↓	2018-03-17	0.582	↔
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	0.0000229	0.943	↔	0.0458	0.068	↔	2024-04-29	0.440	↔
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	-0.0288	0.061	↔	0.0195	0.396	↔	2021-01-27	0.174	↔
03_03_115	MW-3	App. IV	Mercury	ug/L	36	36	100%	0.00000984	0.000	↑	-0.000000432	0.953	↔	2022-01-27	0.605	↔
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	-0.00612	0.814	↔	-0.000200	0.854	↔	2017-01-23	0.031	↔
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	0.000432	0.086	↔	-0.000215	0.119	↔	2019-01-25	0.158	↔
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	-0.00352	0.354	↔	0.000111	0.341	↔	2016-07-10	0.094	↔
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	-0.0000000000170	1.000	↔	-0.000694	0.015	↔	2019-04-08	0.344	↔
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	-0.0116	0.000	↓	0.000000155	0.999	↔	2017-04-23	0.941	↔
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	0.000475	0.355	↔	-0.000268	0.343	↔	2019-04-17	0.057	↔
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	0.0157	0.081	↔	-0.0330	0.167	↔	2021-11-16	0.138	↔
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.00398	0.481	↔	0.00208	0.002	↑	2017-04-05	0.453	↔
04_01_122	MW-4	App. I Metals	Silver	ug/L	37	37	100%	0.0000000000000436	1.000	↔	-0.00181	0.000	↓	2021-05-28	0.761	↔
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	0.000991	0.107	↔	-0.00212	0.032	↔	2021-01-14	0.202	↔
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	0.00724	0.039	↔	-0.00261	0.496	↔	2020-04-17	0.193	↔
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	0.0309	0.501	↔	-0.00704	0.315	↔	2017-10-10	0.050	↔
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	75.5	0.000	↑	-5.74	0.003	↓	2017-05-22	0.671	↔
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.688	0.000	↑	-0.0762	0.000	↓	2017-04-19	0.730	↔
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	-0.0000428	0.018	↔	0.000114	0.000	↑	2020-12-12	0.481	↔
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	-0.0000867	0.000	↓	0.000644	0.675	↔	2024-05-02	0.373	↔
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.00875	0.000	↑	-0.000191	0.588	↔	2017-11-21	0.698	↔
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	1.06	0.000	↑	-0.0789	0.021	↔	2017-09-18	0.697	↔
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	-0.000258	0.495	↔	0.000184	0.827	↔	2021-04-13	0.020	↔
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	0.00535	0.000	↑	-0.00108	0.000	↓	2017-09-17	0.642	↔
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.369	0.001	↑	0.0000712	0.995	↔	2017-04-08	0.611	↔
04_03_104	MW-4	App. IV	Beryllium	ug/L	37	37	100%	0.0000345	0.547	↔	-0.000418	0.009	↓	2021-11-16	0.322	↔
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	0.000000000000806	1.000	↔	-0.0000967	0.000	↓	2018-02-28	0.717	↔
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	0.000901	0.055	↔	-0.00446	0.042	↔	2022-04-21	0.256	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	0.00190	0.275	↔	0.0113	0.018	↔	2021-11-16	0.440	↔
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	-0.0000428	0.018	↔	0.000114	0.000	↑	2020-12-12	0.481	↔
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	0.0000978	0.744	↔	0.0445	0.054	↔	2024-04-23	0.477	↔
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.0143	0.811	↔	0.00528	0.041	↔	2017-01-24	0.230	↔
04_03_115	MW-4	App. IV	Mercury	ug/L	37	37	100%	0.00000957	0.000	↑	-0.000000205	0.978	↔	2022-03-20	0.589	↔
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	0.00525	0.032	↔	-0.00473	0.016	↔	2019-10-14	0.258	↔
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.000351	0.099	↔	-0.000237	0.015	↔	2018-10-22	0.247	↔
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.00109	0.156	↔	-0.0000961	0.281	↔	2017-04-05	0.136	↔
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	-0.000193	0.477	↔	-0.000902	0.083	↔	2021-04-08	0.292	↔
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	-0.0116	0.000	↓	-0.00000973	0.929	↔	2017-04-24	0.942	↔
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.00191	0.051	↔	-0.000251	0.029	↔	2017-04-09	0.255	↔
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.00176	0.002	↑	-0.00613	0.018	↔	2022-04-19	0.356	↔
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	0.00721	0.130	↔	-0.0238	0.387	↔	2022-07-13	0.087	↔
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	0.000000000000898	1.000	↔	-0.00181	0.000	↓	2021-05-29	0.764	↔
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	0.000412	0.128	↔	-0.00184	0.036	↔	2021-11-16	0.233	↔
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	-0.00616	0.294	↔	0.00107	0.534	↔	2018-07-01	0.074	↔
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	-0.00556	0.256	↔	0.00219	0.307	↔	2019-01-23	0.080	↔
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	0.385	0.672	↔	-2.67	0.000	↓	2019-10-13	0.500	↔
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	0.00151	0.024	↔	-0.00185	0.006	↓	2020-04-15	0.299	↔
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	-0.000480	0.396	↔	0.0000257	0.025	↔	2016-05-07	0.157	↔
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	-0.0000875	0.323	↔	0.00309	0.646	↔	2024-05-02	0.052	↔
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.00114	0.387	↔	-0.000213	0.145	↔	2017-07-18	0.094	↔
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.220	0.374	↔	-0.0759	0.044	↔	2017-10-16	0.133	↔
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	-0.000416	0.265	↔	0.000422	0.326	↔	2020-07-03	0.064	↔
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	0.00481	0.000	↑	-0.00114	0.000	↓	2017-11-17	0.641	↔
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.0144	0.051	↔	-0.0185	0.001	↓	2019-07-09	0.389	↔
05_03_104	MW-5	App. IV	Beryllium	ug/L	38	38	100%	0.0000347	0.510	↔	-0.000418	0.017	↔	2021-11-16	0.325	↔
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	0.000000000000434	1.000	↔	-0.0000973	0.000	↓	2018-02-24	0.724	↔
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	0.0155	0.138	↔	-0.0500	0.406	↔	2022-07-13	0.083	↔
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	0.000309	0.234	↔	-0.00284	0.001	↓	2022-01-25	0.419	↔
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	-0.000480	0.396	↔	0.0000257	0.025	↔	2016-05-07	0.157	↔
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	0.0000437	0.874	↔	0.0438	0.046	↔	2024-04-17	0.506	↔
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	0.00192	0.076	↔	-0.00172	0.544	↔	2021-08-09	0.118	↔
05_03_115	MW-5	App. IV	Mercury	ug/L	38	38	100%	0.00000949	0.000	↑	-0.0000000889	0.990	↔	2022-04-18	0.584	↔
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	0.00197	0.064	↔	-0.00506	0.211	↔	2022-04-18	0.135	↔
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	-0.0000503	0.318	↔	0.00172	0.350	↔	2024-01-25	0.106	↔
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	0.0000000340	1.000	↔	0.00144	0.756	↔	2024-04-28	0.021	↔
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	0.0000000000256	1.000	↔	-0.000654	0.006	↓	2019-01-09	0.342	↔
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	-0.0165	0.001	↓	-0.00000536	0.988	↔	2017-04-03	0.719	↔
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	-0.00000410	0.947	↔	0.00327	0.489	↔	2024-04-28	0.094	↔
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	0.00206	0.014	↔	-0.00559	0.034	↔	2021-11-17	0.269	↔
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	0.000516	0.151	↔	-0.00203	0.141	↔	2022-01-25	0.142	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	-0.00000000000161	1.000	↔	-0.00181	0.000	↓	2021-05-30	0.752	↔
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	0.000421	0.149	↔	-0.00153	0.101	↔	2021-11-17	0.156	↔
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	0.00246	0.008	↑	-0.0255	0.220	↔	2023-10-03	0.245	↔
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	-0.0188	0.004	↓	0.00289	0.000	↑	2017-01-29	0.595	↔
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	-24.4	0.505	↔	-0.0166	0.969	↔	2016-04-04	0.088	↔
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.0860	0.523	↔	-0.0278	0.012	↔	2017-04-03	0.187	↔
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.0000774	0.482	↔	-0.0000332	0.126	↔	2018-01-23	0.083	↔
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	-0.000167	0.030	↔	0.0000383	0.686	↔	2020-10-13	0.285	↔
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	-0.0804	0.000	↓	0.00132	0.929	↔	2020-01-26	0.678	↔
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	1.99	0.478	↔	-0.0494	0.004	↓	2016-02-08	0.238	↔
06_03_101	MW-6	App. IV	Antimony	ug/L	37	37	100%	-0.000460	0.208	↔	0.000307	0.537	↔	2020-09-11	0.072	↔
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	0.00428	0.001	↑	-0.00112	0.000	↓	2018-01-30	0.487	↔
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	-0.0411	0.000	↓	0.00613	0.520	↔	2020-10-09	0.701	↔
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	0.0000370	0.482	↔	-0.000404	0.021	↔	2021-11-17	0.302	↔
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	0.000000000000123	1.000	↔	-0.0000985	0.000	↓	2018-03-02	0.719	↔
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	0.000981	0.179	↔	-0.00299	0.074	↔	2021-04-15	0.177	↔
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	0.000279	0.286	↔	-0.00244	0.006	↓	2021-11-17	0.382	↔
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.0000774	0.482	↔	-0.0000332	0.126	↔	2018-01-23	0.083	↔
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	0.000159	0.584	↔	0.0437	0.047	↔	2024-04-22	0.507	↔
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	-0.0132	0.000	↓	0.00304	0.598	↔	2021-05-24	0.598	↔
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	0.00000509	0.600	↔	-0.000000000000692	1.000	↔	2022-05-22	0.014	↔
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	0.00137	0.119	↔	-0.00126	0.049	↔	2019-10-13	0.169	↔
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.0000303	0.863	↔	-0.000145	0.201	↔	2019-04-17	0.106	↔
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	-0.000137	0.309	↔	0.000168	0.428	↔	2021-01-24	0.055	↔
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	0.0000000000260	1.000	↔	-0.000664	0.013	↔	2019-01-28	0.316	↔
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	-0.0125	0.000	↓	0.00000338	0.974	↔	2017-04-16	0.952	↔
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	-0.000107	0.162	↔	0.00302	0.582	↔	2024-05-03	0.084	↔
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.0257	0.341	↔	-0.00994	0.070	↔	2019-07-09	0.159	↔
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	0.244	0.435	↔	-0.0922	0.143	↔	2019-07-09	0.109	↔
07_01_122	MW-7R	App. I Metals	Silver	ug/L	28	28	100%	-0.0000000000114	1.000	↔	-0.00171	0.000	↓	2021-03-25	0.755	↔
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	-0.0545	0.093	↔	-0.000515	0.649	↔	2018-02-24	0.283	↔
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	0.0309	0.160	↔	-0.00948	0.034	↔	2019-07-09	0.234	↔
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	-0.0415	0.000	↓	0.00190	0.110	↔	2018-10-24	0.595	↔
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	14.1	0.225	↔	2.01	0.379	↔	2019-07-09	0.283	↔
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	-0.0972	0.559	↔	-0.00685	0.256	↔	2018-02-24	0.124	↔
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	-0.000992	0.000	↓	0.0000196	0.003	↑	2018-02-24	0.779	↔
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	-0.0172	0.000	↓	0.00000116	0.981	↔	2017-11-21	0.866	↔
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	-0.150	0.000	↓	-0.00160	0.000	↓	2018-02-24	0.977	↓
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.112	0.172	↔	0.0205	0.315	↔	2019-10-13	0.343	↔
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	0.00146	0.731	↔	-0.000717	0.396	↔	2019-07-09	0.036	↔
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	-0.000318	0.466	↔	-0.00192	0.001	↓	2021-06-14	0.672	↔
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	0.303	0.001	↑	-0.00633	0.683	↔	2019-07-09	0.670	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
07_03_104	MW-7R	App. IV	Beryllium	ug/L	28	28	100%	0.000114	0.350	↔	-0.000411	0.030	↔	2021-08-11	0.330	↔
07_03_106	MW-7R	App. IV	Cadmium	ug/L	28	28	100%	-0.000113	0.000	↓	0.0000212	0.891	↔	2023-04-29	0.659	↔
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	-0.0890	0.509	↔	-0.00118	0.999	↔	2023-05-31	0.030	↔
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.00725	0.264	↔	-0.00327	0.015	↔	2019-07-09	0.256	↔
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	-0.000992	0.000	↓	0.0000196	0.003	↑	2018-02-24	0.779	↔
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	-0.000557	0.277	↔	0.0723	0.007	↑	2024-06-09	0.538	↔
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.0270	0.001	↑	-0.00135	0.322	↔	2019-05-29	0.618	↔
07_03_115	MW-7R	App. IV	Mercury	ug/L	28	28	100%	0.0000171	0.001	↑	-0.00000146	0.822	↔	2021-08-11	0.568	↔
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	-0.00441	0.265	↔	0.00198	0.904	↔	2023-01-26	0.089	↔
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.00132	0.125	↔	-0.000229	0.028	↔	2018-11-01	0.270	↔
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.000177	0.394	↔	-0.000577	0.596	↔	2023-01-27	0.046	↔
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	-0.000809	0.005	↓	0.00161	0.546	↔	2023-08-15	0.328	↔
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	-0.00189	0.000	↓	-0.00000253	0.742	↔	2018-02-24	0.901	↔
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.00166	0.328	↔	-0.000266	0.186	↔	2019-01-23	0.131	↔
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	0.000546	0.959	↔	0.00536	0.474	↔	2019-07-10	0.041	↔
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	0.000180	0.990	↔	0.00624	0.555	↔	2019-10-13	0.023	↔
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	0.000000000000813	1.000	↔	-0.00176	0.000	↓	2021-08-03	0.753	↔
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	0.000614	0.042	↔	-0.00342	0.345	↔	2023-04-27	0.139	↔
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	-0.0171	0.085	↔	0.00380	0.363	↔	2018-10-23	0.146	↔
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	-0.0151	0.143	↔	0.00276	0.001	↑	2017-01-24	0.310	↔
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	-58.7	0.000	↓	9.68	0.218	↔	2019-02-13	0.478	↔
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	-0.539	0.000	↓	-0.00516	0.821	↔	2017-11-07	0.682	↔
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.0000341	0.119	↔	0.0000266	0.000	↑	2017-10-18	0.837	↔
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.000946	0.104	↔	0.0000178	0.466	↔	2016-10-14	0.436	↔
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.00308	0.000	↑	-0.000176	0.216	↔	2017-12-06	0.611	↔
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	7.01	0.300	↔	-0.0543	0.170	↔	2016-02-11	0.179	↔
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	-0.0111	0.001	↓	-0.0000496	0.835	↔	2017-03-17	0.697	↔
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	0.00539	0.005	↑	-0.000690	0.013	↔	2017-08-29	0.422	↔
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	-0.416	0.013	↔	0.0537	0.257	↔	2018-06-10	0.329	↔
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	0.0000587	0.412	↔	-0.000358	0.197	↔	2022-01-26	0.109	↔
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	-0.0000142	0.700	↔	-0.000592	0.513	↔	2023-11-07	0.073	↔
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	0.00378	0.386	↔	-0.0391	0.464	↔	2023-04-27	0.052	↔
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	0.000297	0.277	↔	-0.00228	0.012	↔	2022-01-25	0.286	↔
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.0000341	0.119	↔	0.0000266	0.000	↑	2017-10-18	0.837	↔
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	0.000195	0.418	↔	0.0440	0.021	↔	2024-04-17	0.603	↔
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	-0.0152	0.000	↓	0.00490	0.036	↔	2019-04-17	0.448	↔
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	0.00000392	0.793	↔	-0.00000225	0.947	↔	2021-08-10	0.004	↔
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	0.000188	0.589	↔	-0.000727	0.436	↔	2021-09-02	0.035	↔
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	-0.0000282	0.797	↔	-0.000956	0.477	↔	2023-04-27	0.078	↔
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	-0.00109	0.787	↔	0.000131	0.444	↔	2016-07-12	0.022	↔
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	0.00000000000596	1.000	↔	-0.000633	0.007	↓	2018-12-22	0.336	↔
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	-0.0136	0.000	↓	0.00000318	0.985	↔	2017-04-15	0.894	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	-0.00538	0.879	↔	0.0000666	0.749	↔	2016-02-07	0.006	↔
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	0.141	0.539	↔	-0.0471	0.121	↔	2022-04-20	0.248	↔
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	0.00972	0.296	↔	-0.0269	0.442	↔	2023-10-04	0.186	↔
09_01_122	MW-10	App. I Metals	Silver	ug/L	14	14	100%	-0.00397	0.061	↔	-0.000733	0.541	↔	2022-10-24	0.605	↔
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	0.00490	0.467	↔	-0.0157	0.314	↔	2023-10-03	0.155	↔
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	0.0398	0.198	↔	-0.100	0.384	↔	2023-10-04	0.239	↔
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	0.0136	0.084	↔	-0.00860	0.758	↔	2023-10-08	0.321	↔
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	8.16	0.016	↔	-5.39	0.228	↔	2023-06-10	0.567	↔
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	0.00114	0.610	↔	-0.00102	0.758	↔	2023-04-27	0.037	↔
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	-0.0000709	0.078	↔	0.000385	0.478	↔	2024-06-26	0.314	↔
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	-0.00798	0.018	↔	-0.00252	0.039	↔	2022-10-23	0.872	↔
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.173	0.015	↔	-0.00387	0.613	↔	2022-03-11	0.732	↔
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	0.00598	0.286	↔	-0.00173	0.409	↔	2022-08-03	0.181	↔
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	-0.00348	0.089	↔	0.0000164	0.993	↔	2023-04-26	0.524	↔
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.111	0.012	↔	-0.0897	0.529	↔	2023-10-04	0.535	↔
09_03_104	MW-10	App. IV	Beryllium	ug/L	14	14	100%	-0.00137	0.096	↔	-0.0000135	0.963	↔	2022-10-23	0.597	↔
09_03_106	MW-10	App. IV	Cadmium	ug/L	14	14	100%	-0.000279	0.138	↔	0.000108	0.534	↔	2023-04-26	0.370	↔
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	0.0215	0.267	↔	-0.0585	0.422	↔	2023-10-04	0.202	↔
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	-0.00631	0.453	↔	-0.000994	0.752	↔	2022-08-11	0.210	↔
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	-0.0000709	0.078	↔	0.000385	0.478	↔	2024-06-26	0.314	↔
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	-0.00542	0.534	↔	0.0105	0.226	↔	2023-04-26	0.182	↔
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	-0.00325	0.583	↔	0.00590	0.001	↑	2022-05-11	0.777	↔
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	-0.0000162	0.275	↔	0.0000246	0.264	↔	2023-07-24	0.219	↔
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	-0.0230	0.000	↓	0.0140	0.231	↔	2023-11-17	0.903	↔
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	-0.000723	0.114	↔	0.000851	0.201	↔	2023-05-22	0.328	↔
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	-0.0131	0.030	↔	0.000235	0.491	↔	2021-11-16	0.515	↔
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	-0.00372	0.052	↔	0.00303	0.256	↔	2023-04-27	0.395	↔
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	0.0000344	0.183	↔	-0.000134	0.176	↔	2023-10-04	0.409	↔
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	-0.00830	0.146	↔	0.000233	0.504	↔	2021-12-25	0.442	↔
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.00884	0.647	↔	-0.00711	0.057	↔	2021-11-16	0.276	↔
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	0.000240	0.942	↔	-0.00293	0.154	↔	2022-07-12	0.252	↔
10_01_122	MW-11	App. I Metals	Silver	ug/L	17	17	100%	-0.00207	0.020	↔	-0.000826	0.548	↔	2023-04-23	0.637	↔
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	-0.00381	0.007	↓	0.000726	0.727	↔	2023-02-15	0.590	↔
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	0.00188	0.472	↔	-0.0118	0.002	↓	2022-12-11	0.705	↔
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	-0.0194	0.700	↔	0.00282	0.269	↔	2021-04-12	0.106	↔
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	-60.1	0.515	↔	7.52	0.391	↔	2021-06-19	0.110	↔
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	-0.0202	0.183	↔	0.0287	0.831	↔	2024-01-24	0.153	↔
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.0000489	0.303	↔	-0.0000545	0.496	↔	2023-03-30	0.121	↔
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	-0.00918	0.733	↔	0.000904	0.385	↔	2021-05-05	0.072	↔
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	-0.000379	0.707	↔	0.000226	0.443	↔	2021-12-16	0.059	↔
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	-2.36	0.355	↔	-0.0410	0.928	↔	2021-11-16	0.274	↔
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	0.00238	0.322	↔	-0.00139	0.487	↔	2022-10-23	0.138	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	-0.0000000000454	1.000	↔	-0.00231	0.019	↔	2021-09-19	0.484	↔
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	-0.0799	0.476	↔	0.0152	0.452	↔	2021-09-20	0.096	↔
10_03_104	MW-11	App. IV	Beryllium	ug/L	17	17	100%	-0.000715	0.010	↓	-0.0000869	0.833	↔	2023-01-25	0.612	↔
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	-0.000177	0.072	↔	0.0000561	0.723	↔	2023-04-23	0.379	↔
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	0.00115	0.779	↔	-0.00341	0.331	↔	2022-07-13	0.147	↔
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	-0.00335	0.032	↔	-0.00104	0.545	↔	2023-01-24	0.620	↔
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.0000489	0.303	↔	-0.0000545	0.496	↔	2023-03-30	0.121	↔
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	-0.00280	0.003	↓	0.118	0.000	↑	2024-07-16	0.883	↔
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	0.00151	0.451	↔	-0.0121	0.509	↔	2024-01-24	0.108	↔
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	-0.00000968	0.174	↔	0.0000202	0.416	↔	2023-07-25	0.177	↔
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	-0.00317	0.009	↓	0.00251	0.178	↔	2023-04-12	0.545	↔
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	-0.000152	0.185	↔	0.00249	0.283	↔	2024-05-27	0.267	↔
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	-0.00105	0.366	↔	0.000581	0.398	↔	2022-04-19	0.112	↔
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	-0.00232	0.046	↔	0.00257	0.338	↔	2023-04-24	0.320	↔
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	0.00000799	0.214	↔	-0.000164	0.213	↔	2024-04-01	0.494	↔
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	-0.000231	0.542	↔	0.00911	0.249	↔	2024-07-08	0.173	↔
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	0.0259	0.566	↔	-0.00955	0.010	↔	2021-11-16	0.477	↔
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	-0.0000000000373	1.000	↔	-0.00356	0.042	↔	2022-05-28	0.496	↔
11_01_122	MW-11D	App. I Metals	Silver	ug/L	15	15	100%	-0.00294	0.062	↔	-0.000744	0.528	↔	2023-01-02	0.618	↔
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	-0.00497	0.029	↔	0.000823	0.617	↔	2023-01-24	0.604	↔
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	0.00294	0.663	↔	-0.0125	0.141	↔	2023-02-07	0.335	↔
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	-0.0544	0.211	↔	-0.0110	0.623	↔	2022-07-16	0.369	↔
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	-77.9	0.383	↔	-11.3	0.569	↔	2022-04-18	0.324	↔
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	-0.651	0.169	↔	-0.0683	0.508	↔	2022-04-18	0.522	↔
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.0000407	0.637	↔	-0.000180	0.102	↔	2023-04-23	0.311	↔
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	-0.00149	0.012	↔	-0.000161	0.376	↔	2022-04-30	0.730	↔
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	-0.678	0.211	↔	-0.0642	0.589	↔	2022-04-18	0.462	↔
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	-1.56	0.064	↔	-0.209	0.614	↔	2022-07-15	0.543	↔
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	0.00173	0.687	↔	-0.00161	0.483	↔	2022-10-23	0.060	↔
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	0.0499	0.184	↔	0.00589	0.839	↔	2022-10-24	0.332	↔
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	-0.00104	0.028	↔	-0.0000776	0.819	↔	2022-11-04	0.604	↔
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	-0.000237	0.107	↔	0.0000878	0.599	↔	2023-04-23	0.375	↔
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	0.00247	0.632	↔	-0.00562	0.008	↓	2022-07-12	0.580	↔
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	-0.00518	0.039	↔	-0.00109	0.555	↔	2022-11-08	0.623	↔
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.0000407	0.637	↔	-0.000180	0.102	↔	2023-04-23	0.311	↔
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	-0.119	0.021	↔	-0.0122	0.249	↔	2022-03-31	0.766	↔
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	-0.0000133	0.188	↔	0.0000229	0.391	↔	2023-07-25	0.202	↔
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	-0.151	0.228	↔	-0.0218	0.430	↔	2022-04-18	0.485	↔
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	-0.000437	0.026	↔	0.00576	0.064	↔	2024-06-16	0.535	↔
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	-0.0122	0.010	↓	-0.0000926	0.744	↔	2021-08-31	0.702	↔
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	-0.00304	0.108	↔	0.00289	0.195	↔	2023-04-23	0.344	↔
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	0.0000136	0.202	↔	-0.000182	0.294	↔	2024-04-01	0.439	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	-0.00126	0.003	↓	0.00909	0.129	↔	2024-06-10	0.603	↔

Table 10: Trend Tests: Piecewise Linear-Linear-Linear

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.00000000000164	1.000	↔	-0.0153	0.009	↓	-0.000325	0.490	↔	2022-04-19	2022-07-20	0.832	↔
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	-0.000480	0.604	↔	0.00125	0.208	↔	-0.00786	0.520	↔	2019-12-15	2024-01-23	0.092	↔
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	0.00435	0.934	↔	0.00158	0.381	↔	-0.0244	0.644	↔	2016-06-29	2024-01-23	0.051	↔
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	-0.0107	0.123	↔	0.0110	0.002	↑	-0.0231	0.539	↔	2018-10-03	2023-10-08	0.373	↔
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	140	0.711	↔	74.2	0.000	↑	-177	0.013	↔	2016-07-11	2022-04-22	0.532	↔
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.273	0.000	↑	-0.921	0.003	↓	2.94	0.282	↔	2022-02-25	2024-04-18	0.544	↔
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	-0.0000624	0.198	↔	0.00126	0.078	↔	-0.00139	0.135	↔	2022-09-14	2023-12-16	0.355	↔
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	0.00422	0.724	↔	-0.00992	0.368	↔	-0.000760	0.000	↓	2016-04-03	2017-01-24	0.814	↔
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.796	0.000	↑	-8.69	0.005	↓	1.81	0.076	↔	2022-10-18	2023-06-26	0.757	↔
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	0.00582	0.000	↑	-0.000221	0.486	↔	-0.00204	0.000	↓	2017-05-07	2021-07-17	0.810	↔
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.0136	0.867	↔	0.116	0.039	↔	-0.249	0.007	↓	2018-04-25	2022-04-19	0.396	↔
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	-0.00000209	0.935	↔	-0.000287	0.006	↓	0.000113	0.426	↔	2021-01-27	2023-04-24	0.662	↔
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.00632	0.010	↑	-0.0223	0.393	↔	0.000302	0.802	↔	2018-10-23	2019-07-17	0.273	↔
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	-0.000679	0.068	↔	0.0126	0.044	↔	-0.00266	0.000	↓	2020-04-15	2020-10-22	0.582	↔
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	0.000934	0.016	↔	-0.00598	0.020	↔	0.0587	0.005	↑	2022-07-13	2024-04-18	0.634	↔
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.0291	0.272	↔	0.00355	0.087	↔	-0.00974	0.078	↔	2016-07-12	2022-04-19	0.354	↔
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	0.00000580	0.993	↔	-0.000439	0.555	↔	-0.000730	0.127	↔	2018-07-16	2021-01-28	0.335	↔
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	-0.0117	0.000	↓	0.000143	0.805	↔	-0.0000630	0.755	↔	2017-04-29	2020-01-15	0.942	↔
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.000656	0.007	↑	-0.00133	0.687	↔	-0.000102	0.647	↔	2019-07-13	2020-09-17	0.266	↔
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	-0.0113	0.796	↔	0.0738	0.168	↔	-0.0801	0.111	↔	2018-12-08	2021-11-18	0.223	↔
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	0.0130	0.917	↔	0.00544	0.400	↔	-0.0663	0.567	↔	2016-10-04	2023-10-04	0.078	↔
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	-0.00000000000171	1.000	↔	0.000000000000443	1.000	↔	-0.00180	0.000	↓	2016-04-29	2021-05-29	0.751	↔
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	0.0000544	0.976	↔	0.0146	0.233	↔	-0.0365	0.066	↔	2021-12-30	2023-10-03	0.235	↔
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	0.00151	0.958	↔	-0.129	0.602	↔	8.70	0.000	↑	2022-07-12	2024-05-15	0.853	↔
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	-119	0.712	↔	35.8	0.289	↔	-28.4	0.046	↔	2016-05-26	2019-03-04	0.210	↔
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	-0.000773	0.007	↓	0.00188	0.094	↔	-0.0000243	0.070	↔	2017-01-07	2017-05-29	0.496	↔
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	-0.000154	0.132	↔	0.00128	0.365	↔	-0.00259	0.168	↔	2022-09-08	2024-01-23	0.195	↔
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	0.310	0.804	↔	-0.129	0.000	↓	-0.0122	0.551	↔	2016-01-31	2019-08-14	0.759	↔
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	-0.222	0.895	↔	4.79	0.731	↔	-1.90	0.028	↔	2018-07-29	2020-01-16	0.196	↔
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	-0.0110	0.306	↔	-0.00144	0.867	↔	0.00218	0.376	↔	2017-06-03	2020-01-16	0.164	↔
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	-0.437	0.266	↔	0.140	0.063	↔	-0.0334	0.428	↔	2016-09-01	2020-04-02	0.324	↔
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	-0.0000754	0.486	↔	0.000804	0.764	↔	-0.000426	0.003	↓	2020-01-17	2021-02-09	0.347	↔
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	0.00000322	0.940	↔	-0.000128	0.000	↓	0.00226	0.009	↑	2019-02-09	2024-05-15	0.742	↔
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	-0.00675	0.380	↔	0.197	0.665	↔	-0.0885	0.027	↔	2022-02-17	2022-10-18	0.208	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	-0.00162	0.702	↔	0.00350	0.302	↔	-0.0188	0.505	↔	2019-01-23	2023-10-04	0.107	↔
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	-0.000773	0.007	↓	0.00188	0.094	↔	-0.0000243	0.070	↔	2017-01-07	2017-05-29	0.496	↔
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	0.00000628	0.999	↔	0.00158	0.396	↔	0.0327	0.616	↔	2018-09-23	2024-05-15	0.155	↔
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	-0.0675	0.170	↔	0.272	0.694	↔	-0.132	0.052	↔	2020-02-04	2021-08-09	0.197	↔
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	-0.106	0.322	↔	0.00220	0.623	↔	-0.00563	0.133	↔	2016-03-24	2020-01-17	0.303	↔
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	-0.000326	0.445	↔	0.0000301	0.834	↔	-0.00235	0.642	↔	2018-01-25	2024-05-05	0.095	↔
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	-0.00606	0.168	↔	0.000675	0.098	↔	-0.000287	0.186	↔	2016-05-03	2020-01-16	0.268	↔
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	-0.00000954	0.967	↔	-0.00211	0.015	↔	0.00245	0.105	↔	2021-02-23	2023-04-26	0.532	↔
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	-0.0142	0.000	↓	0.000262	0.883	↔	-0.0000775	0.878	↔	2017-04-22	2020-01-16	0.845	↔
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	-0.00475	0.460	↔	0.000270	0.103	↔	-0.00347	0.117	↔	2016-05-26	2023-09-17	0.238	↔
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.0137	0.031	↔	-0.0592	0.342	↔	0.0228	0.837	↔	2022-04-20	2023-10-29	0.186	↔
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.0244	0.022	↔	-0.0247	0.247	↔	0.00231	0.853	↔	2019-01-25	2021-08-30	0.233	↔
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	-0.0398	0.000	↓	0.0285	0.016	↔	0.0136	0.194	↔	2018-11-20	2022-01-26	0.644	↔
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	-51.6	0.296	↔	15.2	0.001	↑	-44.6	0.848	↔	2017-04-04	2024-04-29	0.341	↔
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	-0.438	0.002	↓	0.583	0.309	↔	-0.0306	0.501	↔	2018-03-25	2019-01-25	0.370	↔
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.364	0.000	↑	-0.0870	0.000	↓	-0.0102	0.336	↔	2017-01-24	2020-11-12	0.881	↔
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	30.2	0.035	↔	-3.42	0.419	↔	0.345	0.001	↑	2016-02-07	2017-01-18	0.515	↔
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	0.00535	0.139	↔	0.00115	0.181	↔	-0.00240	0.003	↓	2017-03-10	2020-10-15	0.519	↔
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	-0.601	0.003	↓	0.0998	0.000	↑	0.134	0.425	↔	2017-04-04	2023-04-26	0.692	↔
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	0.0500	0.017	↔	-0.0550	0.189	↔	0.00792	0.746	↔	2019-01-25	2021-08-30	0.262	↔
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	0.000967	0.020	↔	-0.00588	0.030	↔	0.0638	0.004	↑	2022-05-13	2024-04-29	0.627	↔
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	0.0401	0.425	↔	-0.131	0.189	↔	0.0169	0.288	↔	2017-10-18	2019-05-02	0.264	↔
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	-0.00655	0.807	↔	-0.0000285	0.983	↔	-0.00384	0.878	↔	2017-01-23	2023-11-19	0.034	↔
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	0.000244	0.552	↔	0.00106	0.836	↔	-0.000248	0.058	↔	2018-05-01	2019-01-23	0.168	↔
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	-0.00440	0.118	↔	0.00136	0.156	↔	-0.000159	0.409	↔	2016-10-17	2018-11-26	0.214	↔
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	-0.000107	0.541	↔	-0.00371	0.082	↔	0.00322	0.013	↔	2021-11-23	2023-04-25	0.567	↔
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	-0.0116	0.000	↓	0.000218	0.719	↔	-0.0000890	0.694	↔	2017-05-04	2020-01-16	0.941	↔
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	-0.00445	0.213	↔	0.00229	0.153	↔	-0.000322	0.163	↔	2016-10-22	2018-08-06	0.195	↔
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	-0.00185	0.853	↔	0.168	0.372	↔	-0.0680	0.003	↓	2021-01-02	2021-11-16	0.319	↔
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.00324	0.003	↑	-0.00907	0.632	↔	0.00450	0.046	↔	2020-11-20	2021-08-12	0.498	↔
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	0.0361	0.353	↔	-0.0120	0.485	↔	0.00310	0.906	↔	2017-10-17	2022-01-17	0.059	↔
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	75.5	0.000	↑	-6.32	0.004	↓	24.1	0.817	↔	2017-05-28	2024-04-23	0.677	↔
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.664	0.000	↑	-0.0426	0.372	↔	-0.0959	0.002	↓	2017-04-04	2020-05-14	0.739	↔
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	-0.000229	0.300	↔	0.000000676	0.975	↔	0.000118	0.001	↑	2017-01-20	2021-08-10	0.554	↔
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	-0.0000505	0.192	↔	-0.000204	0.070	↔	0.00109	0.477	↔	2021-08-11	2024-05-02	0.419	↔
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.00875	0.000	↑	-0.00102	0.130	↔	0.00185	0.249	↔	2018-01-23	2022-06-14	0.729	↔
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.986	0.000	↑	-0.101	0.015	↔	0.561	0.753	↔	2017-11-17	2024-04-15	0.705	↔
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	0.00580	0.000	↑	-0.000284	0.464	↔	-0.00213	0.001	↓	2017-05-10	2021-08-21	0.709	↔
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.371	0.001	↑	-0.0107	0.509	↔	0.0815	0.401	↔	2017-05-02	2023-04-25	0.628	↔
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	0.0000127	0.835	↔	-0.000111	0.000	↓	0.00000385	0.978	↔	2018-03-14	2023-04-26	0.731	↔
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	-0.0000208	0.986	↔	0.00214	0.186	↔	-0.00528	0.019	↔	2019-07-08	2022-04-21	0.289	↔
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	0.00422	0.097	↔	-0.0131	0.619	↔	0.0128	0.004	↑	2020-04-17	2021-05-01	0.473	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	-0.000229	0.300	↔	0.000000676	0.975	↔	0.000118	0.001	↑	2017-01-20	2021-08-10	0.554	↔
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	0.000935	0.016	↔	-0.00612	0.017	↔	0.0617	0.003	↑	2022-07-11	2024-04-23	0.650	↔
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.00251	0.781	↔	0.0151	0.342	↔	-0.00362	0.681	↔	2018-12-09	2021-08-11	0.270	↔
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.000451	0.002	↑	-0.00153	0.050	↔	0.000159	0.285	↔	2019-10-22	2021-02-28	0.485	↔
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.000809	0.417	↔	0.0000479	0.700	↔	-0.000866	0.154	↔	2017-04-04	2022-12-09	0.241	↔
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	-0.0000380	0.835	↔	-0.00450	0.048	↔	0.00353	0.011	↔	2022-01-06	2023-04-25	0.549	↔
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	-0.0115	0.000	↓	0.000184	0.724	↔	-0.0000847	0.703	↔	2017-05-04	2020-01-16	0.942	↔
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.000815	0.015	↔	-0.00136	0.300	↔	-0.0000629	0.818	↔	2019-06-17	2021-01-26	0.292	↔
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.000902	0.278	↔	0.00512	0.320	↔	-0.00772	0.001	↓	2020-09-05	2022-04-18	0.401	↔
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	-0.00604	0.715	↔	0.0155	0.223	↔	-0.0316	0.183	↔	2018-08-30	2022-07-12	0.124	↔
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	0.000000000000149	1.000	↔	-0.00200	0.000	↓	0.0000000000568	1.000	↔	2021-07-07	2024-04-05	0.769	↔
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	-14.7	0.061	↔	2.64	0.101	↔	-2.90	0.000	↓	2016-08-10	2019-07-09	0.599	↔
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	-0.0191	0.001	↓	0.00468	0.000	↑	-0.00188	0.000	↓	2016-08-09	2019-07-13	0.638	↔
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	-0.000398	0.181	↔	0.0000874	0.213	↔	0.00000408	0.848	↔	2016-08-31	2019-07-08	0.207	↔
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.00221	0.002	↑	-0.00474	0.060	↔	0.000294	0.072	↔	2018-01-24	2019-01-20	0.466	↔
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.261	0.302	↔	-0.109	0.098	↔	0.0625	0.774	↔	2017-10-16	2022-10-11	0.154	↔
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	0.00581	0.001	↑	-0.000295	0.453	↔	-0.00212	0.001	↓	2017-05-11	2021-08-09	0.704	↔
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.0176	0.030	↔	-0.0269	0.006	↓	0.00338	0.877	↔	2019-07-08	2022-10-23	0.435	↔
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	0.0000182	0.761	↔	-0.000111	0.000	↓	0.00000838	0.951	↔	2018-01-26	2023-04-28	0.739	↔
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	-0.0125	0.763	↔	0.0310	0.223	↔	-0.0649	0.213	↔	2018-07-09	2022-07-12	0.113	↔
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	-0.000673	0.041	↔	0.0123	0.247	↔	-0.00286	0.000	↓	2020-04-16	2020-11-09	0.625	↔
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	-0.000398	0.181	↔	0.0000874	0.213	↔	0.00000408	0.848	↔	2016-08-31	2019-07-08	0.207	↔
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	0.000869	0.023	↔	-0.00481	0.017	↔	0.0581	0.003	↑	2022-04-18	2024-04-17	0.659	↔
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	-0.000259	0.901	↔	0.00601	0.298	↔	-0.00340	0.184	↔	2019-07-08	2021-08-08	0.180	↔
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	-0.00114	0.499	↔	0.00866	0.143	↔	-0.00906	0.021	↔	2020-01-20	2022-04-18	0.284	↔
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	-0.000113	0.503	↔	-0.00360	0.081	↔	0.00320	0.012	↔	2021-11-16	2023-04-25	0.563	↔
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	-0.0165	0.000	↓	0.000167	0.923	↔	-0.0000761	0.919	↔	2017-04-08	2020-01-16	0.719	↔
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	-0.00466	0.659	↔	0.0000200	0.767	↔	0.00312	0.515	↔	2016-02-05	2024-04-28	0.127	↔
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	-0.000480	0.792	↔	0.00532	0.058	↔	-0.00732	0.006	↓	2019-04-03	2021-11-17	0.357	↔
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	-0.00000000000131	1.000	↔	-0.00201	0.000	↓	-0.0000000000354	1.000	↔	2021-07-08	2024-04-04	0.757	↔
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	-0.0101	0.653	↔	0.00333	0.008	↑	-0.0282	0.180	↔	2016-10-22	2023-10-03	0.283	↔
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	-0.0188	0.003	↓	0.00440	0.000	↑	-0.000348	0.852	↔	2017-03-22	2021-12-20	0.662	↔
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.0343	0.334	↔	-0.100	0.135	↔	0.0222	0.476	↔	2019-01-09	2021-04-14	0.261	↔
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.000151	0.090	↔	-0.000225	0.095	↔	0.0000266	0.460	↔	2018-04-22	2020-01-19	0.235	↔
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	-0.0340	0.341	↔	-0.172	0.122	↔	0.00139	0.905	↔	2018-01-24	2019-05-23	0.706	↔
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	0.00584	0.007	↑	-0.000178	0.685	↔	-0.00302	0.005	↓	2017-04-28	2022-04-18	0.590	↔
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	-0.000147	0.049	↔	0.00245	0.048	↔	-0.000464	0.000	↓	2020-04-14	2020-10-15	0.533	↔
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	0.0000113	0.851	↔	-0.000117	0.000	↓	0.0000169	0.923	↔	2018-04-10	2023-04-25	0.738	↔
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	-0.000677	0.044	↔	0.0125	0.250	↔	-0.00268	0.000	↓	2020-04-15	2020-10-25	0.598	↔
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.000151	0.090	↔	-0.000225	0.095	↔	0.0000266	0.460	↔	2018-04-22	2020-01-19	0.235	↔
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	0.000883	0.021	↔	-0.00436	0.083	↔	0.0578	0.004	↑	2022-04-19	2024-04-22	0.632	↔
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	0.00663	0.380	↔	-0.0812	0.016	↔	-0.000288	0.901	↔	2018-04-22	2019-02-09	0.724	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	0.0000489	0.255	↔	-0.0000158	0.562	↔	0.0000134	0.666	↔	2018-01-24	2021-08-26	0.076	↔
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	-0.00171	0.303	↔	0.00638	0.214	↔	-0.00167	0.004	↓	2018-03-07	2019-07-08	0.311	↔
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.000111	0.491	↔	-0.000577	0.687	↔	-0.0000148	0.932	↔	2019-07-10	2020-11-04	0.143	↔
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	0.000325	0.402	↔	-0.000951	0.230	↔	0.000202	0.210	↔	2018-07-16	2020-01-16	0.150	↔
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	-0.0000577	0.756	↔	-0.00372	0.030	↔	0.00350	0.014	↔	2021-09-24	2023-04-24	0.561	↔
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	-0.0125	0.000	↓	0.0000611	0.926	↔	-0.0000117	0.950	↔	2017-04-18	2019-08-09	0.952	↔
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	0.000179	0.435	↔	-0.00152	0.649	↔	0.000279	0.217	↔	2019-07-17	2020-08-19	0.173	↔
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.0354	0.199	↔	-0.0227	0.188	↔	0.00281	0.847	↔	2019-07-09	2022-01-06	0.215	↔
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	0.461	0.137	↔	-0.482	0.264	↔	0.0380	0.700	↔	2019-07-09	2021-01-07	0.232	↔
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	-0.0575	0.089	↔	0.000378	0.868	↔	-0.00282	0.648	↔	2018-02-24	2022-07-14	0.294	↔
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	-0.0425	0.000	↓	0.00914	0.121	↔	-0.00117	0.565	↔	2018-12-24	2021-01-25	0.665	↔
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	17.7	0.038	↔	-8.31	0.494	↔	8.18	0.129	↔	2019-10-14	2021-09-13	0.365	↔
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	-0.0189	0.053	↔	0.0648	0.403	↔	-0.124	0.221	↔	2022-07-14	2023-11-08	0.257	↔
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	-0.000987	0.000	↓	0.0000184	0.016	↔	0.000102	0.742	↔	2018-02-24	2024-06-09	0.781	↔
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	-0.0169	0.000	↓	-0.0000291	0.595	↔	0.00183	0.433	↔	2017-11-21	2024-06-02	0.878	↔
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	-0.144	0.000	↓	-0.00608	0.485	↔	-0.00133	0.001	↓	2018-02-24	2019-01-15	0.979	↔
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.0951	0.047	↔	-0.0345	0.582	↔	0.154	0.156	↔	2020-09-29	2023-04-24	0.401	↔
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	0.00444	0.287	↔	-0.00620	0.292	↔	0.00102	0.450	↔	2019-07-09	2020-12-22	0.168	↔
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	0.00000000000771	1.000	↔	-0.000367	0.575	↔	-0.00192	0.002	↓	2018-06-03	2021-06-28	0.672	↔
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	1.04	0.129	↔	-1.14	0.231	↔	0.0847	0.696	↔	2019-07-09	2020-12-12	0.238	↔
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.00925	0.106	↔	-0.00630	0.390	↔	-0.00150	0.578	↔	2019-07-10	2021-07-04	0.283	↔
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	-0.000987	0.000	↓	0.0000184	0.016	↔	0.000102	0.742	↔	2018-02-24	2024-06-09	0.781	↔
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	0.00160	0.092	↔	-0.00442	0.020	↔	0.0885	0.000	↑	2021-10-05	2024-06-09	0.696	↔
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.0649	0.022	↔	0.0165	0.091	↔	-0.00100	0.472	↔	2018-02-24	2019-07-14	0.678	↔
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.00172	0.044	↔	-0.00237	0.334	↔	-0.000116	0.347	↔	2019-01-23	2019-08-15	0.371	↔
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.000254	0.176	↔	-0.00348	0.736	↔	0.00361	0.139	↔	2023-04-27	2024-01-24	0.210	↔
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	-0.0001000	0.830	↔	-0.00290	0.074	↔	0.00305	0.052	↔	2021-07-19	2023-04-24	0.503	↔
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.00175	0.321	↔	-0.000328	0.173	↔	0.00192	0.815	↔	2019-01-23	2024-04-28	0.148	↔
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	-0.00117	0.812	↔	0.0735	0.216	↔	-0.0883	0.016	↔	2022-01-02	2023-04-26	0.273	↔
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	-0.00208	0.754	↔	0.115	0.324	↔	-0.124	0.019	↔	2022-03-06	2023-04-26	0.242	↔
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	-0.00000000000727	1.000	↔	0.000000000000878	1.000	↔	-0.00176	0.000	↓	2016-02-14	2021-08-03	0.753	↔
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	-0.00848	0.034	↔	0.0414	0.232	↔	-0.0469	0.079	↔	2021-10-05	2023-04-26	0.233	↔
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	-0.0223	0.004	↓	0.0285	0.578	↔	0.00170	0.060	↔	2017-05-06	2018-01-19	0.412	↔
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	-84.7	0.026	↔	-14.5	0.375	↔	18.5	0.213	↔	2017-10-13	2021-01-27	0.526	↔
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	-2.06	0.000	↓	-0.161	0.040	↔	0.0115	0.685	↔	2016-05-26	2019-05-24	0.777	↔
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.0000387	0.573	↔	0.0000245	0.031	↔	0.0000294	0.000	↑	2016-10-07	2020-01-24	0.836	↔
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.000402	0.014	↔	0.00000957	0.815	↔	-0.000131	0.809	↔	2017-10-22	2023-10-05	0.440	↔
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.00217	0.000	↑	-0.00168	0.031	↔	0.000481	0.229	↔	2019-03-23	2021-04-15	0.651	↔
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	10.8	0.069	↔	-0.593	0.012	↔	0.0775	0.165	↔	2016-02-11	2018-05-27	0.428	↔
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	-0.0111	0.001	↓	-0.000516	0.477	↔	0.000404	0.542	↔	2017-02-14	2021-01-03	0.705	↔
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	0.00587	0.006	↑	0.00000686	0.982	↔	-0.00565	0.028	↔	2017-04-12	2023-04-27	0.585	↔
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	-2.00	0.221	↔	-0.277	0.196	↔	0.0520	0.303	↔	2016-04-06	2018-09-13	0.362	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	-0.000146	0.178	↔	0.00239	0.500	↔	-0.000406	0.009	↓	2020-04-15	2020-10-31	0.259	↔
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	-0.0000937	0.181	↔	0.000289	0.203	↔	-0.000766	0.114	↔	2021-01-25	2023-04-27	0.199	↔
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	0.0000451	0.993	↔	0.0621	0.677	↔	-0.0724	0.099	↔	2022-06-04	2023-04-26	0.099	↔
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	-0.000681	0.077	↔	0.0128	0.047	↔	-0.00239	0.000	↓	2020-04-14	2020-10-22	0.515	↔
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.0000387	0.573	↔	0.0000245	0.031	↔	0.0000294	0.000	↑	2016-10-07	2020-01-24	0.836	↔
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	0.000889	0.005	↑	-0.00443	0.032	↔	0.0567	0.001	↑	2022-06-04	2024-04-17	0.728	↔
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	-0.0153	0.000	↓	0.00561	0.107	↔	0.0000660	0.997	↔	2019-04-28	2023-08-05	0.451	↔
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	0.0000772	0.205	↔	-0.0000497	0.298	↔	0.0000143	0.559	↔	2018-01-22	2020-07-12	0.108	↔
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	-0.00121	0.762	↔	0.000348	0.135	↔	-0.00176	0.389	↔	2016-11-20	2023-04-27	0.104	↔
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	0.000165	0.710	↔	-0.00106	0.005	↓	0.00159	0.352	↔	2019-03-24	2023-04-27	0.427	↔
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	-0.0136	0.000	↓	0.0000609	0.955	↔	-0.0000116	0.969	↔	2017-04-18	2019-08-10	0.894	↔
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	-0.000153	0.614	↔	0.00392	0.295	↔	-0.00488	0.094	↔	2022-02-11	2023-04-27	0.182	↔
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	0.216	0.174	↔	-0.139	0.497	↔	0.00416	0.943	↔	2022-04-21	2023-03-29	0.369	↔
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	-0.0105	0.720	↔	0.0273	0.345	↔	-0.0356	0.344	↔	2022-09-06	2023-10-04	0.278	↔
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	-0.0101	0.579	↔	0.0177	0.457	↔	-0.0220	0.186	↔	2022-09-03	2023-10-03	0.284	↔
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	-0.0215	0.752	↔	0.128	0.516	↔	-0.138	0.116	↔	2022-11-20	2023-10-03	0.360	↔
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	0.00346	0.790	↔	0.0518	0.594	↔	-0.0203	0.326	↔	2023-03-26	2023-10-03	0.429	↔
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	9.46	0.328	↔	6.26	0.204	↔	-8.67	0.313	↔	2022-05-11	2023-10-04	0.622	↔
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	0.0000213	0.780	↔	-0.000280	0.056	↔	0.000398	0.421	↔	2023-04-26	2024-04-09	0.556	↔
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.173	0.024	↔	0.0169	0.643	↔	-0.0156	0.340	↔	2022-02-10	2023-04-18	0.763	↔
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	0.00598	0.326	↔	-0.00530	0.495	↔	0.00127	0.806	↔	2022-10-18	2023-10-02	0.240	↔
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.0359	0.674	↔	0.231	0.353	↔	-0.140	0.190	↔	2022-12-05	2023-10-03	0.612	↔
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	-0.0124	0.780	↔	0.0658	0.450	↔	-0.0784	0.318	↔	2022-11-05	2023-10-04	0.292	↔
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	-0.0103	0.227	↔	0.00694	0.515	↔	-0.00963	0.197	↔	2022-09-09	2023-10-03	0.406	↔
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	0.0000213	0.780	↔	-0.000280	0.056	↔	0.000398	0.421	↔	2023-04-26	2024-04-09	0.556	↔
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	-0.00249	0.557	↔	0.0100	0.034	↔	0.00189	0.721	↔	2022-08-31	2023-10-04	0.820	↔
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	0.00000713	0.825	↔	-0.0000514	0.239	↔	0.0000355	0.229	↔	2022-10-22	2023-07-25	0.349	↔
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	-0.0116	0.073	↔	0.000955	0.370	↔	-0.000269	0.796	↔	2021-12-13	2023-04-27	0.540	↔
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	-0.00502	0.012	↔	0.0125	0.505	↔	-0.00228	0.607	↔	2023-04-27	2023-10-30	0.586	↔
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	-0.0000277	0.724	↔	0.0000874	0.400	↔	-0.000160	0.042	↔	2022-09-03	2023-10-03	0.492	↔
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.0122	0.381	↔	-0.0440	0.548	↔	-0.000942	0.857	↔	2022-01-23	2022-07-04	0.366	↔
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	0.00224	0.501	↔	-0.0272	0.746	↔	0.0320	0.562	↔	2023-11-30	2024-04-14	0.137	↔
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	-7.73	0.487	↔	123	0.144	↔	-112	0.132	↔	2023-07-06	2024-01-24	0.399	↔
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.0000695	0.019	↔	-0.000580	0.010	↓	0.000413	0.028	↔	2023-07-17	2024-01-24	0.692	↔
10_02_118	MW-11	App. III	pH (Field)	S.U.	16	0	0%	-0.00225	0.525	↔	0.00358	0.217	↔	-0.00760	0.407	↔	2022-05-06	2024-01-24	0.280	↔
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	-0.000519	0.436	↔	0.00154	0.513	↔	-0.000348	0.604	↔	2022-06-24	2023-03-31	0.178	↔
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	0.000918	0.720	↔	-0.00559	0.260	↔	0.000648	0.758	↔	2022-01-25	2023-04-23	0.605	↔
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	-0.0545	0.163	↔	0.0837	0.174	↔	-0.171	0.260	↔	2022-07-16	2024-01-24	0.377	↔
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	0.0000239	0.901	↔	-0.000363	0.181	↔	0.000134	0.504	↔	2022-02-08	2023-04-24	0.470	↔
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.0000695	0.019	↔	-0.000580	0.010	↓	0.000413	0.028	↔	2023-07-17	2024-01-24	0.692	↔
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	0.0000000000588	1.000	↔	-0.00364	0.015	↔	0.118	0.000	↑	2021-11-06	2024-07-13	0.891	↔
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	-0.00353	0.200	↔	0.0209	0.288	↔	-0.0271	0.021	↔	2023-03-22	2024-01-23	0.509	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	0.00000662	0.731	↔	-0.0000234	0.249	↔	0.0000282	0.276	↔	2022-03-06	2023-07-25	0.271	↔
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	0.0000000000521	1.000	↔	-0.0271	0.039	↔	0.00216	0.052	↔	2022-04-18	2022-07-27	0.745	↔
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	-0.00295	0.016	↔	0.0105	0.616	↔	-0.00180	0.707	↔	2023-04-24	2023-10-18	0.436	↔
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	-0.00000197	0.797	↔	0.000105	0.121	↔	-0.000234	0.058	↔	2023-09-18	2024-04-01	0.667	↔
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	-0.00567	0.003	↓	0.0121	0.372	↔	-0.00377	0.205	↔	2023-04-14	2023-10-01	0.741	↔
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	-0.000610	0.943	↔	0.0120	0.852	↔	-0.0218	0.060	↔	2023-01-21	2023-07-22	0.428	↔
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	-0.644	0.112	↔	-0.0774	0.732	↔	-0.0237	0.974	↔	2022-04-19	2024-03-03	0.523	↔
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.0000768	0.363	↔	-0.000401	0.120	↔	0.000221	0.500	↔	2023-04-23	2024-03-01	0.484	↔
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	-0.0000151	0.959	↔	-0.000407	0.513	↔	0.000143	0.427	↔	2022-04-19	2023-04-23	0.431	↔
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	-0.00579	0.007	↓	0.00929	0.550	↔	-0.00581	0.102	↔	2023-03-25	2023-10-01	0.735	↔
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.0000768	0.363	↔	-0.000401	0.120	↔	0.000221	0.500	↔	2023-04-23	2024-03-01	0.484	↔
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	-0.000000000146	1.000	↔	-0.00349	0.025	↔	0.118	0.000	↑	2021-11-30	2024-07-14	0.923	↔
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	0.00000754	0.733	↔	-0.0000376	0.363	↔	0.0000326	0.245	↔	2022-08-02	2023-07-25	0.318	↔
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	-0.148	0.163	↔	-0.0248	0.620	↔	0.00563	0.989	↔	2022-04-19	2024-05-16	0.487	↔
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	0.00365	0.103	↔	-0.000873	0.007	↓	0.00247	0.014	↔	2021-09-02	2024-01-01	0.735	↔
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	-0.0000161	0.794	↔	0.0000240	0.229	↔	-0.000198	0.290	↔	2022-04-15	2024-04-01	0.478	↔
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	-0.00858	0.056	↔	-0.000783	0.057	↔	0.00909	0.077	↔	2021-09-02	2024-06-29	0.780	↔

D

Appendix D – Downgradient Wells Plots

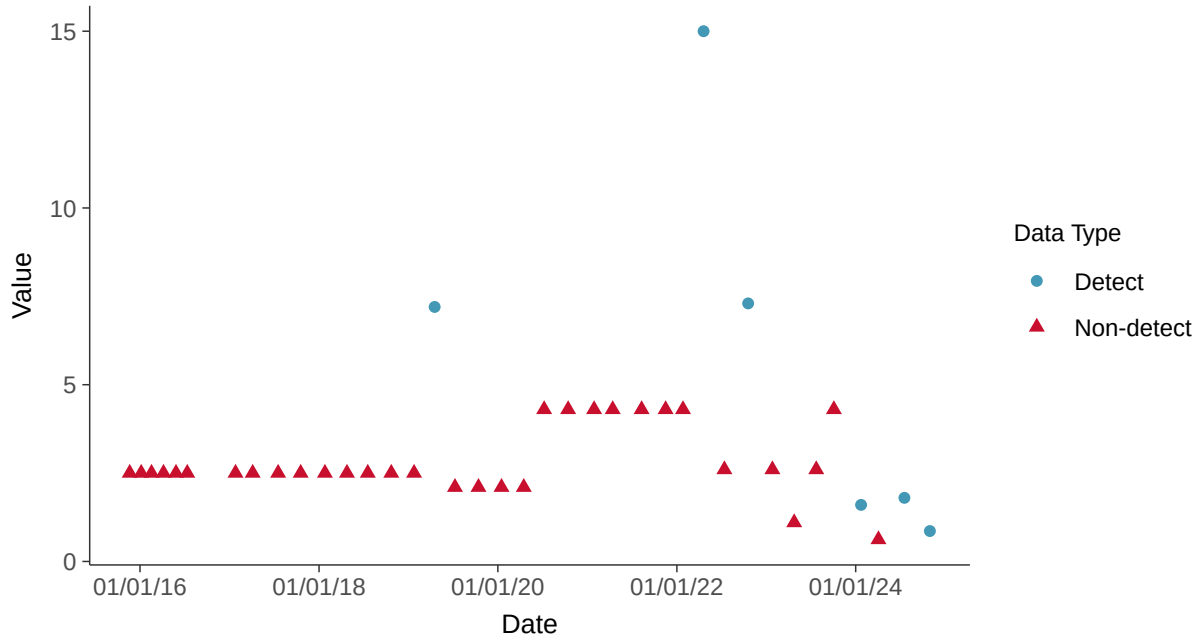
This page intentionally left blank.

App. I Metals: Copper, MW-1

ID: 01_01_111

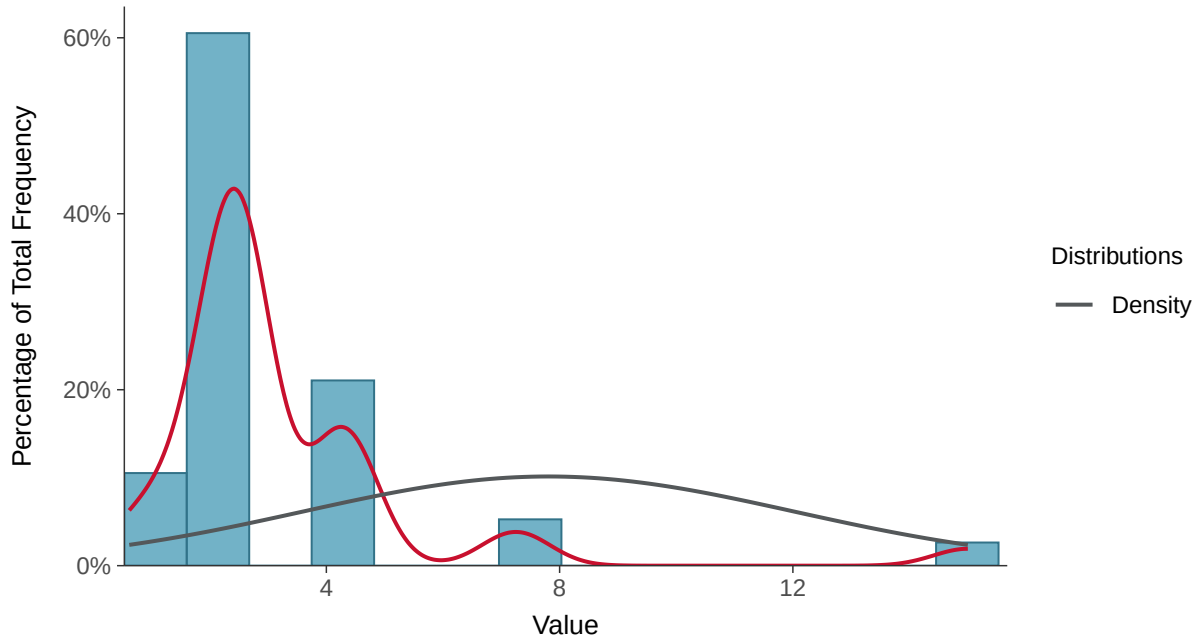
Scatter Plot

Copper, MW-1 (ug/L)



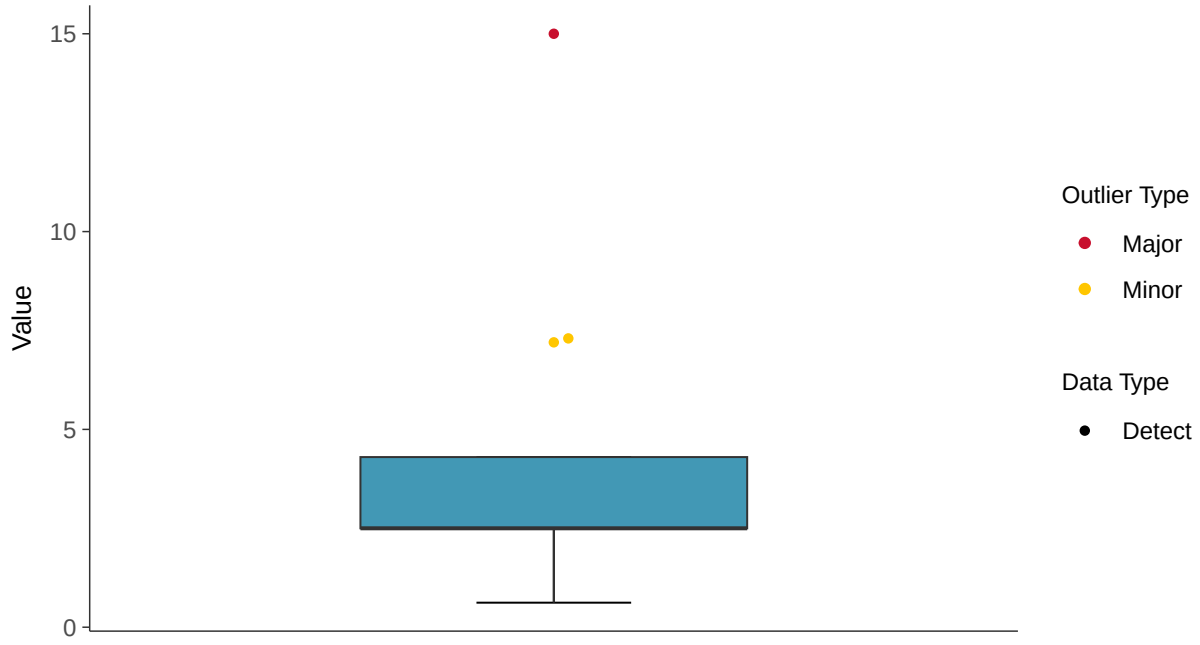
Histogram

Copper, MW-1 (ug/L)



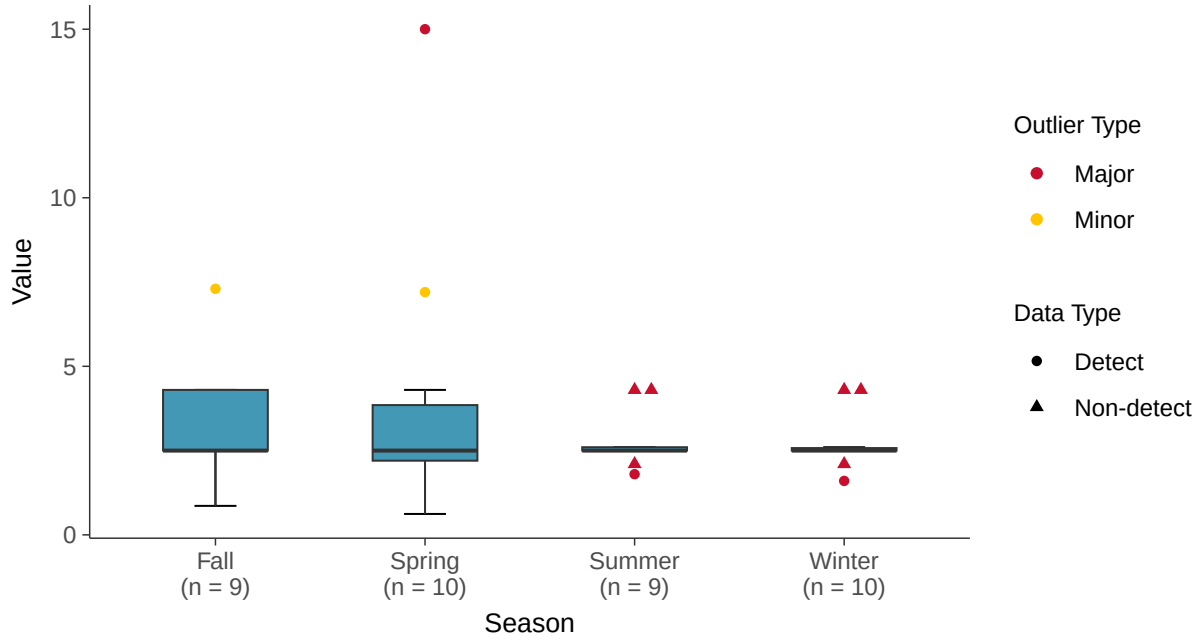
Boxplot

Copper, MW-1 (ug/L)



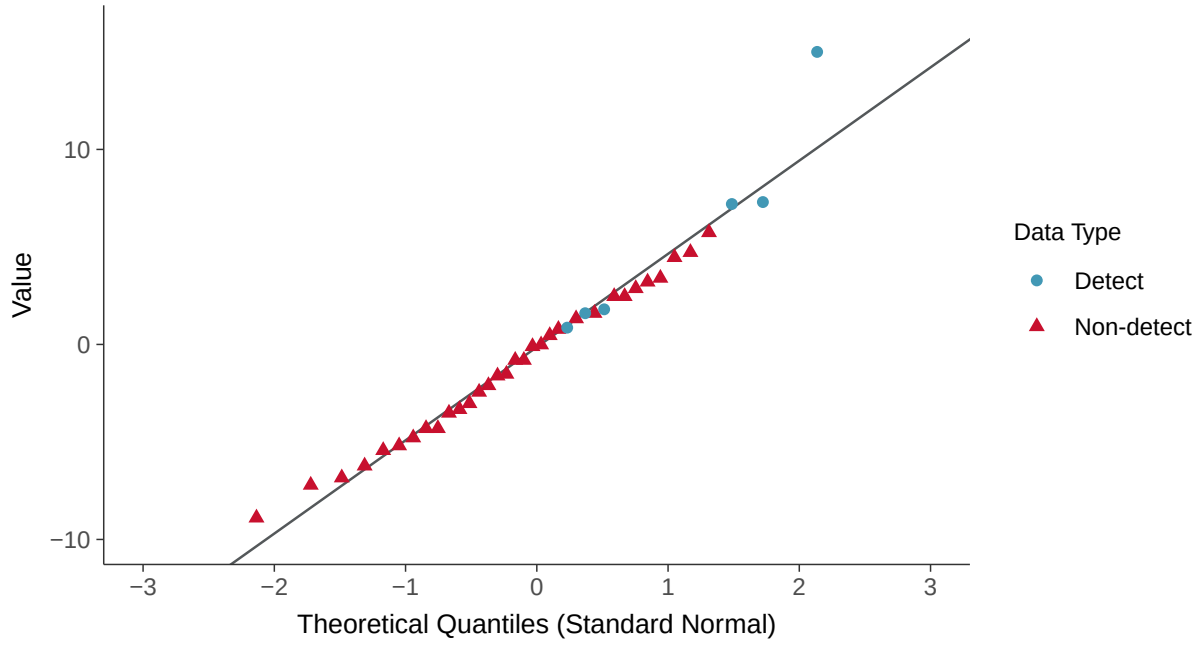
Boxplot by Season

Copper, MW-1 (ug/L)



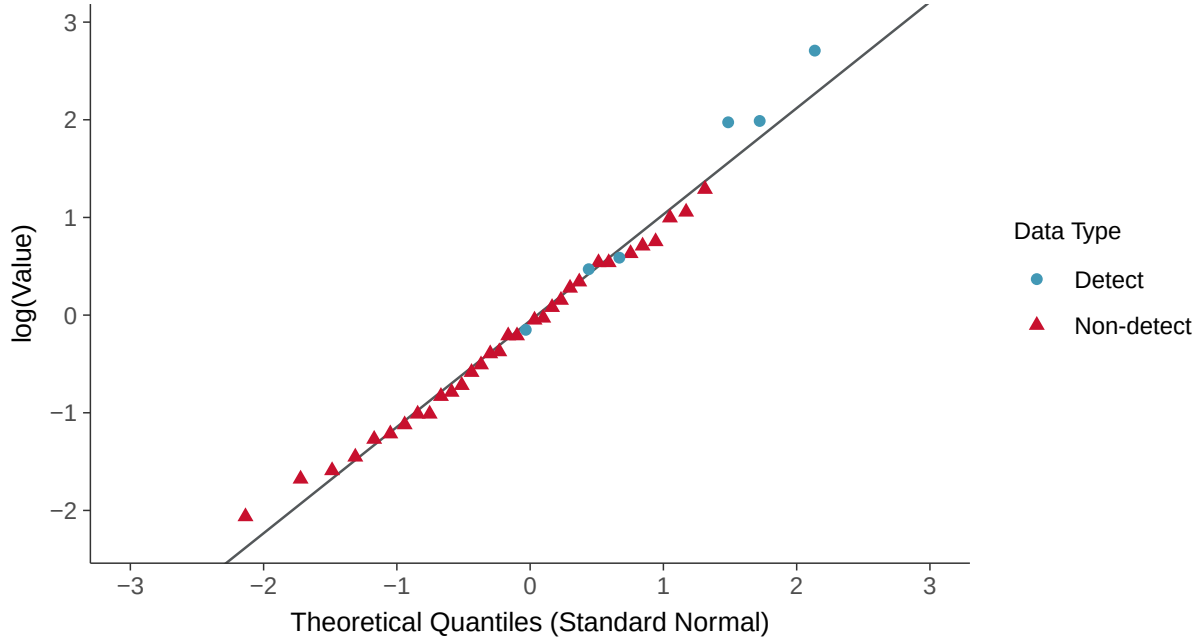
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-1 (ug/L)



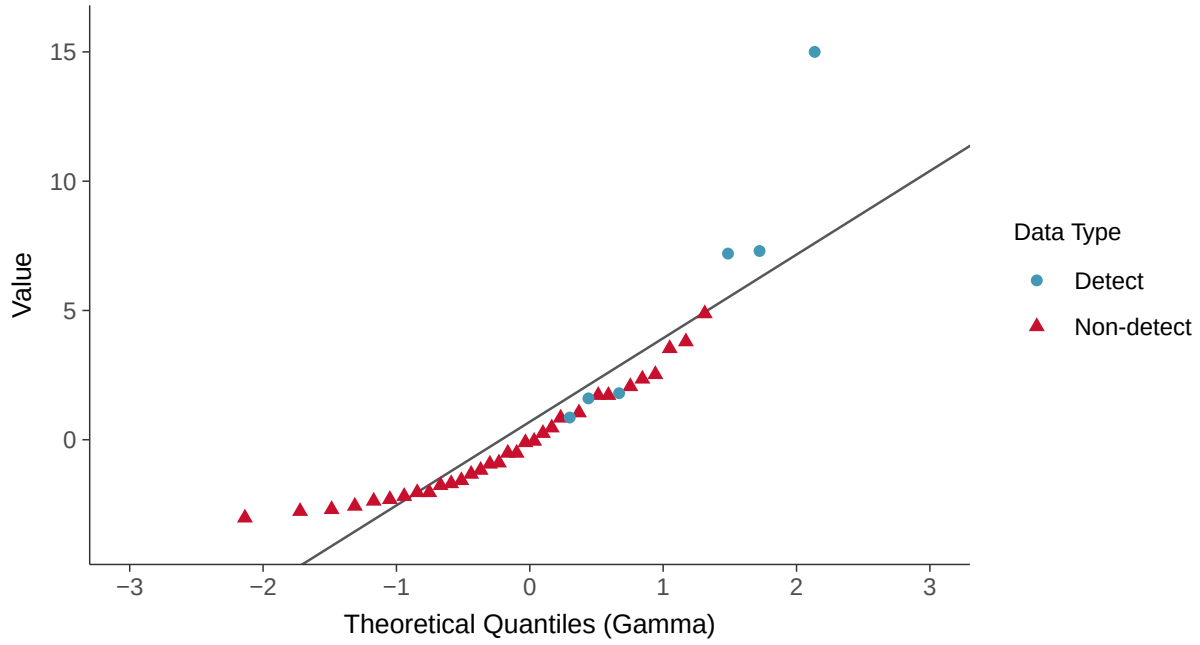
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-1 (ug/L)



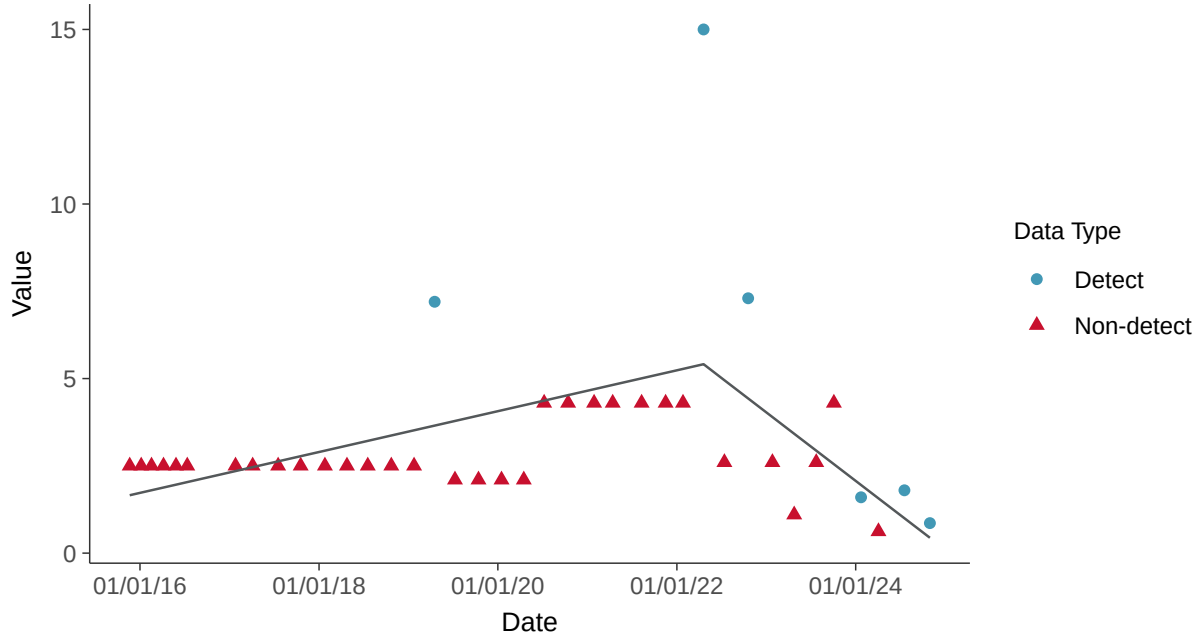
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-1 (ug/L)



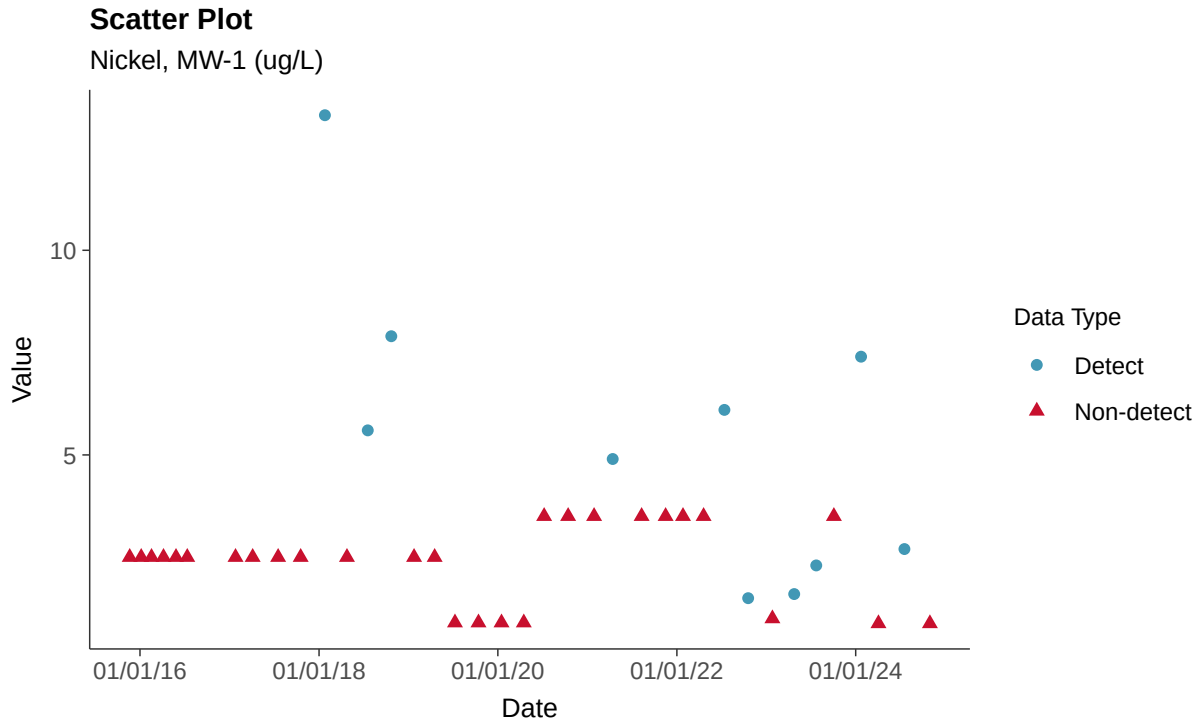
Trend Regression: Piecewise Linear-Linear

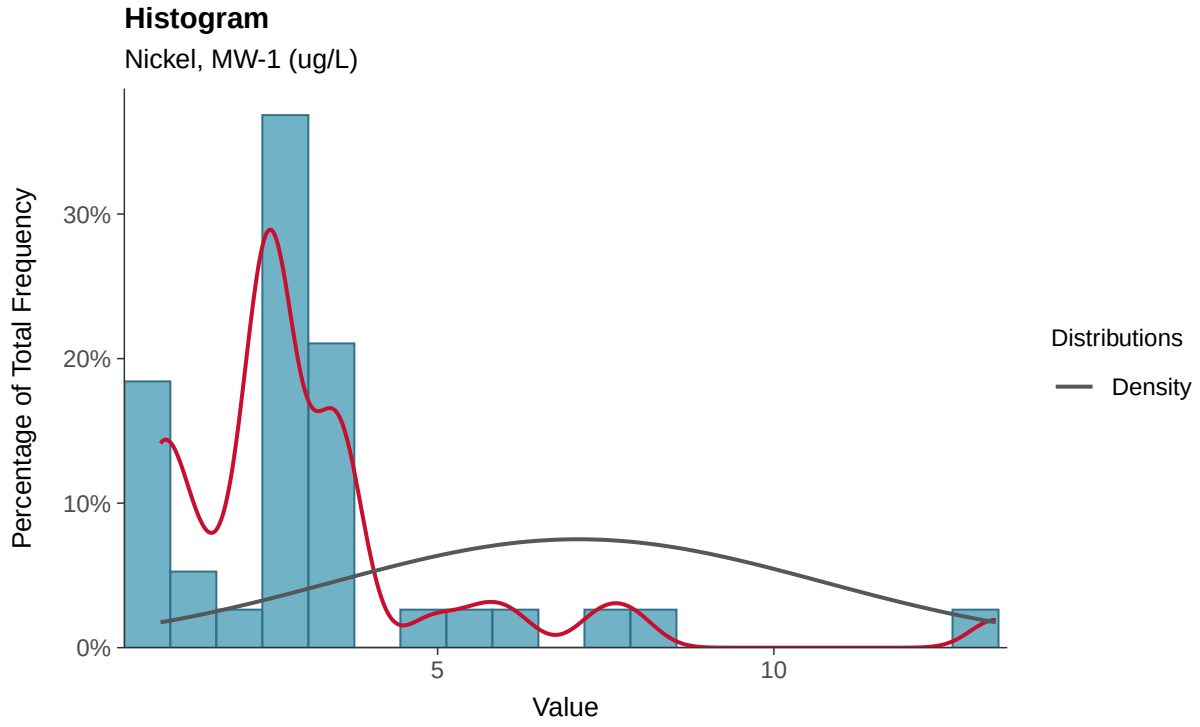
Copper, MW-1 (ug/L)



App. I Metals: Nickel, MW-1

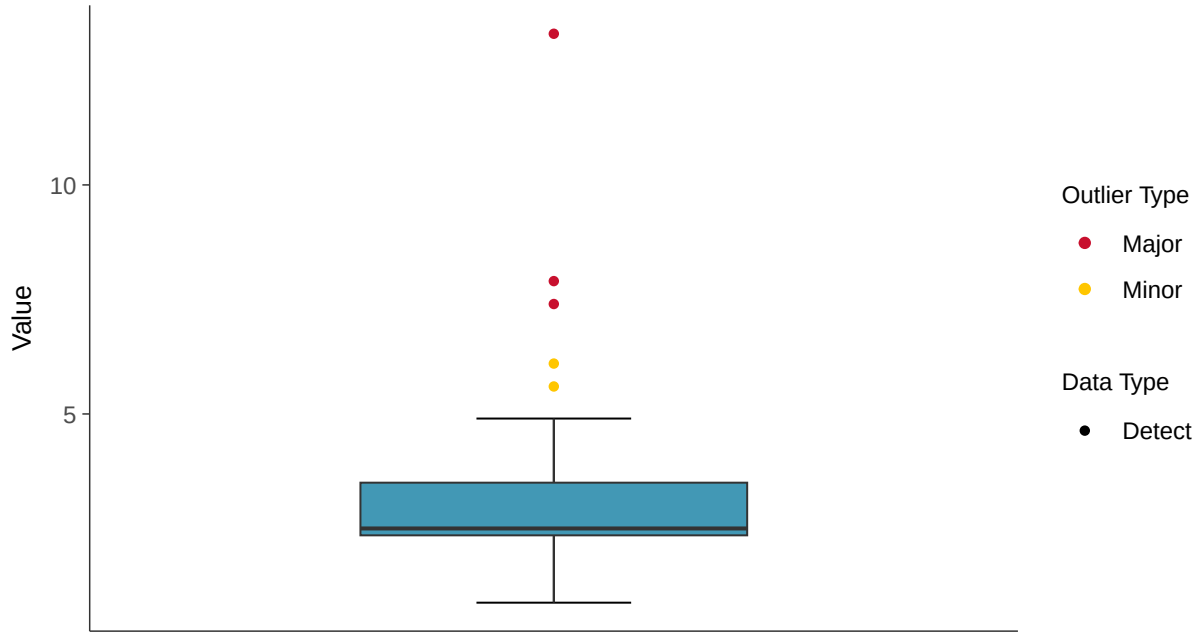
ID: 01_01_117





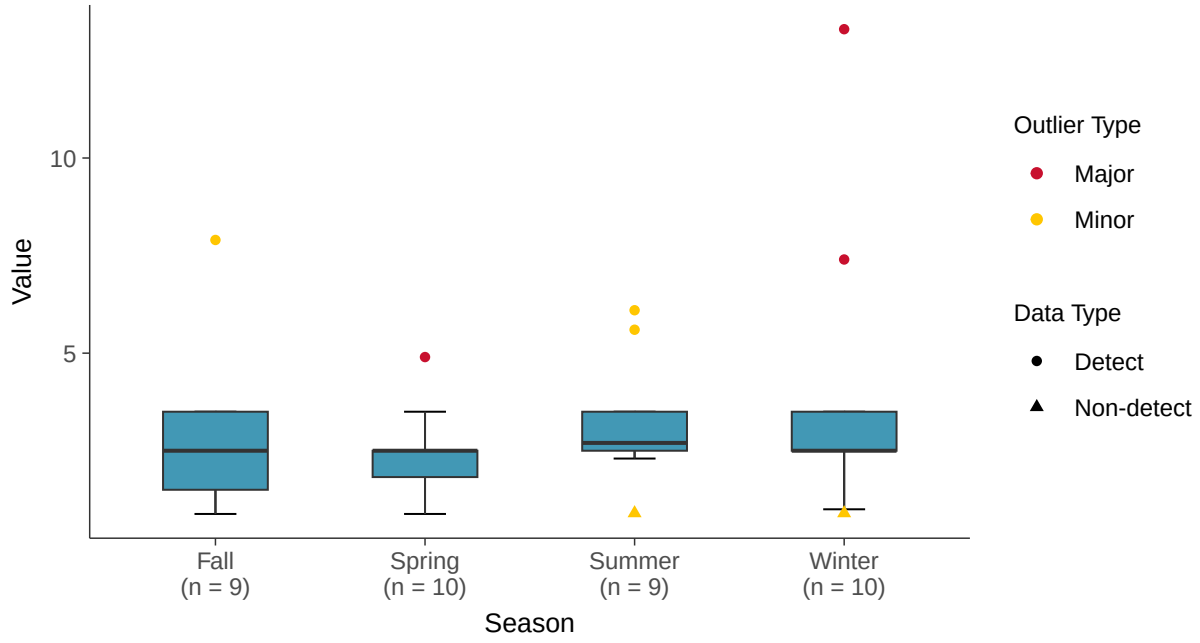
Boxplot

Nickel, MW-1 (ug/L)



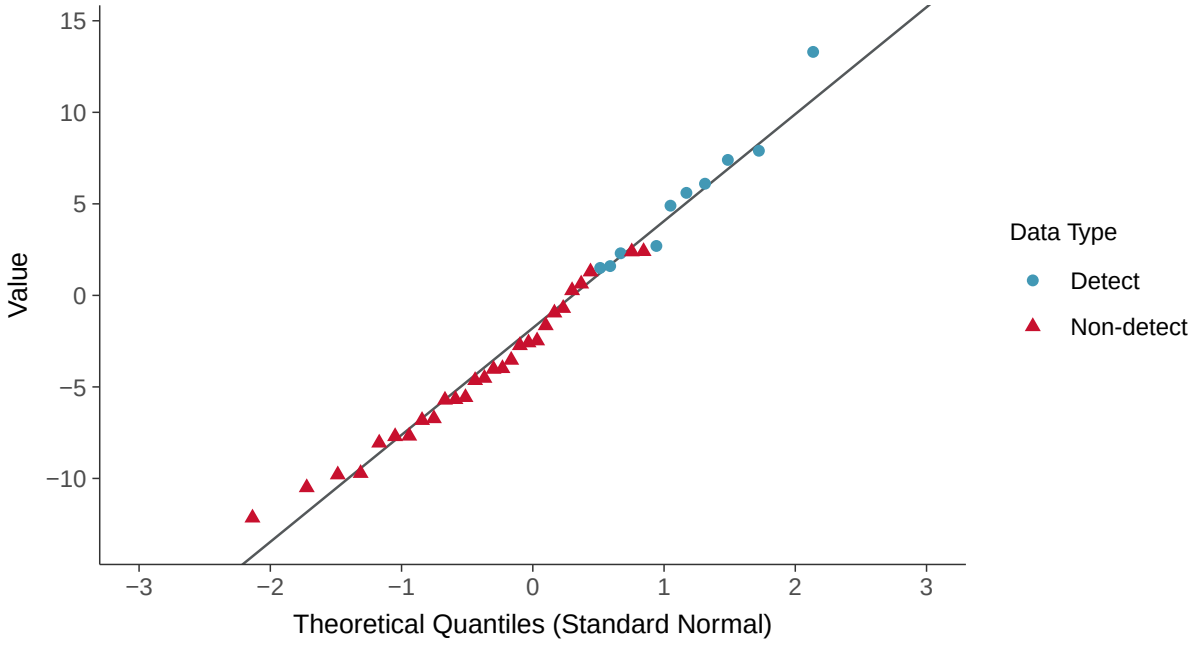
Boxplot by Season

Nickel, MW-1 (ug/L)



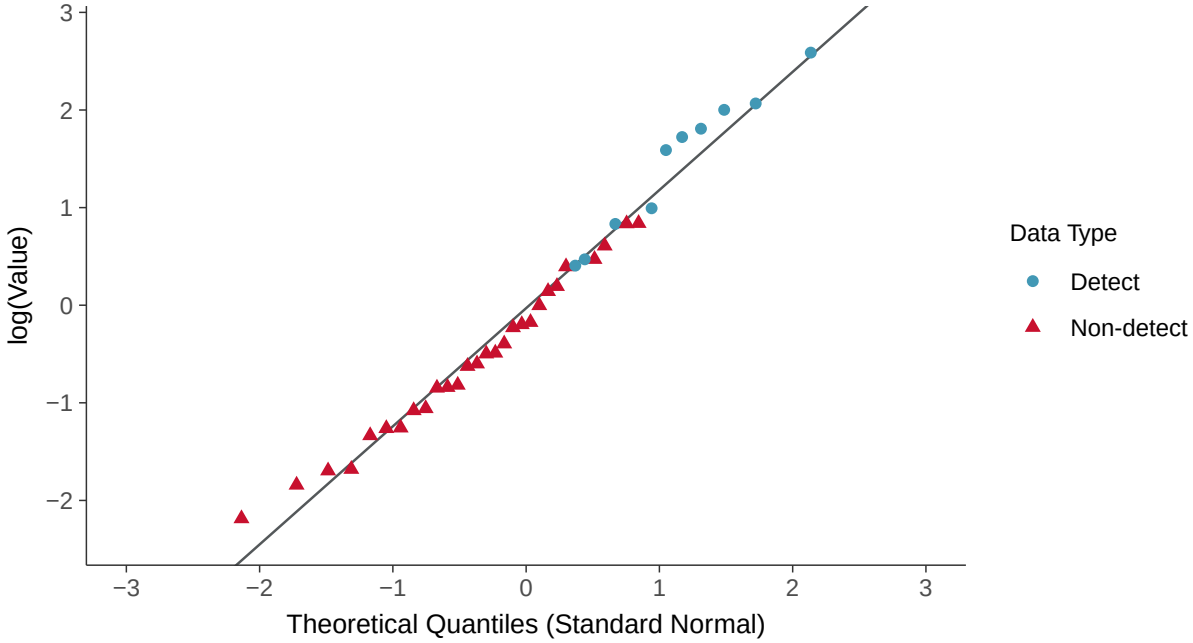
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



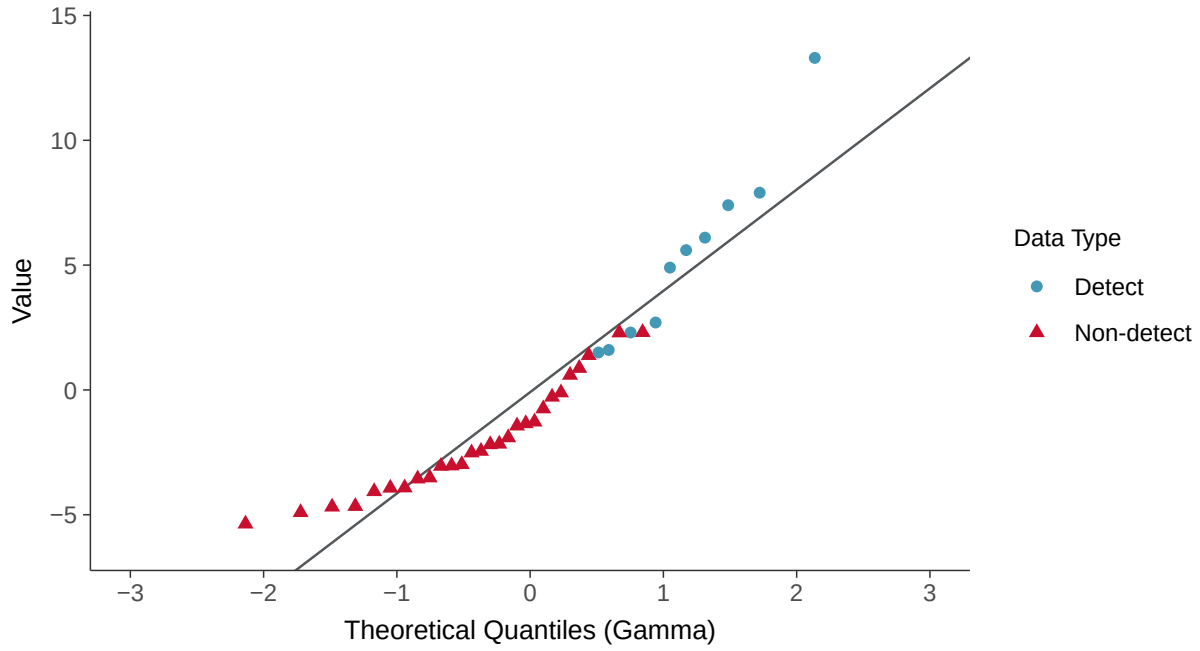
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



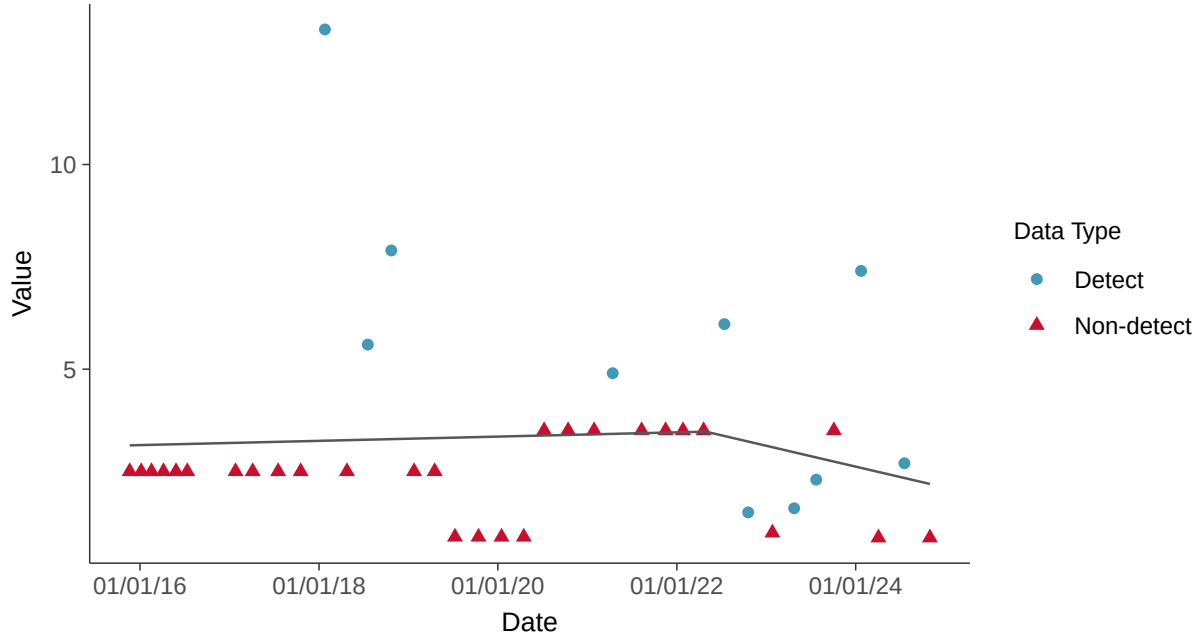
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



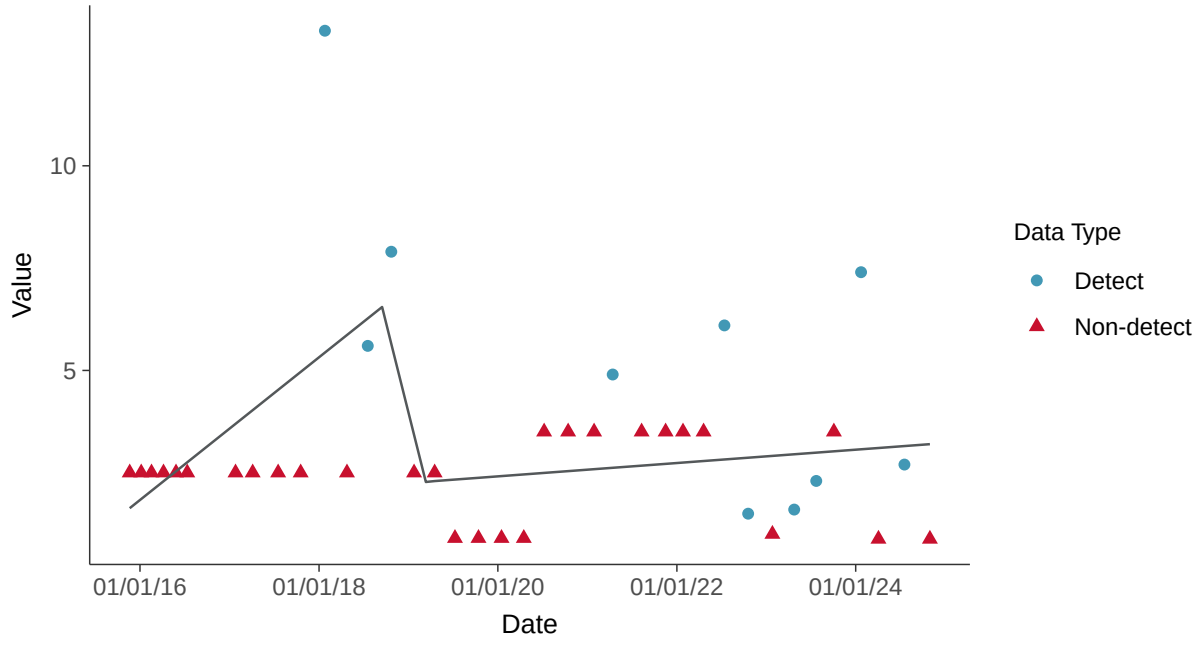
Trend Regression: Piecewise Linear-Linear

Nickel, MW-1 (ug/L)



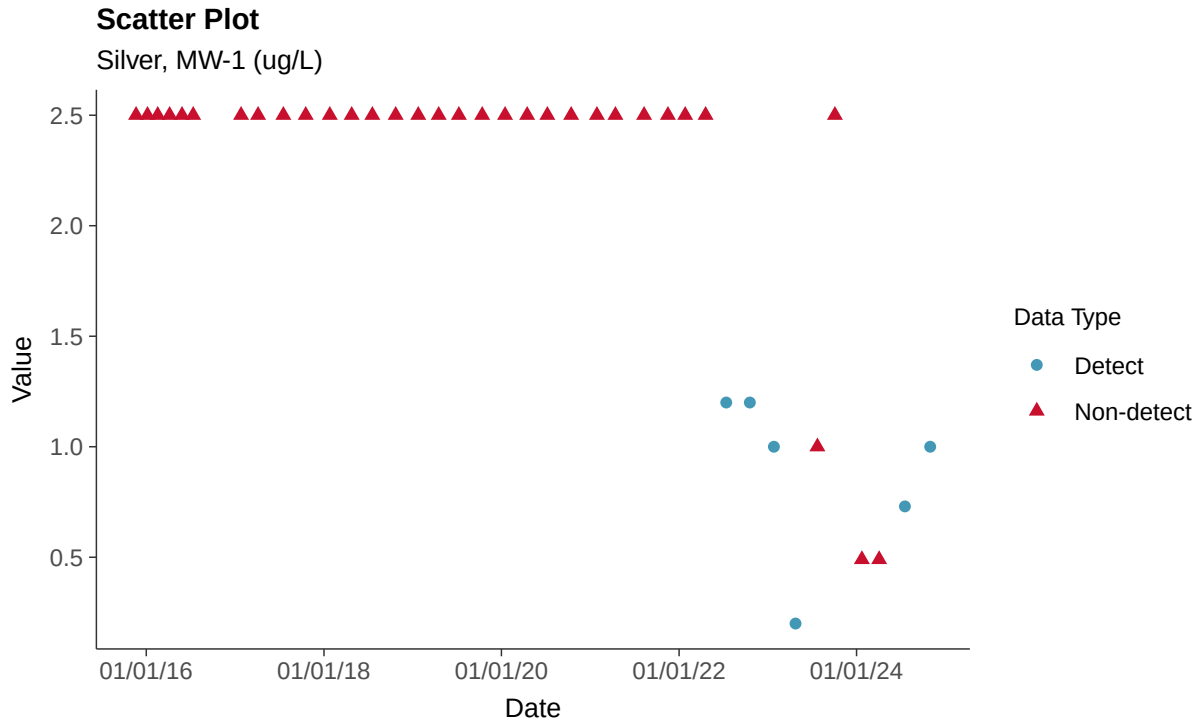
Trend Regression: Piecewise Linear-Linear-Linear

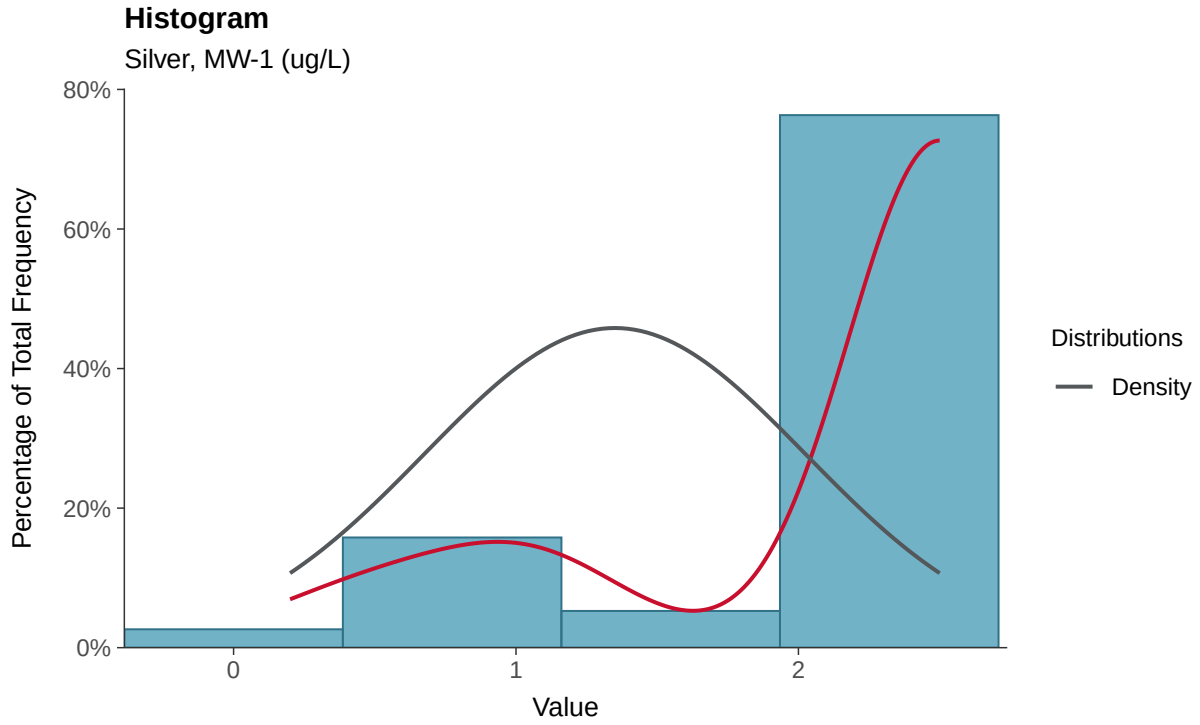
Nickel, MW-1 (ug/L)



App. I Metals: Silver, MW-1

ID: 01_01_122



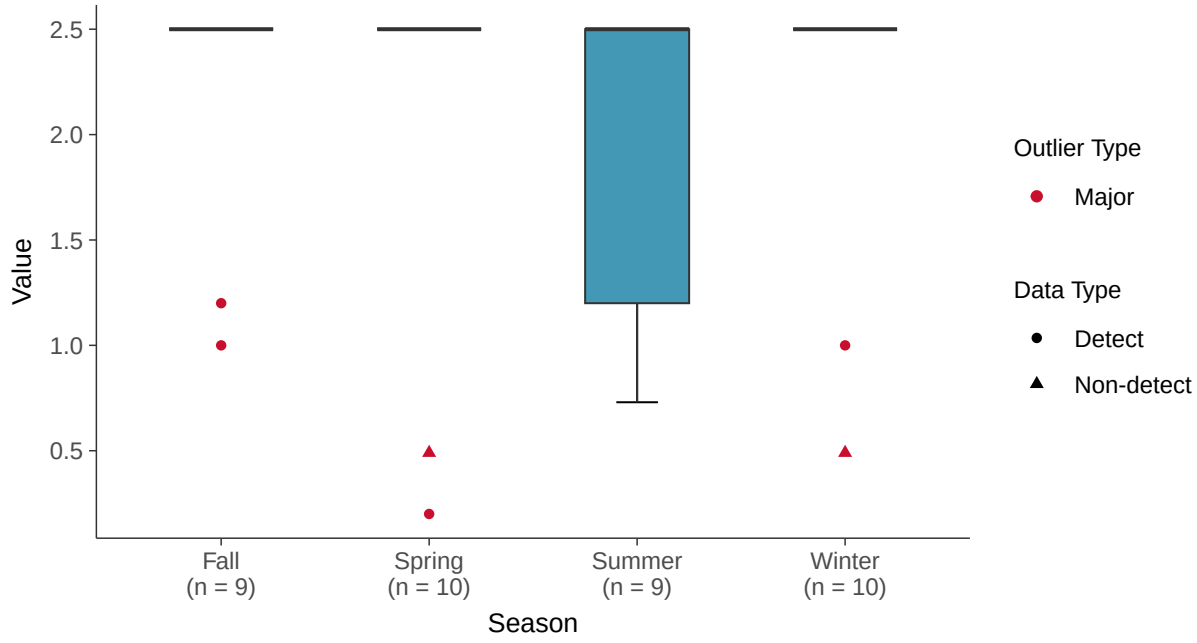


Boxplot

Silver, MW-1 (ug/L)

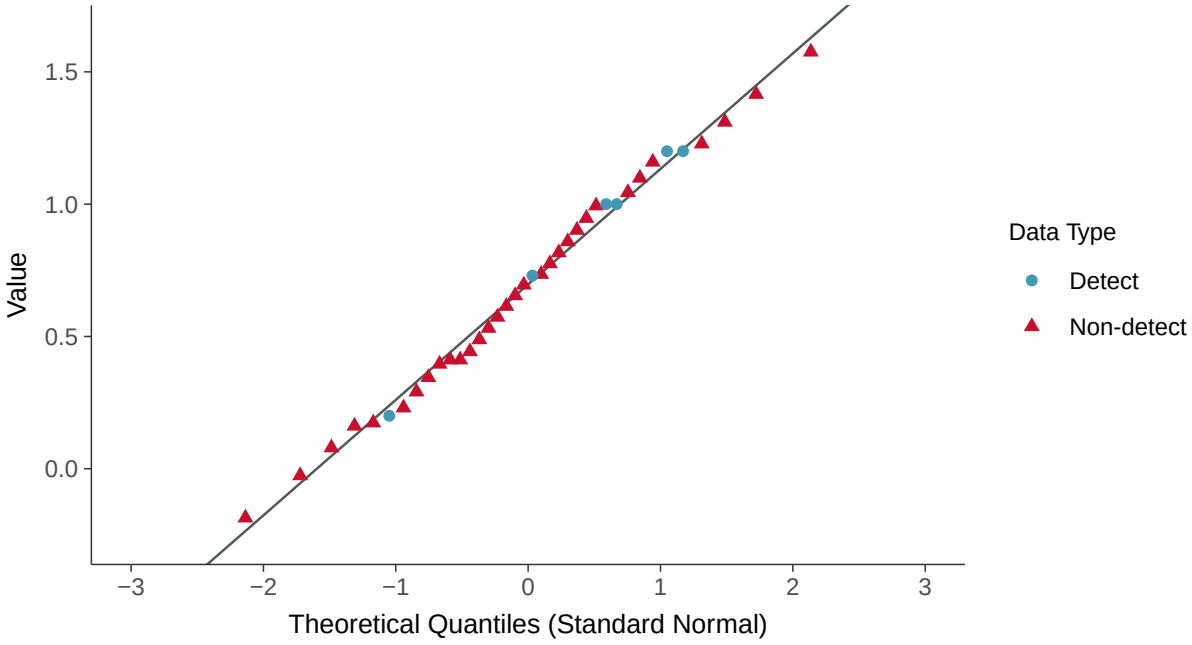
Boxplot by Season

Silver, MW-1 (ug/L)



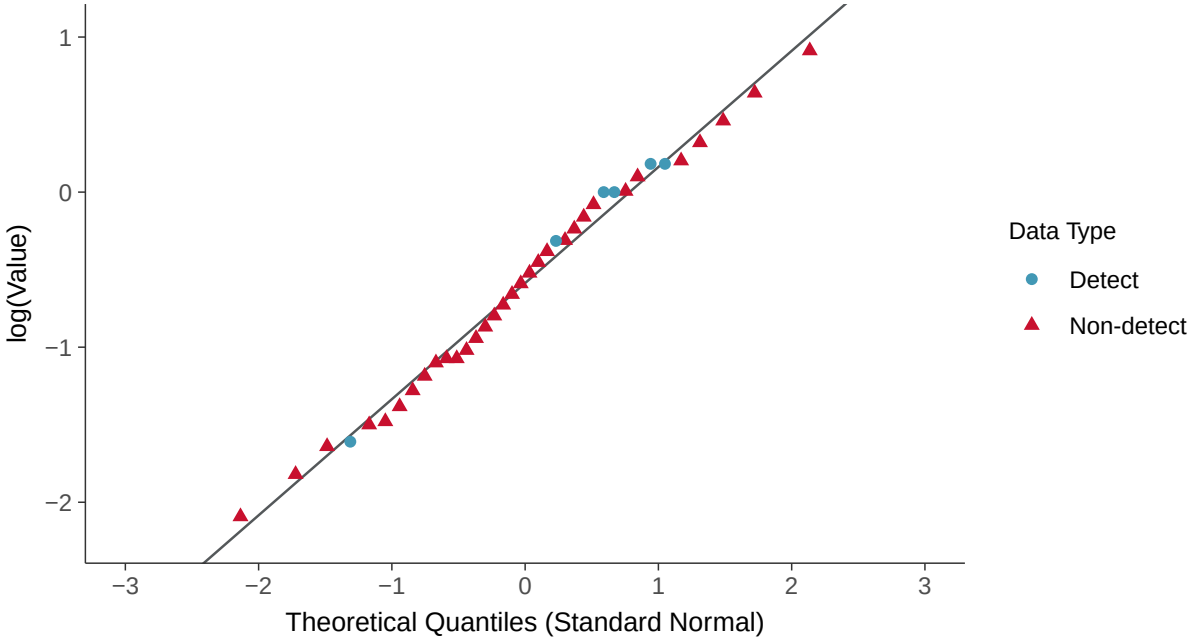
Normal Q-Q plot using ROS Imputed Estimates

Silver, MW-1 (ug/L)



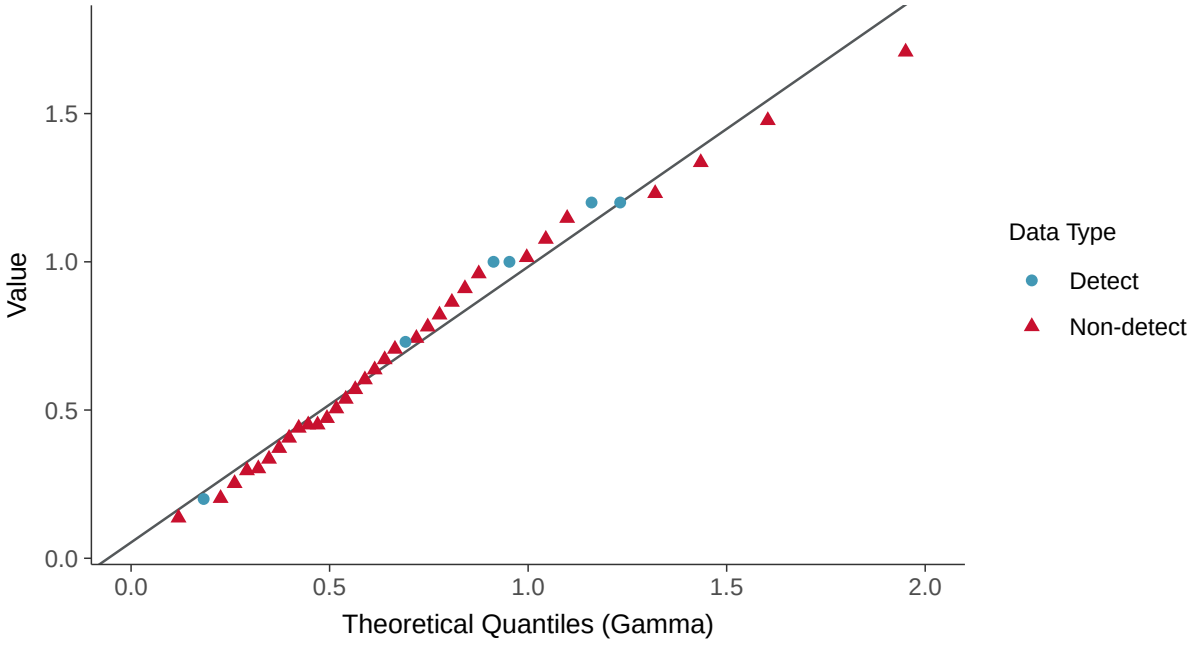
Lognormal Q-Q plot using ROS Imputed Estimates

Silver, MW-1 (ug/L)



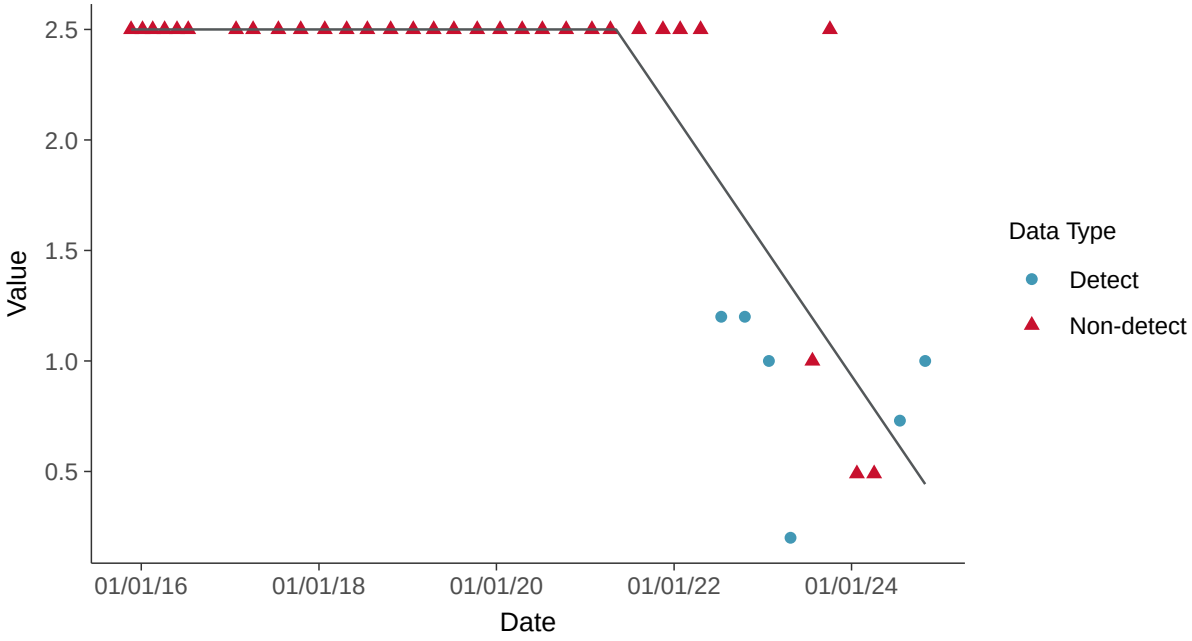
Gamma Q-Q plot using ROS Imputed Estimates

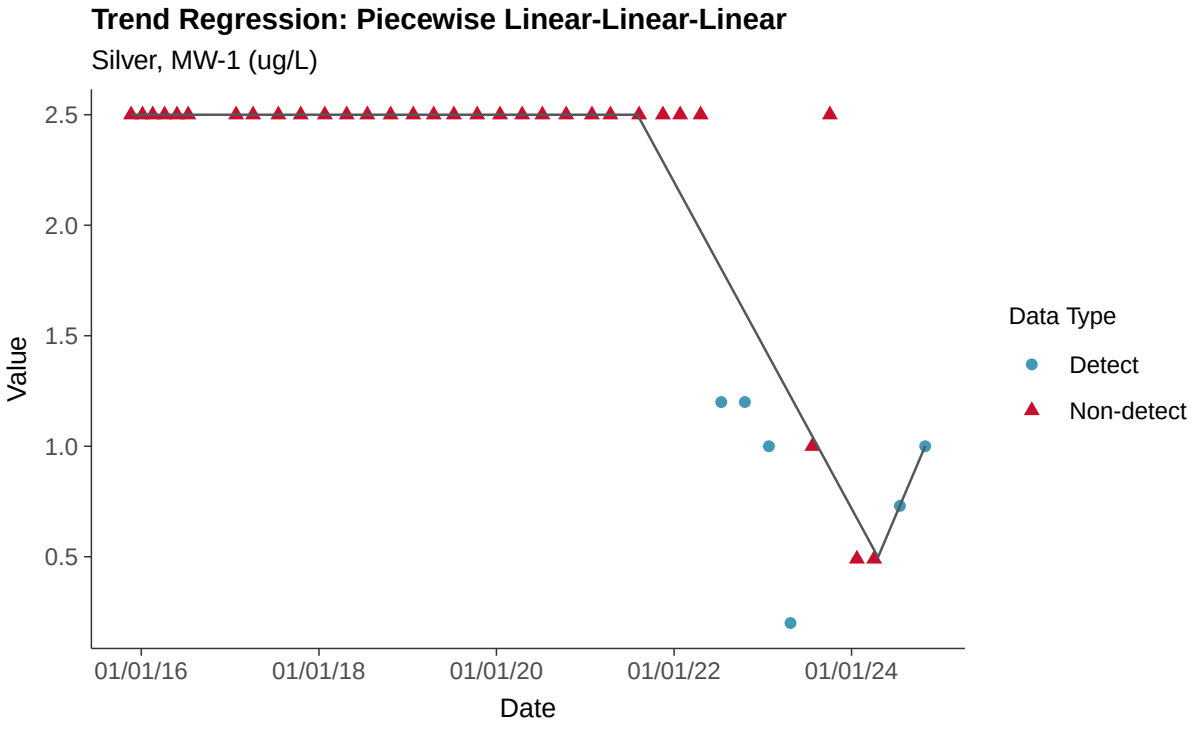
Silver, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear

Silver, MW-1 (ug/L)



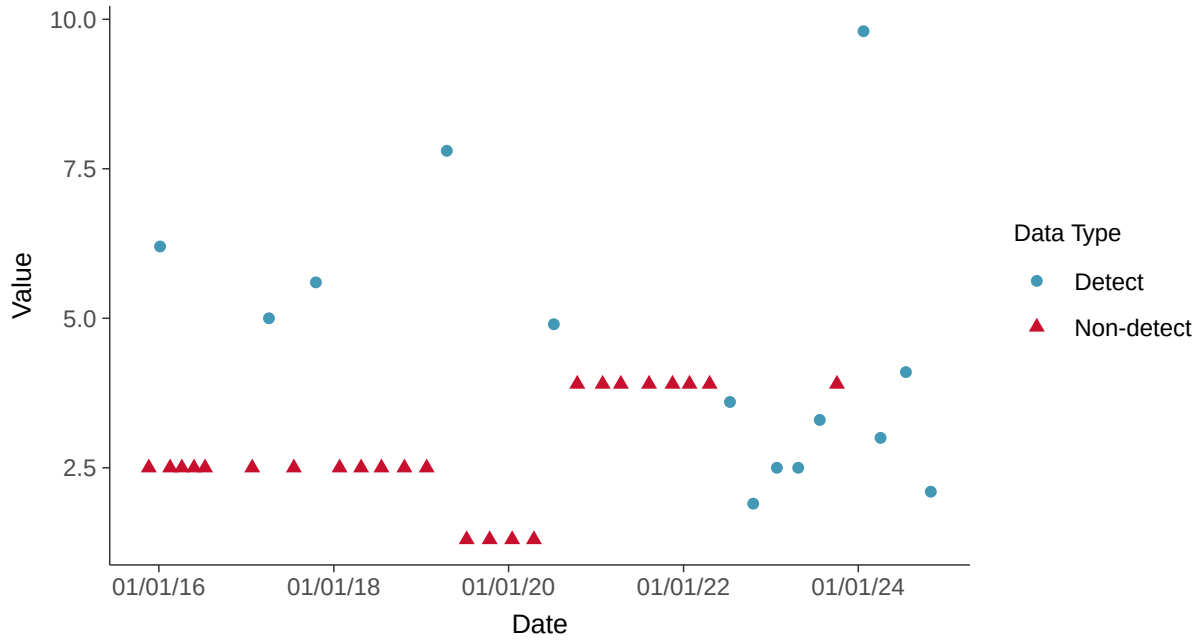

Trend Regression: Piecewise Linear-Linear-Linear
Silver, MW-1 (ug/L)
Value
2.5
2.0
1.5
1.0
0.5
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Vanadium, MW-1

ID: 01_01_127

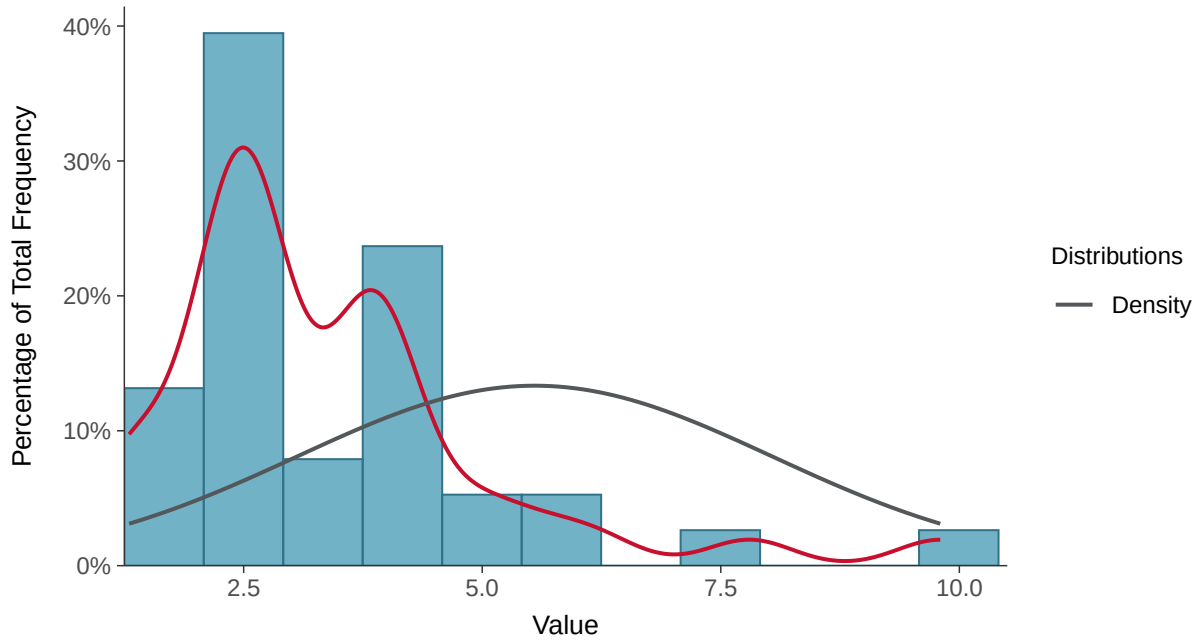
Scatter Plot

Vanadium, MW-1 (ug/L)



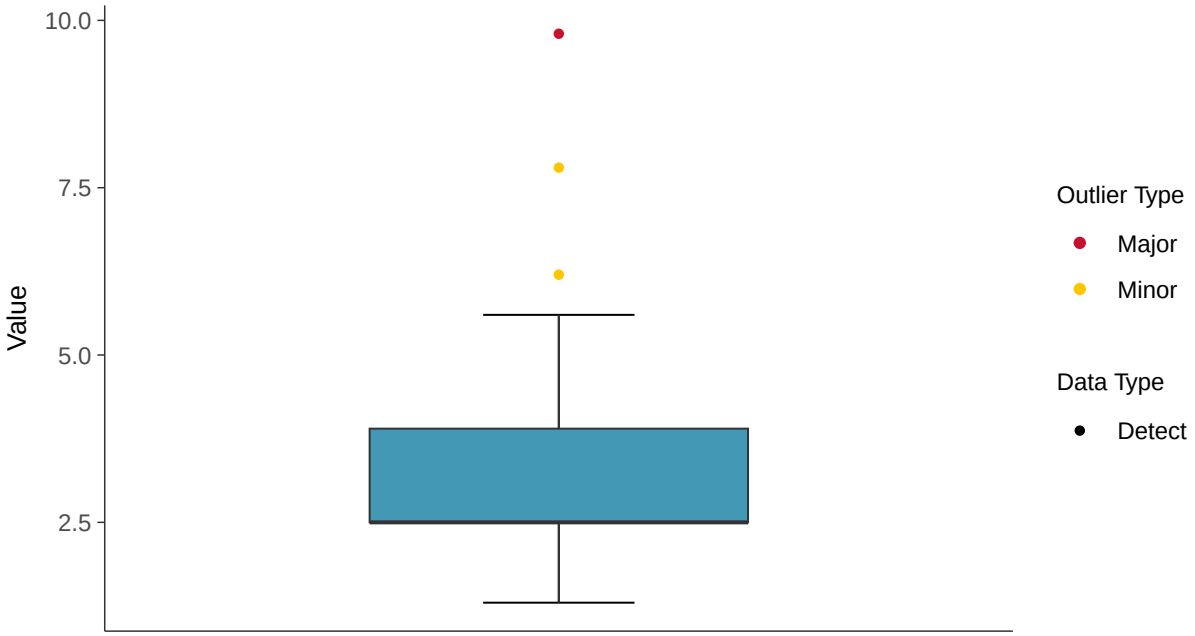
Histogram

Vanadium, MW-1 (ug/L)



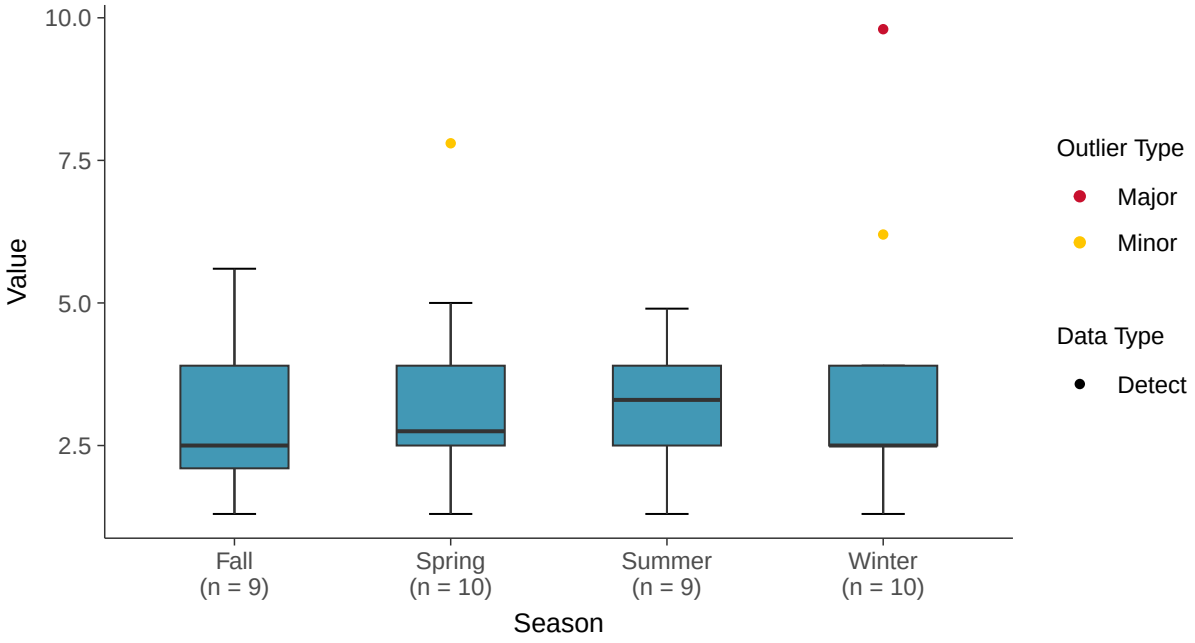
Boxplot

Vanadium, MW-1 (ug/L)



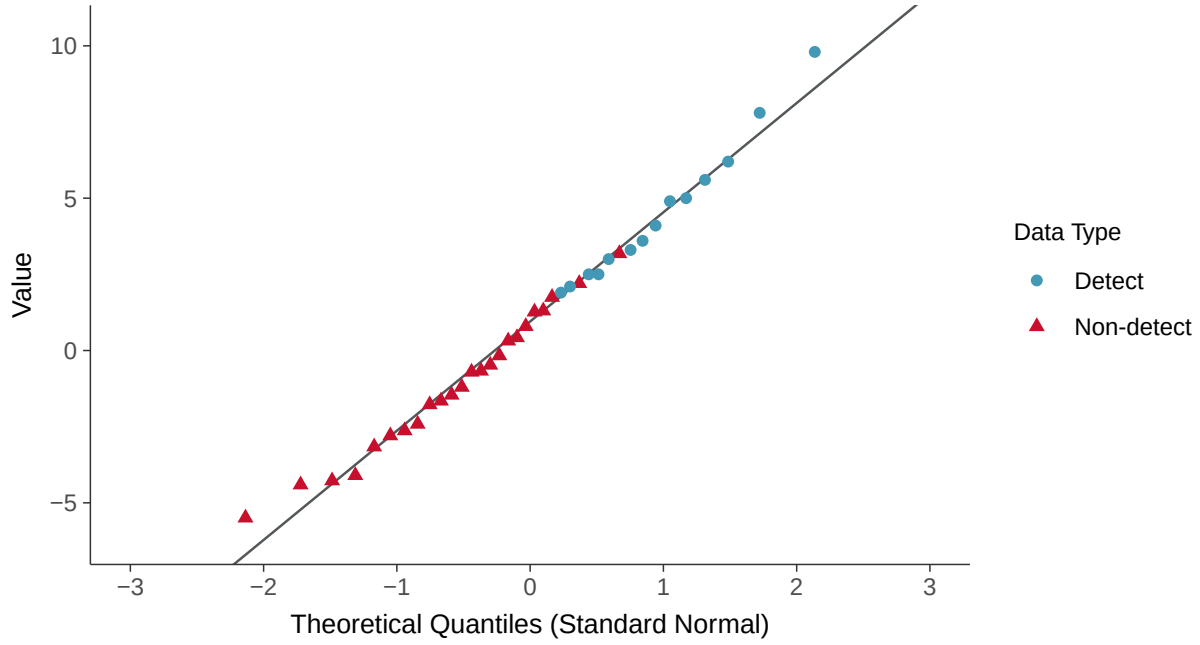
Boxplot by Season

Vanadium, MW-1 (ug/L)



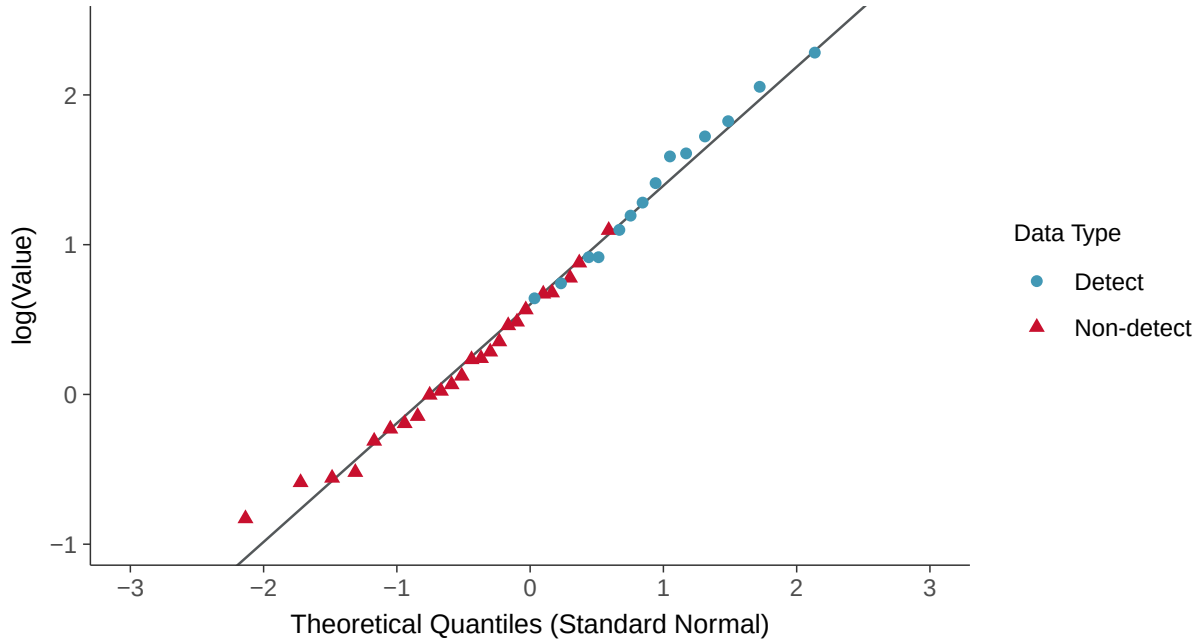
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-1 (ug/L)



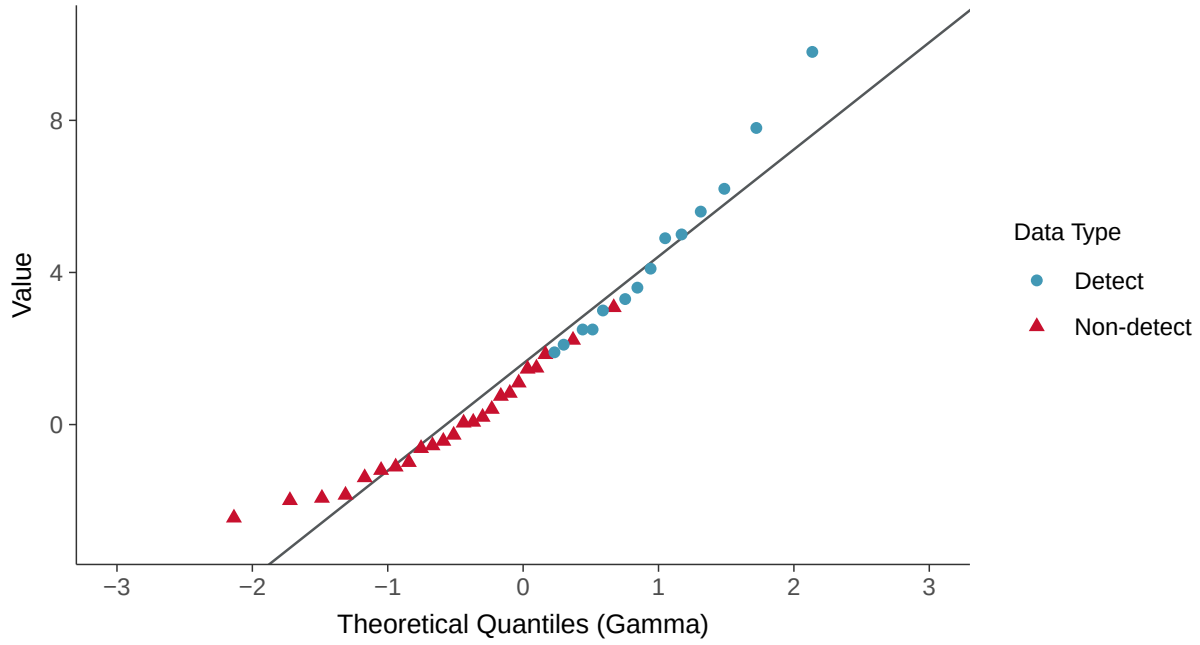
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-1 (ug/L)



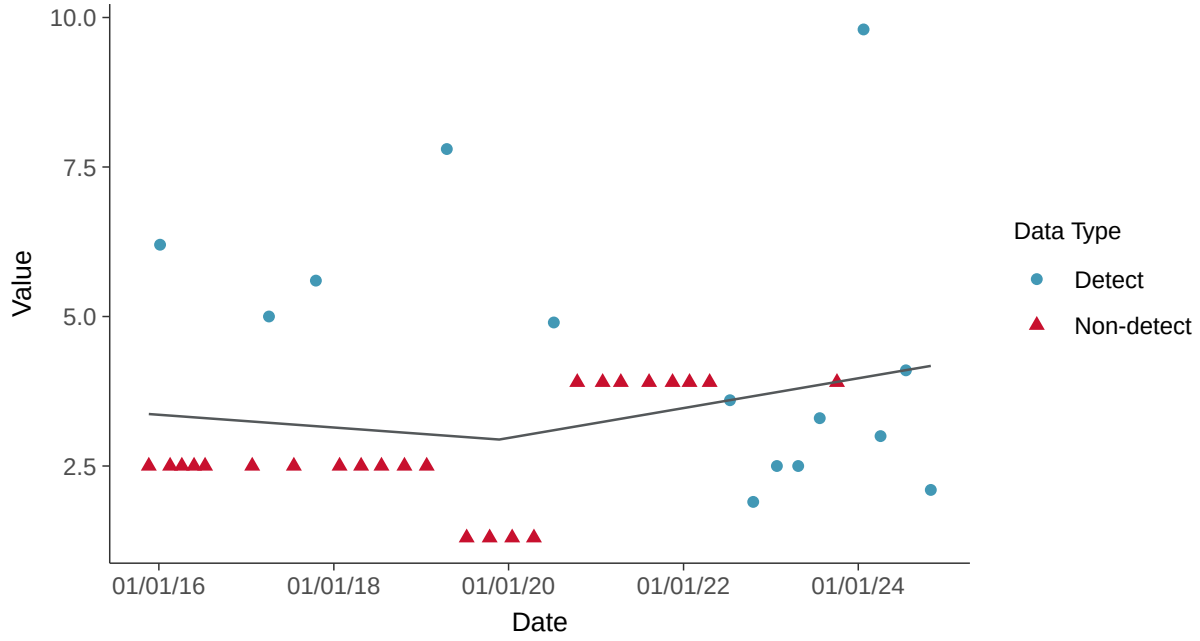
Gamma Q-Q plot using ROS Imputed Estimates

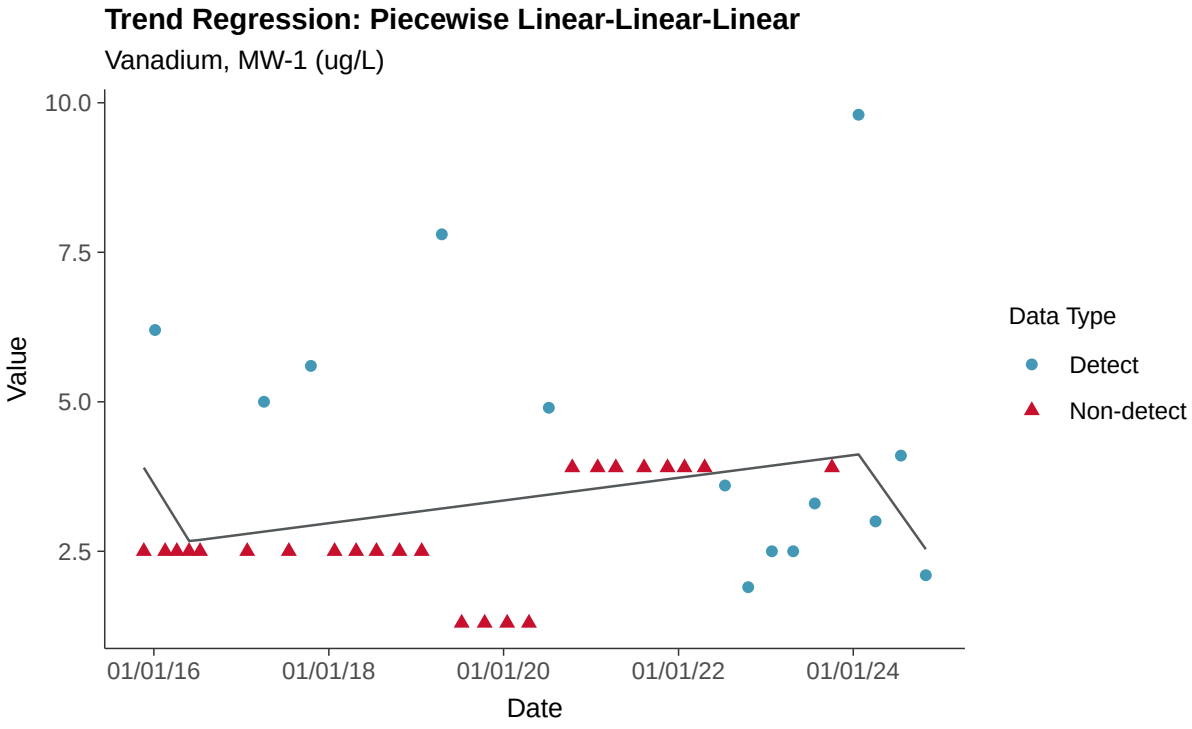
Vanadium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear

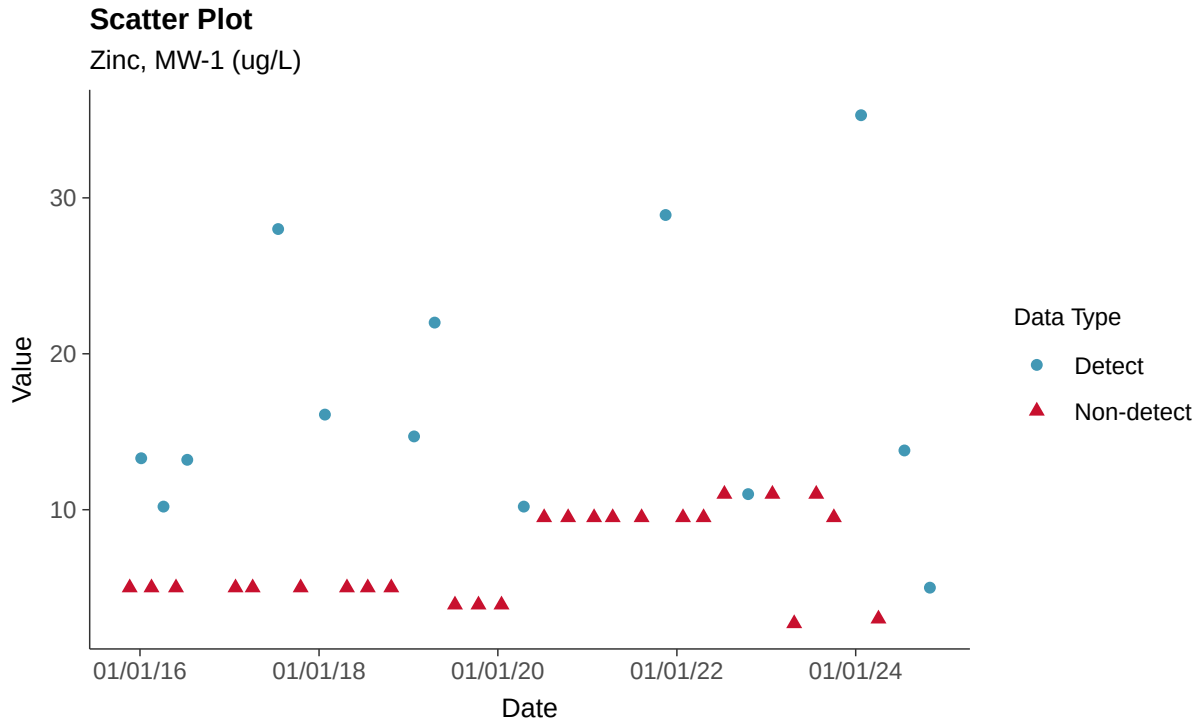
Vanadium, MW-1 (ug/L)

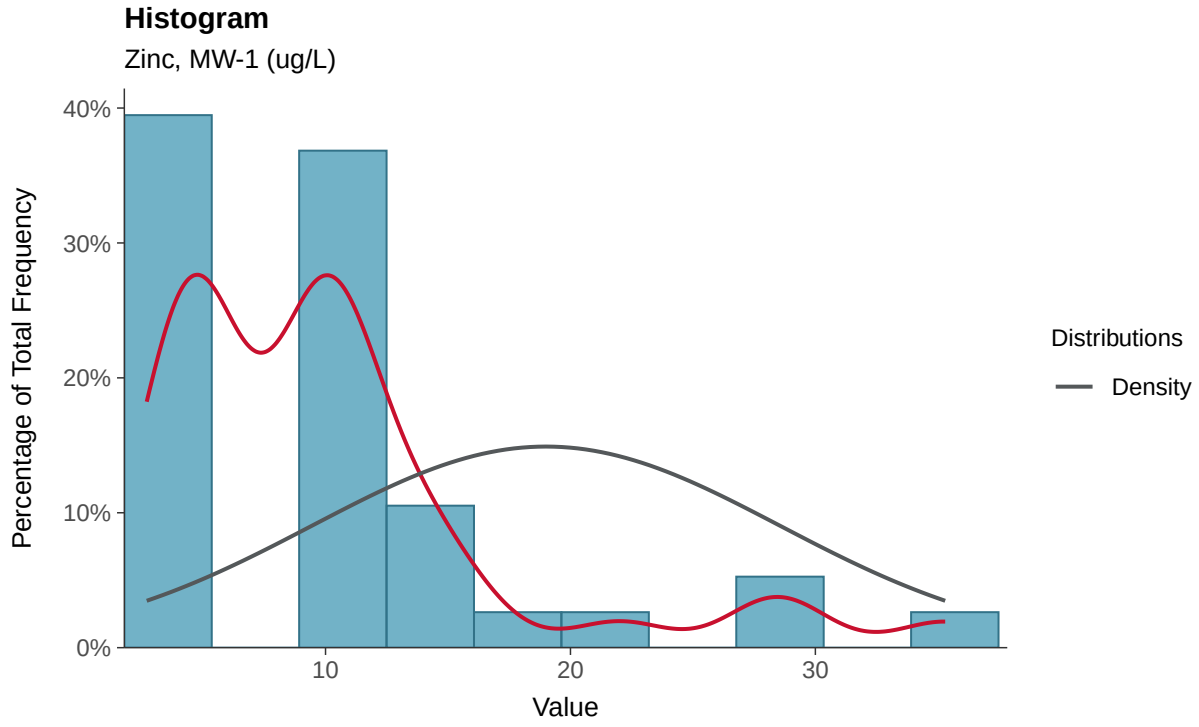



Trend Regression: Piecewise Linear-Linear-Linear
Vanadium, MW-1 (ug/L)
Value
10.0
7.5
5.0
2.5
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Zinc, MW-1

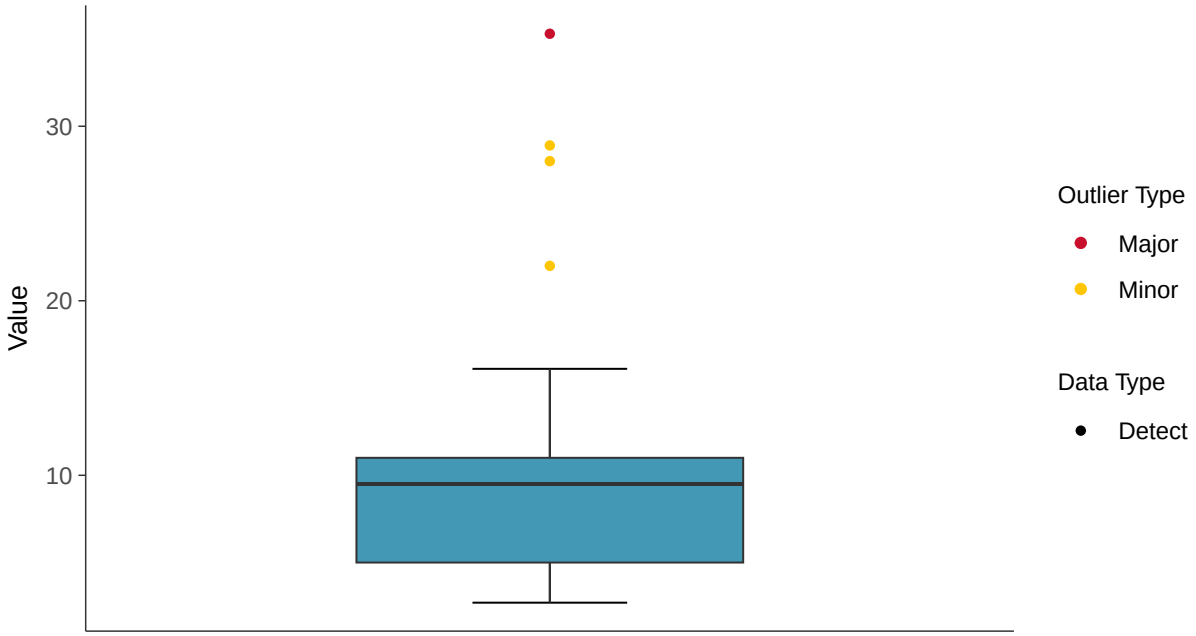
ID: 01_01_128





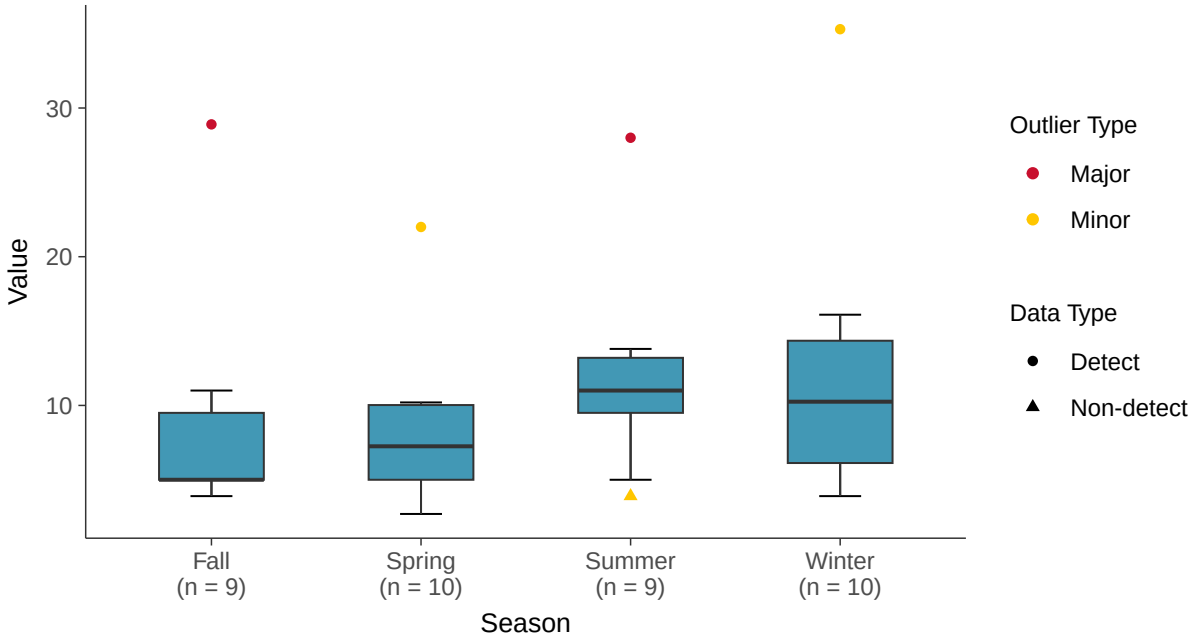
Boxplot

Zinc, MW-1 (ug/L)



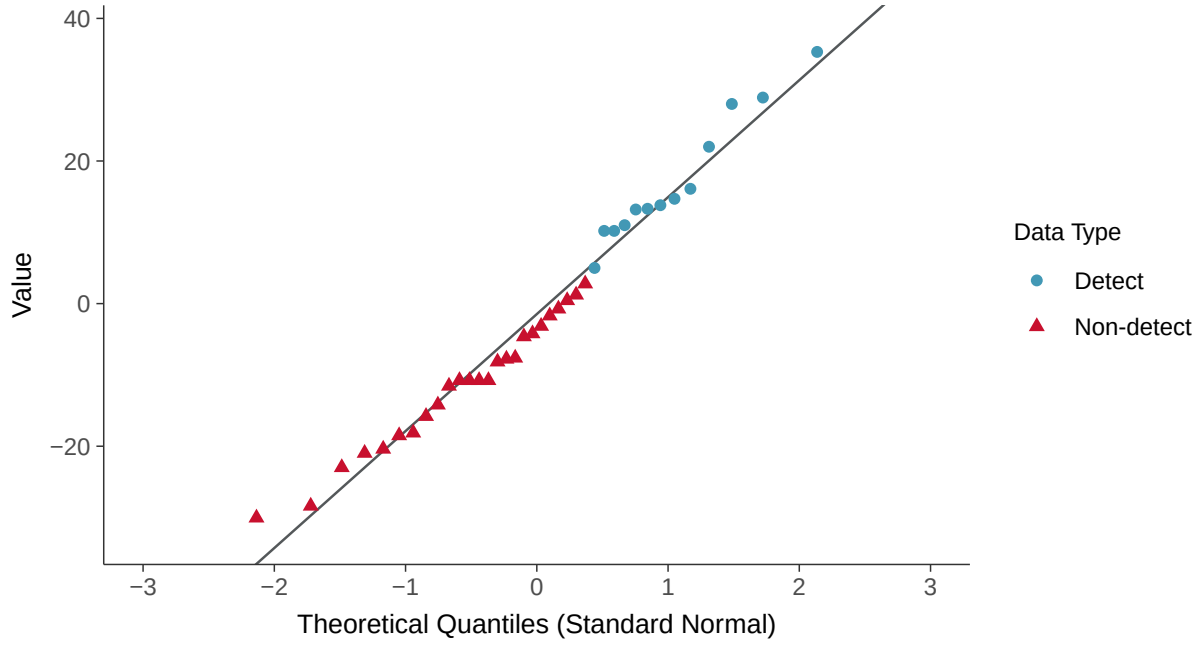
Boxplot by Season

Zinc, MW-1 (ug/L)



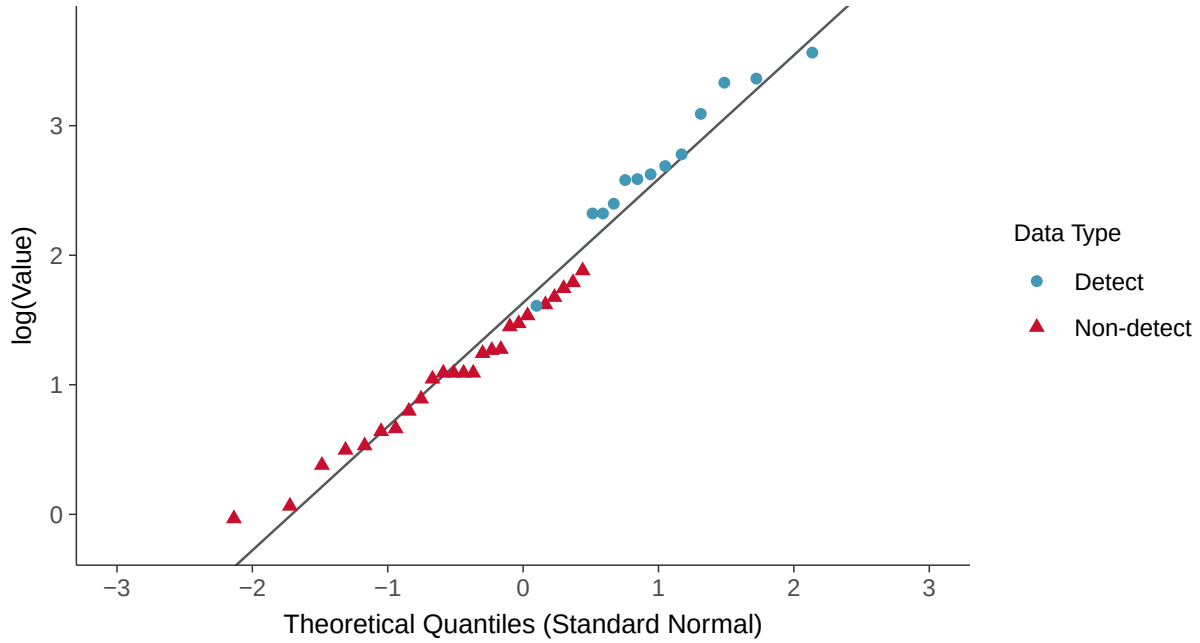
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



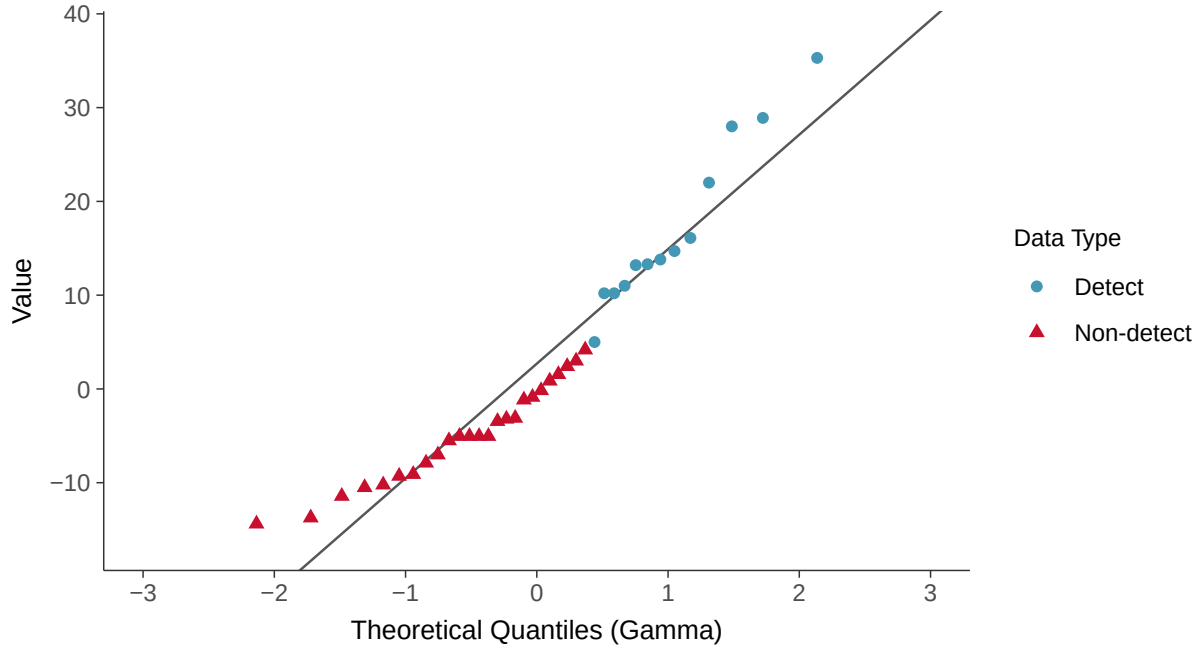
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



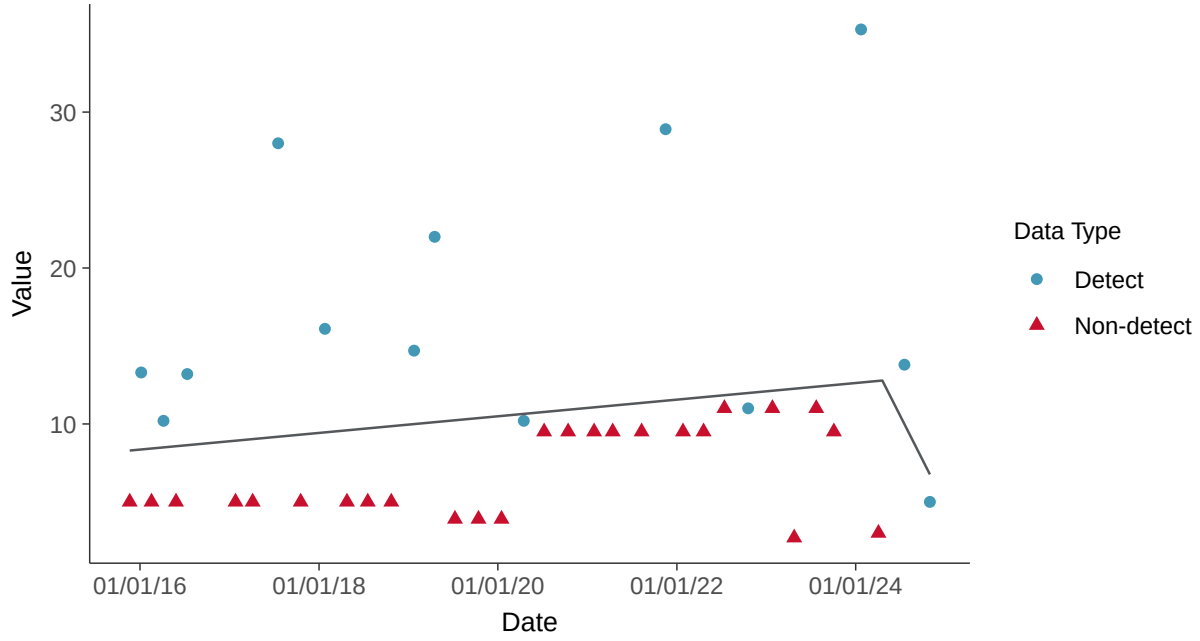
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-1 (ug/L)

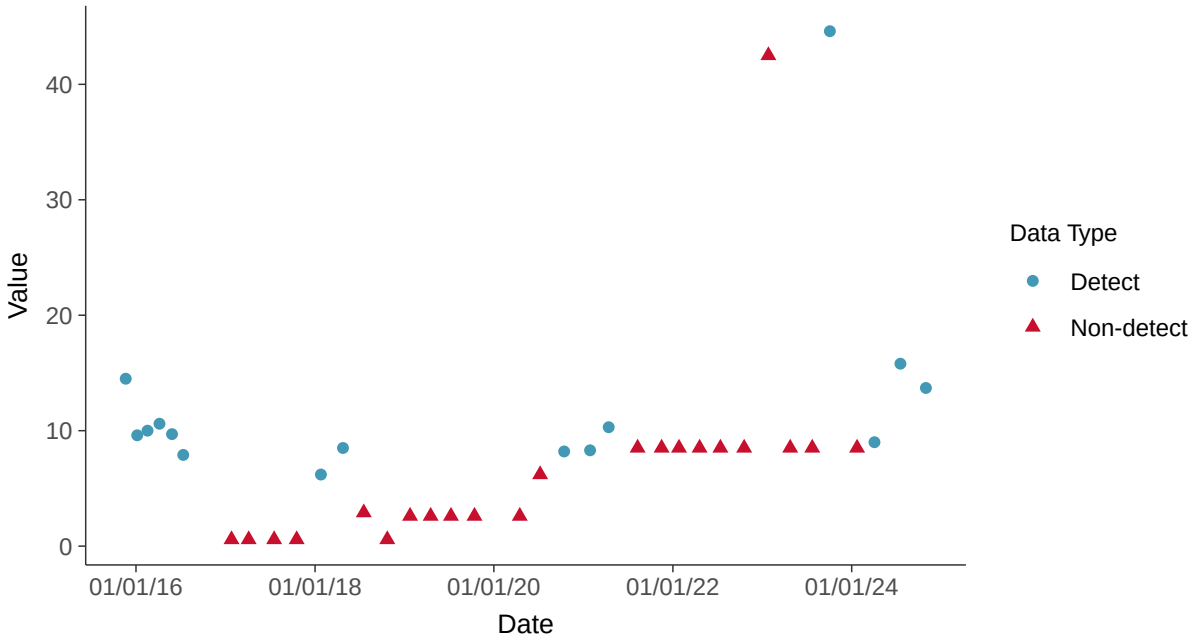


App. III: Boron, MW-1

ID: 01_02_105

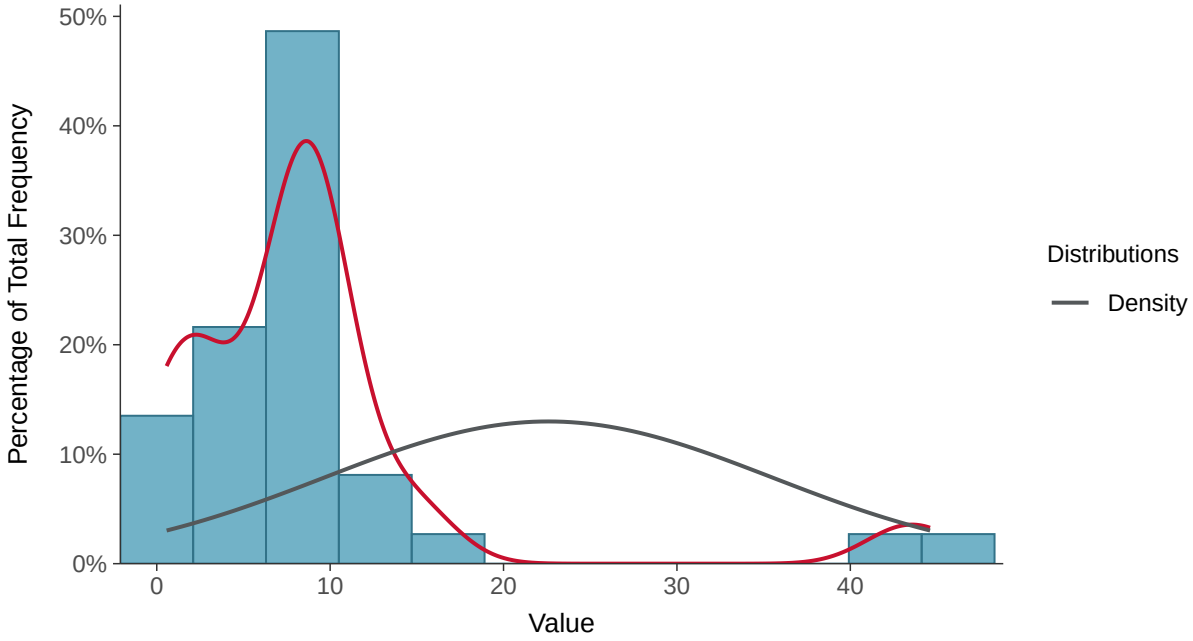
Scatter Plot

Boron, MW-1 (ug/L)



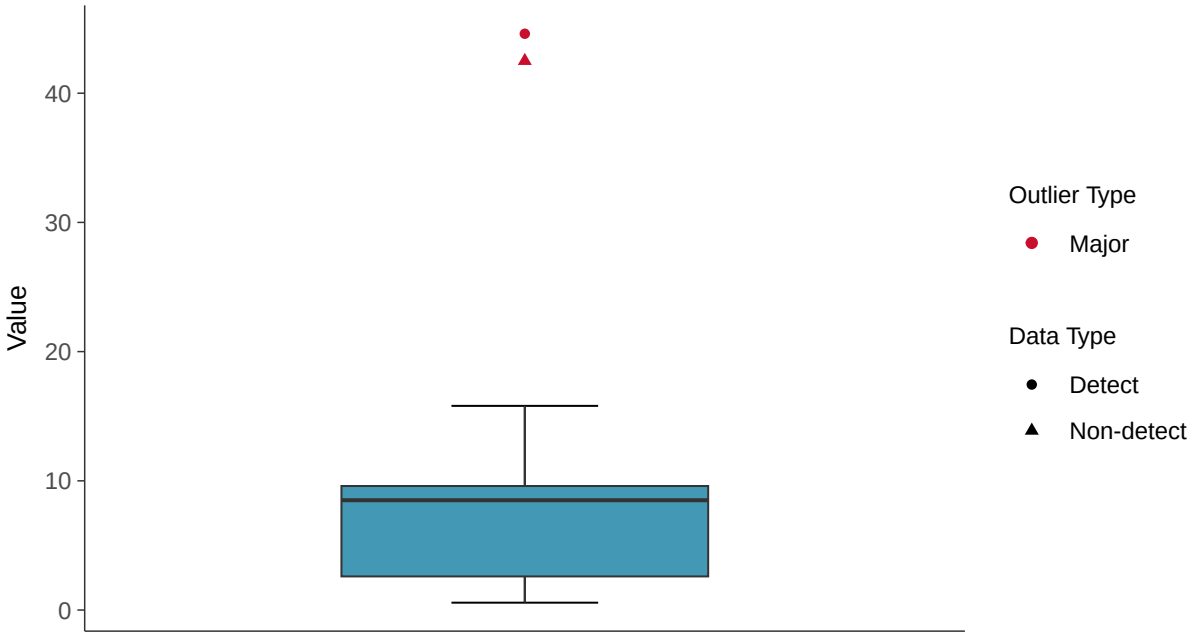
Histogram

Boron, MW-1 (ug/L)



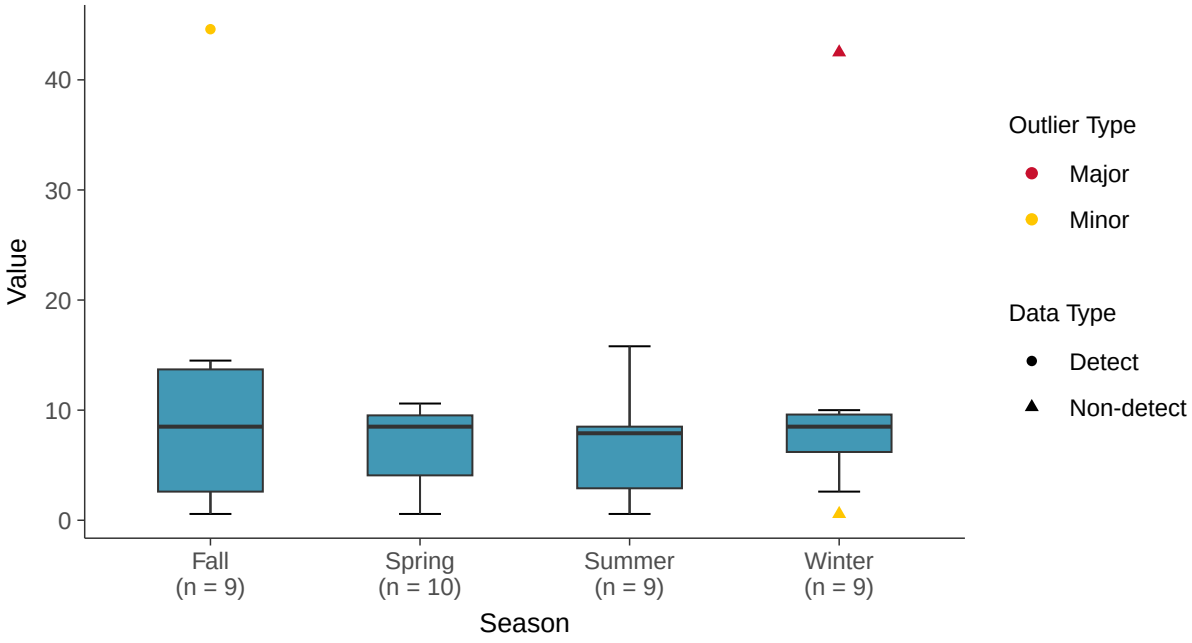
Boxplot

Boron, MW-1 (ug/L)



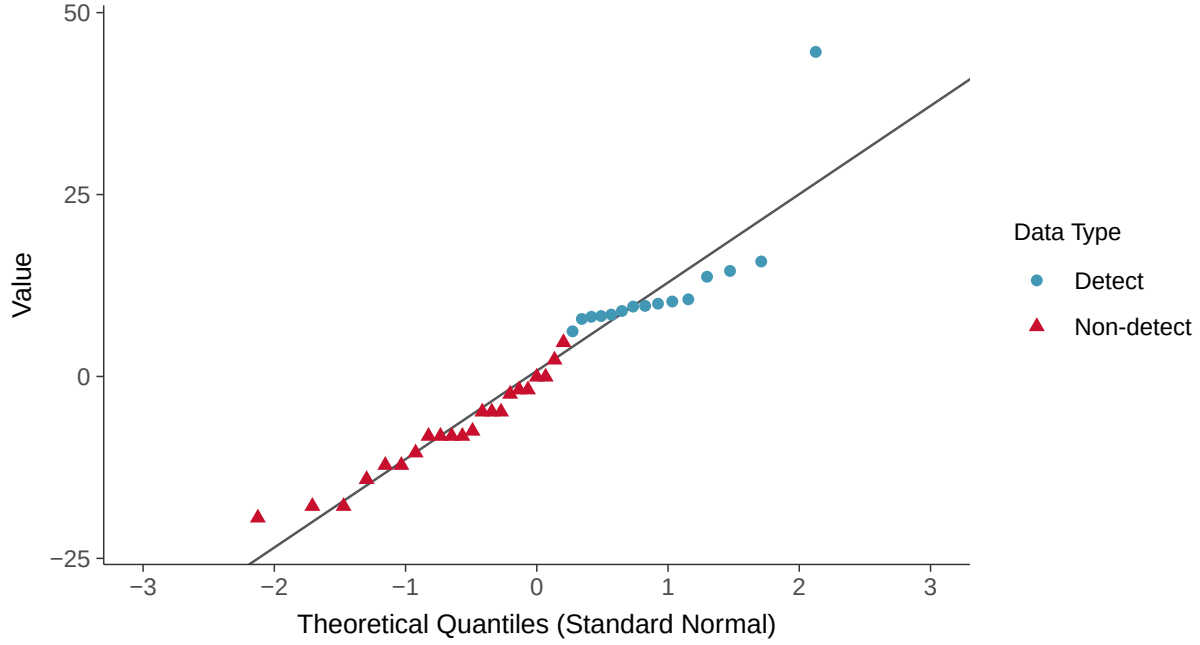
Boxplot by Season

Boron, MW-1 (ug/L)



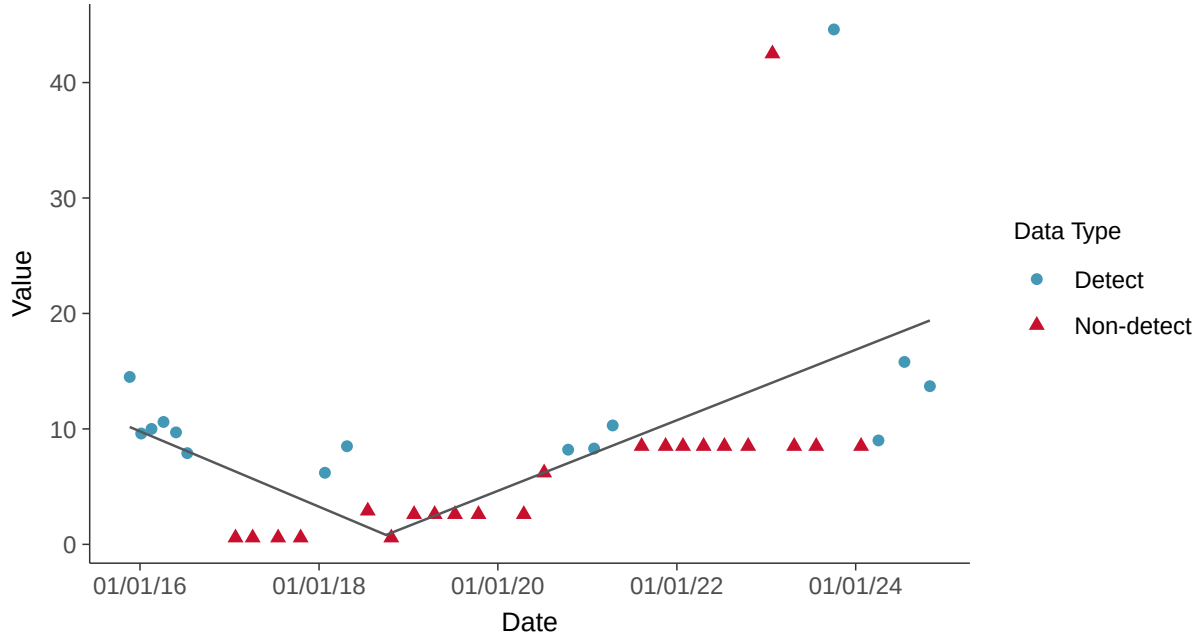
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-1 (ug/L)



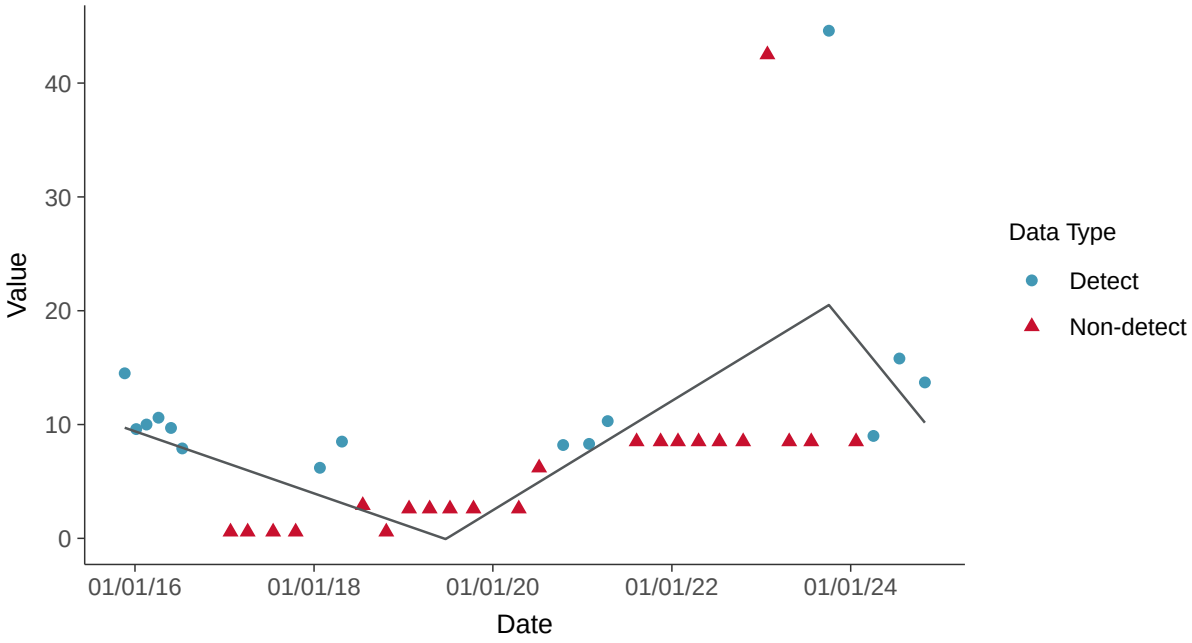
Trend Regression: Piecewise Linear-Linear

Boron, MW-1 (ug/L)



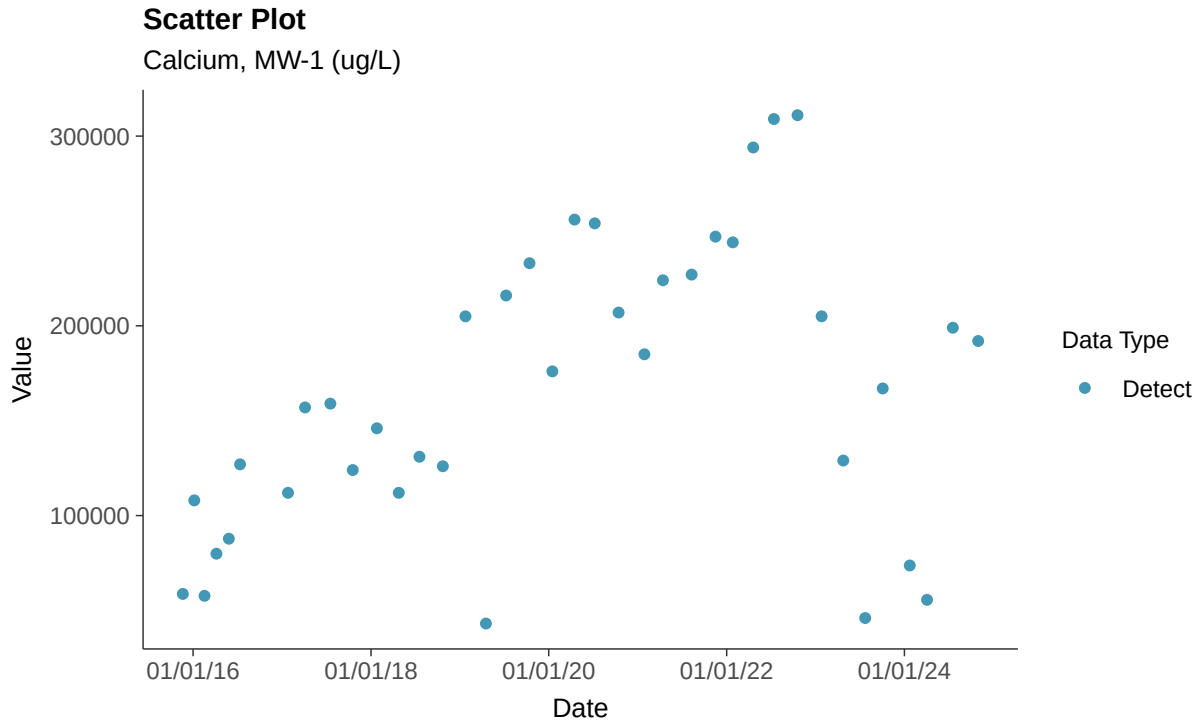
Trend Regression: Piecewise Linear-Linear-Linear

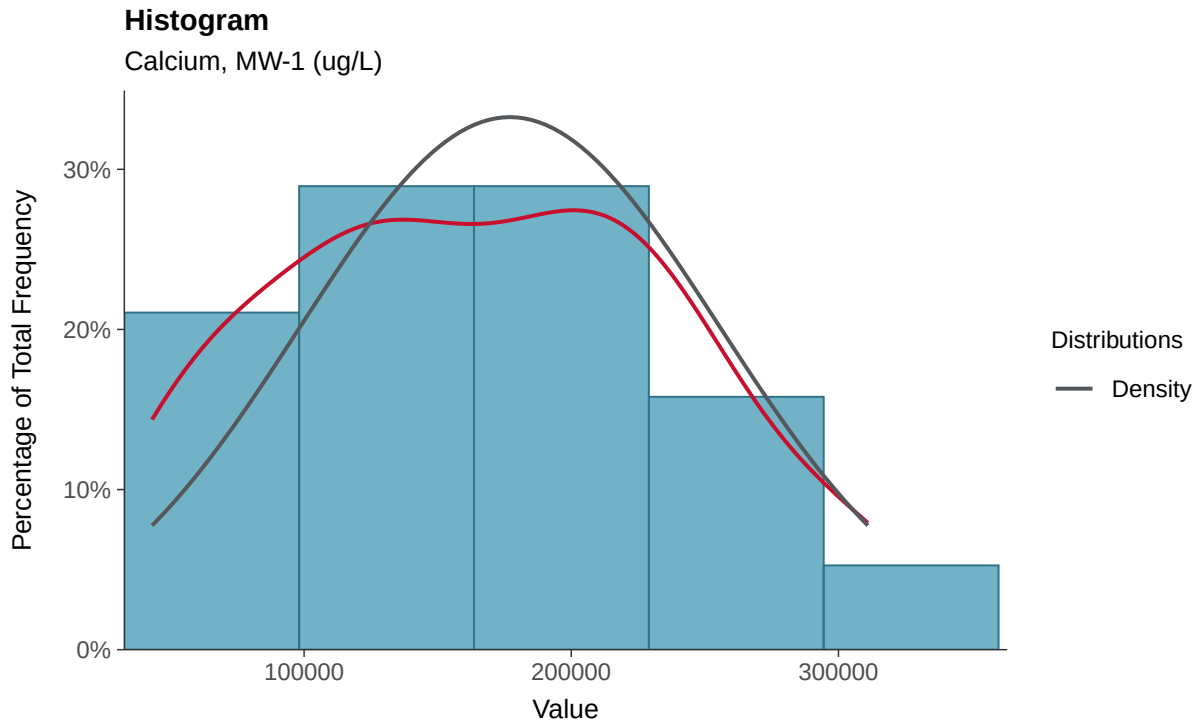
Boron, MW-1 (ug/L)



App. III: Calcium, MW-1

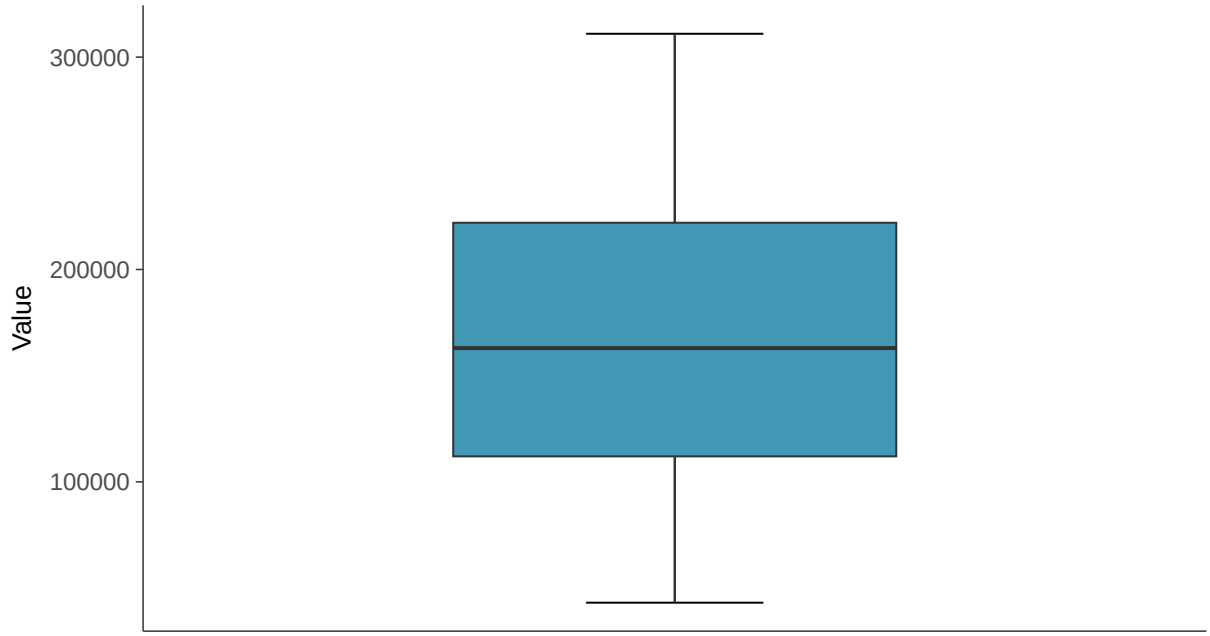
ID: 01_02_107





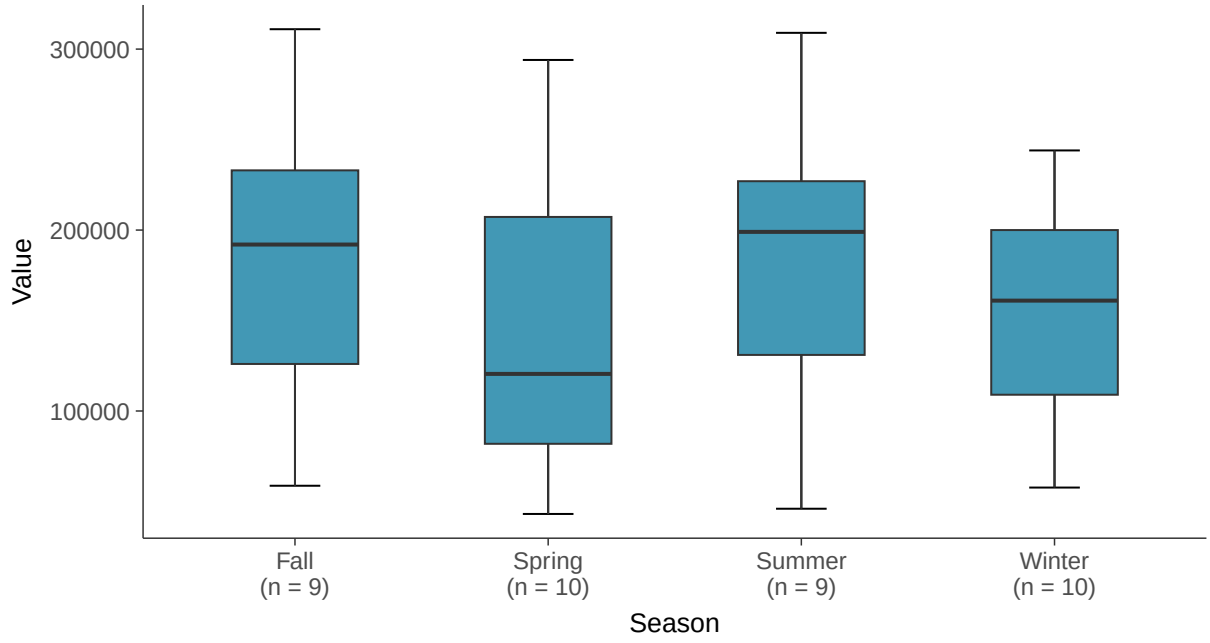
Boxplot

Calcium, MW-1 (ug/L)



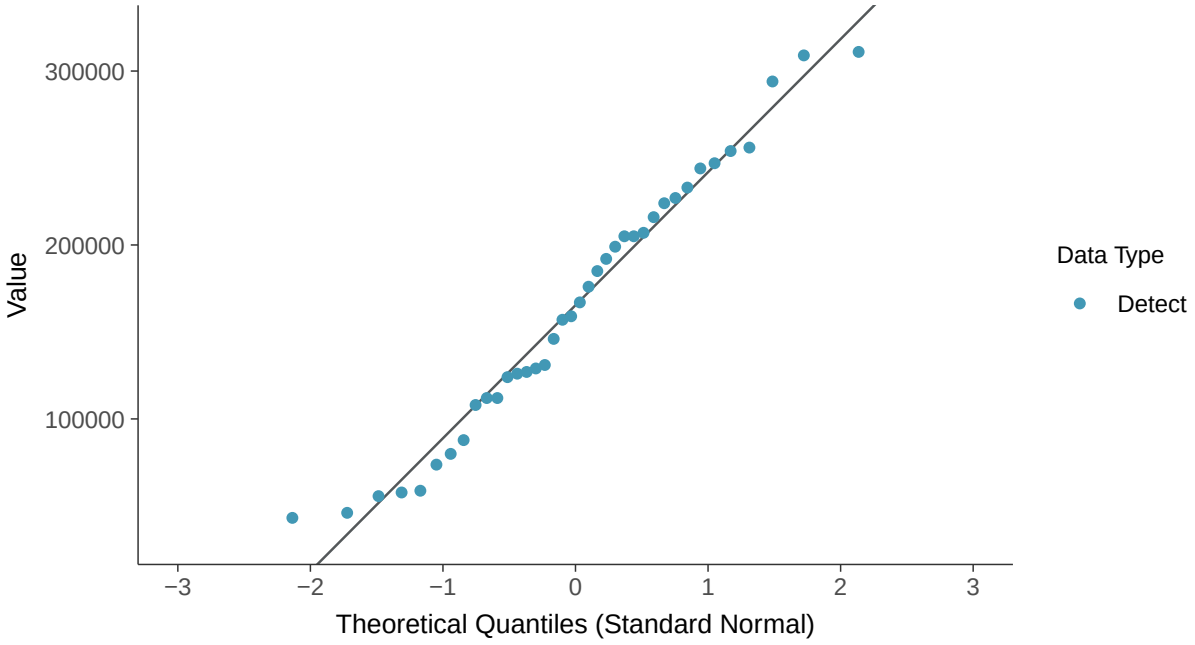
Boxplot by Season

Calcium, MW-1 (ug/L)



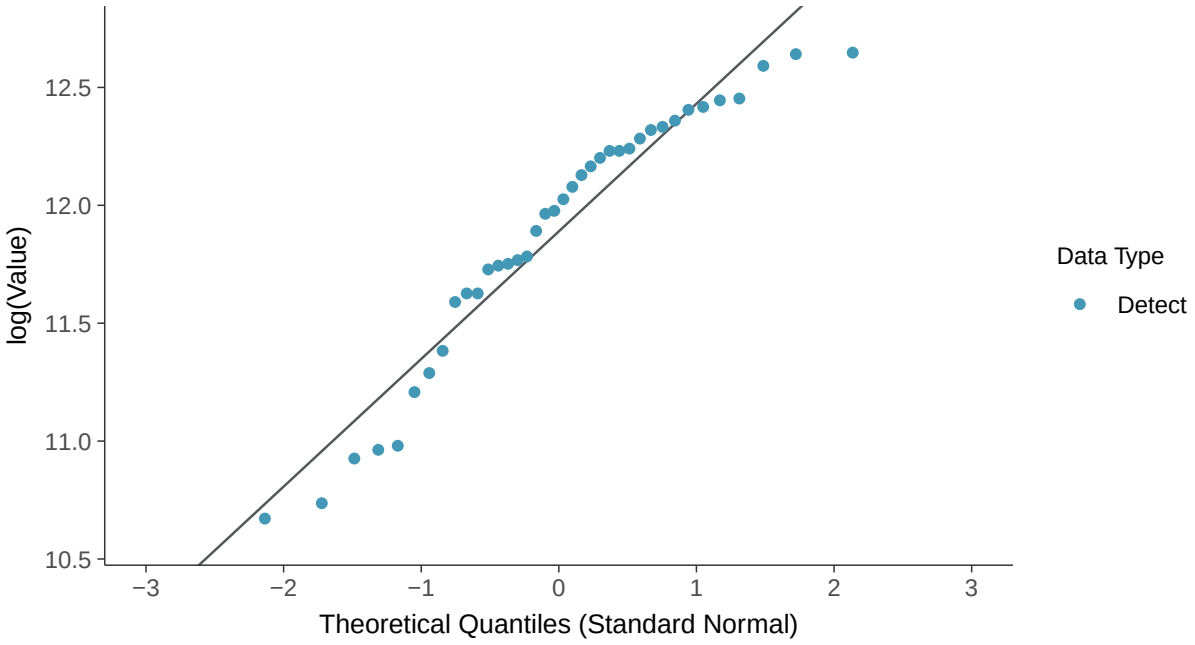
Normal Q-Q plot

Calcium, MW-1 (ug/L)



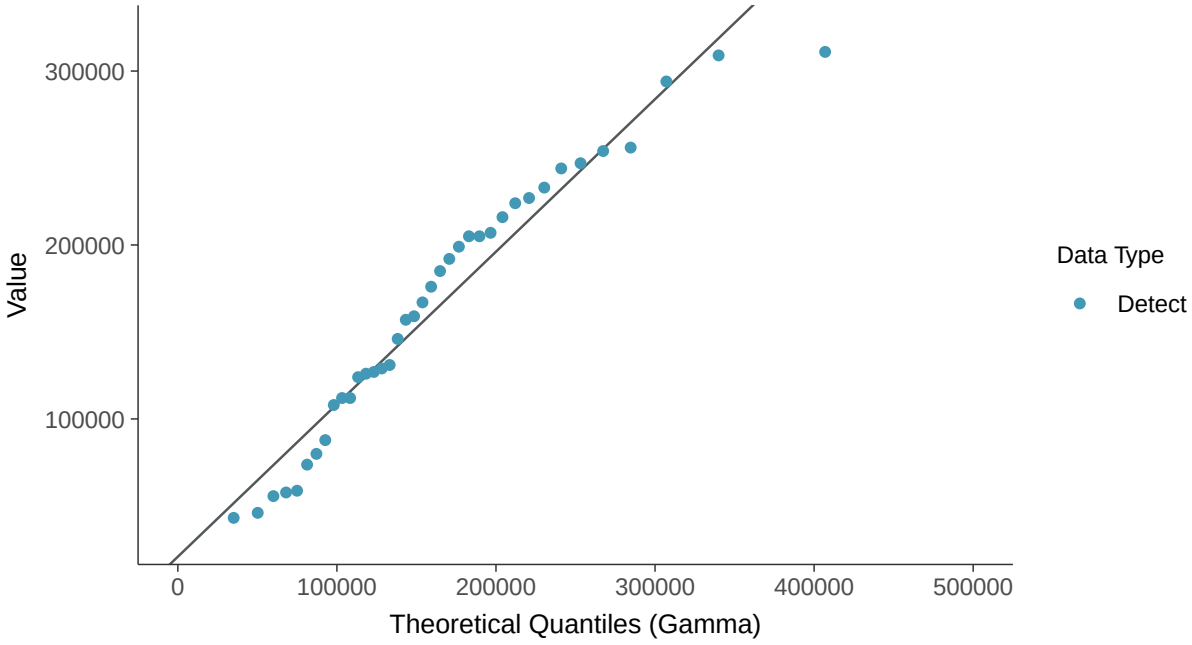
Lognormal Q-Q plot

Calcium, MW-1 (ug/L)



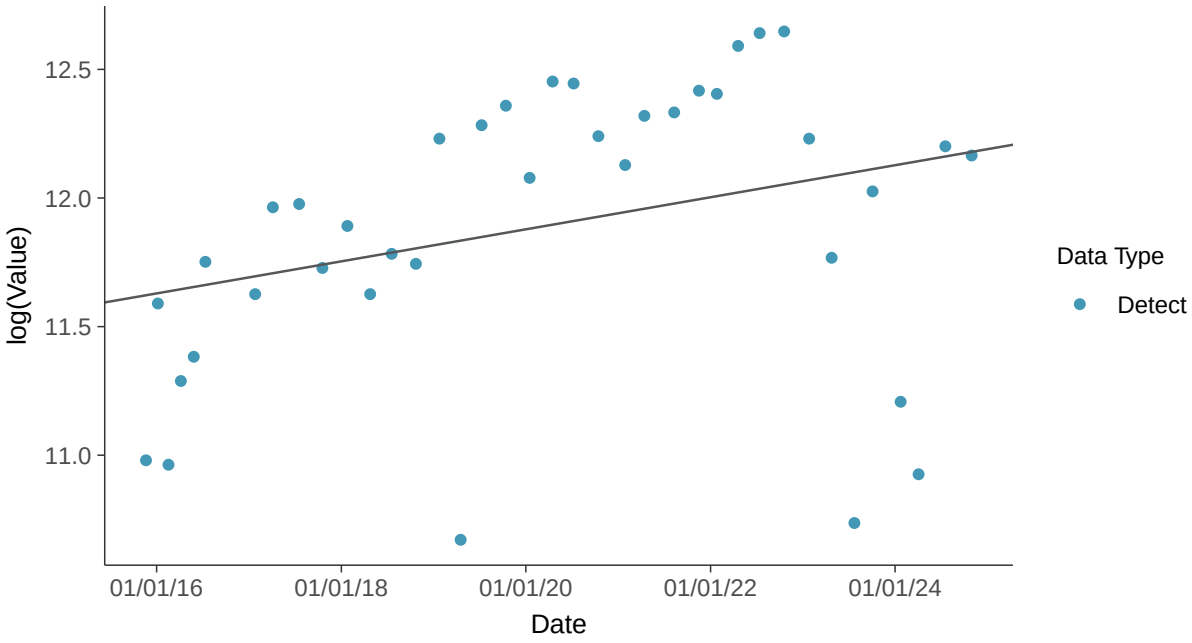
Gamma Q-Q plot

Calcium, MW-1 (ug/L)



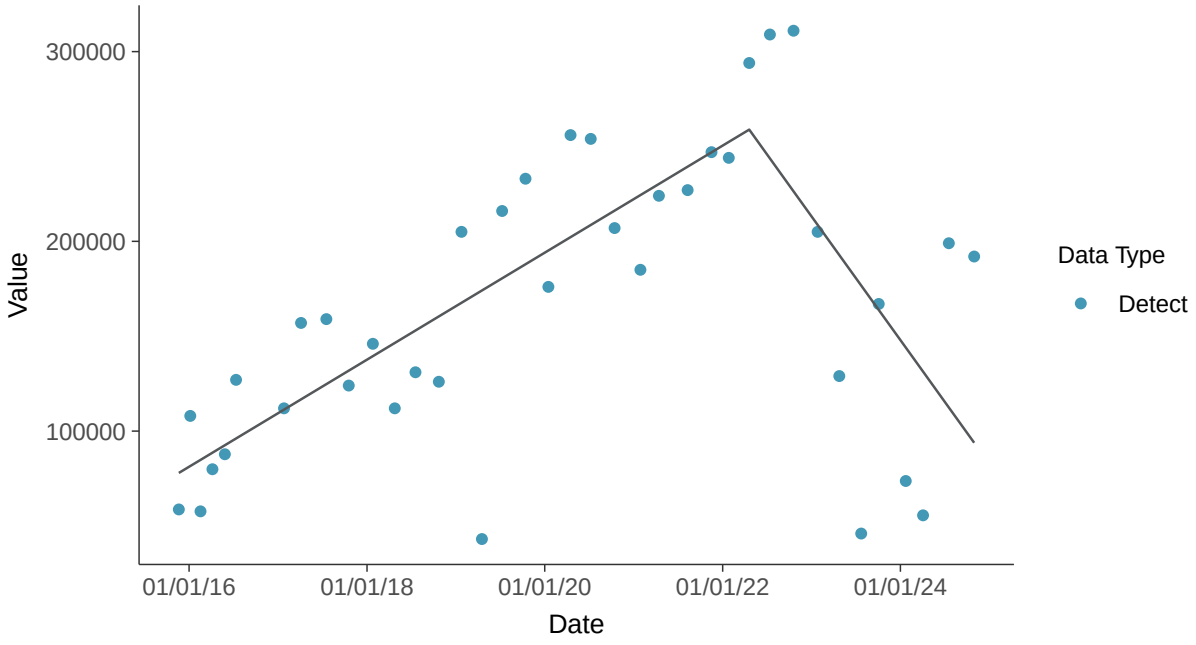
Trend Regression: Lognormal MLE

Calcium, MW-1 (ug/L)



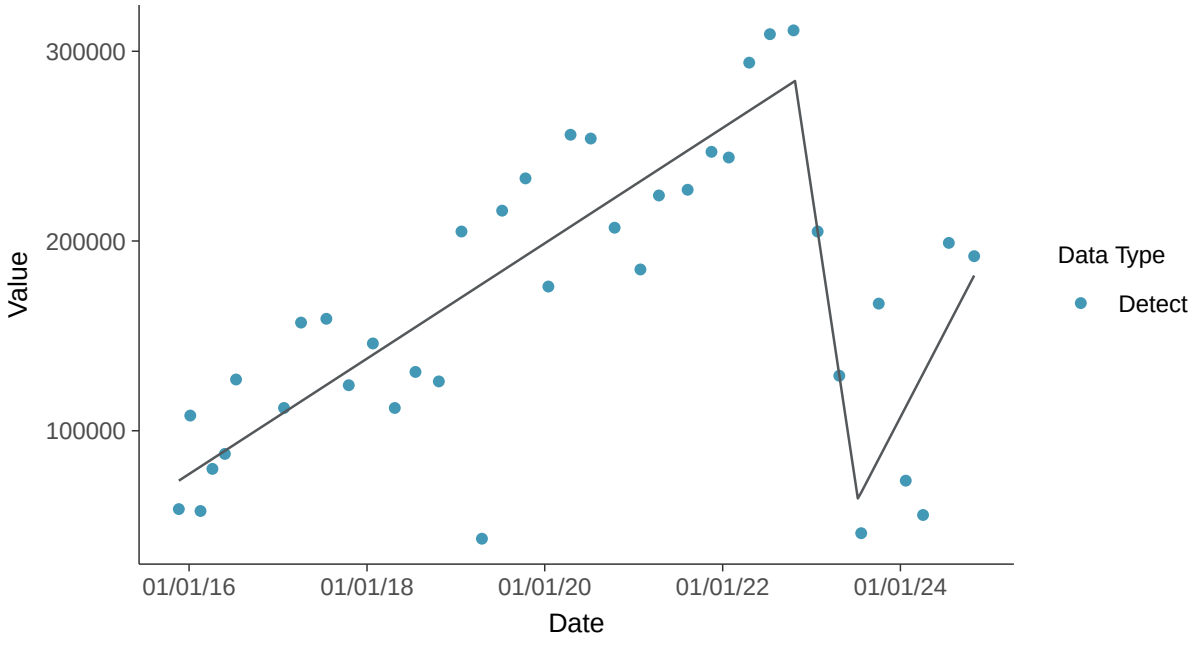
Trend Regression: Piecewise Linear-Linear

Calcium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-1 (ug/L)

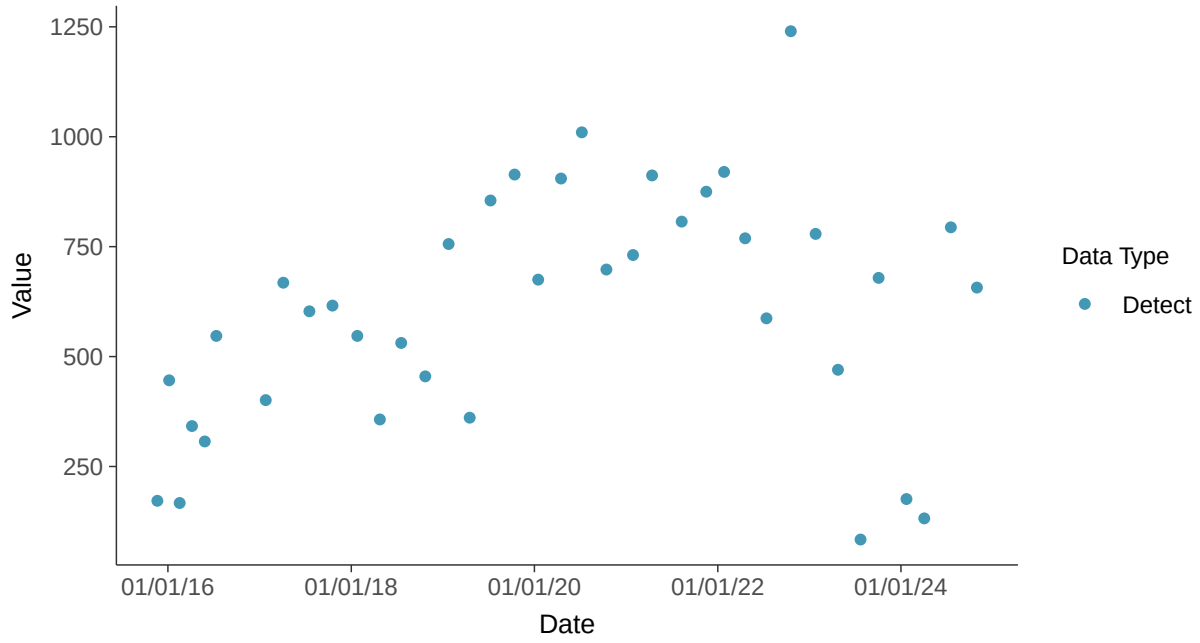


App. III: Chloride, MW-1

ID: 01_02_108

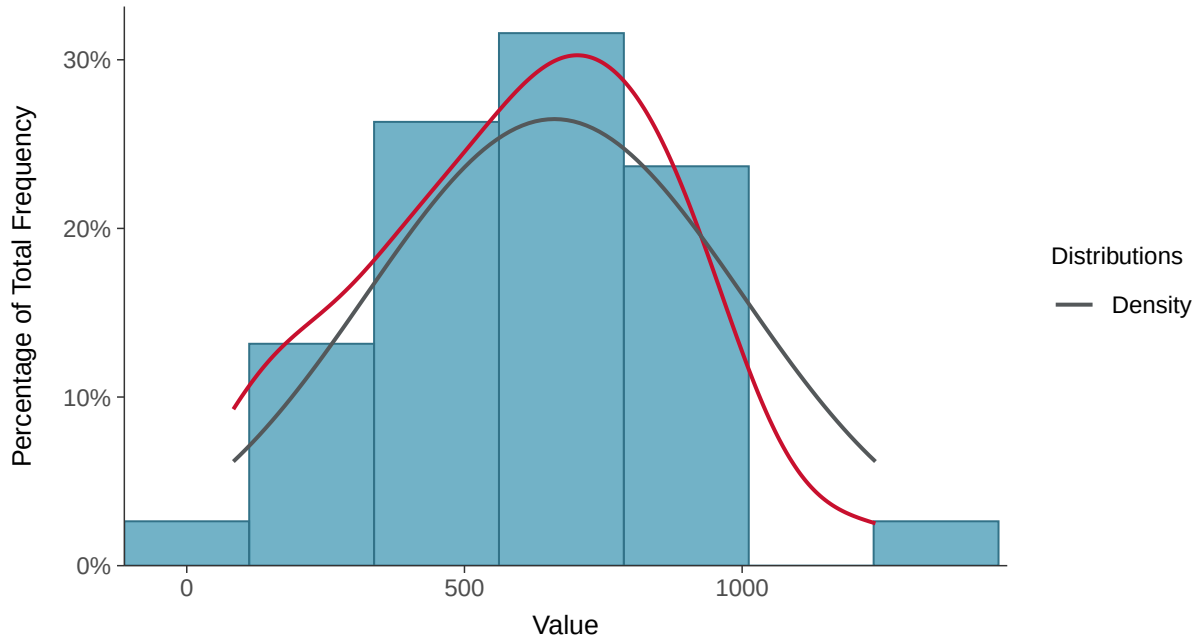
Scatter Plot

Chloride, MW-1 (mg/L)



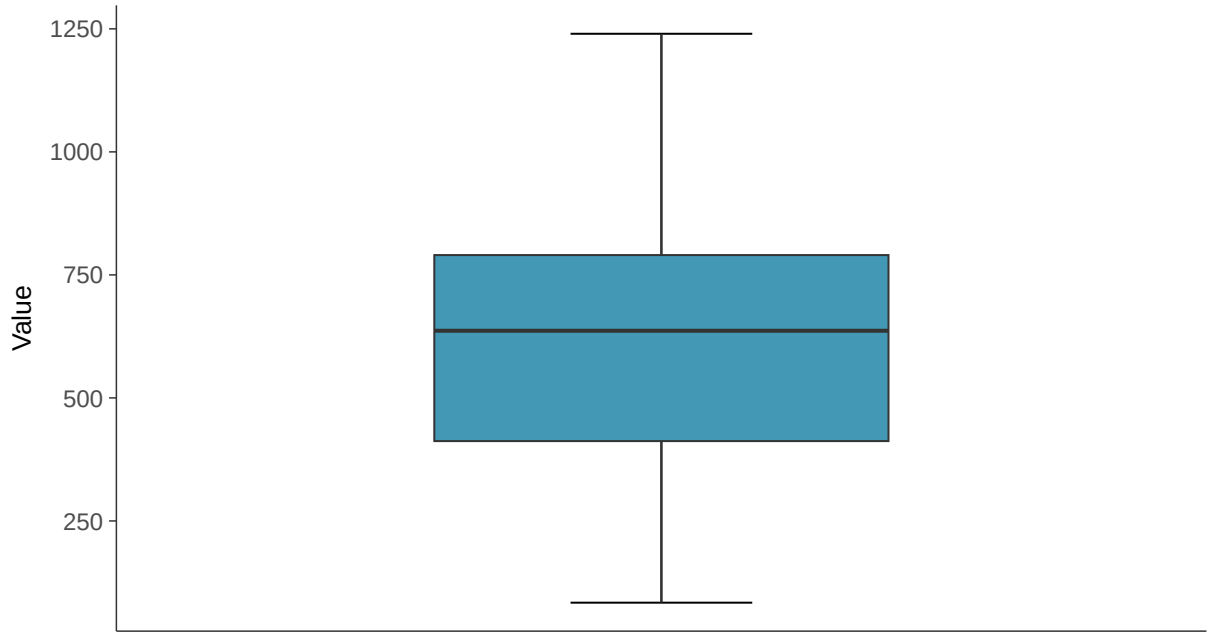
Histogram

Chloride, MW-1 (mg/L)



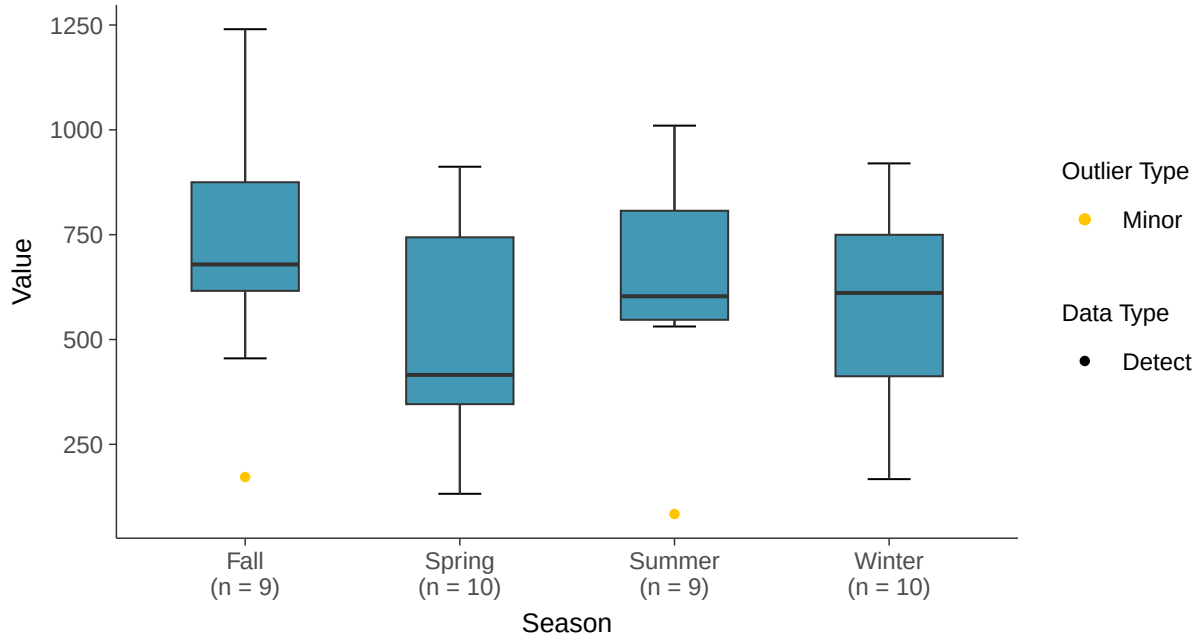
Boxplot

Chloride, MW-1 (mg/L)



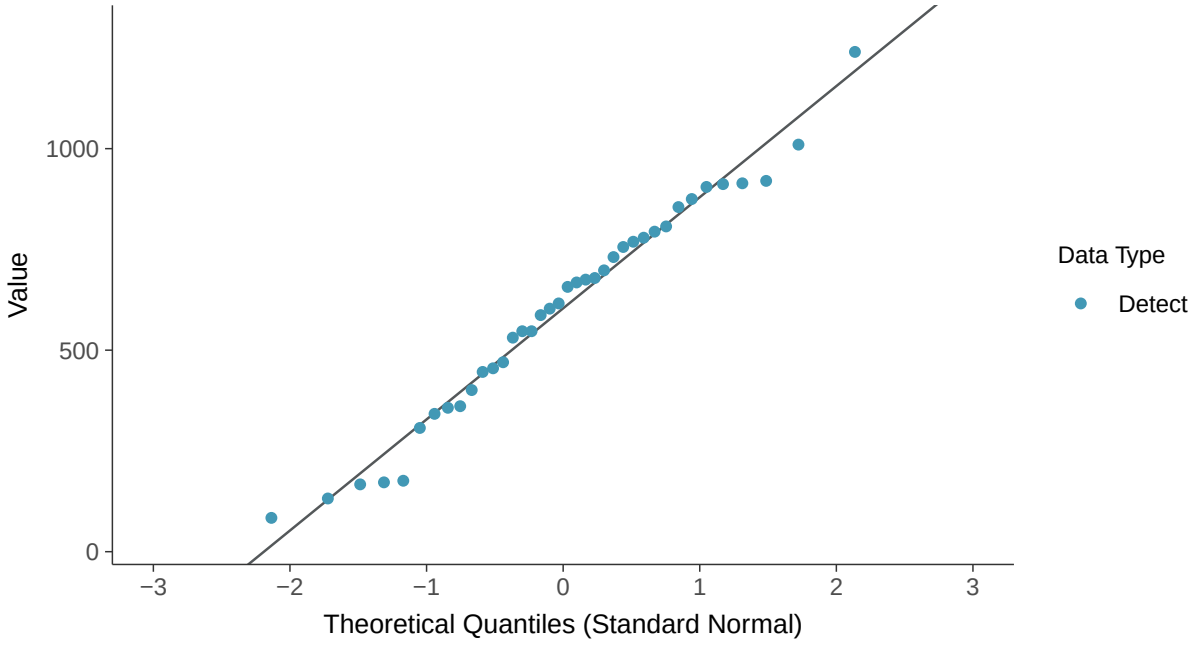
Boxplot by Season

Chloride, MW-1 (mg/L)



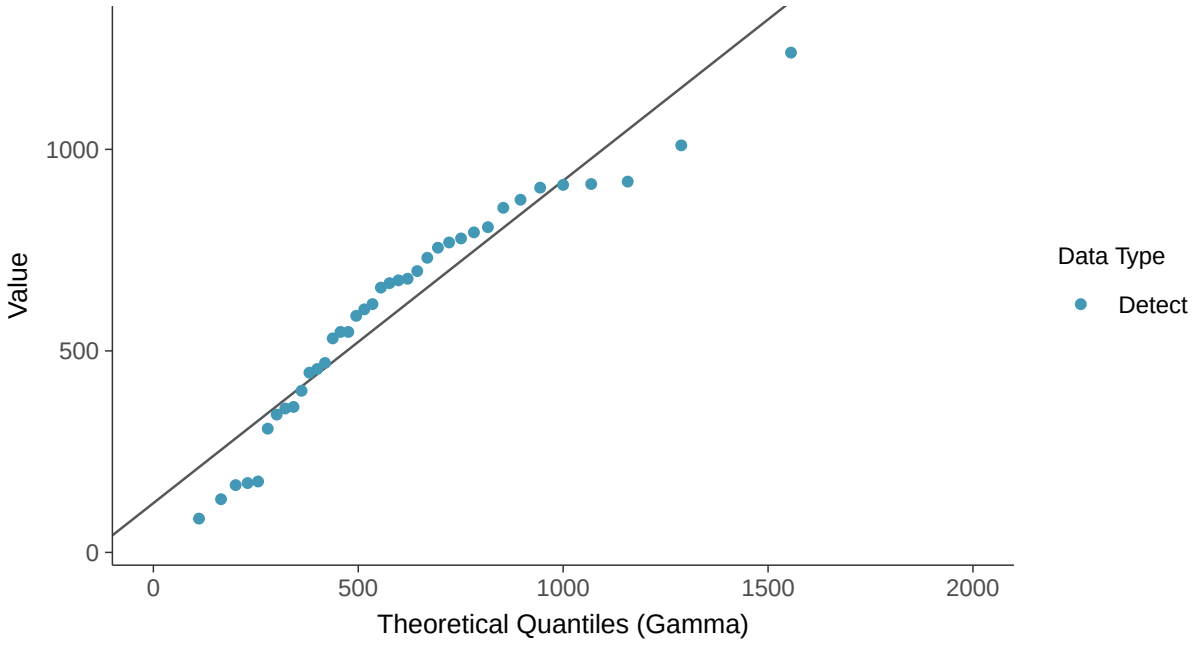
Normal Q-Q plot

Chloride, MW-1 (mg/L)



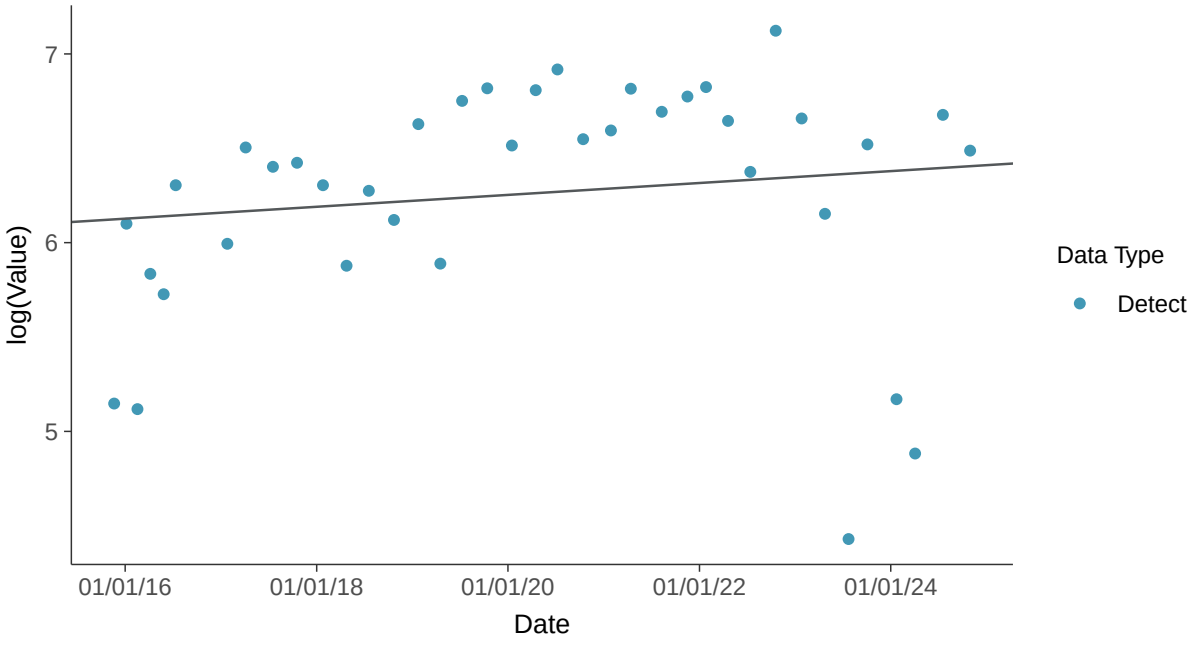
Gamma Q-Q plot

Chloride, MW-1 (mg/L)



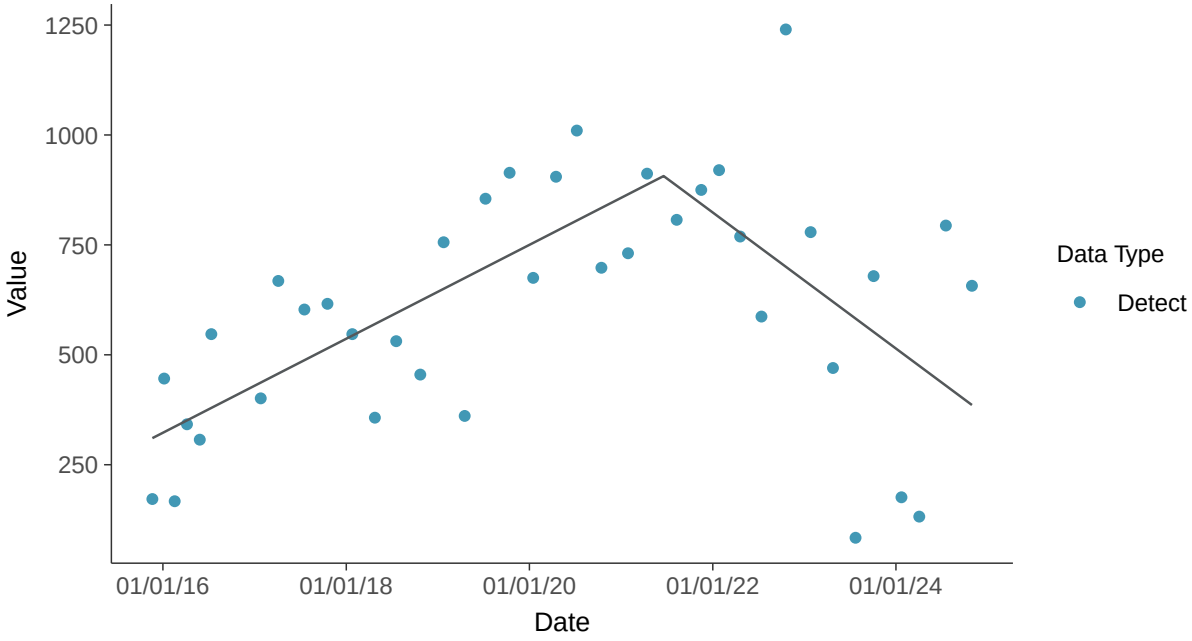
Trend Regression: Lognormal MLE

Chloride, MW-1 (mg/L)



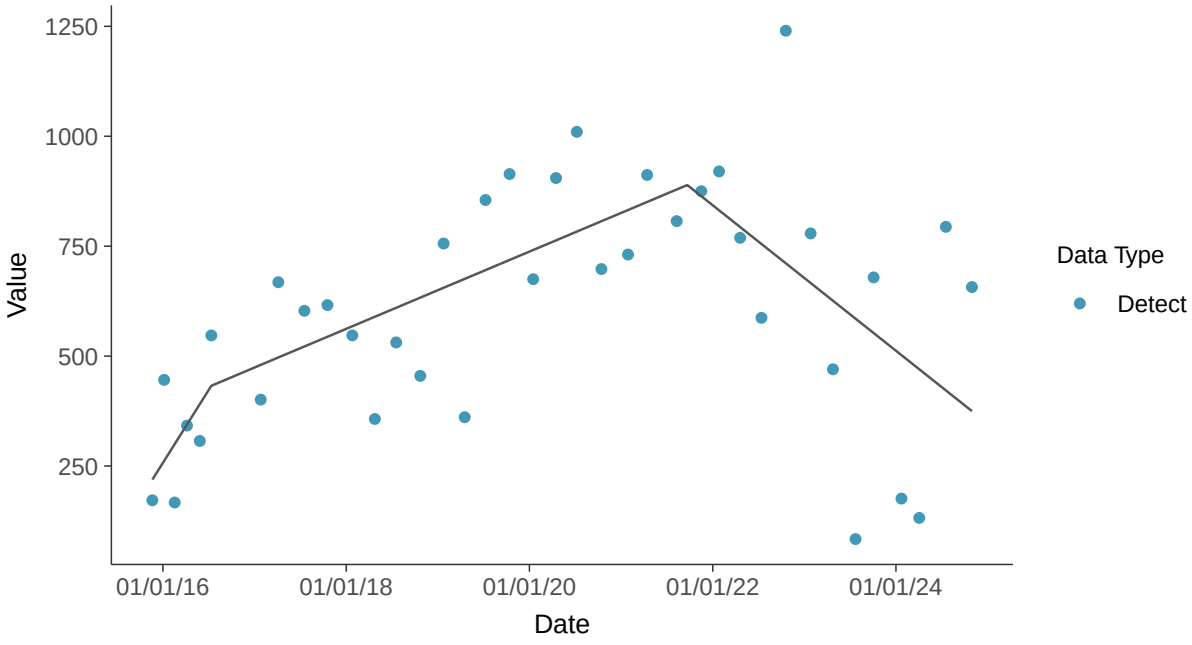
Trend Regression: Piecewise Linear-Linear

Chloride, MW-1 (mg/L)



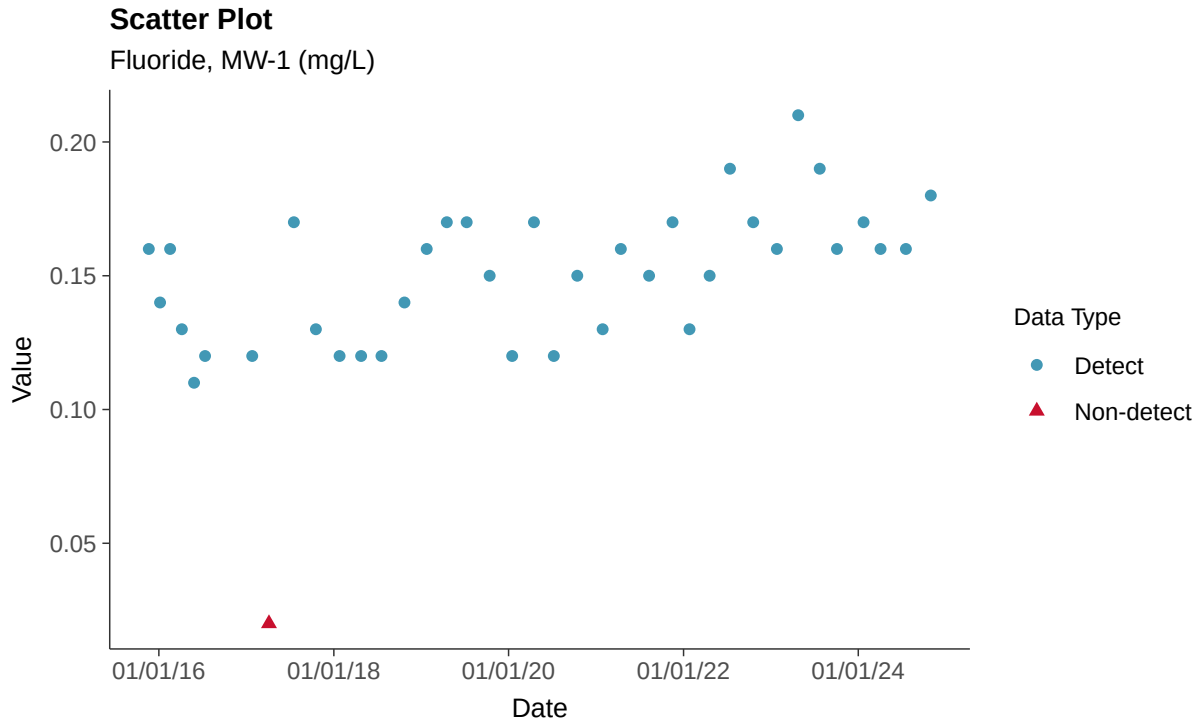
Trend Regression: Piecewise Linear-Linear-Linear

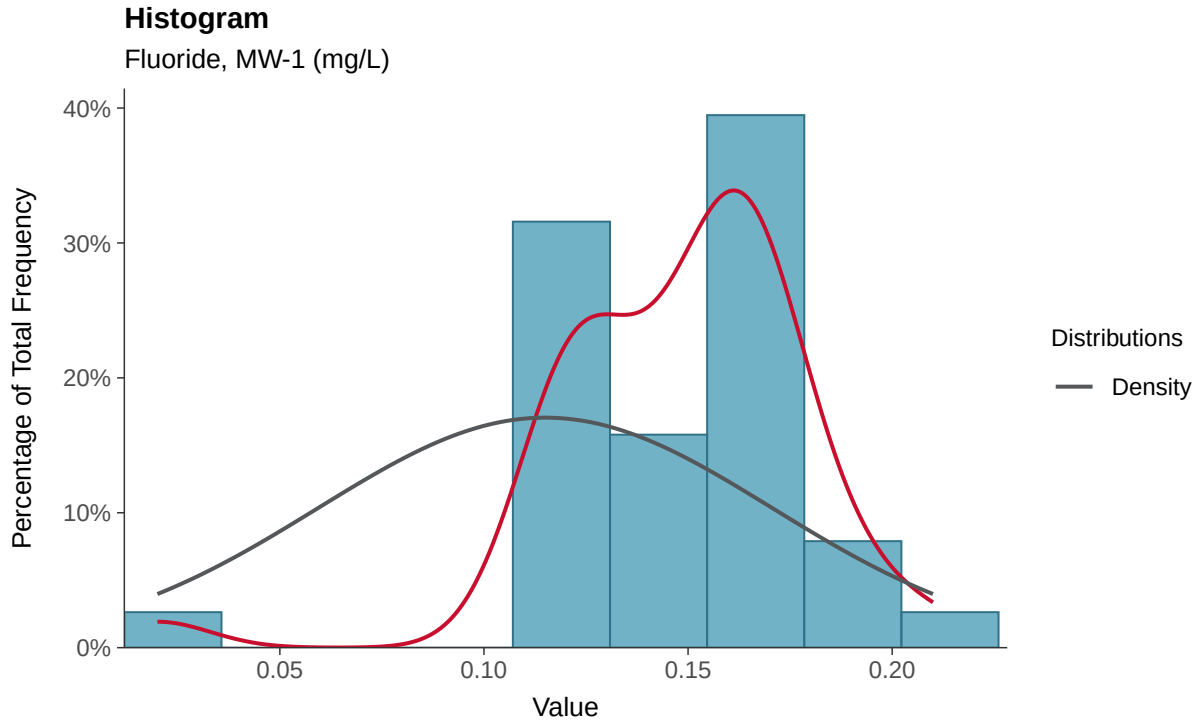
Chloride, MW-1 (mg/L)



App. III: Fluoride, MW-1

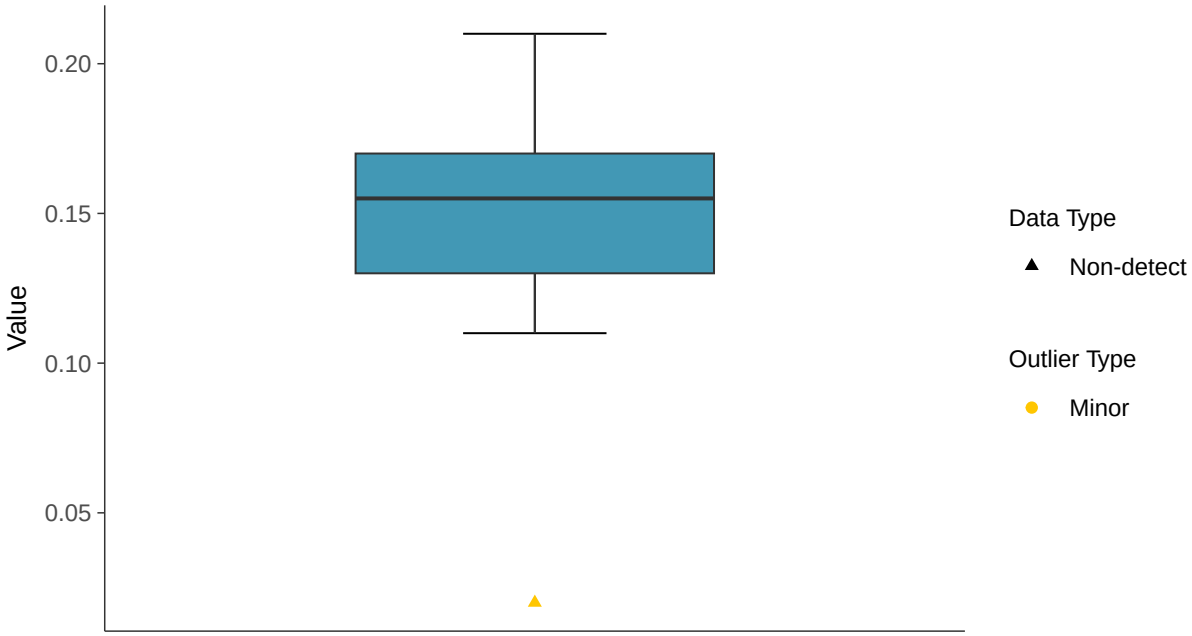
ID: 01_02_112





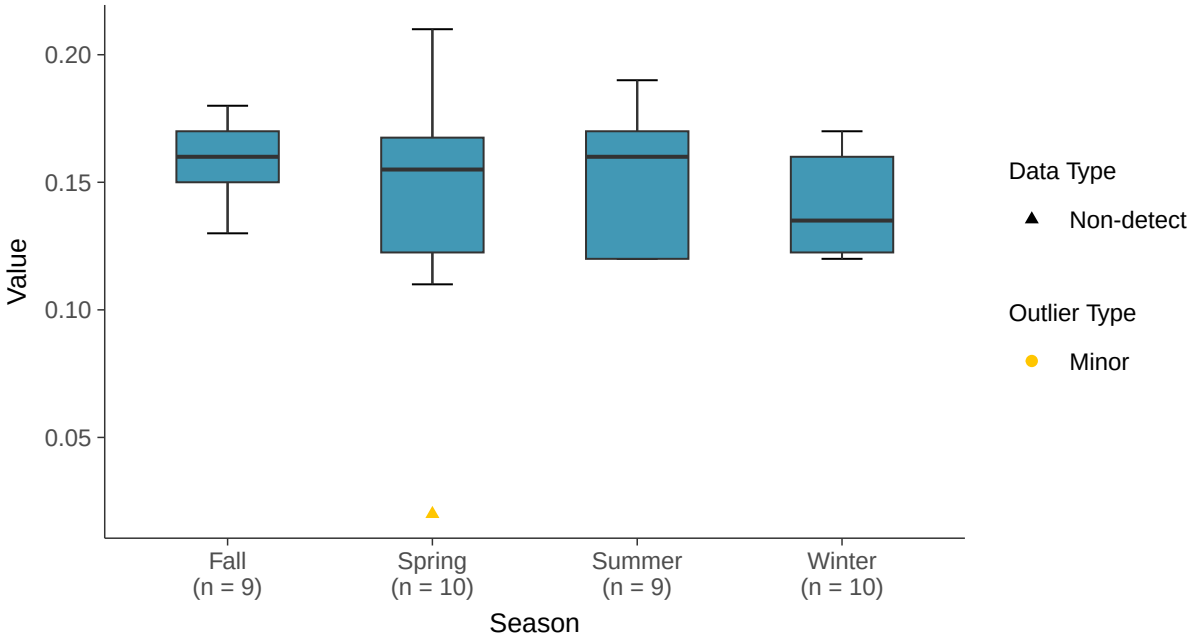
Boxplot

Fluoride, MW-1 (mg/L)



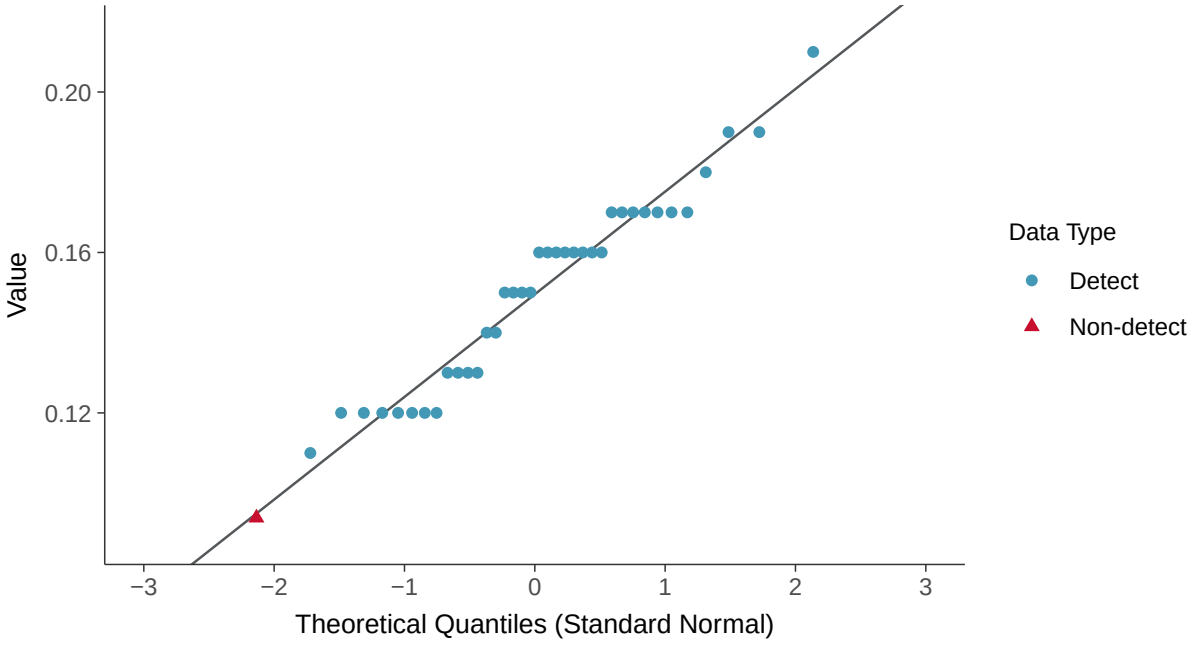
Boxplot by Season

Fluoride, MW-1 (mg/L)



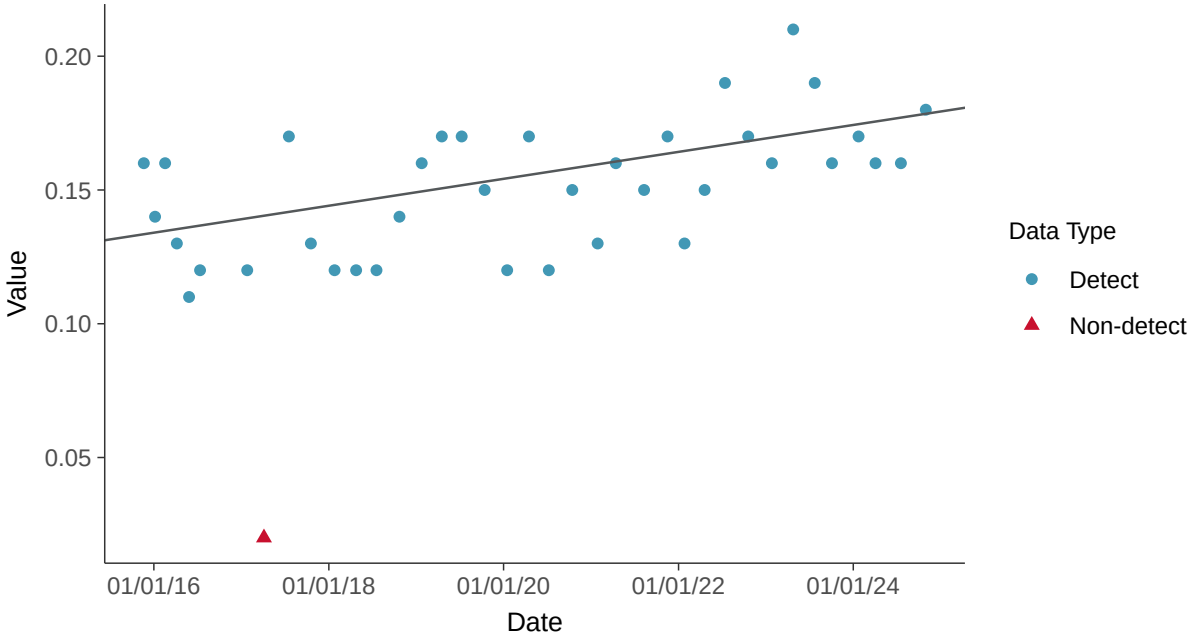
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-1 (mg/L)



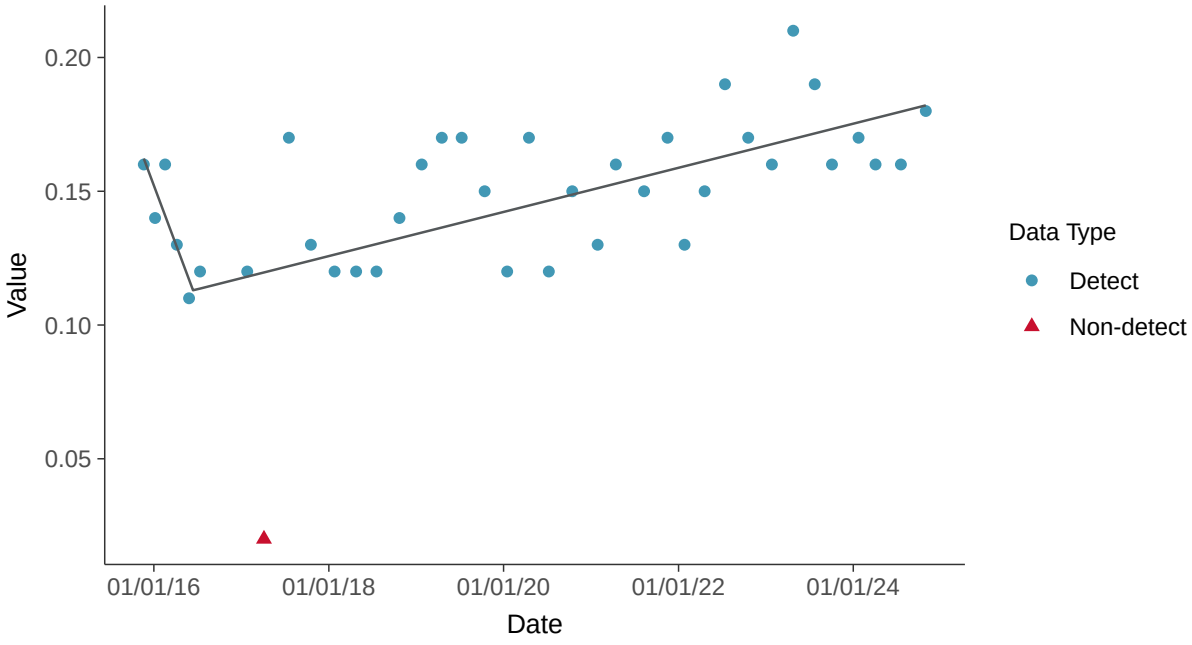
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-1 (mg/L)



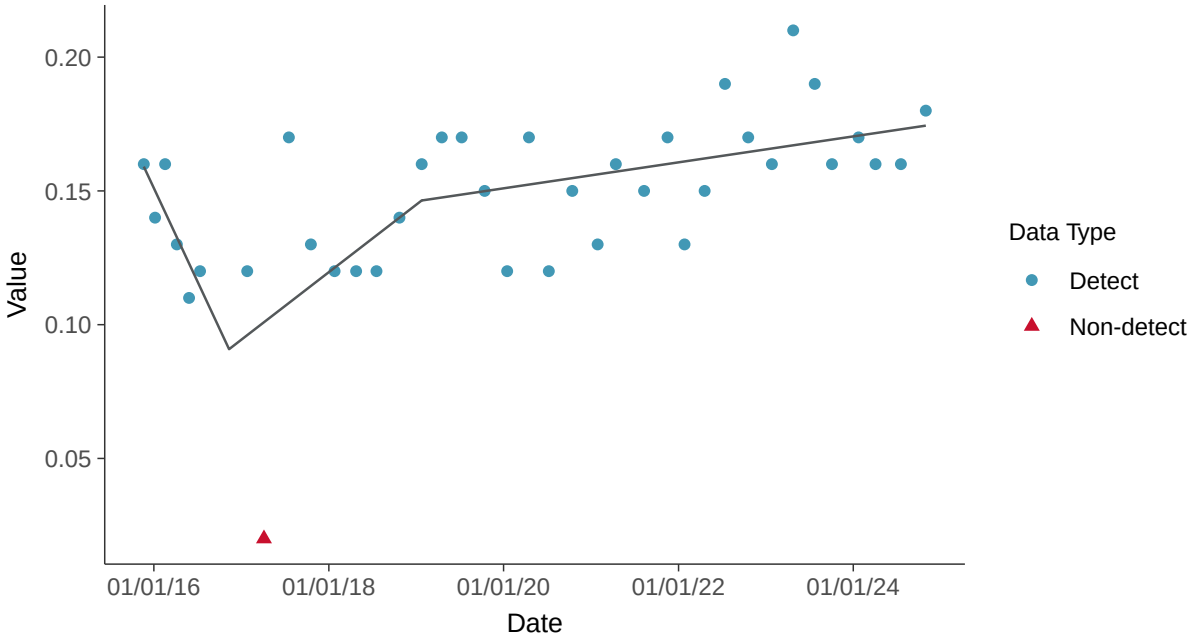
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-1 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-1 (mg/L)

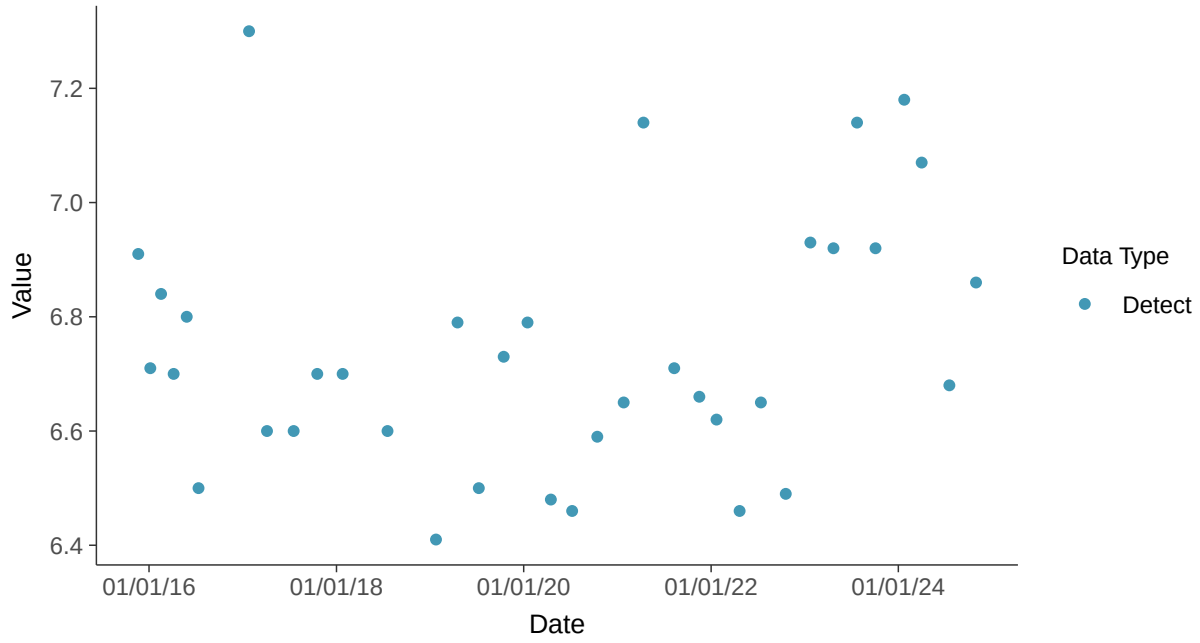


App. III: pH (Field), MW-1

ID: 01_02_118

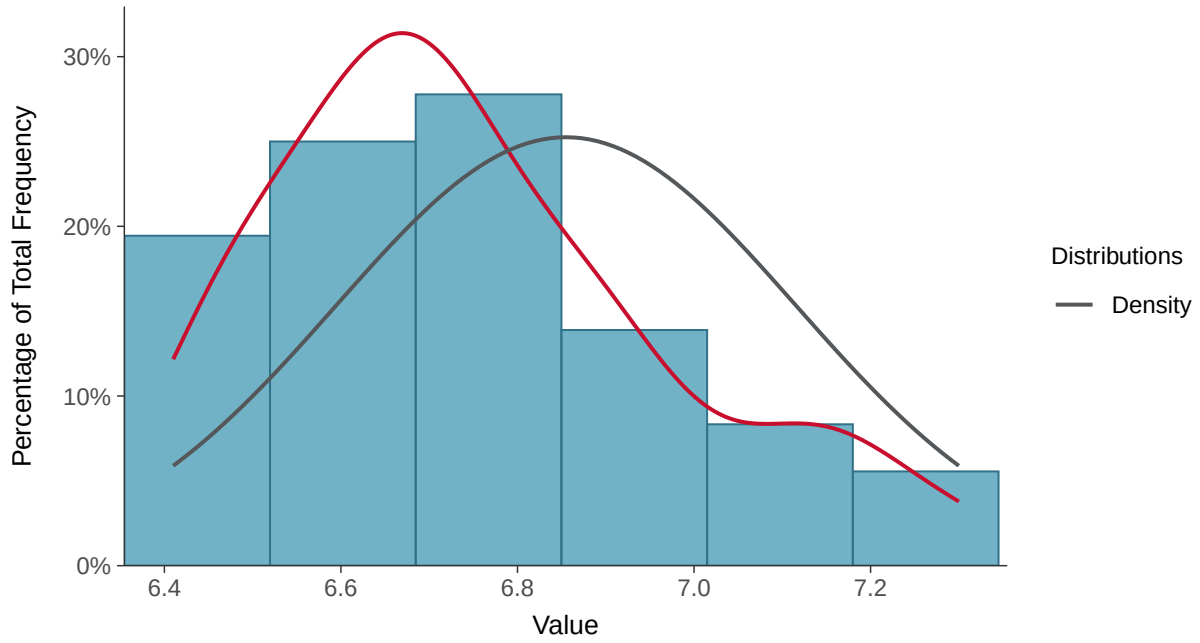
Scatter Plot

pH (Field), MW-1 (S.U.)



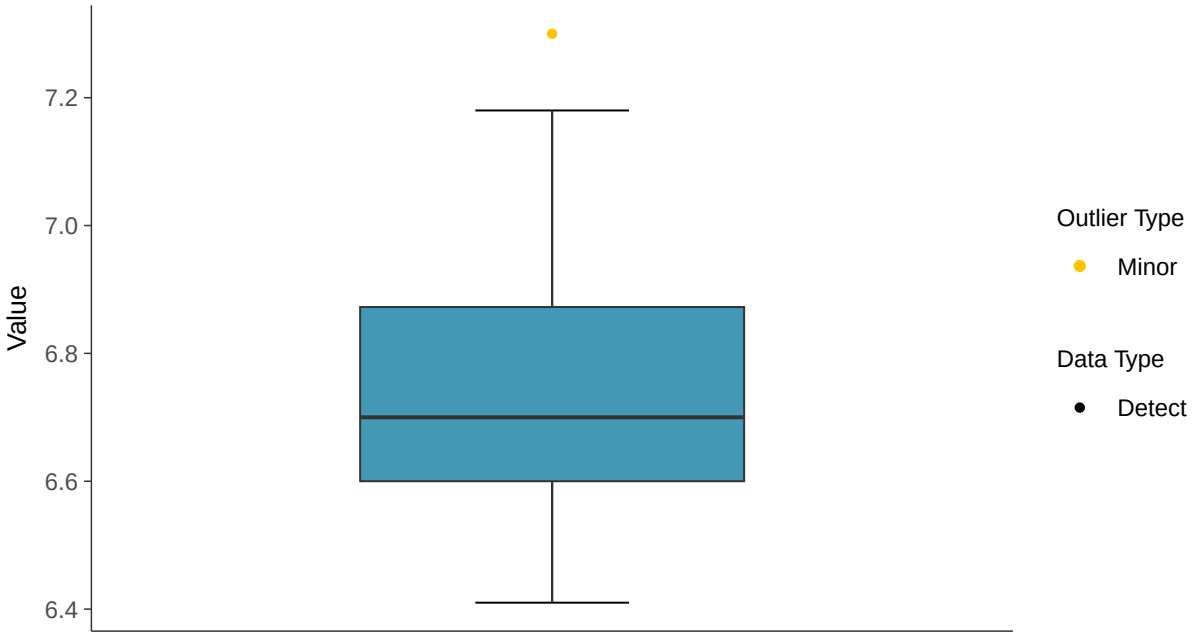
Histogram

pH (Field), MW-1 (S.U.)



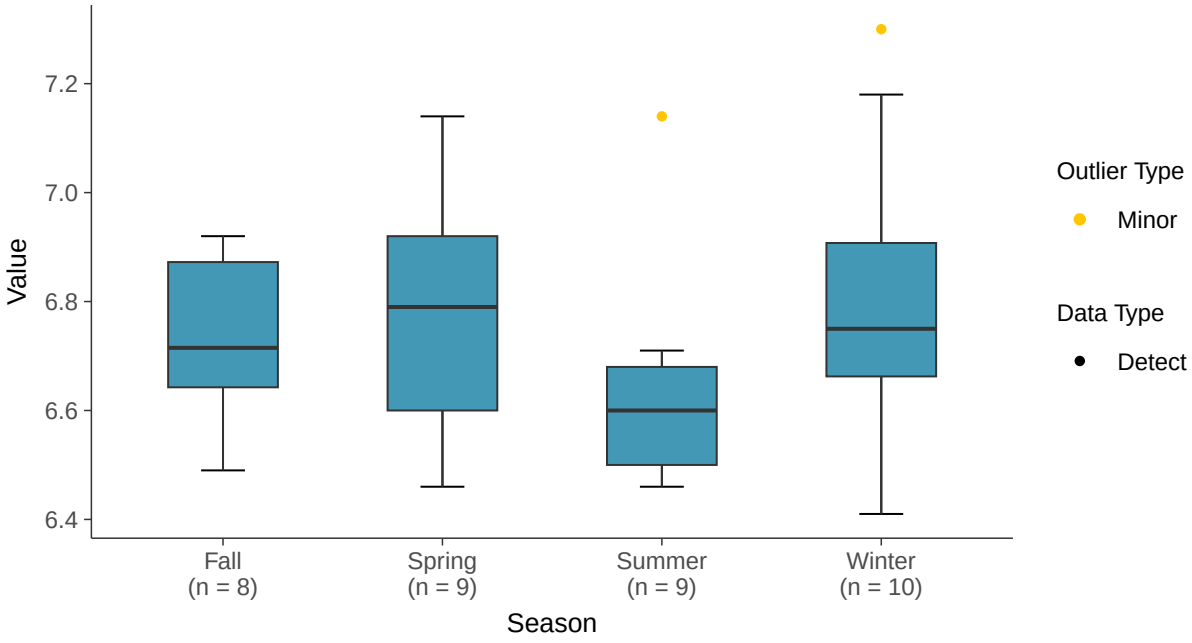
Boxplot

pH (Field), MW-1 (S.U.)



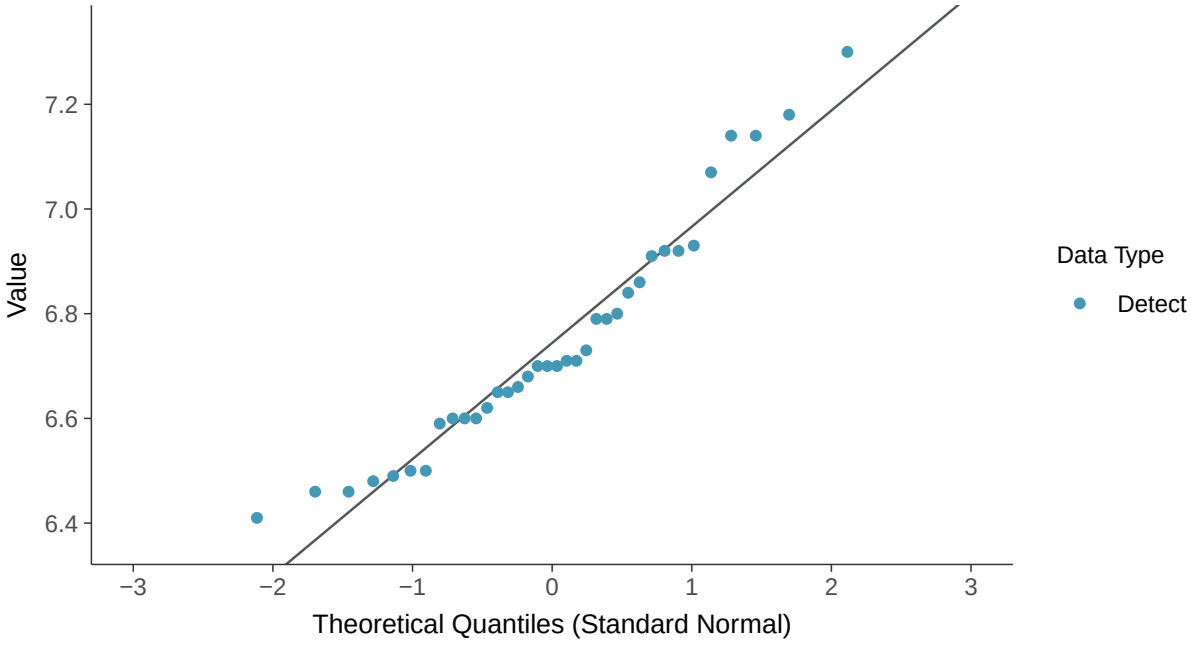
Boxplot by Season

pH (Field), MW-1 (S.U.)



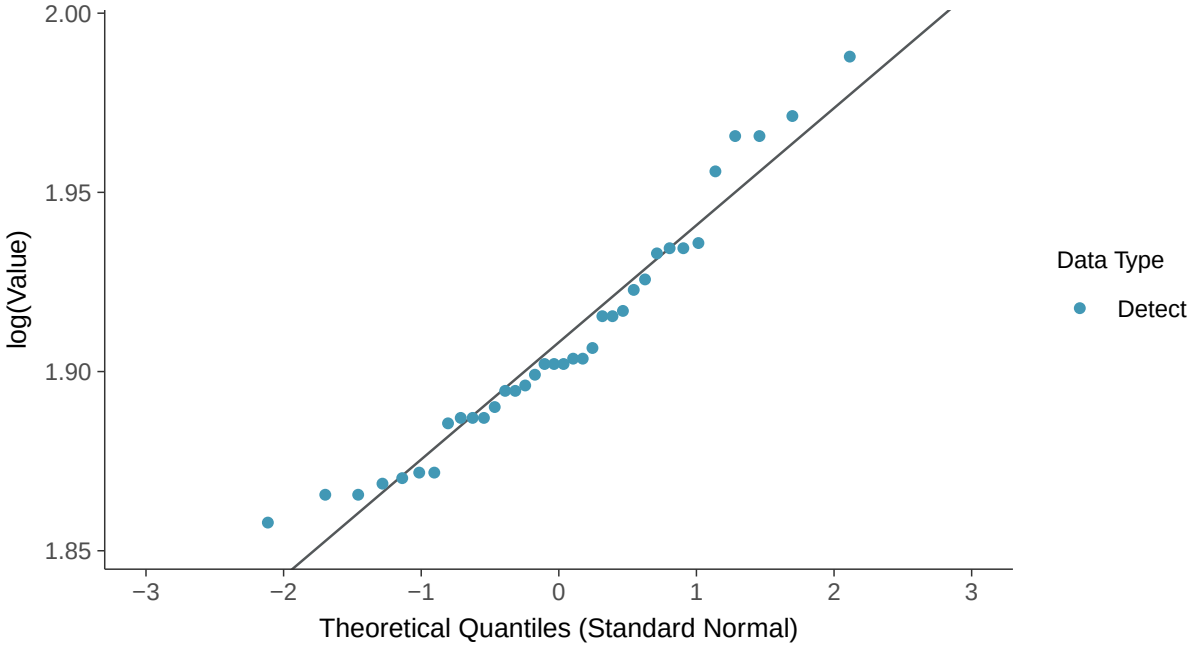
Normal Q-Q plot

pH (Field), MW-1 (S.U.)



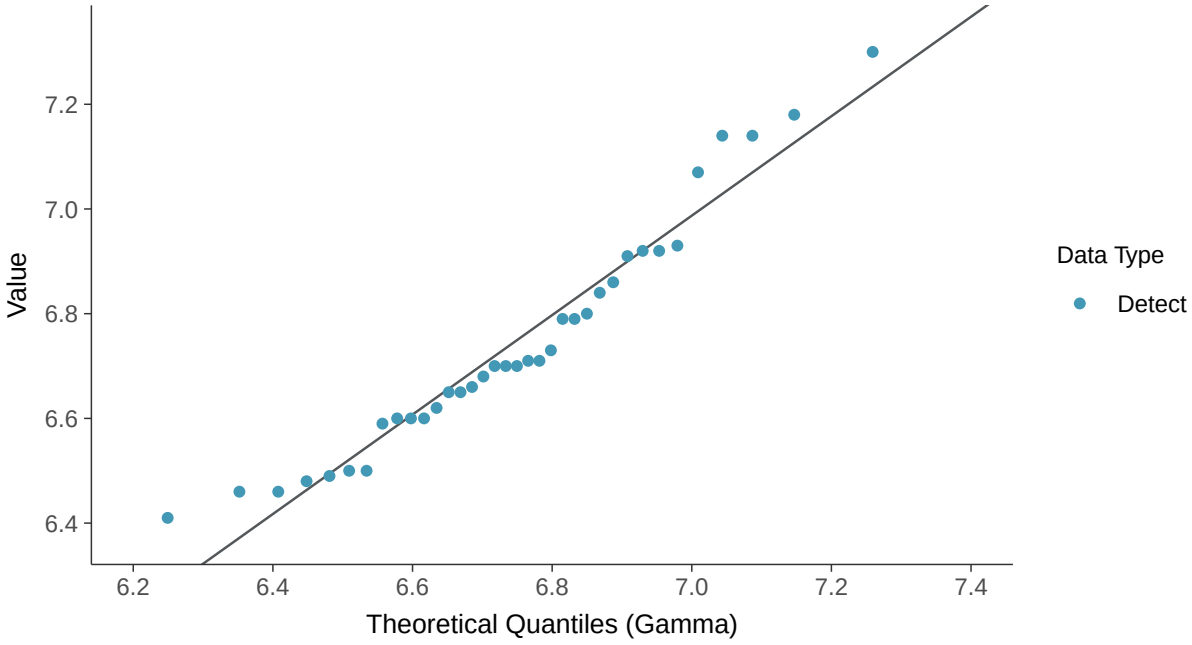
Lognormal Q-Q plot

pH (Field), MW-1 (S.U.)



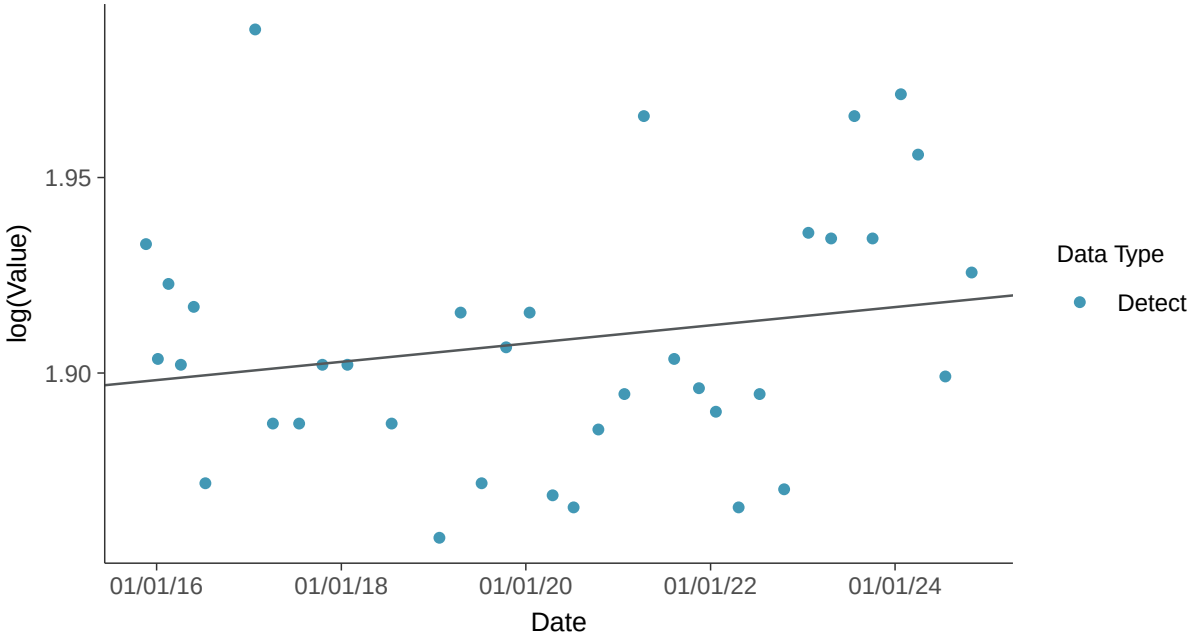
Gamma Q-Q plot

pH (Field), MW-1 (S.U.)



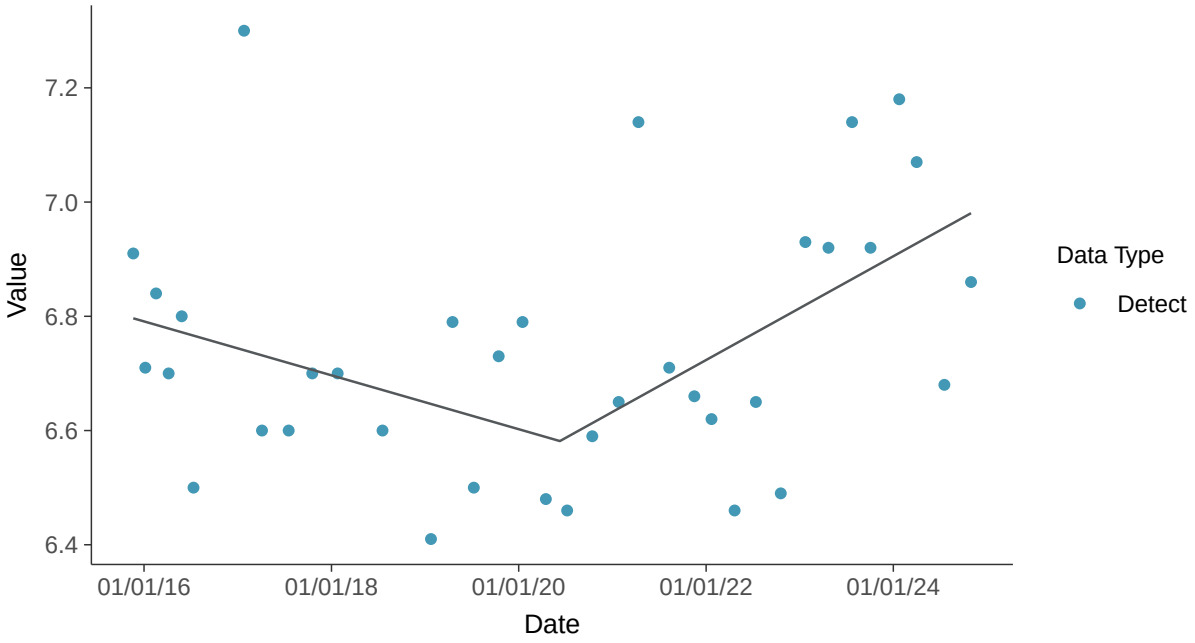
Trend Regression: Lognormal MLE

pH (Field), MW-1 (S.U.)



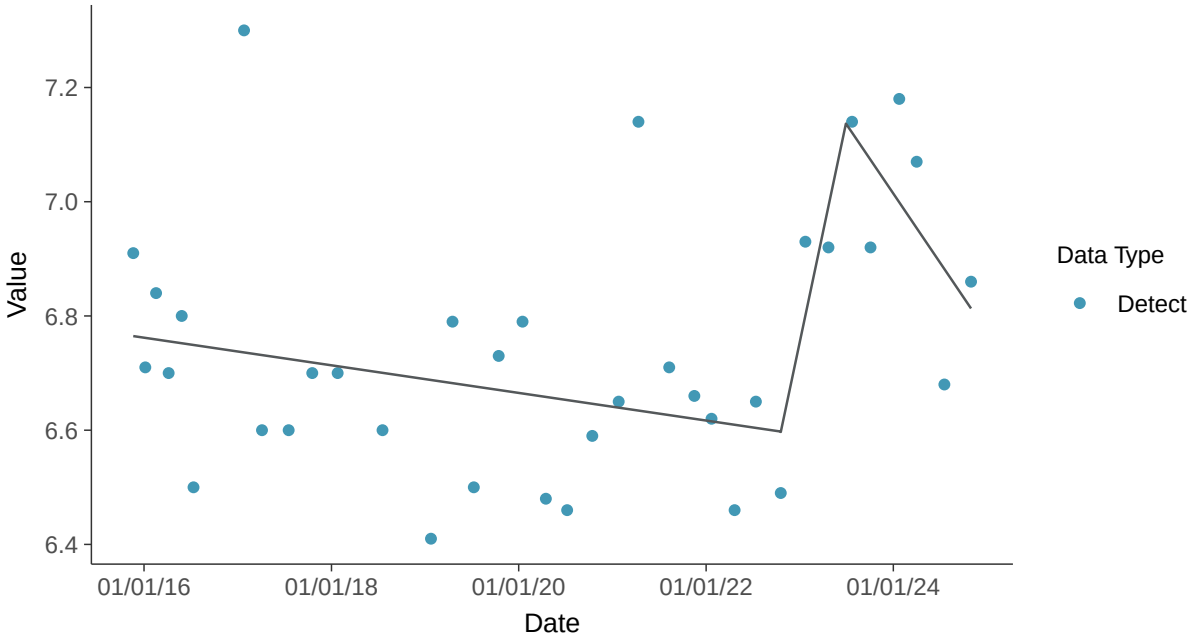
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-1 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-1 (S.U.)

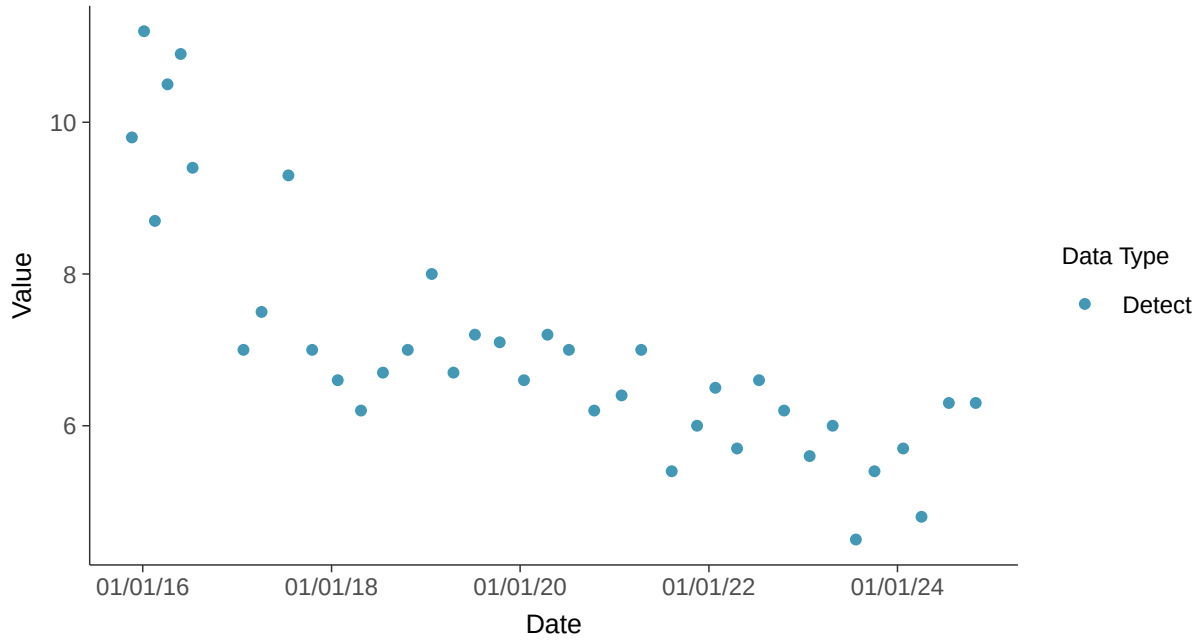


App. III: Sulfate, MW-1

ID: 01_02_123

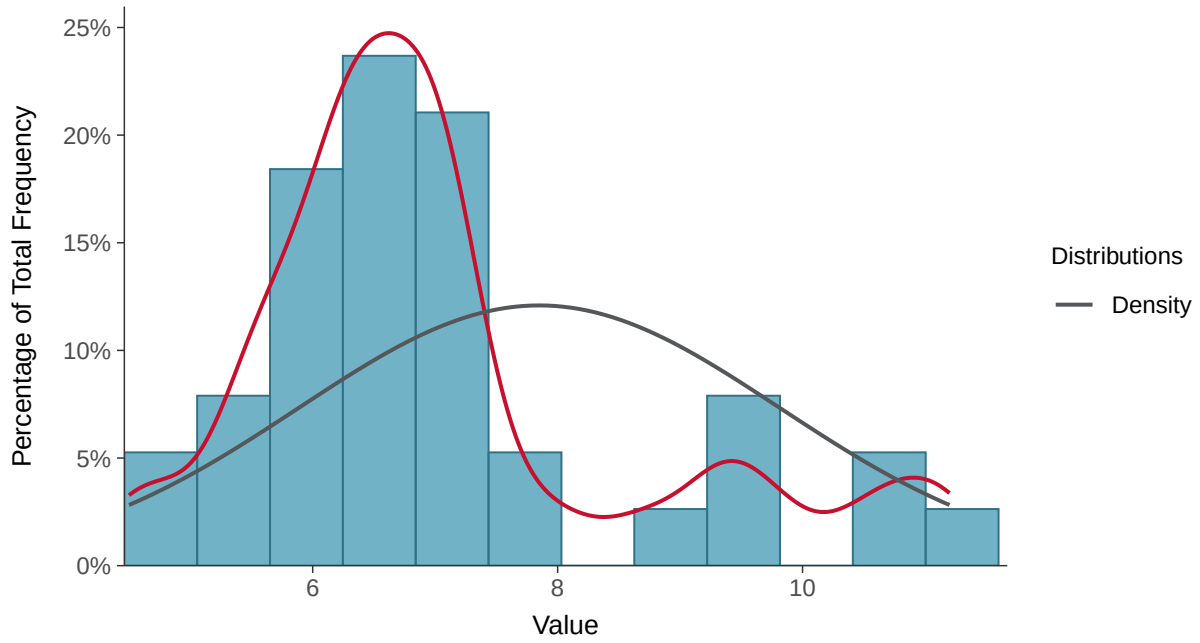
Scatter Plot

Sulfate, MW-1 (mg/L)



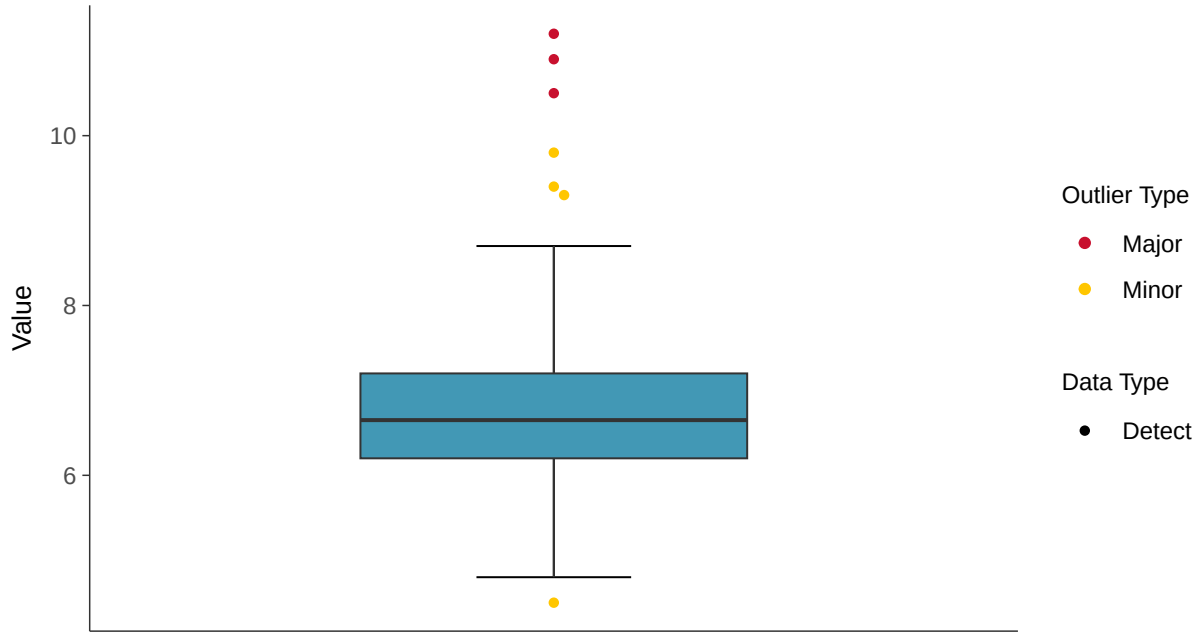
Histogram

Sulfate, MW-1 (mg/L)



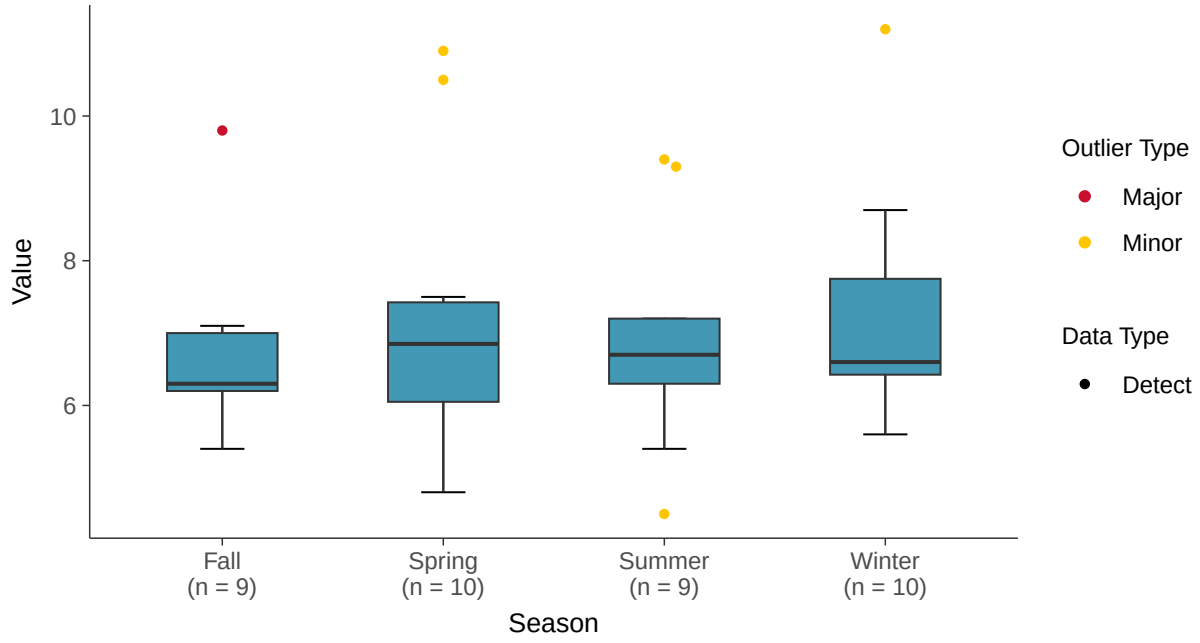
Boxplot

Sulfate, MW-1 (mg/L)



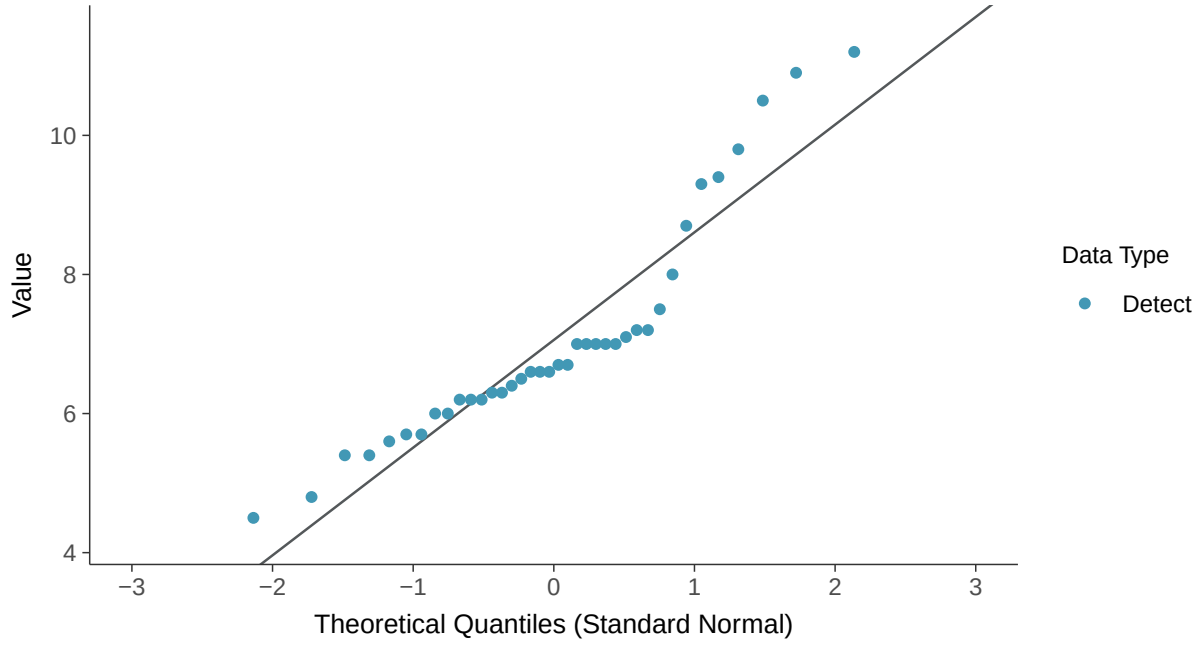
Boxplot by Season

Sulfate, MW-1 (mg/L)



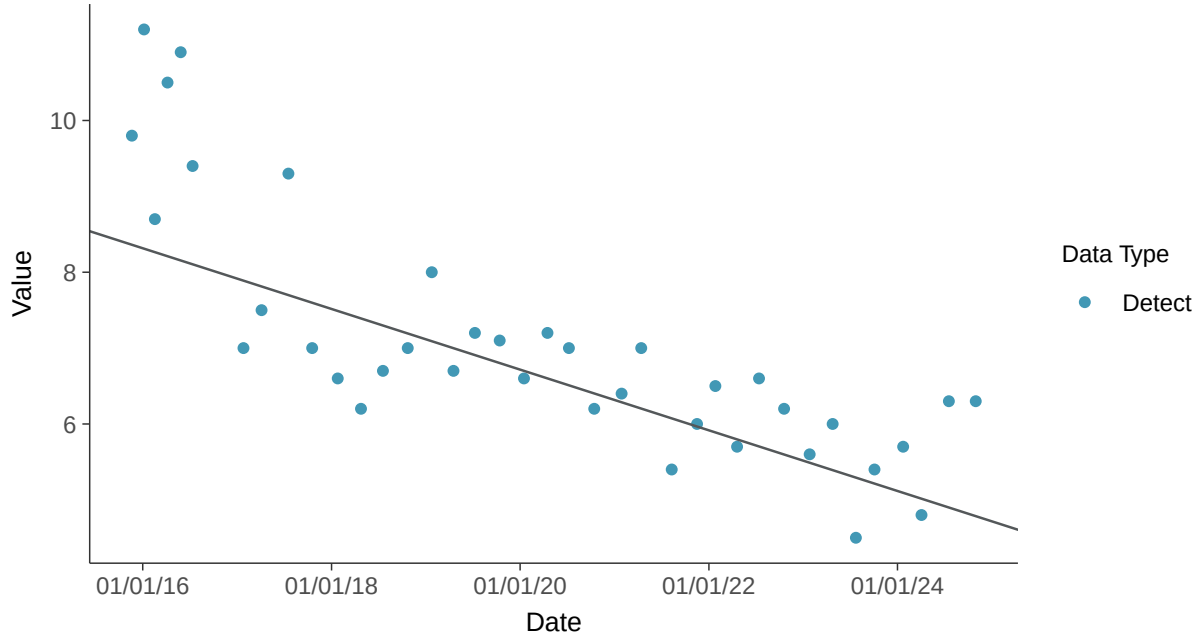
Normal Q-Q plot

Sulfate, MW-1 (mg/L)



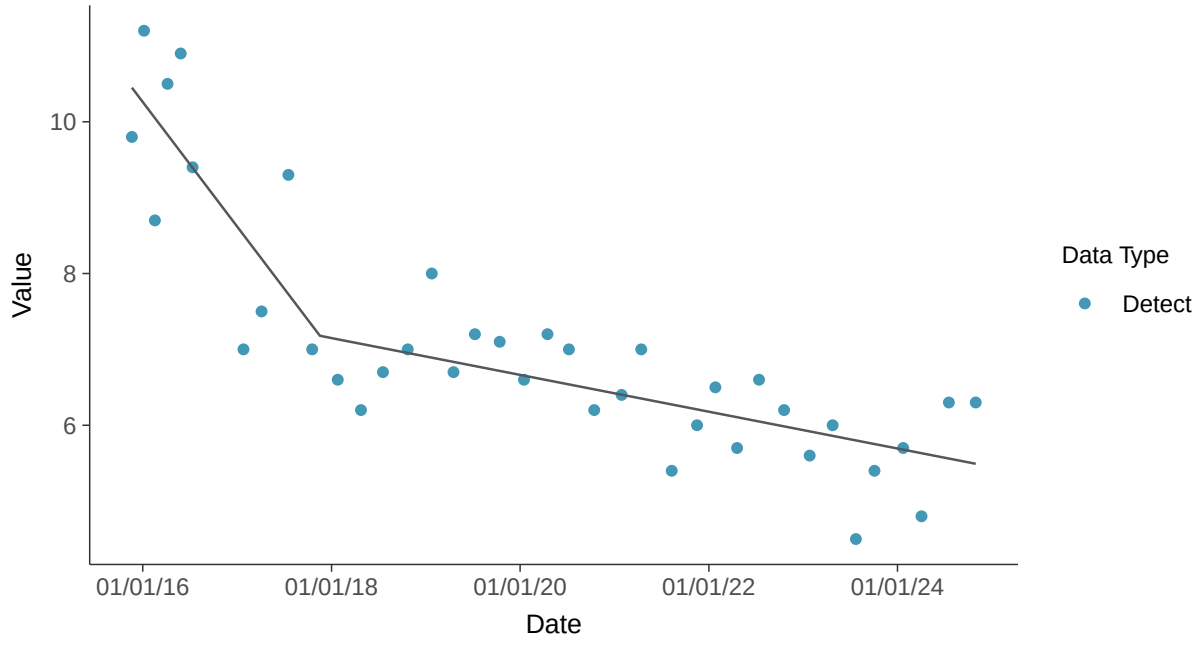
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-1 (mg/L)



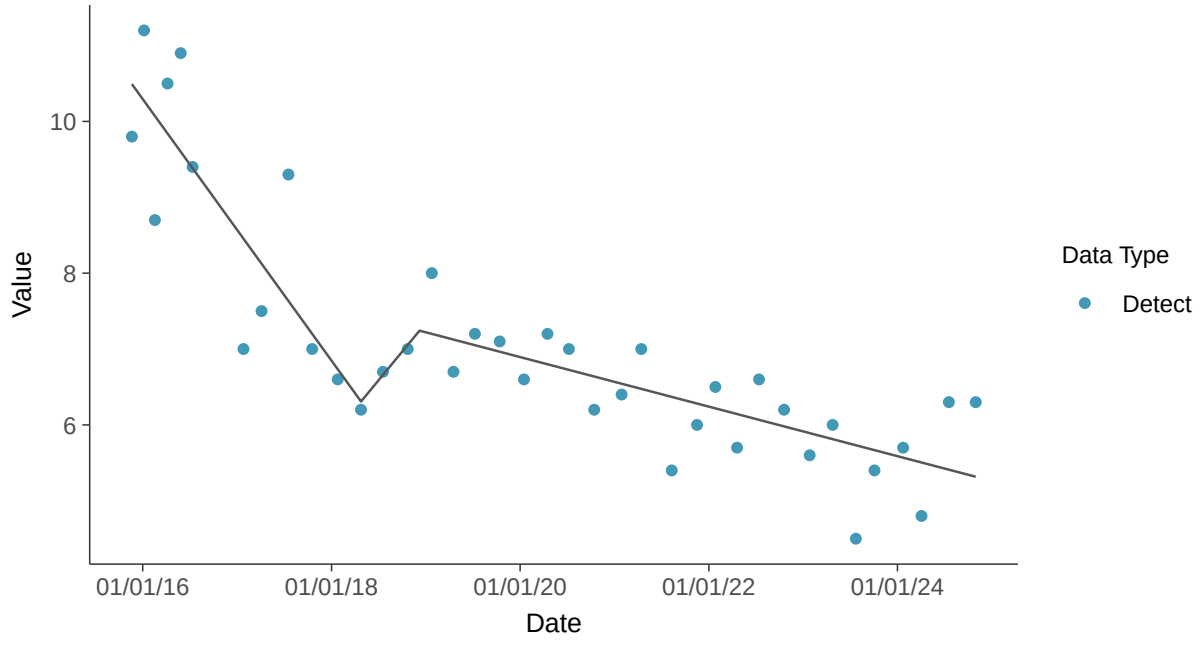
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-1 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-1 (mg/L)

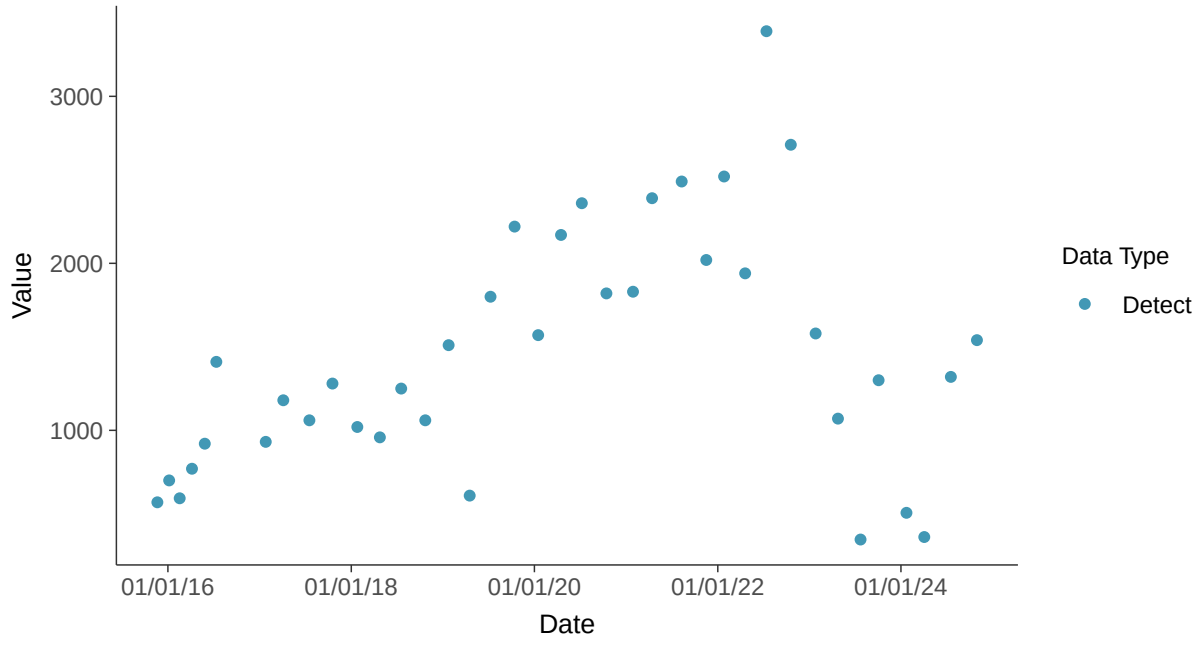


App. III: Total Dissolved Solids, MW-1

ID: 01_02_125

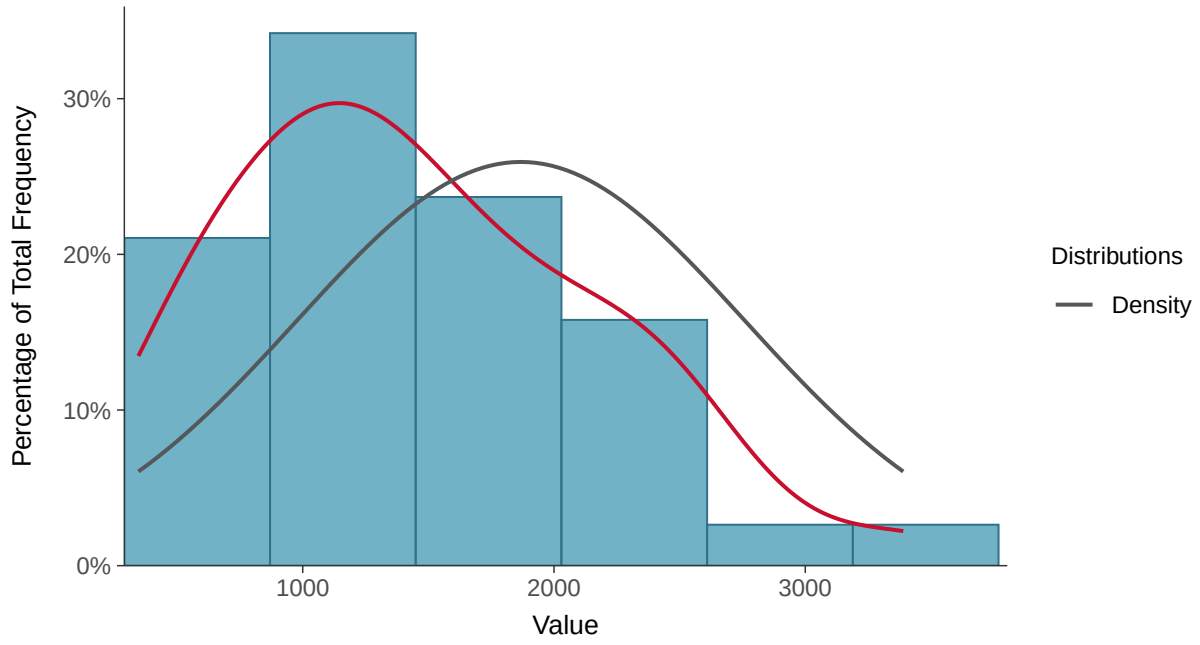
Scatter Plot

Total Dissolved Solids, MW-1 (mg/L)



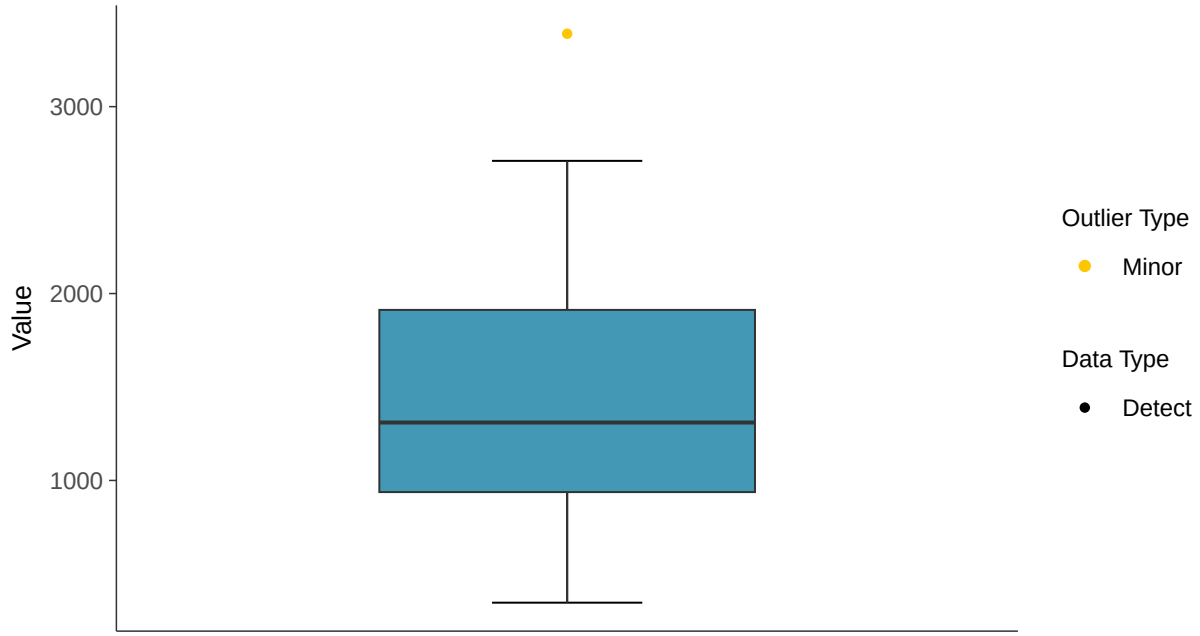
Histogram

Total Dissolved Solids, MW-1 (mg/L)



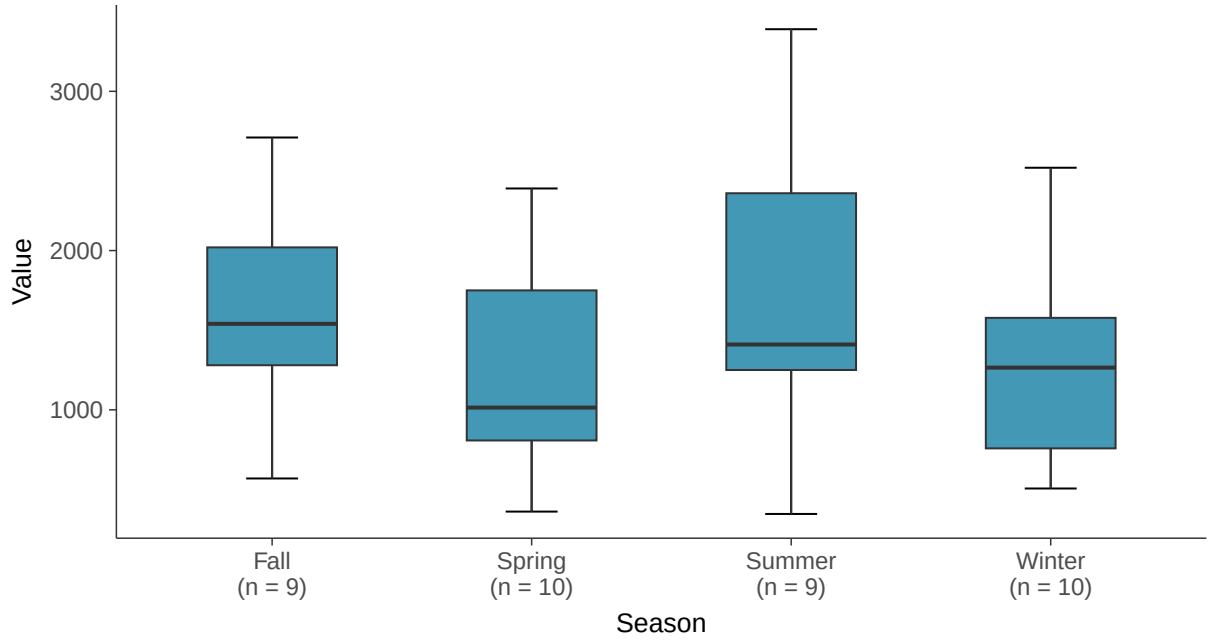
Boxplot

Total Dissolved Solids, MW-1 (mg/L)



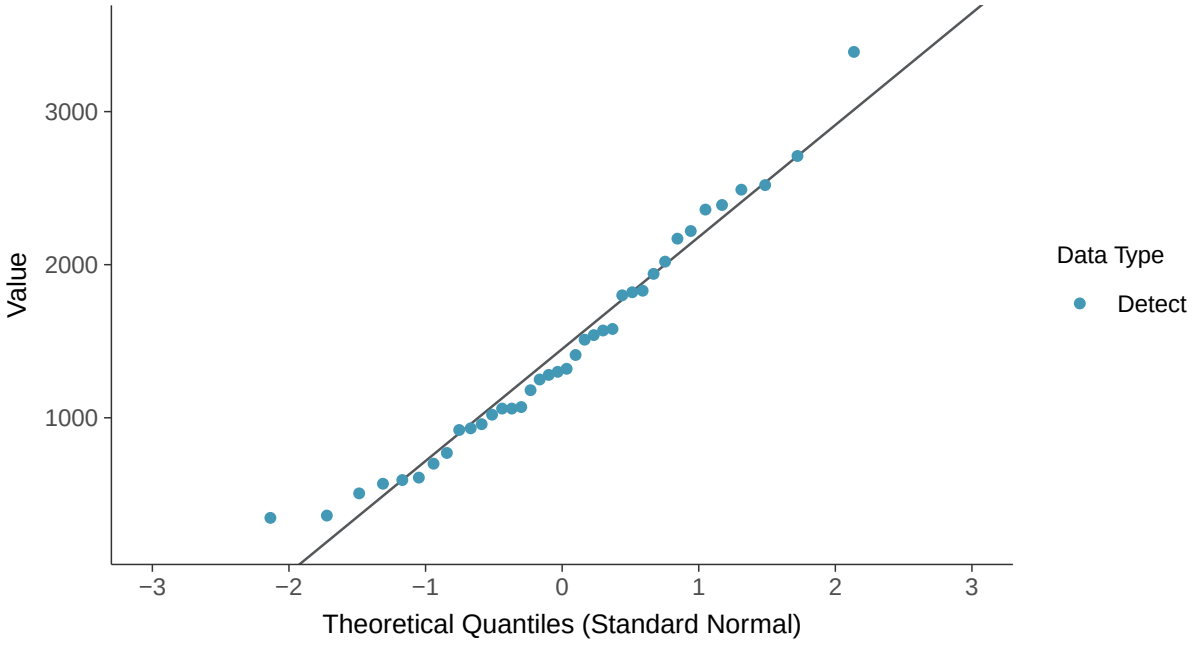
Boxplot by Season

Total Dissolved Solids, MW-1 (mg/L)



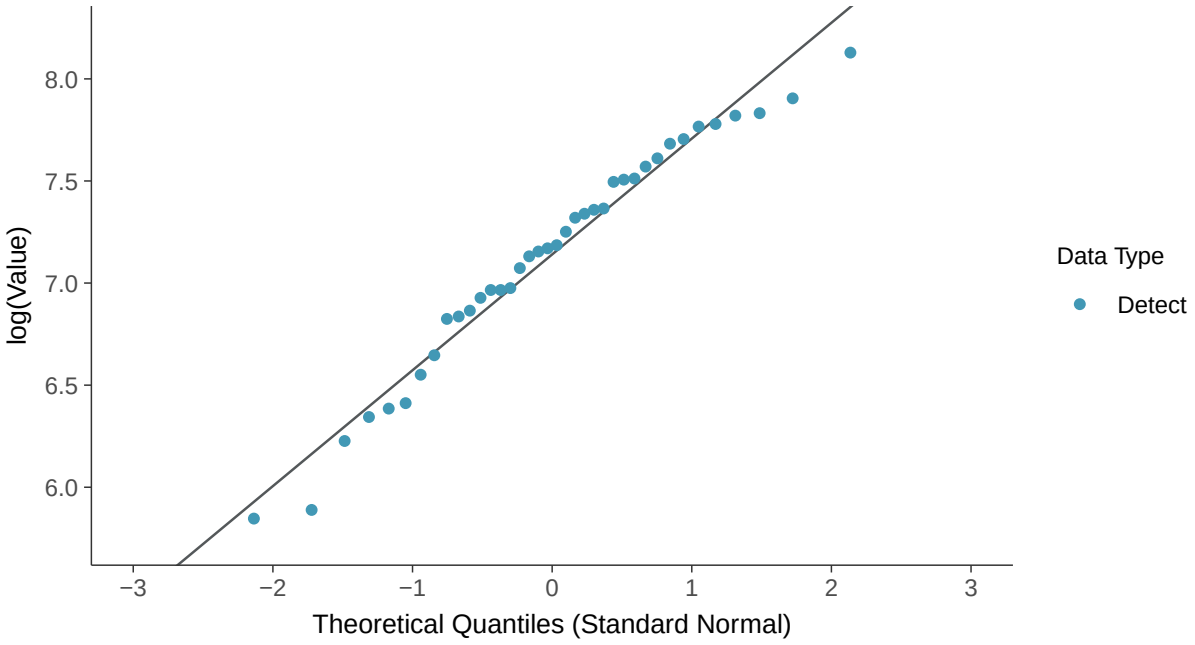
Normal Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



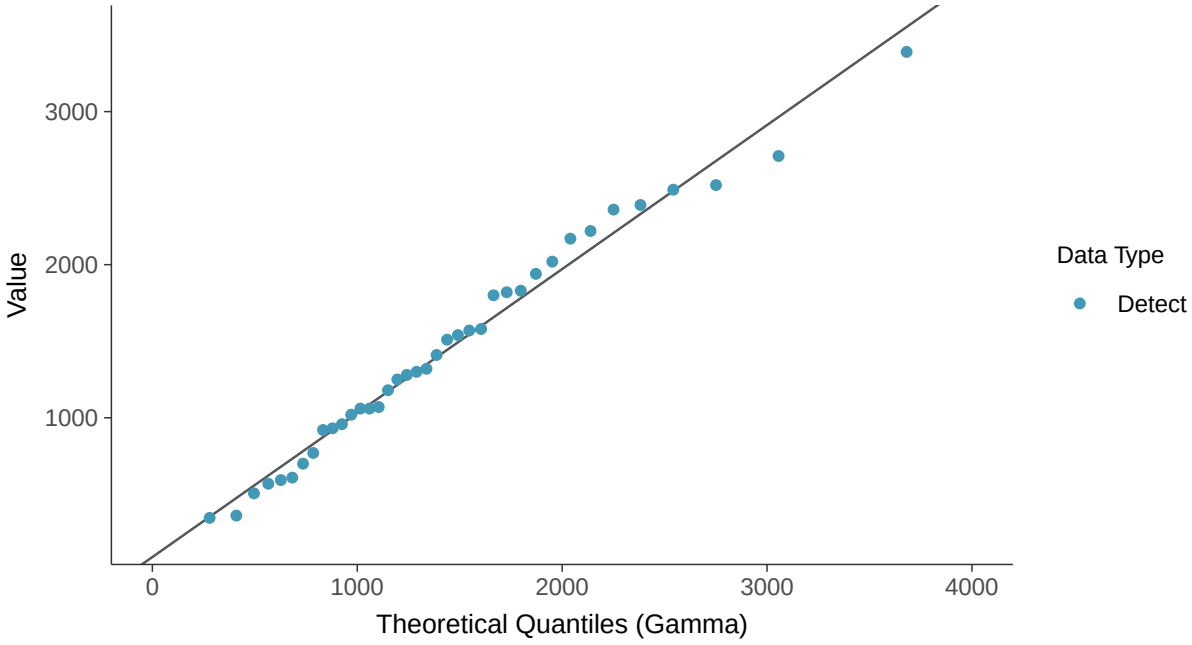
Lognormal Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



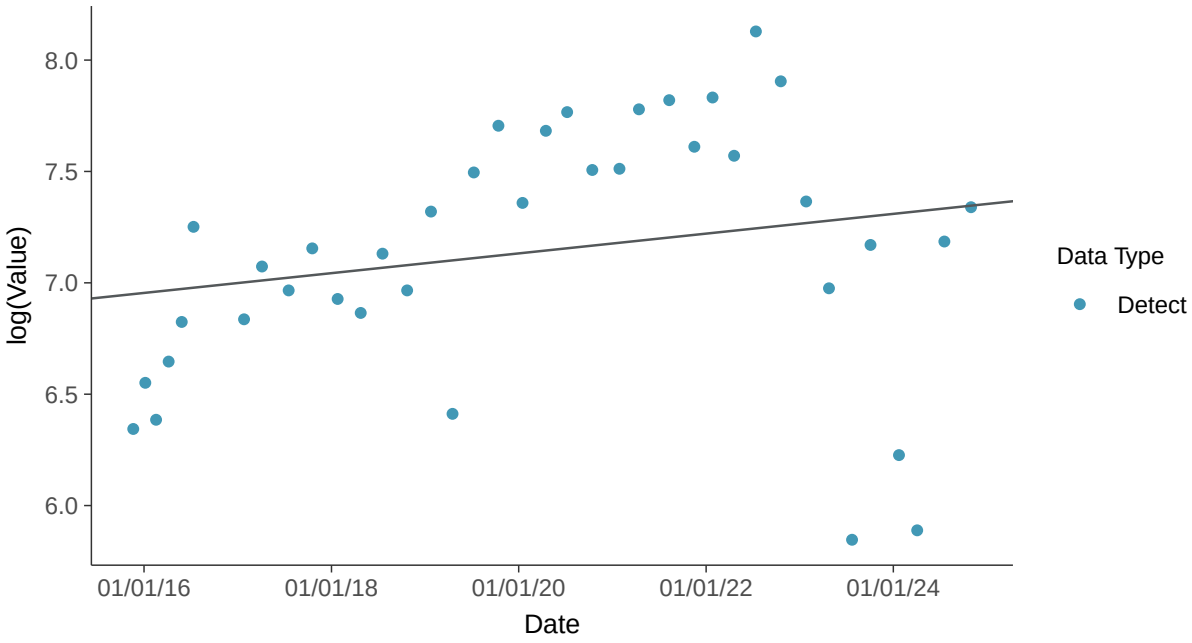
Gamma Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



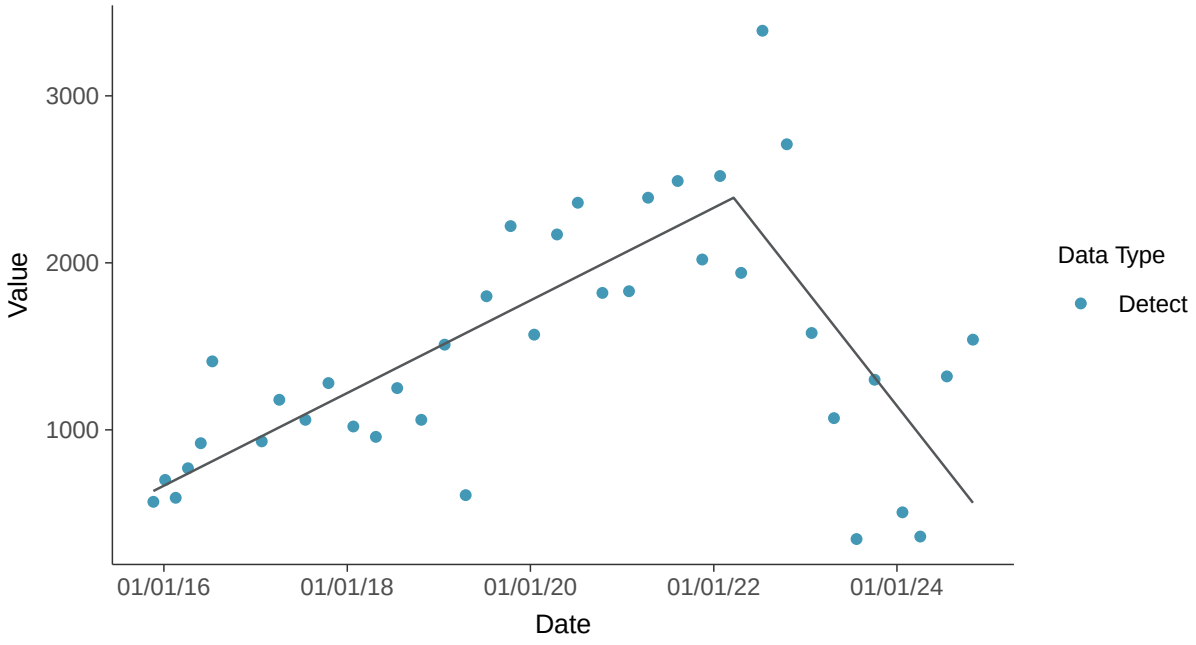
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-1 (mg/L)



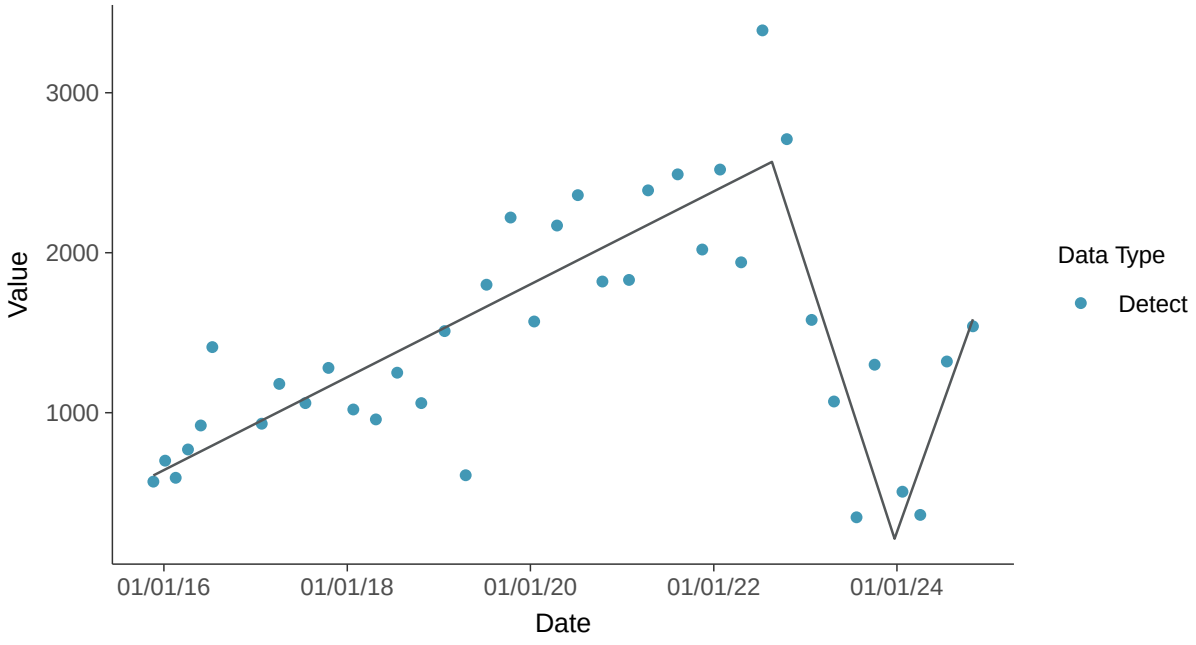
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-1 (mg/L)



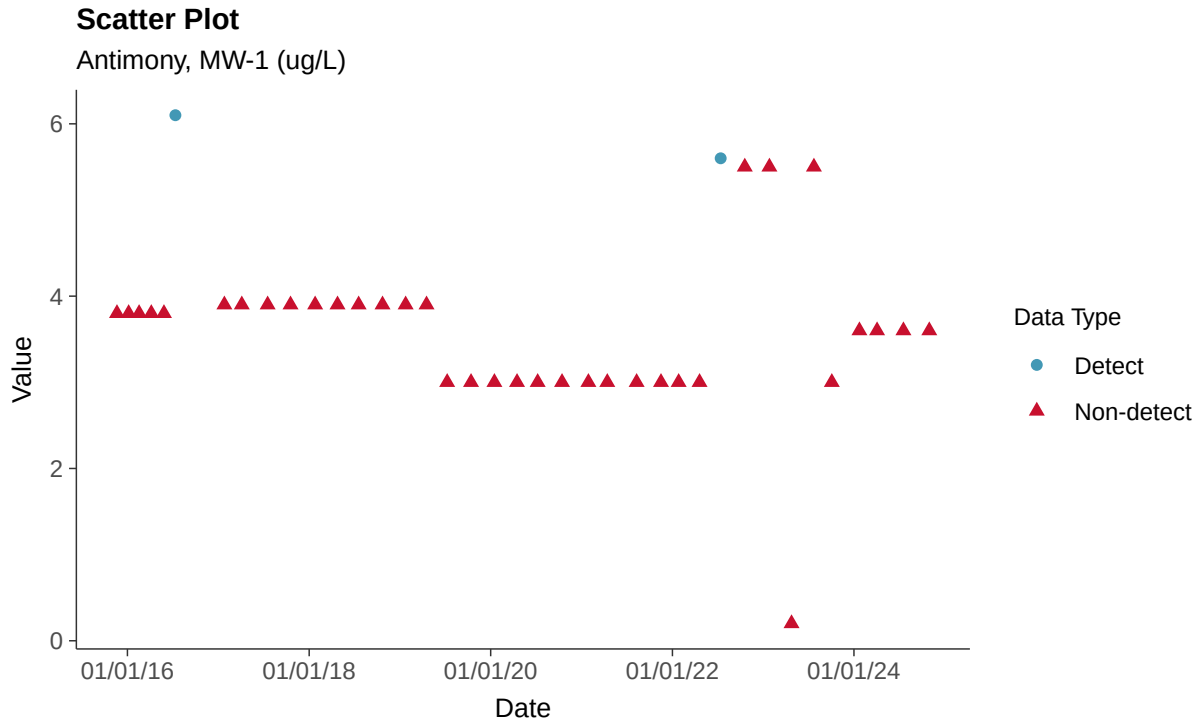
Trend Regression: Piecewise Linear-Linear-Linear

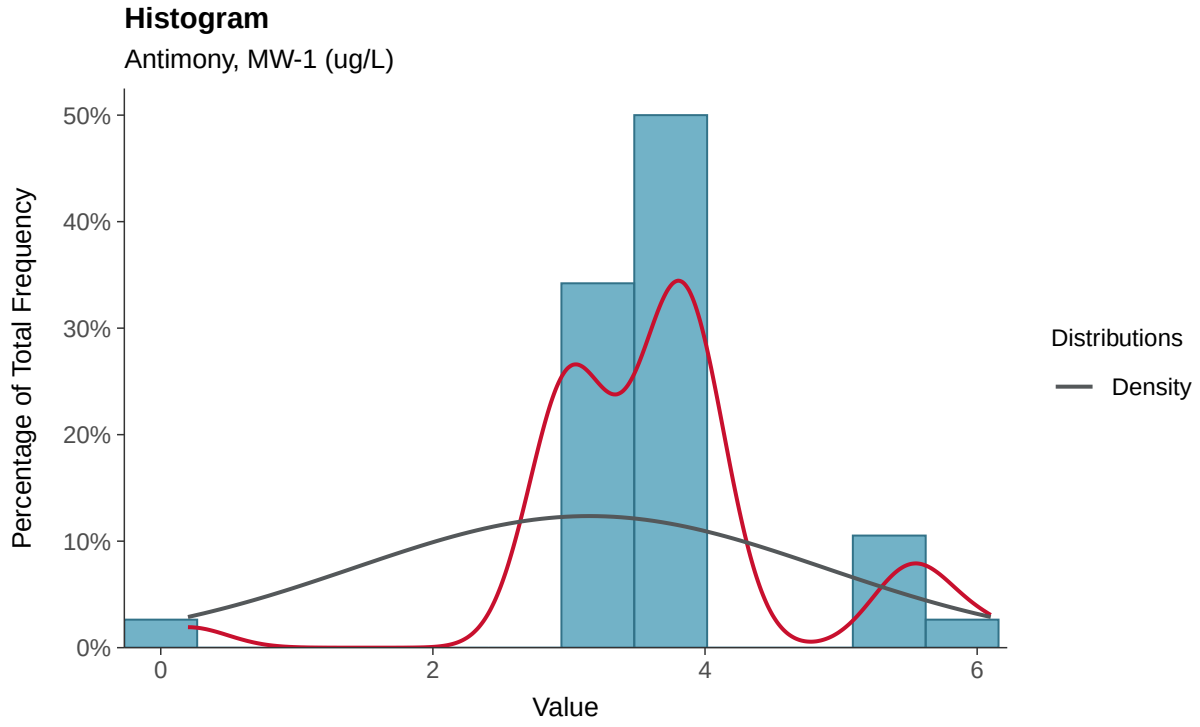
Total Dissolved Solids, MW-1 (mg/L)



App. IV: Antimony, MW-1

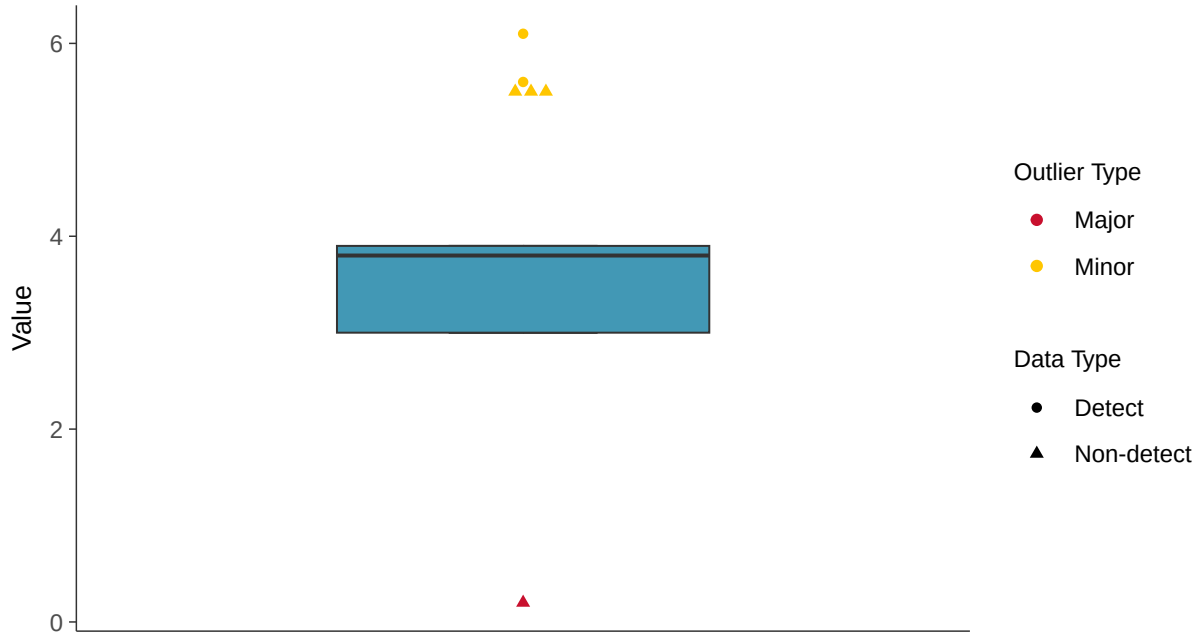
ID: 01_03_101





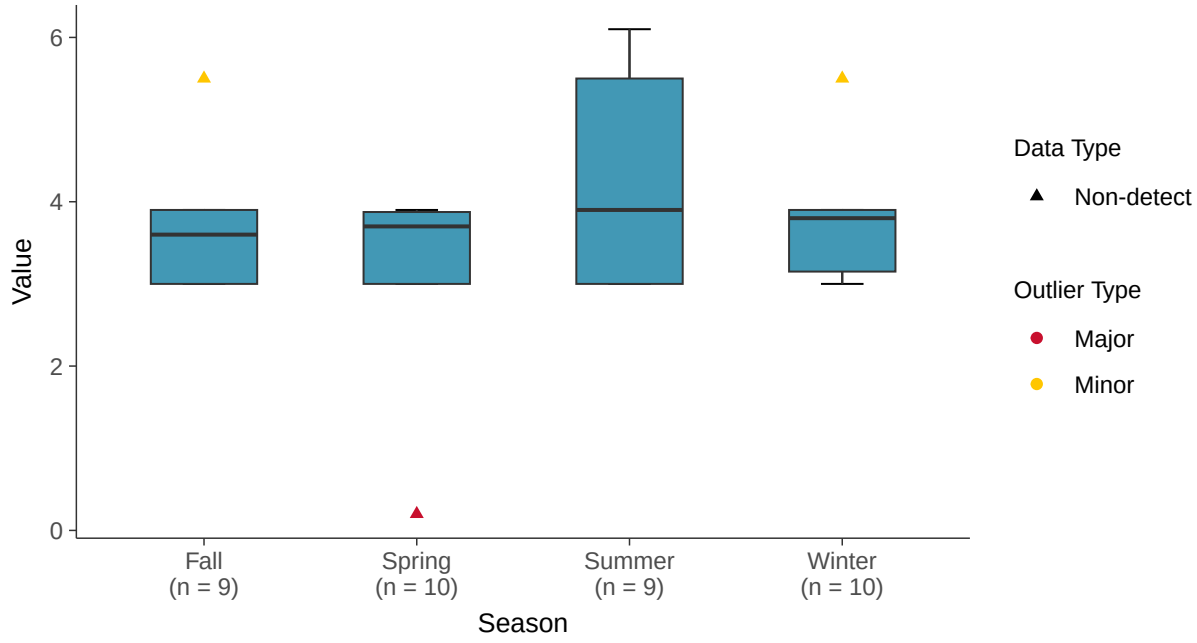
Boxplot

Antimony, MW-1 (ug/L)



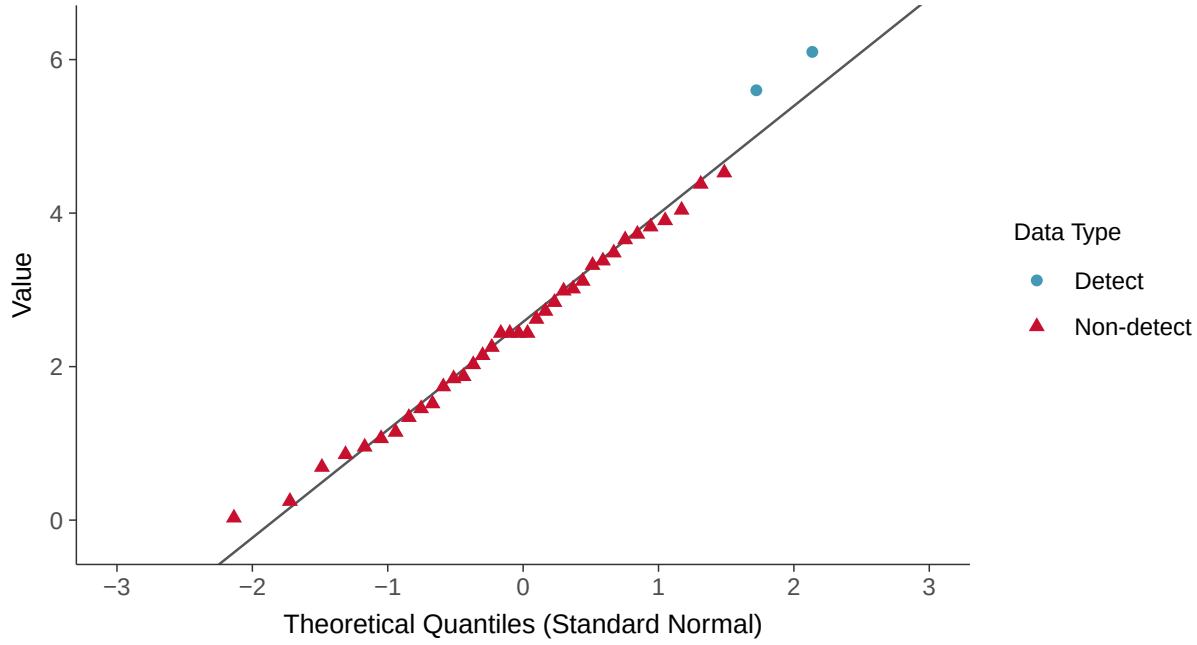
Boxplot by Season

Antimony, MW-1 (ug/L)



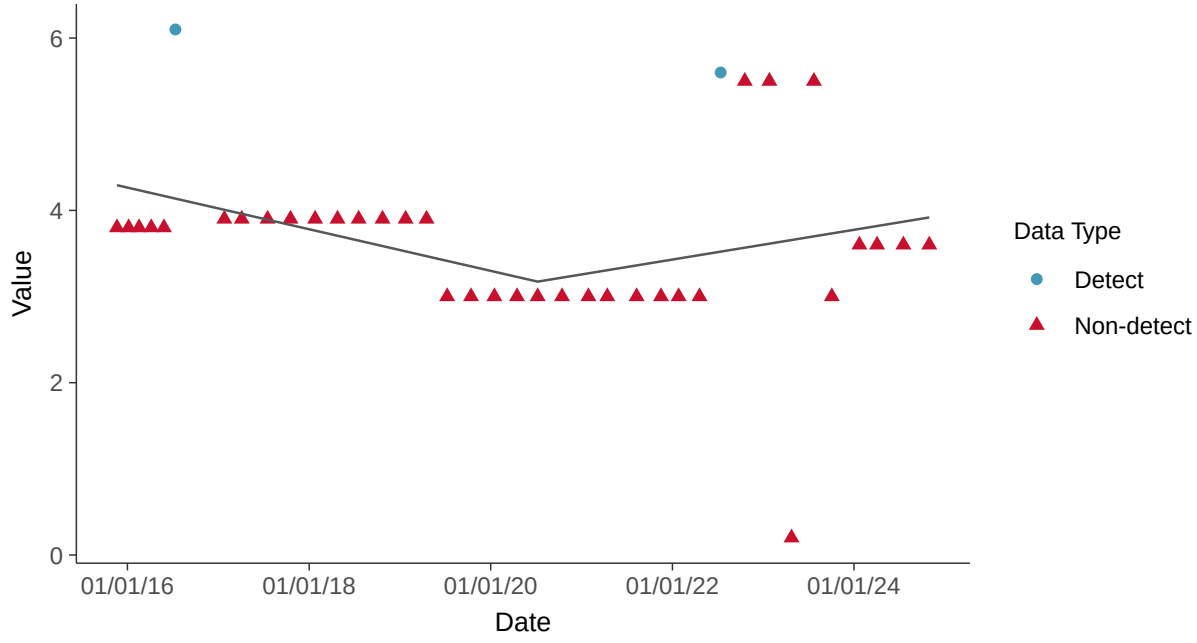
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-1 (ug/L)



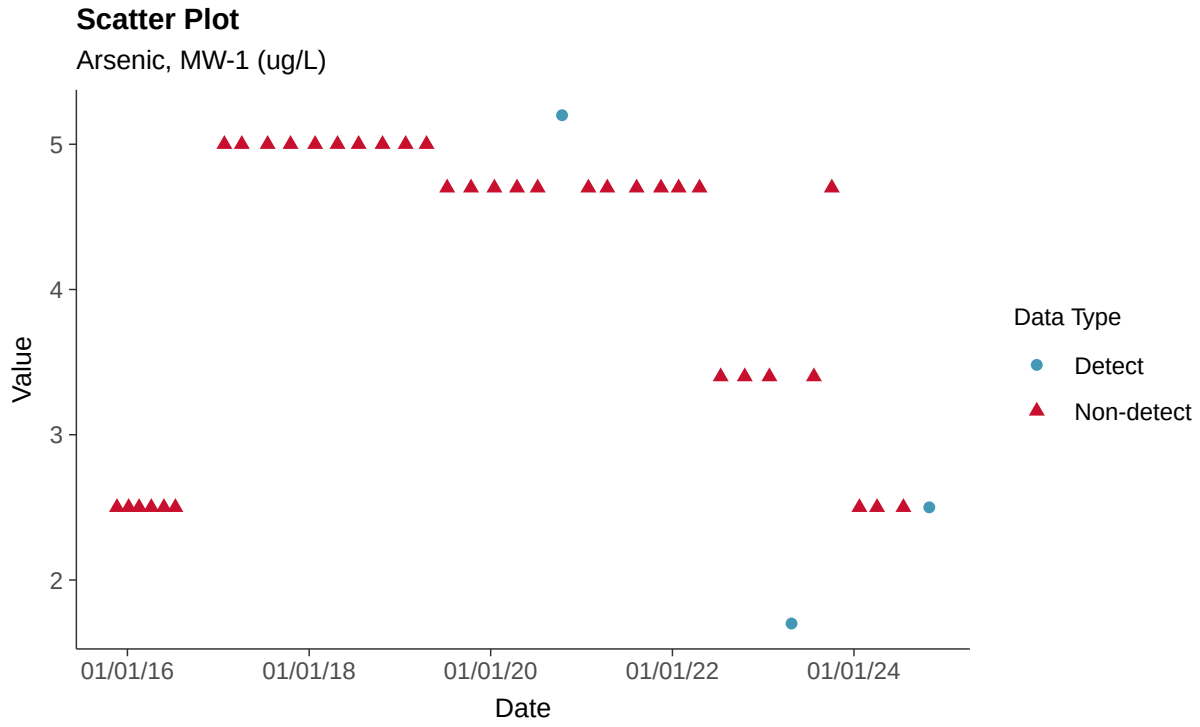
Trend Regression: Piecewise Linear-Linear

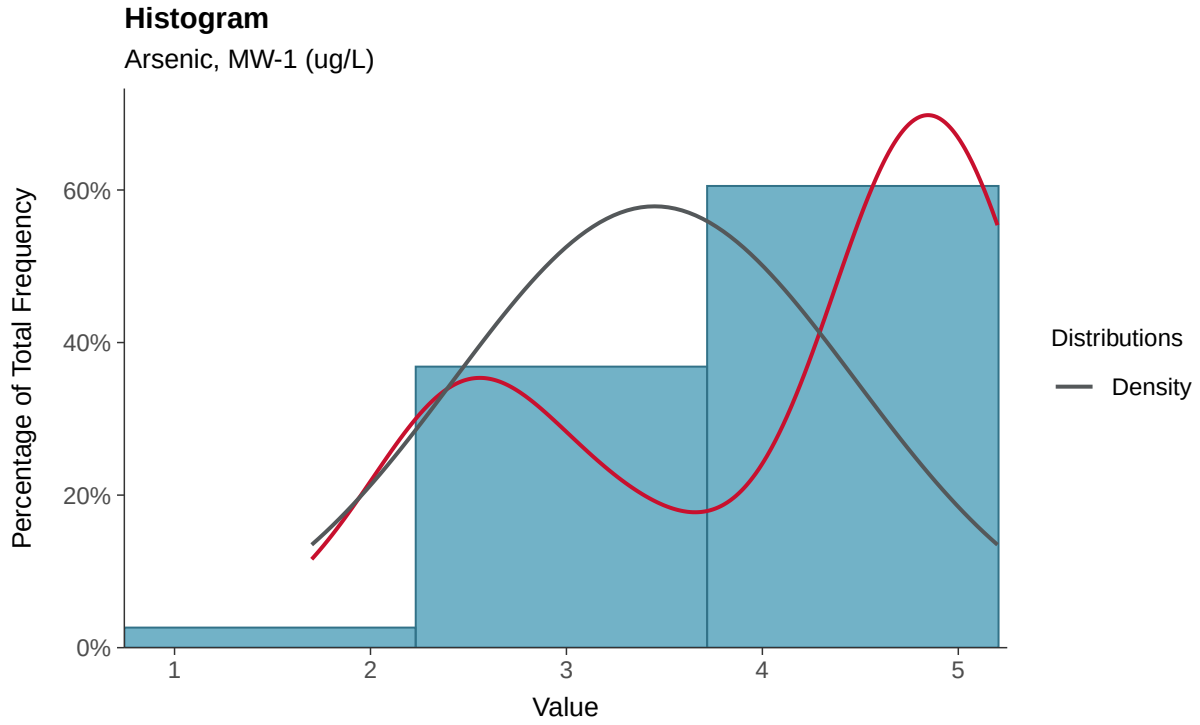
Antimony, MW-1 (ug/L)



App. IV: Arsenic, MW-1

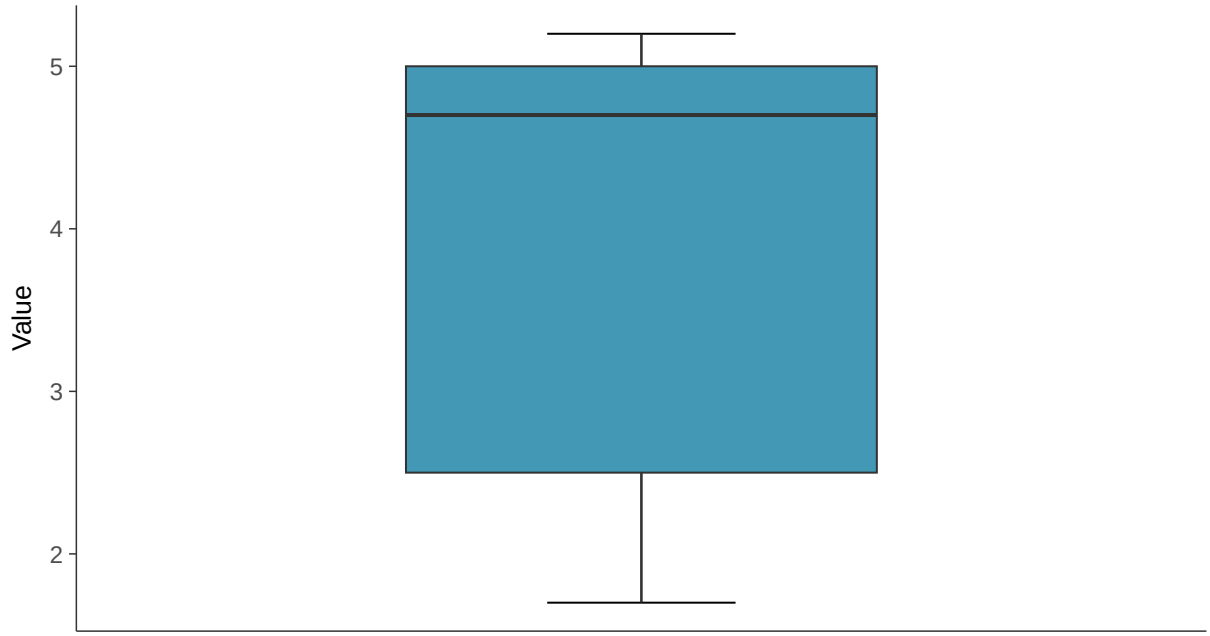
ID: 01_03_102





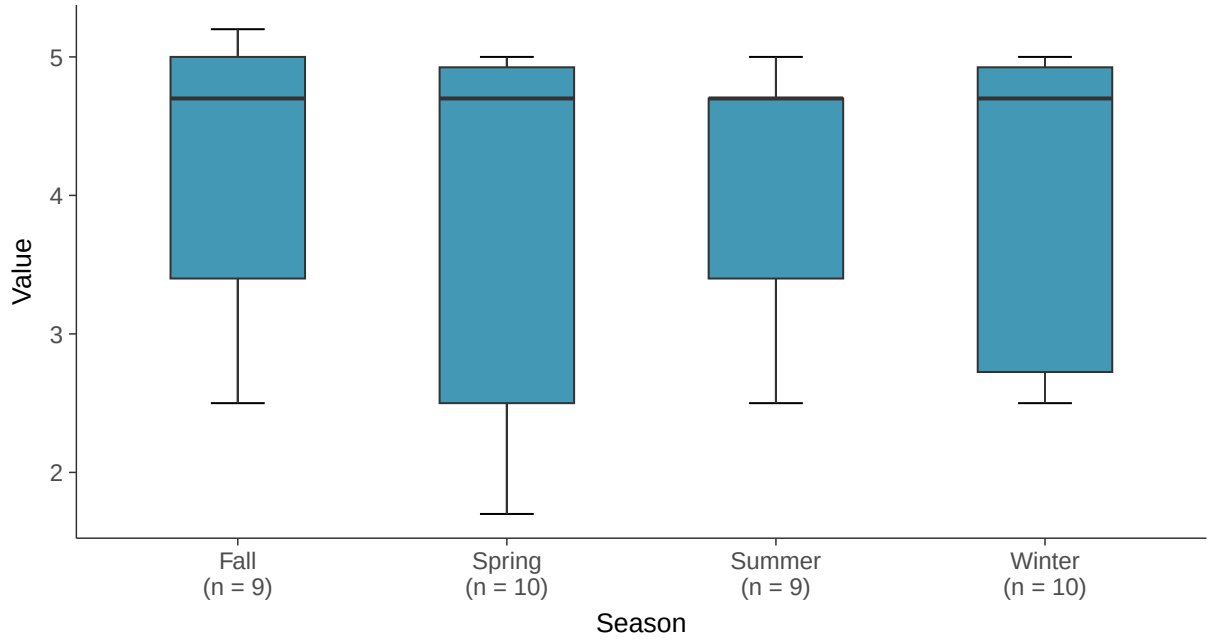
Boxplot

Arsenic, MW-1 (ug/L)



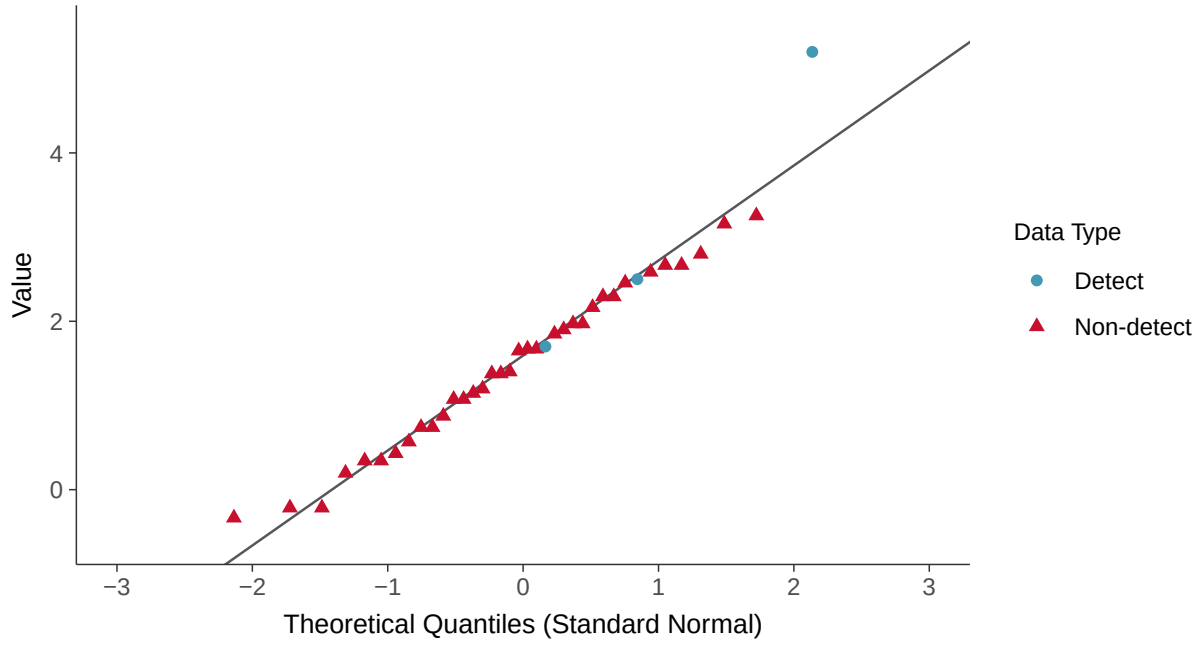
Boxplot by Season

Arsenic, MW-1 (ug/L)



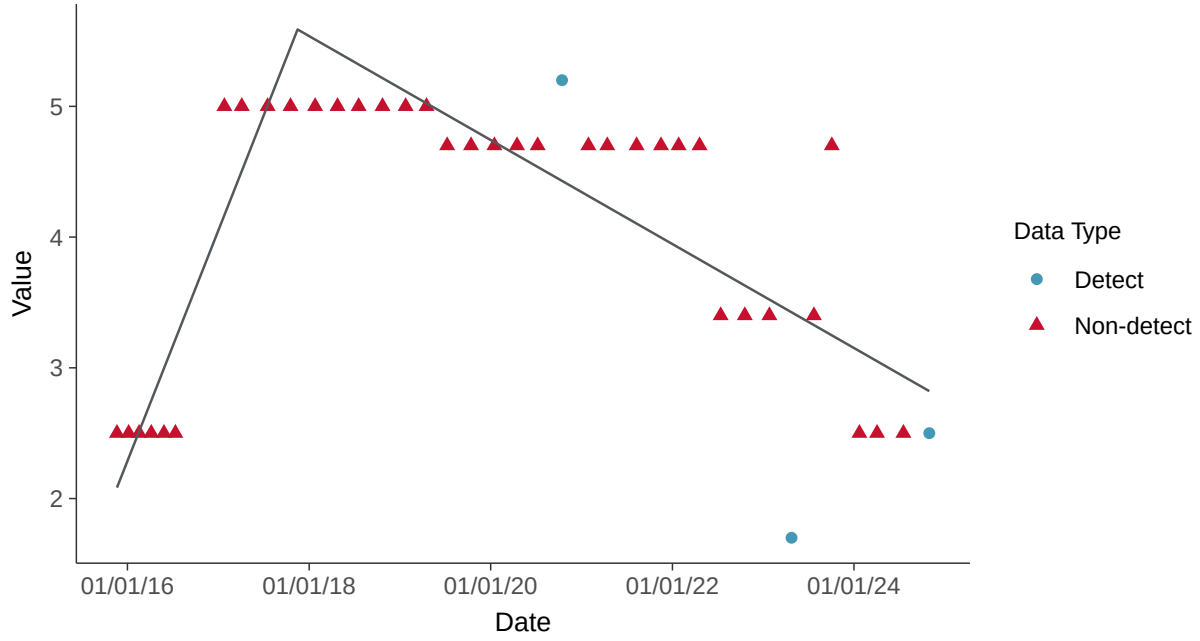
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-1 (ug/L)



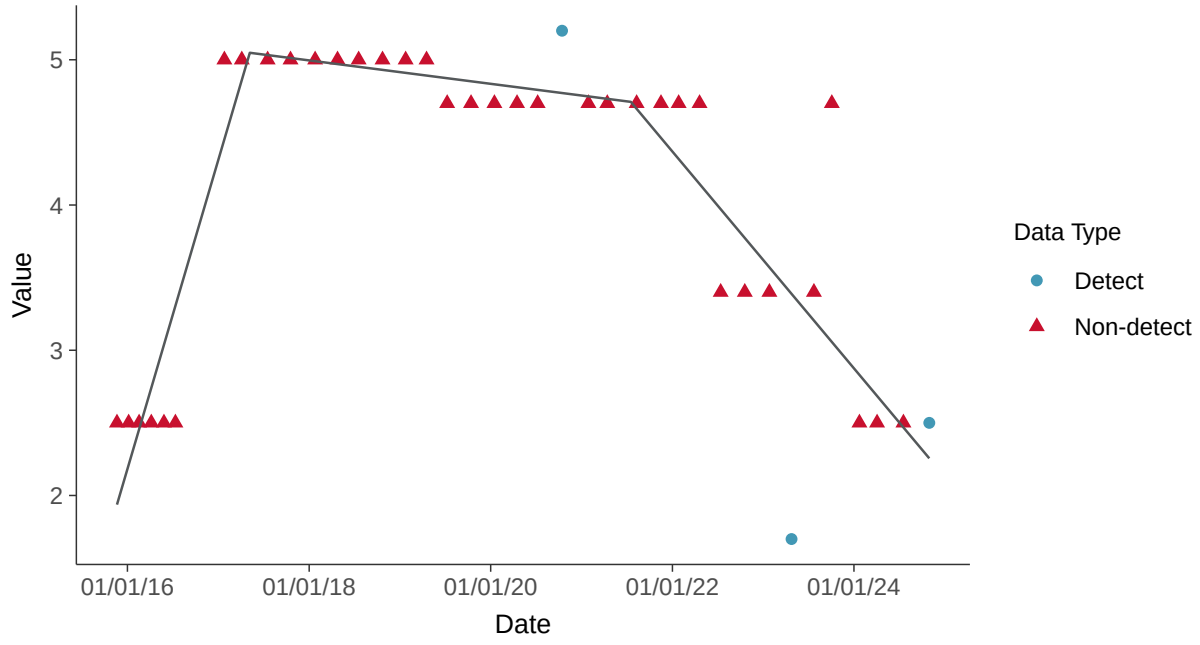
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-1 (ug/L)



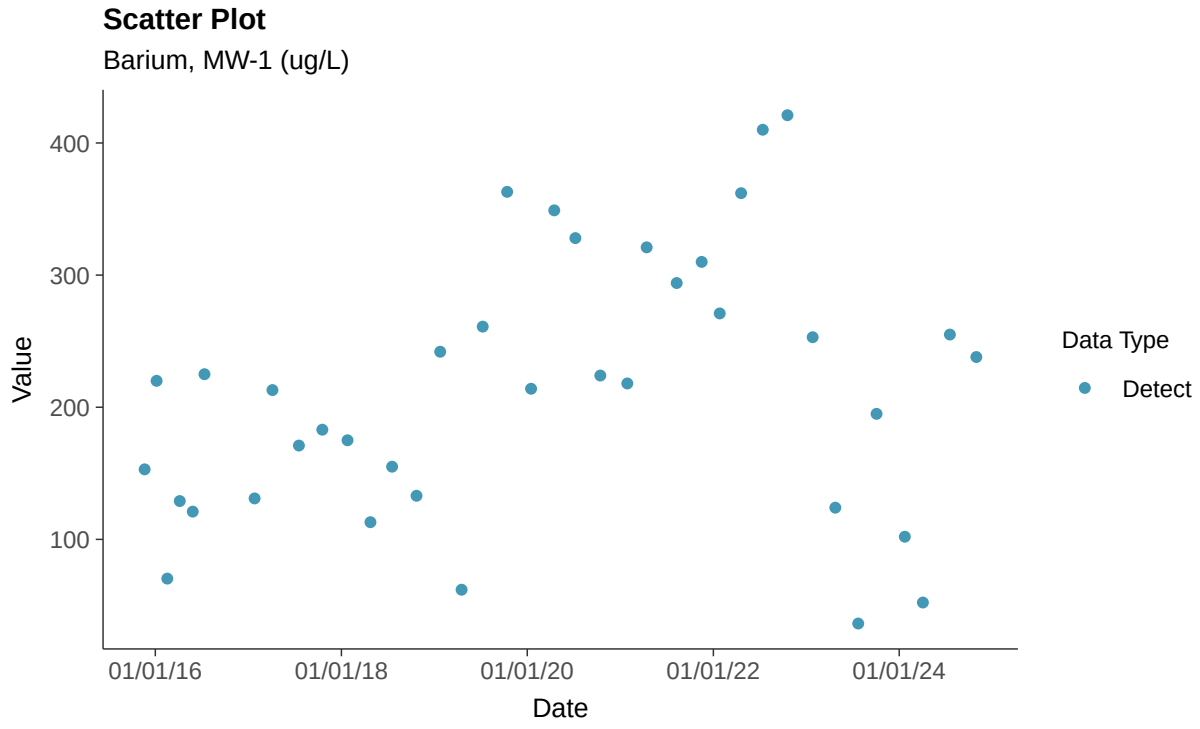
Trend Regression: Piecewise Linear-Linear-Linear

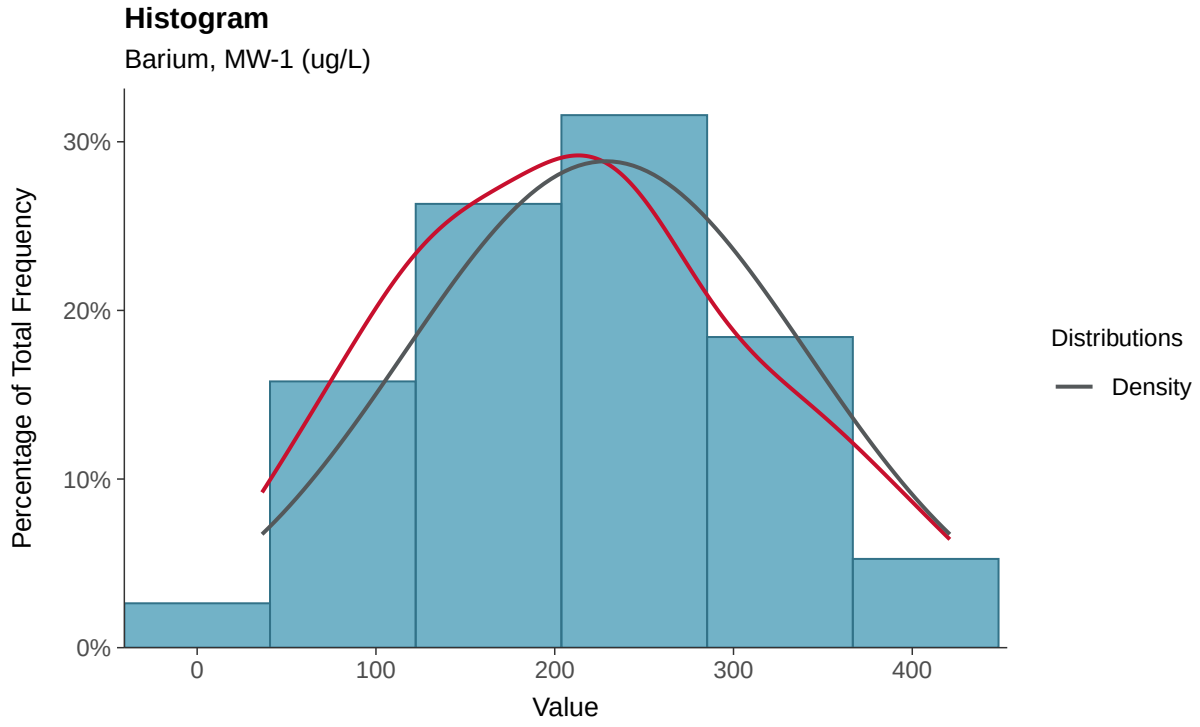
Arsenic, MW-1 (ug/L)



App. IV: Barium, MW-1

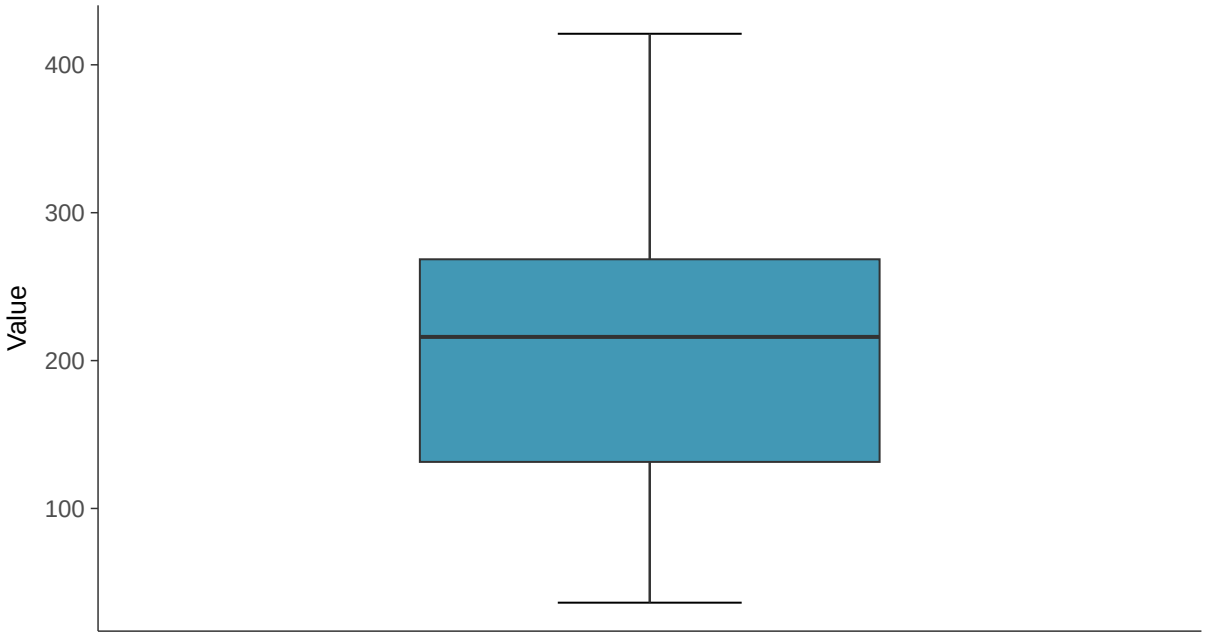
ID: 01_03_103





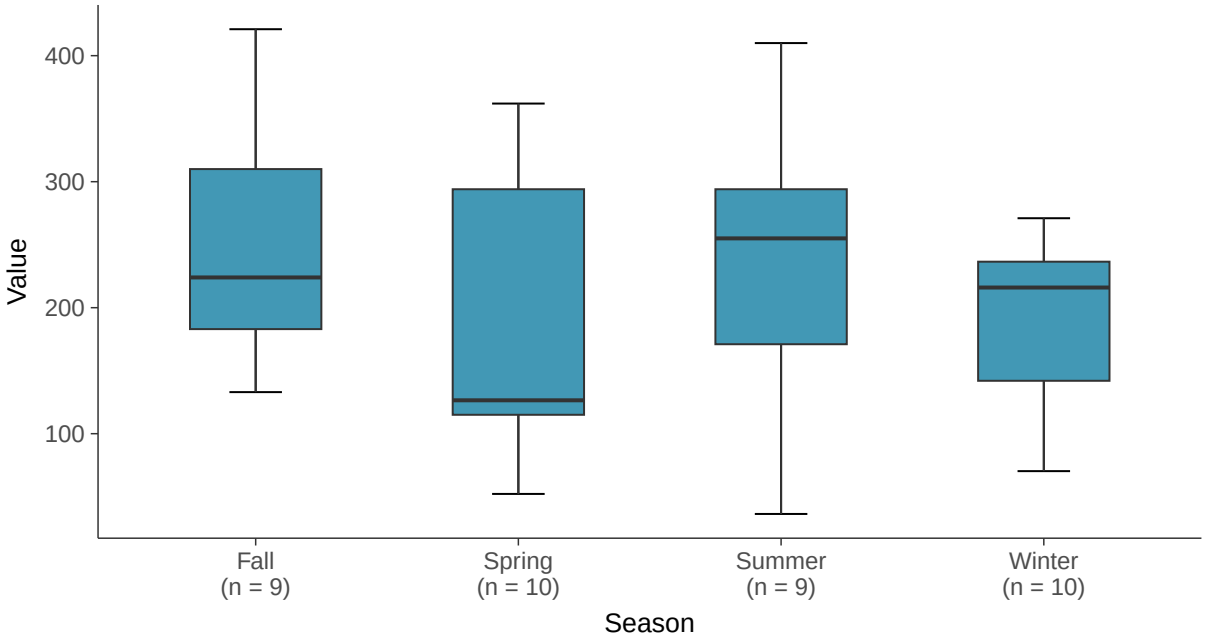
Boxplot

Barium, MW-1 (ug/L)



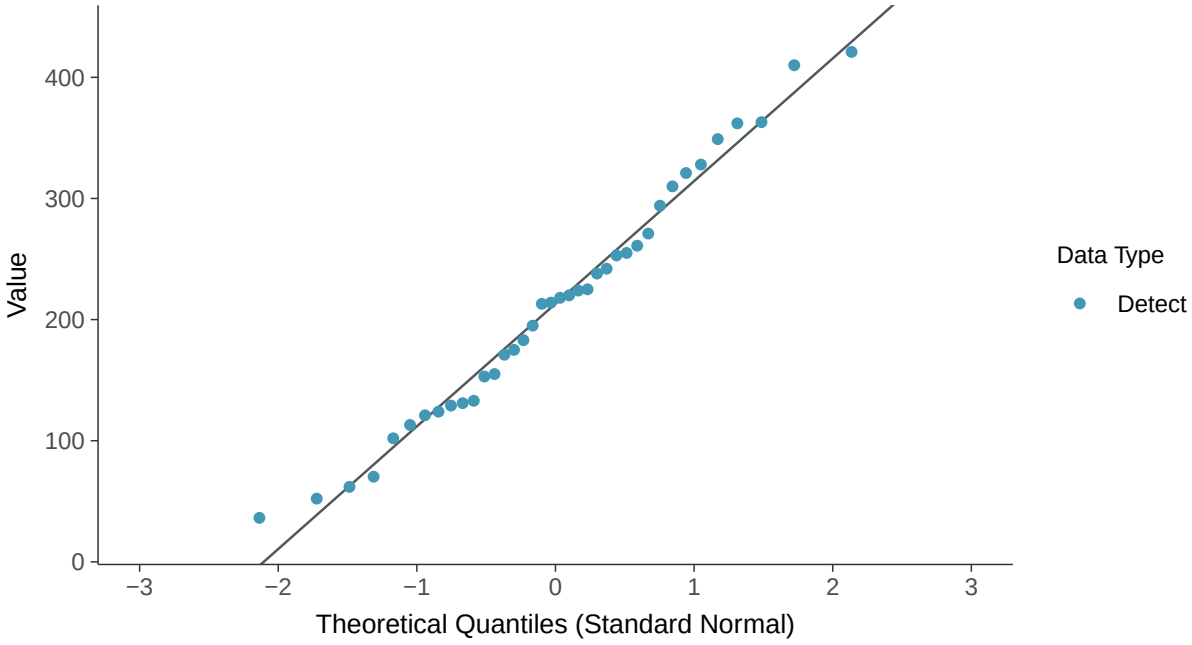
Boxplot by Season

Barium, MW-1 (ug/L)



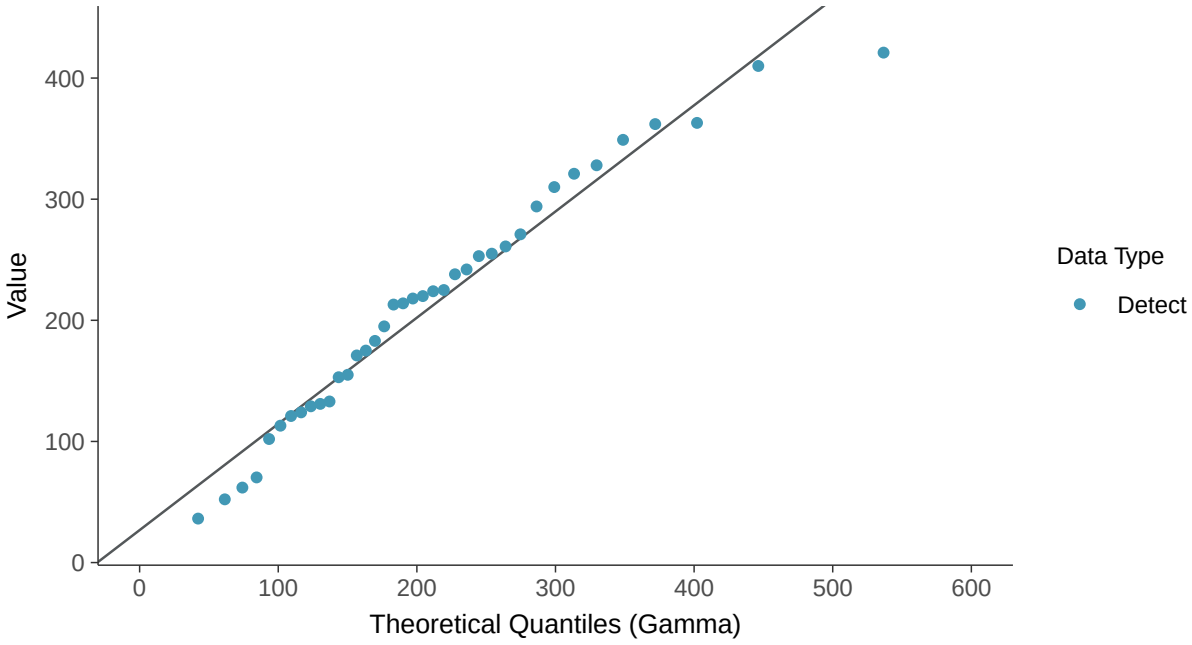
Normal Q-Q plot

Barium, MW-1 (ug/L)



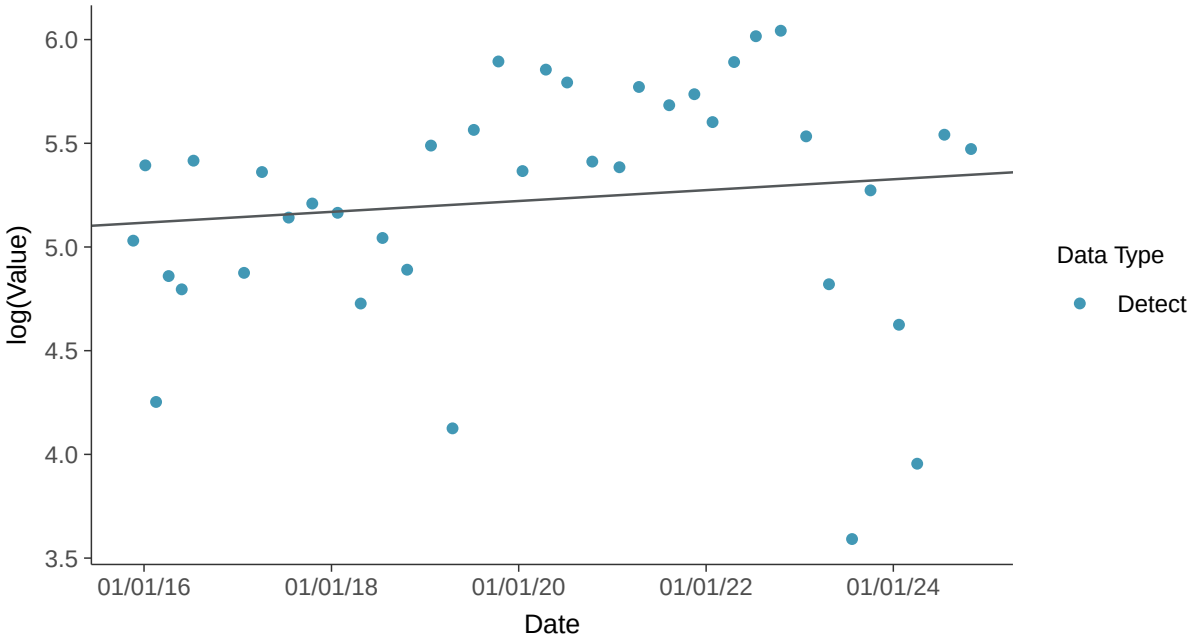
Gamma Q-Q plot

Barium, MW-1 (ug/L)



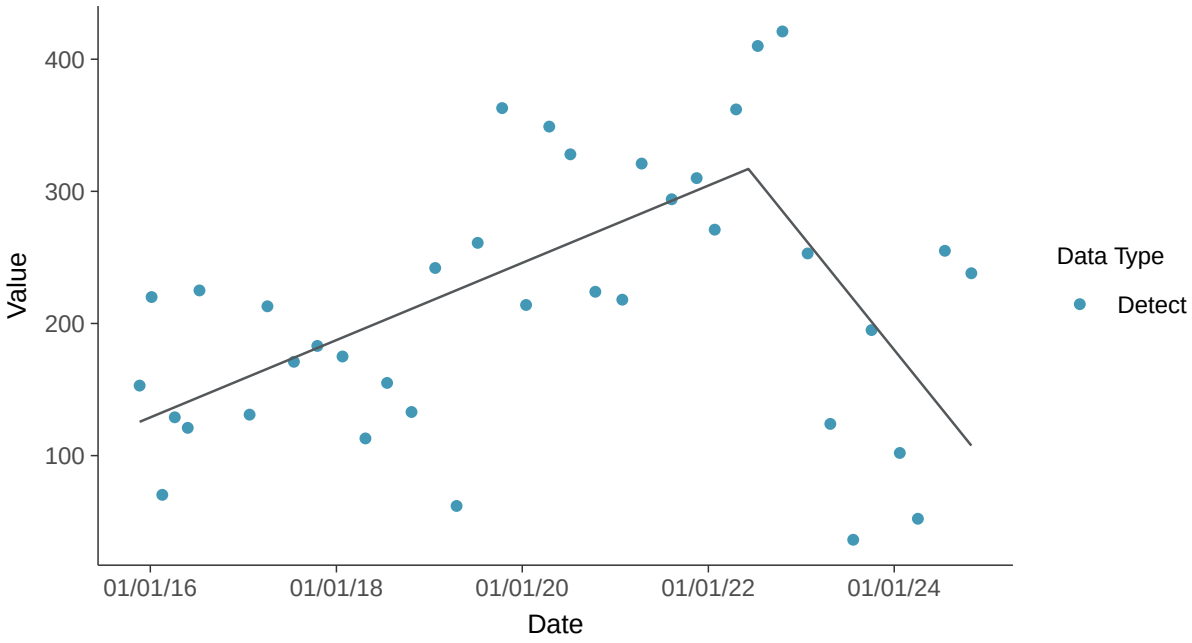
Trend Regression: Lognormal MLE

Barium, MW-1 (ug/L)



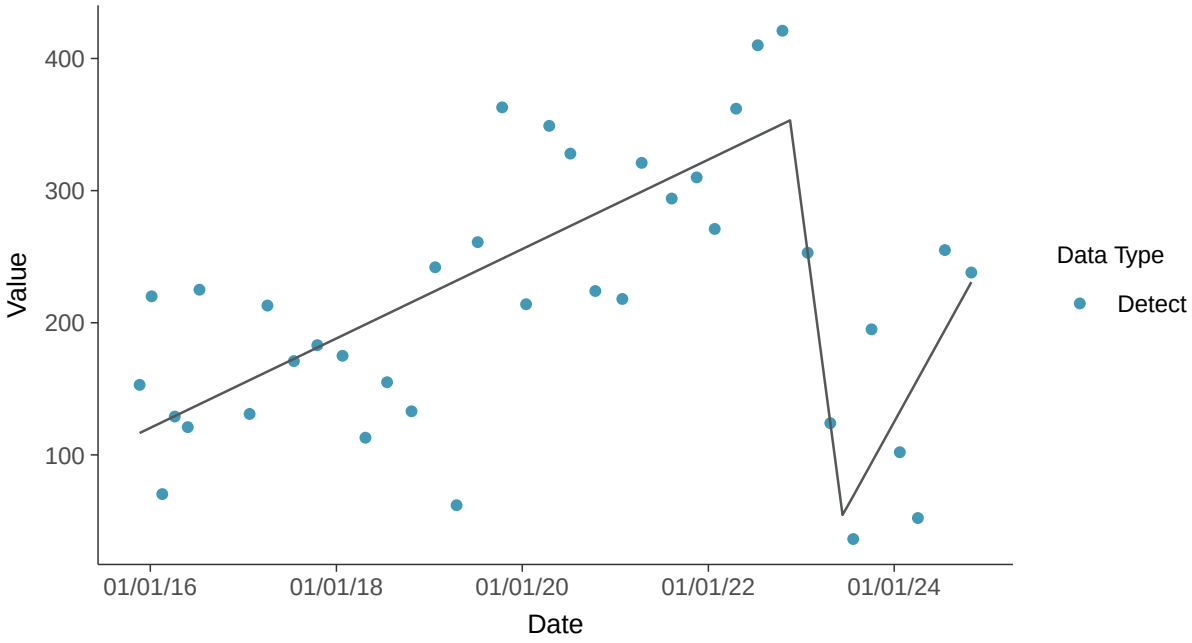
Trend Regression: Piecewise Linear-Linear

Barium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-1 (ug/L)

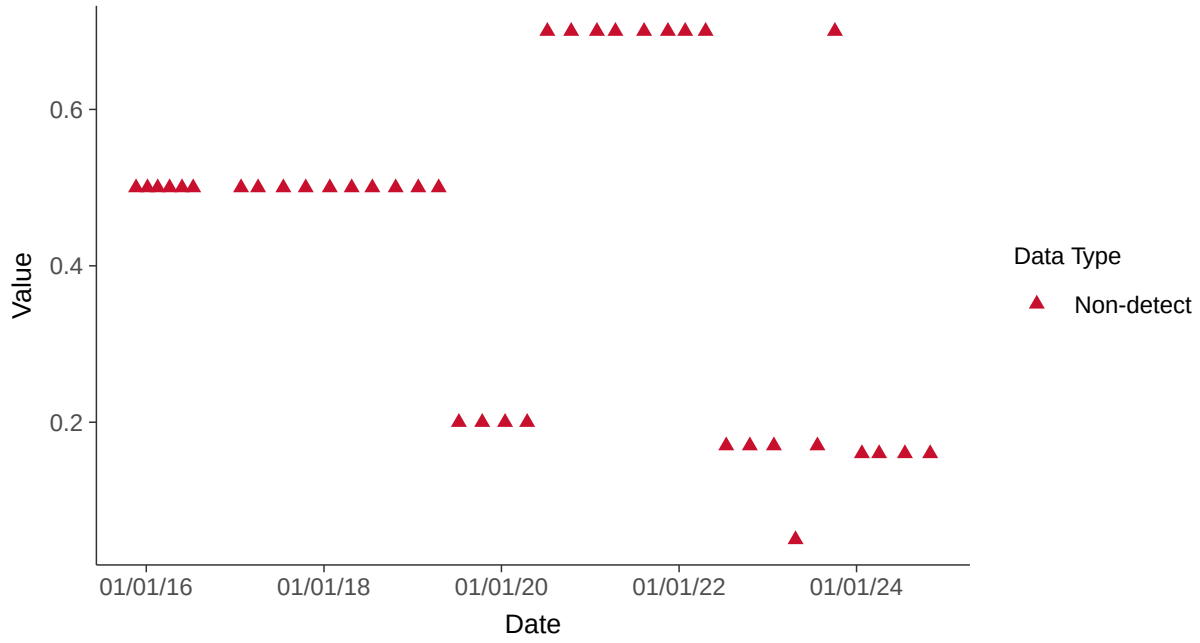


App. IV: Beryllium, MW-1

ID: 01_03_104

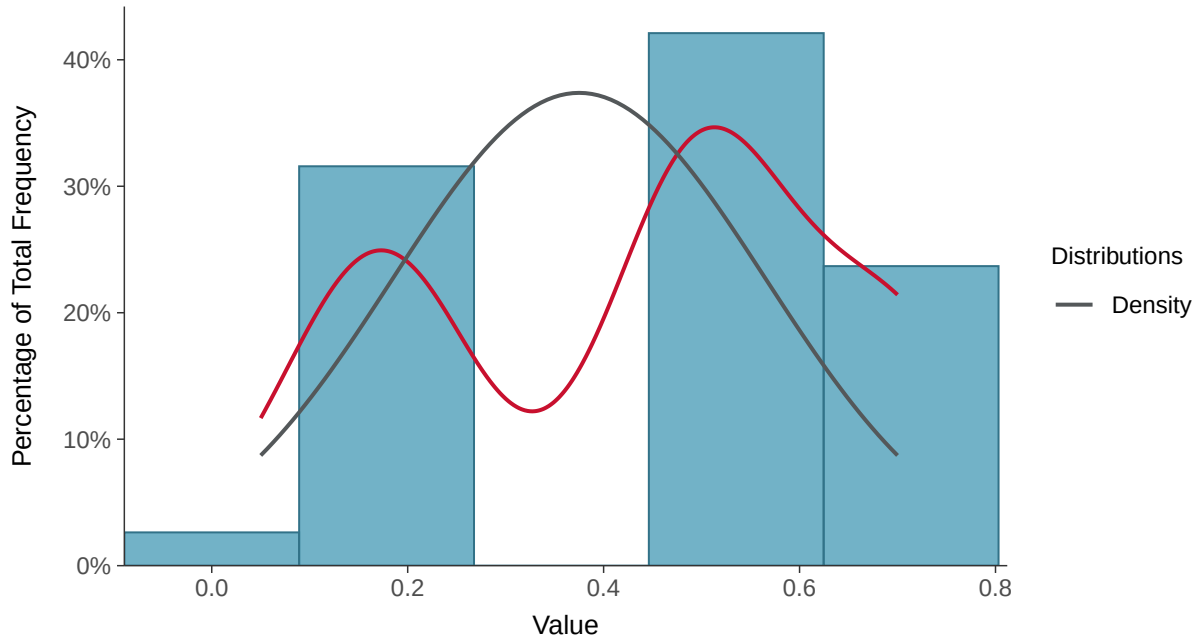
Scatter Plot

Beryllium, MW-1 (ug/L)



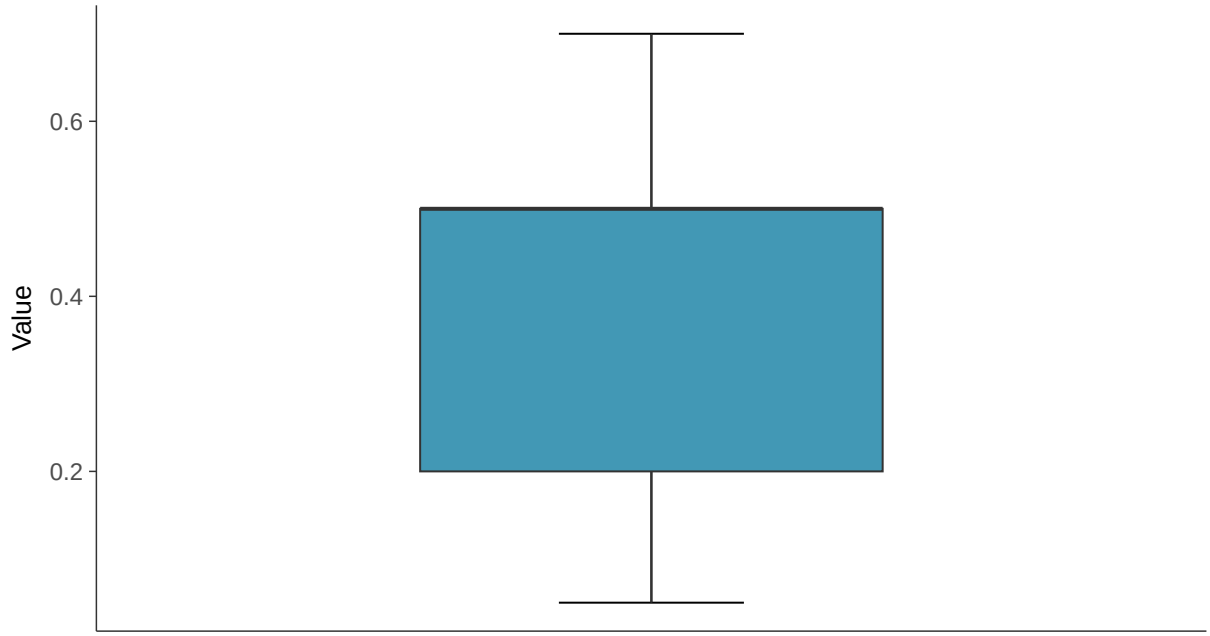
Histogram

Beryllium, MW-1 (ug/L)



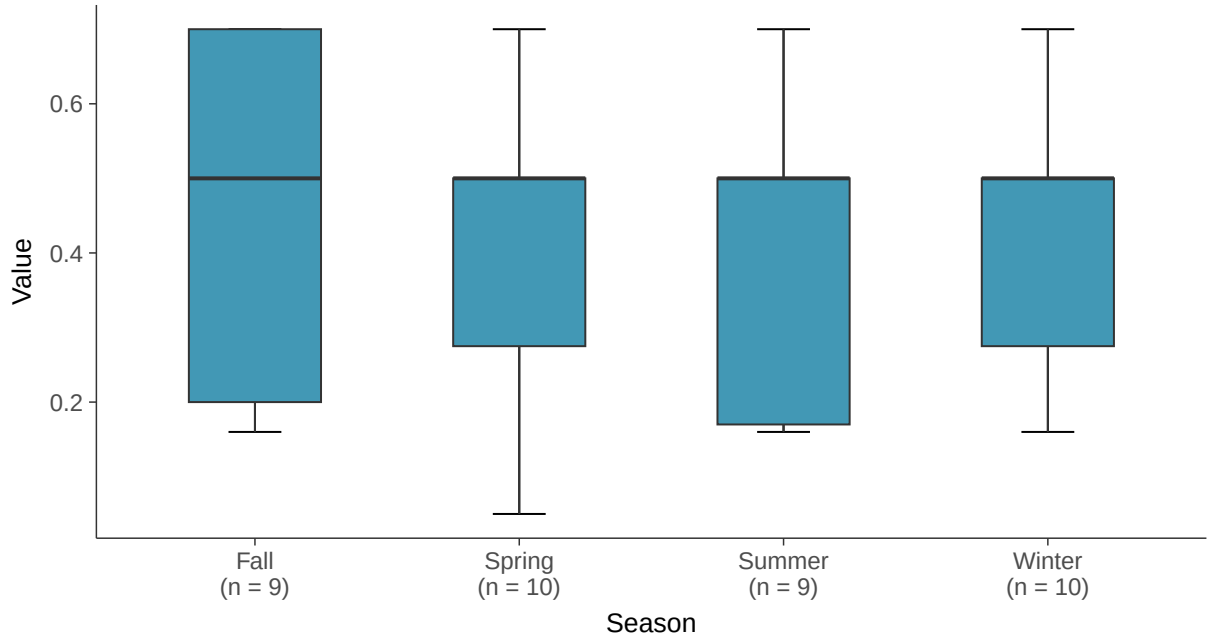
Boxplot

Beryllium, MW-1 (ug/L)



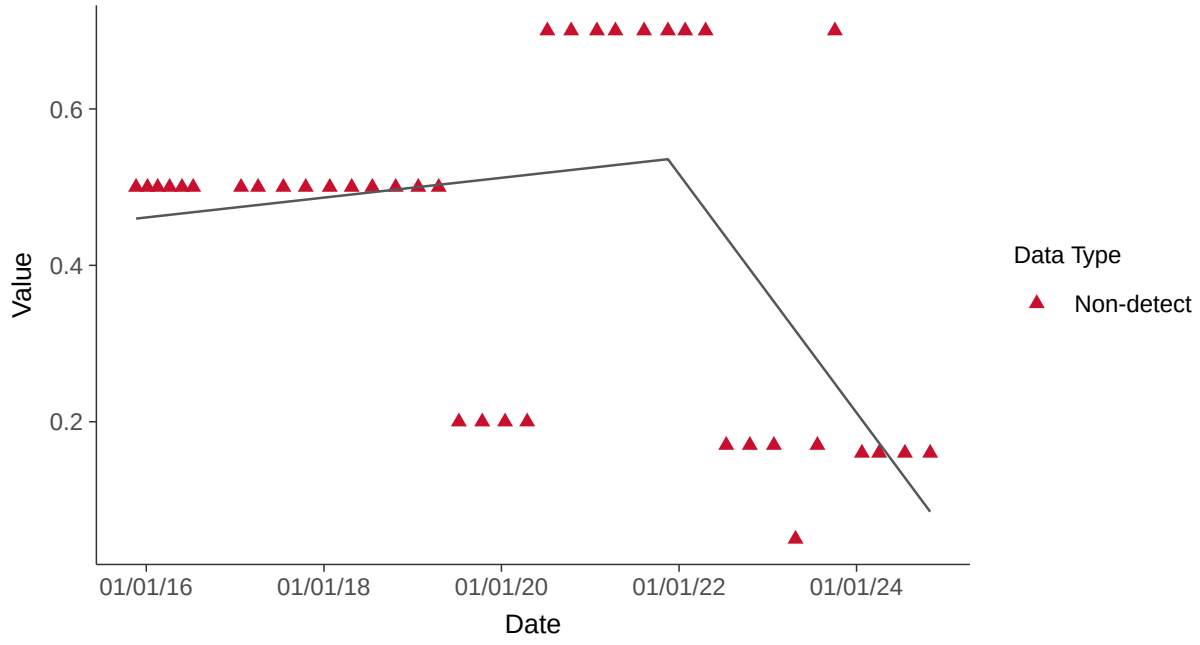
Boxplot by Season

Beryllium, MW-1 (ug/L)



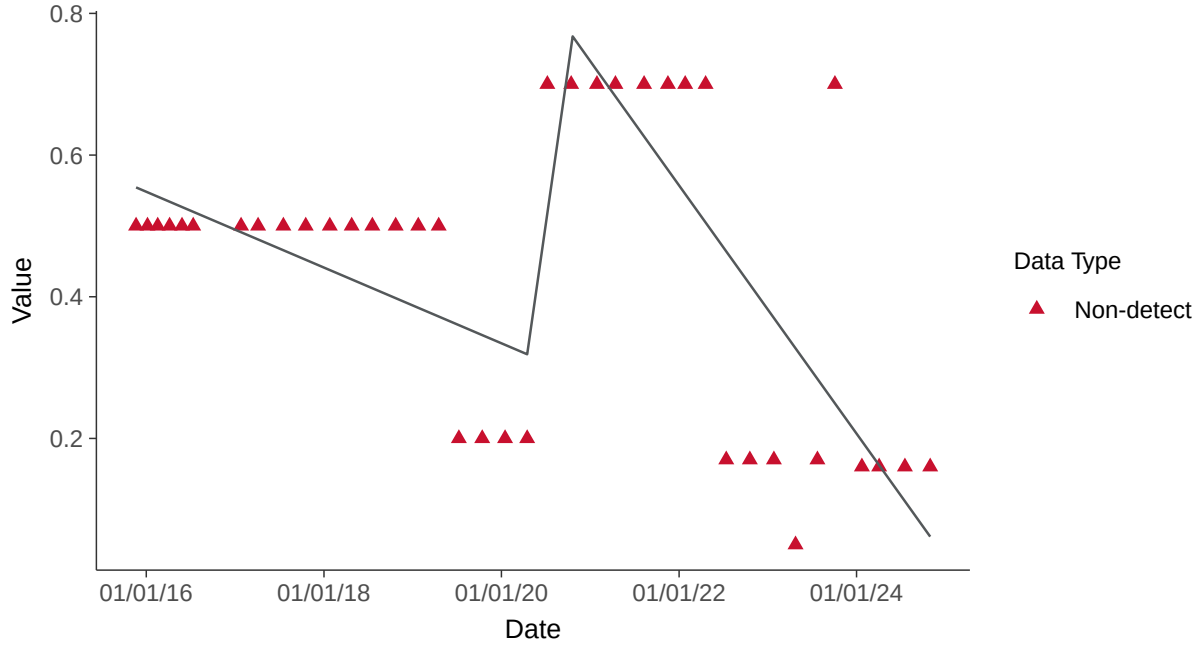
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-1 (ug/L)



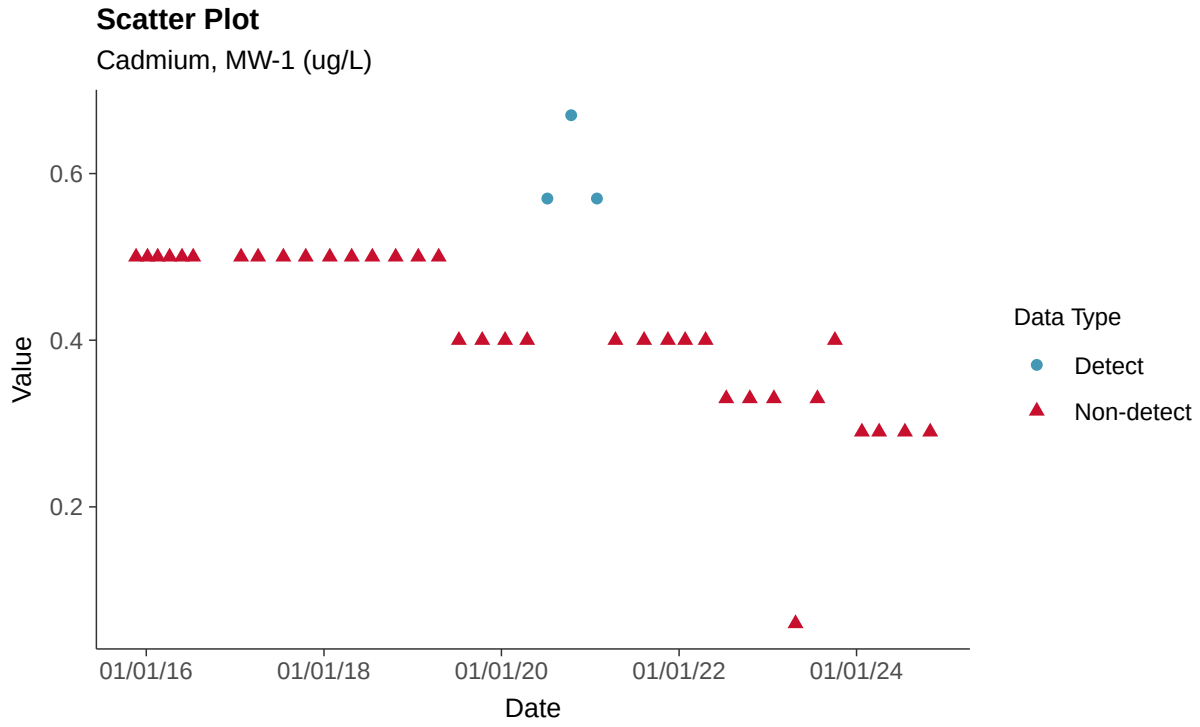
Trend Regression: Piecewise Linear-Linear-Linear

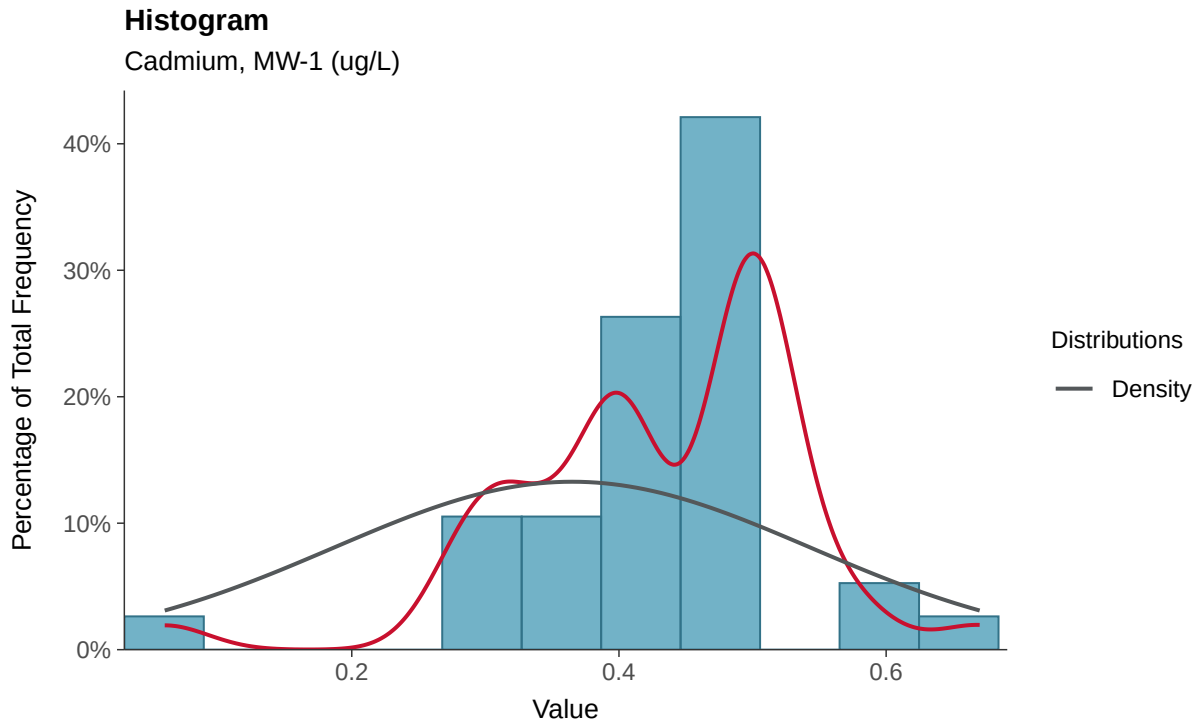
Beryllium, MW-1 (ug/L)



App. IV: Cadmium, MW-1

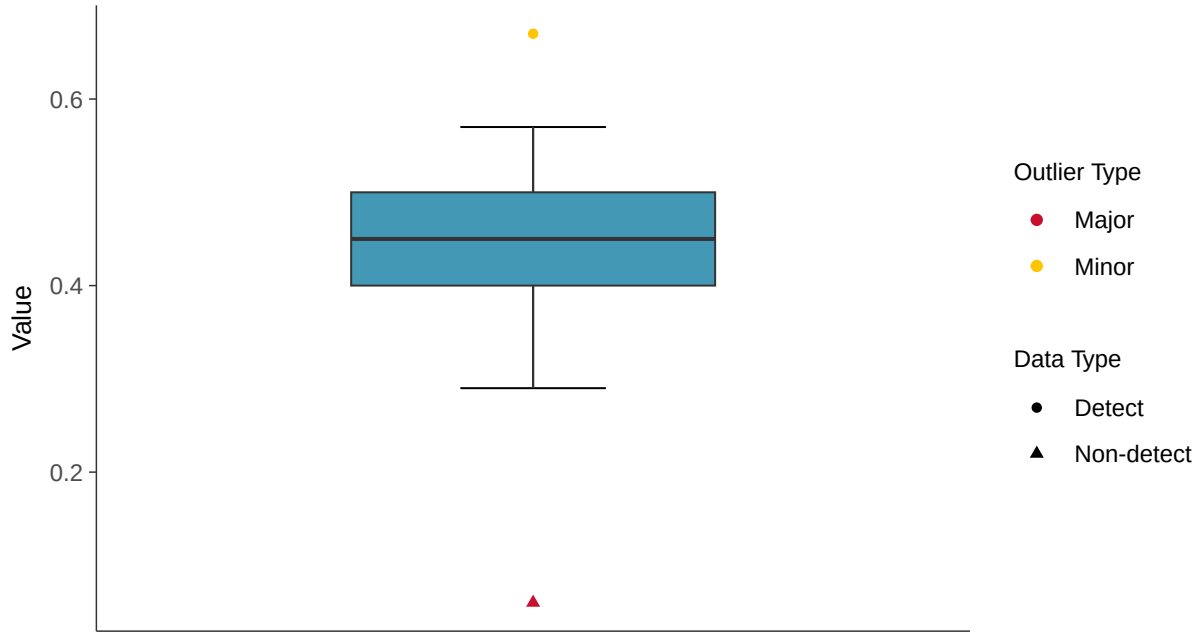
ID: 01_03_106





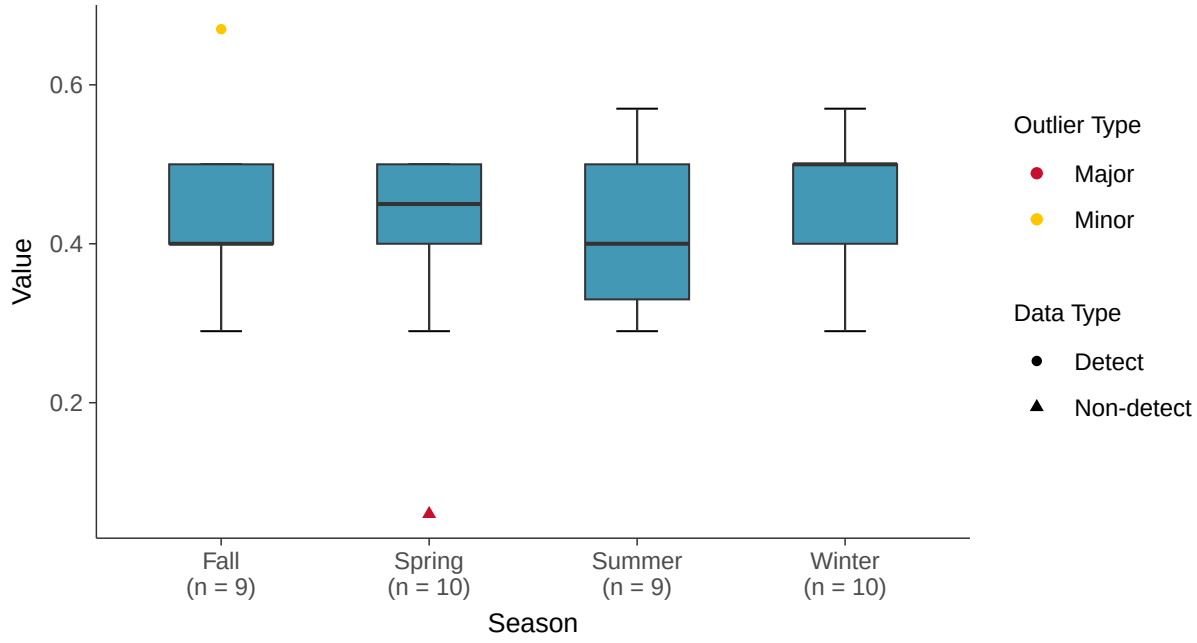
Boxplot

Cadmium, MW-1 (ug/L)



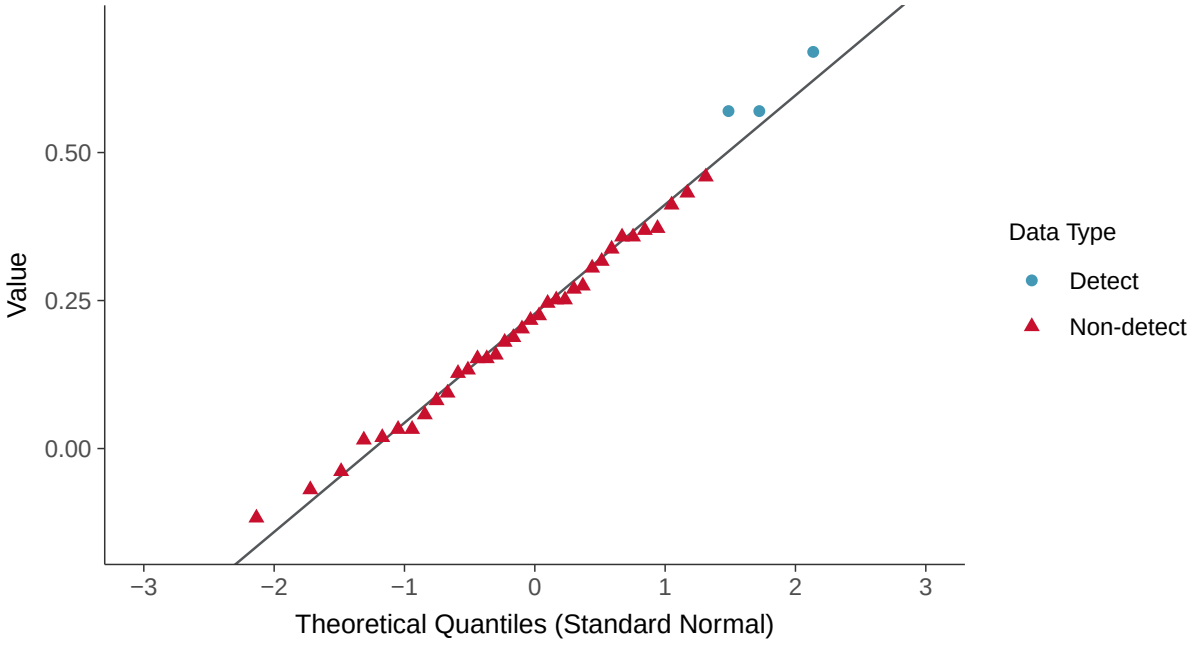
Boxplot by Season

Cadmium, MW-1 (ug/L)



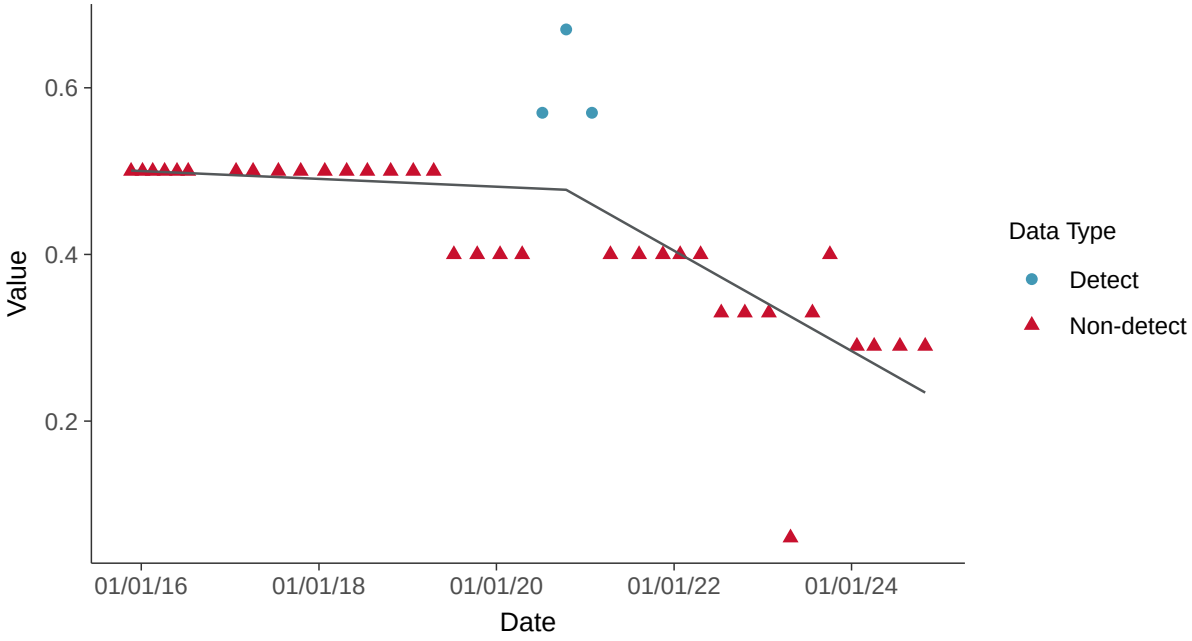
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-1 (ug/L)



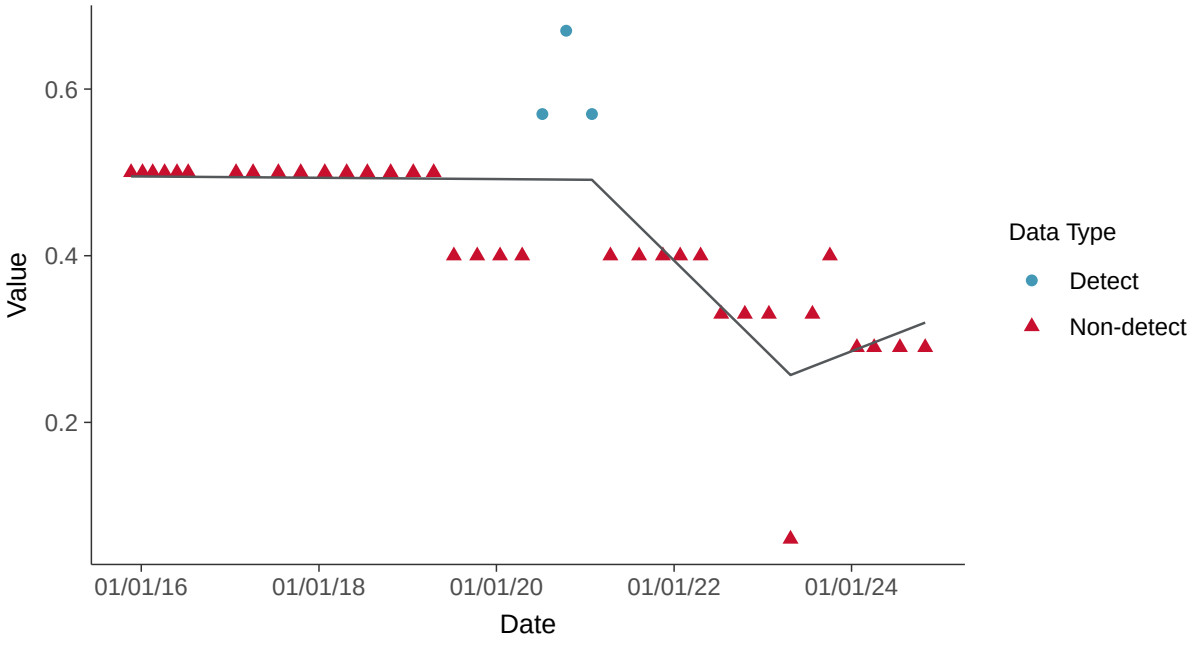
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-1 (ug/L)



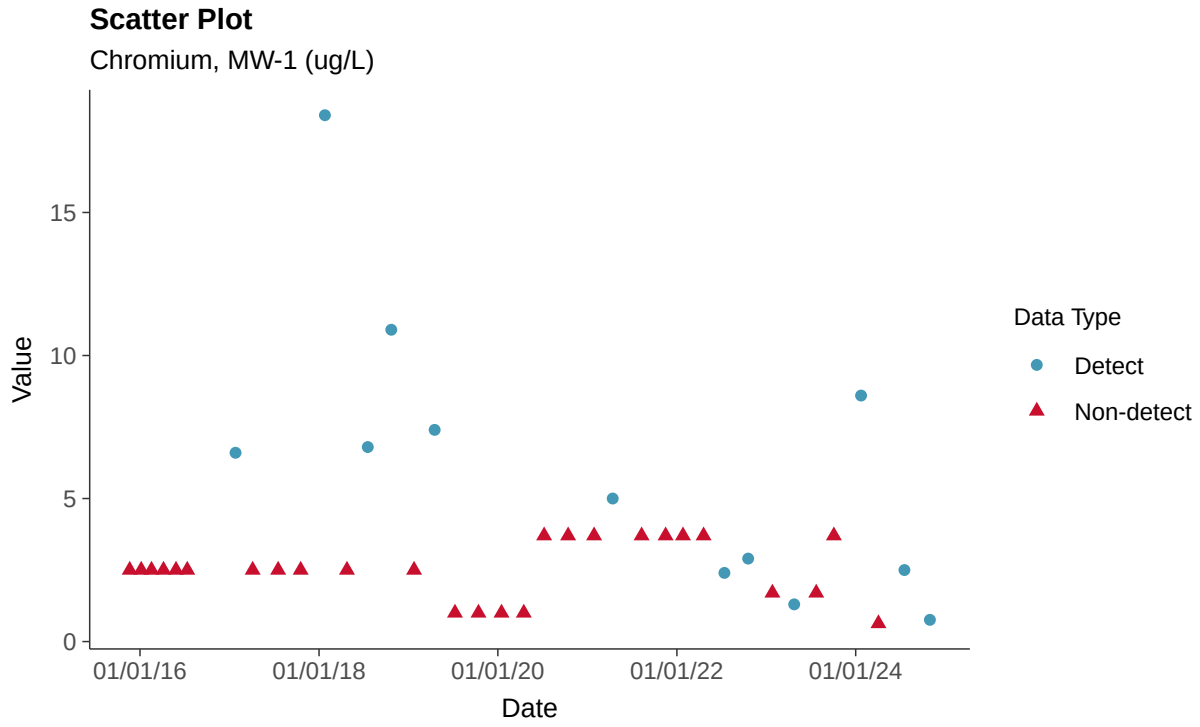
Trend Regression: Piecewise Linear-Linear-Linear

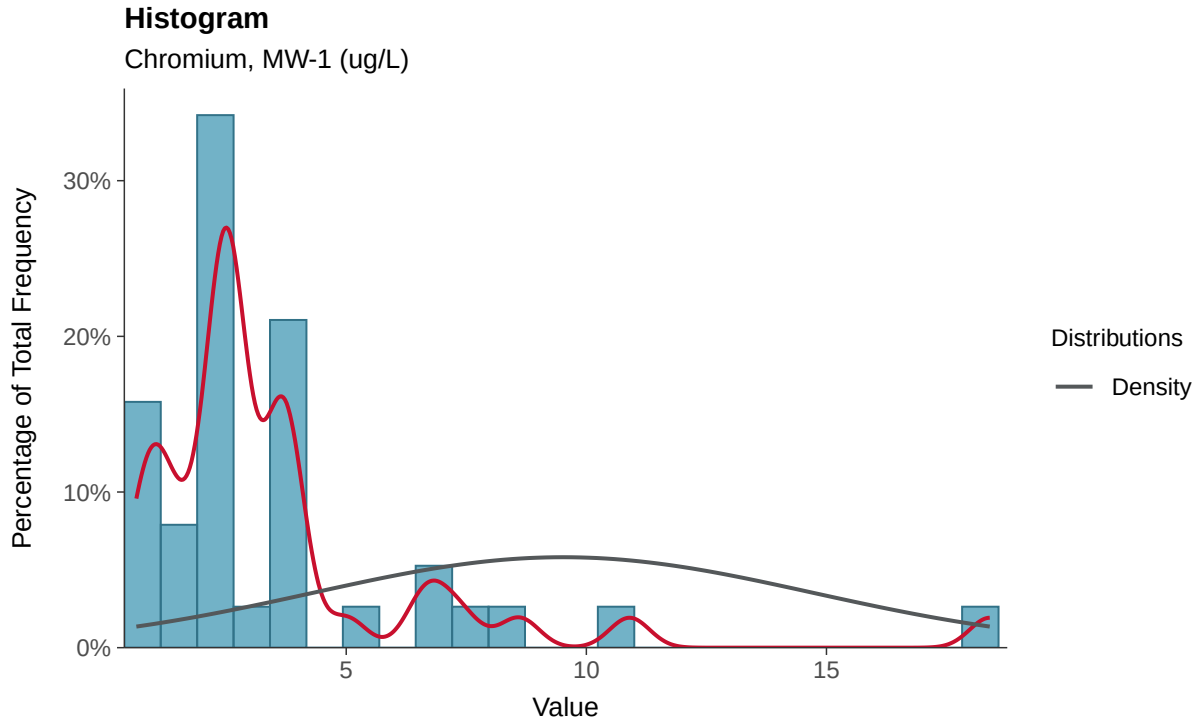
Cadmium, MW-1 (ug/L)



App. IV: Chromium, MW-1

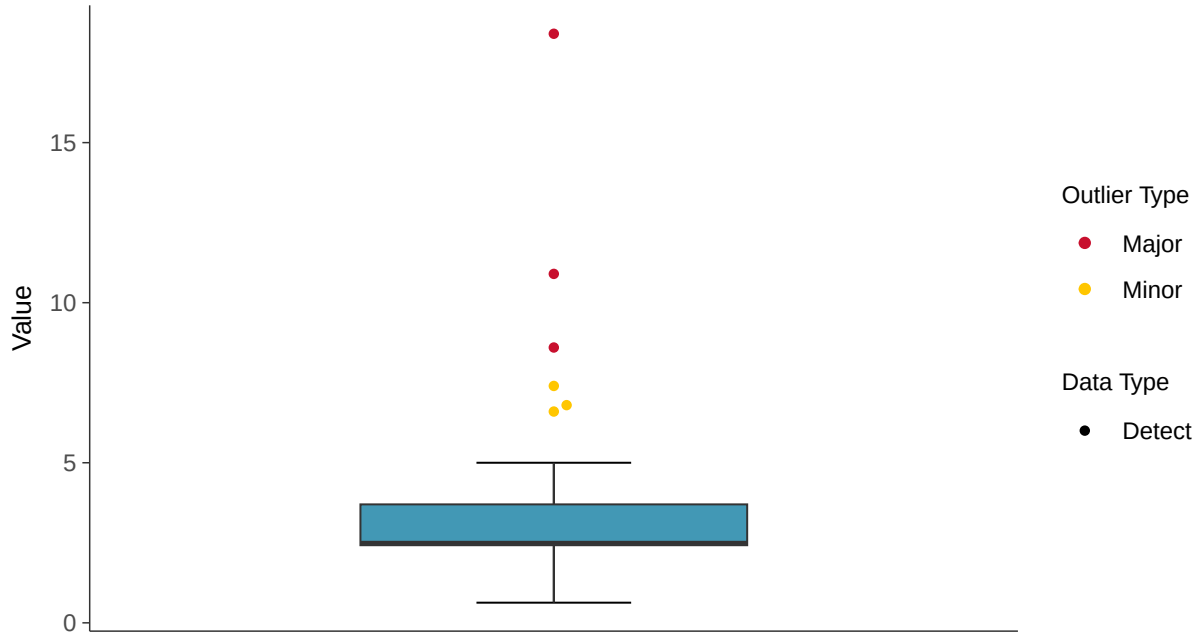
ID: 01_03_109





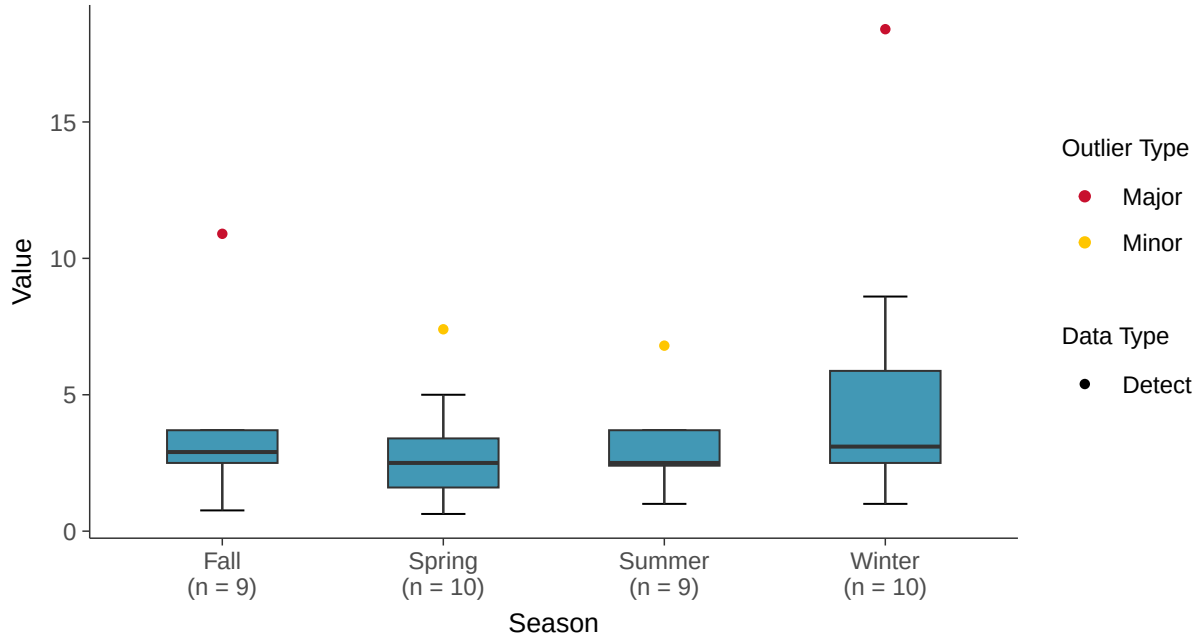
Boxplot

Chromium, MW-1 (ug/L)



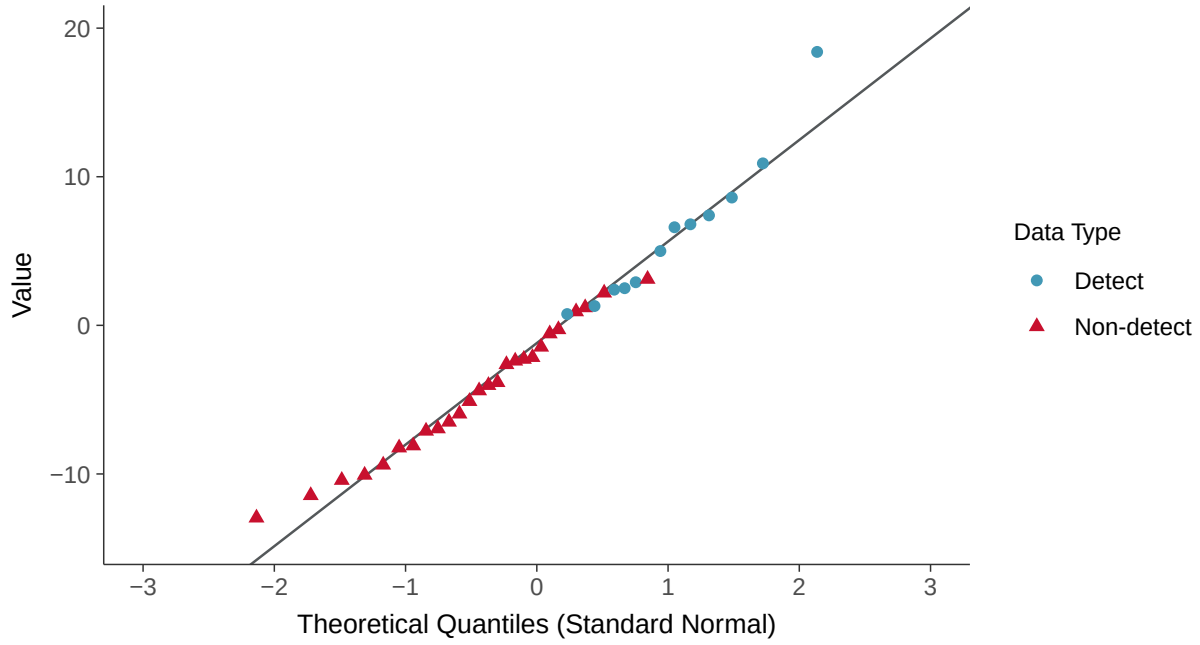
Boxplot by Season

Chromium, MW-1 (ug/L)



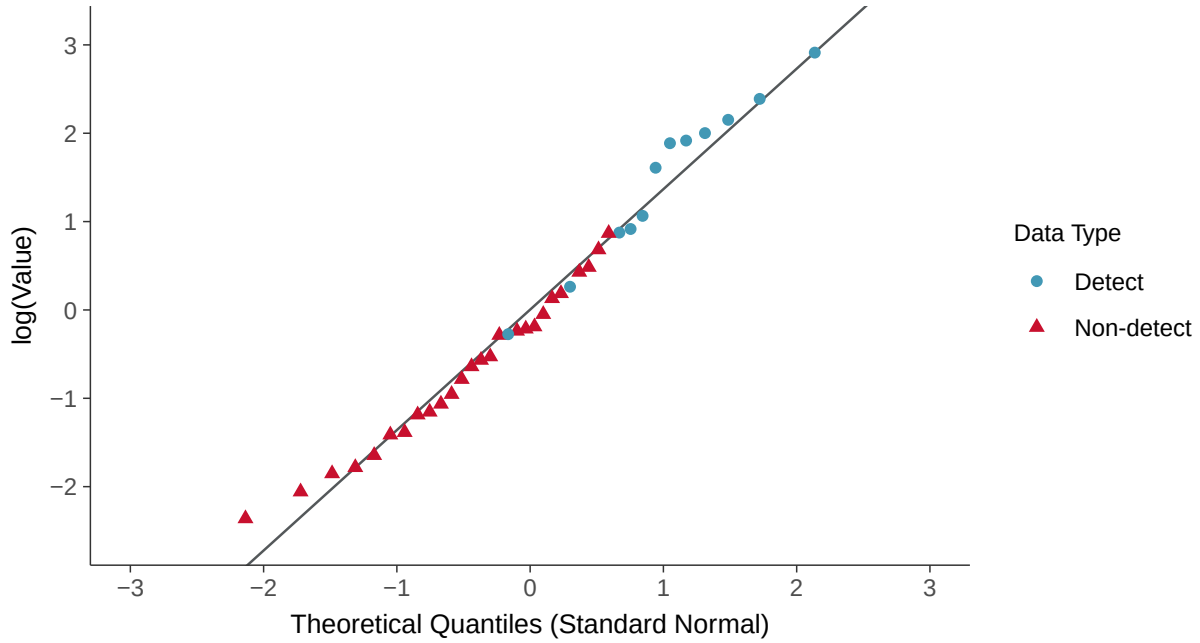
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



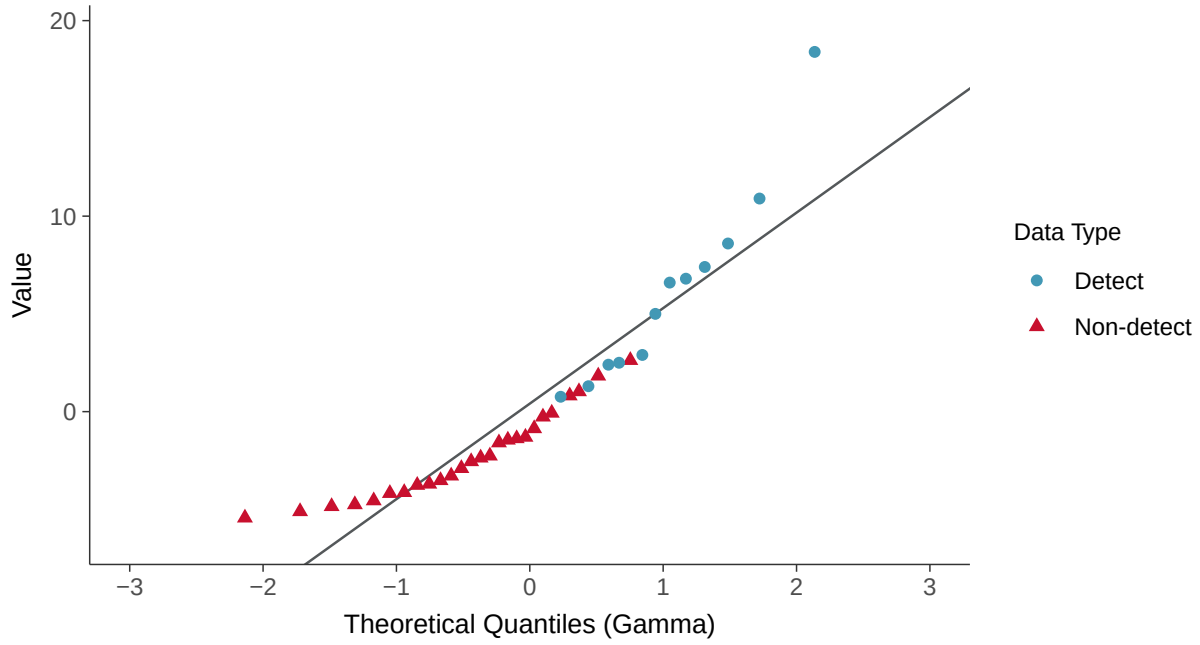
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



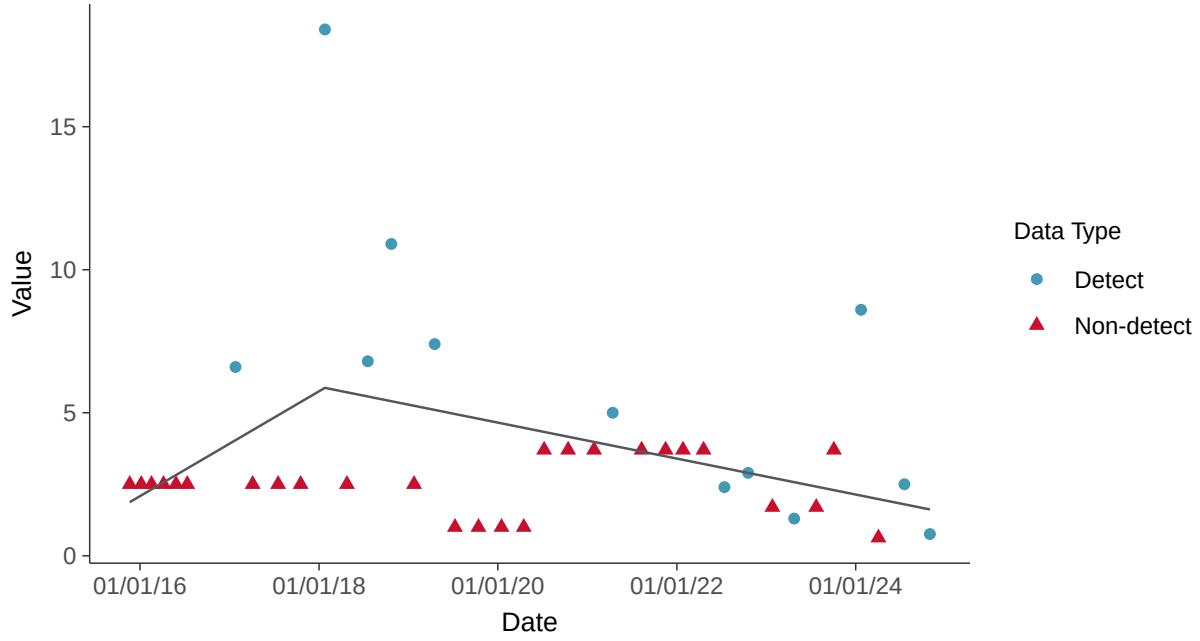
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



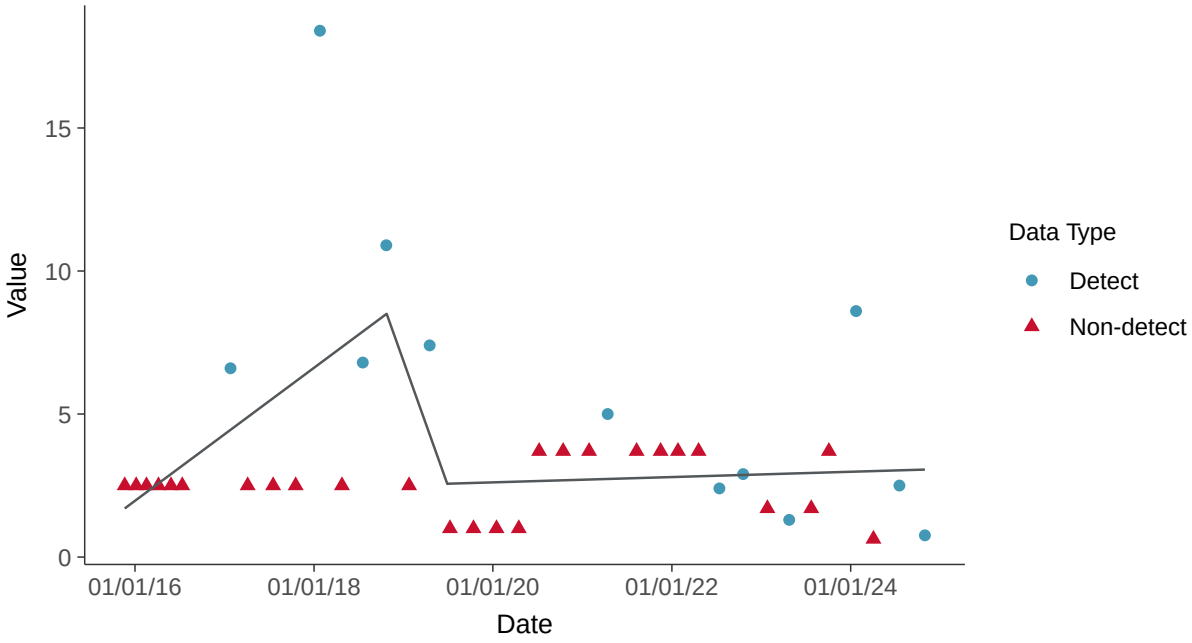
Trend Regression: Piecewise Linear-Linear

Chromium, MW-1 (ug/L)



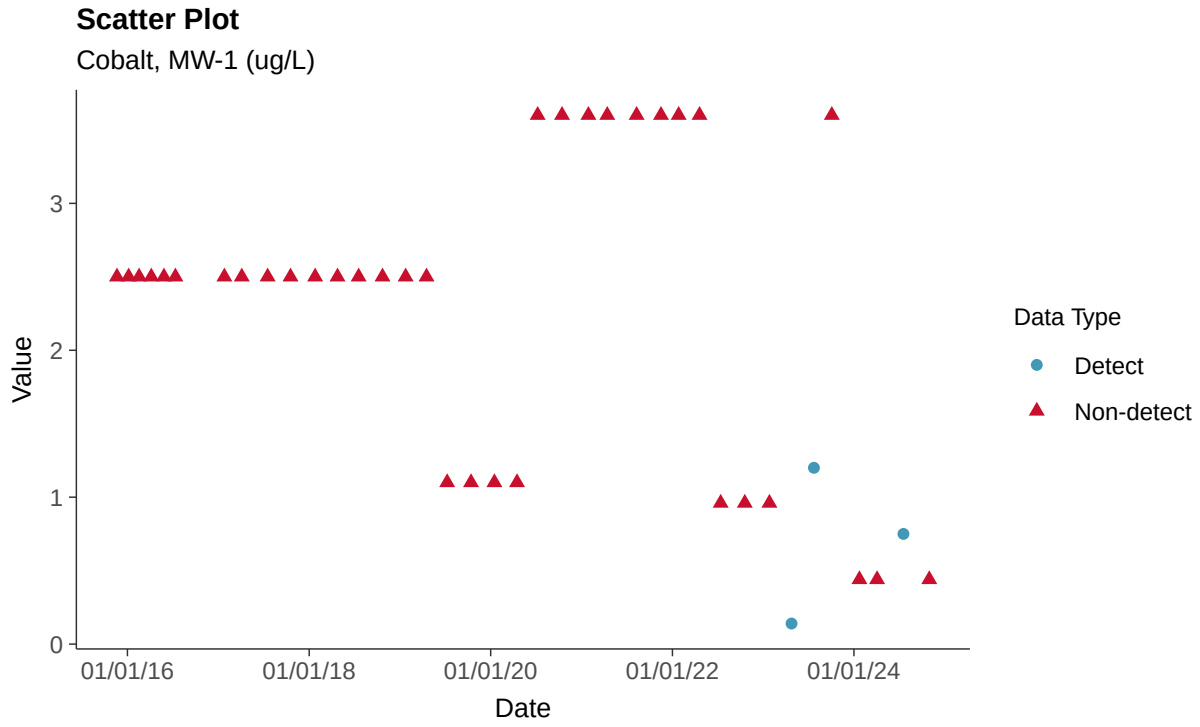
Trend Regression: Piecewise Linear-Linear-Linear

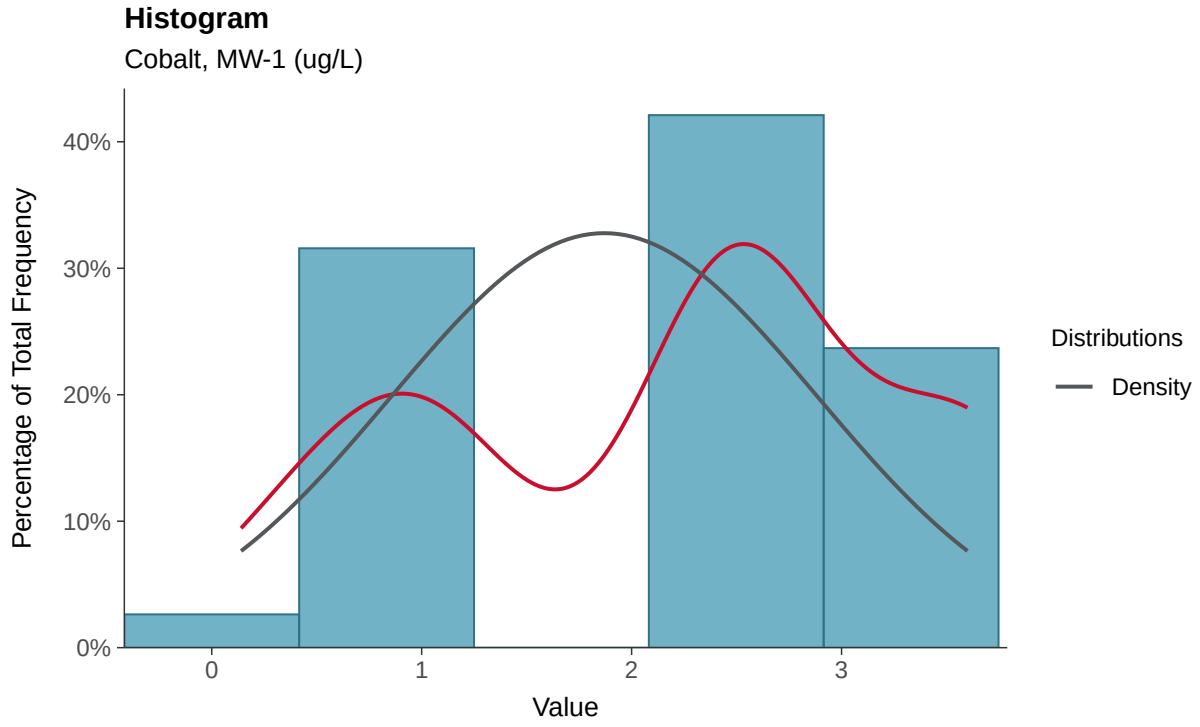
Chromium, MW-1 (ug/L)



App. IV: Cobalt, MW-1

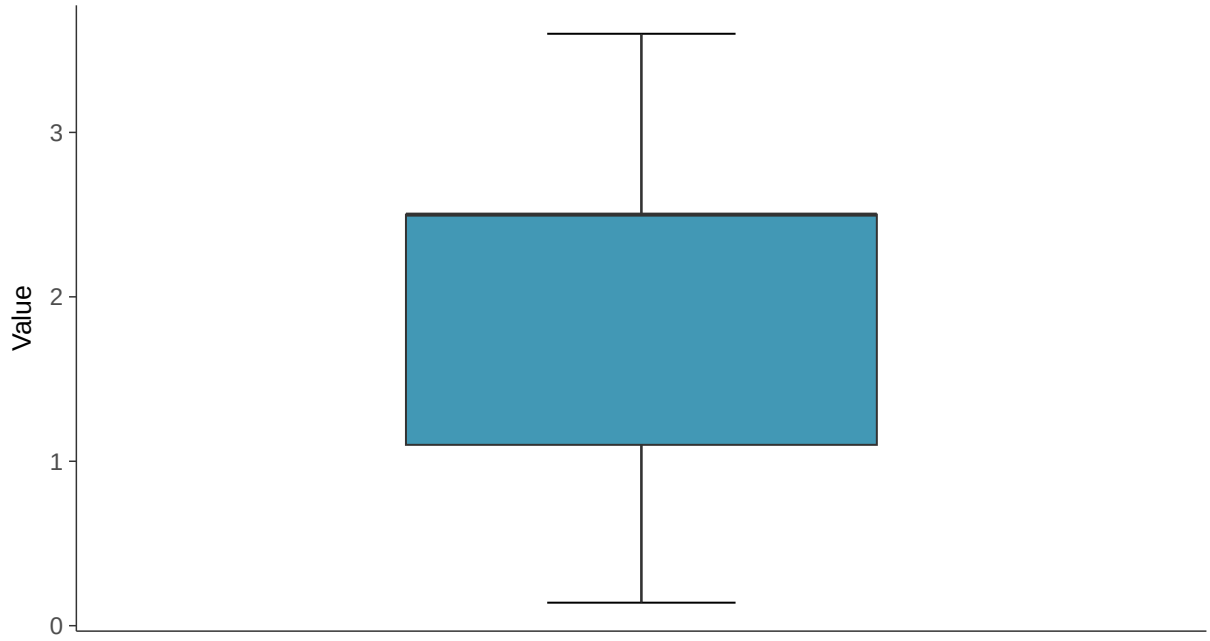
ID: 01_03_110





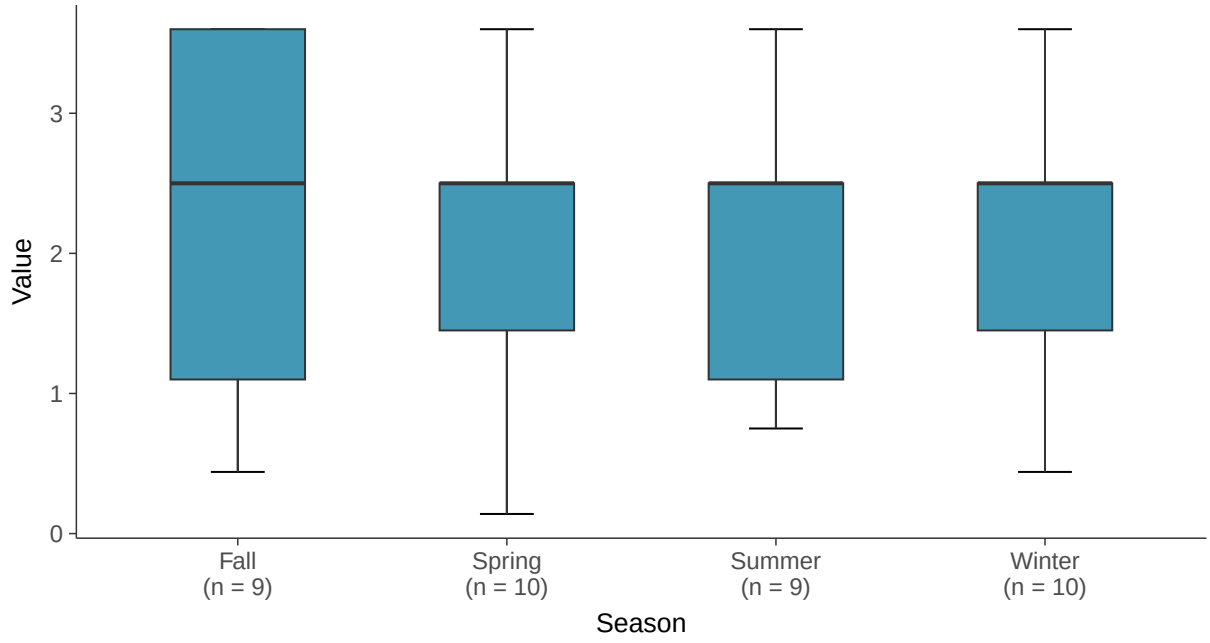
Boxplot

Cobalt, MW-1 (ug/L)



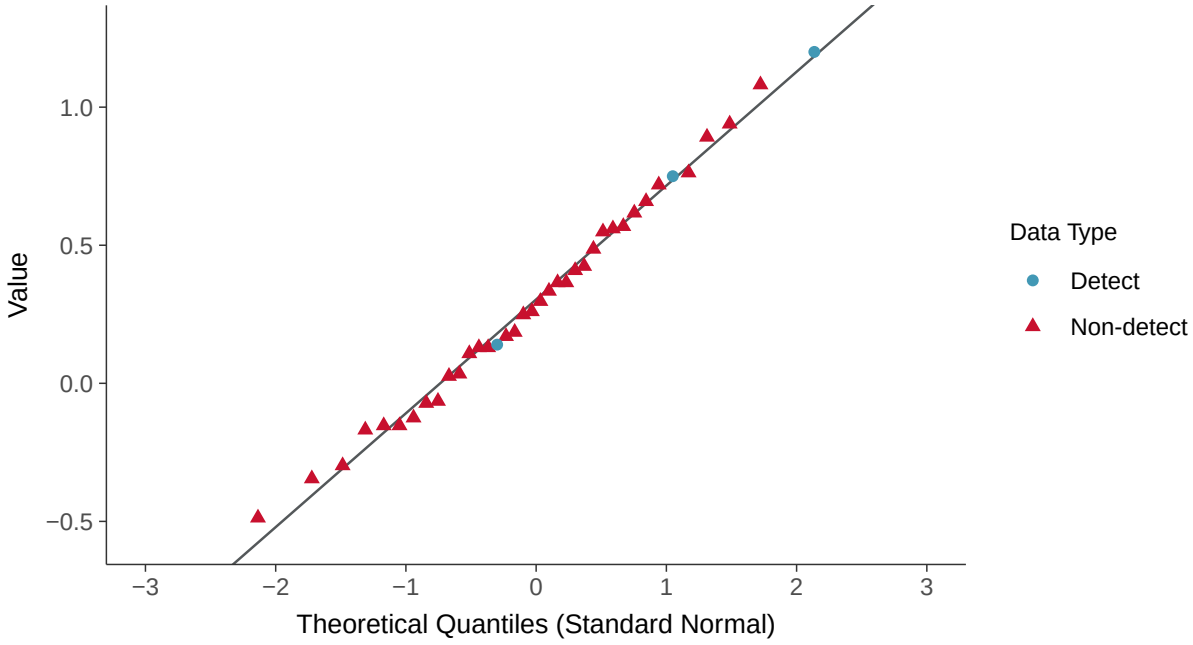
Boxplot by Season

Cobalt, MW-1 (ug/L)



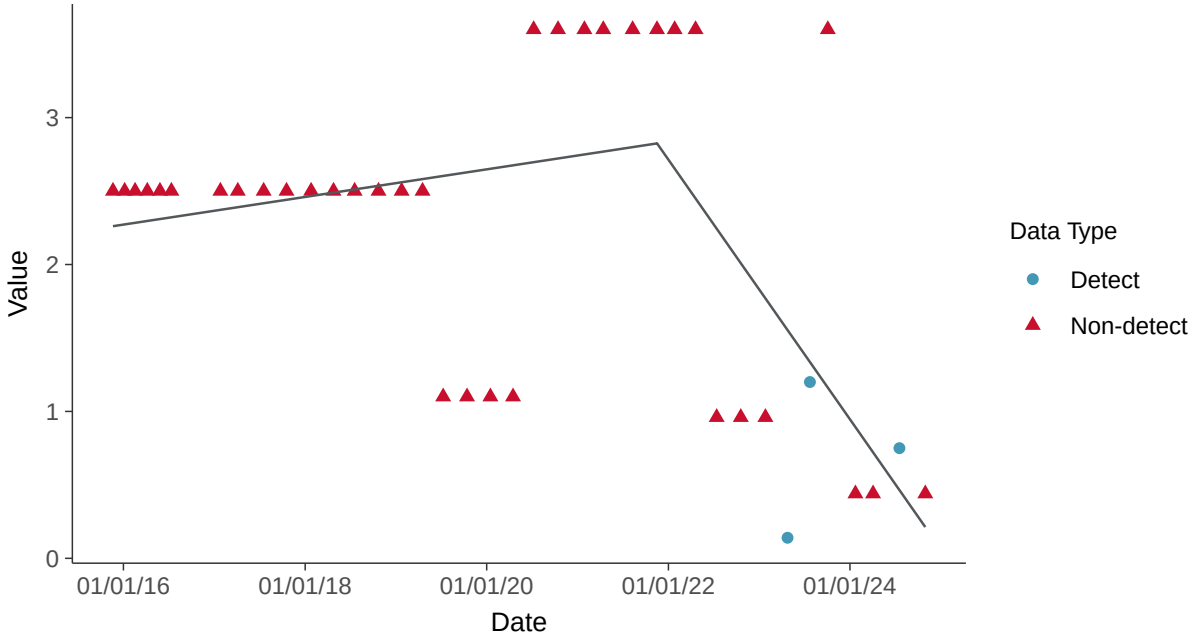
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-1 (ug/L)



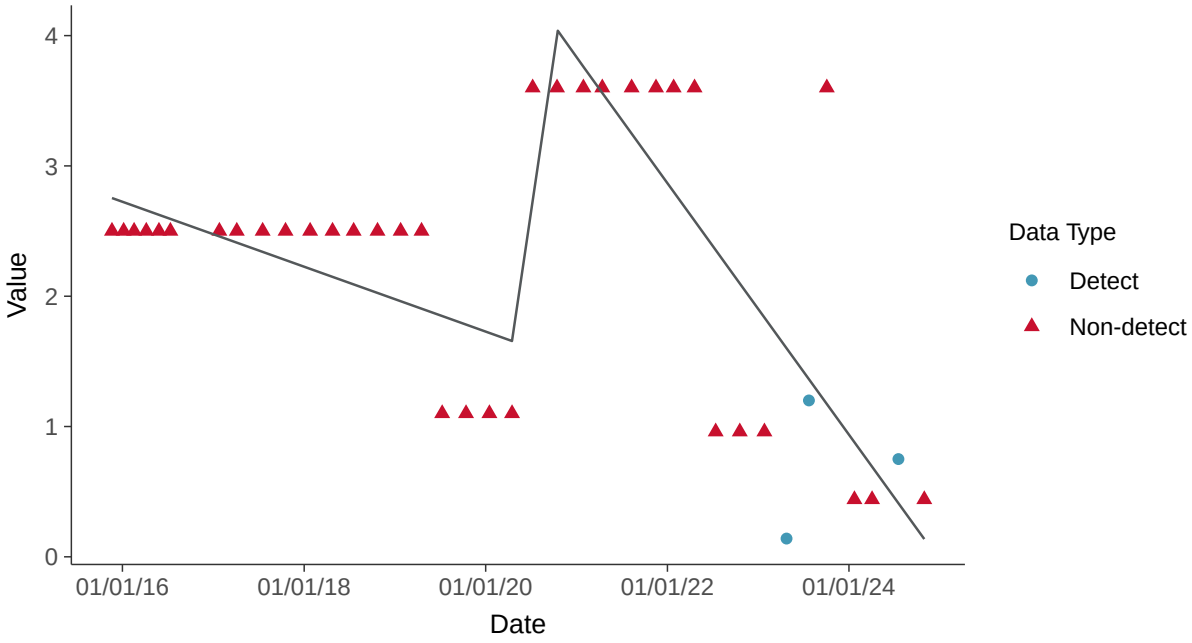
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-1 (ug/L)

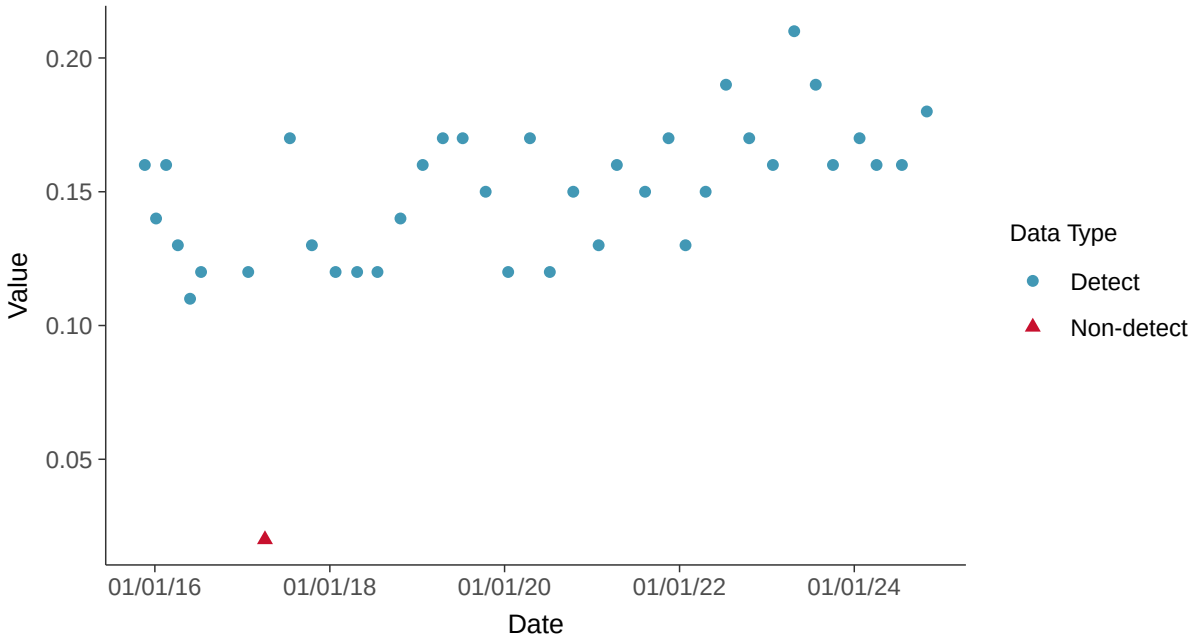


App. IV: Fluoride, MW-1

ID: 01_03_112

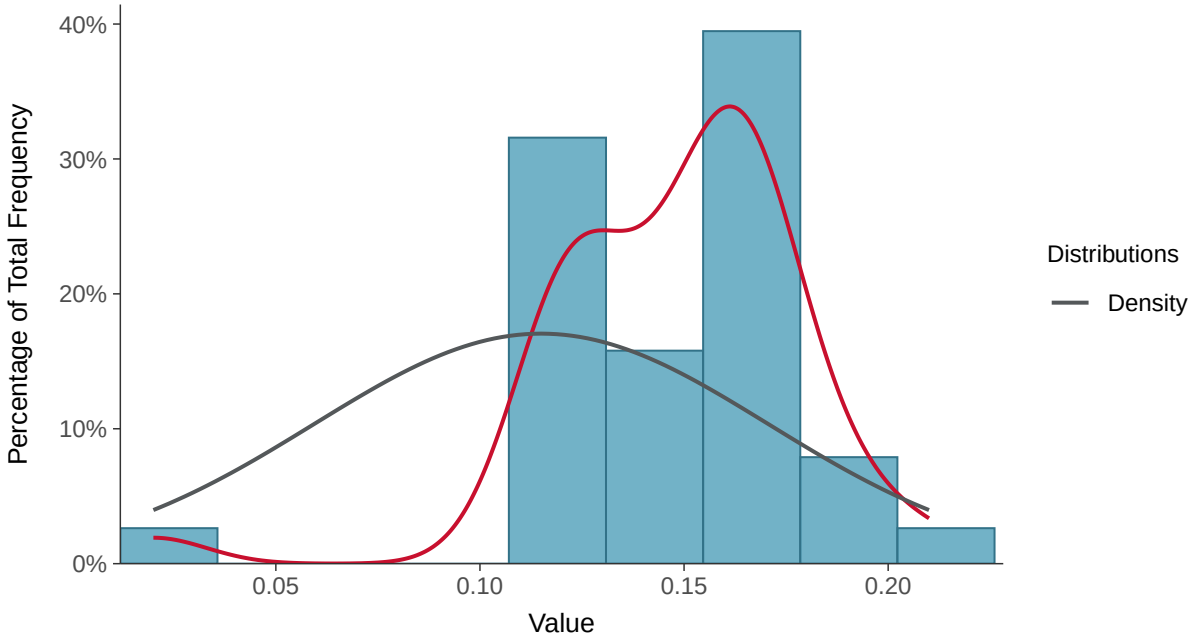
Scatter Plot

Fluoride, MW-1 (mg/L)



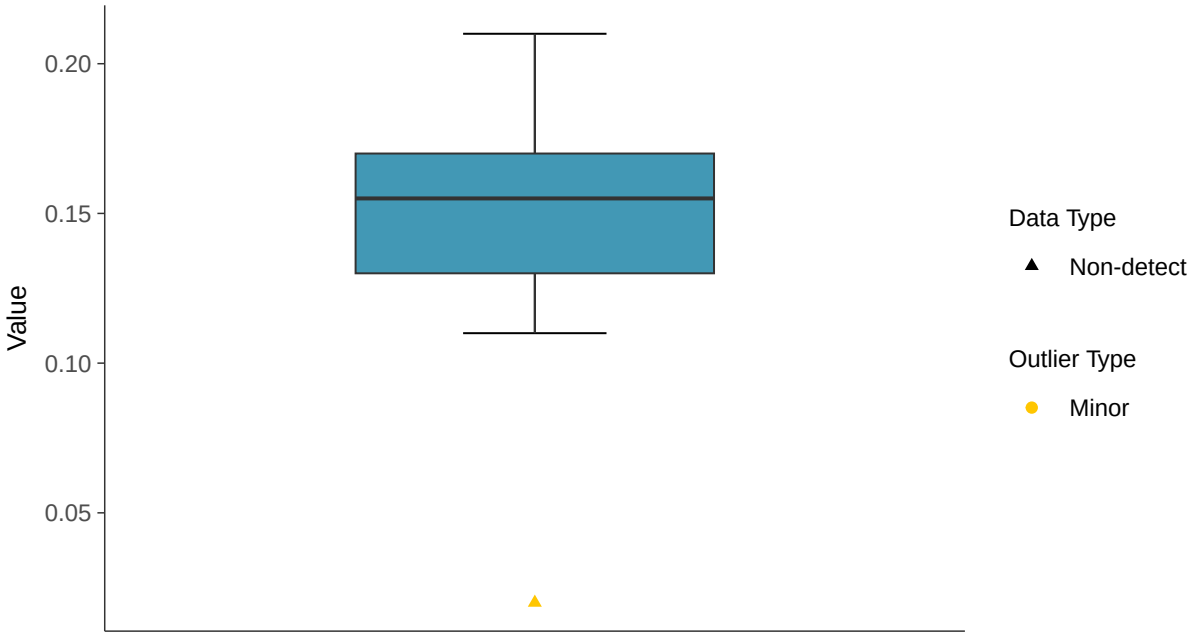
Histogram

Fluoride, MW-1 (mg/L)



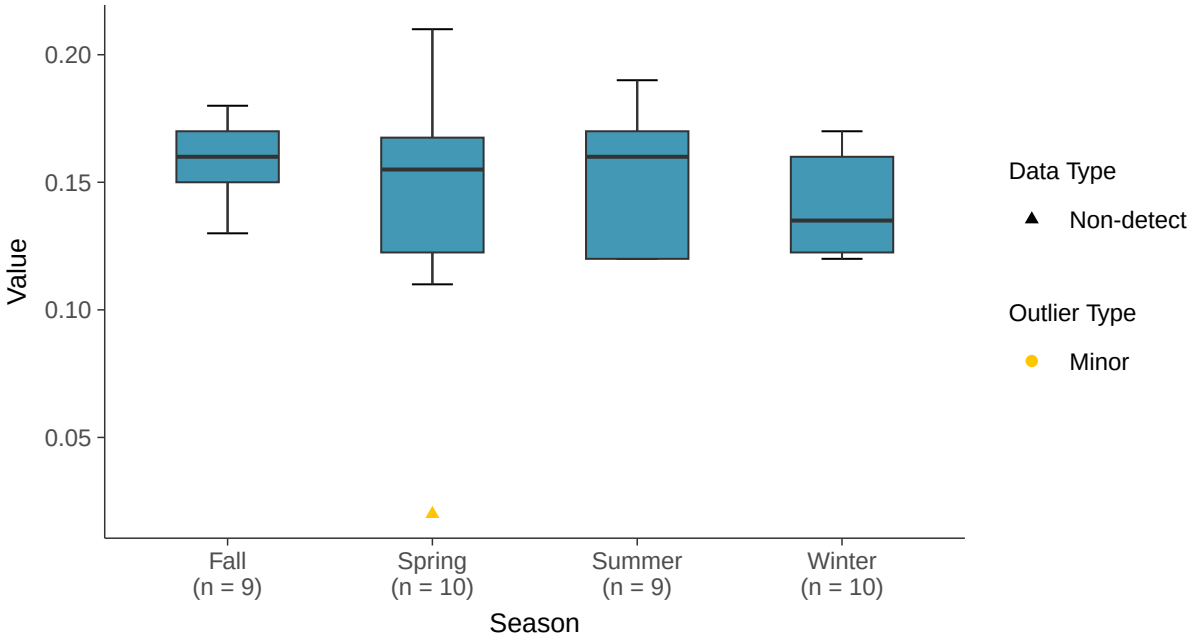
Boxplot

Fluoride, MW-1 (mg/L)



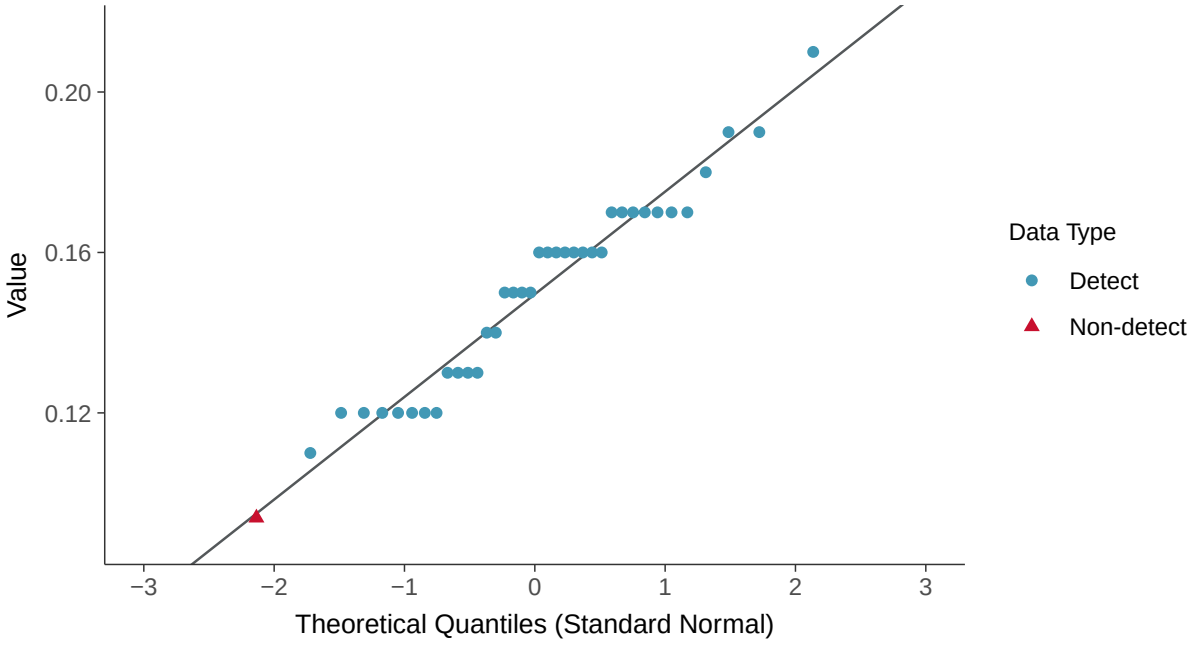
Boxplot by Season

Fluoride, MW-1 (mg/L)



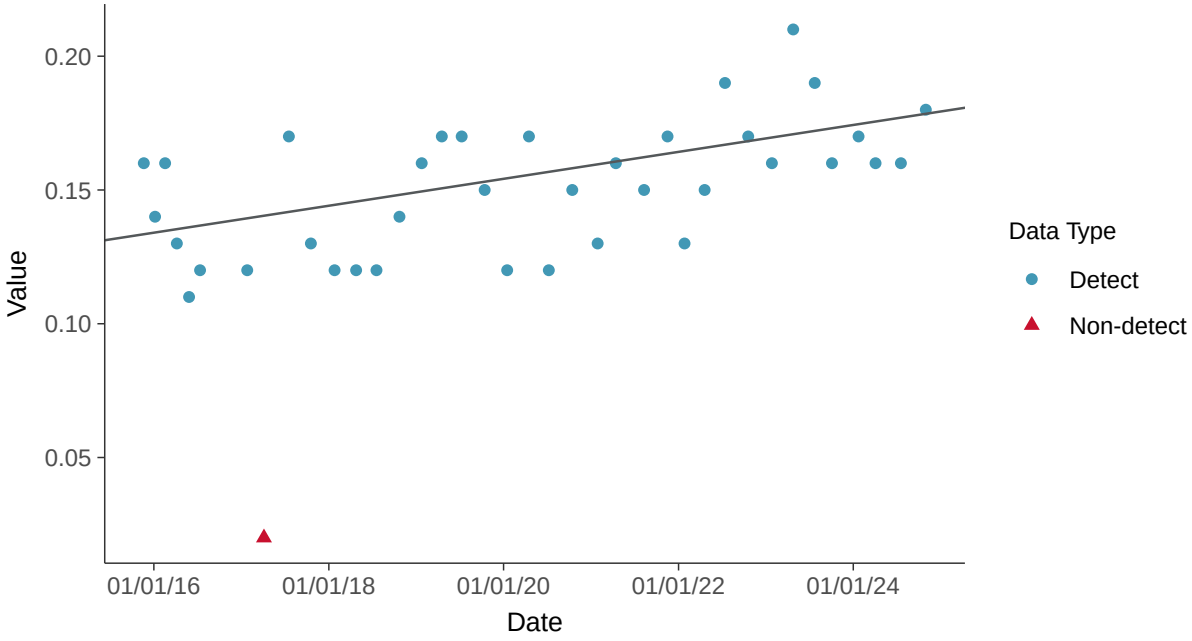
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-1 (mg/L)



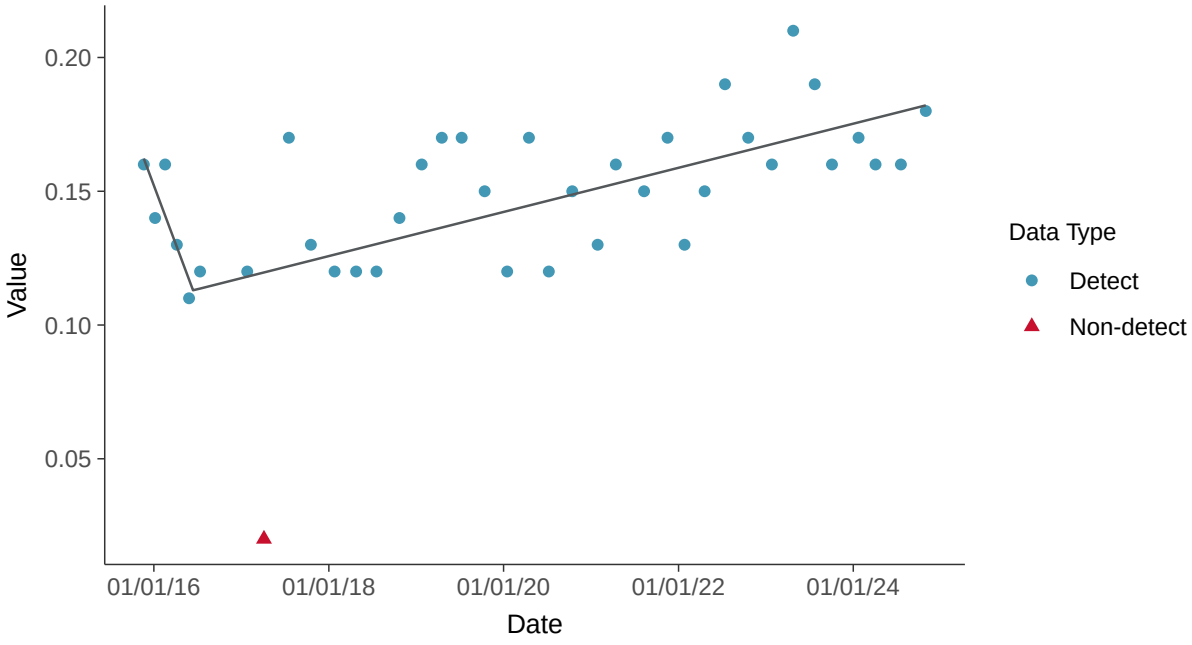
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-1 (mg/L)



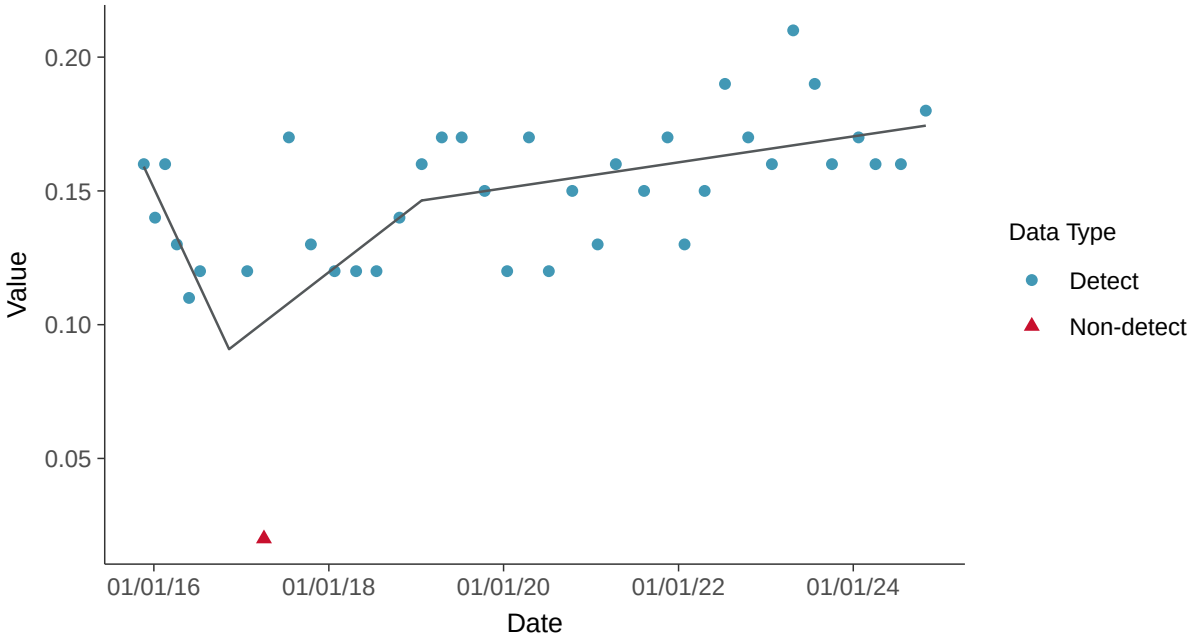
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-1 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-1 (mg/L)

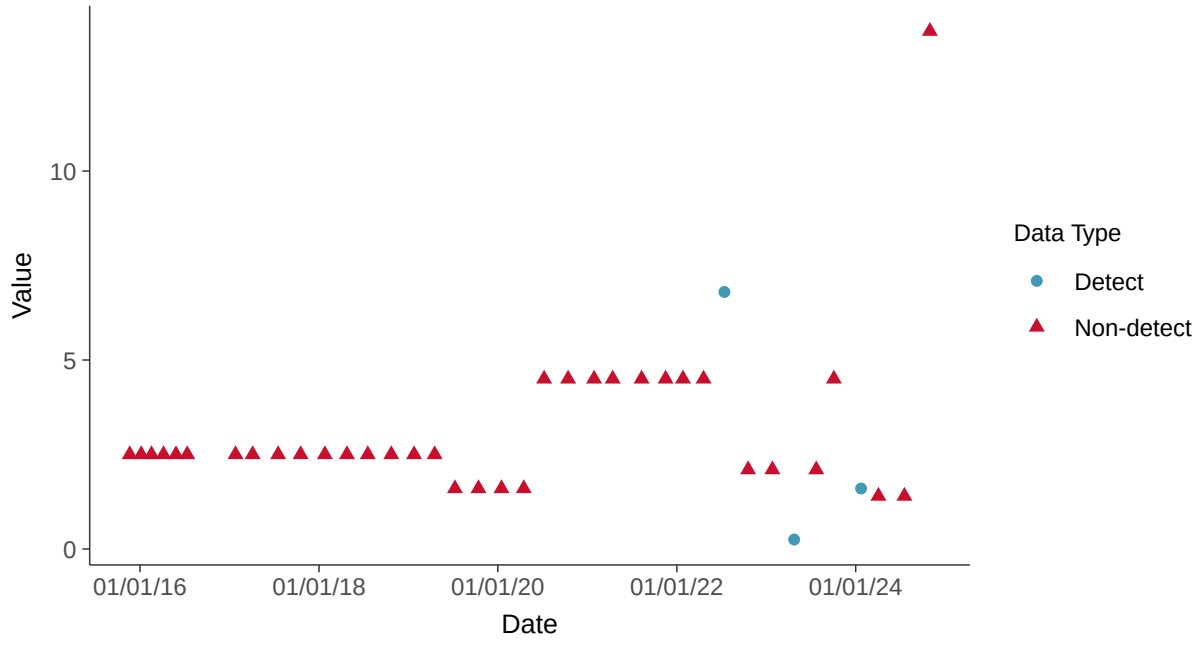


App. IV: Lead, MW-1

ID: 01_03_113

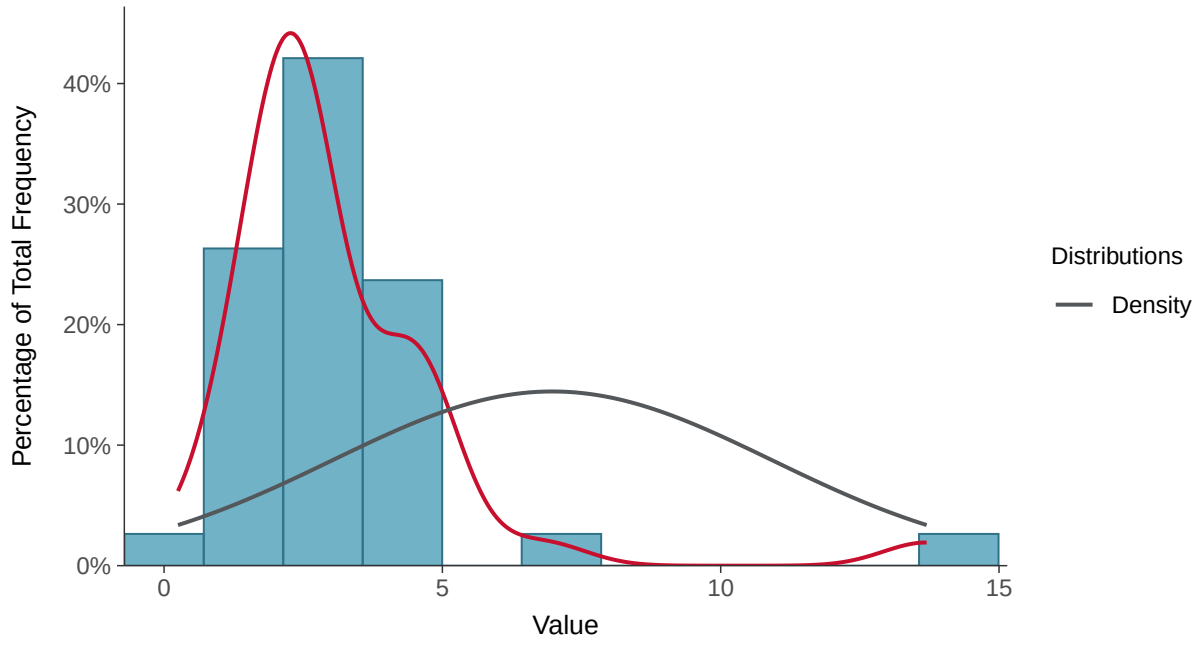
Scatter Plot

Lead, MW-1 (ug/L)



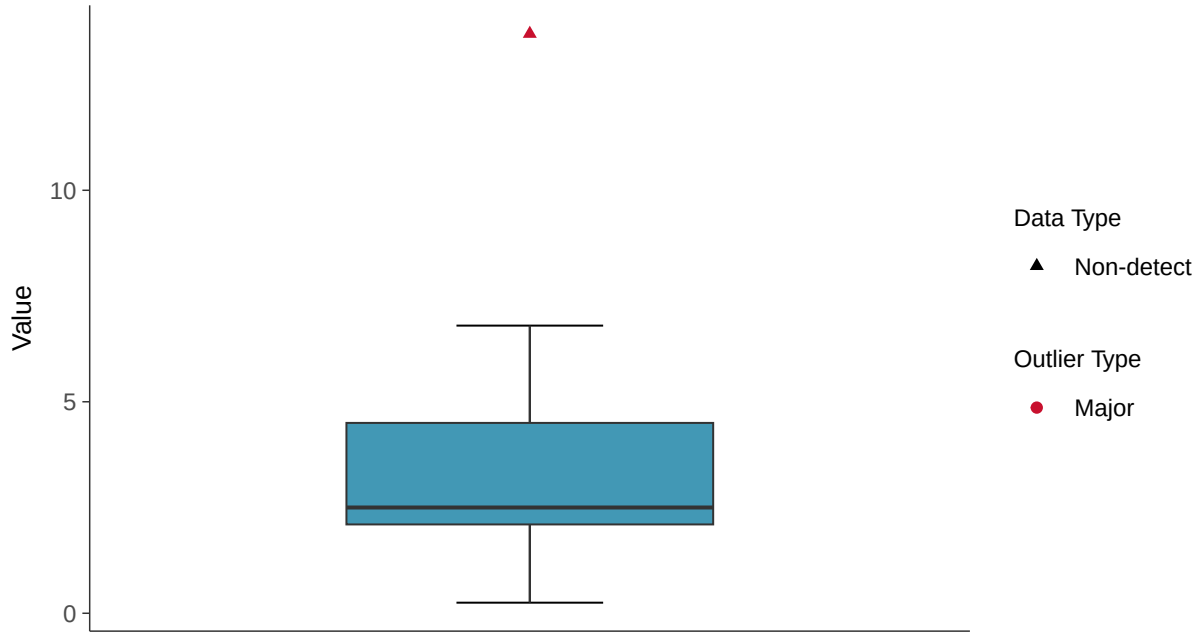
Histogram

Lead, MW-1 (ug/L)



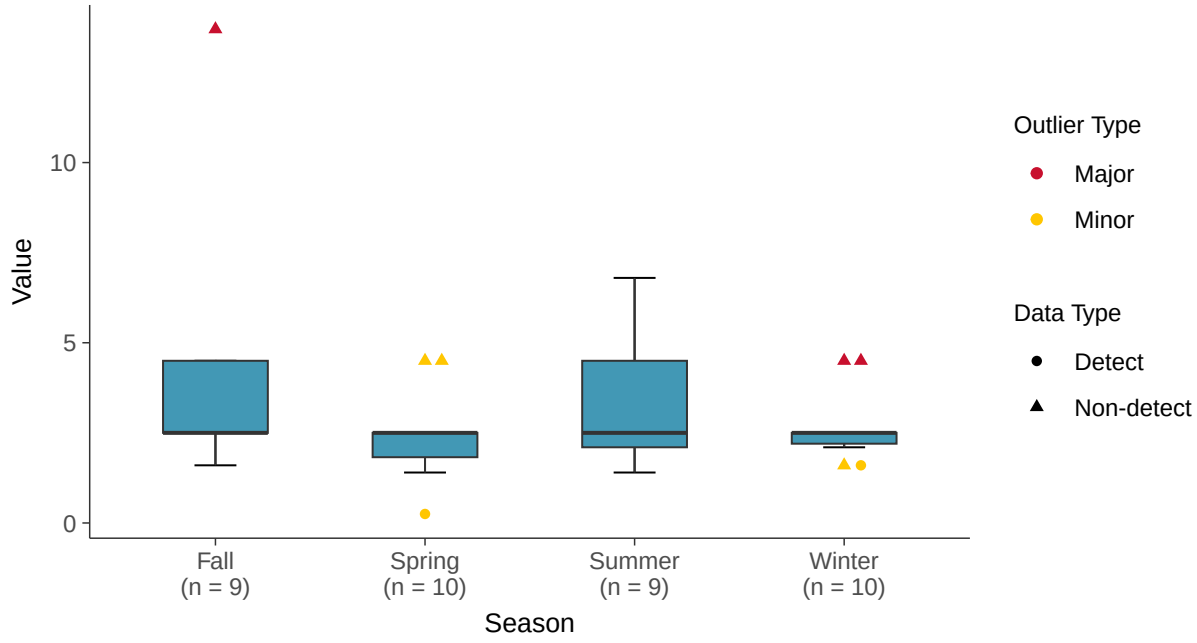
Boxplot

Lead, MW-1 (ug/L)



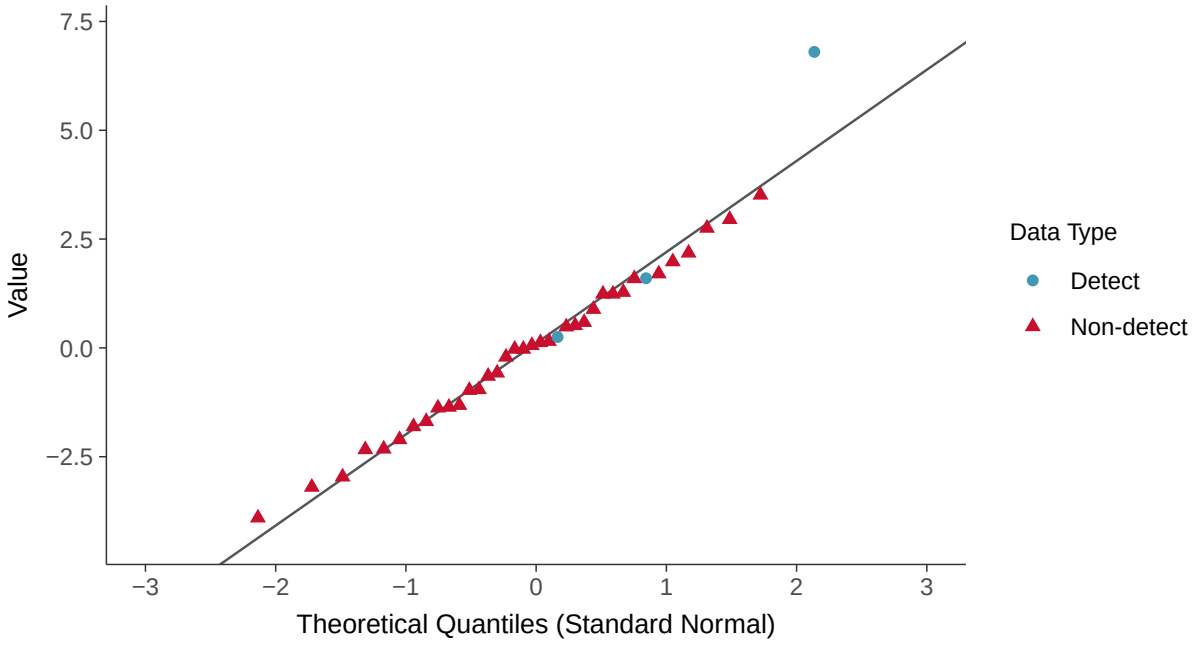
Boxplot by Season

Lead, MW-1 (ug/L)



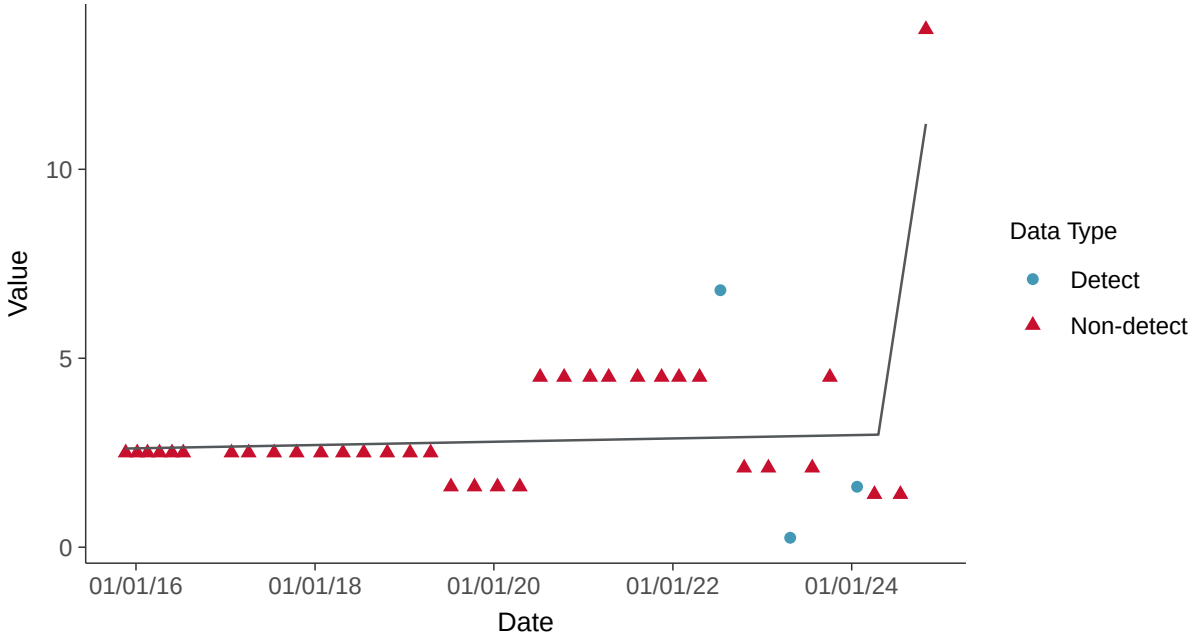
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-1 (ug/L)



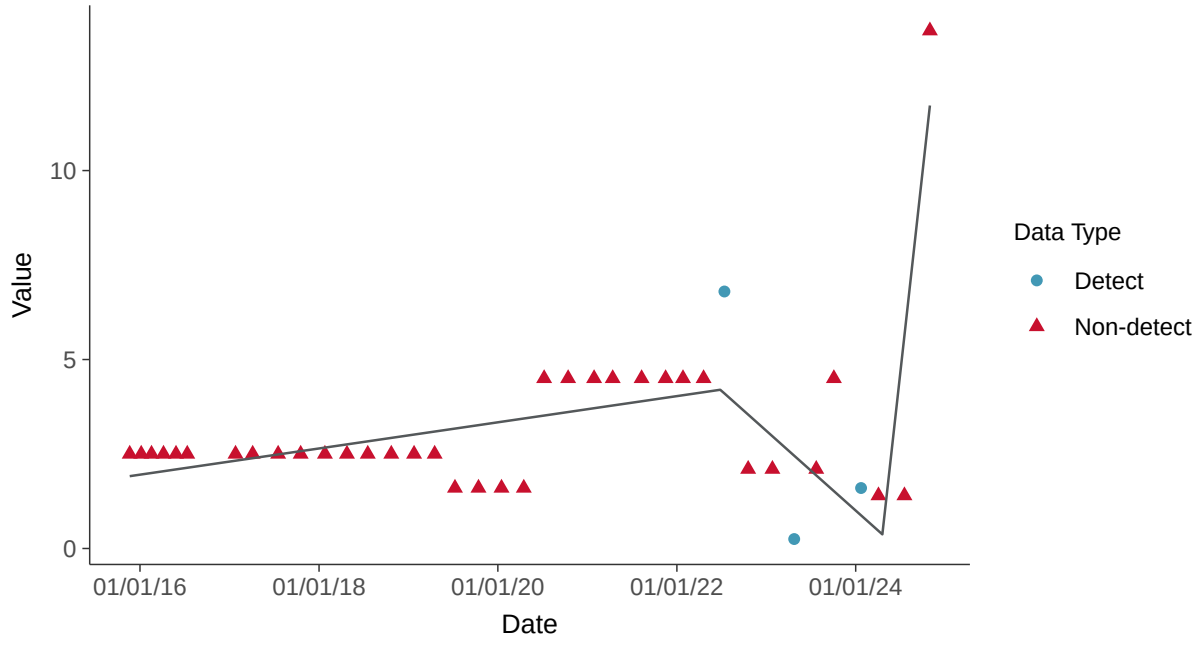
Trend Regression: Piecewise Linear-Linear

Lead, MW-1 (ug/L)



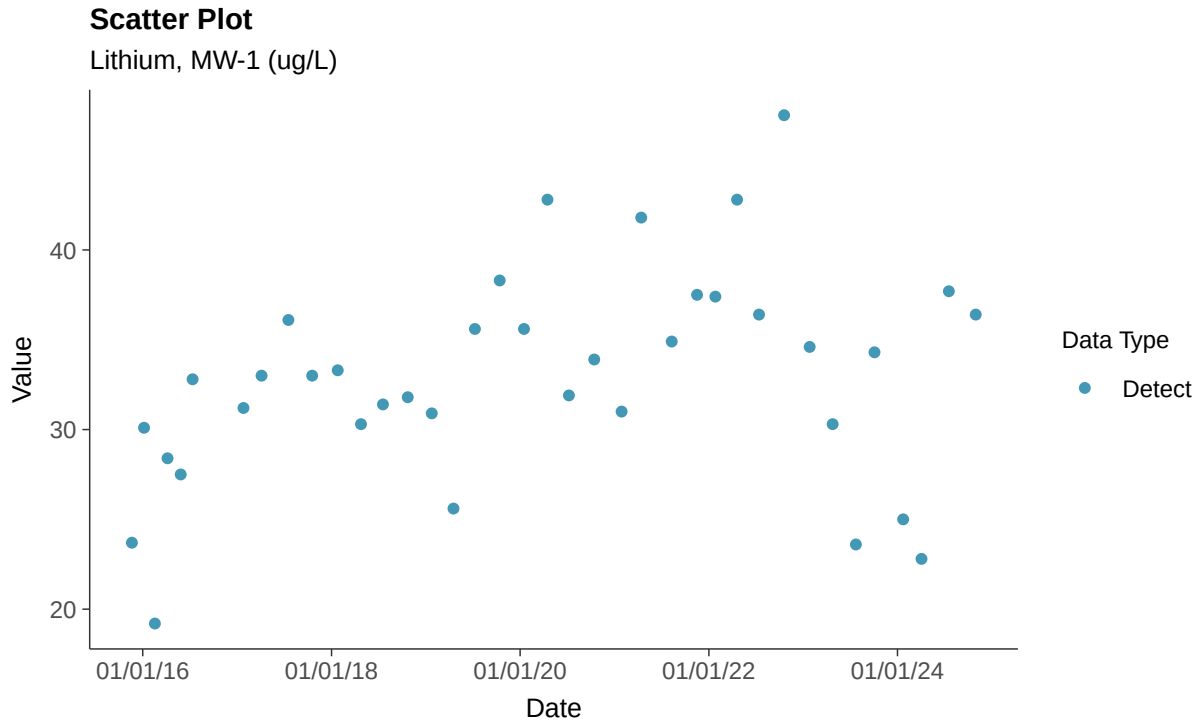
Trend Regression: Piecewise Linear-Linear-Linear

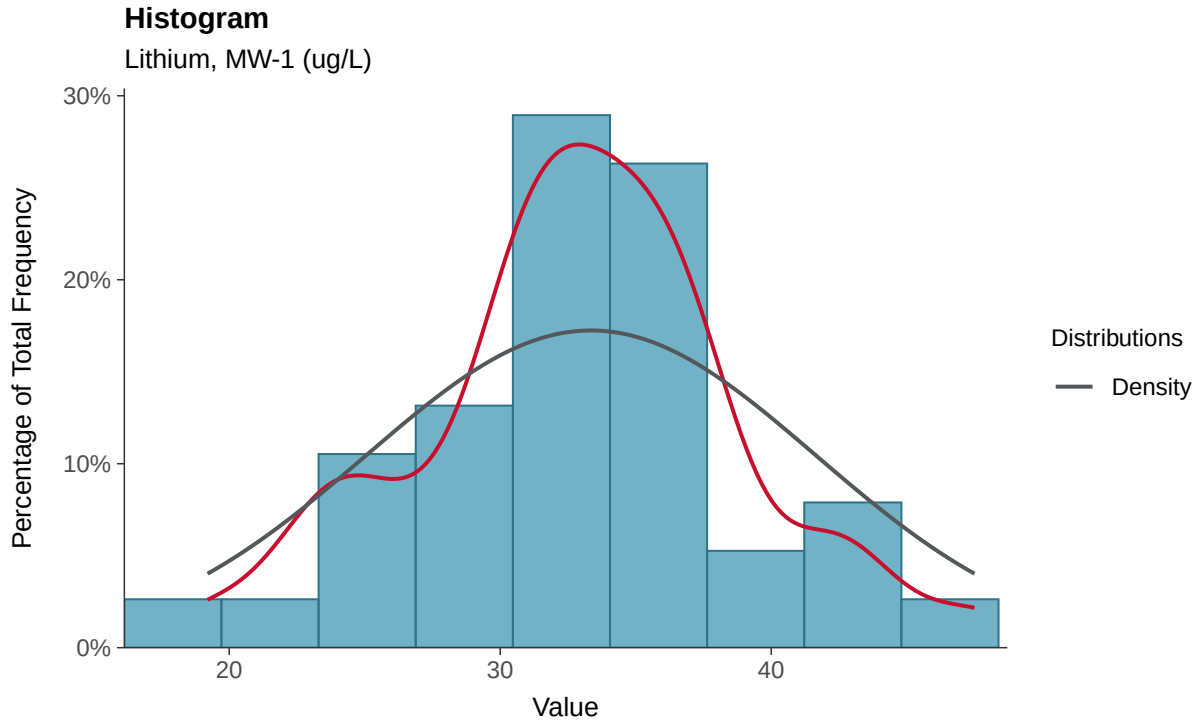
Lead, MW-1 (ug/L)



App. IV: Lithium, MW-1

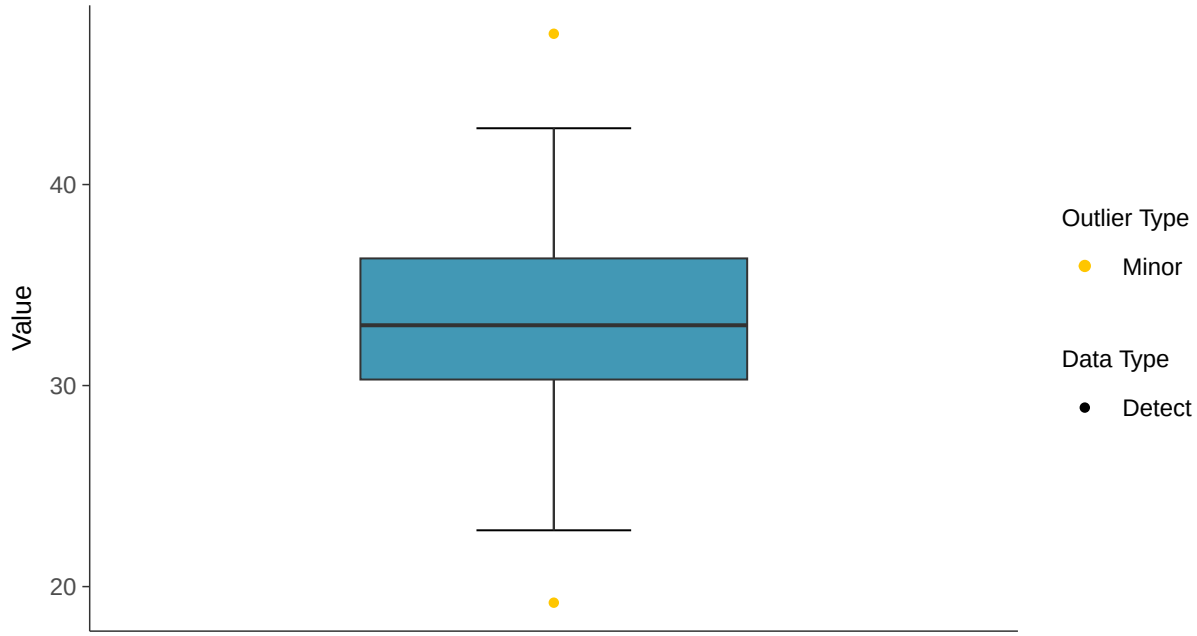
ID: 01_03_114





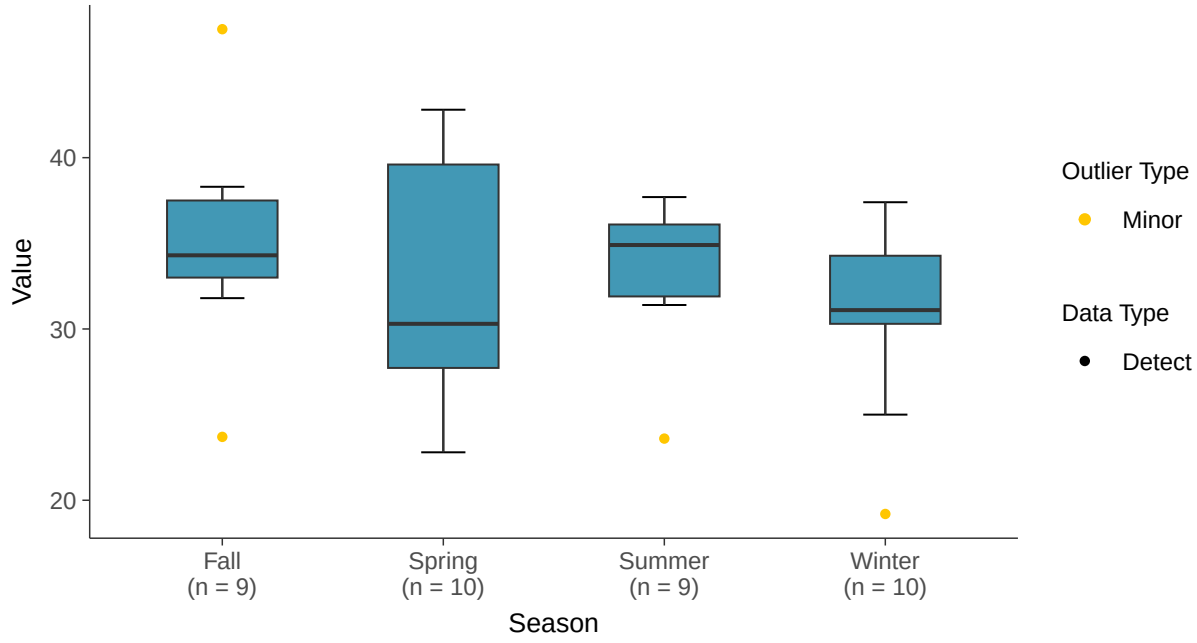
Boxplot

Lithium, MW-1 (ug/L)



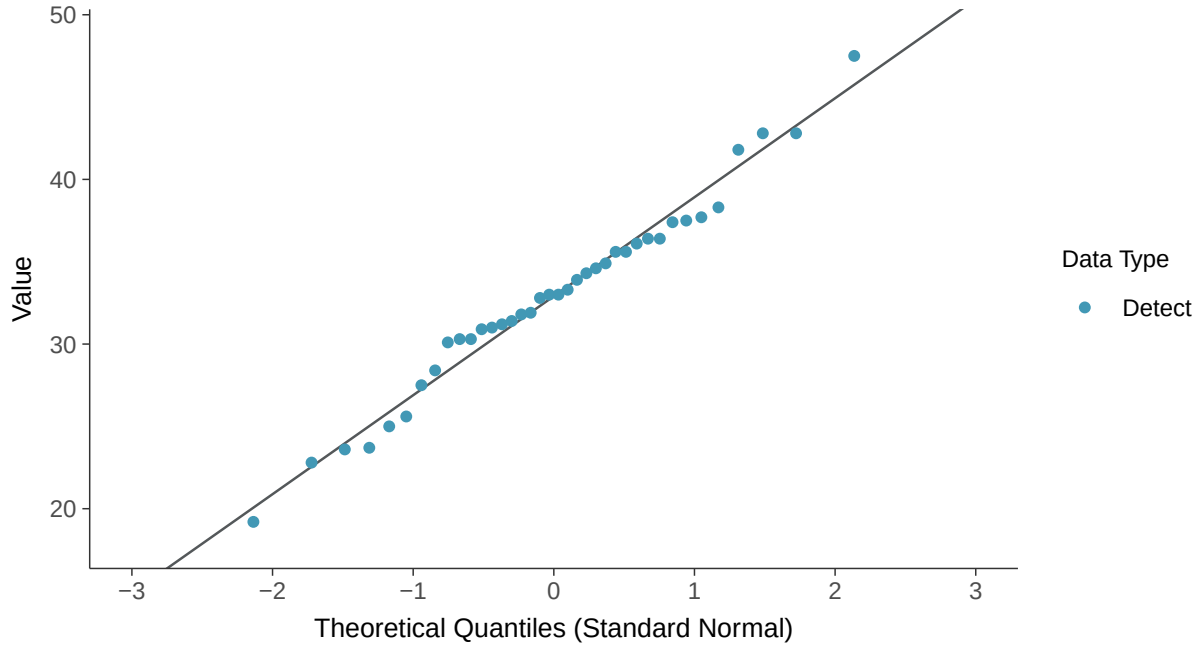
Boxplot by Season

Lithium, MW-1 (ug/L)



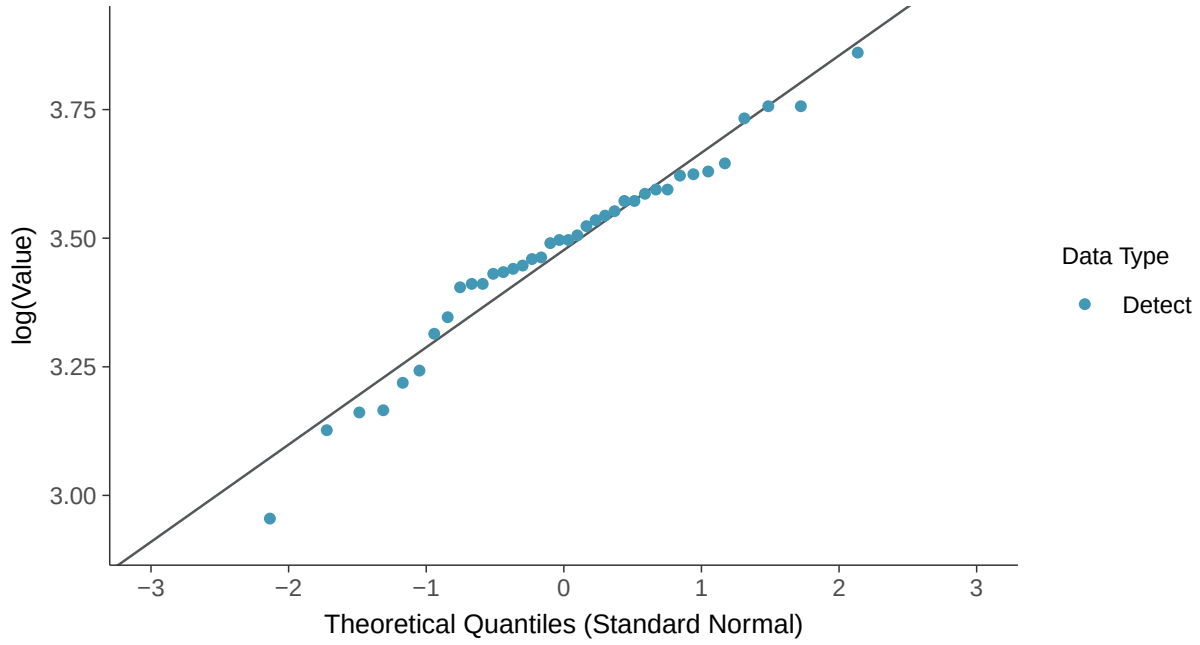
Normal Q-Q plot

Lithium, MW-1 (ug/L)



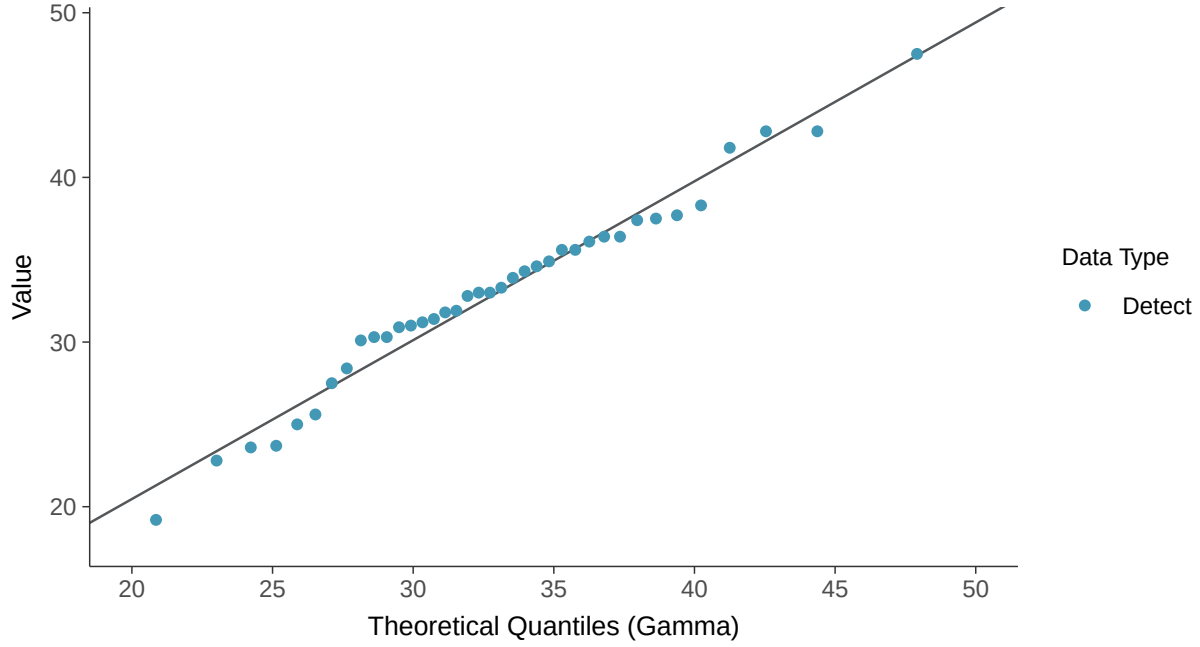
Lognormal Q-Q plot

Lithium, MW-1 (ug/L)



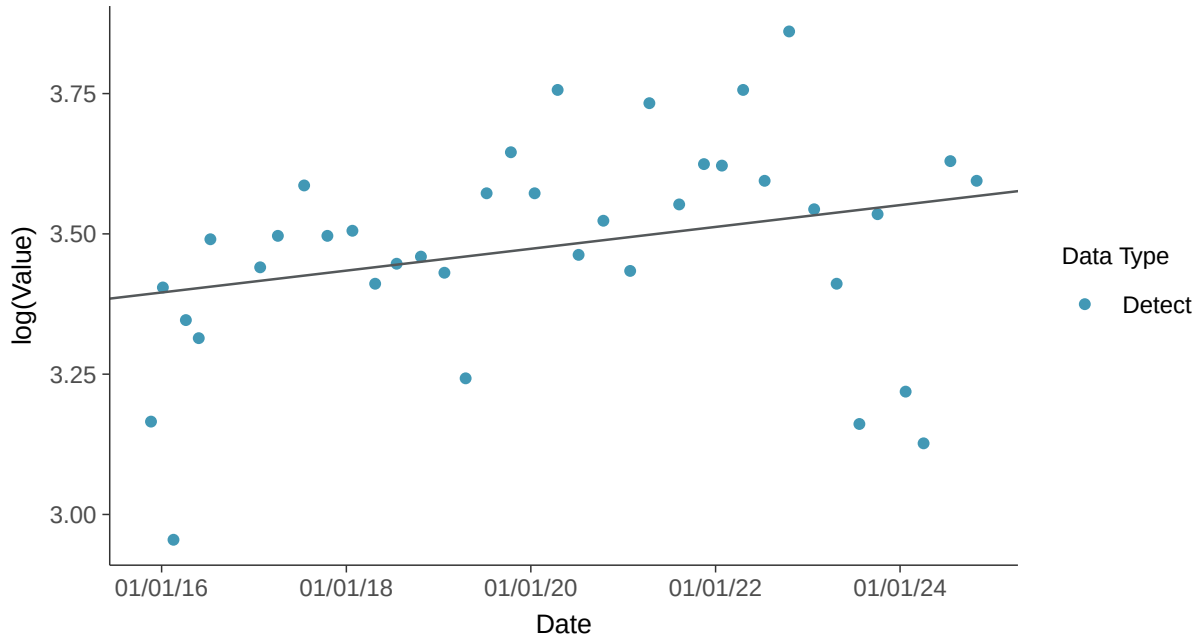
Gamma Q-Q plot

Lithium, MW-1 (ug/L)



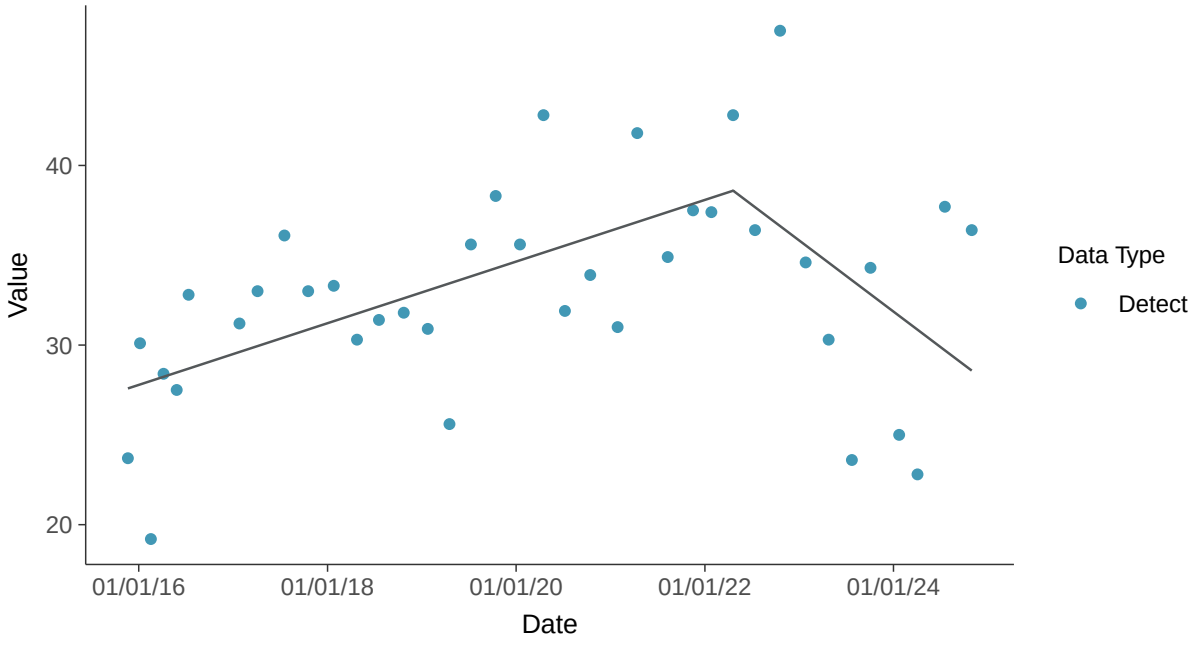
Trend Regression: Lognormal MLE

Lithium, MW-1 (ug/L)



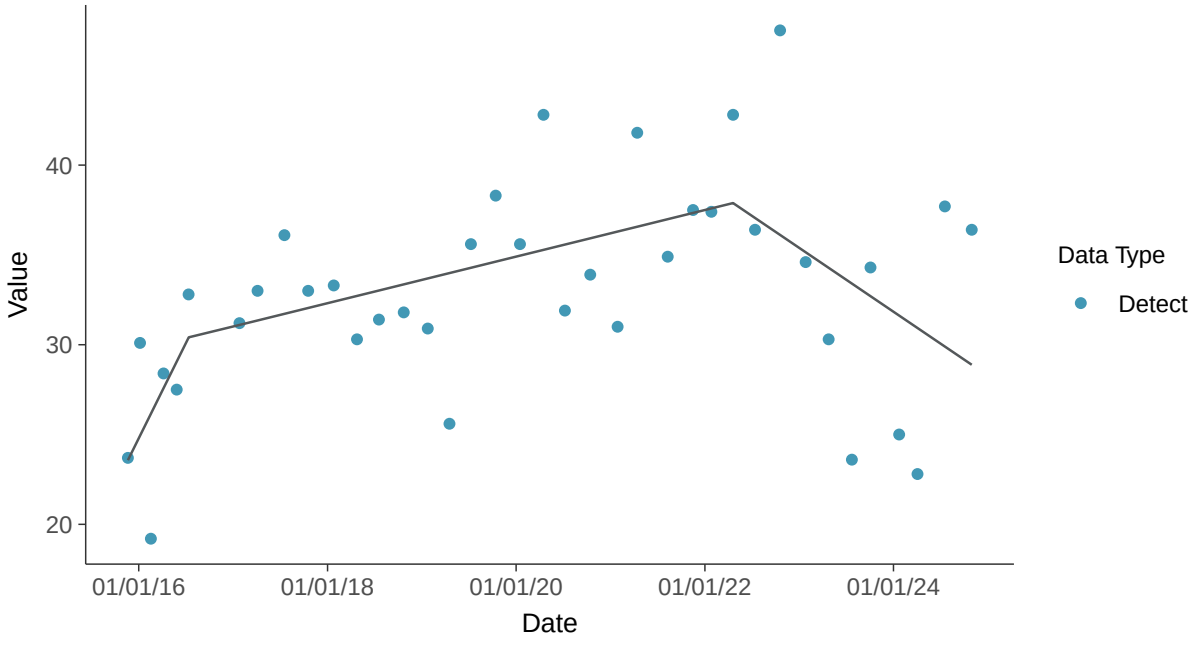
Trend Regression: Piecewise Linear-Linear

Lithium, MW-1 (ug/L)



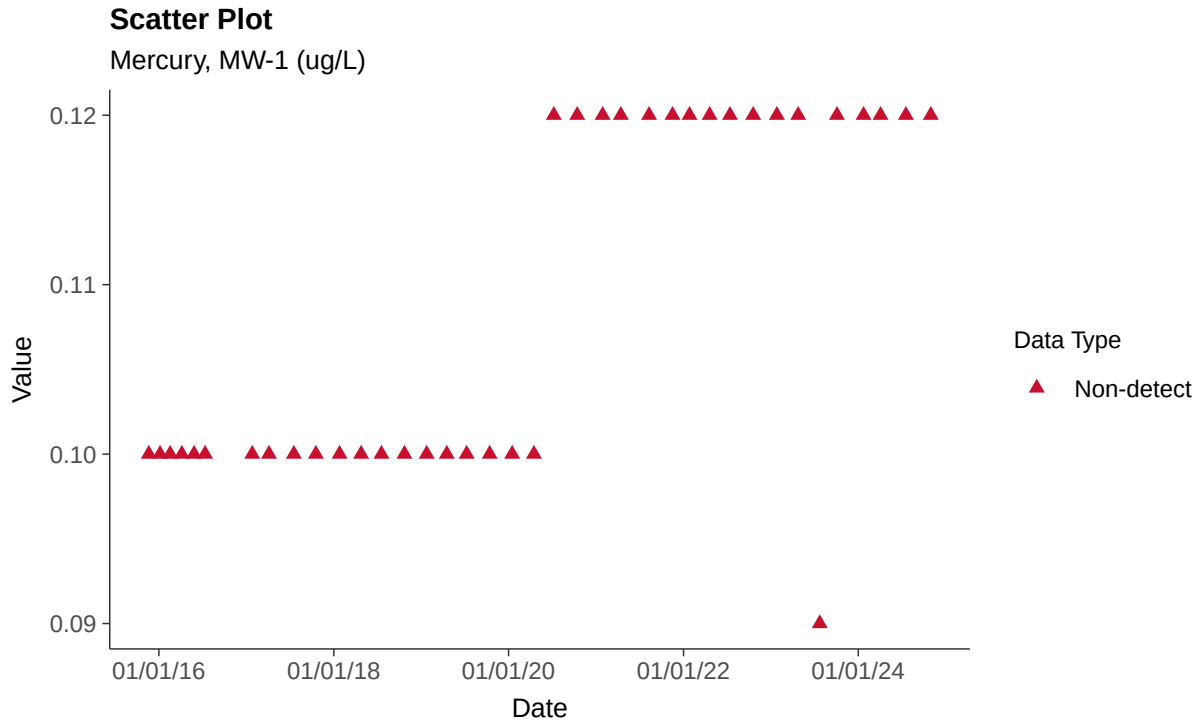
Trend Regression: Piecewise Linear-Linear-Linear

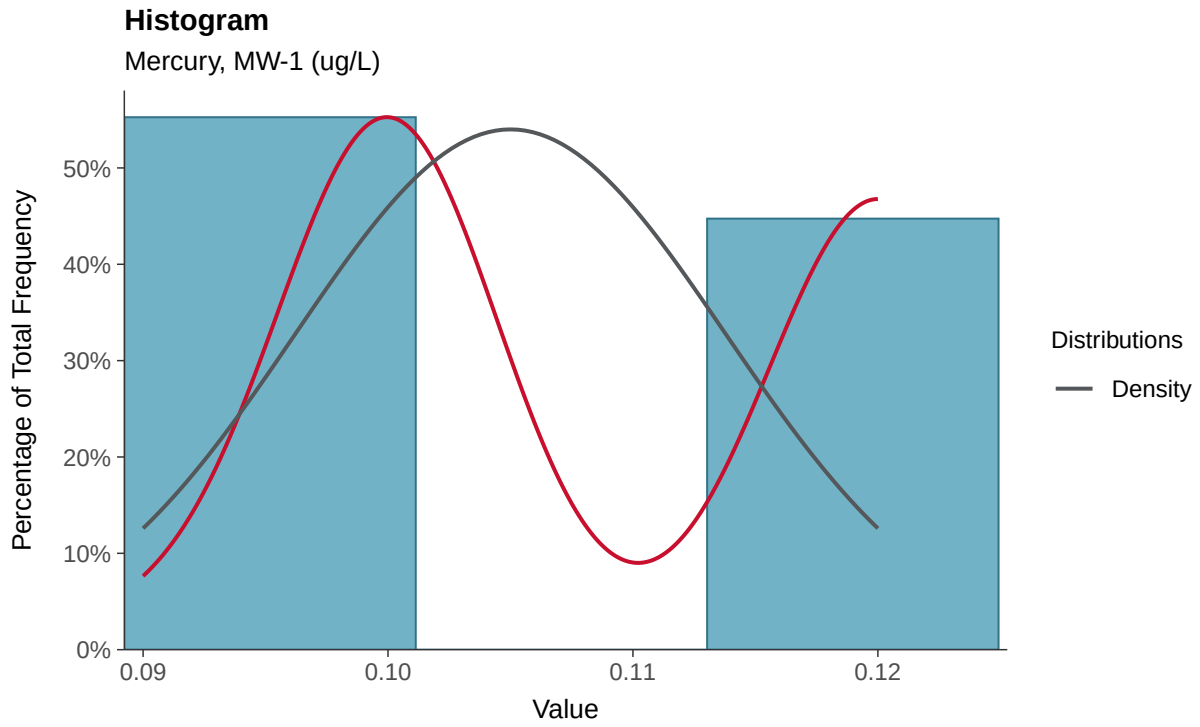
Lithium, MW-1 (ug/L)



App. IV: Mercury, MW-1

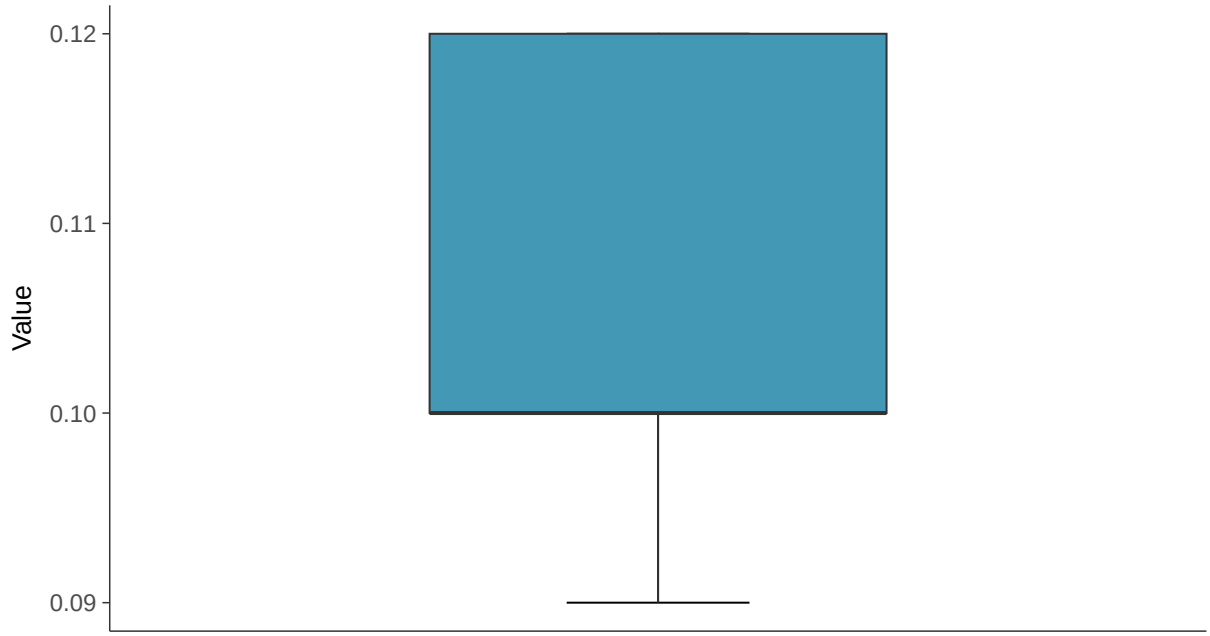
ID: 01_03_115





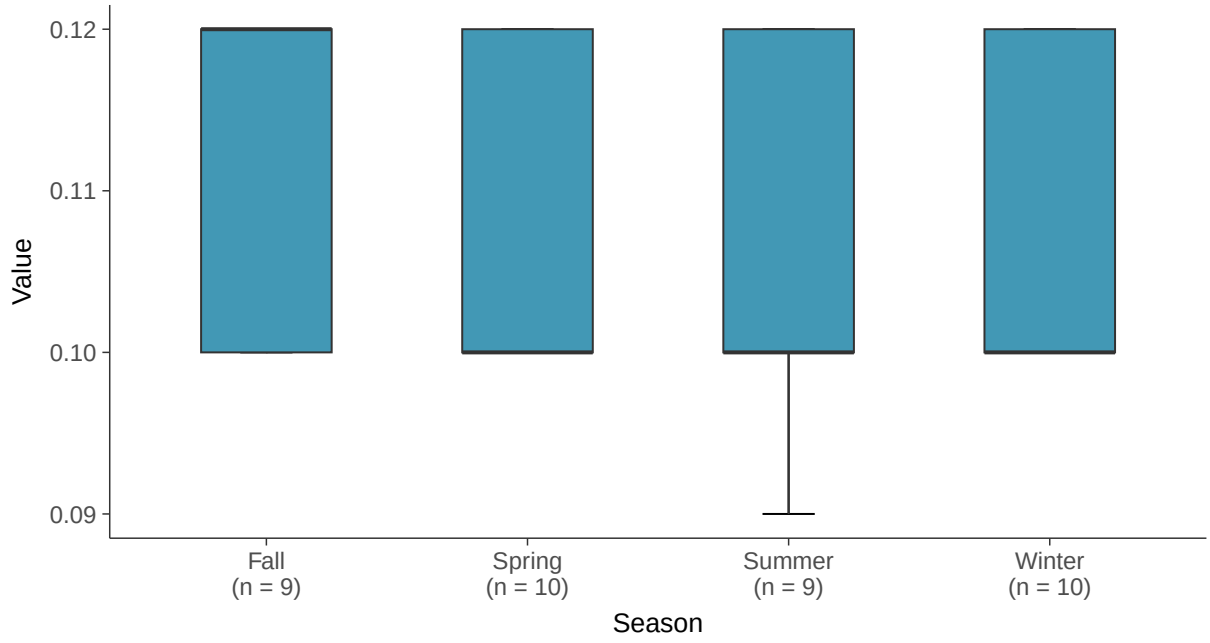
Boxplot

Mercury, MW-1 (ug/L)



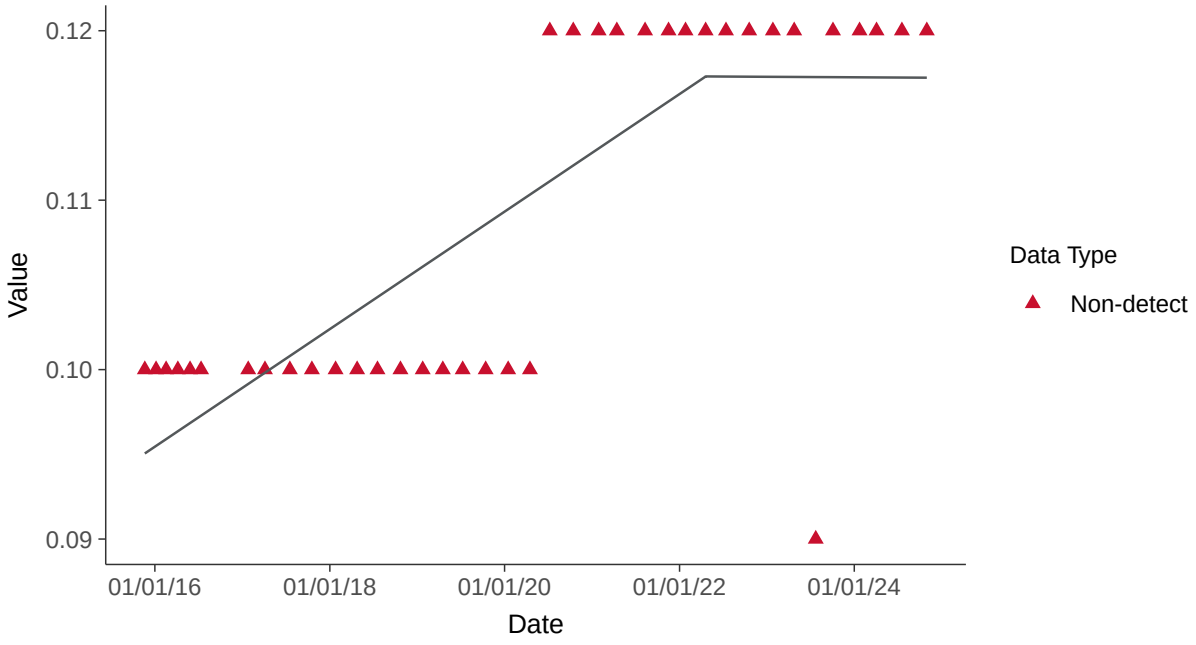
Boxplot by Season

Mercury, MW-1 (ug/L)



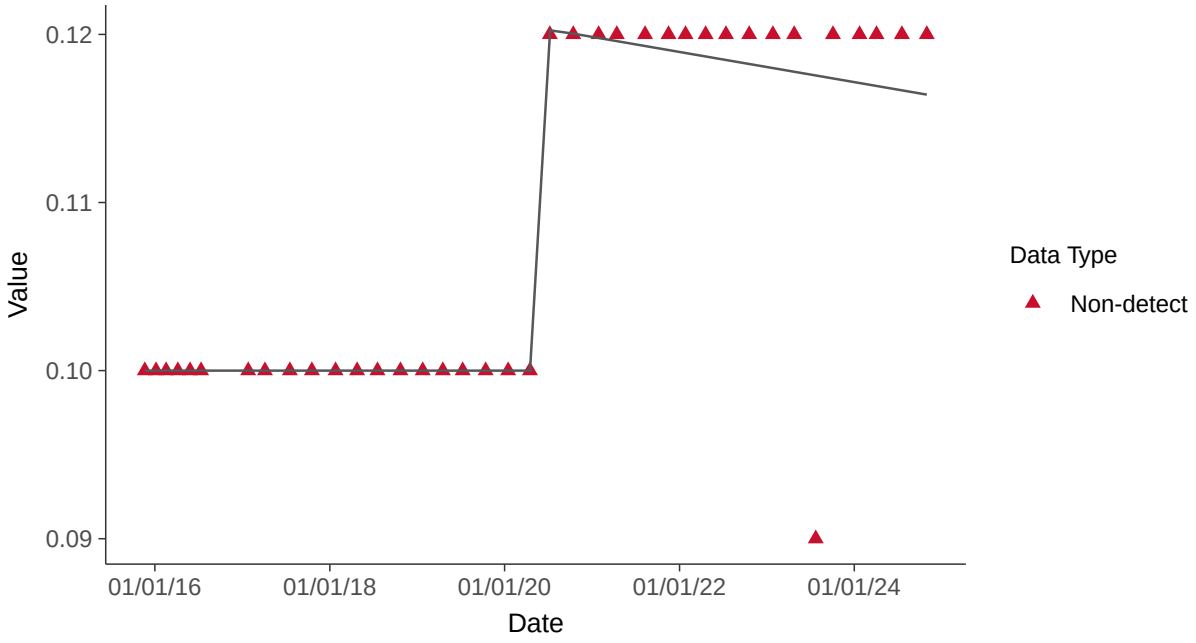
Trend Regression: Piecewise Linear-Linear

Mercury, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-1 (ug/L)

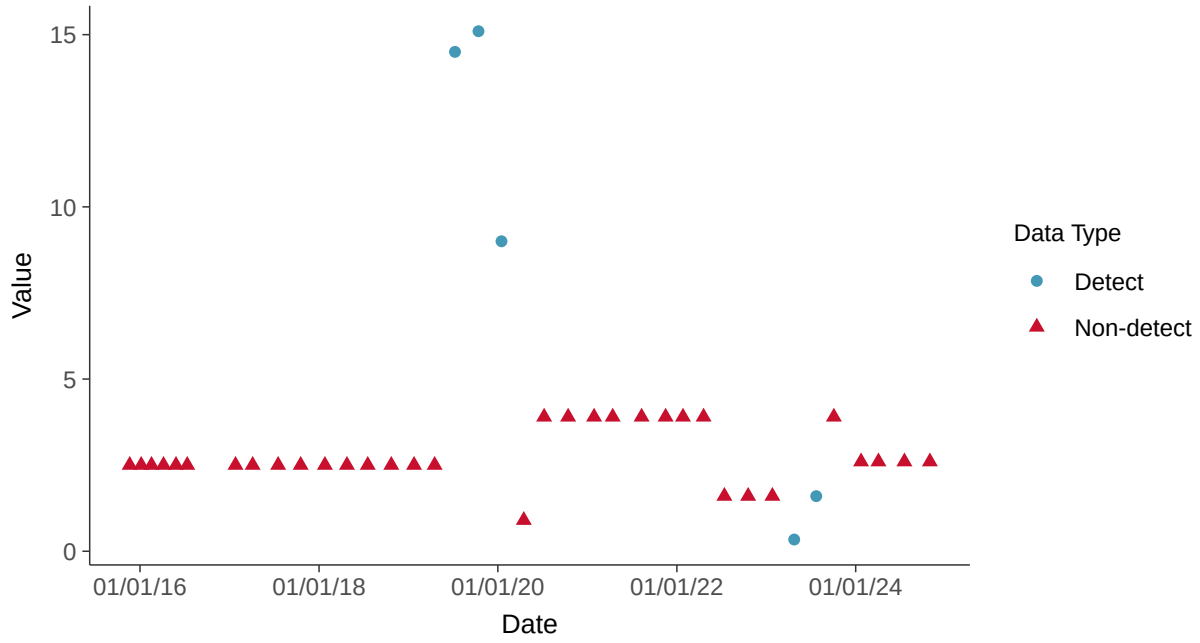


App. IV: Molybdenum, MW-1

ID: 01_03_116

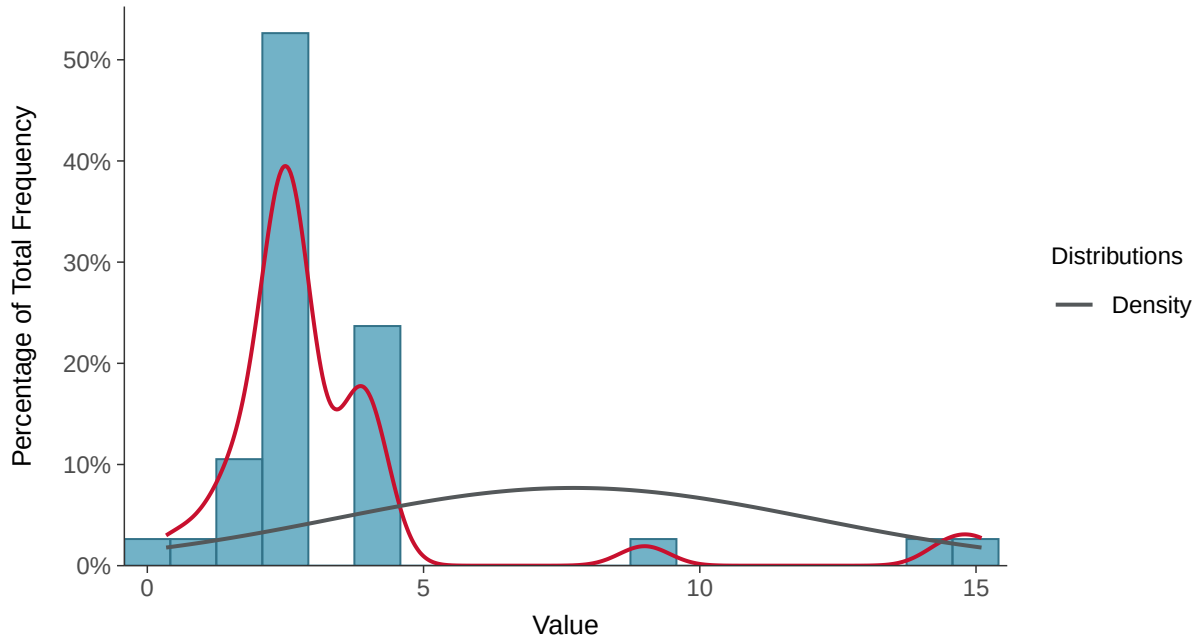
Scatter Plot

Molybdenum, MW-1 (ug/L)



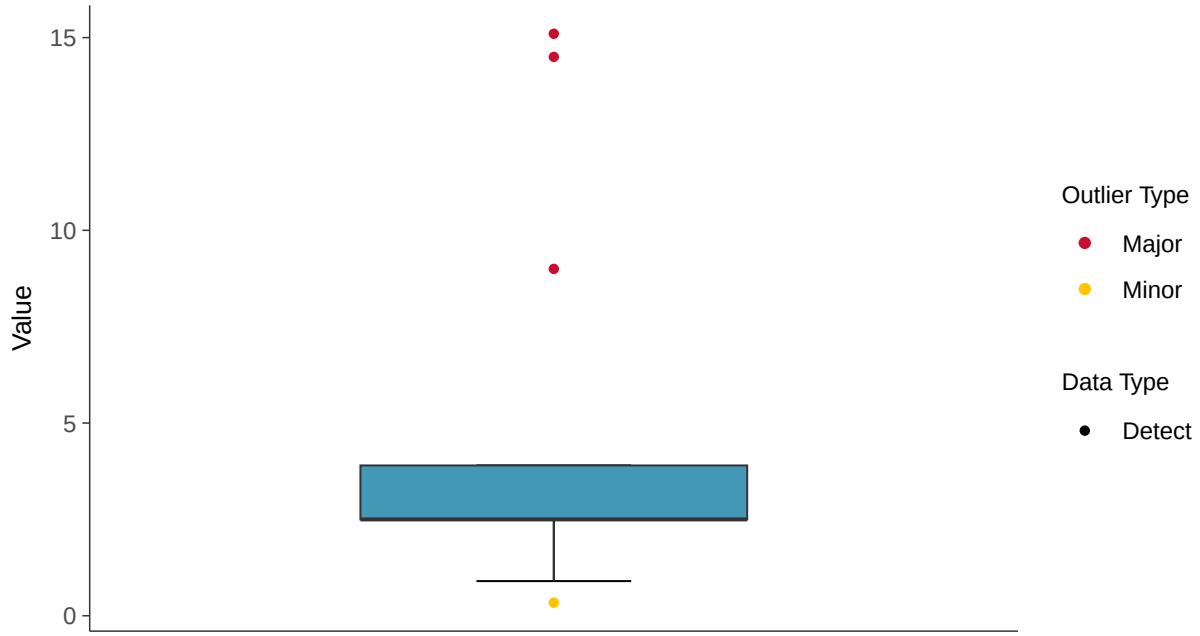
Histogram

Molybdenum, MW-1 (ug/L)



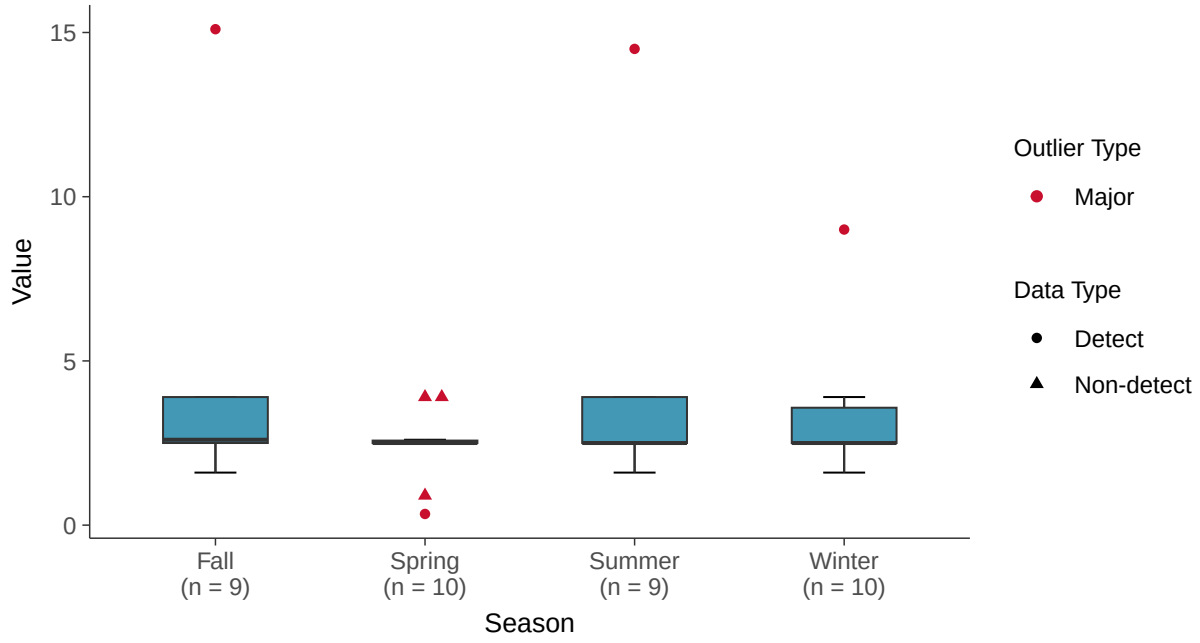
Boxplot

Molybdenum, MW-1 (ug/L)



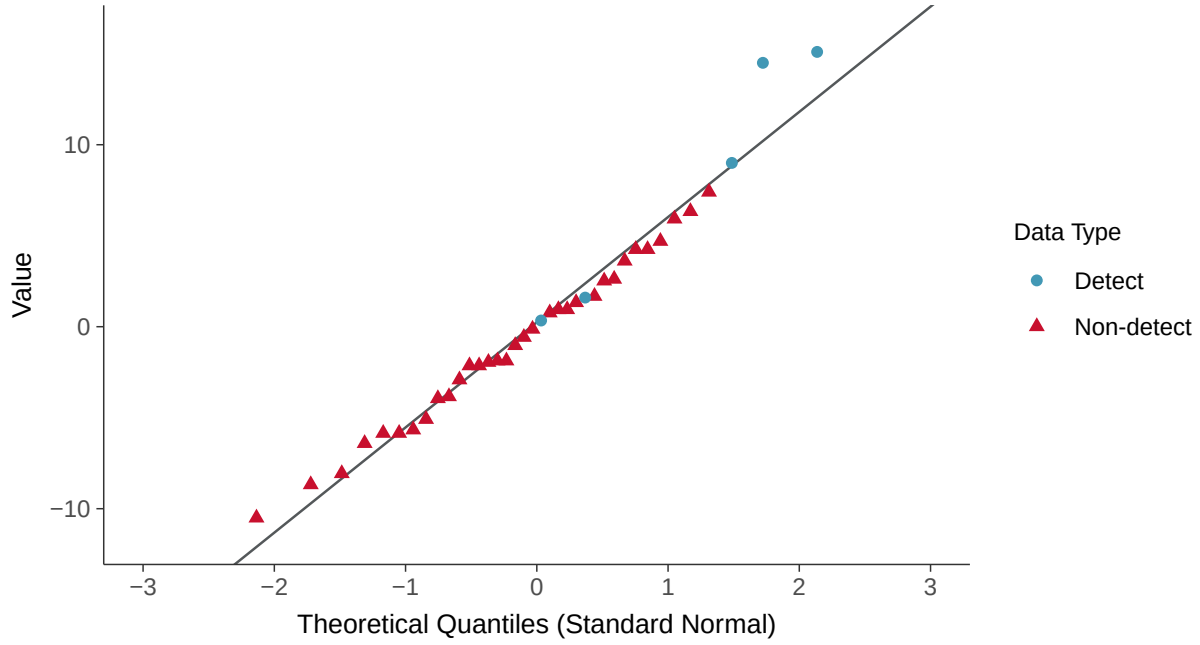
Boxplot by Season

Molybdenum, MW-1 (ug/L)



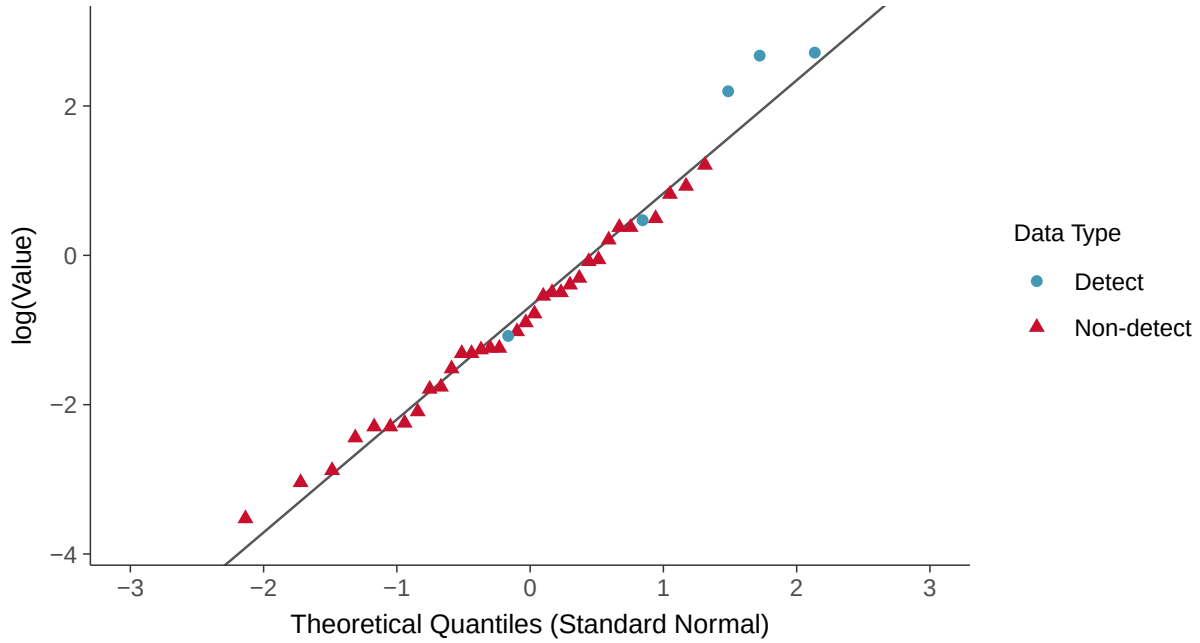
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



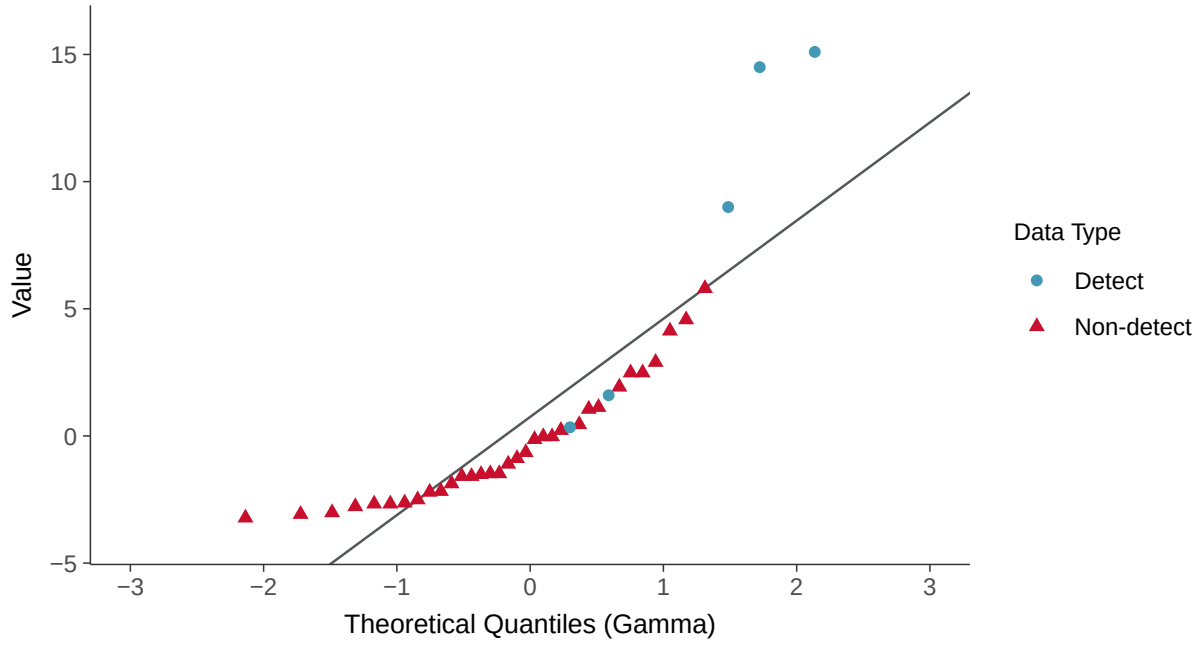
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



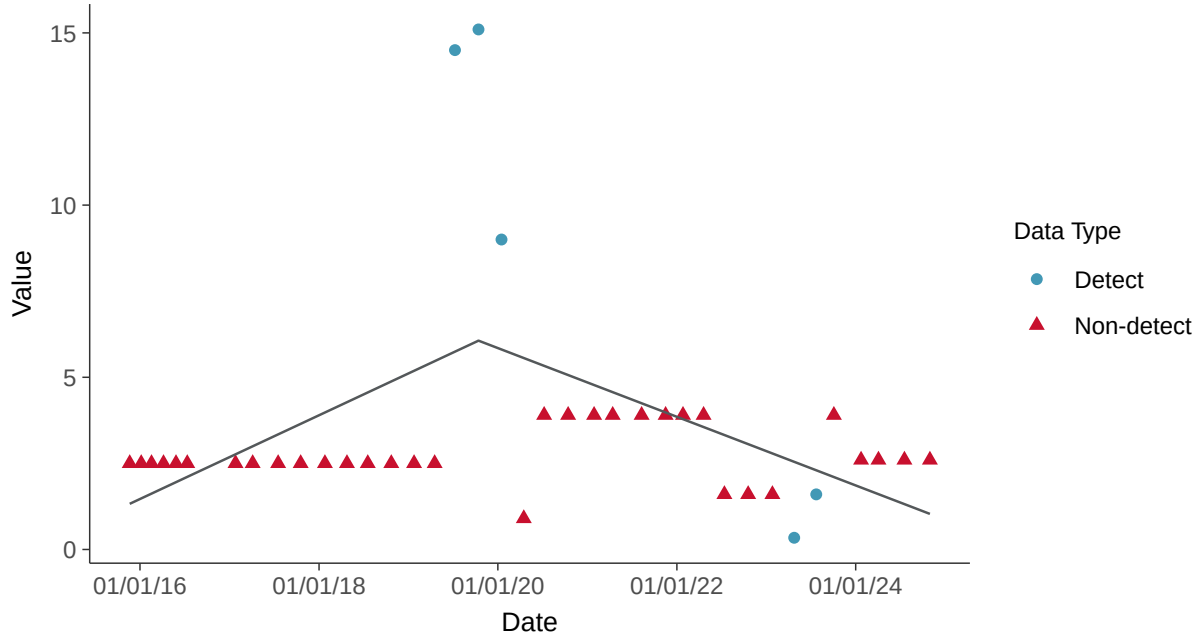
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



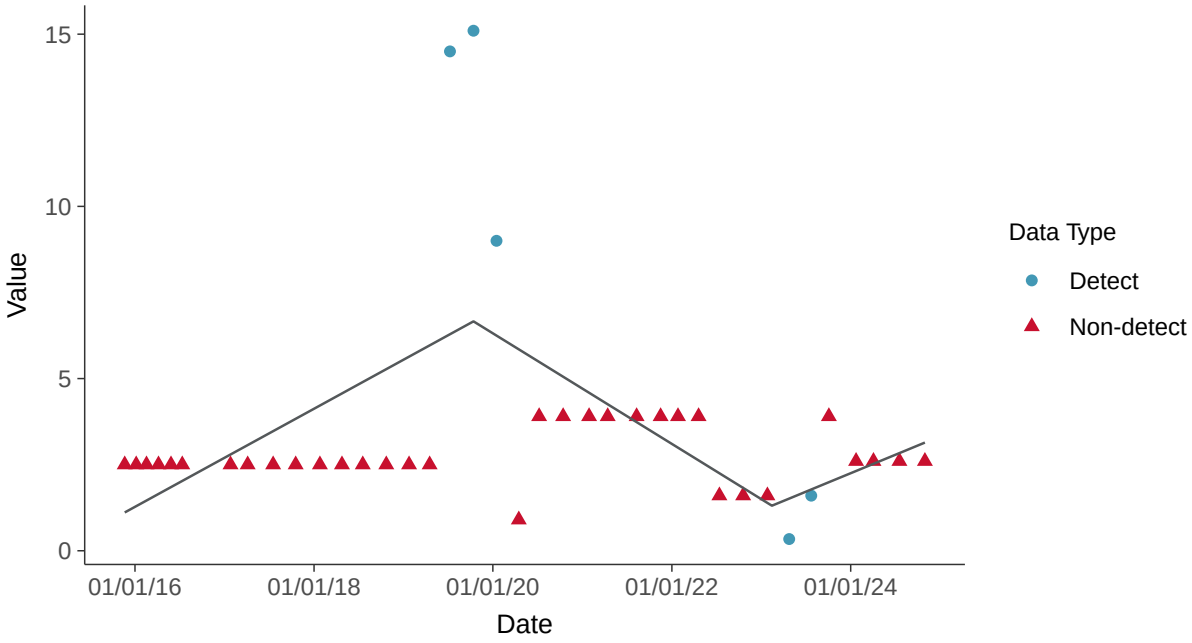
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-1 (ug/L)

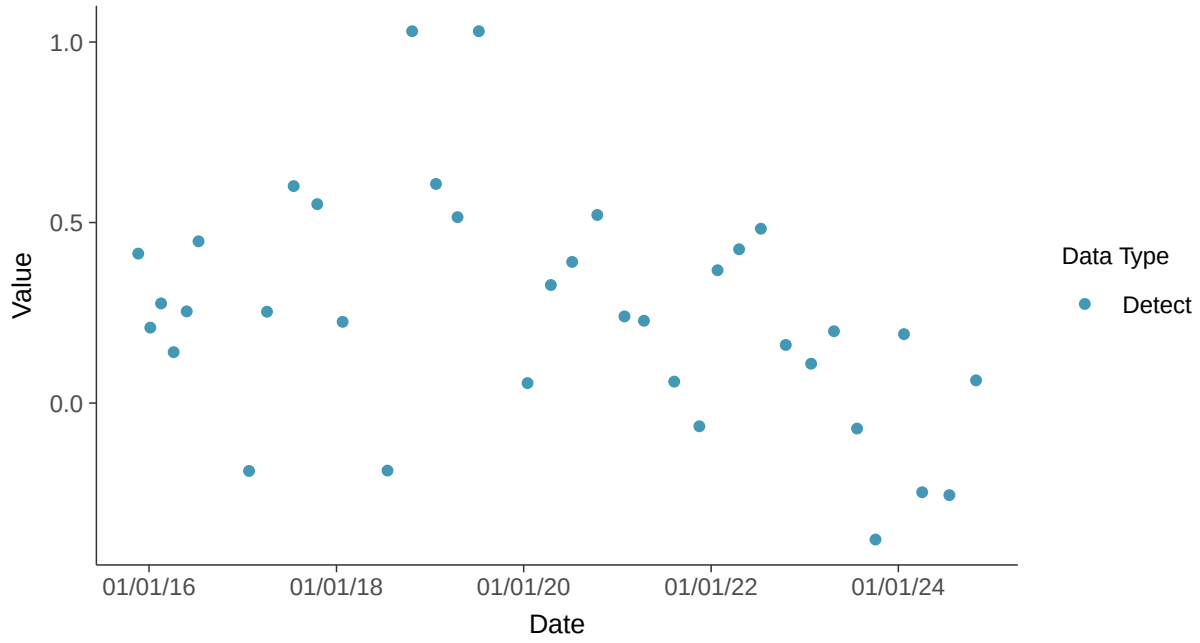


App. IV: Radium-226, MW-1

ID: 01_03_119

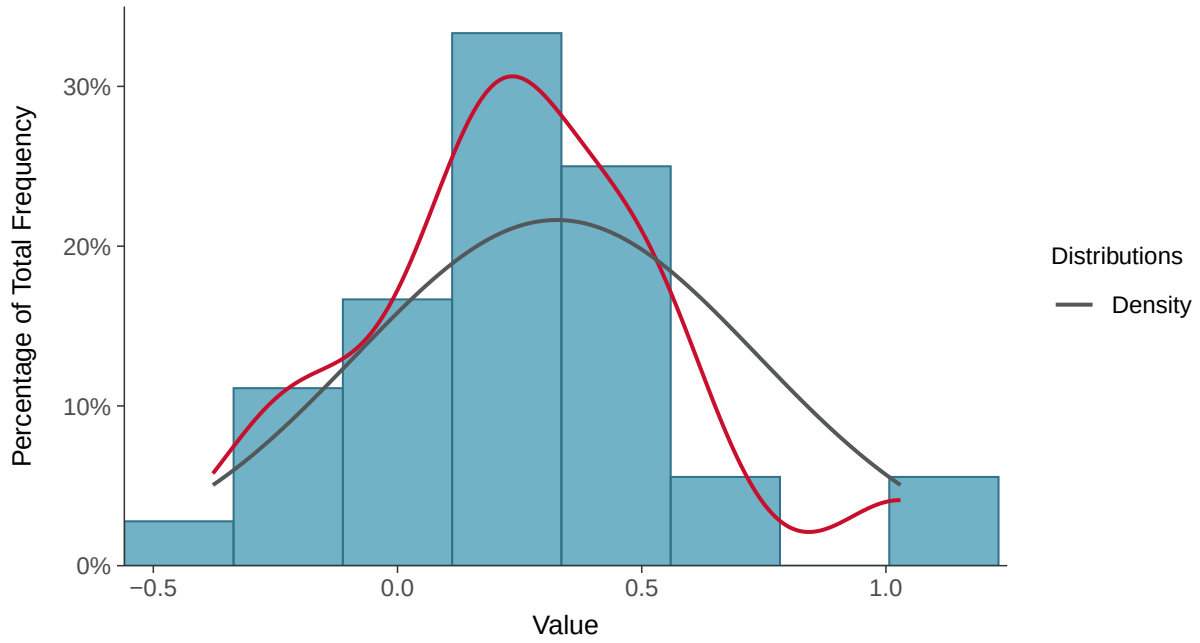
Scatter Plot

Radium-226, MW-1 (pCi/L)



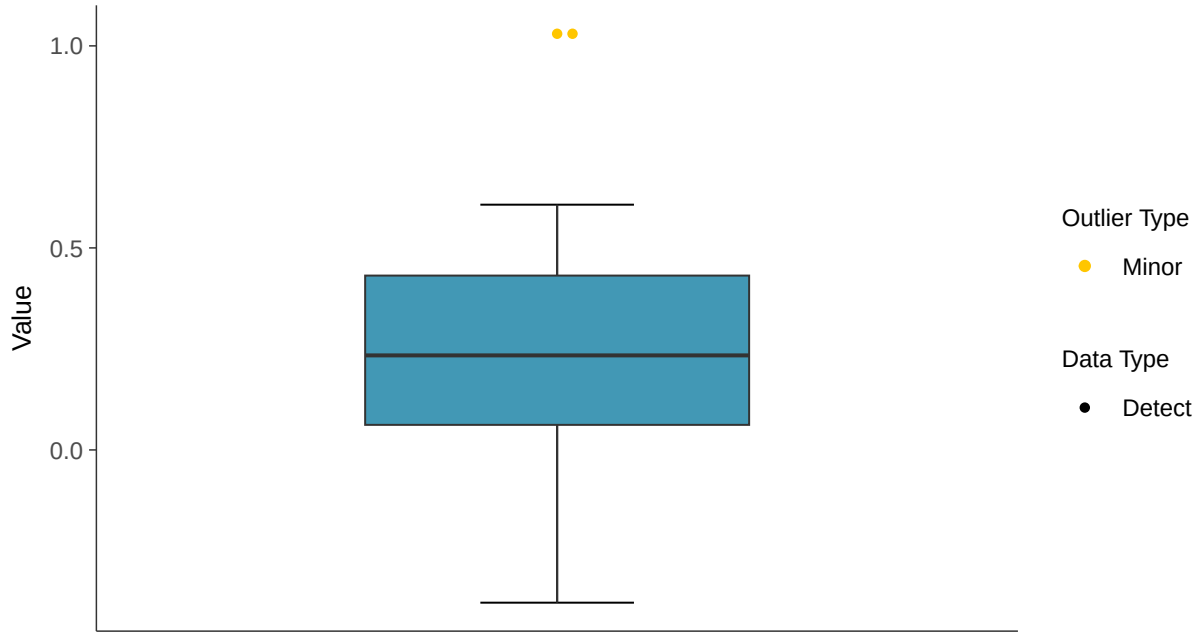
Histogram

Radium-226, MW-1 (pCi/L)



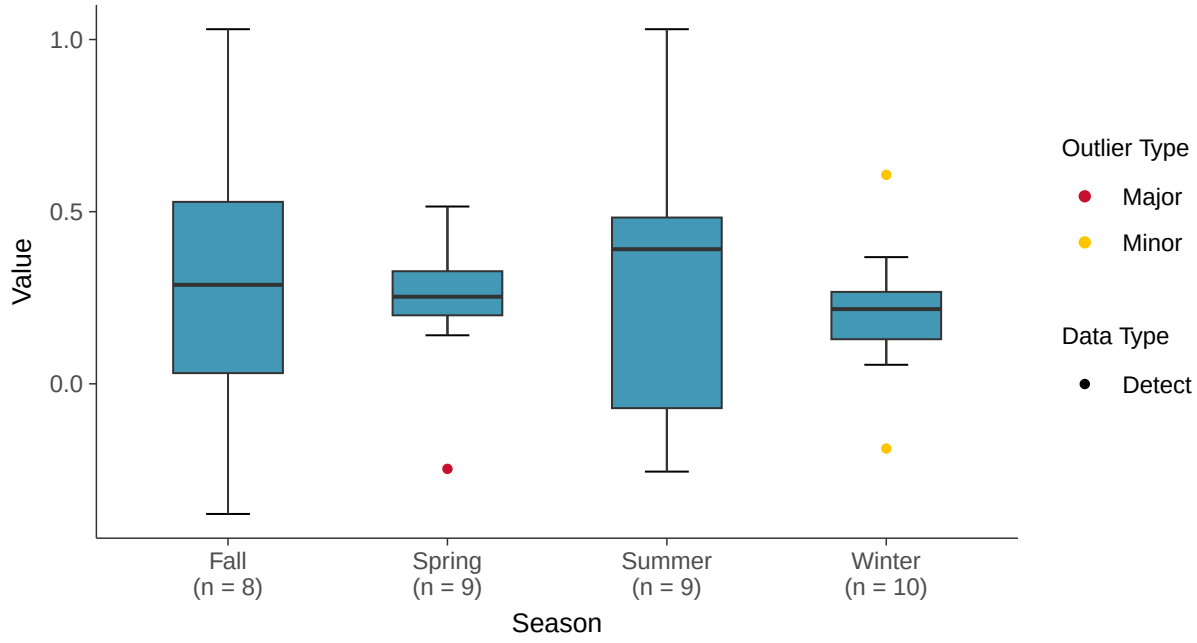
Boxplot

Radium-226, MW-1 (pCi/L)



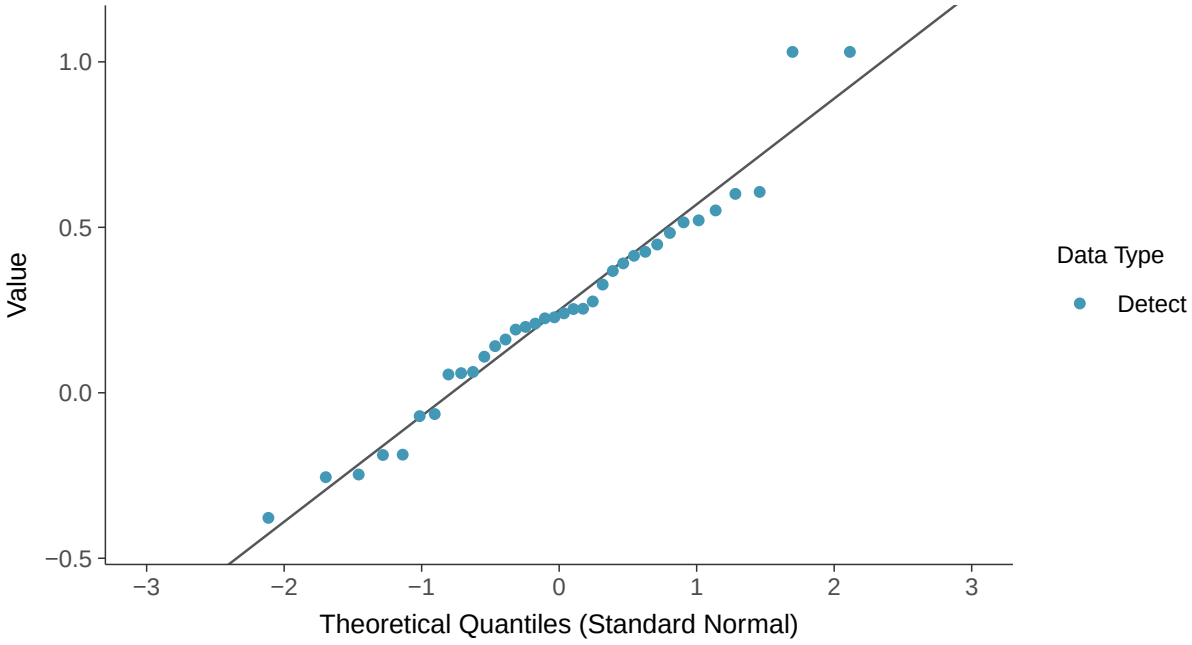
Boxplot by Season

Radium-226, MW-1 (pCi/L)



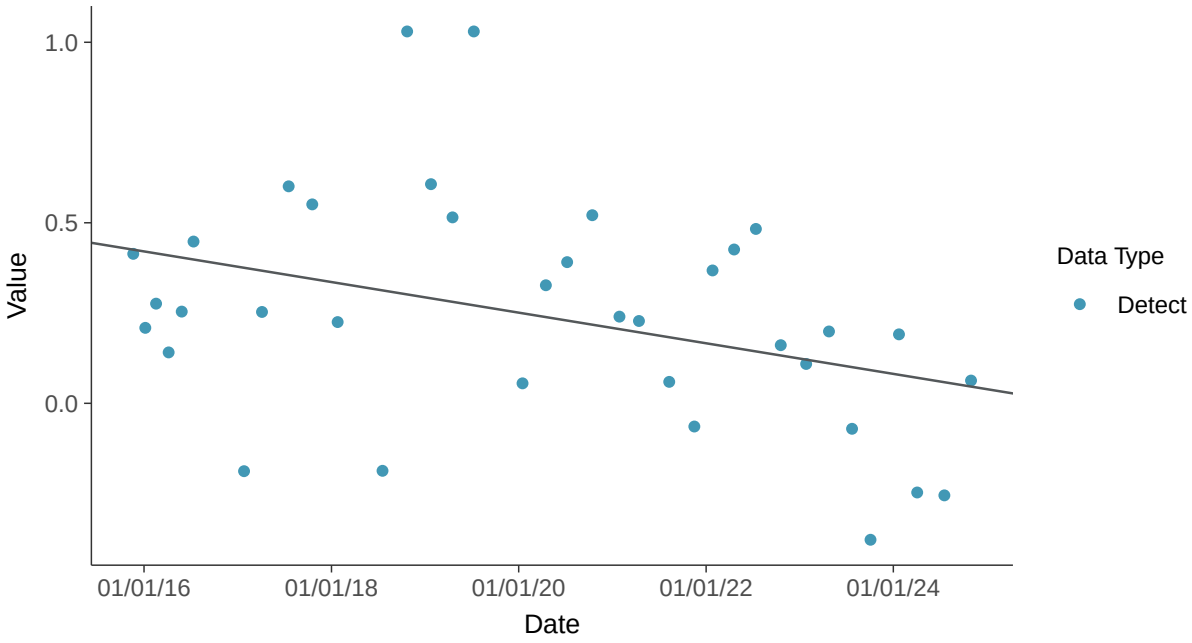
Normal Q-Q plot

Radium-226, MW-1 (pCi/L)



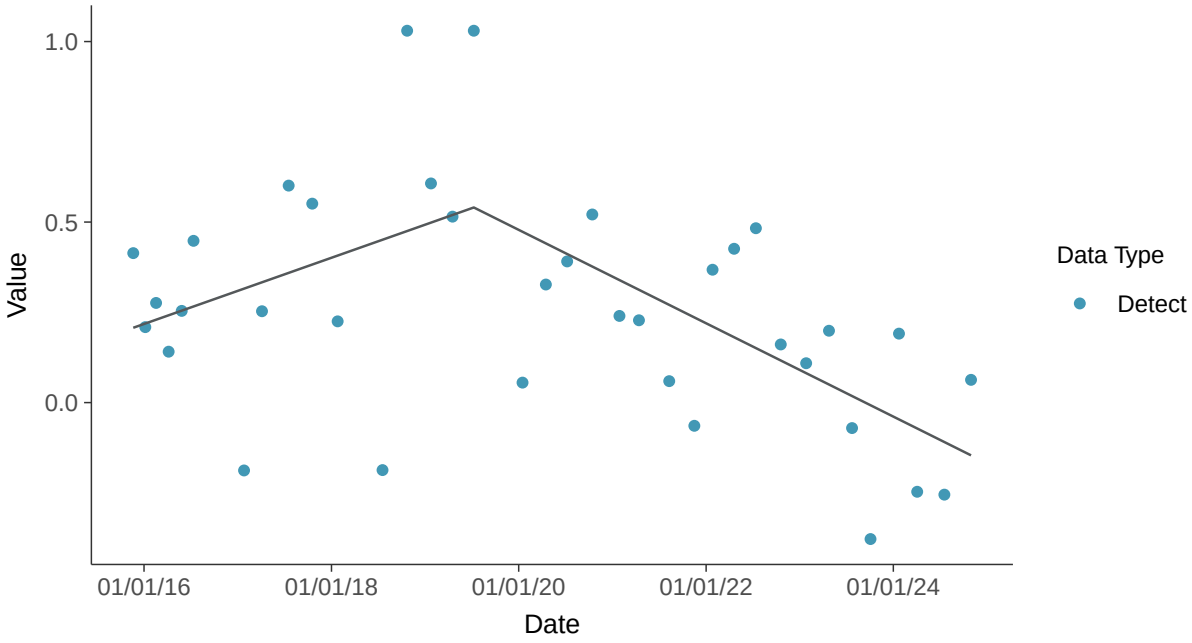
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-1 (pCi/L)



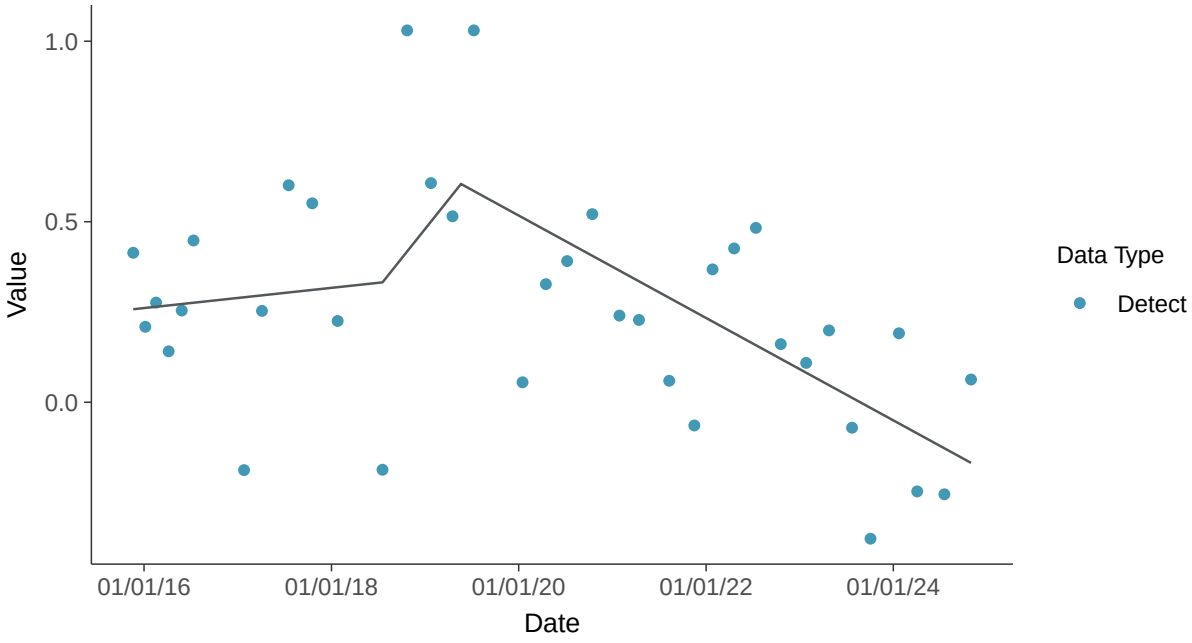
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-1 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-1 (pCi/L)

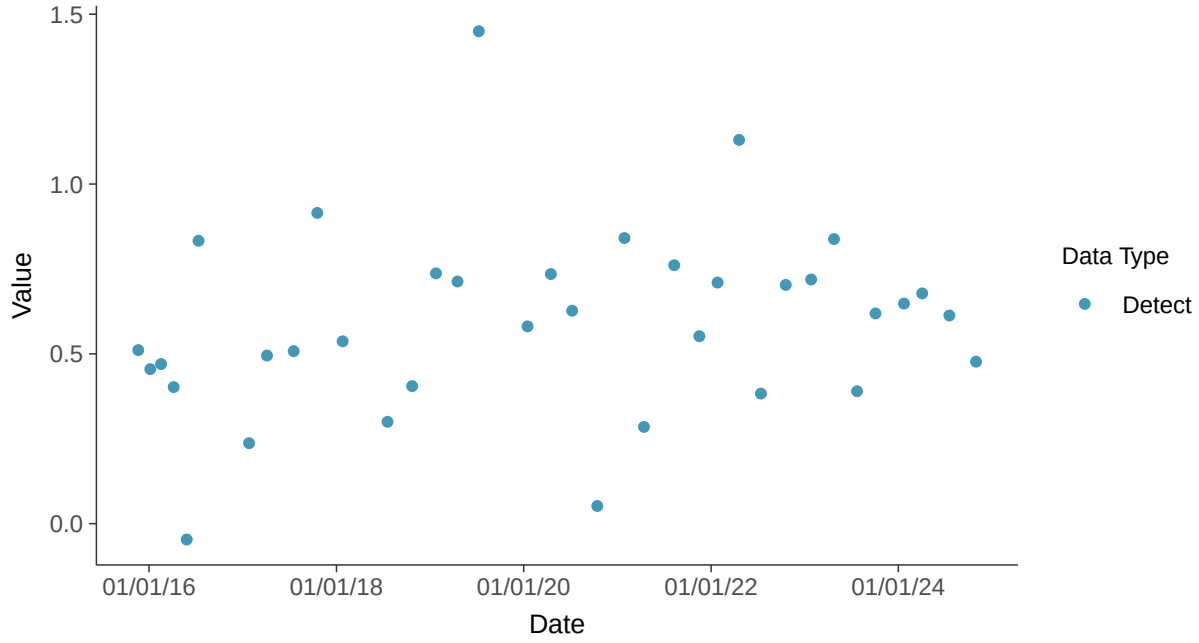


App. IV: Radium-228, MW-1

ID: 01_03_120

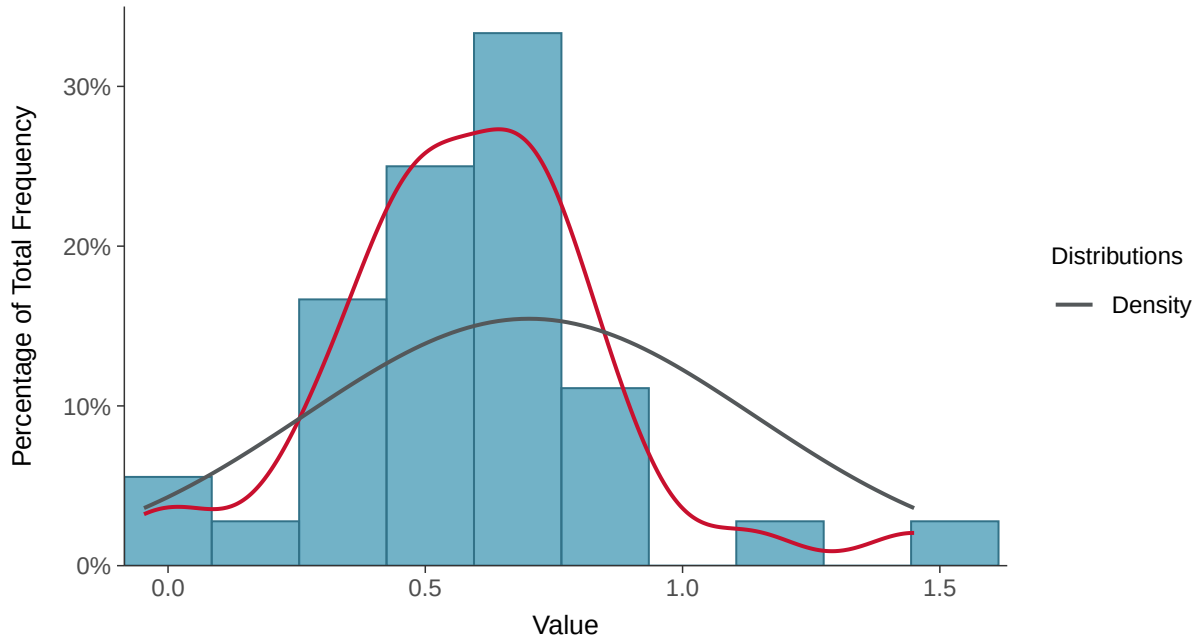
Scatter Plot

Radium-228, MW-1 (pCi/L)



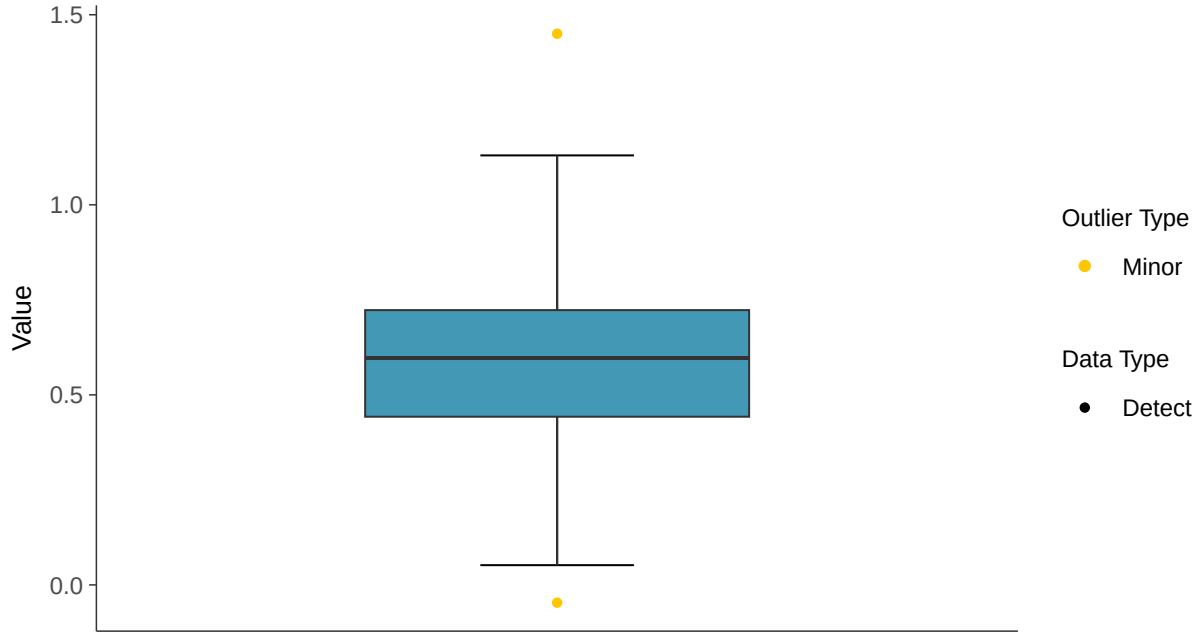
Histogram

Radium-228, MW-1 (pCi/L)



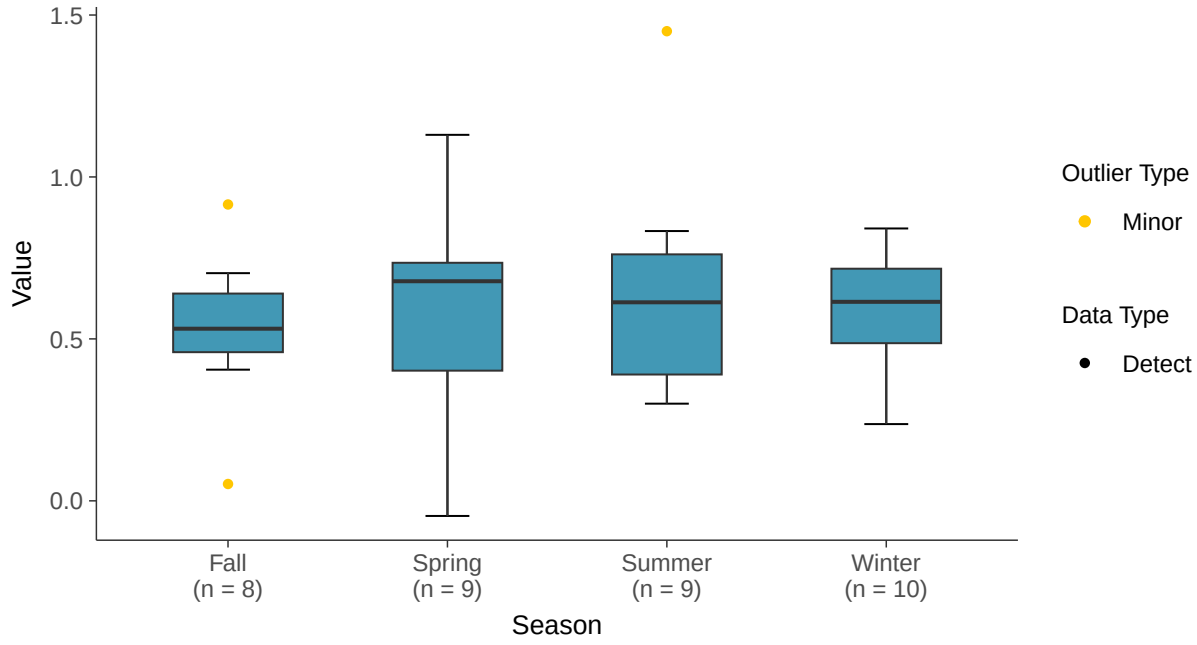
Boxplot

Radium-228, MW-1 (pCi/L)



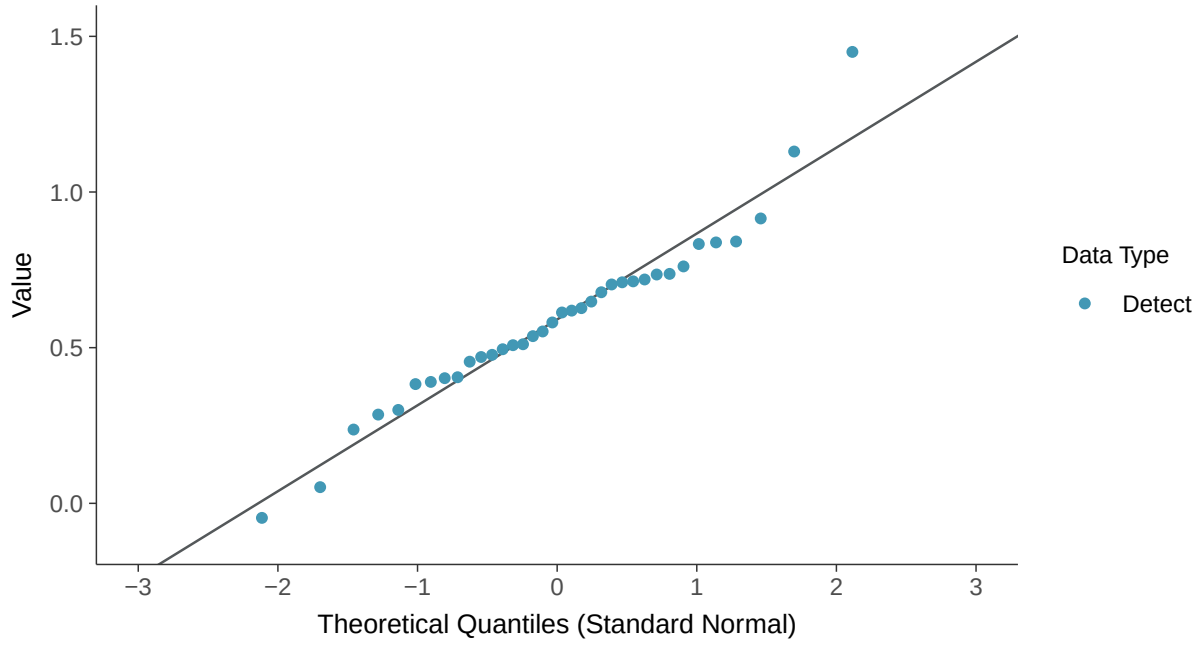
Boxplot by Season

Radium-228, MW-1 (pCi/L)



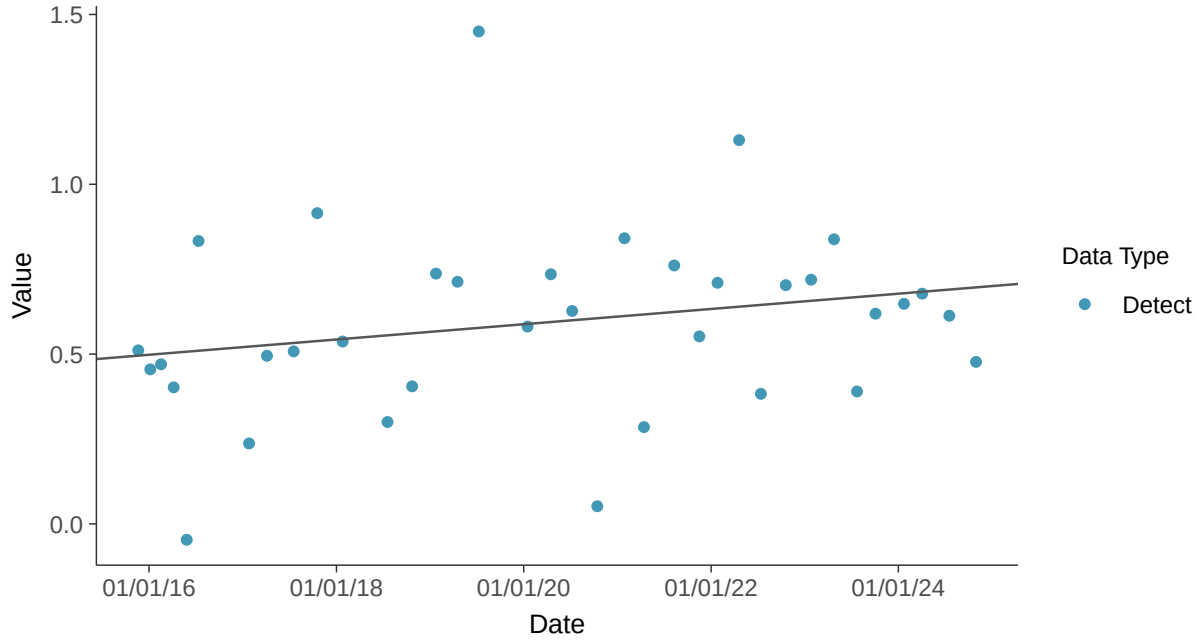
Normal Q-Q plot

Radium-228, MW-1 (pCi/L)



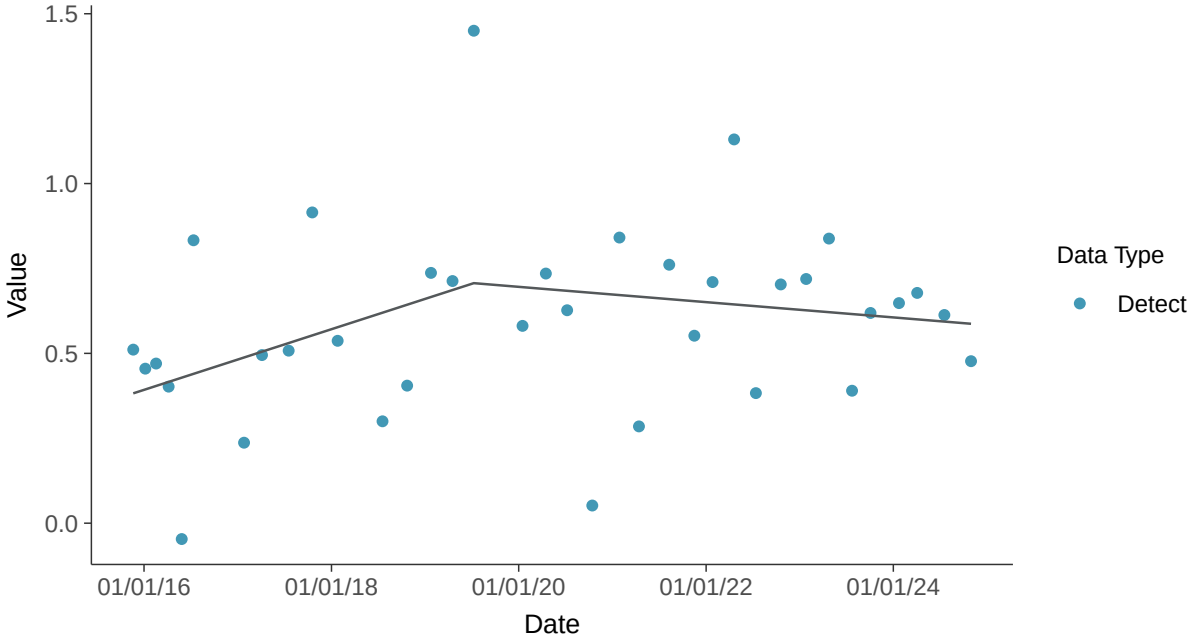
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-1 (pCi/L)



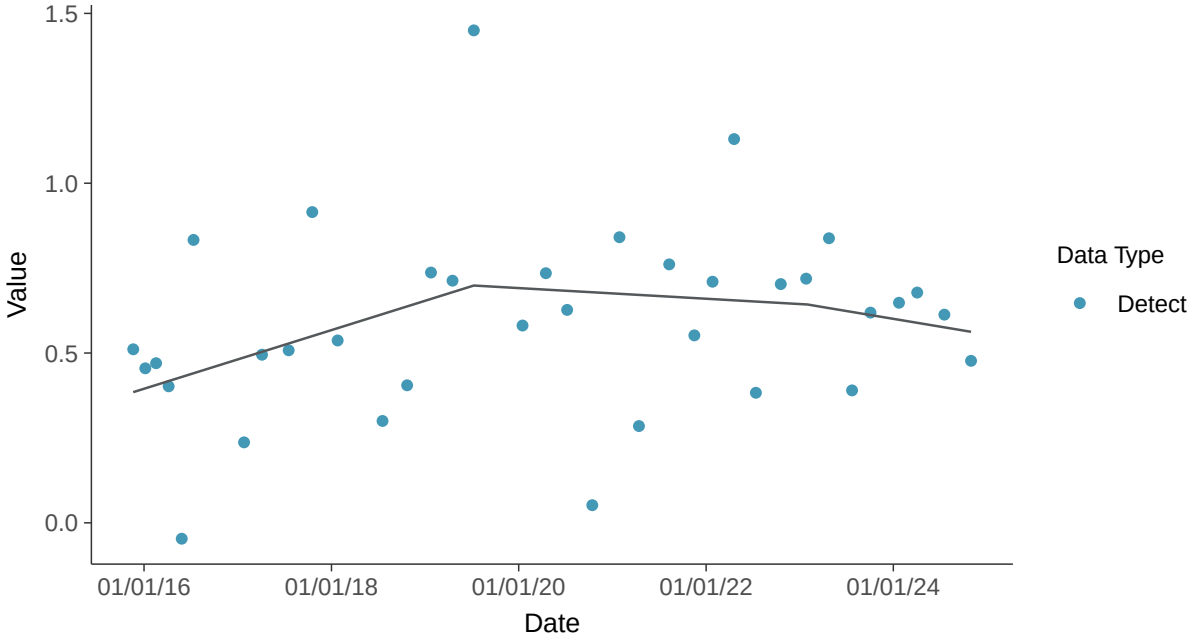
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-1 (pCi/L)



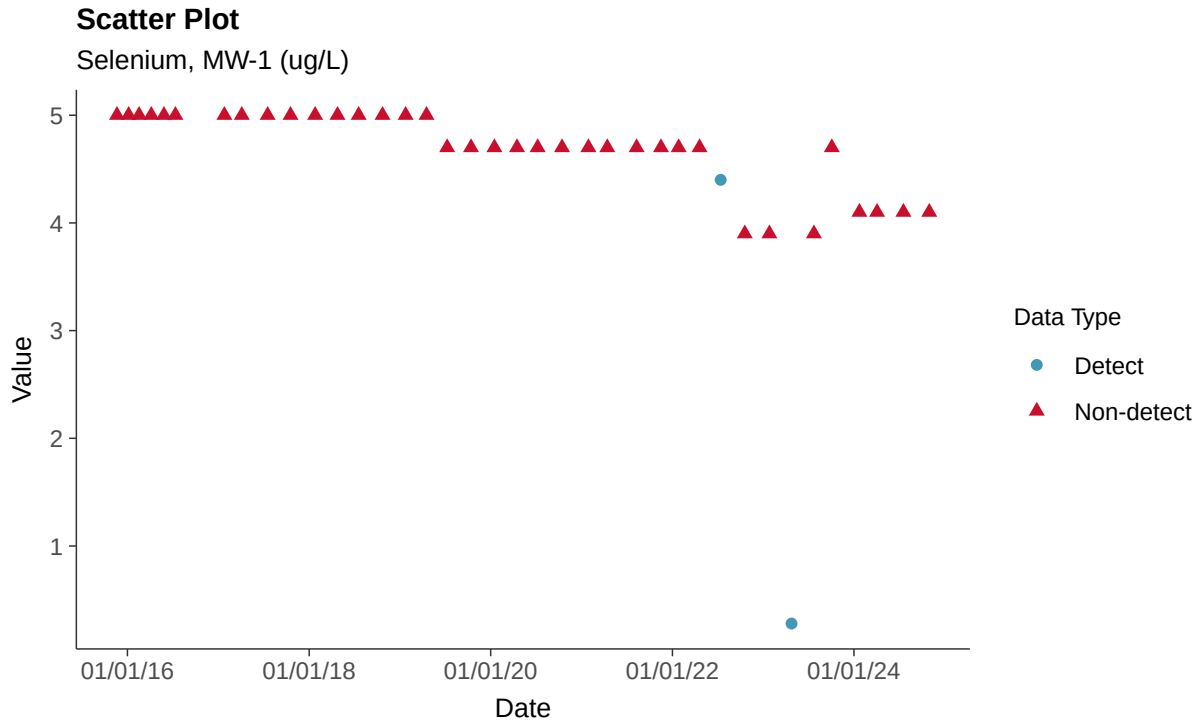
Trend Regression: Piecewise Linear-Linear-Linear

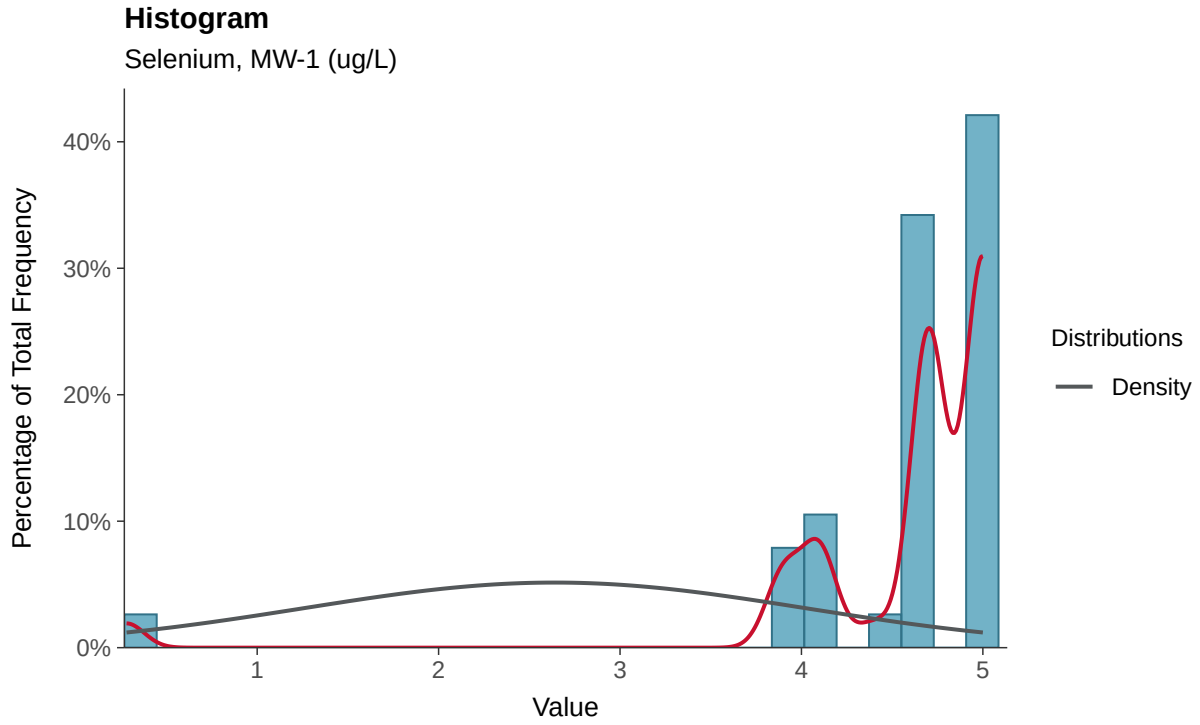
Radium-228, MW-1 (pCi/L)



App. IV: Selenium, MW-1

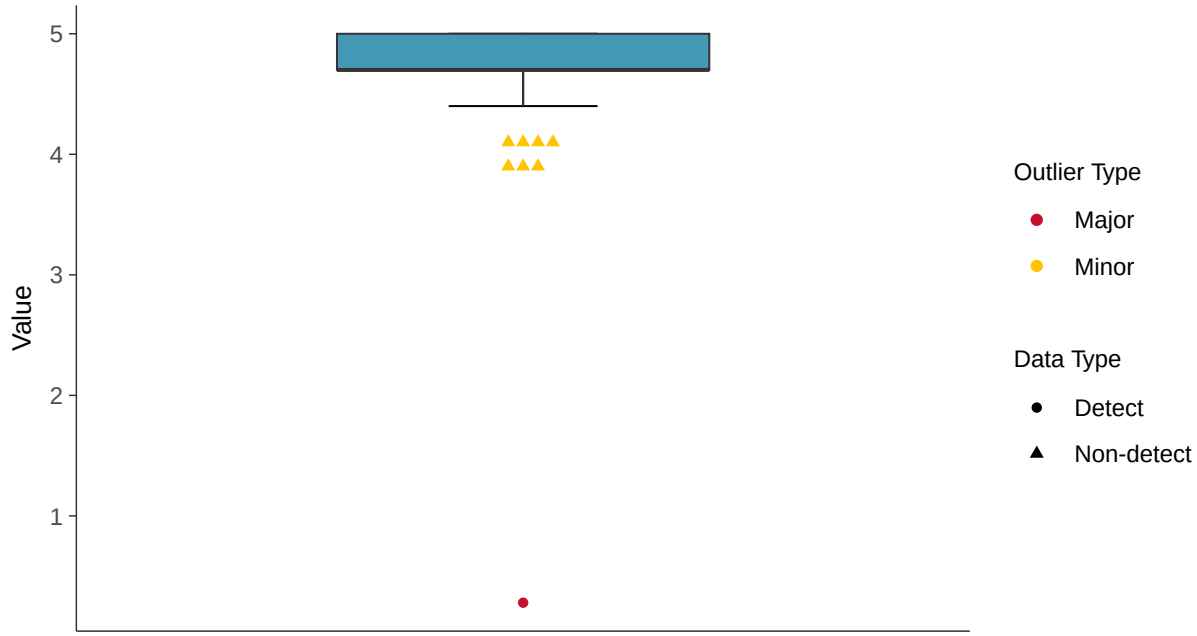
ID: 01_03_121





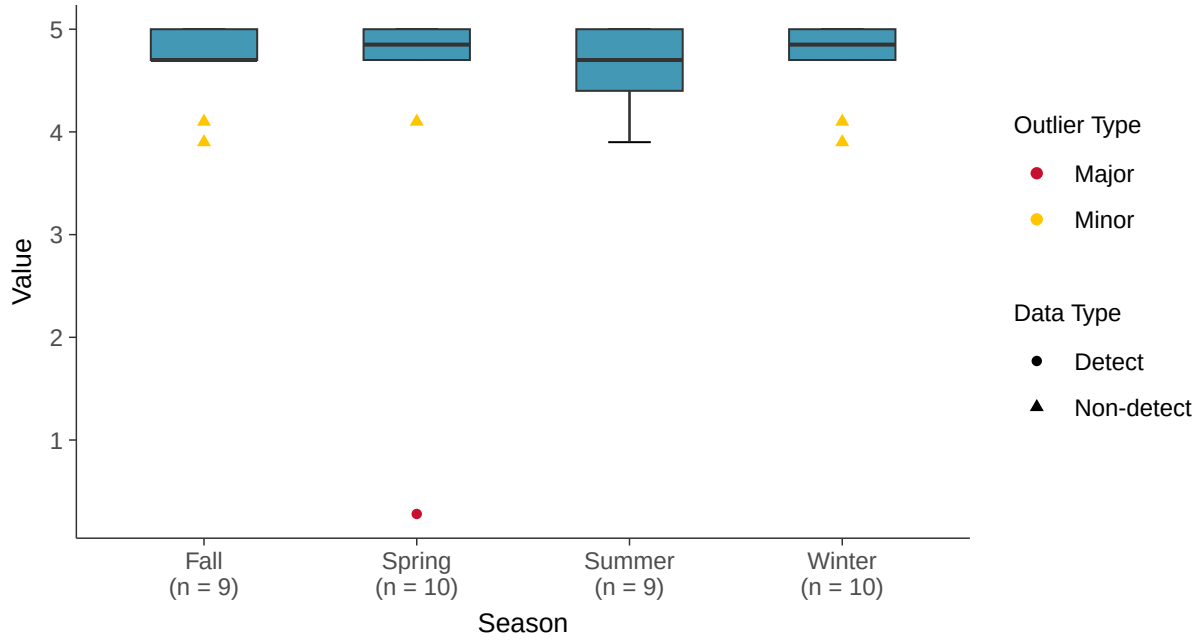
Boxplot

Selenium, MW-1 (ug/L)



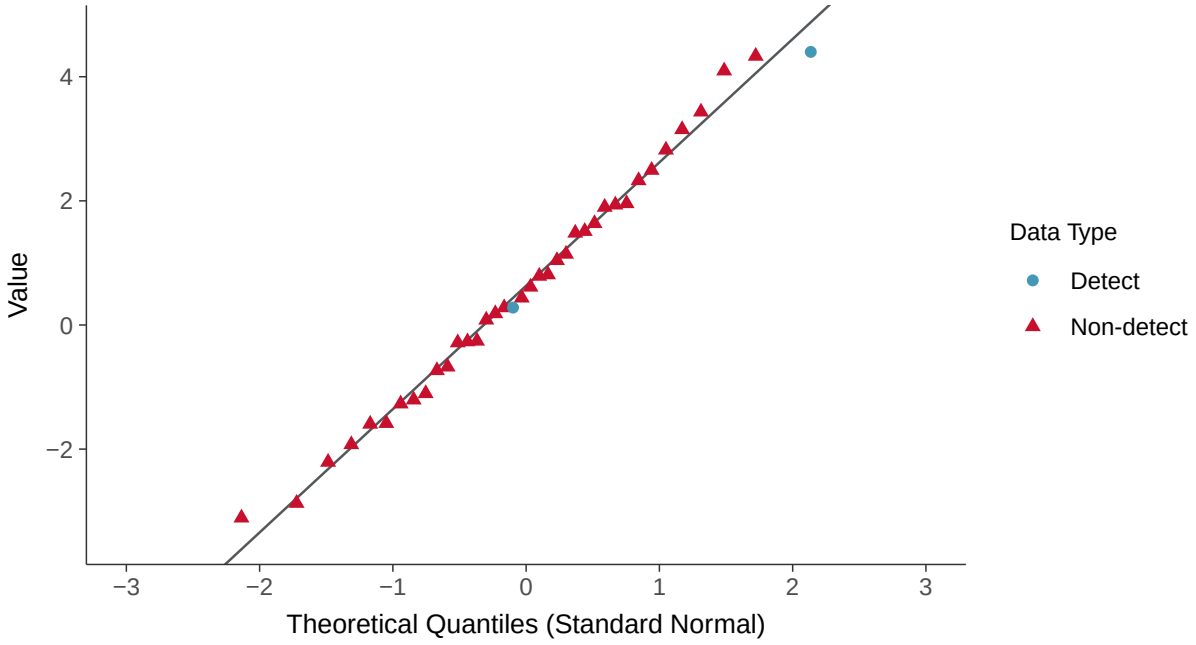
Boxplot by Season

Selenium, MW-1 (ug/L)



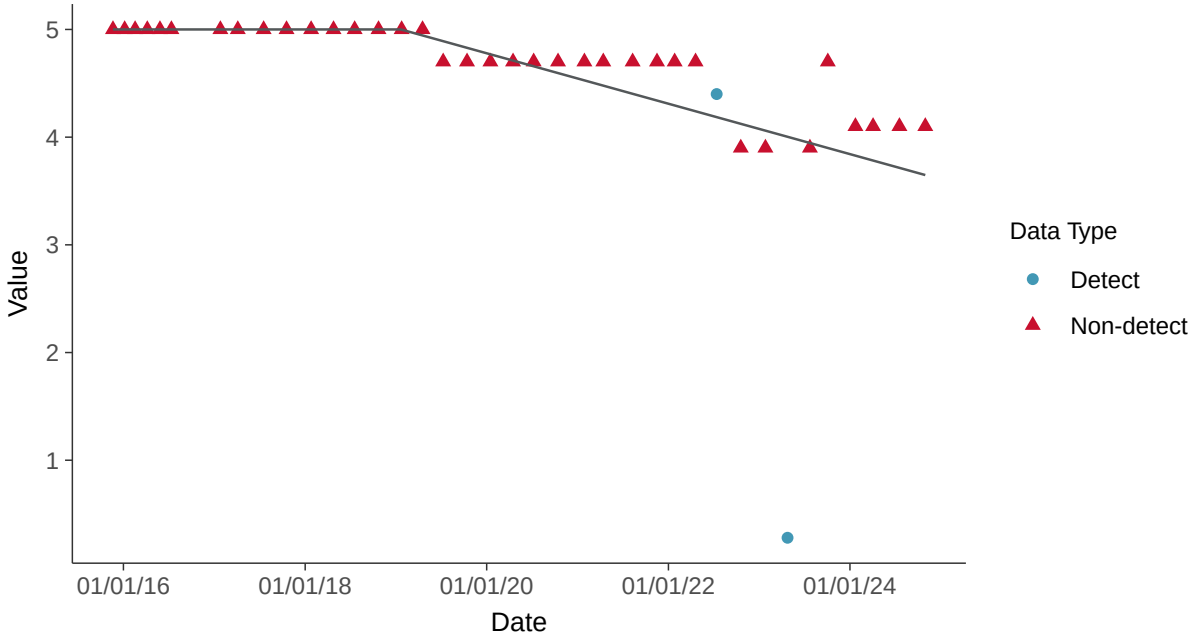
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-1 (ug/L)



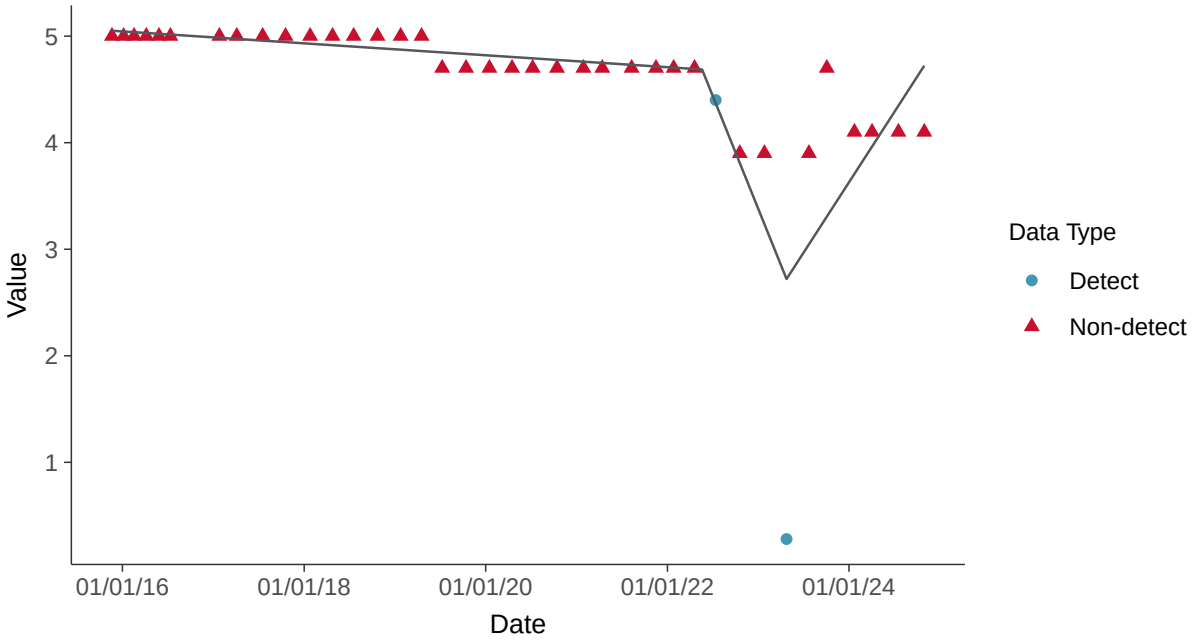
Trend Regression: Piecewise Linear-Linear

Selenium, MW-1 (ug/L)



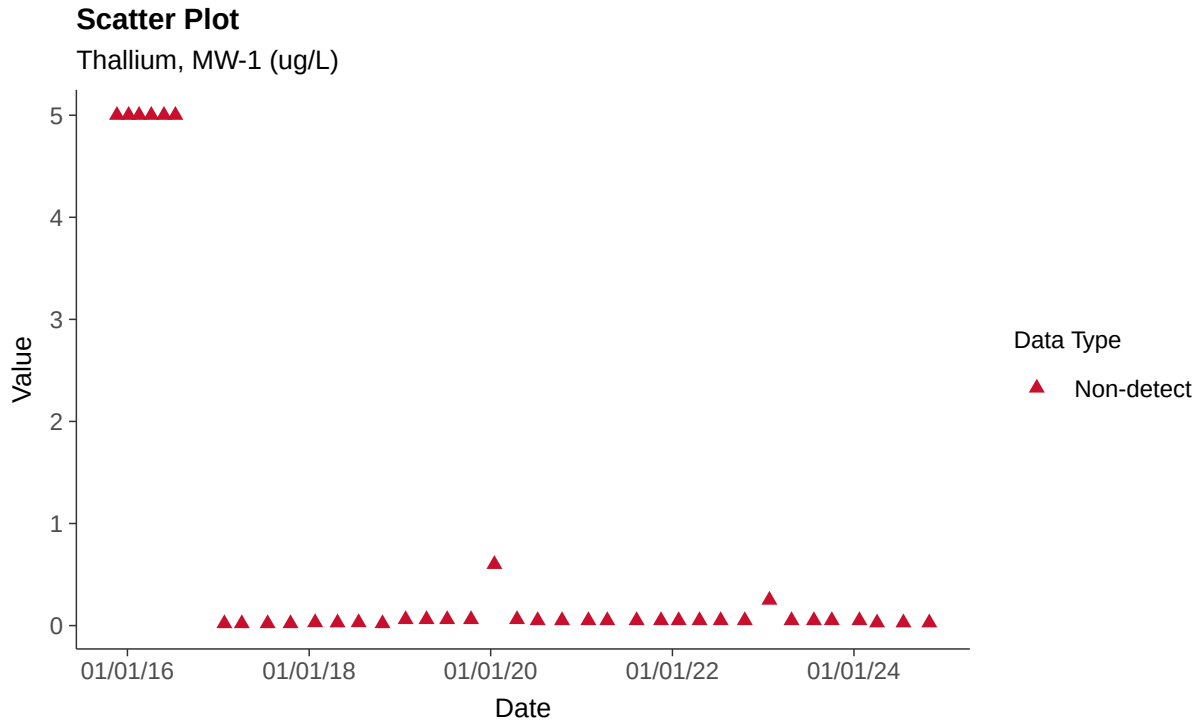
Trend Regression: Piecewise Linear-Linear-Linear

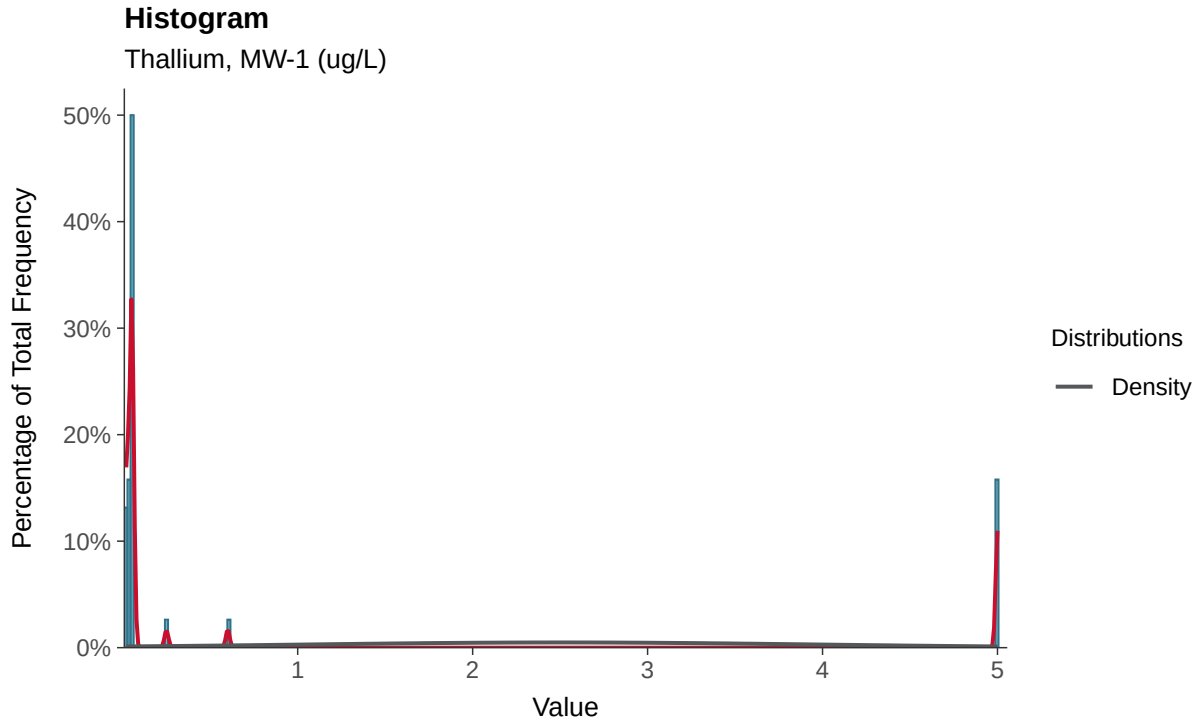
Selenium, MW-1 (ug/L)



App. IV: Thallium, MW-1

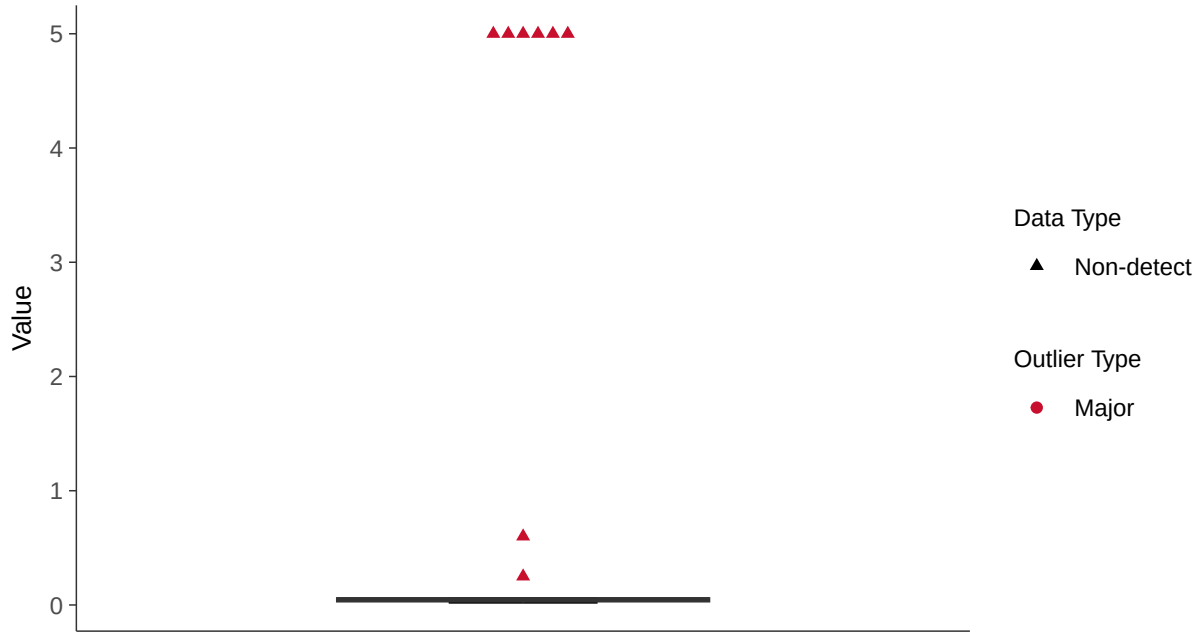
ID: 01_03_124





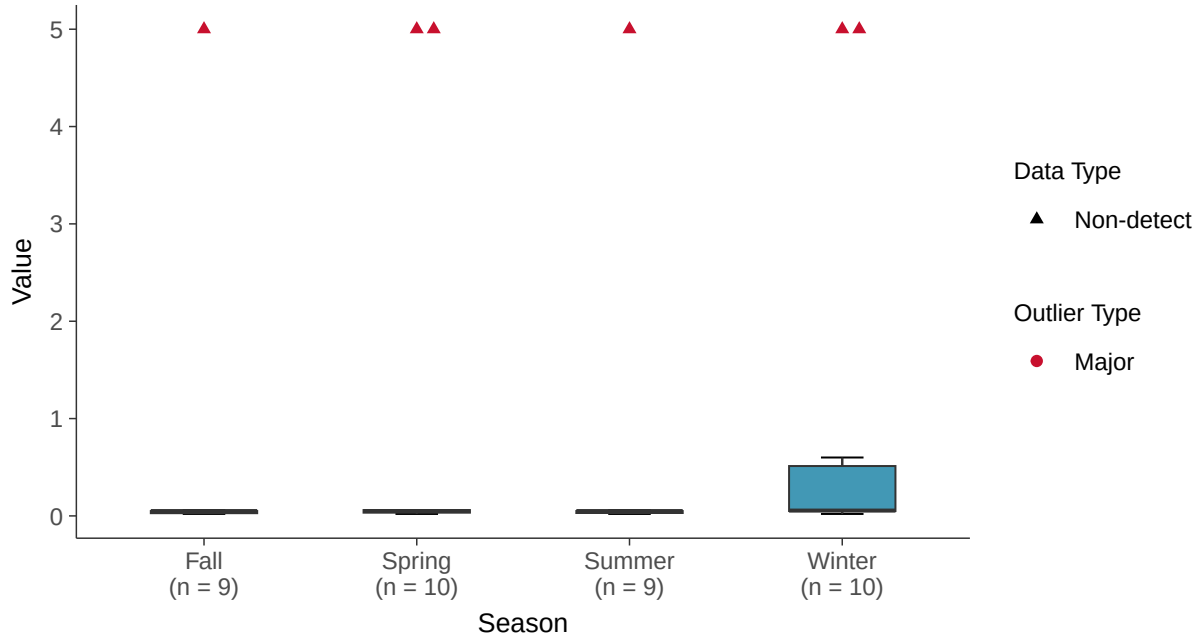
Boxplot

Thallium, MW-1 (ug/L)



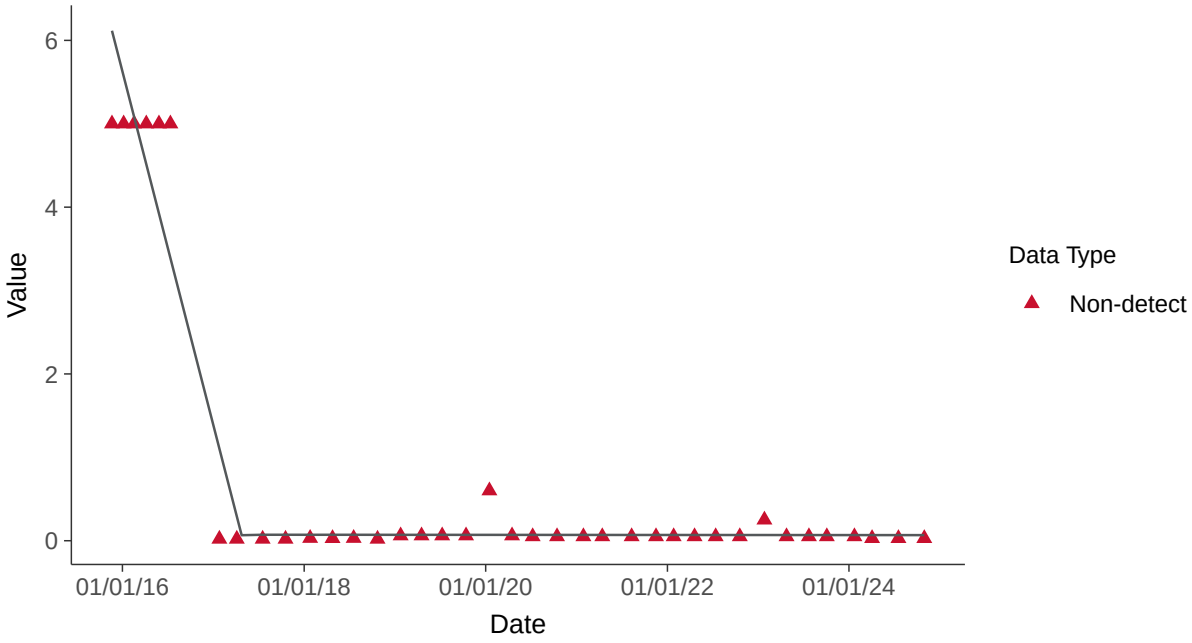
Boxplot by Season

Thallium, MW-1 (ug/L)



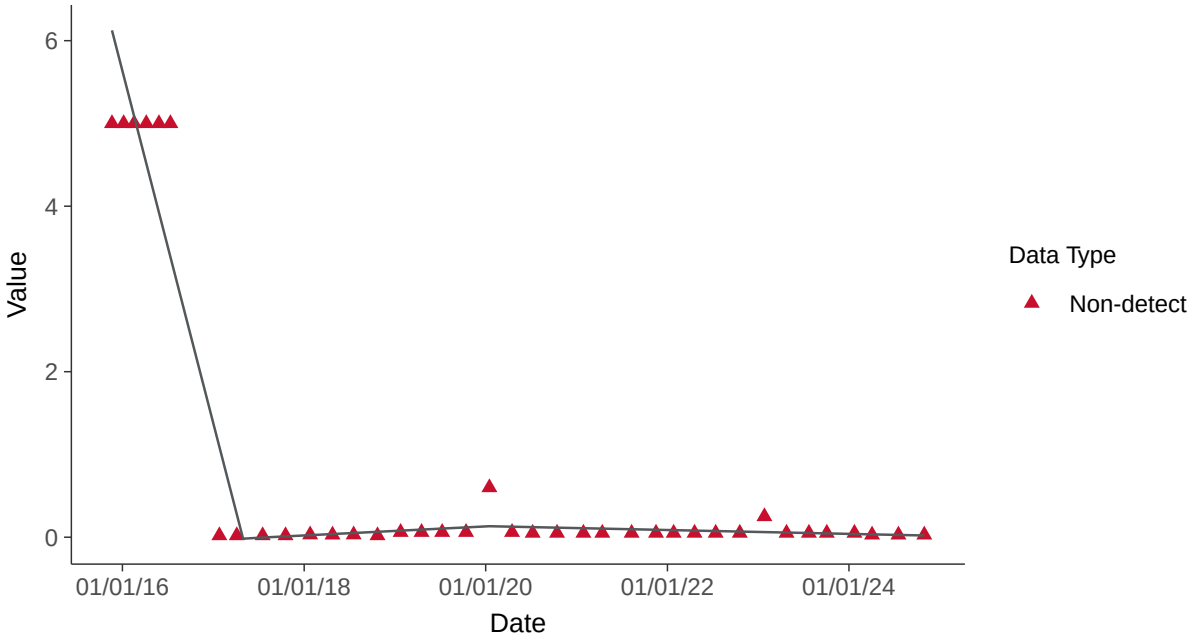
Trend Regression: Piecewise Linear-Linear

Thallium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-1 (ug/L)

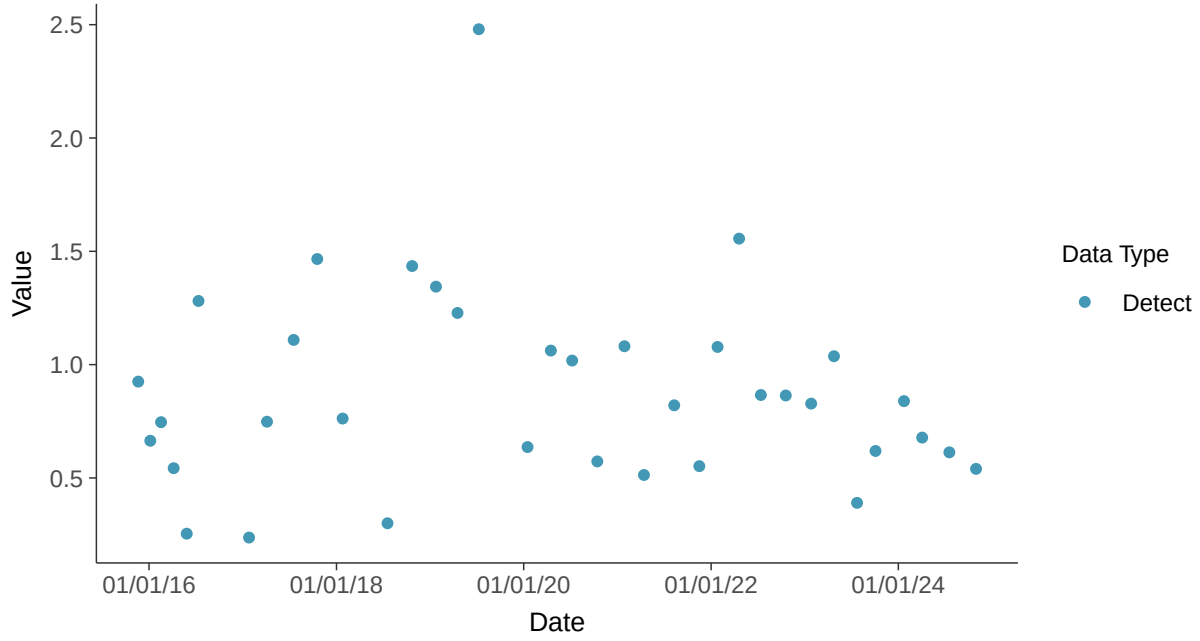


App. IV: Total Radium, MW-1

ID: 01_03_126

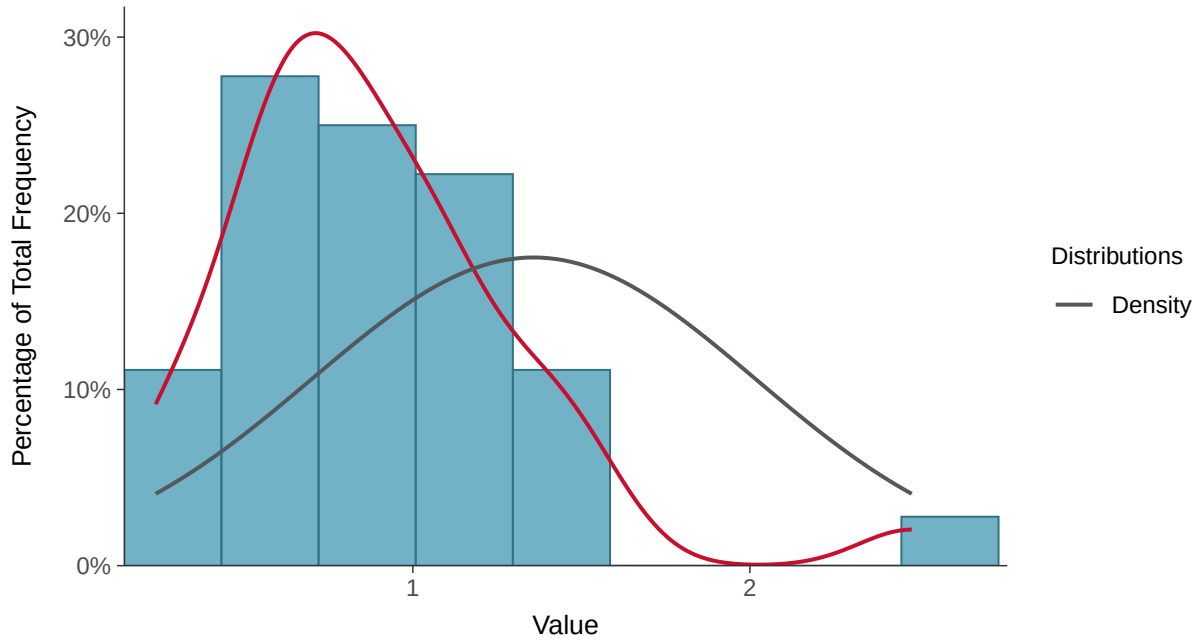
Scatter Plot

Total Radium, MW-1 (pCi/L)



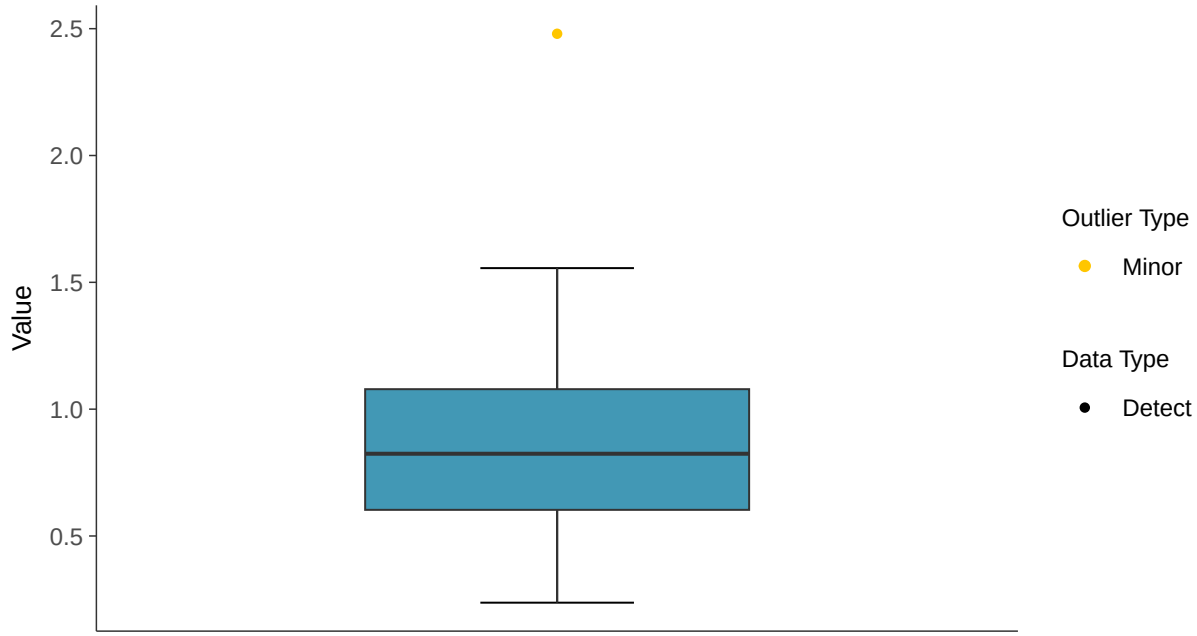
Histogram

Total Radium, MW-1 (pCi/L)



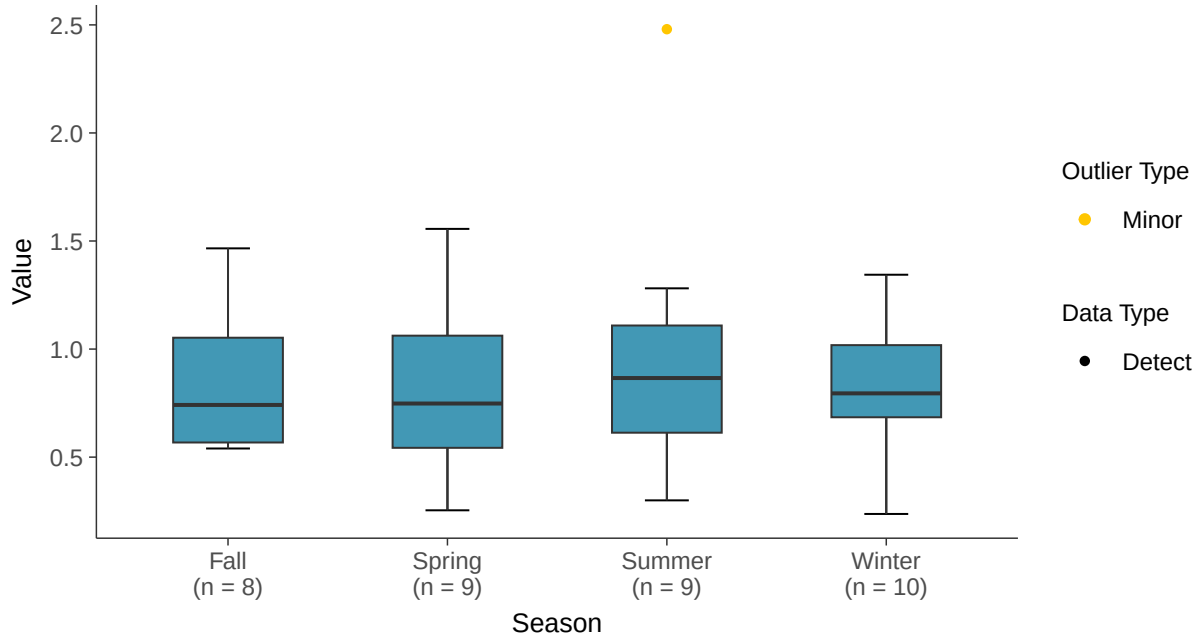
Boxplot

Total Radium, MW-1 (pCi/L)



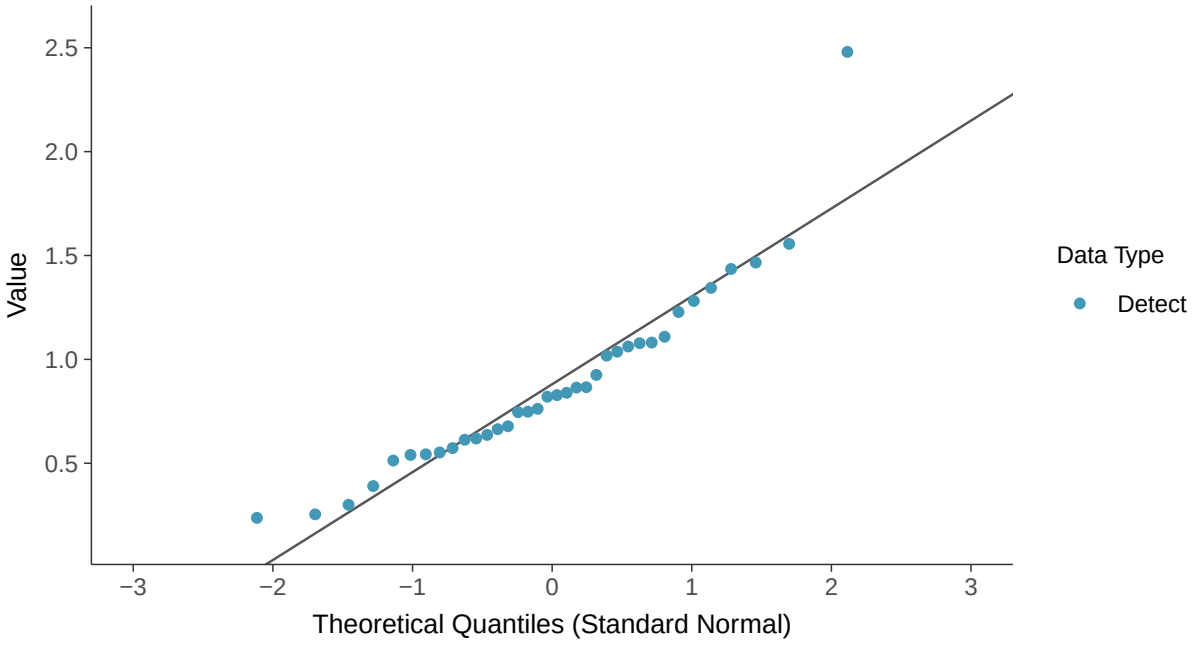
Boxplot by Season

Total Radium, MW-1 (pCi/L)



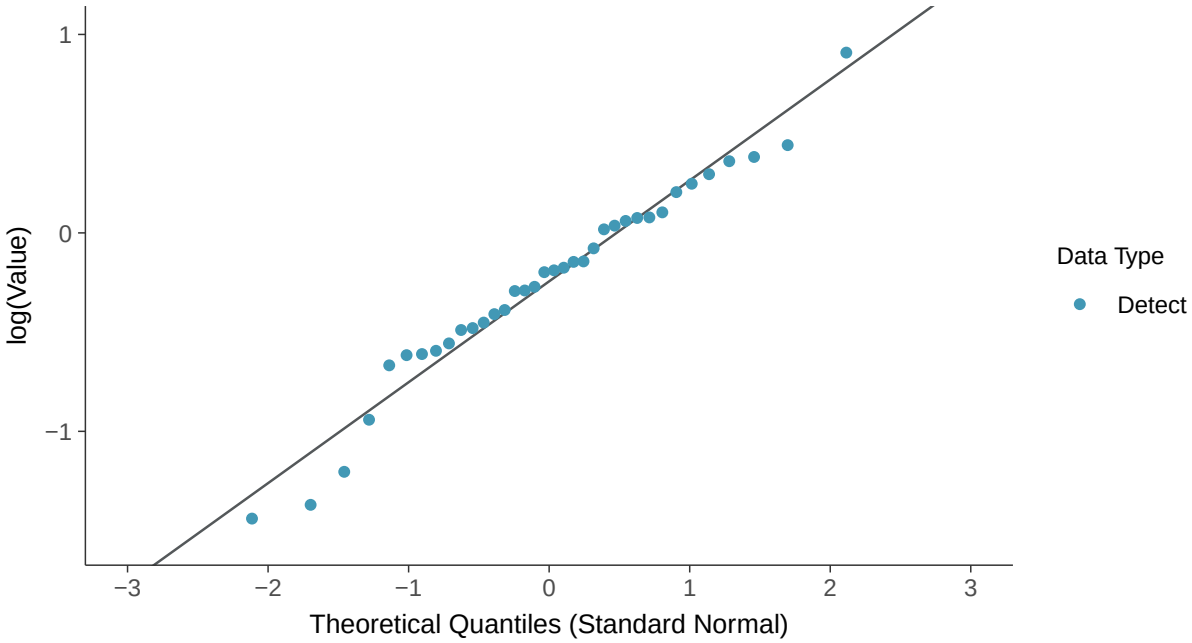
Normal Q-Q plot

Total Radium, MW-1 (pCi/L)



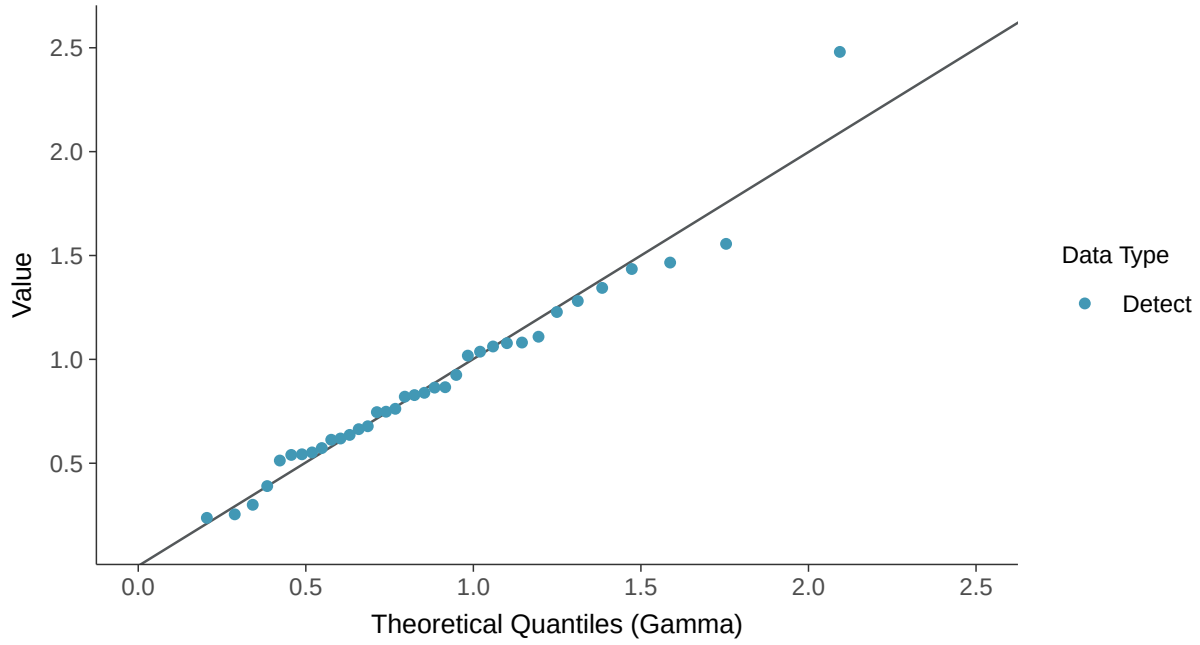
Lognormal Q-Q plot

Total Radium, MW-1 (pCi/L)



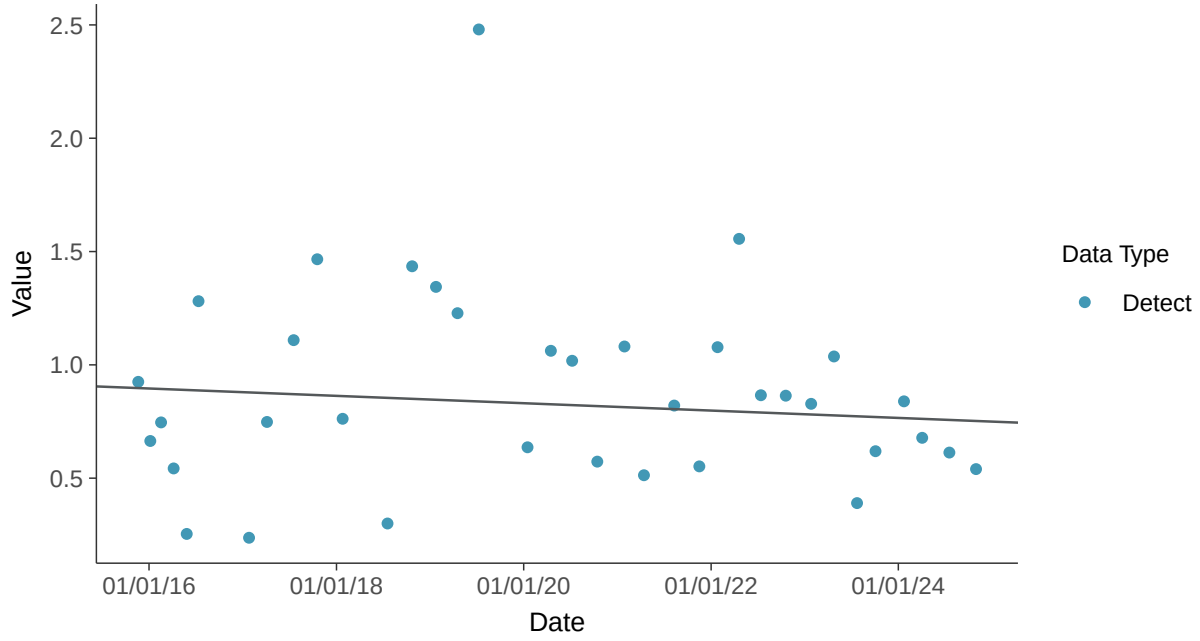
Gamma Q-Q plot

Total Radium, MW-1 (pCi/L)



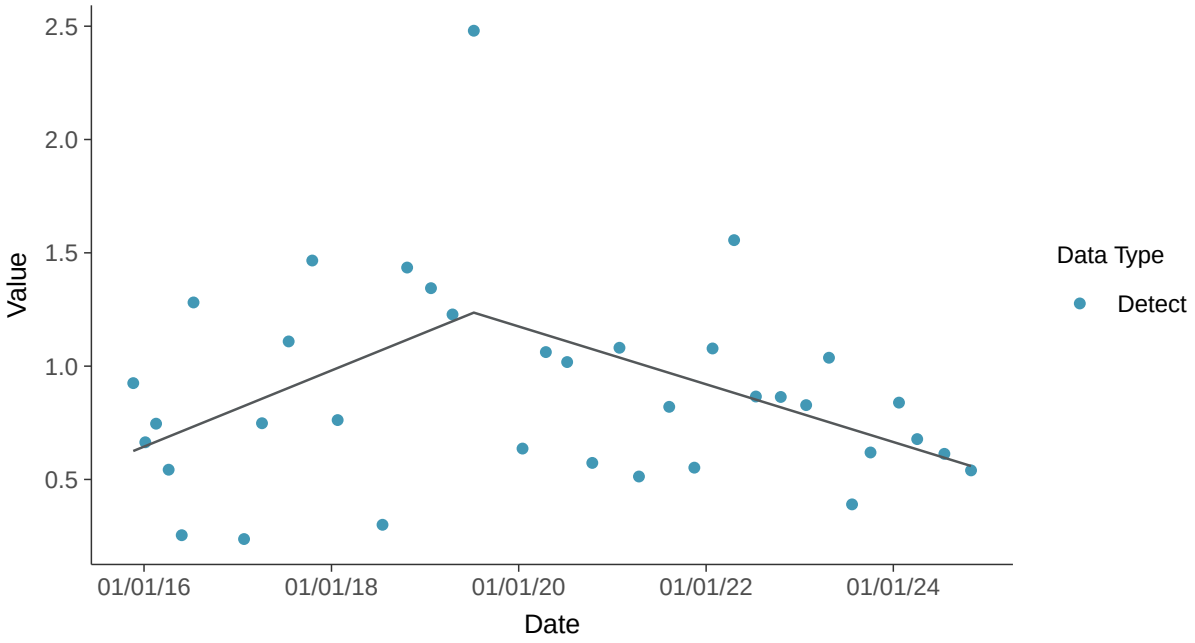
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-1 (pCi/L)



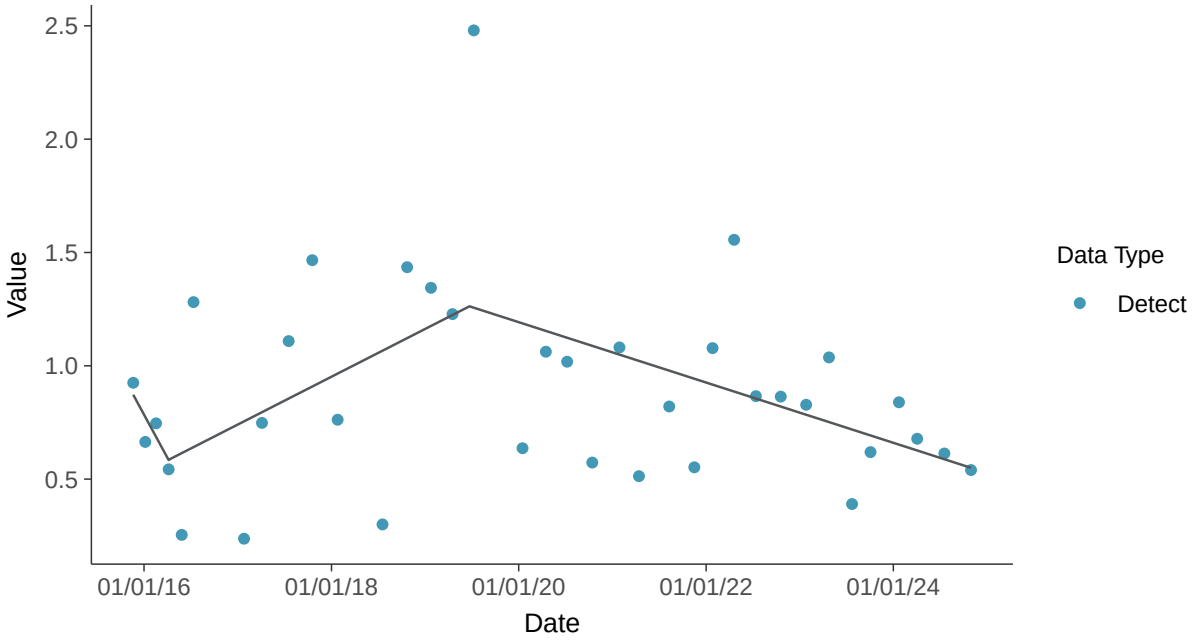
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-1 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, MW-1 (pCi/L)

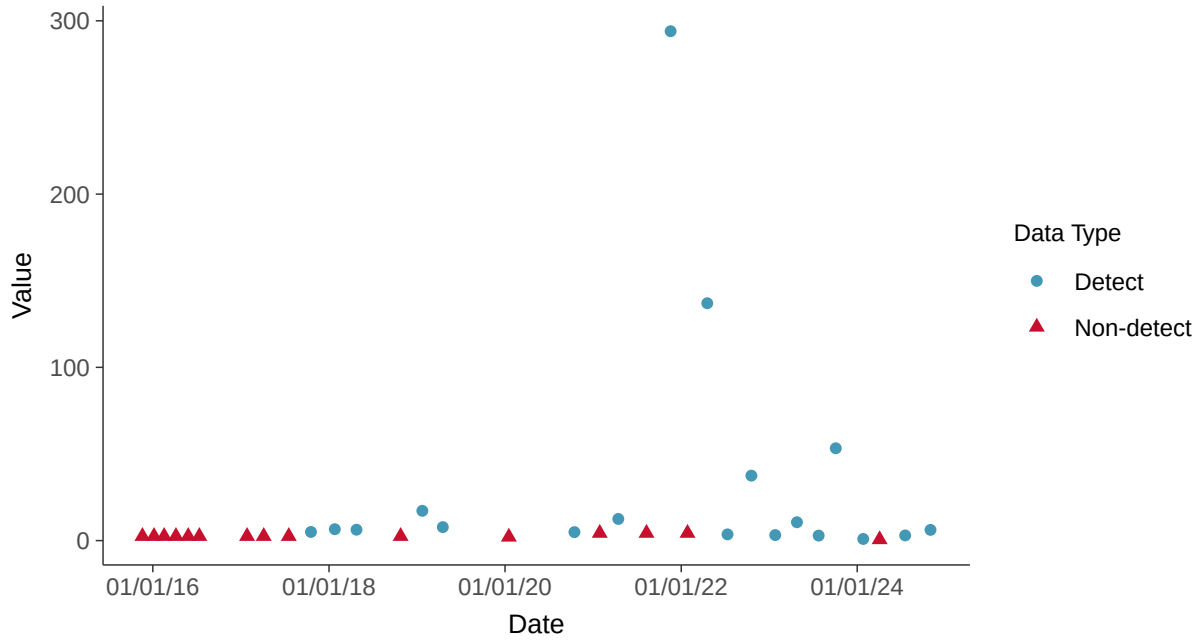


App. I Metals: Copper, MW-2

ID: 02_01_111

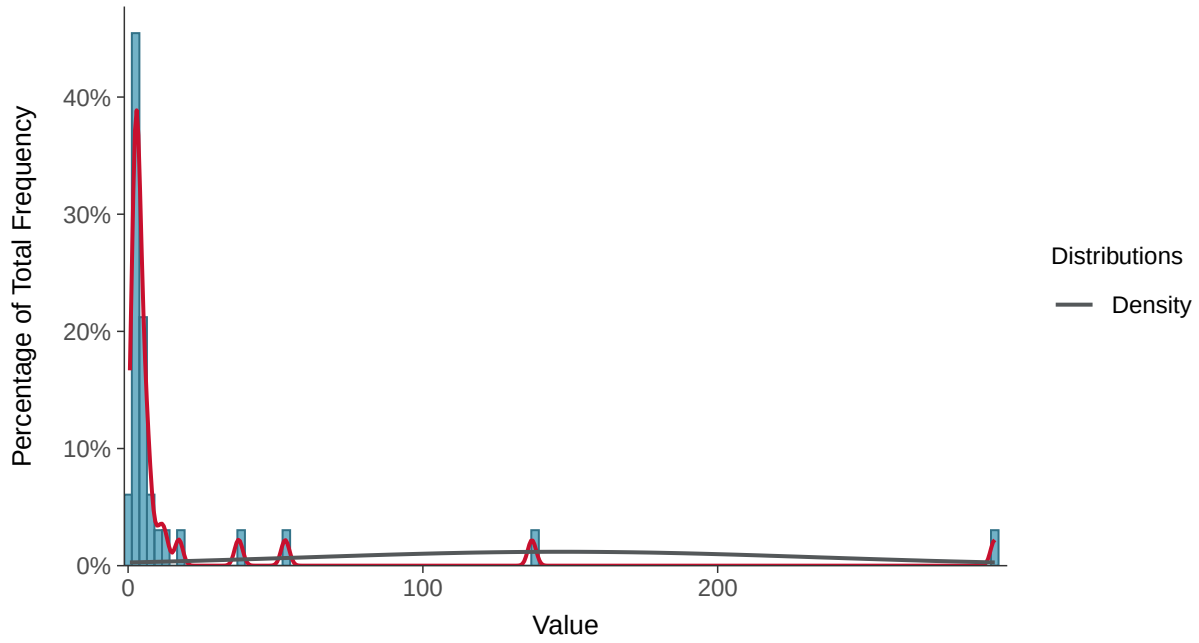
Scatter Plot

Copper, MW-2 (ug/L)



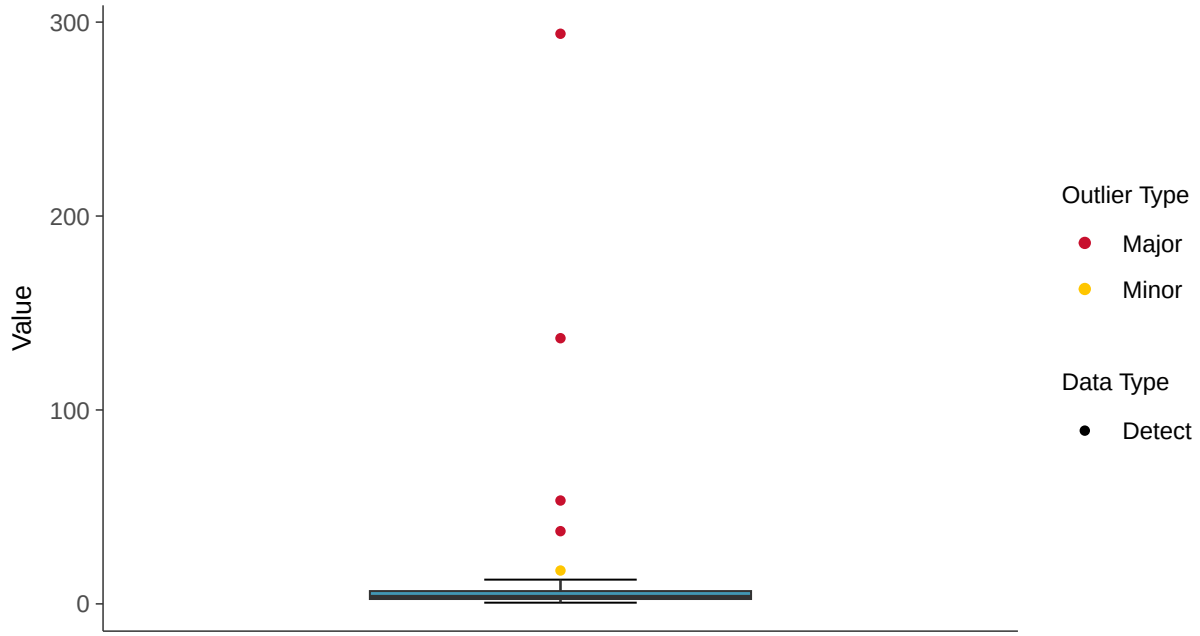
Histogram

Copper, MW-2 (ug/L)



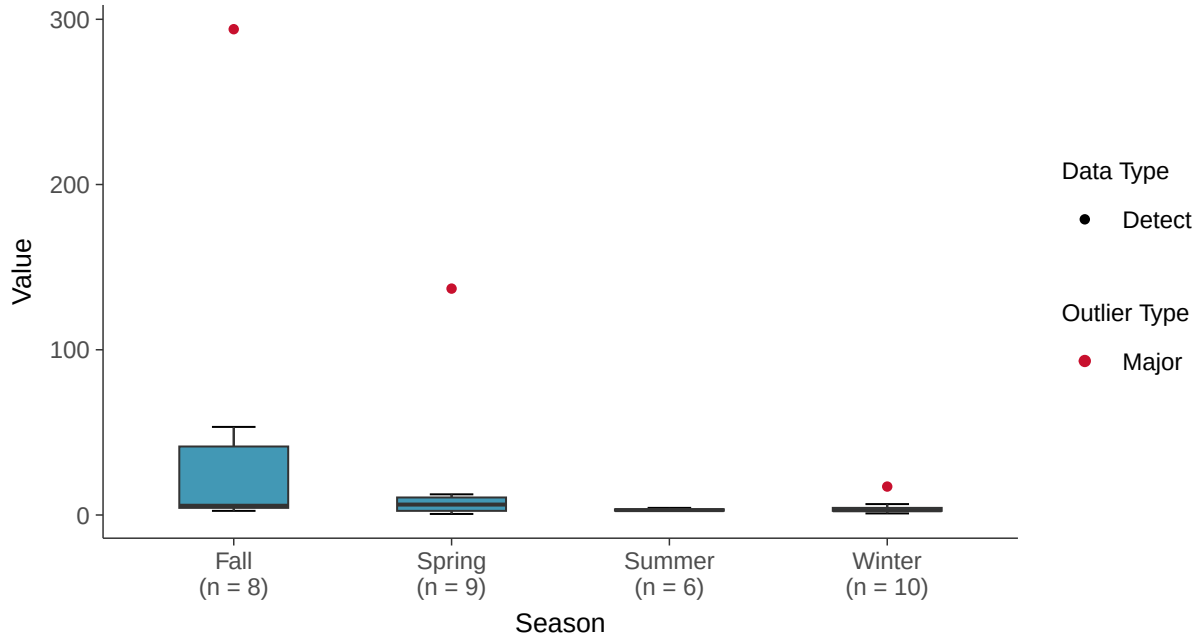
Boxplot

Copper, MW-2 (ug/L)



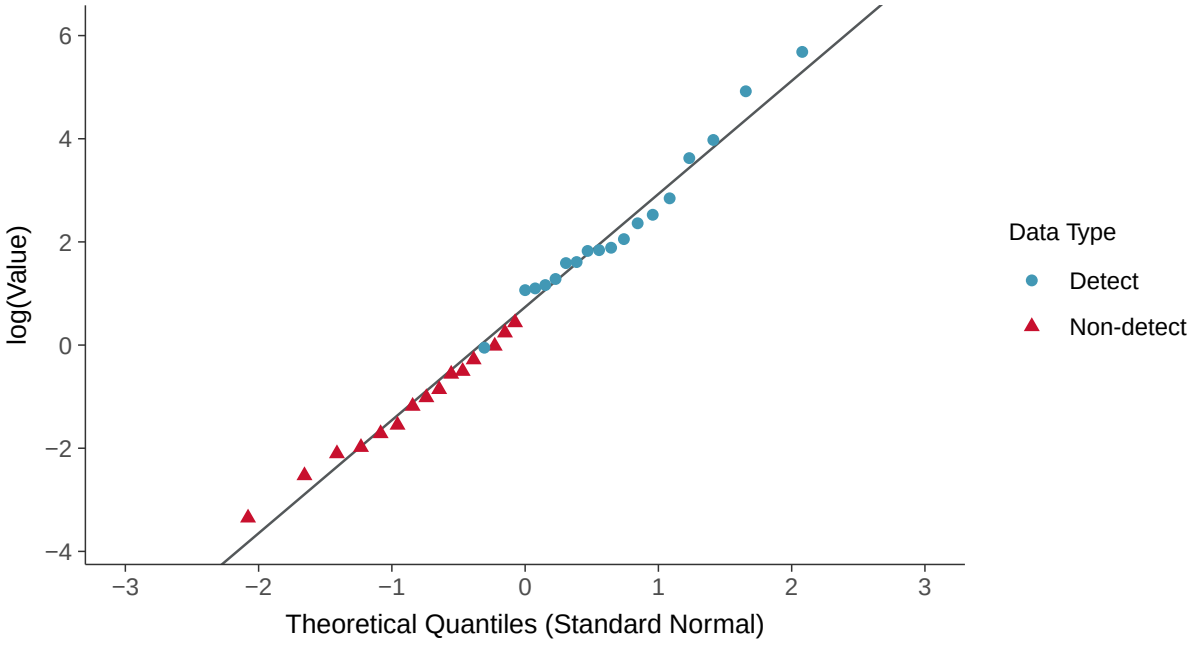
Boxplot by Season

Copper, MW-2 (ug/L)



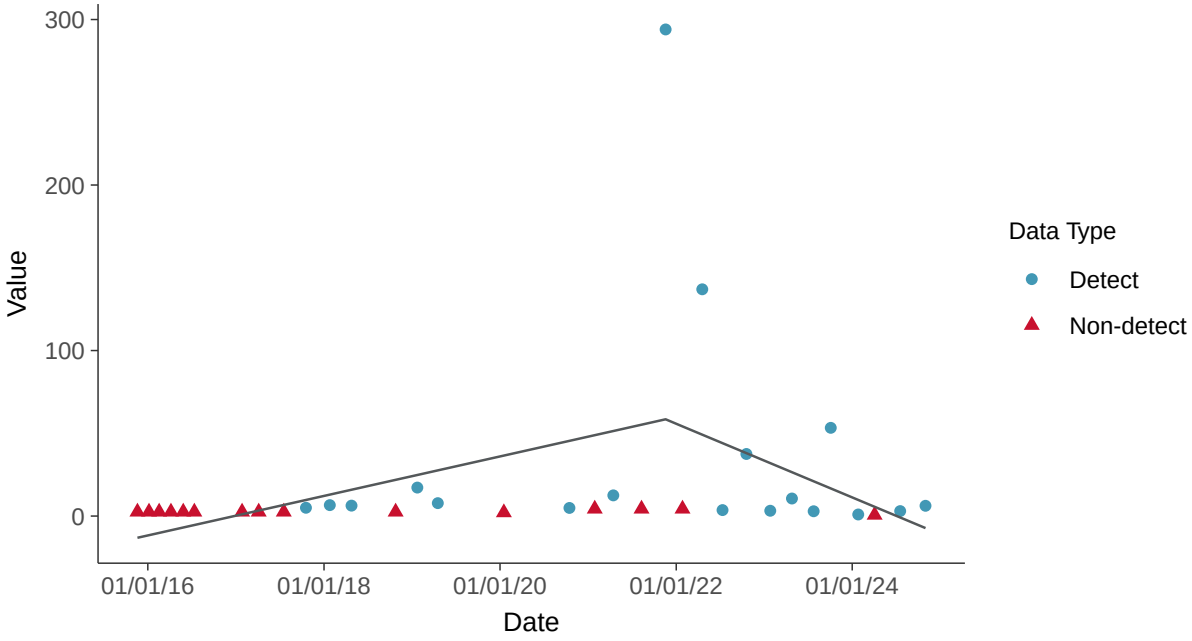
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-2 (ug/L)



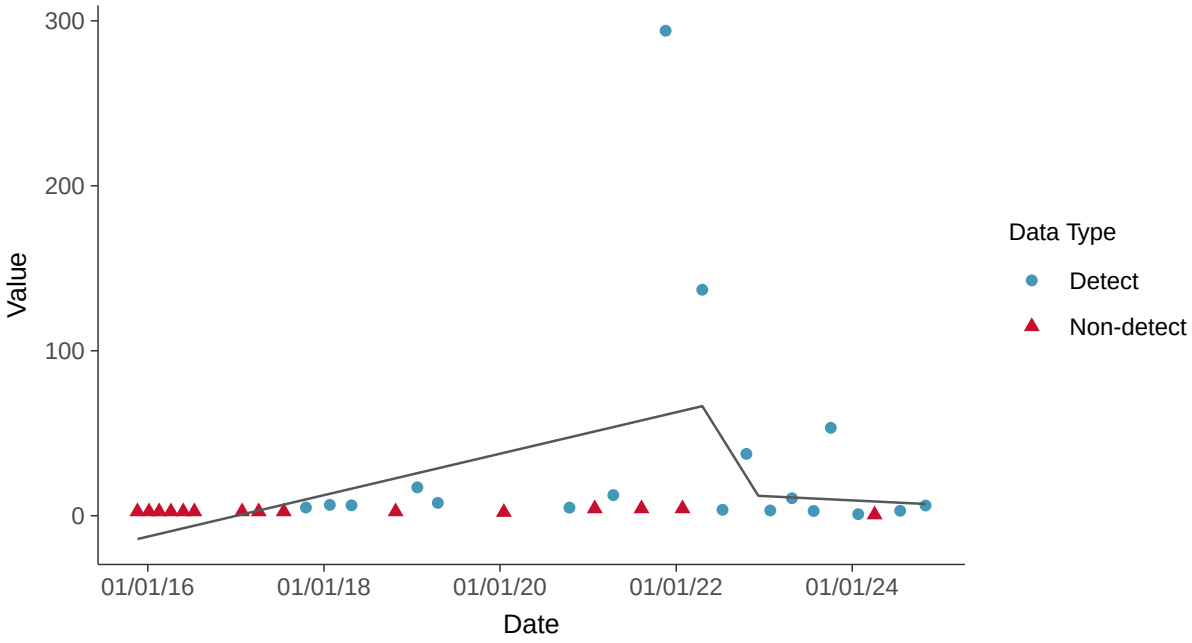
Trend Regression: Piecewise Linear-Linear

Copper, MW-2 (ug/L)



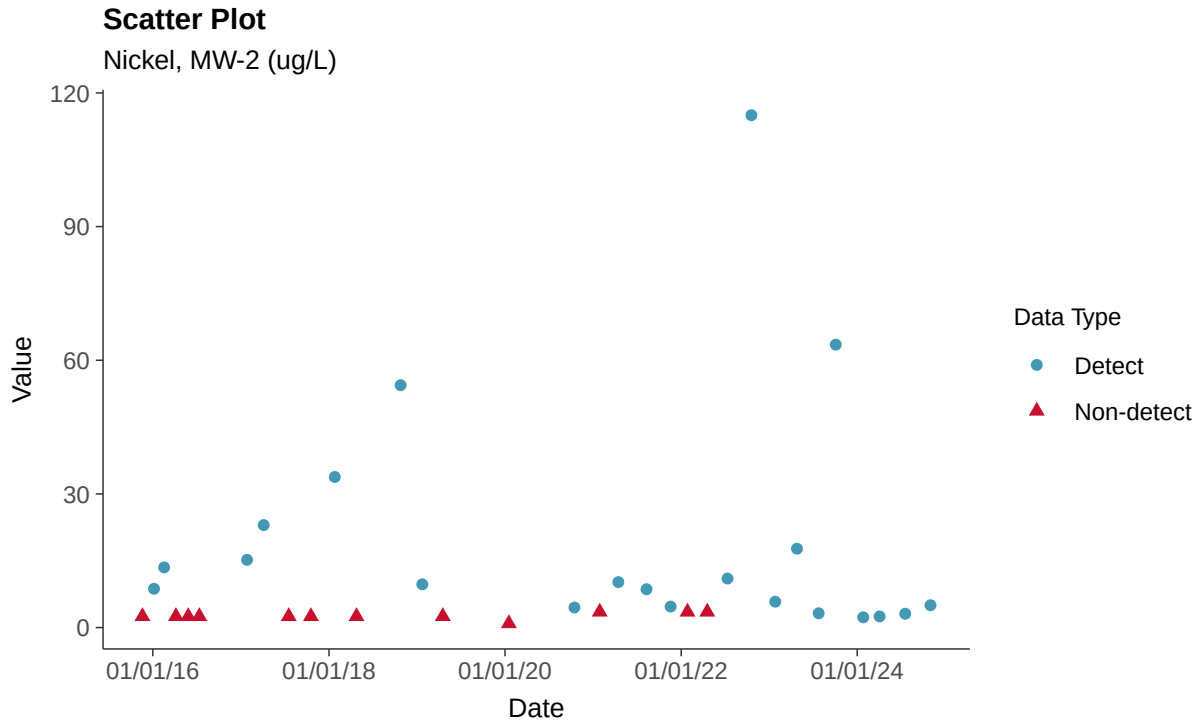
Trend Regression: Piecewise Linear-Linear-Linear

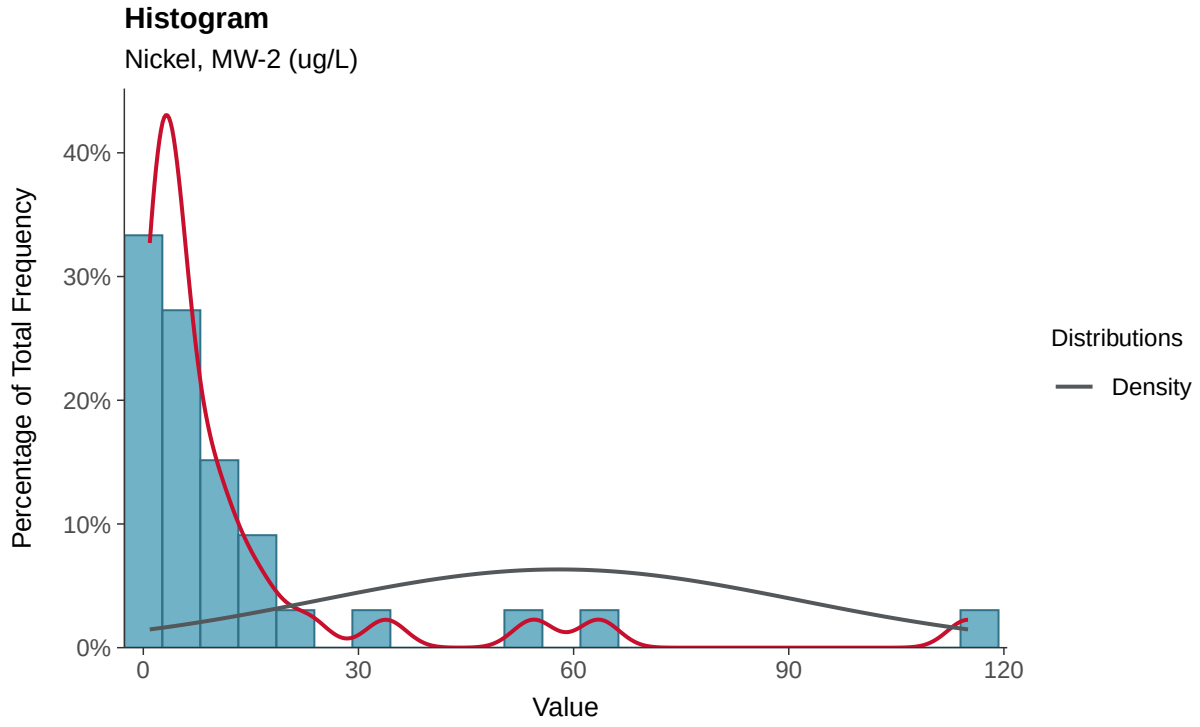
Copper, MW-2 (ug/L)



App. I Metals: Nickel, MW-2

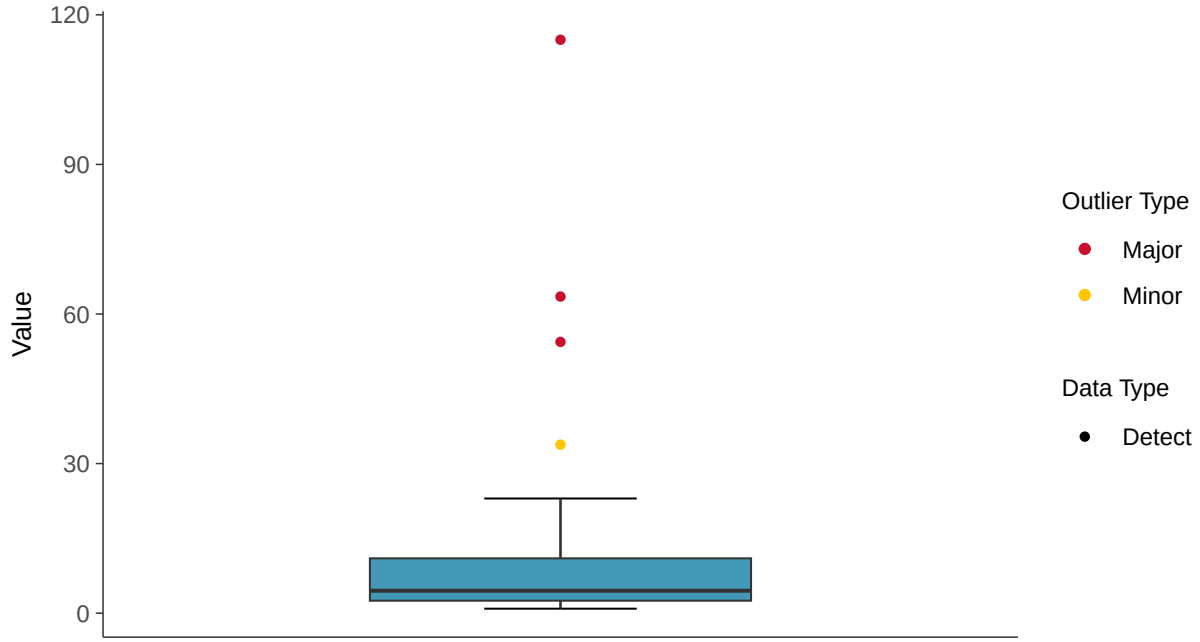
ID: 02_01_117





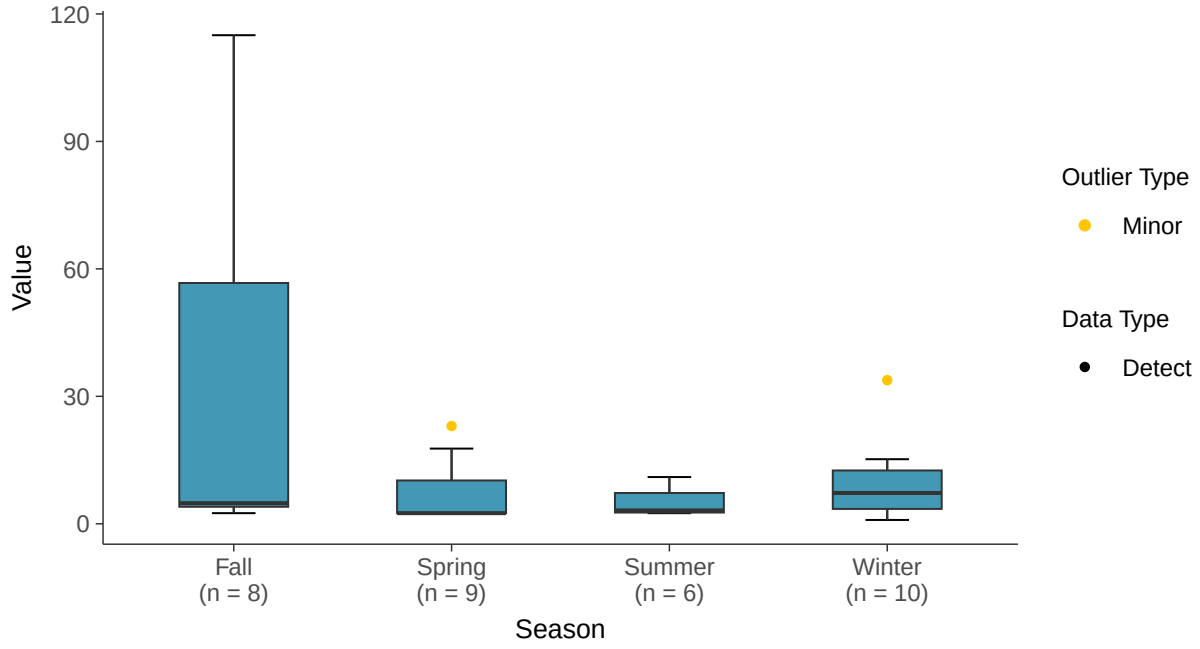
Boxplot

Nickel, MW-2 (ug/L)



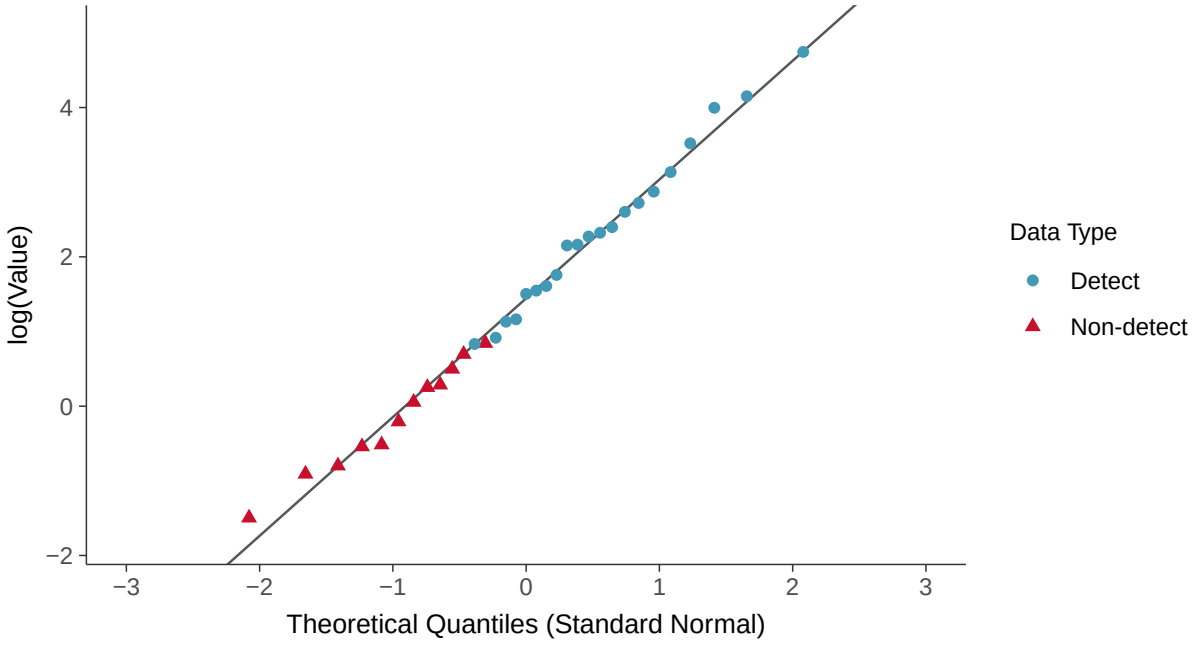
Boxplot by Season

Nickel, MW-2 (ug/L)



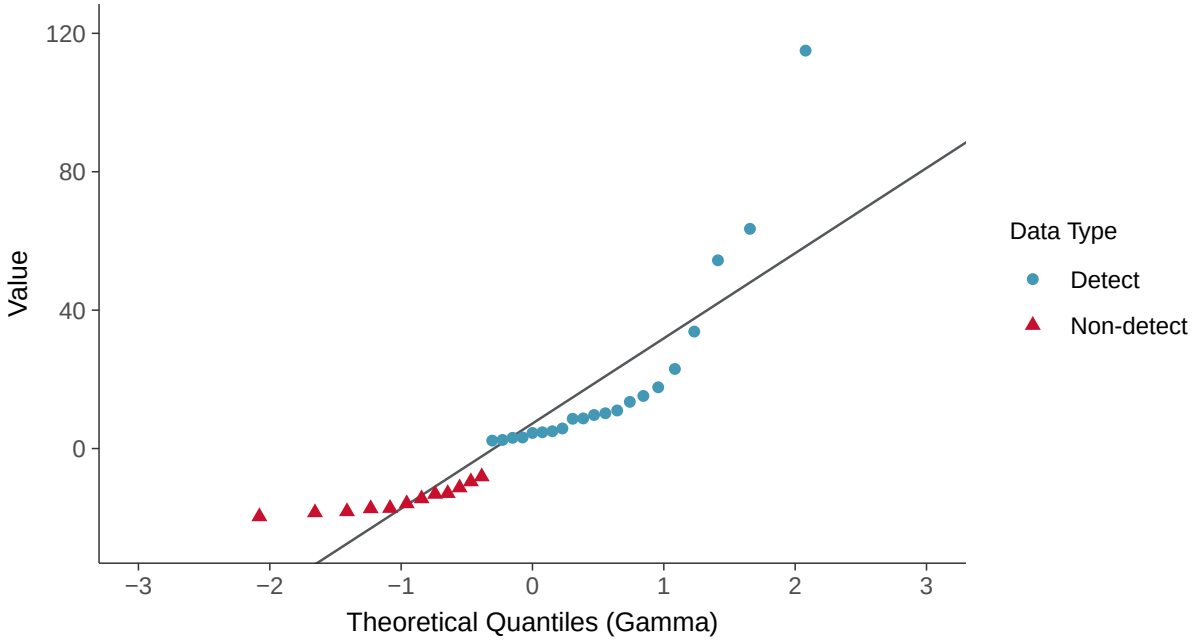
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-2 (ug/L)



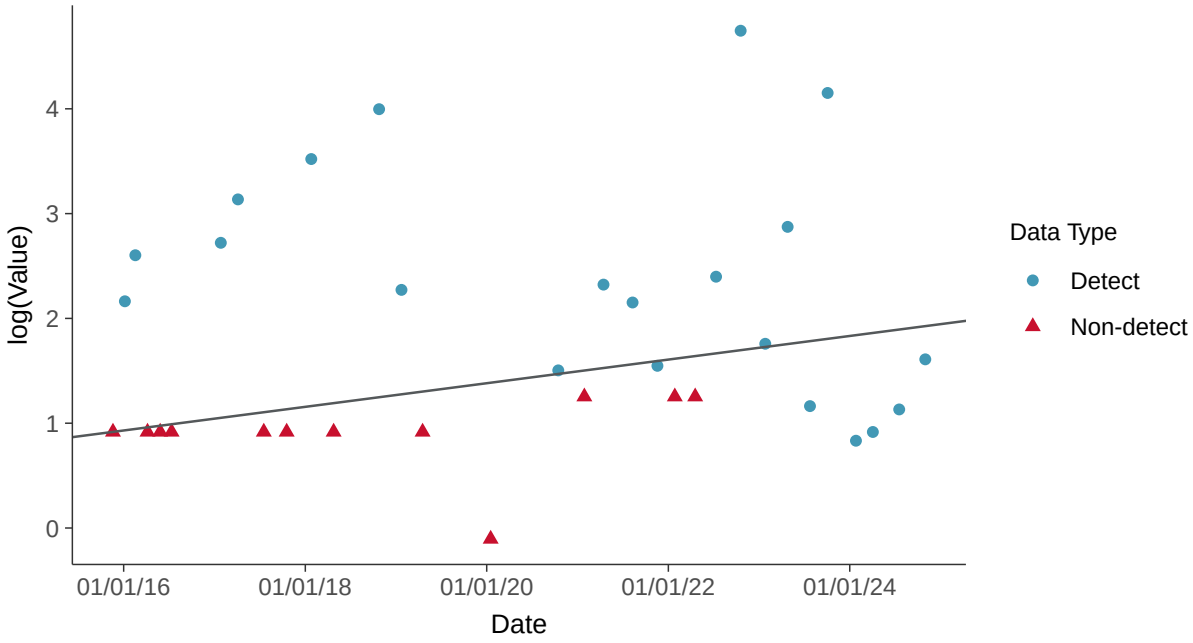
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-2 (ug/L)



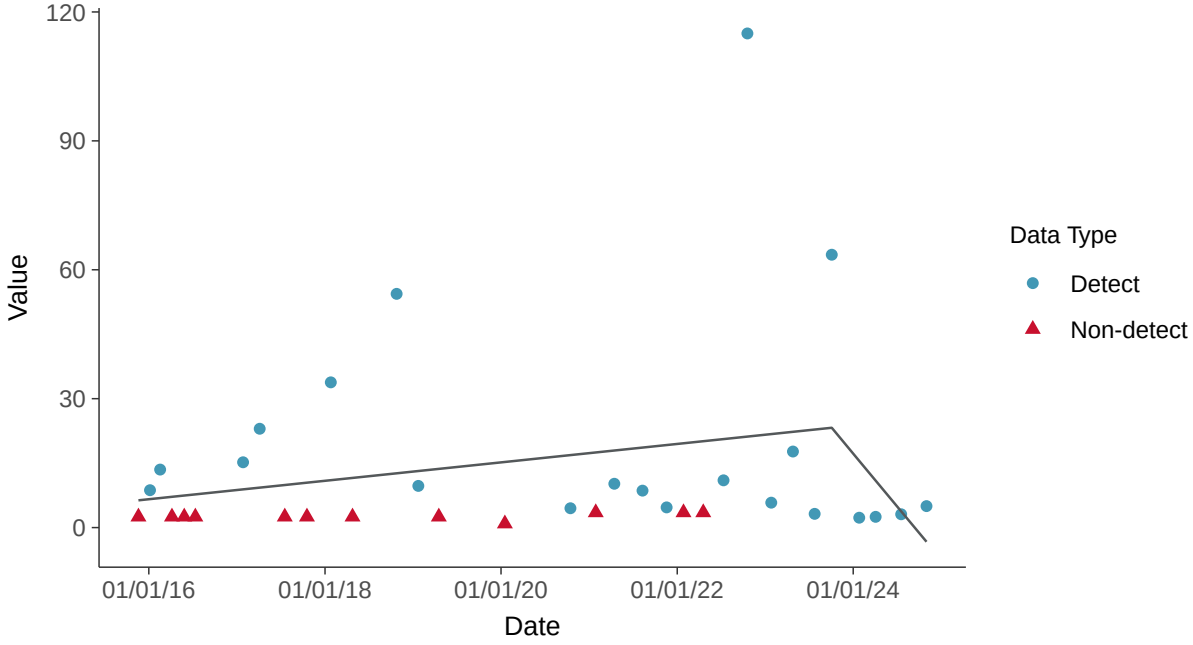
Trend Regression: Lognormal MLE

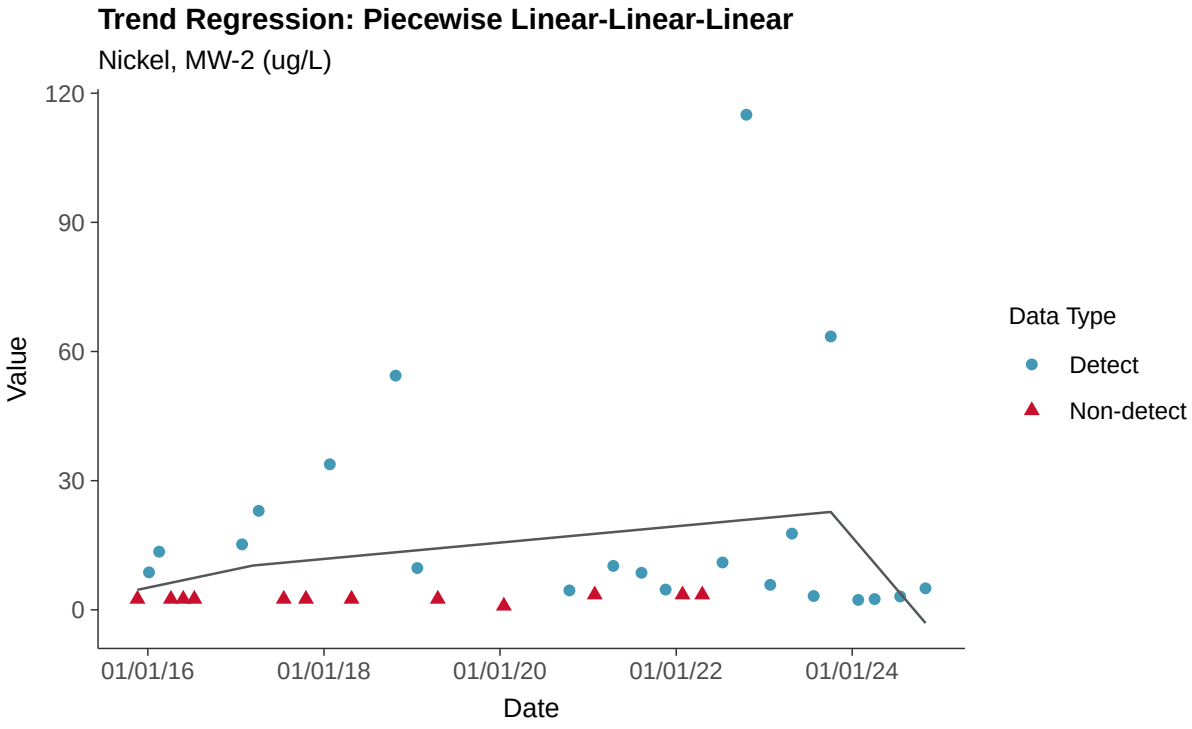
Nickel, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

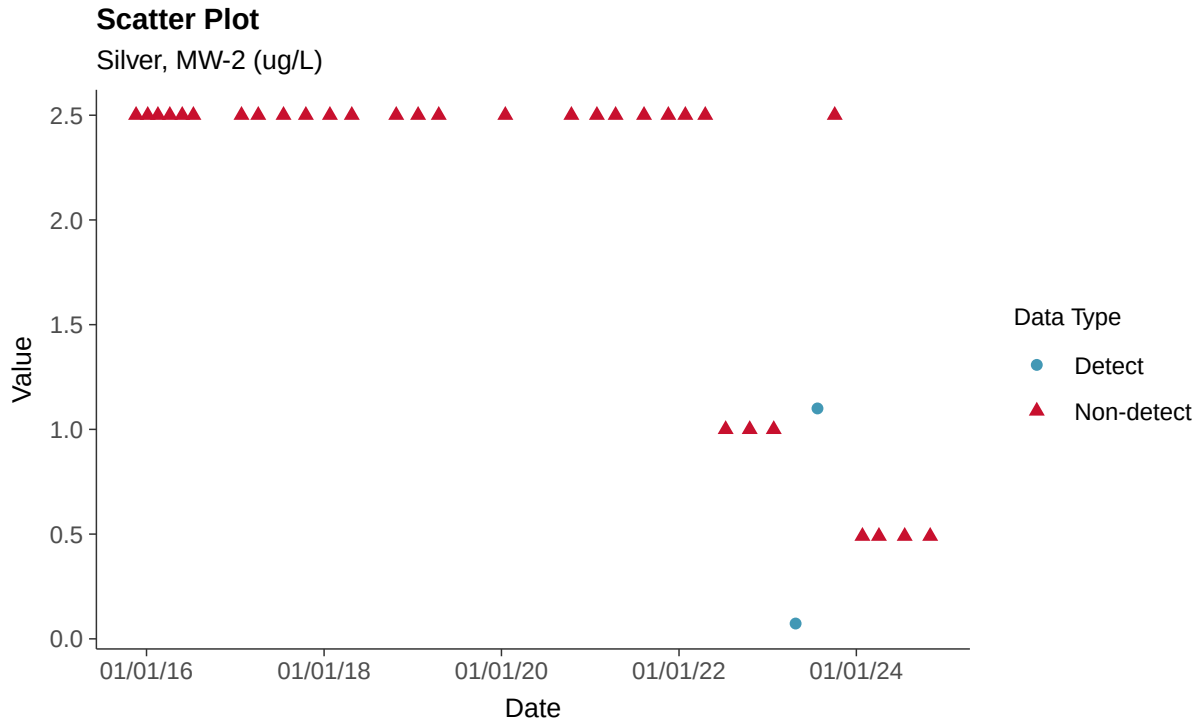
Nickel, MW-2 (ug/L)

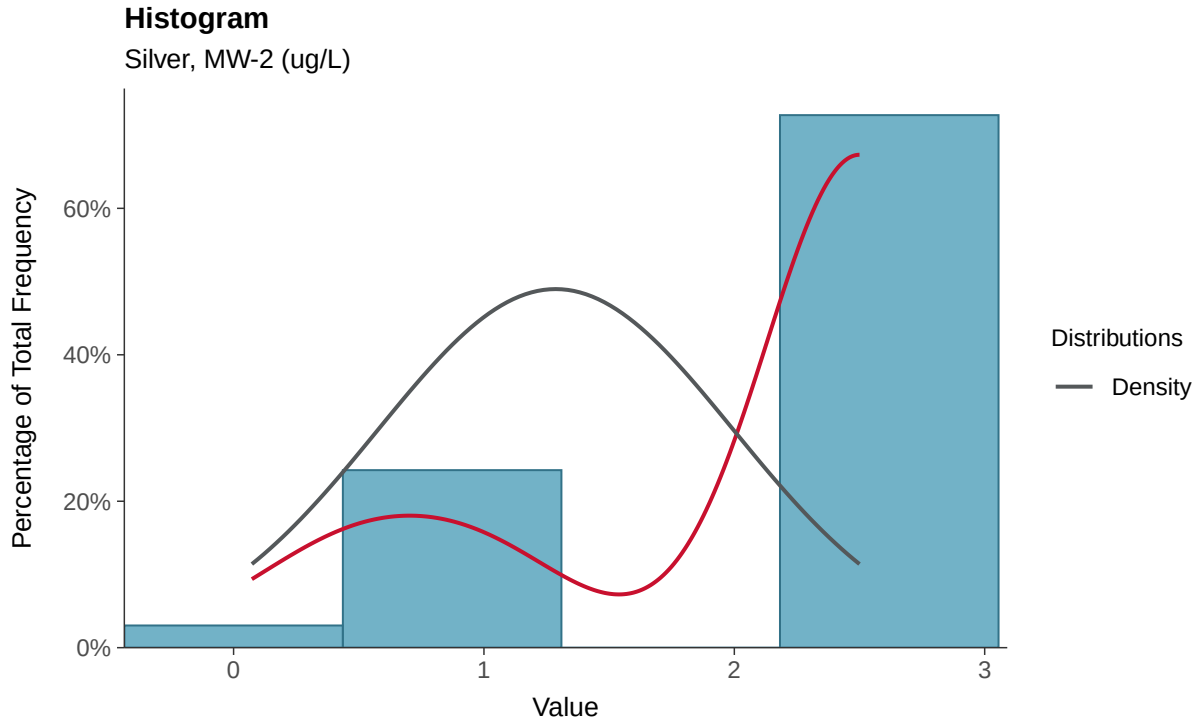



Trend Regression: Piecewise Linear-Linear-Linear
Nickel, MW-2 (ug/L)
Value
120
90
60
30
0
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Silver, MW-2

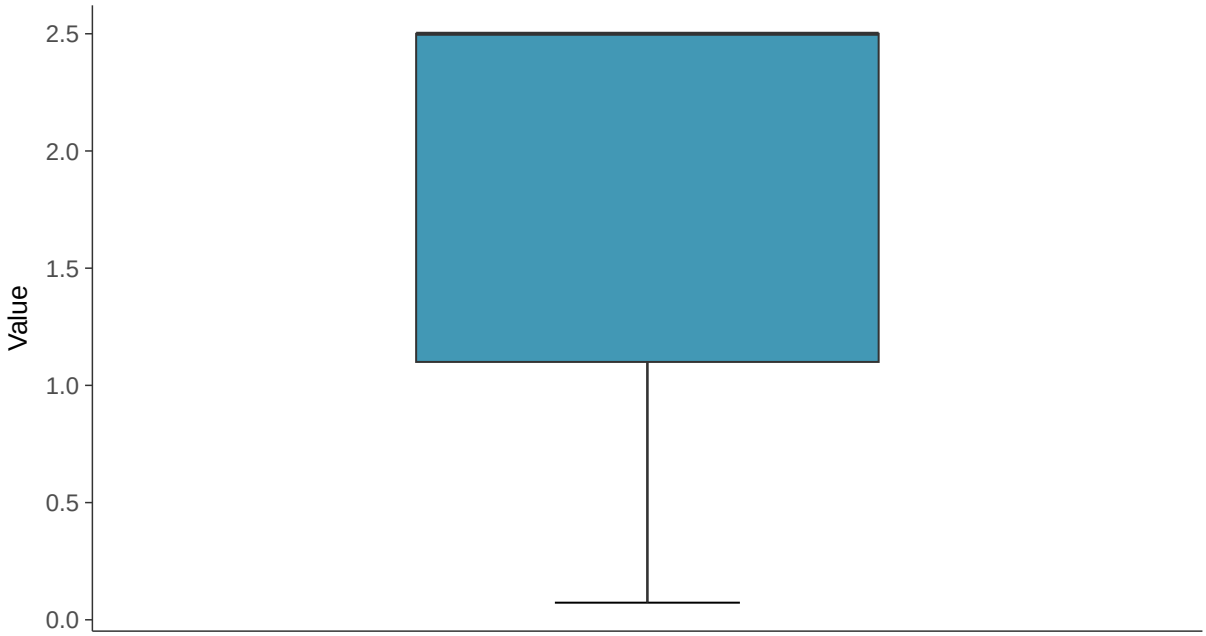
ID: 02_01_122





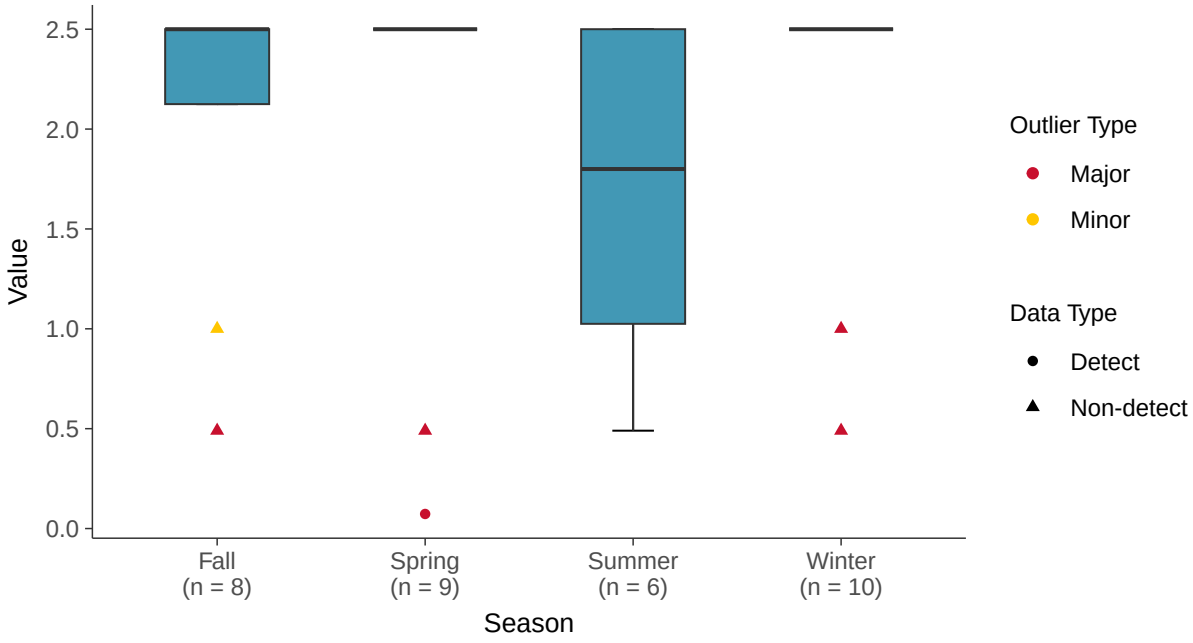
Boxplot

Silver, MW-2 (ug/L)



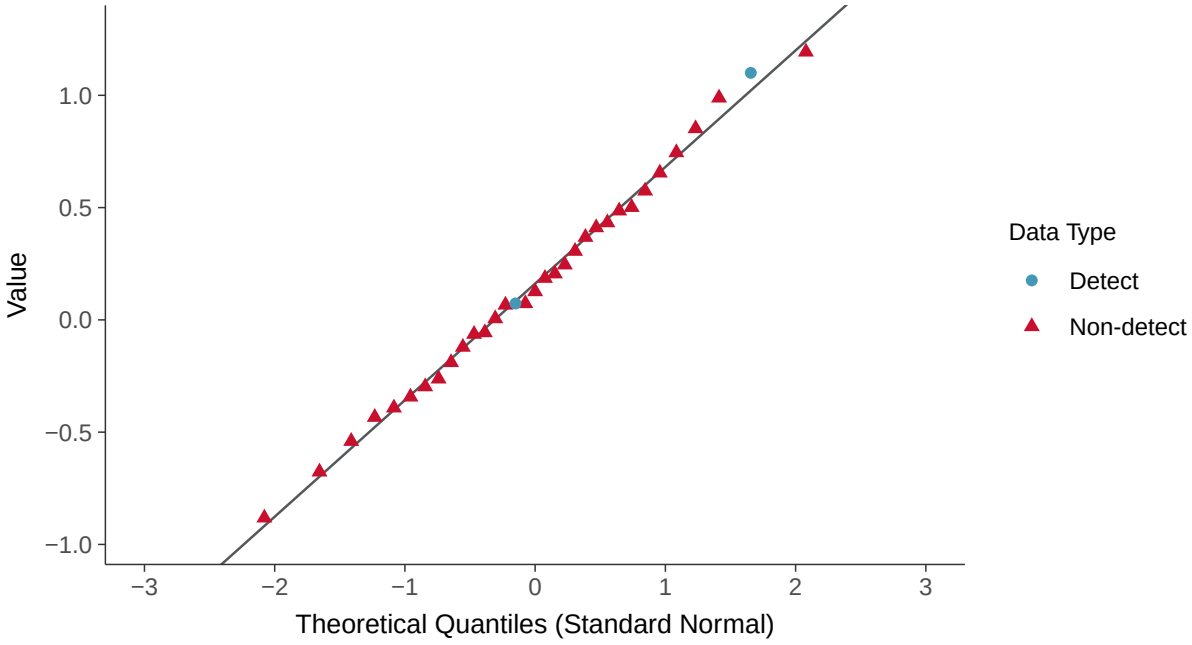
Boxplot by Season

Silver, MW-2 (ug/L)



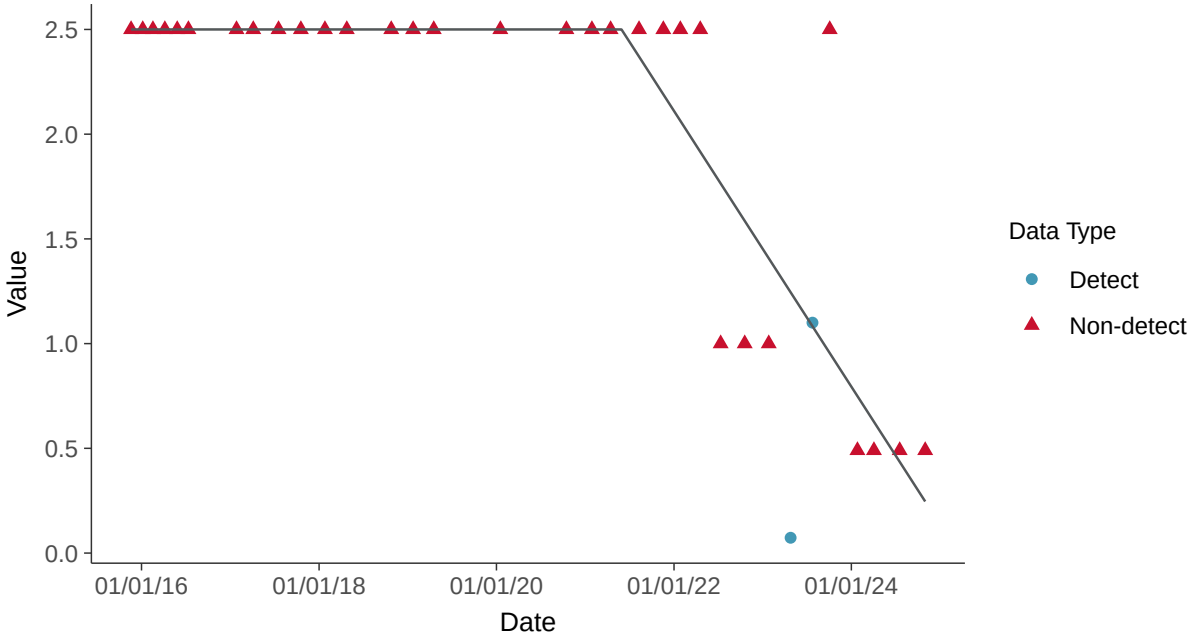
Normal Q-Q plot using ROS Imputed Estimates

Silver, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Silver, MW-2 (ug/L)

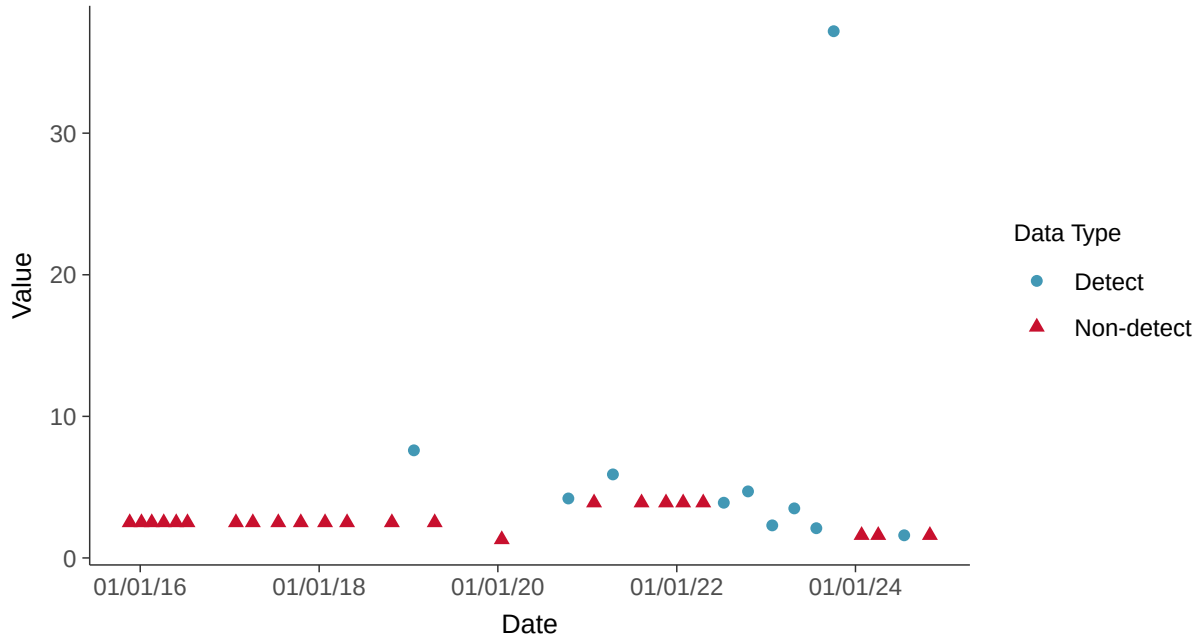


App. I Metals: Vanadium, MW-2

ID: 02_01_127

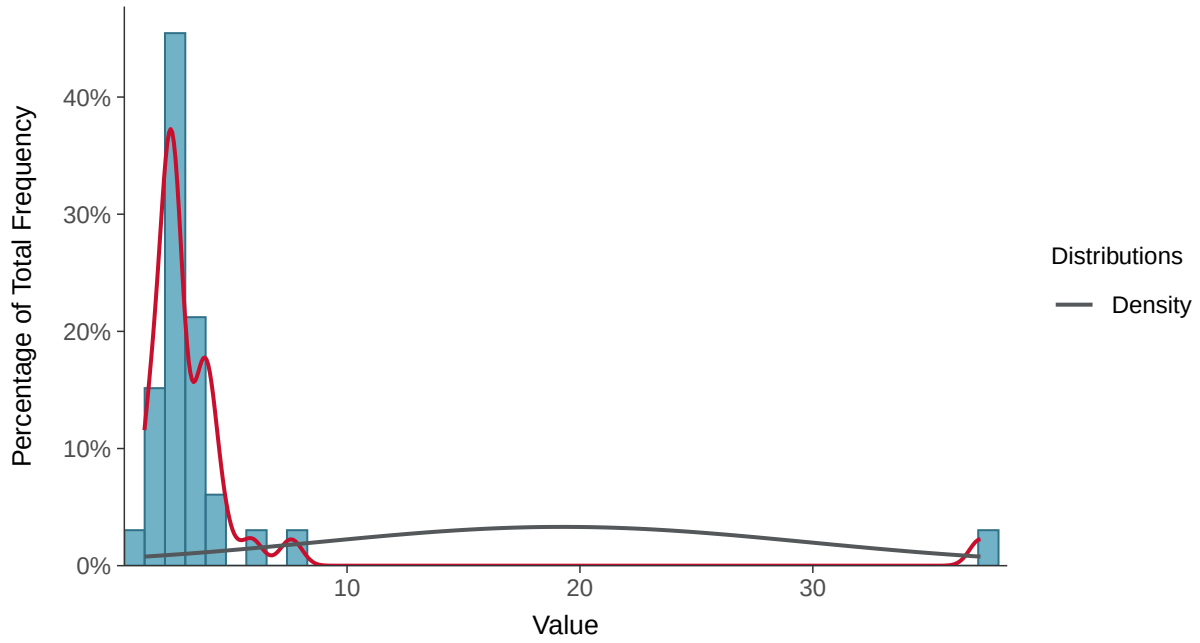
Scatter Plot

Vanadium, MW-2 (ug/L)



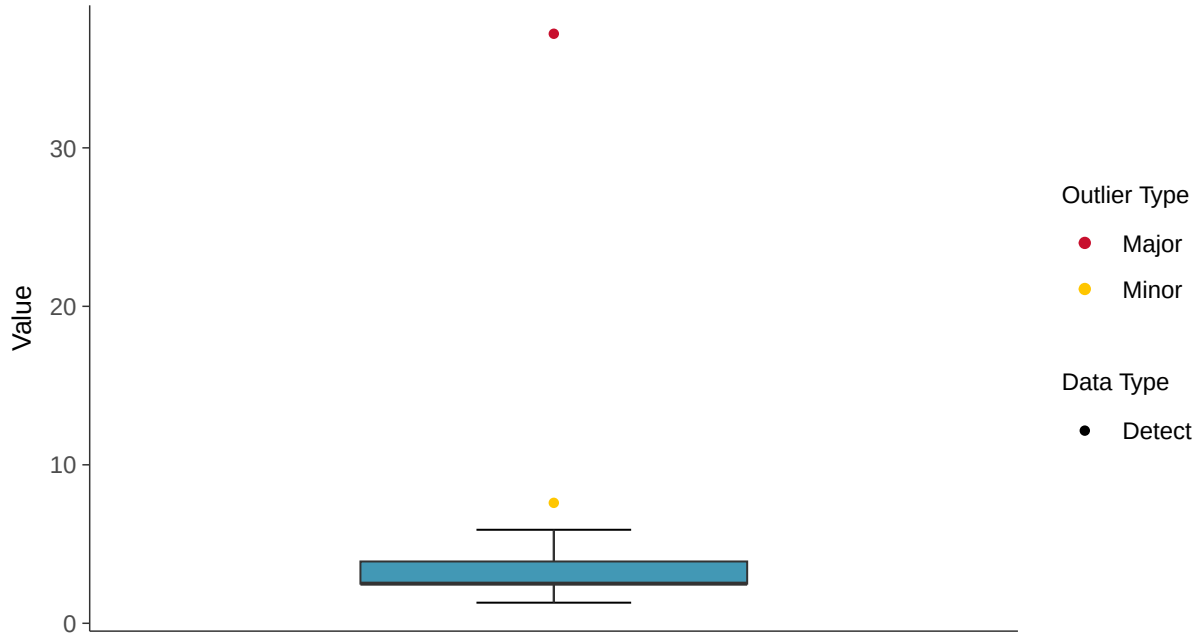
Histogram

Vanadium, MW-2 (ug/L)



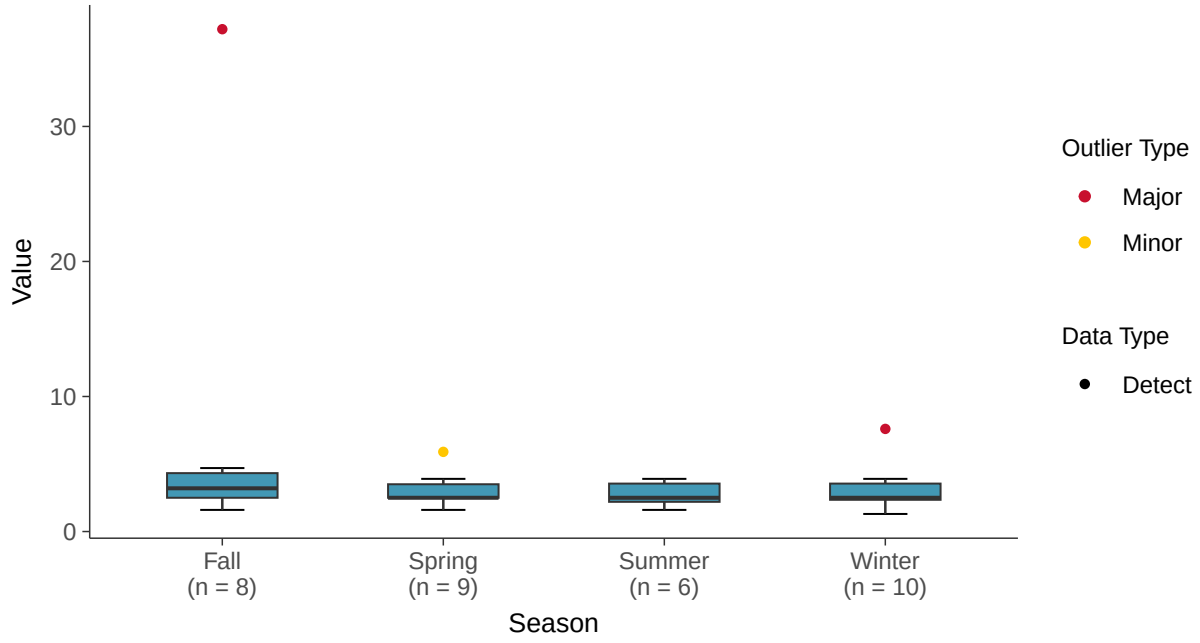
Boxplot

Vanadium, MW-2 (ug/L)



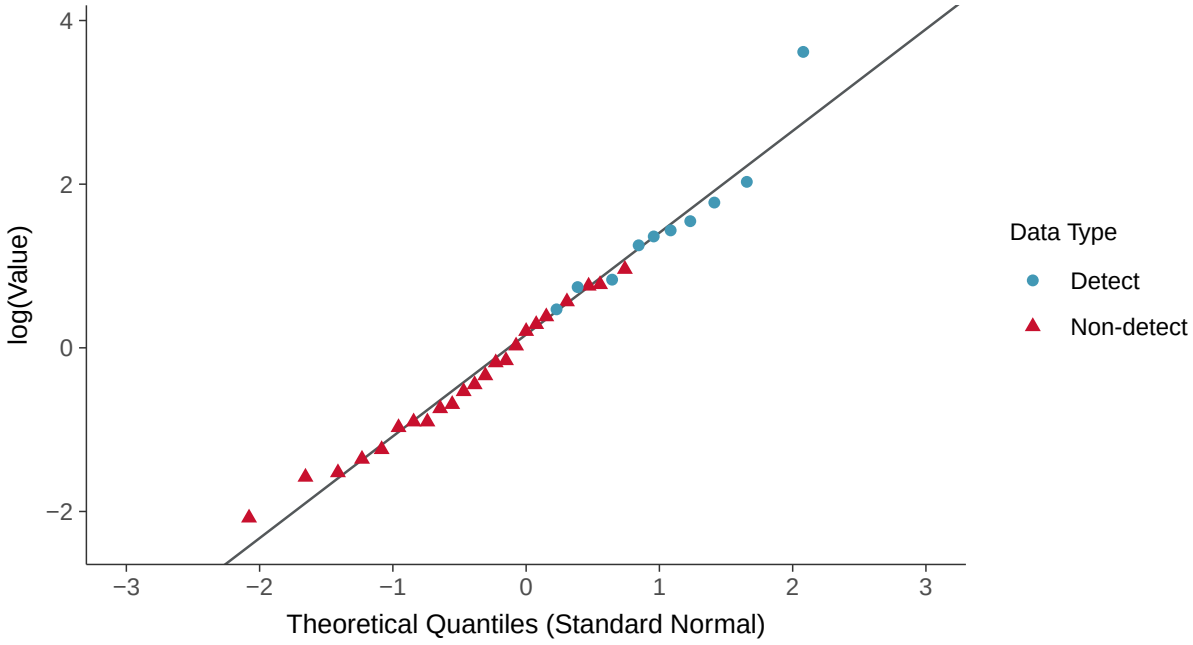
Boxplot by Season

Vanadium, MW-2 (ug/L)



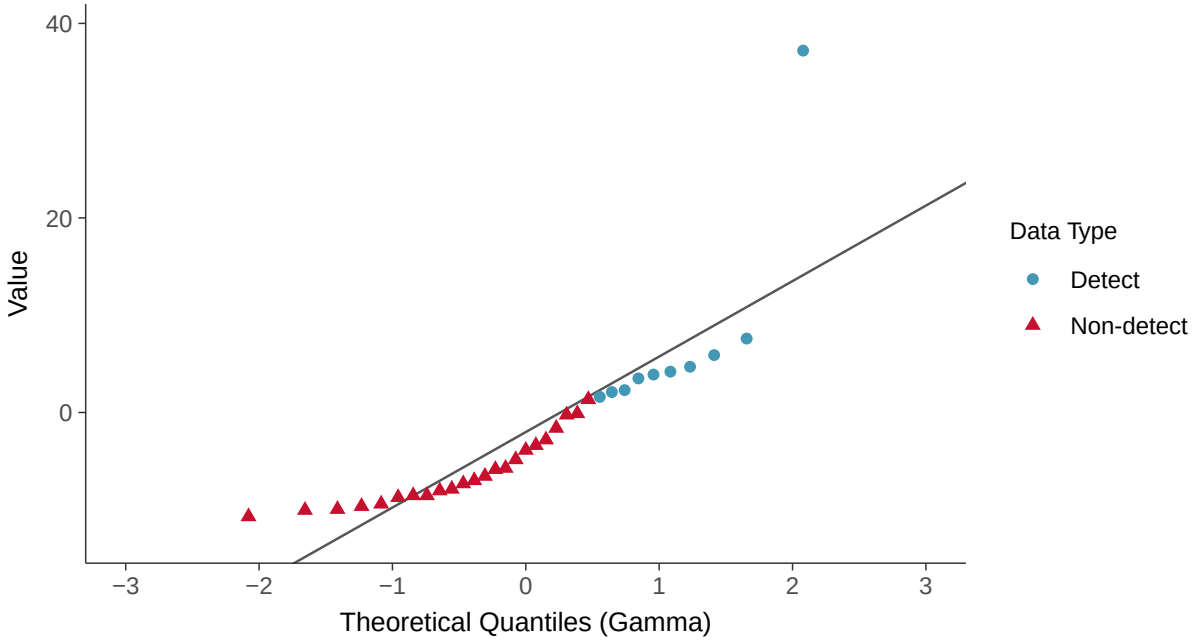
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-2 (ug/L)



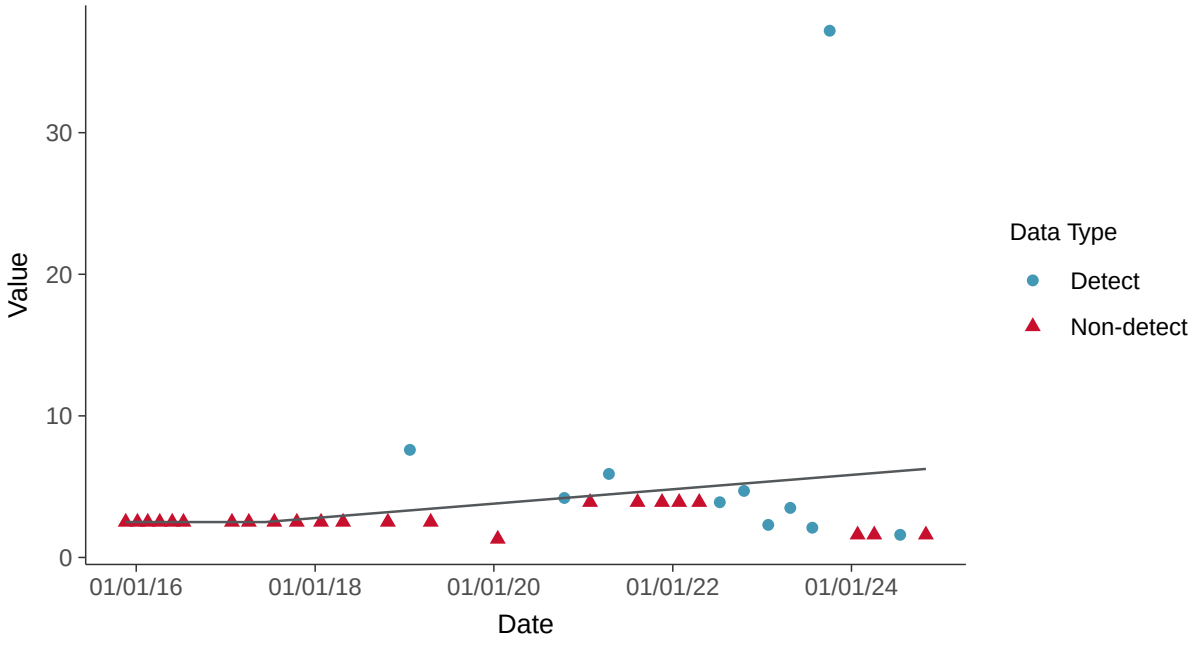
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-2 (ug/L)



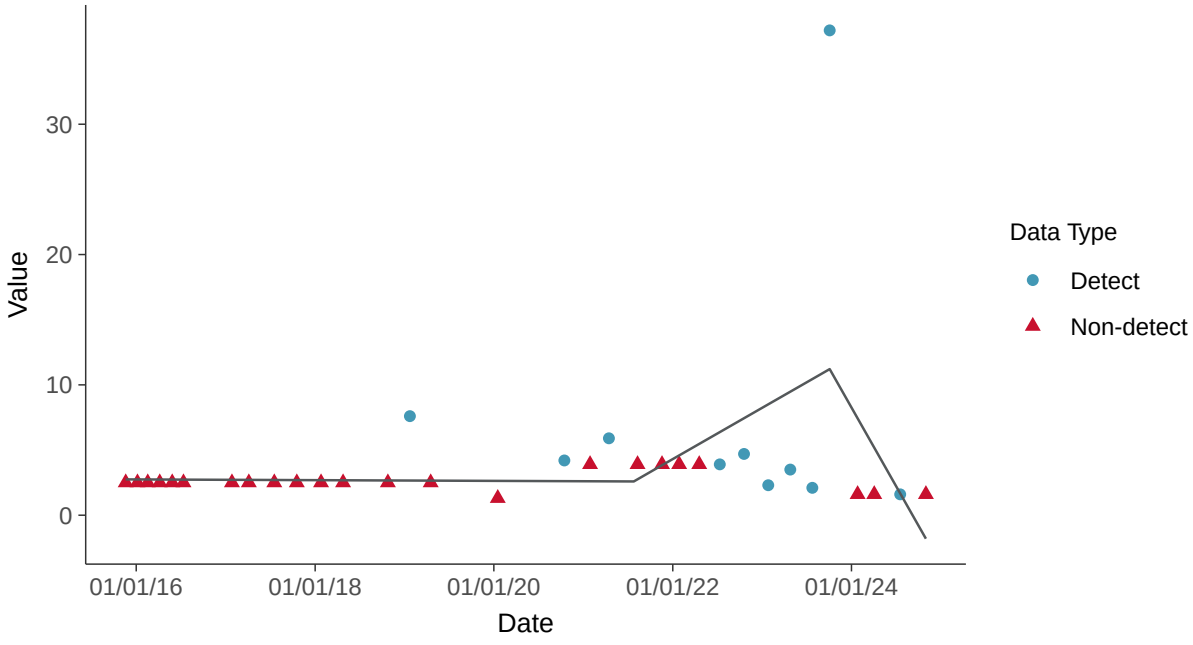
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-2 (ug/L)

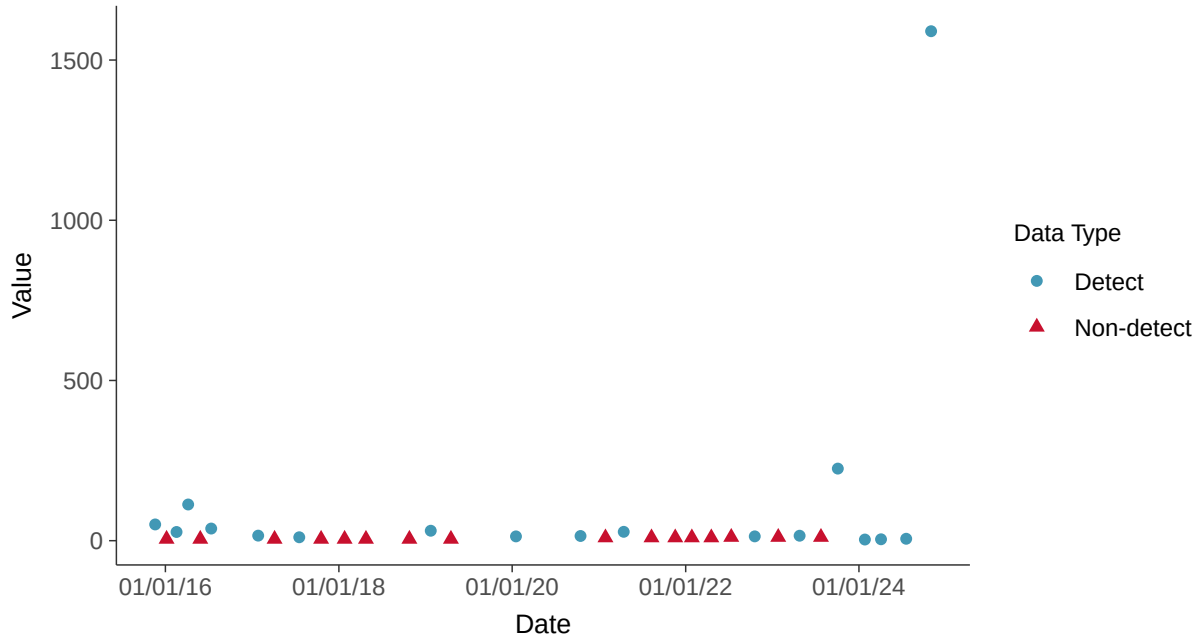


App. I Metals: Zinc, MW-2

ID: 02_01_128

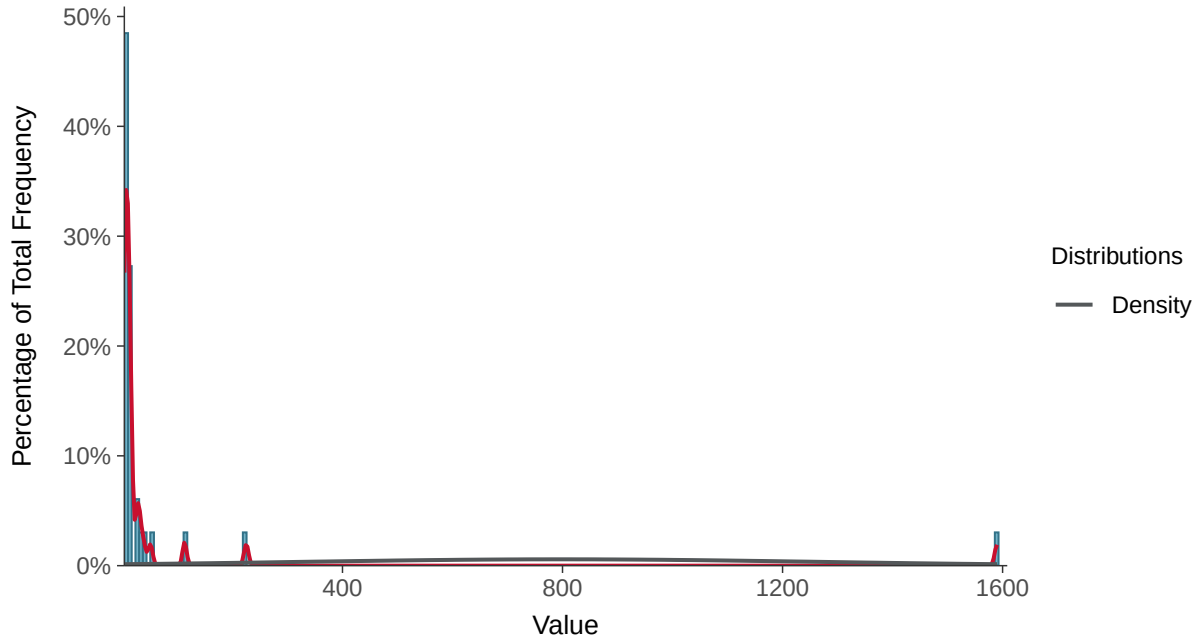
Scatter Plot

Zinc, MW-2 (ug/L)



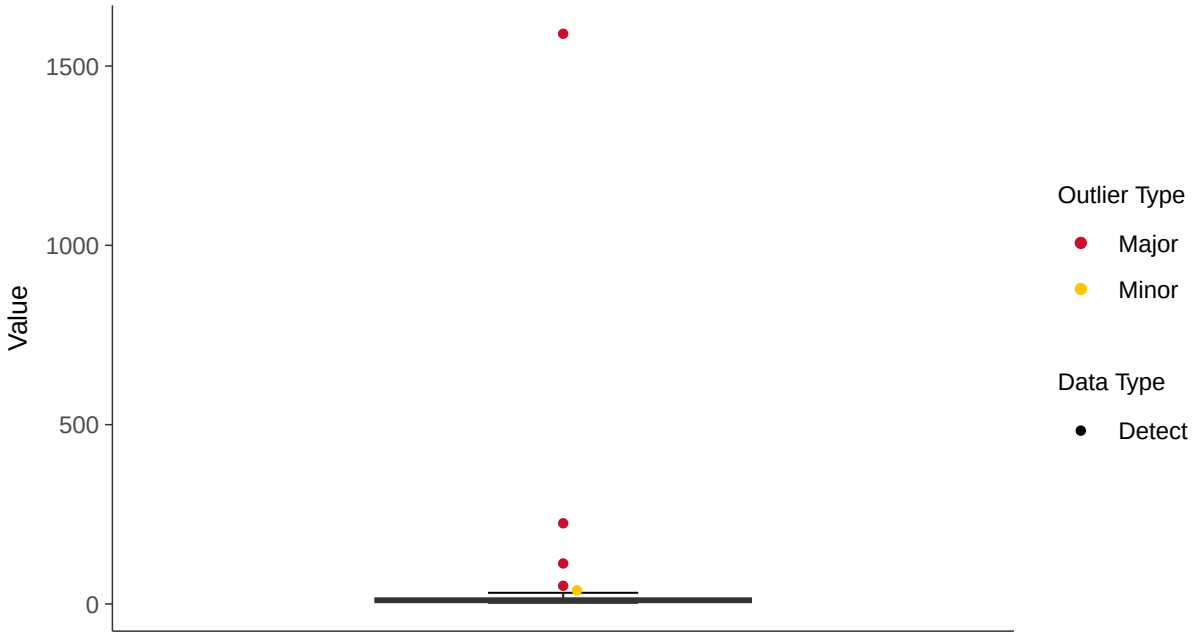
Histogram

Zinc, MW-2 (ug/L)



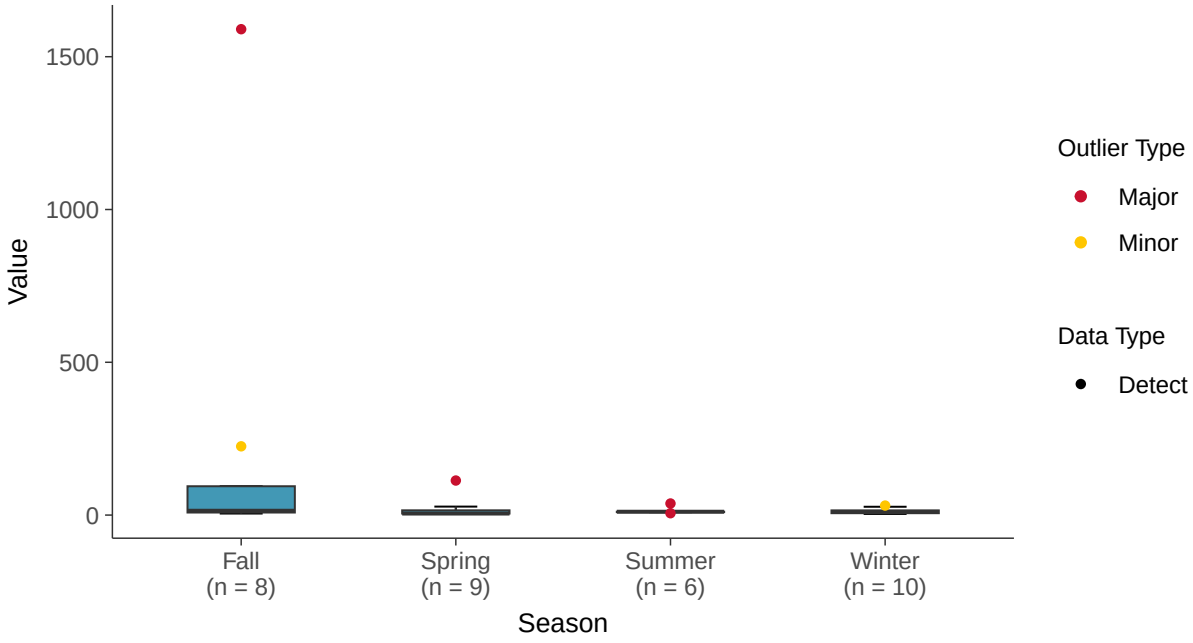
Boxplot

Zinc, MW-2 (ug/L)



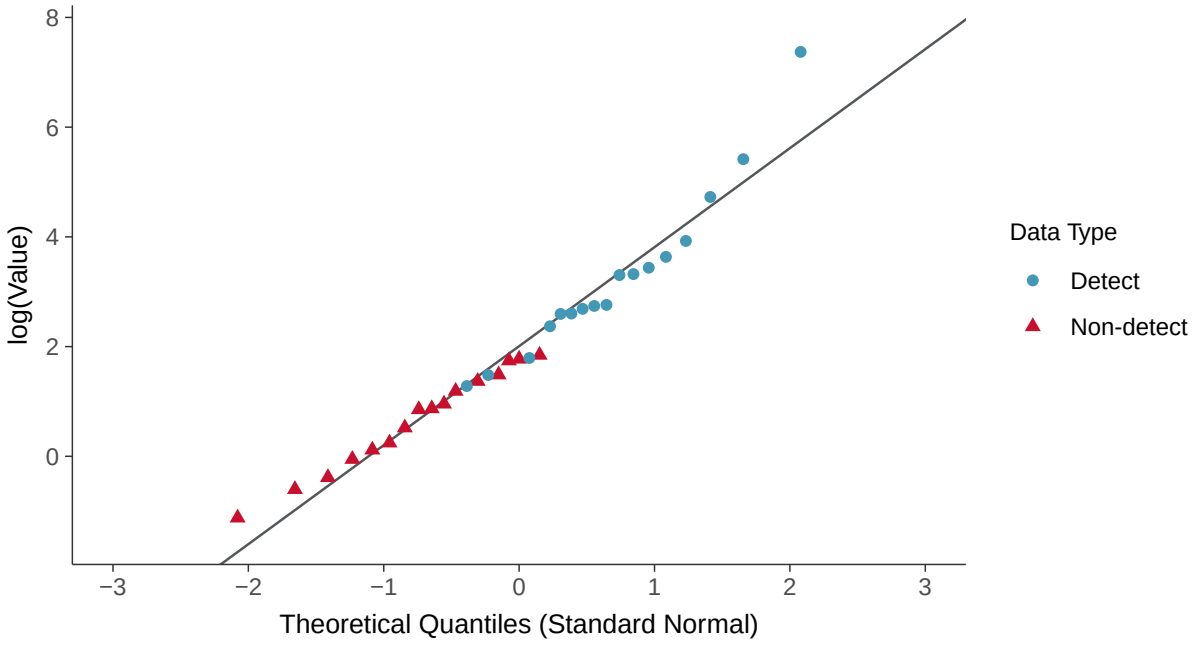
Boxplot by Season

Zinc, MW-2 (ug/L)



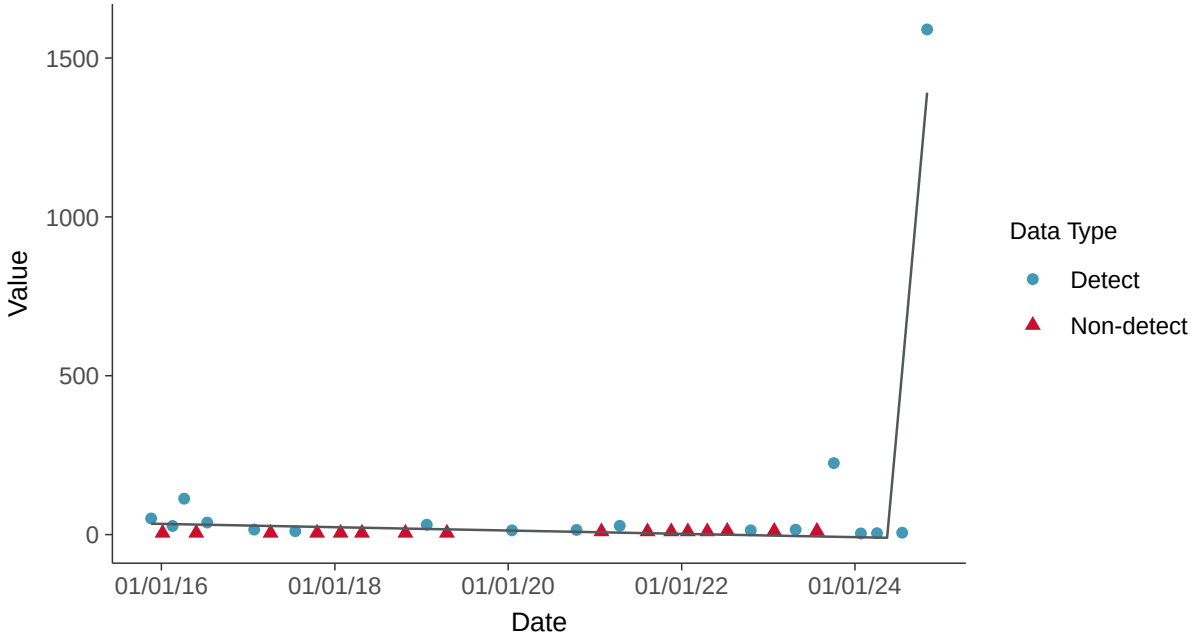
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-2 (ug/L)



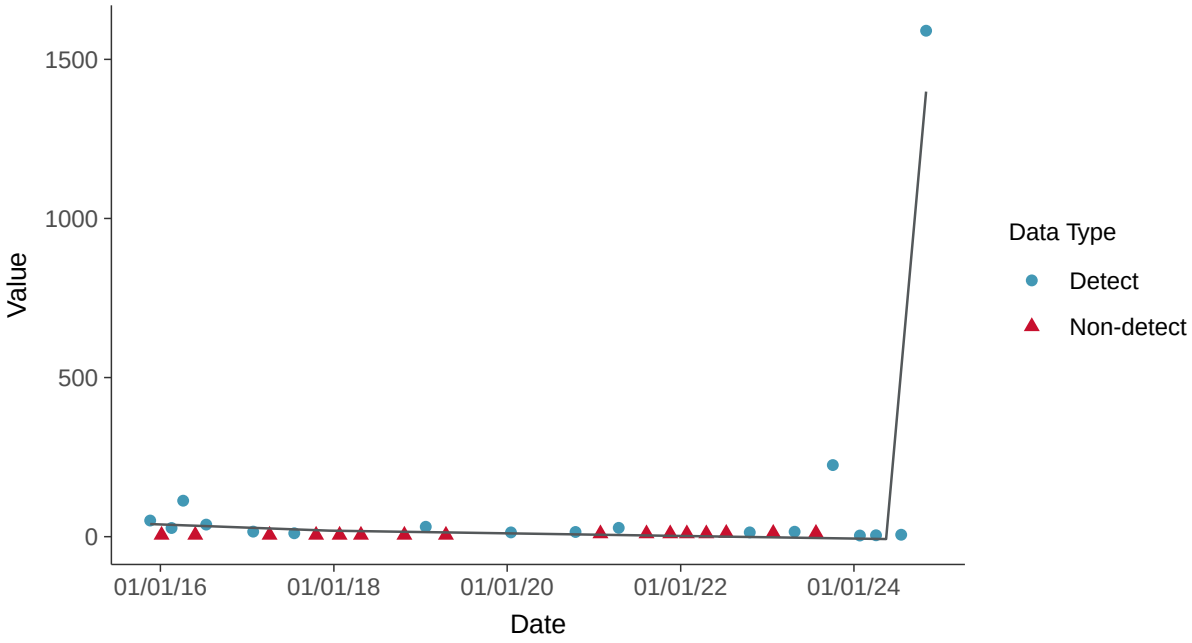
Trend Regression: Piecewise Linear-Linear

Zinc, MW-2 (ug/L)



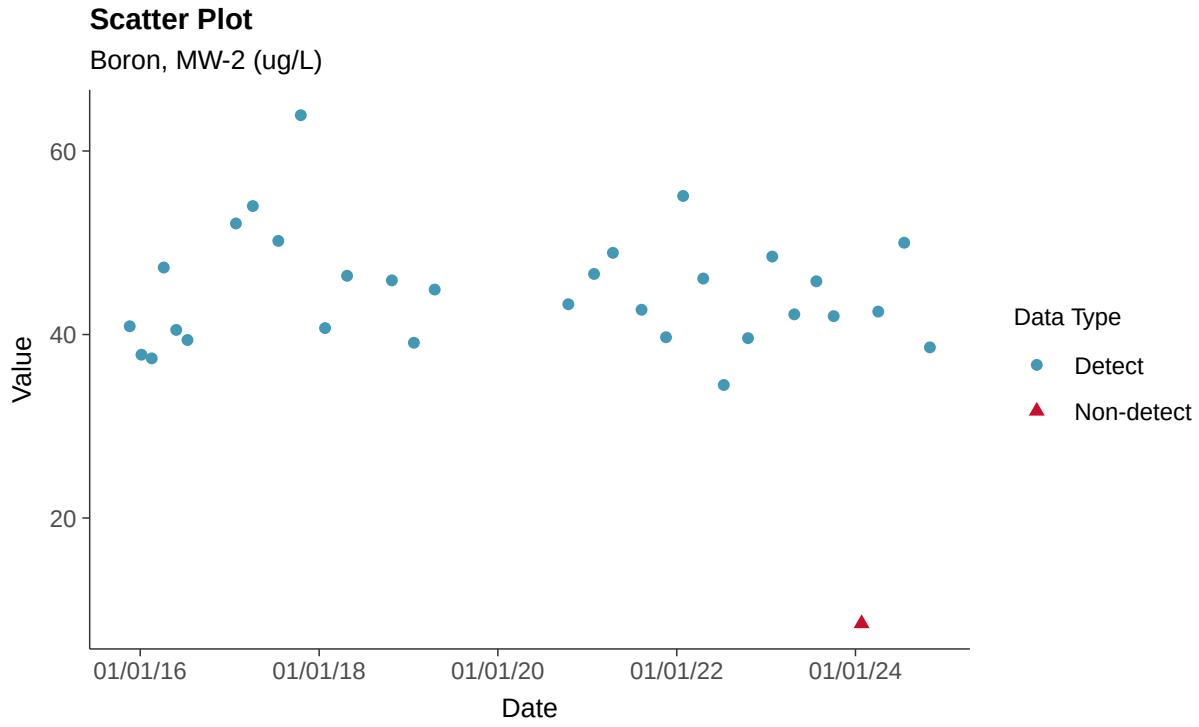
Trend Regression: Piecewise Linear-Linear-Linear

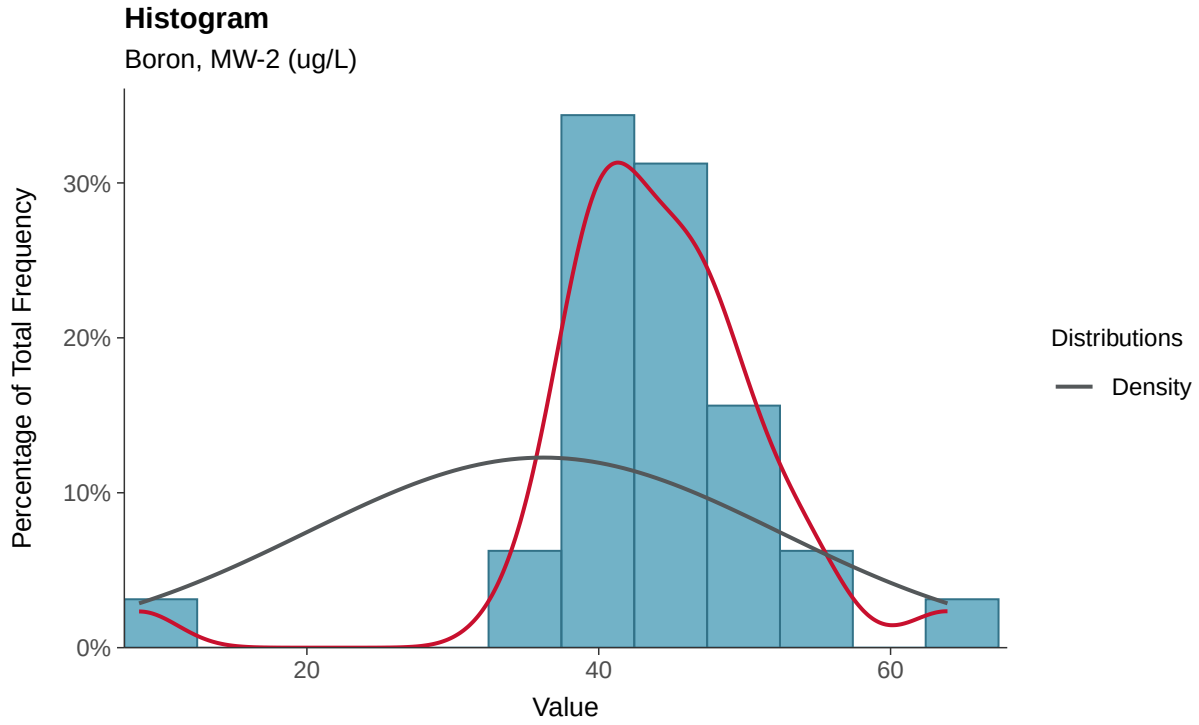
Zinc, MW-2 (ug/L)



App. III: Boron, MW-2

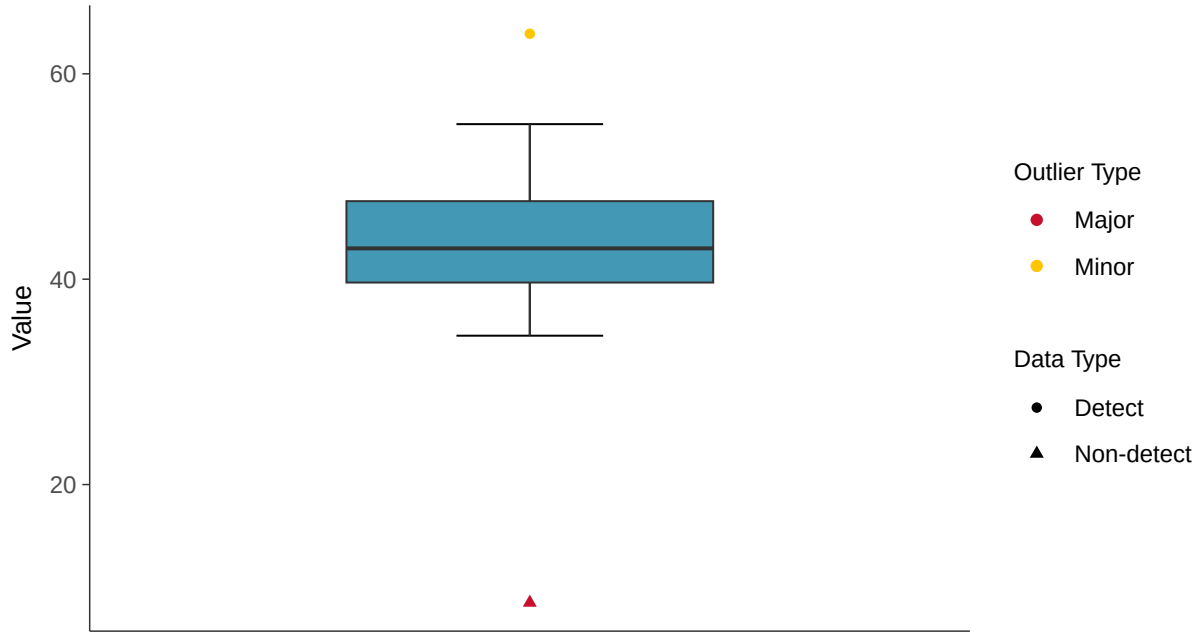
ID: 02_02_105





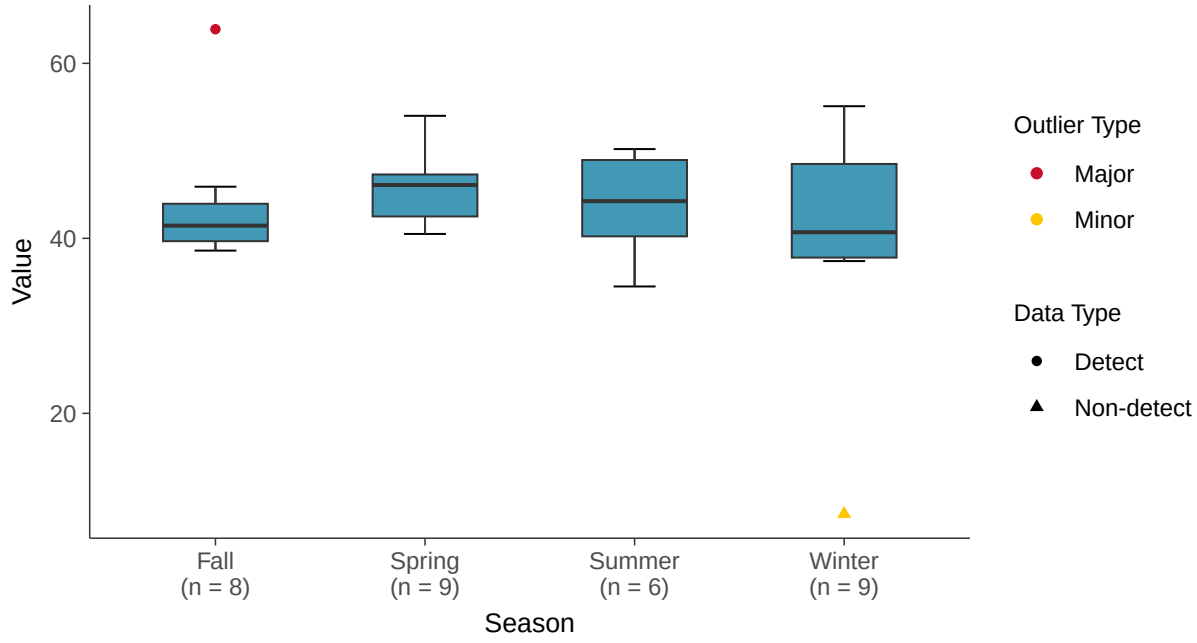
Boxplot

Boron, MW-2 (ug/L)



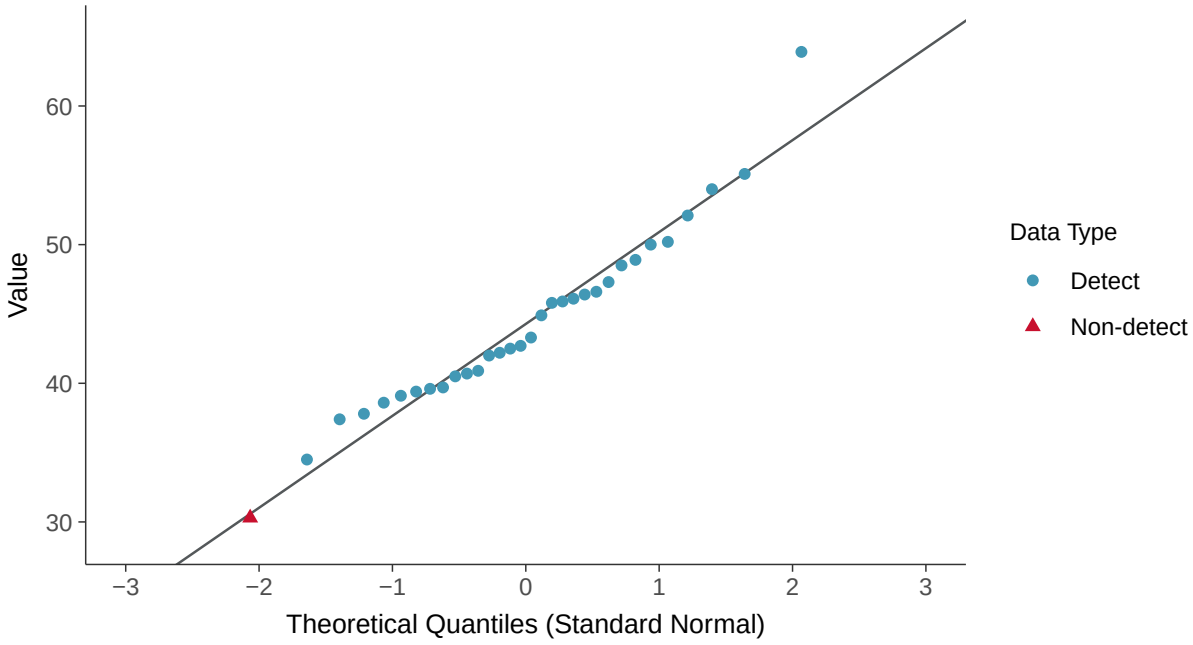
Boxplot by Season

Boron, MW-2 (ug/L)



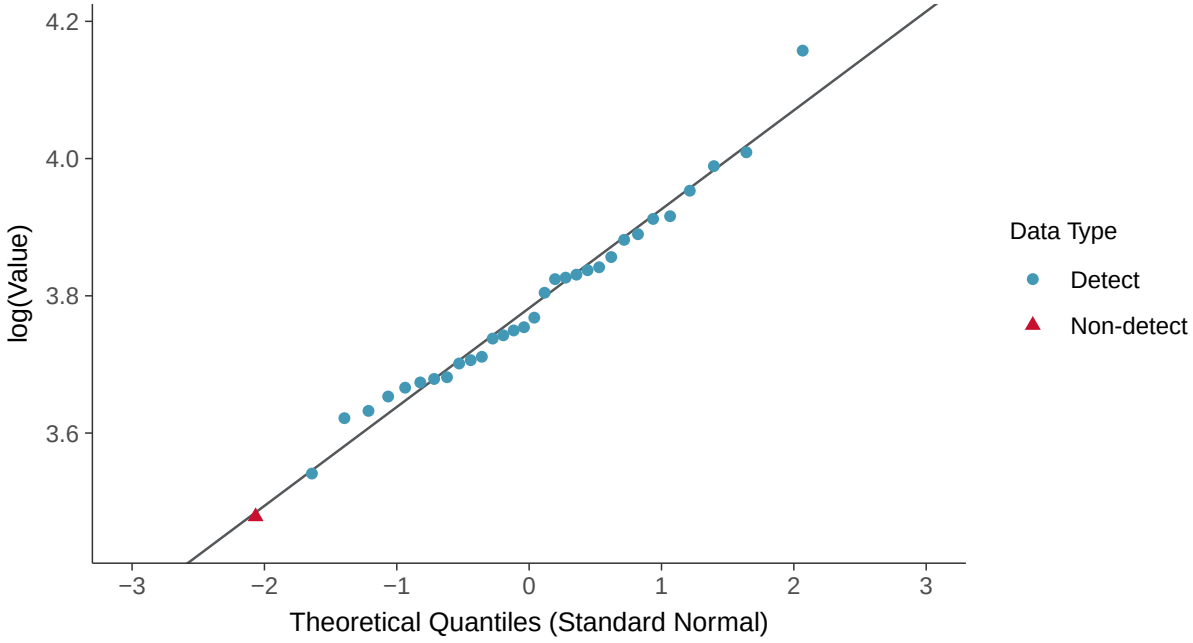
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



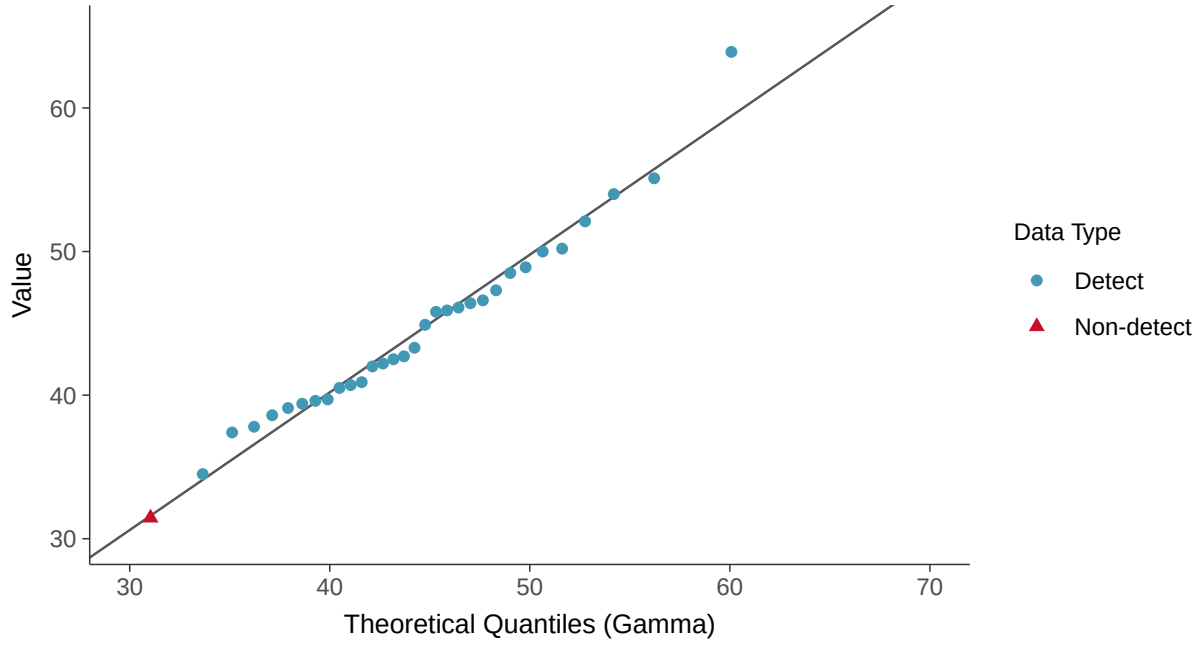
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



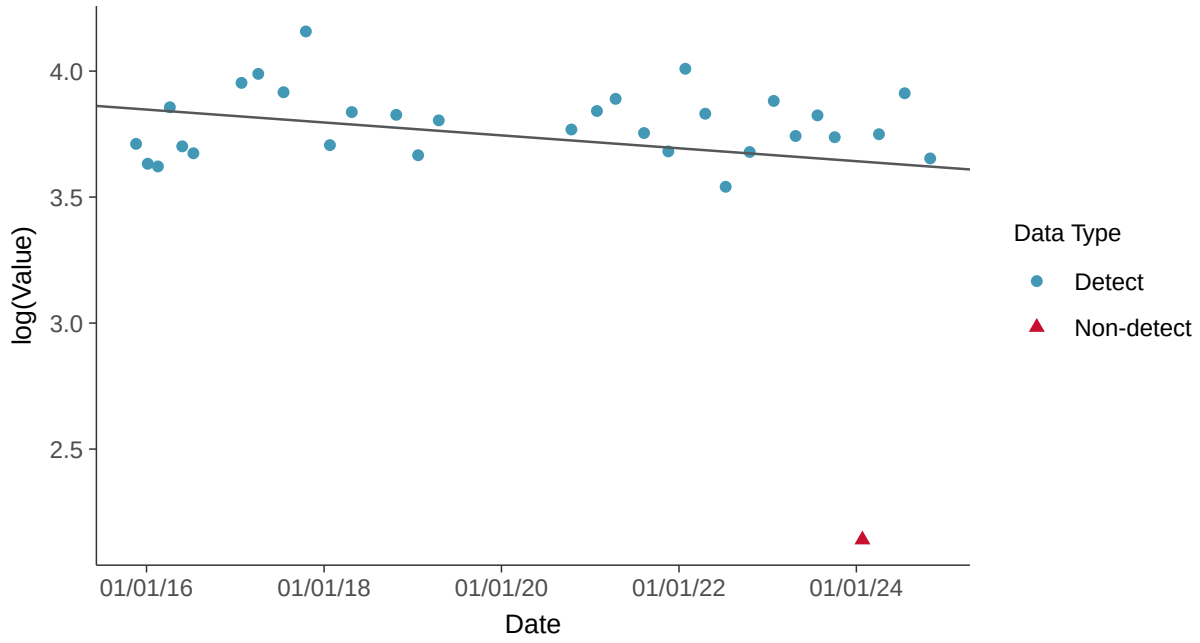
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



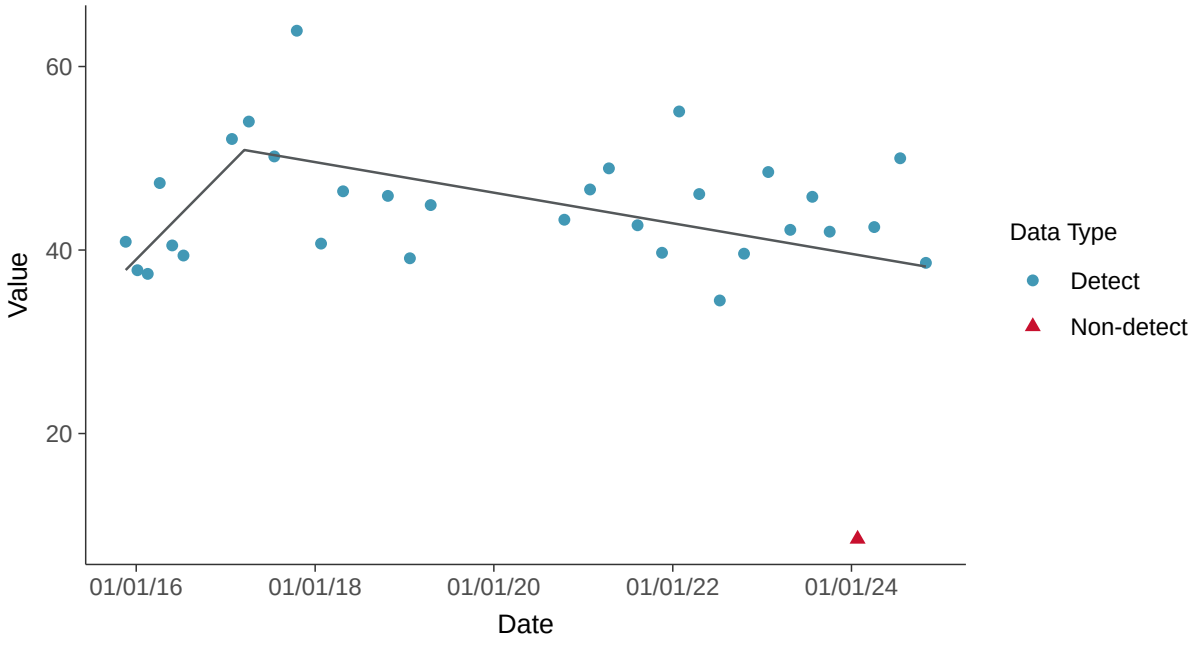
Trend Regression: Lognormal MLE

Boron, MW-2 (ug/L)



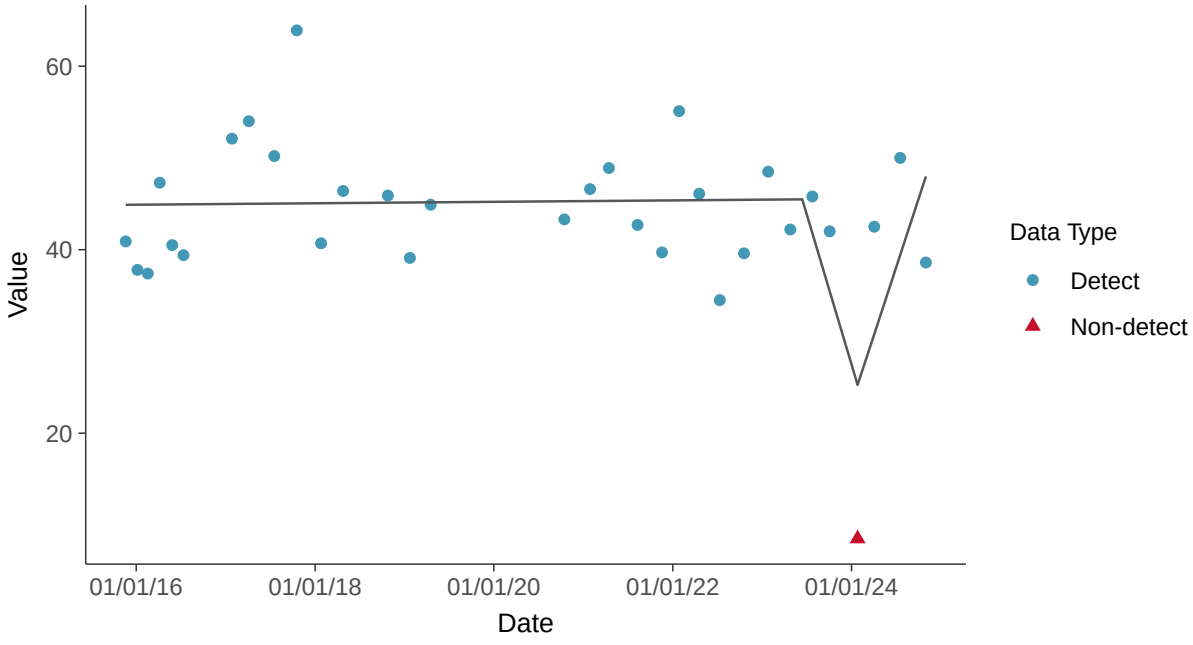
Trend Regression: Piecewise Linear-Linear

Boron, MW-2 (ug/L)



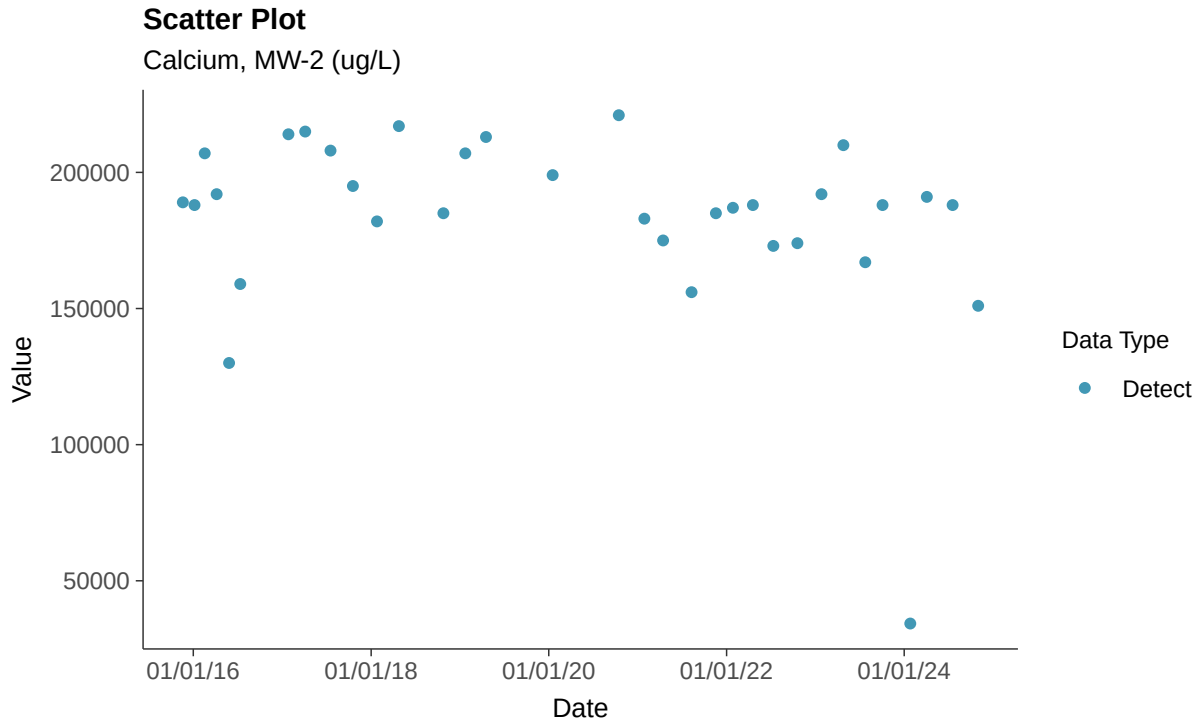
Trend Regression: Piecewise Linear-Linear-Linear

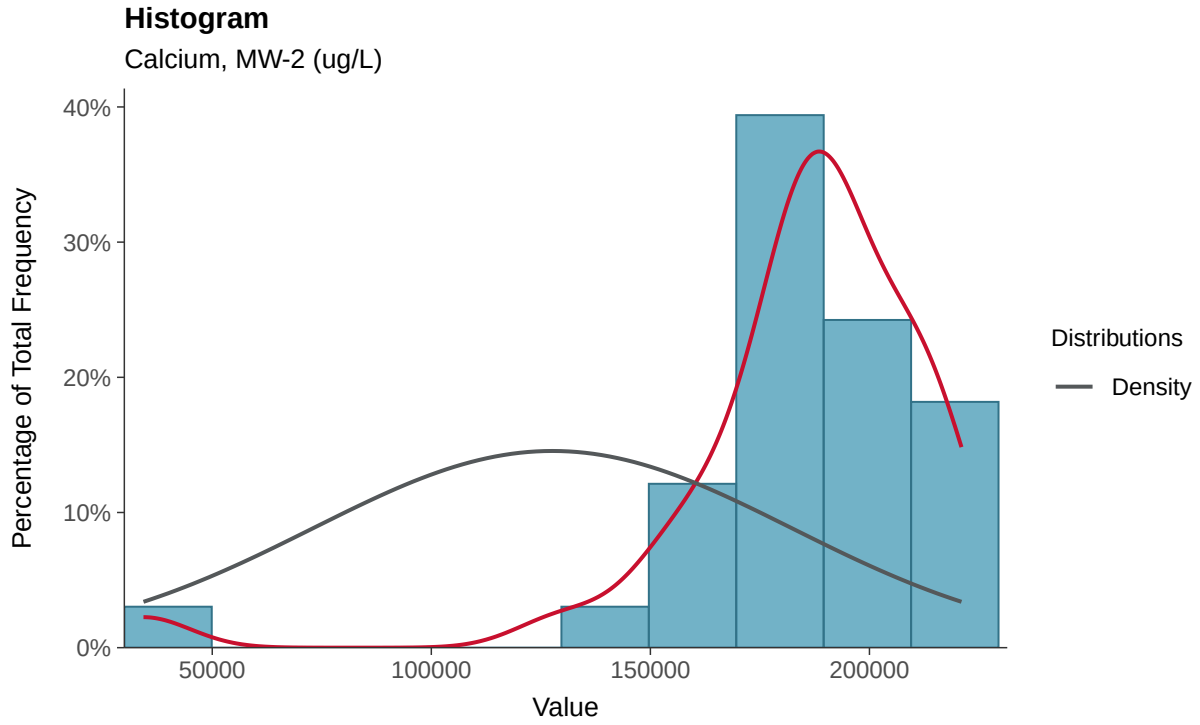
Boron, MW-2 (ug/L)



App. III: Calcium, MW-2

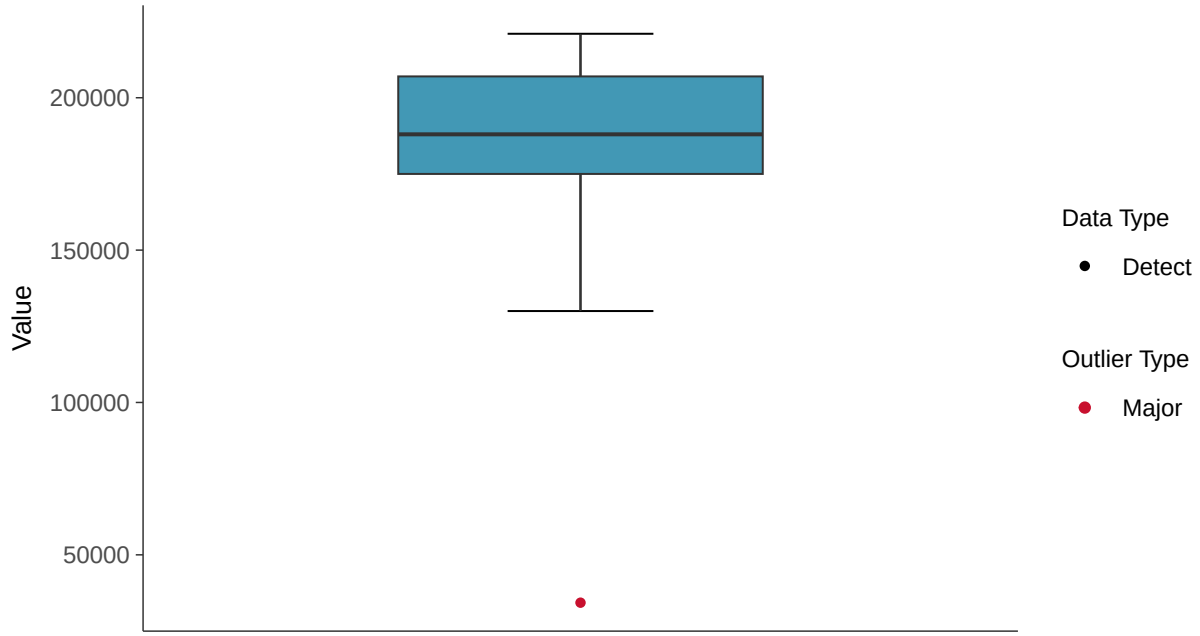
ID: 02_02_107





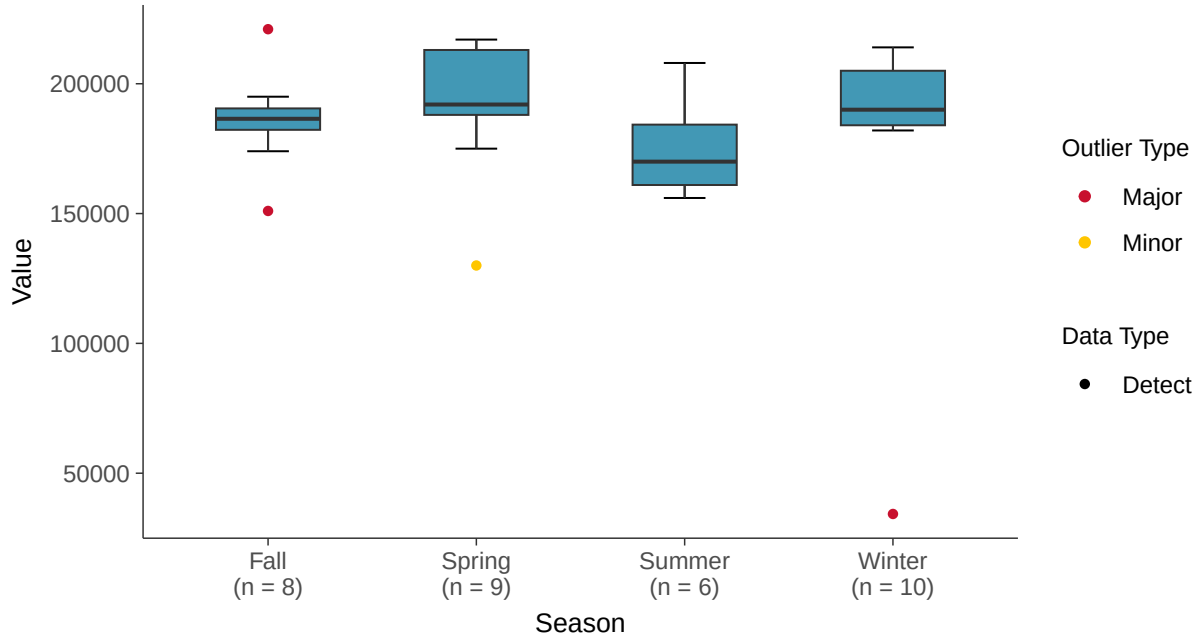
Boxplot

Calcium, MW-2 (ug/L)



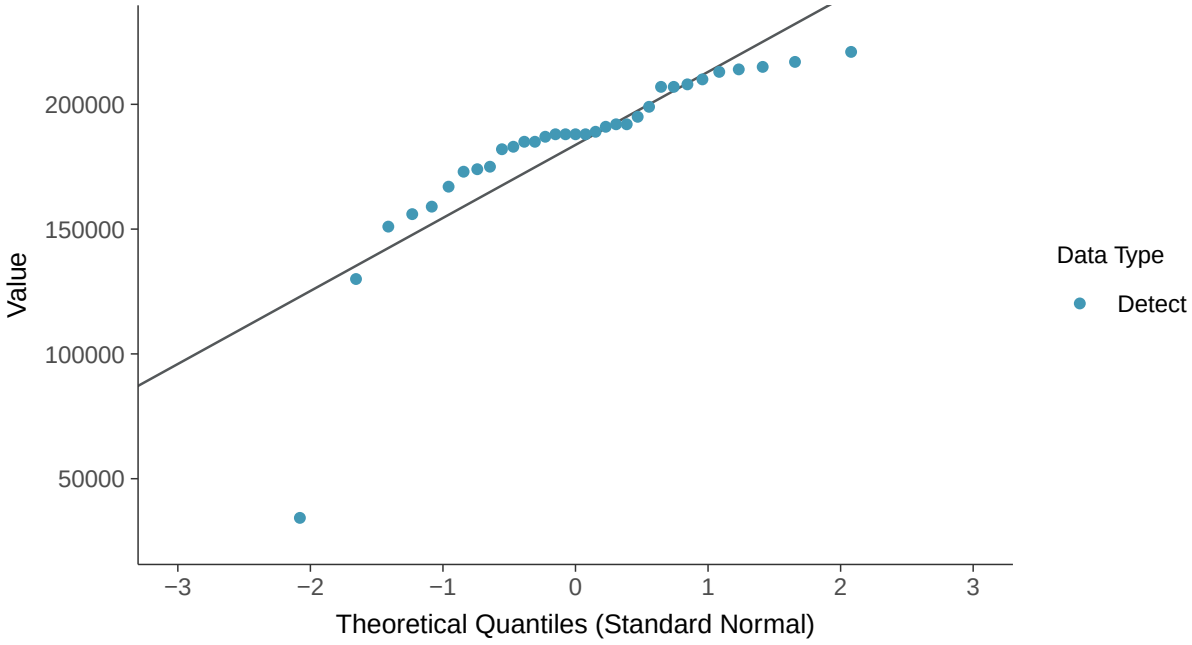
Boxplot by Season

Calcium, MW-2 (ug/L)



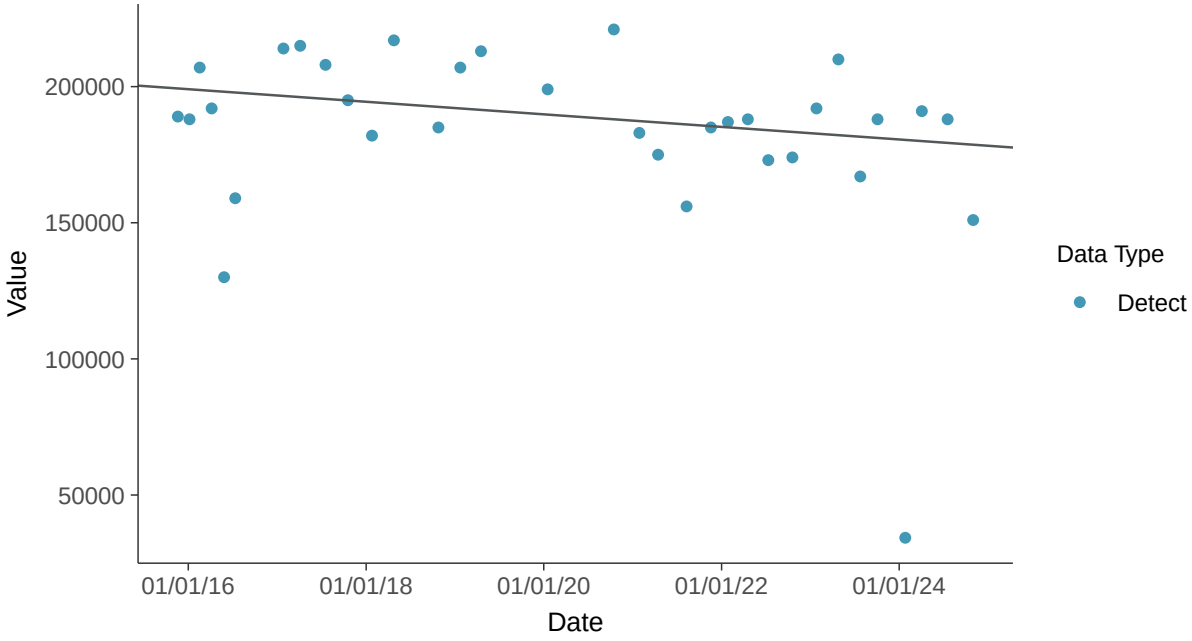
Normal Q-Q plot

Calcium, MW-2 (ug/L)



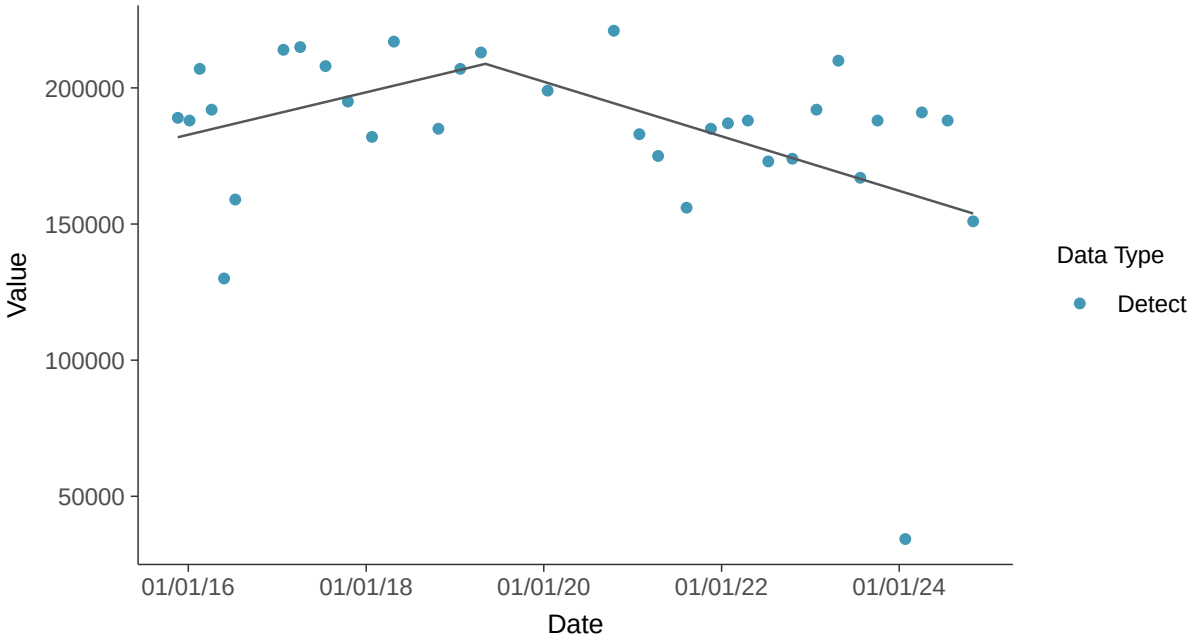
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-2 (ug/L)



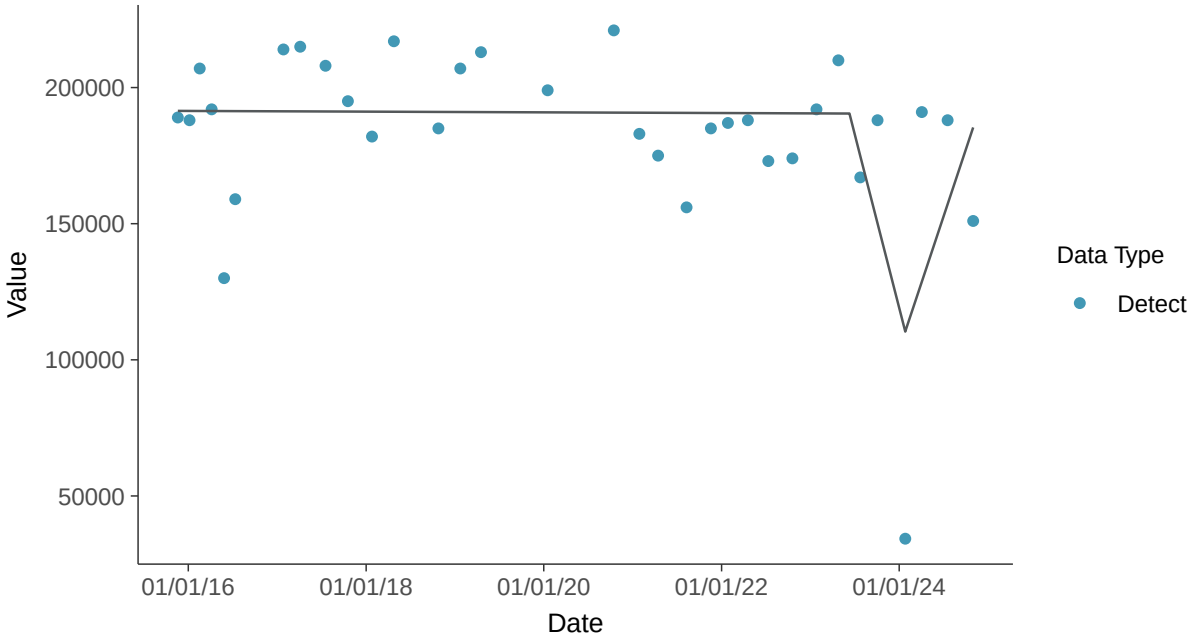
Trend Regression: Piecewise Linear-Linear

Calcium, MW-2 (ug/L)



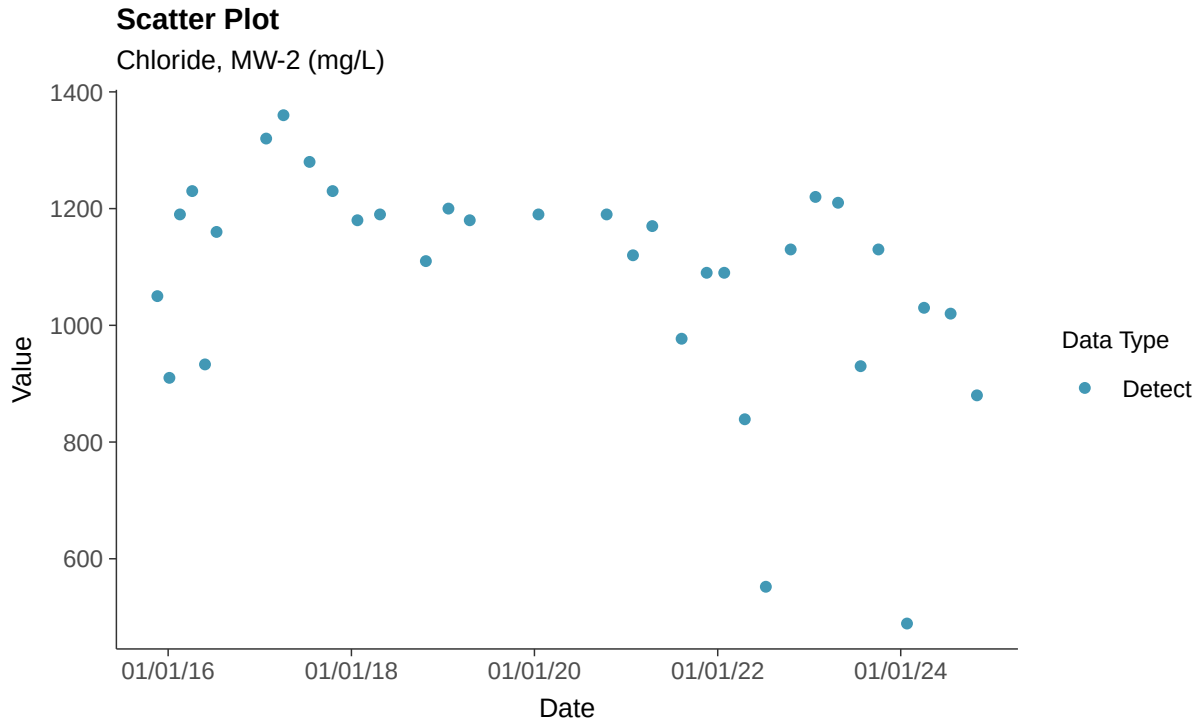
Trend Regression: Piecewise Linear-Linear-Linear

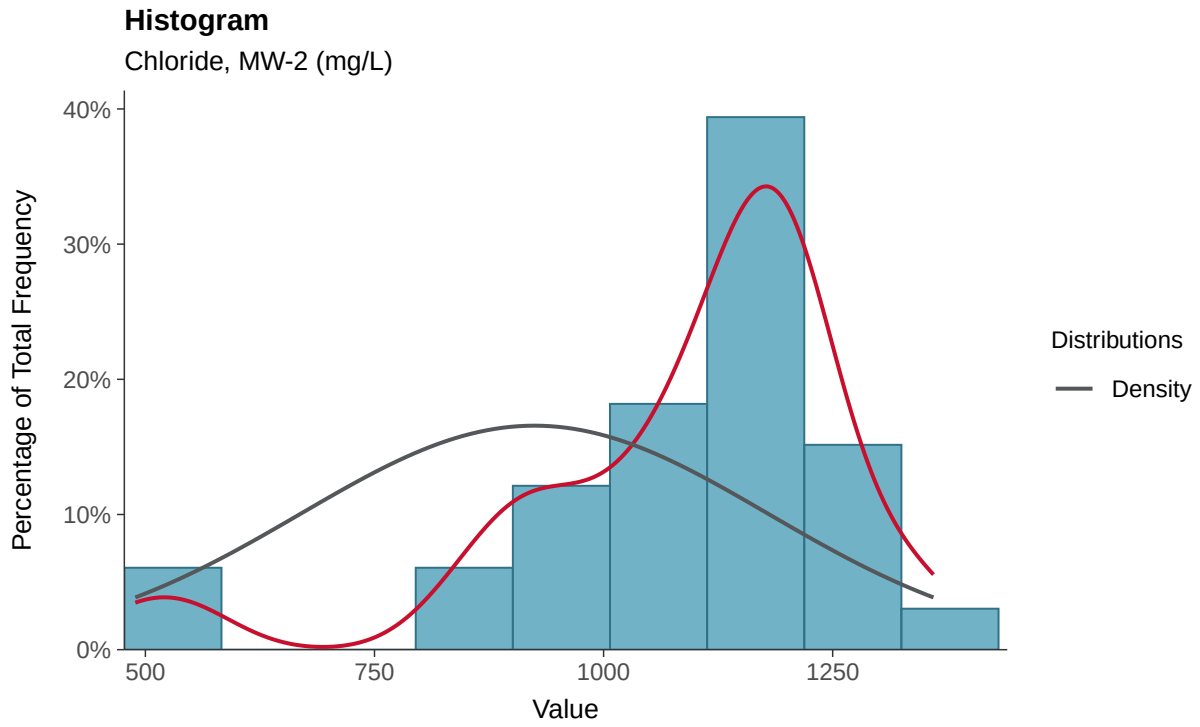
Calcium, MW-2 (ug/L)



App. III: Chloride, MW-2

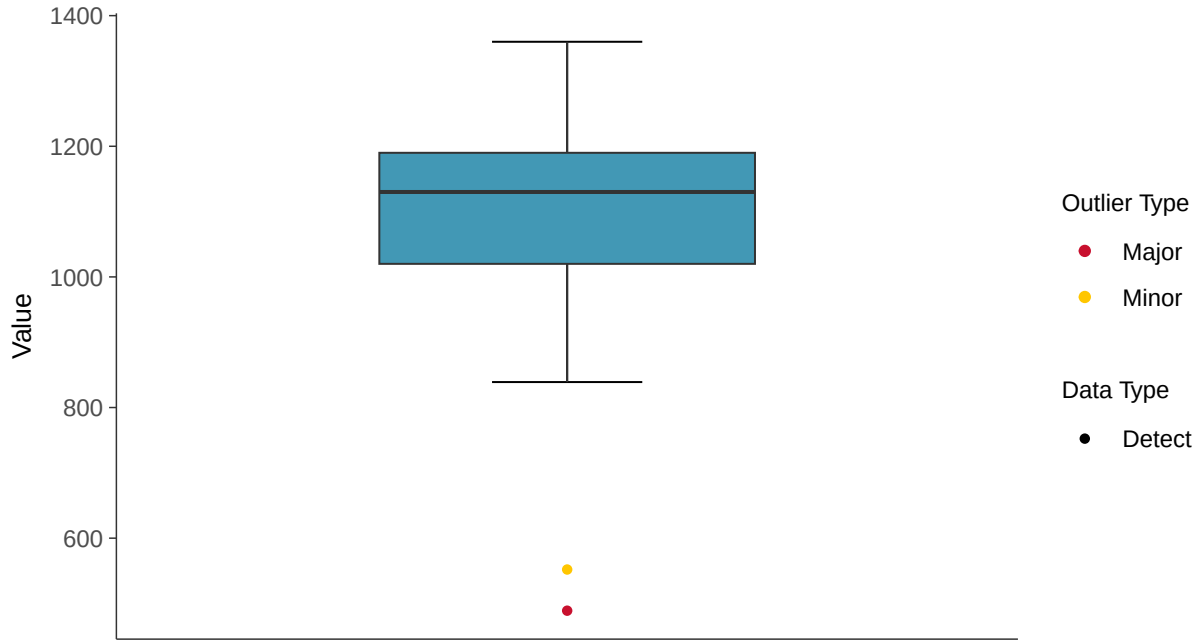
ID: 02_02_108





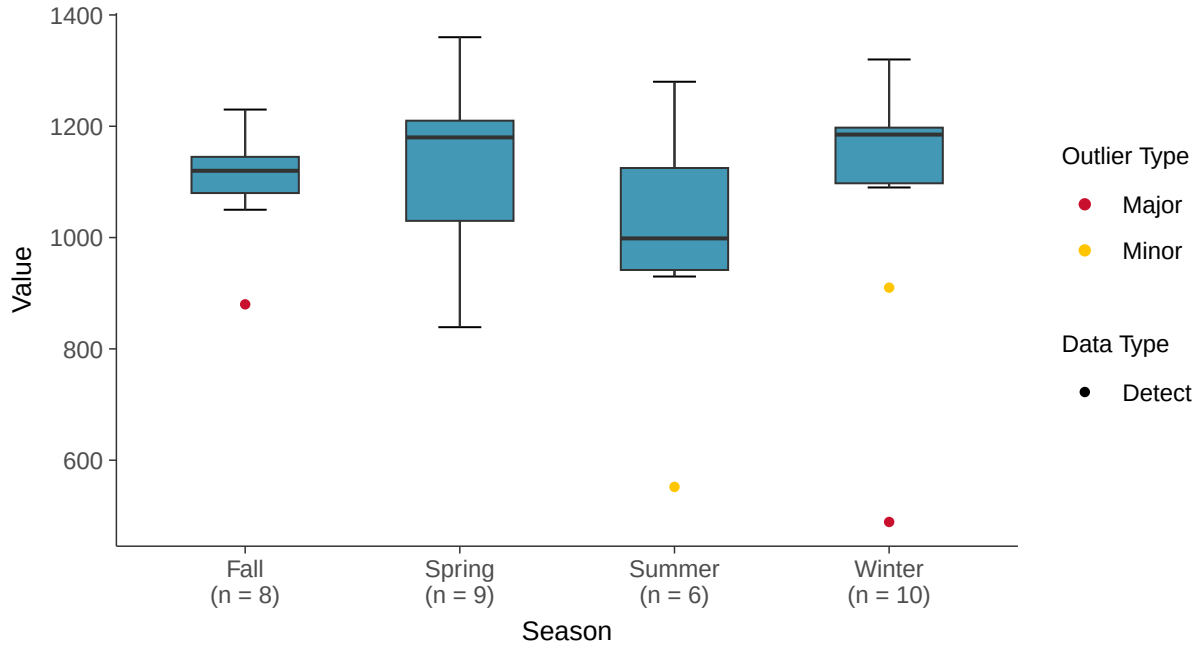
Boxplot

Chloride, MW-2 (mg/L)



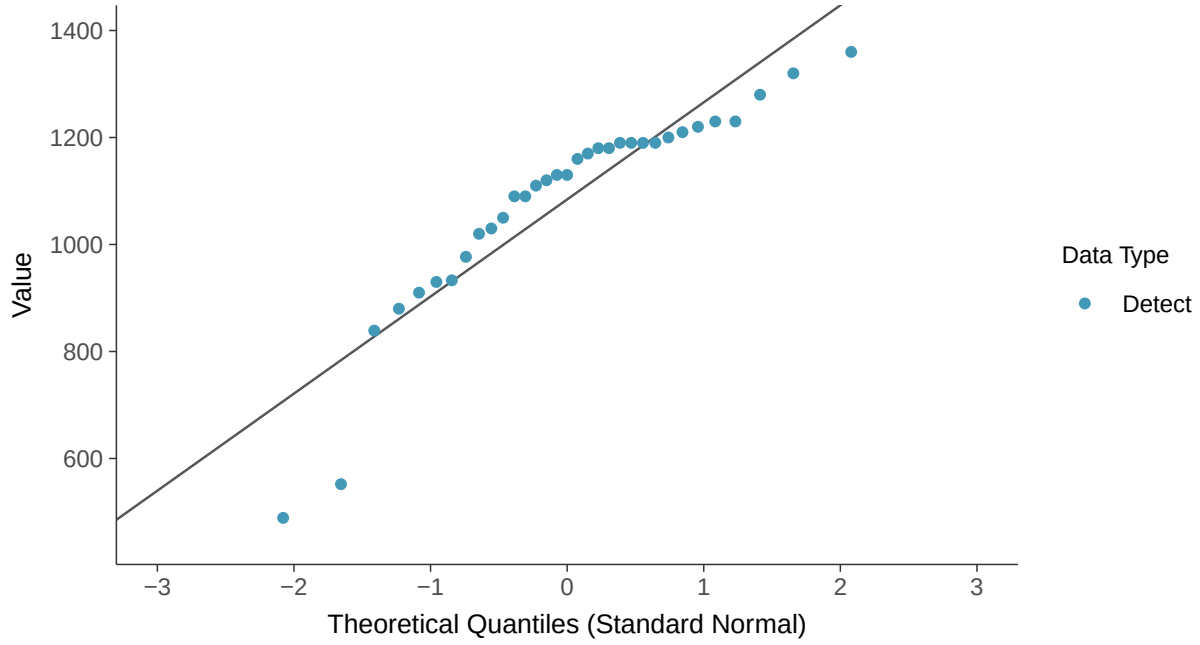
Boxplot by Season

Chloride, MW-2 (mg/L)



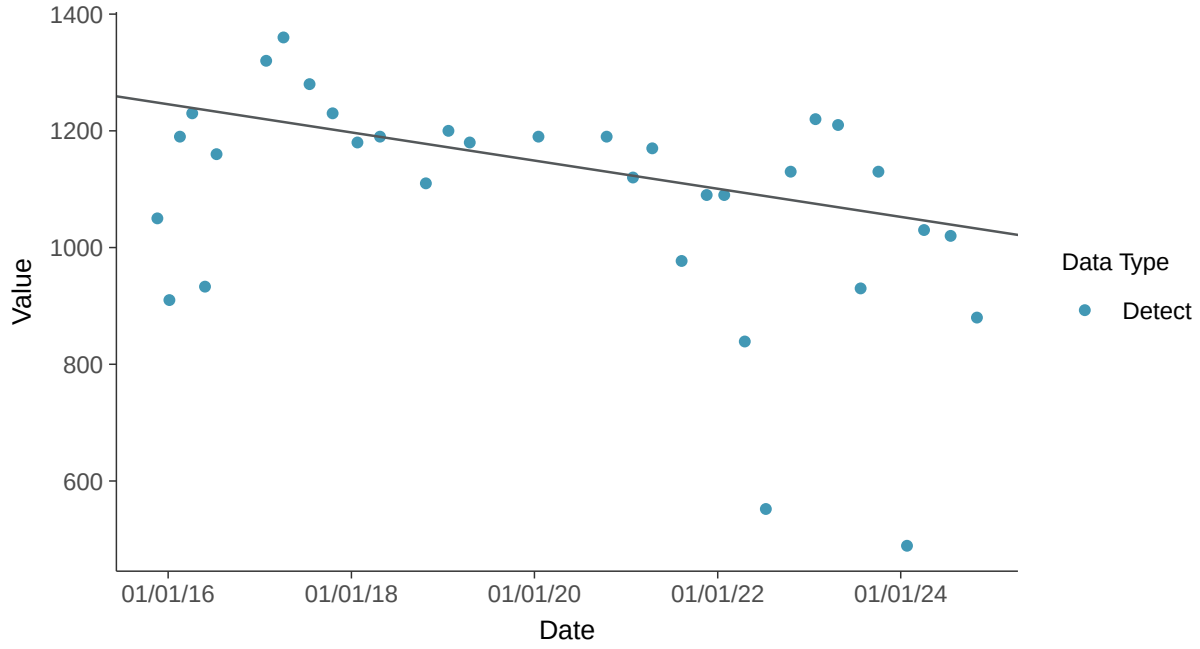
Normal Q-Q plot

Chloride, MW-2 (mg/L)



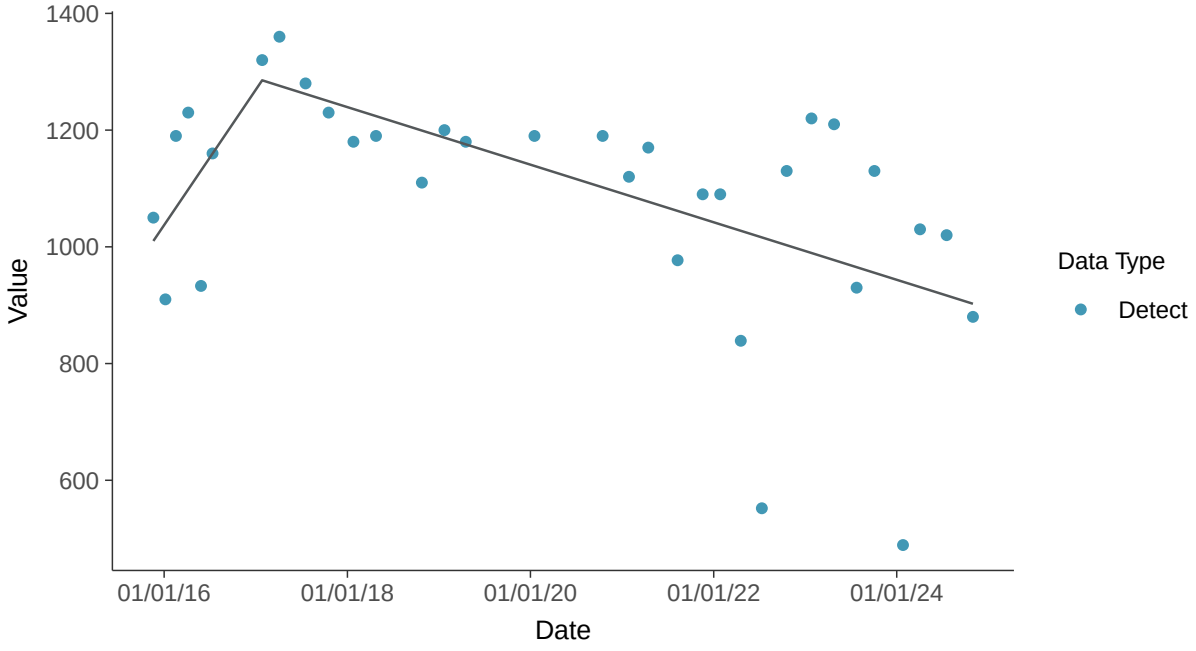
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-2 (mg/L)



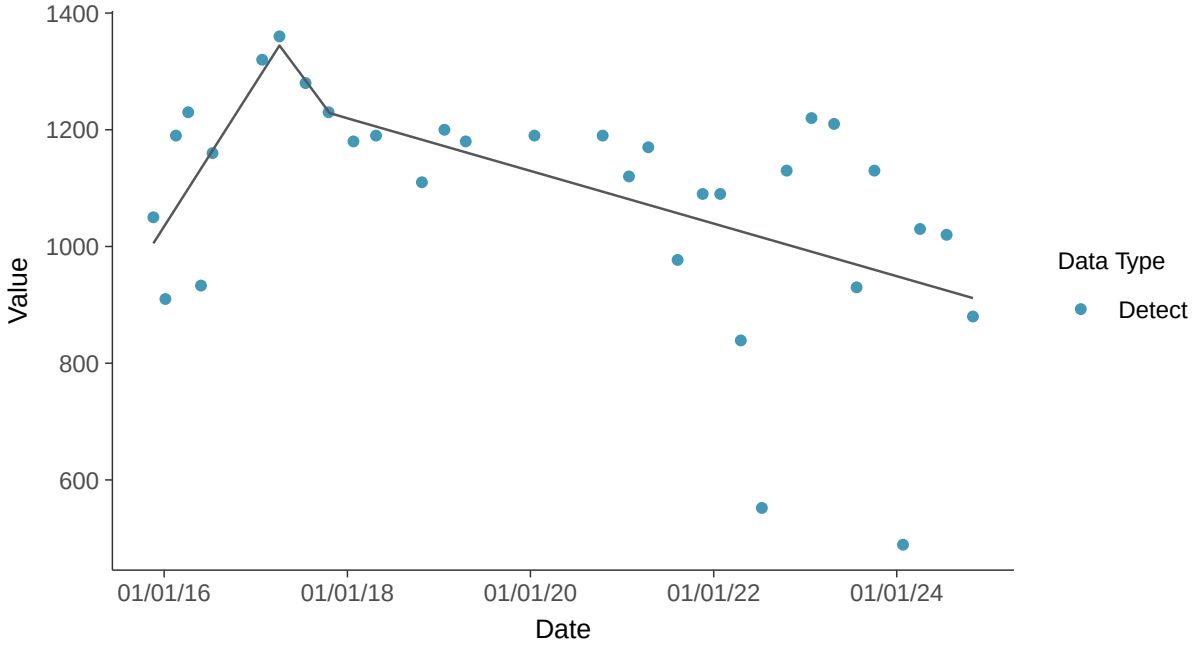
Trend Regression: Piecewise Linear-Linear

Chloride, MW-2 (mg/L)



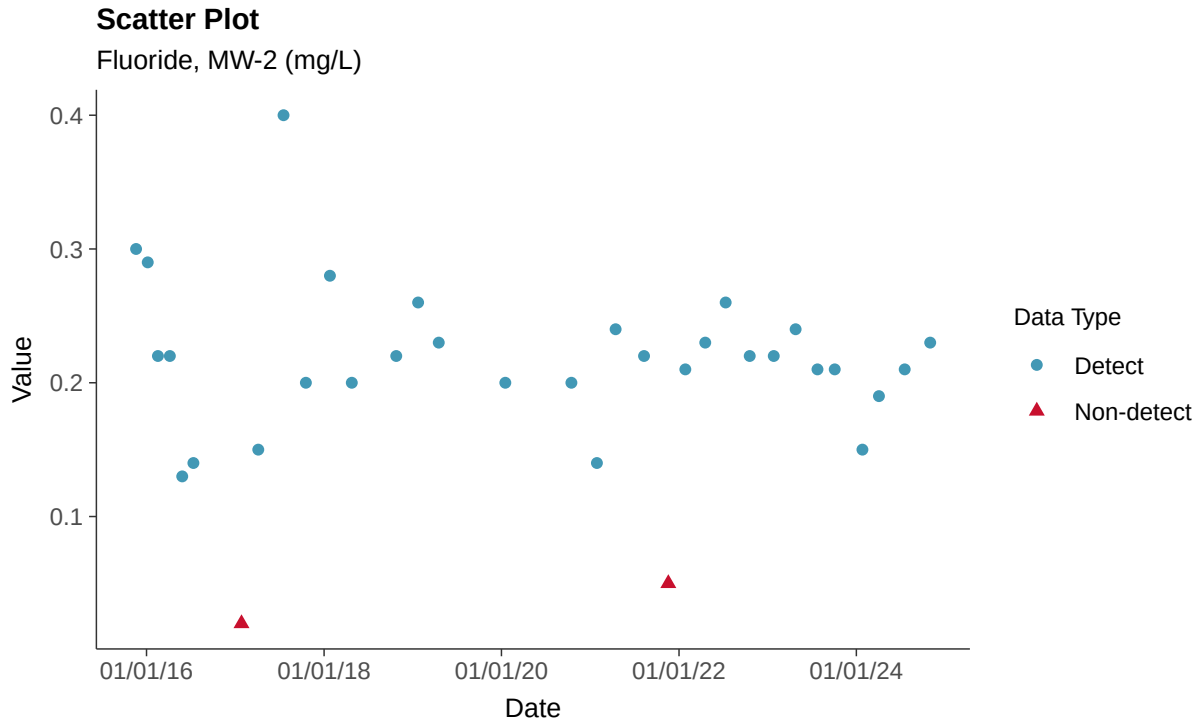
Trend Regression: Piecewise Linear-Linear-Linear

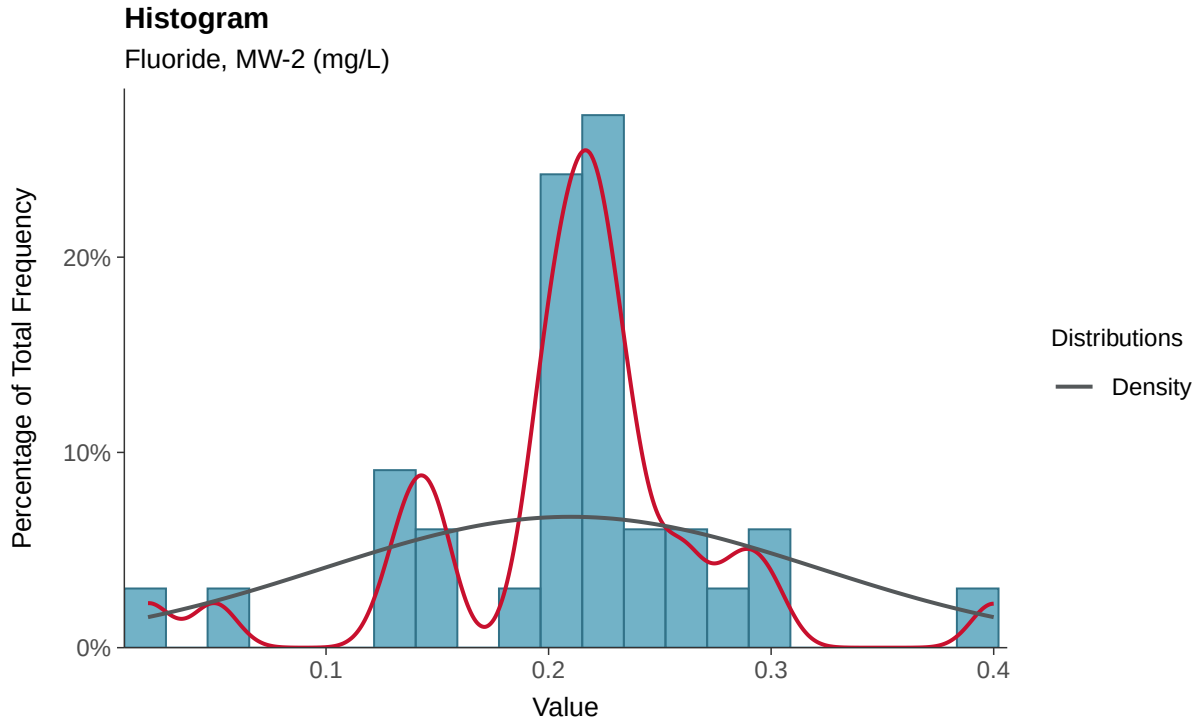
Chloride, MW-2 (mg/L)



App. III: Fluoride, MW-2

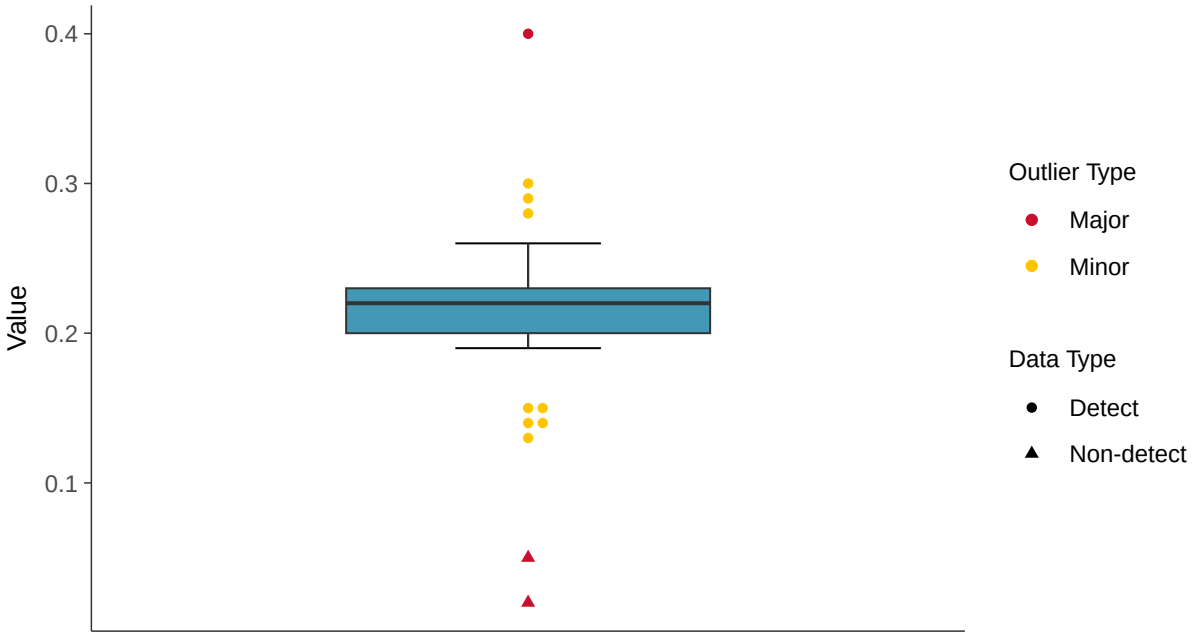
ID: 02_02_112





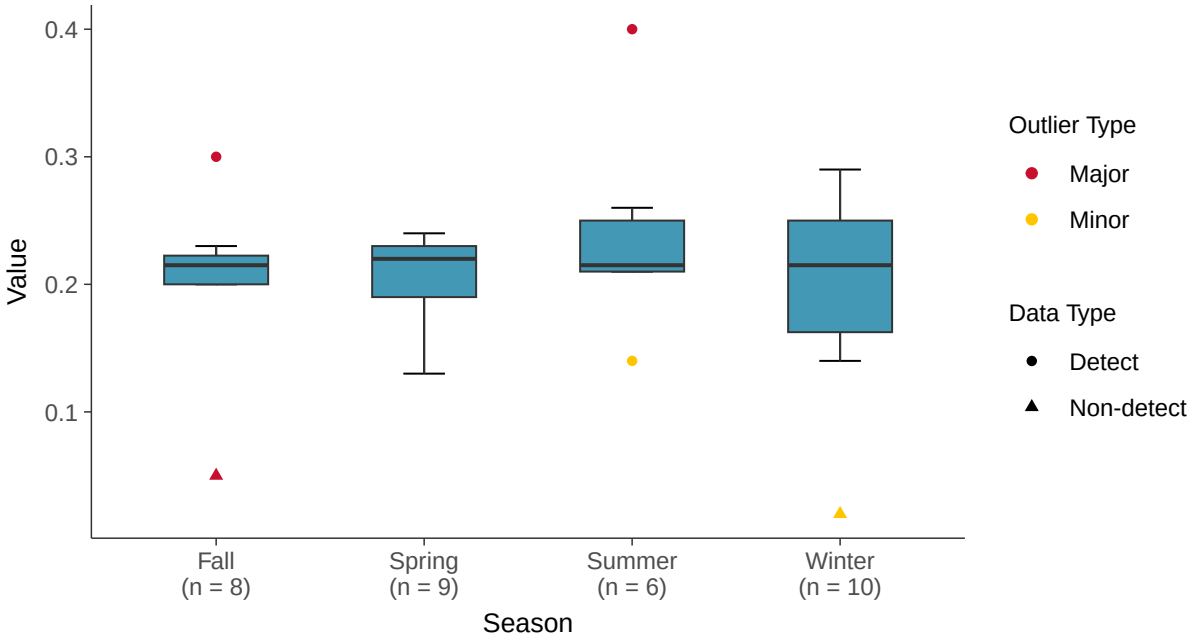
Boxplot

Fluoride, MW-2 (mg/L)



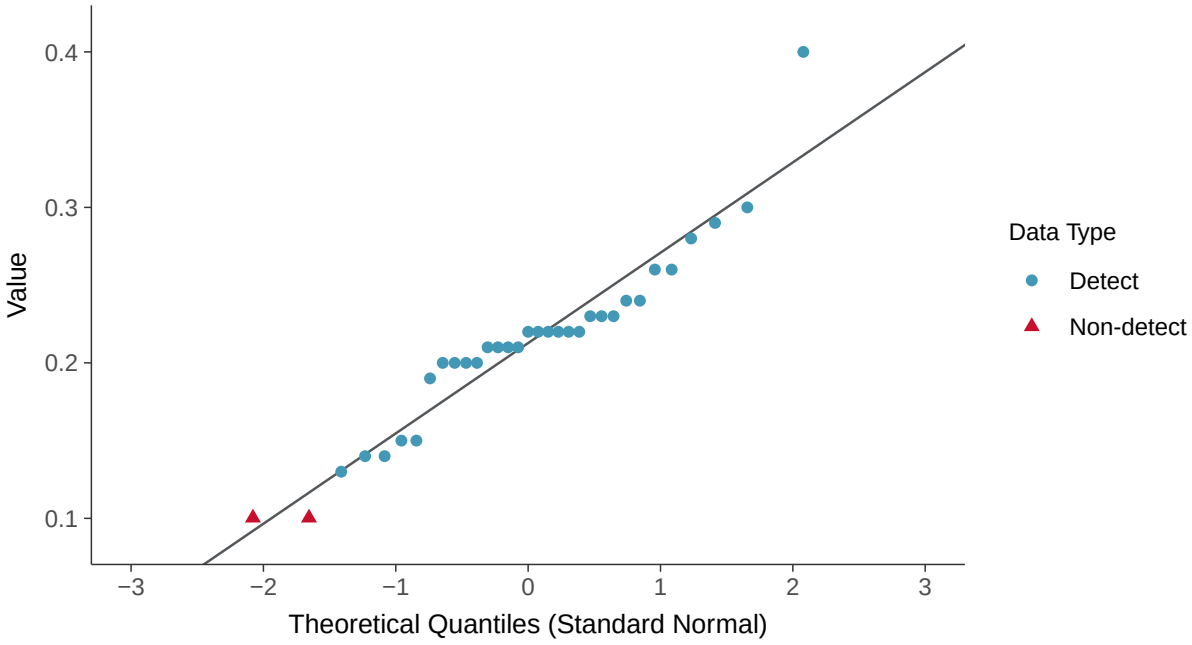
Boxplot by Season

Fluoride, MW-2 (mg/L)



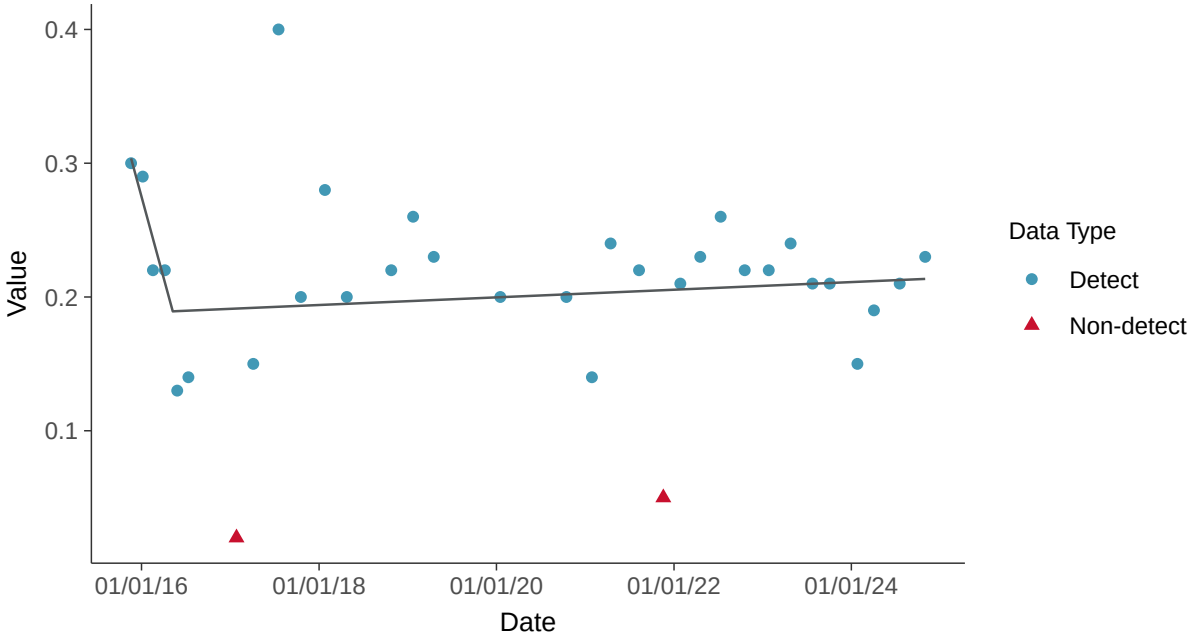
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



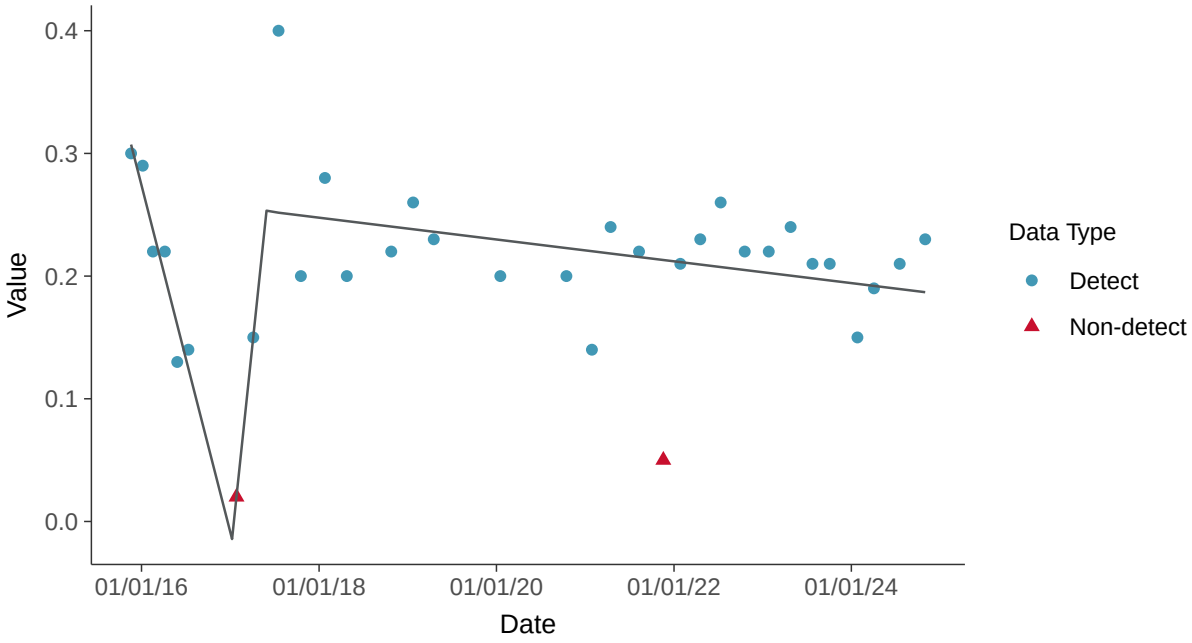
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-2 (mg/L)

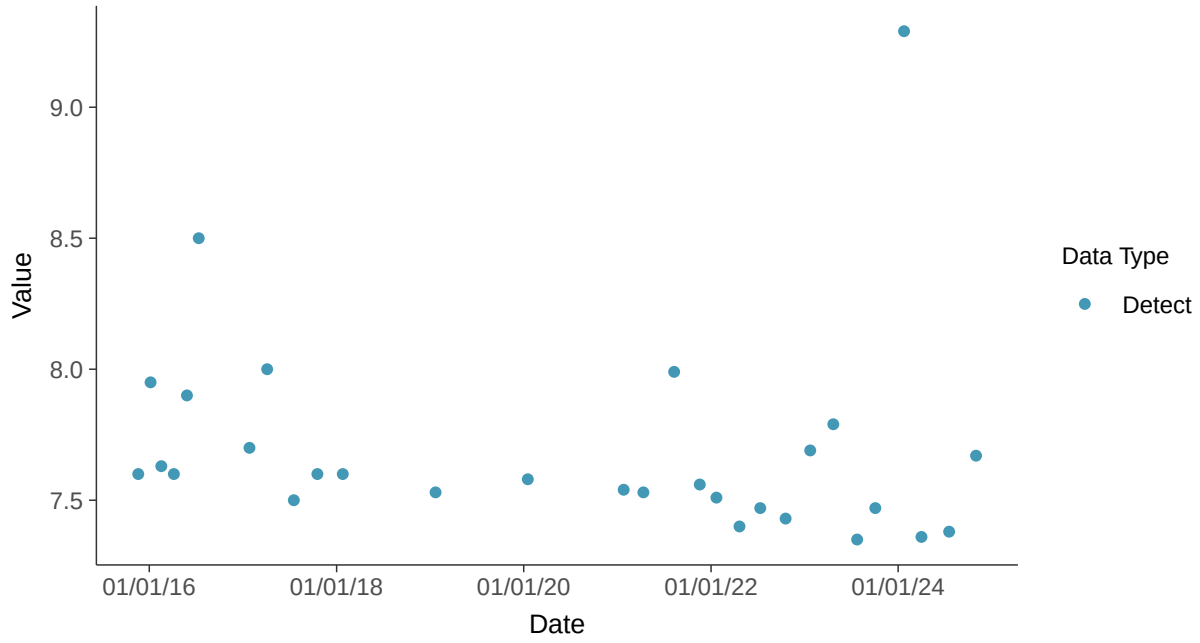


App. III: pH (Field), MW-2

ID: 02_02_118

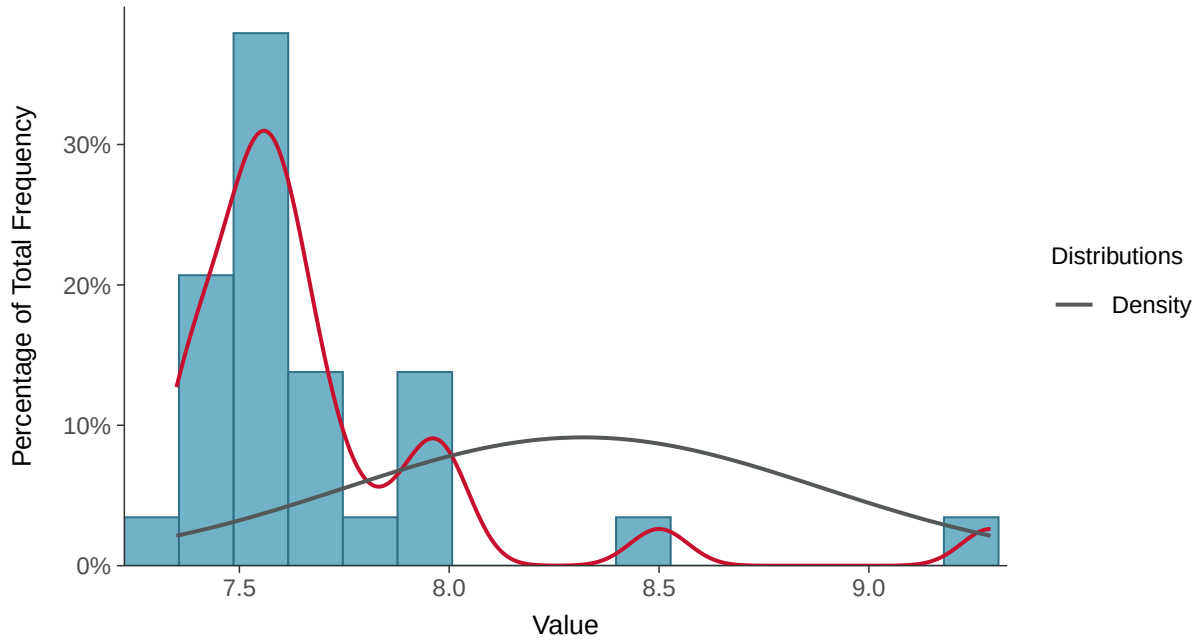
Scatter Plot

pH (Field), MW-2 (S.U.)



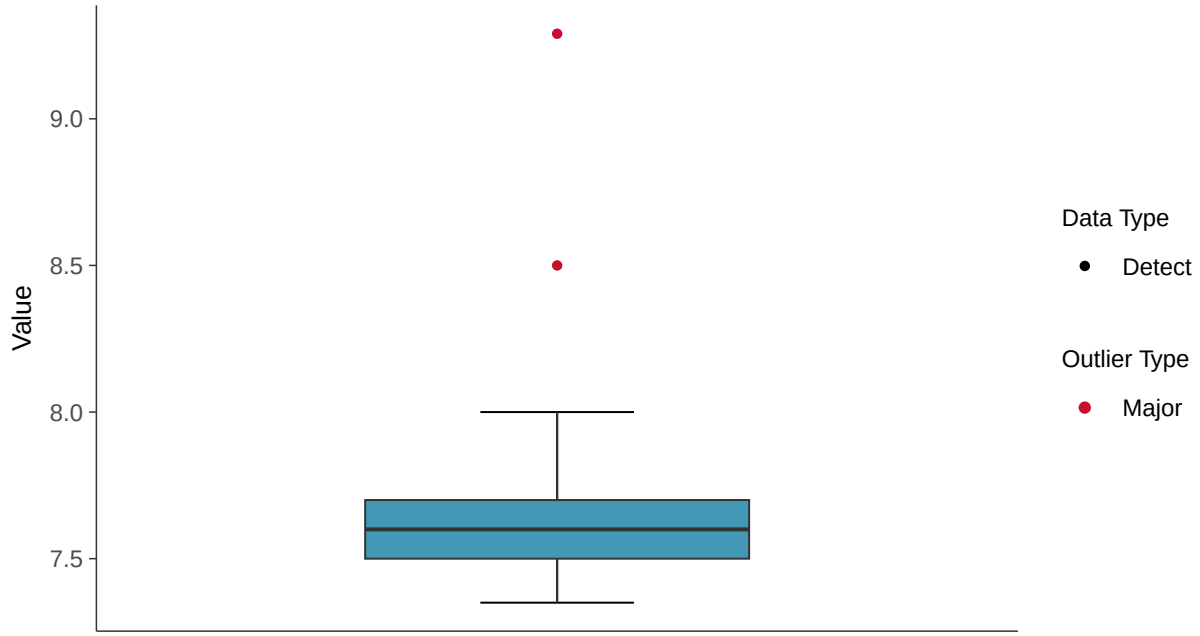
Histogram

pH (Field), MW-2 (S.U.)



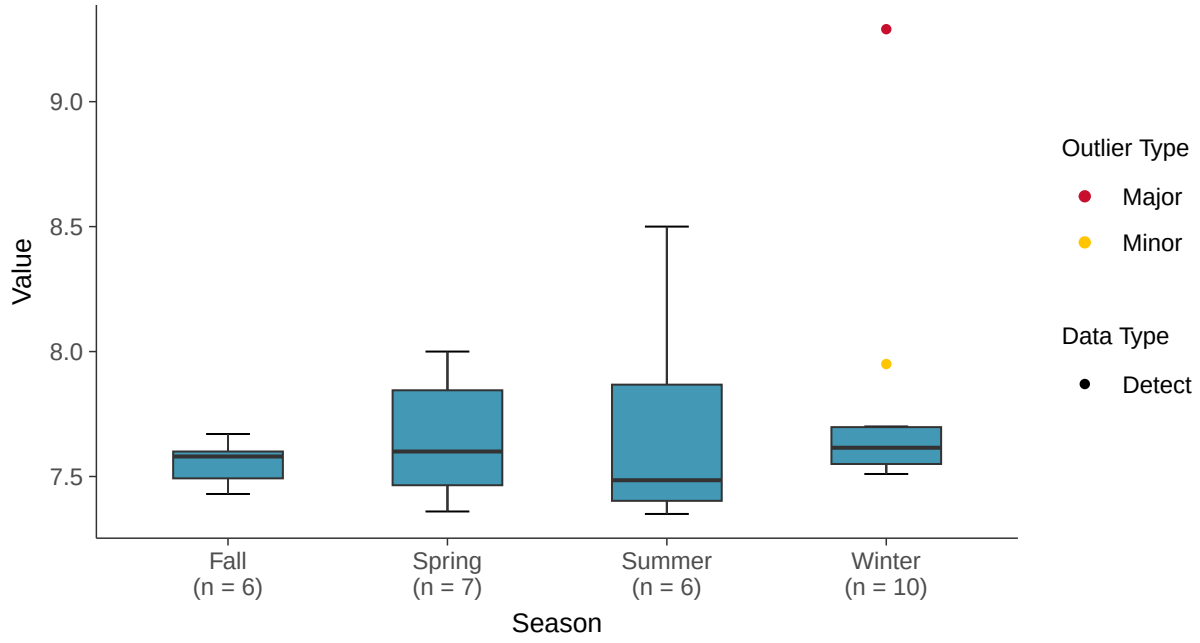
Boxplot

pH (Field), MW-2 (S.U.)



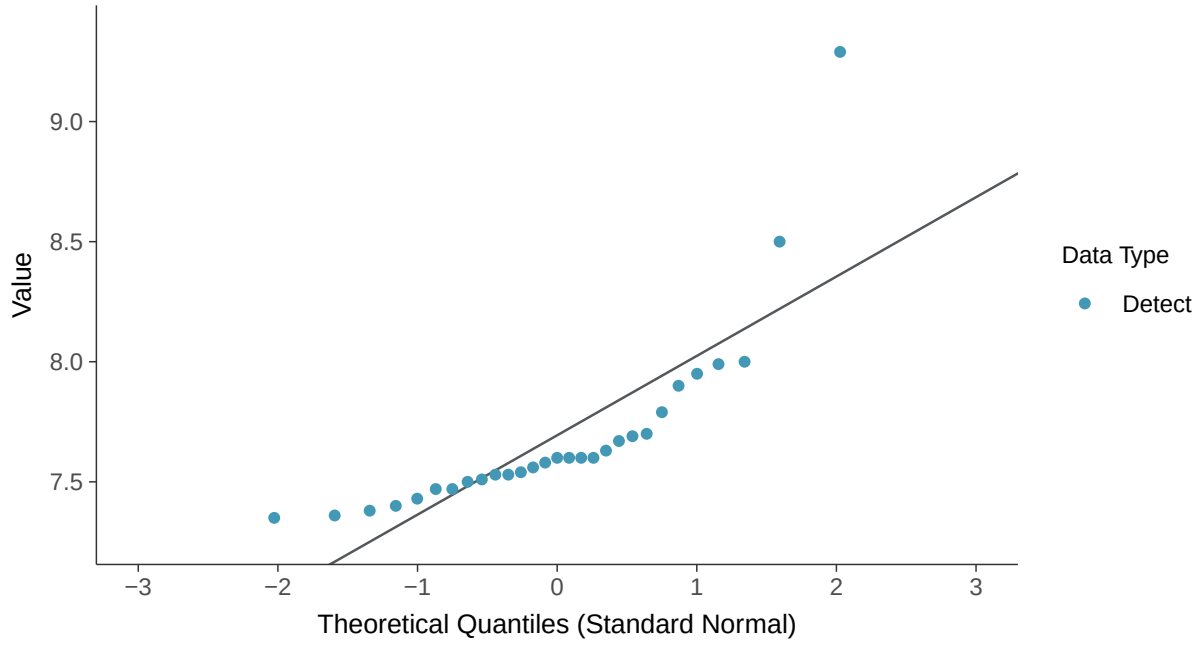
Boxplot by Season

pH (Field), MW-2 (S.U.)



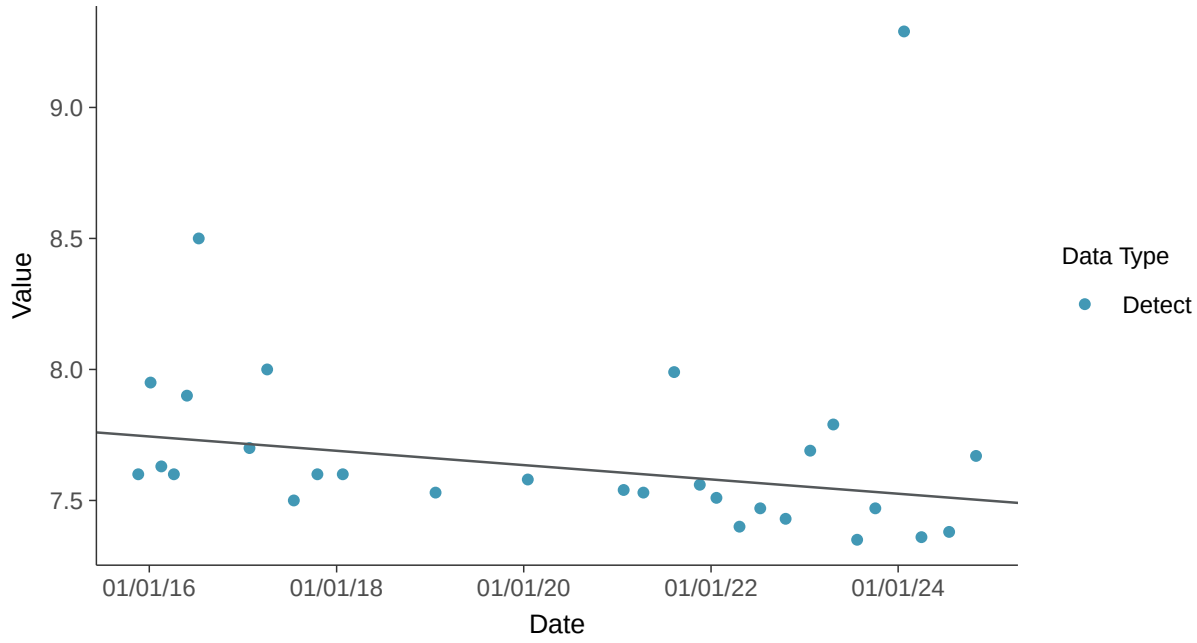
Normal Q-Q plot

pH (Field), MW-2 (S.U.)



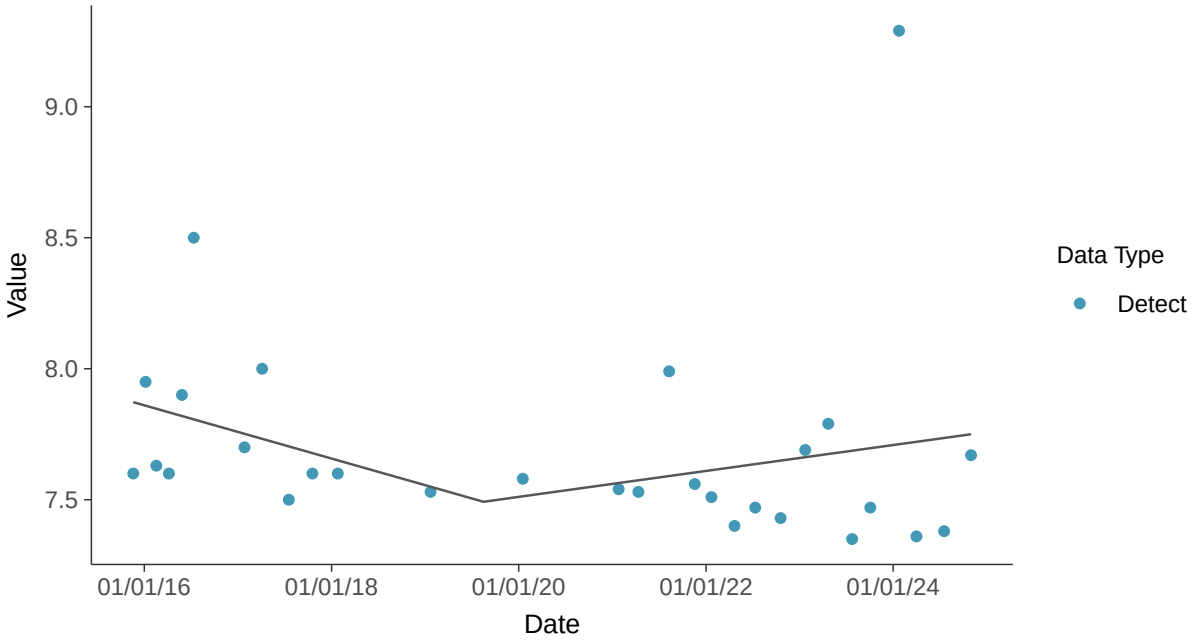
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-2 (S.U.)



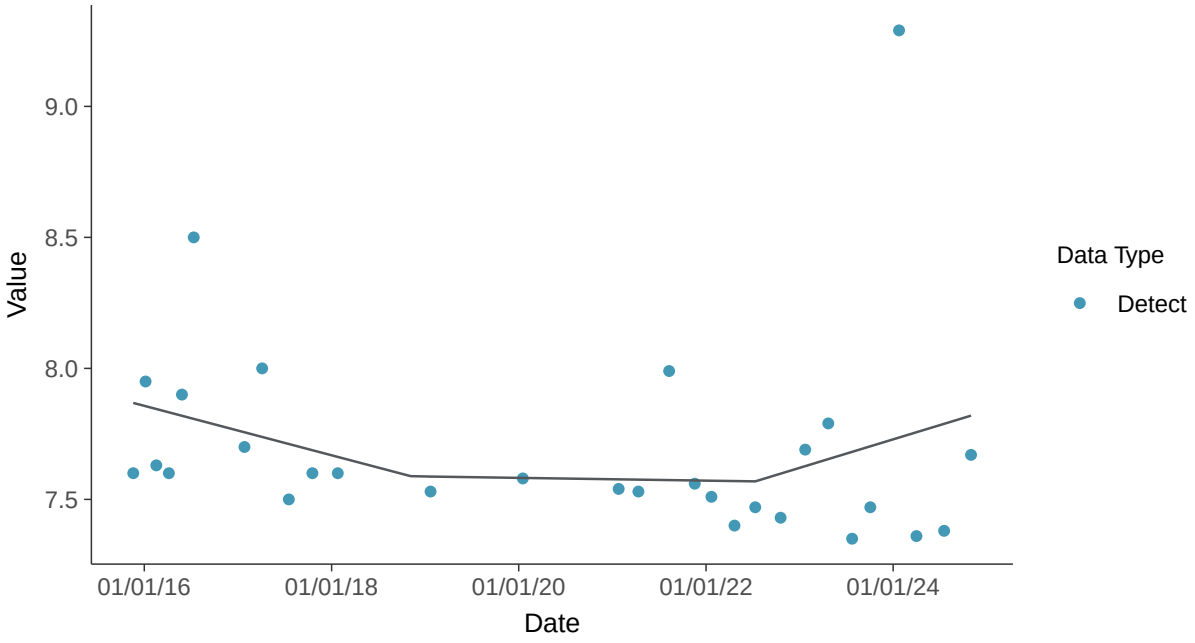
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-2 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-2 (S.U.)

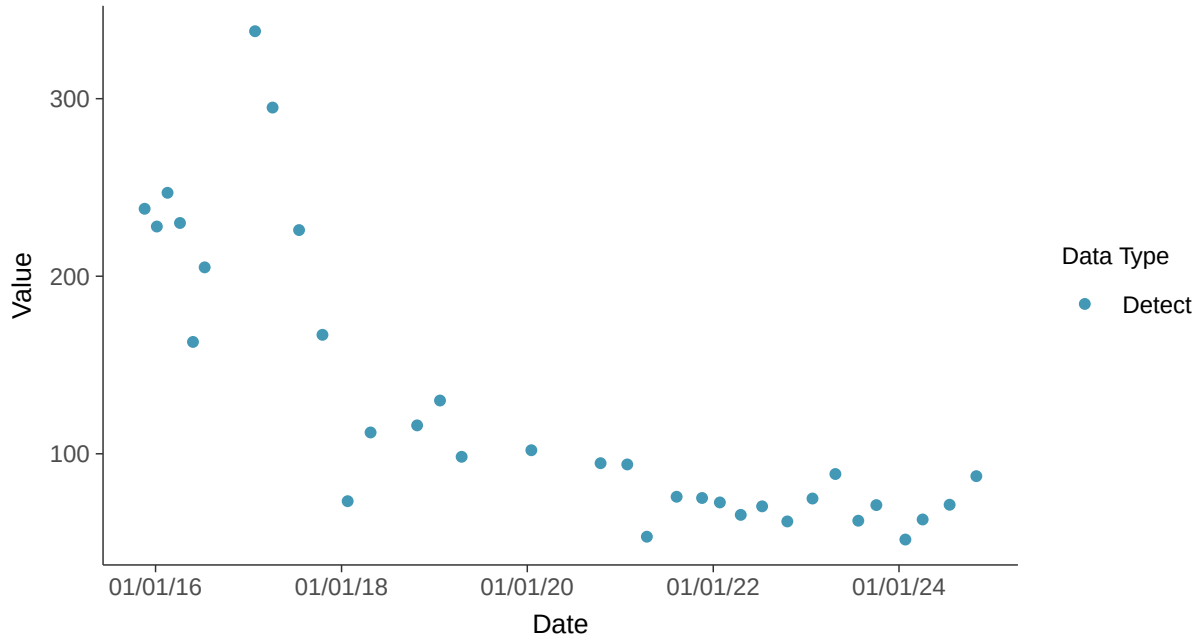


App. III: Sulfate, MW-2

ID: 02_02_123

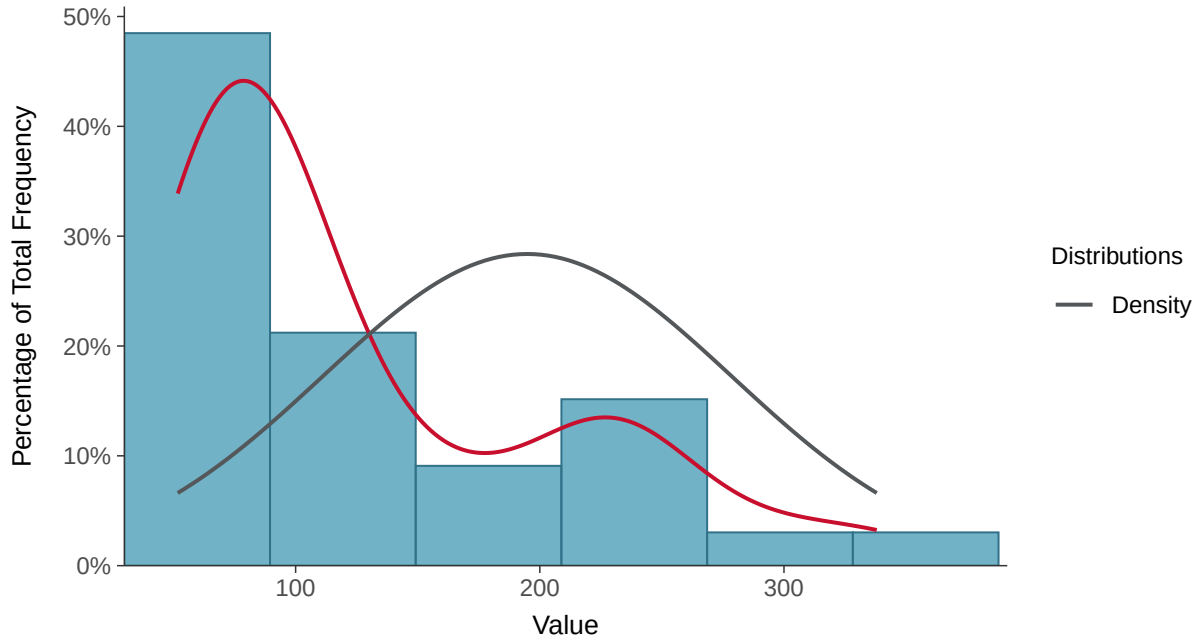
Scatter Plot

Sulfate, MW-2 (mg/L)



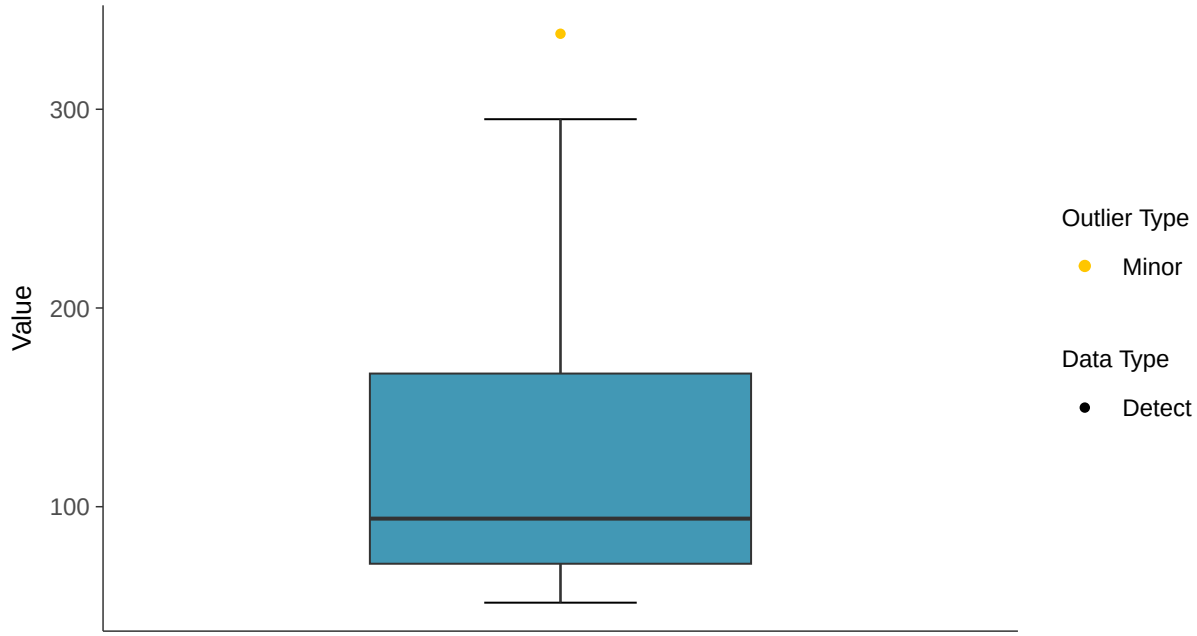
Histogram

Sulfate, MW-2 (mg/L)



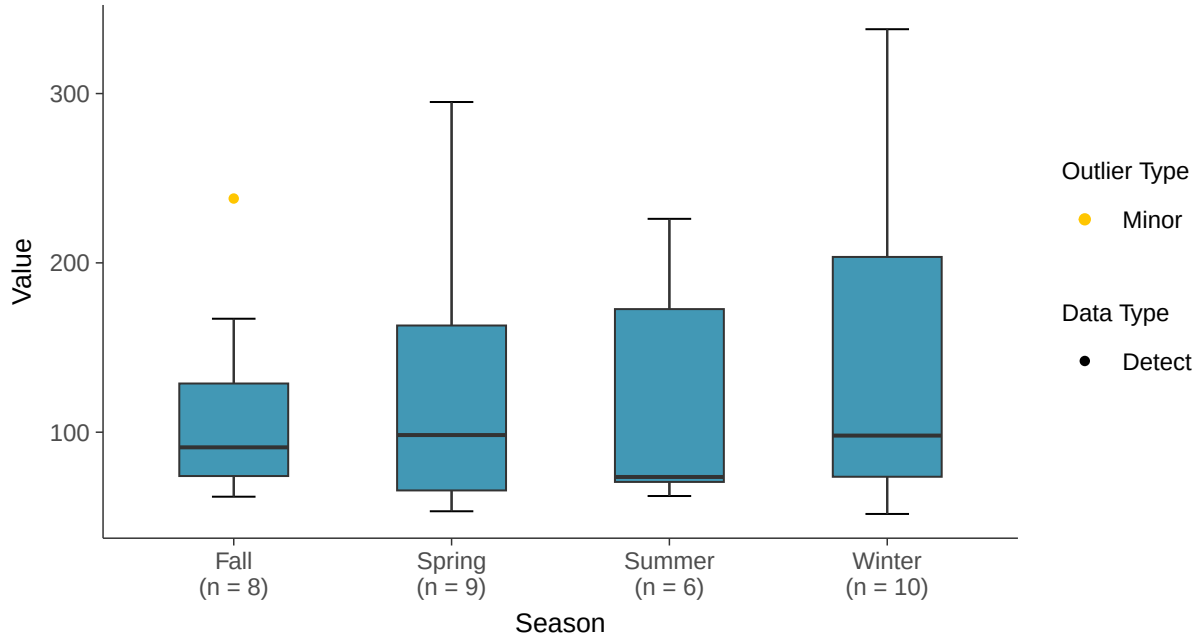
Boxplot

Sulfate, MW-2 (mg/L)



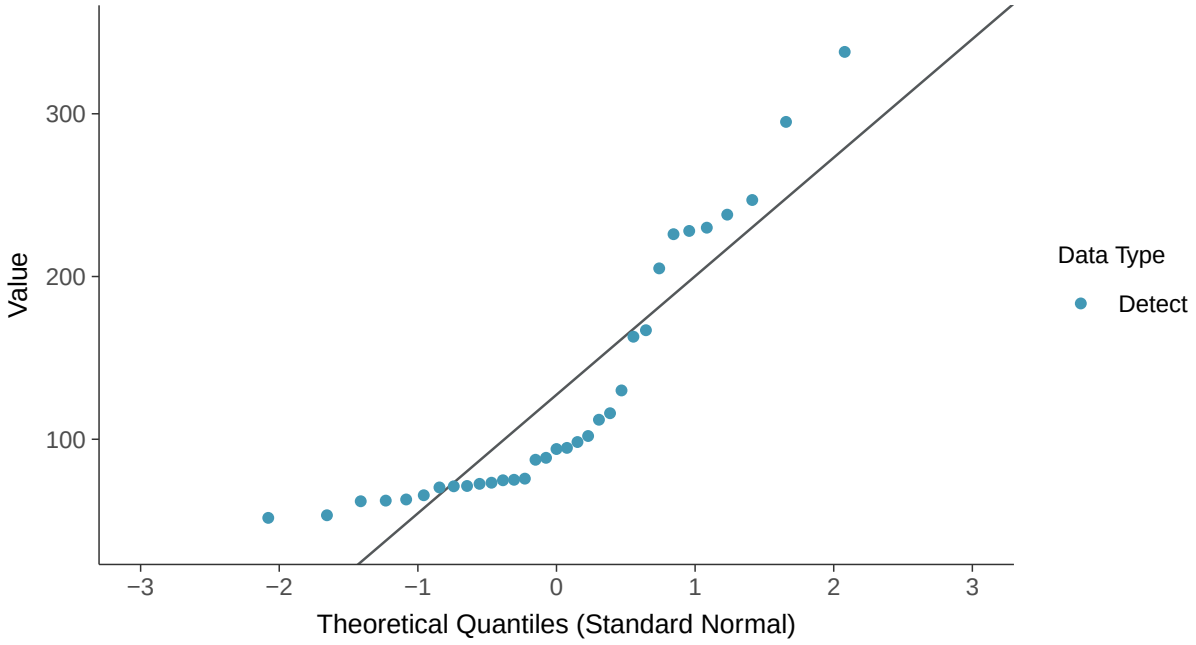
Boxplot by Season

Sulfate, MW-2 (mg/L)



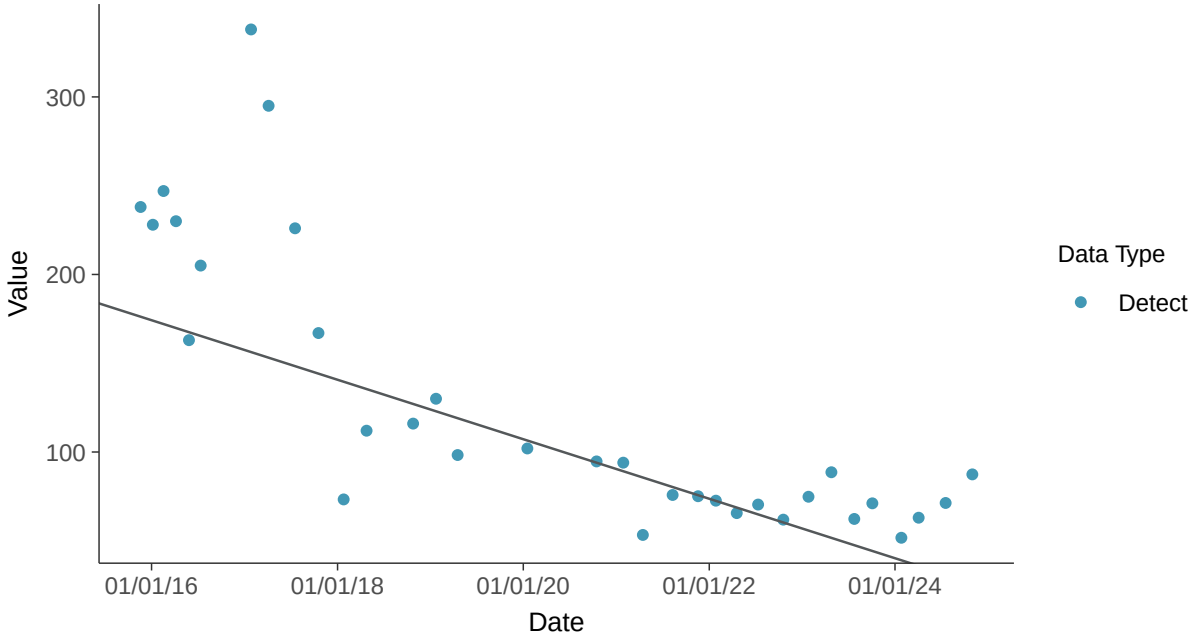
Normal Q-Q plot

Sulfate, MW-2 (mg/L)



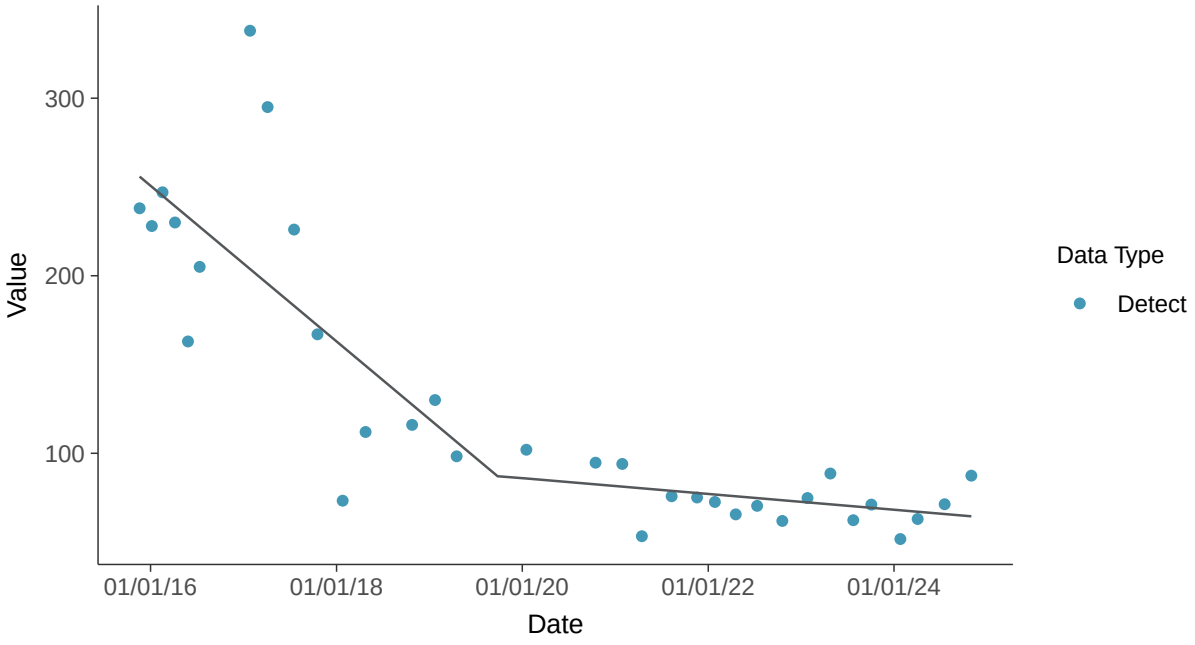
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-2 (mg/L)



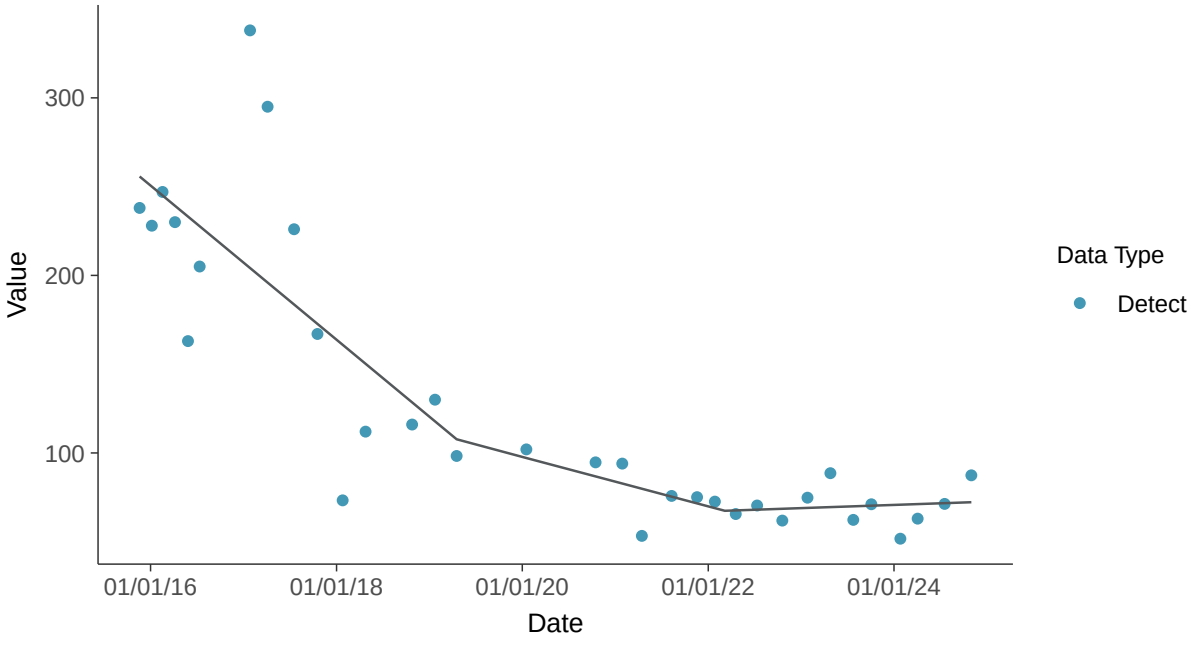
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-2 (mg/L)

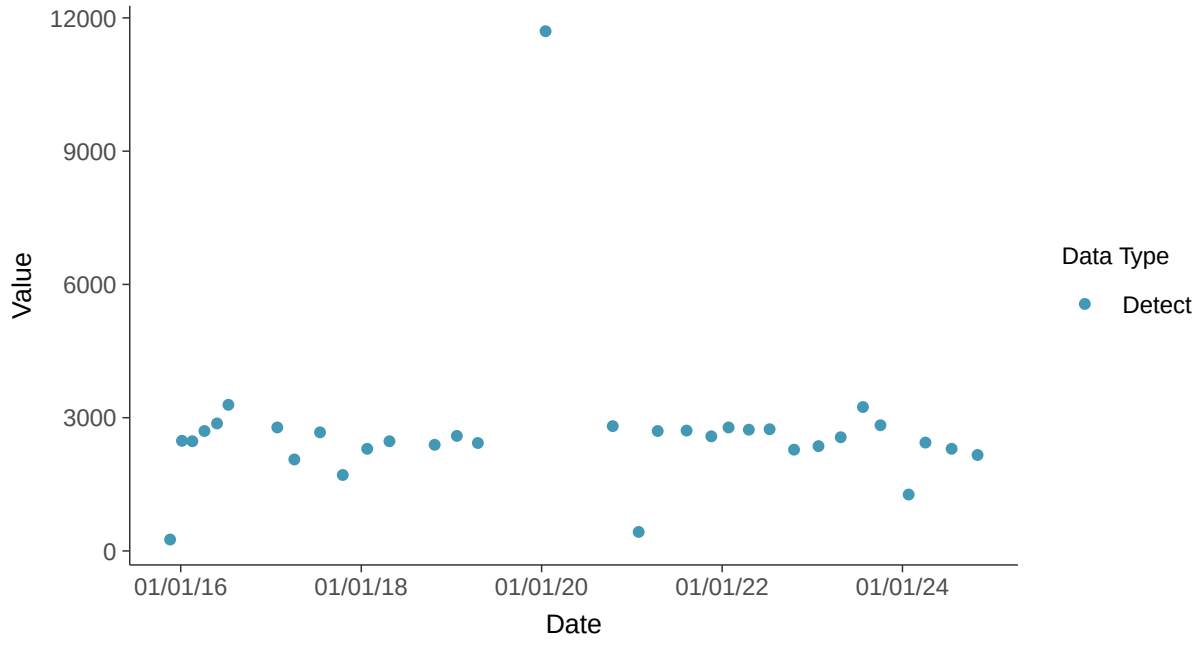


App. III: Total Dissolved Solids, MW-2

ID: 02_02_125

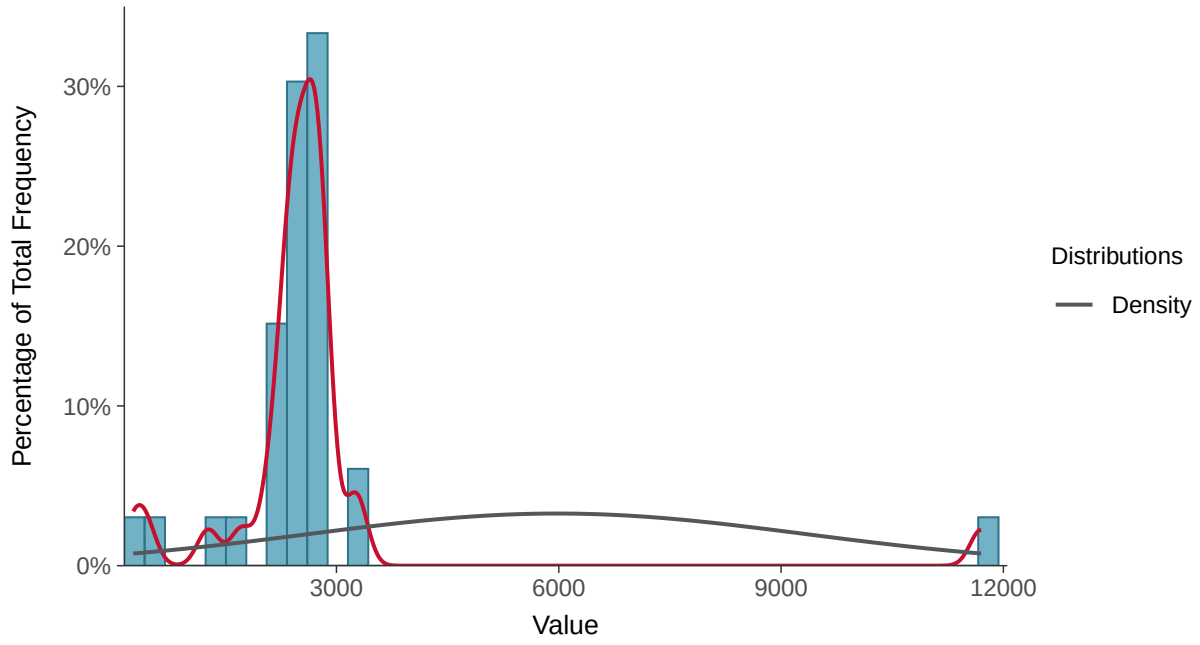
Scatter Plot

Total Dissolved Solids, MW-2 (mg/L)



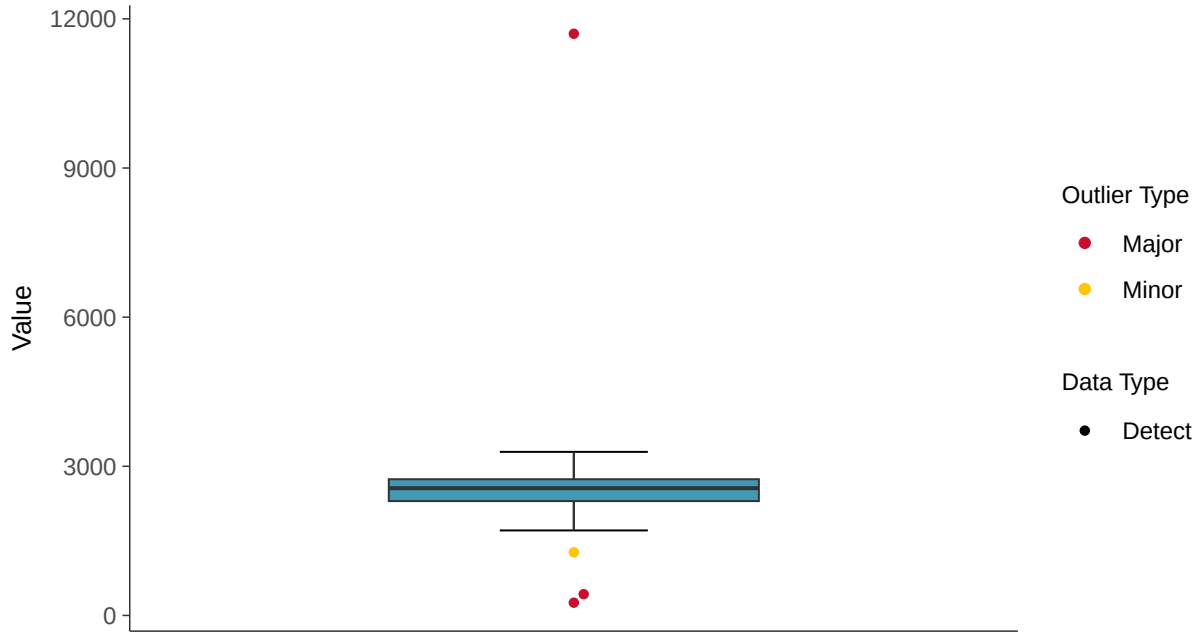
Histogram

Total Dissolved Solids, MW-2 (mg/L)



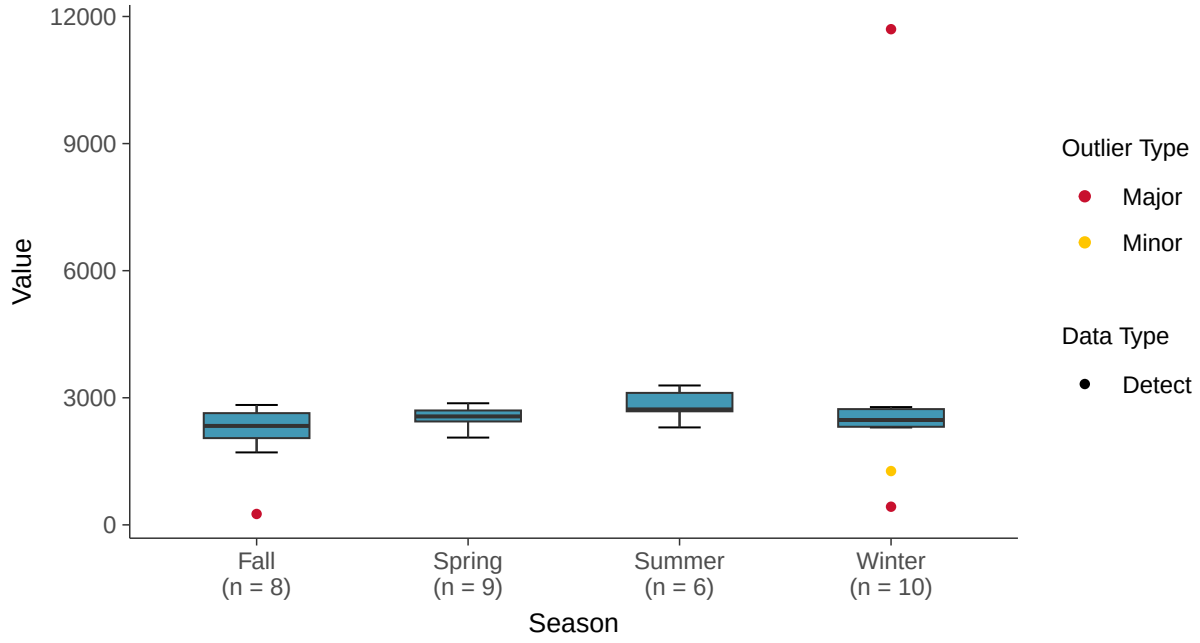
Boxplot

Total Dissolved Solids, MW-2 (mg/L)



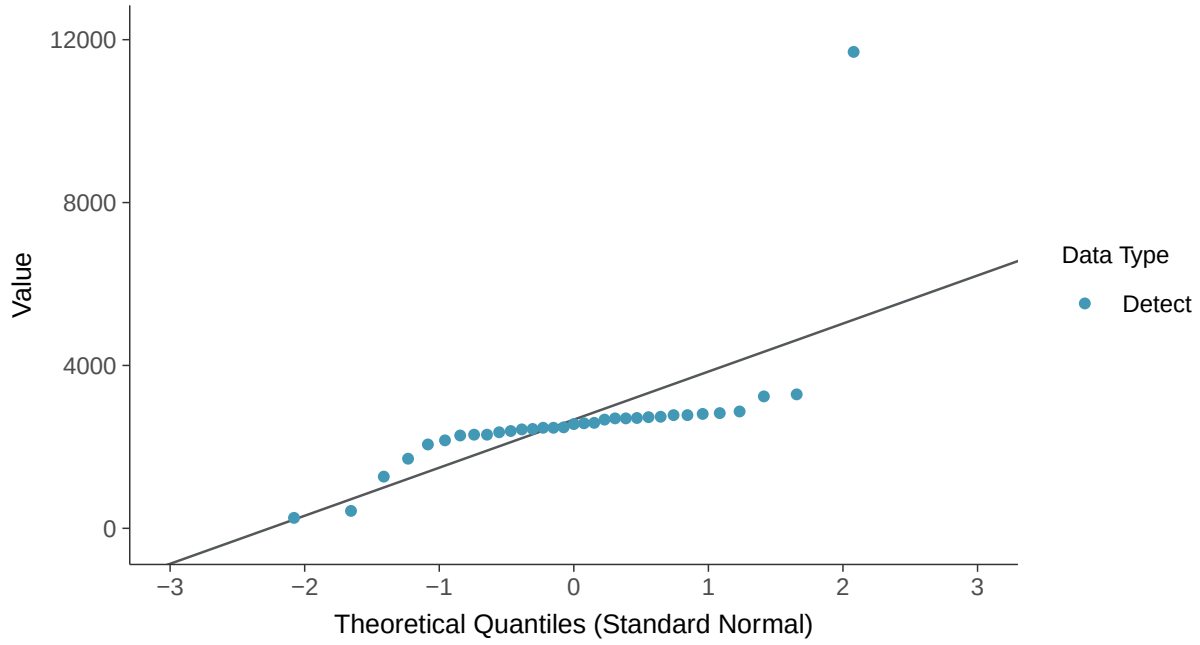
Boxplot by Season

Total Dissolved Solids, MW-2 (mg/L)



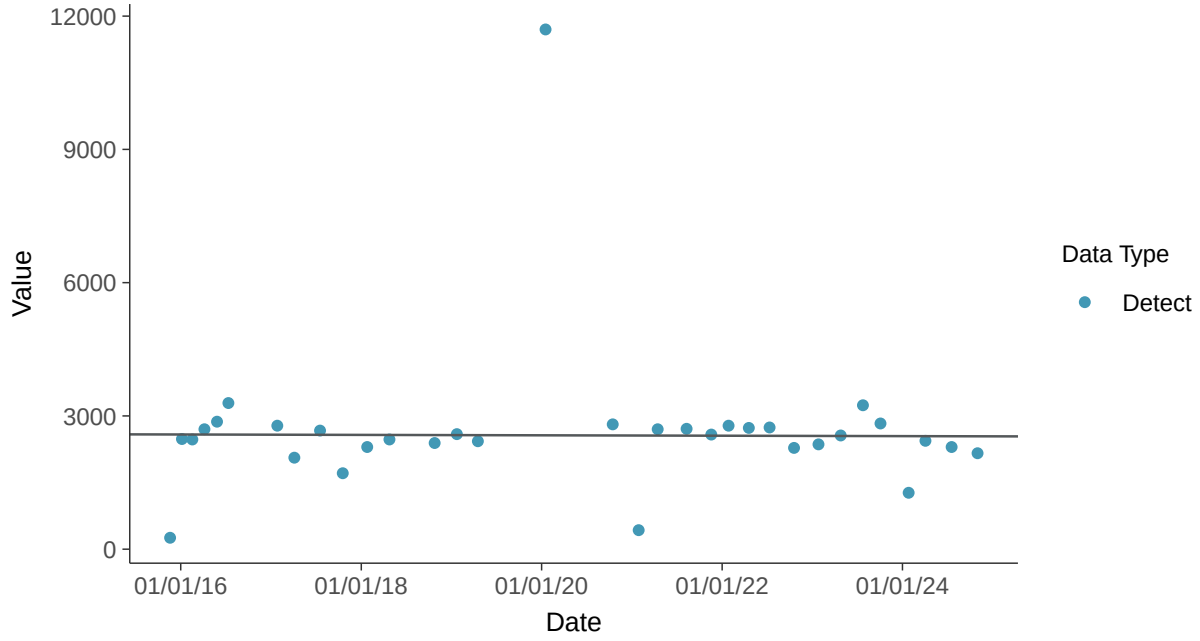
Normal Q-Q plot

Total Dissolved Solids, MW-2 (mg/L)



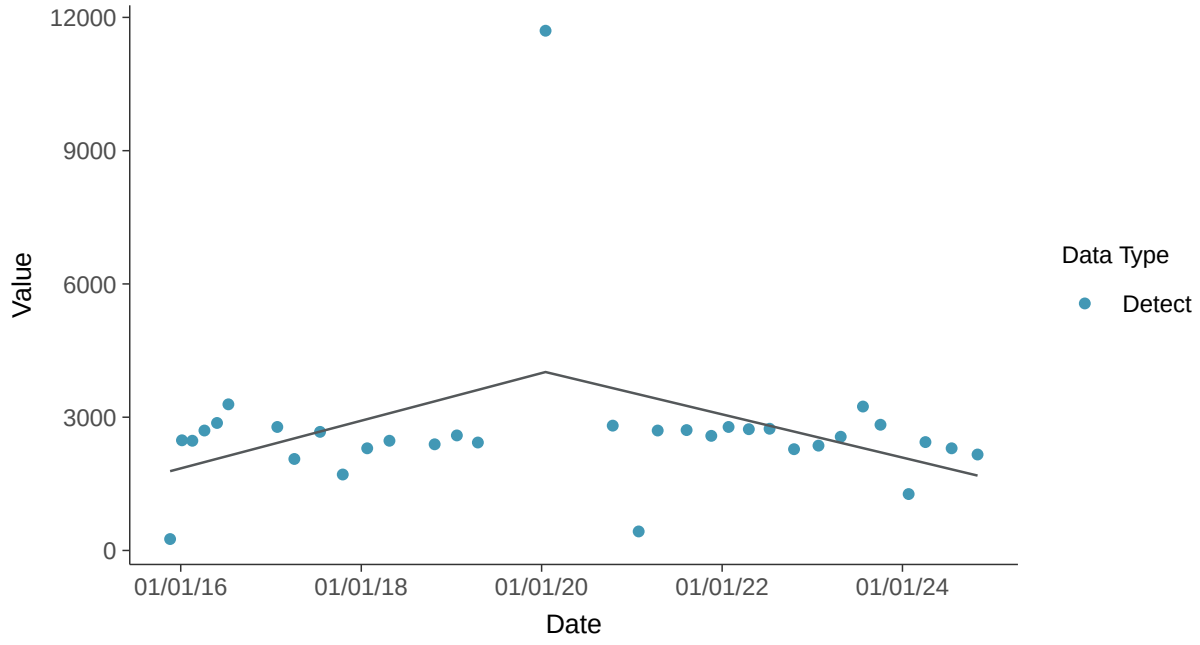
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-2 (mg/L)



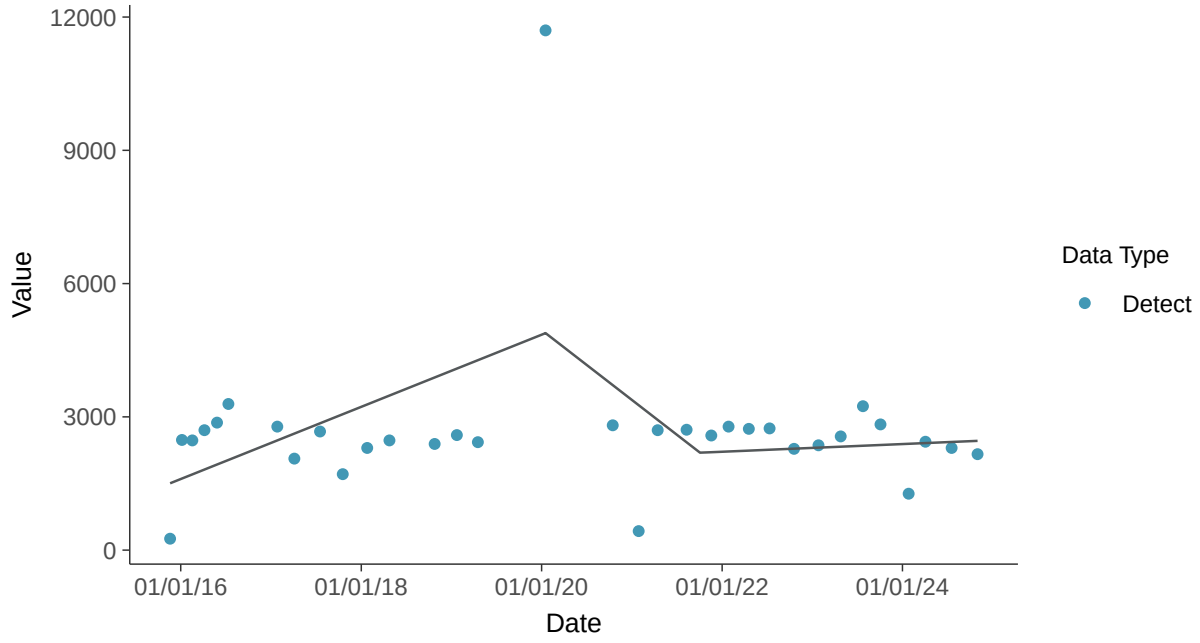
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-2 (mg/L)

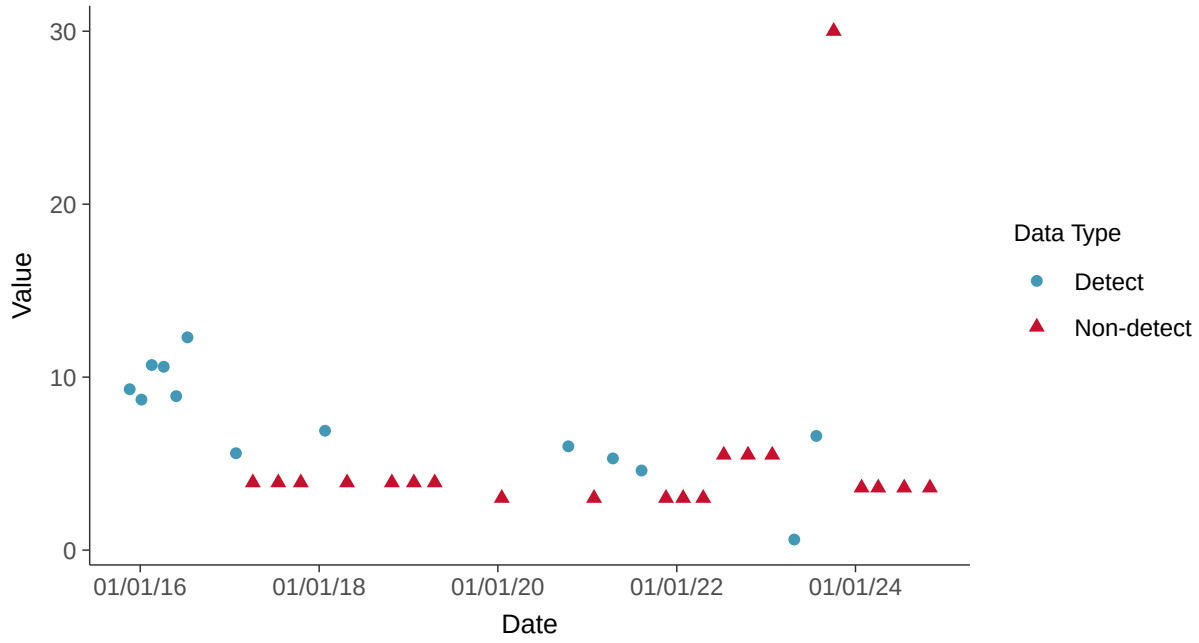


App. IV: Antimony, MW-2

ID: 02_03_101

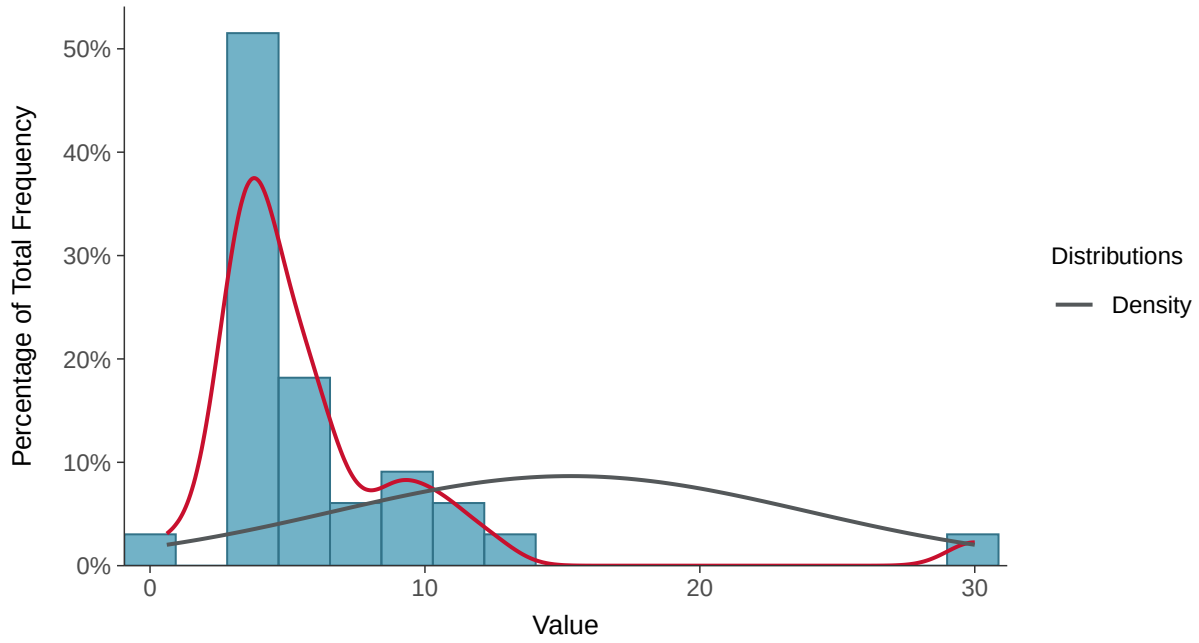
Scatter Plot

Antimony, MW-2 (ug/L)



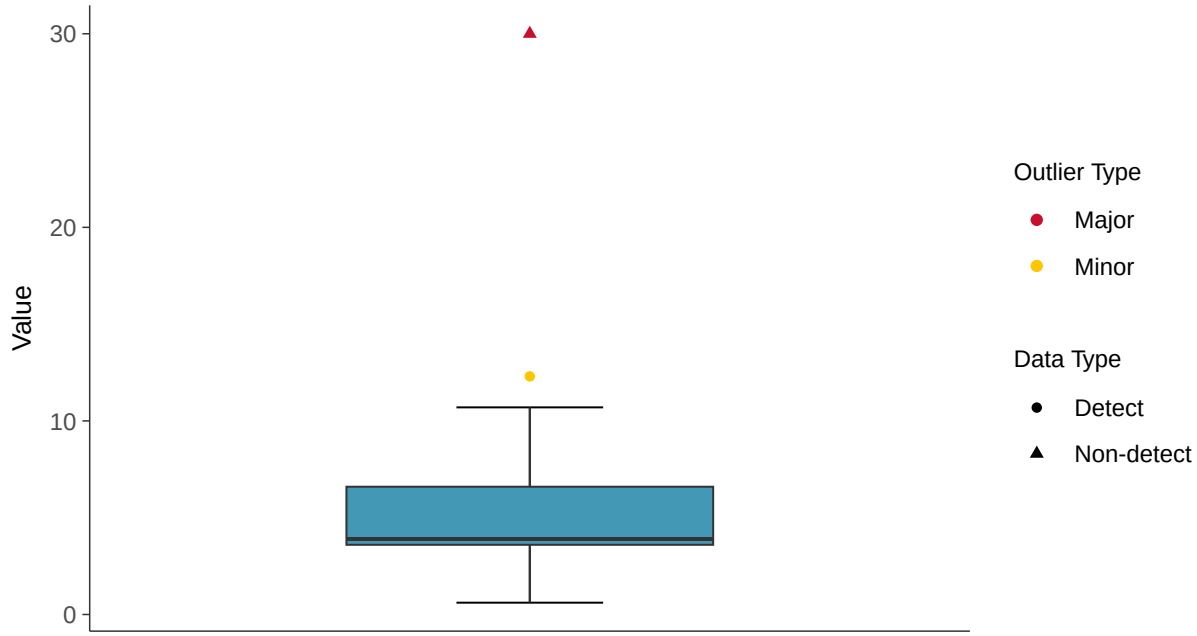
Histogram

Antimony, MW-2 (ug/L)



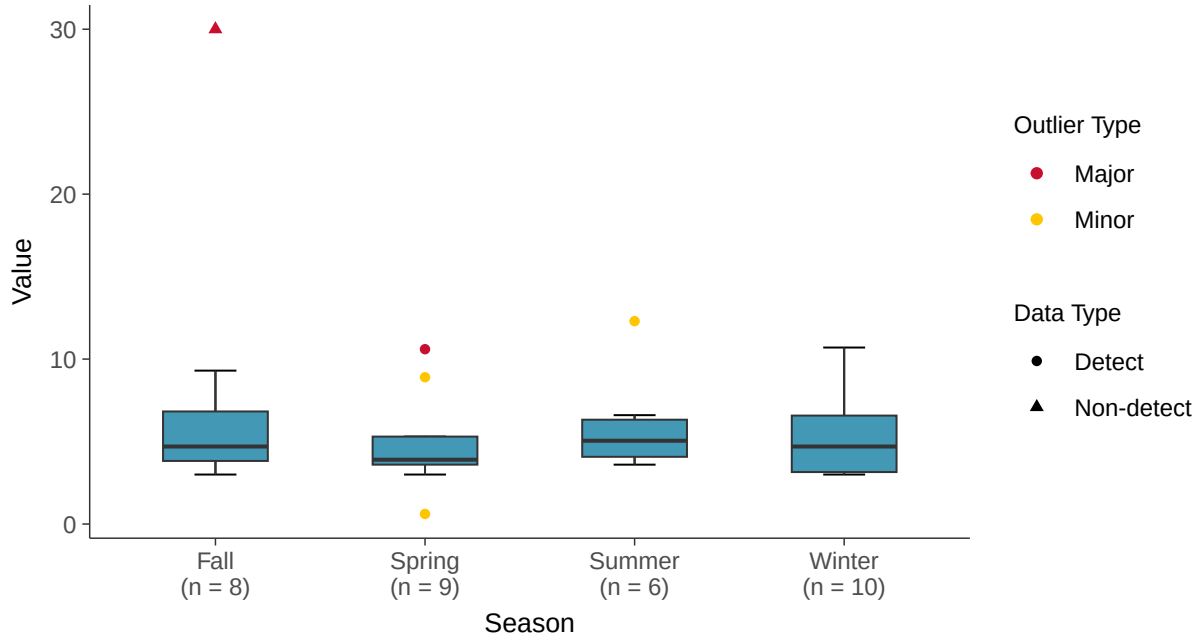
Boxplot

Antimony, MW-2 (ug/L)



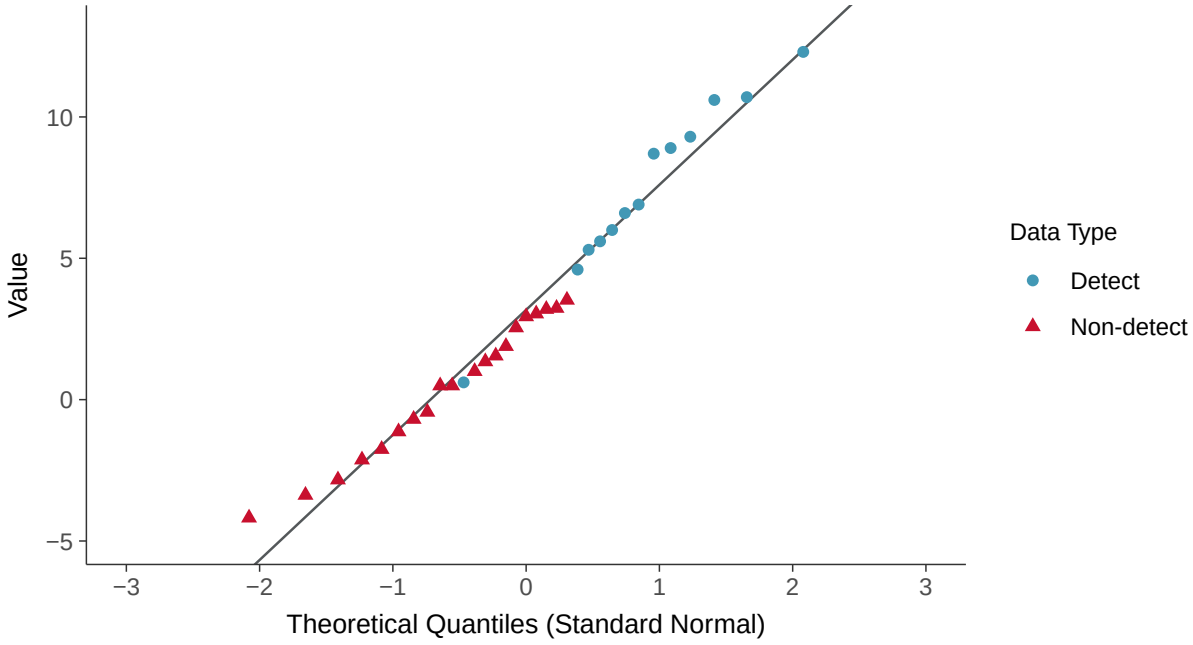
Boxplot by Season

Antimony, MW-2 (ug/L)



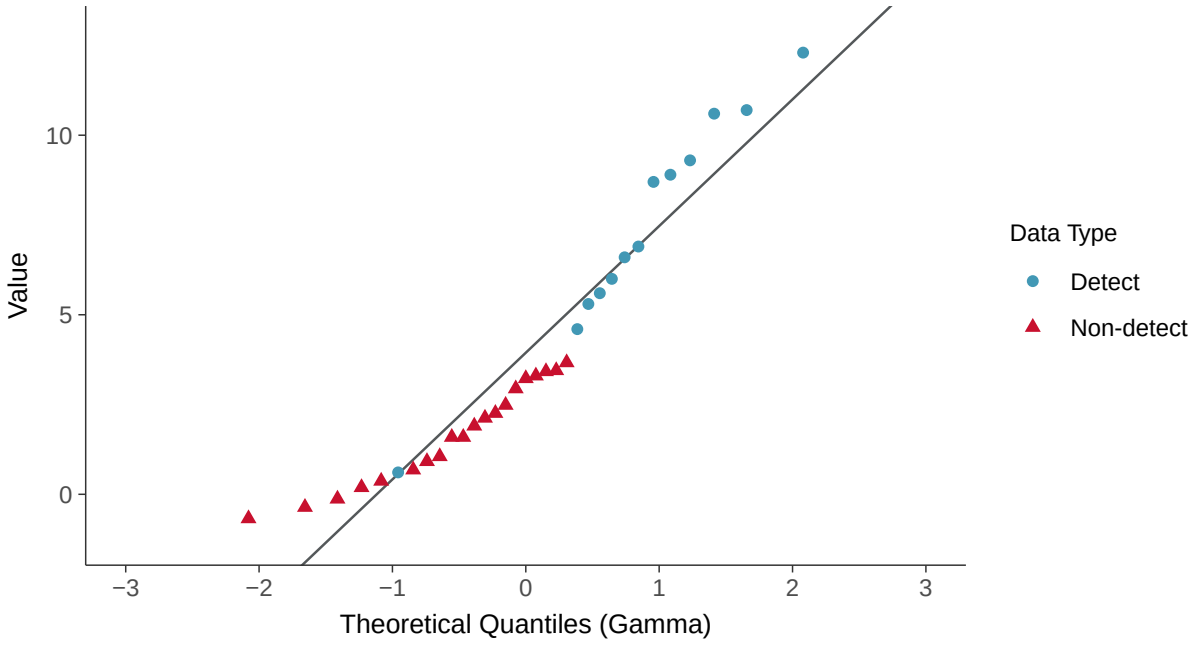
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-2 (ug/L)



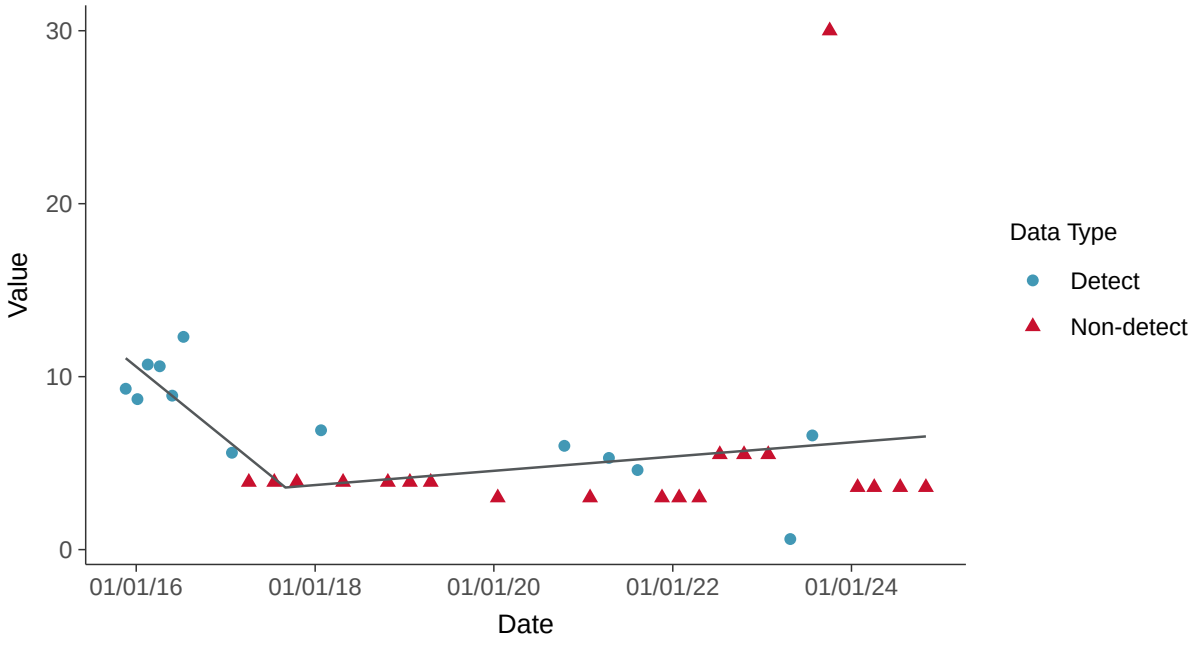
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-2 (ug/L)



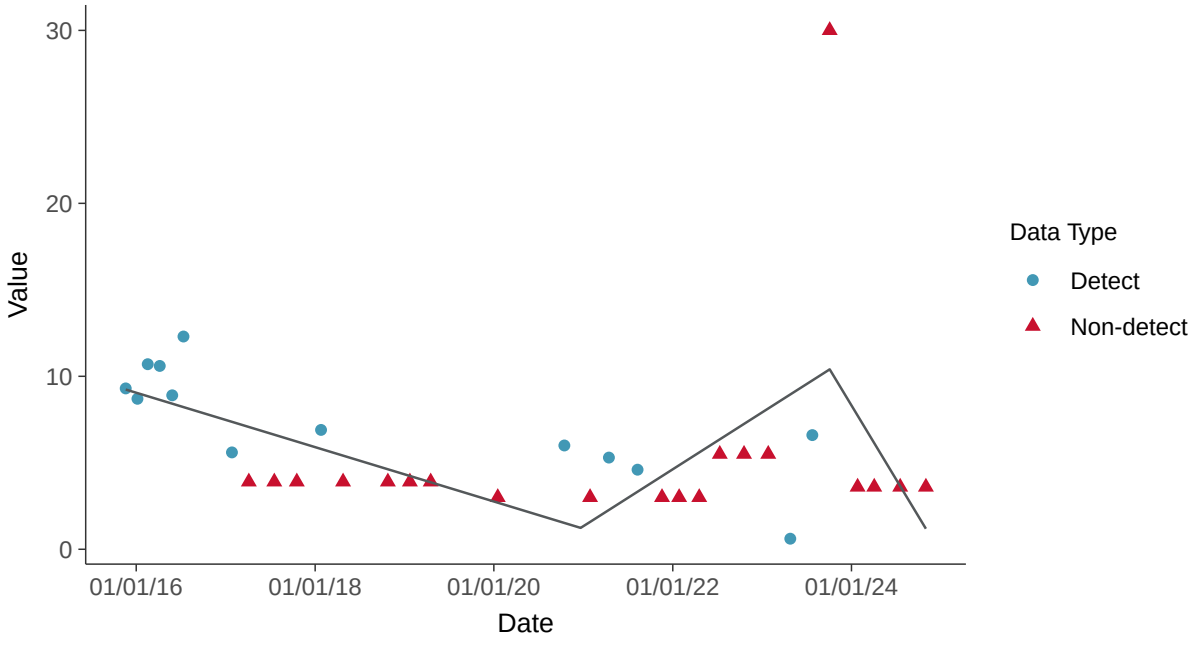
Trend Regression: Piecewise Linear-Linear

Antimony, MW-2 (ug/L)



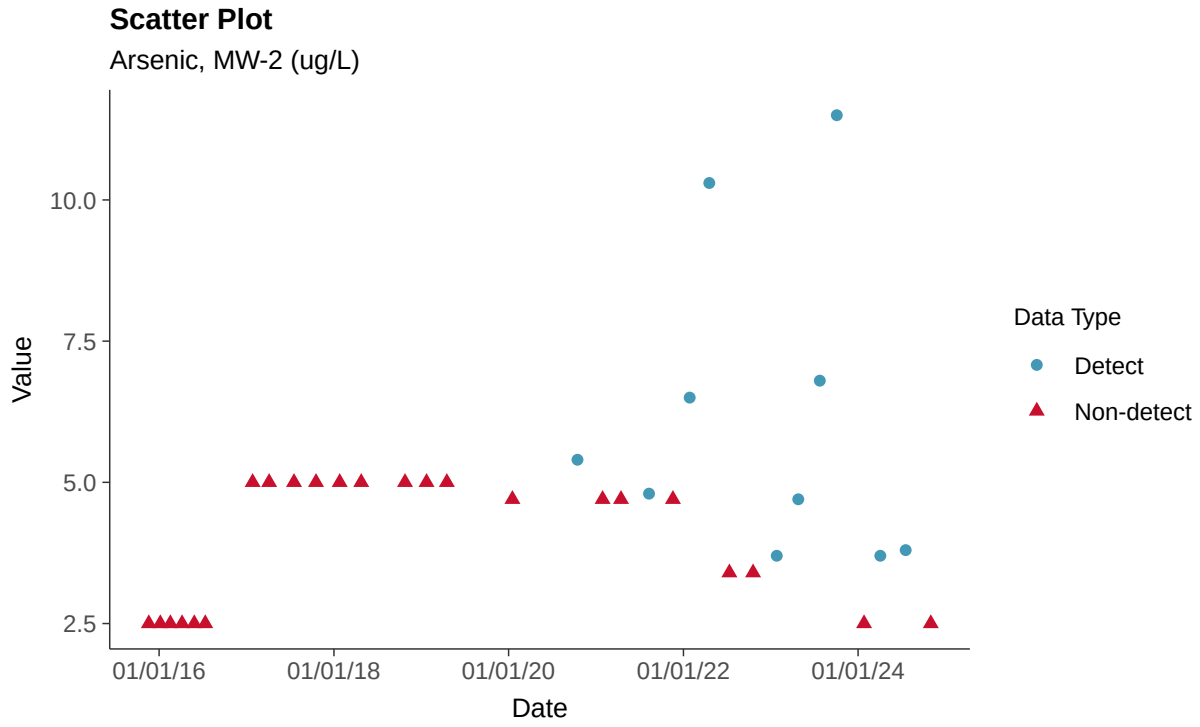
Trend Regression: Piecewise Linear-Linear-Linear

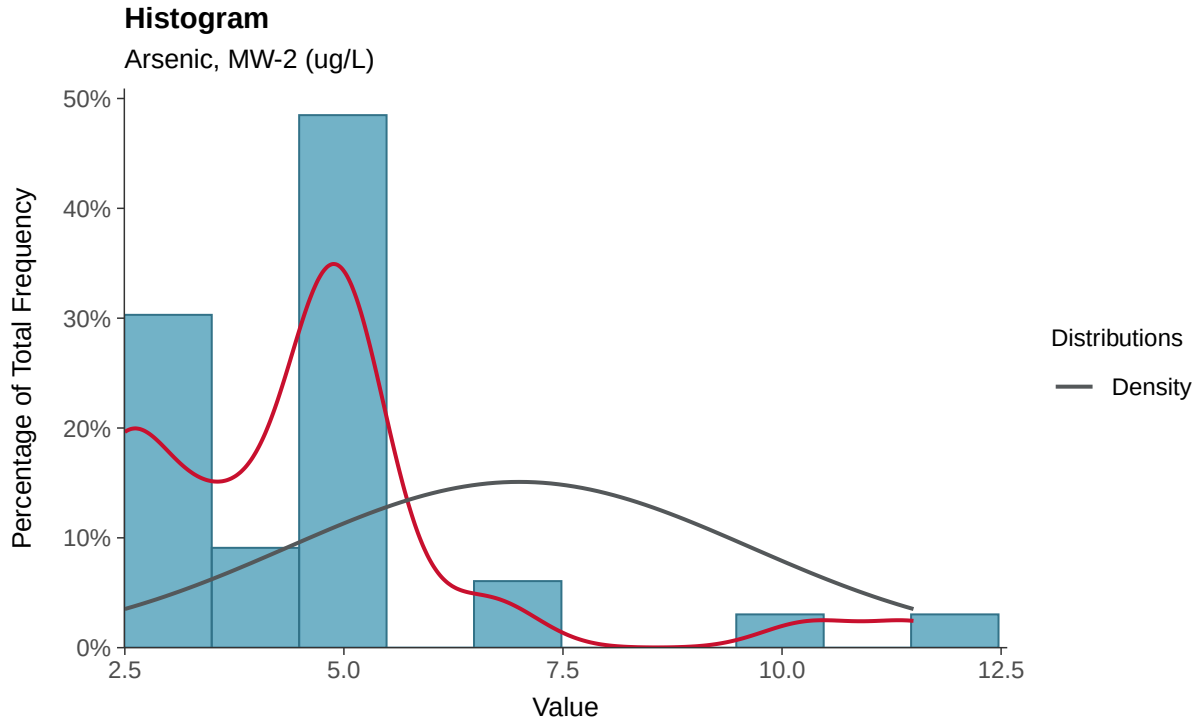
Antimony, MW-2 (ug/L)



App. IV: Arsenic, MW-2

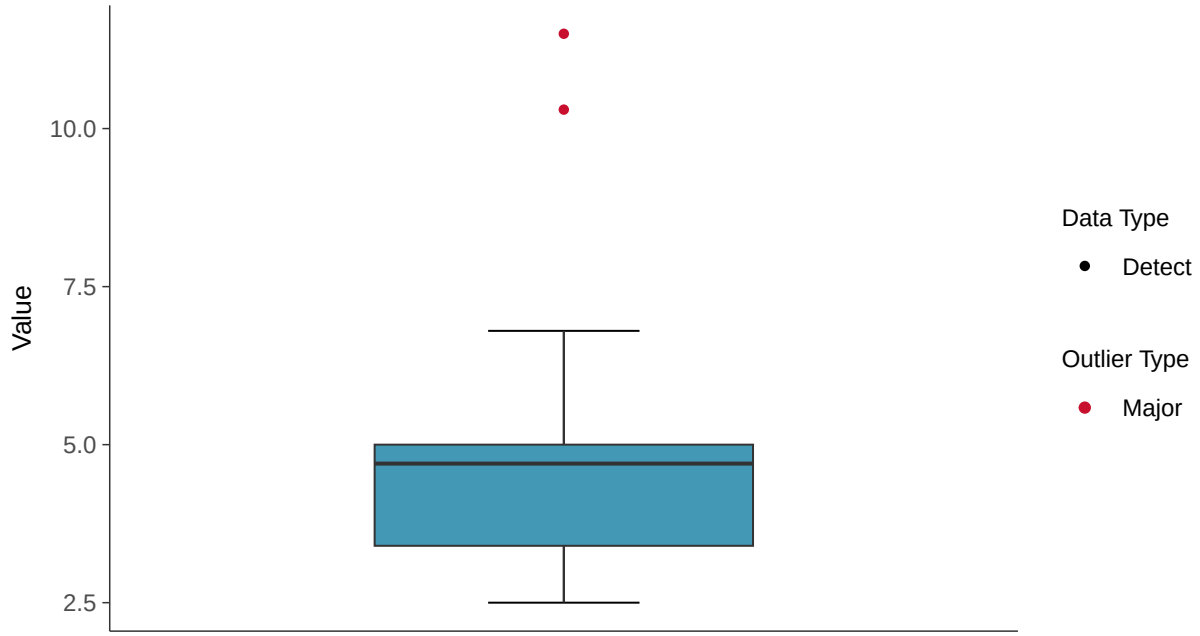
ID: 02_03_102





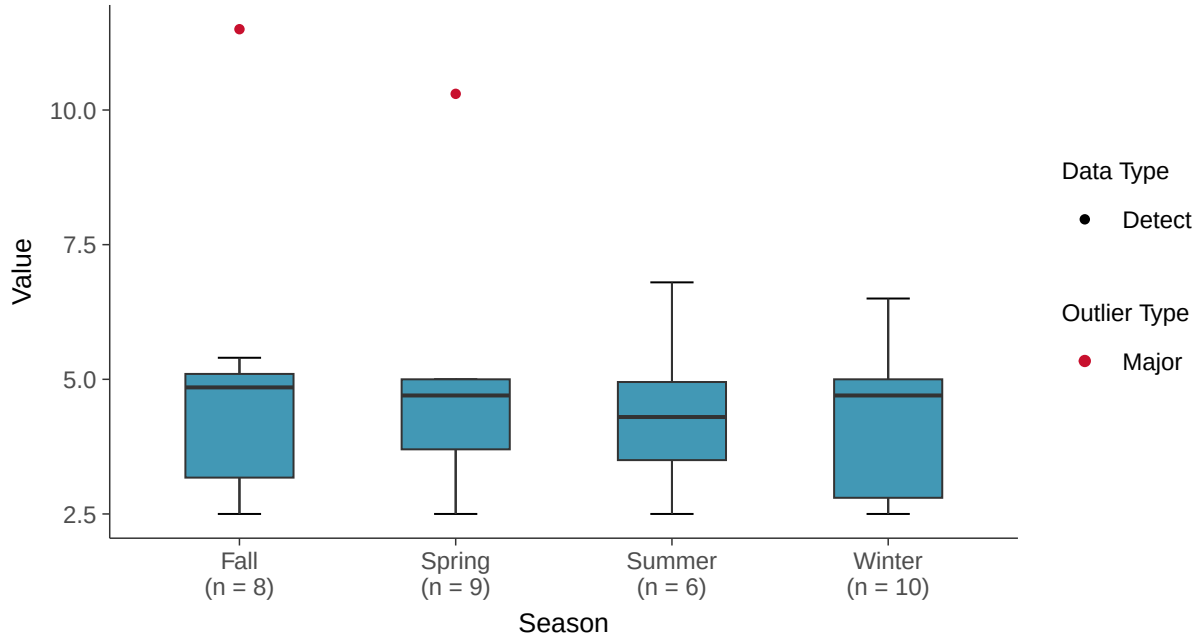
Boxplot

Arsenic, MW-2 (ug/L)



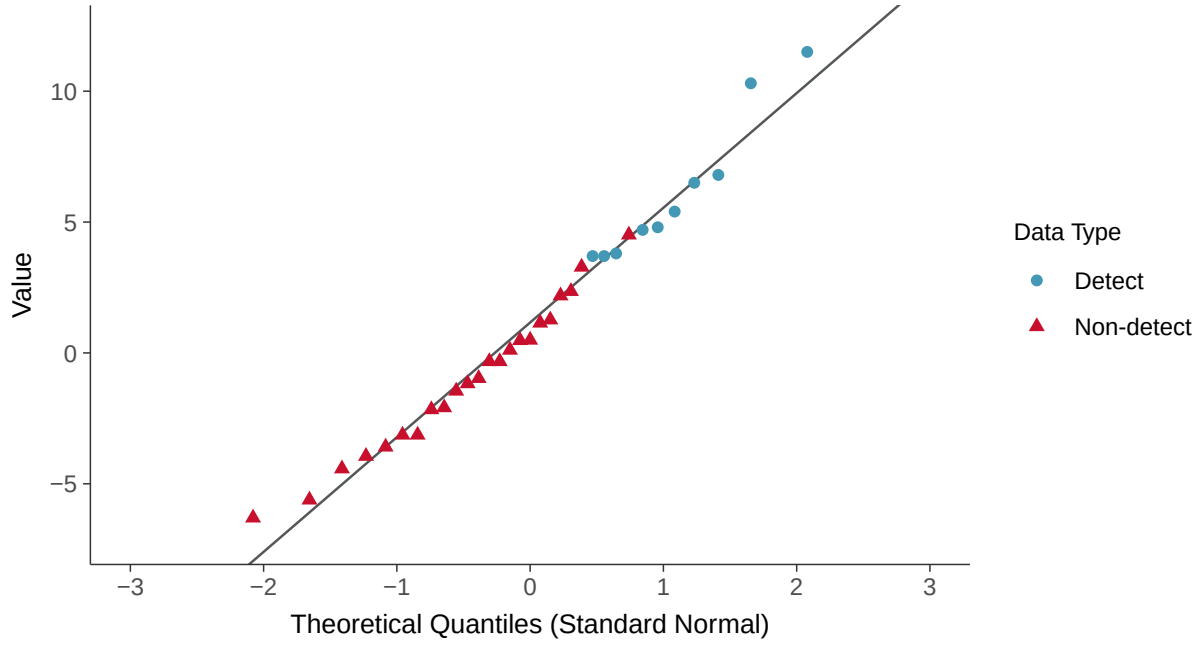
Boxplot by Season

Arsenic, MW-2 (ug/L)



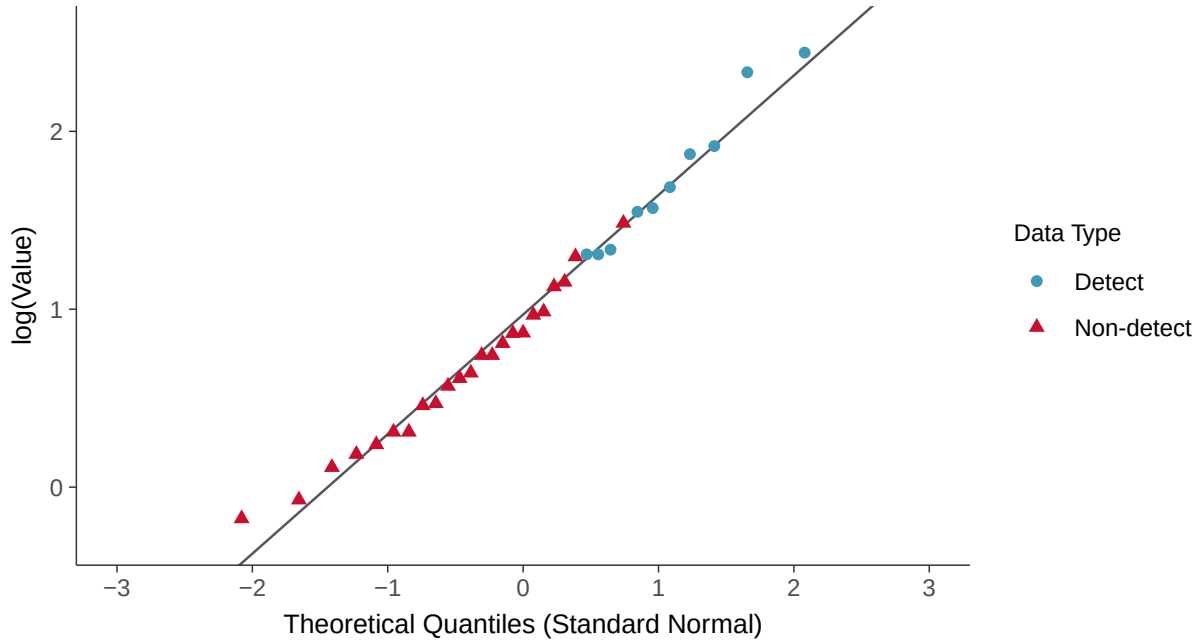
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



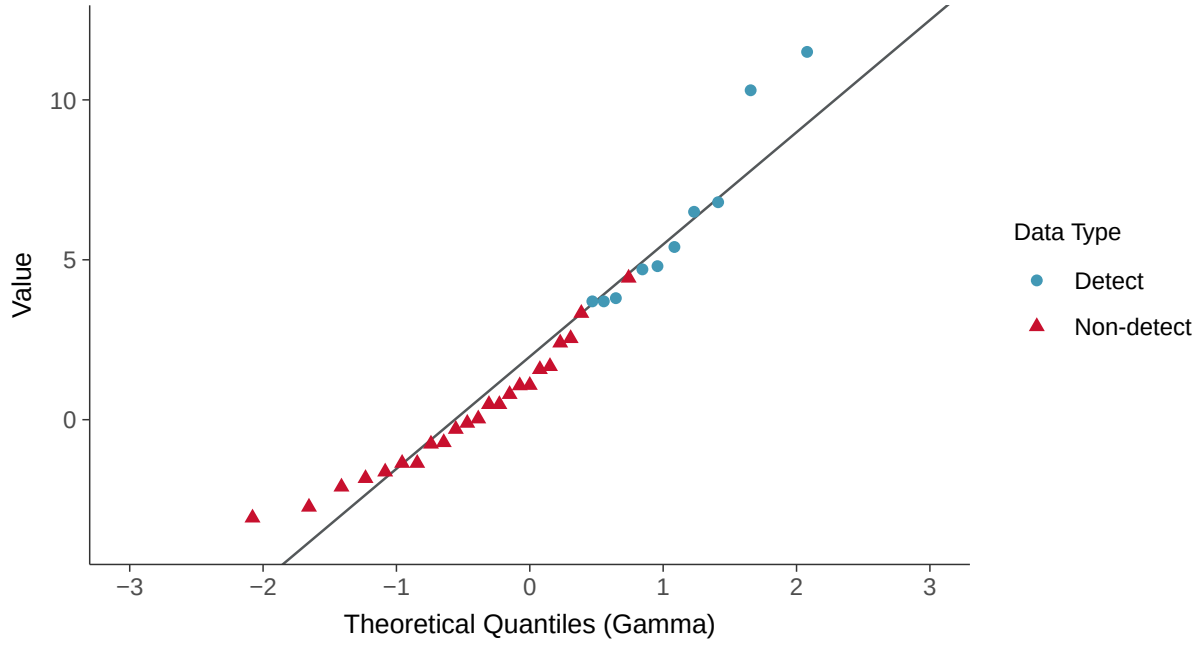
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



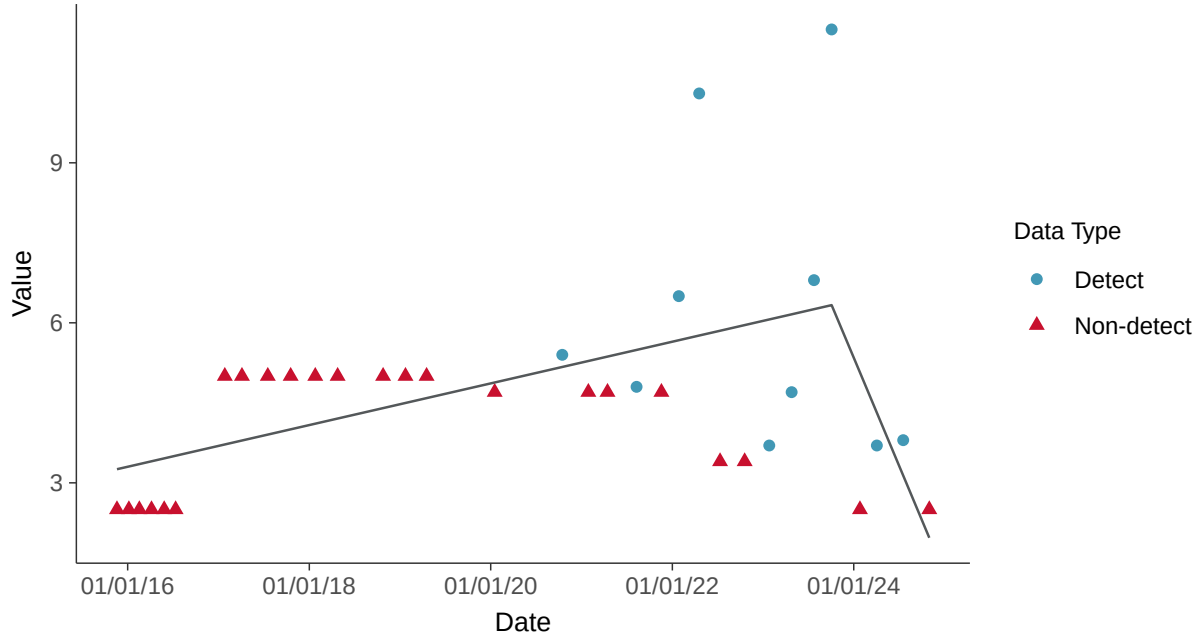
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



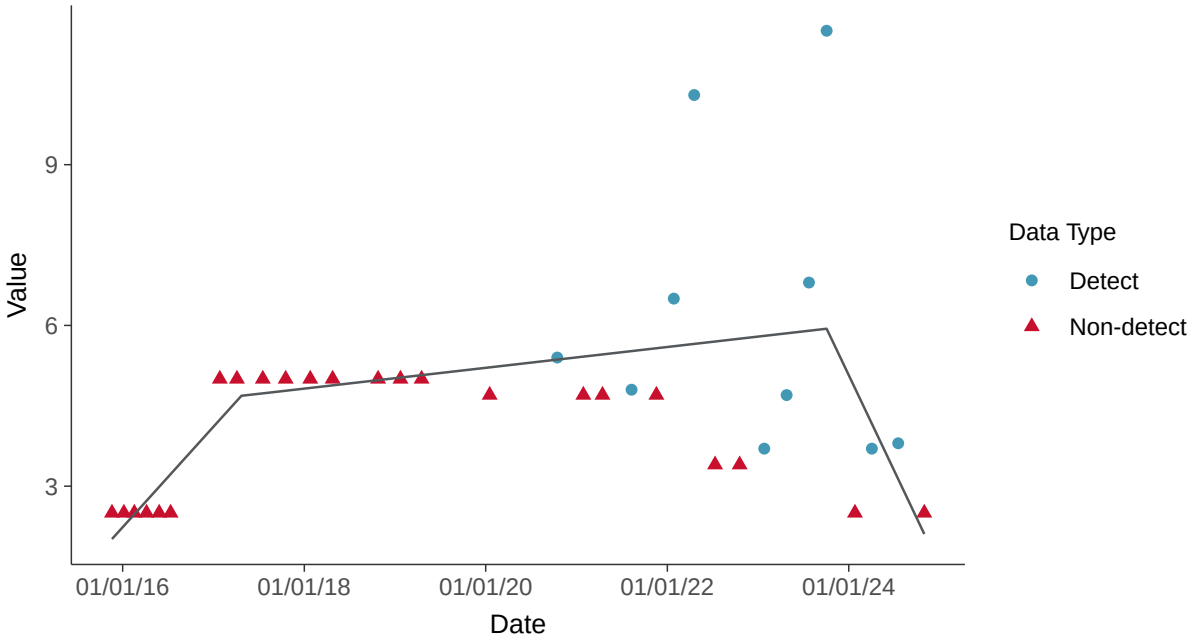
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-2 (ug/L)

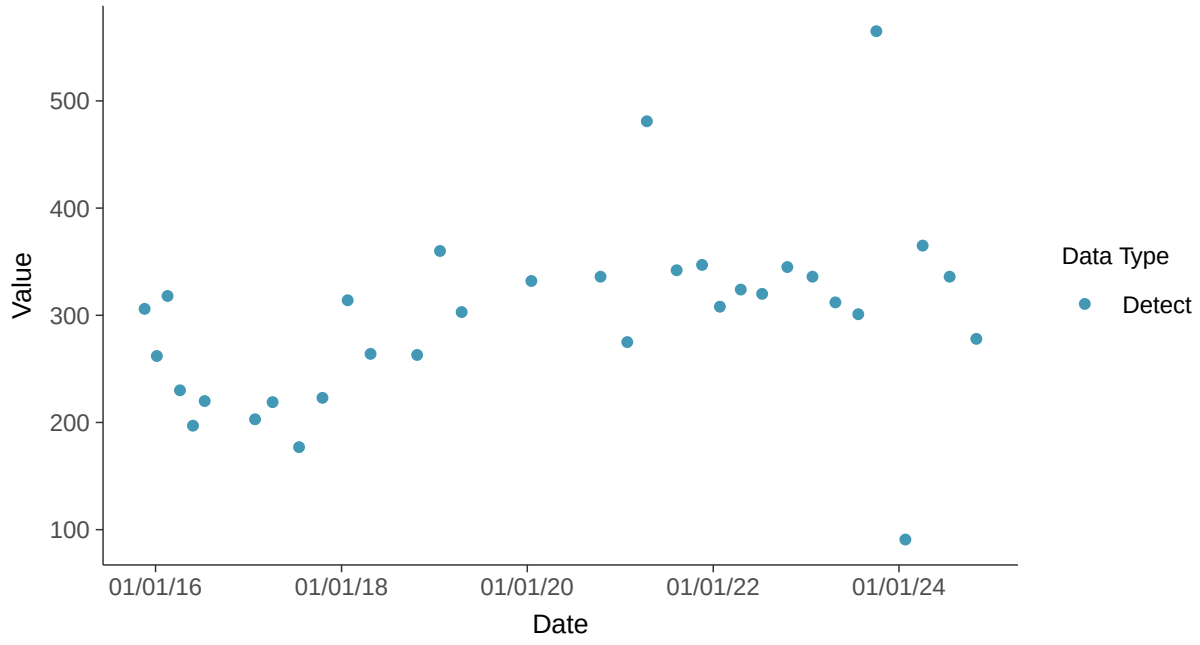


App. IV: Barium, MW-2

ID: 02_03_103

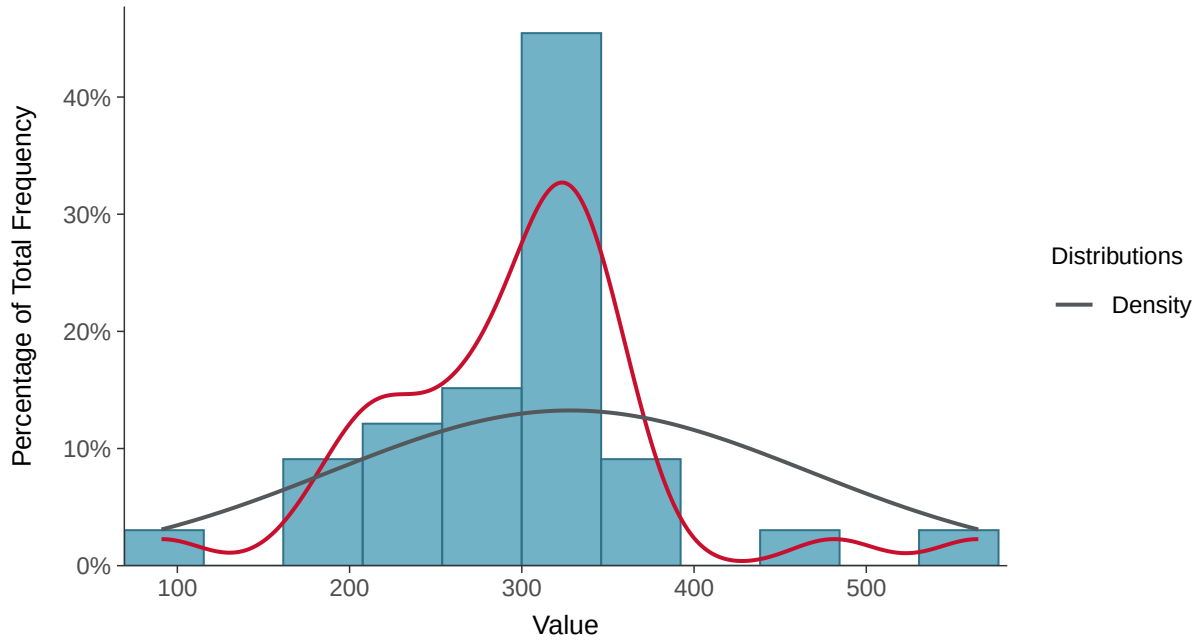
Scatter Plot

Barium, MW-2 (ug/L)



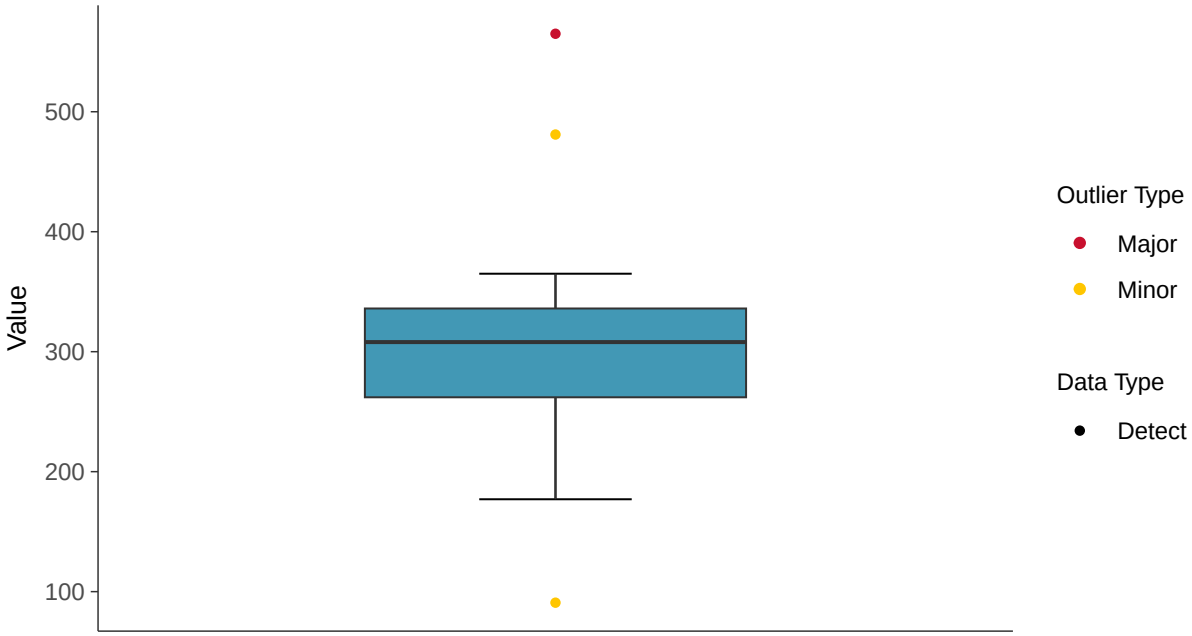
Histogram

Barium, MW-2 (ug/L)



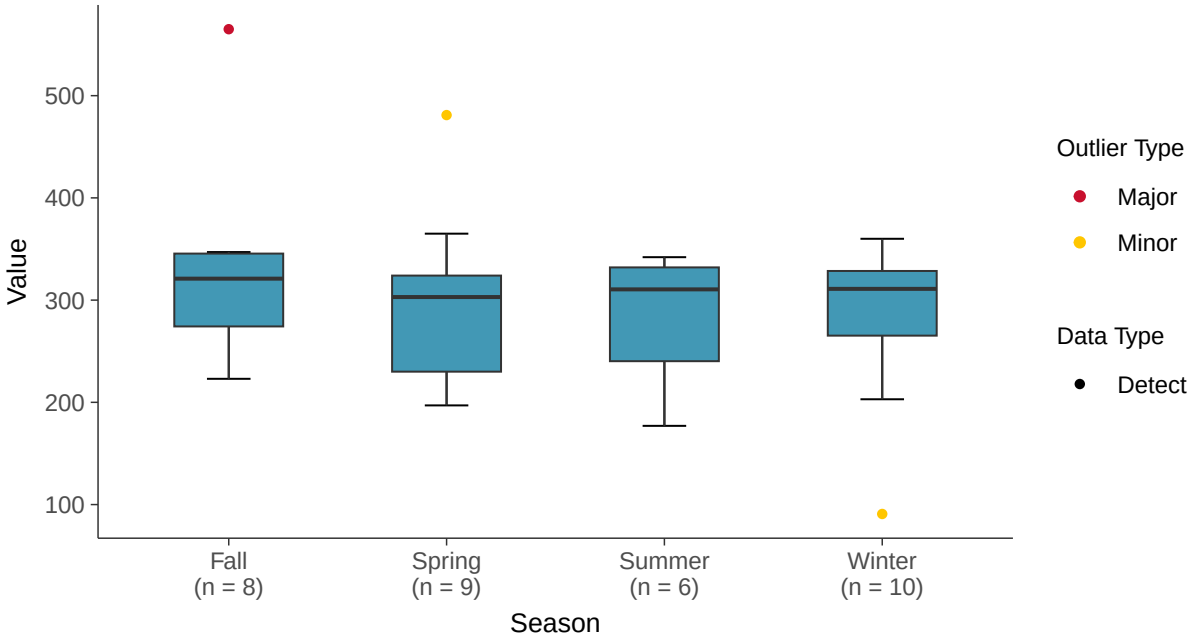
Boxplot

Barium, MW-2 (ug/L)



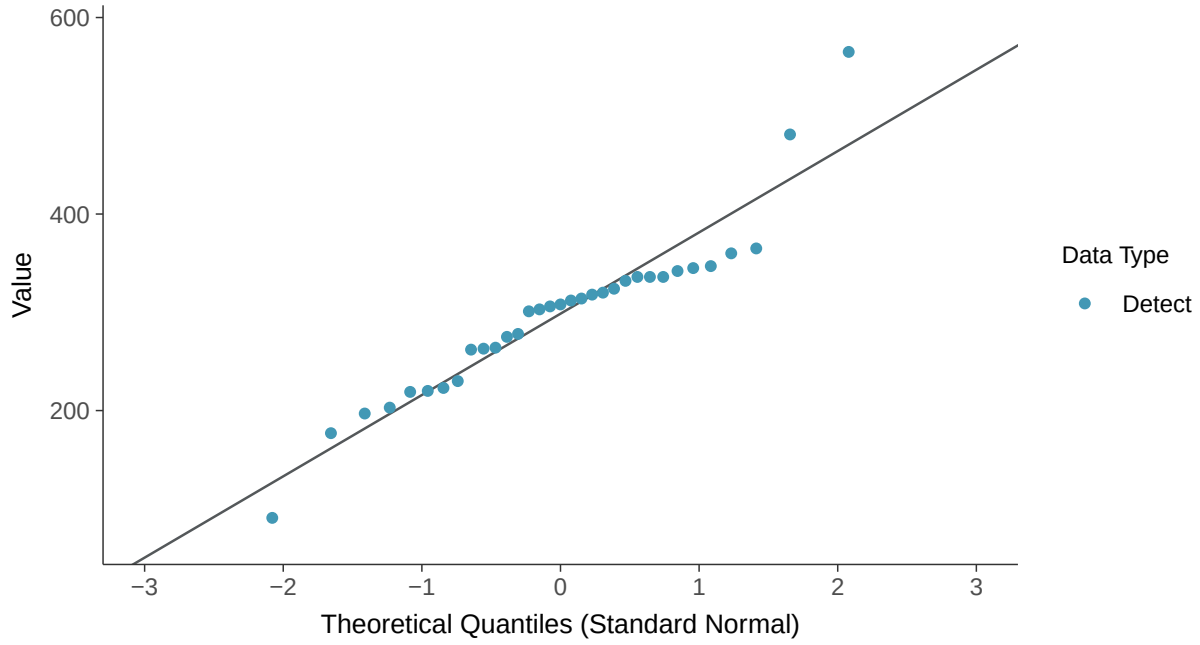
Boxplot by Season

Barium, MW-2 (ug/L)



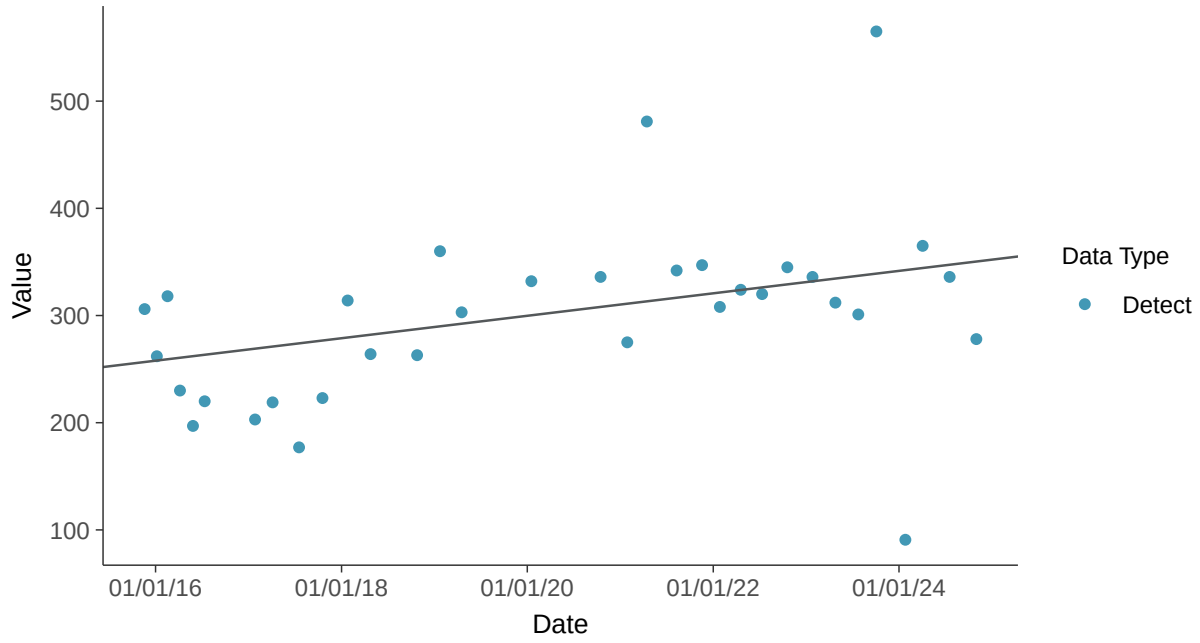
Normal Q-Q plot

Barium, MW-2 (ug/L)



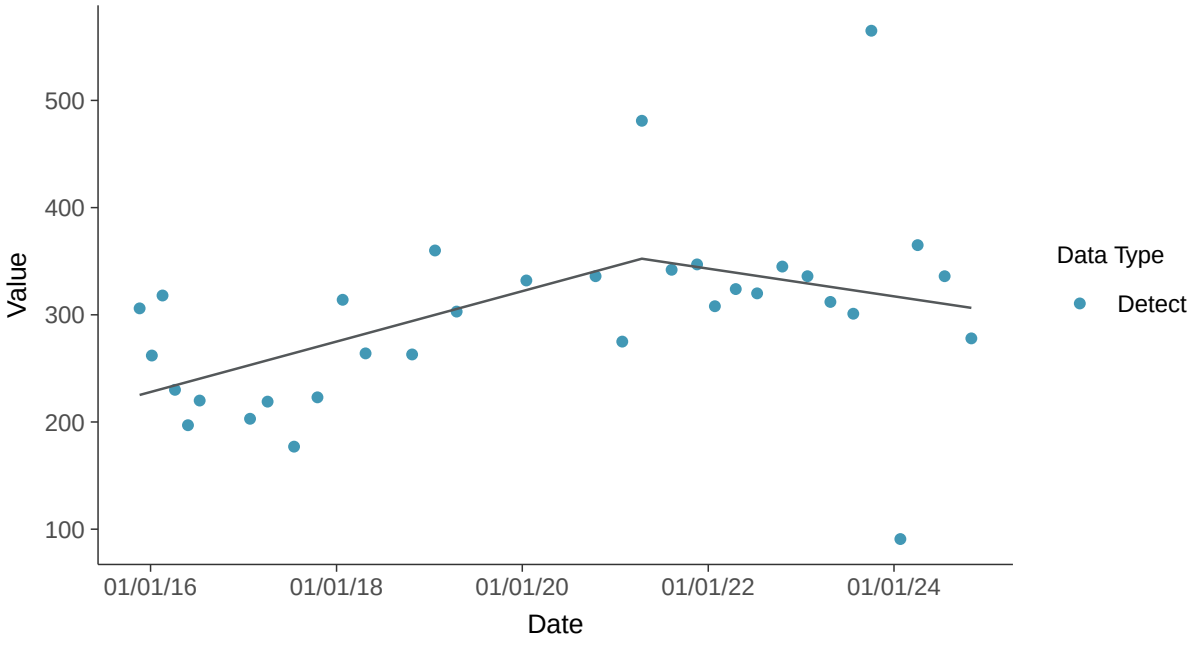
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-2 (ug/L)



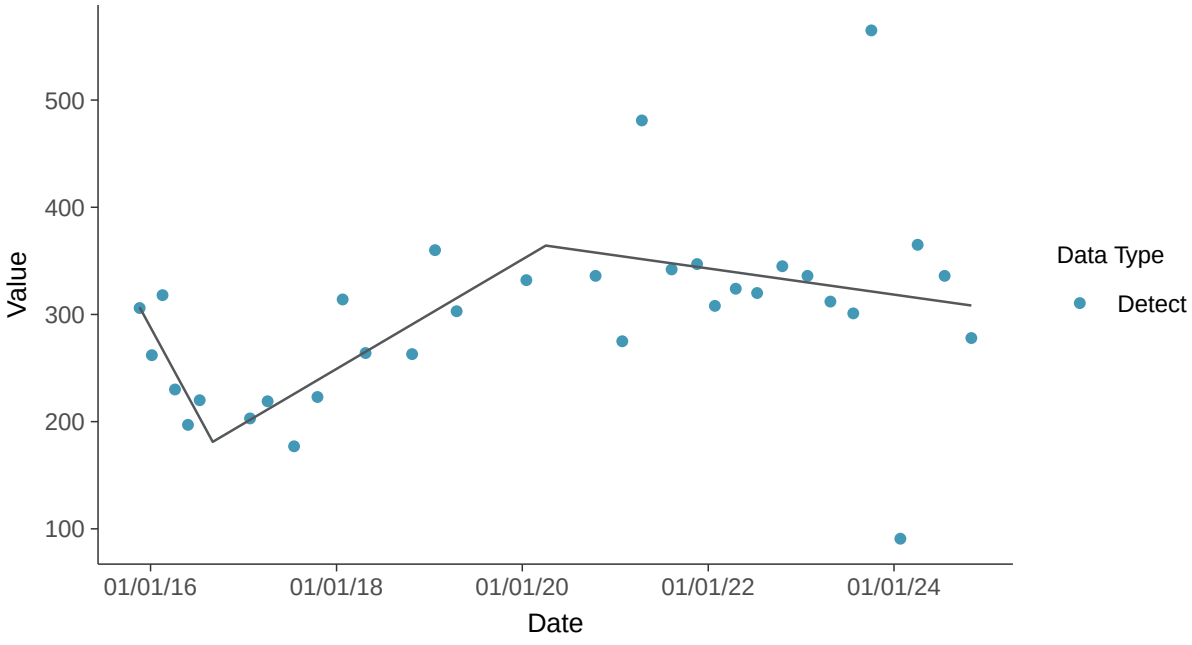
Trend Regression: Piecewise Linear-Linear

Barium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-2 (ug/L)

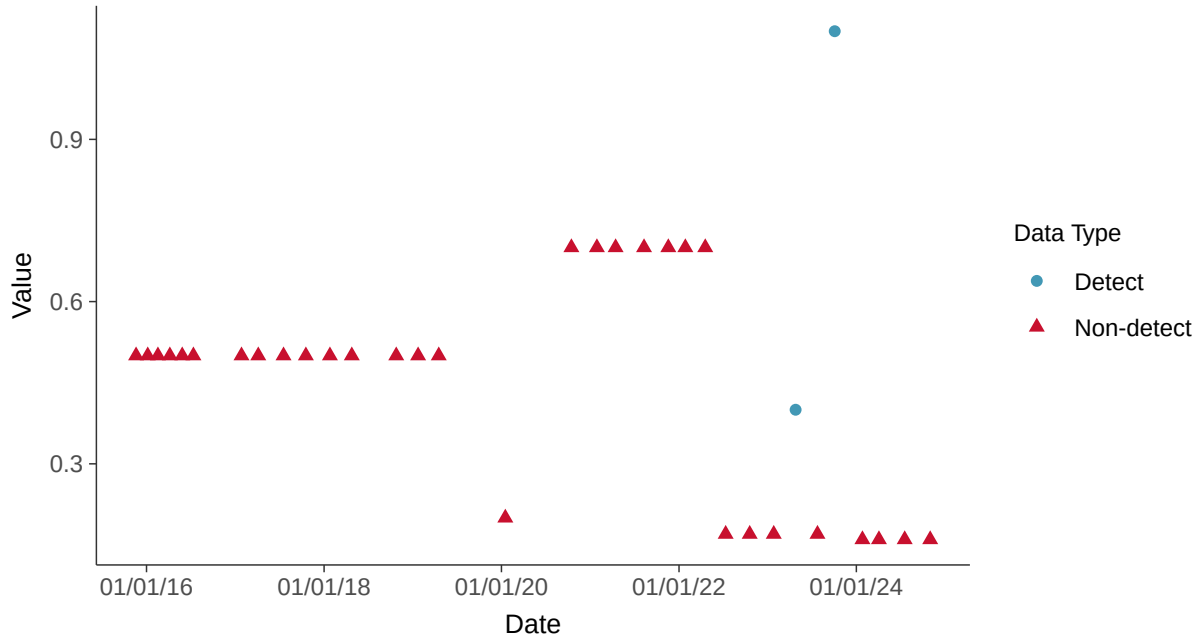


App. IV: Beryllium, MW-2

ID: 02_03_104

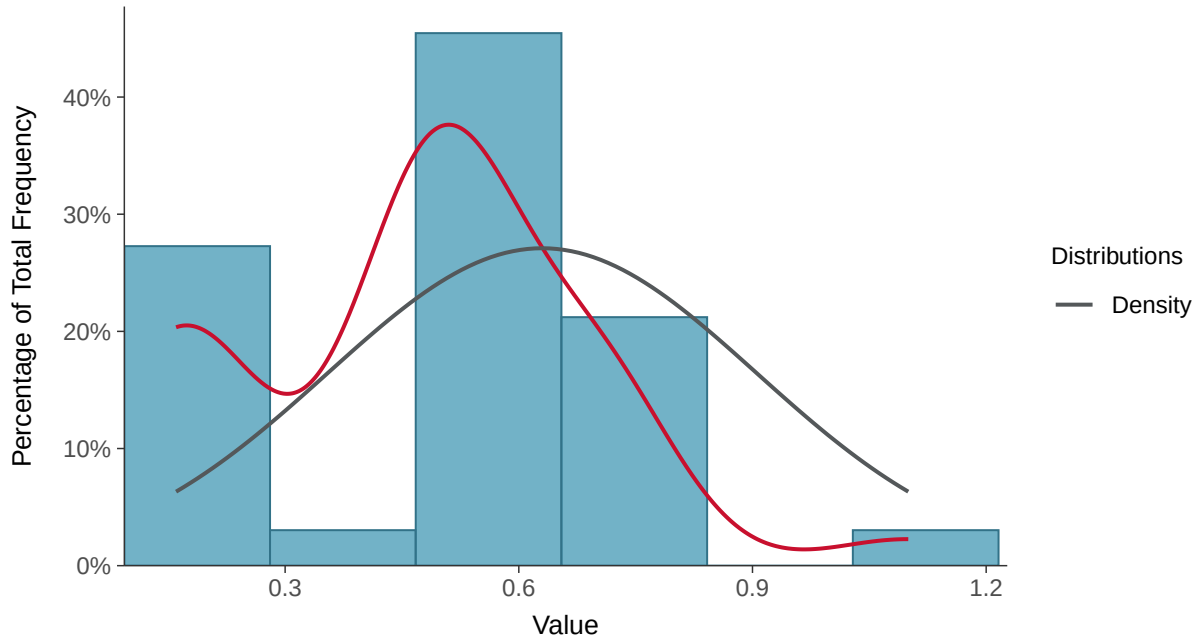
Scatter Plot

Beryllium, MW-2 (ug/L)



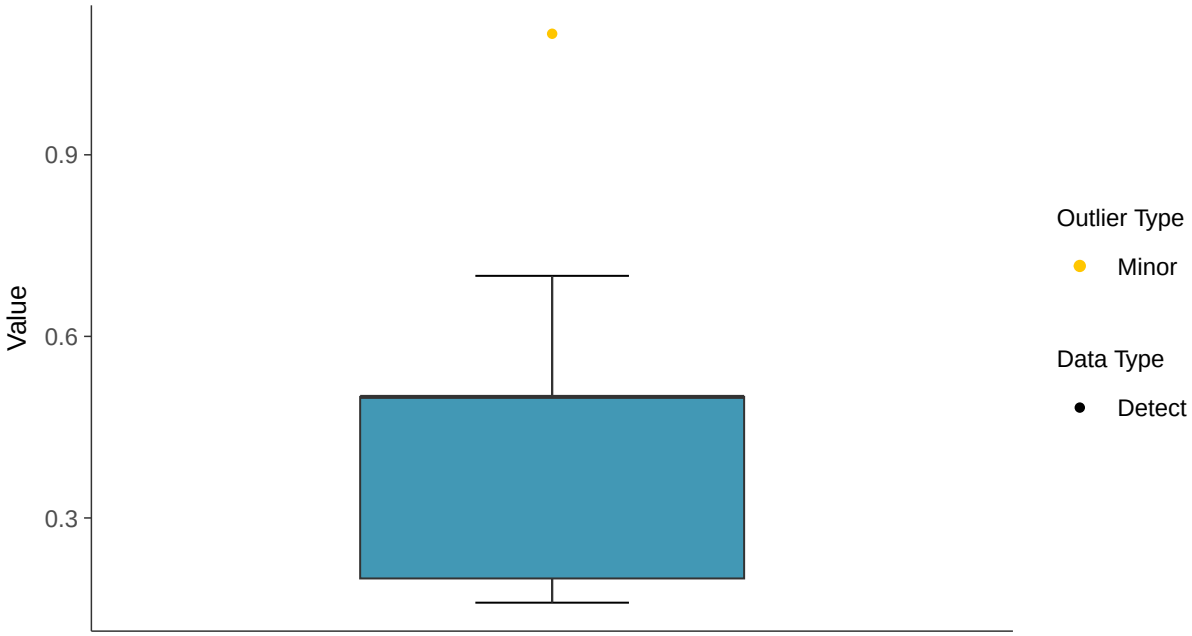
Histogram

Beryllium, MW-2 (ug/L)



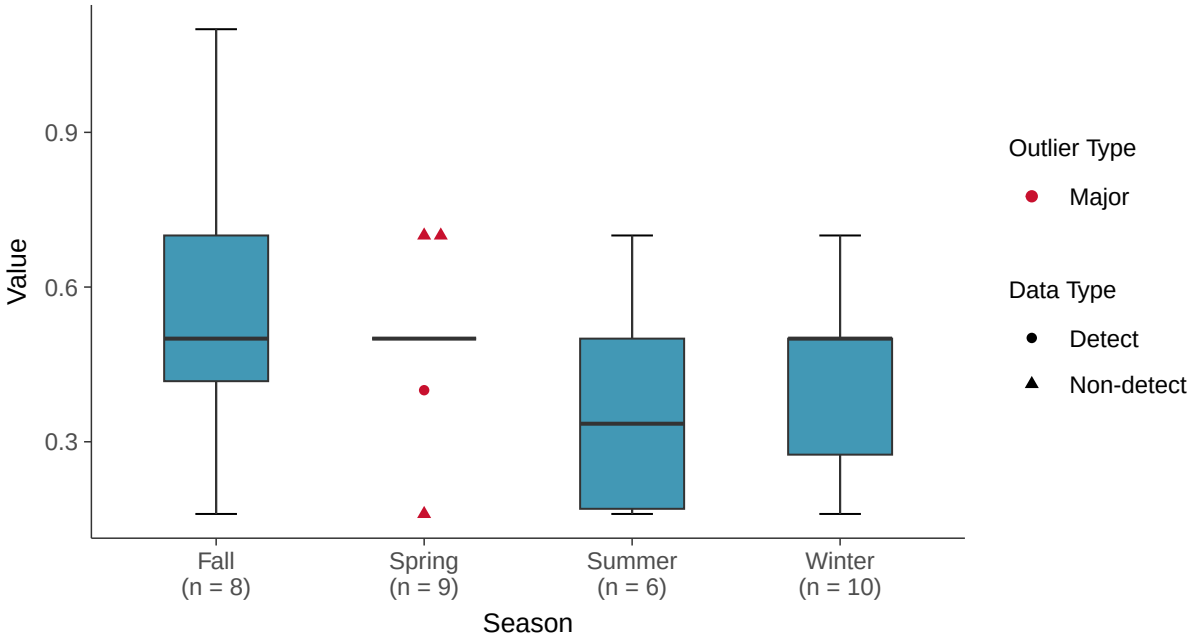
Boxplot

Beryllium, MW-2 (ug/L)



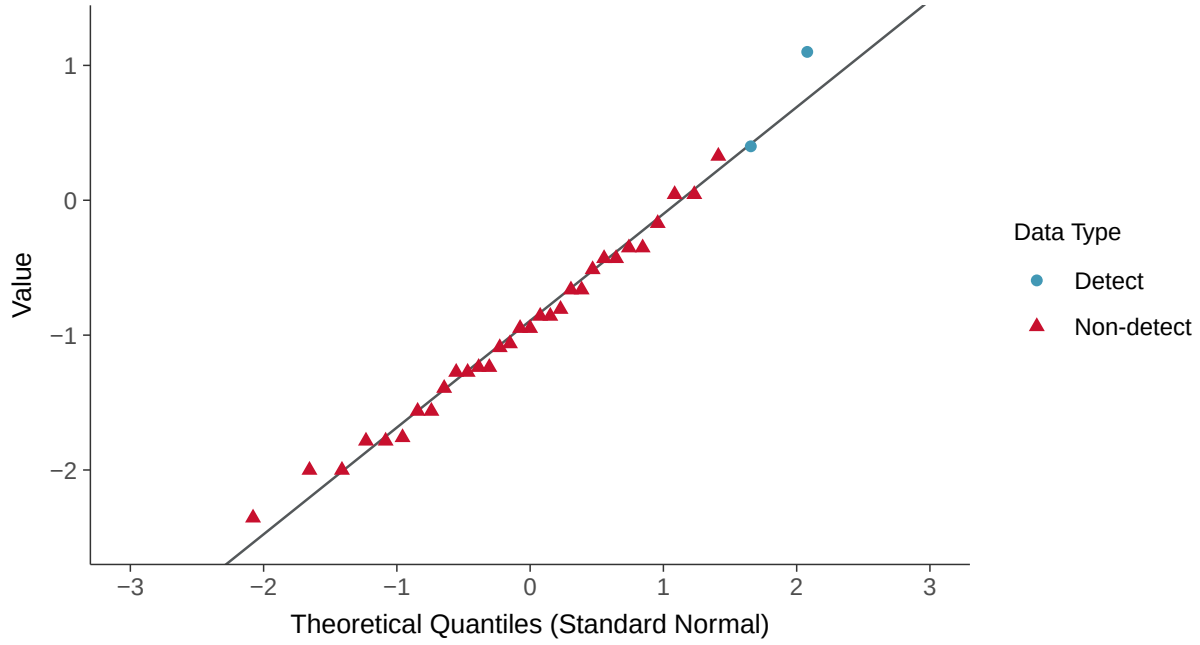
Boxplot by Season

Beryllium, MW-2 (ug/L)



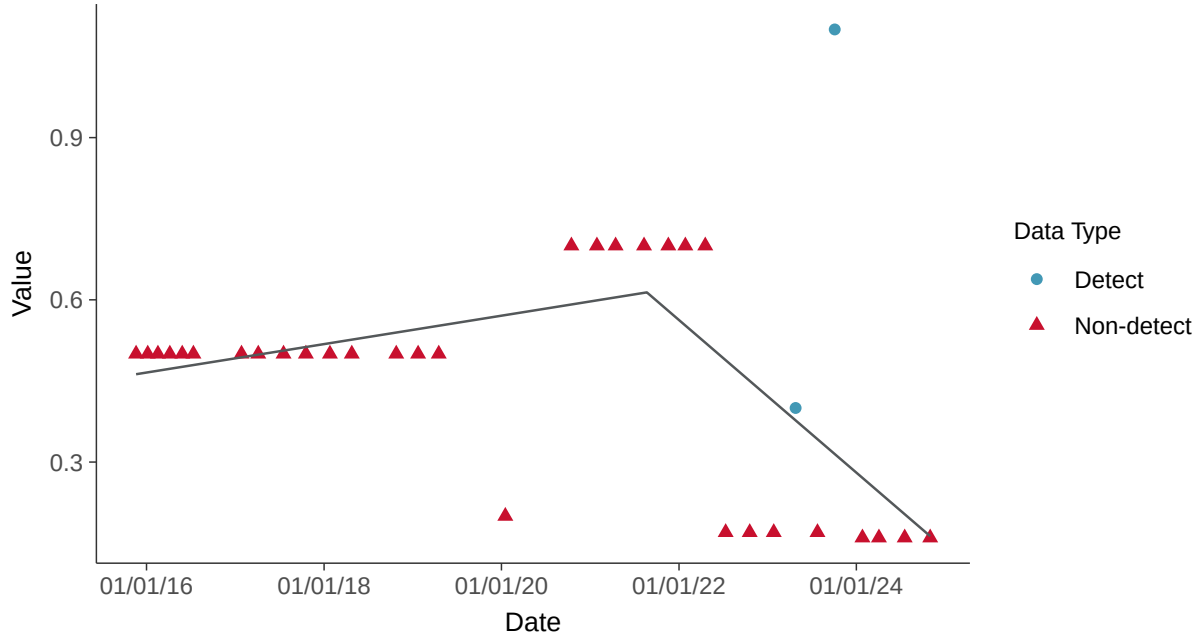
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-2 (ug/L)



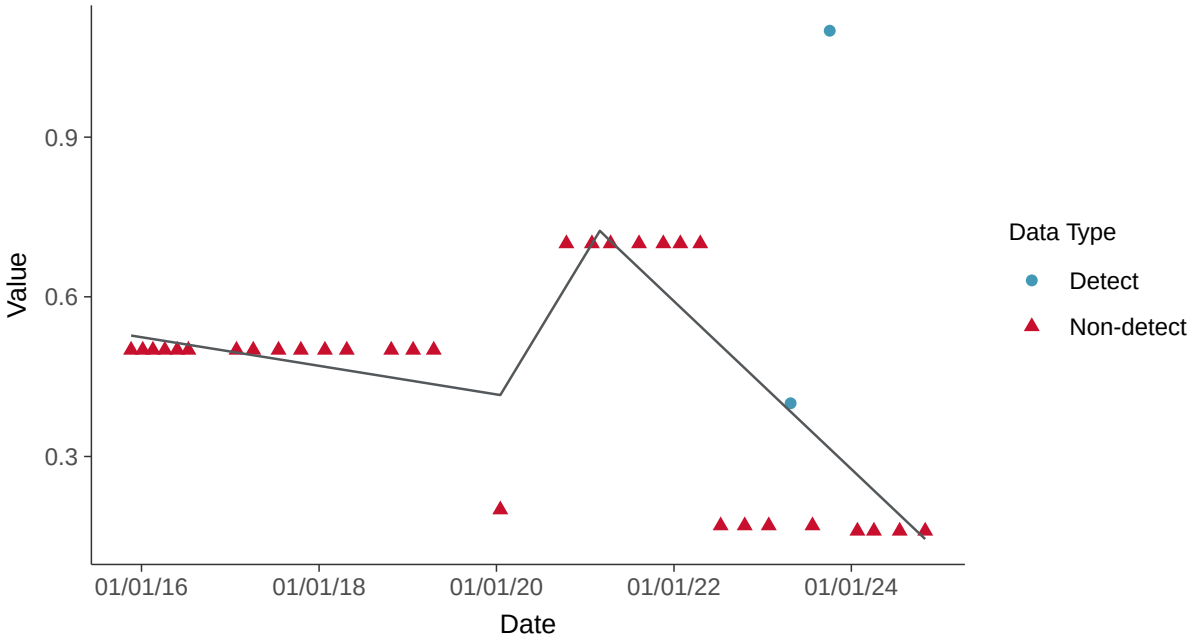
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-2 (ug/L)

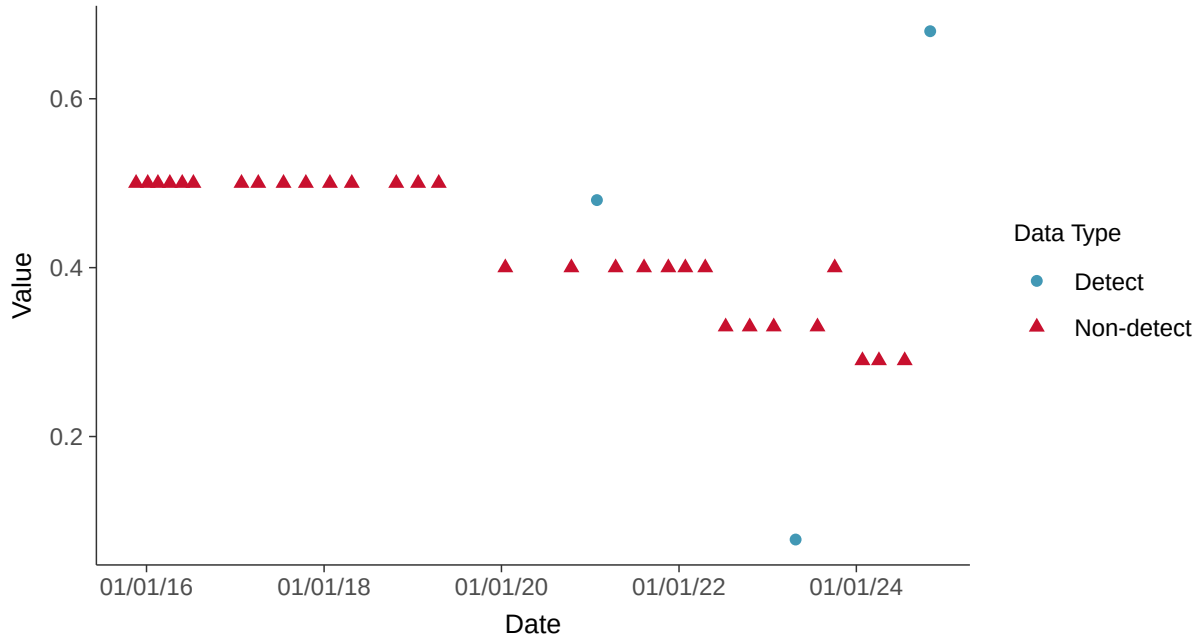


App. IV: Cadmium, MW-2

ID: 02_03_106

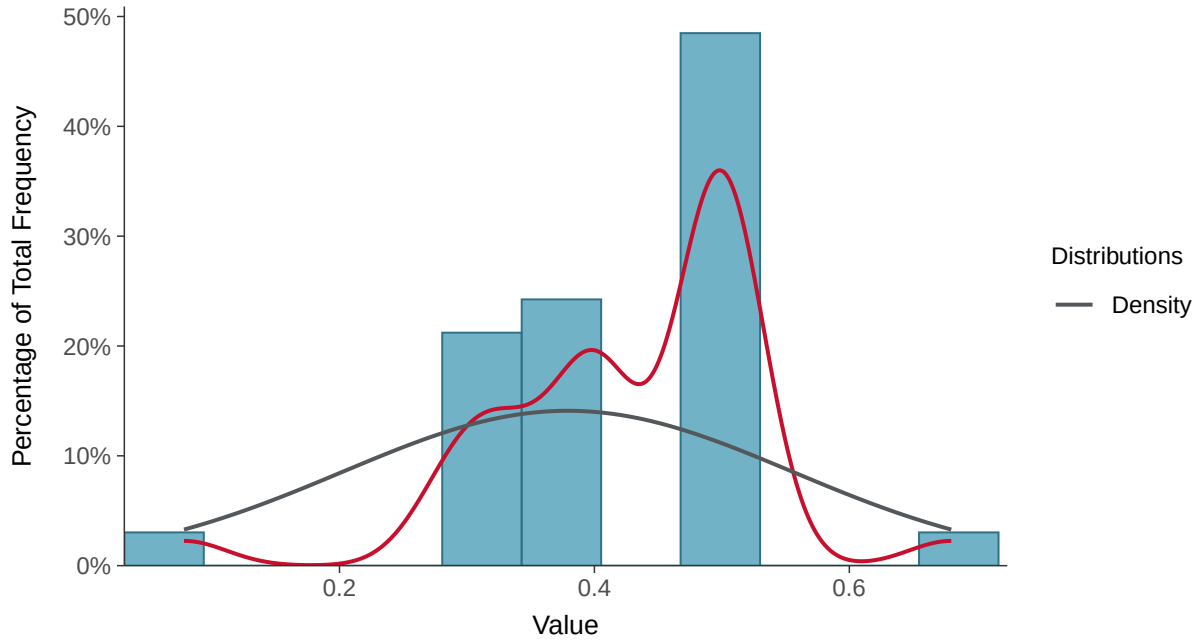
Scatter Plot

Cadmium, MW-2 (ug/L)



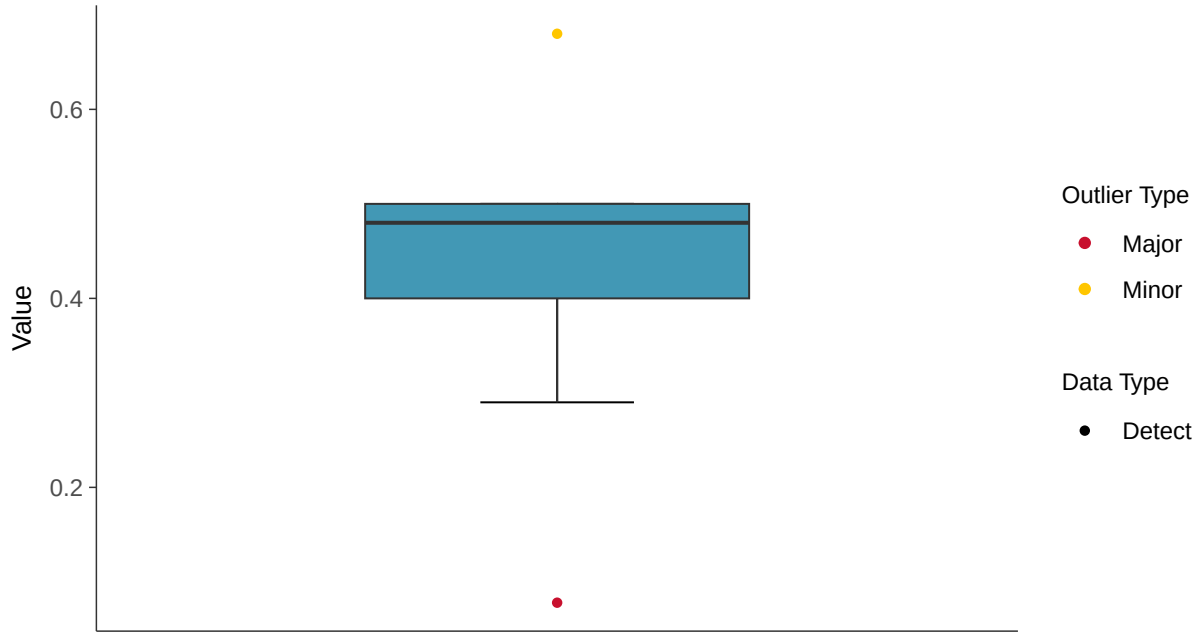
Histogram

Cadmium, MW-2 (ug/L)



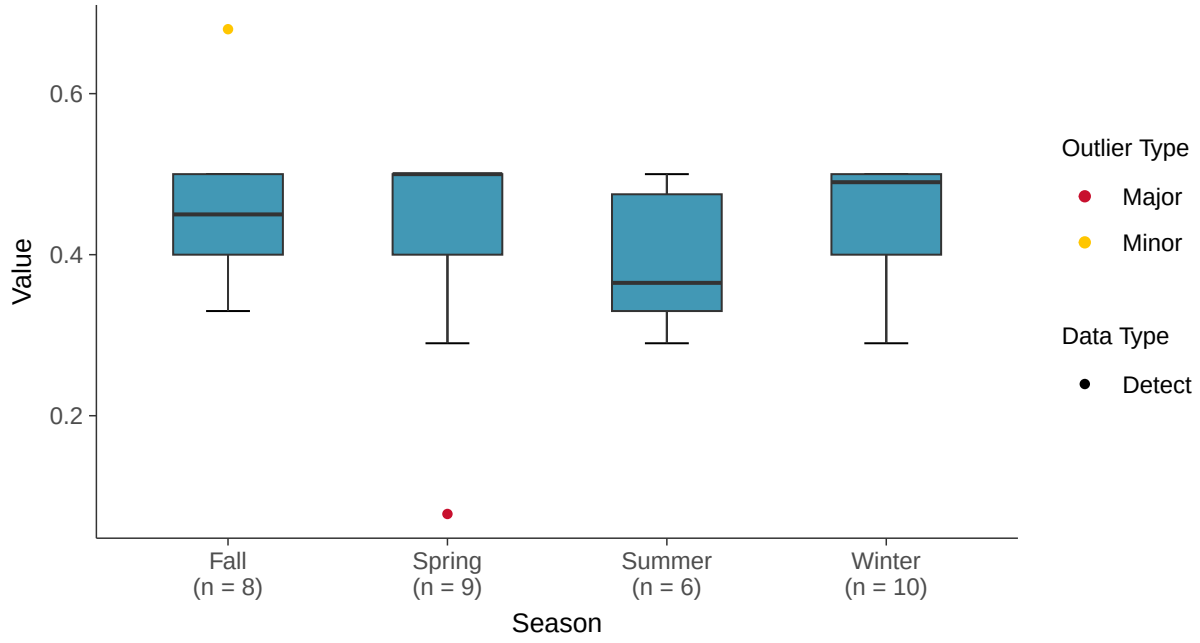
Boxplot

Cadmium, MW-2 (ug/L)



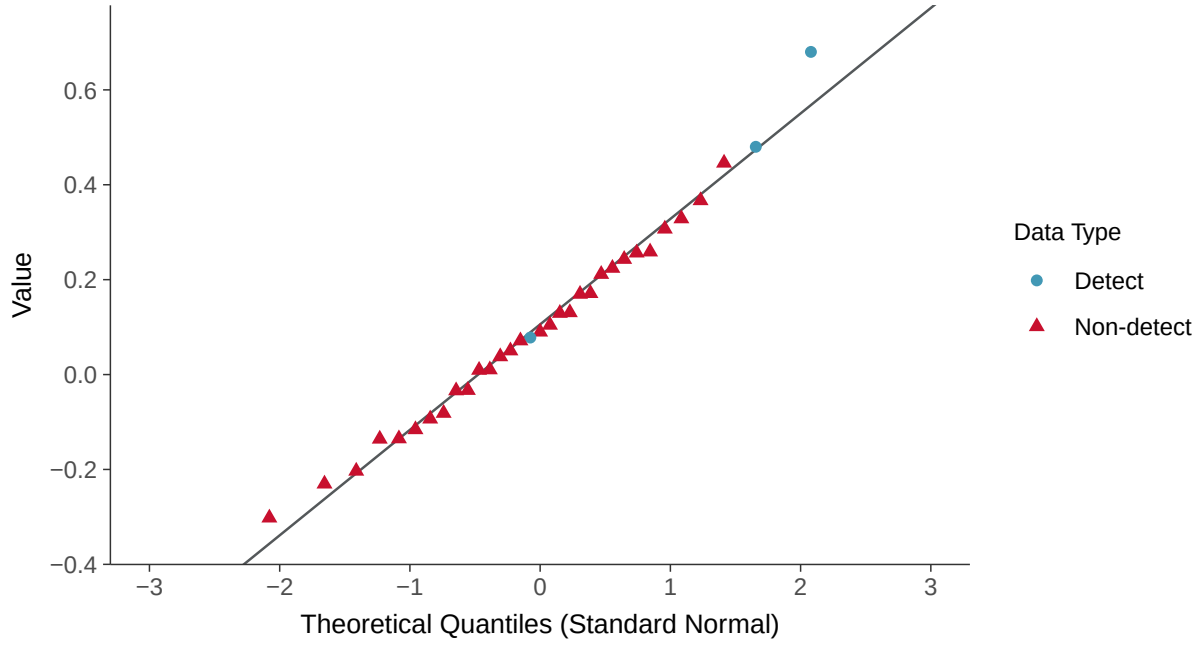
Boxplot by Season

Cadmium, MW-2 (ug/L)



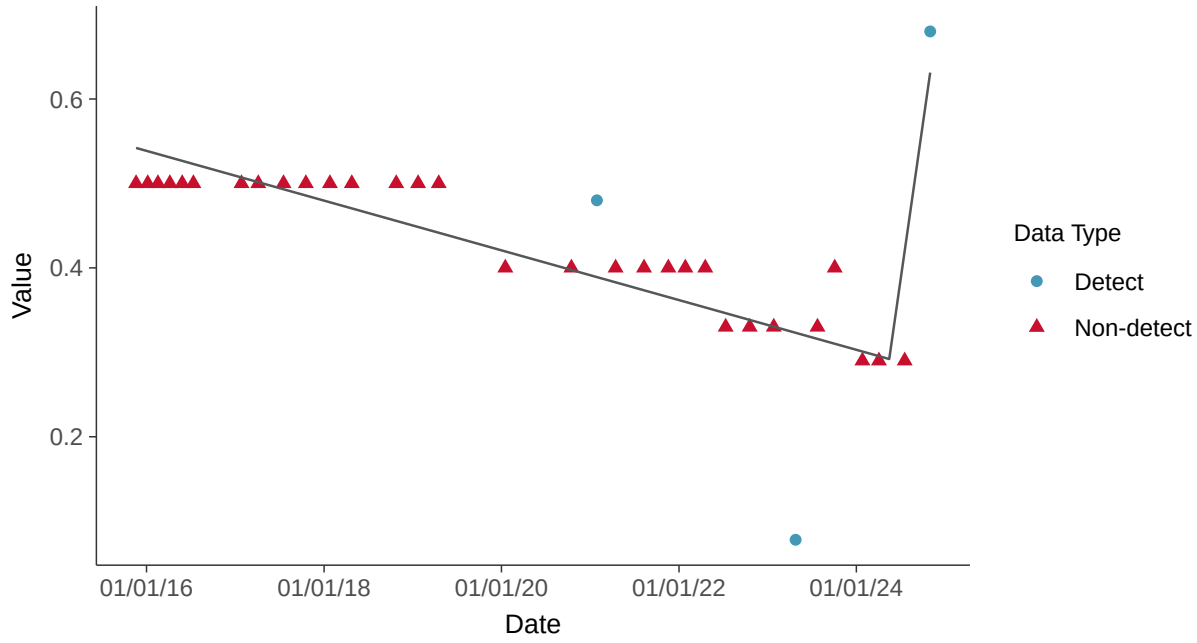
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-2 (ug/L)



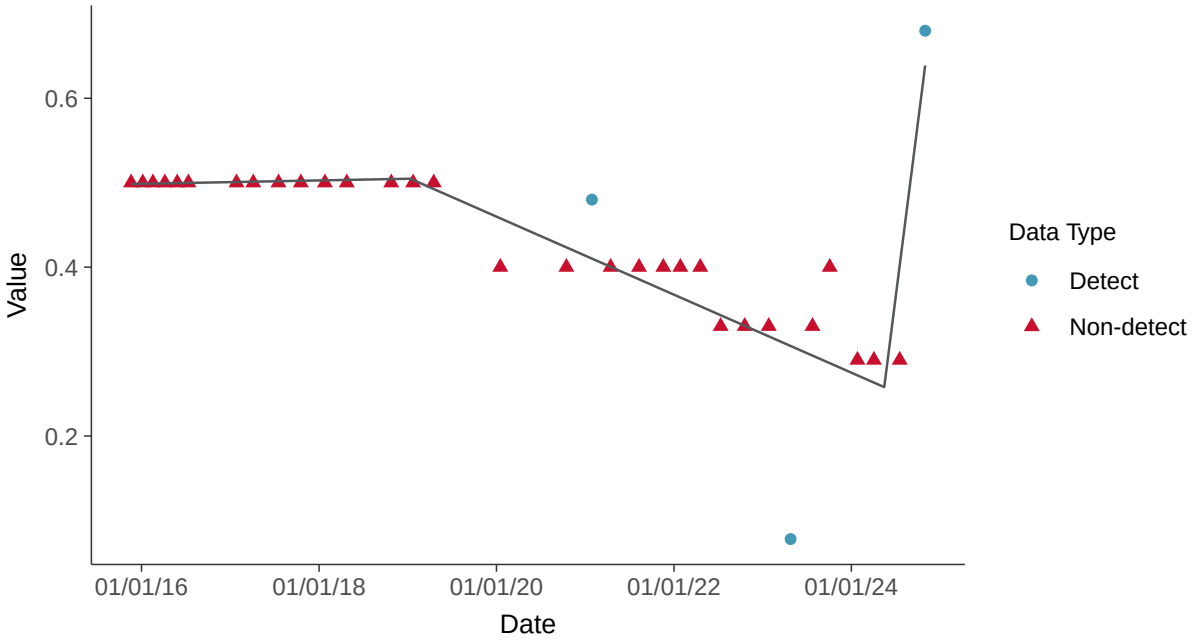
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-2 (ug/L)

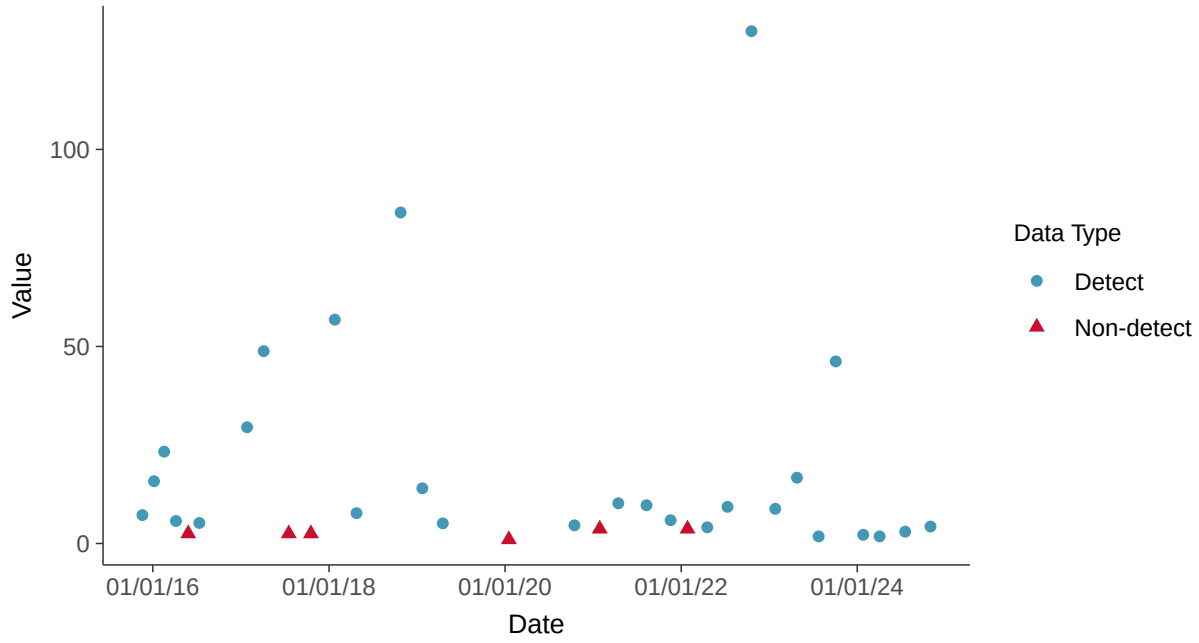


App. IV: Chromium, MW-2

ID: 02_03_109

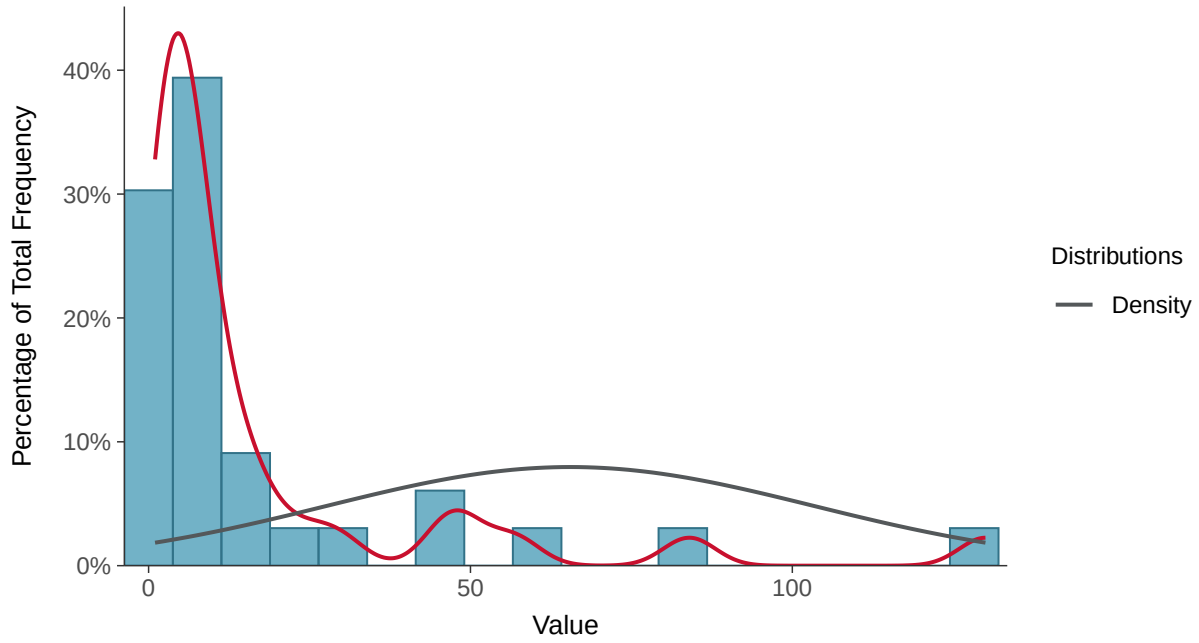
Scatter Plot

Chromium, MW-2 (ug/L)



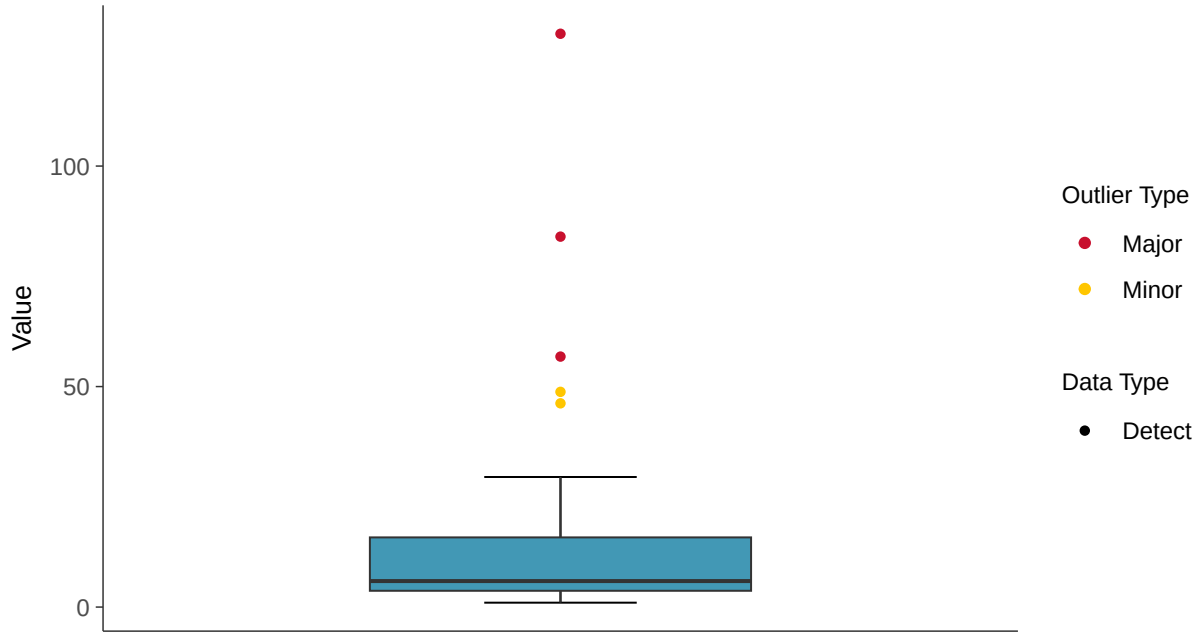
Histogram

Chromium, MW-2 (ug/L)



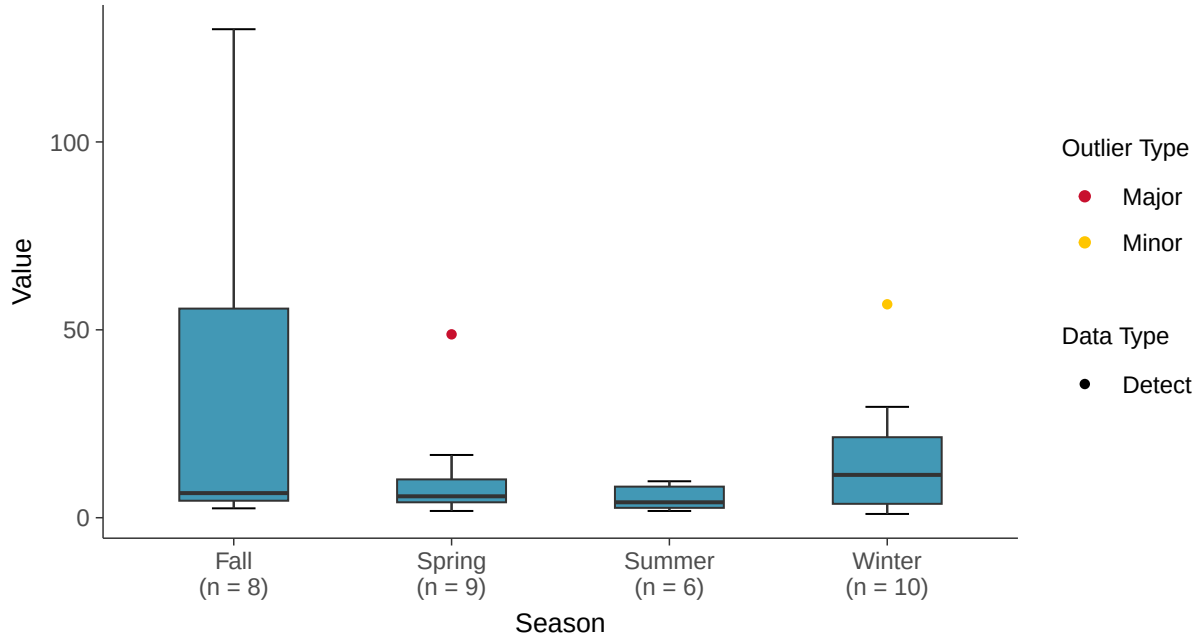
Boxplot

Chromium, MW-2 (ug/L)



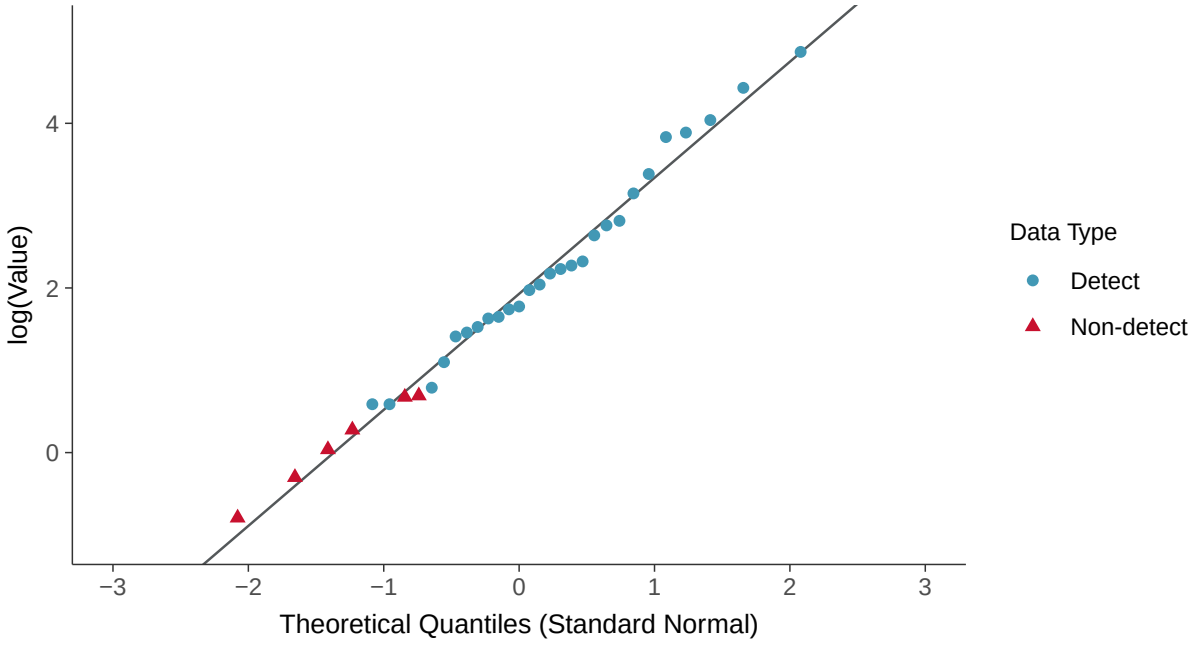
Boxplot by Season

Chromium, MW-2 (ug/L)



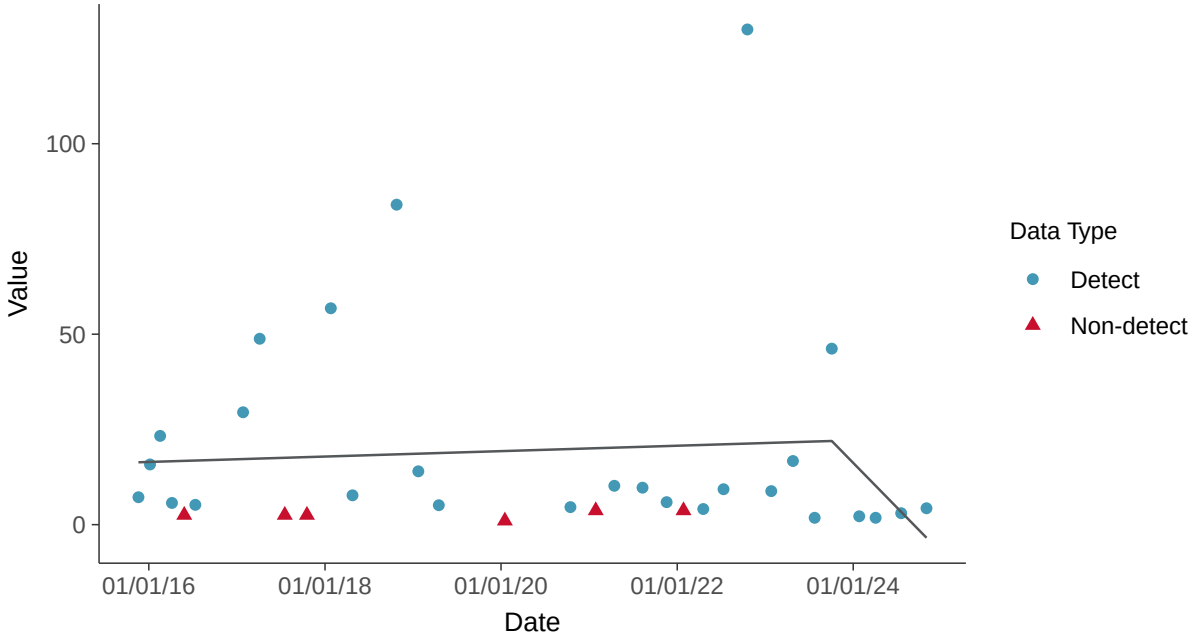
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-2 (ug/L)



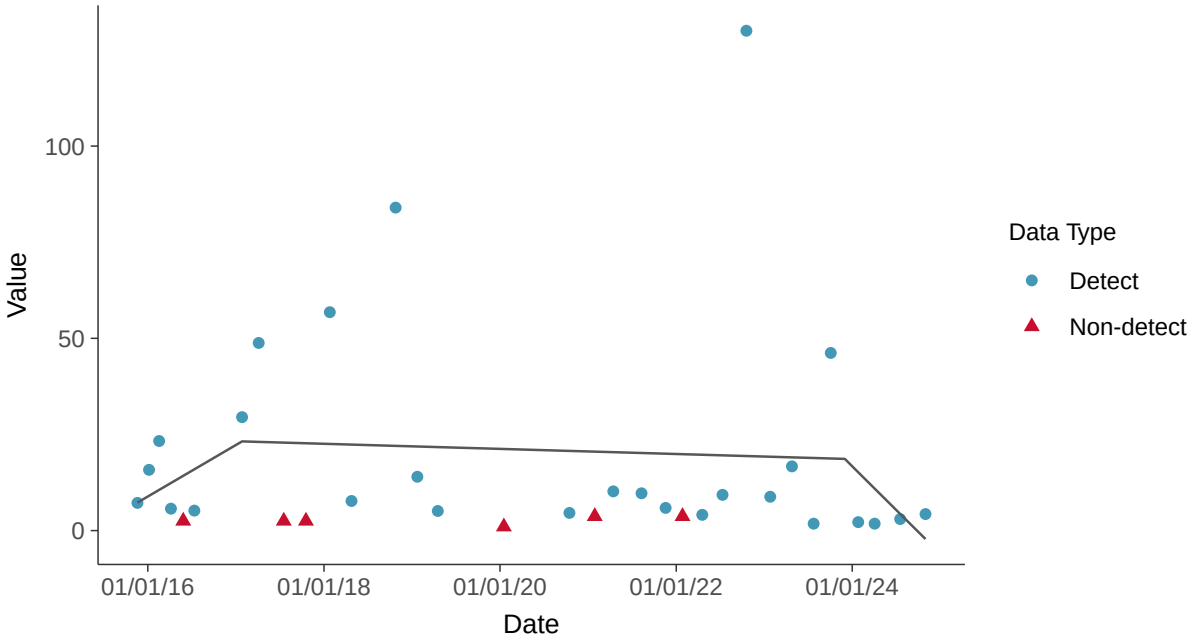
Trend Regression: Piecewise Linear-Linear

Chromium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-2 (ug/L)

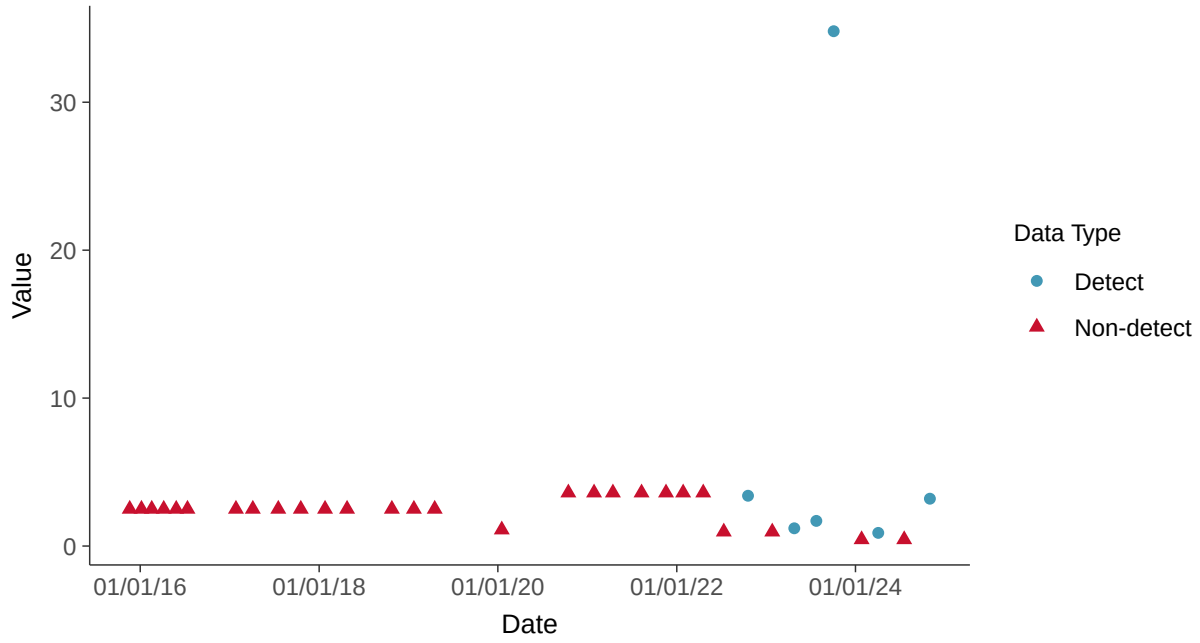


App. IV: Cobalt, MW-2

ID: 02_03_110

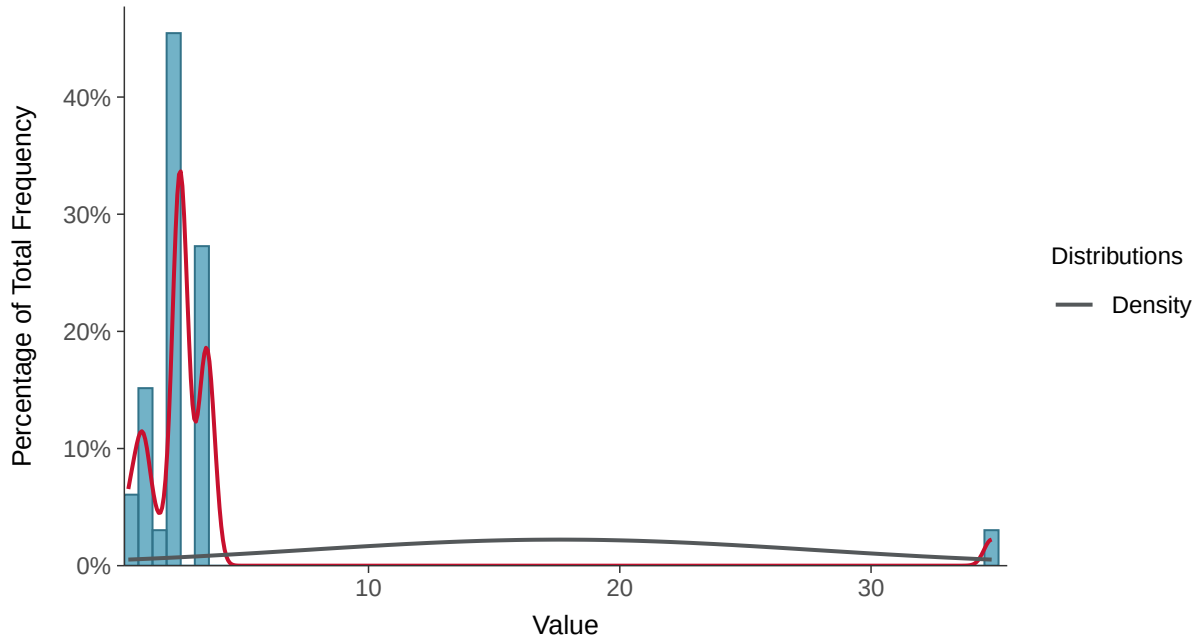
Scatter Plot

Cobalt, MW-2 (ug/L)



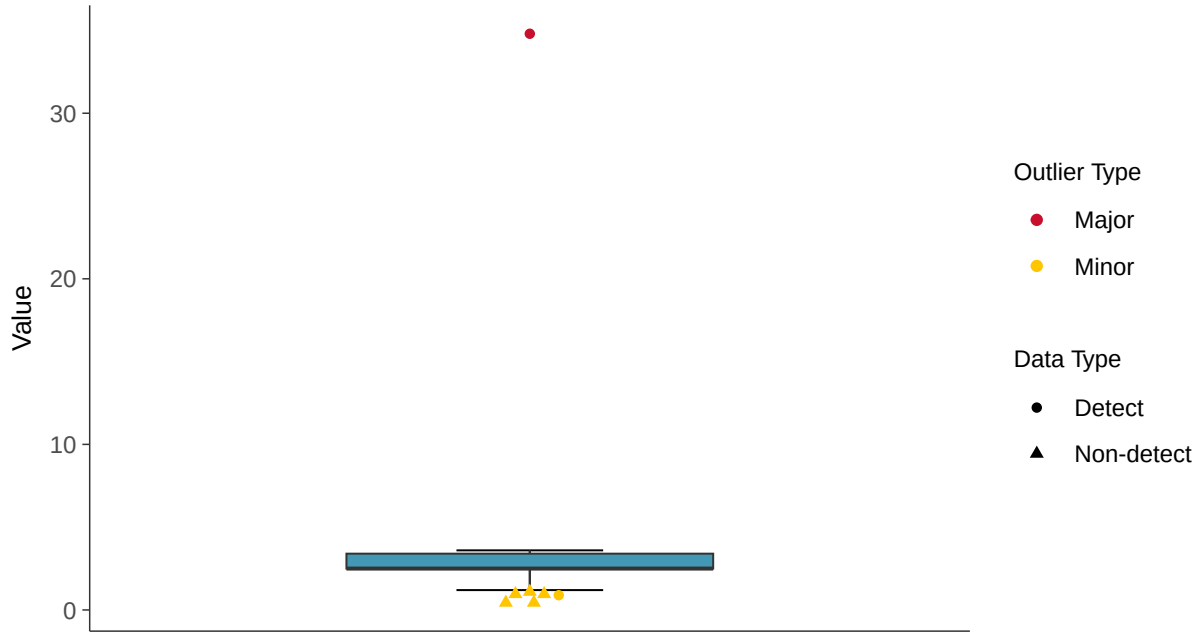
Histogram

Cobalt, MW-2 (ug/L)



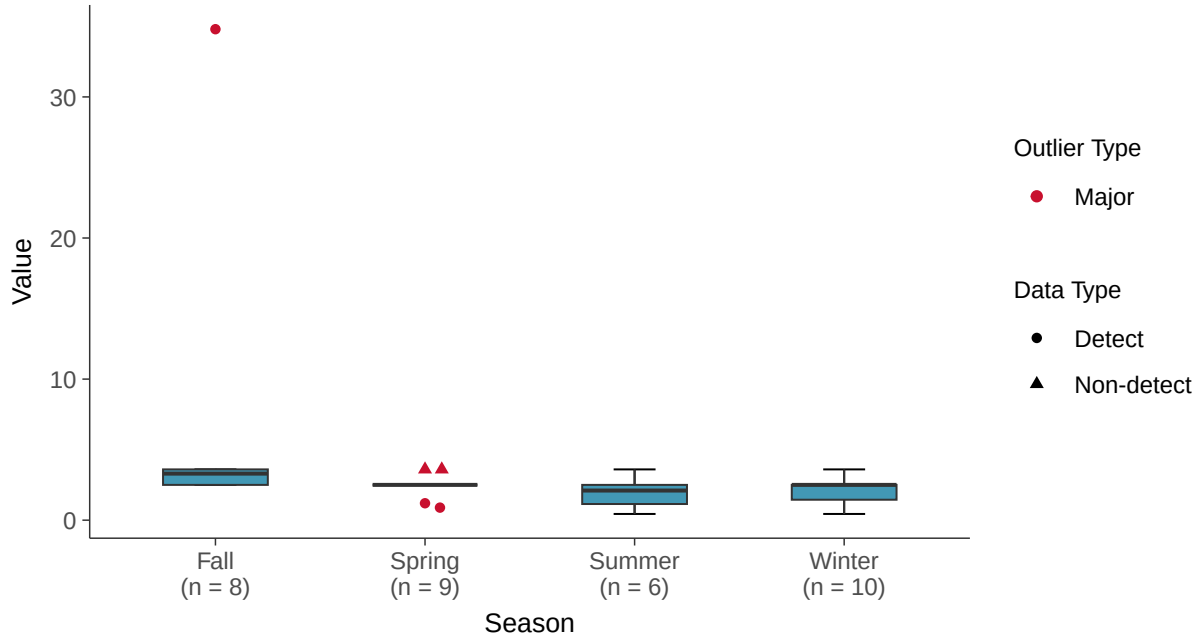
Boxplot

Cobalt, MW-2 (ug/L)



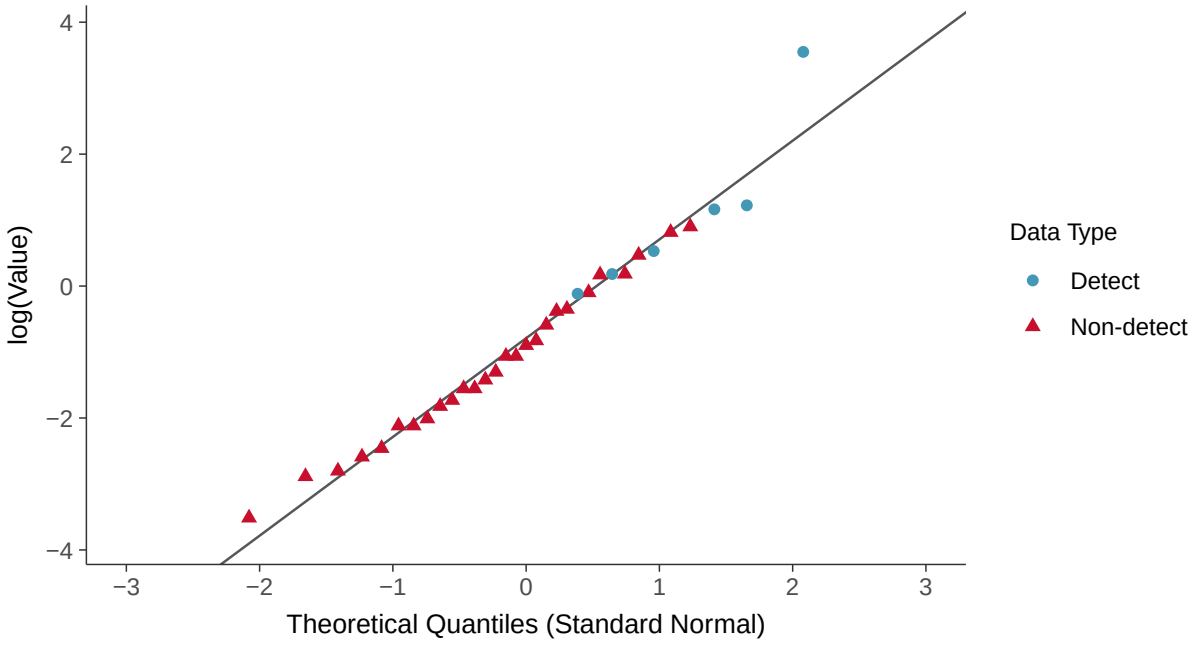
Boxplot by Season

Cobalt, MW-2 (ug/L)



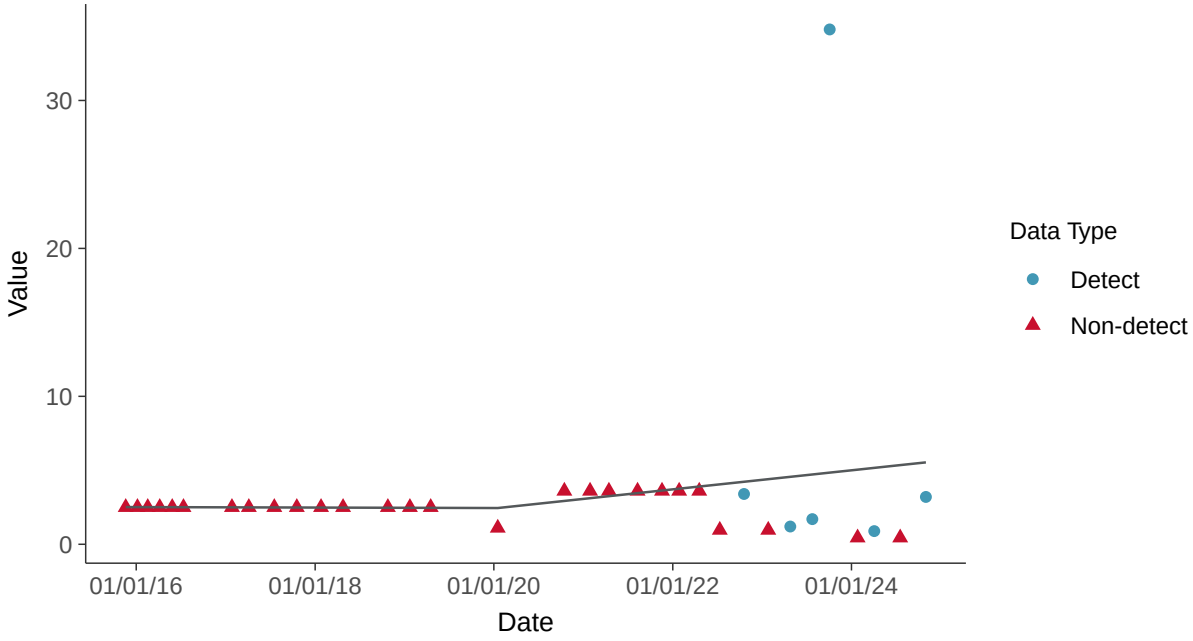
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-2 (ug/L)



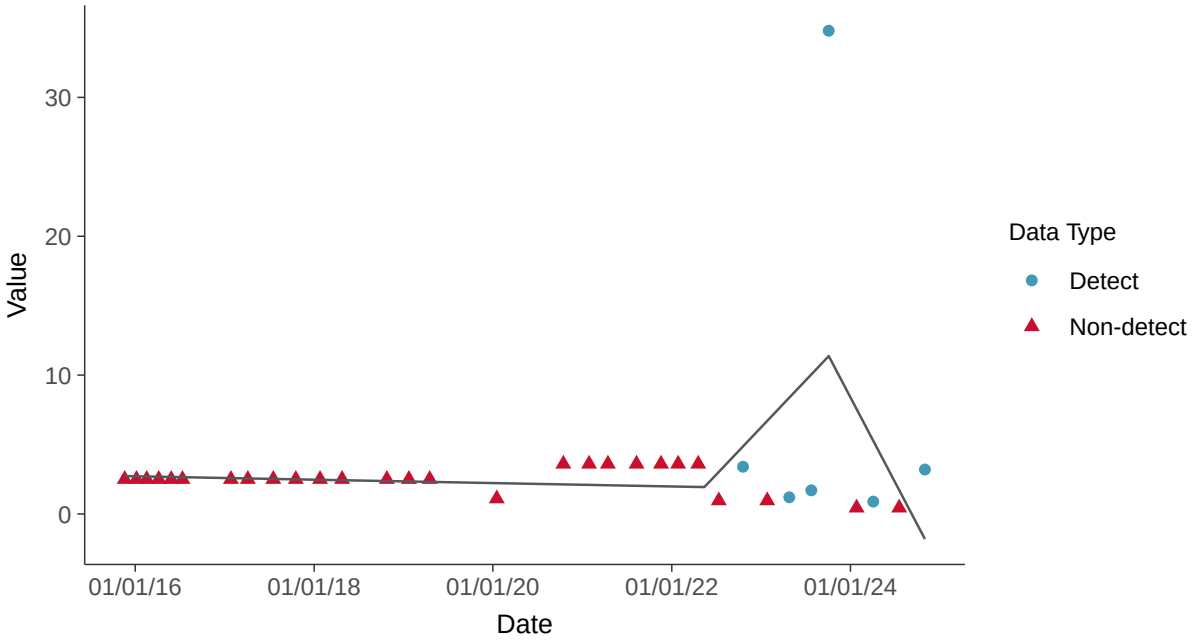
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-2 (ug/L)



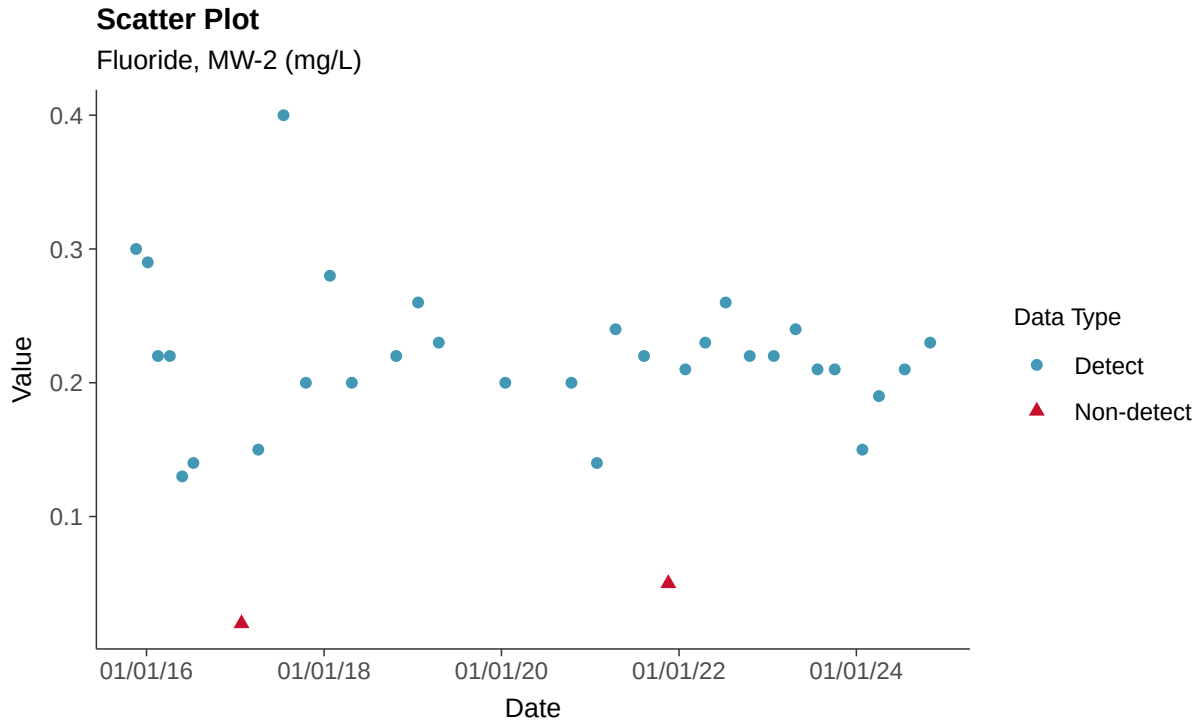
Trend Regression: Piecewise Linear-Linear-Linear

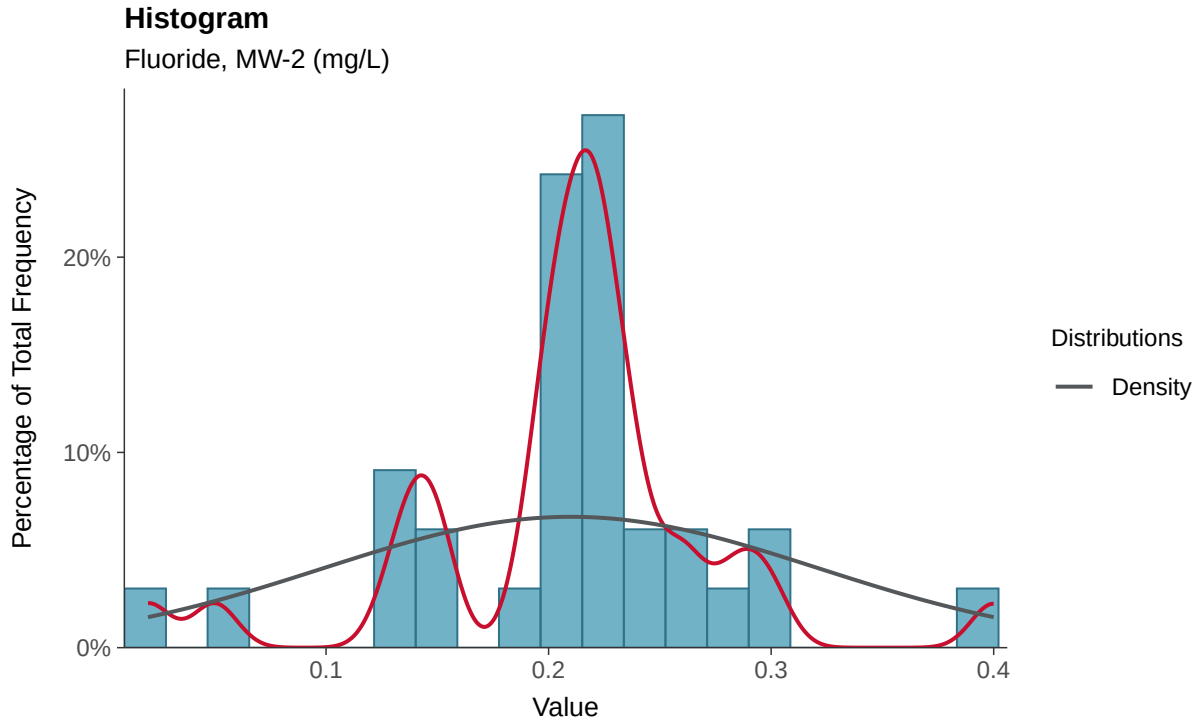
Cobalt, MW-2 (ug/L)



App. IV: Fluoride, MW-2

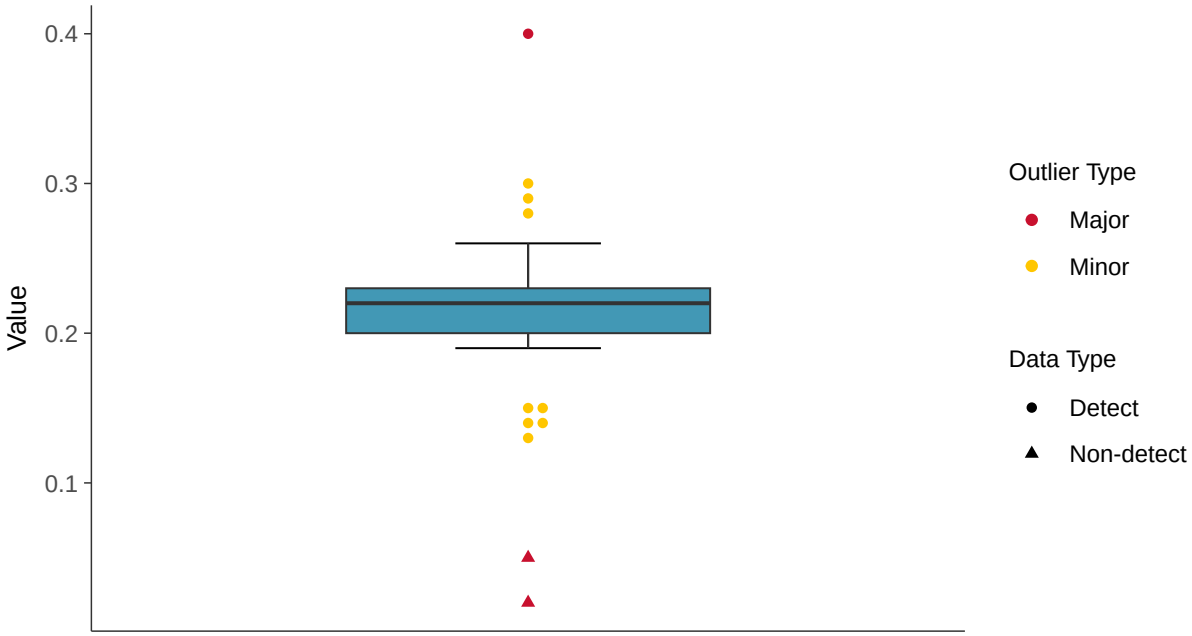
ID: 02_03_112





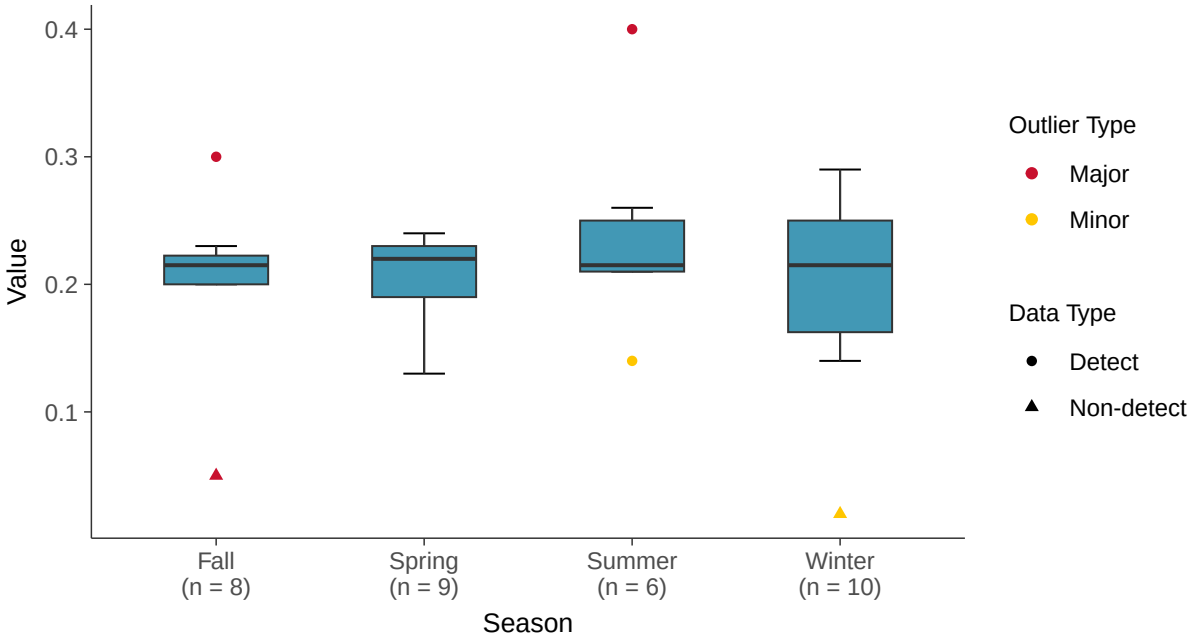
Boxplot

Fluoride, MW-2 (mg/L)



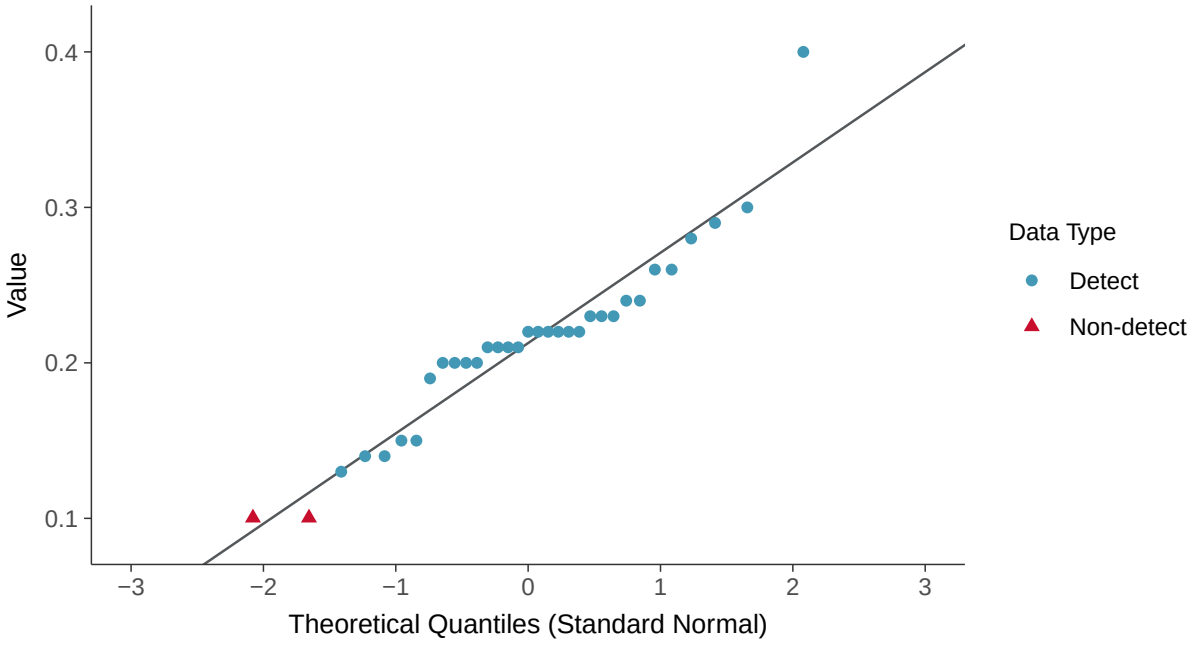
Boxplot by Season

Fluoride, MW-2 (mg/L)



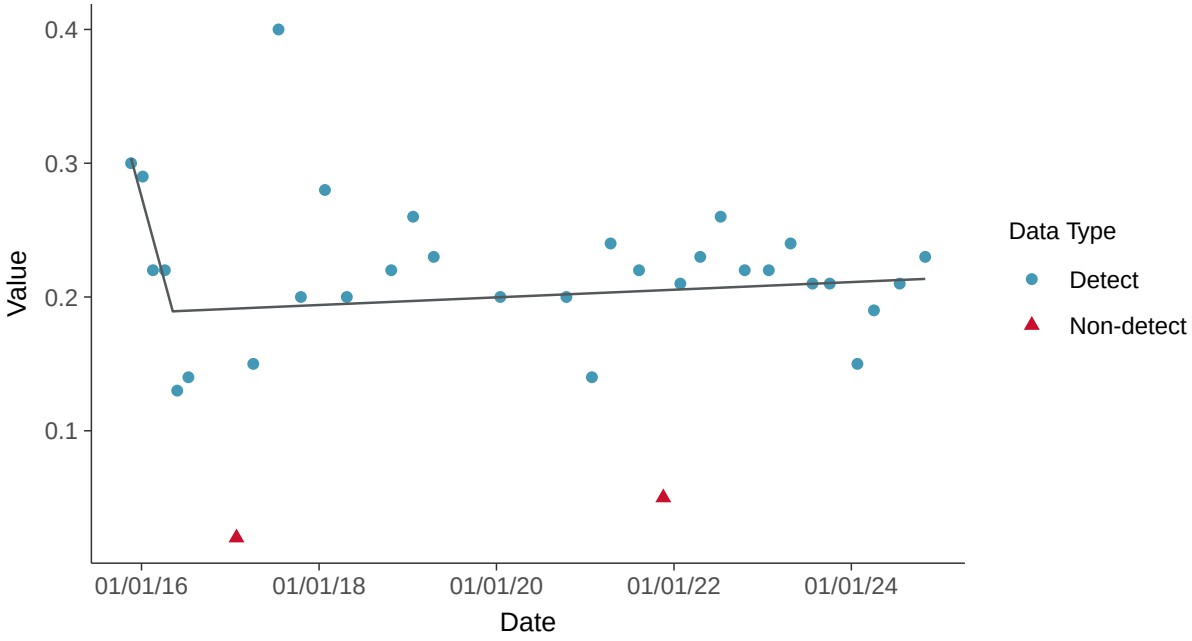
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



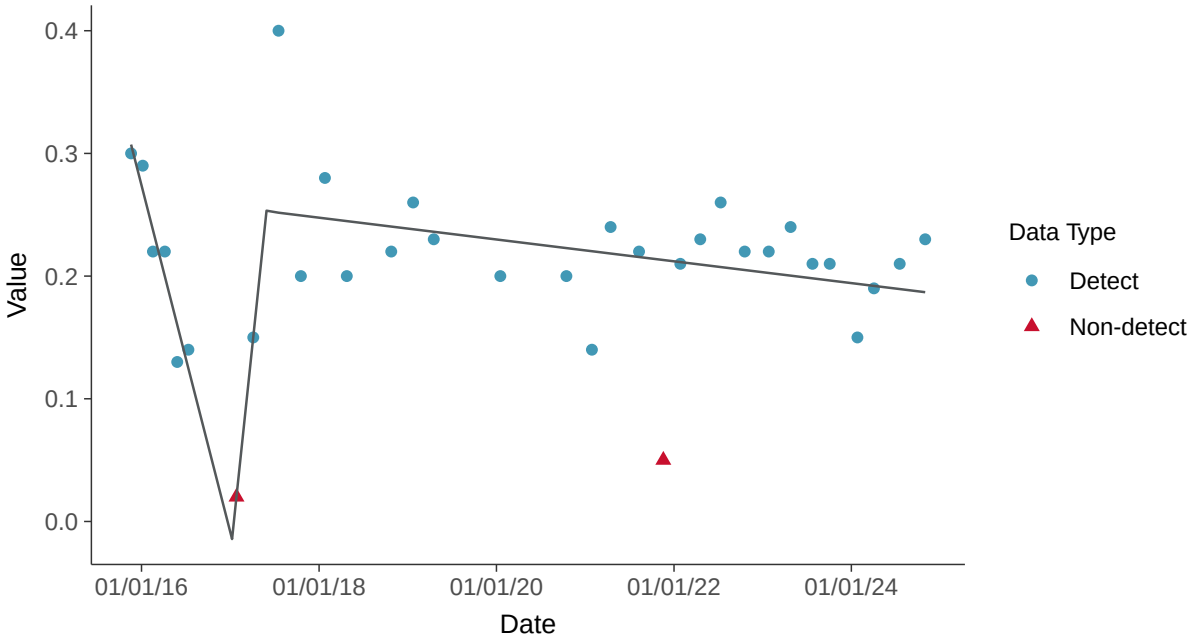
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-2 (mg/L)

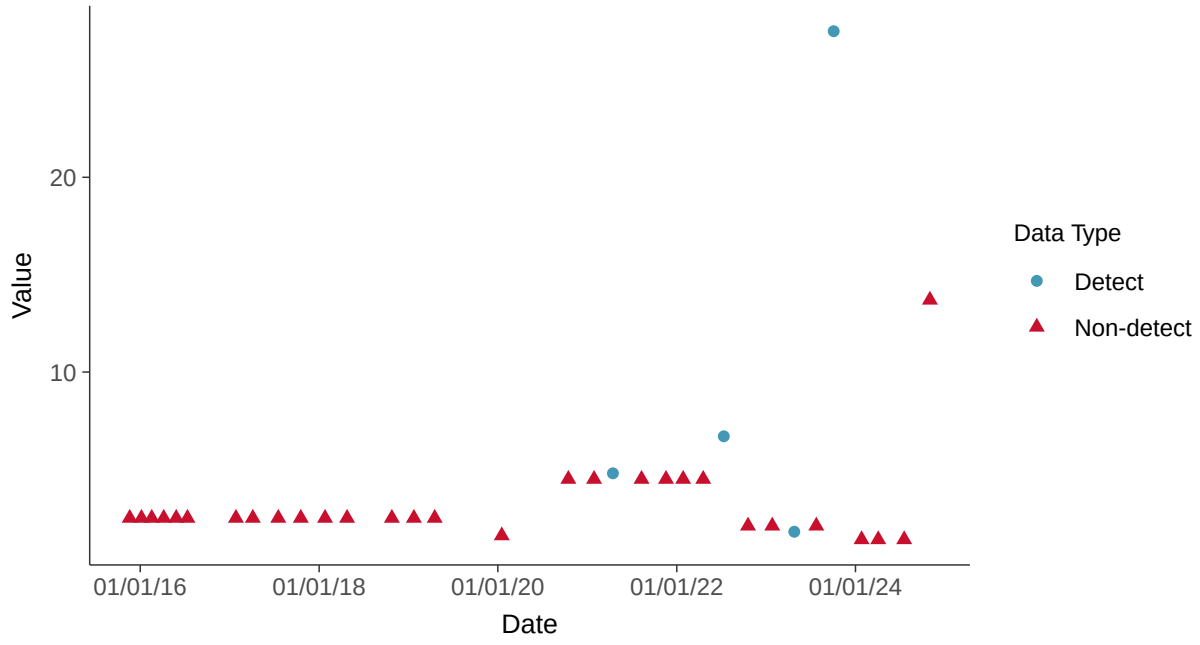


App. IV: Lead, MW-2

ID: 02_03_113

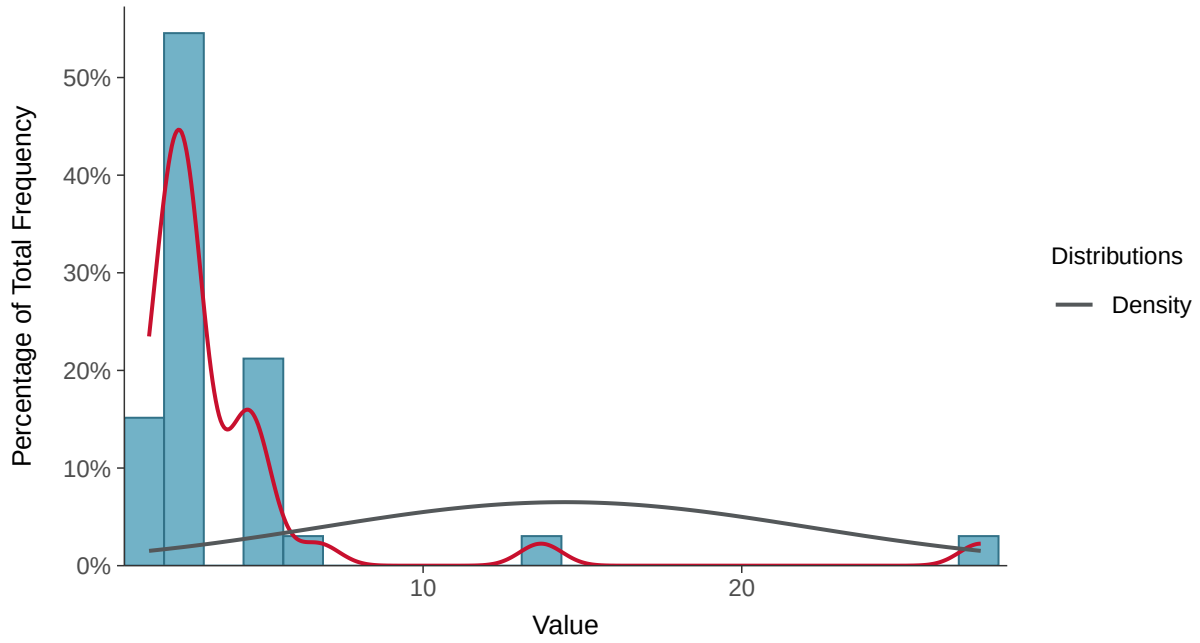
Scatter Plot

Lead, MW-2 (ug/L)



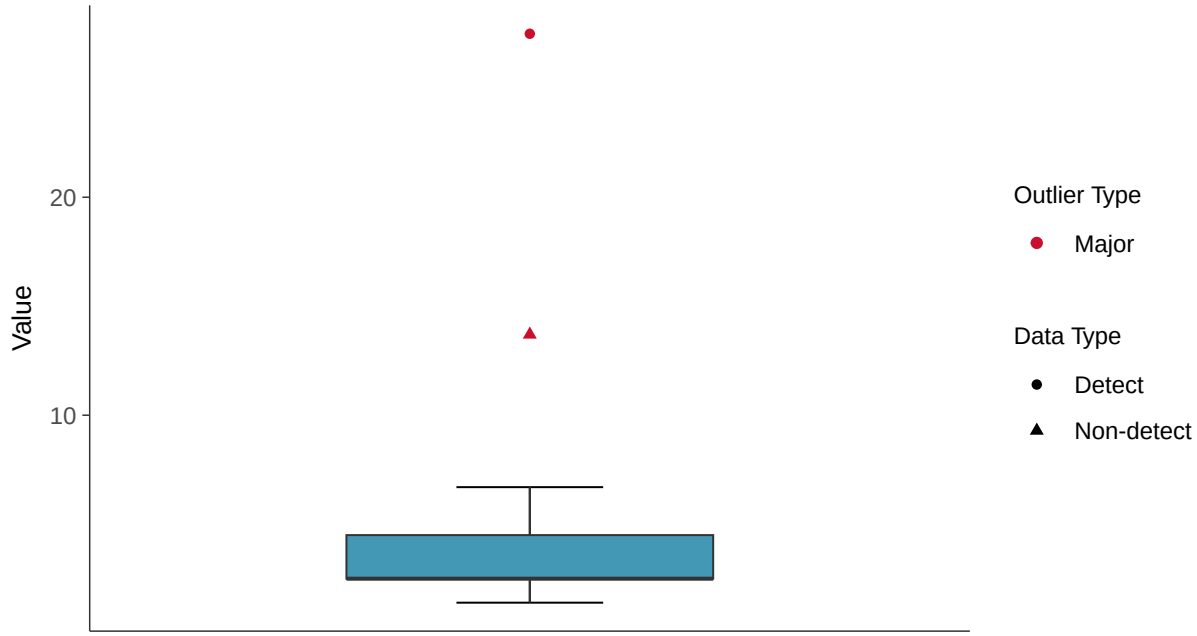
Histogram

Lead, MW-2 (ug/L)



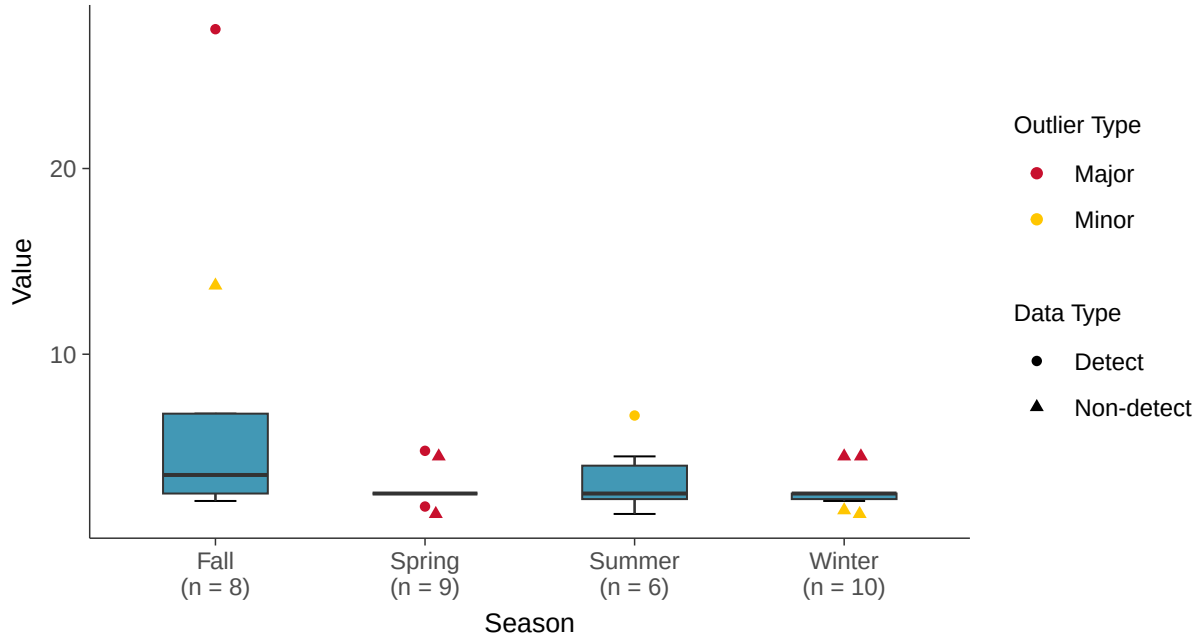
Boxplot

Lead, MW-2 (ug/L)



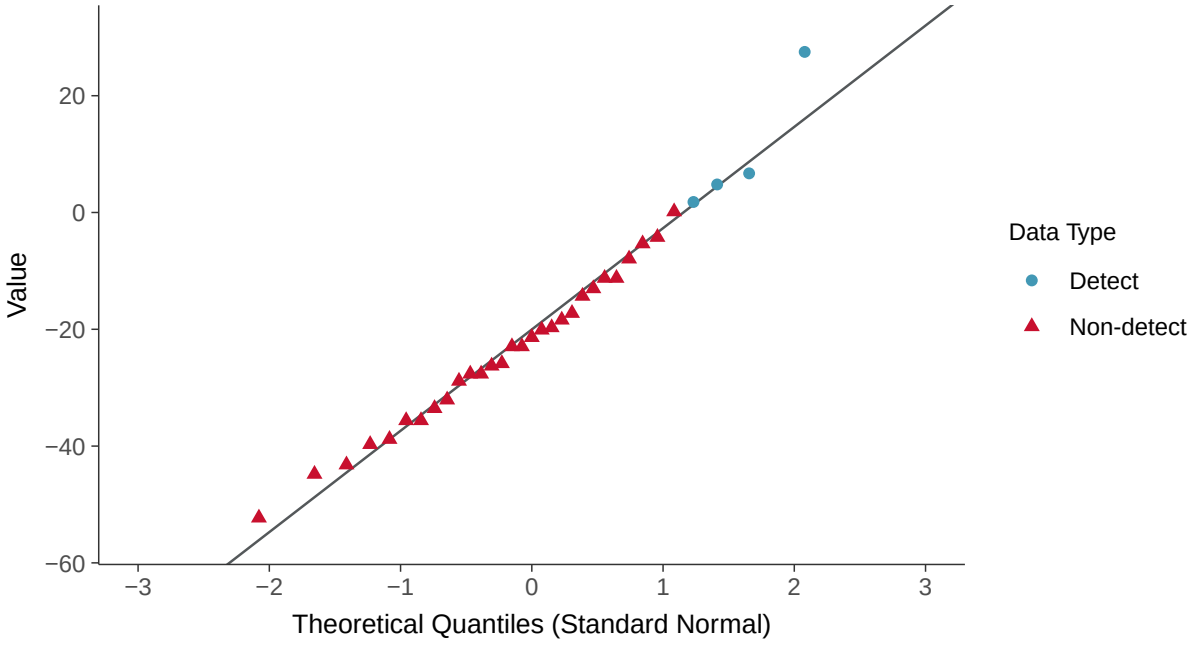
Boxplot by Season

Lead, MW-2 (ug/L)



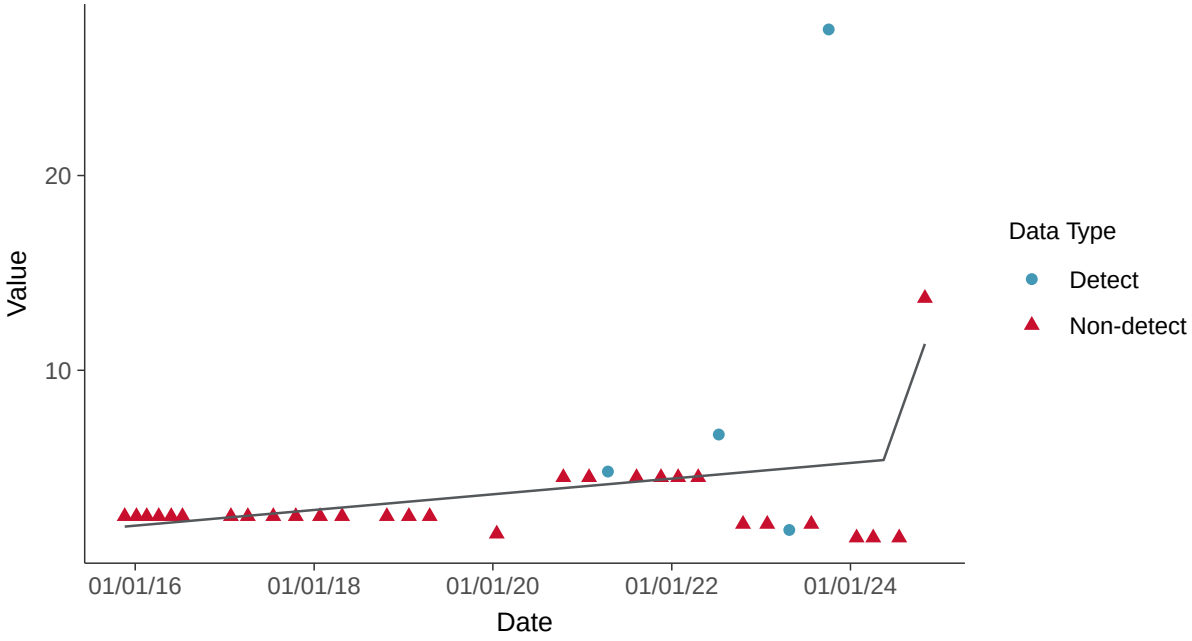
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-2 (ug/L)



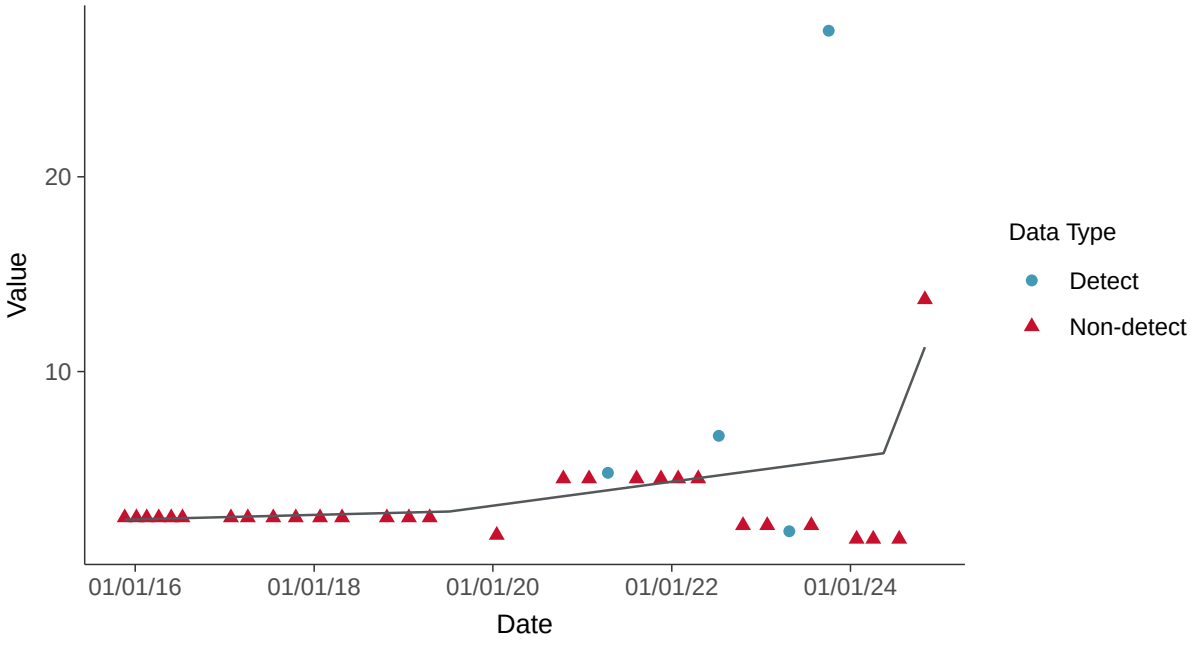
Trend Regression: Piecewise Linear-Linear

Lead, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-2 (ug/L)

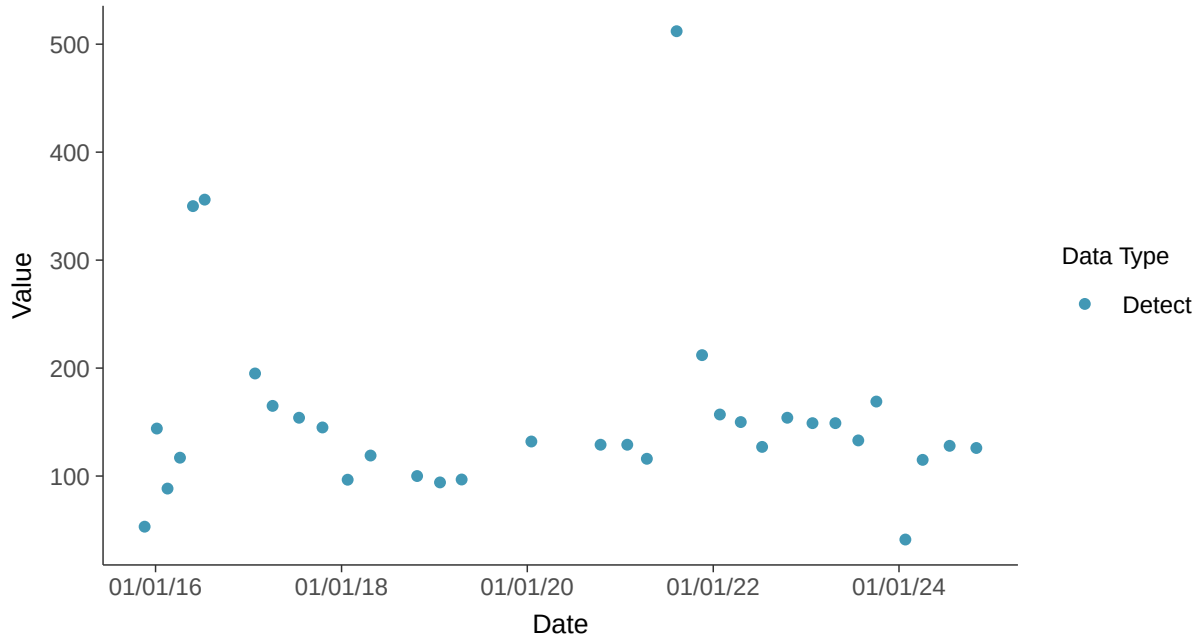


App. IV: Lithium, MW-2

ID: 02_03_114

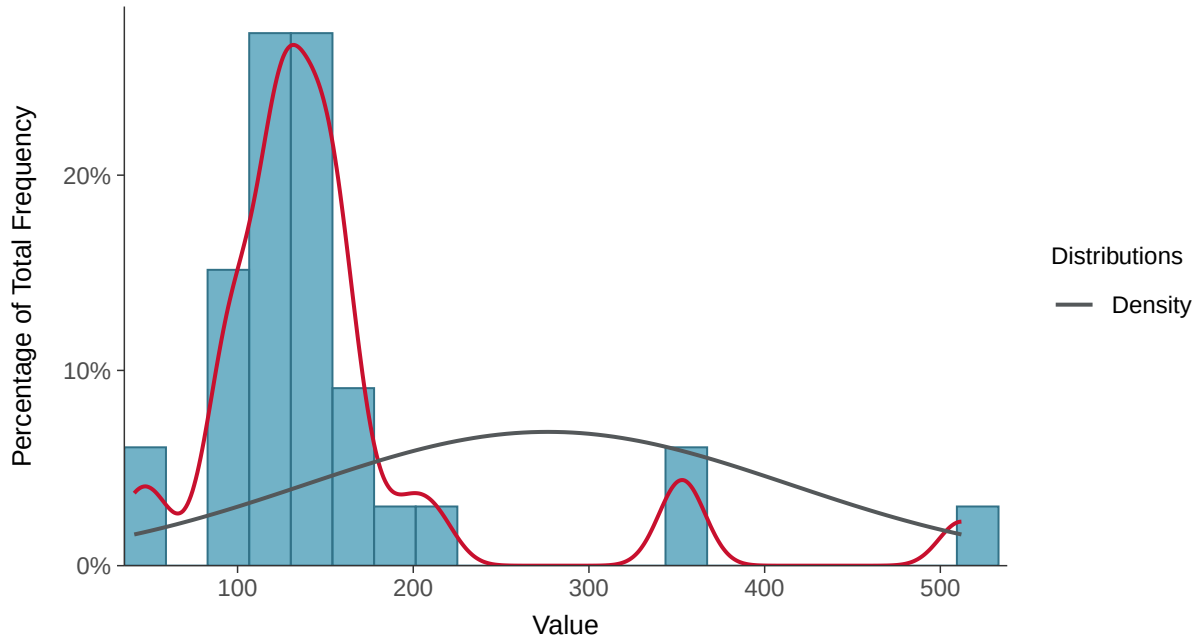
Scatter Plot

Lithium, MW-2 (ug/L)



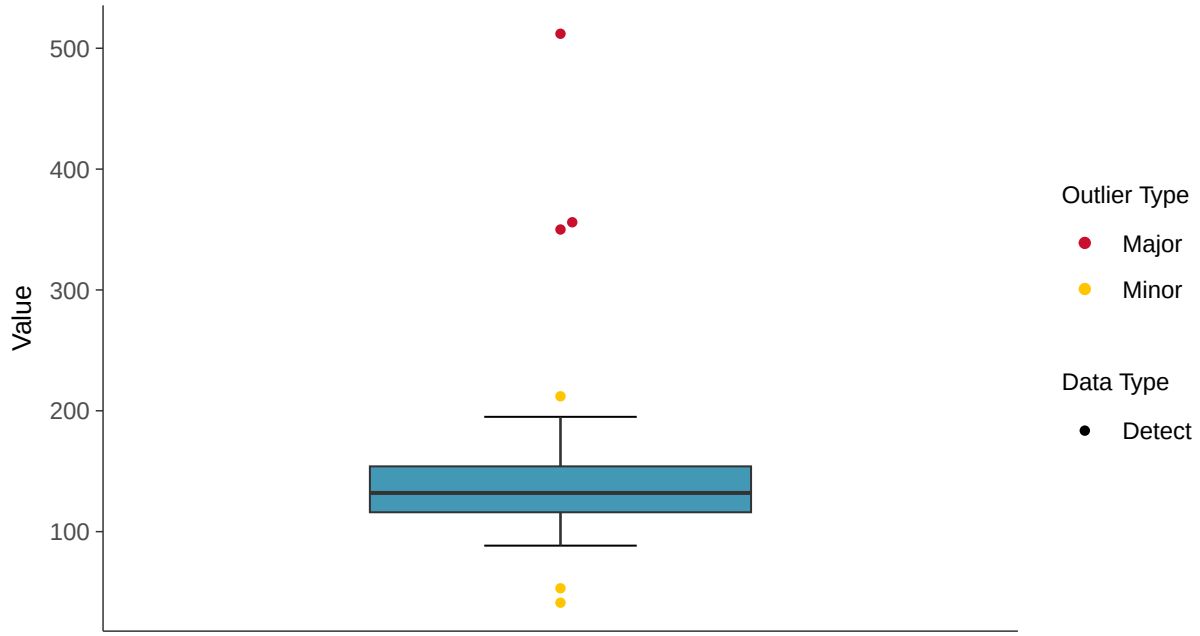
Histogram

Lithium, MW-2 (ug/L)



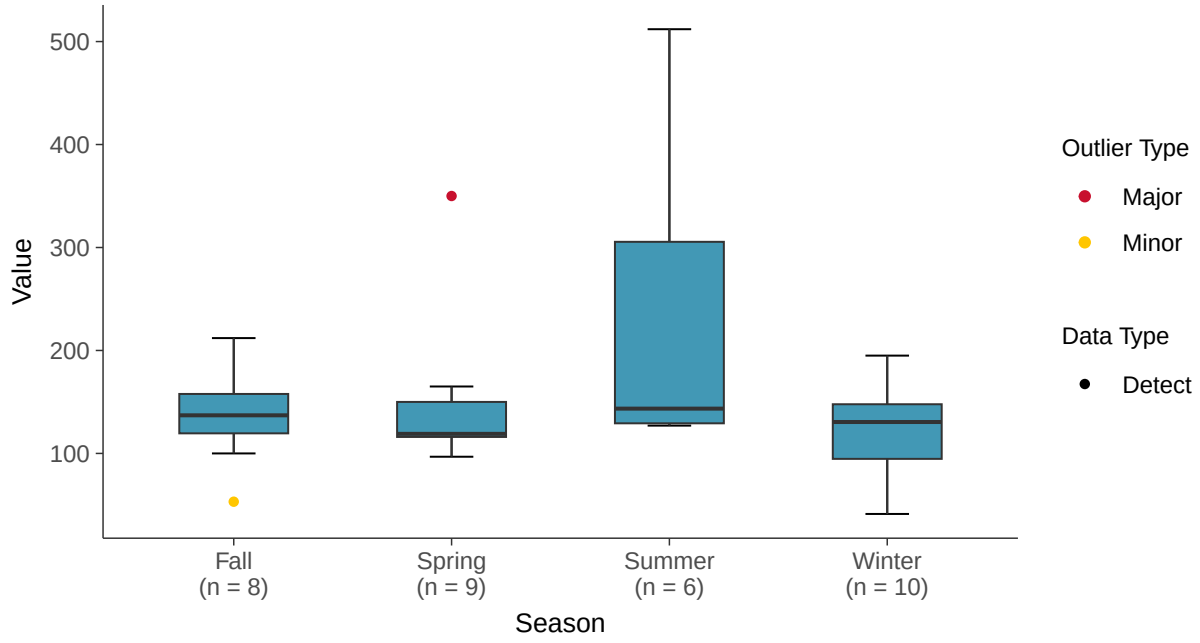
Boxplot

Lithium, MW-2 (ug/L)



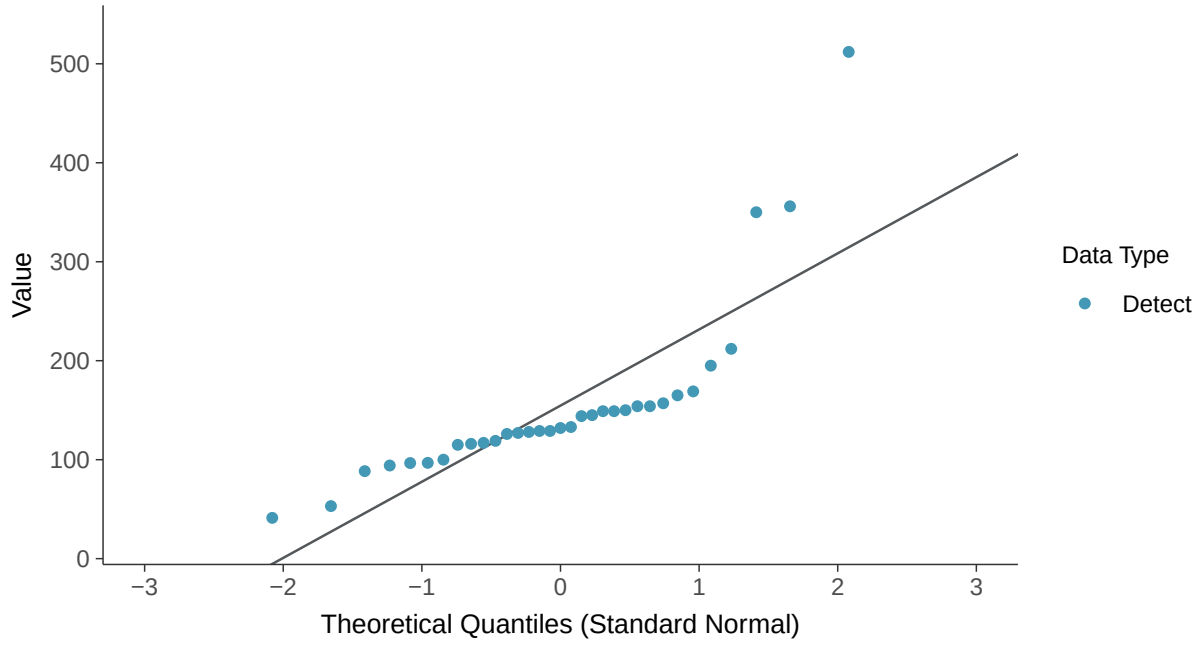
Boxplot by Season

Lithium, MW-2 (ug/L)



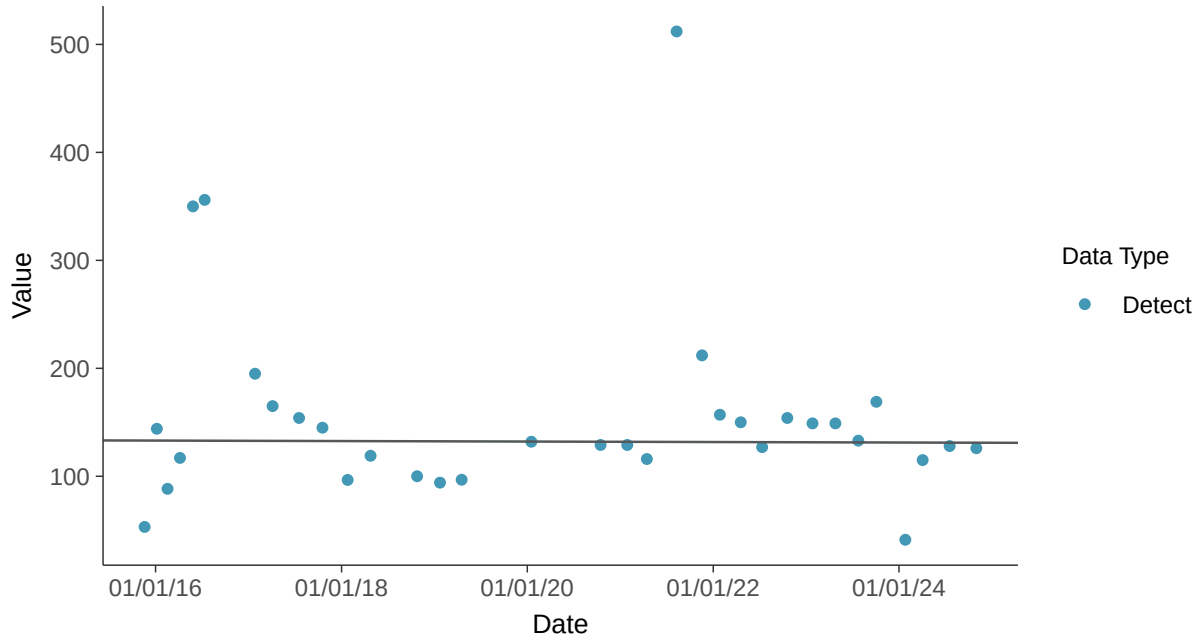
Normal Q-Q plot

Lithium, MW-2 (ug/L)



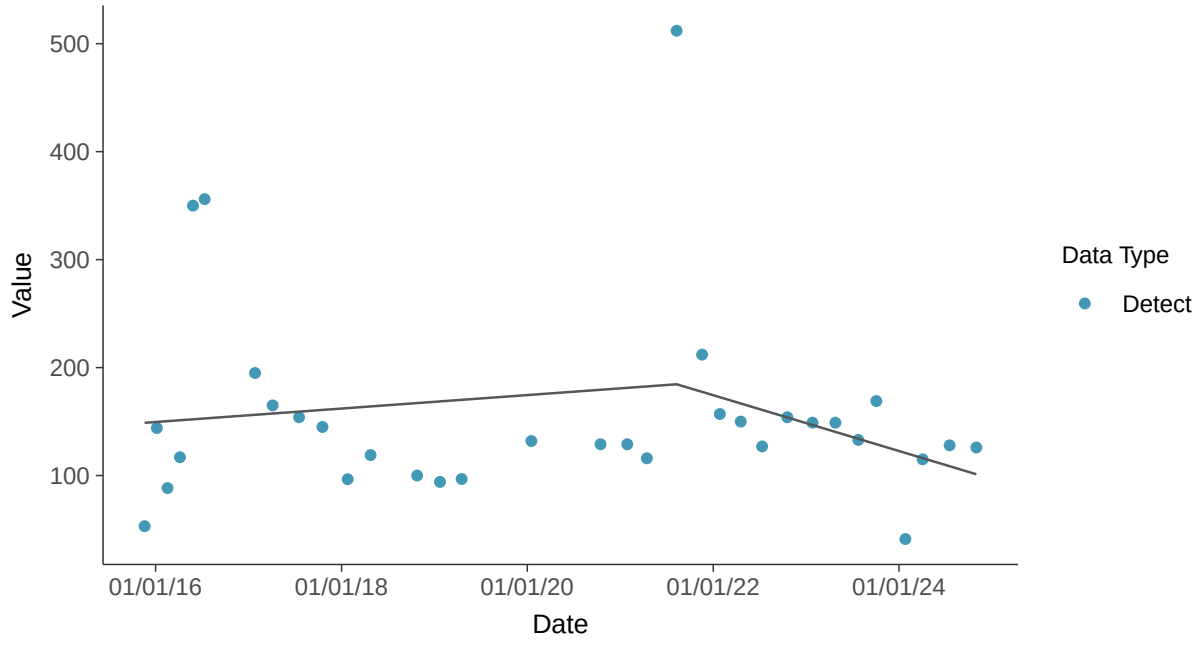
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-2 (ug/L)



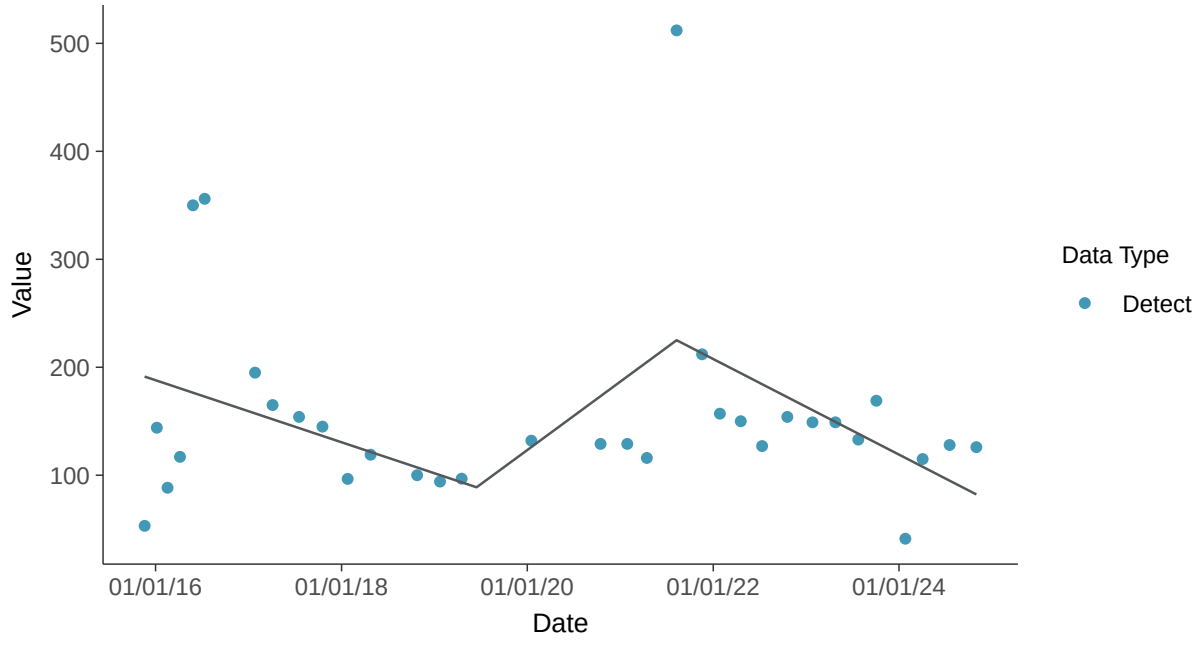
Trend Regression: Piecewise Linear-Linear

Lithium, MW-2 (ug/L)



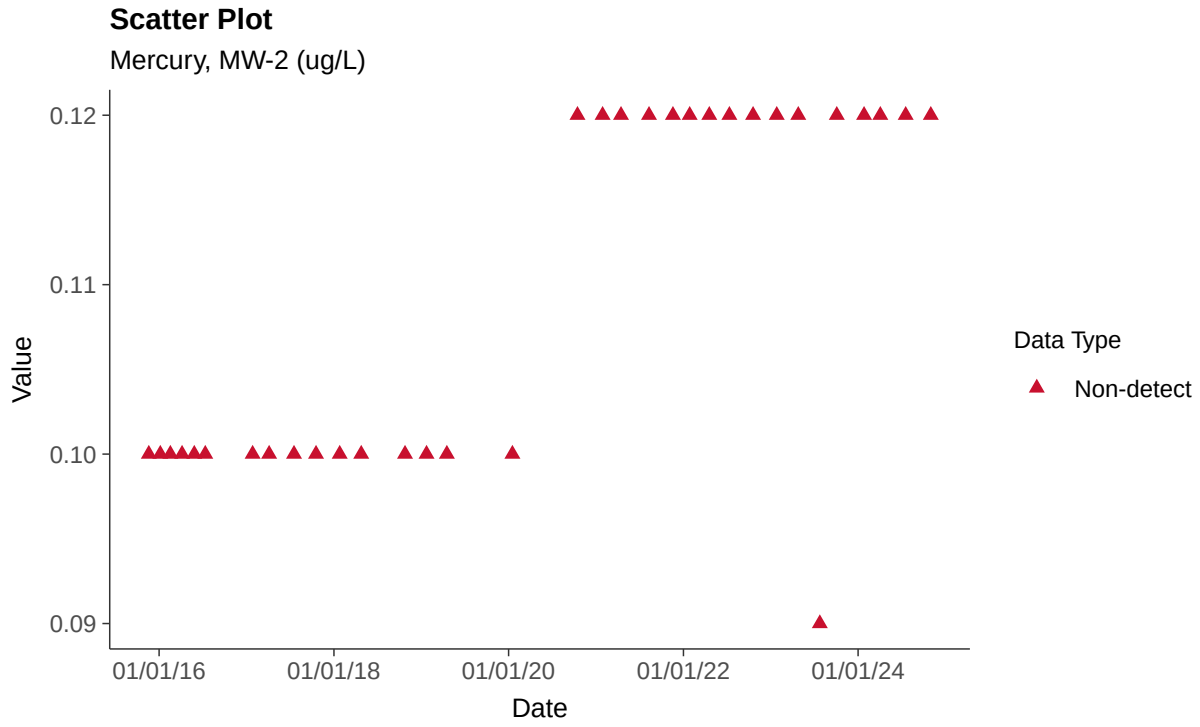
Trend Regression: Piecewise Linear-Linear-Linear

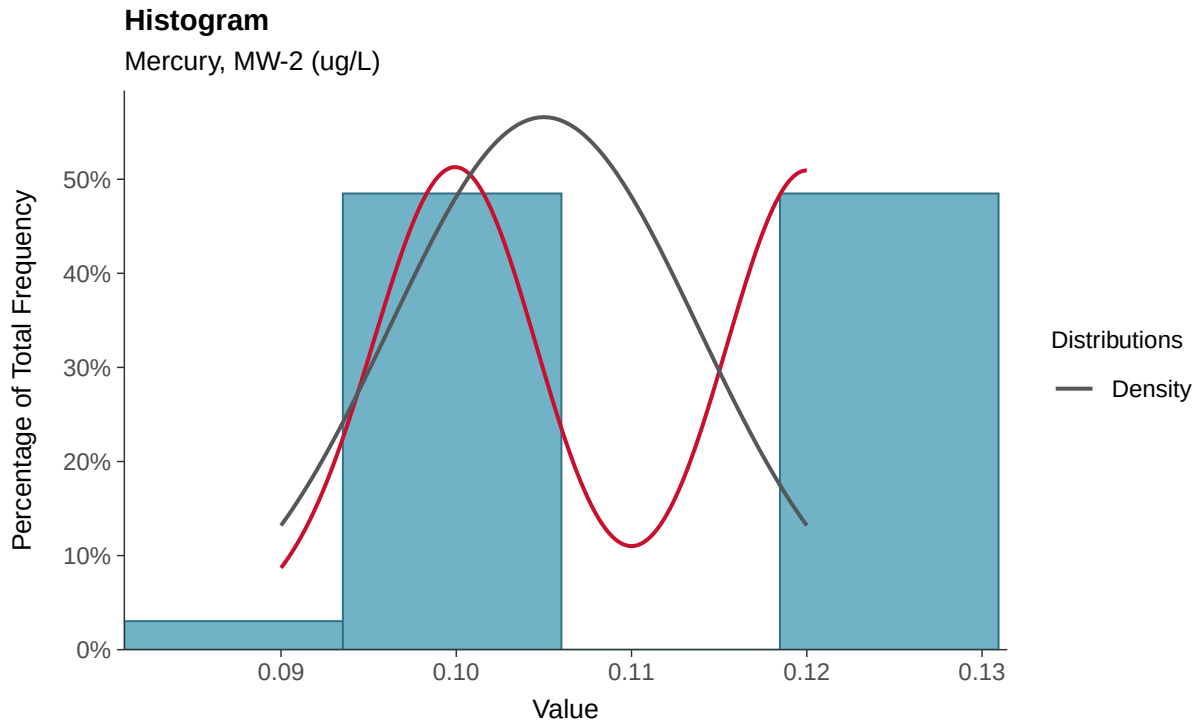
Lithium, MW-2 (ug/L)



App. IV: Mercury, MW-2

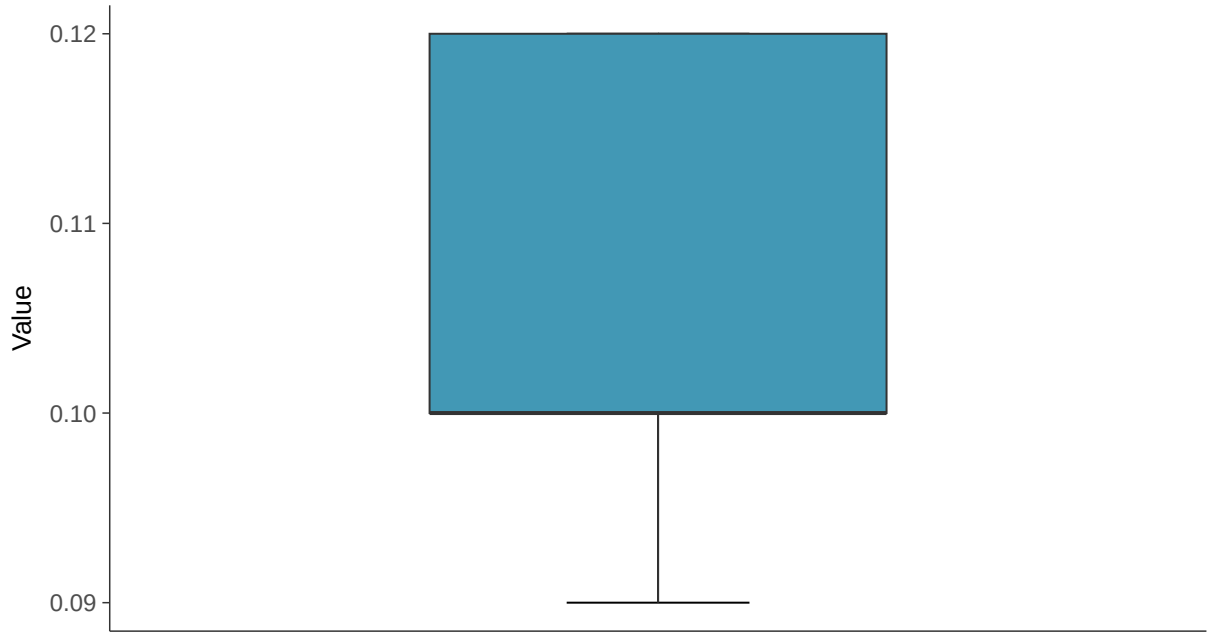
ID: 02_03_115





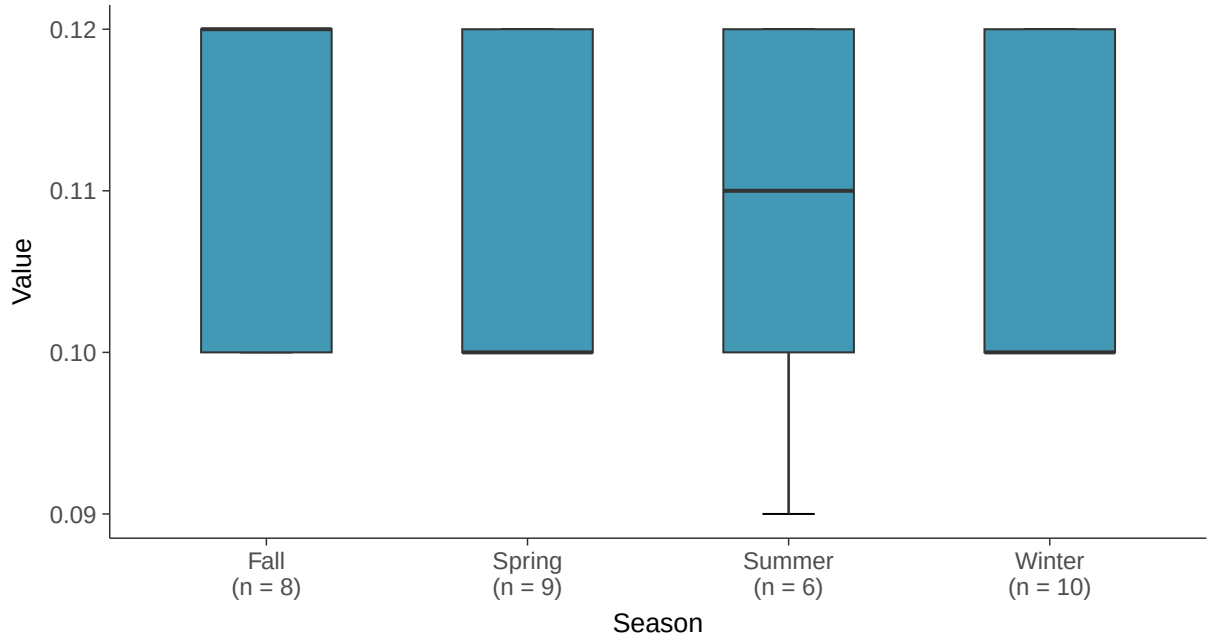
Boxplot

Mercury, MW-2 (ug/L)



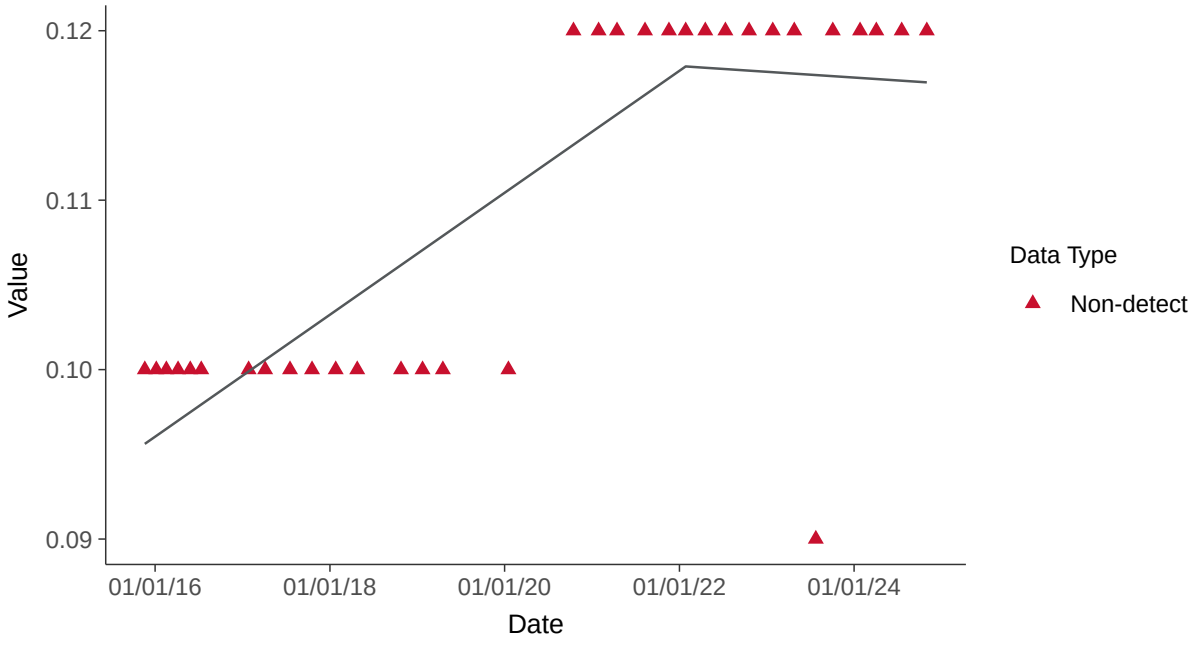
Boxplot by Season

Mercury, MW-2 (ug/L)



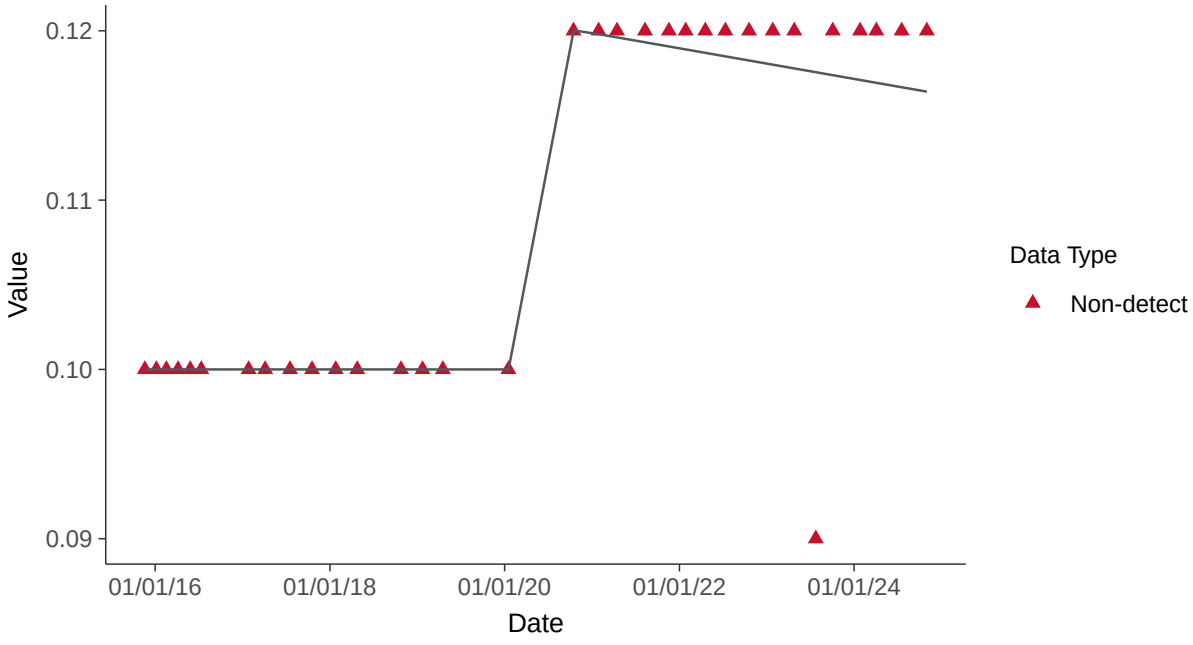
Trend Regression: Piecewise Linear-Linear

Mercury, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-2 (ug/L)

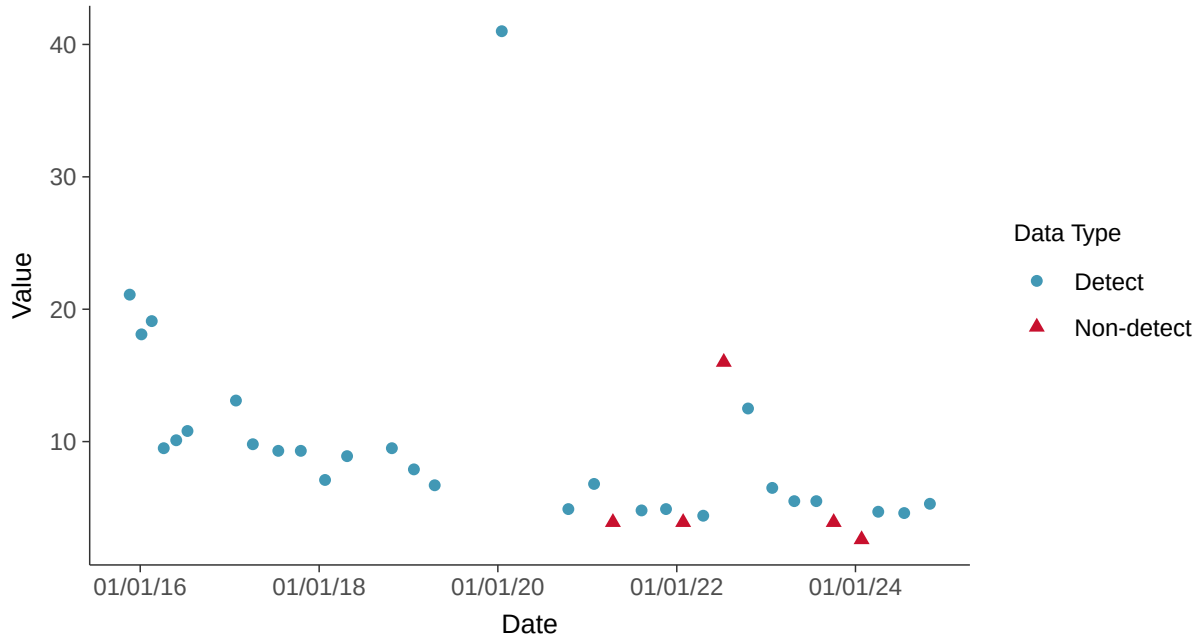


App. IV: Molybdenum, MW-2

ID: 02_03_116

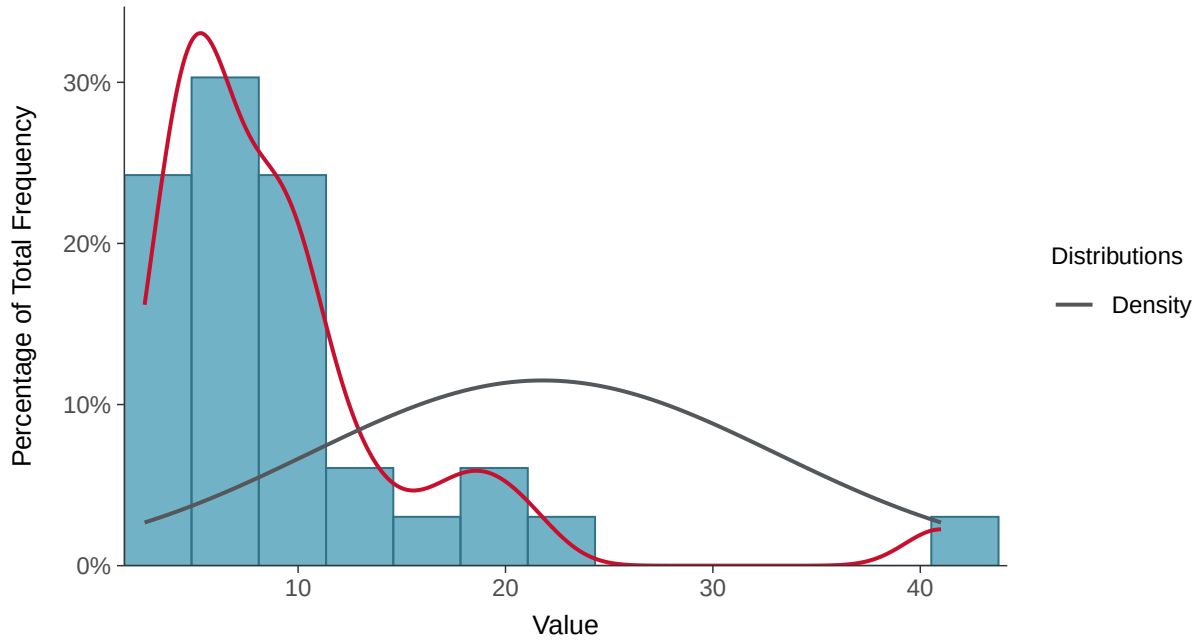
Scatter Plot

Molybdenum, MW-2 (ug/L)



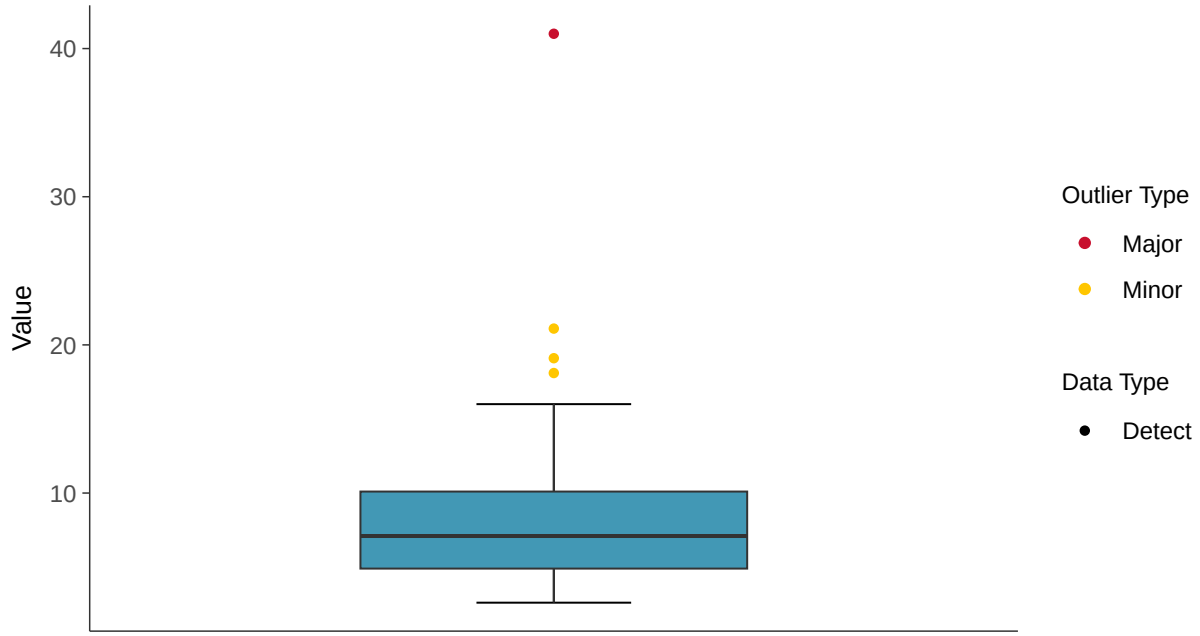
Histogram

Molybdenum, MW-2 (ug/L)



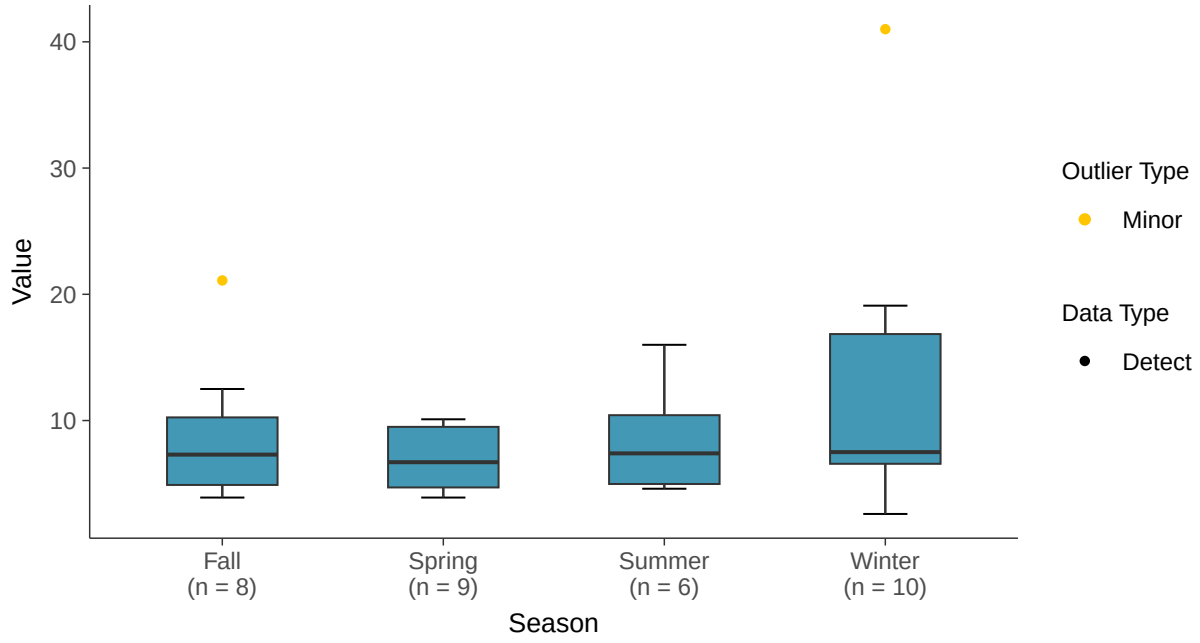
Boxplot

Molybdenum, MW-2 (ug/L)



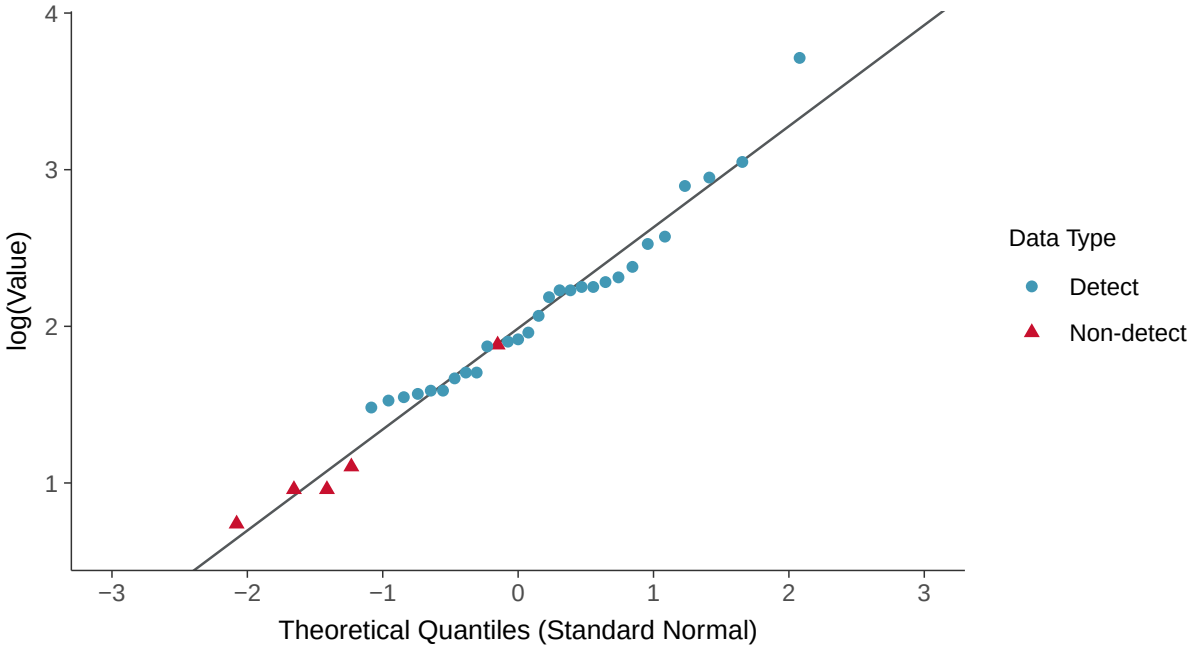
Boxplot by Season

Molybdenum, MW-2 (ug/L)



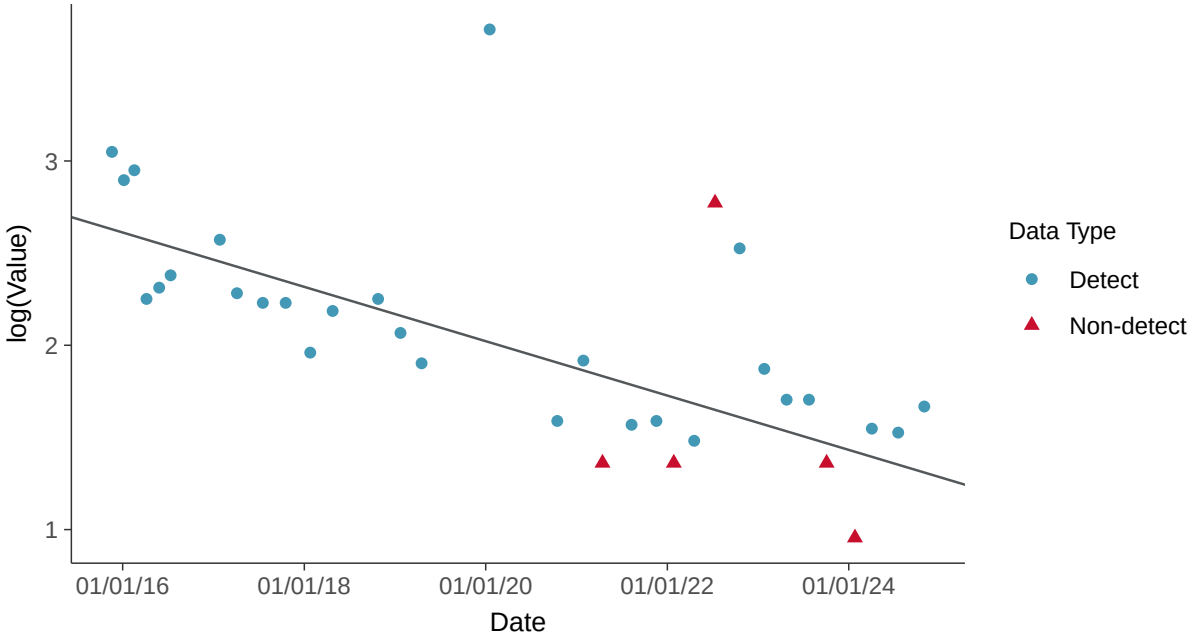
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-2 (ug/L)



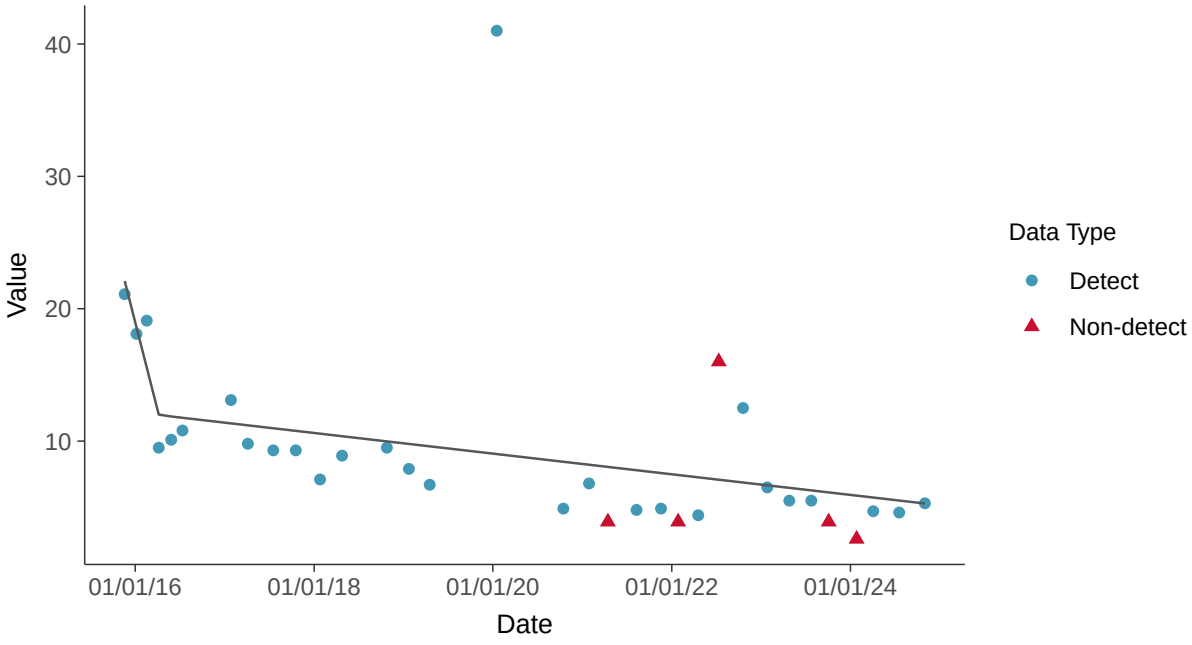
Trend Regression: Lognormal MLE

Molybdenum, MW-2 (ug/L)



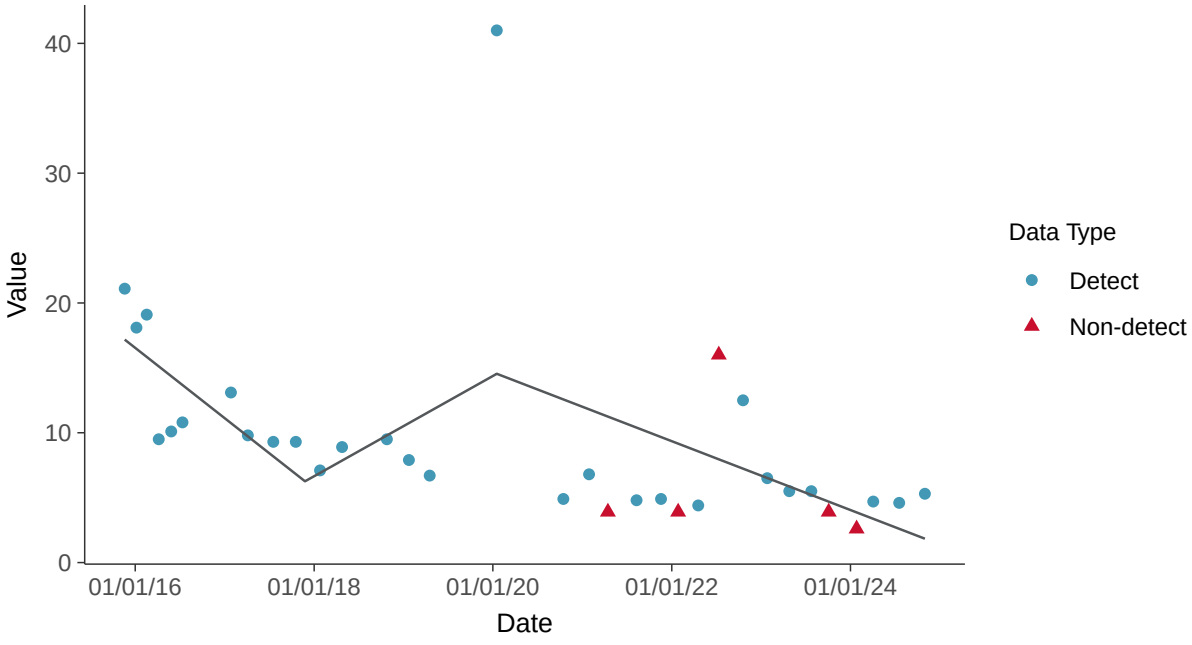
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-2 (ug/L)

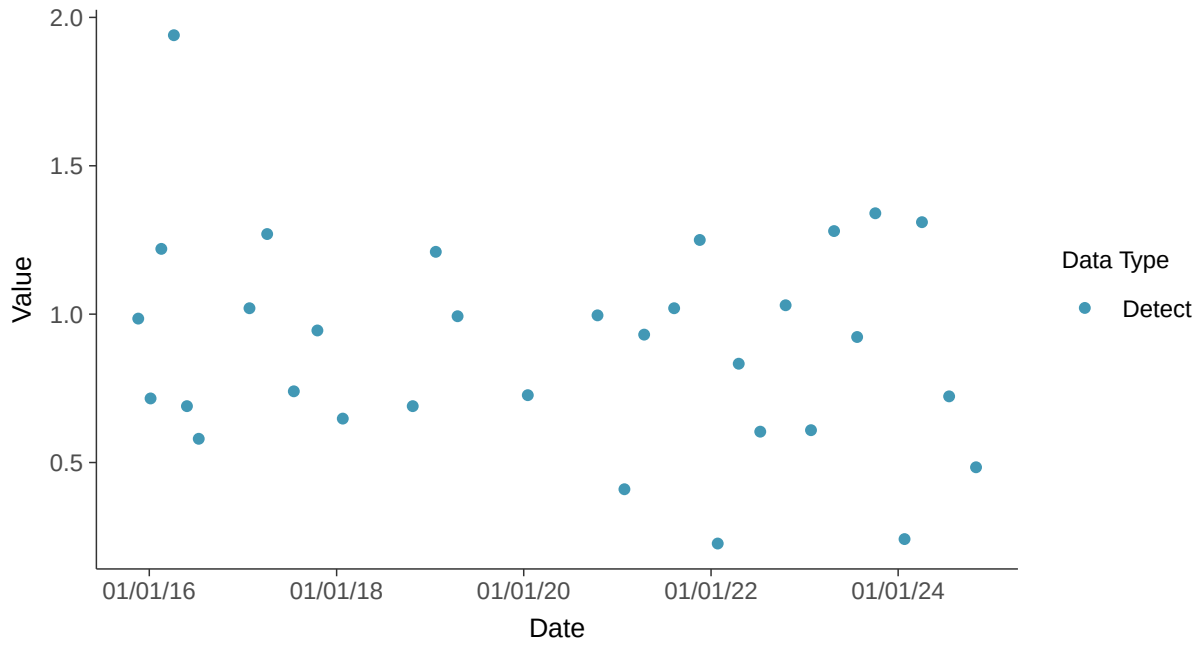


App. IV: Radium-226, MW-2

ID: 02_03_119

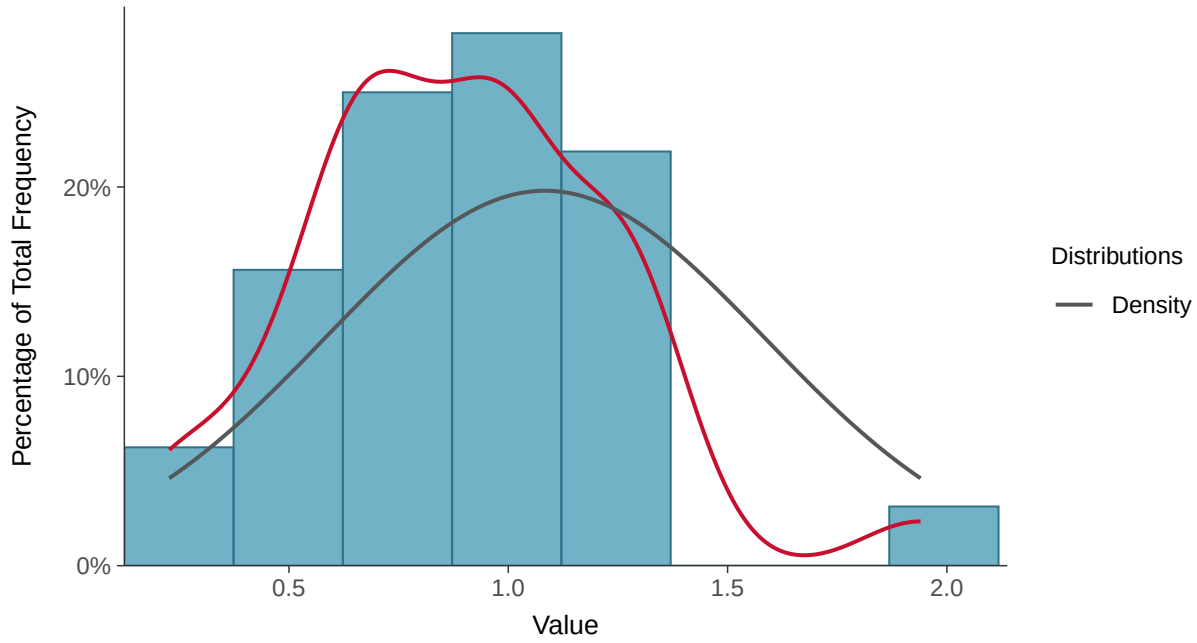
Scatter Plot

Radium-226, MW-2 (pCi/L)



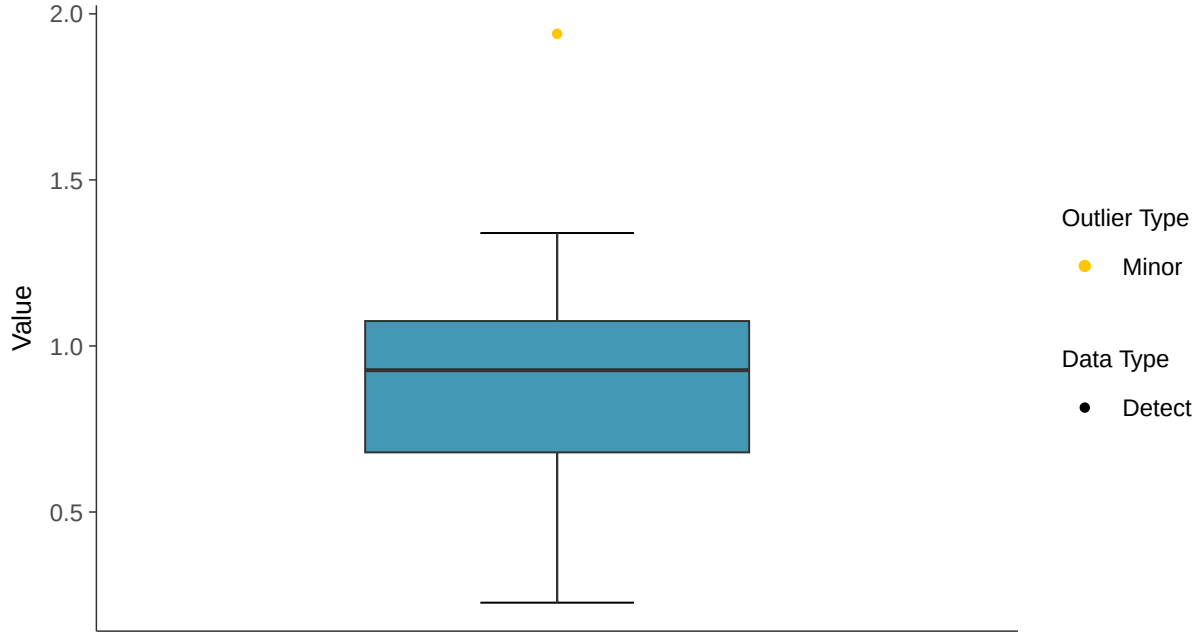
Histogram

Radium-226, MW-2 (pCi/L)



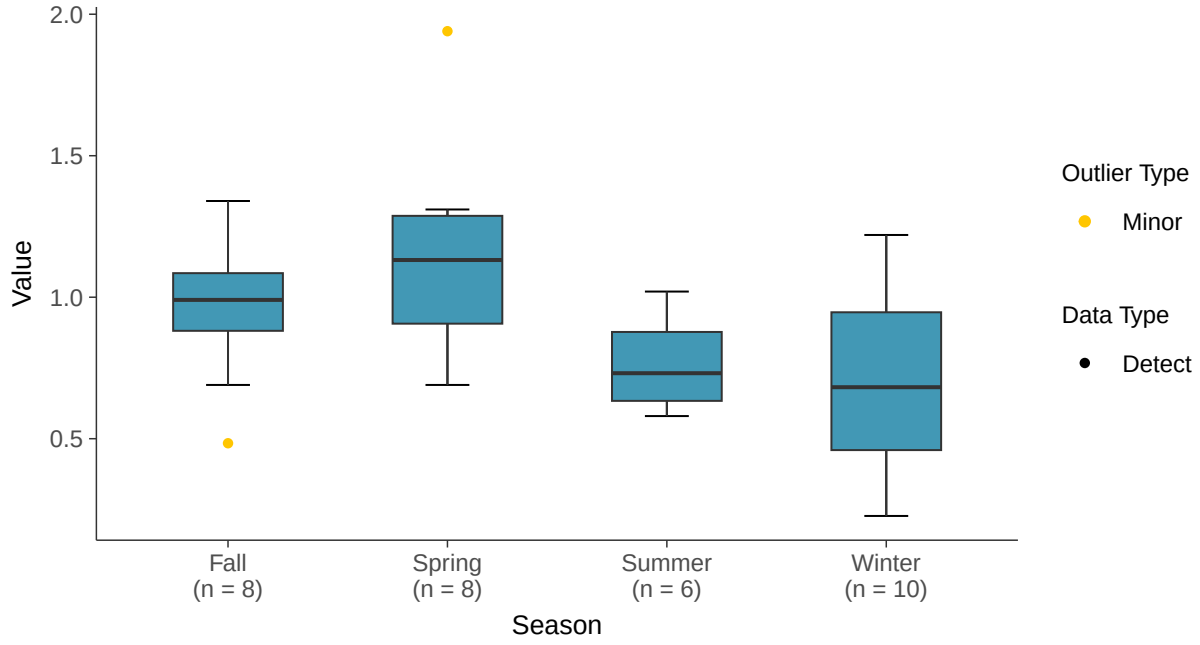
Boxplot

Radium-226, MW-2 (pCi/L)



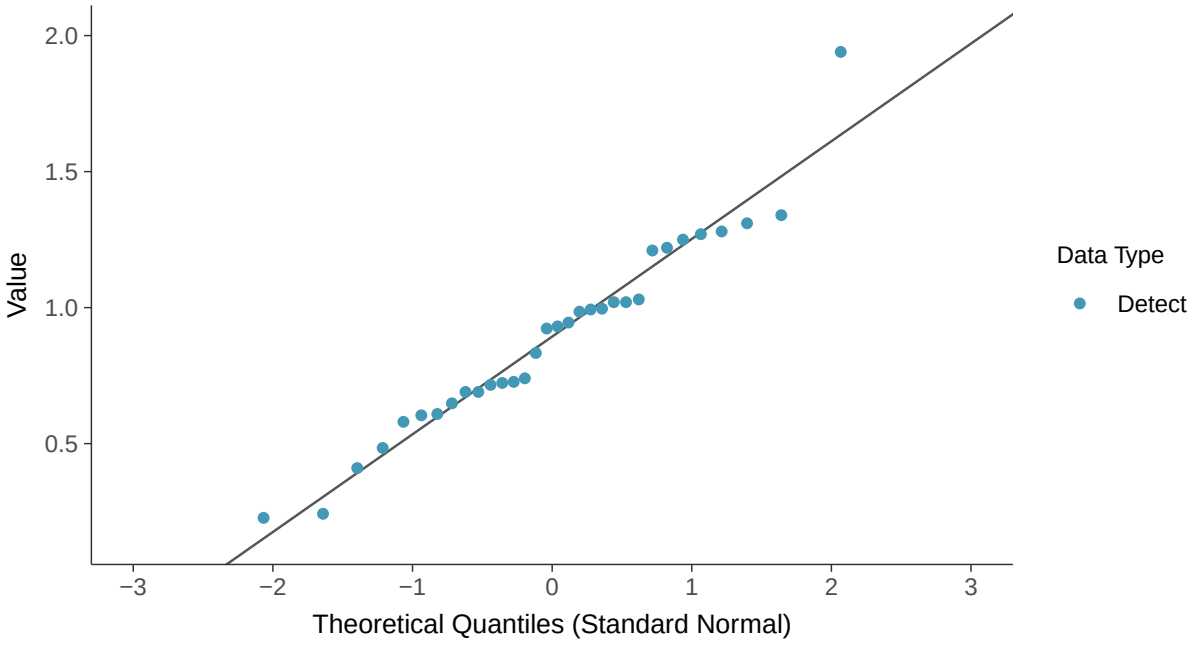
Boxplot by Season

Radium-226, MW-2 (pCi/L)



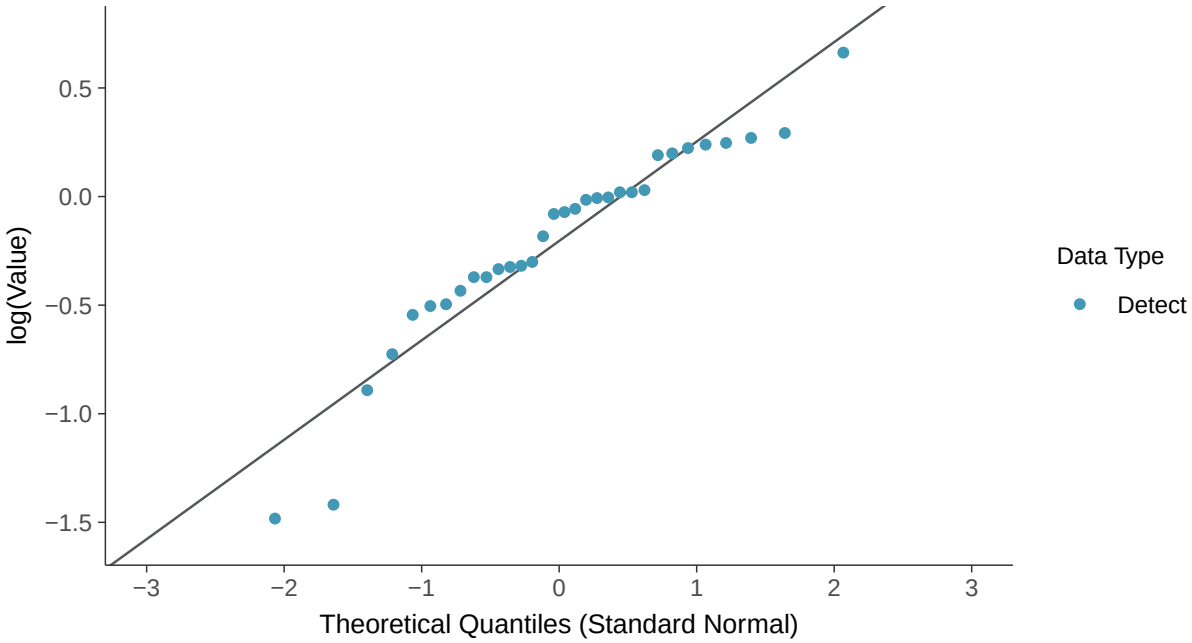
Normal Q-Q plot

Radium-226, MW-2 (pCi/L)



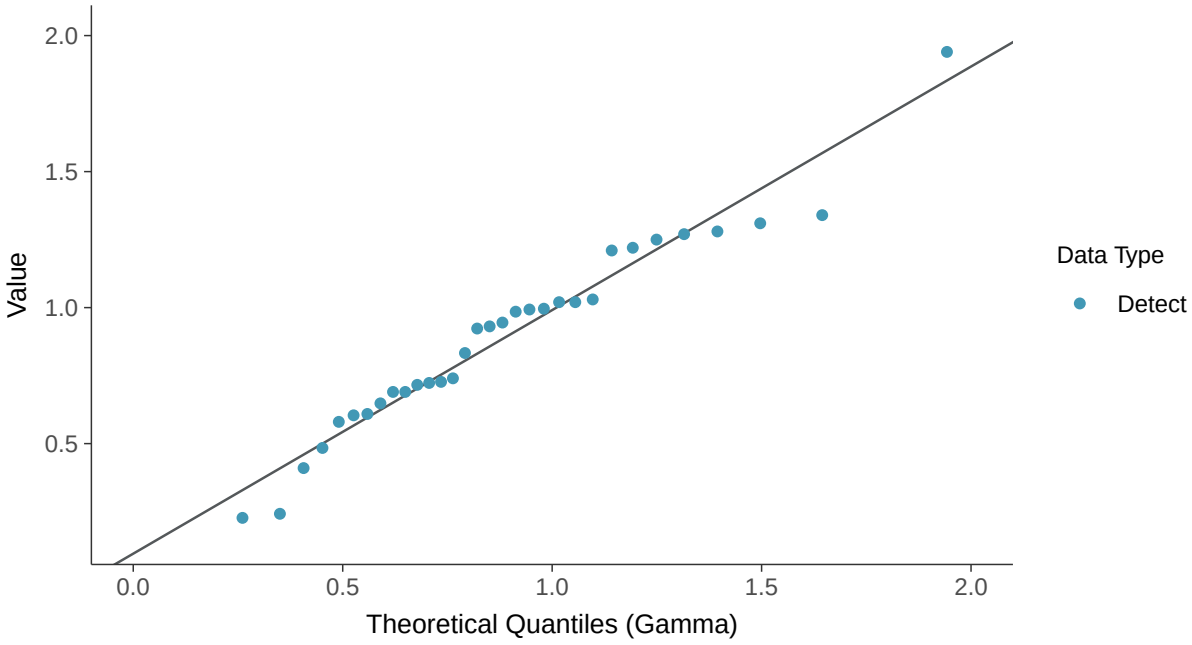
Lognormal Q-Q plot

Radium-226, MW-2 (pCi/L)



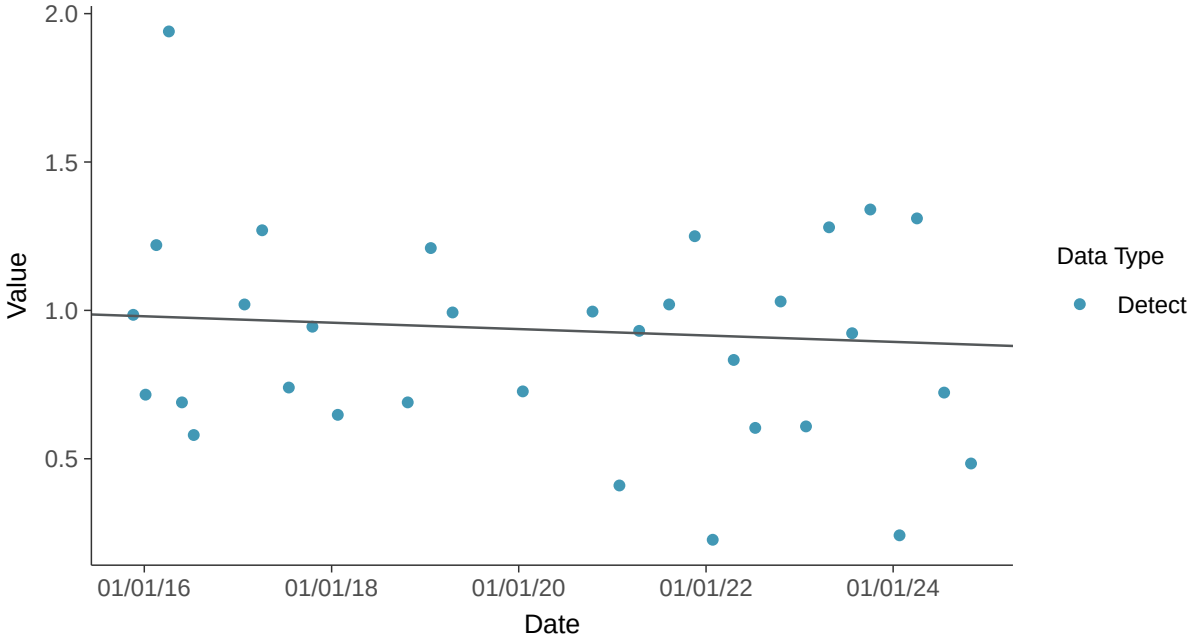
Gamma Q-Q plot

Radium-226, MW-2 (pCi/L)



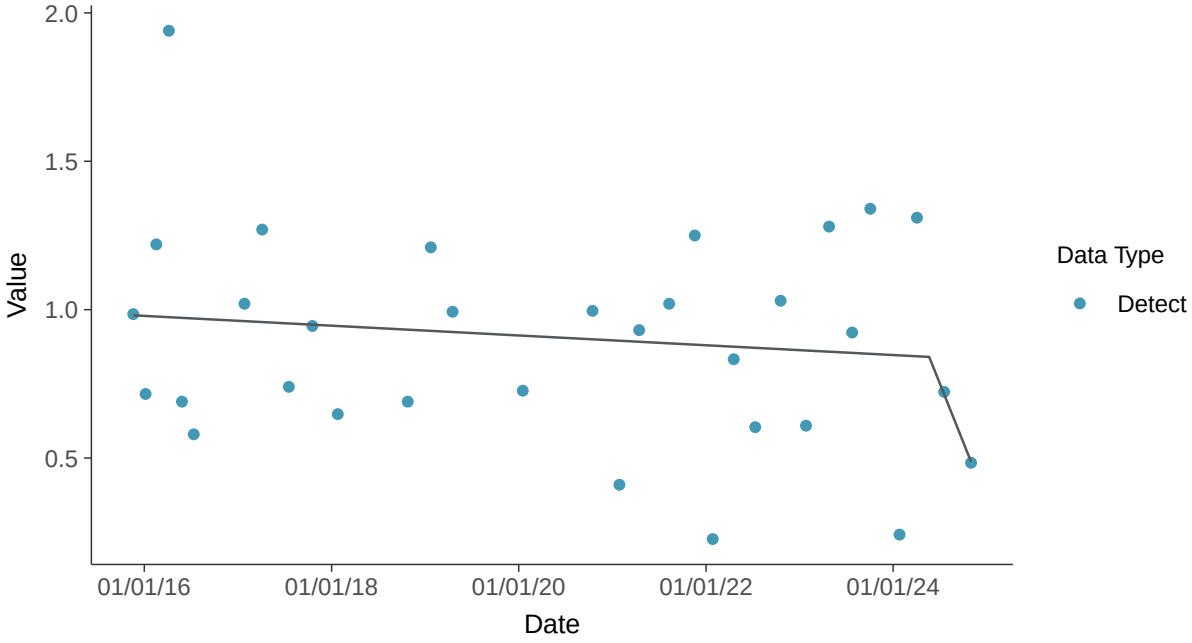
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, MW-2 (pCi/L)

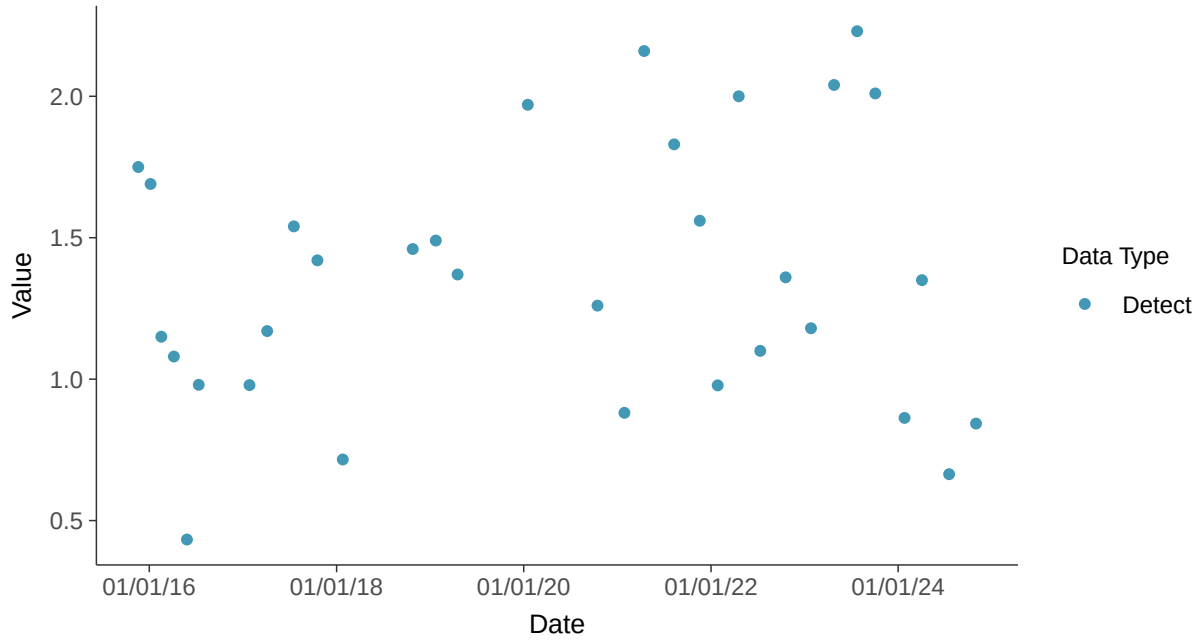


App. IV: Radium-228, MW-2

ID: 02_03_120

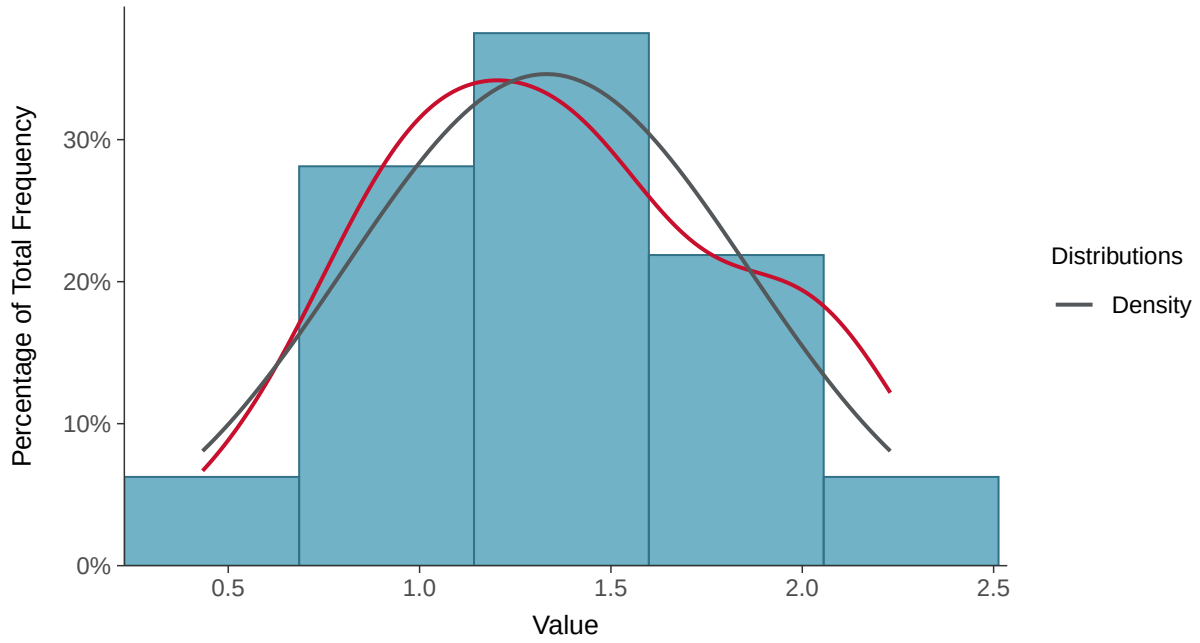
Scatter Plot

Radium-228, MW-2 (pCi/L)



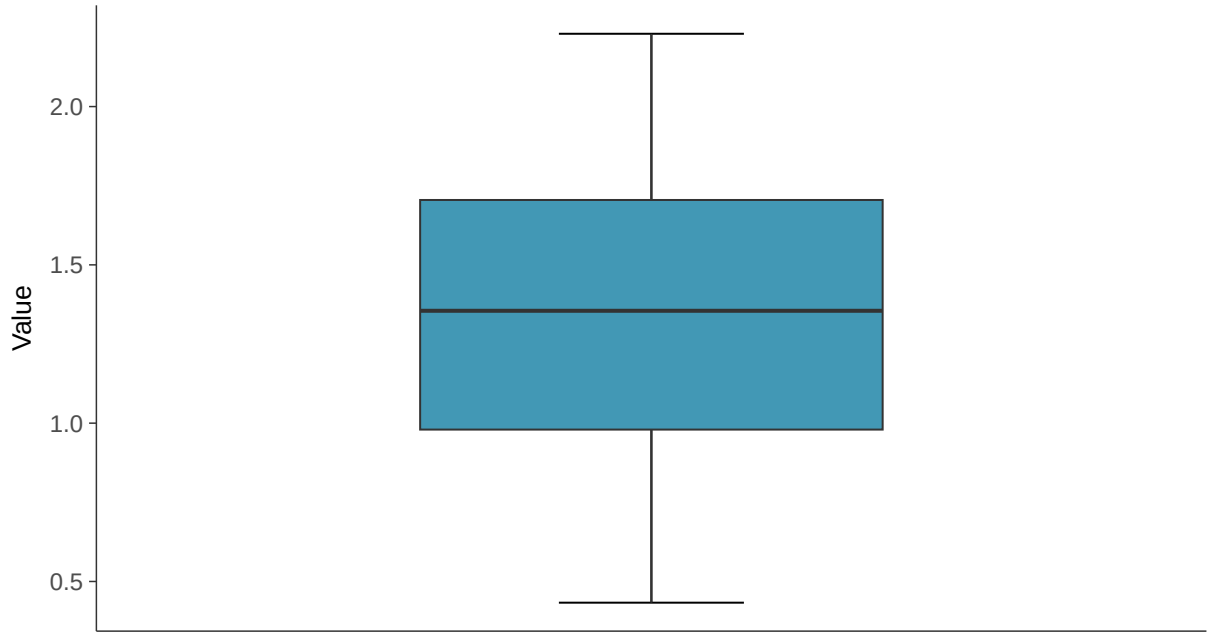
Histogram

Radium-228, MW-2 (pCi/L)



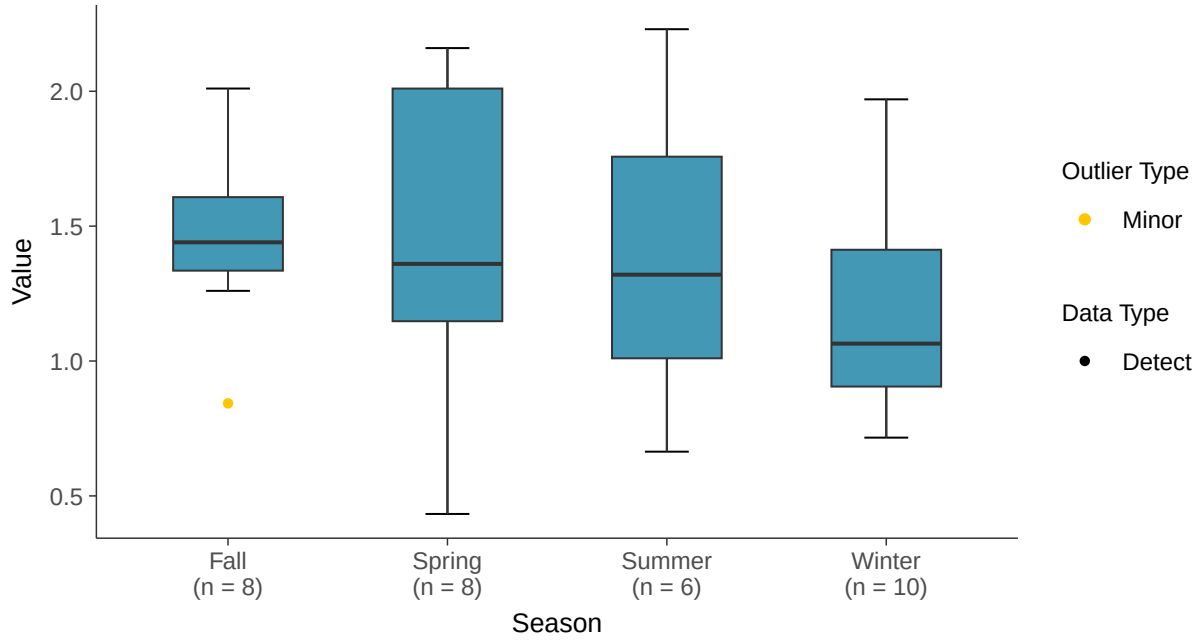
Boxplot

Radium-228, MW-2 (pCi/L)



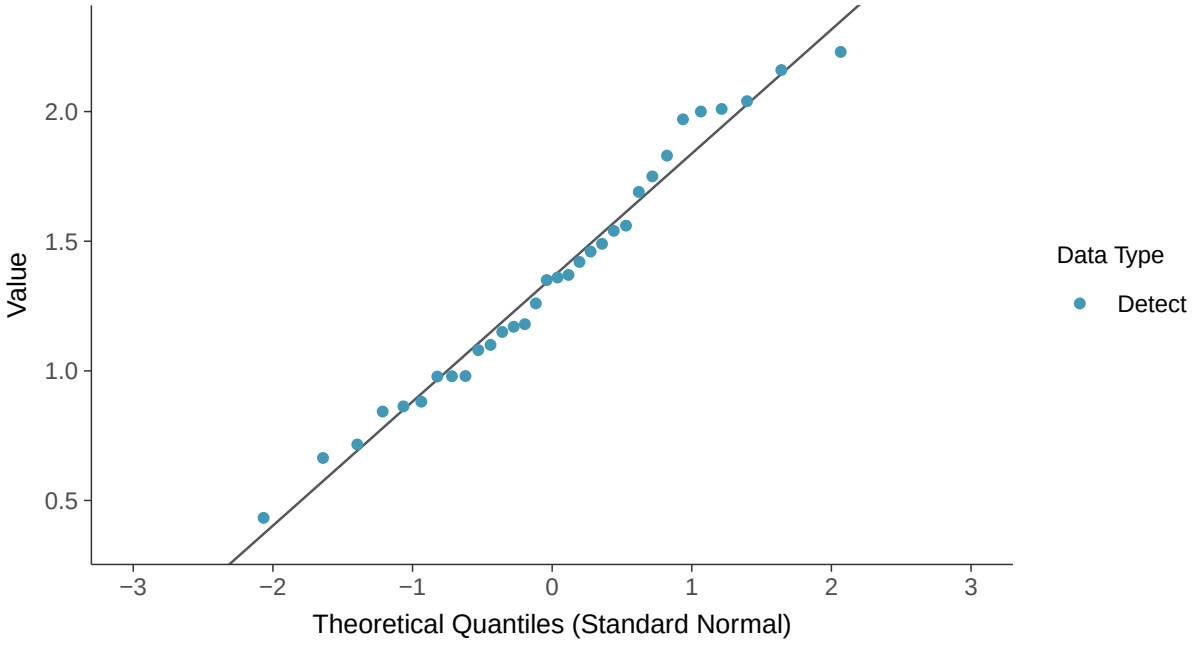
Boxplot by Season

Radium-228, MW-2 (pCi/L)



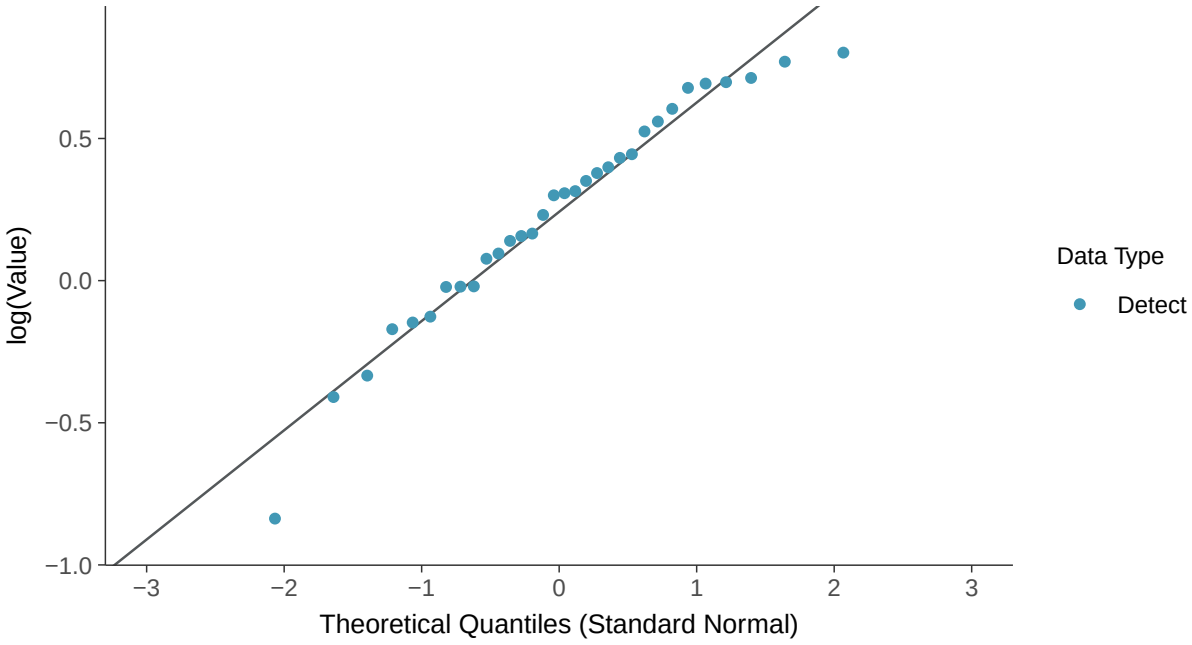
Normal Q-Q plot

Radium-228, MW-2 (pCi/L)



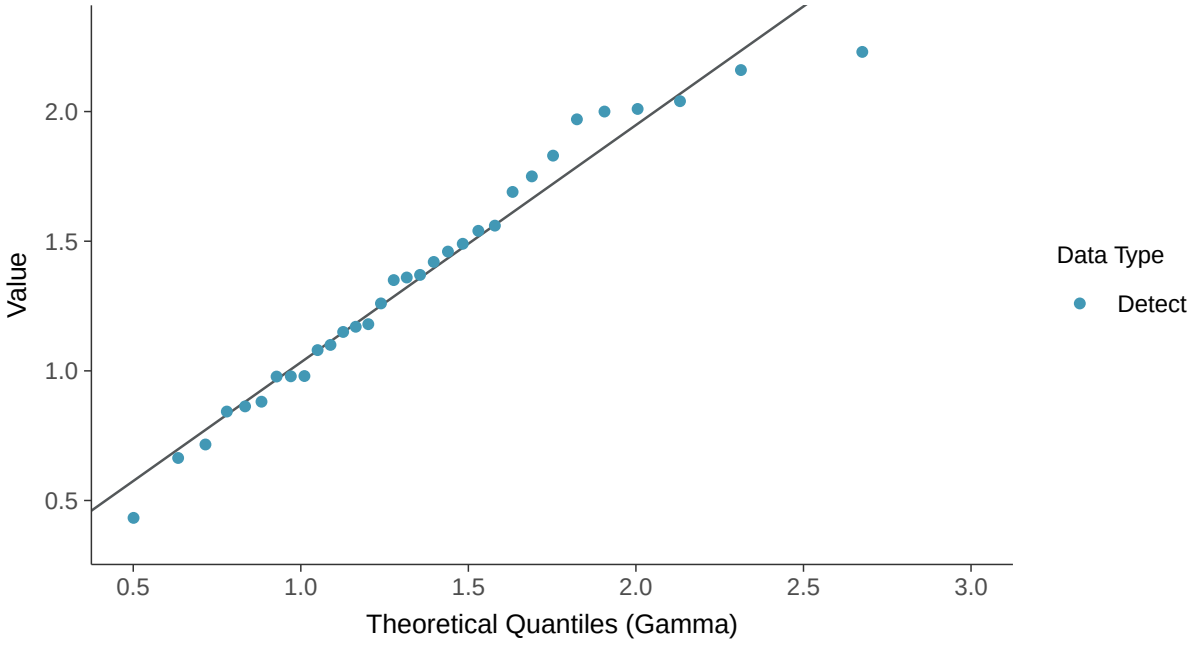
Lognormal Q-Q plot

Radium-228, MW-2 (pCi/L)



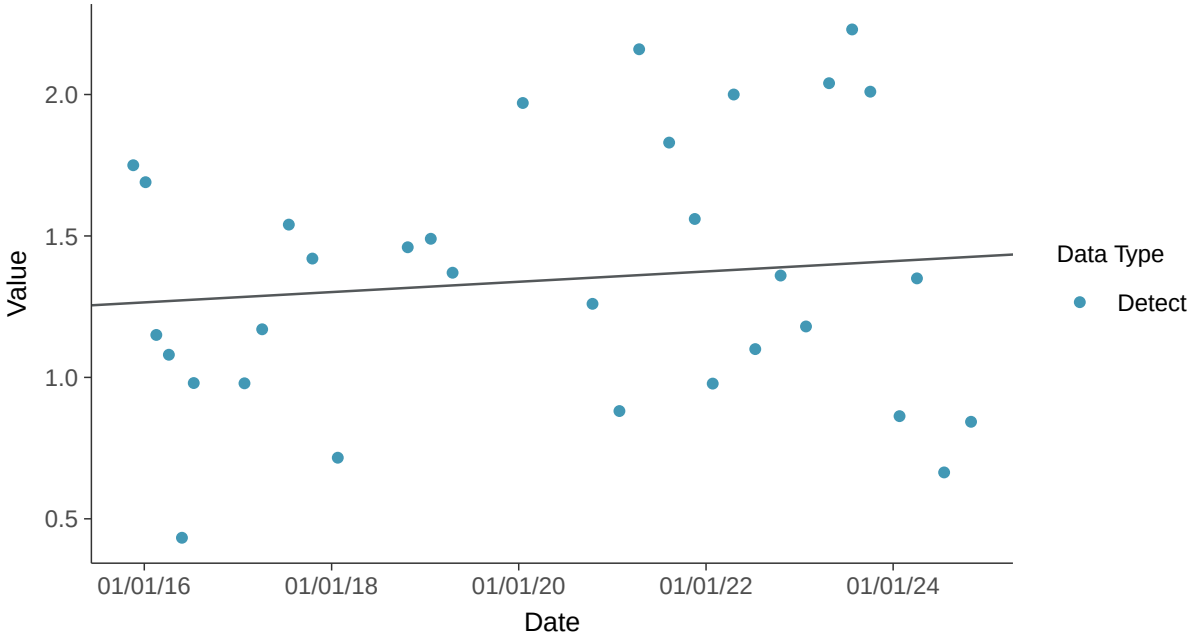
Gamma Q-Q plot

Radium-228, MW-2 (pCi/L)



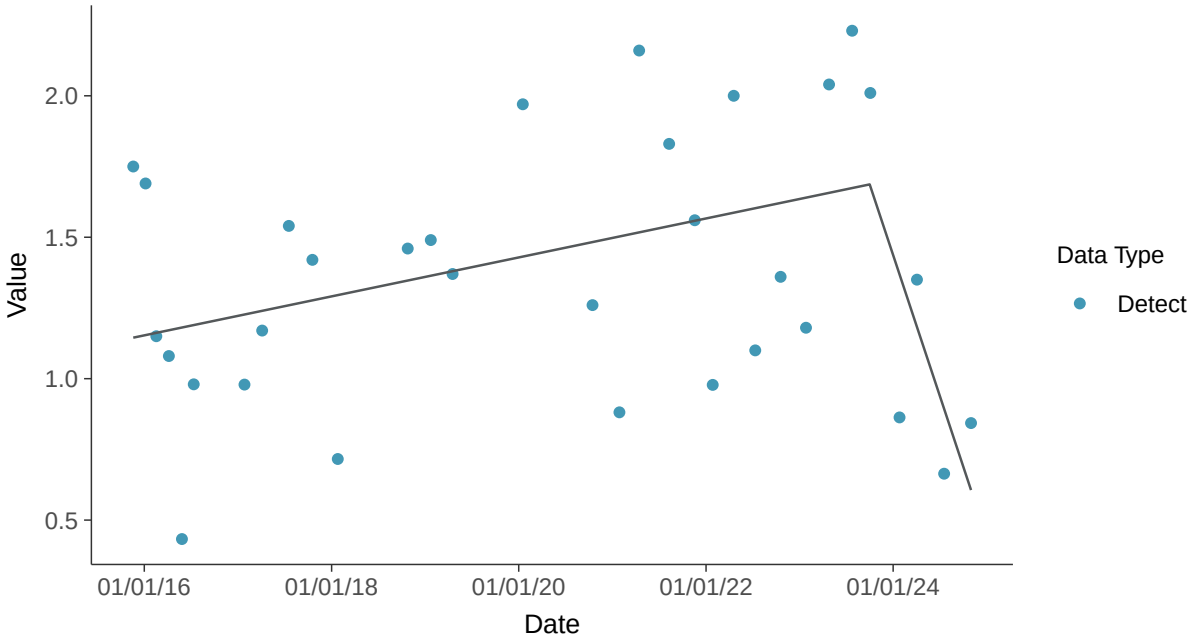
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-2 (pCi/L)



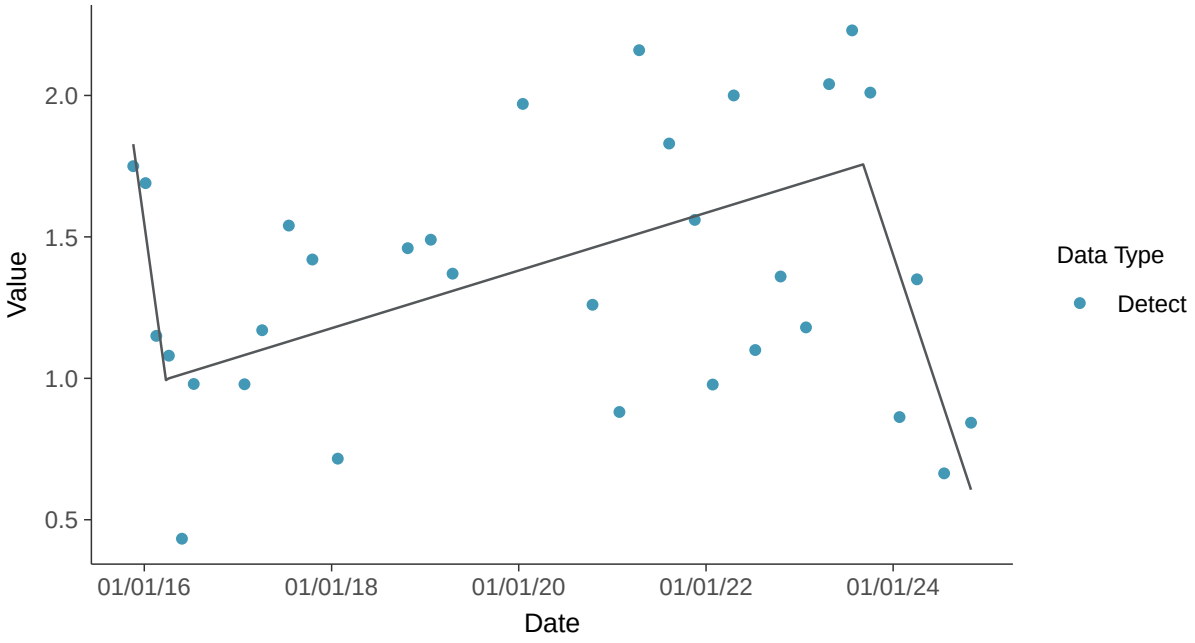
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-2 (pCi/L)



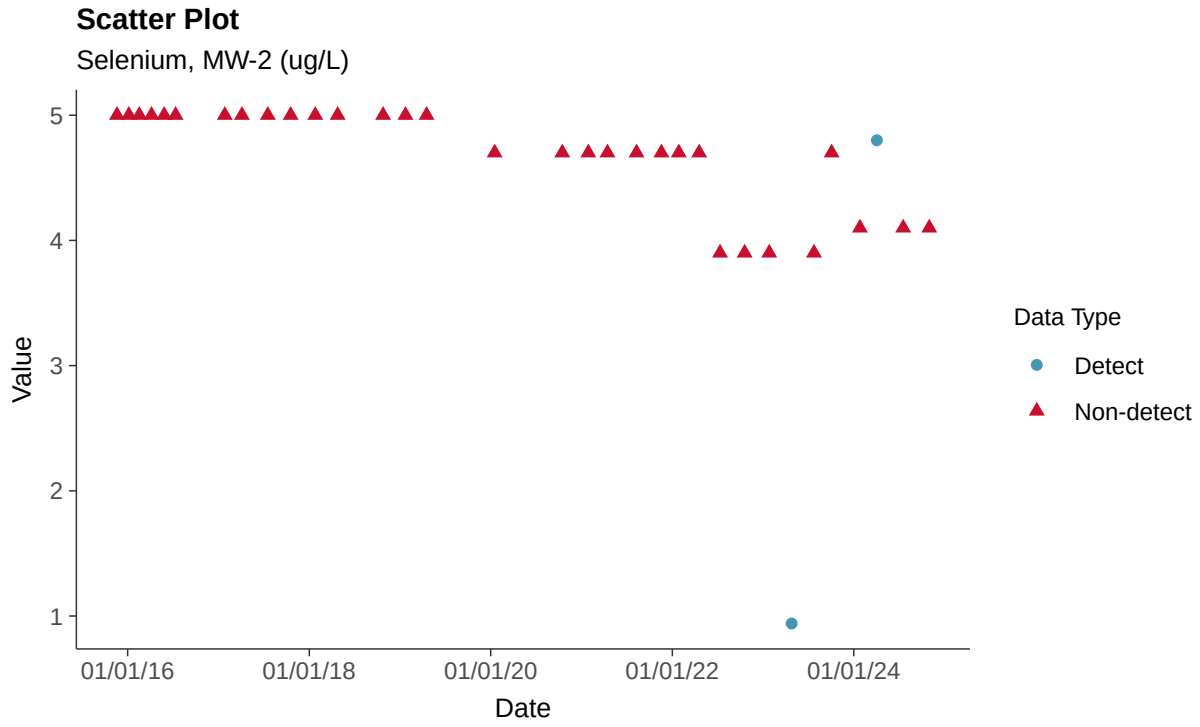
Trend Regression: Piecewise Linear-Linear-Linear

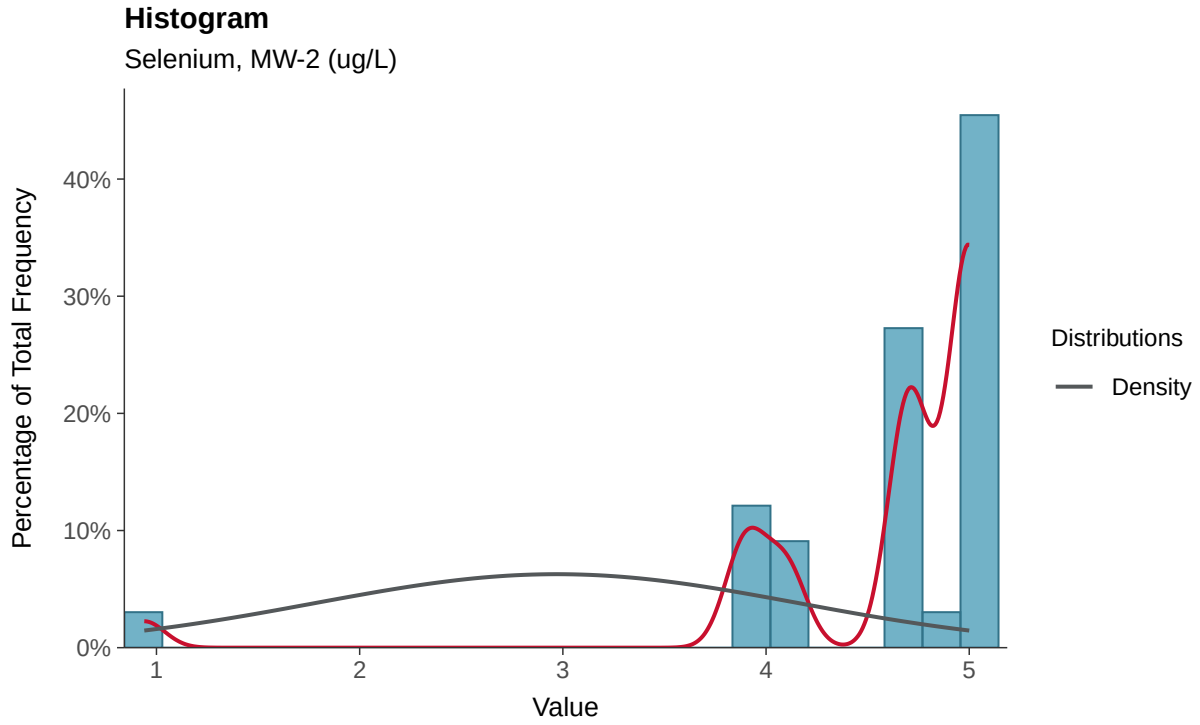
Radium-228, MW-2 (pCi/L)



App. IV: Selenium, MW-2

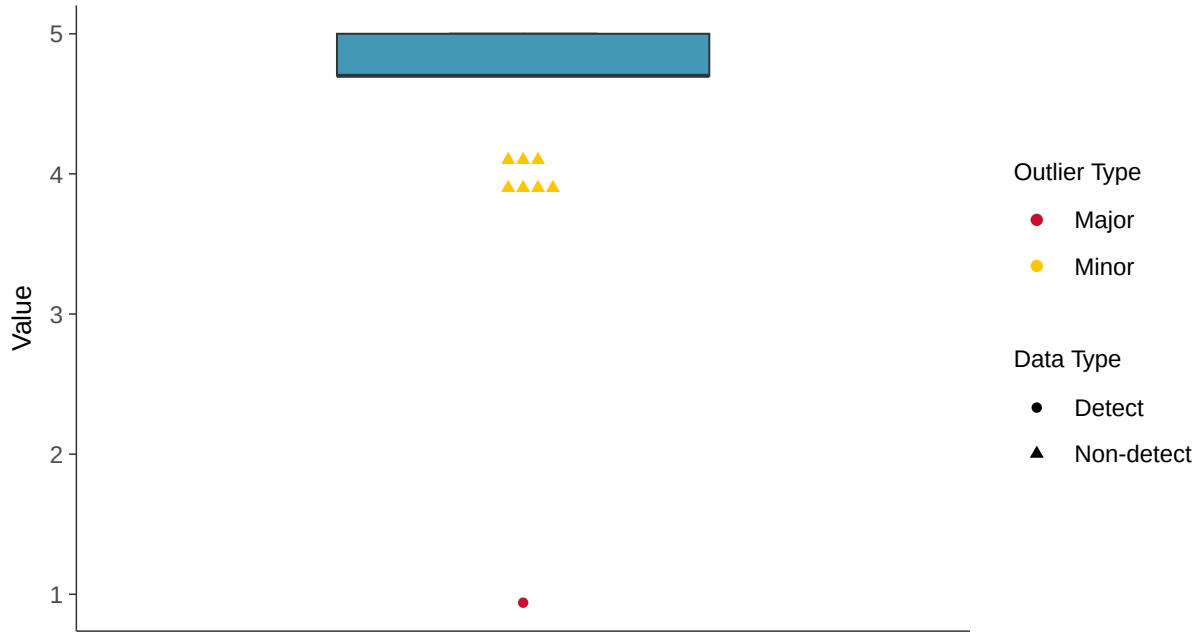
ID: 02_03_121





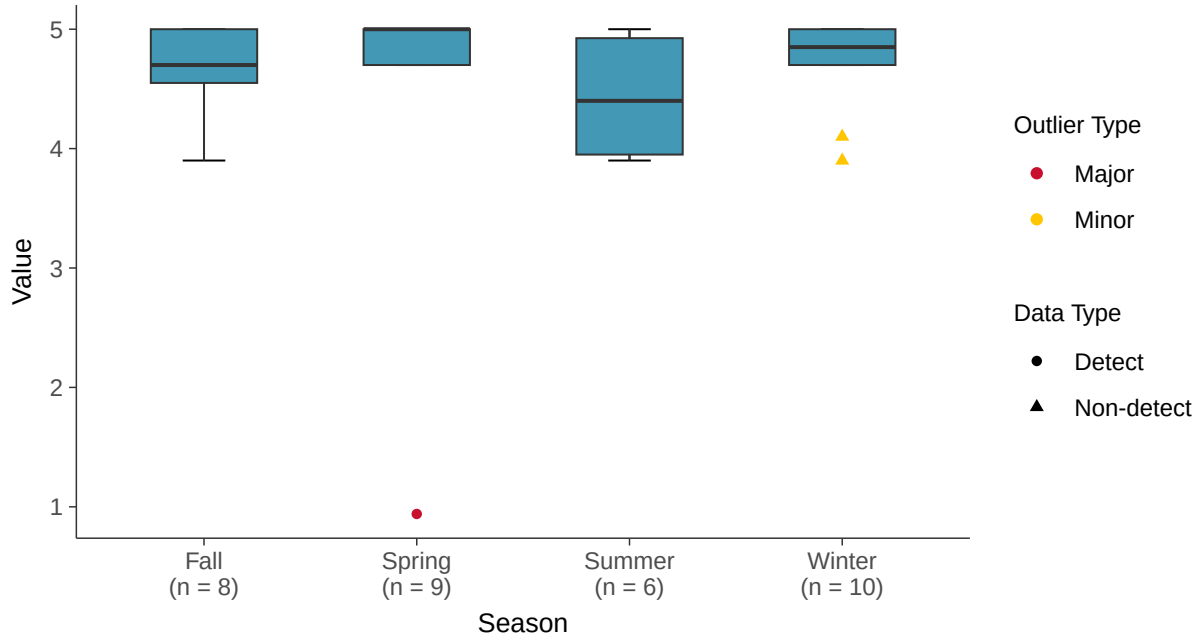
Boxplot

Selenium, MW-2 (ug/L)



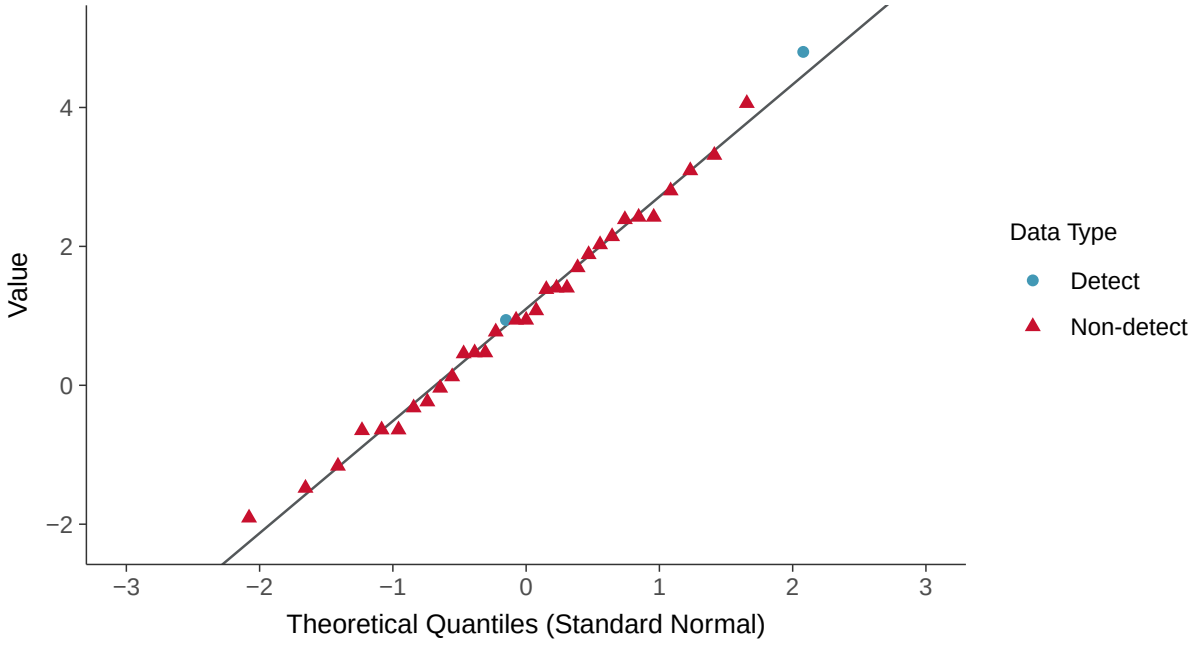
Boxplot by Season

Selenium, MW-2 (ug/L)



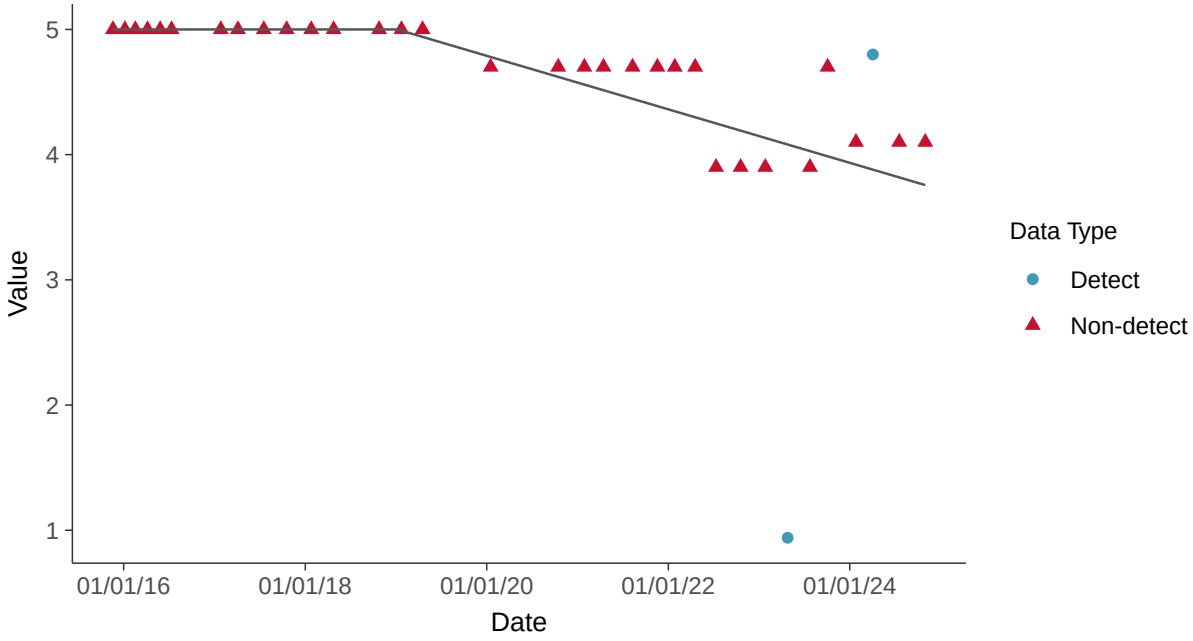
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-2 (ug/L)



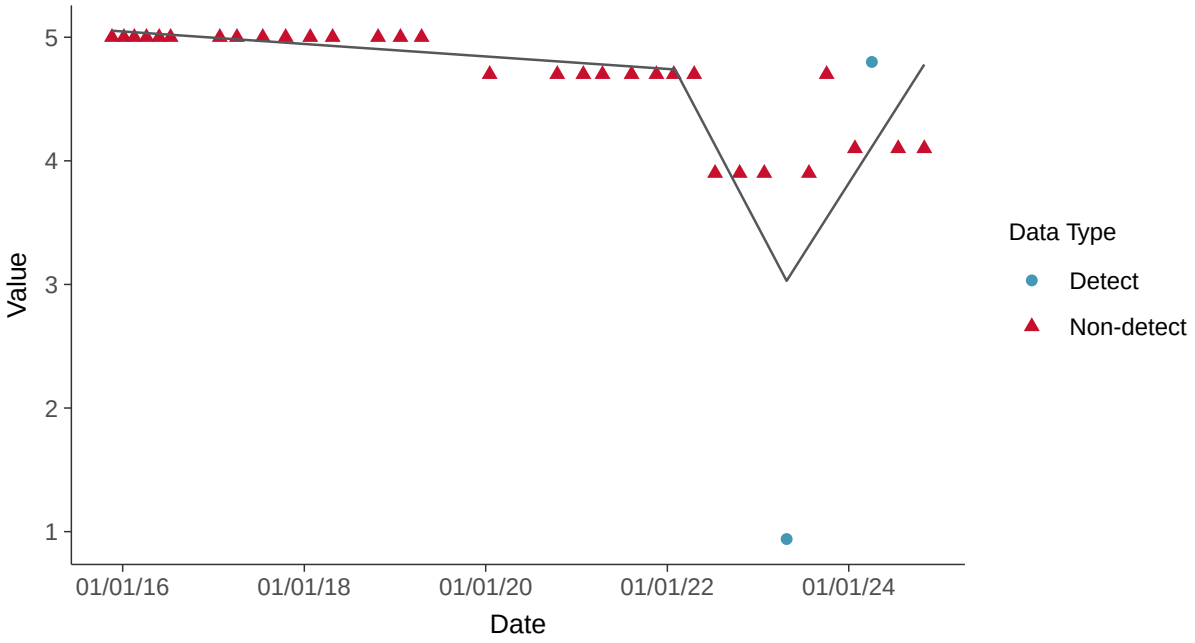
Trend Regression: Piecewise Linear-Linear

Selenium, MW-2 (ug/L)



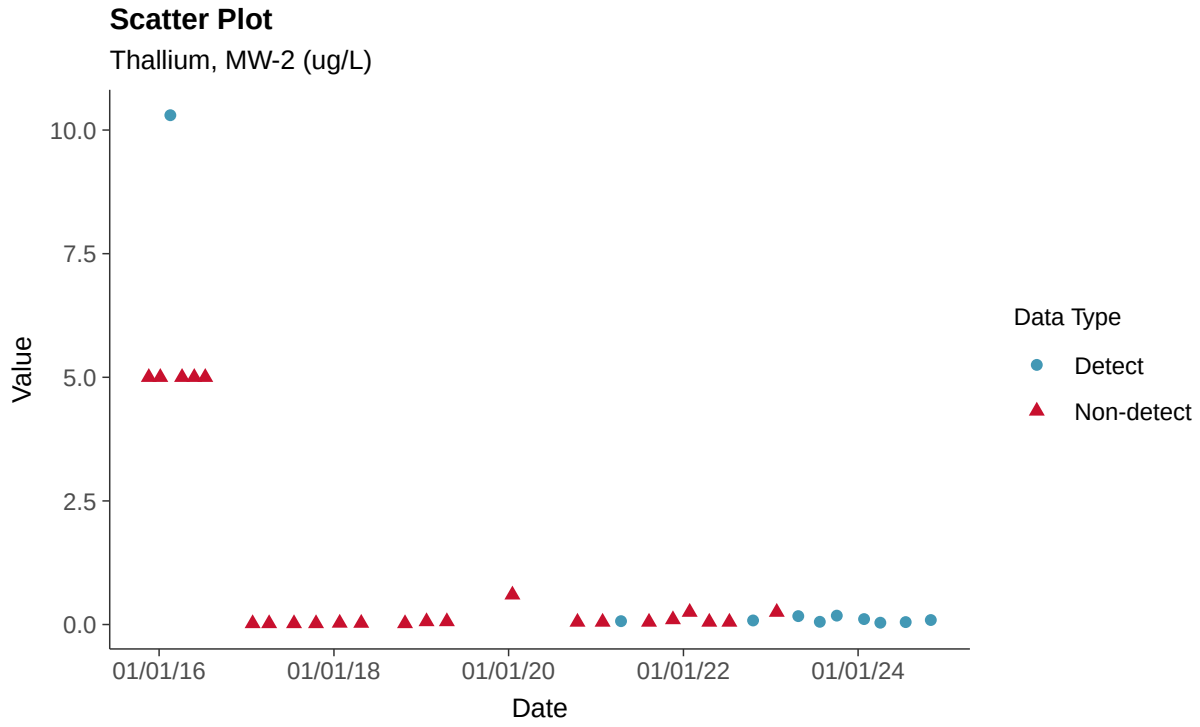
Trend Regression: Piecewise Linear-Linear-Linear

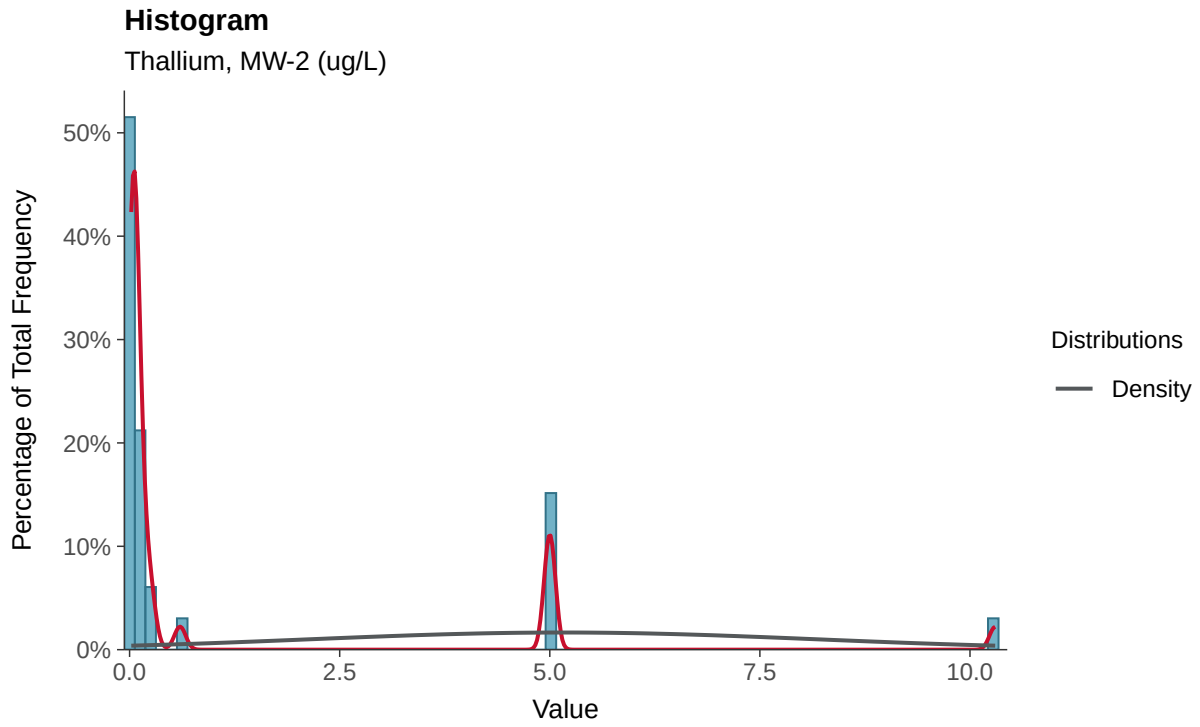
Selenium, MW-2 (ug/L)



App. IV: Thallium, MW-2

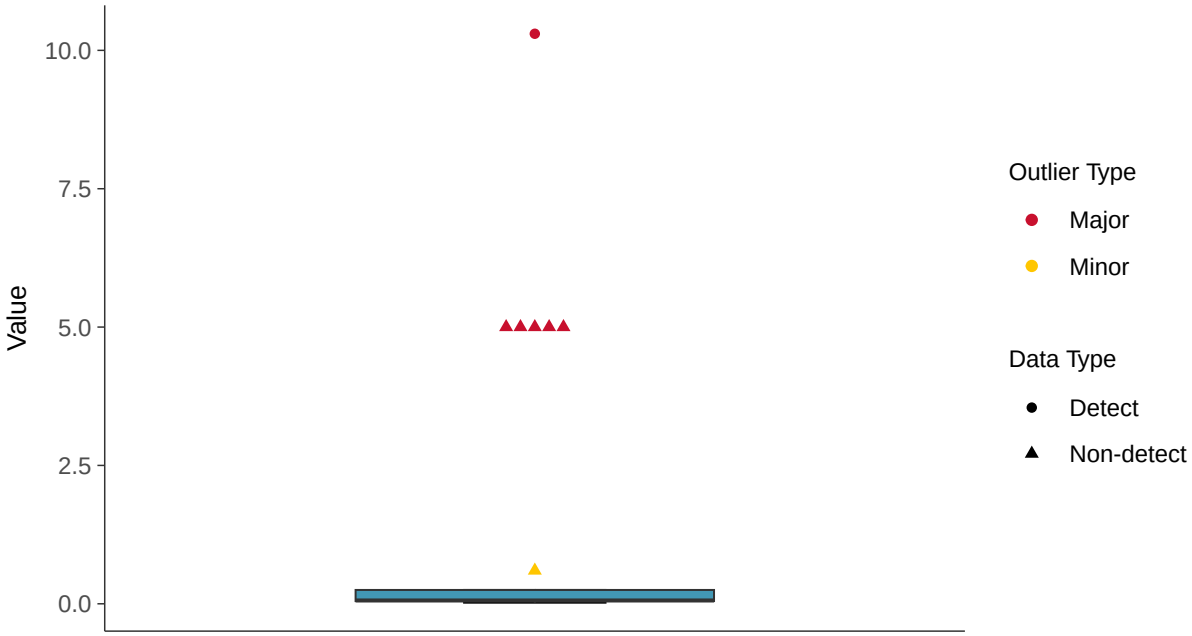
ID: 02_03_124





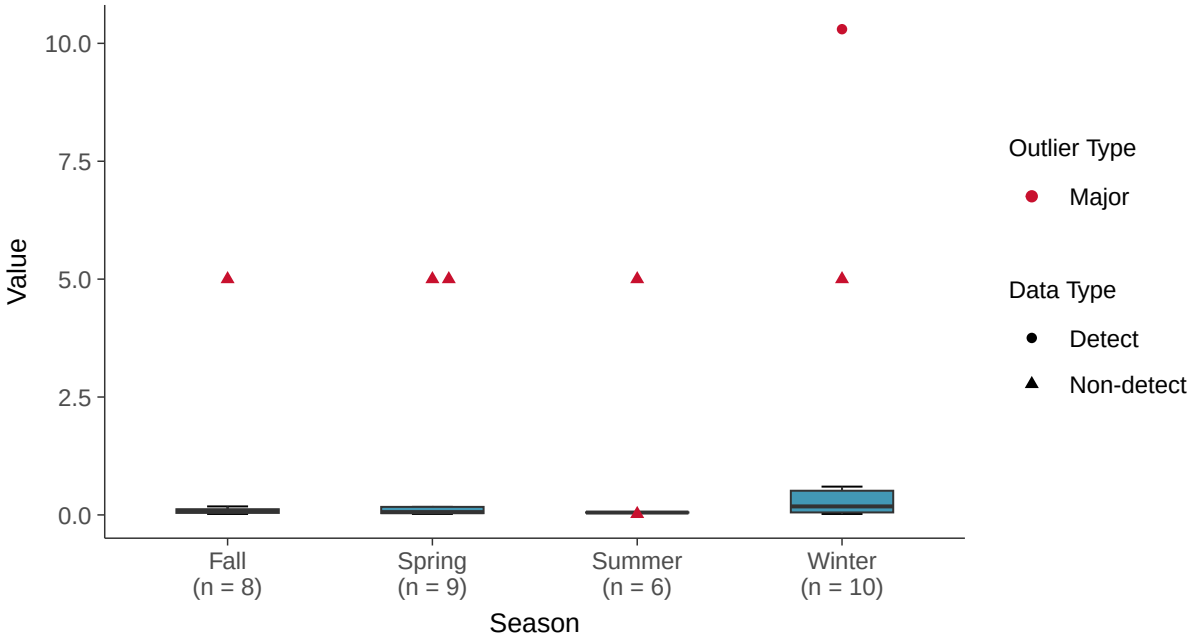
Boxplot

Thallium, MW-2 (ug/L)



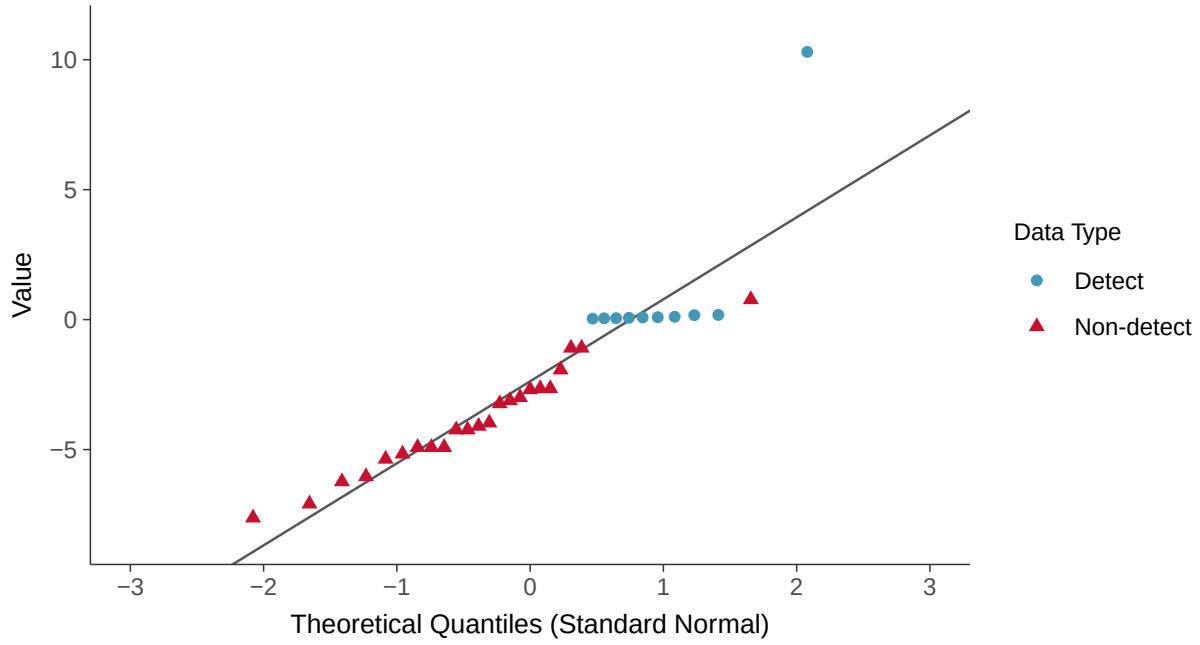
Boxplot by Season

Thallium, MW-2 (ug/L)



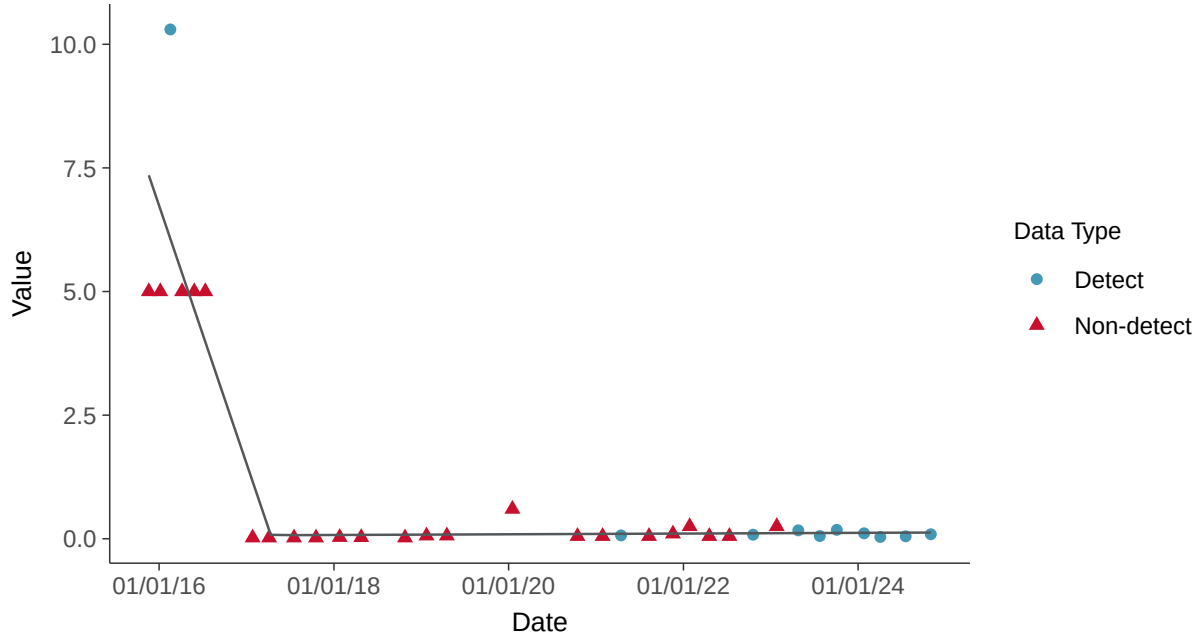
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-2 (ug/L)



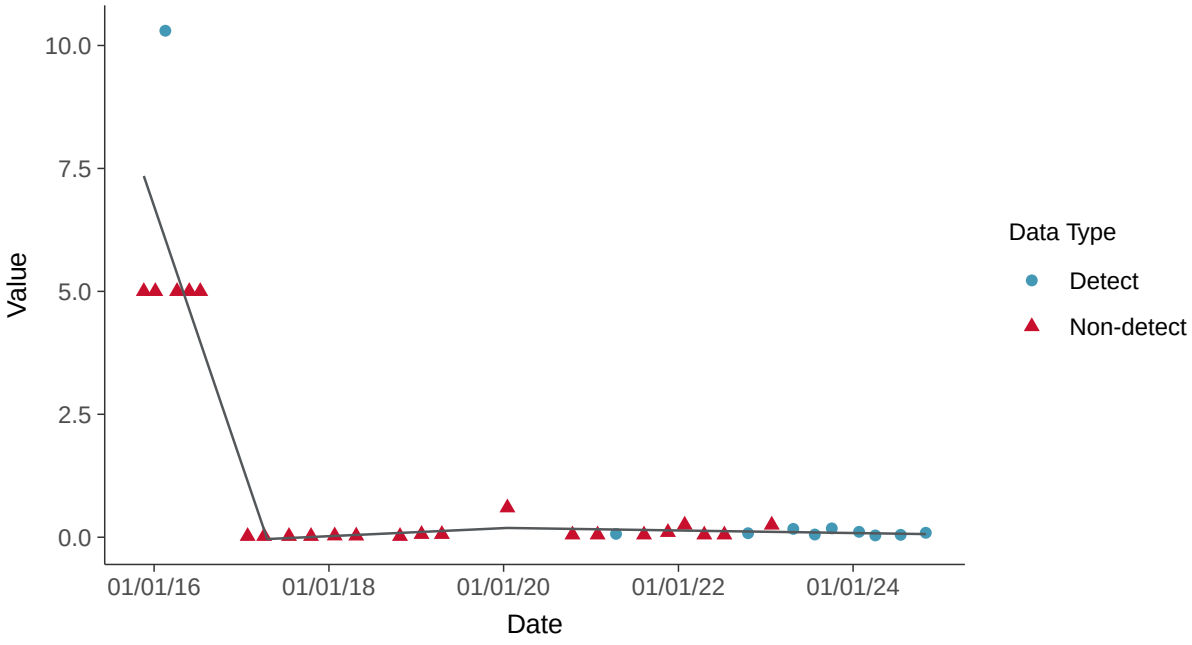
Trend Regression: Piecewise Linear-Linear

Thallium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-2 (ug/L)

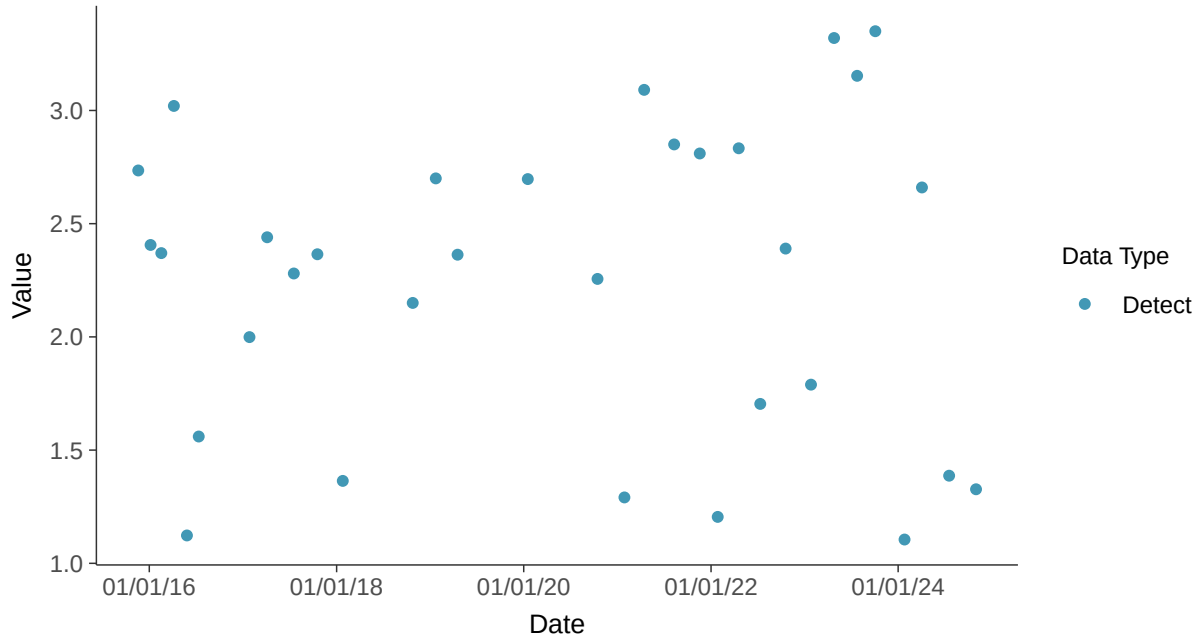


App. IV: Total Radium, MW-2

ID: 02_03_126

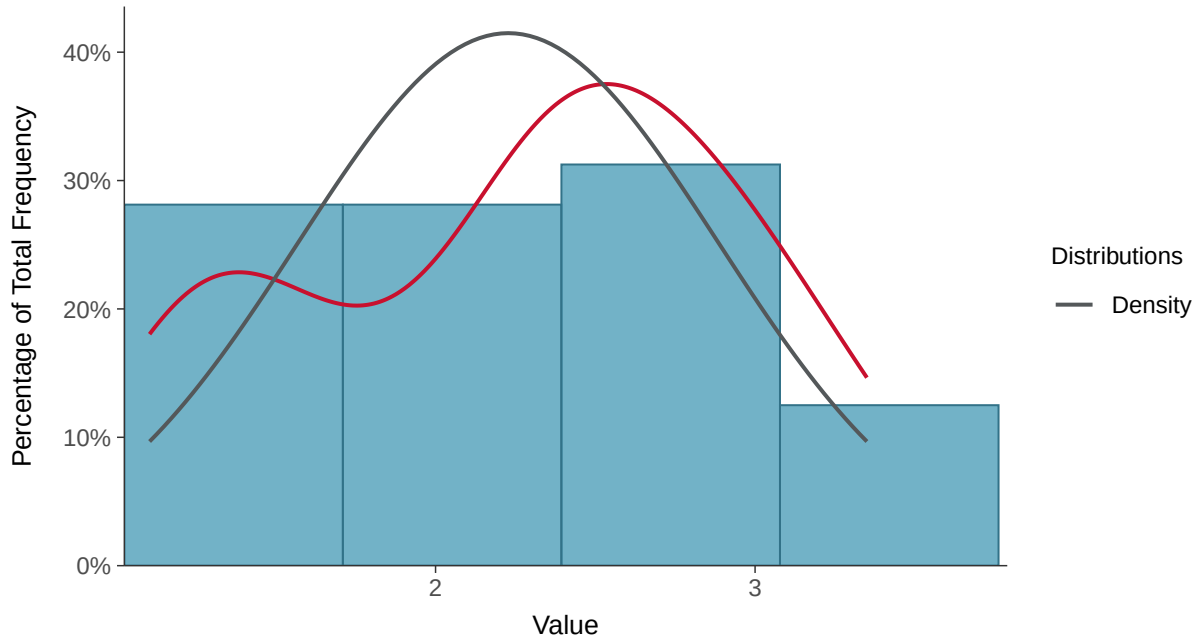
Scatter Plot

Total Radium, MW-2 (pCi/L)



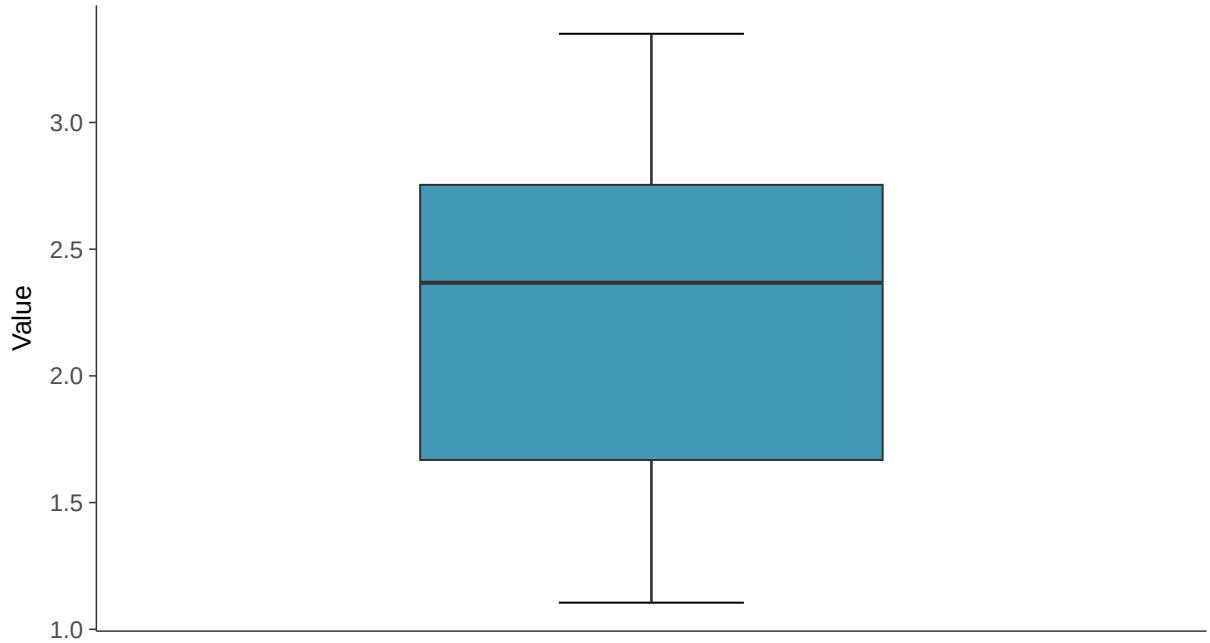
Histogram

Total Radium, MW-2 (pCi/L)



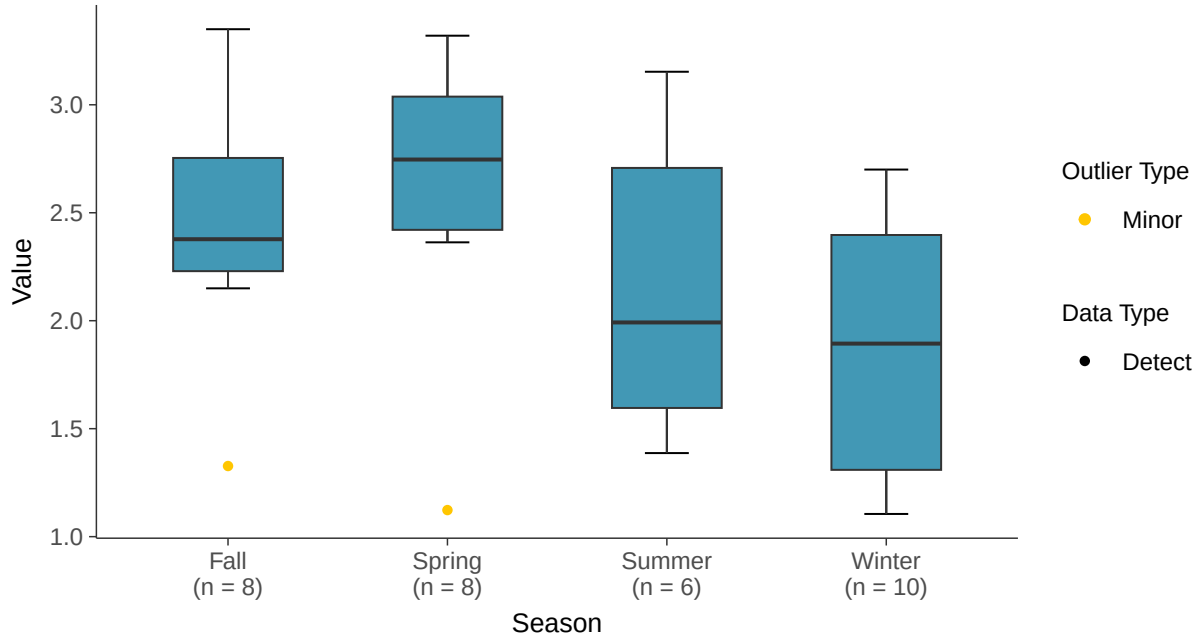
Boxplot

Total Radium, MW-2 (pCi/L)



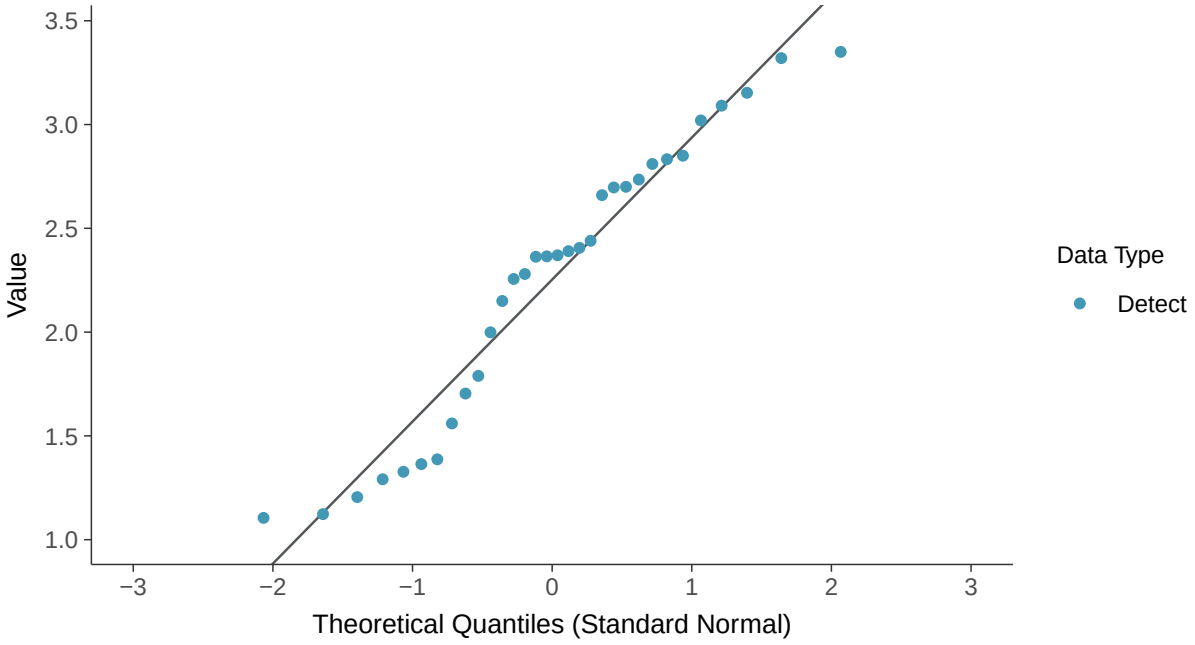
Boxplot by Season

Total Radium, MW-2 (pCi/L)



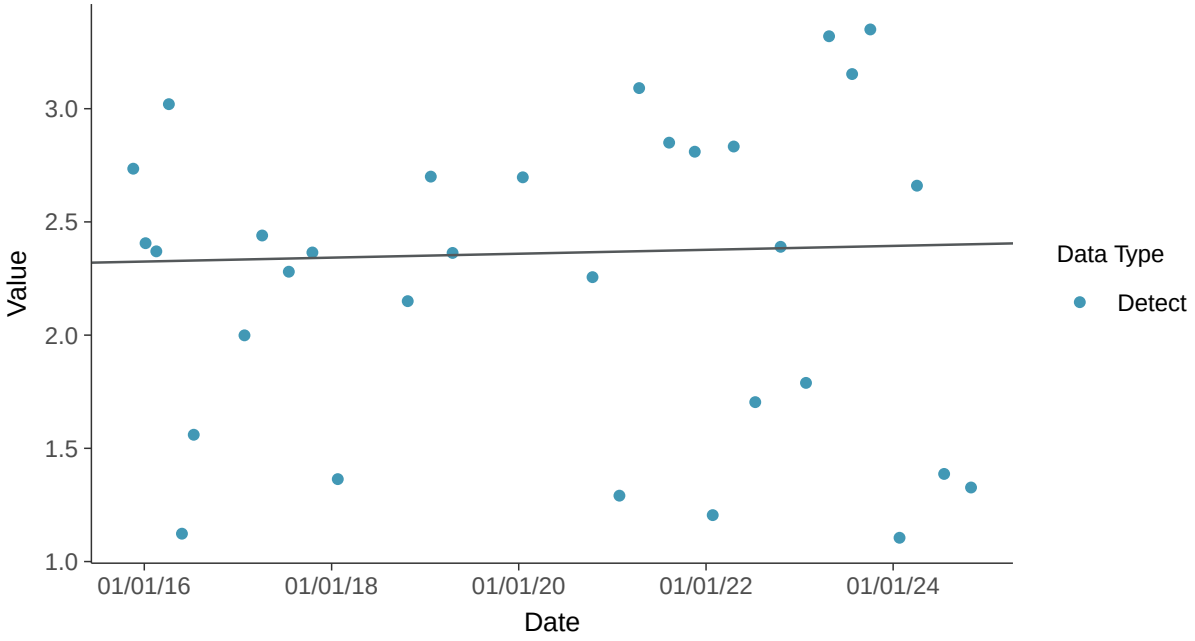
Normal Q-Q plot

Total Radium, MW-2 (pCi/L)



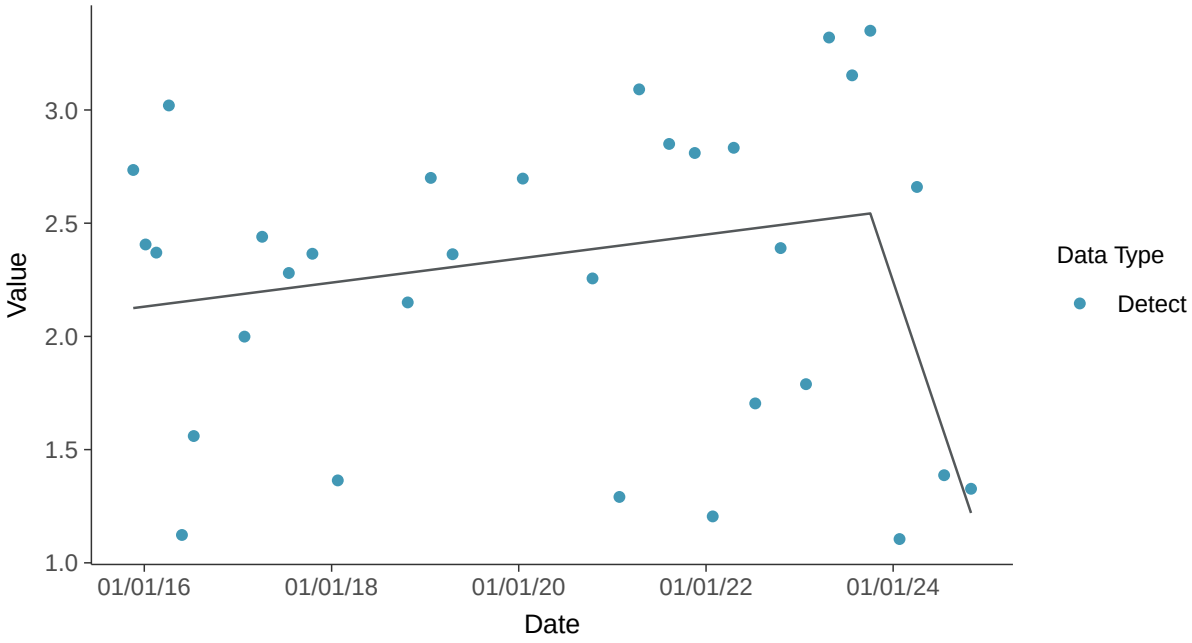
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-2 (pCi/L)



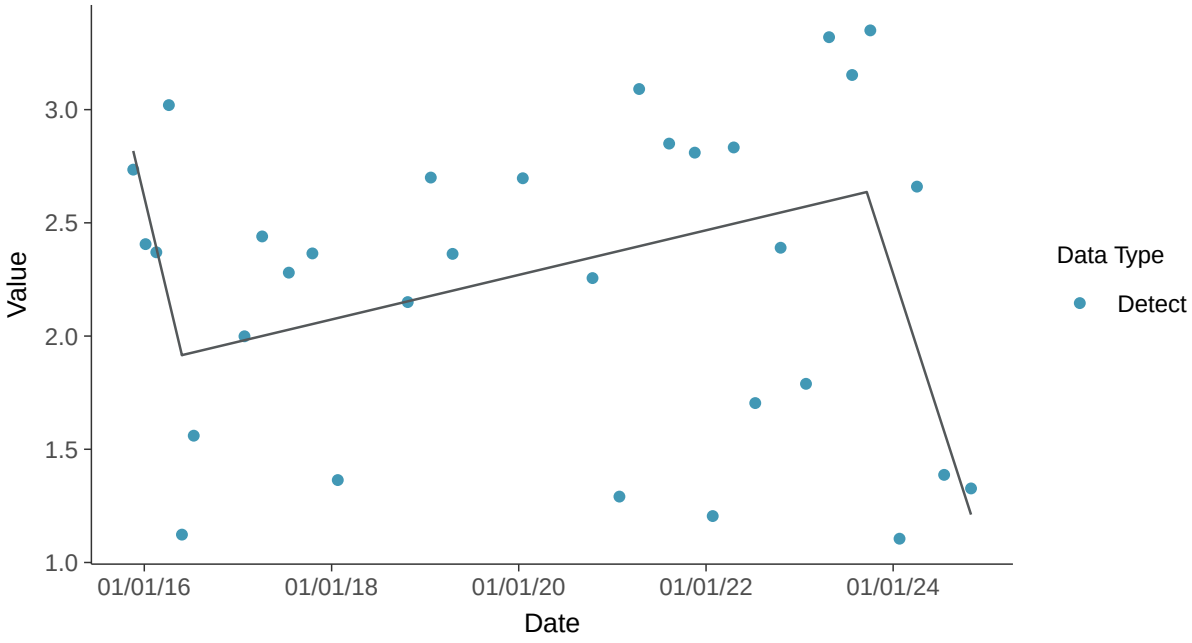
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, MW-2 (pCi/L)

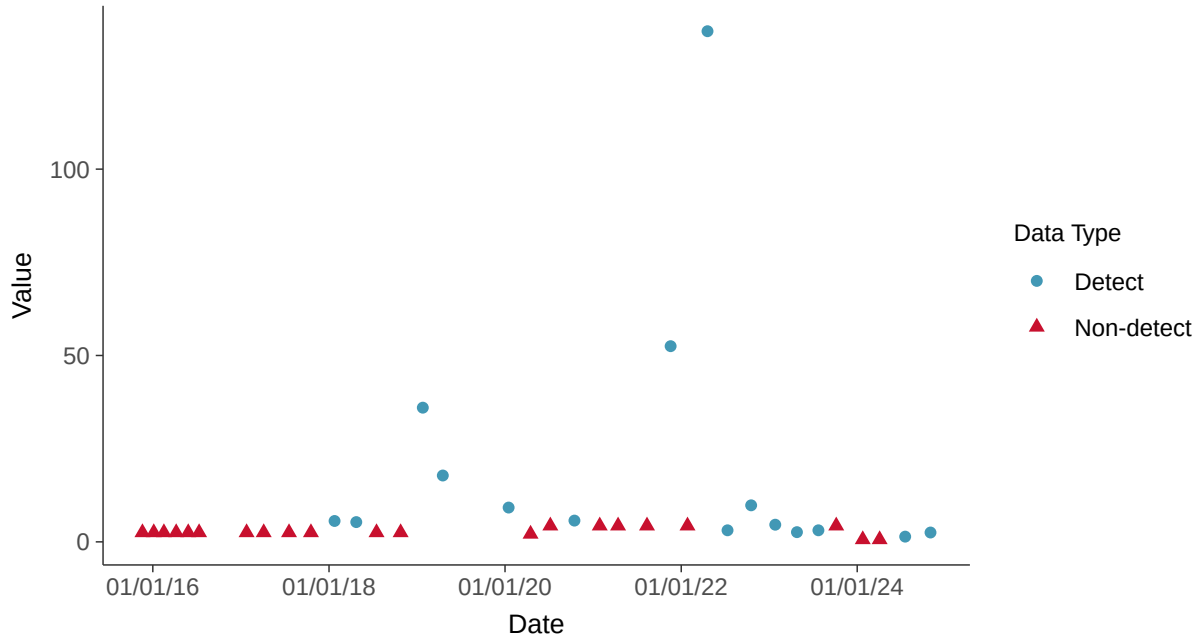


App. I Metals: Copper, MW-3

ID: 03_01_111

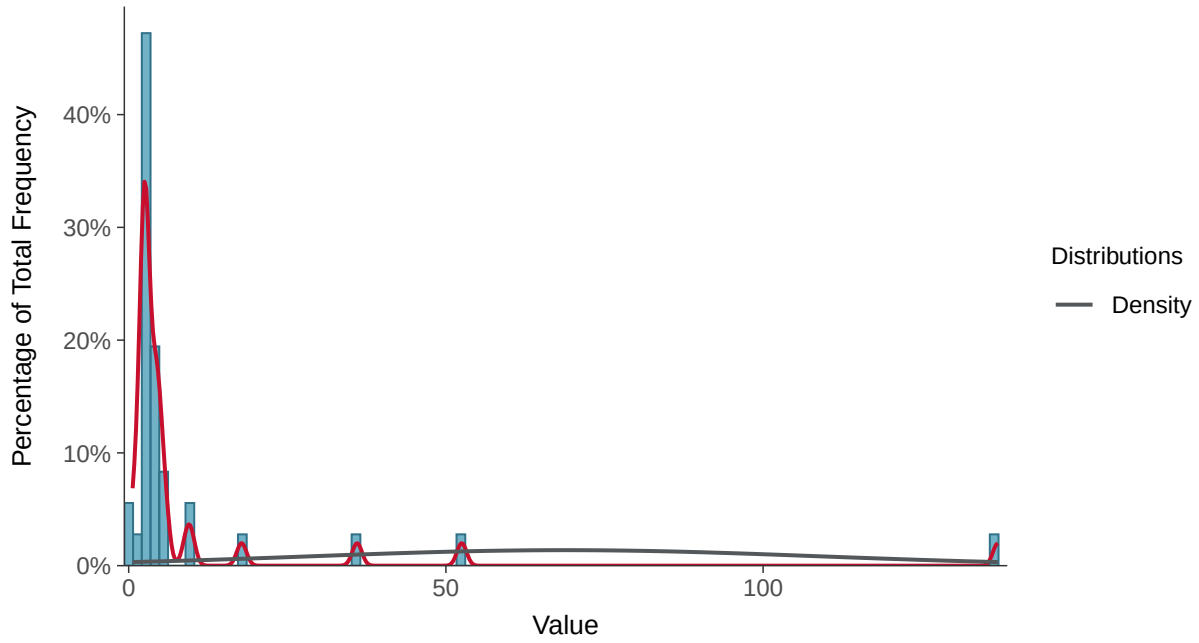
Scatter Plot

Copper, MW-3 (ug/L)



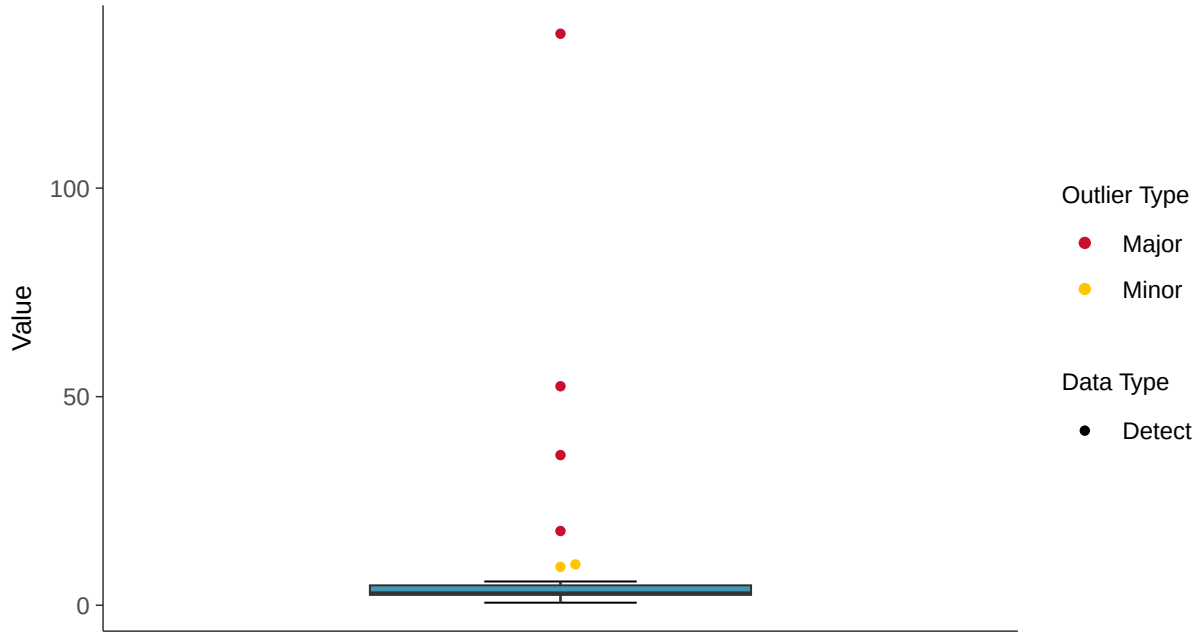
Histogram

Copper, MW-3 (ug/L)



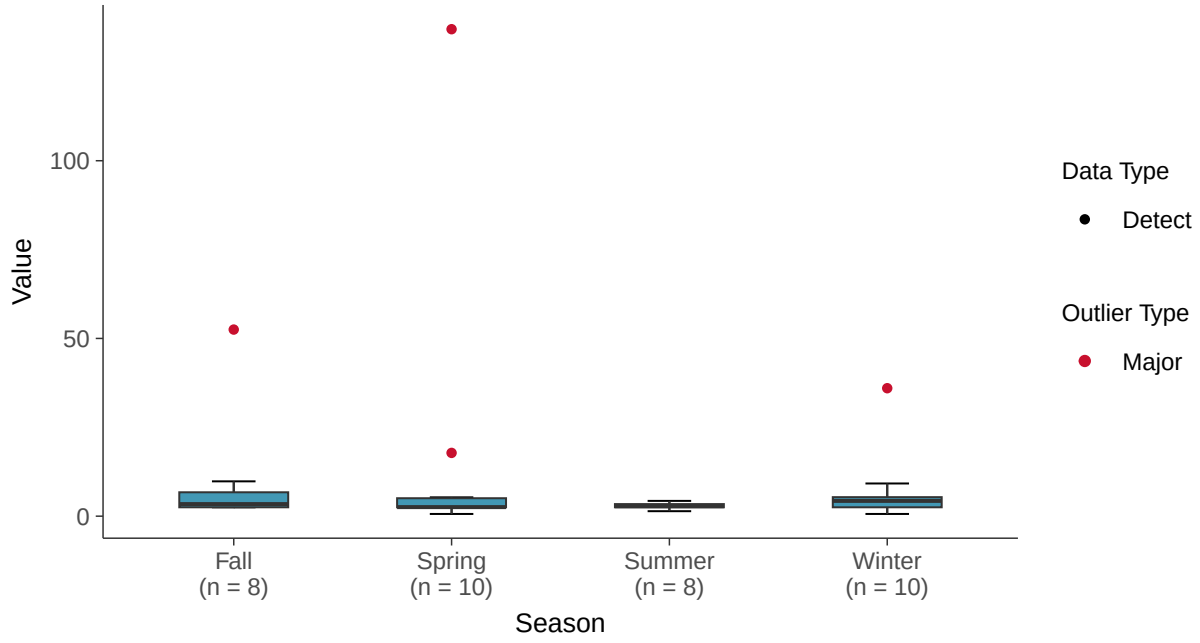
Boxplot

Copper, MW-3 (ug/L)



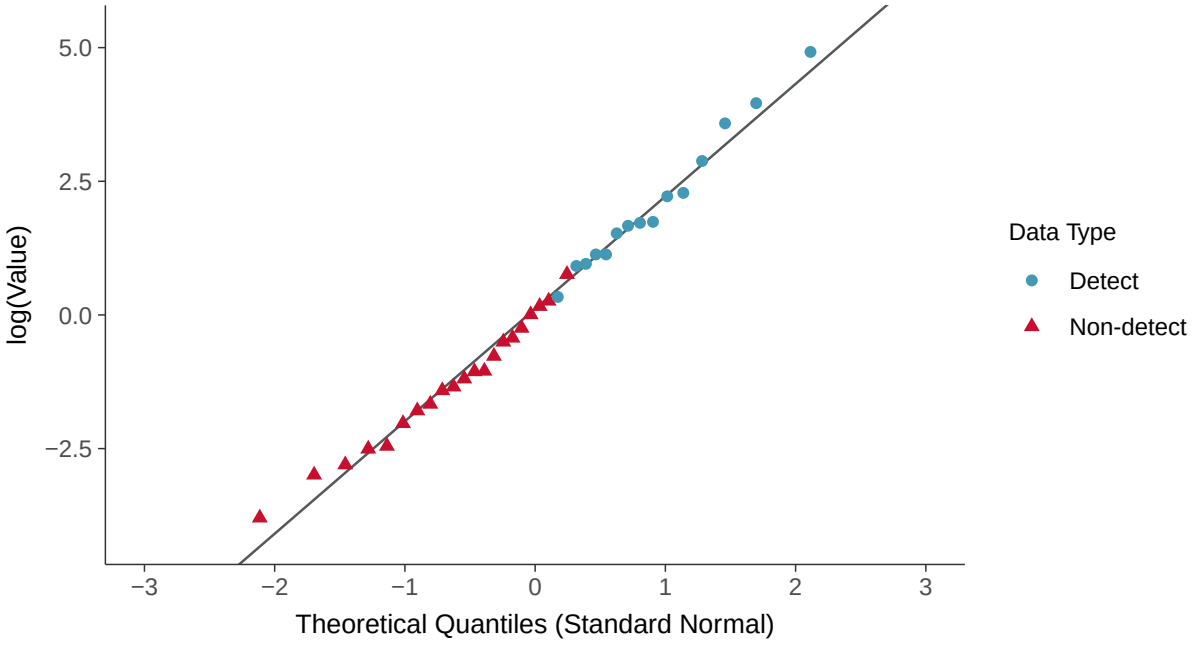
Boxplot by Season

Copper, MW-3 (ug/L)



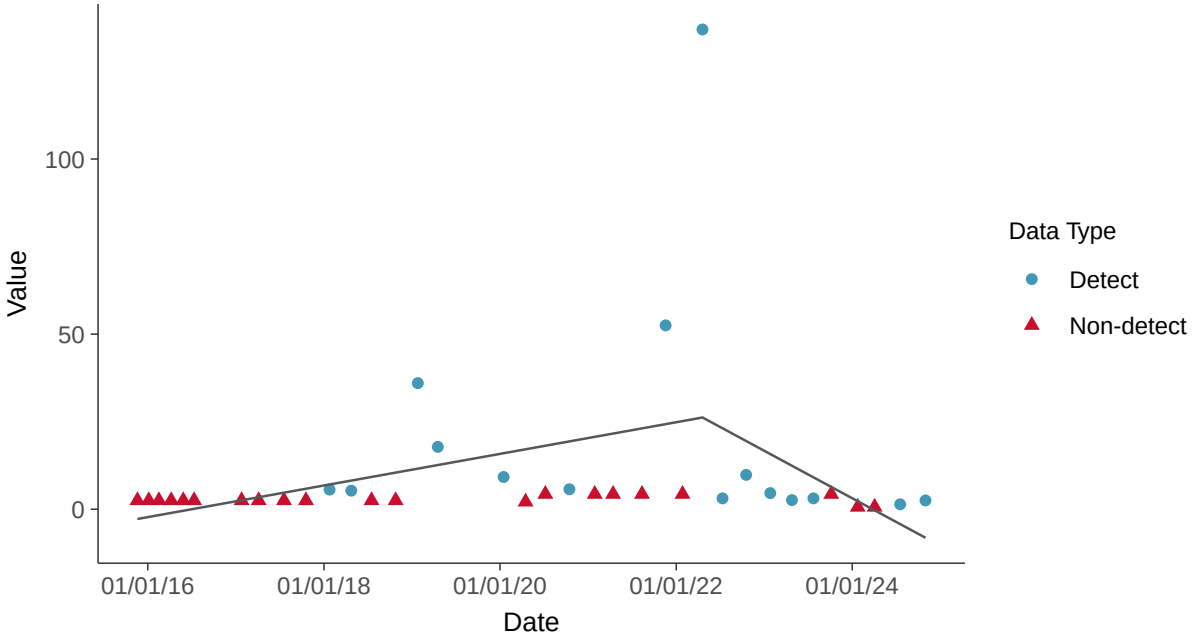
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-3 (ug/L)



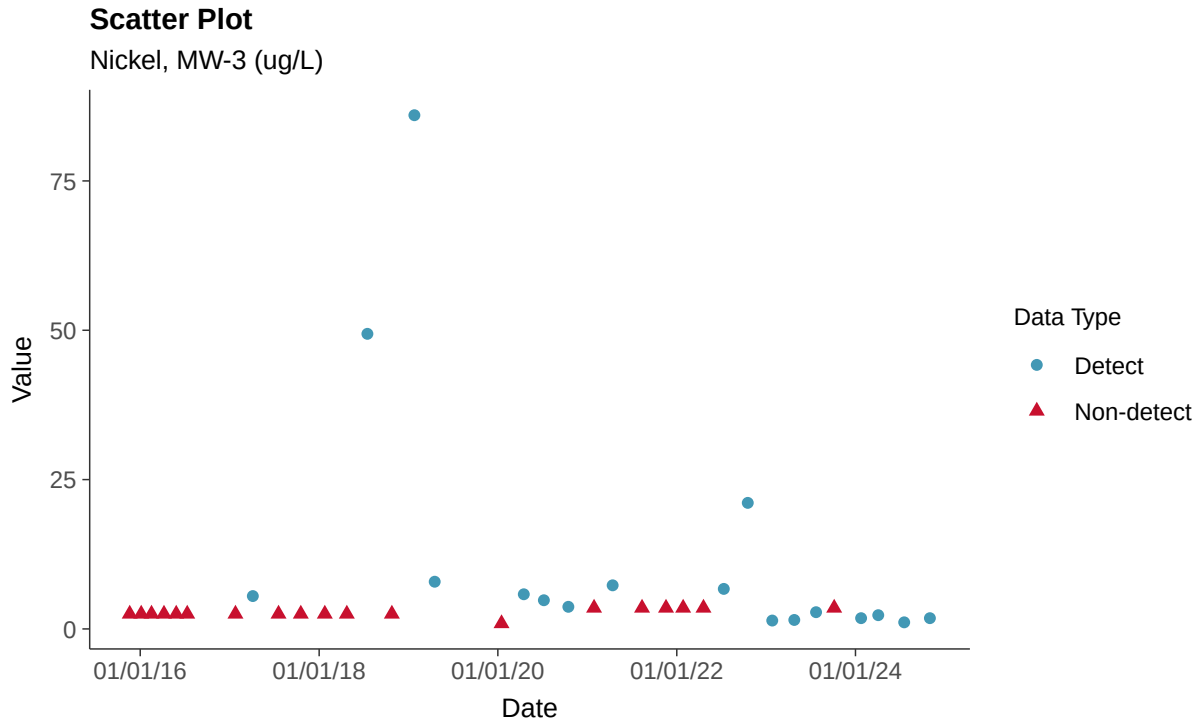
Trend Regression: Piecewise Linear-Linear

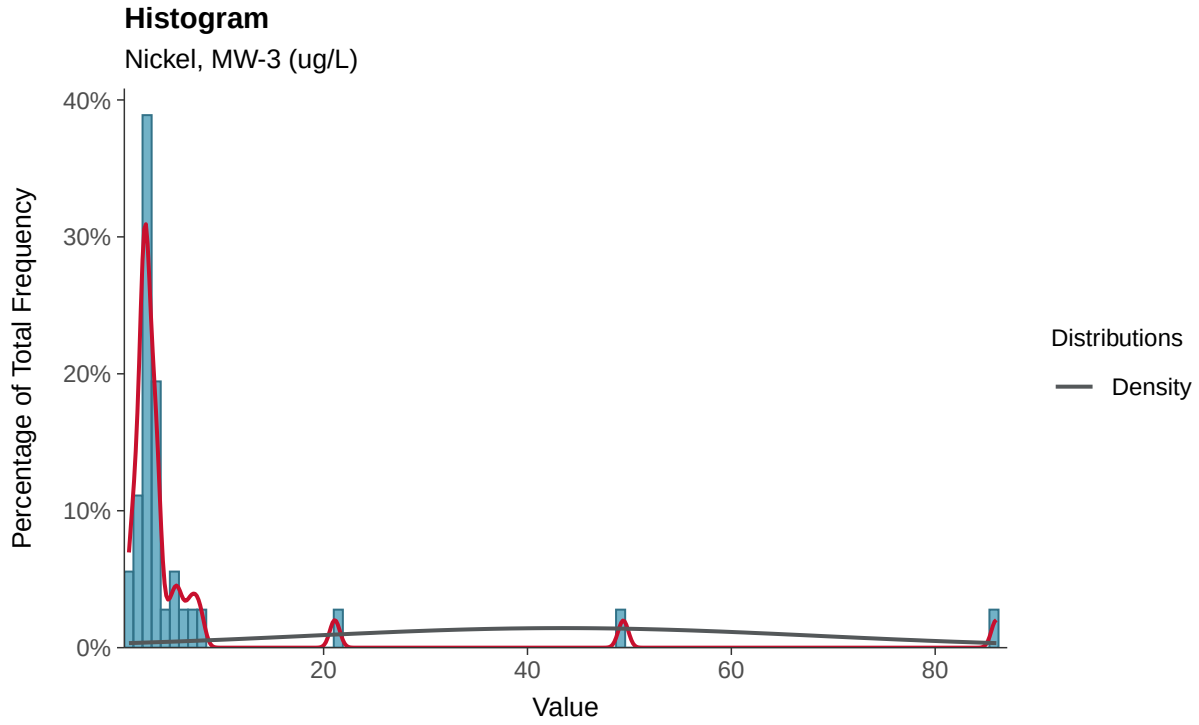
Copper, MW-3 (ug/L)



App. I Metals: Nickel, MW-3

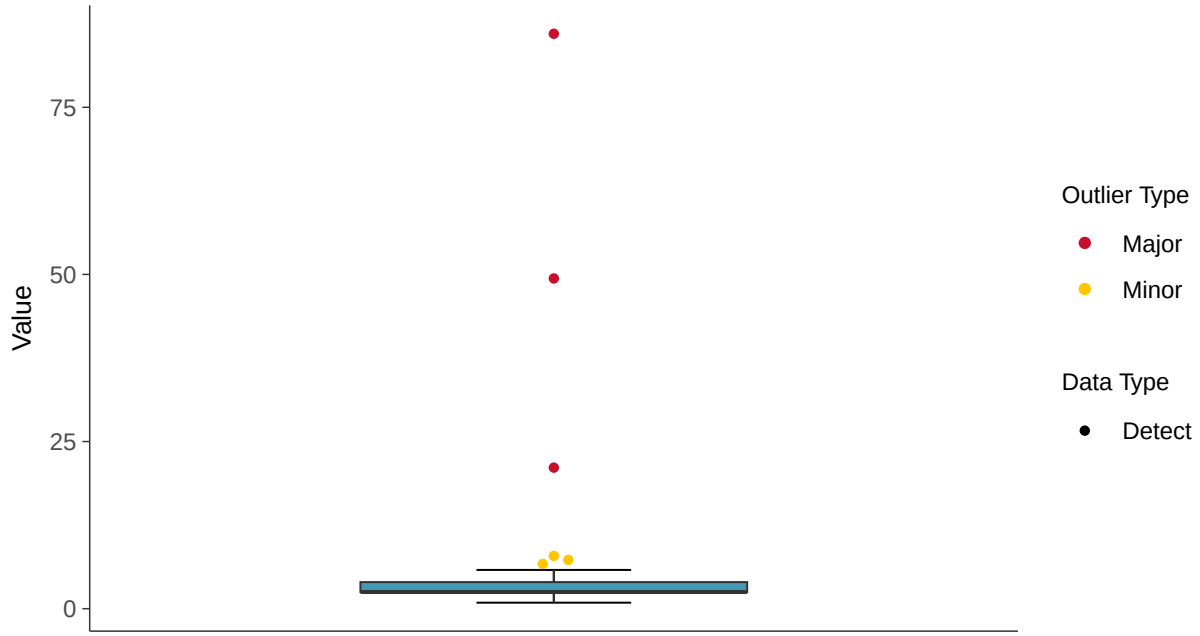
ID: 03_01_117





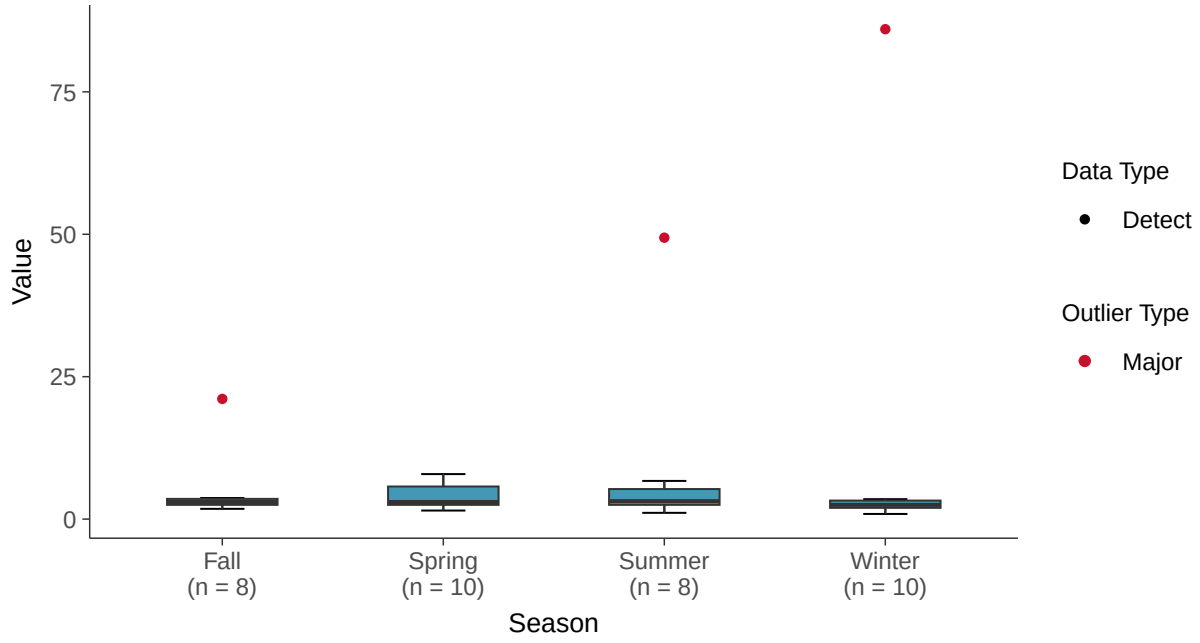
Boxplot

Nickel, MW-3 (ug/L)



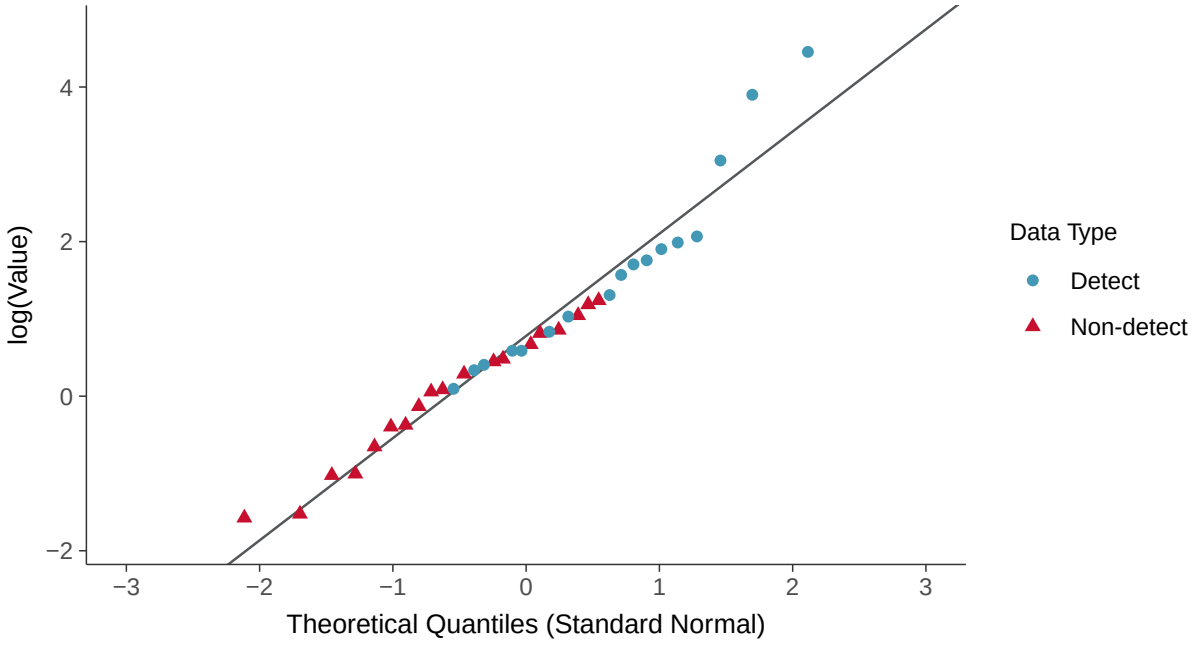
Boxplot by Season

Nickel, MW-3 (ug/L)



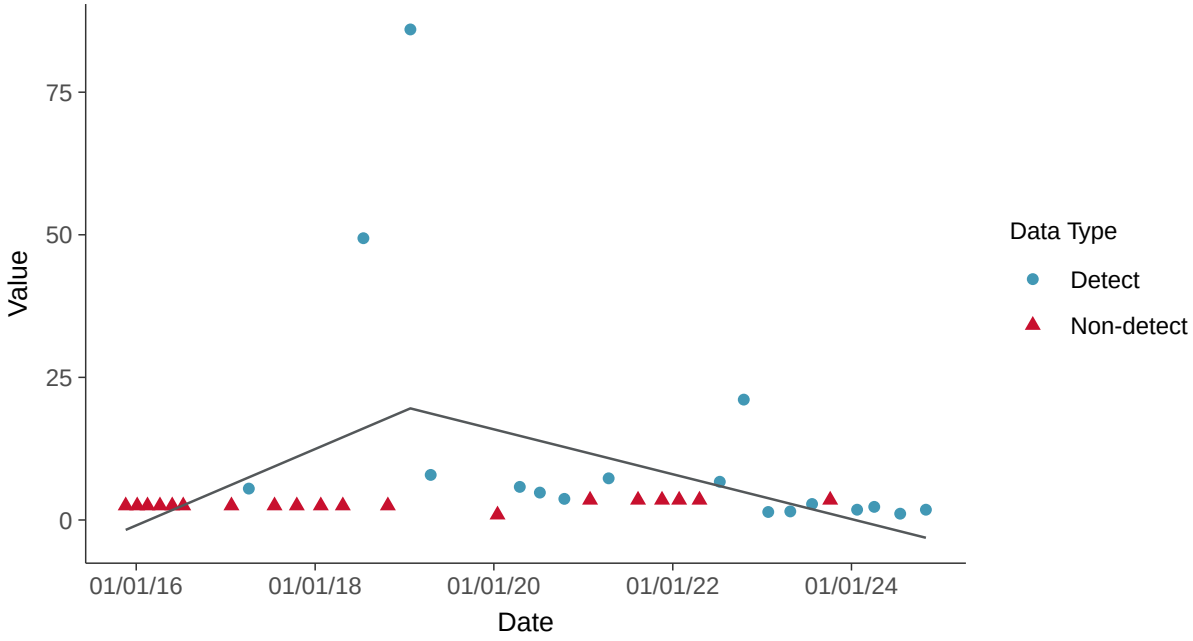
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-3 (ug/L)



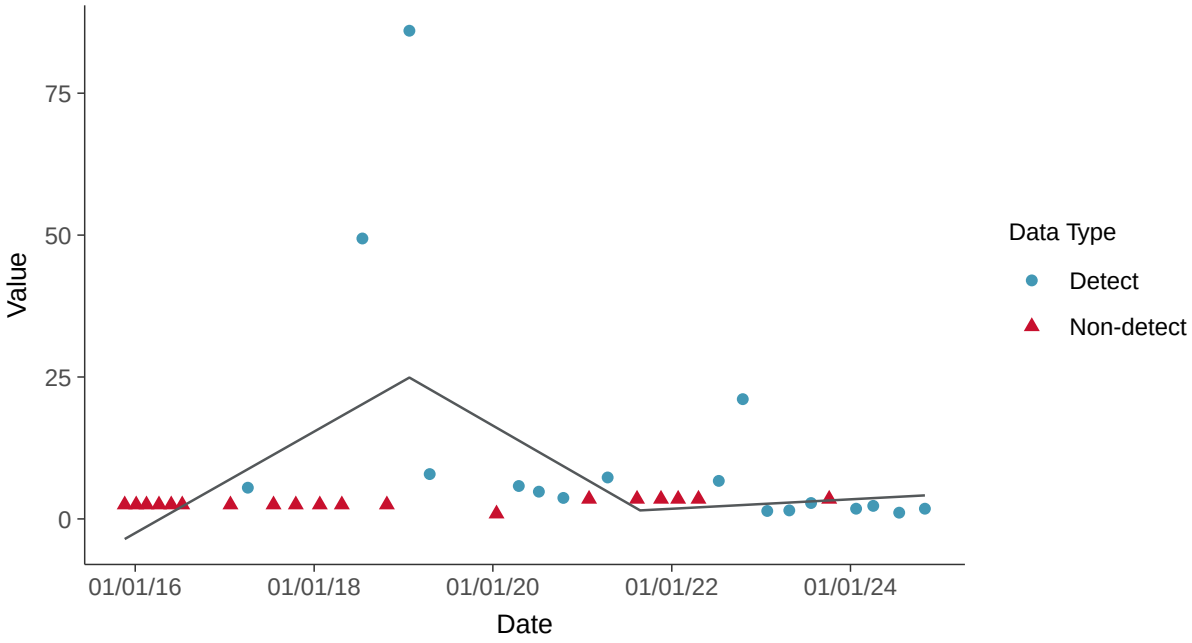
Trend Regression: Piecewise Linear-Linear

Nickel, MW-3 (ug/L)



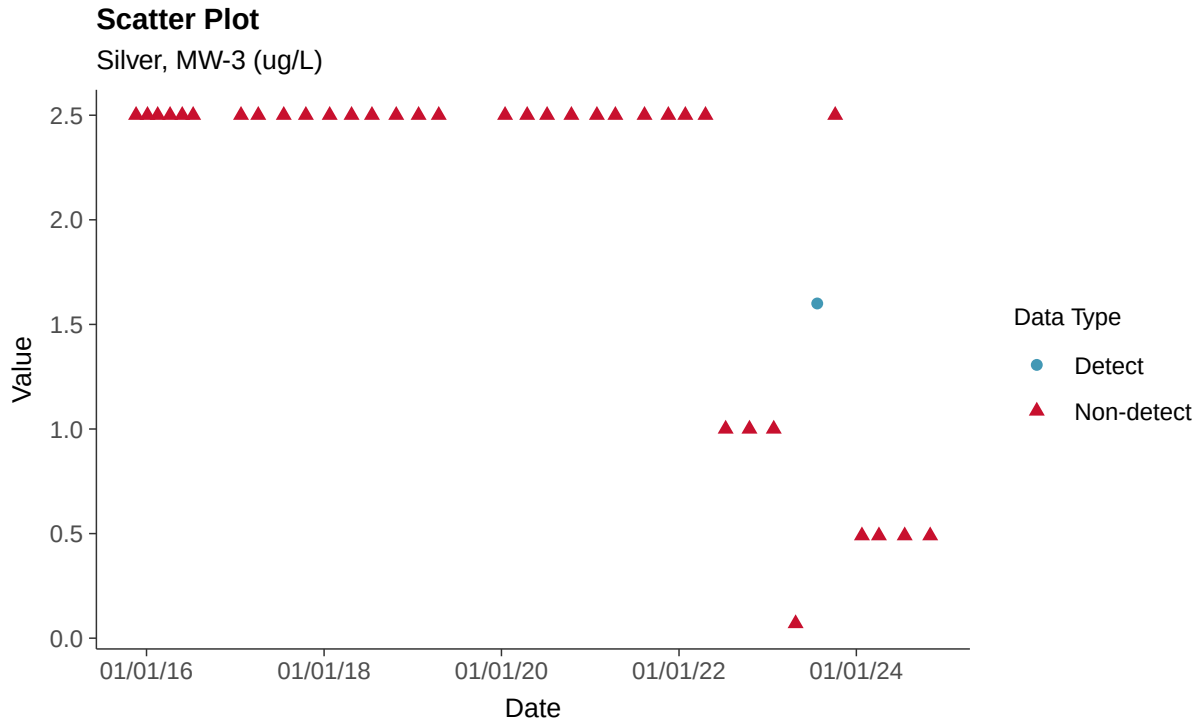
Trend Regression: Piecewise Linear-Linear-Linear

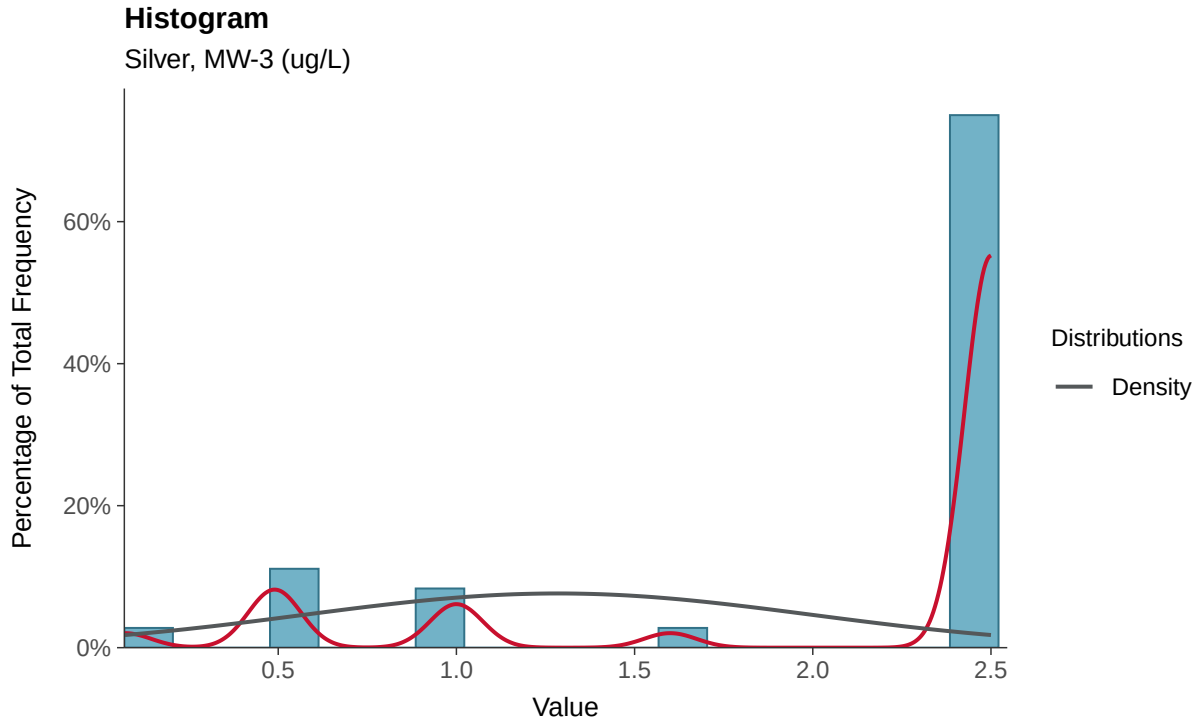
Nickel, MW-3 (ug/L)



App. I Metals: Silver, MW-3

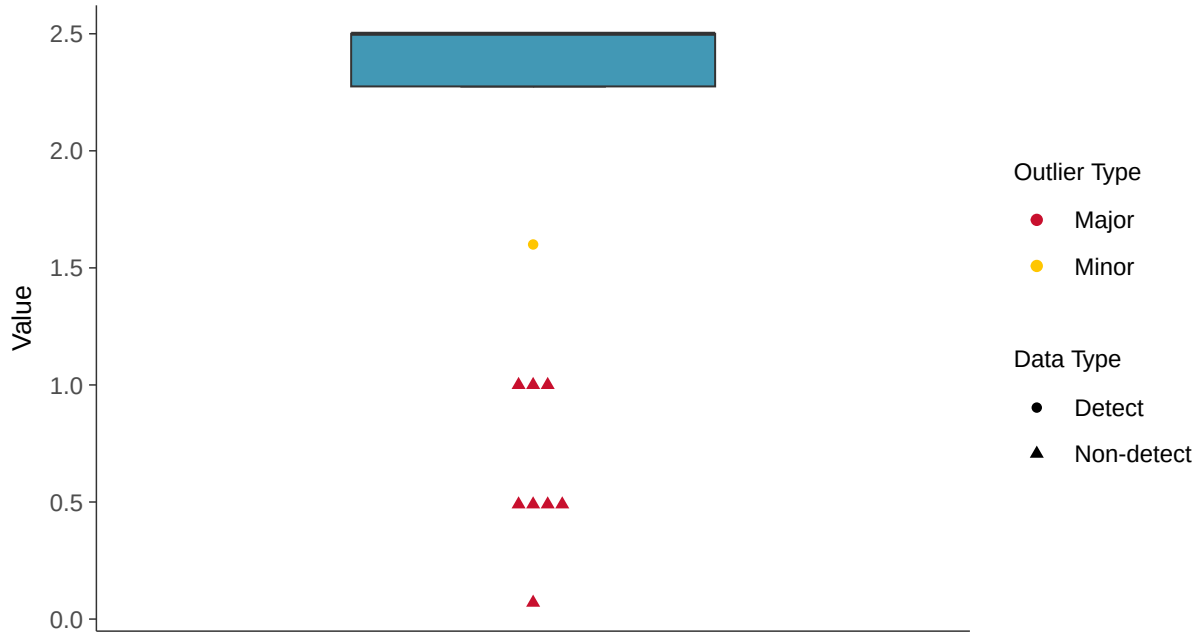
ID: 03_01_122





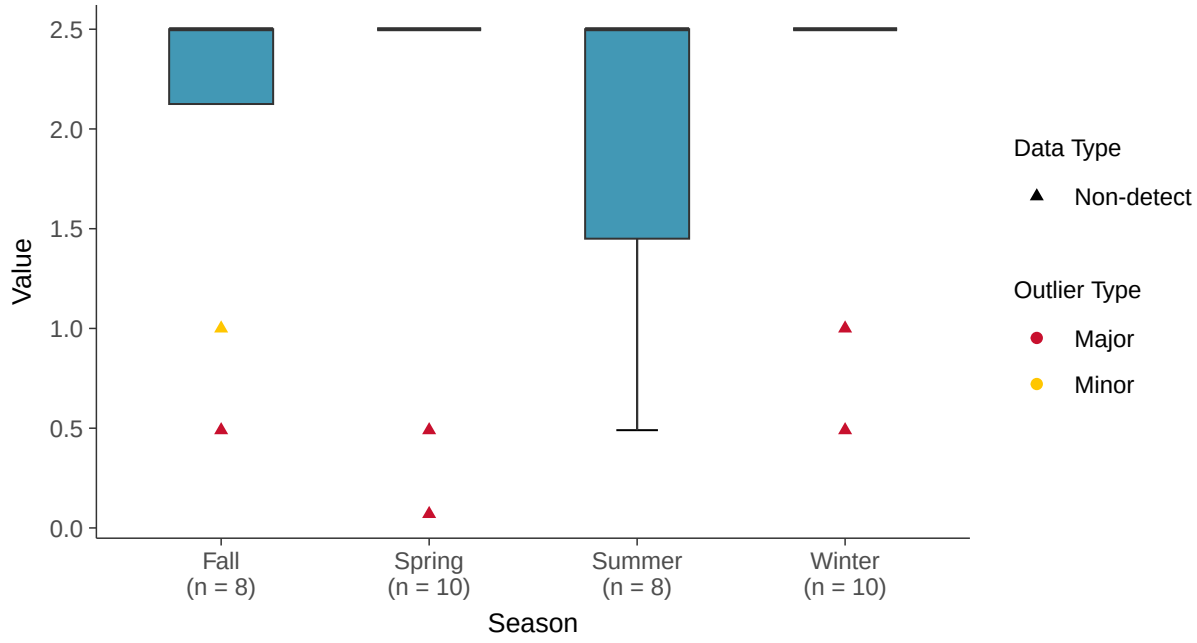
Boxplot

Silver, MW-3 (ug/L)



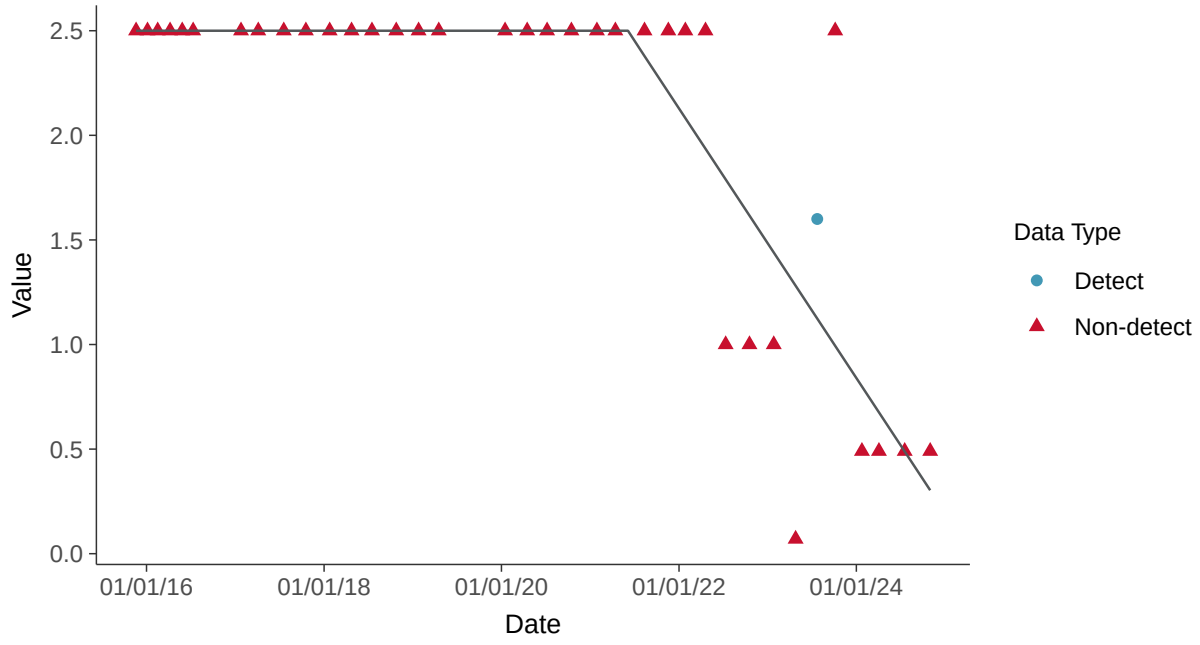
Boxplot by Season

Silver, MW-3 (ug/L)



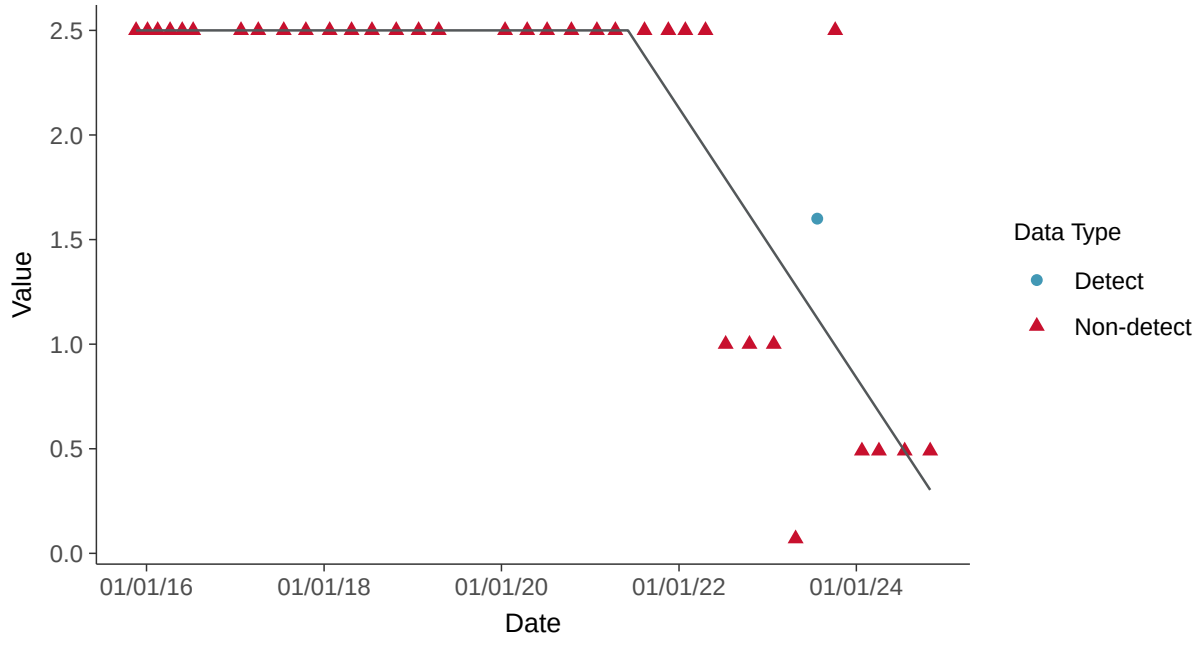
Trend Regression: Piecewise Linear-Linear

Silver, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-3 (ug/L)

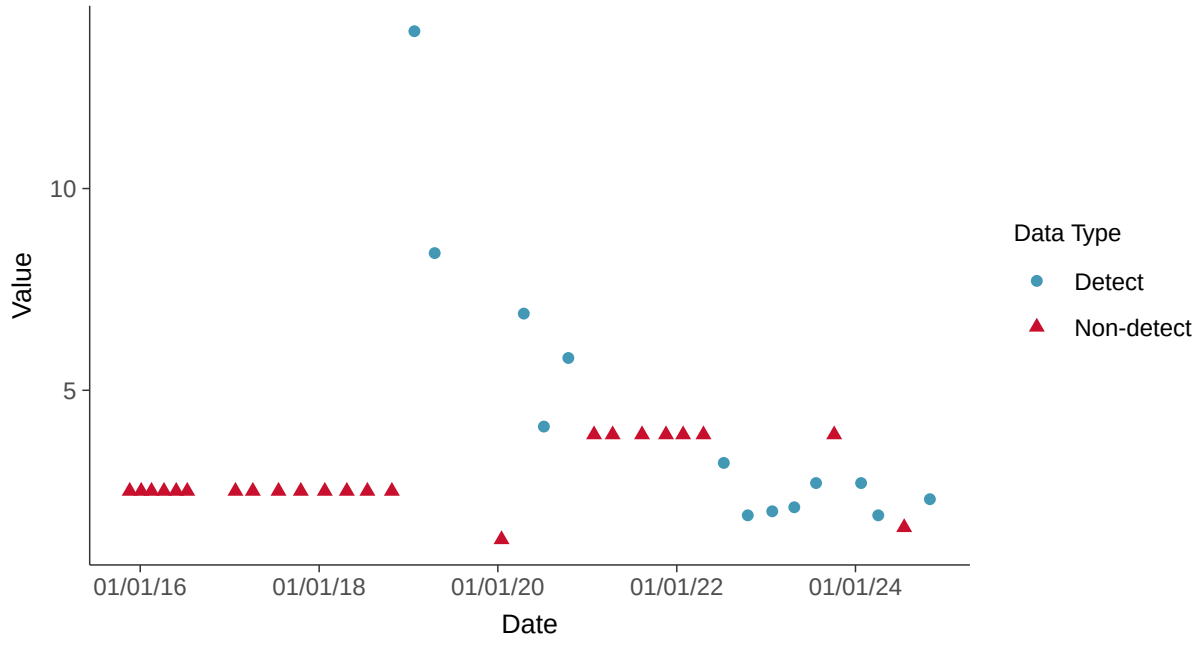


App. I Metals: Vanadium, MW-3

ID: 03_01_127

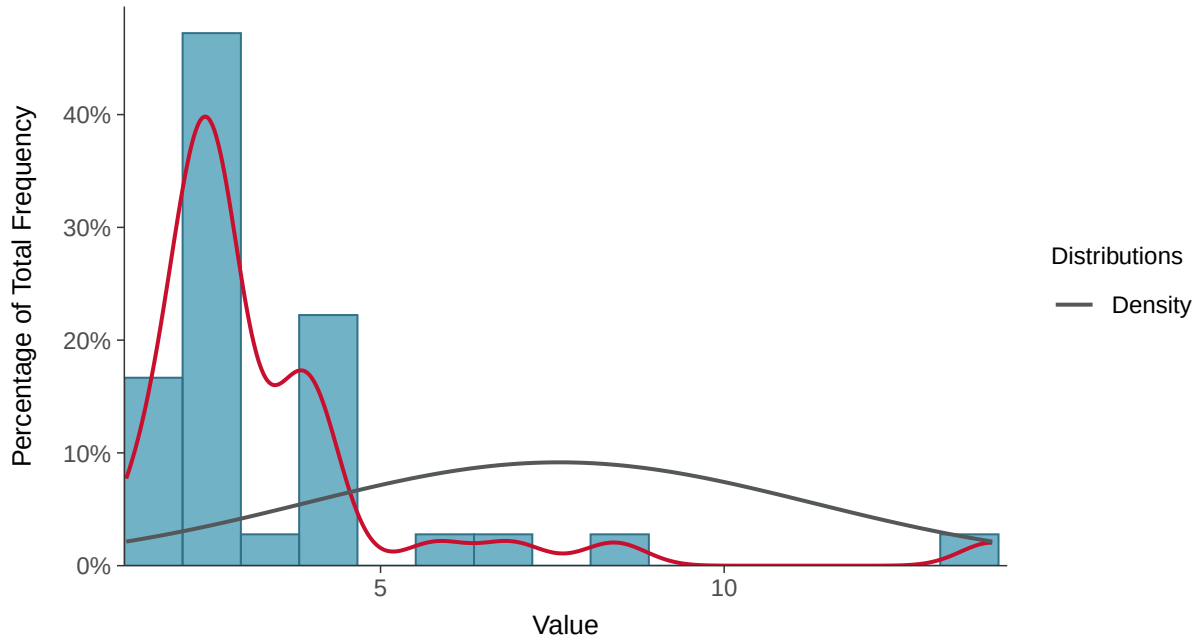
Scatter Plot

Vanadium, MW-3 (ug/L)



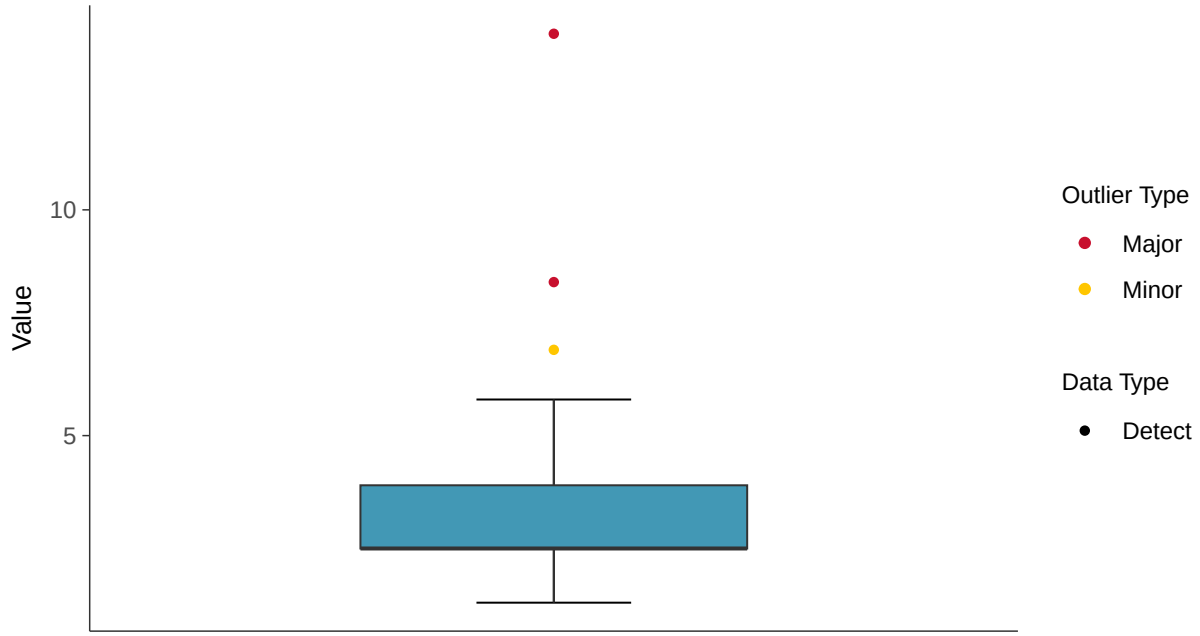
Histogram

Vanadium, MW-3 (ug/L)



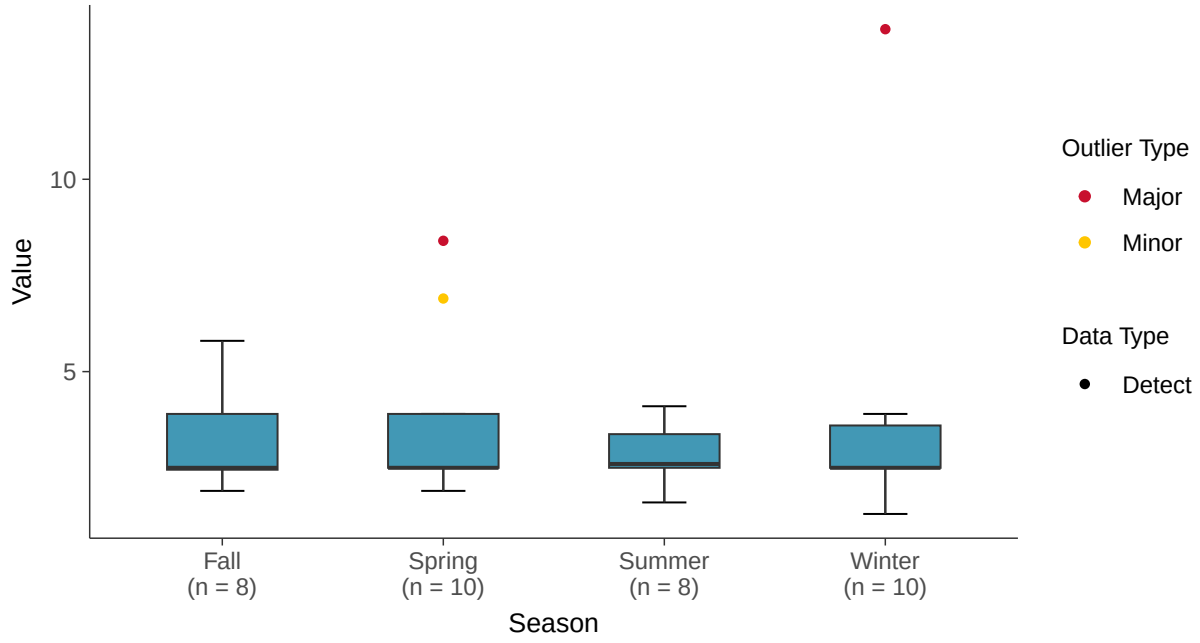
Boxplot

Vanadium, MW-3 (ug/L)



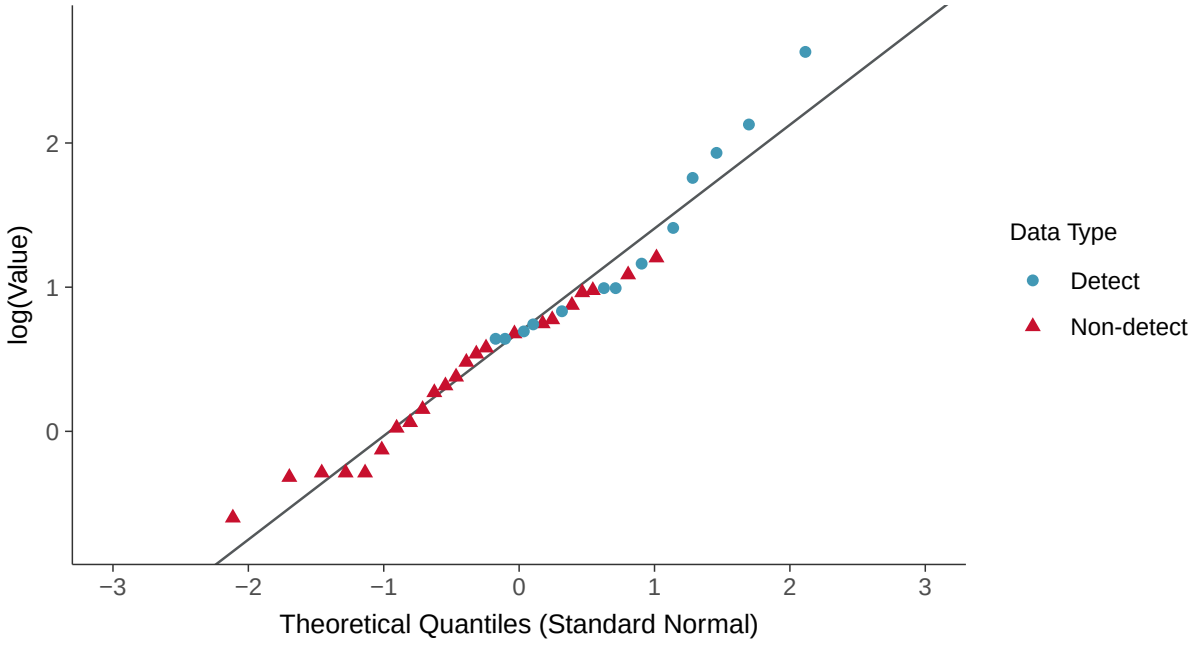
Boxplot by Season

Vanadium, MW-3 (ug/L)



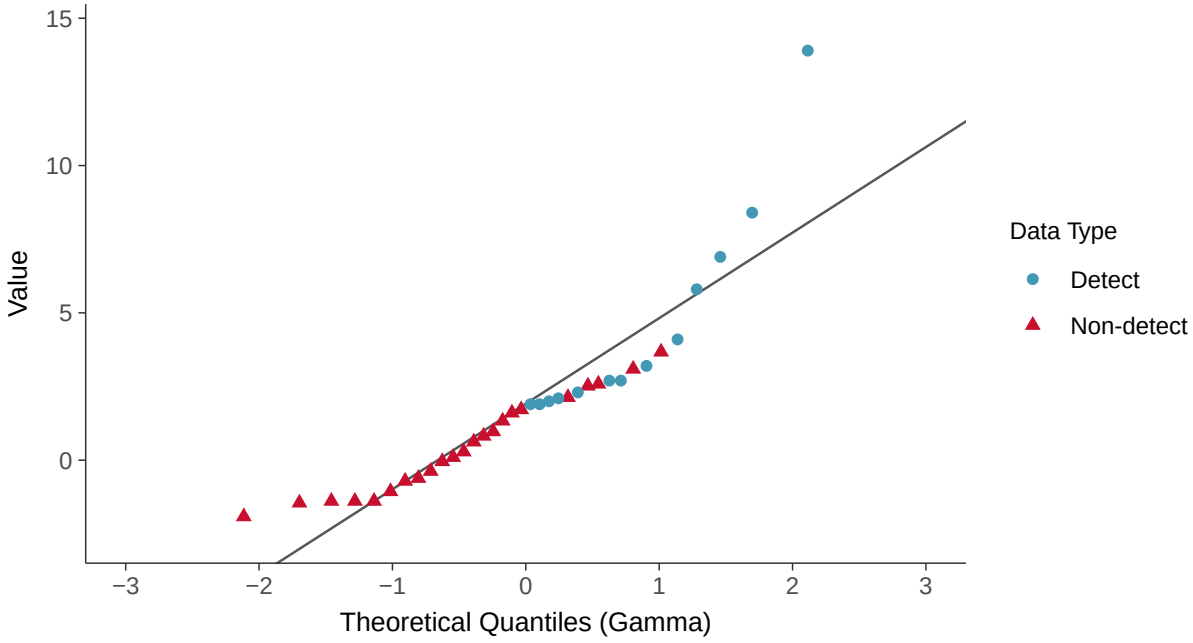
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-3 (ug/L)



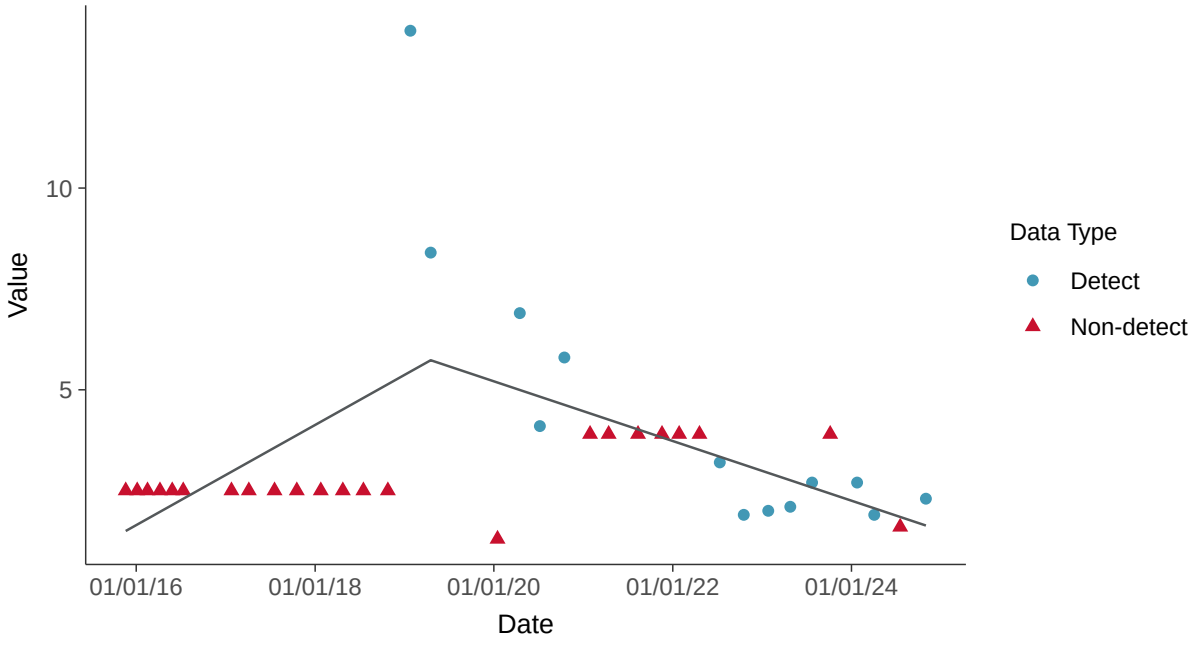
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-3 (ug/L)



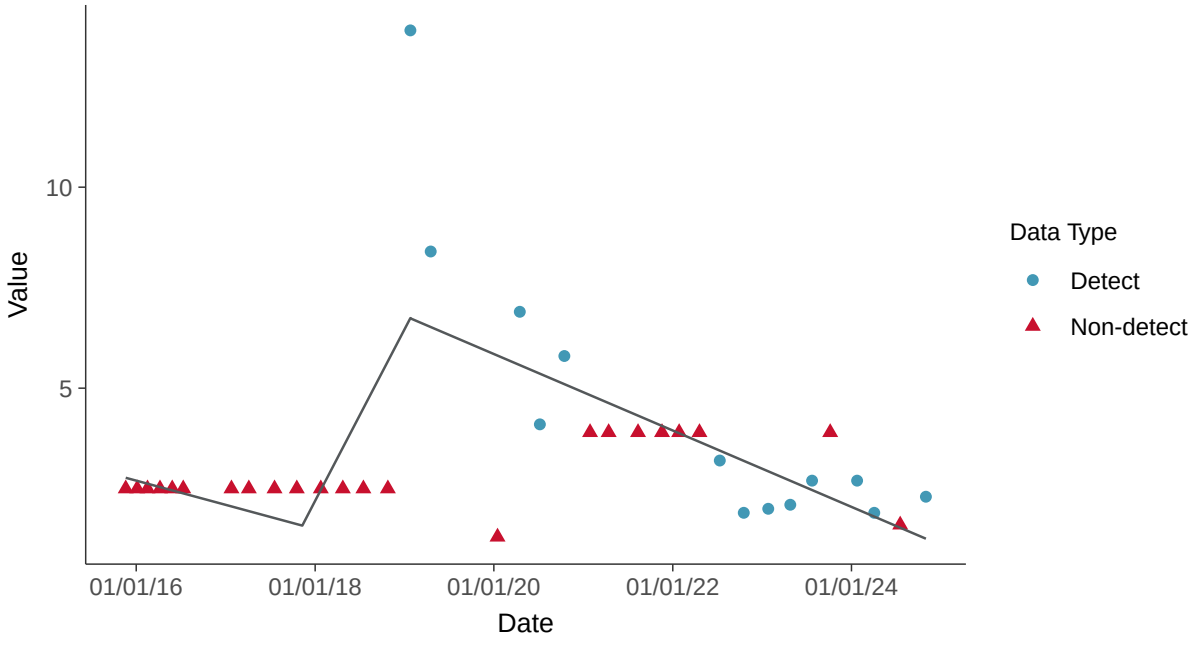
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-3 (ug/L)

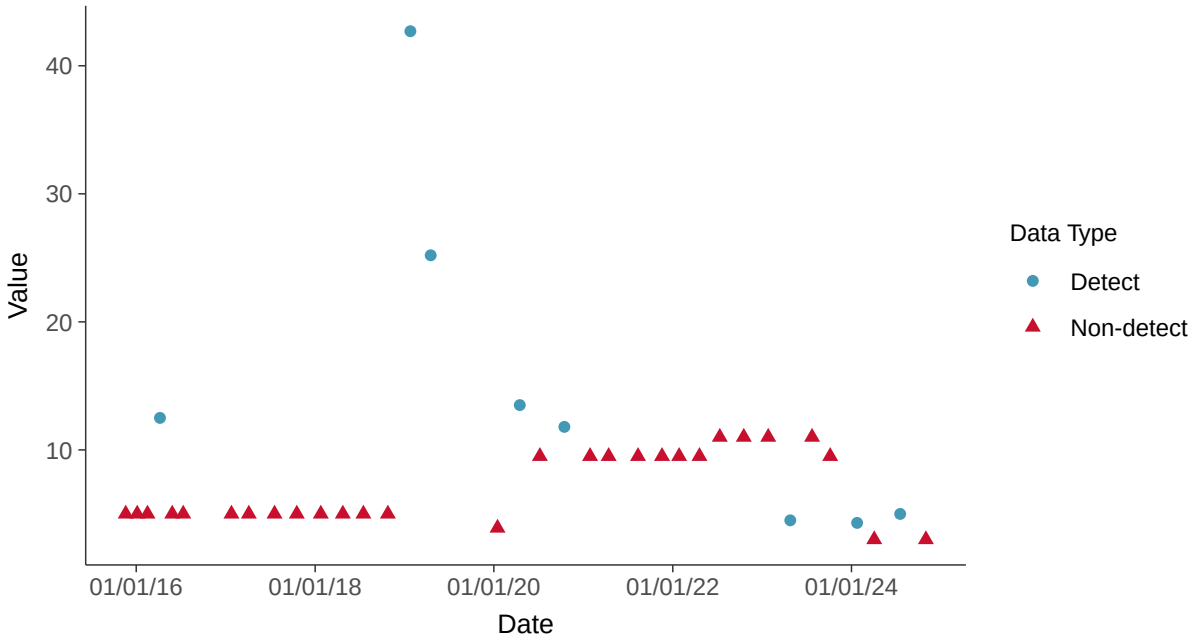


App. I Metals: Zinc, MW-3

ID: 03_01_128

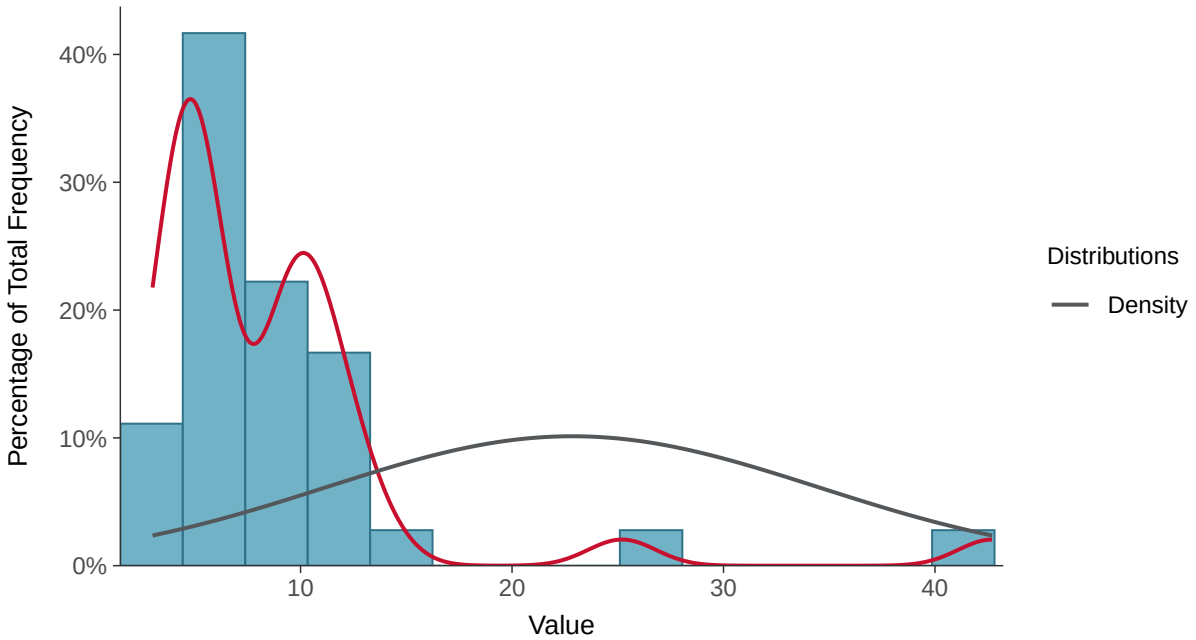
Scatter Plot

Zinc, MW-3 (ug/L)



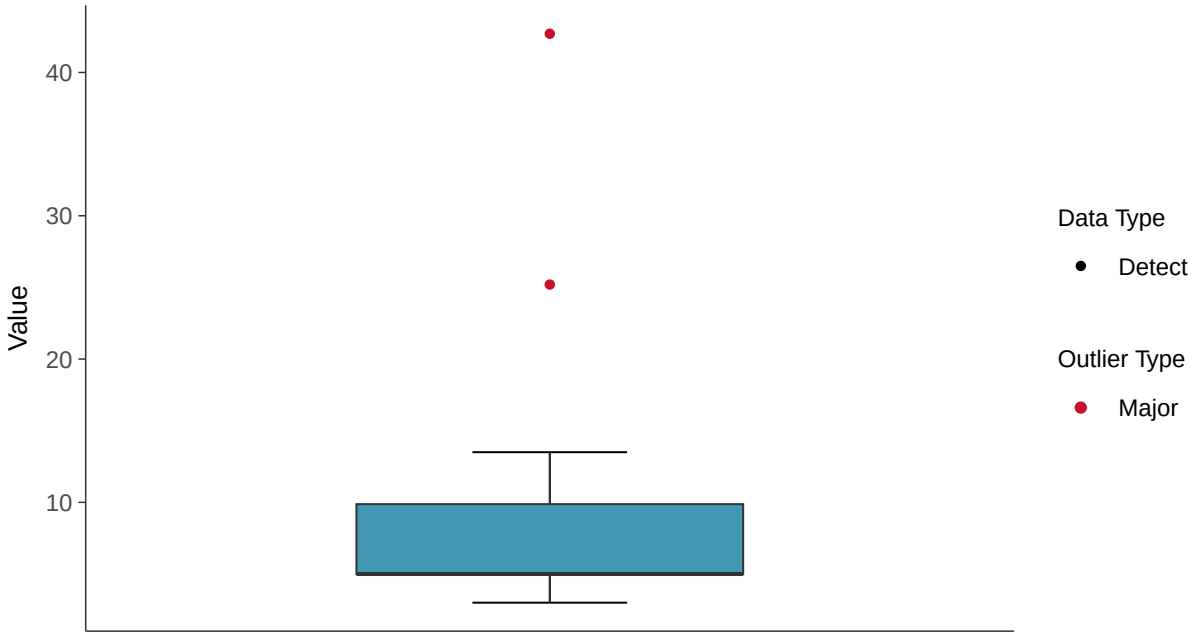
Histogram

Zinc, MW-3 (ug/L)



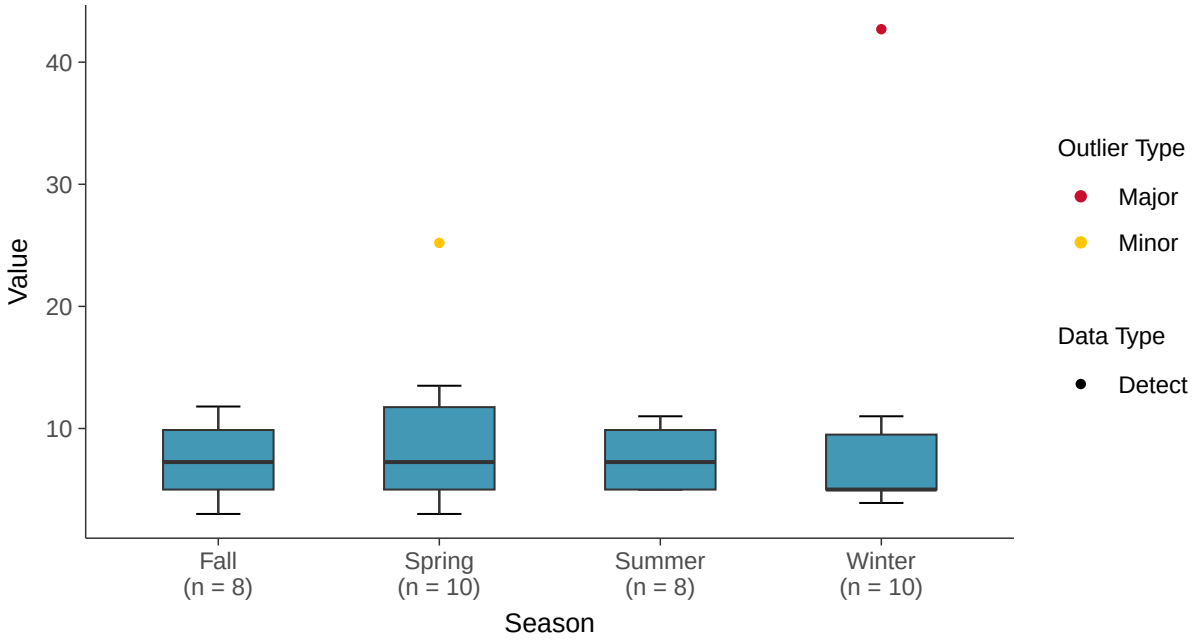
Boxplot

Zinc, MW-3 (ug/L)



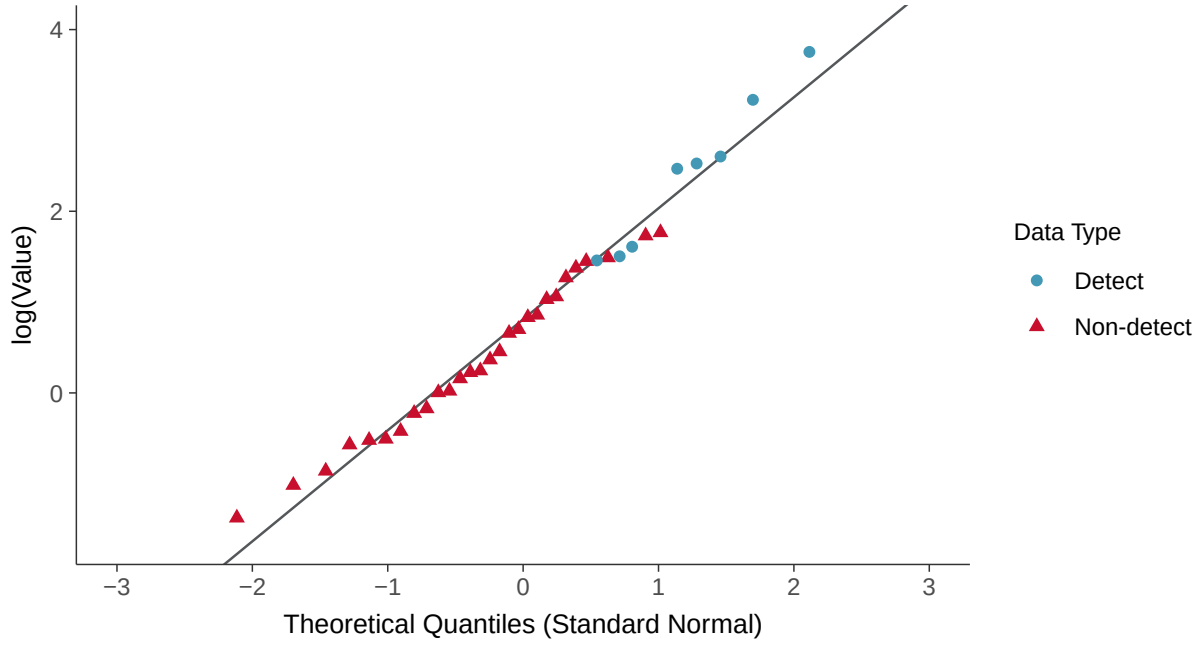
Boxplot by Season

Zinc, MW-3 (ug/L)



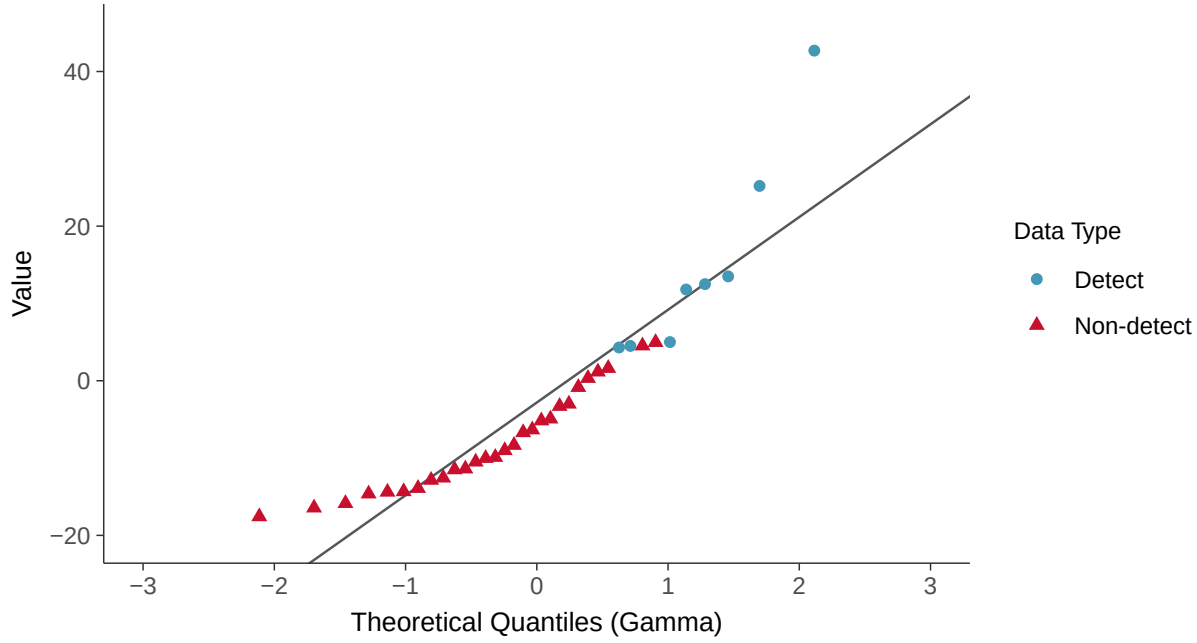
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-3 (ug/L)



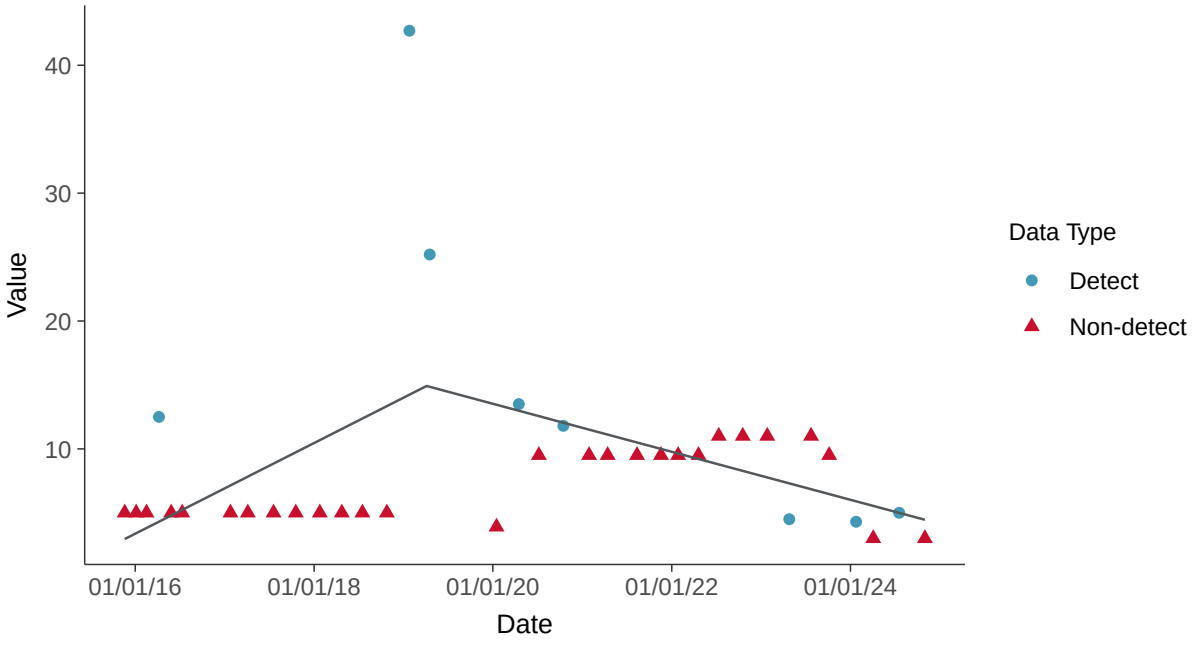
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-3 (ug/L)



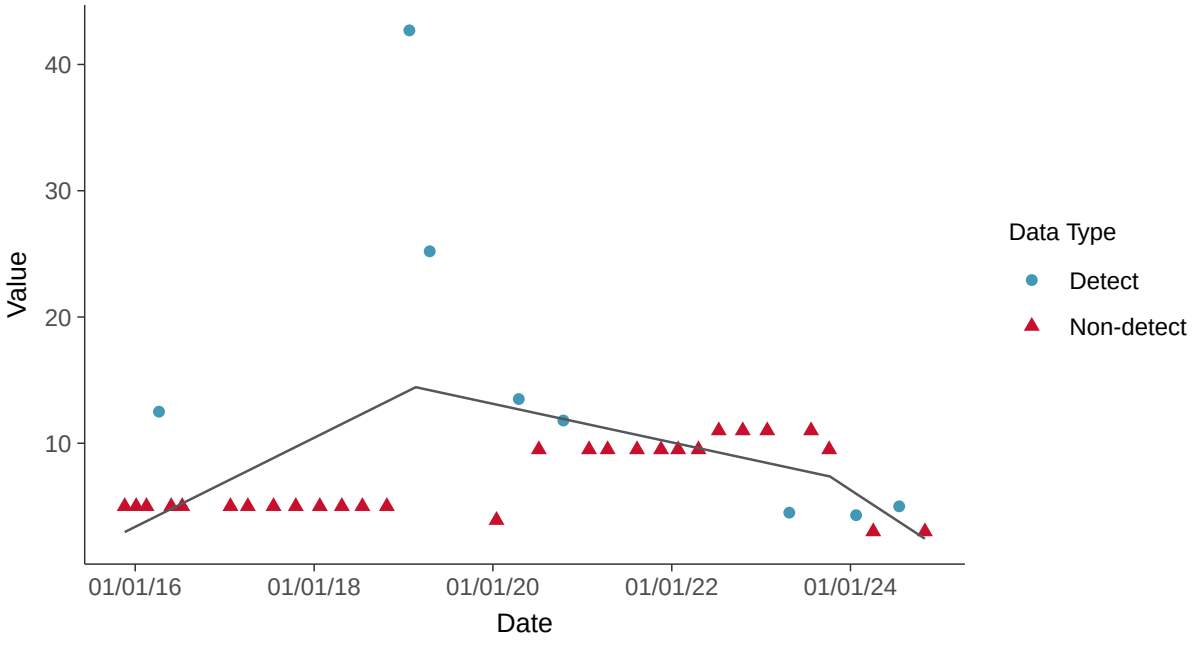
Trend Regression: Piecewise Linear-Linear

Zinc, MW-3 (ug/L)



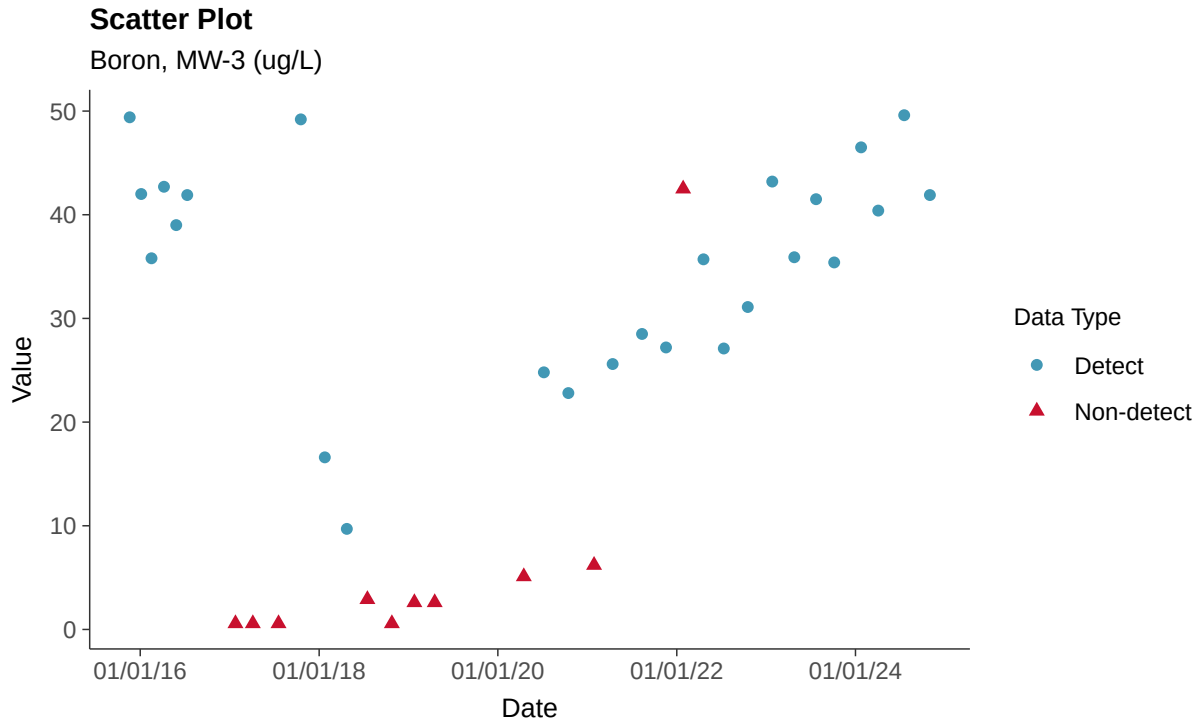
Trend Regression: Piecewise Linear-Linear-Linear

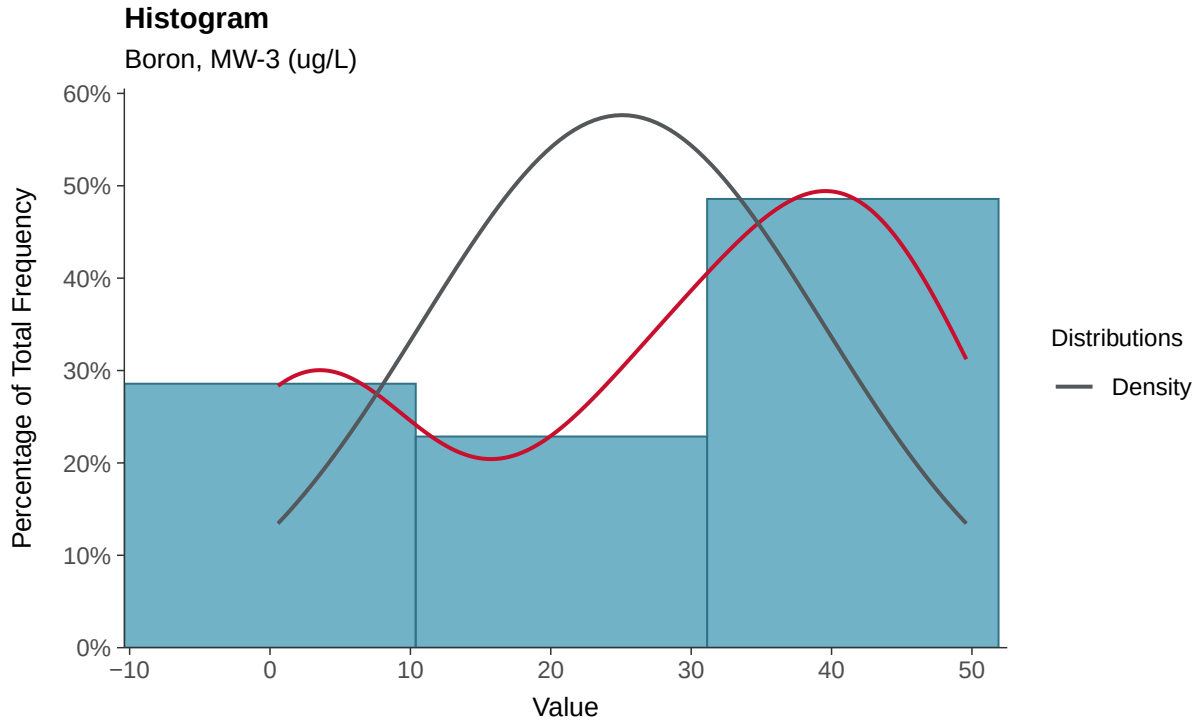
Zinc, MW-3 (ug/L)



App. III: Boron, MW-3

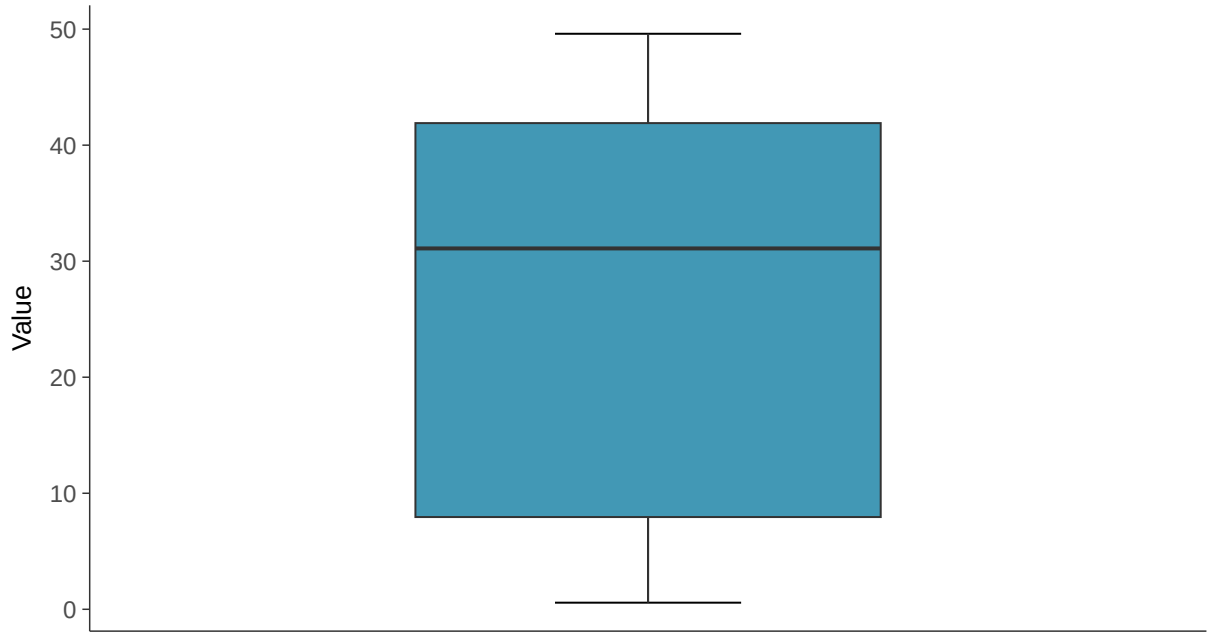
ID: 03_02_105





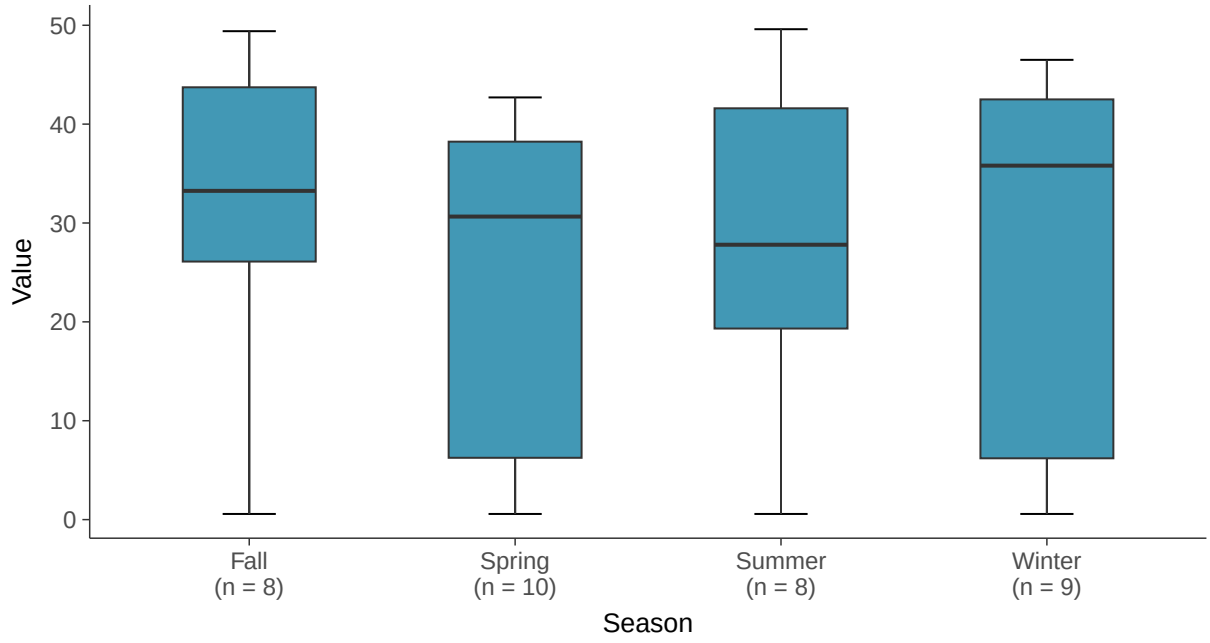
Boxplot

Boron, MW-3 (ug/L)



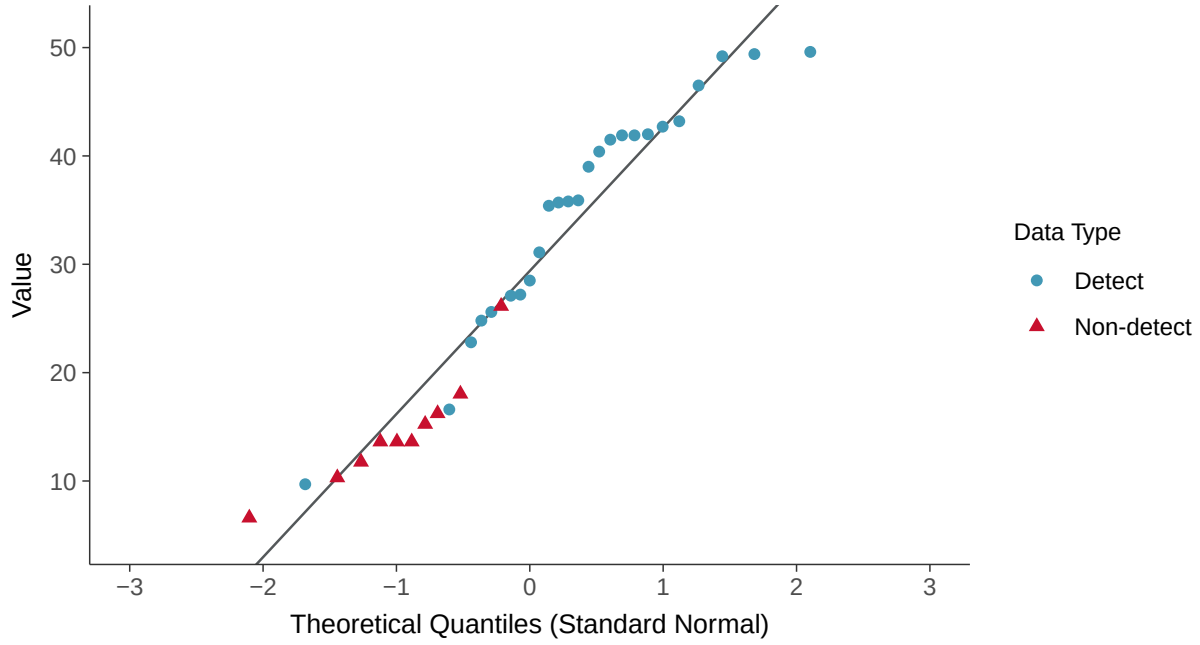
Boxplot by Season

Boron, MW-3 (ug/L)



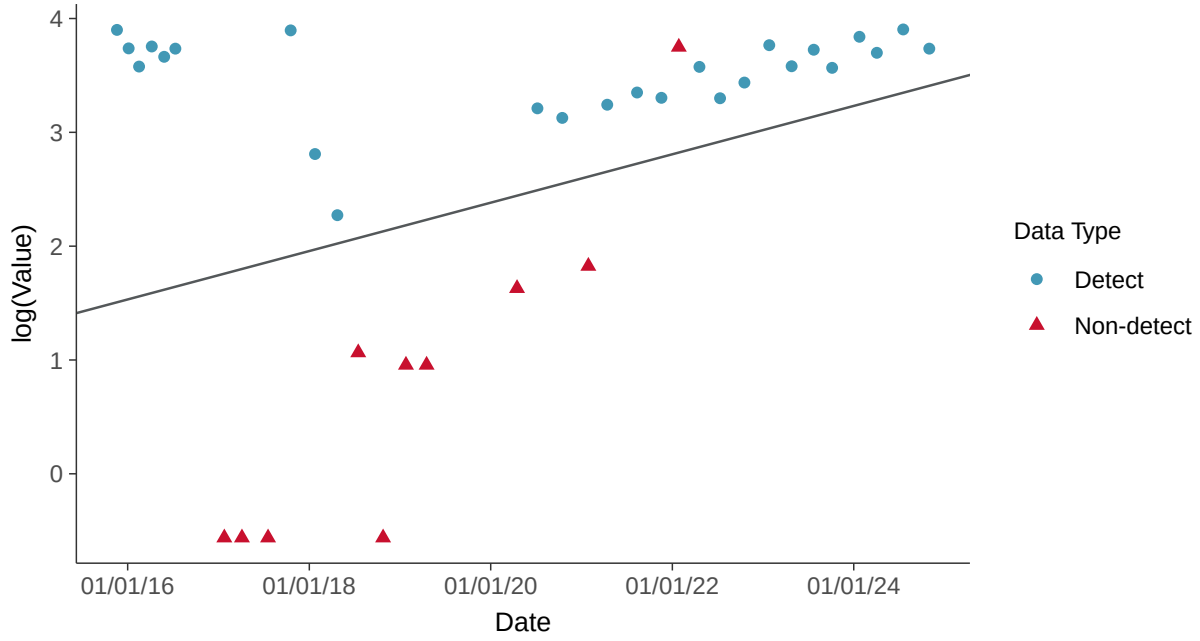
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-3 (ug/L)



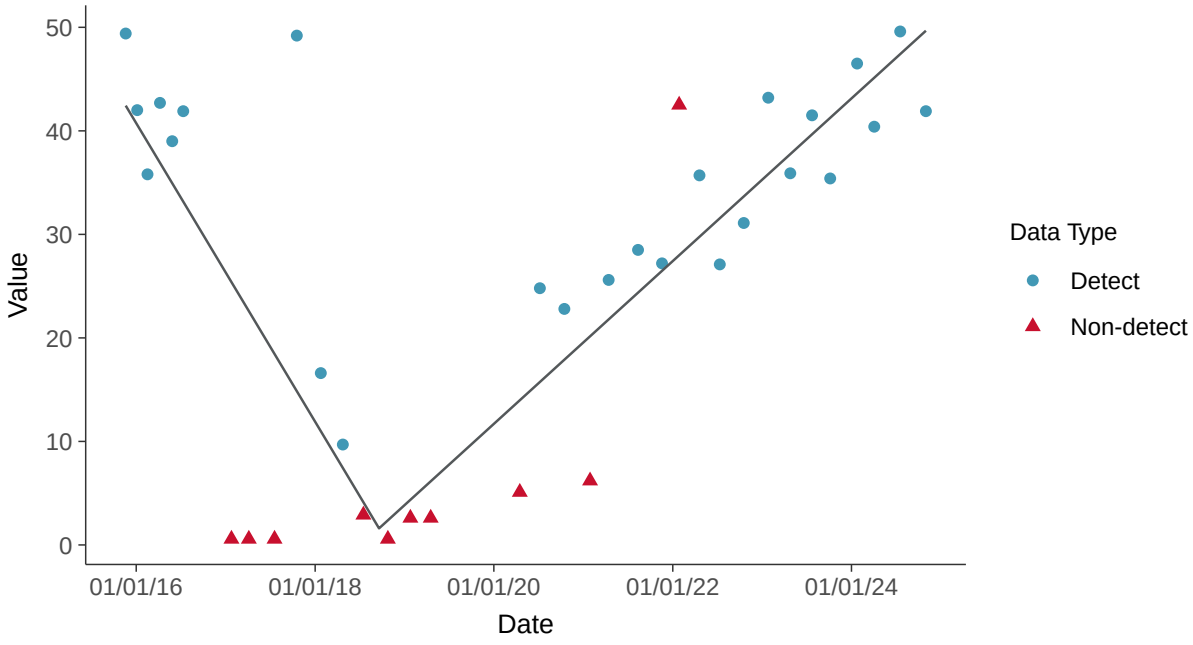
Trend Regression: Lognormal MLE

Boron, MW-3 (ug/L)



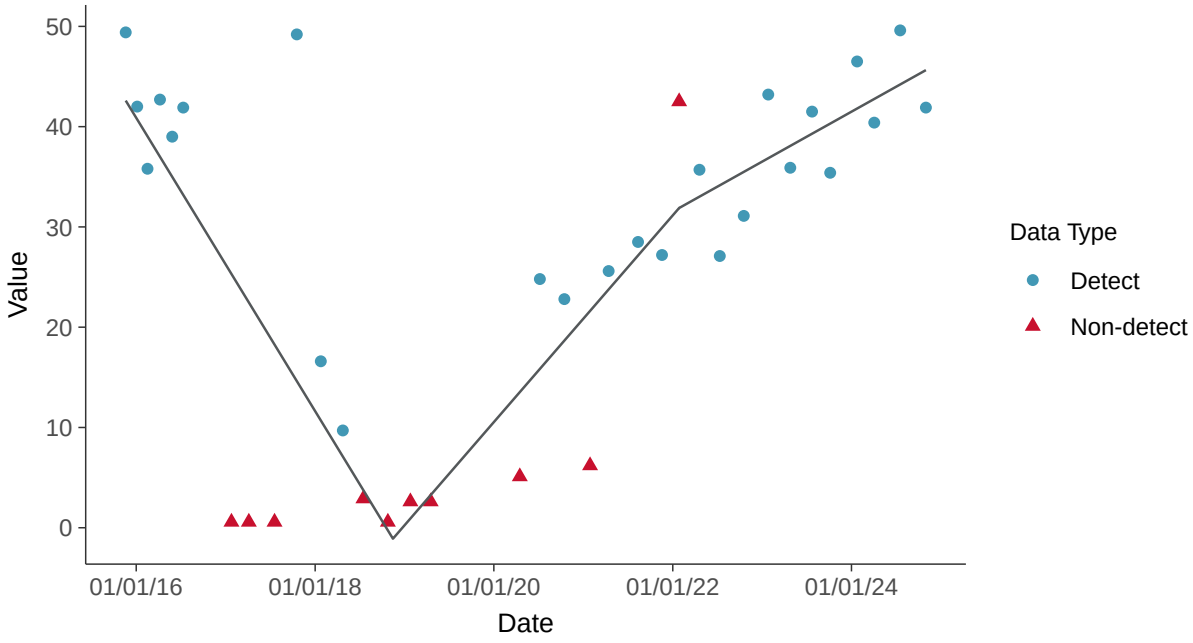
Trend Regression: Piecewise Linear-Linear

Boron, MW-3 (ug/L)



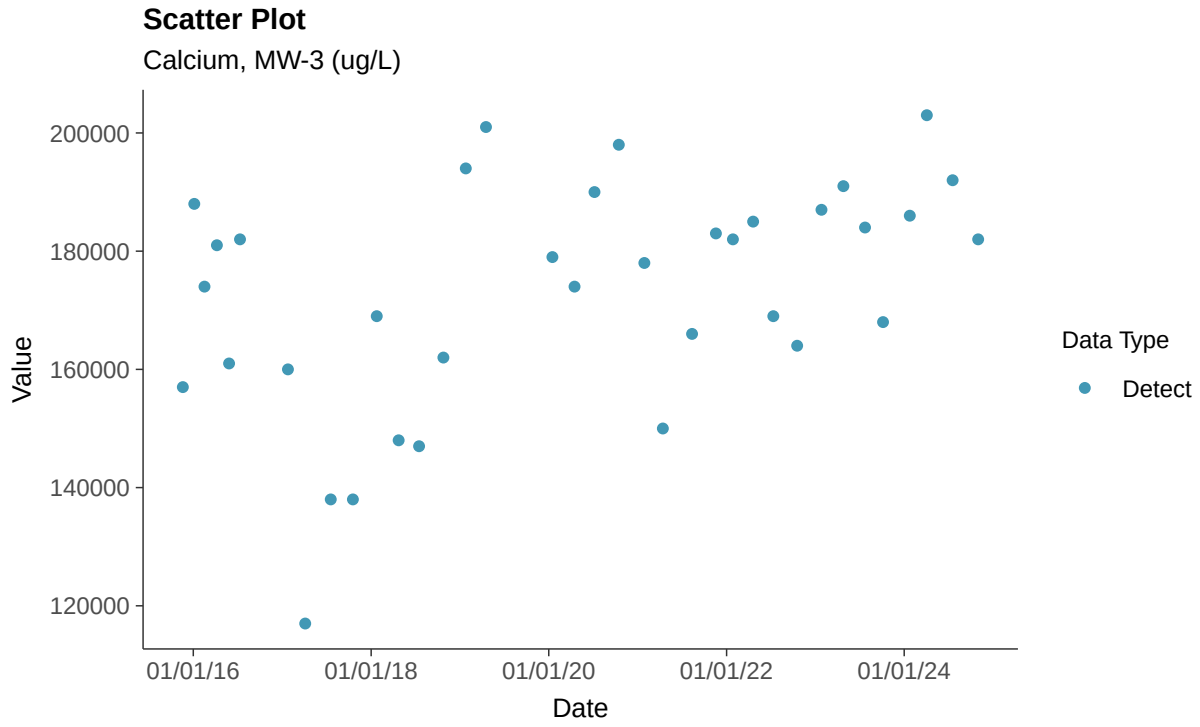
Trend Regression: Piecewise Linear-Linear-Linear

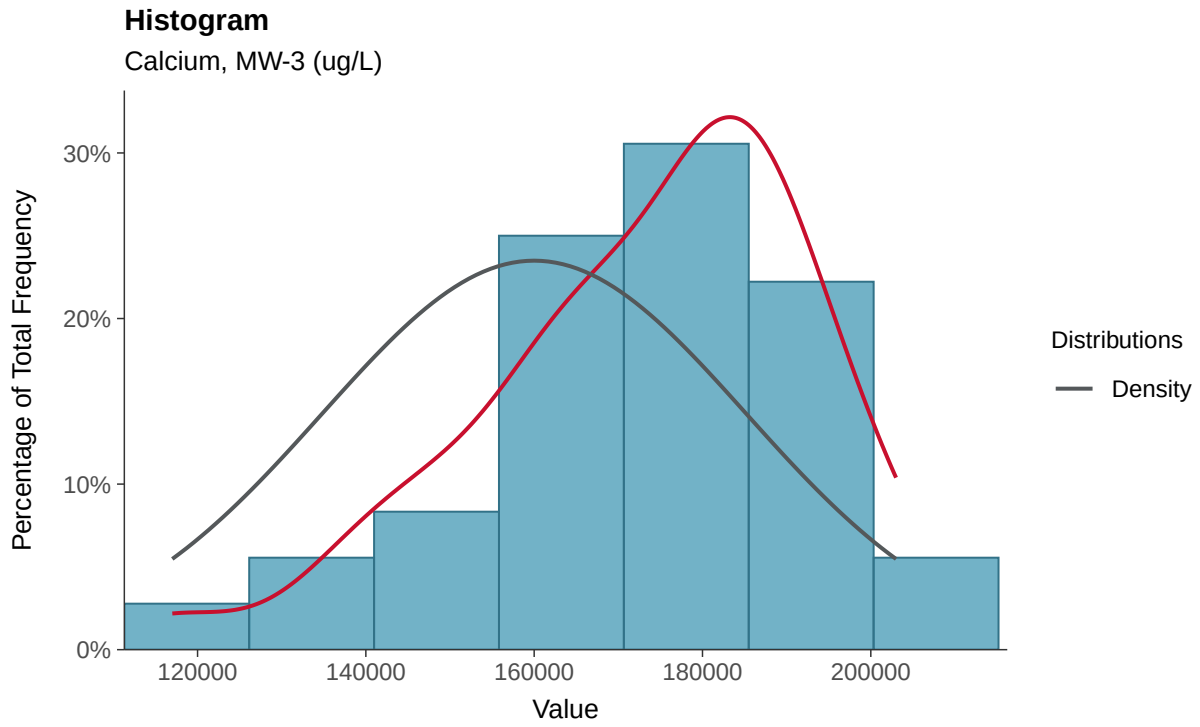
Boron, MW-3 (ug/L)



App. III: Calcium, MW-3

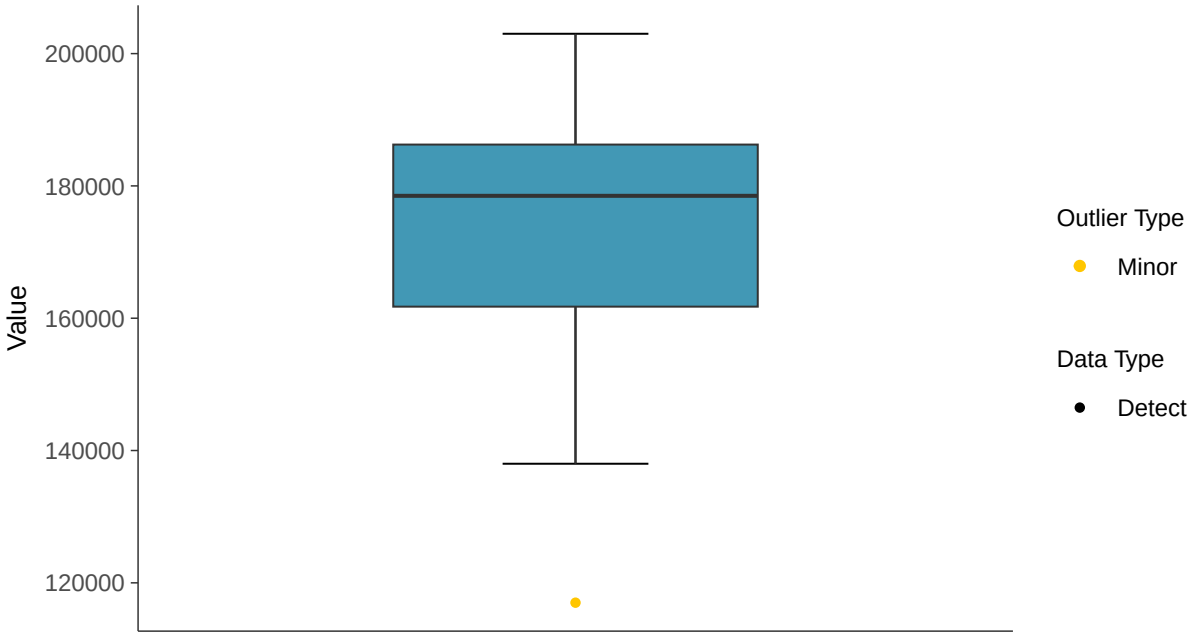
ID: 03_02_107





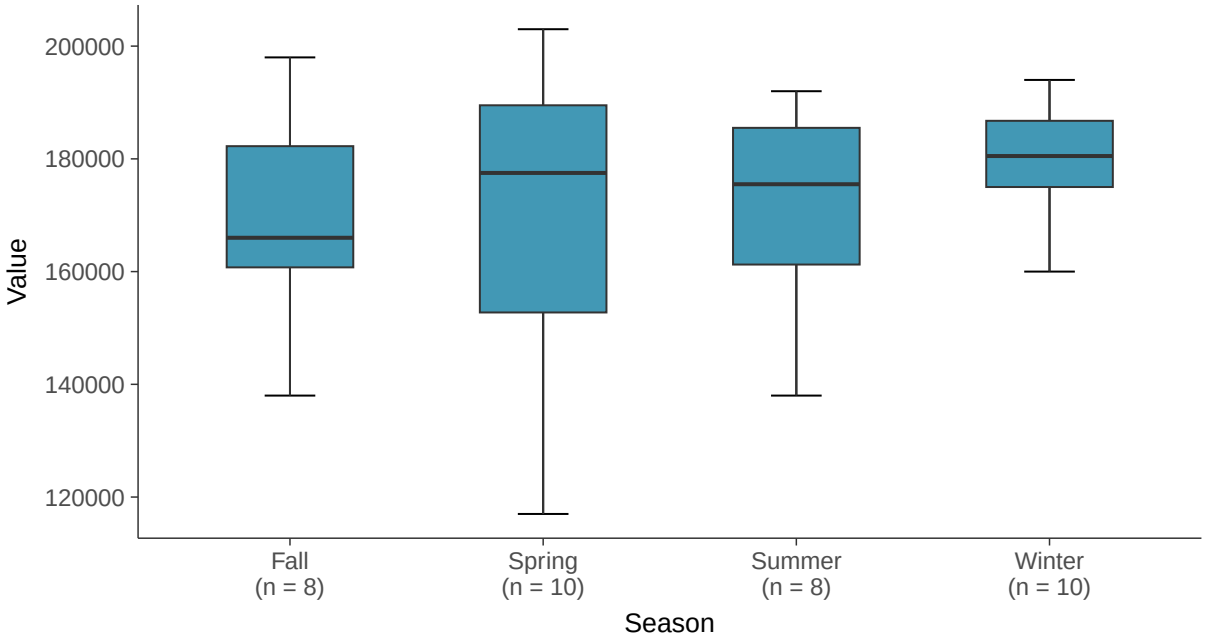
Boxplot

Calcium, MW-3 (ug/L)



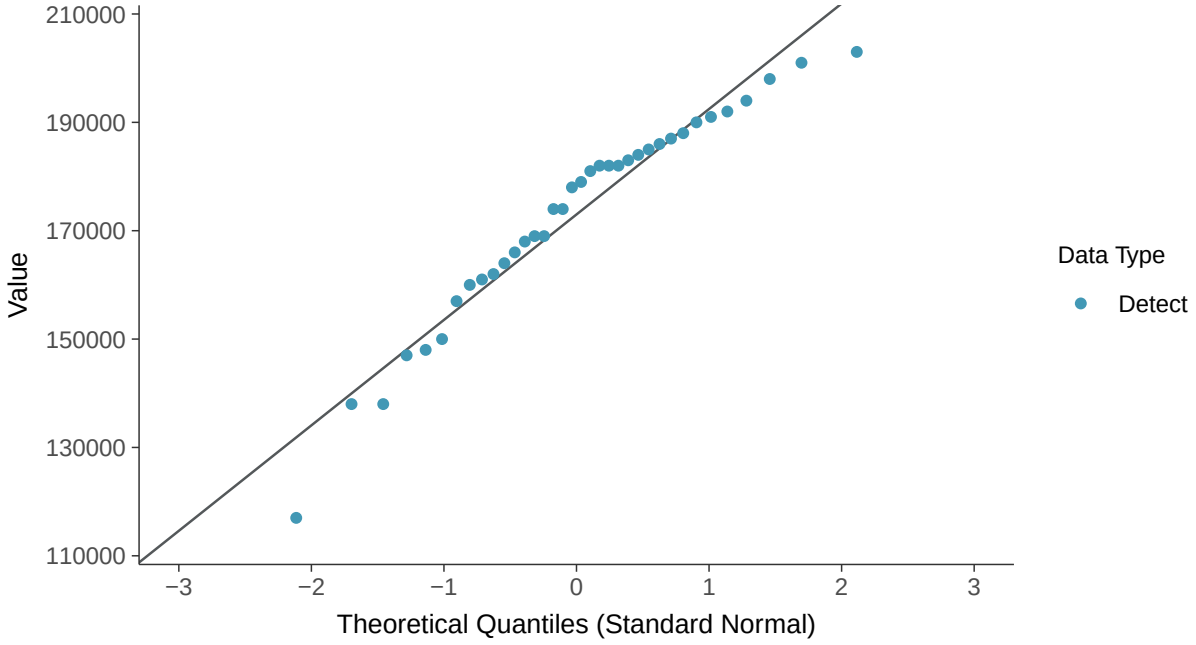
Boxplot by Season

Calcium, MW-3 (ug/L)



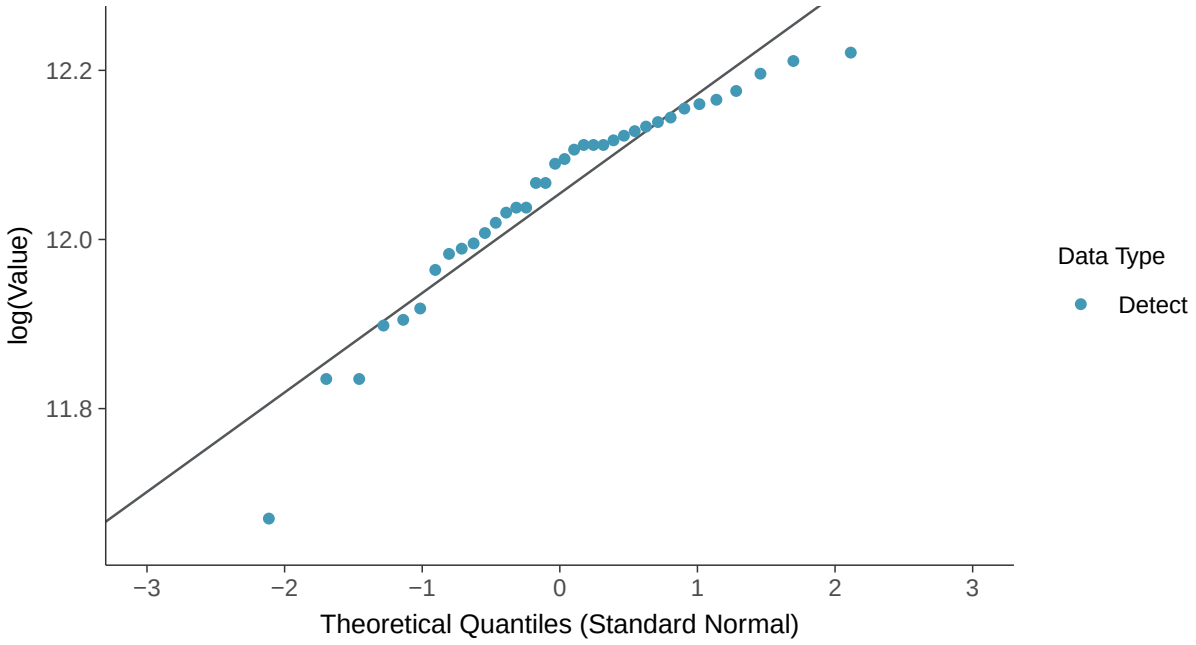
Normal Q-Q plot

Calcium, MW-3 (ug/L)



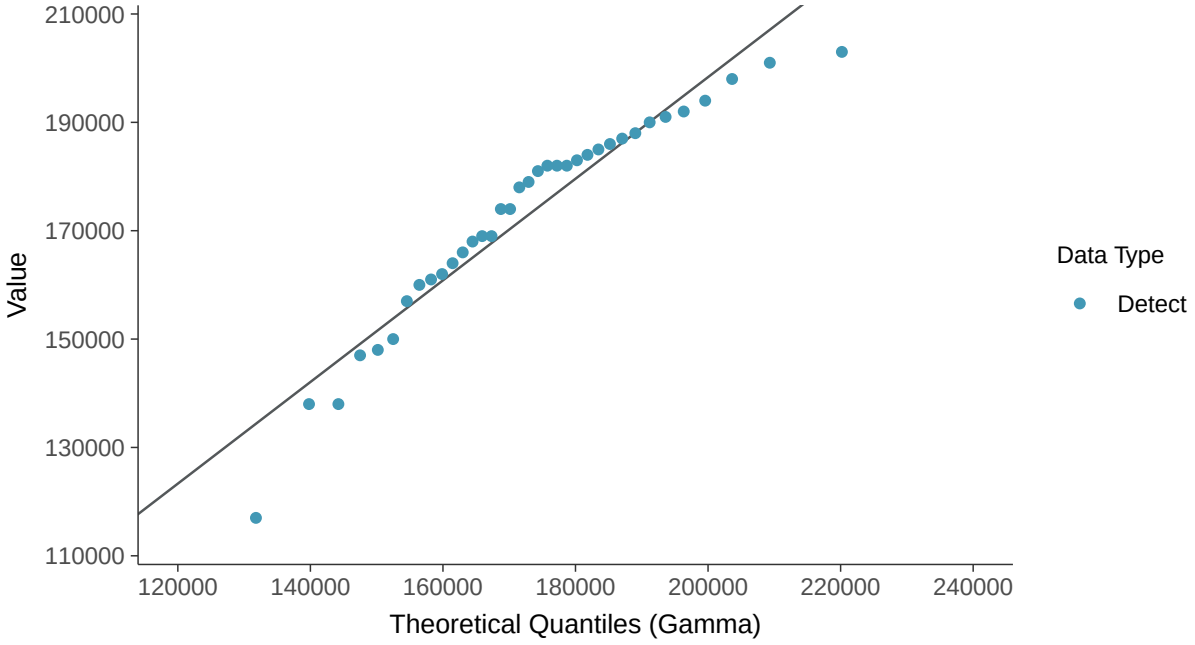
Lognormal Q-Q plot

Calcium, MW-3 (ug/L)



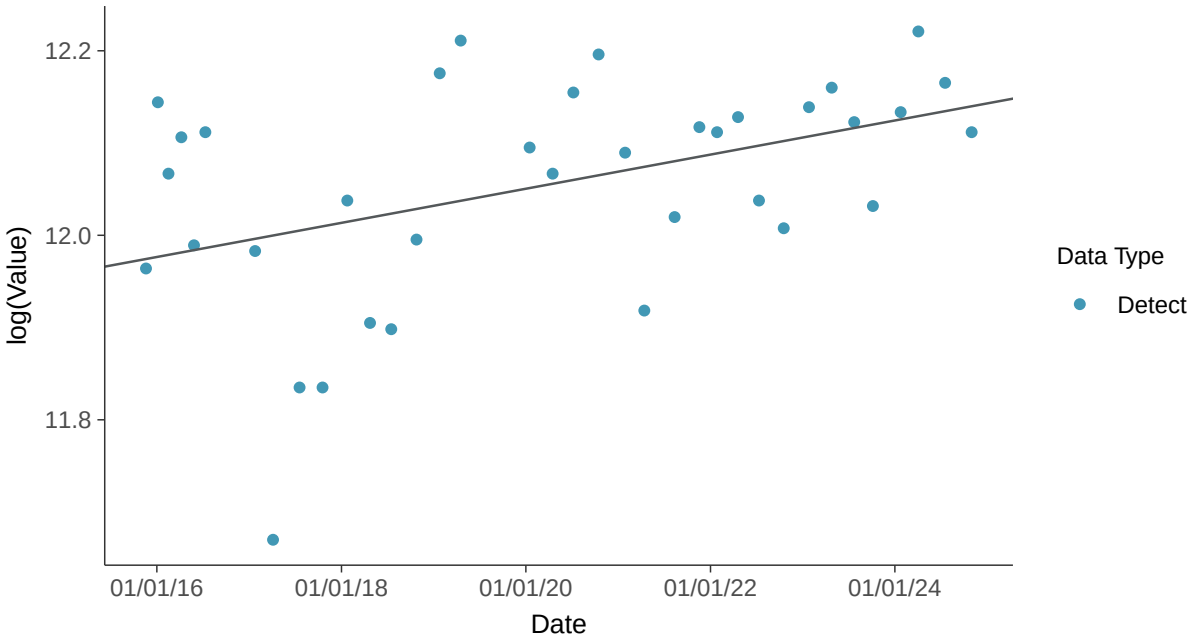
Gamma Q-Q plot

Calcium, MW-3 (ug/L)



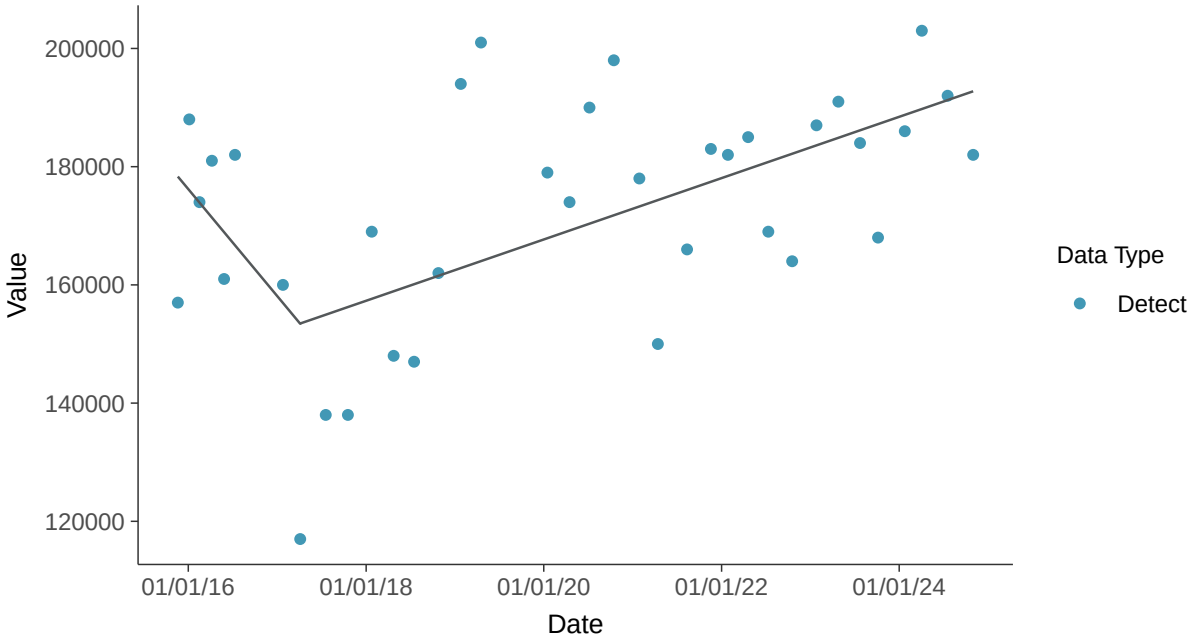
Trend Regression: Lognormal MLE

Calcium, MW-3 (ug/L)



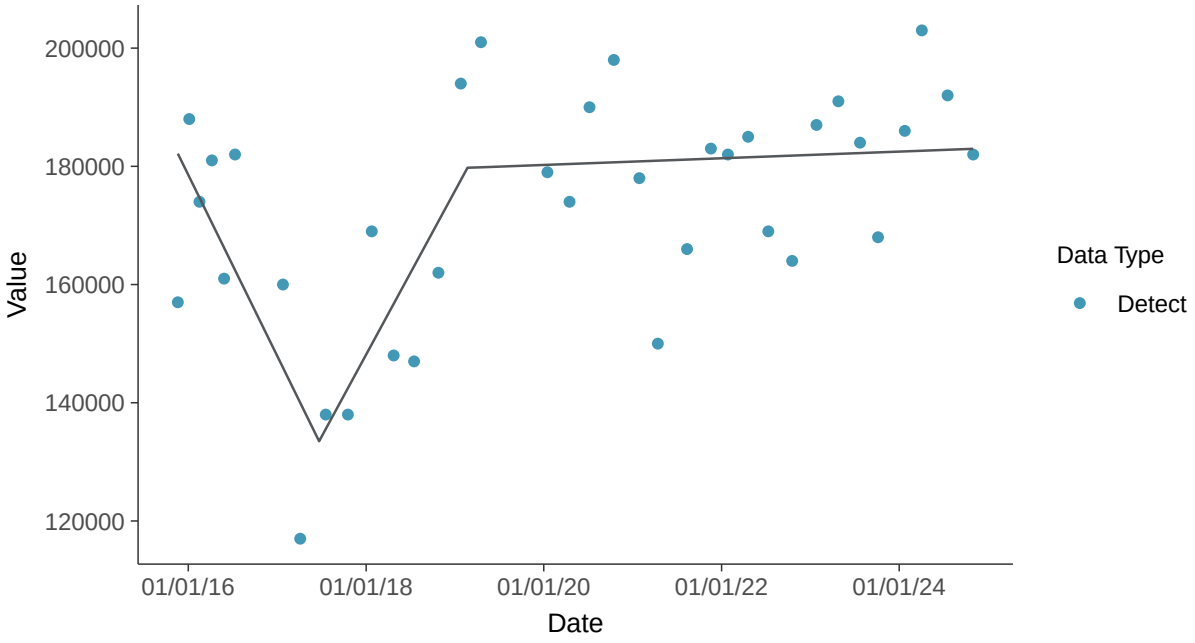
Trend Regression: Piecewise Linear-Linear

Calcium, MW-3 (ug/L)



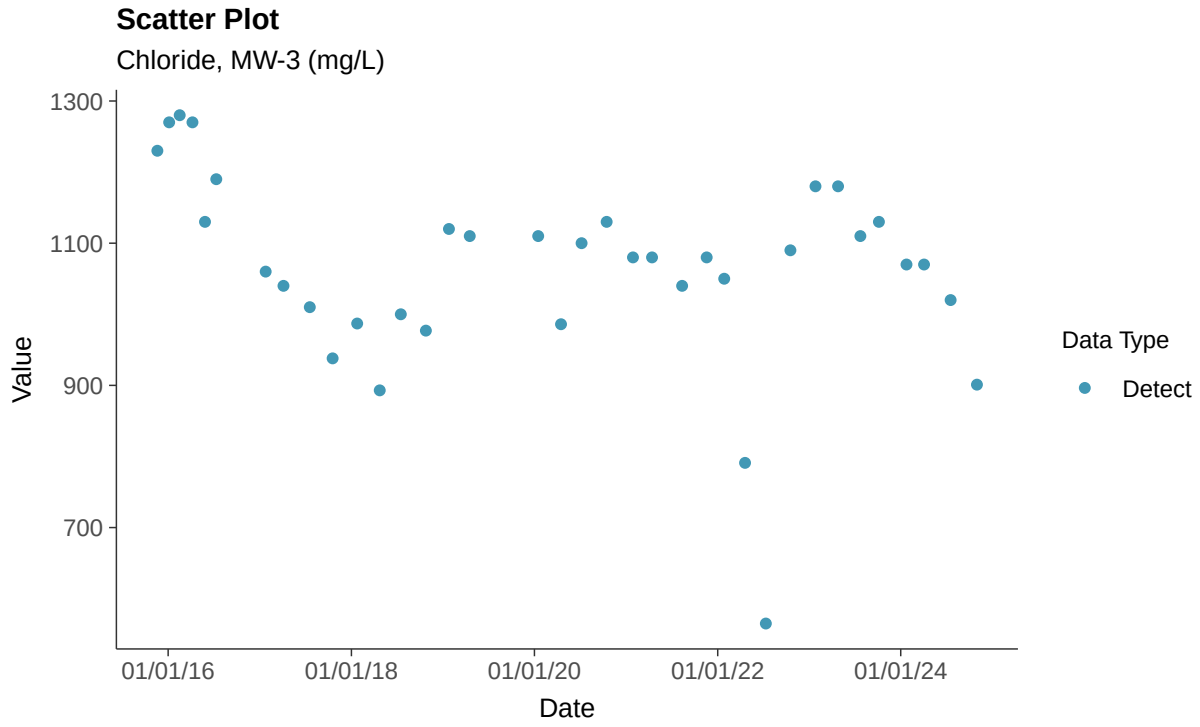
Trend Regression: Piecewise Linear-Linear-Linear

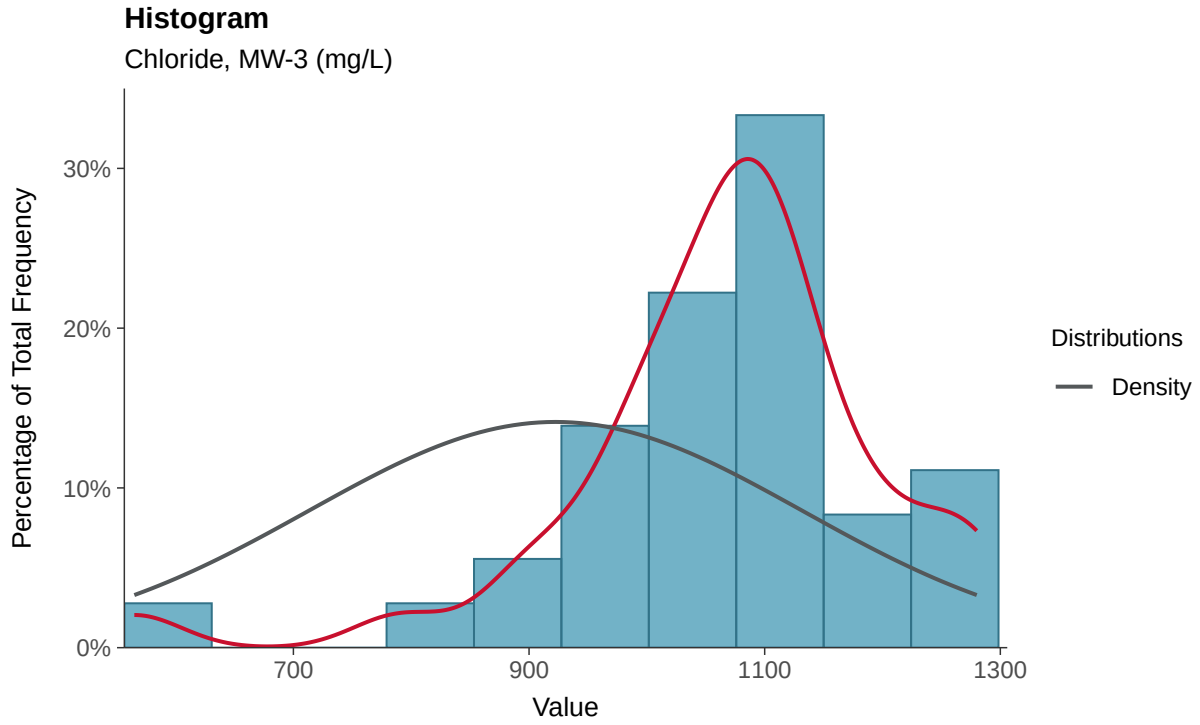
Calcium, MW-3 (ug/L)



App. III: Chloride, MW-3

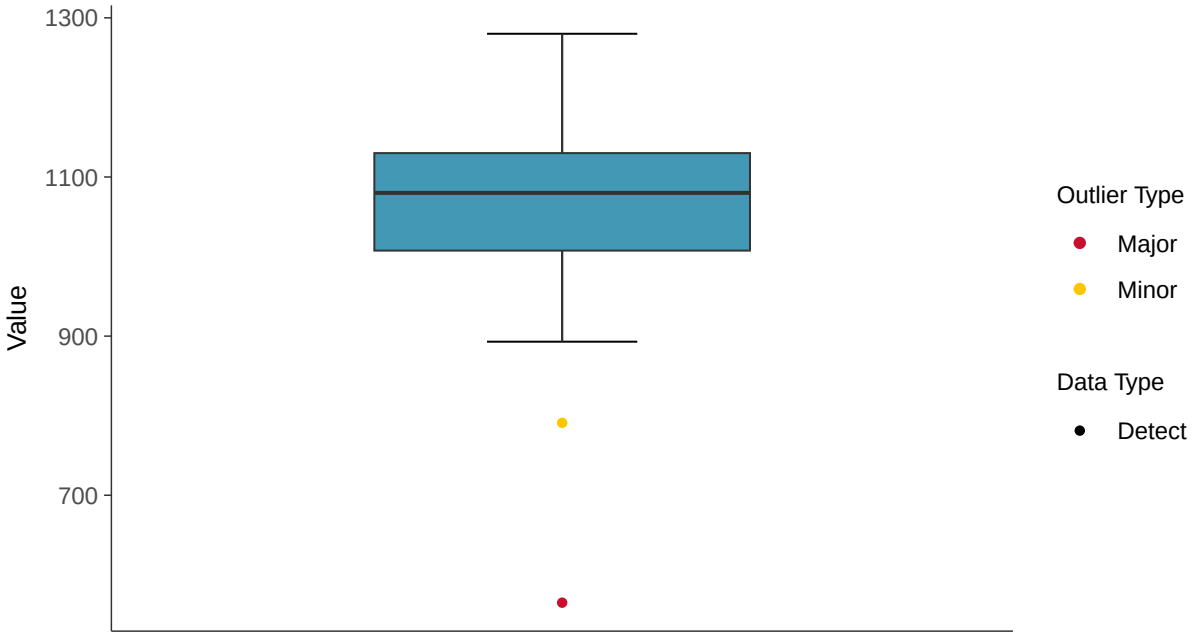
ID: 03_02_108





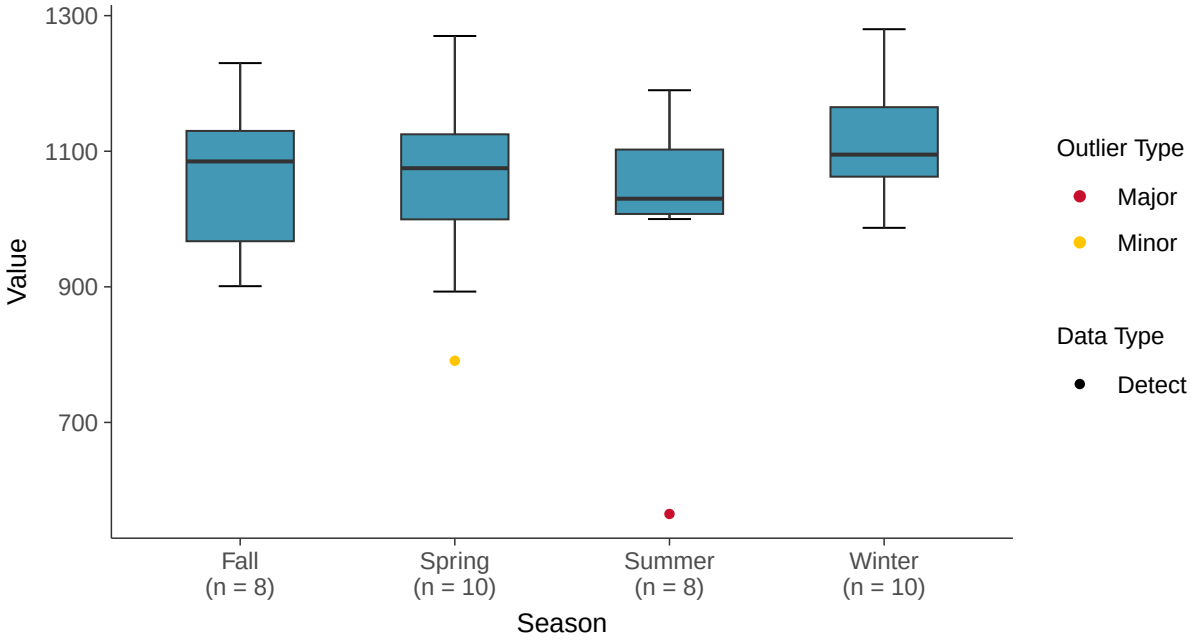
Boxplot

Chloride, MW-3 (mg/L)



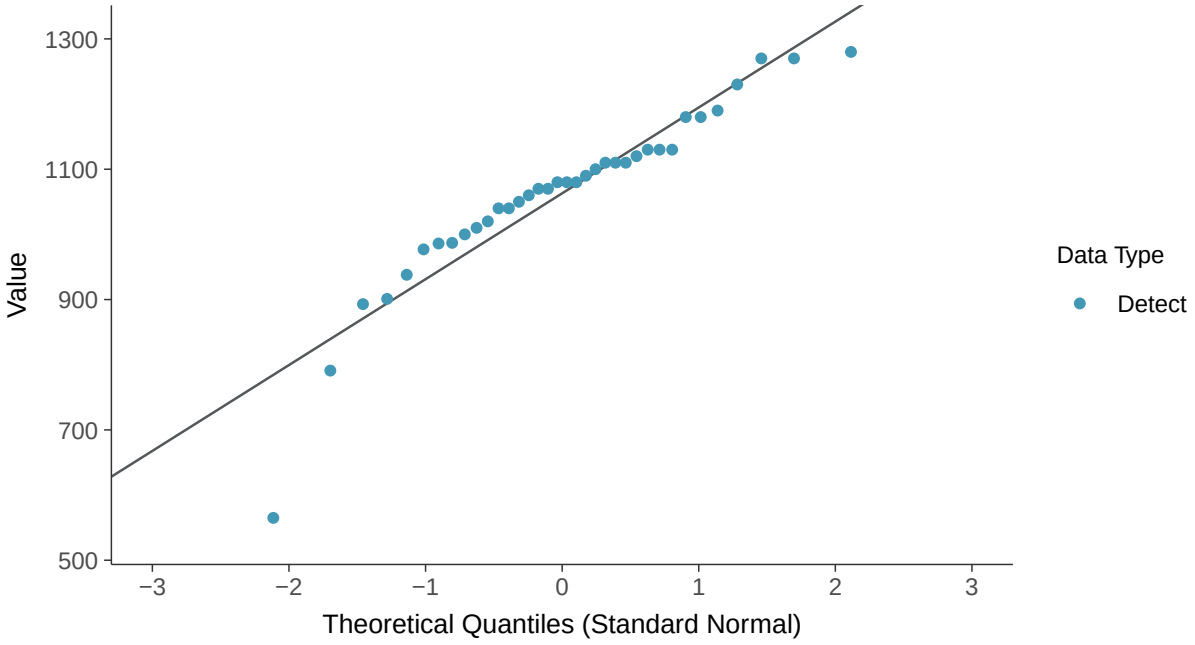
Boxplot by Season

Chloride, MW-3 (mg/L)



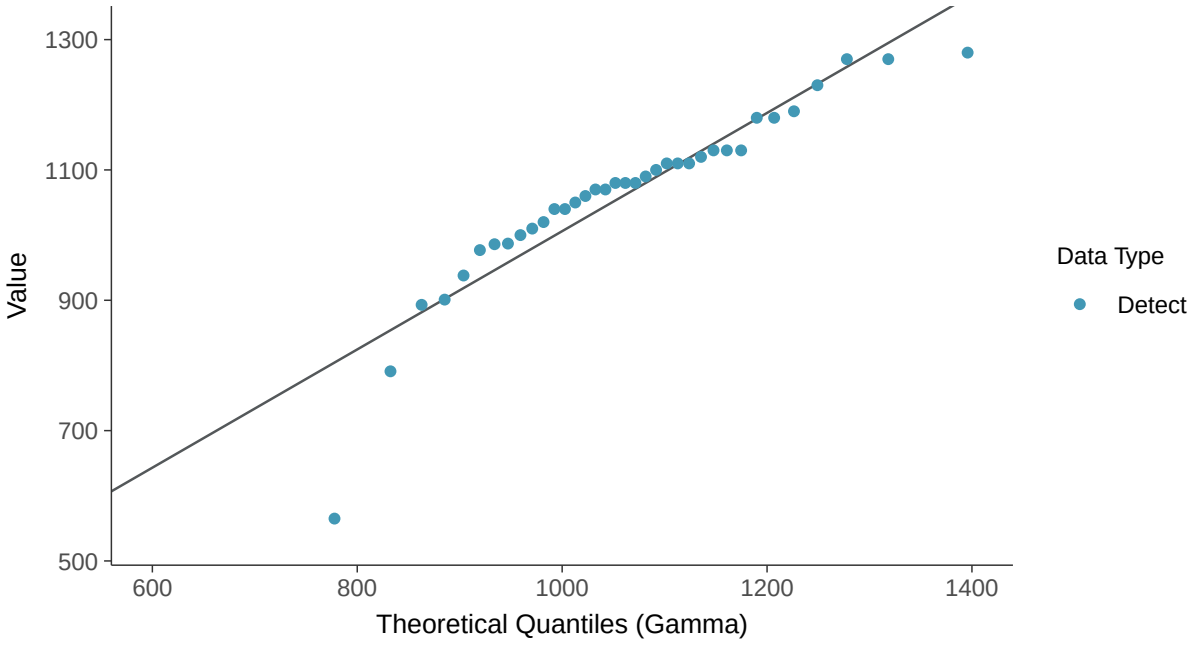
Normal Q-Q plot

Chloride, MW-3 (mg/L)



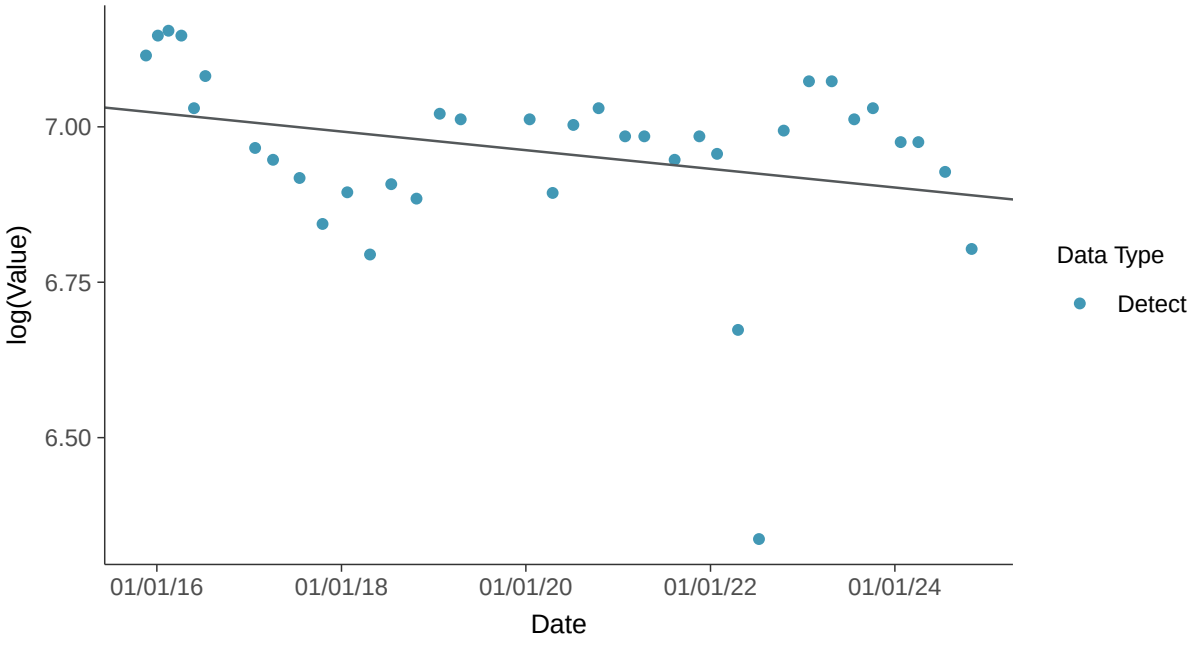
Gamma Q-Q plot

Chloride, MW-3 (mg/L)



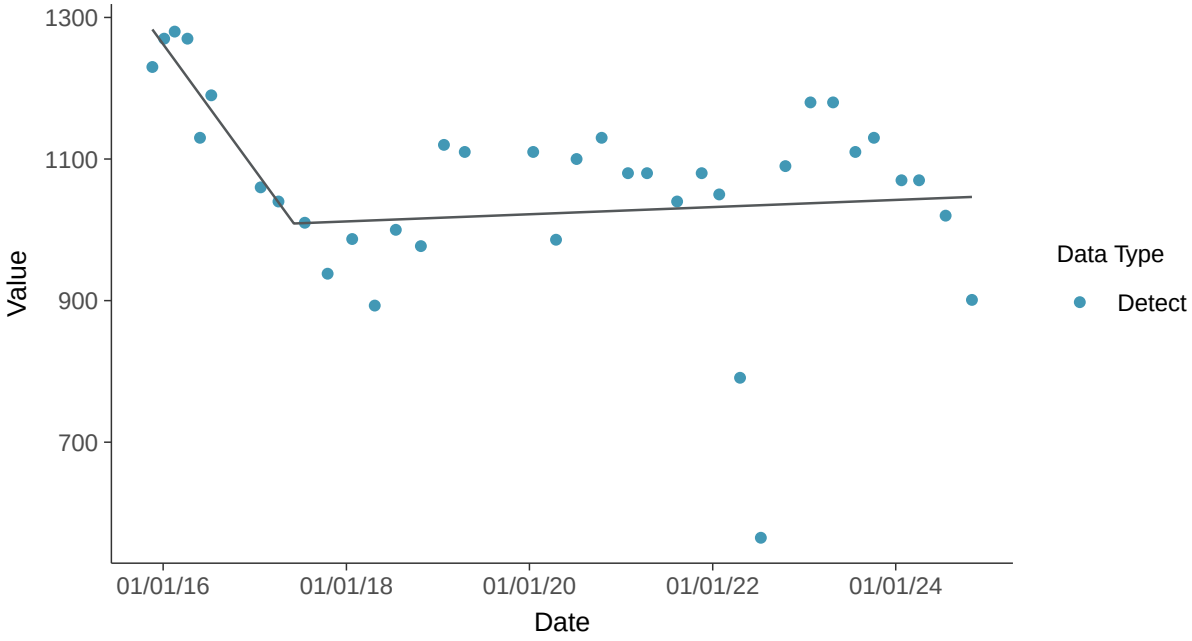
Trend Regression: Lognormal MLE

Chloride, MW-3 (mg/L)



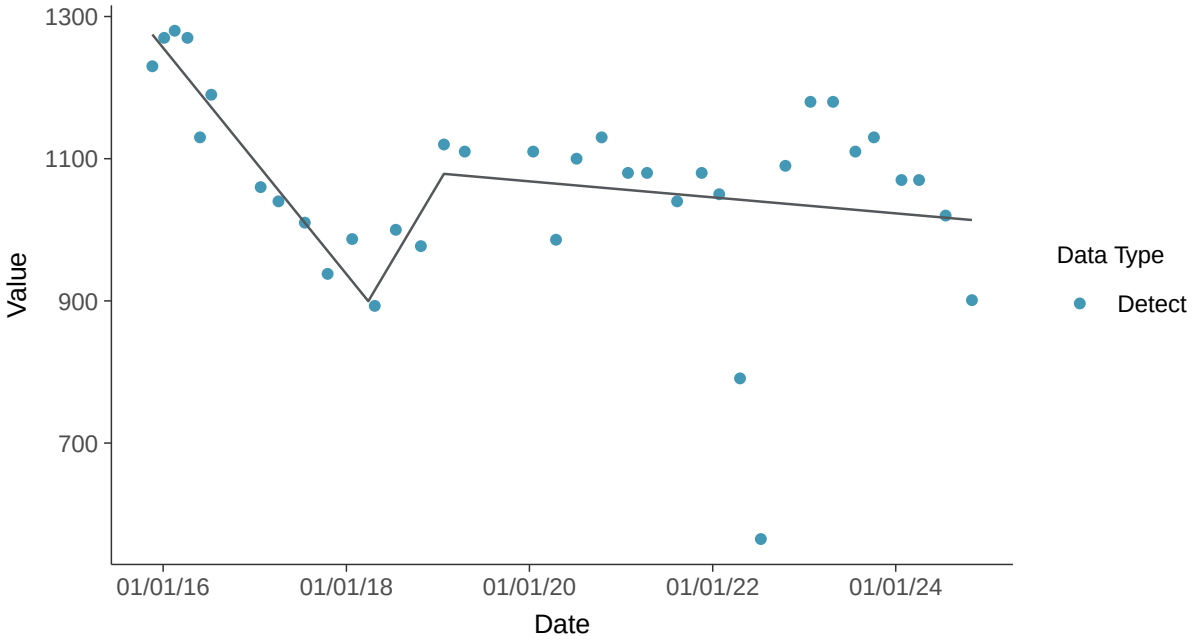
Trend Regression: Piecewise Linear-Linear

Chloride, MW-3 (mg/L)



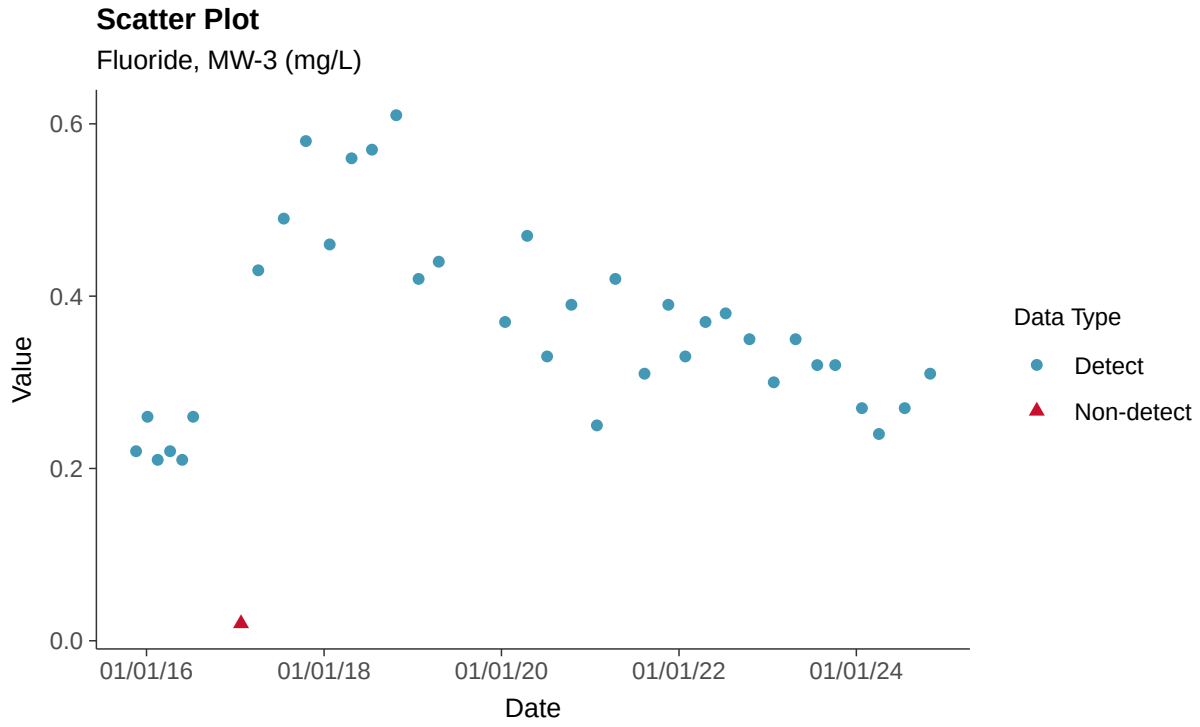
Trend Regression: Piecewise Linear-Linear-Linear

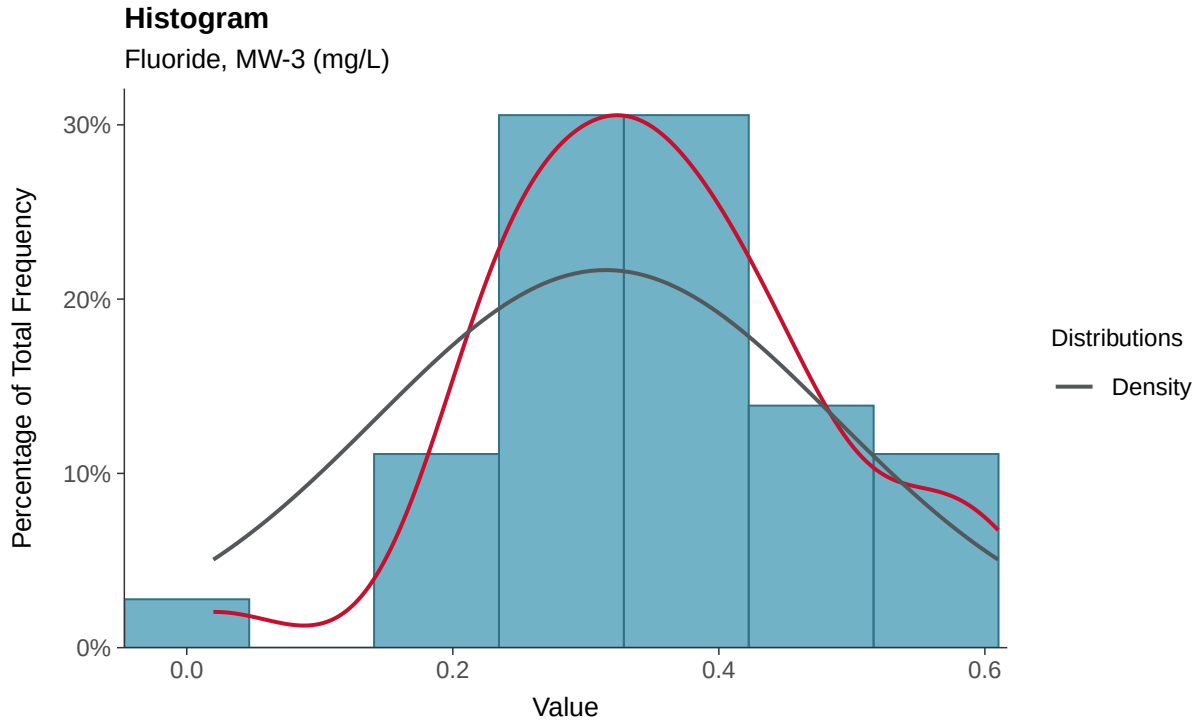
Chloride, MW-3 (mg/L)



App. III: Fluoride, MW-3

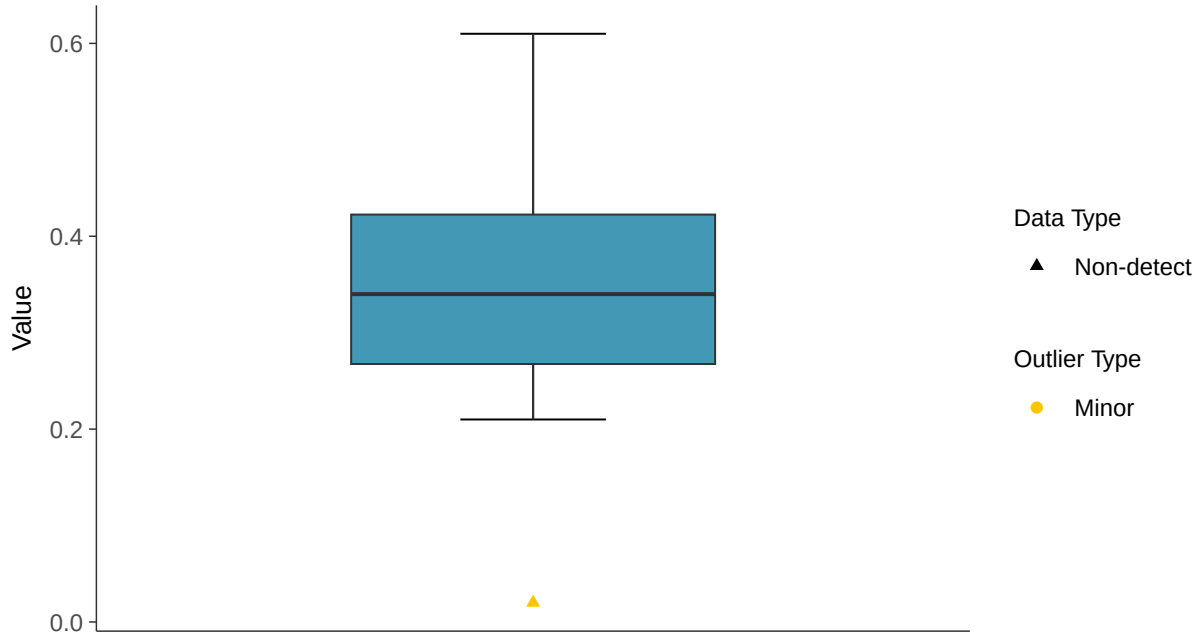
ID: 03_02_112





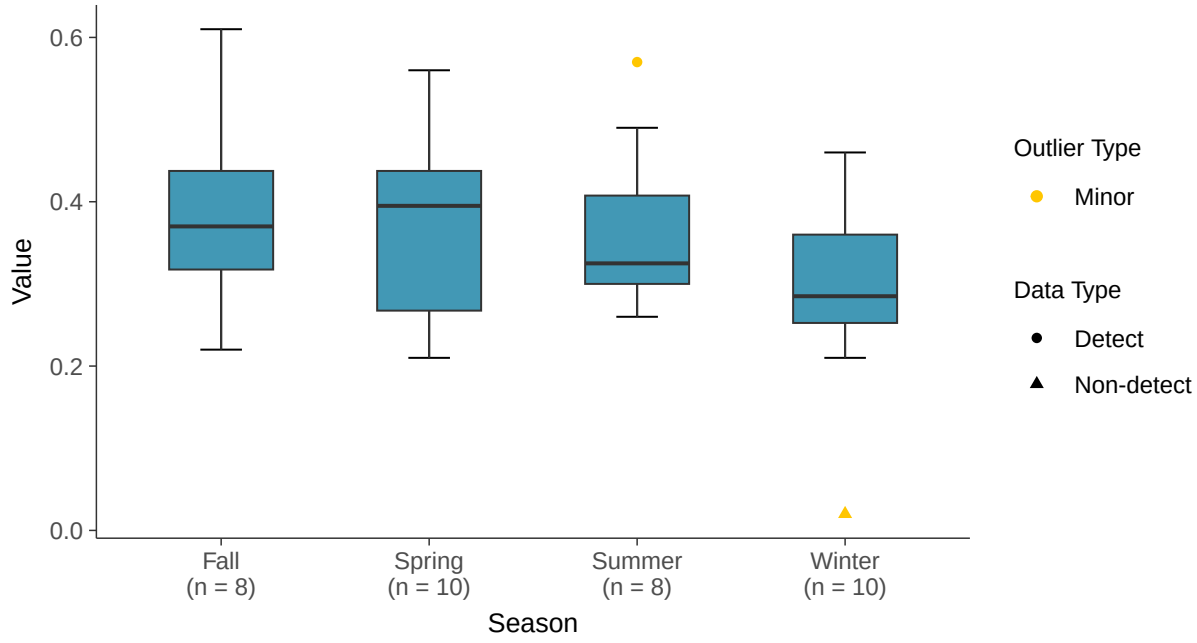
Boxplot

Fluoride, MW-3 (mg/L)



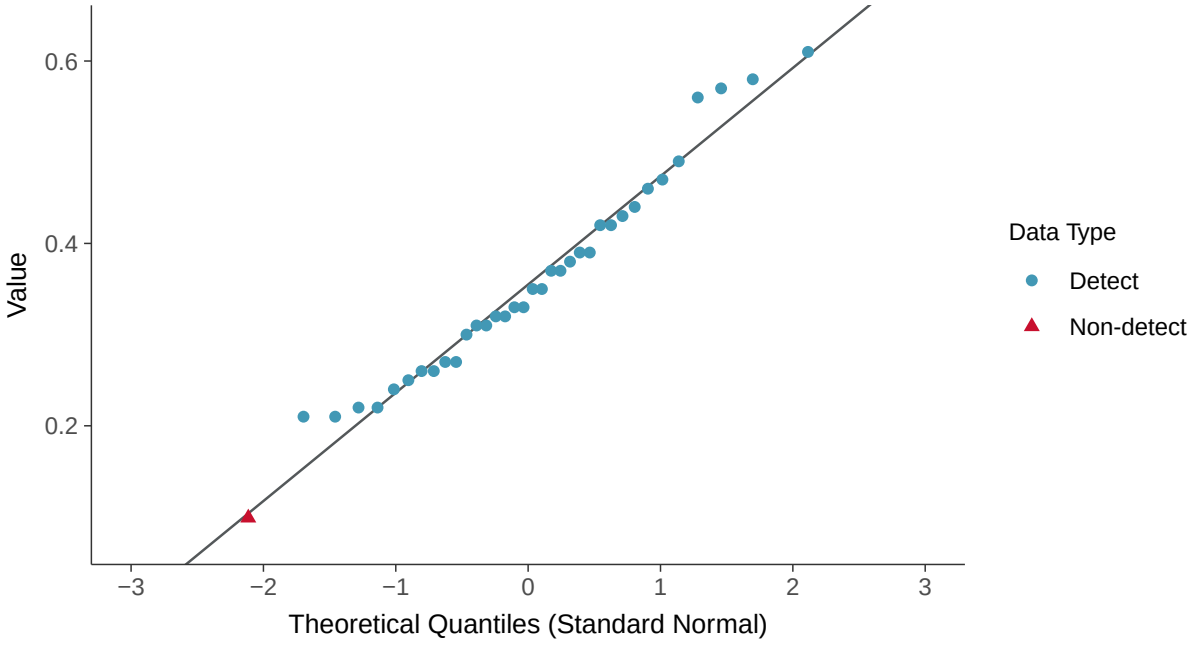
Boxplot by Season

Fluoride, MW-3 (mg/L)



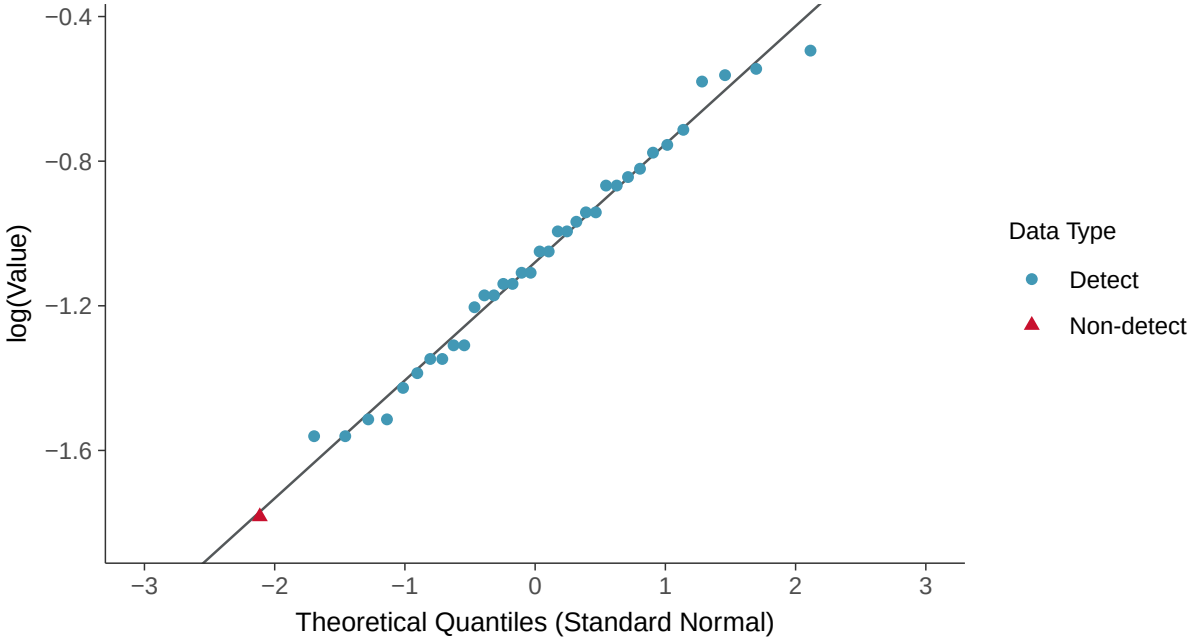
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



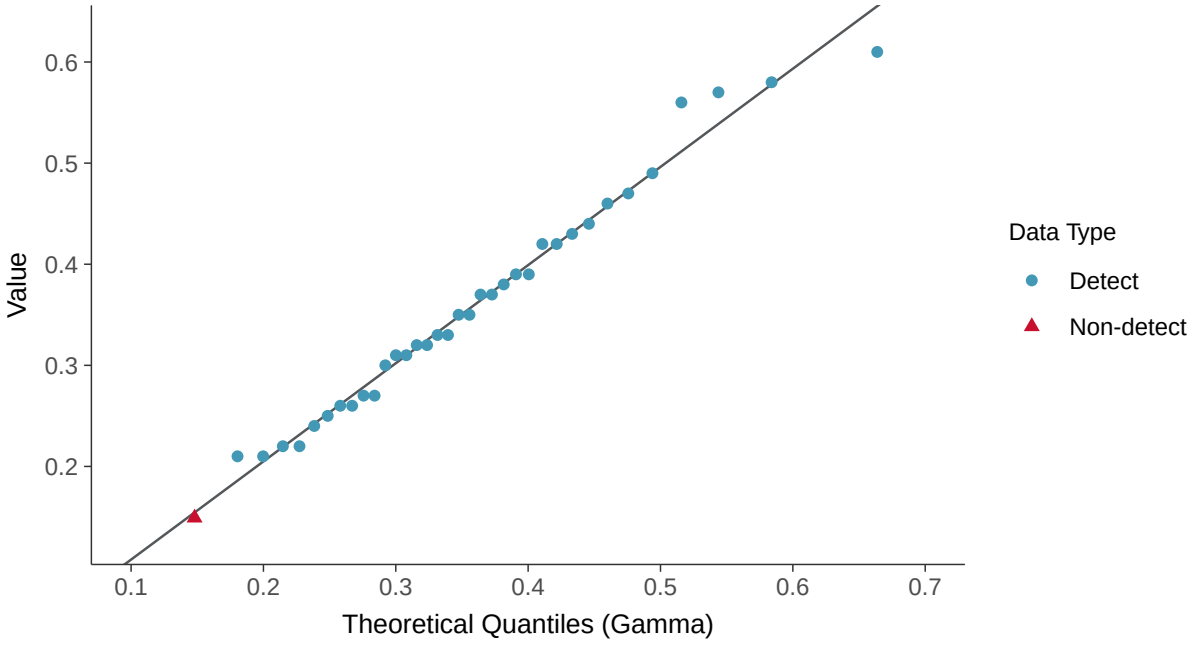
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



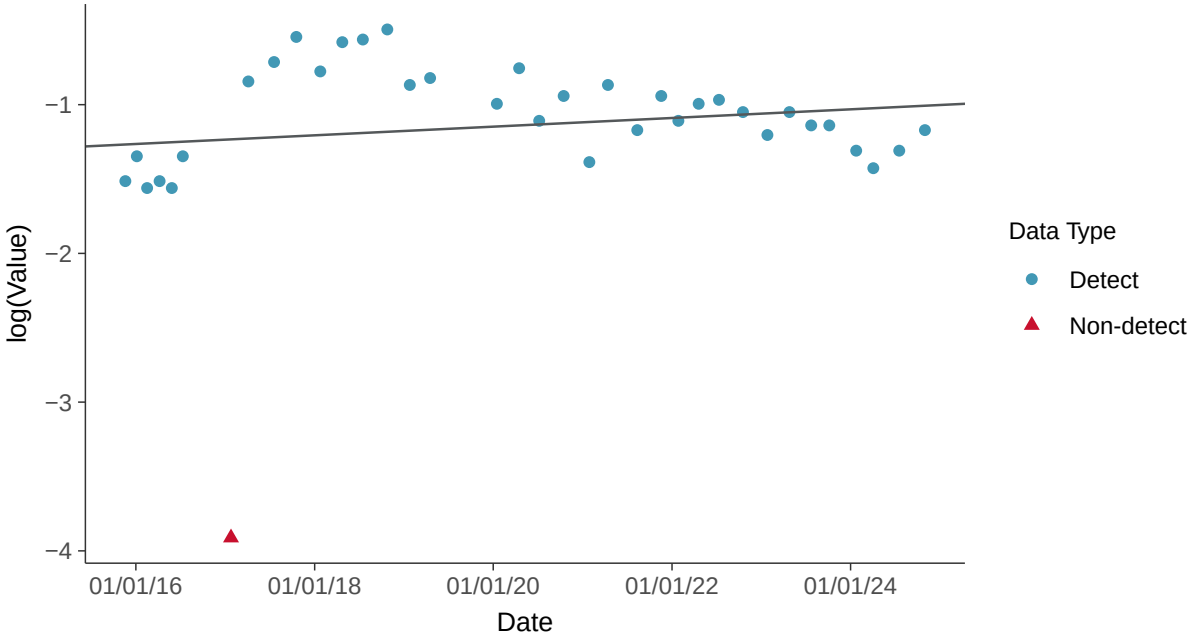
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



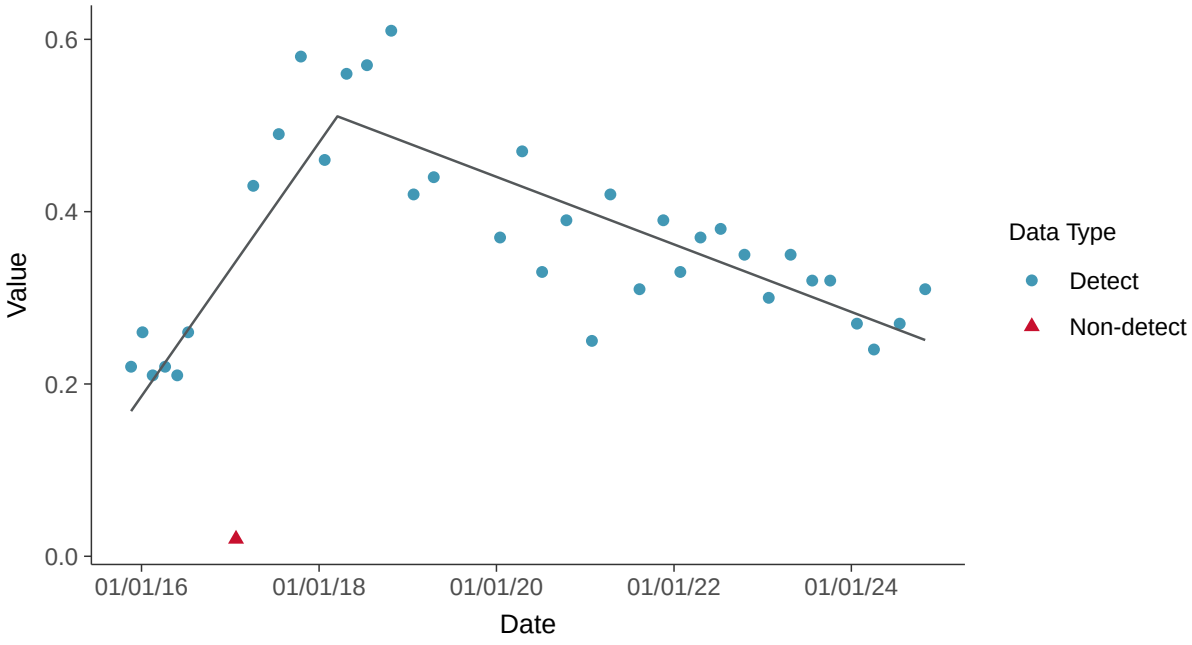
Trend Regression: Lognormal MLE

Fluoride, MW-3 (mg/L)



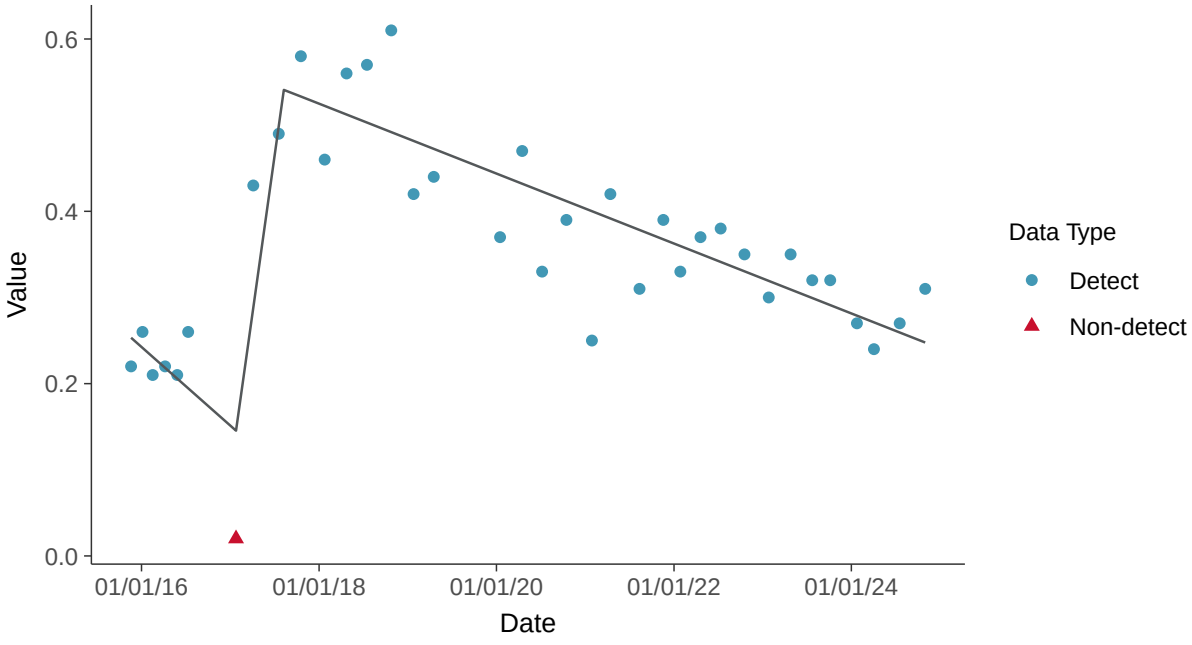
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-3 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-3 (mg/L)

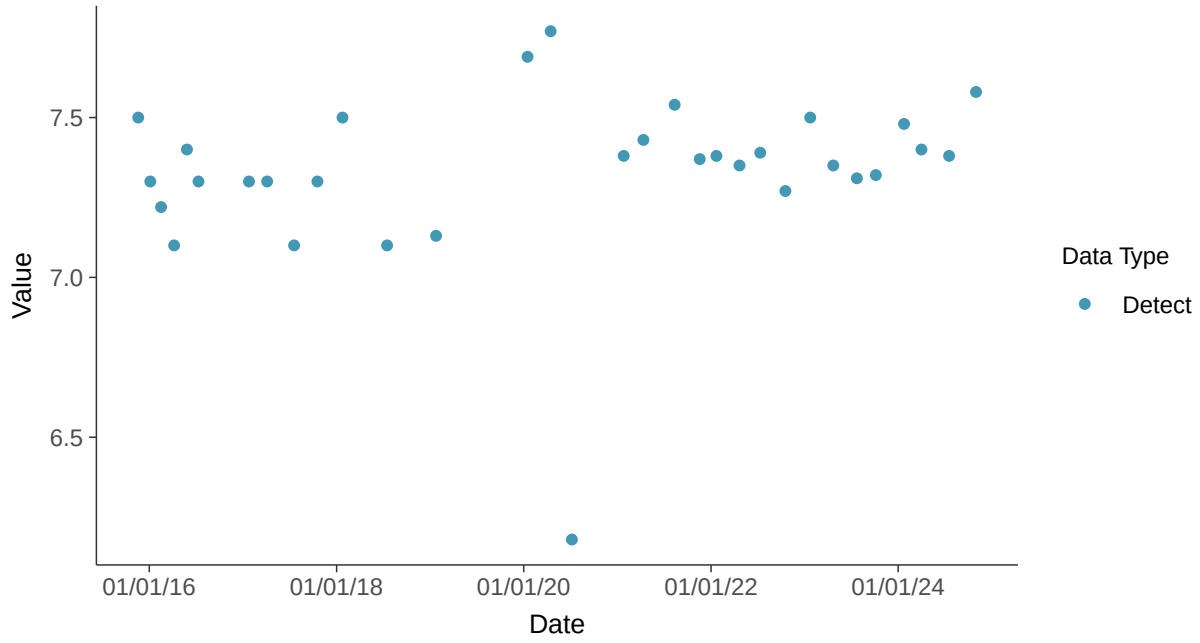


App. III: pH (Field), MW-3

ID: 03_02_118

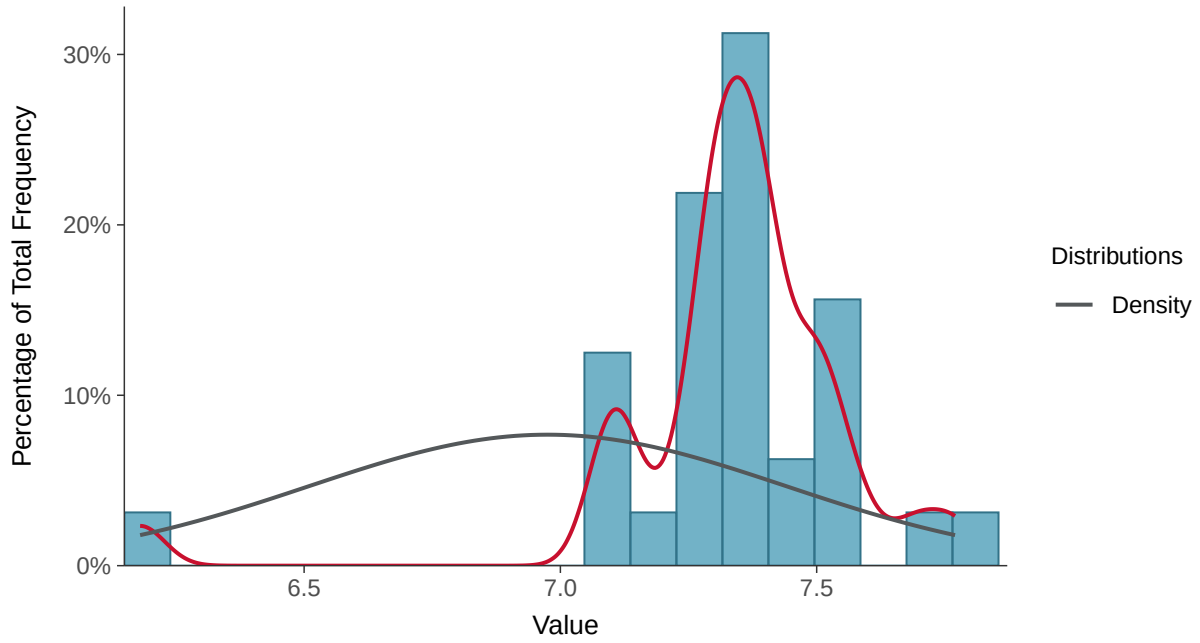
Scatter Plot

pH (Field), MW-3 (S.U.)



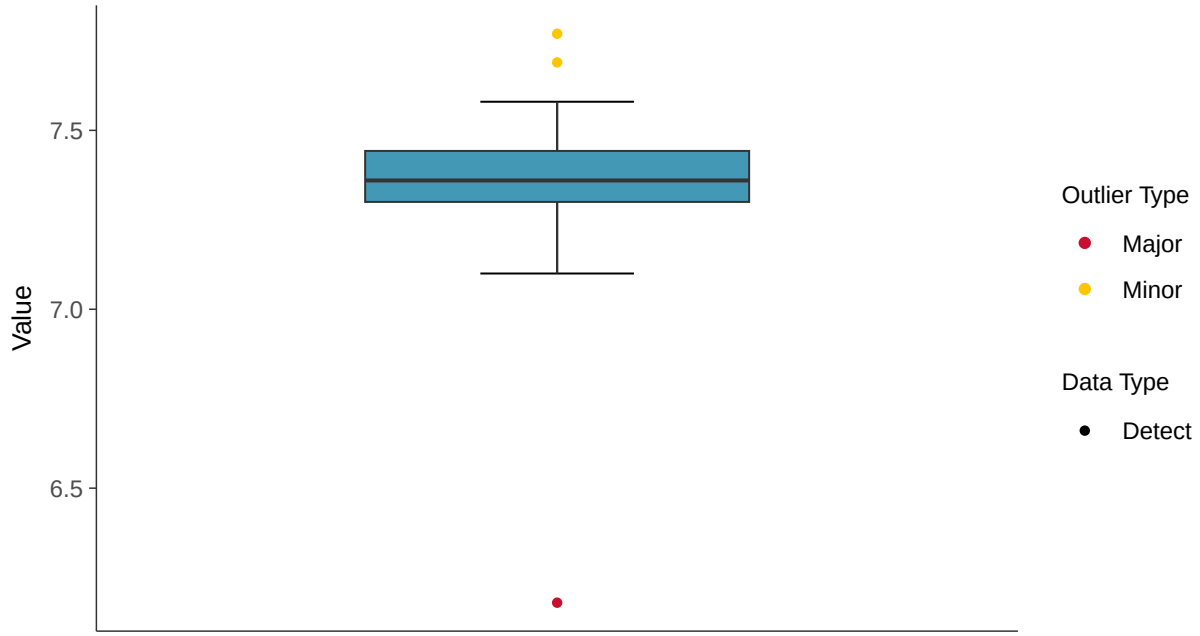
Histogram

pH (Field), MW-3 (S.U.)



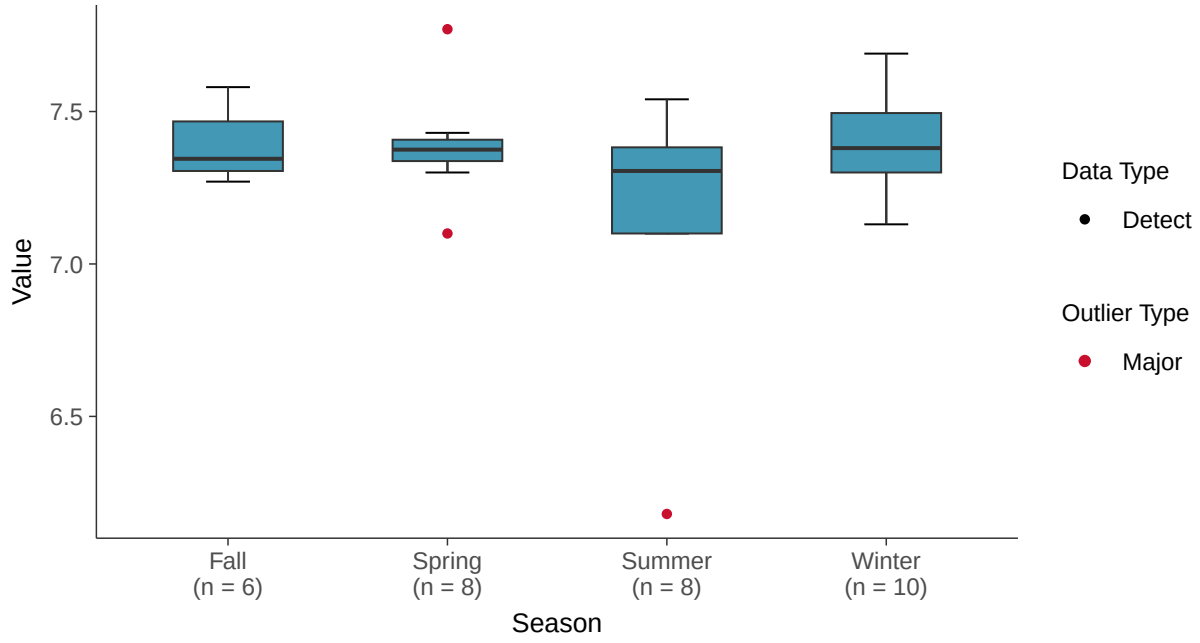
Boxplot

pH (Field), MW-3 (S.U.)



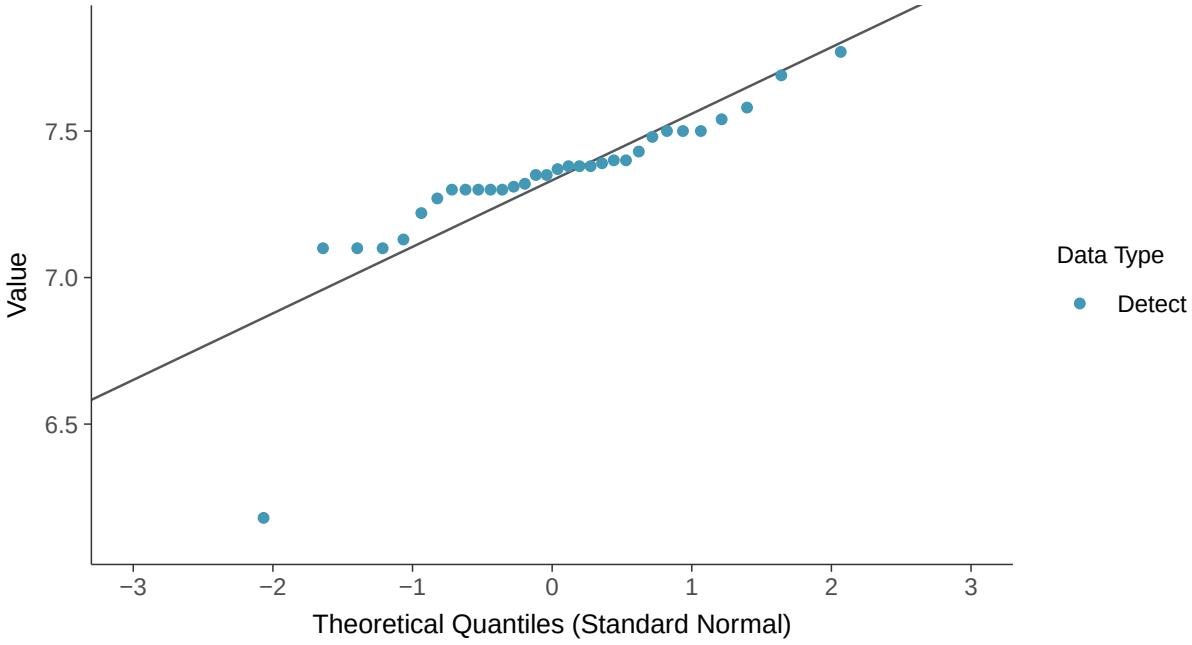
Boxplot by Season

pH (Field), MW-3 (S.U.)



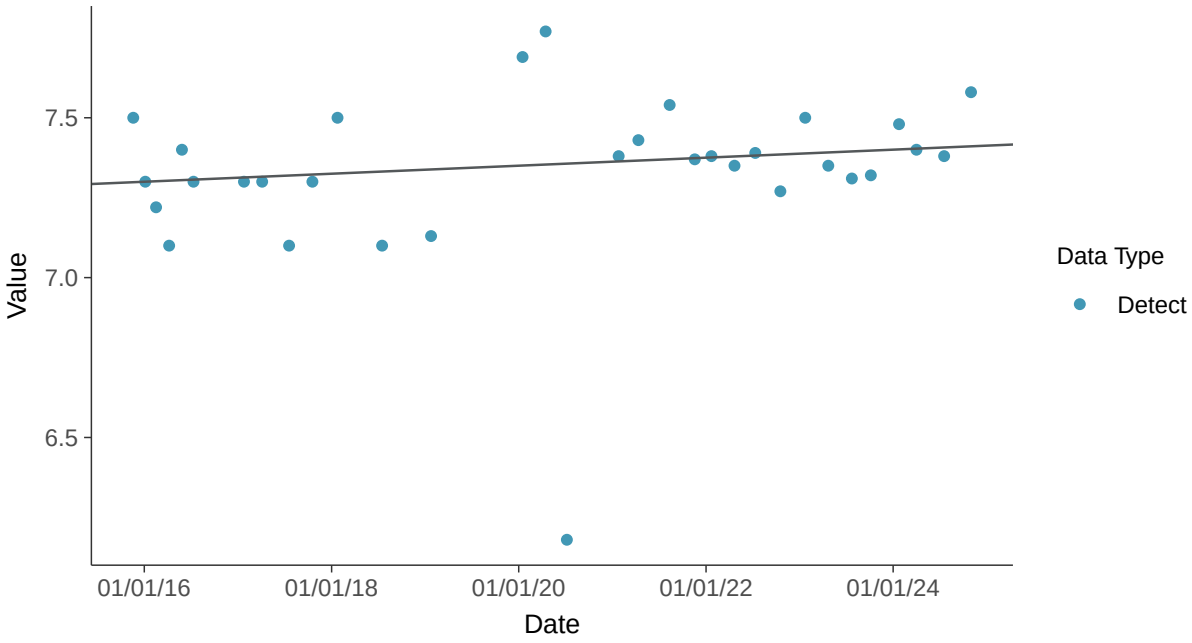
Normal Q-Q plot

pH (Field), MW-3 (S.U.)



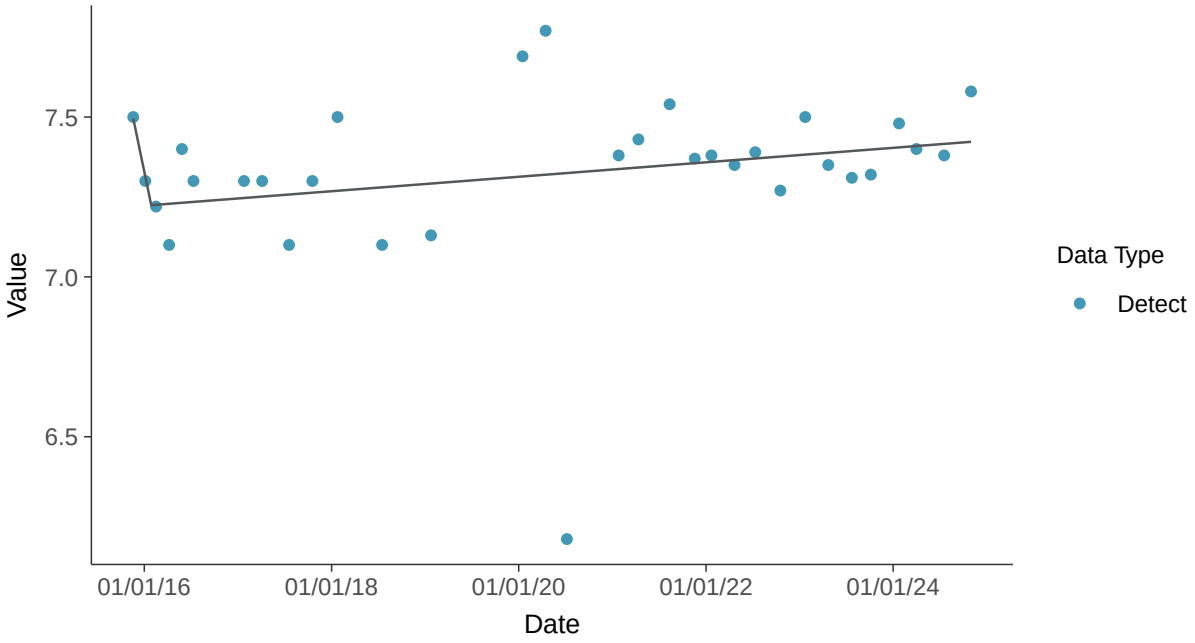
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-3 (S.U.)



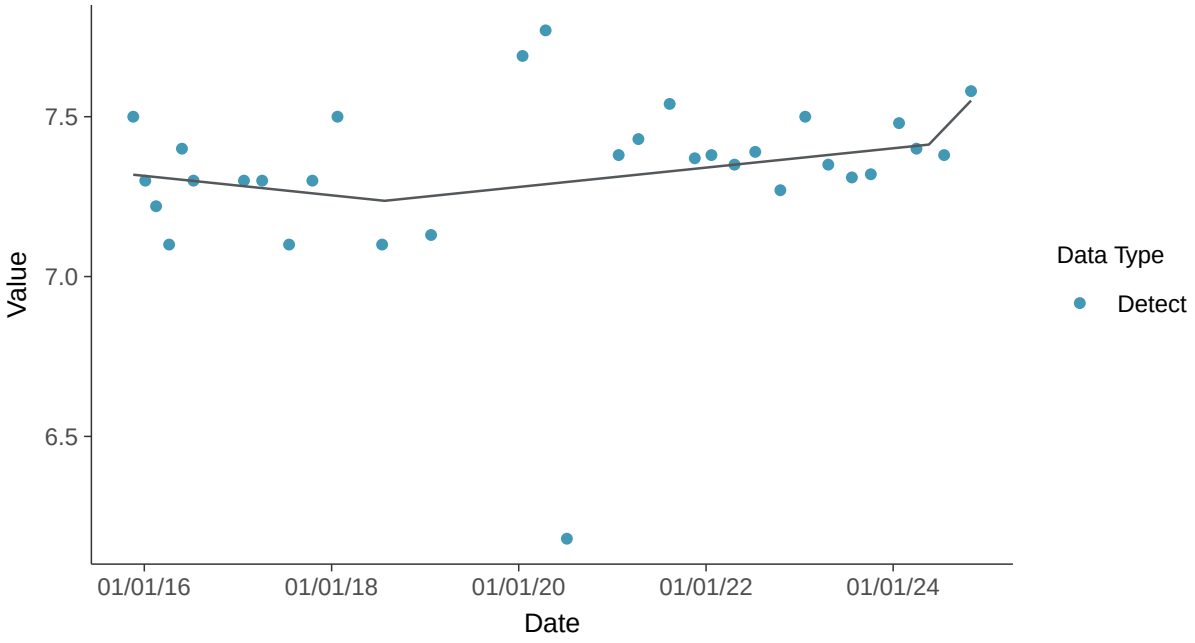
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-3 (S.U.)



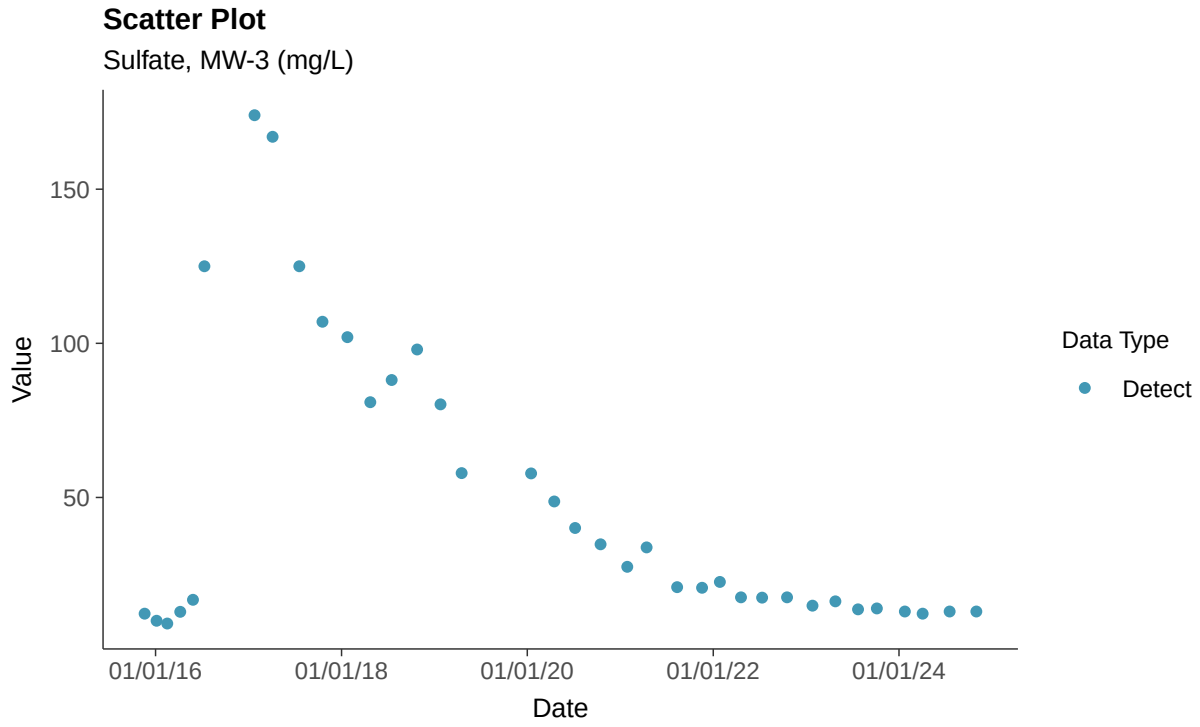
Trend Regression: Piecewise Linear-Linear-Linear

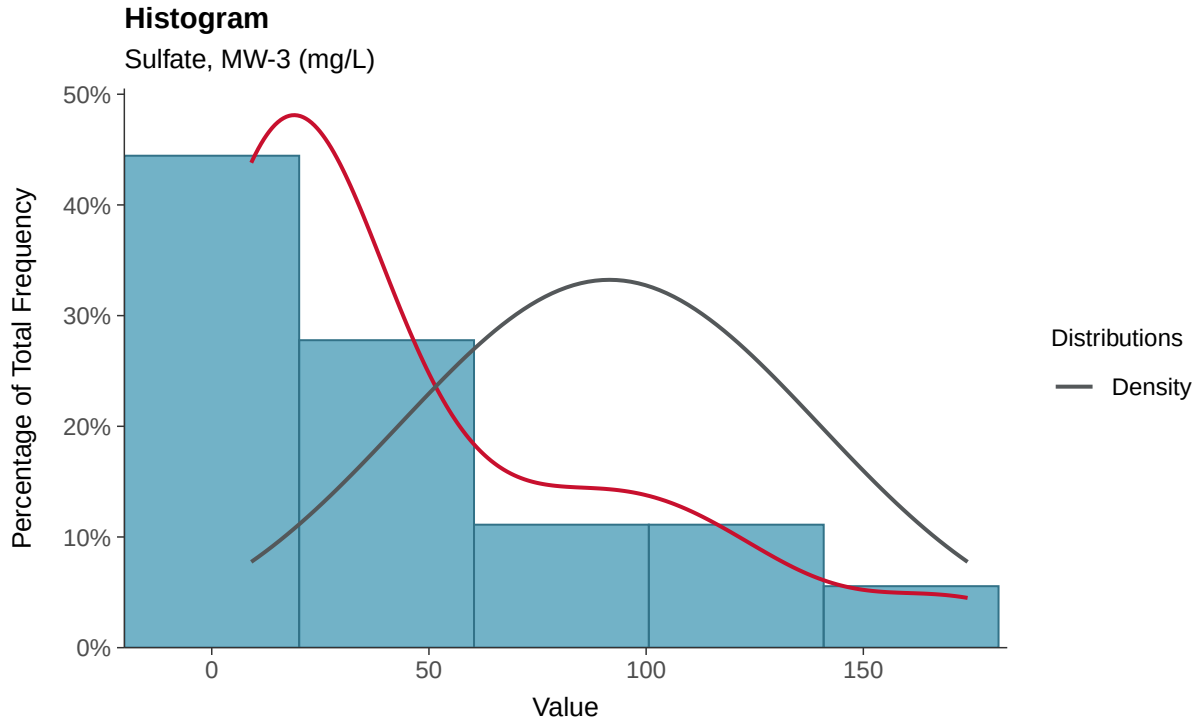
pH (Field), MW-3 (S.U.)



App. III: Sulfate, MW-3

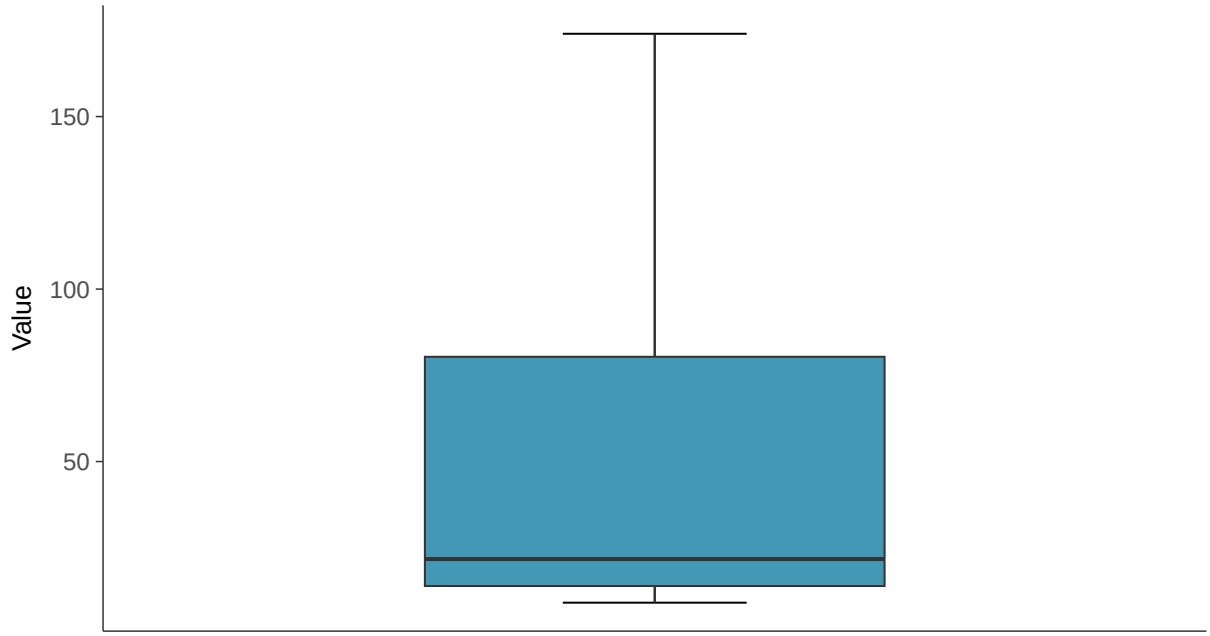
ID: 03_02_123





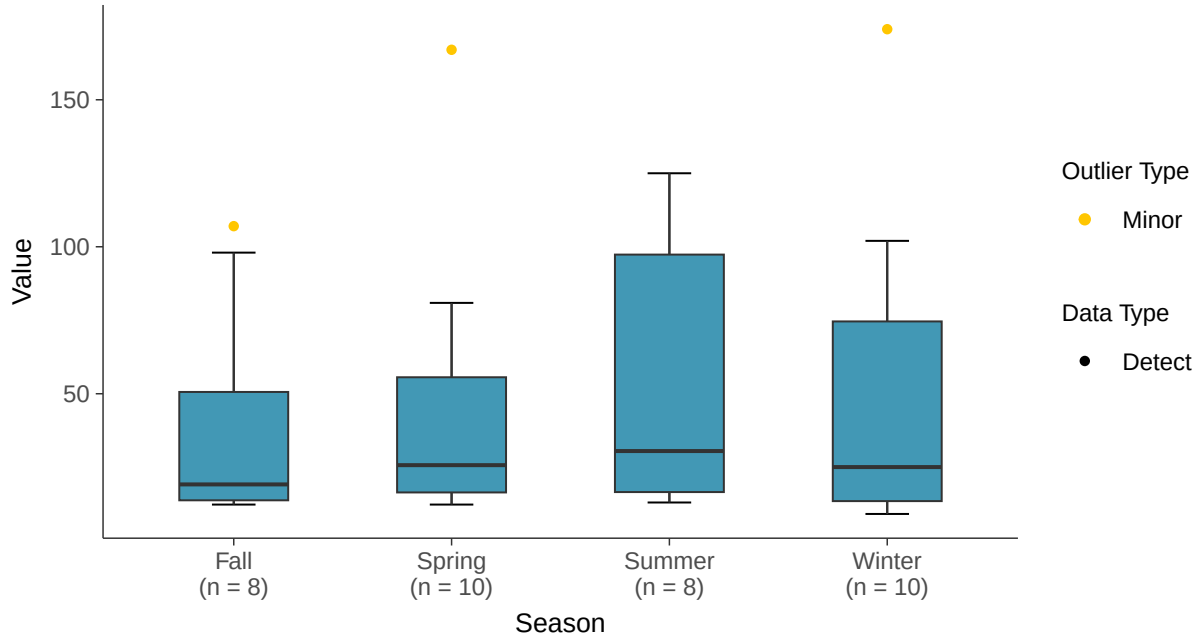
Boxplot

Sulfate, MW-3 (mg/L)



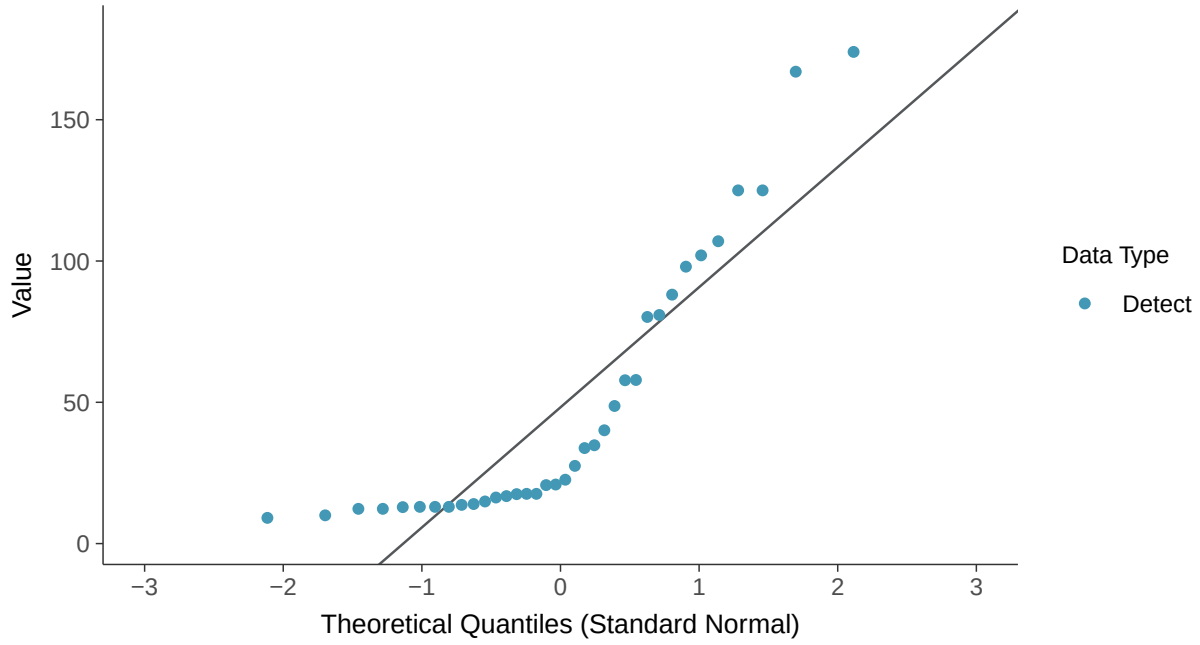
Boxplot by Season

Sulfate, MW-3 (mg/L)



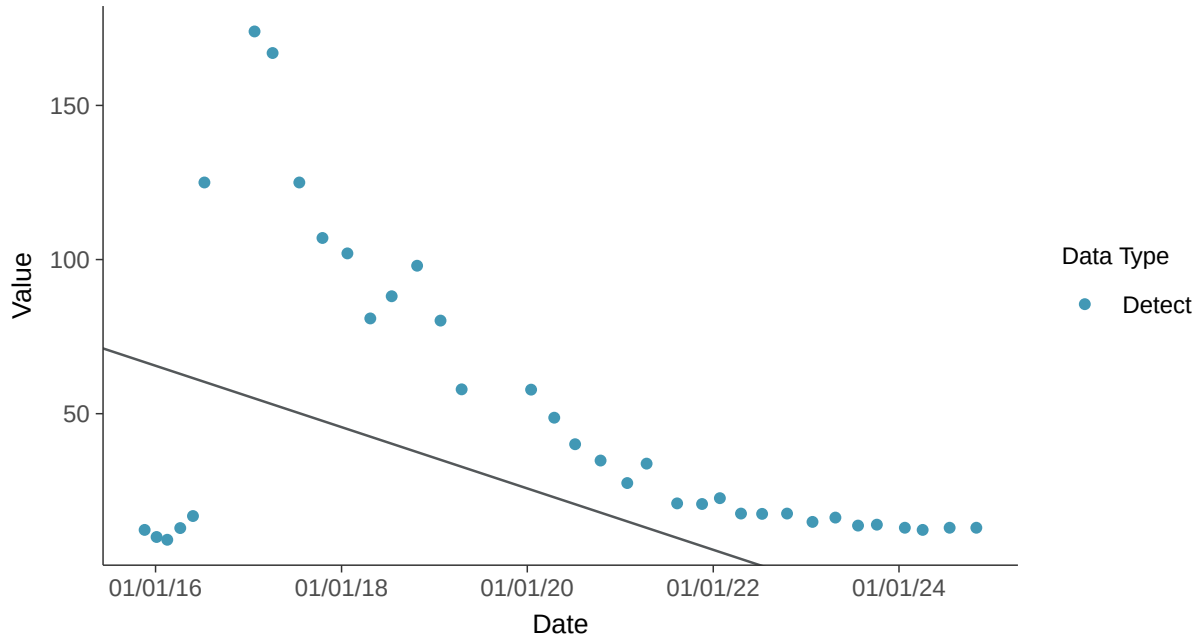
Normal Q-Q plot

Sulfate, MW-3 (mg/L)



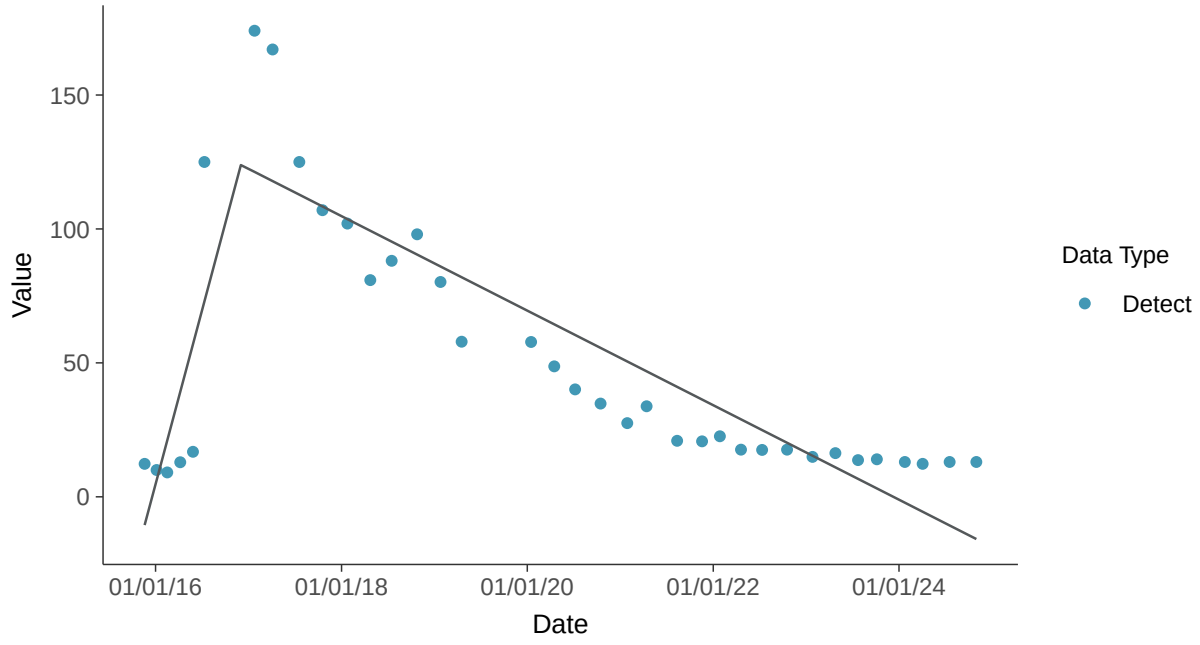
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-3 (mg/L)



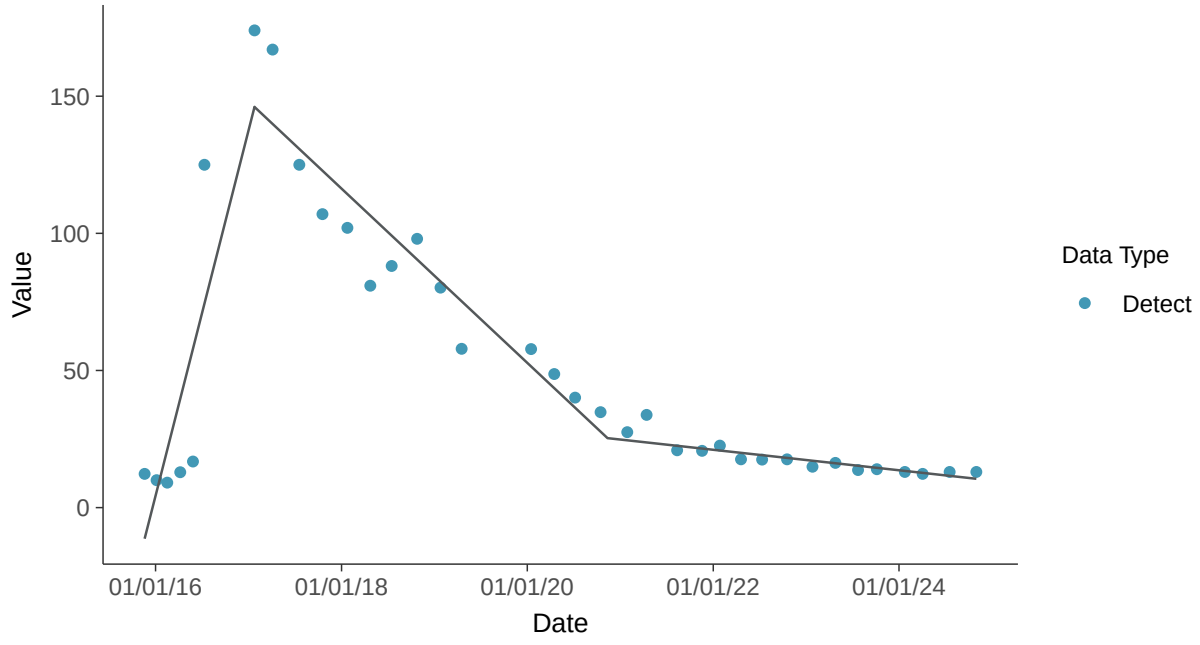
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-3 (mg/L)



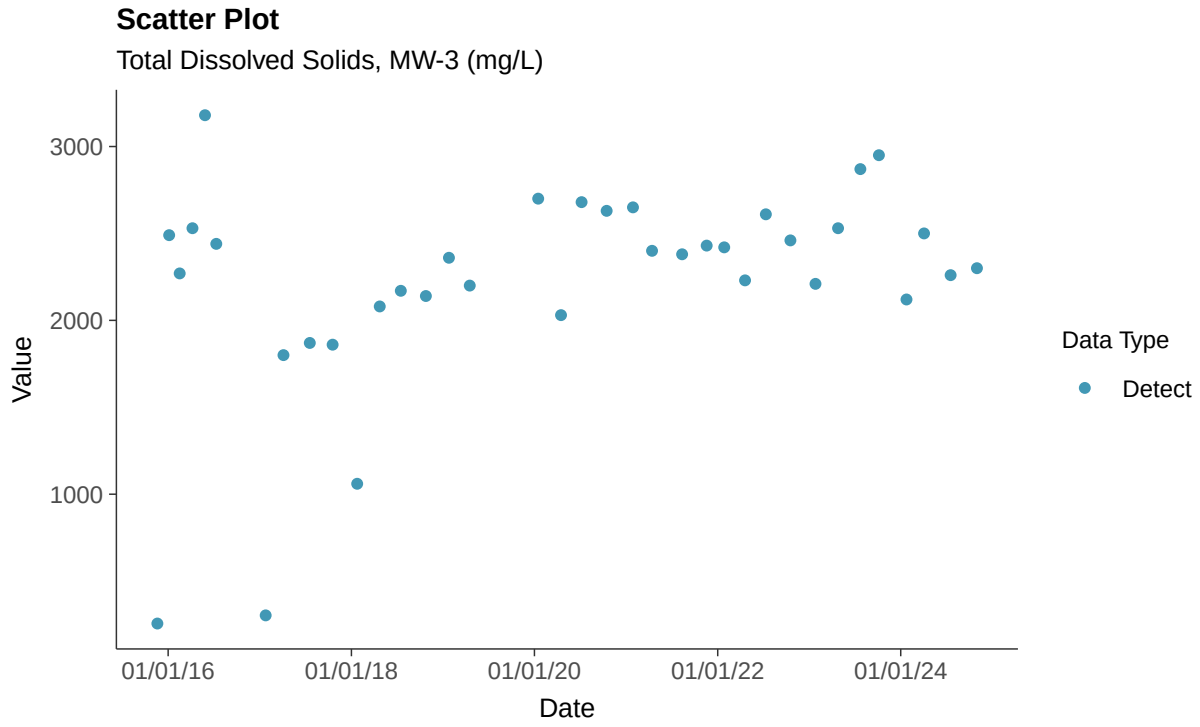
Trend Regression: Piecewise Linear-Linear-Linear

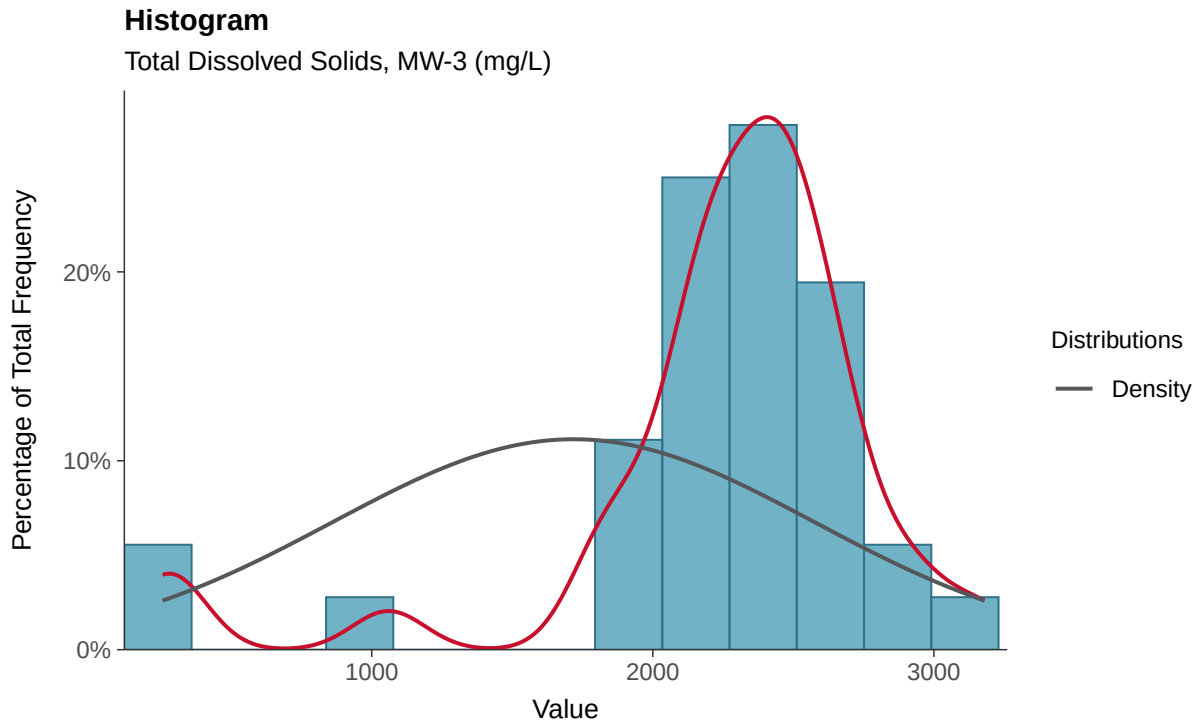
Sulfate, MW-3 (mg/L)



App. III: Total Dissolved Solids, MW-3

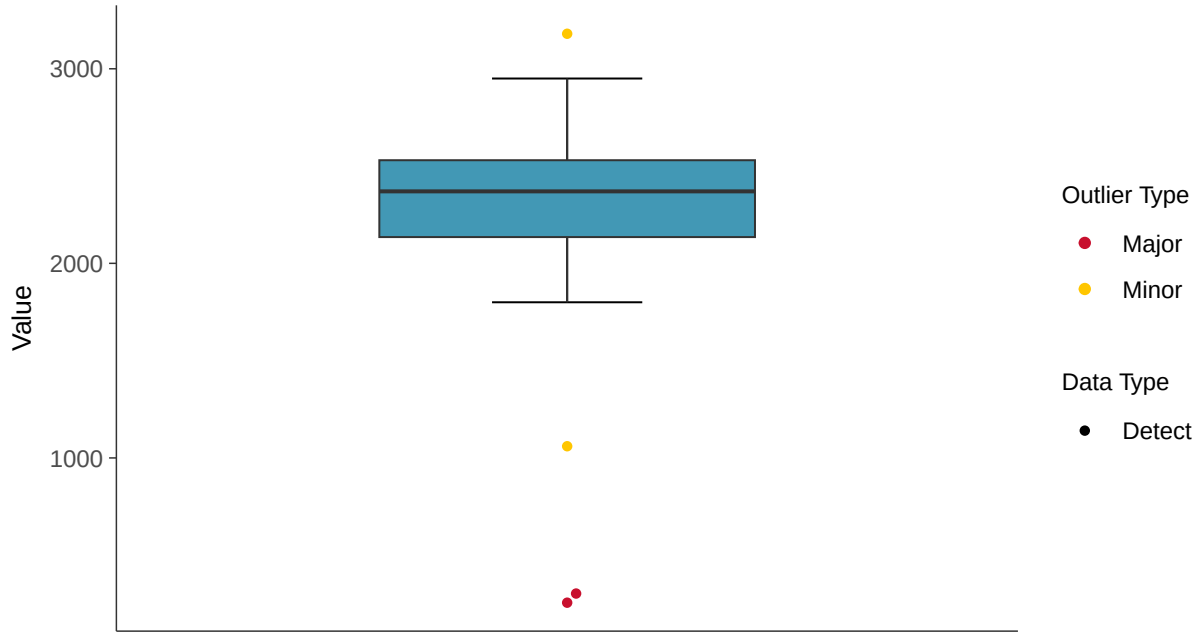
ID: 03_02_125





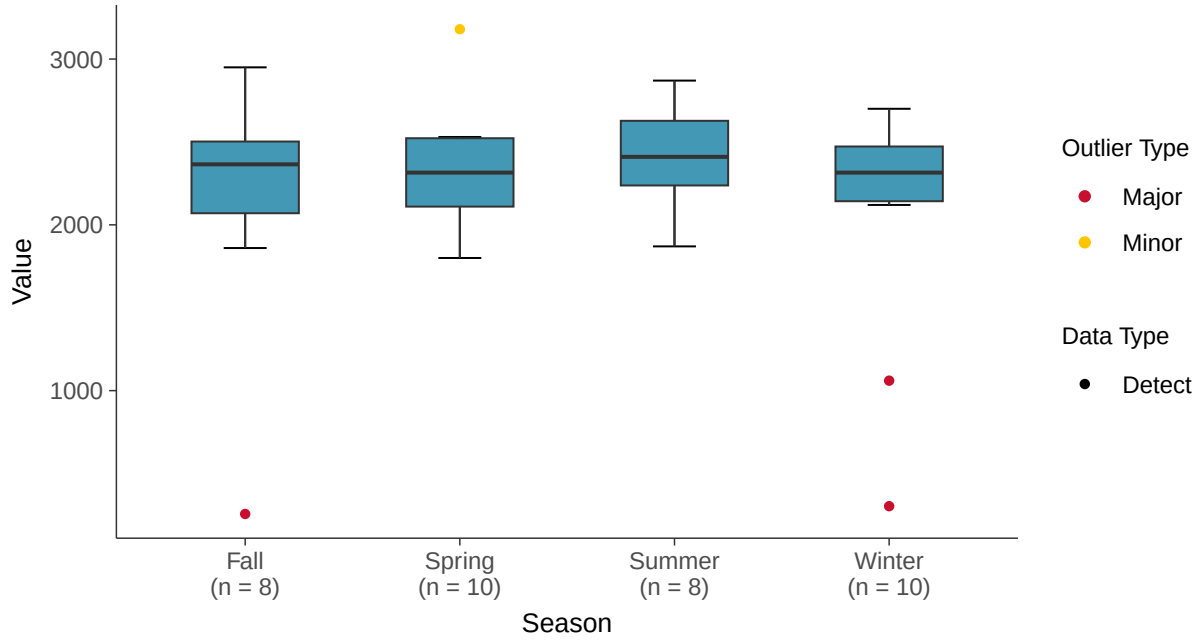
Boxplot

Total Dissolved Solids, MW-3 (mg/L)



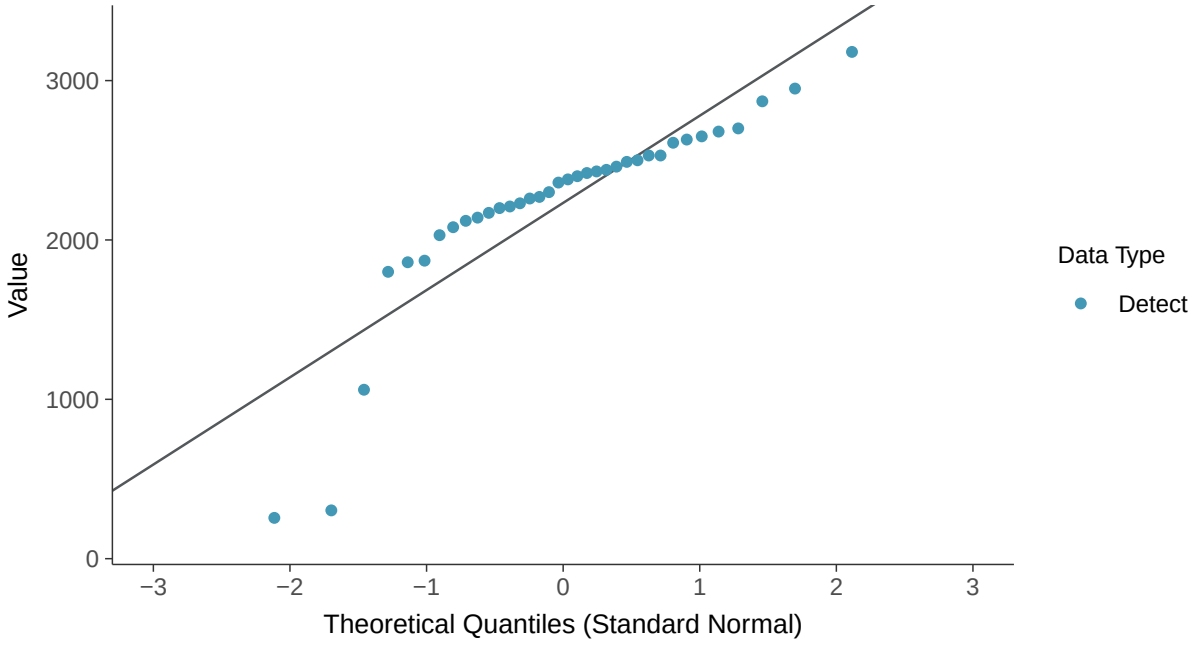
Boxplot by Season

Total Dissolved Solids, MW-3 (mg/L)



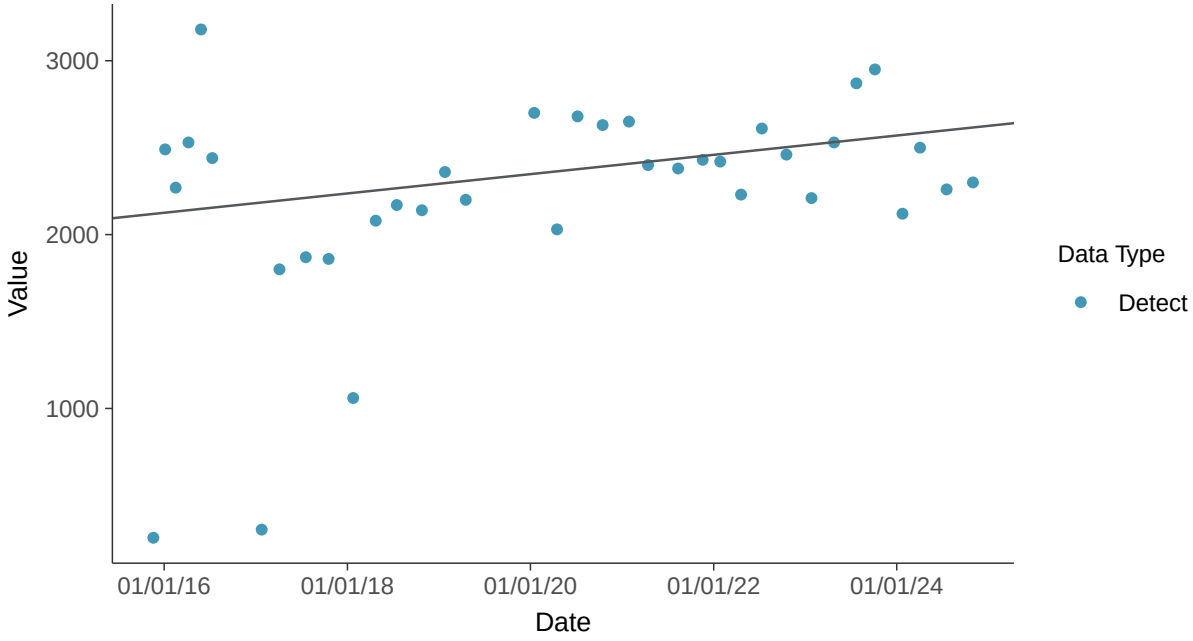
Normal Q-Q plot

Total Dissolved Solids, MW-3 (mg/L)



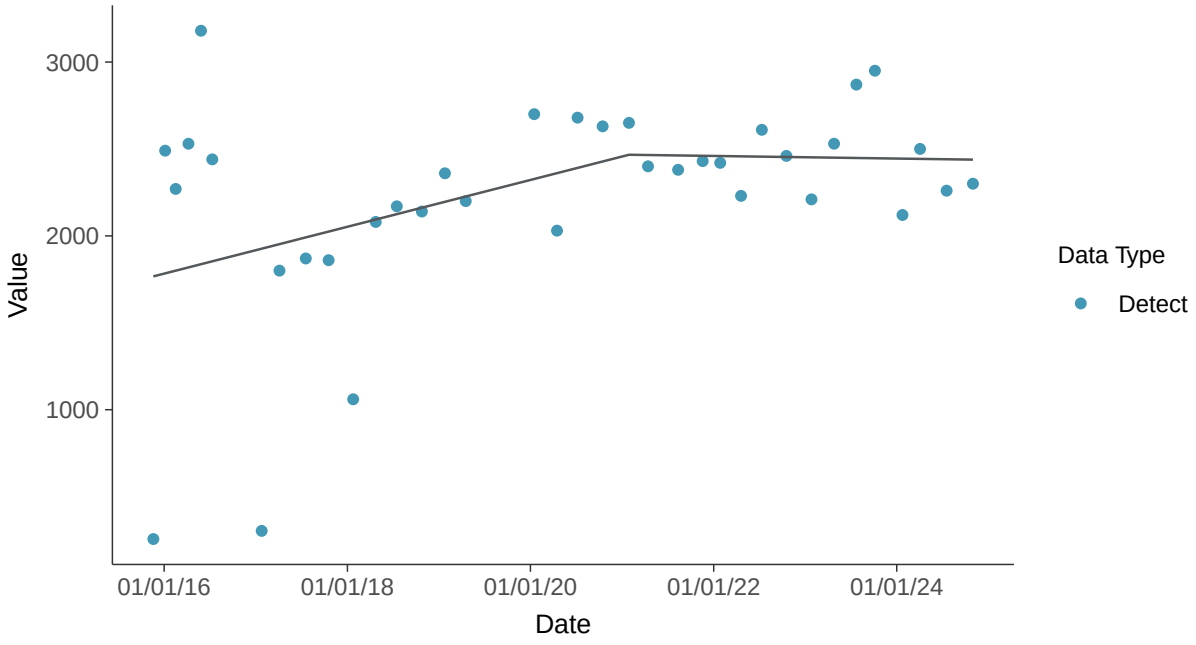
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-3 (mg/L)



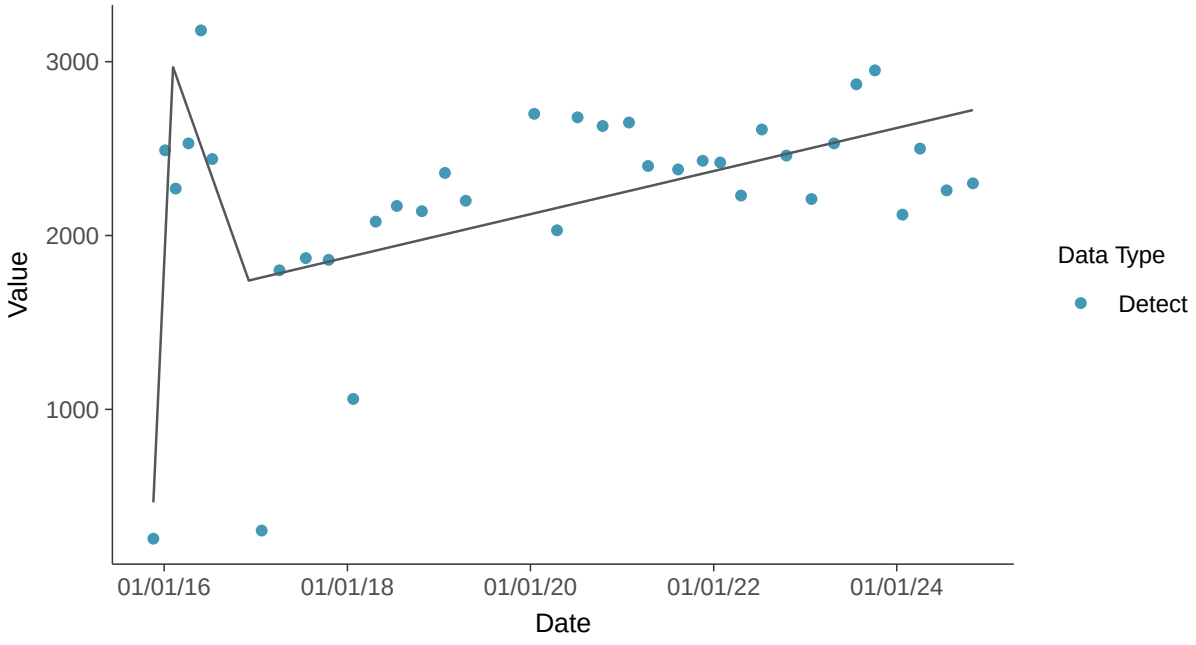
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-3 (mg/L)



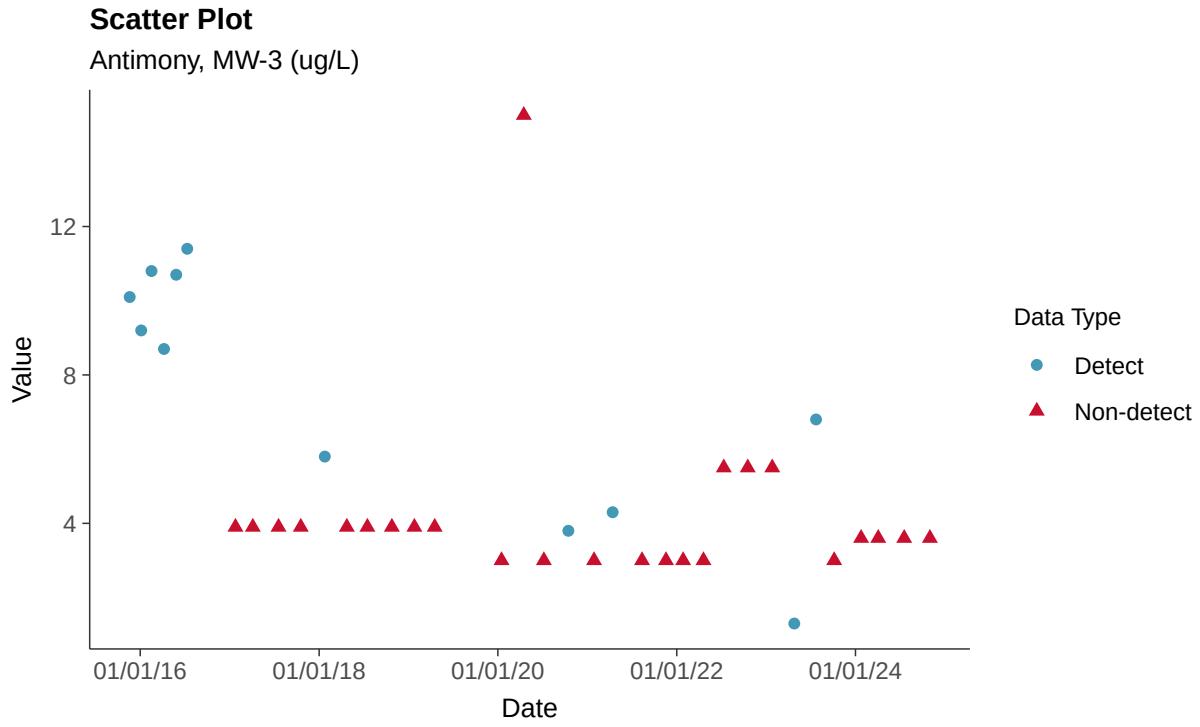
Trend Regression: Piecewise Linear-Linear-Linear

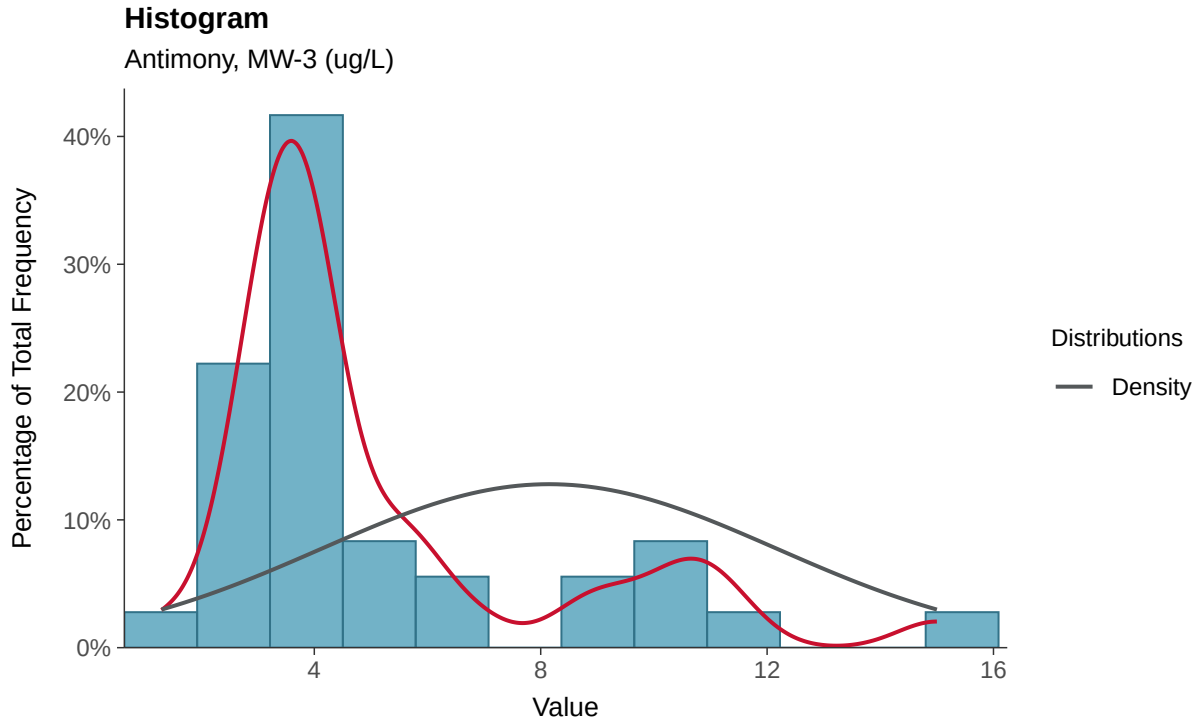
Total Dissolved Solids, MW-3 (mg/L)



App. IV: Antimony, MW-3

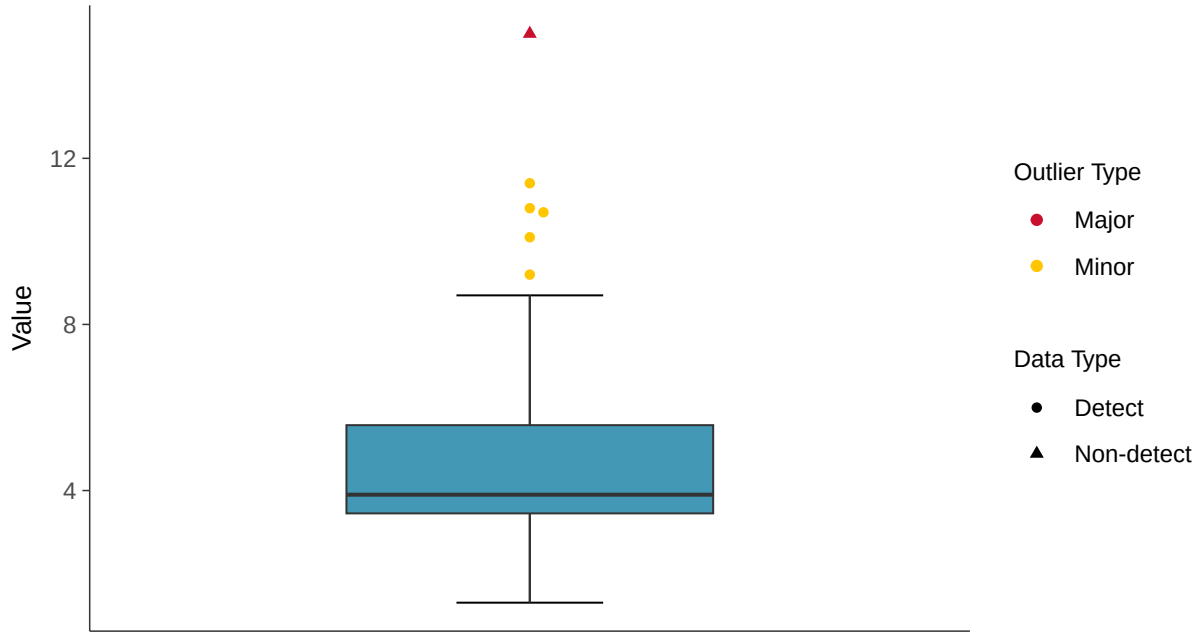
ID: 03_03_101





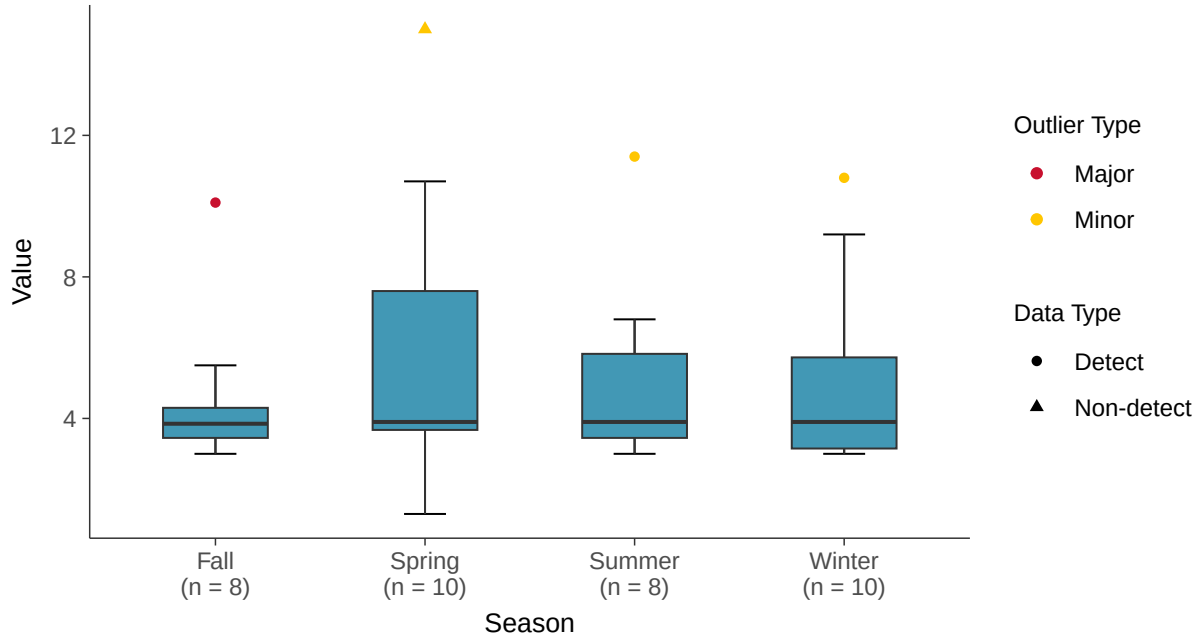
Boxplot

Antimony, MW-3 (ug/L)



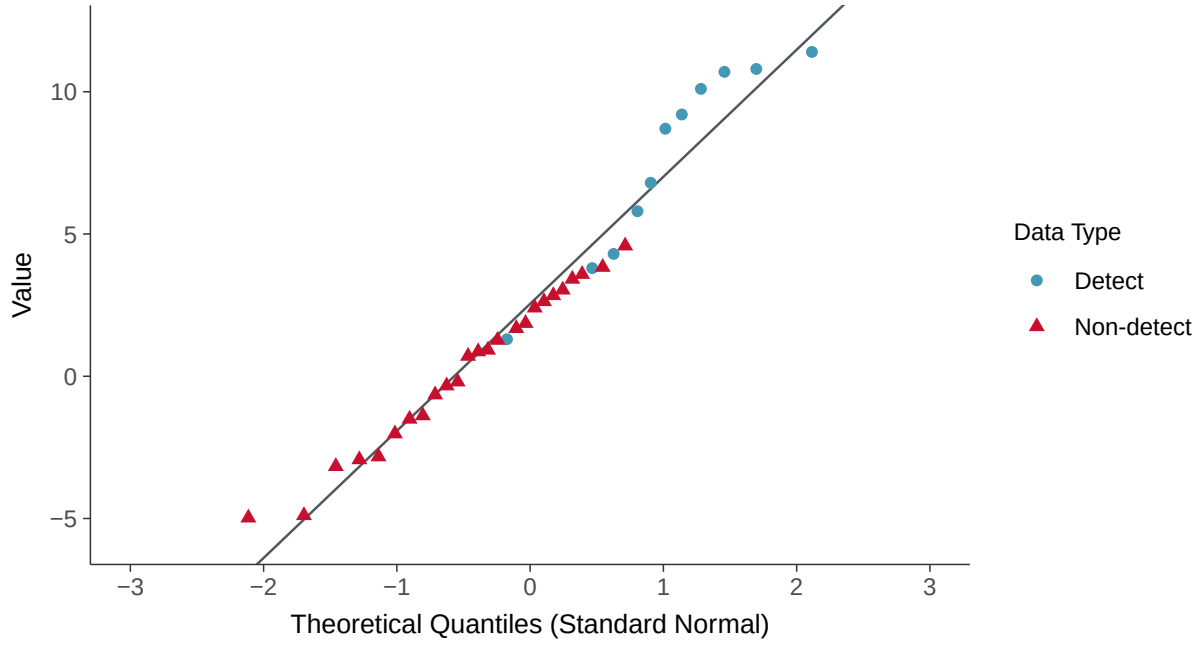
Boxplot by Season

Antimony, MW-3 (ug/L)



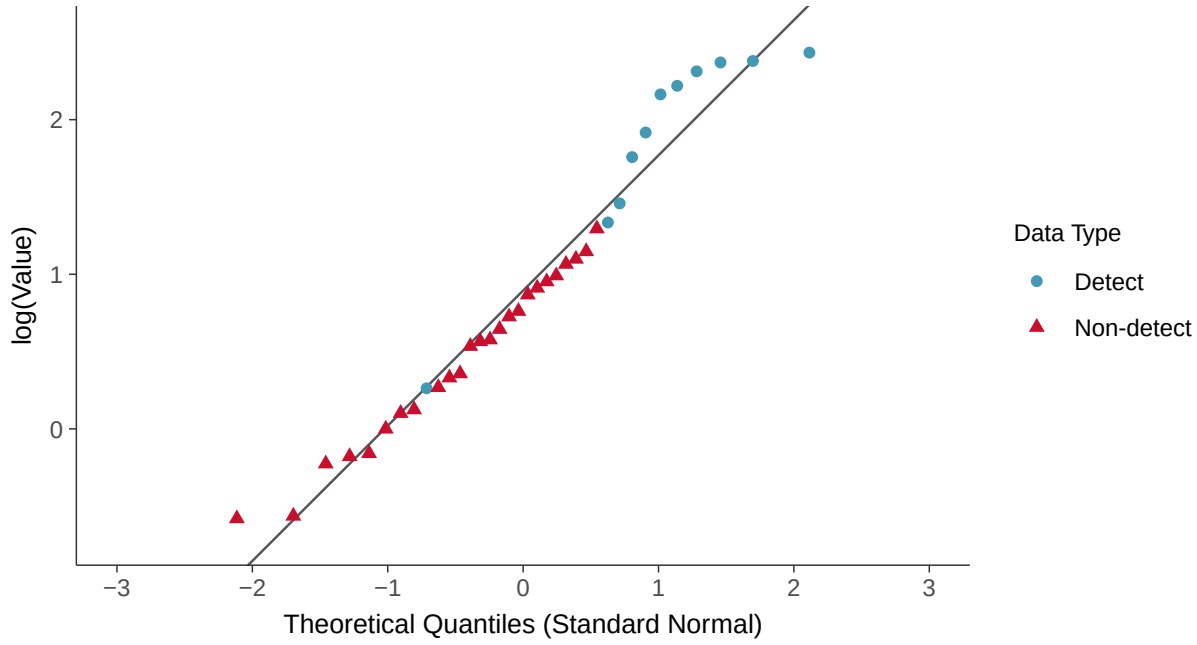
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



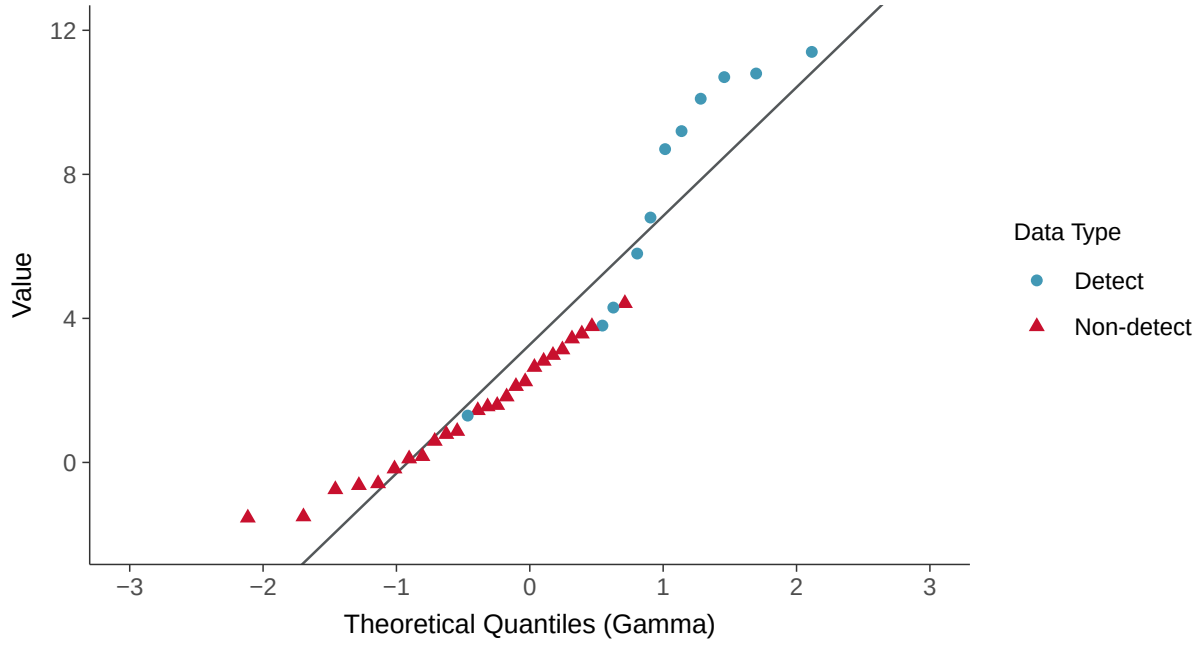
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



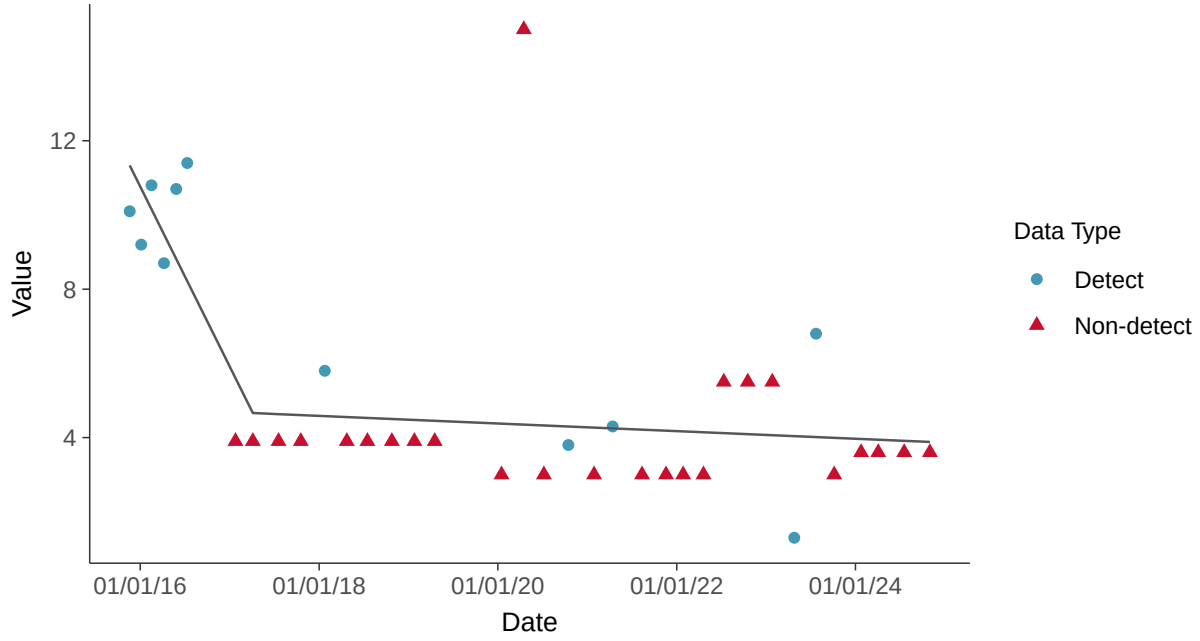
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



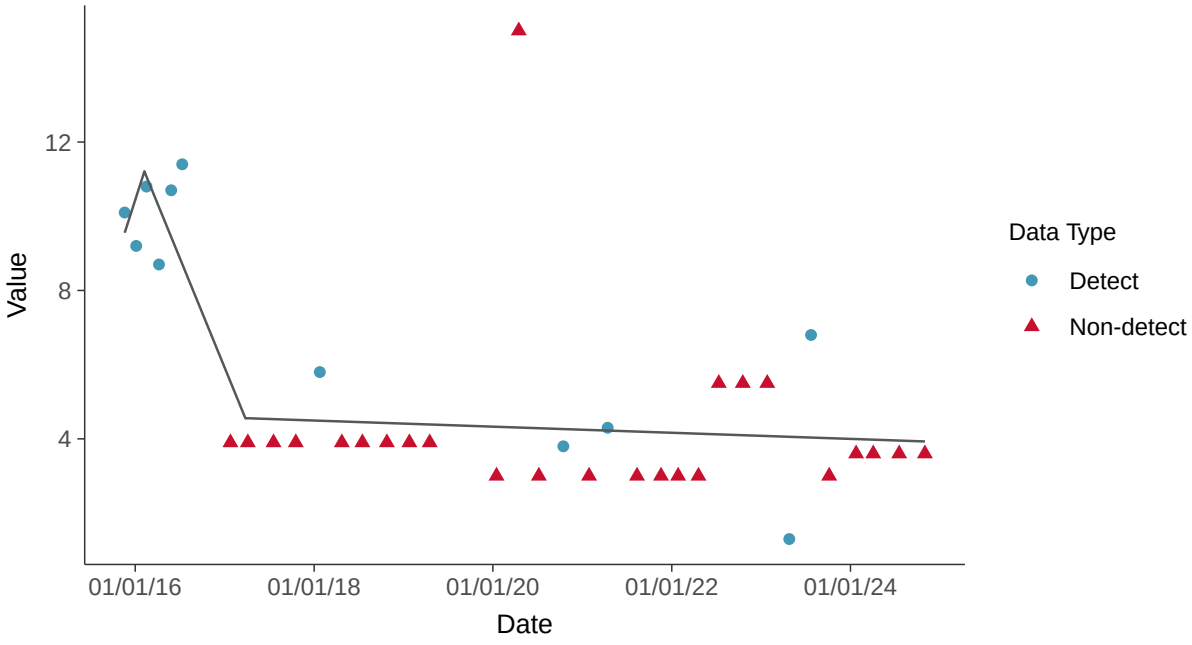
Trend Regression: Piecewise Linear-Linear

Antimony, MW-3 (ug/L)



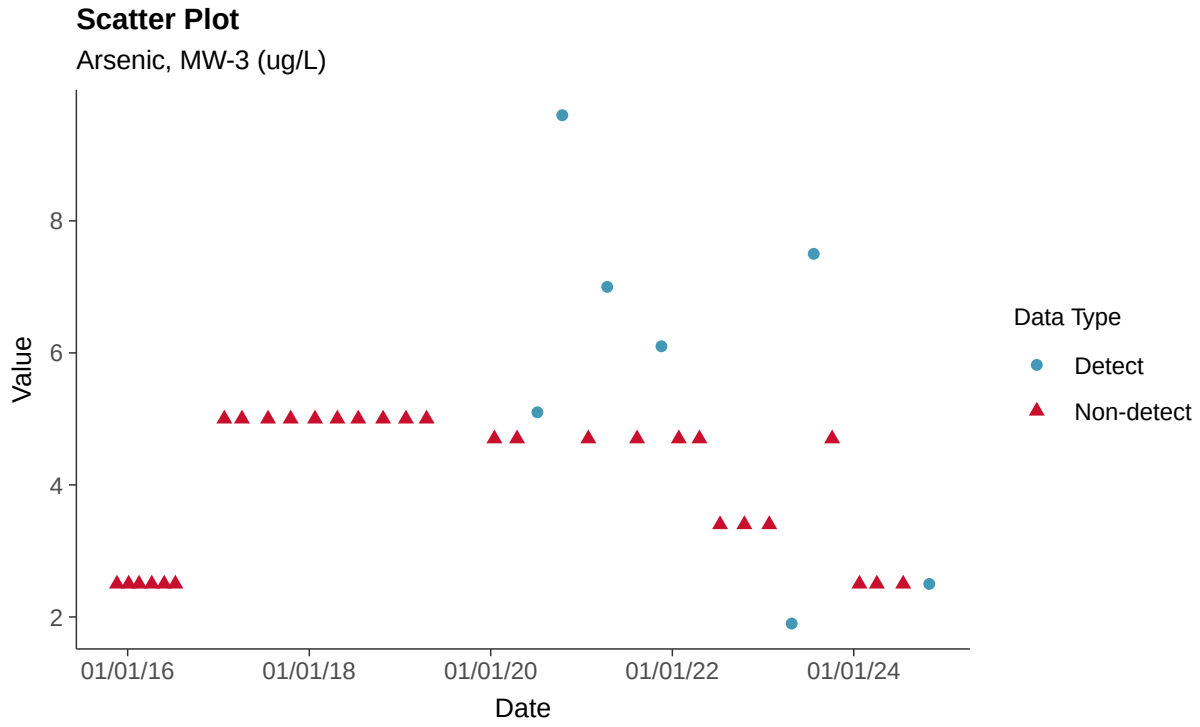
Trend Regression: Piecewise Linear-Linear-Linear

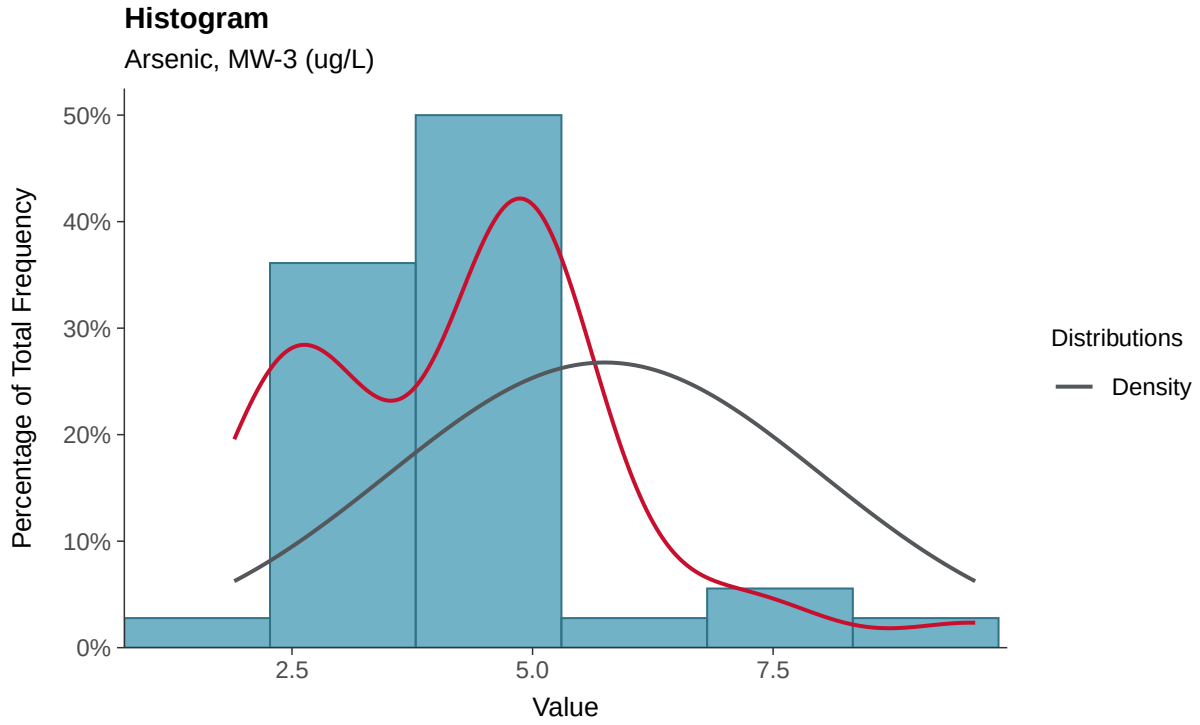
Antimony, MW-3 (ug/L)



App. IV: Arsenic, MW-3

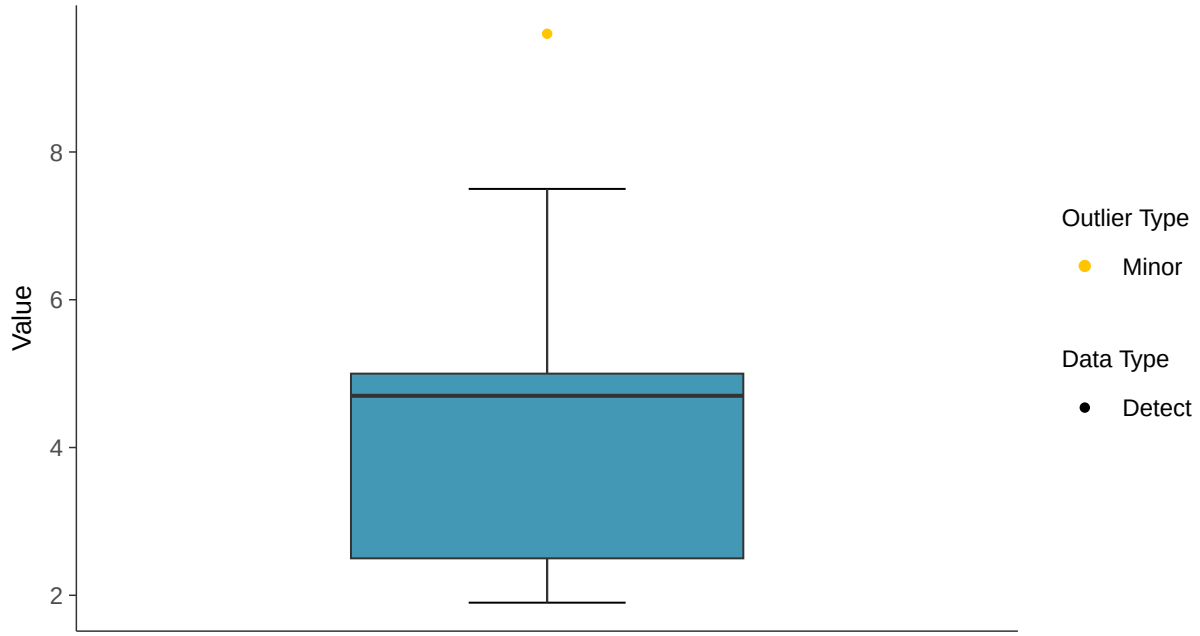
ID: 03_03_102





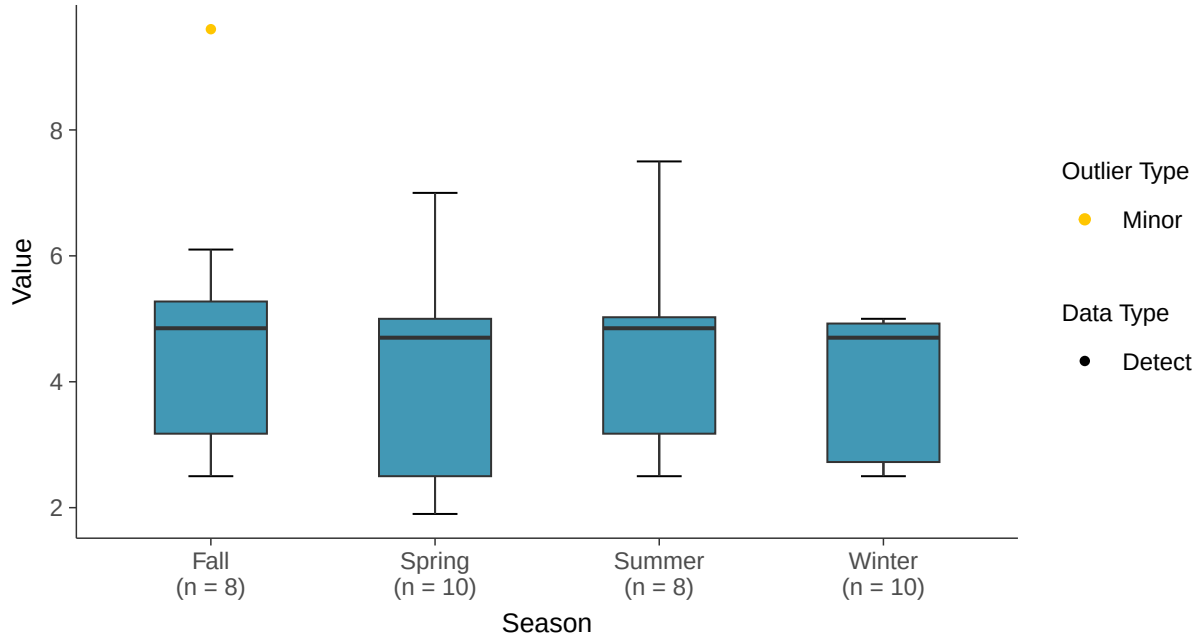
Boxplot

Arsenic, MW-3 (ug/L)



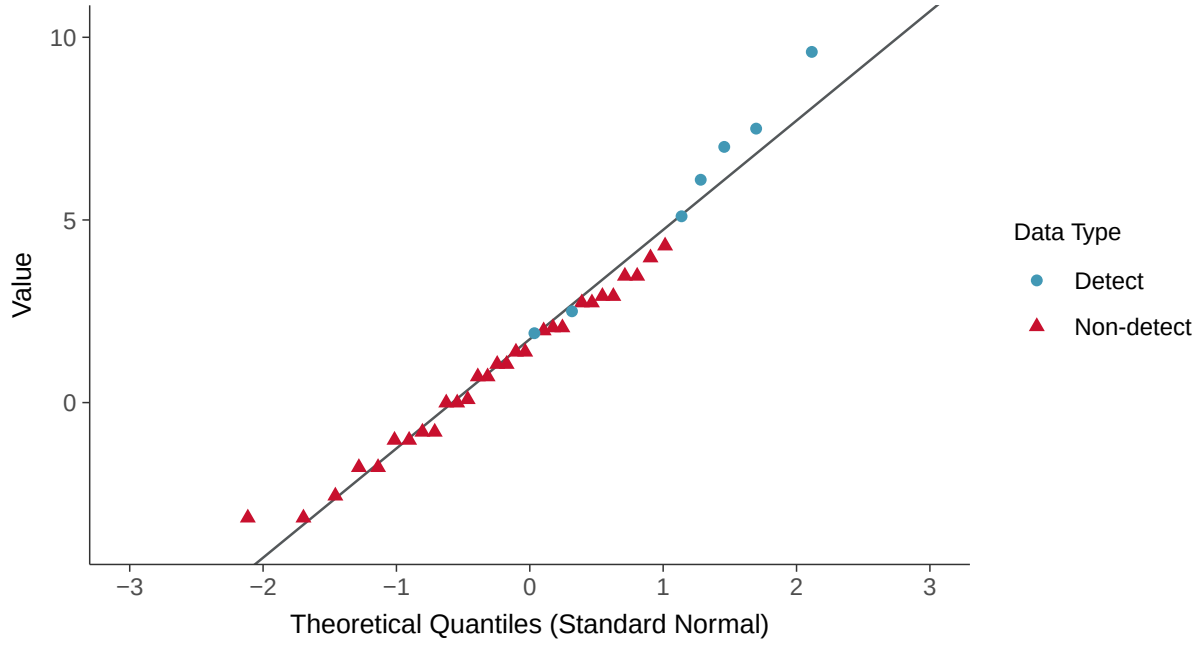
Boxplot by Season

Arsenic, MW-3 (ug/L)



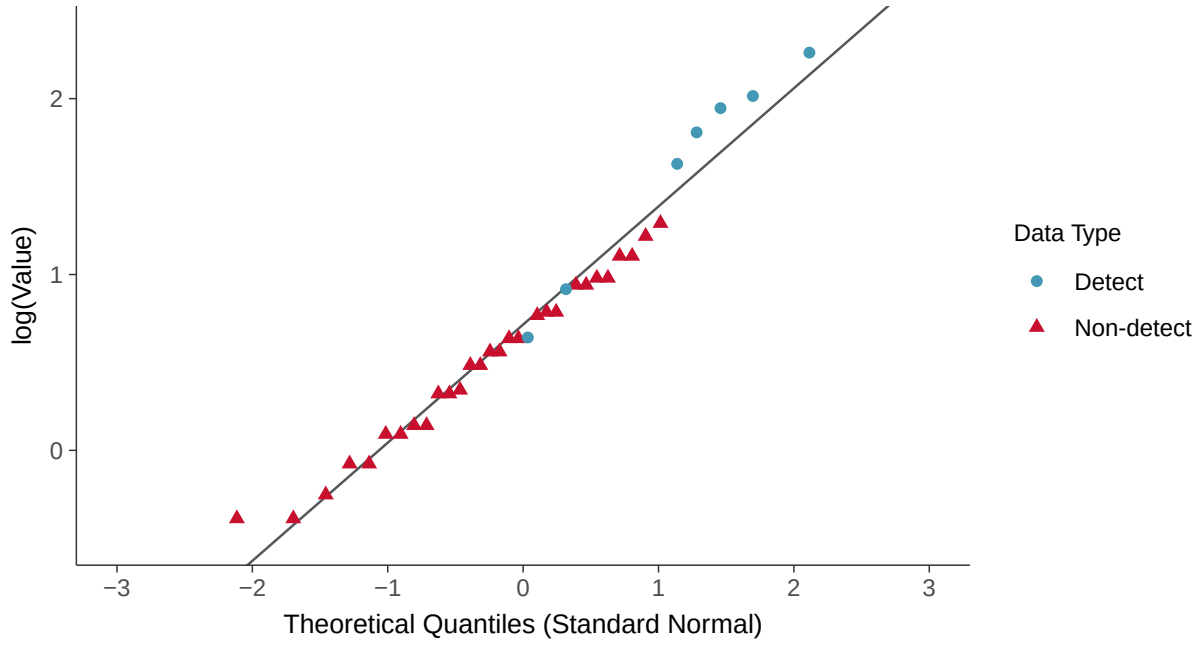
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



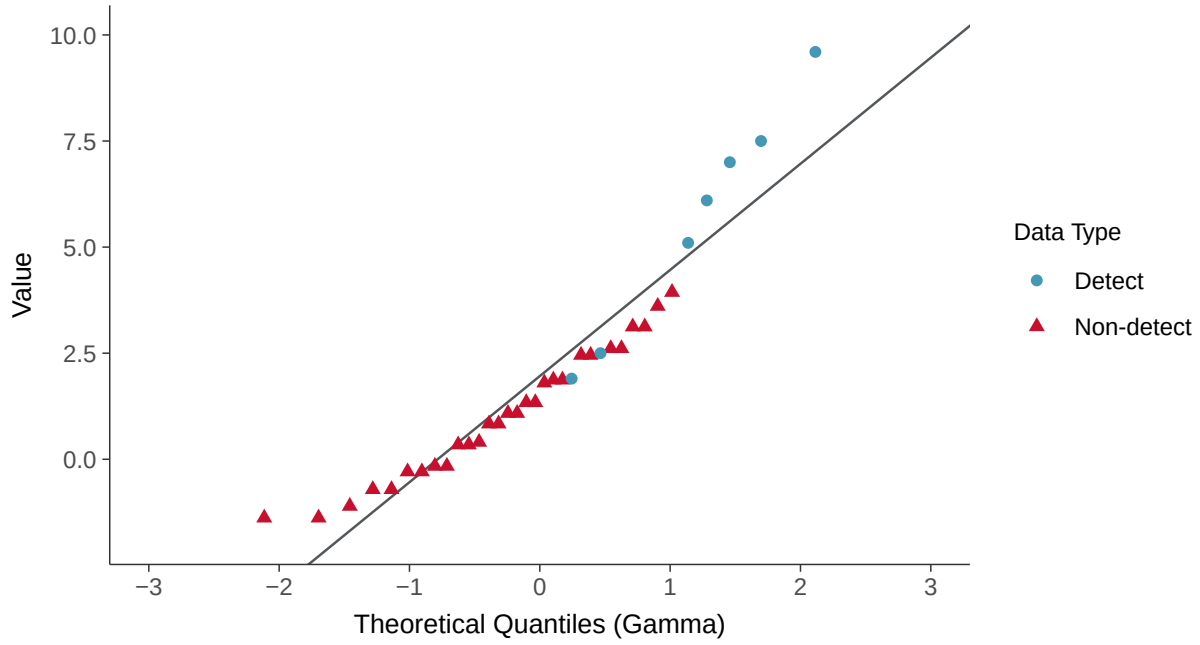
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



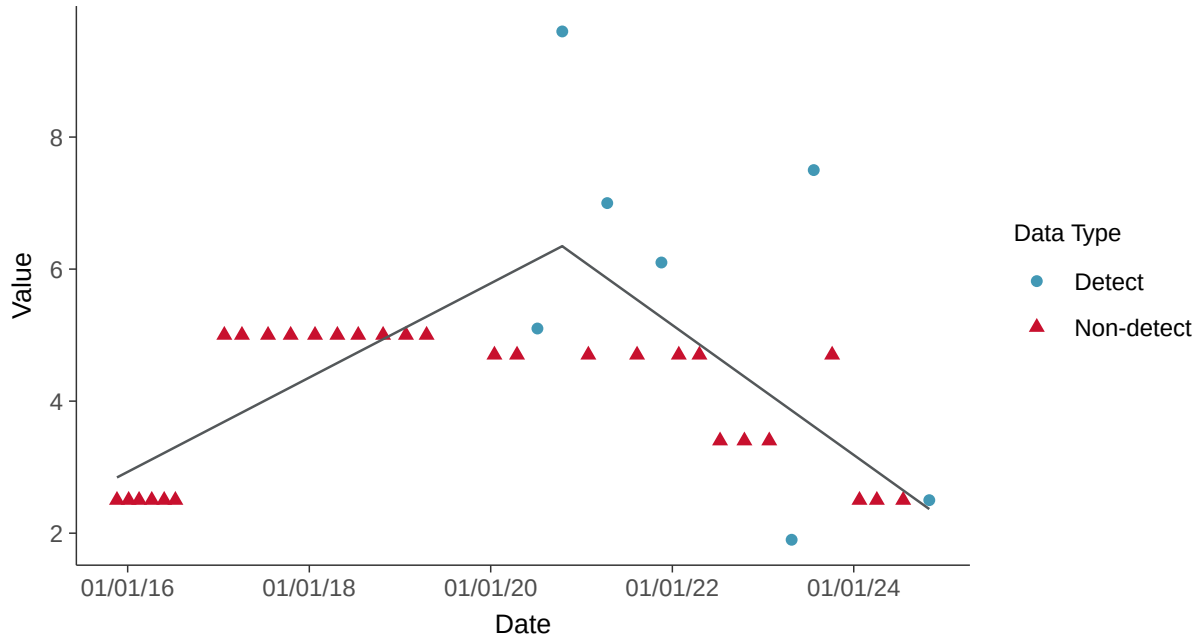
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



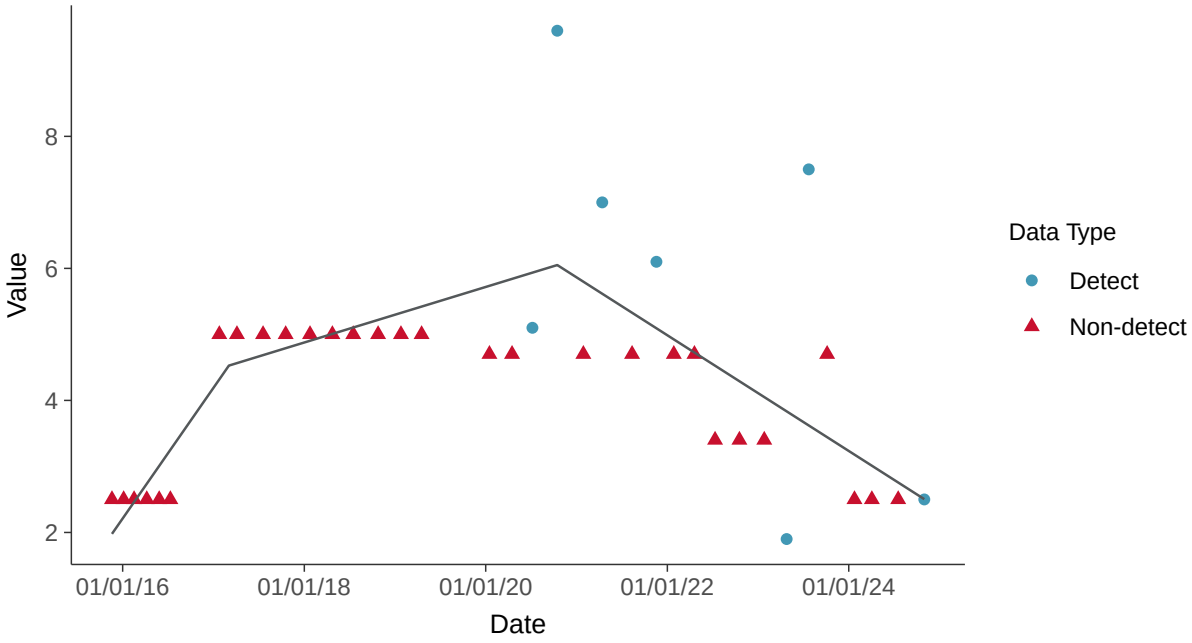
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-3 (ug/L)

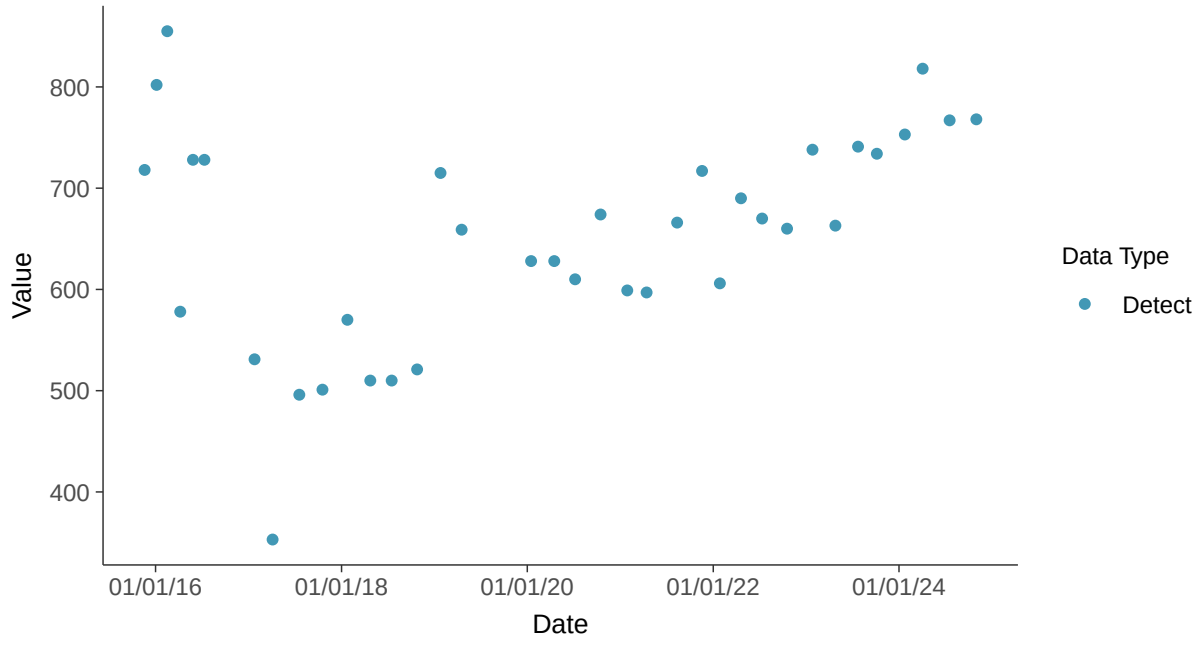


App. IV: Barium, MW-3

ID: 03_03_103

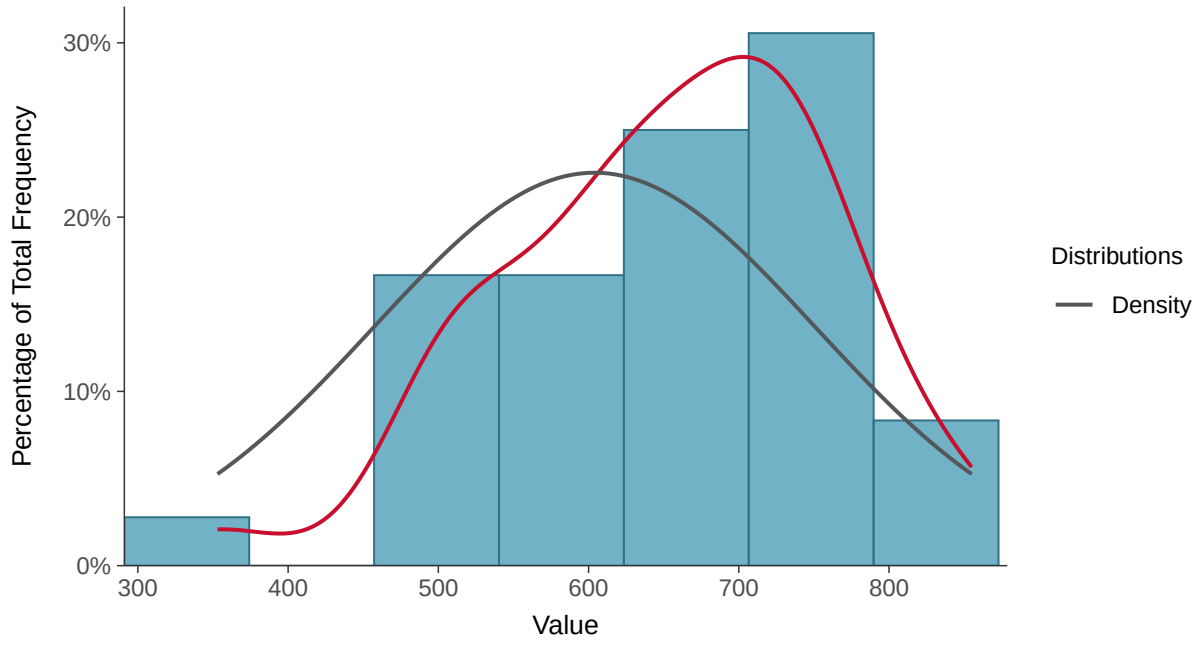
Scatter Plot

Barium, MW-3 (ug/L)



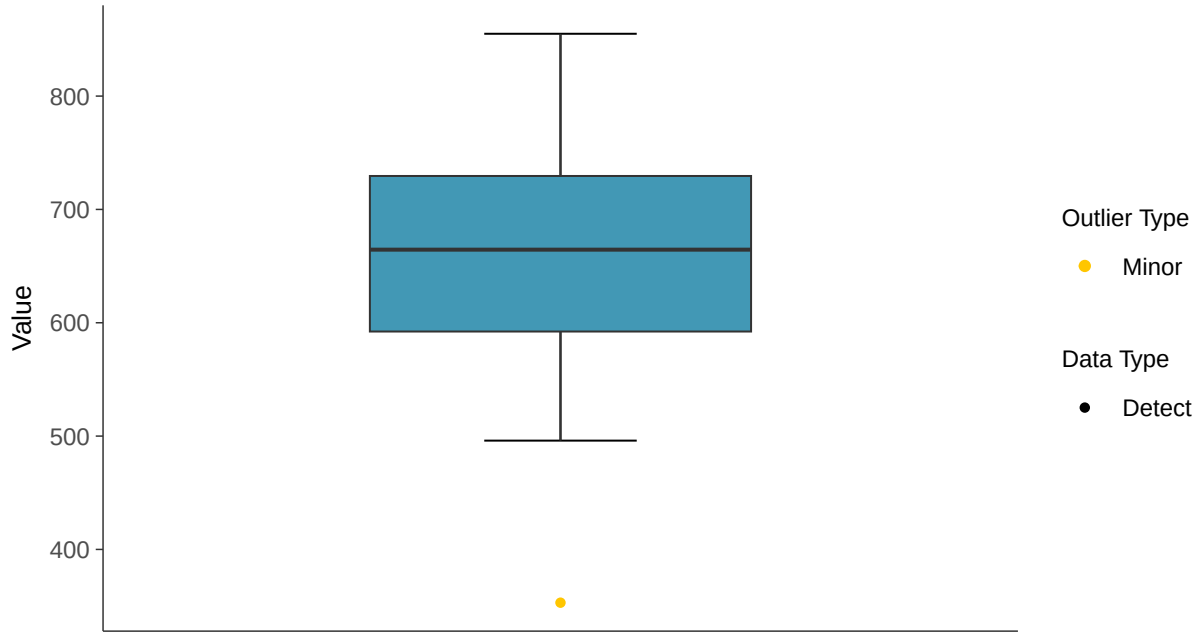
Histogram

Barium, MW-3 (ug/L)



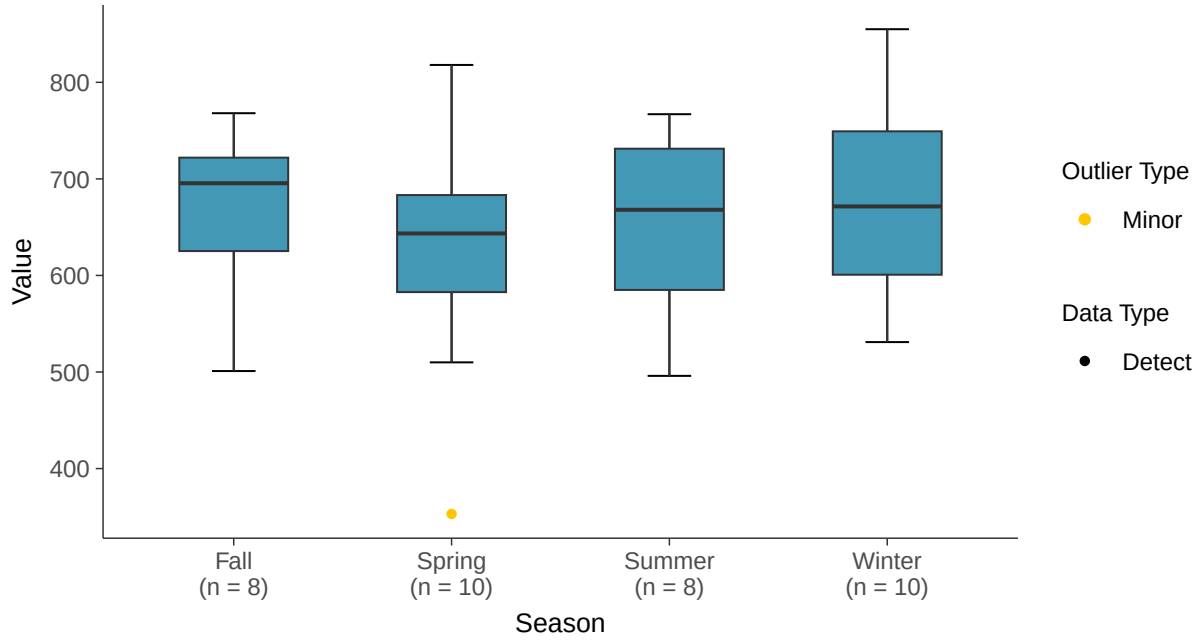
Boxplot

Barium, MW-3 (ug/L)



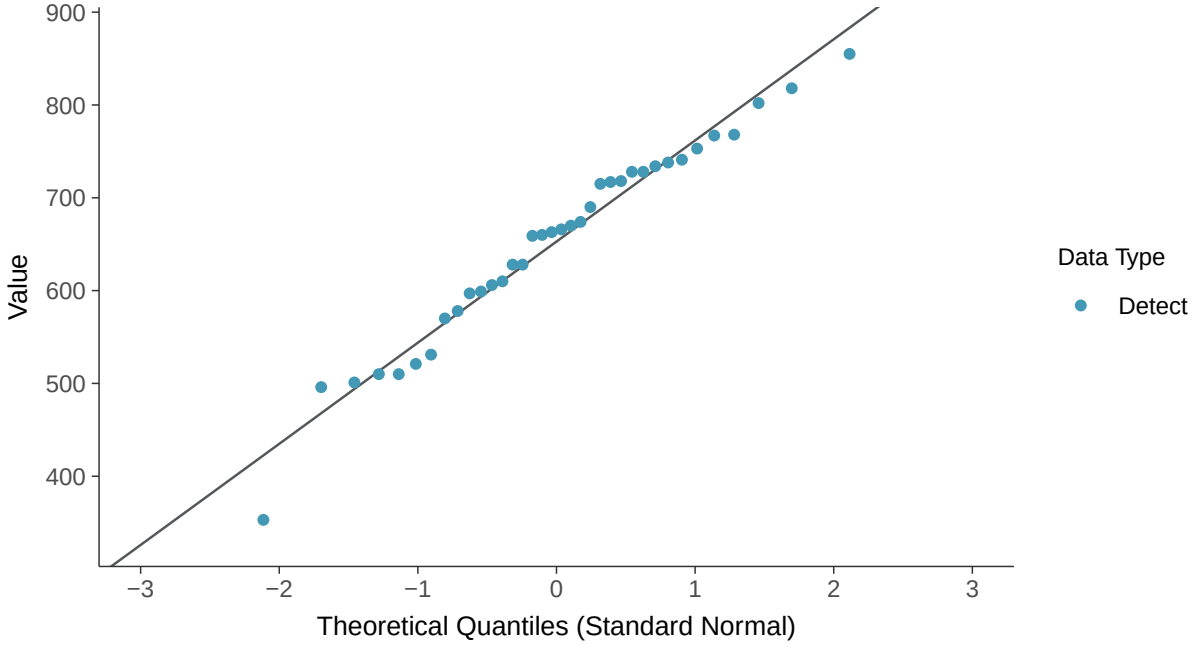
Boxplot by Season

Barium, MW-3 (ug/L)



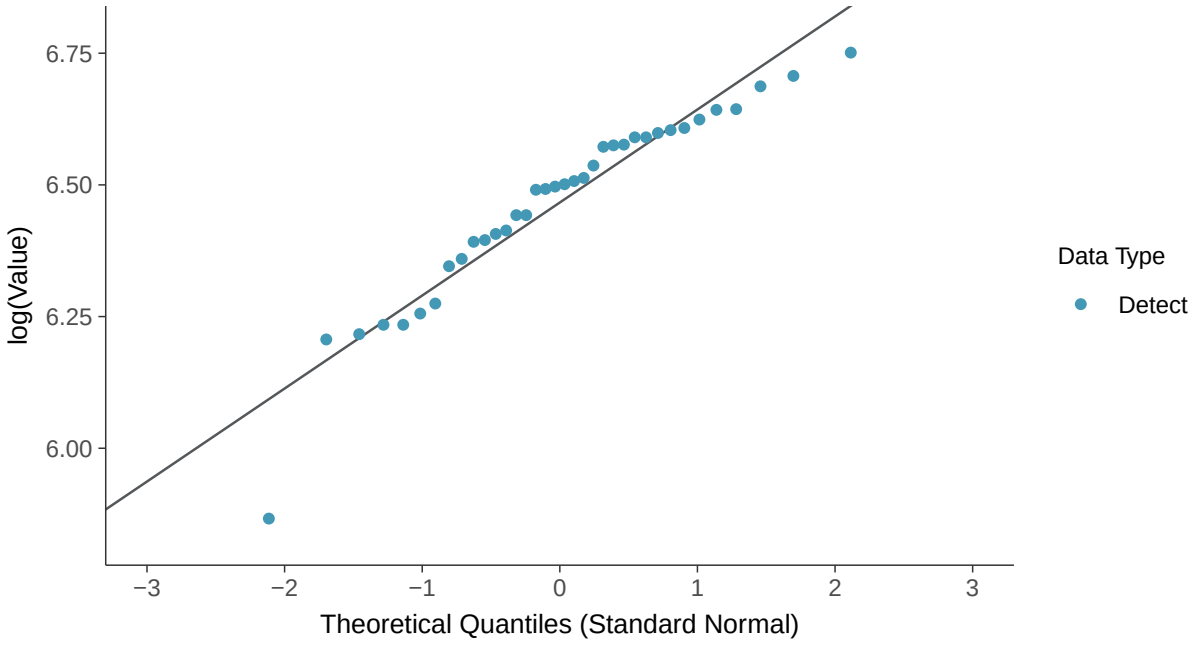
Normal Q-Q plot

Barium, MW-3 (ug/L)



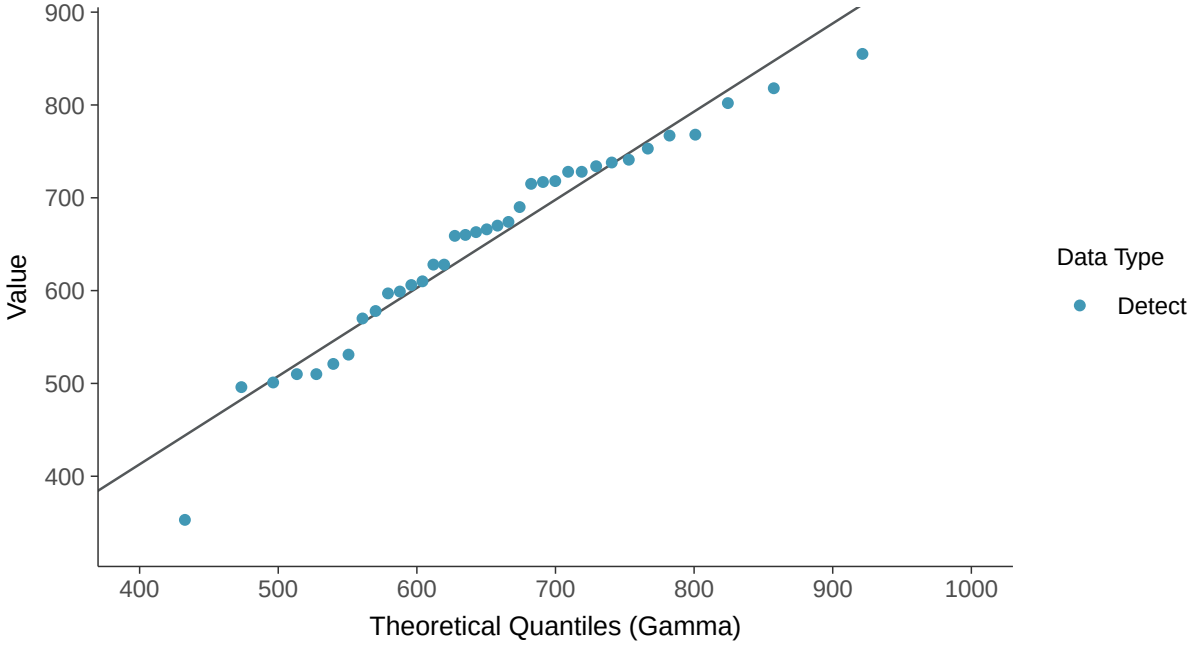
Lognormal Q-Q plot

Barium, MW-3 (ug/L)



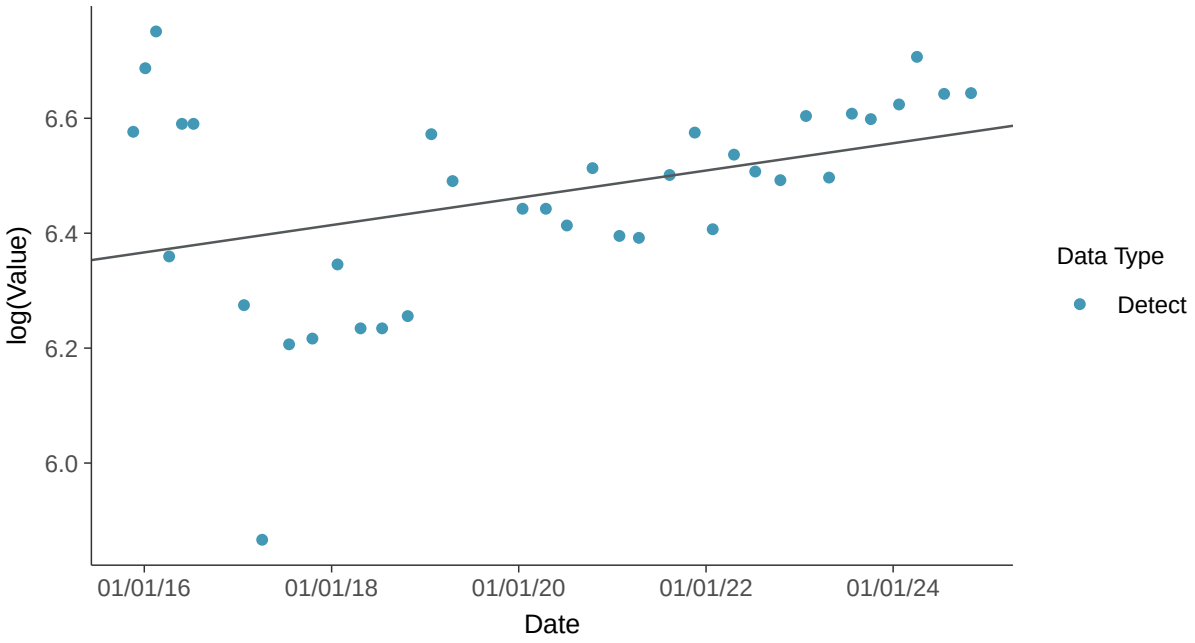
Gamma Q-Q plot

Barium, MW-3 (ug/L)



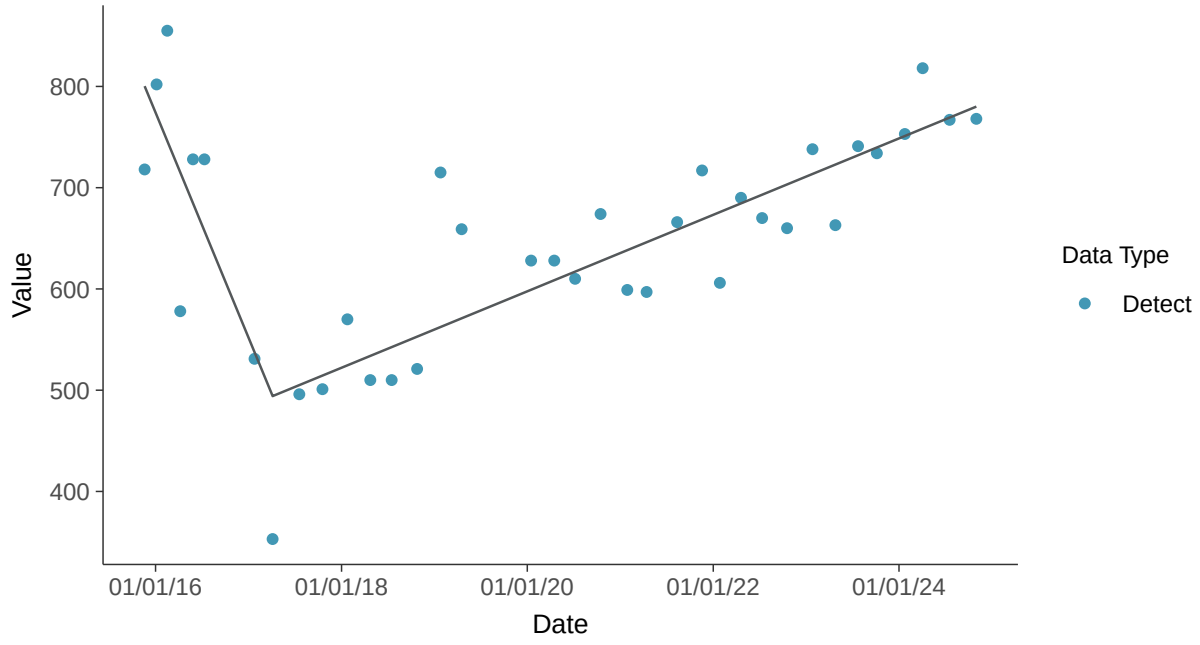
Trend Regression: Lognormal MLE

Barium, MW-3 (ug/L)



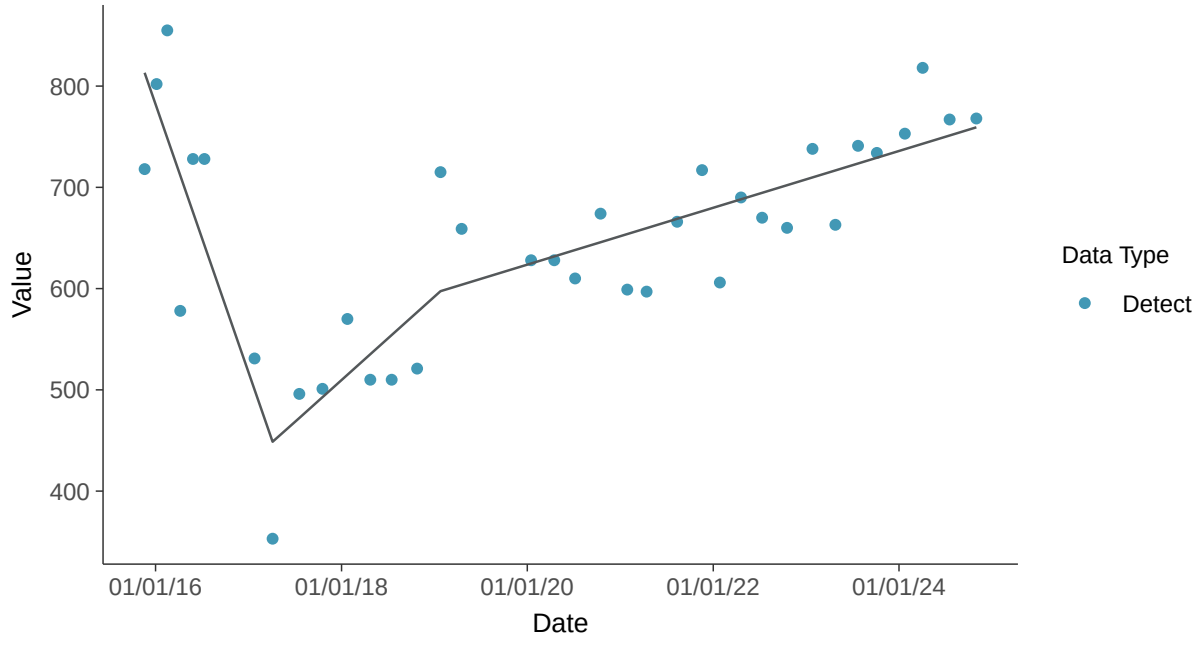
Trend Regression: Piecewise Linear-Linear

Barium, MW-3 (ug/L)



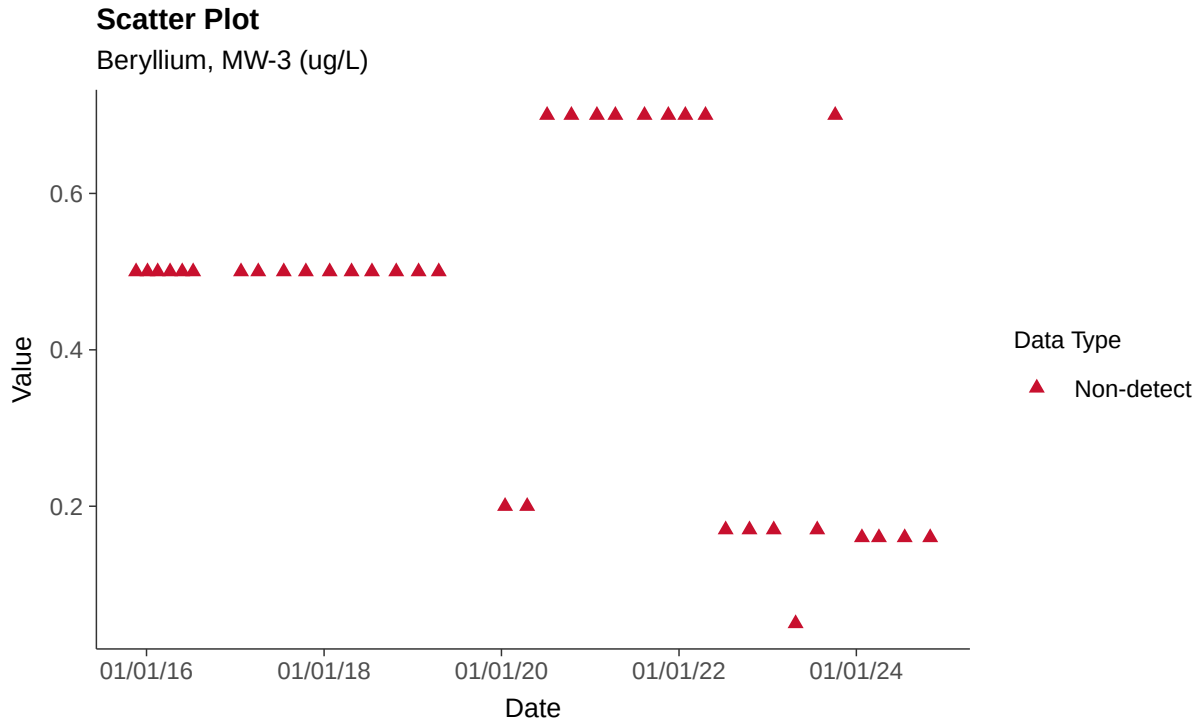
Trend Regression: Piecewise Linear-Linear-Linear

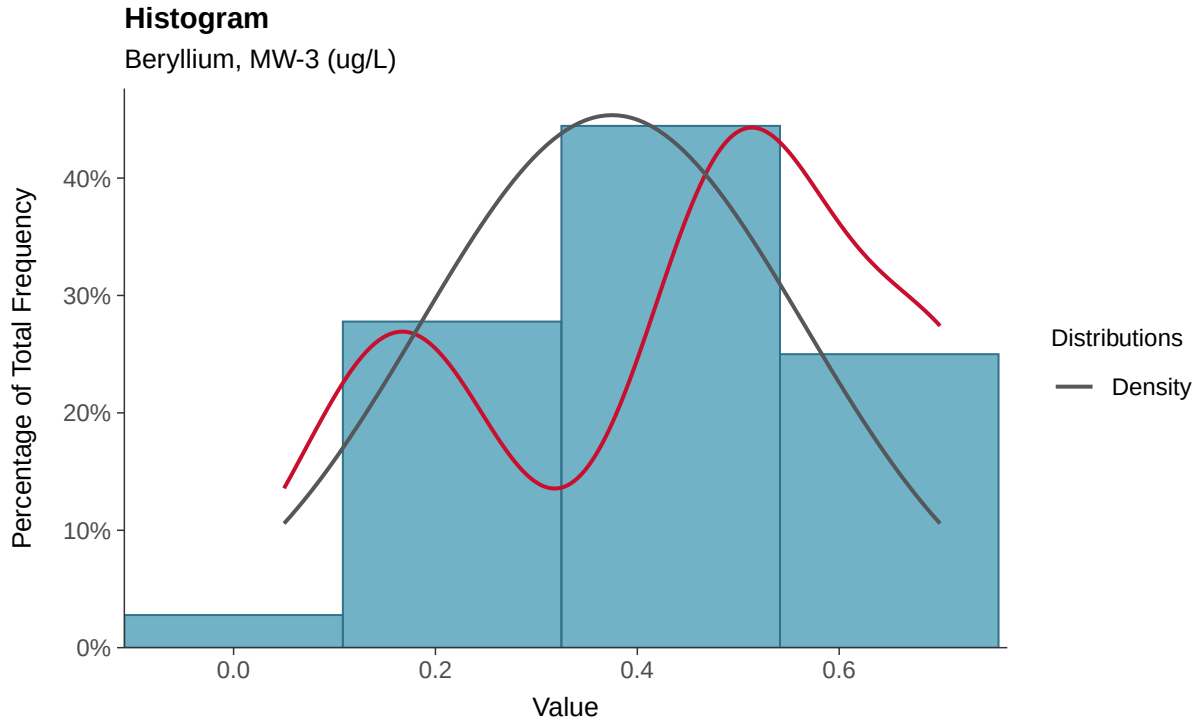
Barium, MW-3 (ug/L)



App. IV: Beryllium, MW-3

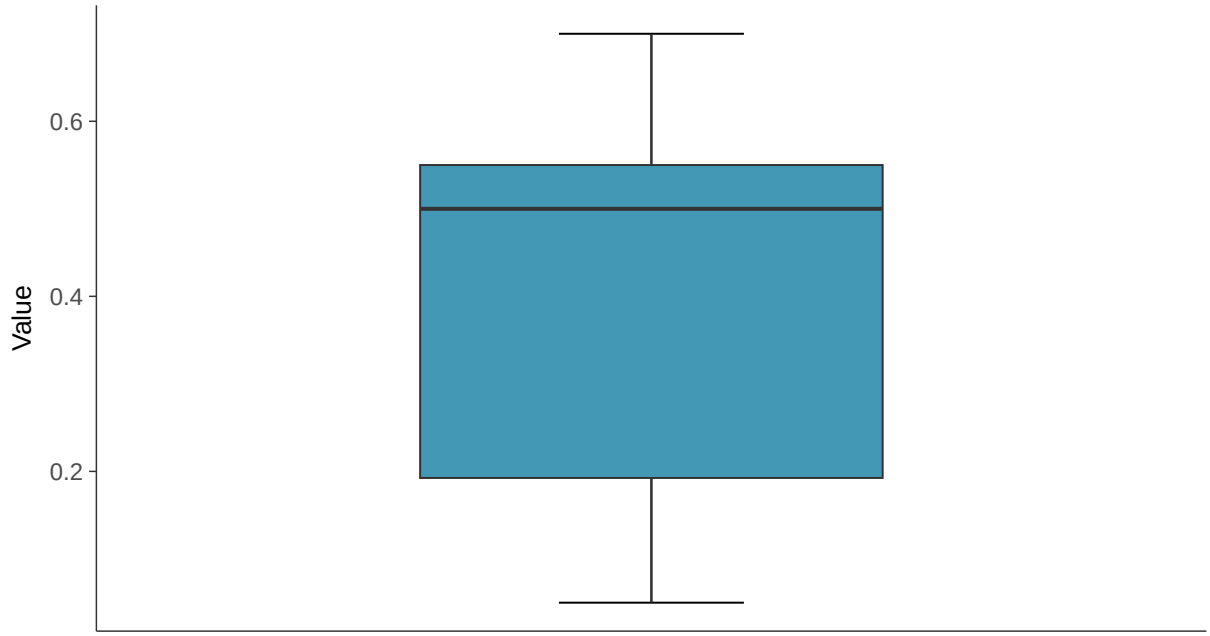
ID: 03_03_104





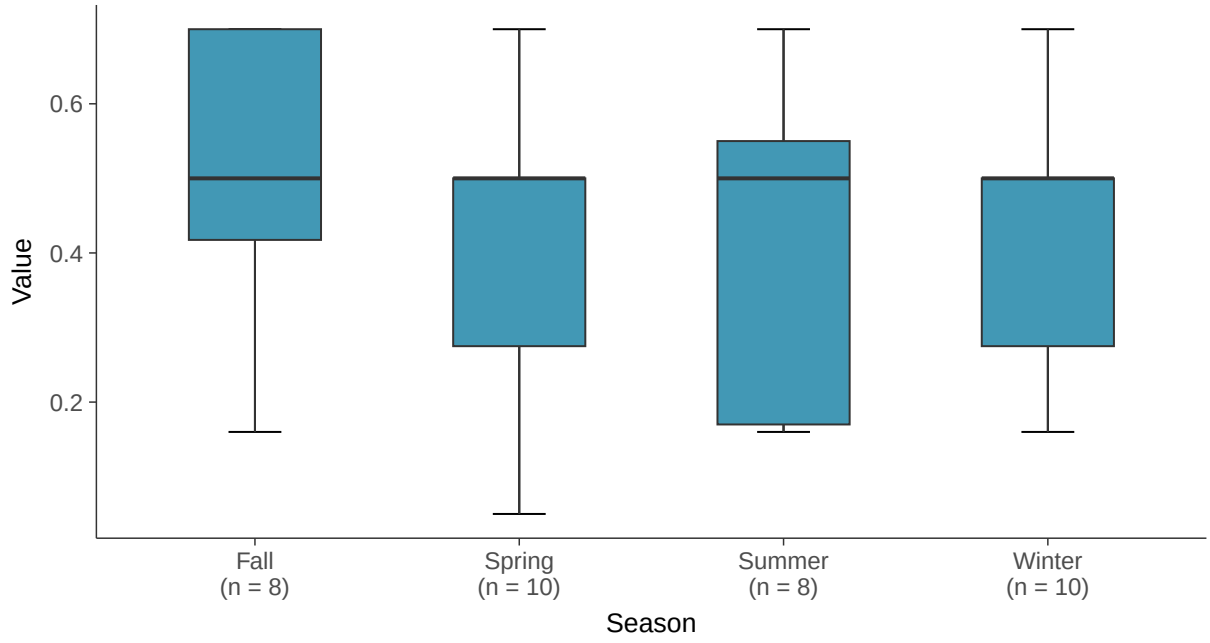
Boxplot

Beryllium, MW-3 (ug/L)



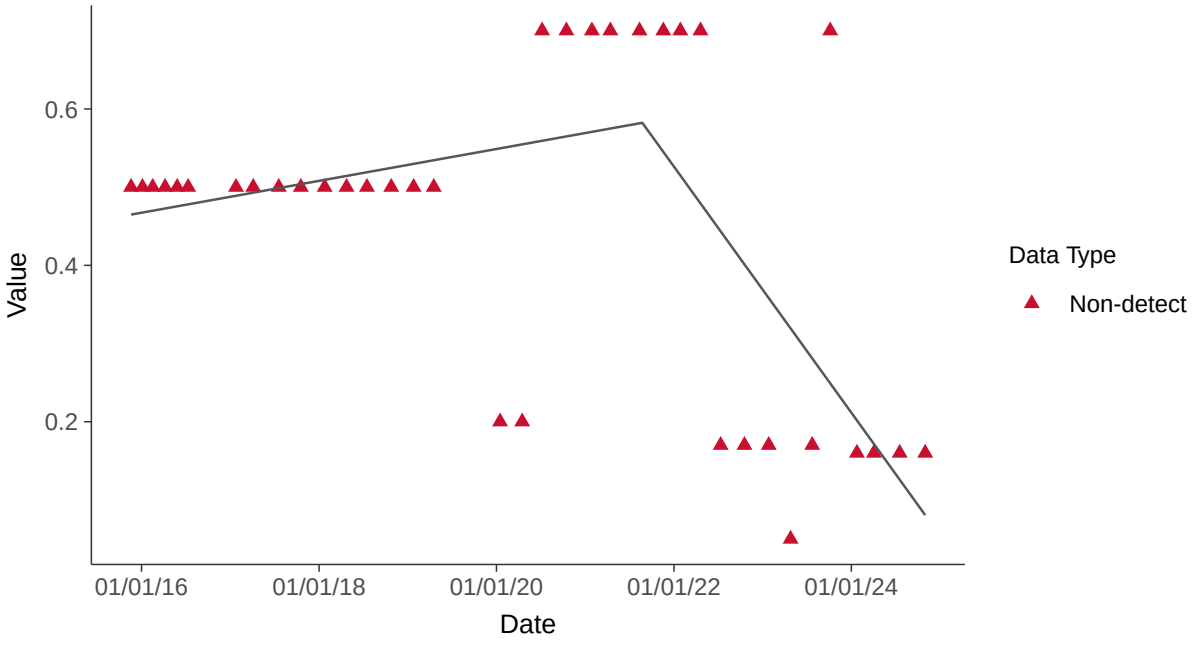
Boxplot by Season

Beryllium, MW-3 (ug/L)



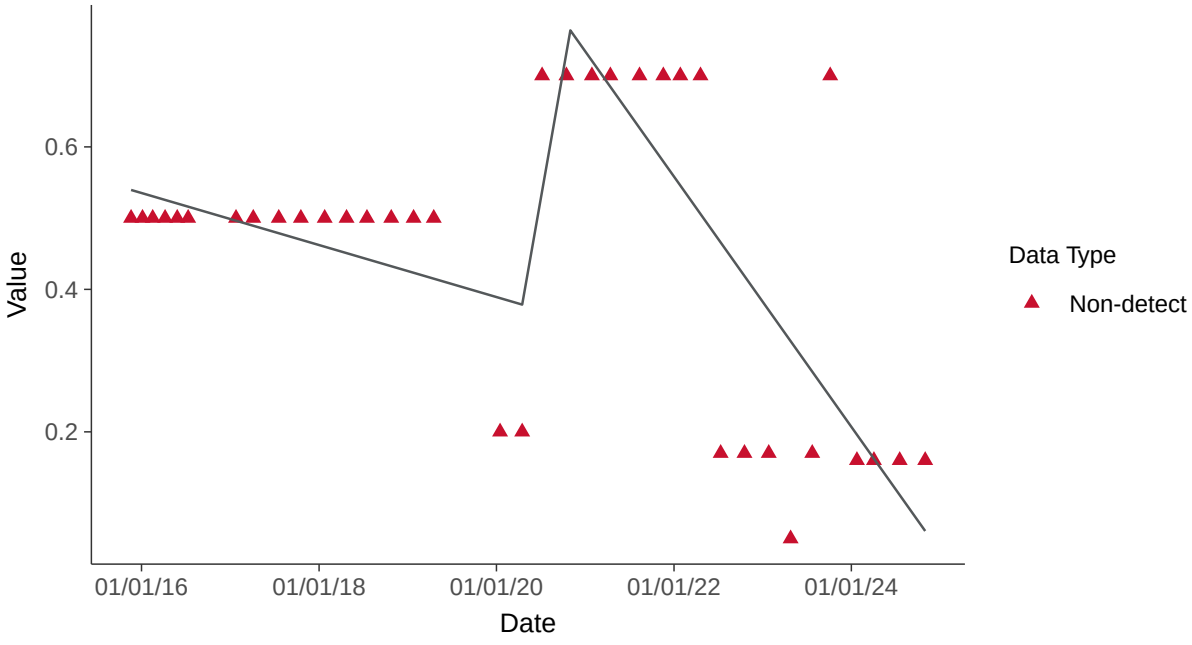
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-3 (ug/L)

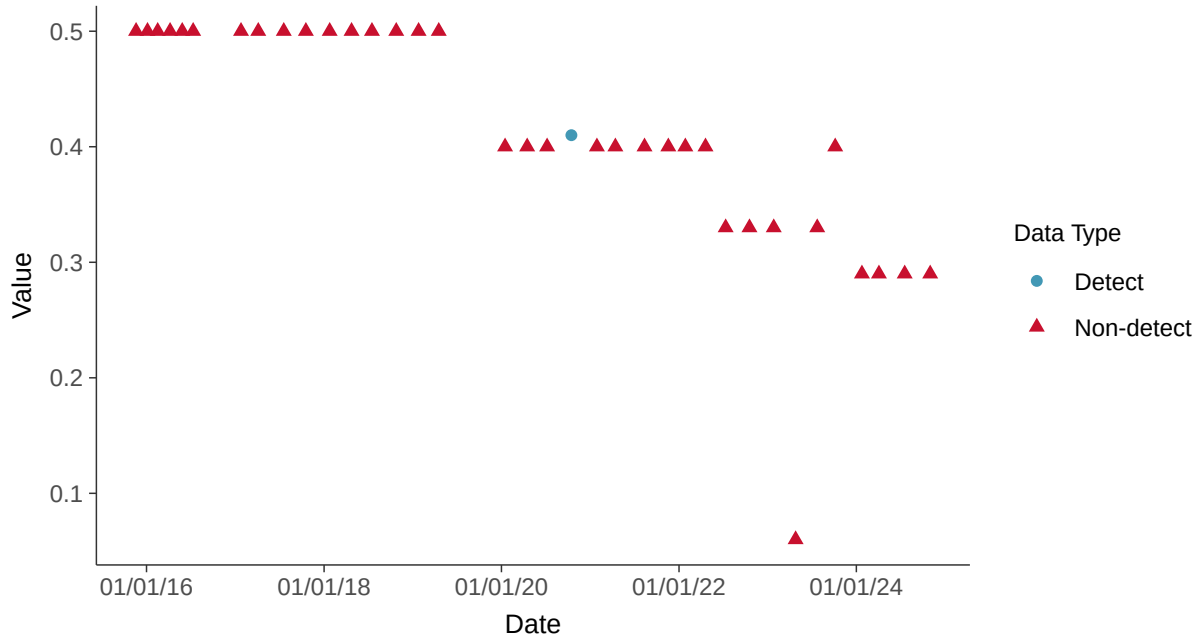


App. IV: Cadmium, MW-3

ID: 03_03_106

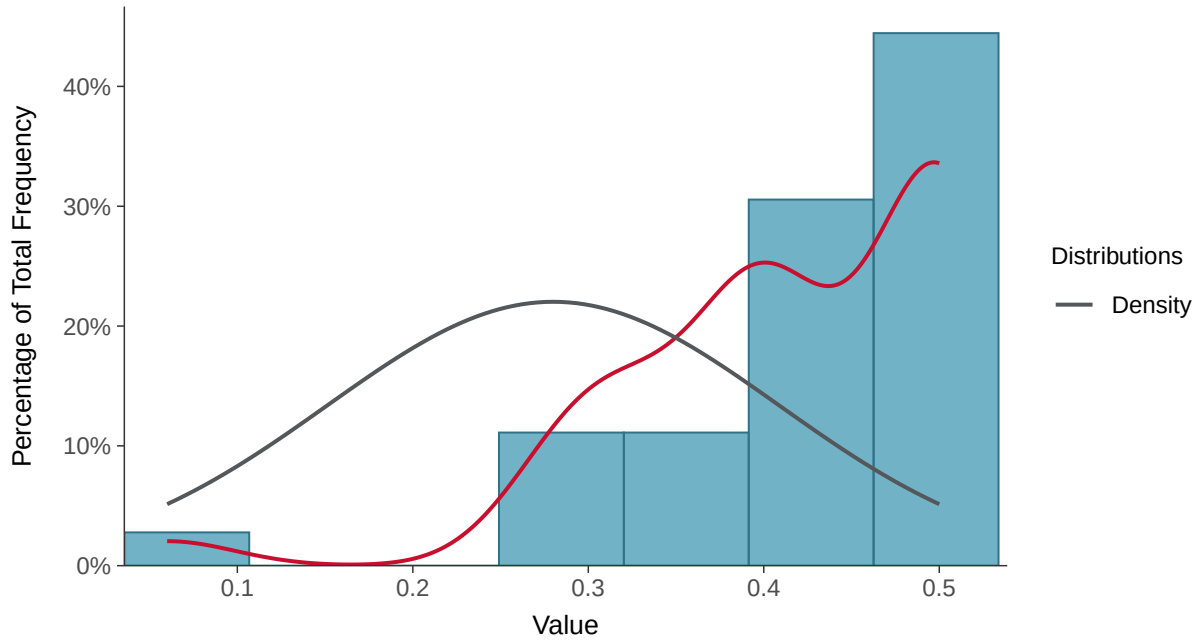
Scatter Plot

Cadmium, MW-3 (ug/L)



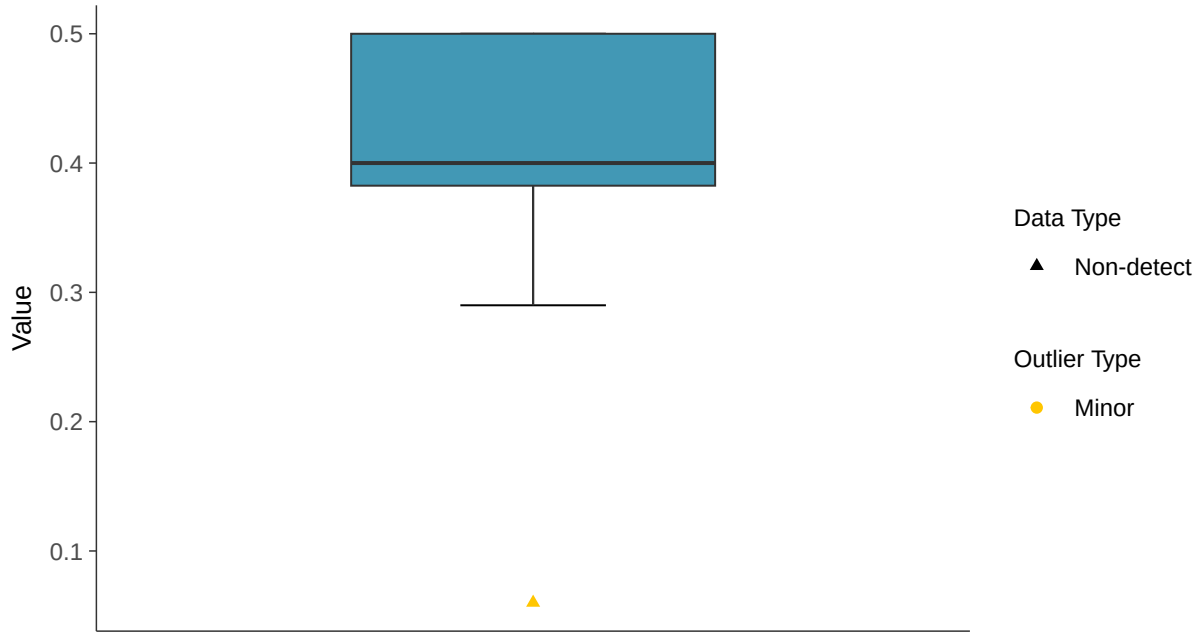
Histogram

Cadmium, MW-3 (ug/L)



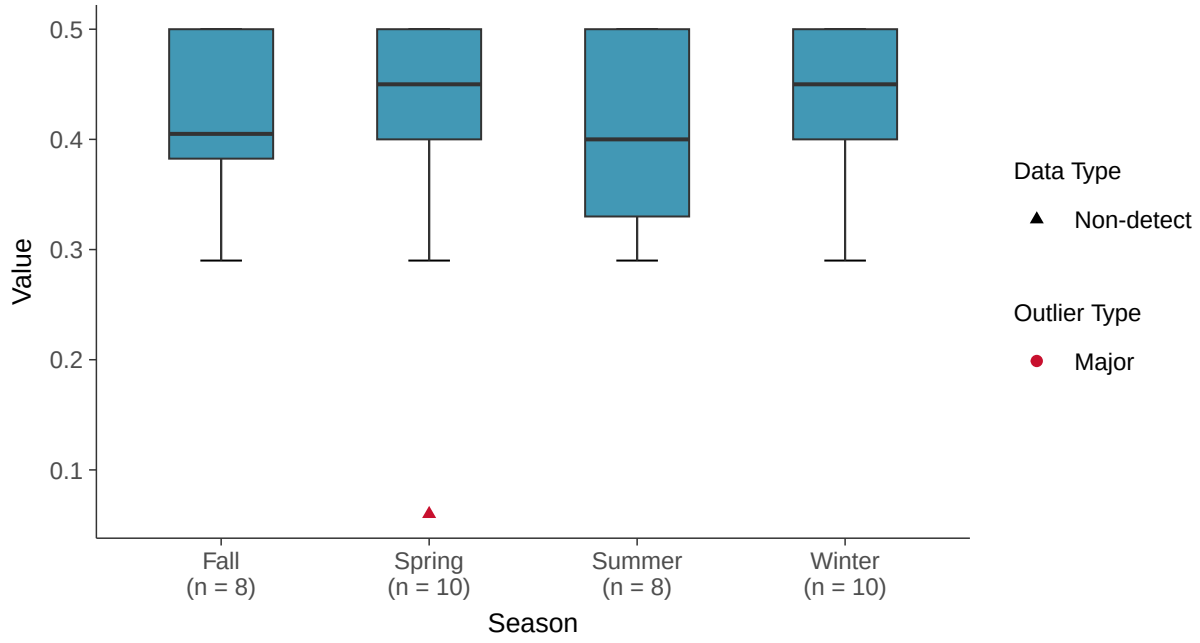
Boxplot

Cadmium, MW-3 (ug/L)



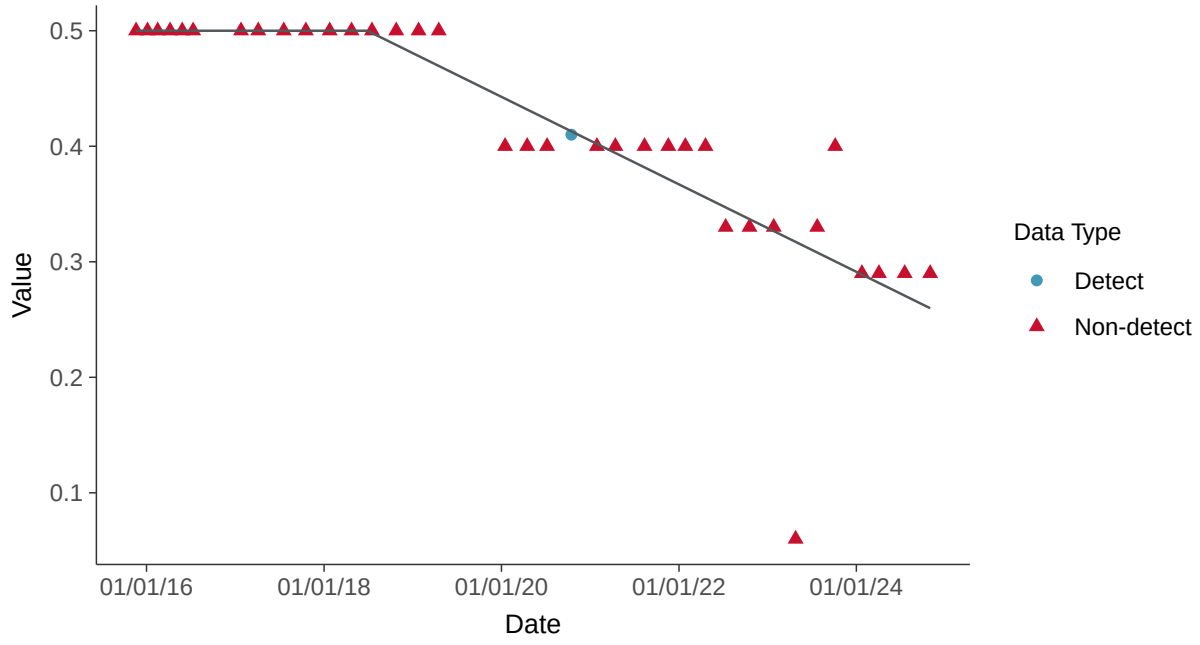
Boxplot by Season

Cadmium, MW-3 (ug/L)



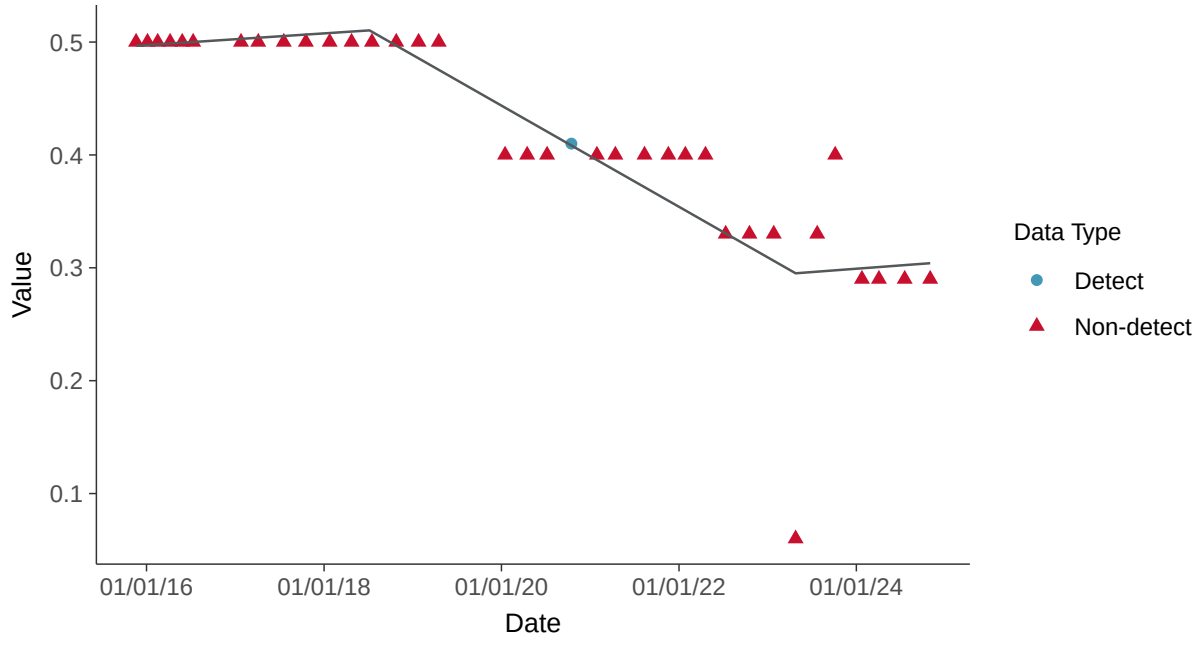
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-3 (ug/L)

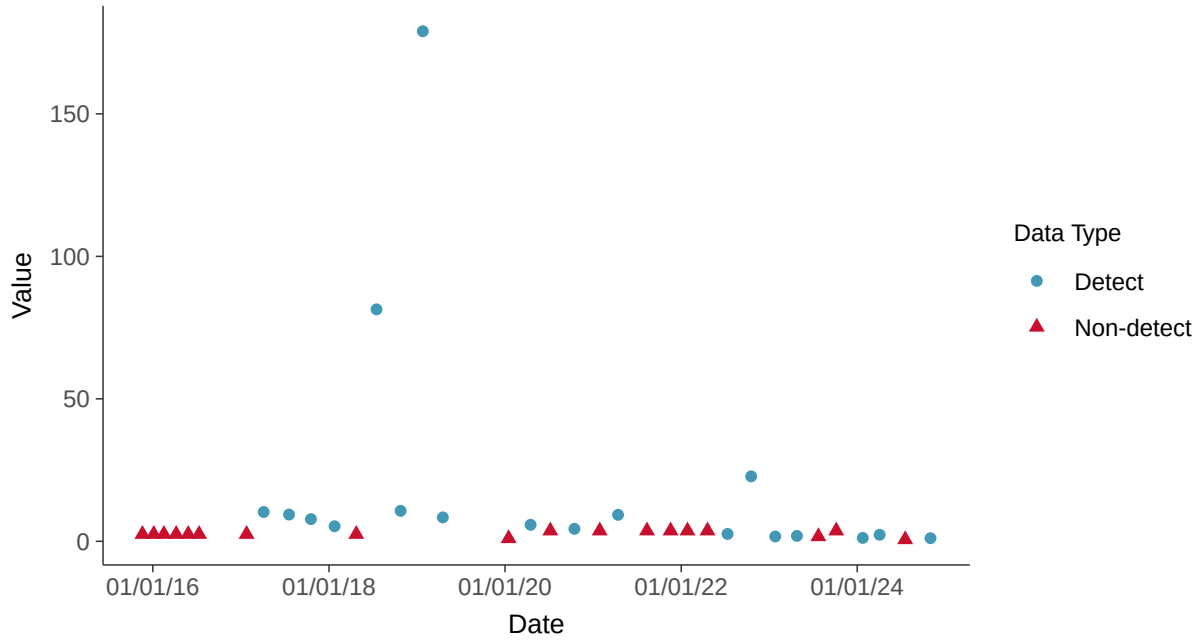


App. IV: Chromium, MW-3

ID: 03_03_109

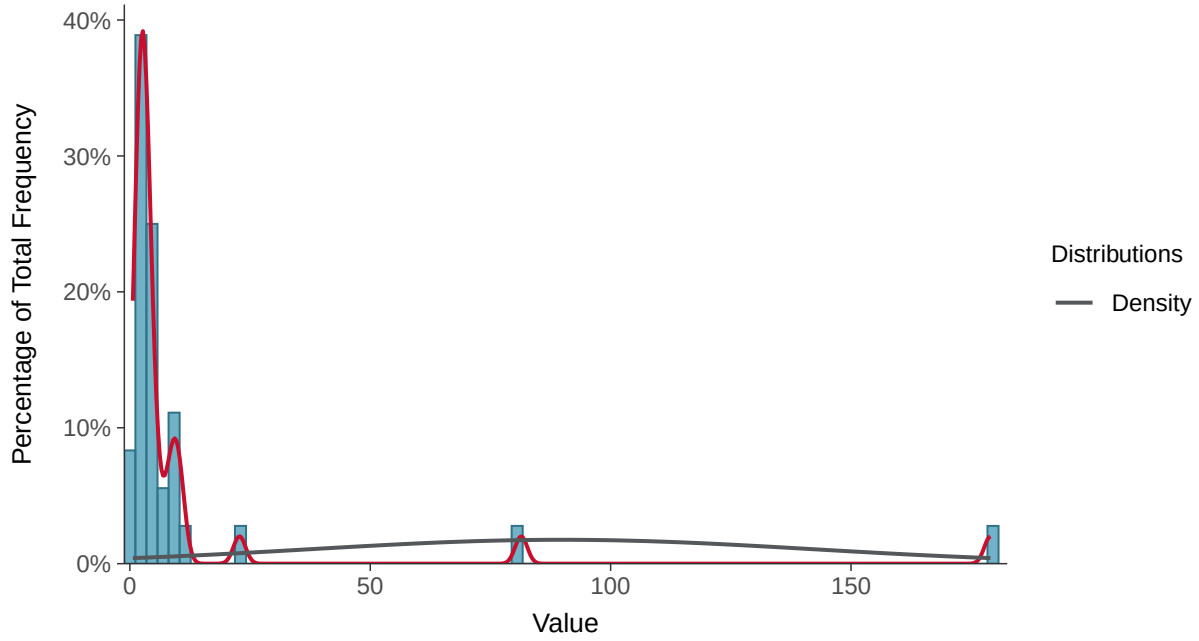
Scatter Plot

Chromium, MW-3 (ug/L)



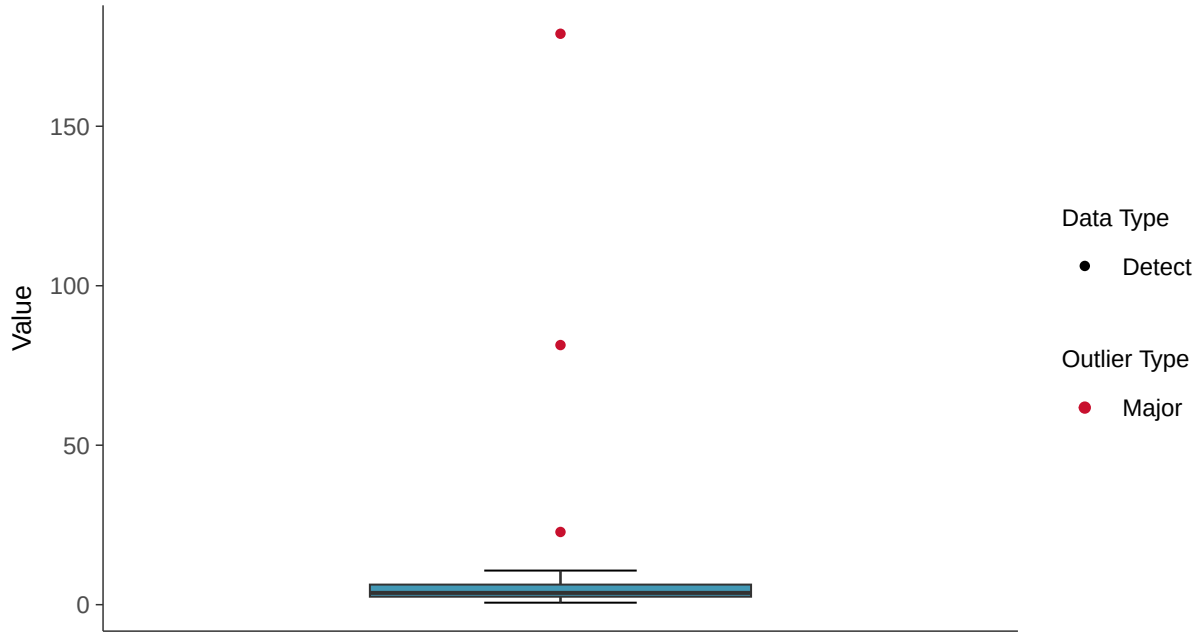
Histogram

Chromium, MW-3 (ug/L)



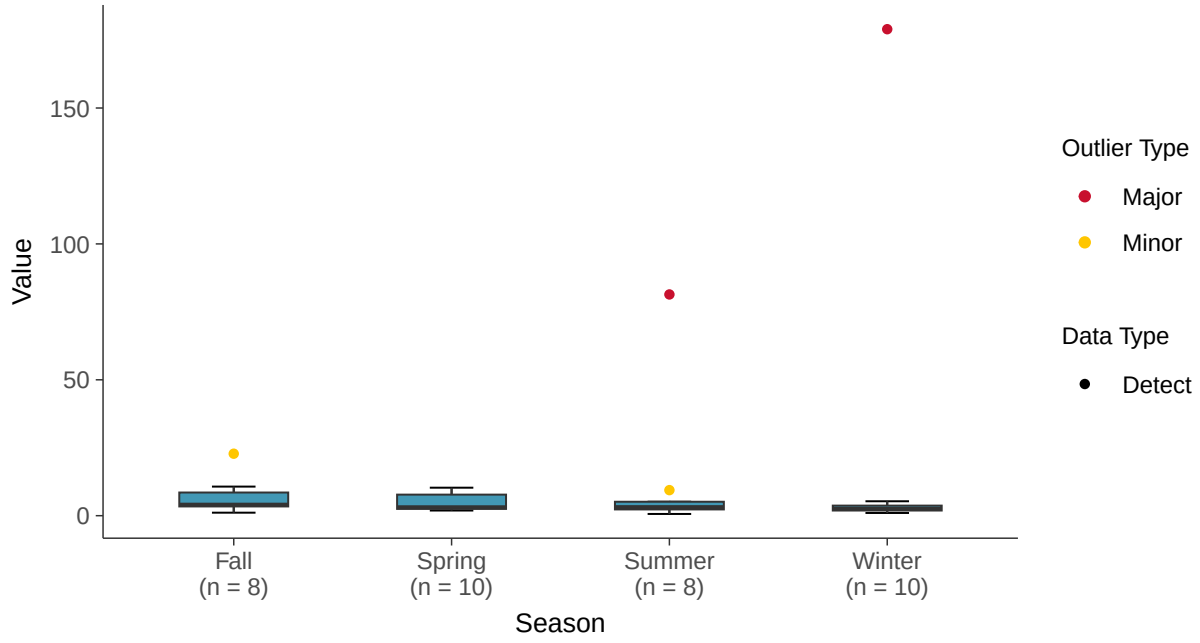
Boxplot

Chromium, MW-3 (ug/L)



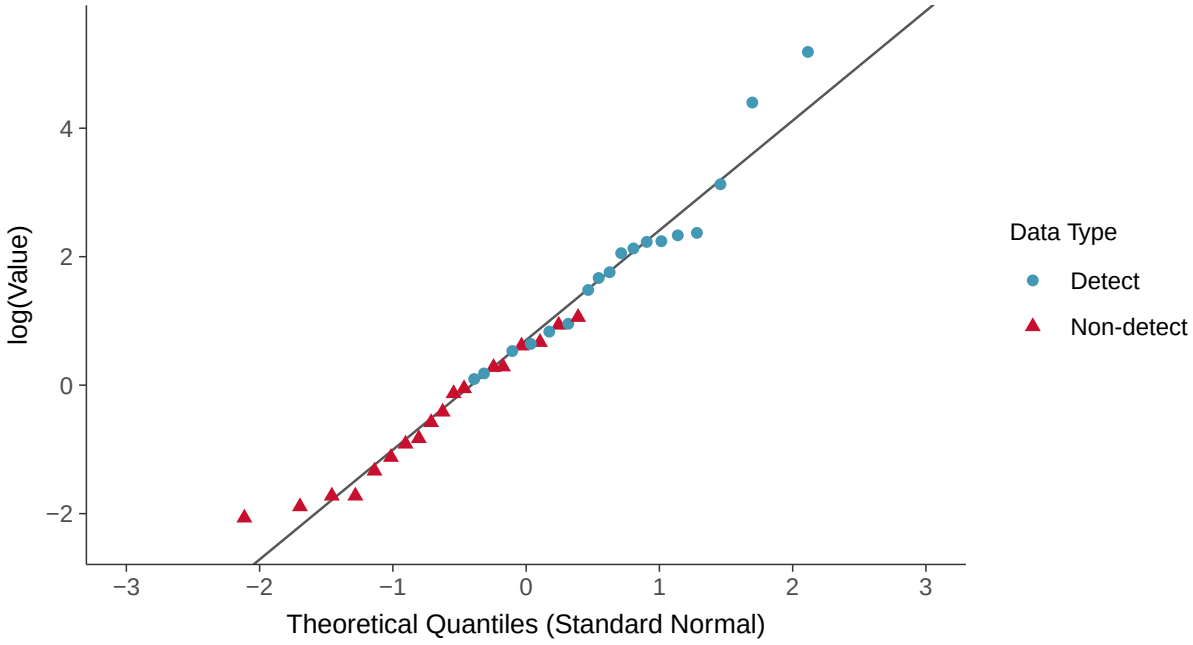
Boxplot by Season

Chromium, MW-3 (ug/L)



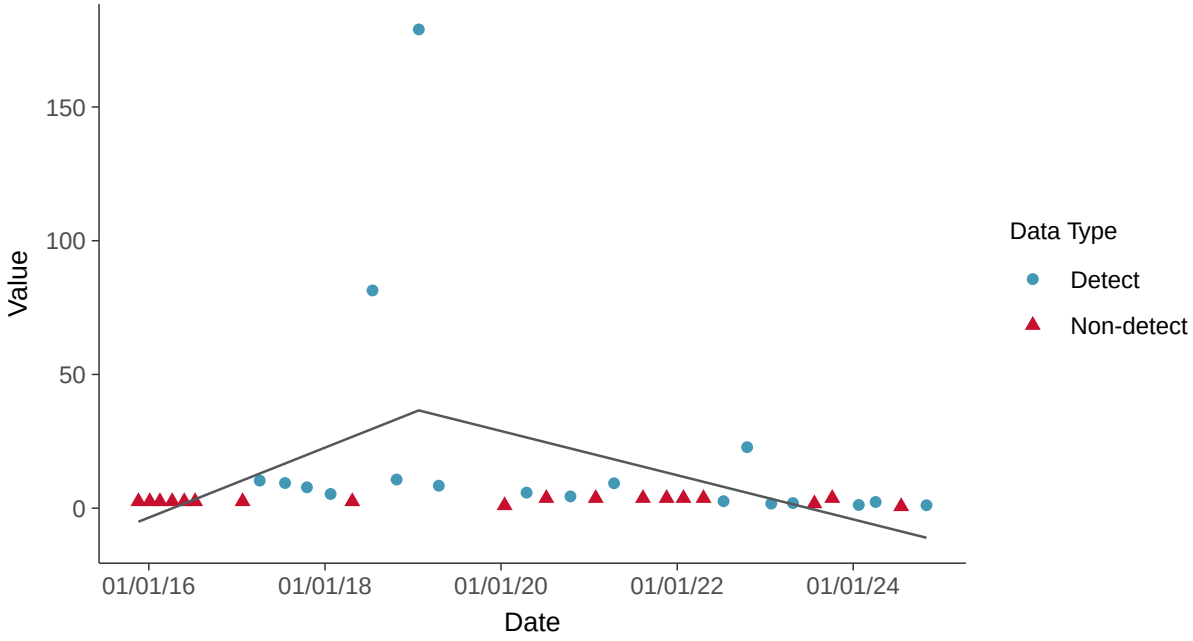
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-3 (ug/L)



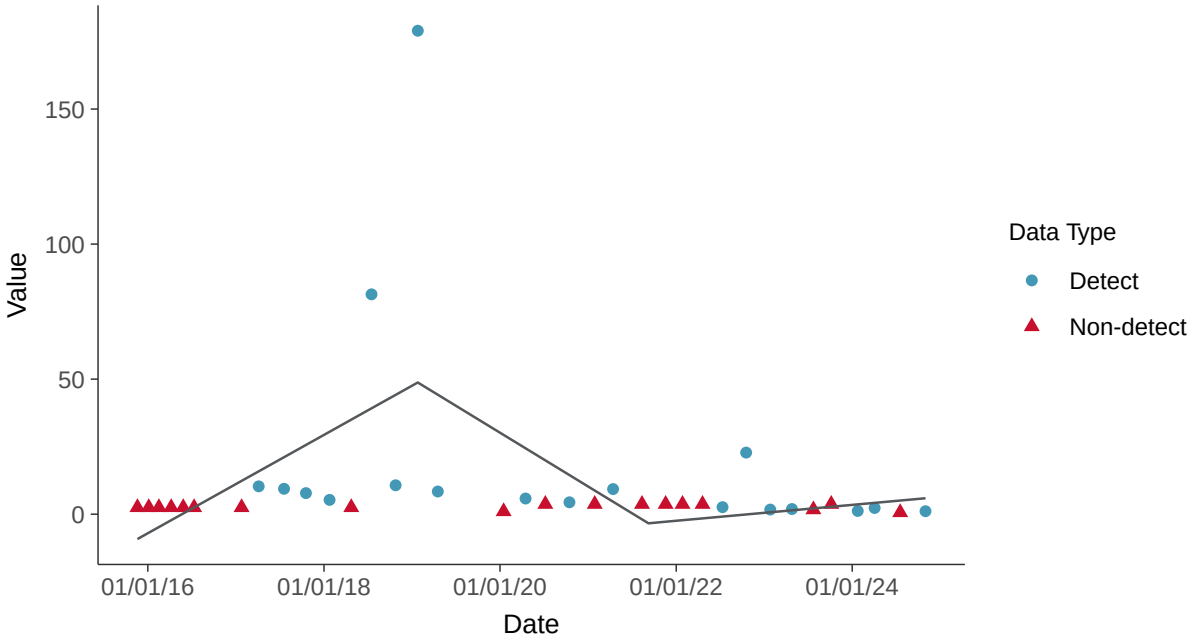
Trend Regression: Piecewise Linear-Linear

Chromium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-3 (ug/L)

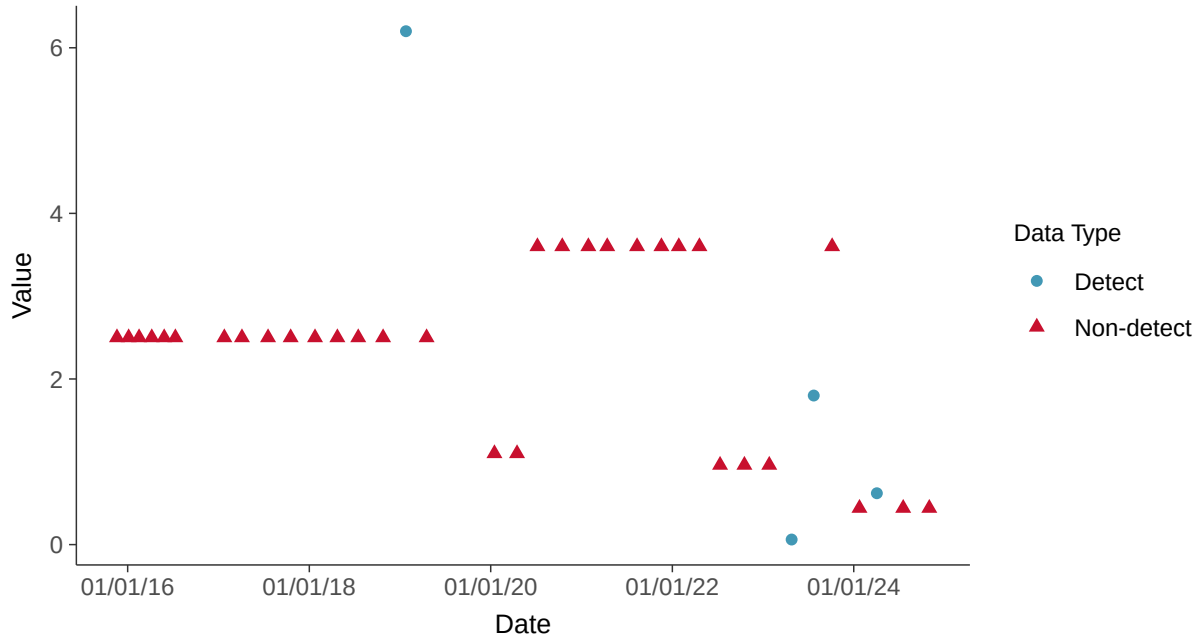


App. IV: Cobalt, MW-3

ID: 03_03_110

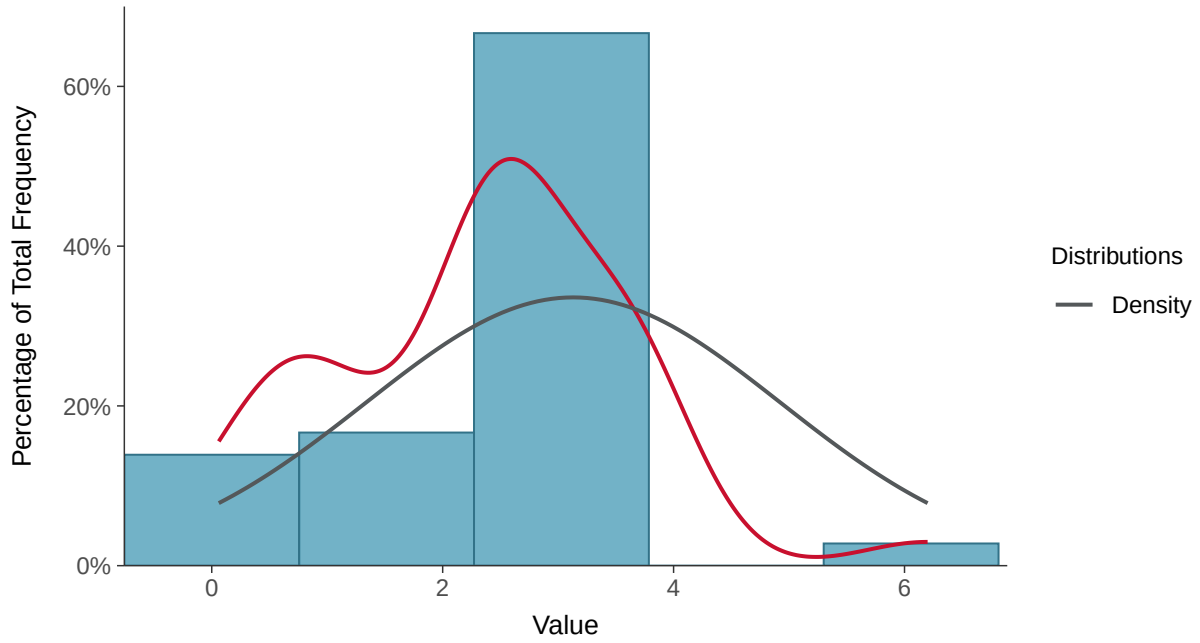
Scatter Plot

Cobalt, MW-3 (ug/L)



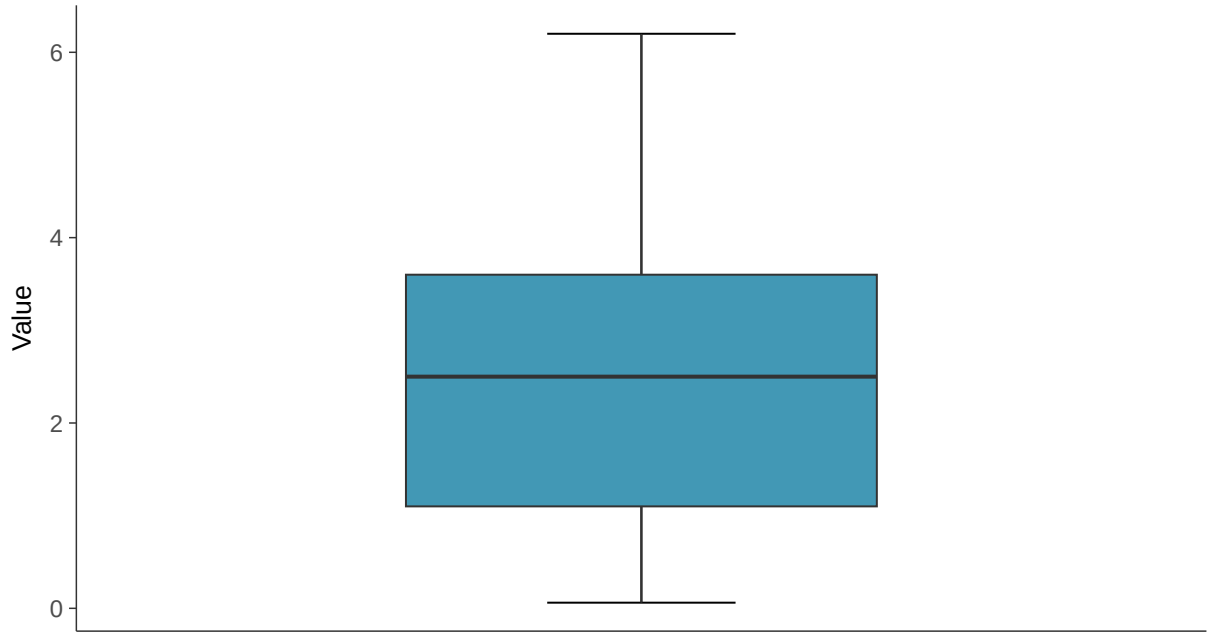
Histogram

Cobalt, MW-3 (ug/L)



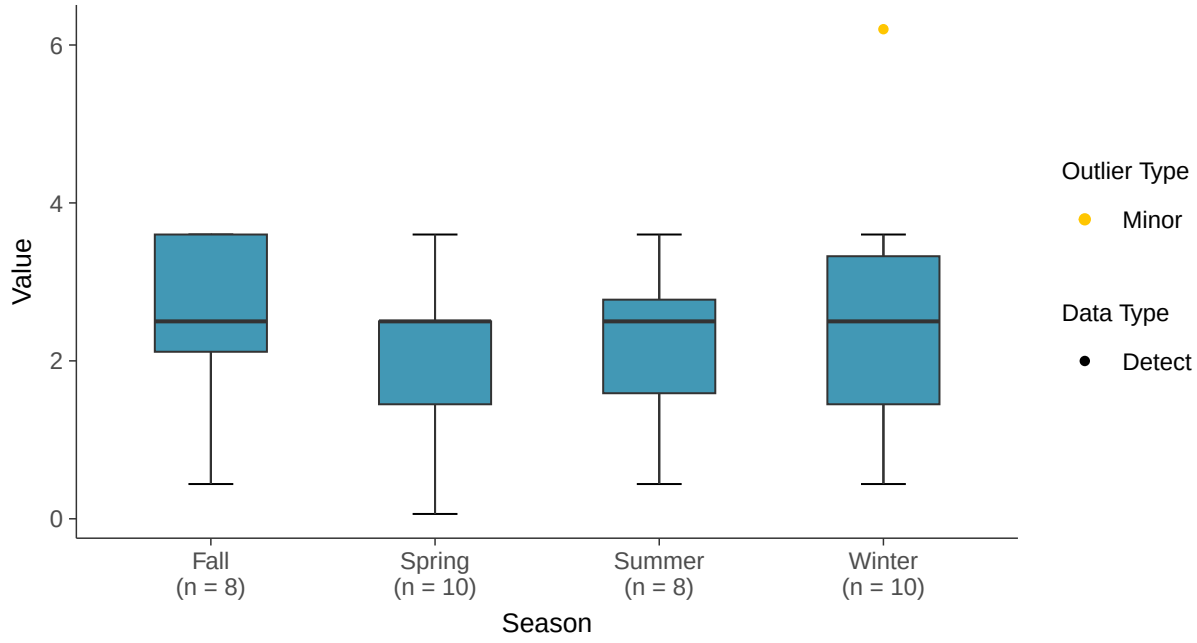
Boxplot

Cobalt, MW-3 (ug/L)



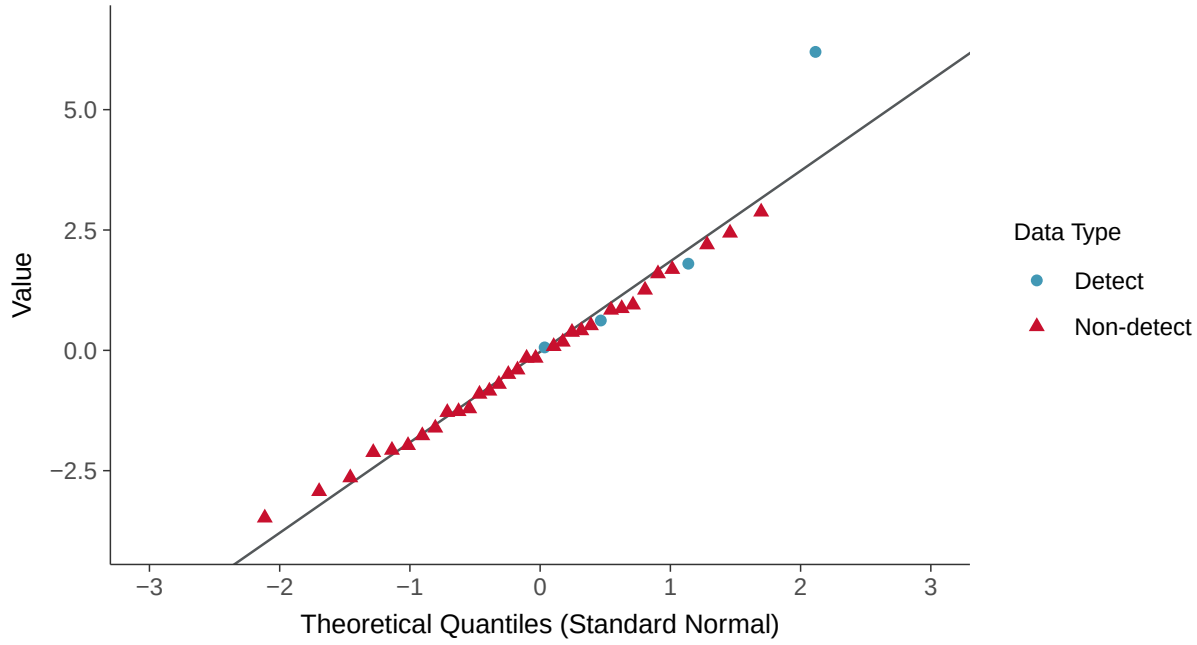
Boxplot by Season

Cobalt, MW-3 (ug/L)



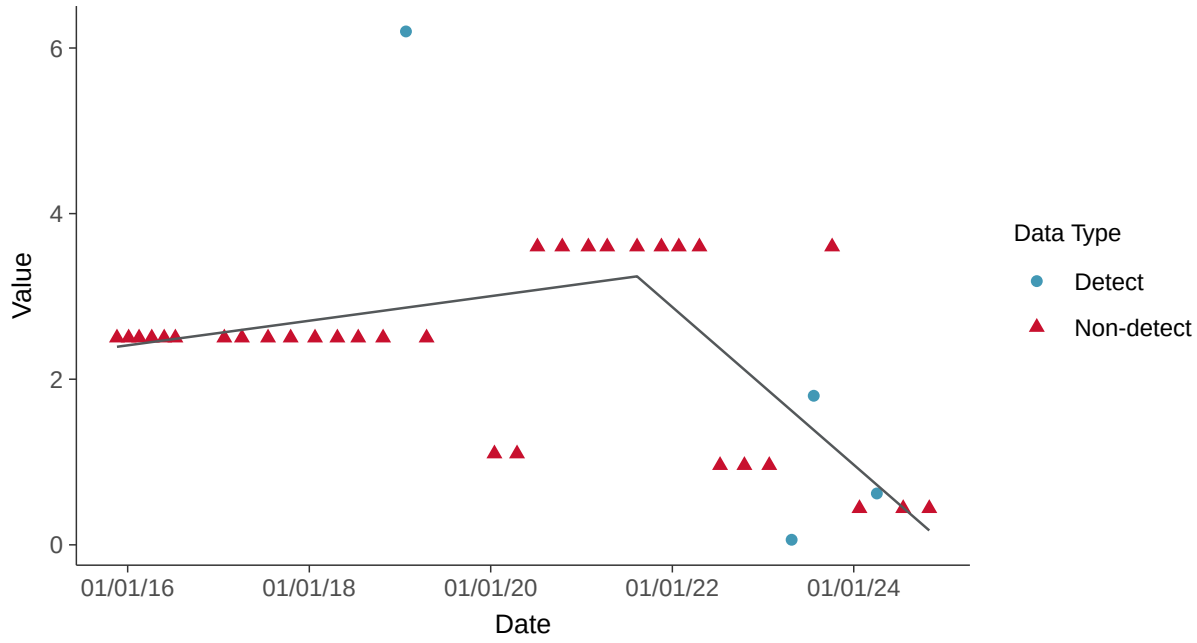
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-3 (ug/L)



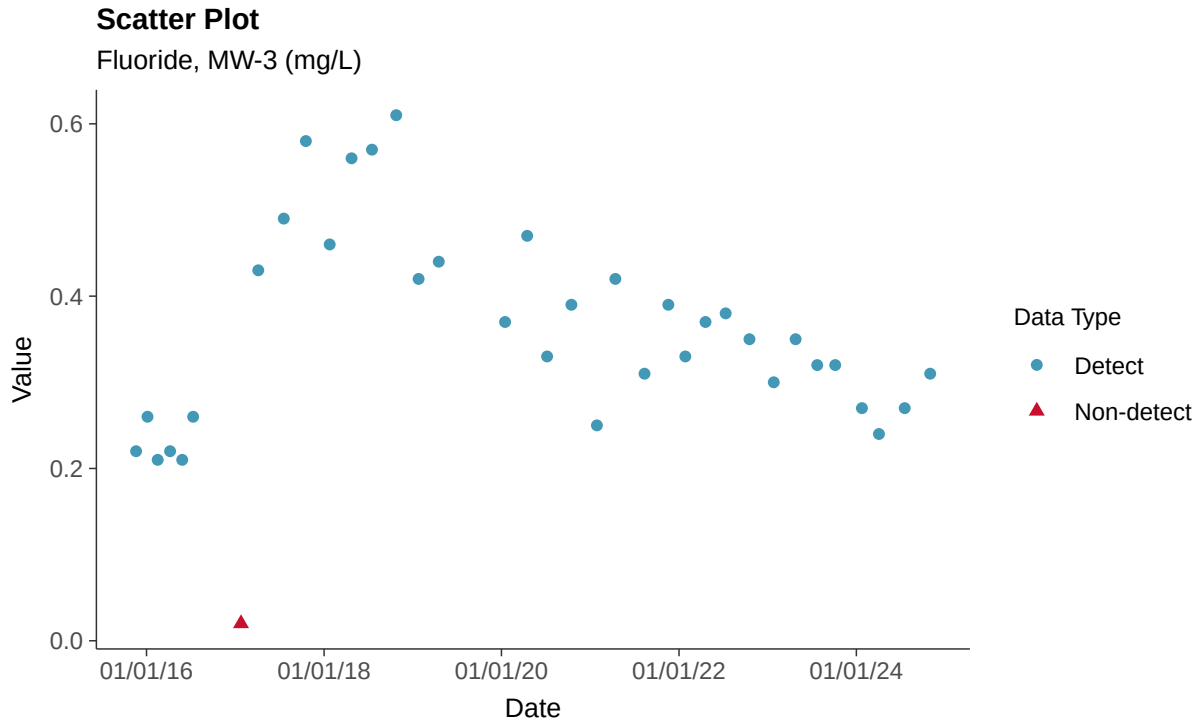
Trend Regression: Piecewise Linear-Linear

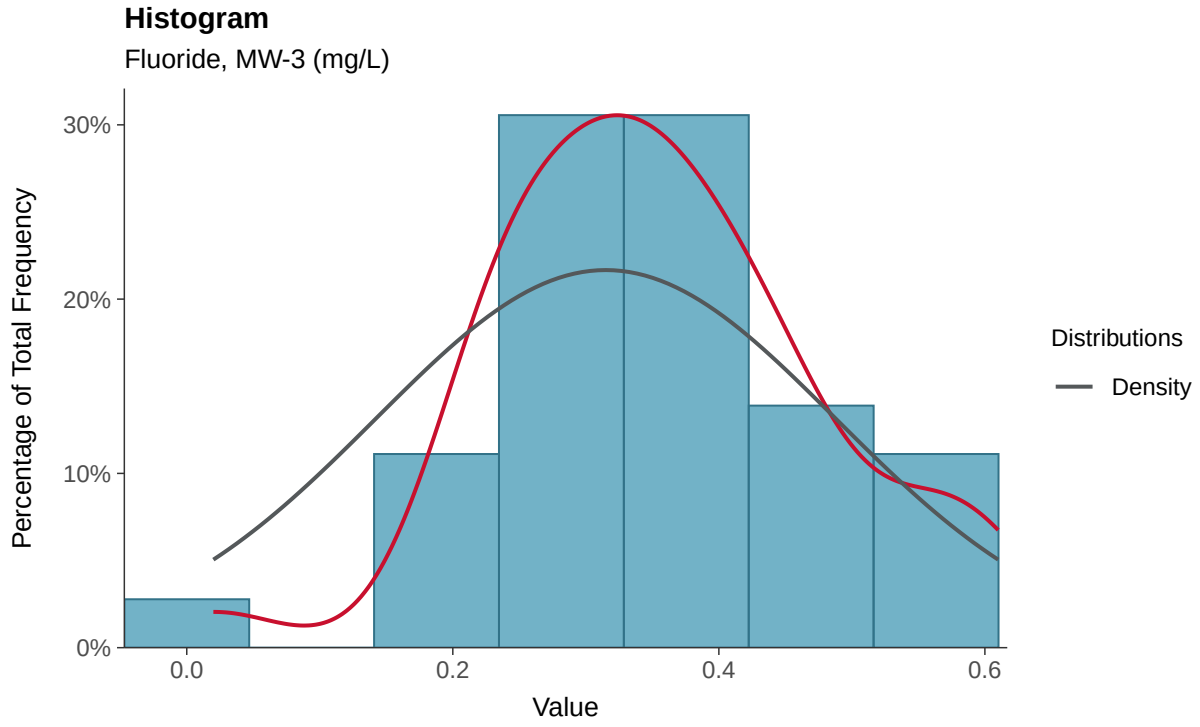
Cobalt, MW-3 (ug/L)



App. IV: Fluoride, MW-3

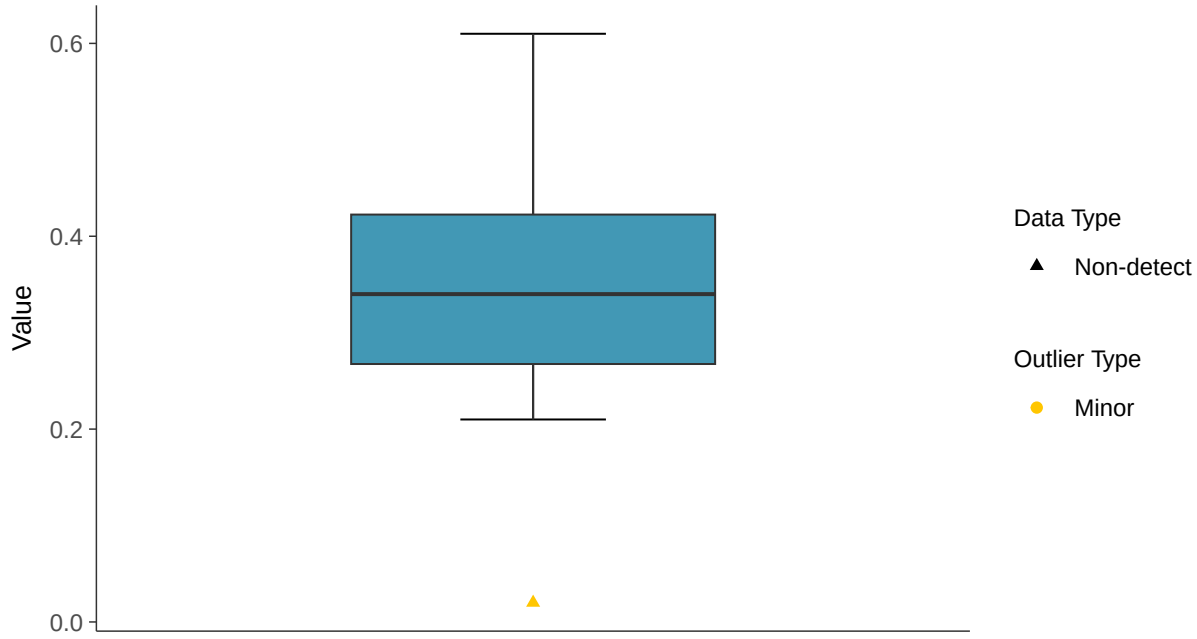
ID: 03_03_112





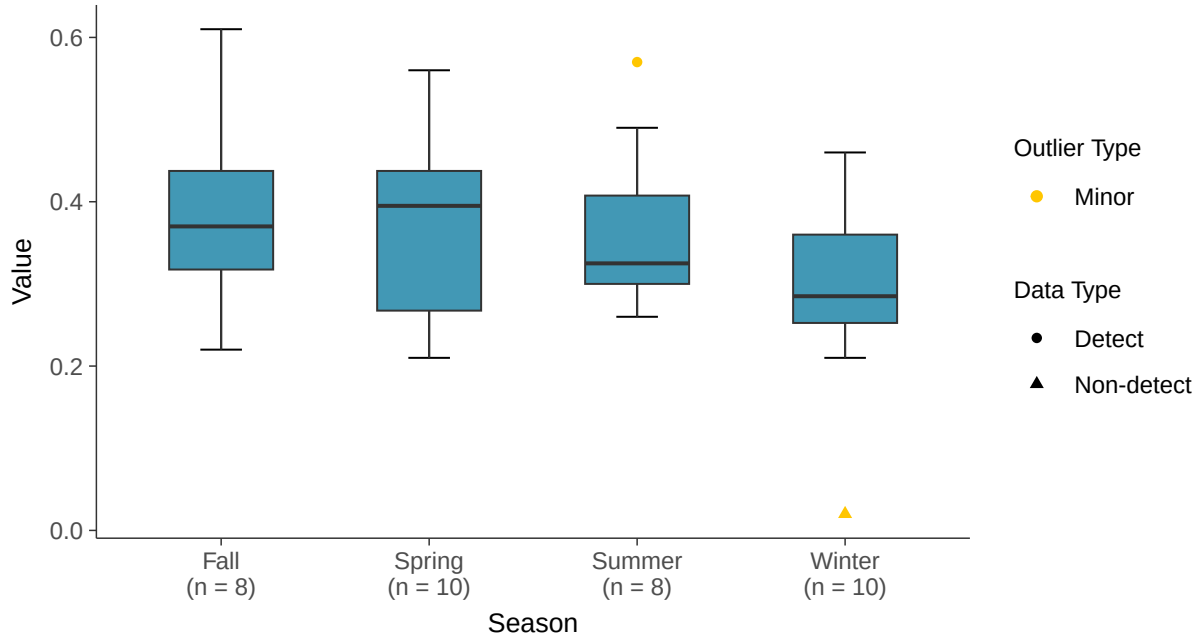
Boxplot

Fluoride, MW-3 (mg/L)



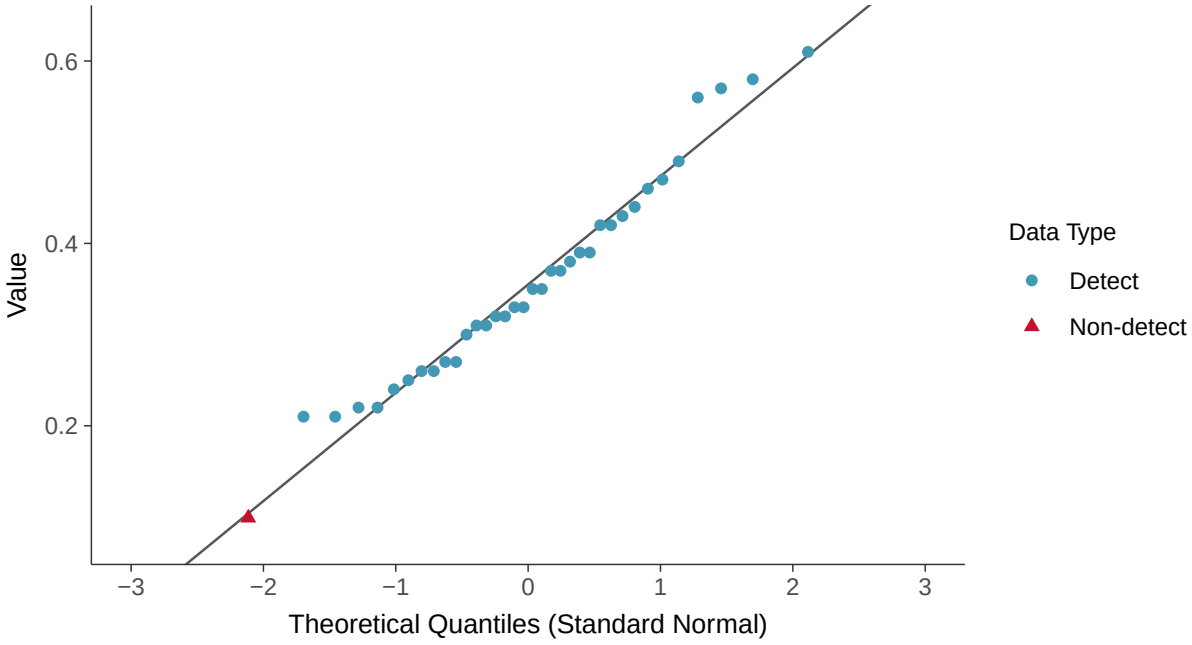
Boxplot by Season

Fluoride, MW-3 (mg/L)



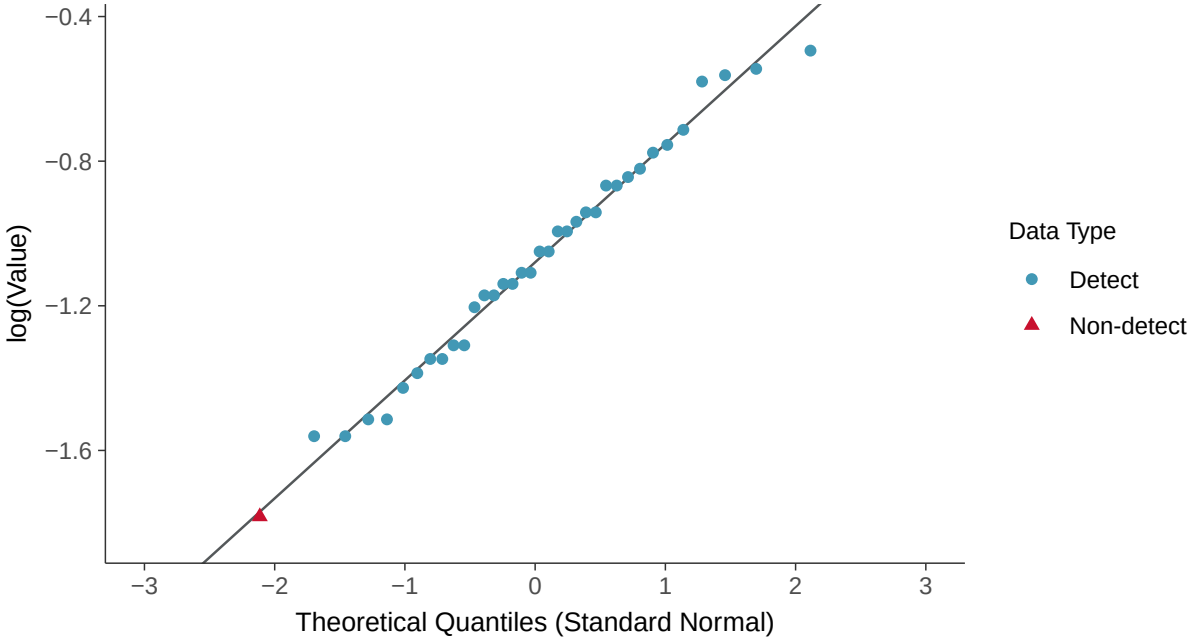
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



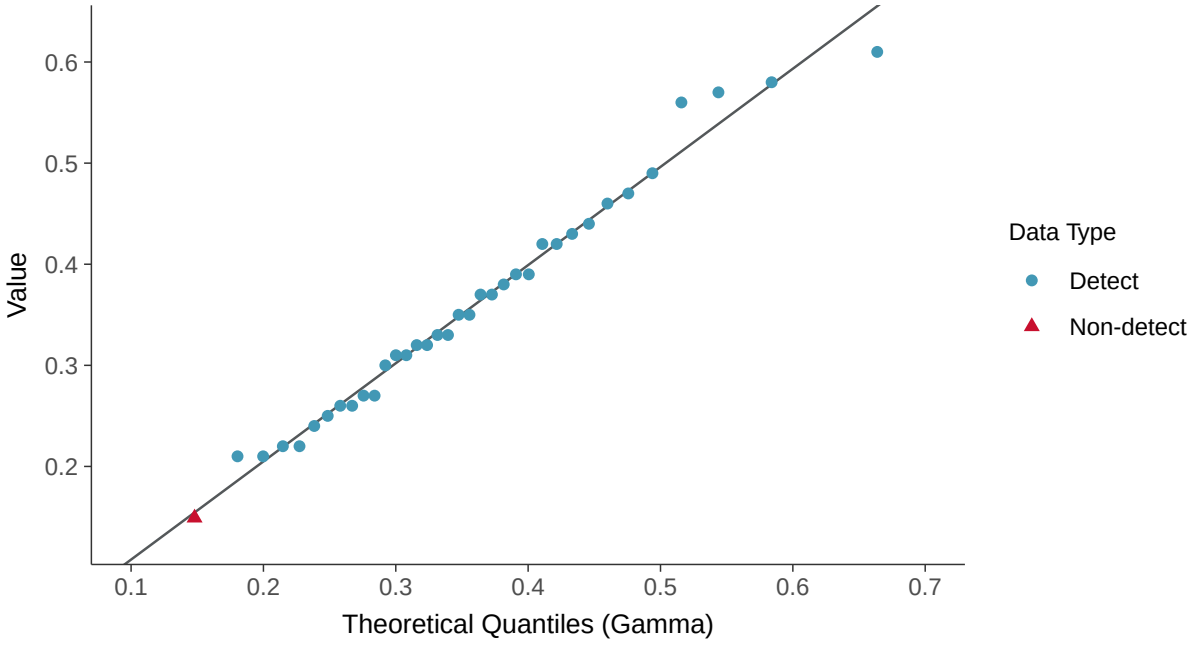
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



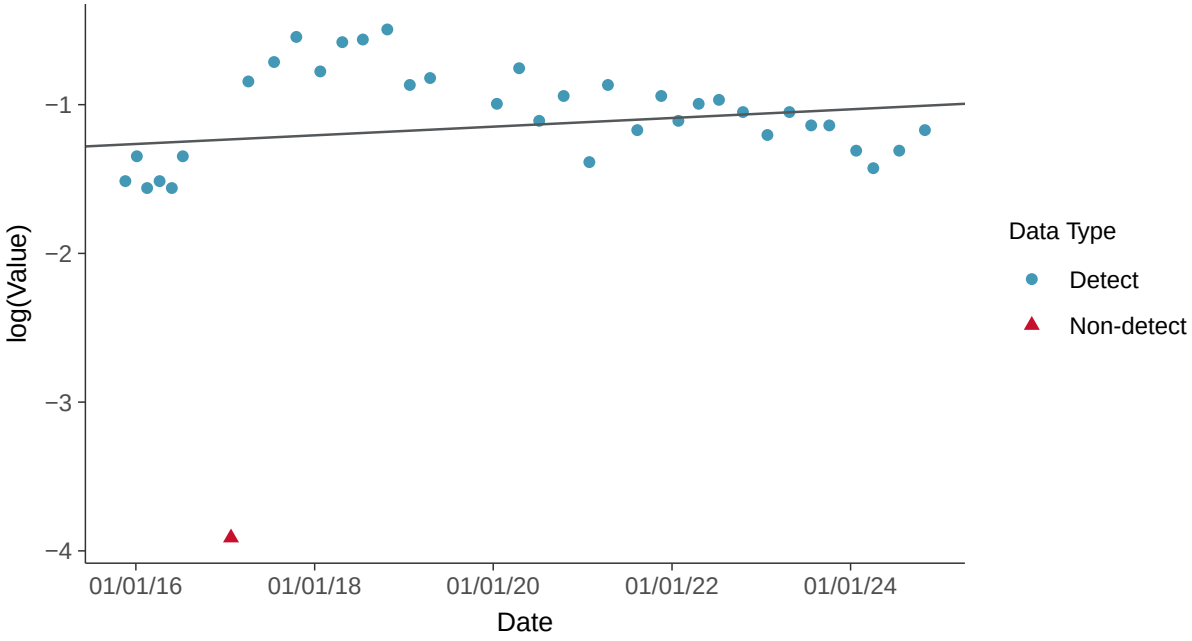
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



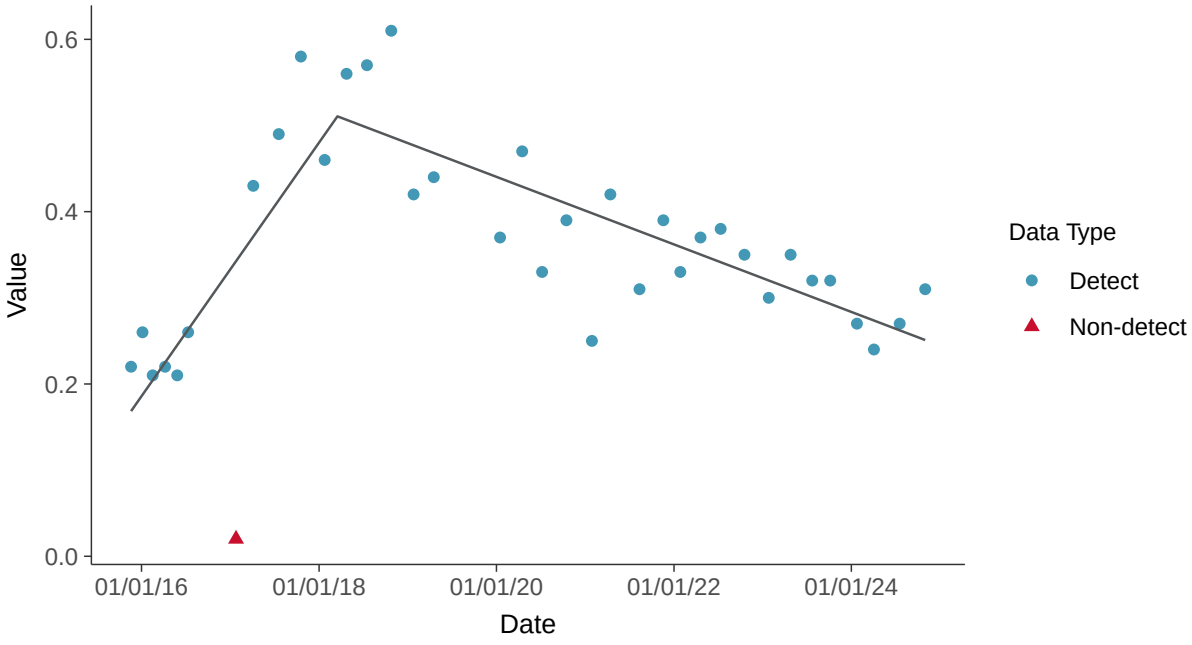
Trend Regression: Lognormal MLE

Fluoride, MW-3 (mg/L)



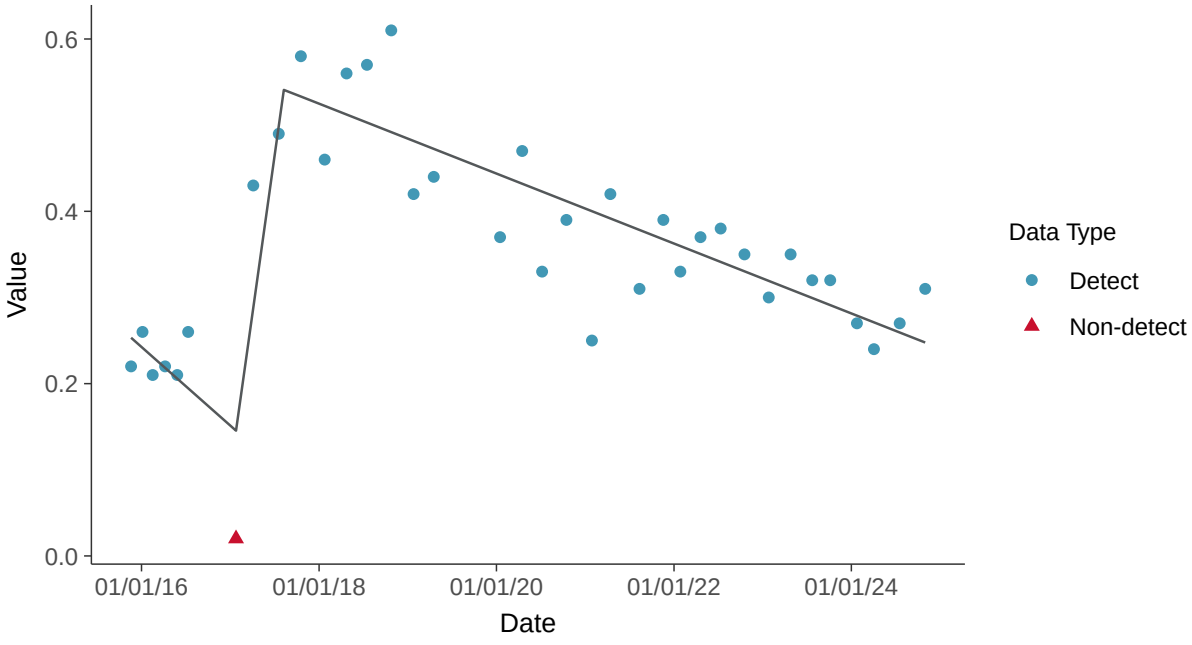
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-3 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-3 (mg/L)

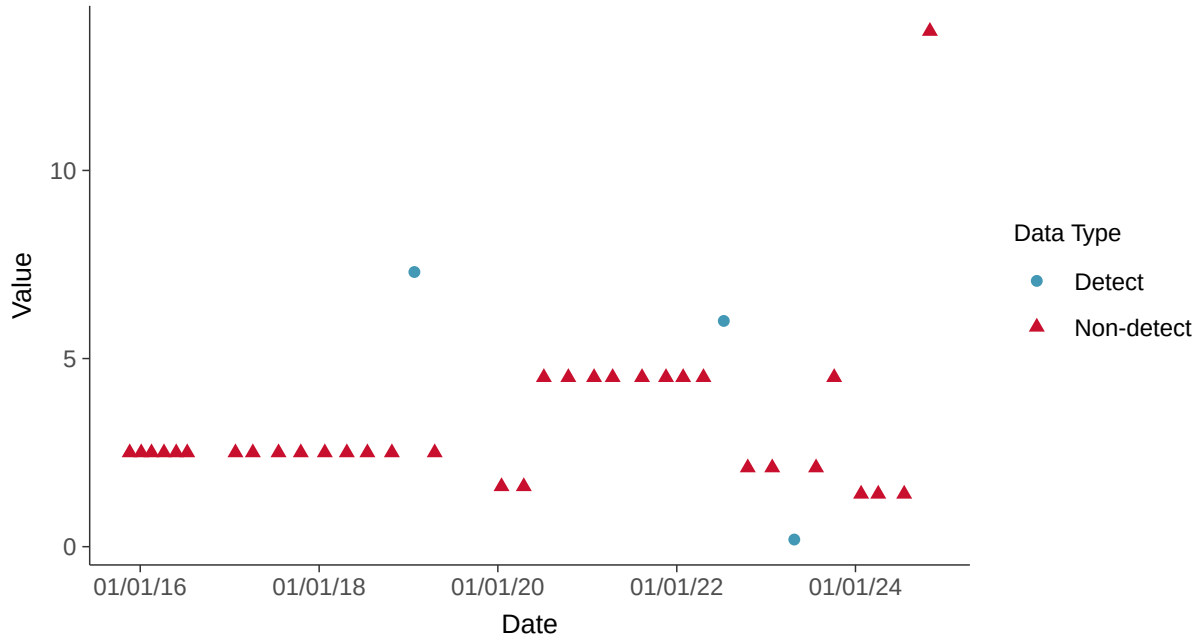


App. IV: Lead, MW-3

ID: 03_03_113

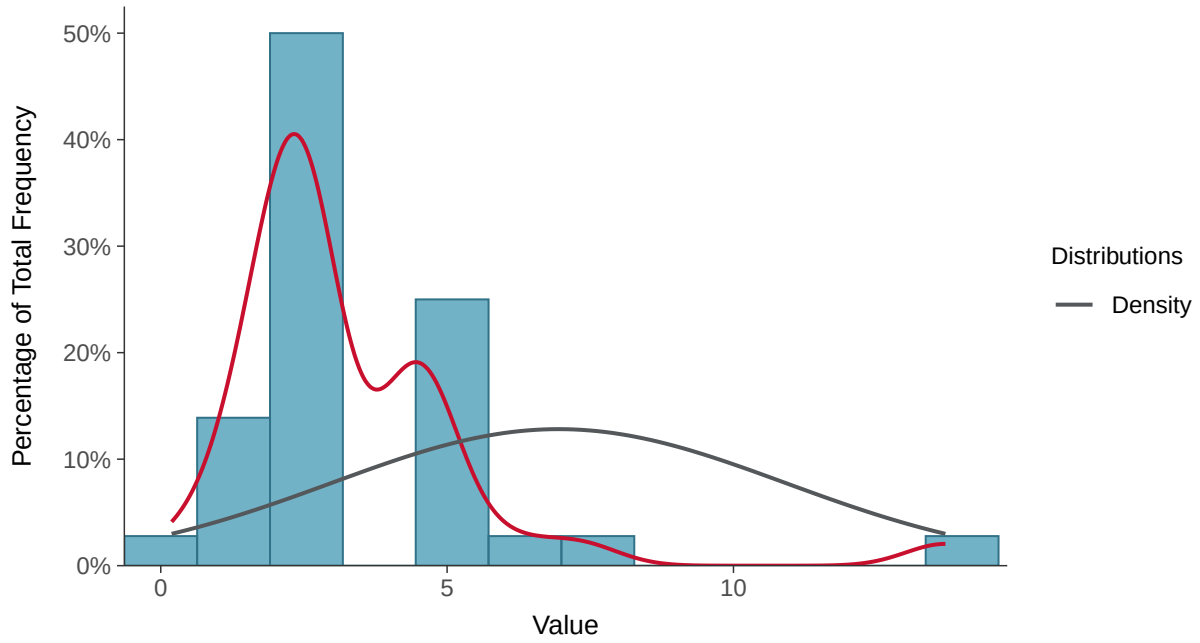
Scatter Plot

Lead, MW-3 (ug/L)



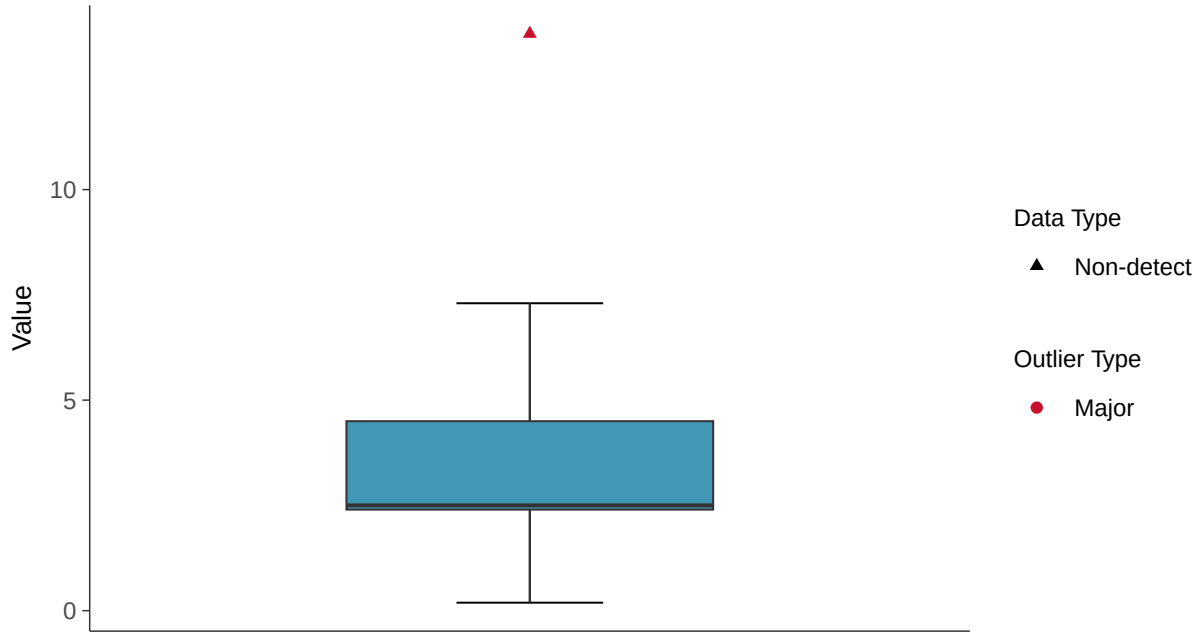
Histogram

Lead, MW-3 (ug/L)



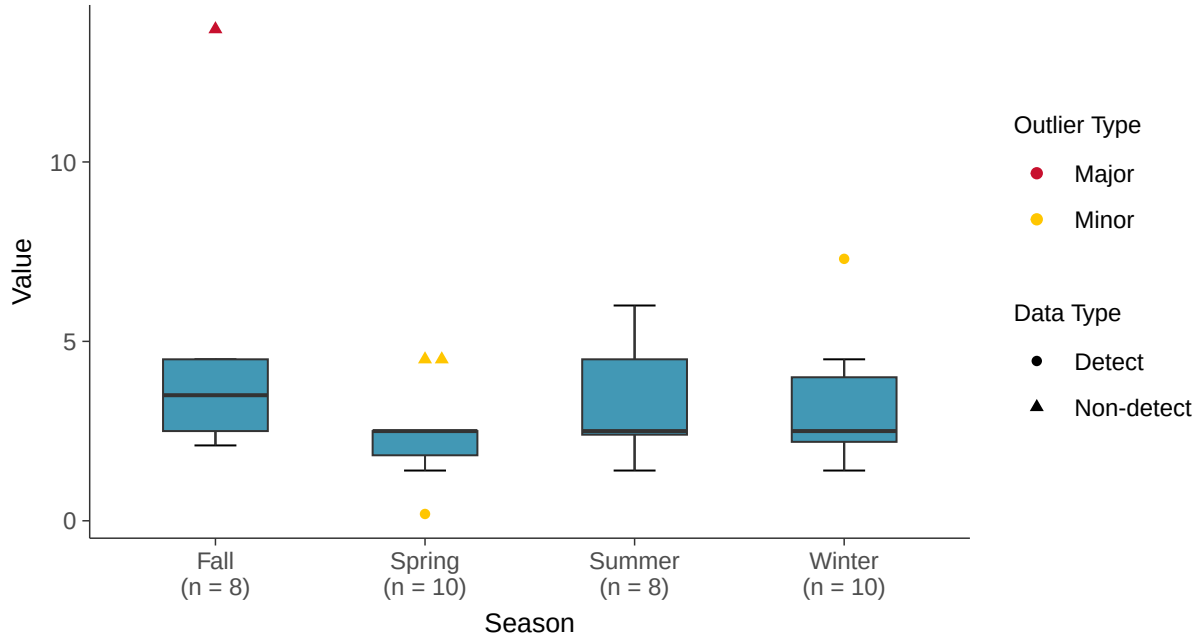
Boxplot

Lead, MW-3 (ug/L)



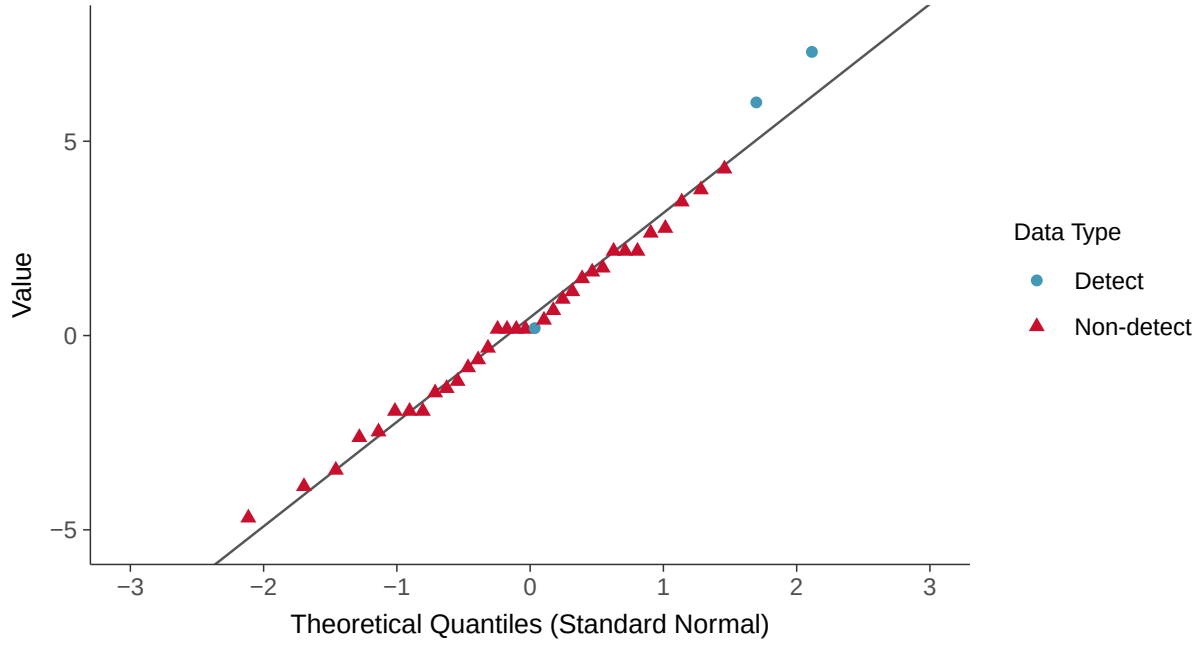
Boxplot by Season

Lead, MW-3 (ug/L)



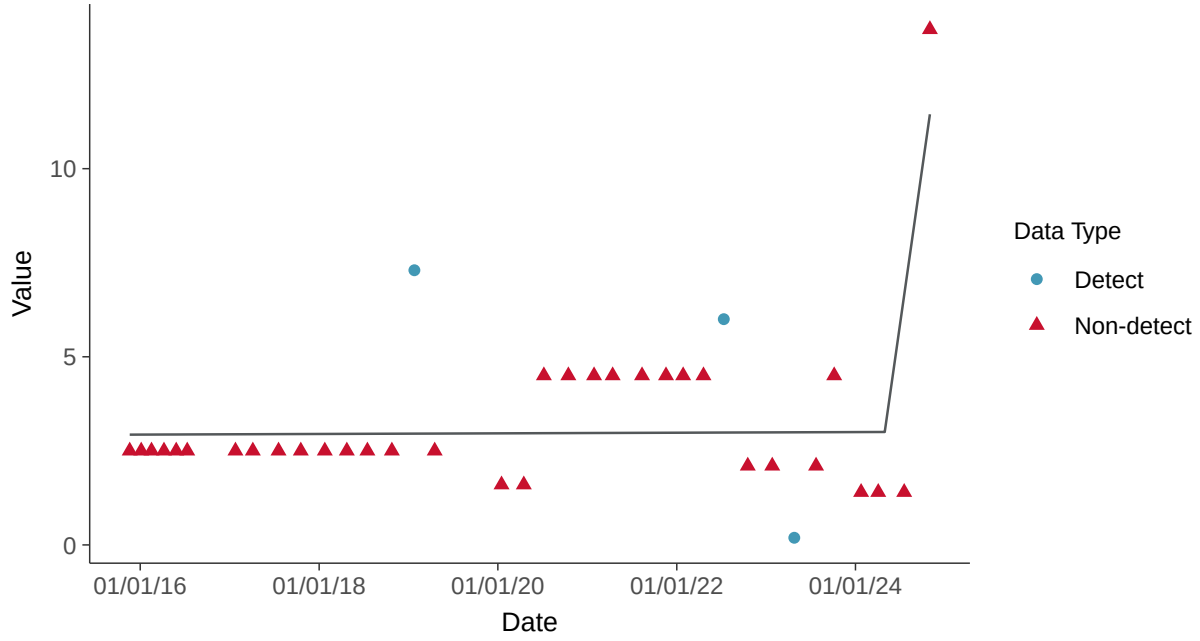
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-3 (ug/L)



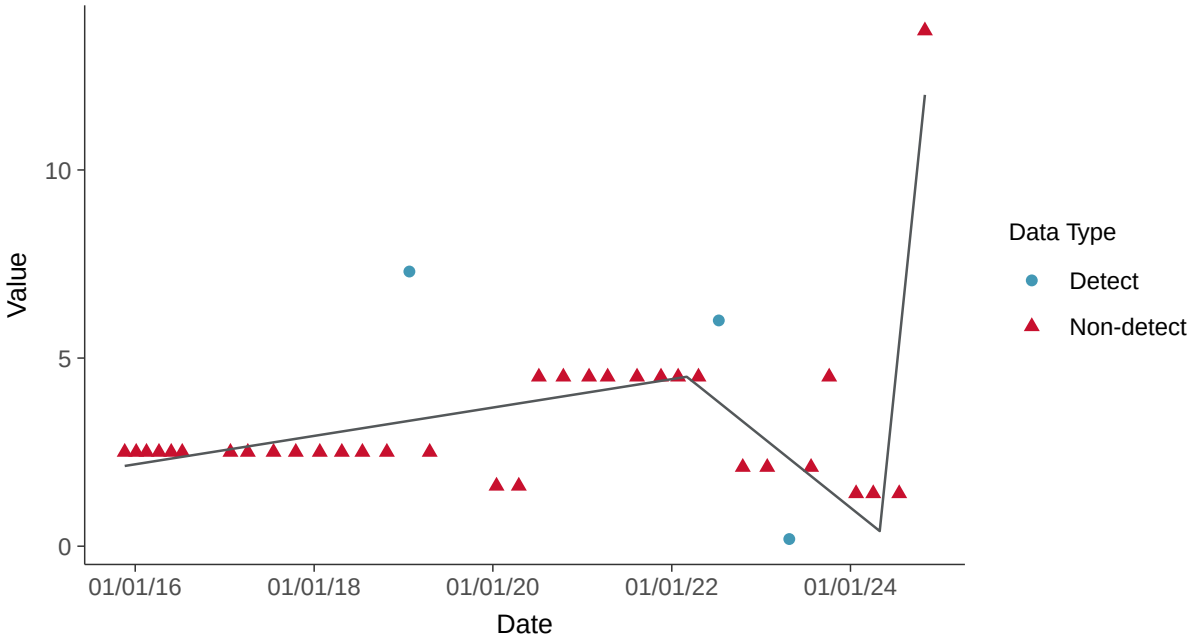
Trend Regression: Piecewise Linear-Linear

Lead, MW-3 (ug/L)



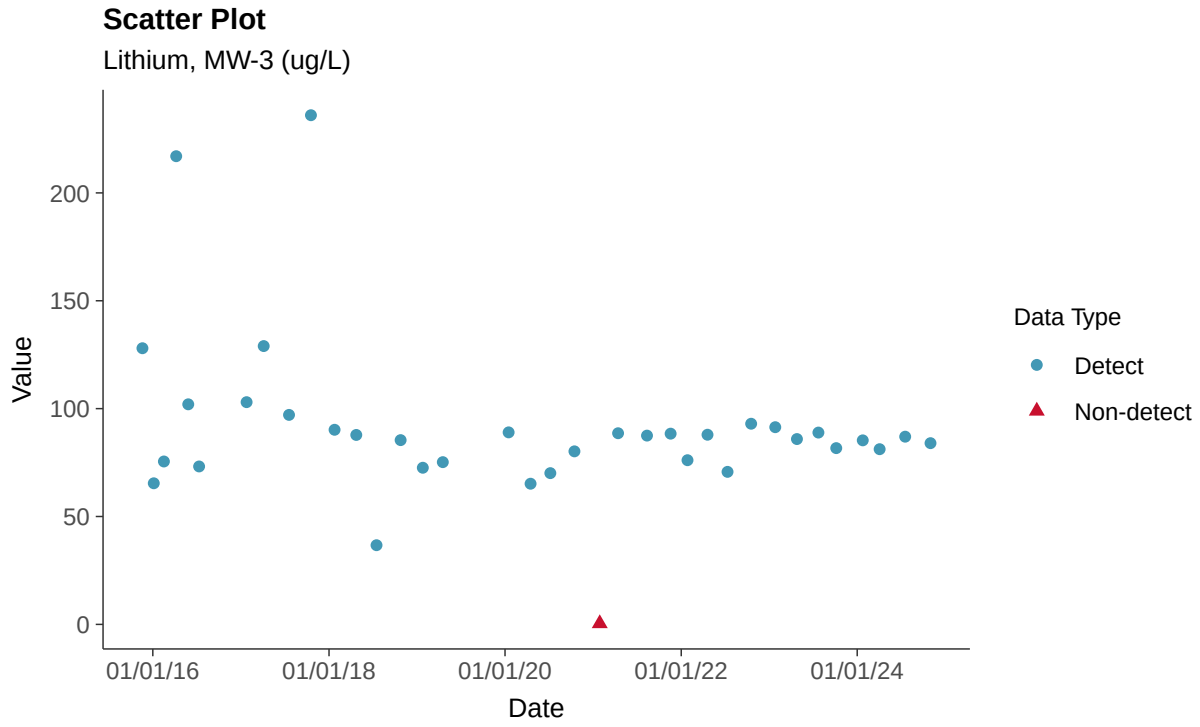
Trend Regression: Piecewise Linear-Linear-Linear

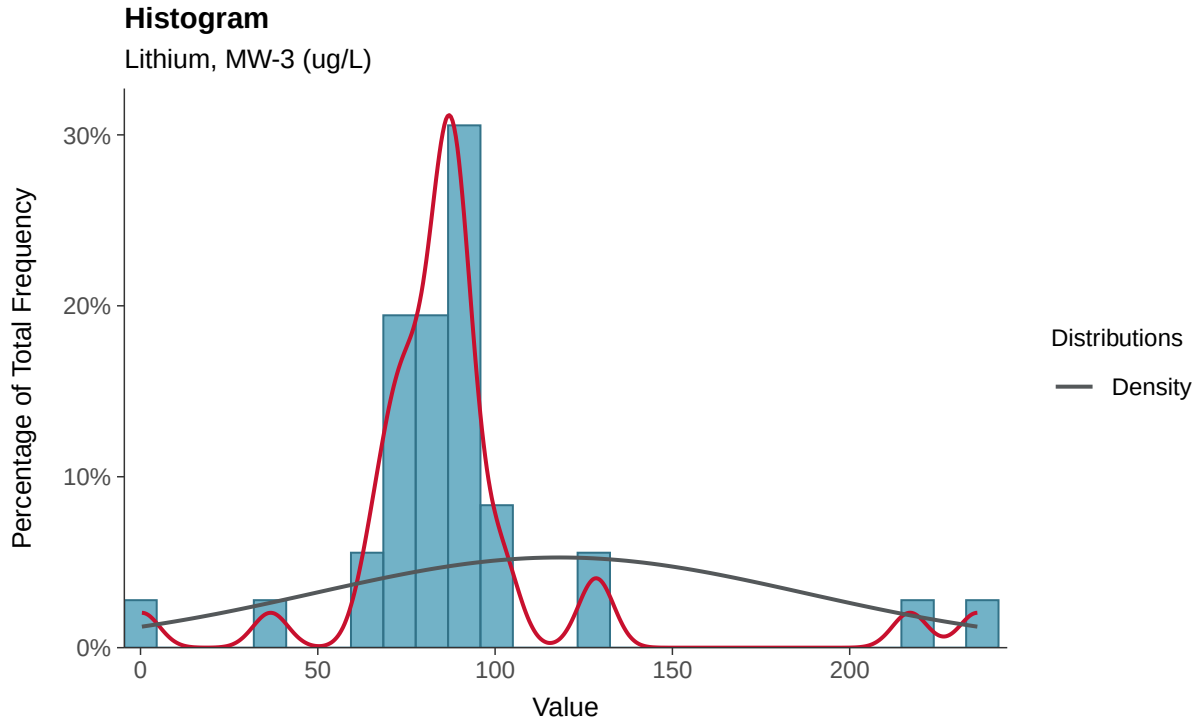
Lead, MW-3 (ug/L)



App. IV: Lithium, MW-3

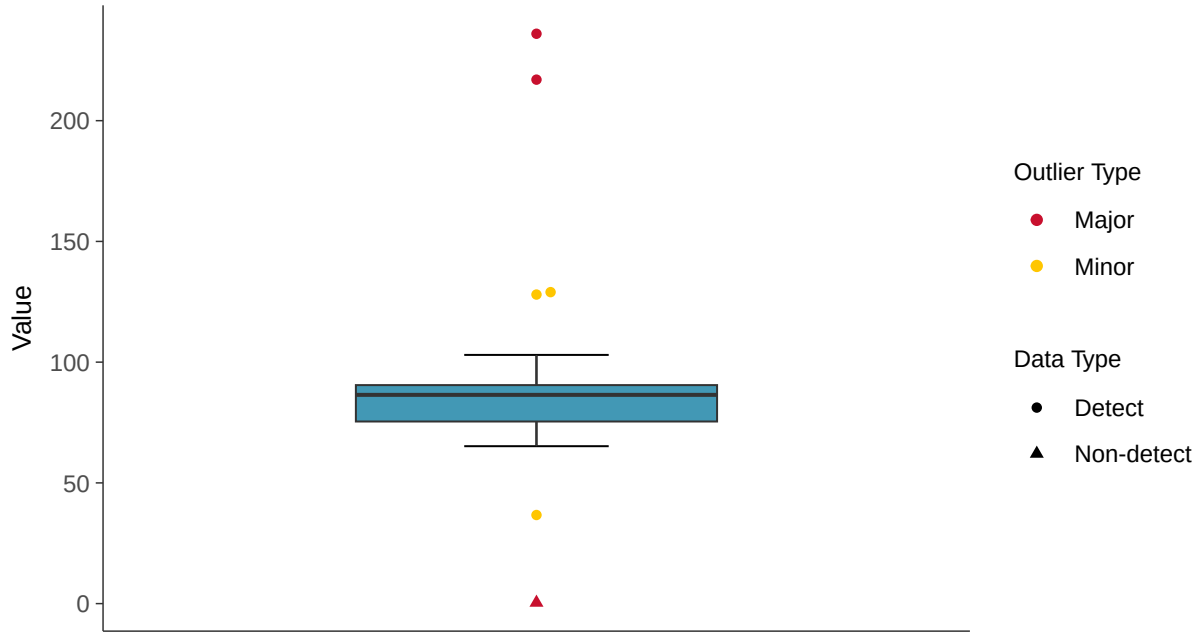
ID: 03_03_114





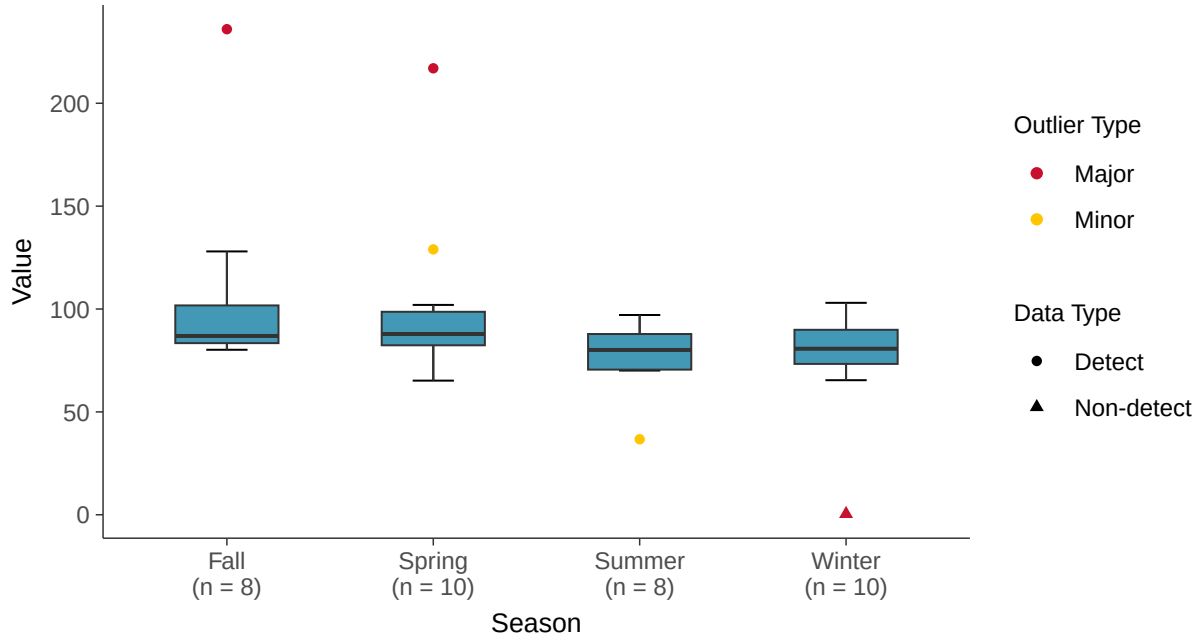
Boxplot

Lithium, MW-3 (ug/L)



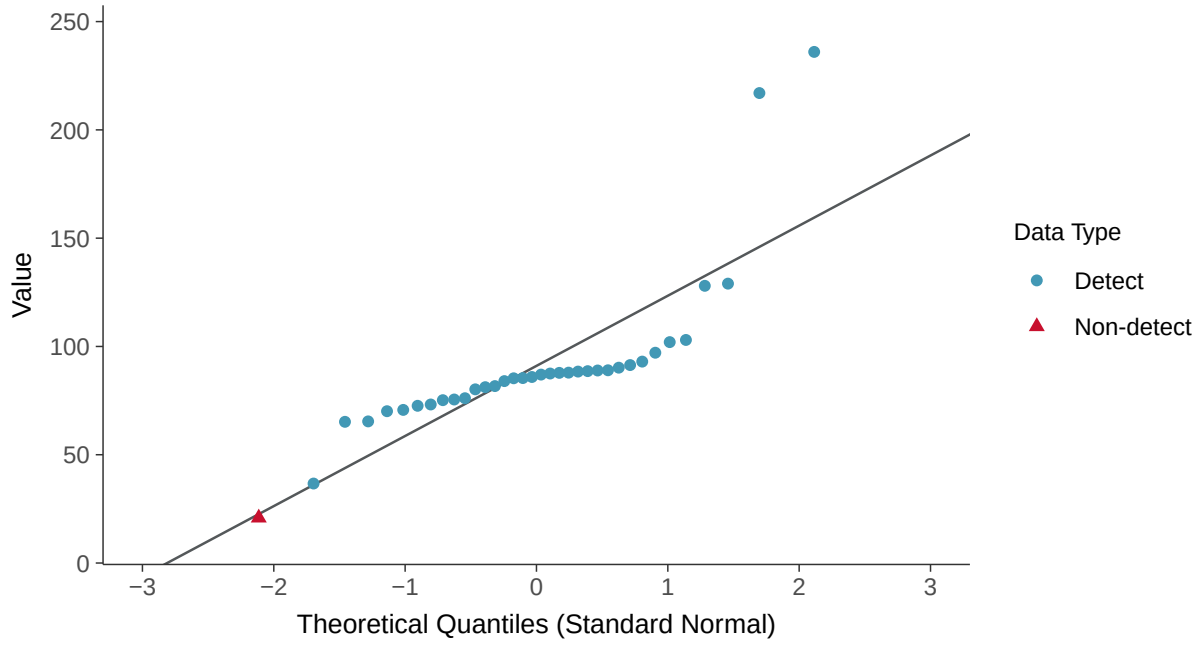
Boxplot by Season

Lithium, MW-3 (ug/L)



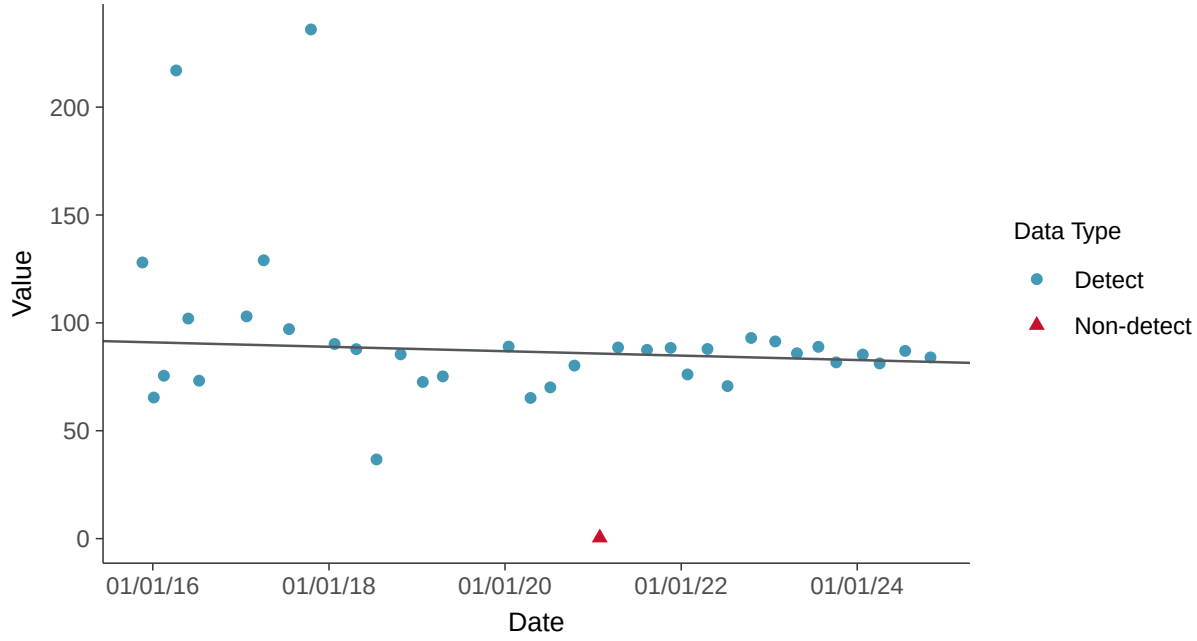
Normal Q-Q plot using ROS Imputed Estimates

Lithium, MW-3 (ug/L)



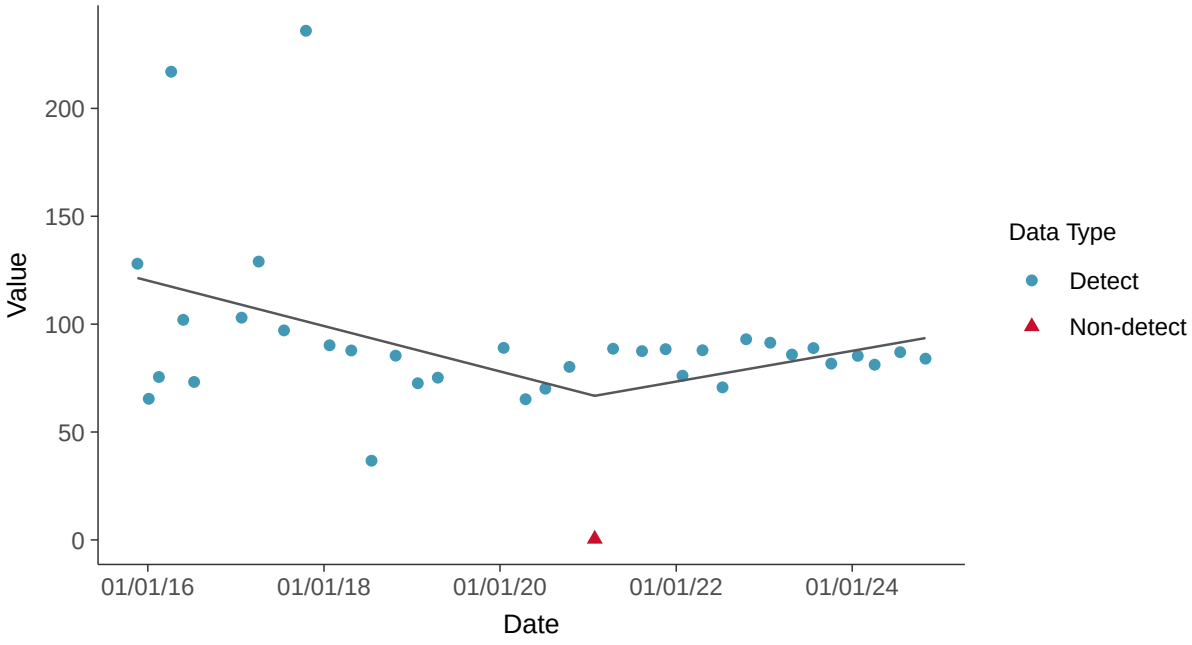
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-3 (ug/L)



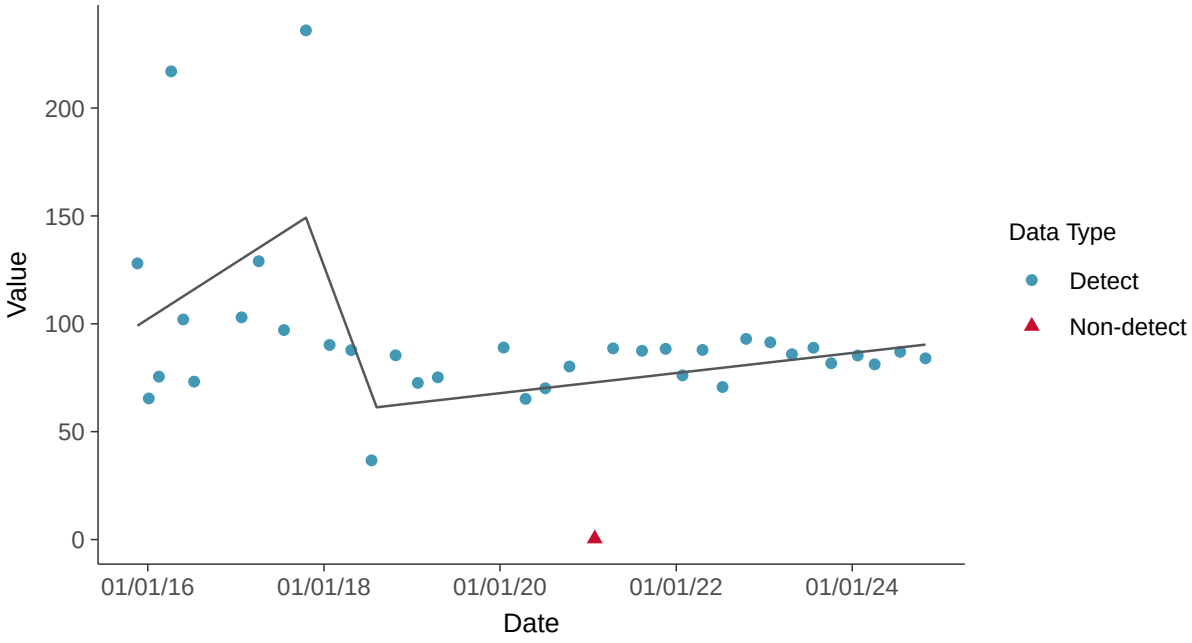
Trend Regression: Piecewise Linear-Linear

Lithium, MW-3 (ug/L)



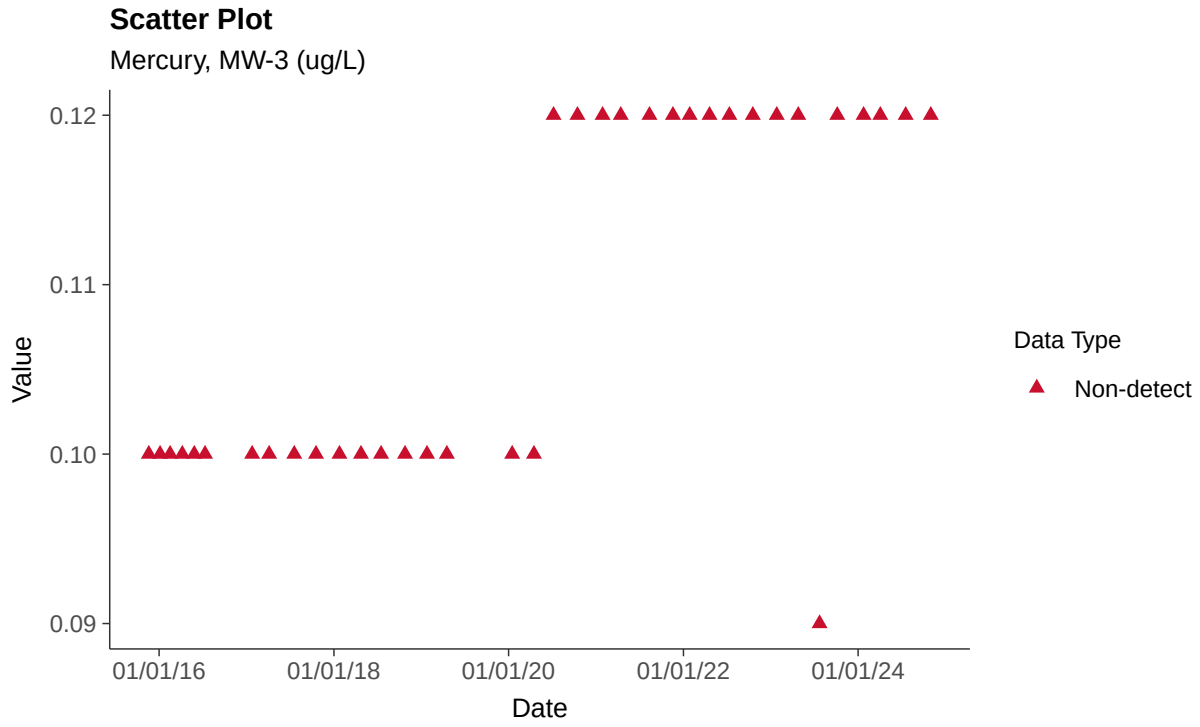
Trend Regression: Piecewise Linear-Linear-Linear

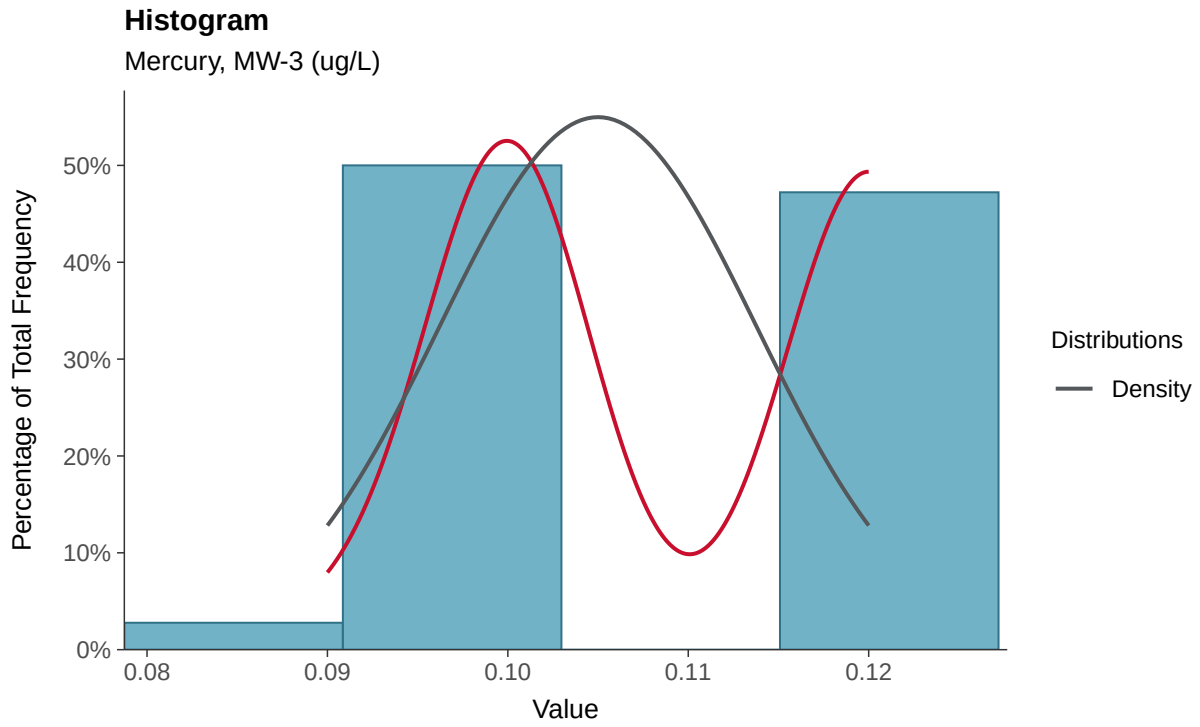
Lithium, MW-3 (ug/L)



App. IV: Mercury, MW-3

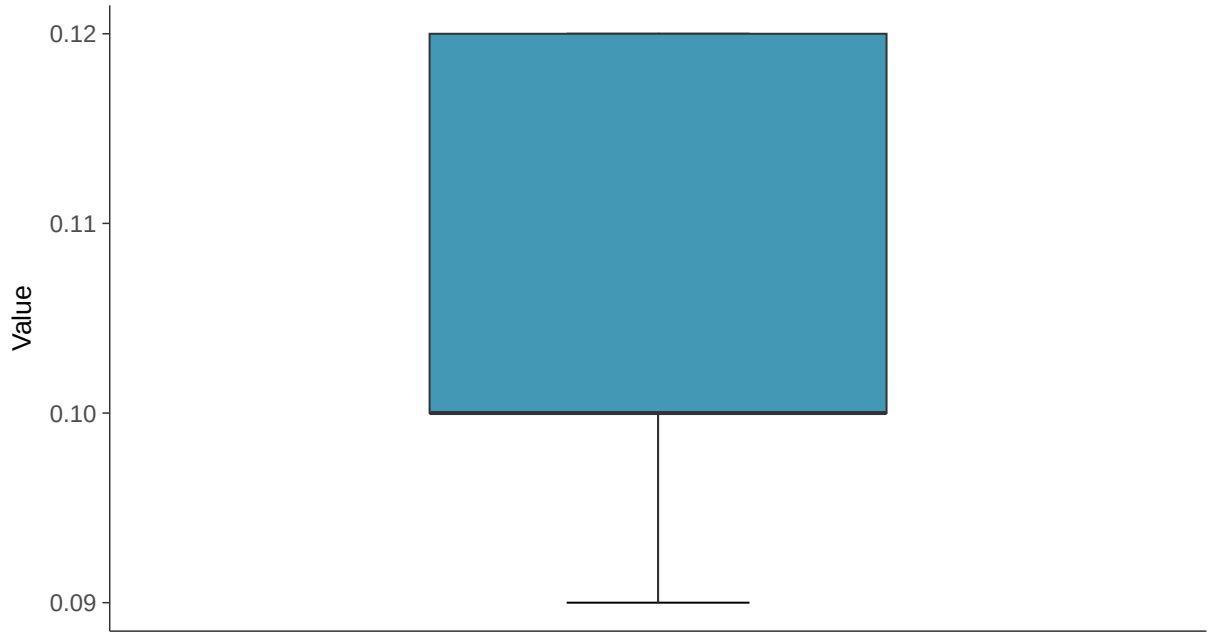
ID: 03_03_115





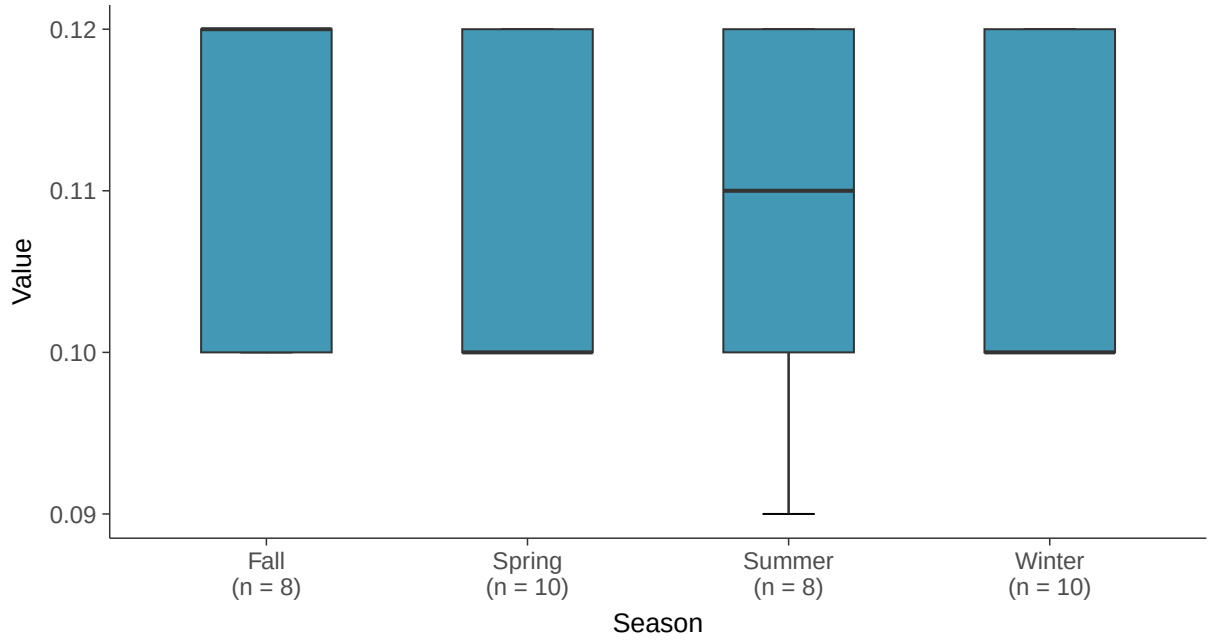
Boxplot

Mercury, MW-3 (ug/L)



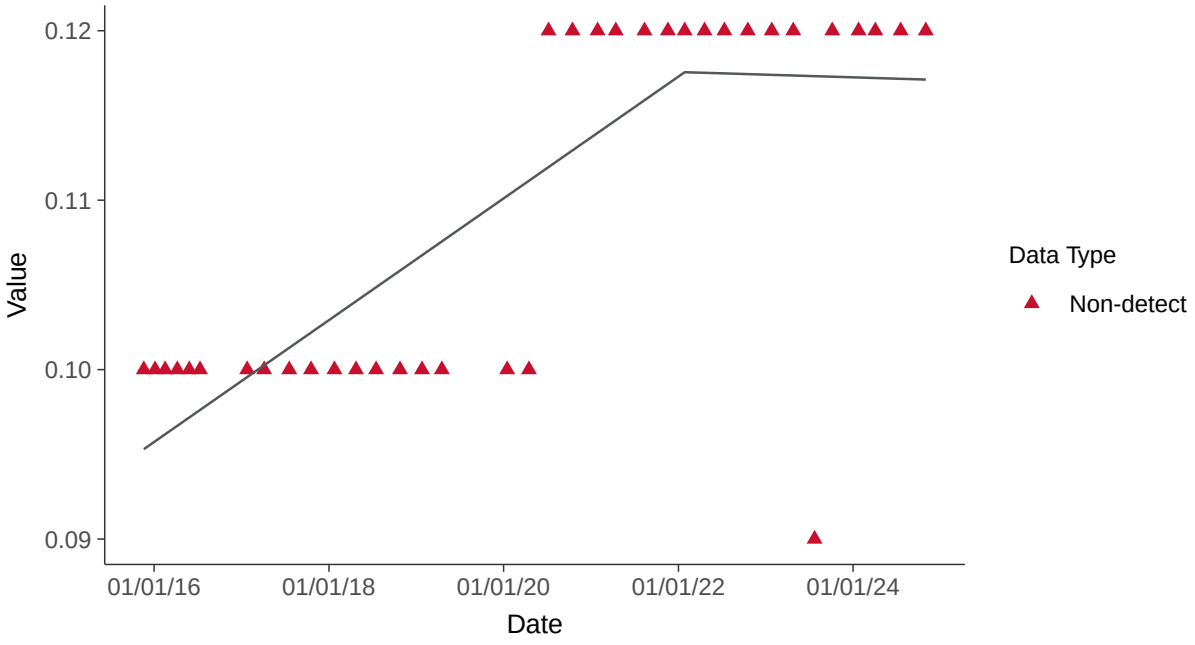
Boxplot by Season

Mercury, MW-3 (ug/L)



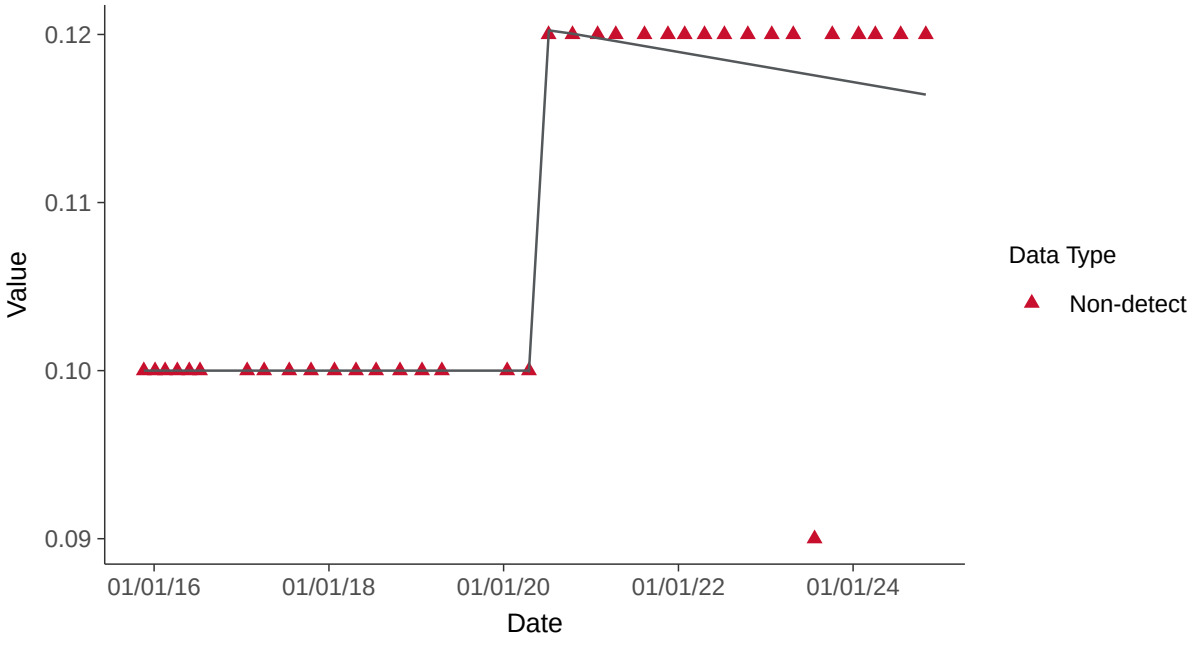
Trend Regression: Piecewise Linear-Linear

Mercury, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-3 (ug/L)

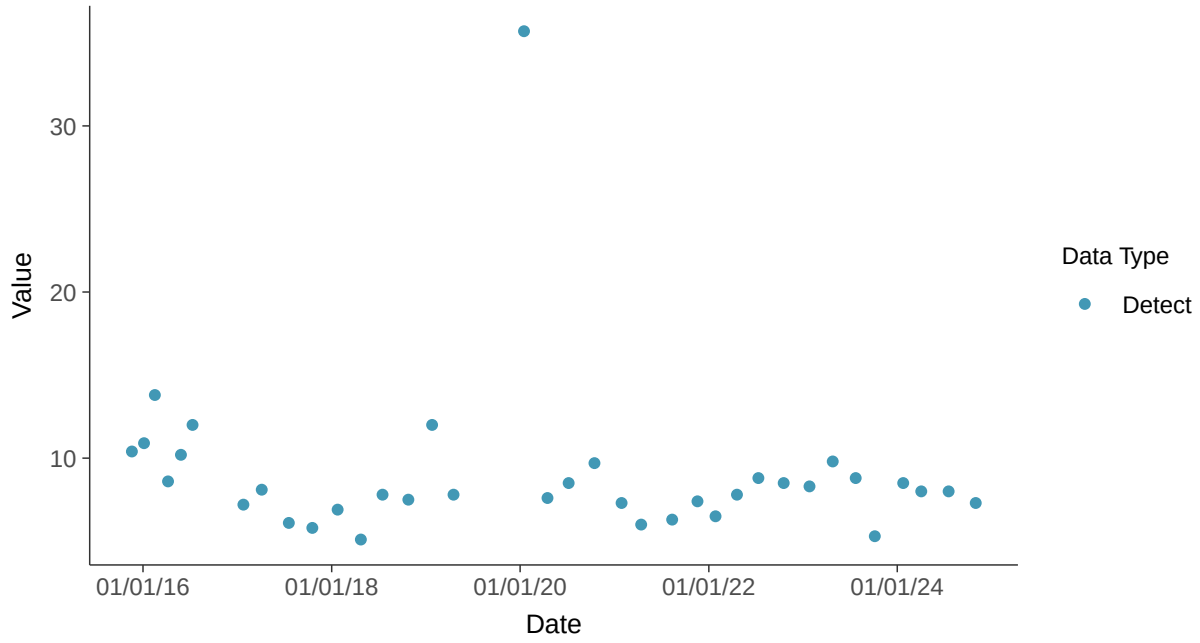


App. IV: Molybdenum, MW-3

ID: 03_03_116

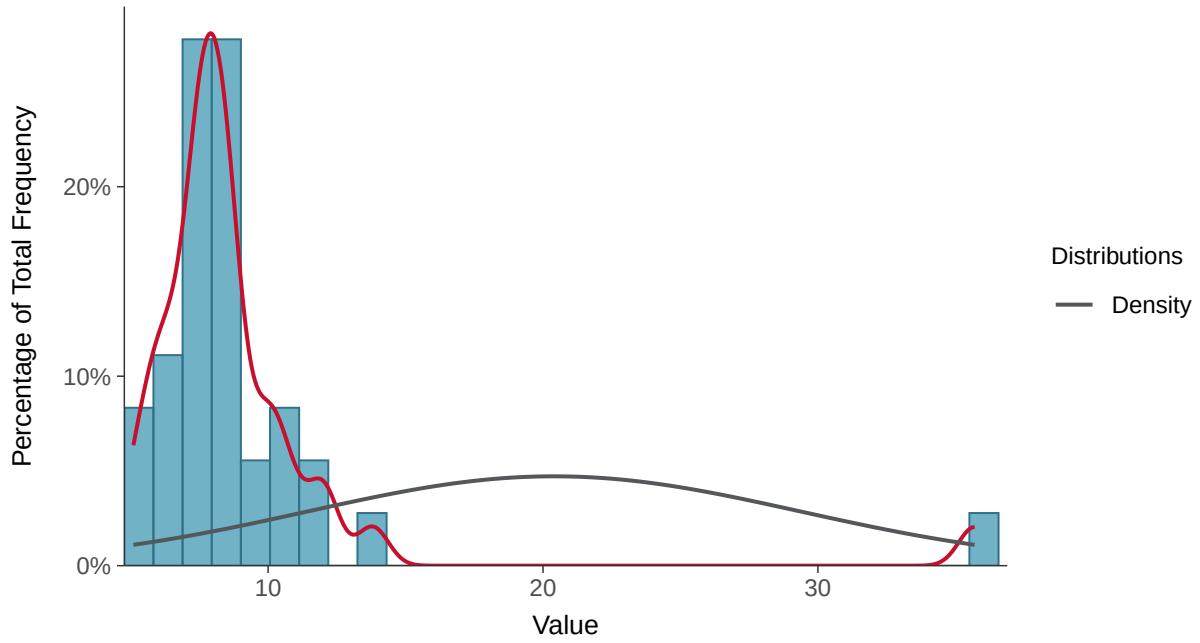
Scatter Plot

Molybdenum, MW-3 (ug/L)



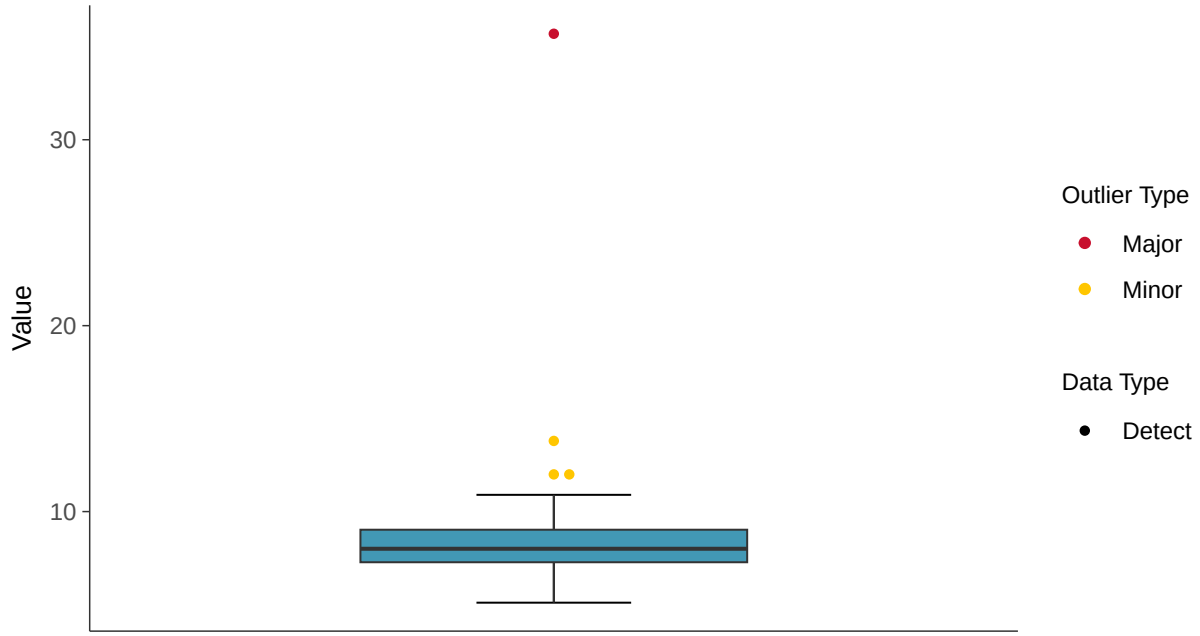
Histogram

Molybdenum, MW-3 (ug/L)



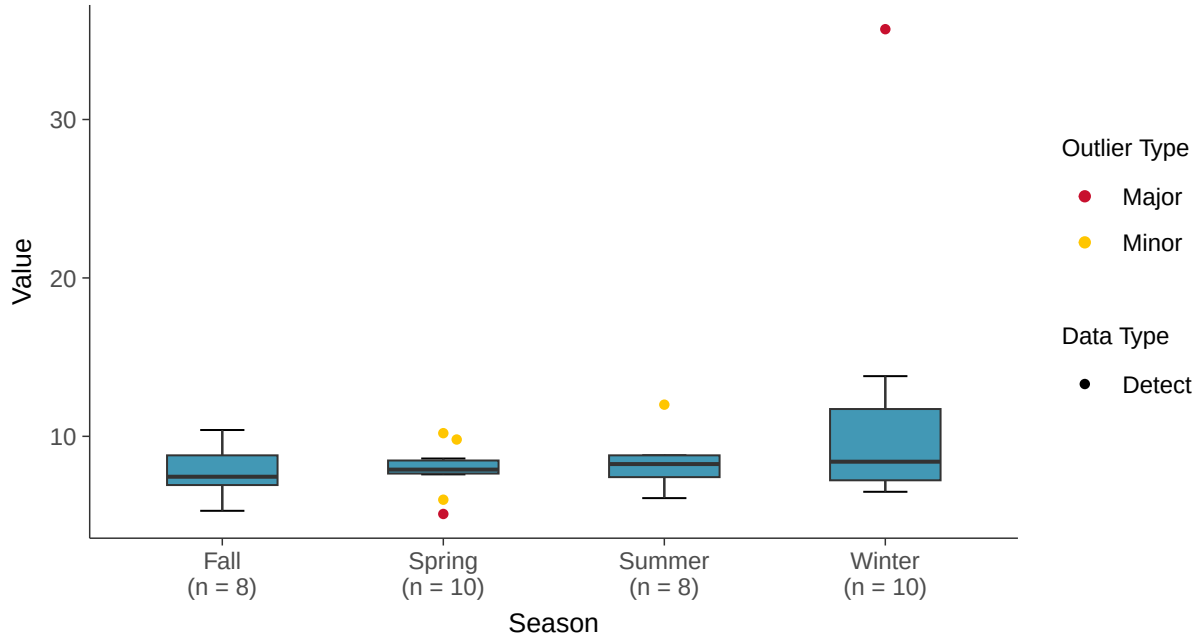
Boxplot

Molybdenum, MW-3 (ug/L)



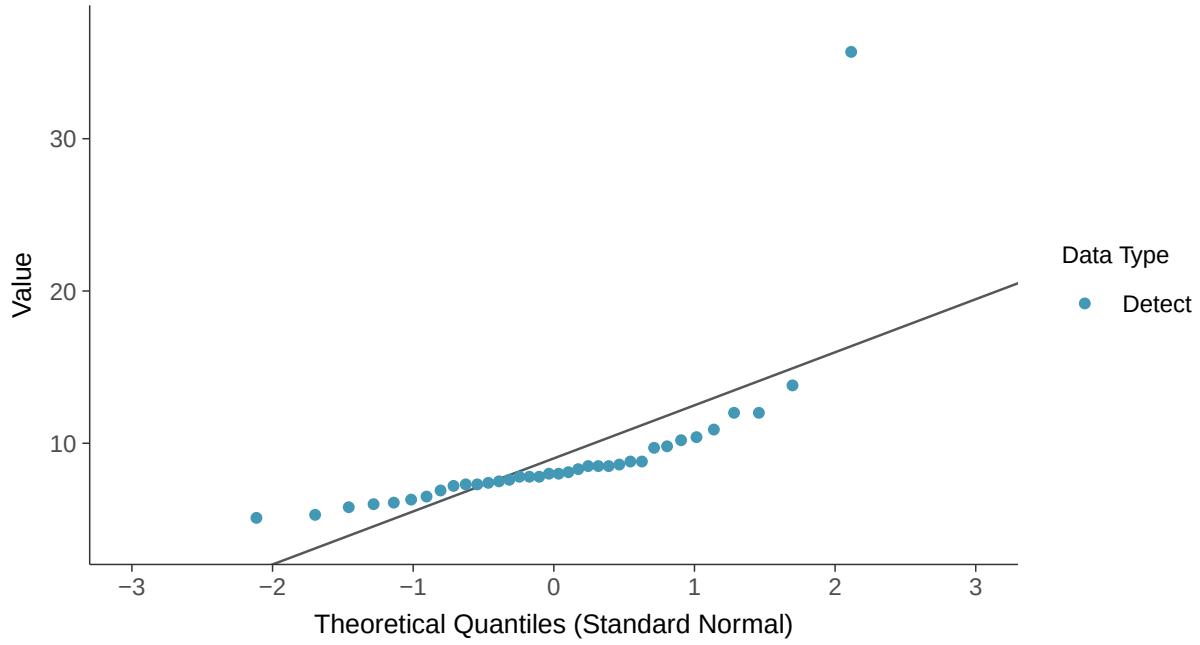
Boxplot by Season

Molybdenum, MW-3 (ug/L)



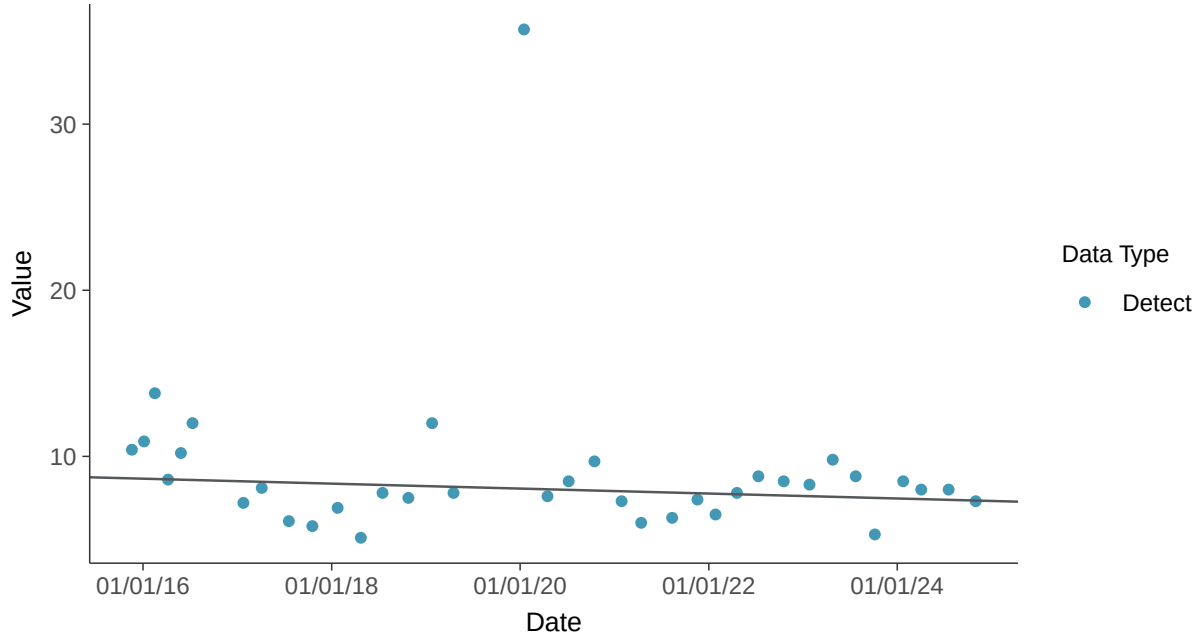
Normal Q-Q plot

Molybdenum, MW-3 (ug/L)



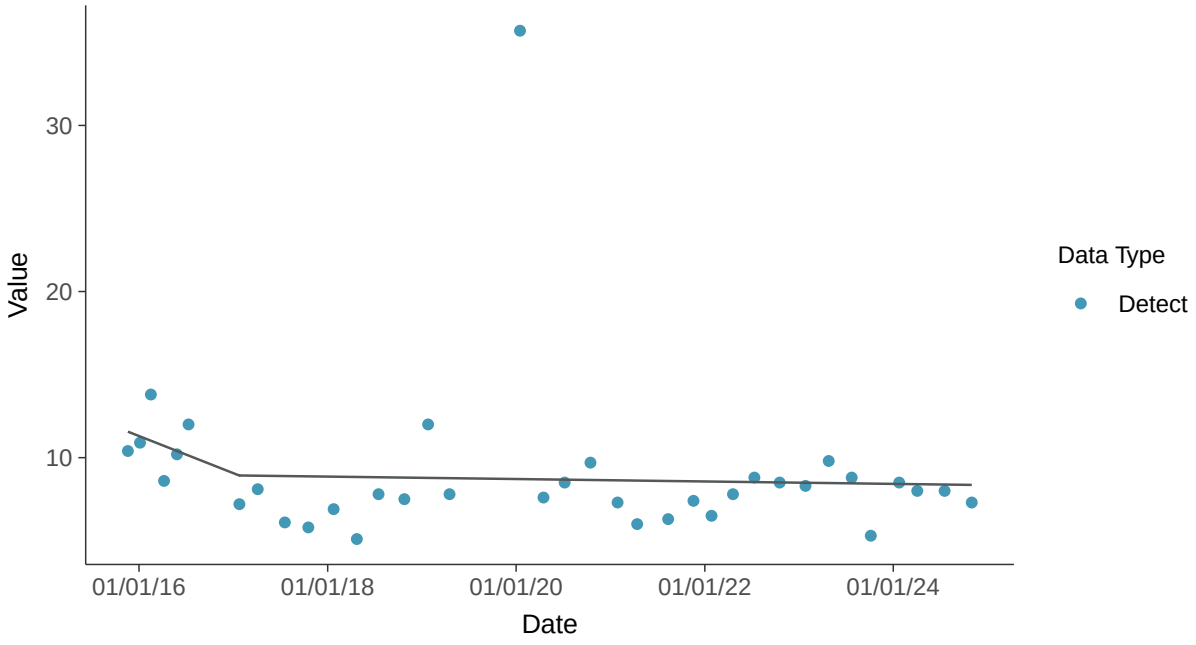
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Molybdenum, MW-3 (ug/L)



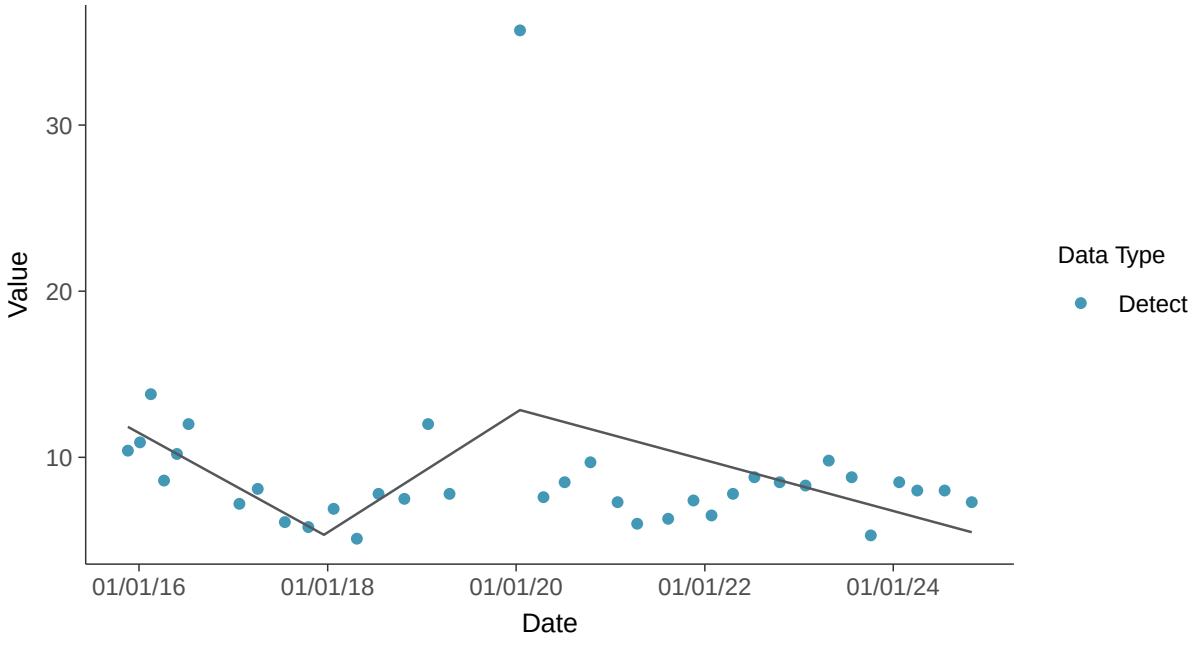
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-3 (ug/L)



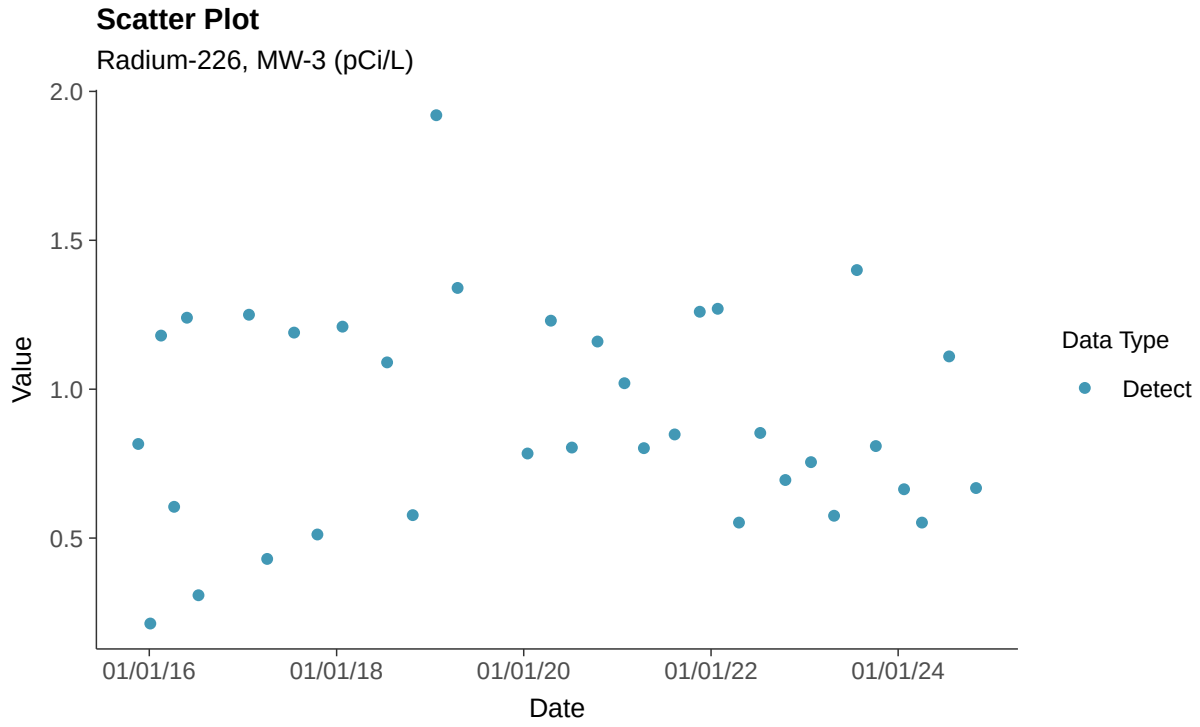
Trend Regression: Piecewise Linear-Linear-Linear

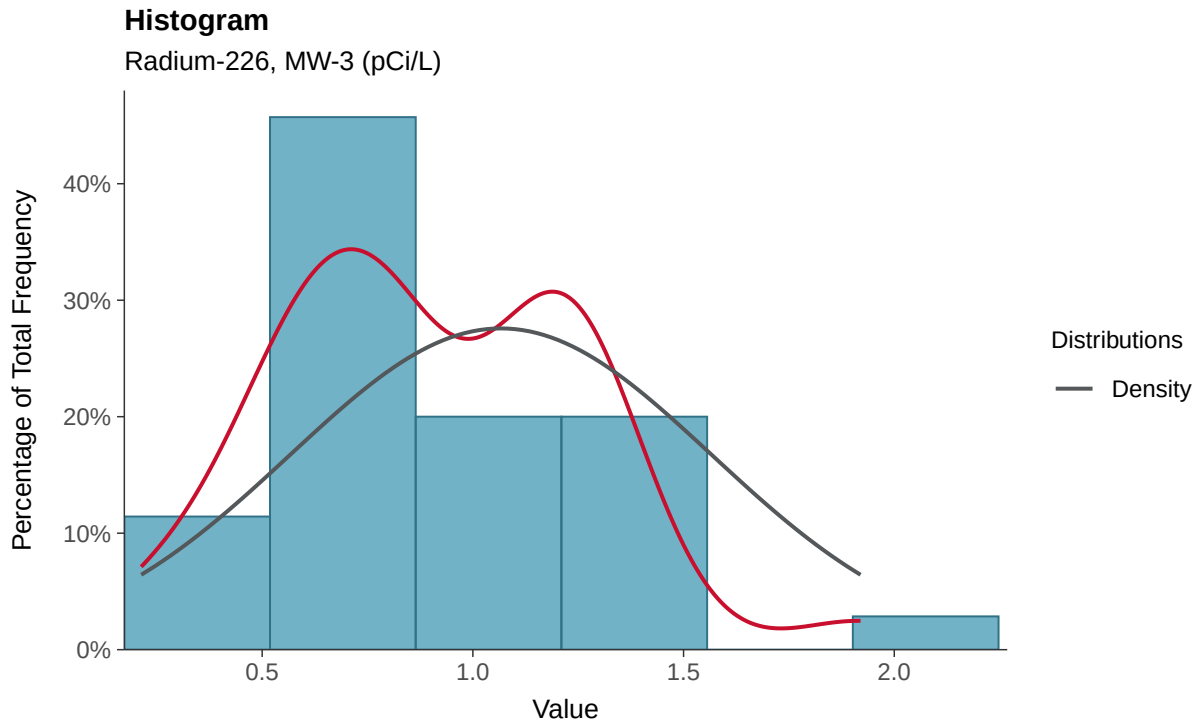
Molybdenum, MW-3 (ug/L)



App. IV: Radium-226, MW-3

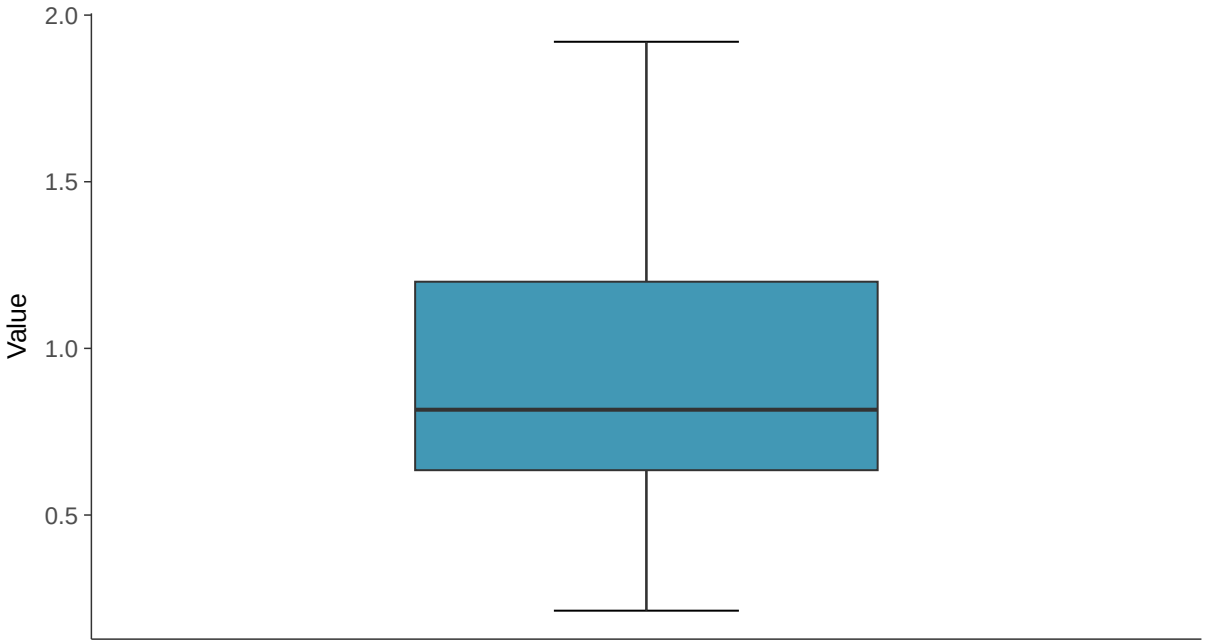
ID: 03_03_119





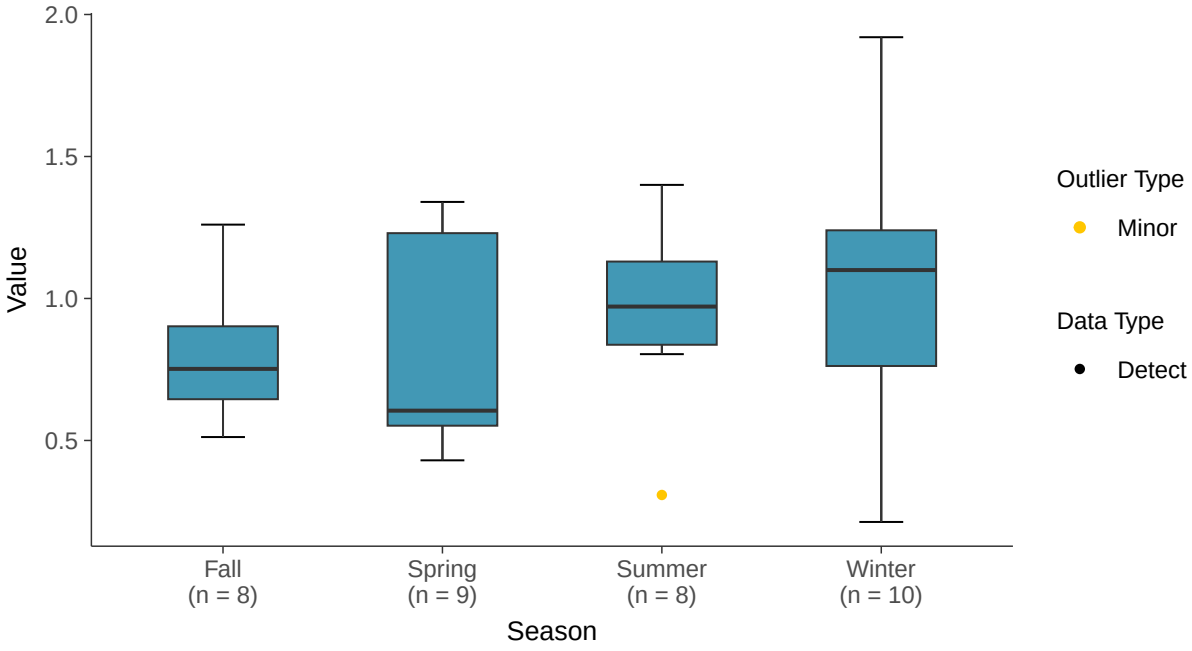
Boxplot

Radium-226, MW-3 (pCi/L)



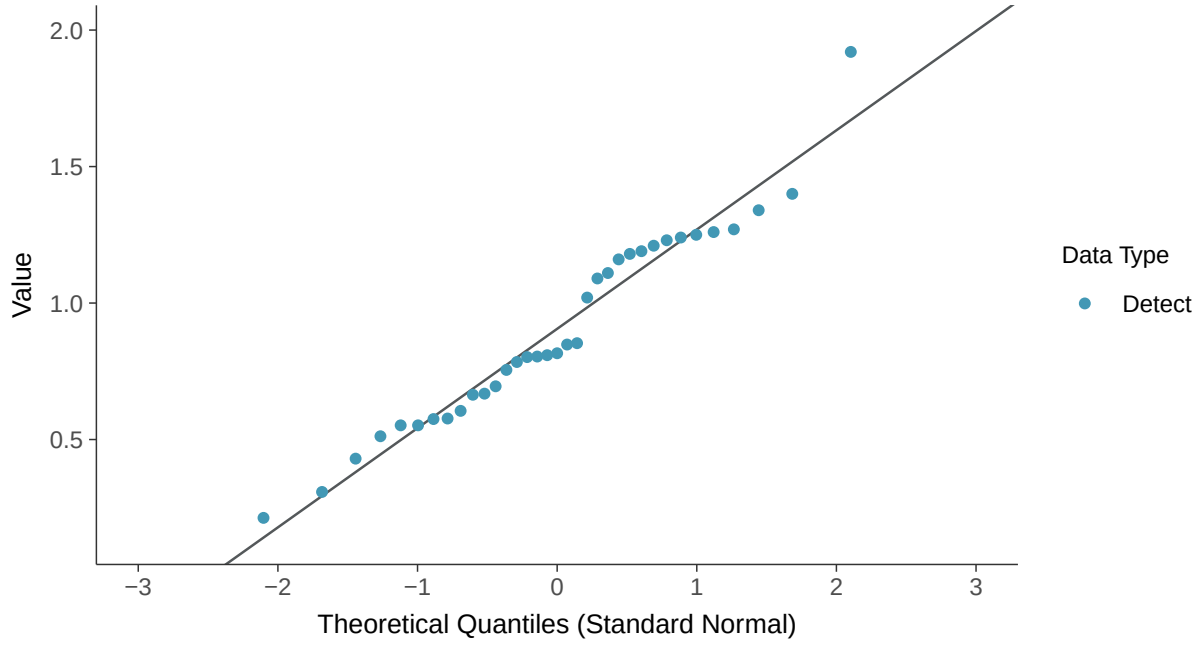
Boxplot by Season

Radium-226, MW-3 (pCi/L)



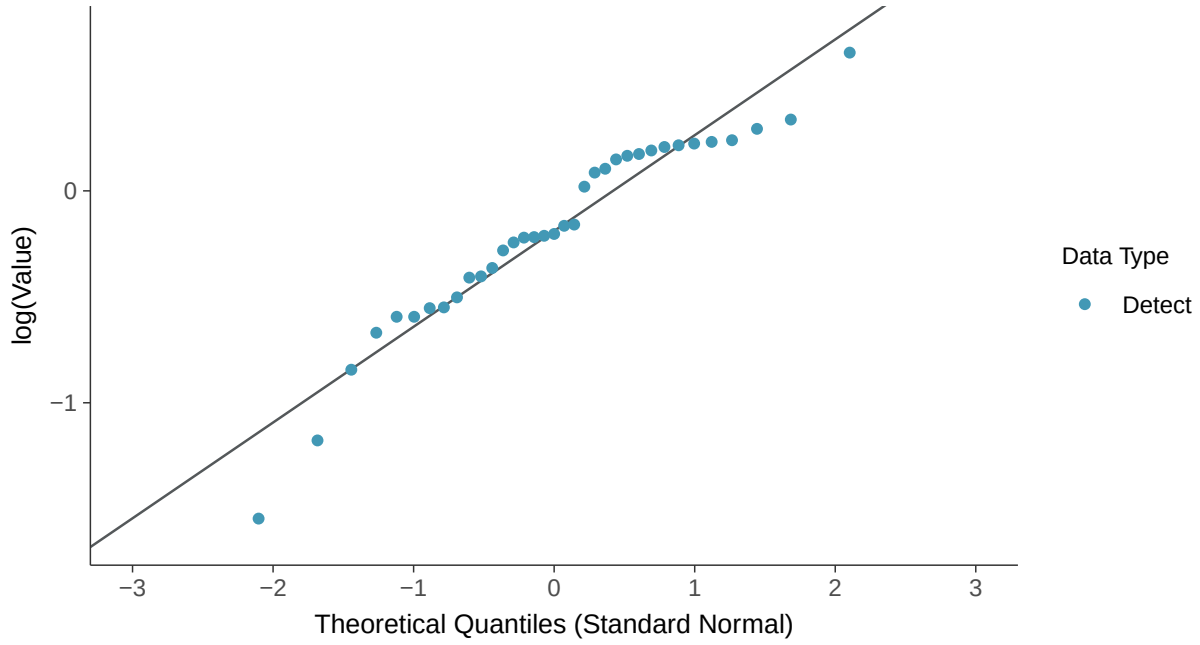
Normal Q-Q plot

Radium-226, MW-3 (pCi/L)



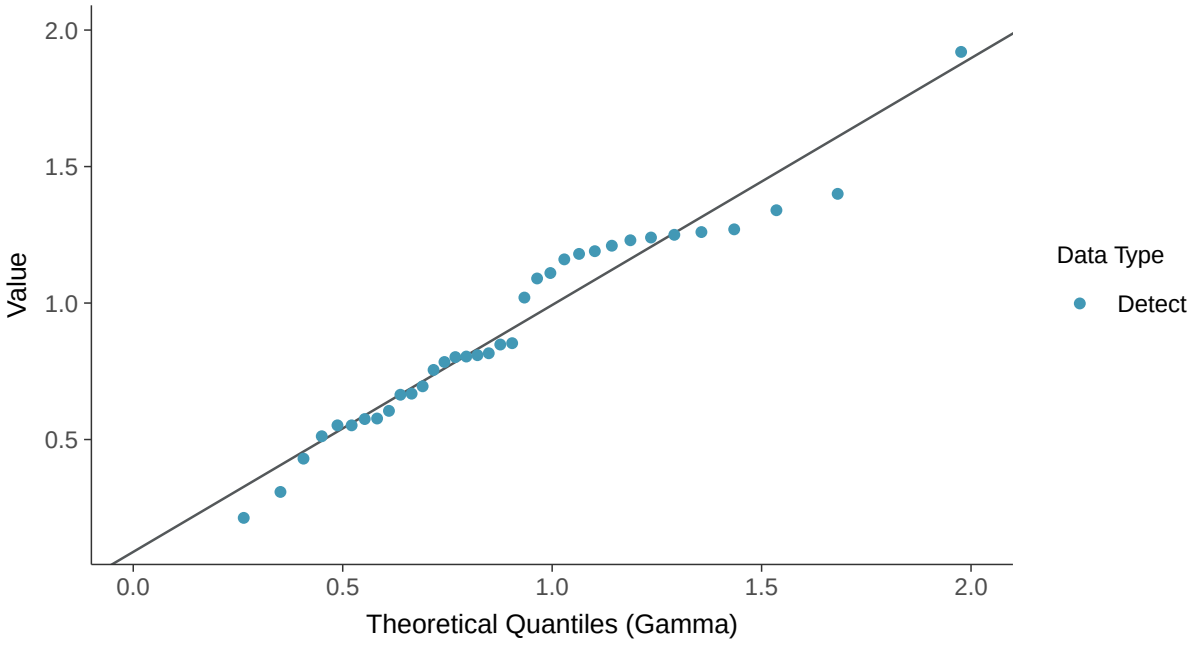
Lognormal Q-Q plot

Radium-226, MW-3 (pCi/L)



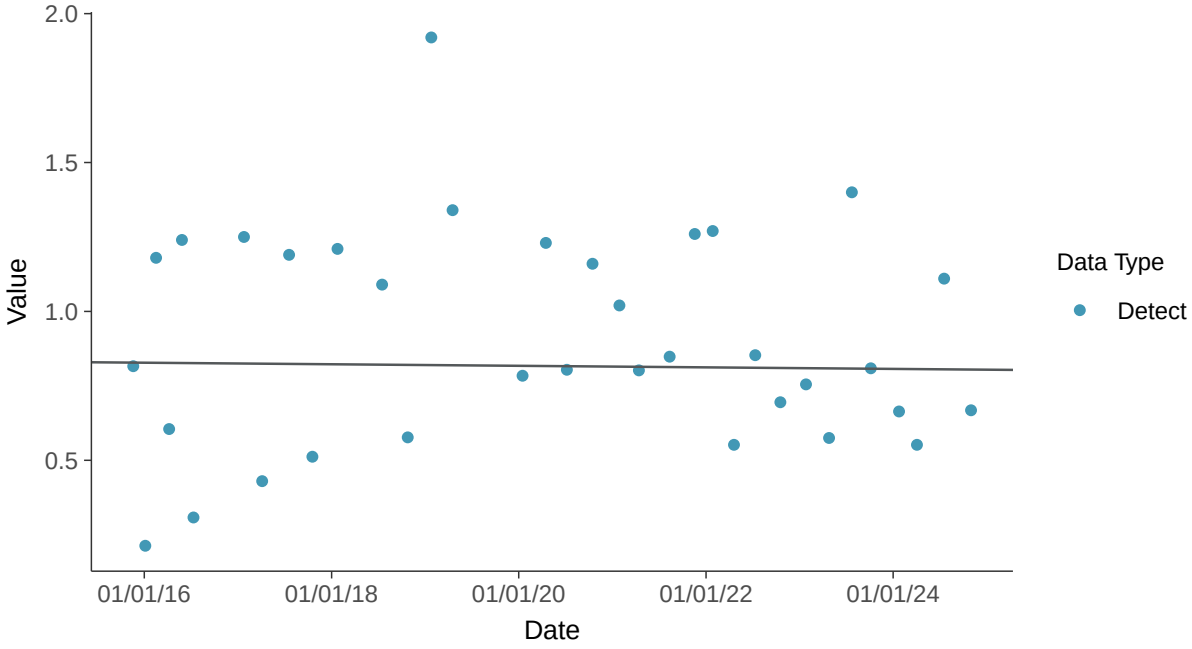
Gamma Q-Q plot

Radium-226, MW-3 (pCi/L)



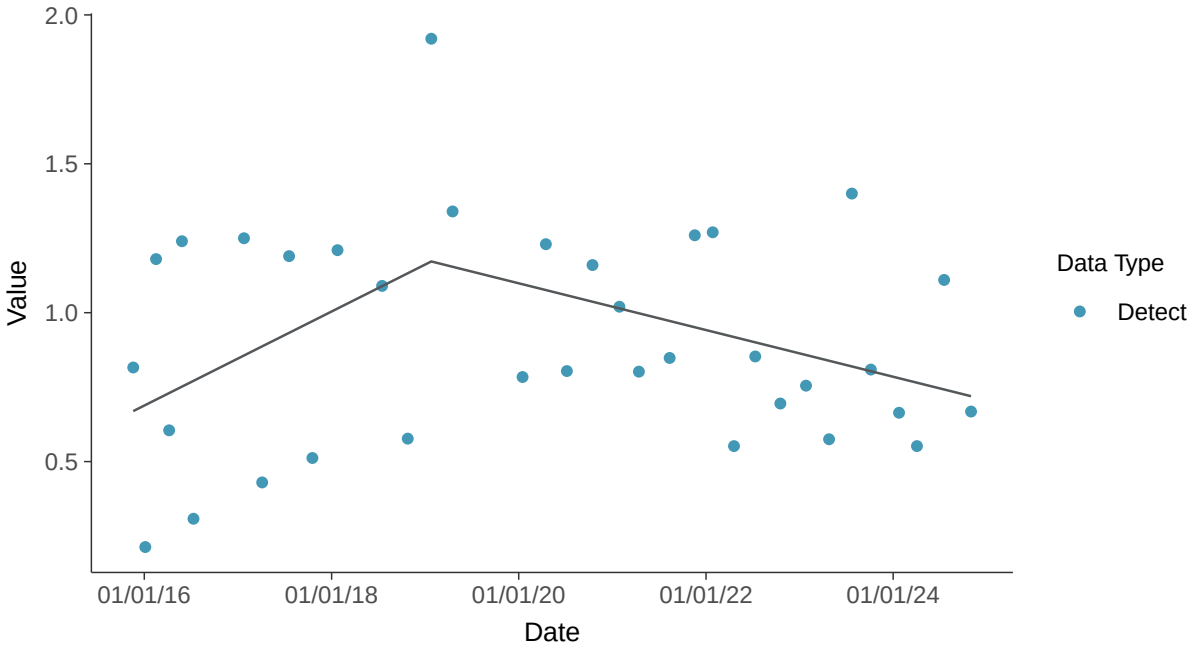
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-3 (pCi/L)



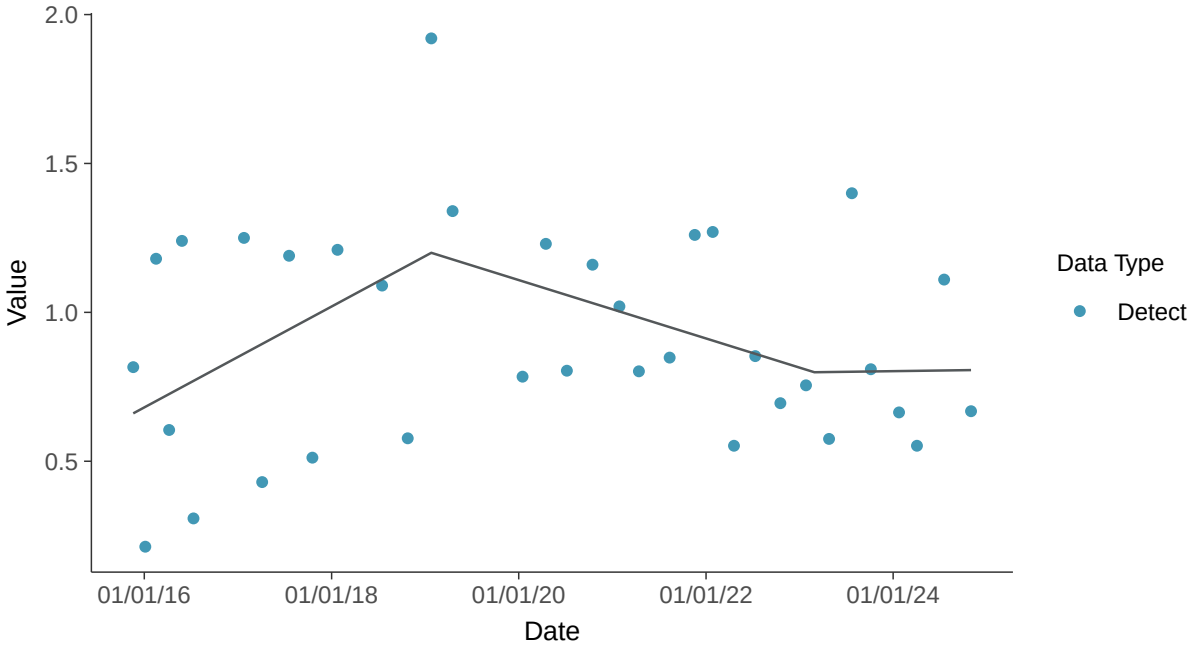
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-3 (pCi/L)



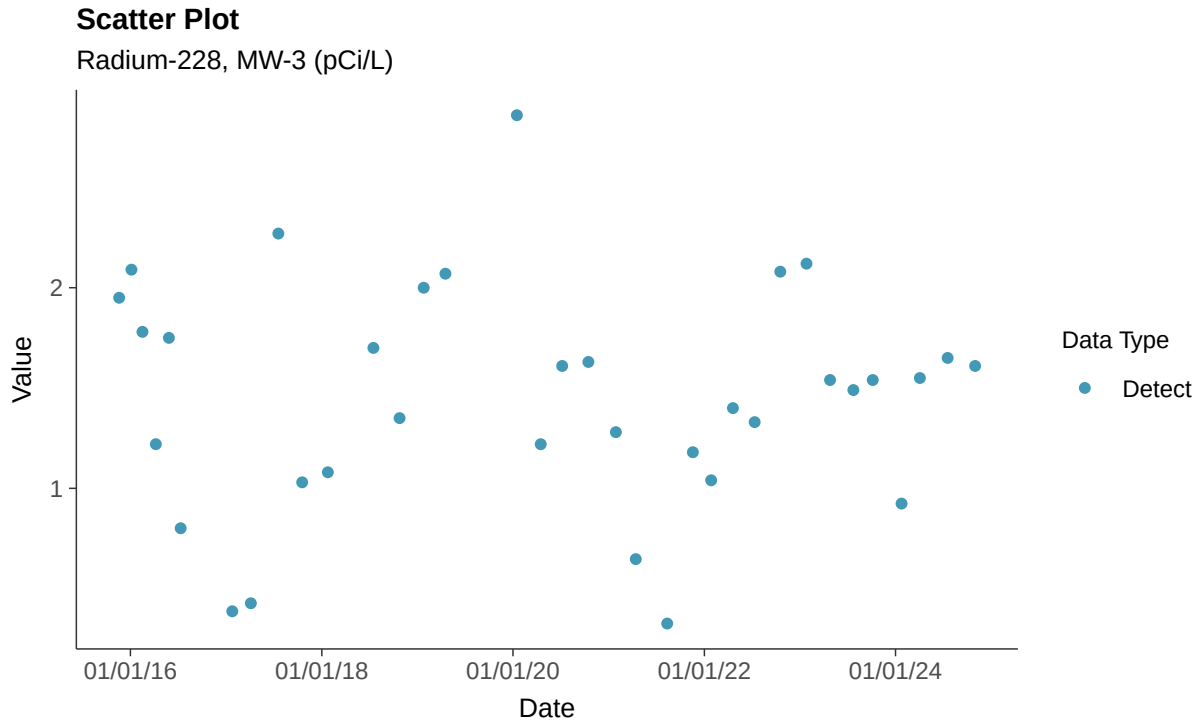
Trend Regression: Piecewise Linear-Linear-Linear

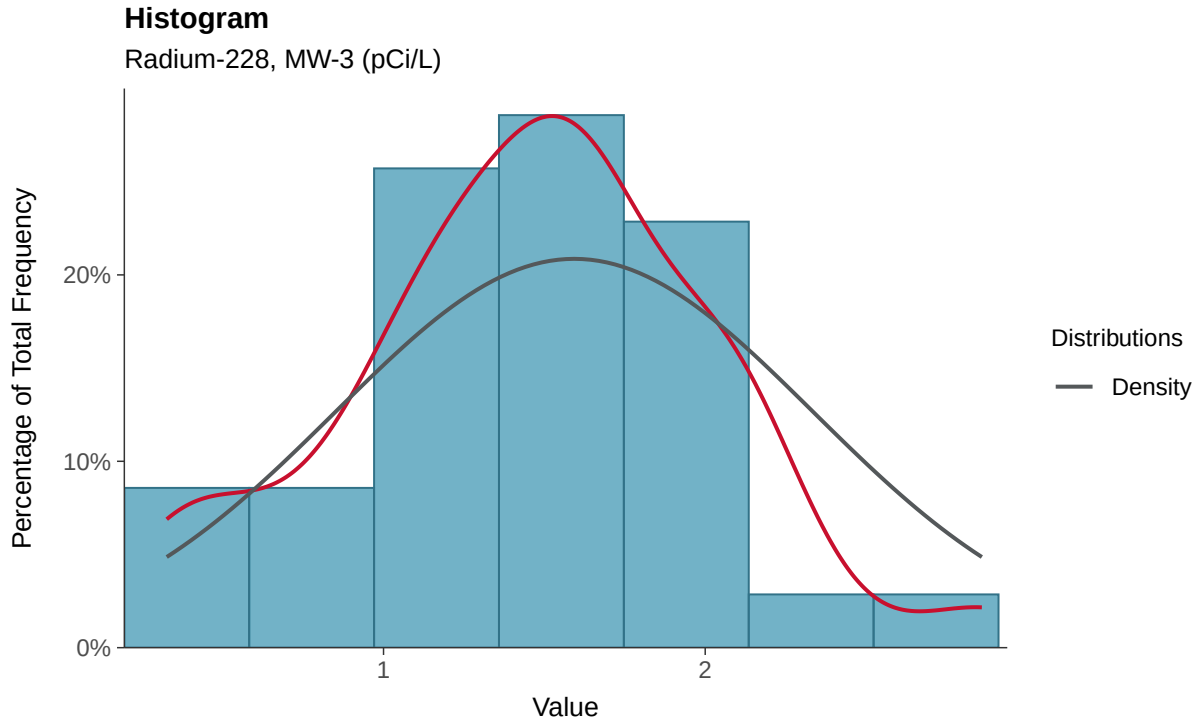
Radium-226, MW-3 (pCi/L)



App. IV: Radium-228, MW-3

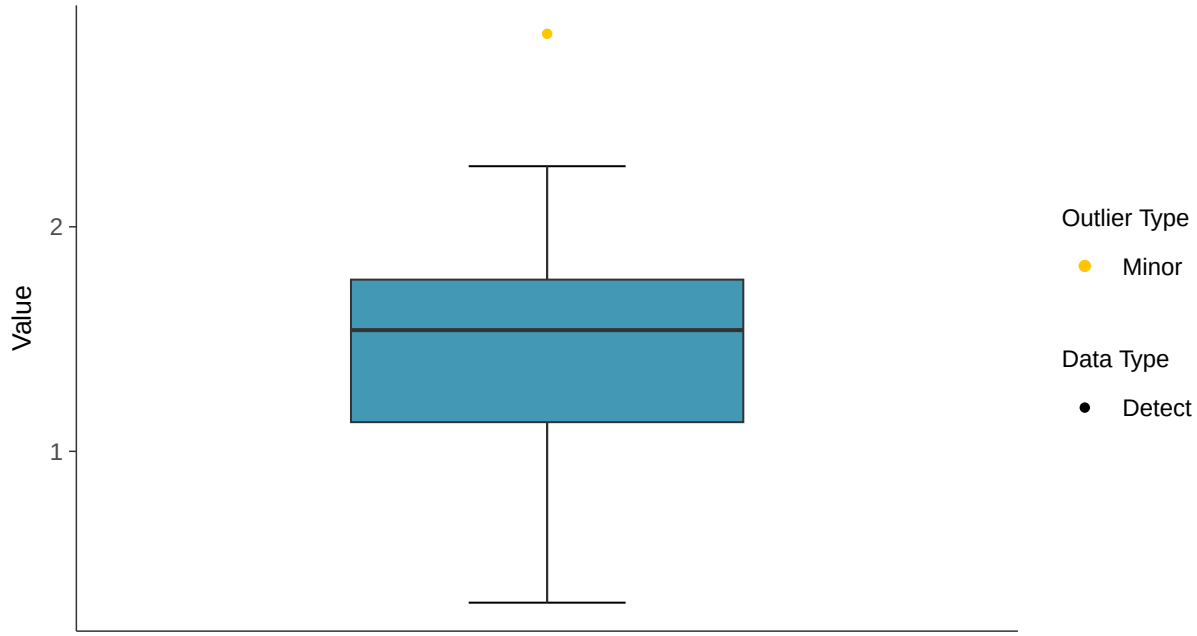
ID: 03_03_120





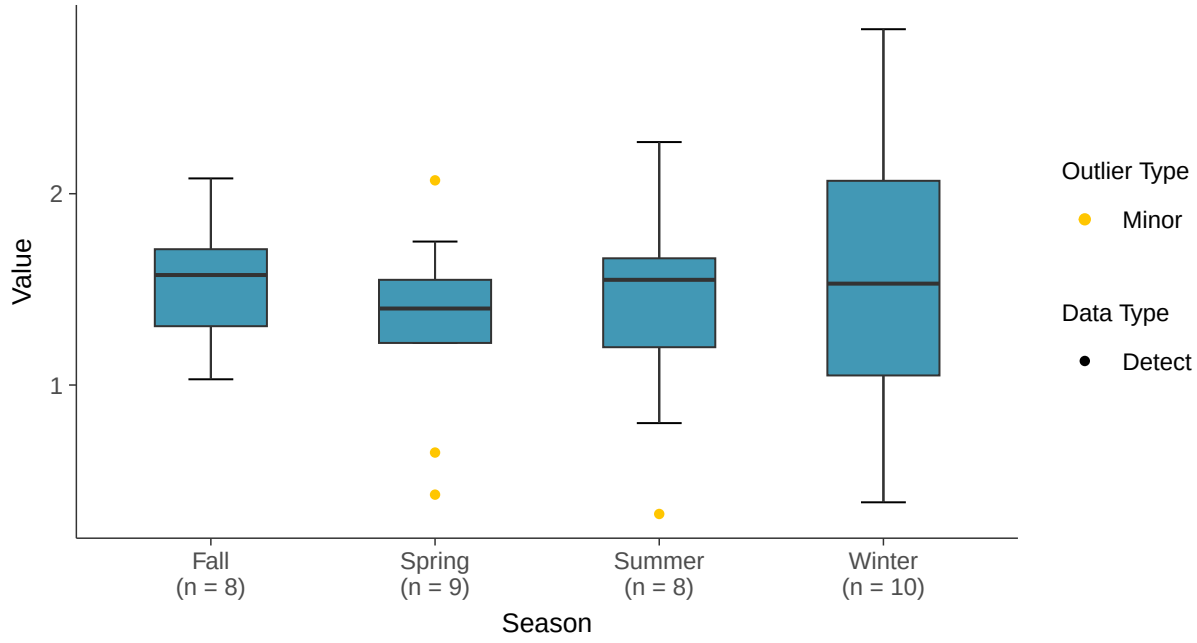
Boxplot

Radium-228, MW-3 (pCi/L)



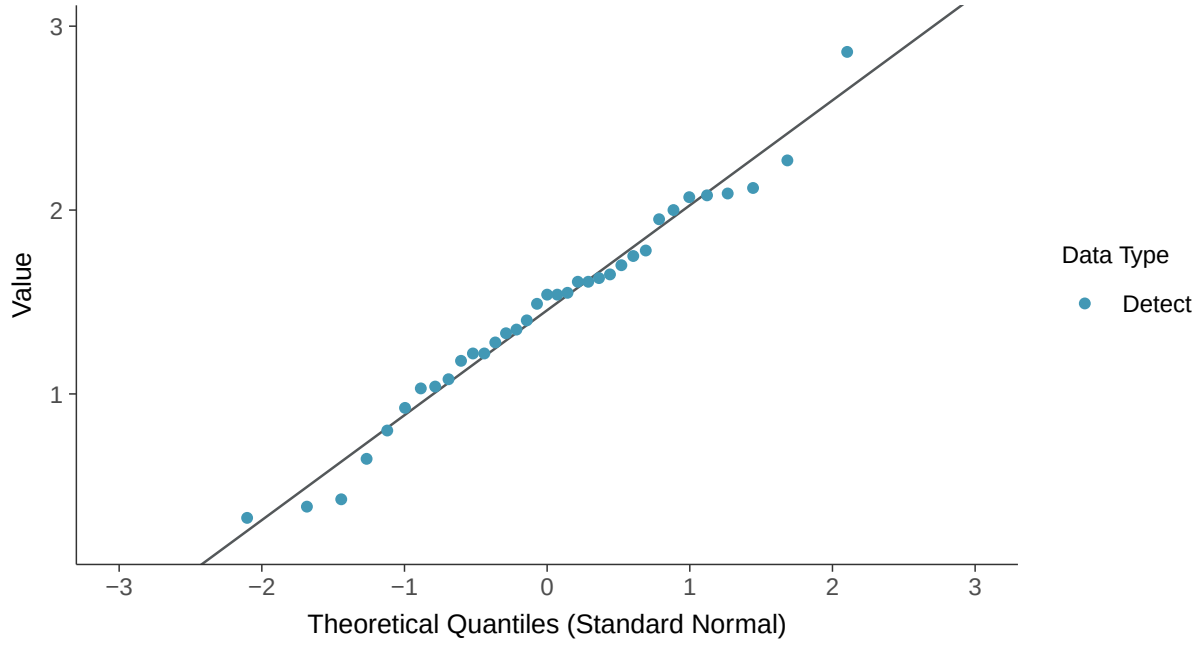
Boxplot by Season

Radium-228, MW-3 (pCi/L)



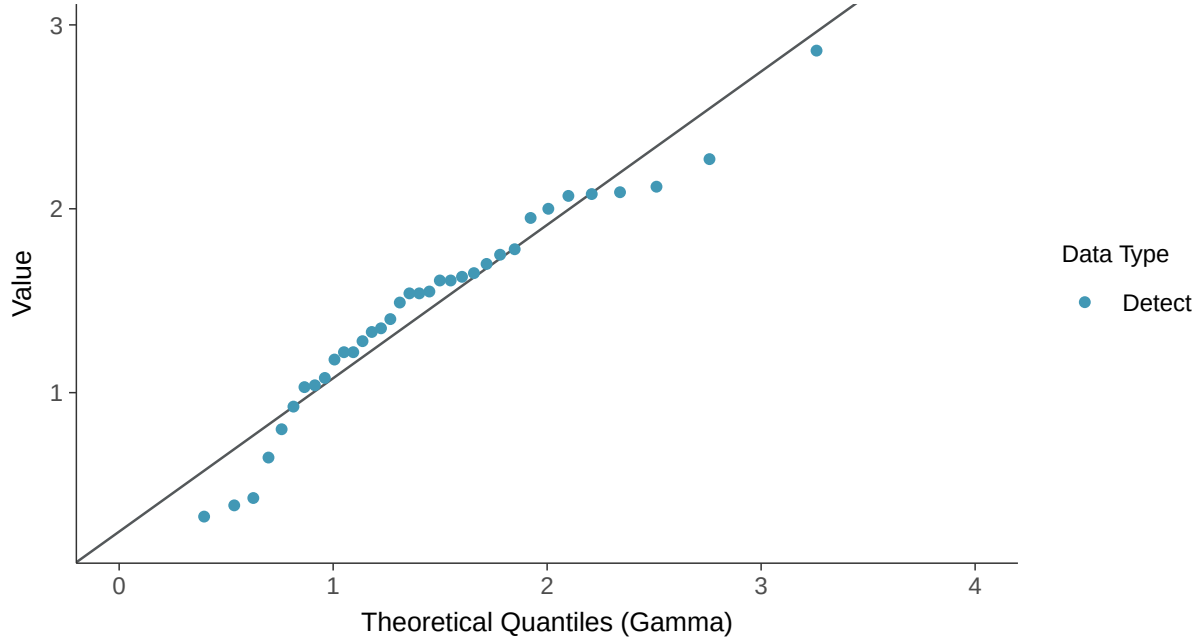
Normal Q-Q plot

Radium-228, MW-3 (pCi/L)



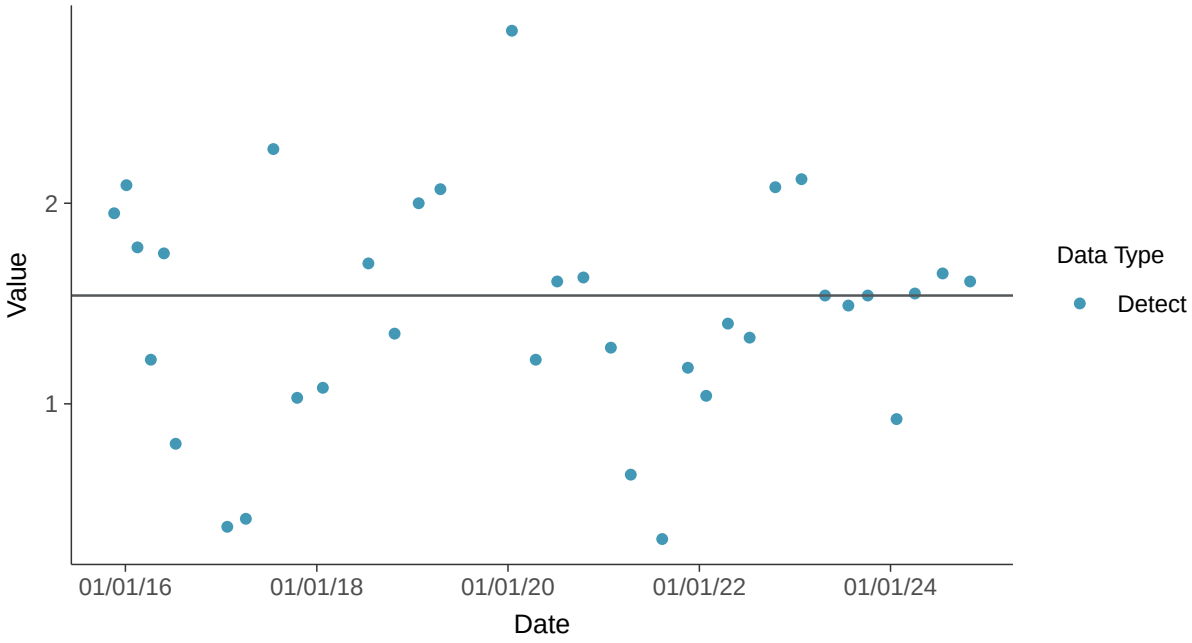
Gamma Q-Q plot

Radium-228, MW-3 (pCi/L)



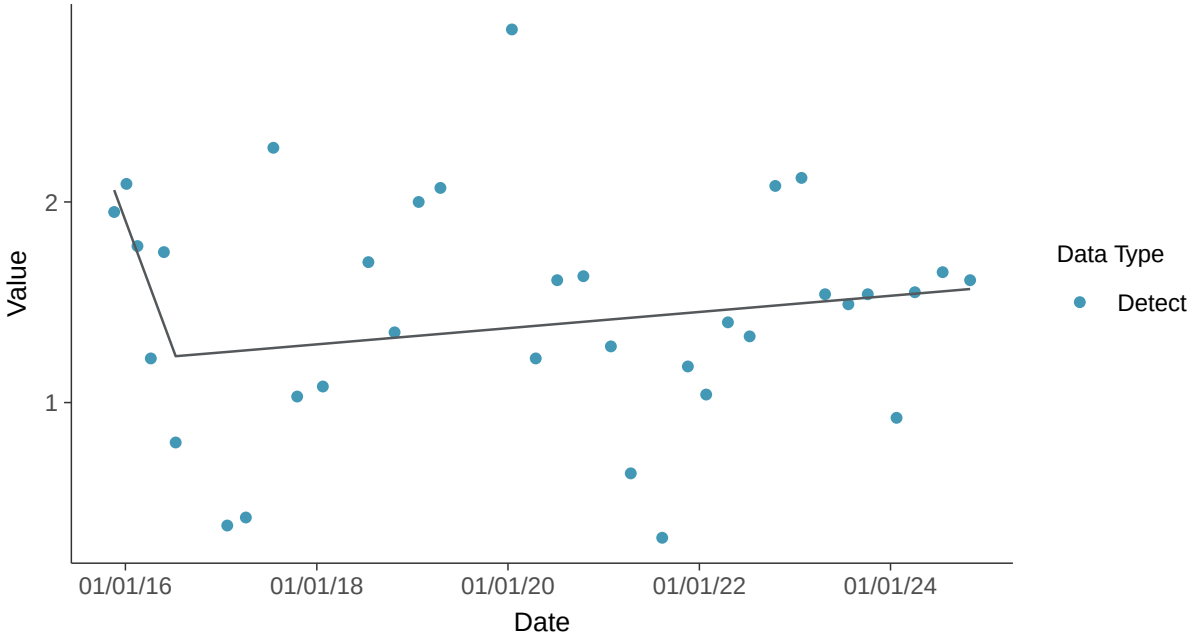
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-3 (pCi/L)



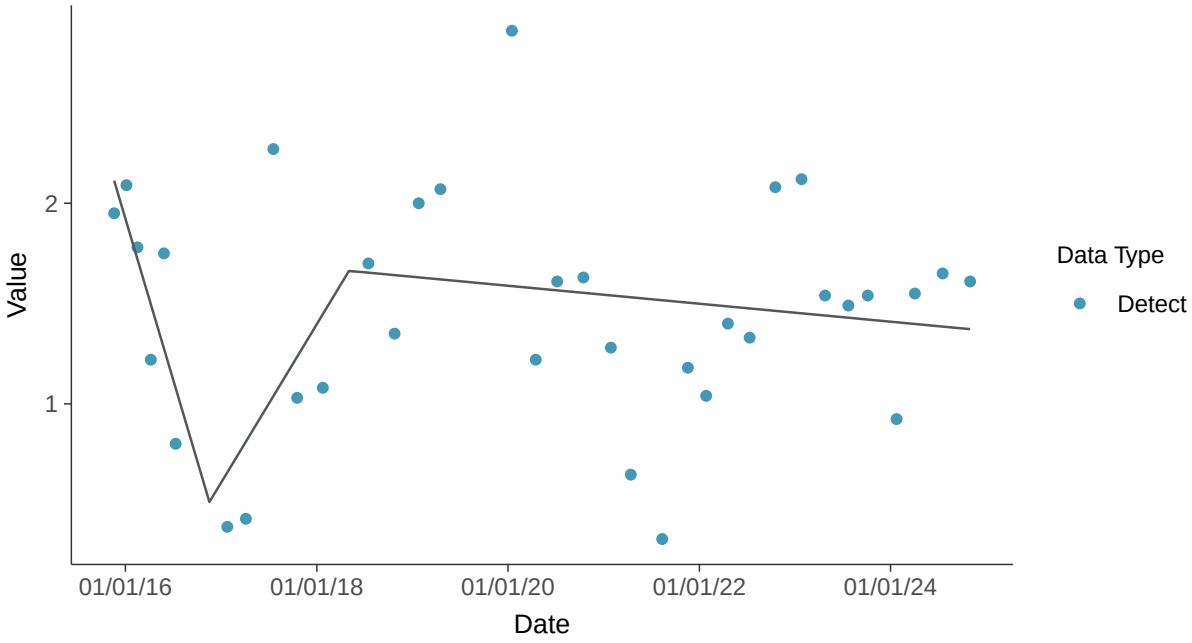
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-3 (pCi/L)



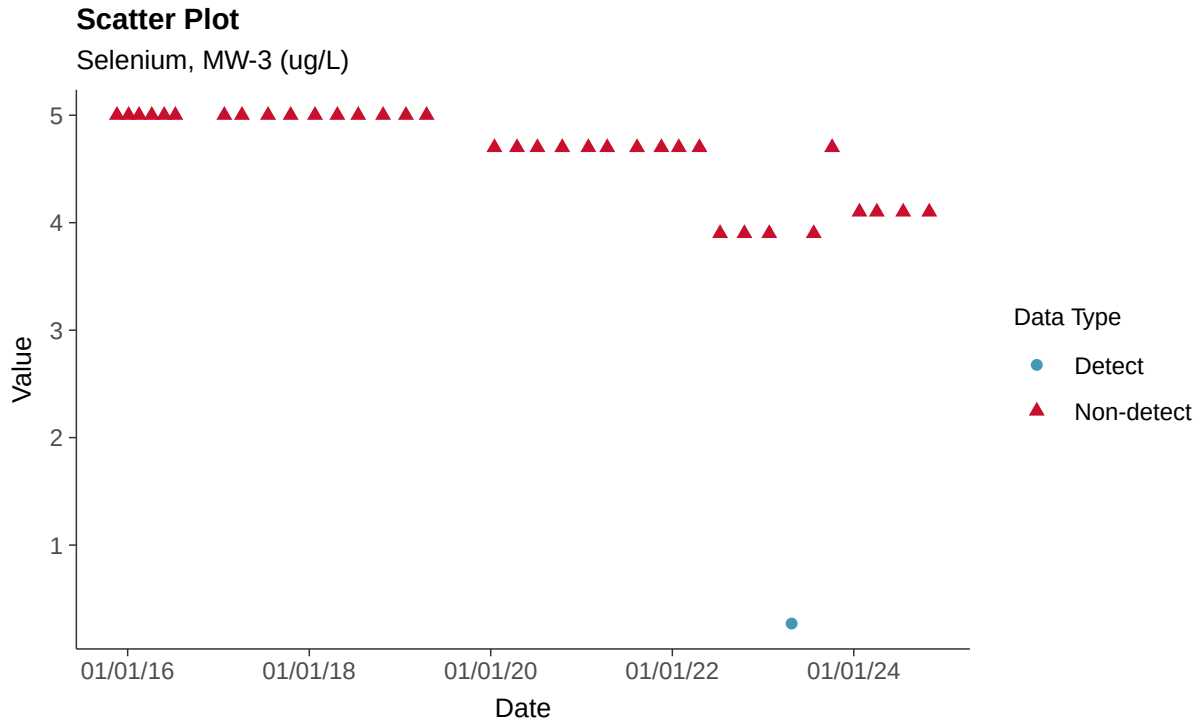
Trend Regression: Piecewise Linear-Linear-Linear

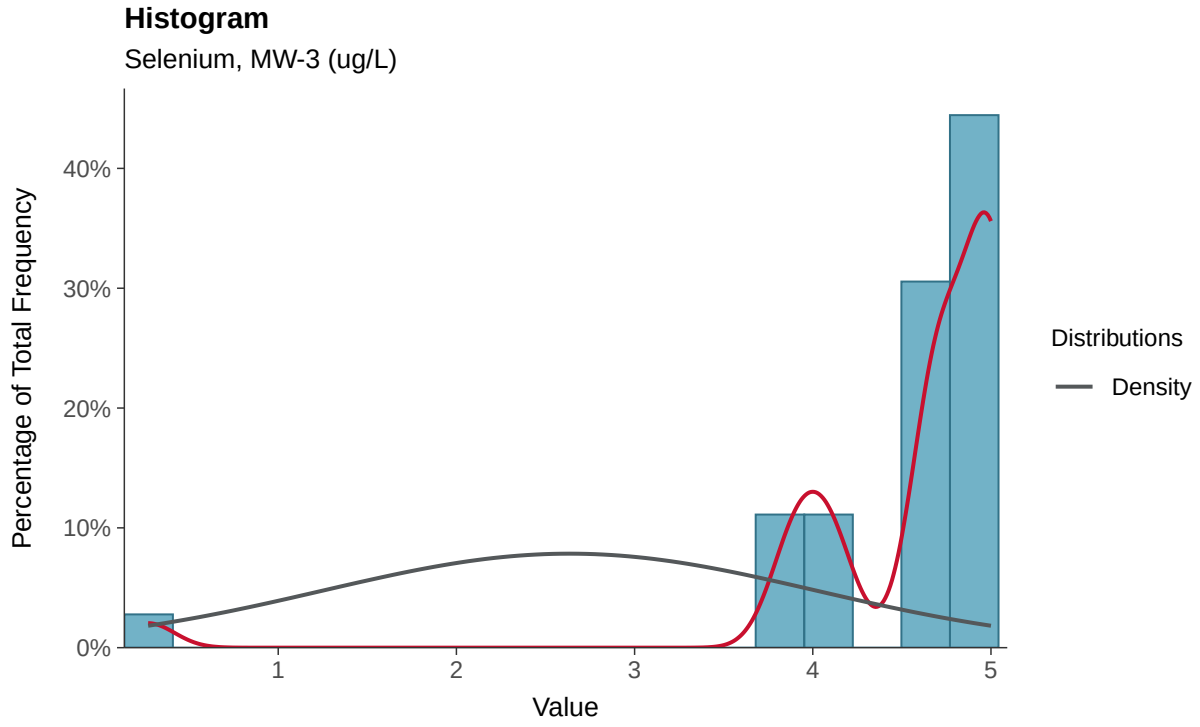
Radium-228, MW-3 (pCi/L)



App. IV: Selenium, MW-3

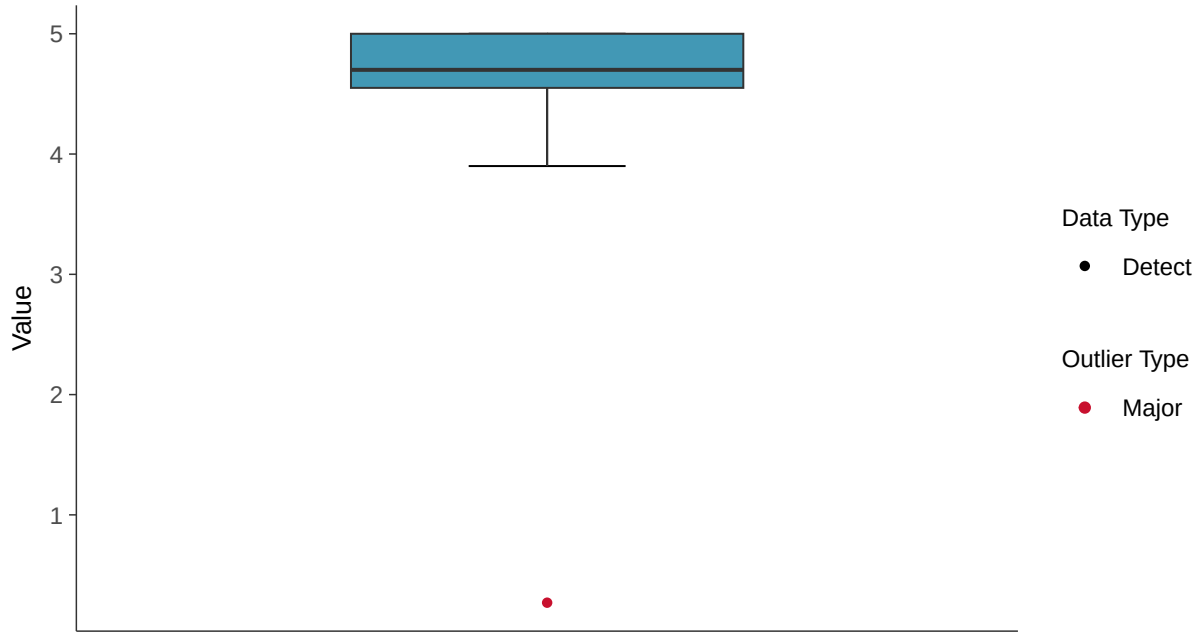
ID: 03_03_121





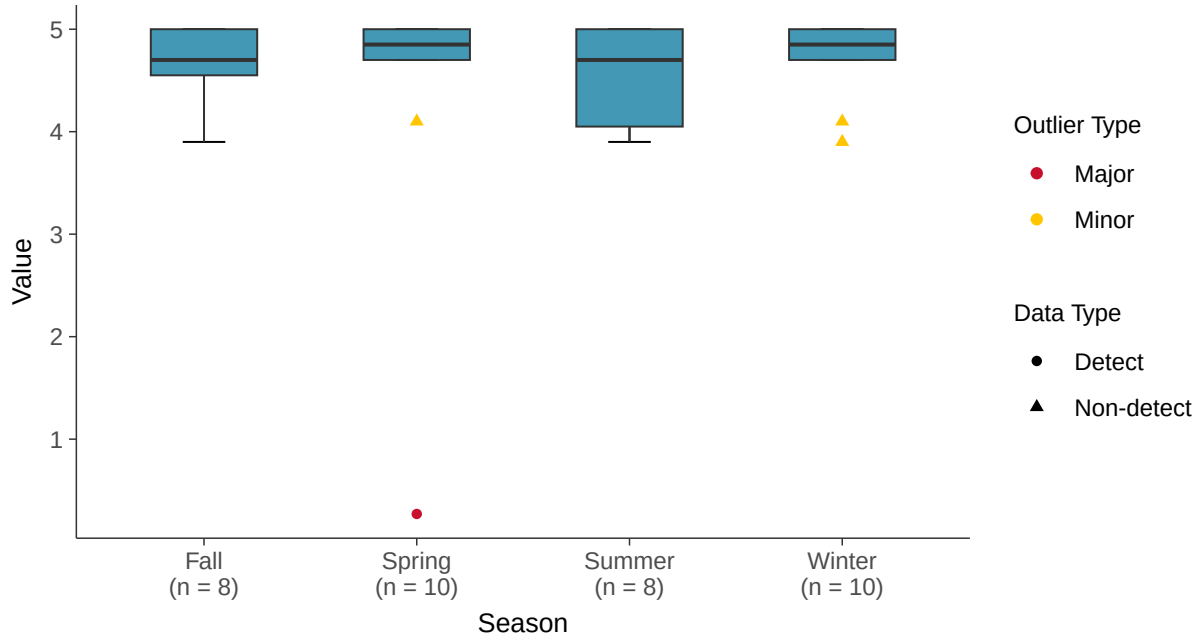
Boxplot

Selenium, MW-3 (ug/L)



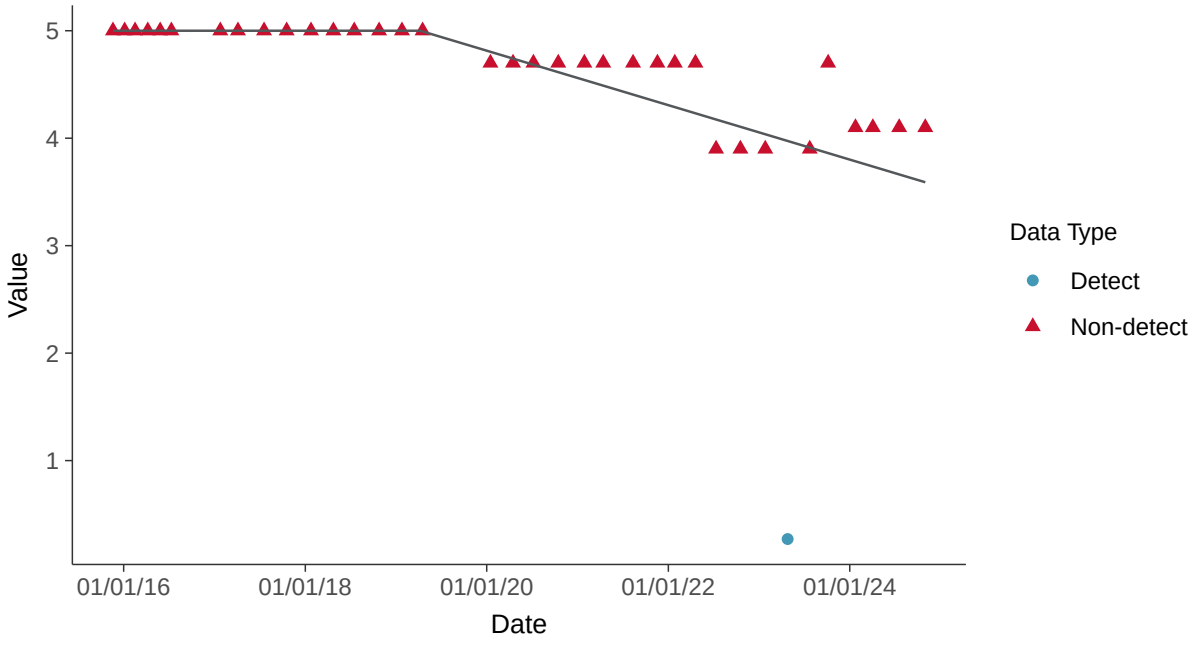
Boxplot by Season

Selenium, MW-3 (ug/L)



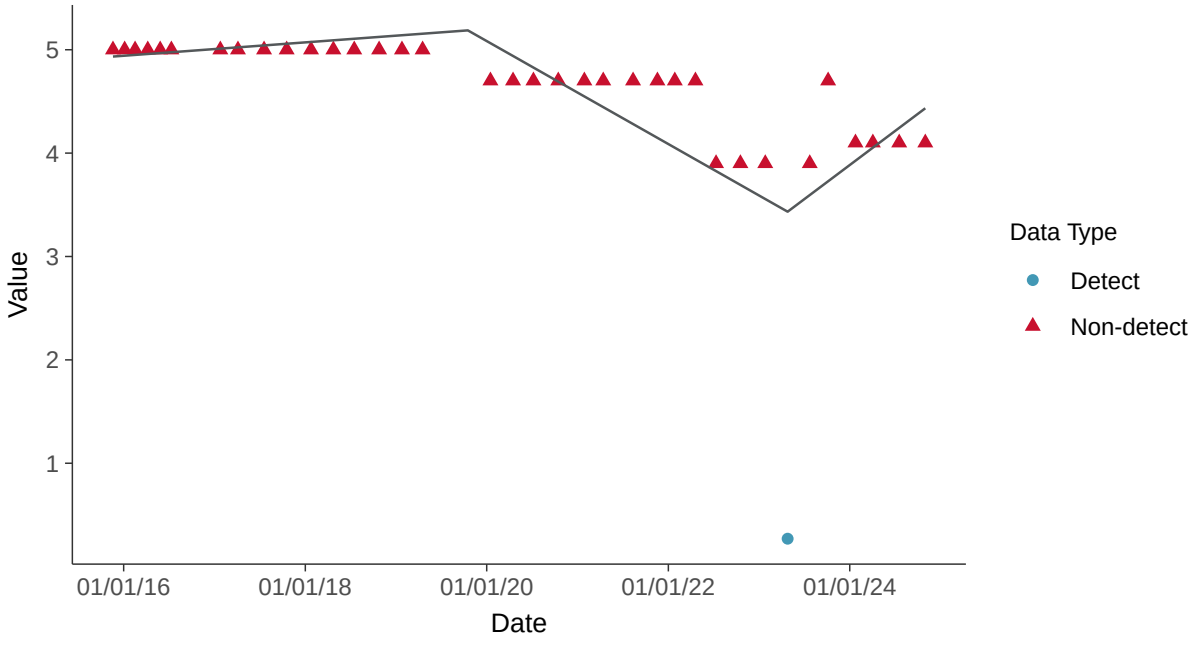
Trend Regression: Piecewise Linear-Linear

Selenium, MW-3 (ug/L)



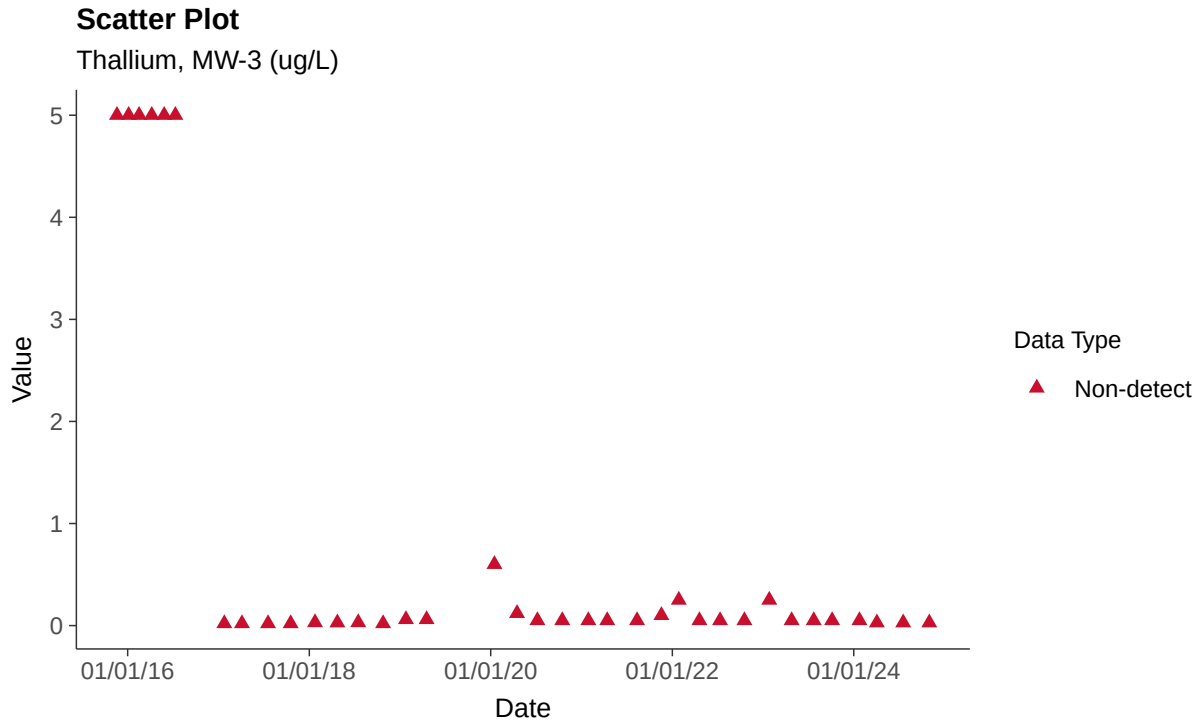
Trend Regression: Piecewise Linear-Linear-Linear

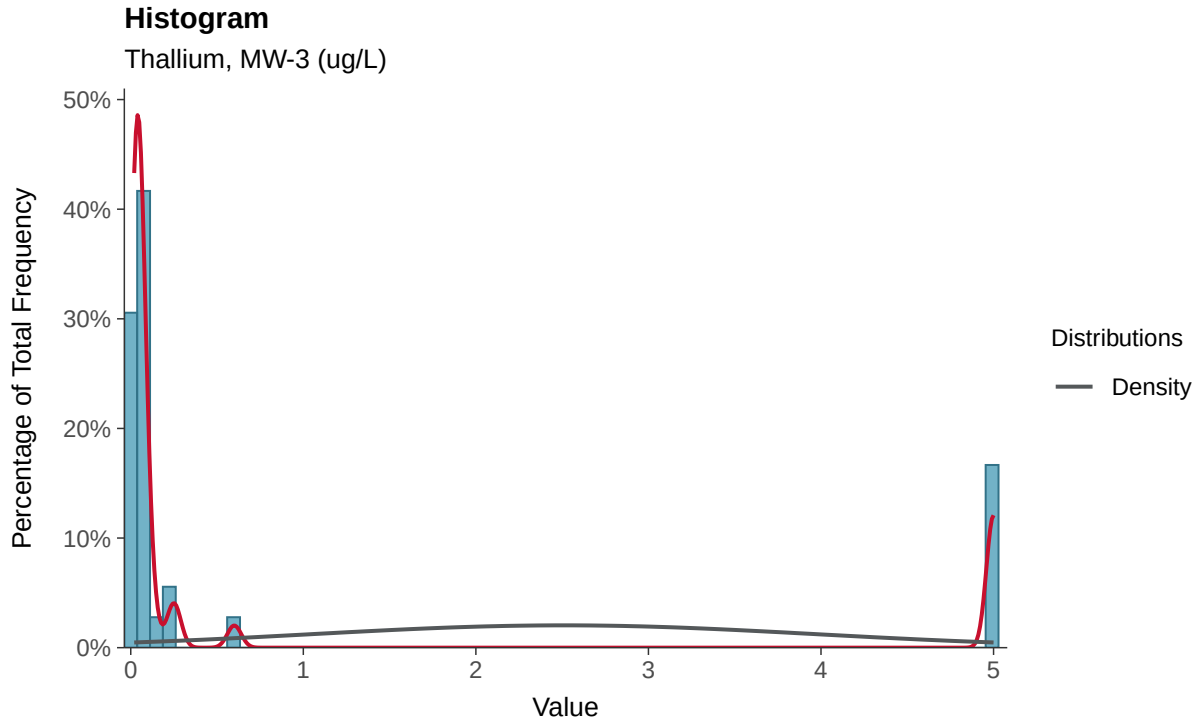
Selenium, MW-3 (ug/L)



App. IV: Thallium, MW-3

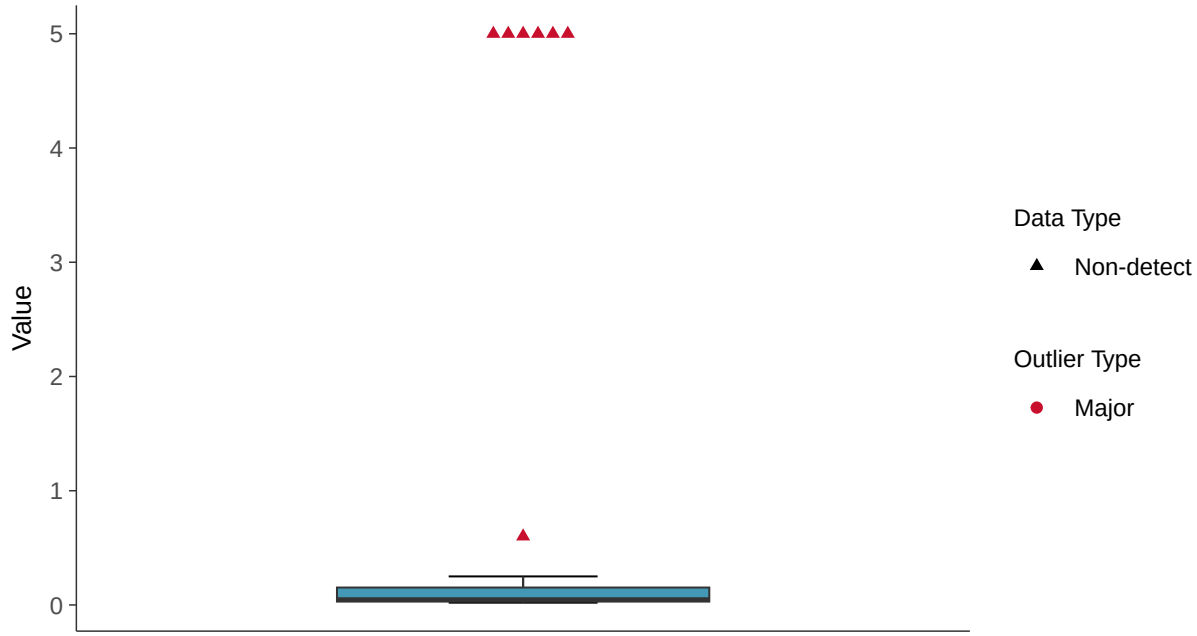
ID: 03_03_124





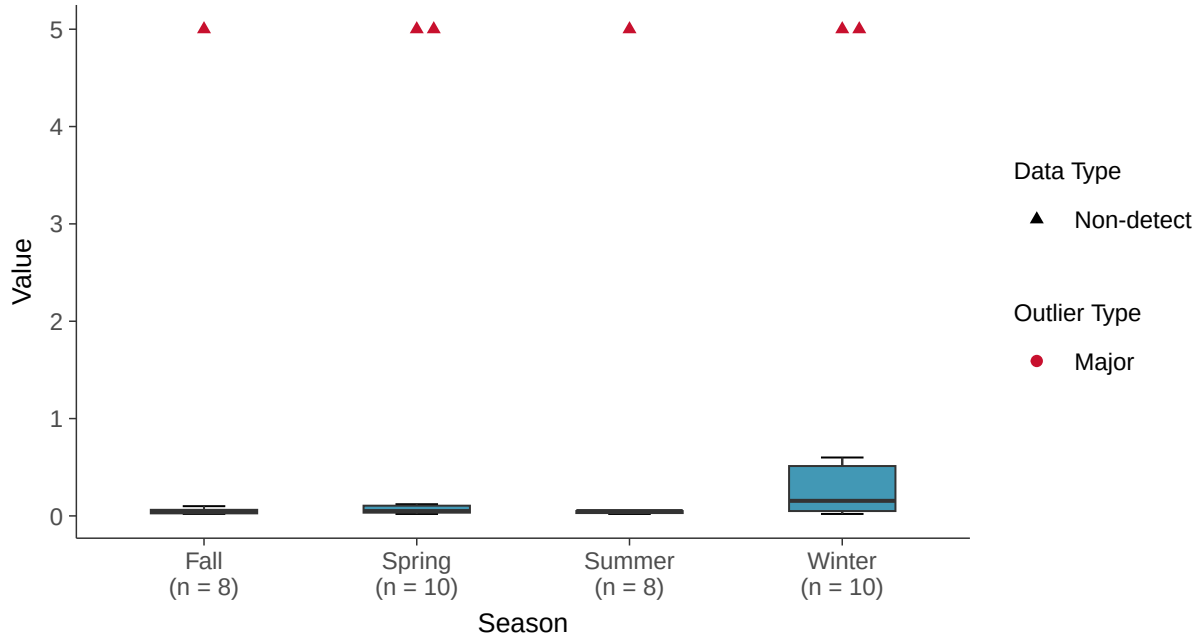
Boxplot

Thallium, MW-3 (ug/L)



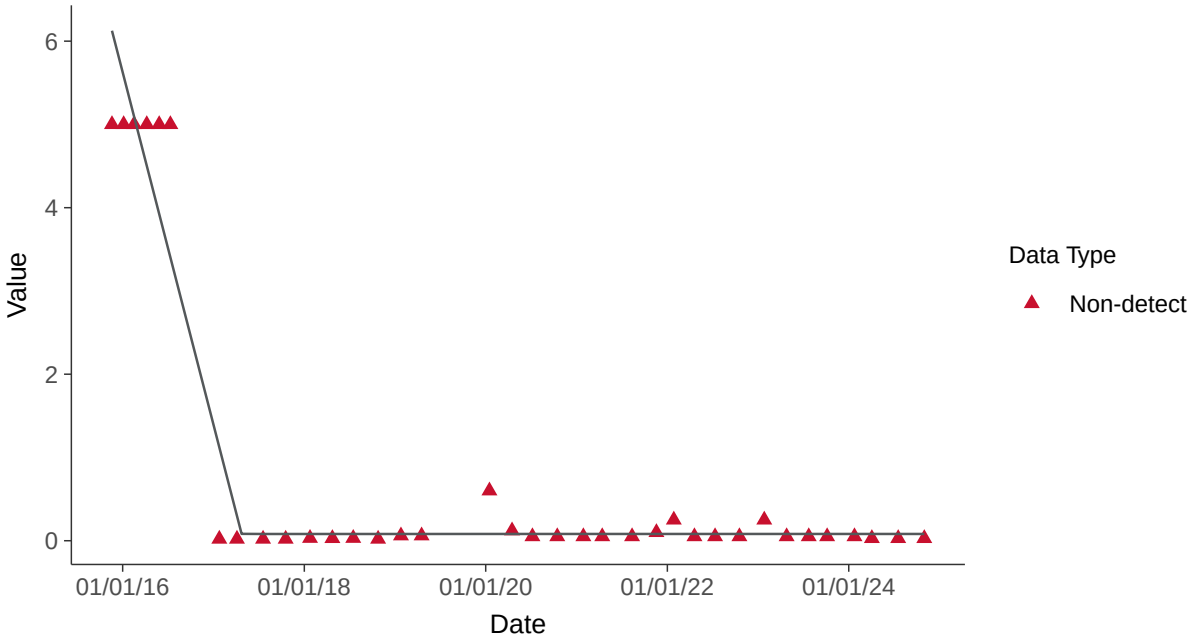
Boxplot by Season

Thallium, MW-3 (ug/L)



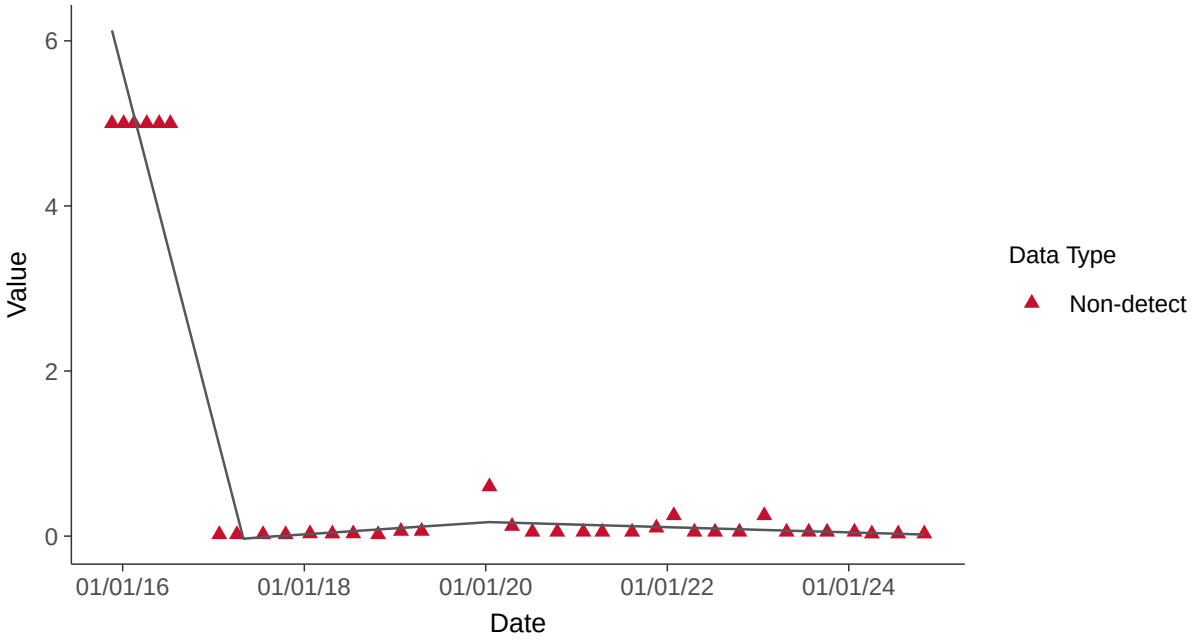
Trend Regression: Piecewise Linear-Linear

Thallium, MW-3 (ug/L)



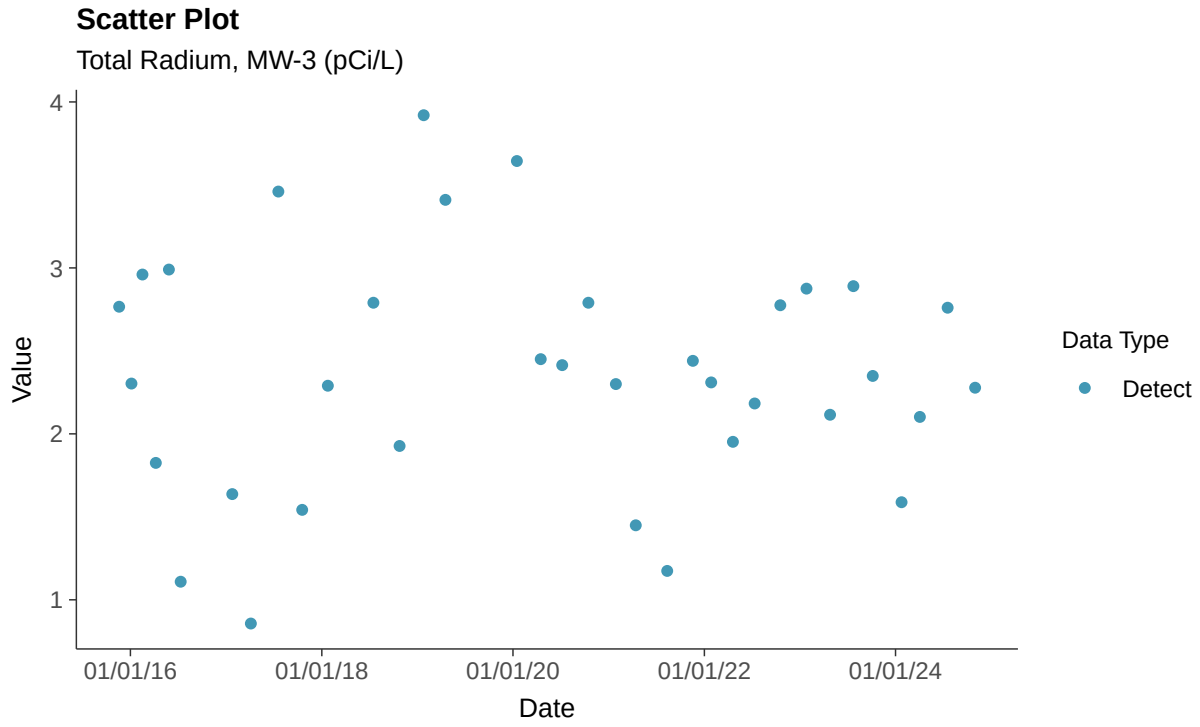
Trend Regression: Piecewise Linear-Linear-Linear

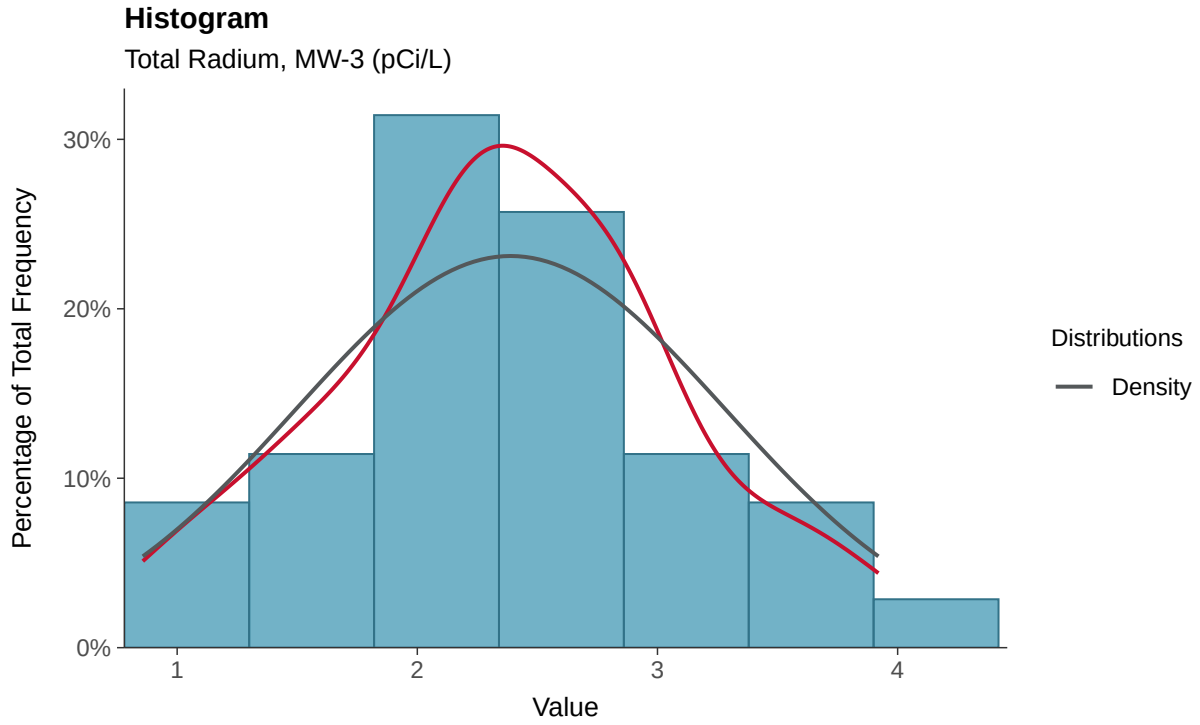
Thallium, MW-3 (ug/L)



App. IV: Total Radium, MW-3

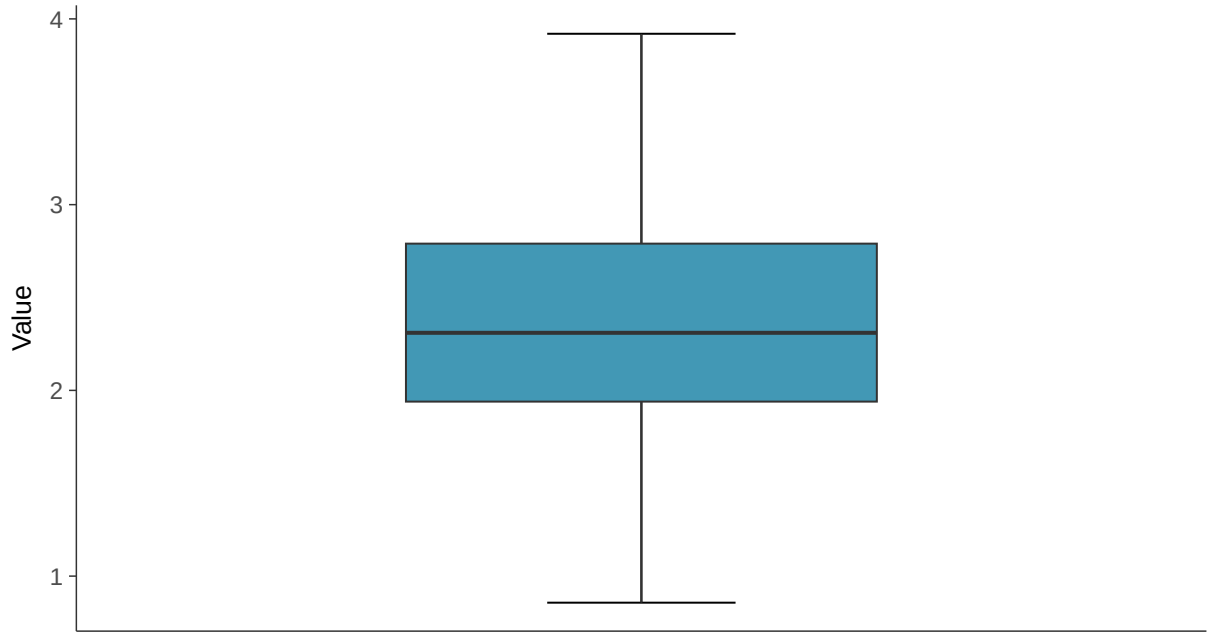
ID: 03_03_126





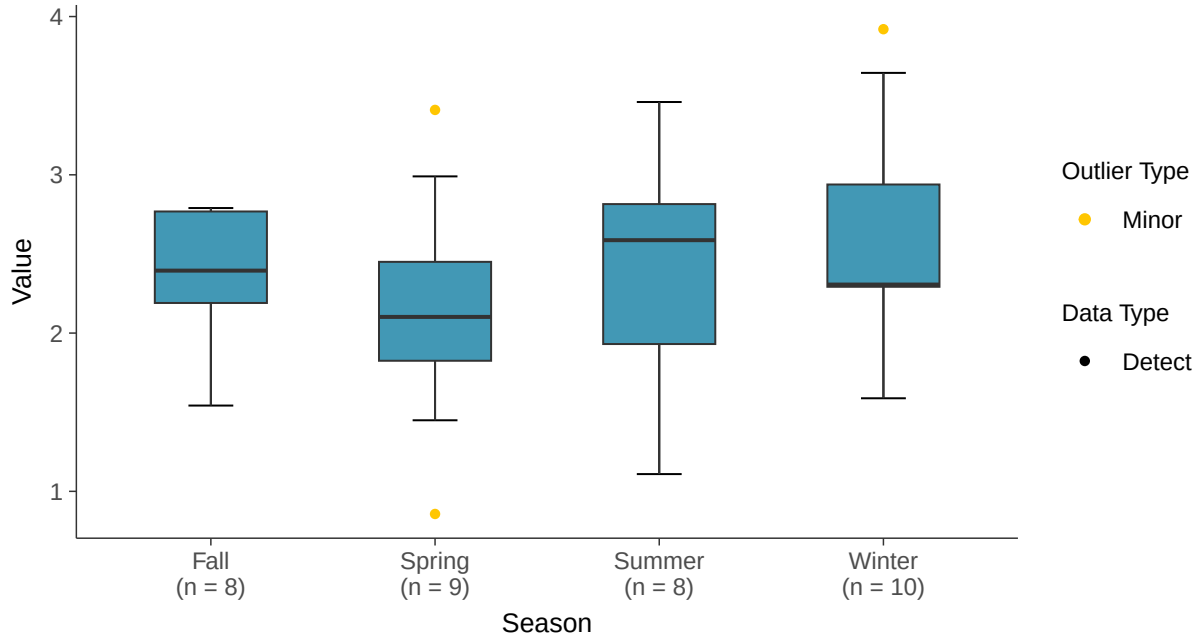
Boxplot

Total Radium, MW-3 (pCi/L)



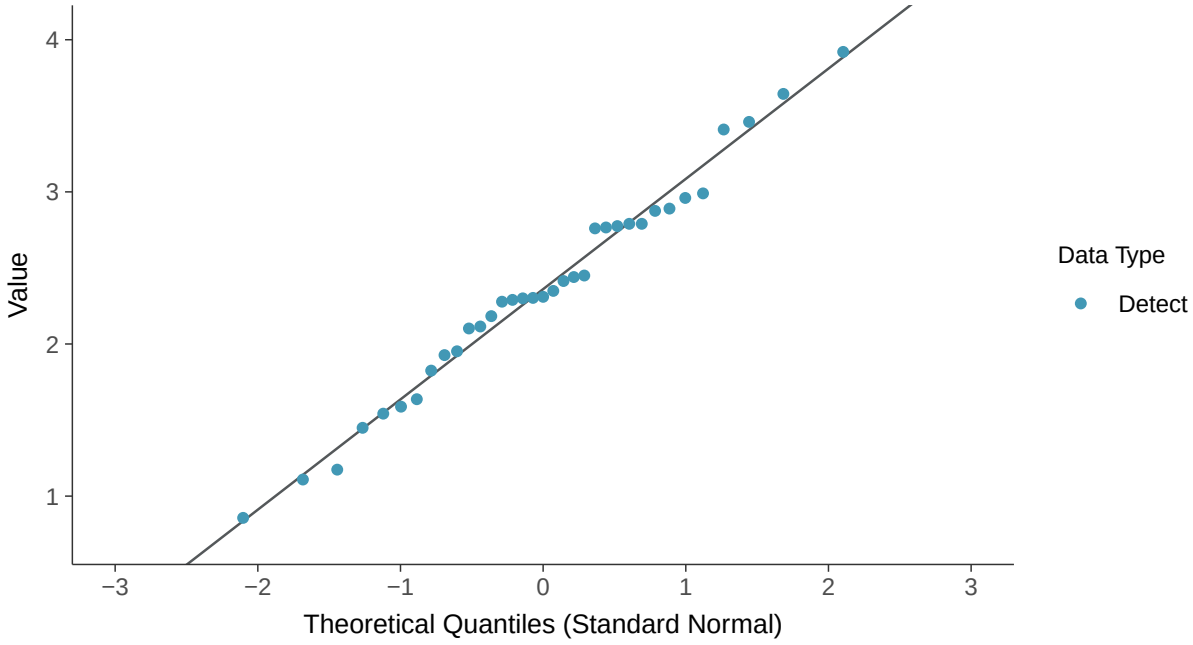
Boxplot by Season

Total Radium, MW-3 (pCi/L)



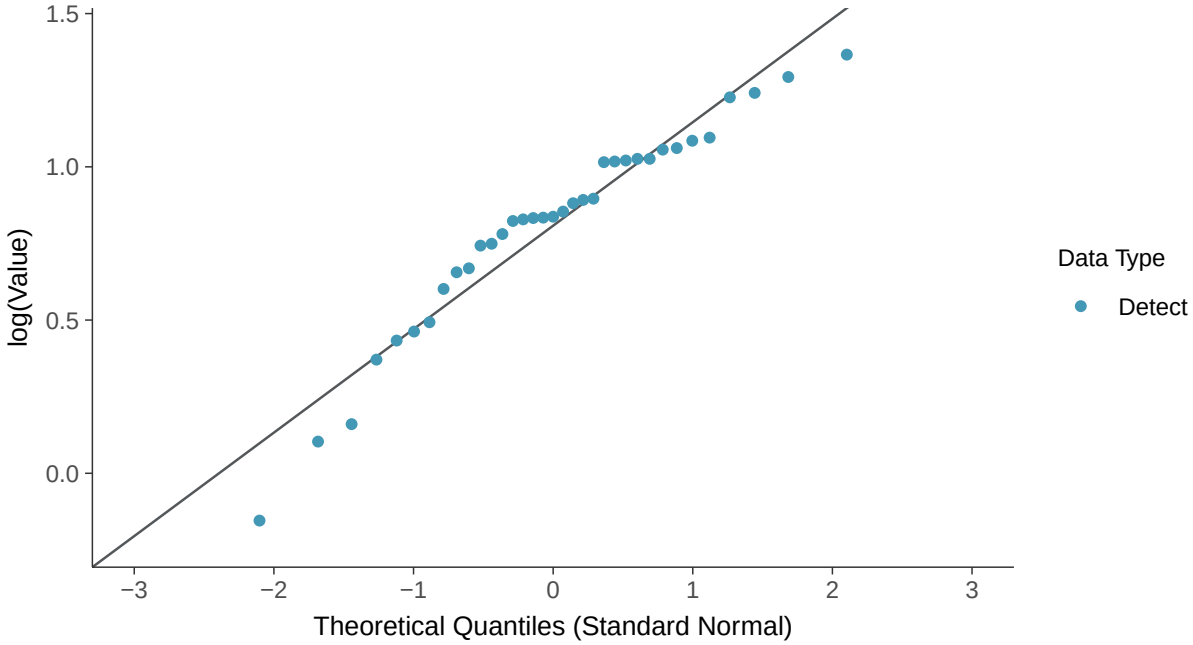
Normal Q-Q plot

Total Radium, MW-3 (pCi/L)



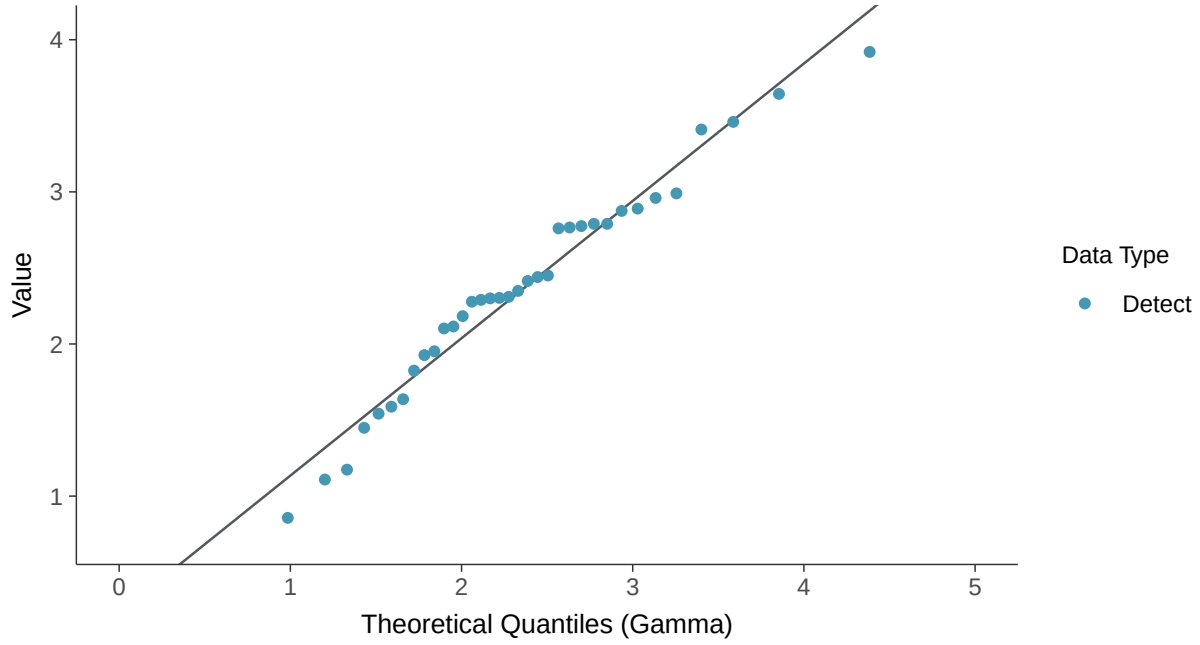
Lognormal Q-Q plot

Total Radium, MW-3 (pCi/L)



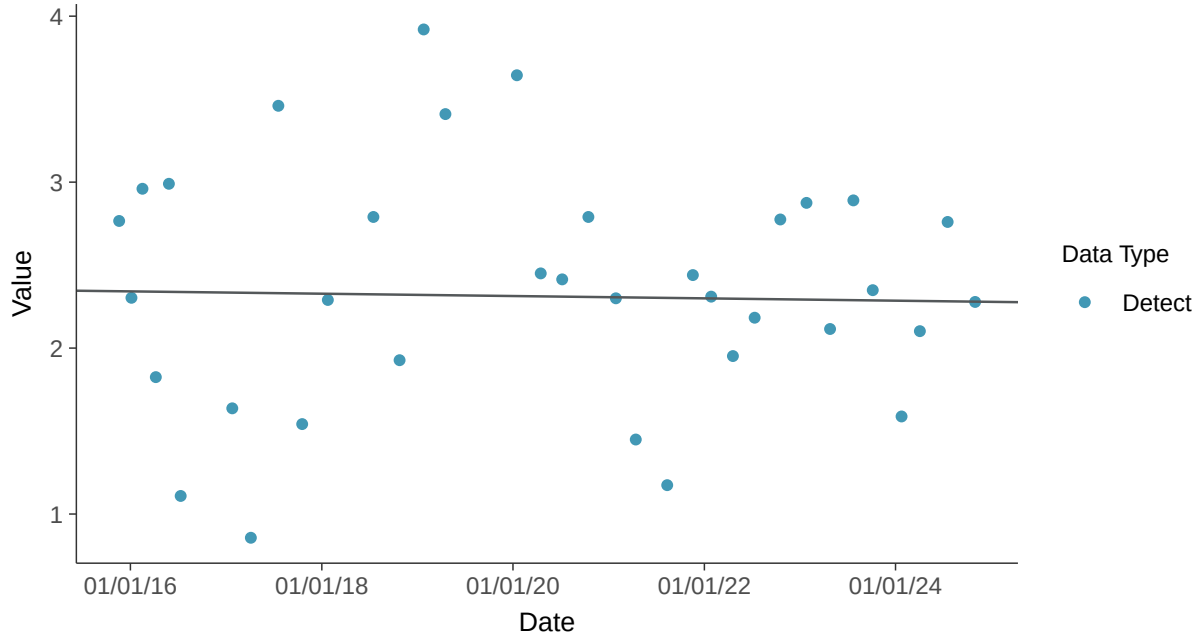
Gamma Q-Q plot

Total Radium, MW-3 (pCi/L)



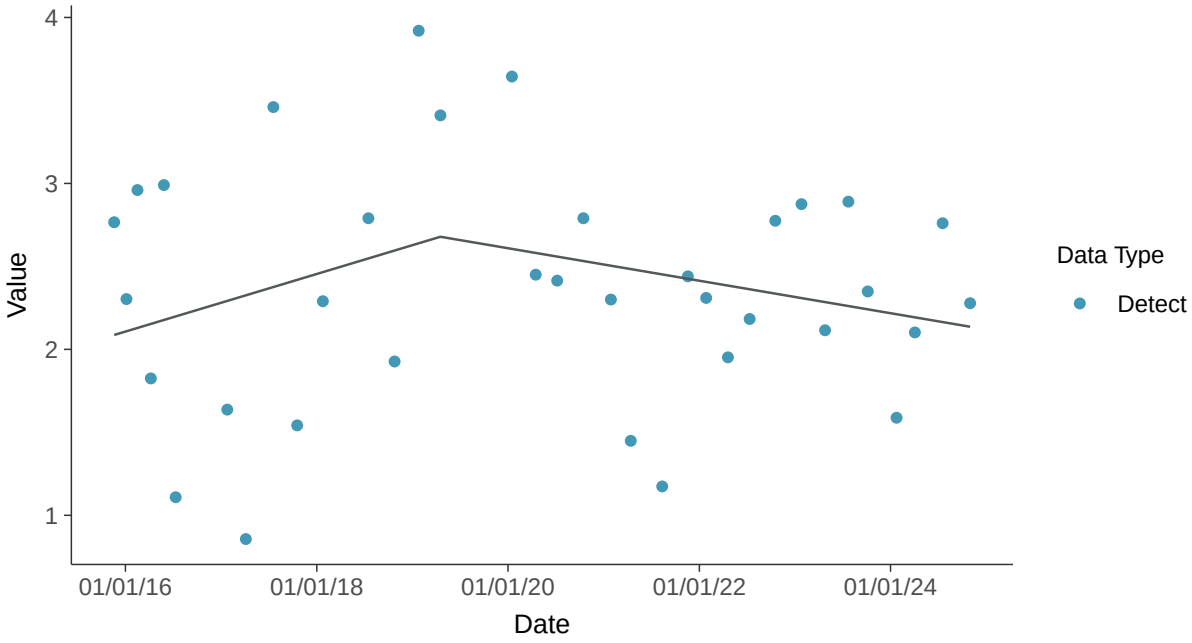
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-3 (pCi/L)



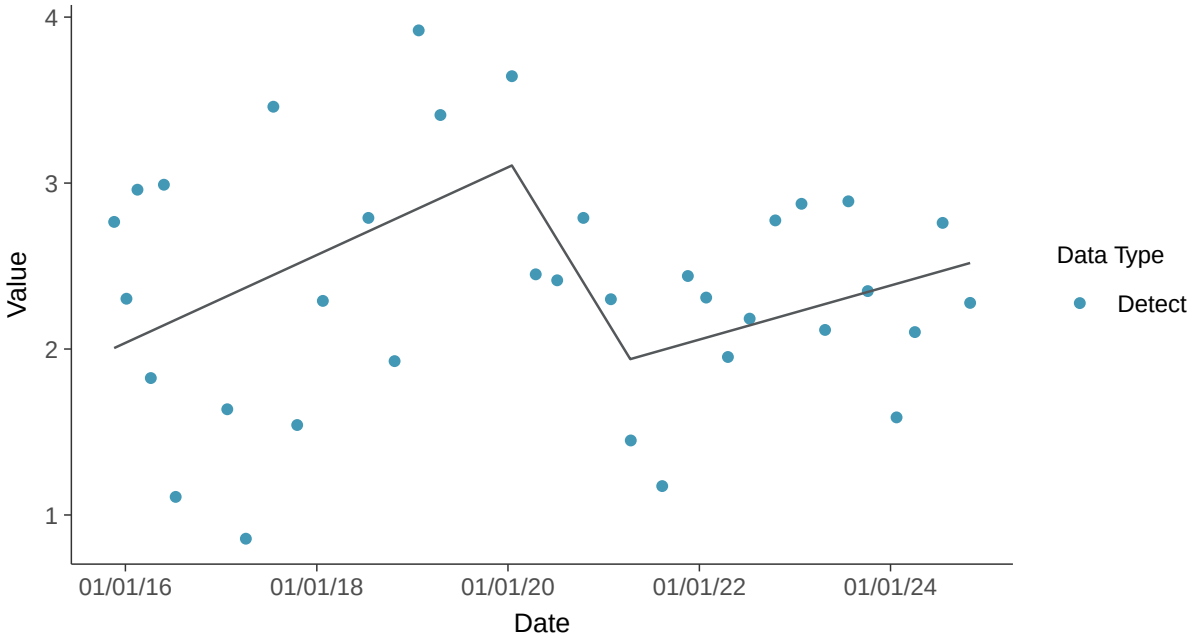
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-3 (pCi/L)



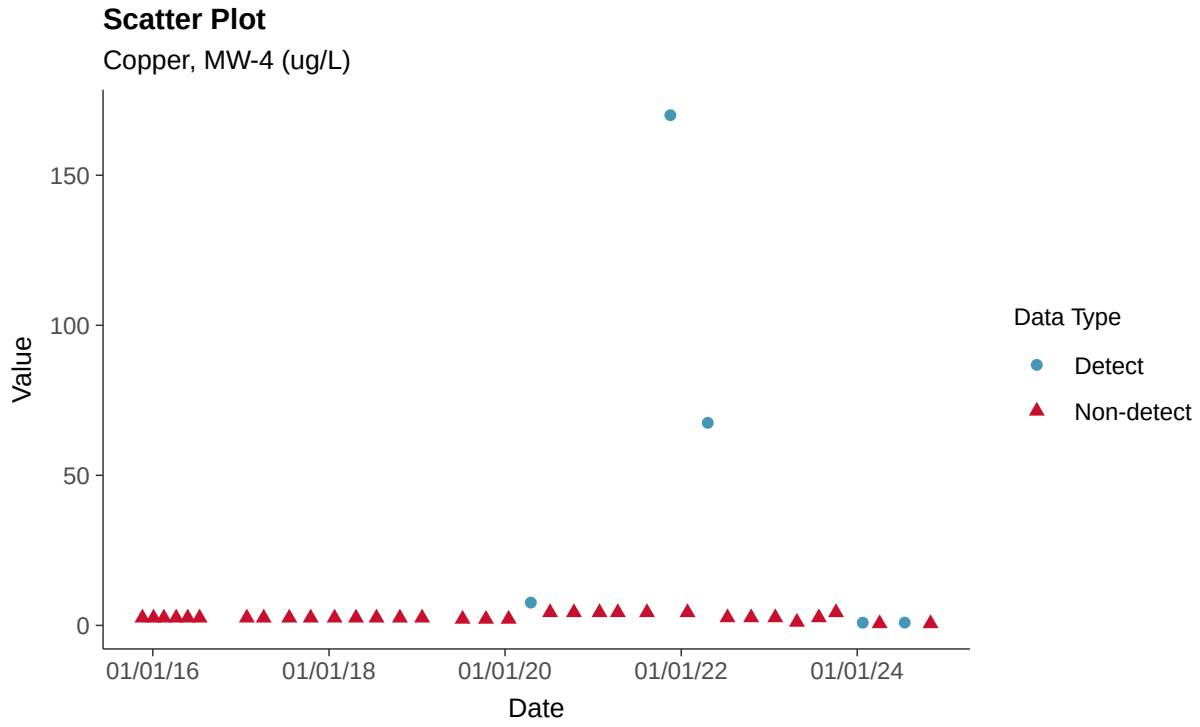
Trend Regression: Piecewise Linear-Linear-Linear

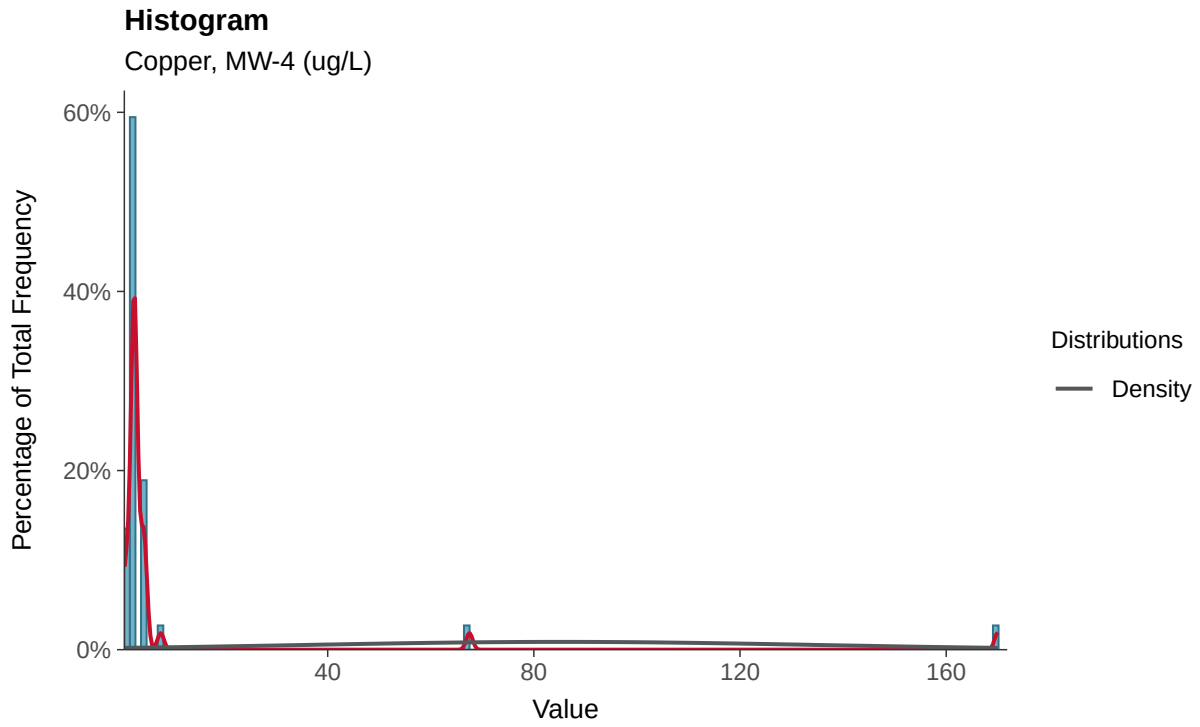
Total Radium, MW-3 (pCi/L)



App. I Metals: Copper, MW-4

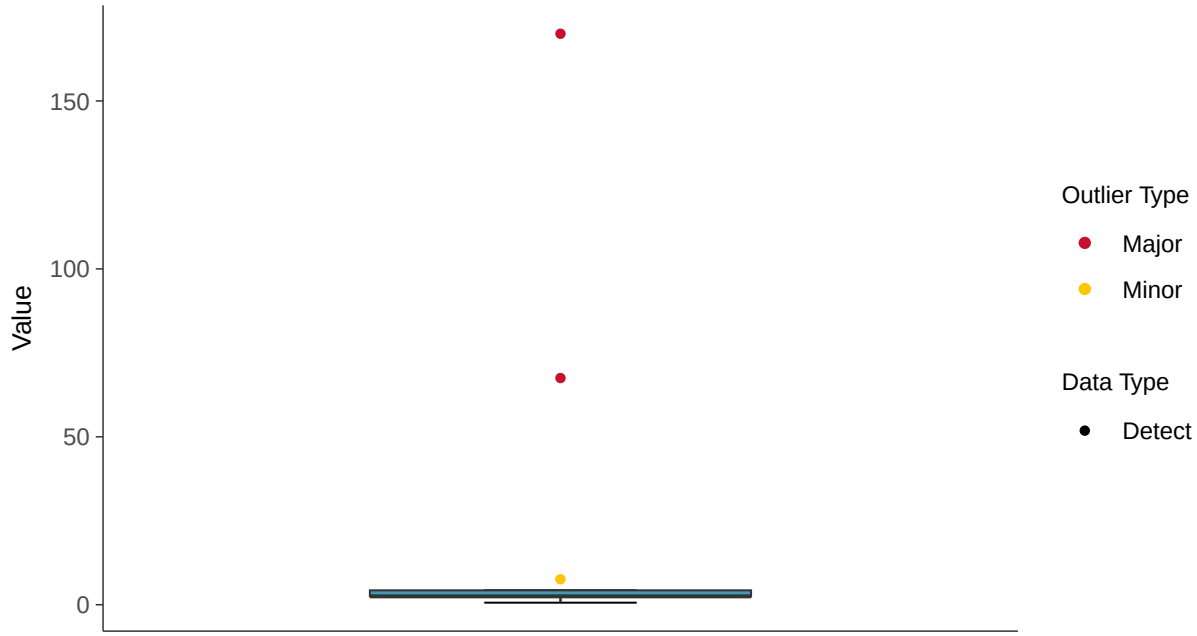
ID: 04_01_111





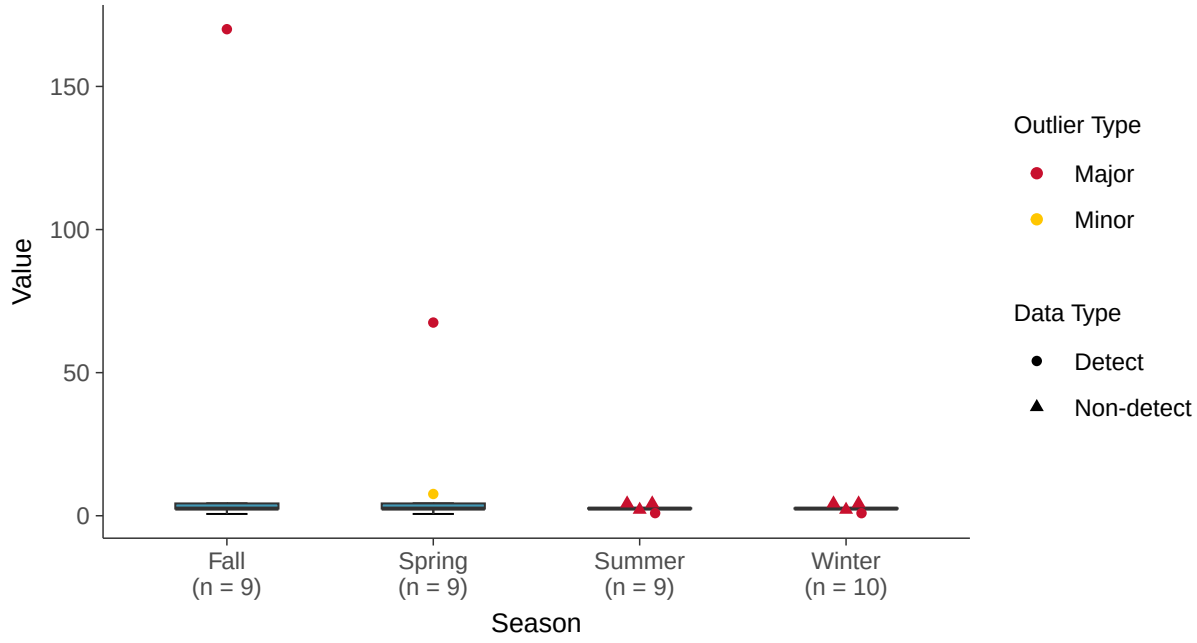
Boxplot

Copper, MW-4 (ug/L)



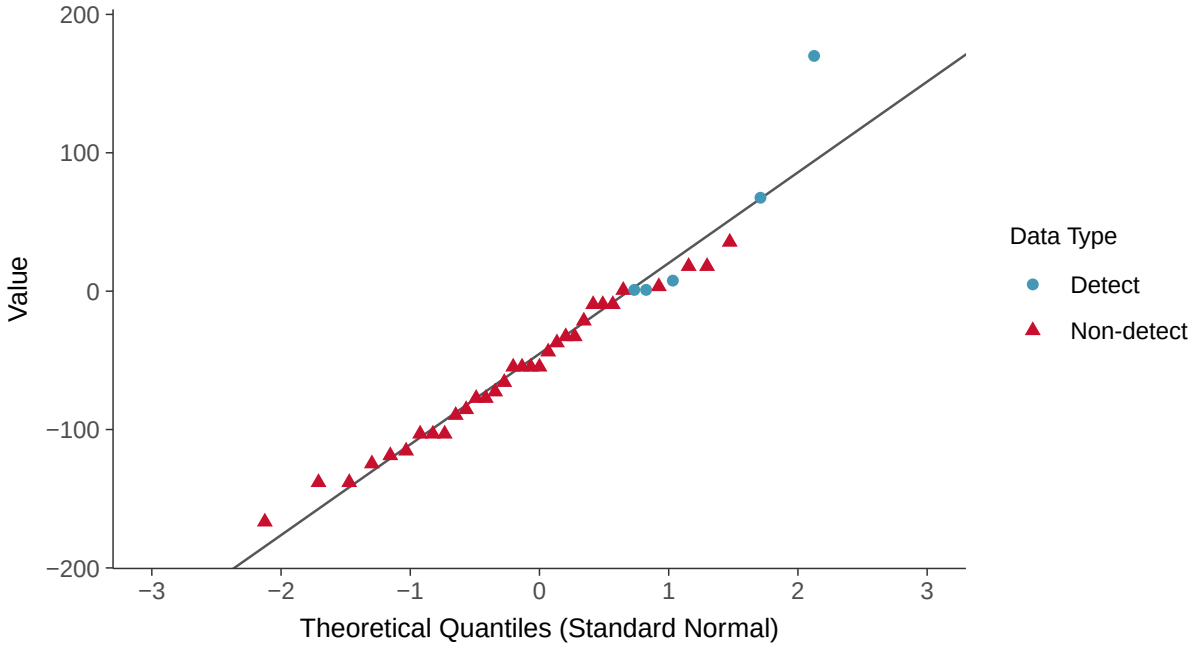
Boxplot by Season

Copper, MW-4 (ug/L)



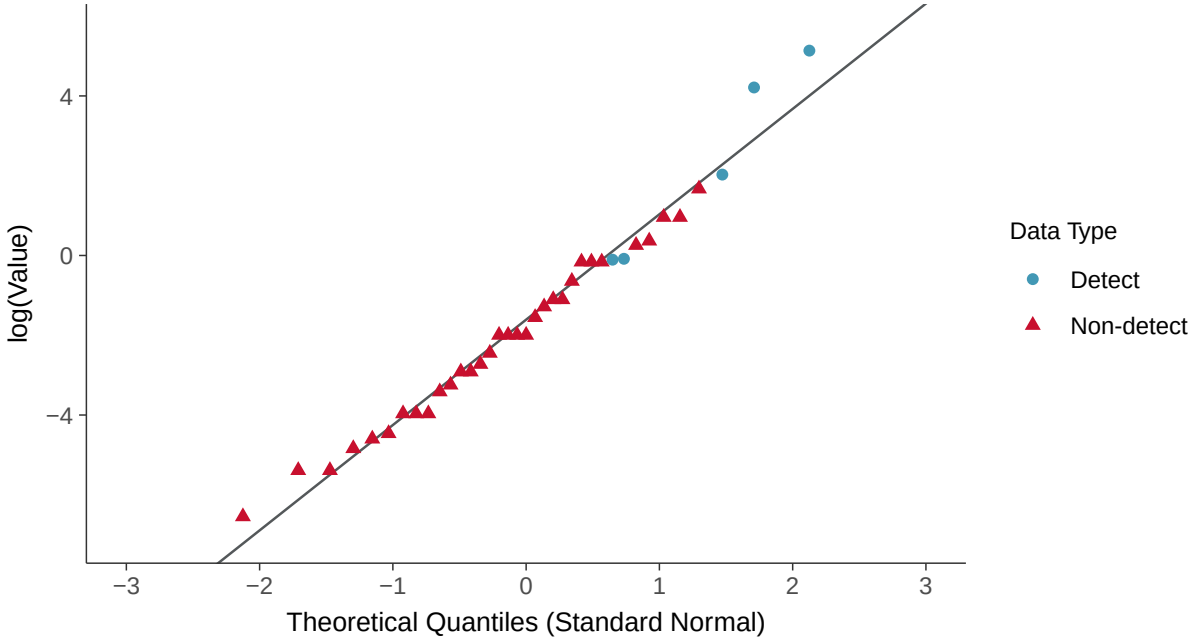
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-4 (ug/L)



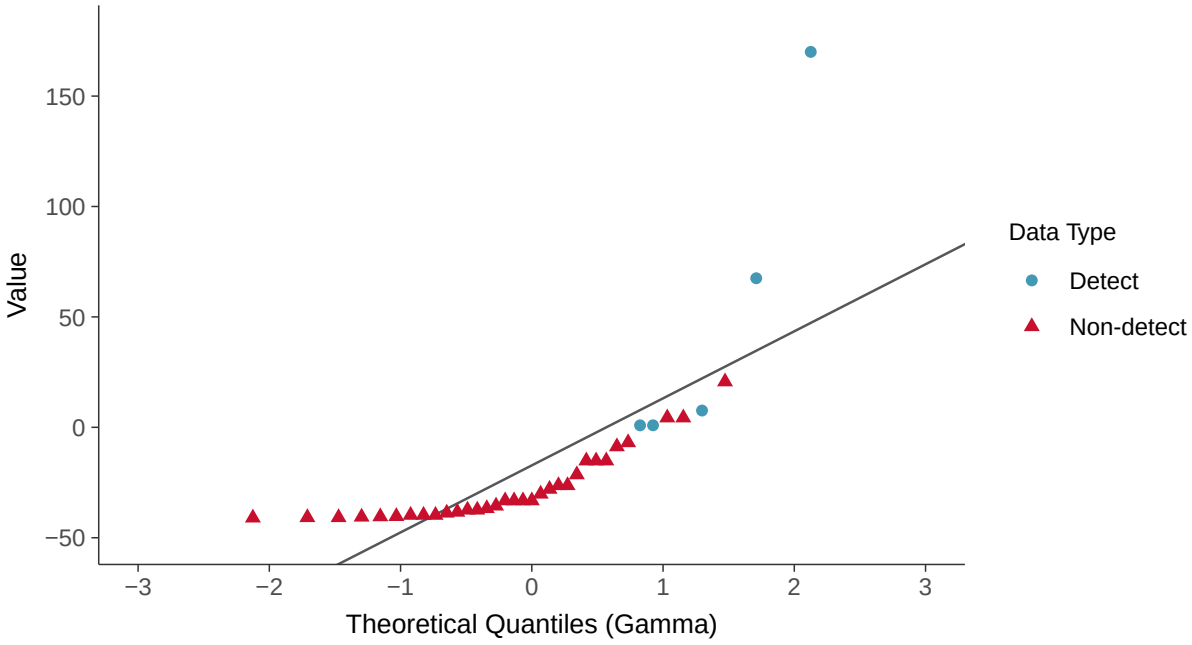
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-4 (ug/L)



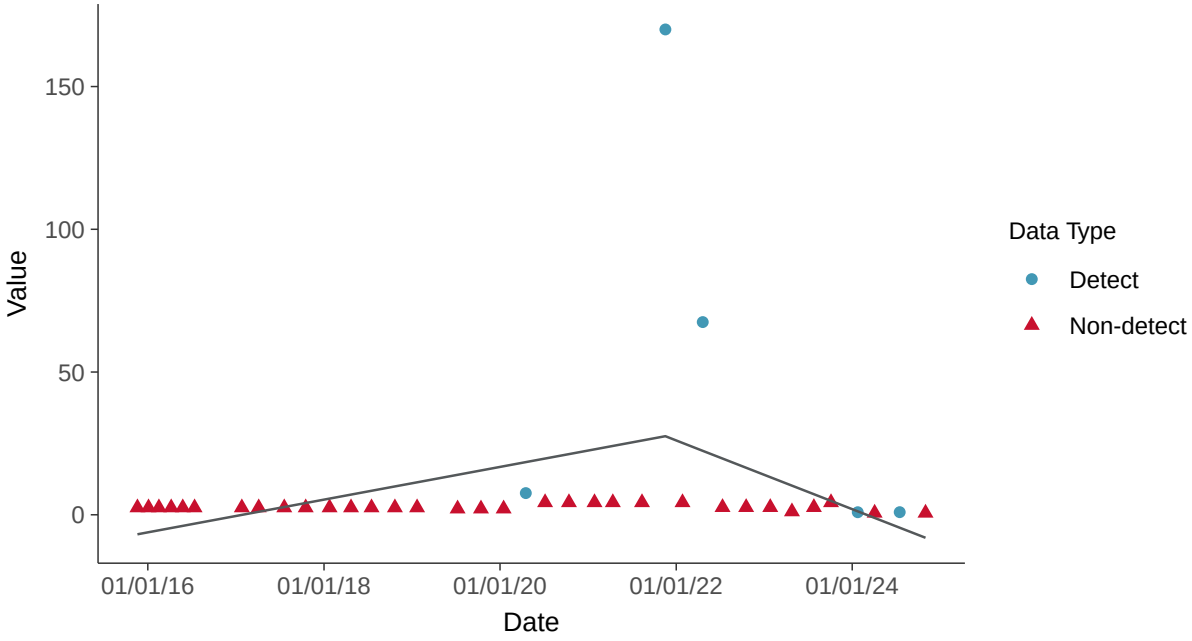
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-4 (ug/L)



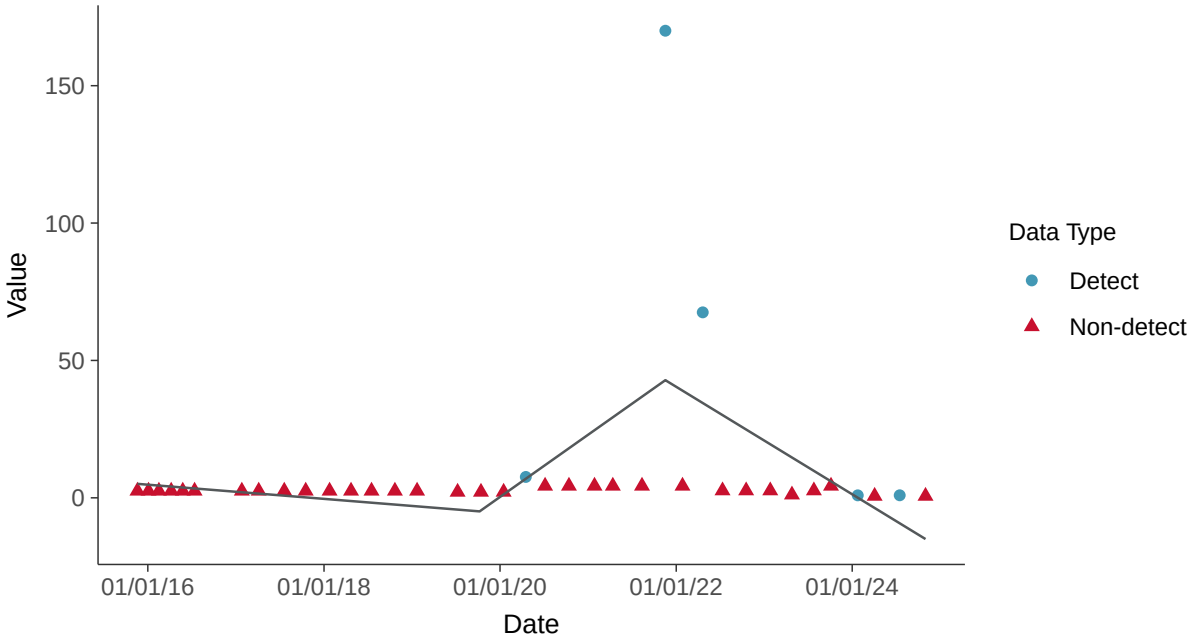
Trend Regression: Piecewise Linear-Linear

Copper, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-4 (ug/L)

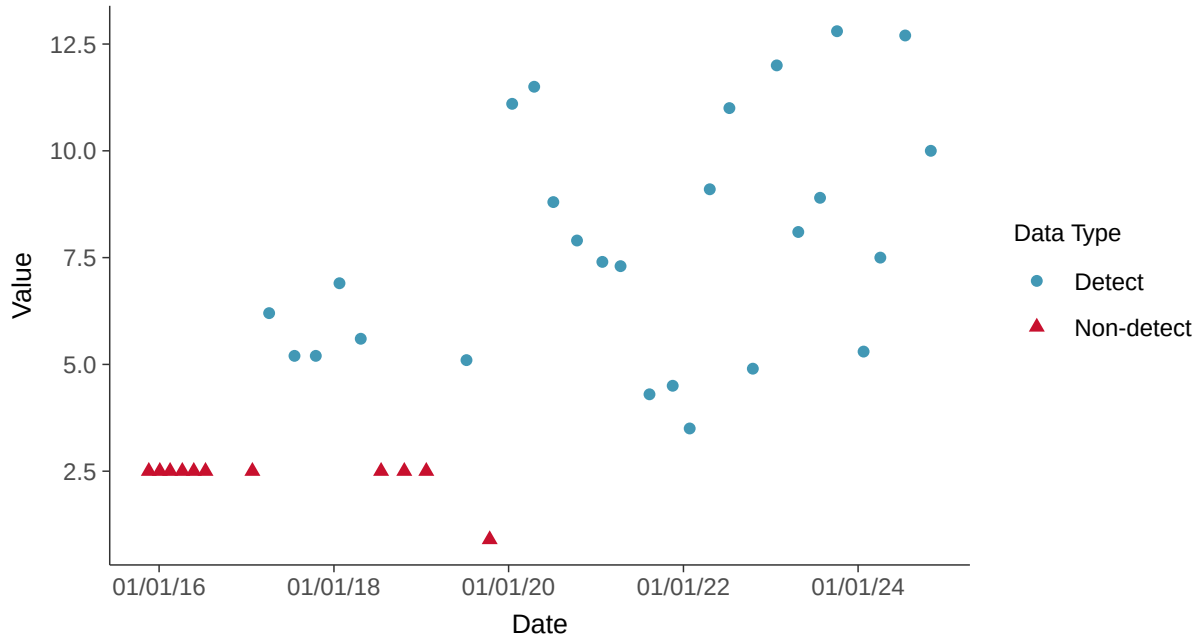


App. I Metals: Nickel, MW-4

ID: 04_01_117

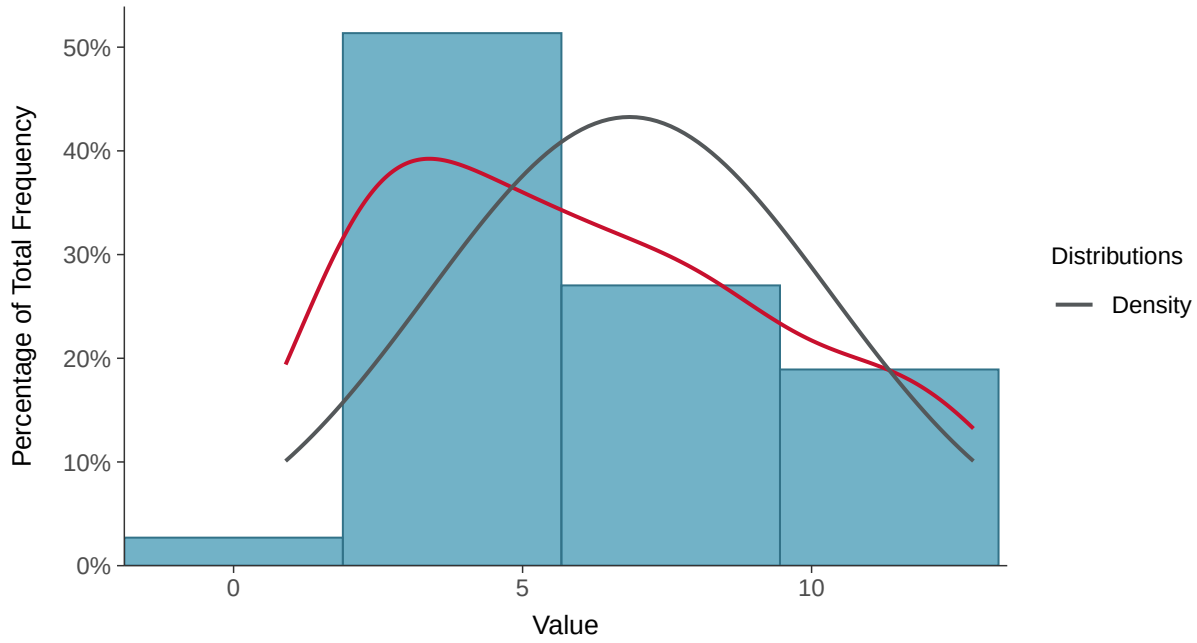
Scatter Plot

Nickel, MW-4 (ug/L)



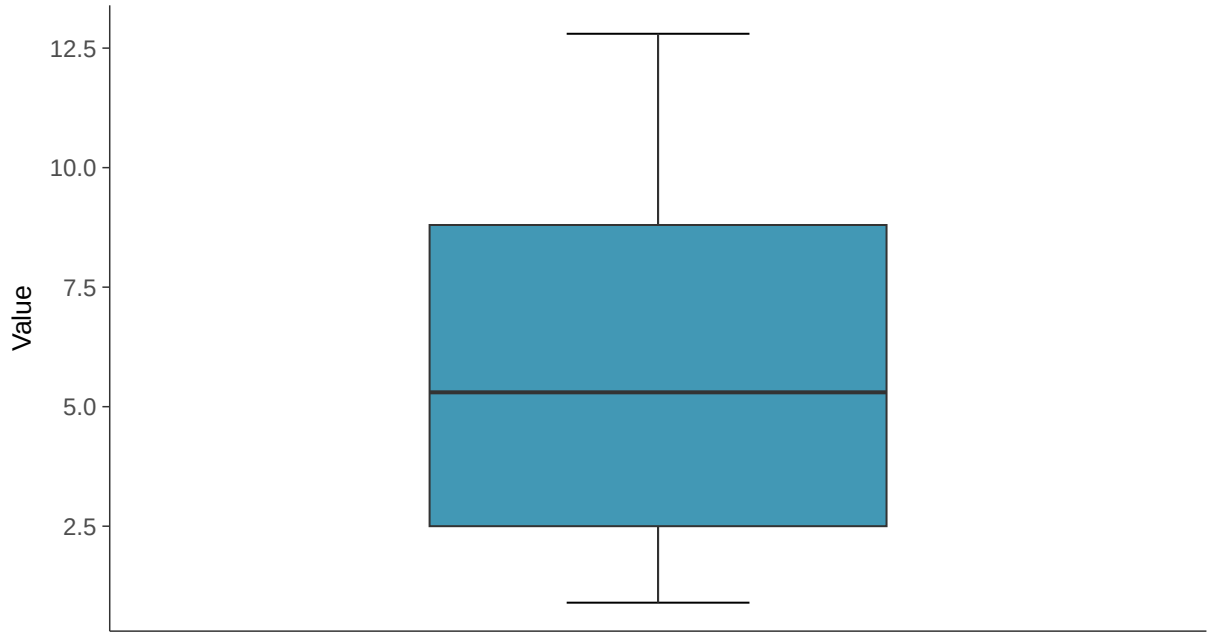
Histogram

Nickel, MW-4 (ug/L)



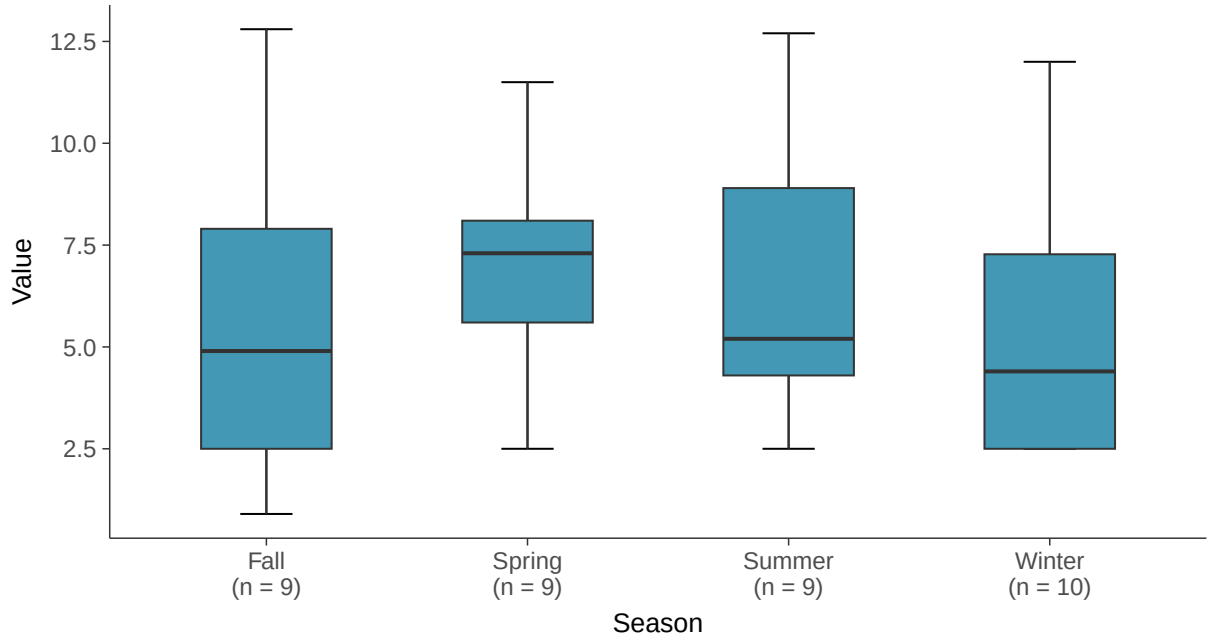
Boxplot

Nickel, MW-4 (ug/L)



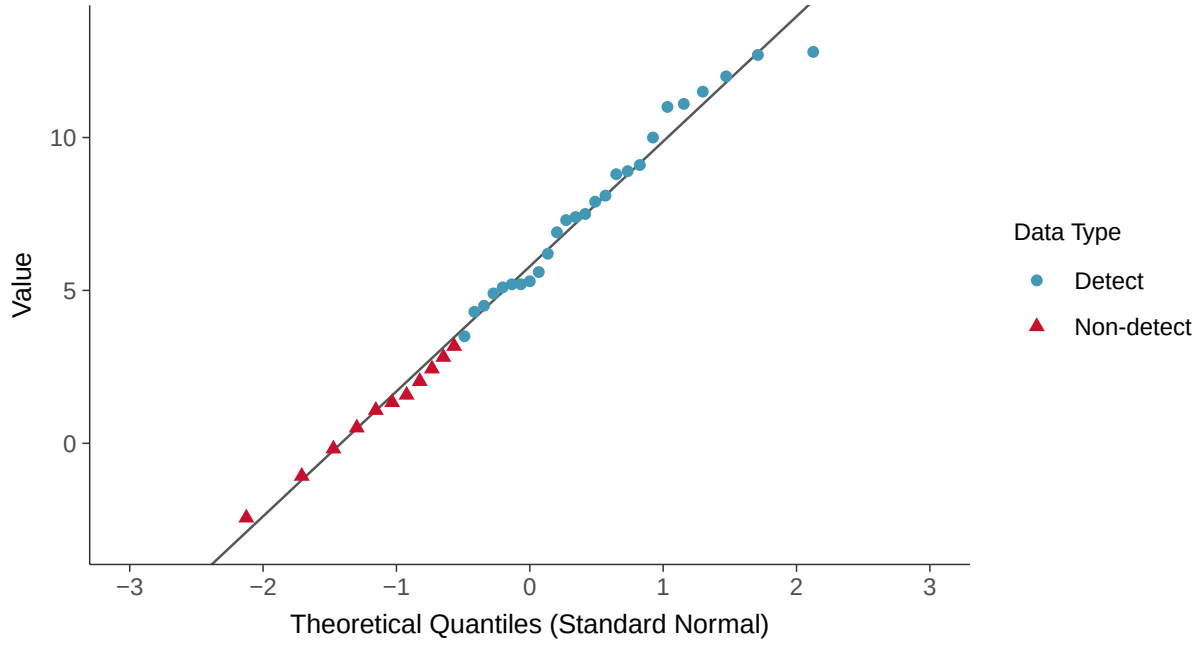
Boxplot by Season

Nickel, MW-4 (ug/L)



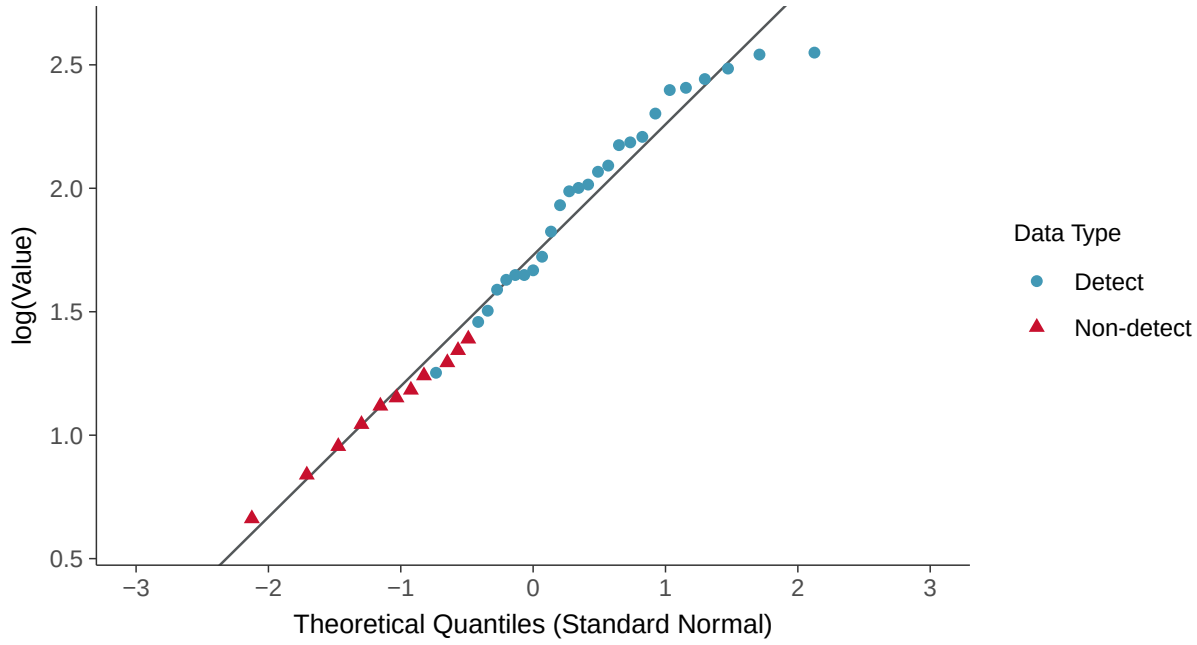
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



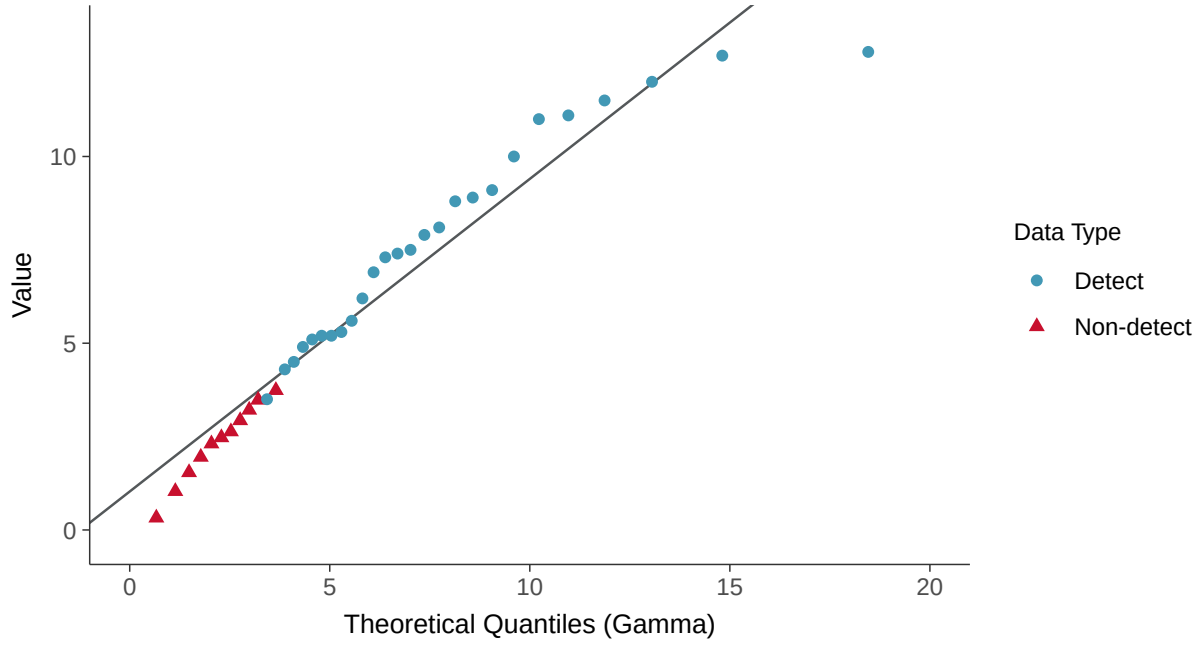
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



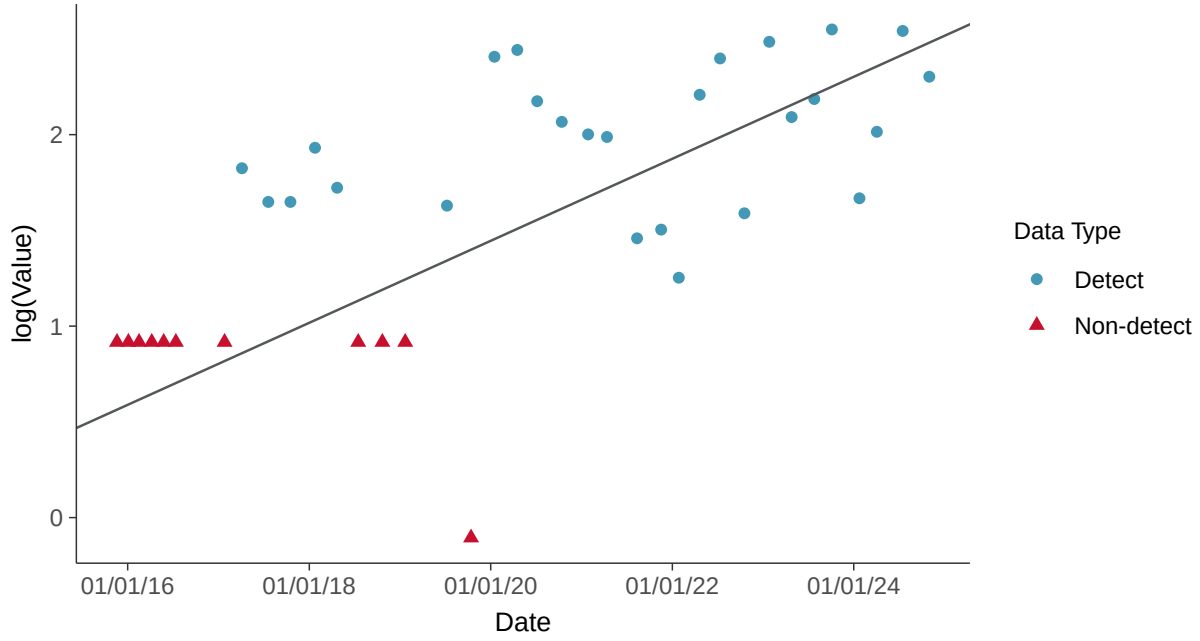
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



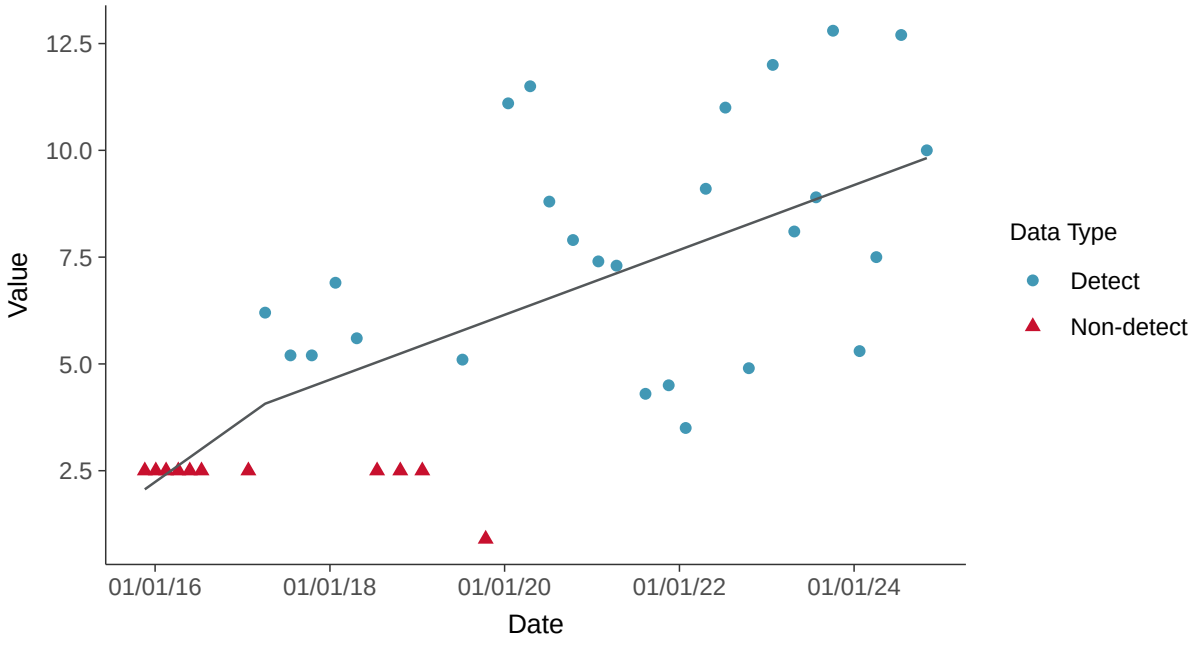
Trend Regression: Lognormal MLE

Nickel, MW-4 (ug/L)



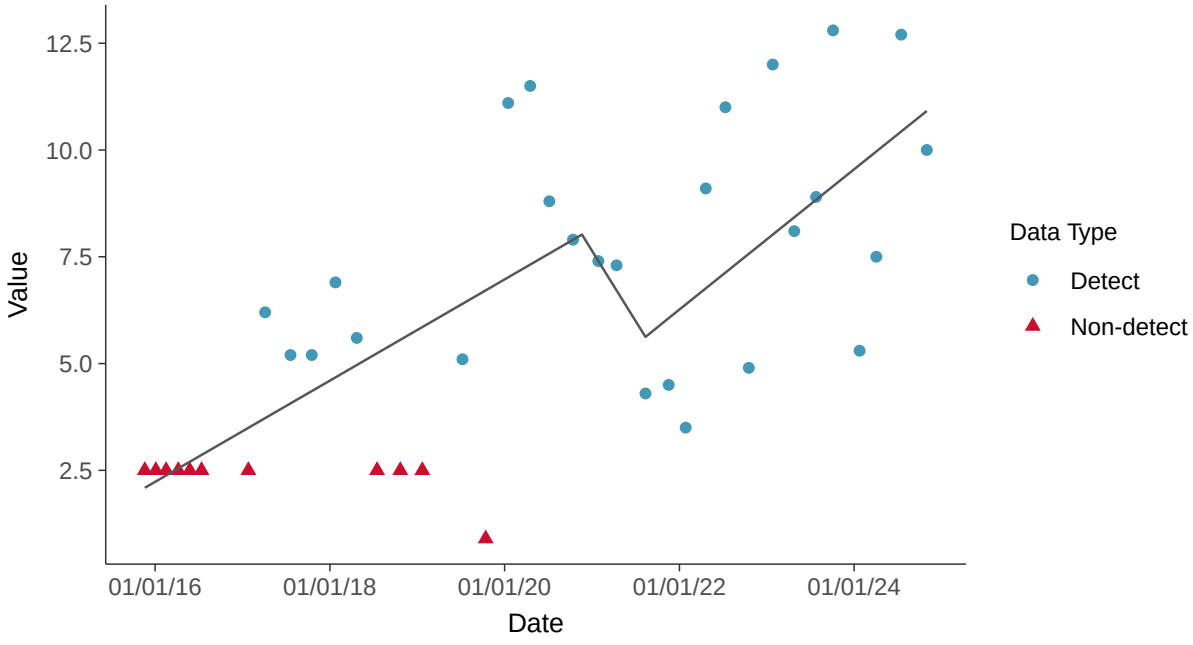
Trend Regression: Piecewise Linear-Linear

Nickel, MW-4 (ug/L)



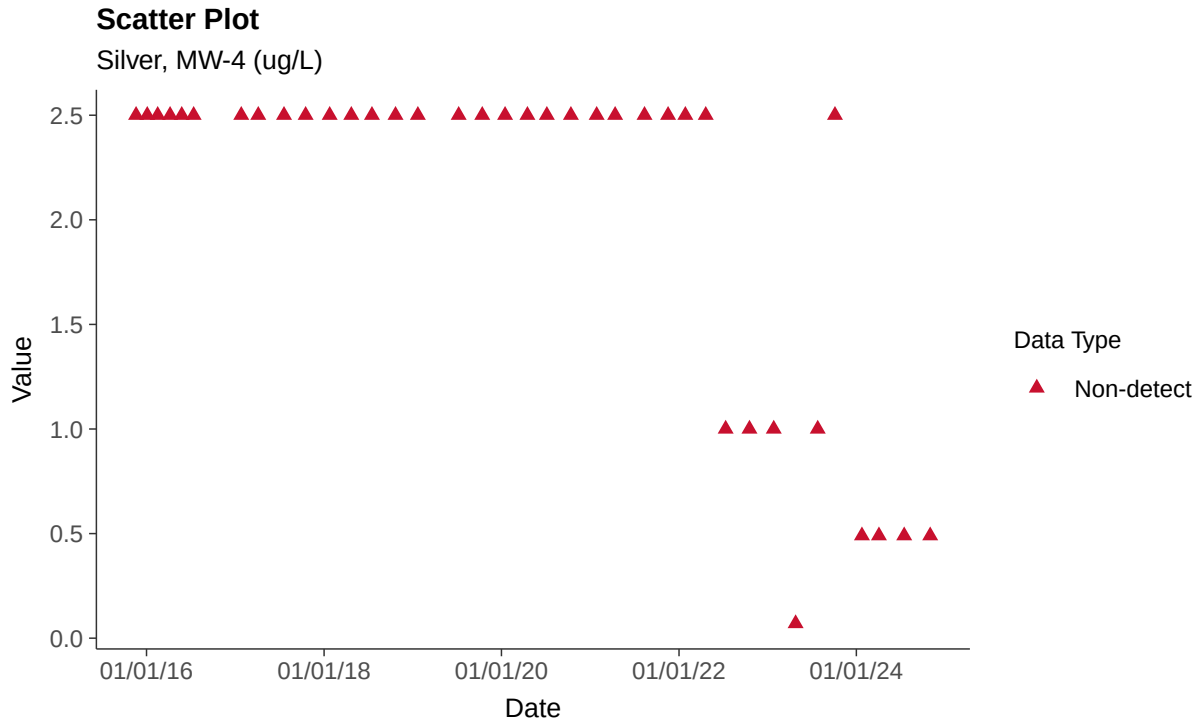
Trend Regression: Piecewise Linear-Linear-Linear

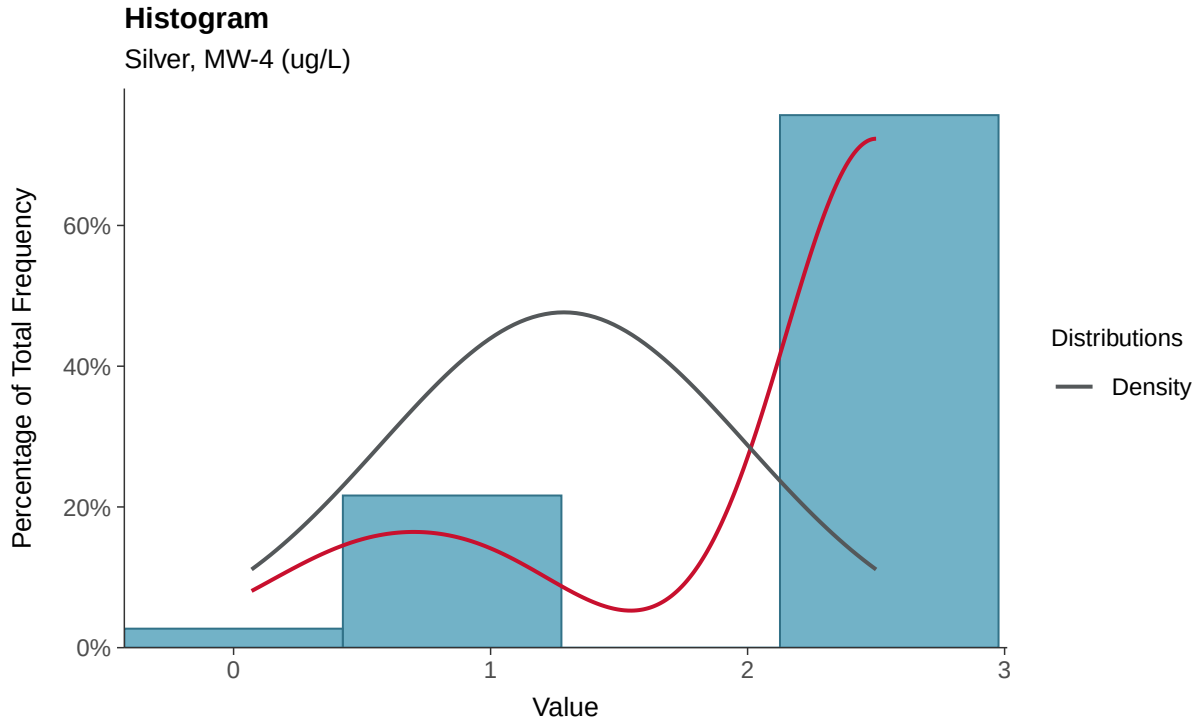
Nickel, MW-4 (ug/L)



App. I Metals: Silver, MW-4

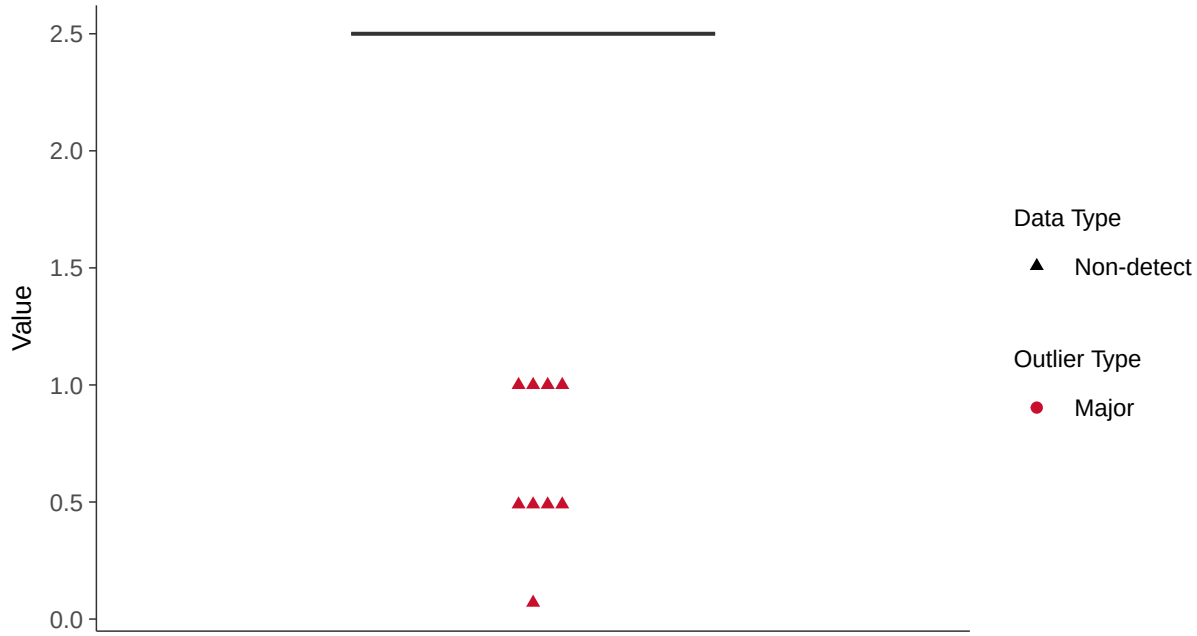
ID: 04_01_122





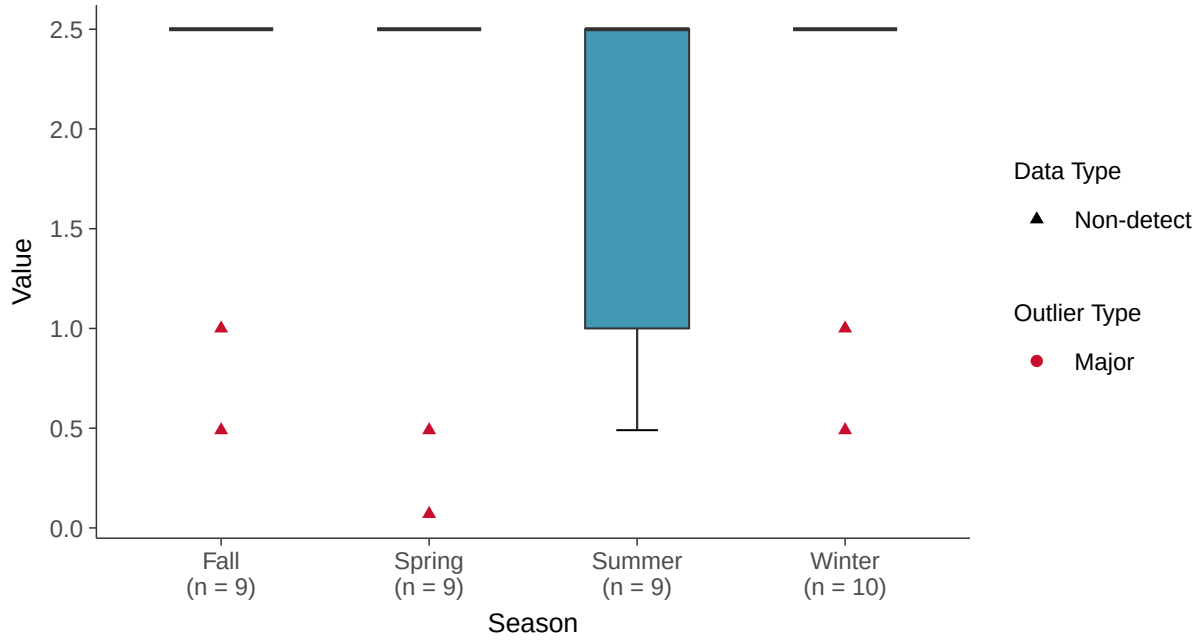
Boxplot

Silver, MW-4 (ug/L)



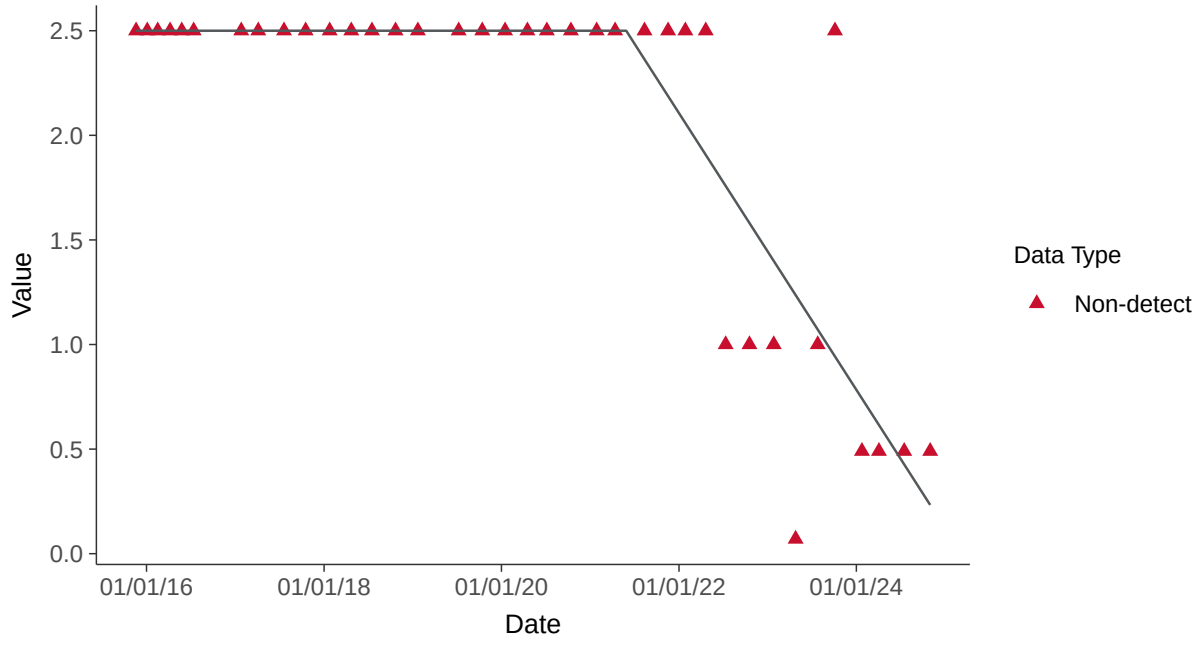
Boxplot by Season

Silver, MW-4 (ug/L)



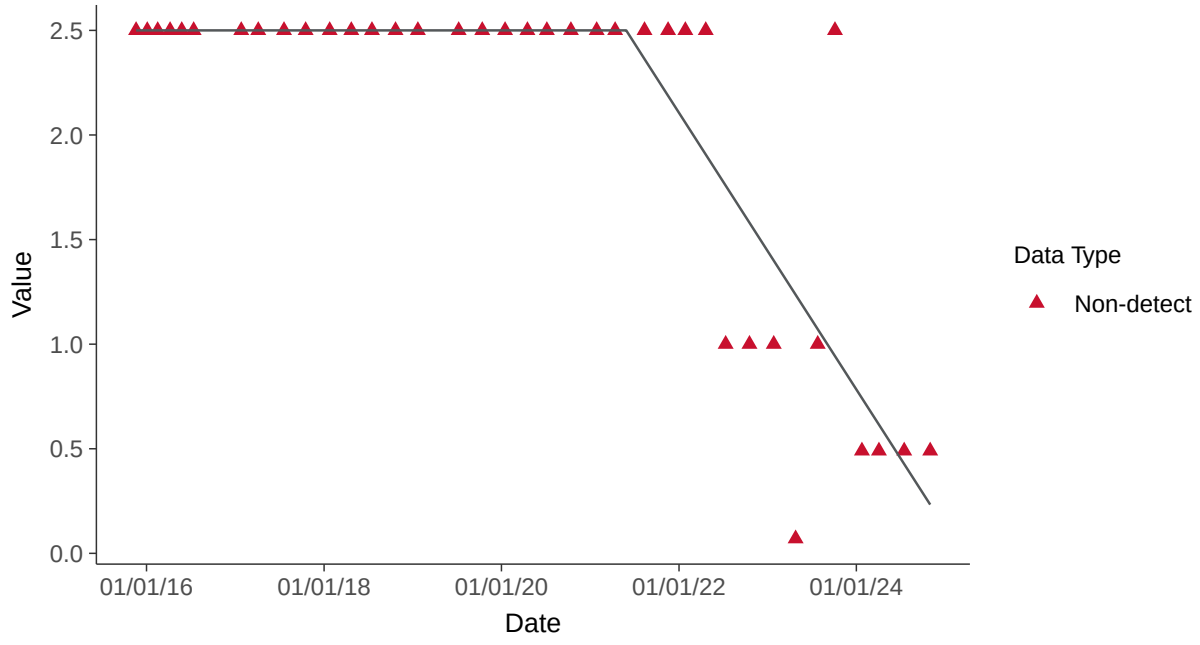
Trend Regression: Piecewise Linear-Linear

Silver, MW-4 (ug/L)



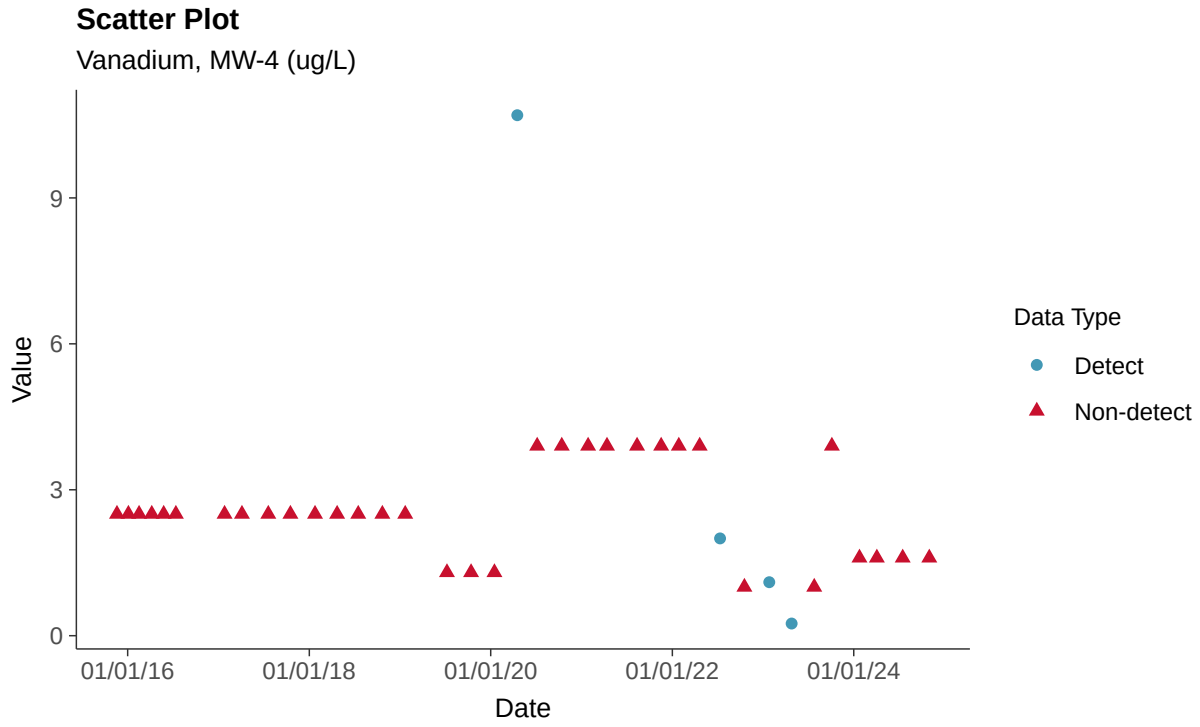
Trend Regression: Piecewise Linear-Linear-Linear

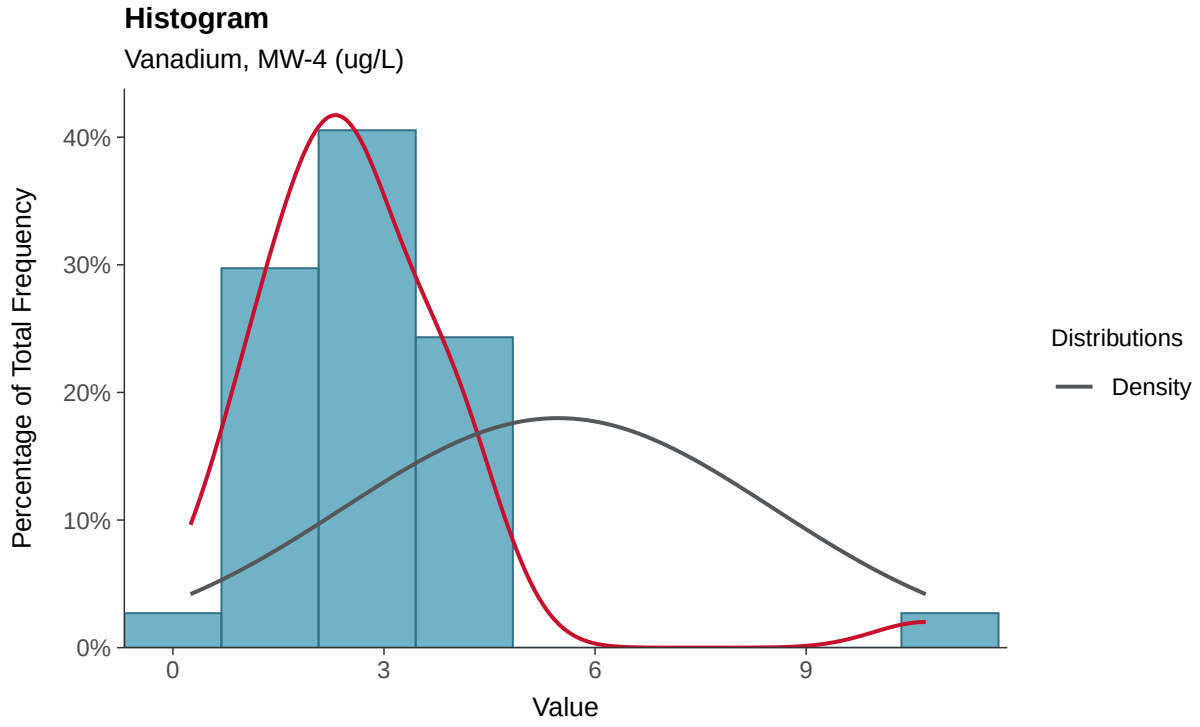
Silver, MW-4 (ug/L)



App. I Metals: Vanadium, MW-4

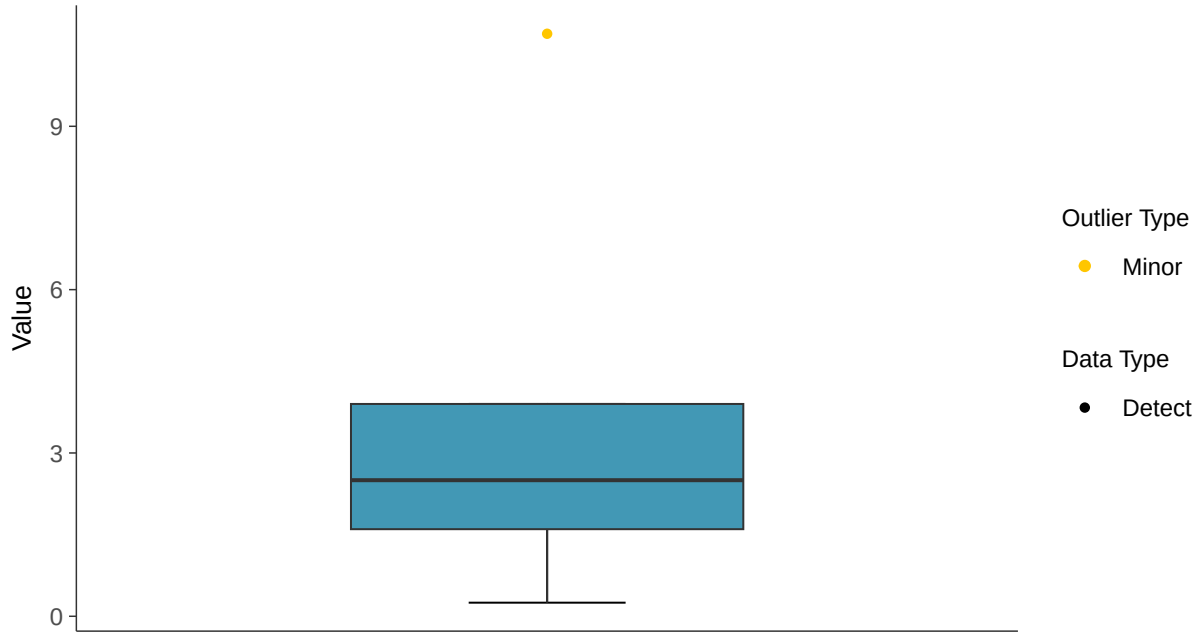
ID: 04_01_127





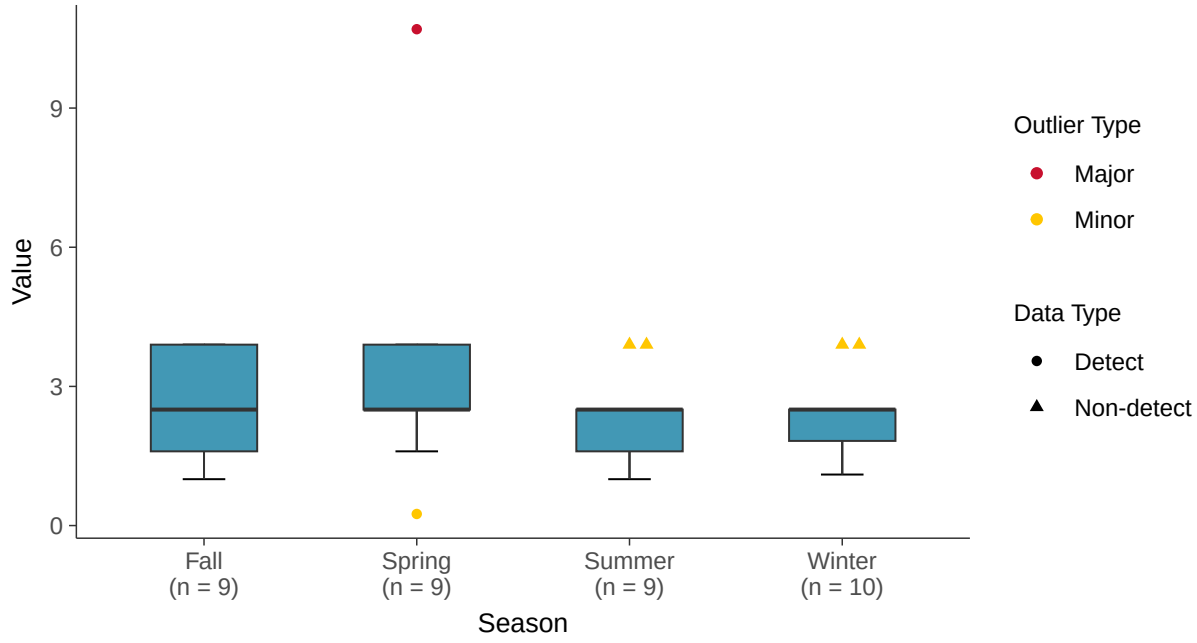
Boxplot

Vanadium, MW-4 (ug/L)



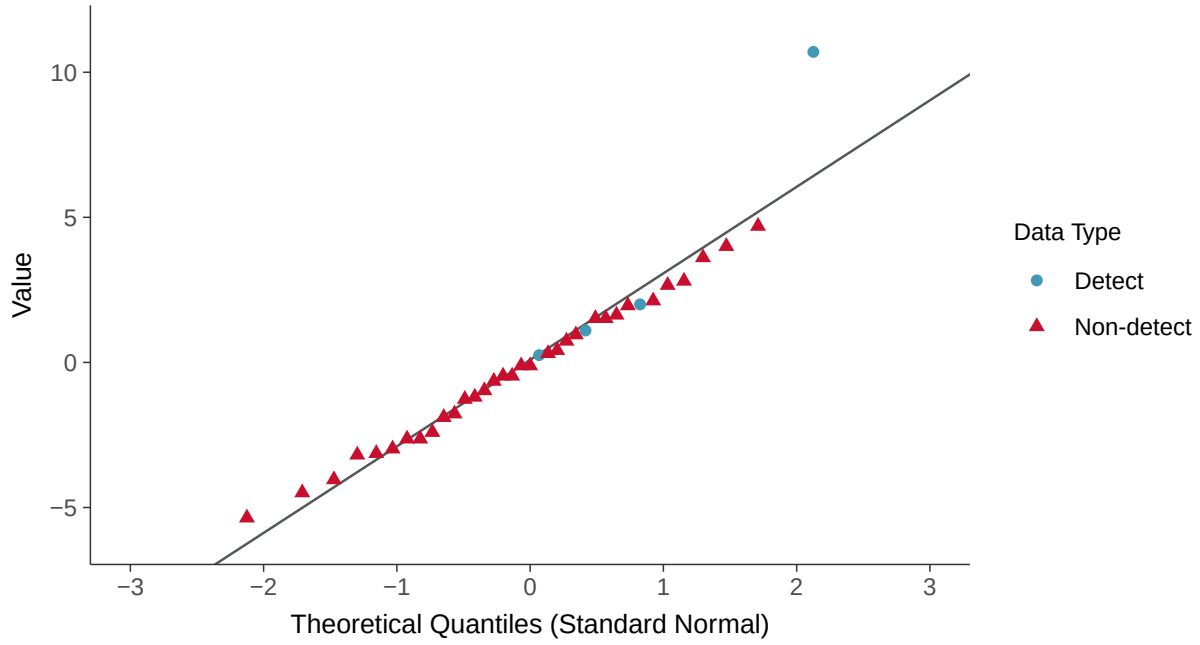
Boxplot by Season

Vanadium, MW-4 (ug/L)



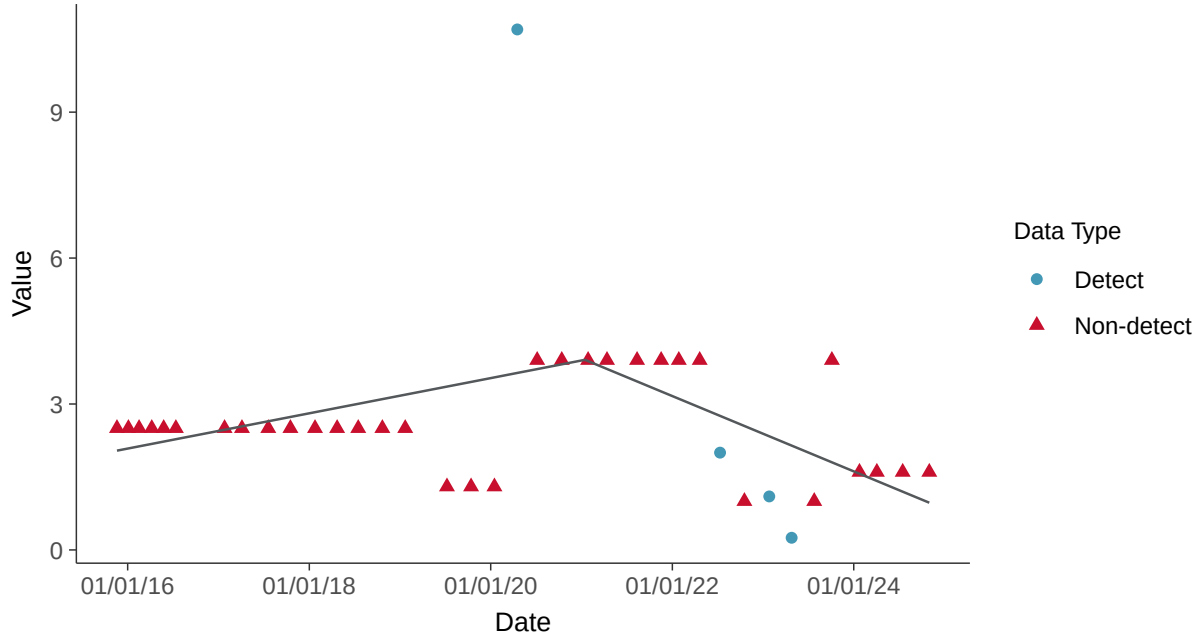
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-4 (ug/L)



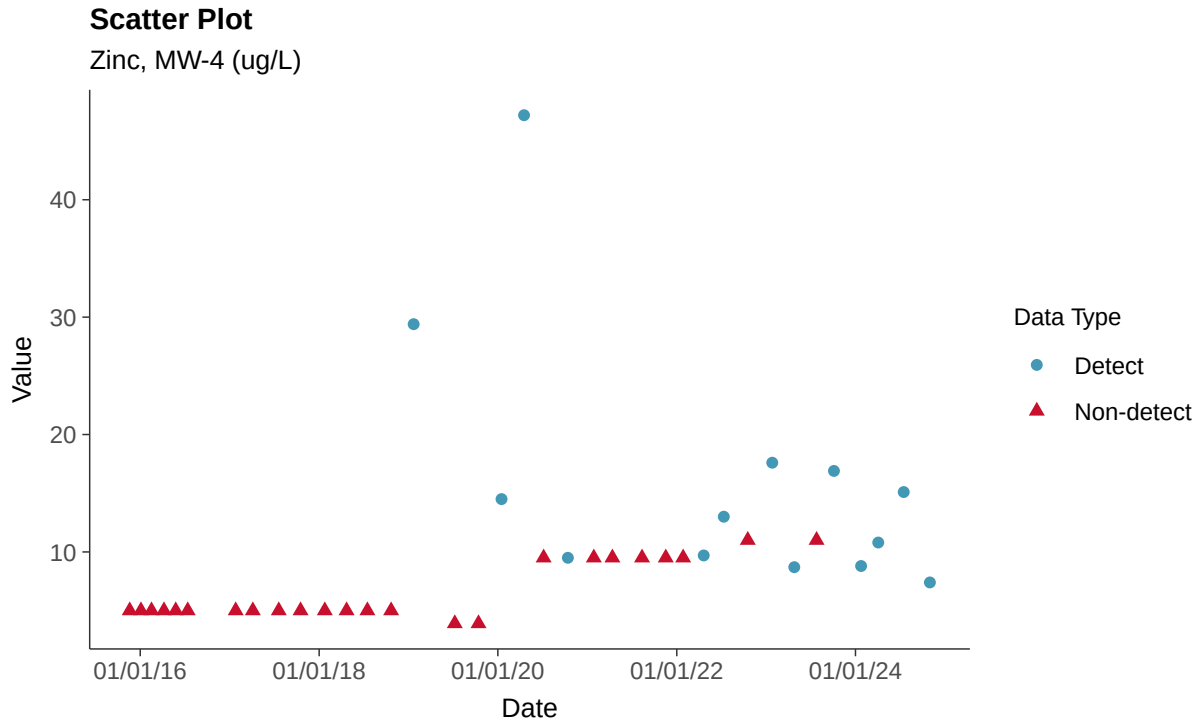
Trend Regression: Piecewise Linear-Linear

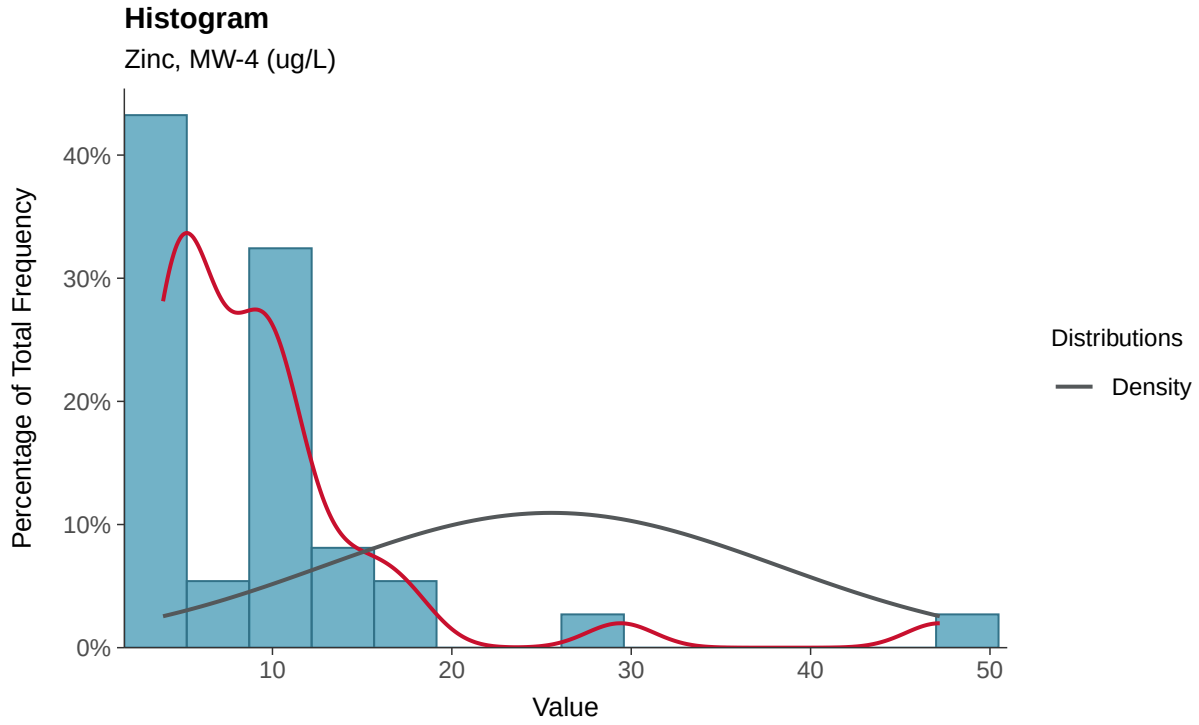
Vanadium, MW-4 (ug/L)



App. I Metals: Zinc, MW-4

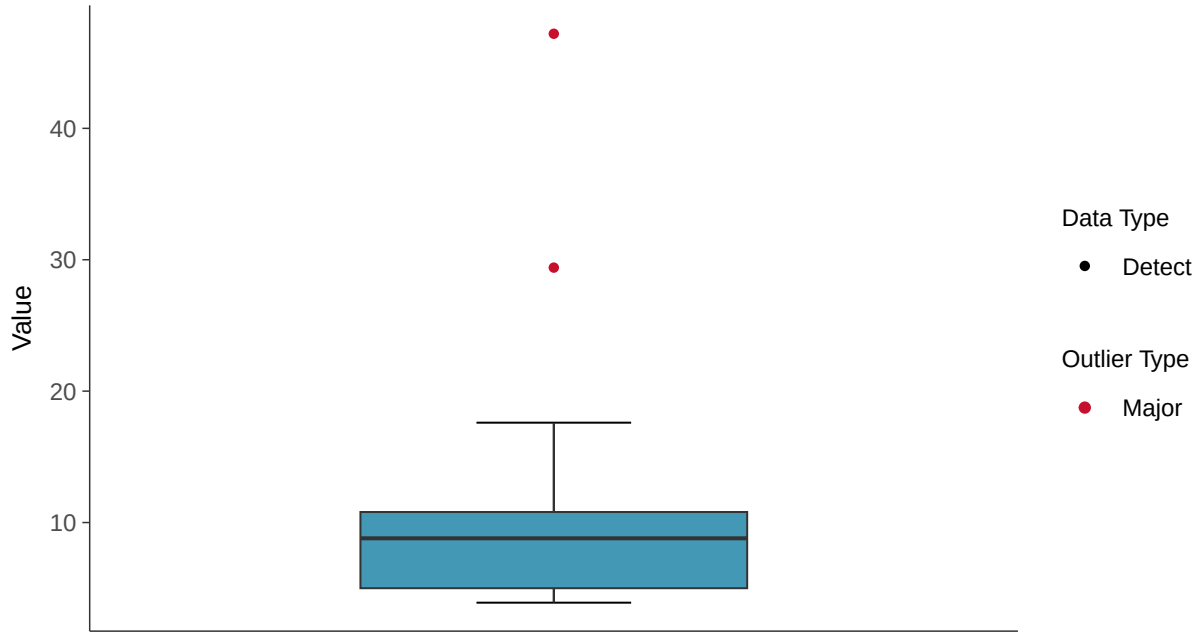
ID: 04_01_128





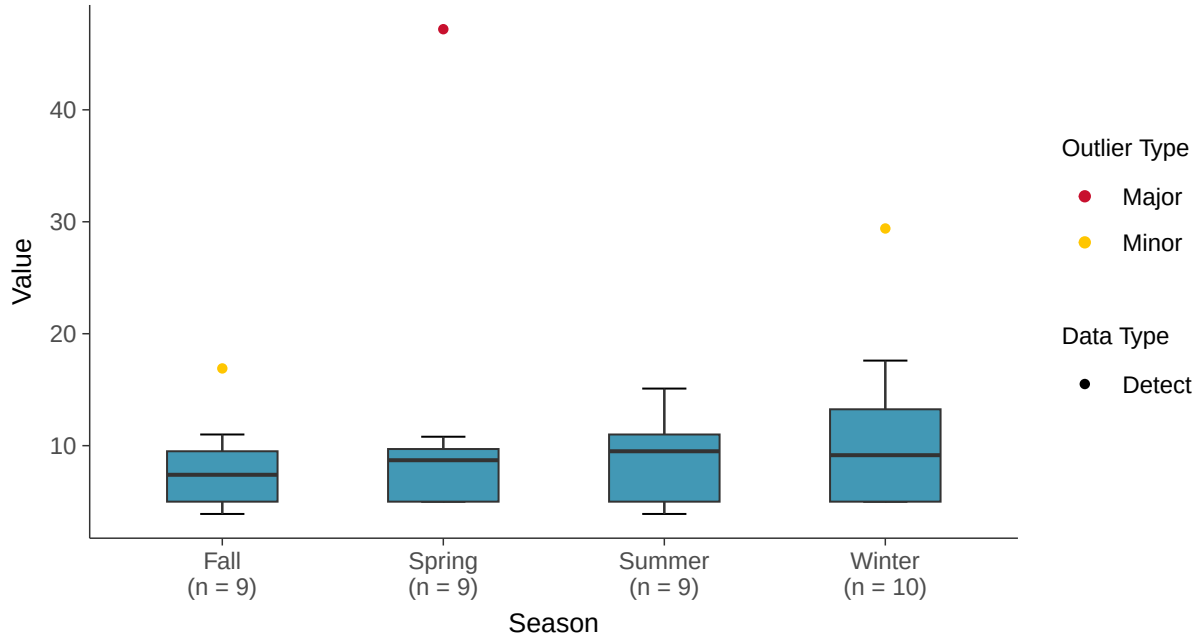
Boxplot

Zinc, MW-4 (ug/L)



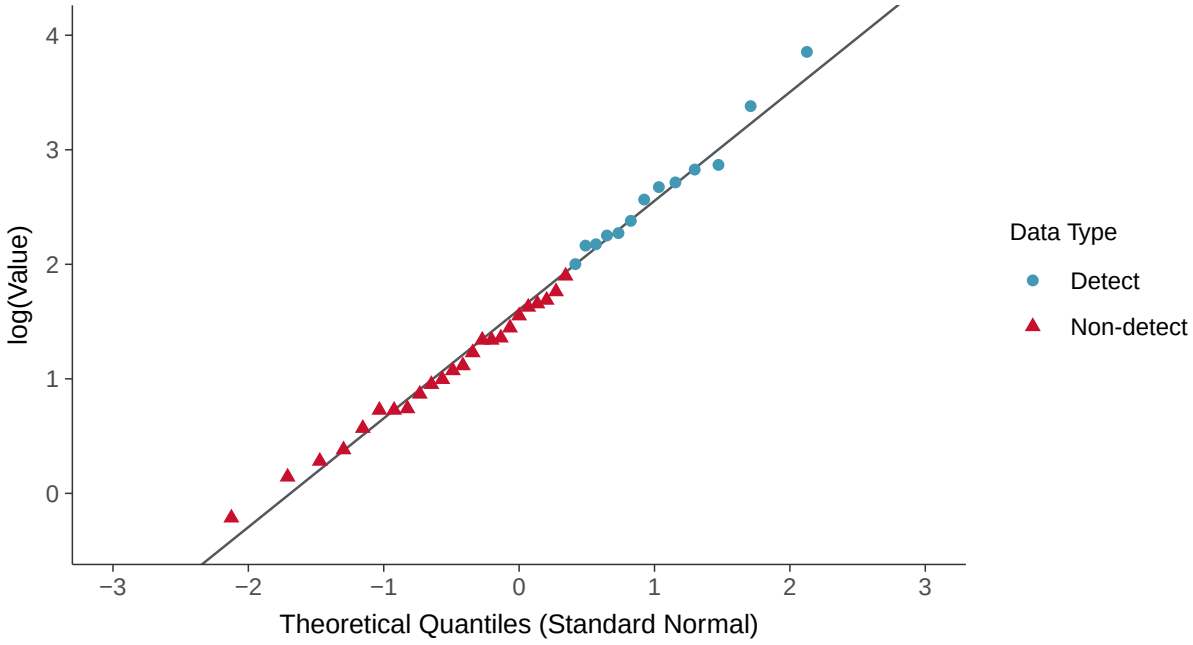
Boxplot by Season

Zinc, MW-4 (ug/L)



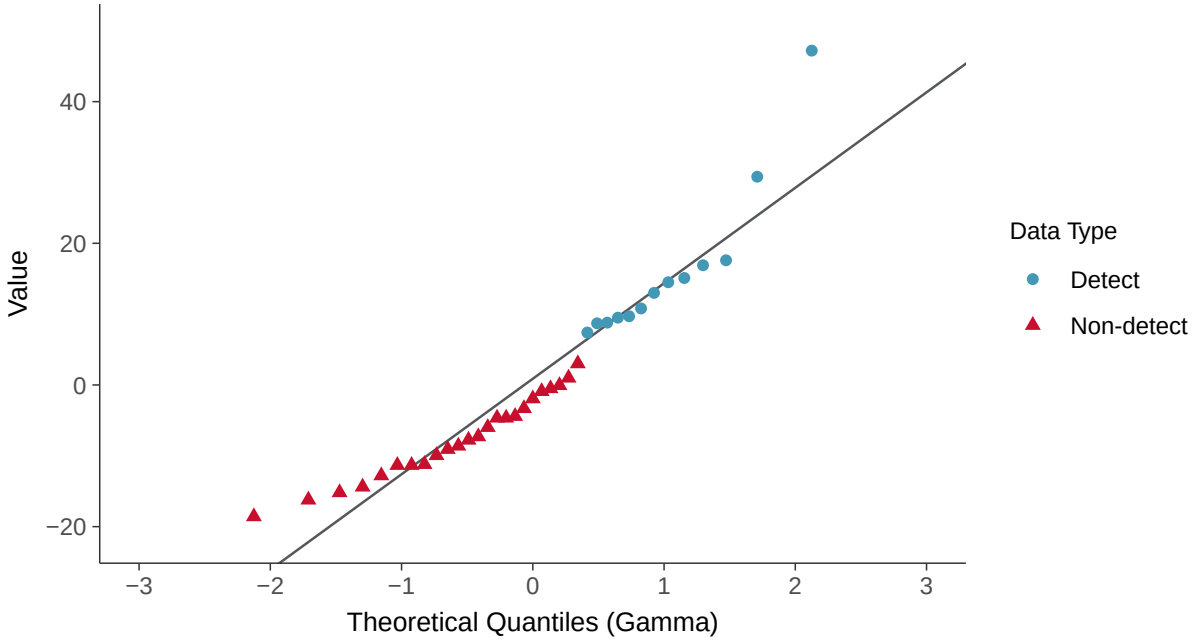
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-4 (ug/L)



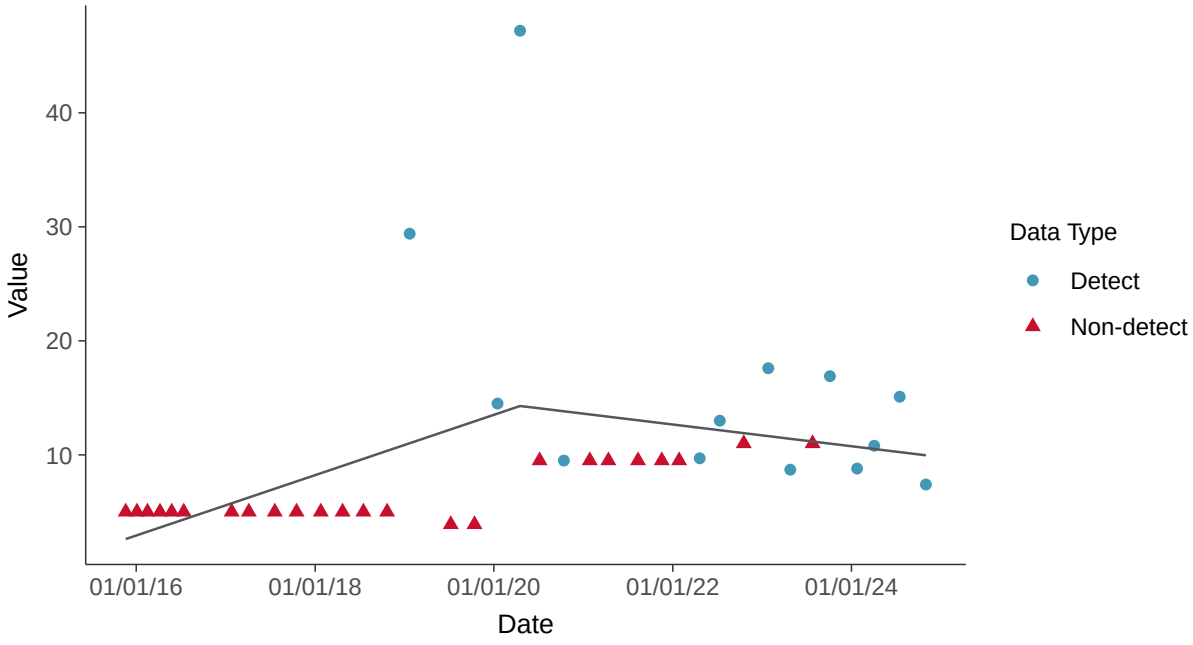
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-4 (ug/L)



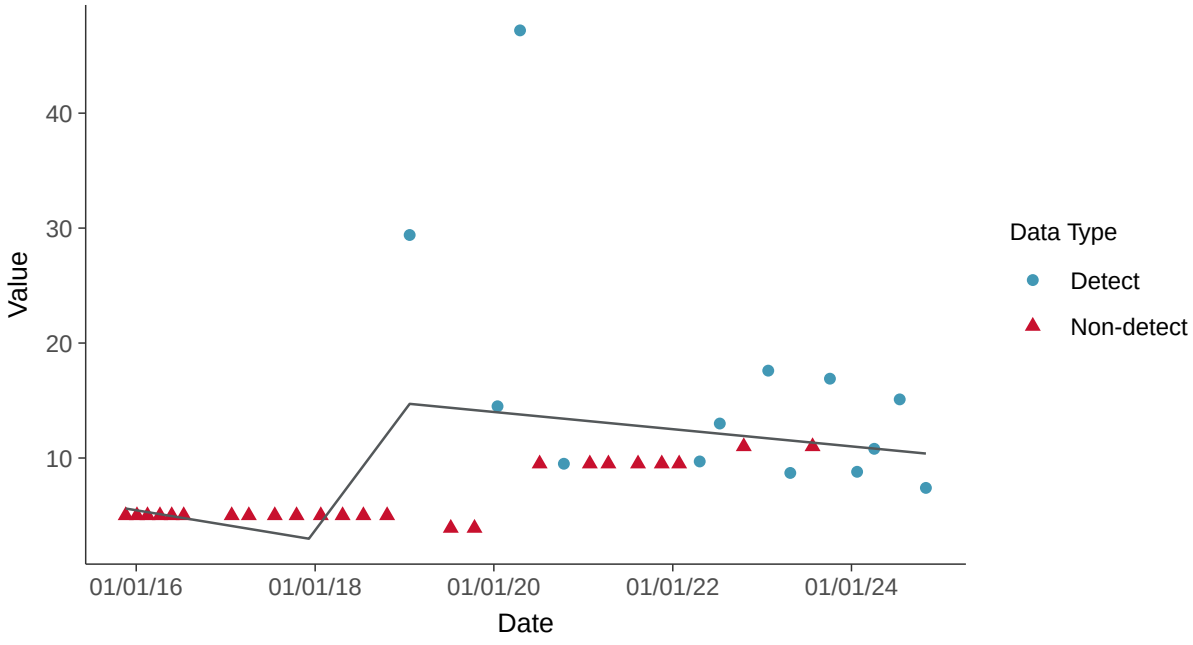
Trend Regression: Piecewise Linear-Linear

Zinc, MW-4 (ug/L)



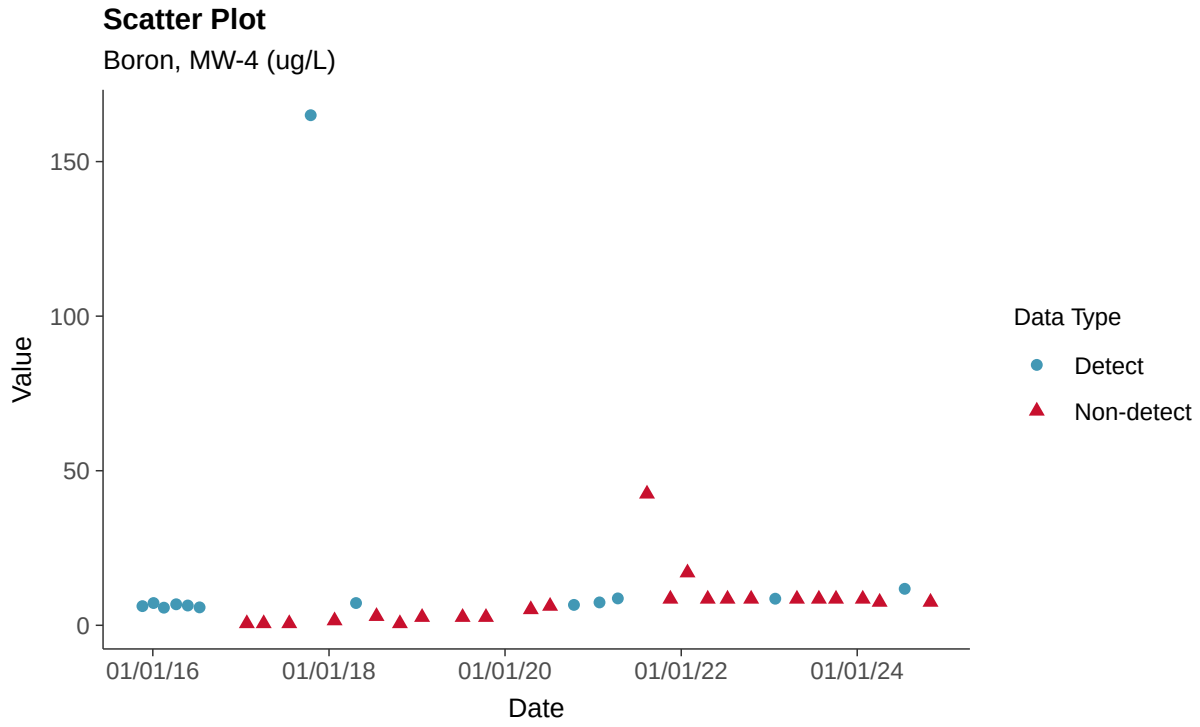
Trend Regression: Piecewise Linear-Linear-Linear

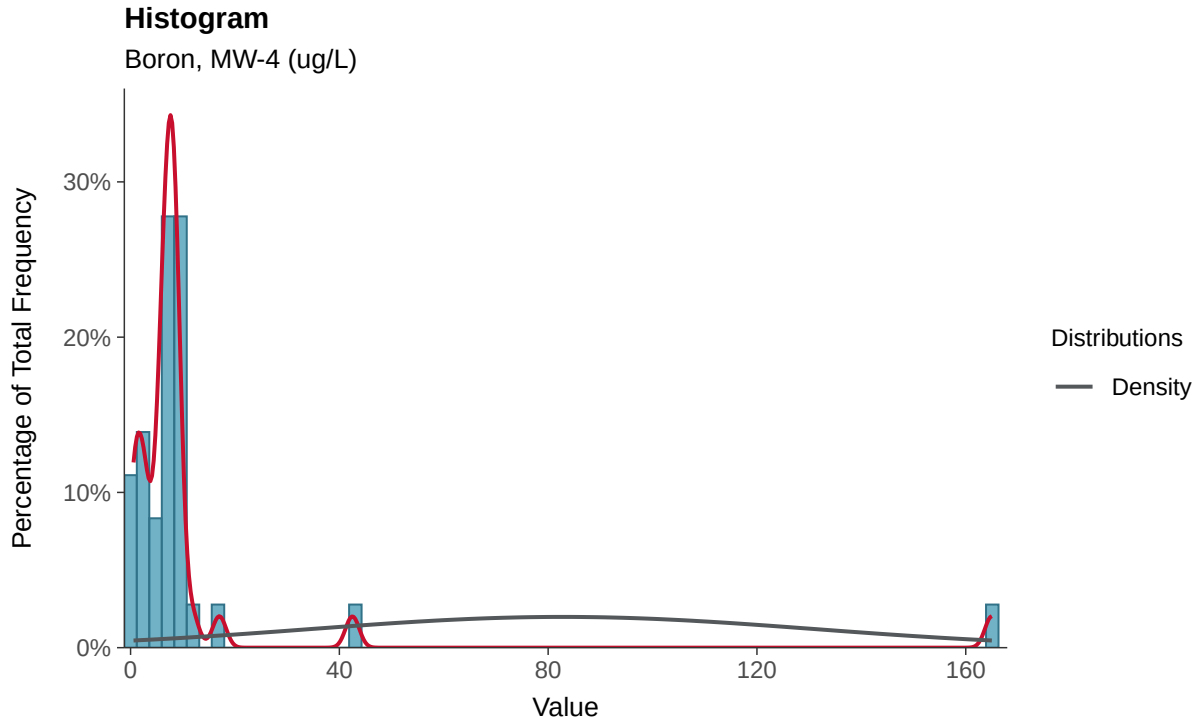
Zinc, MW-4 (ug/L)



App. III: Boron, MW-4

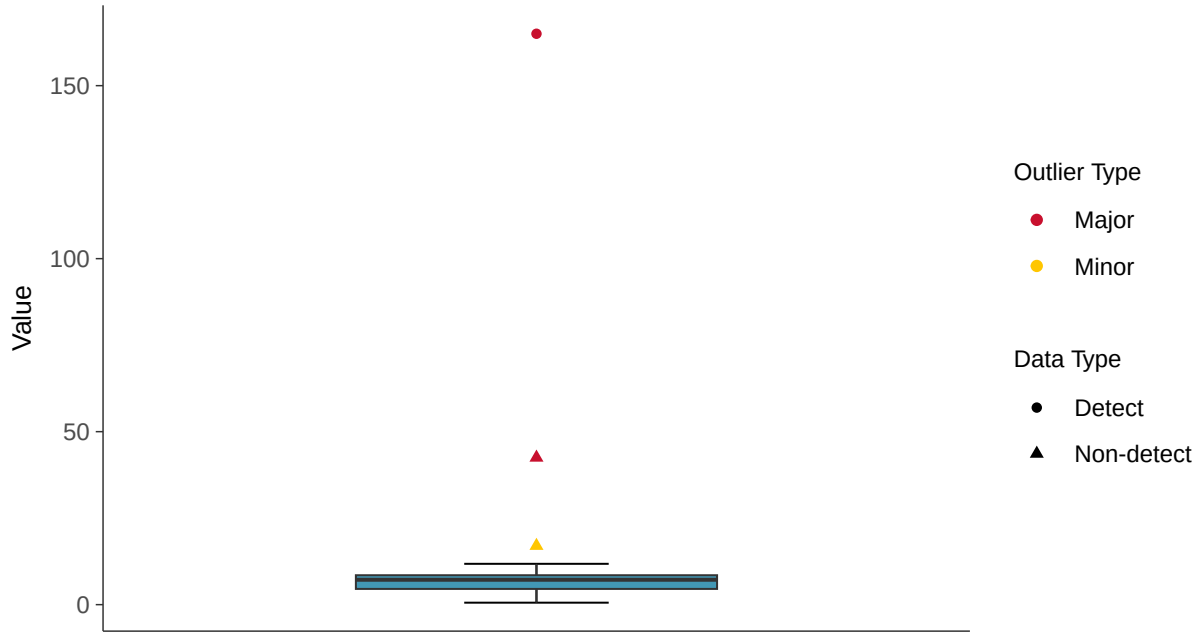
ID: 04_02_105





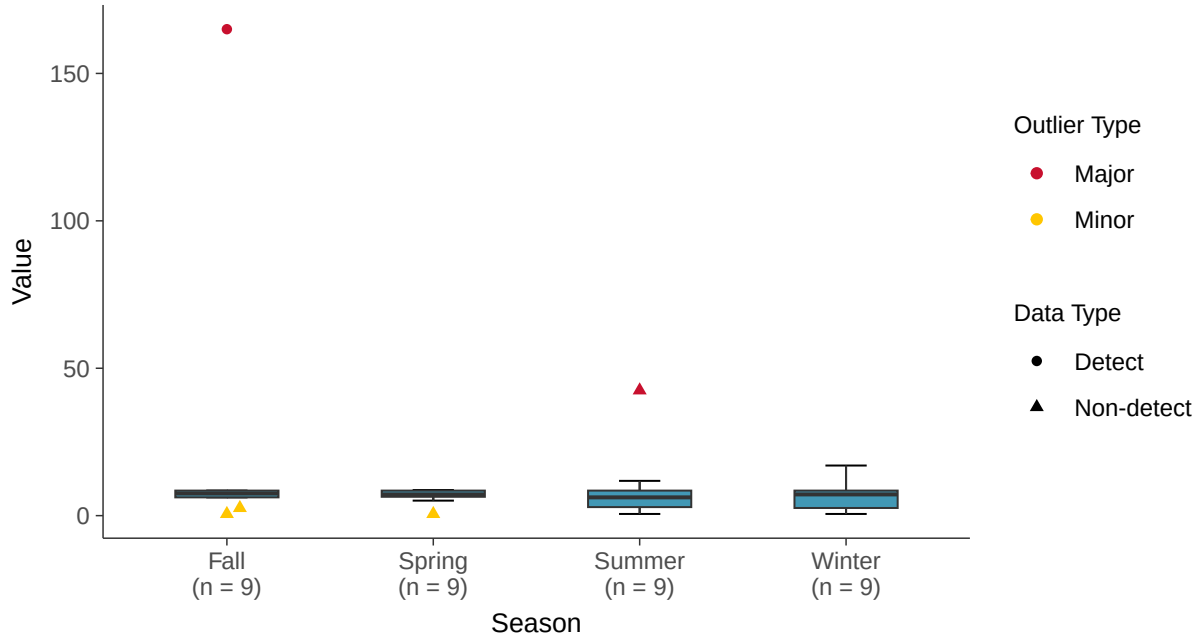
Boxplot

Boron, MW-4 (ug/L)



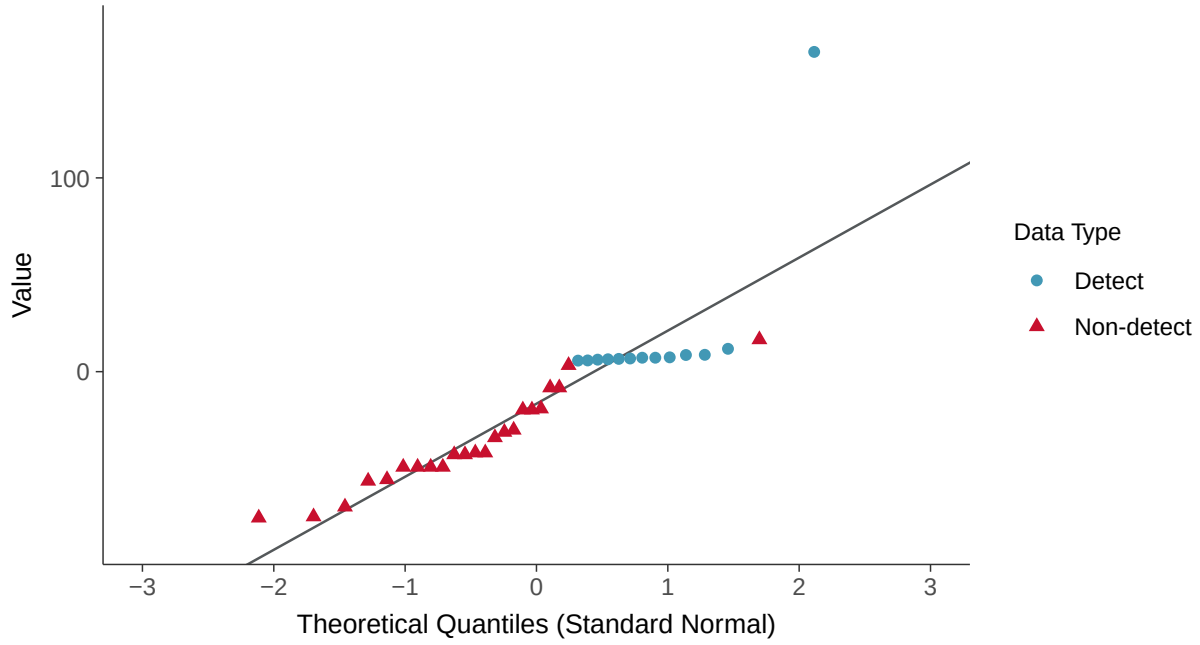
Boxplot by Season

Boron, MW-4 (ug/L)



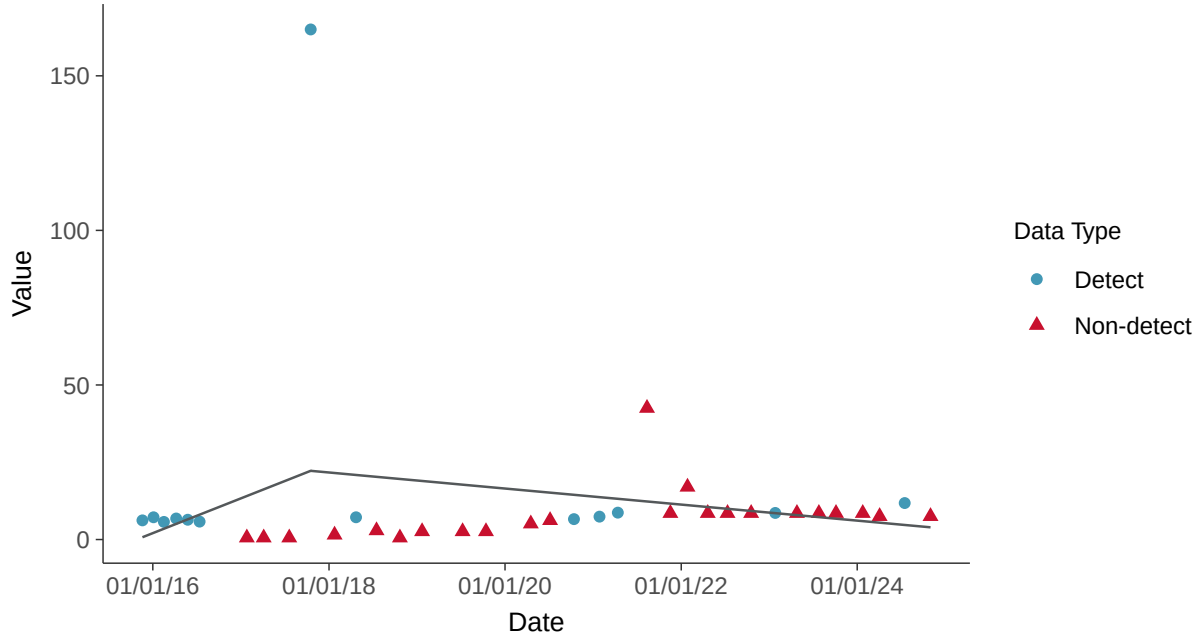
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-4 (ug/L)



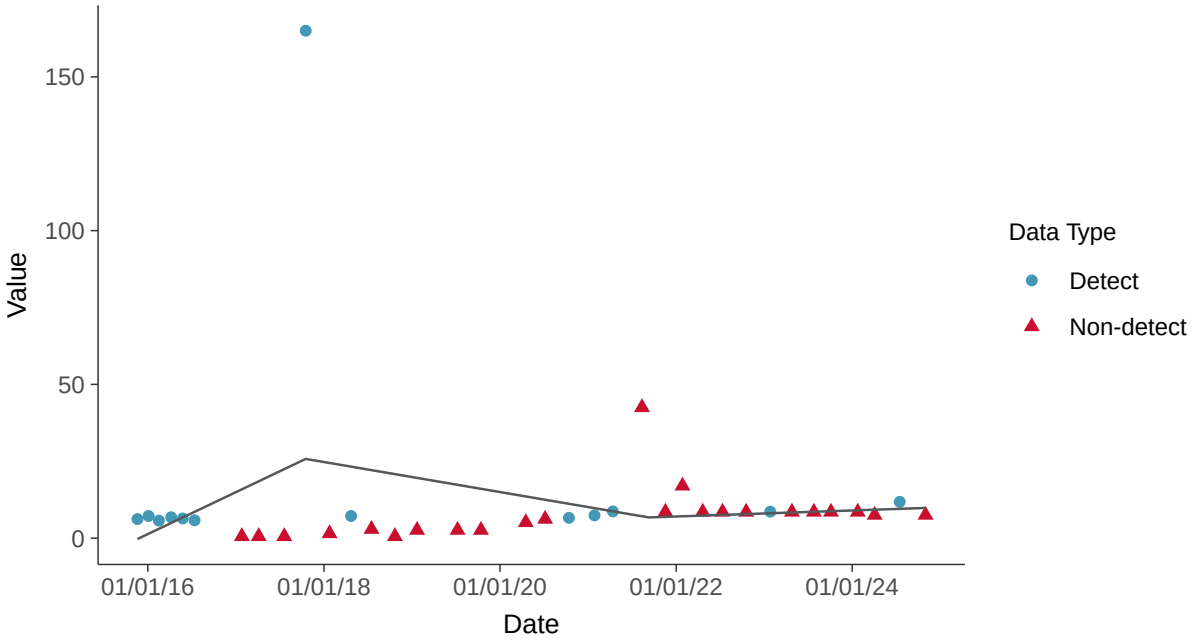
Trend Regression: Piecewise Linear-Linear

Boron, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-4 (ug/L)

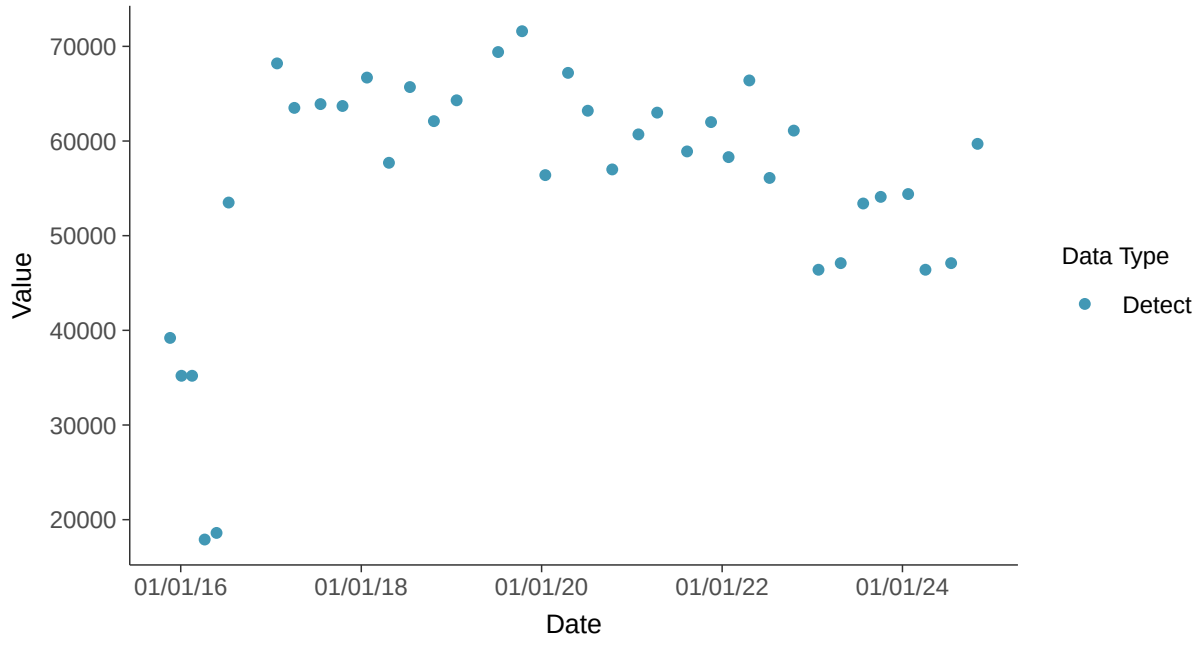


App. III: Calcium, MW-4

ID: 04_02_107

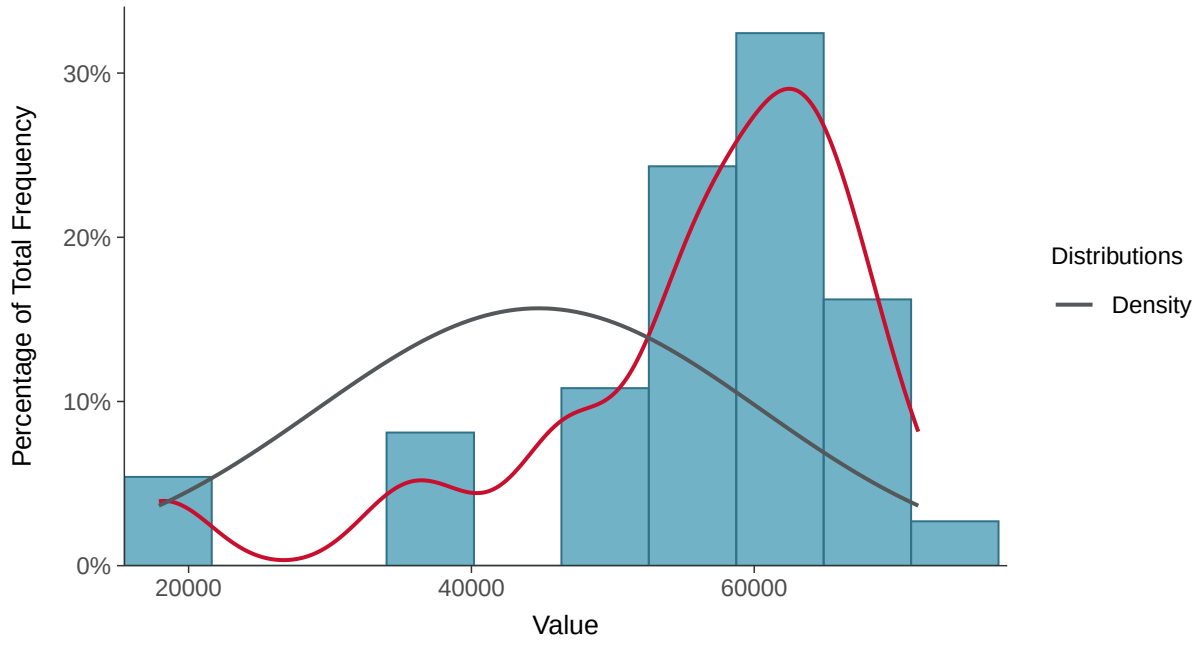
Scatter Plot

Calcium, MW-4 (ug/L)



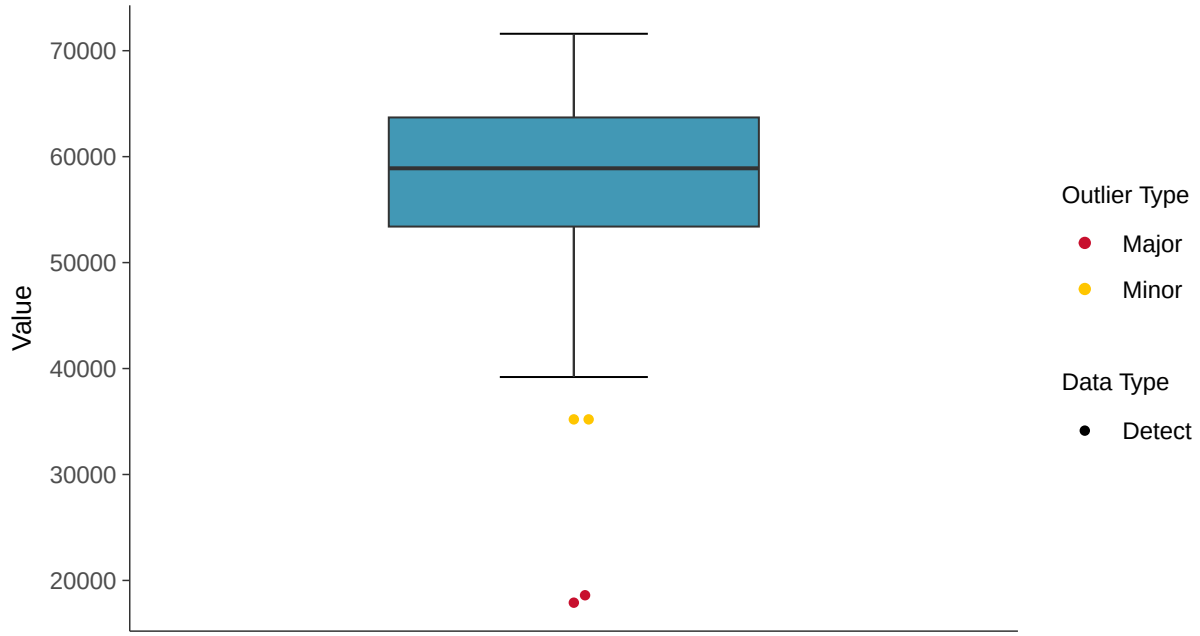
Histogram

Calcium, MW-4 (ug/L)



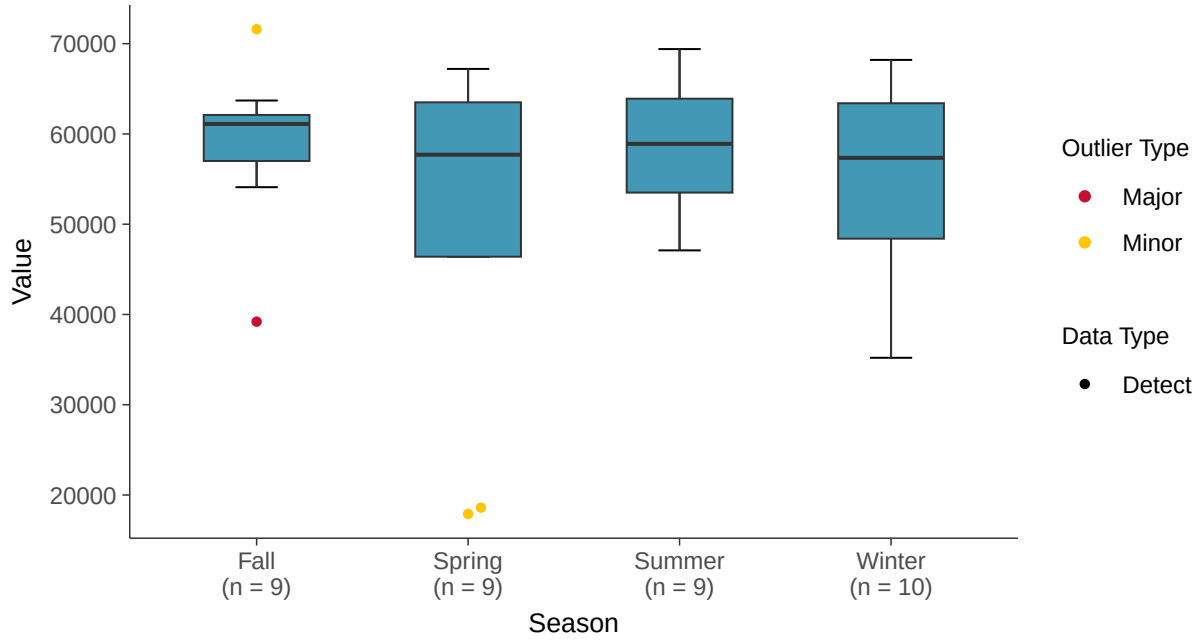
Boxplot

Calcium, MW-4 (ug/L)



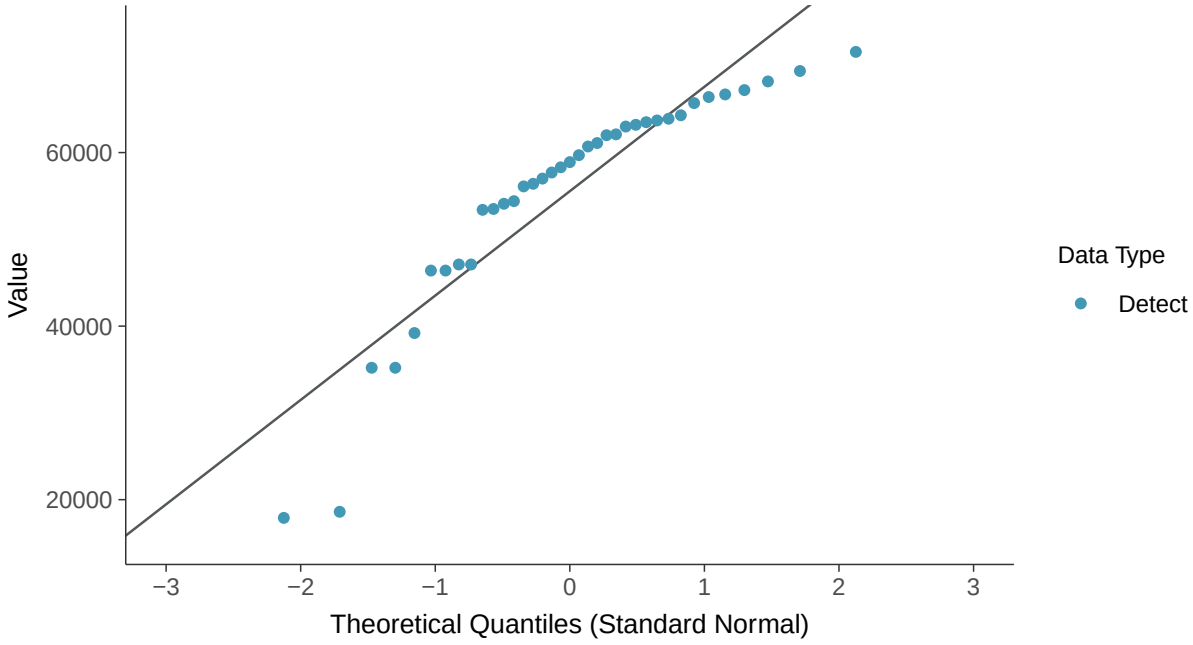
Boxplot by Season

Calcium, MW-4 (ug/L)



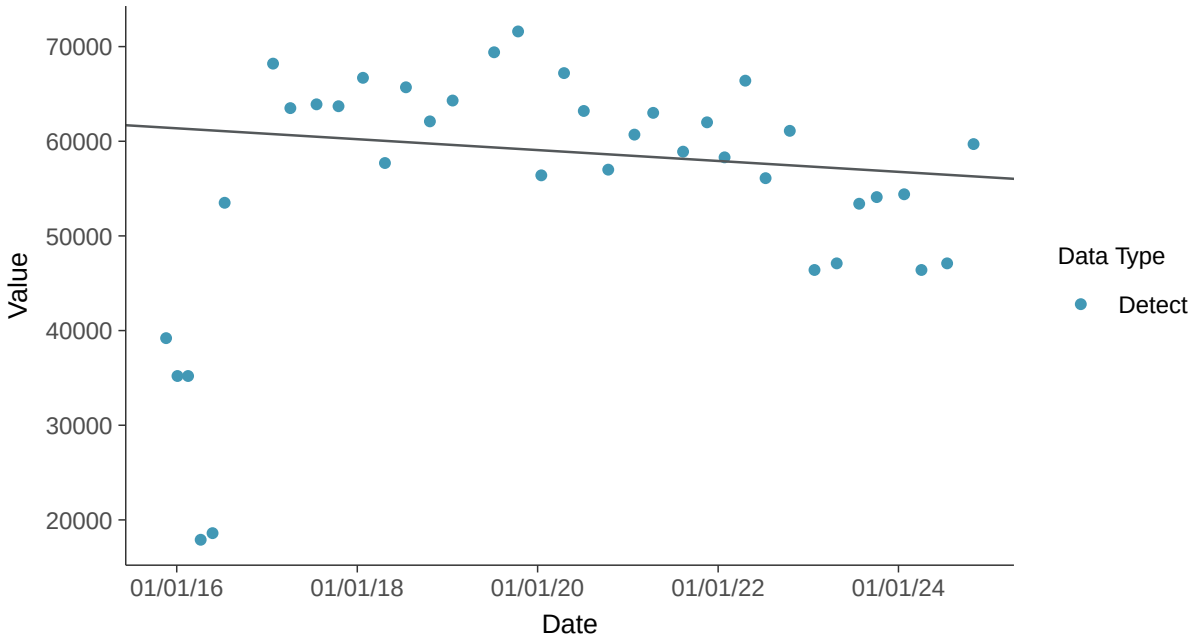
Normal Q-Q plot

Calcium, MW-4 (ug/L)



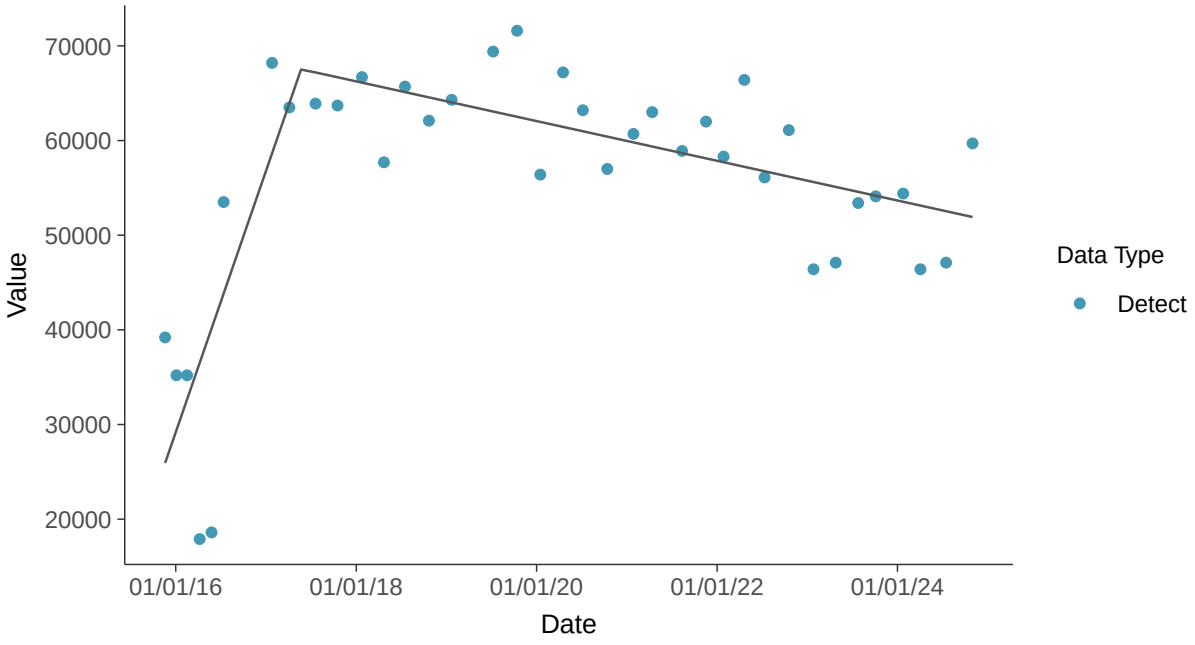
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-4 (ug/L)



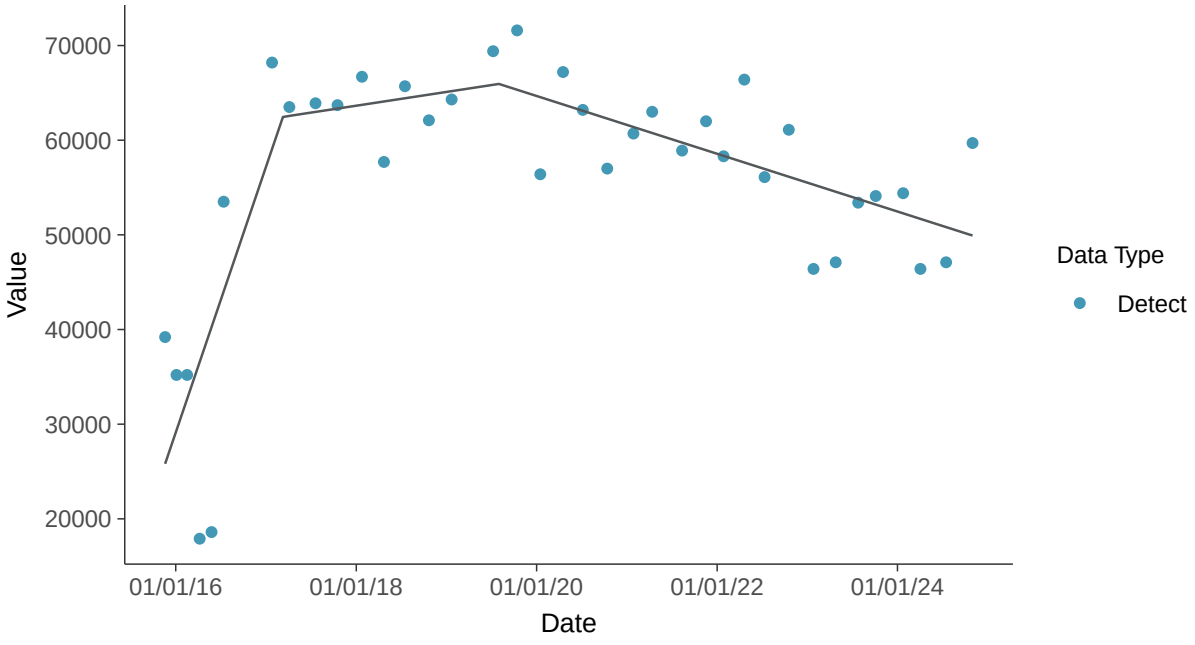
Trend Regression: Piecewise Linear-Linear

Calcium, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-4 (ug/L)

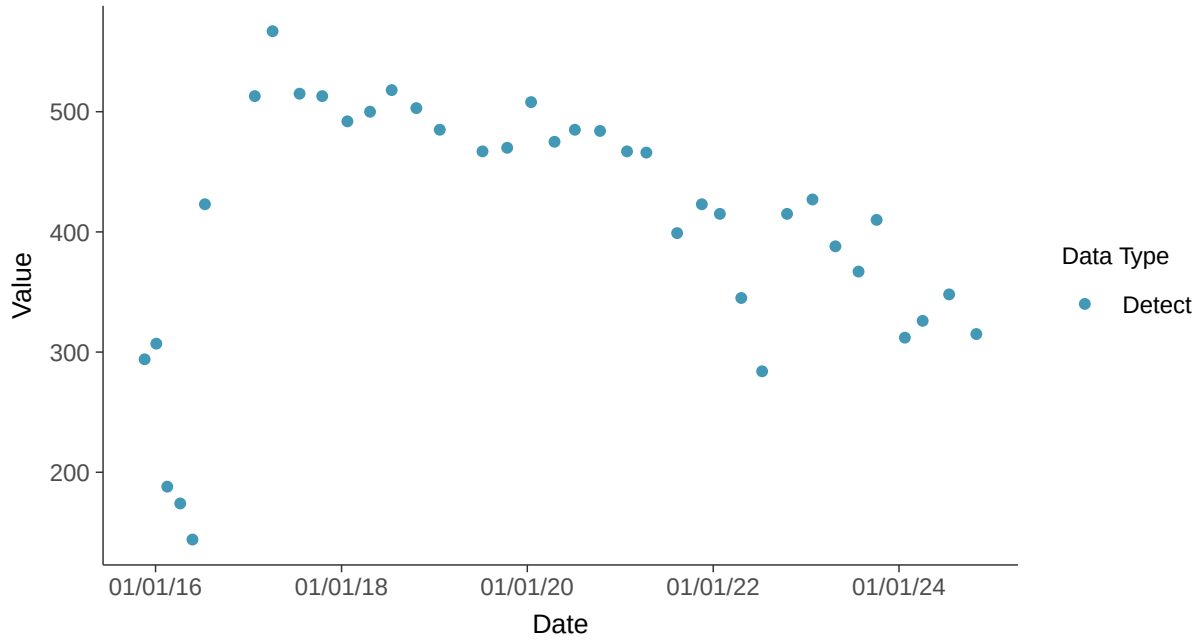


App. III: Chloride, MW-4

ID: 04_02_108

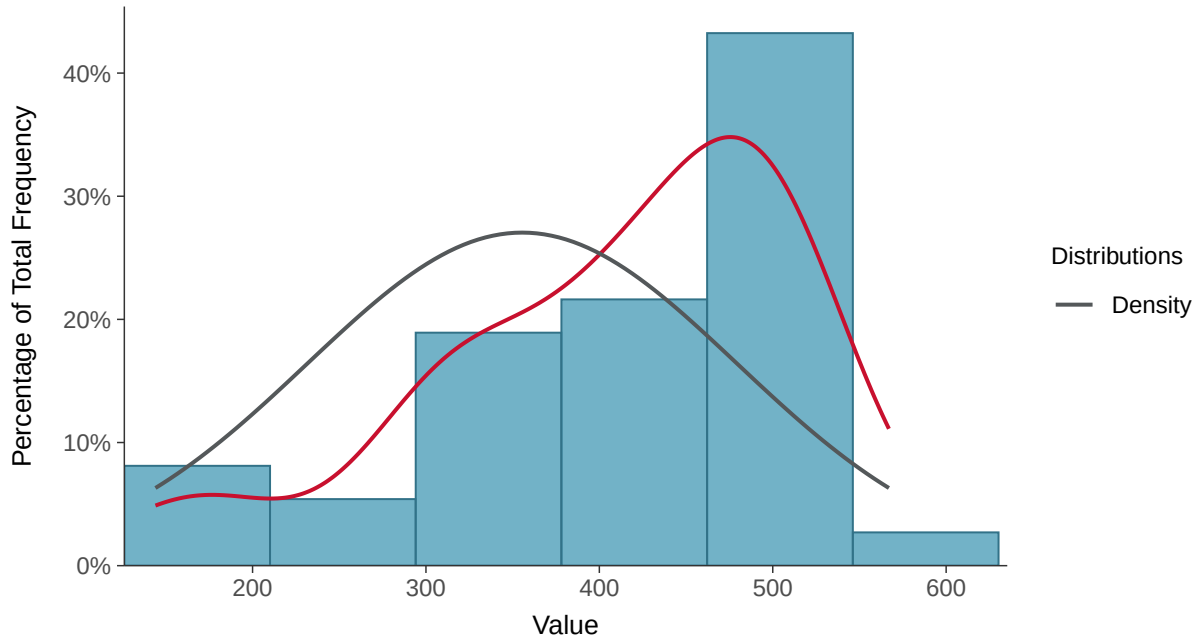
Scatter Plot

Chloride, MW-4 (mg/L)



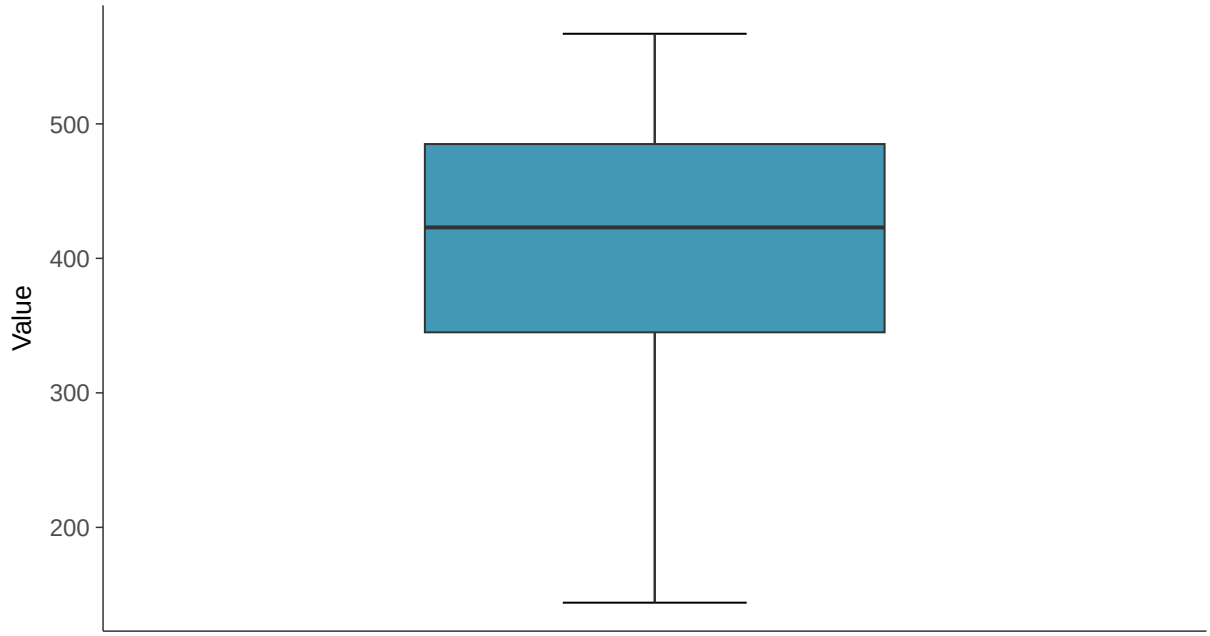
Histogram

Chloride, MW-4 (mg/L)



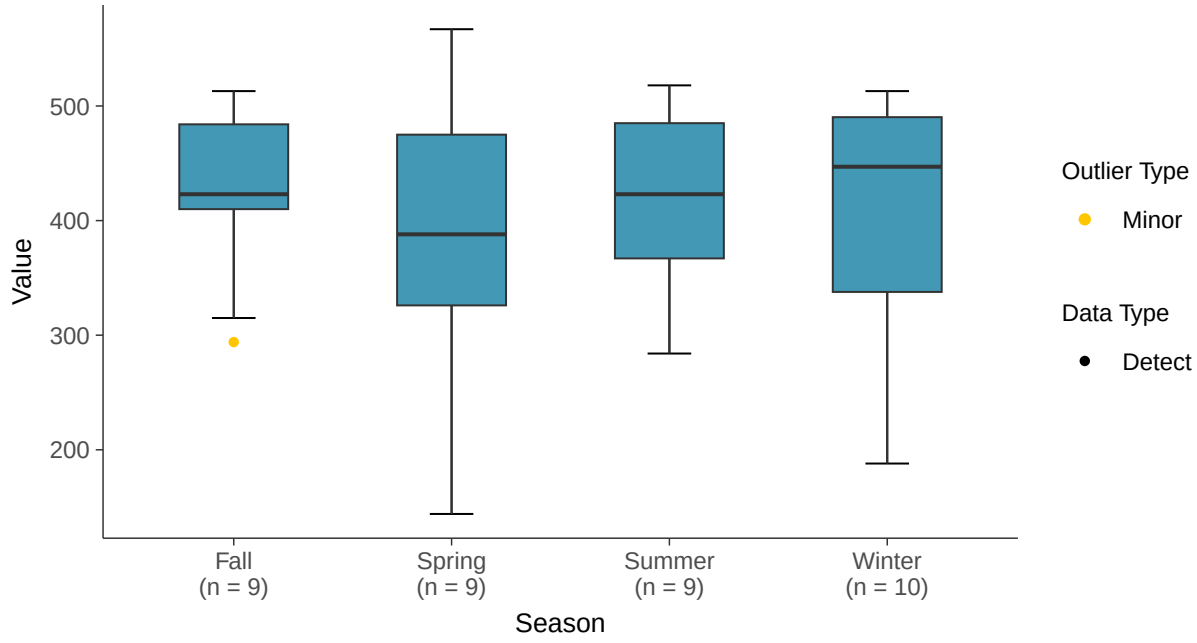
Boxplot

Chloride, MW-4 (mg/L)



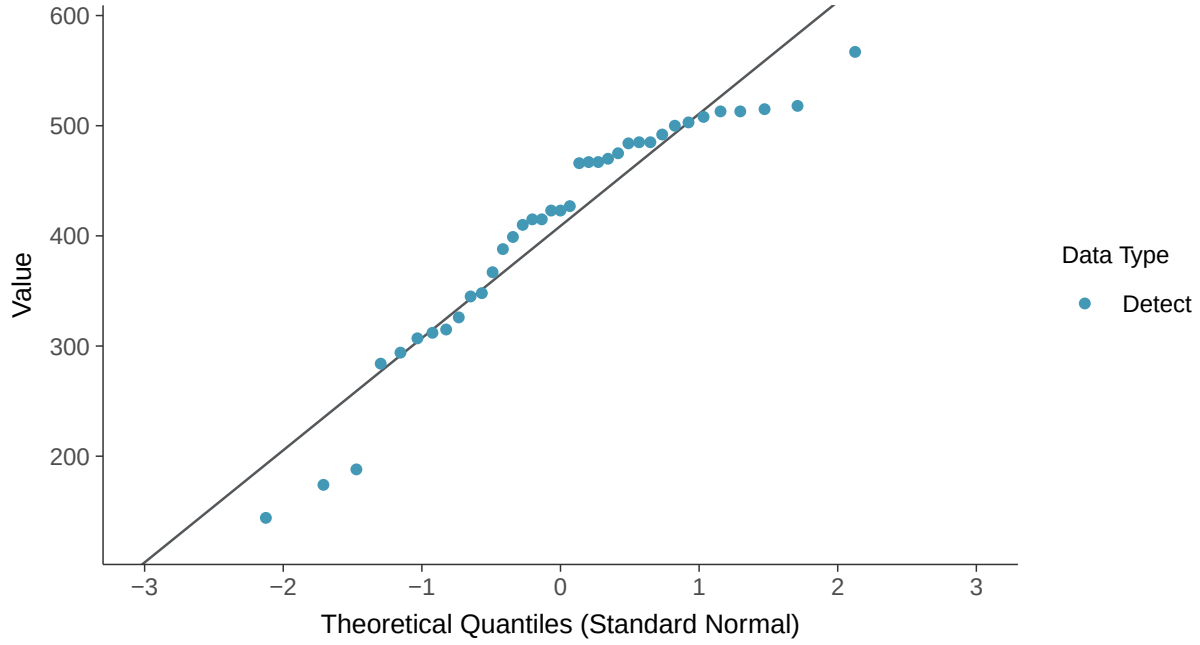
Boxplot by Season

Chloride, MW-4 (mg/L)



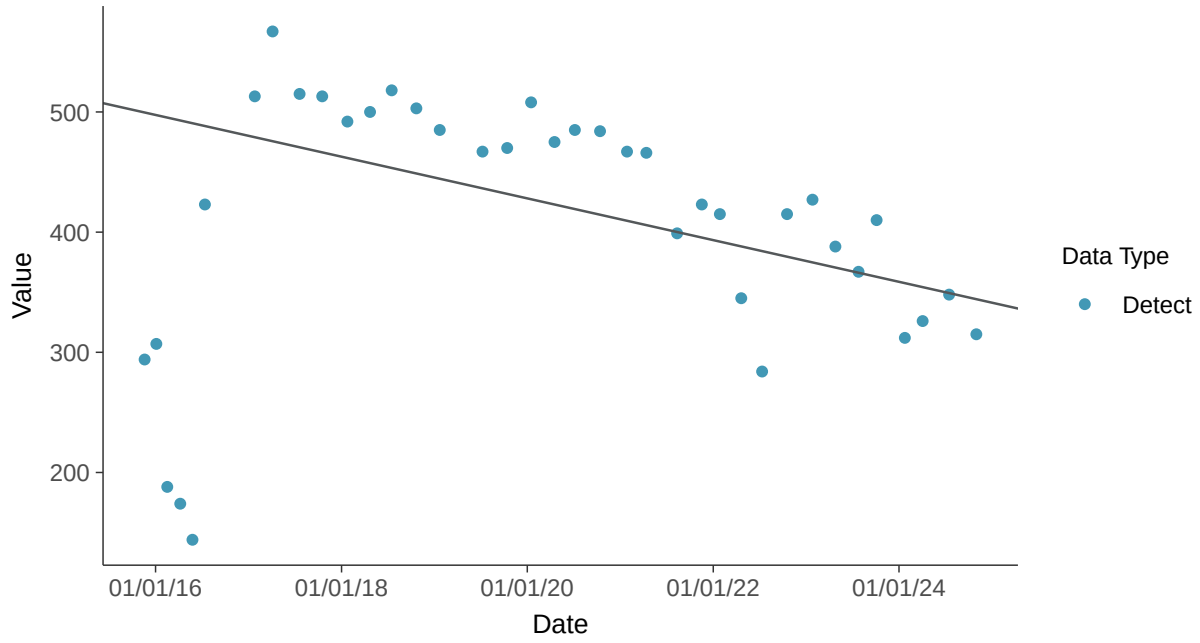
Normal Q-Q plot

Chloride, MW-4 (mg/L)



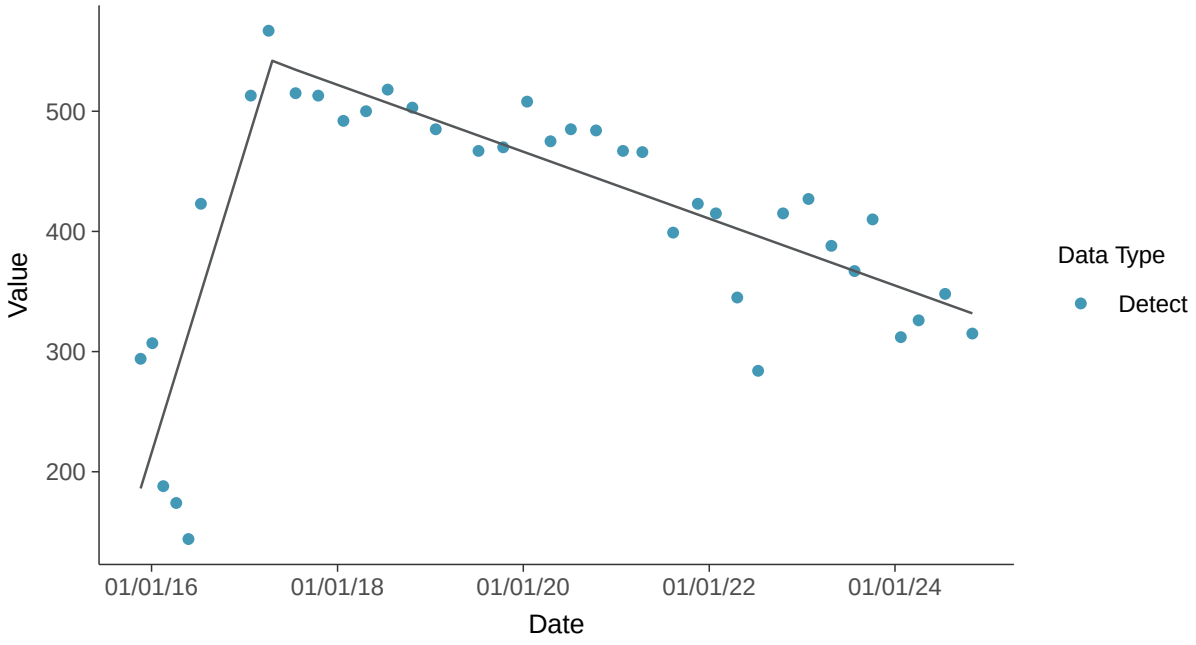
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-4 (mg/L)



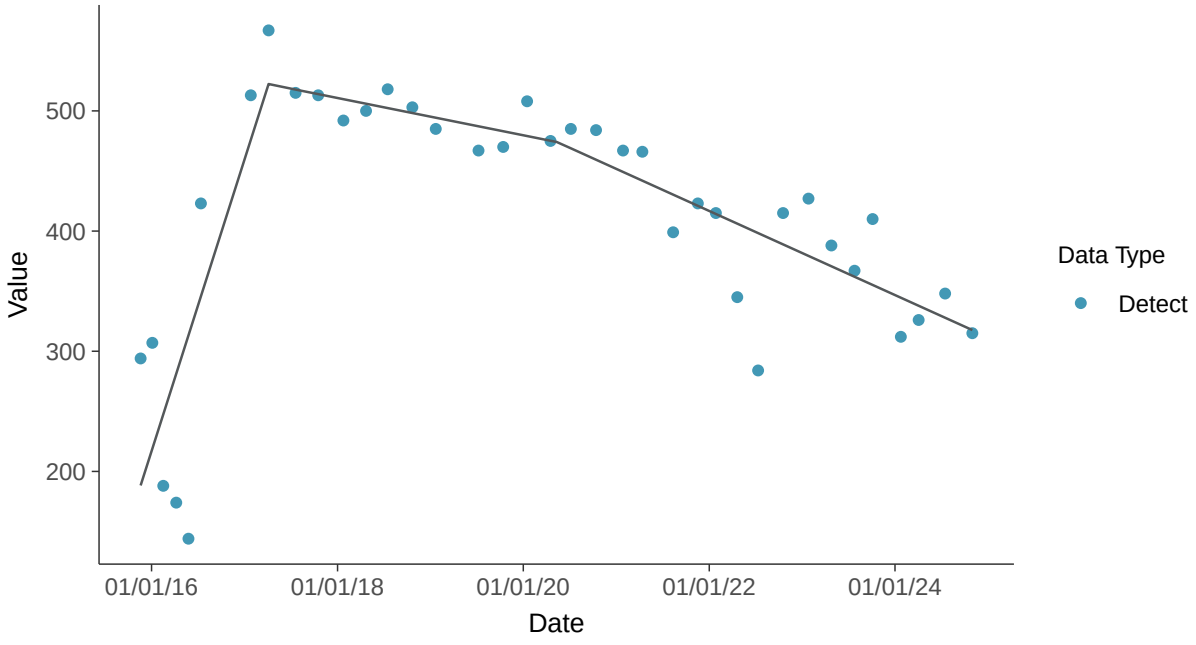
Trend Regression: Piecewise Linear-Linear

Chloride, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride, MW-4 (mg/L)

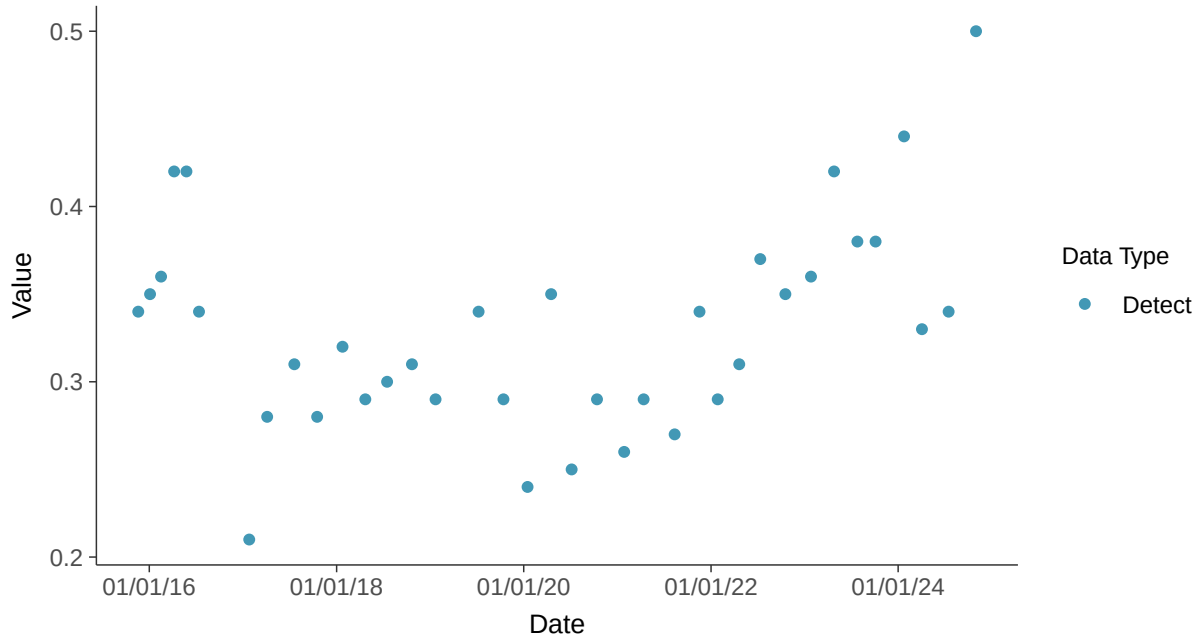


App. III: Fluoride, MW-4

ID: 04_02_112

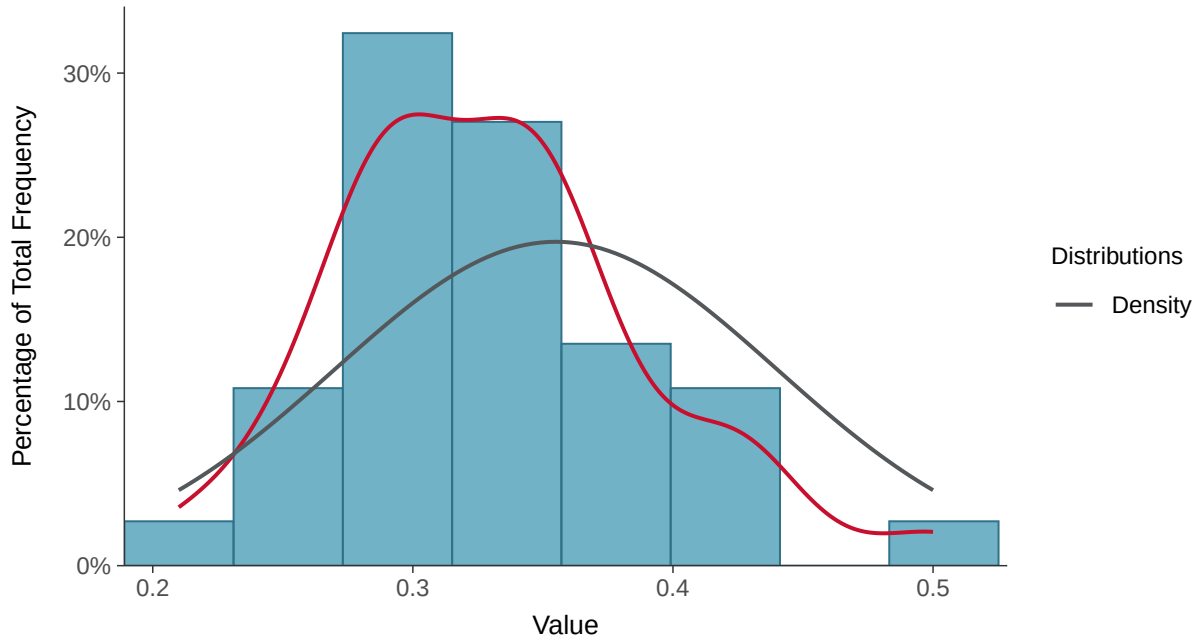
Scatter Plot

Fluoride, MW-4 (mg/L)



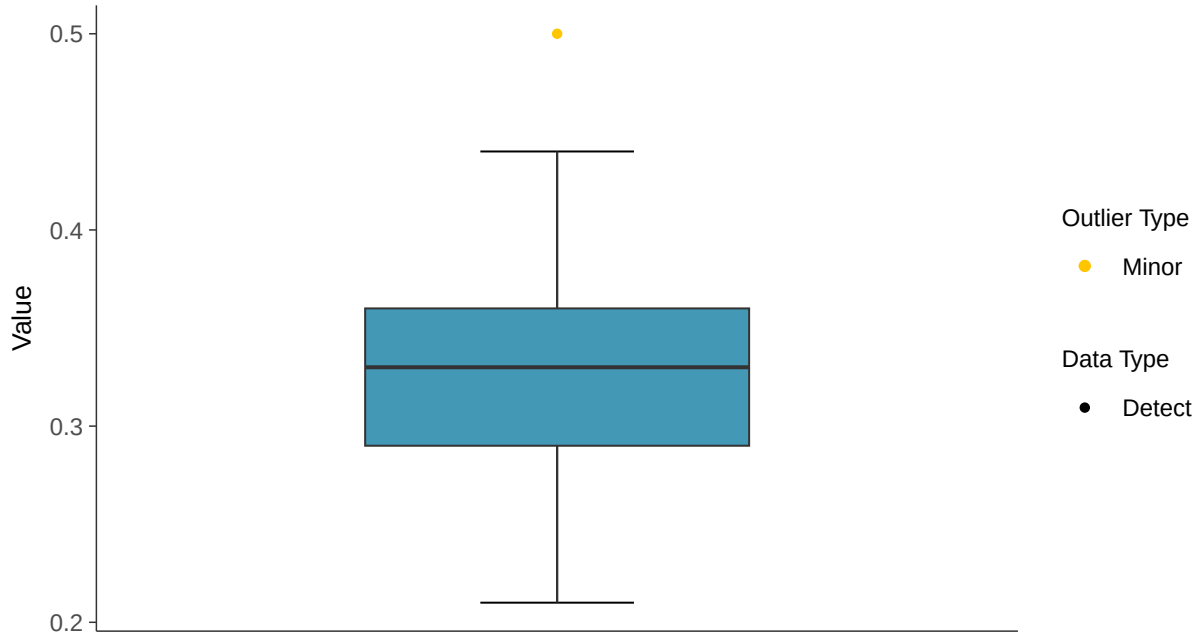
Histogram

Fluoride, MW-4 (mg/L)



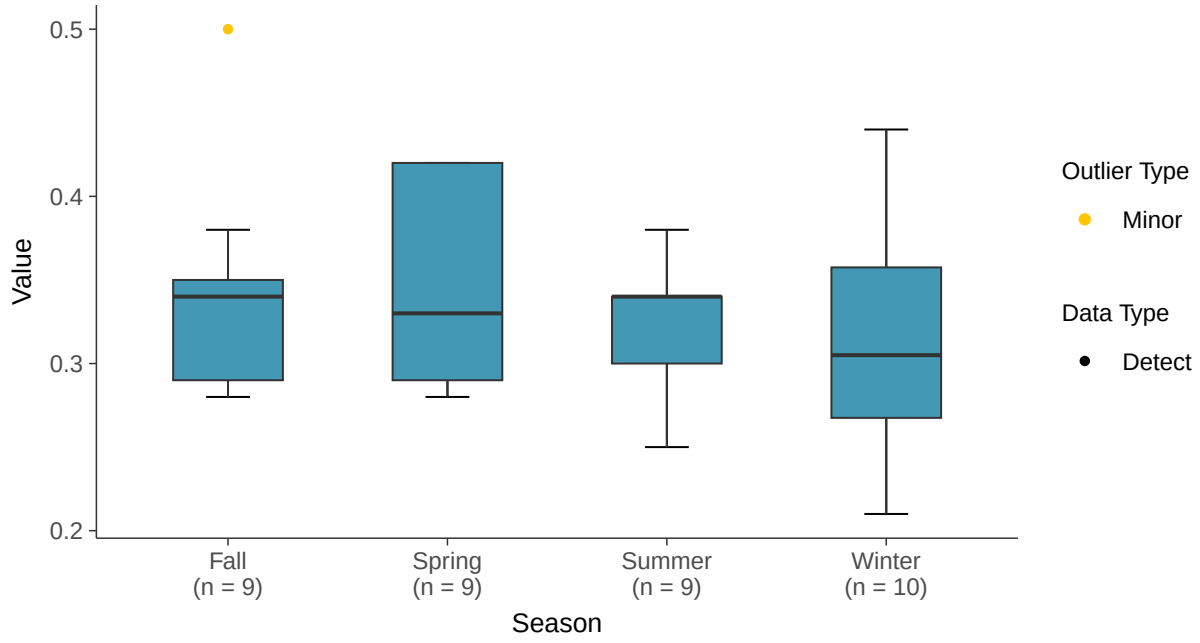
Boxplot

Fluoride, MW-4 (mg/L)



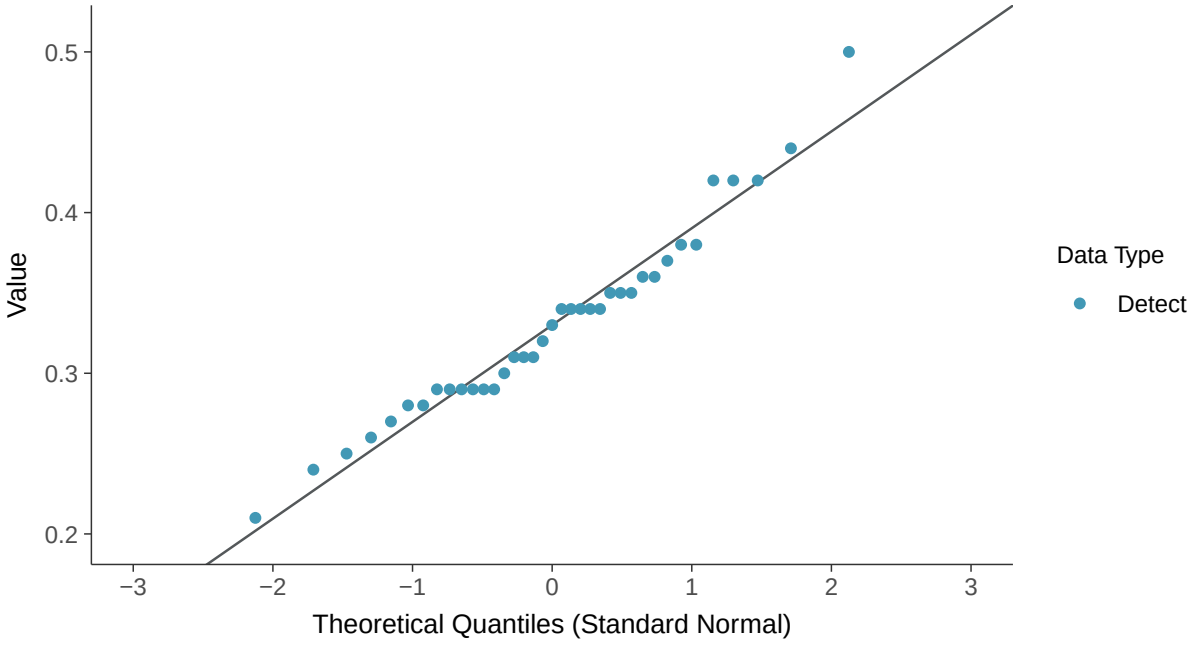
Boxplot by Season

Fluoride, MW-4 (mg/L)



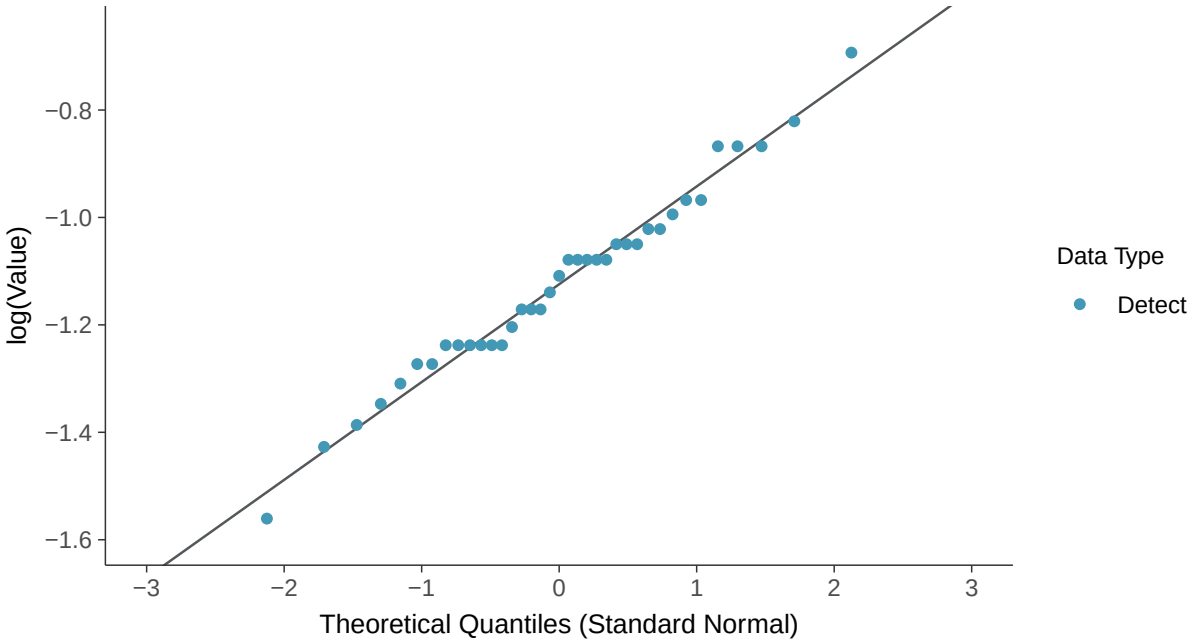
Normal Q-Q plot

Fluoride, MW-4 (mg/L)



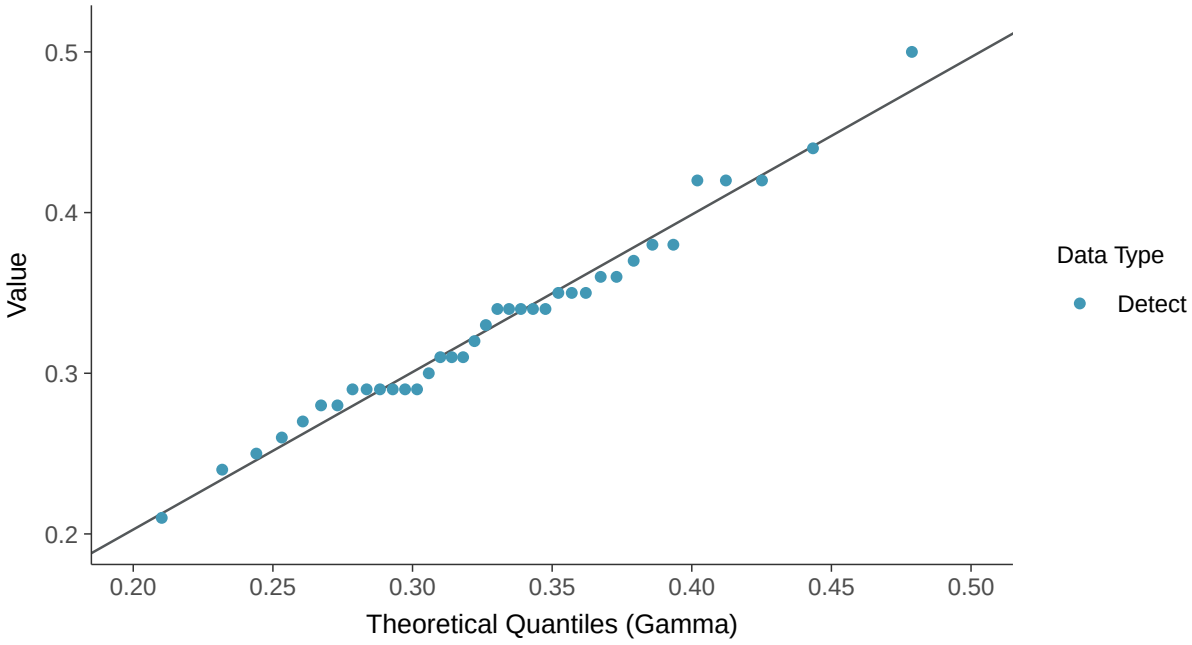
Lognormal Q-Q plot

Fluoride, MW-4 (mg/L)



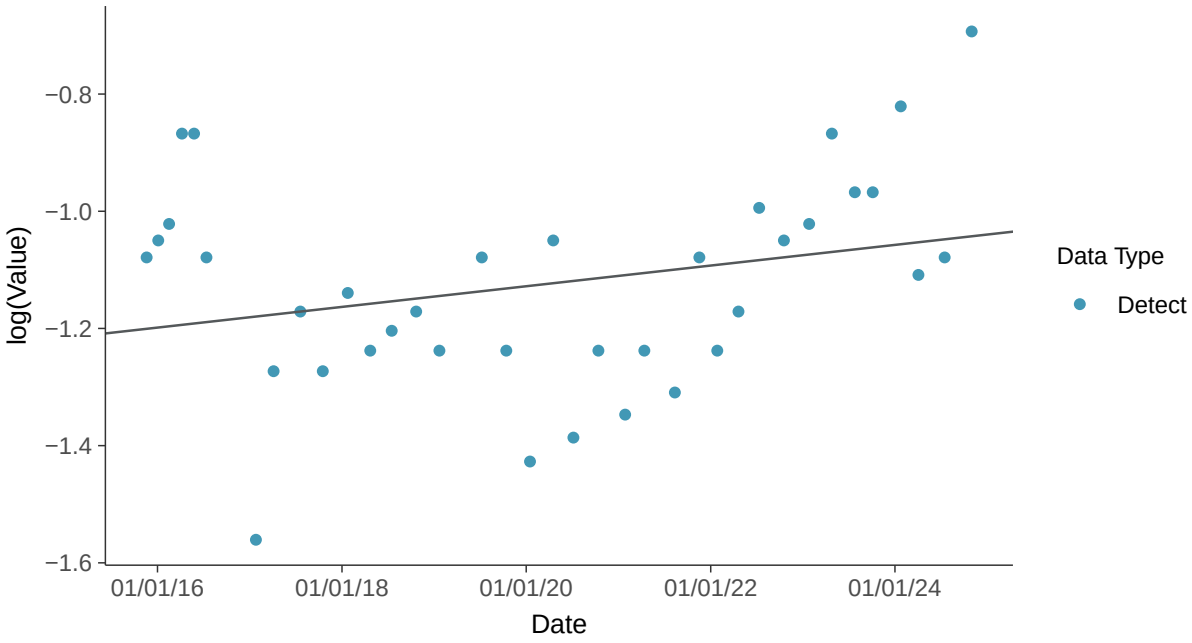
Gamma Q-Q plot

Fluoride, MW-4 (mg/L)



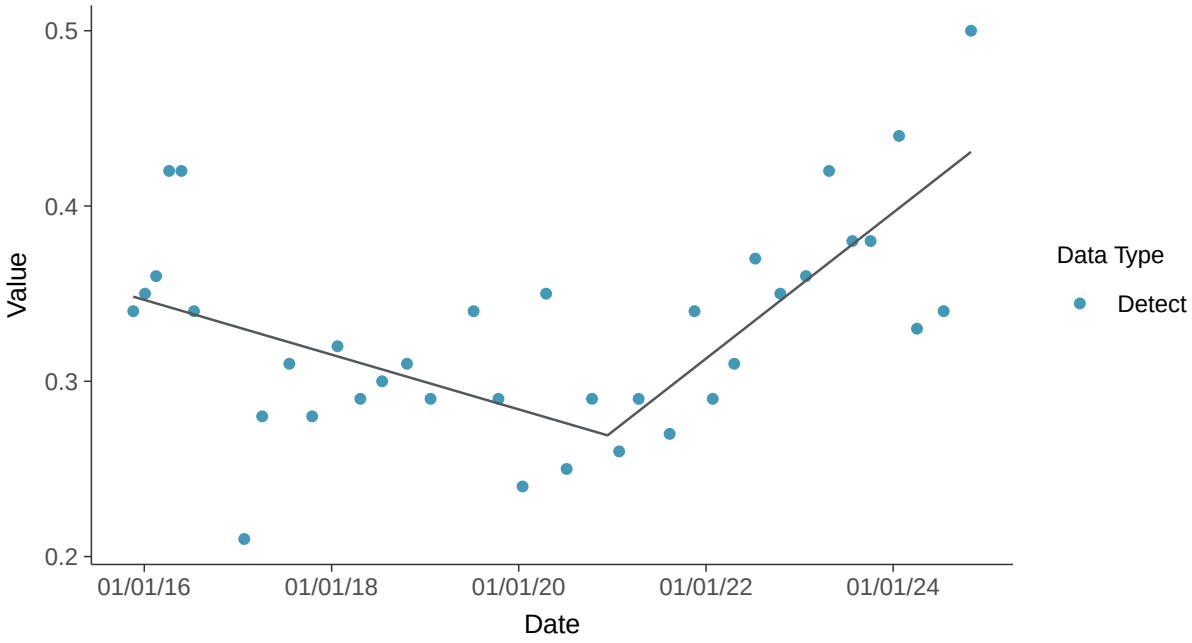
Trend Regression: Lognormal MLE

Fluoride, MW-4 (mg/L)



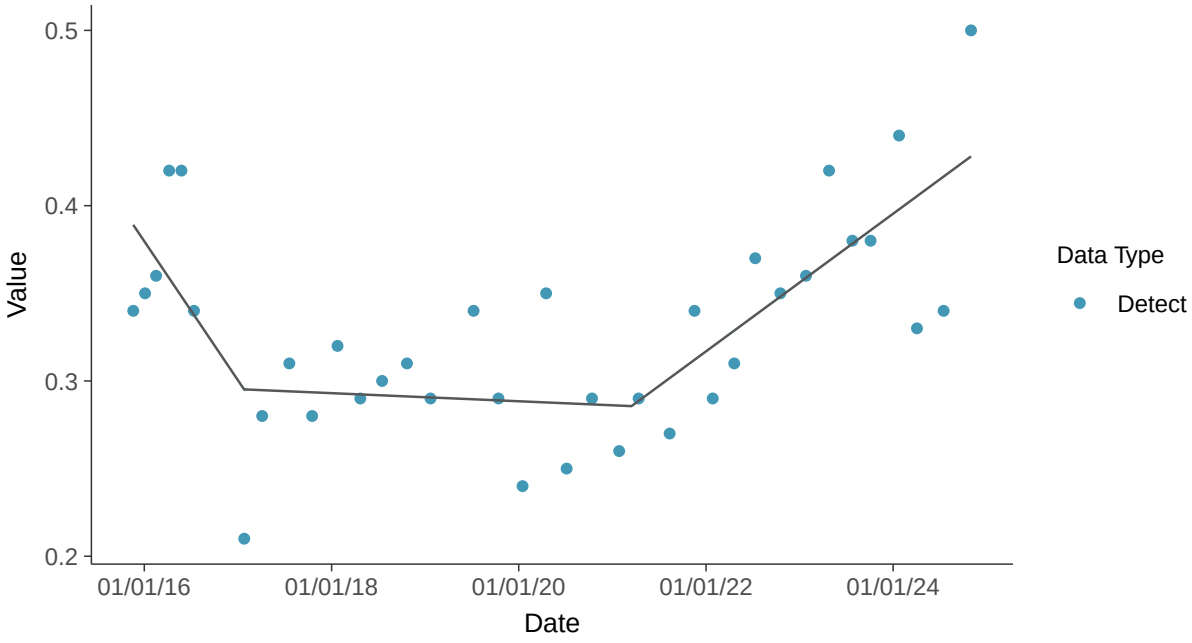
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-4 (mg/L)

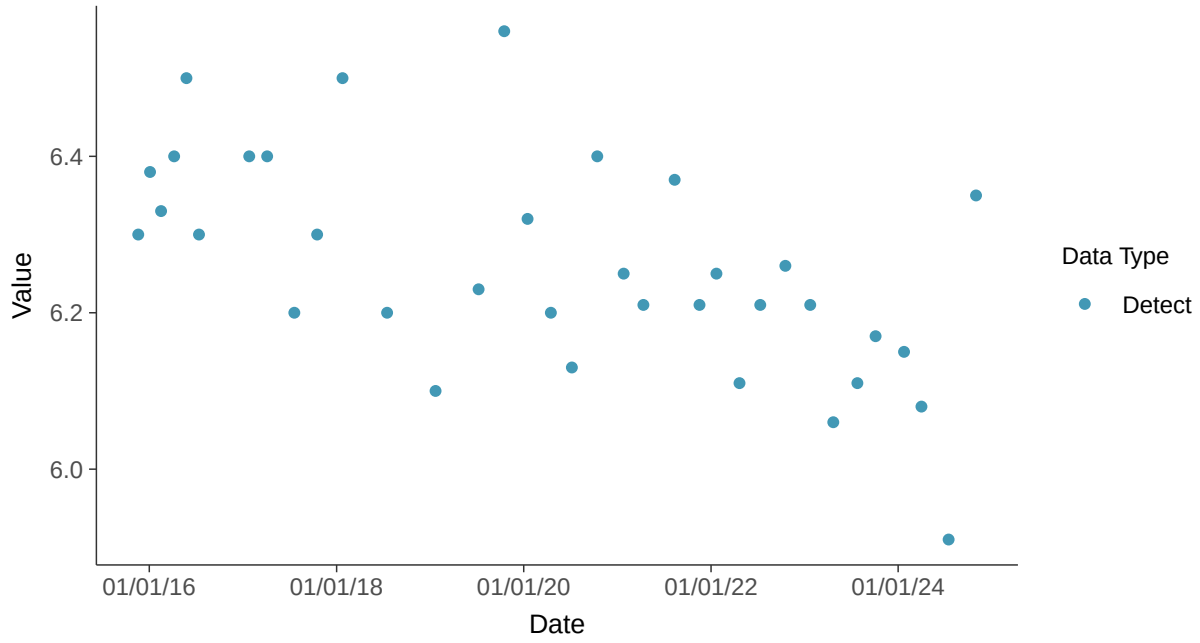


App. III: pH (Field), MW-4

ID: 04_02_118

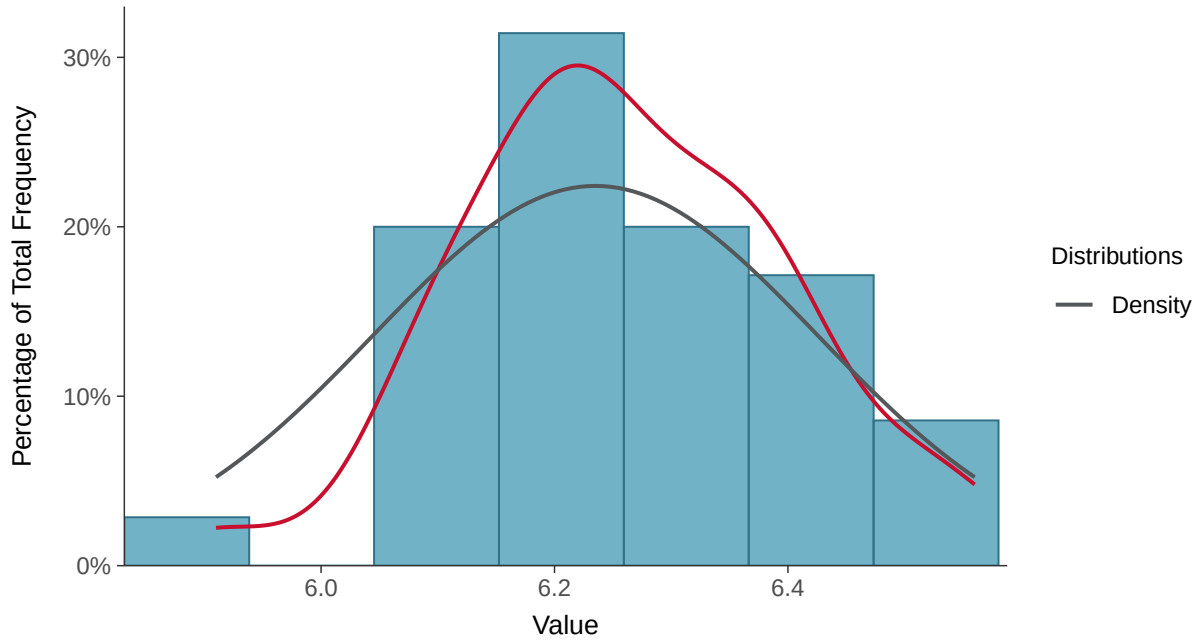
Scatter Plot

pH (Field), MW-4 (S.U.)



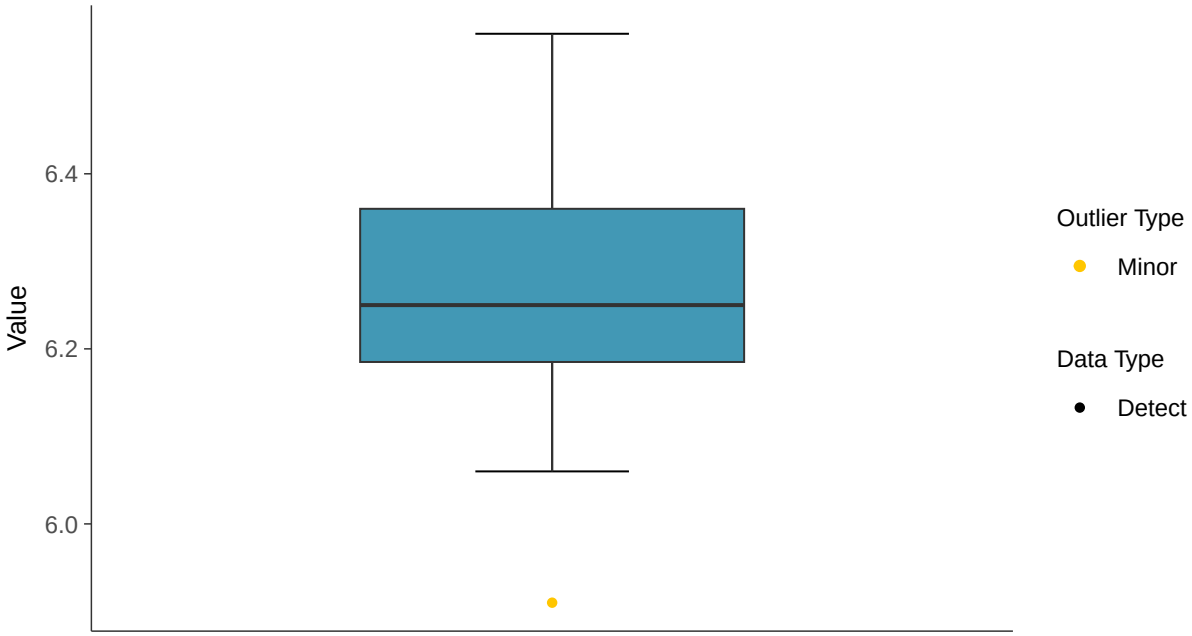
Histogram

pH (Field), MW-4 (S.U.)



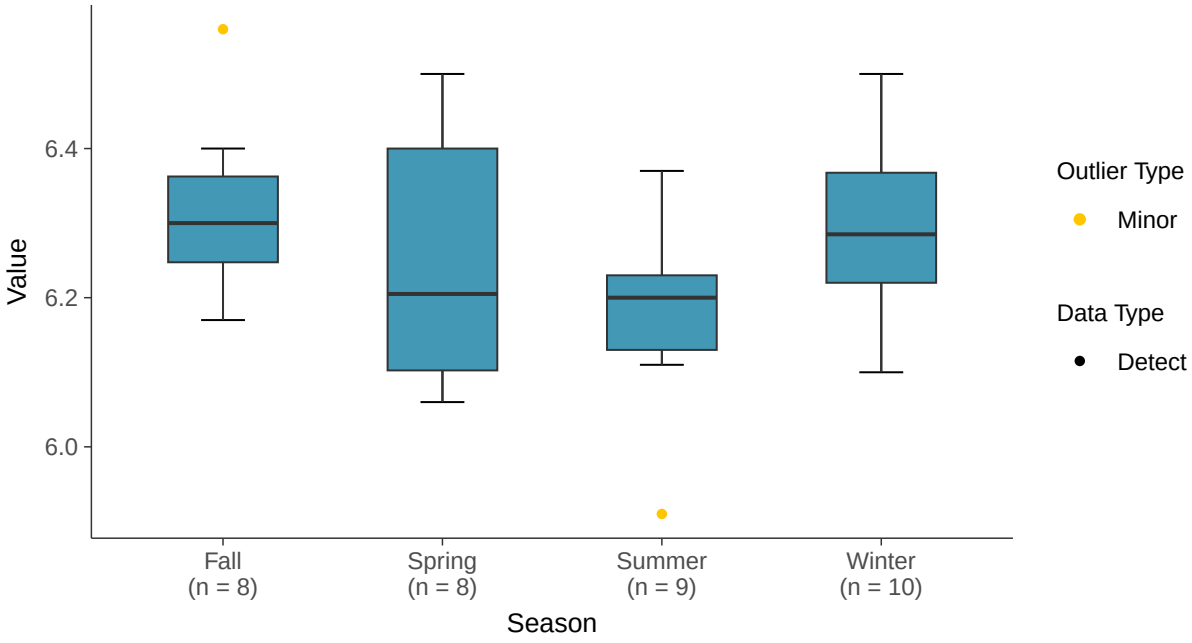
Boxplot

pH (Field), MW-4 (S.U.)



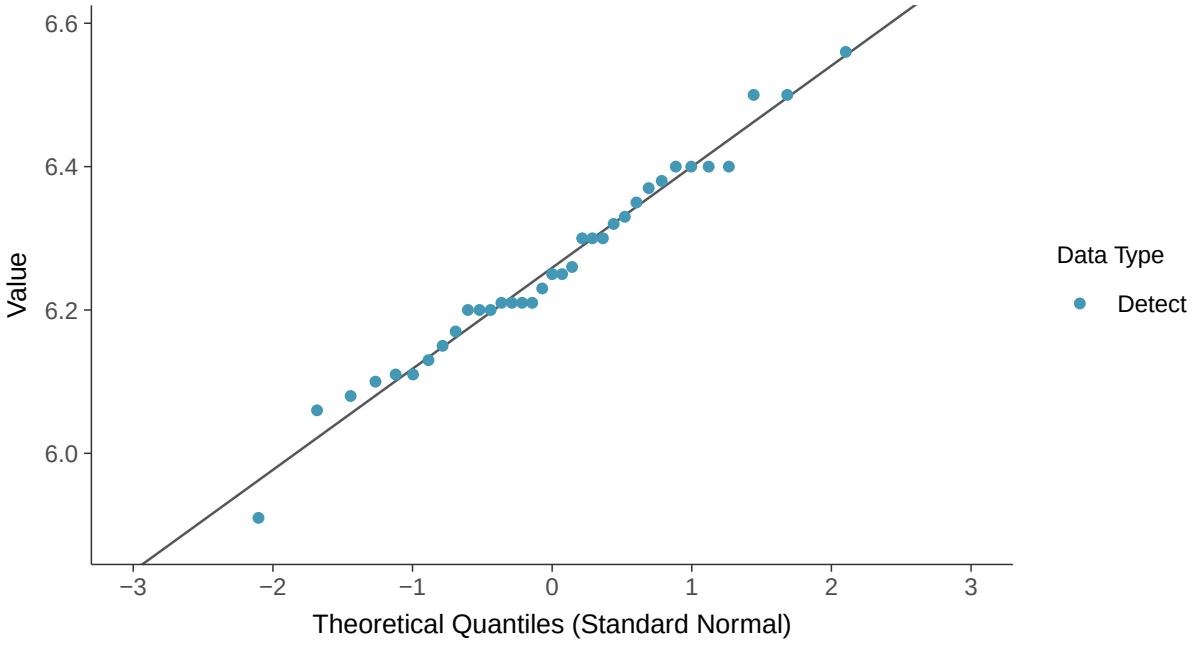
Boxplot by Season

pH (Field), MW-4 (S.U.)



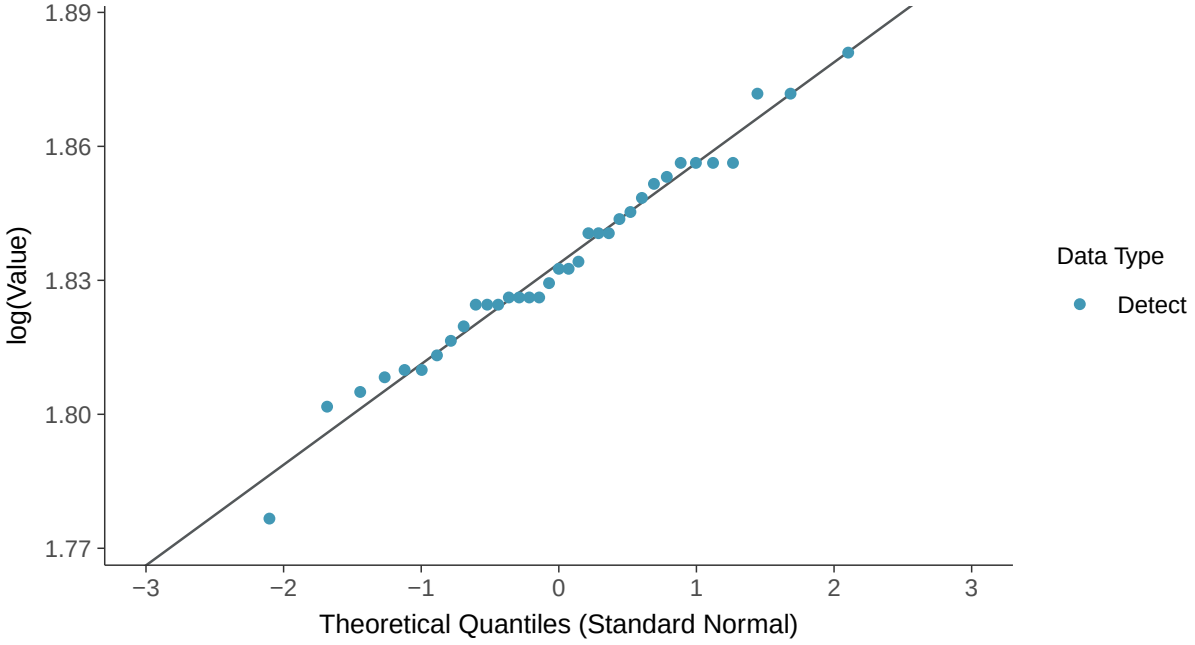
Normal Q-Q plot

pH (Field), MW-4 (S.U.)



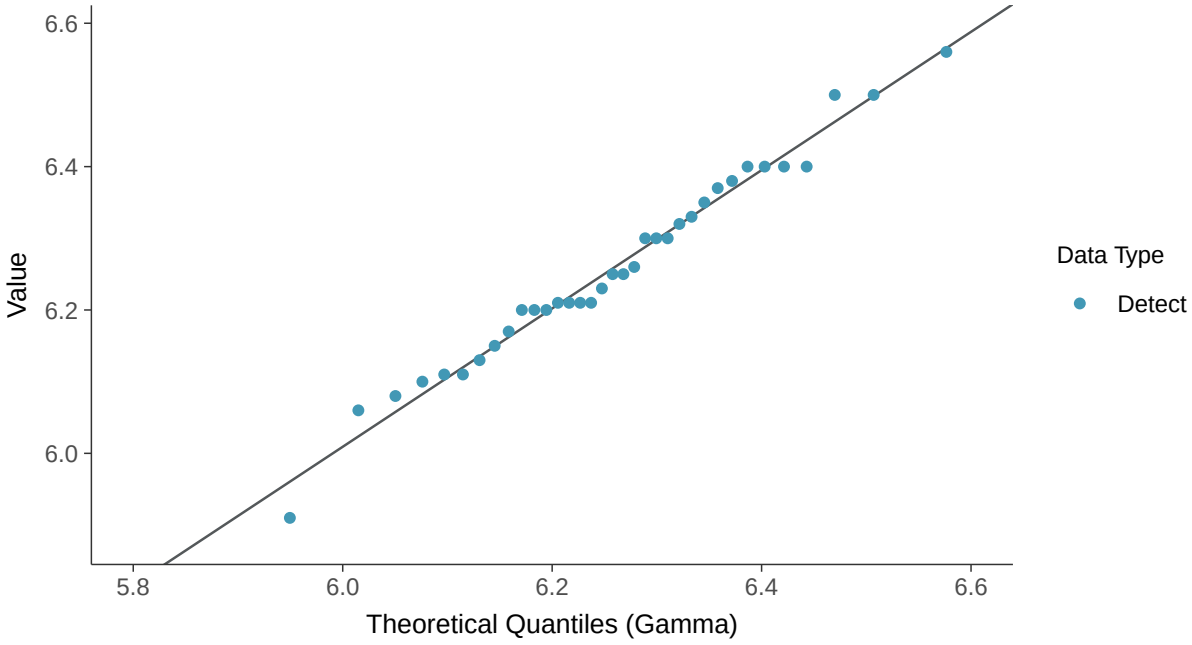
Lognormal Q-Q plot

pH (Field), MW-4 (S.U.)



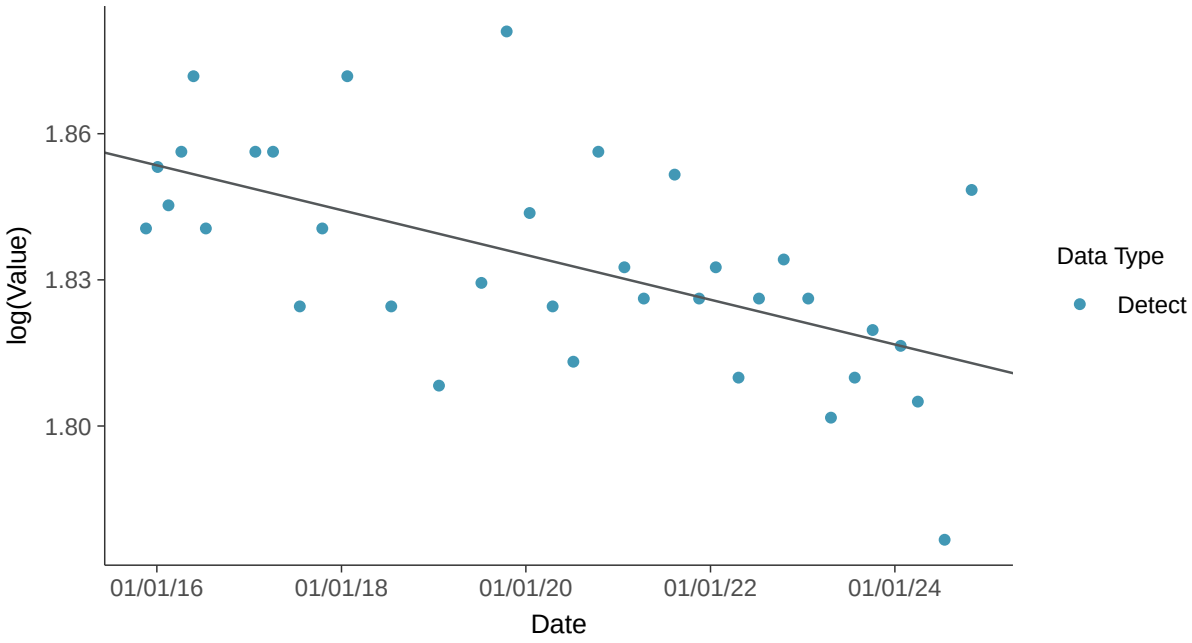
Gamma Q-Q plot

pH (Field), MW-4 (S.U.)



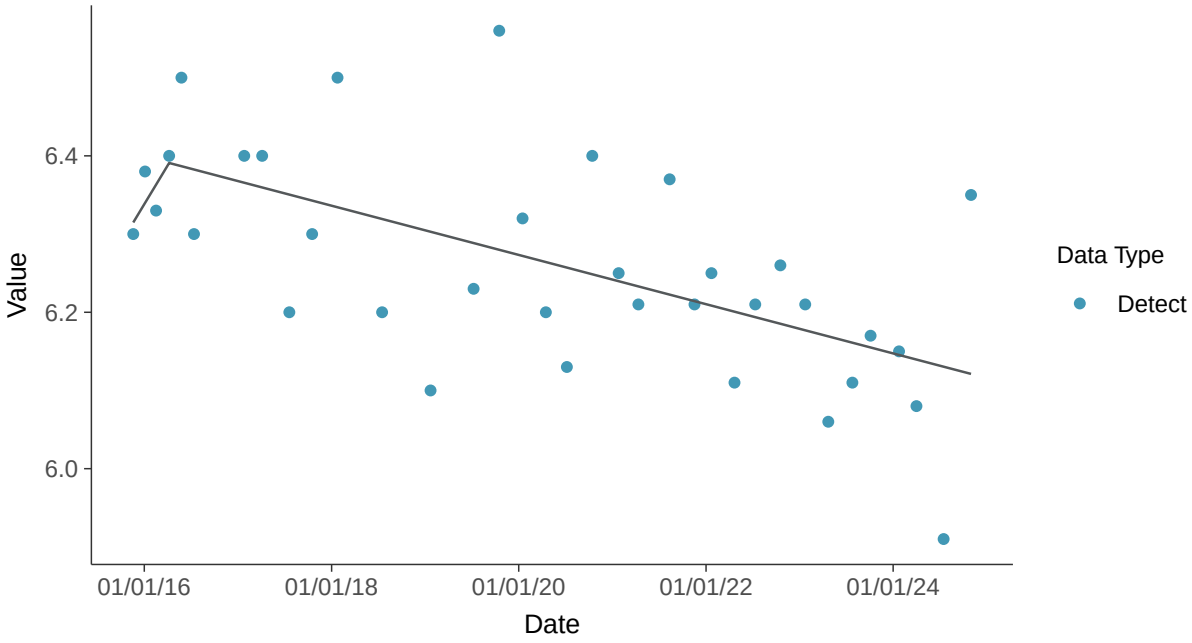
Trend Regression: Lognormal MLE

pH (Field), MW-4 (S.U.)



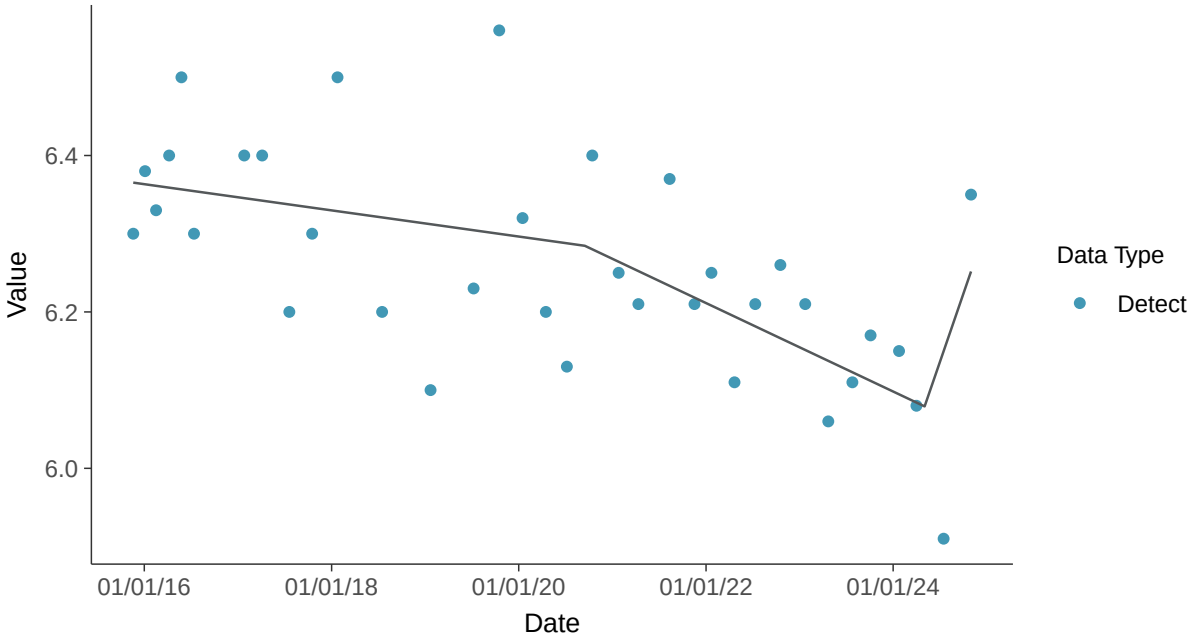
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-4 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-4 (S.U.)

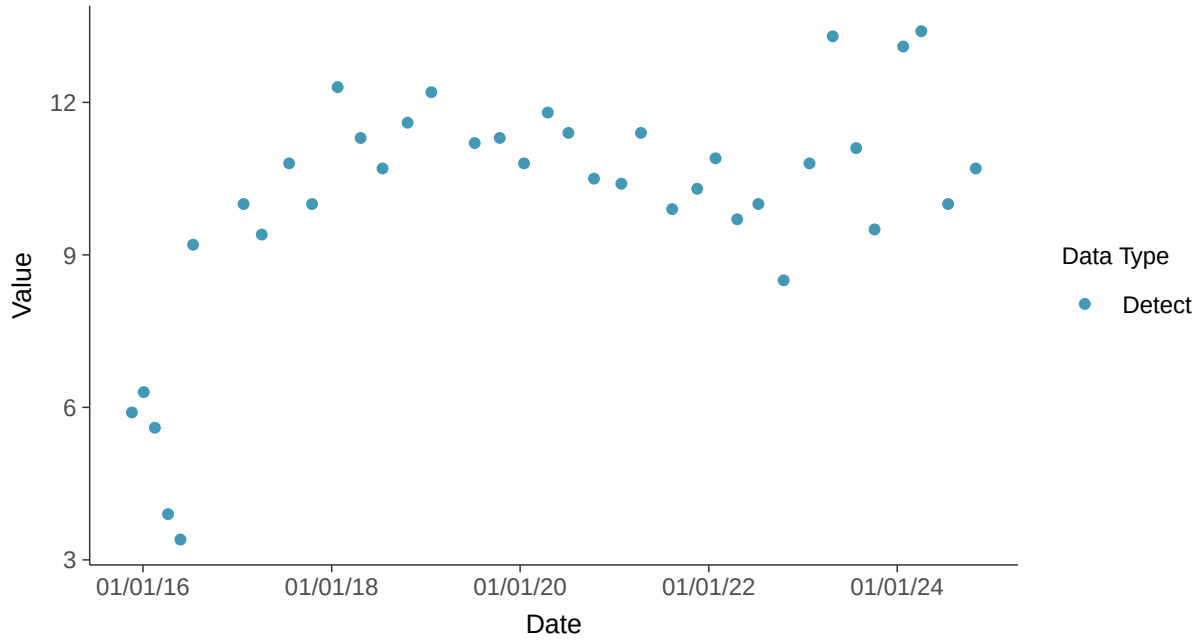


App. III: Sulfate, MW-4

ID: 04_02_123

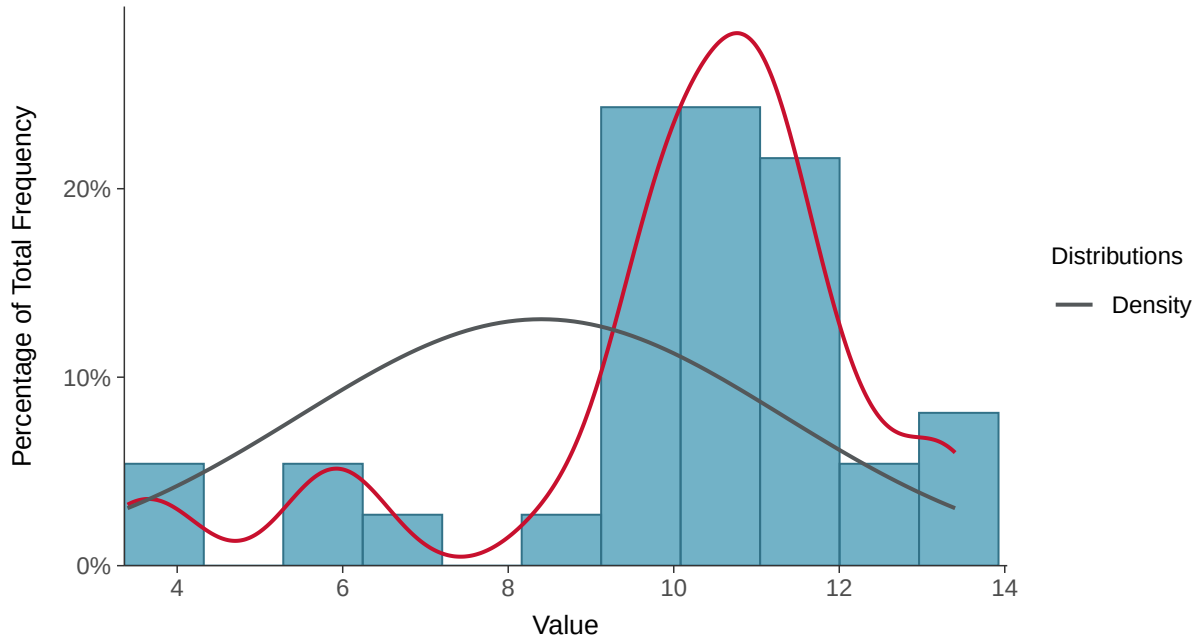
Scatter Plot

Sulfate, MW-4 (mg/L)



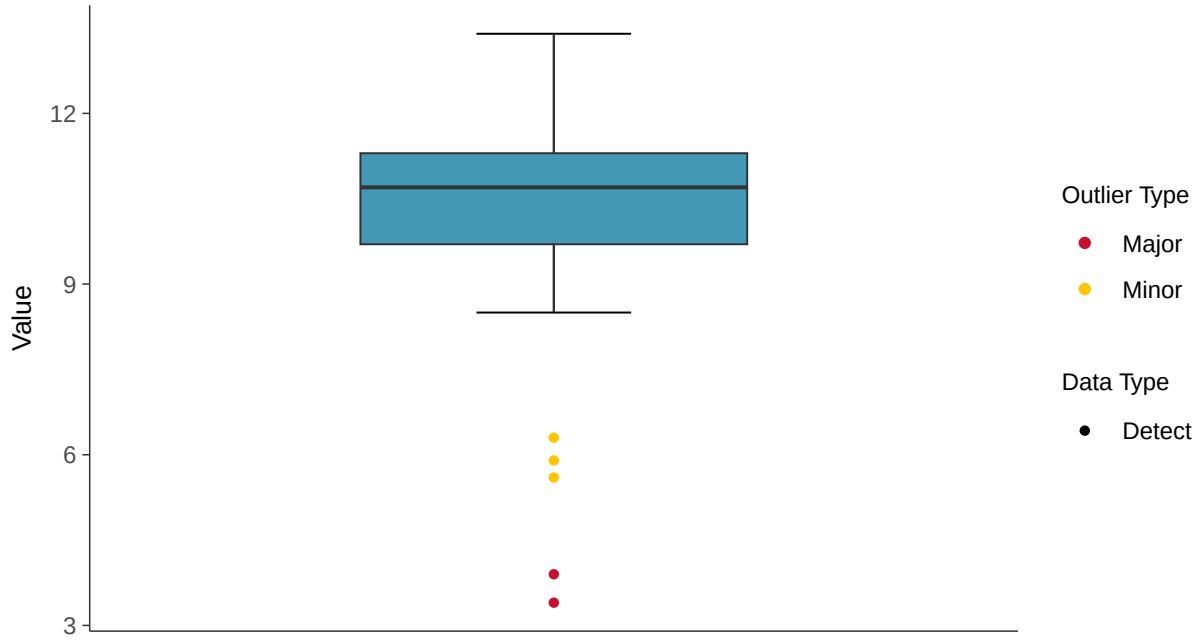
Histogram

Sulfate, MW-4 (mg/L)



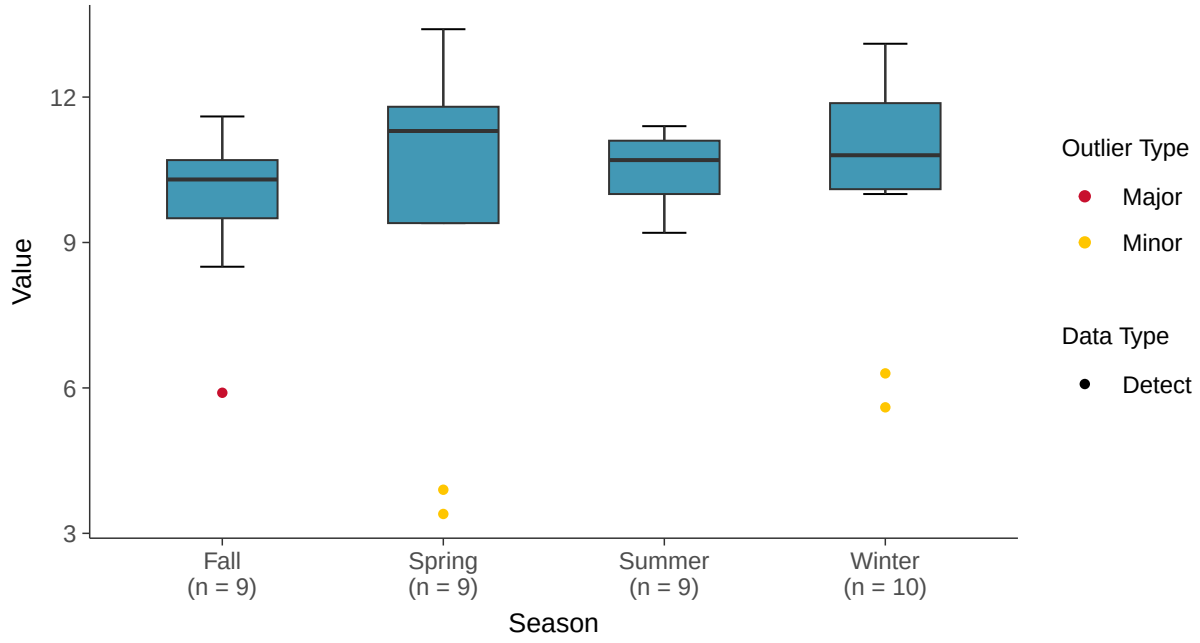
Boxplot

Sulfate, MW-4 (mg/L)



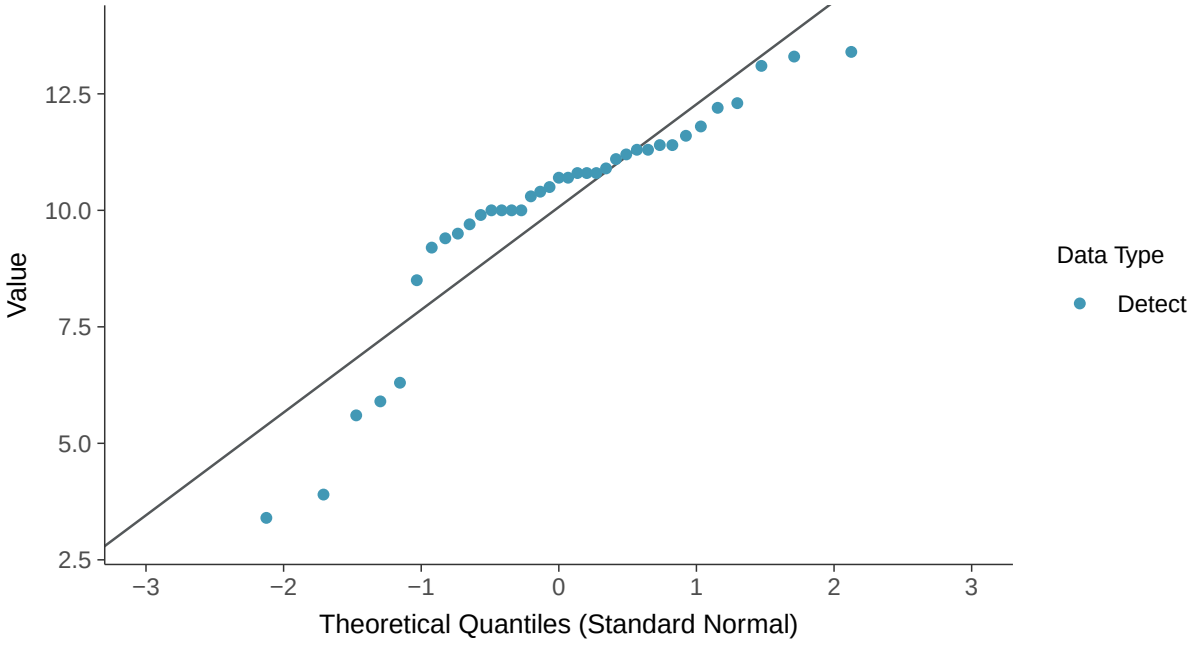
Boxplot by Season

Sulfate, MW-4 (mg/L)



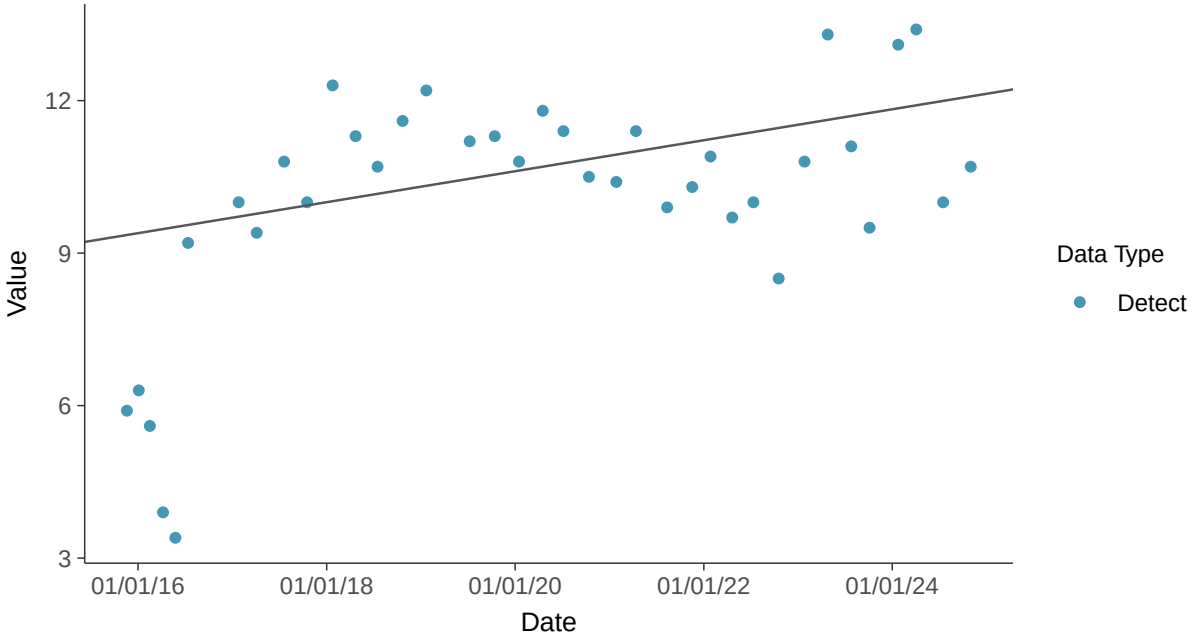
Normal Q-Q plot

Sulfate, MW-4 (mg/L)



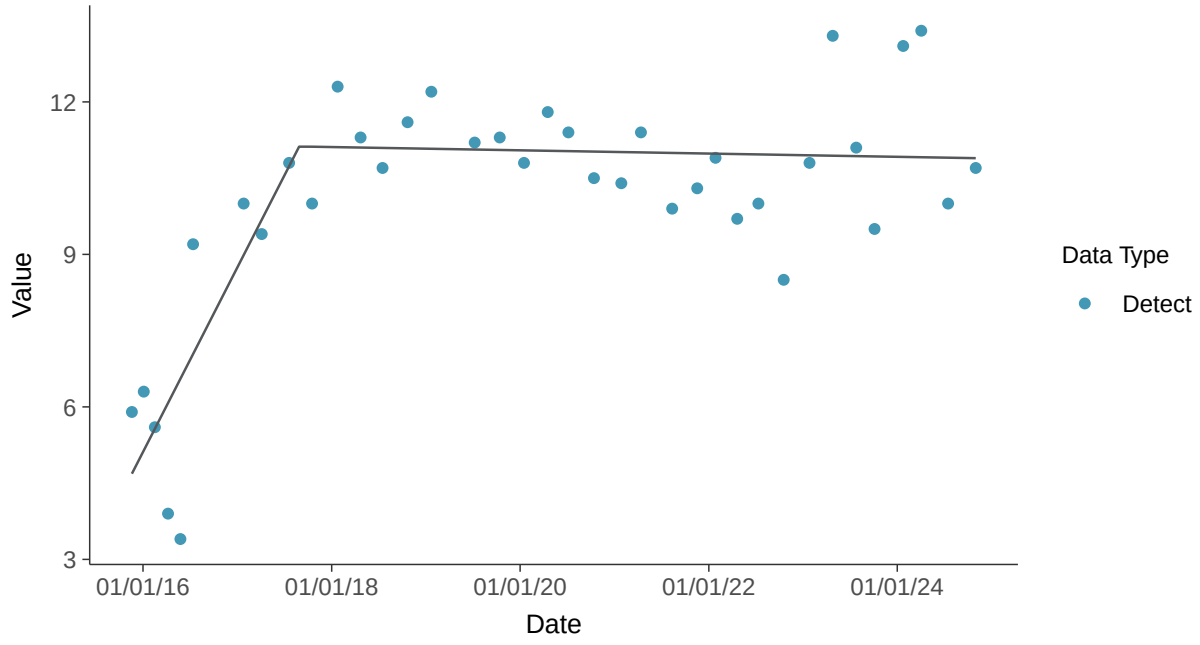
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-4 (mg/L)



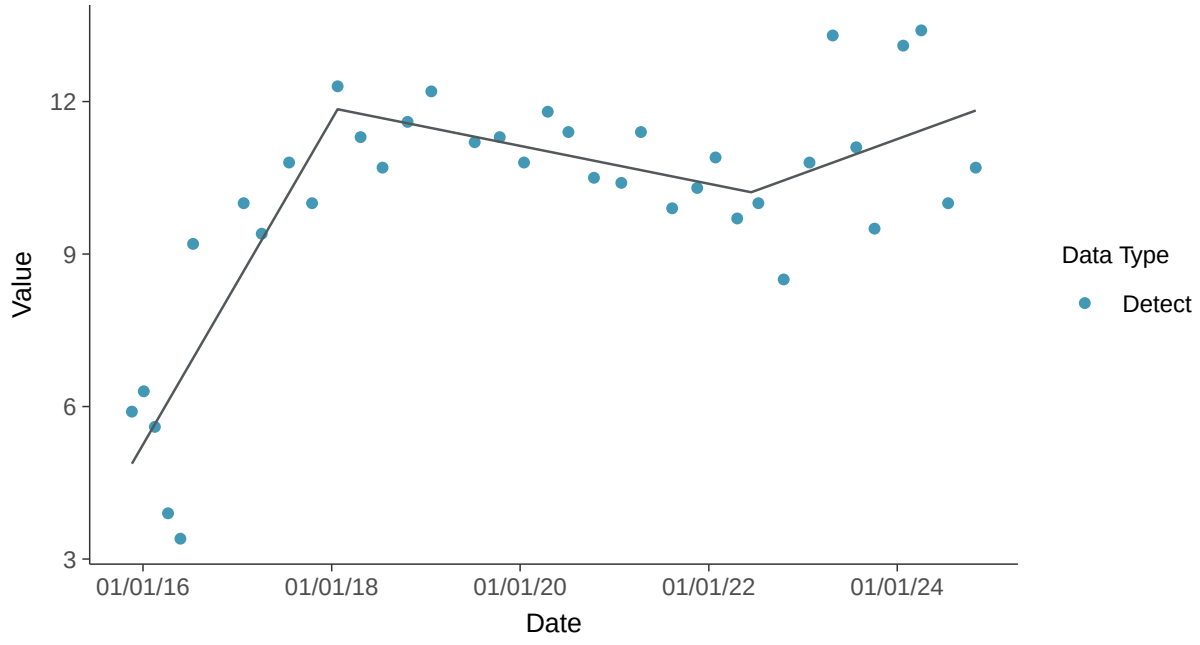
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-4 (mg/L)

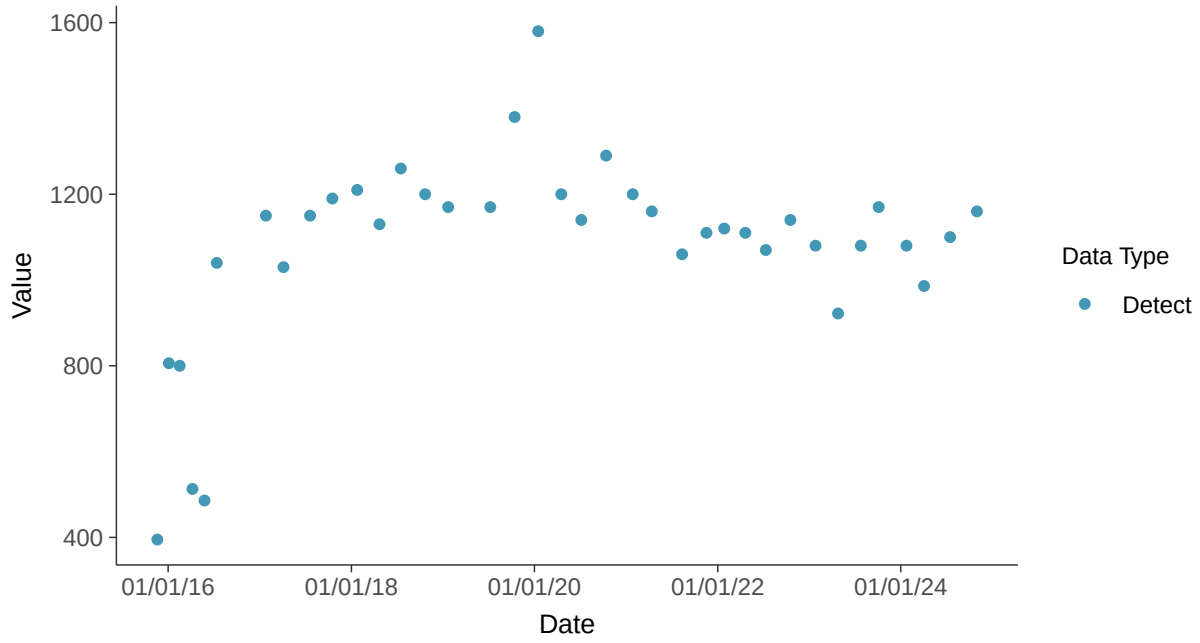


App. III: Total Dissolved Solids, MW-4

ID: 04_02_125

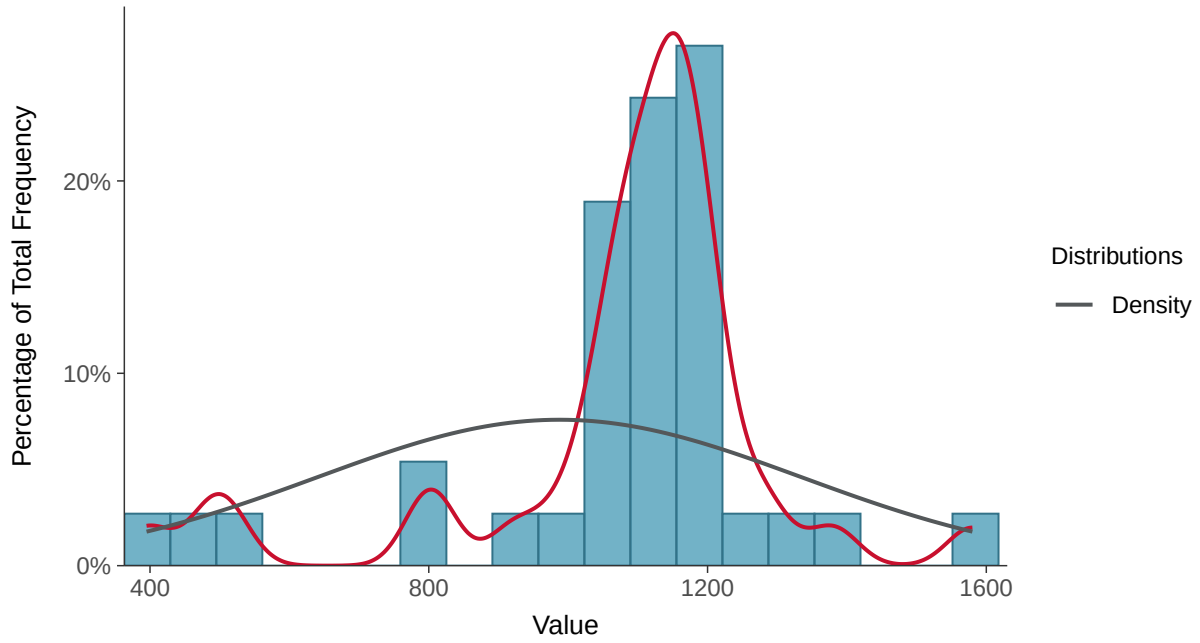
Scatter Plot

Total Dissolved Solids, MW-4 (mg/L)



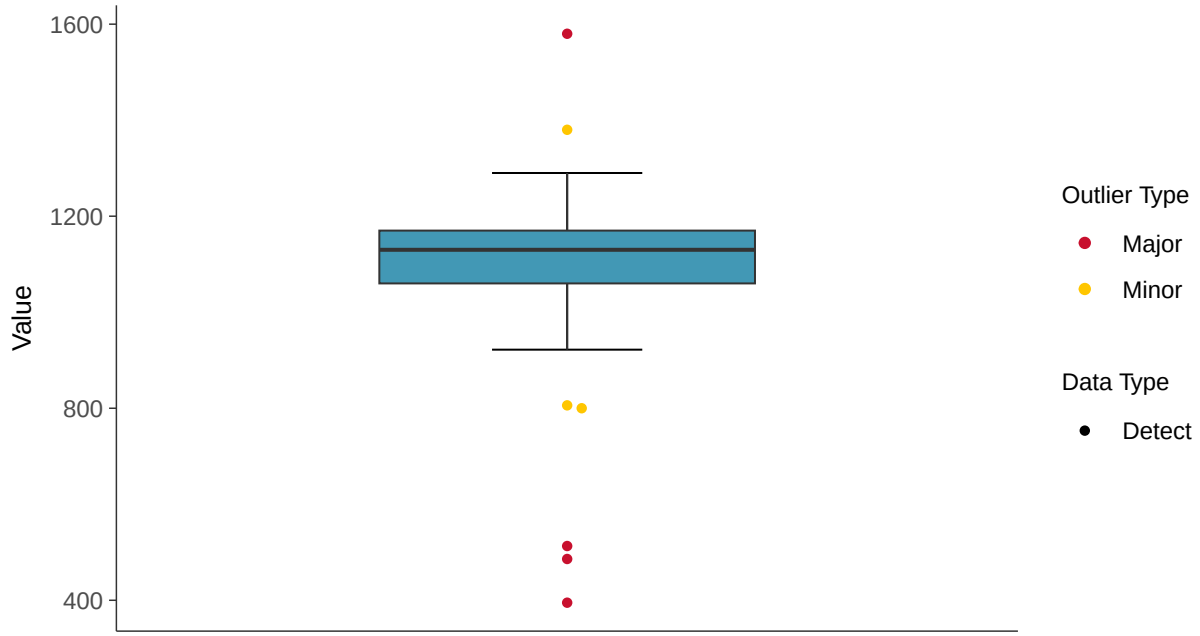
Histogram

Total Dissolved Solids, MW-4 (mg/L)



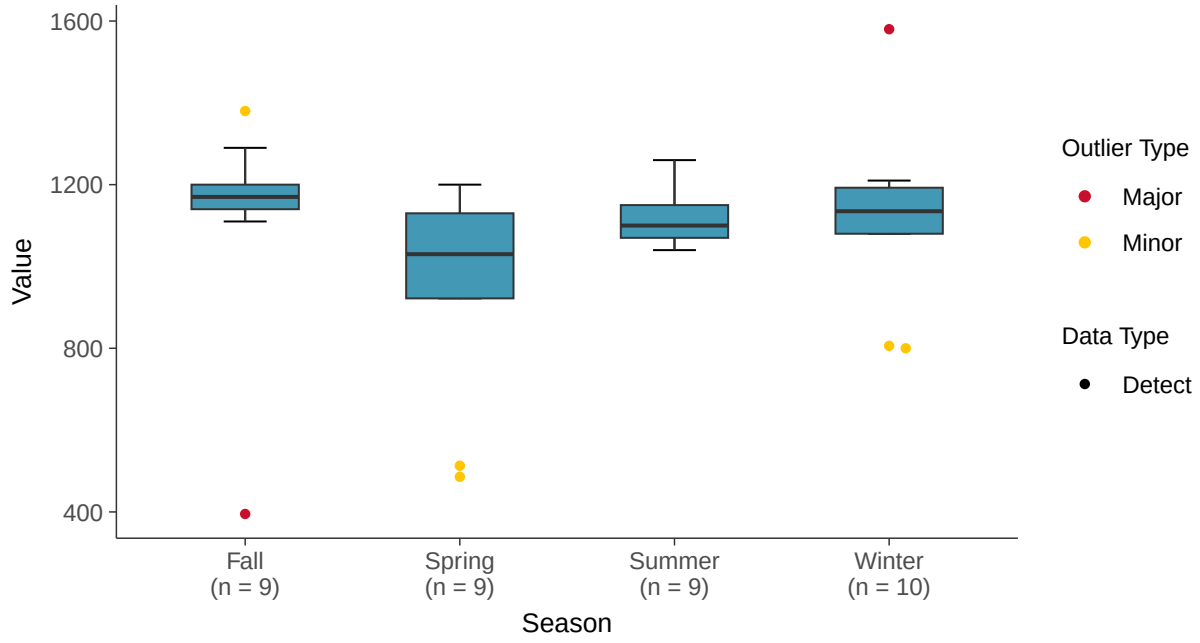
Boxplot

Total Dissolved Solids, MW-4 (mg/L)



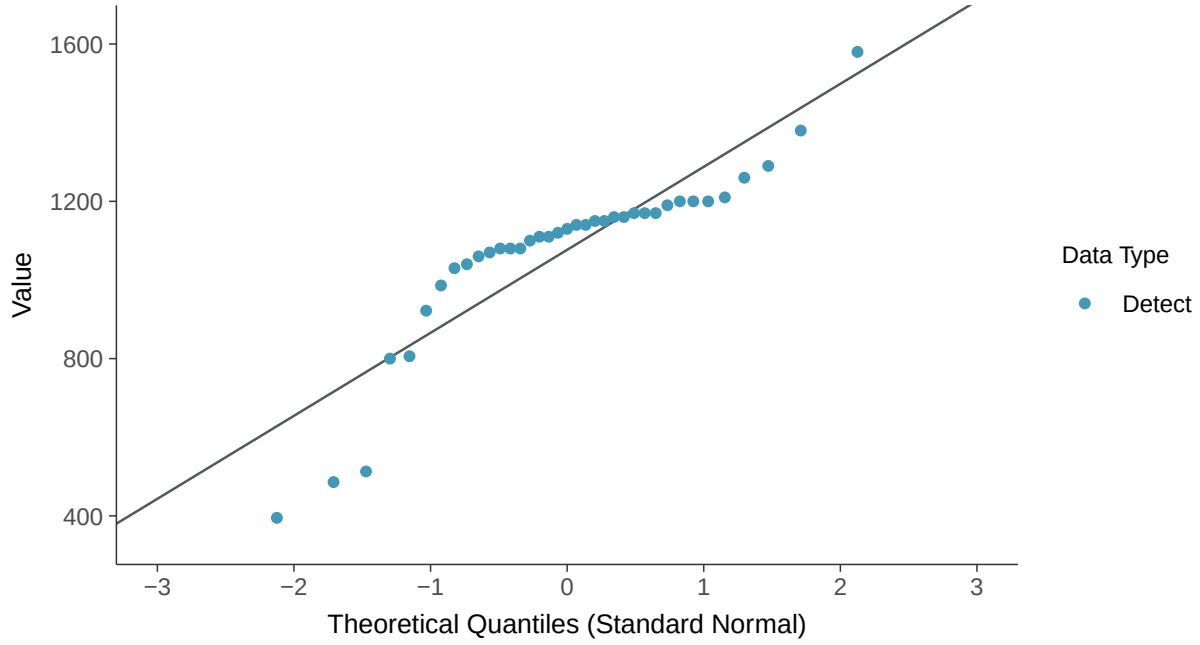
Boxplot by Season

Total Dissolved Solids, MW-4 (mg/L)



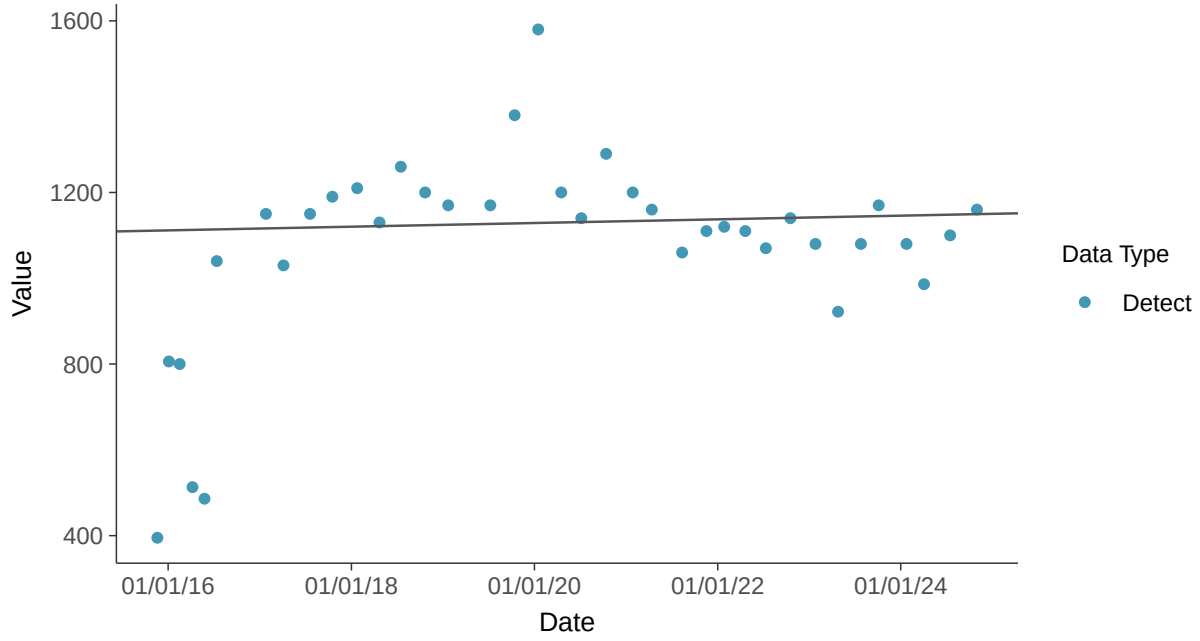
Normal Q-Q plot

Total Dissolved Solids, MW-4 (mg/L)



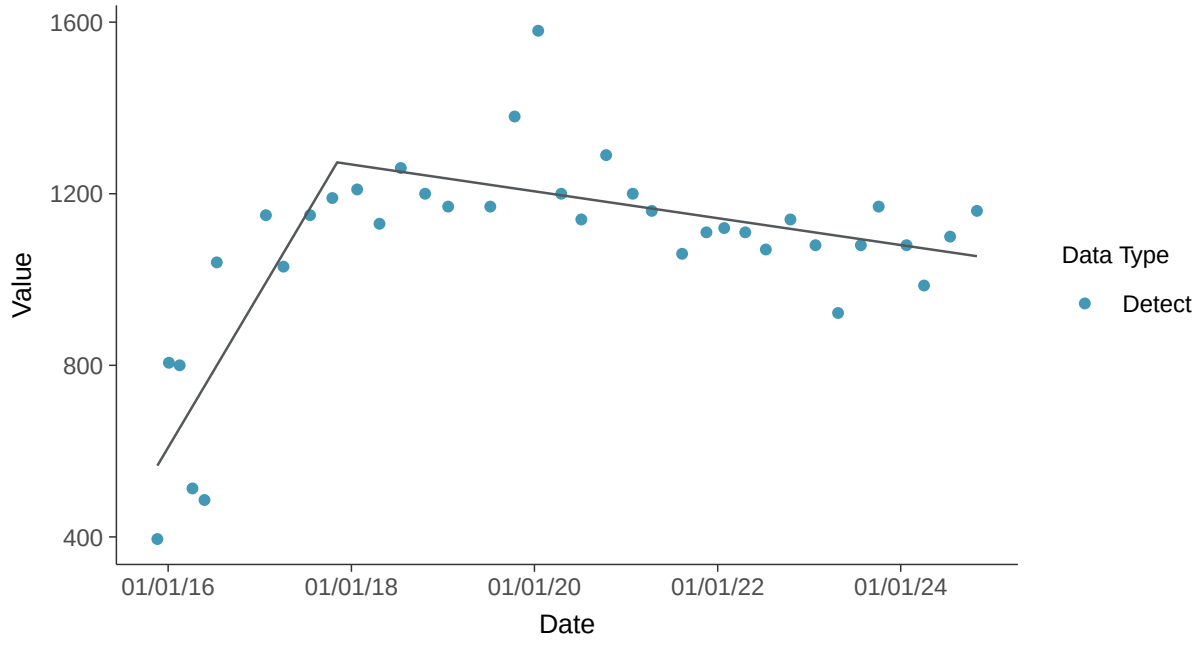
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-4 (mg/L)



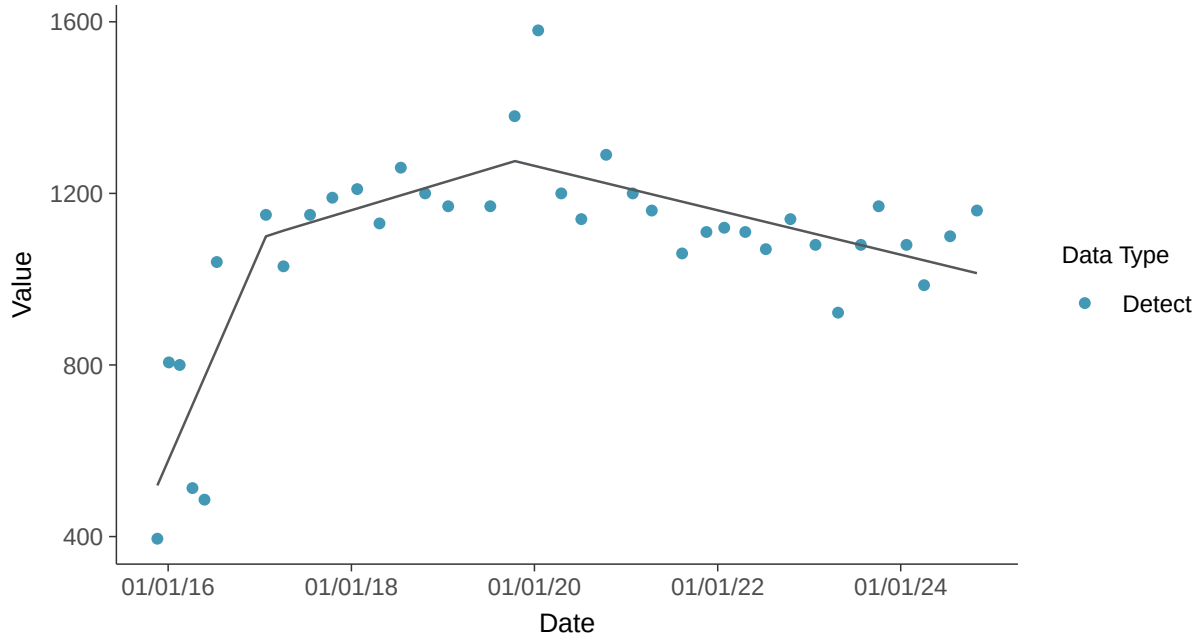
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-4 (mg/L)



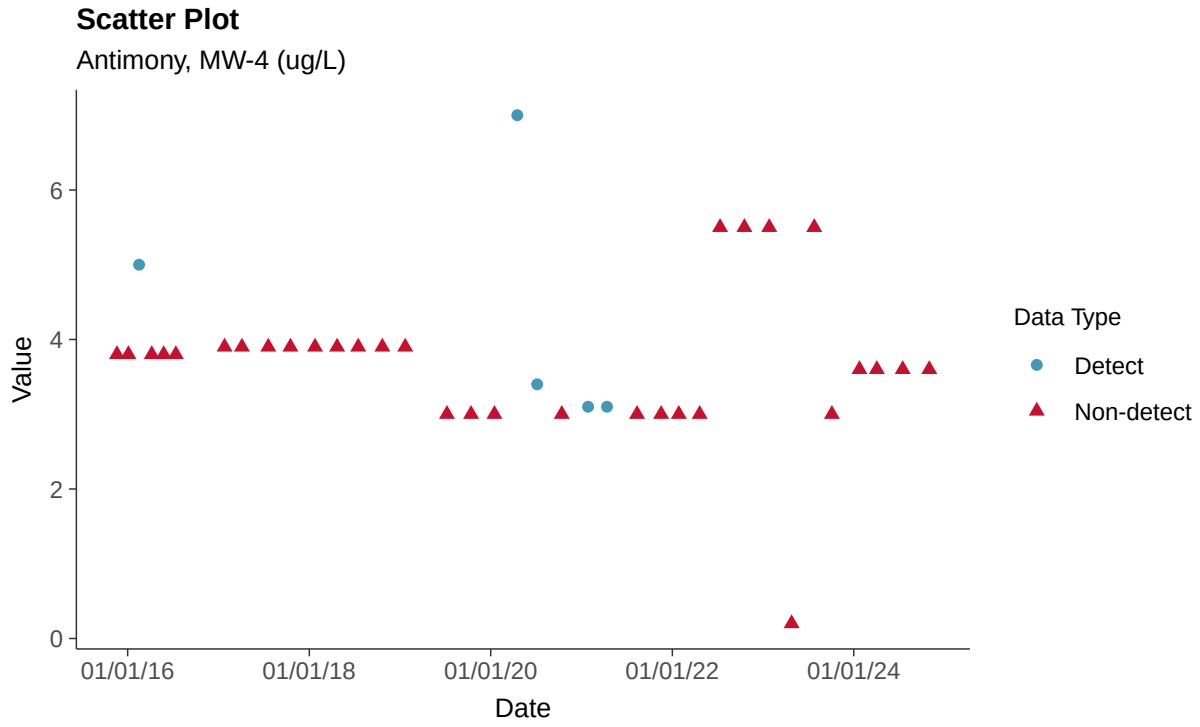
Trend Regression: Piecewise Linear-Linear-Linear

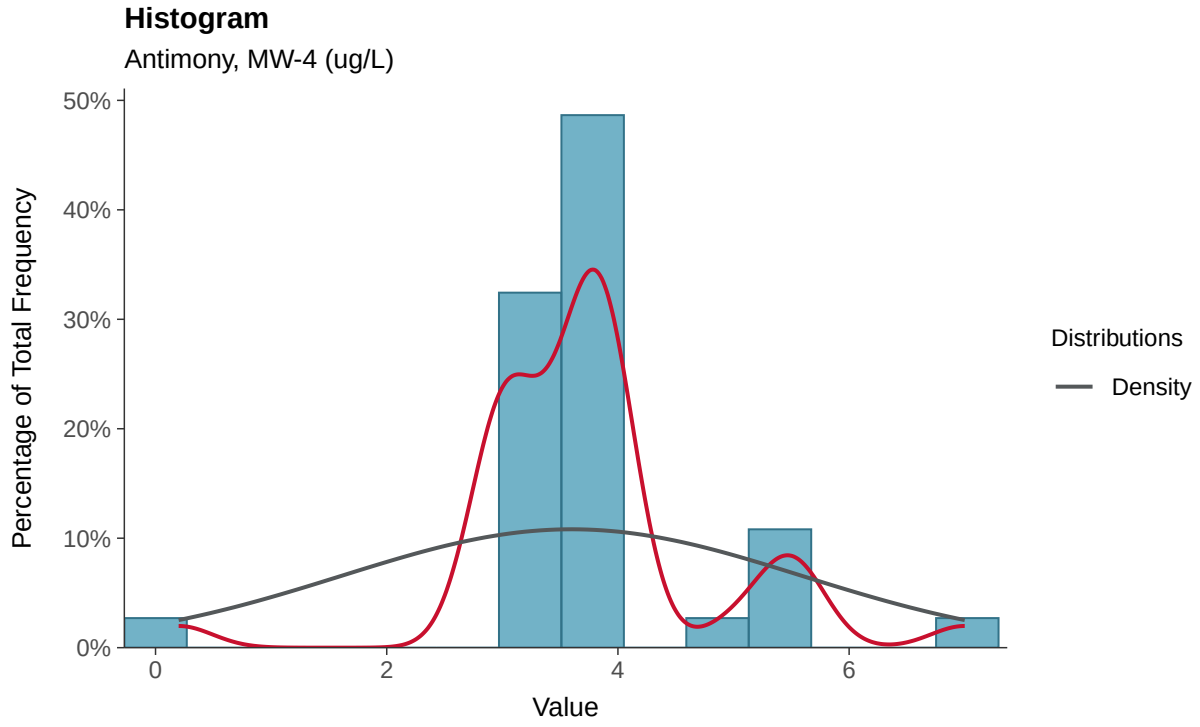
Total Dissolved Solids, MW-4 (mg/L)



App. IV: Antimony, MW-4

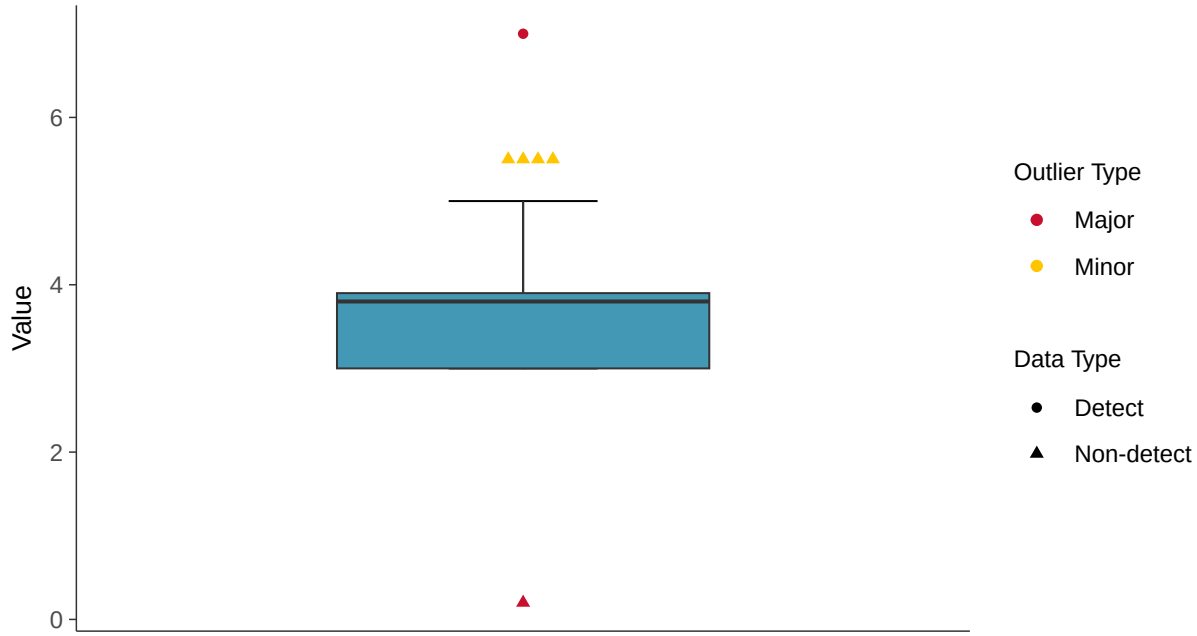
ID: 04_03_101





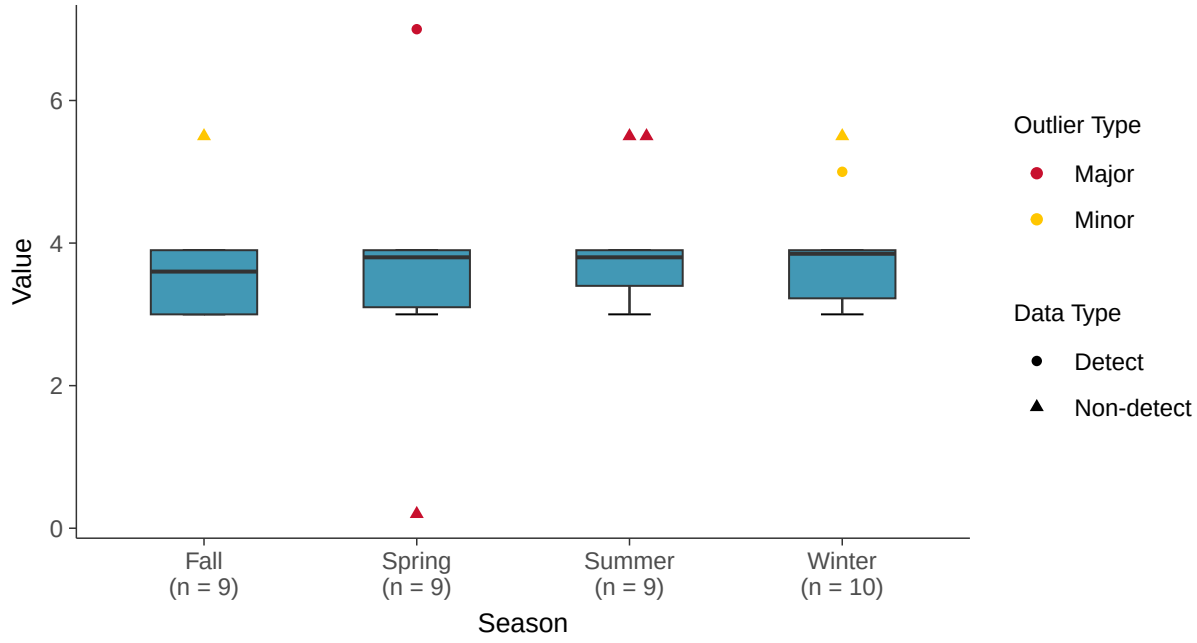
Boxplot

Antimony, MW-4 (ug/L)



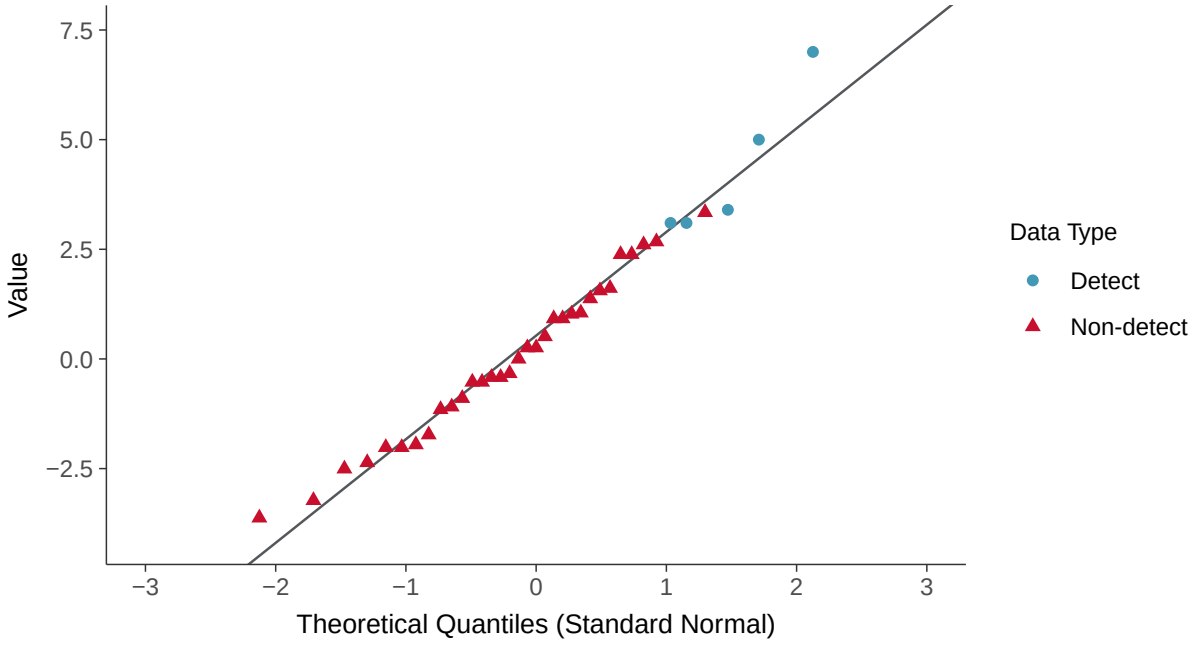
Boxplot by Season

Antimony, MW-4 (ug/L)



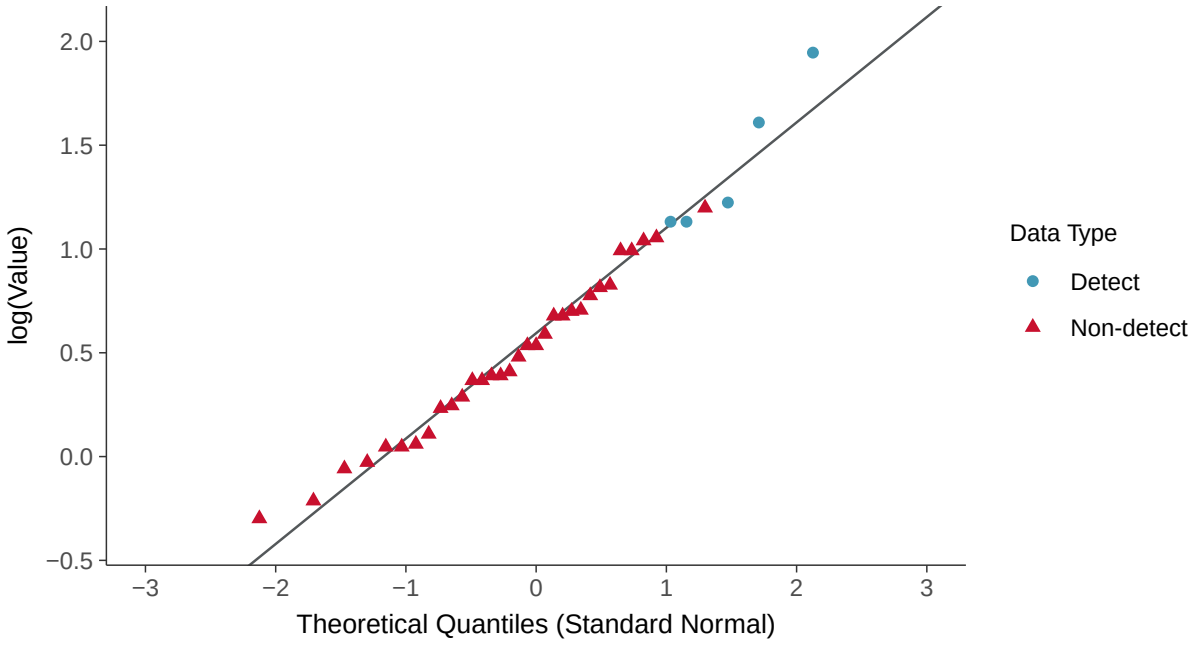
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



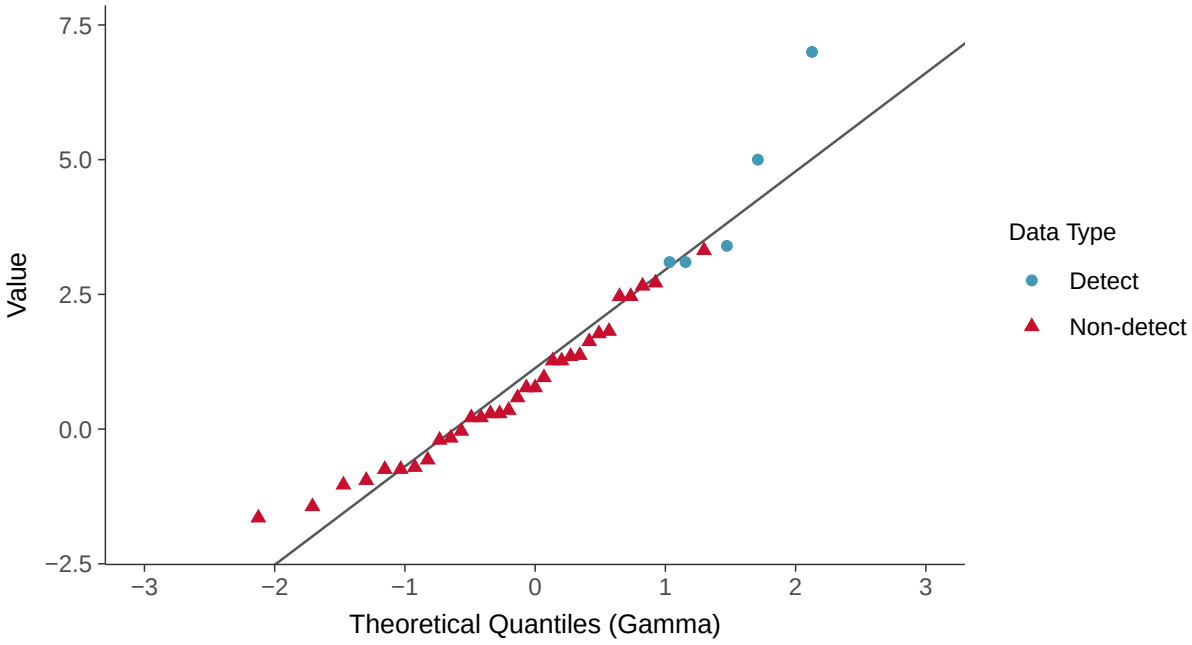
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



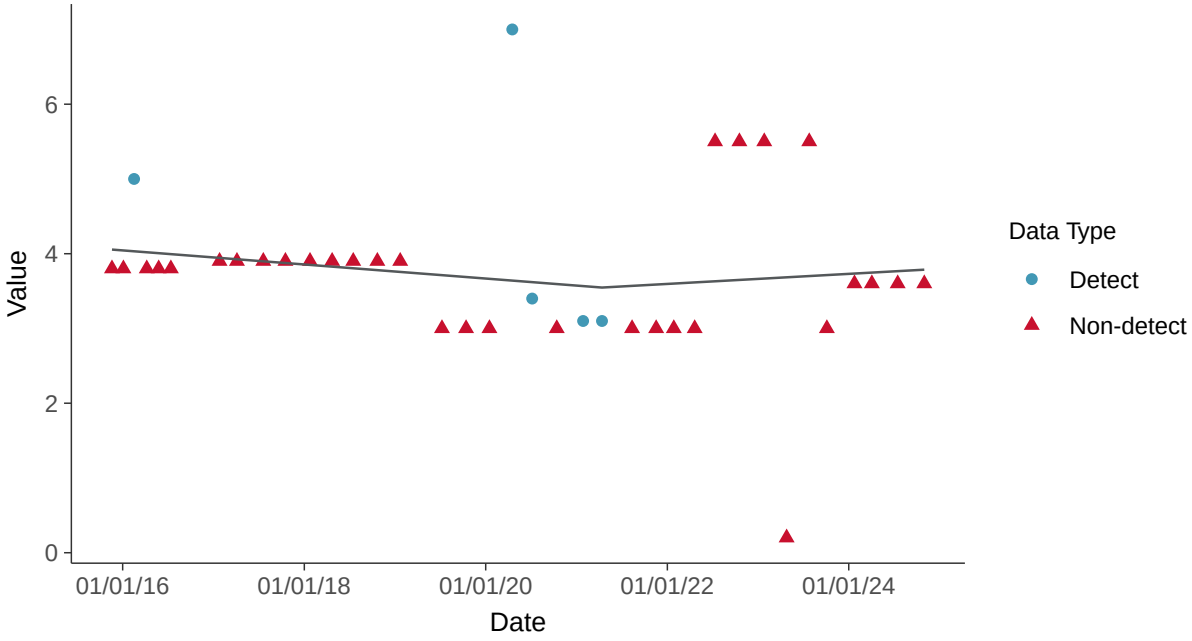
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-4 (ug/L)

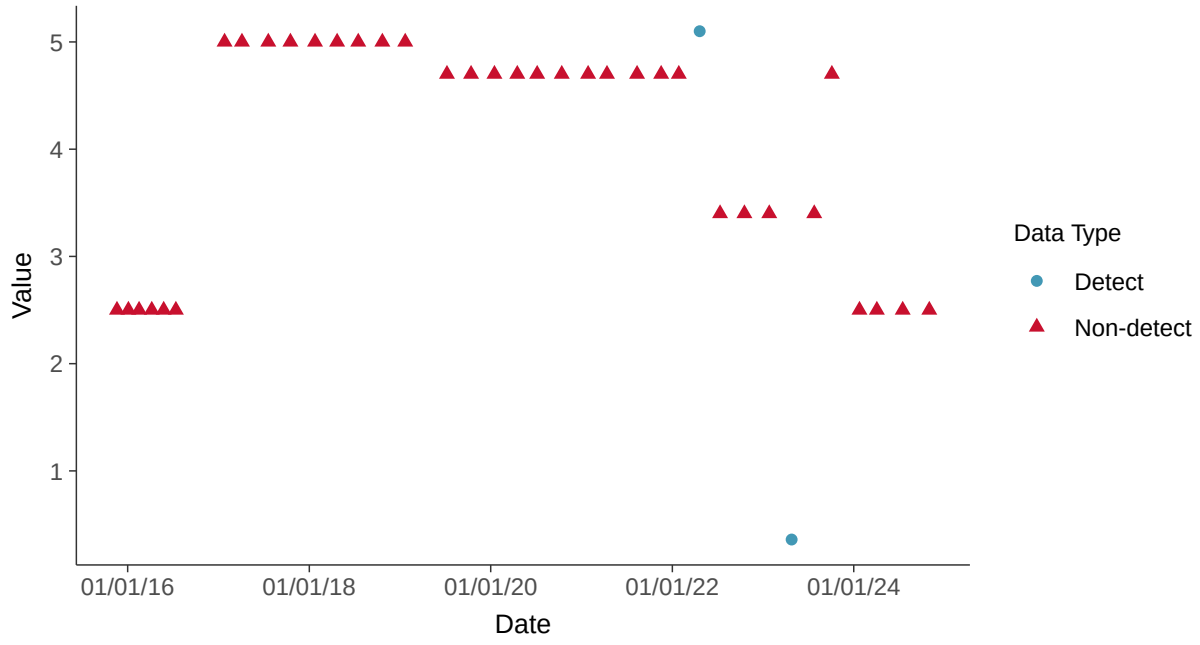


App. IV: Arsenic, MW-4

ID: 04_03_102

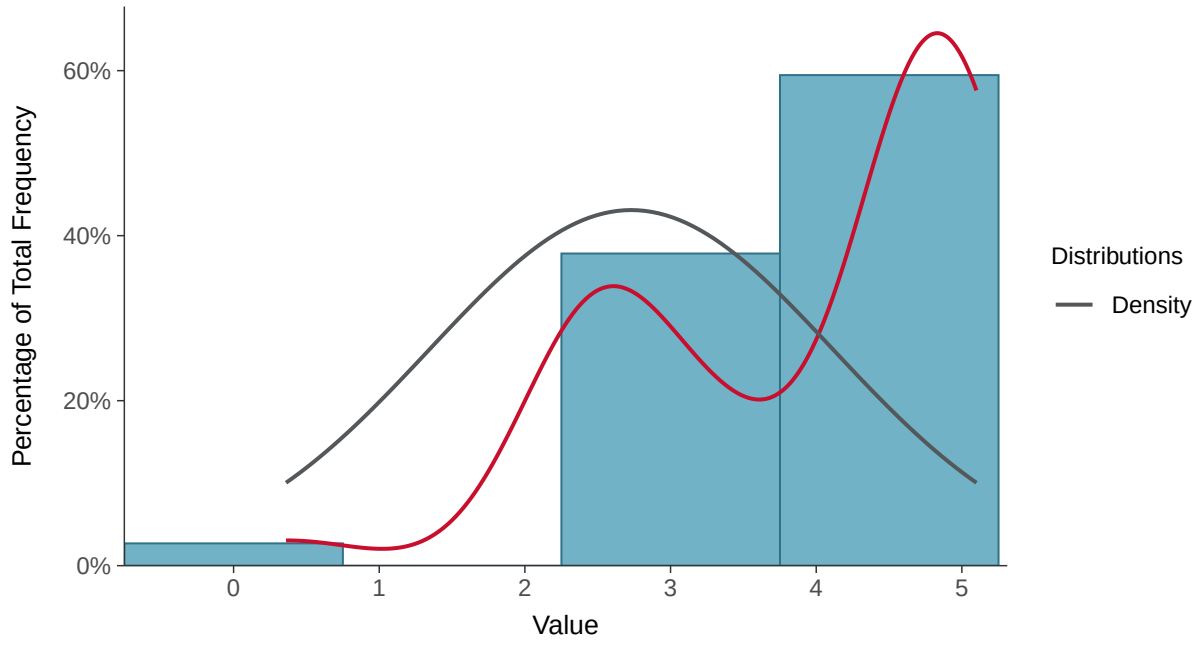
Scatter Plot

Arsenic, MW-4 (ug/L)



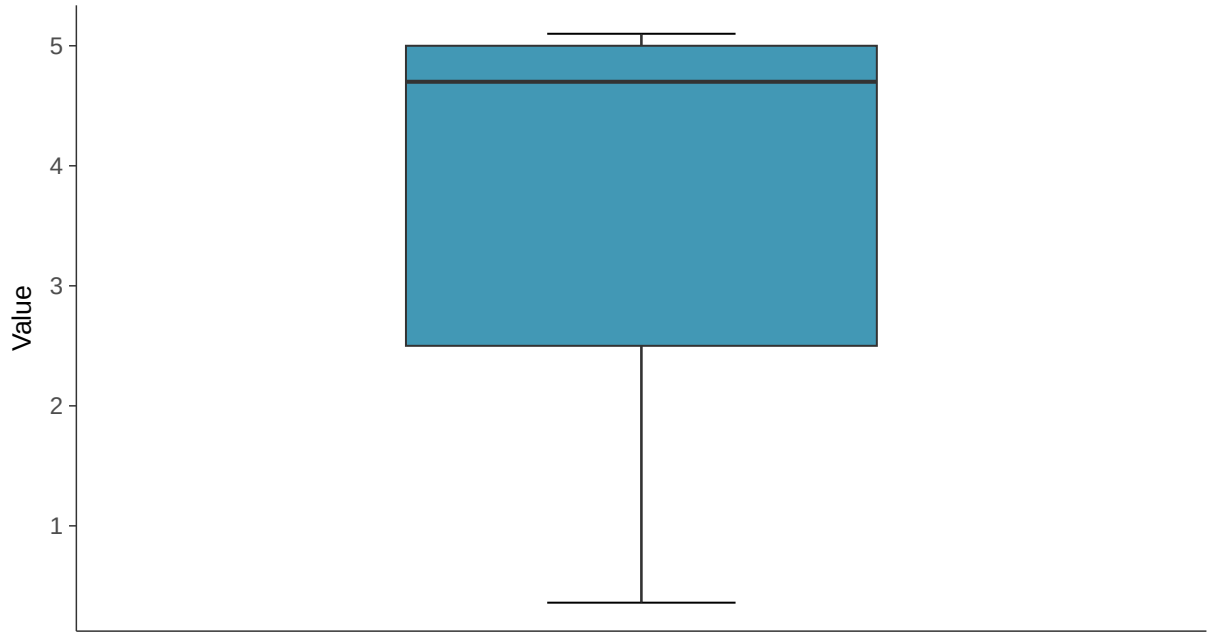
Histogram

Arsenic, MW-4 (ug/L)



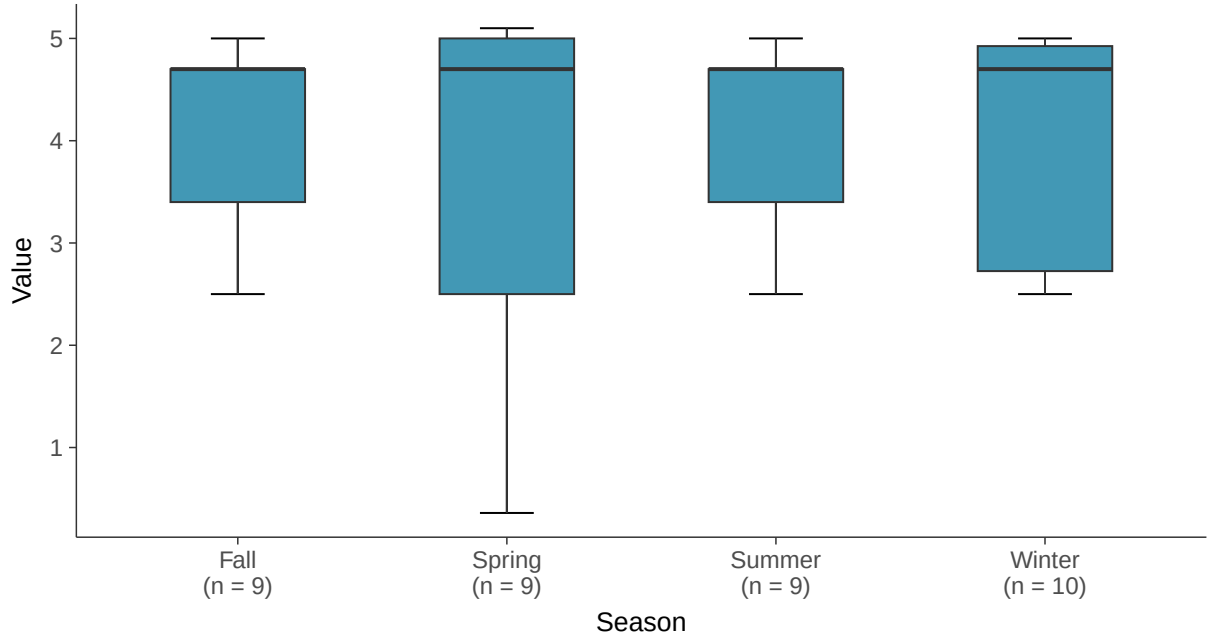
Boxplot

Arsenic, MW-4 (ug/L)



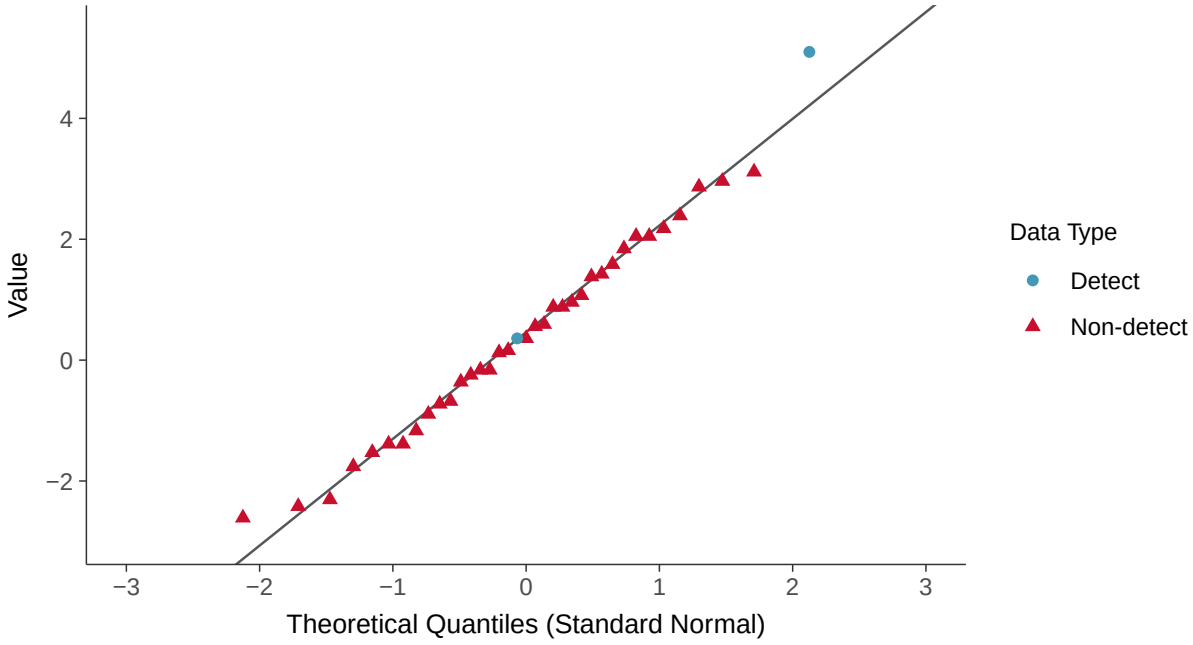
Boxplot by Season

Arsenic, MW-4 (ug/L)



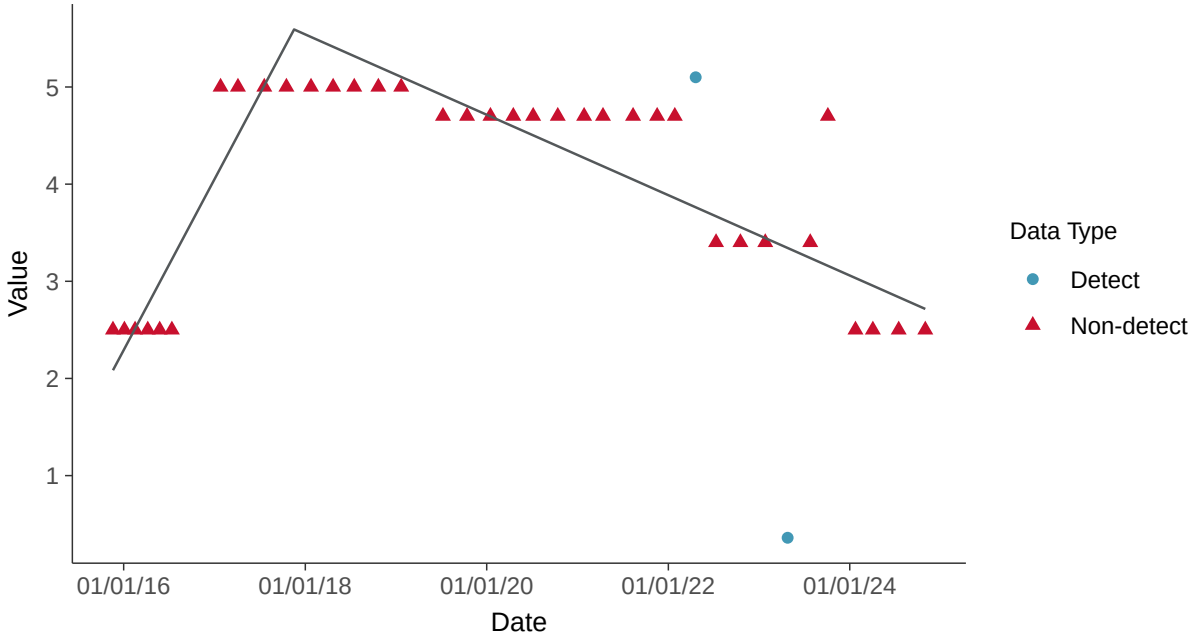
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-4 (ug/L)



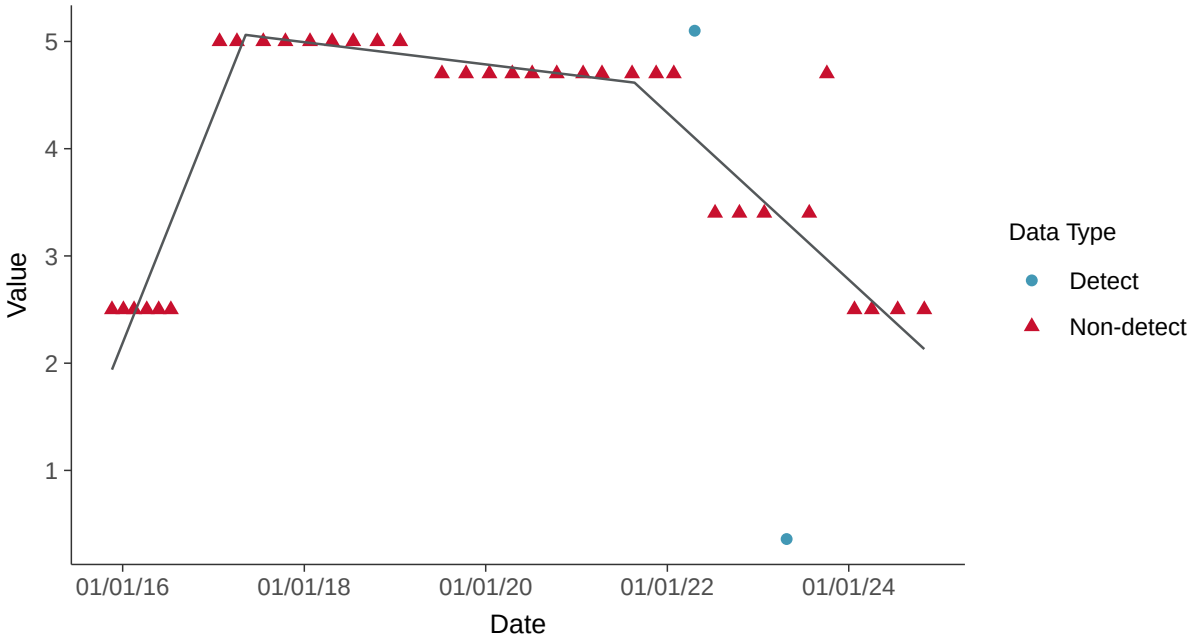
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-4 (ug/L)



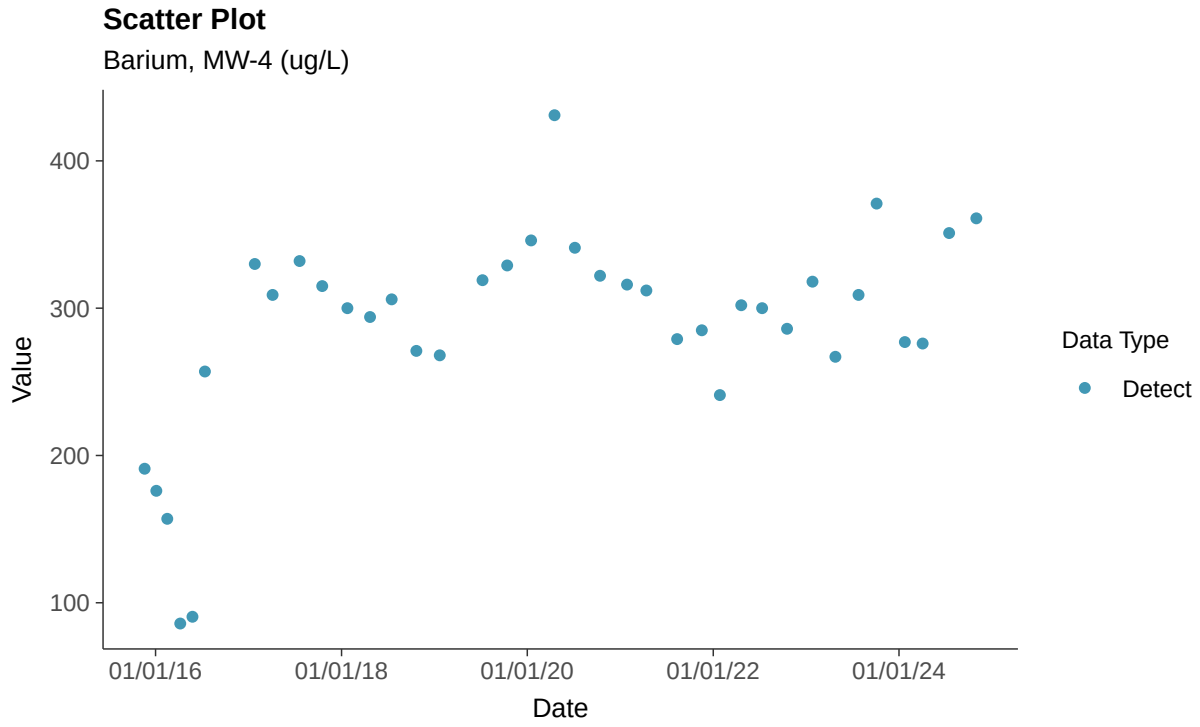
Trend Regression: Piecewise Linear-Linear-Linear

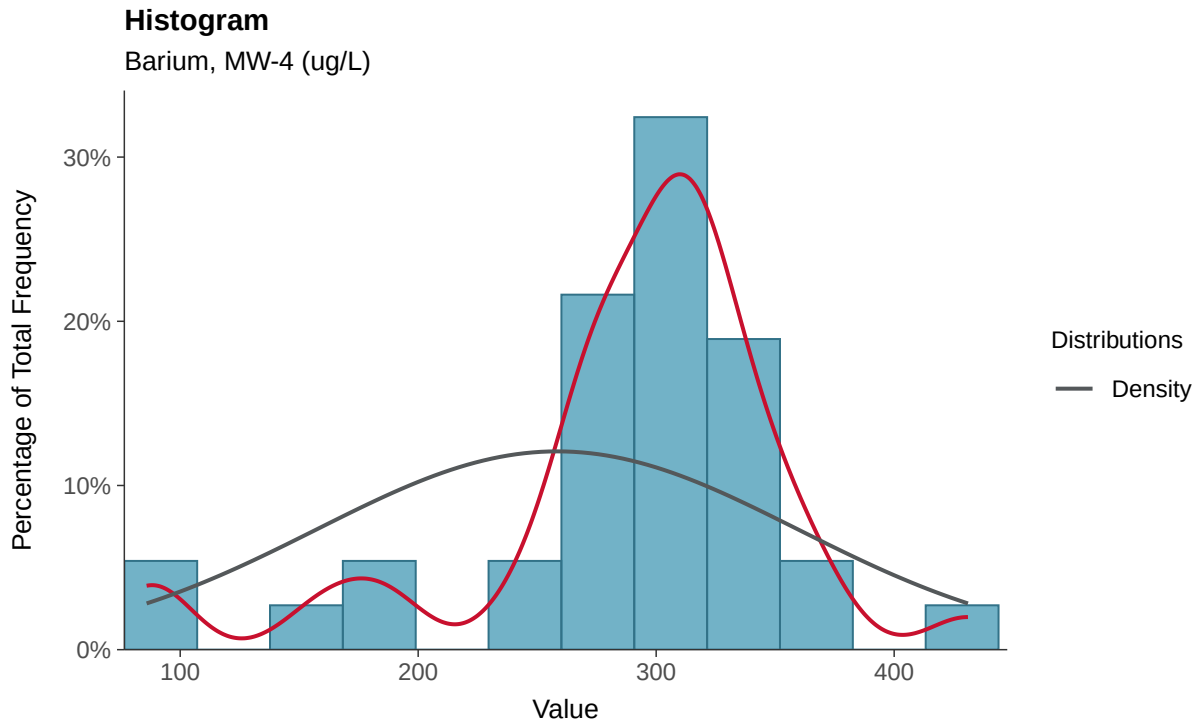
Arsenic, MW-4 (ug/L)



App. IV: Barium, MW-4

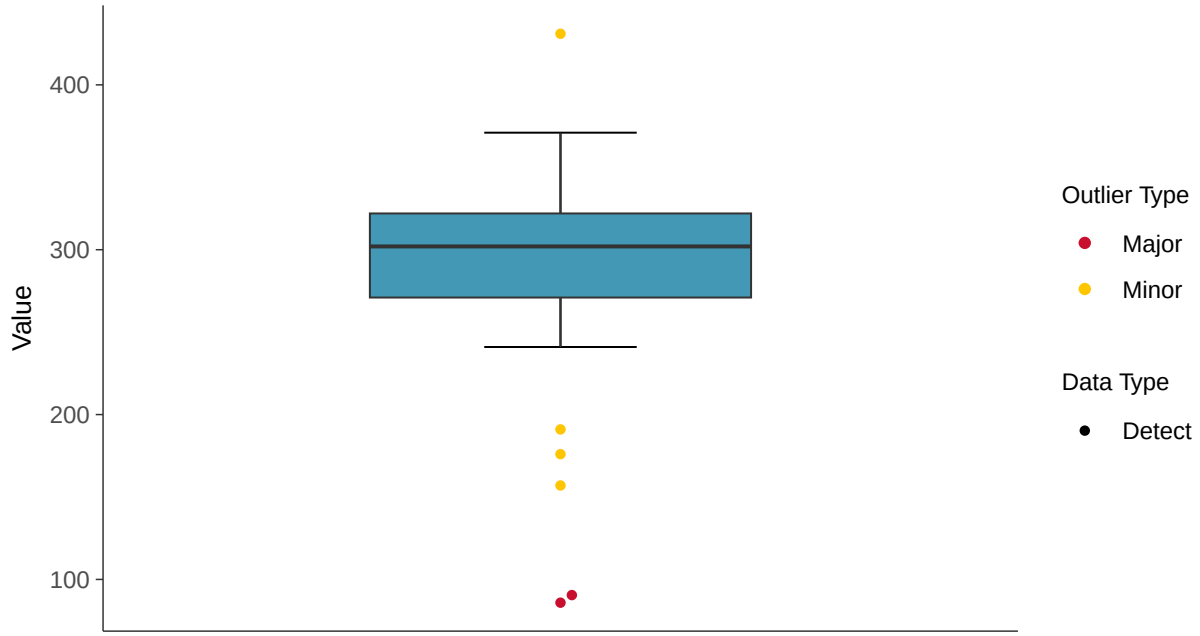
ID: 04_03_103





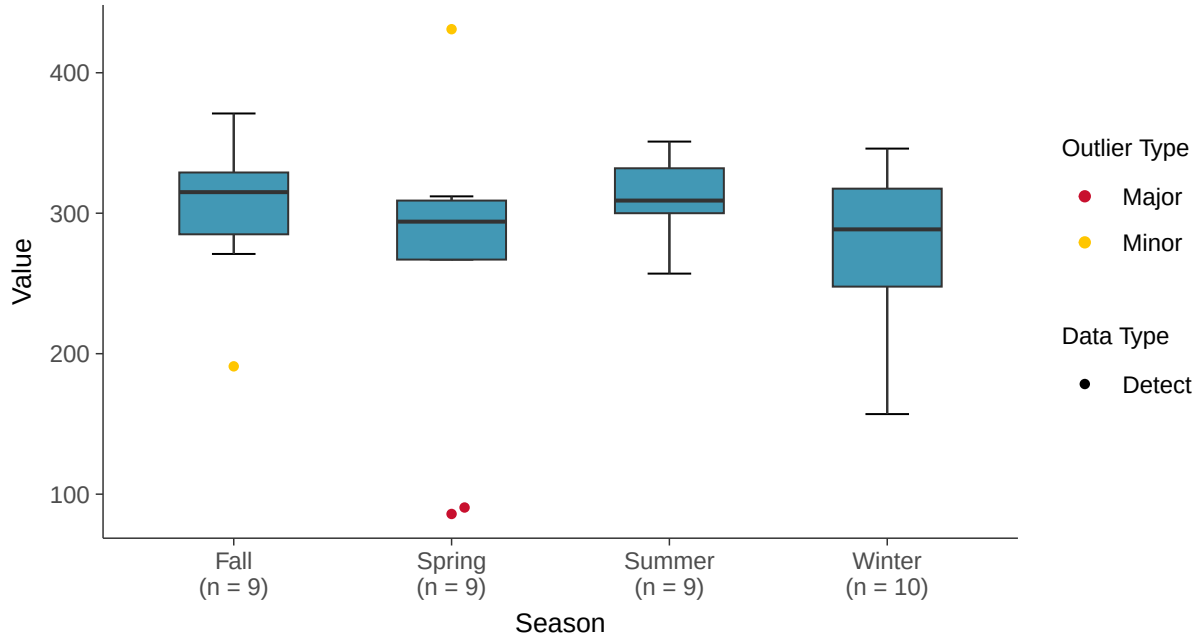
Boxplot

Barium, MW-4 (ug/L)



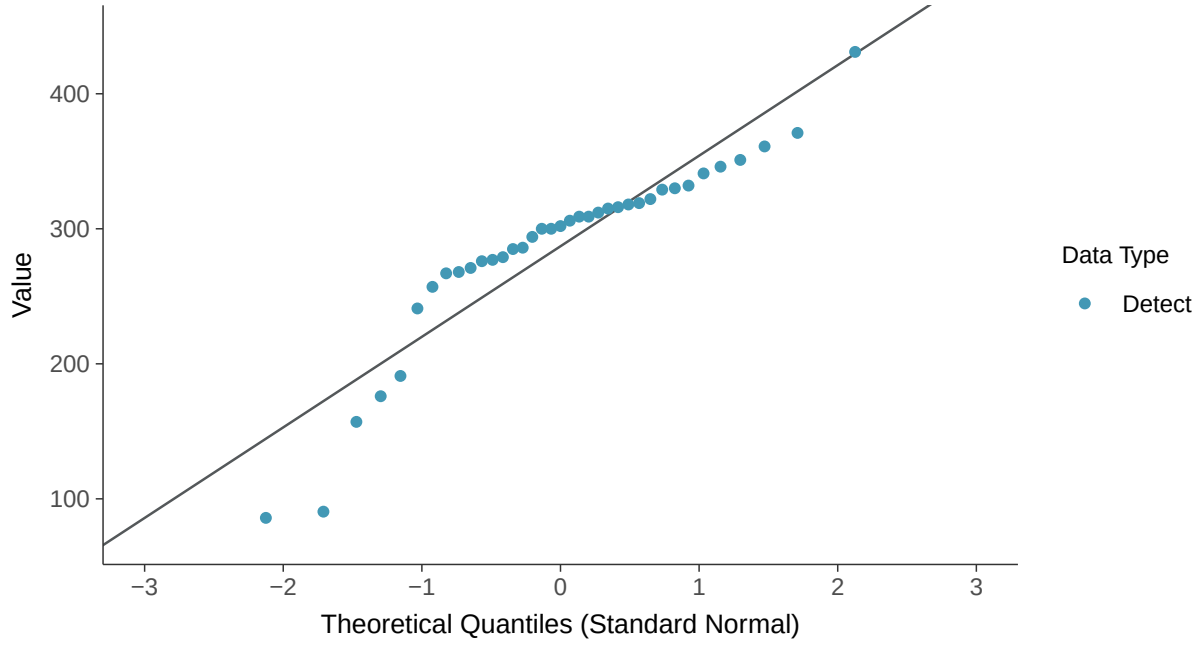
Boxplot by Season

Barium, MW-4 (ug/L)



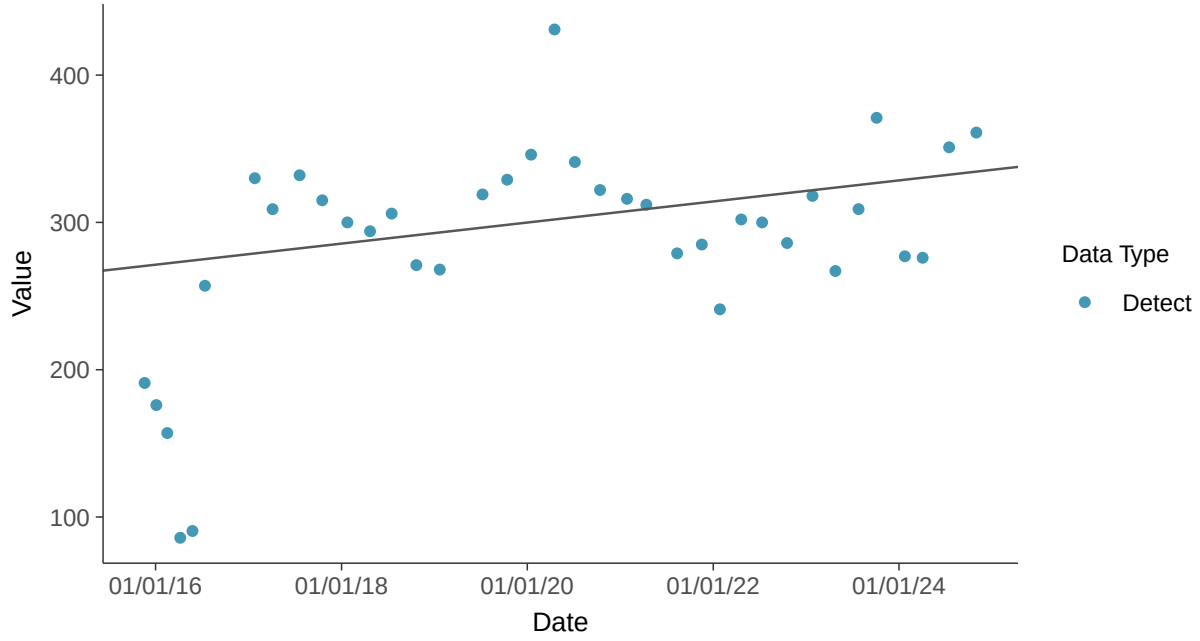
Normal Q-Q plot

Barium, MW-4 (ug/L)



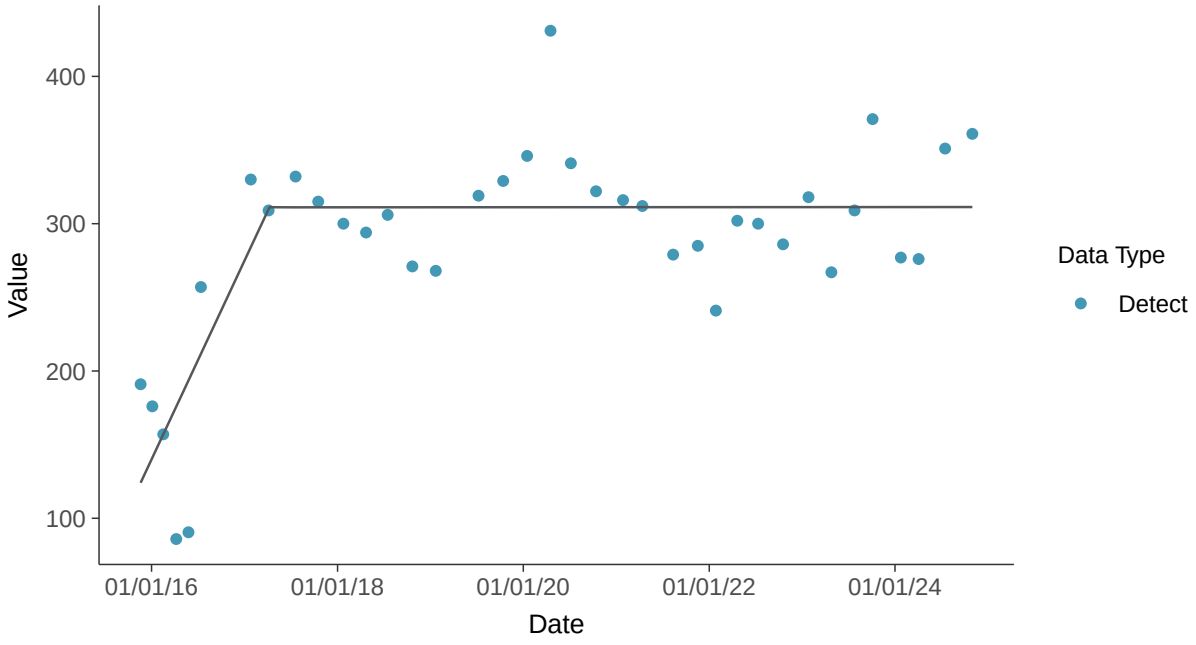
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-4 (ug/L)



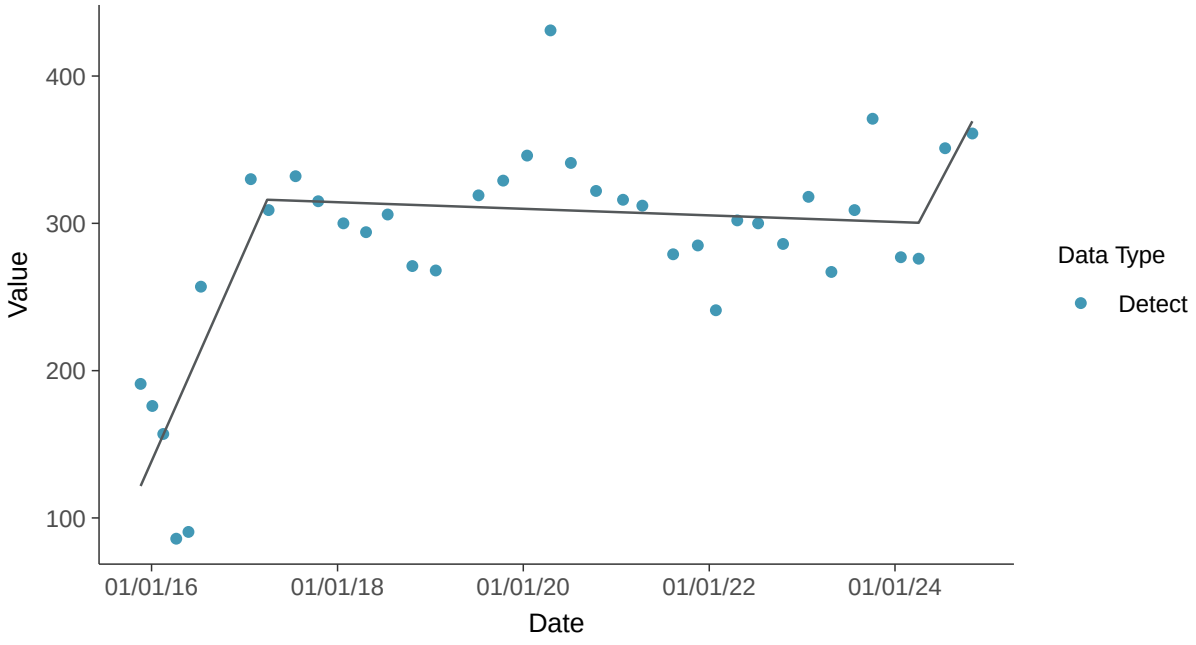
Trend Regression: Piecewise Linear-Linear

Barium, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-4 (ug/L)

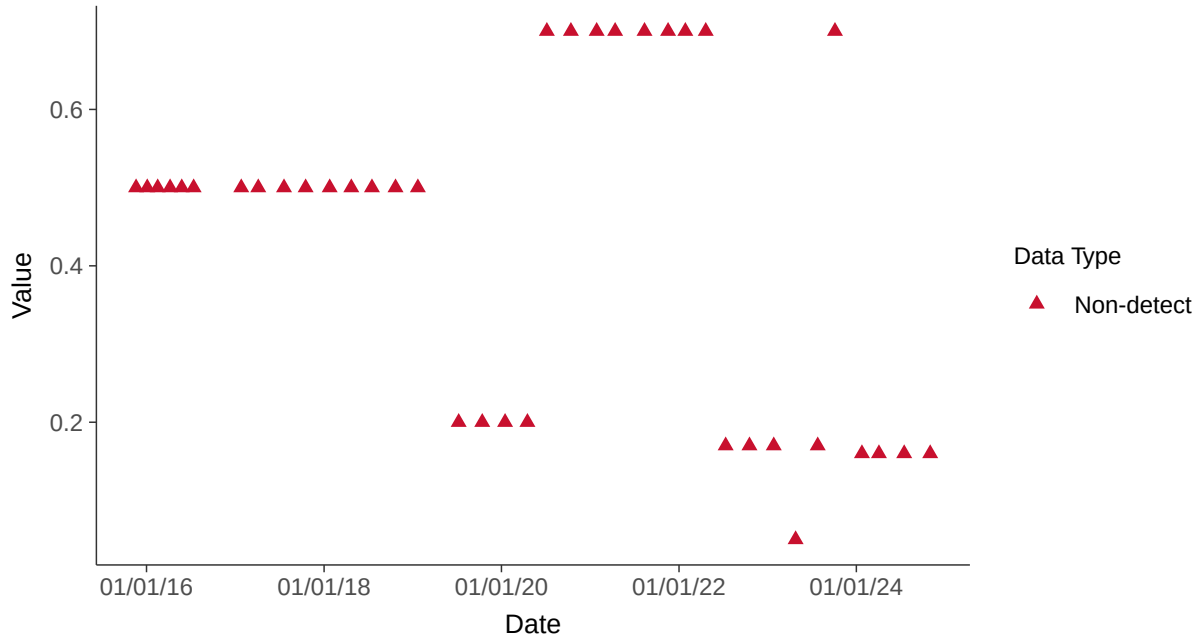


App. IV: Beryllium, MW-4

ID: 04_03_104

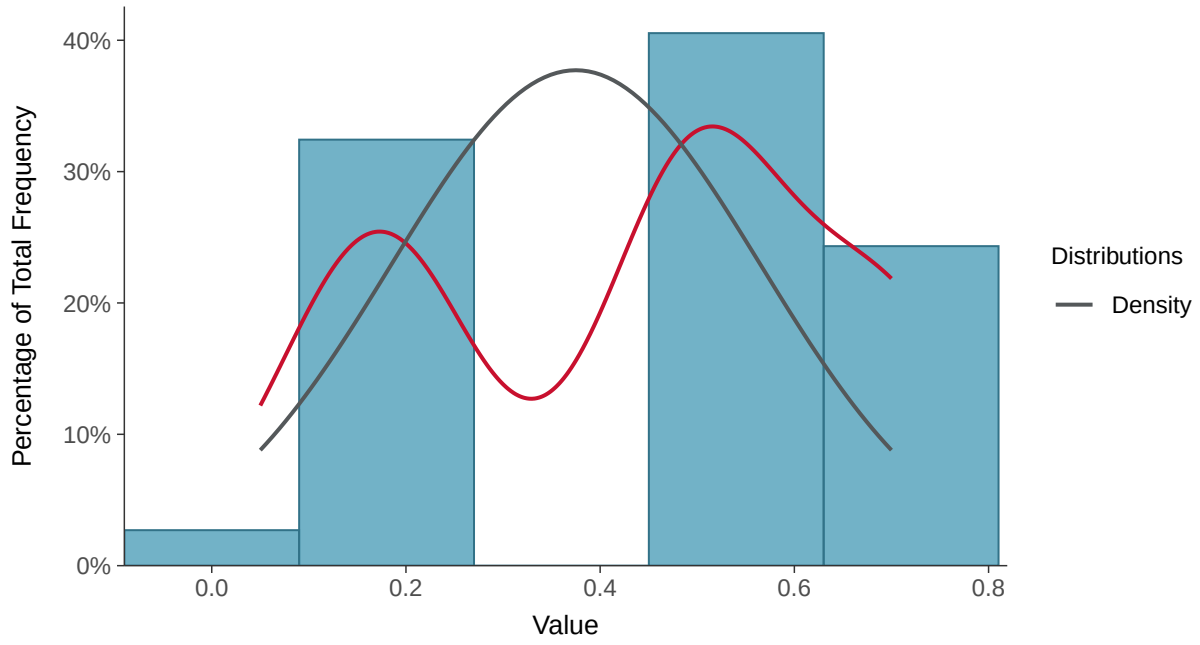
Scatter Plot

Beryllium, MW-4 (ug/L)



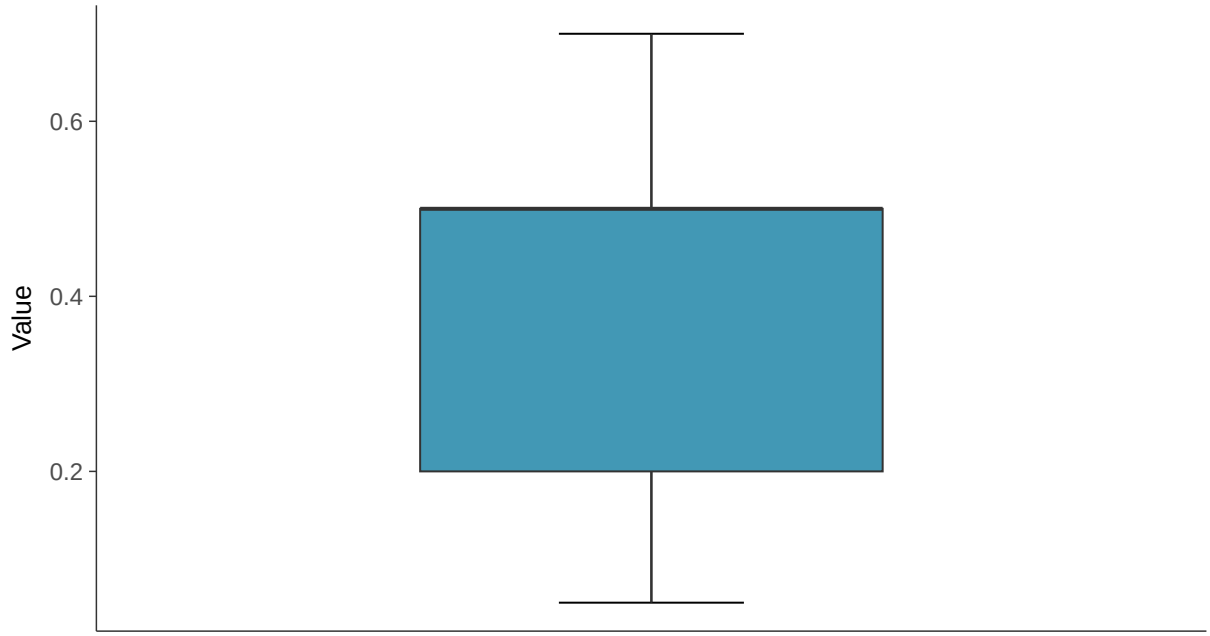
Histogram

Beryllium, MW-4 (ug/L)



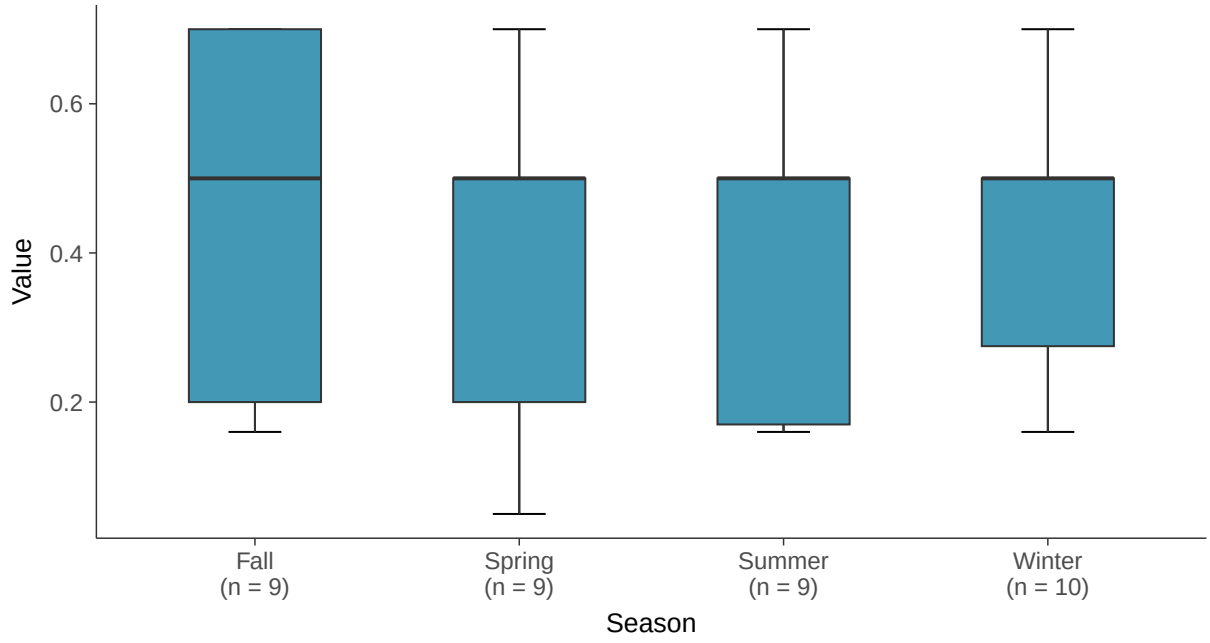
Boxplot

Beryllium, MW-4 (ug/L)



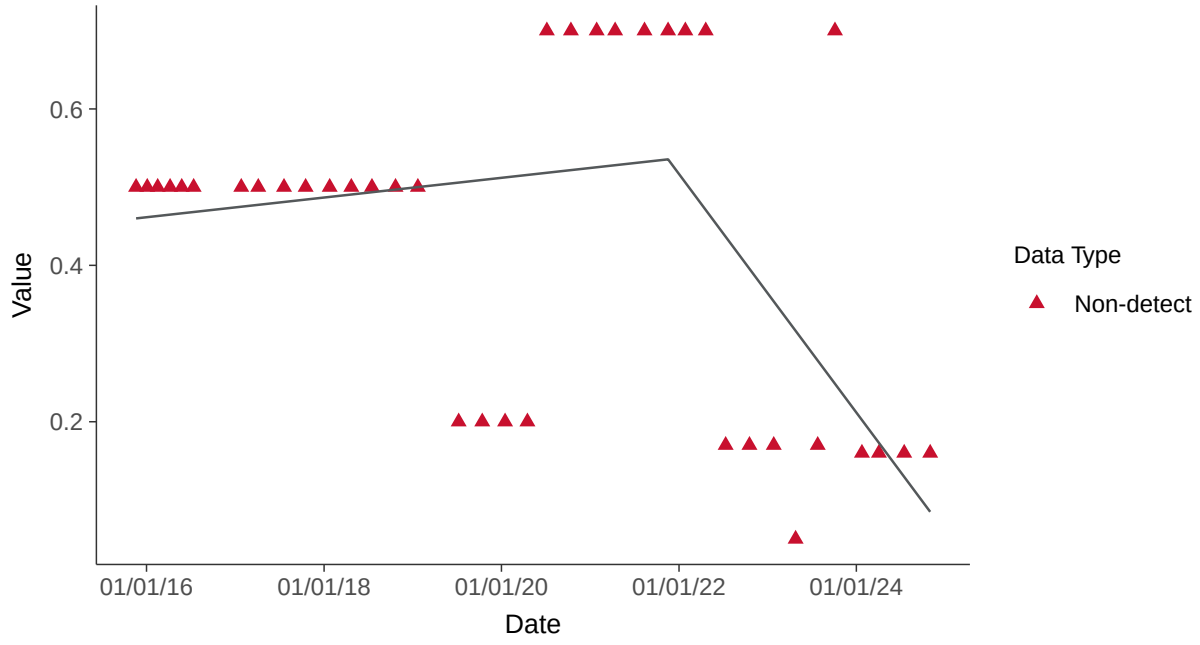
Boxplot by Season

Beryllium, MW-4 (ug/L)



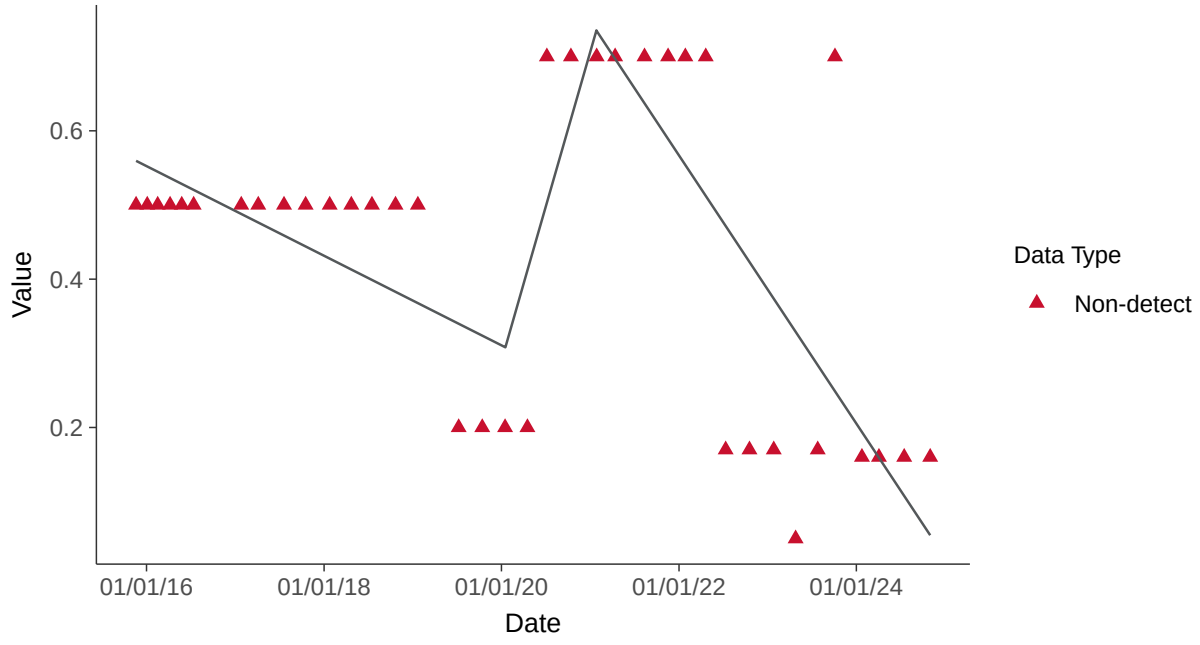
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-4 (ug/L)



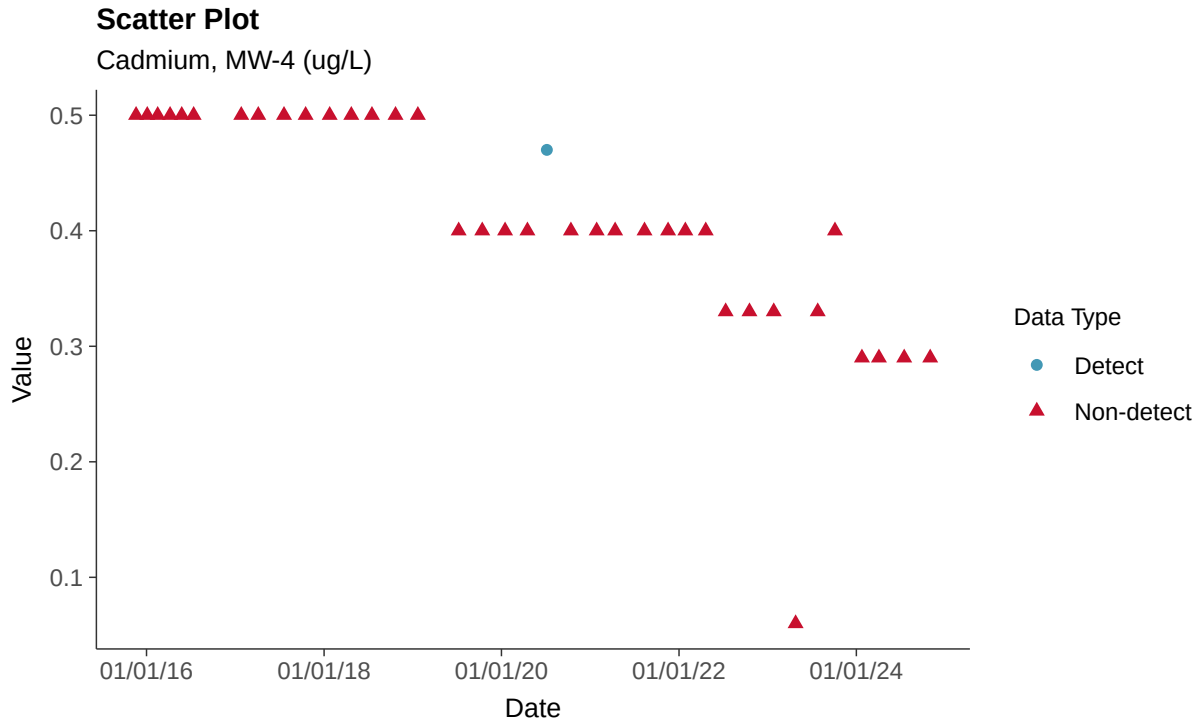
Trend Regression: Piecewise Linear-Linear-Linear

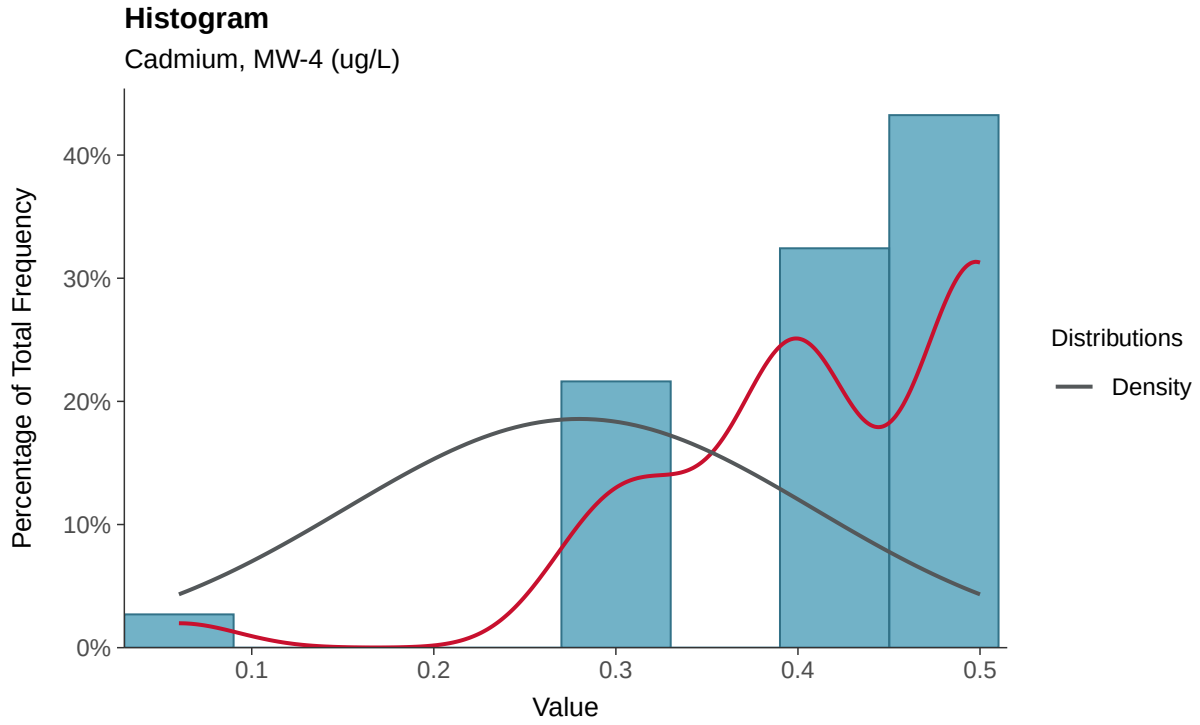
Beryllium, MW-4 (ug/L)



App. IV: Cadmium, MW-4

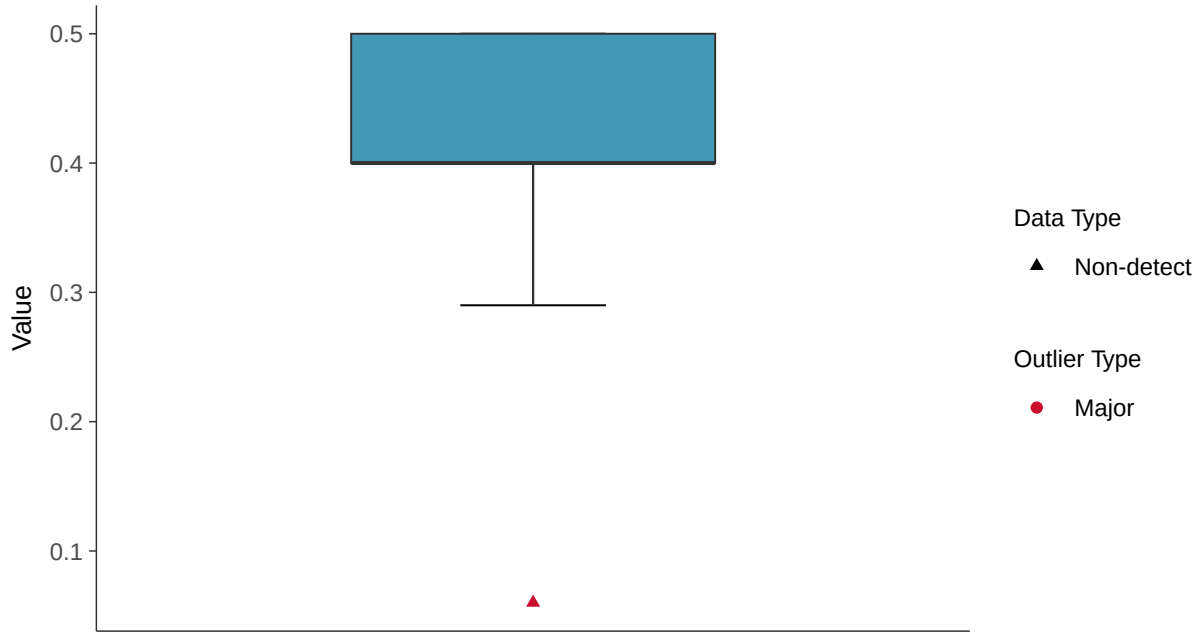
ID: 04_03_106





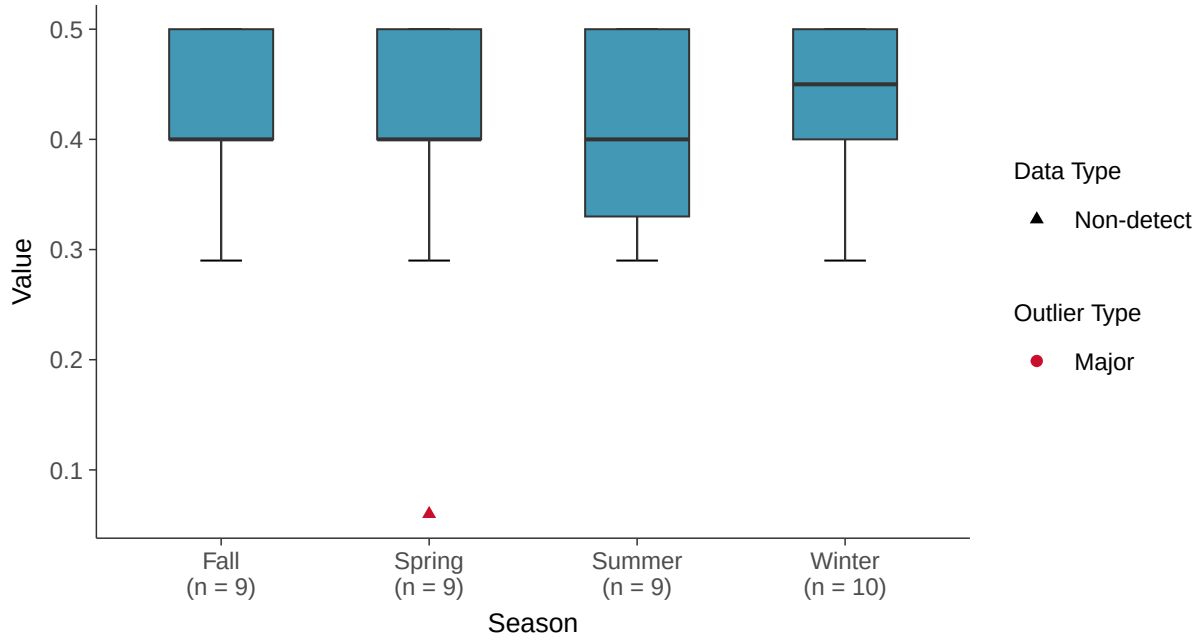
Boxplot

Cadmium, MW-4 (ug/L)



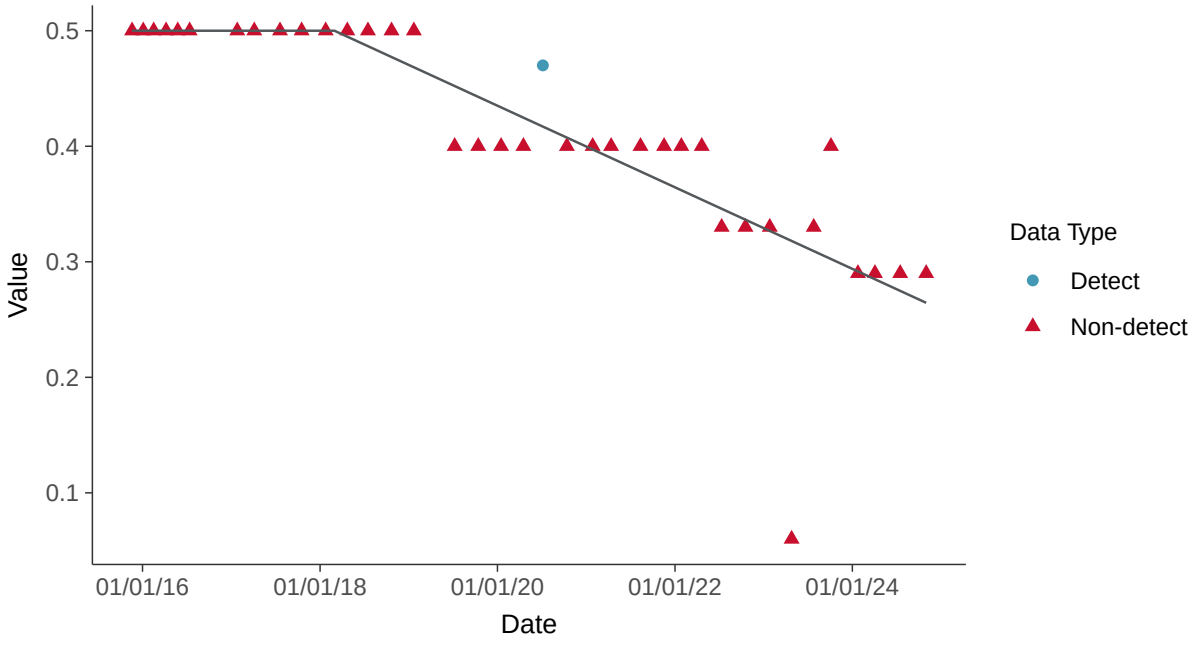
Boxplot by Season

Cadmium, MW-4 (ug/L)



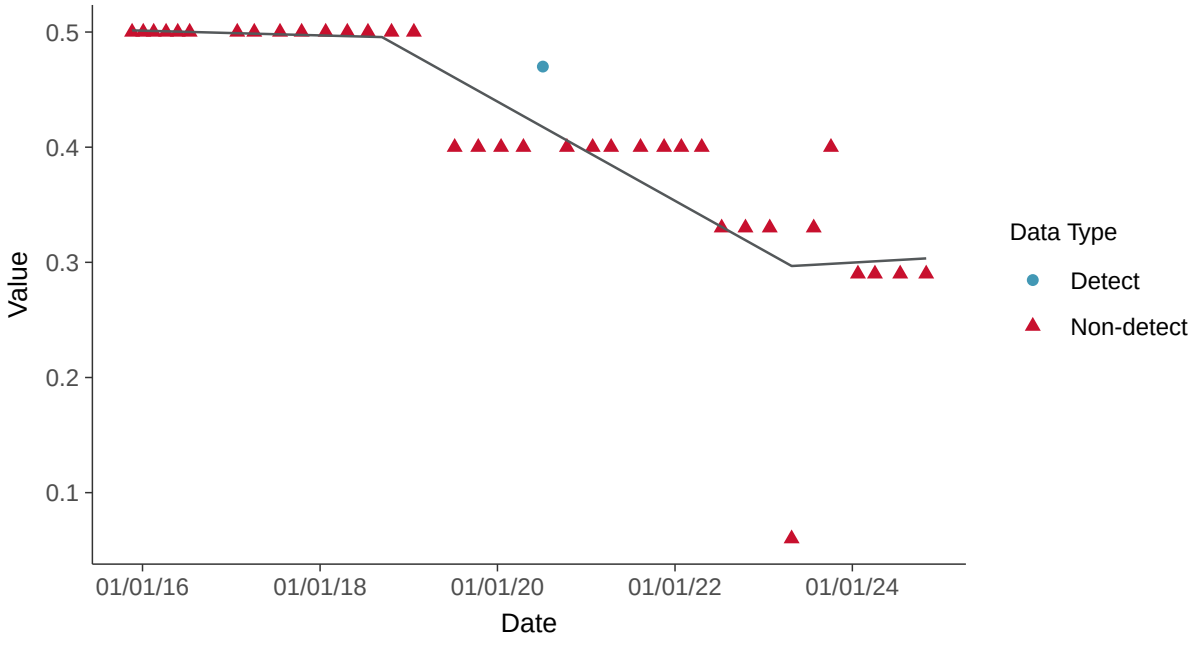
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-4 (ug/L)

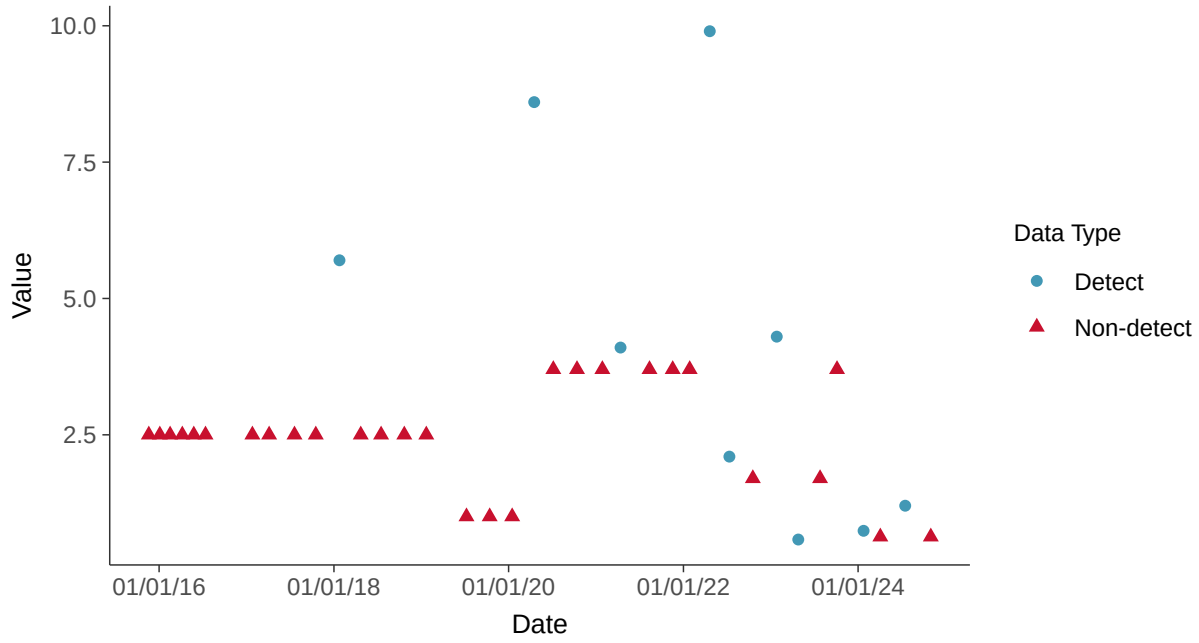


App. IV: Chromium, MW-4

ID: 04_03_109

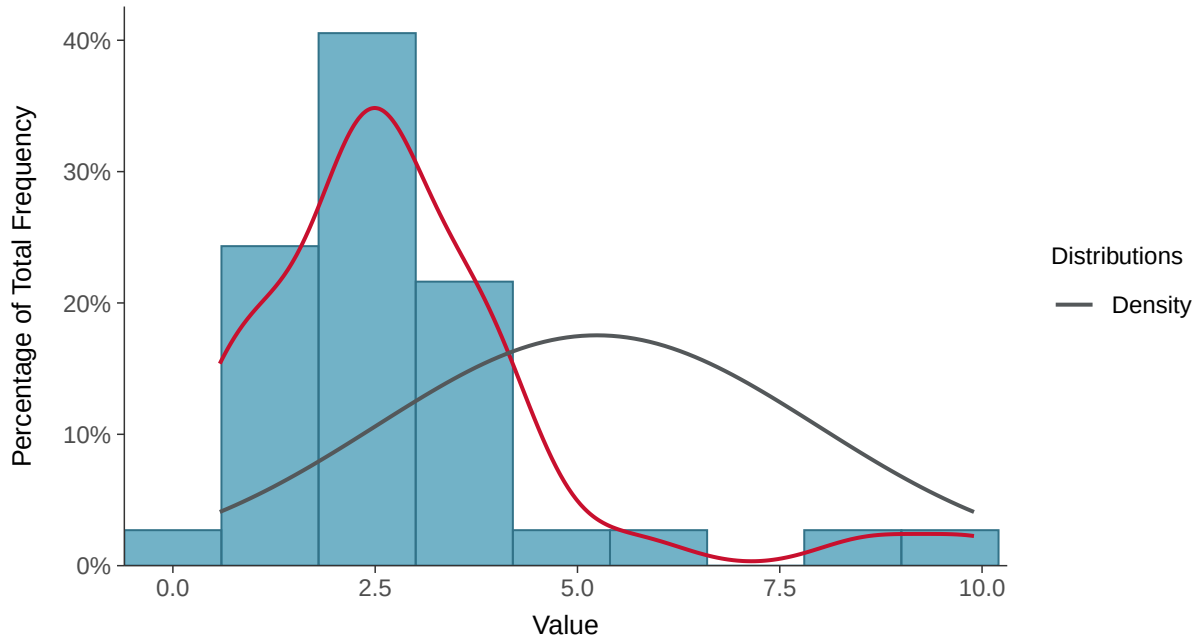
Scatter Plot

Chromium, MW-4 (ug/L)



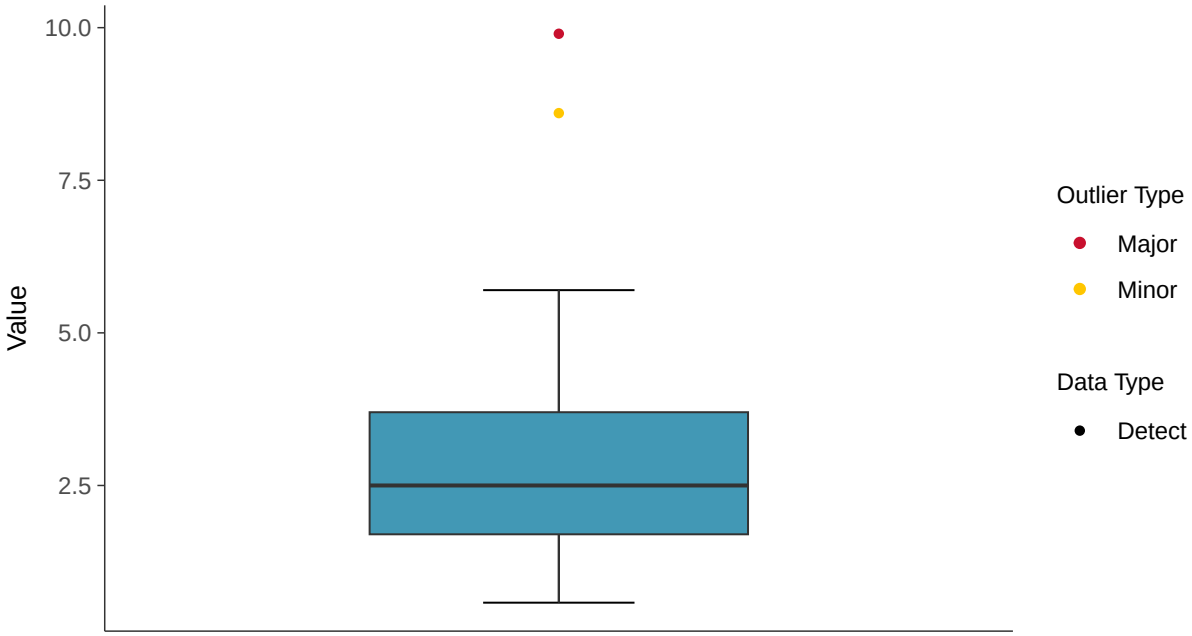
Histogram

Chromium, MW-4 (ug/L)



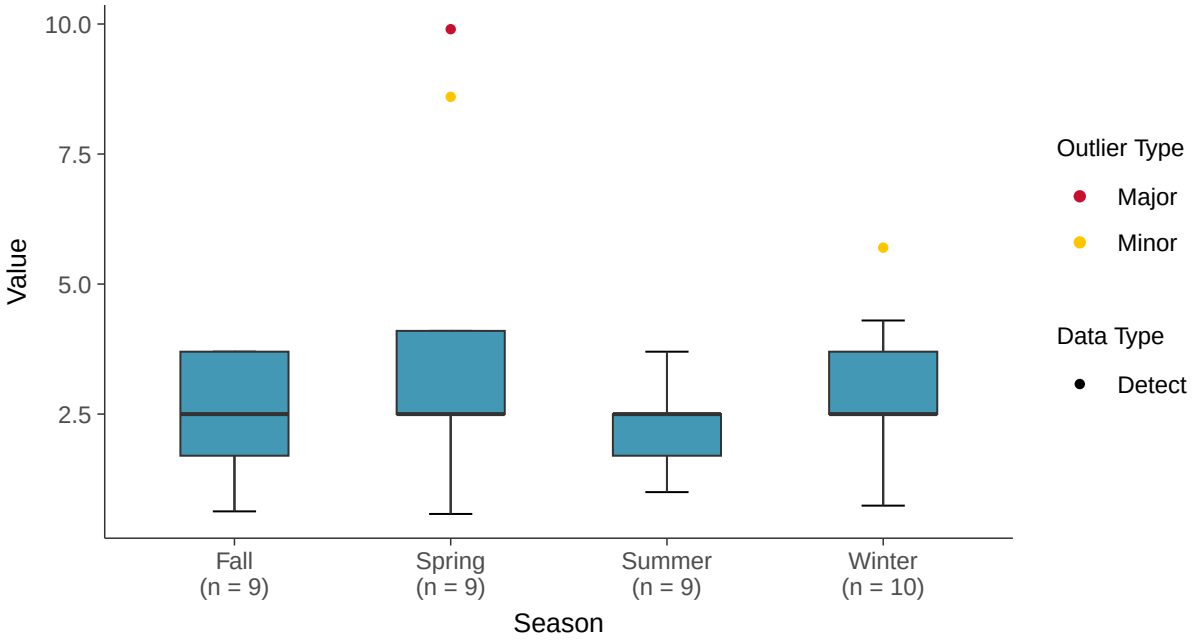
Boxplot

Chromium, MW-4 (ug/L)



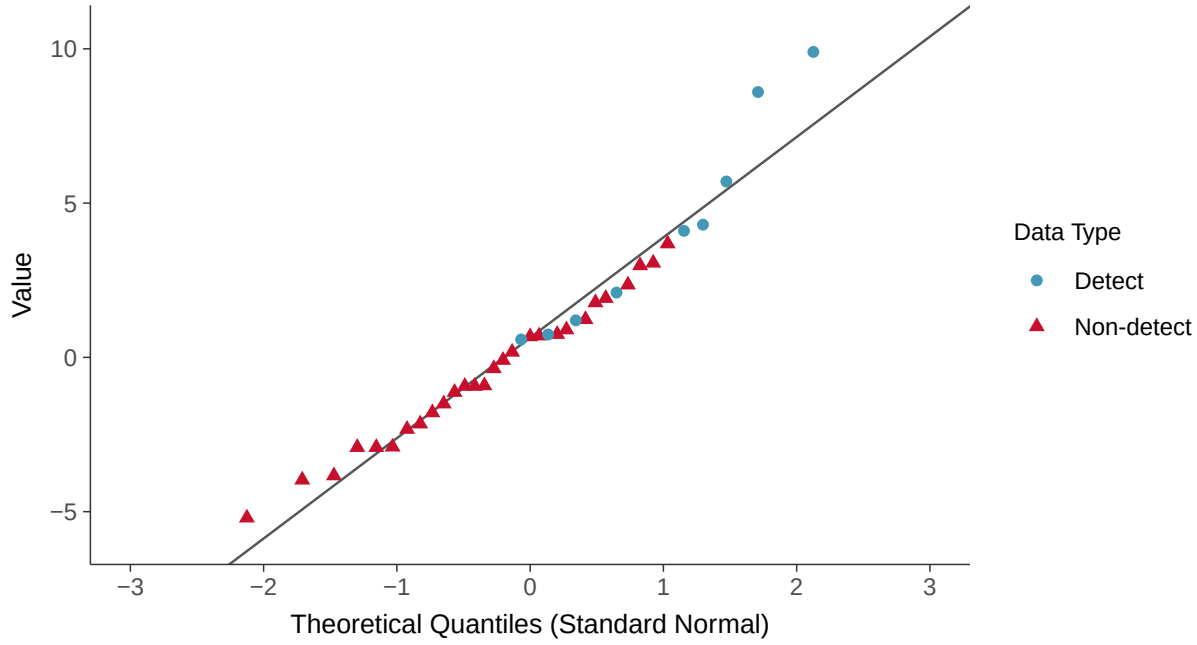
Boxplot by Season

Chromium, MW-4 (ug/L)



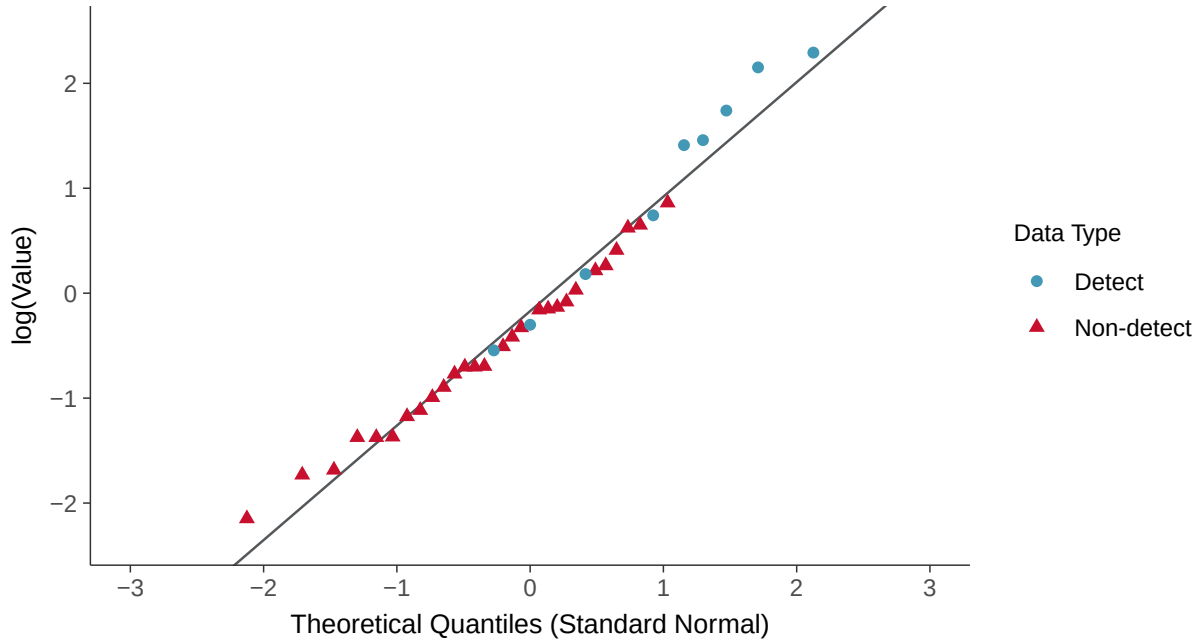
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



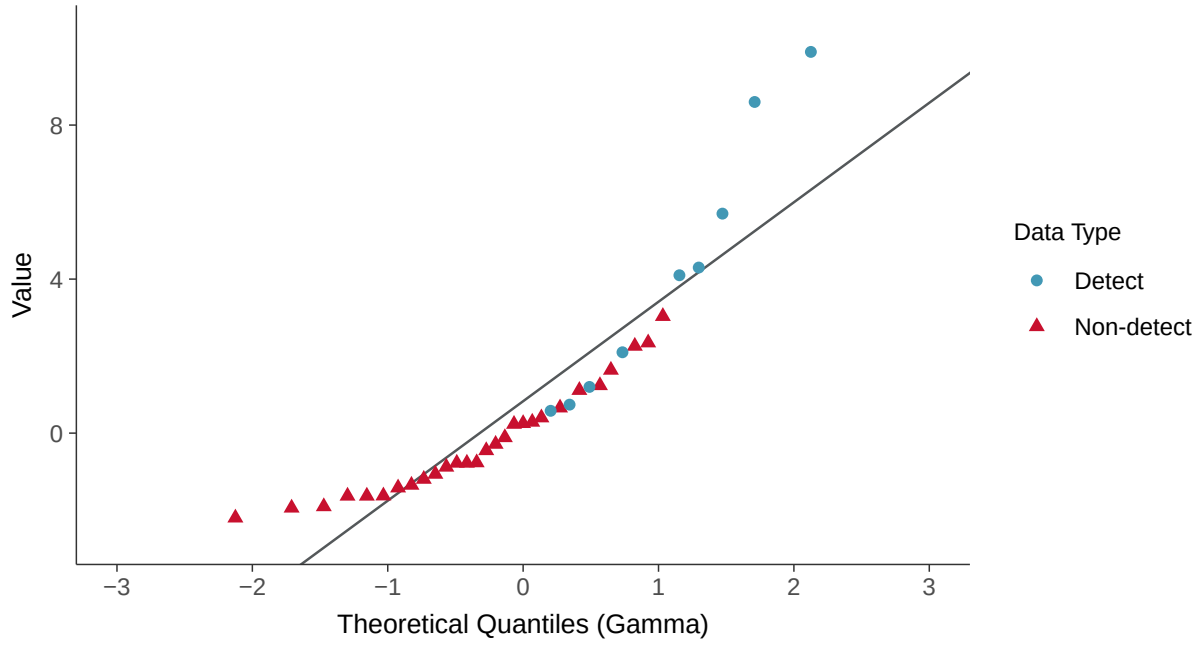
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



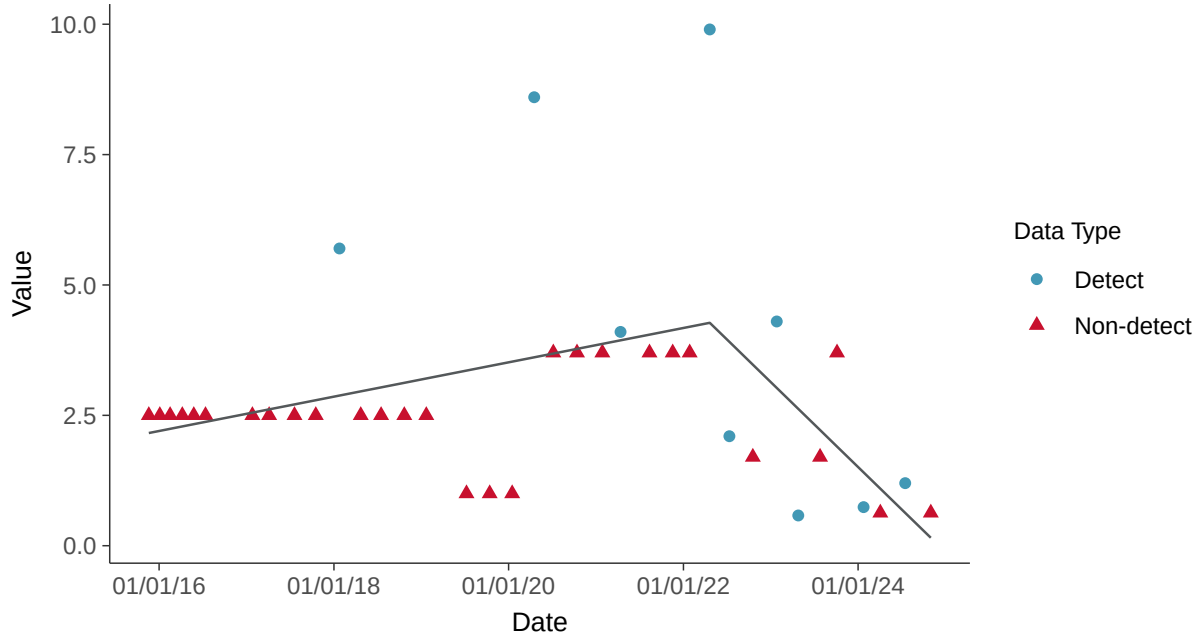
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



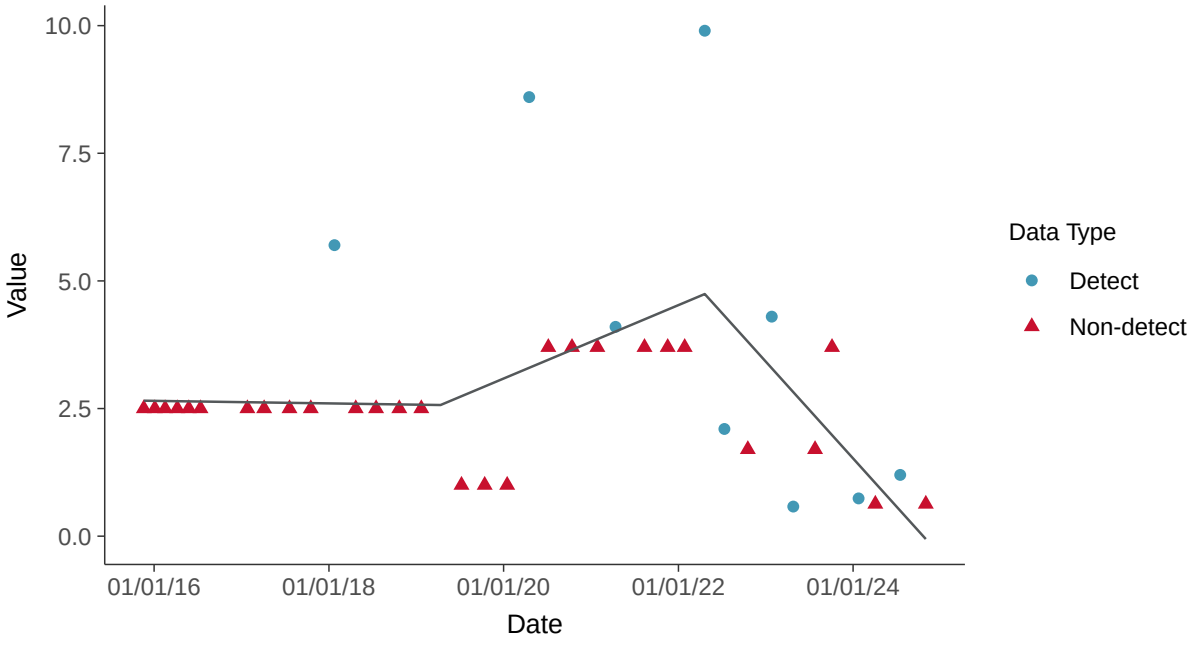
Trend Regression: Piecewise Linear-Linear

Chromium, MW-4 (ug/L)



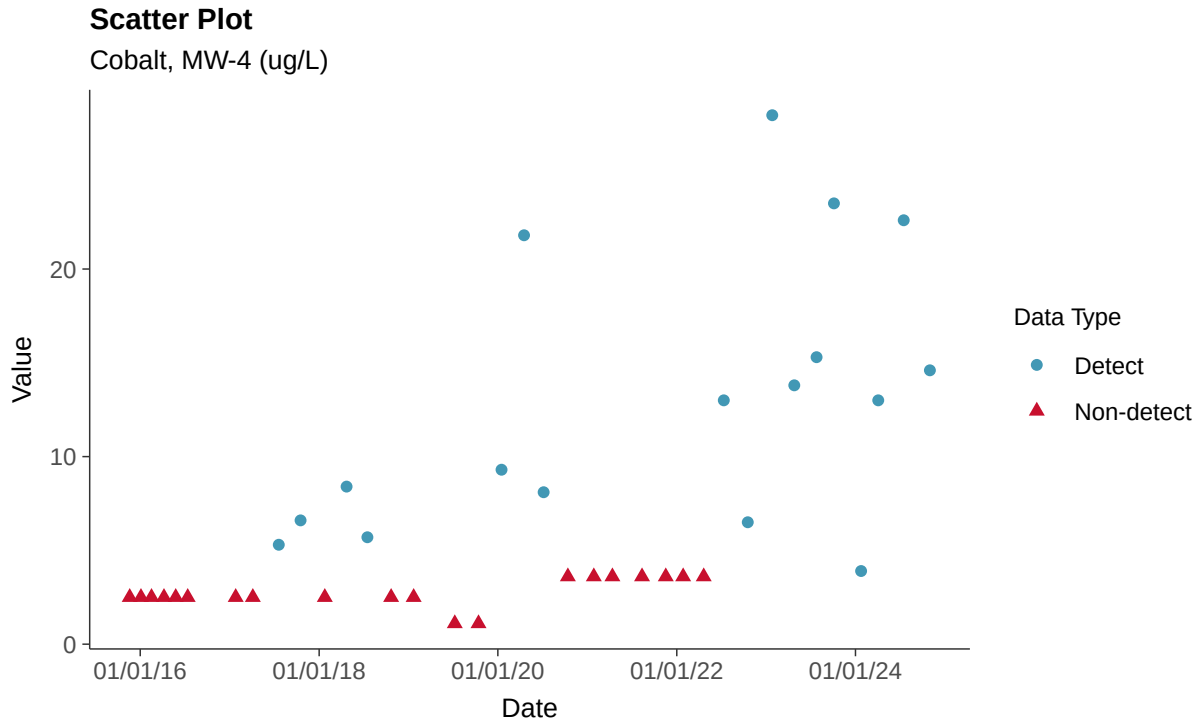
Trend Regression: Piecewise Linear-Linear-Linear

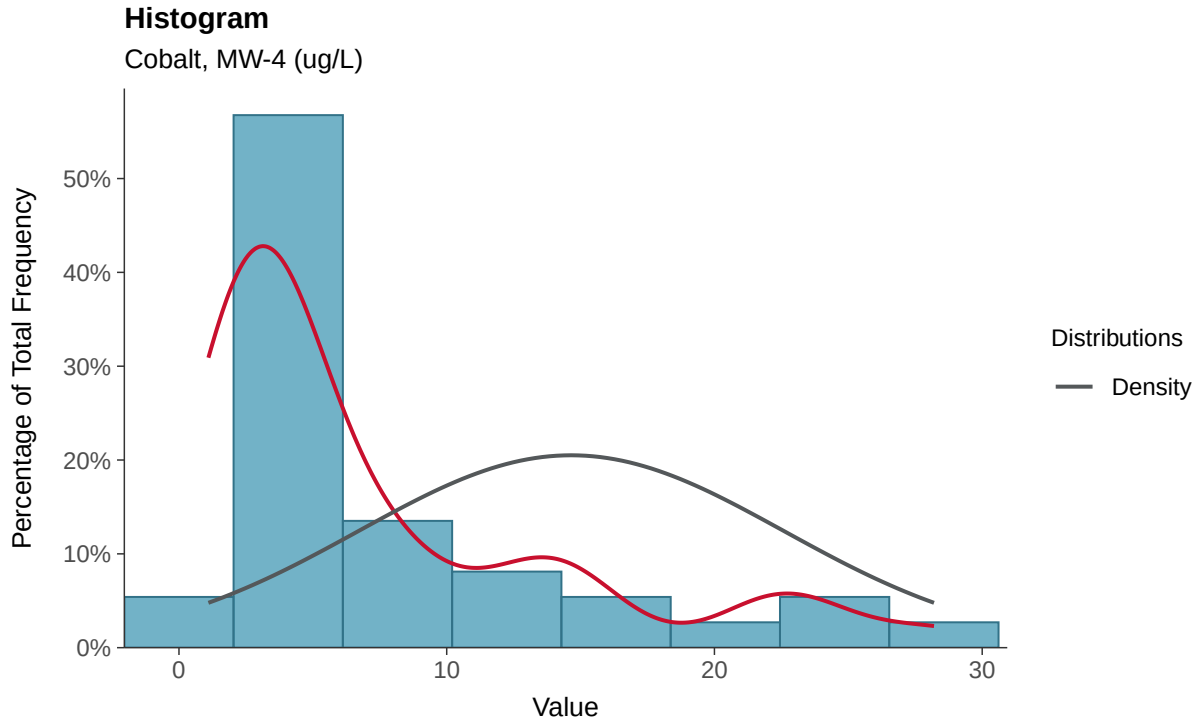
Chromium, MW-4 (ug/L)



App. IV: Cobalt, MW-4

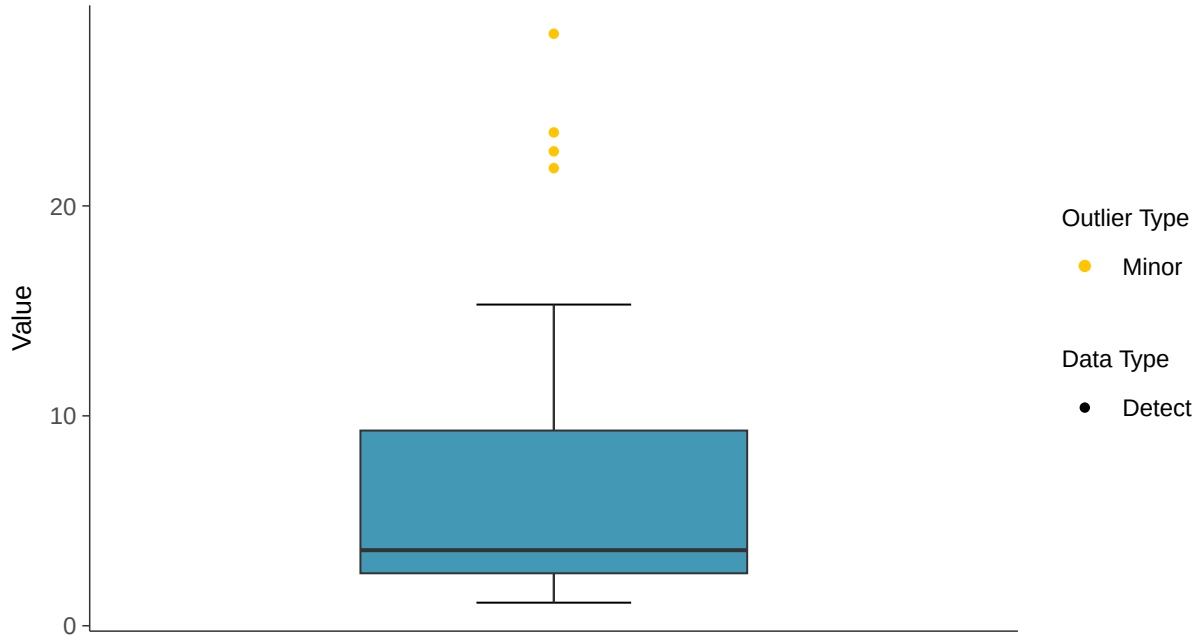
ID: 04_03_110





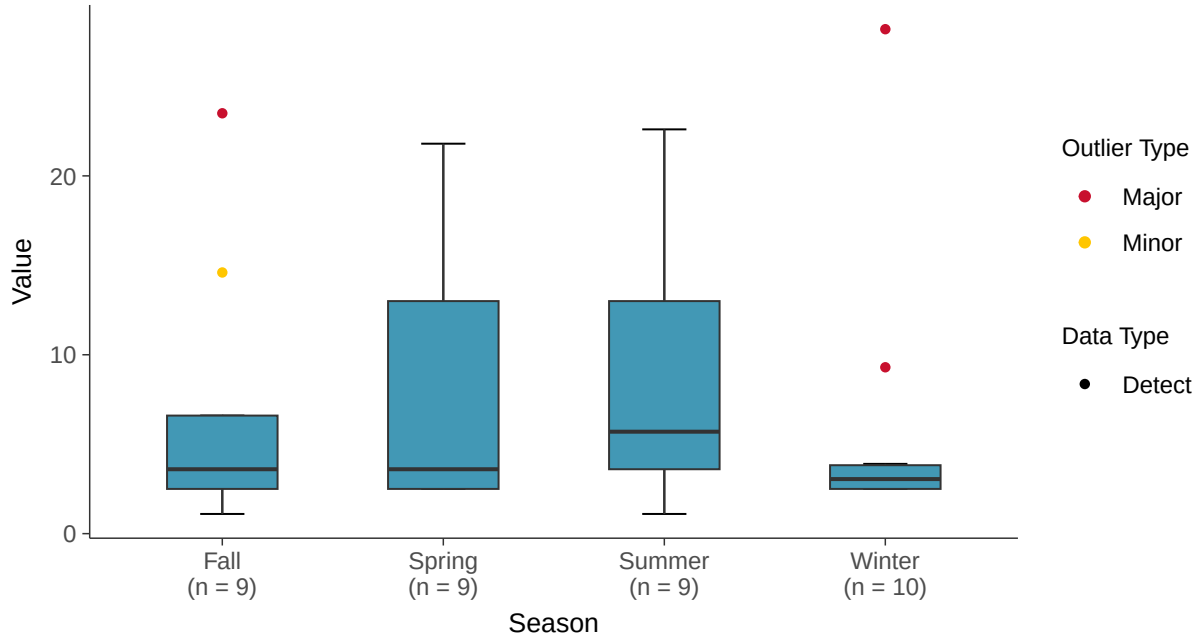
Boxplot

Cobalt, MW-4 (ug/L)



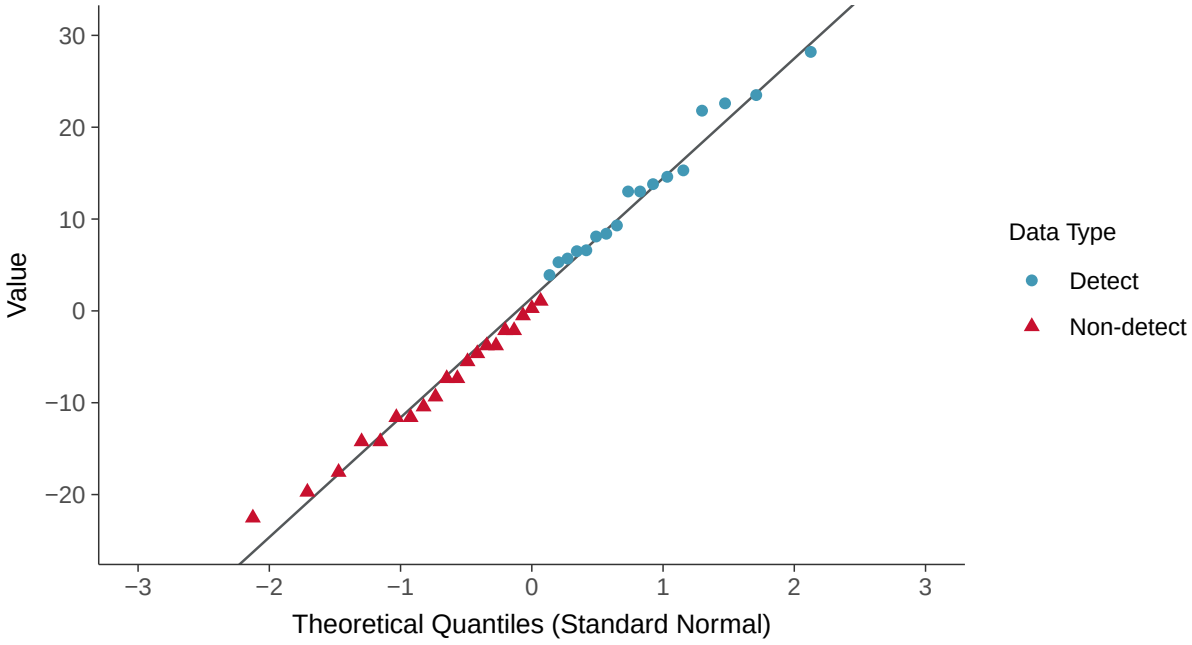
Boxplot by Season

Cobalt, MW-4 (ug/L)



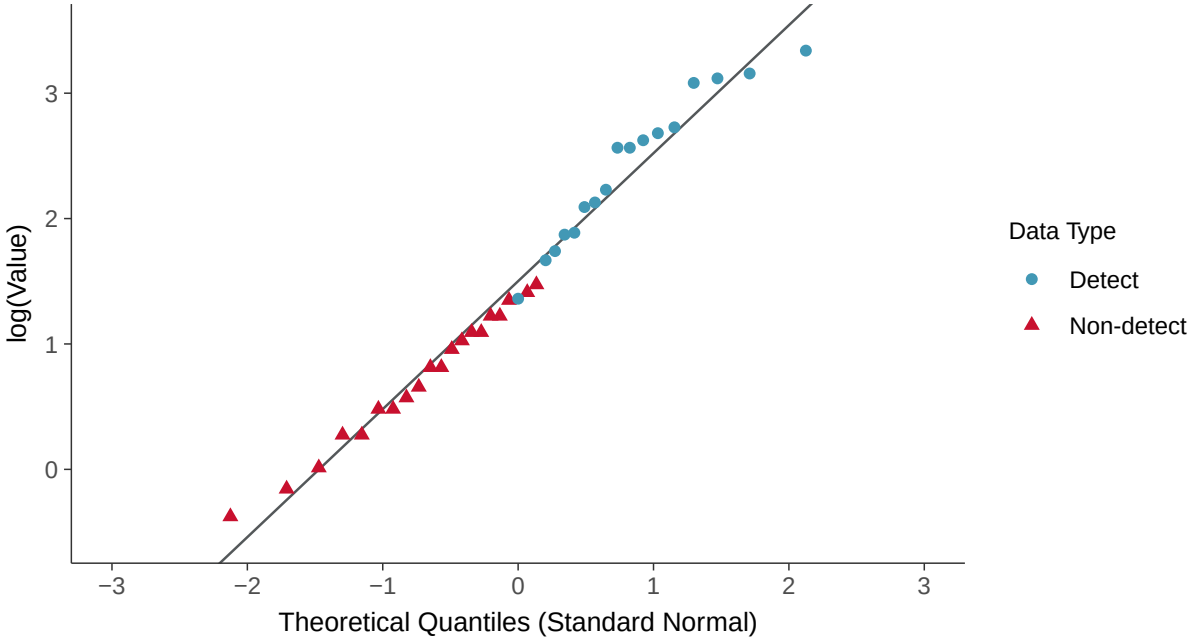
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



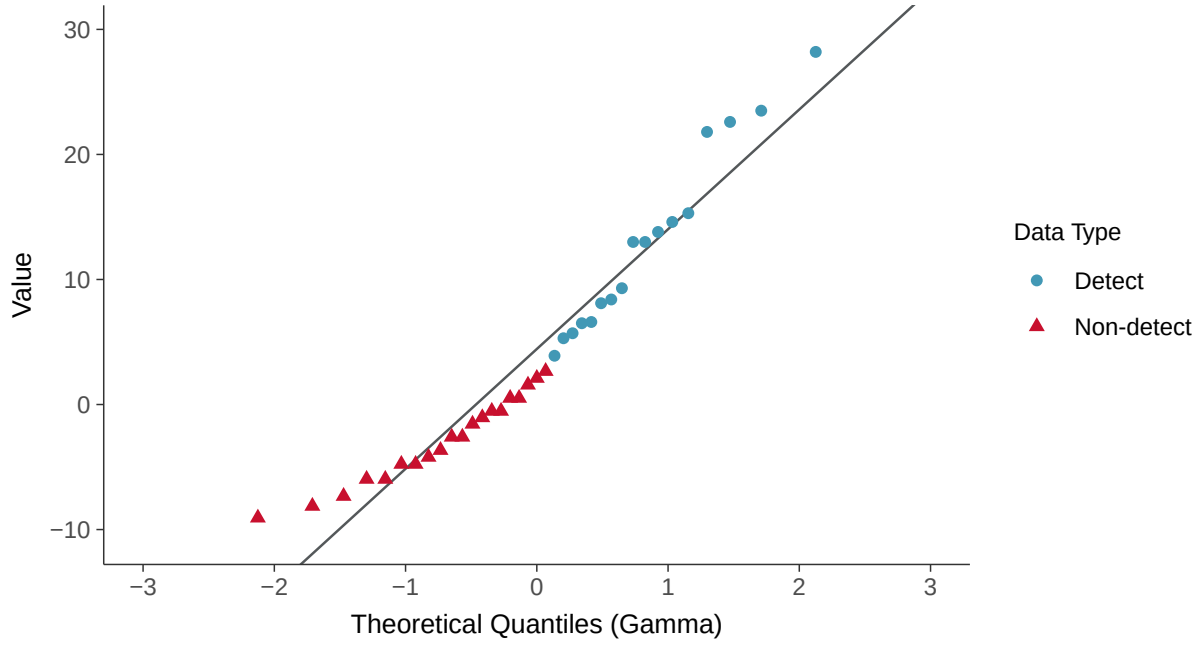
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



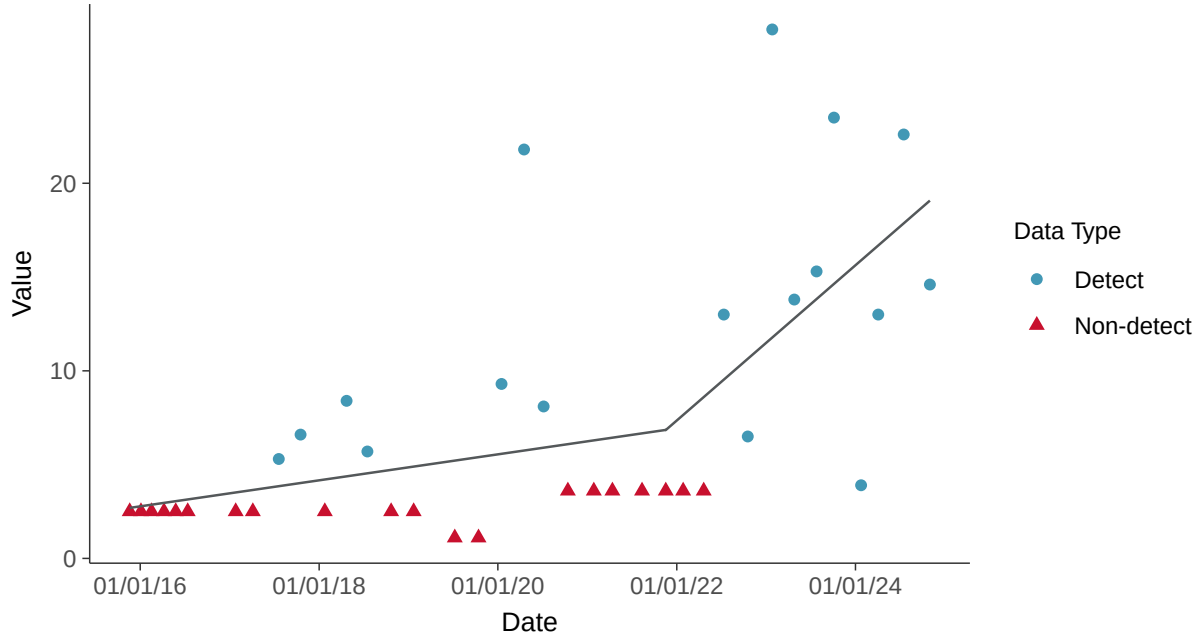
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, MW-4 (ug/L)

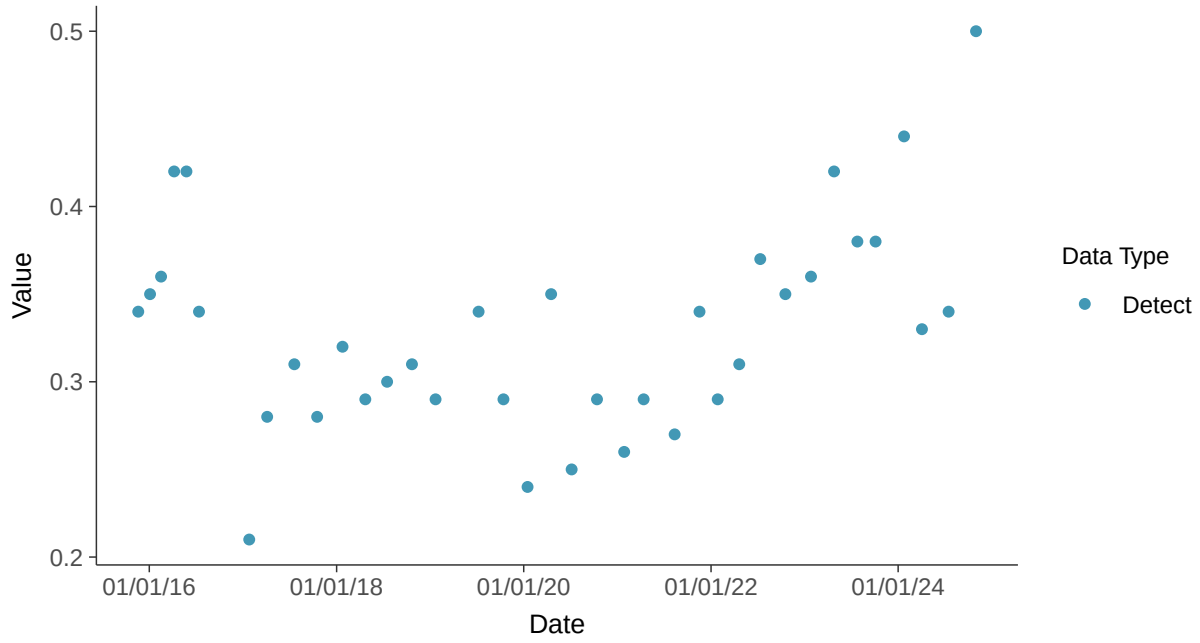


App. IV: Fluoride, MW-4

ID: 04_03_112

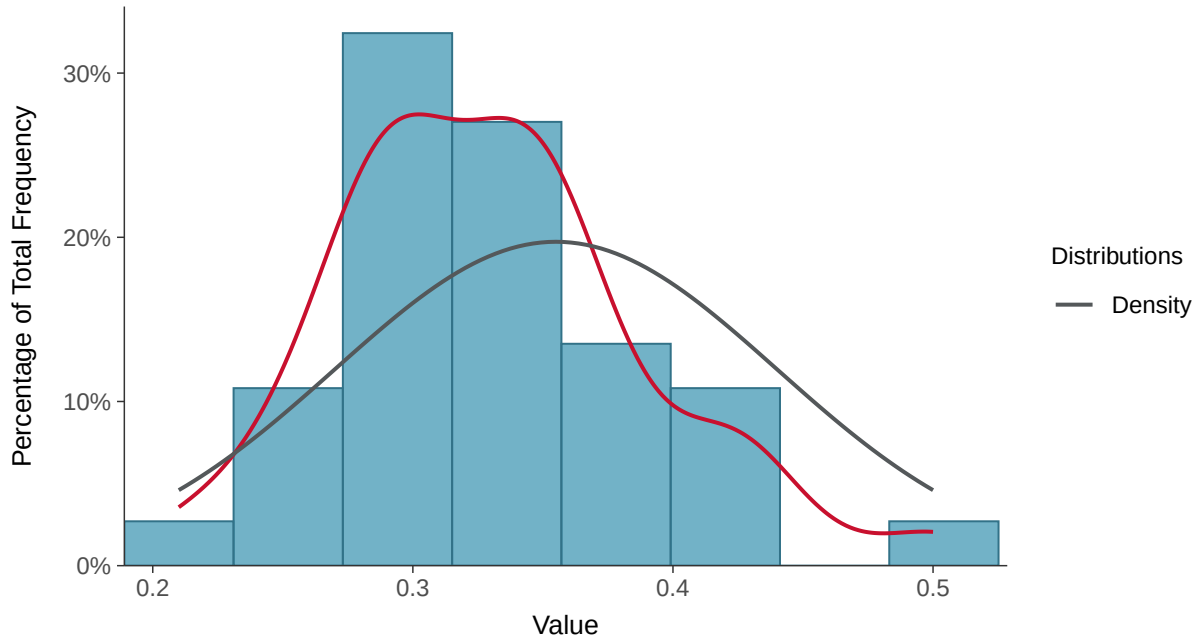
Scatter Plot

Fluoride, MW-4 (mg/L)



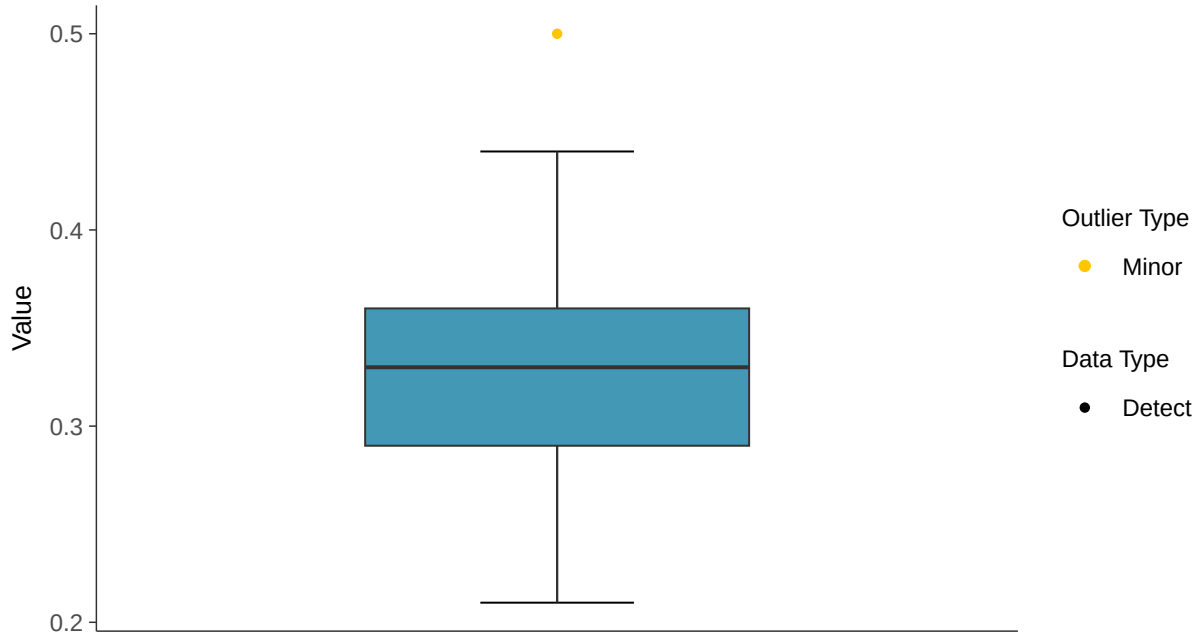
Histogram

Fluoride, MW-4 (mg/L)



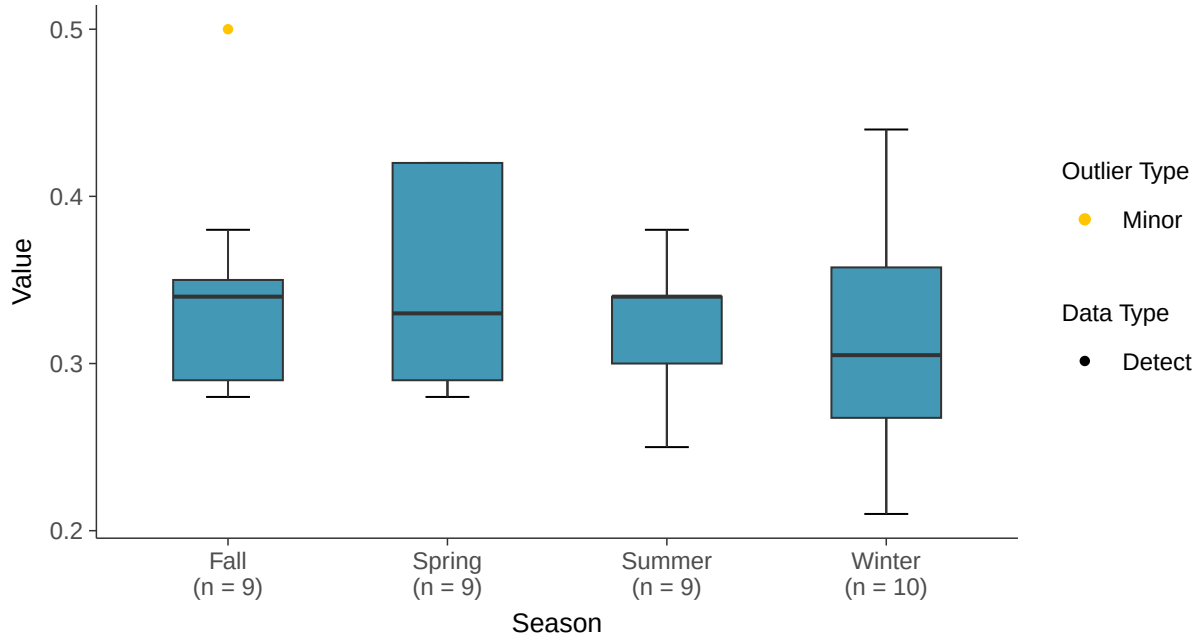
Boxplot

Fluoride, MW-4 (mg/L)



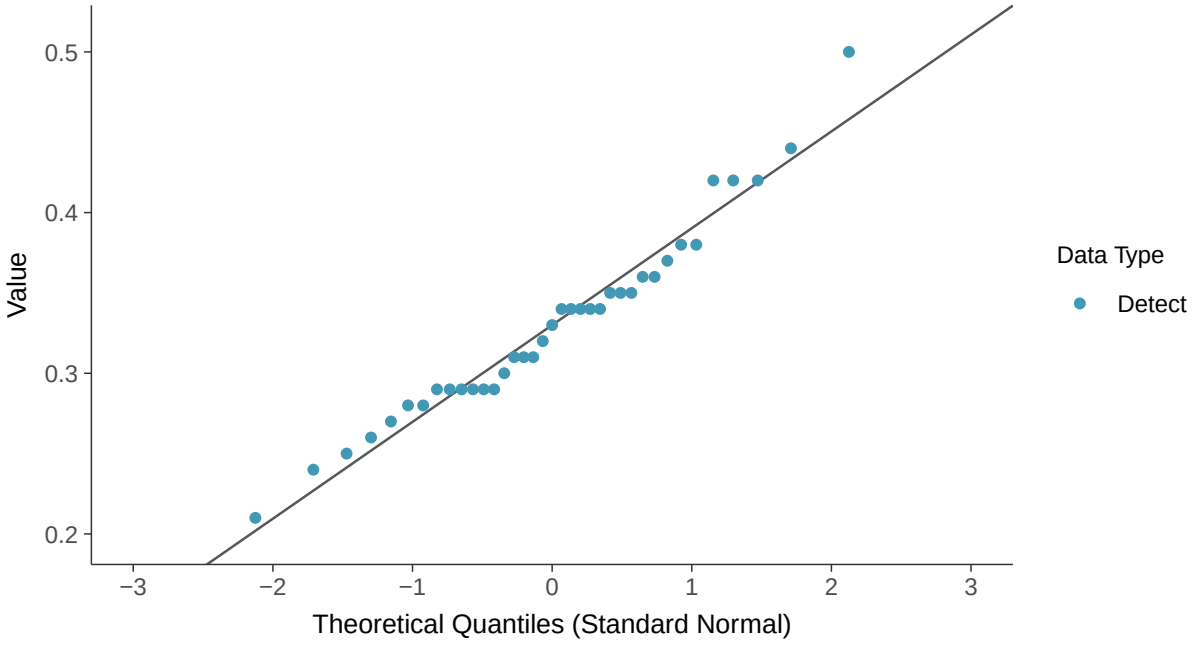
Boxplot by Season

Fluoride, MW-4 (mg/L)



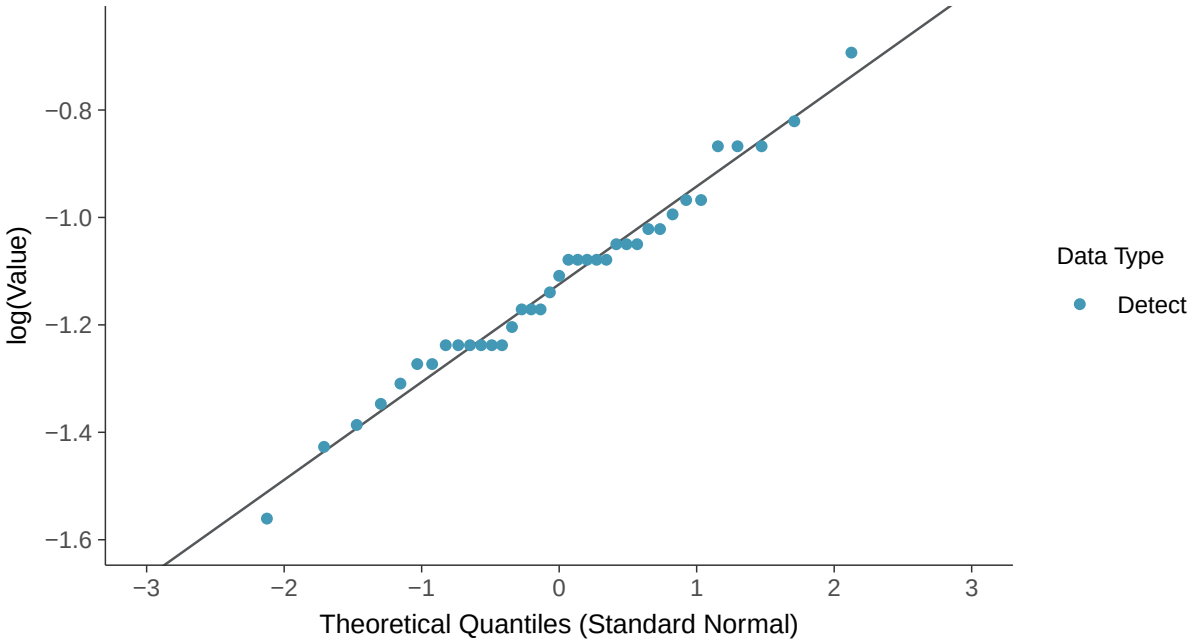
Normal Q-Q plot

Fluoride, MW-4 (mg/L)



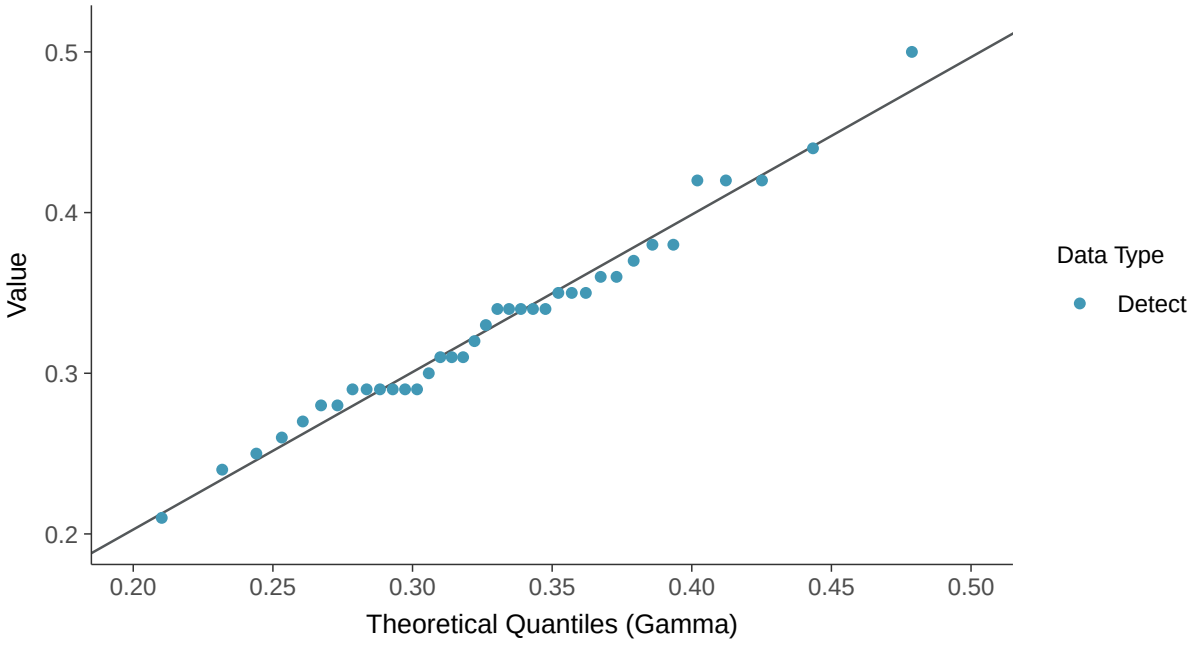
Lognormal Q-Q plot

Fluoride, MW-4 (mg/L)



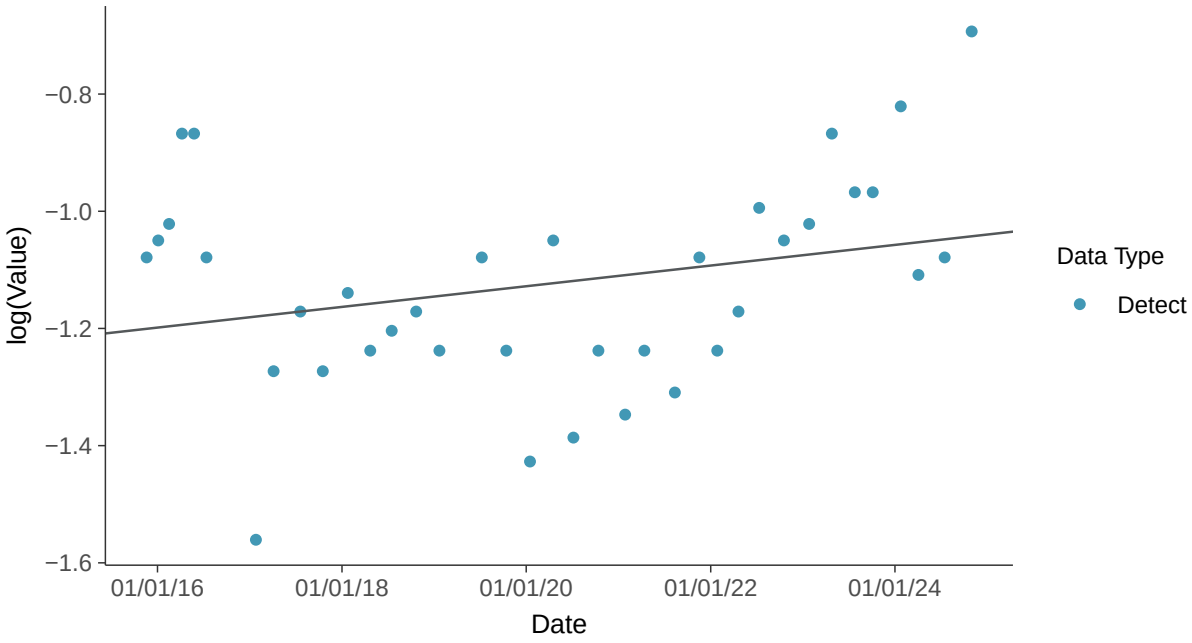
Gamma Q-Q plot

Fluoride, MW-4 (mg/L)



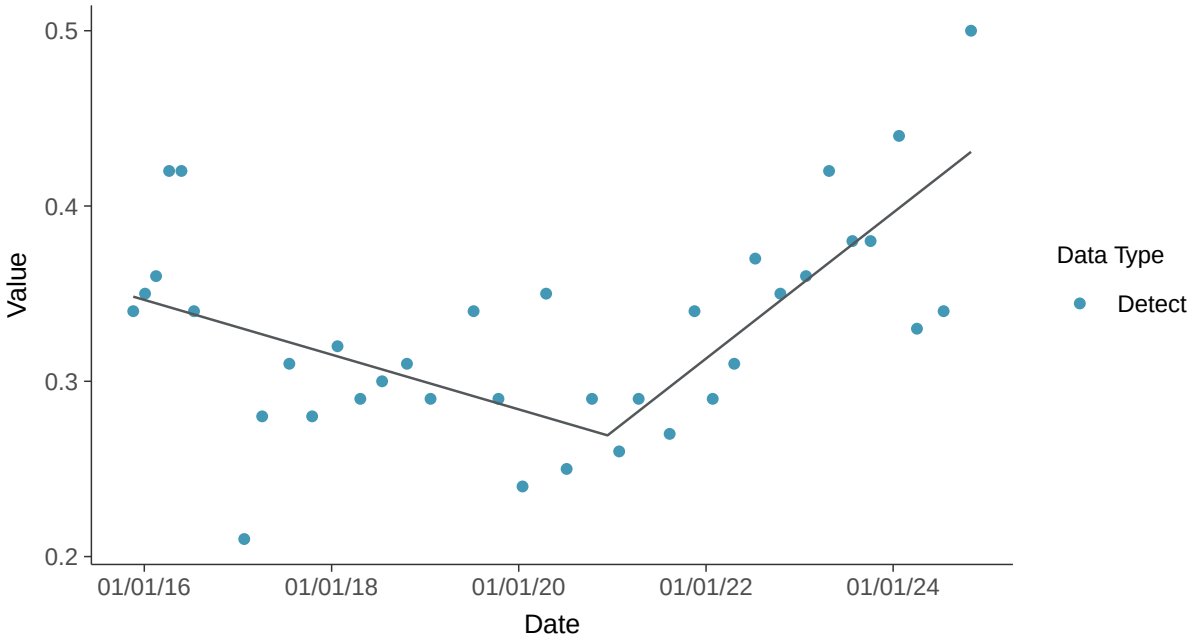
Trend Regression: Lognormal MLE

Fluoride, MW-4 (mg/L)



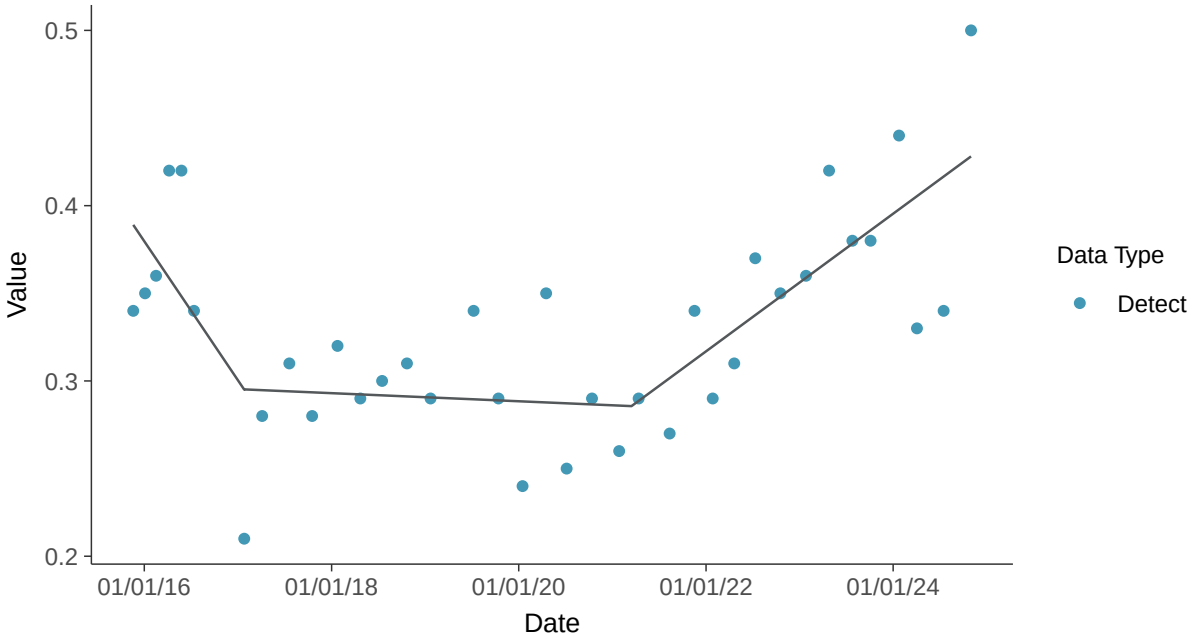
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-4 (mg/L)

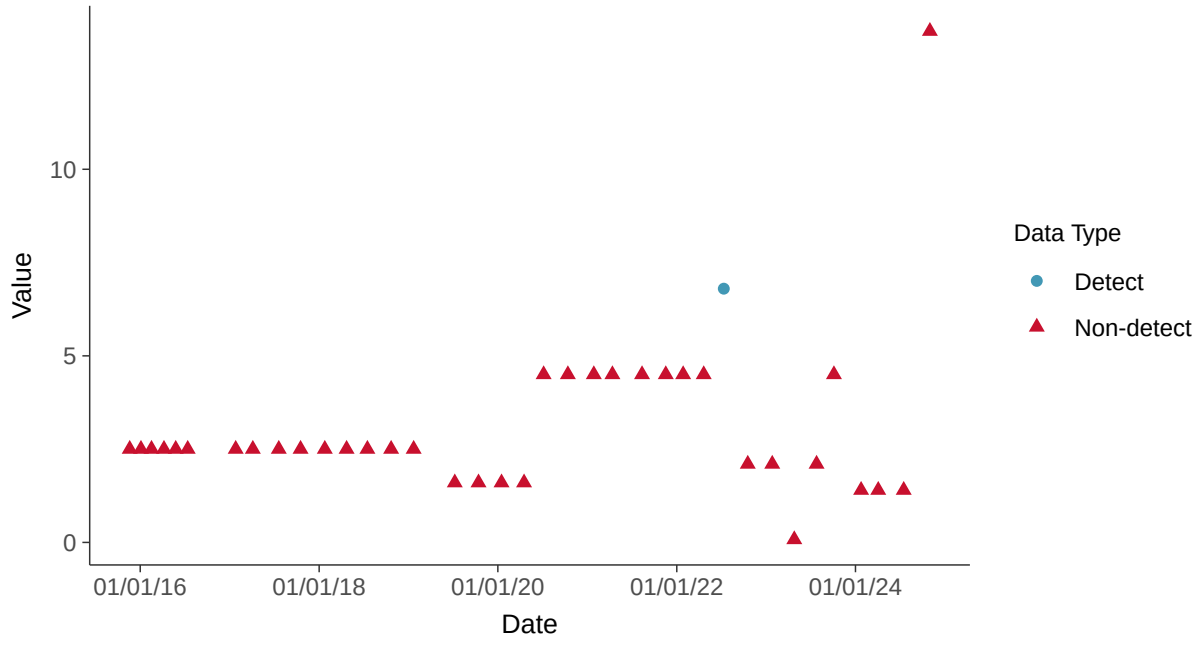


App. IV: Lead, MW-4

ID: 04_03_113

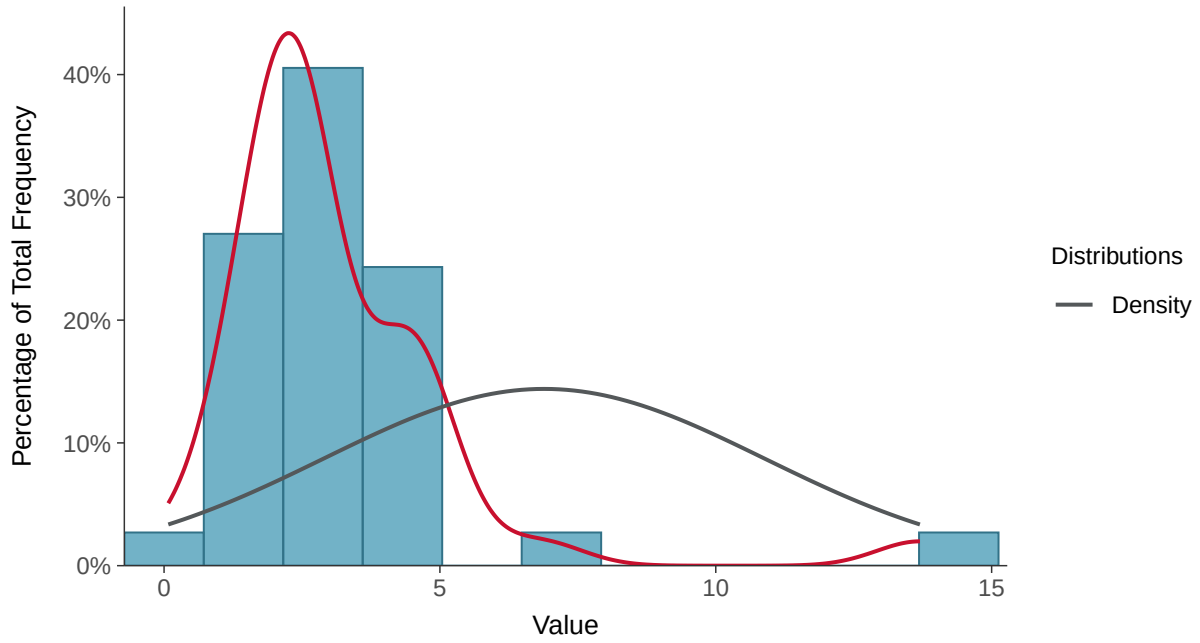
Scatter Plot

Lead, MW-4 (ug/L)



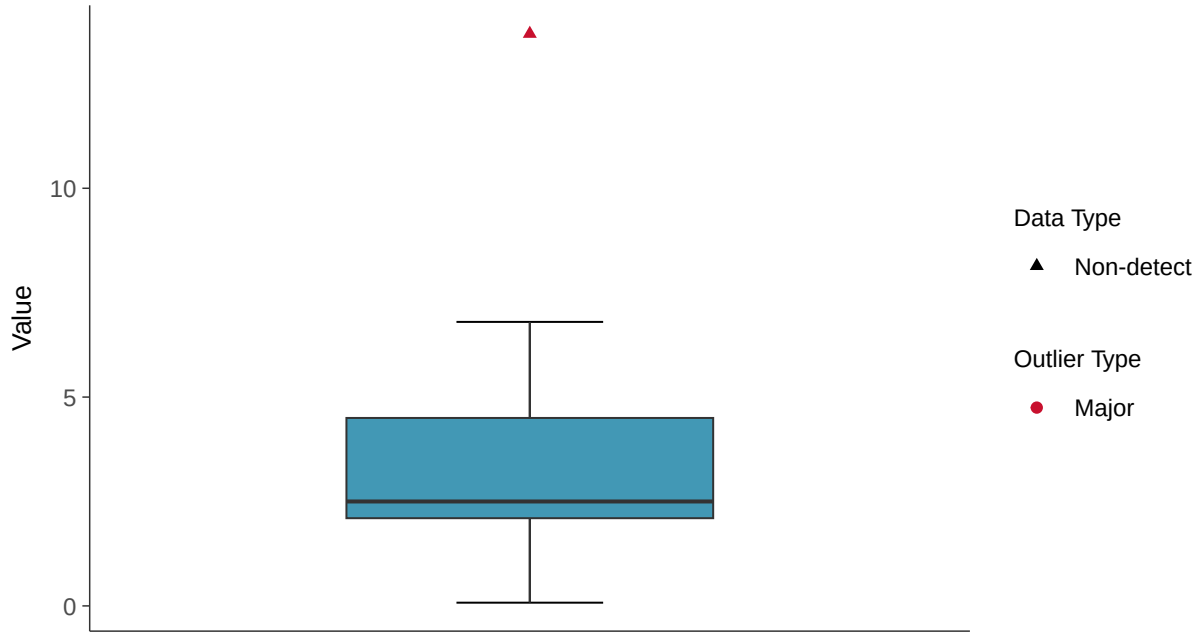
Histogram

Lead, MW-4 (ug/L)



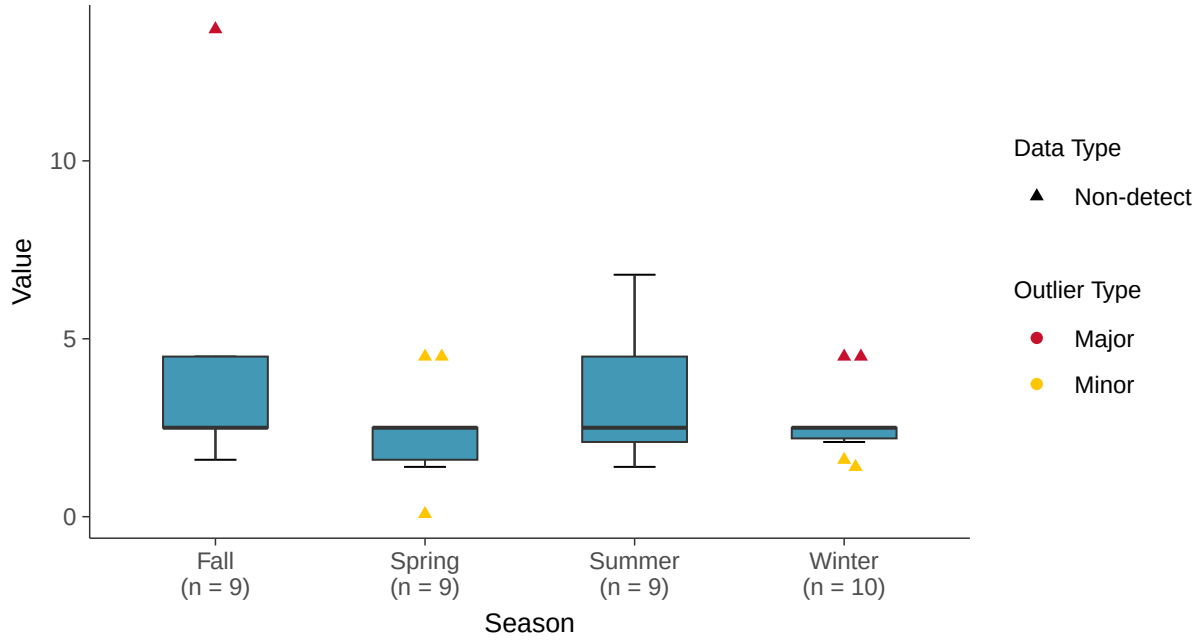
Boxplot

Lead, MW-4 (ug/L)



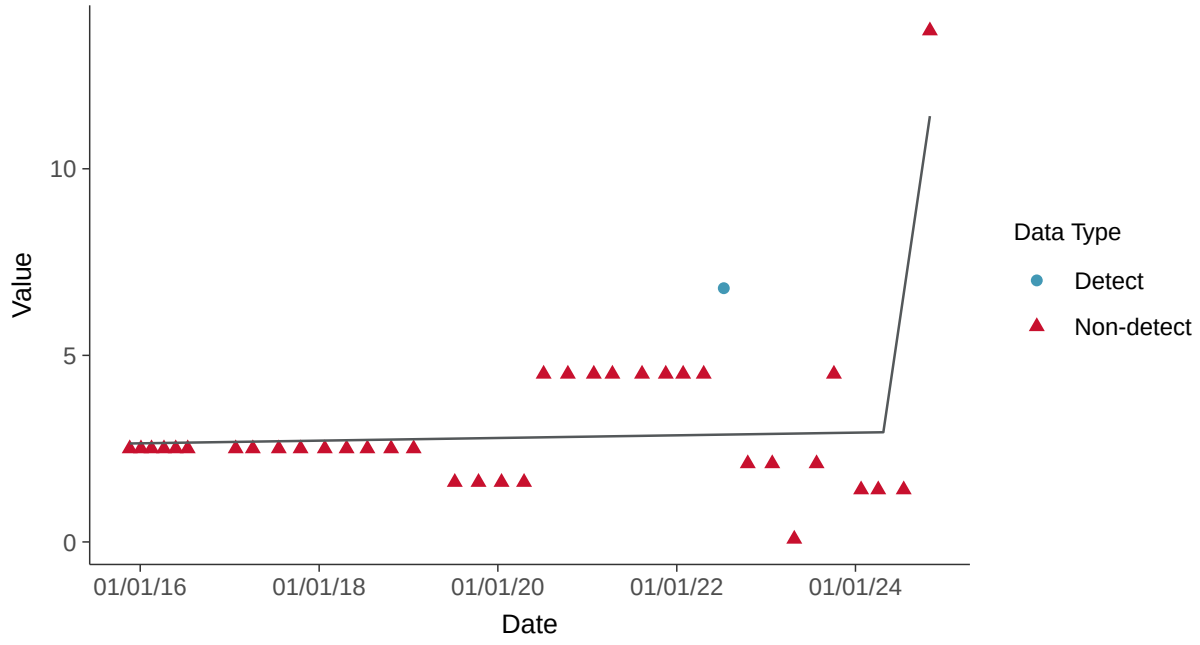
Boxplot by Season

Lead, MW-4 (ug/L)



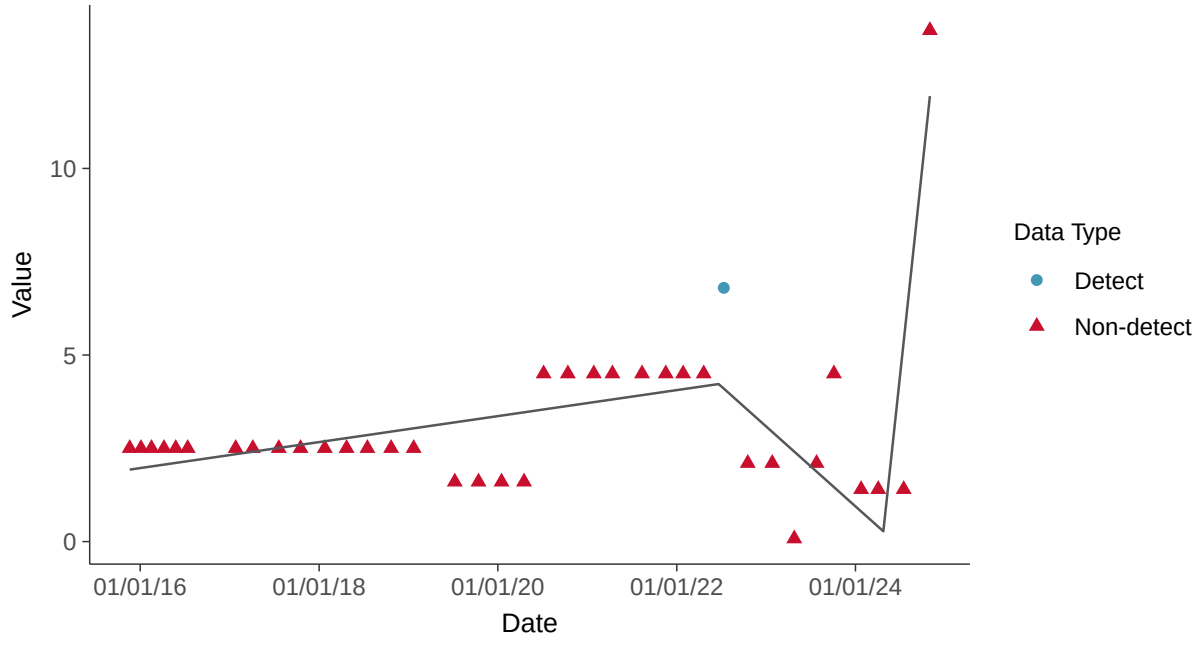
Trend Regression: Piecewise Linear-Linear

Lead, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-4 (ug/L)

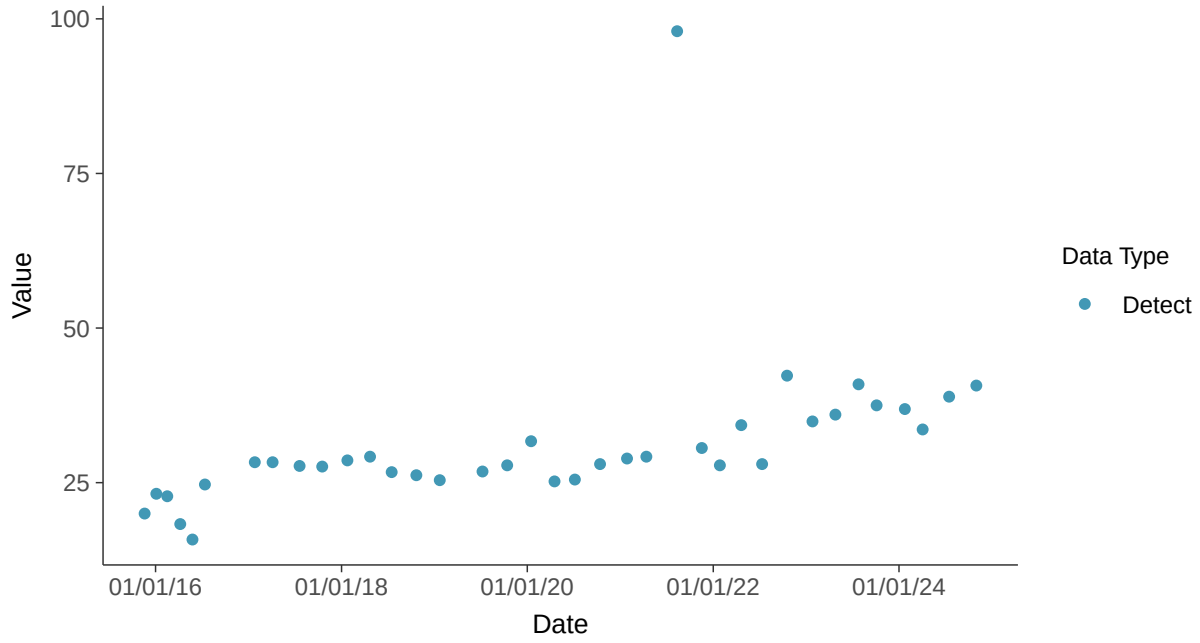


App. IV: Lithium, MW-4

ID: 04_03_114

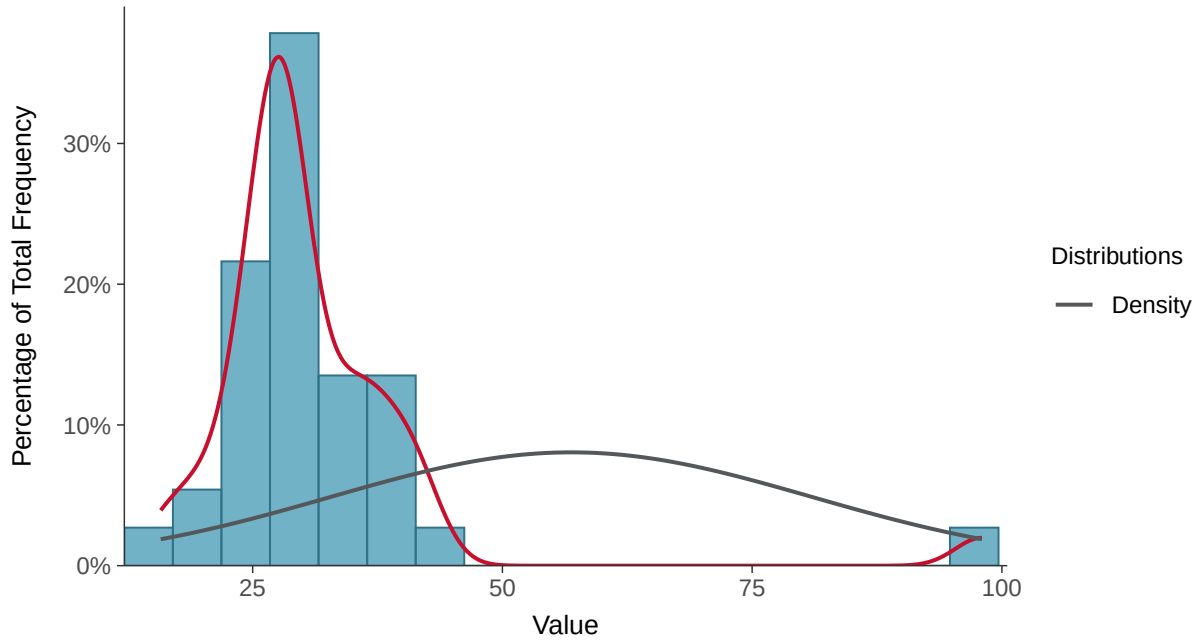
Scatter Plot

Lithium, MW-4 (ug/L)



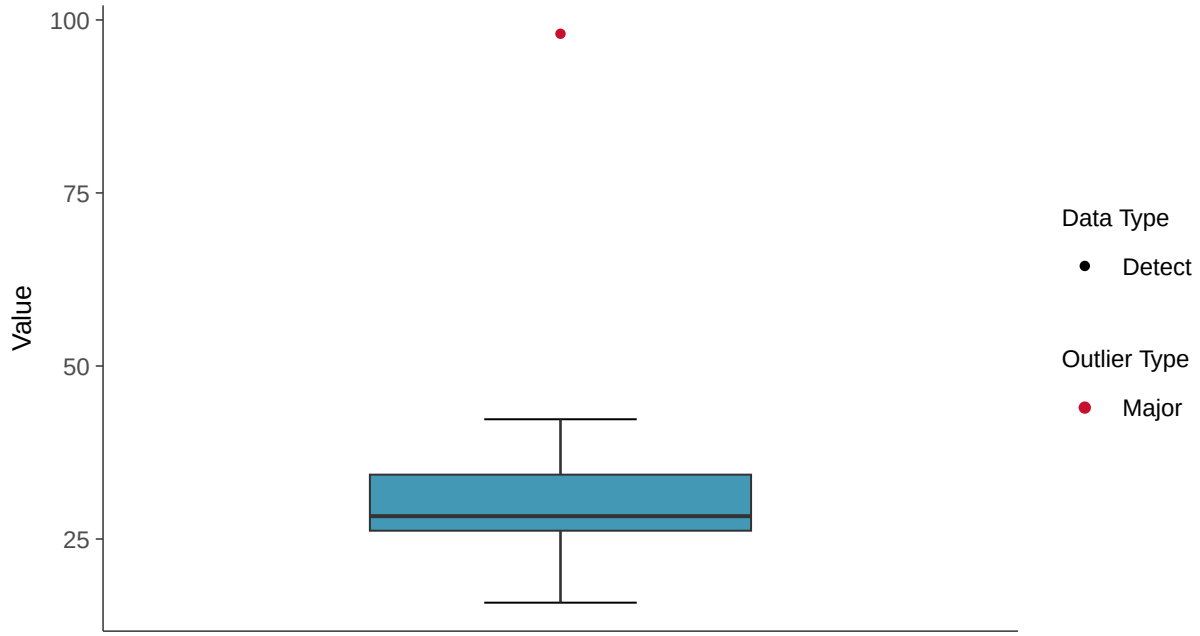
Histogram

Lithium, MW-4 (ug/L)



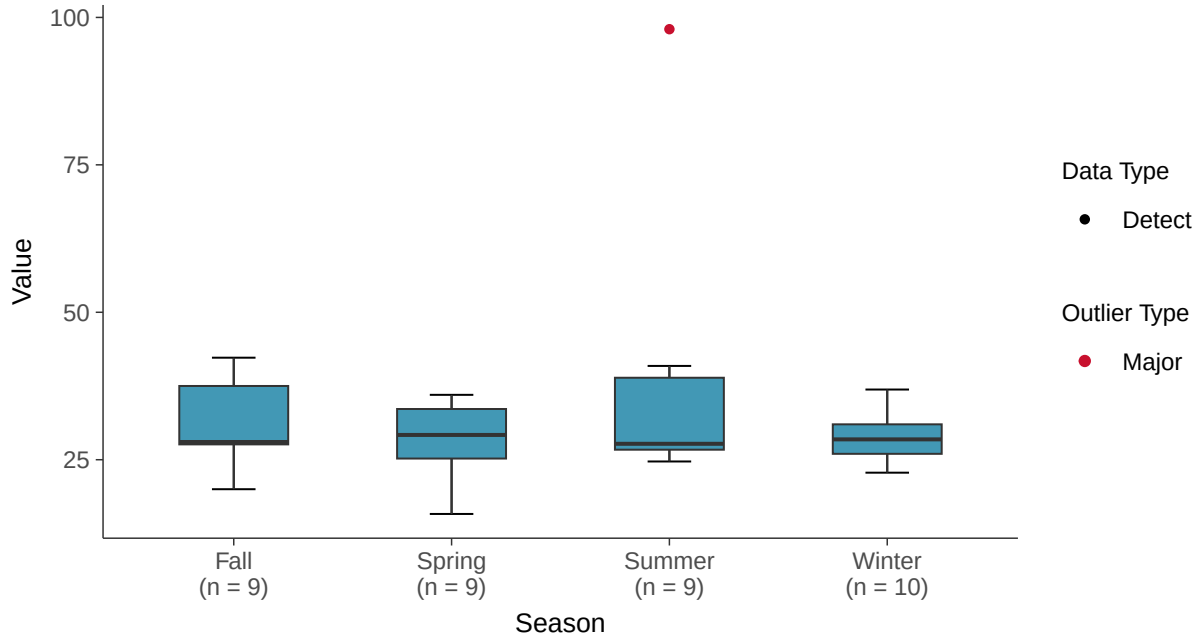
Boxplot

Lithium, MW-4 (ug/L)



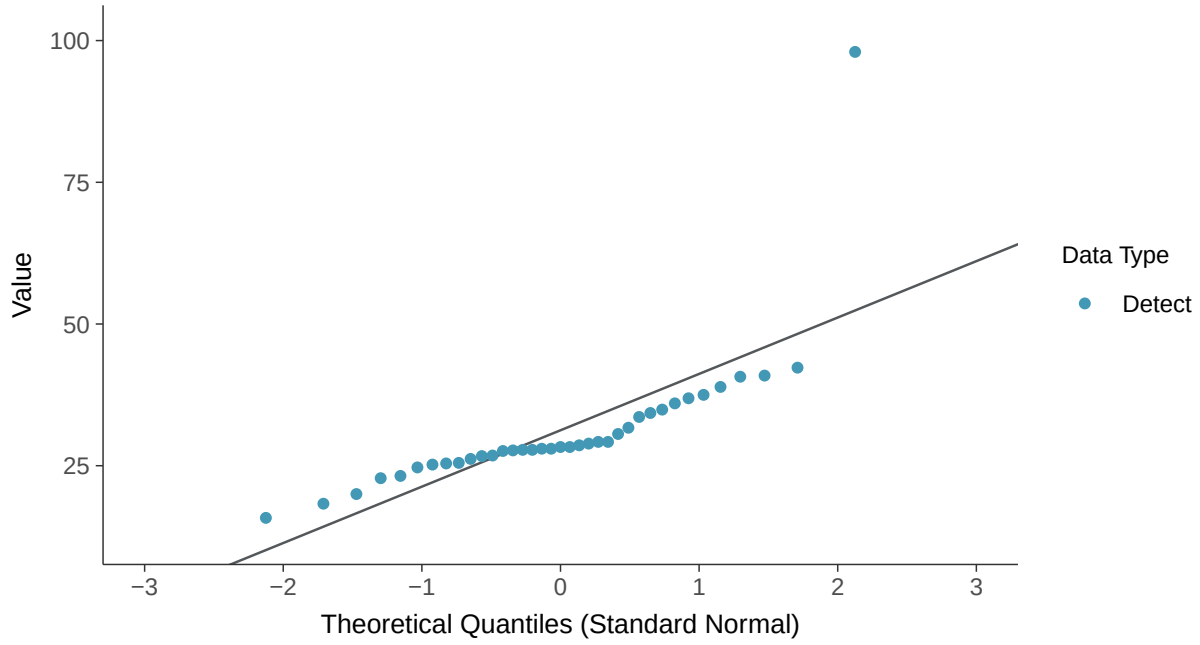
Boxplot by Season

Lithium, MW-4 (ug/L)



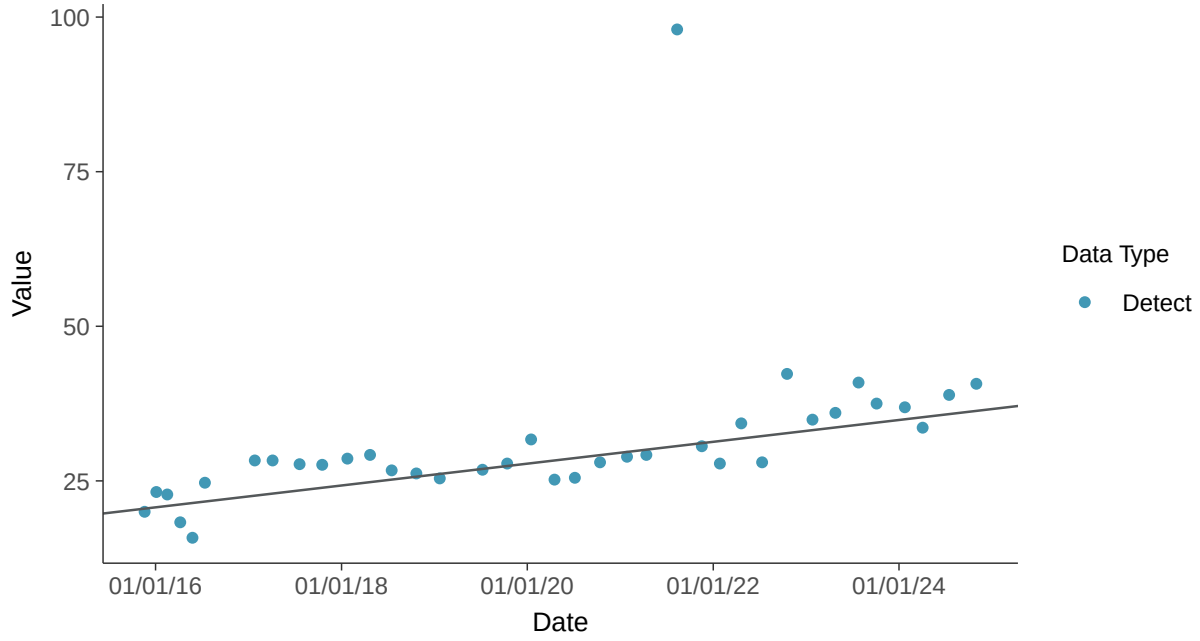
Normal Q-Q plot

Lithium, MW-4 (ug/L)



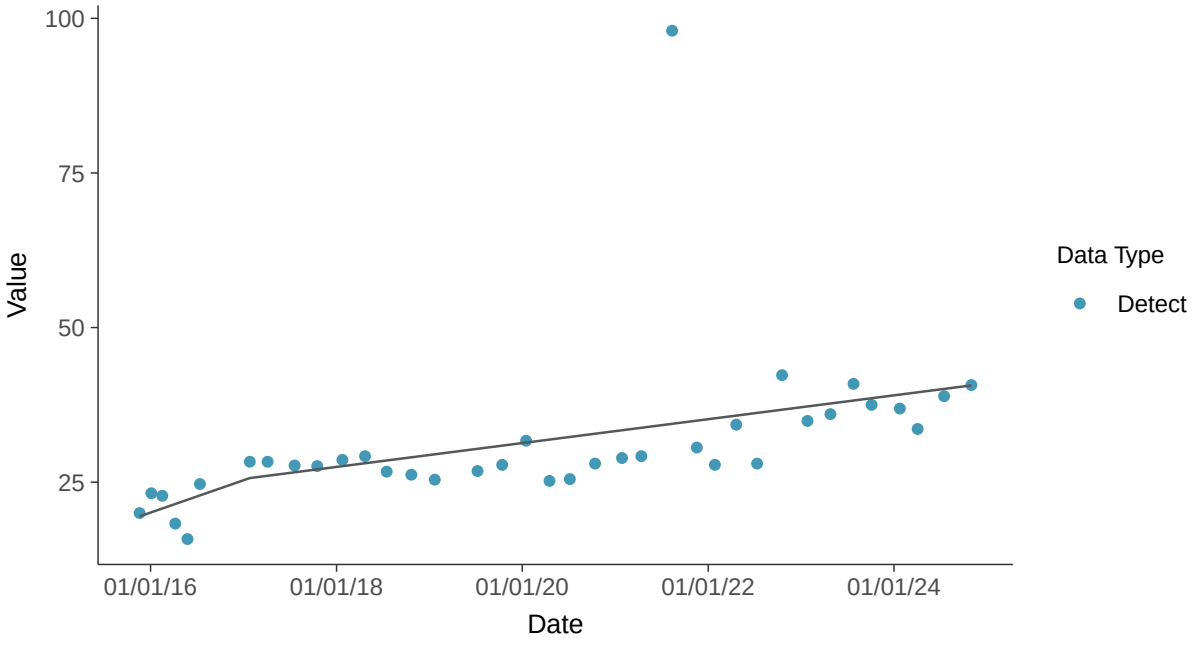
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-4 (ug/L)



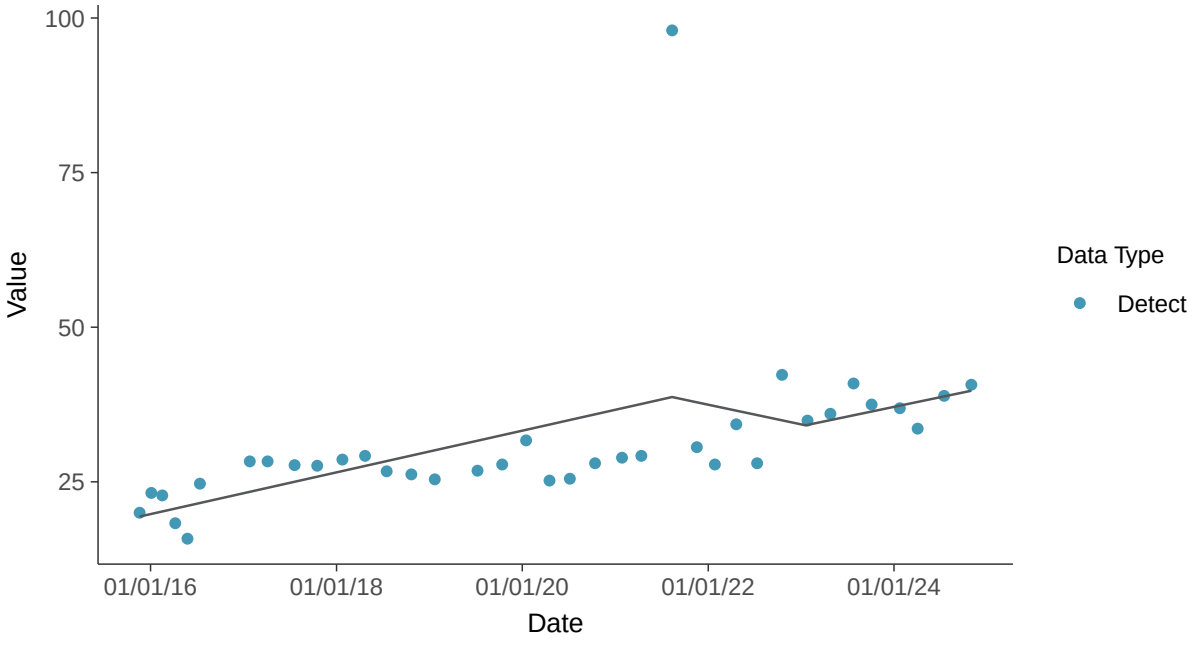
Trend Regression: Piecewise Linear-Linear

Lithium, MW-4 (ug/L)



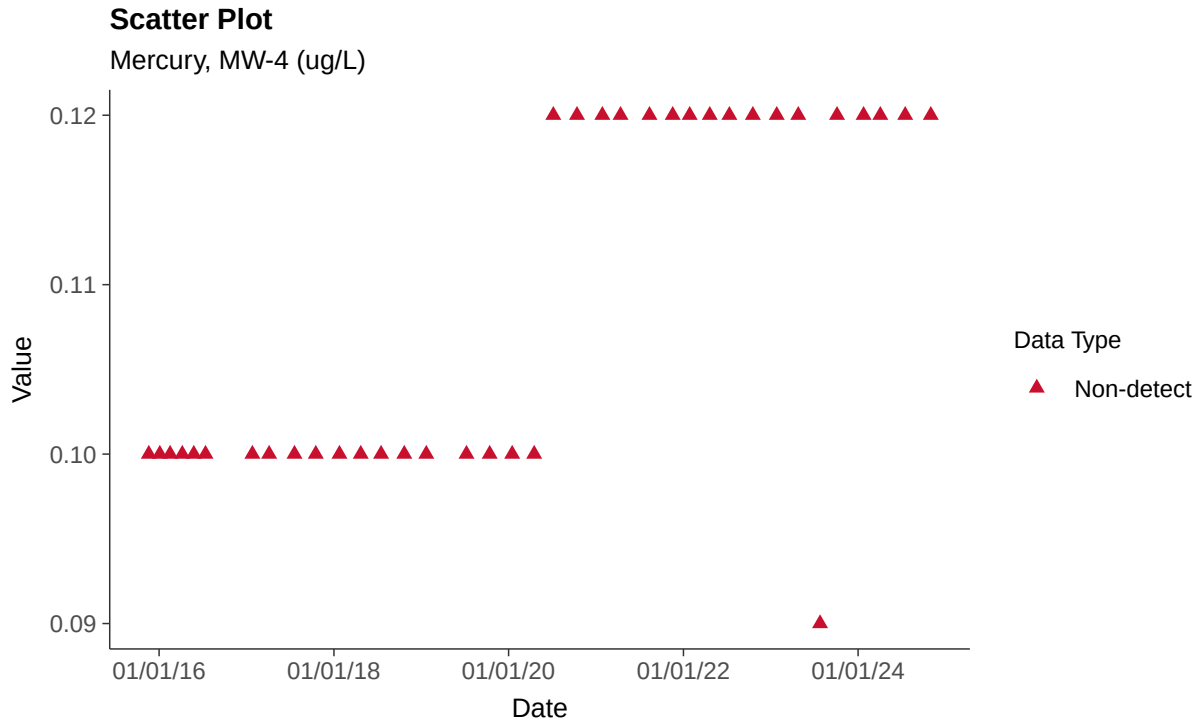
Trend Regression: Piecewise Linear-Linear-Linear

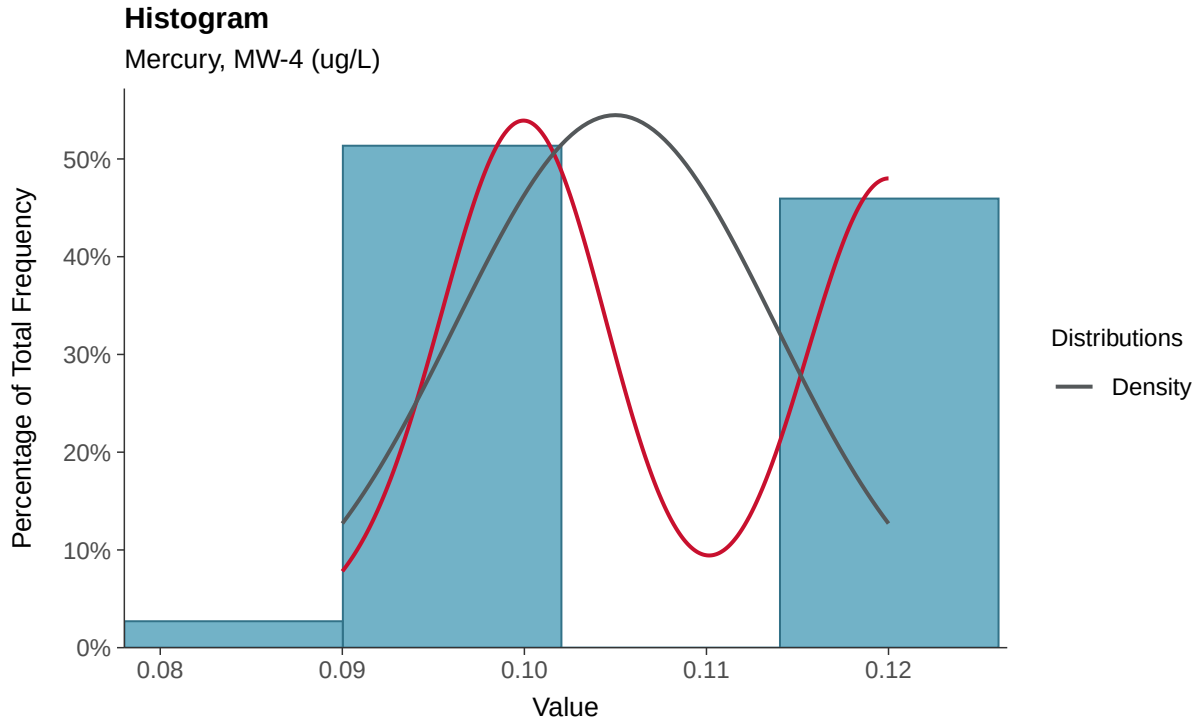
Lithium, MW-4 (ug/L)



App. IV: Mercury, MW-4

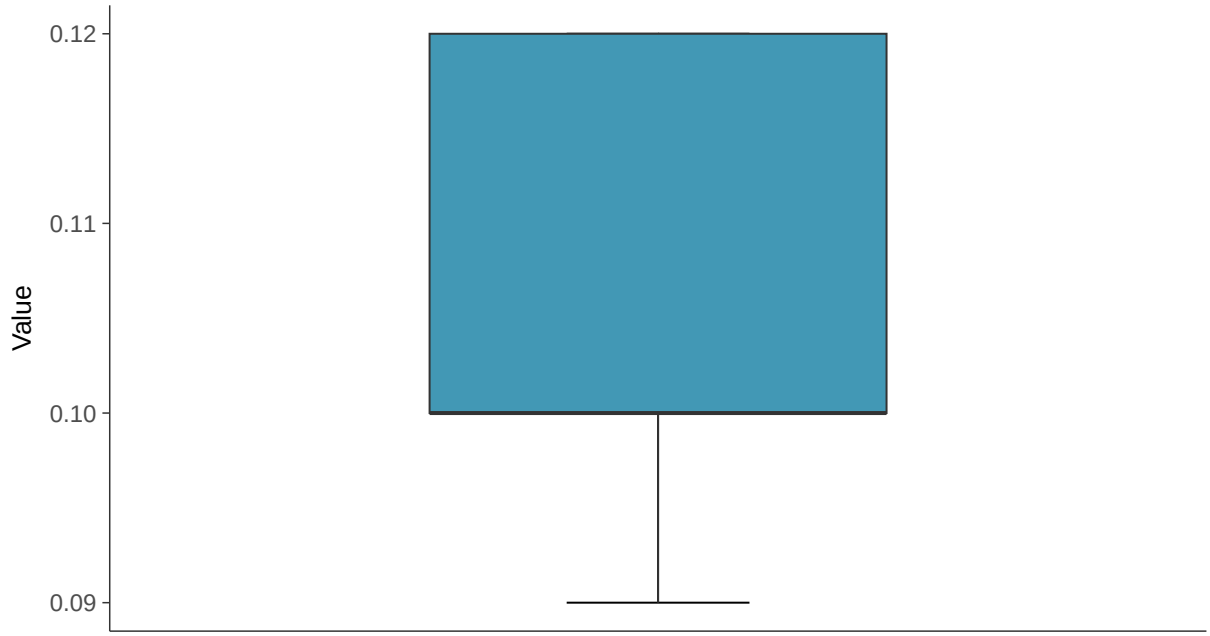
ID: 04_03_115





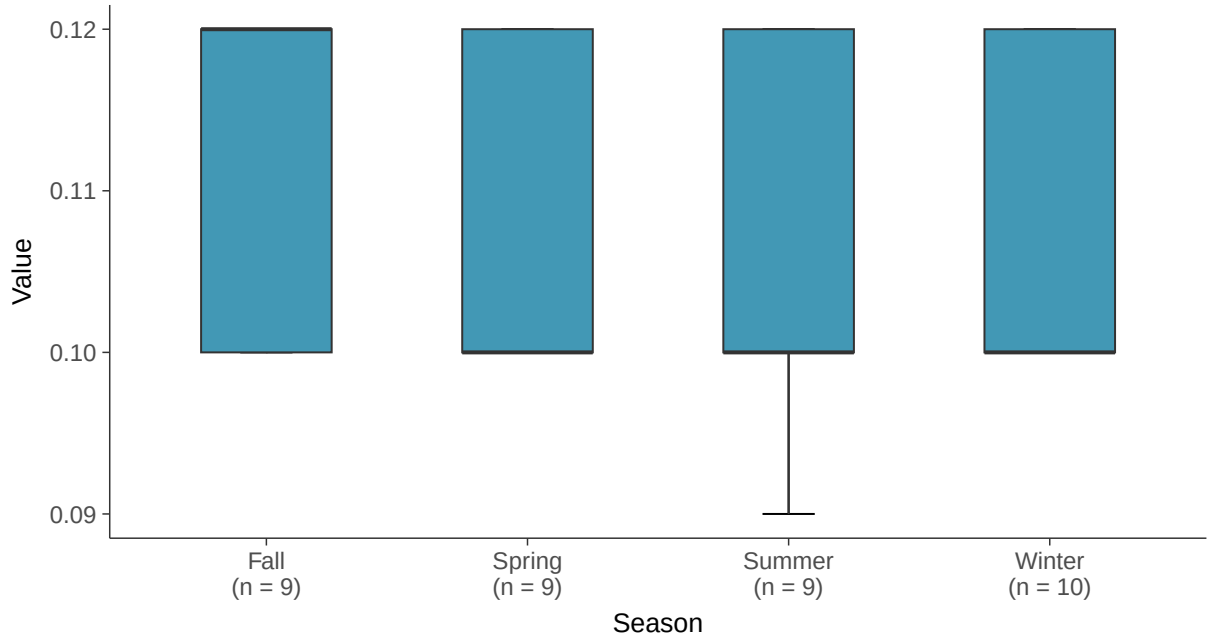
Boxplot

Mercury, MW-4 (ug/L)



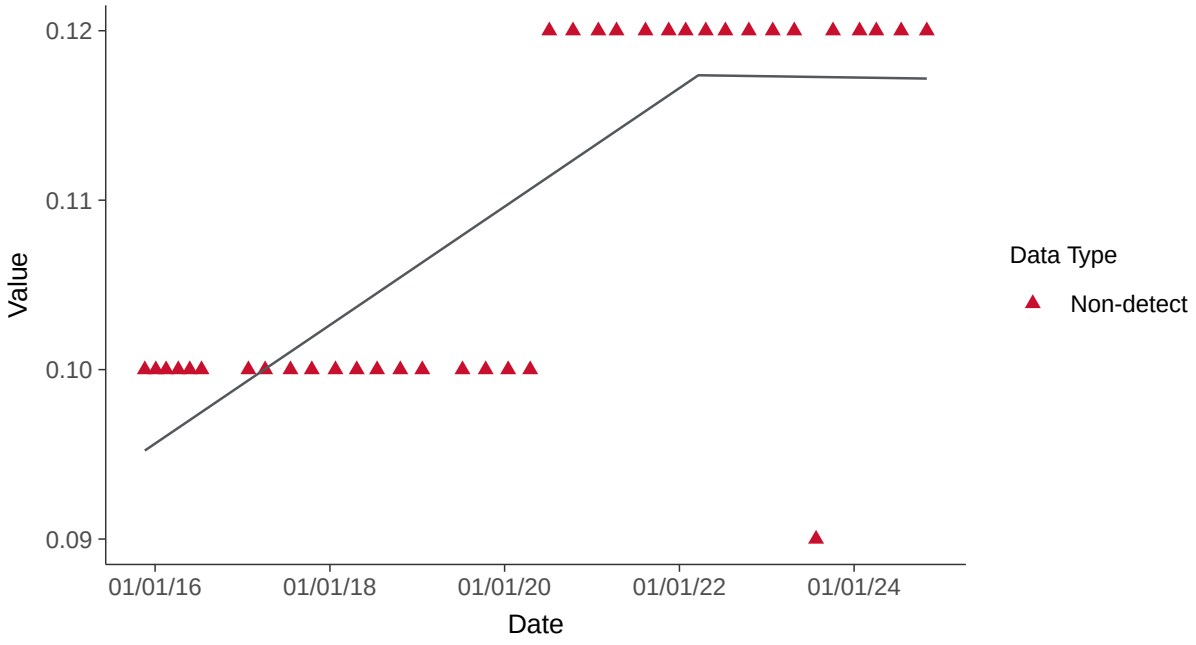
Boxplot by Season

Mercury, MW-4 (ug/L)



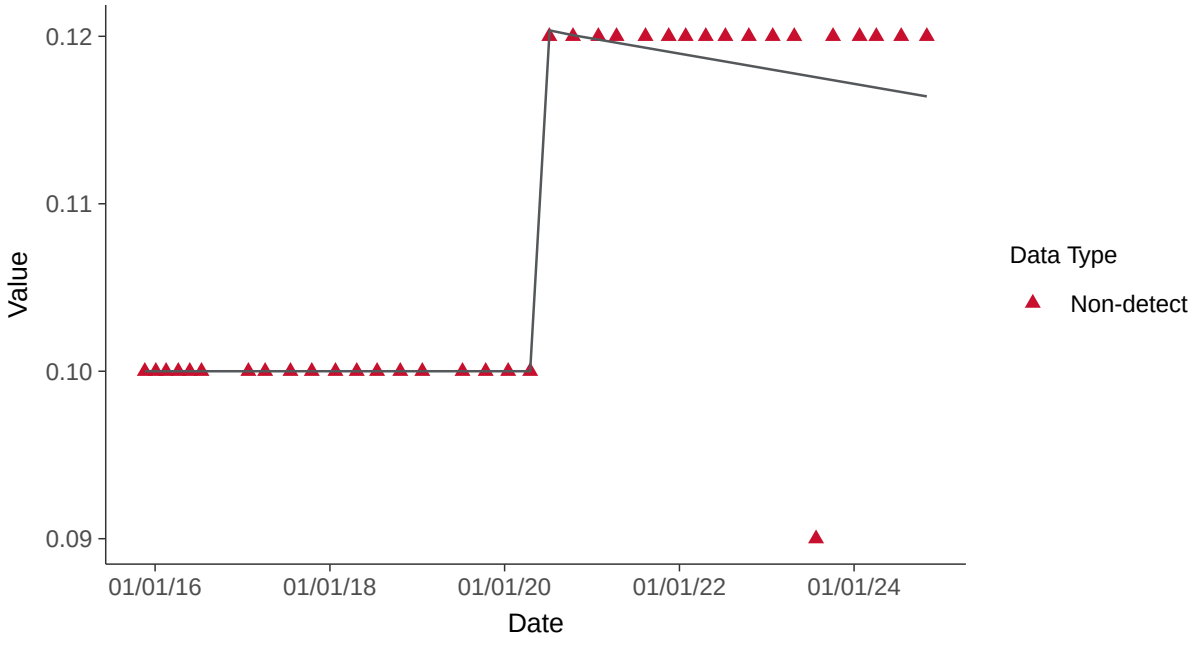
Trend Regression: Piecewise Linear-Linear

Mercury, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-4 (ug/L)

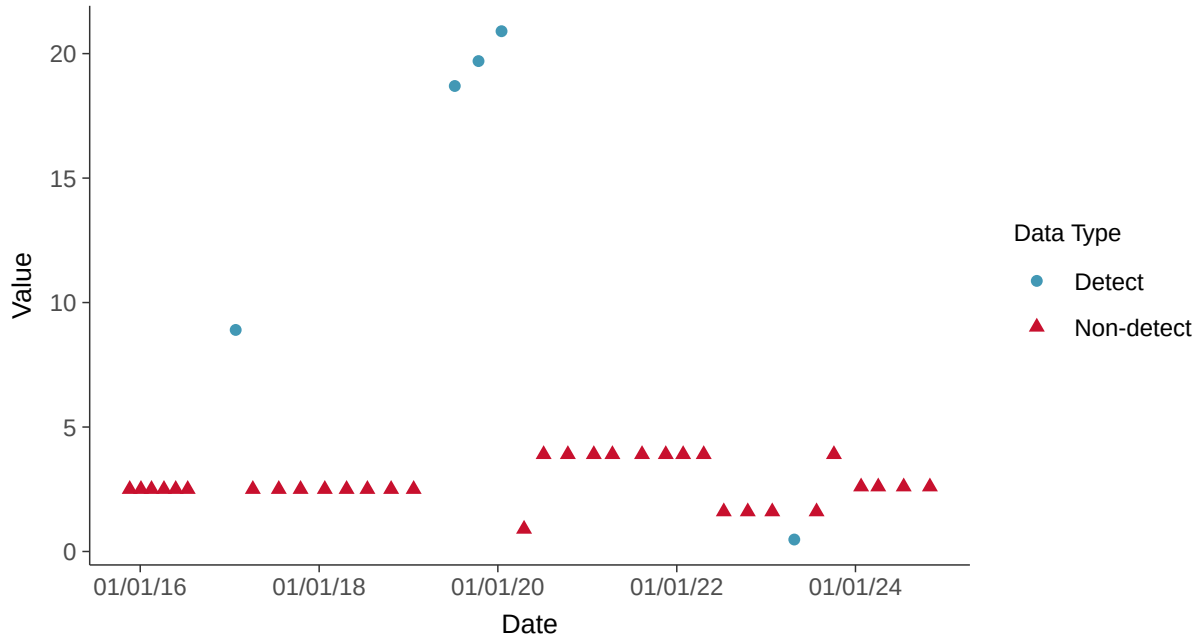


App. IV: Molybdenum, MW-4

ID: 04_03_116

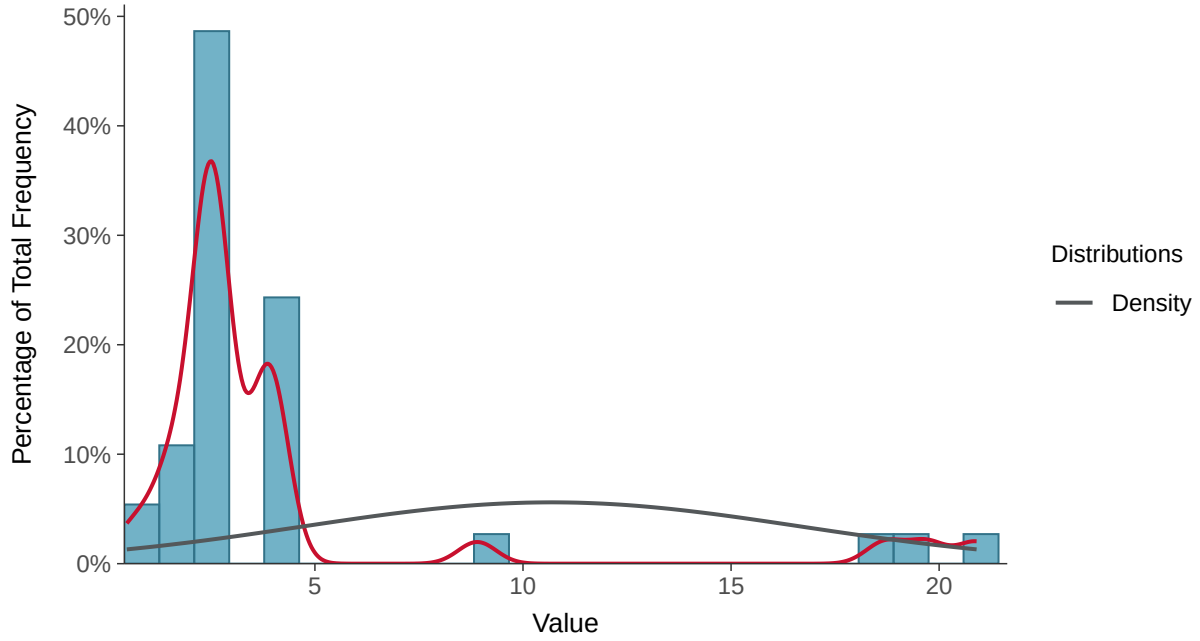
Scatter Plot

Molybdenum, MW-4 (ug/L)



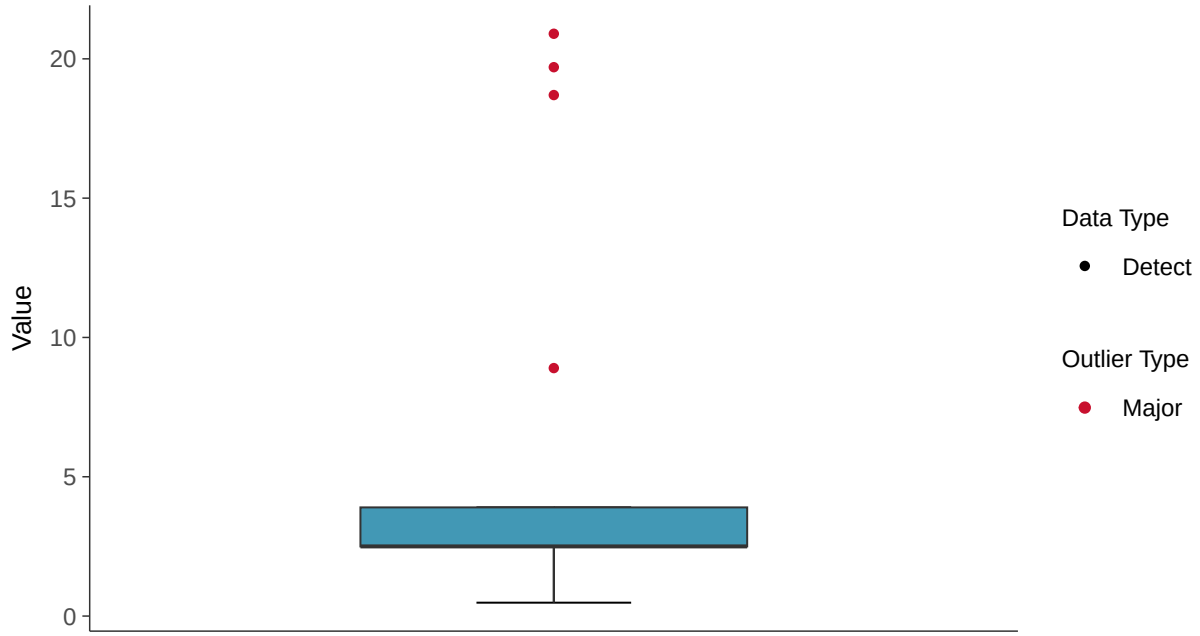
Histogram

Molybdenum, MW-4 (ug/L)



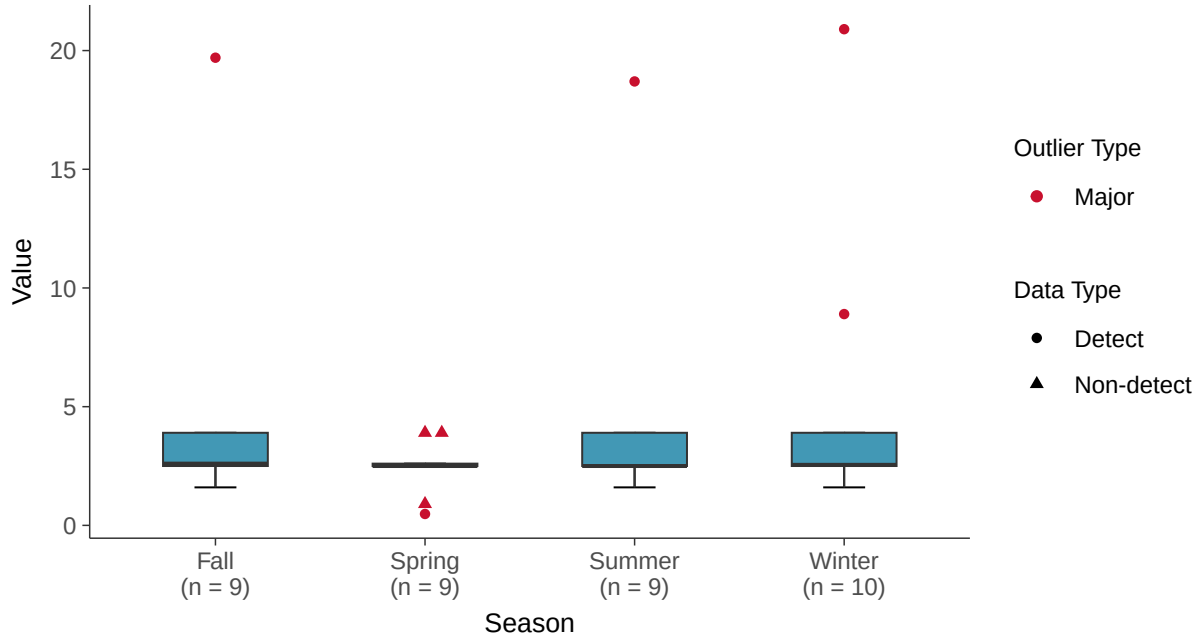
Boxplot

Molybdenum, MW-4 (ug/L)



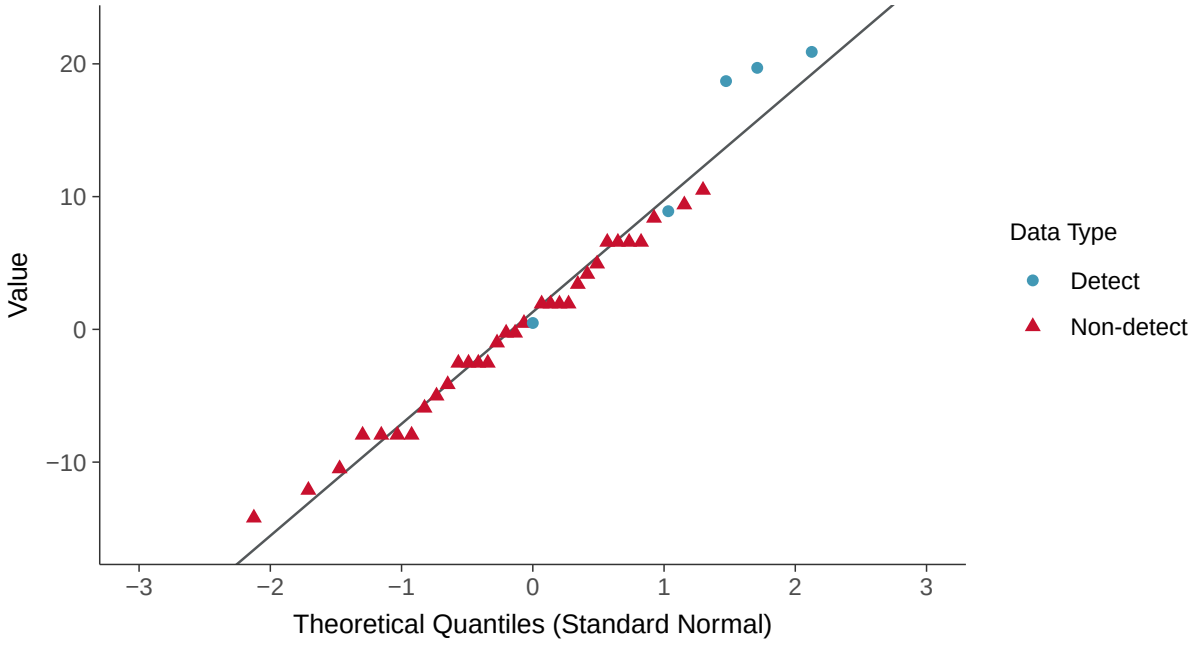
Boxplot by Season

Molybdenum, MW-4 (ug/L)



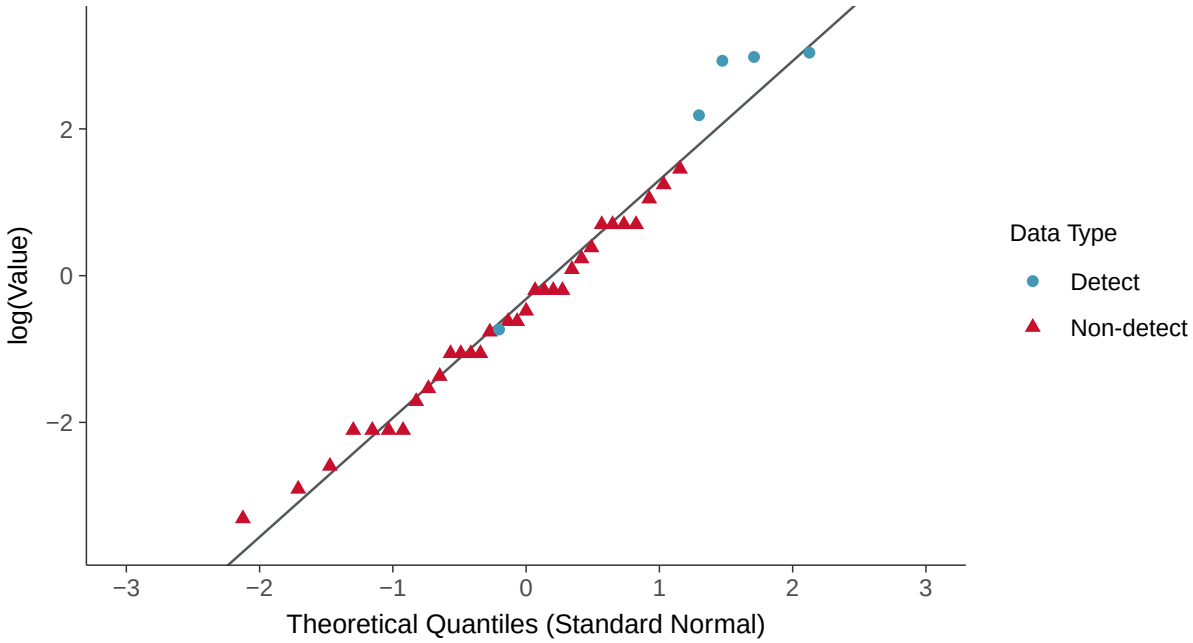
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



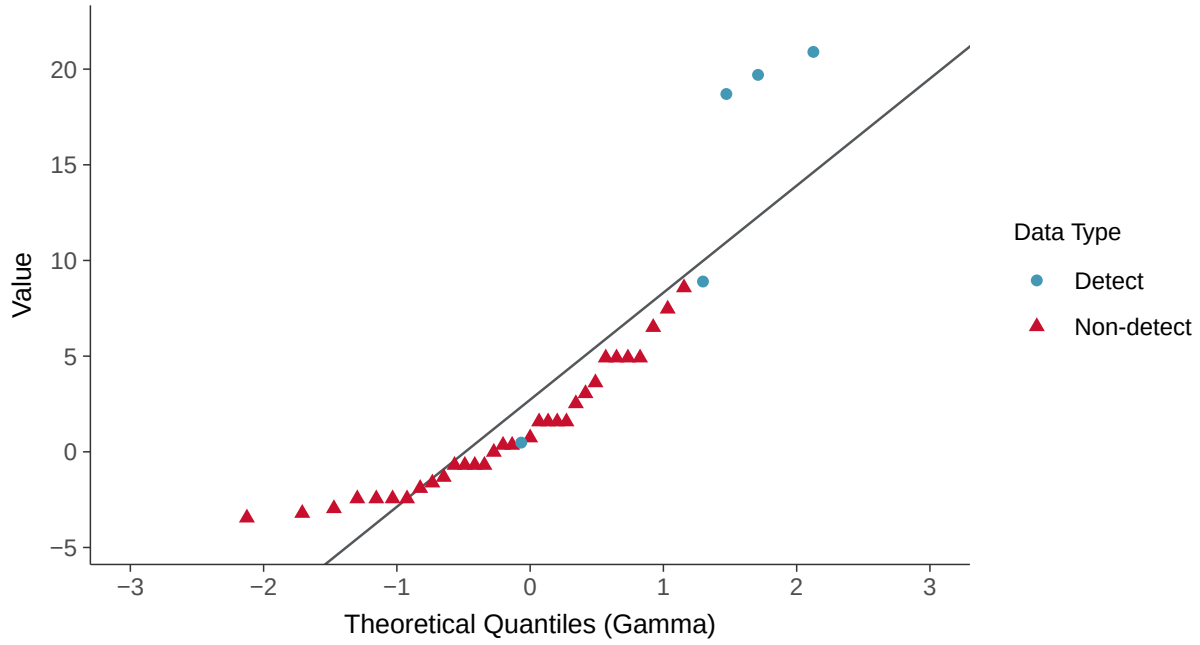
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



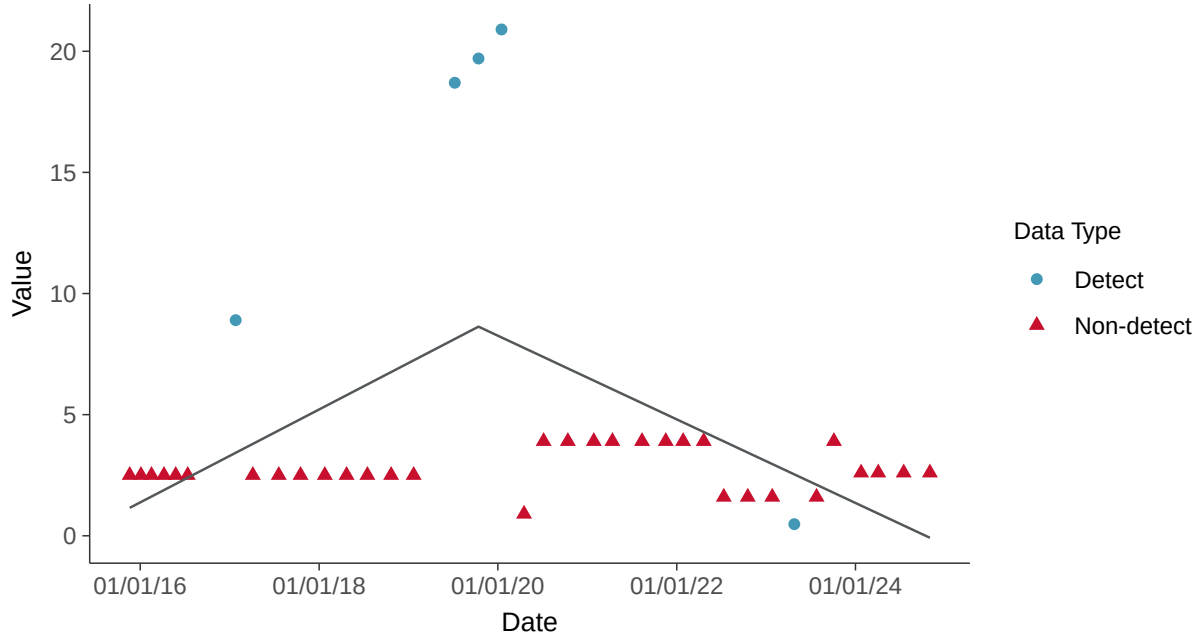
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



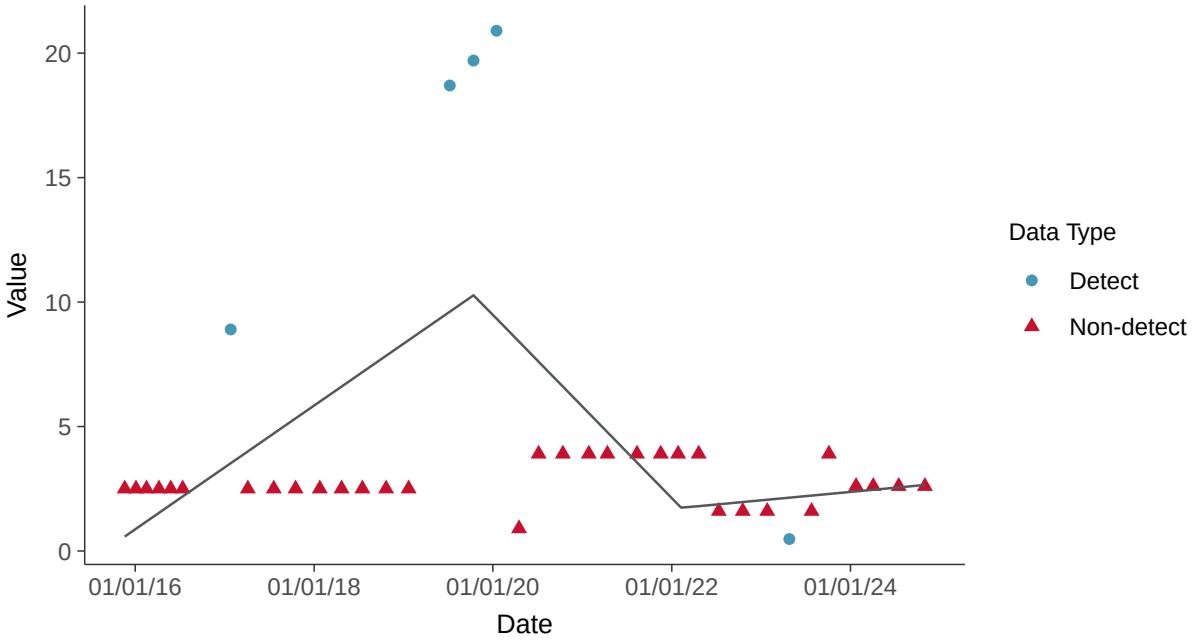
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-4 (ug/L)



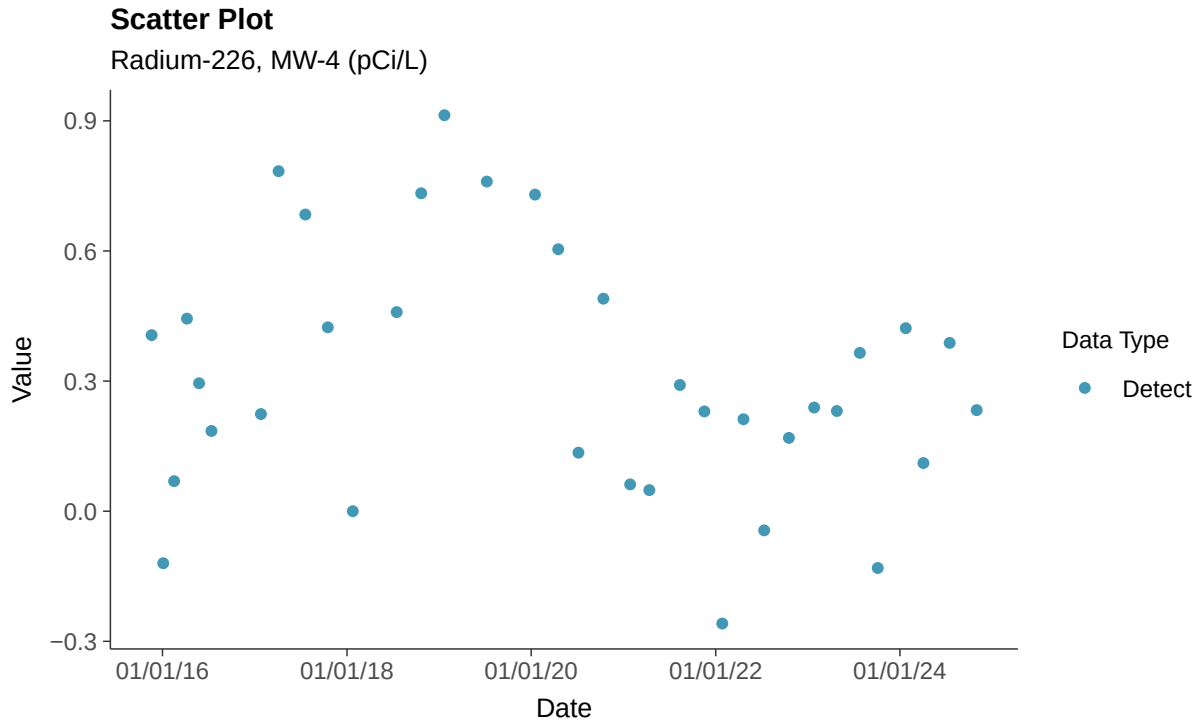
Trend Regression: Piecewise Linear-Linear-Linear

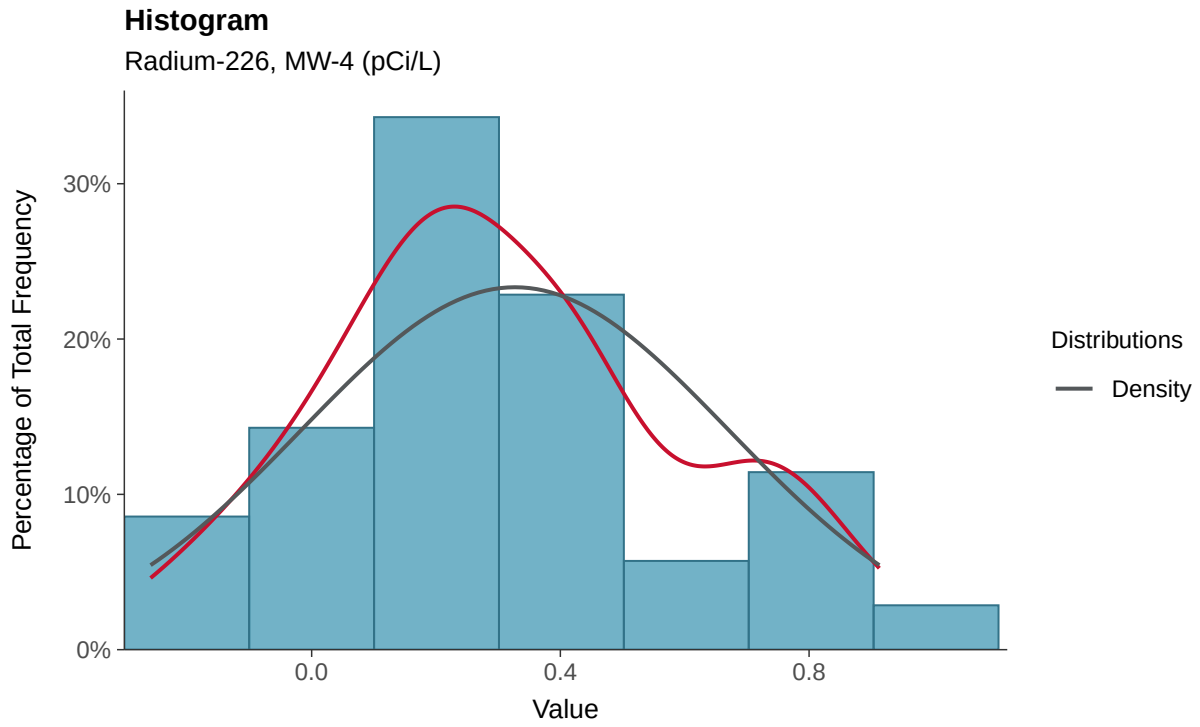
Molybdenum, MW-4 (ug/L)



App. IV: Radium-226, MW-4

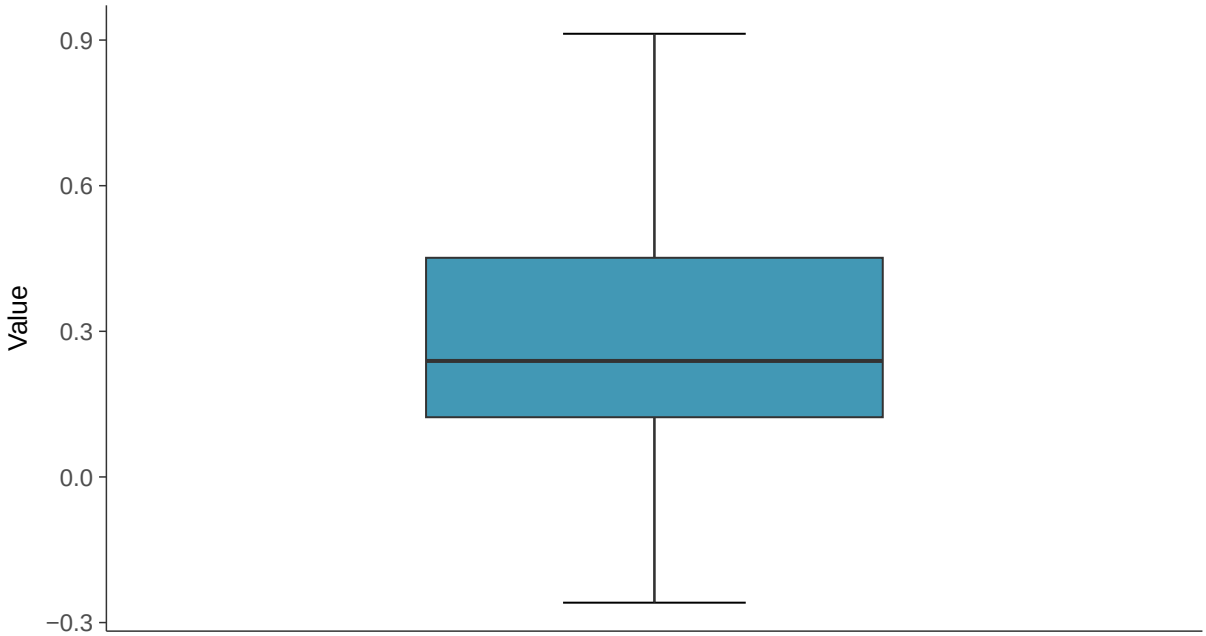
ID: 04_03_119





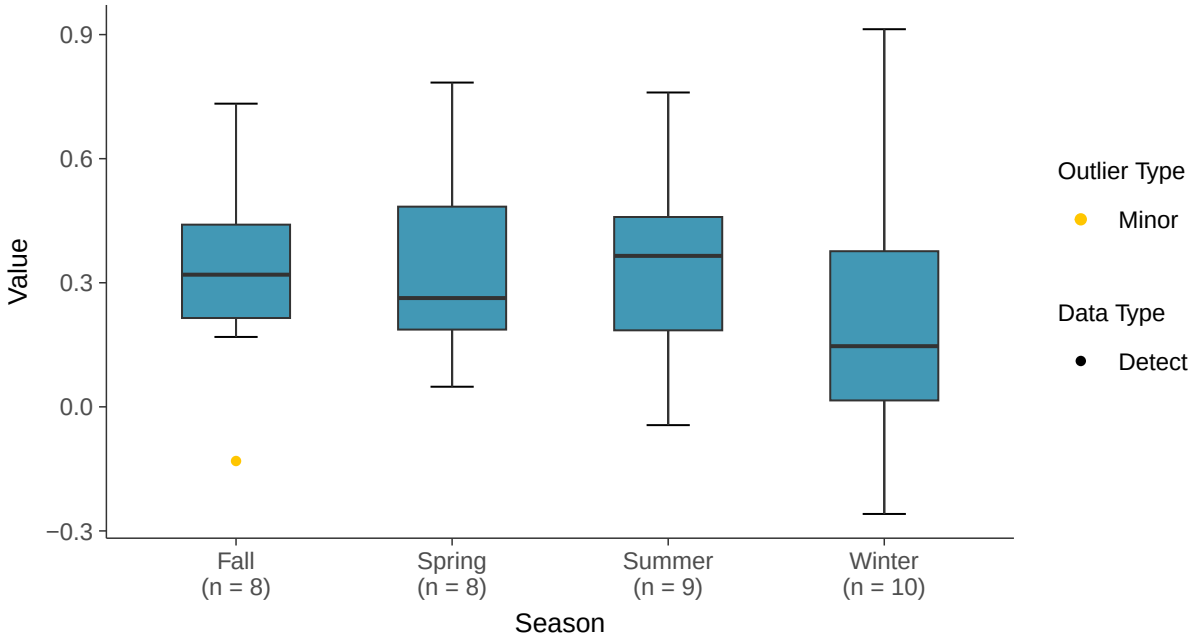
Boxplot

Radium-226, MW-4 (pCi/L)



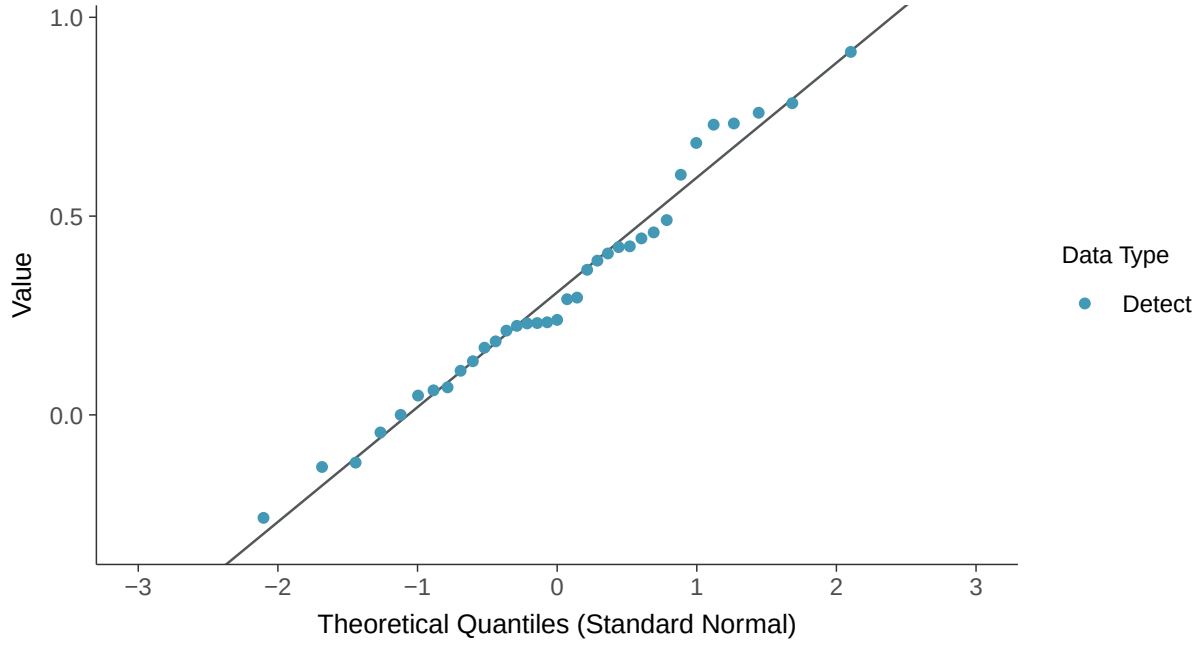
Boxplot by Season

Radium-226, MW-4 (pCi/L)



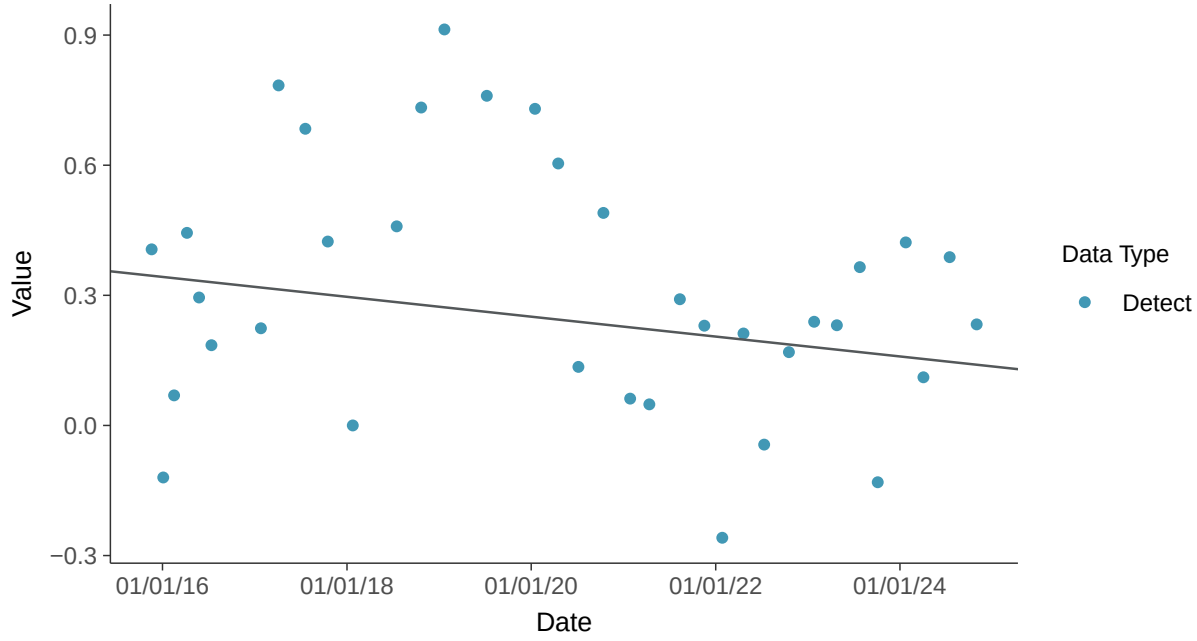
Normal Q-Q plot

Radium-226, MW-4 (pCi/L)



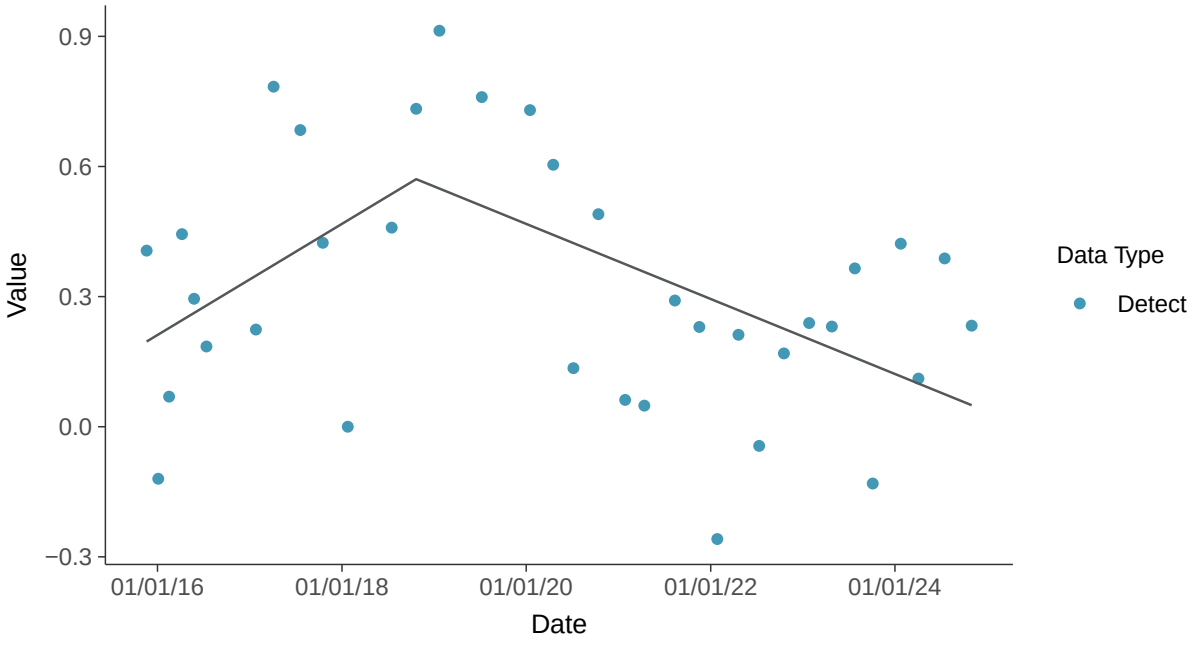
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-4 (pCi/L)



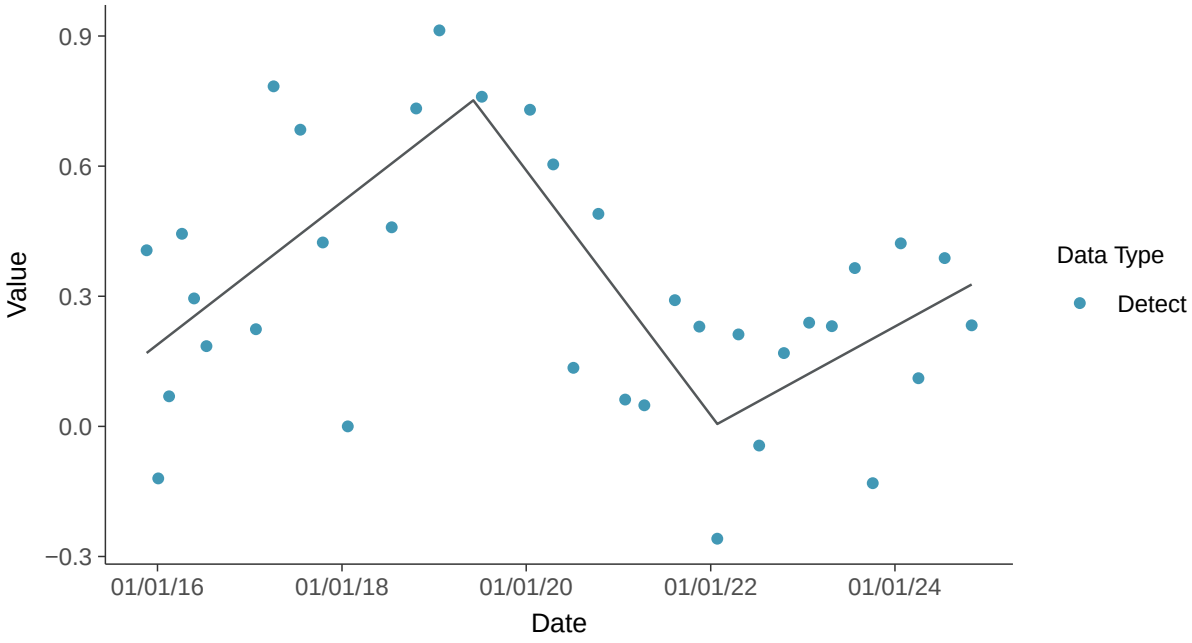
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-4 (pCi/L)



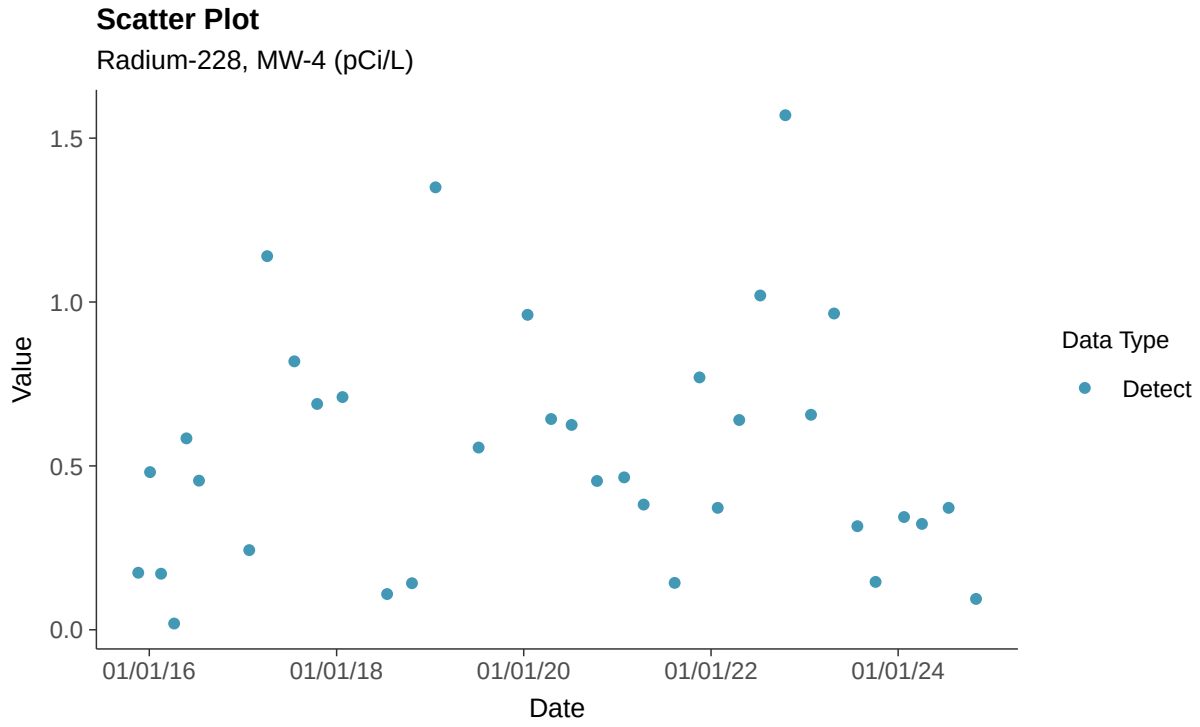
Trend Regression: Piecewise Linear-Linear-Linear

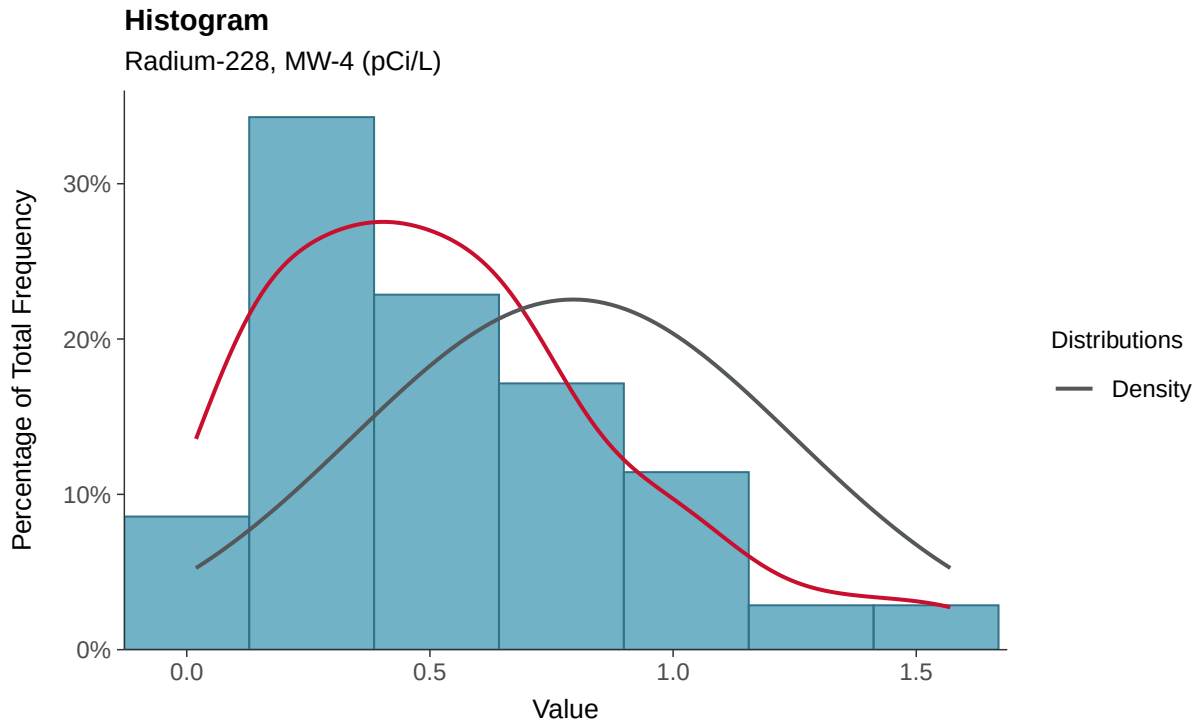
Radium-226, MW-4 (pCi/L)



App. IV: Radium-228, MW-4

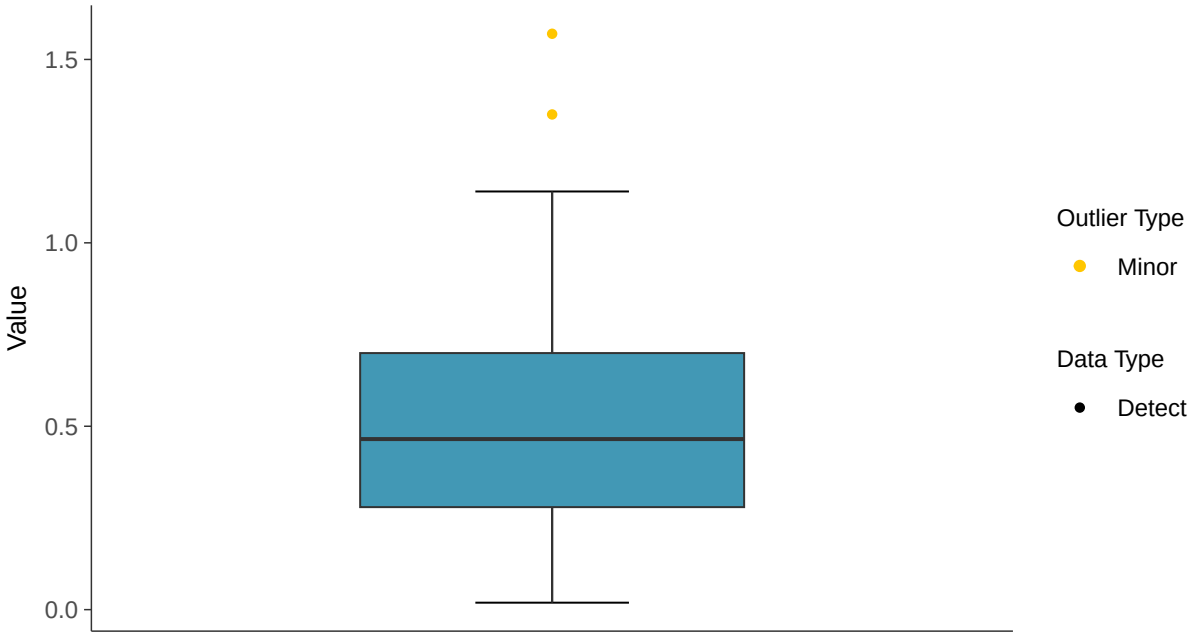
ID: 04_03_120





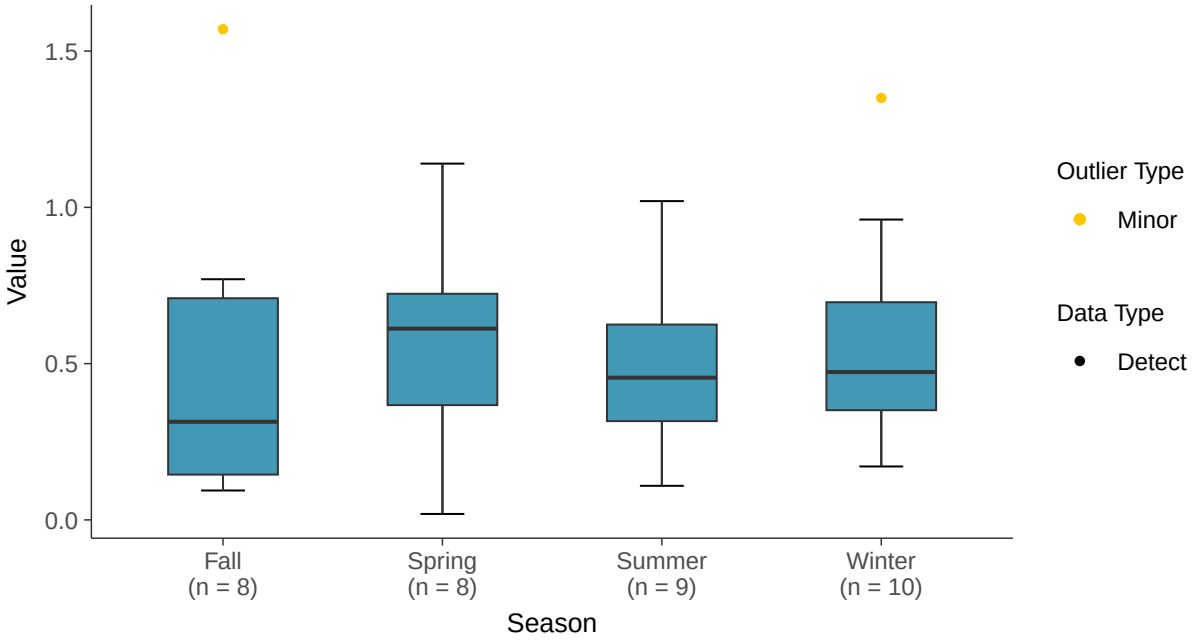
Boxplot

Radium-228, MW-4 (pCi/L)



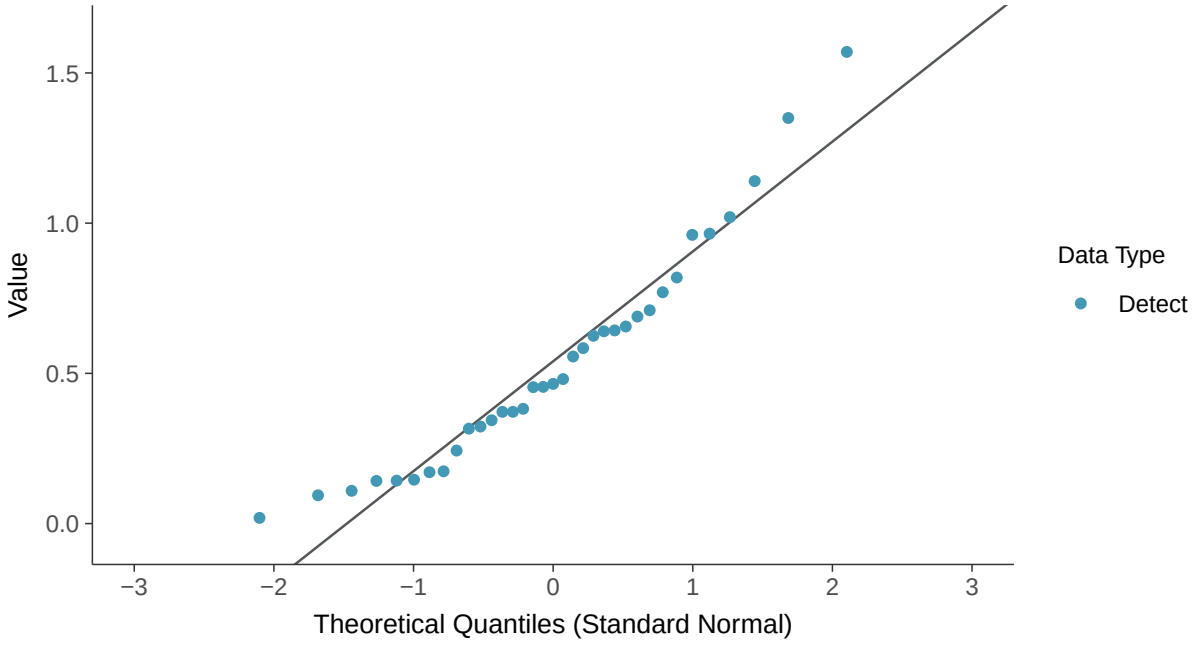
Boxplot by Season

Radium-228, MW-4 (pCi/L)



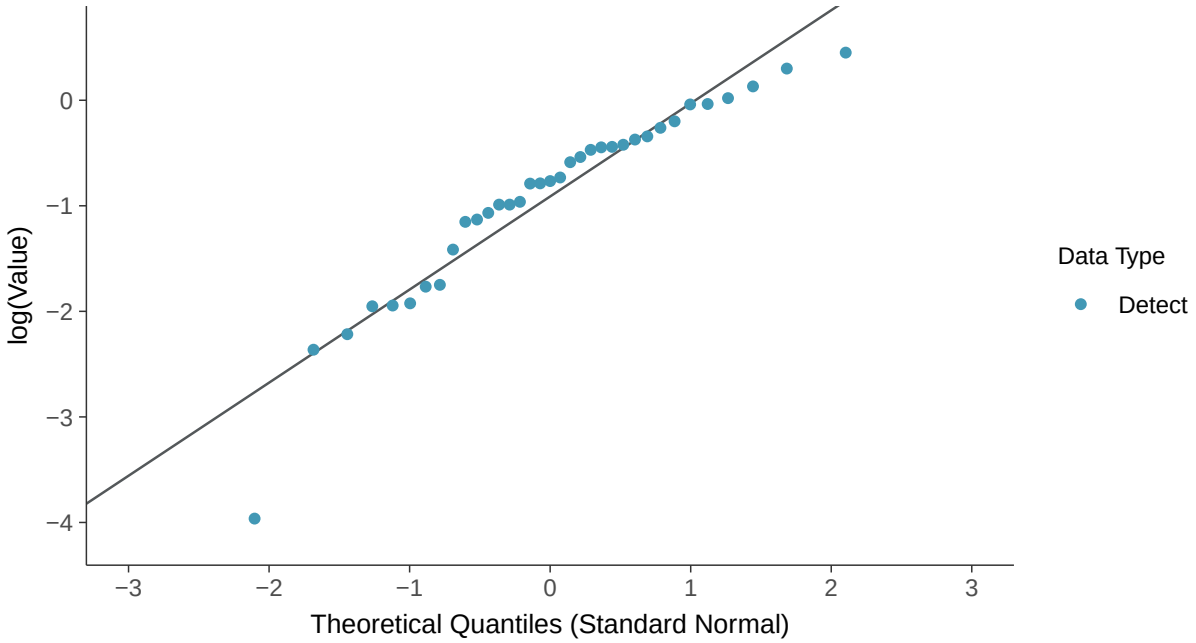
Normal Q-Q plot

Radium-228, MW-4 (pCi/L)



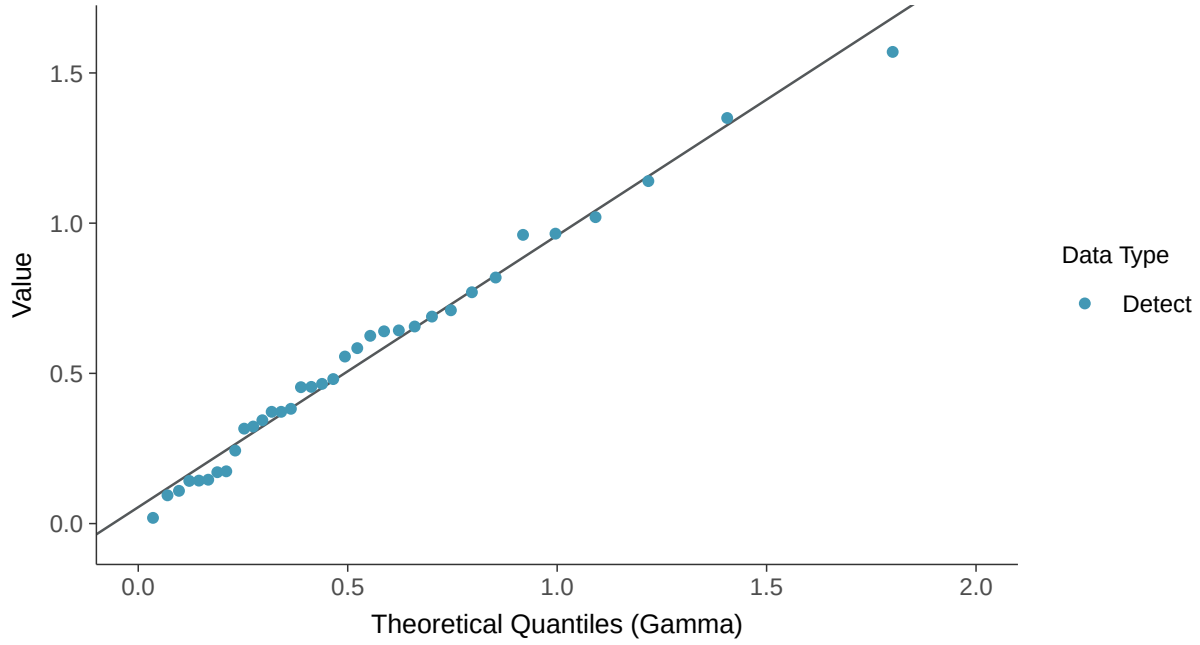
Lognormal Q-Q plot

Radium-228, MW-4 (pCi/L)



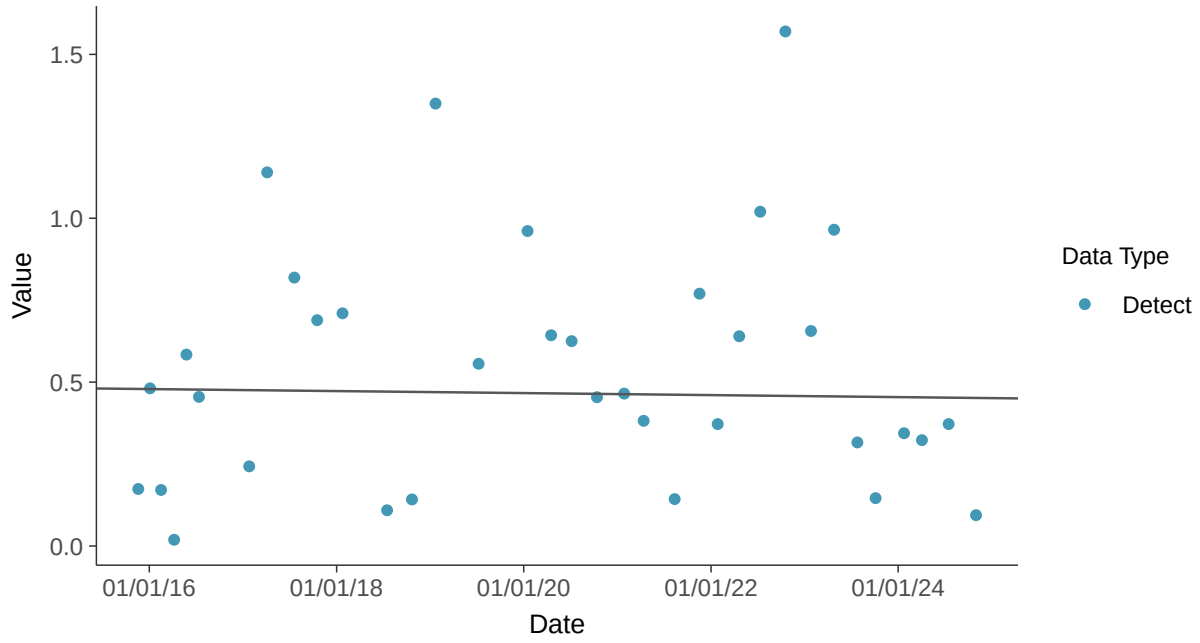
Gamma Q-Q plot

Radium-228, MW-4 (pCi/L)



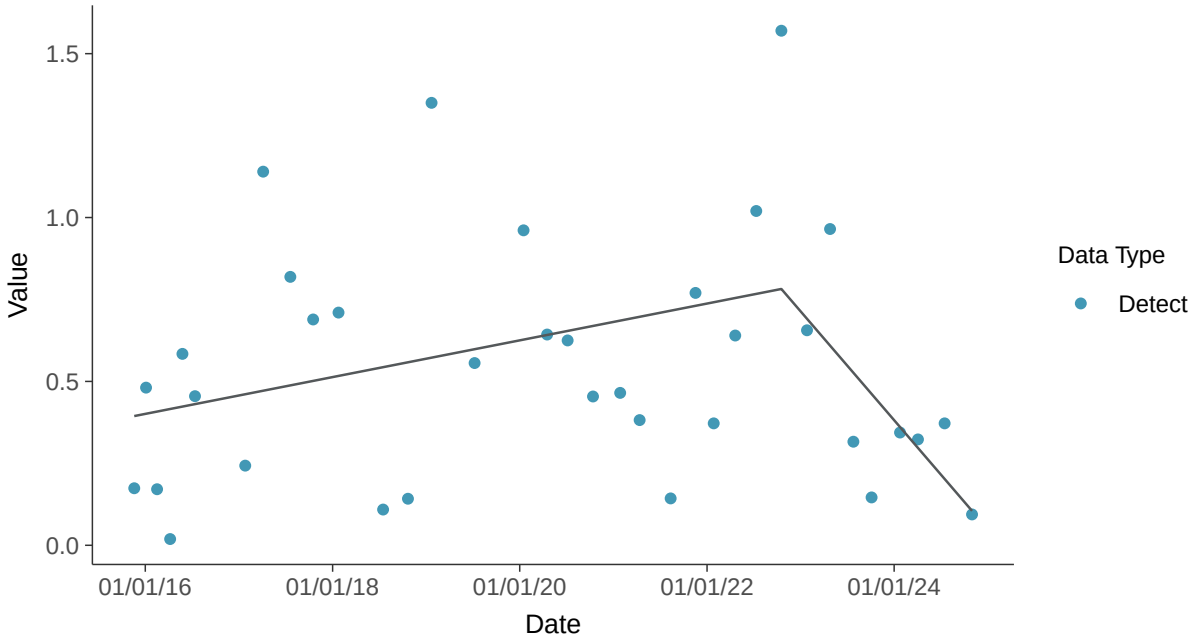
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-4 (pCi/L)



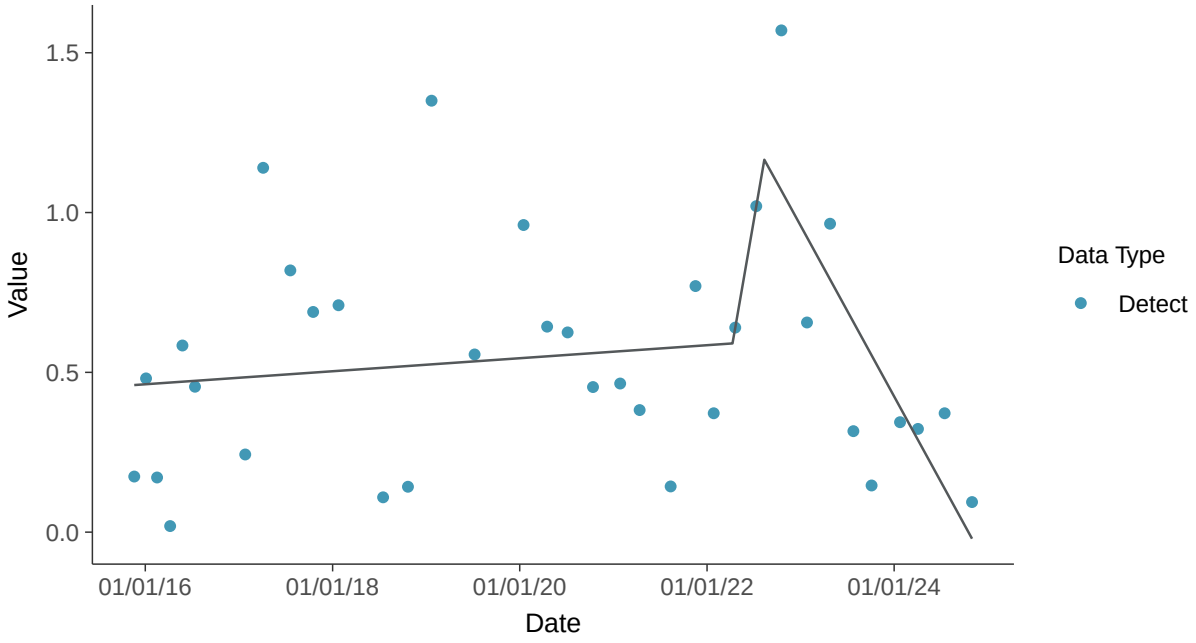
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-4 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-228, MW-4 (pCi/L)

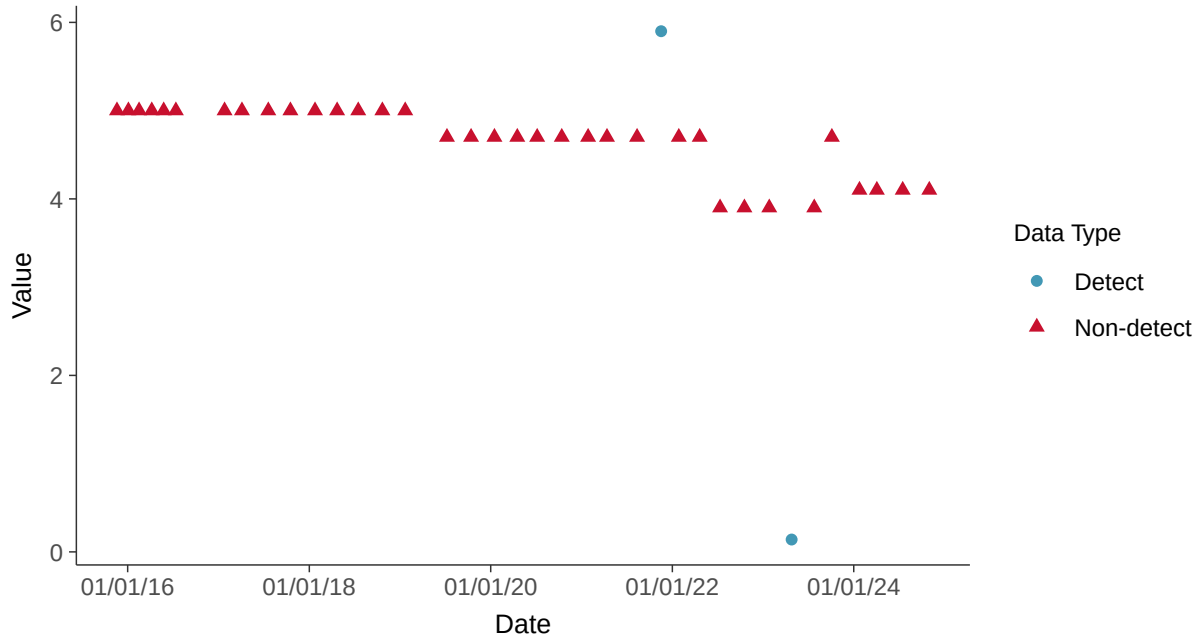


App. IV: Selenium, MW-4

ID: 04_03_121

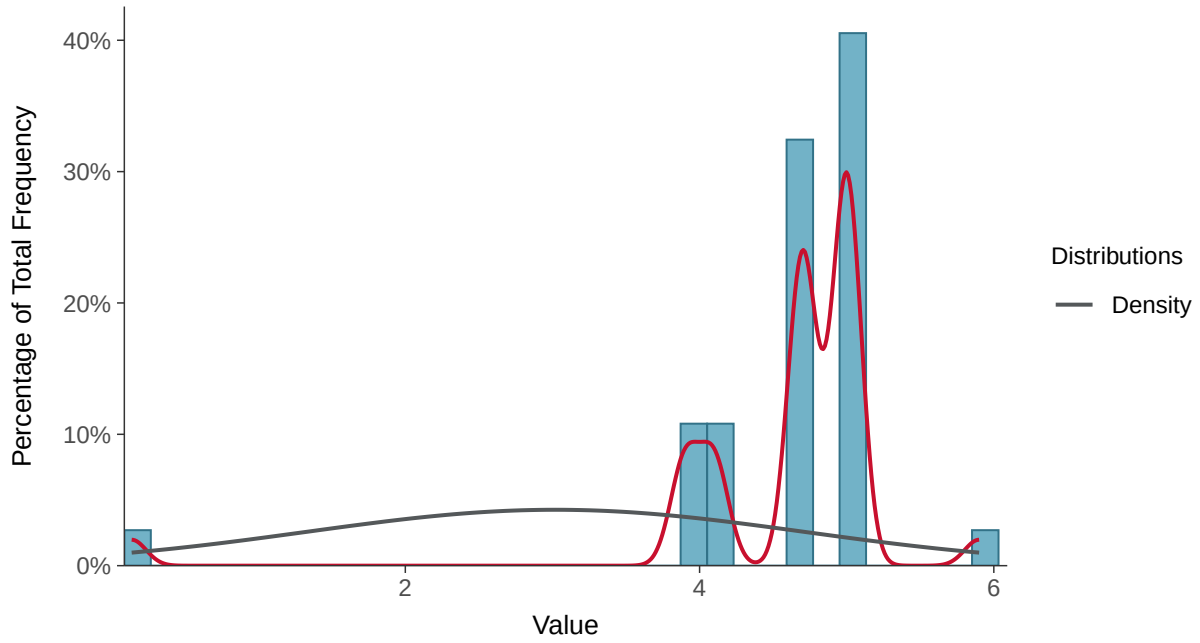
Scatter Plot

Selenium, MW-4 (ug/L)



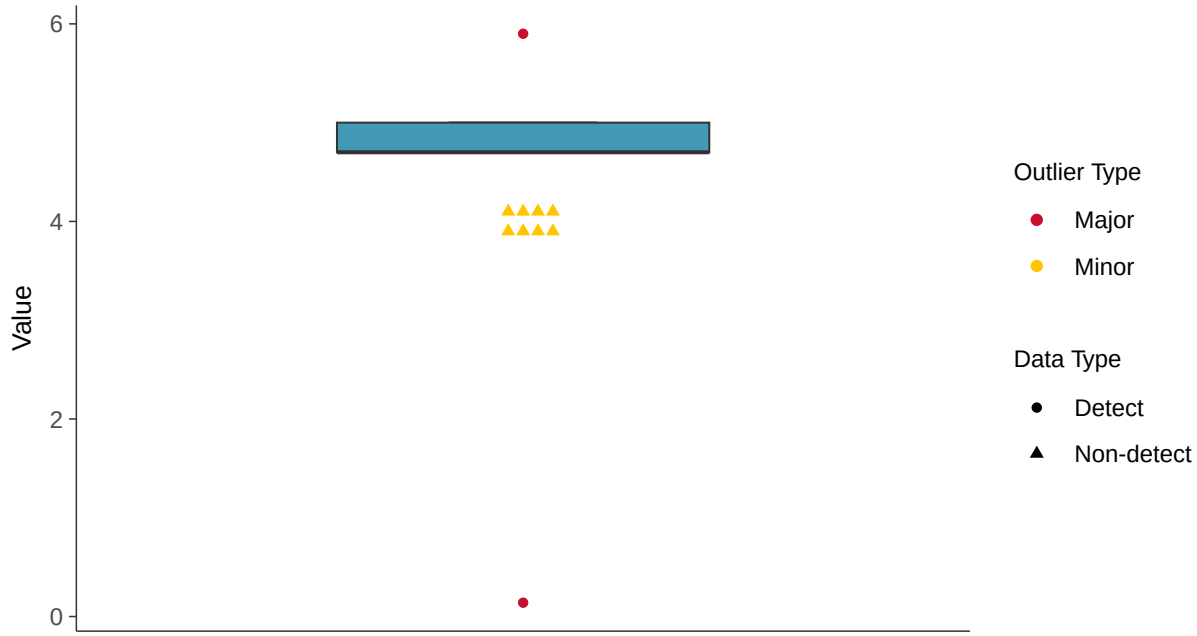
Histogram

Selenium, MW-4 (ug/L)



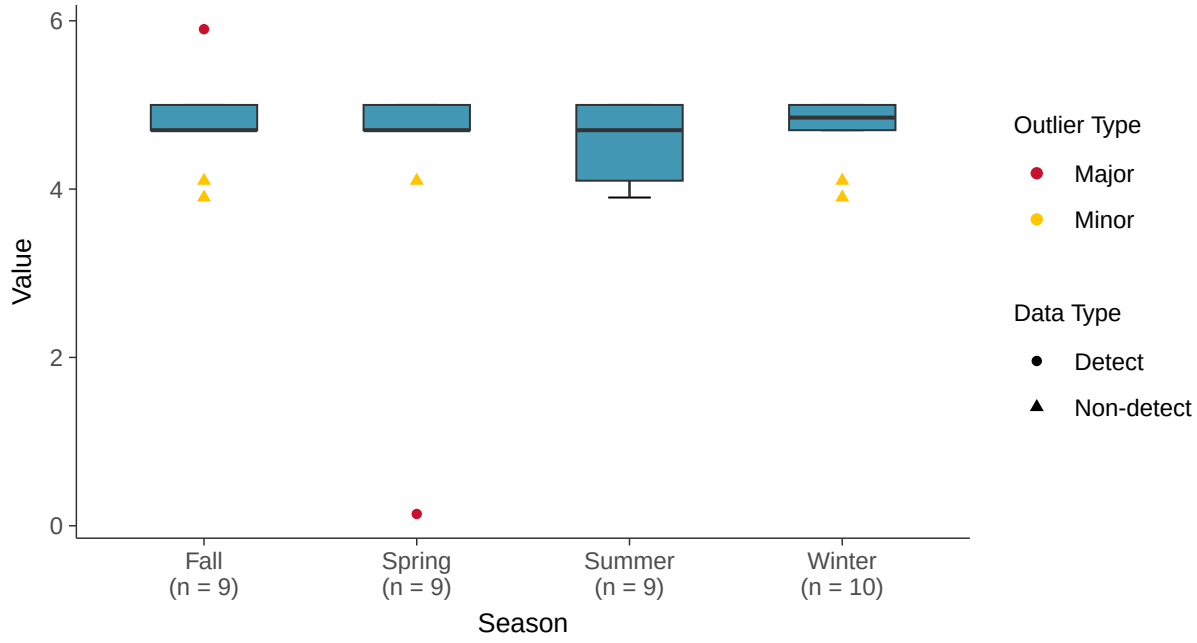
Boxplot

Selenium, MW-4 (ug/L)



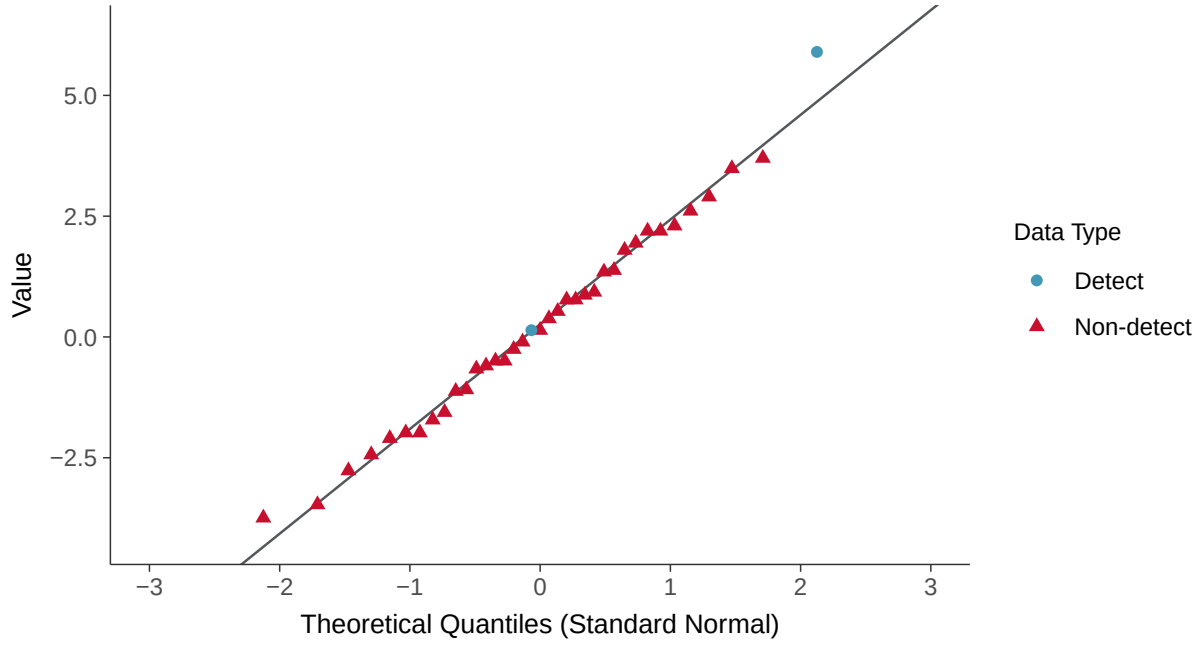
Boxplot by Season

Selenium, MW-4 (ug/L)



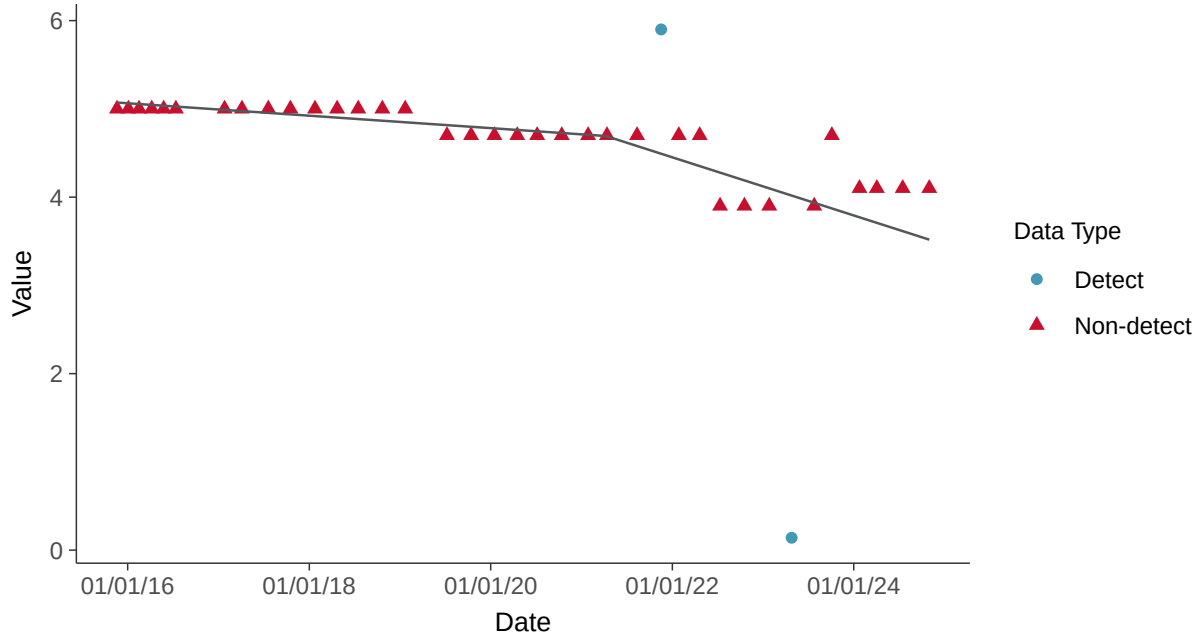
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-4 (ug/L)



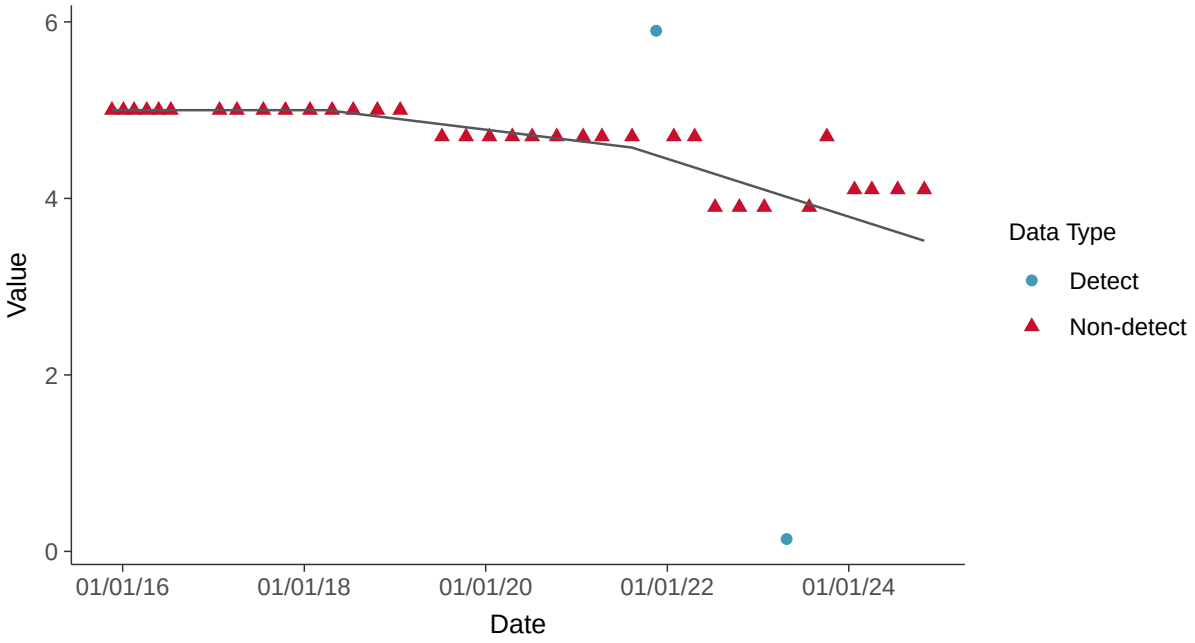
Trend Regression: Piecewise Linear-Linear

Selenium, MW-4 (ug/L)



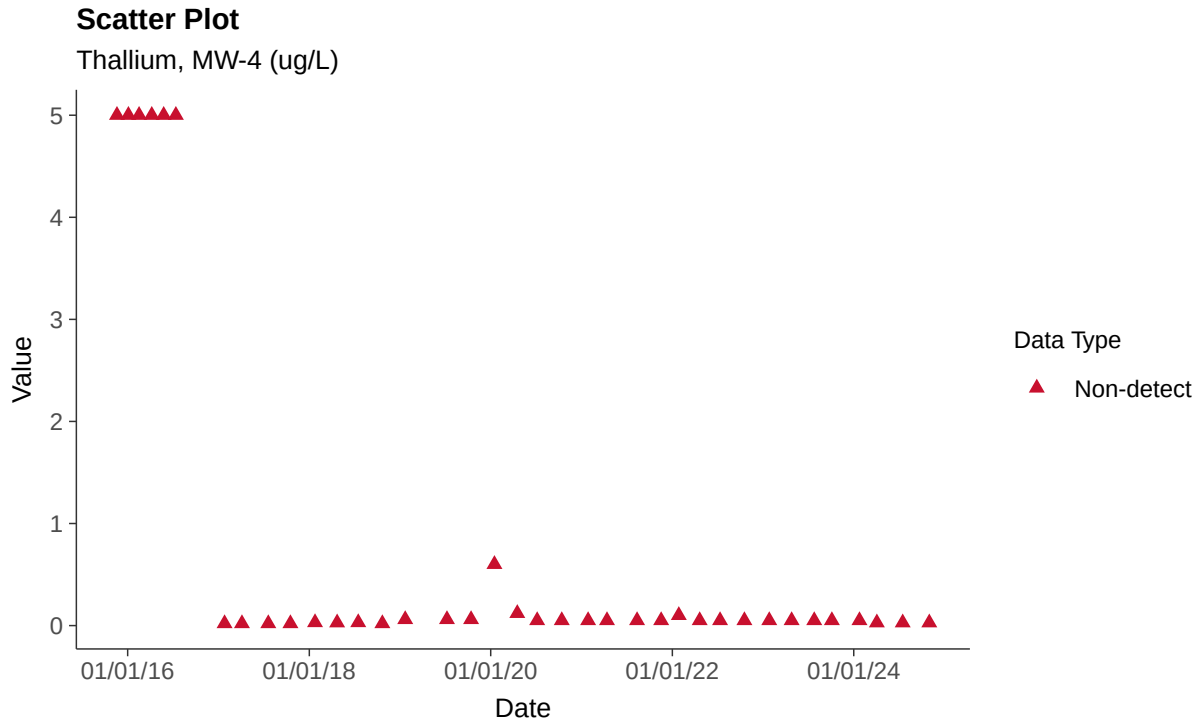
Trend Regression: Piecewise Linear-Linear-Linear

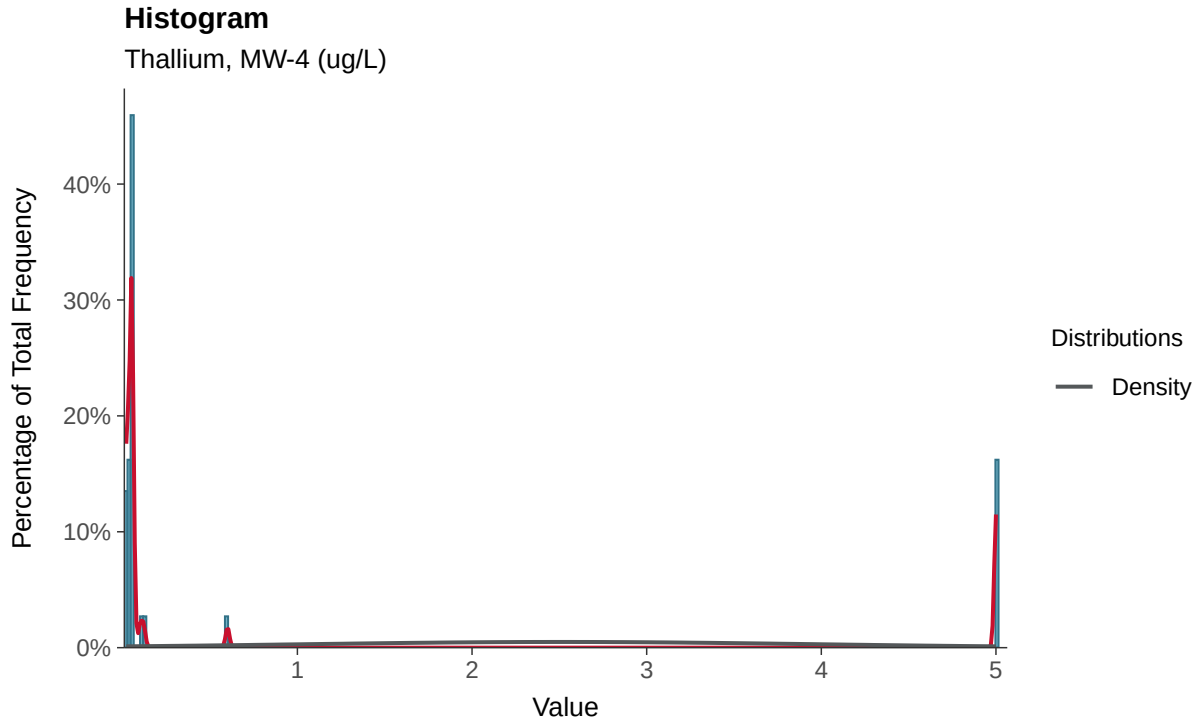
Selenium, MW-4 (ug/L)



App. IV: Thallium, MW-4

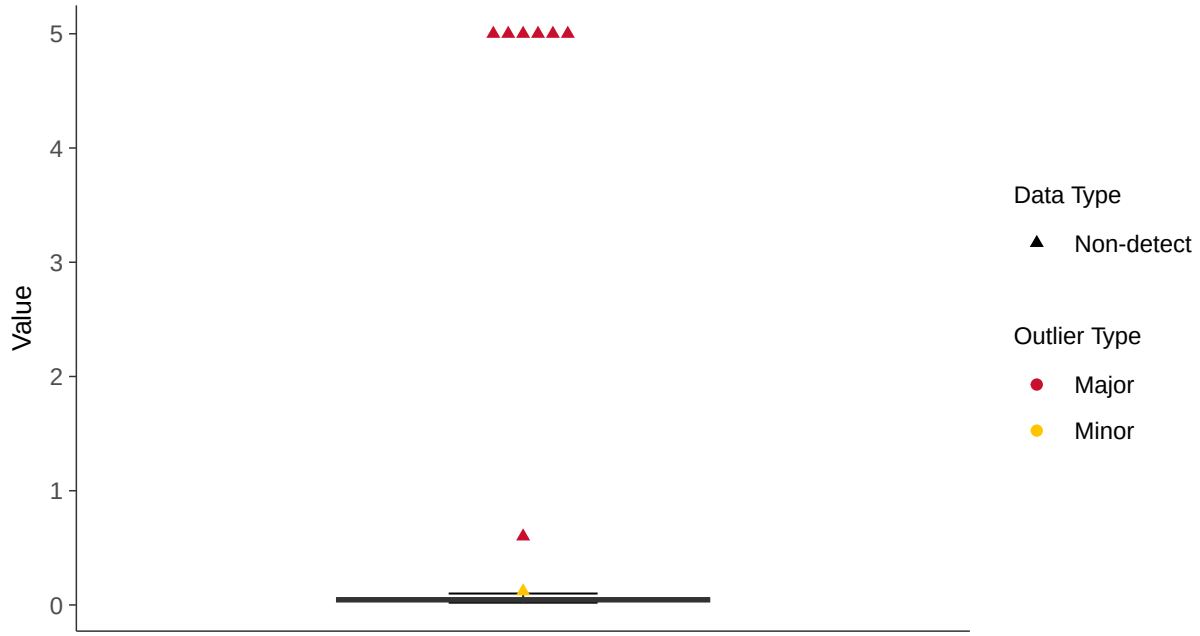
ID: 04_03_124





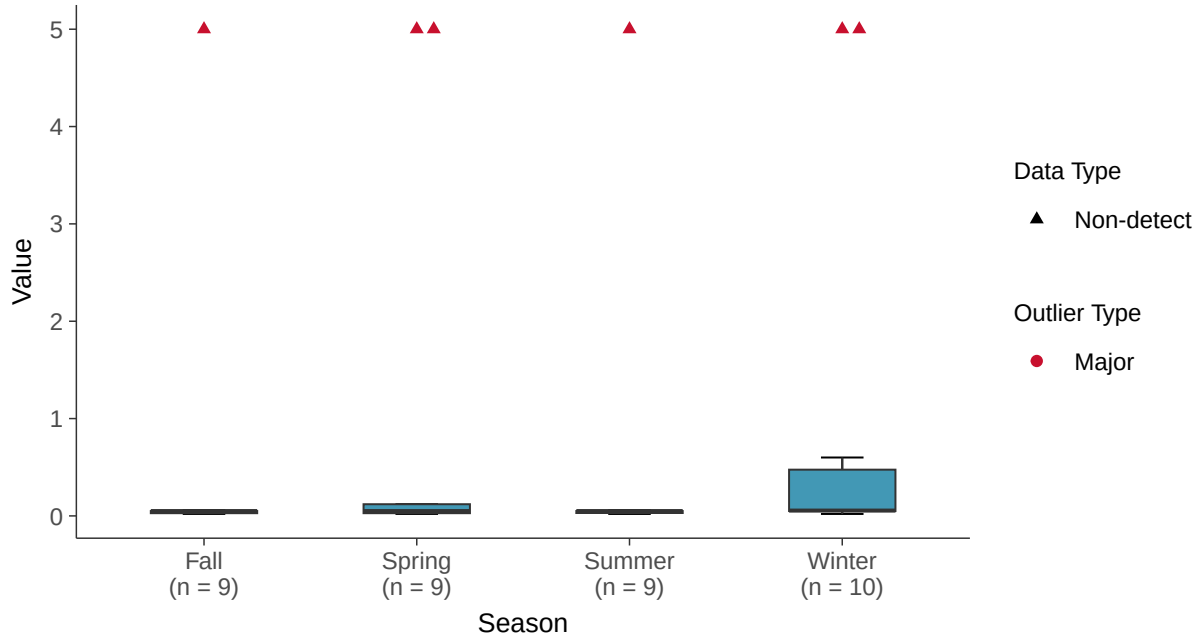
Boxplot

Thallium, MW-4 (ug/L)



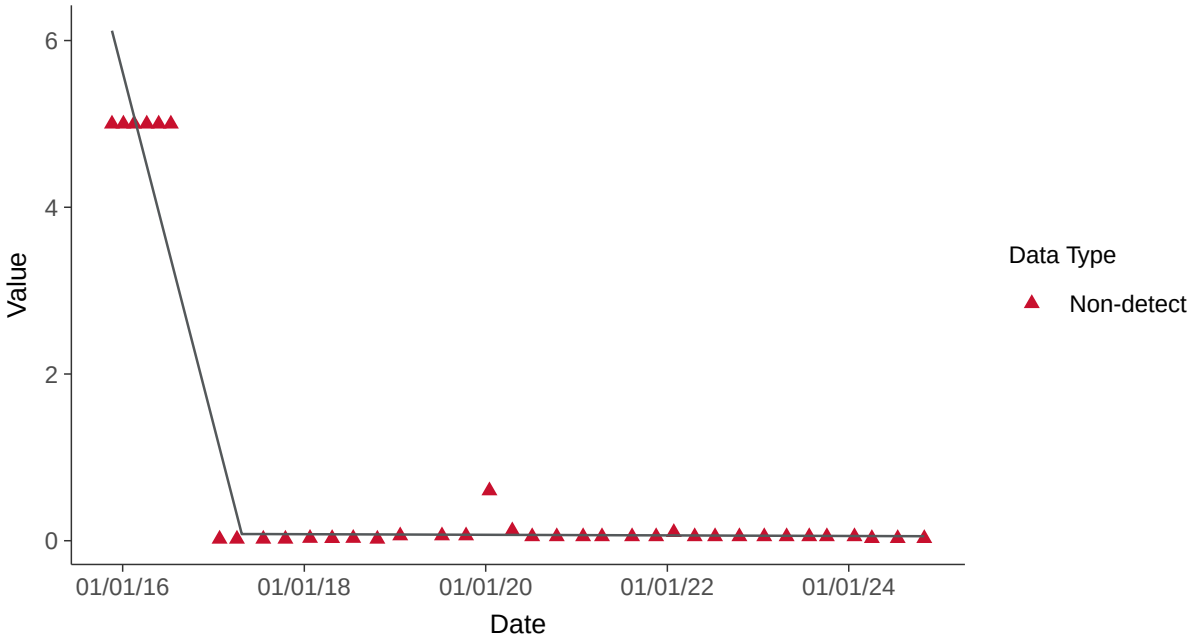
Boxplot by Season

Thallium, MW-4 (ug/L)



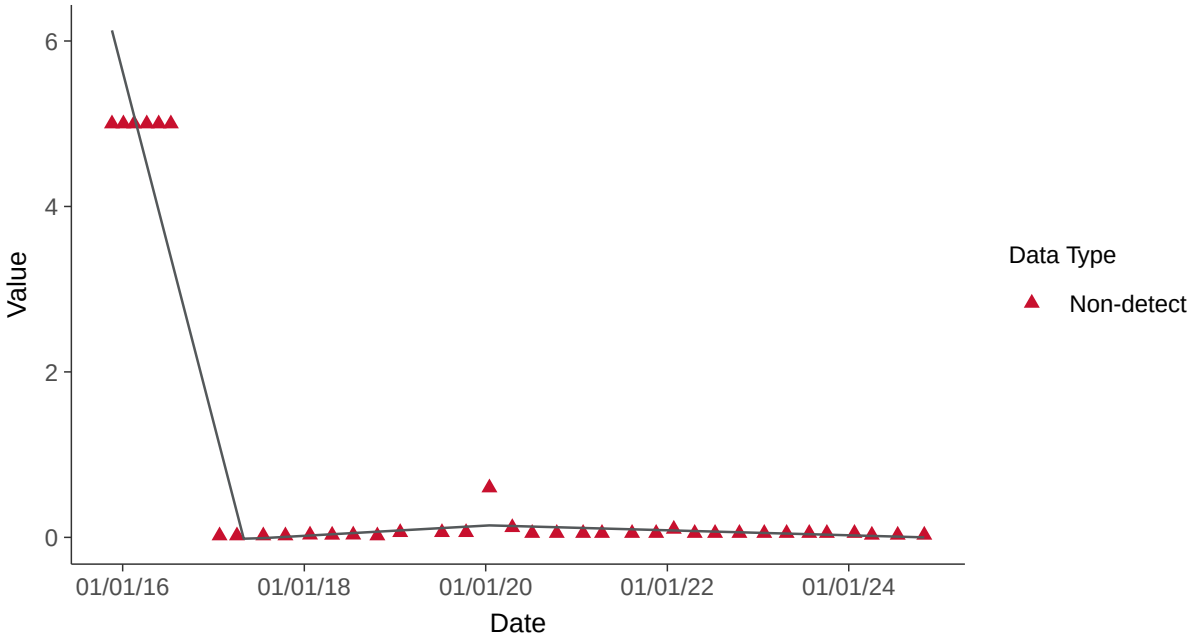
Trend Regression: Piecewise Linear-Linear

Thallium, MW-4 (ug/L)



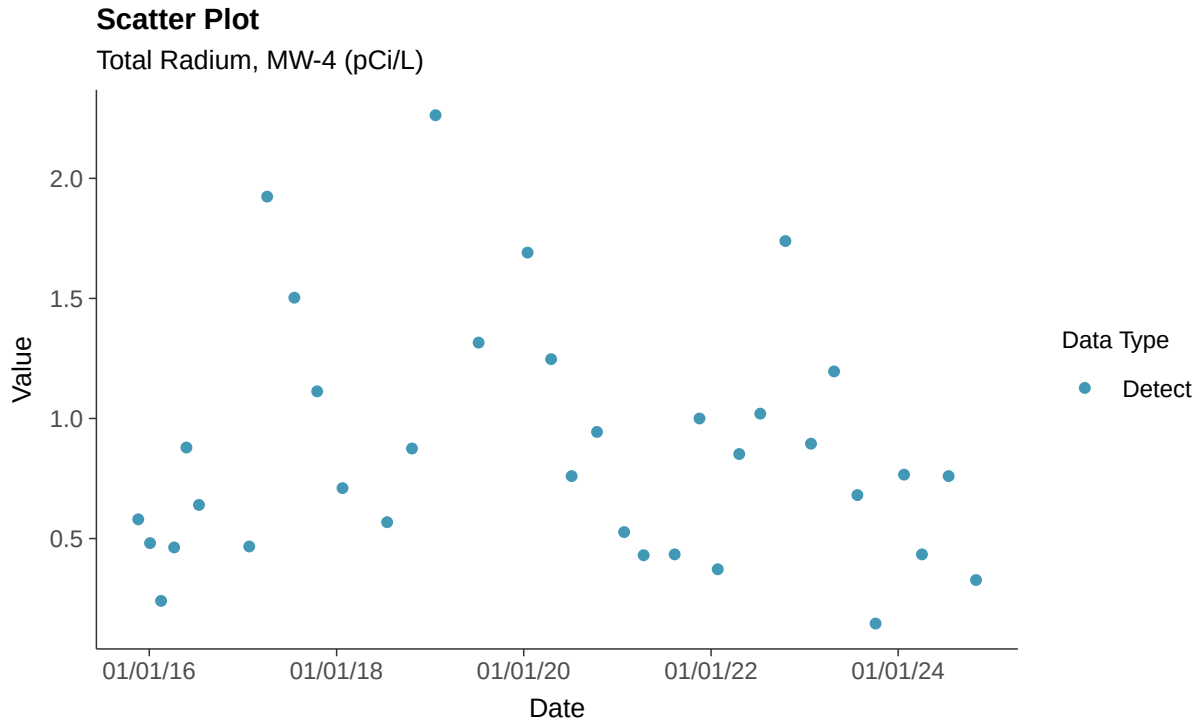
Trend Regression: Piecewise Linear-Linear-Linear

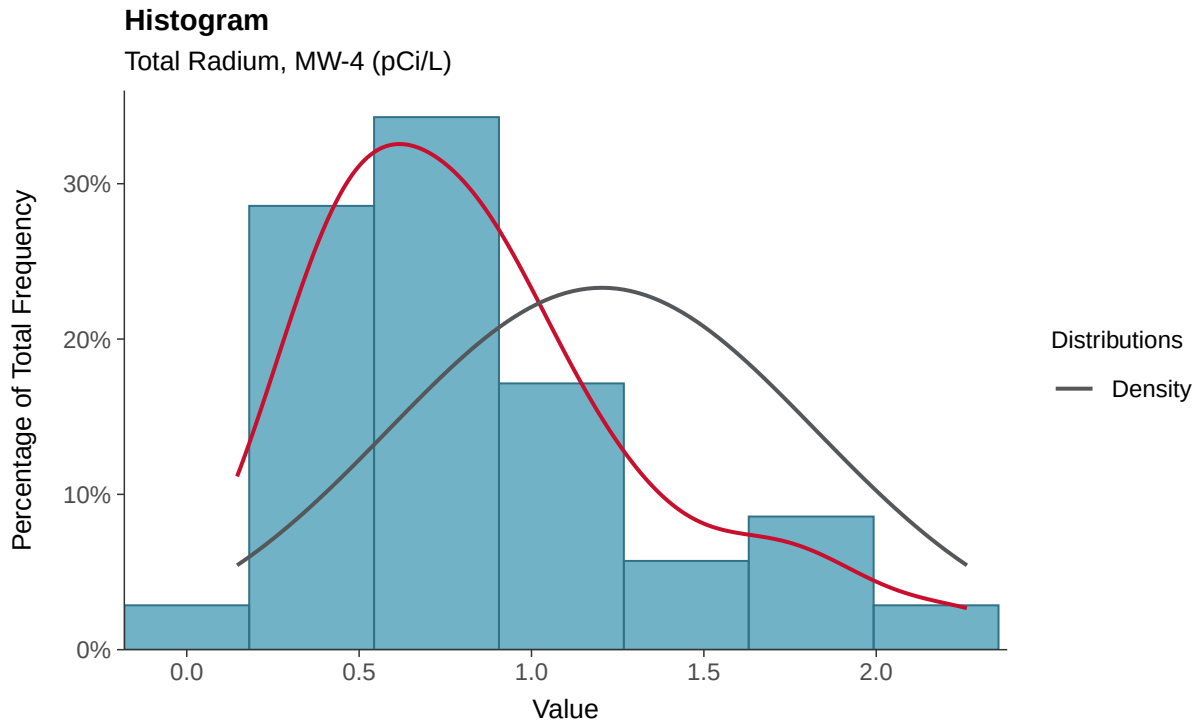
Thallium, MW-4 (ug/L)



App. IV: Total Radium, MW-4

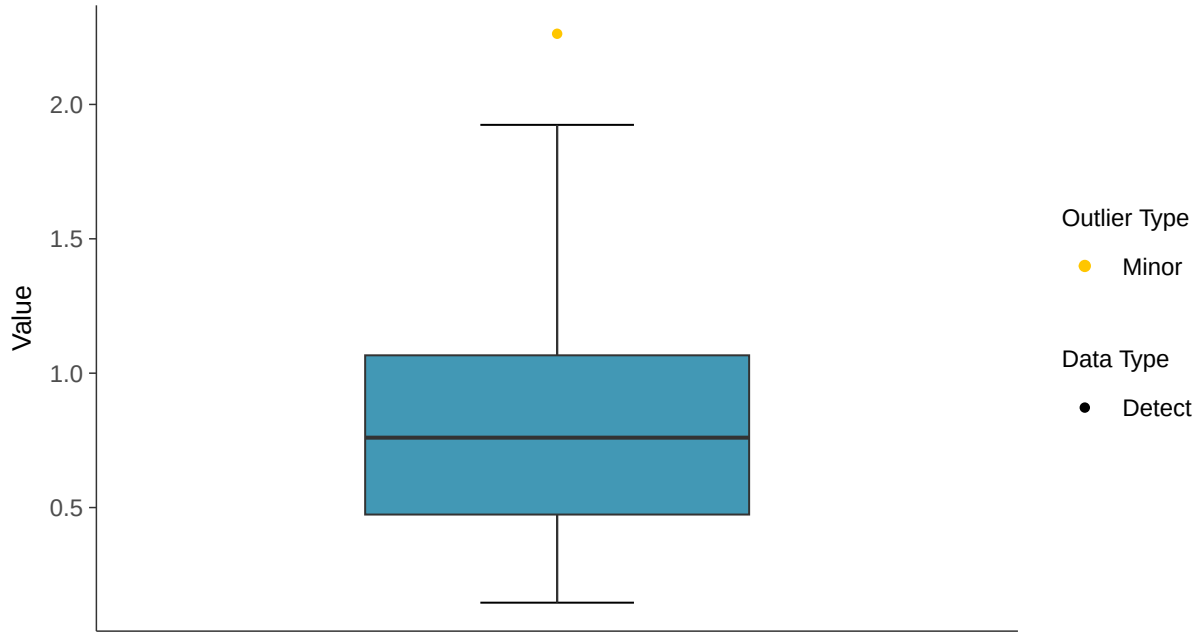
ID: 04_03_126





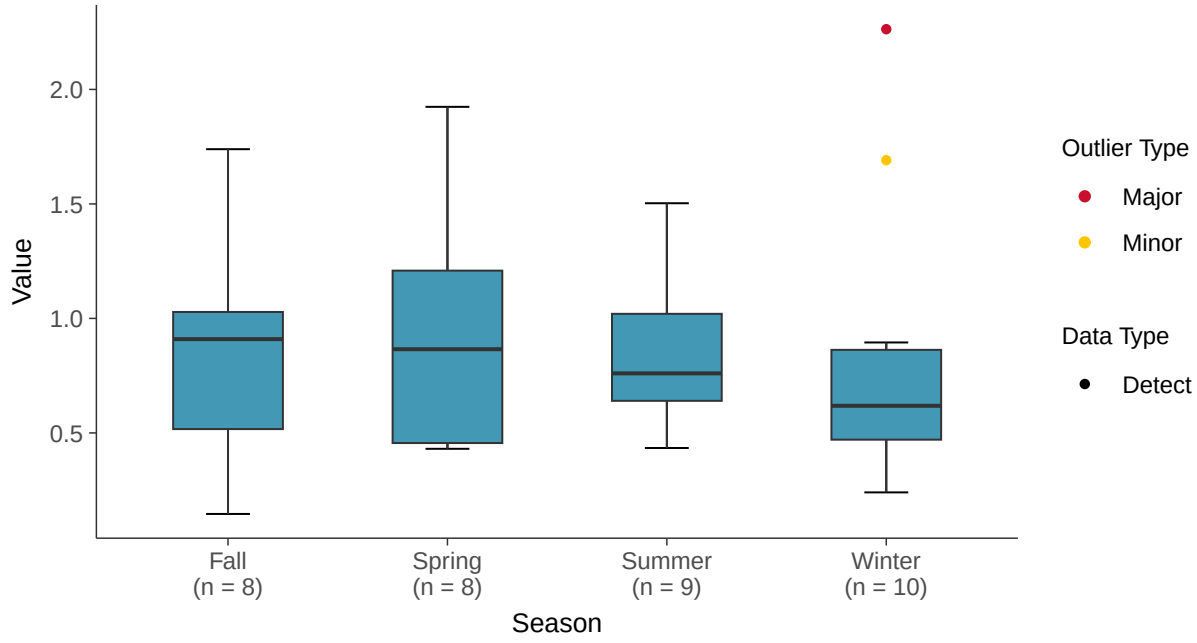
Boxplot

Total Radium, MW-4 (pCi/L)



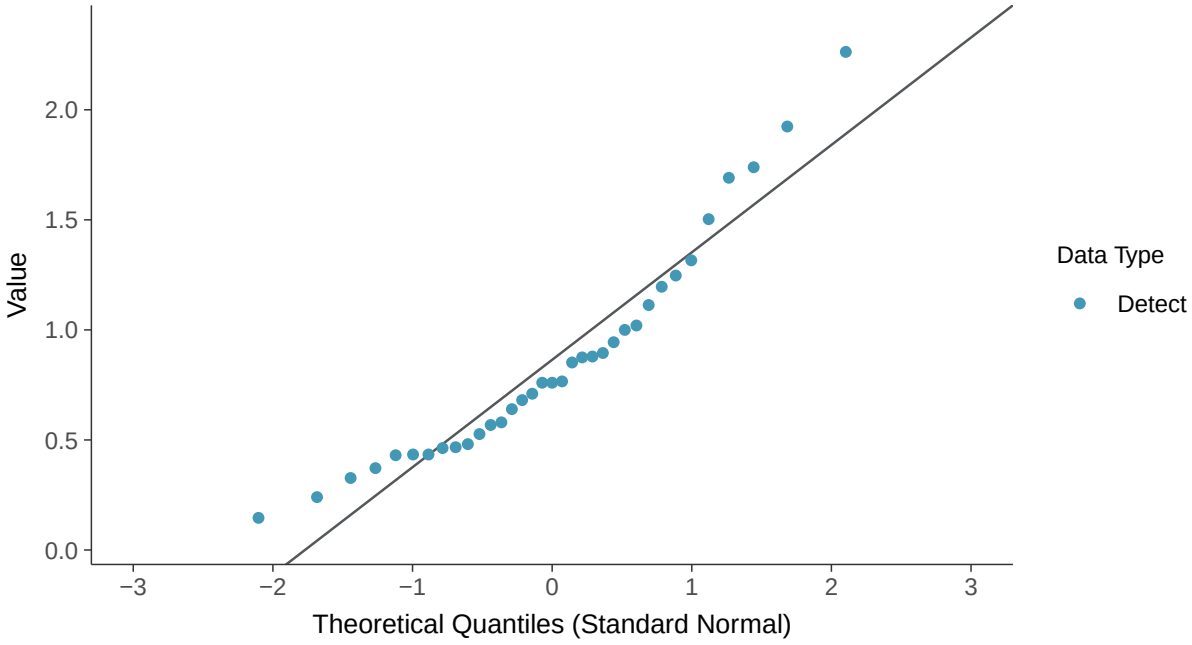
Boxplot by Season

Total Radium, MW-4 (pCi/L)



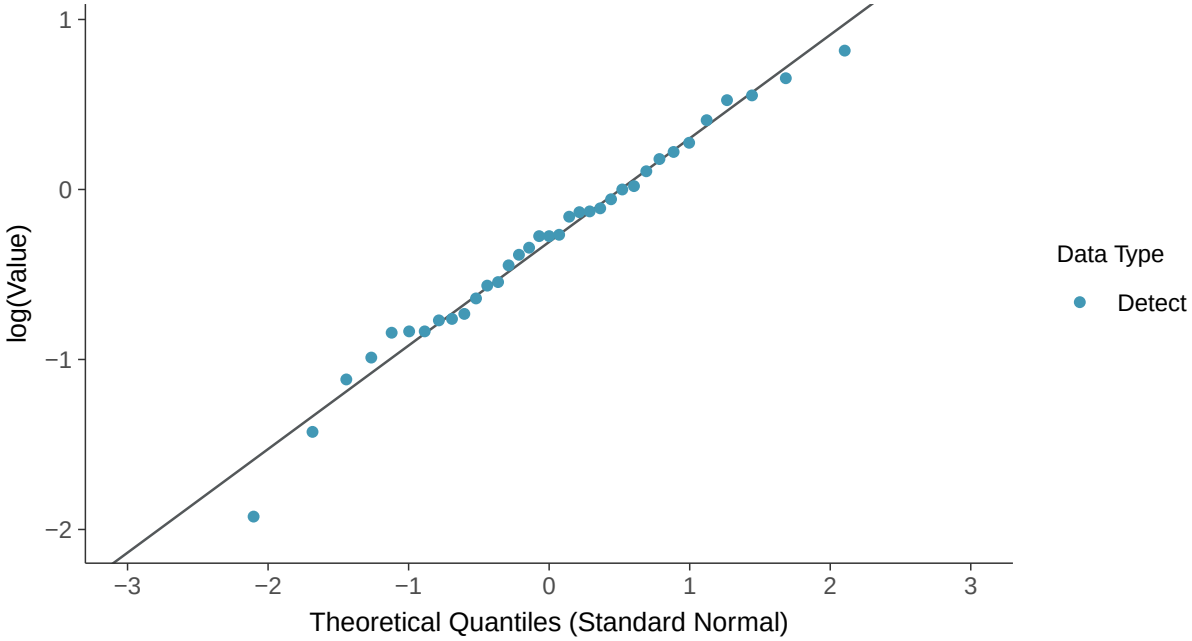
Normal Q-Q plot

Total Radium, MW-4 (pCi/L)



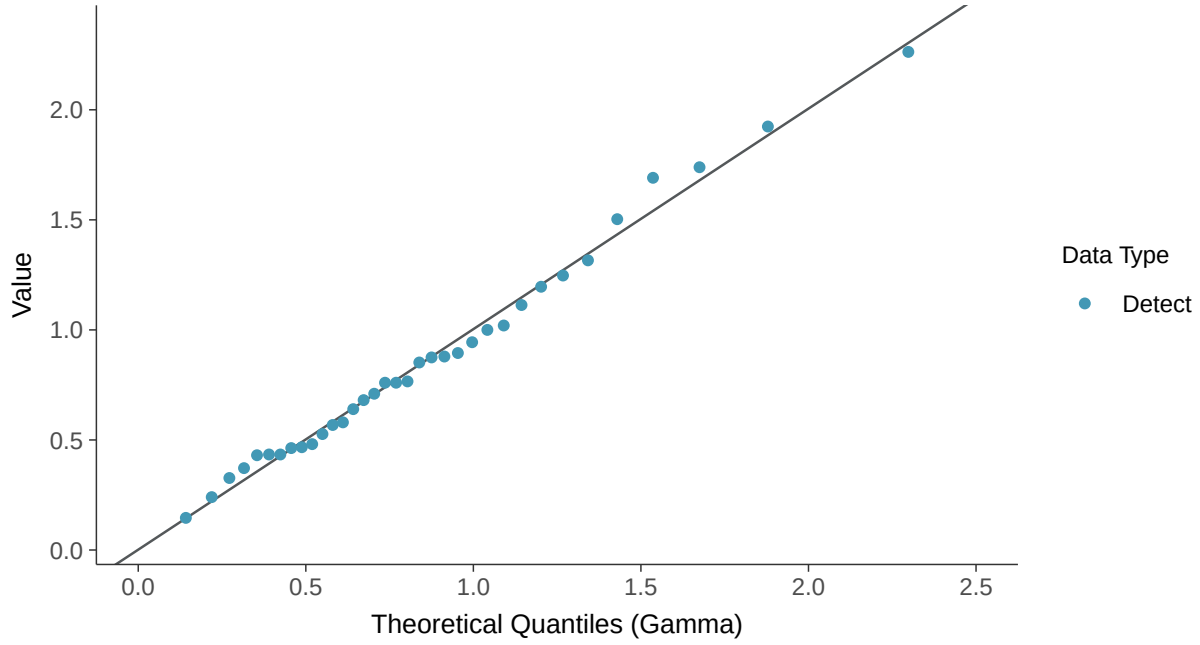
Lognormal Q-Q plot

Total Radium, MW-4 (pCi/L)



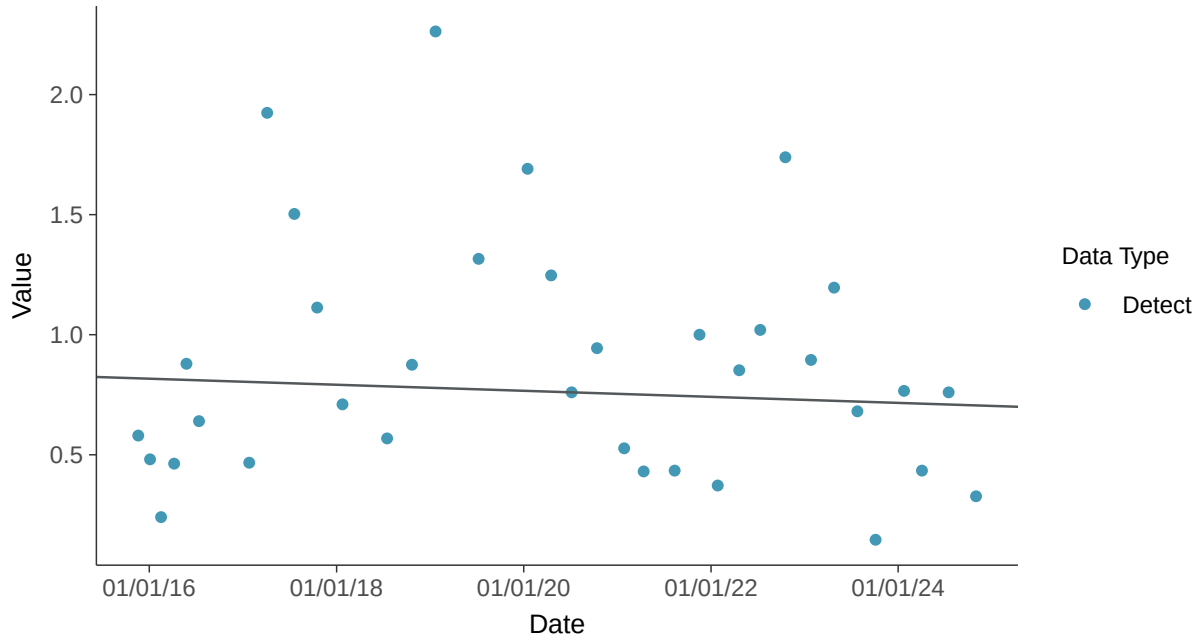
Gamma Q-Q plot

Total Radium, MW-4 (pCi/L)



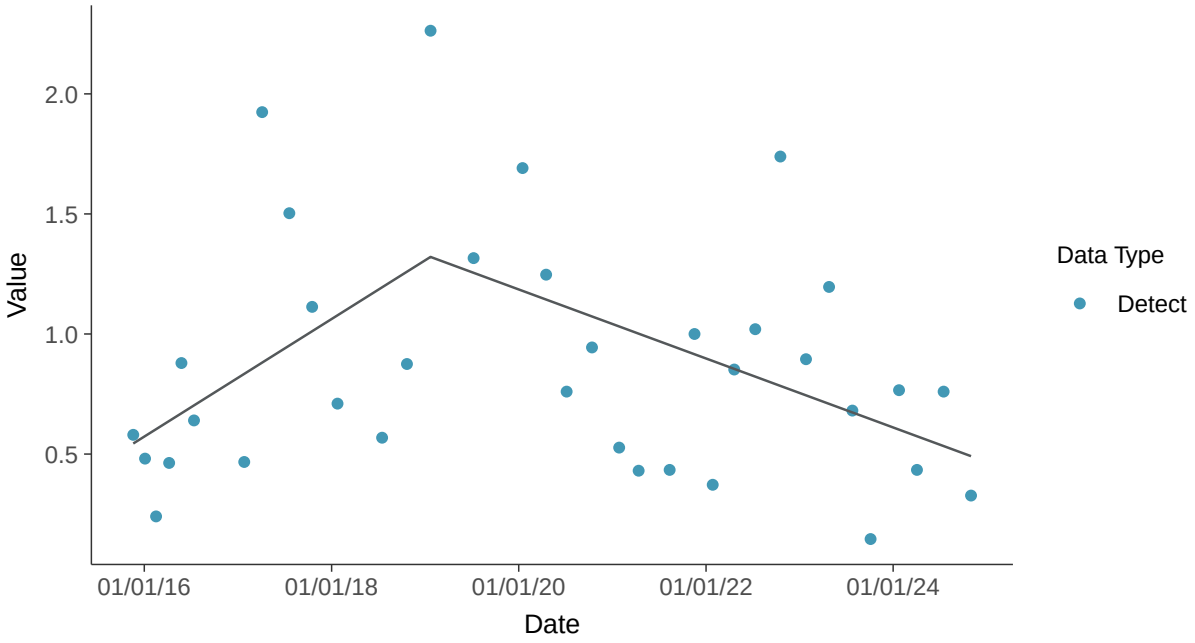
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-4 (pCi/L)



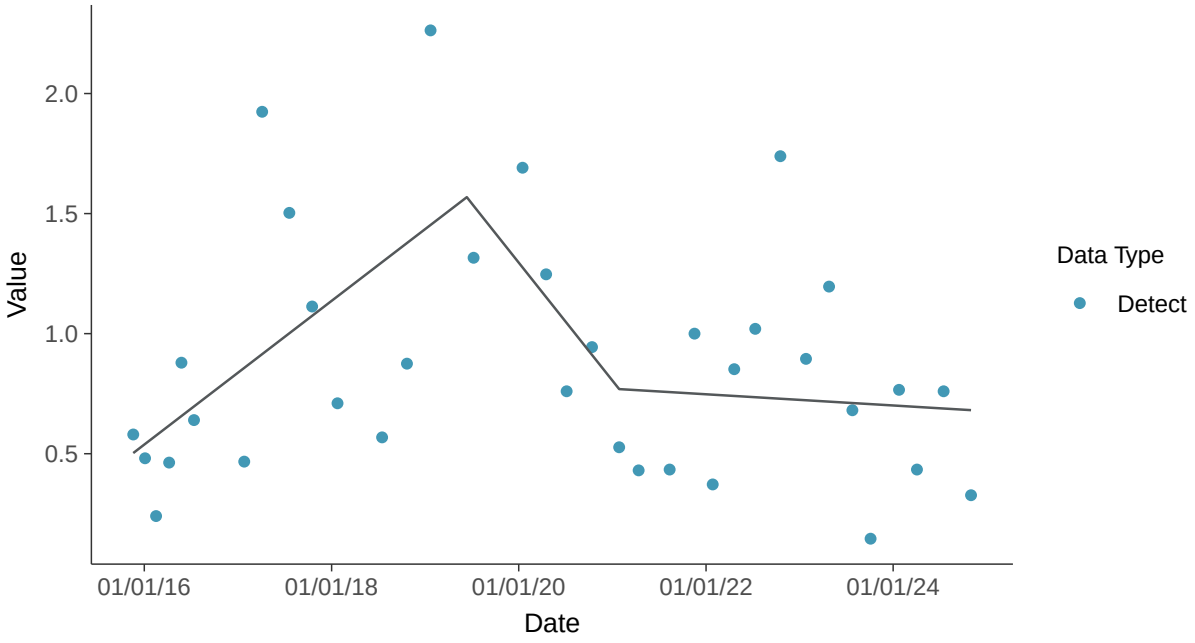
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-4 (pCi/L)



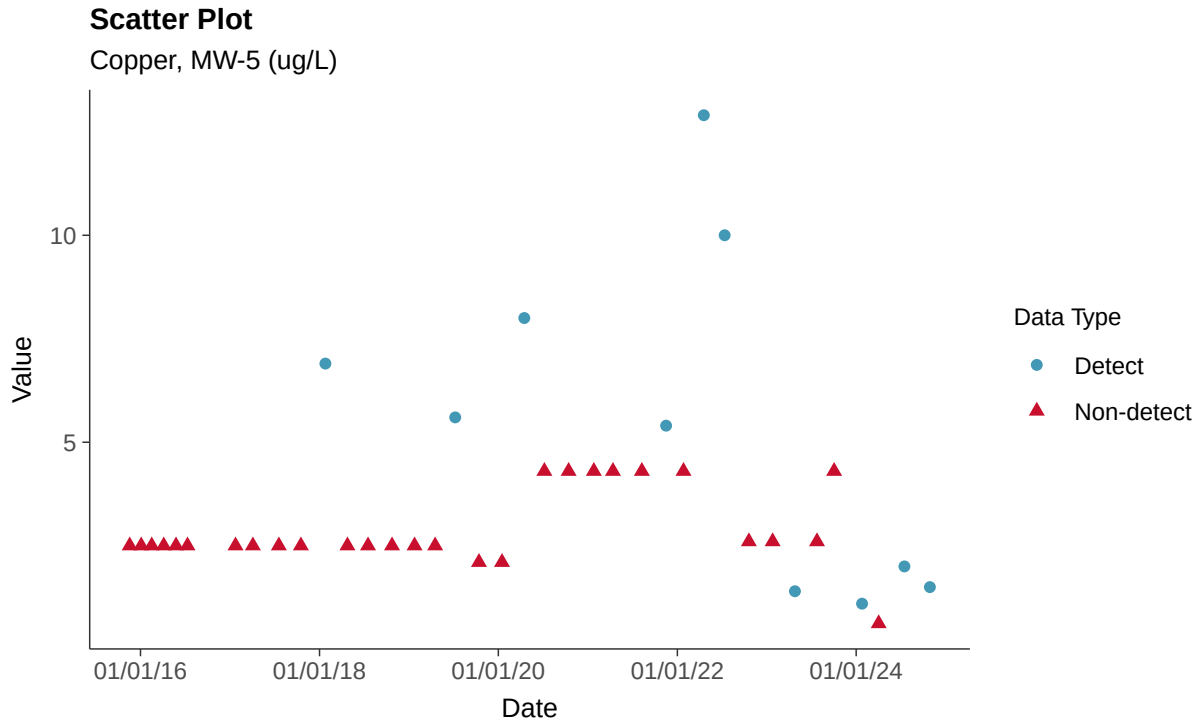
Trend Regression: Piecewise Linear-Linear-Linear

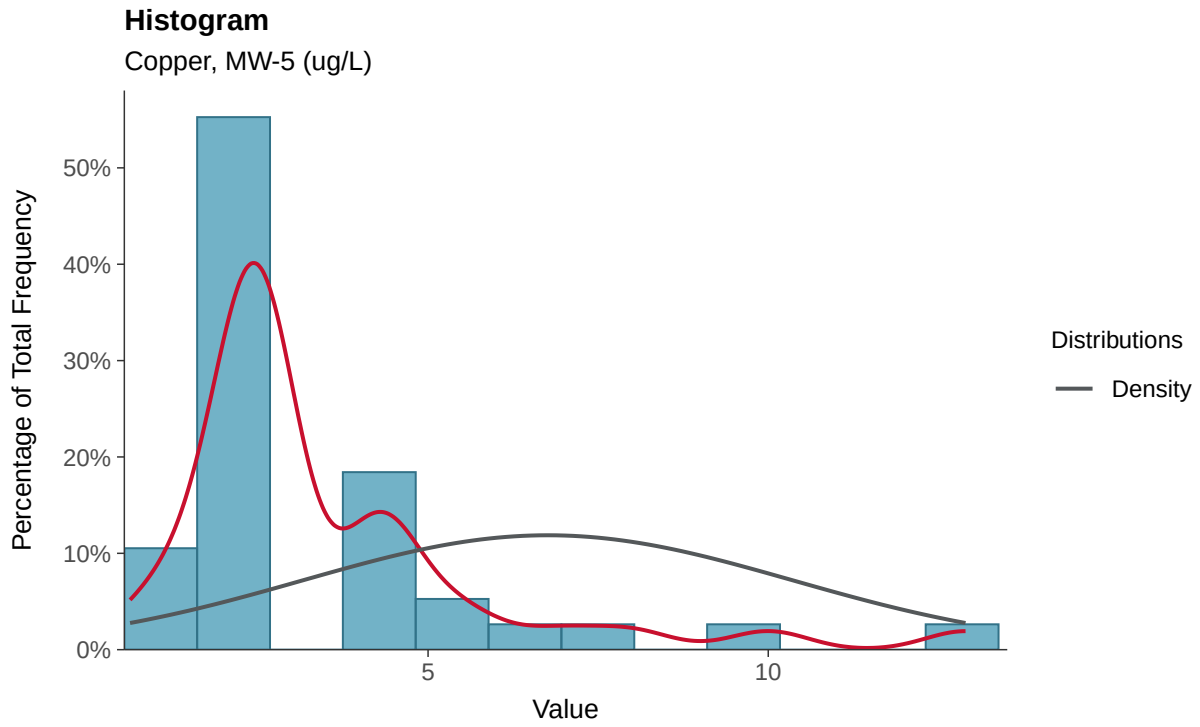
Total Radium, MW-4 (pCi/L)



App. I Metals: Copper, MW-5

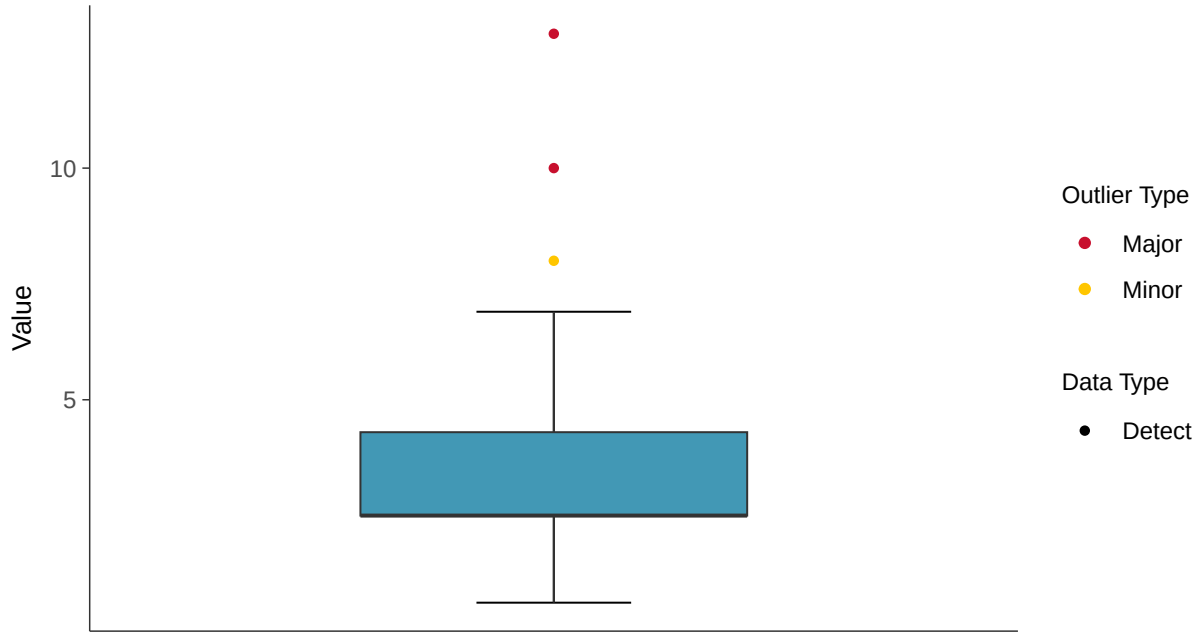
ID: 05_01_111





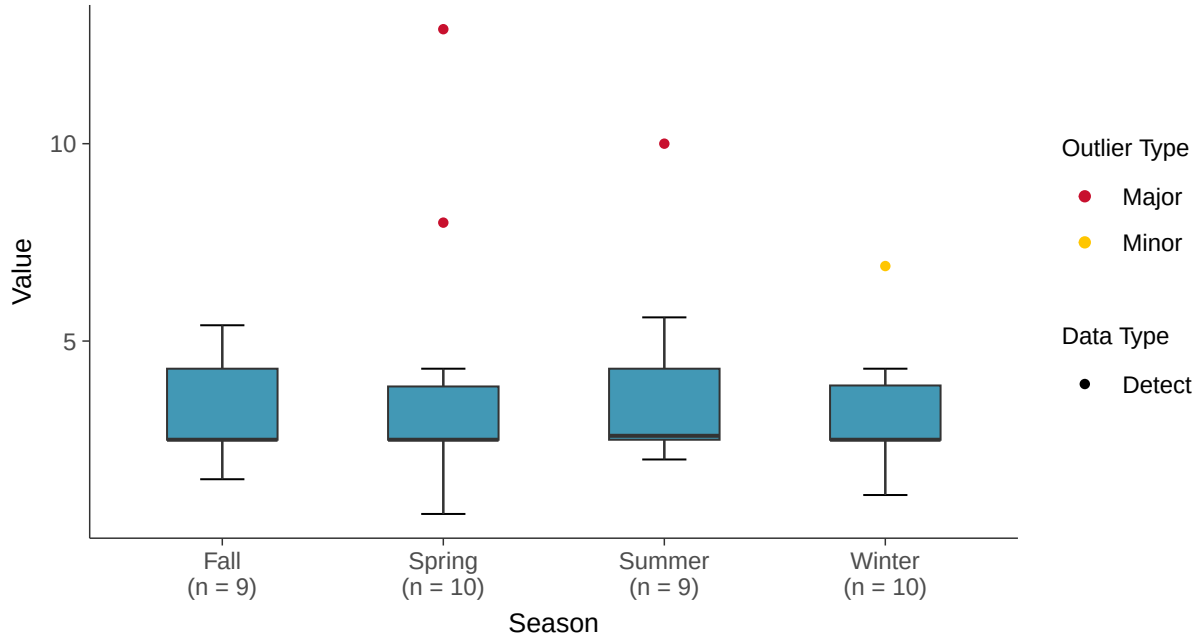
Boxplot

Copper, MW-5 (ug/L)



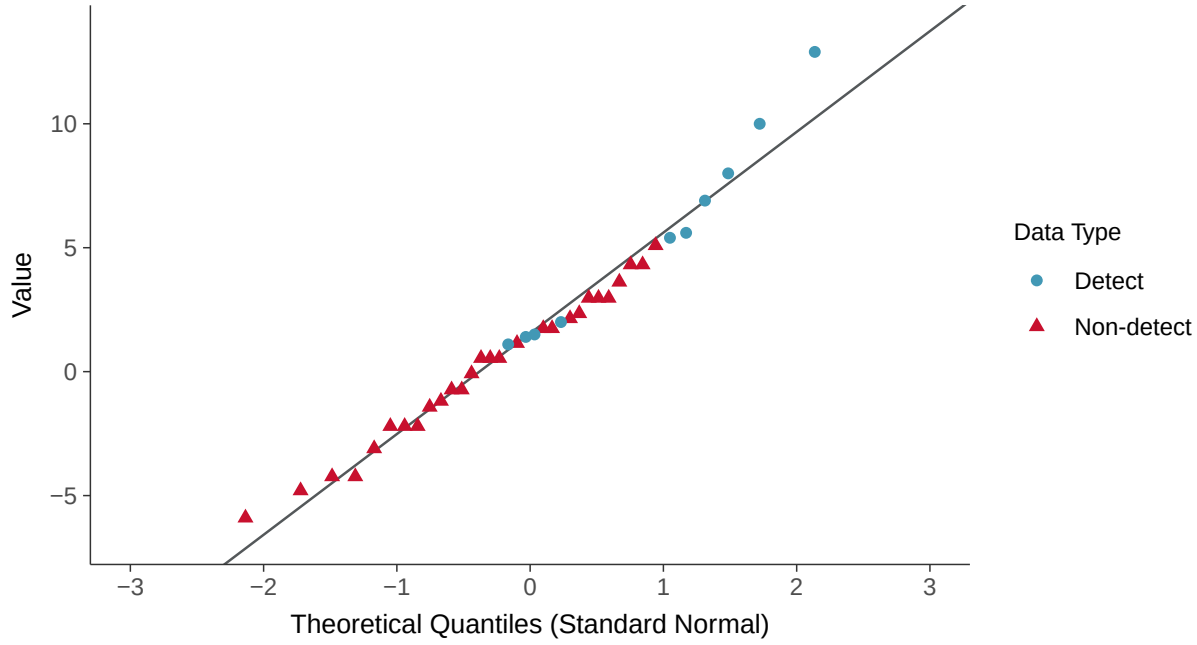
Boxplot by Season

Copper, MW-5 (ug/L)



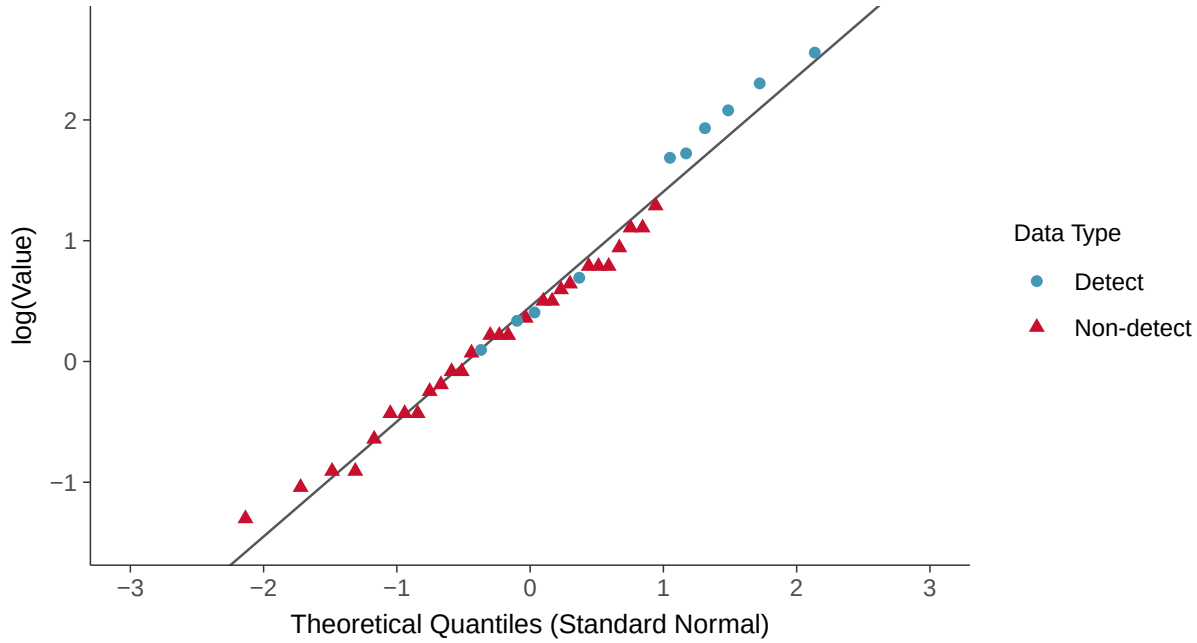
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



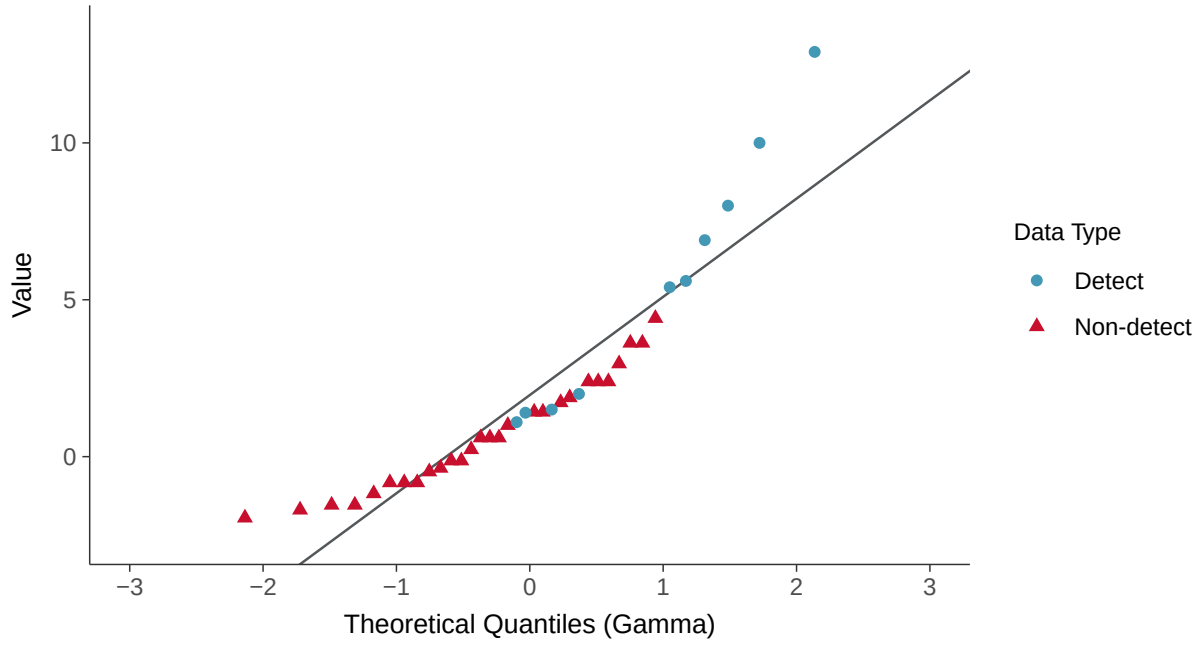
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



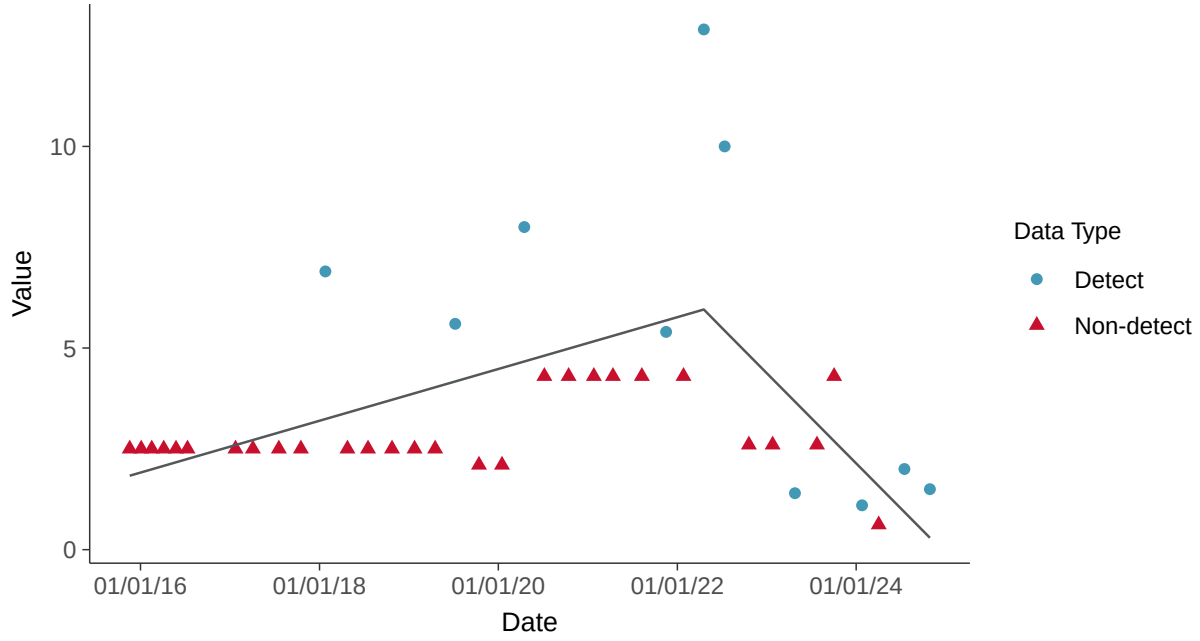
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



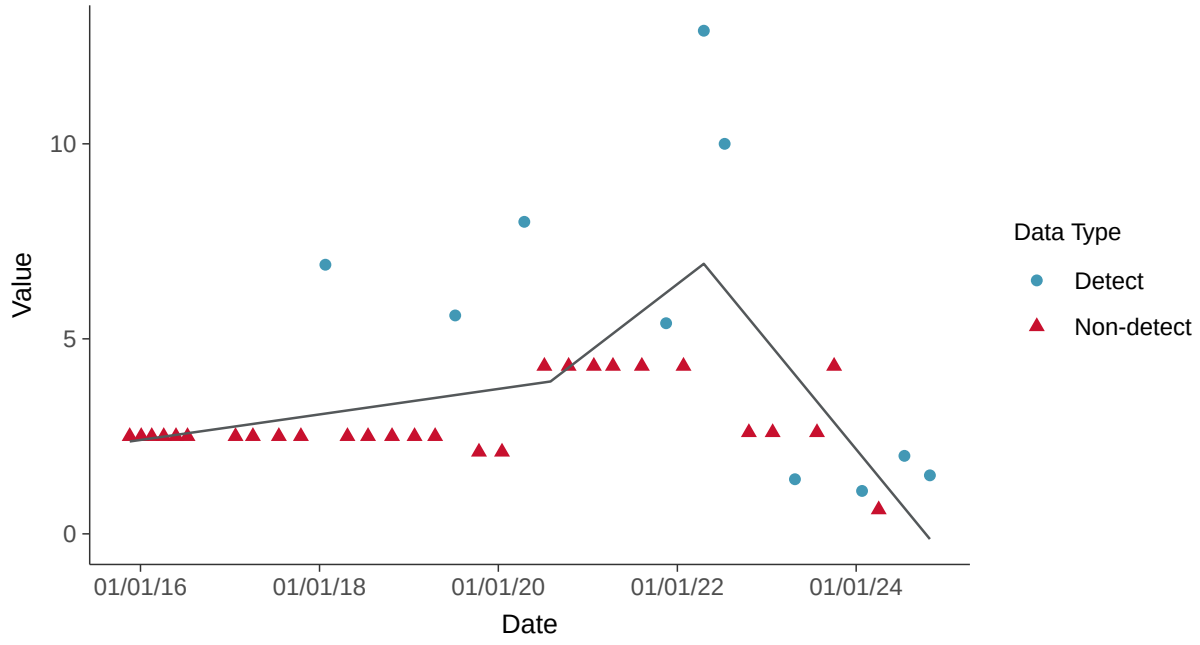
Trend Regression: Piecewise Linear-Linear

Copper, MW-5 (ug/L)



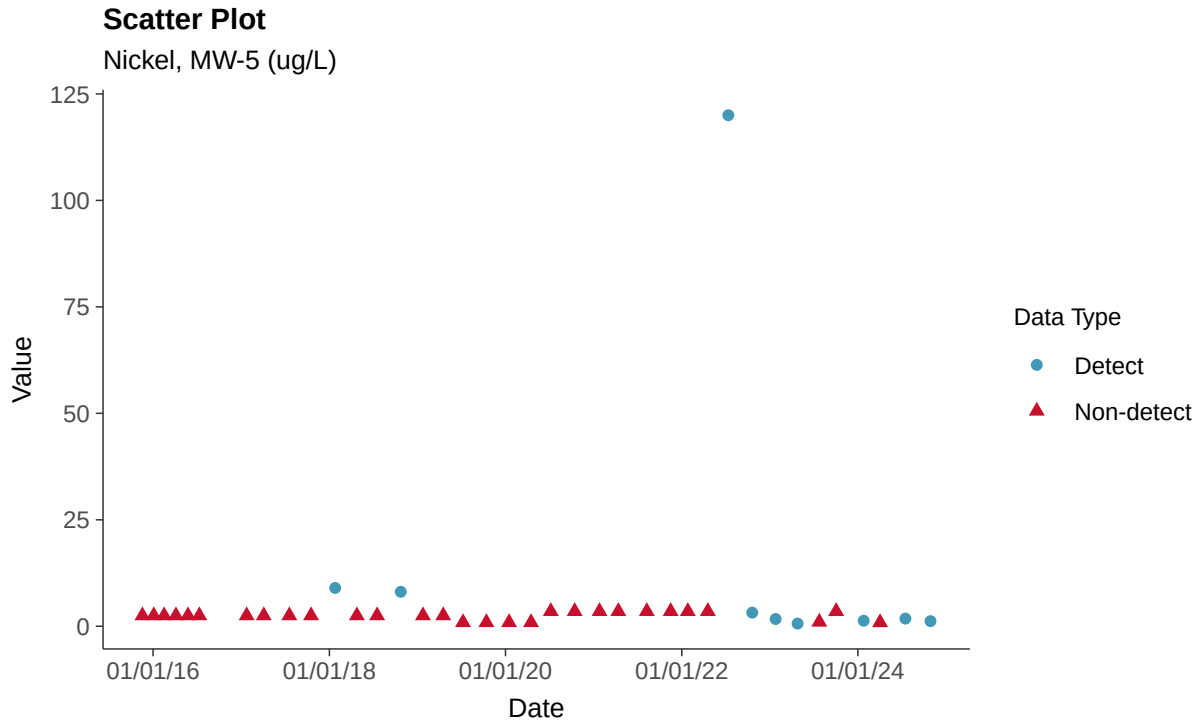
Trend Regression: Piecewise Linear-Linear-Linear

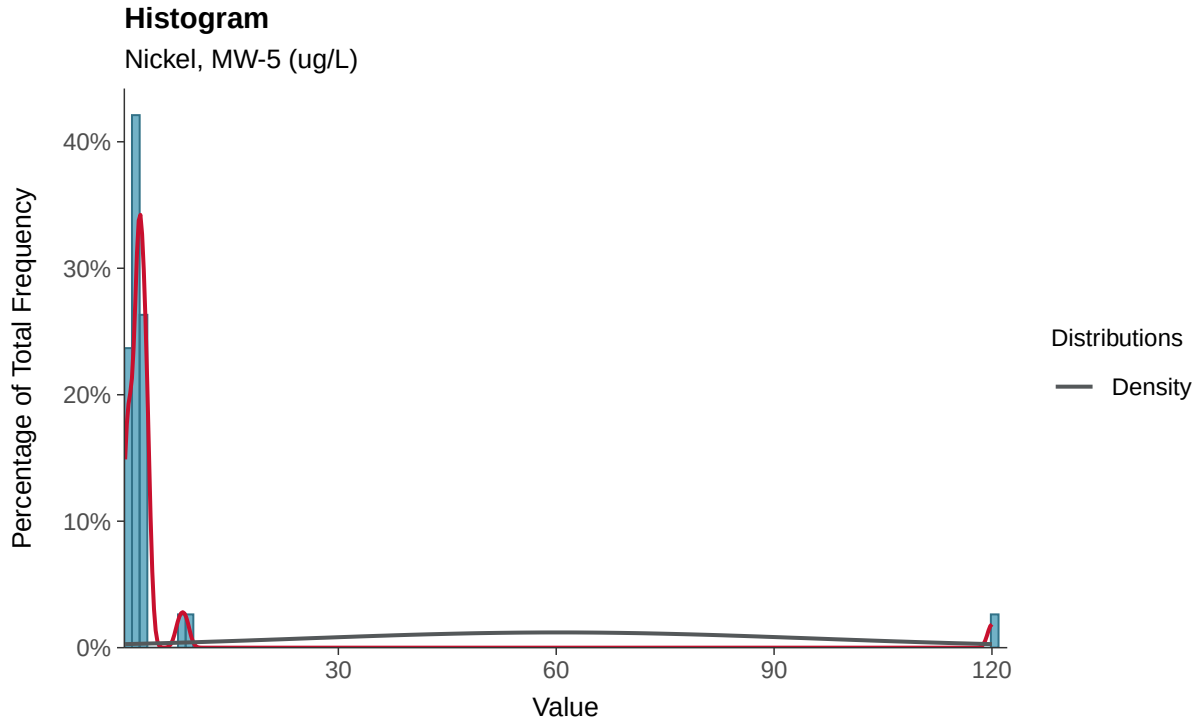
Copper, MW-5 (ug/L)



App. I Metals: Nickel, MW-5

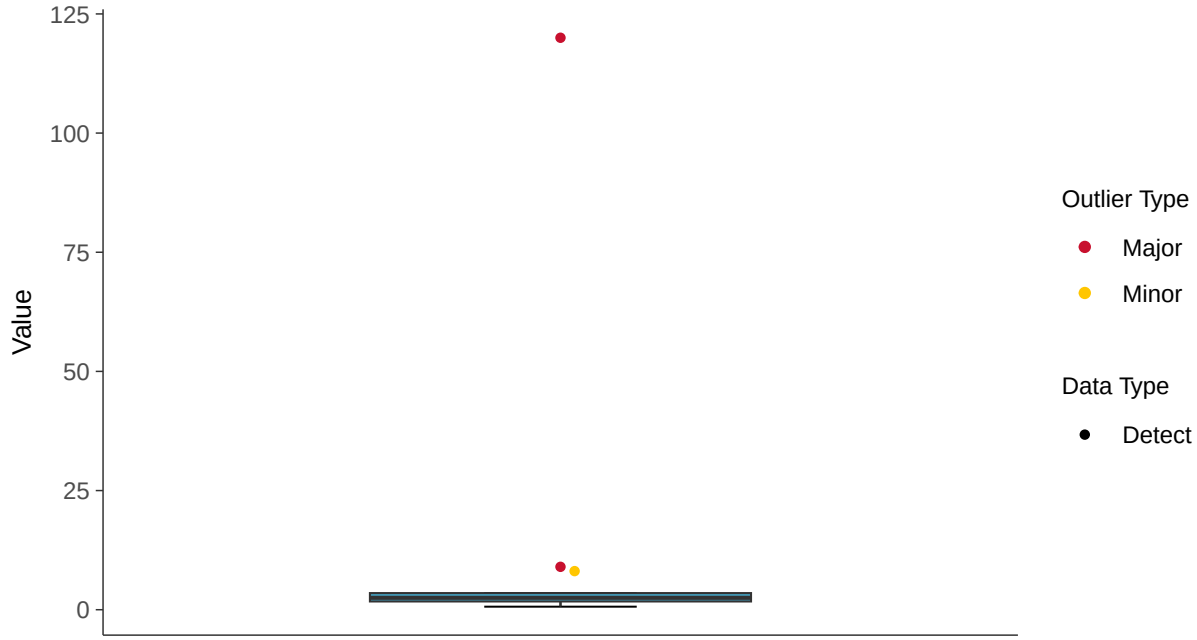
ID: 05_01_117





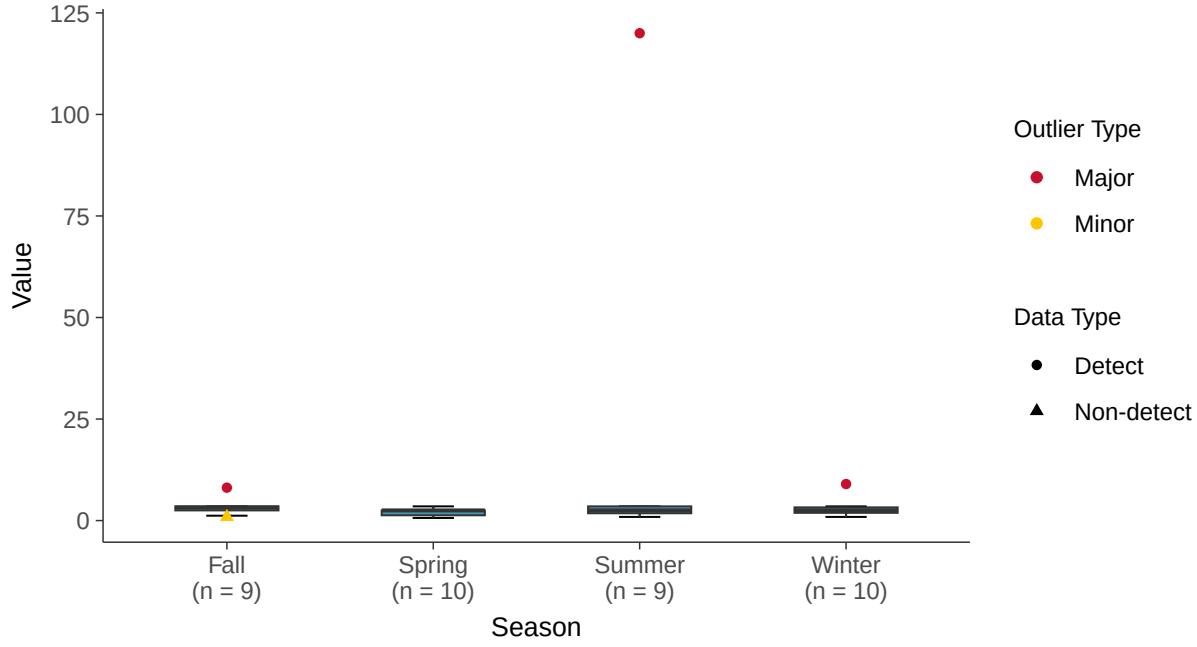
Boxplot

Nickel, MW-5 (ug/L)



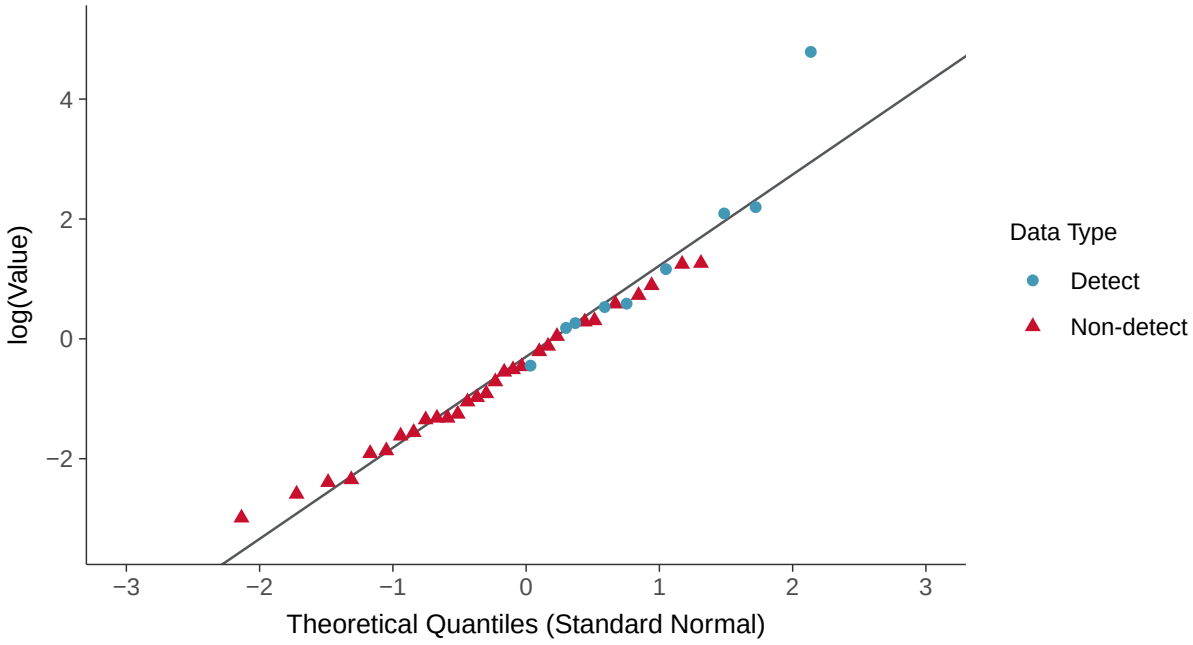
Boxplot by Season

Nickel, MW-5 (ug/L)



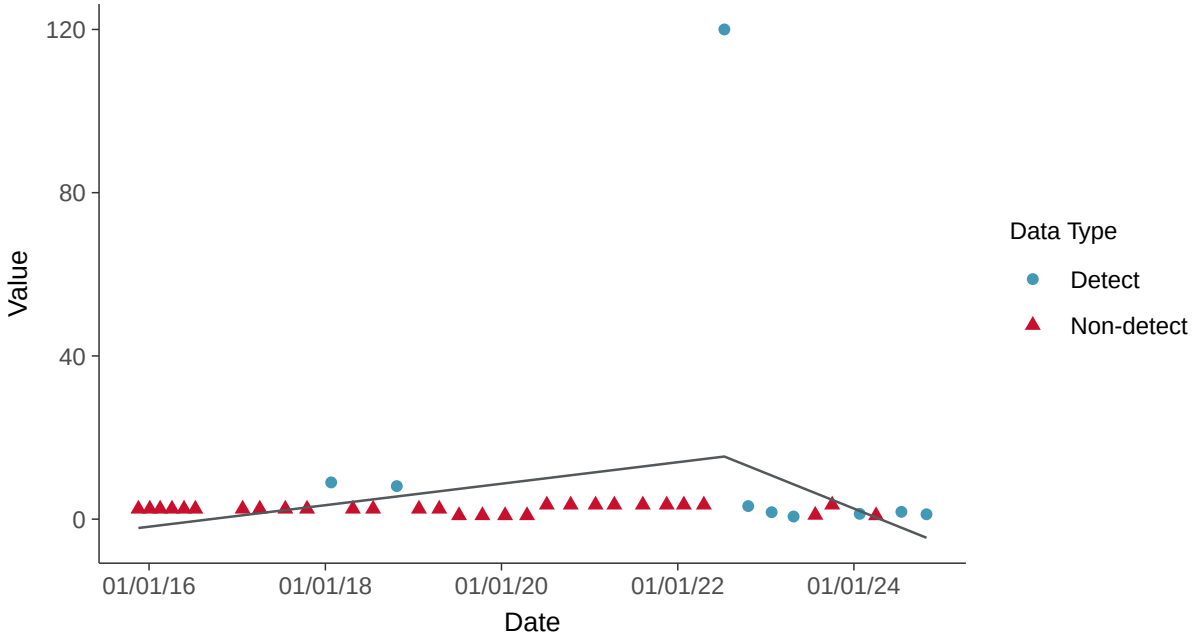
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-5 (ug/L)



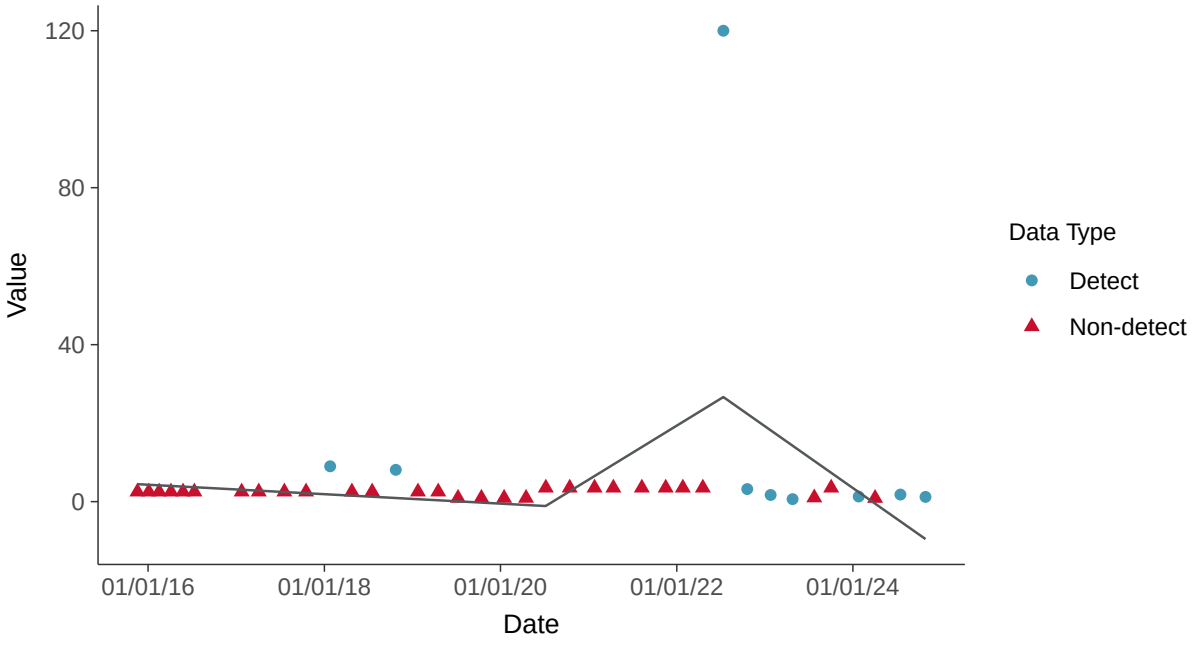
Trend Regression: Piecewise Linear-Linear

Nickel, MW-5 (ug/L)



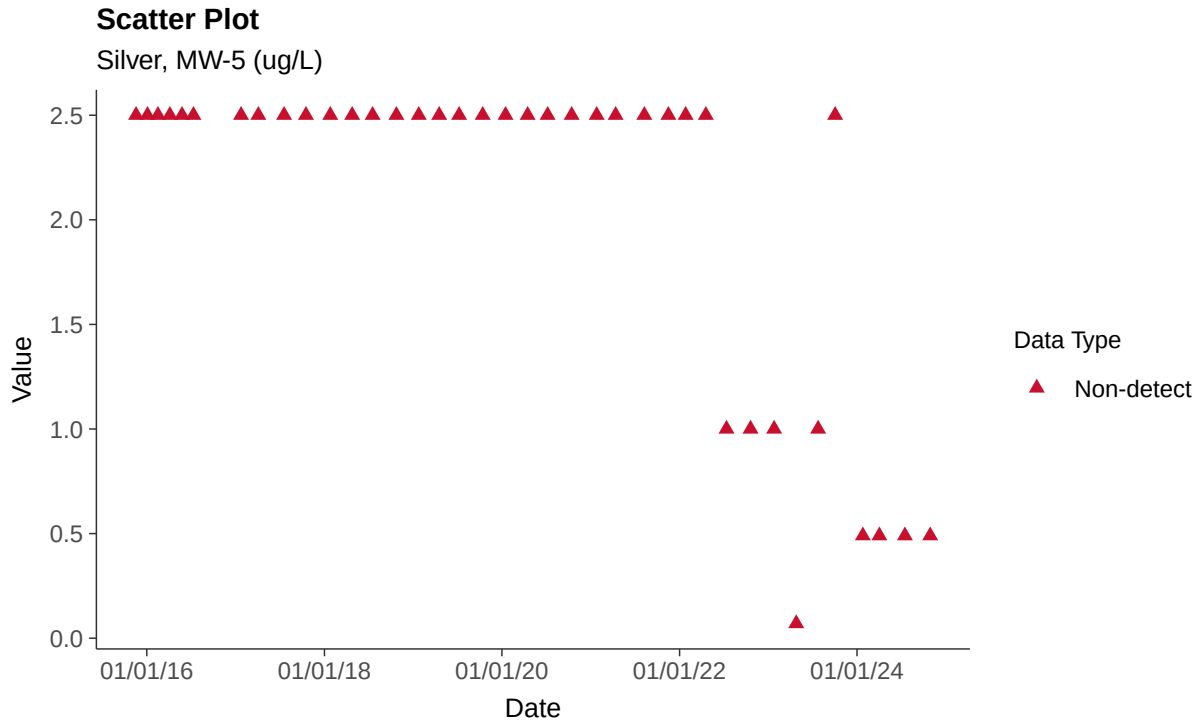
Trend Regression: Piecewise Linear-Linear-Linear

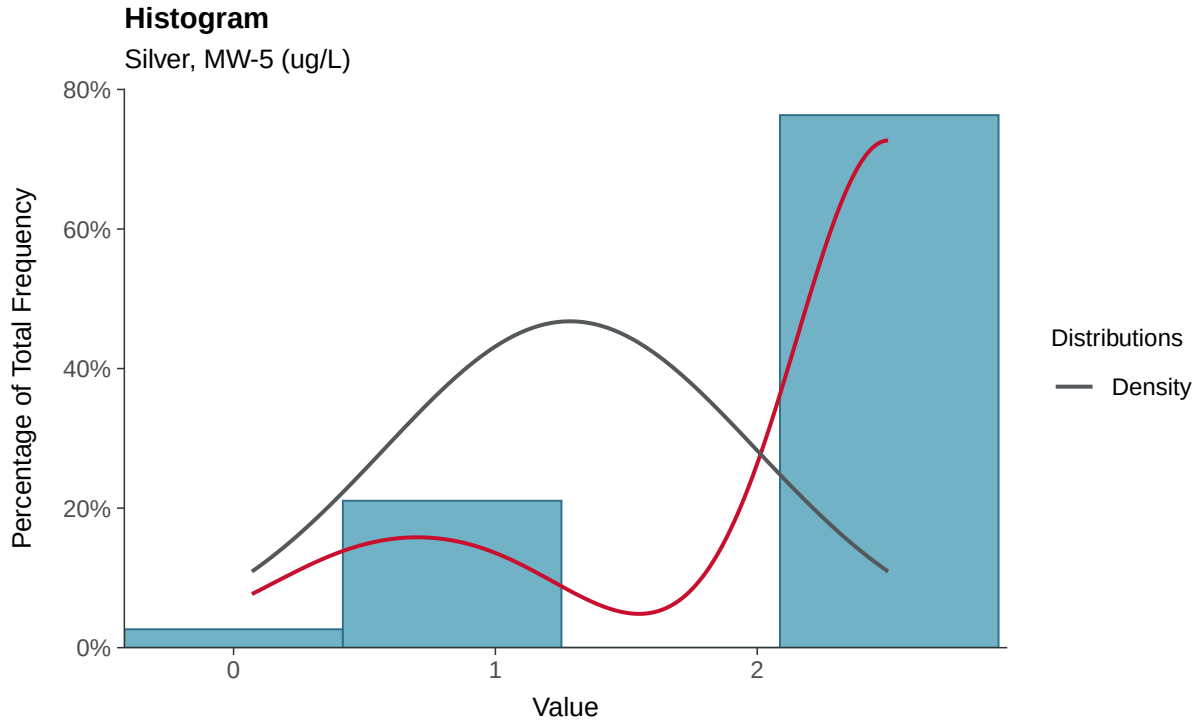
Nickel, MW-5 (ug/L)



App. I Metals: Silver, MW-5

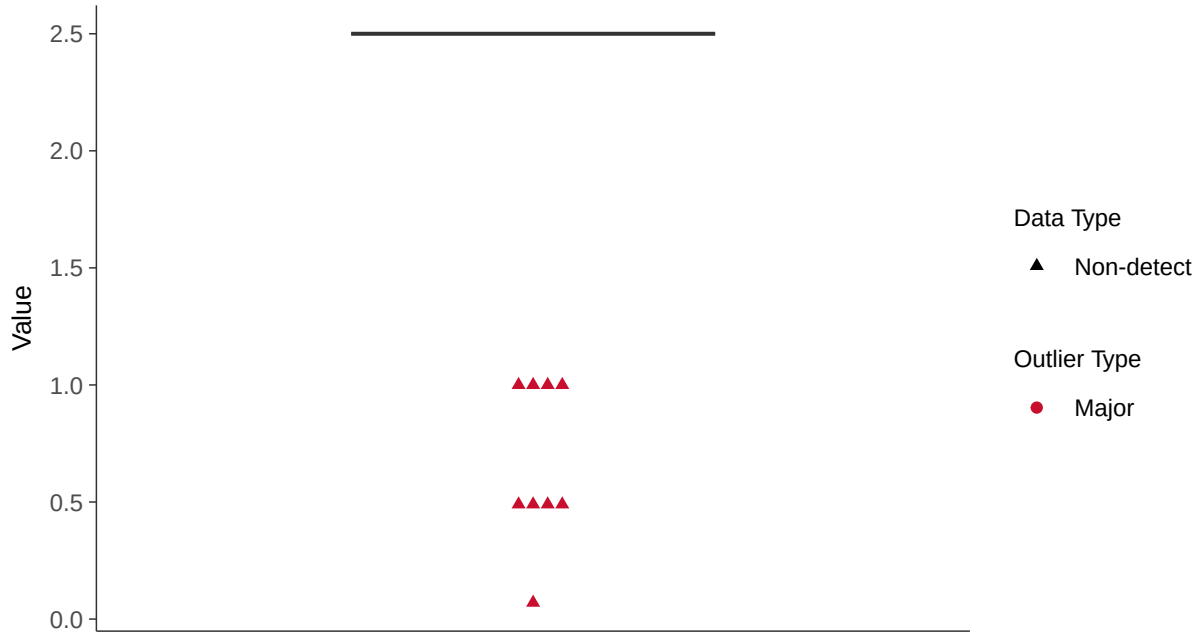
ID: 05_01_122





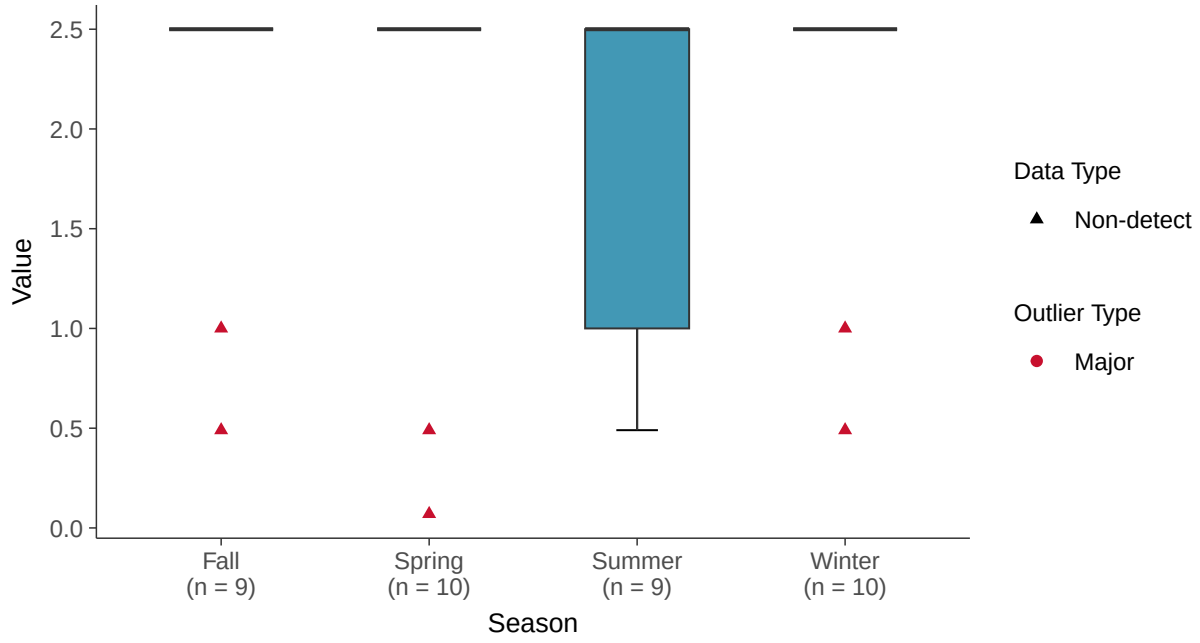
Boxplot

Silver, MW-5 (ug/L)



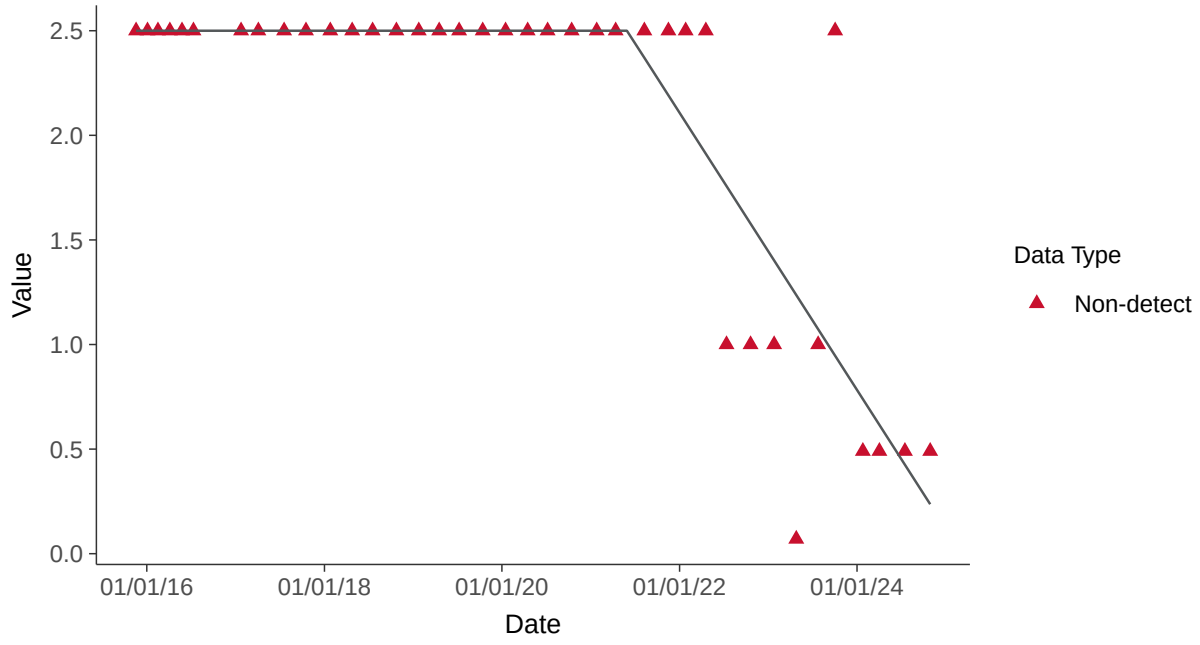
Boxplot by Season

Silver, MW-5 (ug/L)



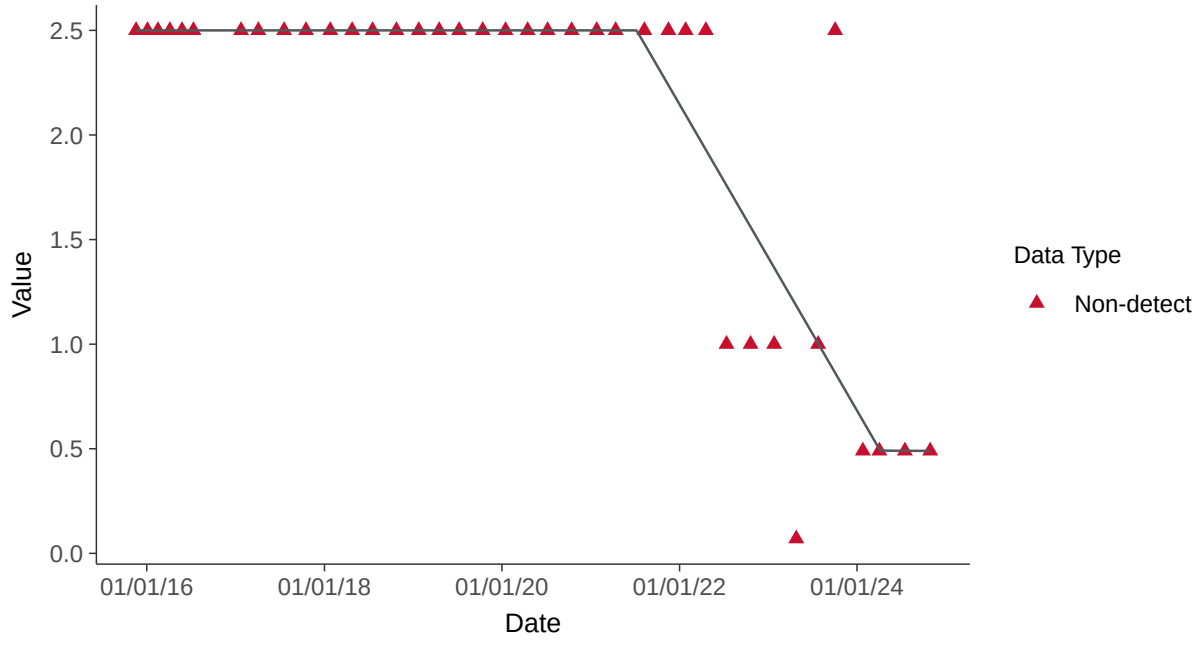
Trend Regression: Piecewise Linear-Linear

Silver, MW-5 (ug/L)



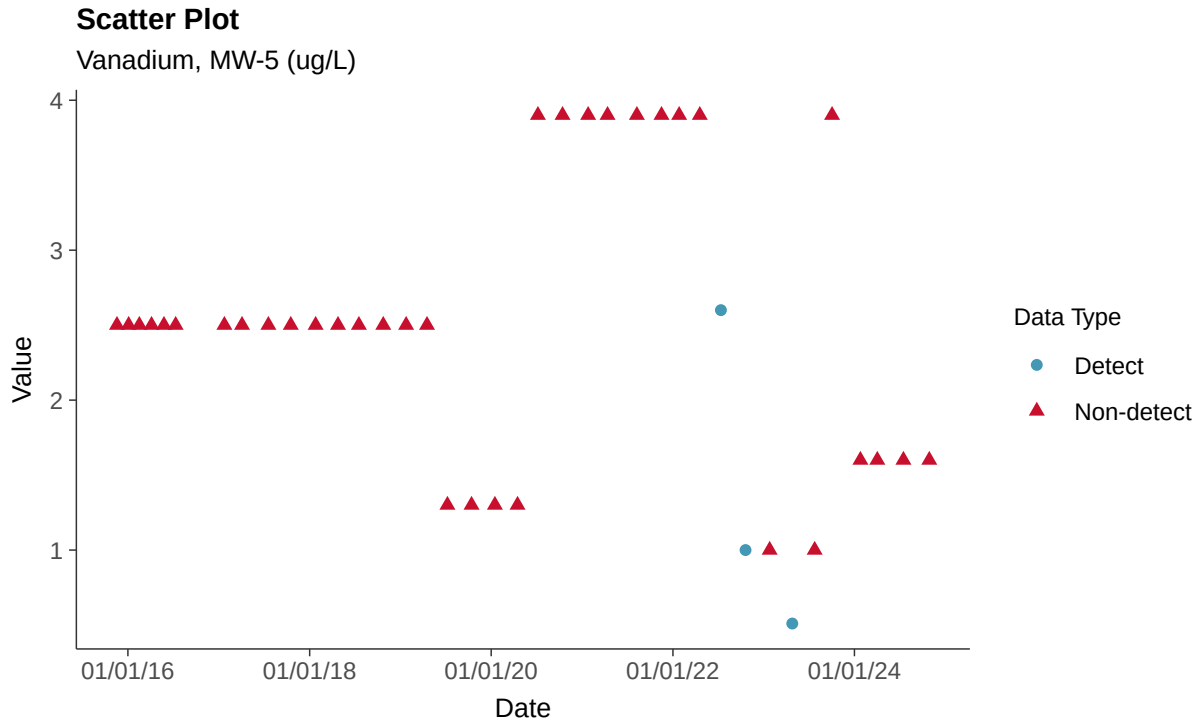
Trend Regression: Piecewise Linear-Linear-Linear

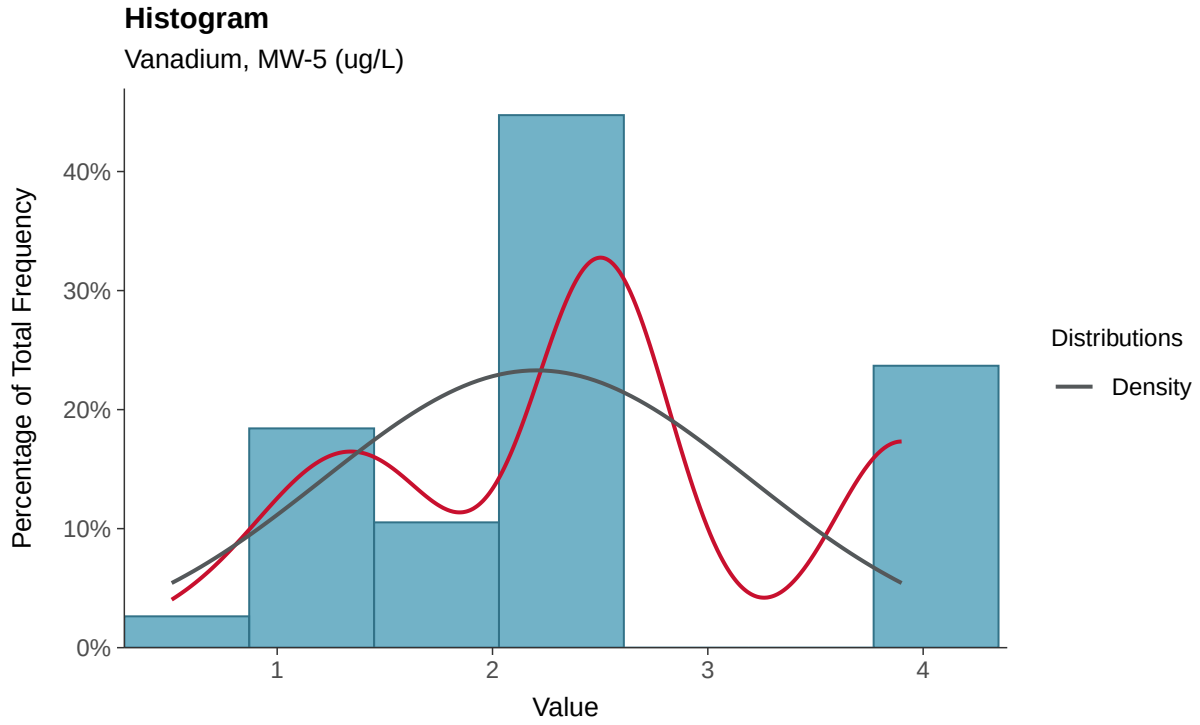
Silver, MW-5 (ug/L)



App. I Metals: Vanadium, MW-5

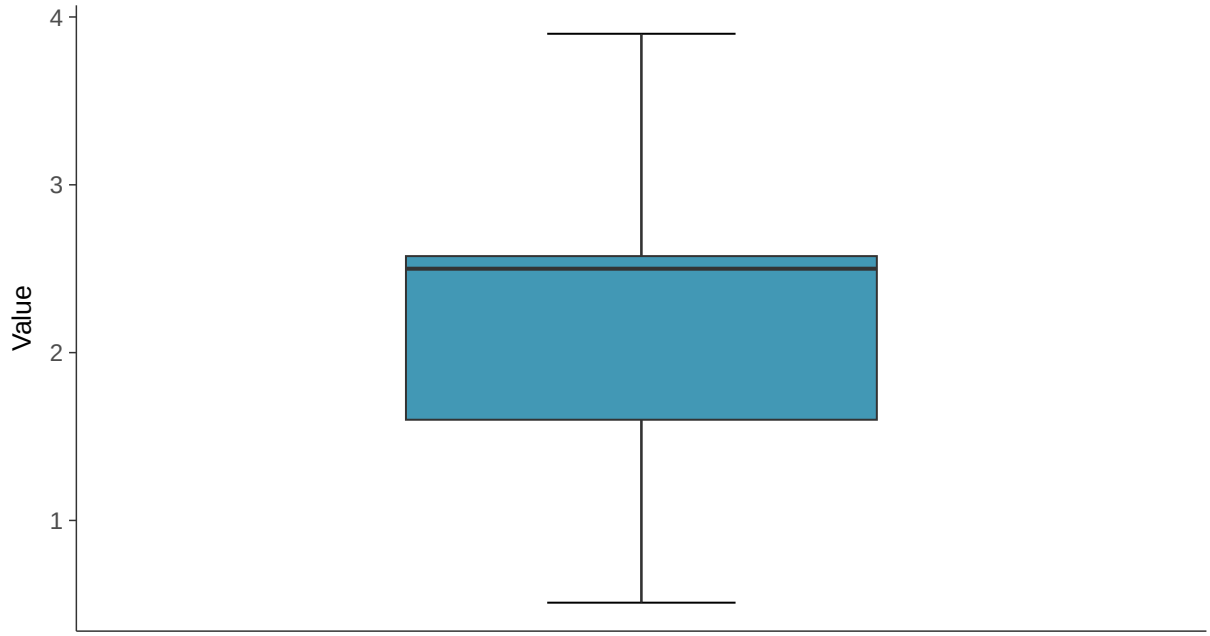
ID: 05_01_127





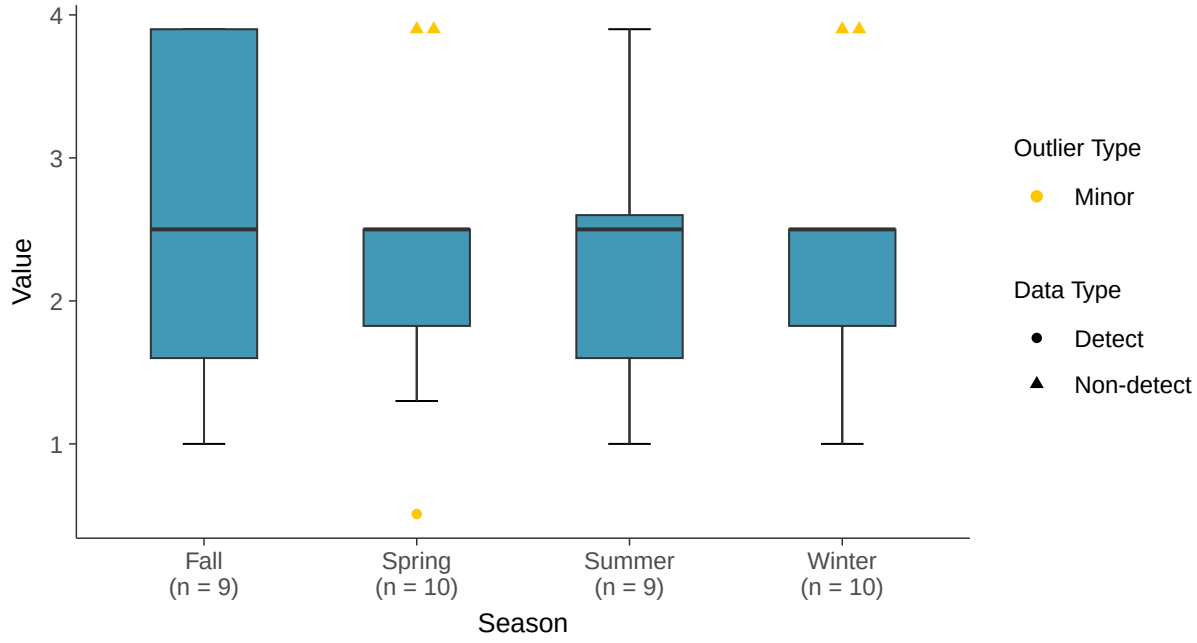
Boxplot

Vanadium, MW-5 (ug/L)



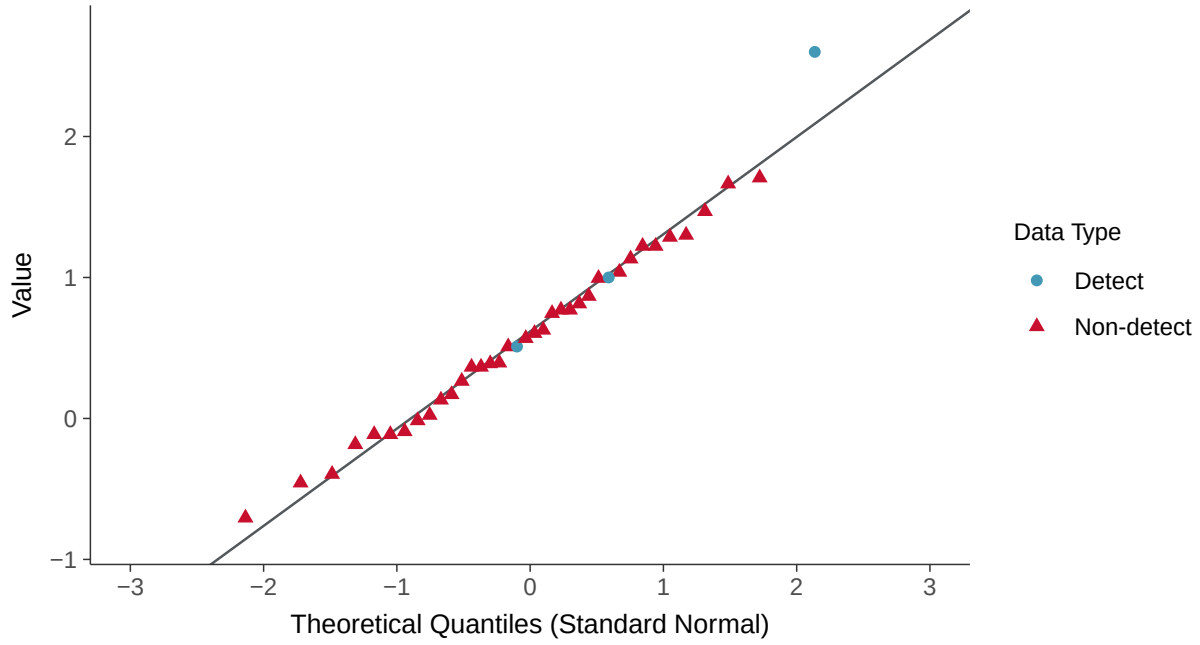
Boxplot by Season

Vanadium, MW-5 (ug/L)



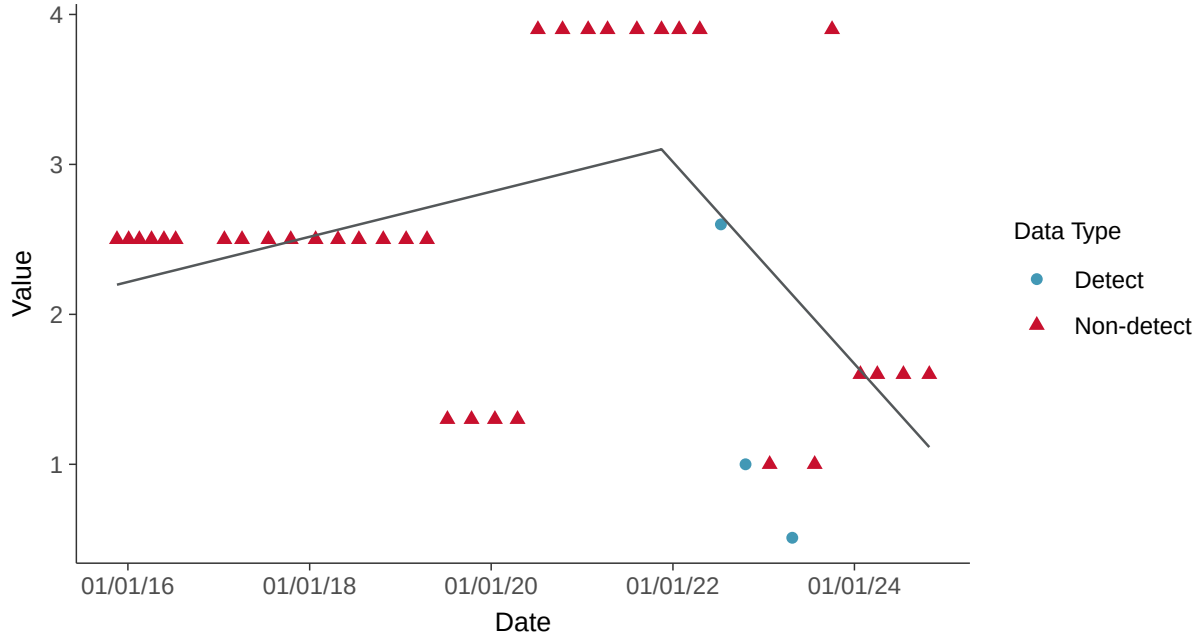
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-5 (ug/L)



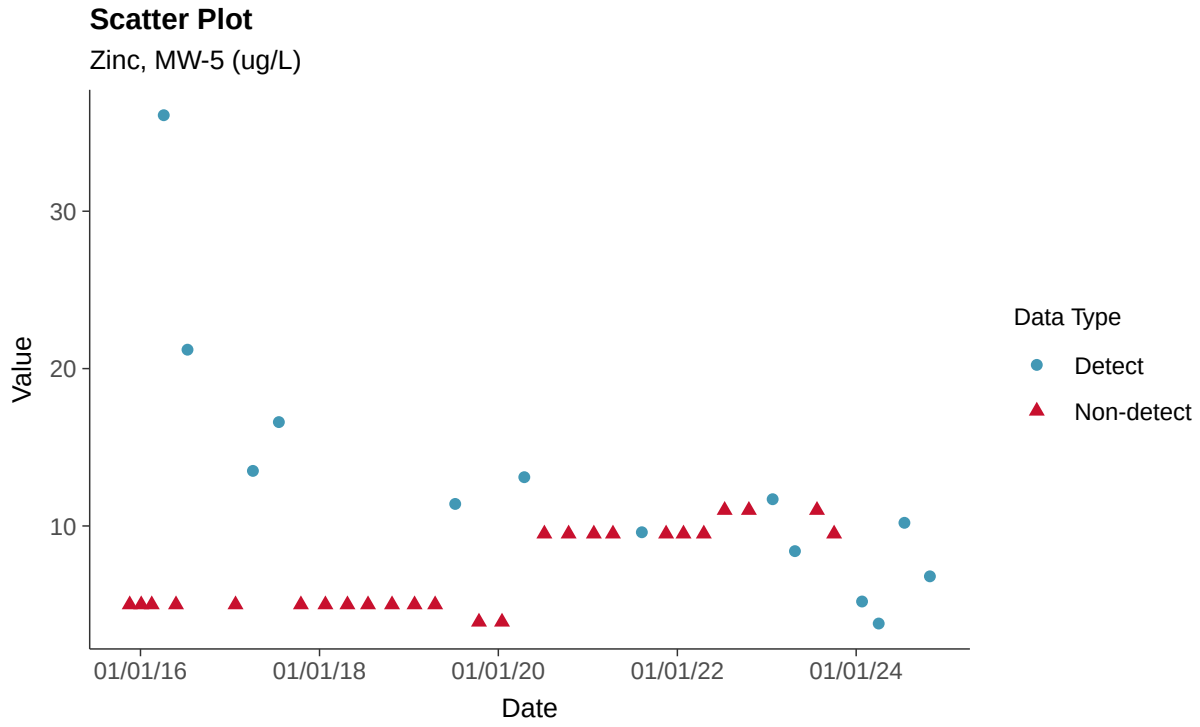
Trend Regression: Piecewise Linear-Linear

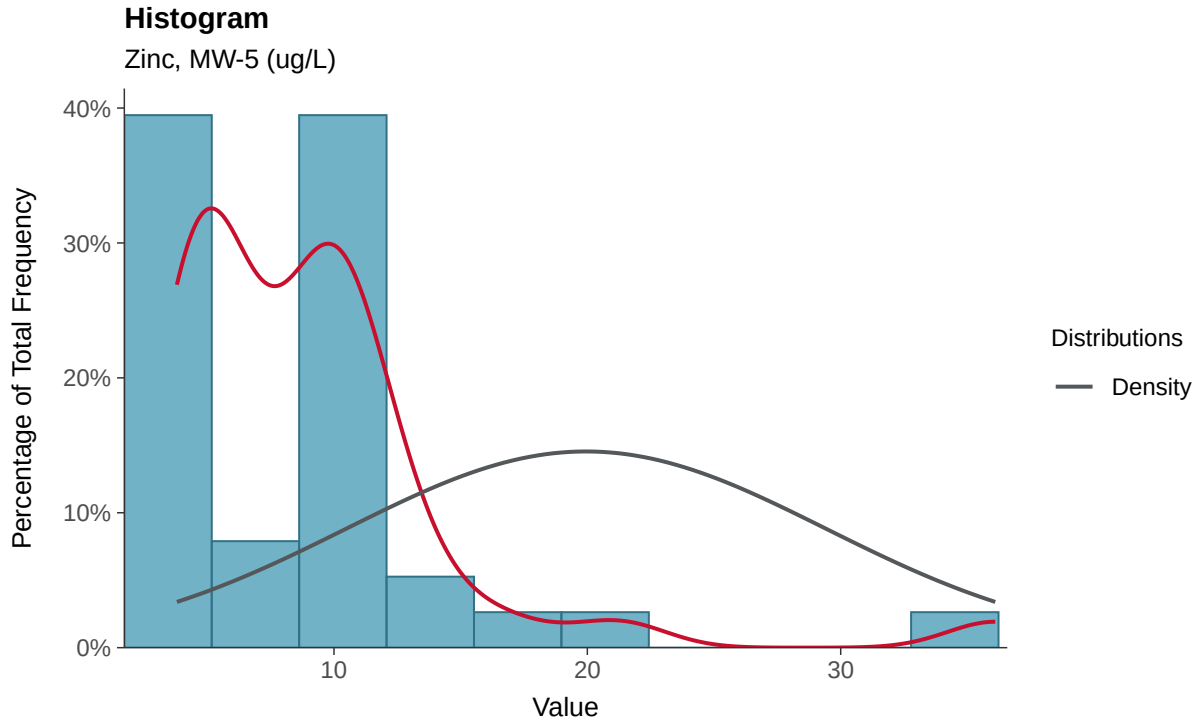
Vanadium, MW-5 (ug/L)



App. I Metals: Zinc, MW-5

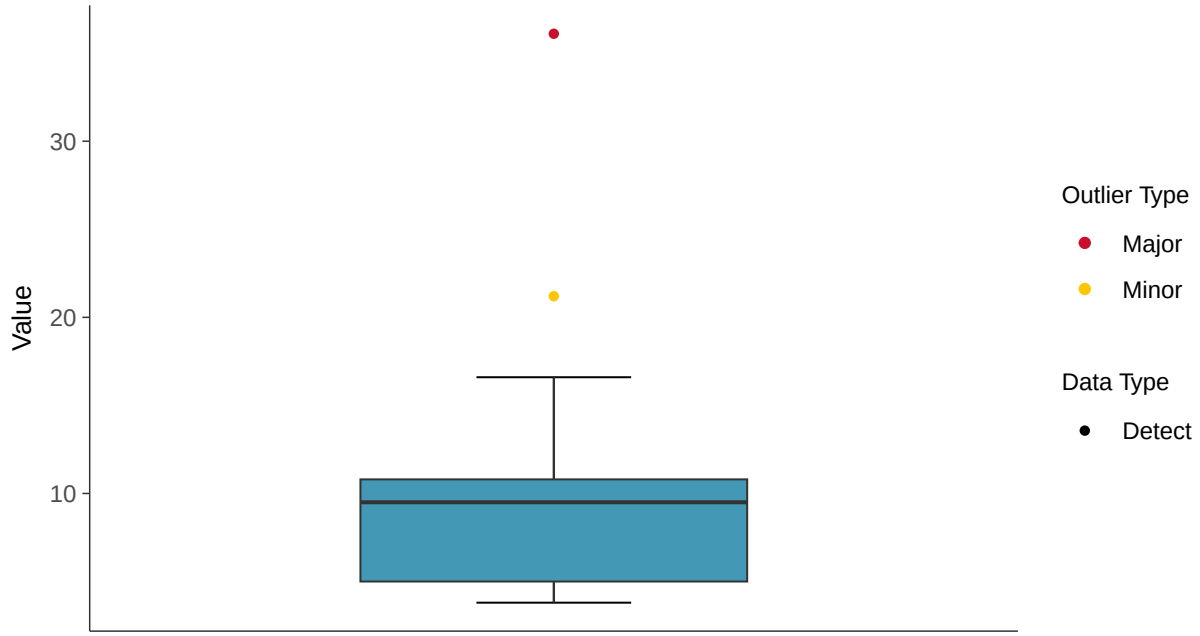
ID: 05_01_128





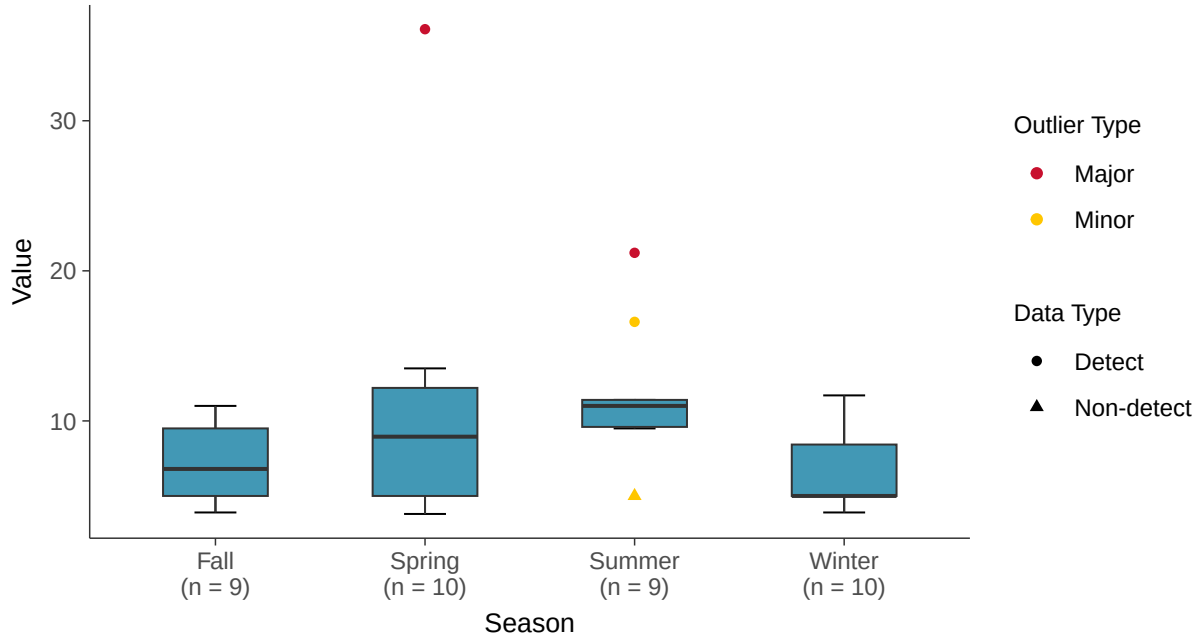
Boxplot

Zinc, MW-5 (ug/L)



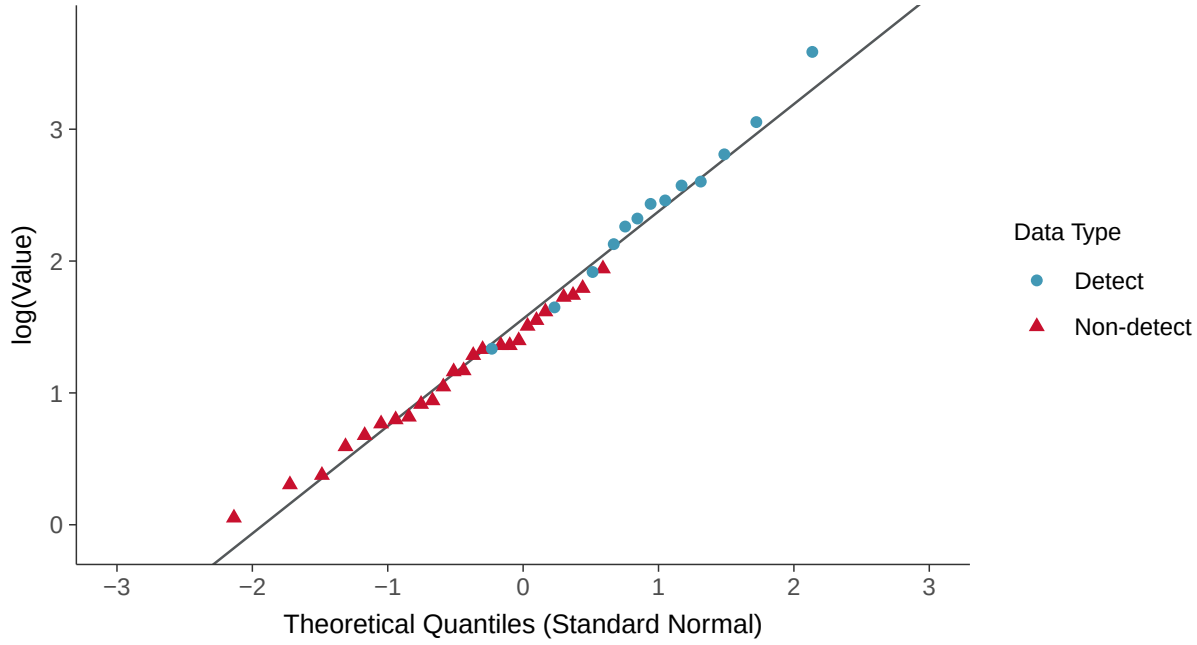
Boxplot by Season

Zinc, MW-5 (ug/L)



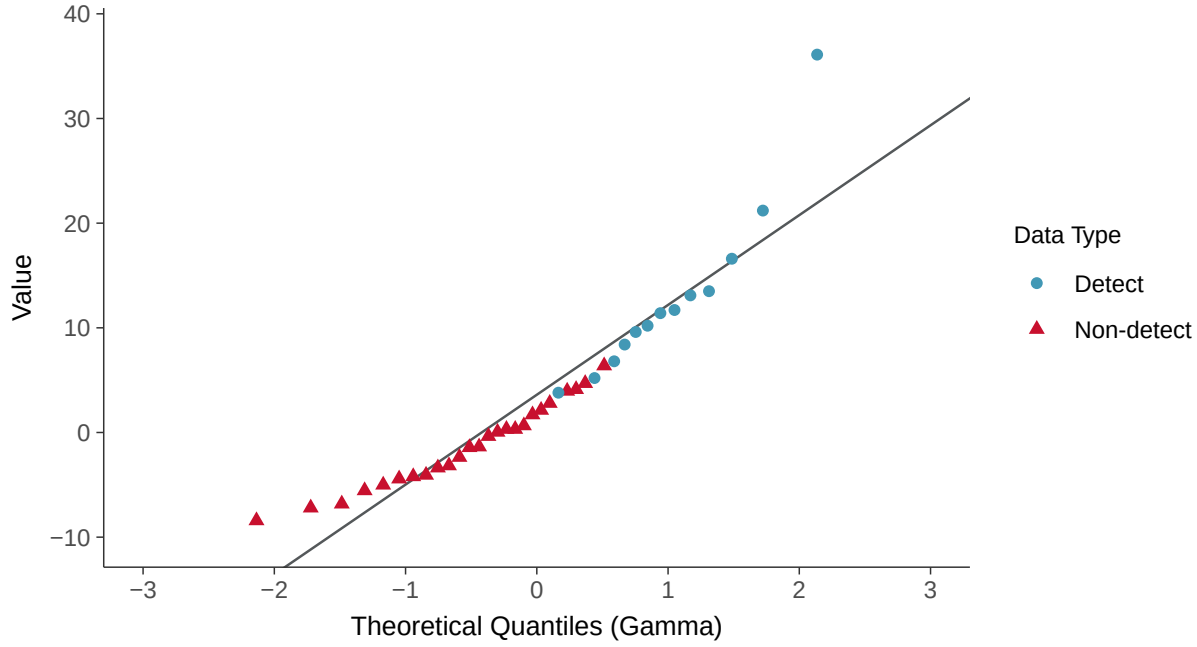
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-5 (ug/L)



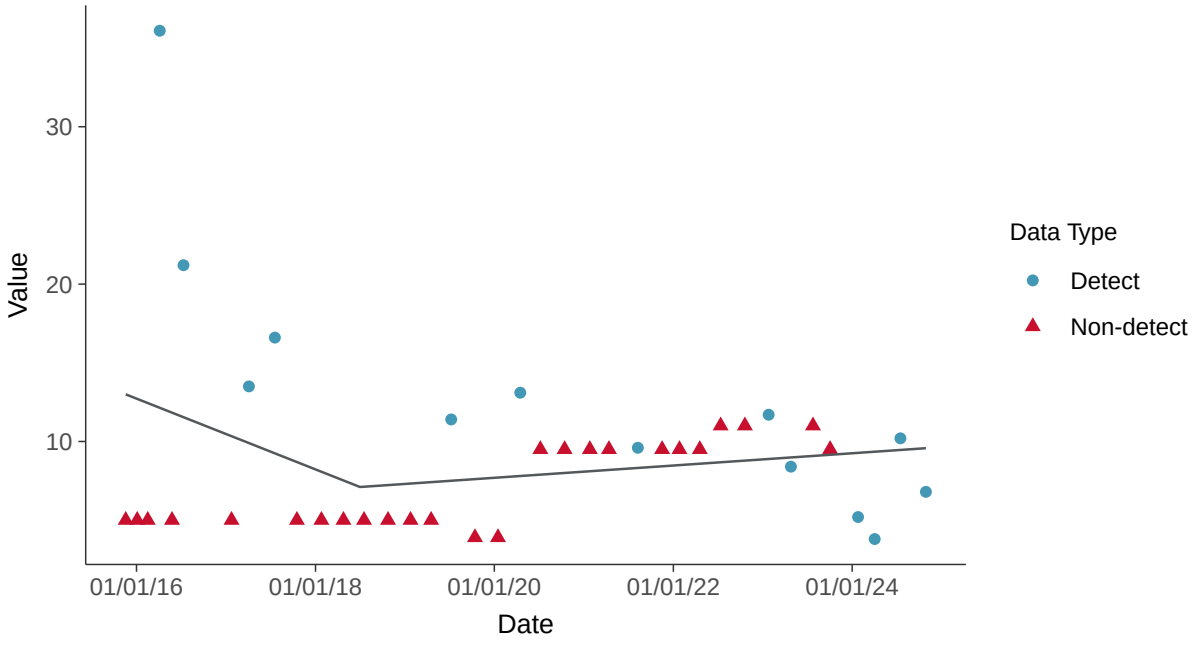
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-5 (ug/L)



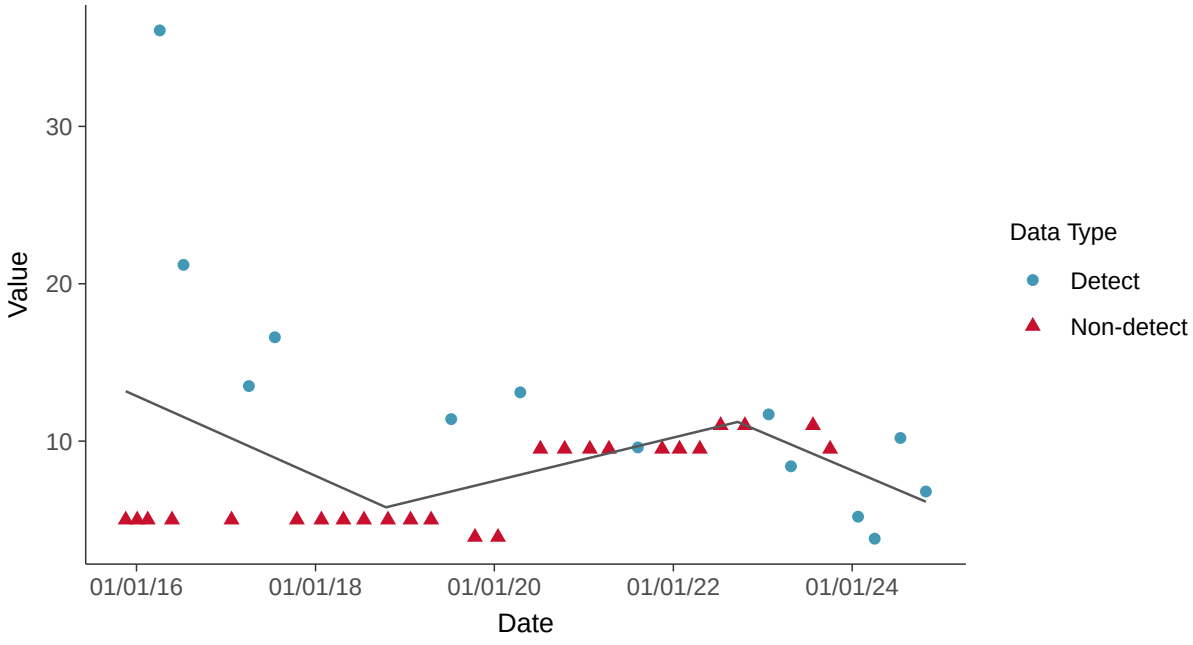
Trend Regression: Piecewise Linear-Linear

Zinc, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-5 (ug/L)

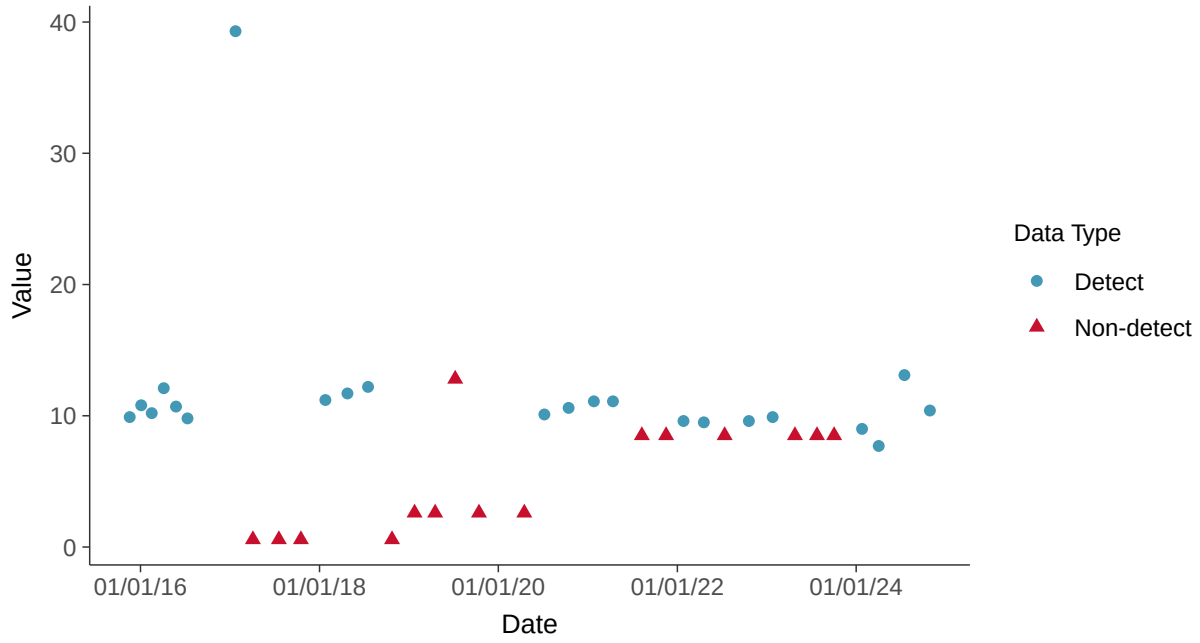


App. III: Boron, MW-5

ID: 05_02_105

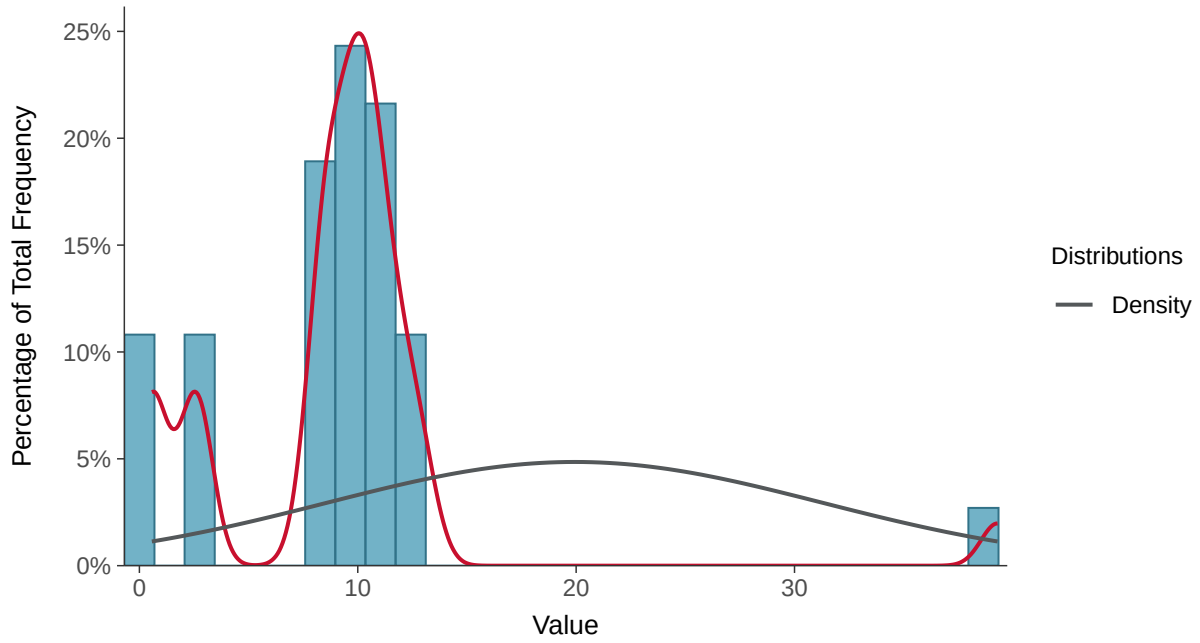
Scatter Plot

Boron, MW-5 (ug/L)



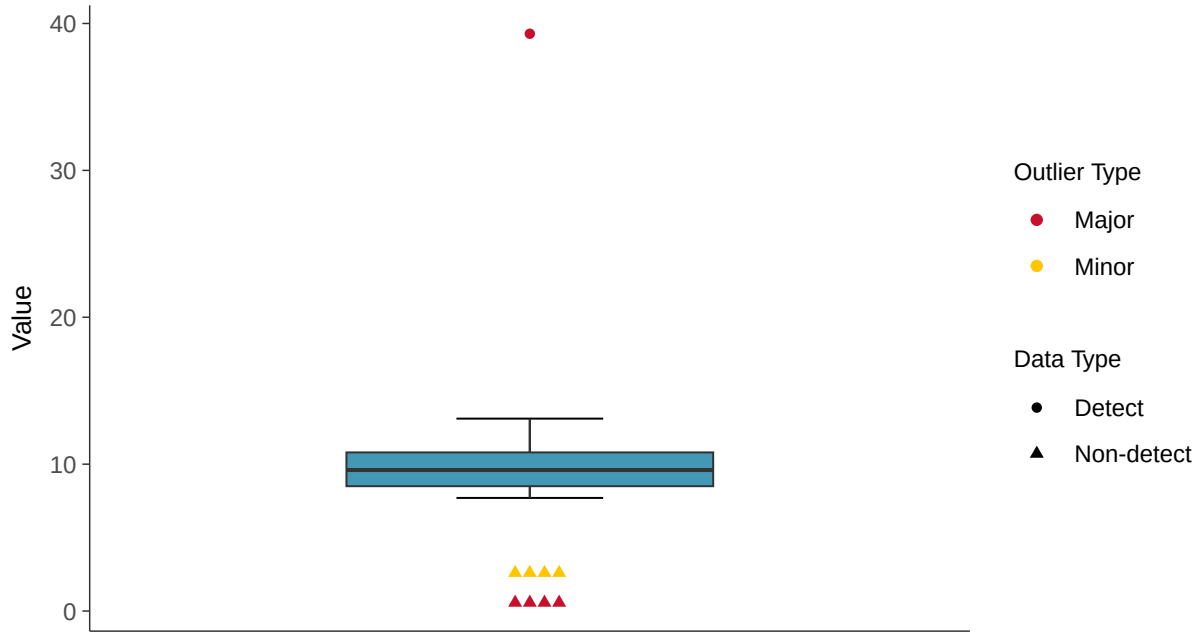
Histogram

Boron, MW-5 (ug/L)



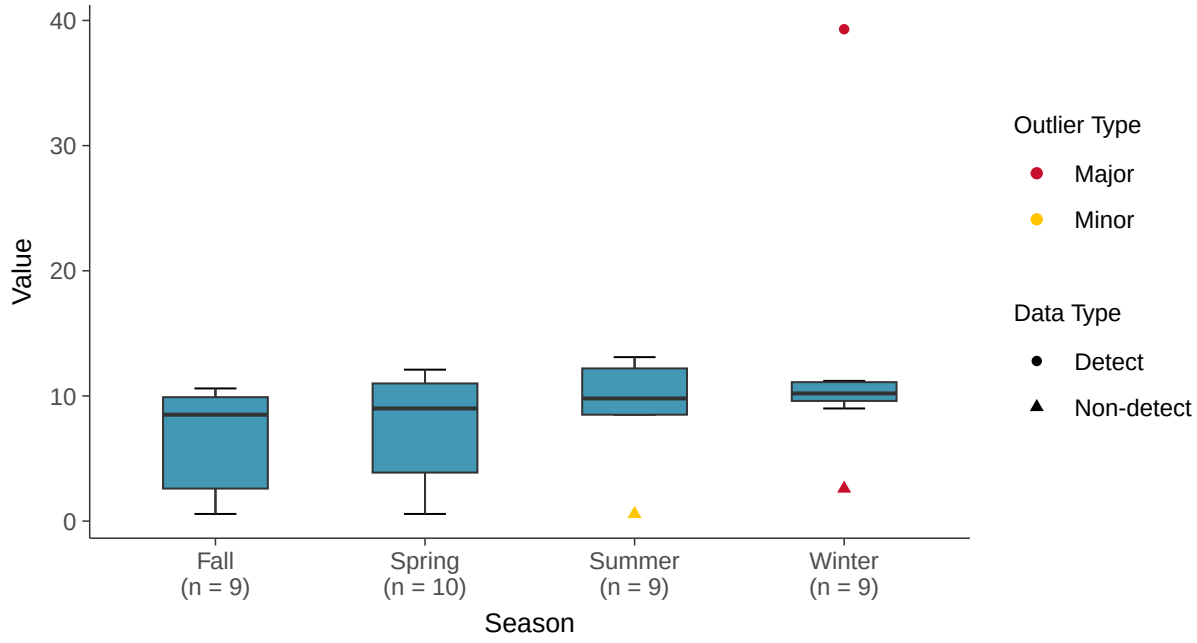
Boxplot

Boron, MW-5 (ug/L)



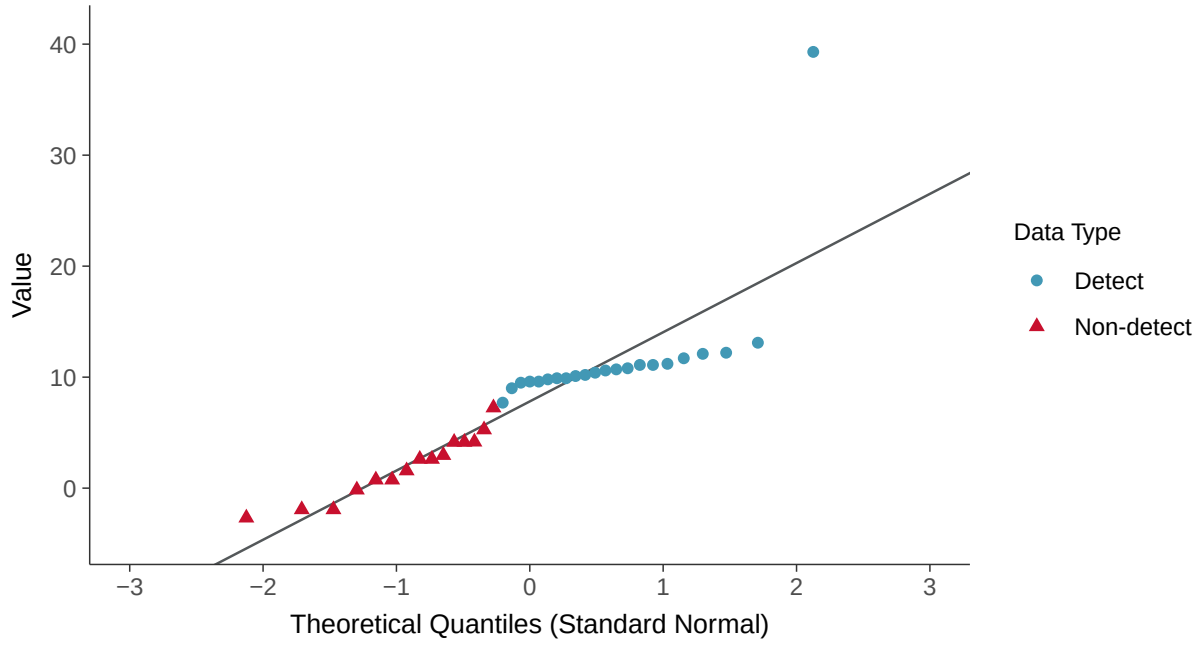
Boxplot by Season

Boron, MW-5 (ug/L)



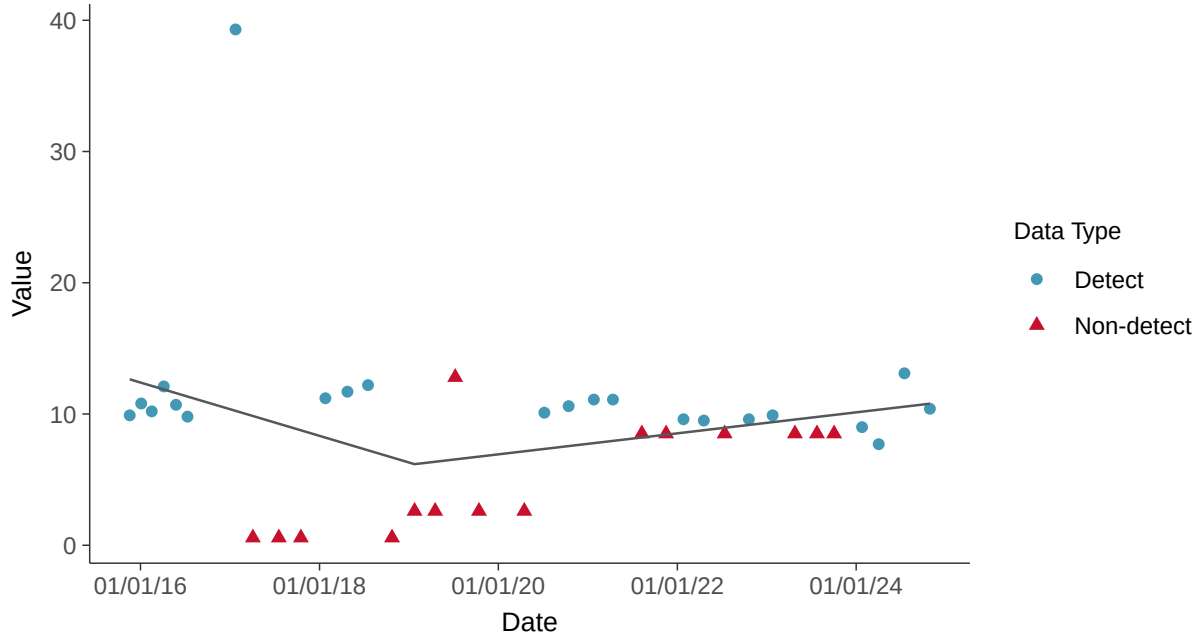
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-5 (ug/L)



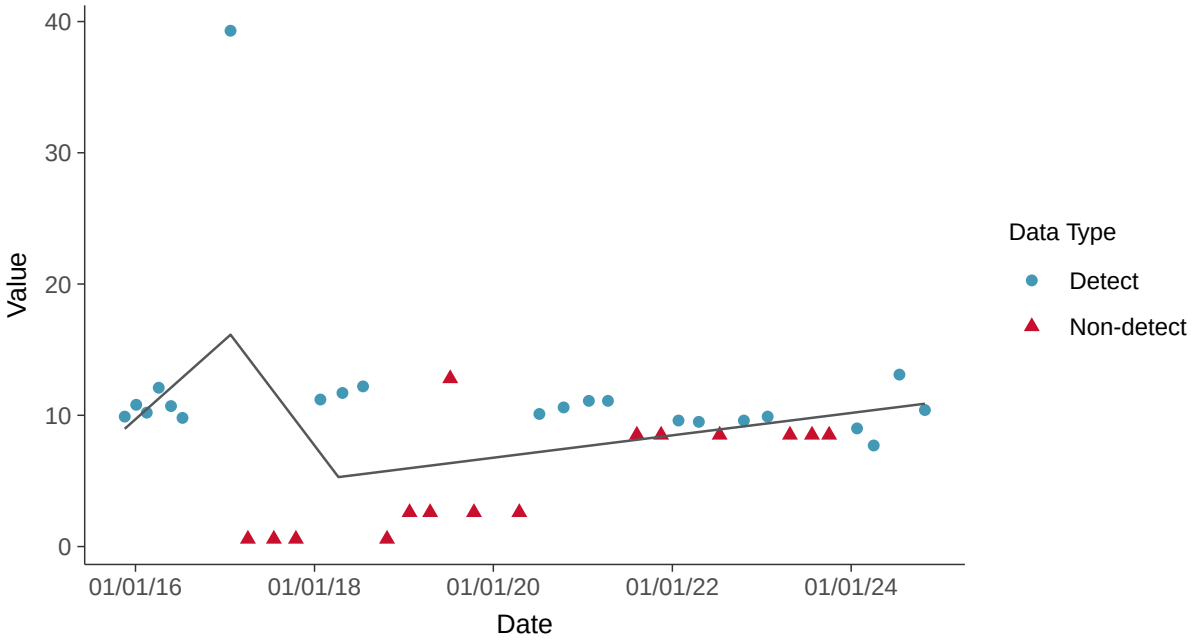
Trend Regression: Piecewise Linear-Linear

Boron, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-5 (ug/L)

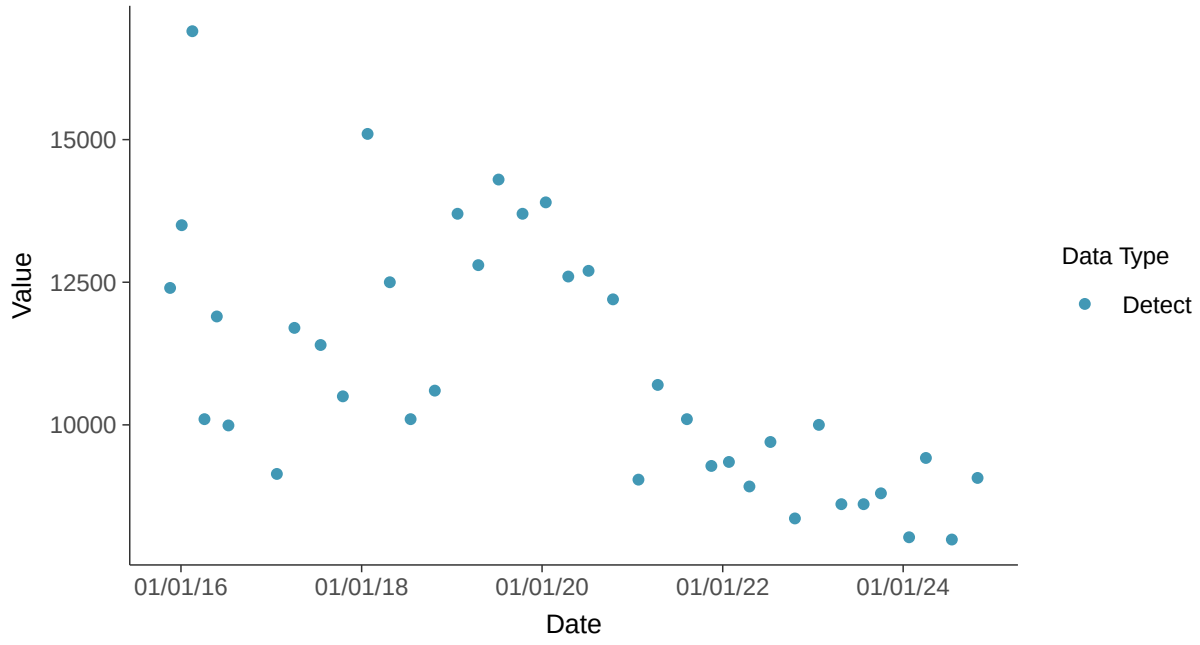


App. III: Calcium, MW-5

ID: 05_02_107

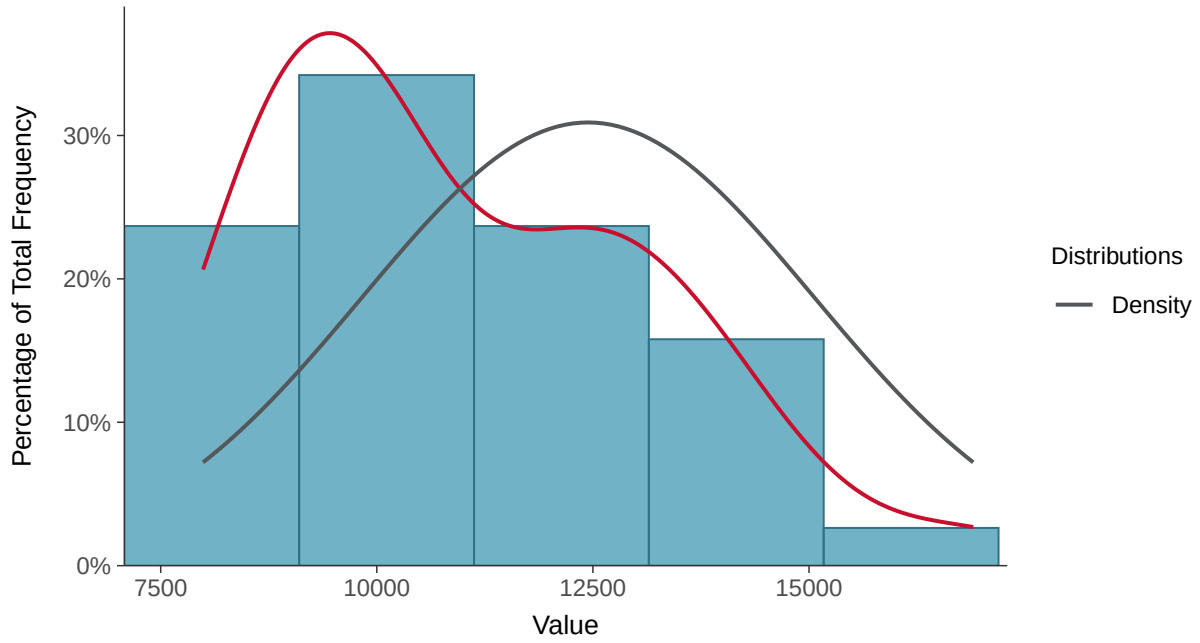
Scatter Plot

Calcium, MW-5 (ug/L)



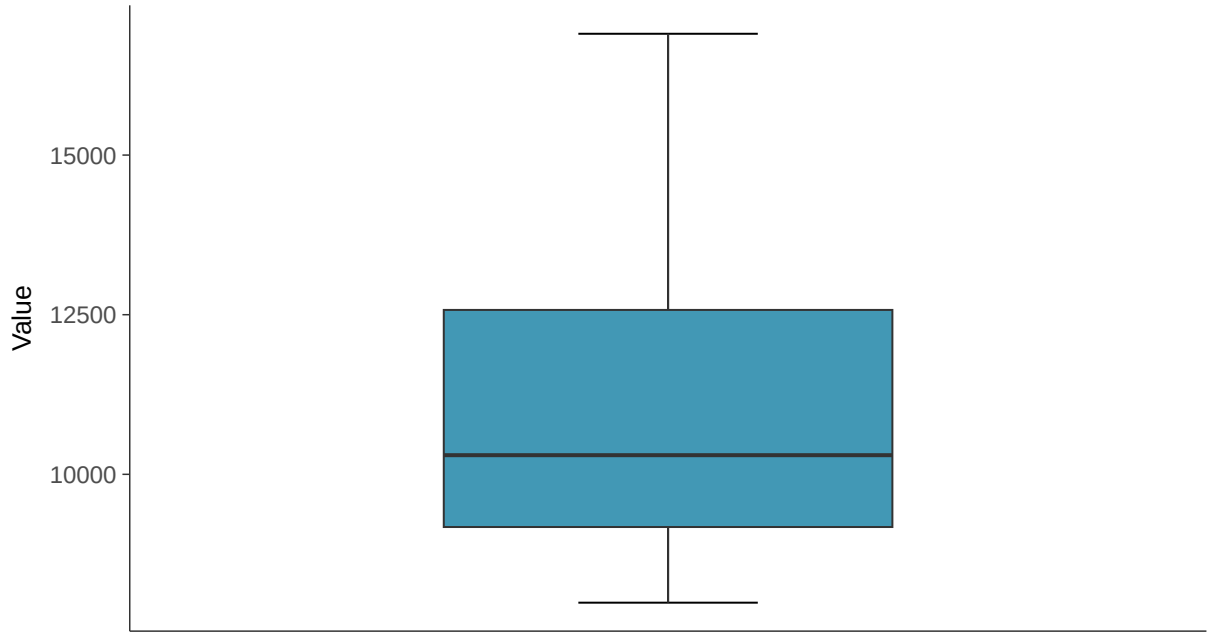
Histogram

Calcium, MW-5 (ug/L)



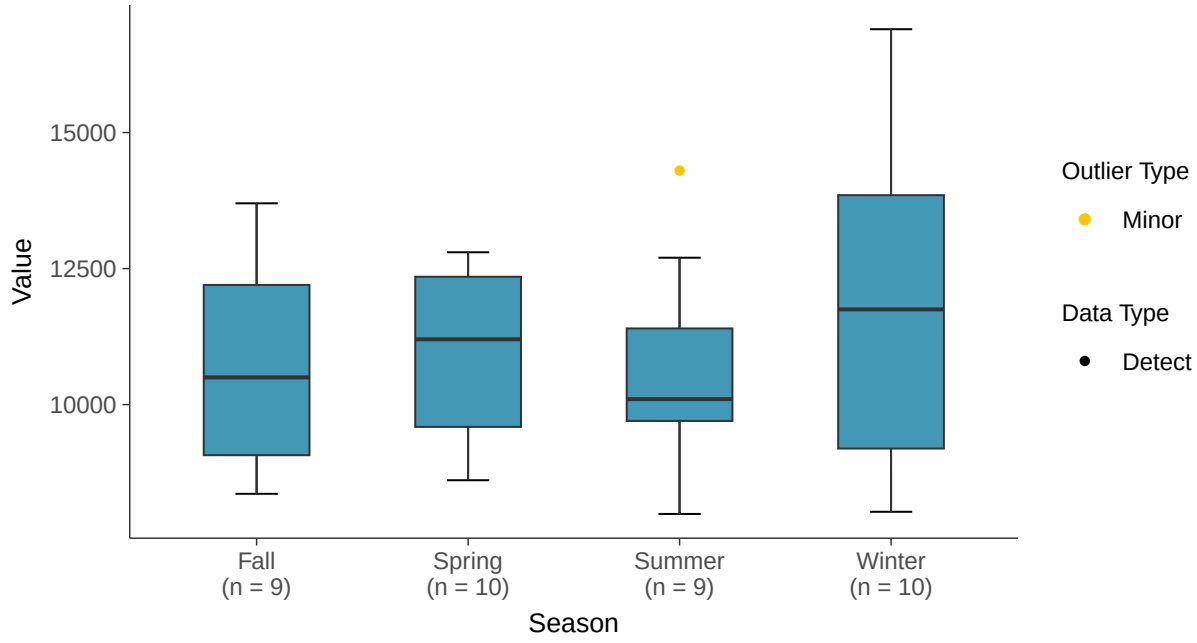
Boxplot

Calcium, MW-5 (ug/L)



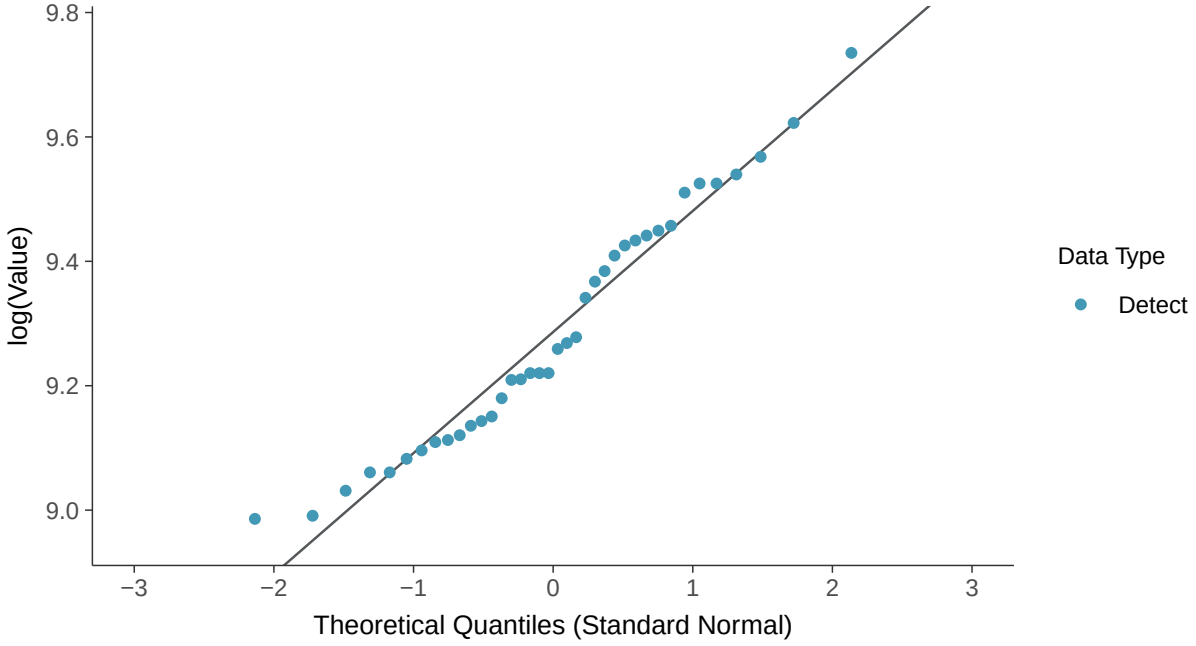
Boxplot by Season

Calcium, MW-5 (ug/L)



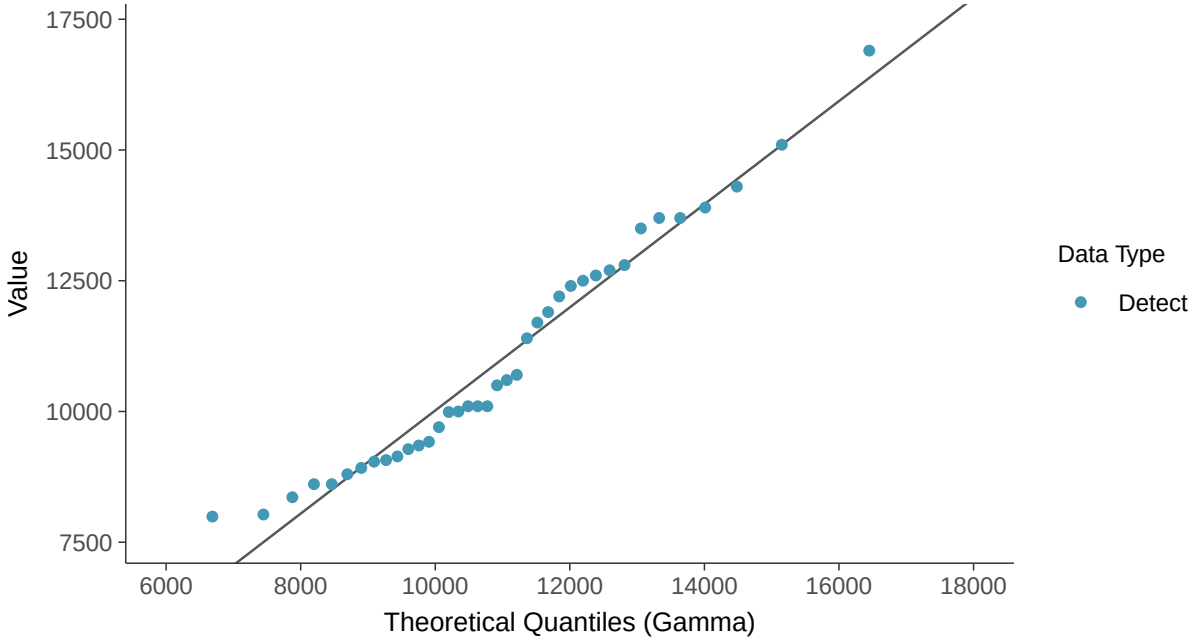
Lognormal Q-Q plot

Calcium, MW-5 (ug/L)



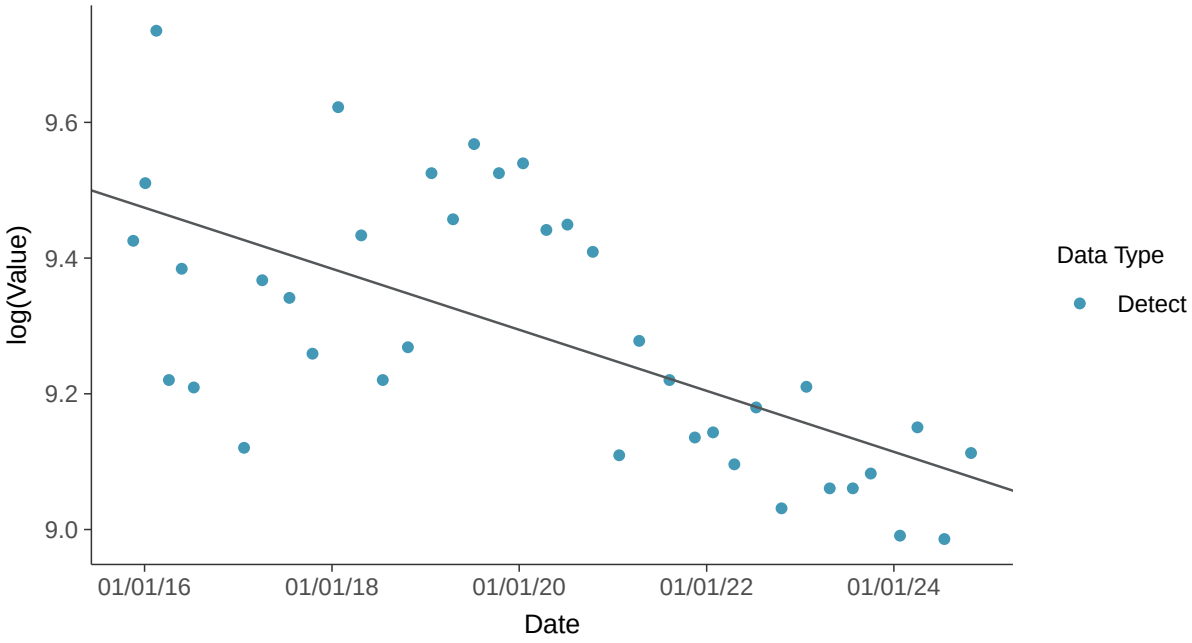
Gamma Q-Q plot

Calcium, MW-5 (ug/L)



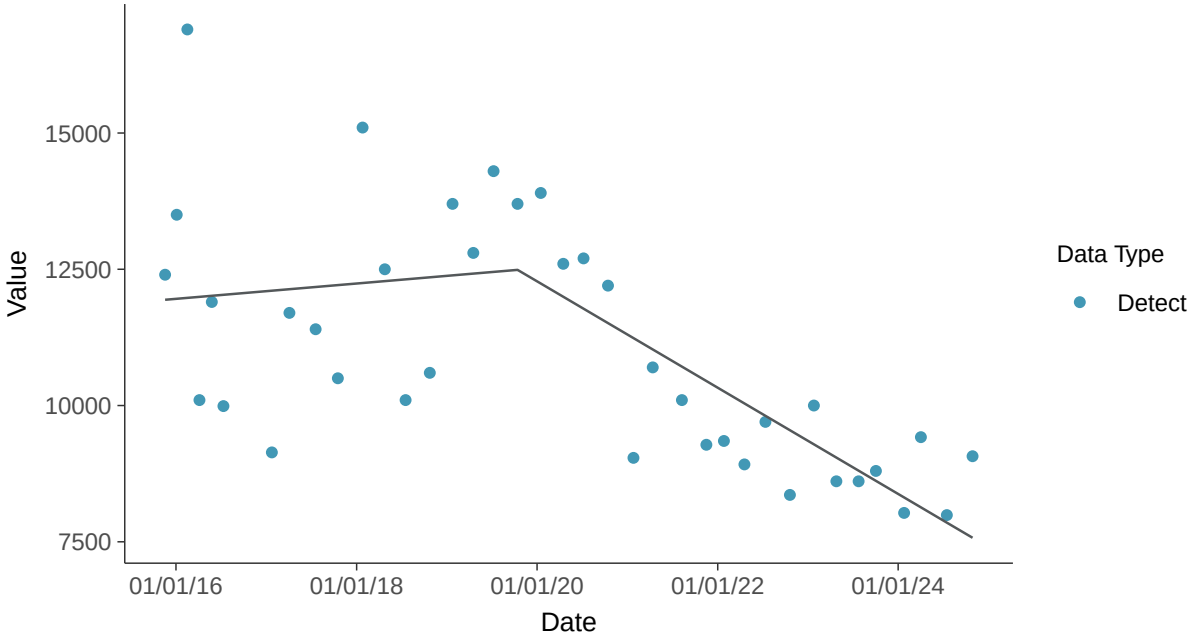
Trend Regression: Lognormal MLE

Calcium, MW-5 (ug/L)



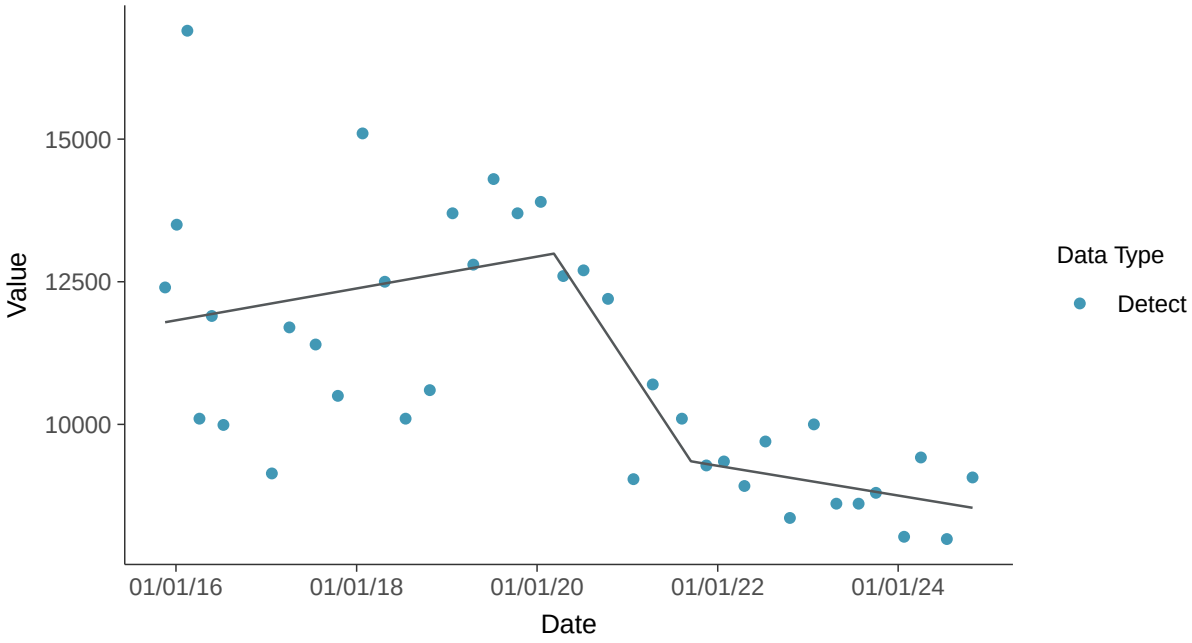
Trend Regression: Piecewise Linear-Linear

Calcium, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-5 (ug/L)

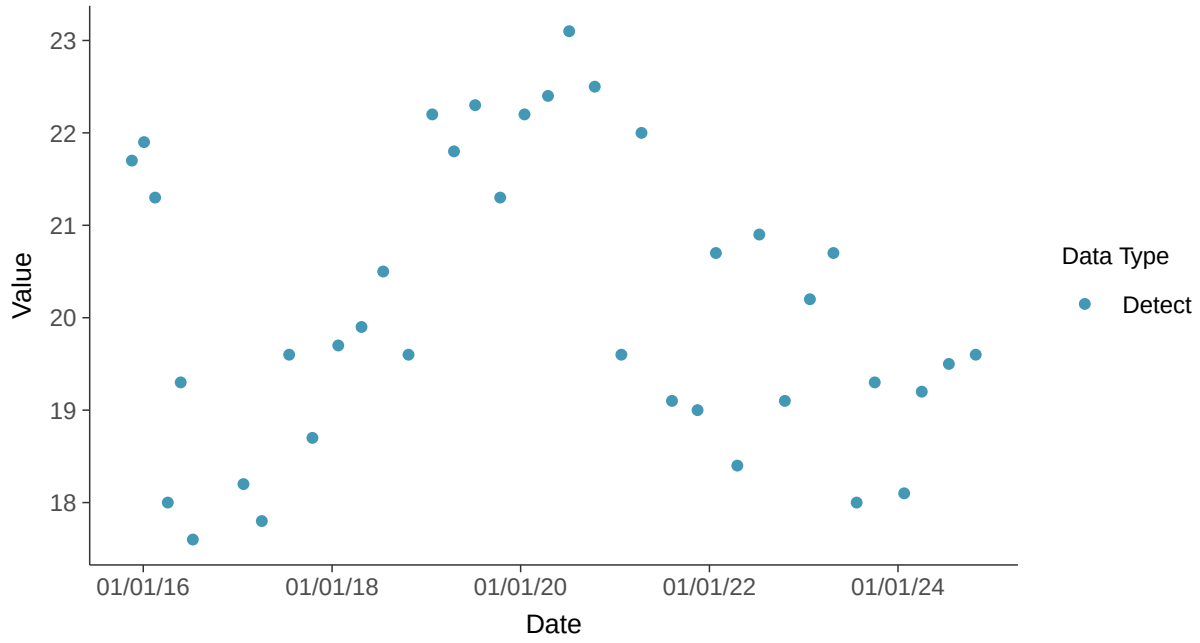


App. III: Chloride, MW-5

ID: 05_02_108

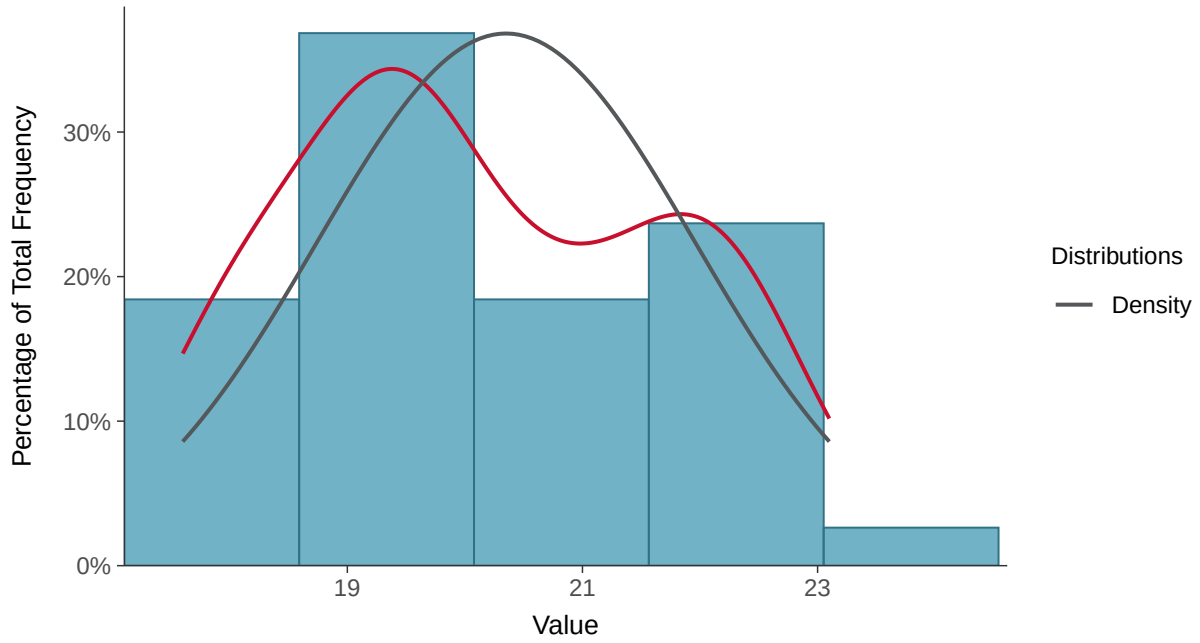
Scatter Plot

Chloride, MW-5 (mg/L)



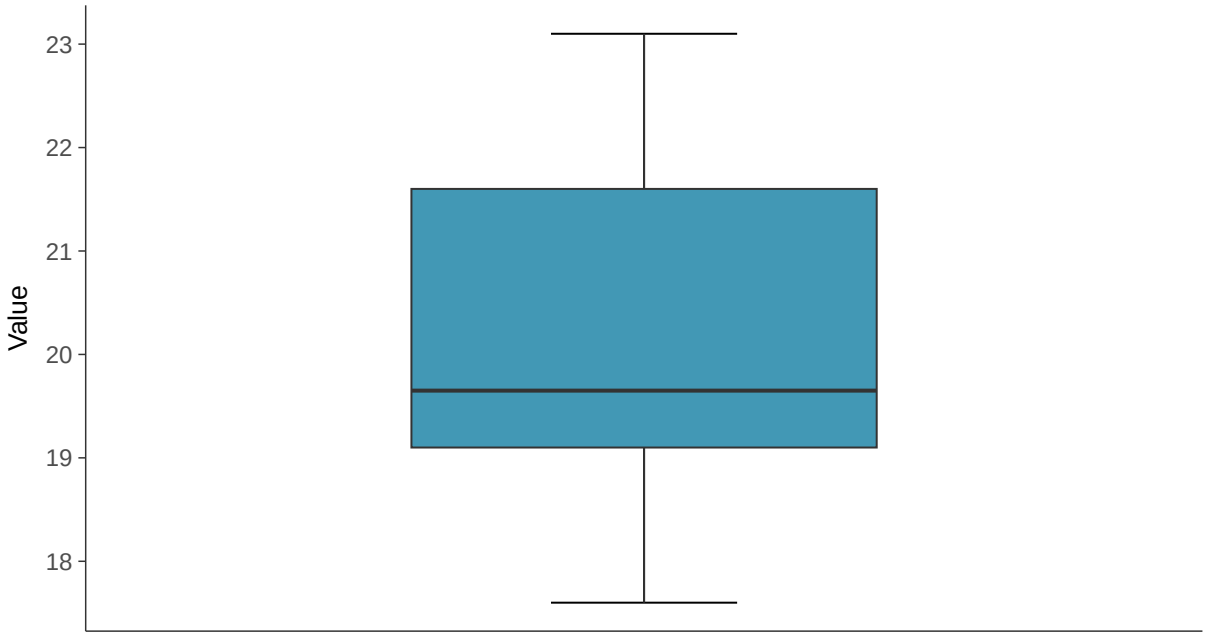
Histogram

Chloride, MW-5 (mg/L)



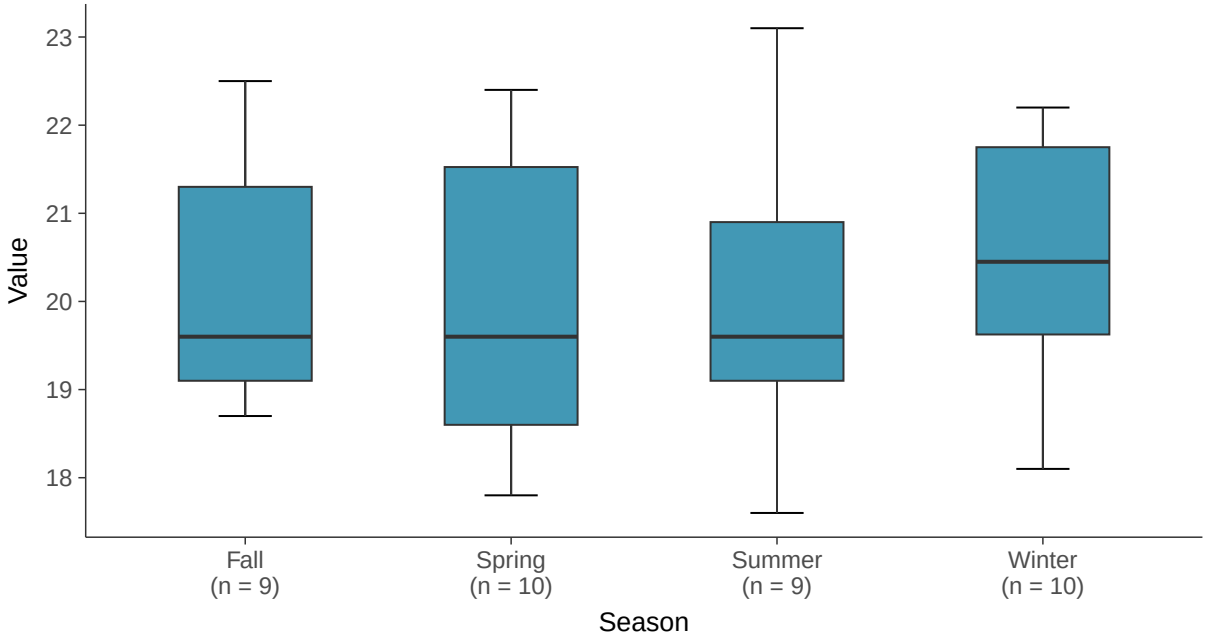
Boxplot

Chloride, MW-5 (mg/L)



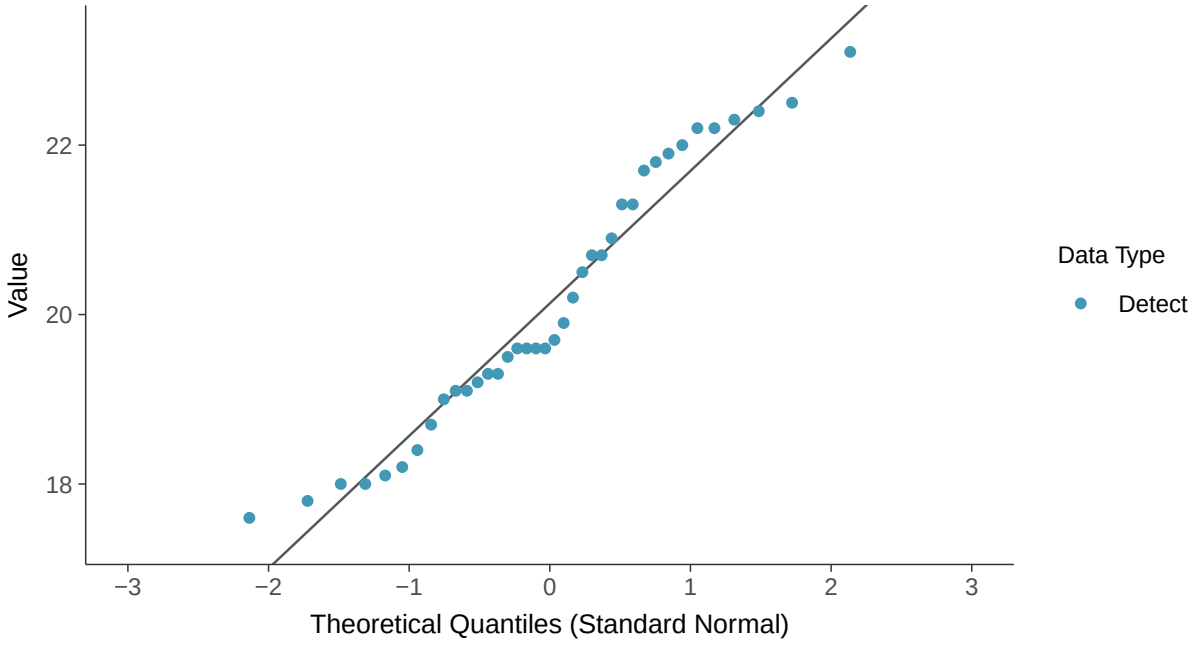
Boxplot by Season

Chloride, MW-5 (mg/L)



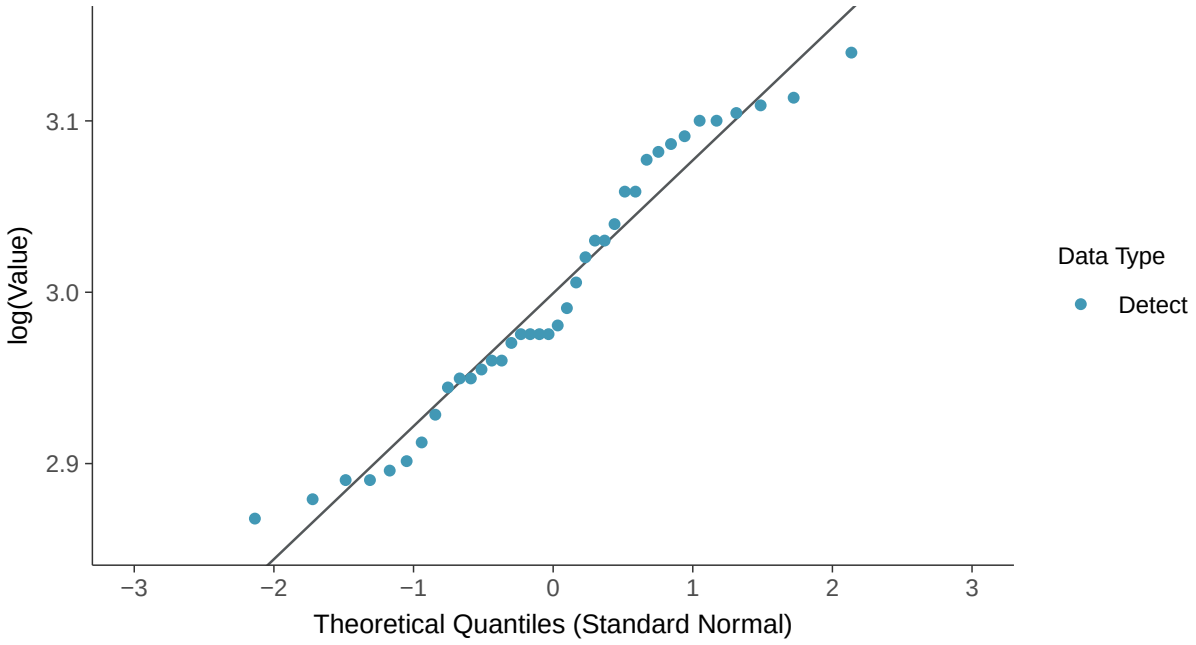
Normal Q-Q plot

Chloride, MW-5 (mg/L)



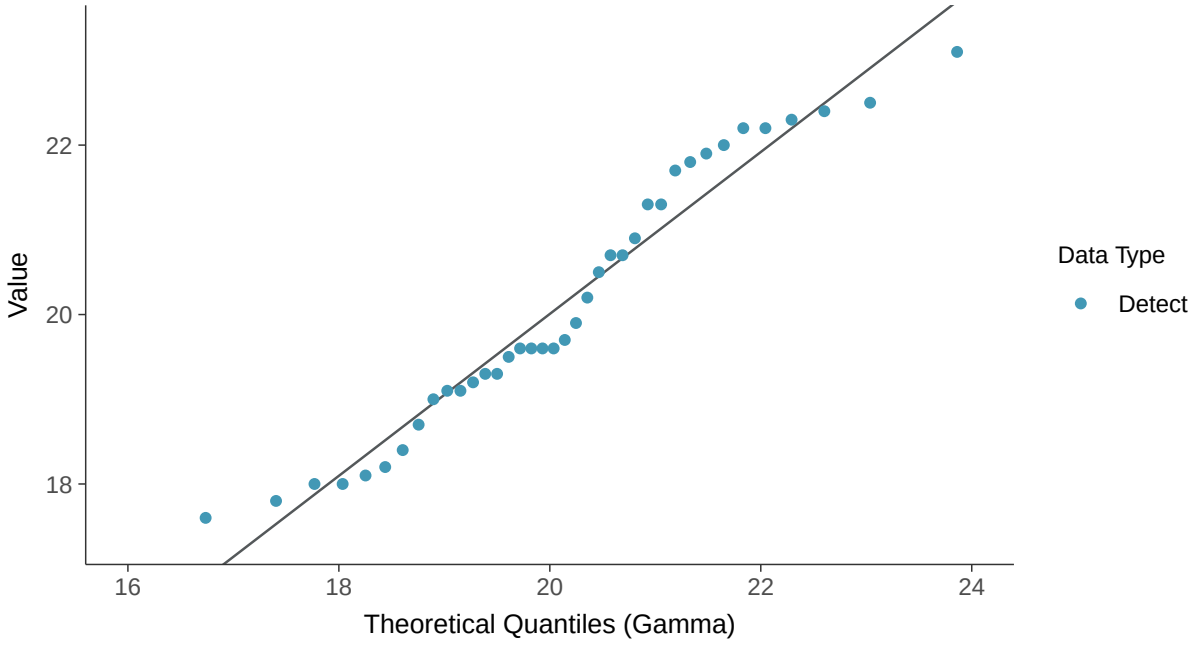
Lognormal Q-Q plot

Chloride, MW-5 (mg/L)



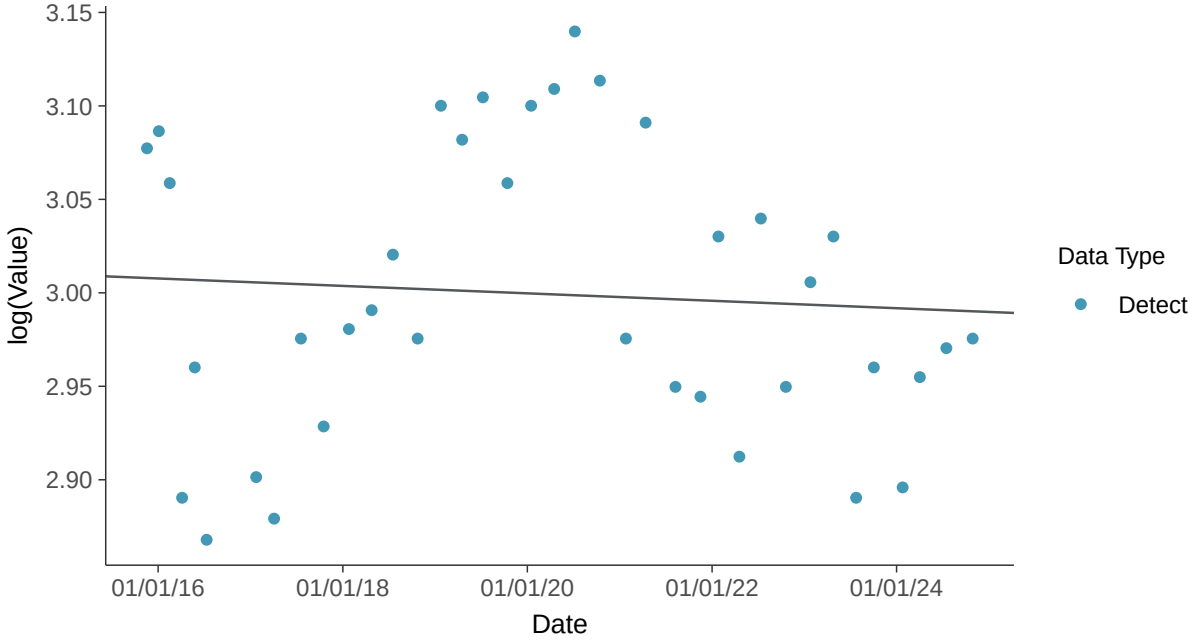
Gamma Q-Q plot

Chloride, MW-5 (mg/L)



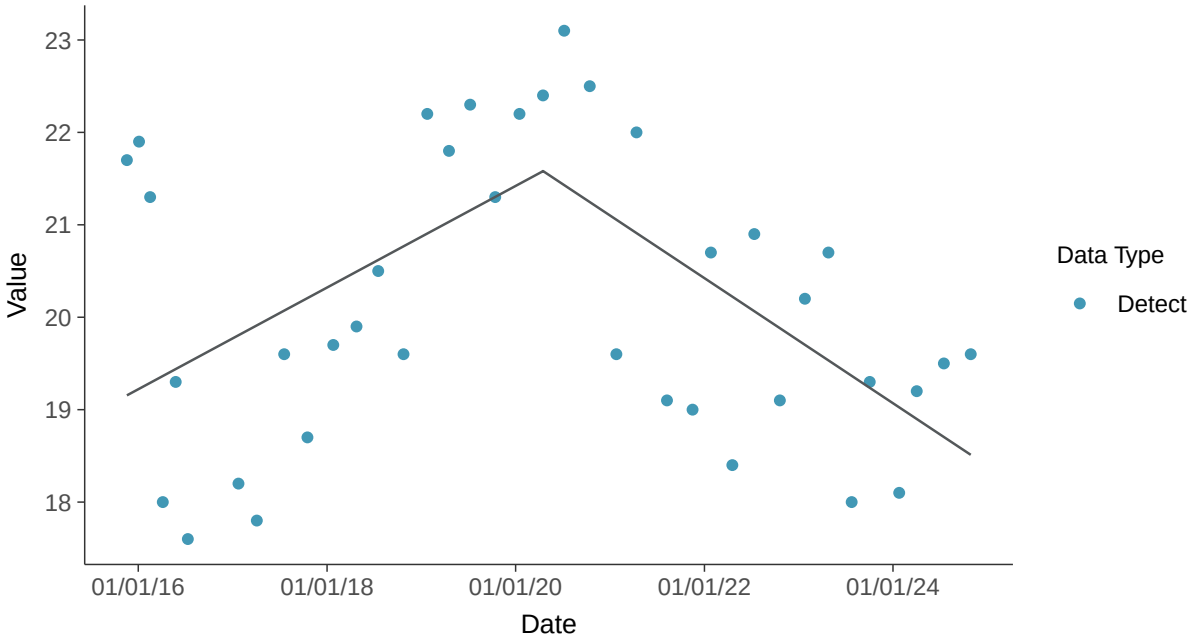
Trend Regression: Lognormal MLE

Chloride, MW-5 (mg/L)



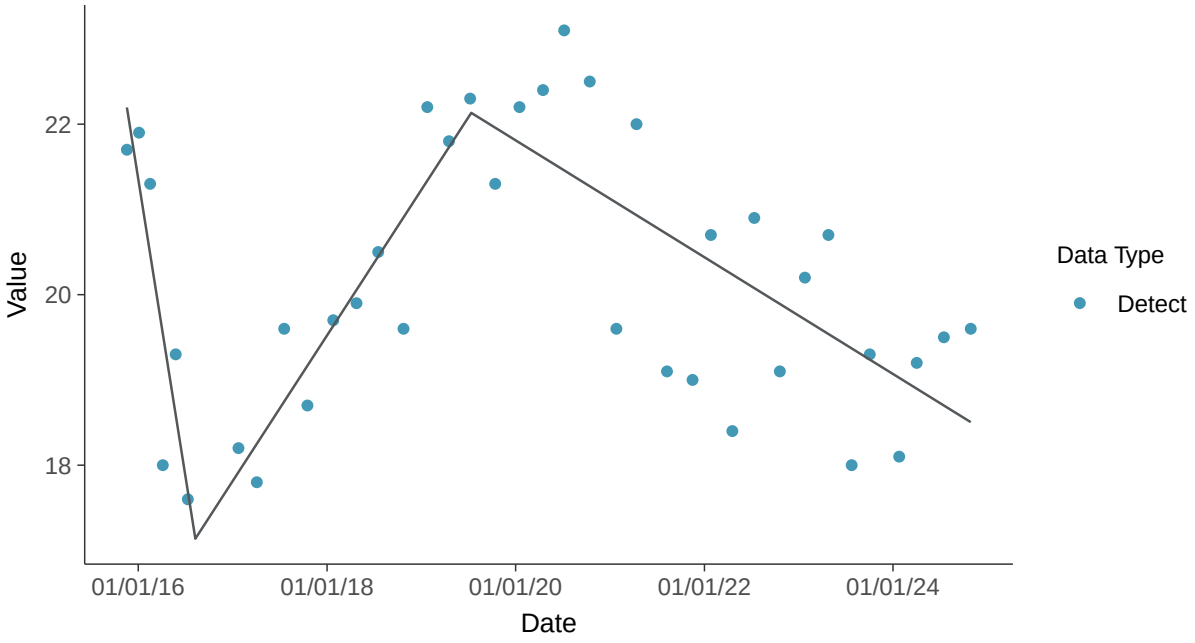
Trend Regression: Piecewise Linear-Linear

Chloride, MW-5 (mg/L)



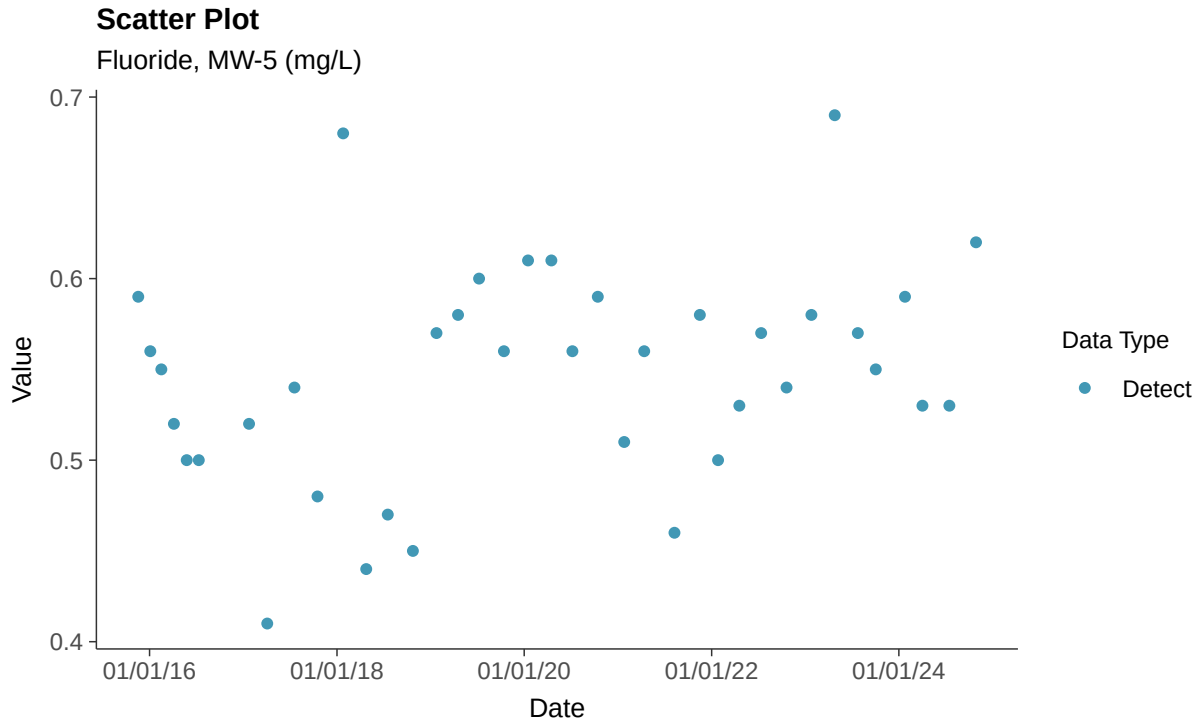
Trend Regression: Piecewise Linear-Linear-Linear

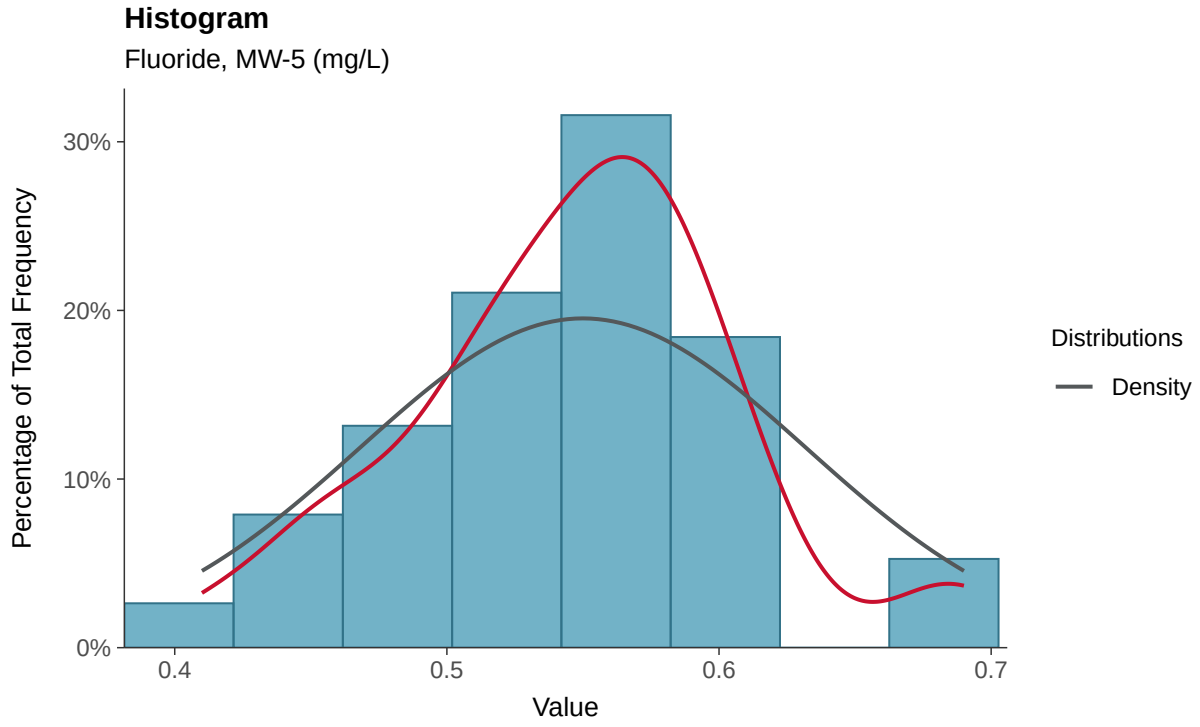
Chloride, MW-5 (mg/L)



App. III: Fluoride, MW-5

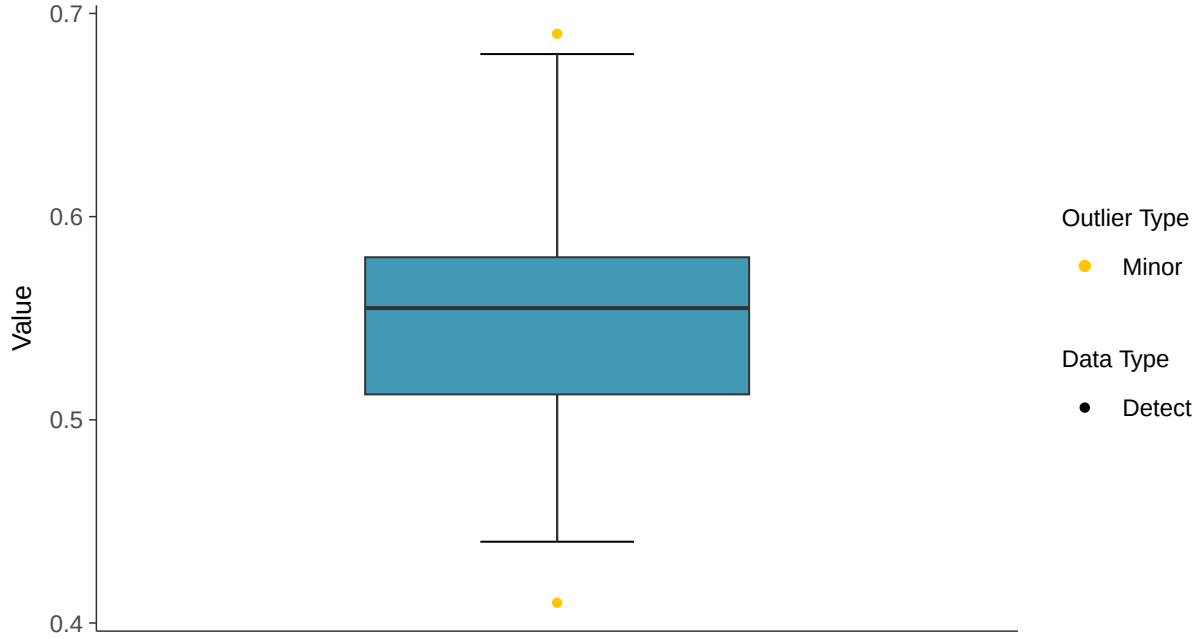
ID: 05_02_112





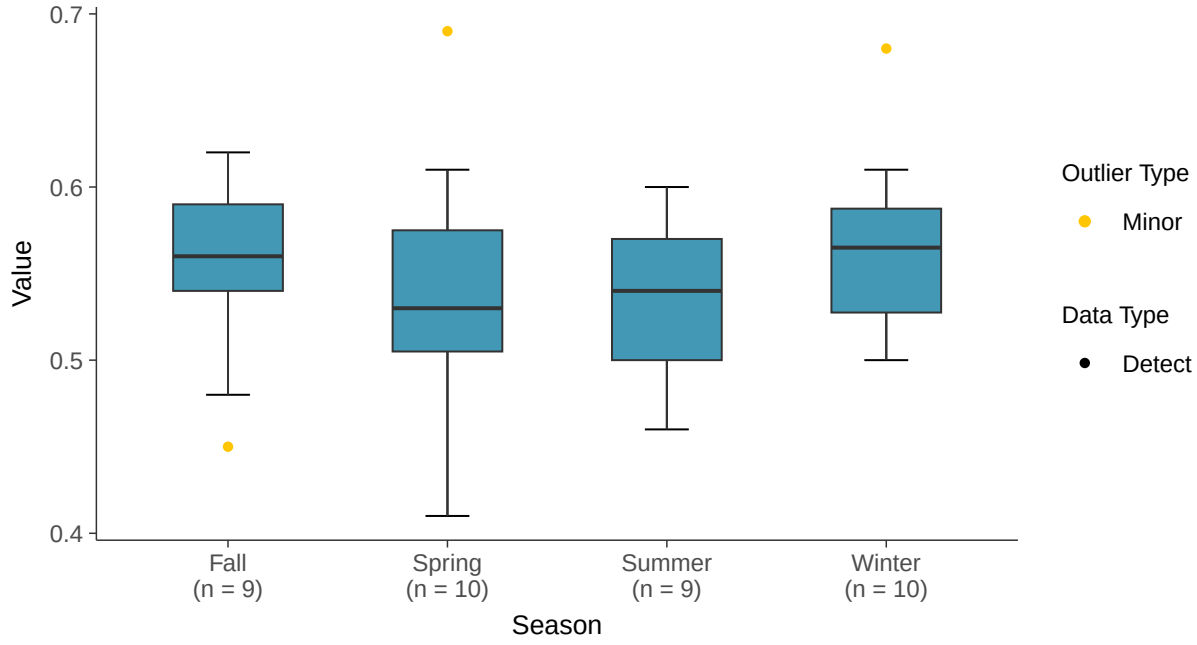
Boxplot

Fluoride, MW-5 (mg/L)



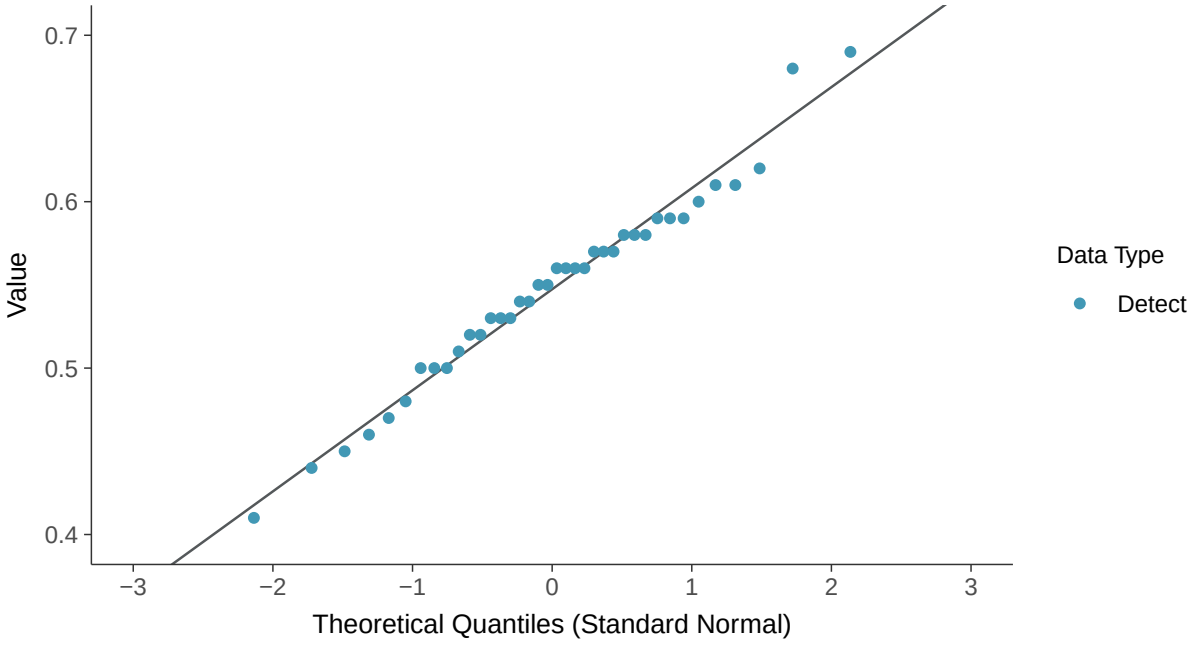
Boxplot by Season

Fluoride, MW-5 (mg/L)



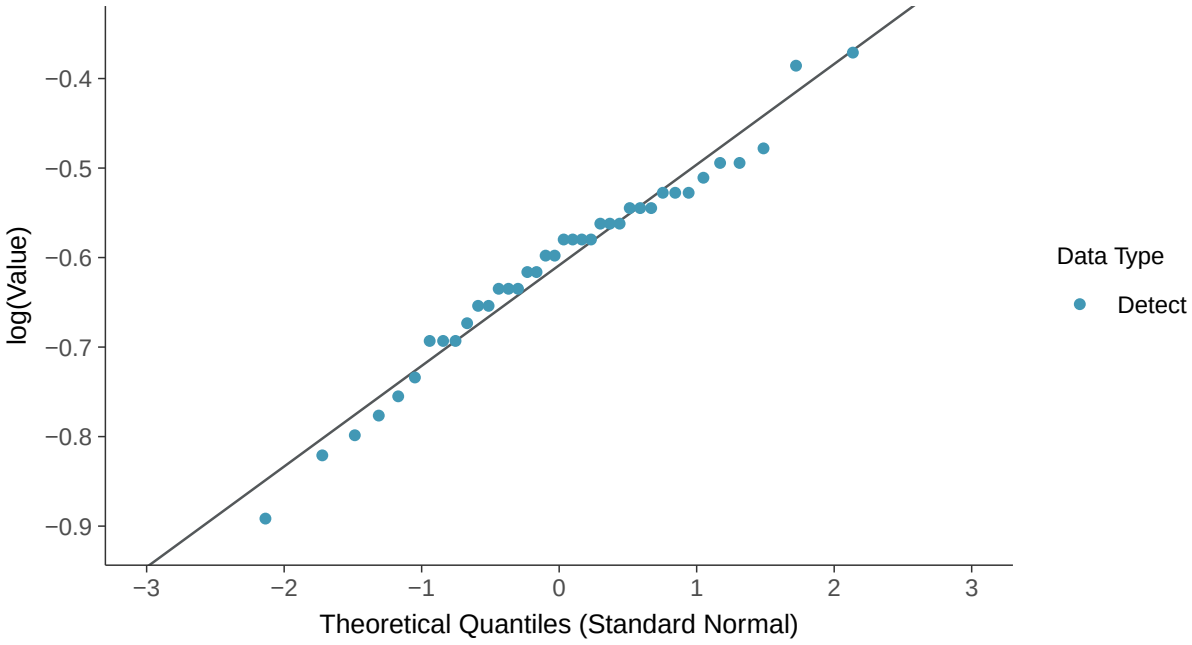
Normal Q-Q plot

Fluoride, MW-5 (mg/L)



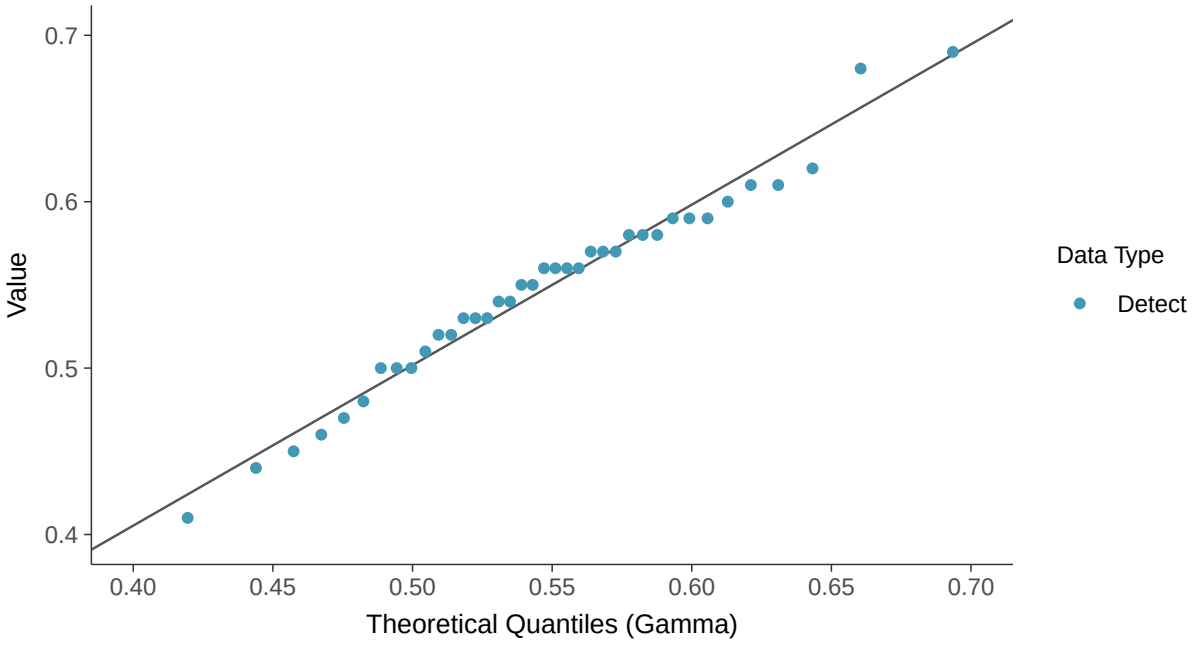
Lognormal Q-Q plot

Fluoride, MW-5 (mg/L)



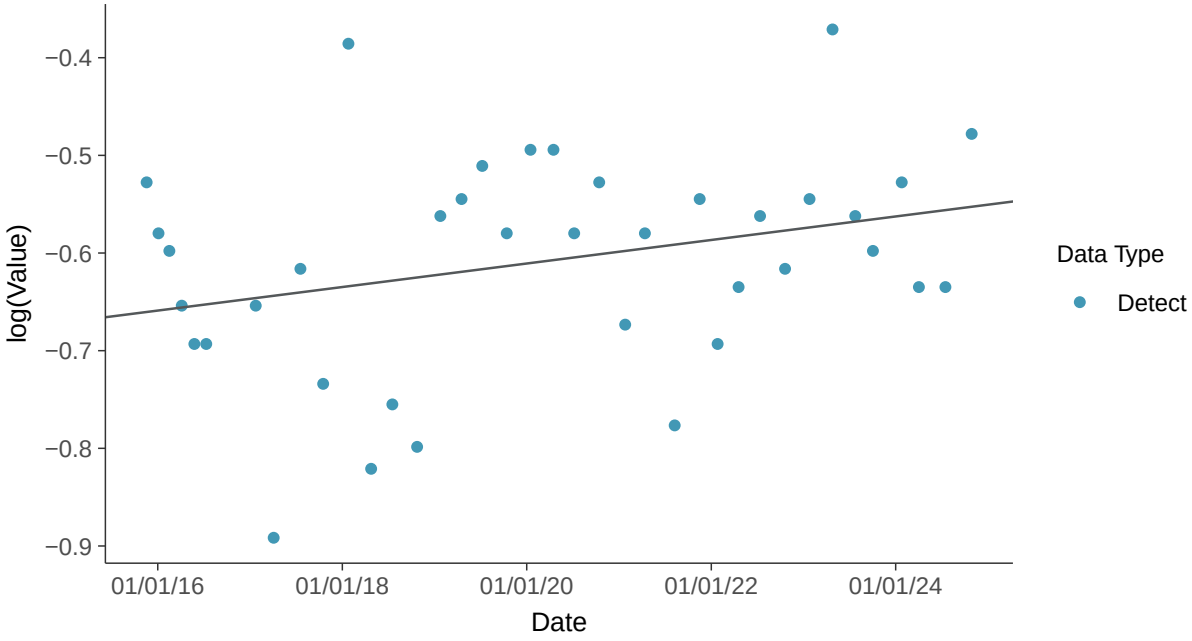
Gamma Q-Q plot

Fluoride, MW-5 (mg/L)



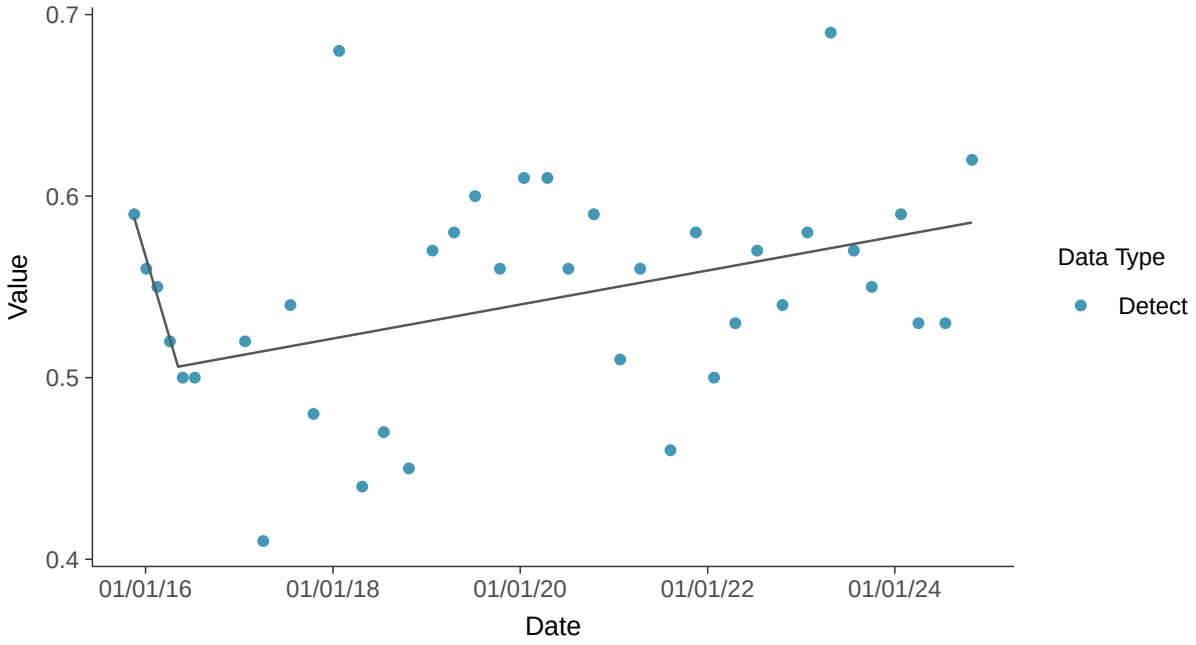
Trend Regression: Lognormal MLE

Fluoride, MW-5 (mg/L)



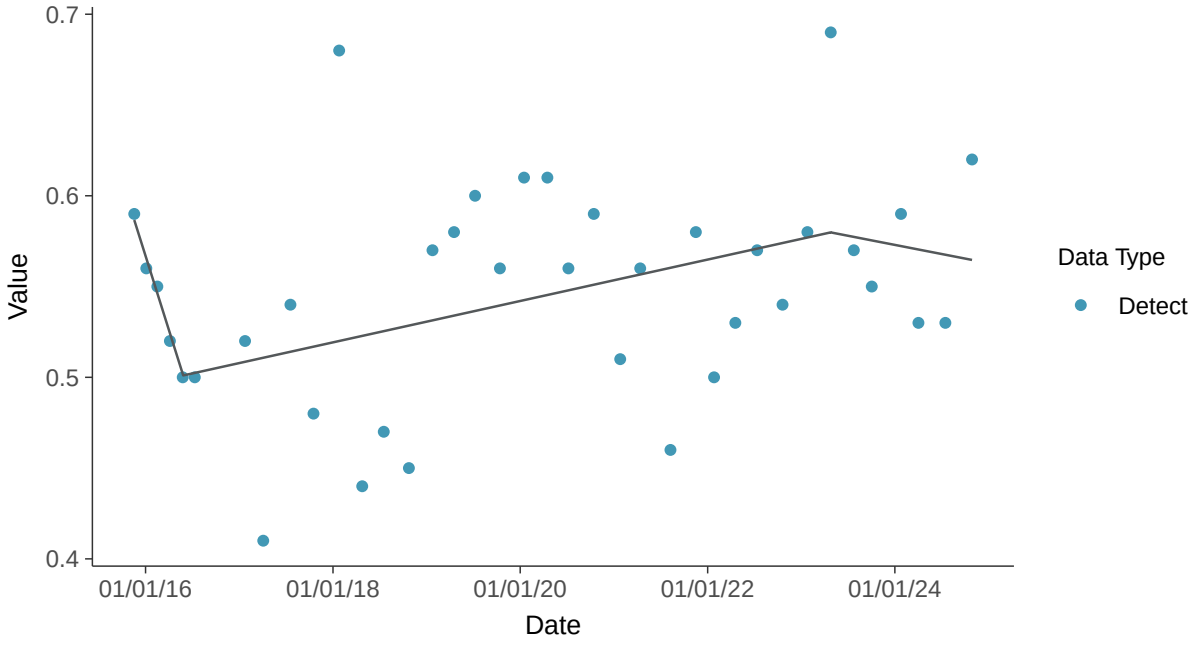
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-5 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-5 (mg/L)

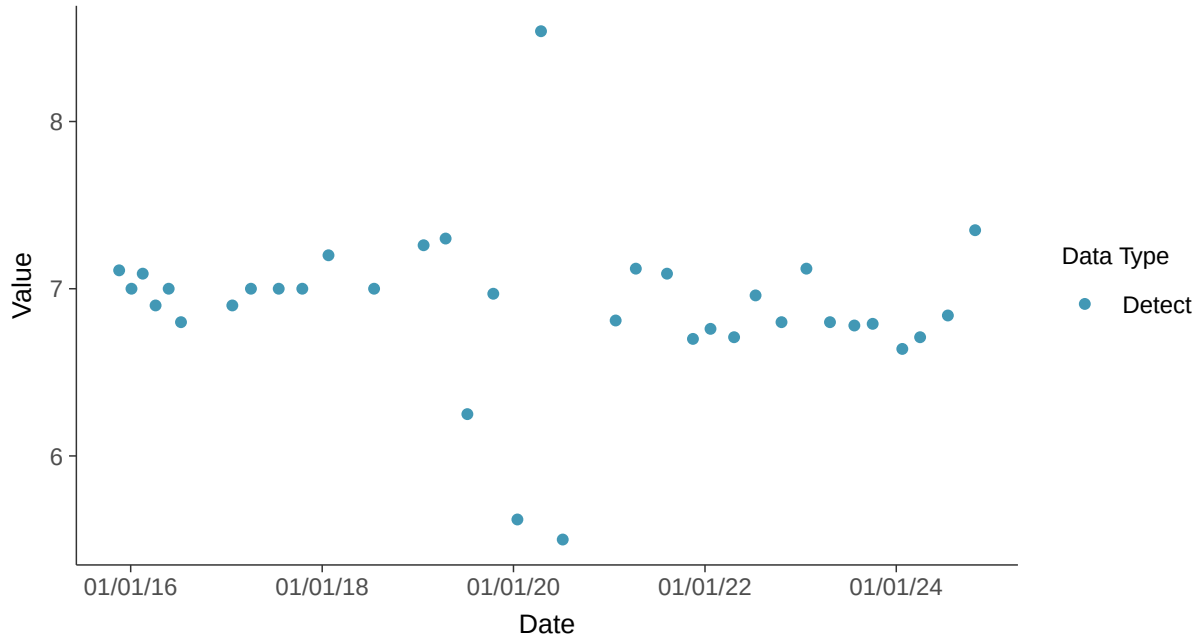


App. III: pH (Field), MW-5

ID: 05_02_118

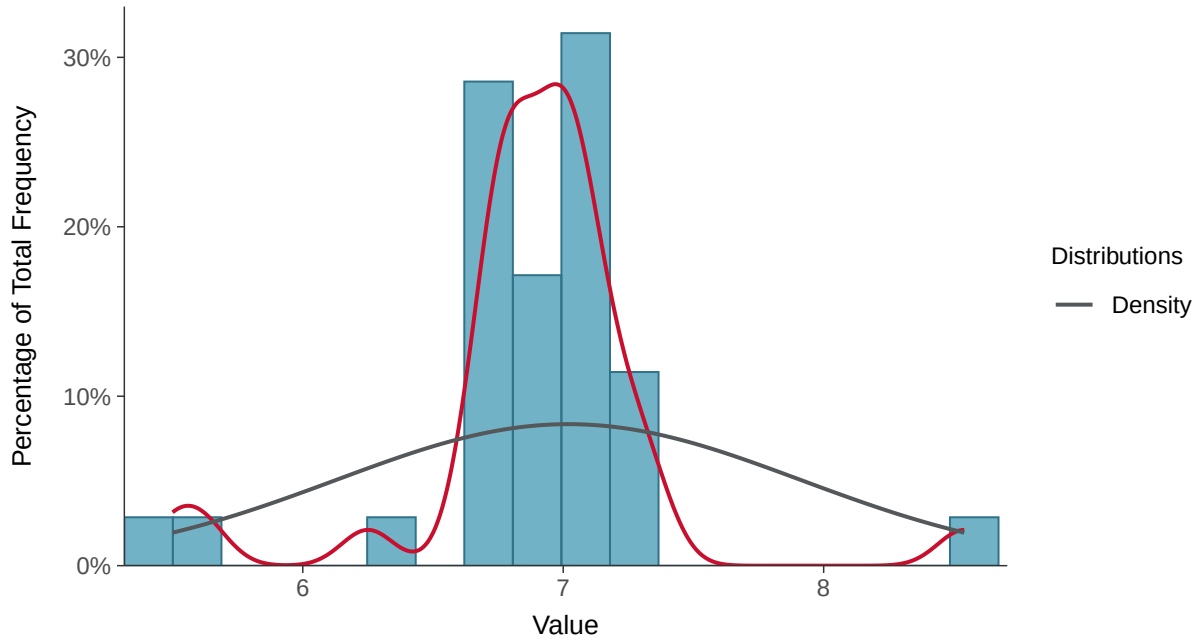
Scatter Plot

pH (Field), MW-5 (S.U.)



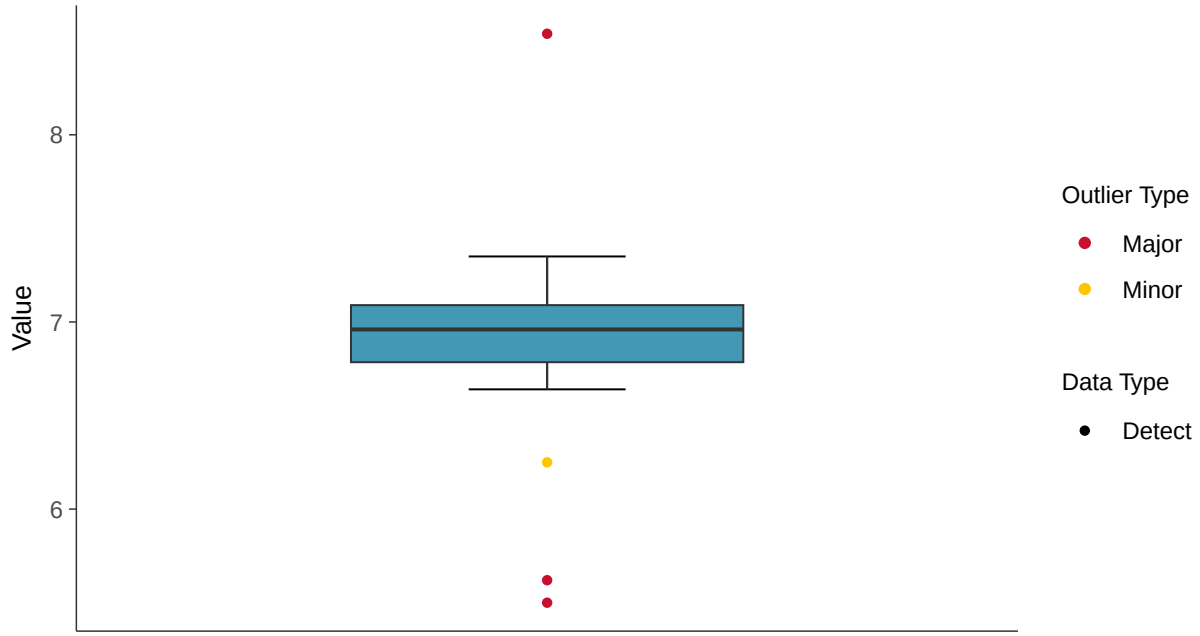
Histogram

pH (Field), MW-5 (S.U.)



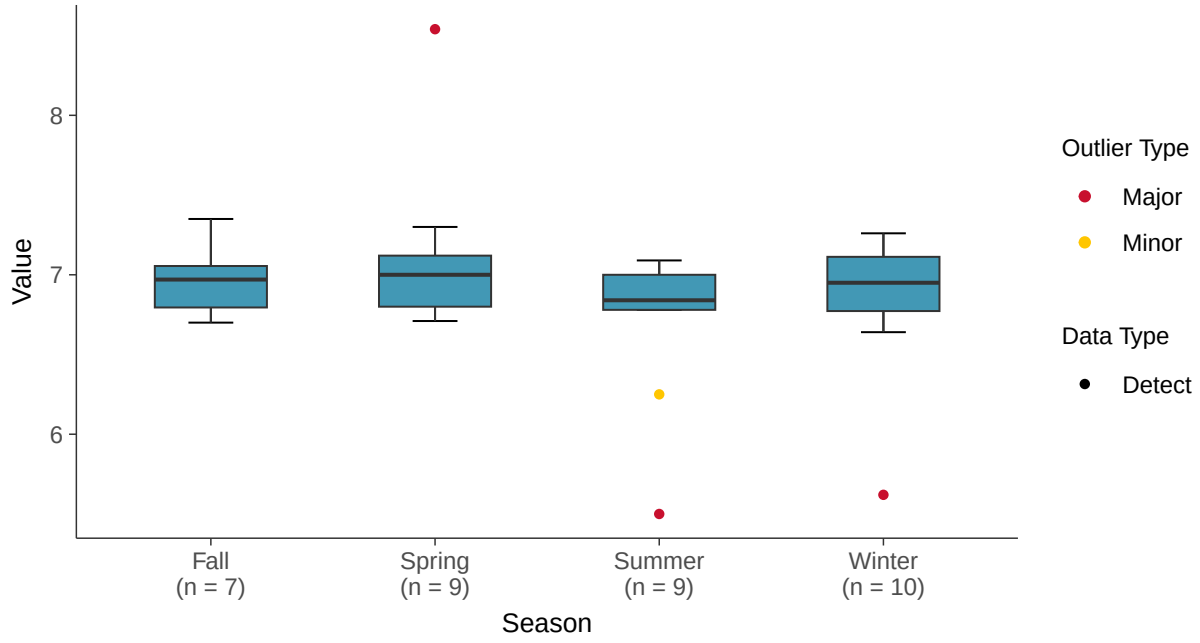
Boxplot

pH (Field), MW-5 (S.U.)



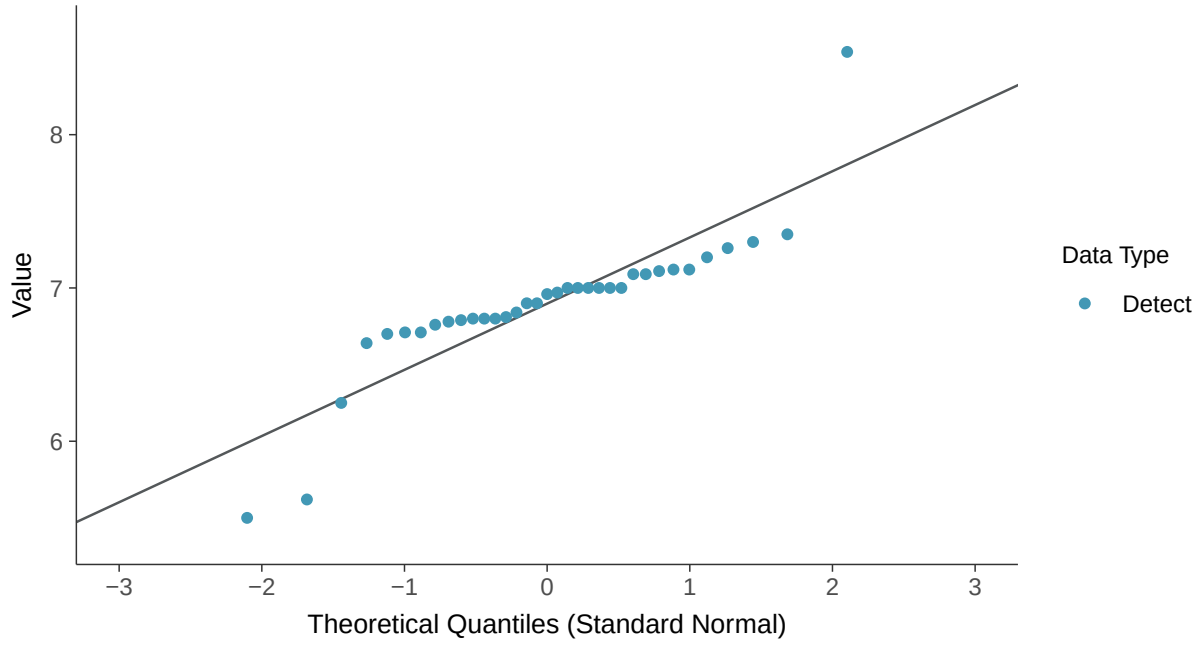
Boxplot by Season

pH (Field), MW-5 (S.U.)



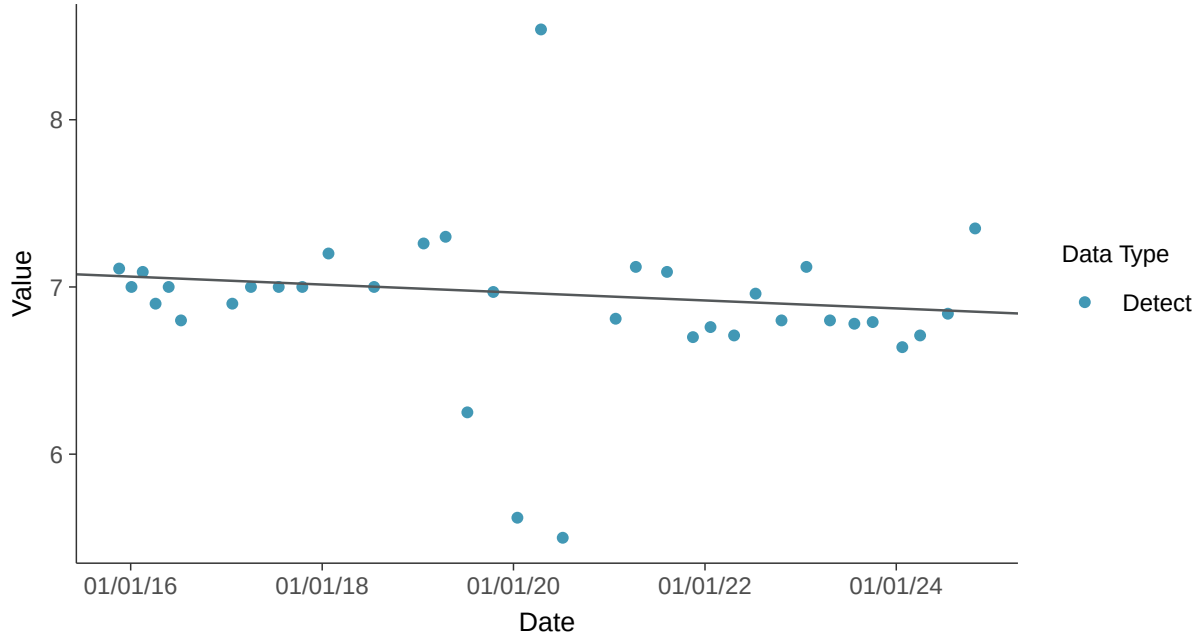
Normal Q-Q plot

pH (Field), MW-5 (S.U.)



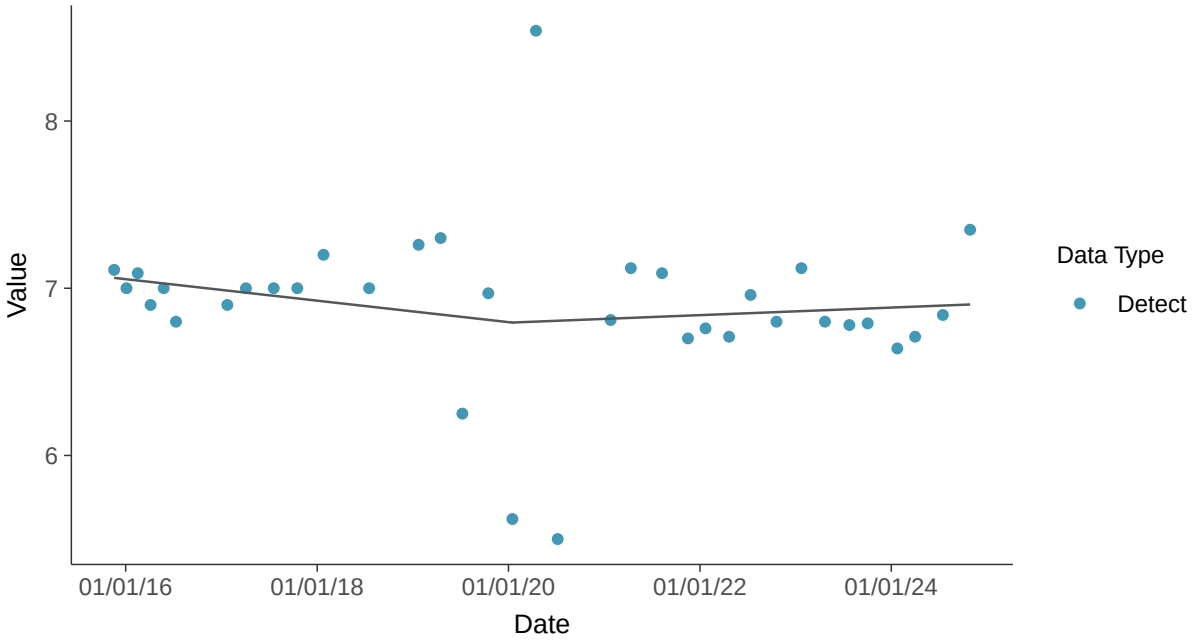
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-5 (S.U.)



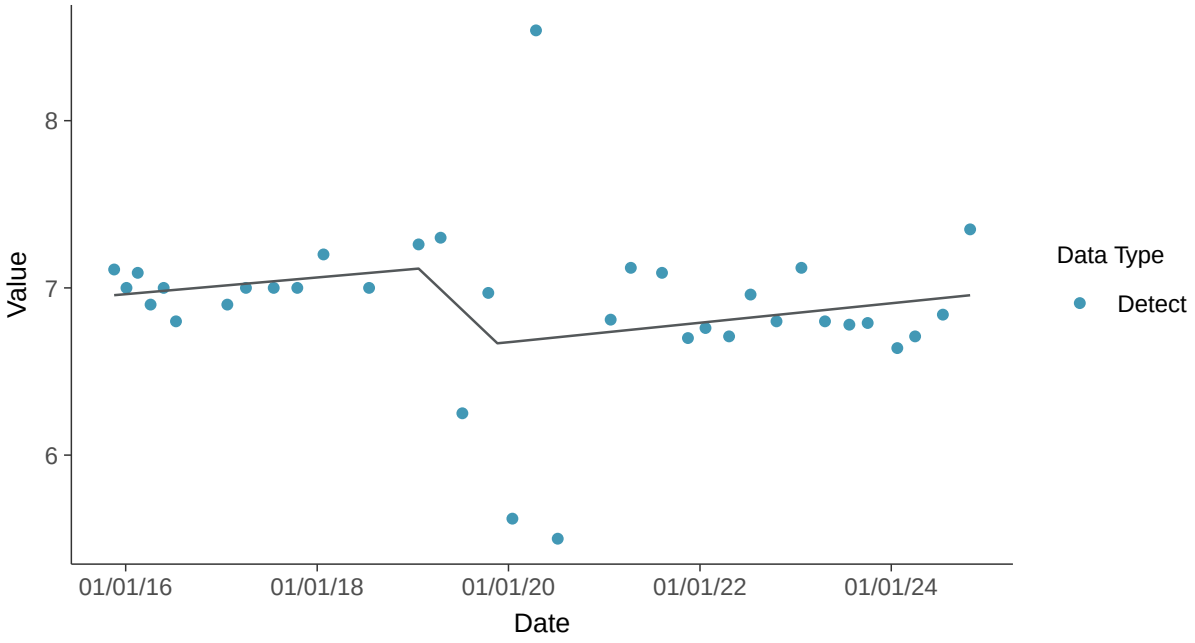
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-5 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-5 (S.U.)

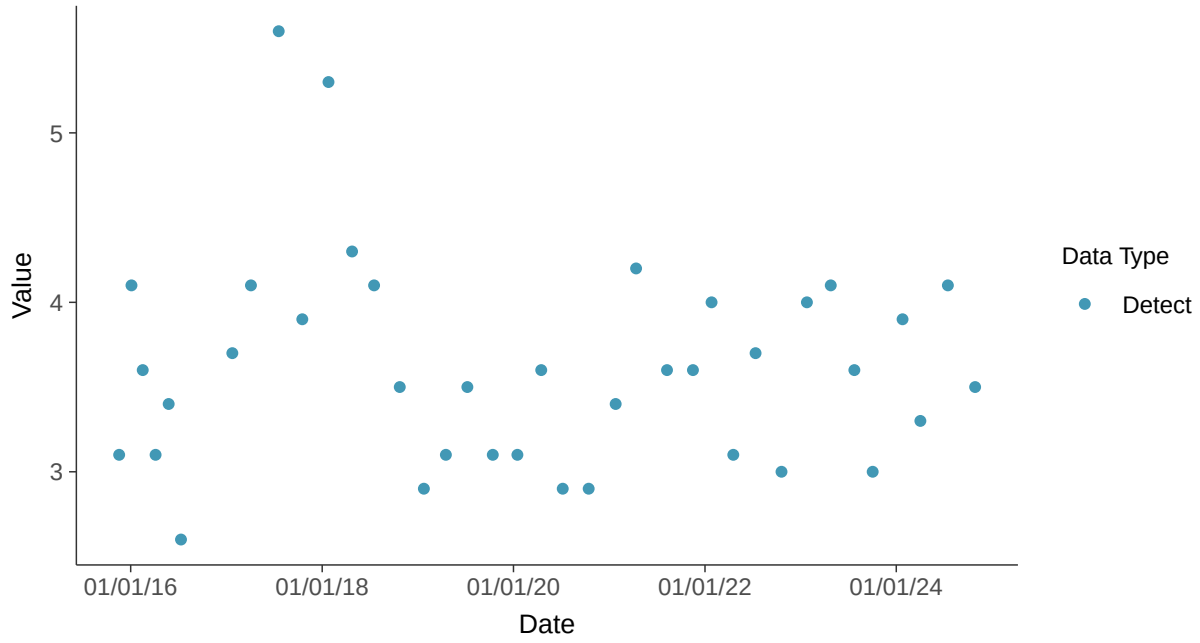


App. III: Sulfate, MW-5

ID: 05_02_123

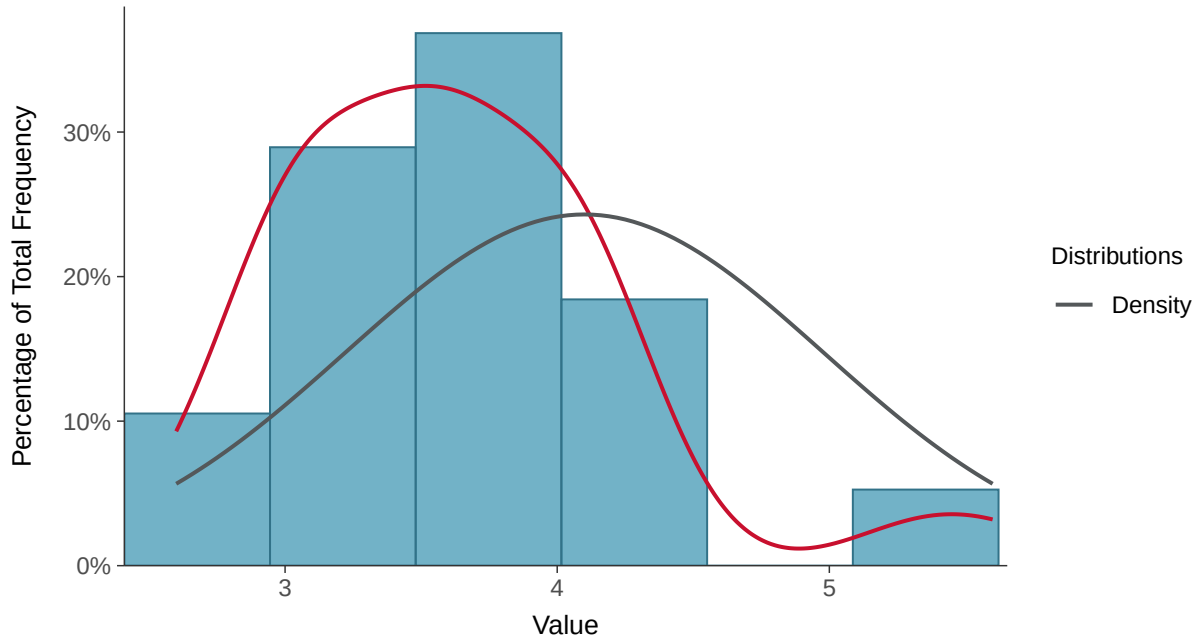
Scatter Plot

Sulfate, MW-5 (mg/L)



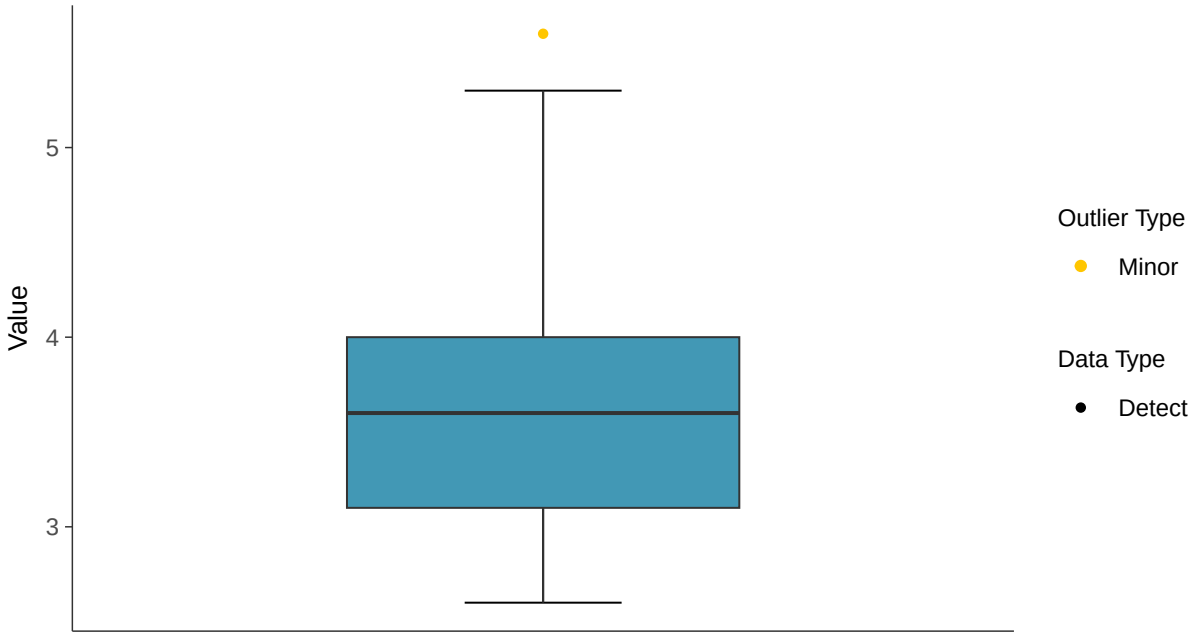
Histogram

Sulfate, MW-5 (mg/L)



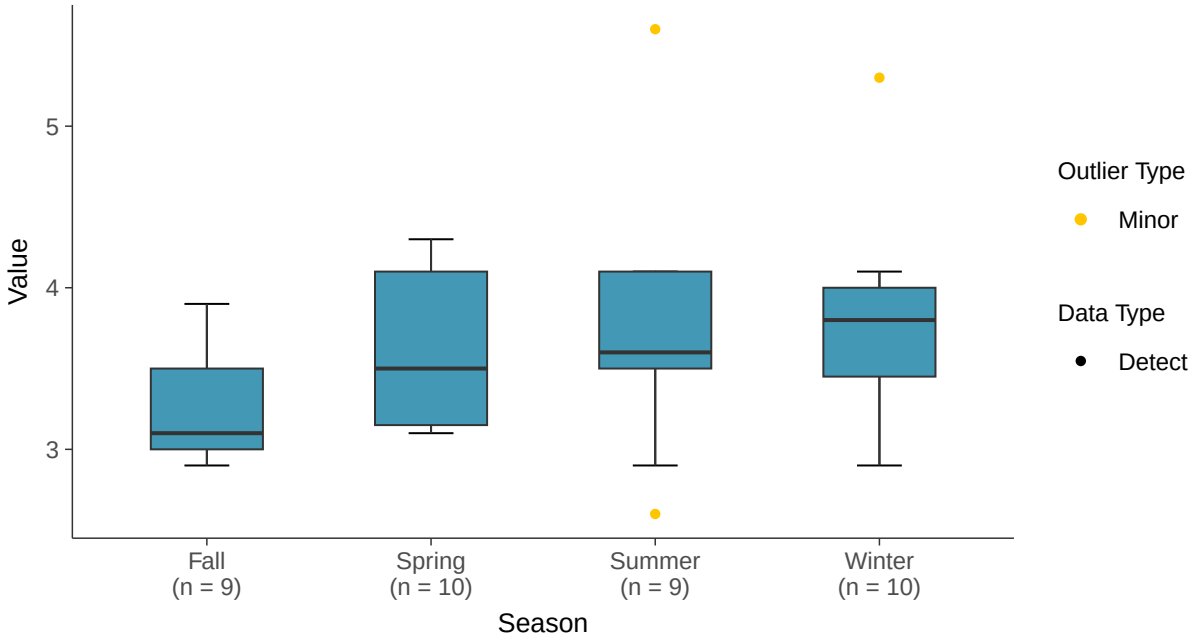
Boxplot

Sulfate, MW-5 (mg/L)



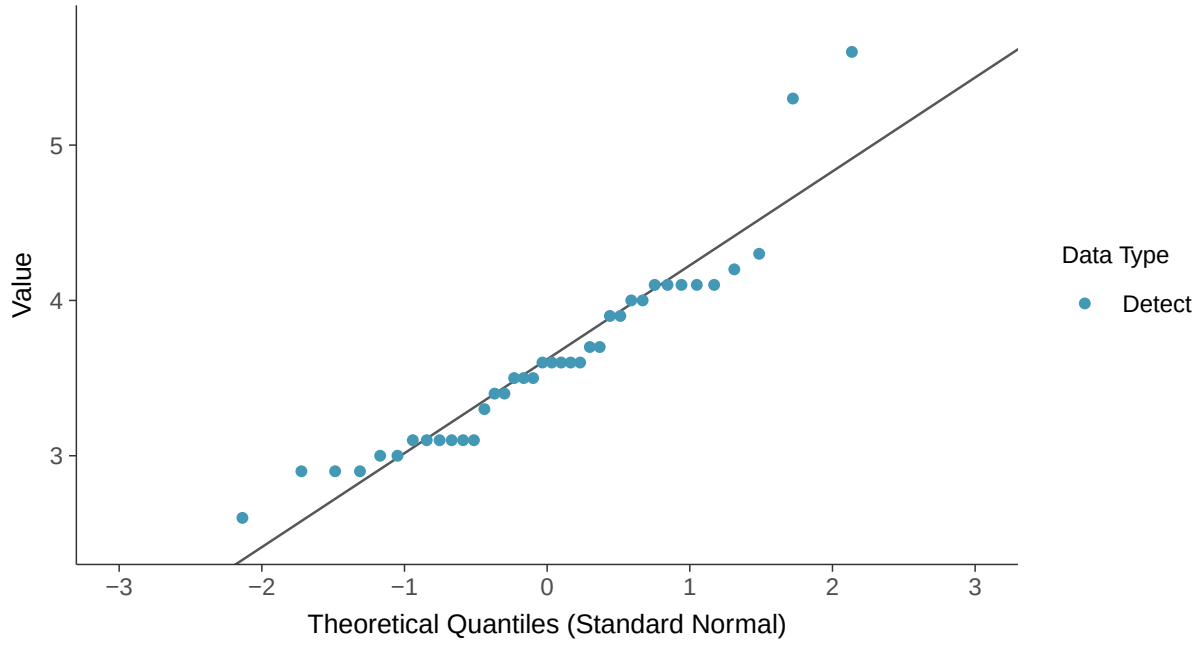
Boxplot by Season

Sulfate, MW-5 (mg/L)



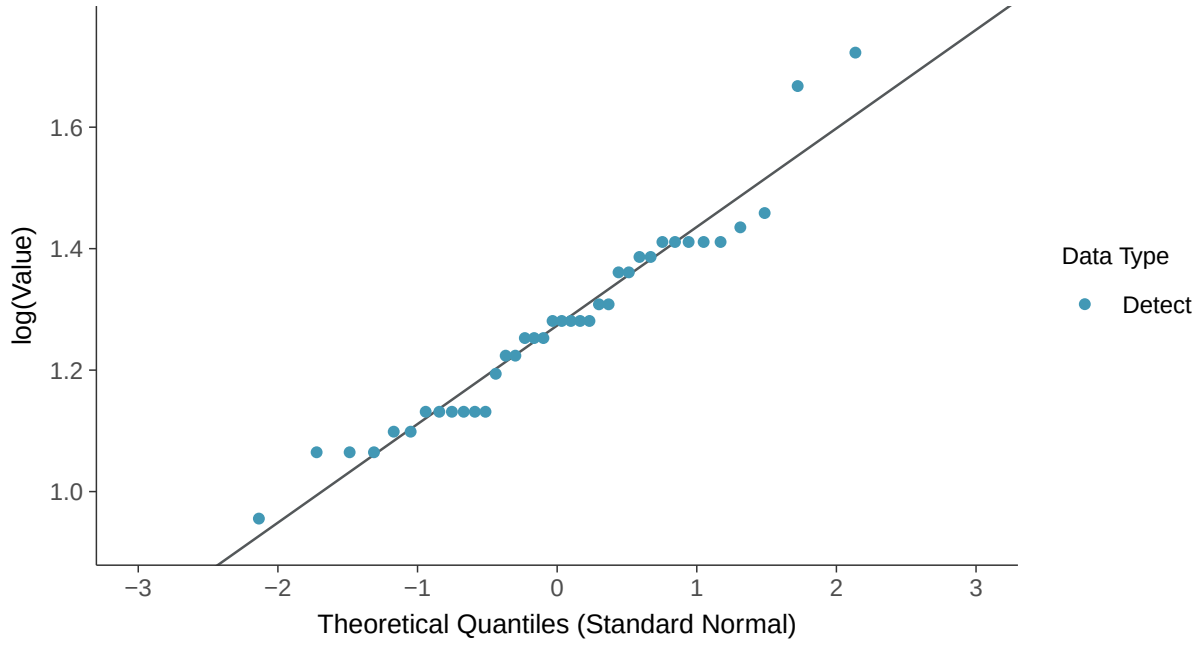
Normal Q-Q plot

Sulfate, MW-5 (mg/L)



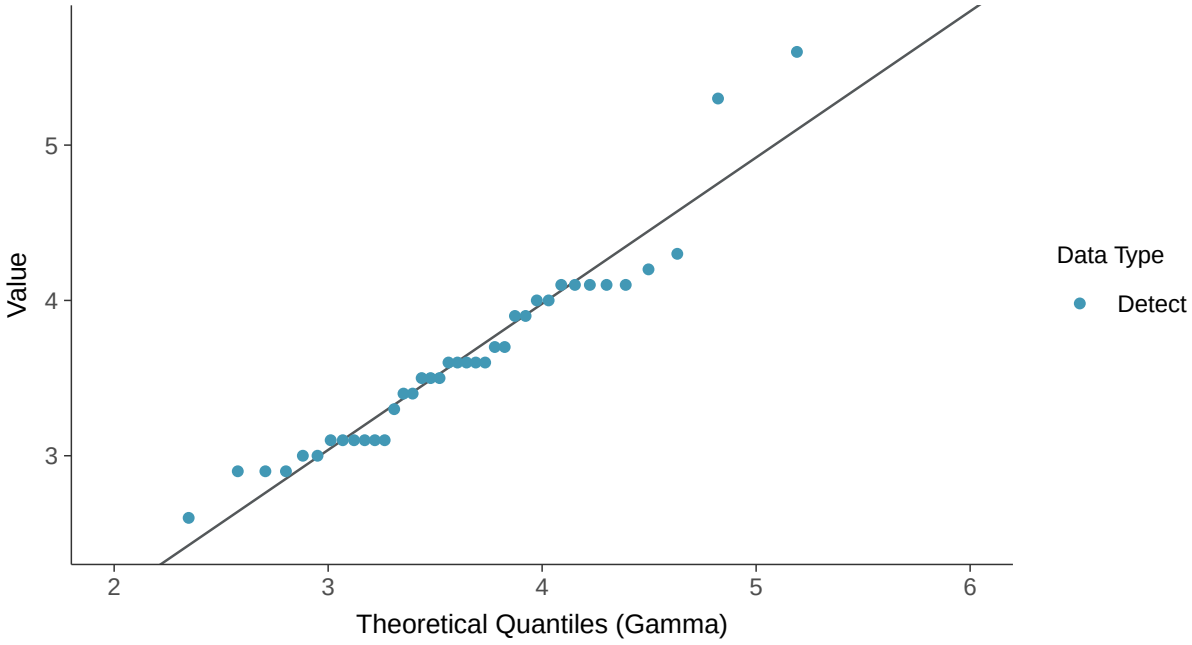
Lognormal Q-Q plot

Sulfate, MW-5 (mg/L)



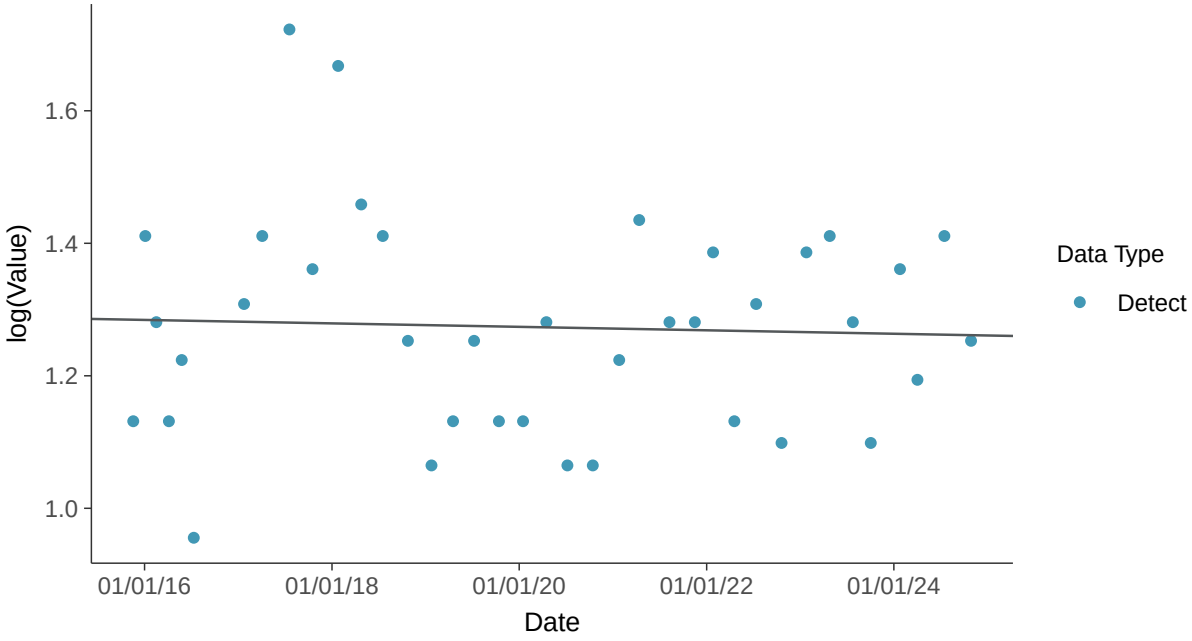
Gamma Q-Q plot

Sulfate, MW-5 (mg/L)



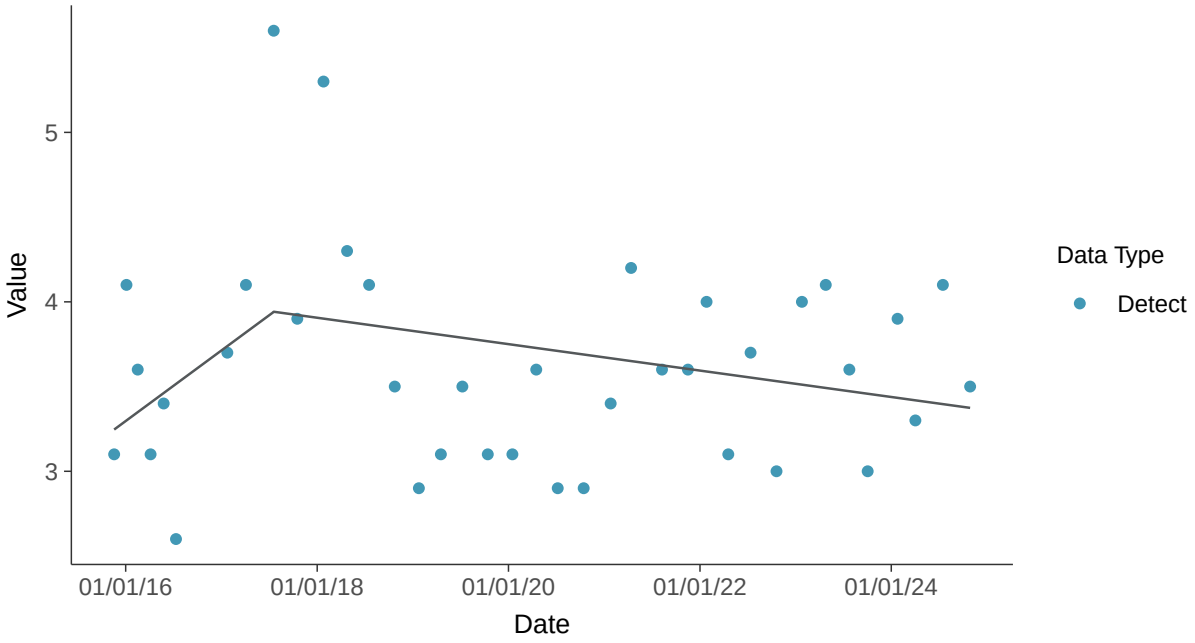
Trend Regression: Lognormal MLE

Sulfate, MW-5 (mg/L)



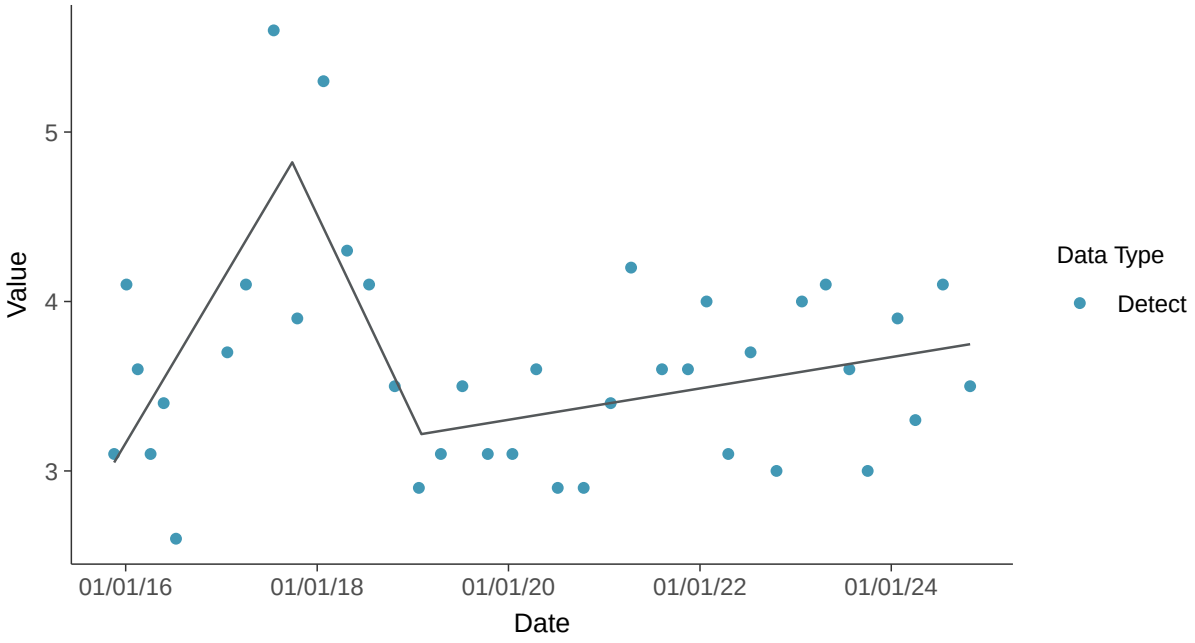
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-5 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-5 (mg/L)

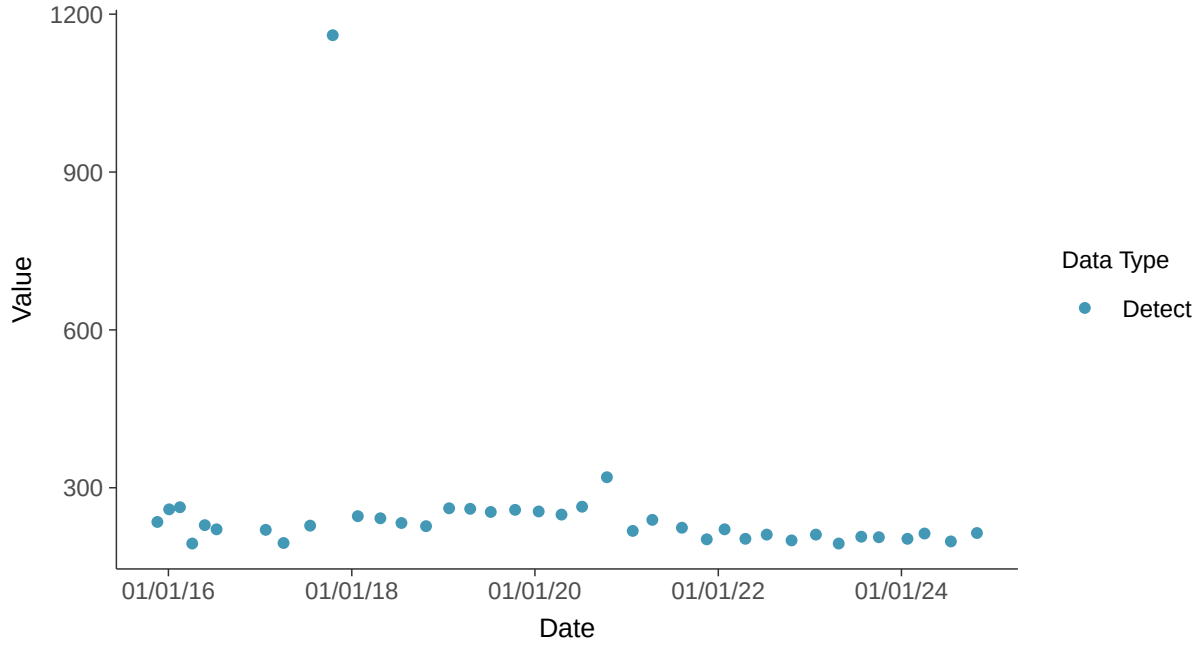


App. III: Total Dissolved Solids, MW-5

ID: 05_02_125

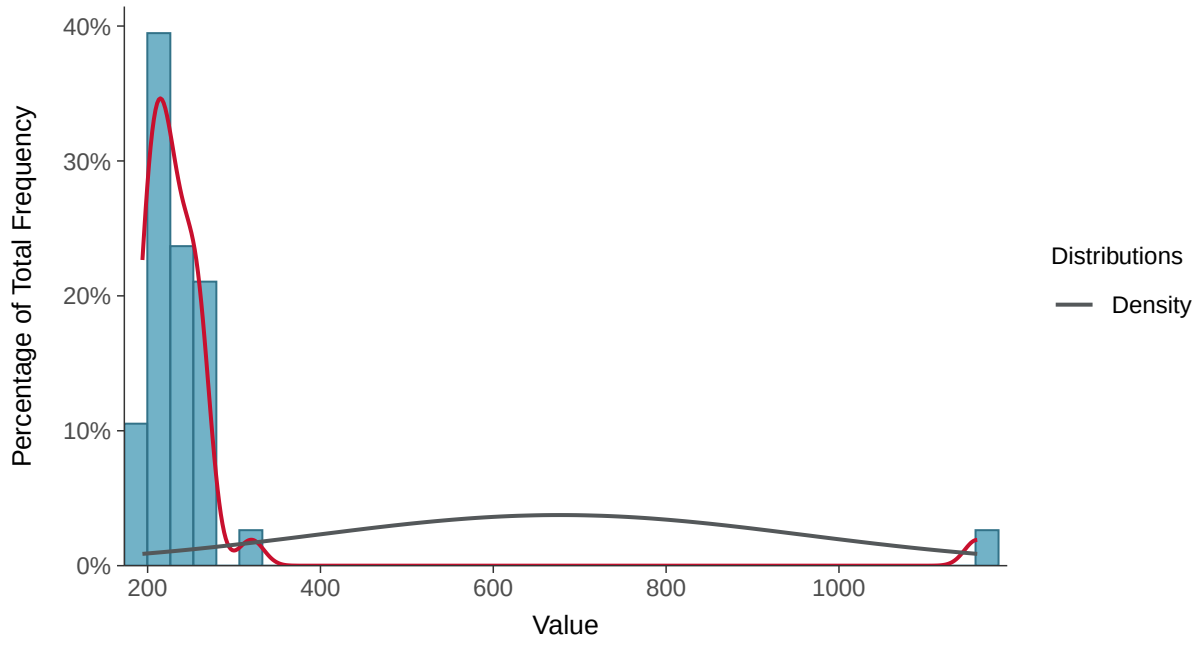
Scatter Plot

Total Dissolved Solids, MW-5 (mg/L)



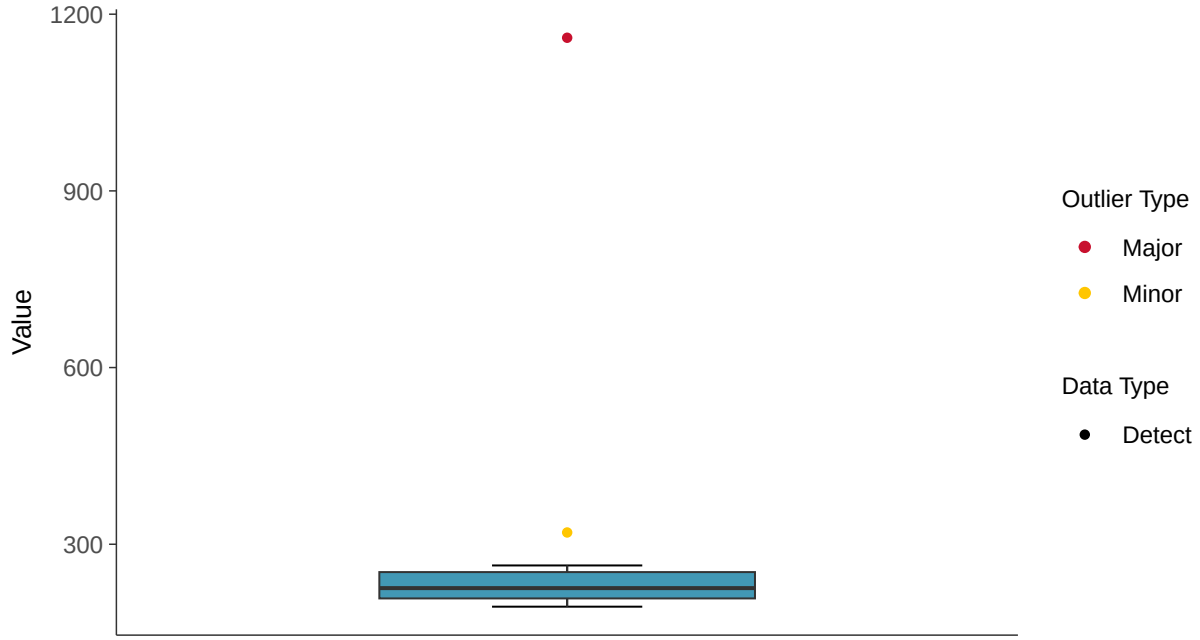
Histogram

Total Dissolved Solids, MW-5 (mg/L)



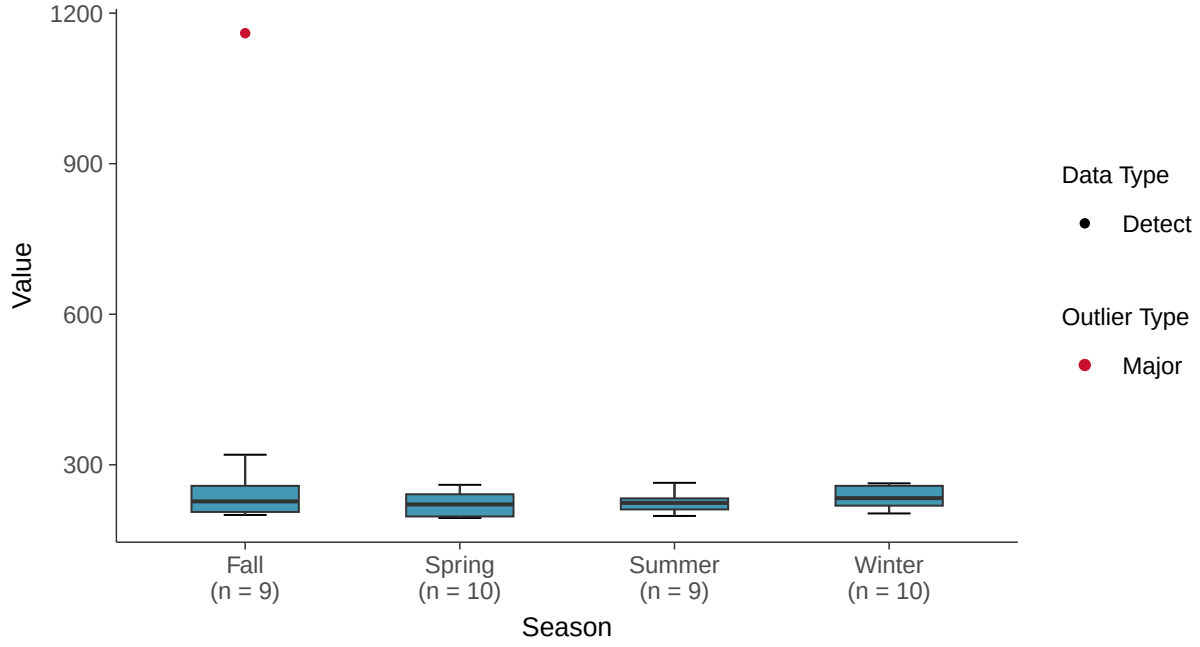
Boxplot

Total Dissolved Solids, MW-5 (mg/L)



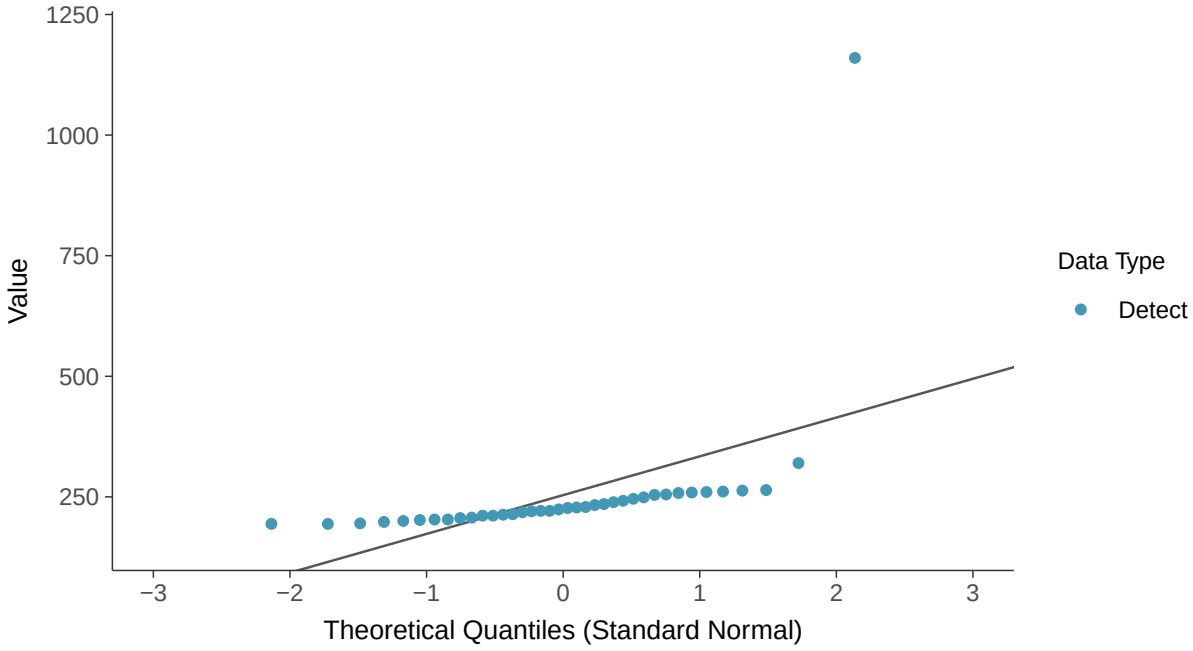
Boxplot by Season

Total Dissolved Solids, MW-5 (mg/L)



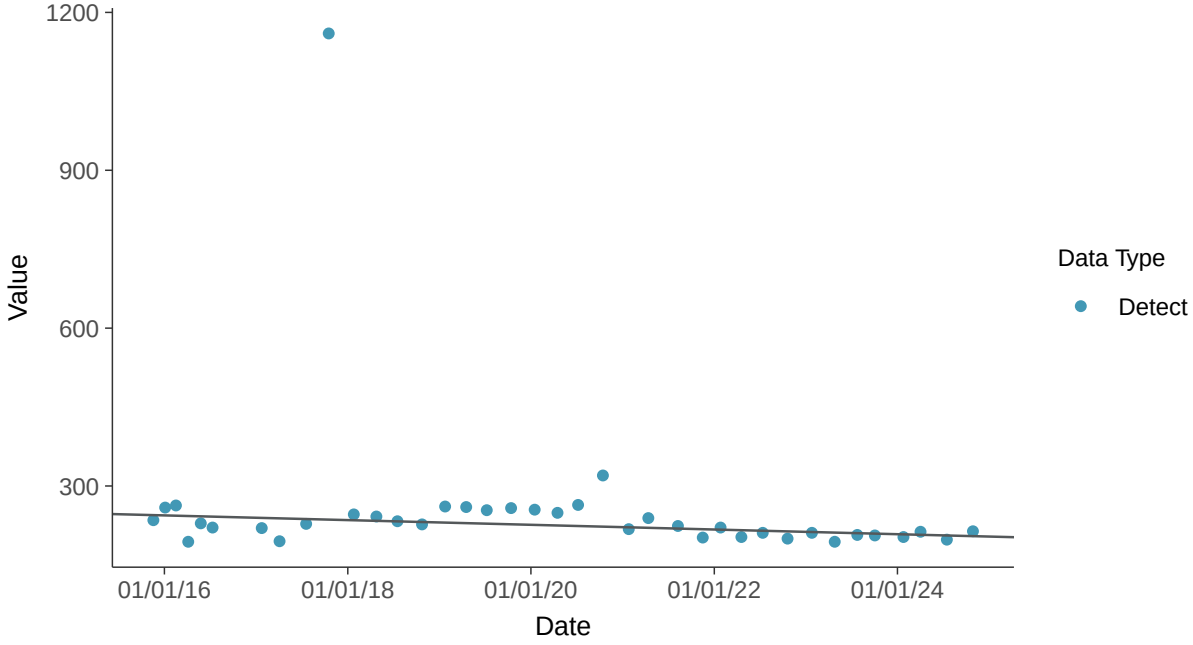
Normal Q-Q plot

Total Dissolved Solids, MW-5 (mg/L)



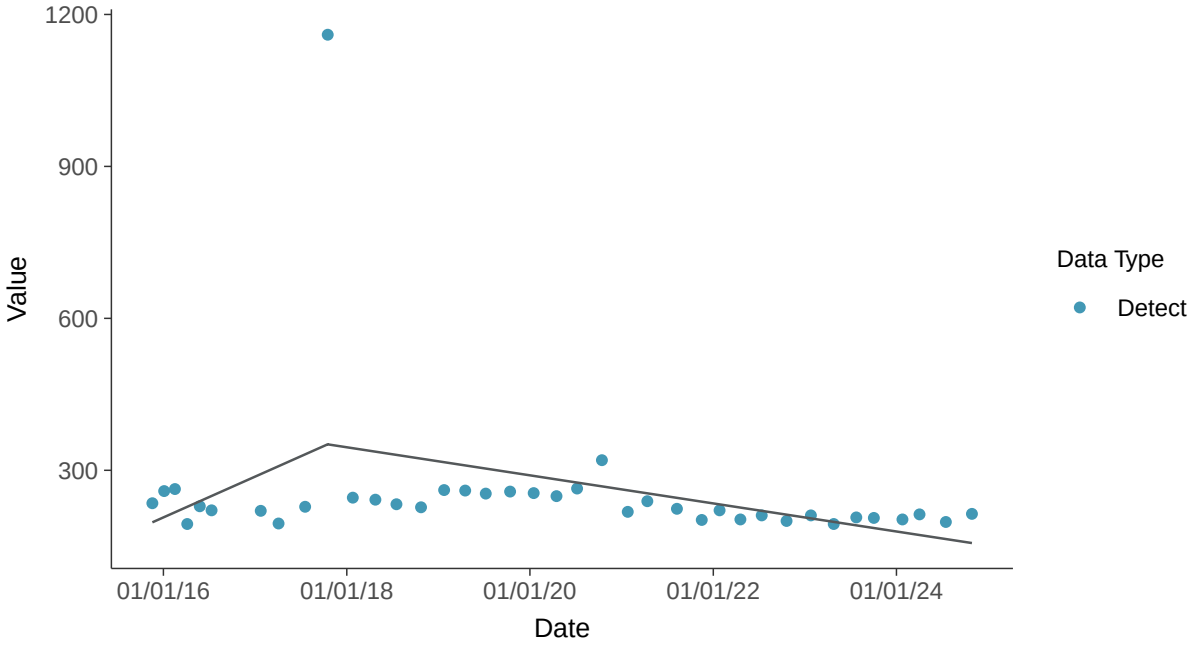
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-5 (mg/L)



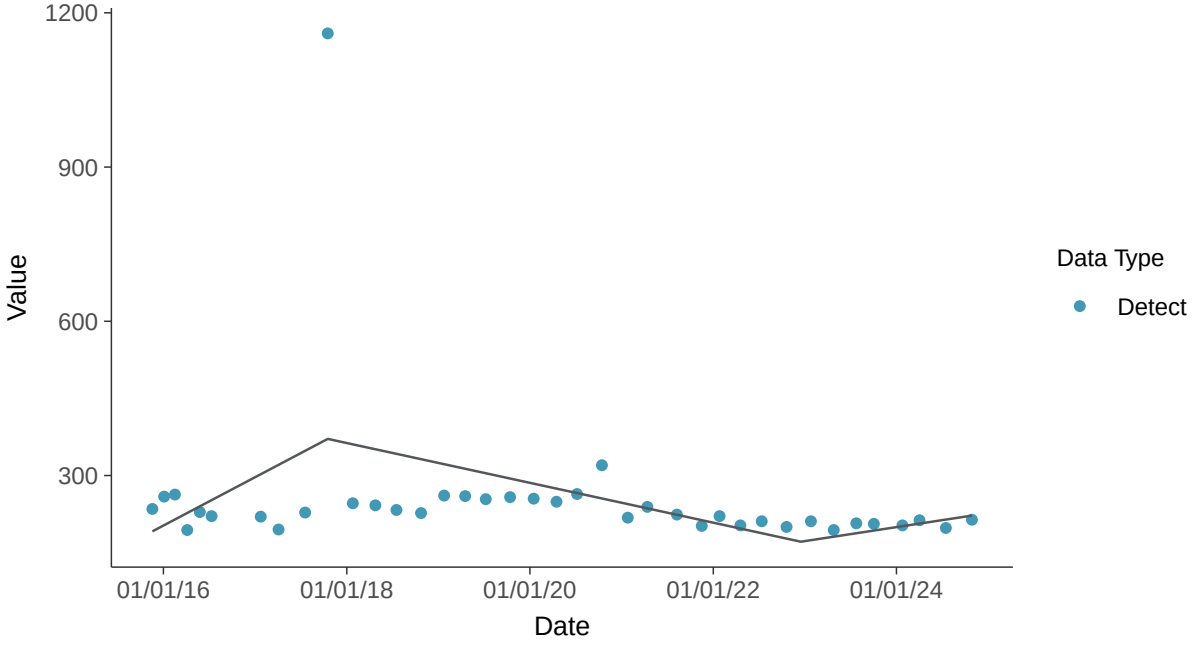
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-5 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-5 (mg/L)

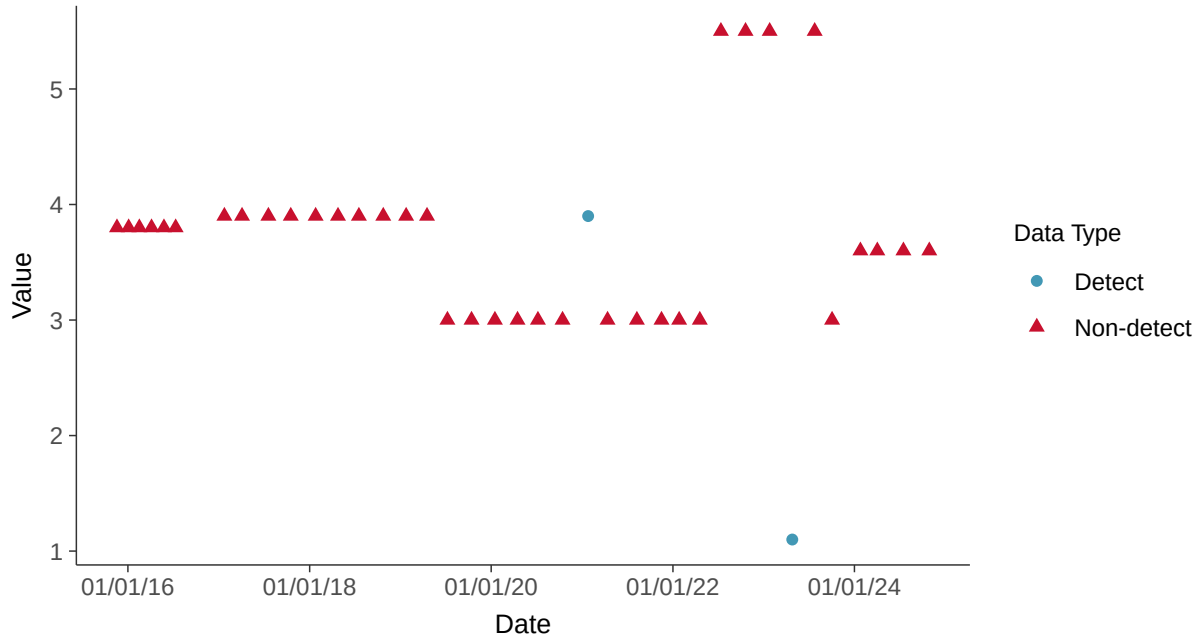


App. IV: Antimony, MW-5

ID: 05_03_101

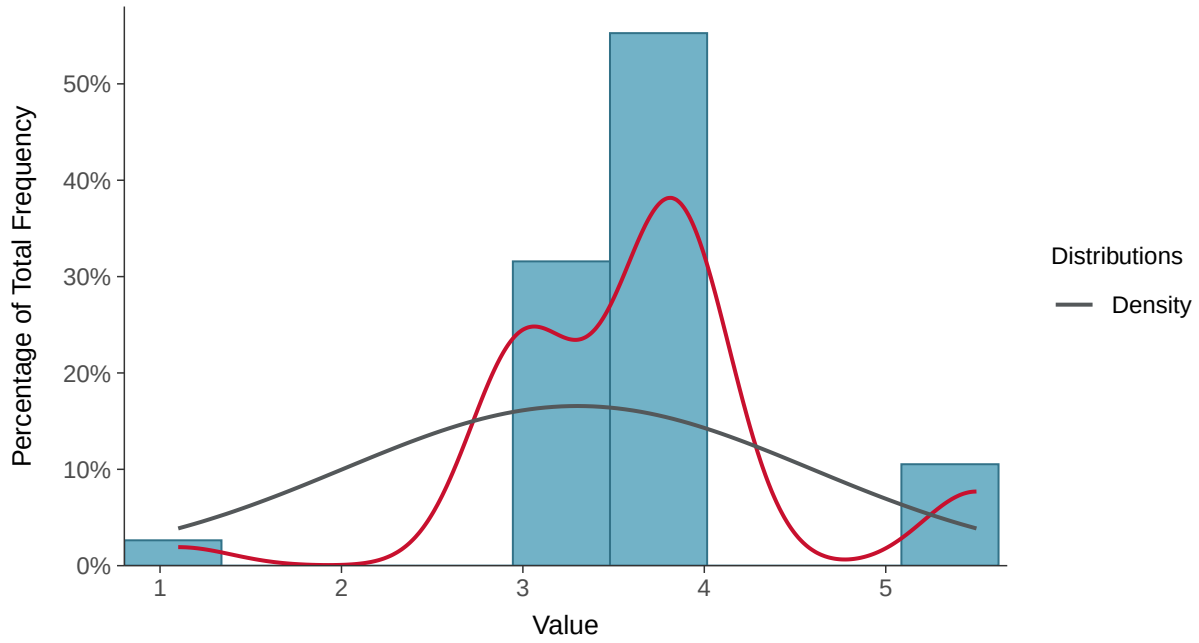
Scatter Plot

Antimony, MW-5 (ug/L)



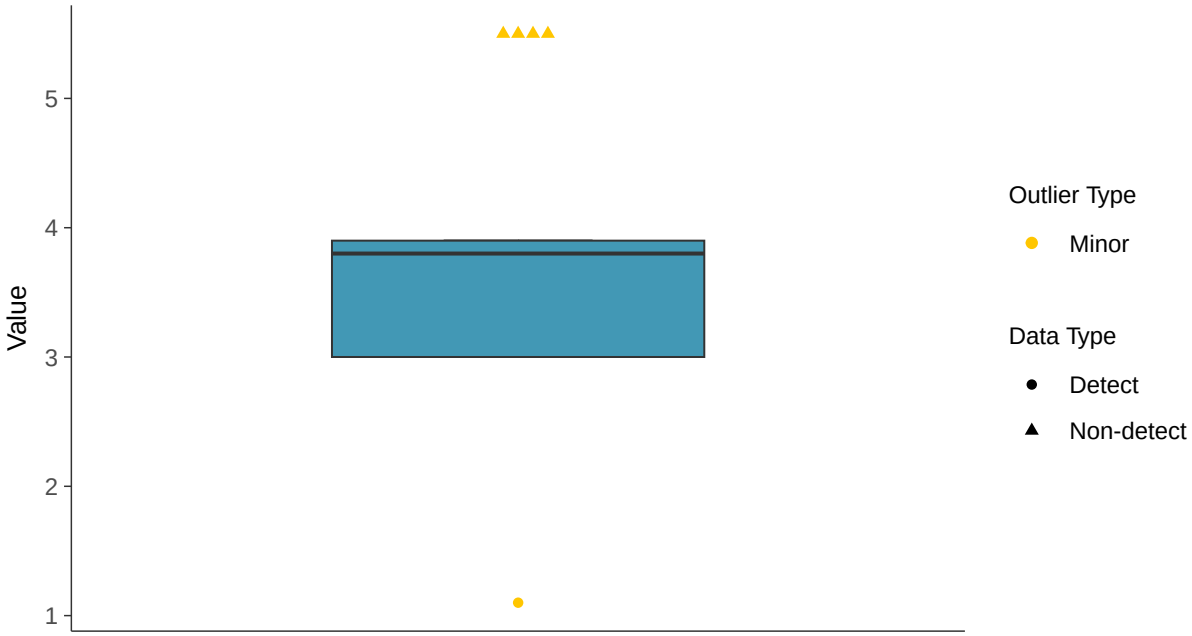
Histogram

Antimony, MW-5 (ug/L)



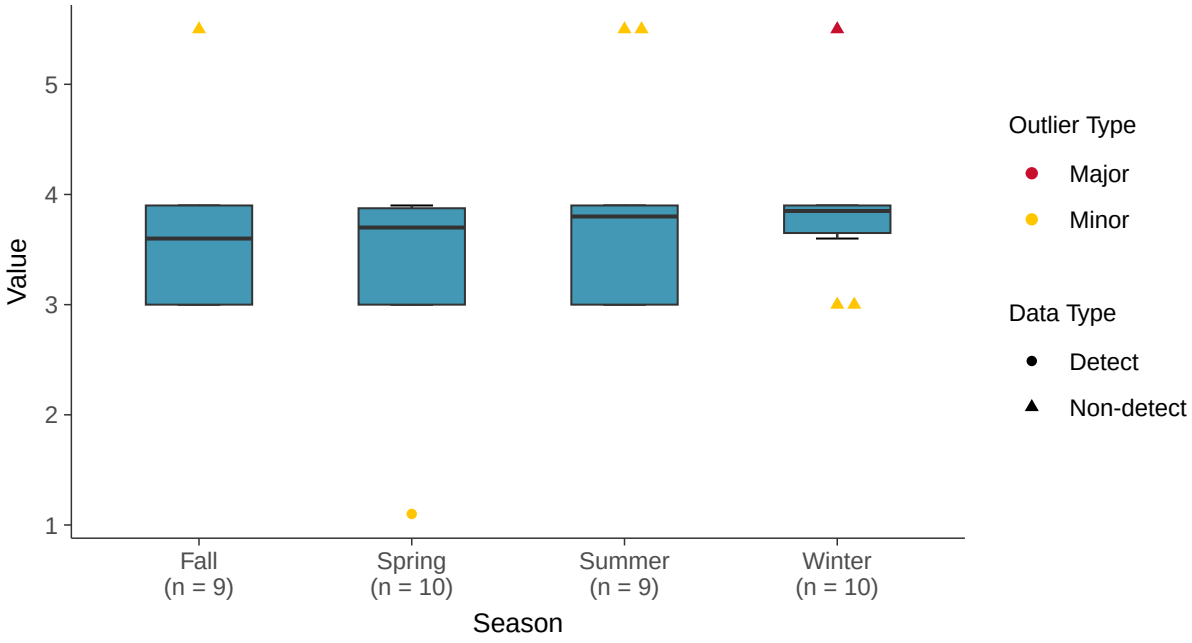
Boxplot

Antimony, MW-5 (ug/L)



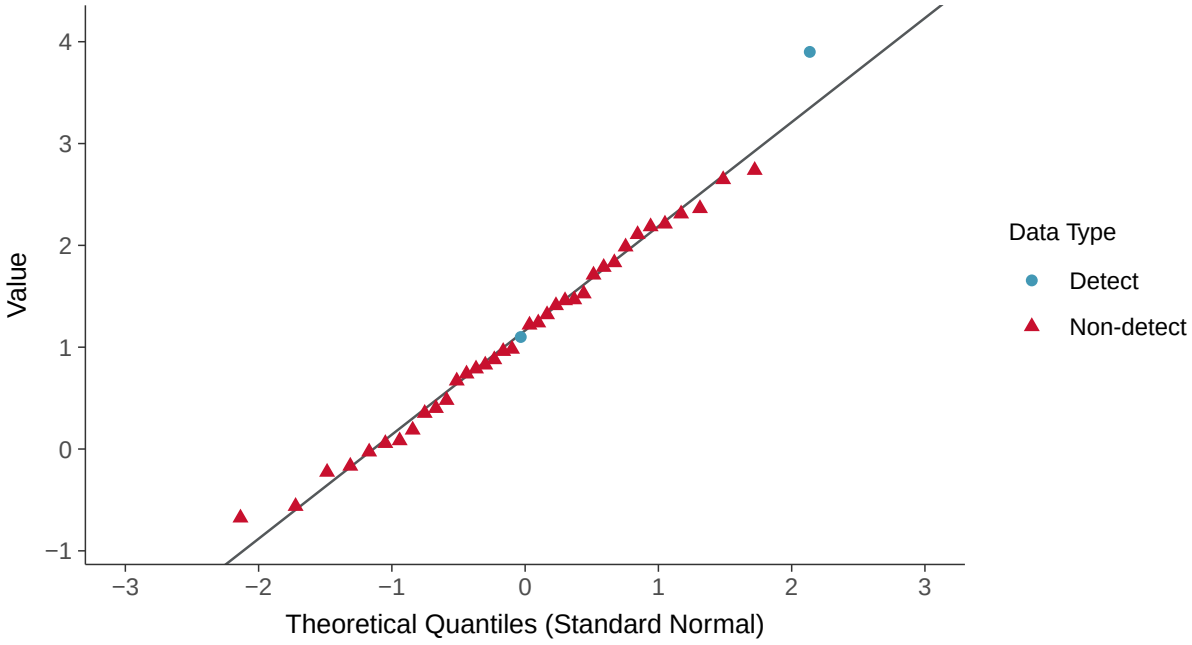
Boxplot by Season

Antimony, MW-5 (ug/L)



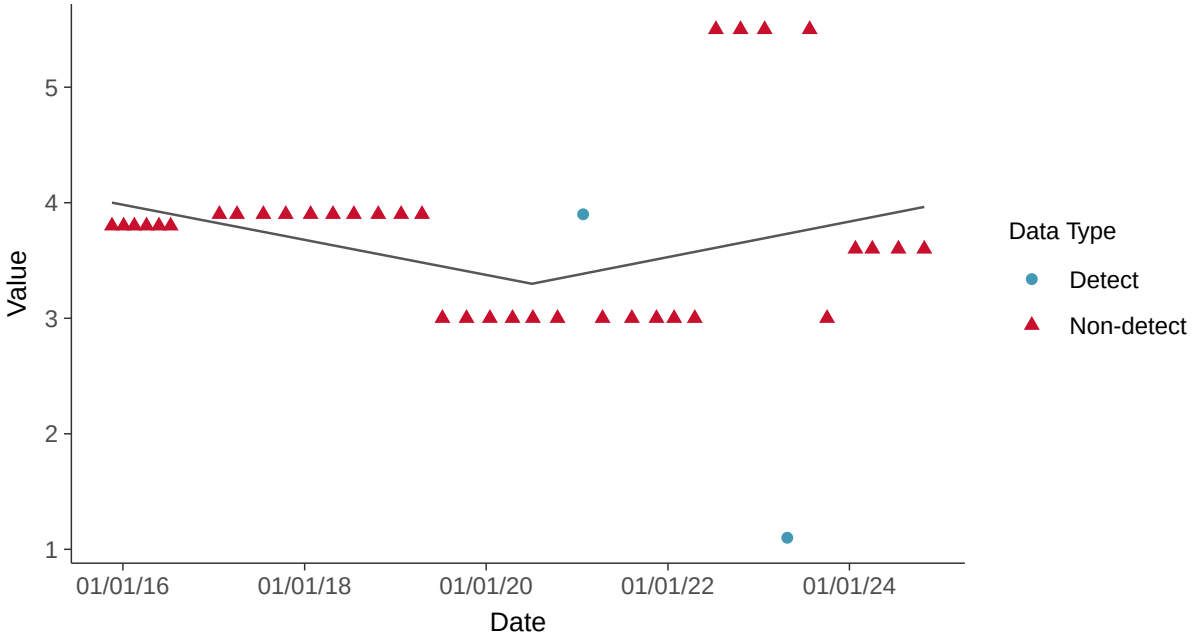
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-5 (ug/L)



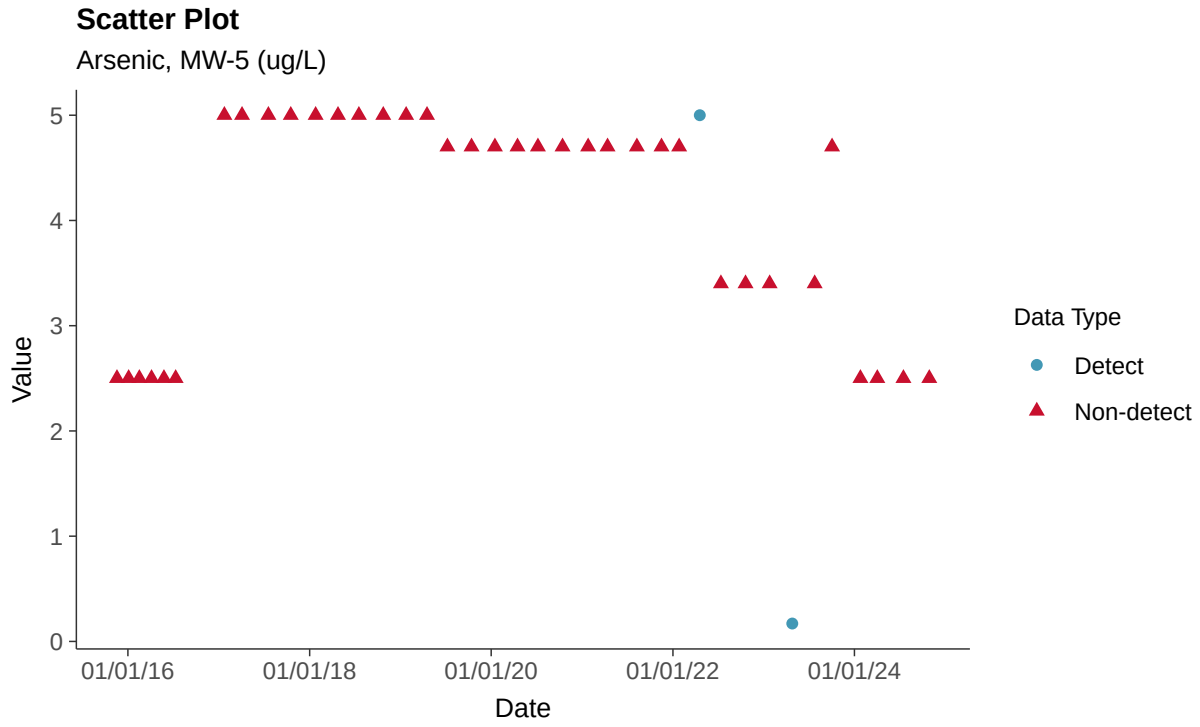
Trend Regression: Piecewise Linear-Linear

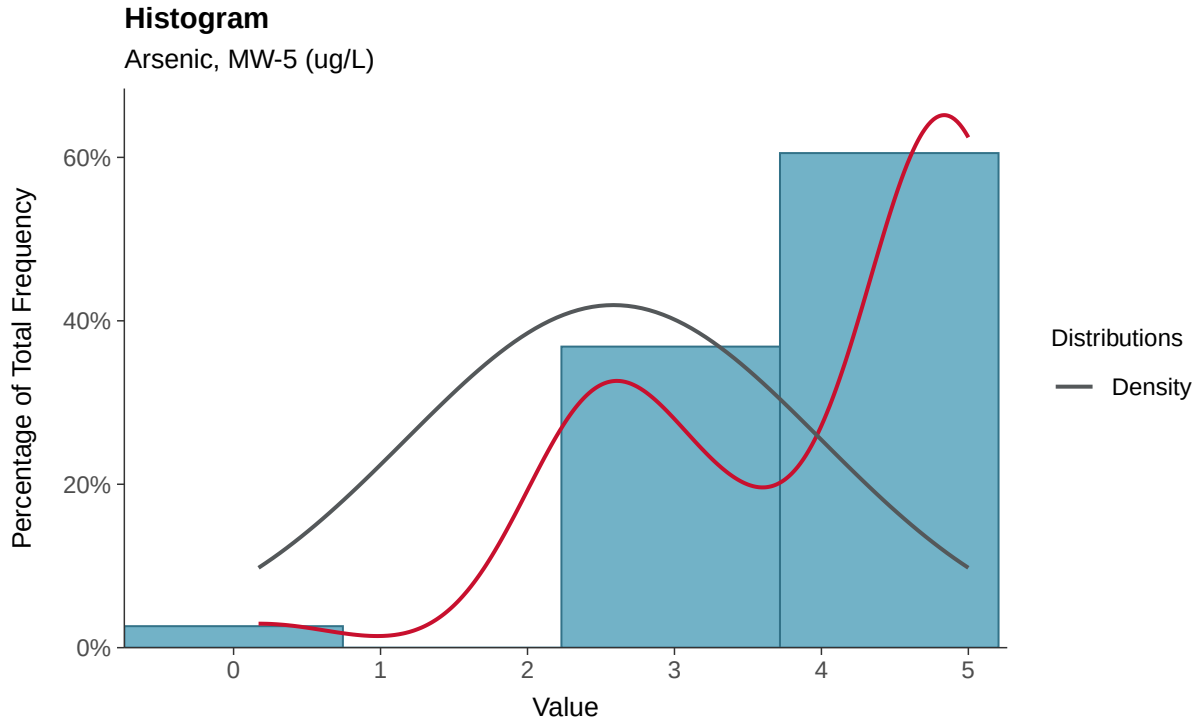
Antimony, MW-5 (ug/L)



App. IV: Arsenic, MW-5

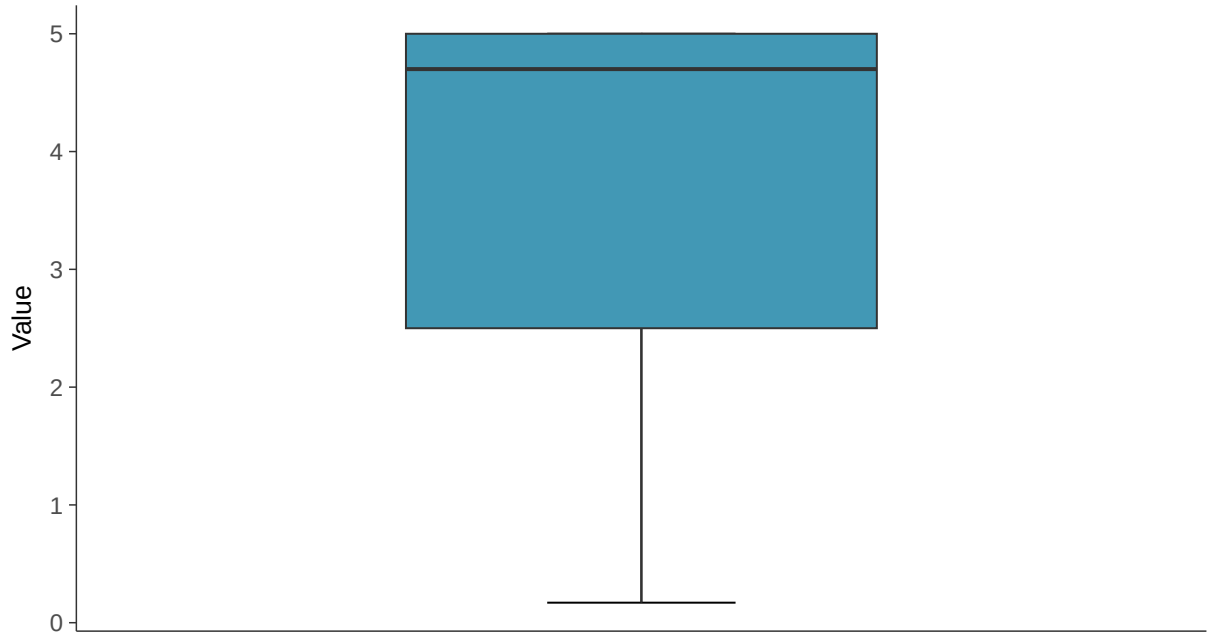
ID: 05_03_102





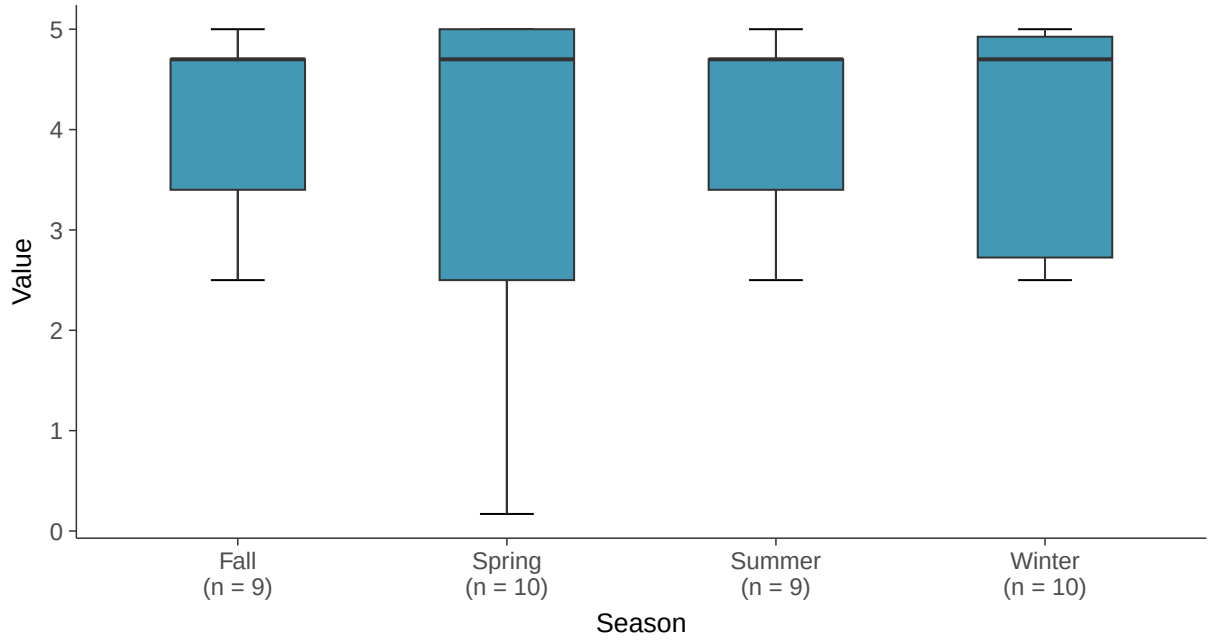
Boxplot

Arsenic, MW-5 (ug/L)



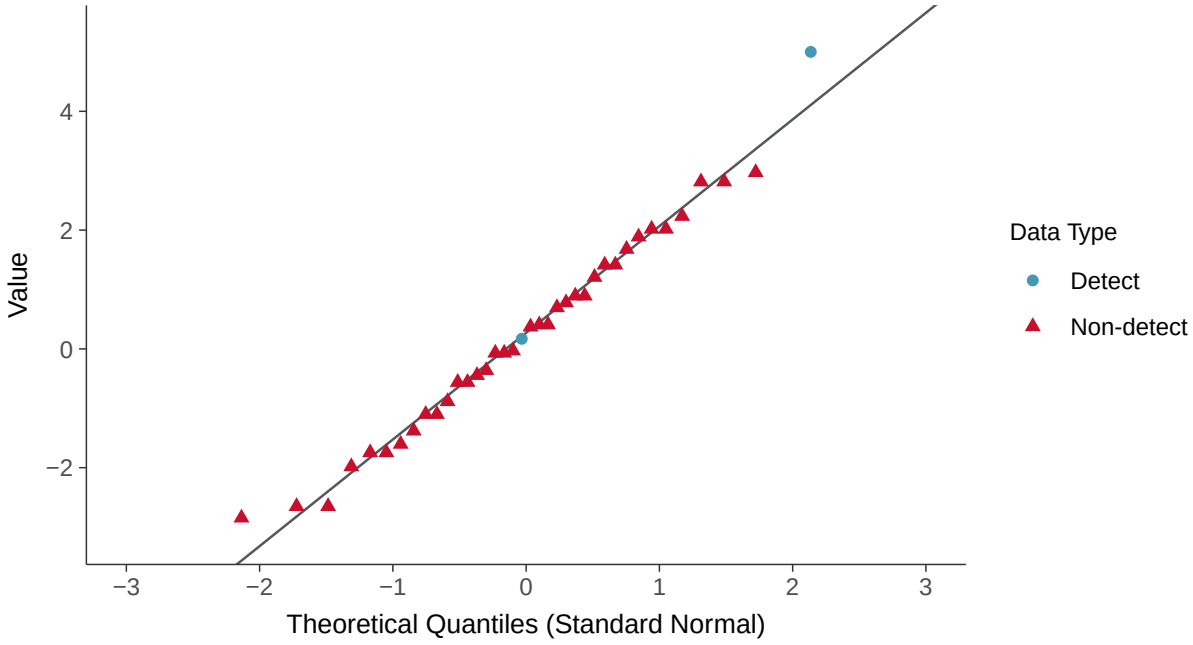
Boxplot by Season

Arsenic, MW-5 (ug/L)



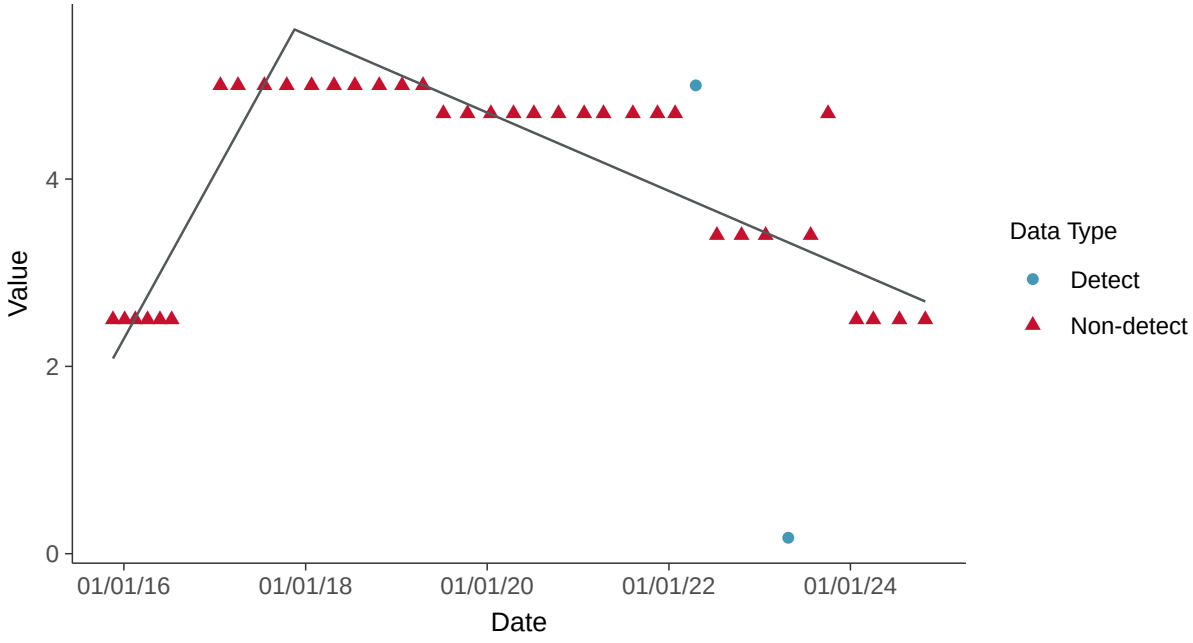
Normal Q-Q plot using ROS Imputed Estimates

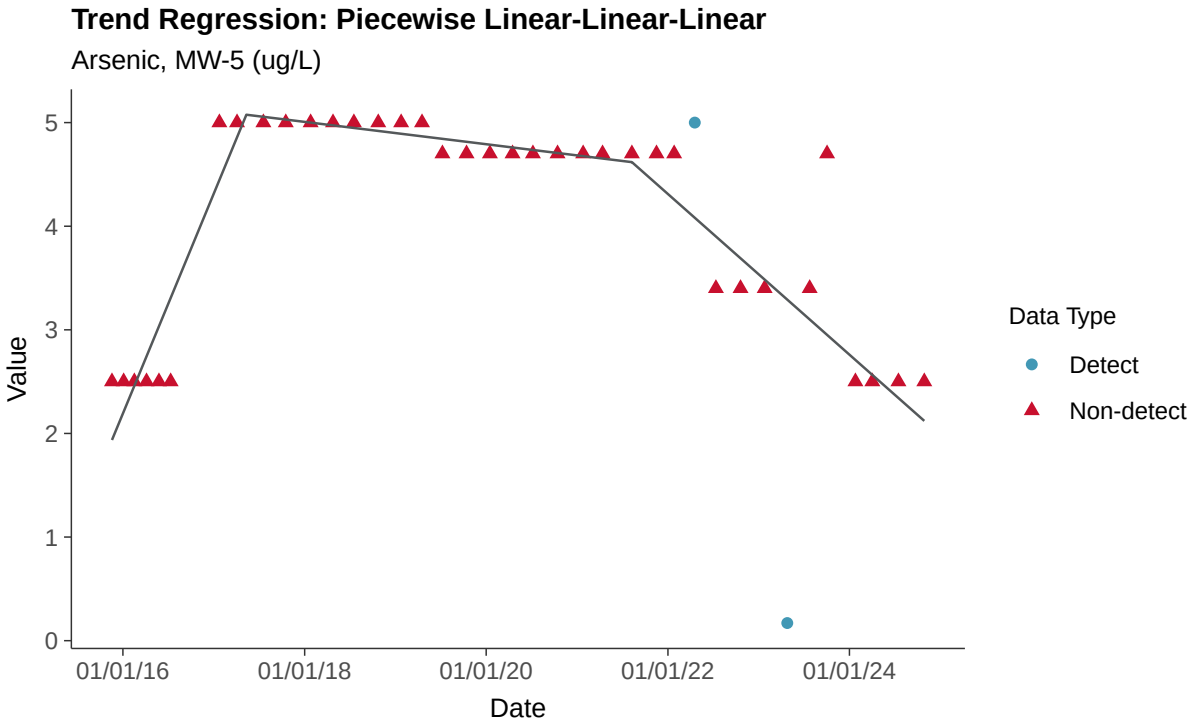
Arsenic, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear

Arsenic, MW-5 (ug/L)



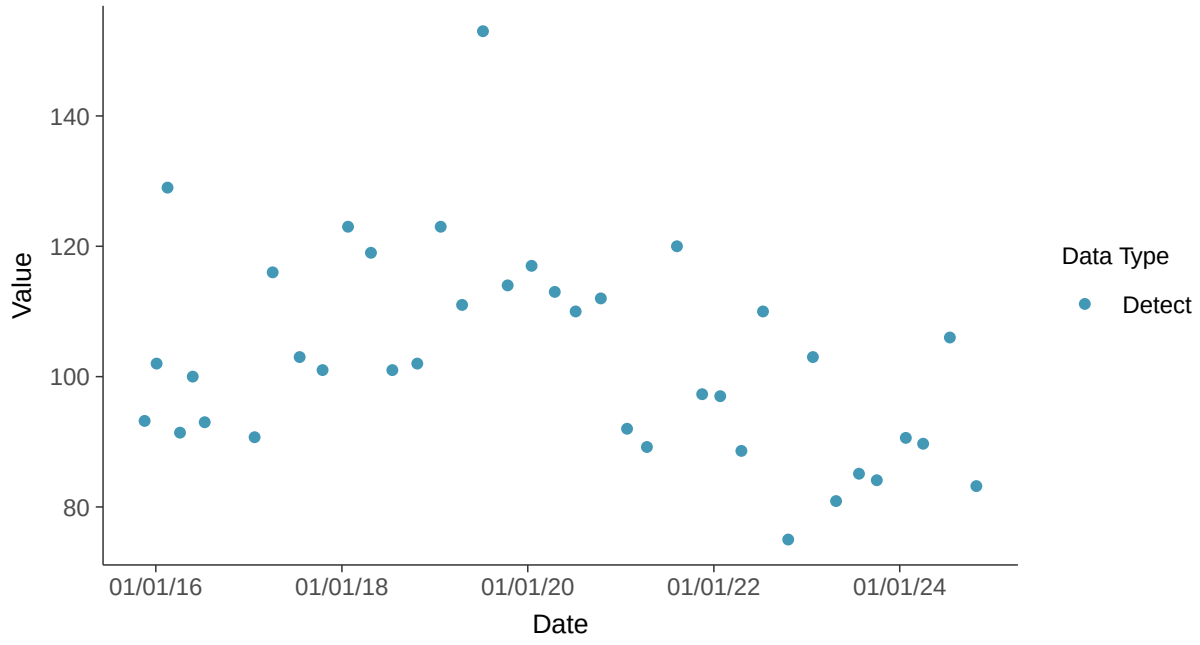

Trend Regression: Piecewise Linear-Linear-Linear
Arsenic, MW-5 (ug/L)
Value
0
1
2
3
4
5
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. IV: Barium, MW-5

ID: 05_03_103

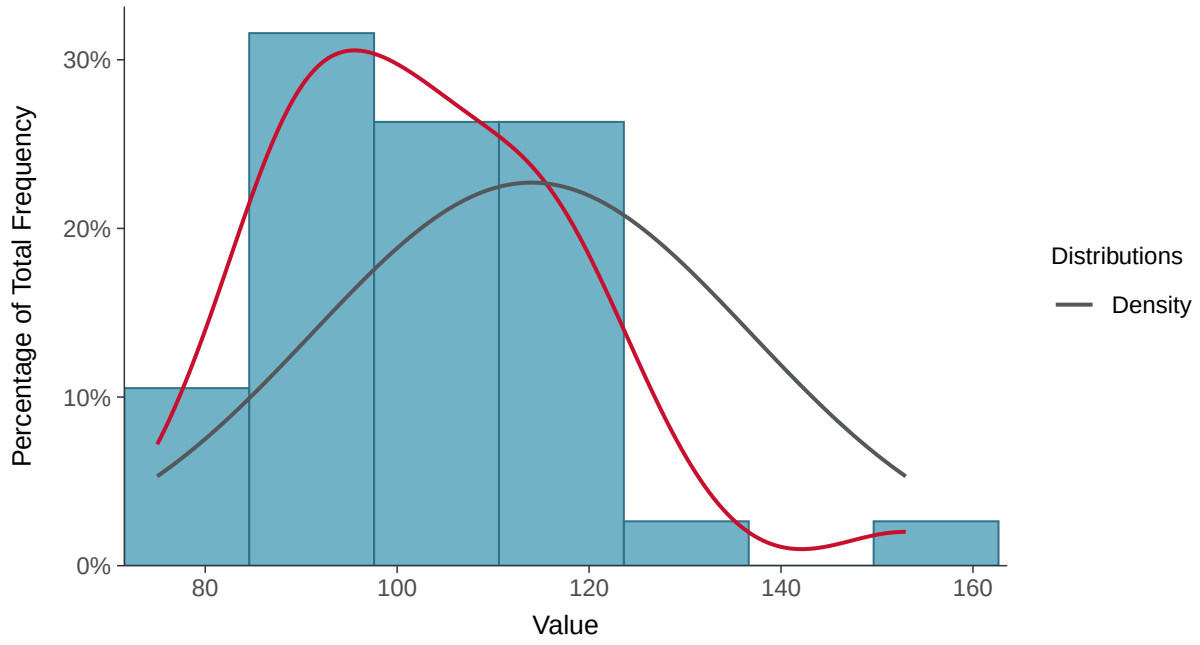
Scatter Plot

Barium, MW-5 (ug/L)



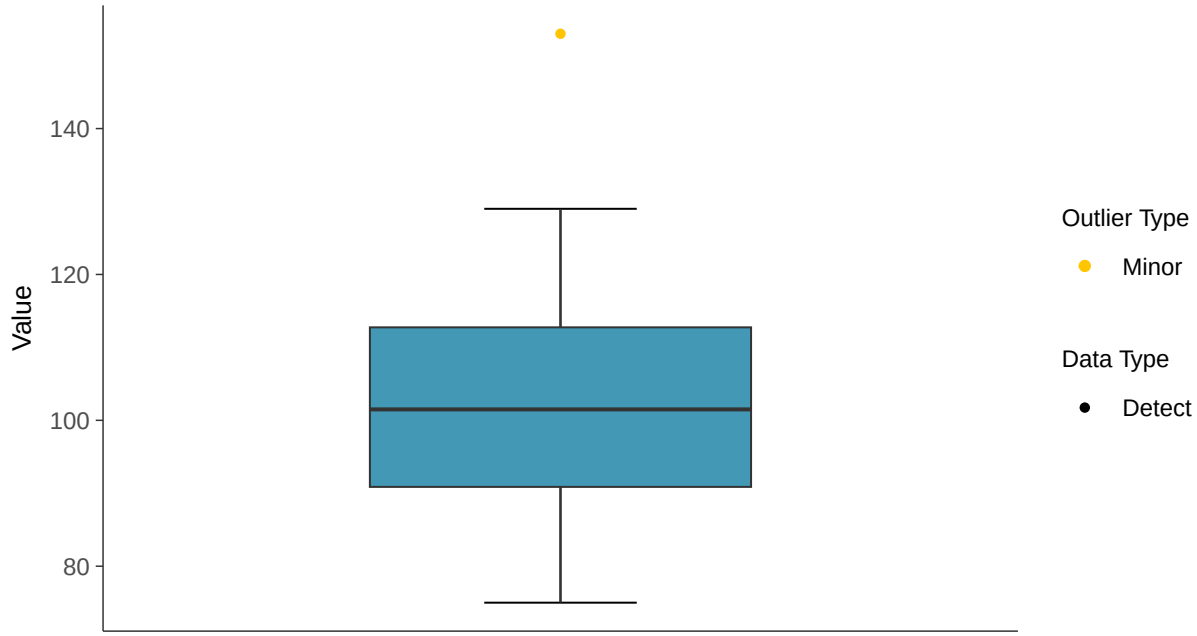
Histogram

Barium, MW-5 (ug/L)



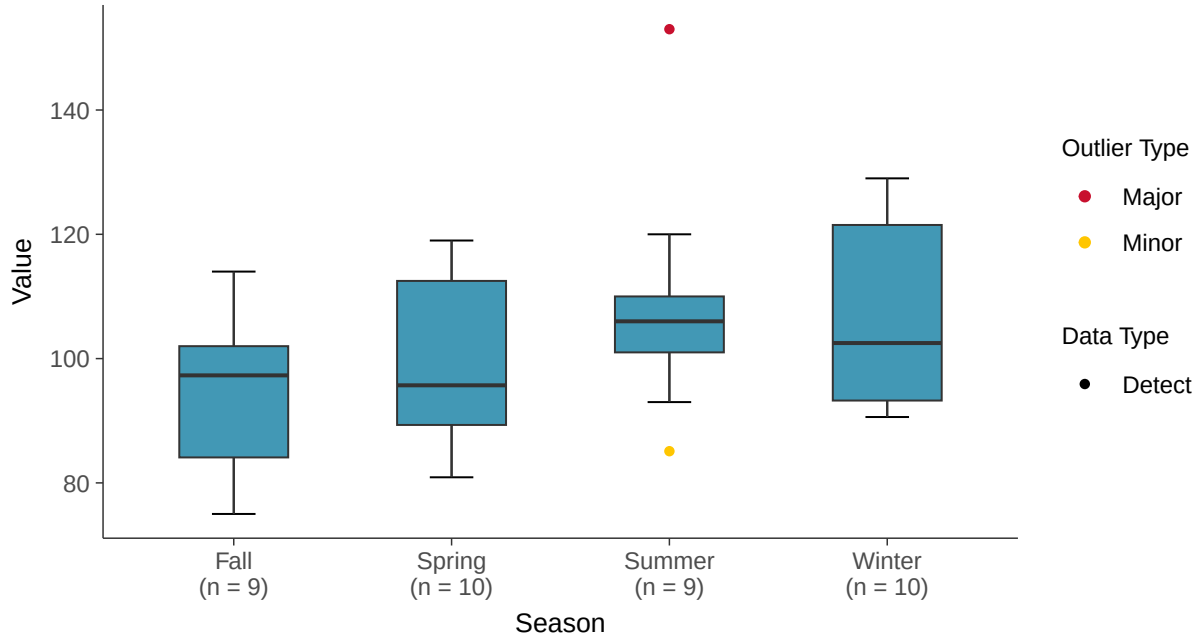
Boxplot

Barium, MW-5 (ug/L)



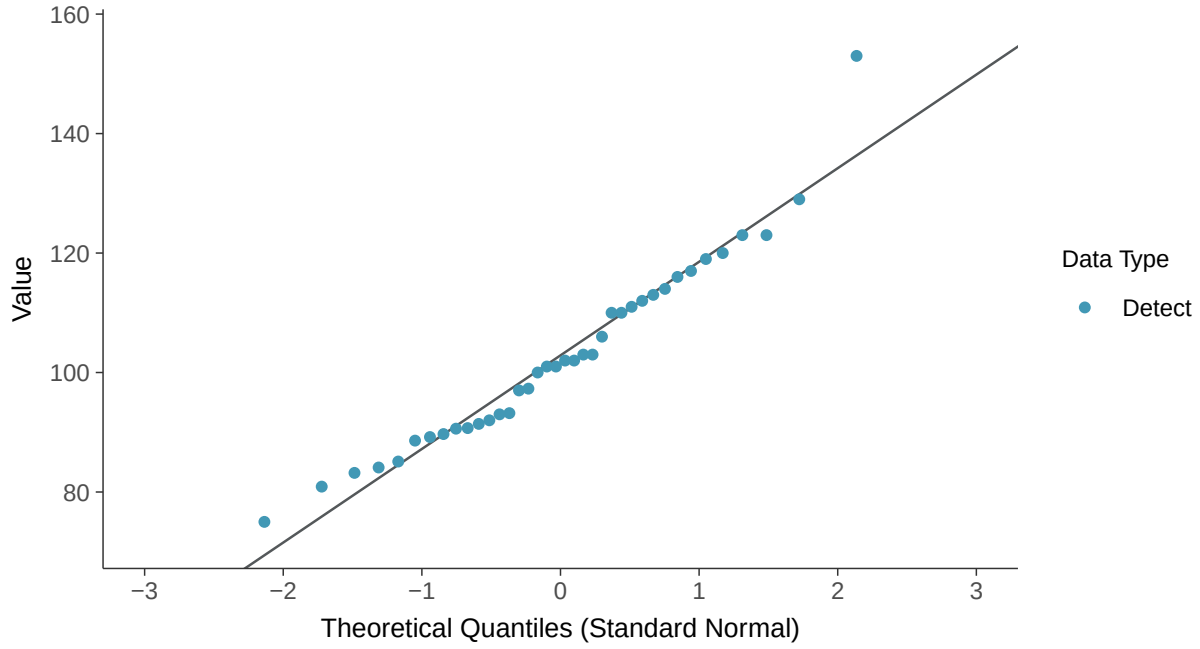
Boxplot by Season

Barium, MW-5 (ug/L)



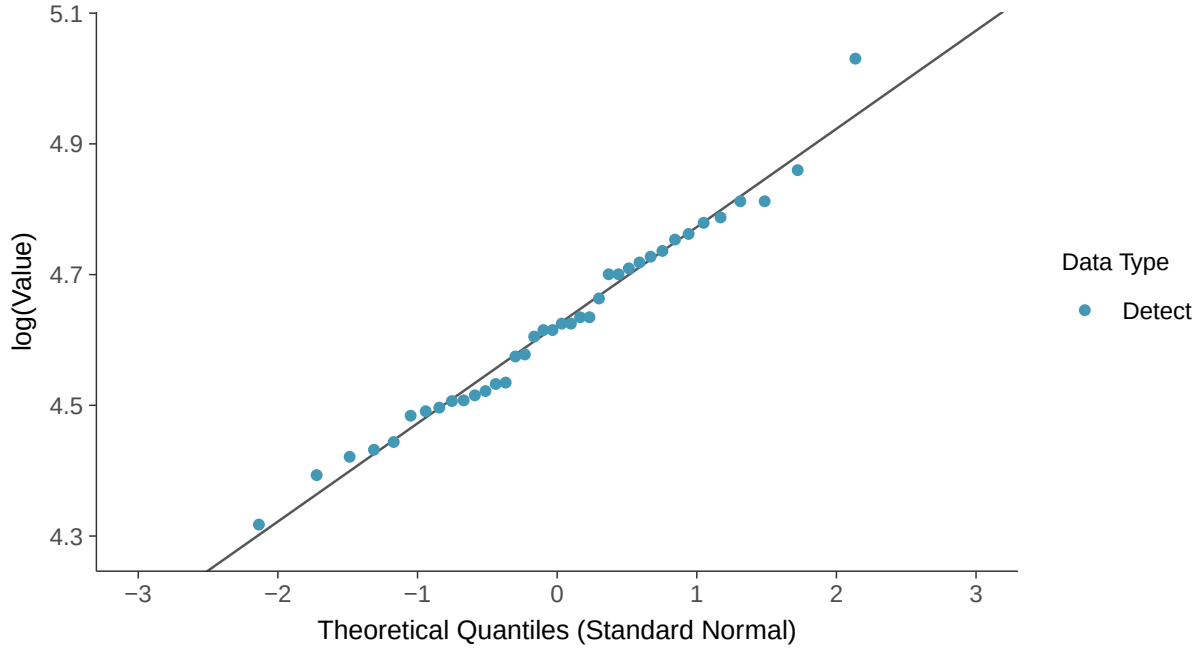
Normal Q-Q plot

Barium, MW-5 (ug/L)



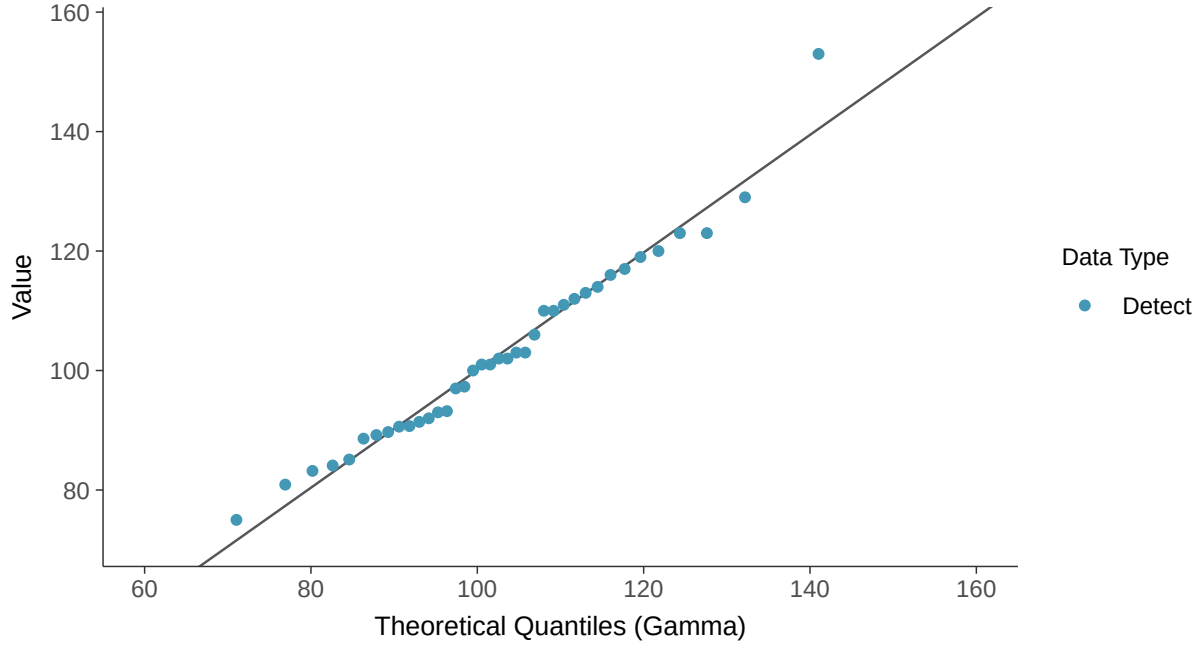
Lognormal Q-Q plot

Barium, MW-5 (ug/L)



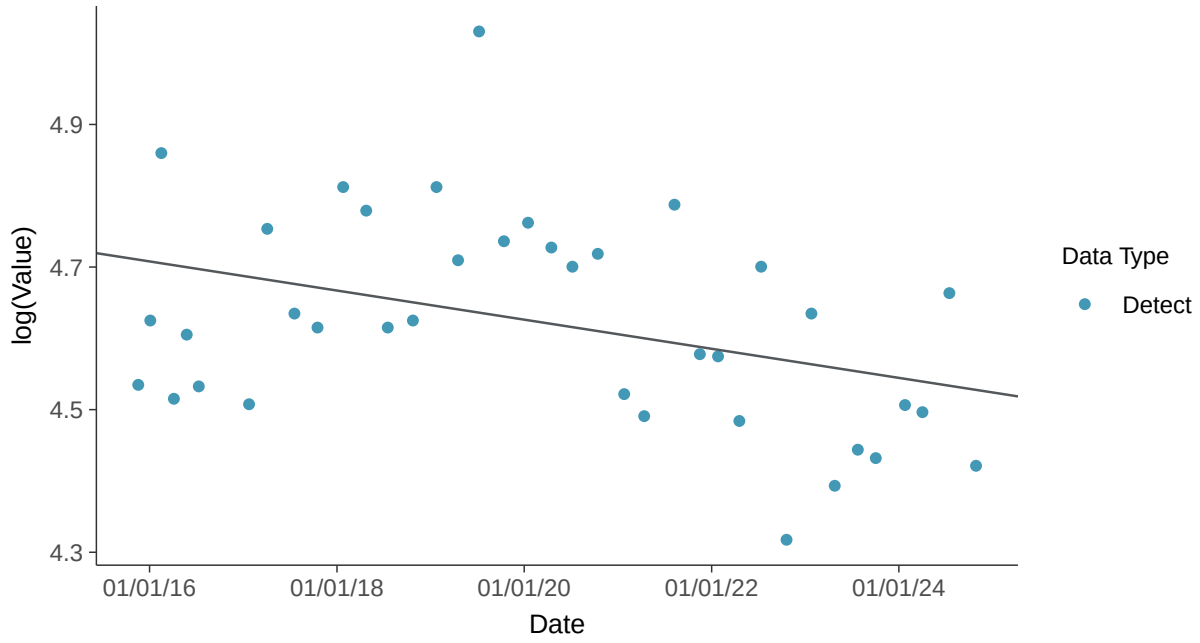
Gamma Q-Q plot

Barium, MW-5 (ug/L)



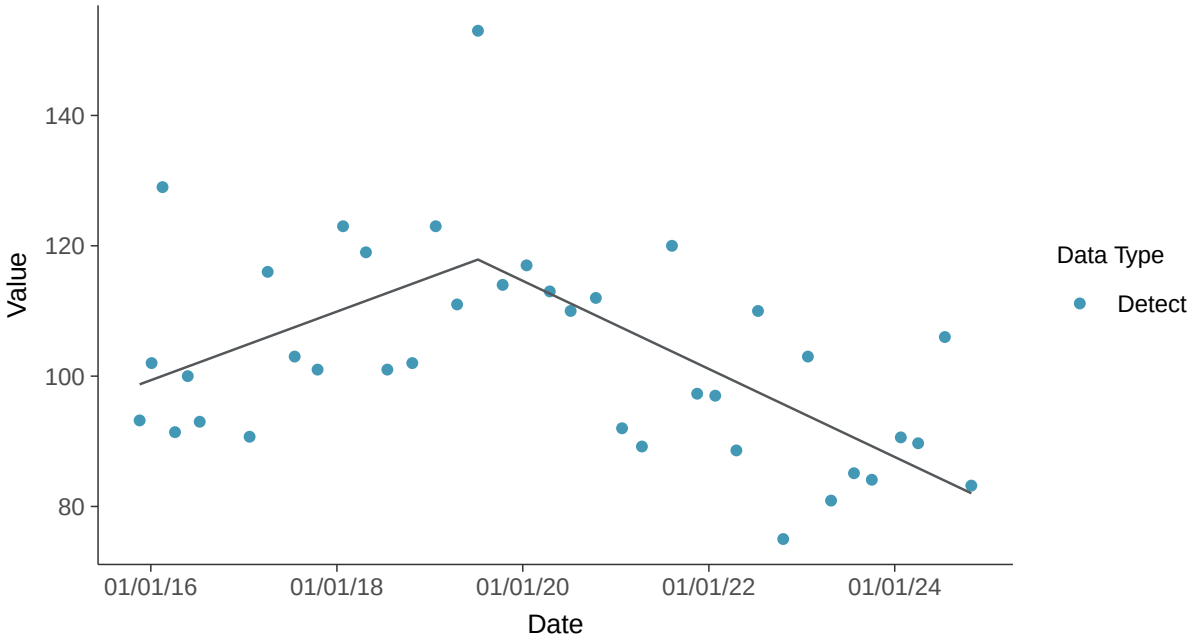
Trend Regression: Lognormal MLE

Barium, MW-5 (ug/L)



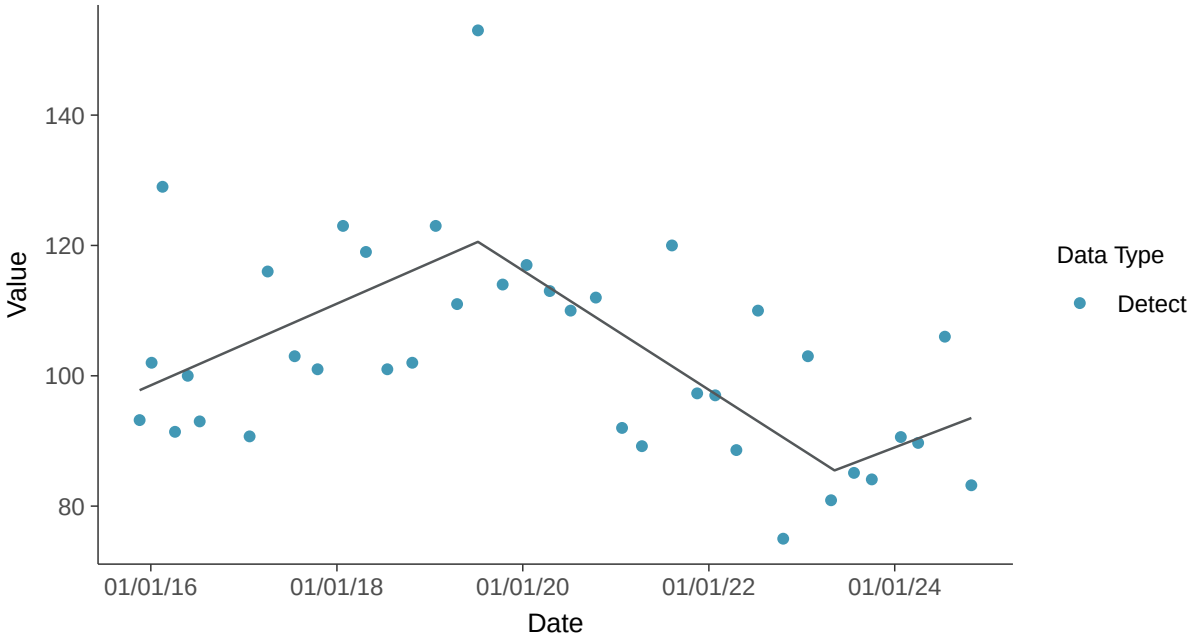
Trend Regression: Piecewise Linear-Linear

Barium, MW-5 (ug/L)



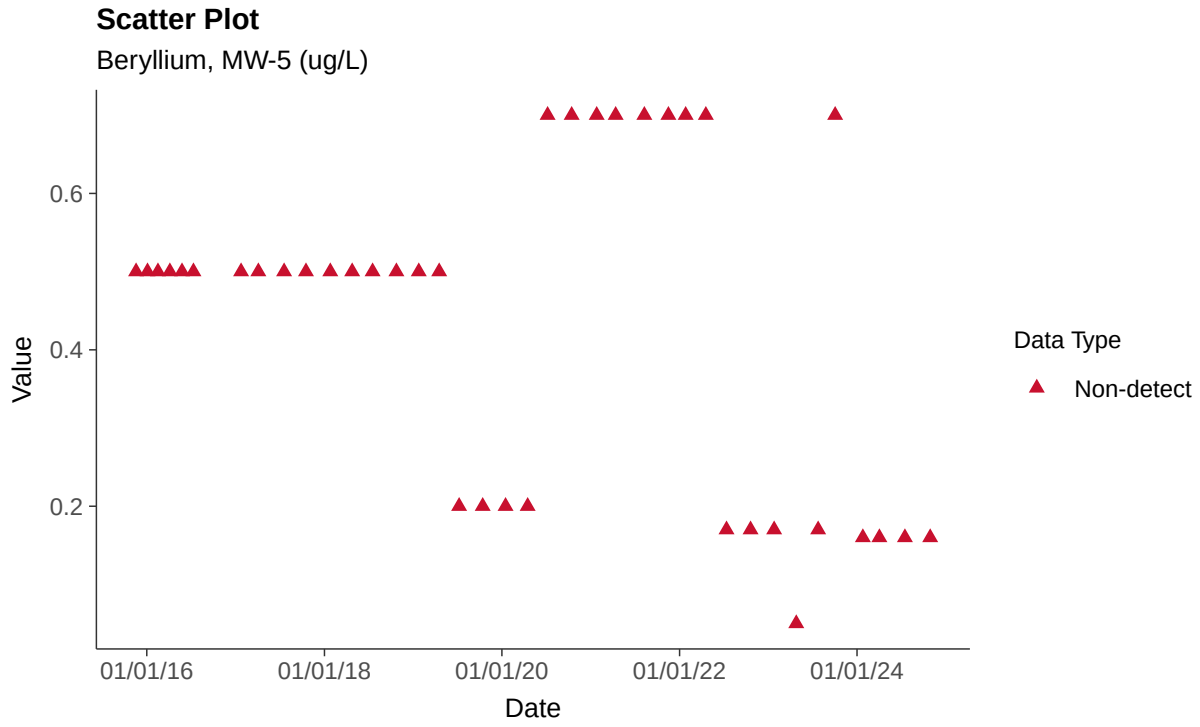
Trend Regression: Piecewise Linear-Linear-Linear

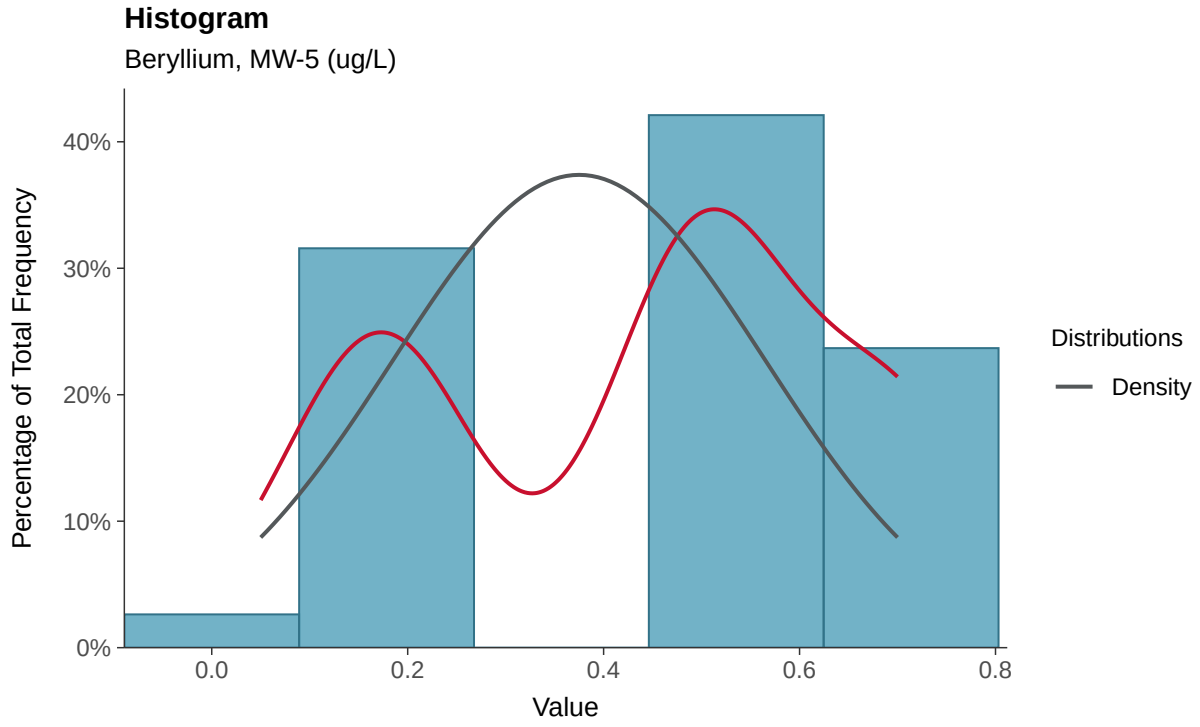
Barium, MW-5 (ug/L)



App. IV: Beryllium, MW-5

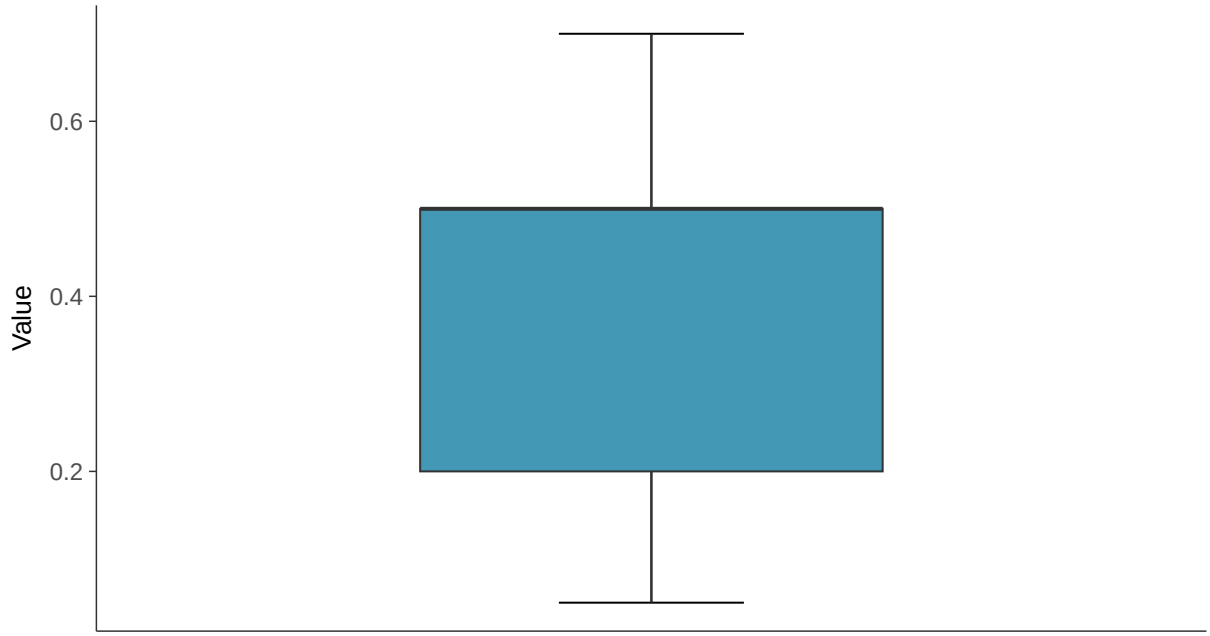
ID: 05_03_104





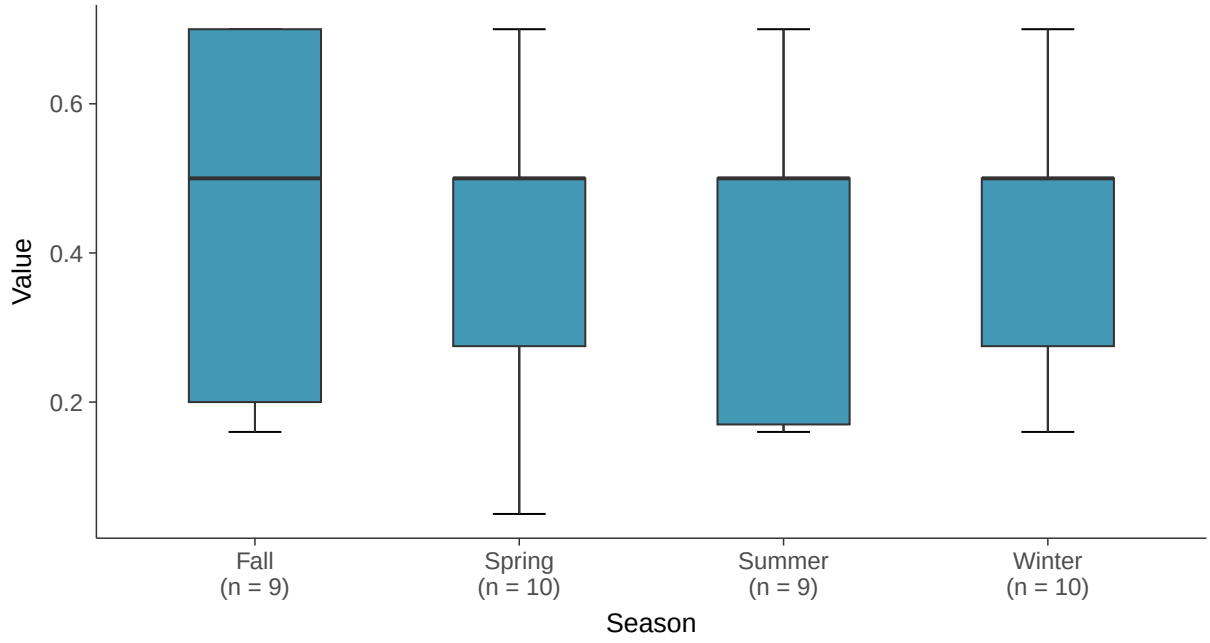
Boxplot

Beryllium, MW-5 (ug/L)



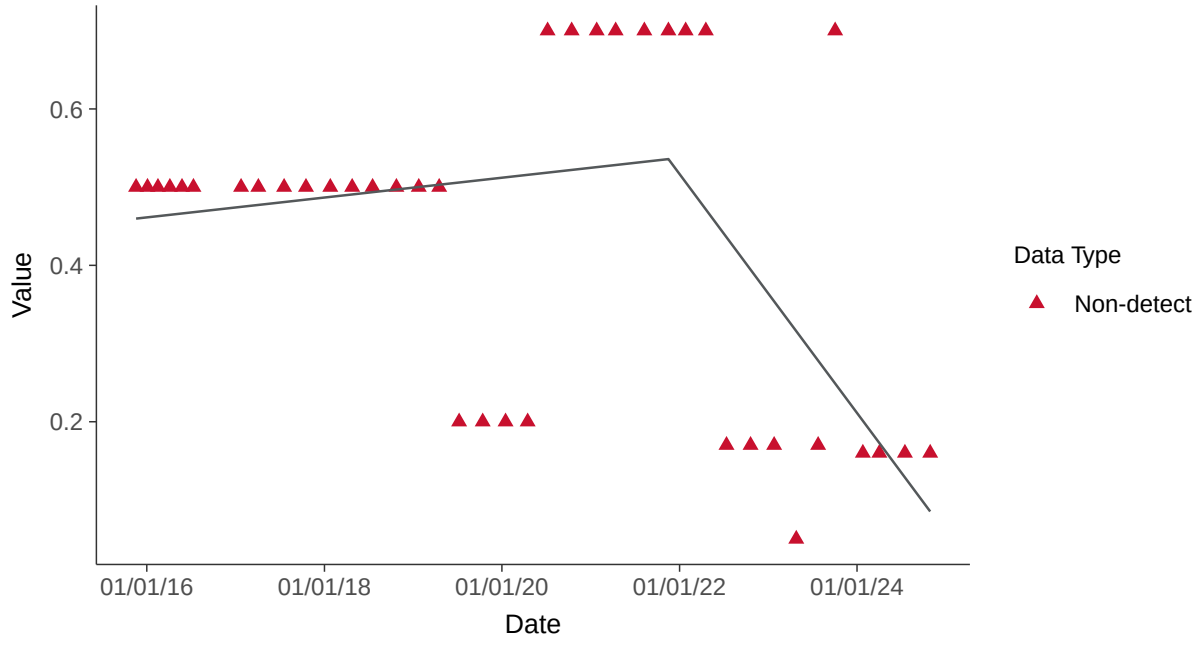
Boxplot by Season

Beryllium, MW-5 (ug/L)



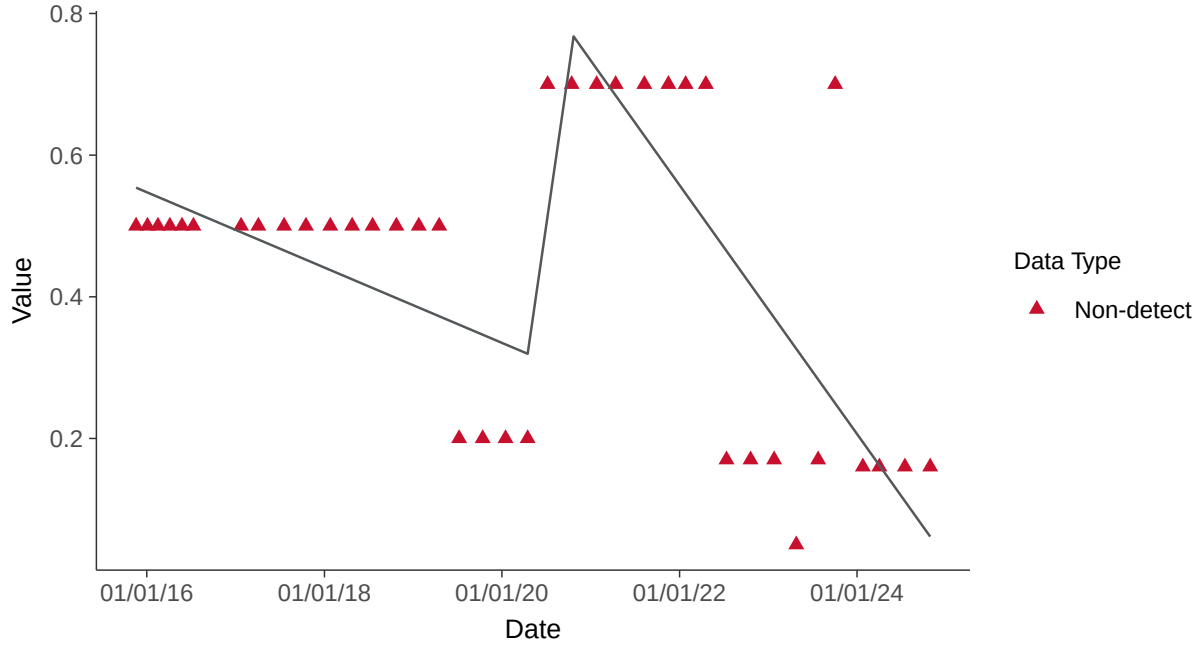
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-5 (ug/L)



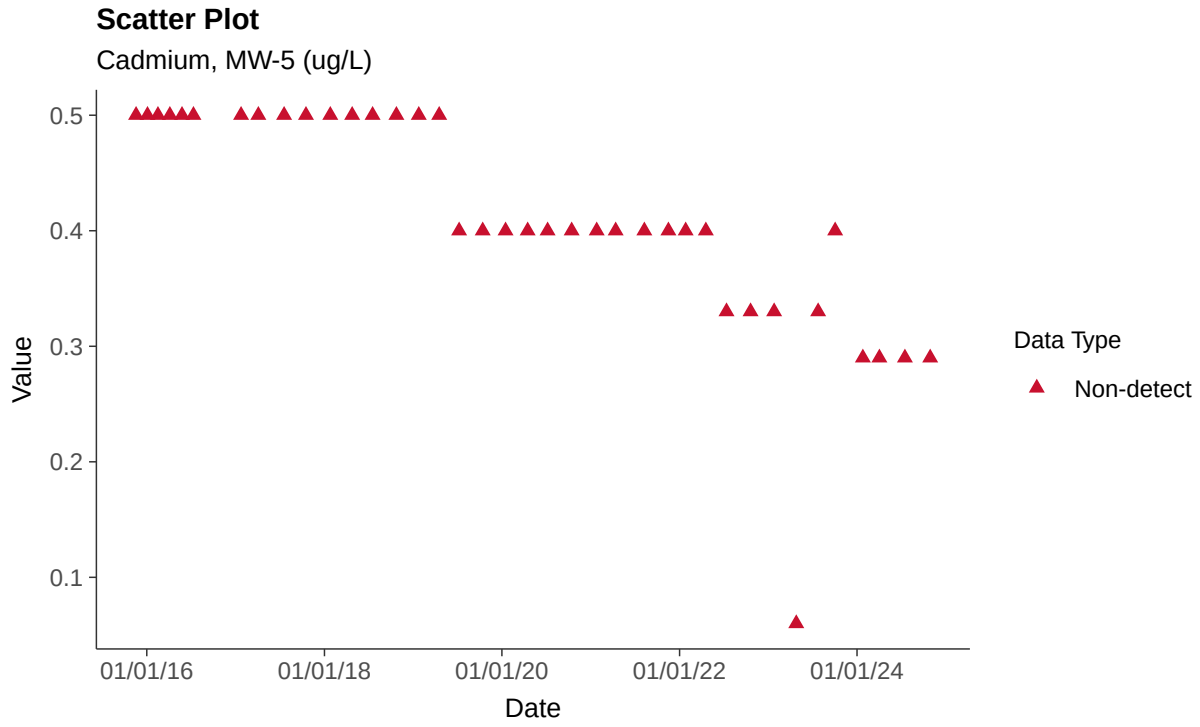
Trend Regression: Piecewise Linear-Linear-Linear

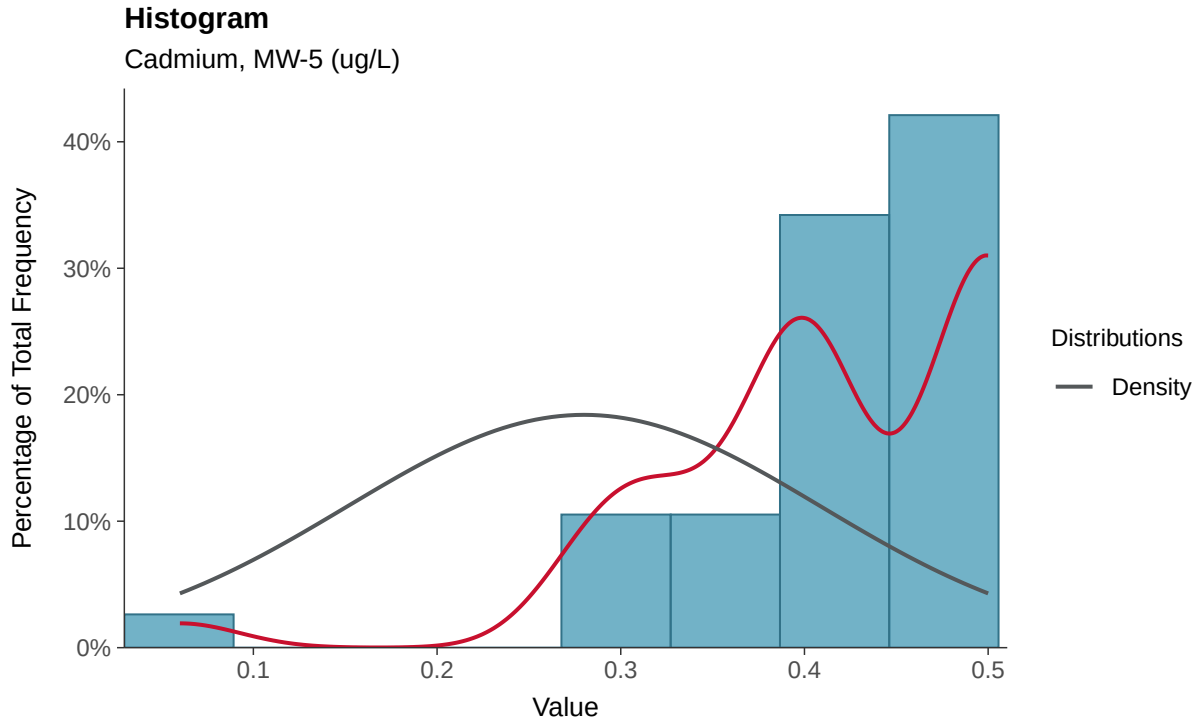
Beryllium, MW-5 (ug/L)



App. IV: Cadmium, MW-5

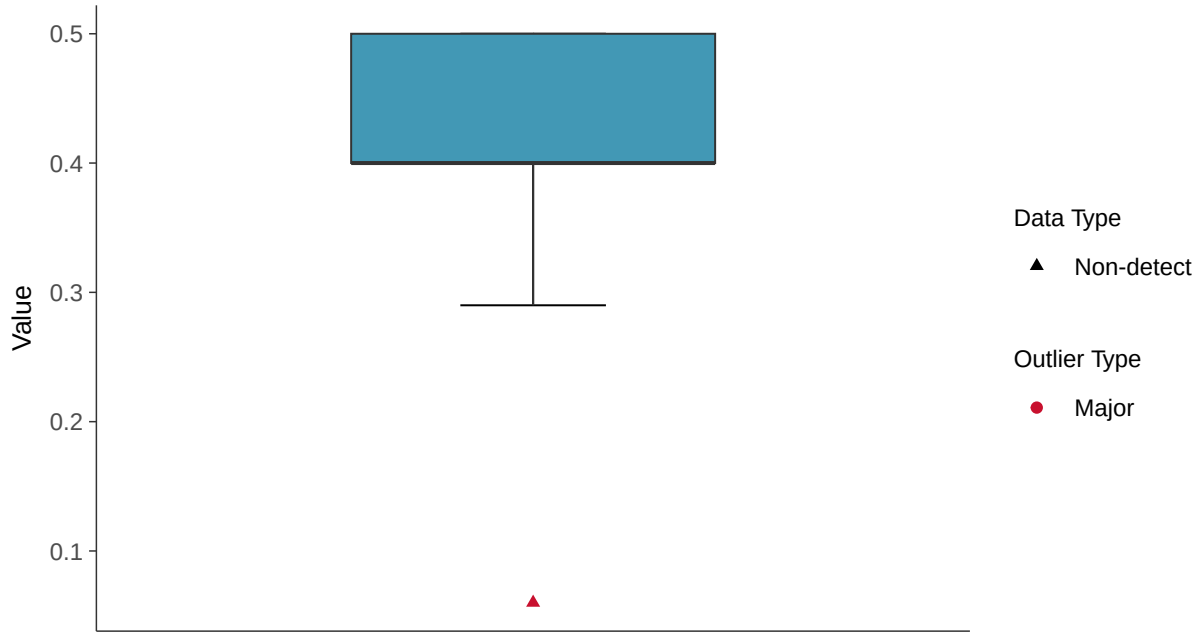
ID: 05_03_106





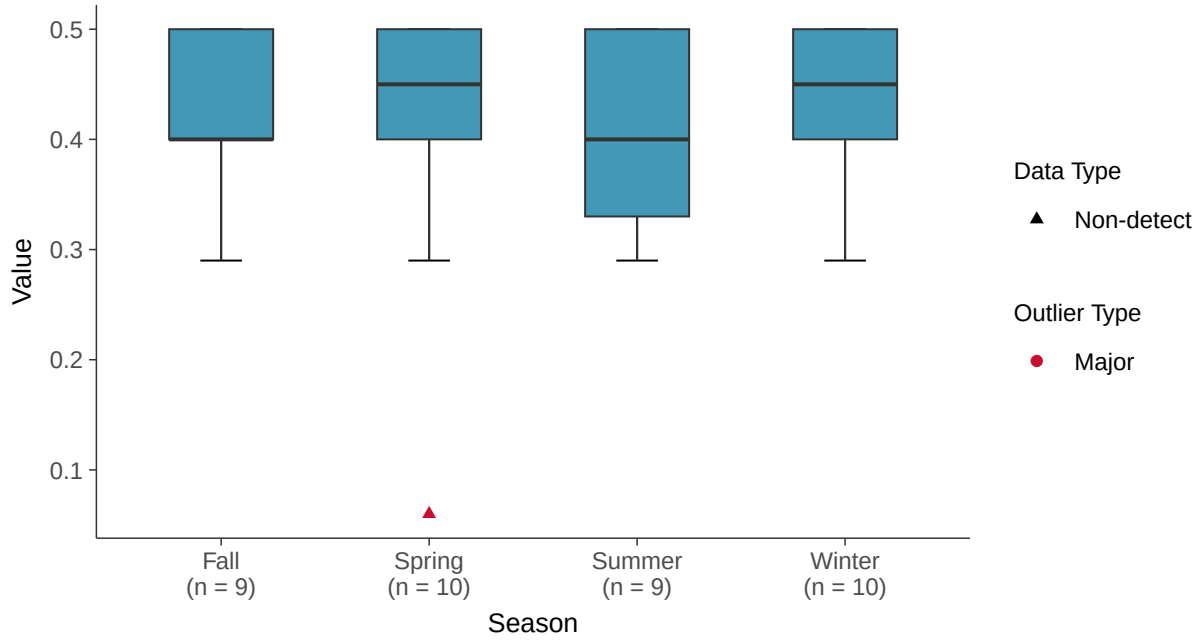
Boxplot

Cadmium, MW-5 (ug/L)



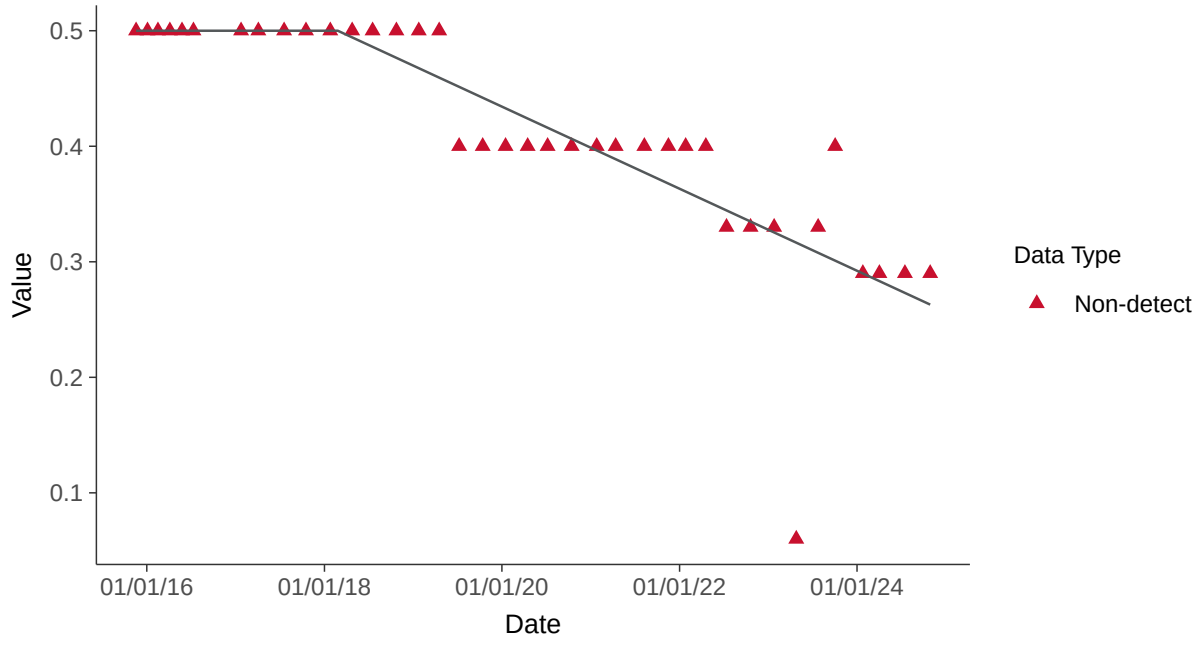
Boxplot by Season

Cadmium, MW-5 (ug/L)



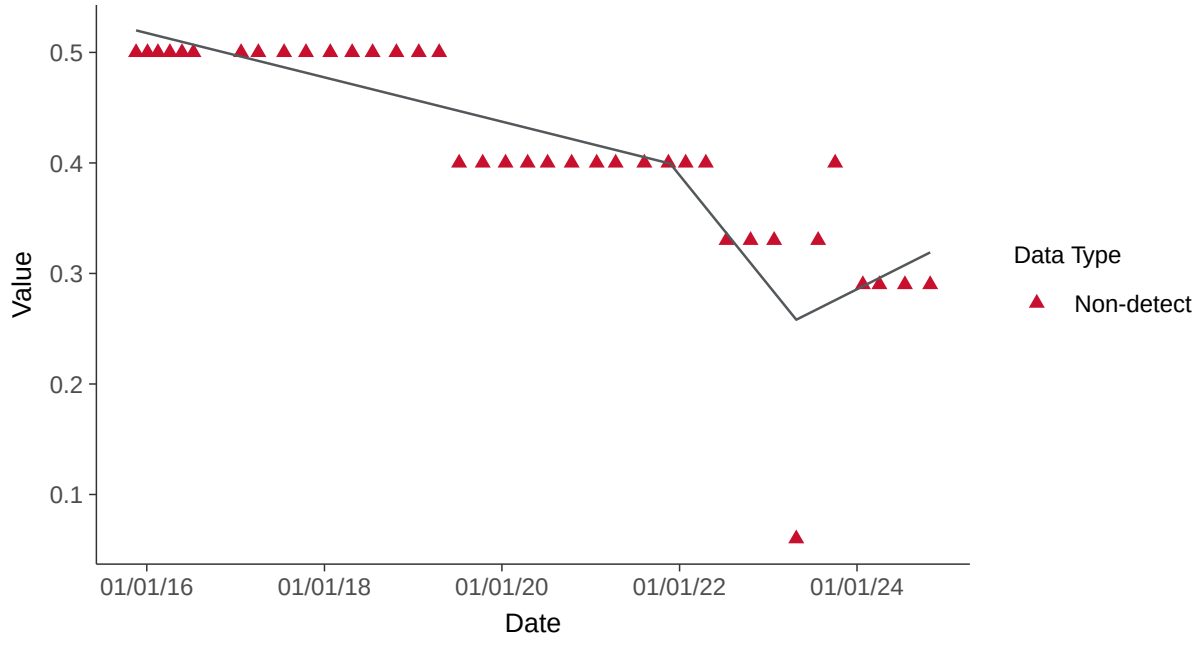
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-5 (ug/L)

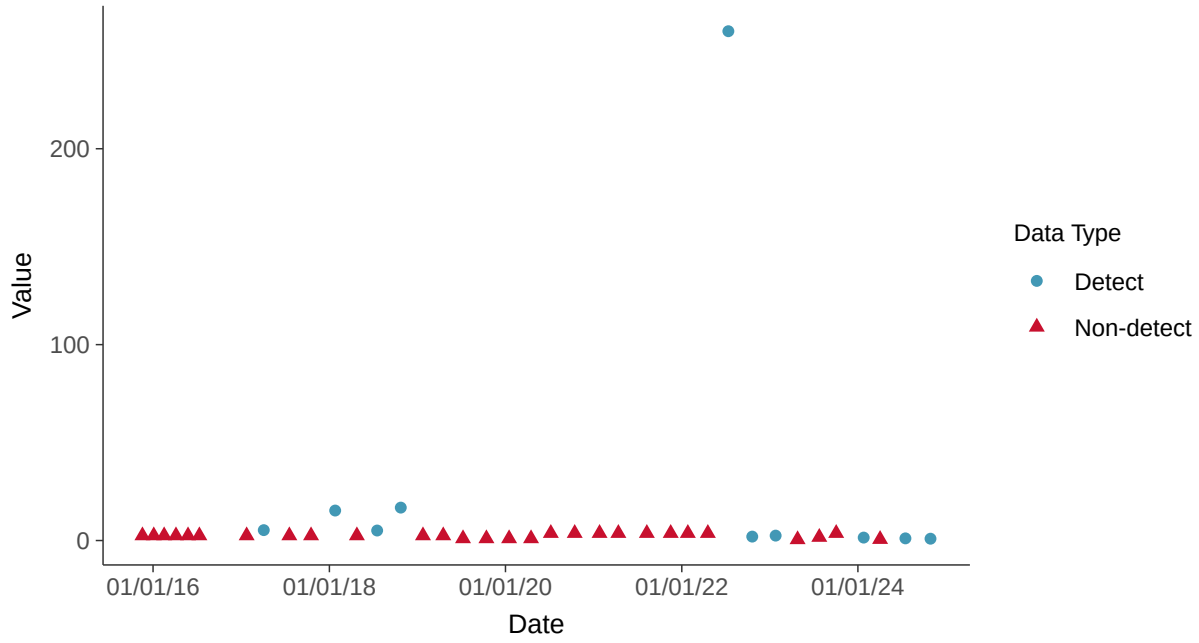


App. IV: Chromium, MW-5

ID: 05_03_109

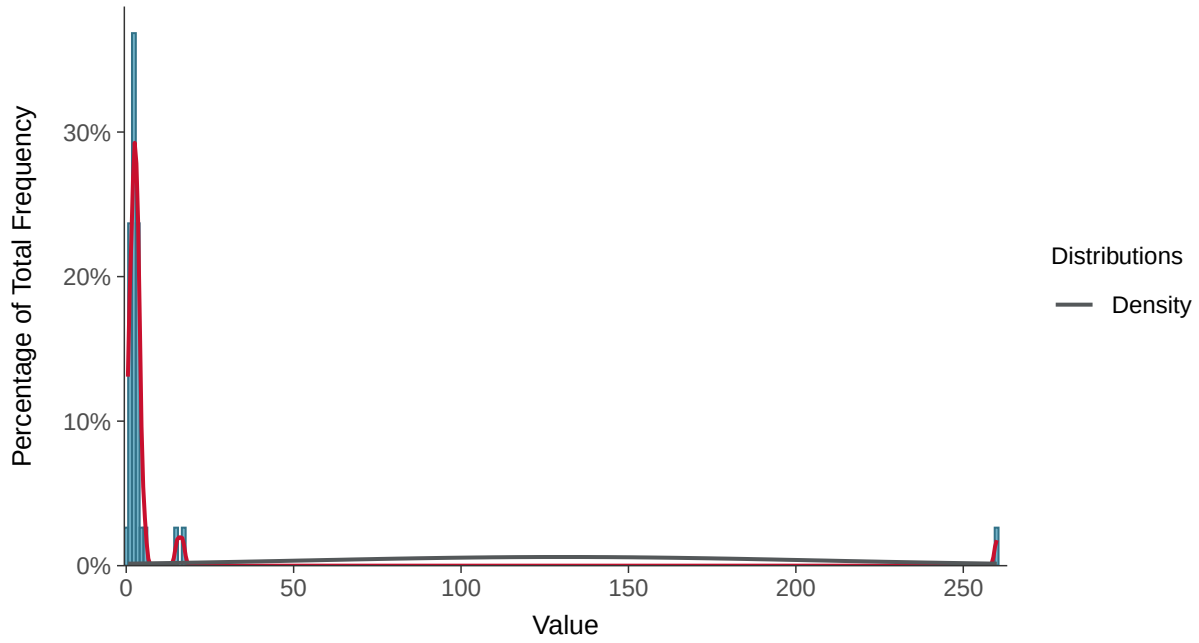
Scatter Plot

Chromium, MW-5 (ug/L)



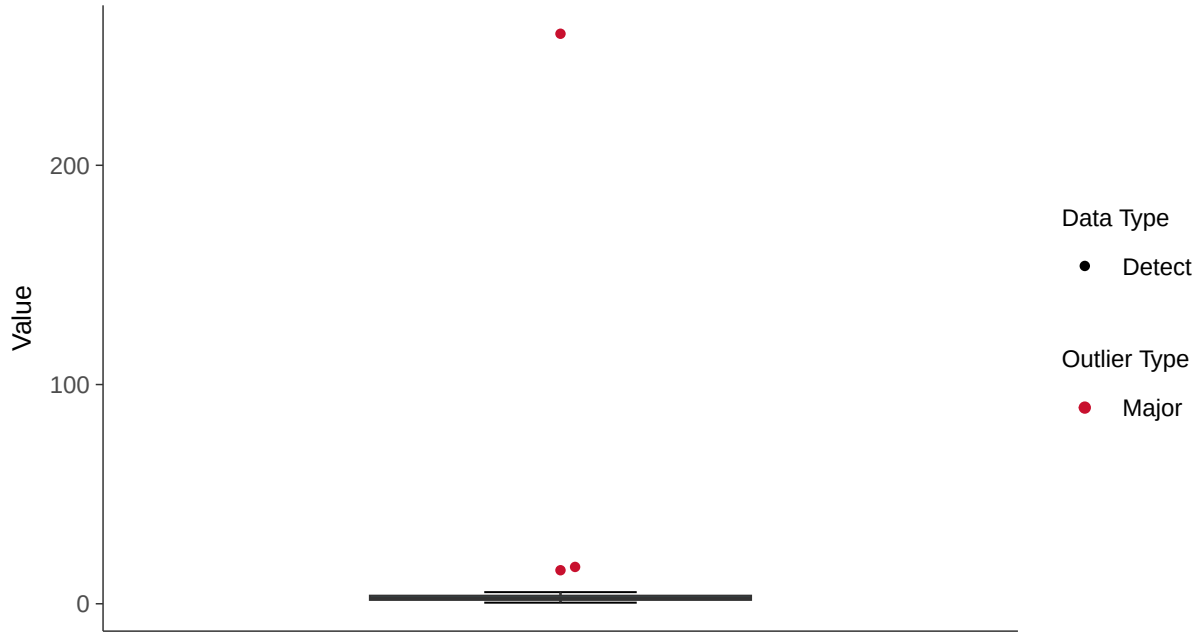
Histogram

Chromium, MW-5 (ug/L)



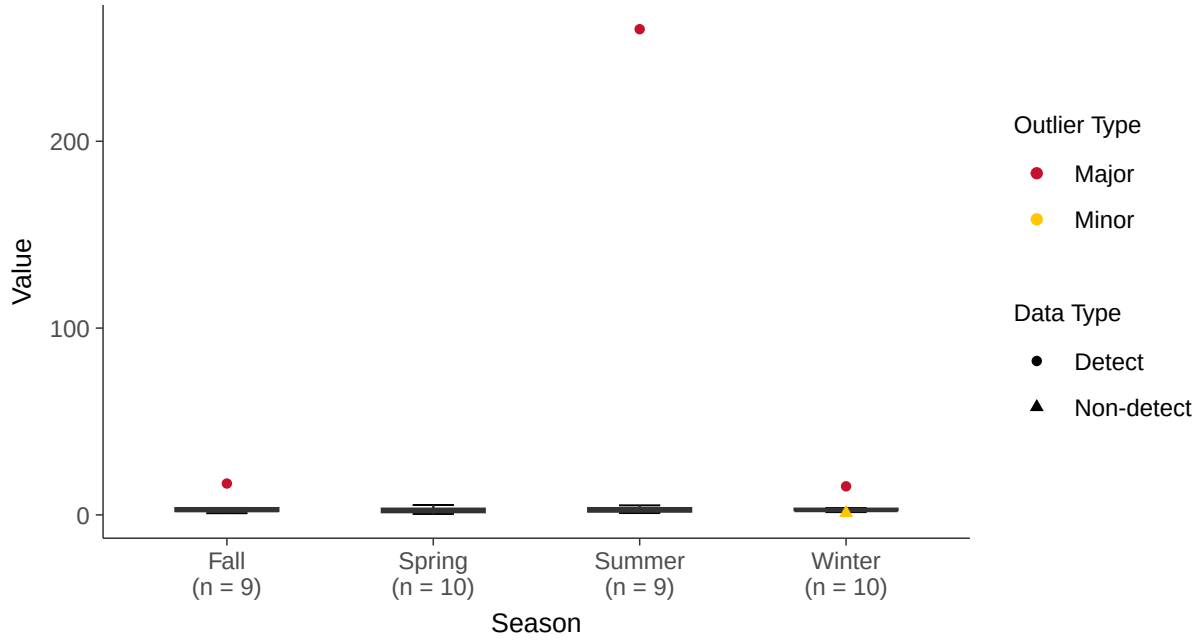
Boxplot

Chromium, MW-5 (ug/L)



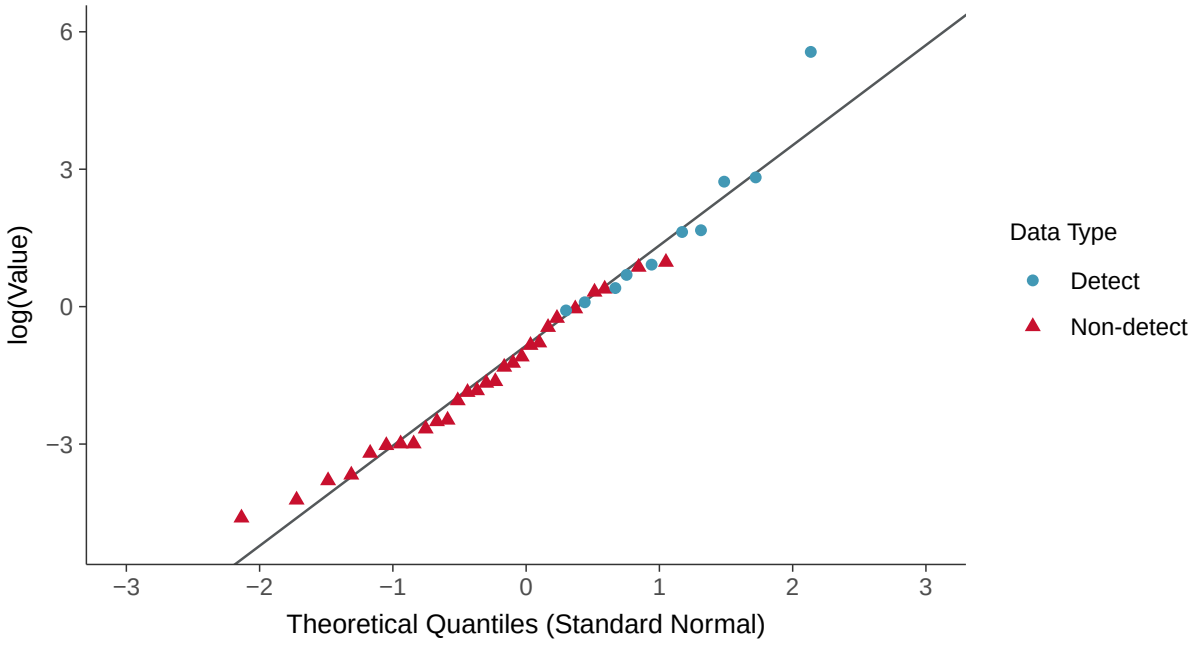
Boxplot by Season

Chromium, MW-5 (ug/L)



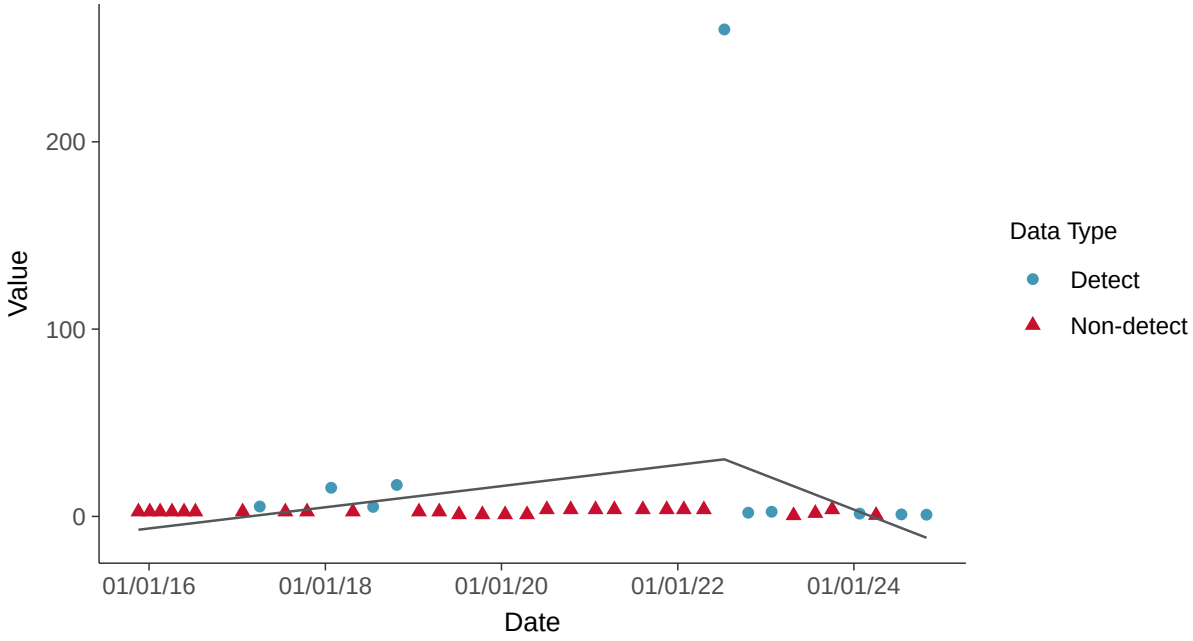
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-5 (ug/L)



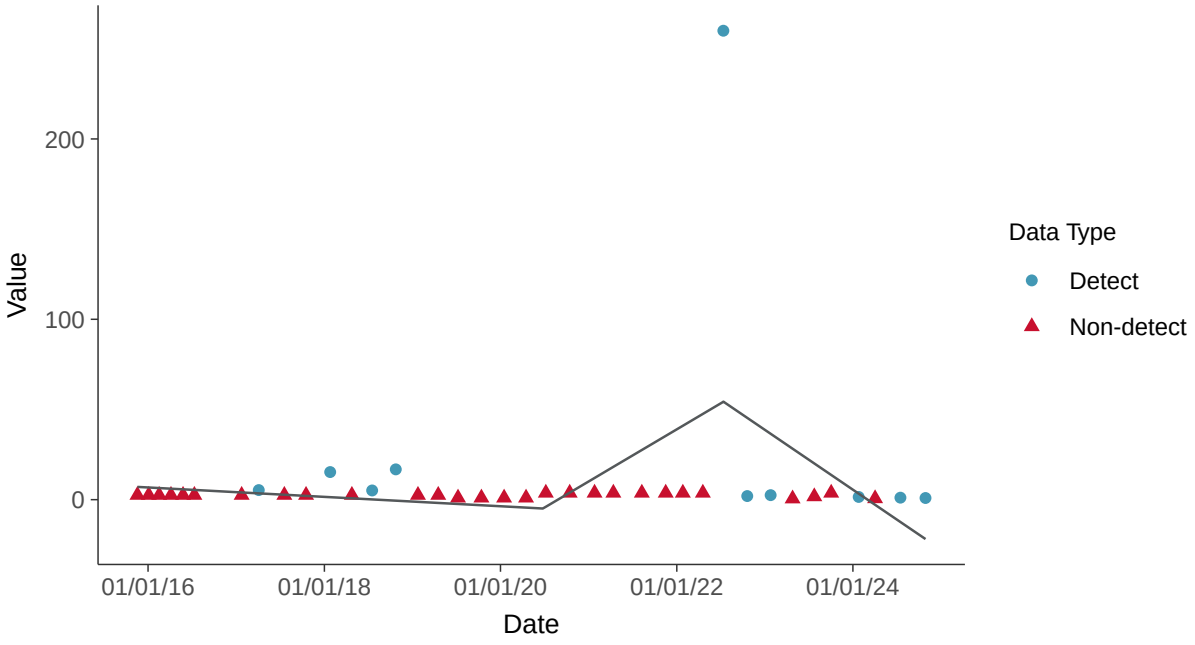
Trend Regression: Piecewise Linear-Linear

Chromium, MW-5 (ug/L)



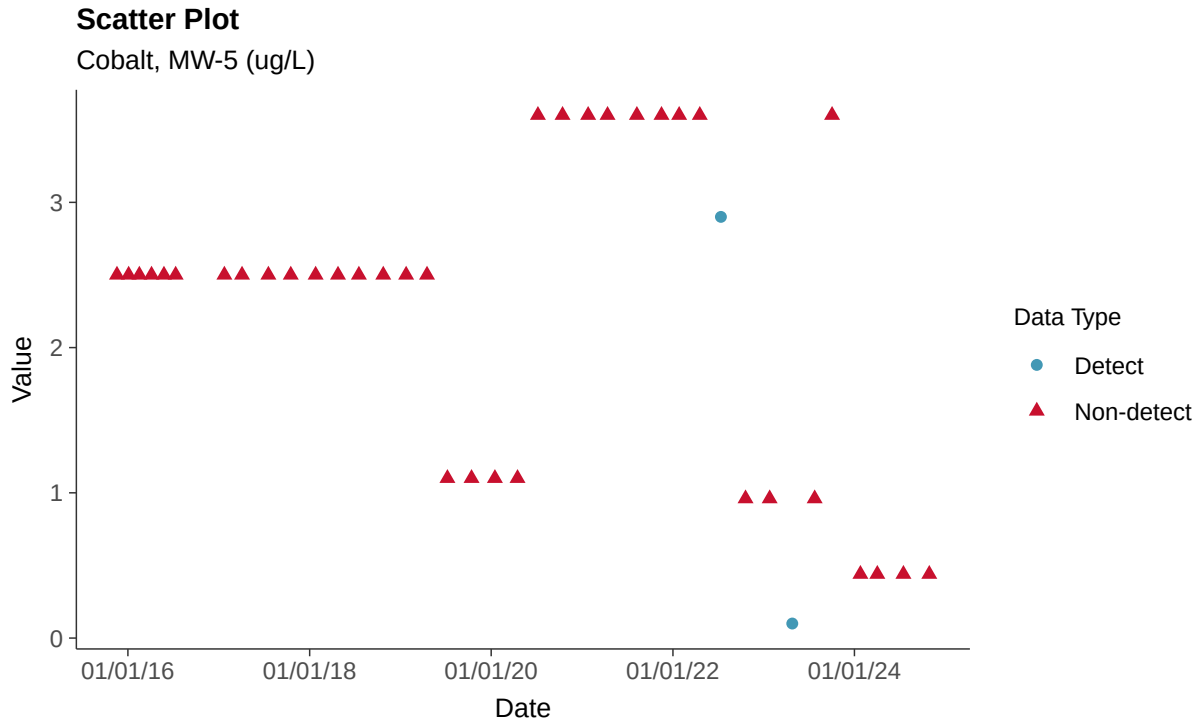
Trend Regression: Piecewise Linear-Linear-Linear

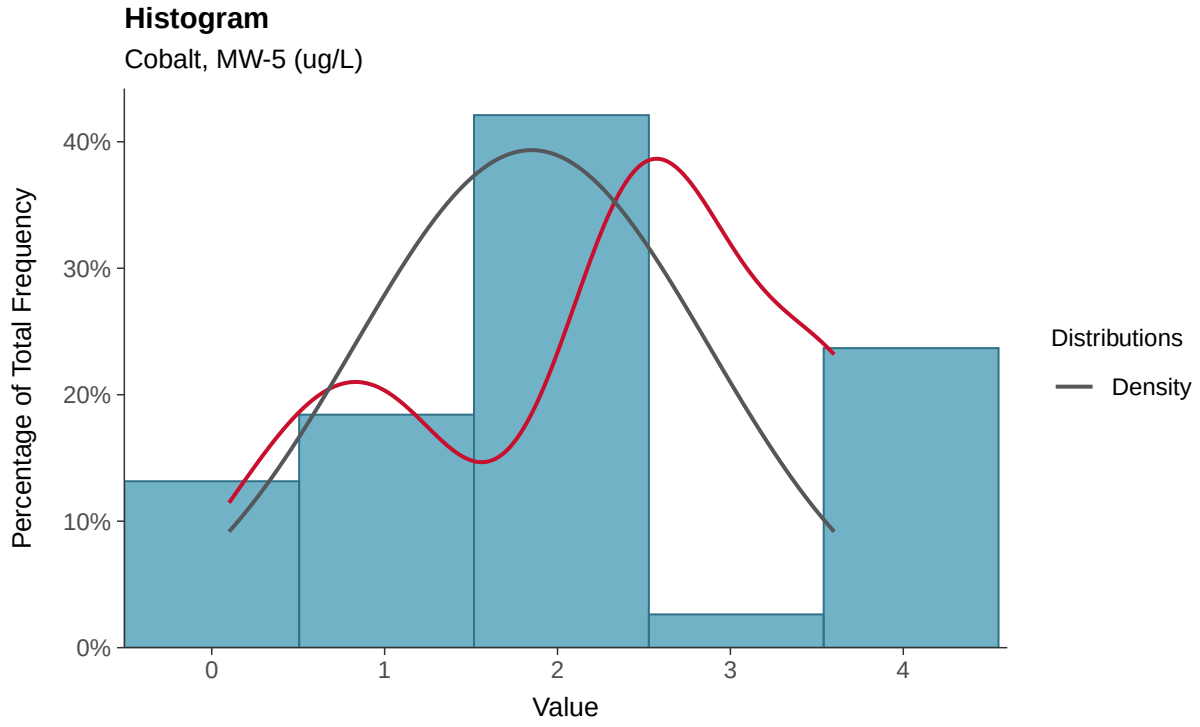
Chromium, MW-5 (ug/L)



App. IV: Cobalt, MW-5

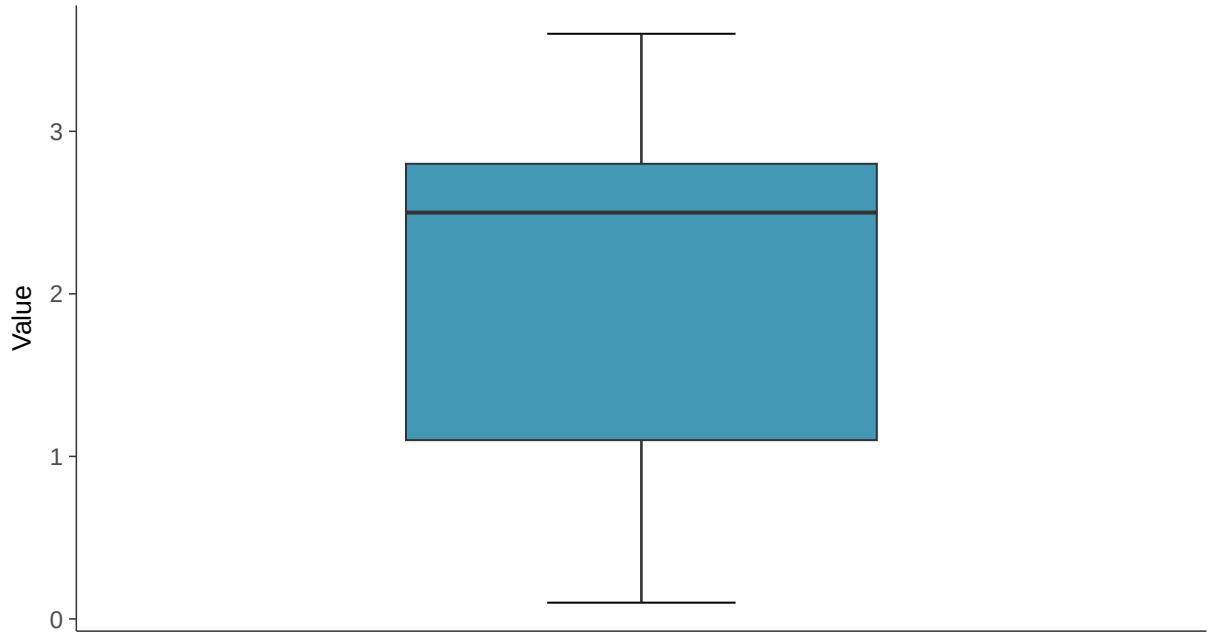
ID: 05_03_110





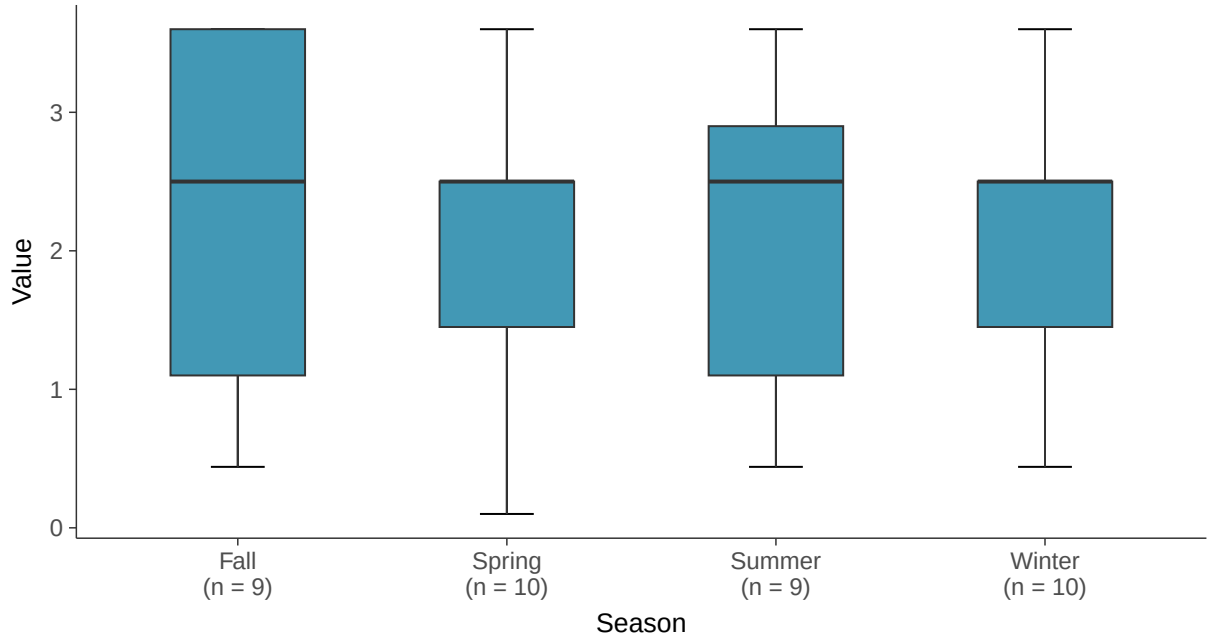
Boxplot

Cobalt, MW-5 (ug/L)



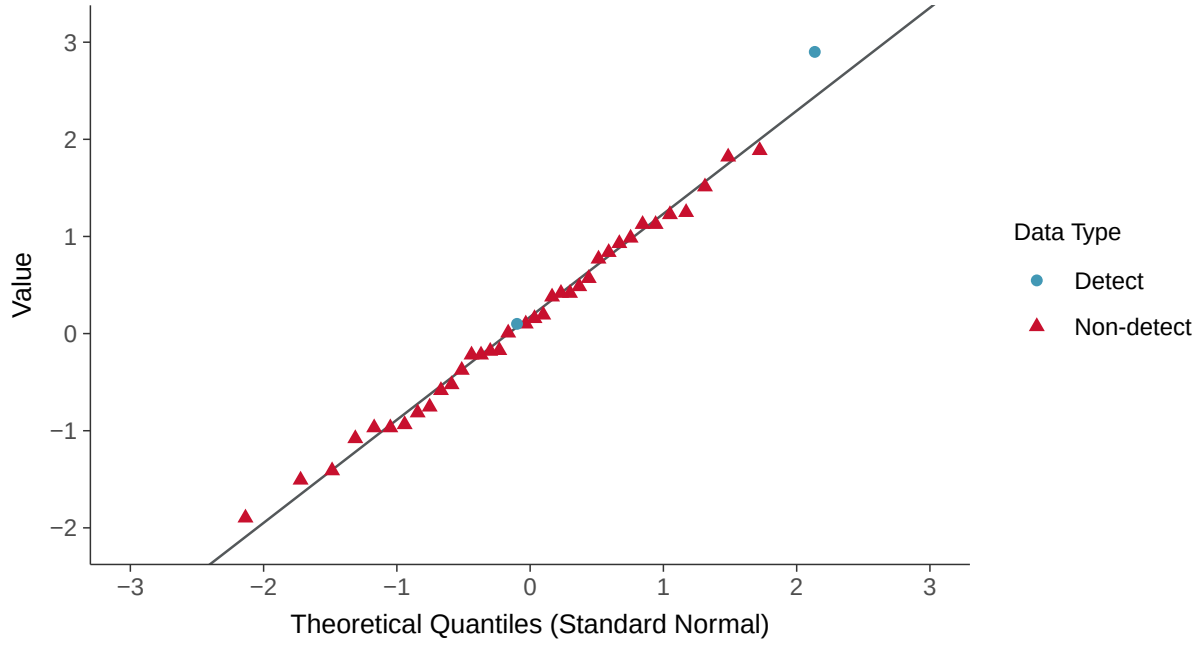
Boxplot by Season

Cobalt, MW-5 (ug/L)



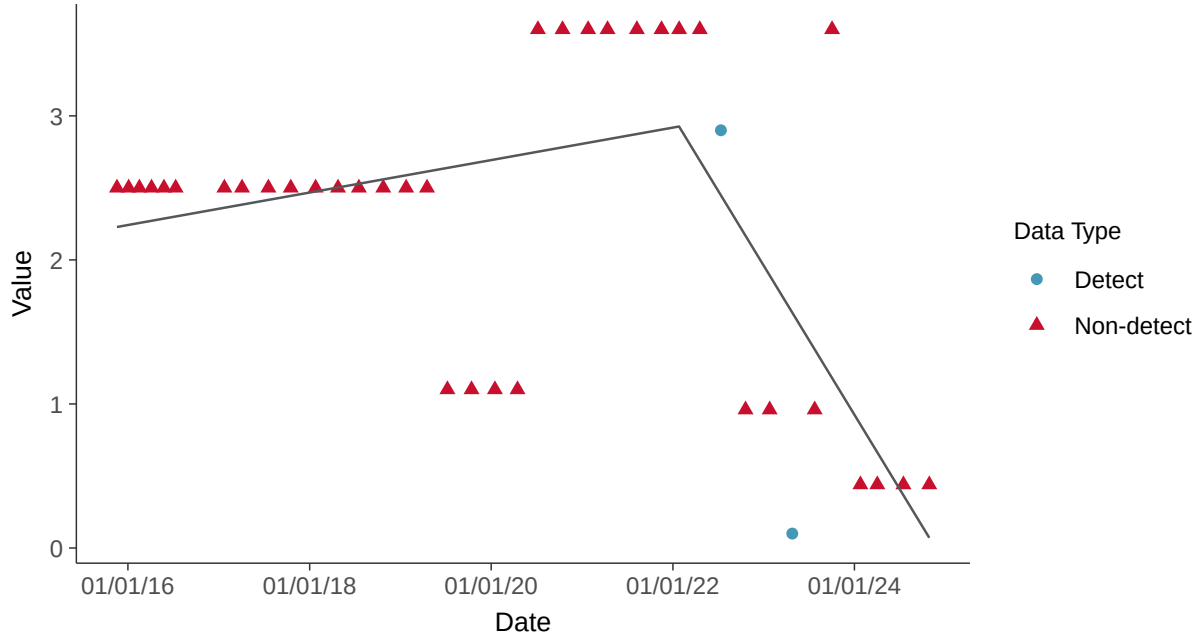
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-5 (ug/L)



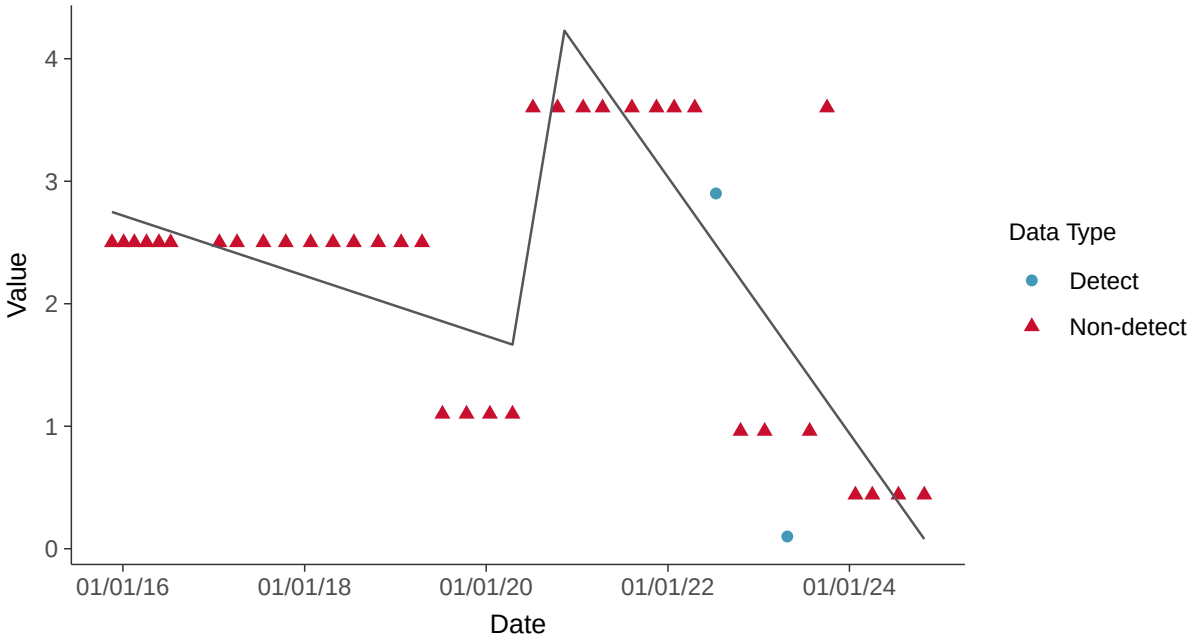
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-5 (ug/L)



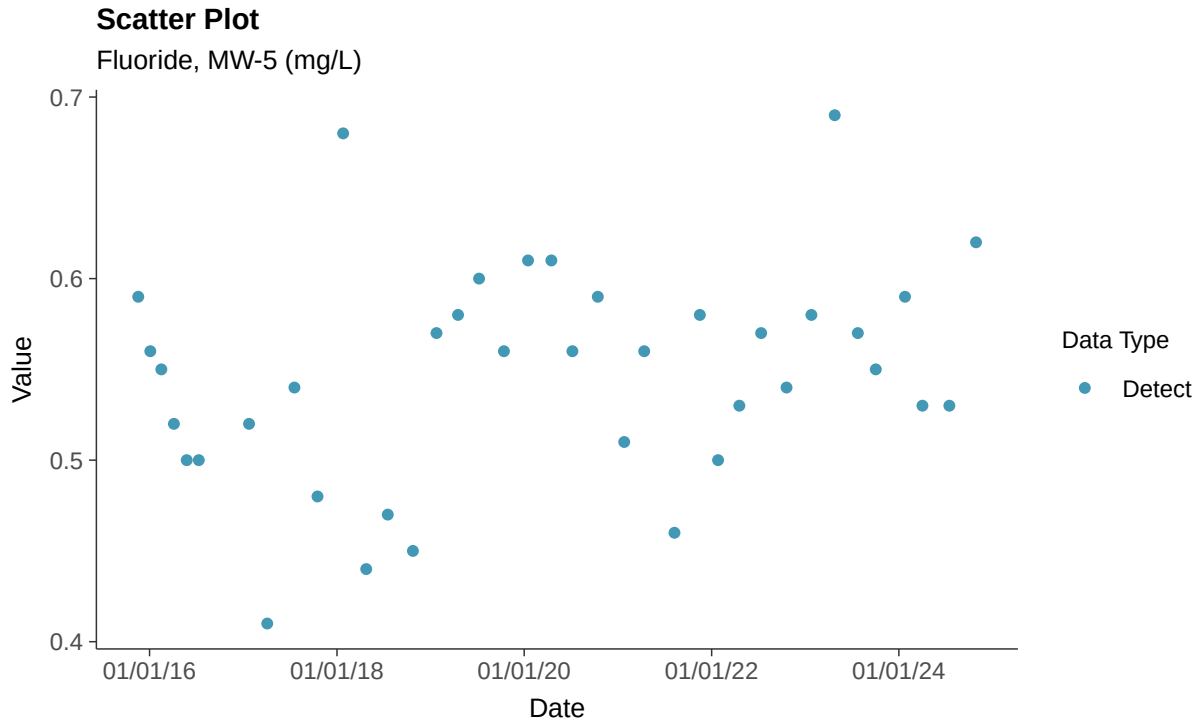
Trend Regression: Piecewise Linear-Linear-Linear

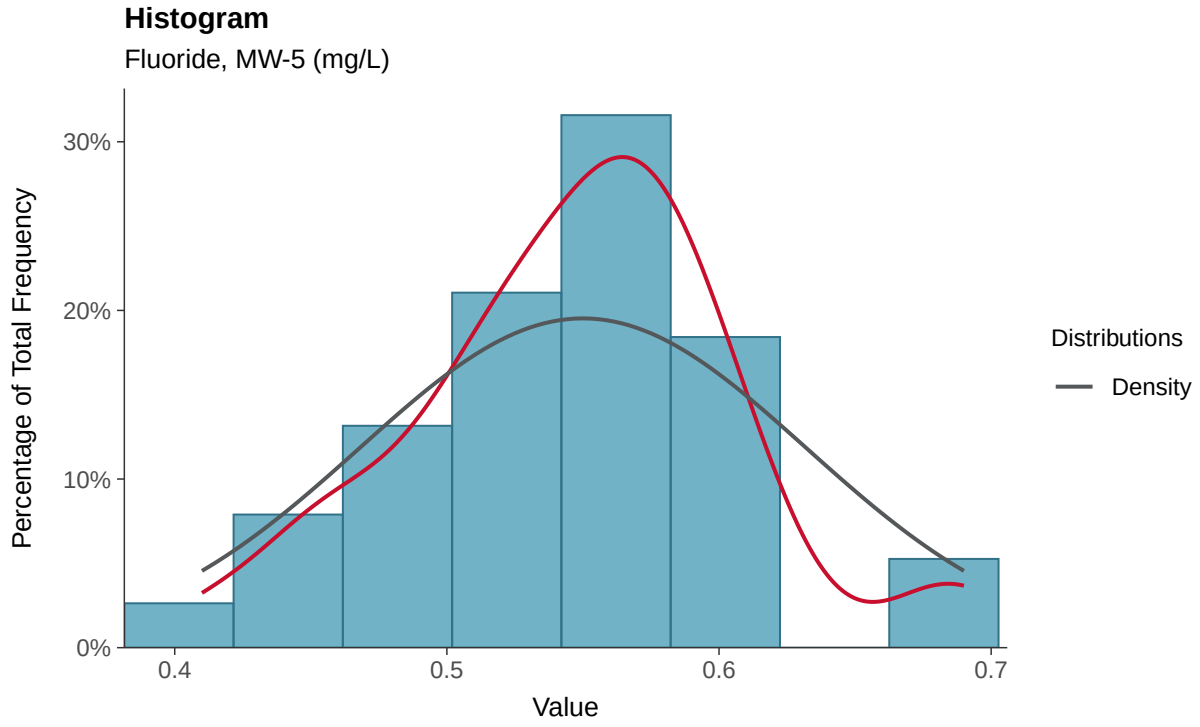
Cobalt, MW-5 (ug/L)



App. IV: Fluoride, MW-5

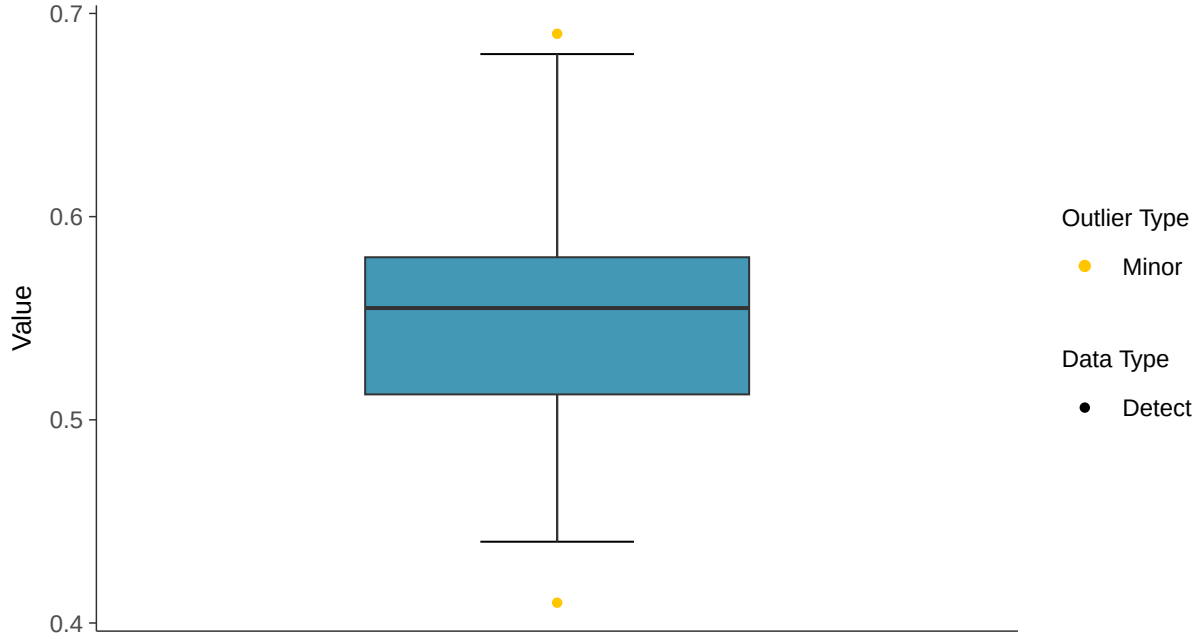
ID: 05_03_112





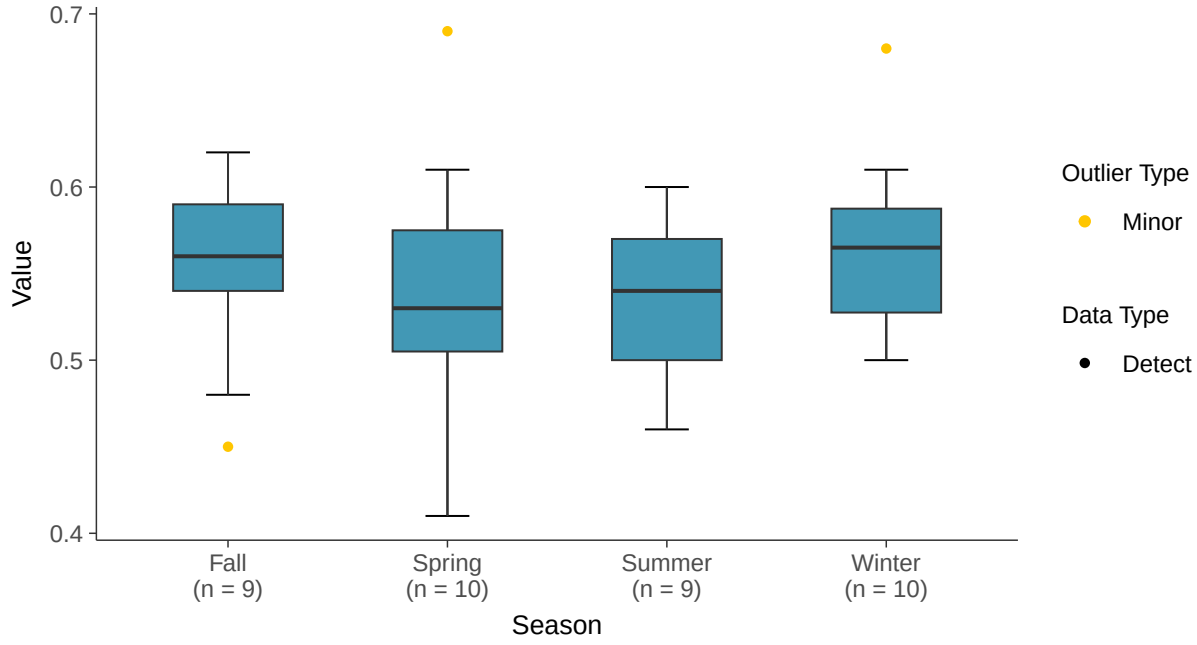
Boxplot

Fluoride, MW-5 (mg/L)



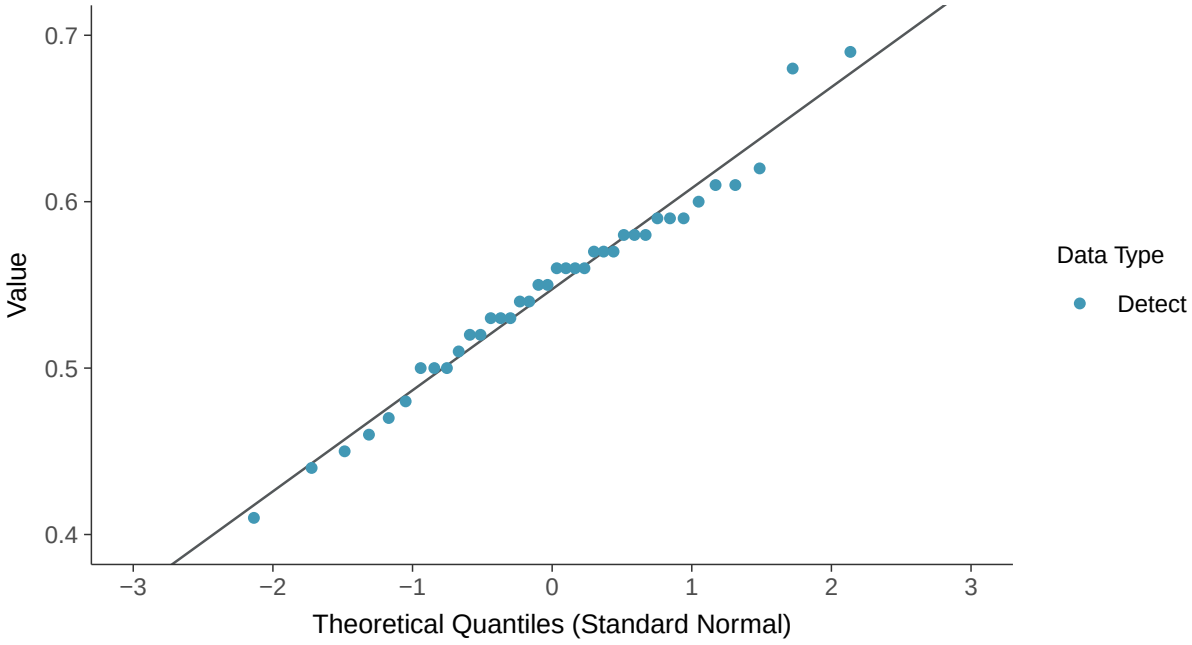
Boxplot by Season

Fluoride, MW-5 (mg/L)



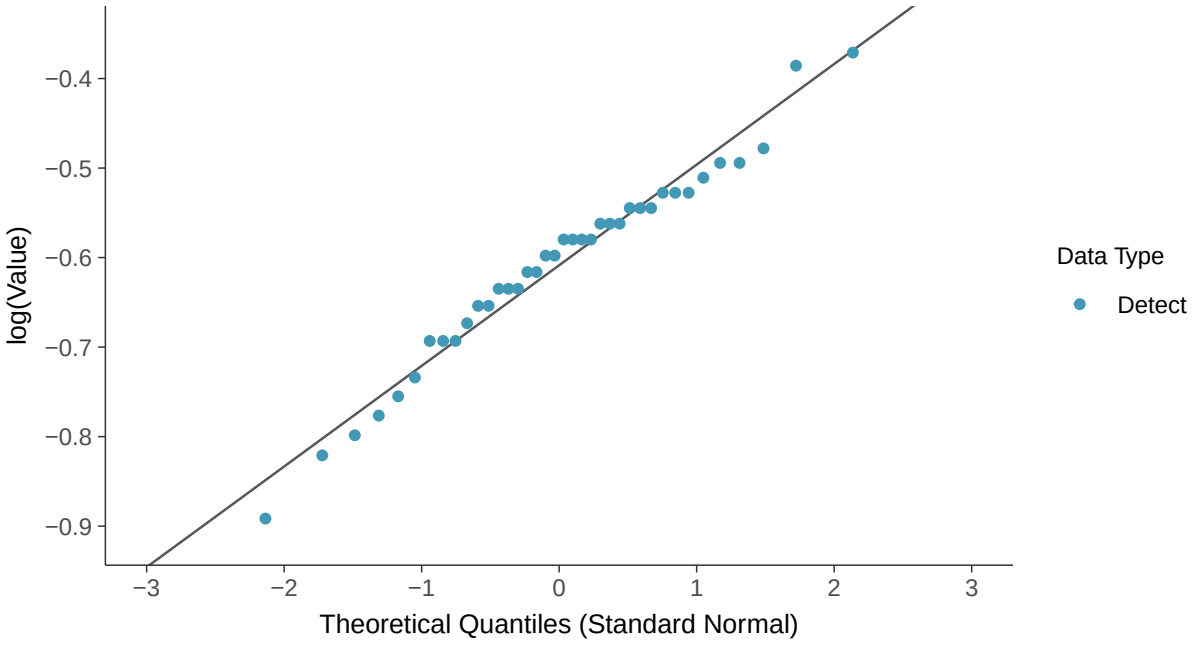
Normal Q-Q plot

Fluoride, MW-5 (mg/L)



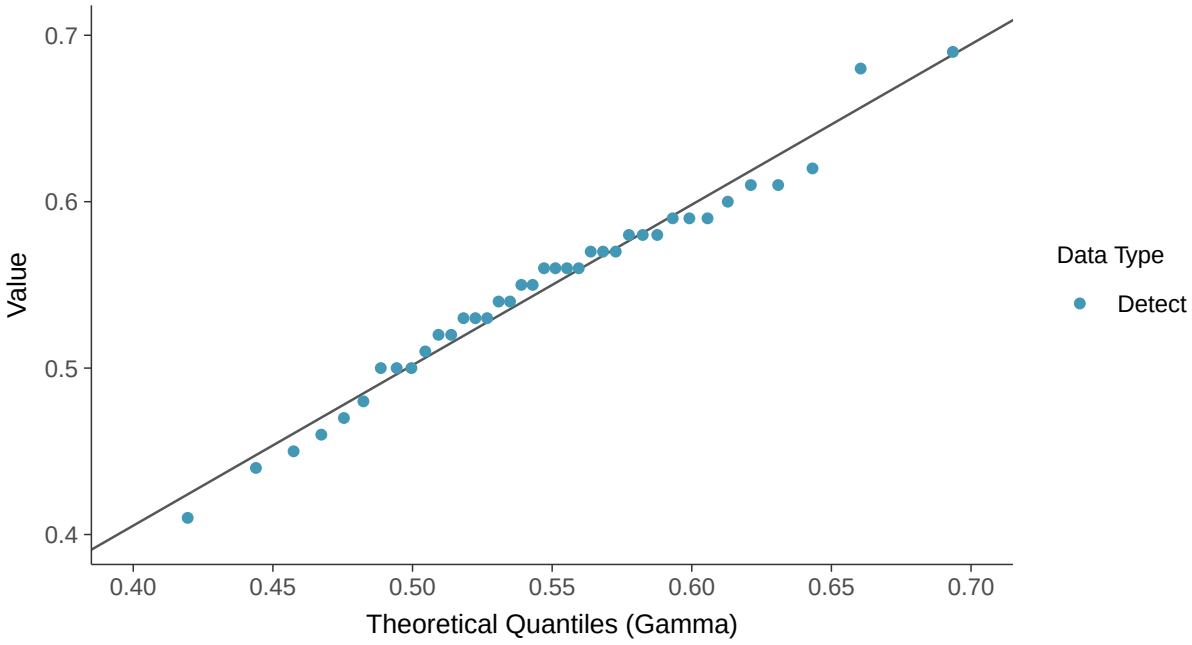
Lognormal Q-Q plot

Fluoride, MW-5 (mg/L)



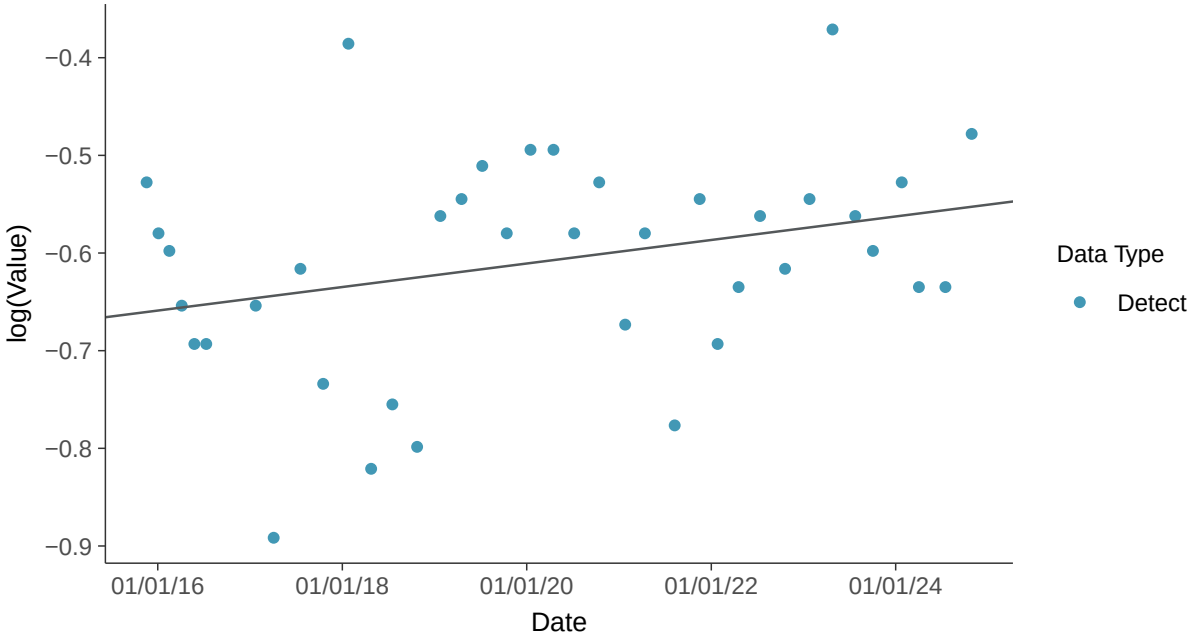
Gamma Q-Q plot

Fluoride, MW-5 (mg/L)



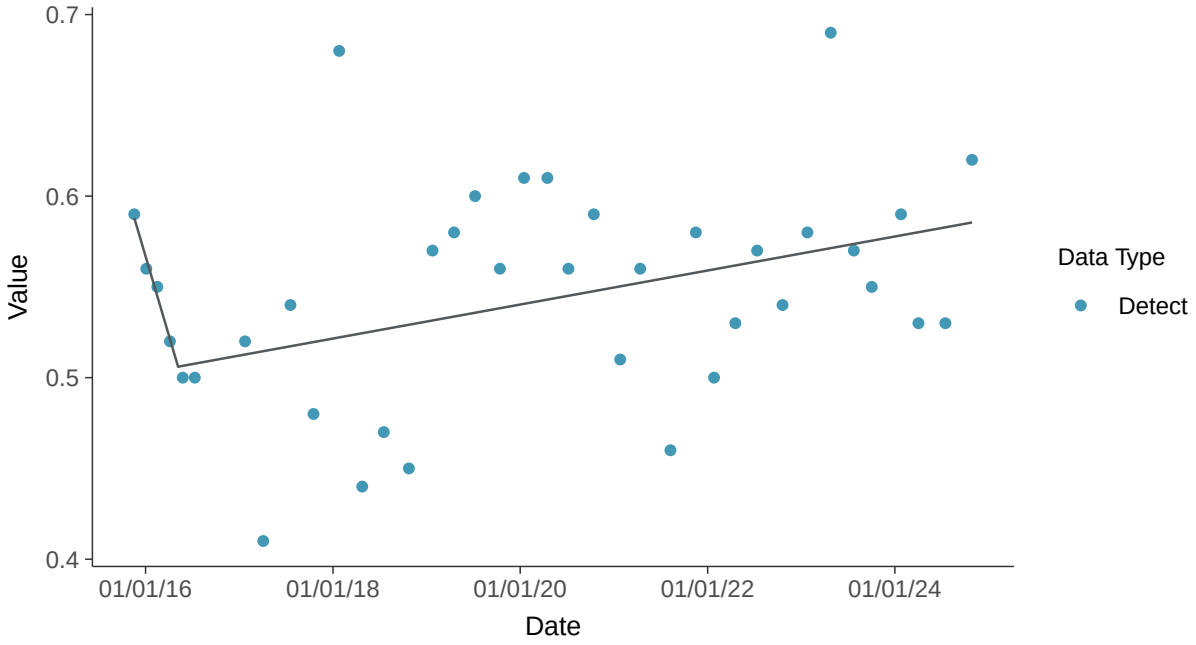
Trend Regression: Lognormal MLE

Fluoride, MW-5 (mg/L)



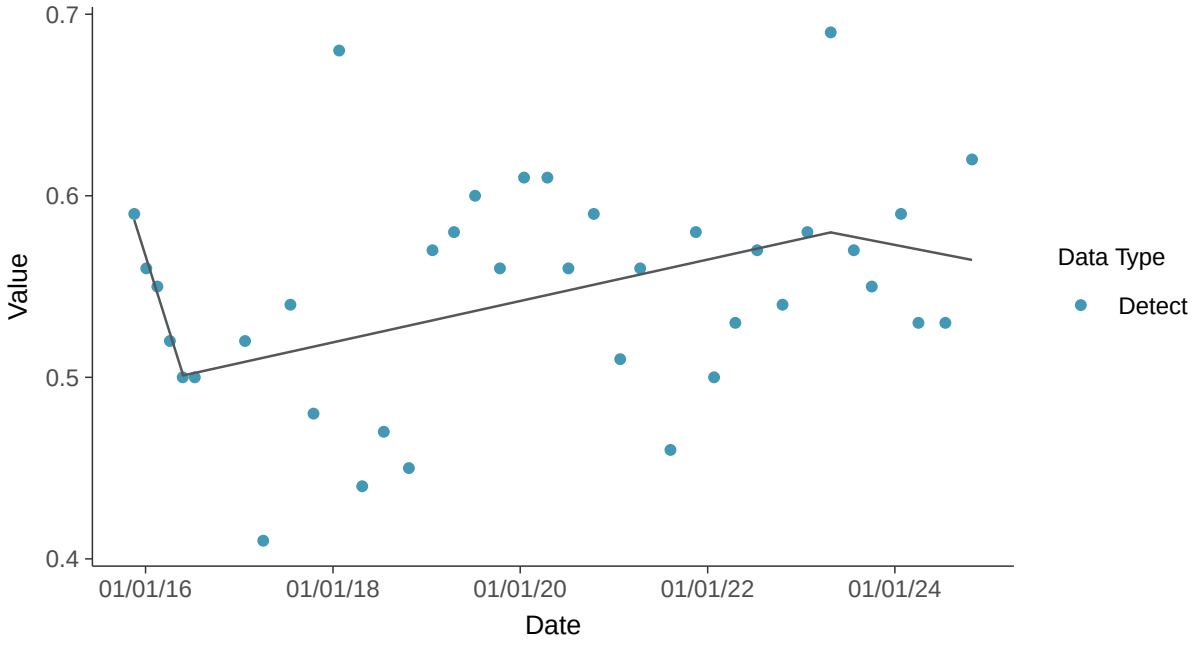
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-5 (mg/L)



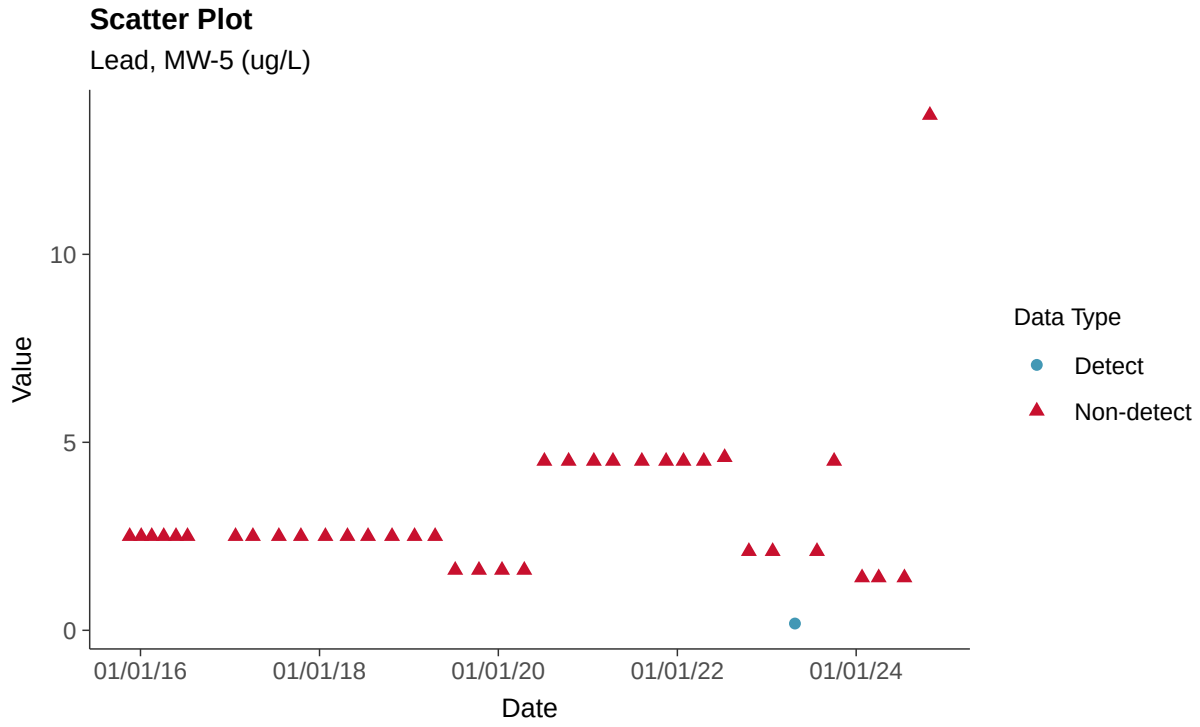
Trend Regression: Piecewise Linear-Linear-Linear

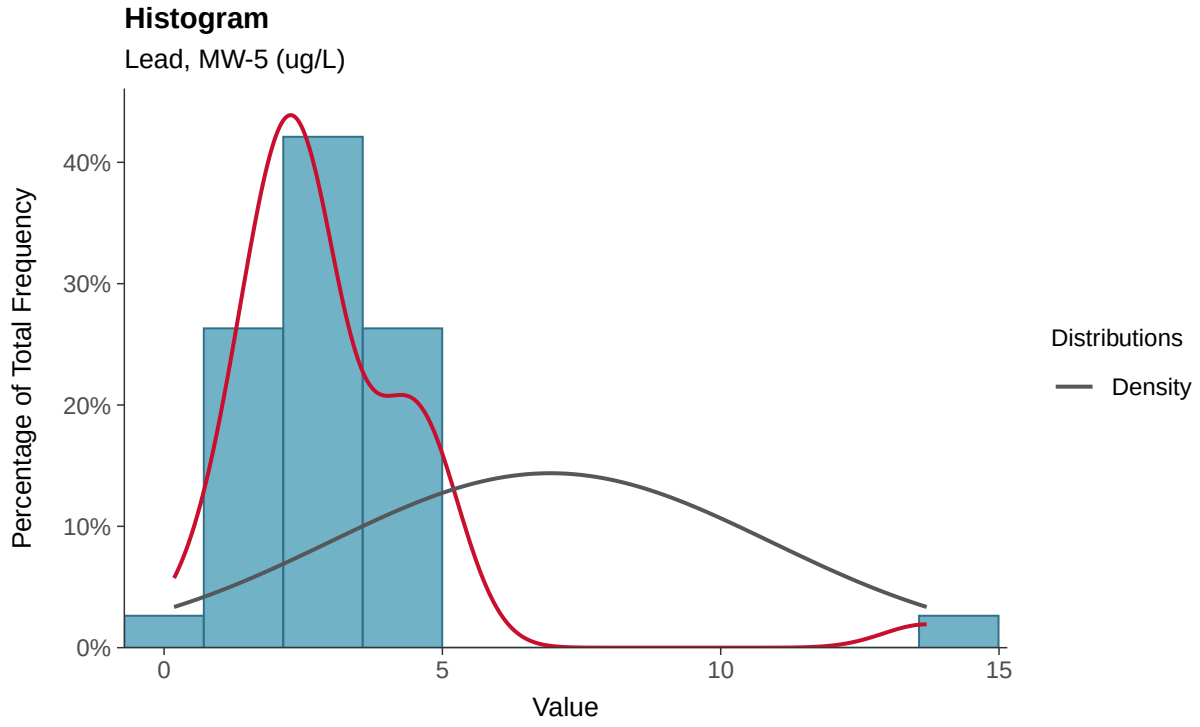
Fluoride, MW-5 (mg/L)



App. IV: Lead, MW-5

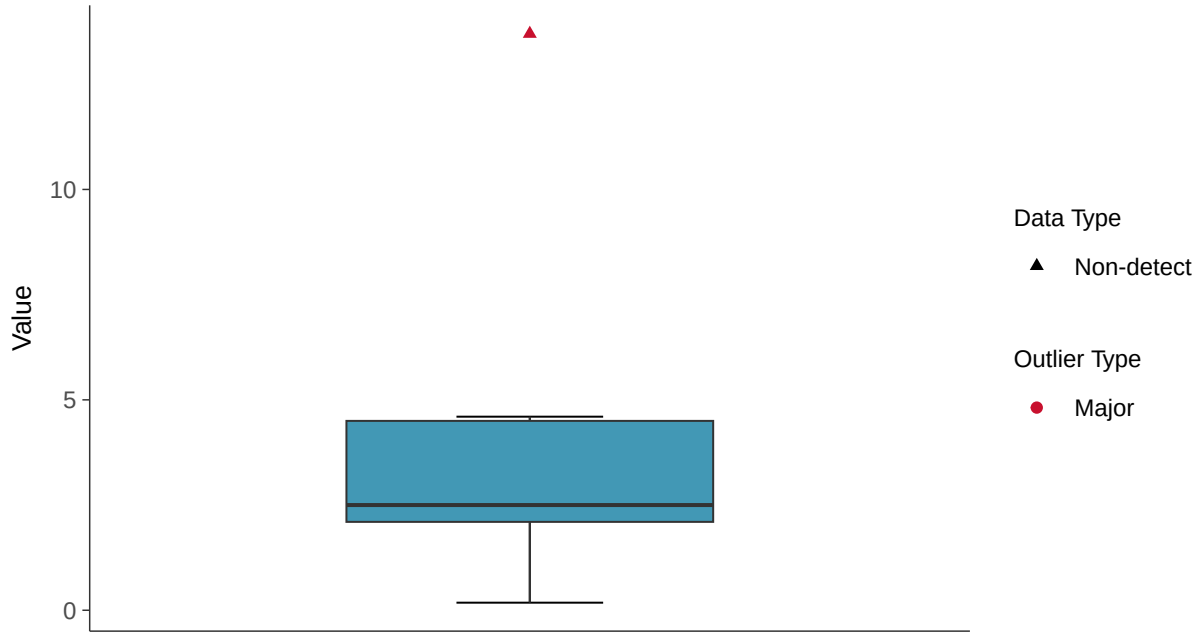
ID: 05_03_113





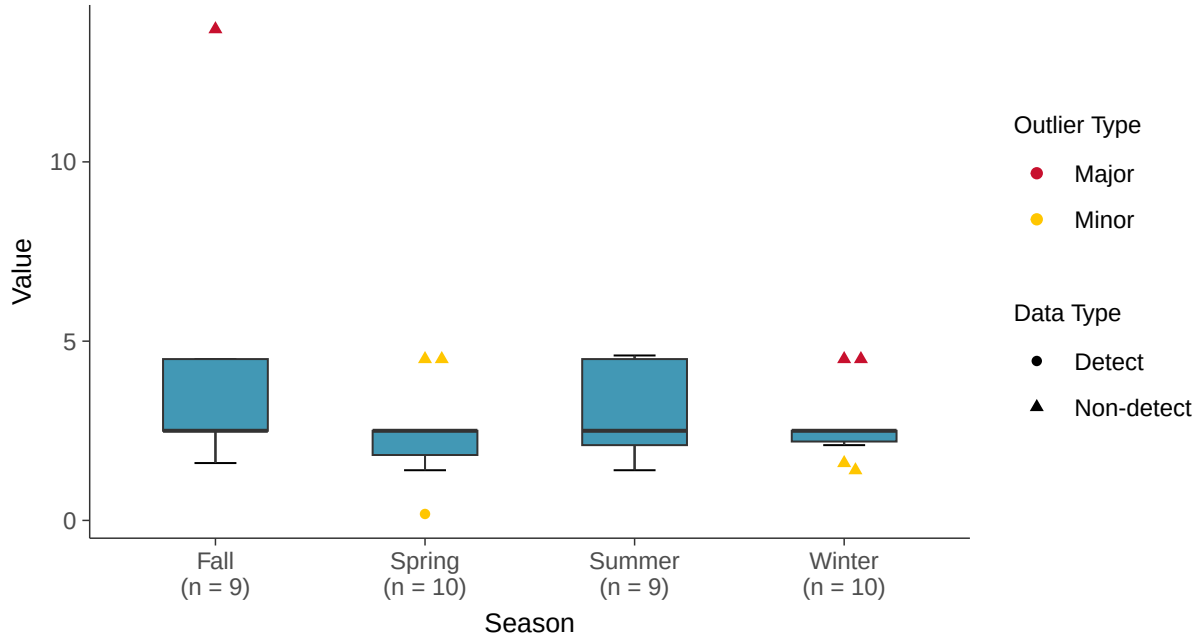
Boxplot

Lead, MW-5 (ug/L)



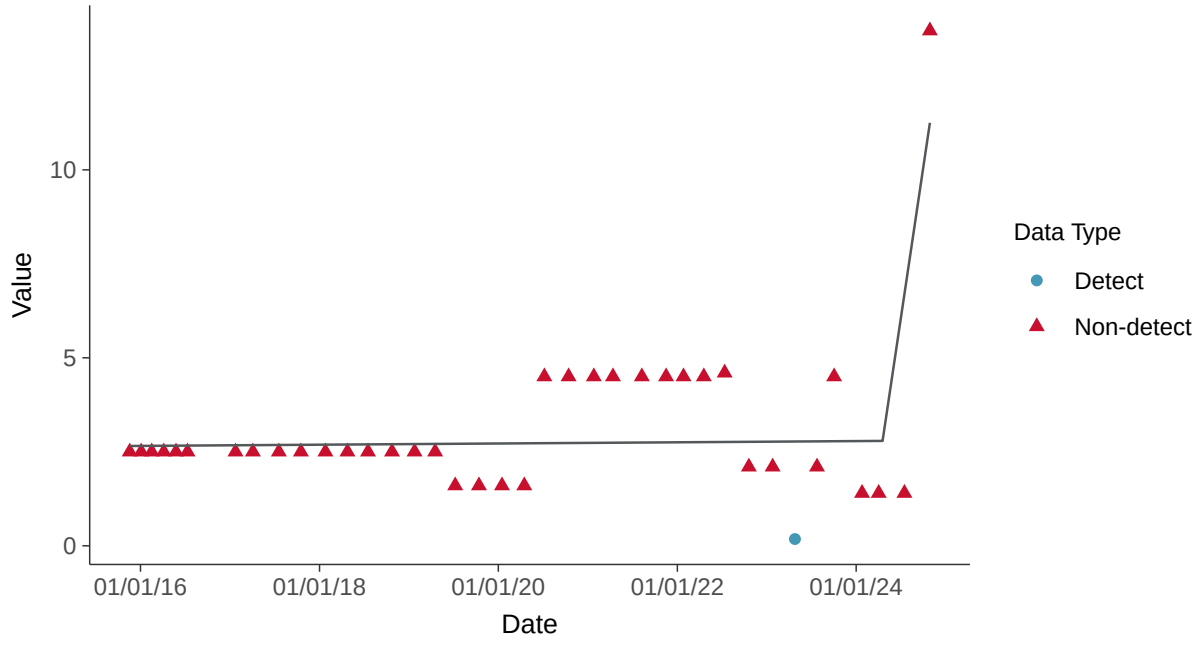
Boxplot by Season

Lead, MW-5 (ug/L)



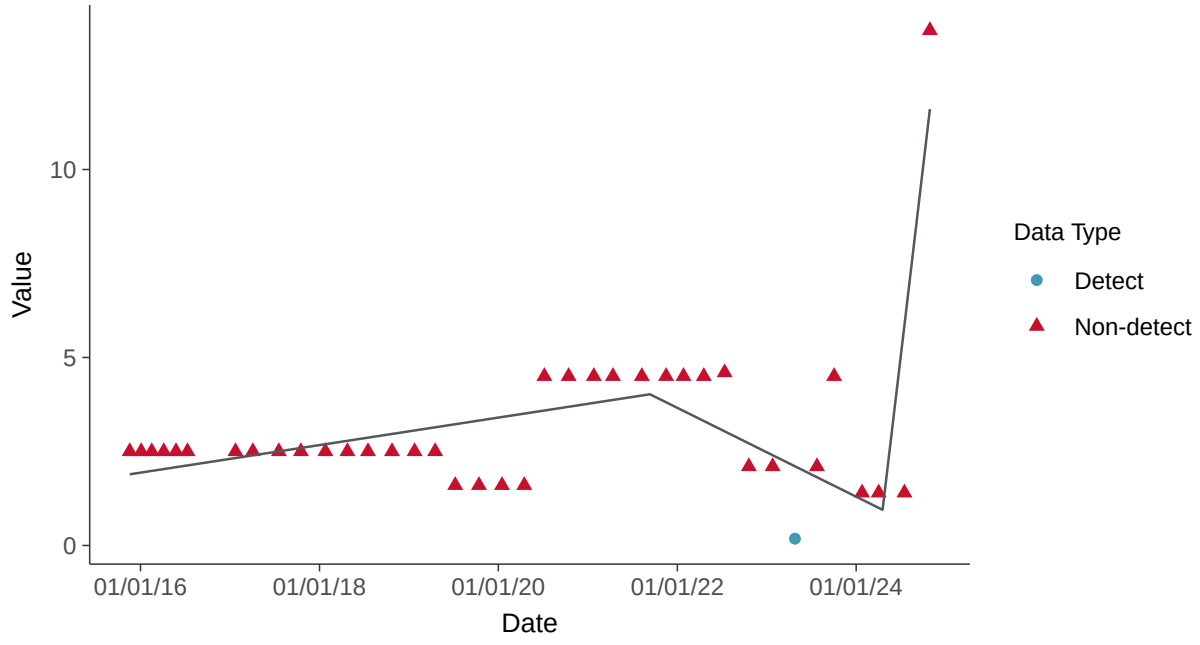
Trend Regression: Piecewise Linear-Linear

Lead, MW-5 (ug/L)



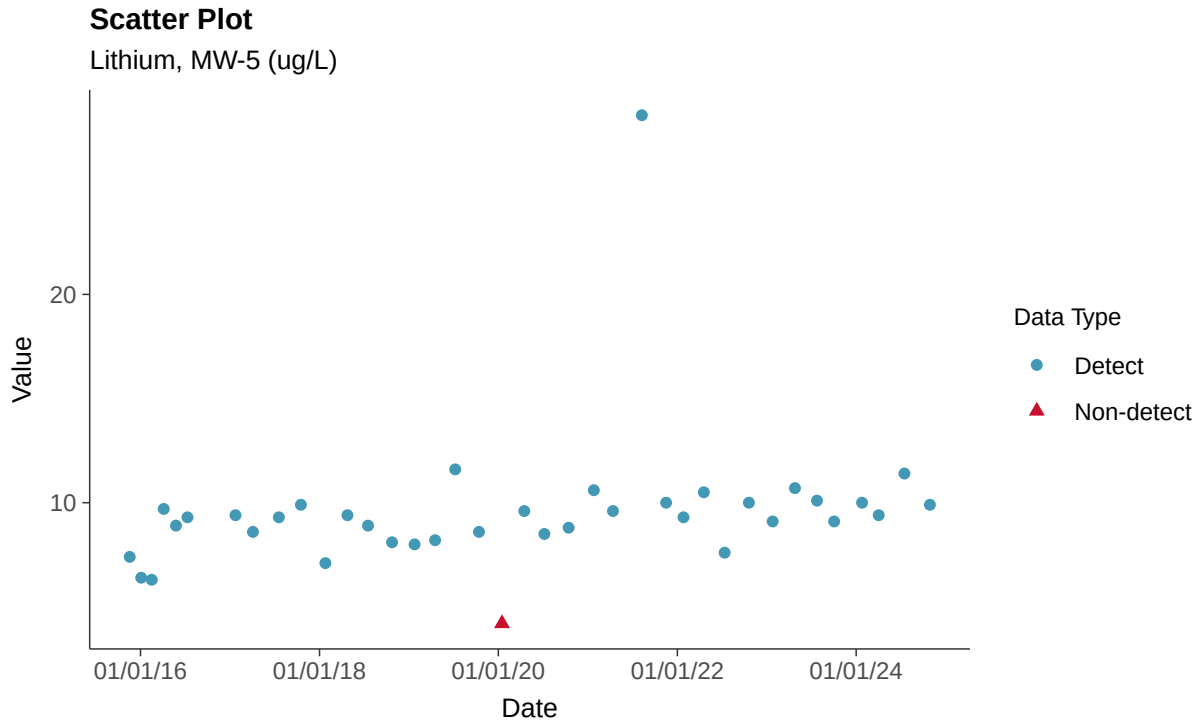
Trend Regression: Piecewise Linear-Linear-Linear

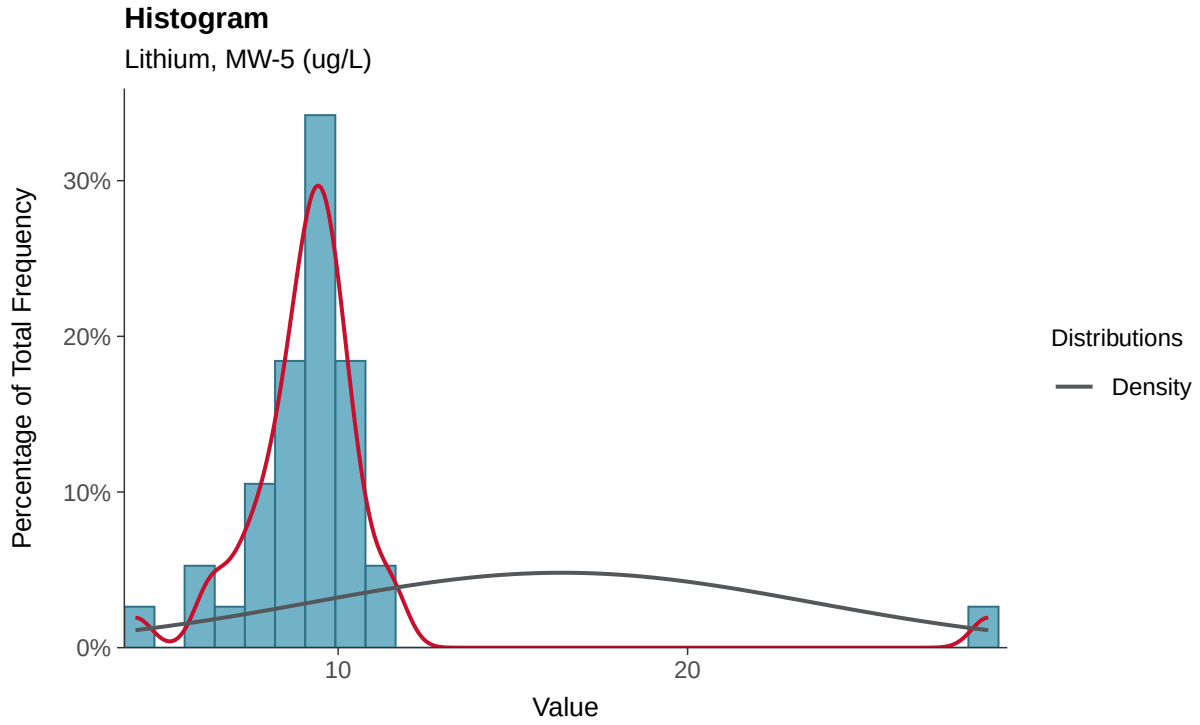
Lead, MW-5 (ug/L)



App. IV: Lithium, MW-5

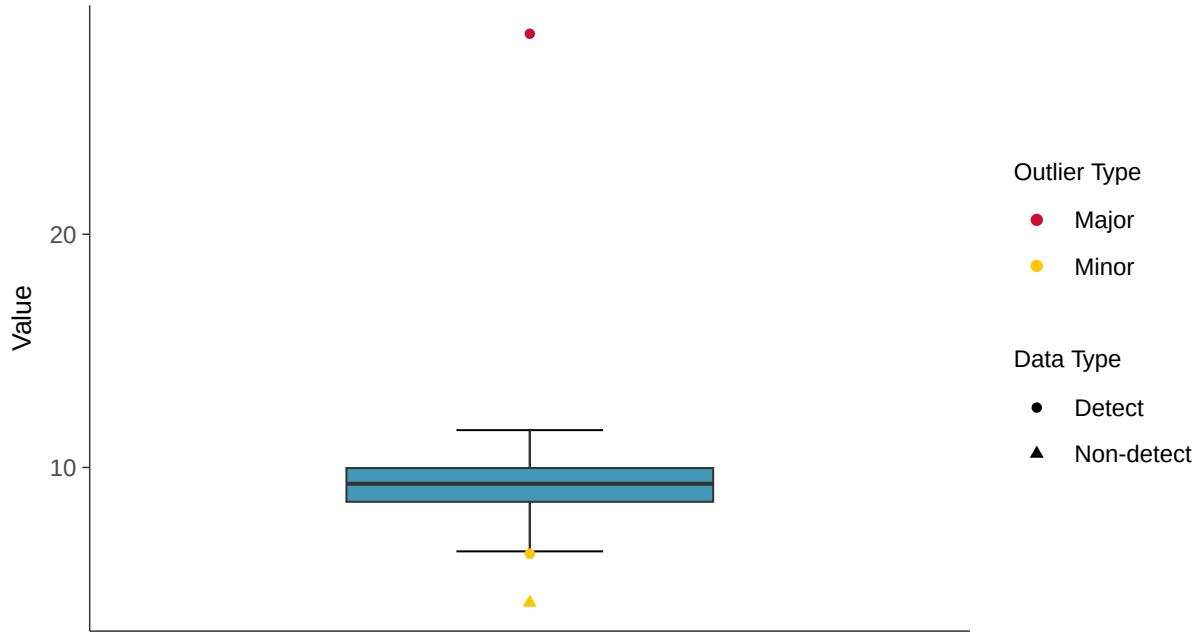
ID: 05_03_114





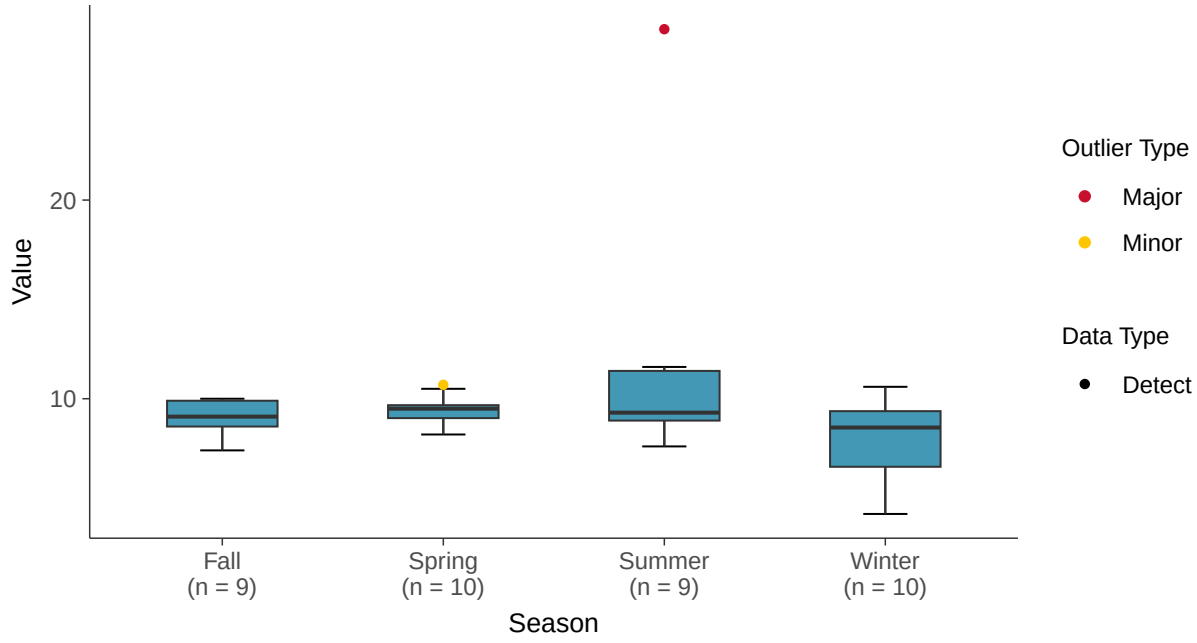
Boxplot

Lithium, MW-5 (ug/L)



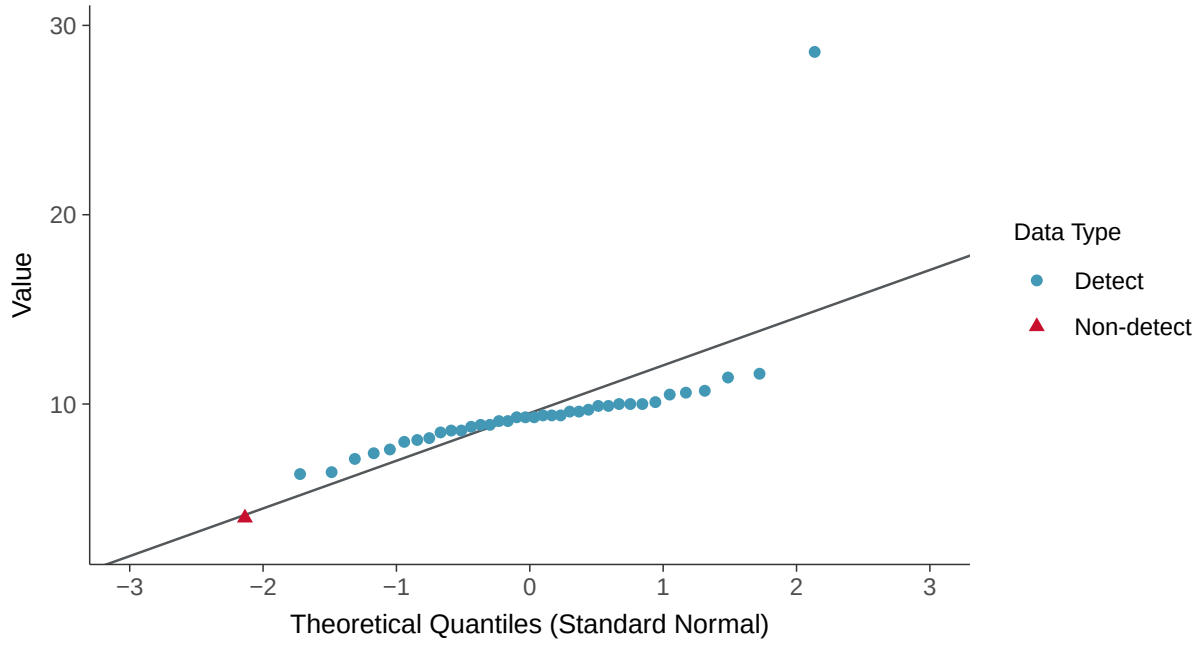
Boxplot by Season

Lithium, MW-5 (ug/L)



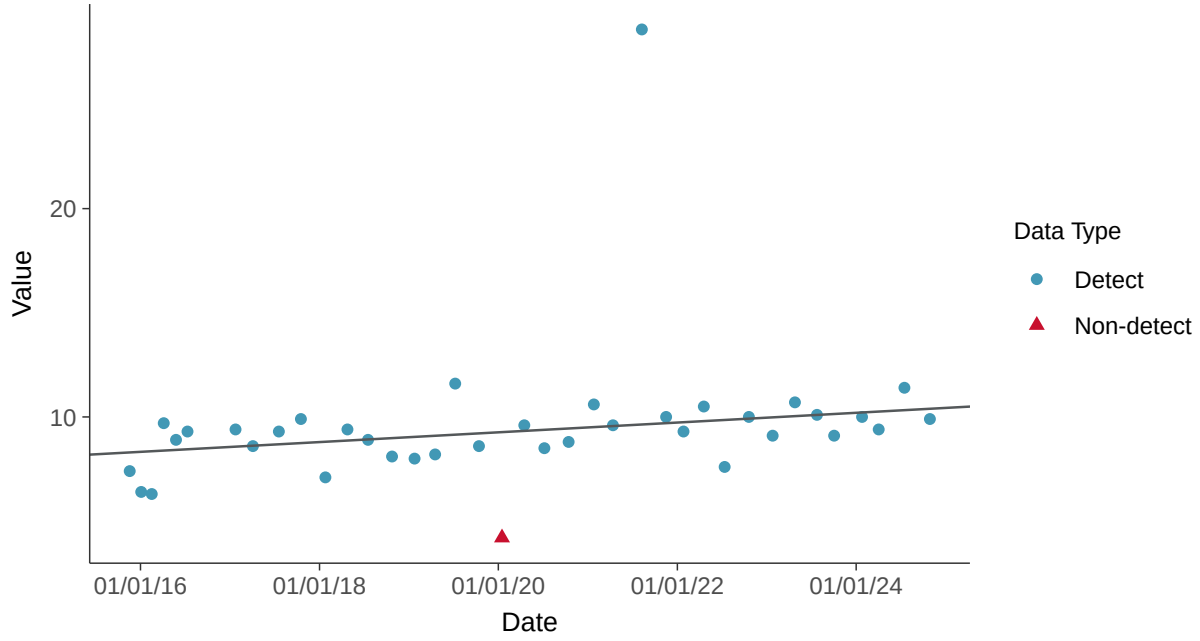
Normal Q-Q plot using ROS Imputed Estimates

Lithium, MW-5 (ug/L)



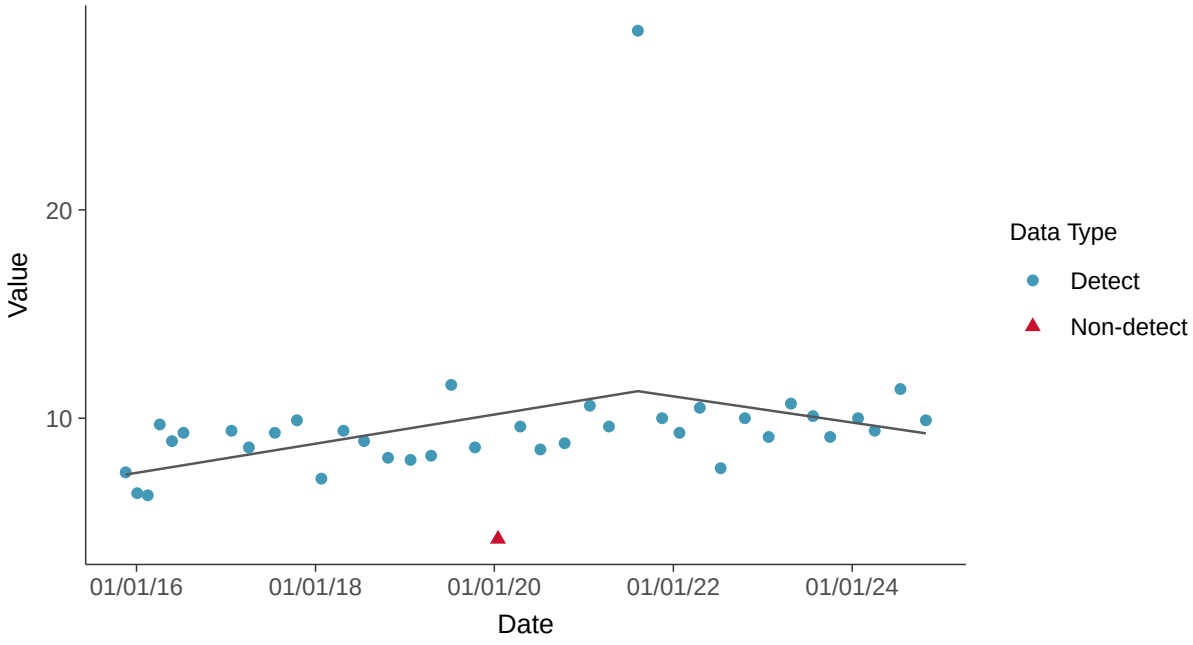
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-5 (ug/L)



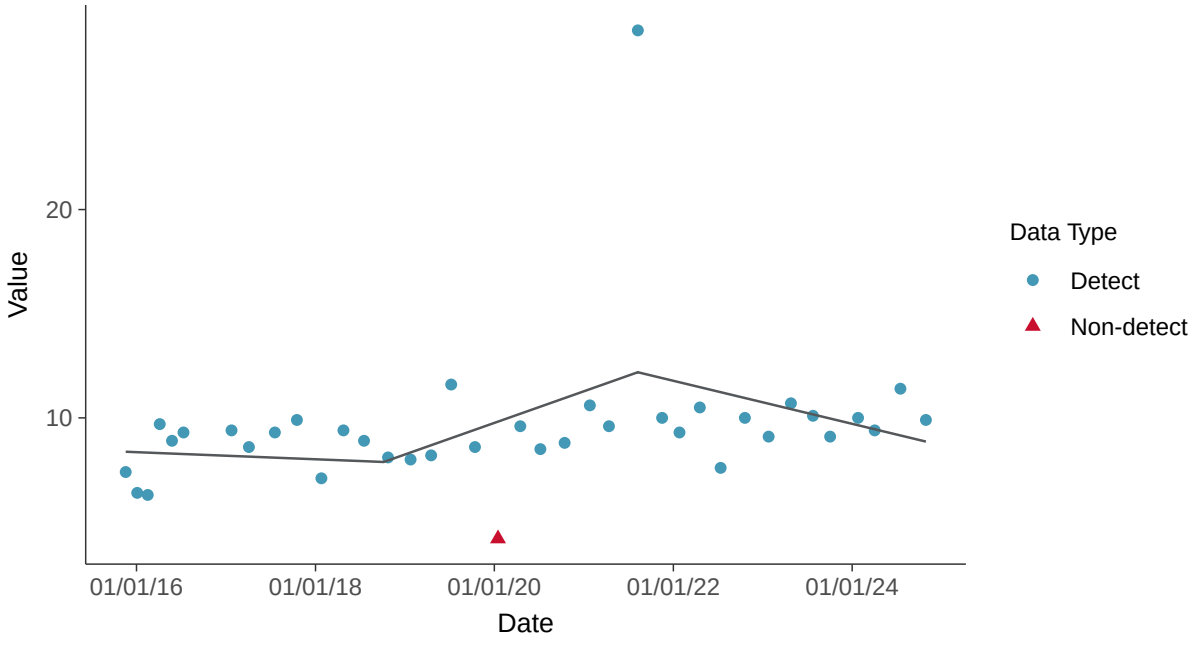
Trend Regression: Piecewise Linear-Linear

Lithium, MW-5 (ug/L)



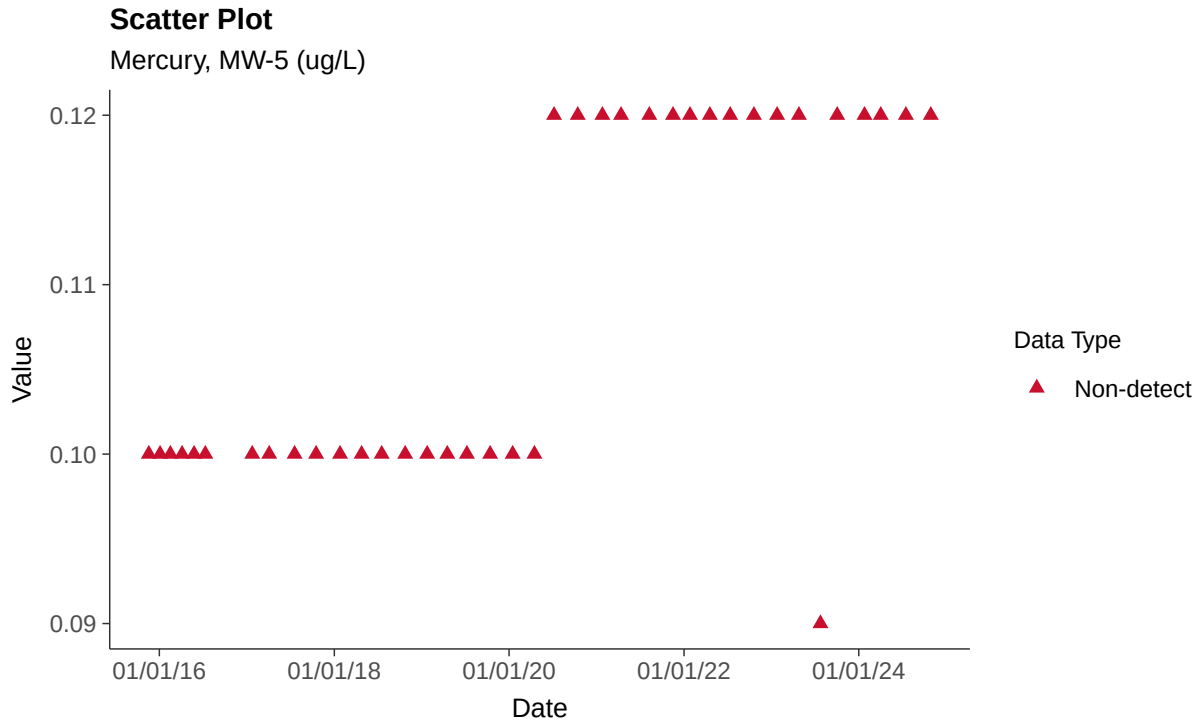
Trend Regression: Piecewise Linear-Linear-Linear

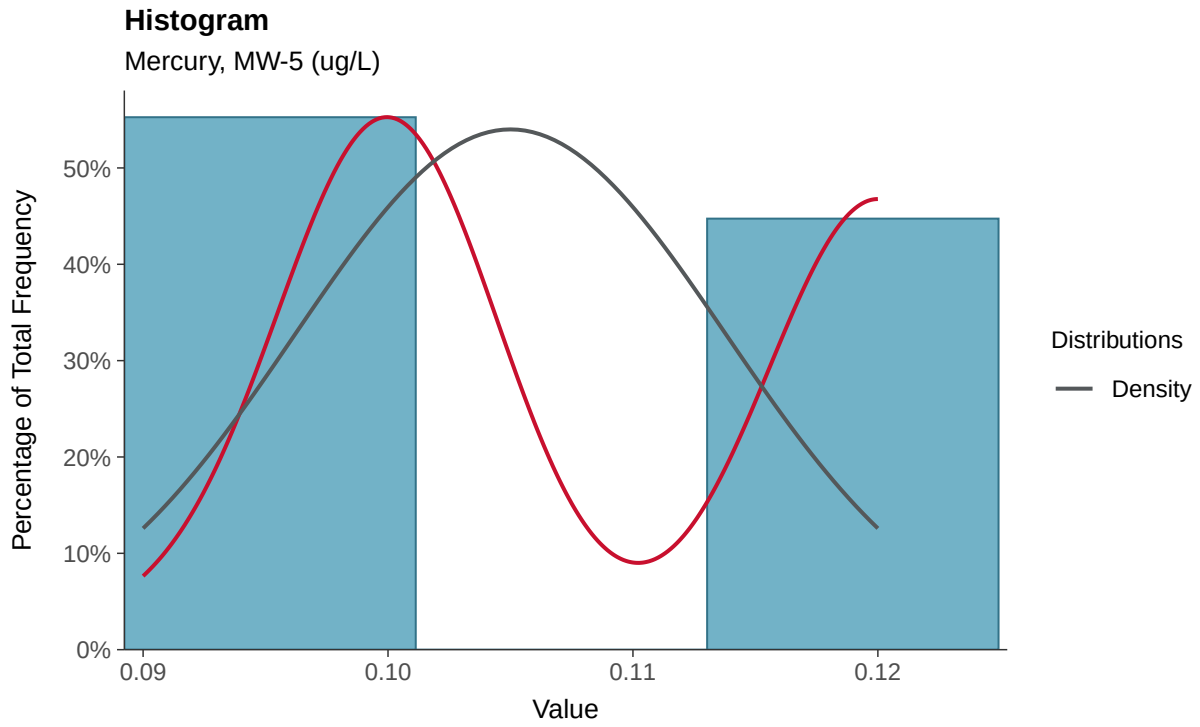
Lithium, MW-5 (ug/L)



App. IV: Mercury, MW-5

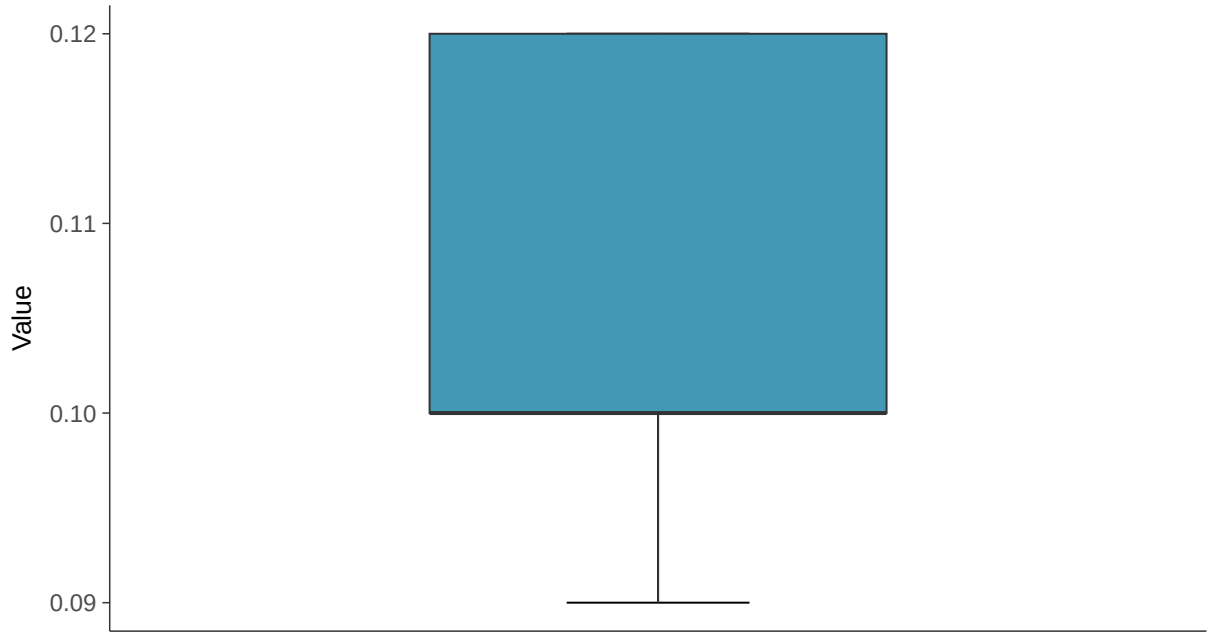
ID: 05_03_115





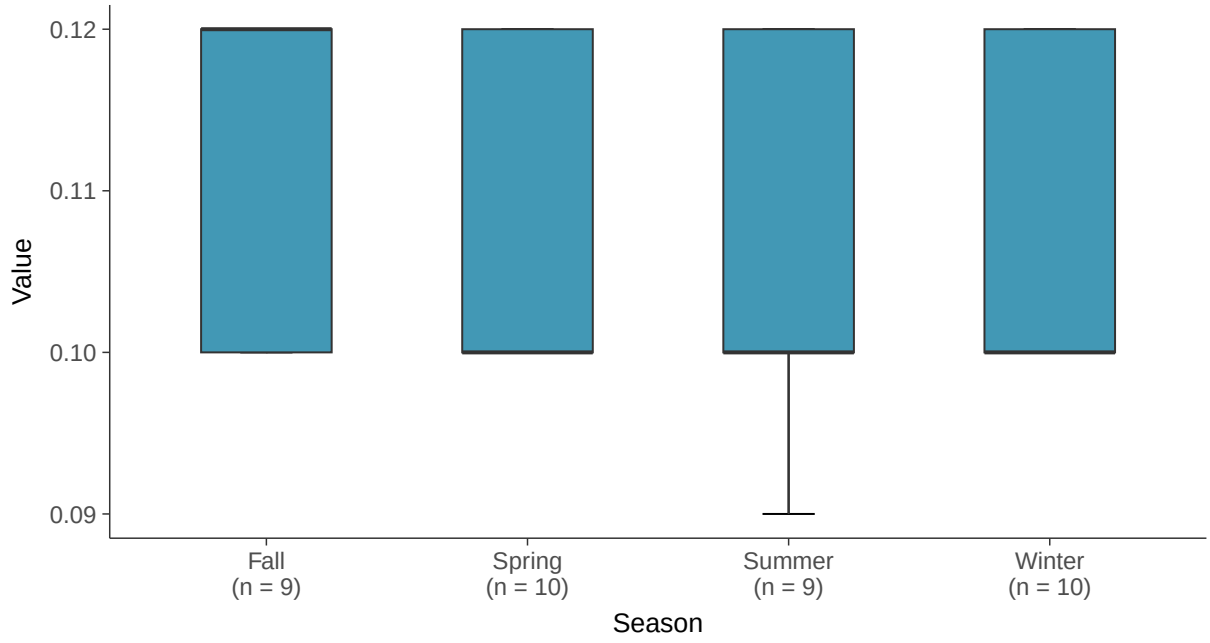
Boxplot

Mercury, MW-5 (ug/L)



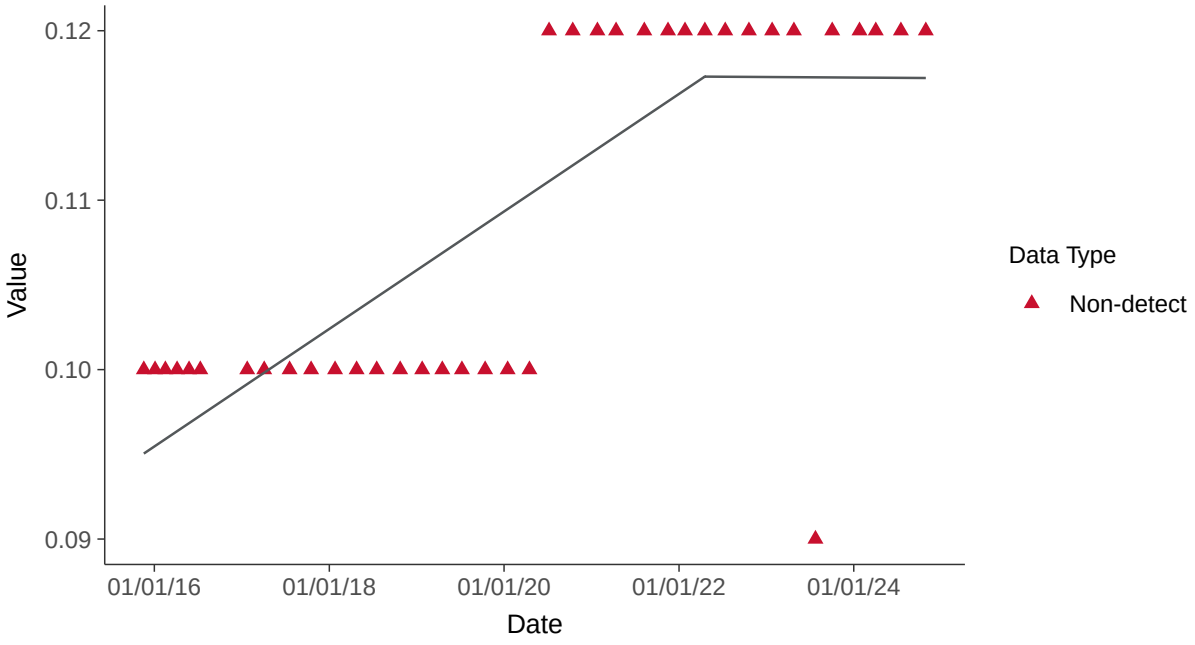
Boxplot by Season

Mercury, MW-5 (ug/L)



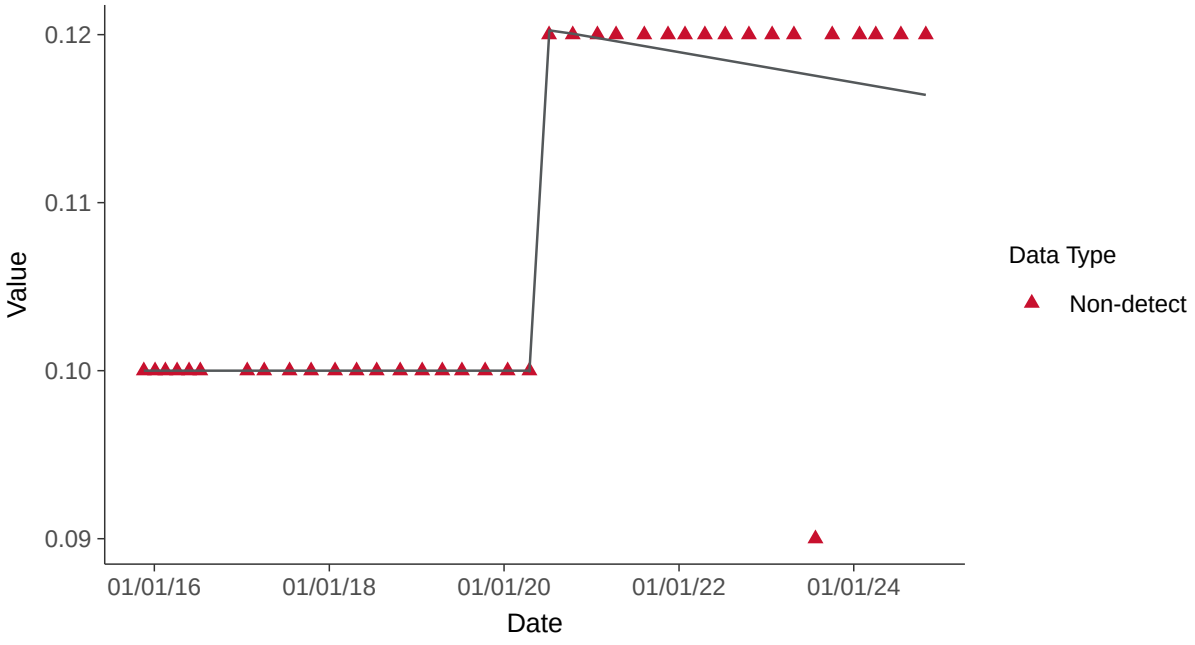
Trend Regression: Piecewise Linear-Linear

Mercury, MW-5 (ug/L)



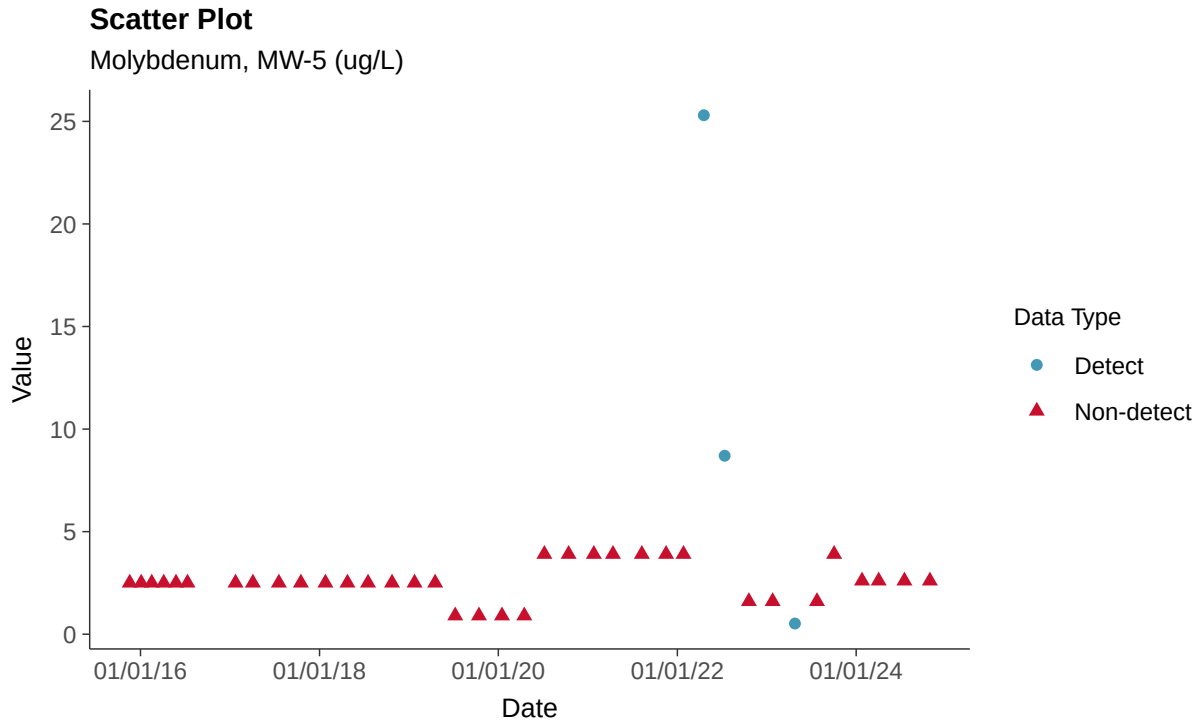
Trend Regression: Piecewise Linear-Linear-Linear

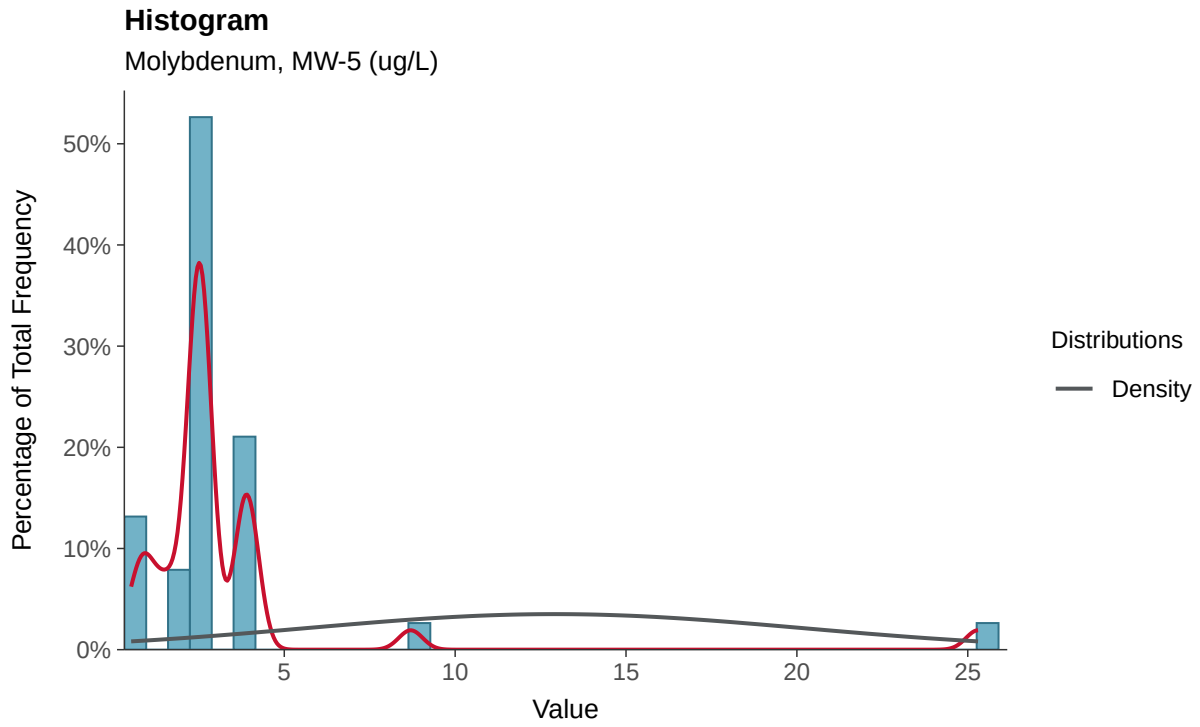
Mercury, MW-5 (ug/L)



App. IV: Molybdenum, MW-5

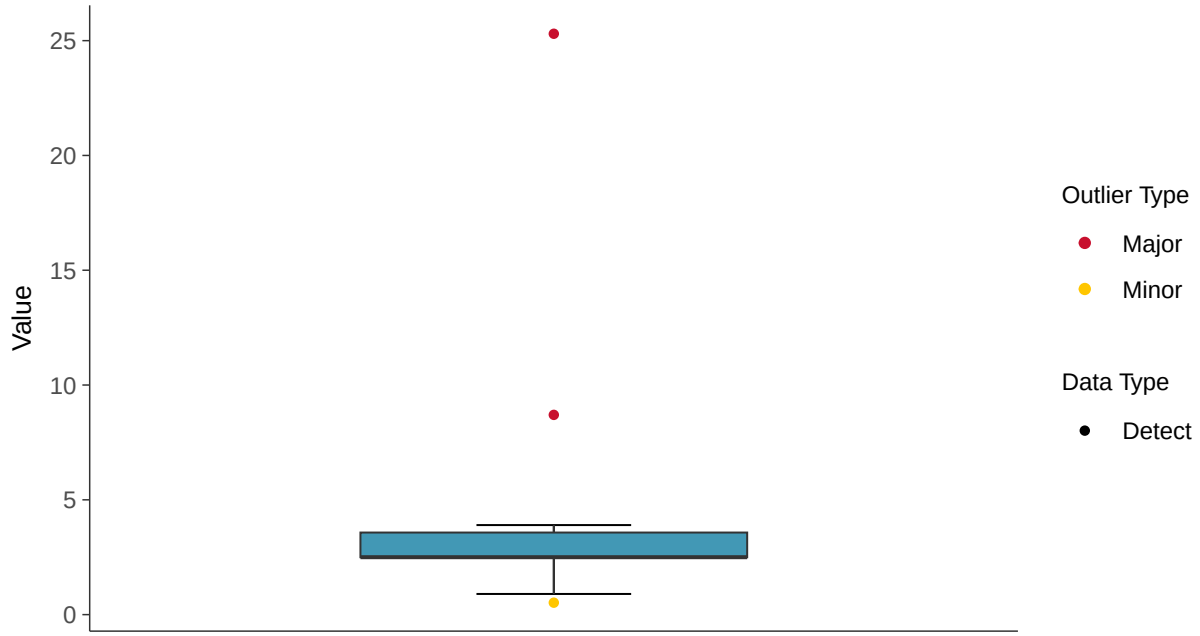
ID: 05_03_116





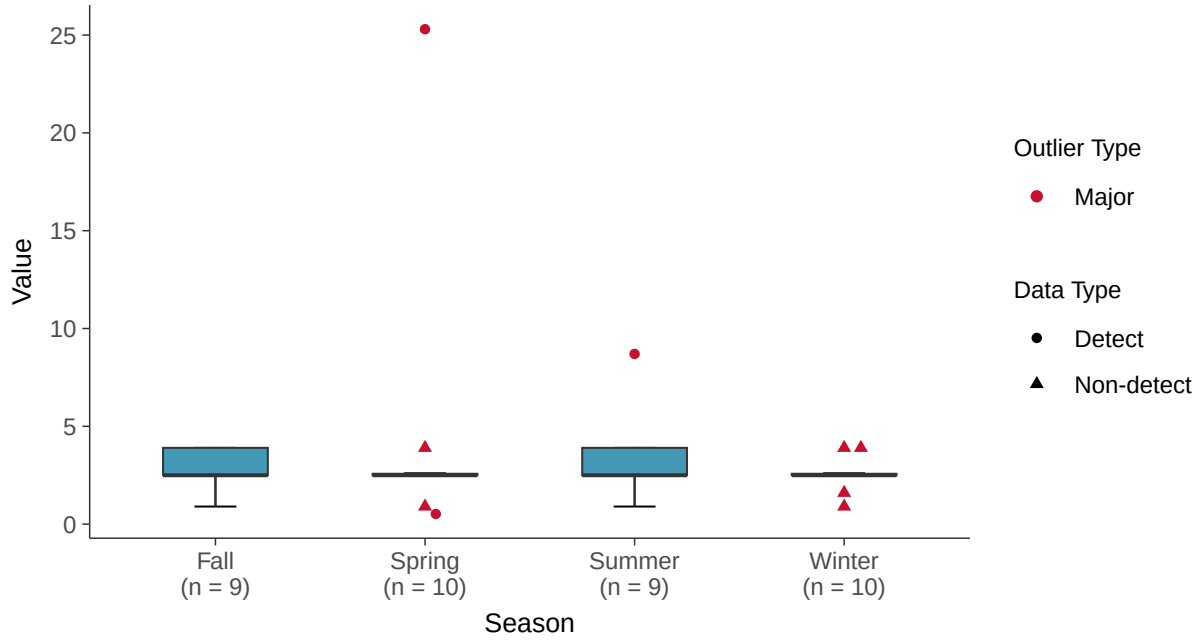
Boxplot

Molybdenum, MW-5 (ug/L)



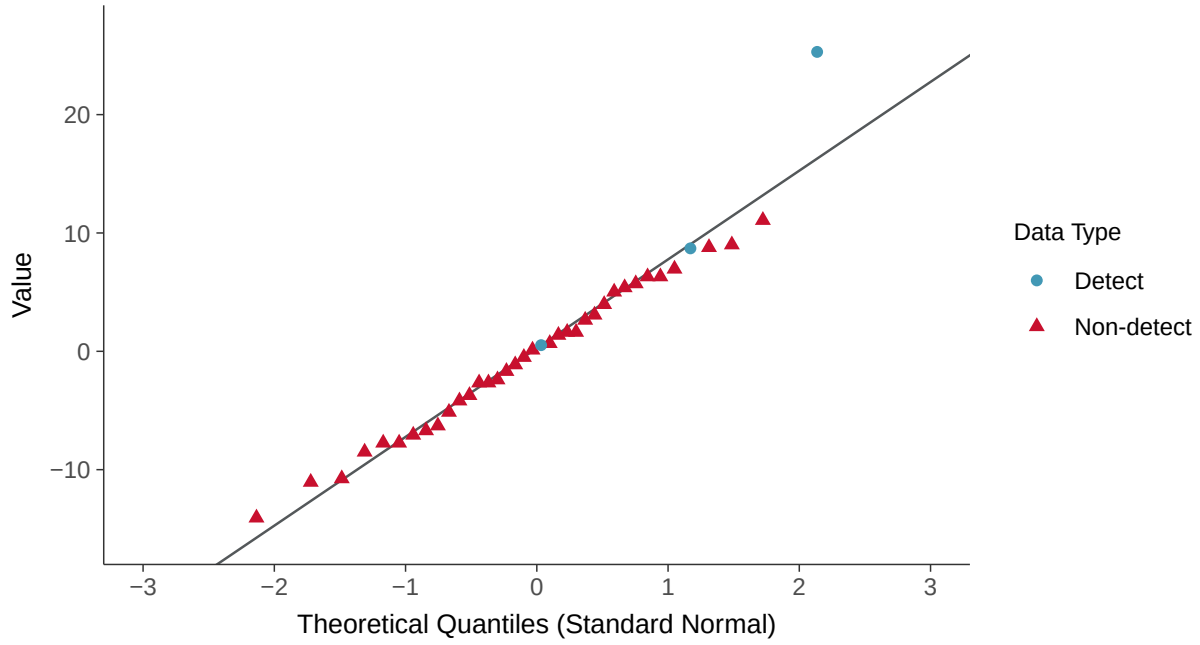
Boxplot by Season

Molybdenum, MW-5 (ug/L)



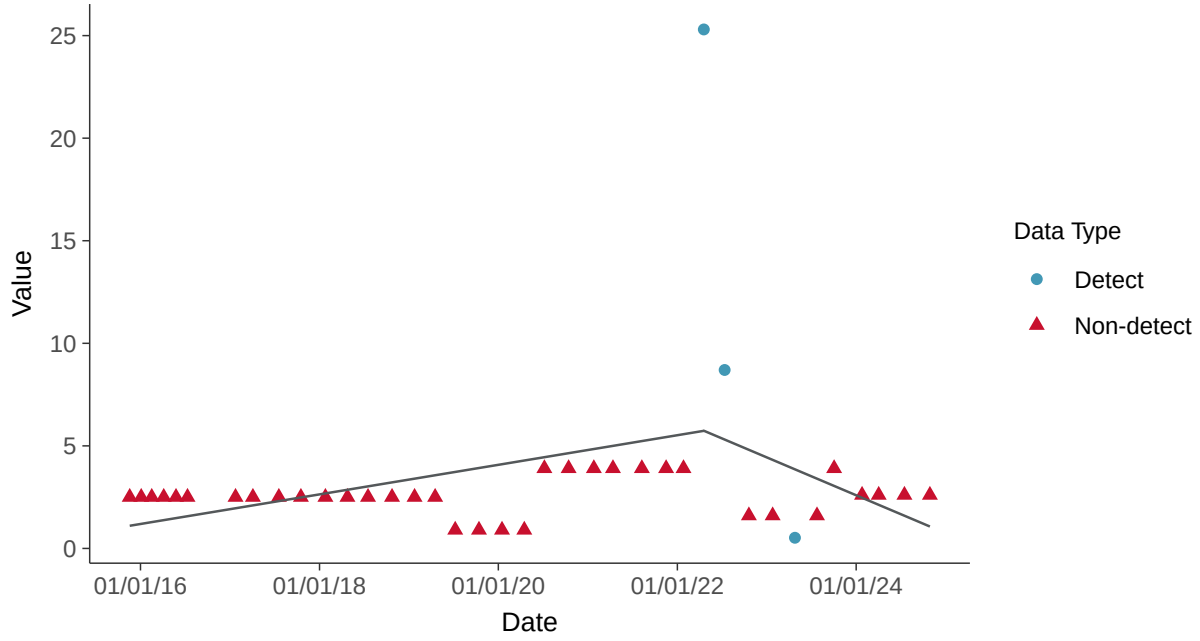
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-5 (ug/L)



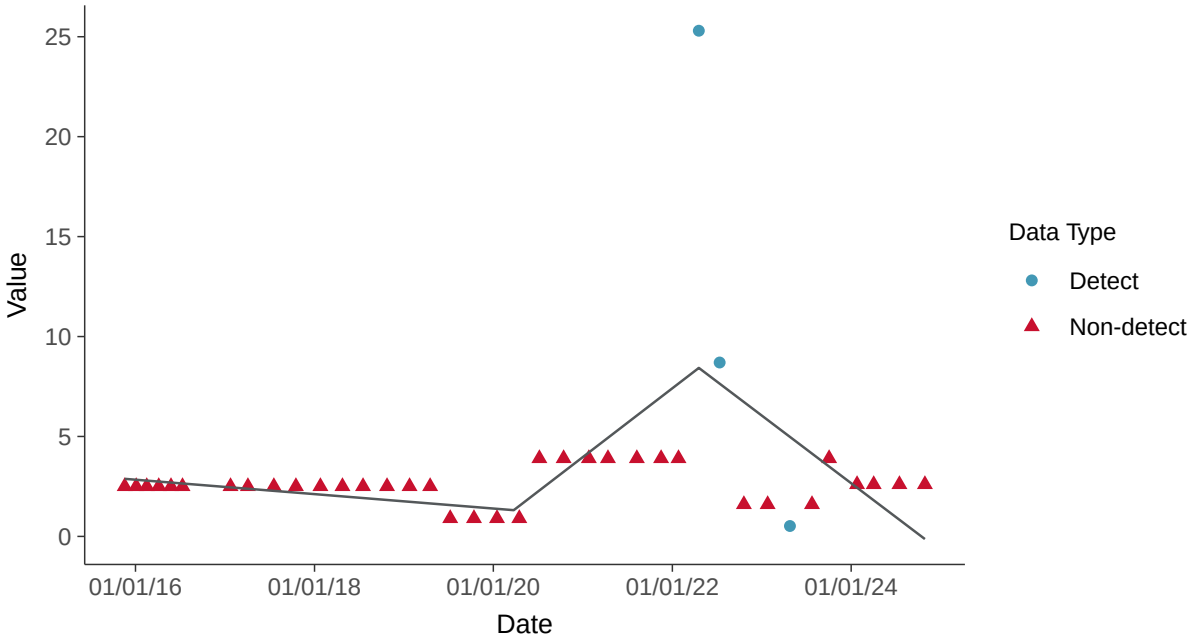
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-5 (ug/L)



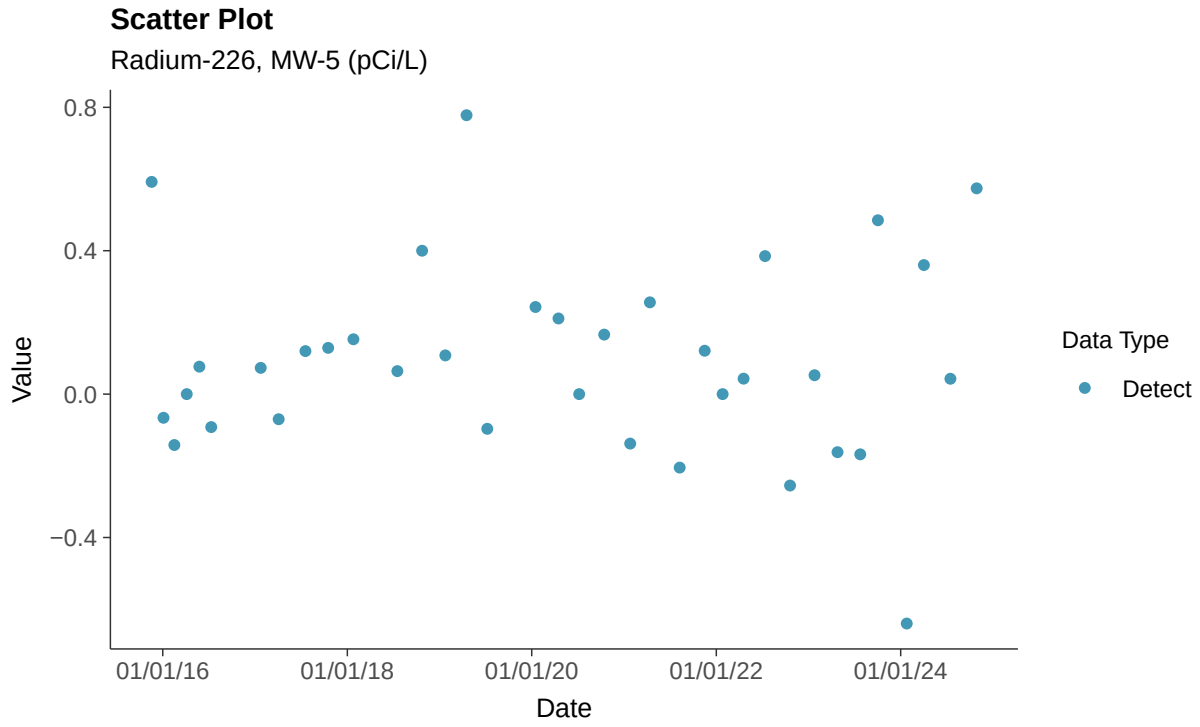
Trend Regression: Piecewise Linear-Linear-Linear

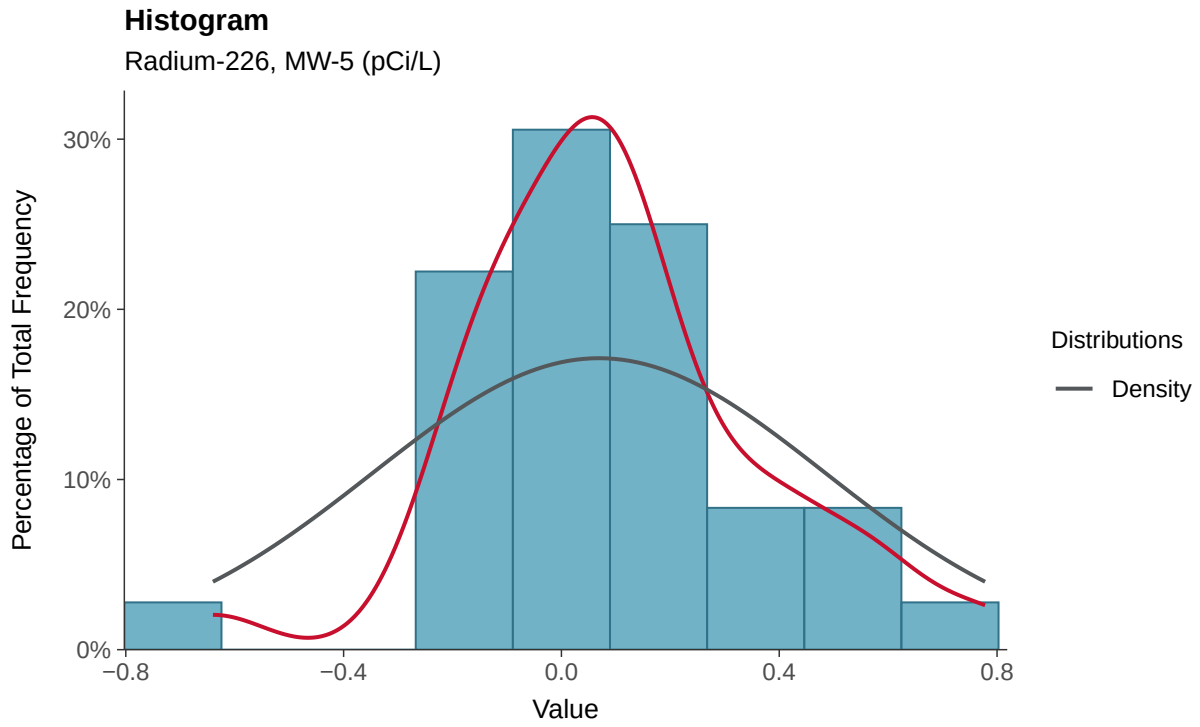
Molybdenum, MW-5 (ug/L)



App. IV: Radium-226, MW-5

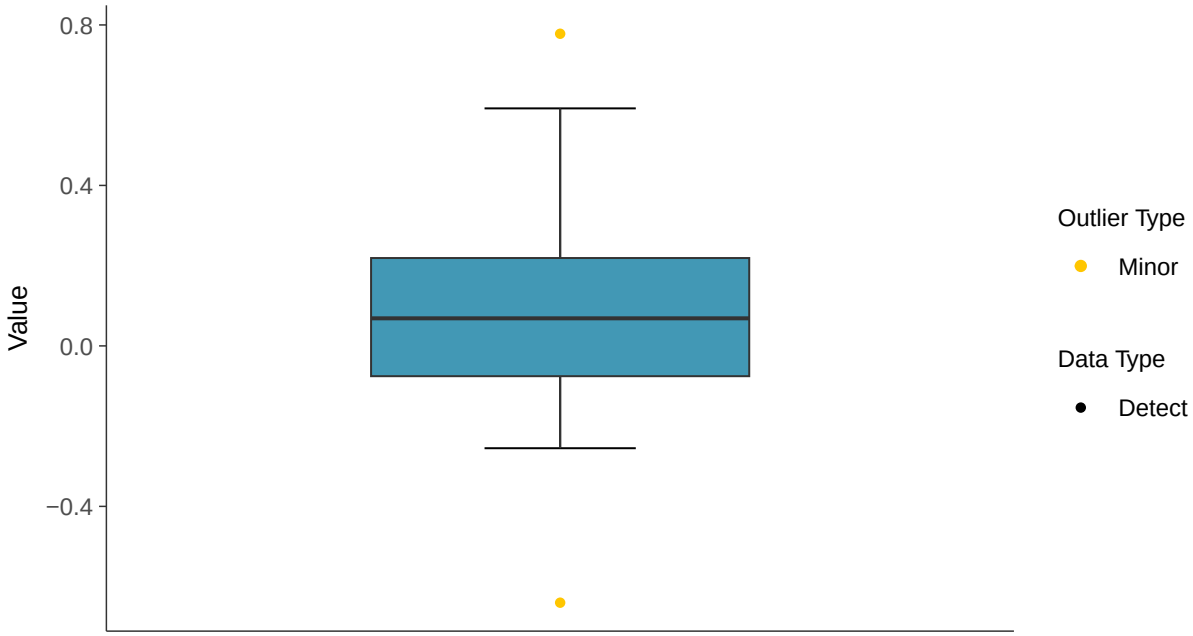
ID: 05_03_119





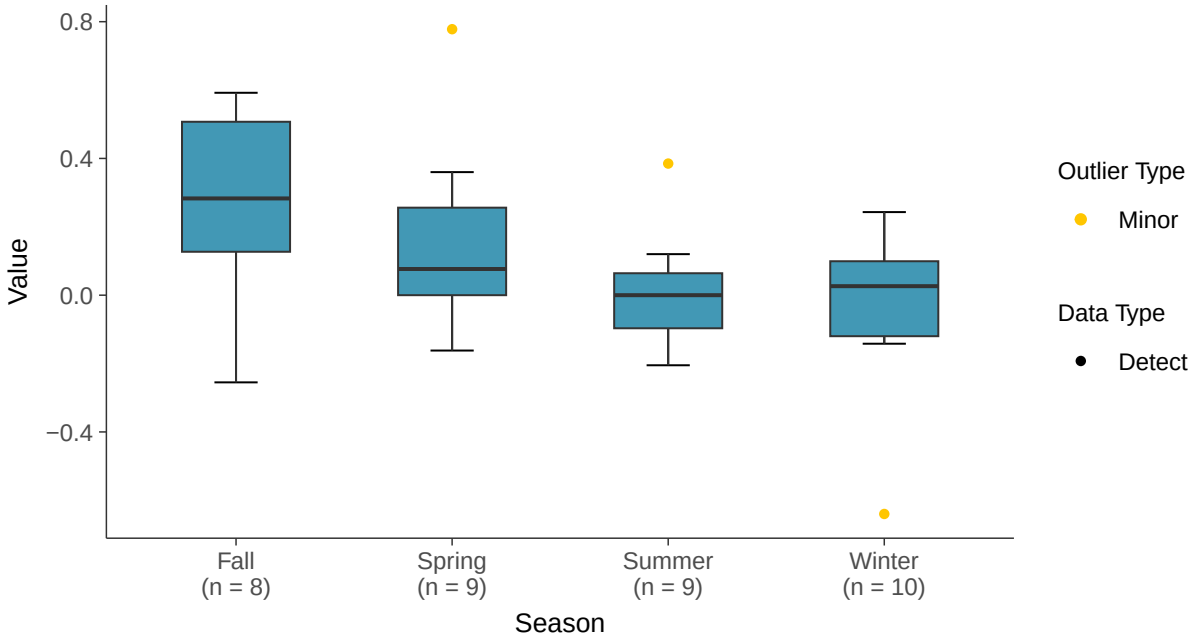
Boxplot

Radium-226, MW-5 (pCi/L)



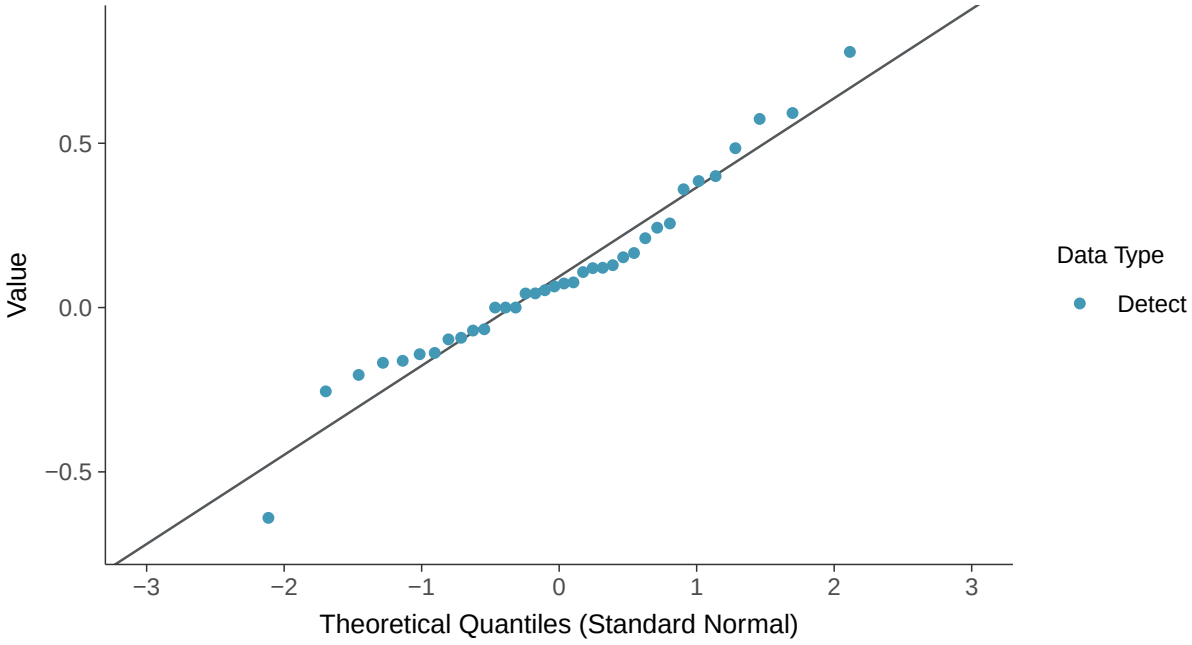
Boxplot by Season

Radium-226, MW-5 (pCi/L)



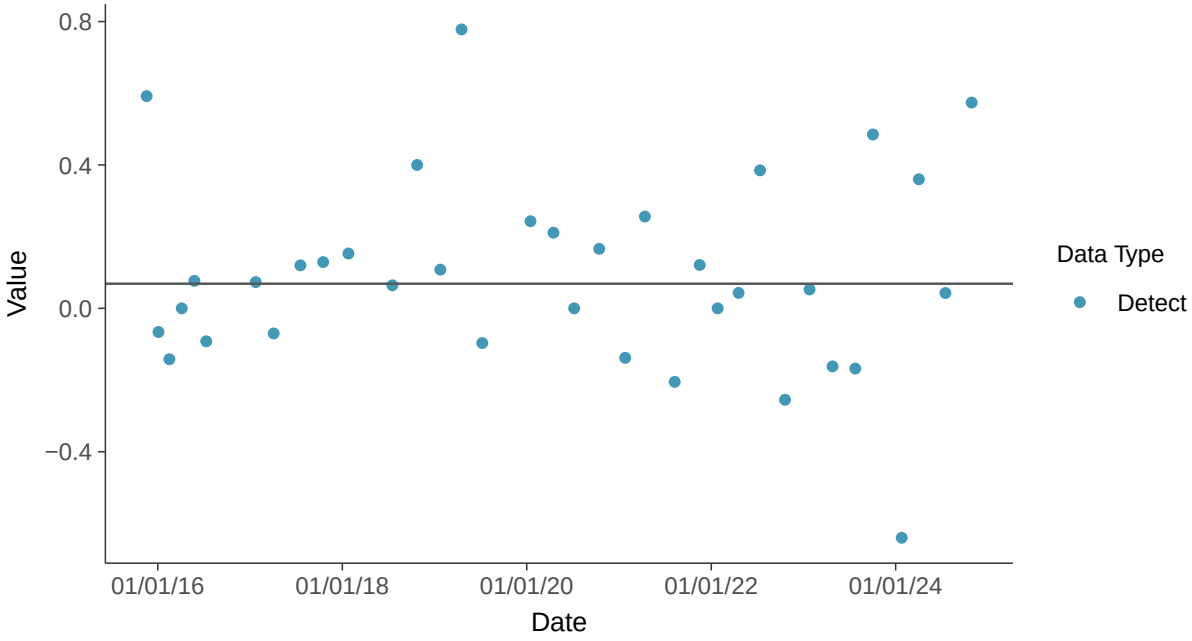
Normal Q-Q plot

Radium-226, MW-5 (pCi/L)



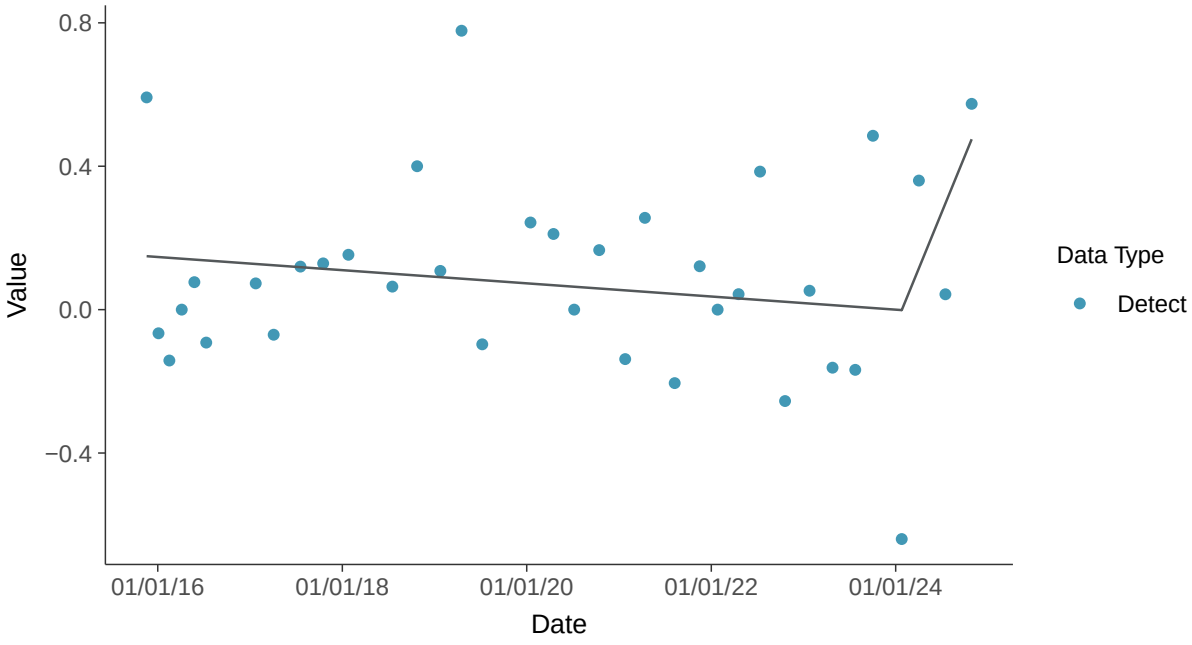
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-5 (pCi/L)



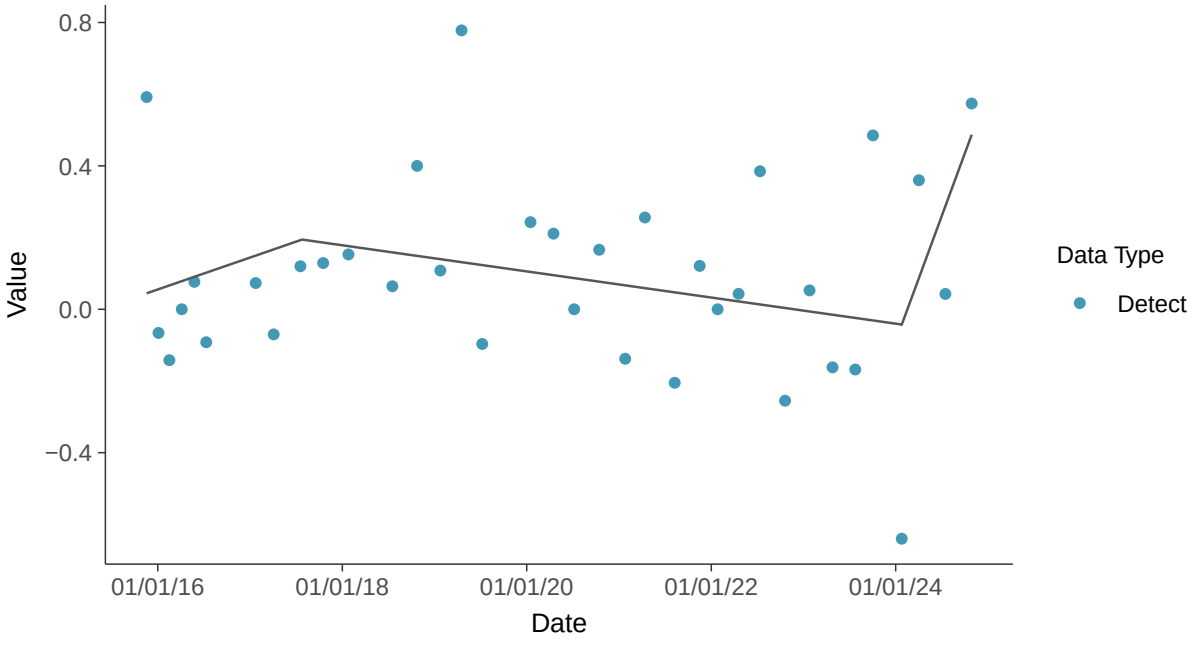
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-5 (pCi/L)



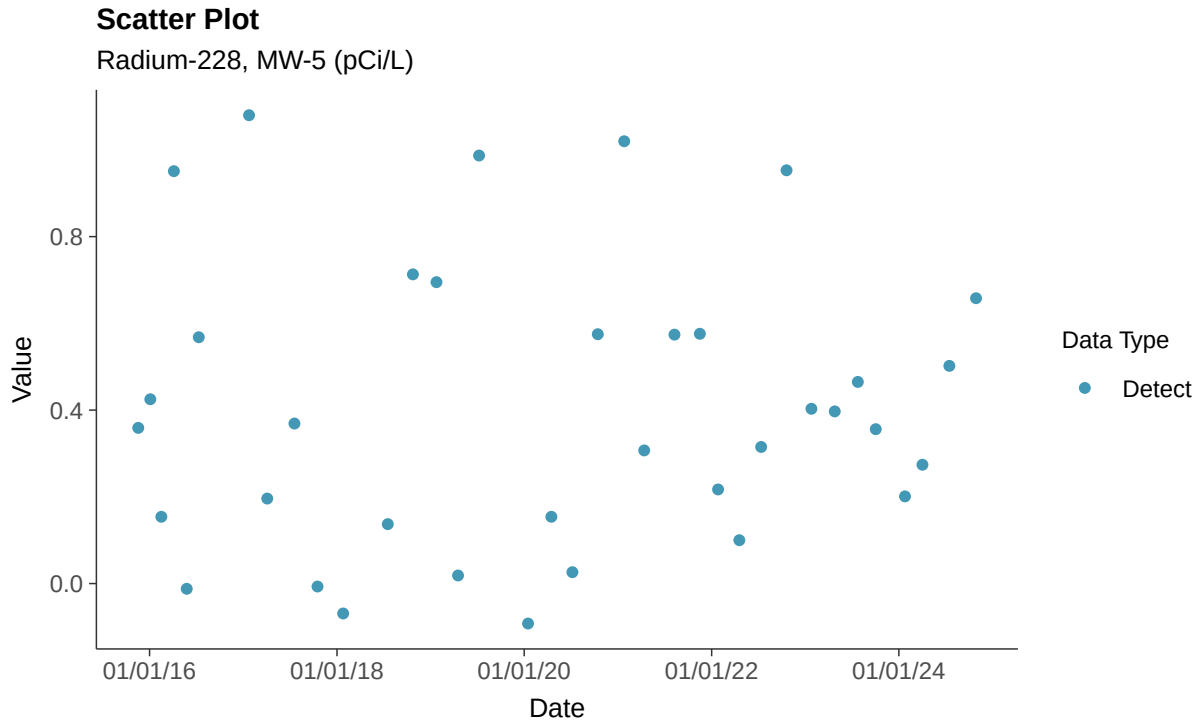
Trend Regression: Piecewise Linear-Linear-Linear

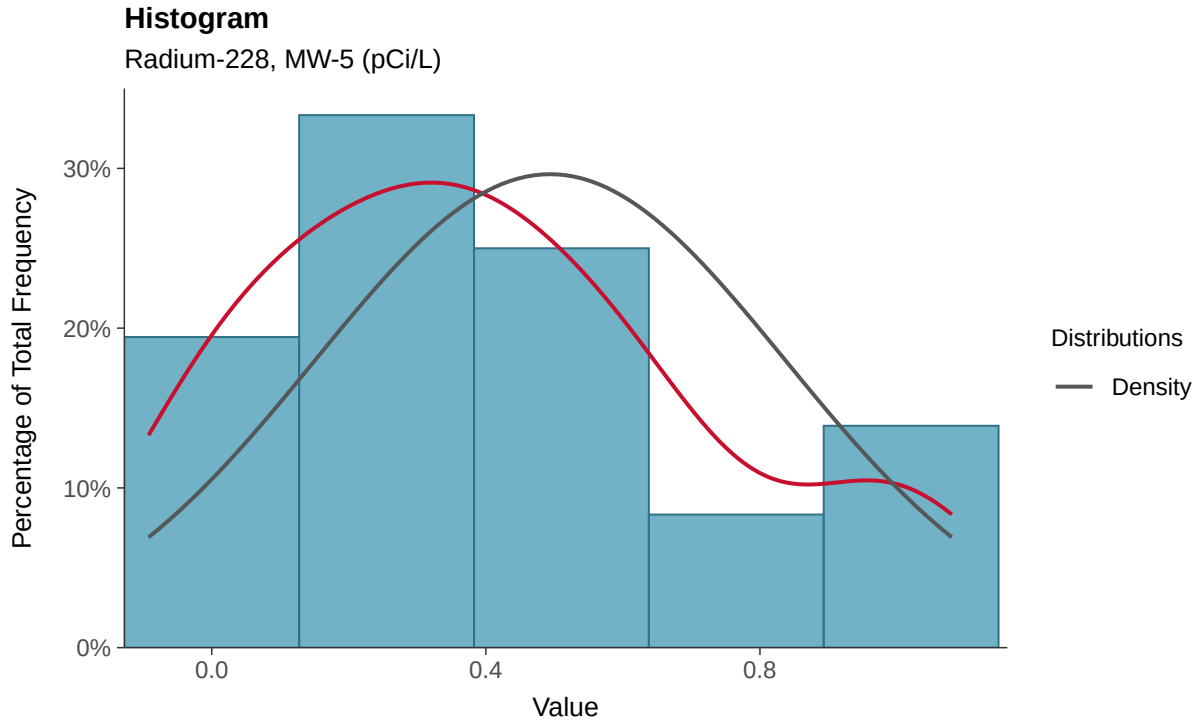
Radium-226, MW-5 (pCi/L)



App. IV: Radium-228, MW-5

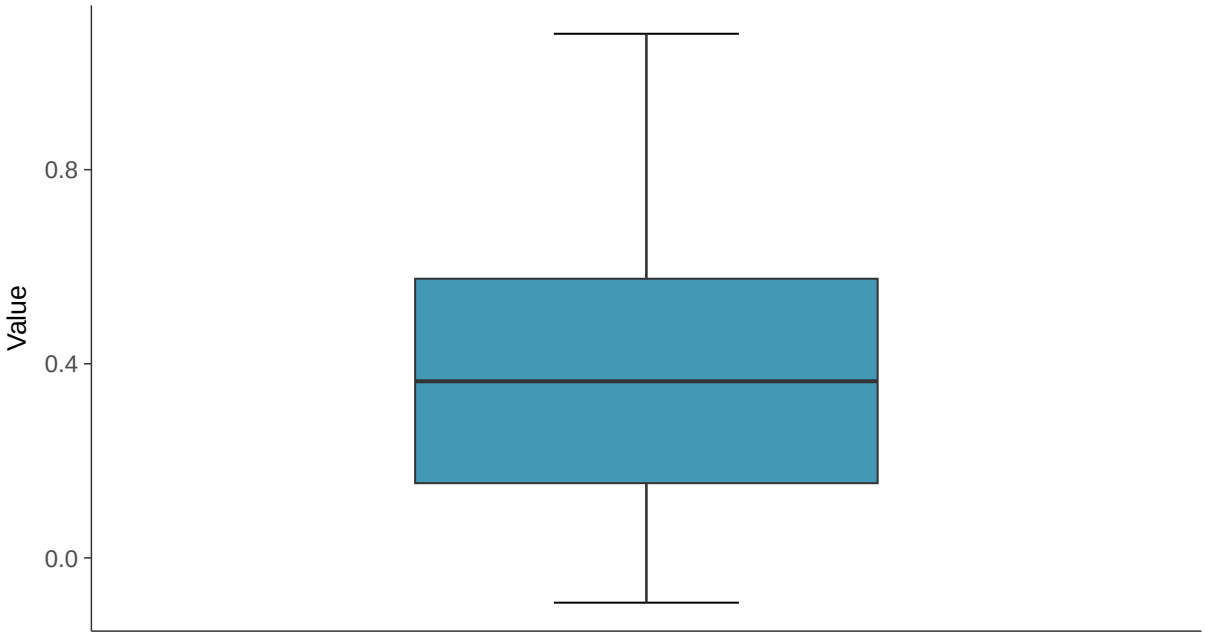
ID: 05_03_120





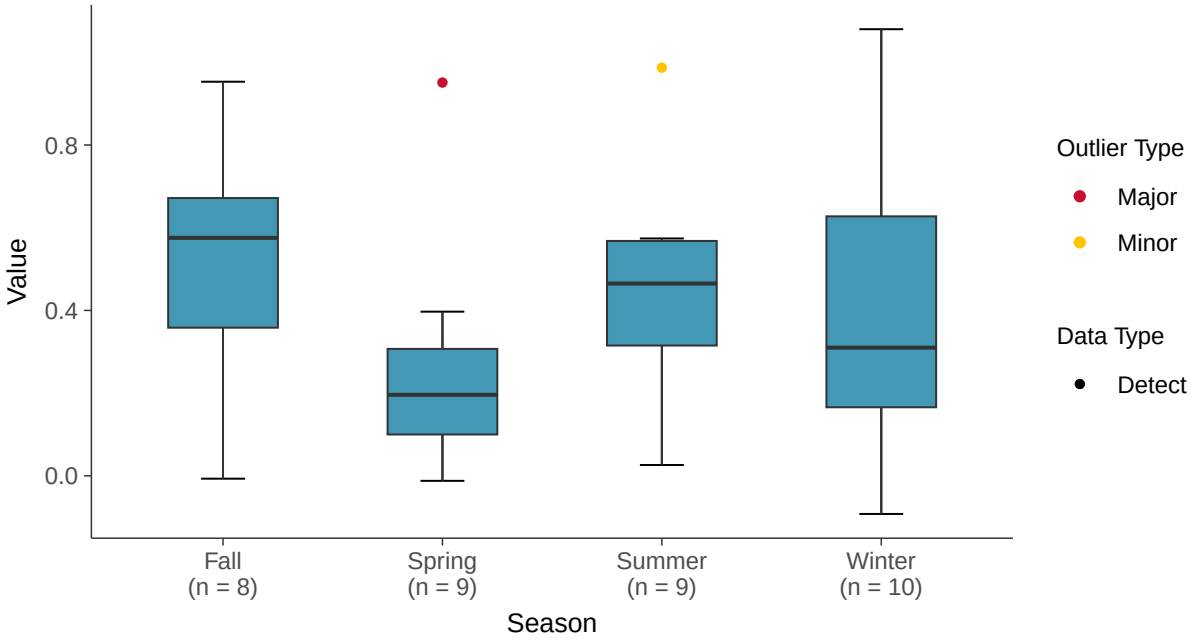
Boxplot

Radium-228, MW-5 (pCi/L)



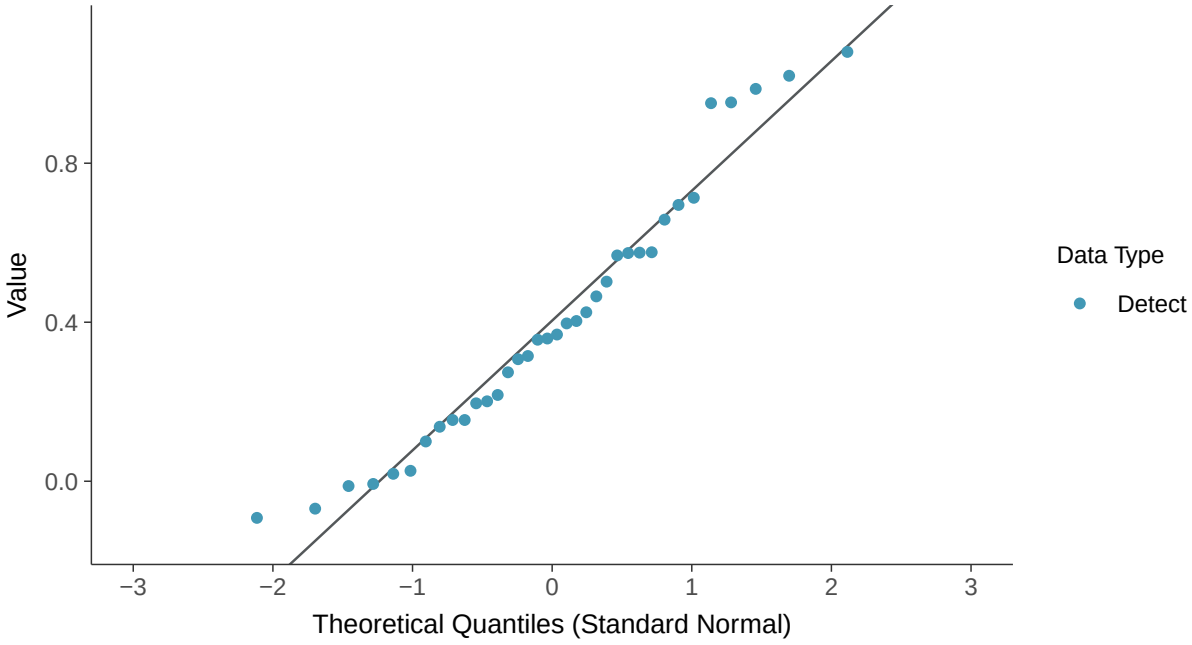
Boxplot by Season

Radium-228, MW-5 (pCi/L)



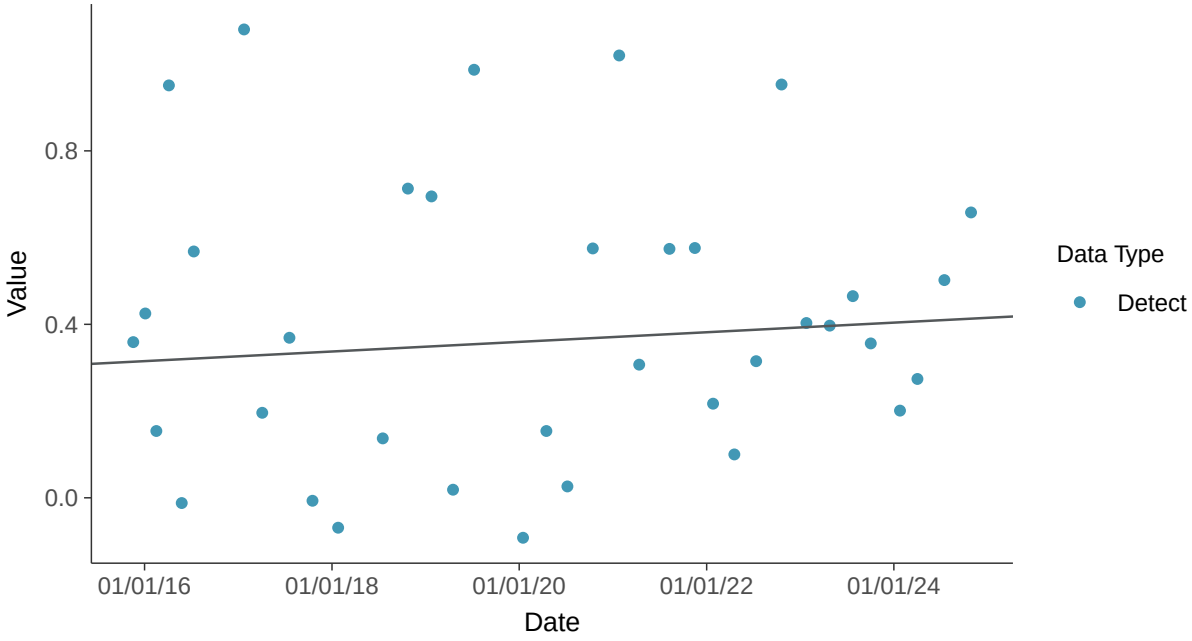
Normal Q-Q plot

Radium-228, MW-5 (pCi/L)



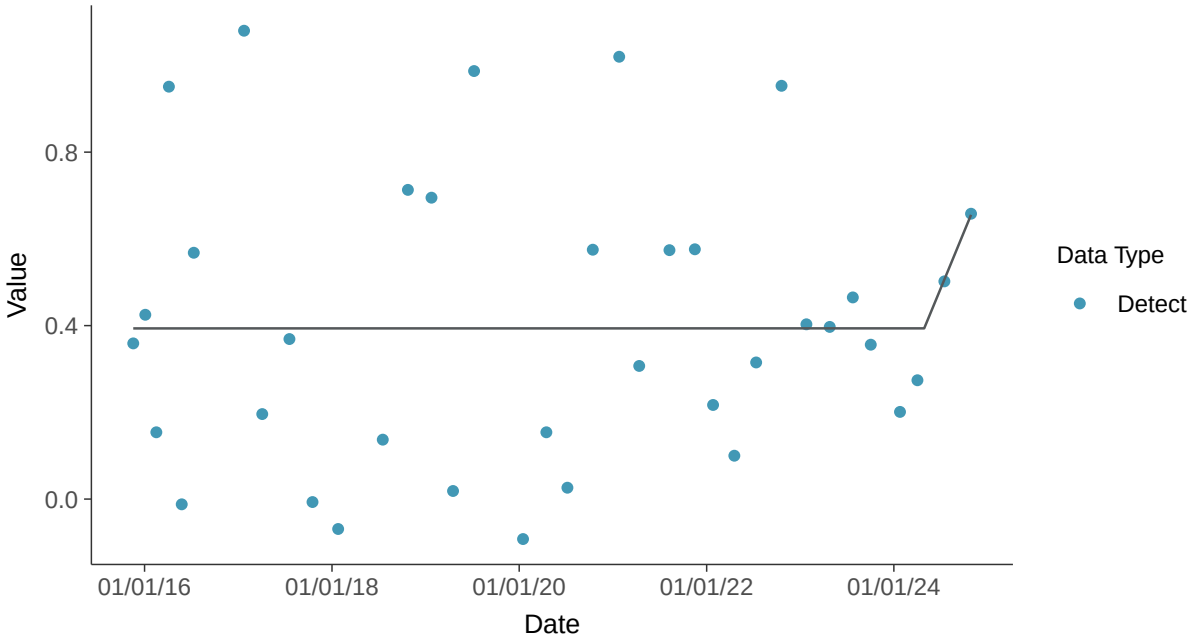
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-5 (pCi/L)



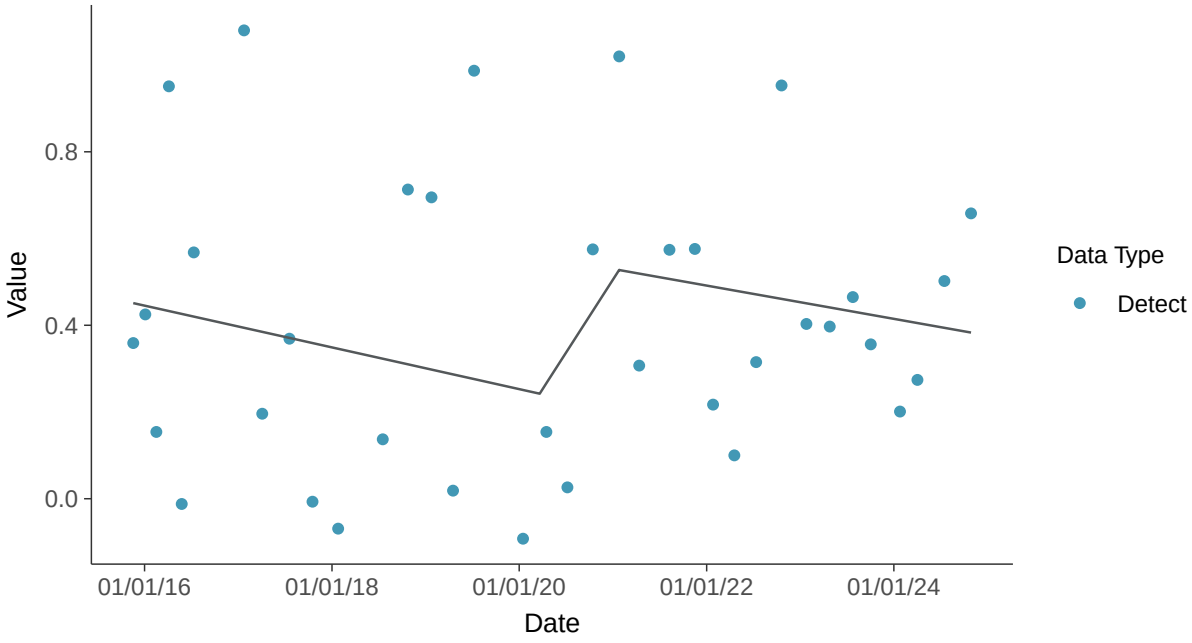
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-5 (pCi/L)



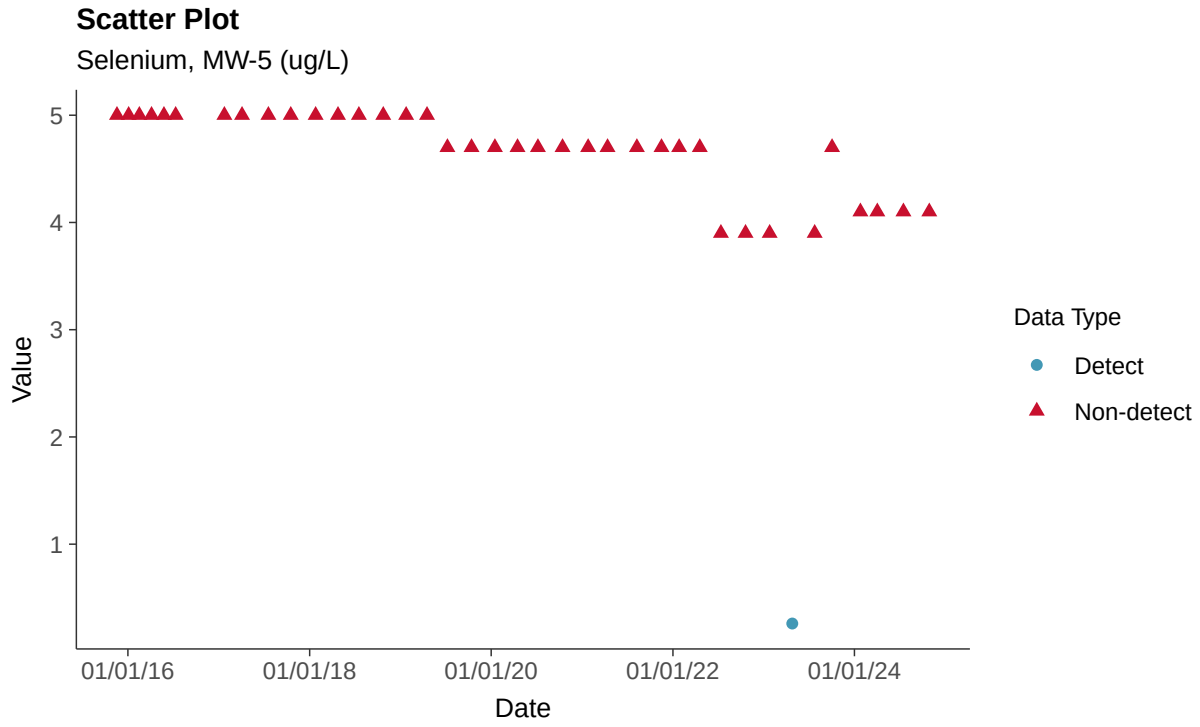
Trend Regression: Piecewise Linear-Linear-Linear

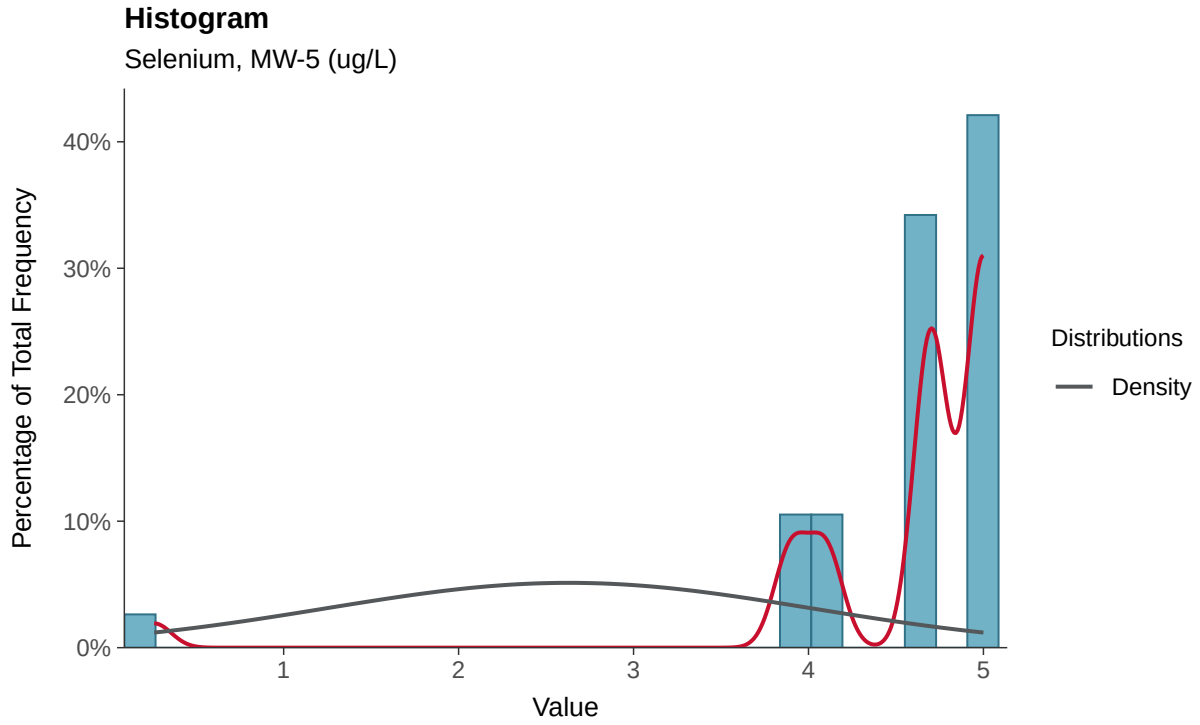
Radium-228, MW-5 (pCi/L)



App. IV: Selenium, MW-5

ID: 05_03_121



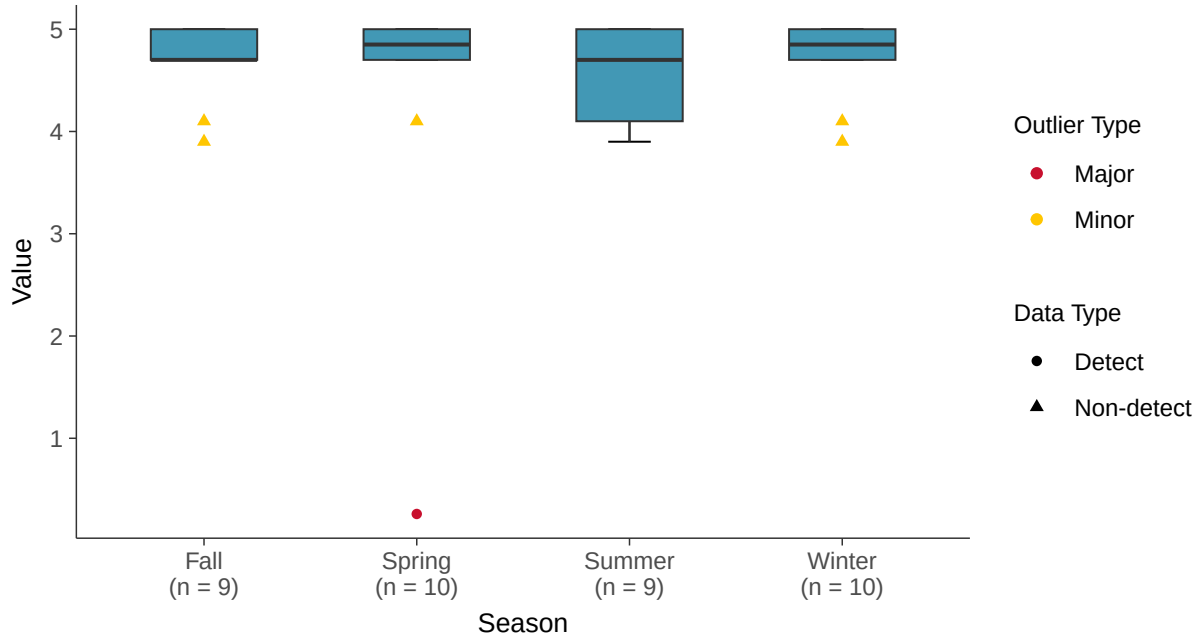


Boxplot

Selenium, MW-5 (ug/L)

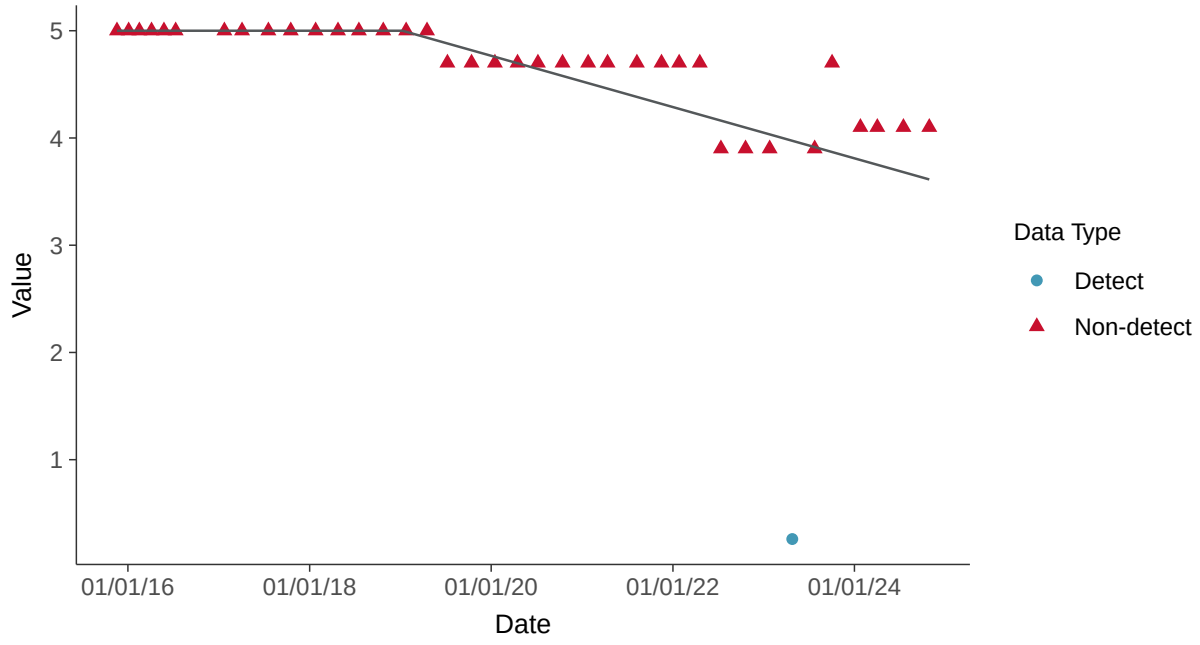
Boxplot by Season

Selenium, MW-5 (ug/L)



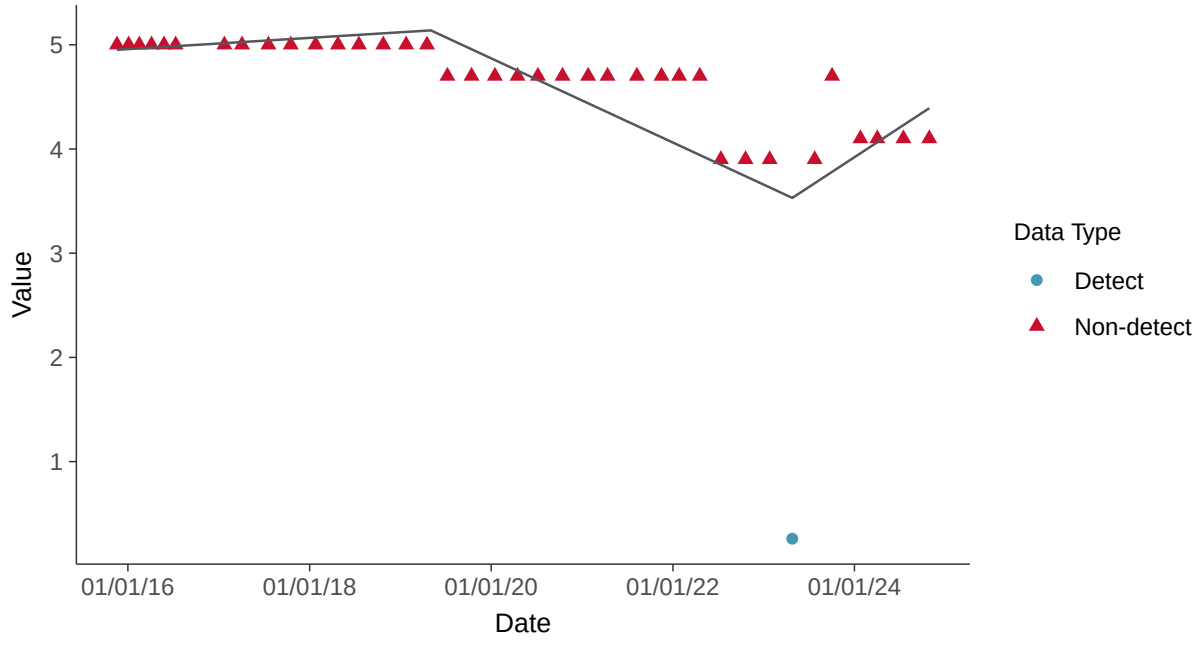
Trend Regression: Piecewise Linear-Linear

Selenium, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-5 (ug/L)

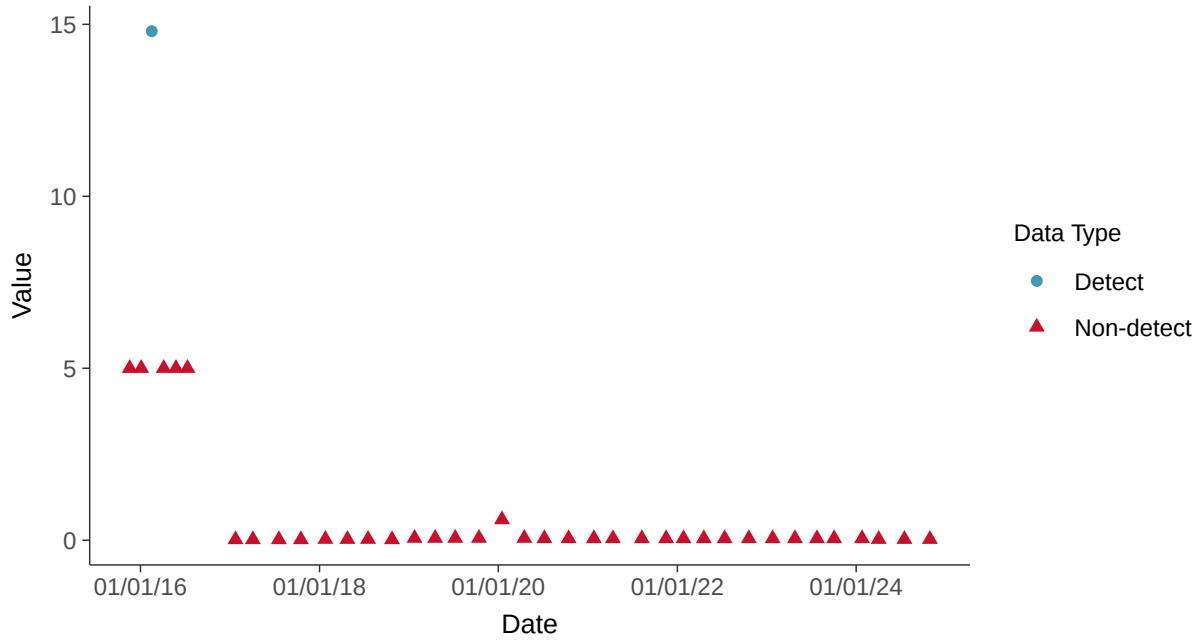


App. IV: Thallium, MW-5

ID: 05_03_124

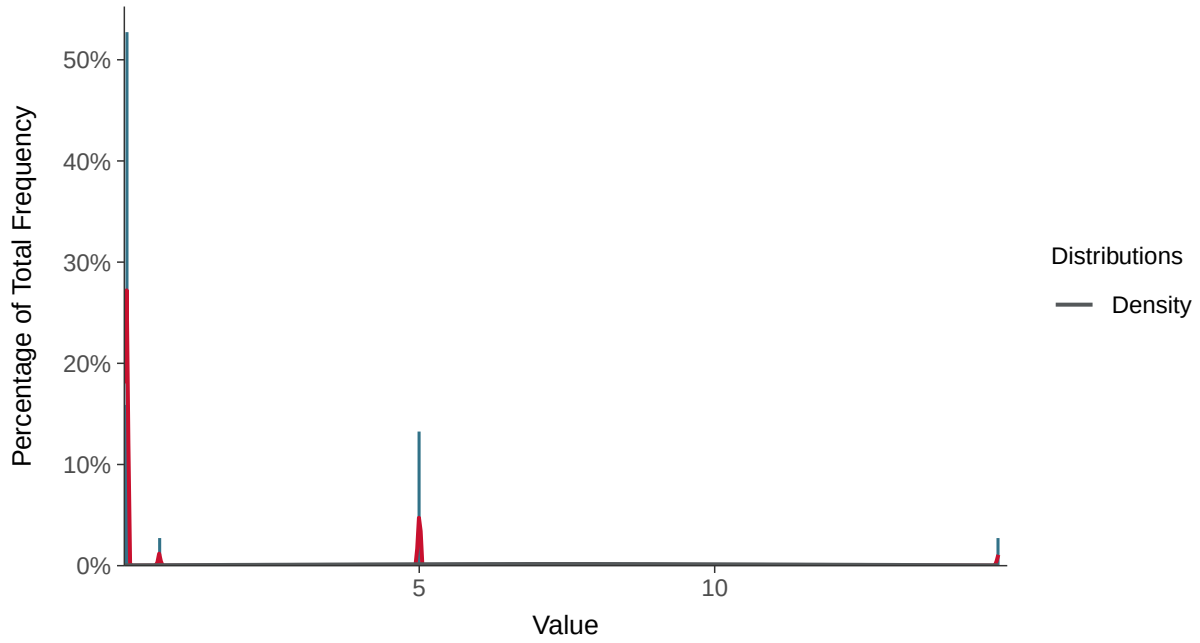
Scatter Plot

Thallium, MW-5 (ug/L)



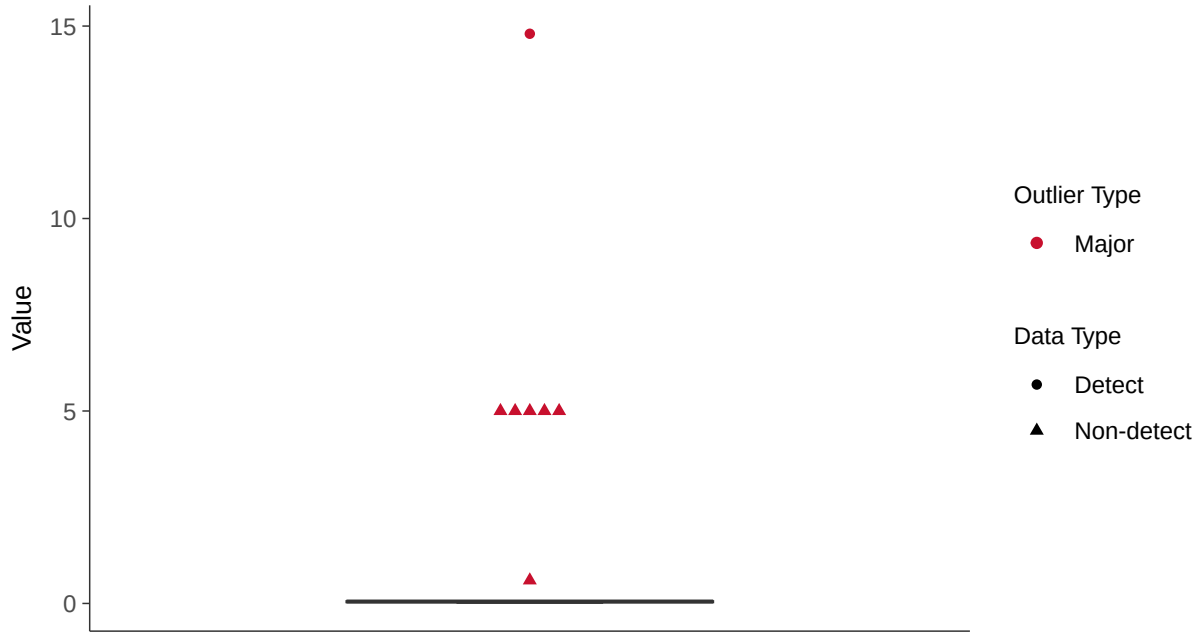
Histogram

Thallium, MW-5 (ug/L)



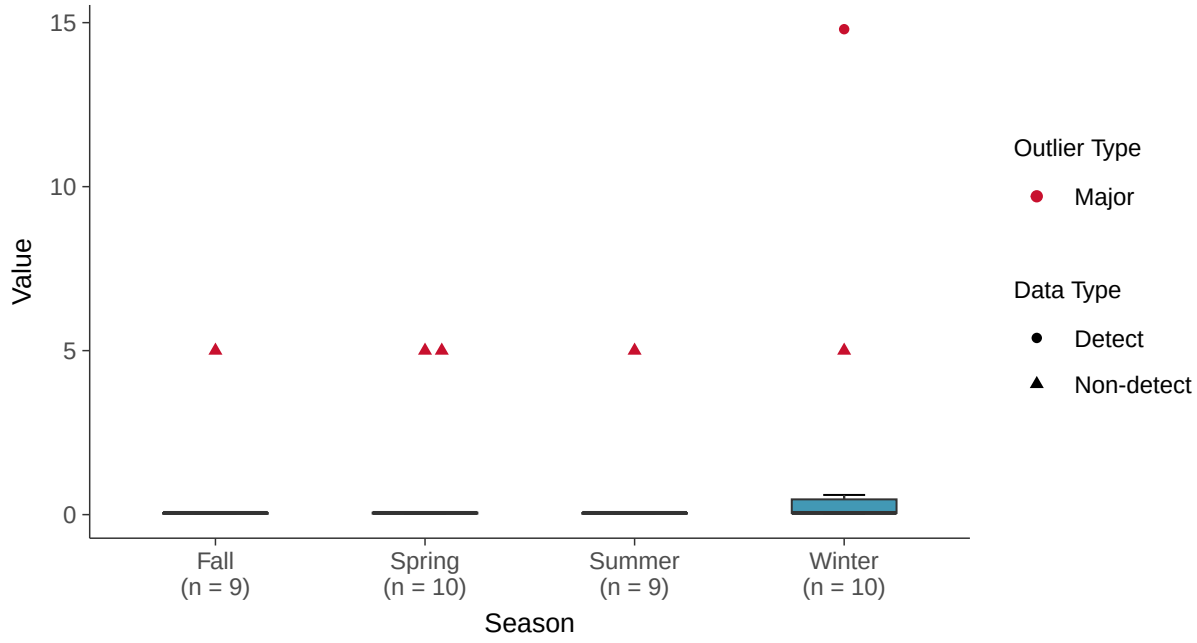
Boxplot

Thallium, MW-5 (ug/L)



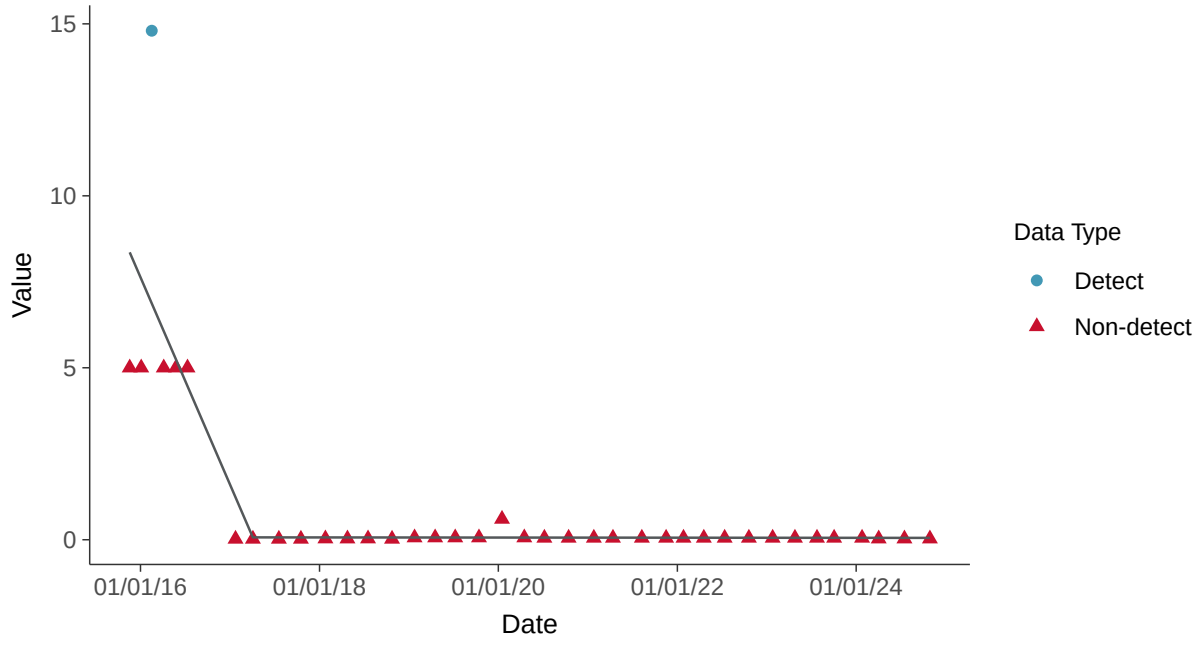
Boxplot by Season

Thallium, MW-5 (ug/L)



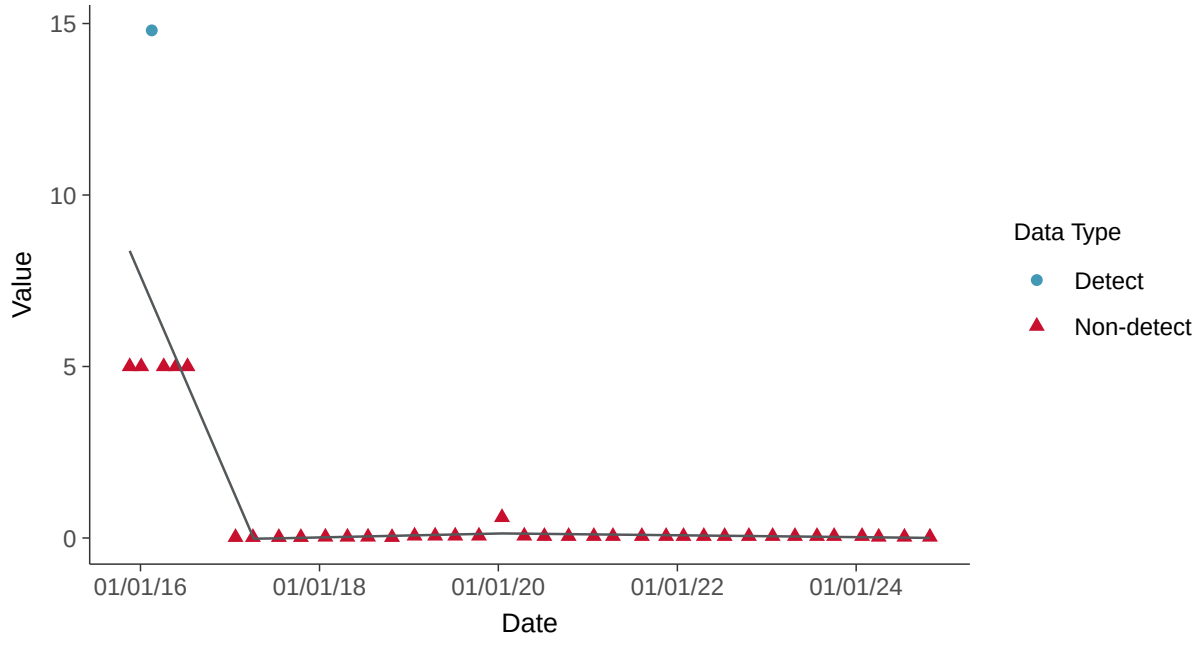
Trend Regression: Piecewise Linear-Linear

Thallium, MW-5 (ug/L)



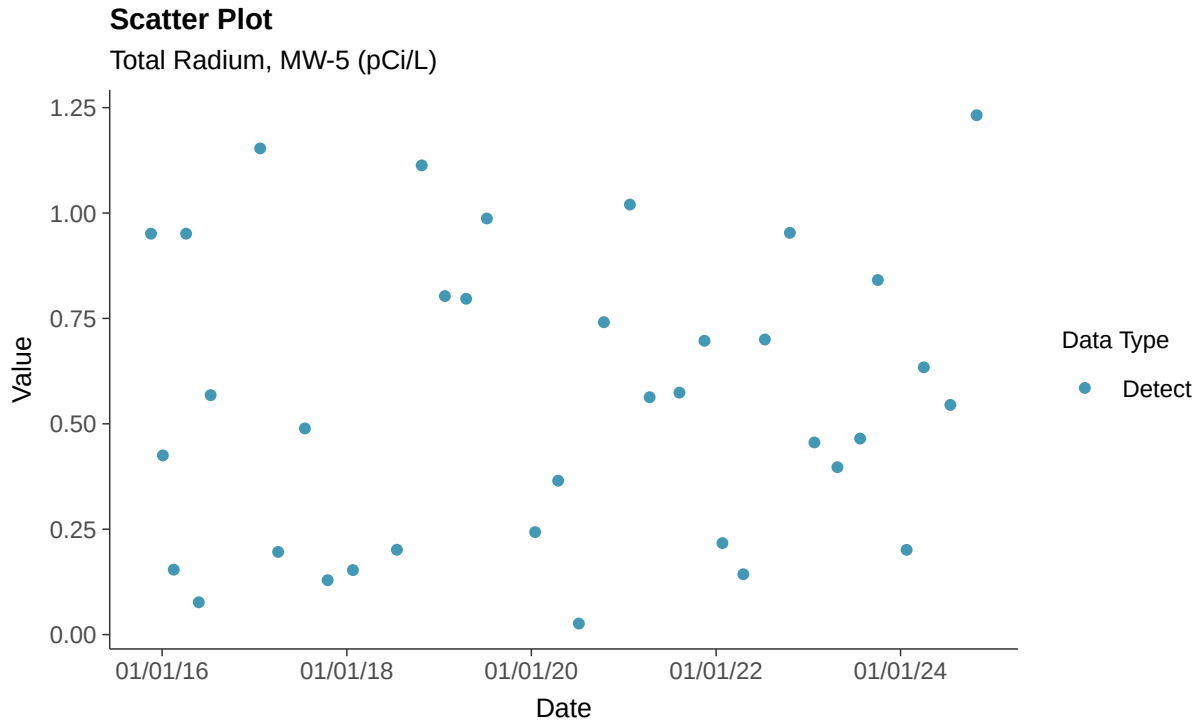
Trend Regression: Piecewise Linear-Linear-Linear

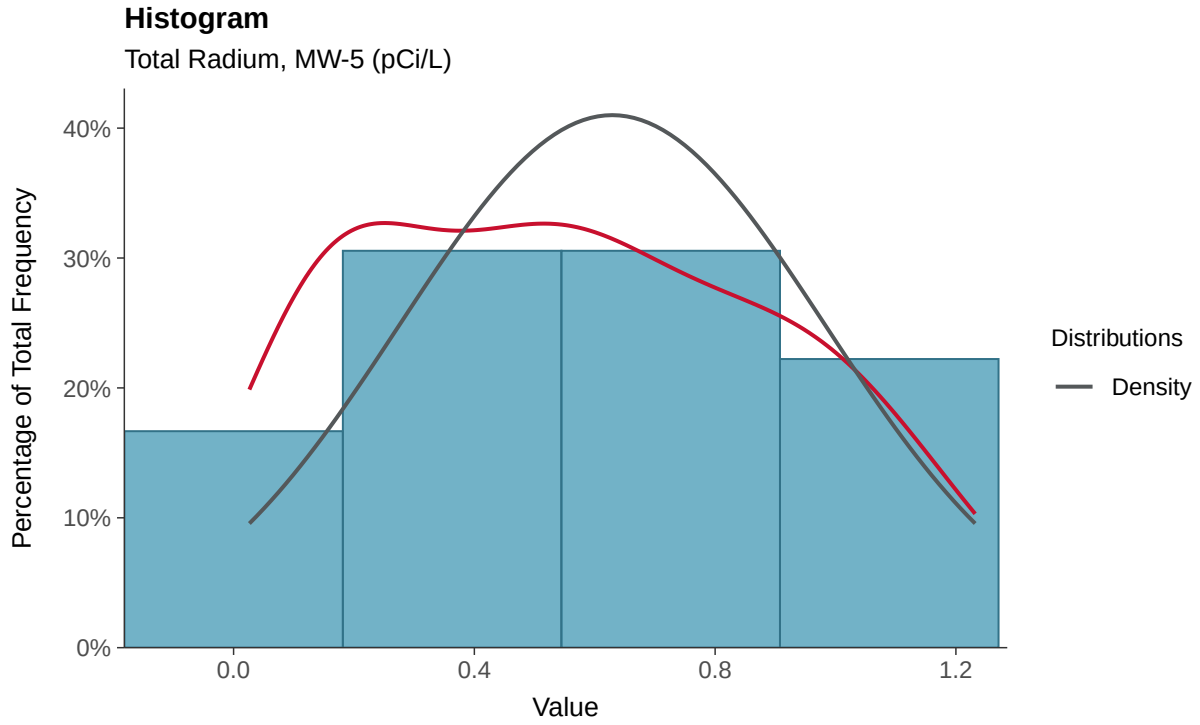
Thallium, MW-5 (ug/L)



App. IV: Total Radium, MW-5

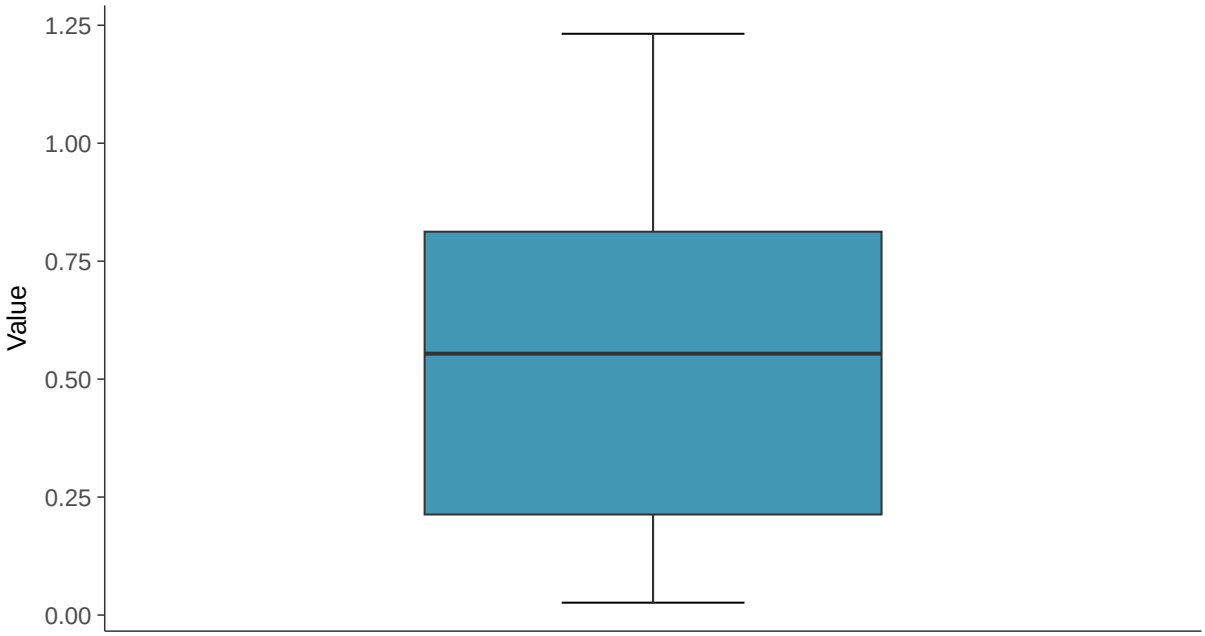
ID: 05_03_126





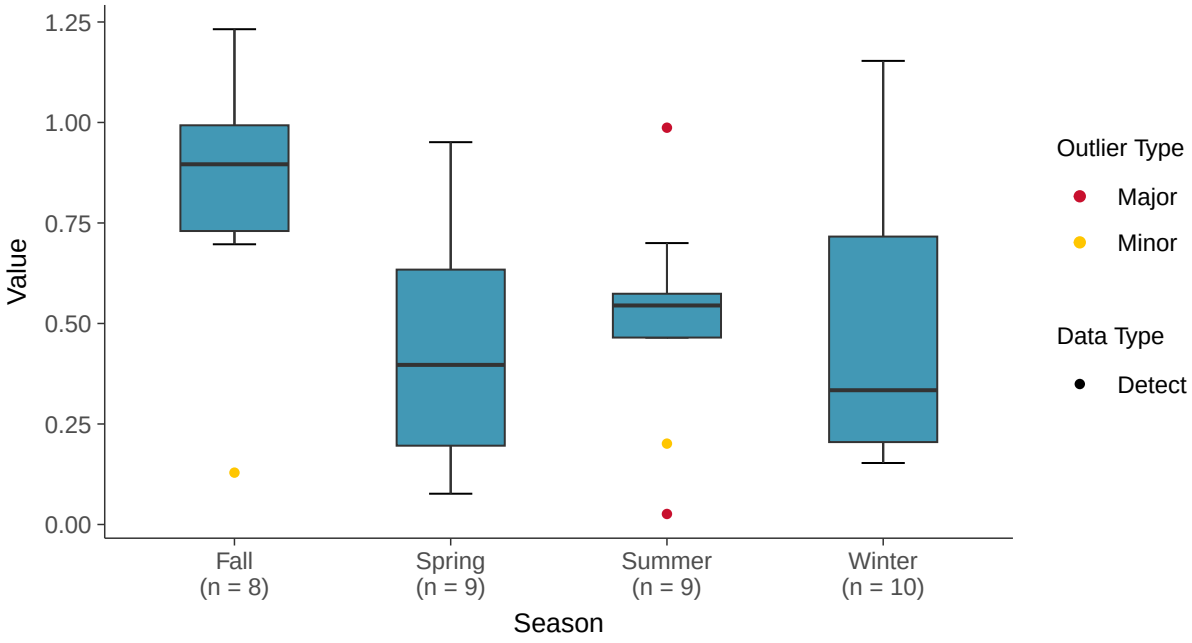
Boxplot

Total Radium, MW-5 (pCi/L)



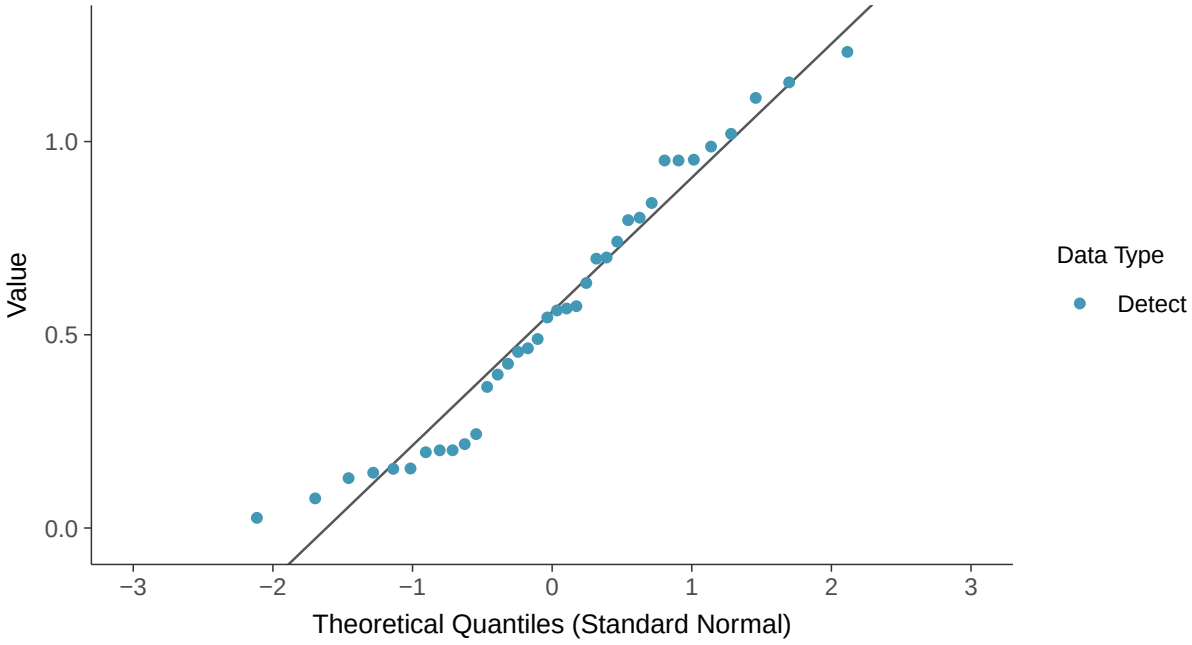
Boxplot by Season

Total Radium, MW-5 (pCi/L)



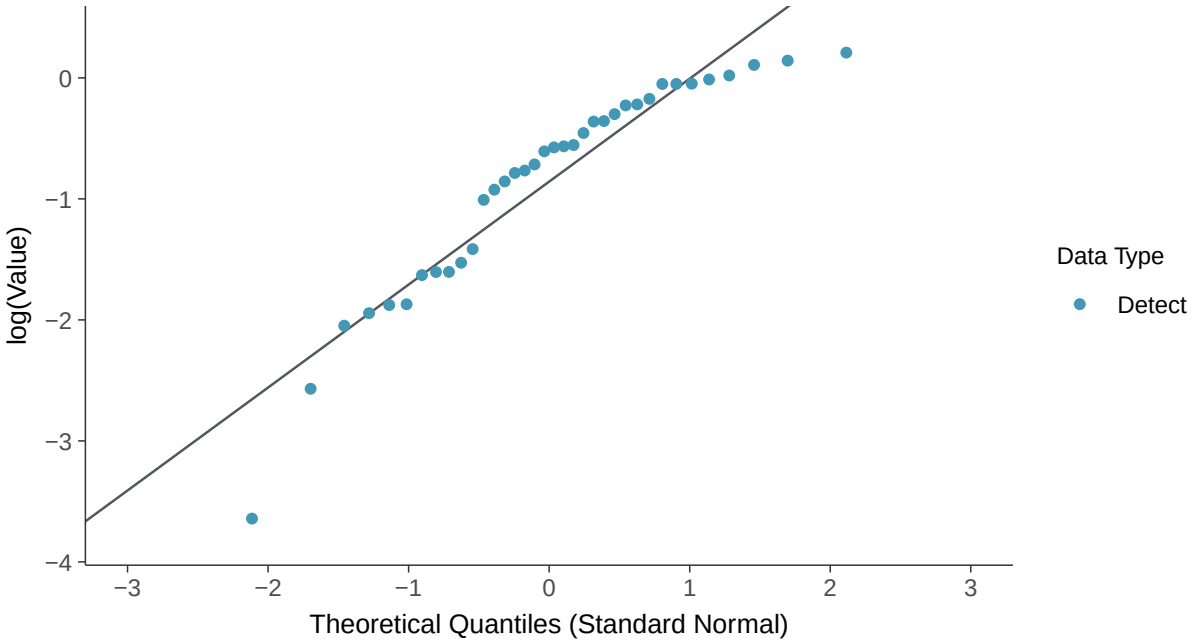
Normal Q-Q plot

Total Radium, MW-5 (pCi/L)



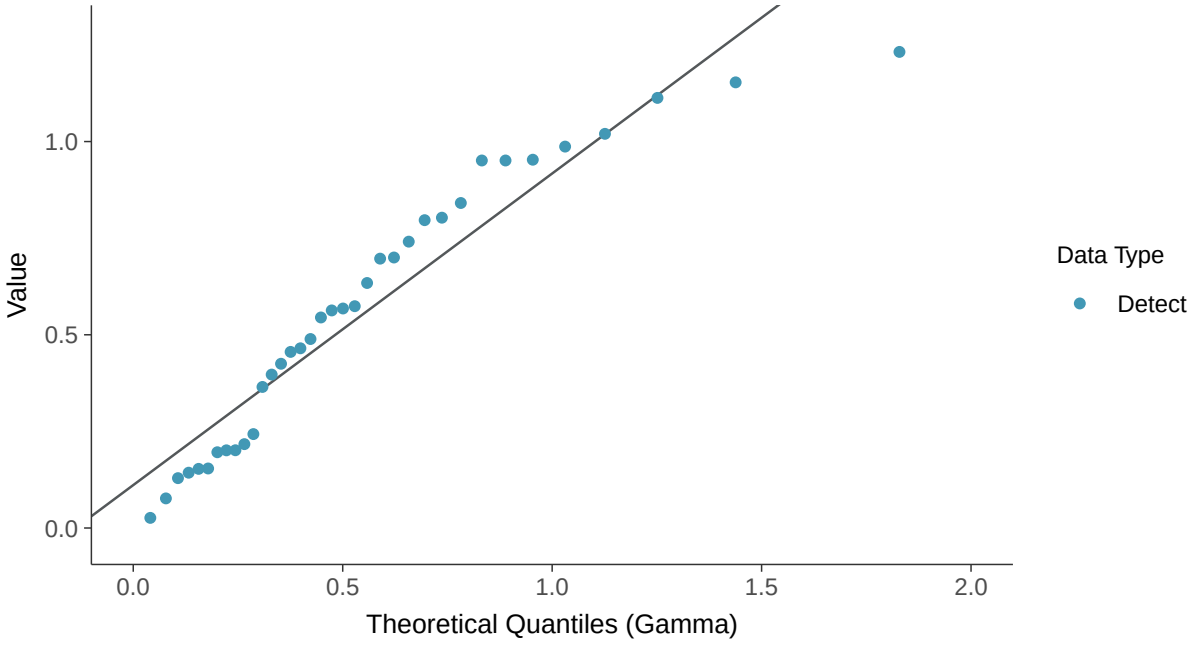
Lognormal Q-Q plot

Total Radium, MW-5 (pCi/L)



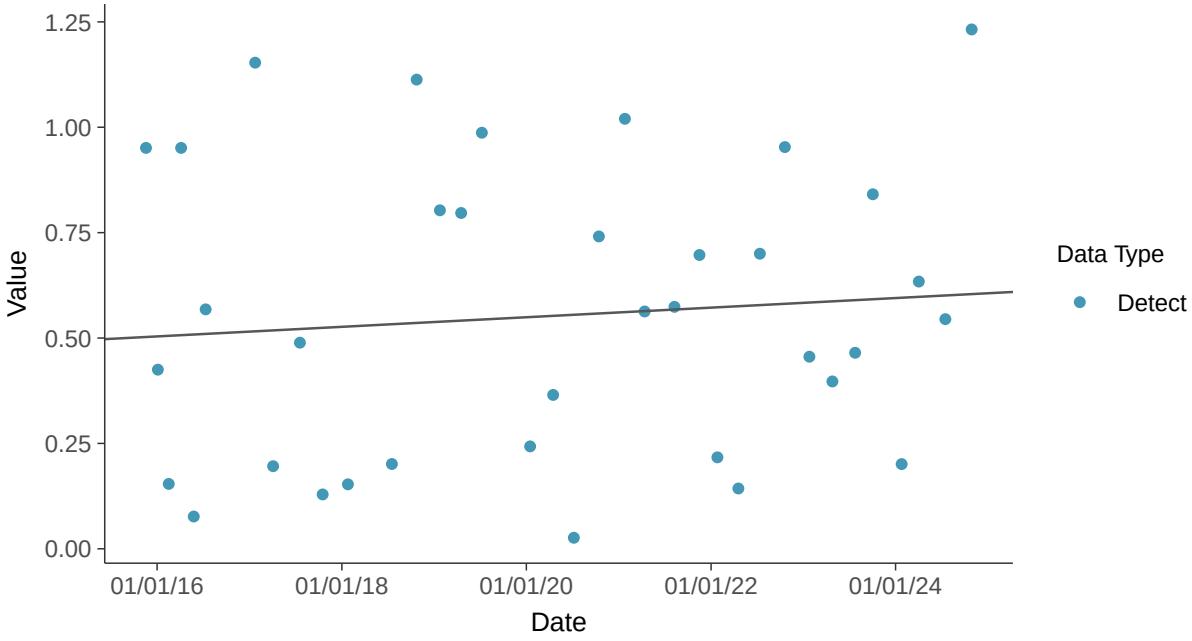
Gamma Q-Q plot

Total Radium, MW-5 (pCi/L)



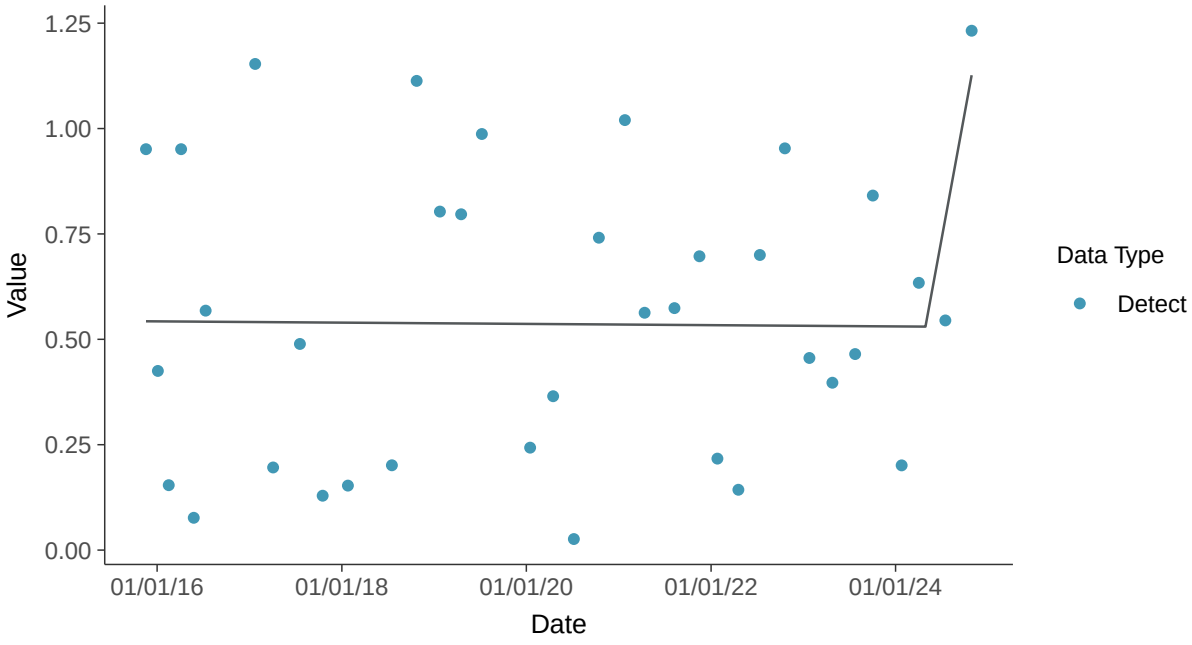
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-5 (pCi/L)



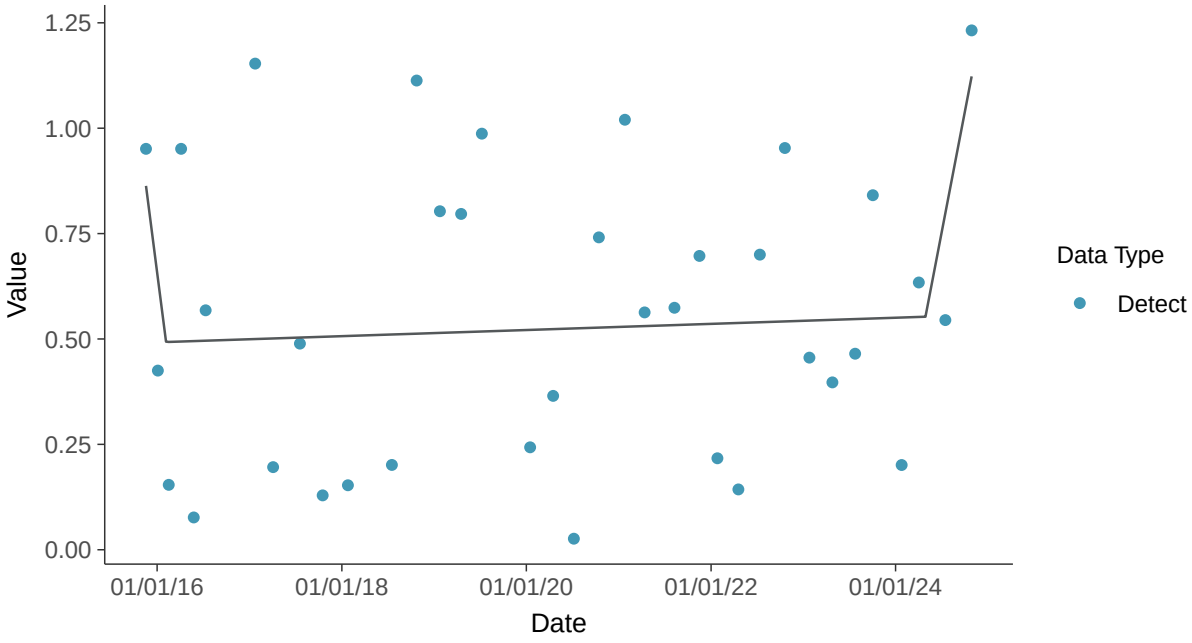
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-5 (pCi/L)



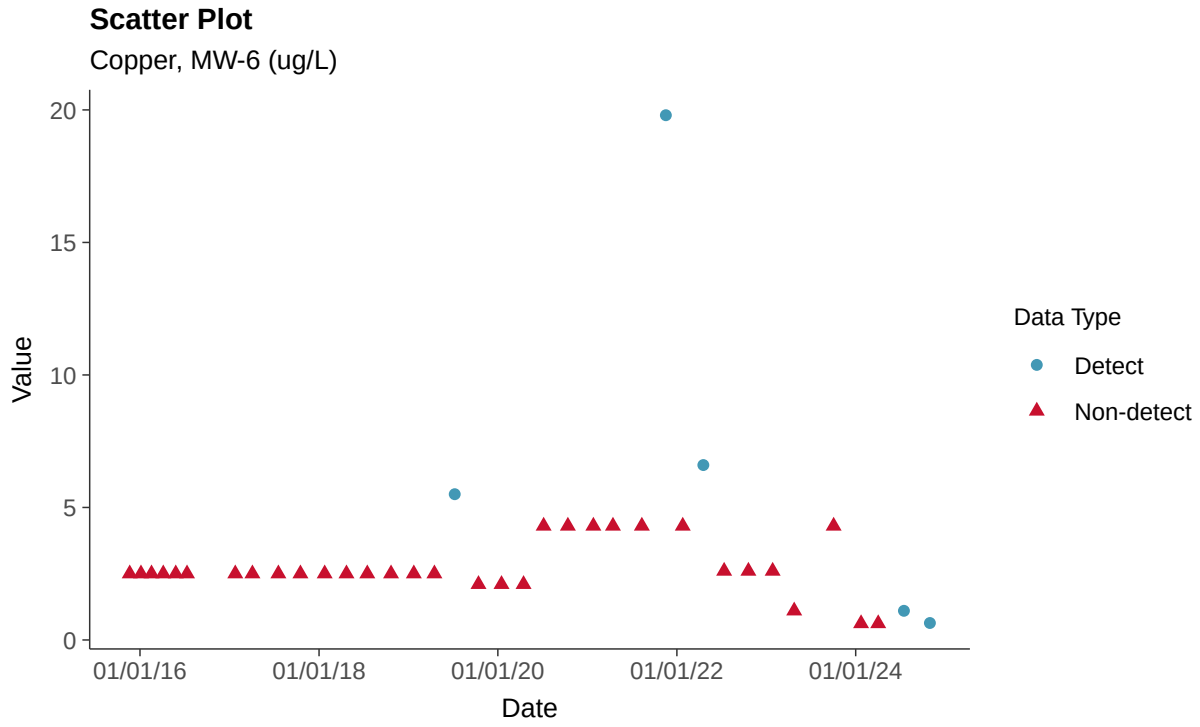
Trend Regression: Piecewise Linear-Linear-Linear

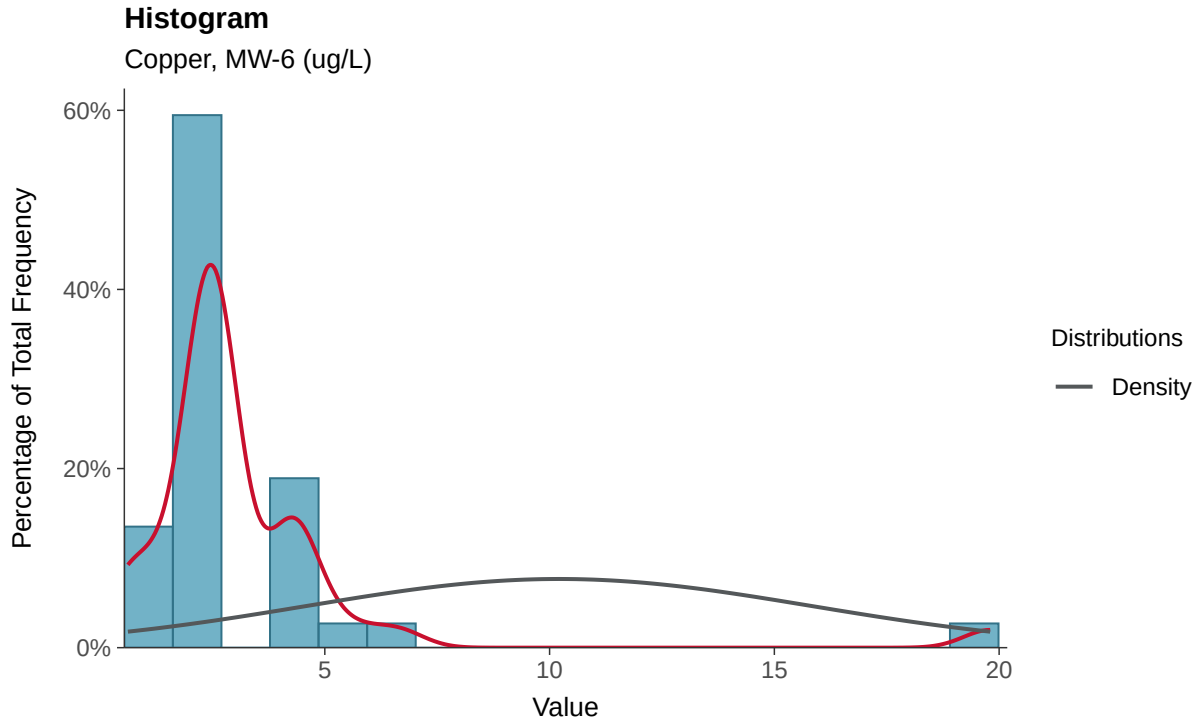
Total Radium, MW-5 (pCi/L)



App. I Metals: Copper, MW-6

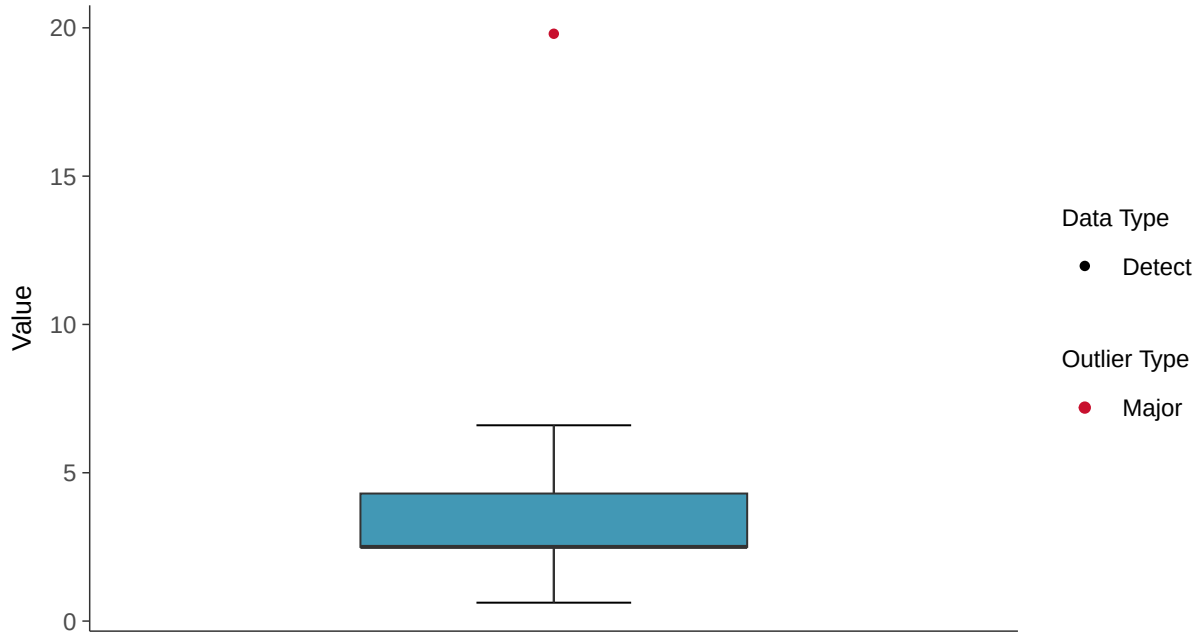
ID: 06_01_111





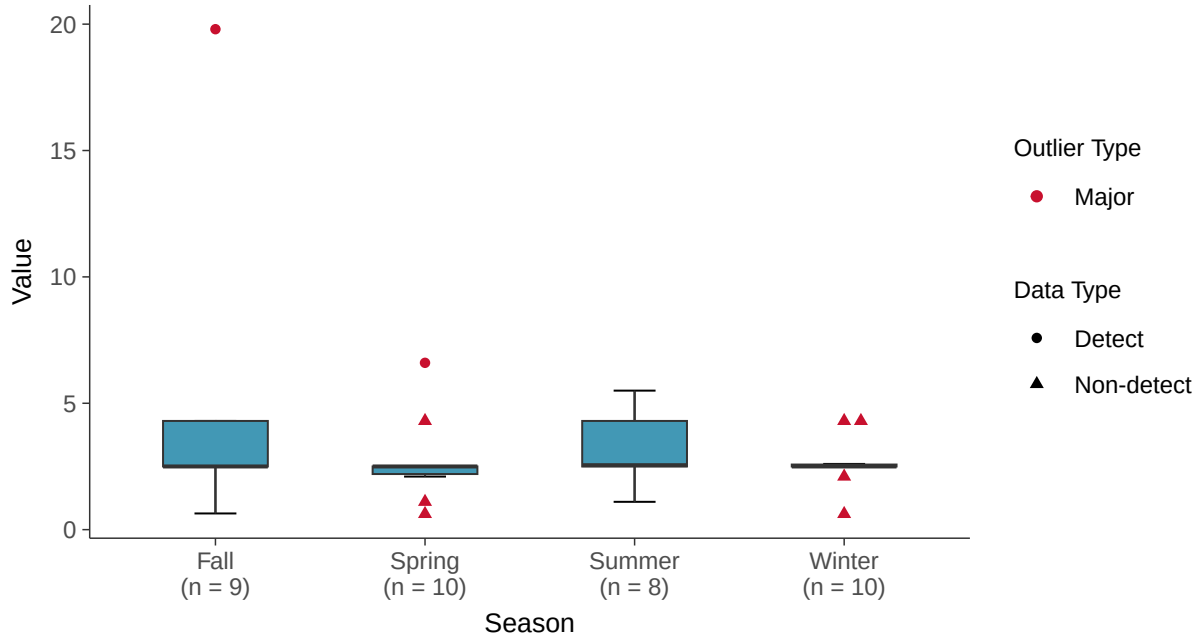
Boxplot

Copper, MW-6 (ug/L)



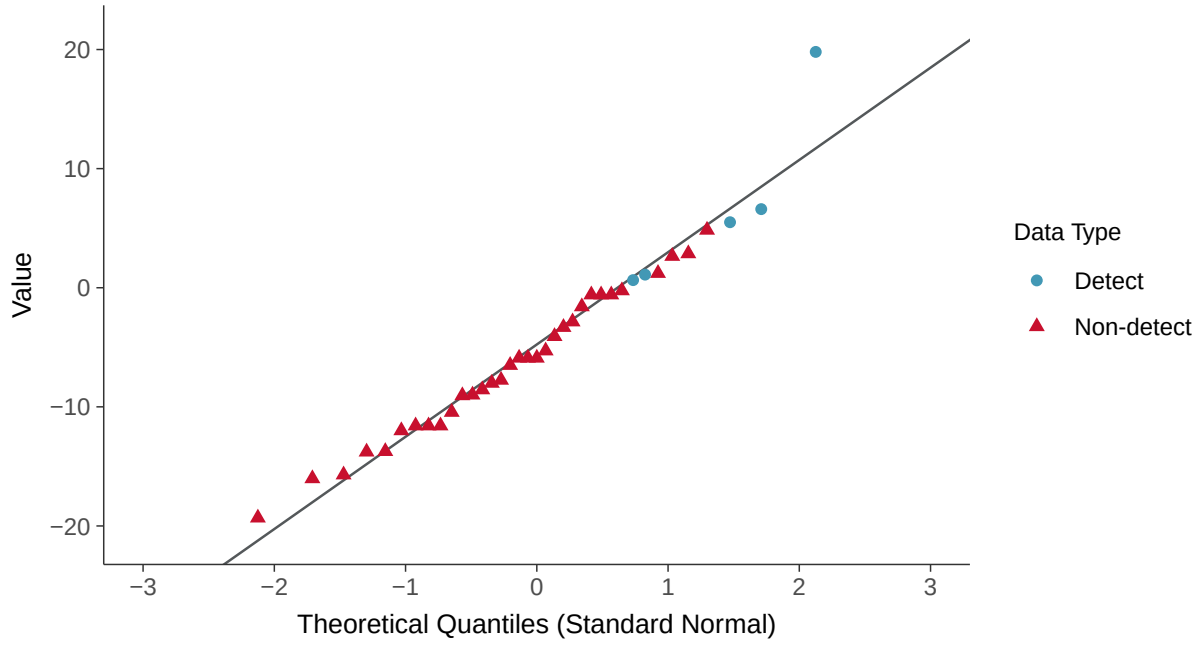
Boxplot by Season

Copper, MW-6 (ug/L)



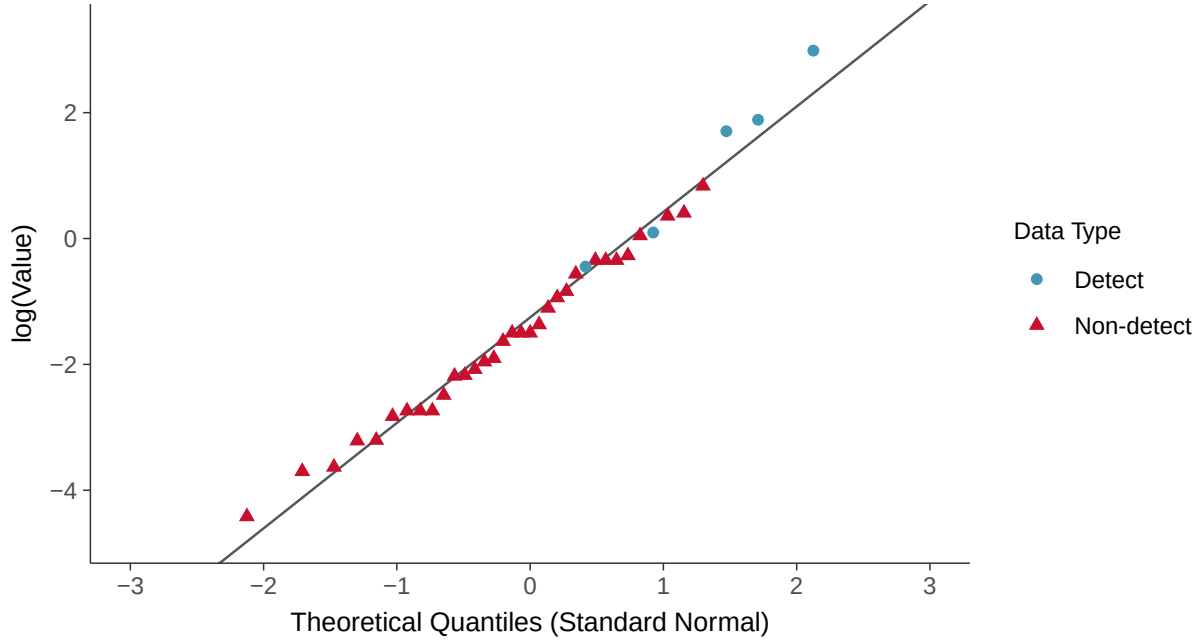
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-6 (ug/L)



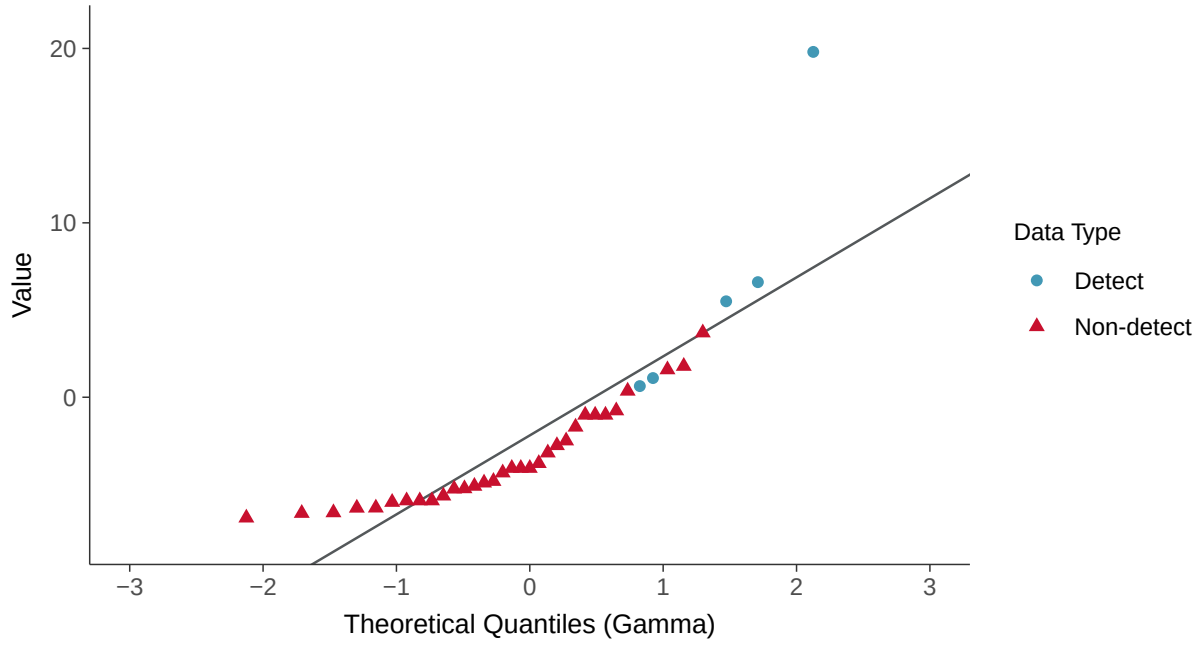
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-6 (ug/L)



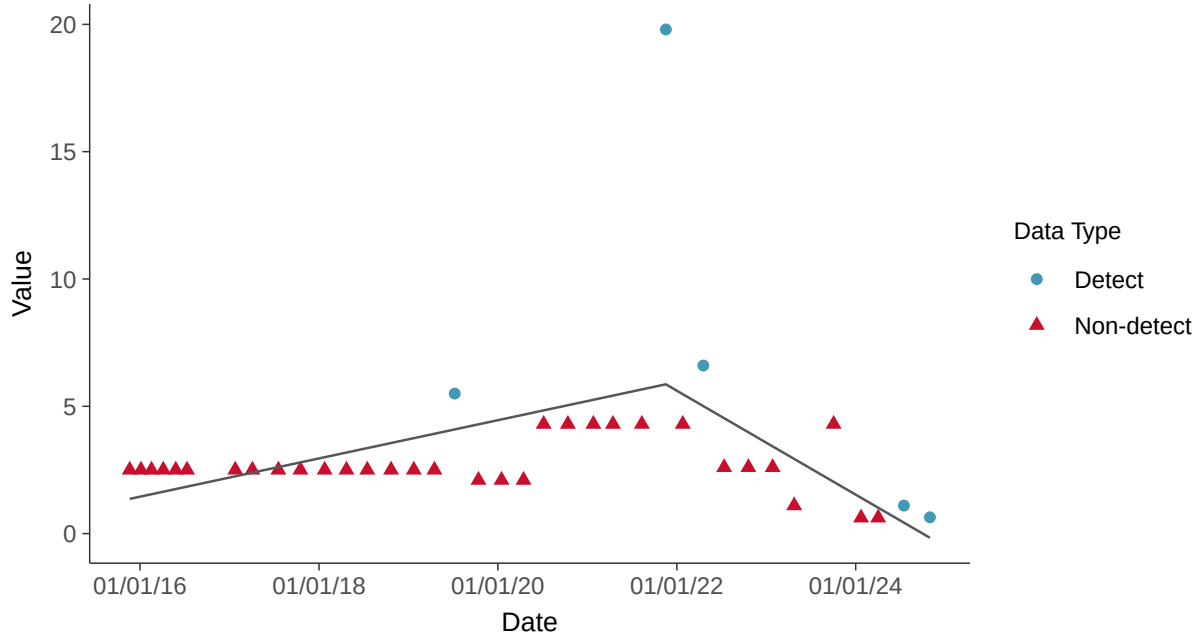
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-6 (ug/L)



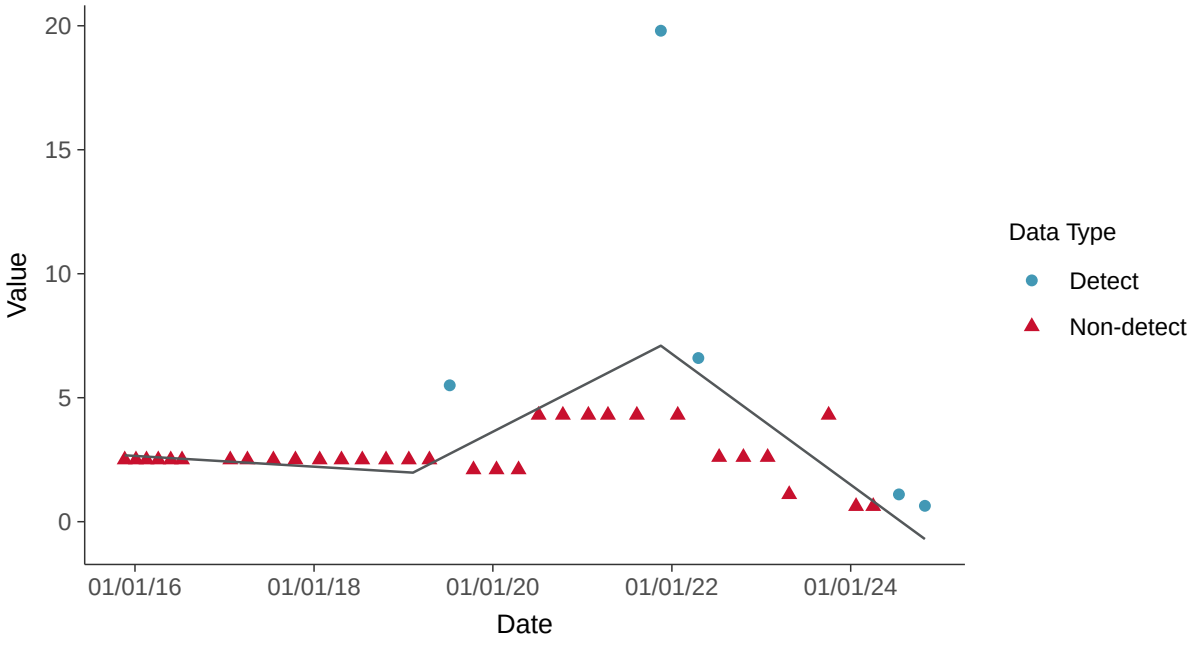
Trend Regression: Piecewise Linear-Linear

Copper, MW-6 (ug/L)



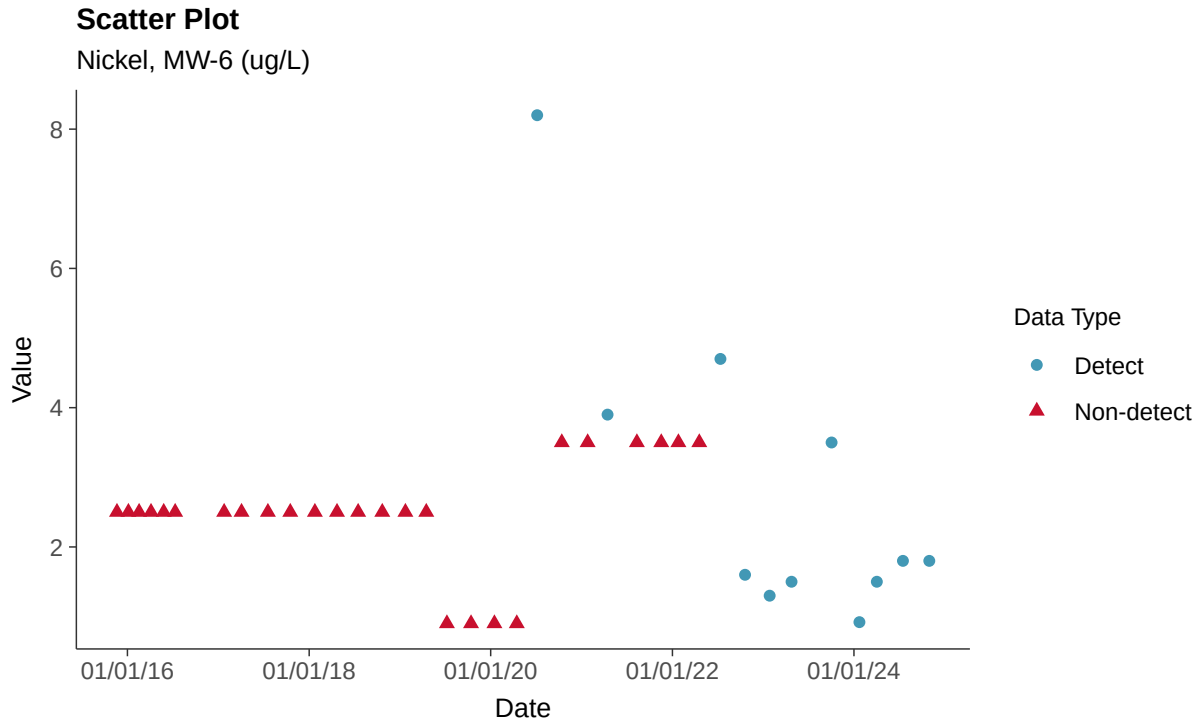
Trend Regression: Piecewise Linear-Linear-Linear

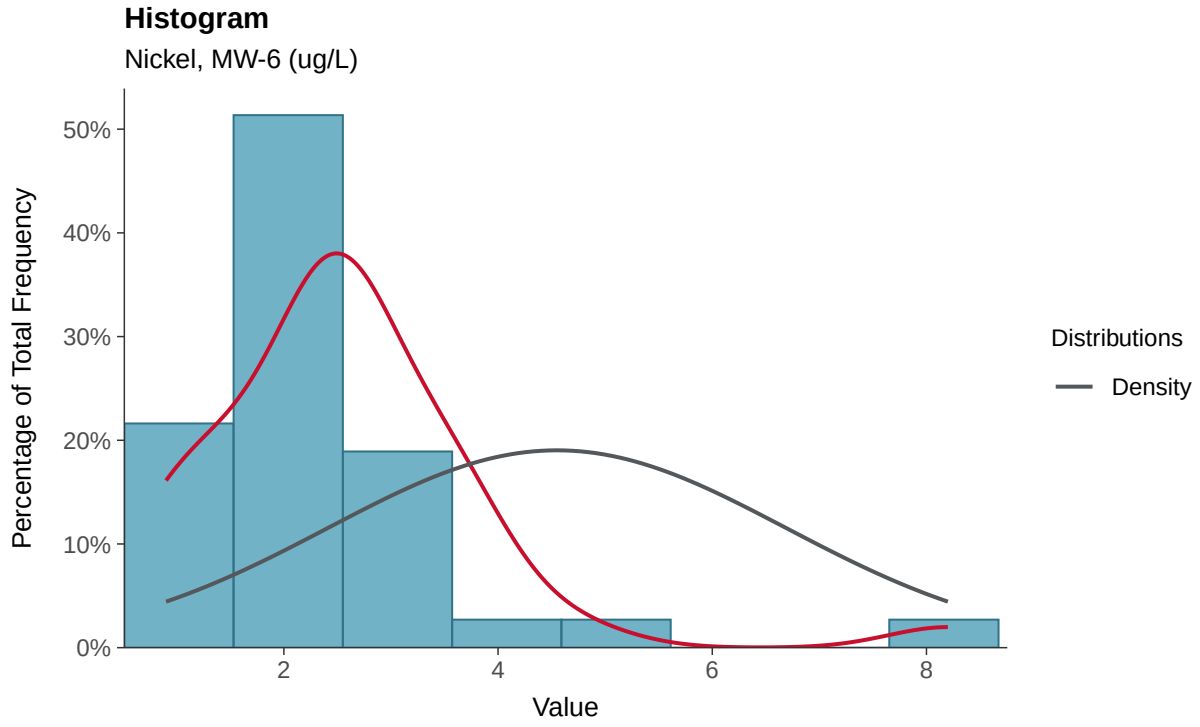
Copper, MW-6 (ug/L)



App. I Metals: Nickel, MW-6

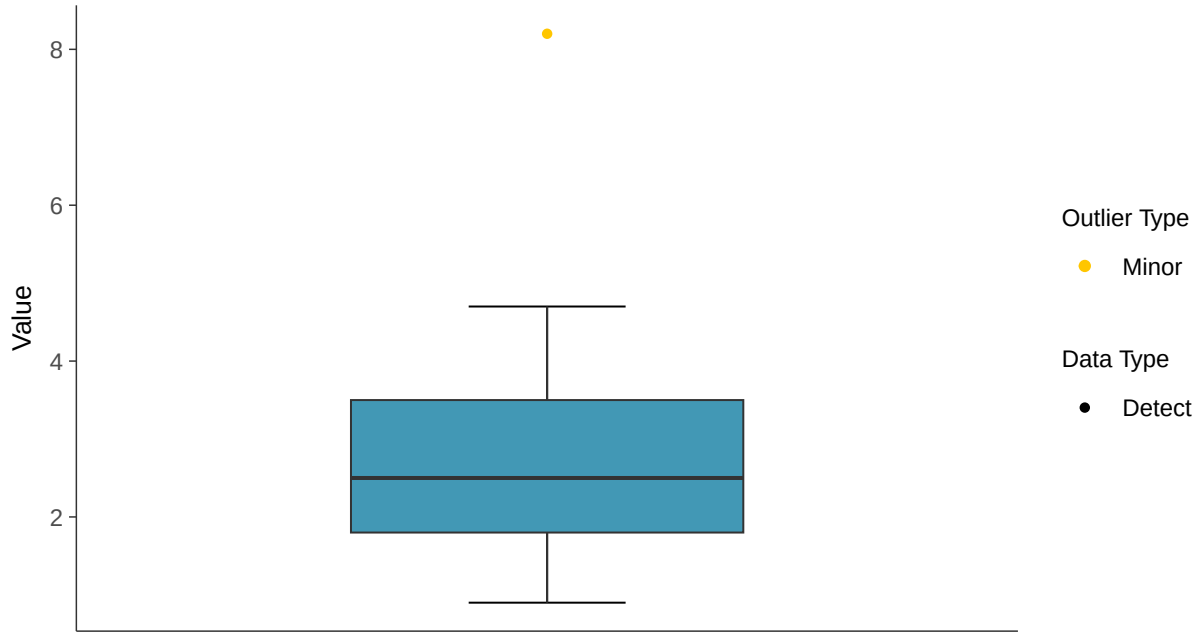
ID: 06_01_117





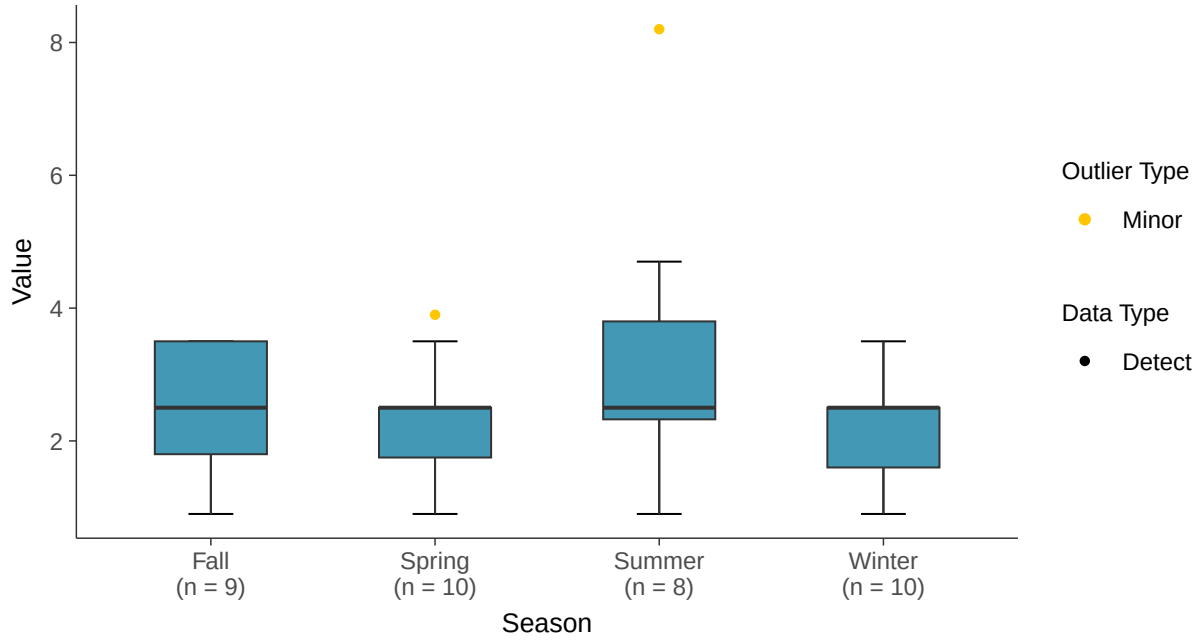
Boxplot

Nickel, MW-6 (ug/L)



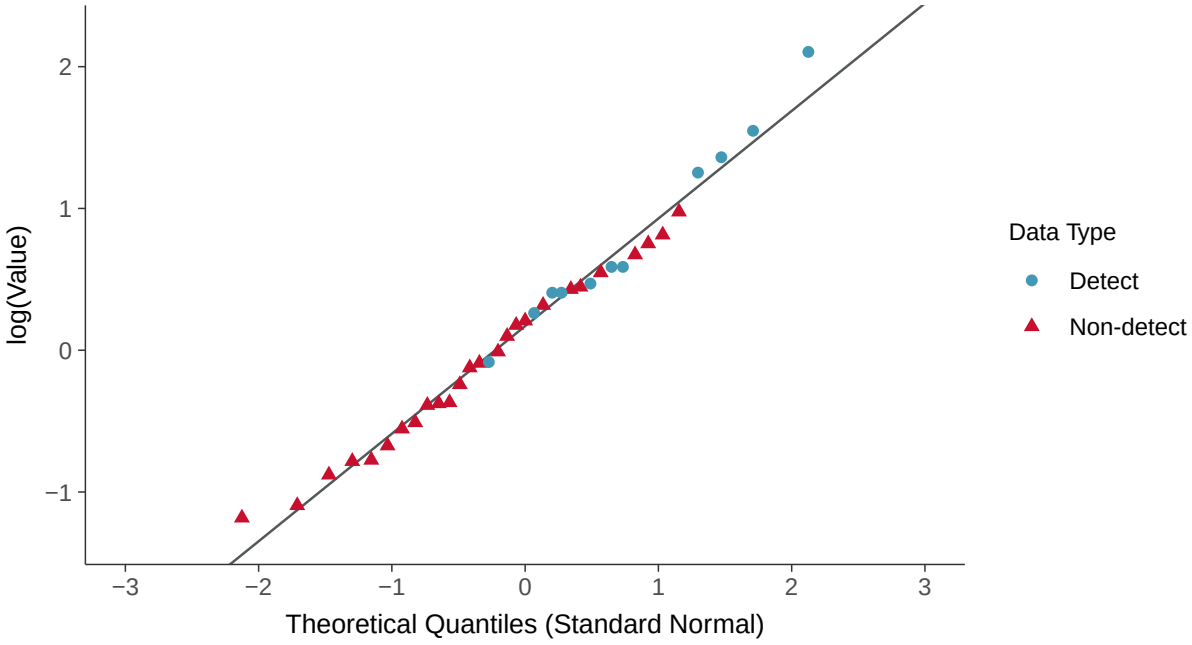
Boxplot by Season

Nickel, MW-6 (ug/L)



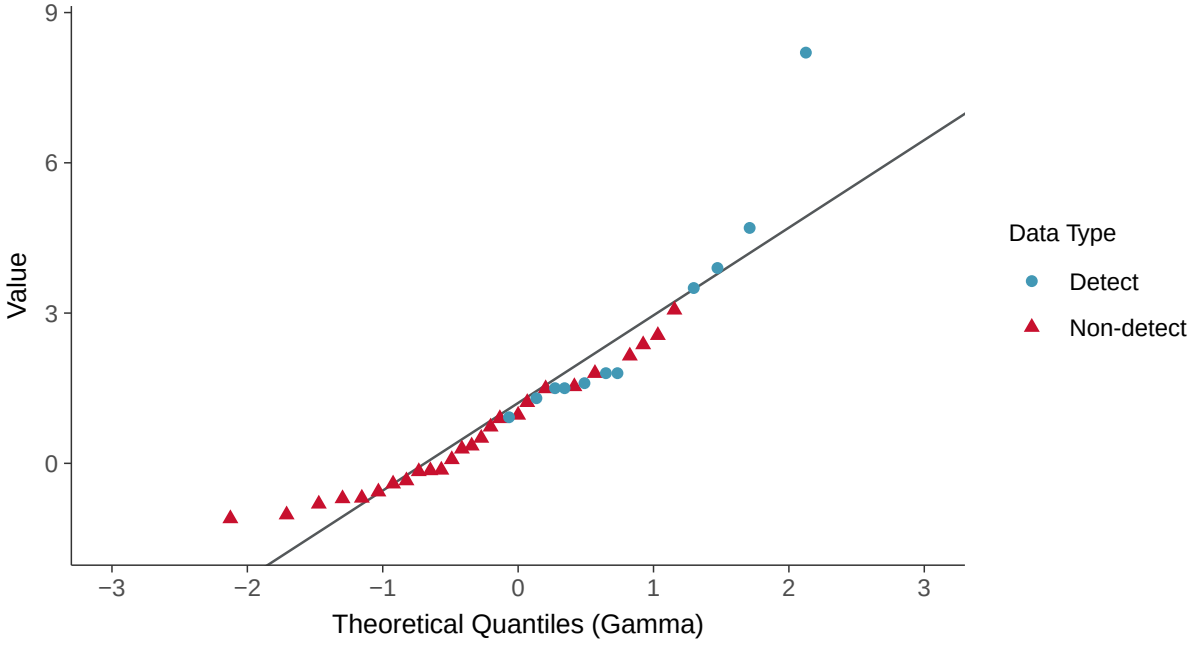
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-6 (ug/L)



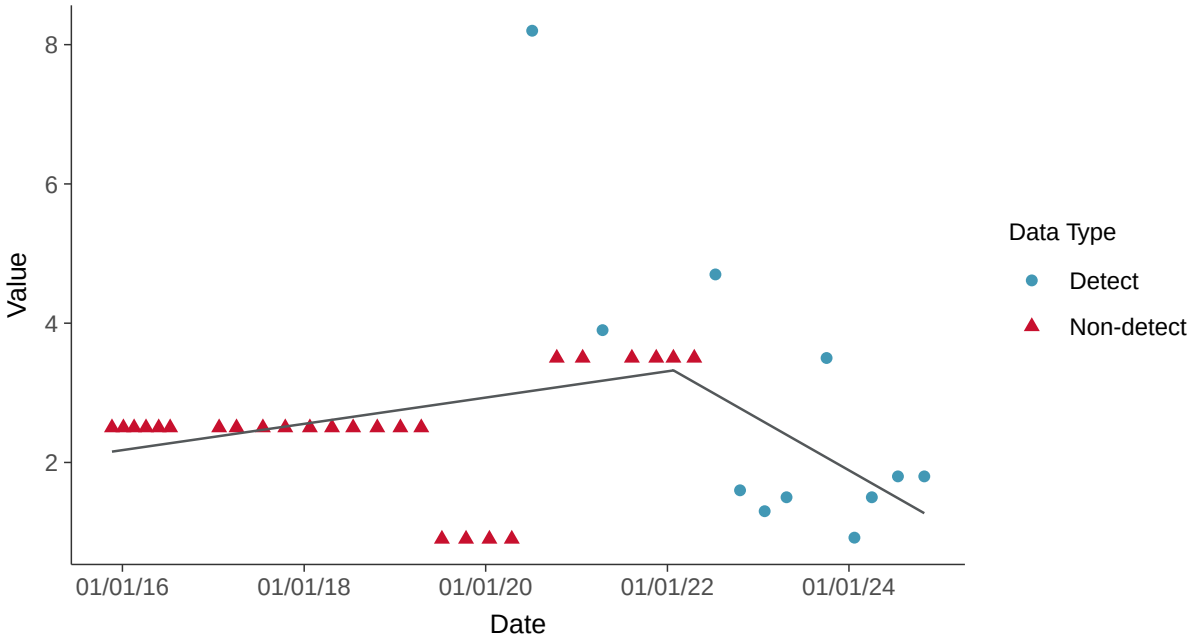
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-6 (ug/L)



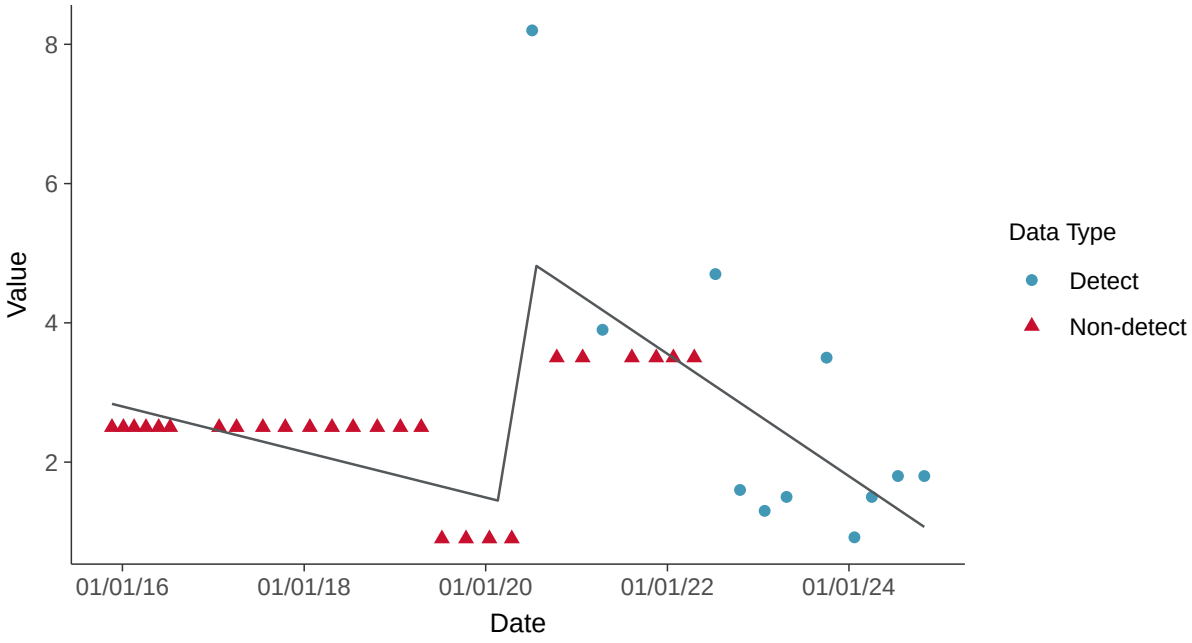
Trend Regression: Piecewise Linear-Linear

Nickel, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Nickel, MW-6 (ug/L)

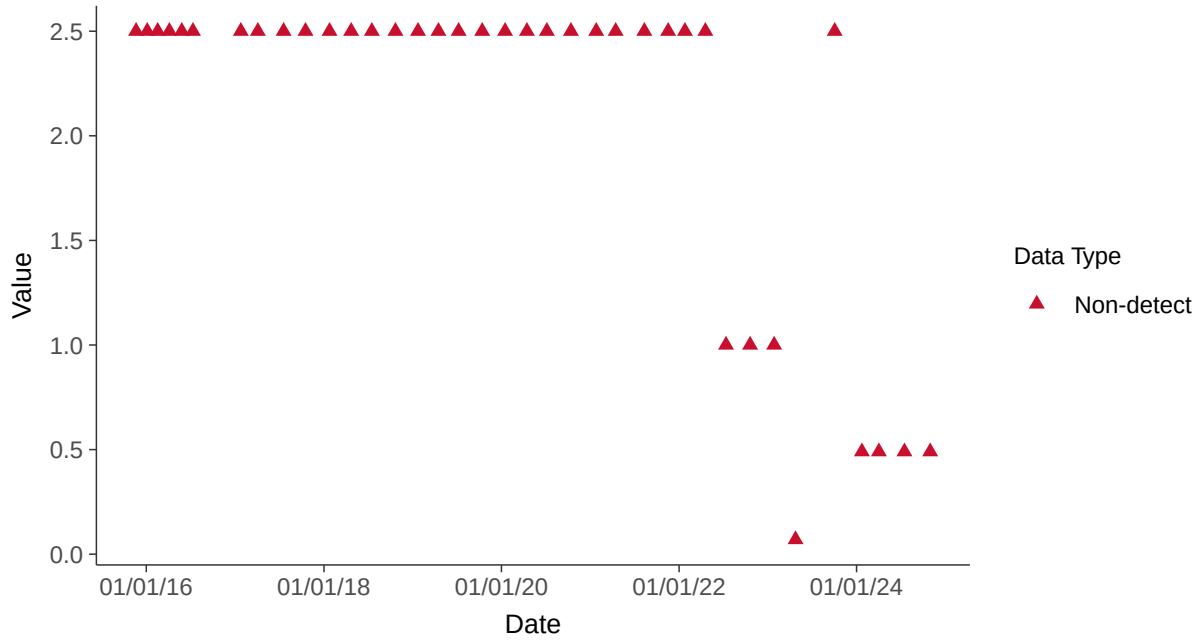


App. I Metals: Silver, MW-6

ID: 06_01_122

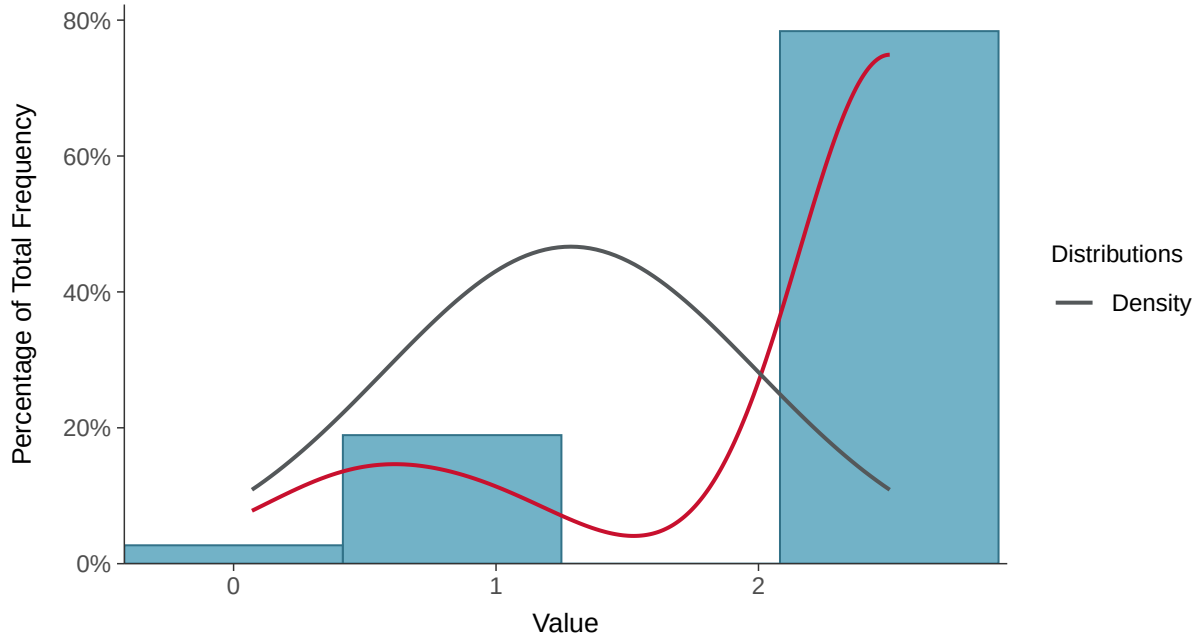
Scatter Plot

Silver, MW-6 (ug/L)



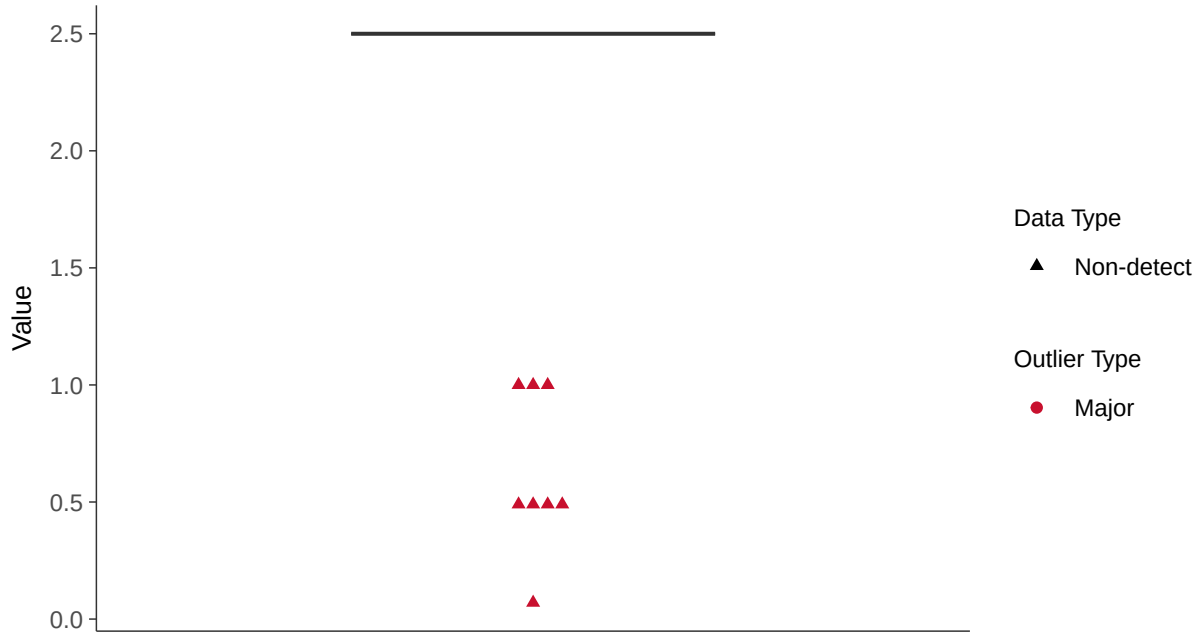
Histogram

Silver, MW-6 (ug/L)



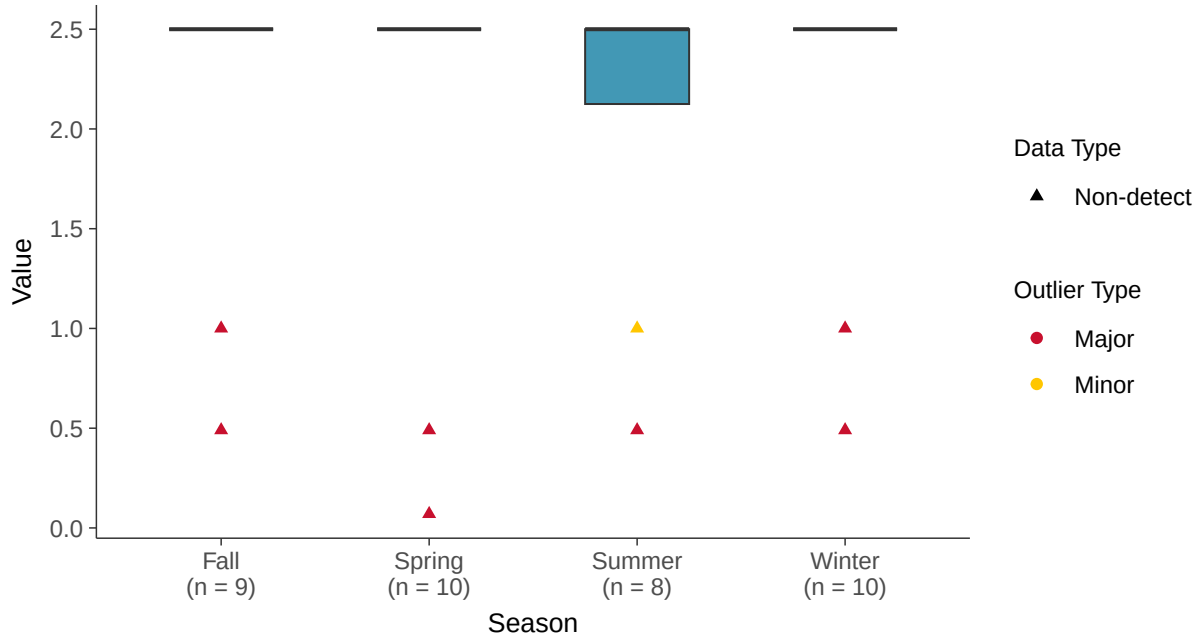
Boxplot

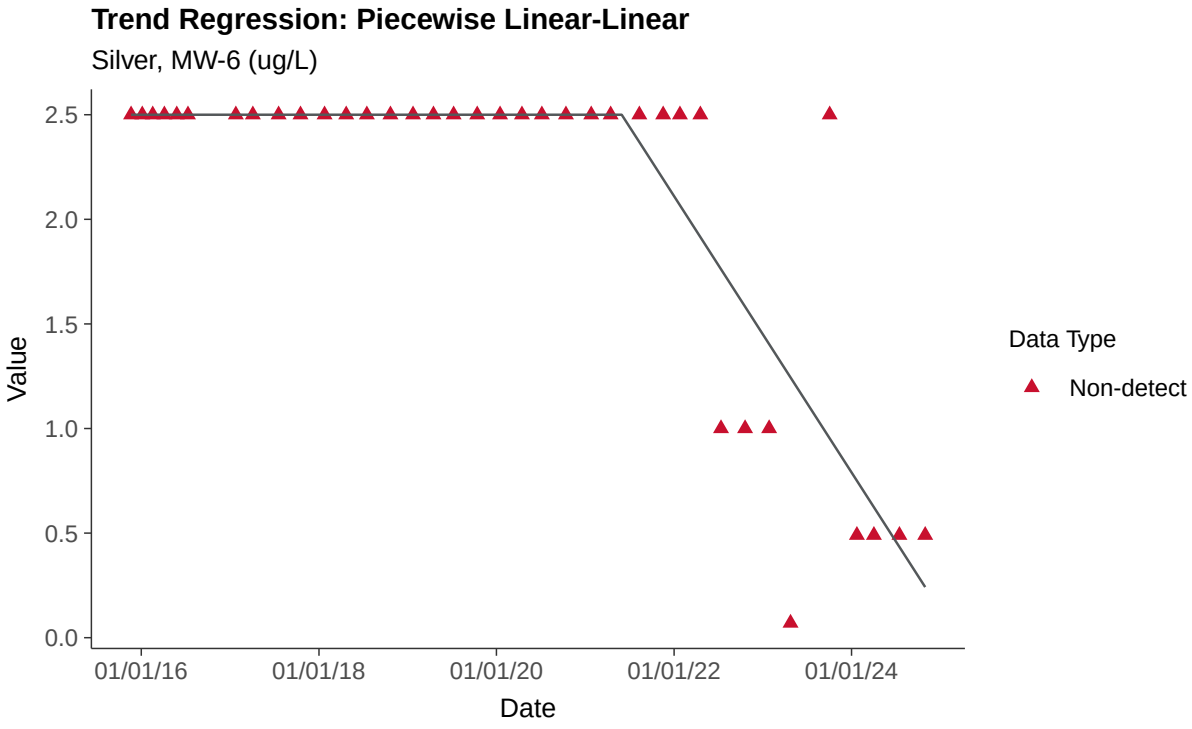
Silver, MW-6 (ug/L)



Boxplot by Season

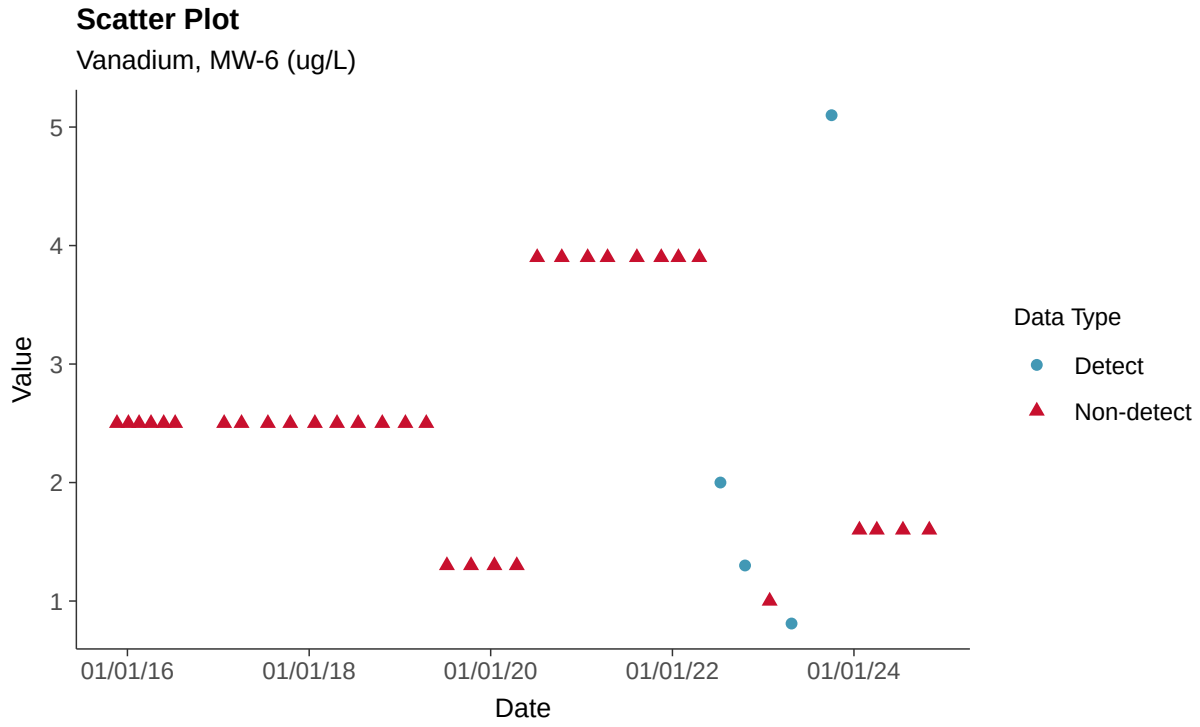
Silver, MW-6 (ug/L)

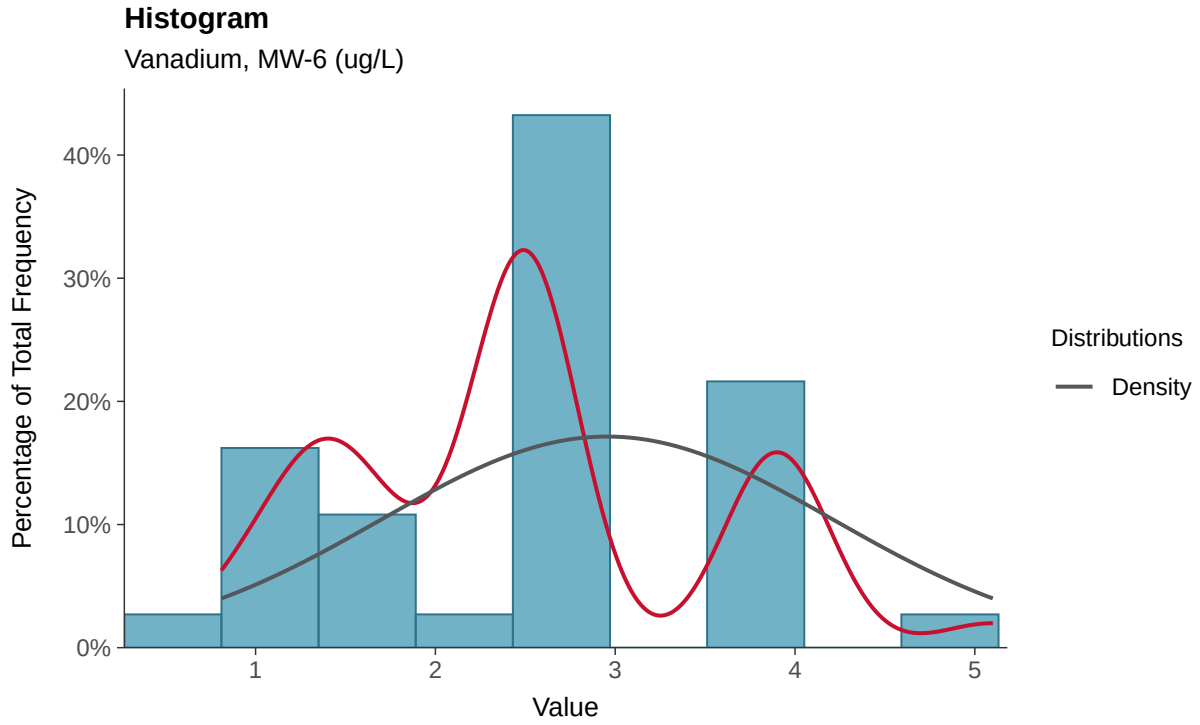



Trend Regression: Piecewise Linear-Linear
Silver, MW-6 (ug/L)
Value
2.5
2.0
1.5
1.0
0.5
0.0
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Non-detect

App. I Metals: Vanadium, MW-6

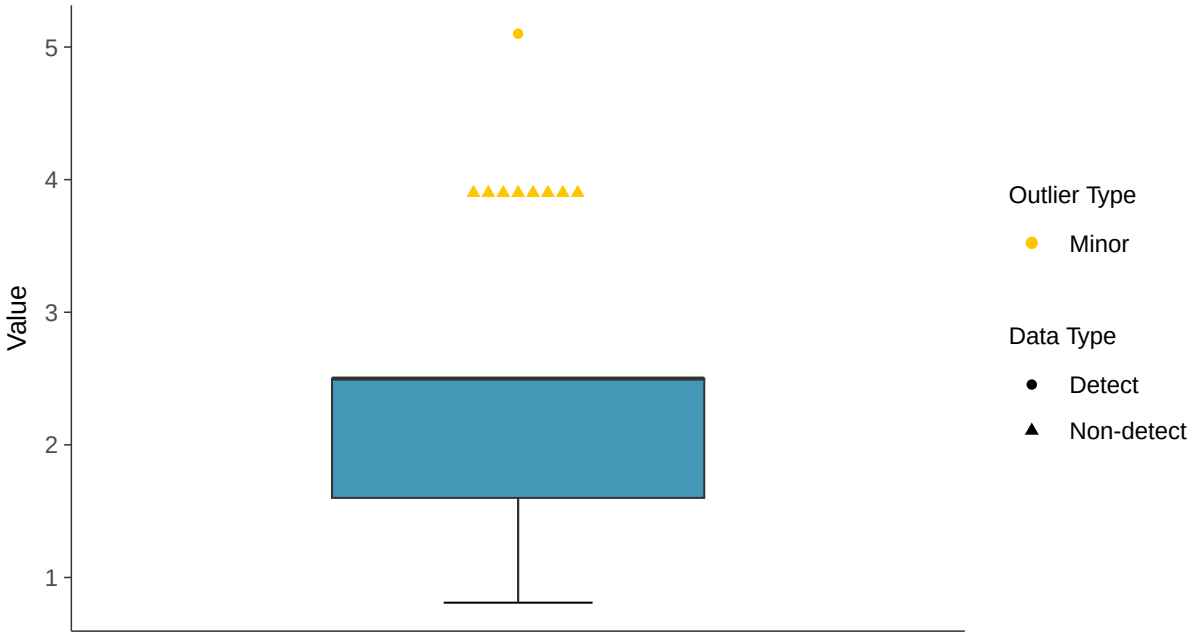
ID: 06_01_127





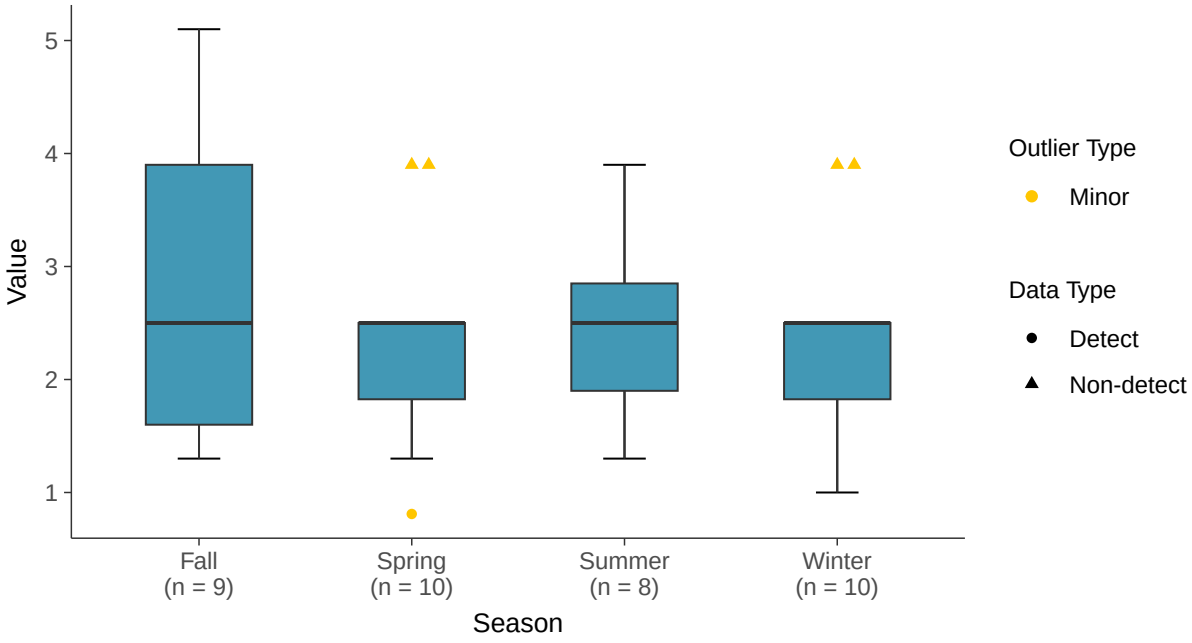
Boxplot

Vanadium, MW-6 (ug/L)



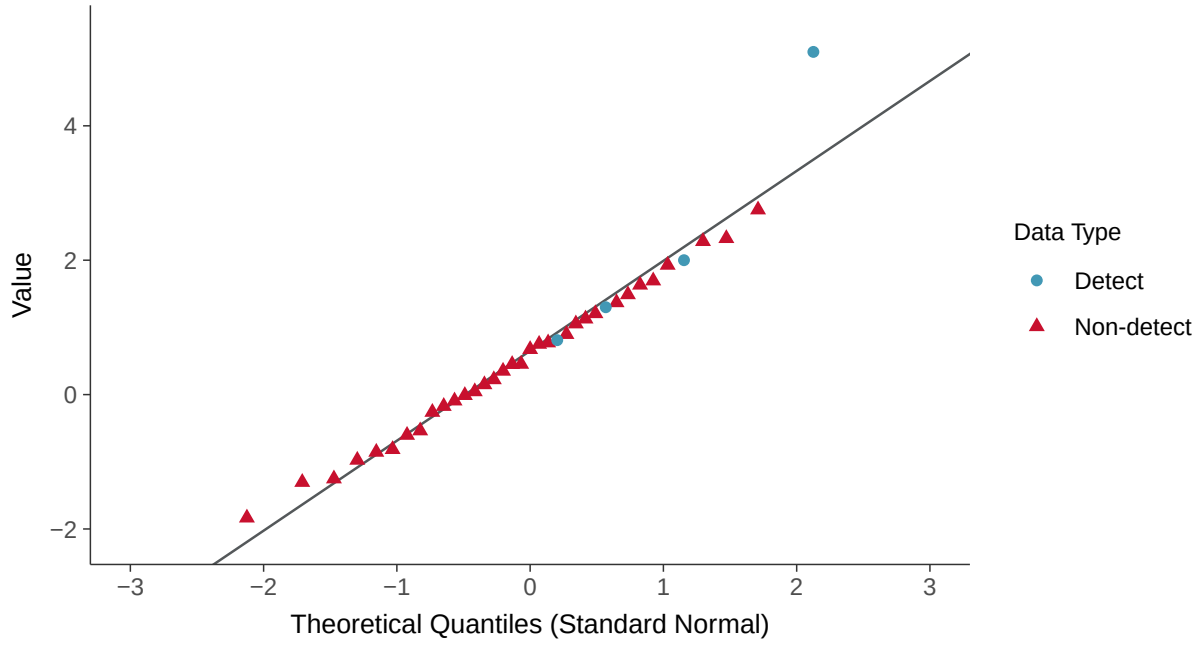
Boxplot by Season

Vanadium, MW-6 (ug/L)



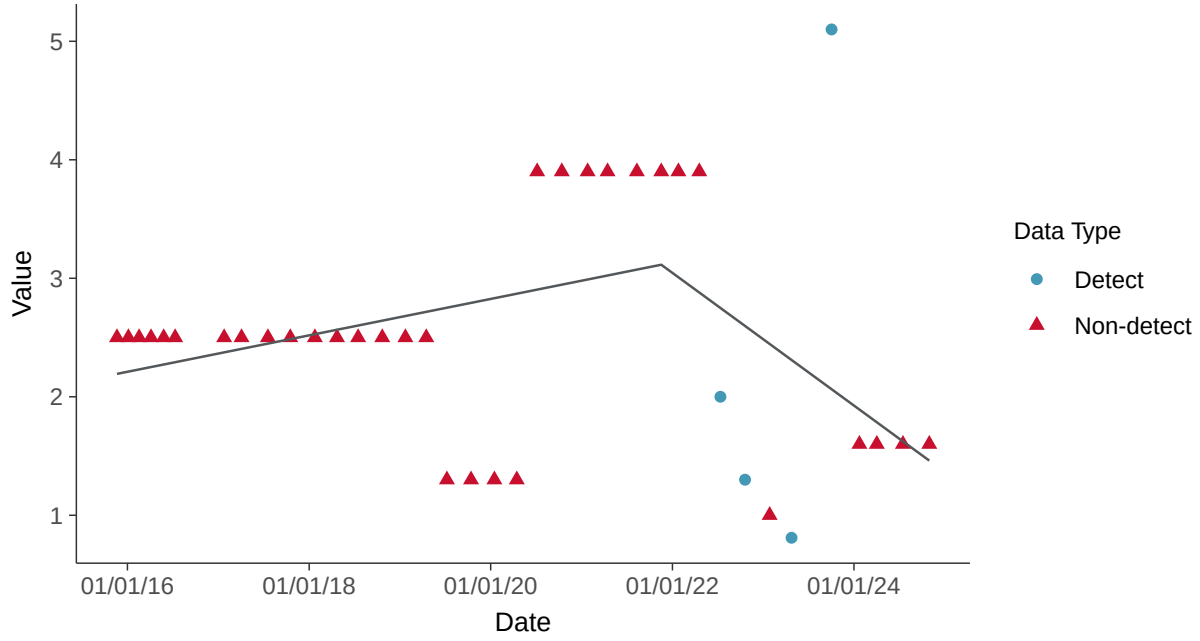
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-6 (ug/L)



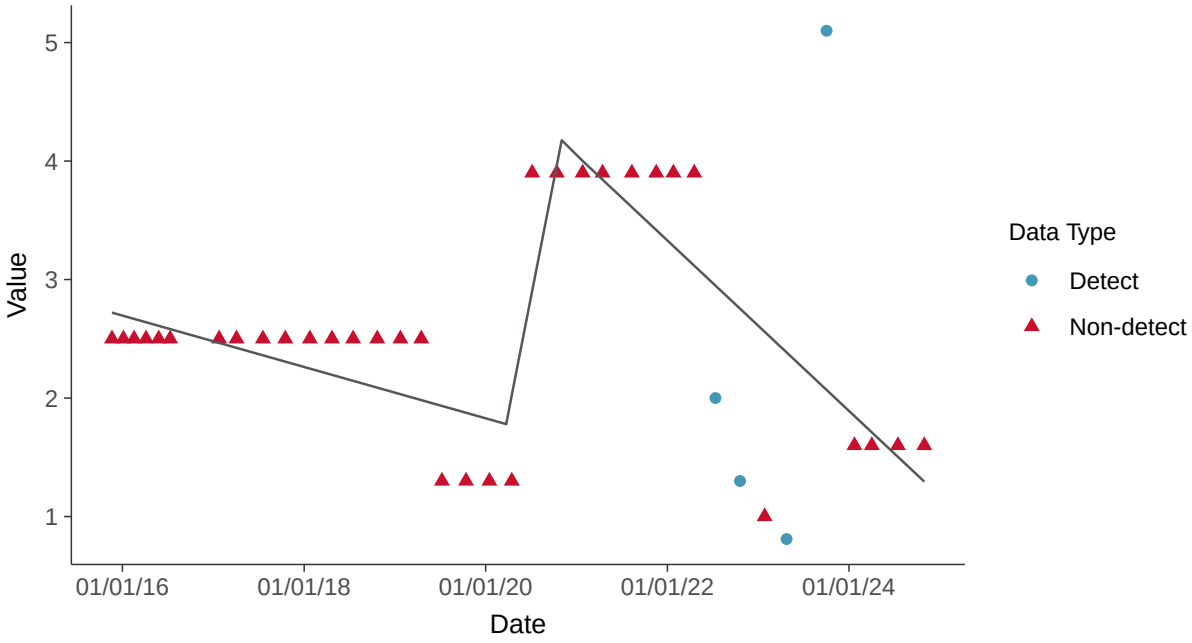
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-6 (ug/L)

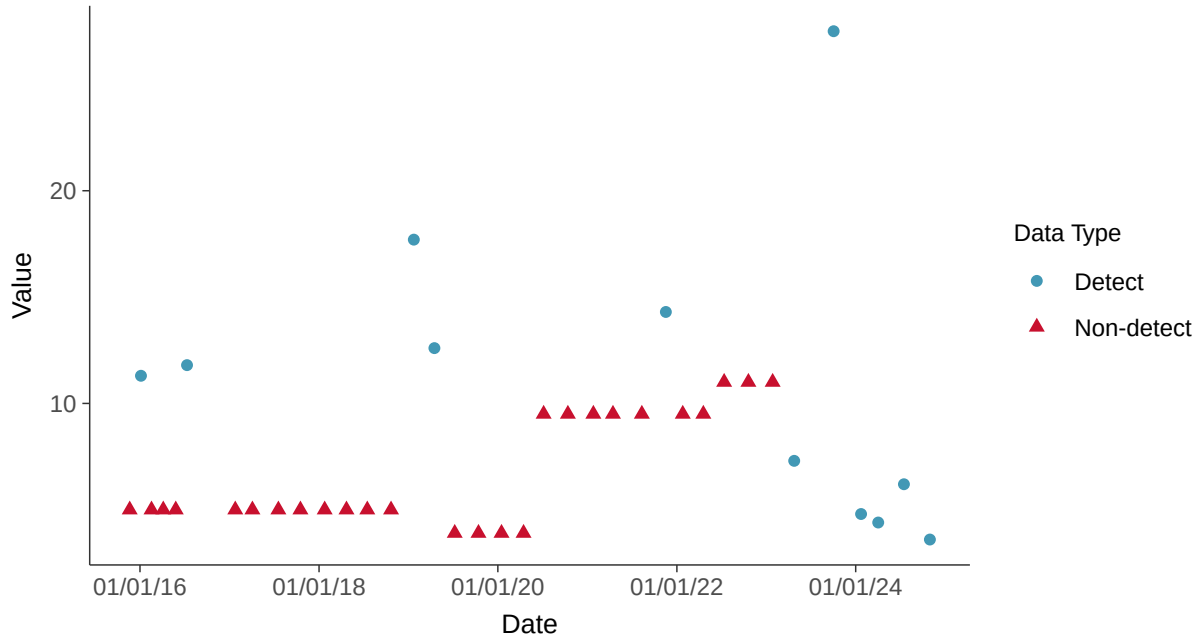


App. I Metals: Zinc, MW-6

ID: 06_01_128

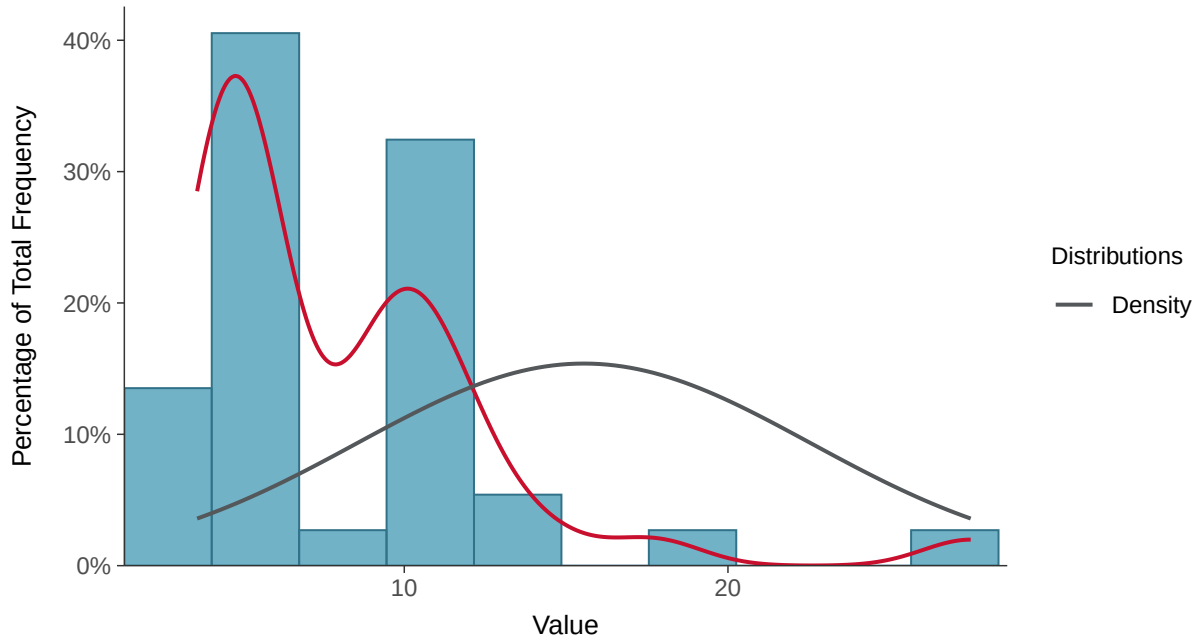
Scatter Plot

Zinc, MW-6 (ug/L)



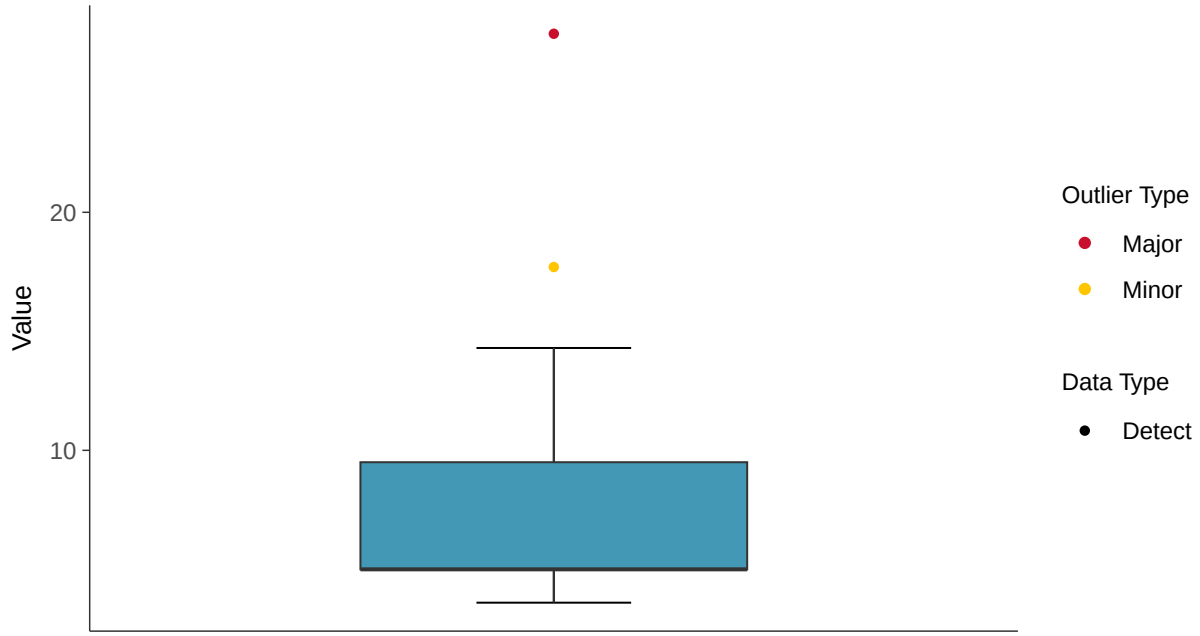
Histogram

Zinc, MW-6 (ug/L)



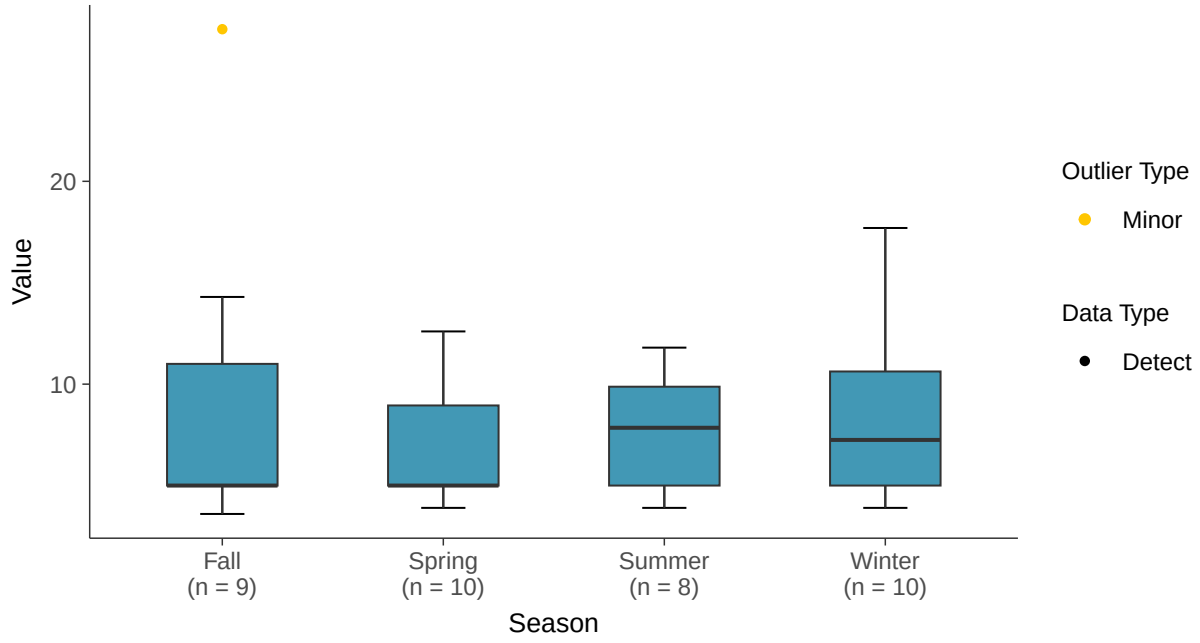
Boxplot

Zinc, MW-6 (ug/L)



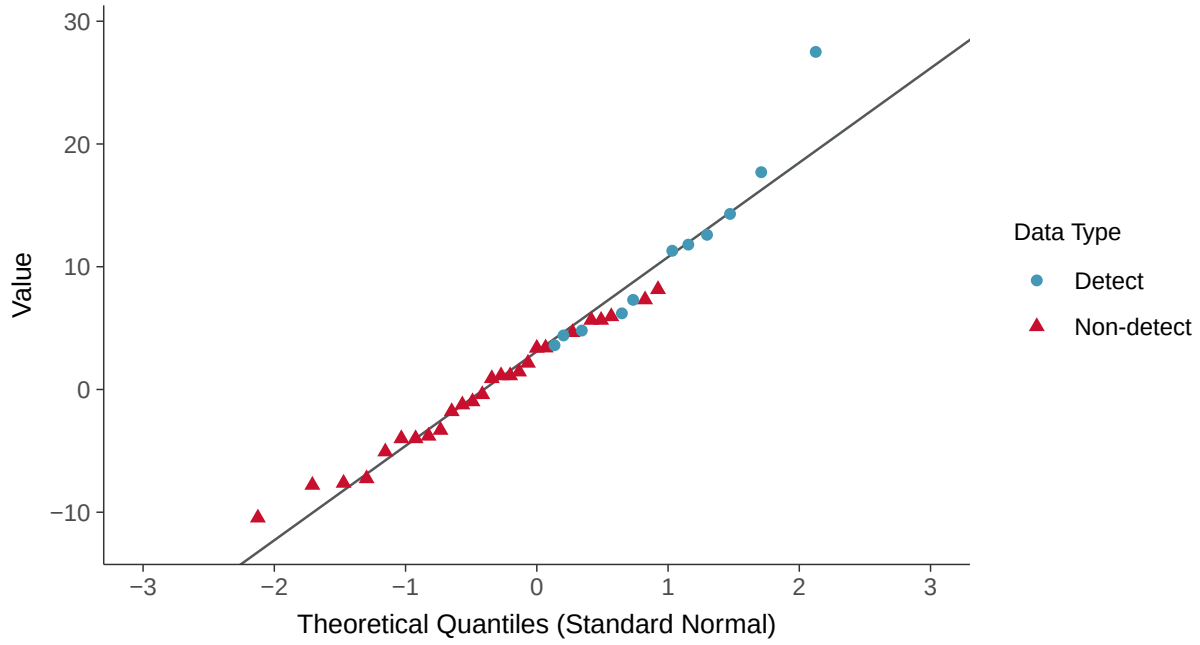
Boxplot by Season

Zinc, MW-6 (ug/L)



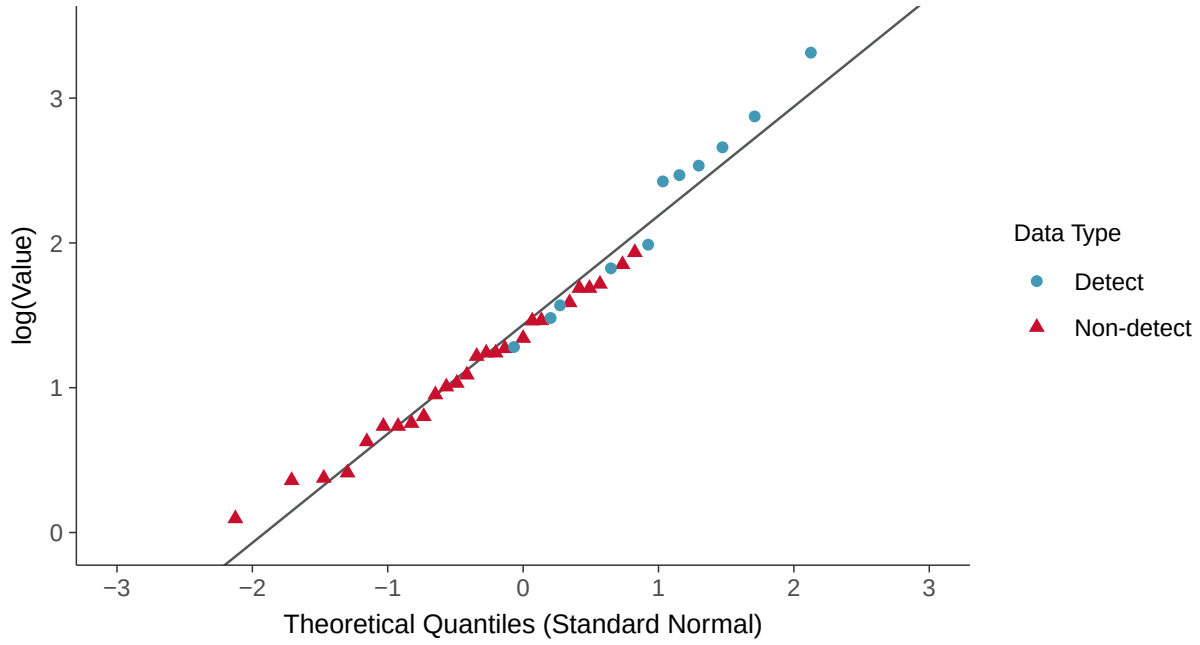
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



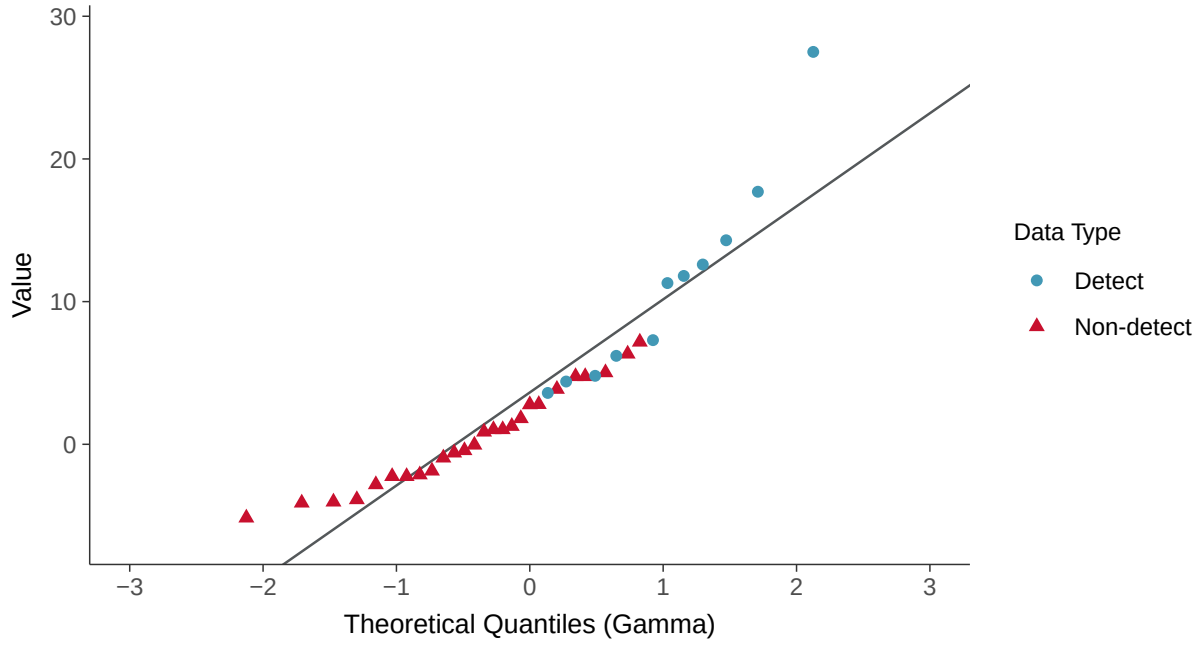
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



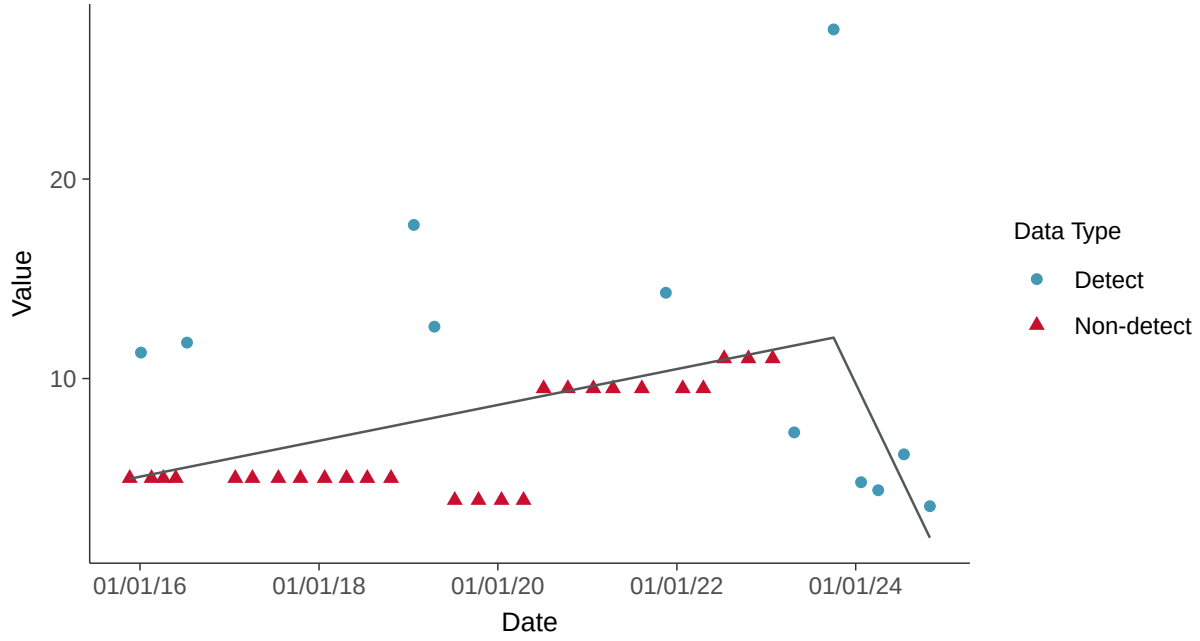
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-6 (ug/L)

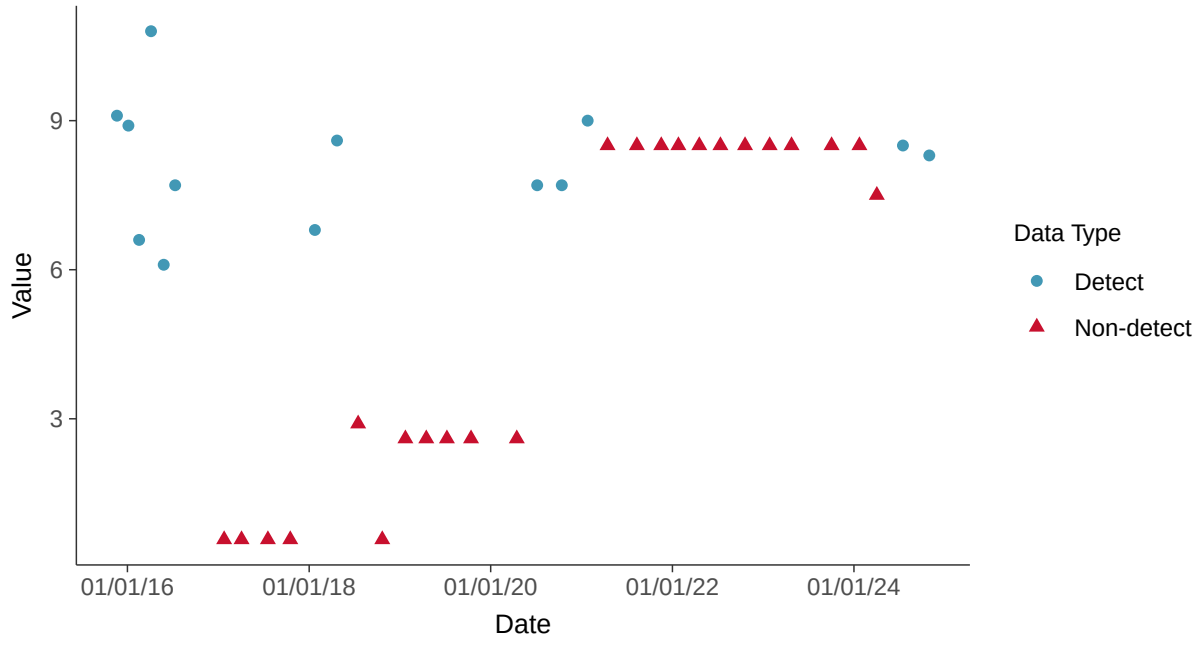


App. III: Boron, MW-6

ID: 06_02_105

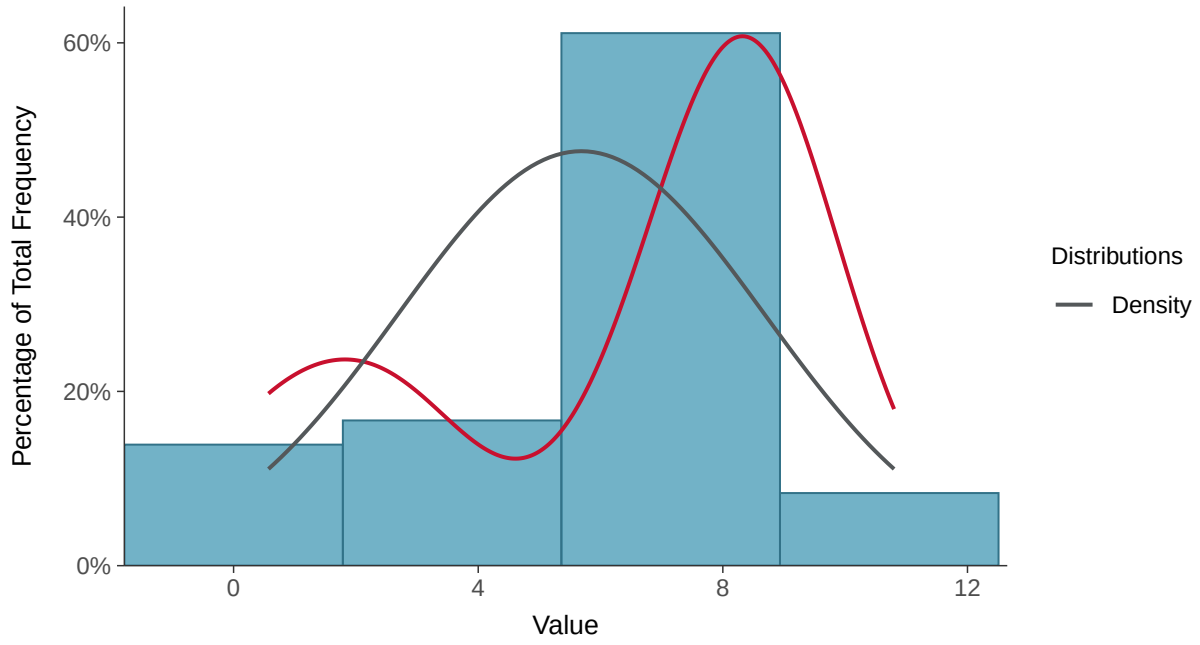
Scatter Plot

Boron, MW-6 (ug/L)



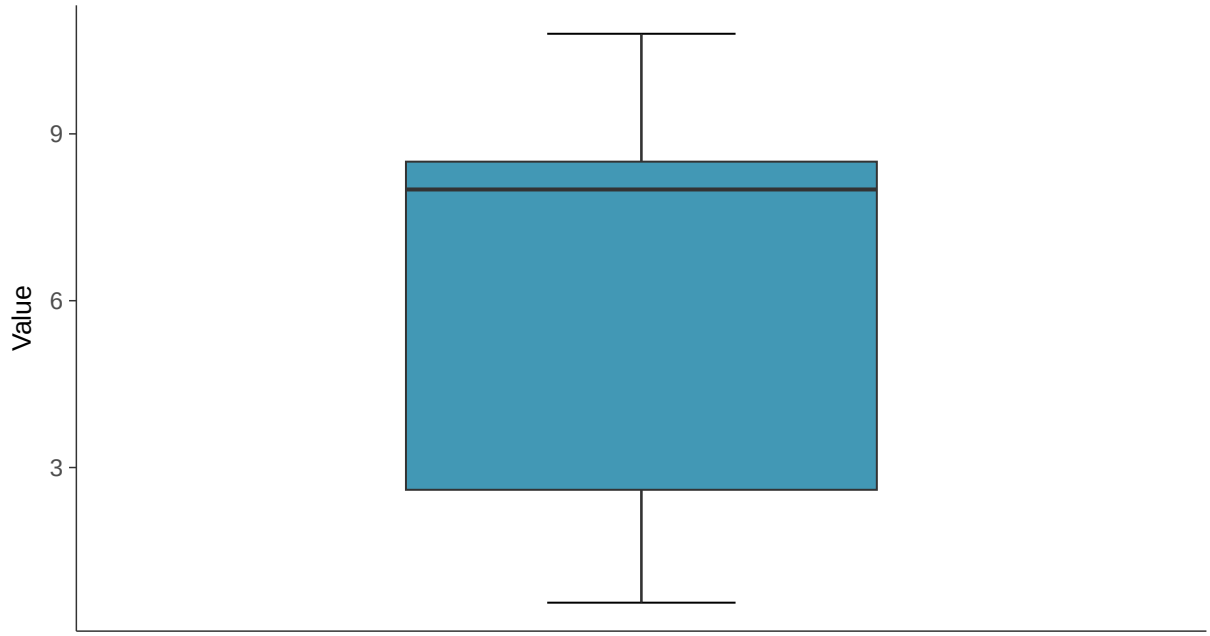
Histogram

Boron, MW-6 (ug/L)



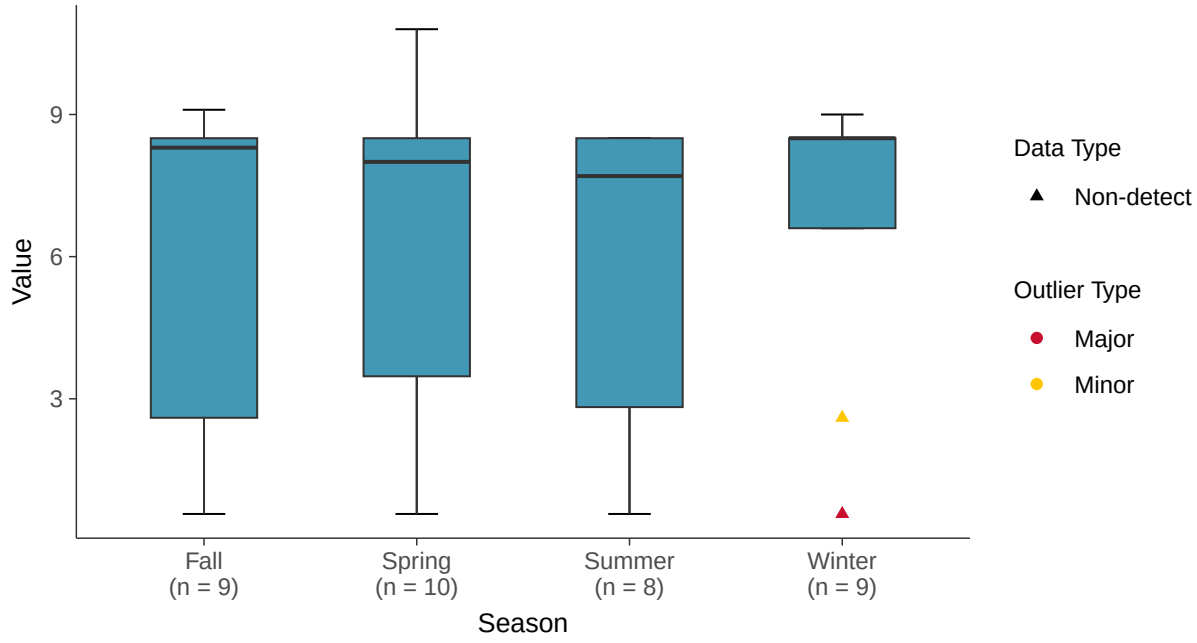
Boxplot

Boron, MW-6 (ug/L)



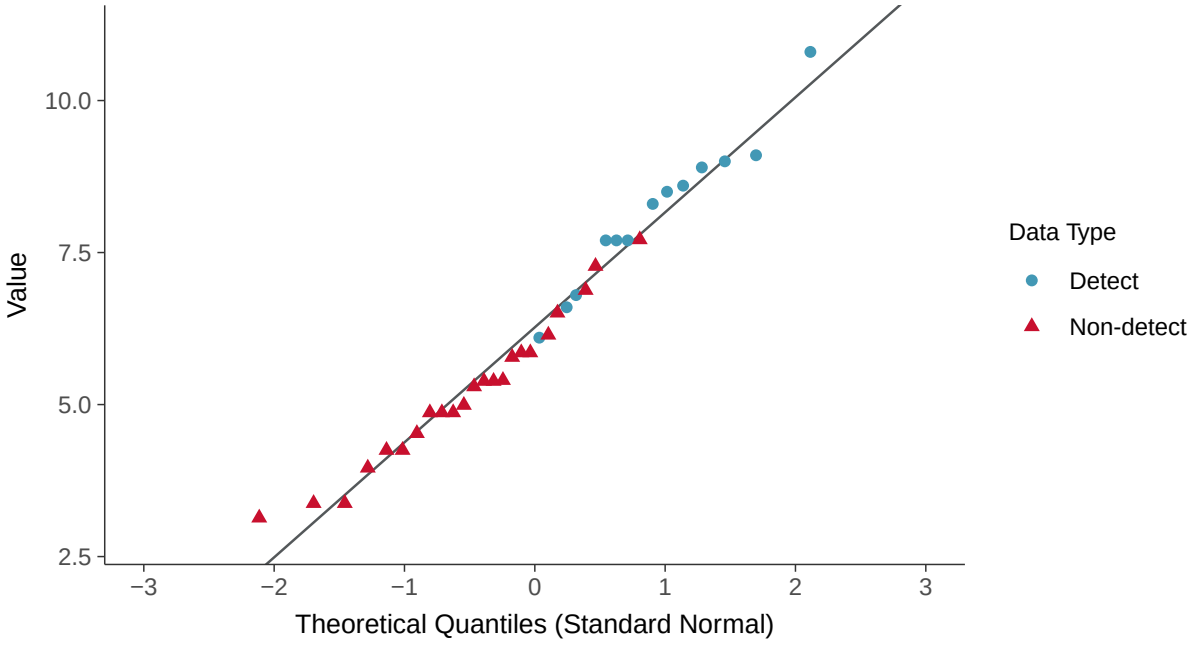
Boxplot by Season

Boron, MW-6 (ug/L)



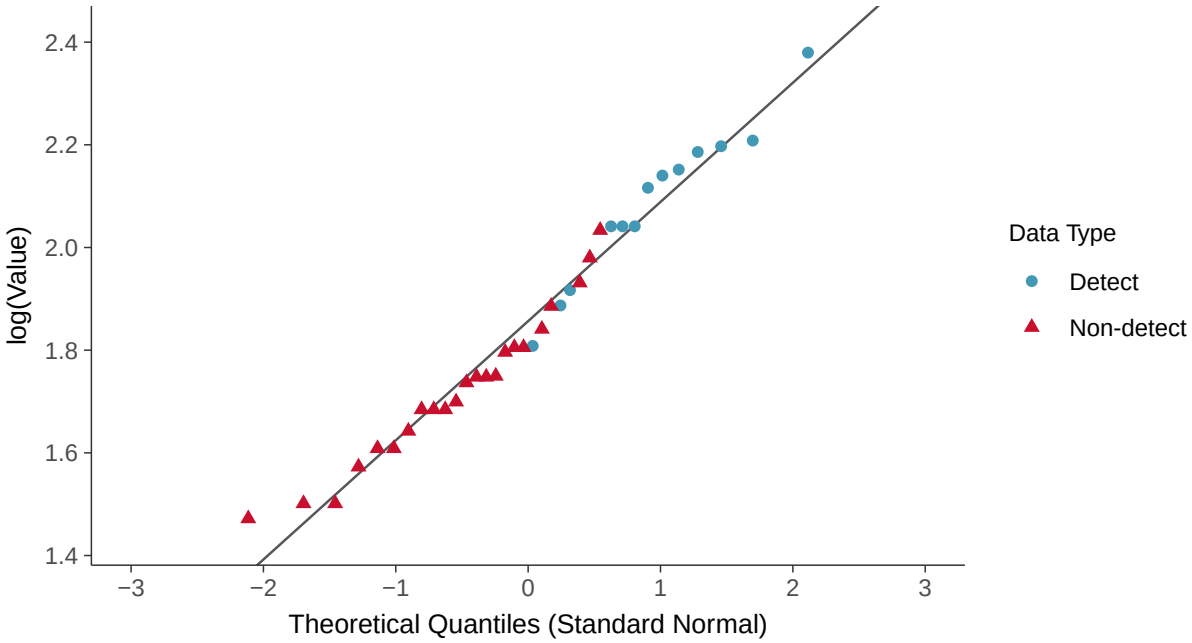
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



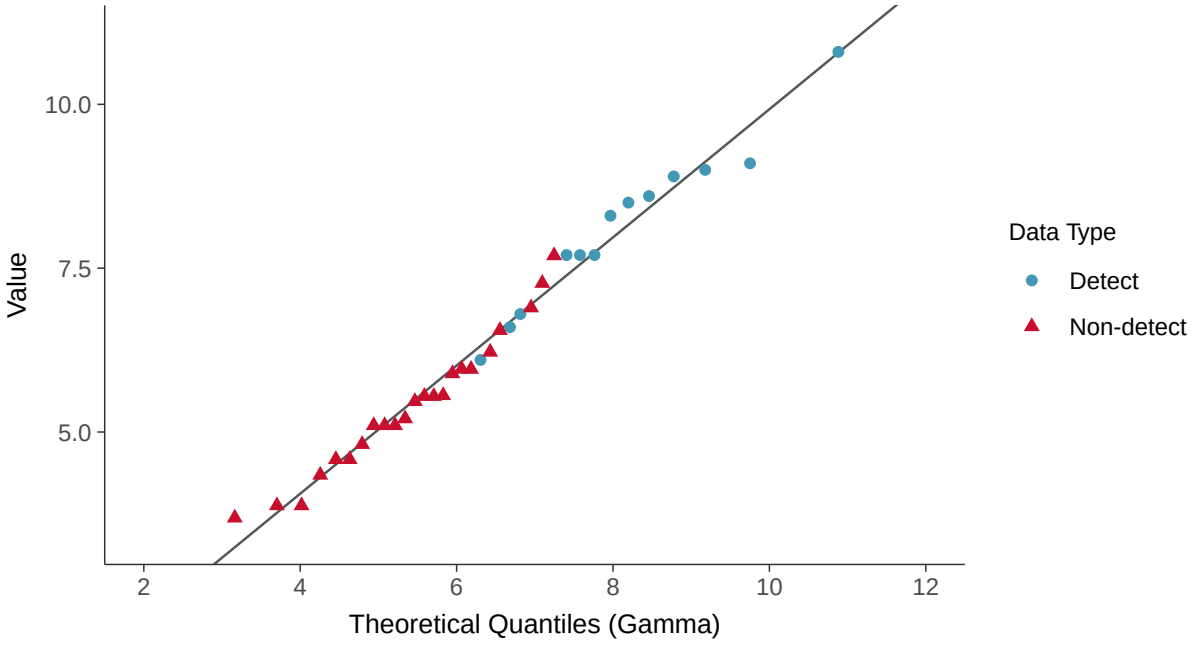
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



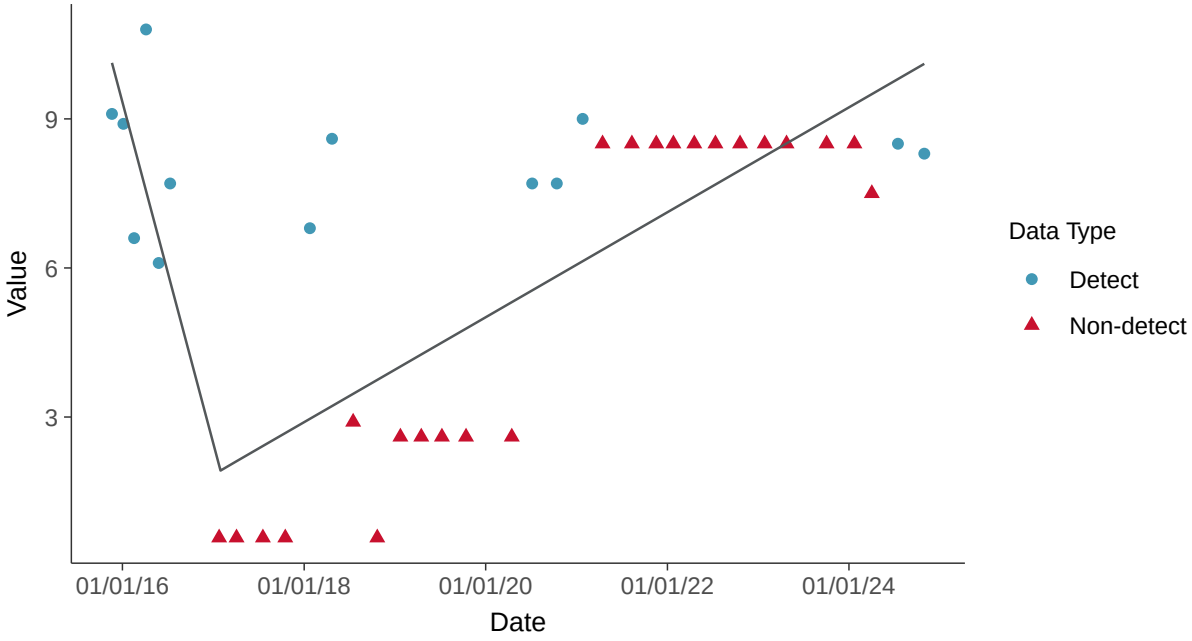
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



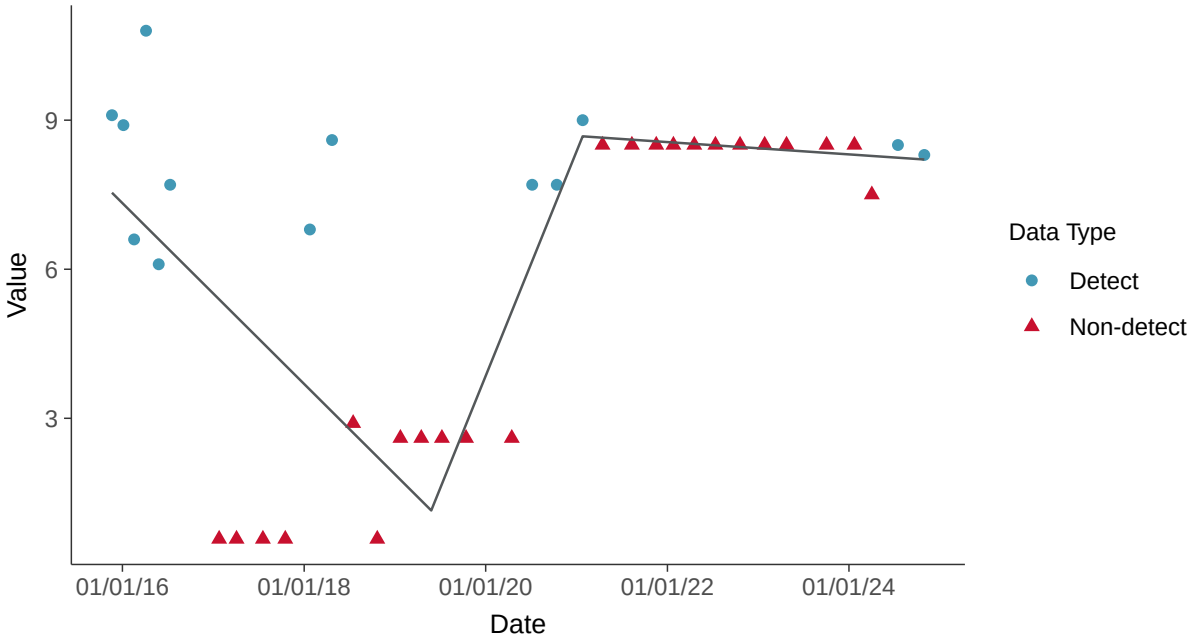
Trend Regression: Piecewise Linear-Linear

Boron, MW-6 (ug/L)



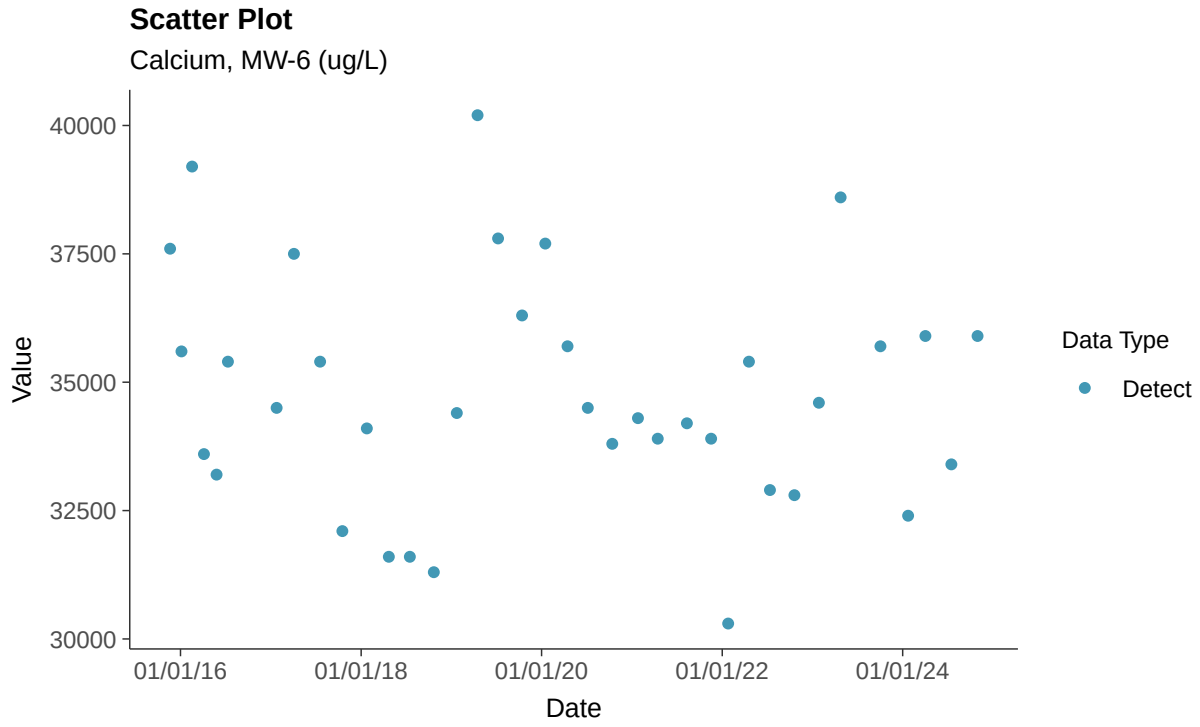
Trend Regression: Piecewise Linear-Linear-Linear

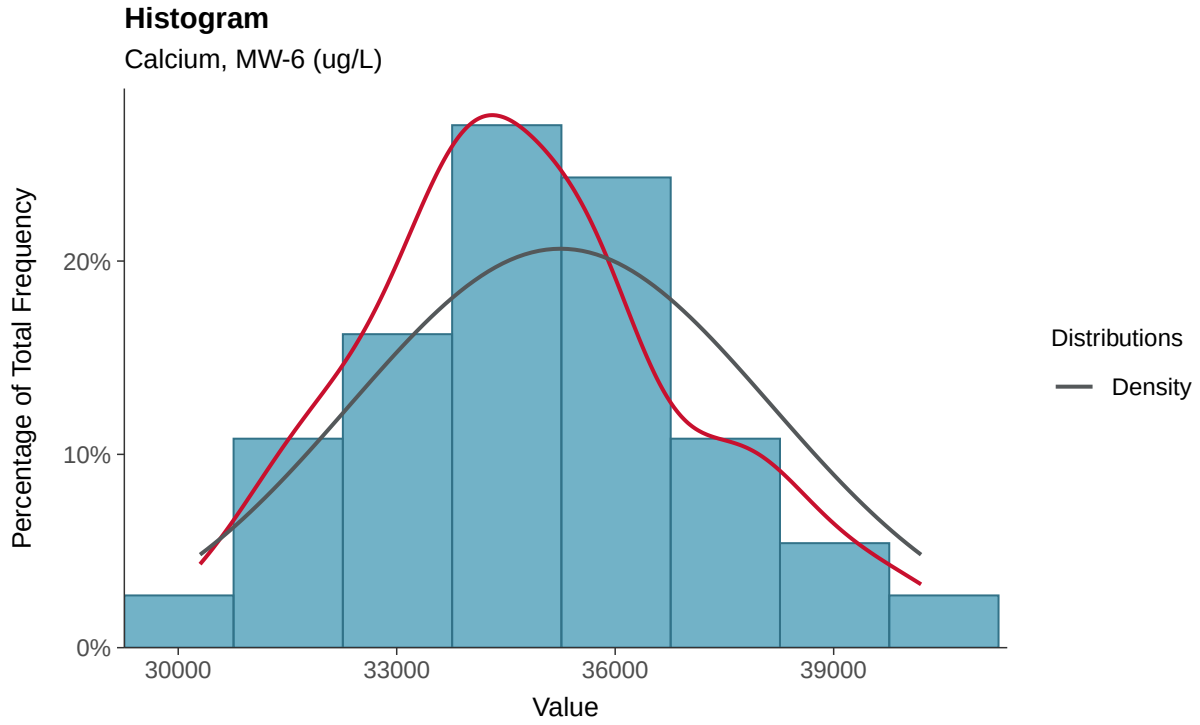
Boron, MW-6 (ug/L)



App. III: Calcium, MW-6

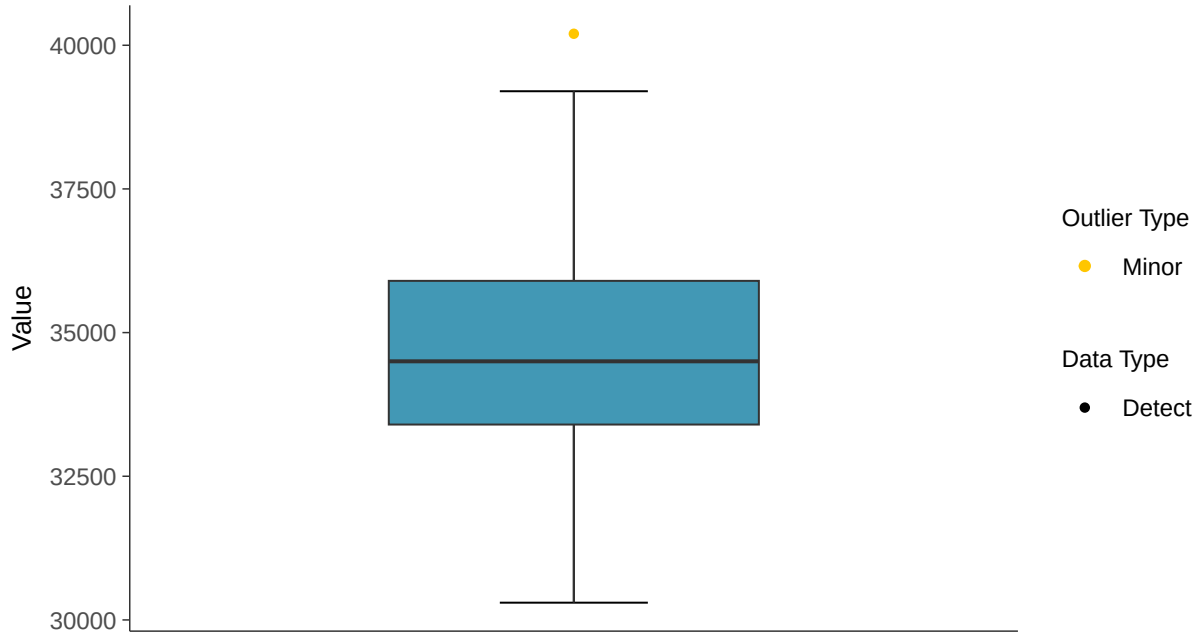
ID: 06_02_107





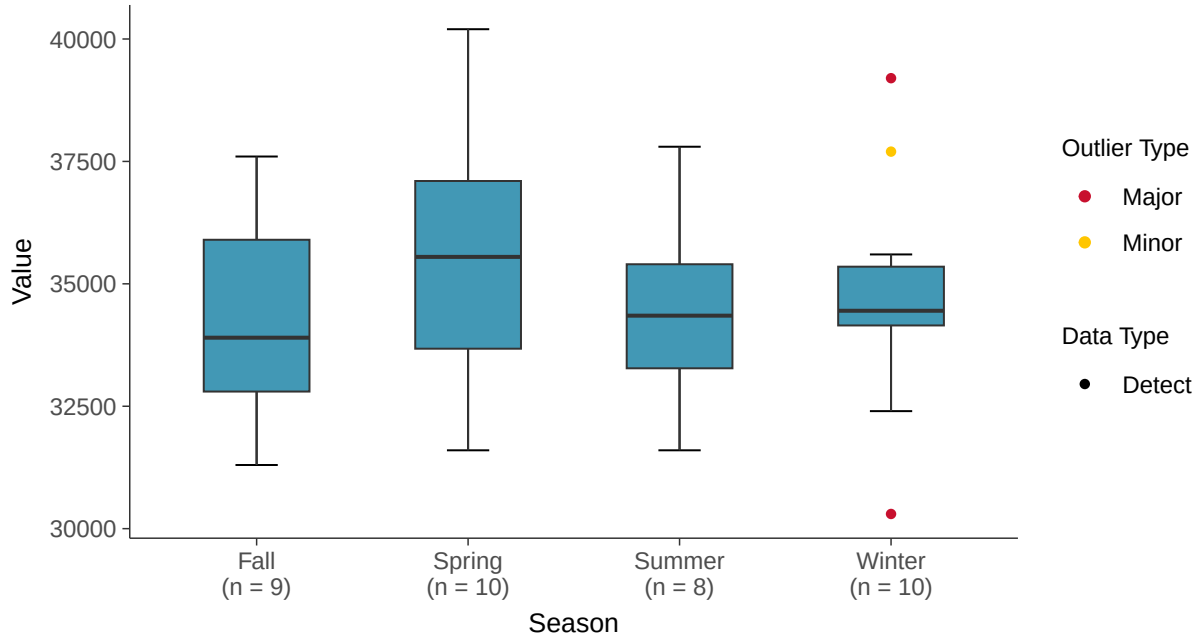
Boxplot

Calcium, MW-6 (ug/L)



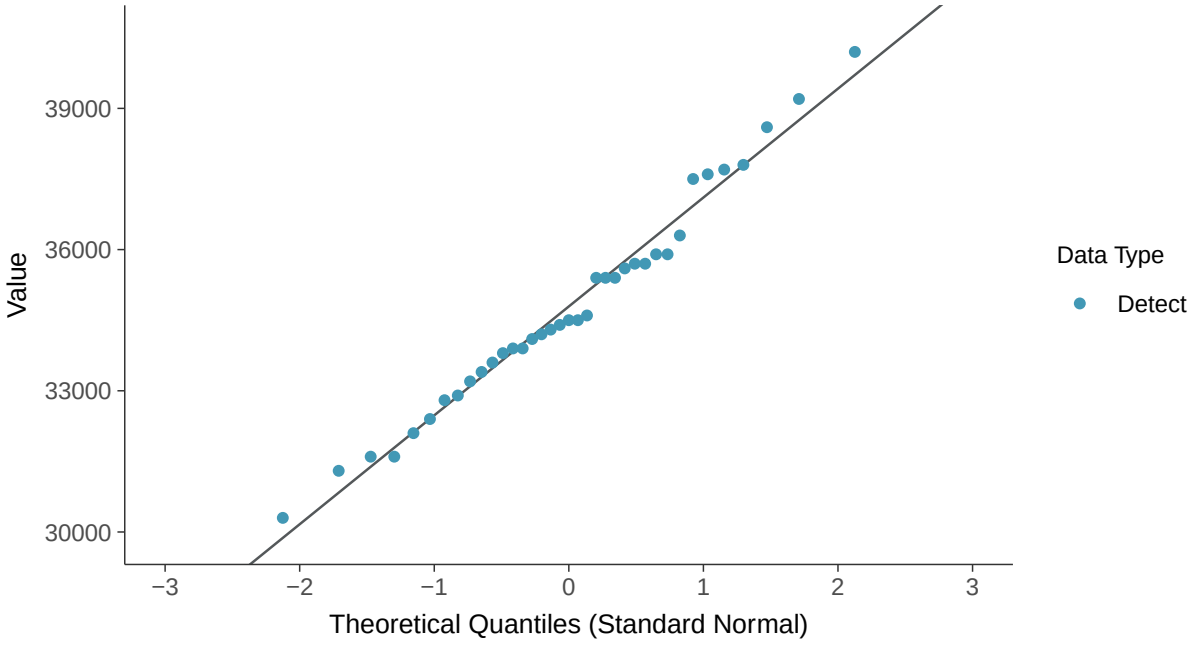
Boxplot by Season

Calcium, MW-6 (ug/L)



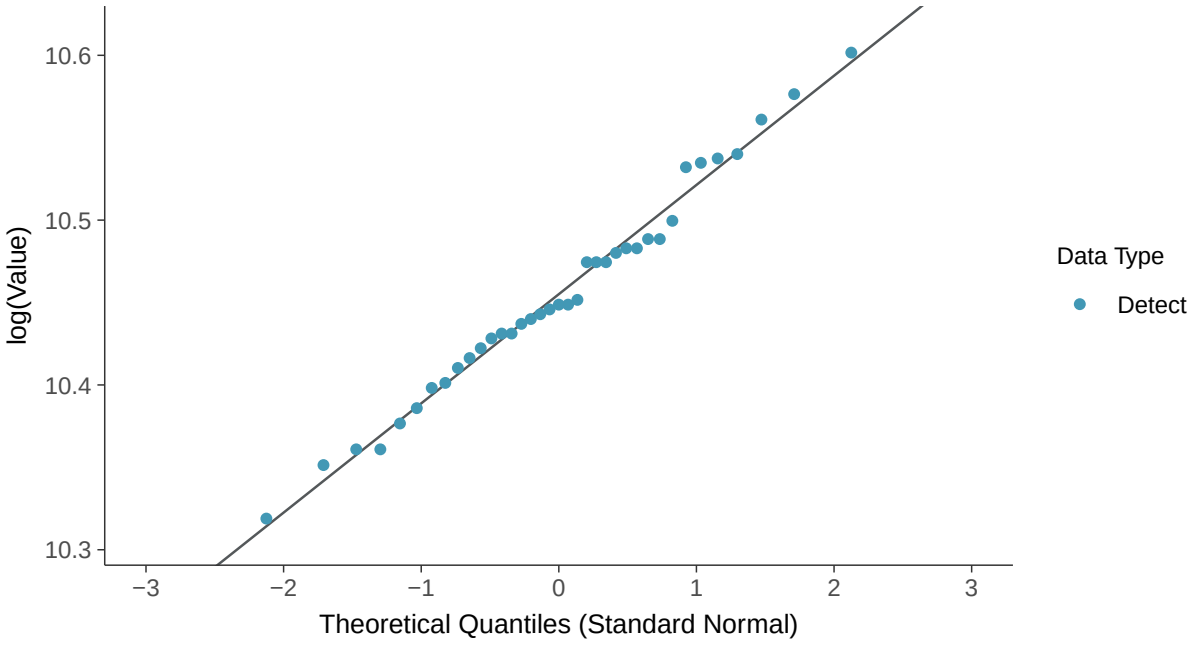
Normal Q-Q plot

Calcium, MW-6 (ug/L)



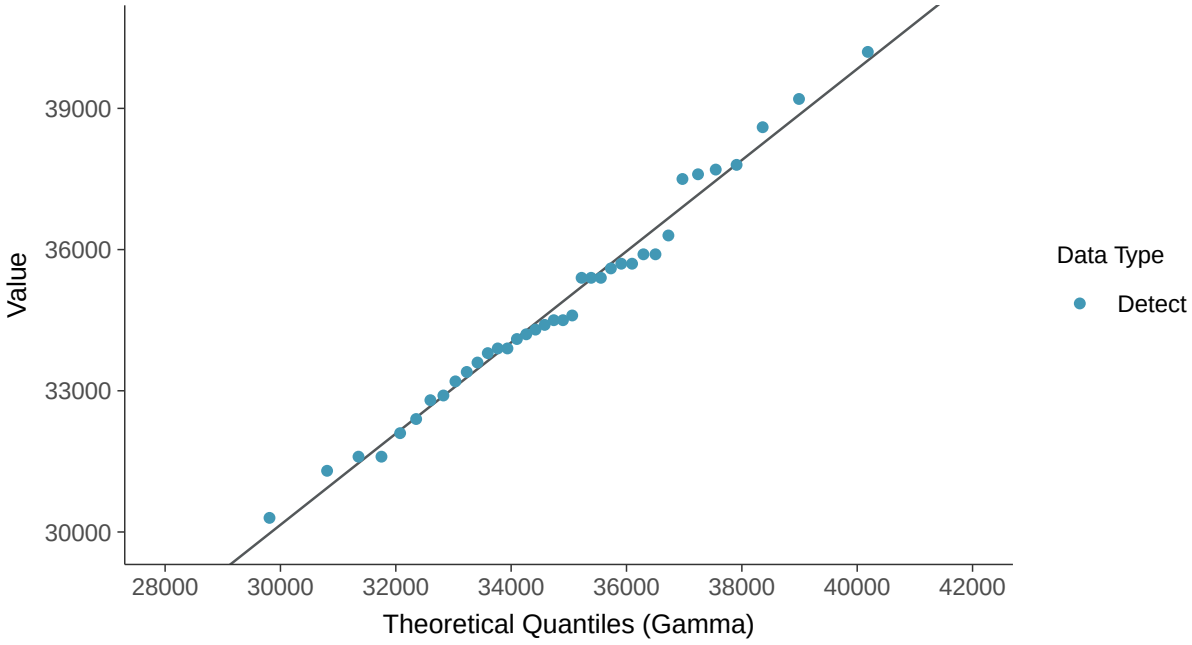
Lognormal Q-Q plot

Calcium, MW-6 (ug/L)



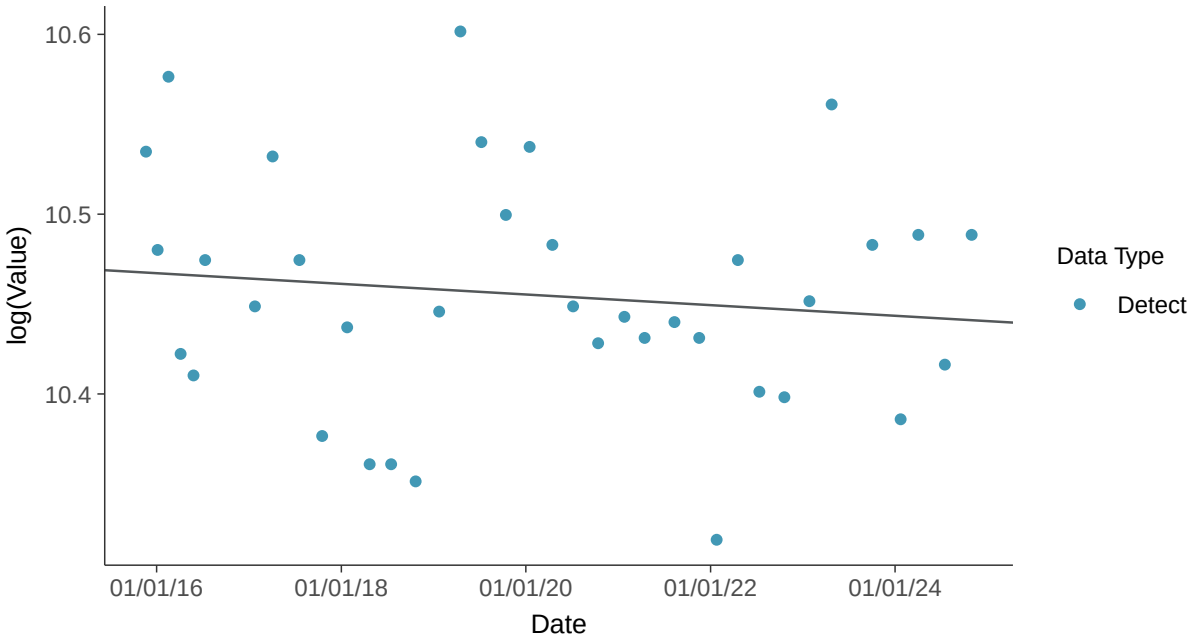
Gamma Q-Q plot

Calcium, MW-6 (ug/L)



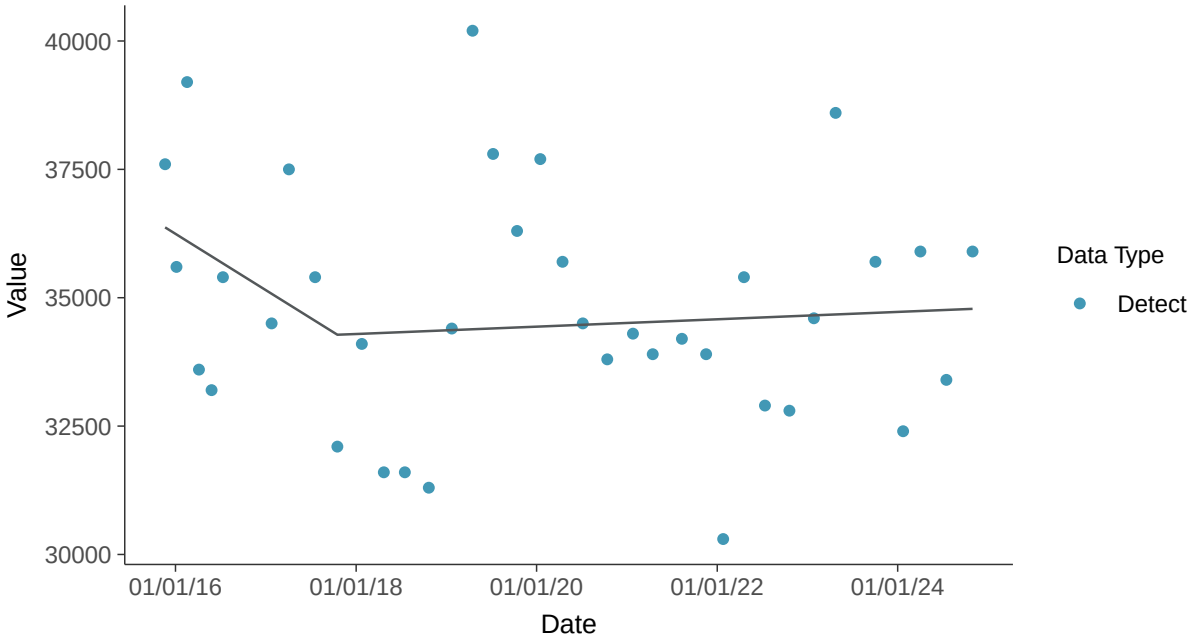
Trend Regression: Lognormal MLE

Calcium, MW-6 (ug/L)



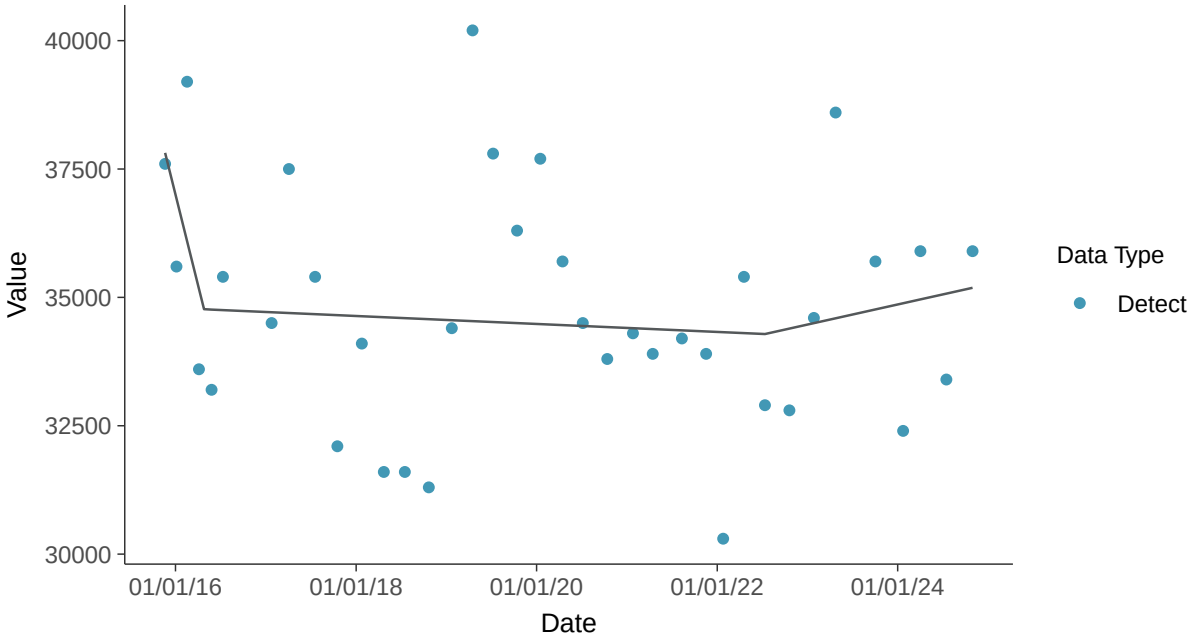
Trend Regression: Piecewise Linear-Linear

Calcium, MW-6 (ug/L)



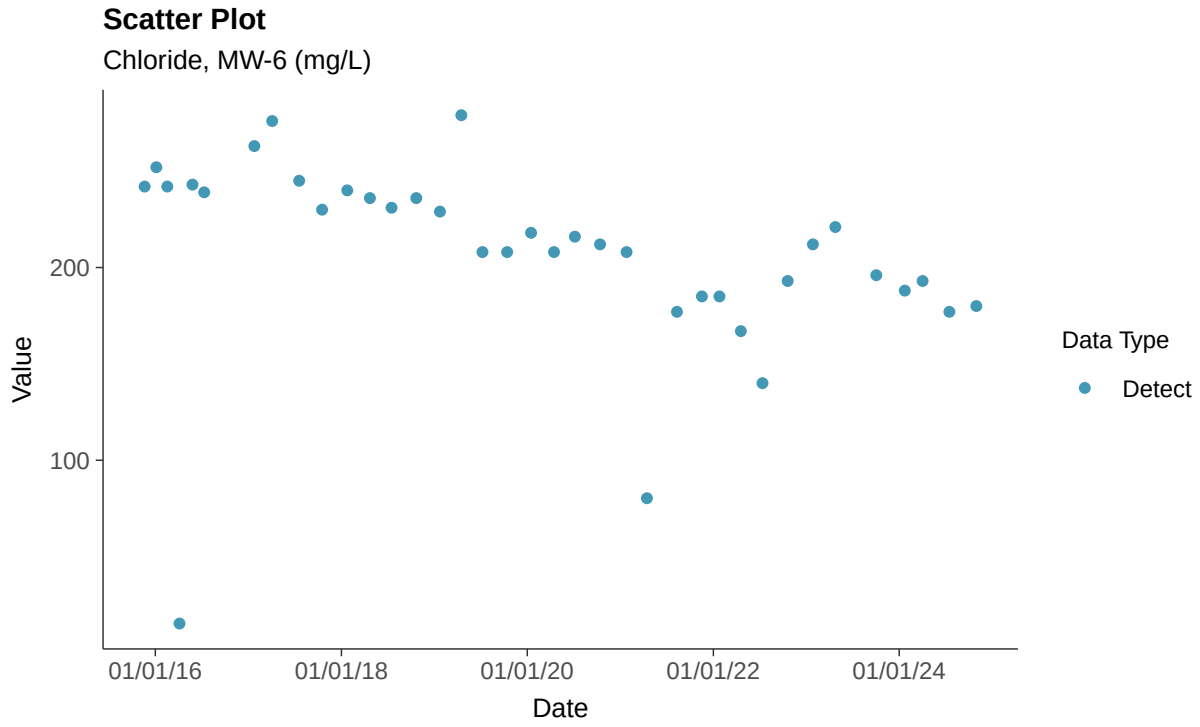
Trend Regression: Piecewise Linear-Linear-Linear

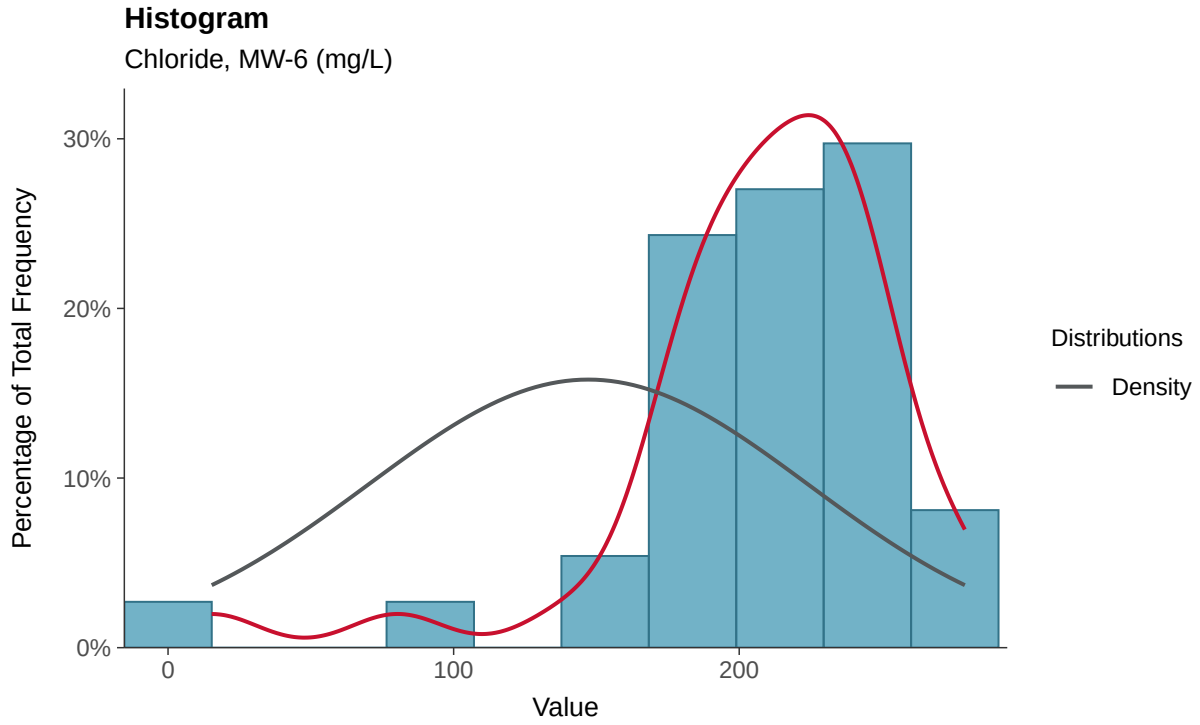
Calcium, MW-6 (ug/L)



App. III: Chloride, MW-6

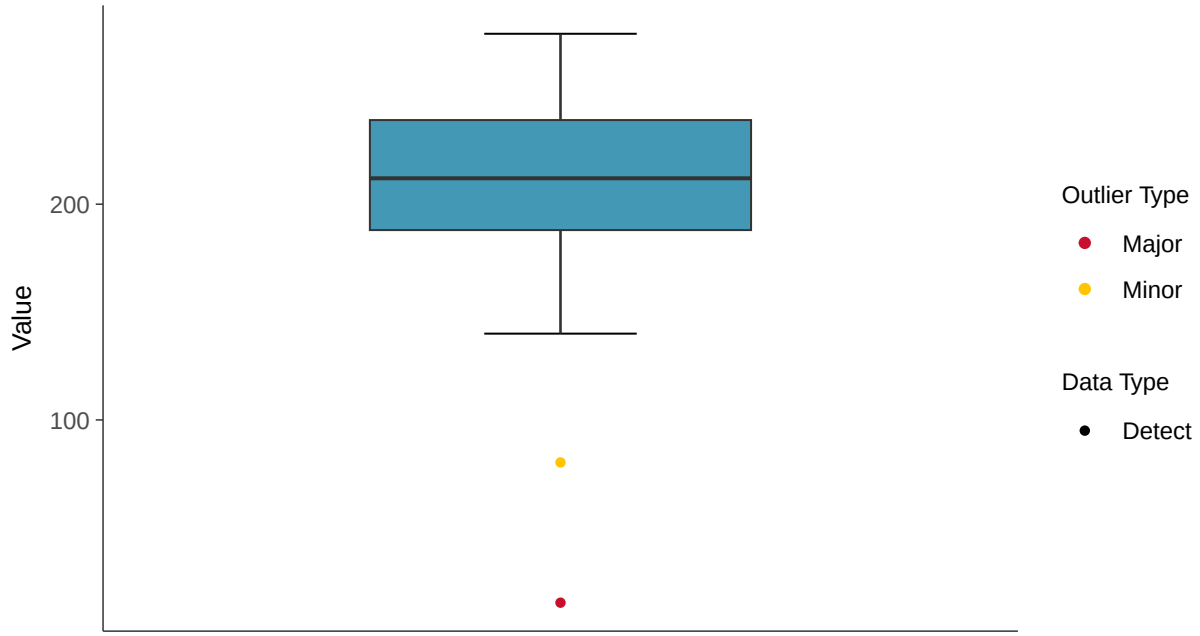
ID: 06_02_108





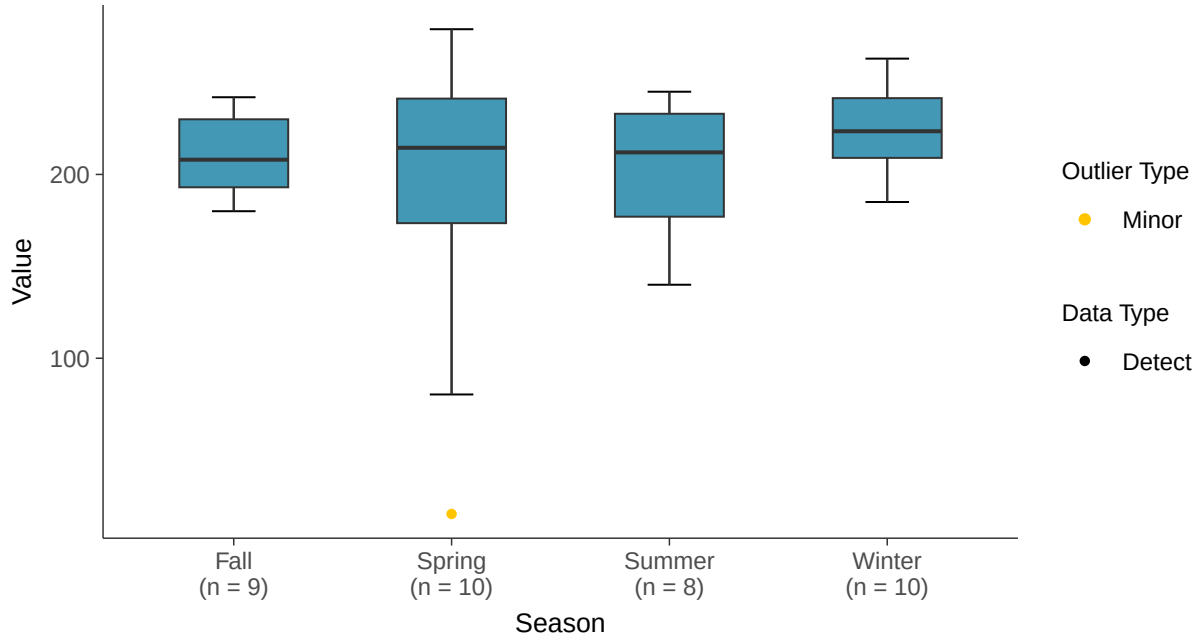
Boxplot

Chloride, MW-6 (mg/L)



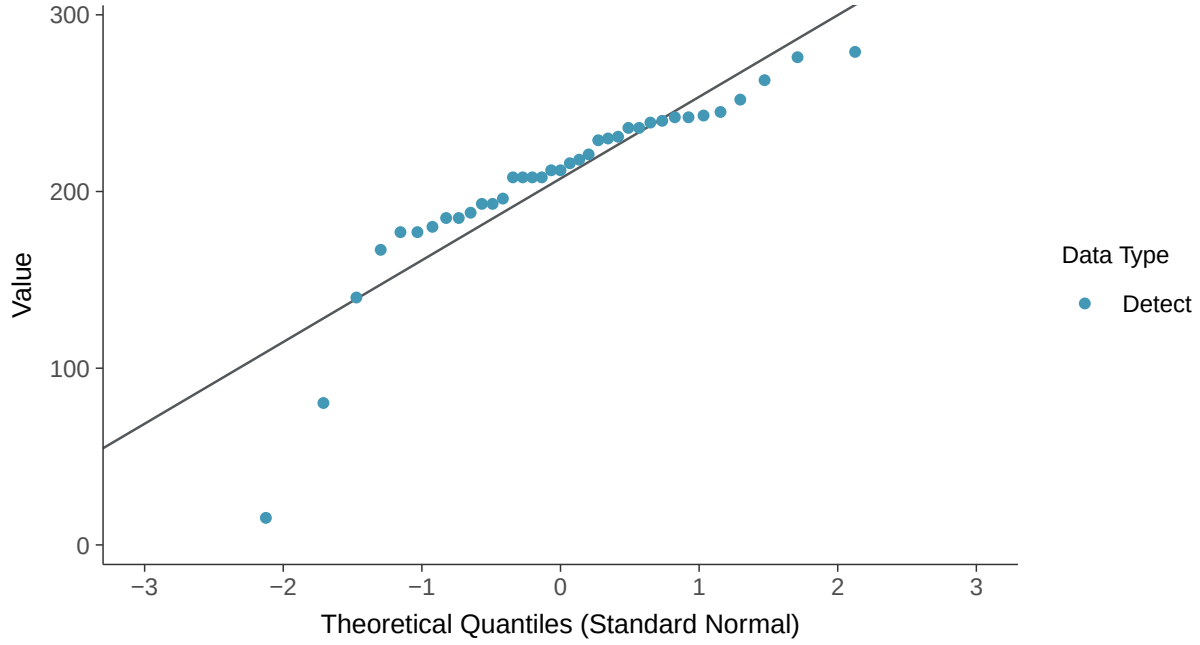
Boxplot by Season

Chloride, MW-6 (mg/L)



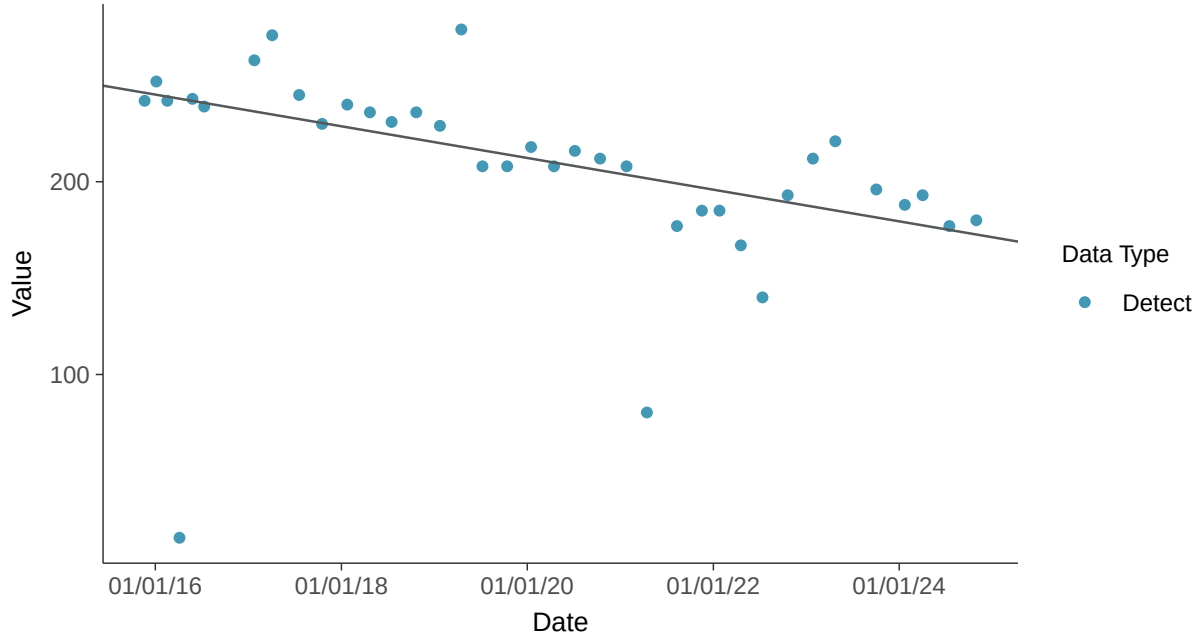
Normal Q-Q plot

Chloride, MW-6 (mg/L)



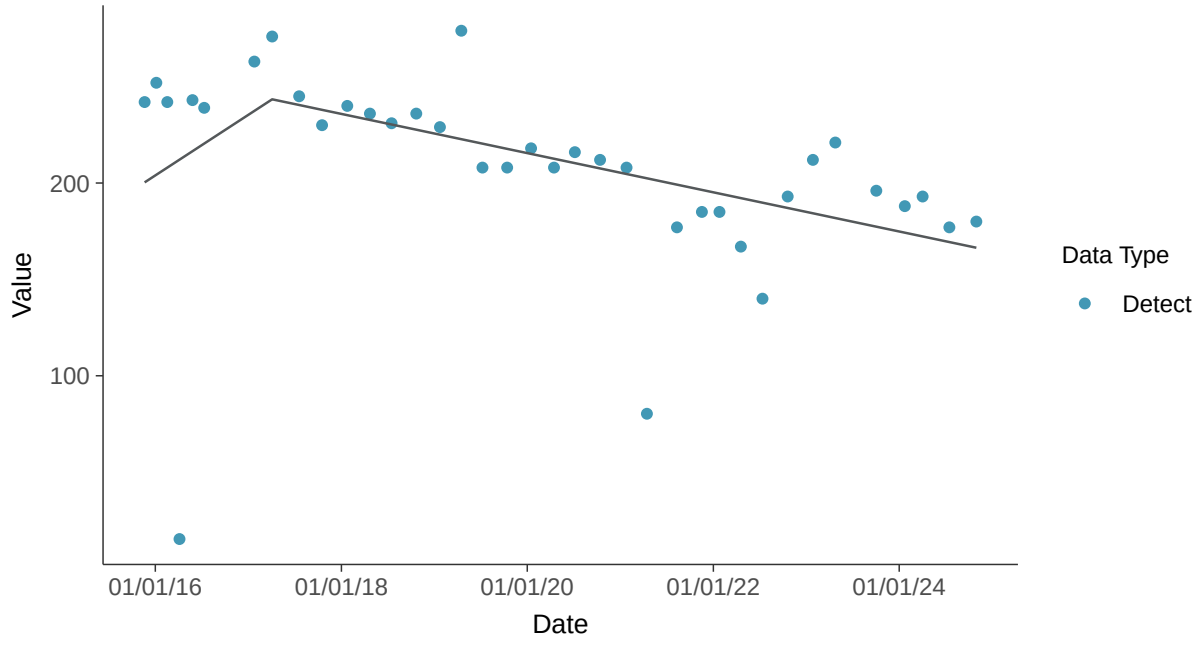
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-6 (mg/L)



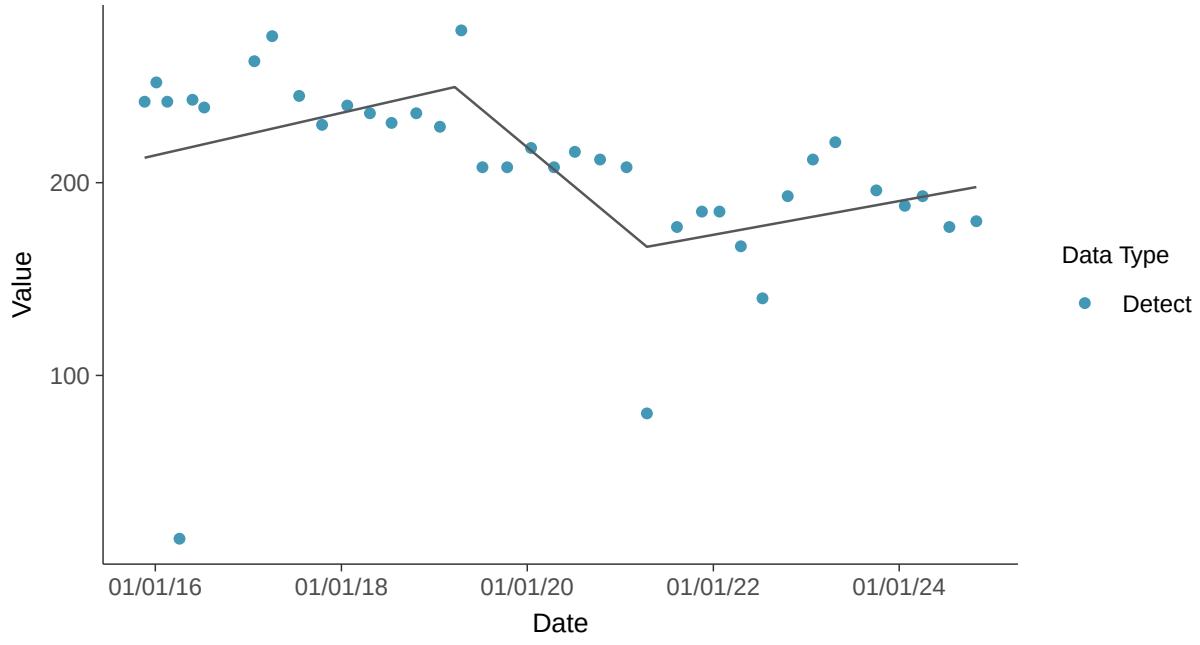
Trend Regression: Piecewise Linear-Linear

Chloride, MW-6 (mg/L)



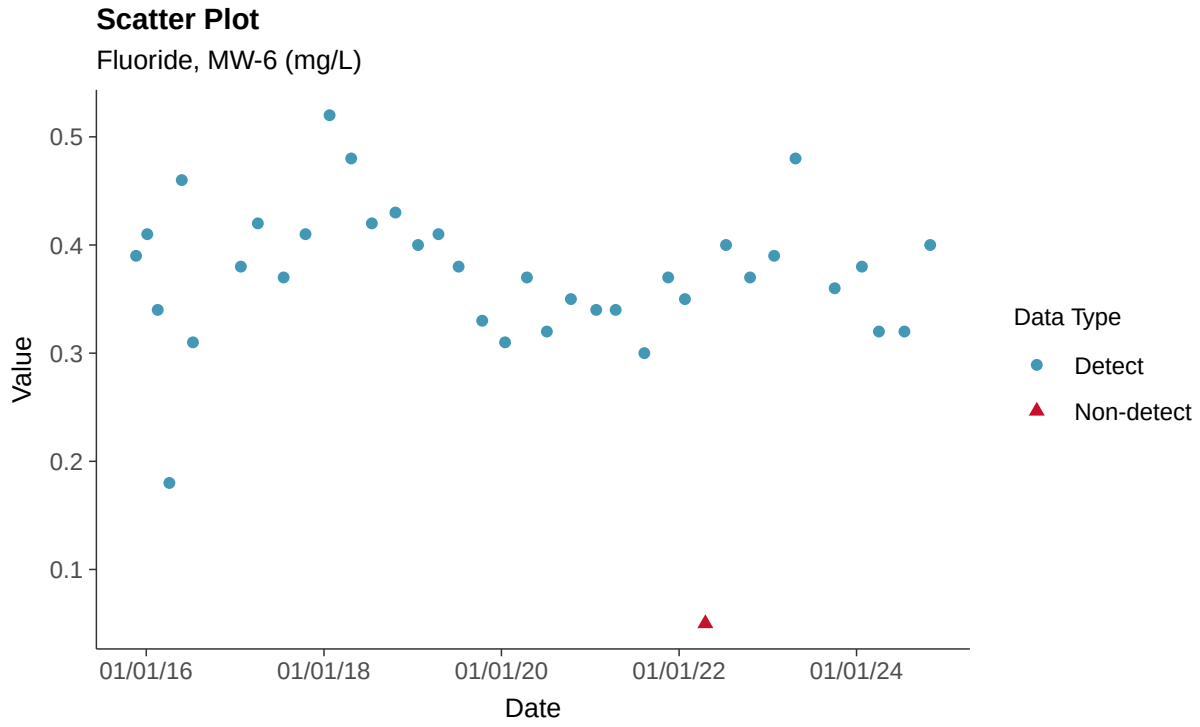
Trend Regression: Piecewise Linear-Linear-Linear

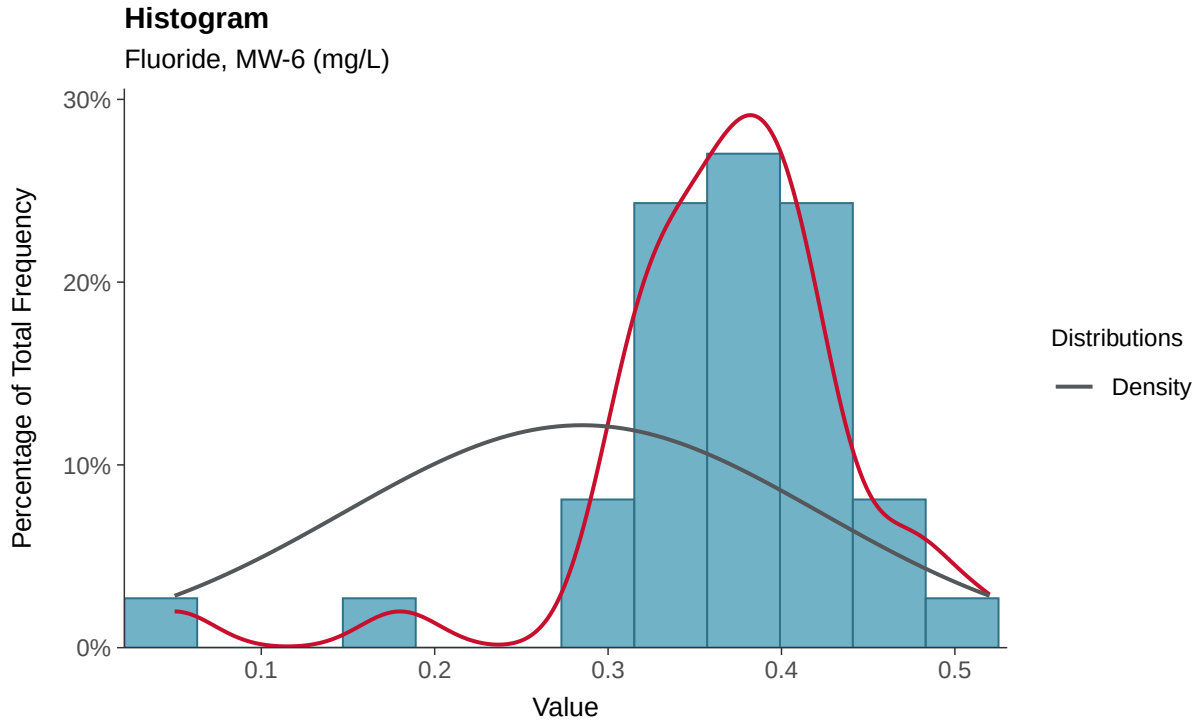
Chloride, MW-6 (mg/L)



App. III: Fluoride, MW-6

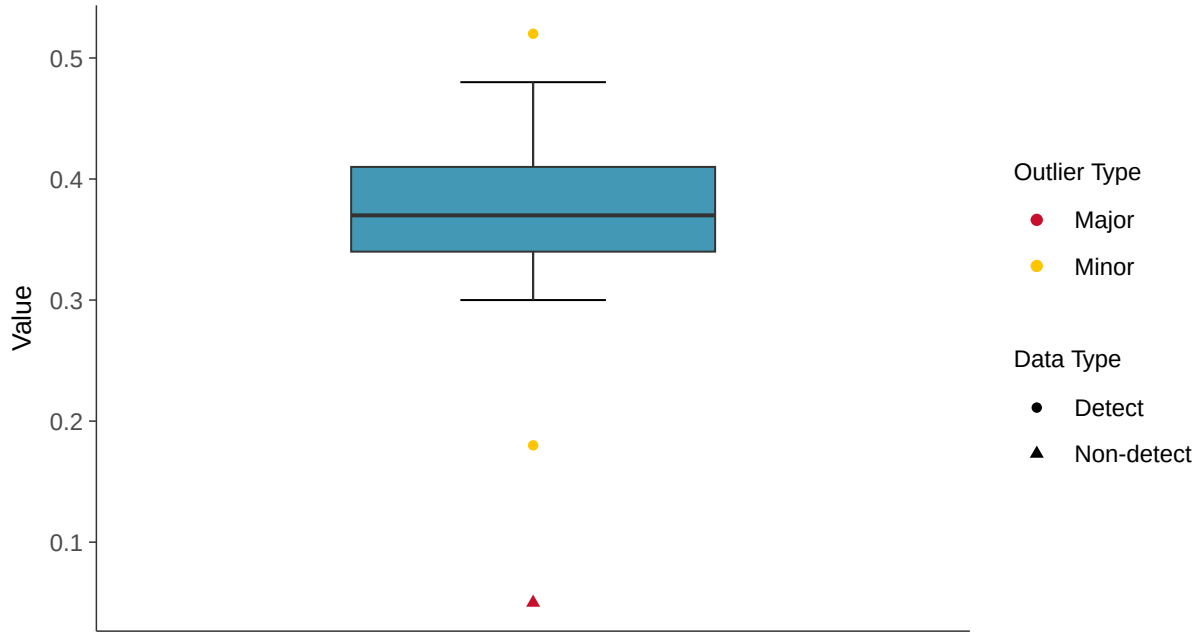
ID: 06_02_112





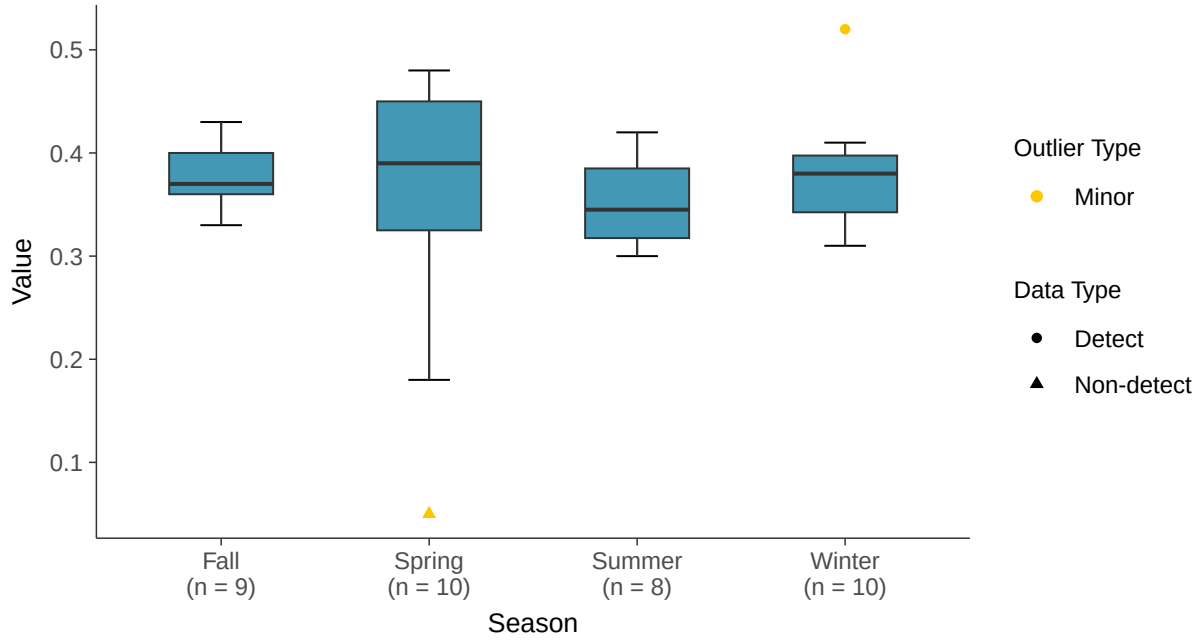
Boxplot

Fluoride, MW-6 (mg/L)



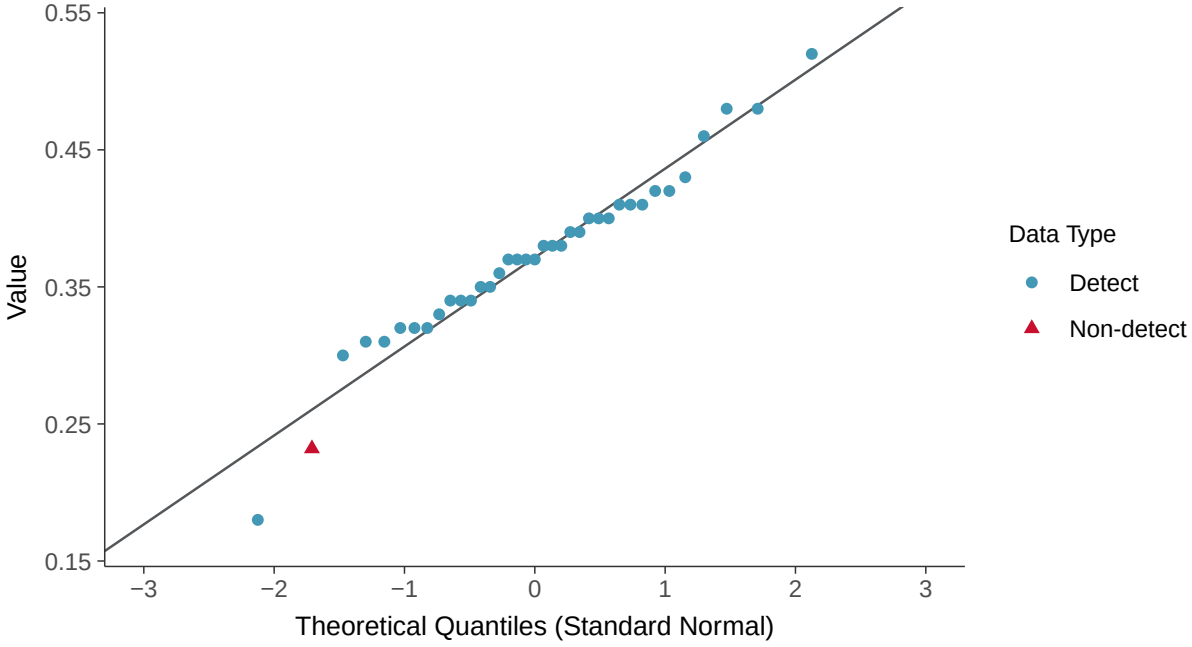
Boxplot by Season

Fluoride, MW-6 (mg/L)



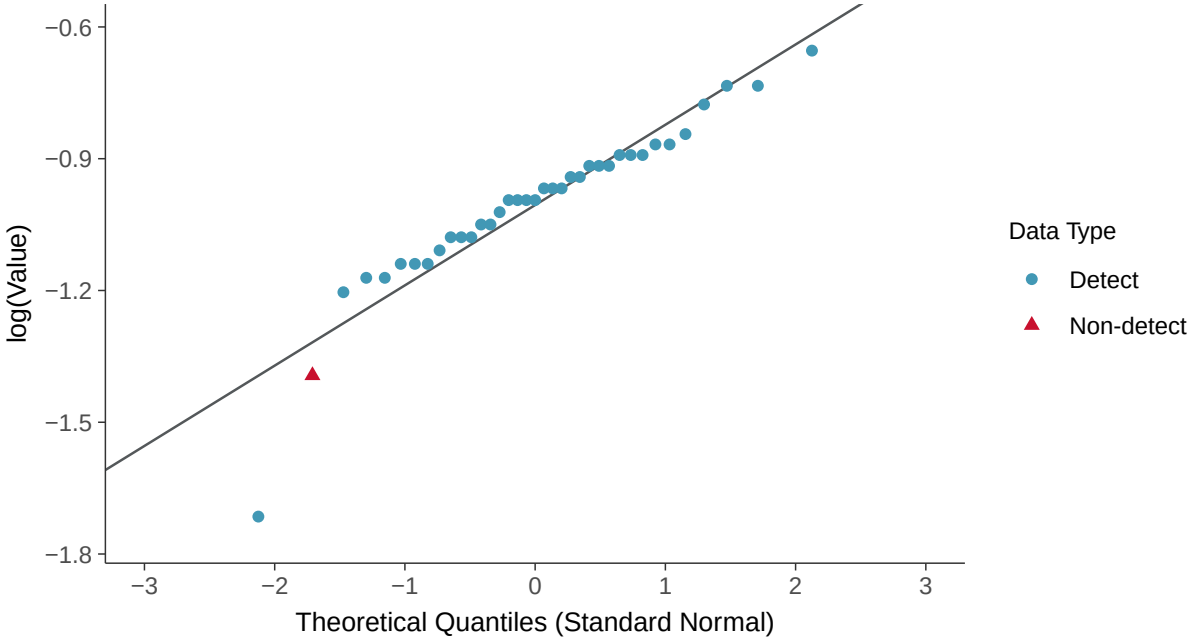
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



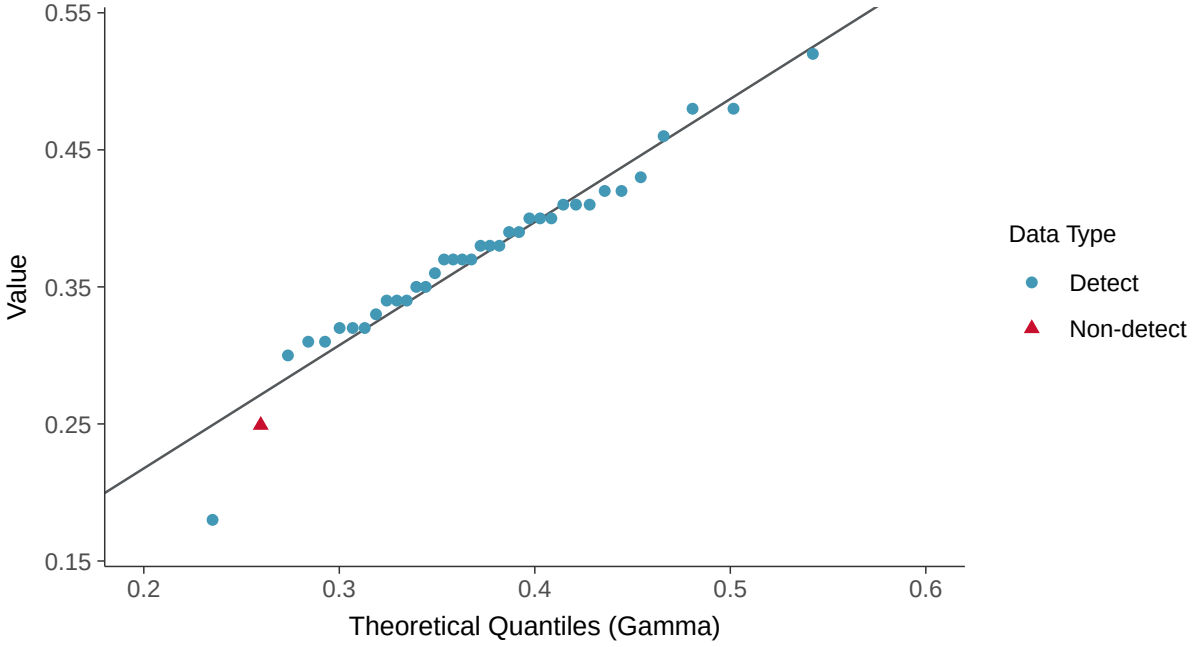
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



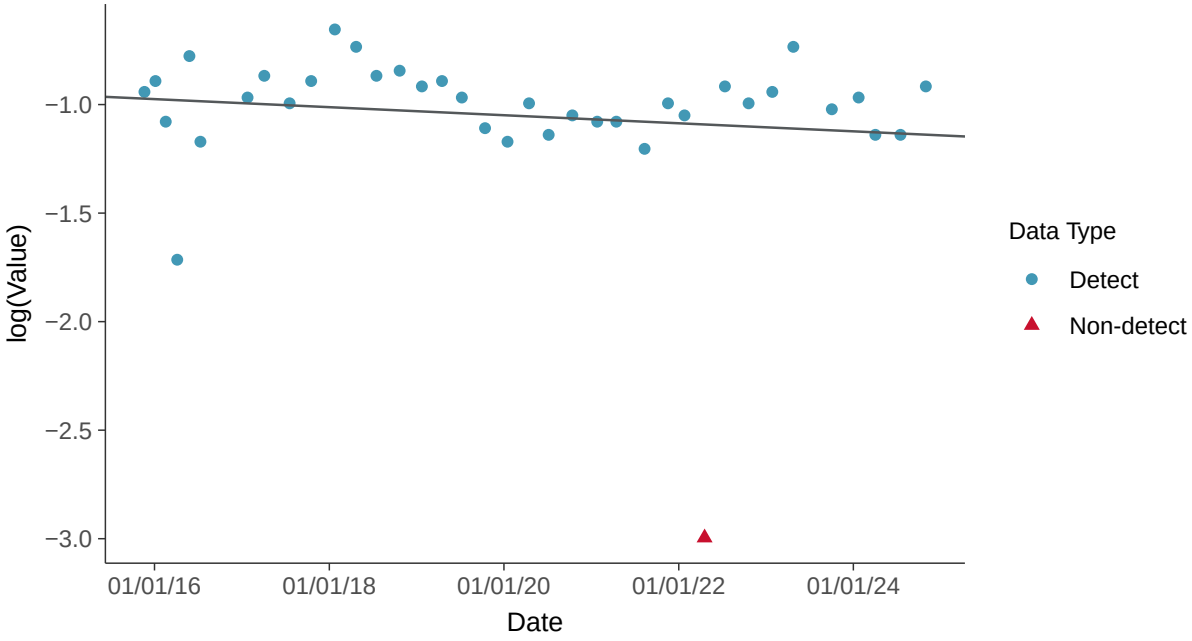
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



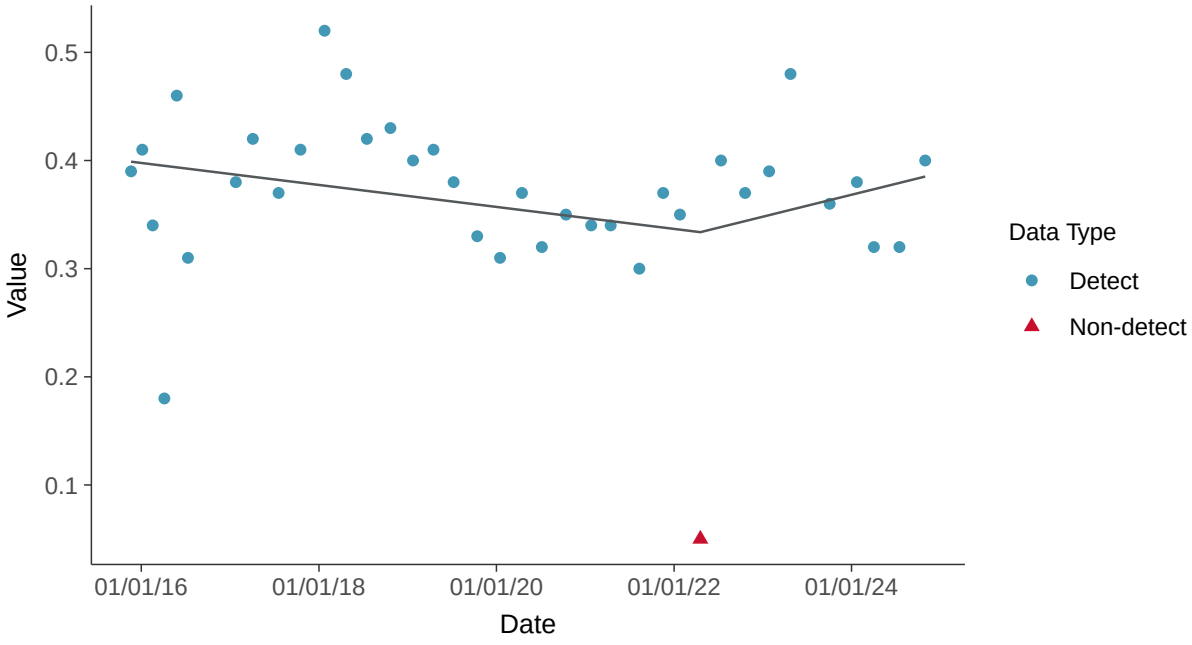
Trend Regression: Lognormal MLE

Fluoride, MW-6 (mg/L)



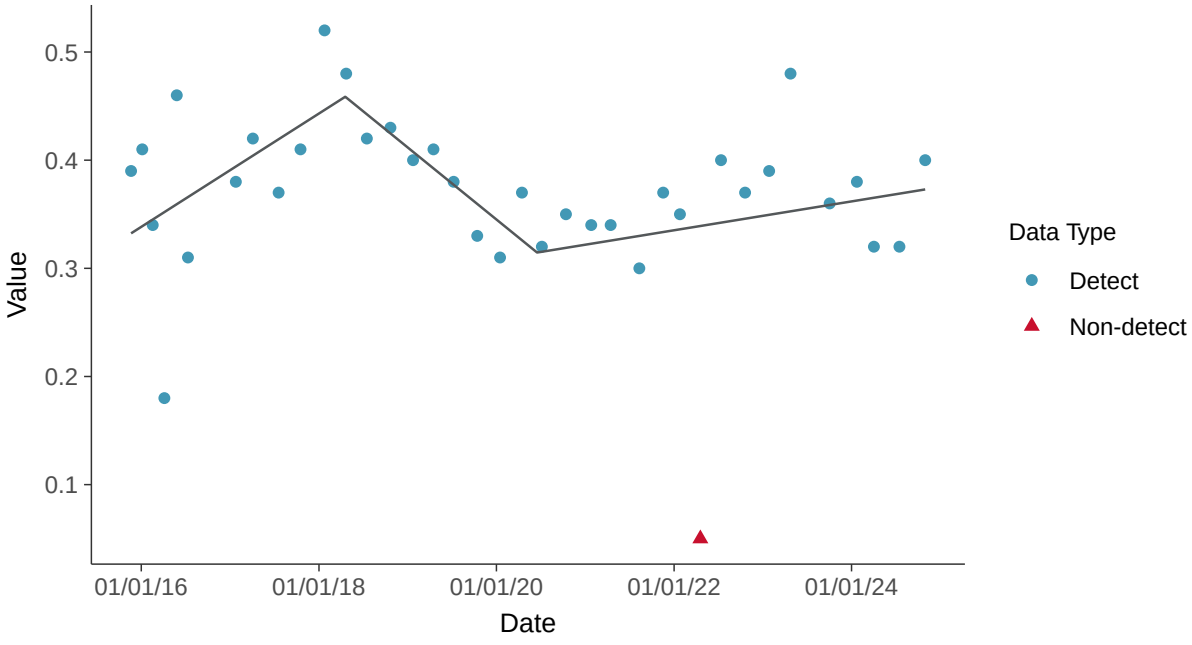
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-6 (mg/L)

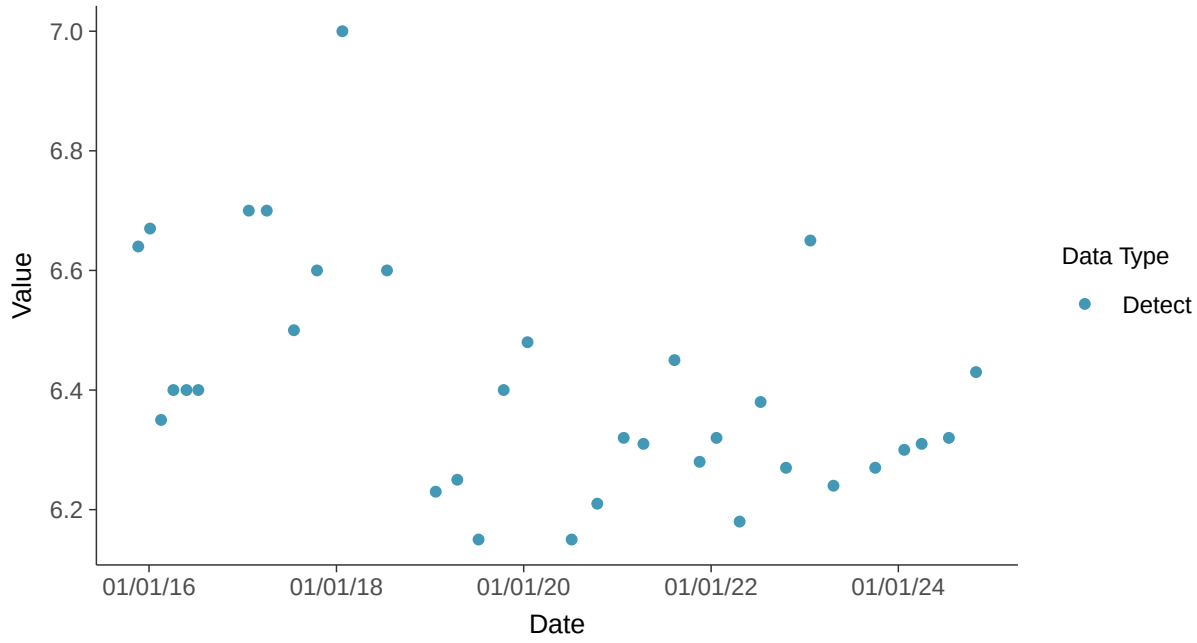


App. III: pH (Field), MW-6

ID: 06_02_118

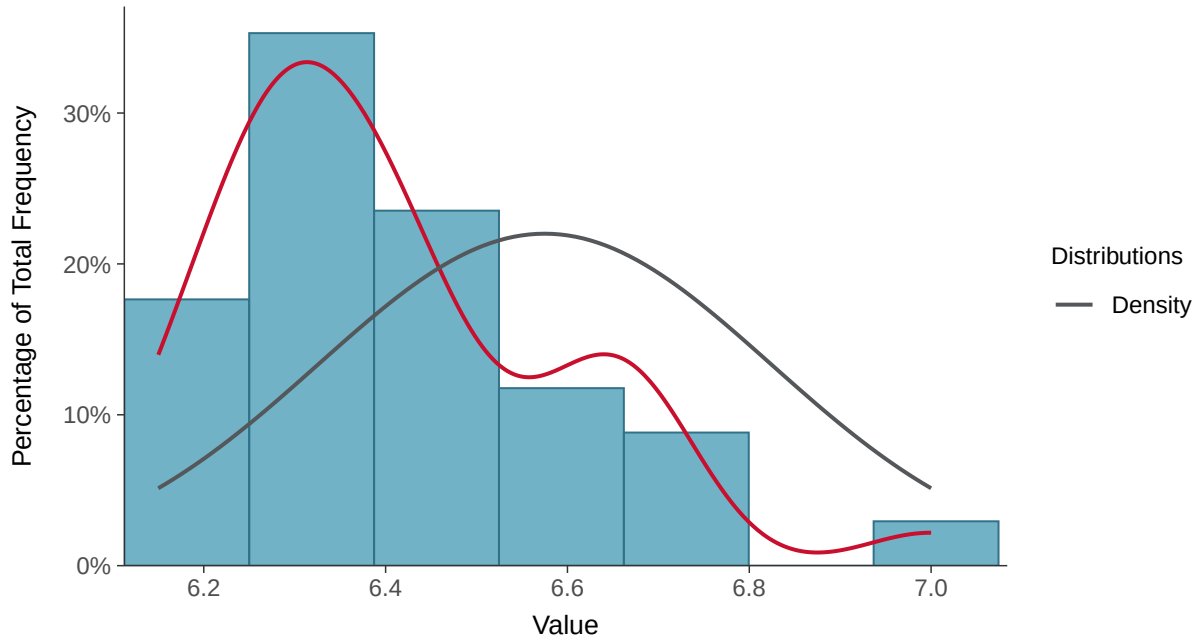
Scatter Plot

pH (Field), MW-6 (S.U.)



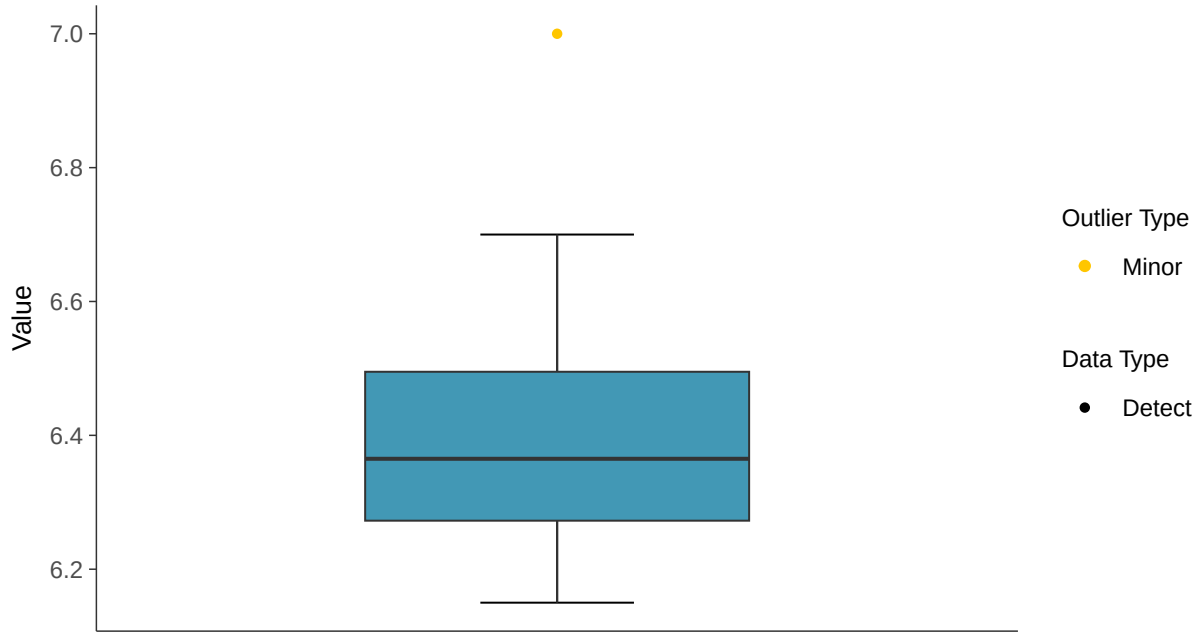
Histogram

pH (Field), MW-6 (S.U.)



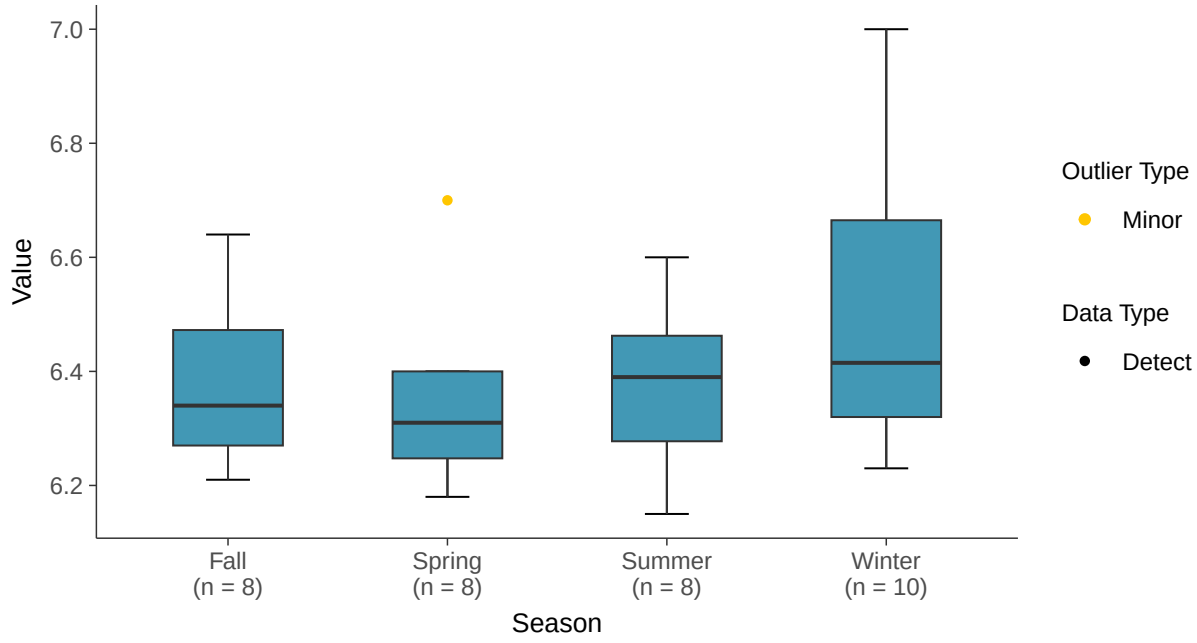
Boxplot

pH (Field), MW-6 (S.U.)



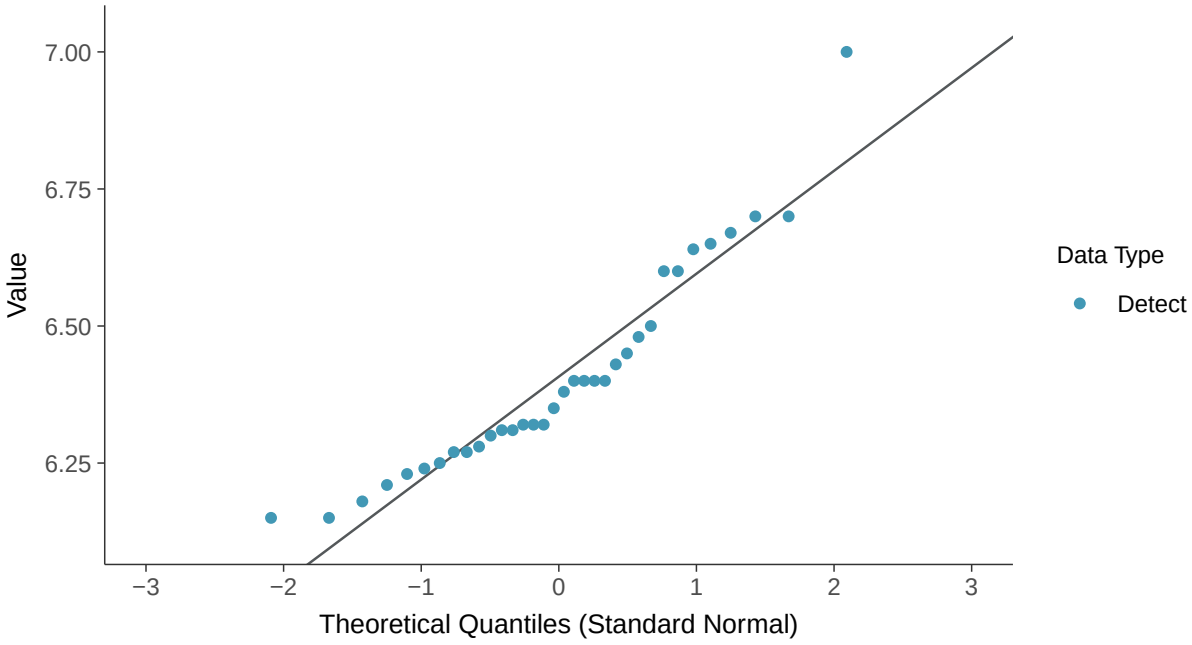
Boxplot by Season

pH (Field), MW-6 (S.U.)



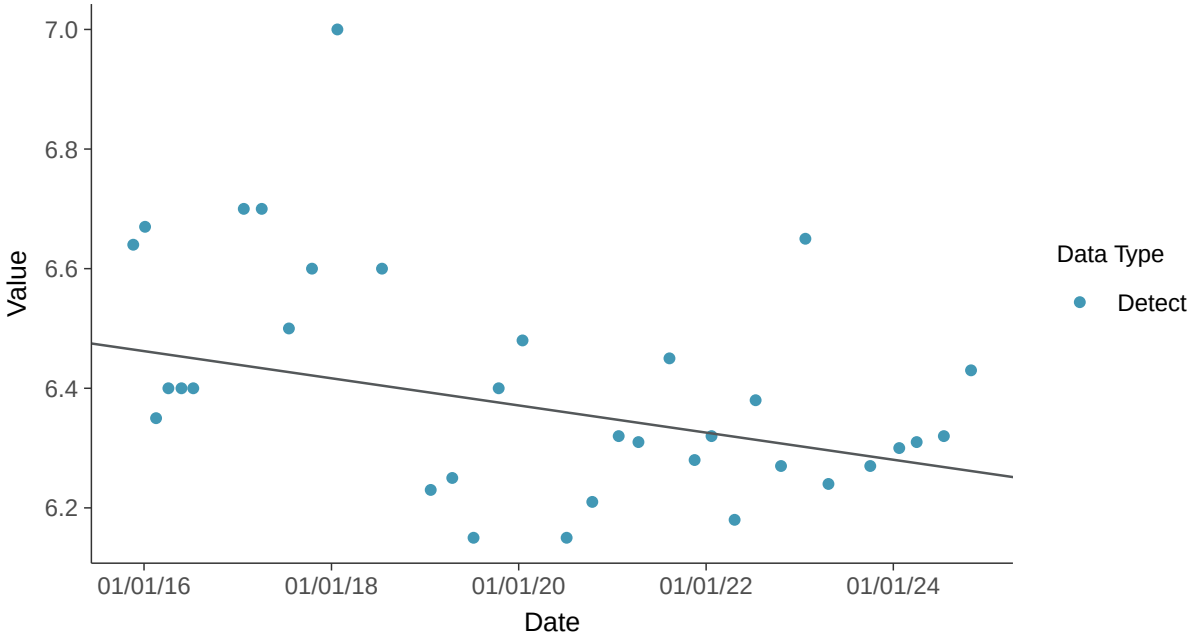
Normal Q-Q plot

pH (Field), MW-6 (S.U.)



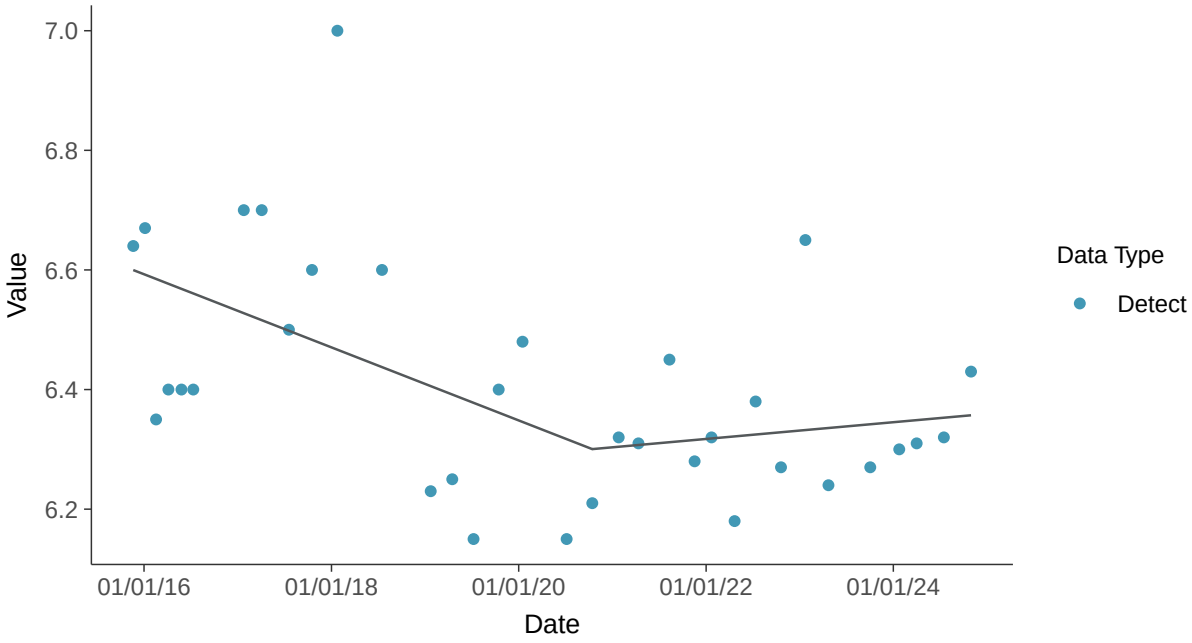
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-6 (S.U.)



Trend Regression: Piecewise Linear-Linear

pH (Field), MW-6 (S.U.)

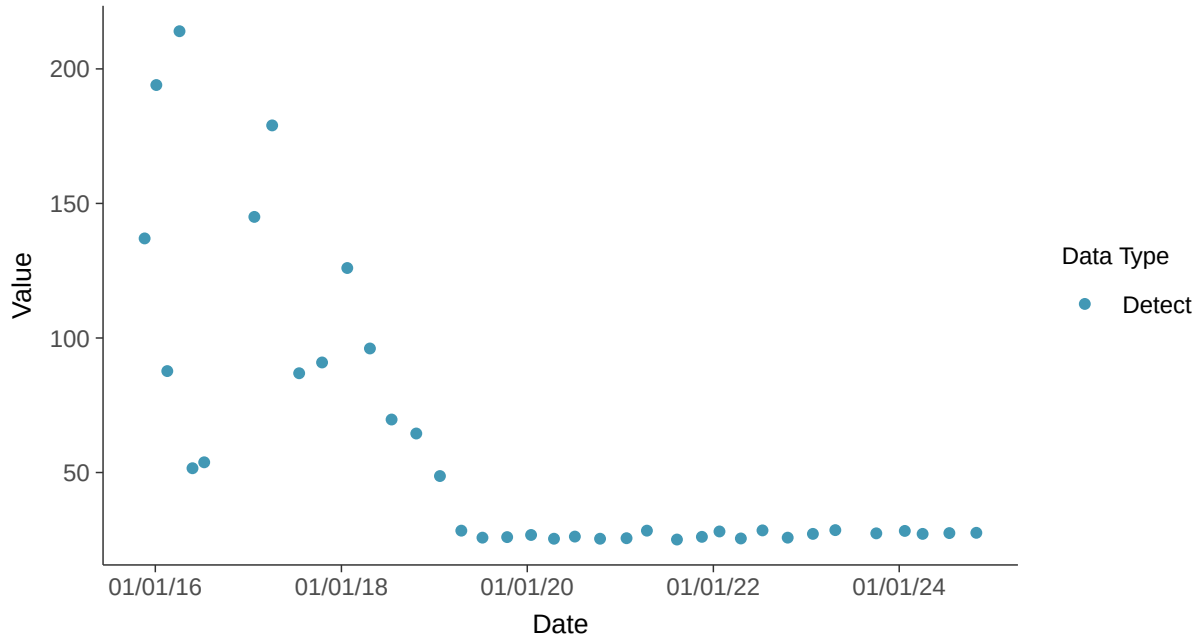


App. III: Sulfate, MW-6

ID: 06_02_123

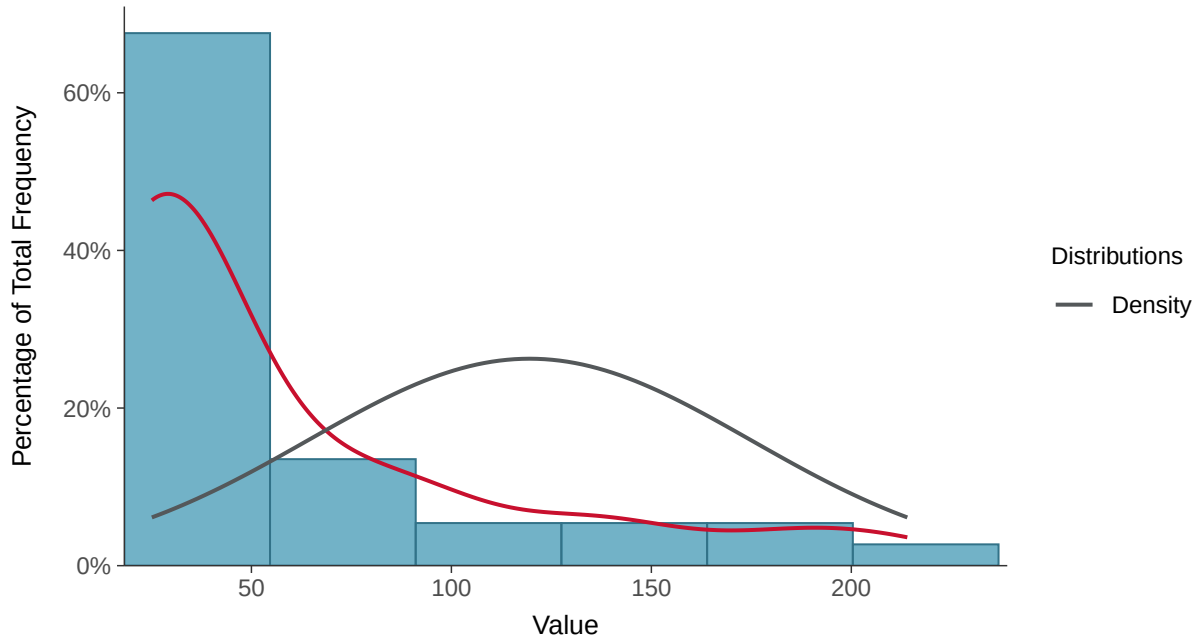
Scatter Plot

Sulfate, MW-6 (mg/L)



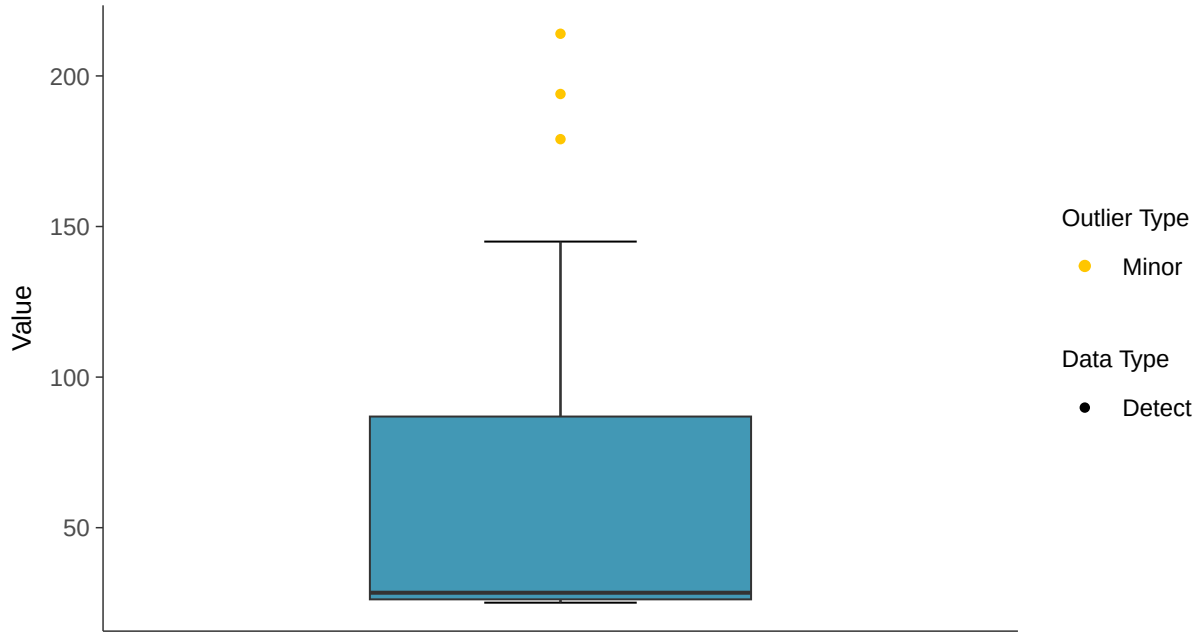
Histogram

Sulfate, MW-6 (mg/L)



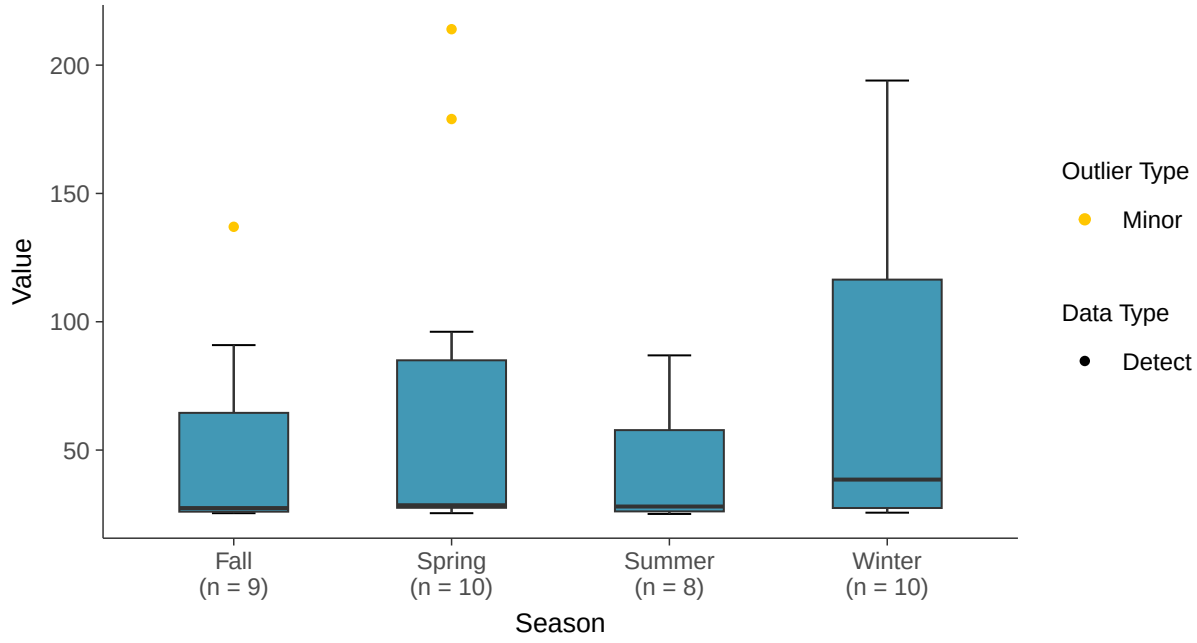
Boxplot

Sulfate, MW-6 (mg/L)



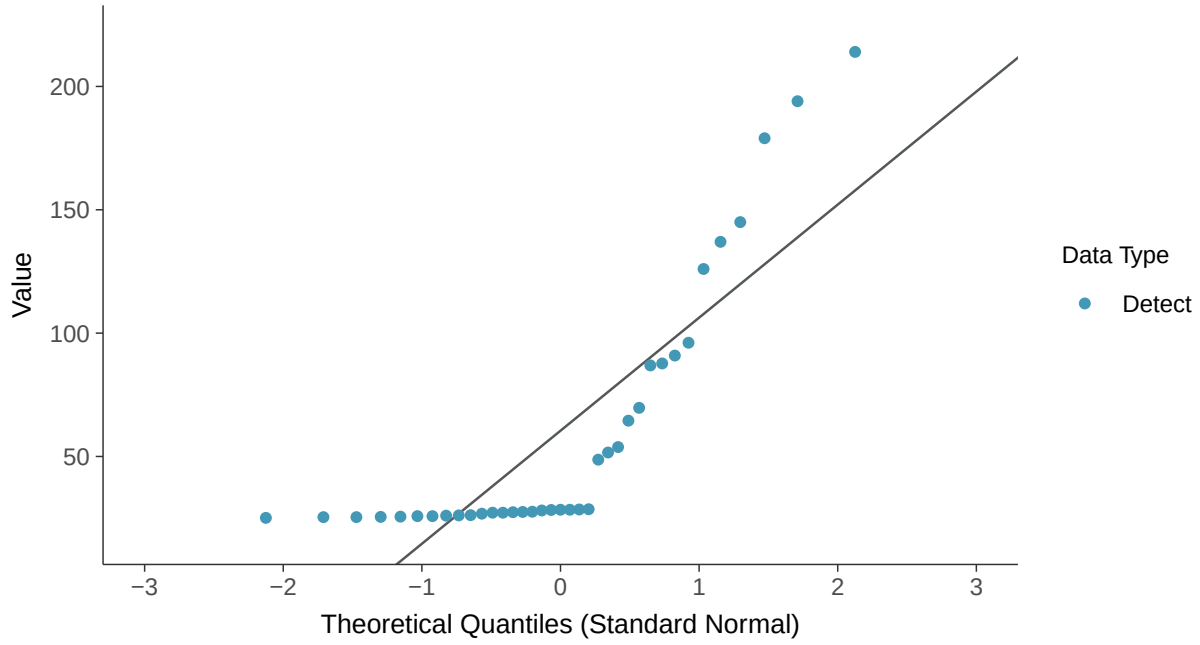
Boxplot by Season

Sulfate, MW-6 (mg/L)



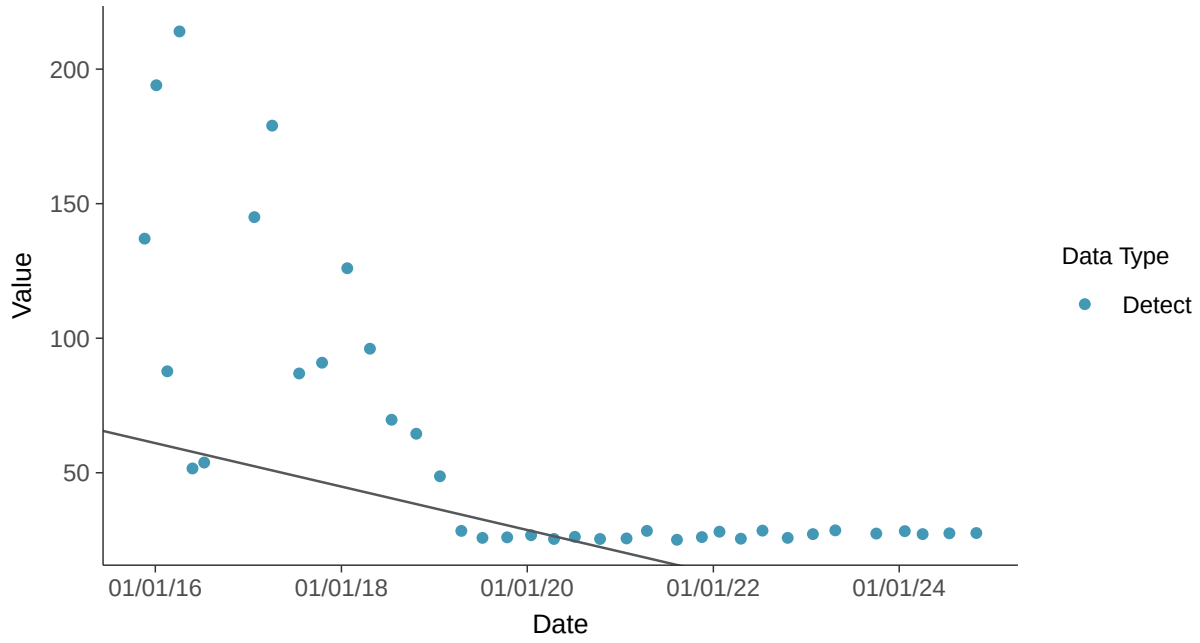
Normal Q-Q plot

Sulfate, MW-6 (mg/L)



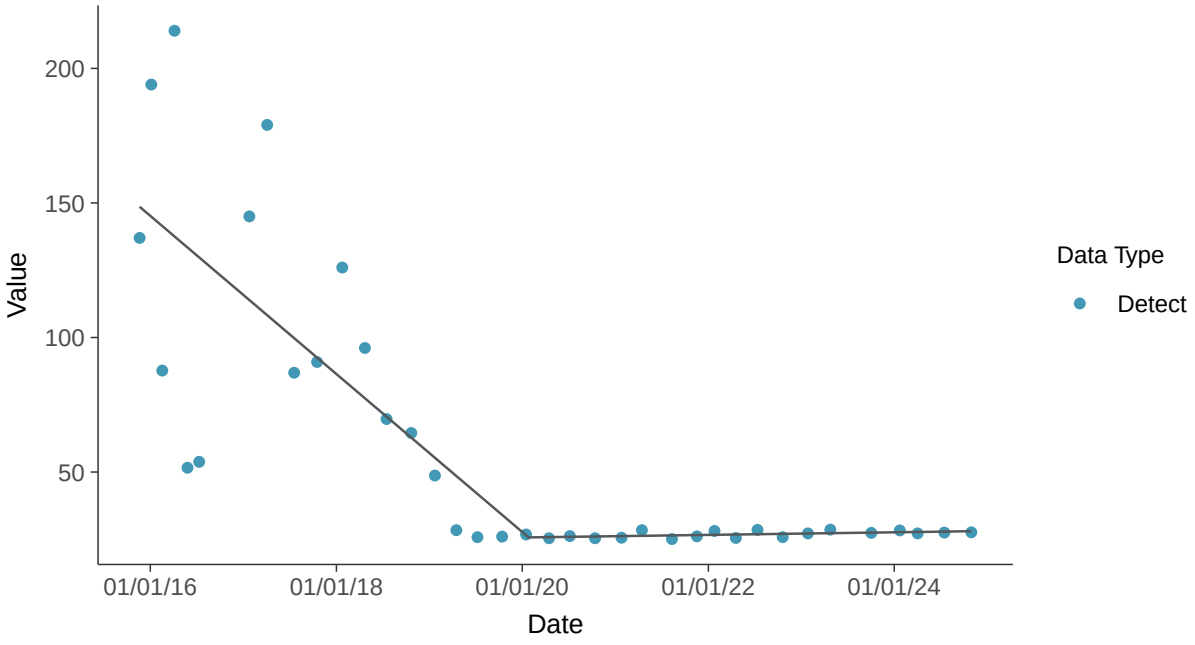
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-6 (mg/L)



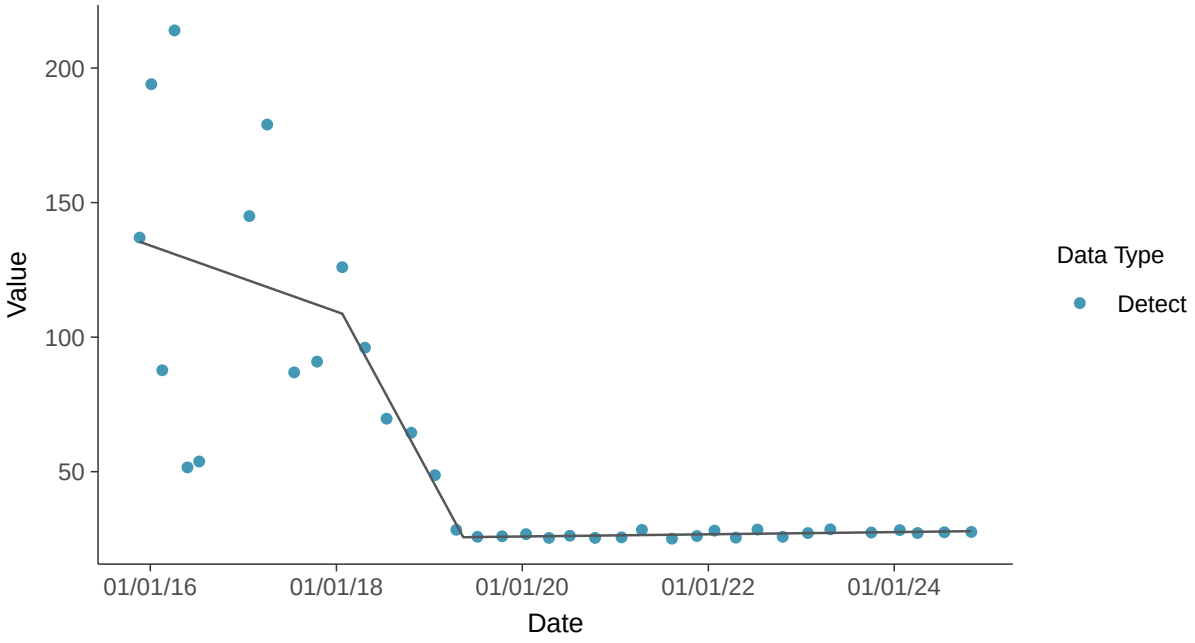
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-6 (mg/L)

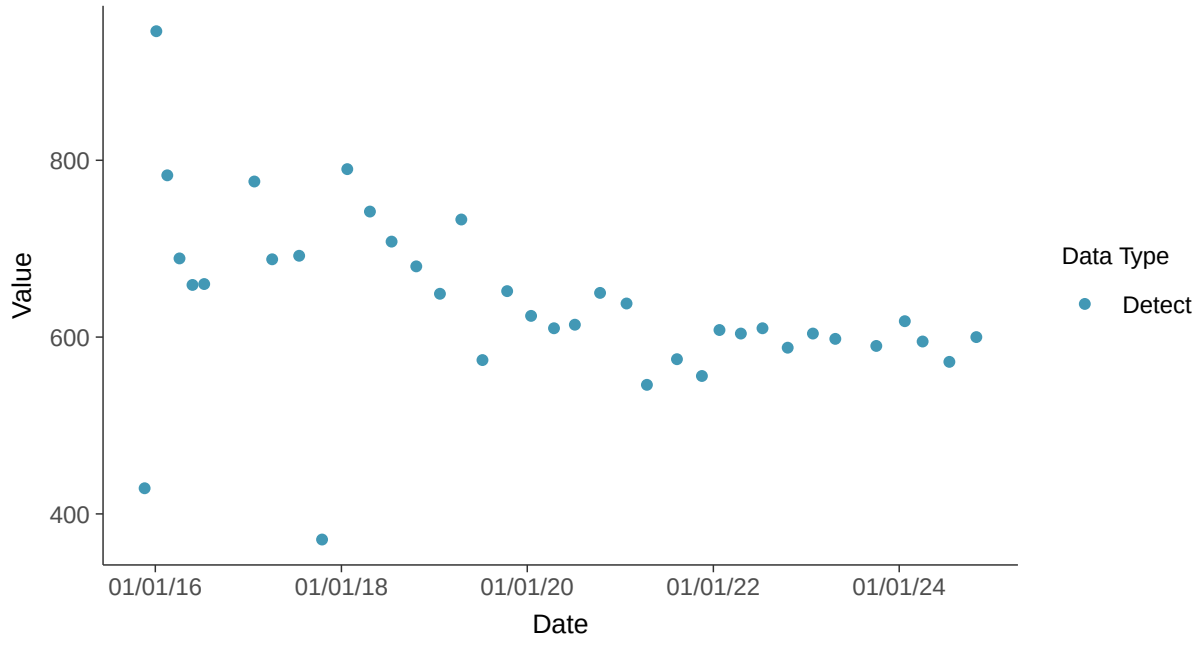


App. III: Total Dissolved Solids, MW-6

ID: 06_02_125

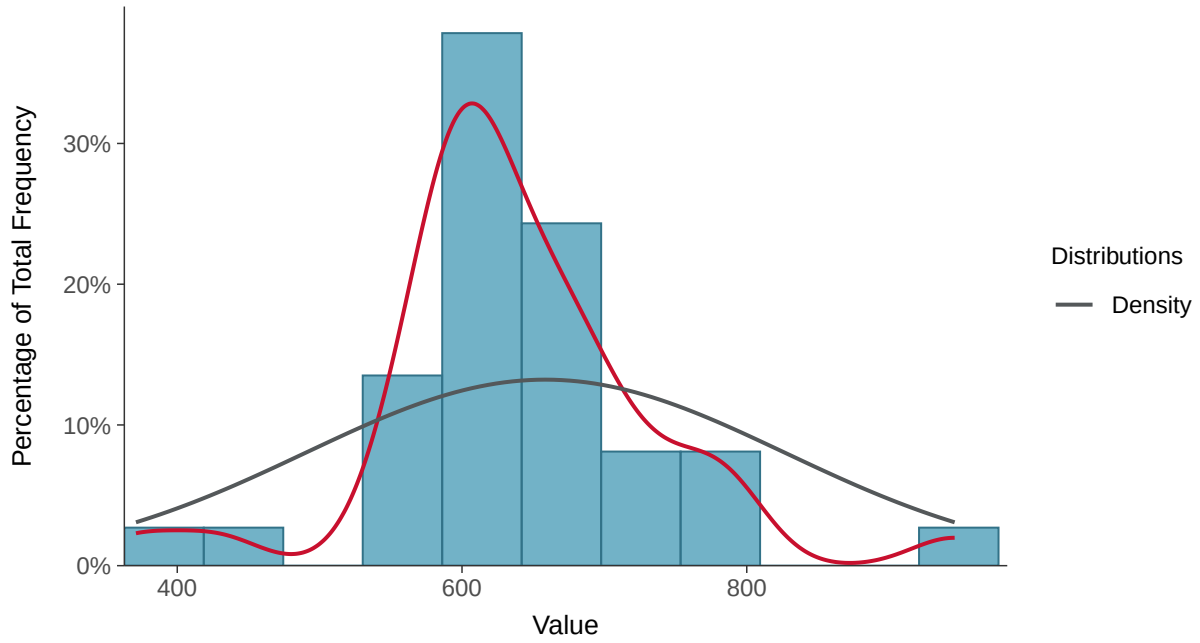
Scatter Plot

Total Dissolved Solids, MW-6 (mg/L)



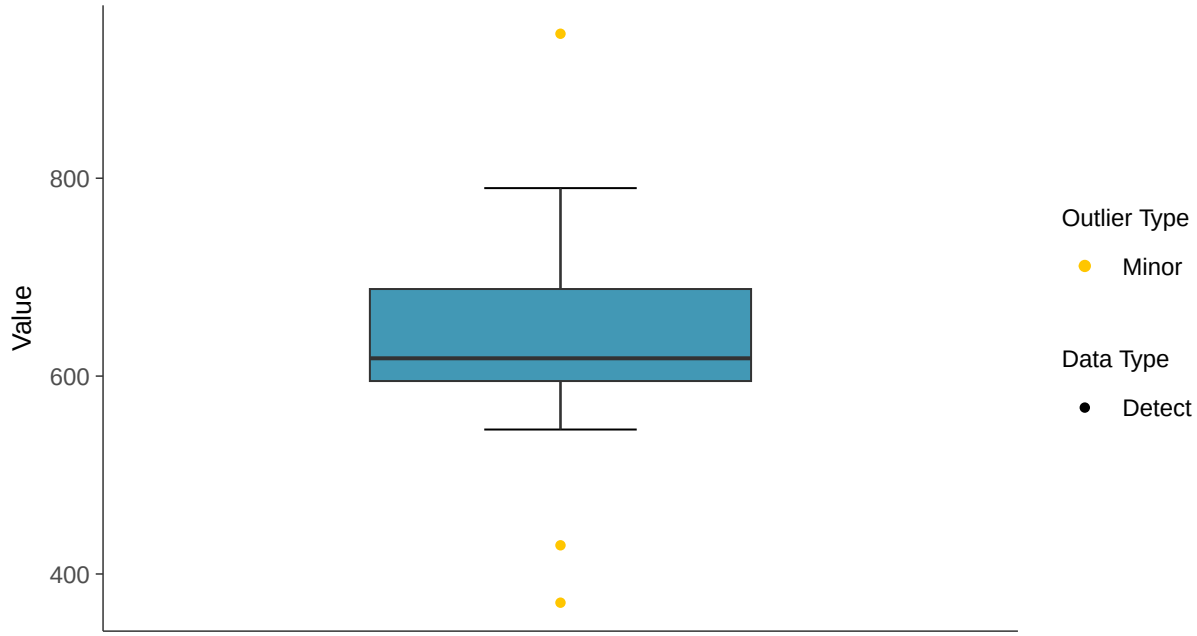
Histogram

Total Dissolved Solids, MW-6 (mg/L)



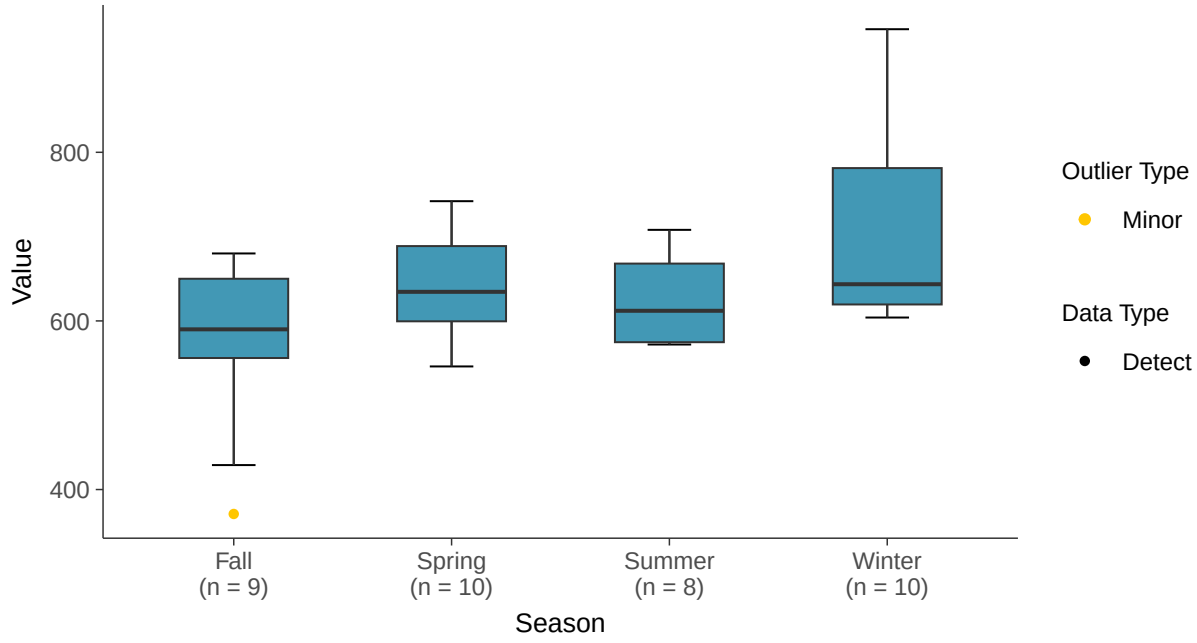
Boxplot

Total Dissolved Solids, MW-6 (mg/L)



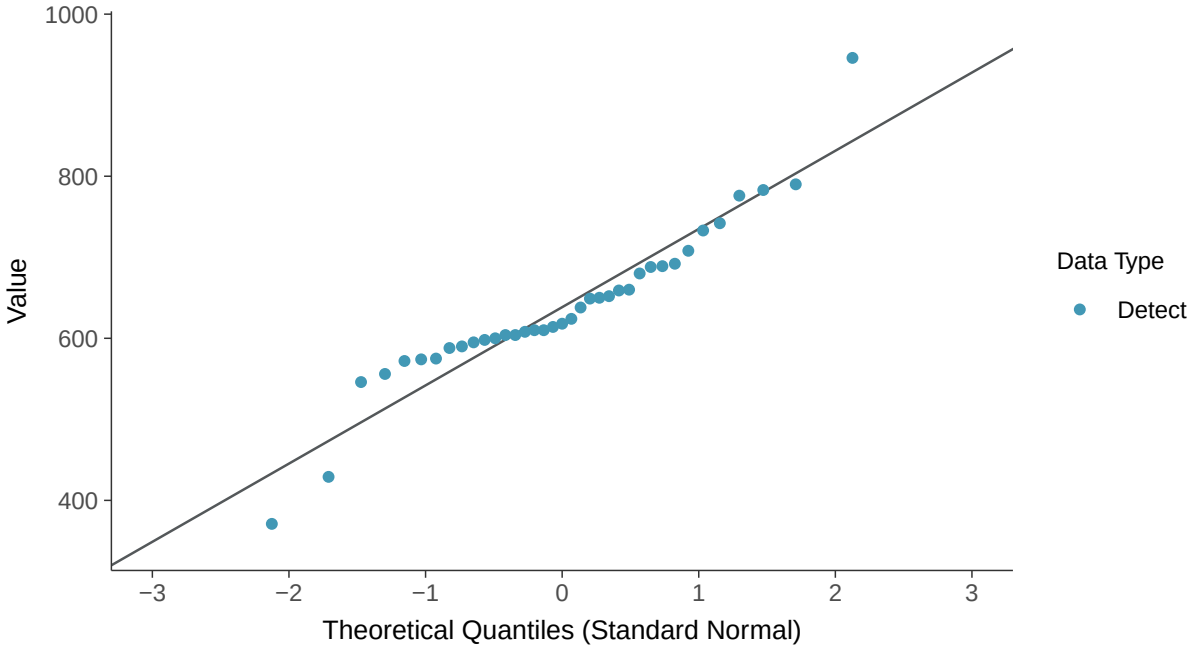
Boxplot by Season

Total Dissolved Solids, MW-6 (mg/L)



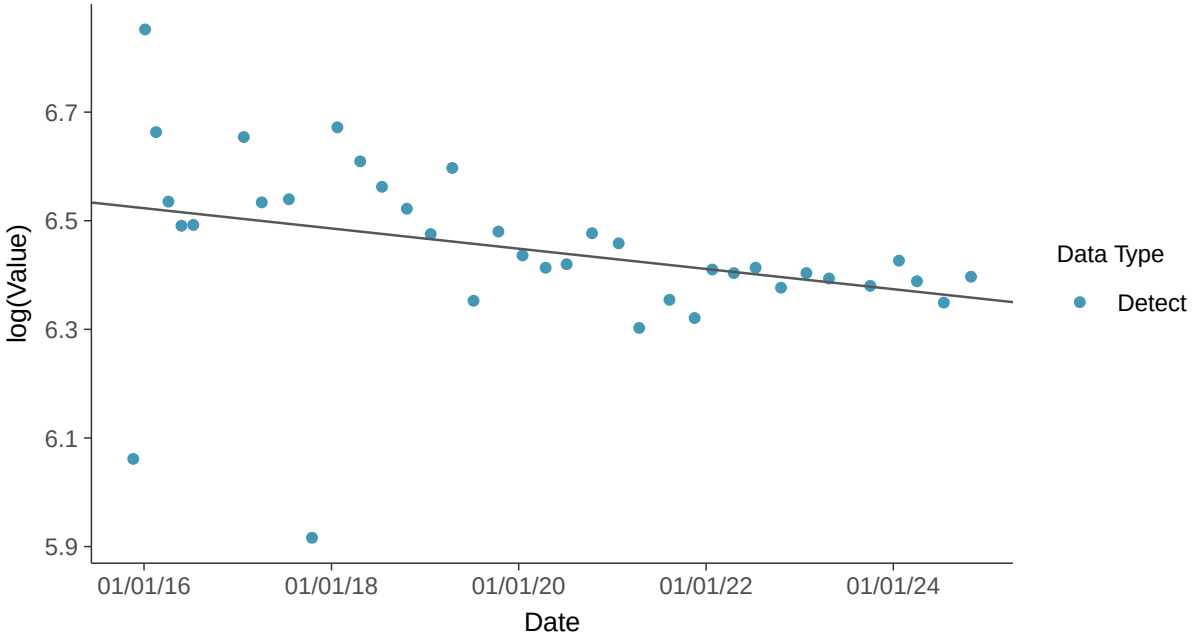
Normal Q-Q plot

Total Dissolved Solids, MW-6 (mg/L)



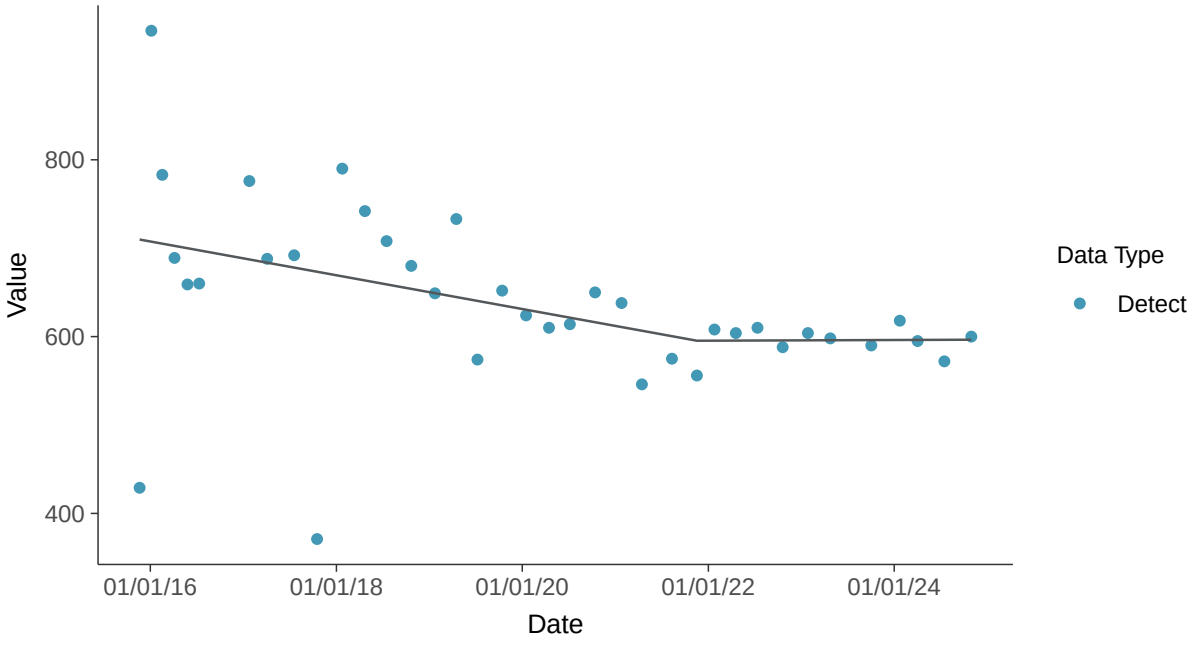
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-6 (mg/L)



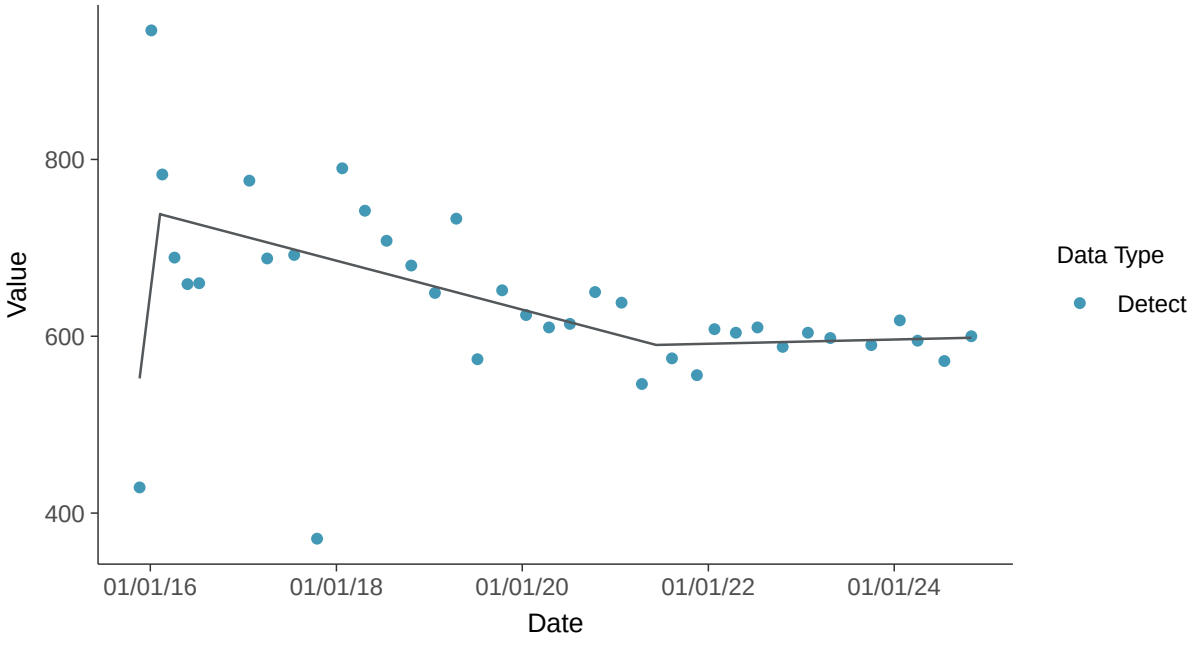
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-6 (mg/L)

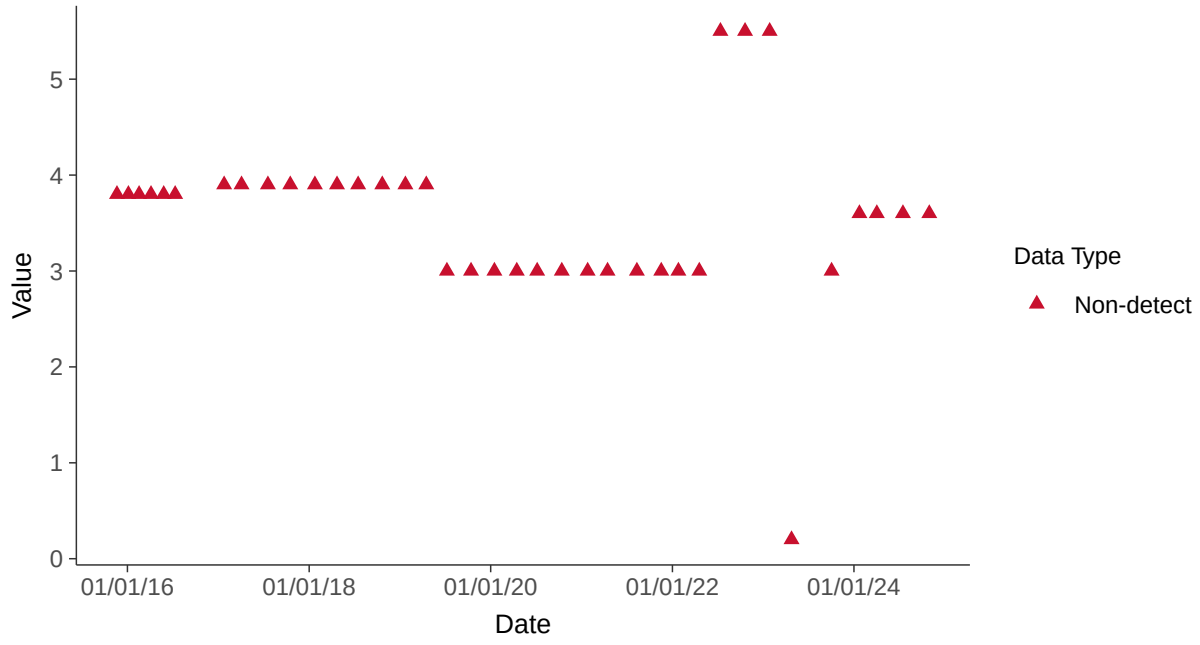


App. IV: Antimony, MW-6

ID: 06_03_101

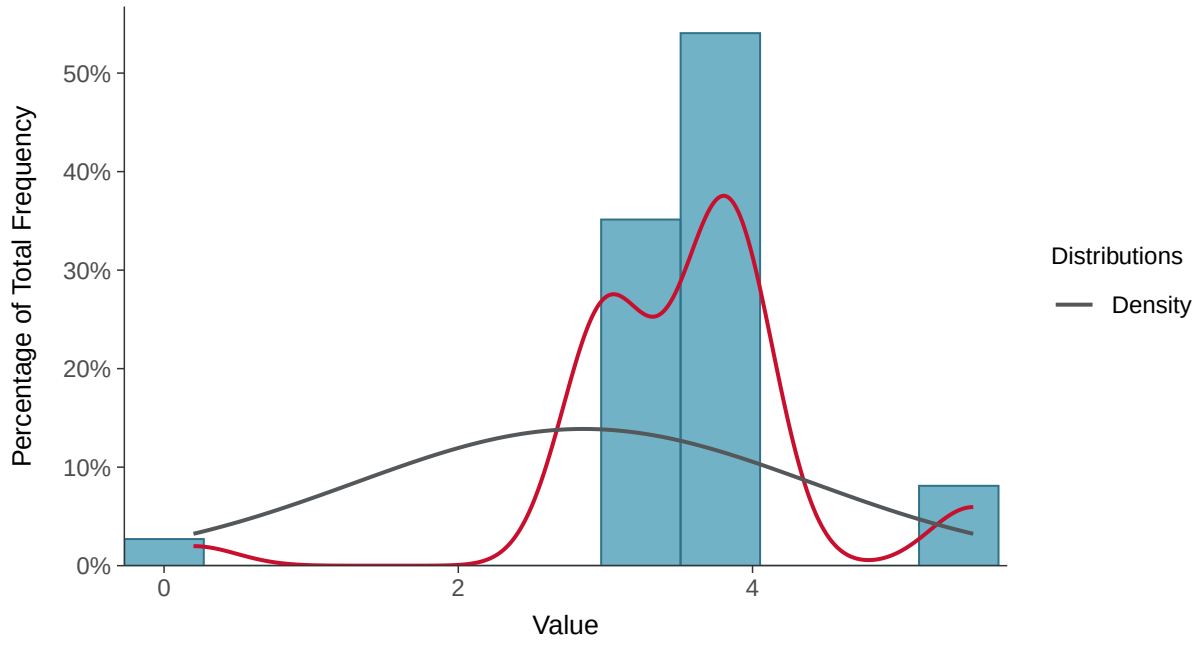
Scatter Plot

Antimony, MW-6 (ug/L)



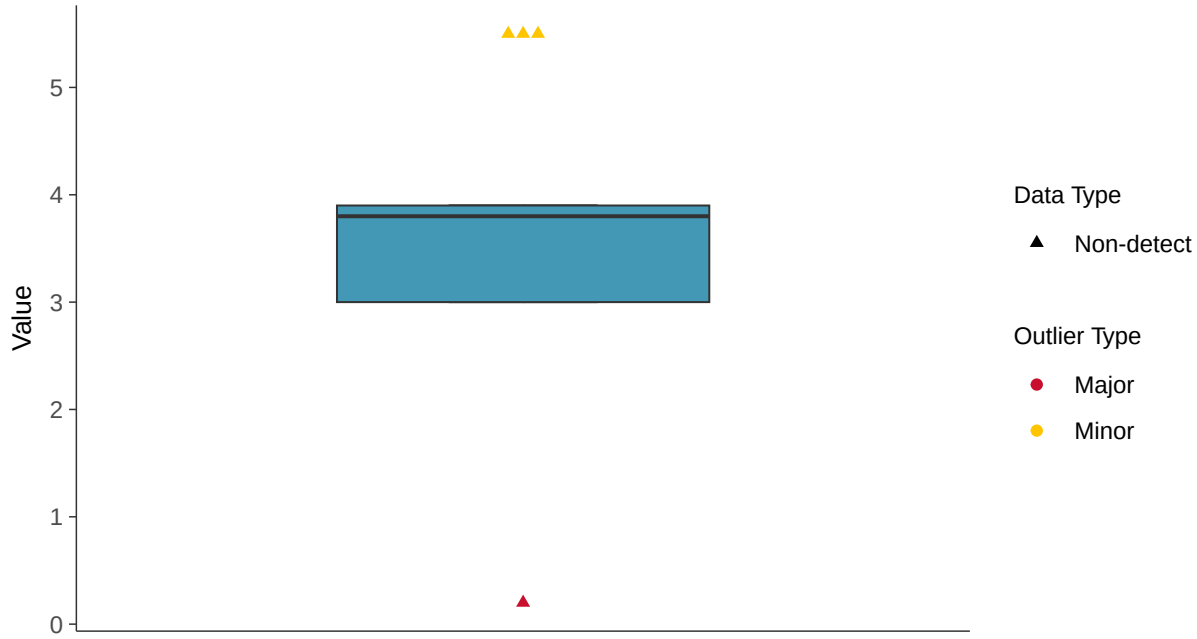
Histogram

Antimony, MW-6 (ug/L)



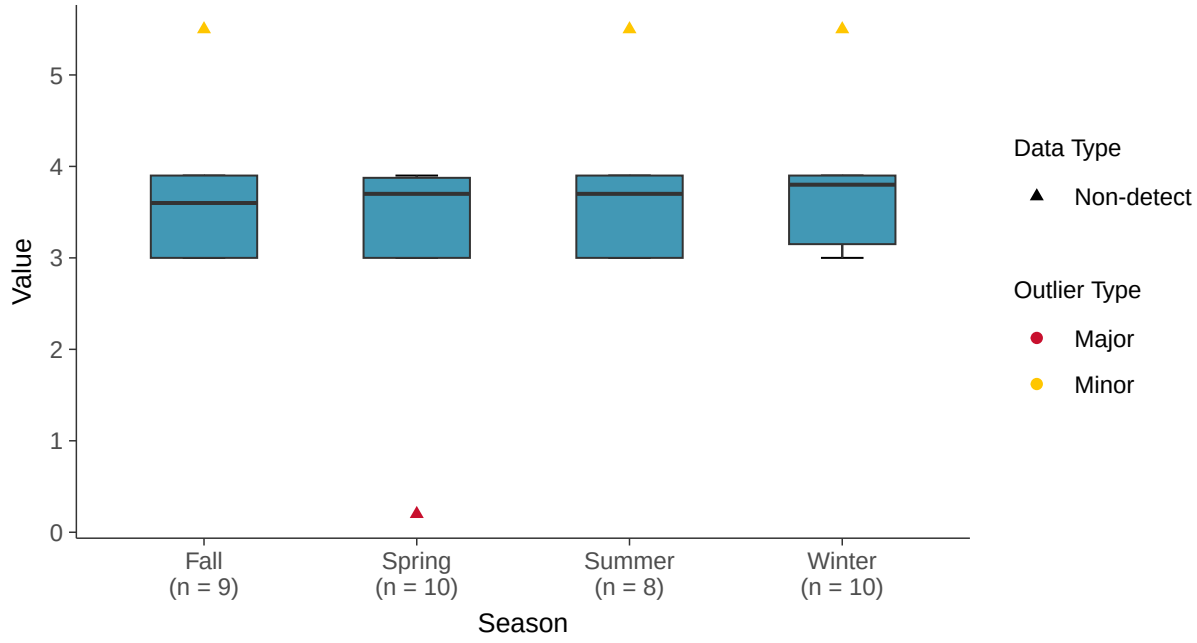
Boxplot

Antimony, MW-6 (ug/L)



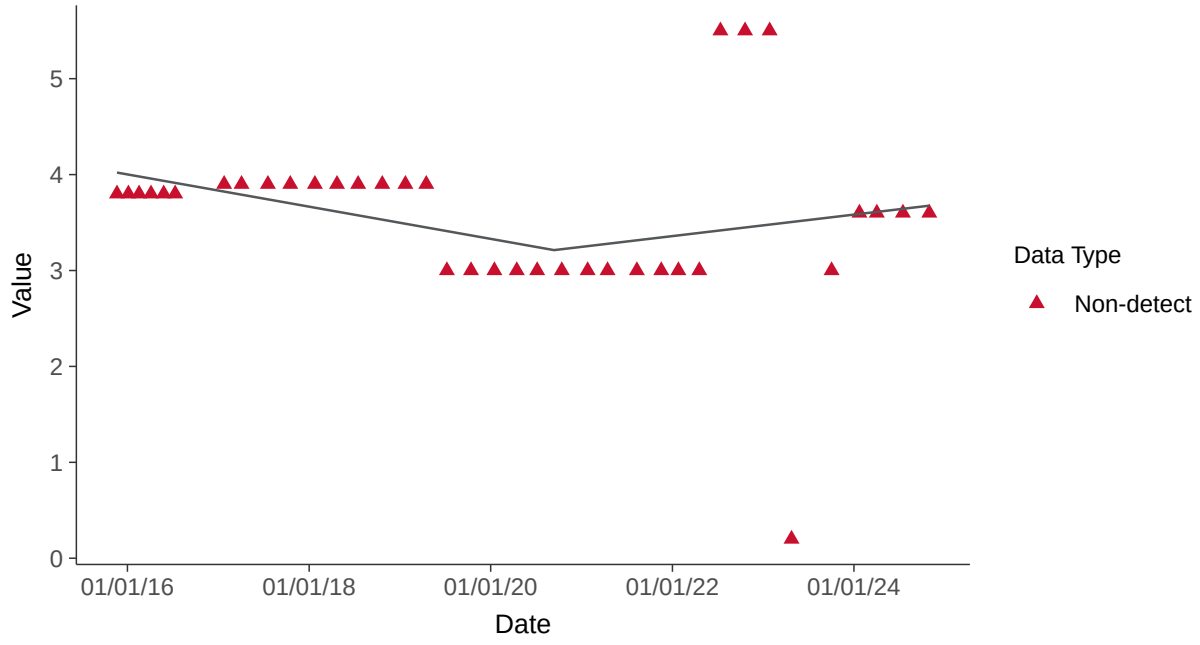
Boxplot by Season

Antimony, MW-6 (ug/L)



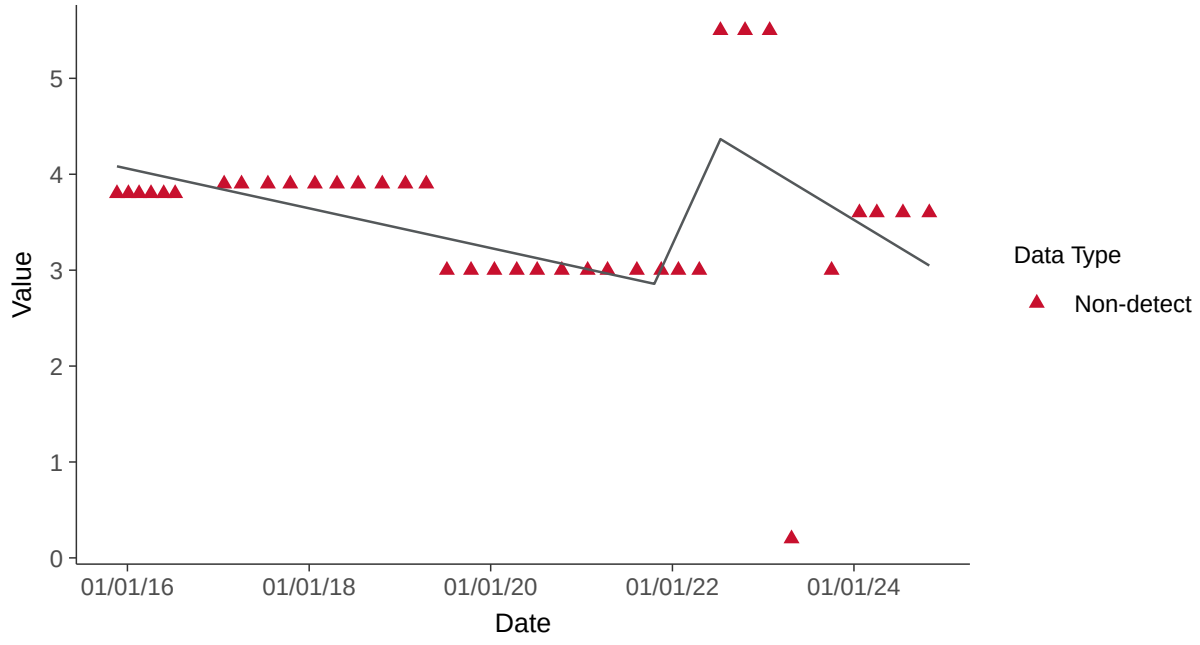
Trend Regression: Piecewise Linear-Linear

Antimony, MW-6 (ug/L)



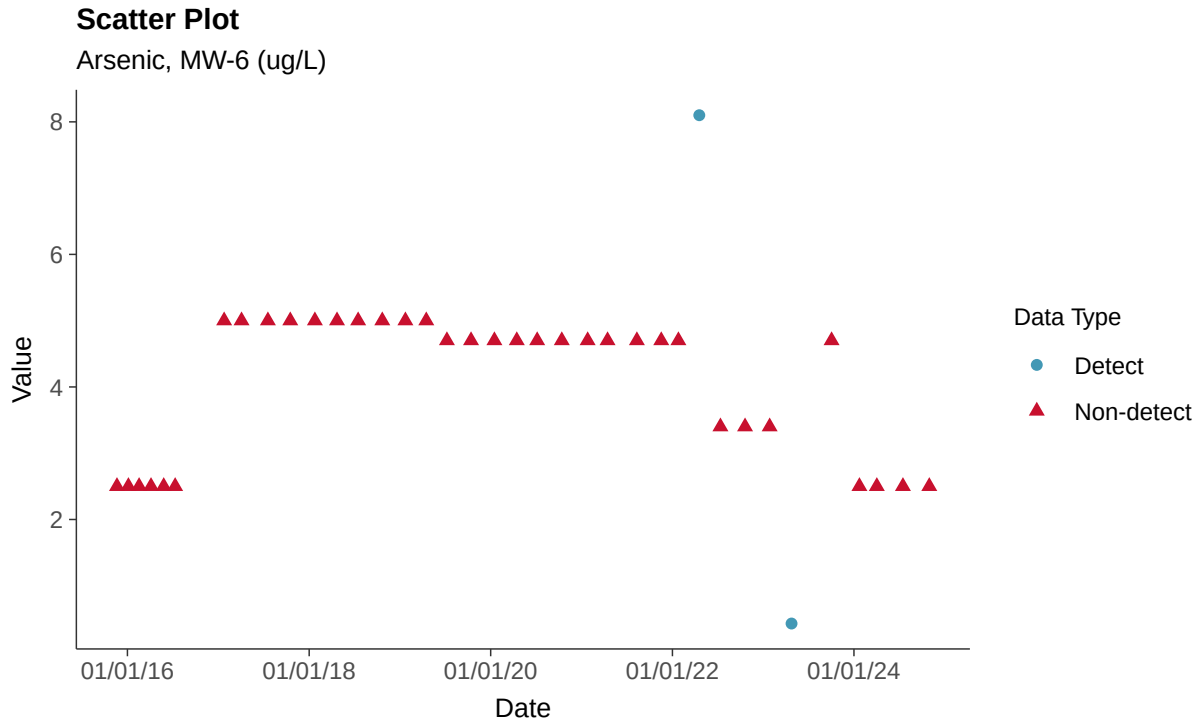
Trend Regression: Piecewise Linear-Linear-Linear

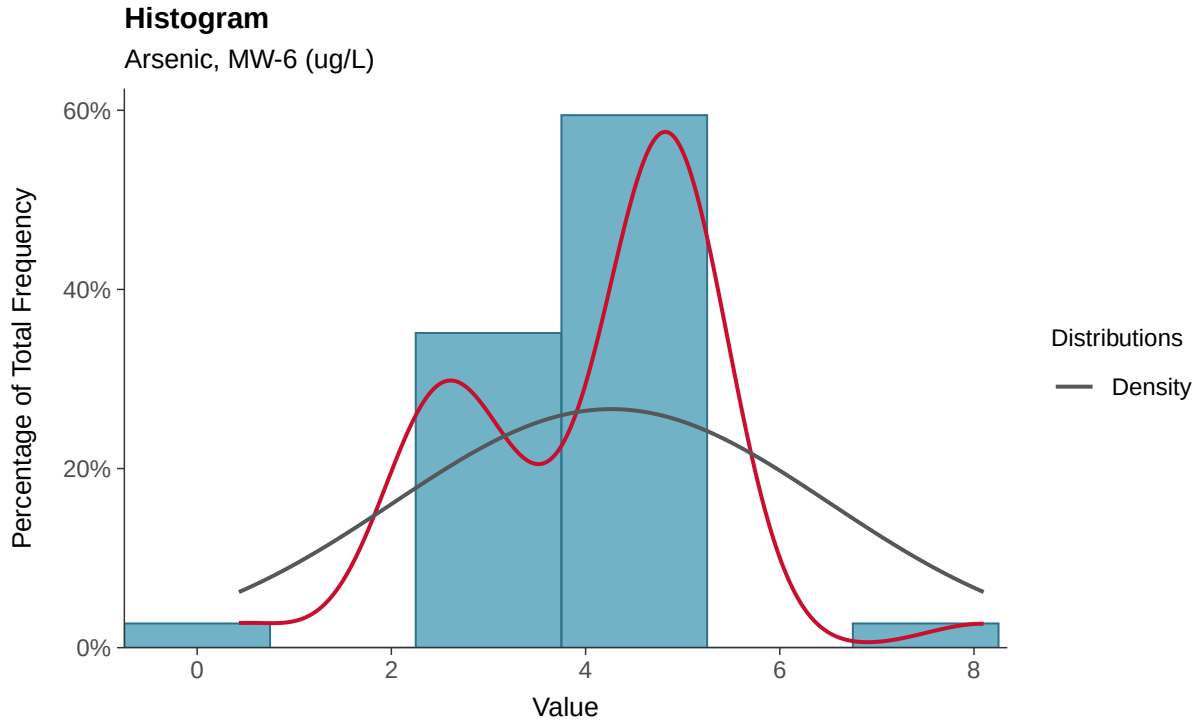
Antimony, MW-6 (ug/L)



App. IV: Arsenic, MW-6

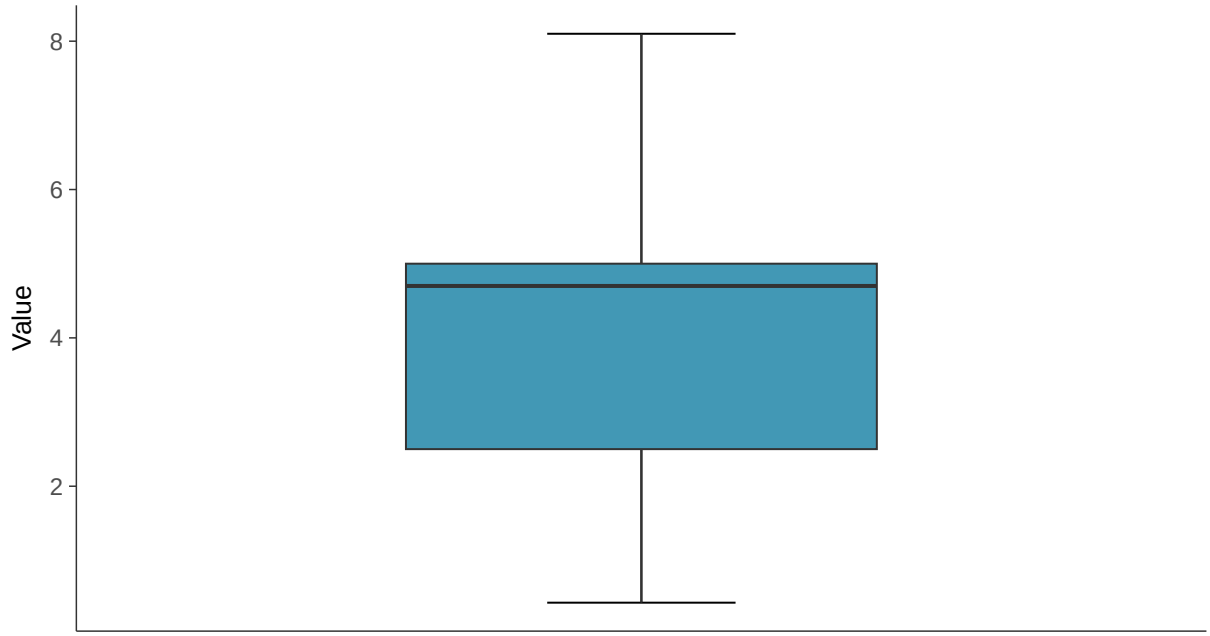
ID: 06_03_102





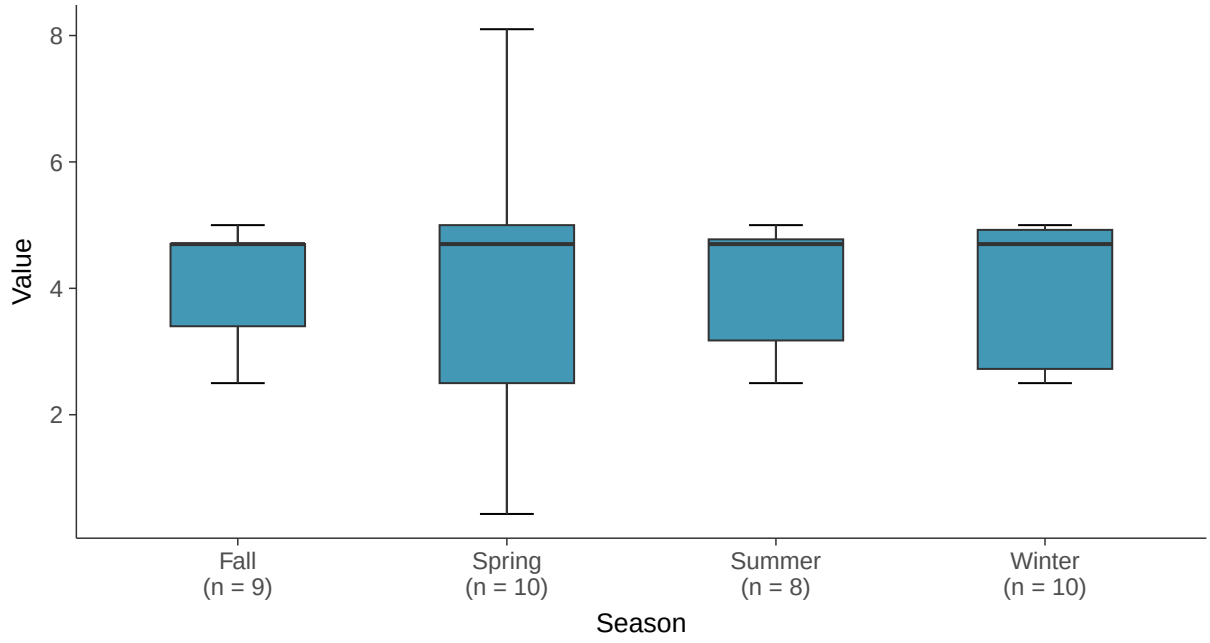
Boxplot

Arsenic, MW-6 (ug/L)



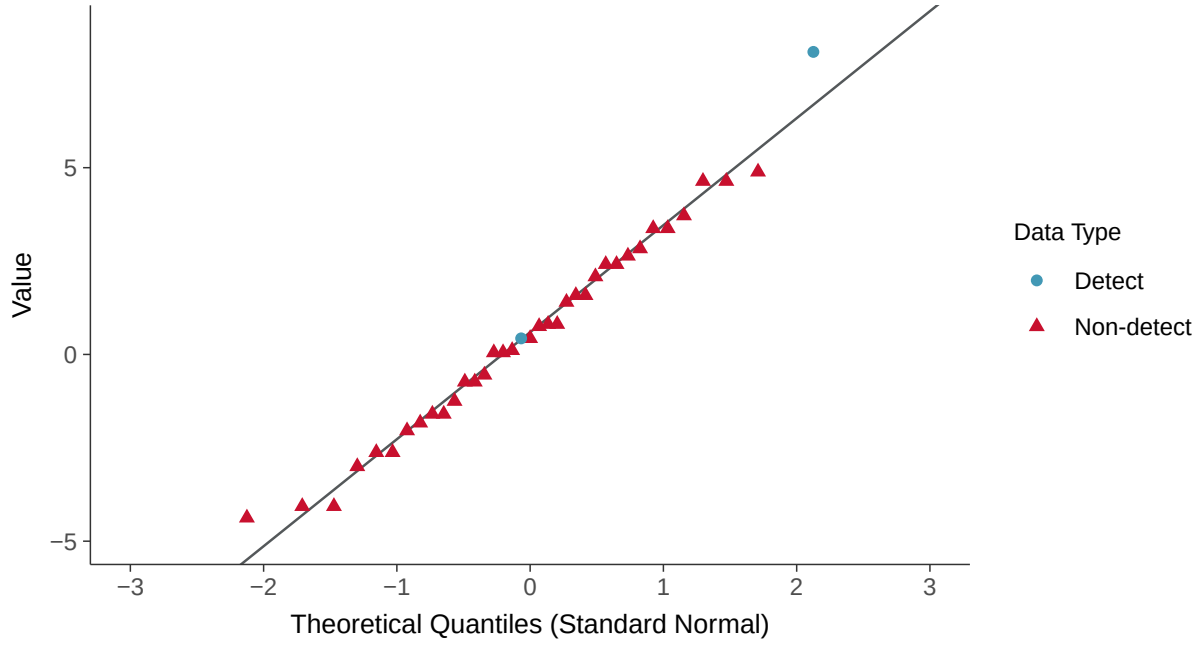
Boxplot by Season

Arsenic, MW-6 (ug/L)



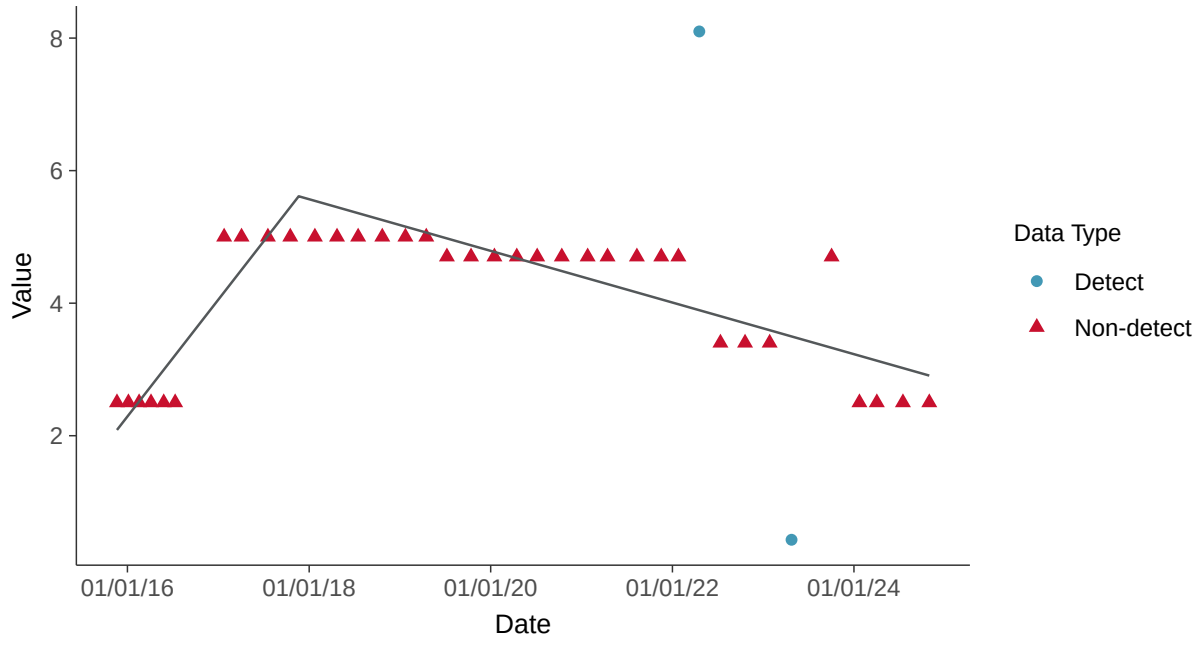
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-6 (ug/L)



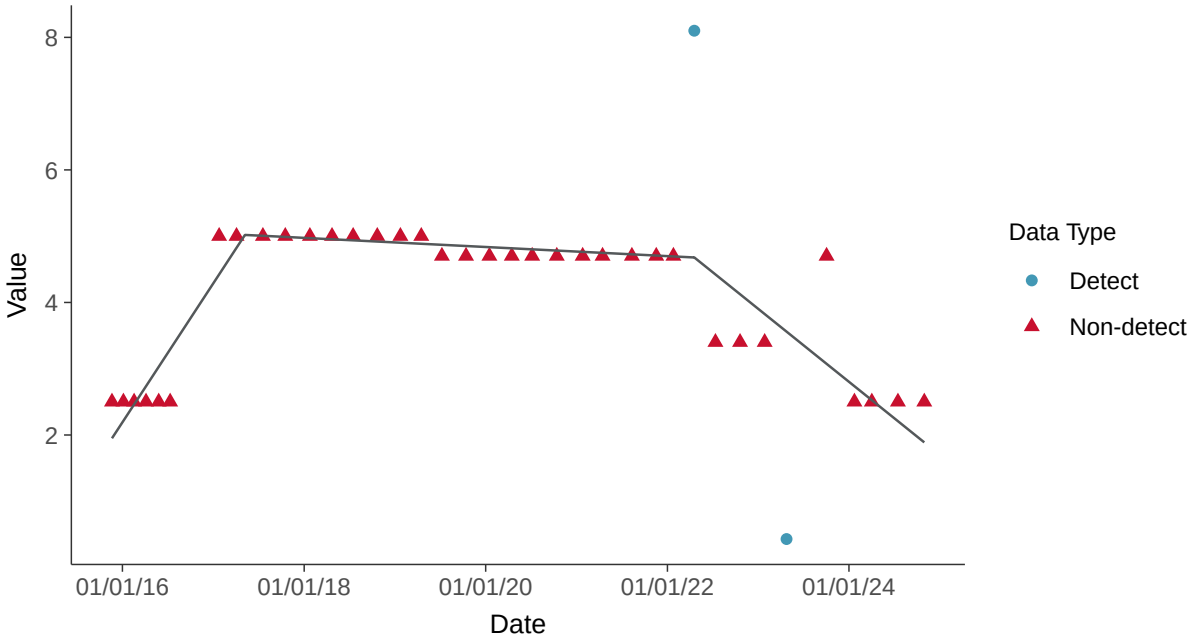
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-6 (ug/L)



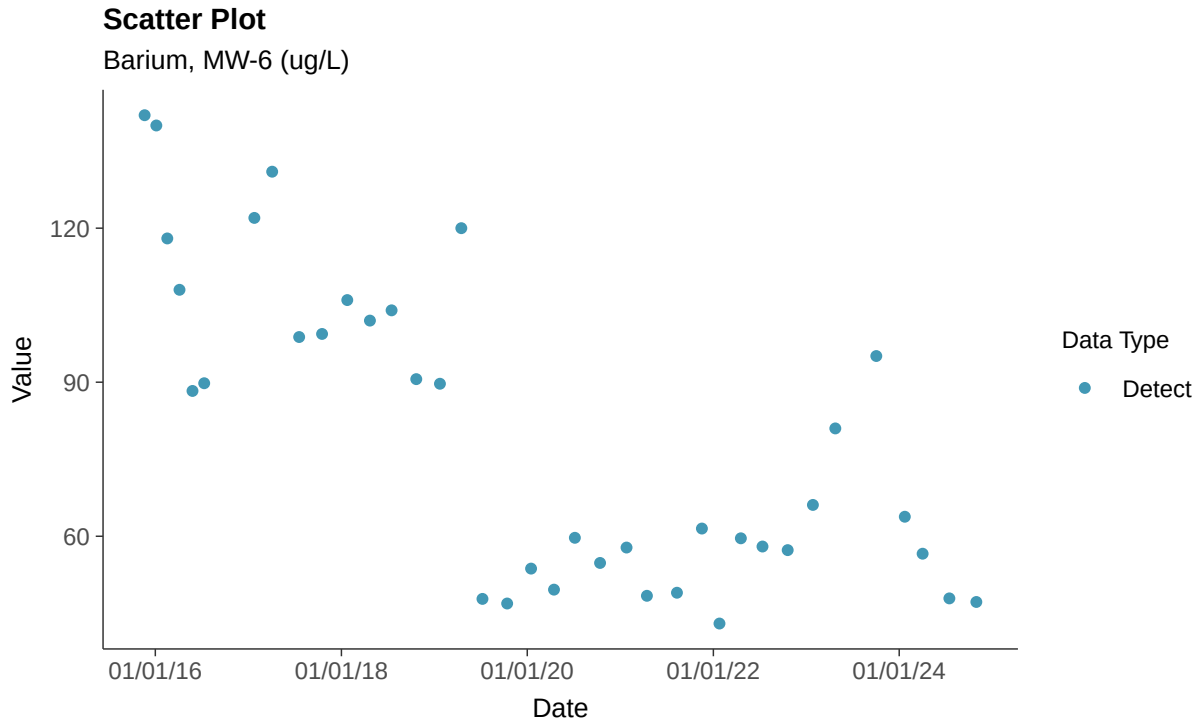
Trend Regression: Piecewise Linear-Linear-Linear

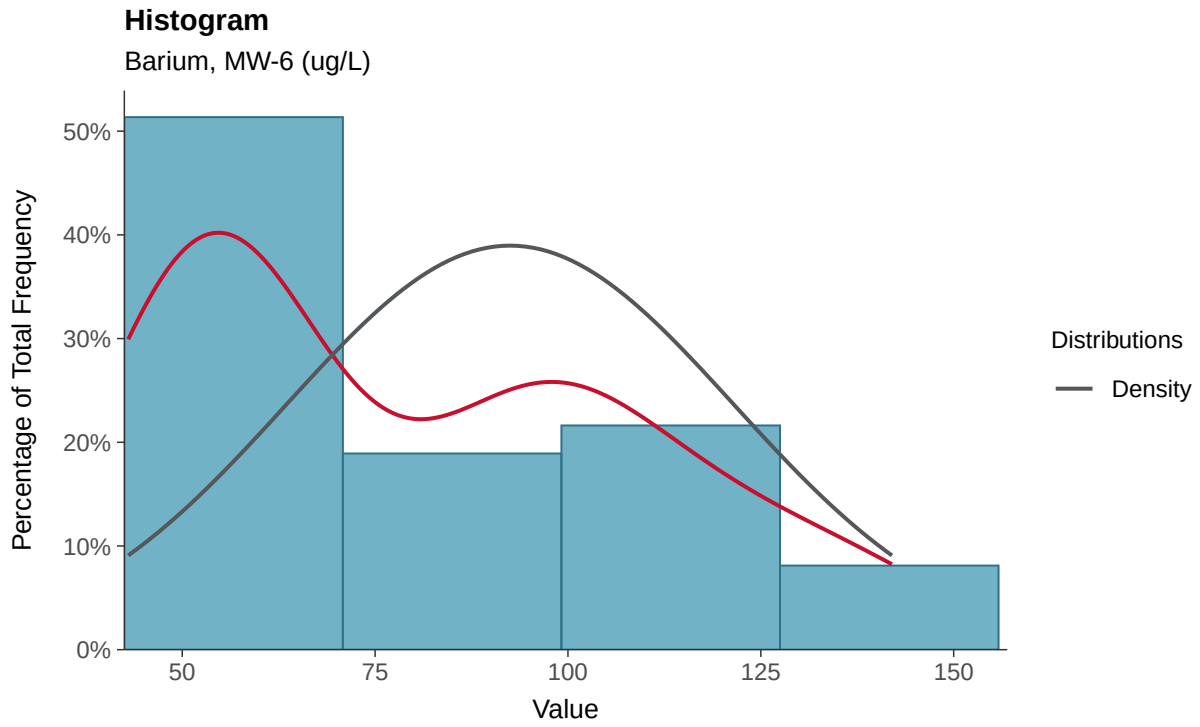
Arsenic, MW-6 (ug/L)



App. IV: Barium, MW-6

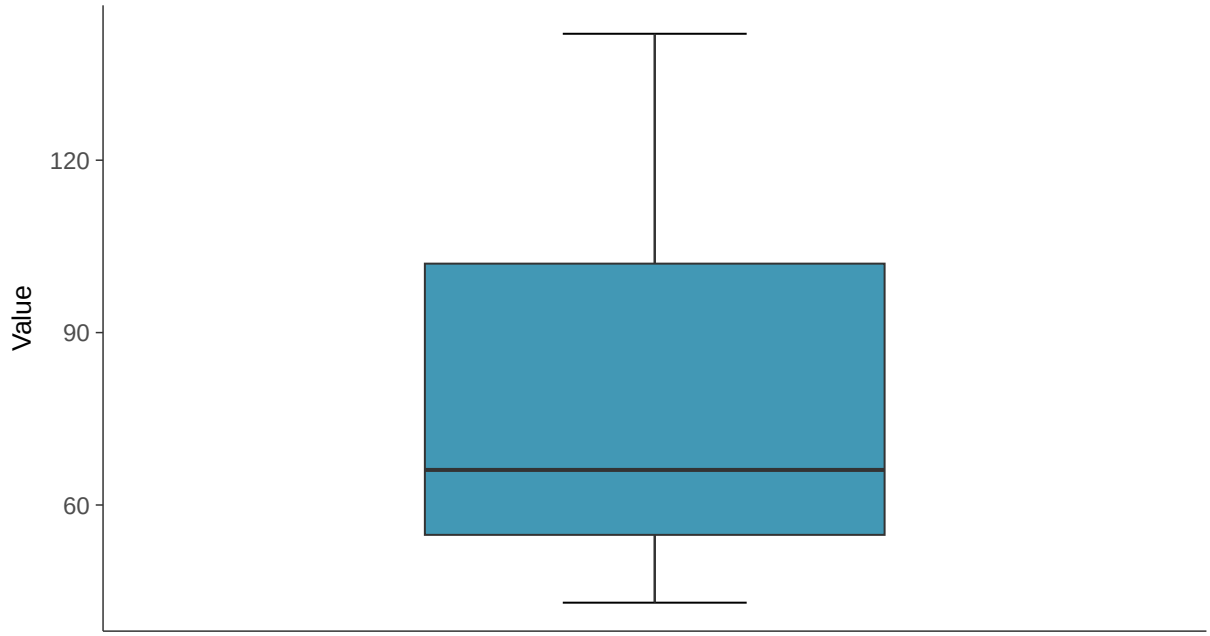
ID: 06_03_103





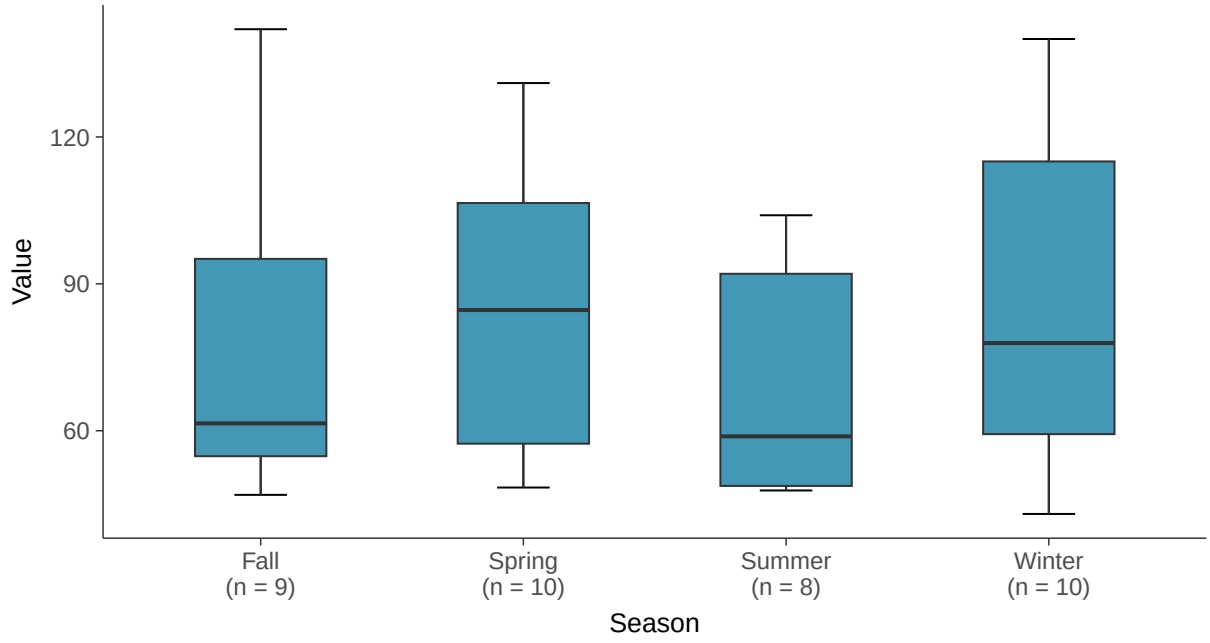
Boxplot

Barium, MW-6 (ug/L)



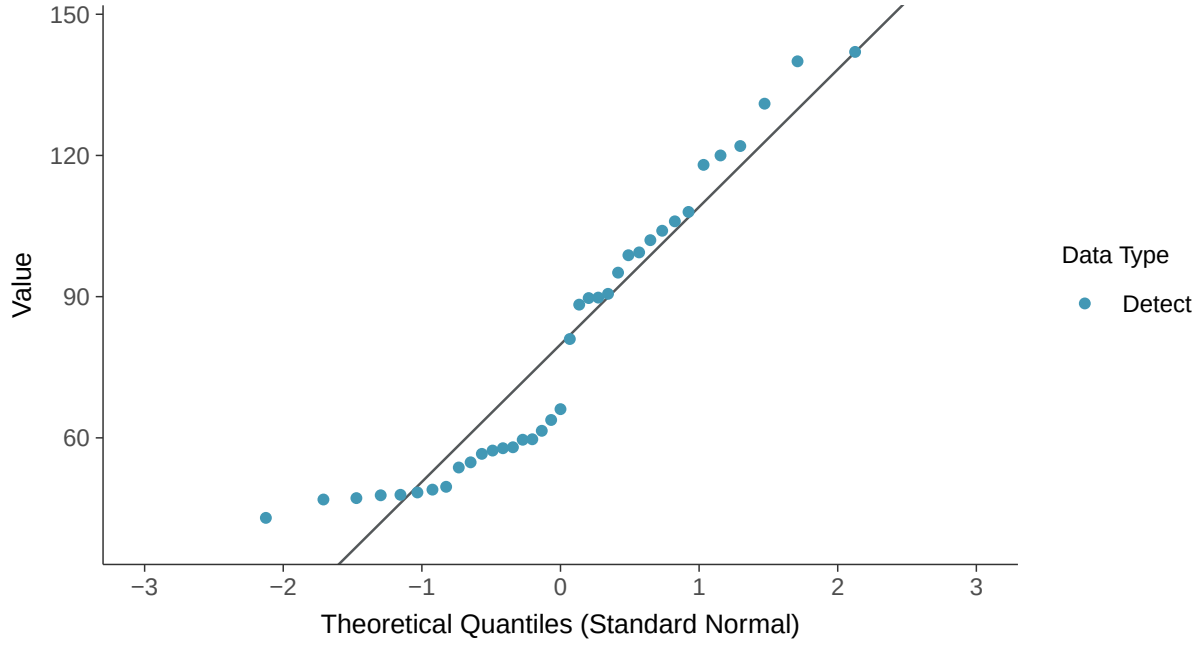
Boxplot by Season

Barium, MW-6 (ug/L)



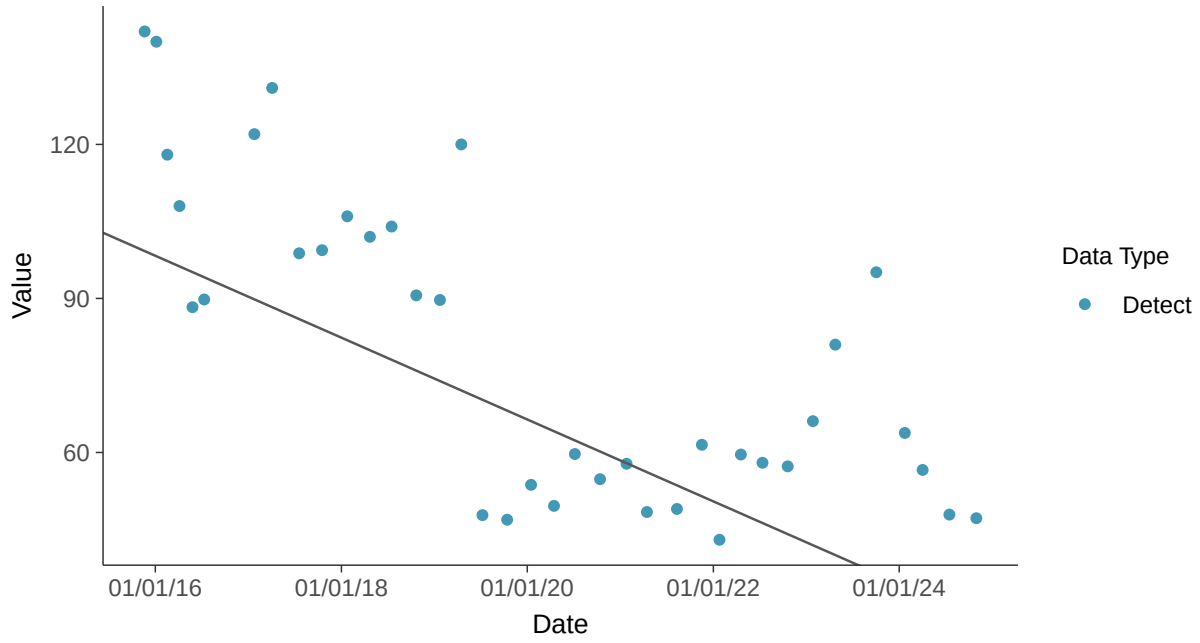
Normal Q-Q plot

Barium, MW-6 (ug/L)



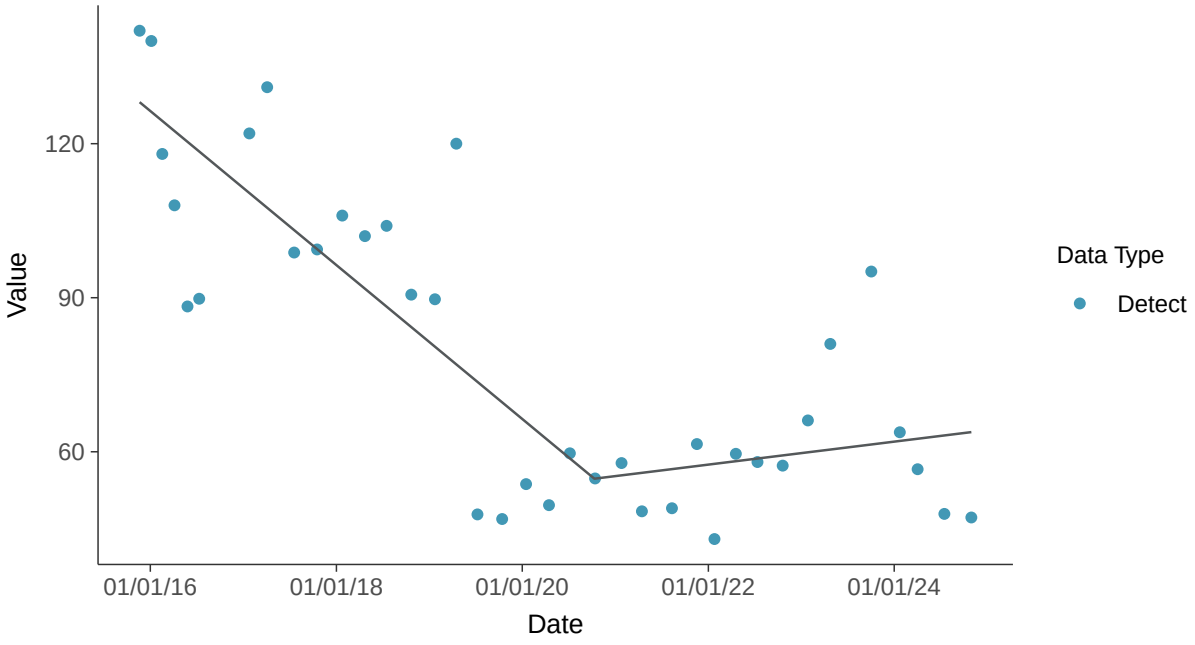
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-6 (ug/L)



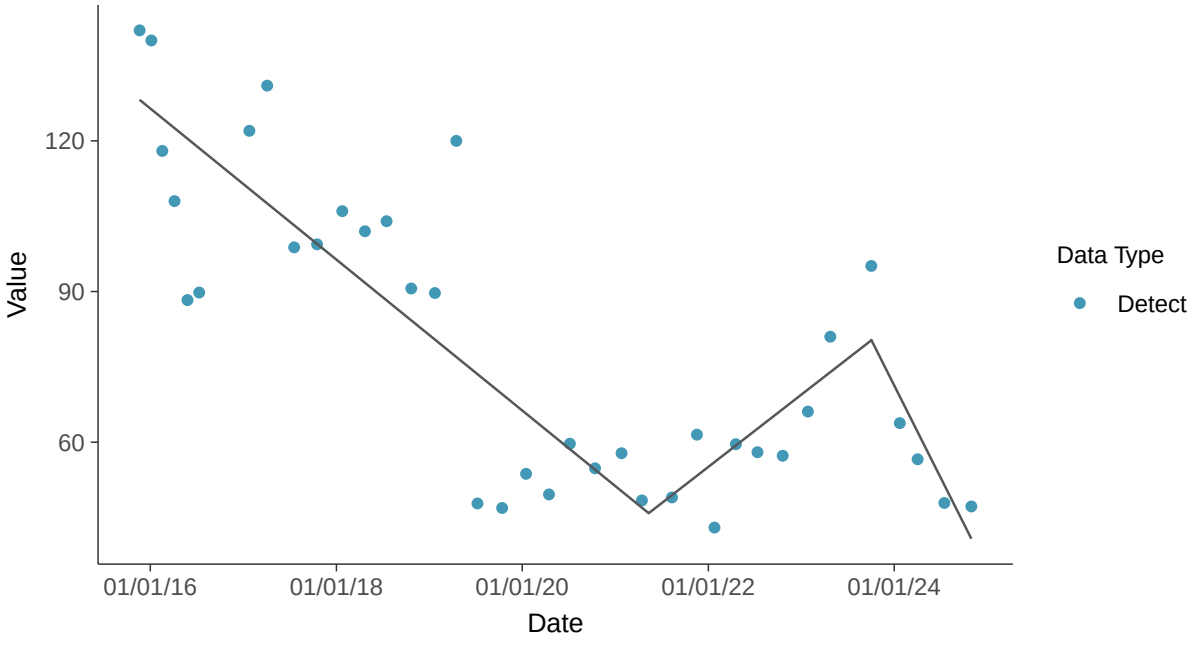
Trend Regression: Piecewise Linear-Linear

Barium, MW-6 (ug/L)



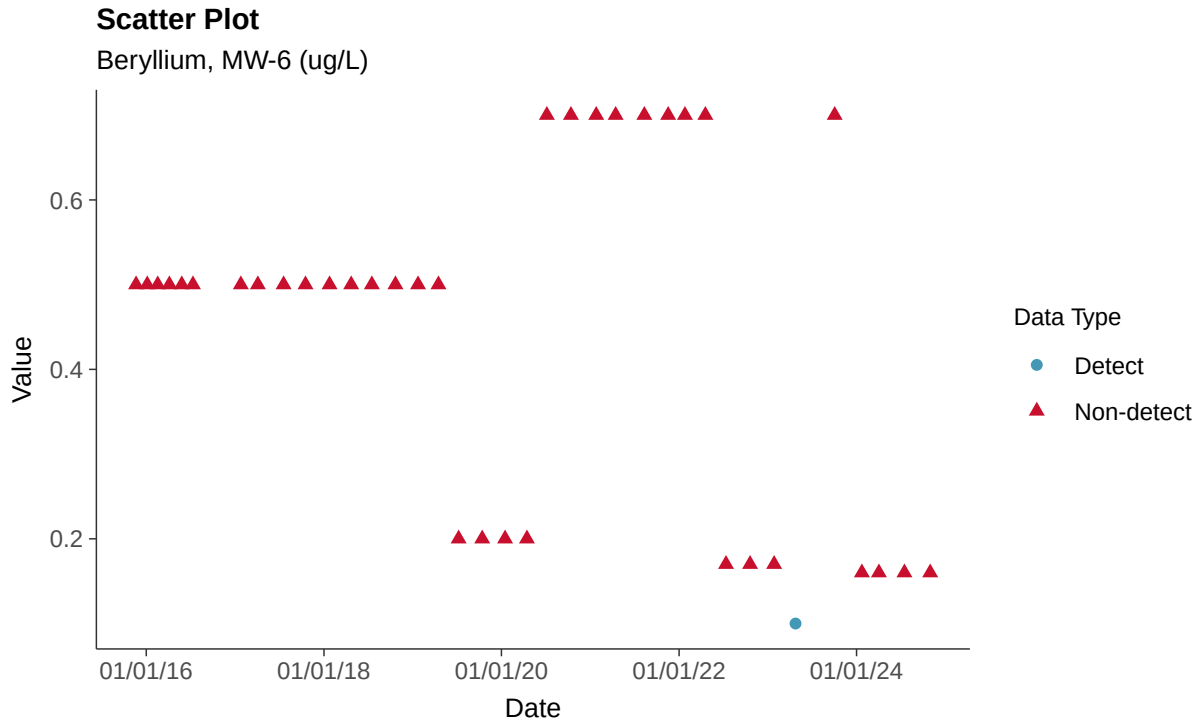
Trend Regression: Piecewise Linear-Linear-Linear

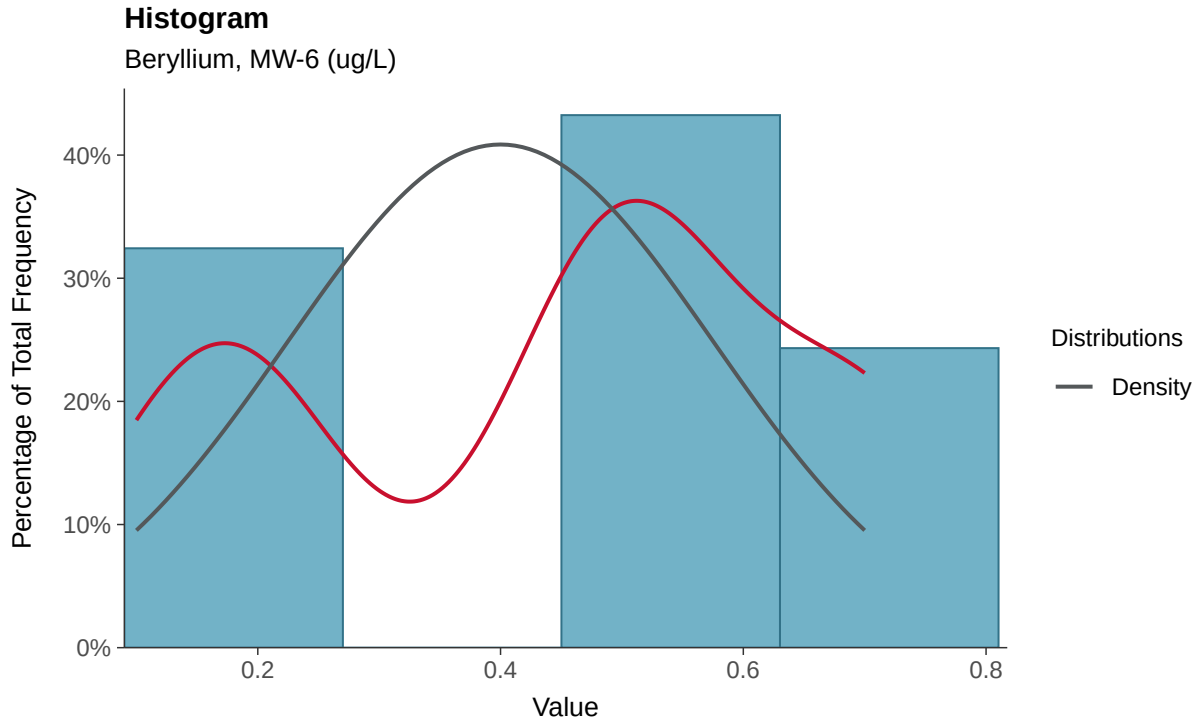
Barium, MW-6 (ug/L)



App. IV: Beryllium, MW-6

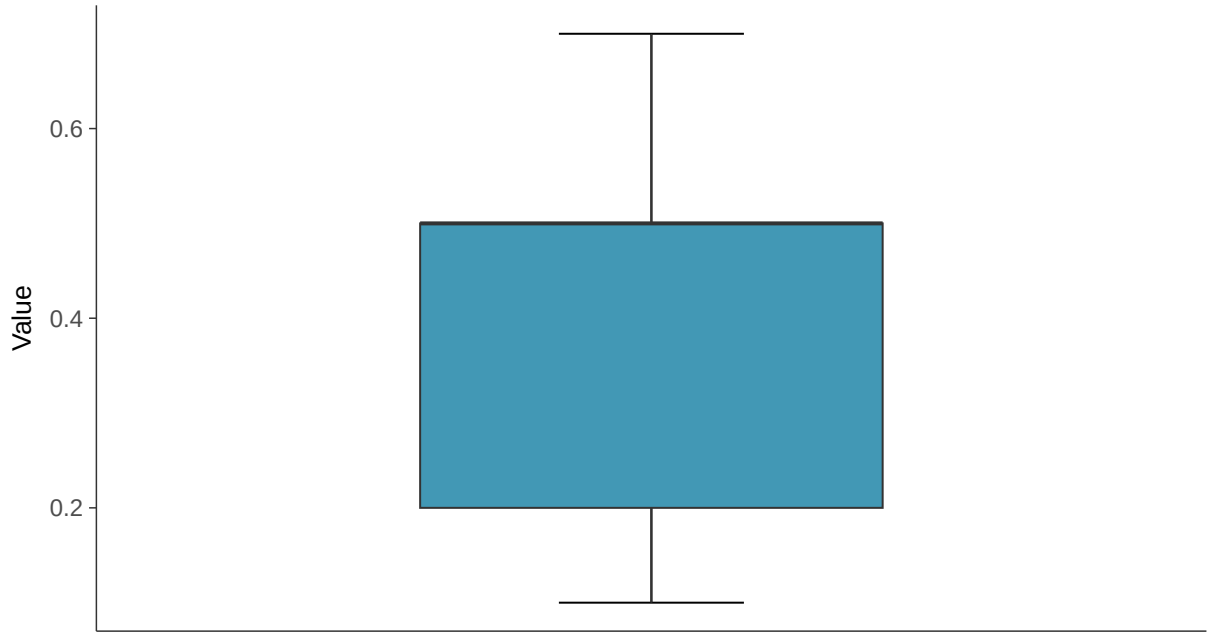
ID: 06_03_104





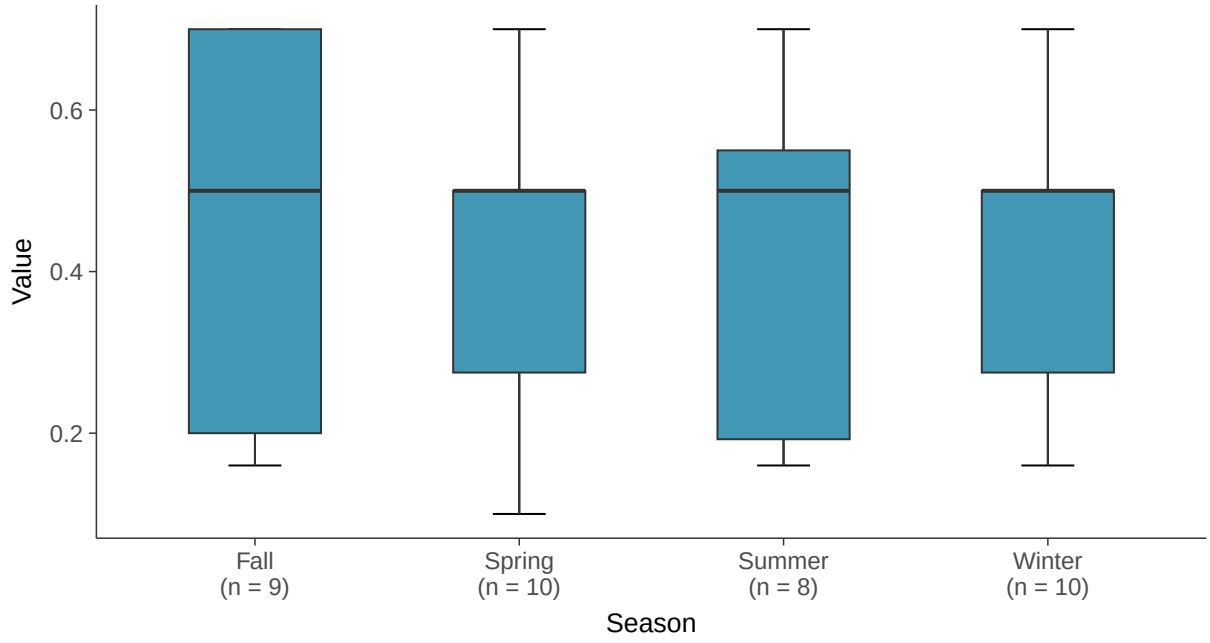
Boxplot

Beryllium, MW-6 (ug/L)



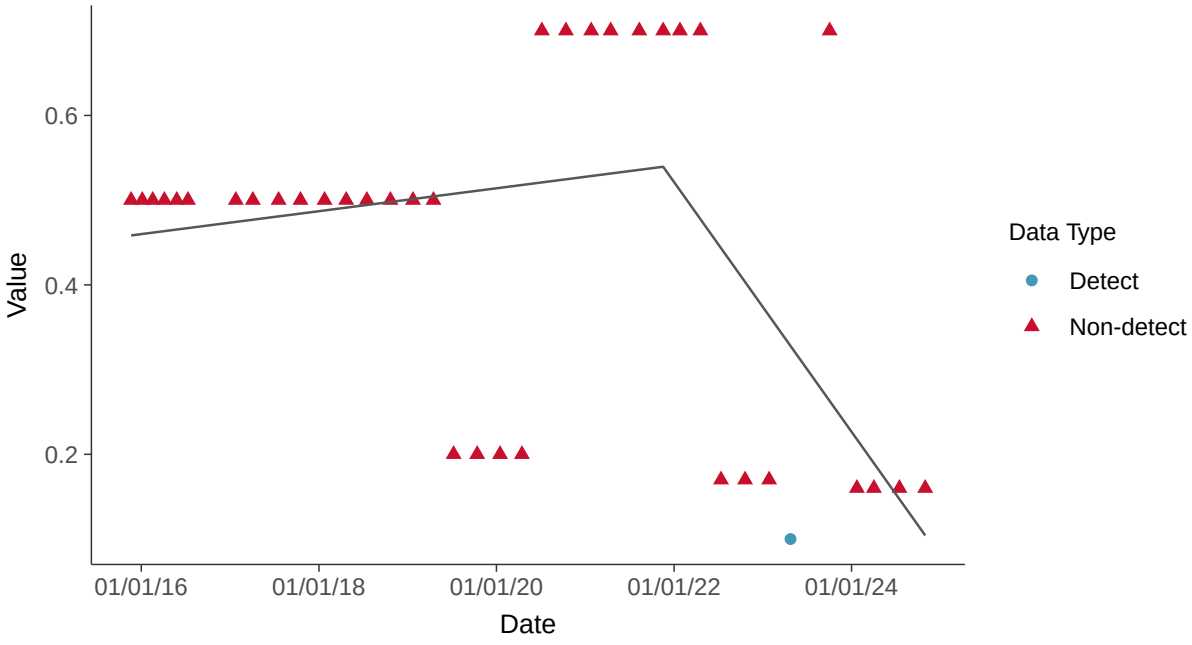
Boxplot by Season

Beryllium, MW-6 (ug/L)



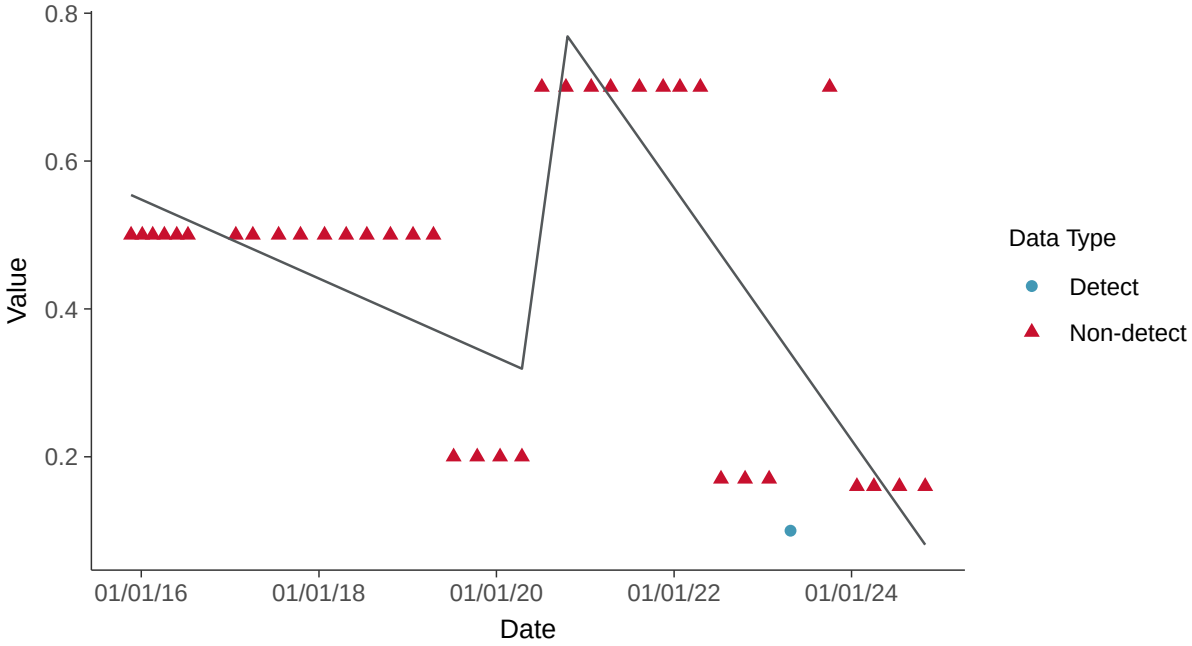
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-6 (ug/L)



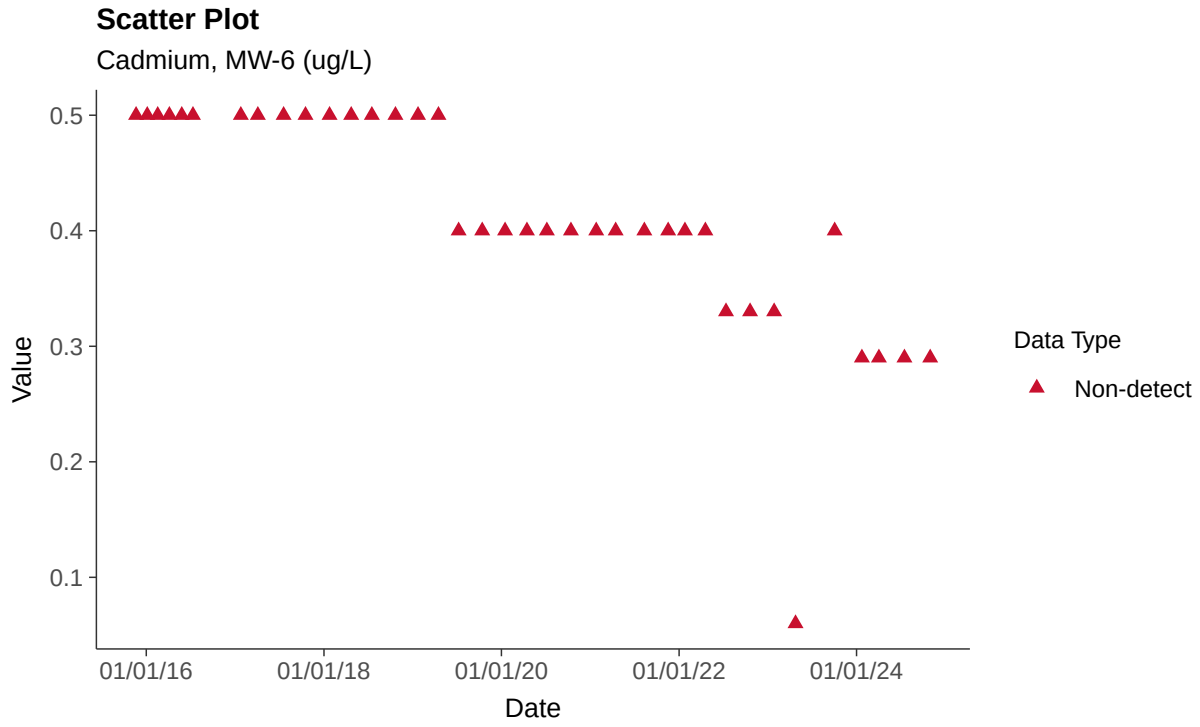
Trend Regression: Piecewise Linear-Linear-Linear

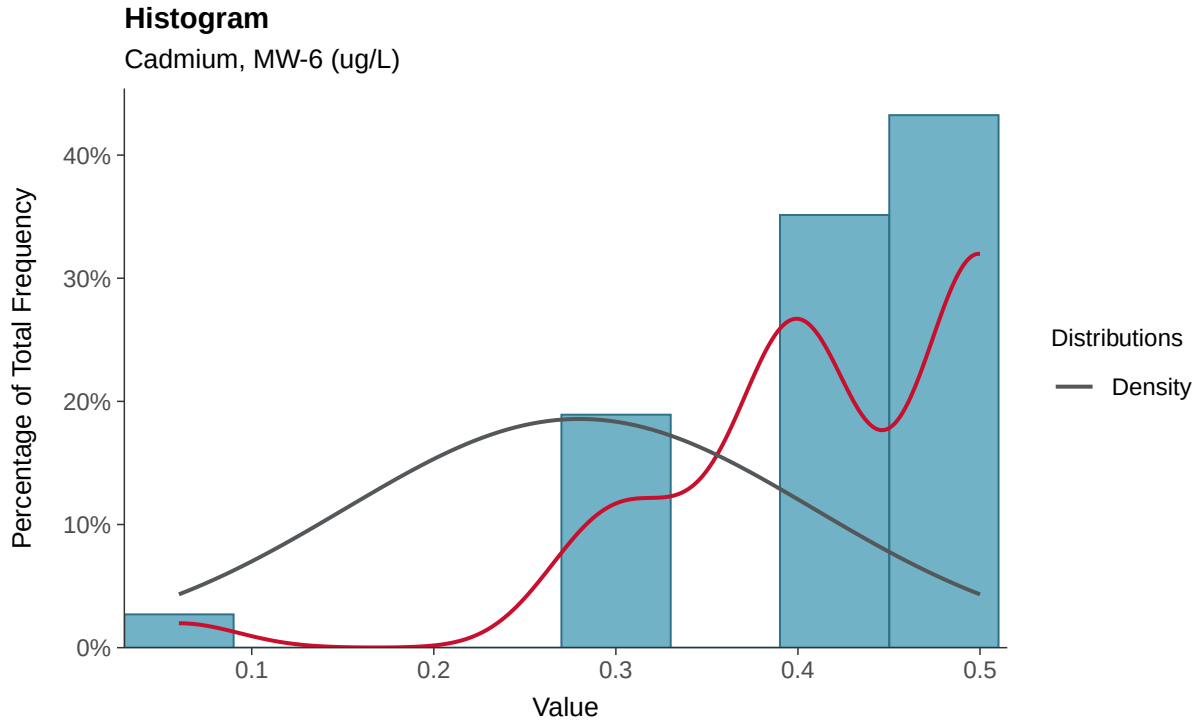
Beryllium, MW-6 (ug/L)



App. IV: Cadmium, MW-6

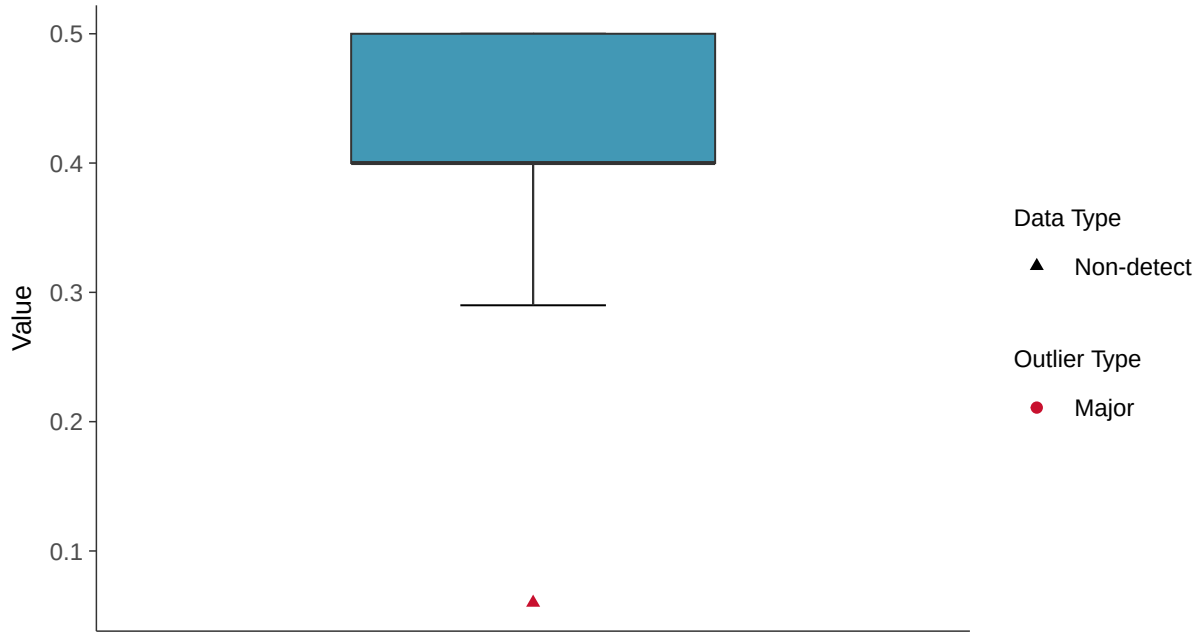
ID: 06_03_106





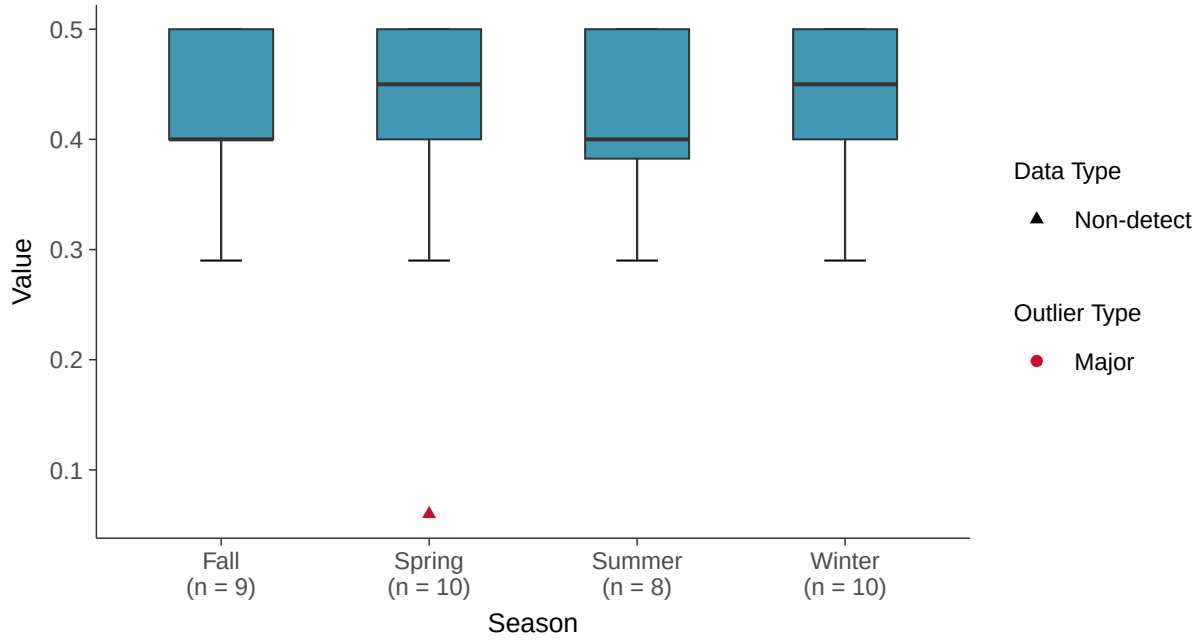
Boxplot

Cadmium, MW-6 (ug/L)



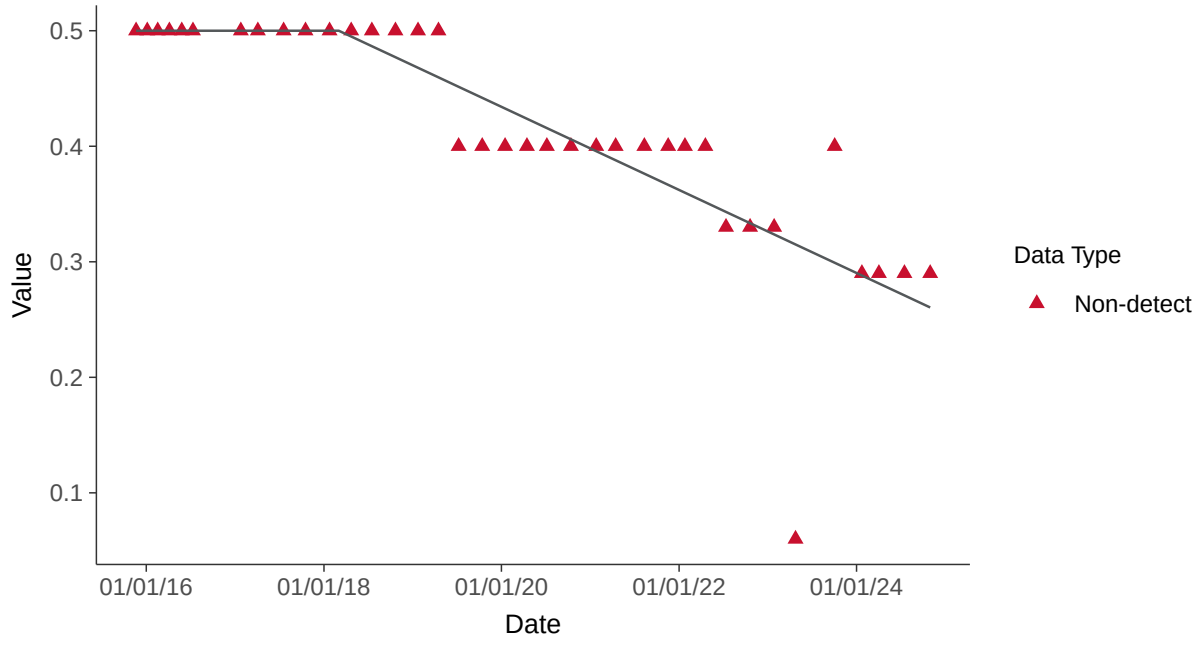
Boxplot by Season

Cadmium, MW-6 (ug/L)



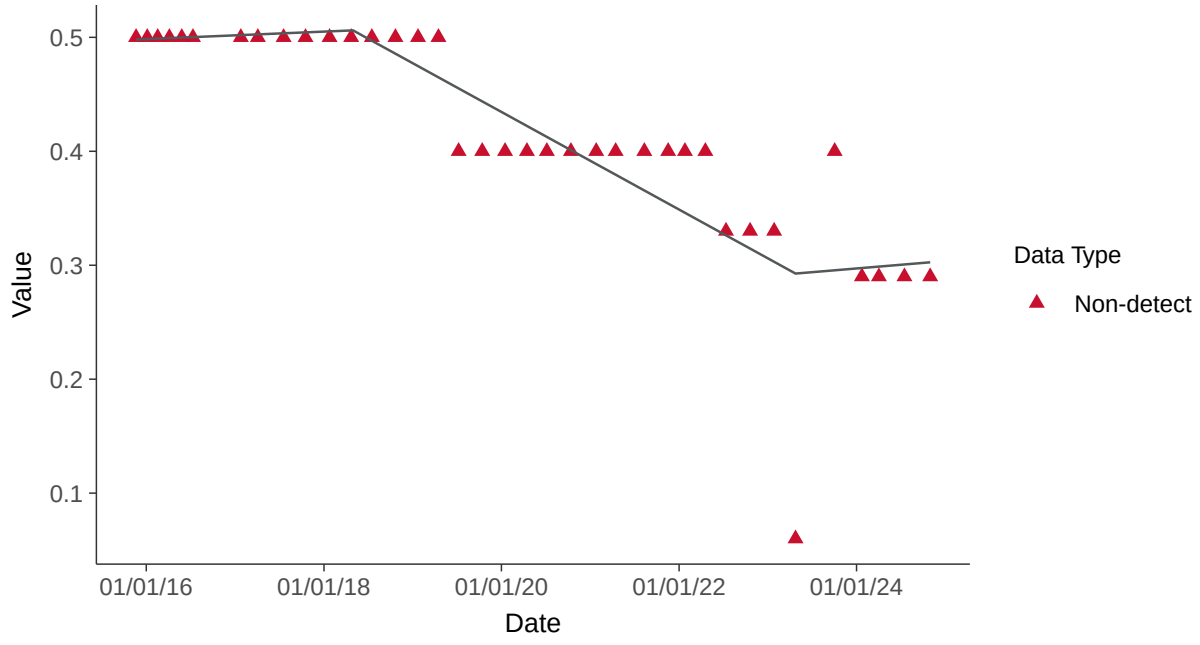
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-6 (ug/L)

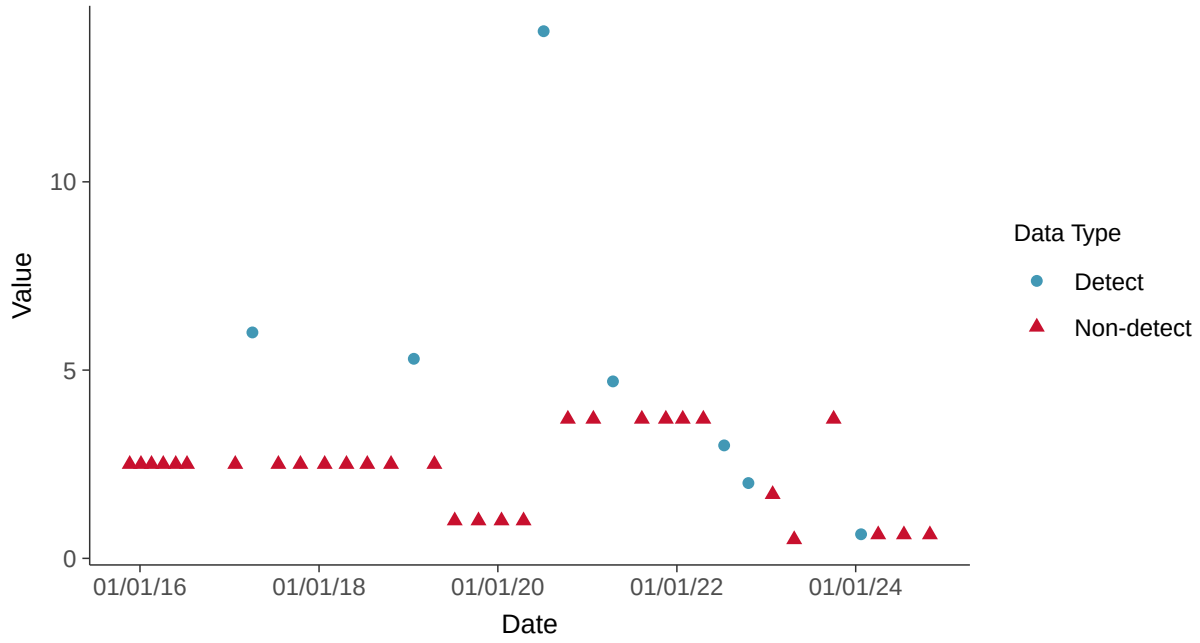


App. IV: Chromium, MW-6

ID: 06_03_109

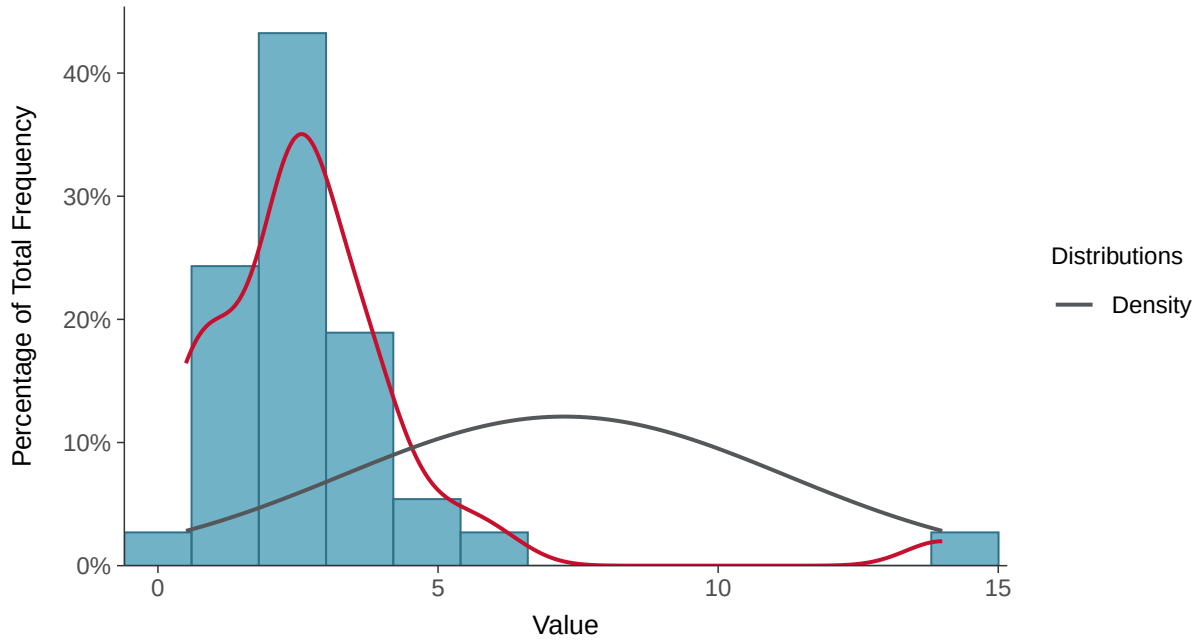
Scatter Plot

Chromium, MW-6 (ug/L)



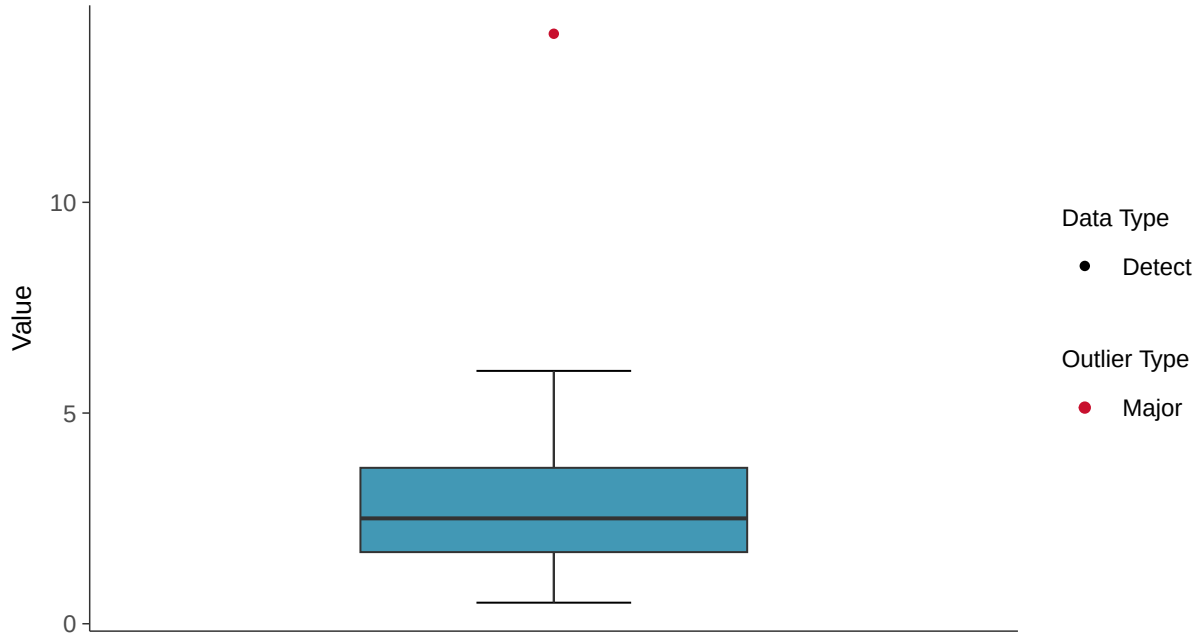
Histogram

Chromium, MW-6 (ug/L)



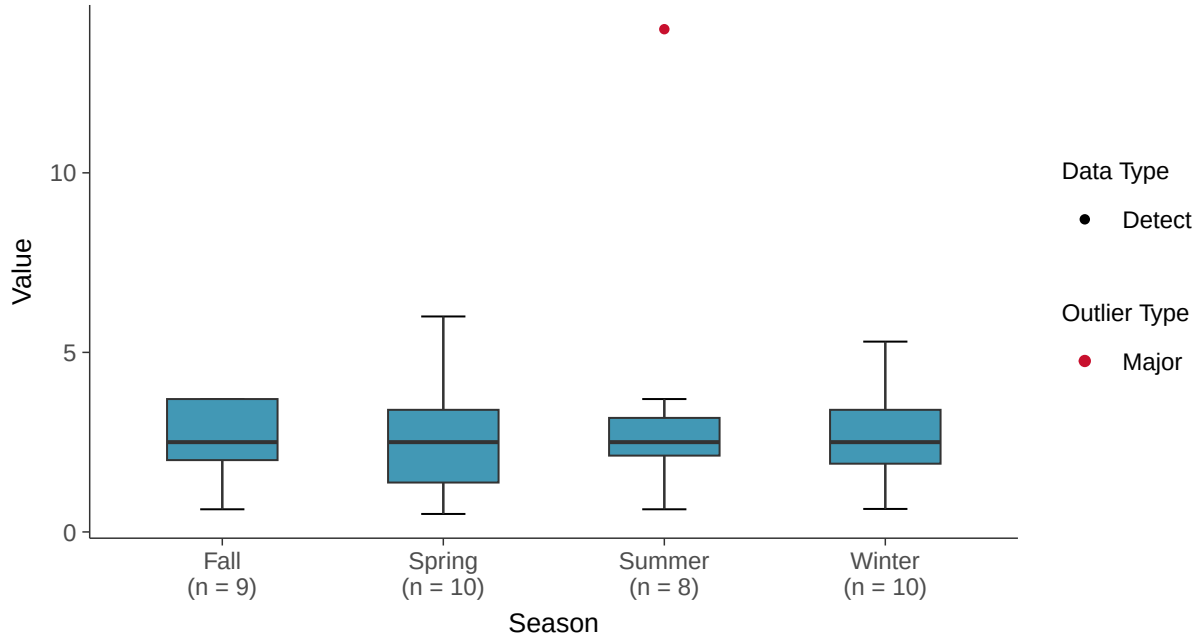
Boxplot

Chromium, MW-6 (ug/L)



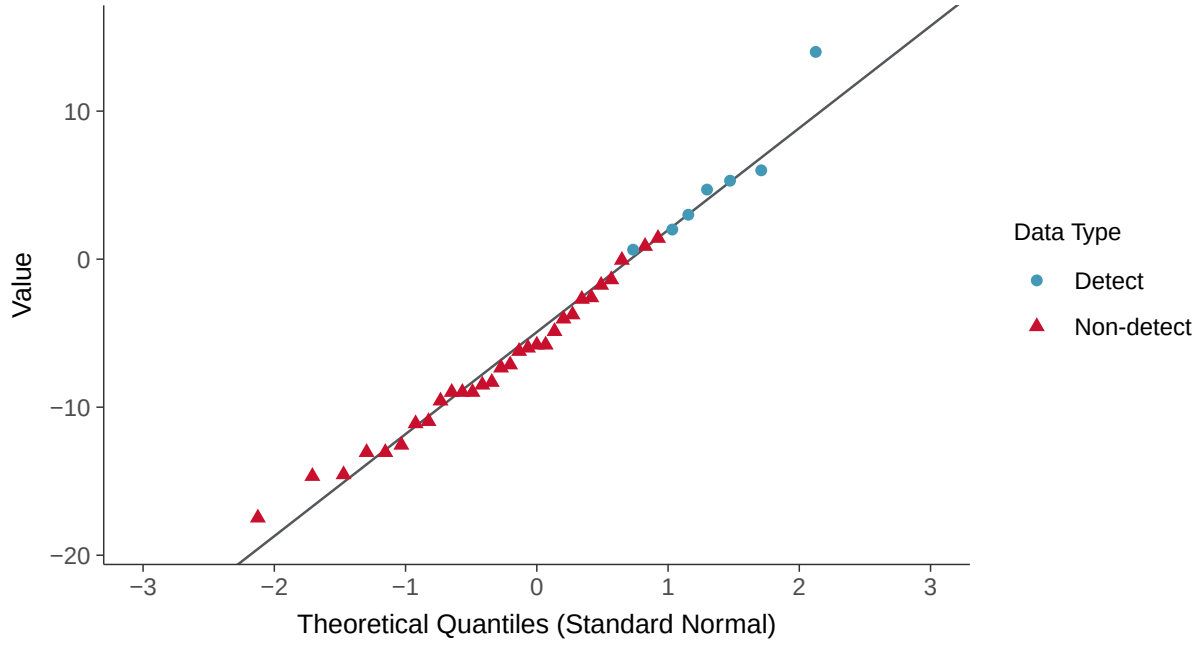
Boxplot by Season

Chromium, MW-6 (ug/L)



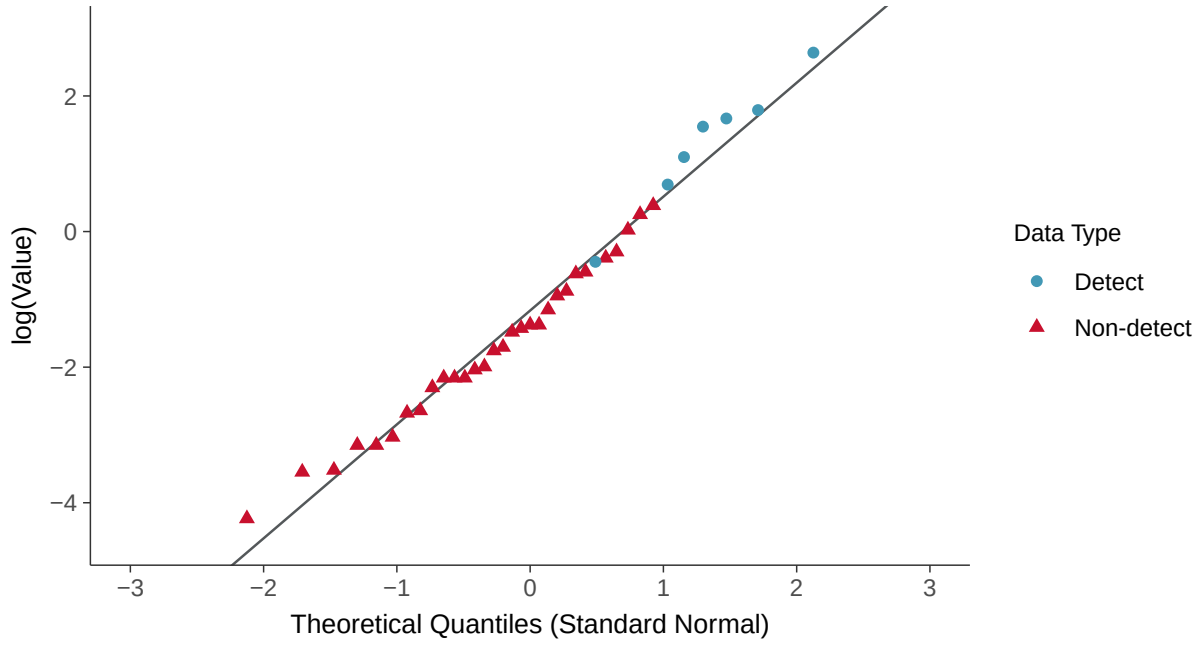
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



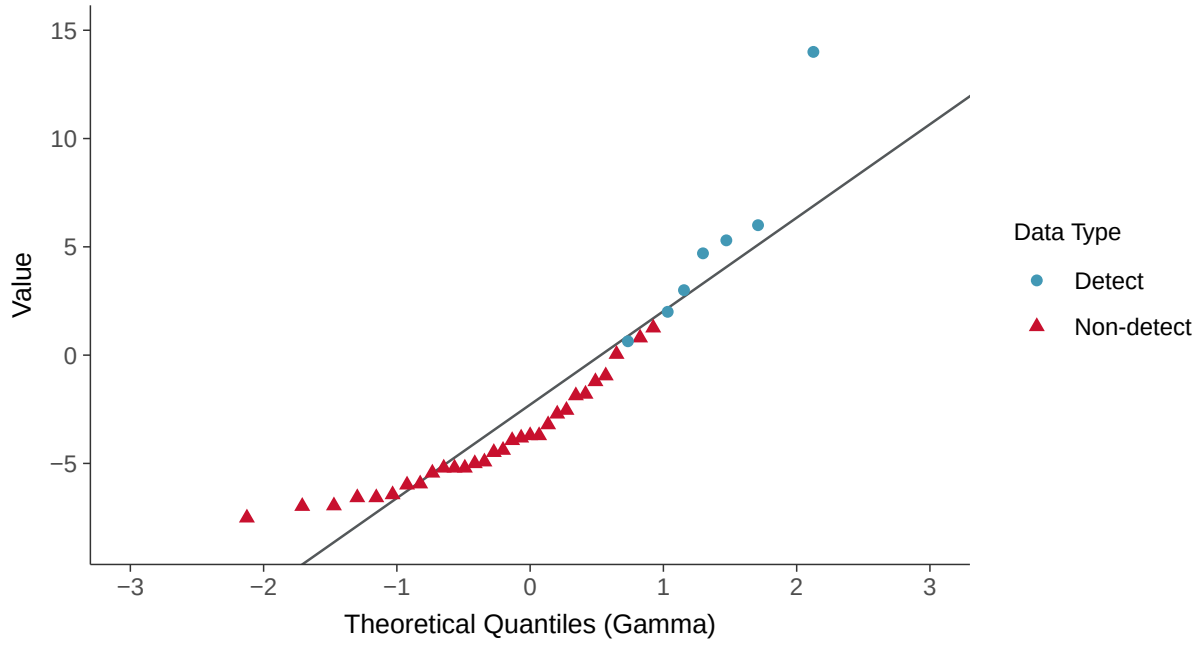
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



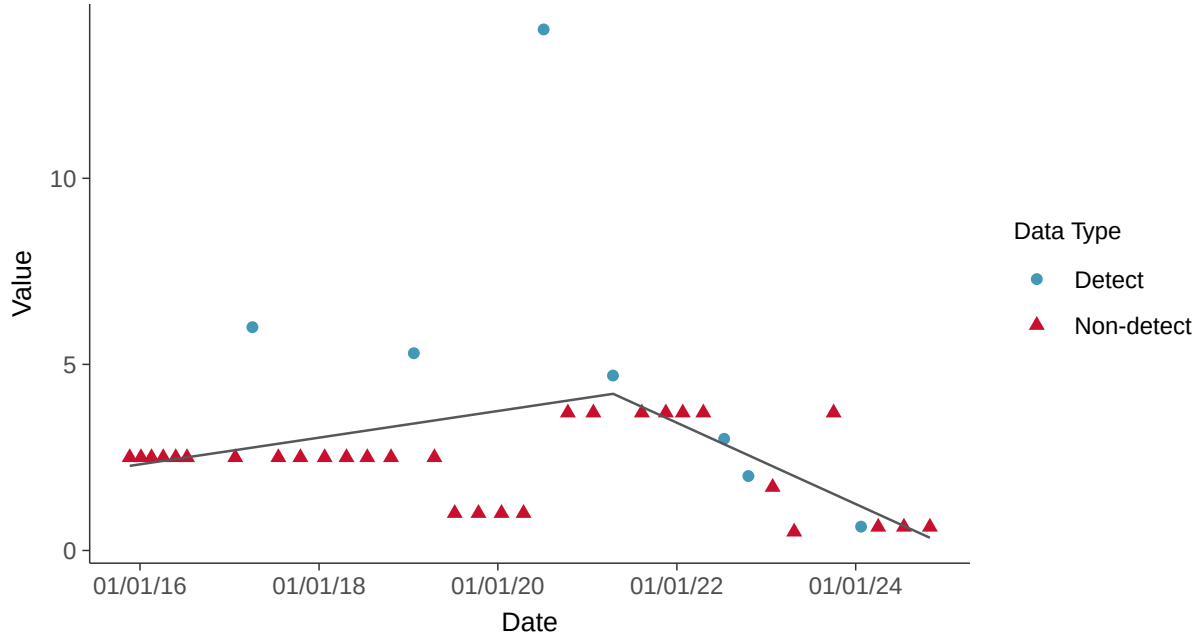
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



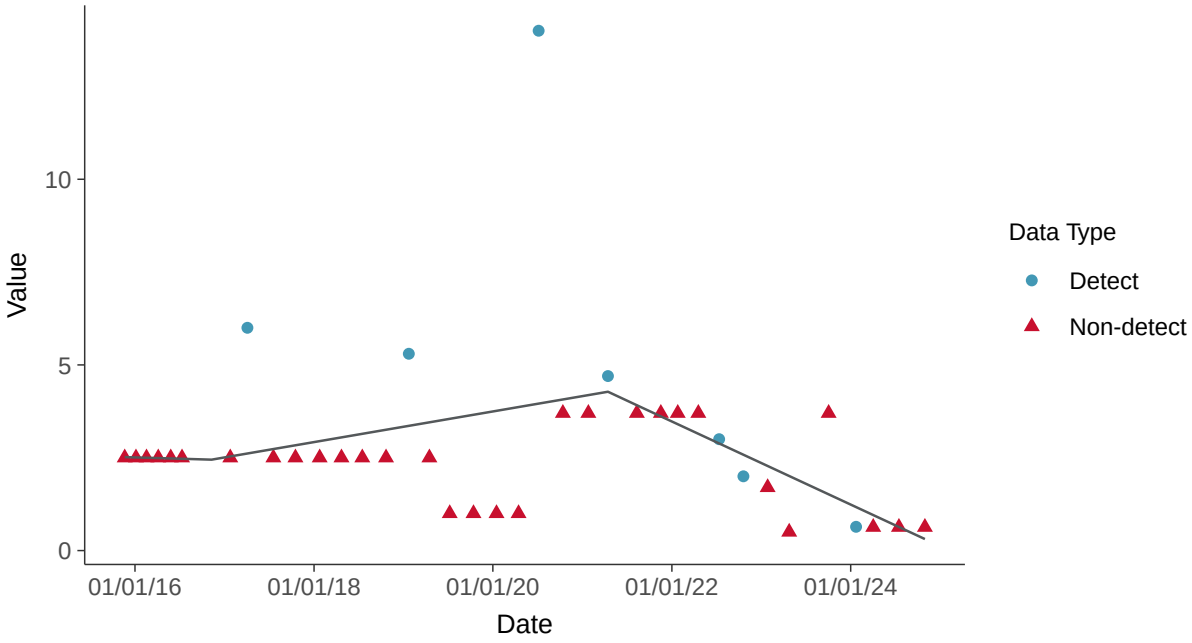
Trend Regression: Piecewise Linear-Linear

Chromium, MW-6 (ug/L)



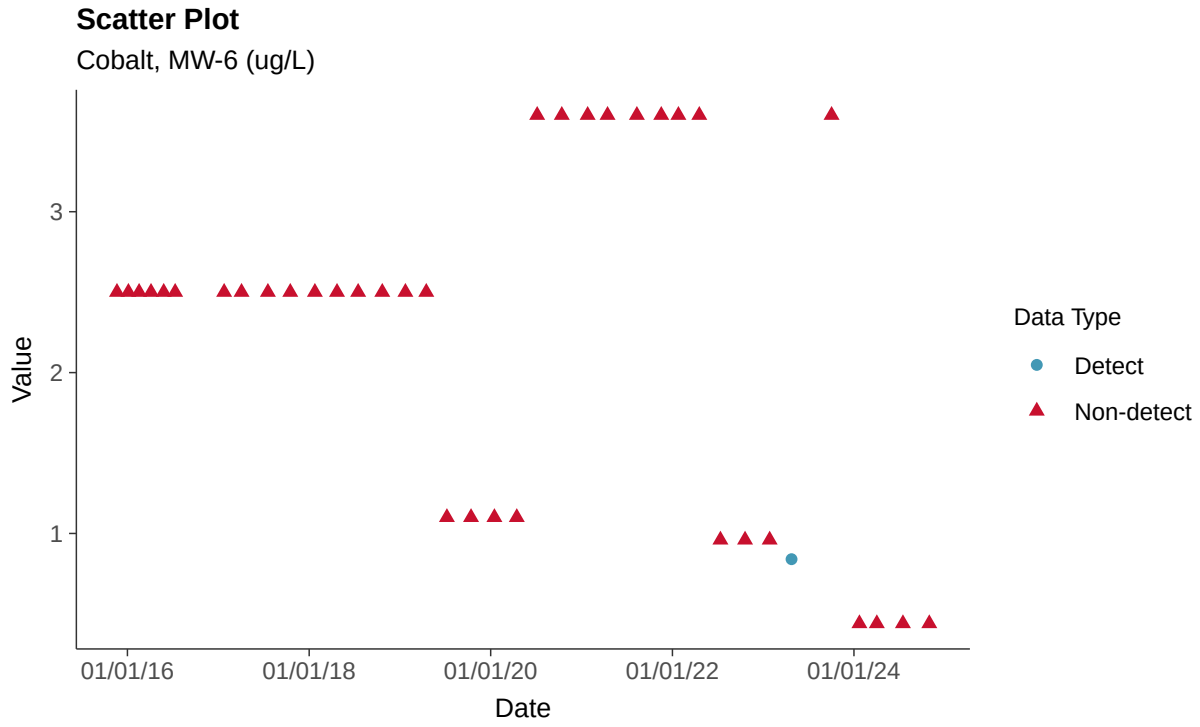
Trend Regression: Piecewise Linear-Linear-Linear

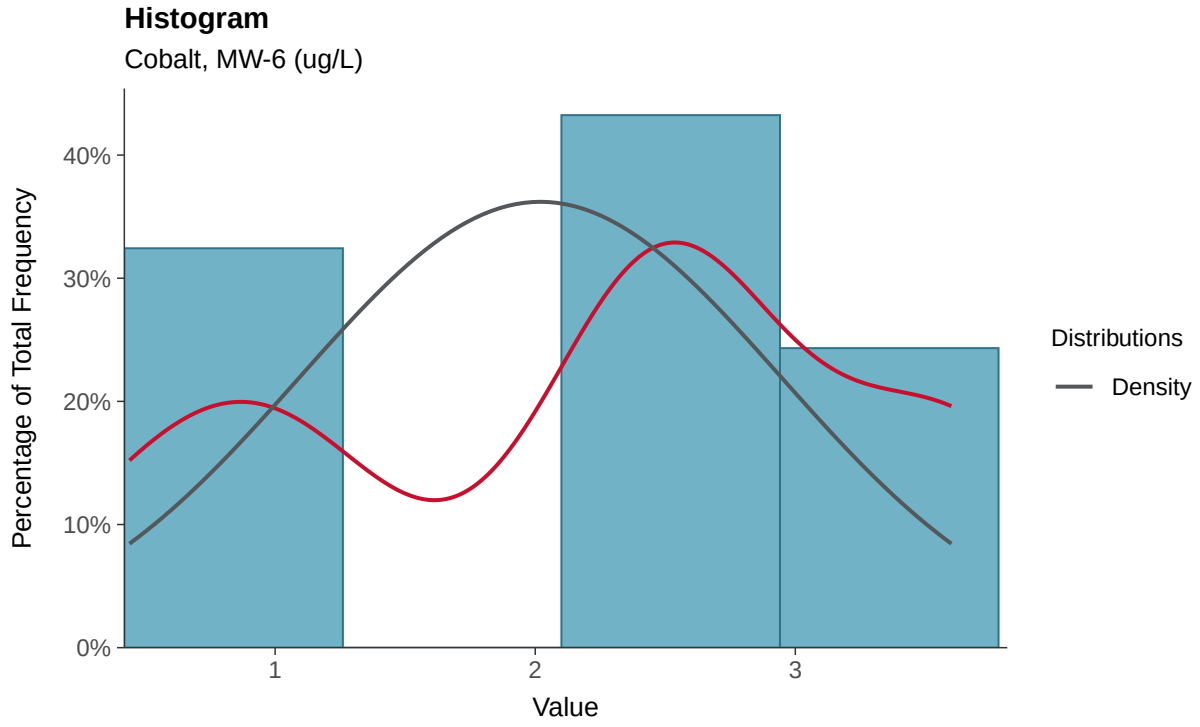
Chromium, MW-6 (ug/L)



App. IV: Cobalt, MW-6

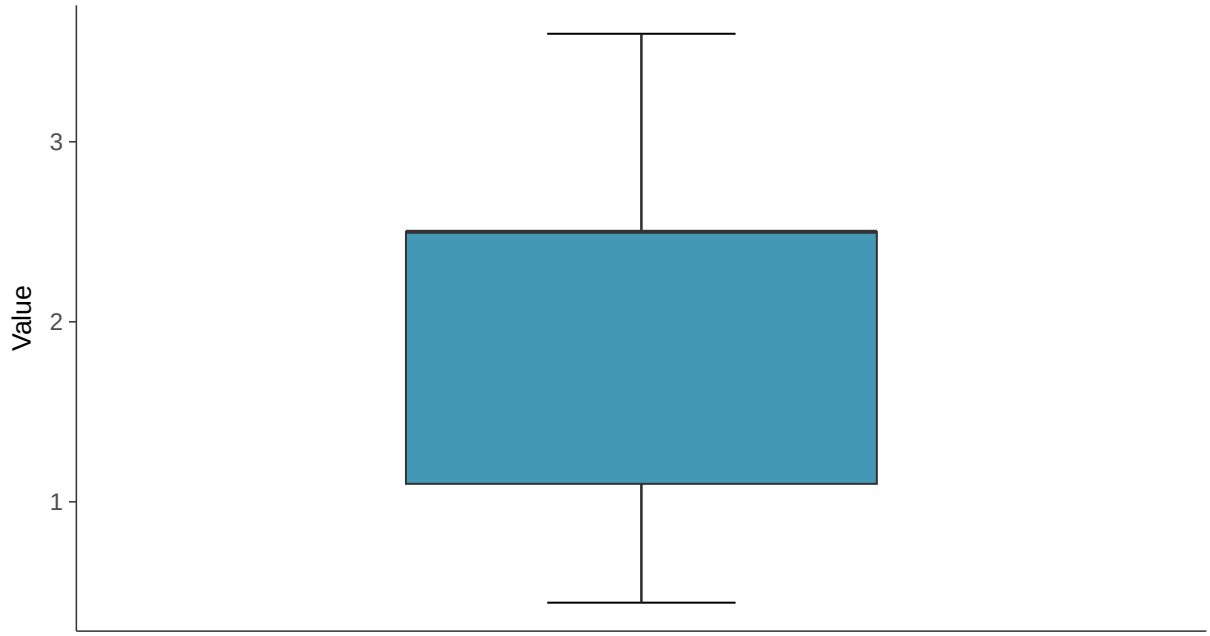
ID: 06_03_110





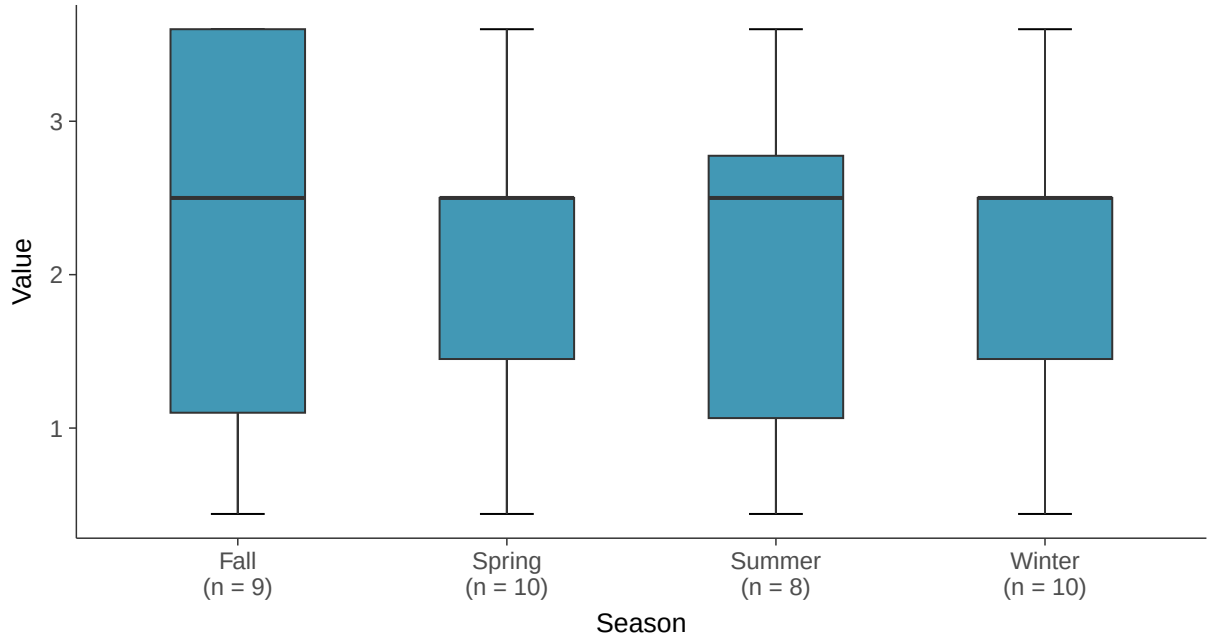
Boxplot

Cobalt, MW-6 (ug/L)



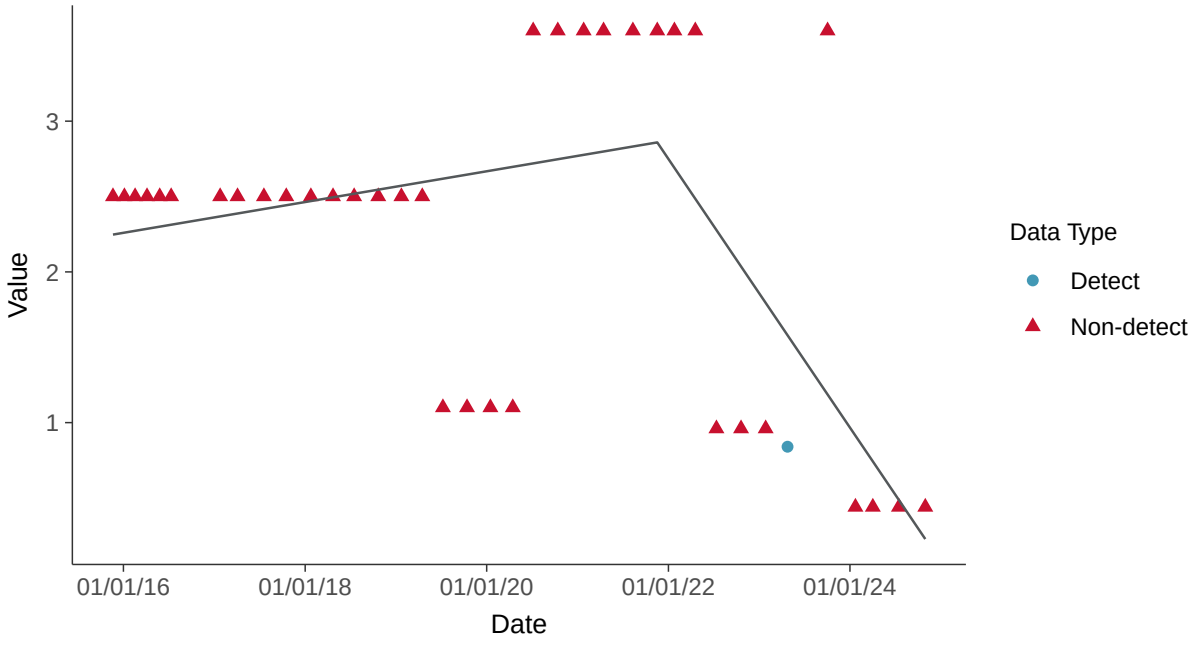
Boxplot by Season

Cobalt, MW-6 (ug/L)



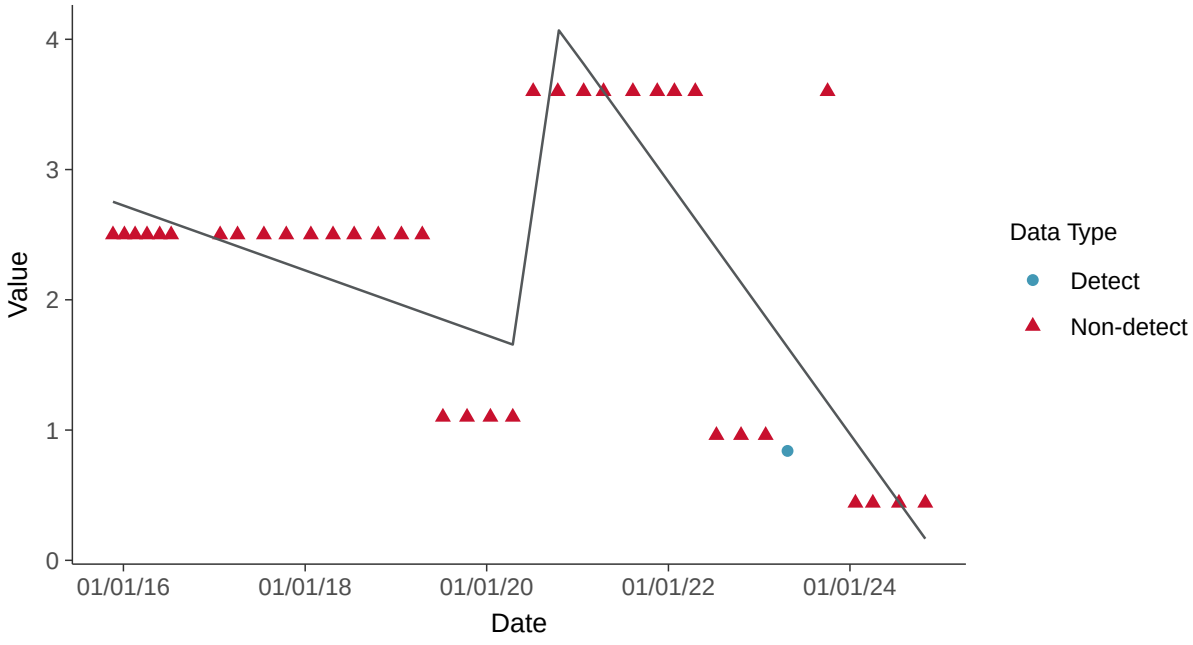
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-6 (ug/L)



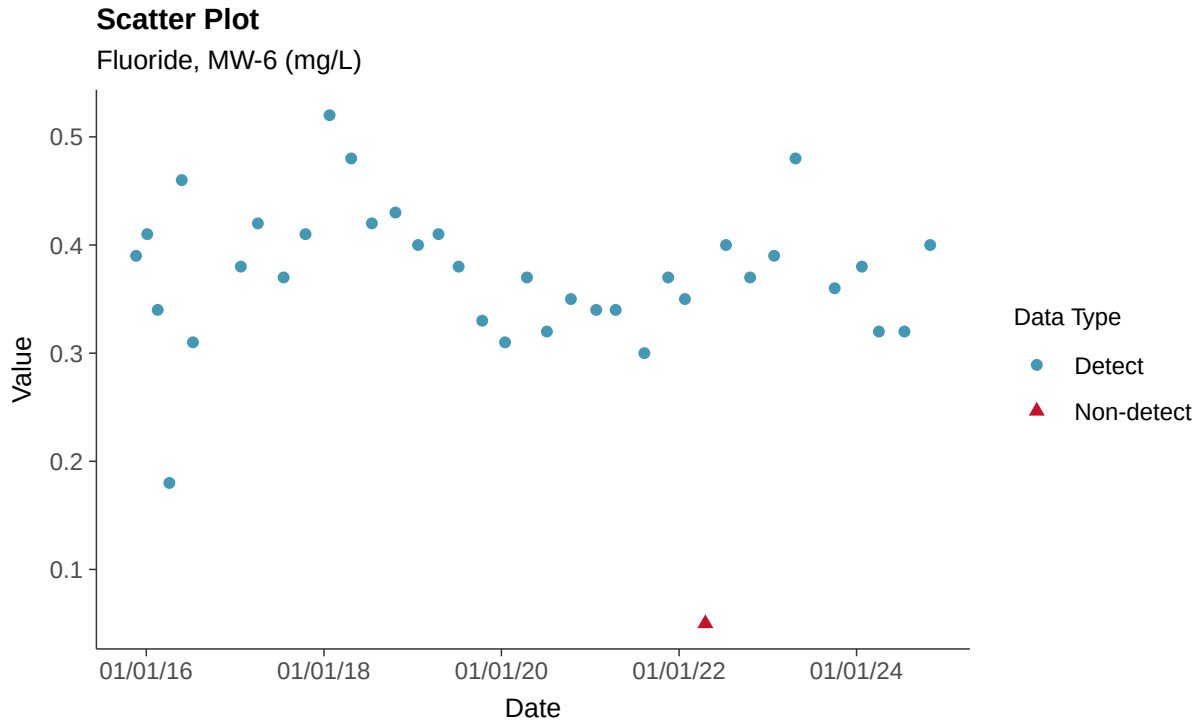
Trend Regression: Piecewise Linear-Linear-Linear

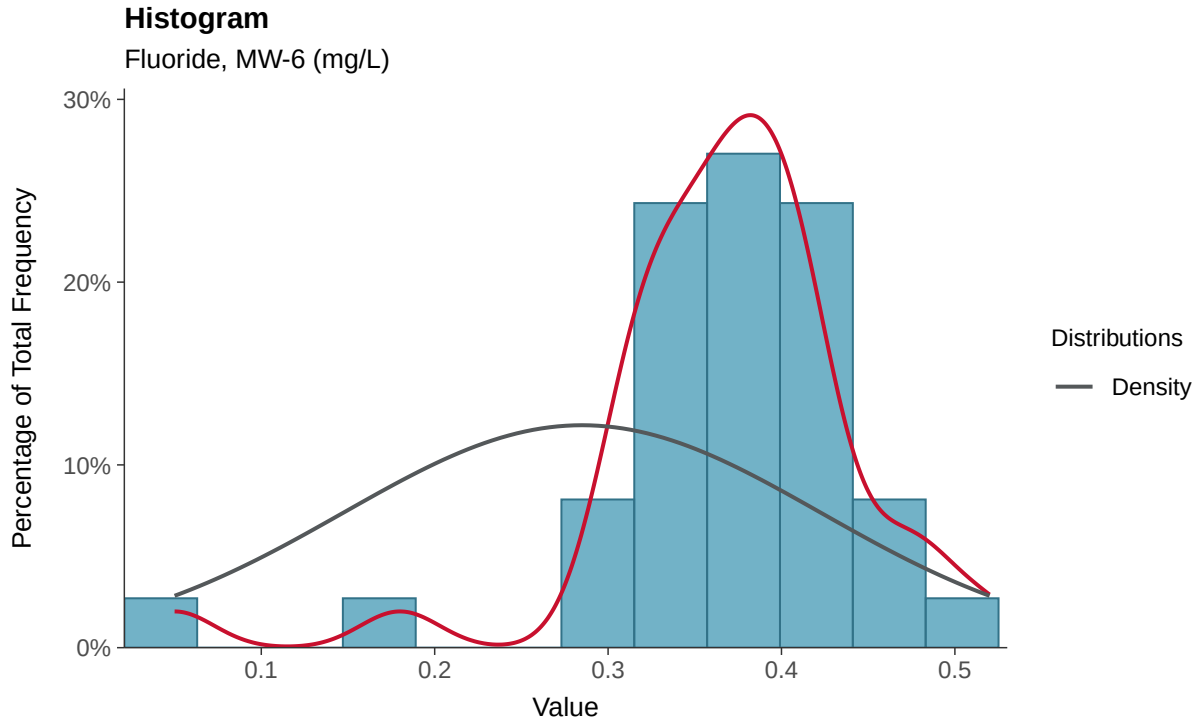
Cobalt, MW-6 (ug/L)



App. IV: Fluoride, MW-6

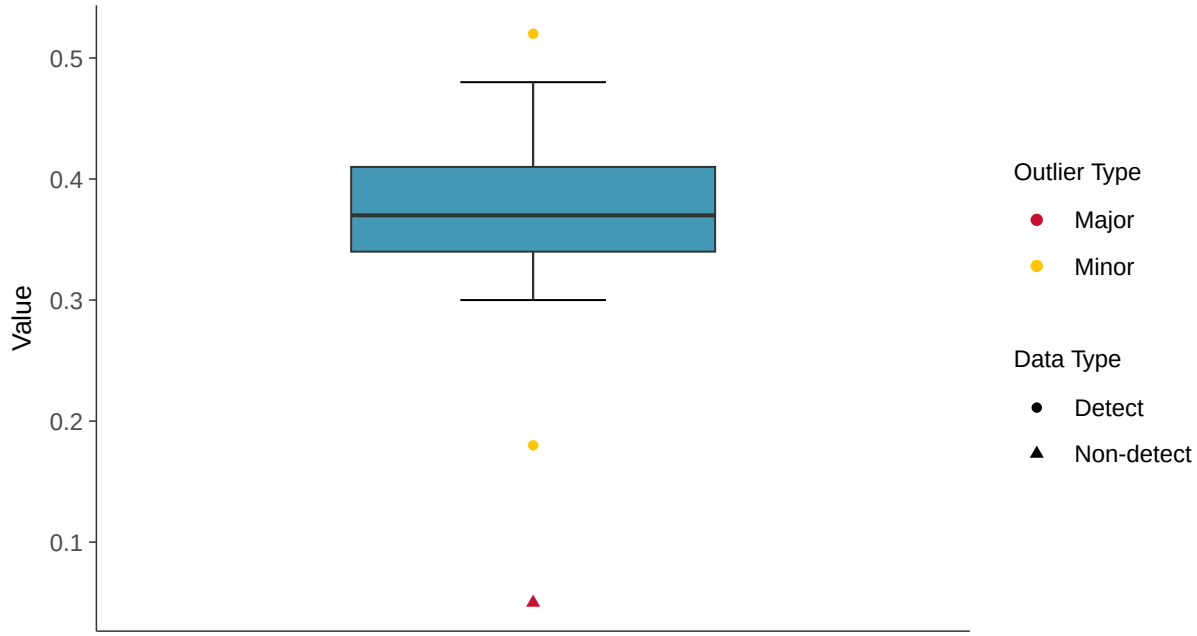
ID: 06_03_112





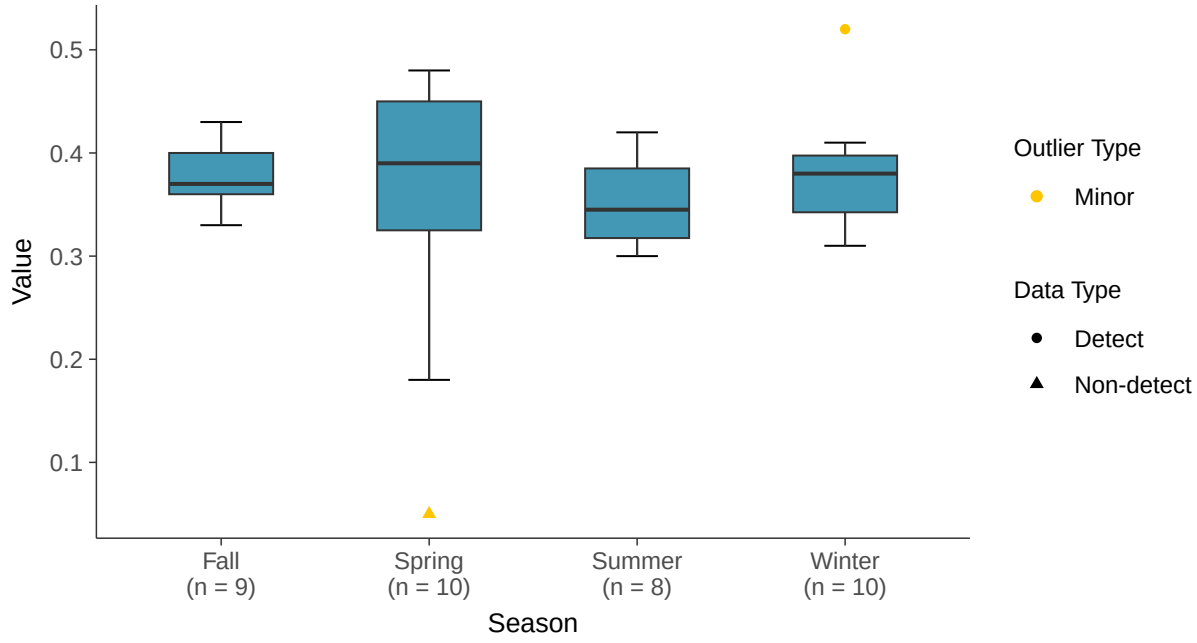
Boxplot

Fluoride, MW-6 (mg/L)



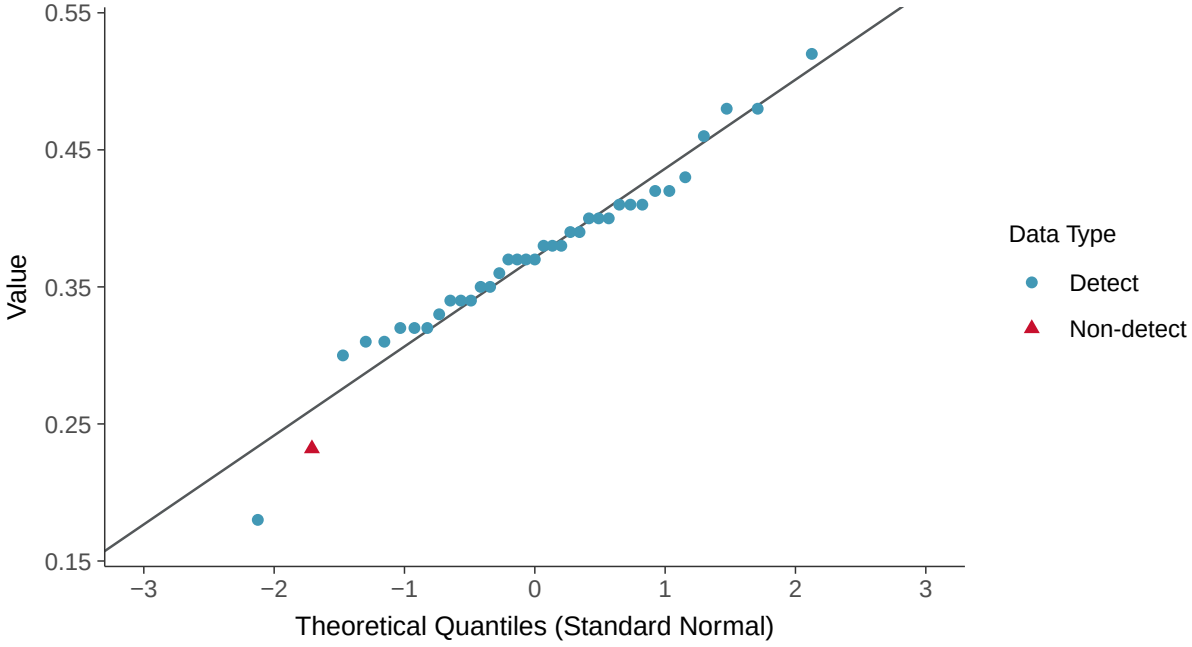
Boxplot by Season

Fluoride, MW-6 (mg/L)



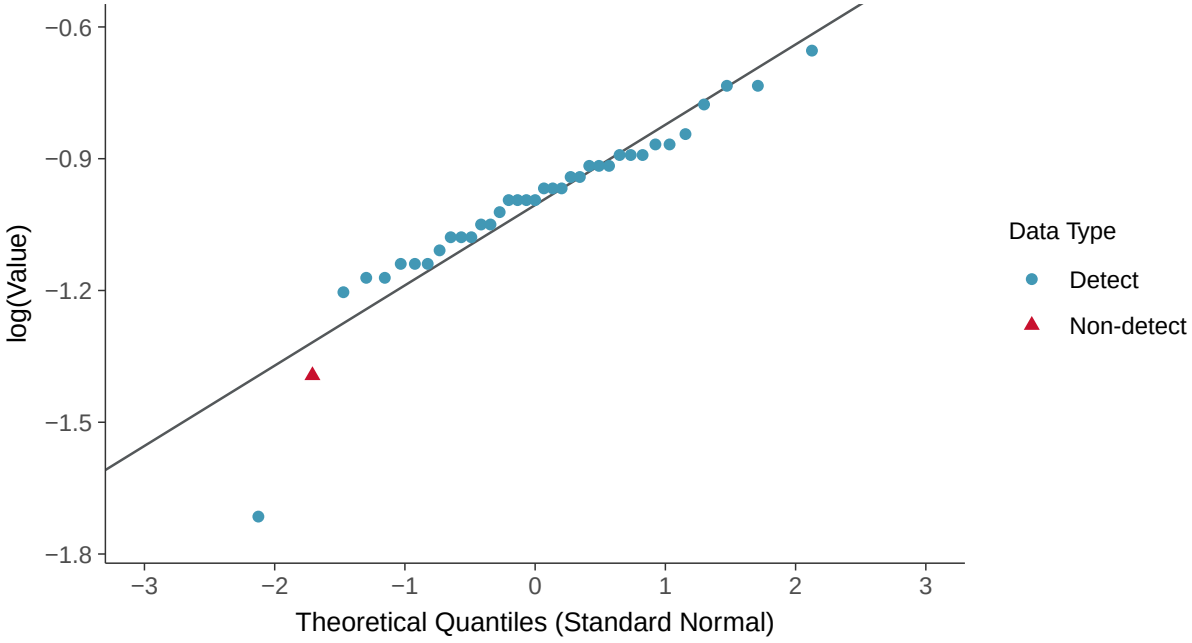
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



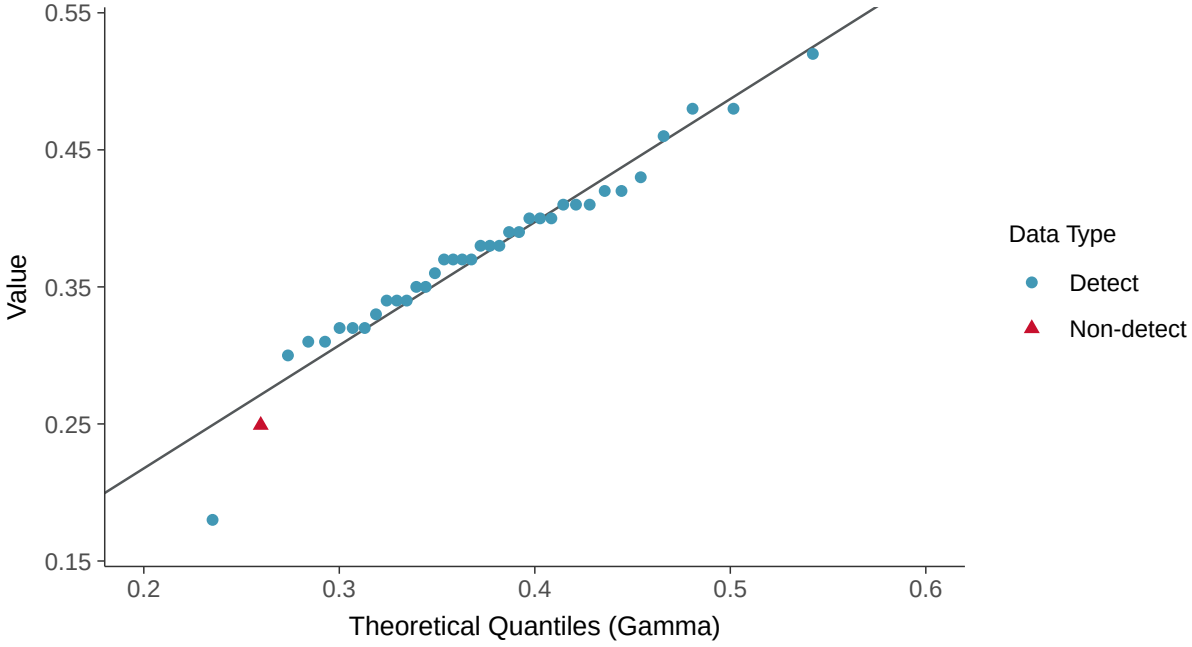
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



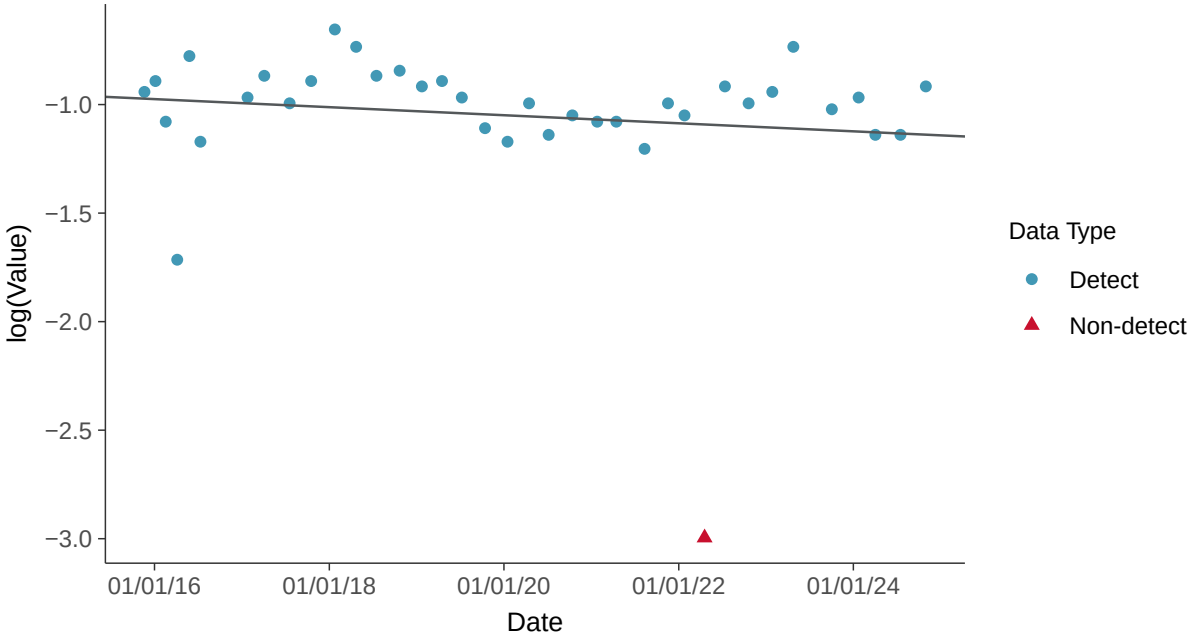
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



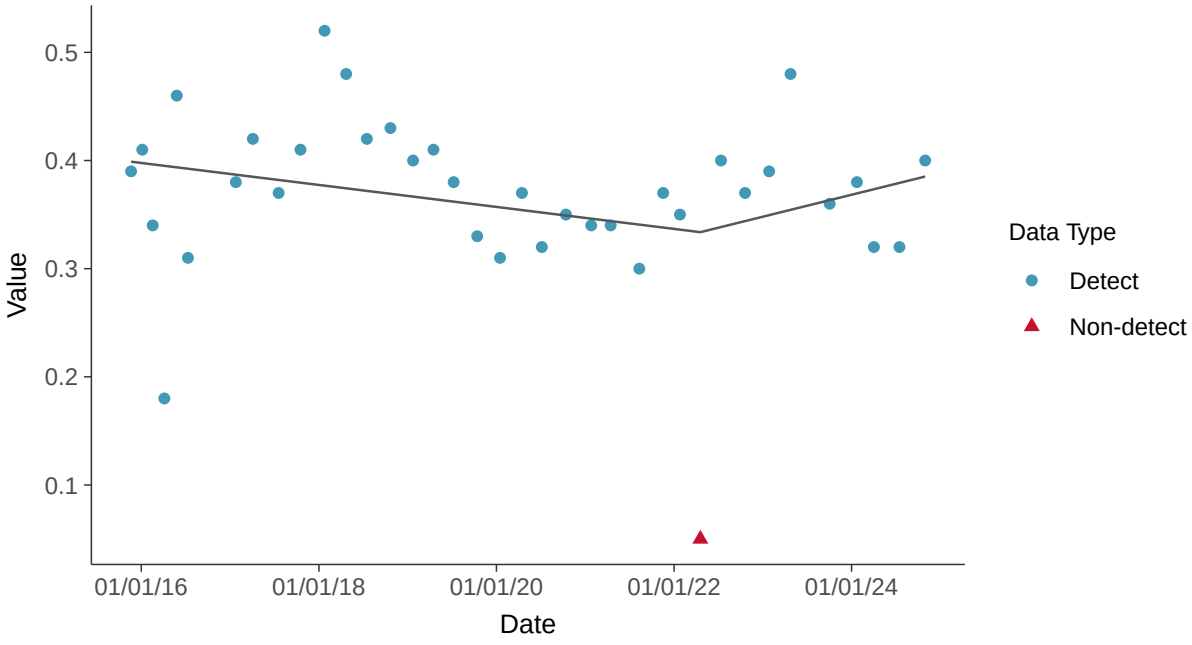
Trend Regression: Lognormal MLE

Fluoride, MW-6 (mg/L)



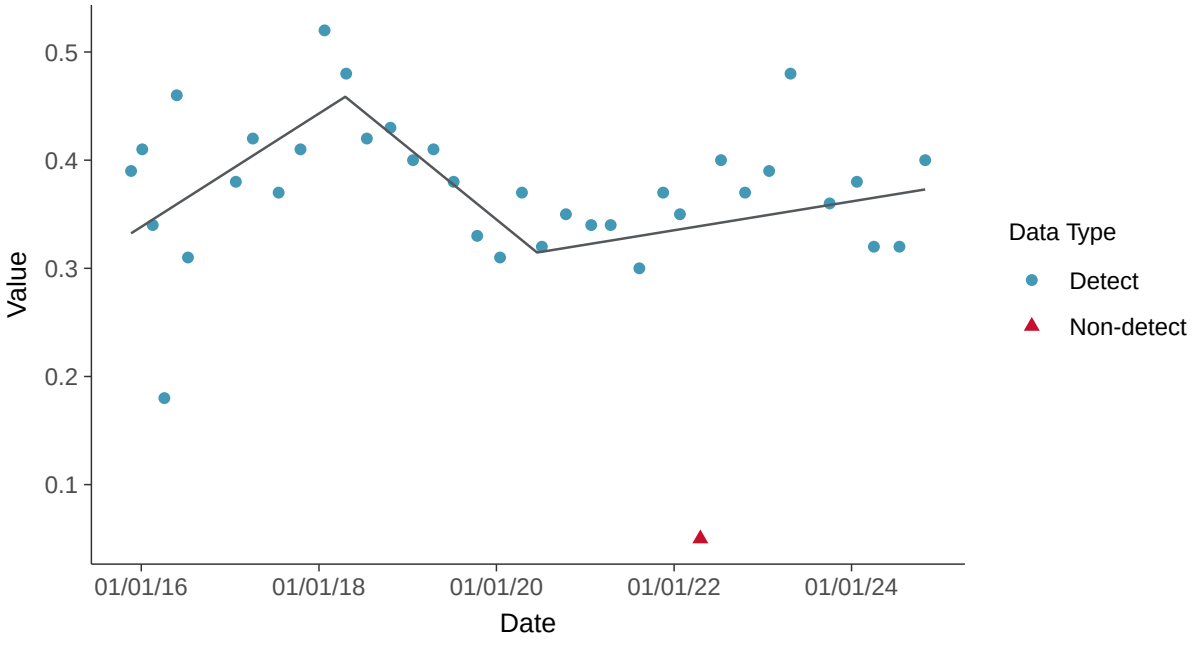
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-6 (mg/L)

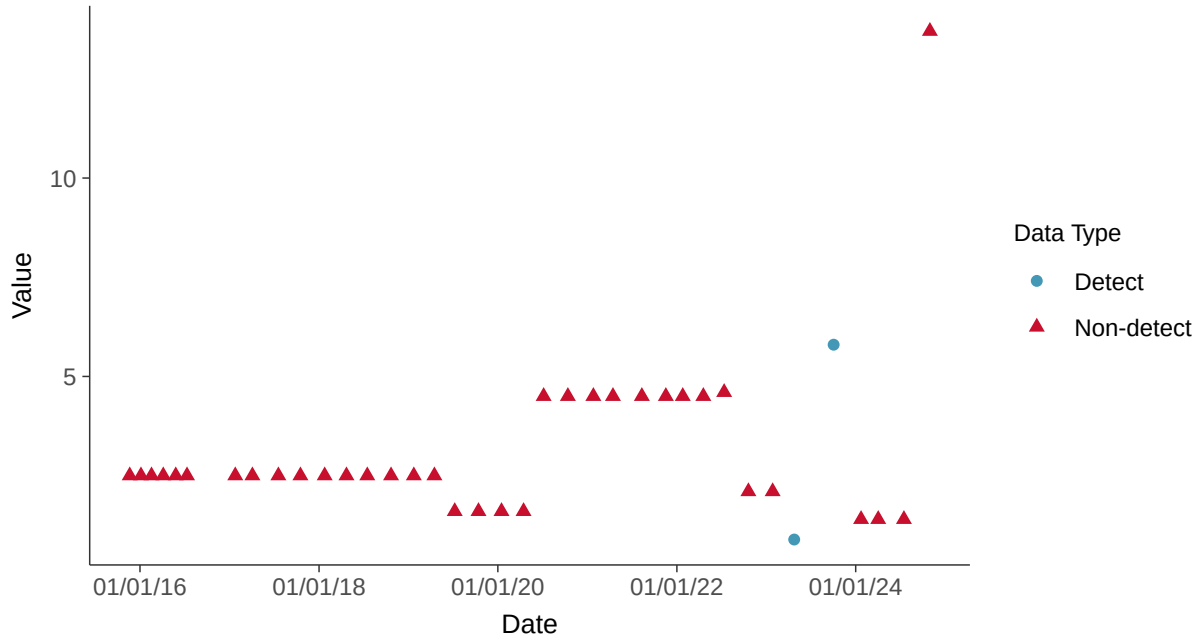


App. IV: Lead, MW-6

ID: 06_03_113

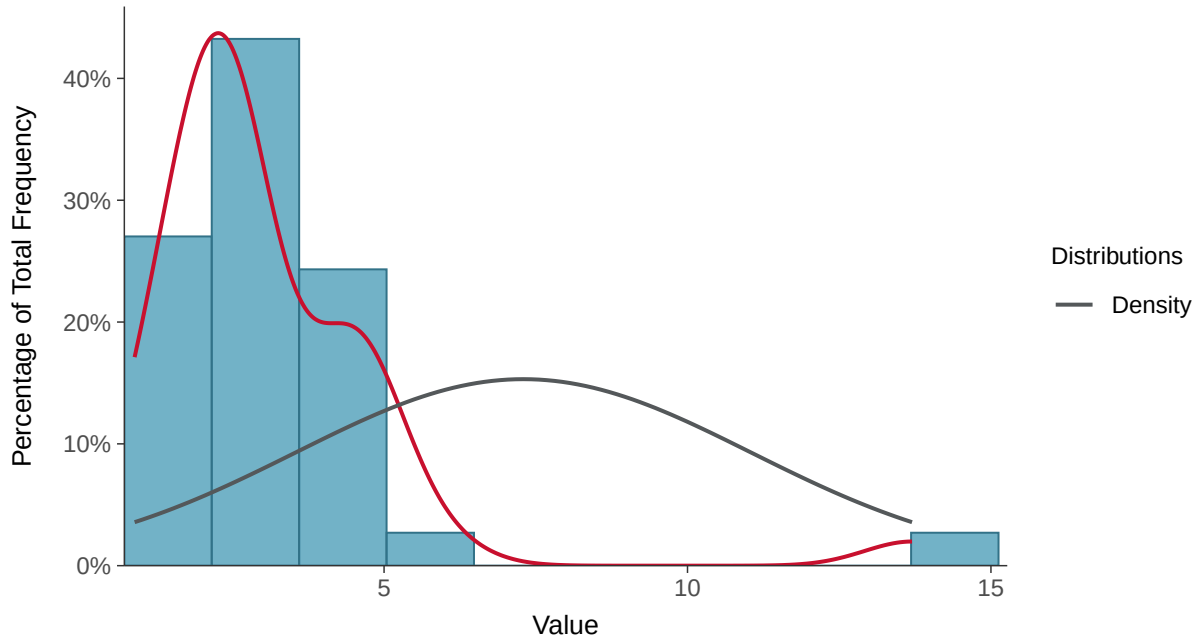
Scatter Plot

Lead, MW-6 (ug/L)



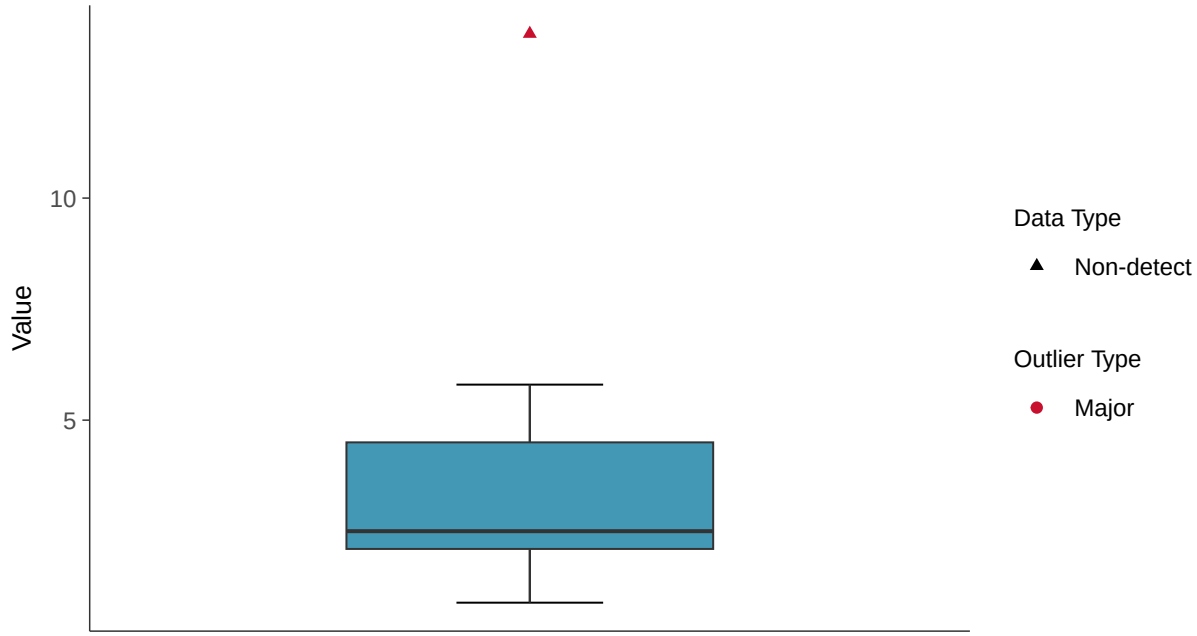
Histogram

Lead, MW-6 (ug/L)



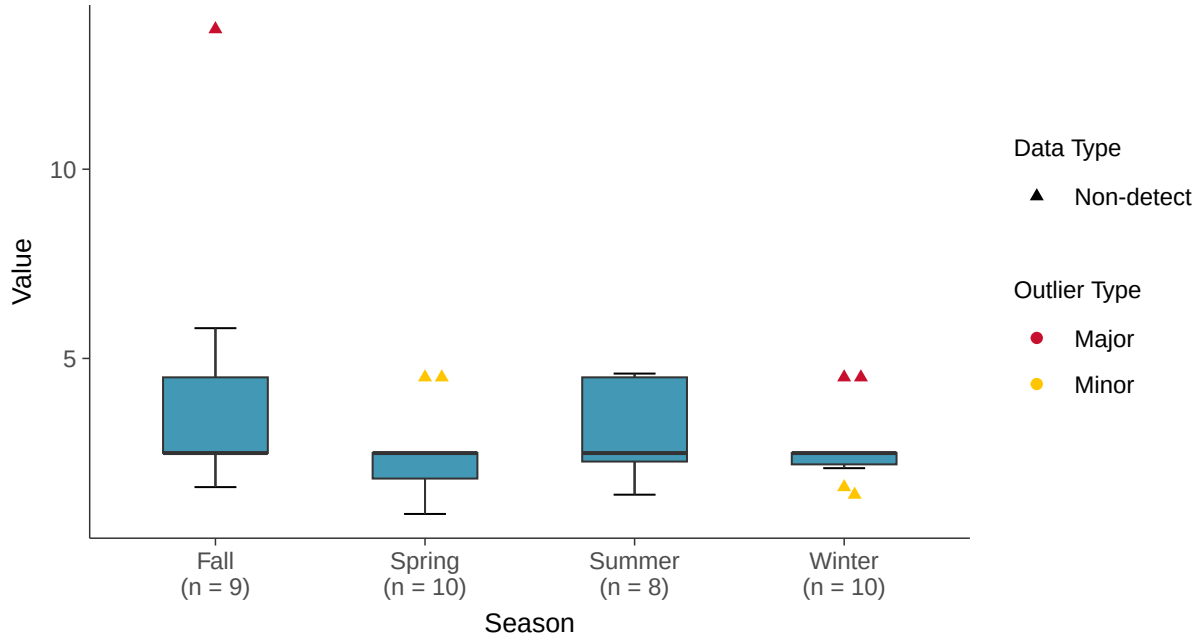
Boxplot

Lead, MW-6 (ug/L)



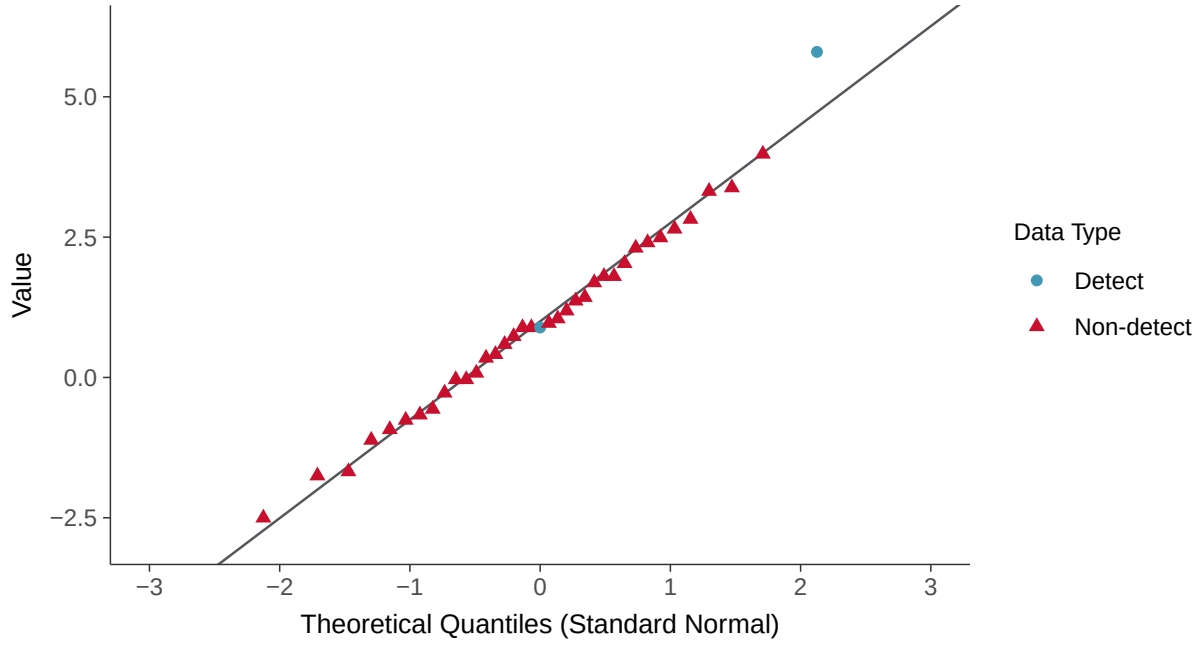
Boxplot by Season

Lead, MW-6 (ug/L)



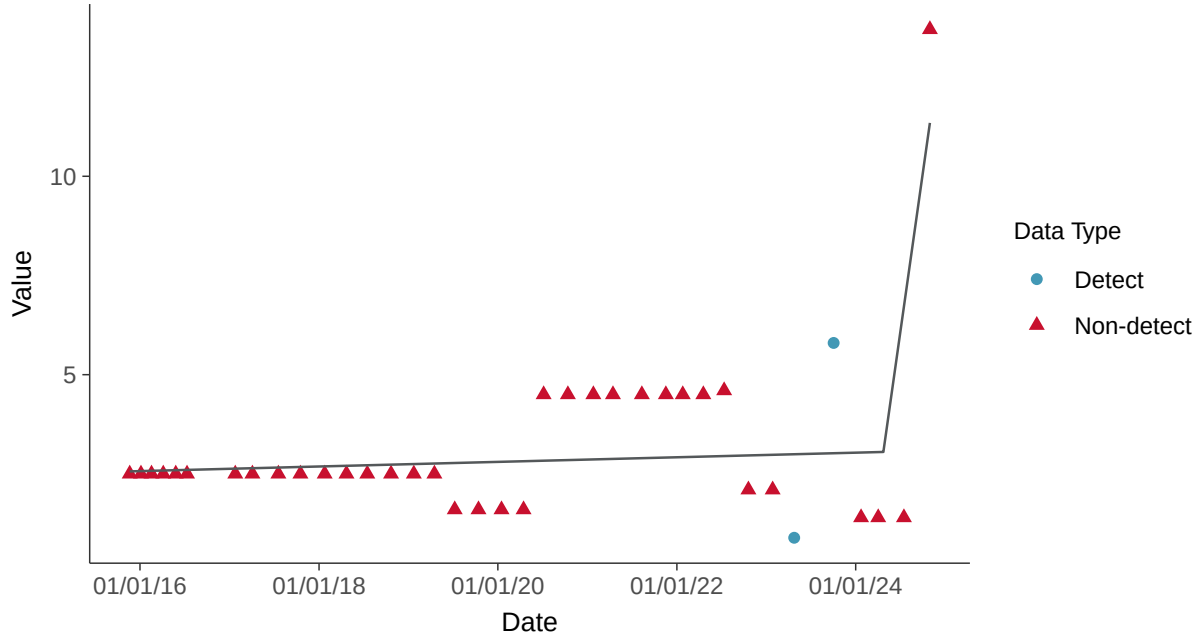
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-6 (ug/L)



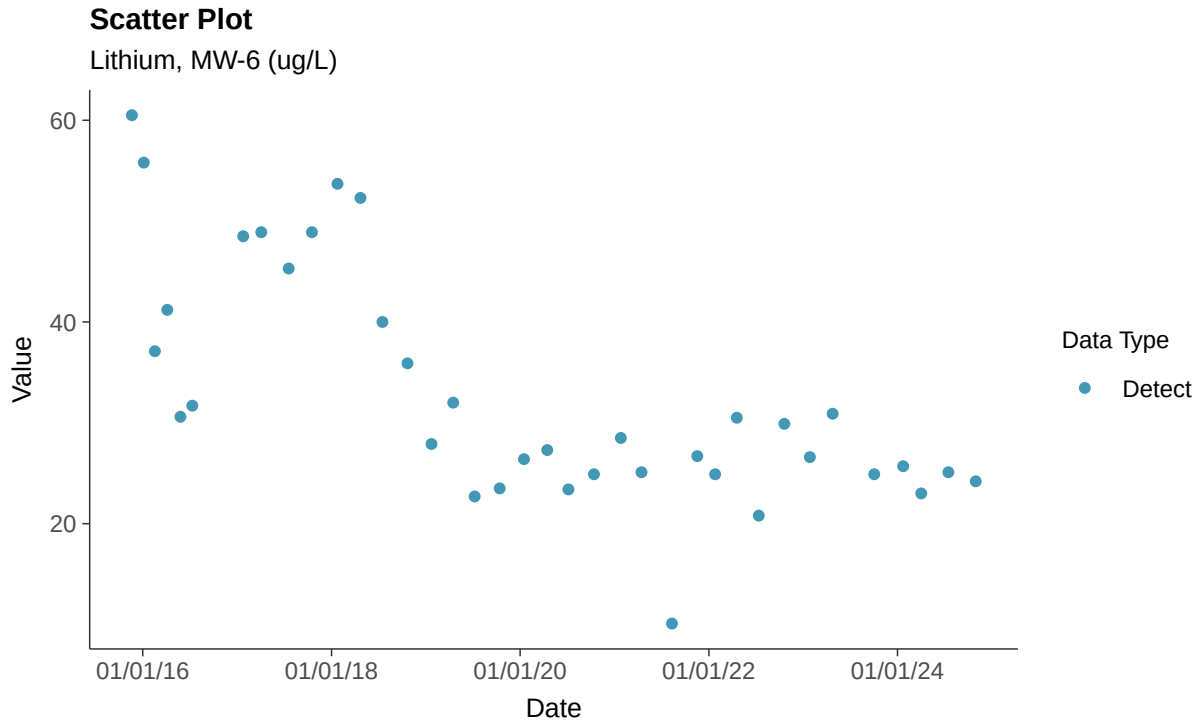
Trend Regression: Piecewise Linear-Linear

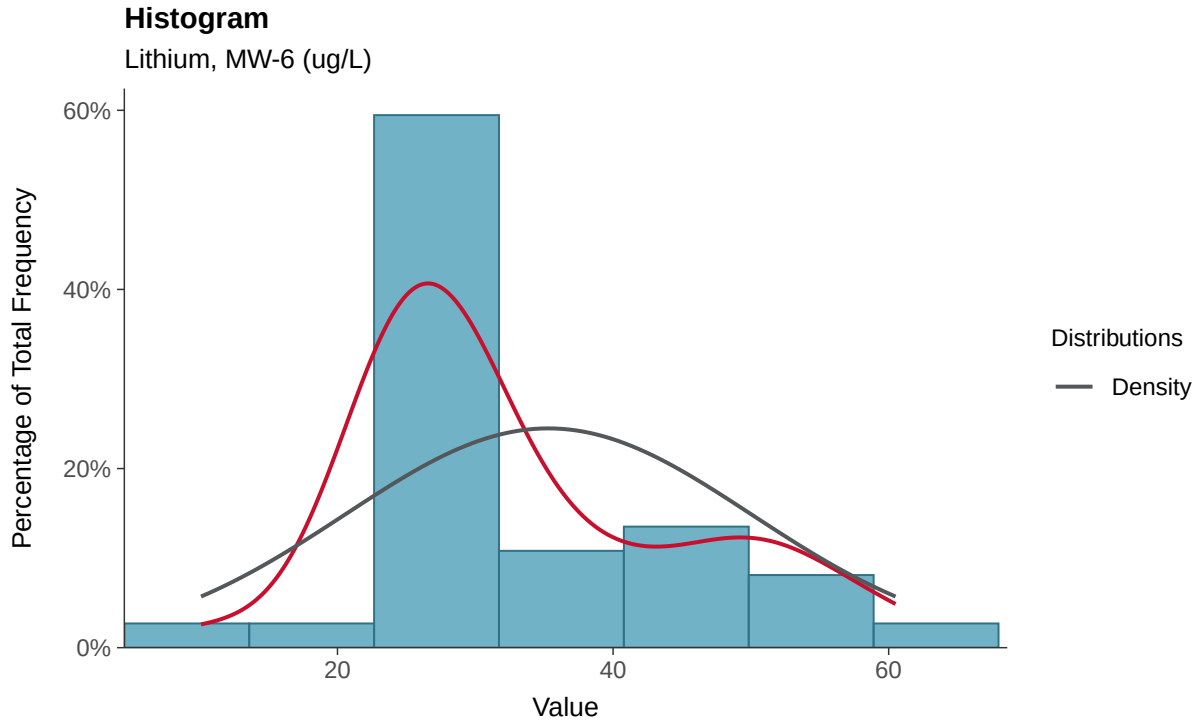
Lead, MW-6 (ug/L)



App. IV: Lithium, MW-6

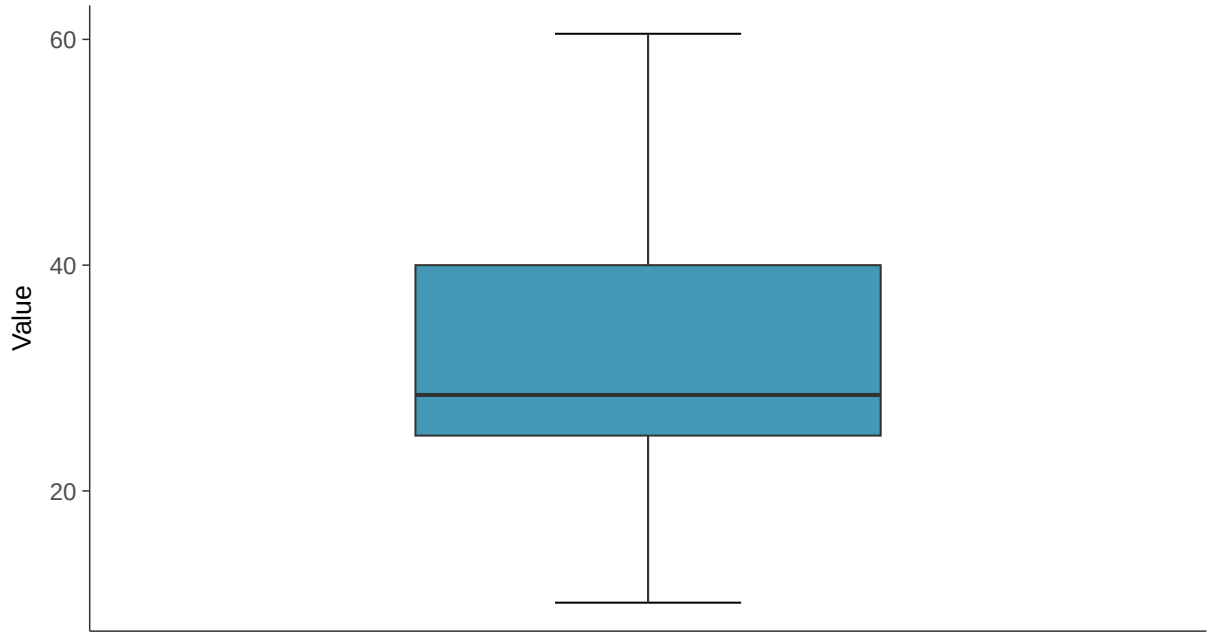
ID: 06_03_114





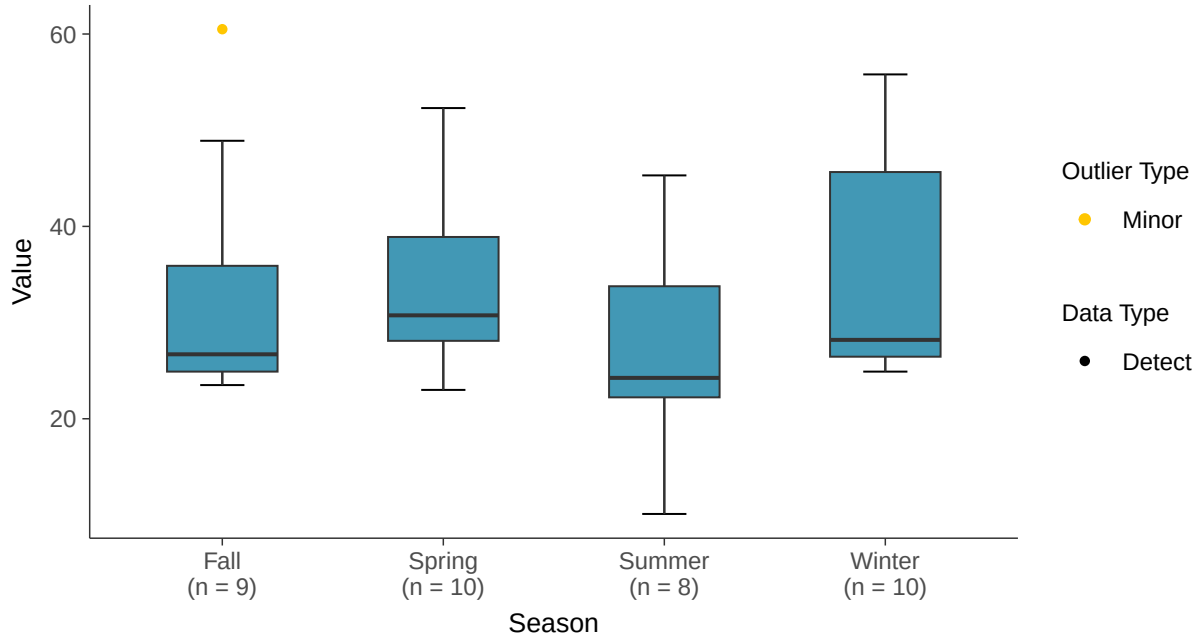
Boxplot

Lithium, MW-6 (ug/L)



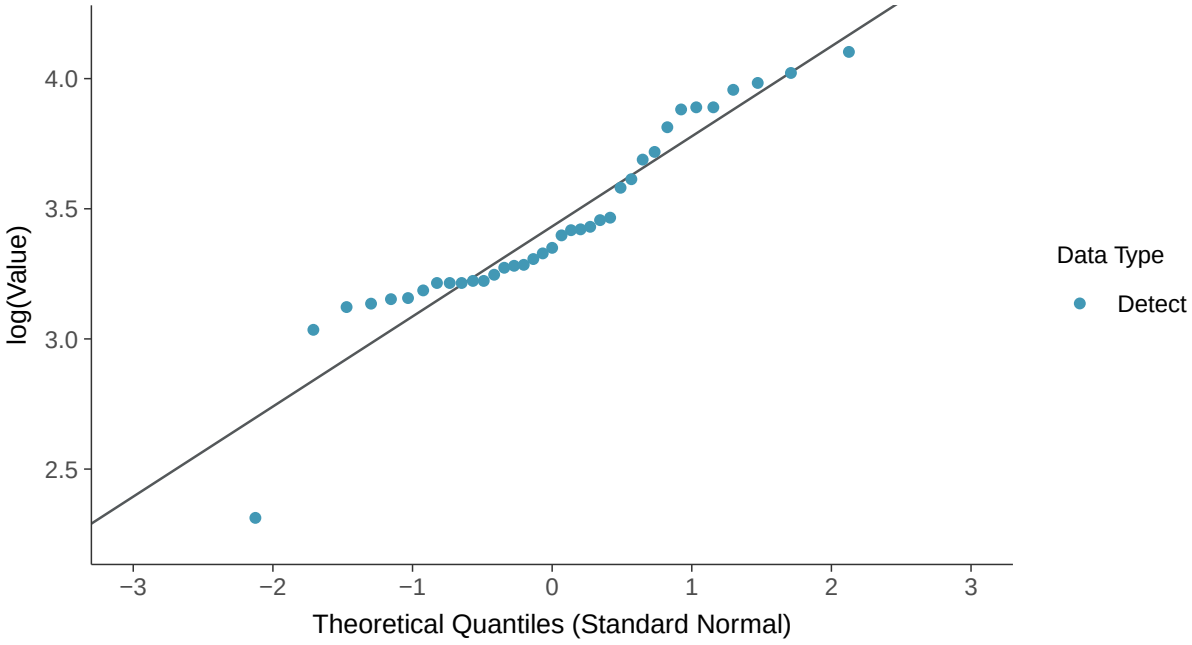
Boxplot by Season

Lithium, MW-6 (ug/L)



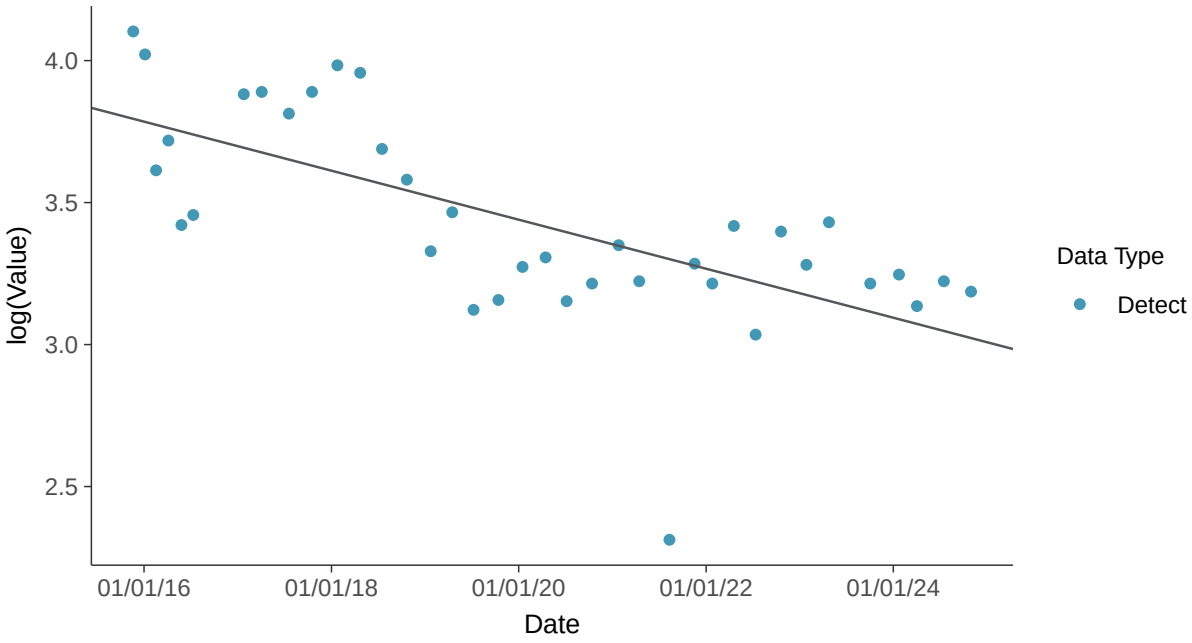
Lognormal Q-Q plot

Lithium, MW-6 (ug/L)



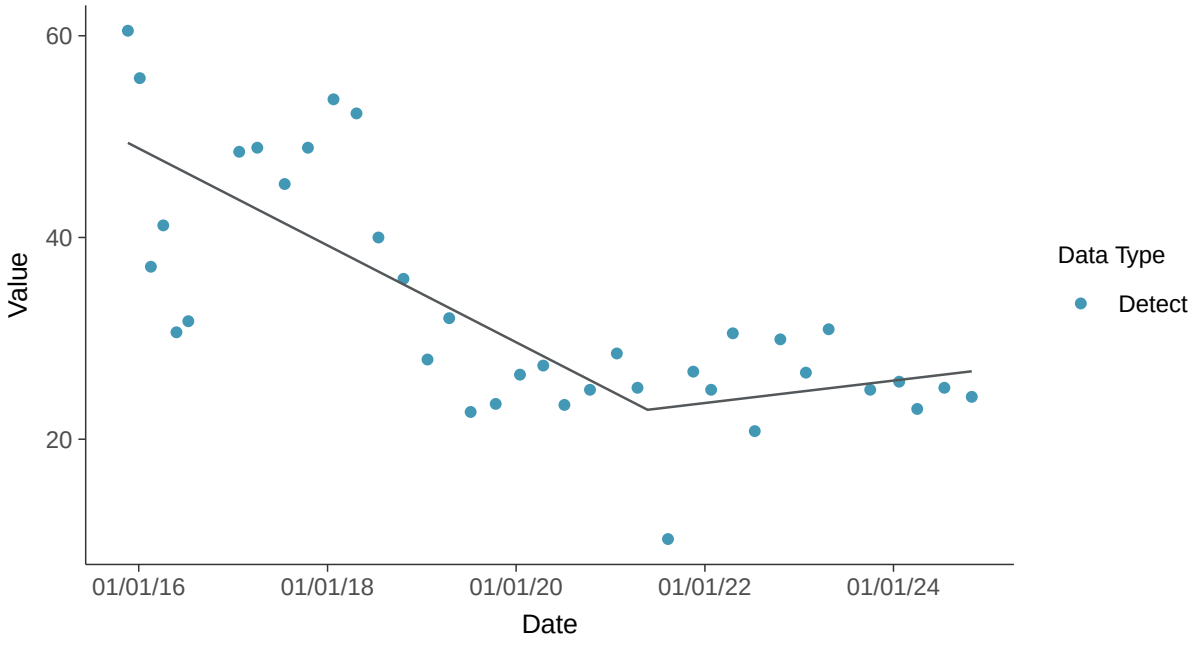
Trend Regression: Lognormal MLE

Lithium, MW-6 (ug/L)



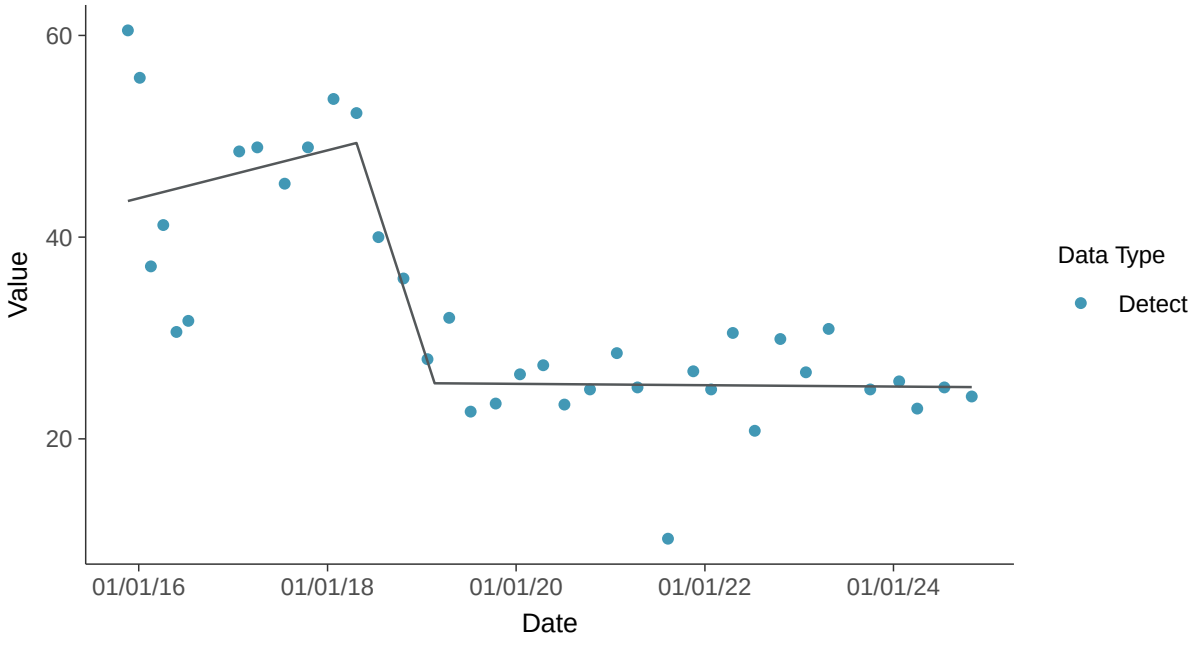
Trend Regression: Piecewise Linear-Linear

Lithium, MW-6 (ug/L)



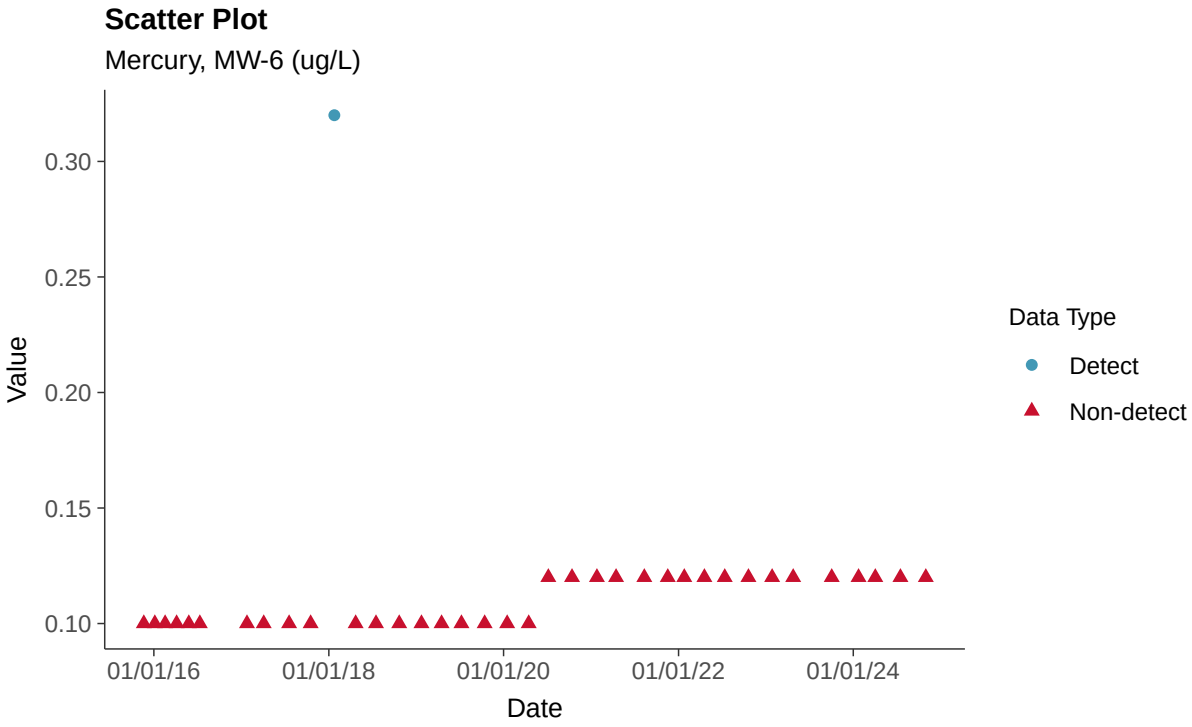
Trend Regression: Piecewise Linear-Linear-Linear

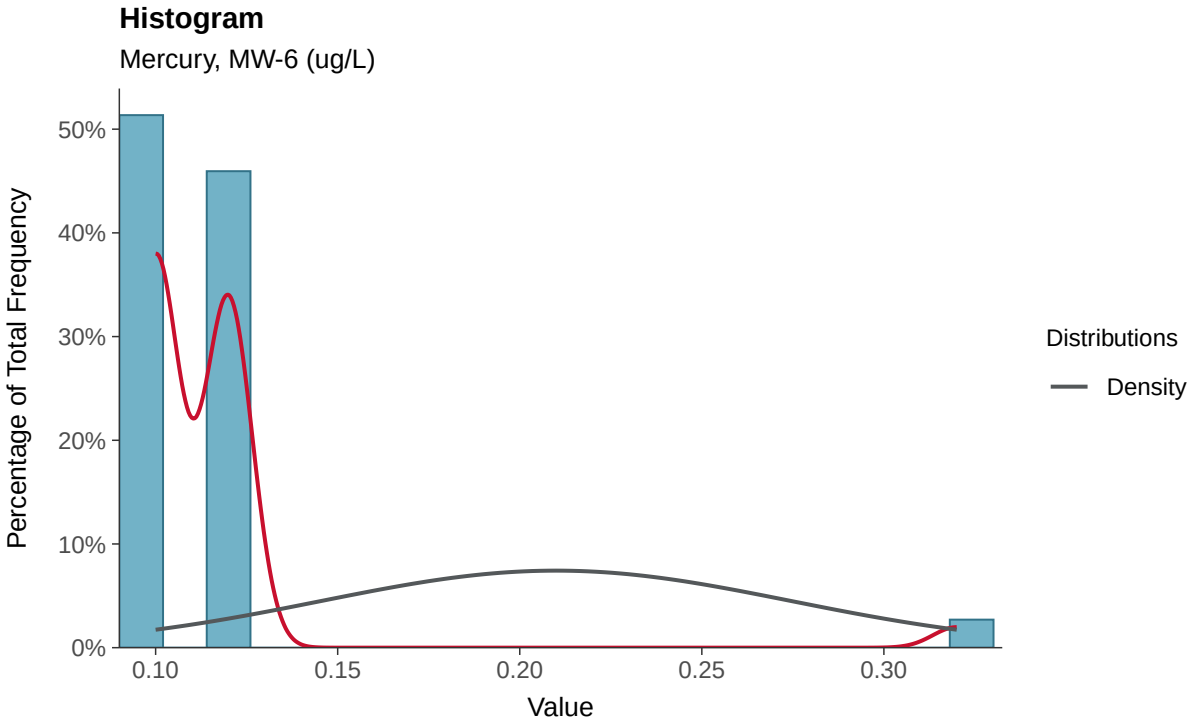
Lithium, MW-6 (ug/L)



App. IV: Mercury, MW-6

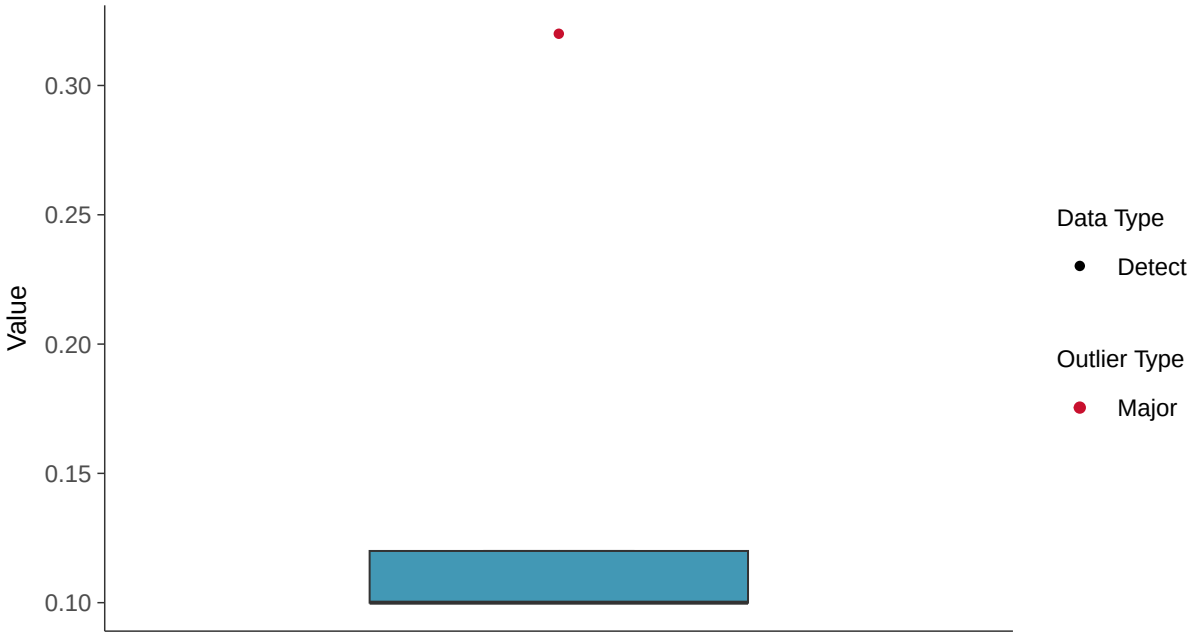
ID: 06_03_115





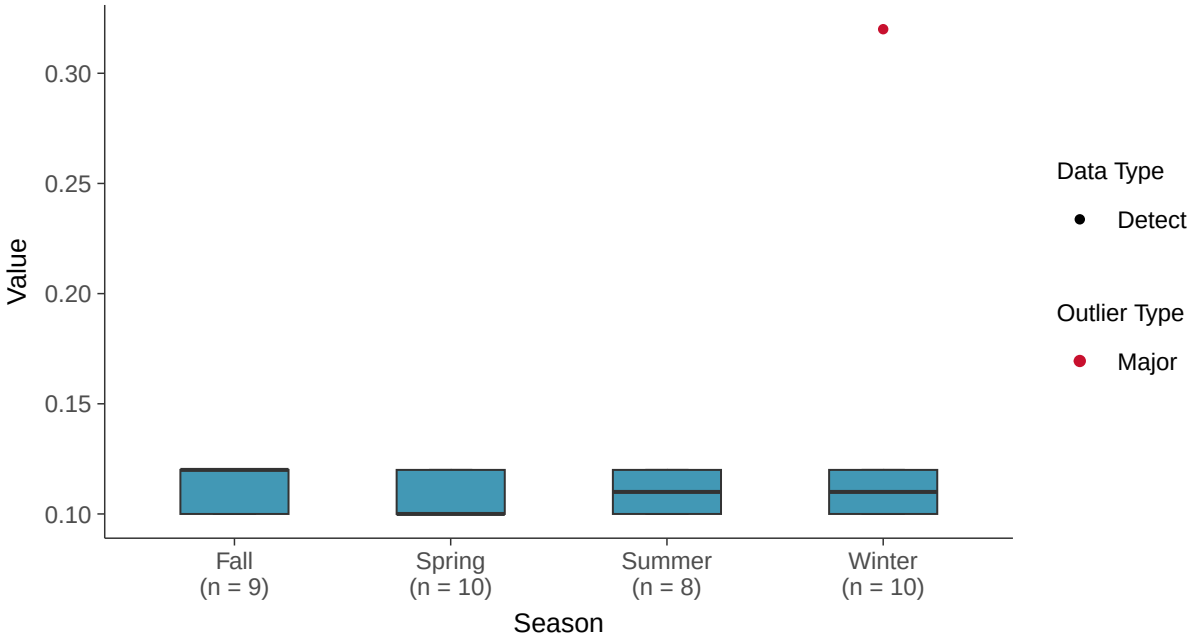
Boxplot

Mercury, MW-6 (ug/L)



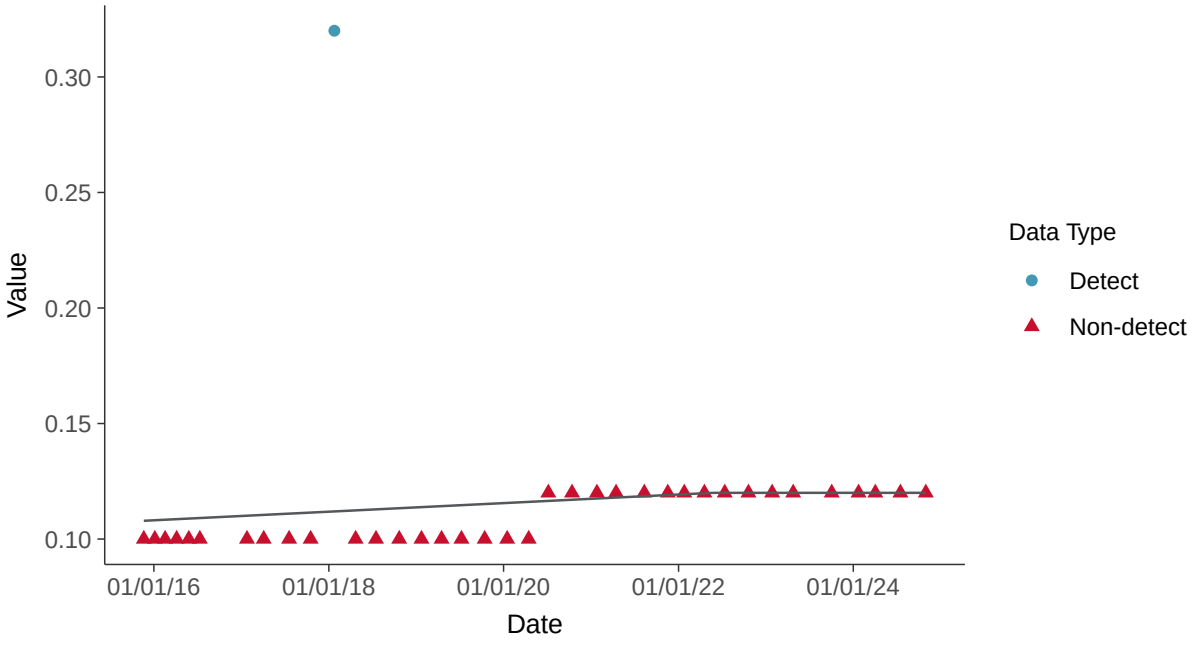
Boxplot by Season

Mercury, MW-6 (ug/L)



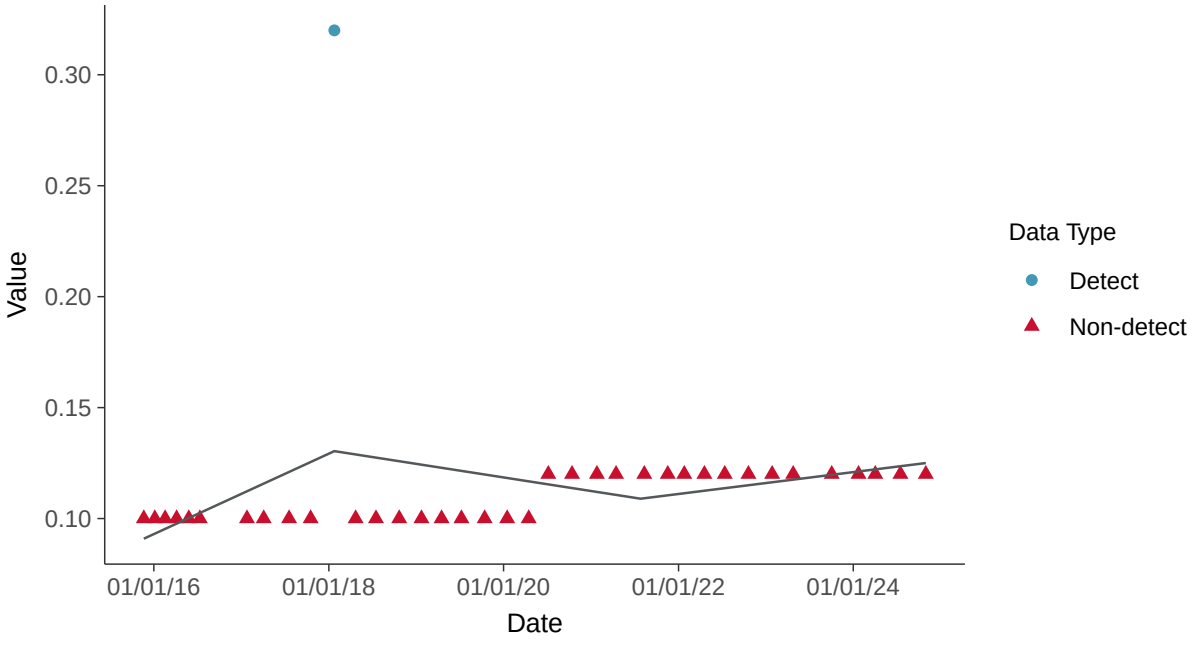
Trend Regression: Piecewise Linear-Linear

Mercury, MW-6 (ug/L)



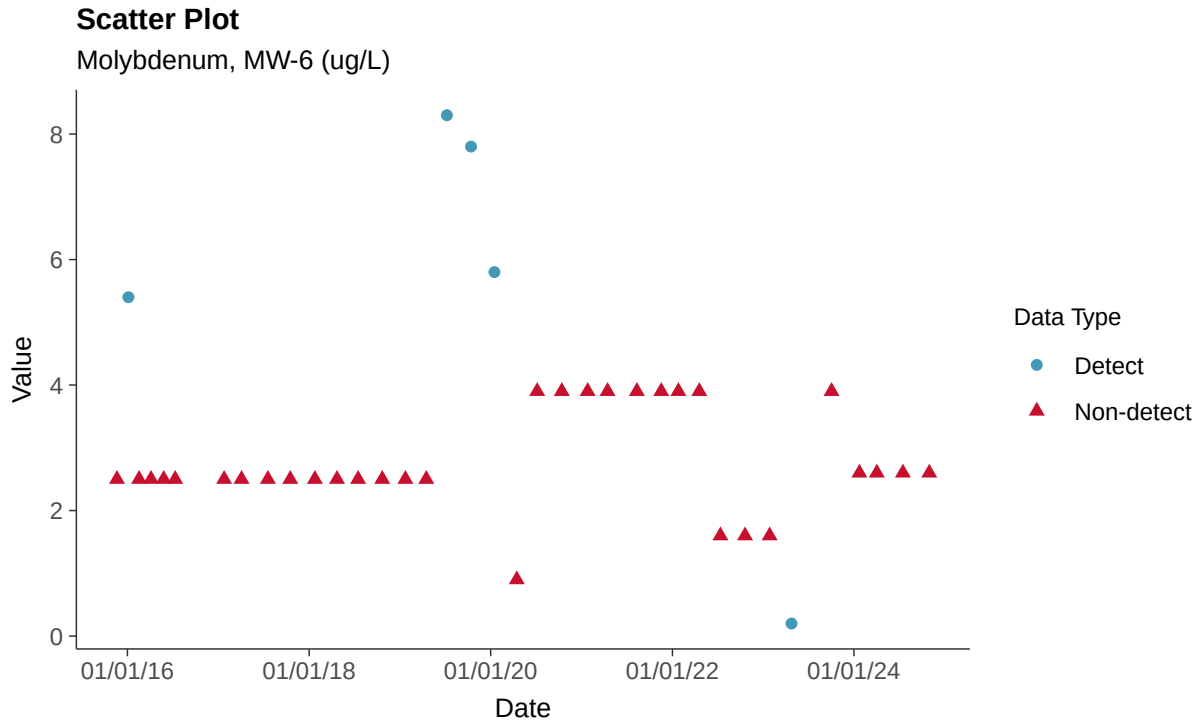
Trend Regression: Piecewise Linear-Linear-Linear

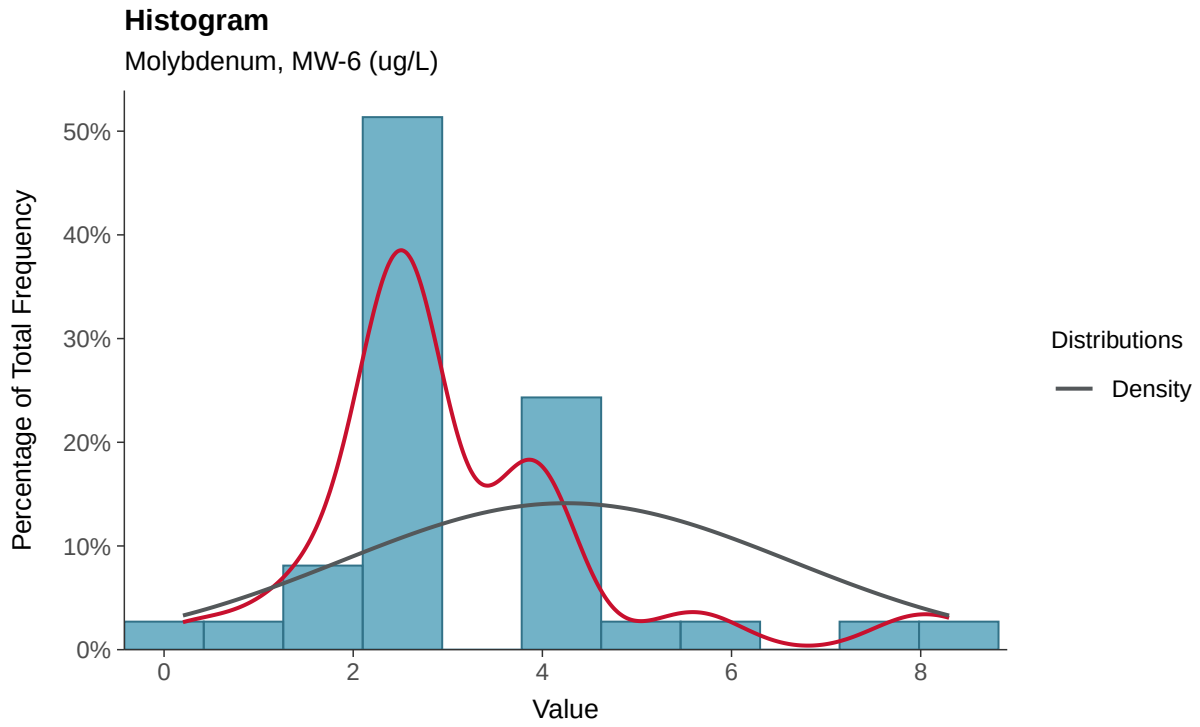
Mercury, MW-6 (ug/L)



App. IV: Molybdenum, MW-6

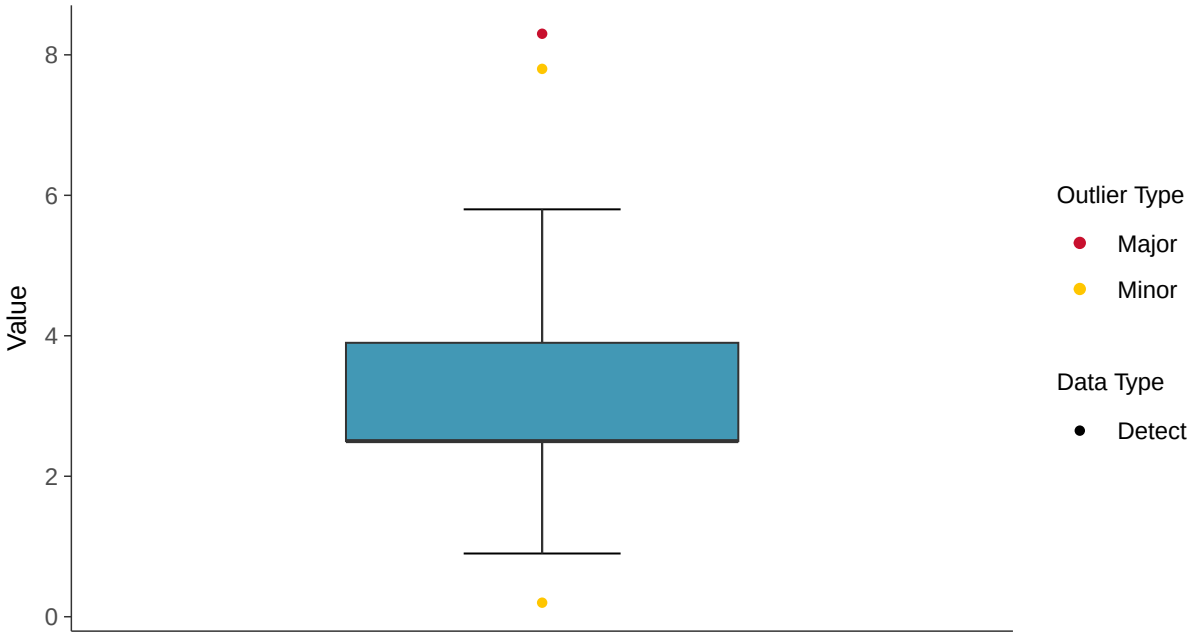
ID: 06_03_116





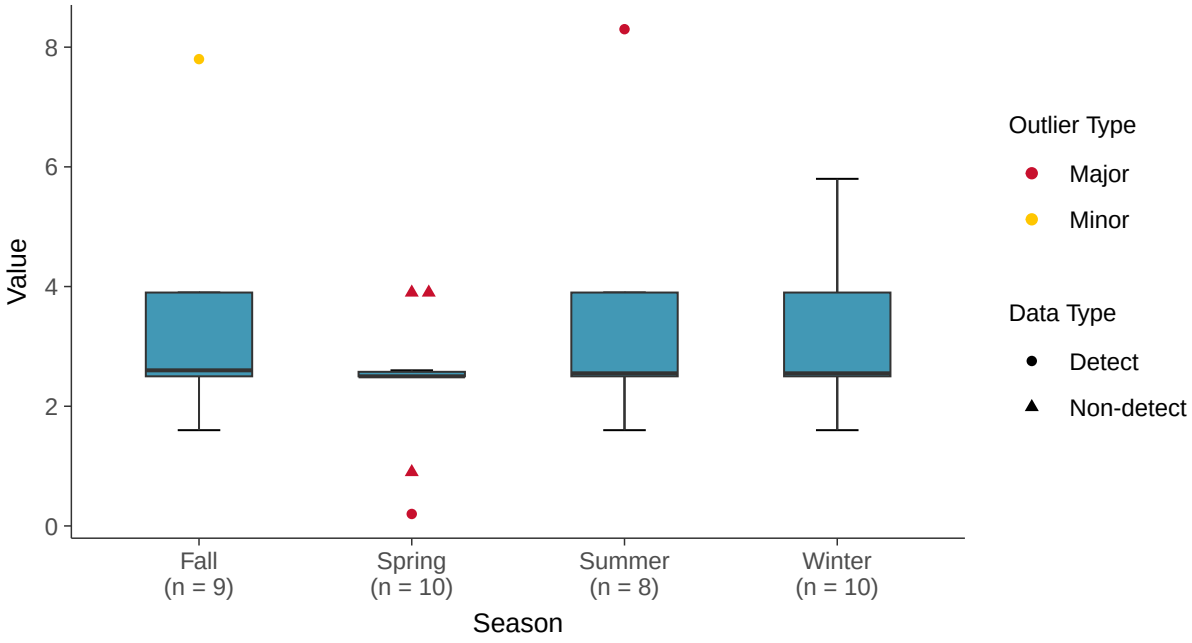
Boxplot

Molybdenum, MW-6 (ug/L)



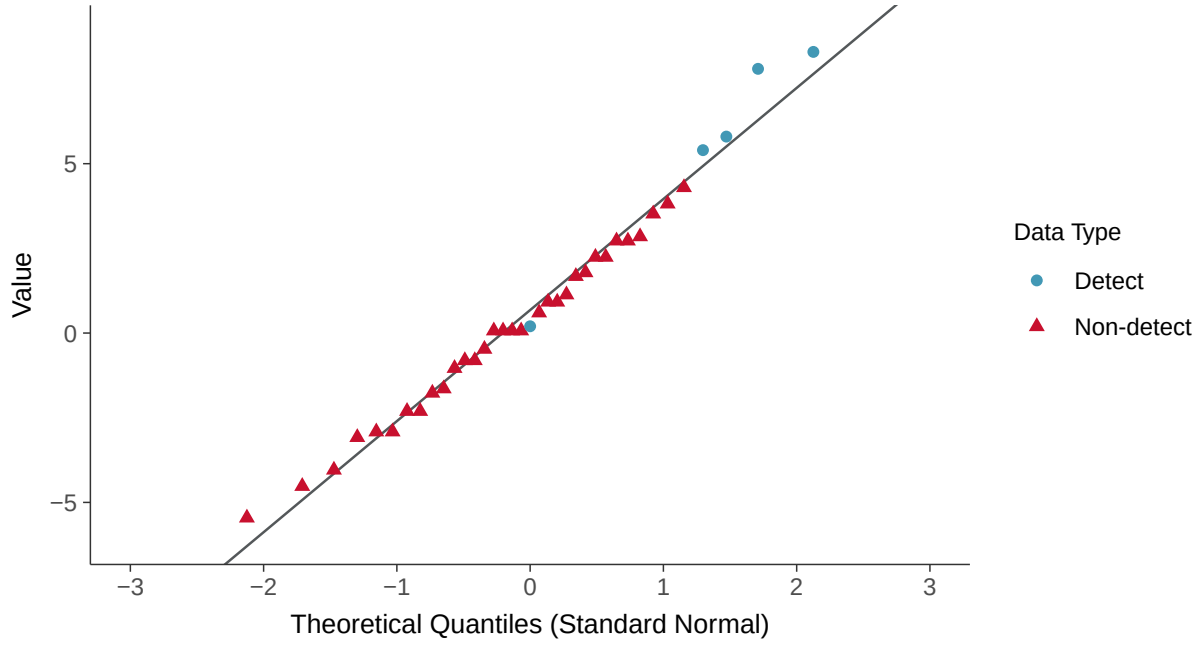
Boxplot by Season

Molybdenum, MW-6 (ug/L)



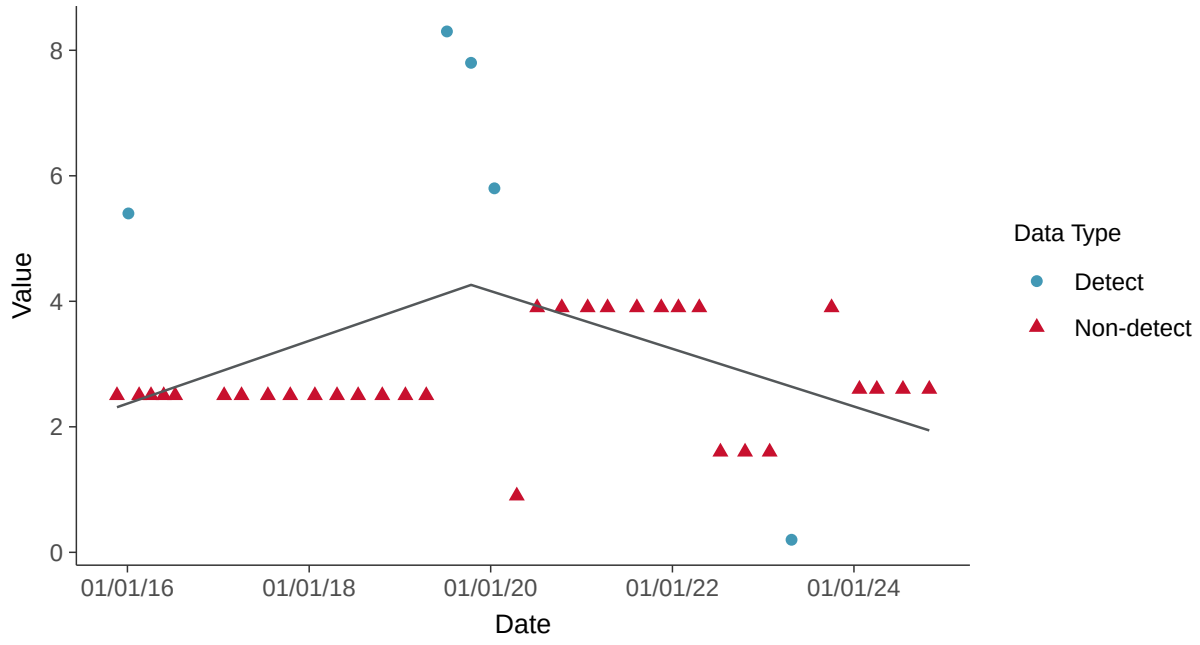
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-6 (ug/L)



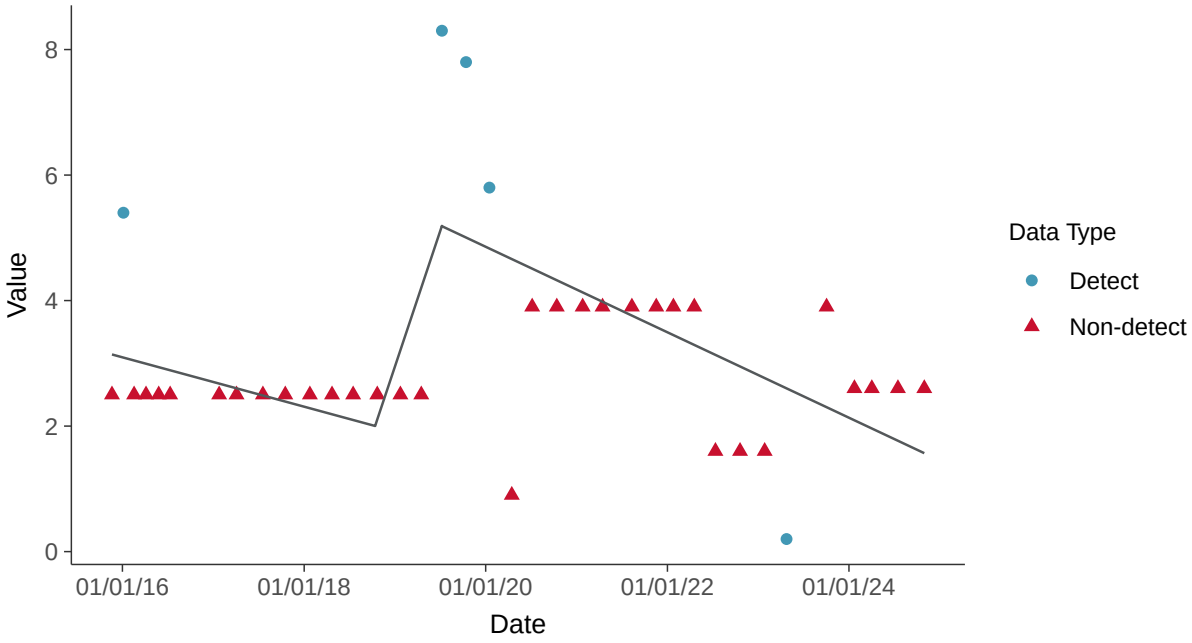
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-6 (ug/L)



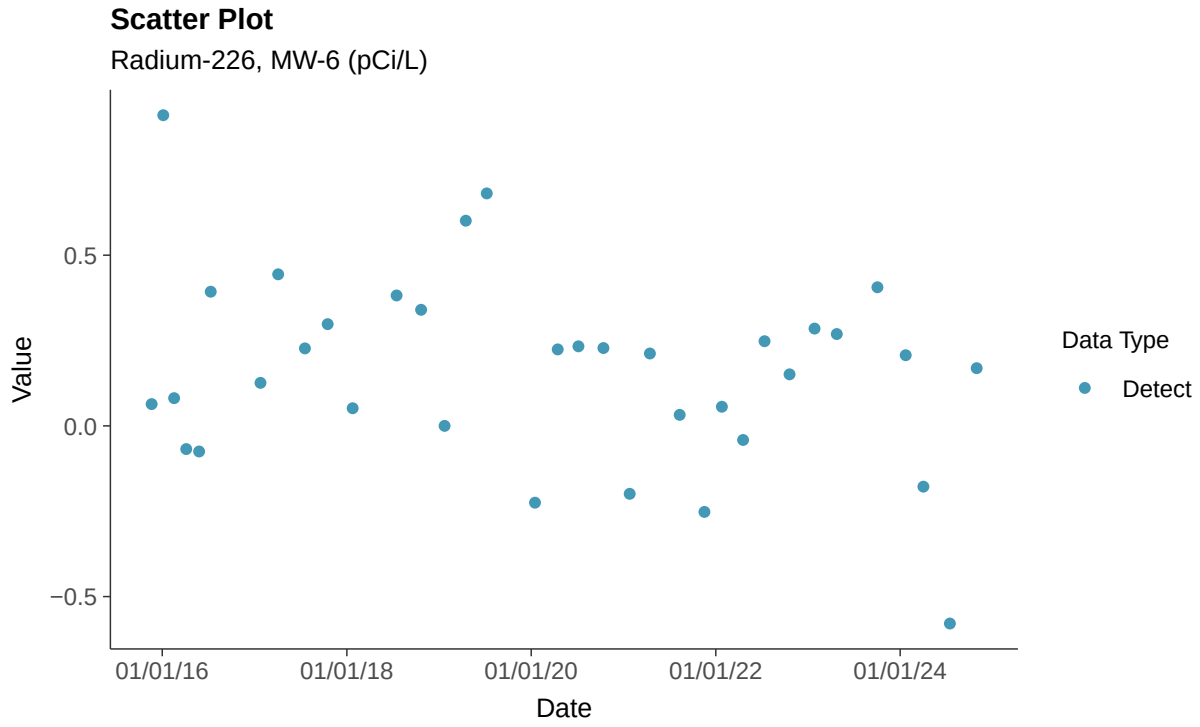
Trend Regression: Piecewise Linear-Linear-Linear

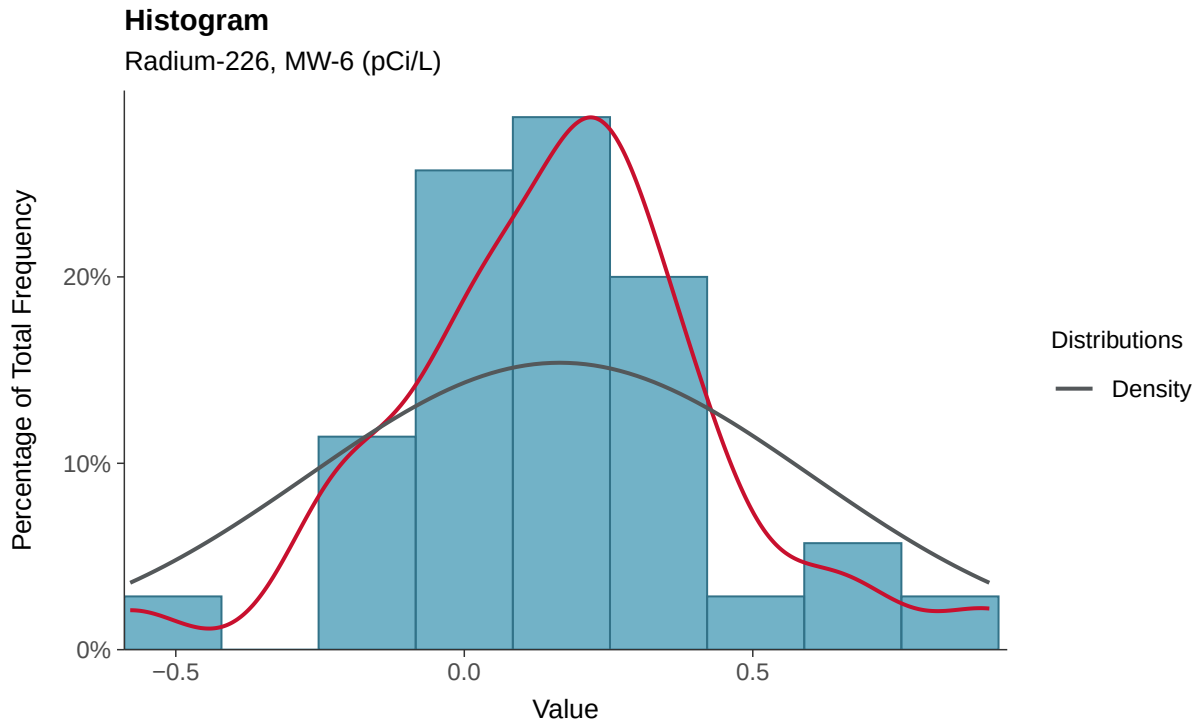
Molybdenum, MW-6 (ug/L)



App. IV: Radium-226, MW-6

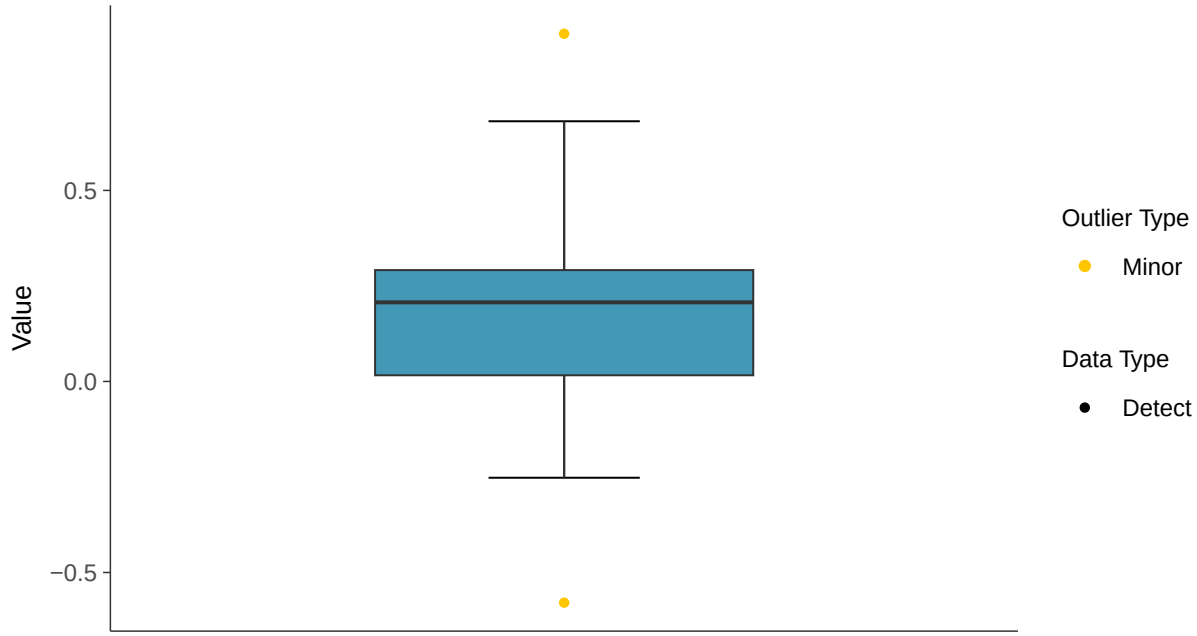
ID: 06_03_119





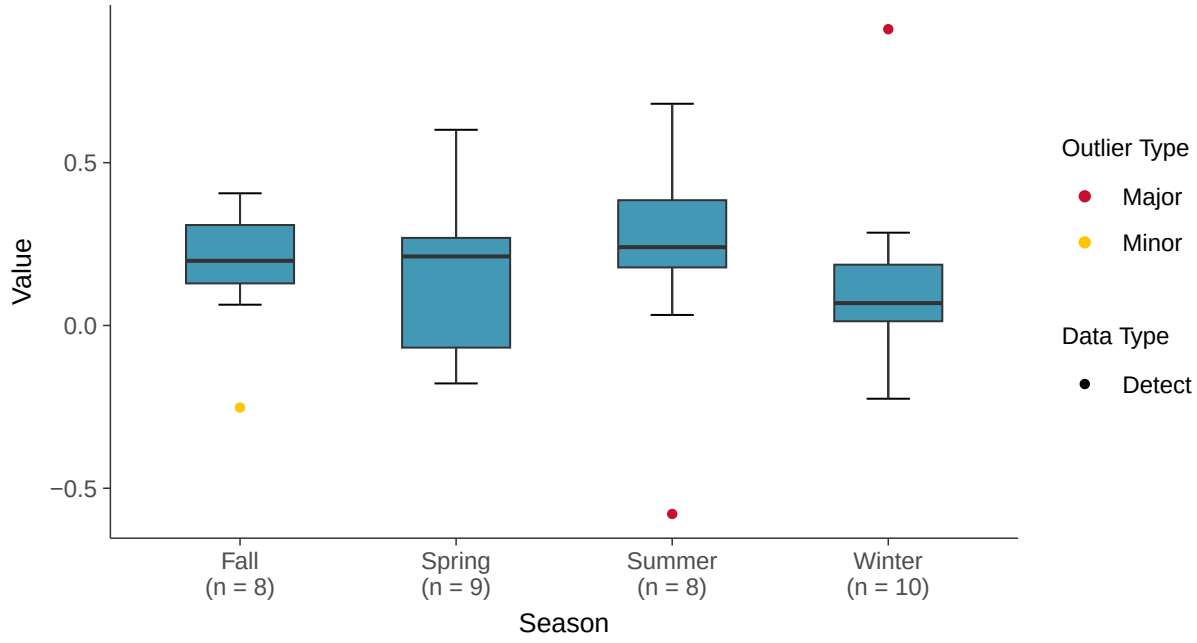
Boxplot

Radium-226, MW-6 (pCi/L)



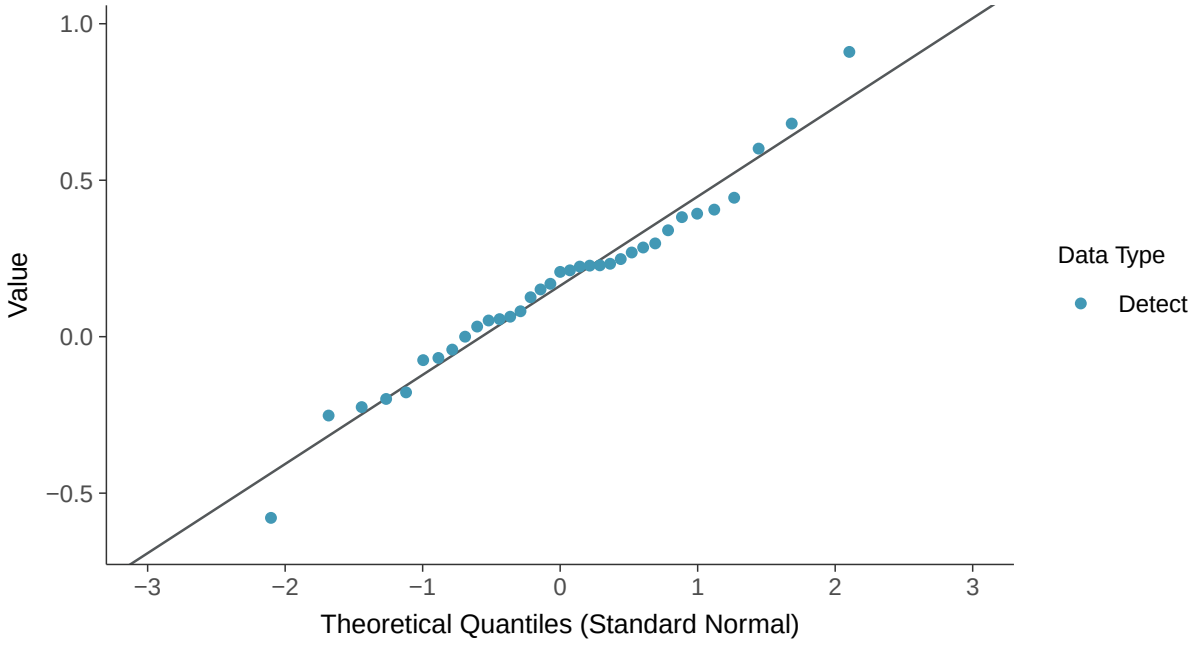
Boxplot by Season

Radium-226, MW-6 (pCi/L)



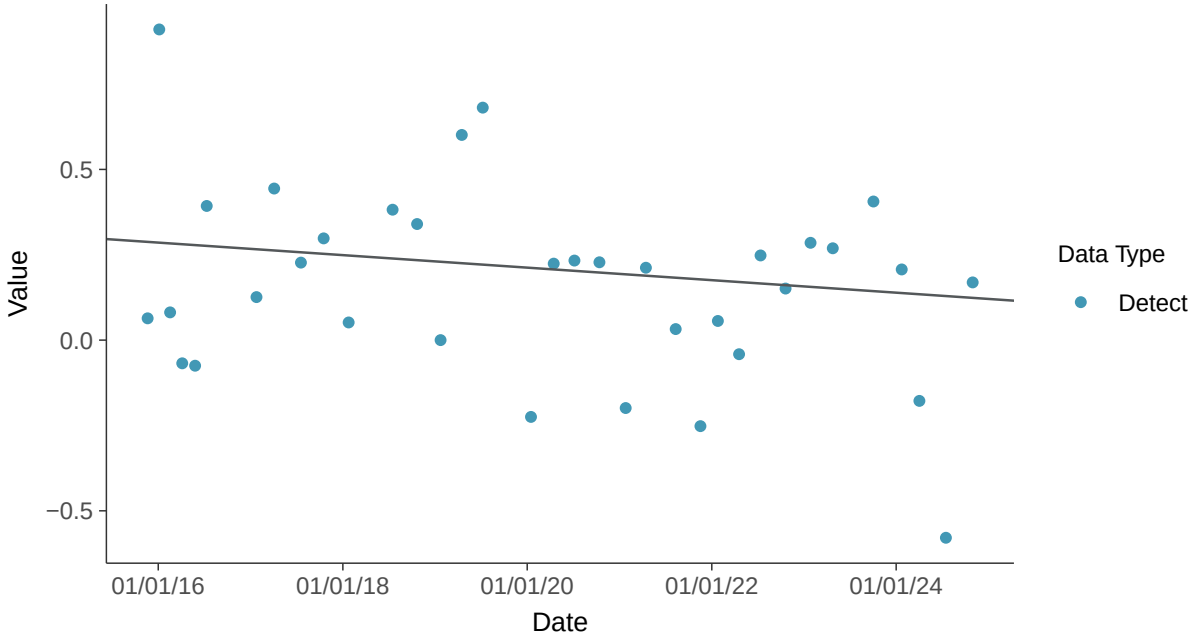
Normal Q-Q plot

Radium-226, MW-6 (pCi/L)



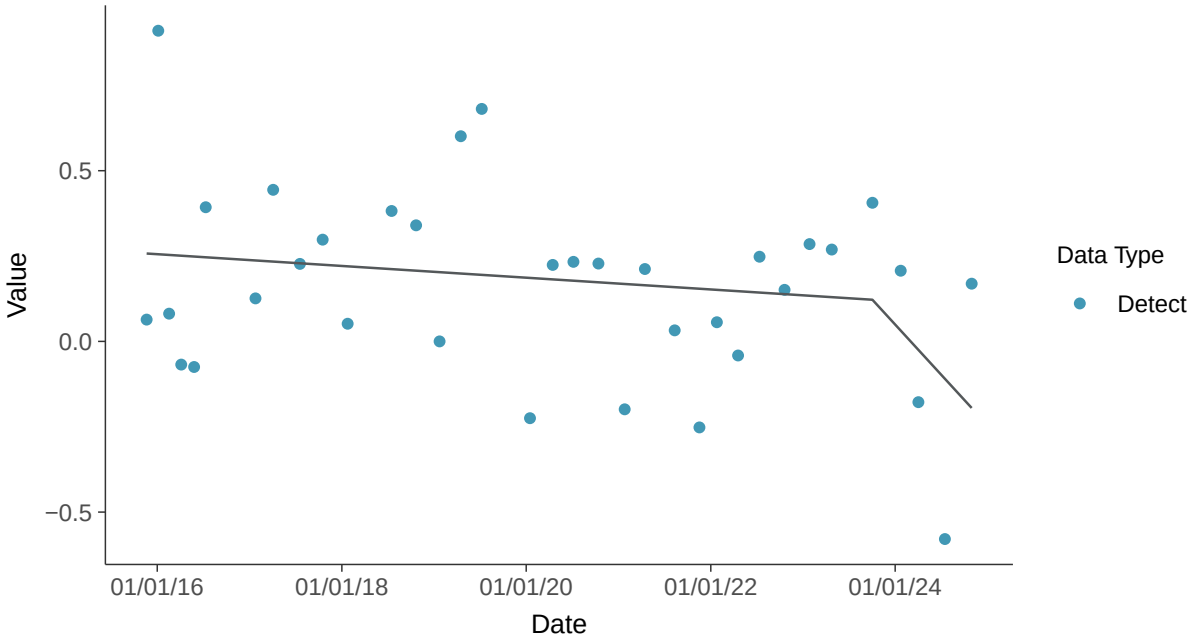
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-6 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, MW-6 (pCi/L)

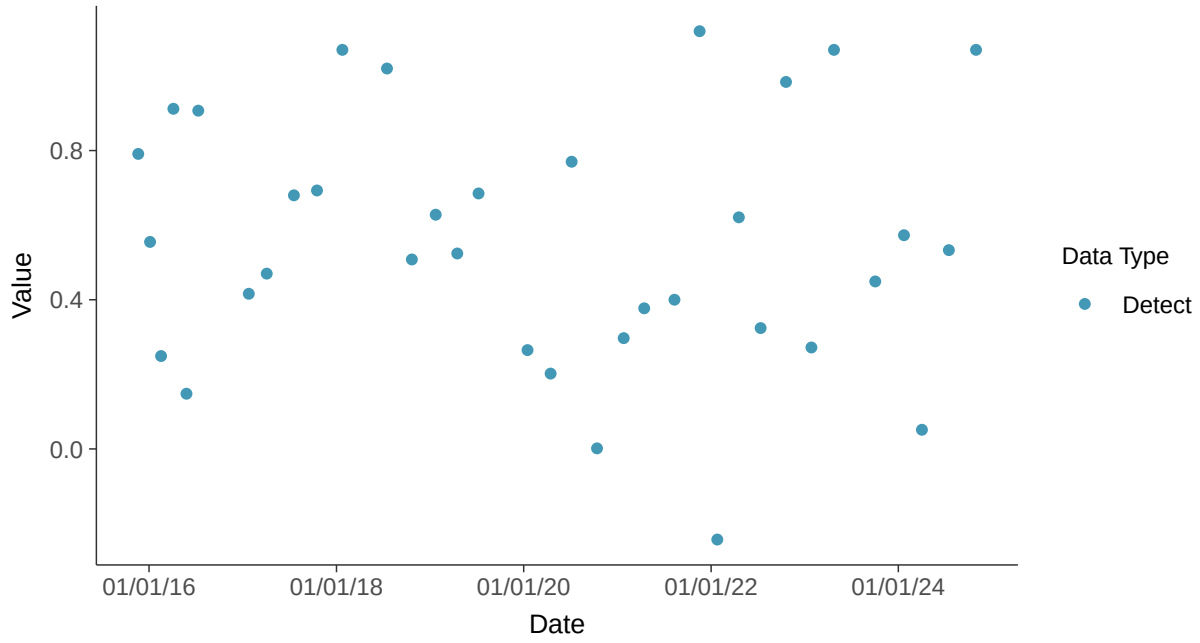


App. IV: Radium-228, MW-6

ID: 06_03_120

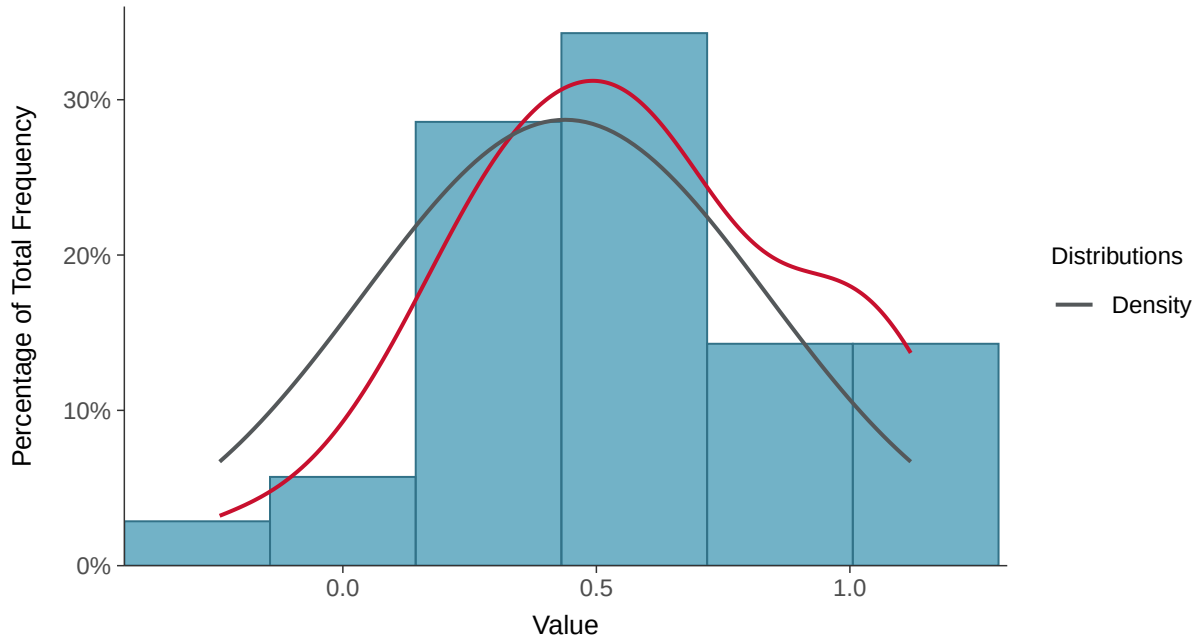
Scatter Plot

Radium-228, MW-6 (pCi/L)



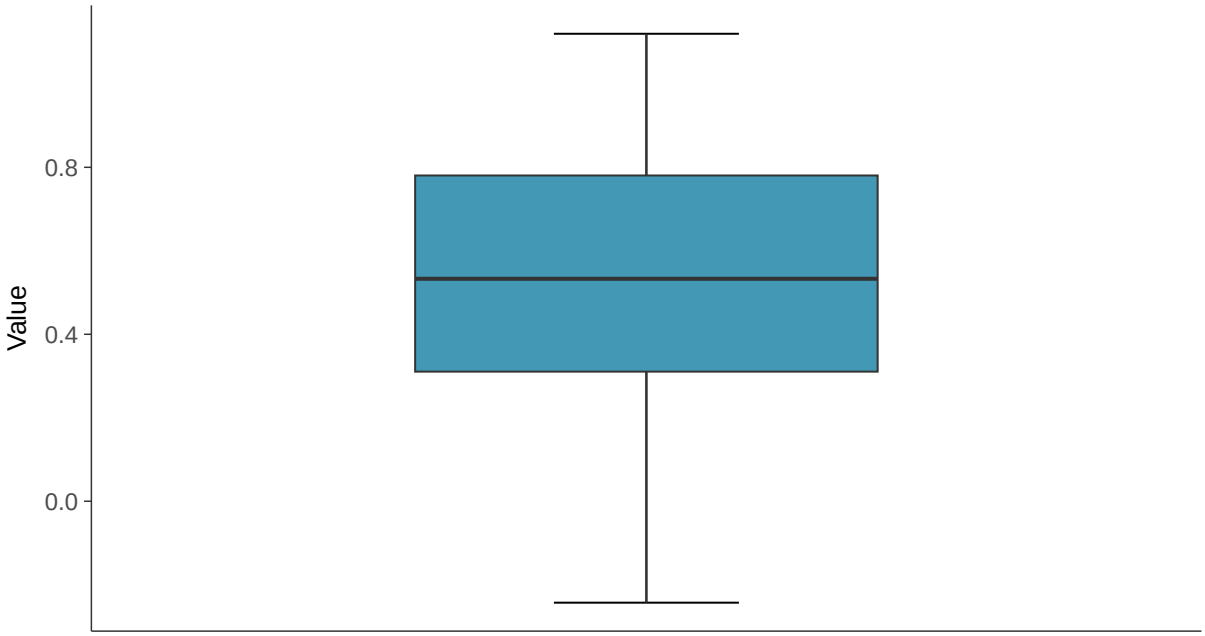
Histogram

Radium-228, MW-6 (pCi/L)



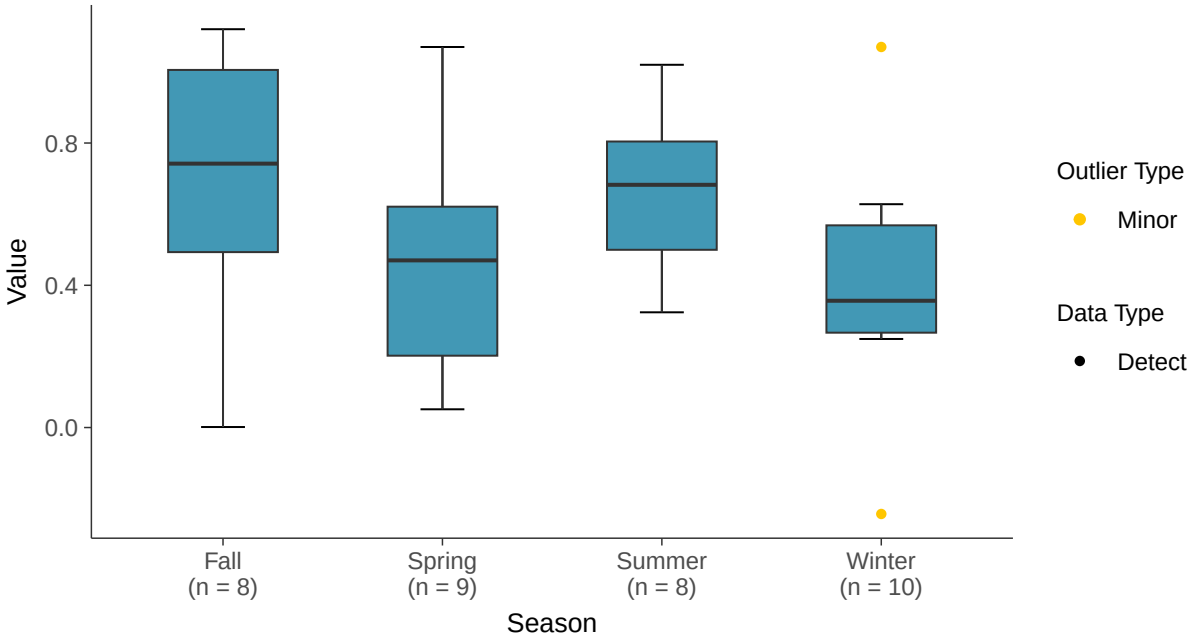
Boxplot

Radium-228, MW-6 (pCi/L)



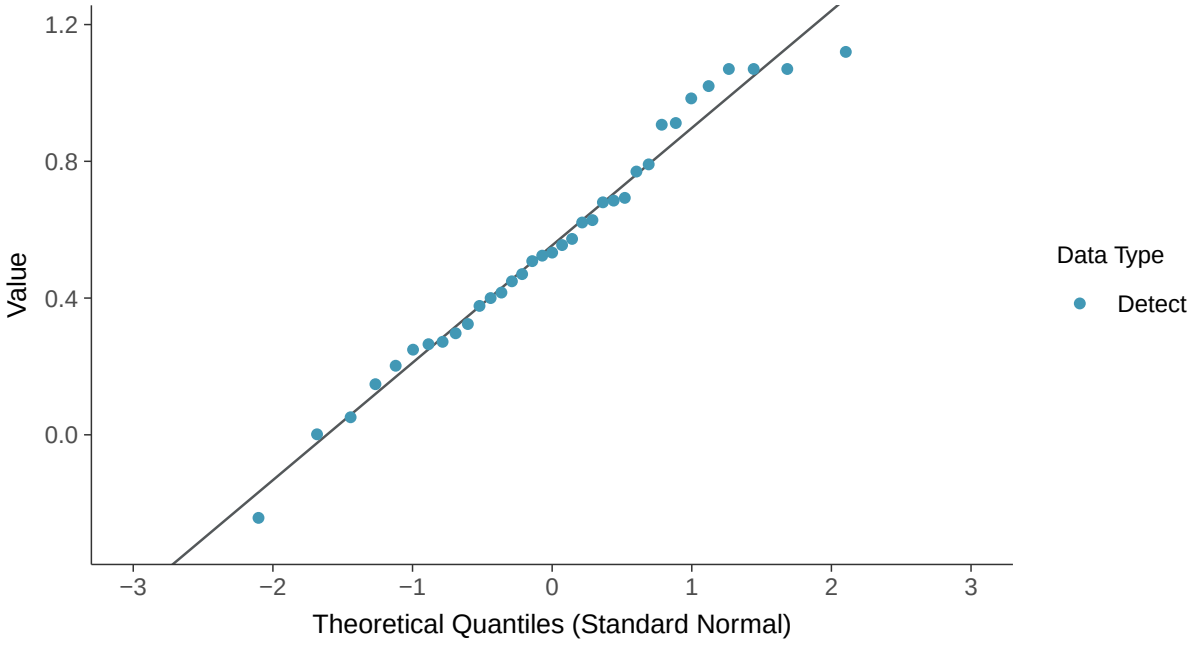
Boxplot by Season

Radium-228, MW-6 (pCi/L)



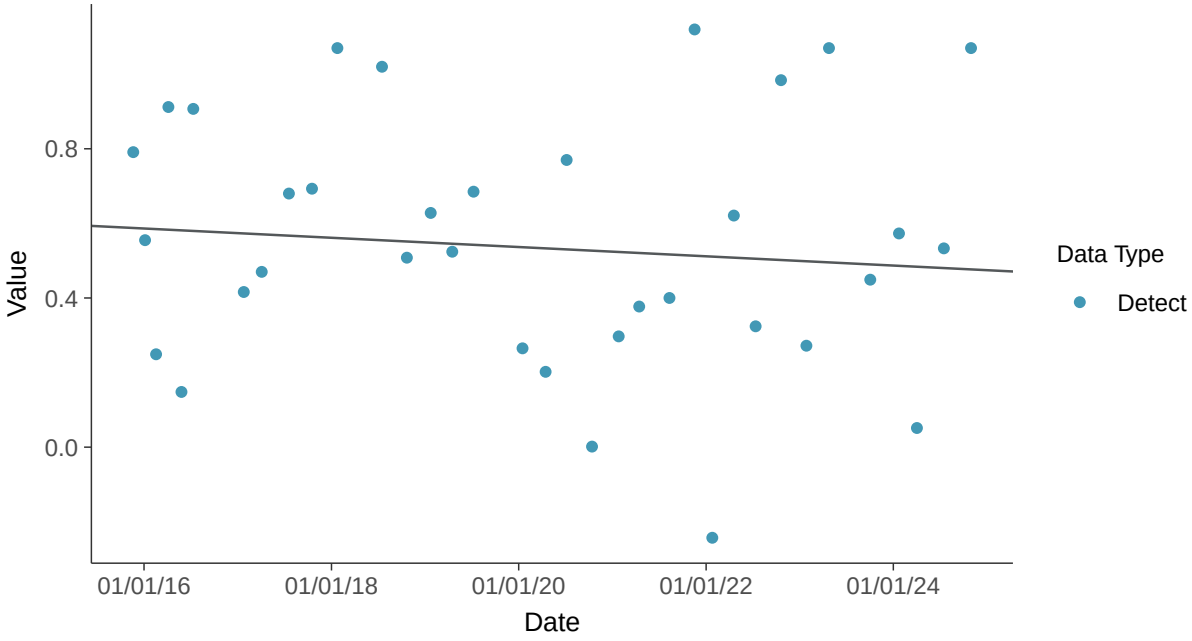
Normal Q-Q plot

Radium-228, MW-6 (pCi/L)



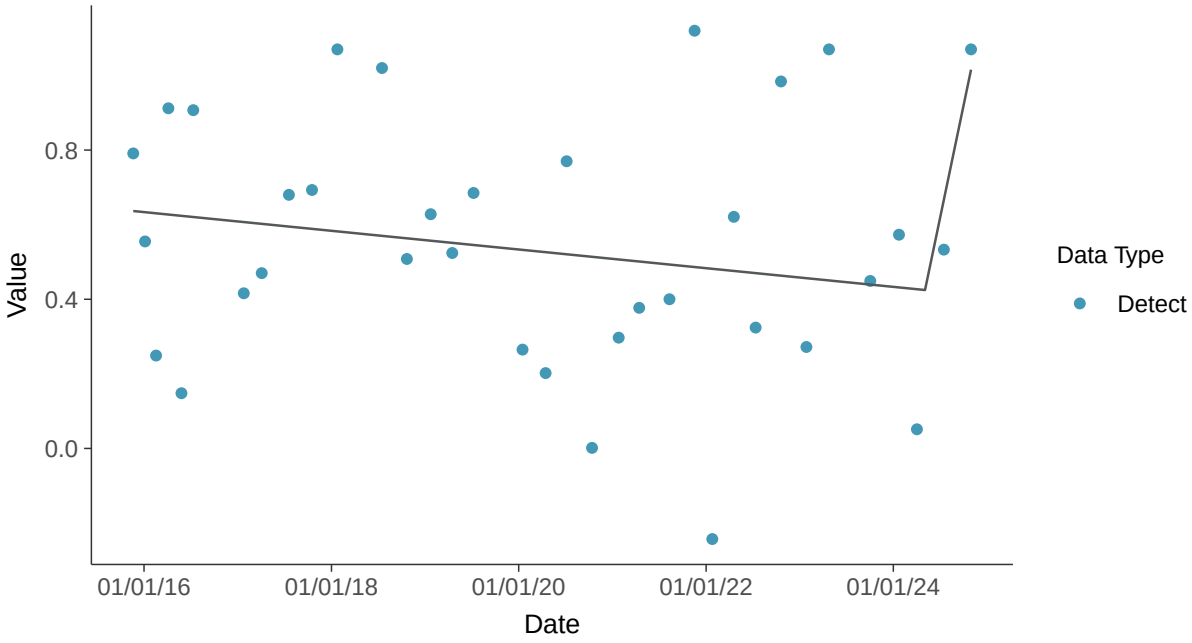
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-6 (pCi/L)



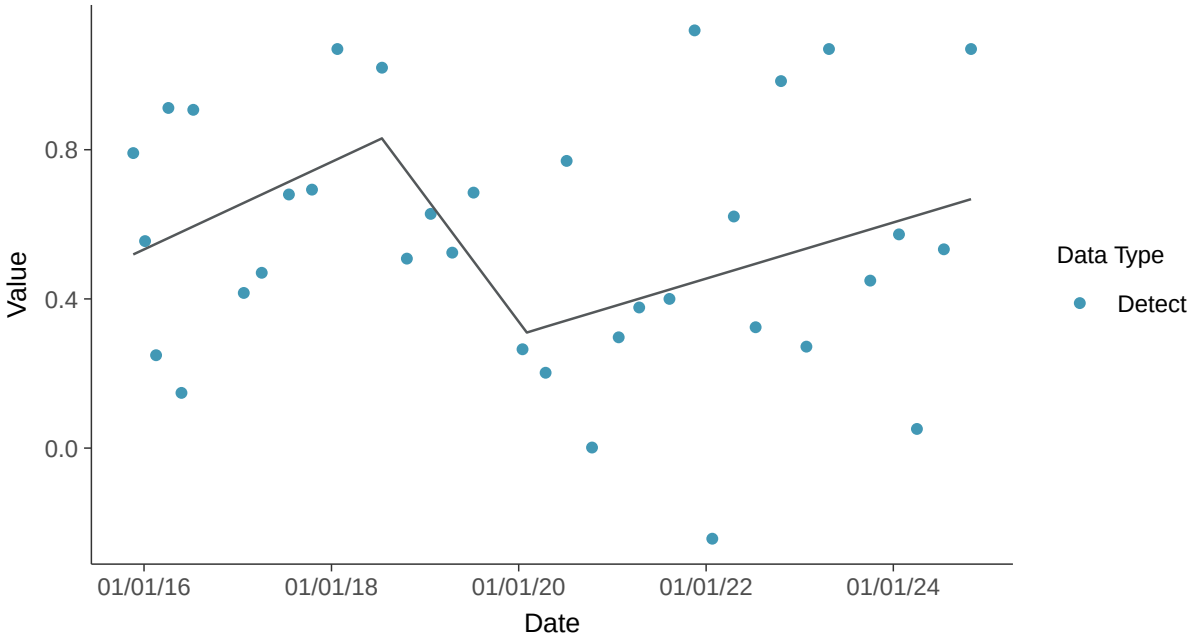
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-6 (pCi/L)



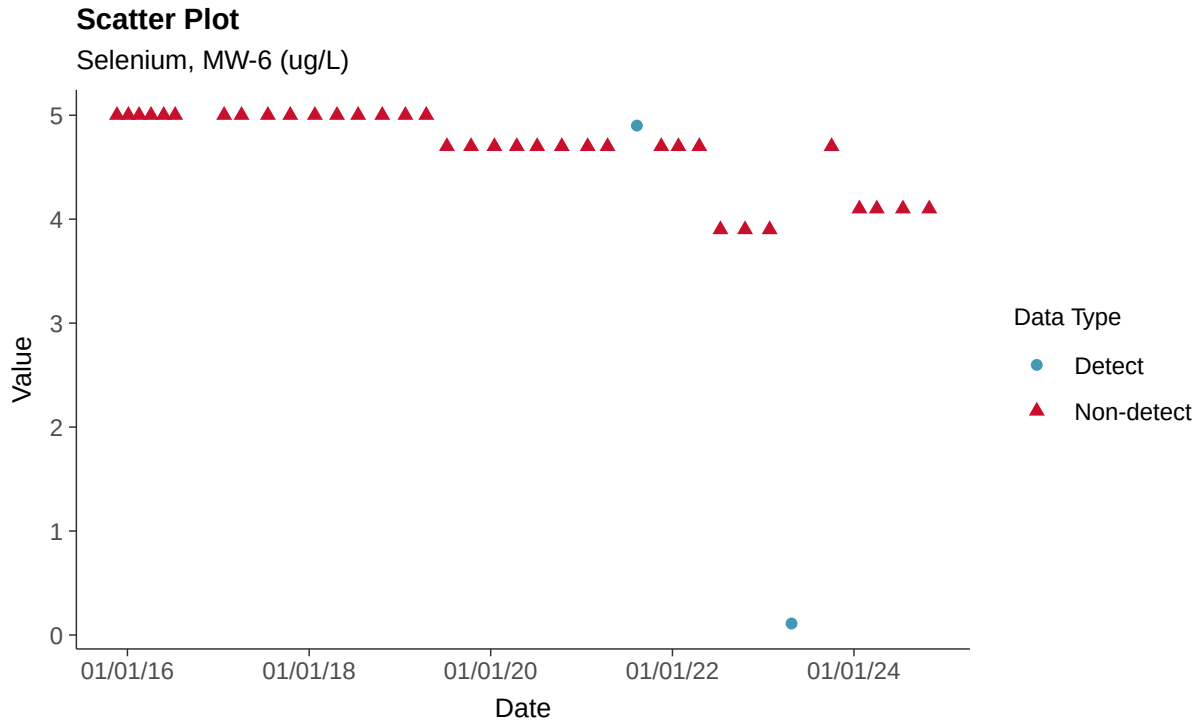
Trend Regression: Piecewise Linear-Linear-Linear

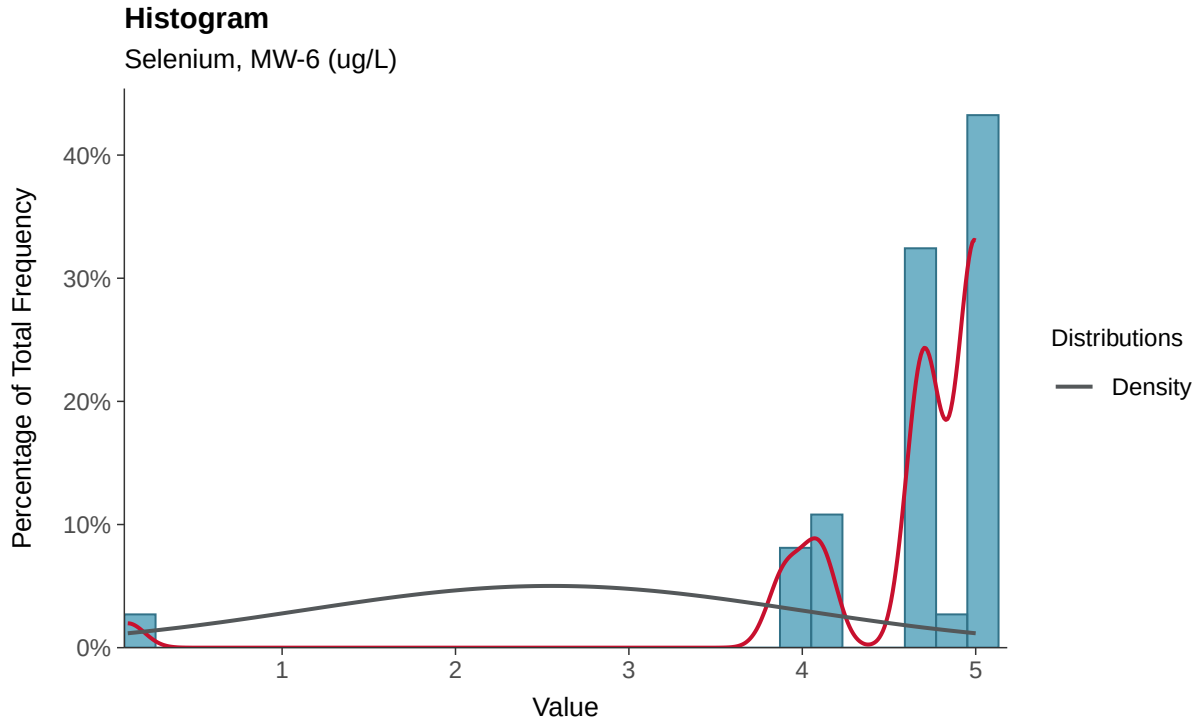
Radium-228, MW-6 (pCi/L)



App. IV: Selenium, MW-6

ID: 06_03_121



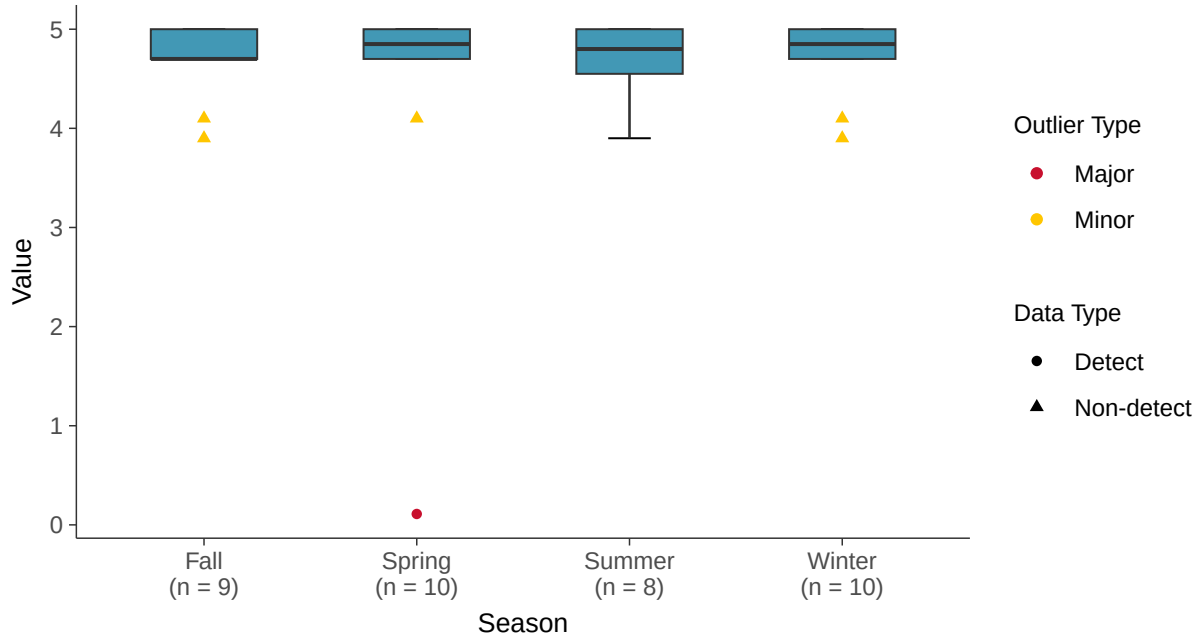


Boxplot

Selenium, MW-6 (ug/L)

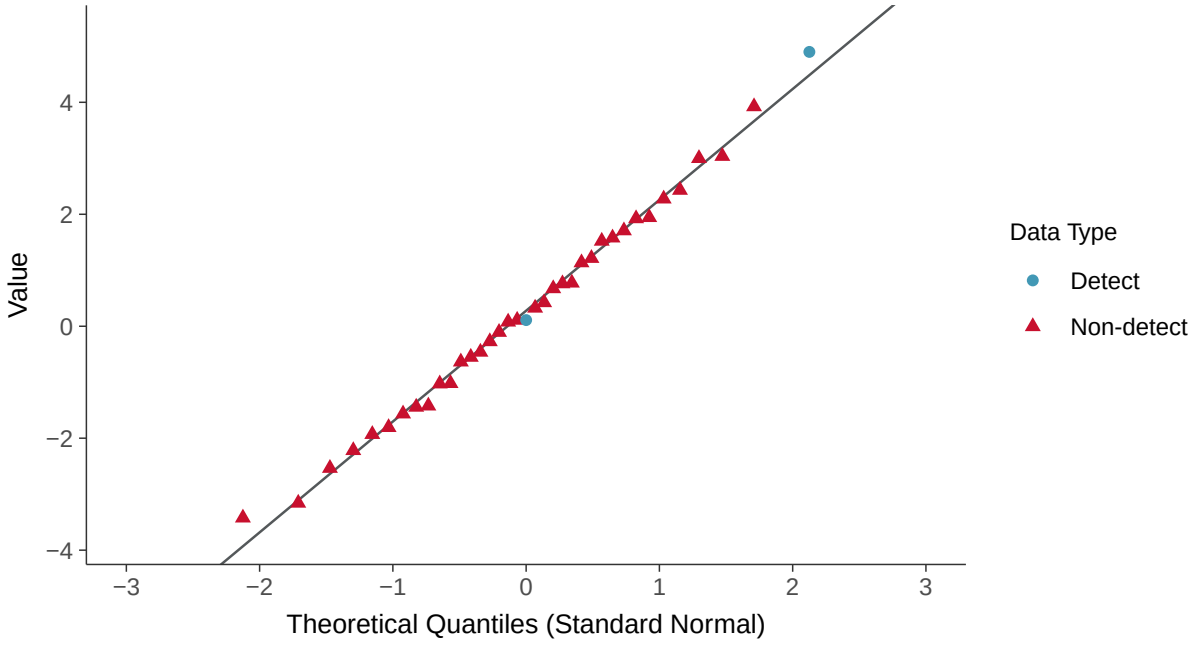
Boxplot by Season

Selenium, MW-6 (ug/L)



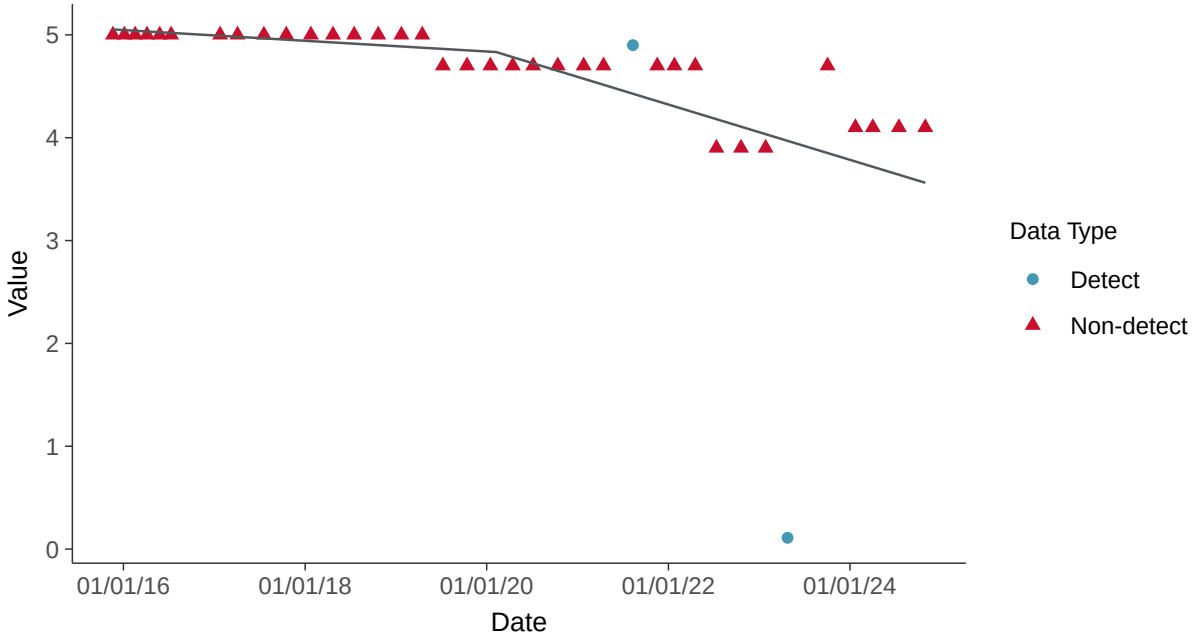
Normal Q-Q plot using ROS Imputed Estimates

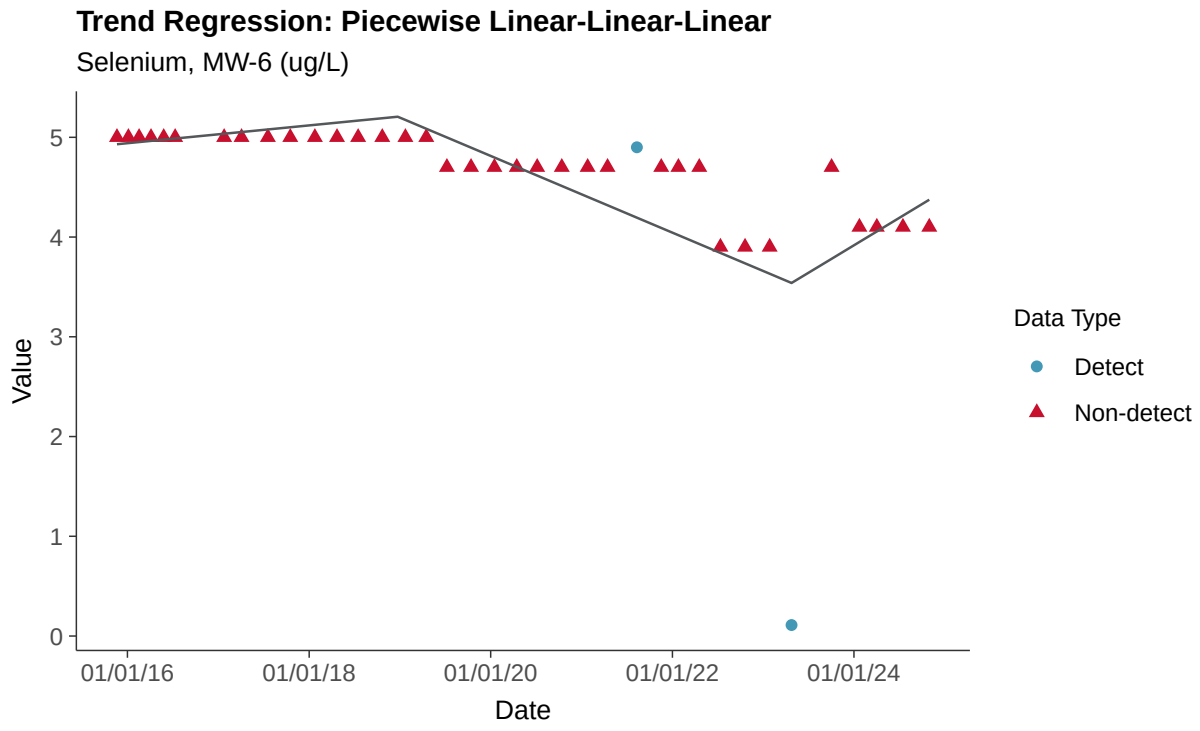
Selenium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear

Selenium, MW-6 (ug/L)



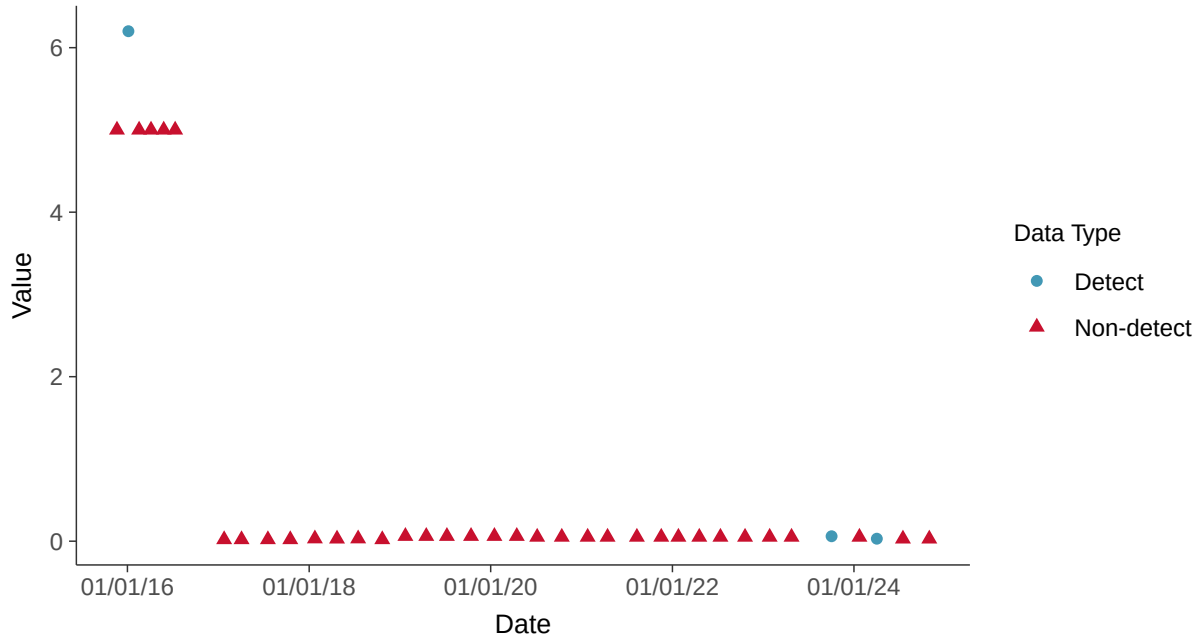

Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-6 (ug/L)
Value
5
4
3
2
1
0
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. IV: Thallium, MW-6

ID: 06_03_124

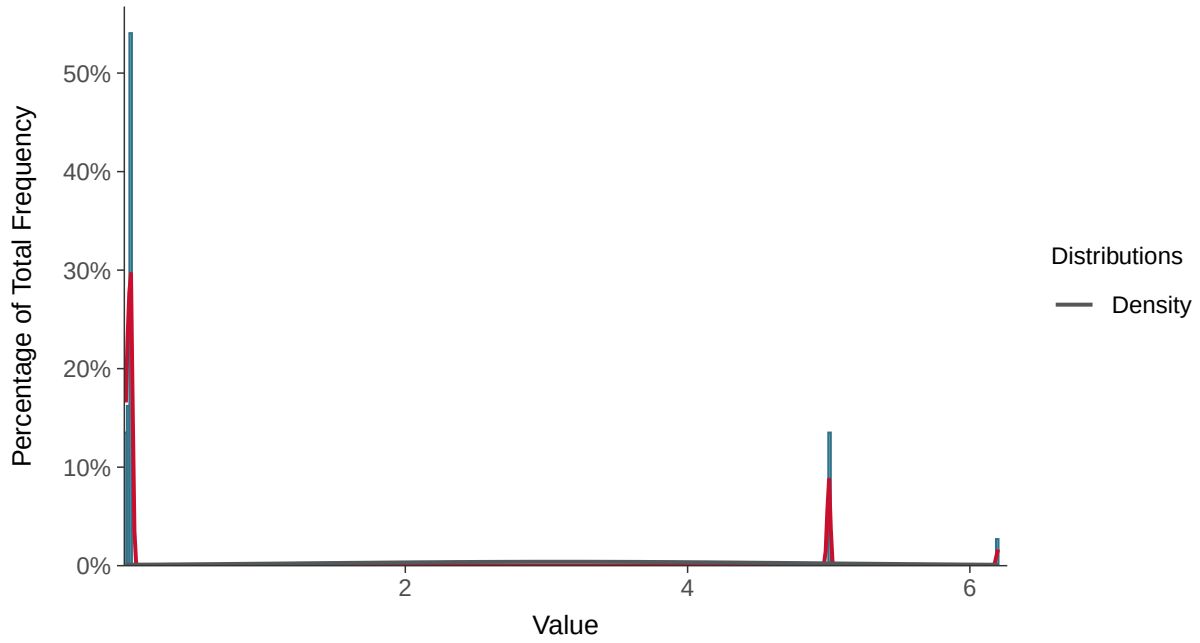
Scatter Plot

Thallium, MW-6 (ug/L)



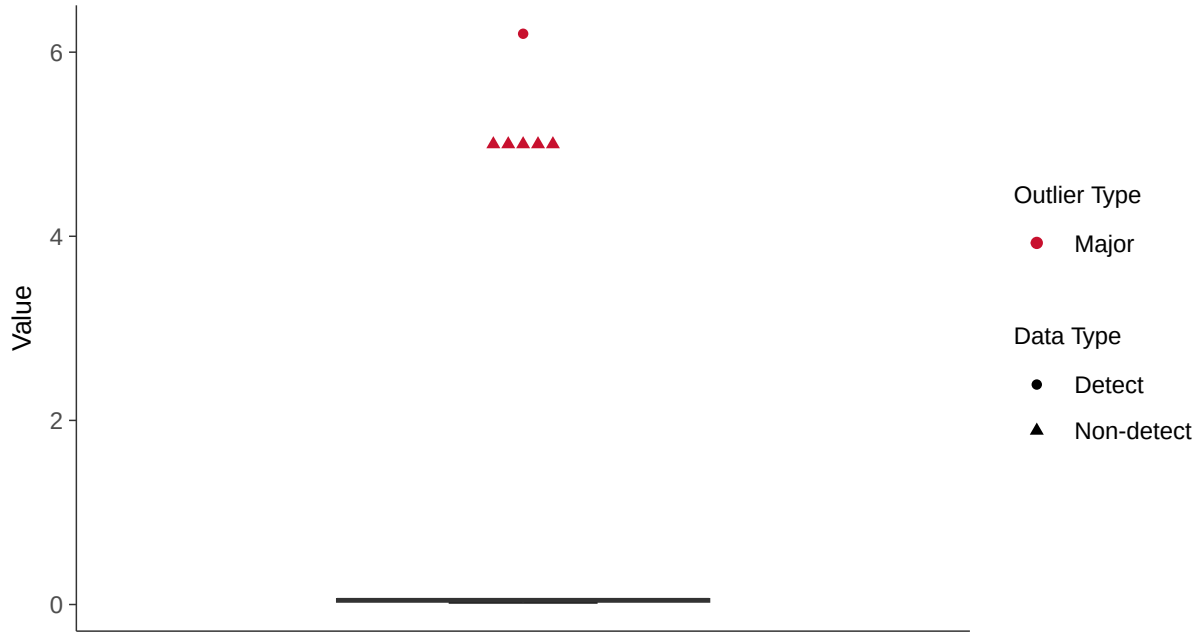
Histogram

Thallium, MW-6 (ug/L)



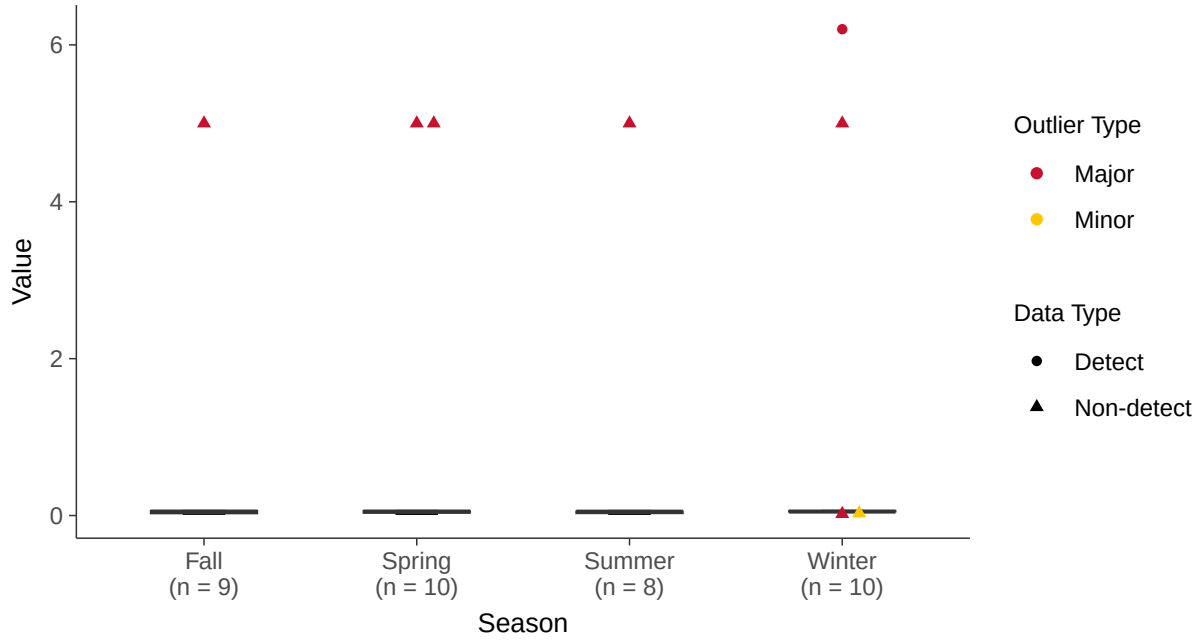
Boxplot

Thallium, MW-6 (ug/L)



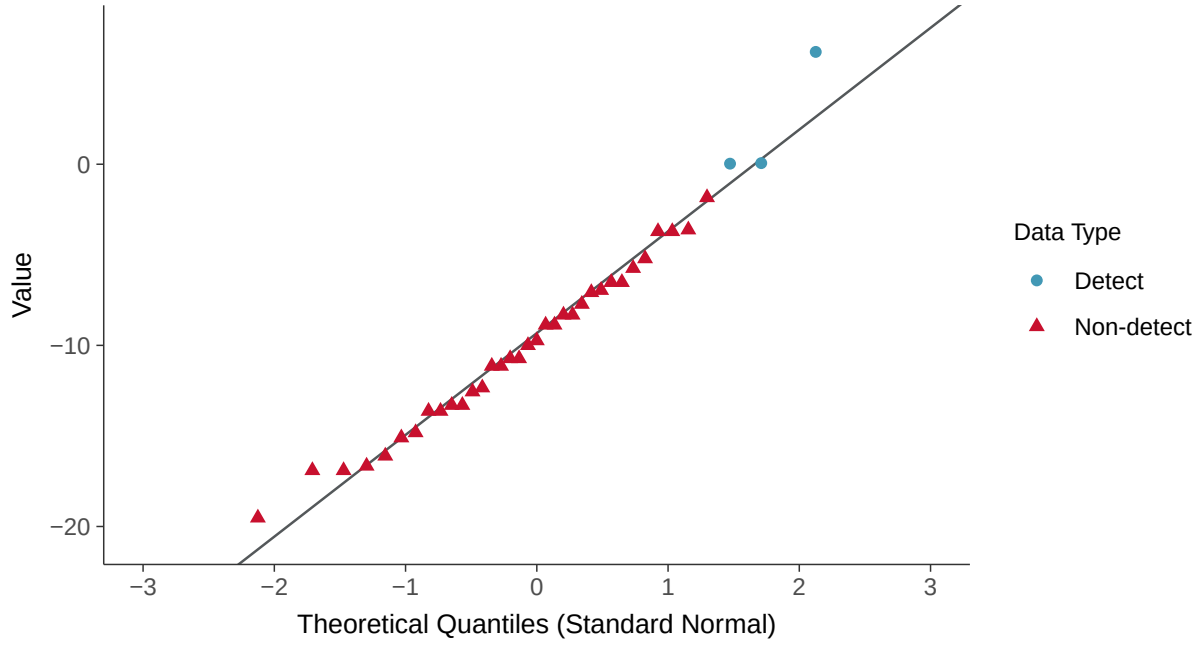
Boxplot by Season

Thallium, MW-6 (ug/L)



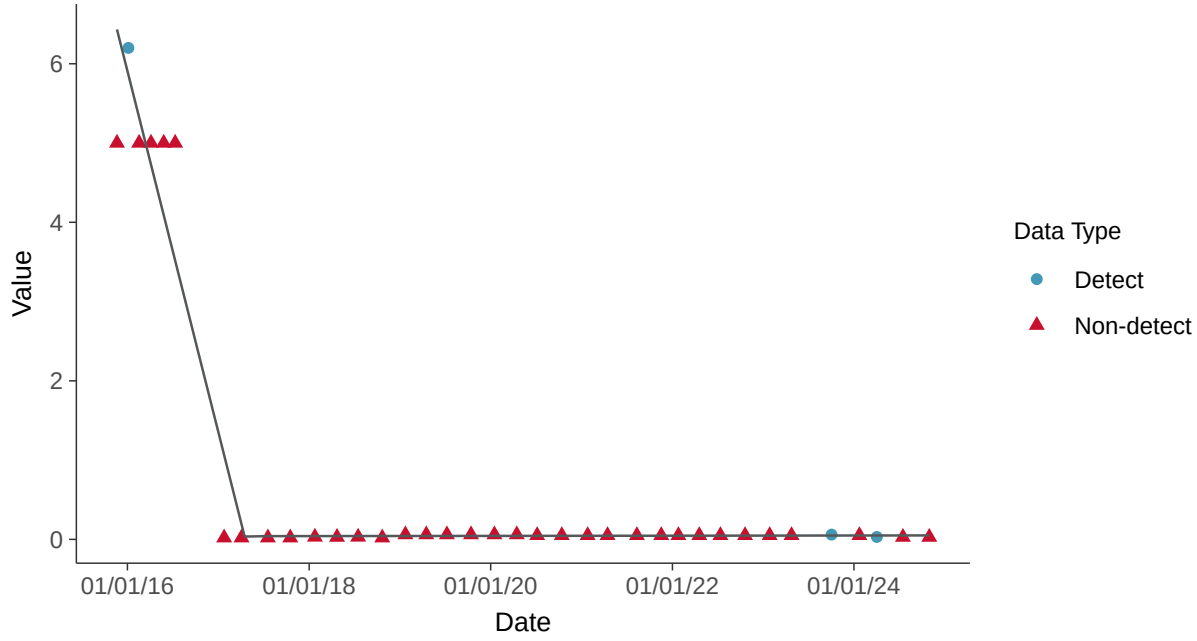
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-6 (ug/L)



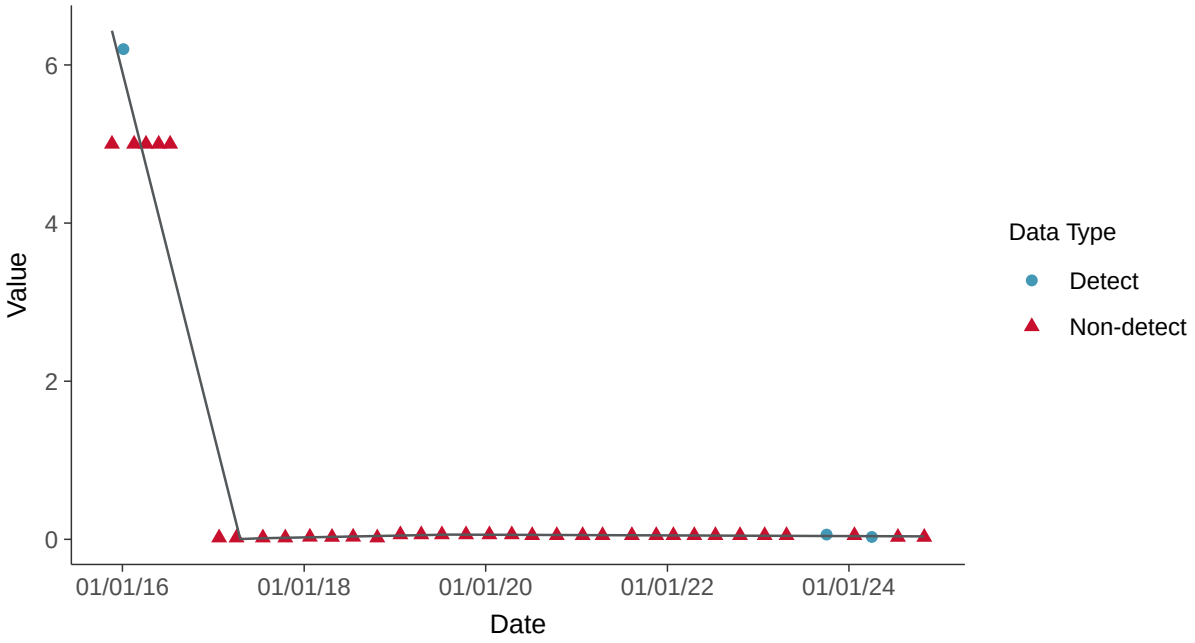
Trend Regression: Piecewise Linear-Linear

Thallium, MW-6 (ug/L)



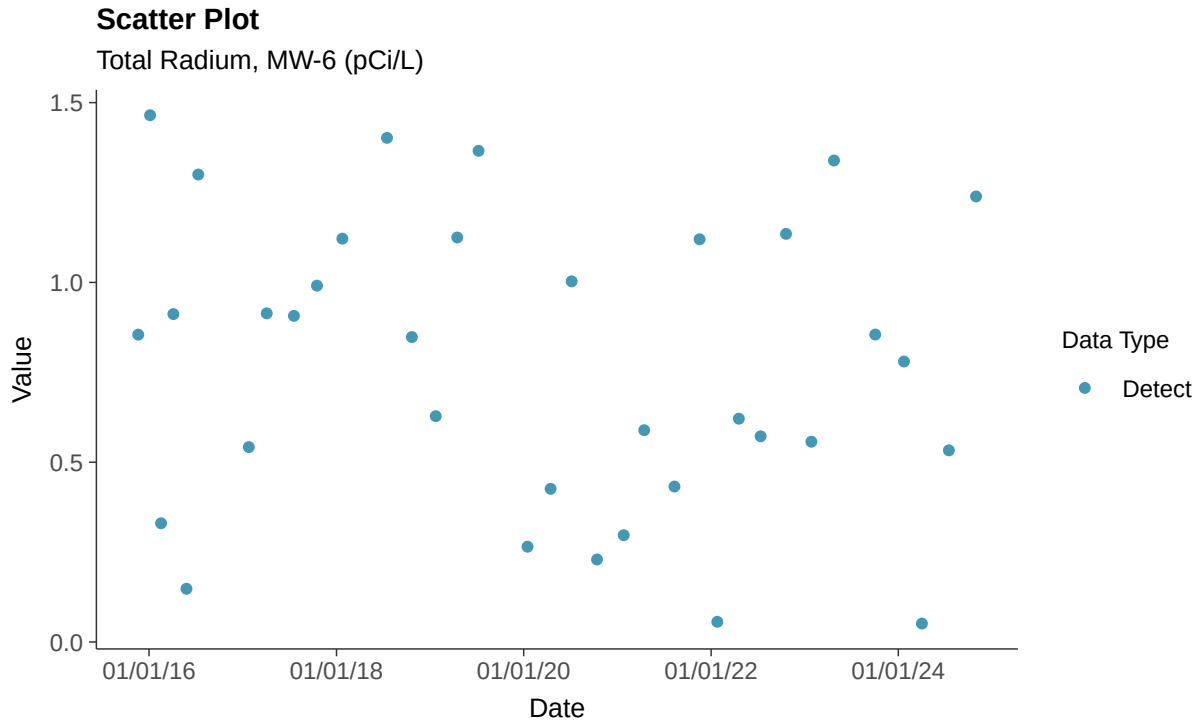
Trend Regression: Piecewise Linear-Linear-Linear

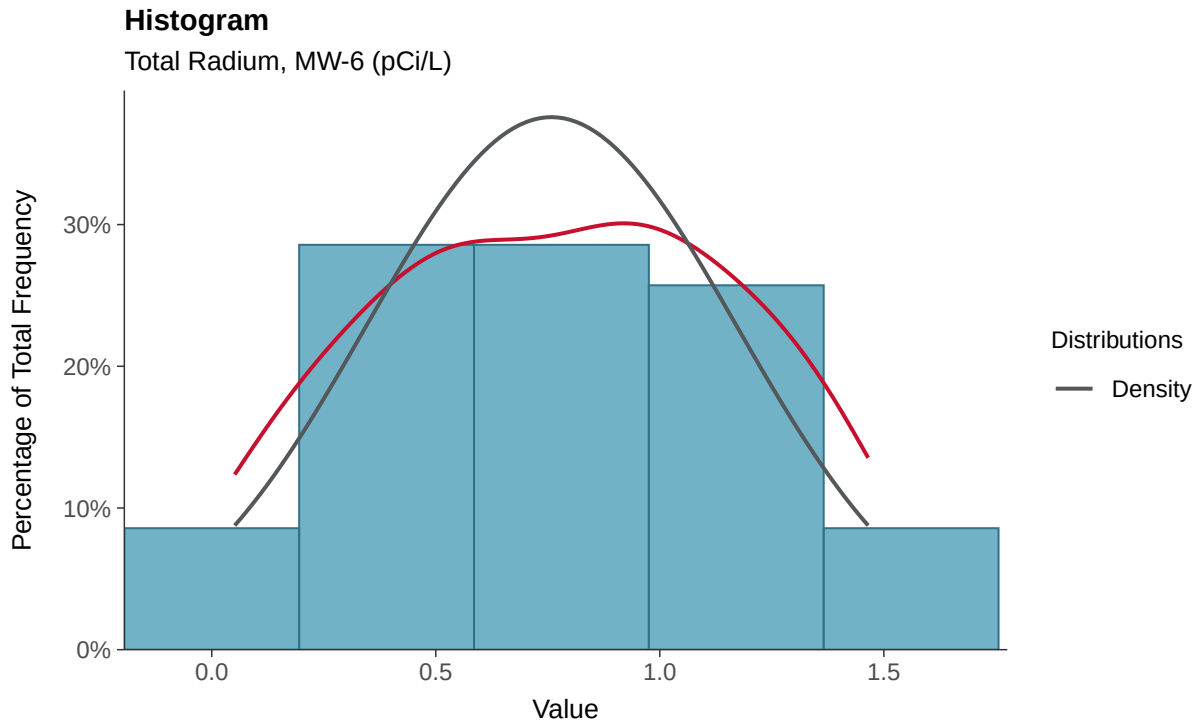
Thallium, MW-6 (ug/L)



App. IV: Total Radium, MW-6

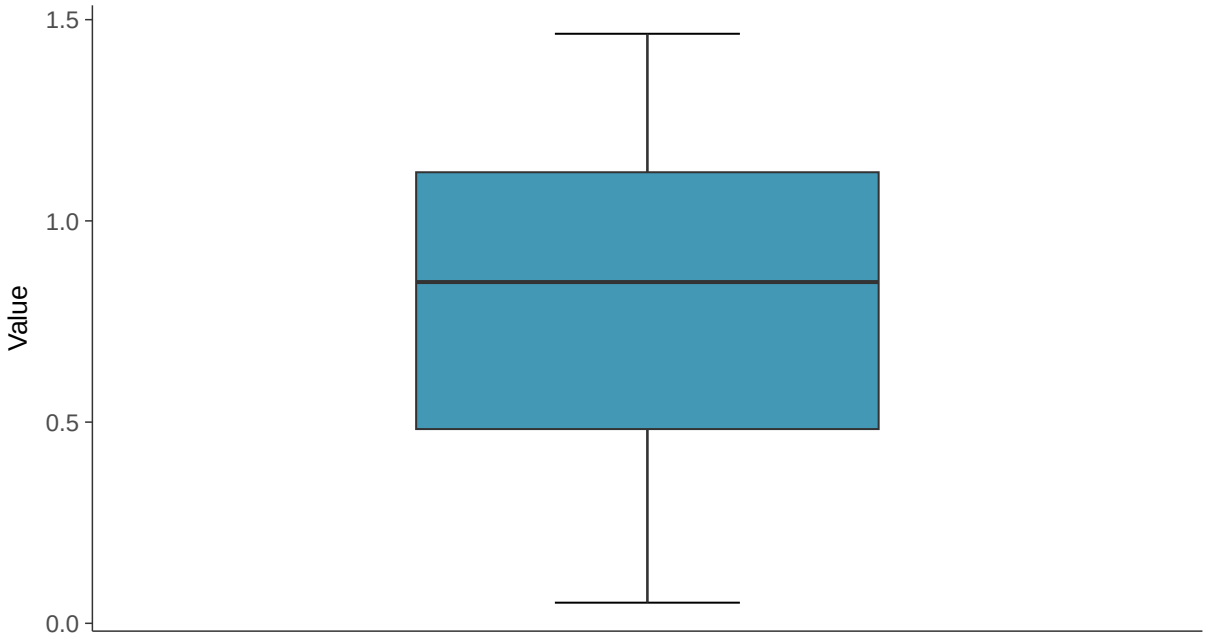
ID: 06_03_126





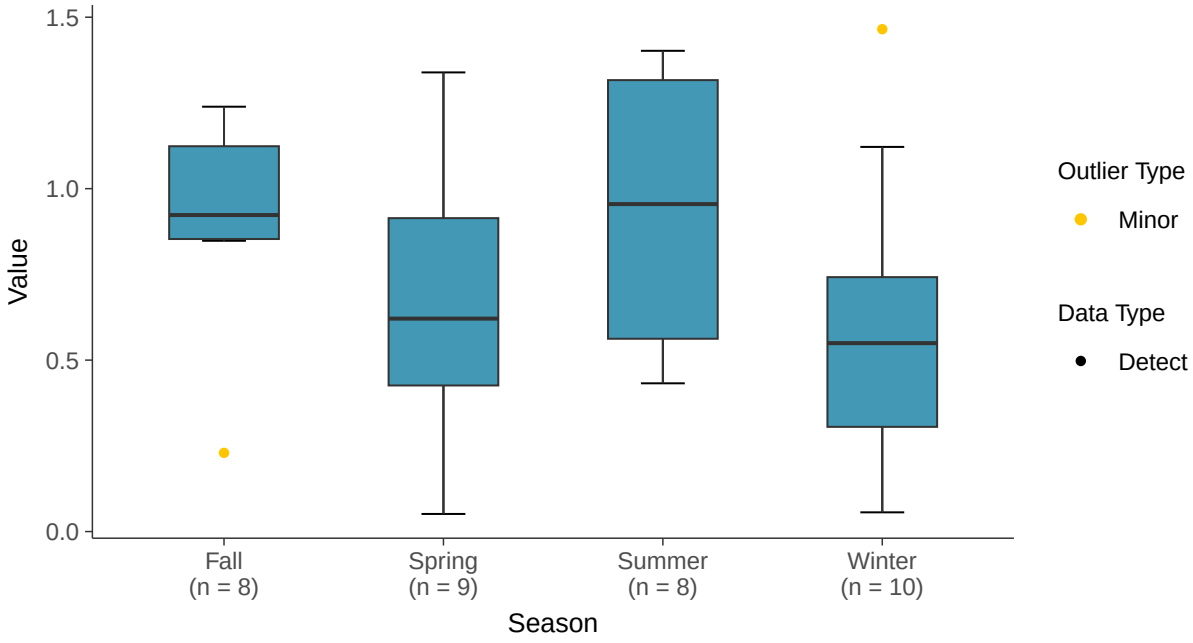
Boxplot

Total Radium, MW-6 (pCi/L)



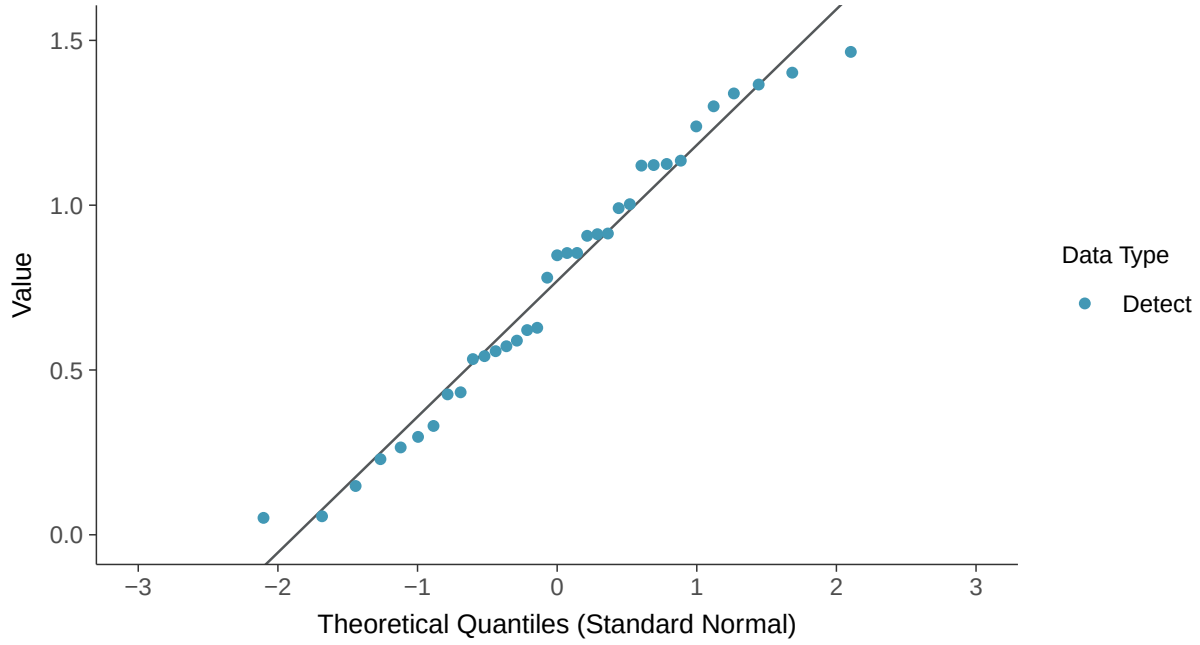
Boxplot by Season

Total Radium, MW-6 (pCi/L)



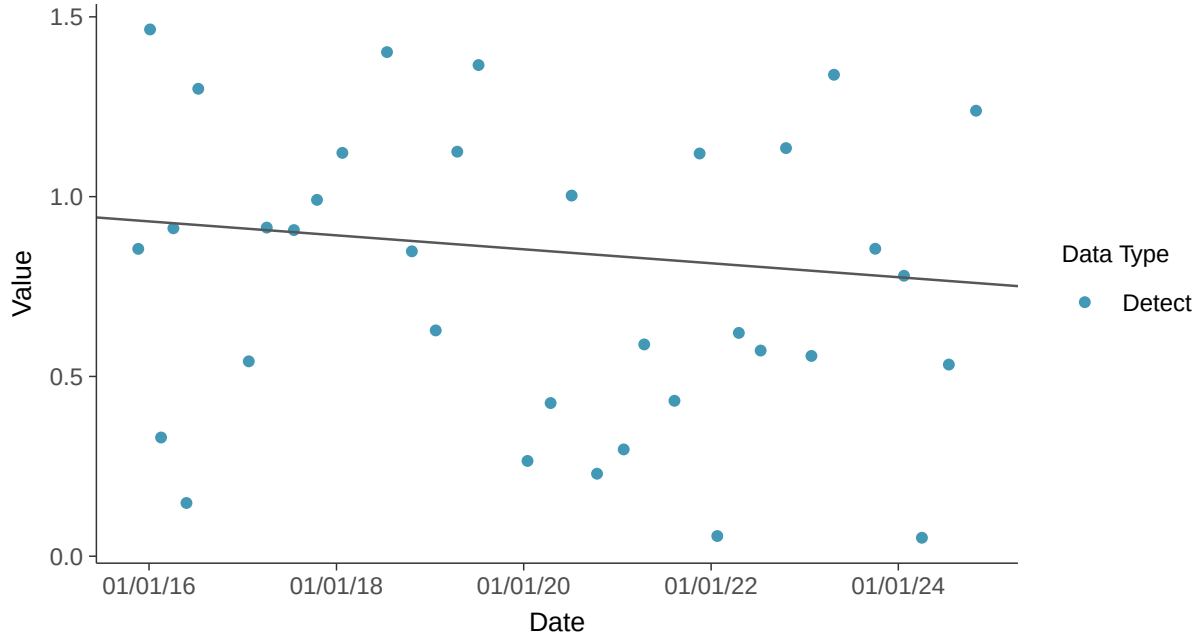
Normal Q-Q plot

Total Radium, MW-6 (pCi/L)



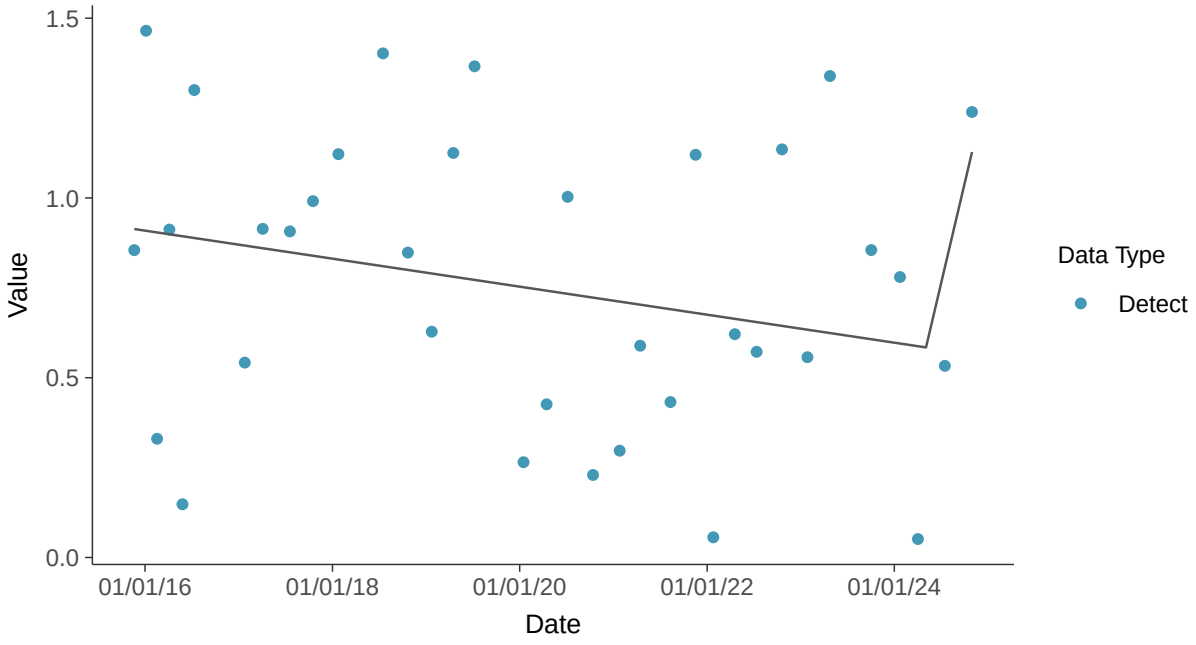
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-6 (pCi/L)



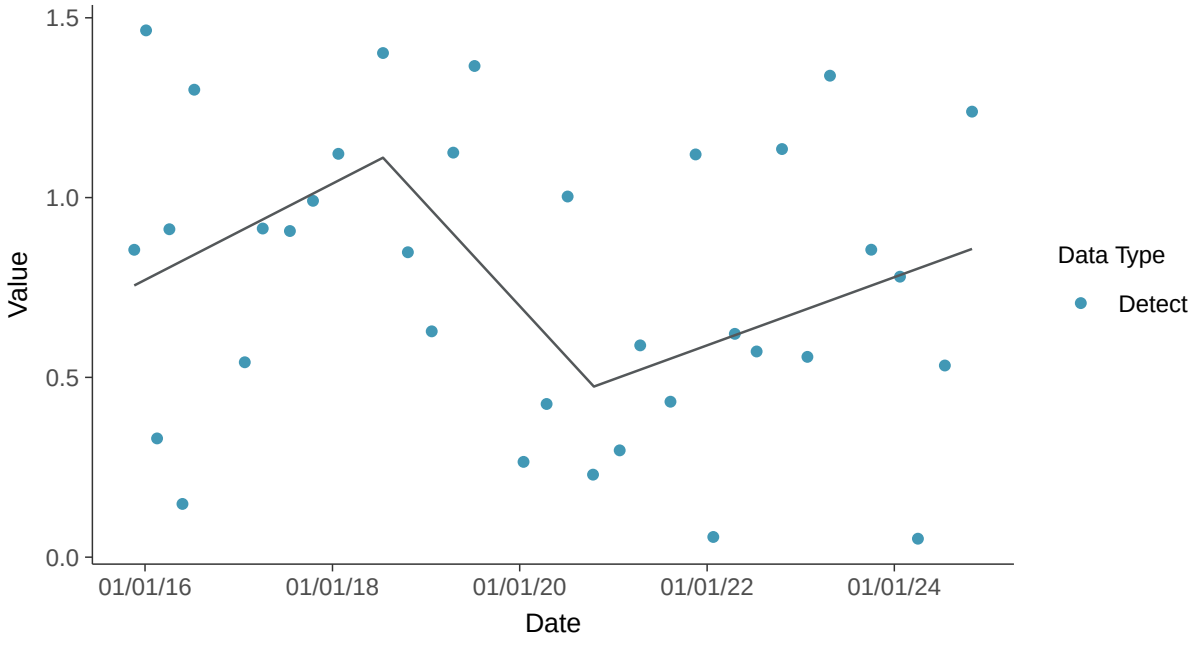
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-6 (pCi/L)



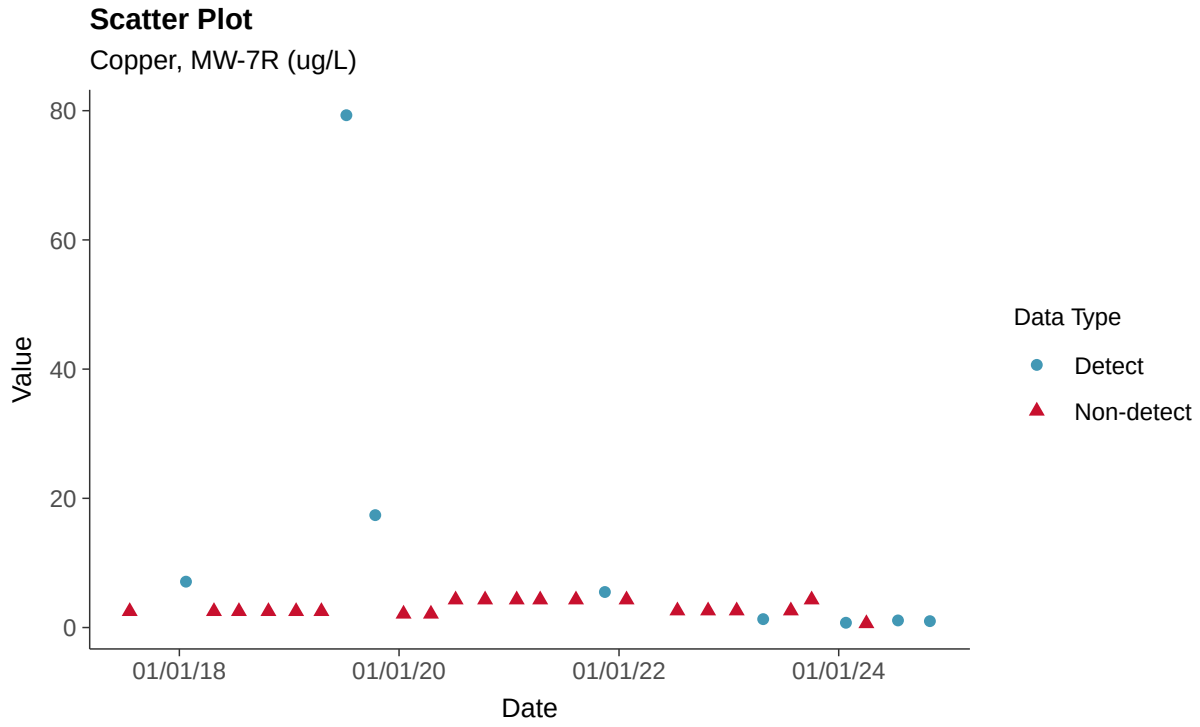
Trend Regression: Piecewise Linear-Linear-Linear

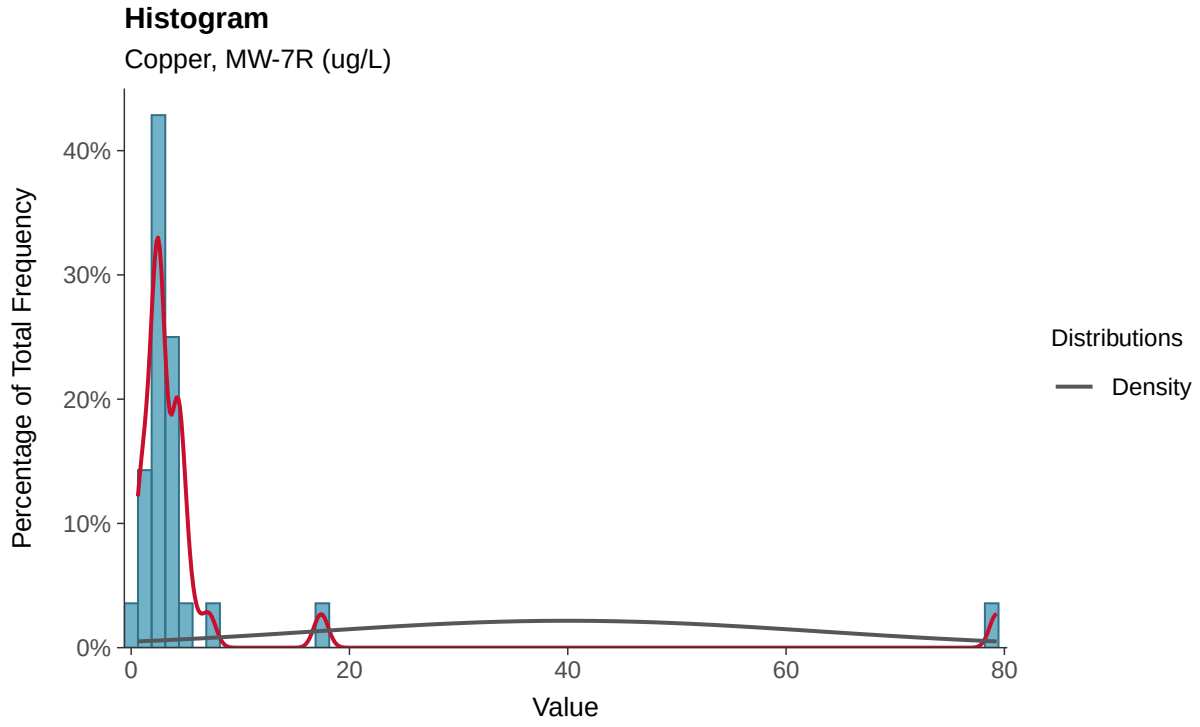
Total Radium, MW-6 (pCi/L)



App. I Metals: Copper, MW-7R

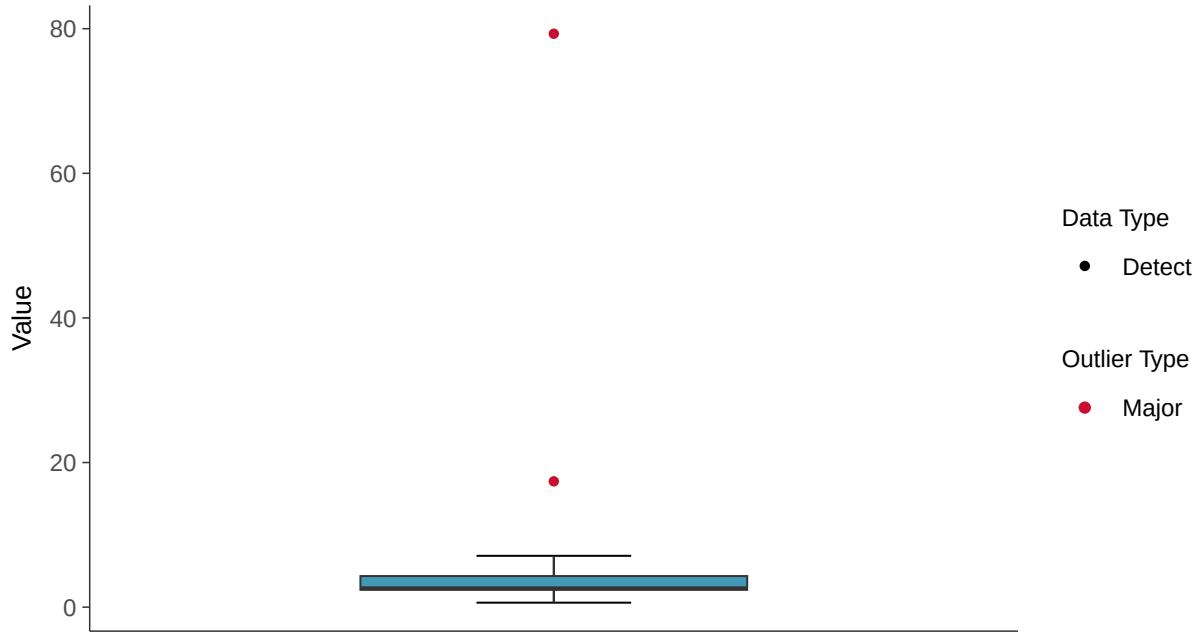
ID: 07_01_111





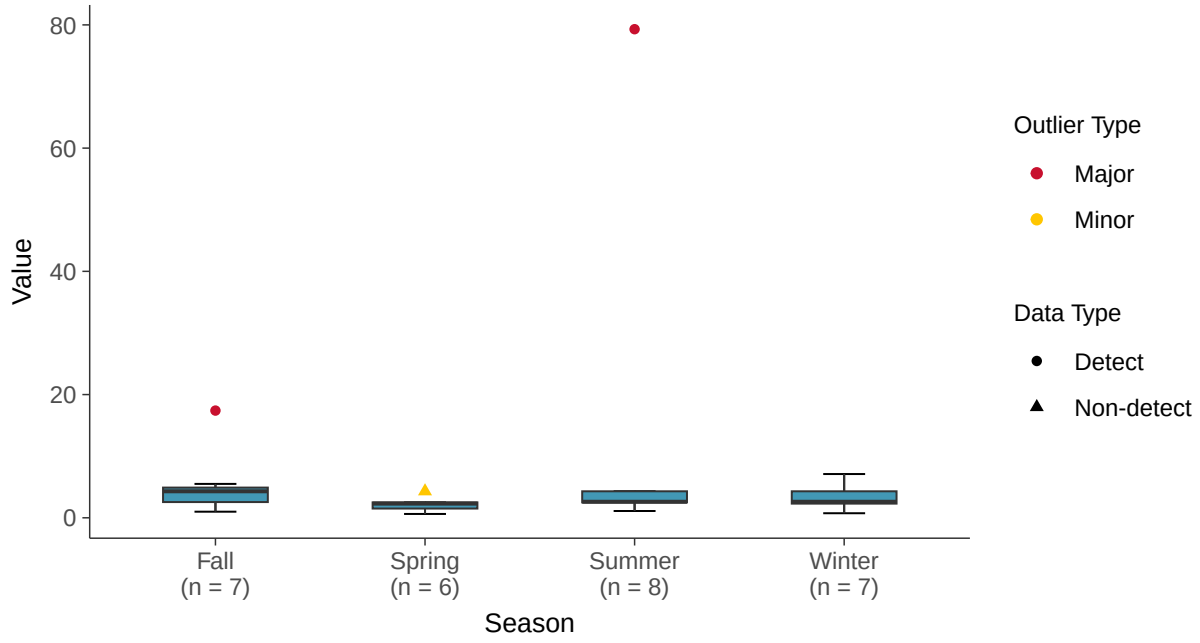
Boxplot

Copper, MW-7R (ug/L)



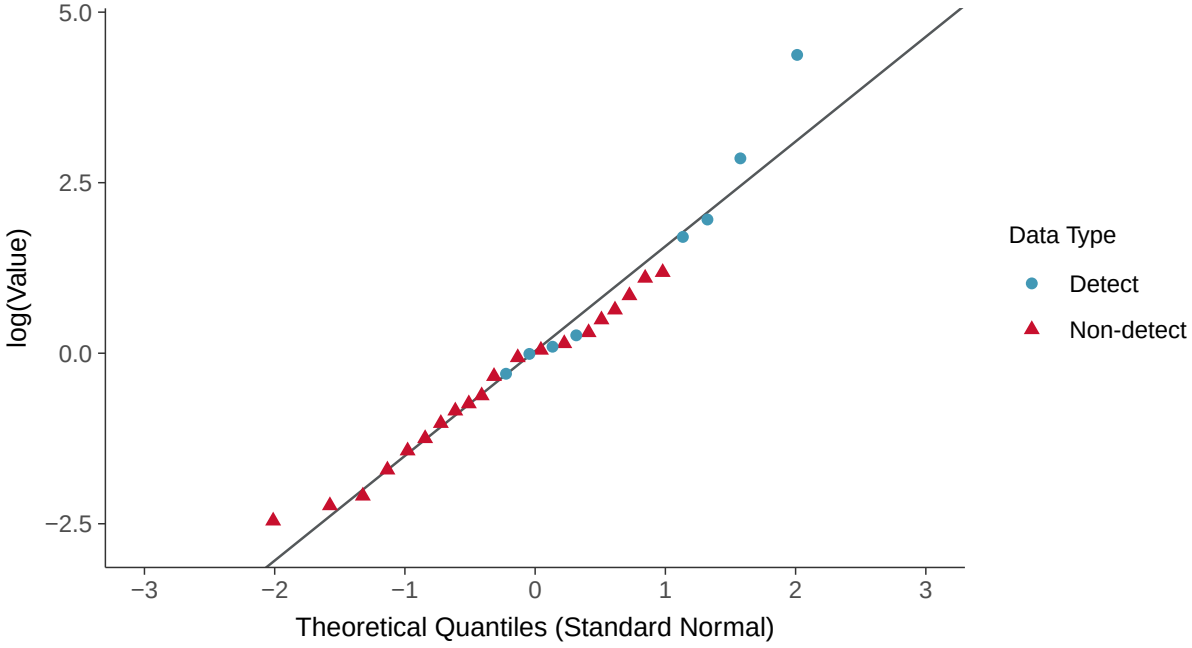
Boxplot by Season

Copper, MW-7R (ug/L)



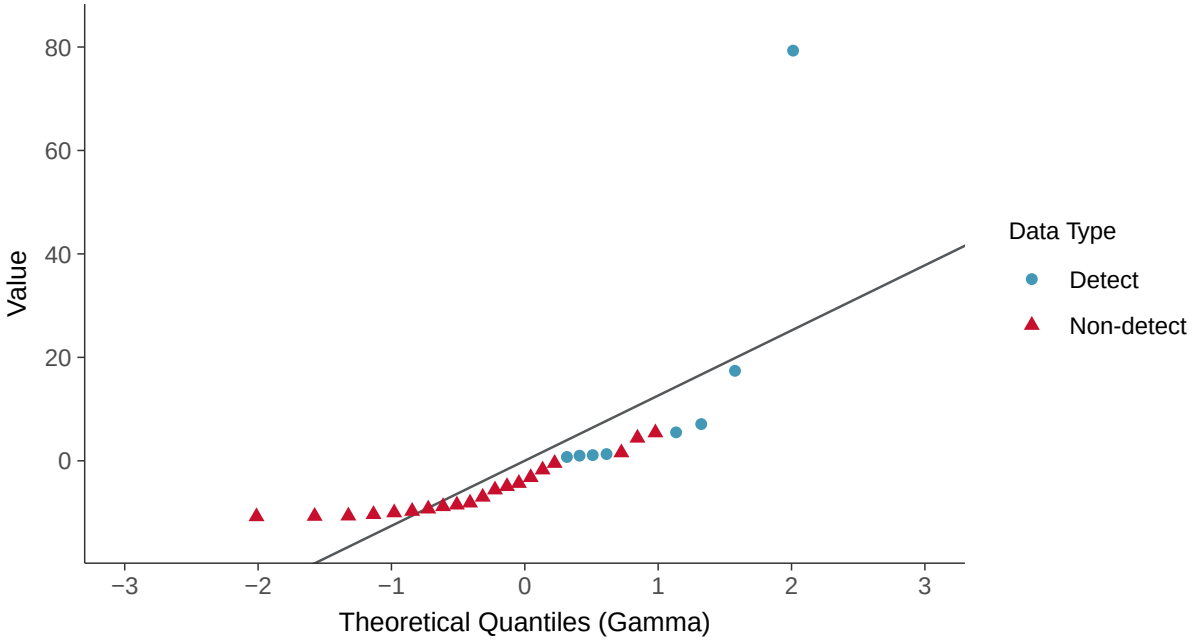
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-7R (ug/L)



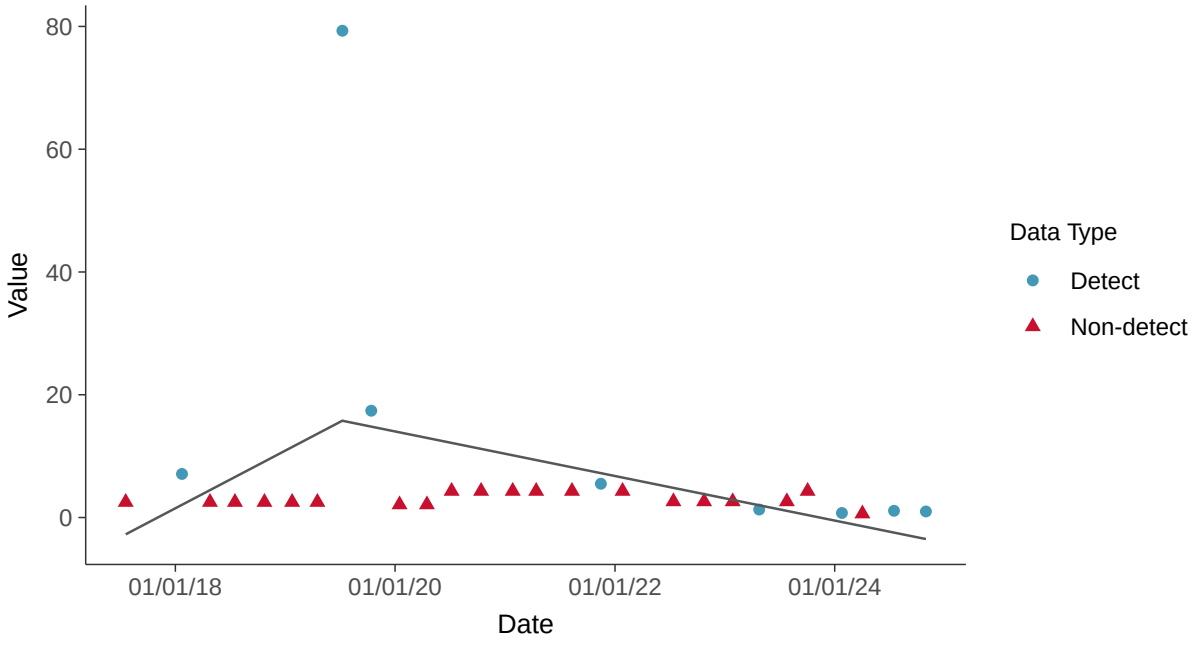
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-7R (ug/L)



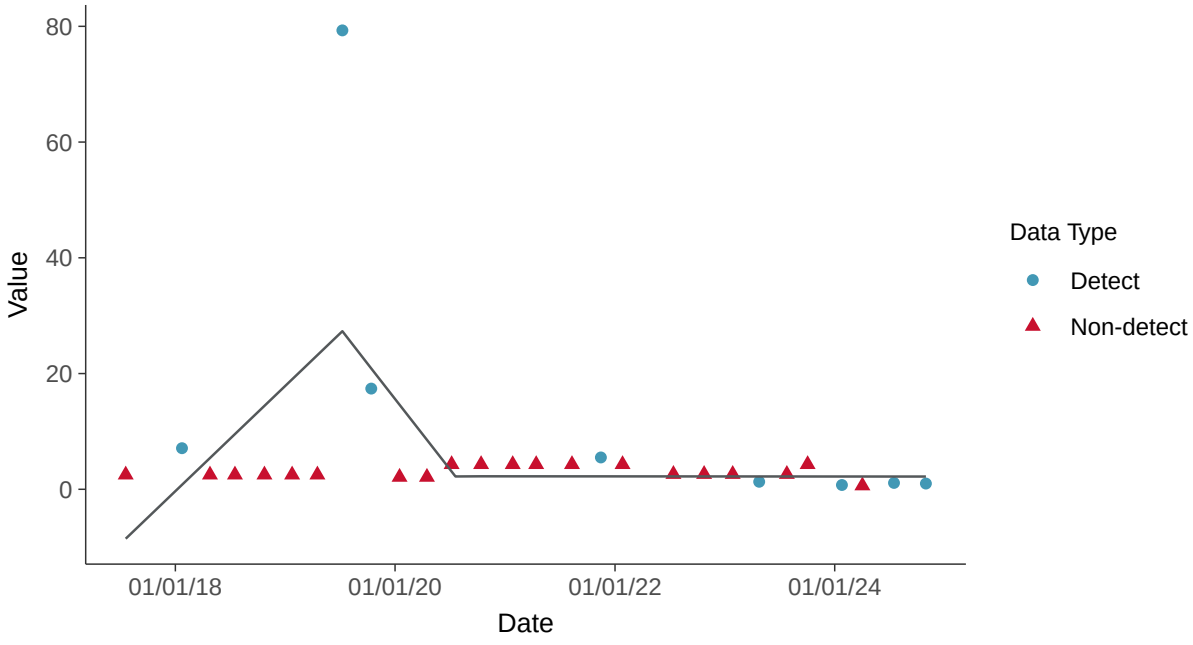
Trend Regression: Piecewise Linear-Linear

Copper, MW-7R (ug/L)



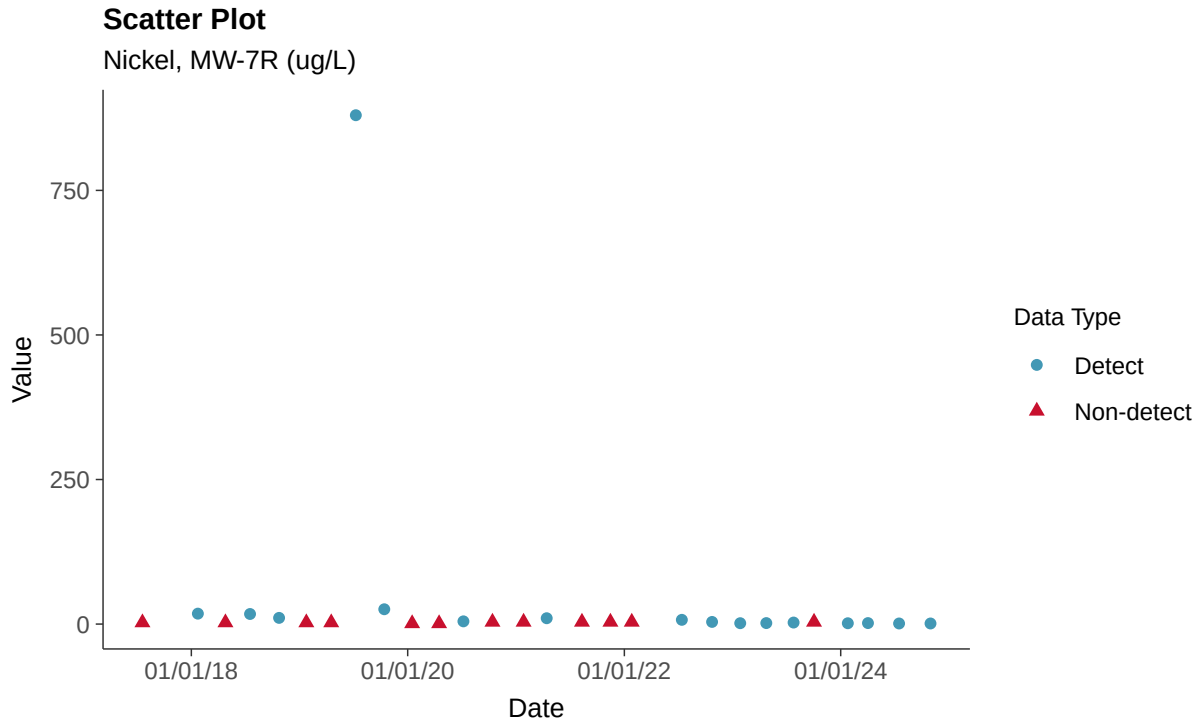
Trend Regression: Piecewise Linear-Linear-Linear

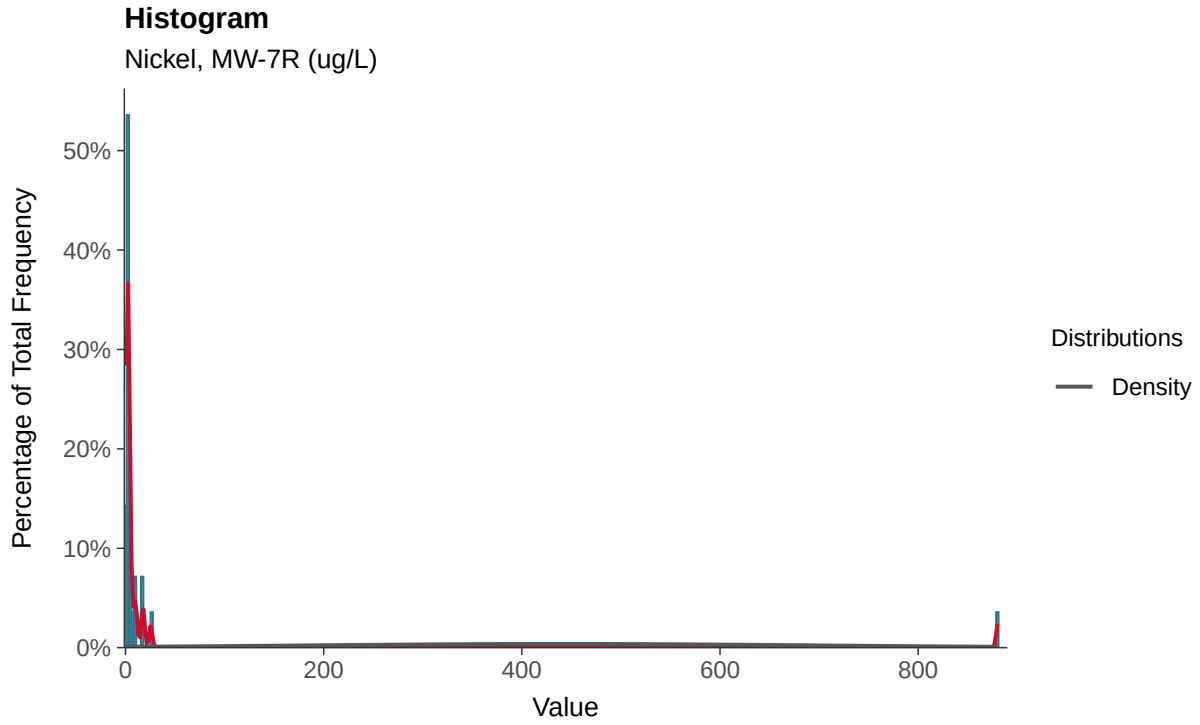
Copper, MW-7R (ug/L)



App. I Metals: Nickel, MW-7R

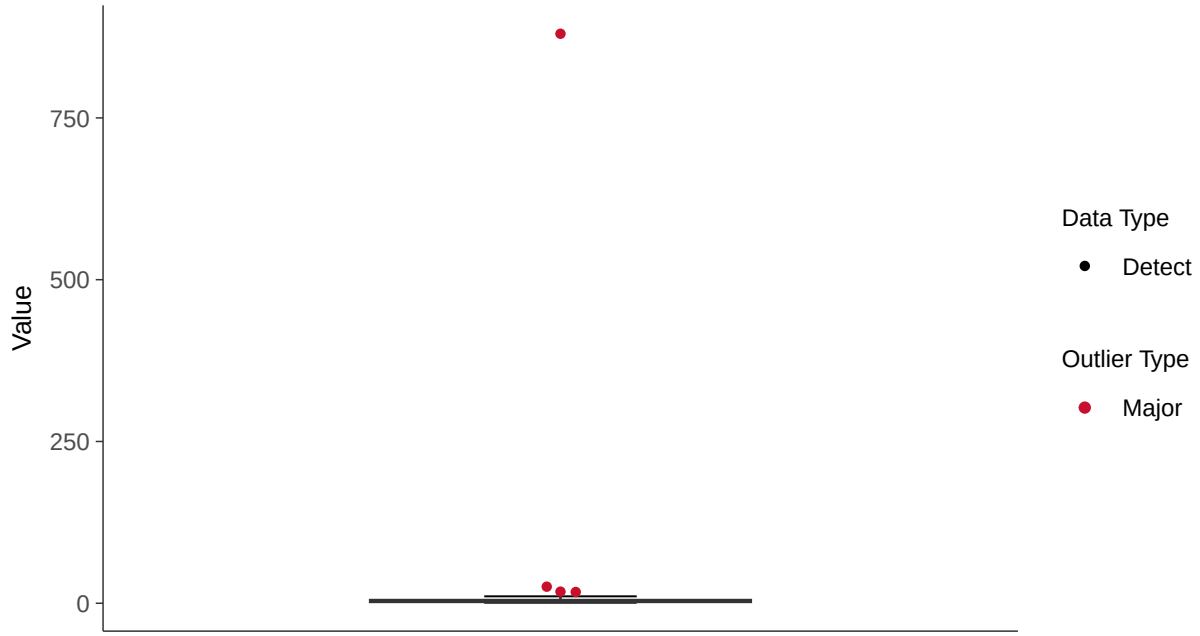
ID: 07_01_117





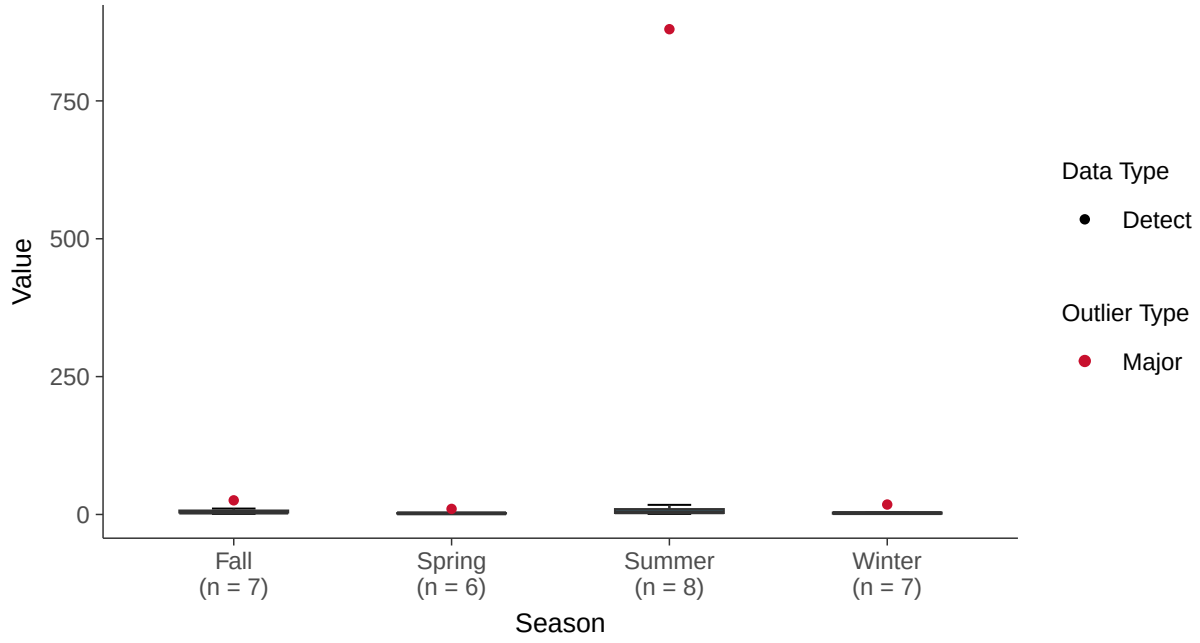
Boxplot

Nickel, MW-7R (ug/L)



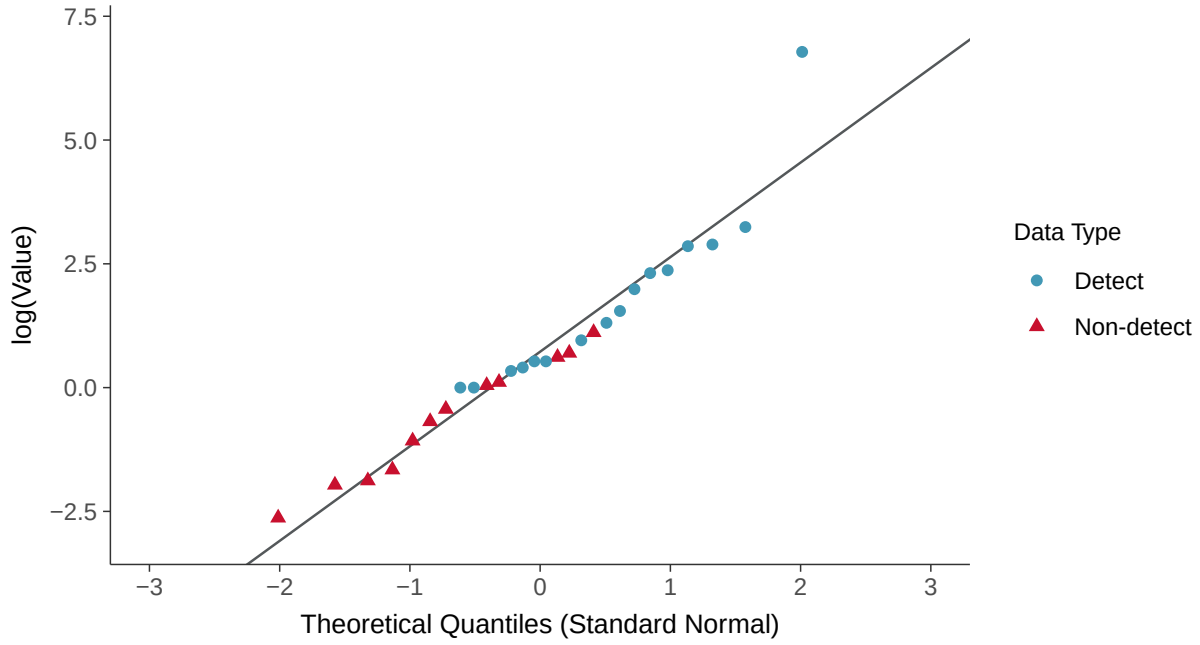
Boxplot by Season

Nickel, MW-7R (ug/L)



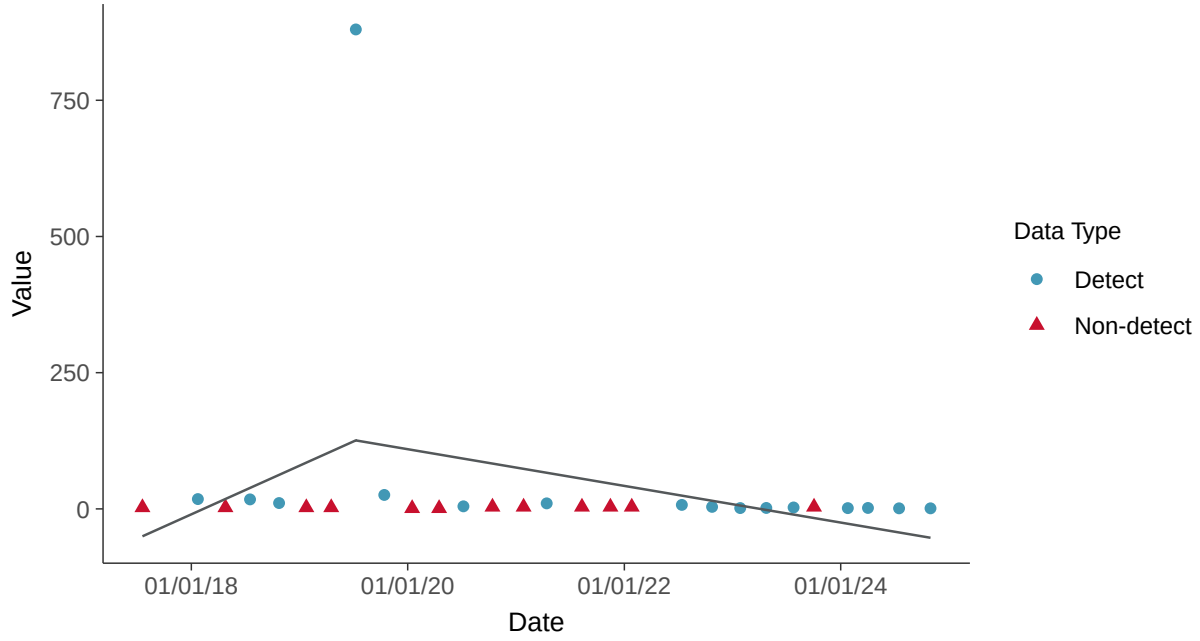
Lognormal Q-Q plot using ROS Imputed Estimates

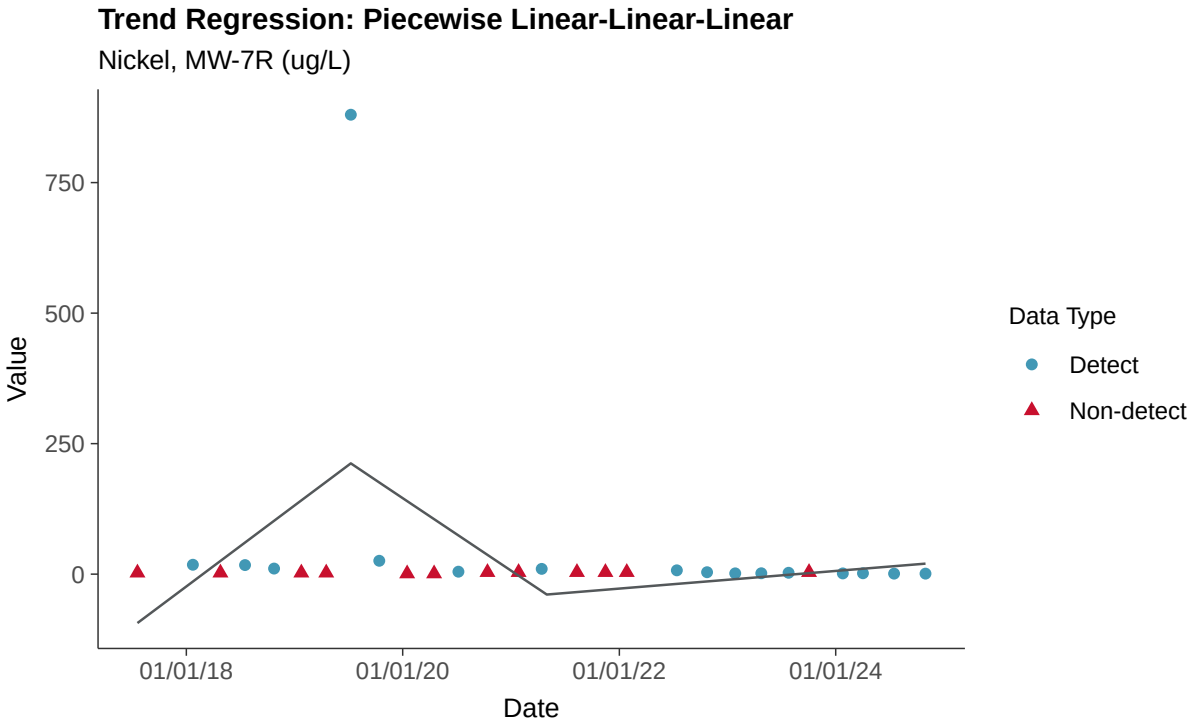
Nickel, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

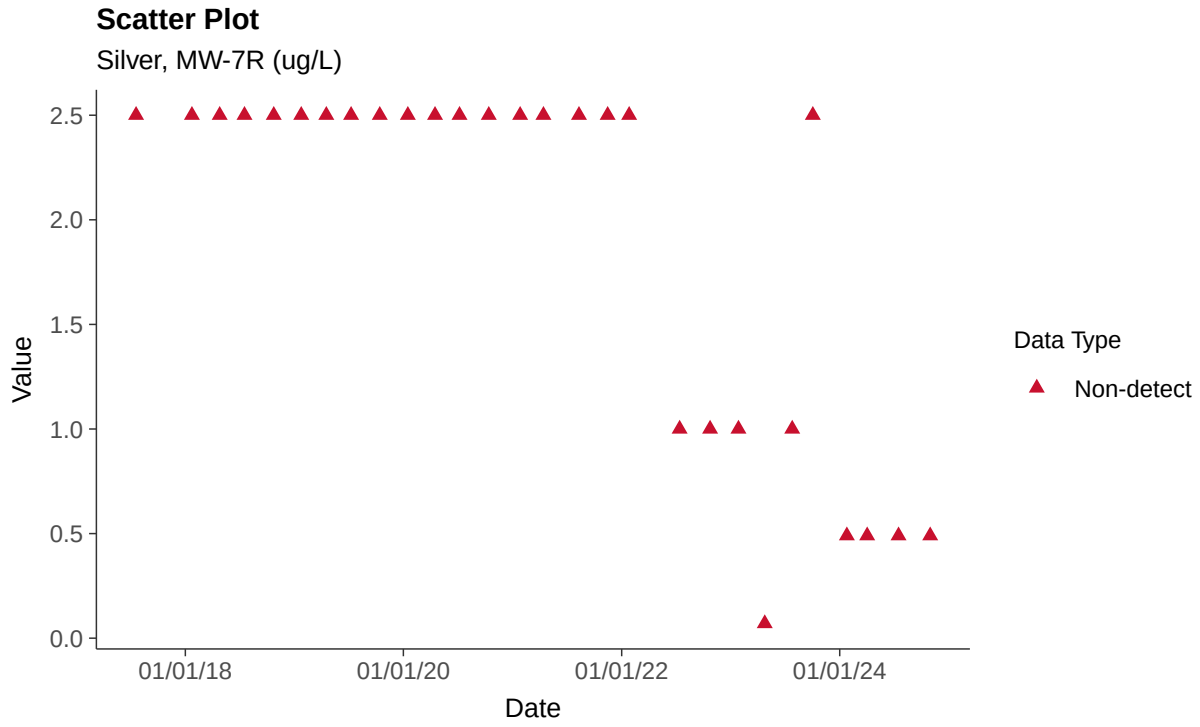
Nickel, MW-7R (ug/L)

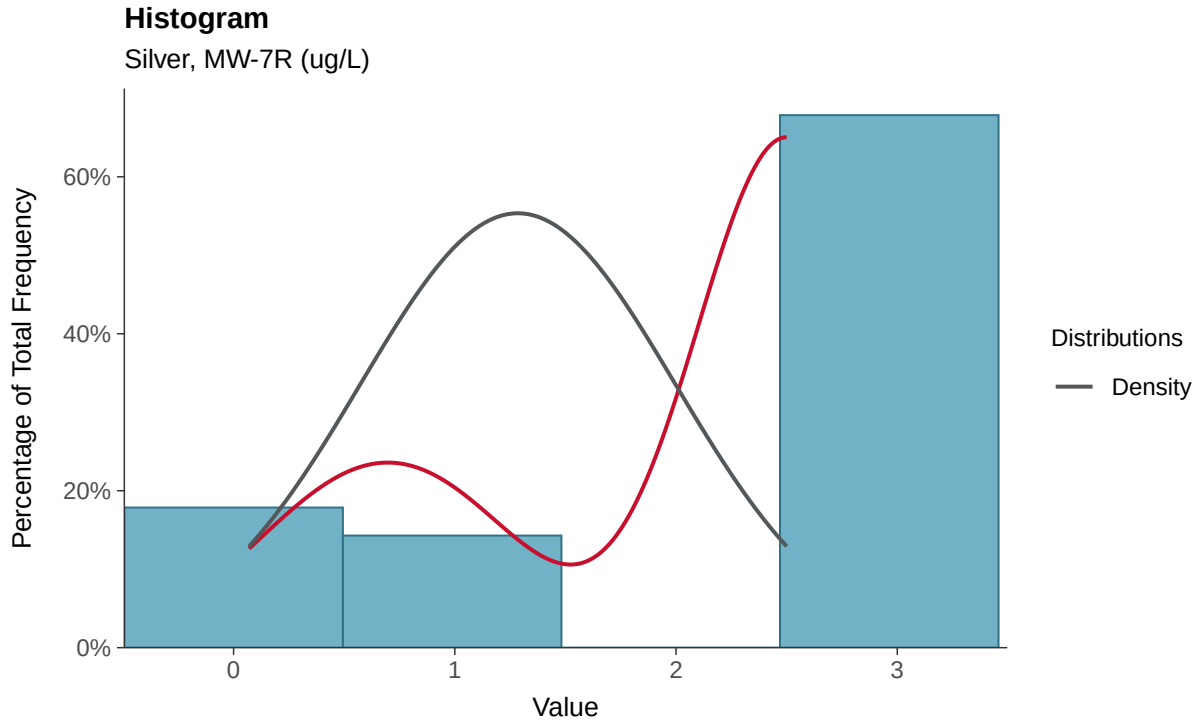



Trend Regression: Piecewise Linear-Linear-Linear
Nickel, MW-7R (ug/L)
Value
750
500
250
0
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Silver, MW-7R

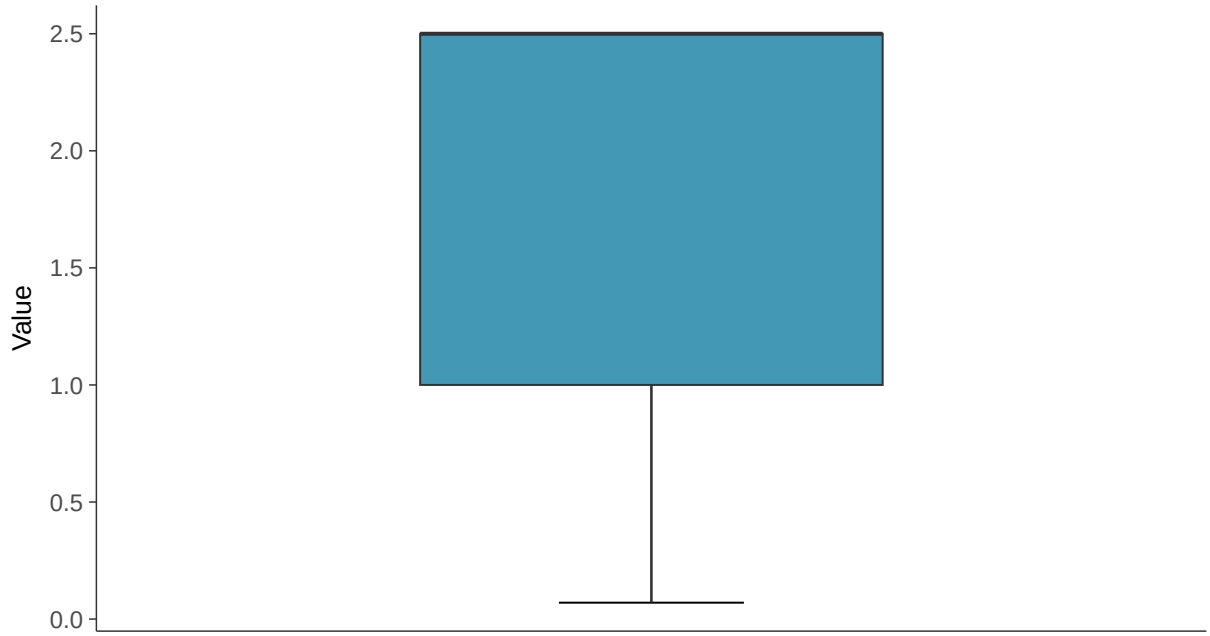
ID: 07_01_122





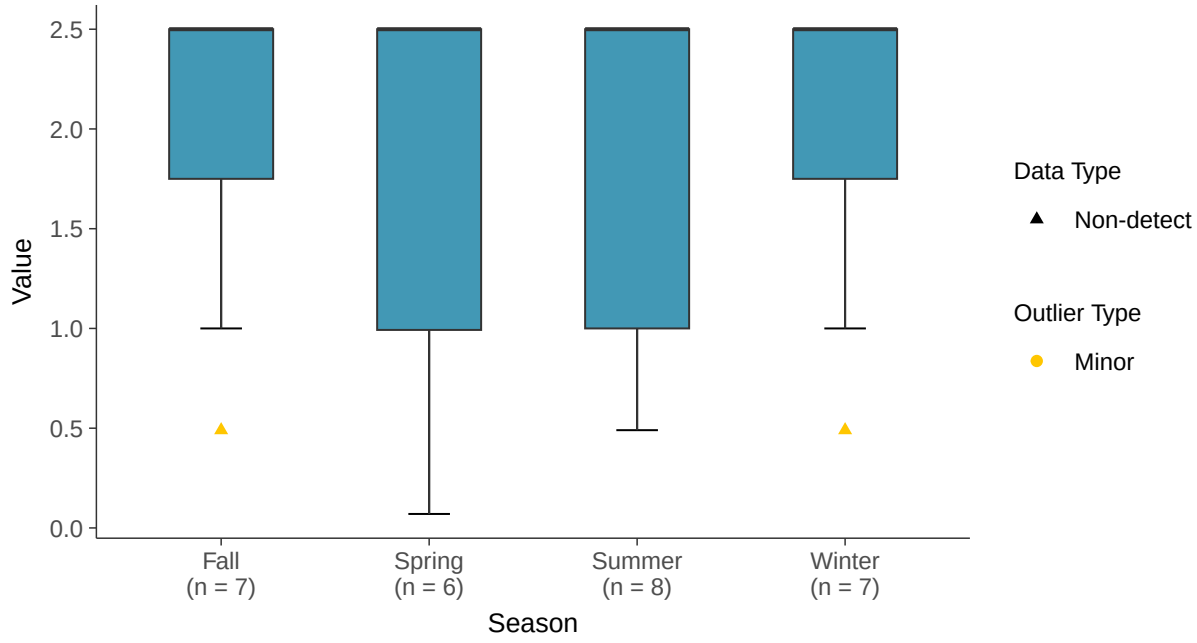
Boxplot

Silver, MW-7R (ug/L)



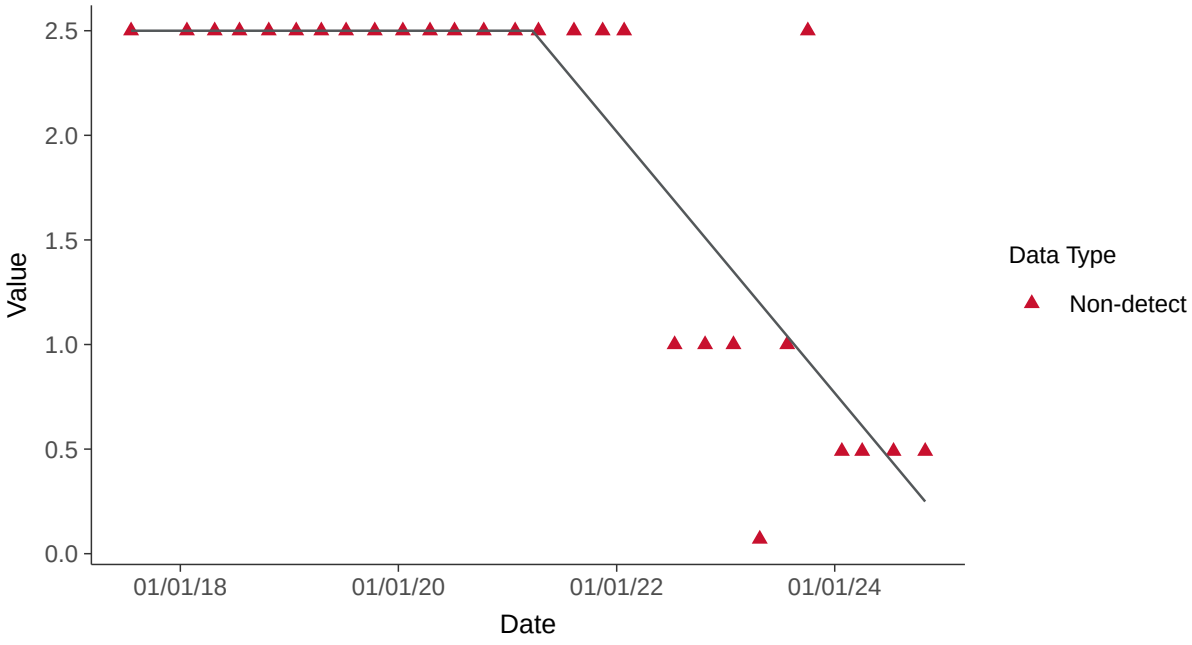
Boxplot by Season

Silver, MW-7R (ug/L)



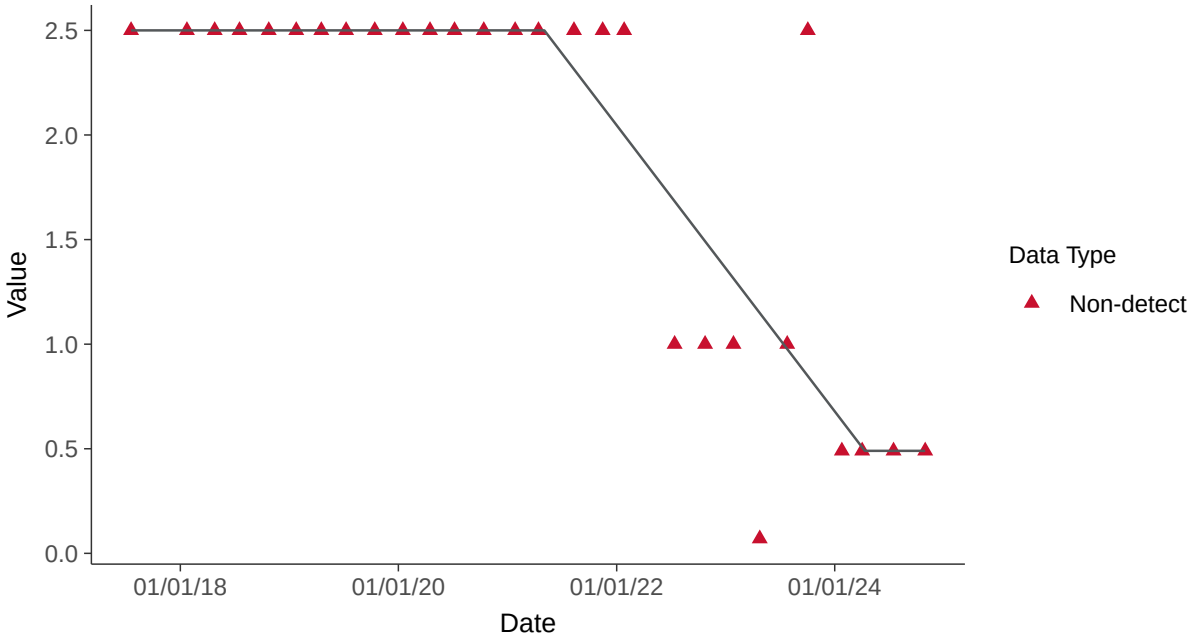
Trend Regression: Piecewise Linear-Linear

Silver, MW-7R (ug/L)



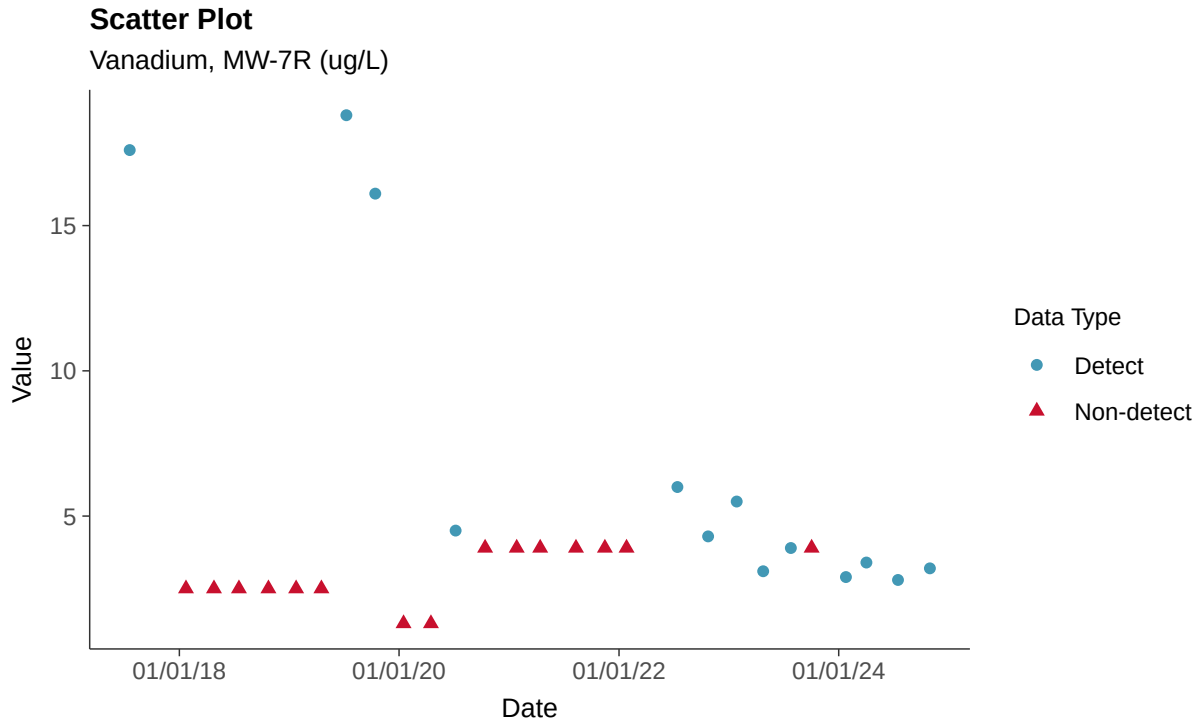
Trend Regression: Piecewise Linear-Linear-Linear

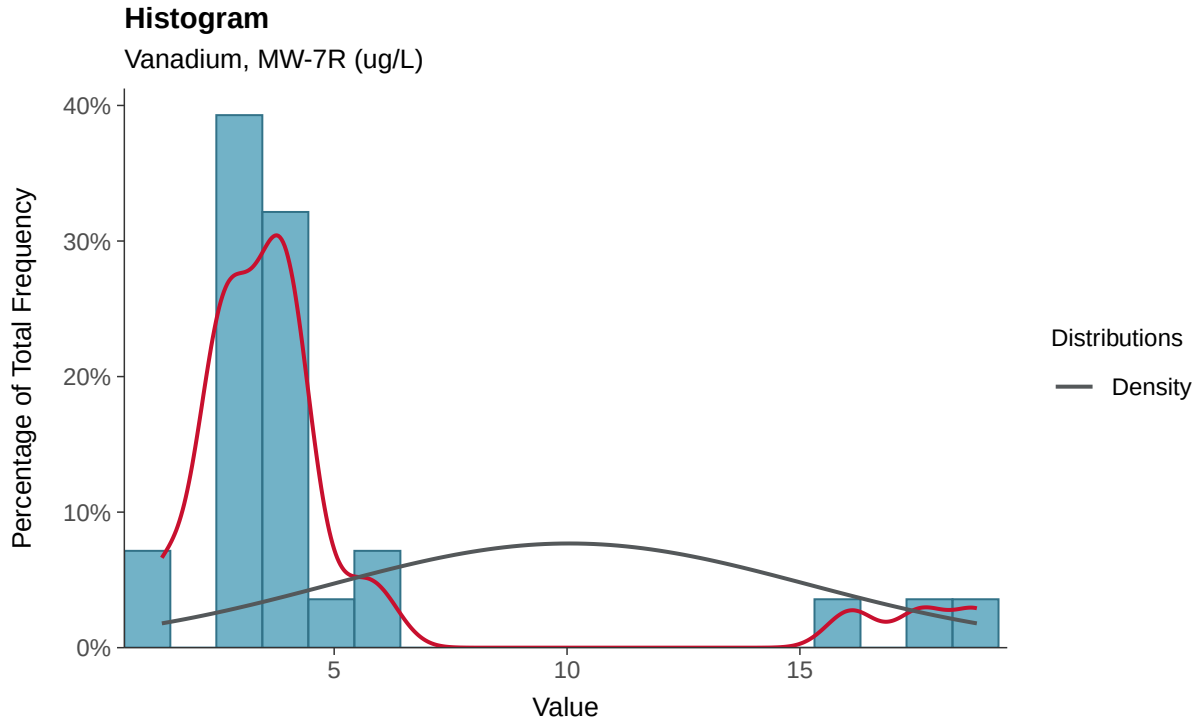
Silver, MW-7R (ug/L)



App. I Metals: Vanadium, MW-7R

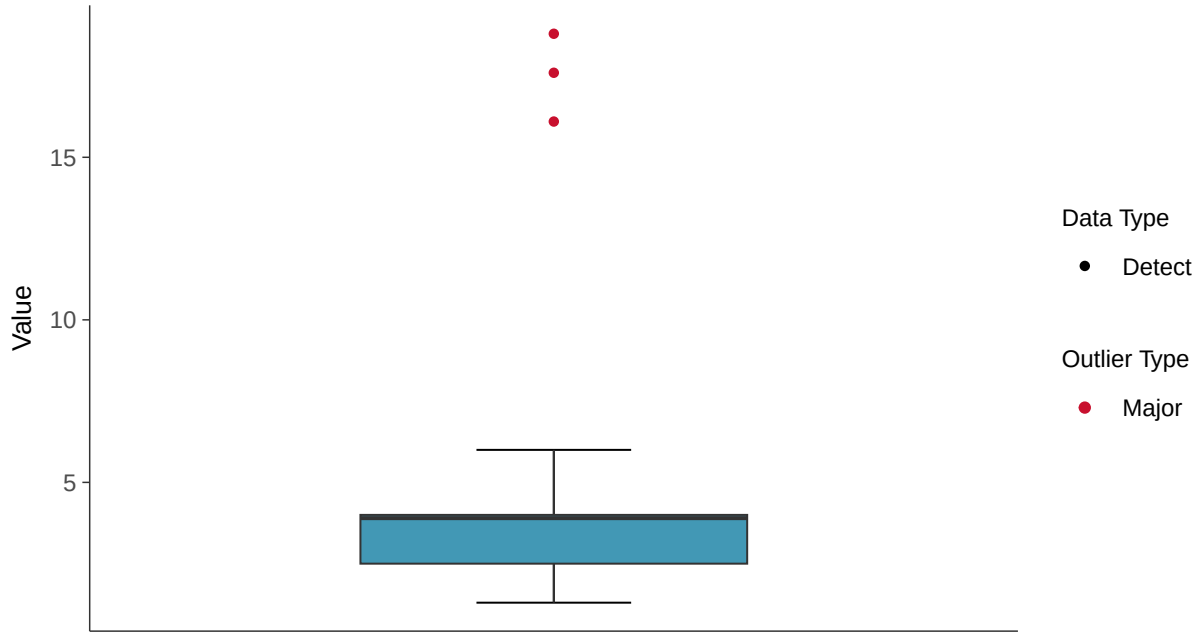
ID: 07_01_127





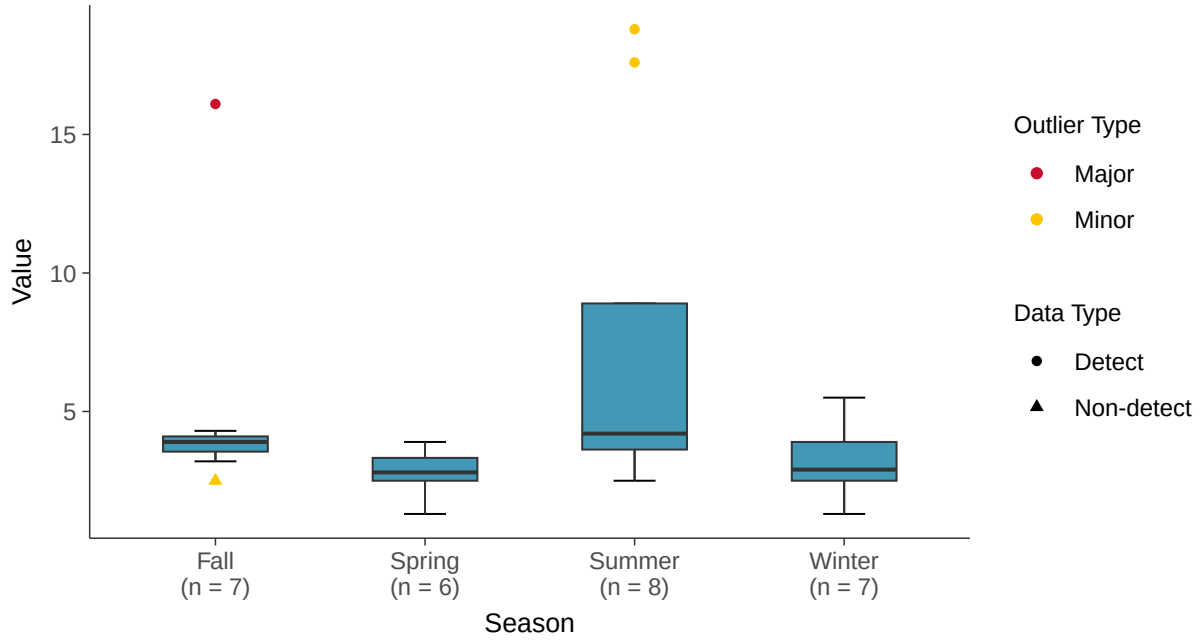
Boxplot

Vanadium, MW-7R (ug/L)



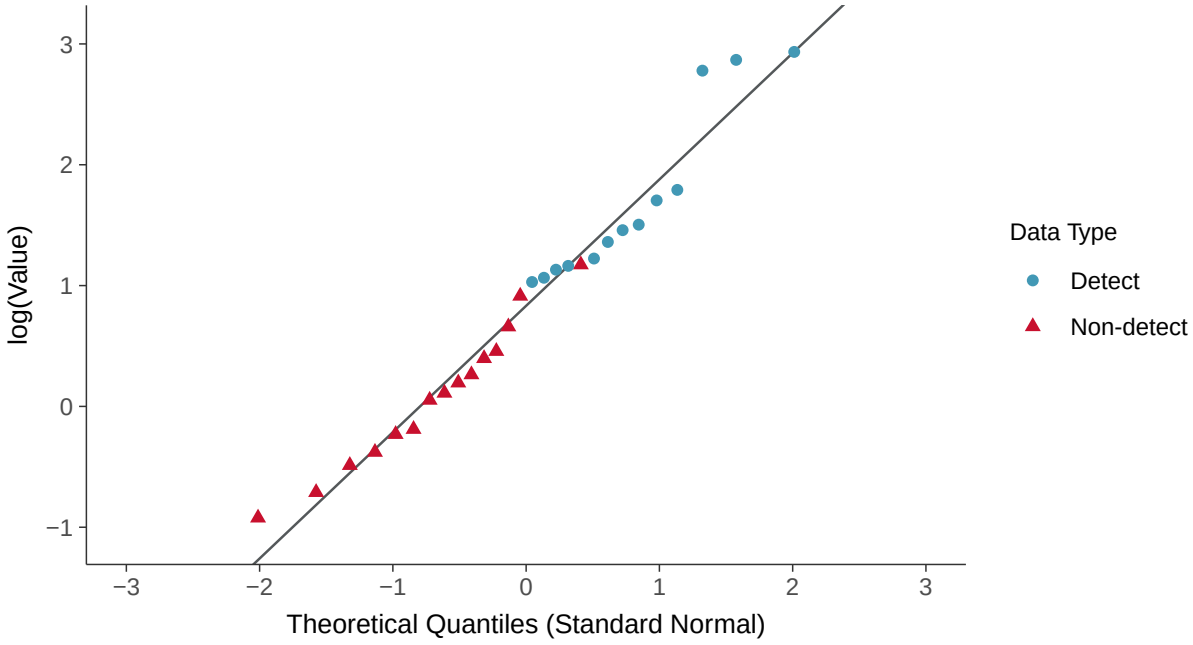
Boxplot by Season

Vanadium, MW-7R (ug/L)



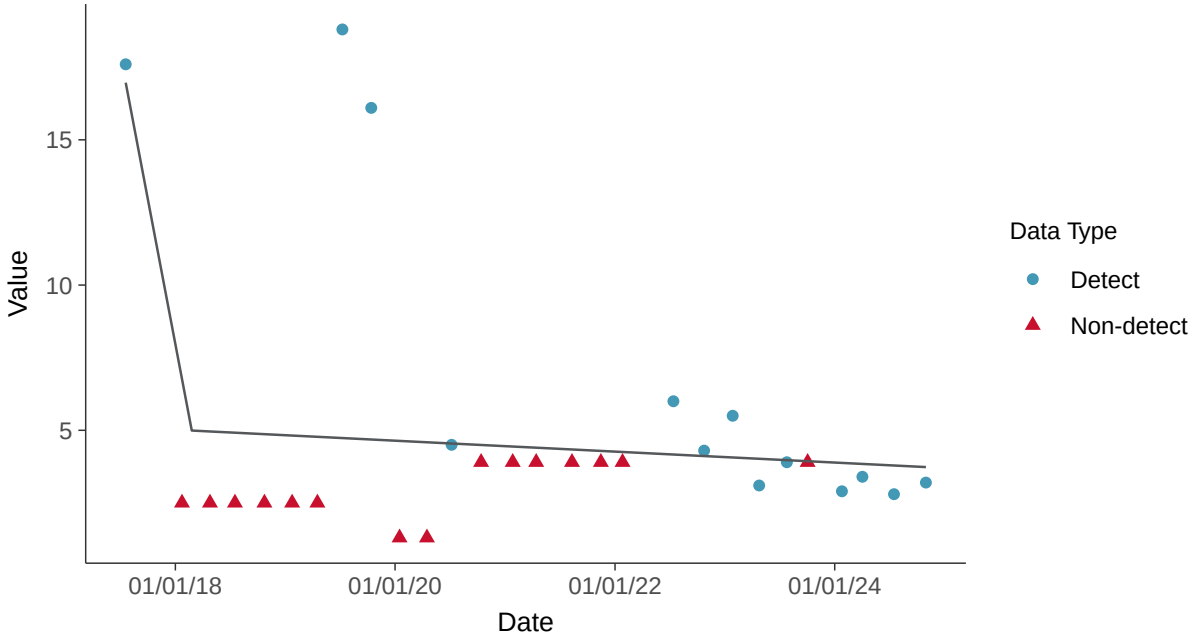
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-7R (ug/L)



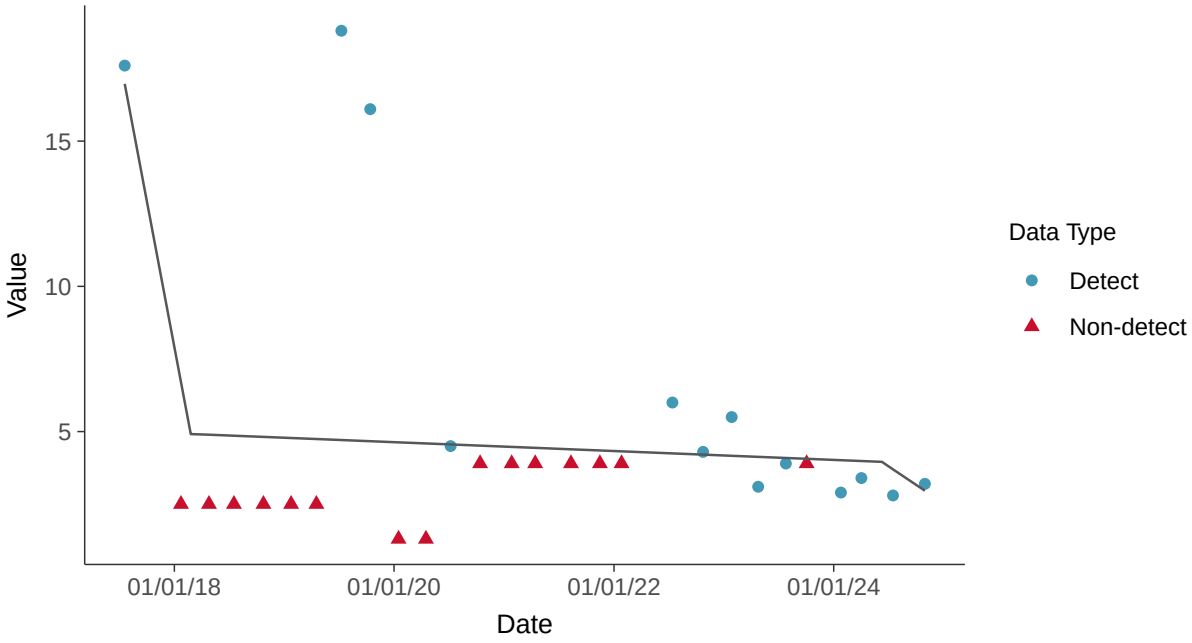
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-7R (ug/L)

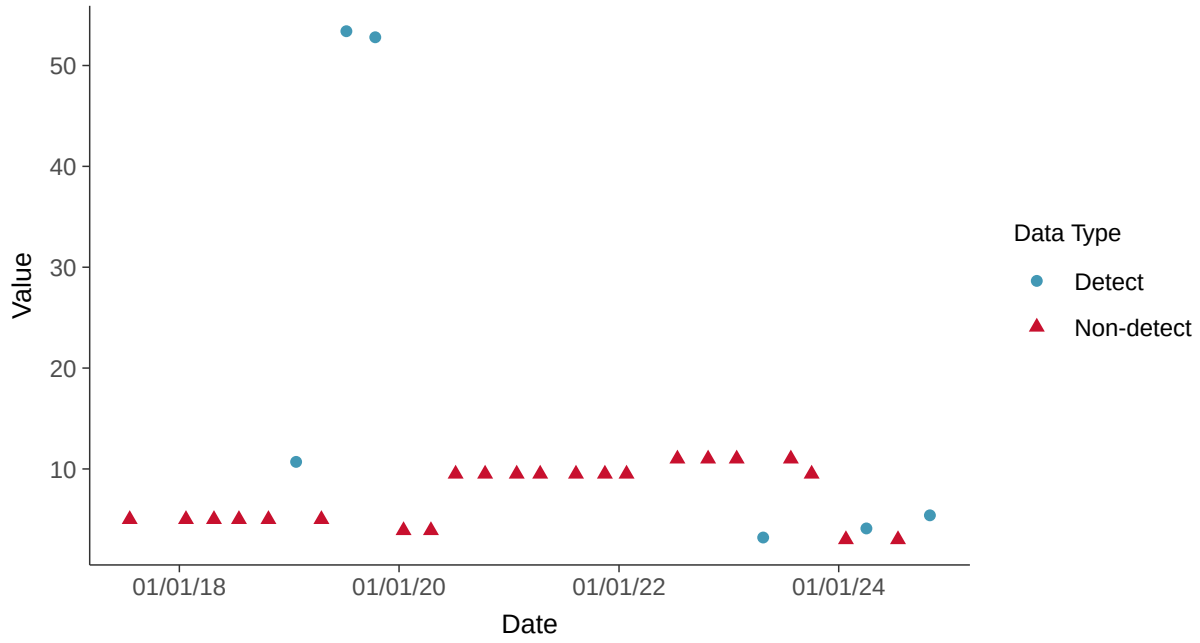


App. I Metals: Zinc, MW-7R

ID: 07_01_128

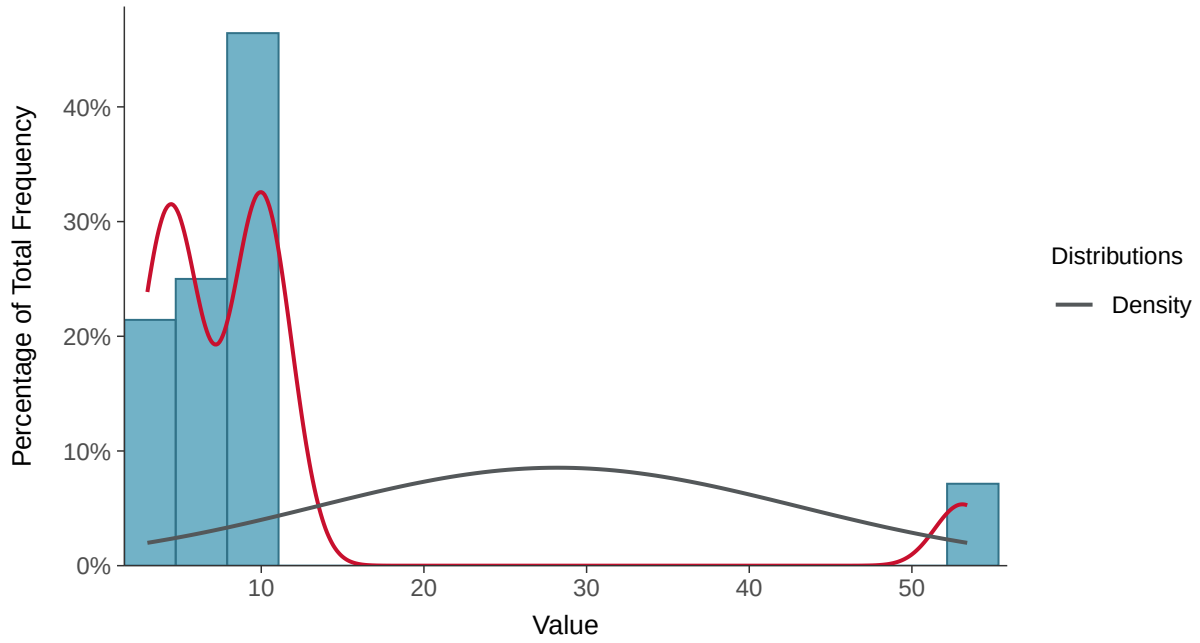
Scatter Plot

Zinc, MW-7R (ug/L)



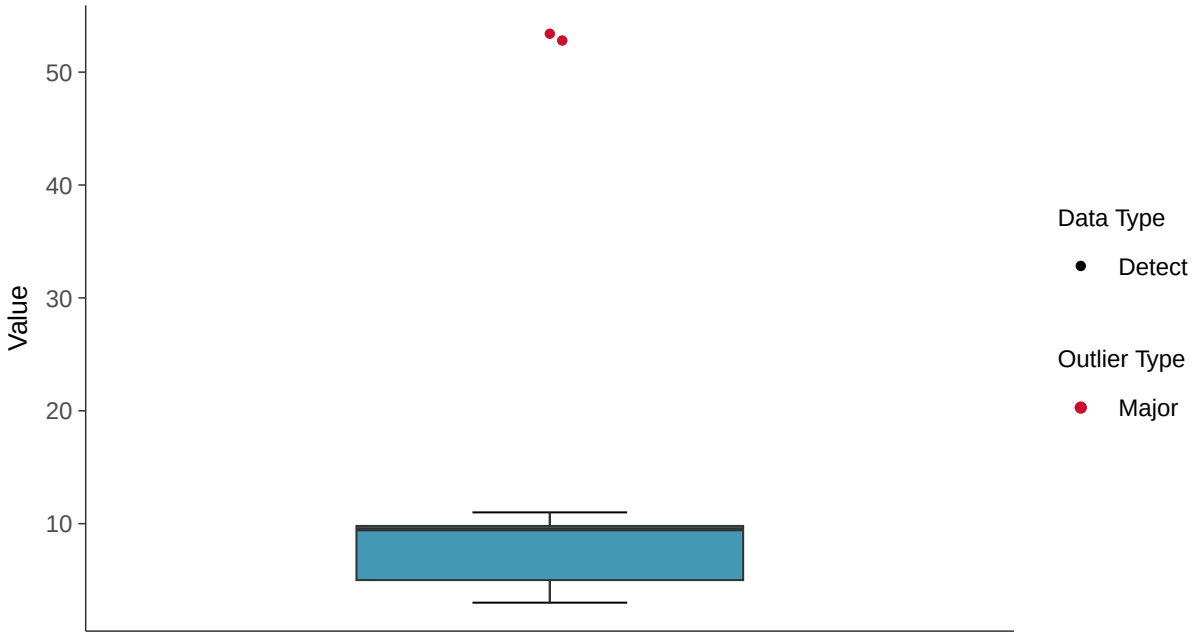
Histogram

Zinc, MW-7R (ug/L)



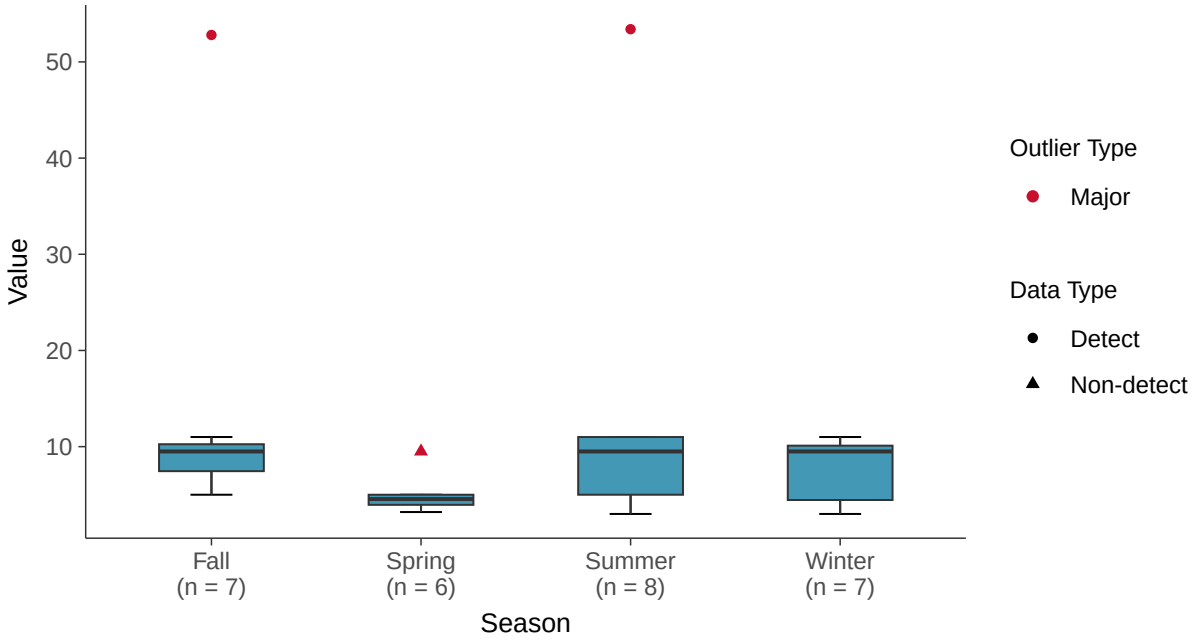
Boxplot

Zinc, MW-7R (ug/L)



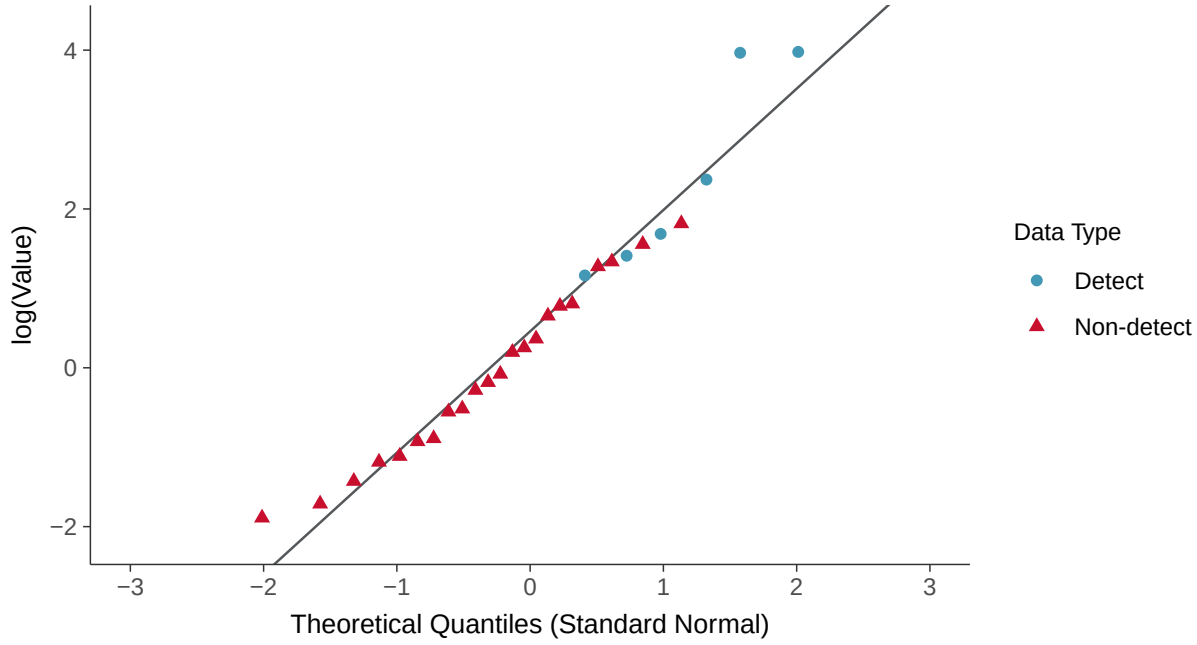
Boxplot by Season

Zinc, MW-7R (ug/L)



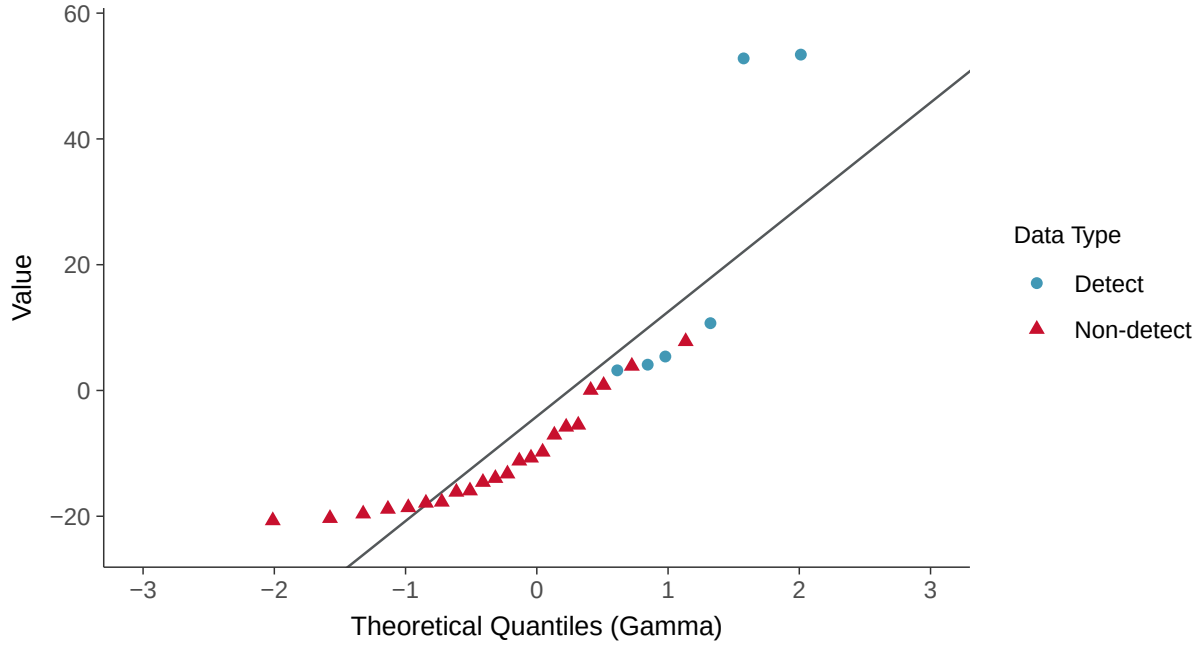
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-7R (ug/L)



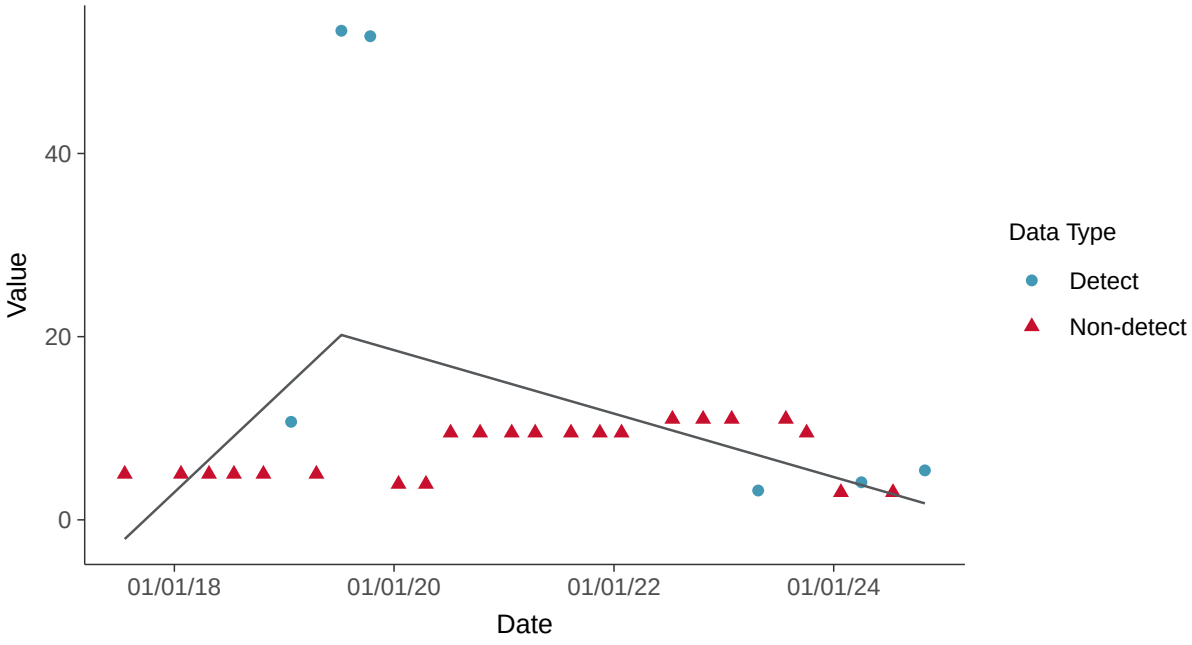
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-7R (ug/L)

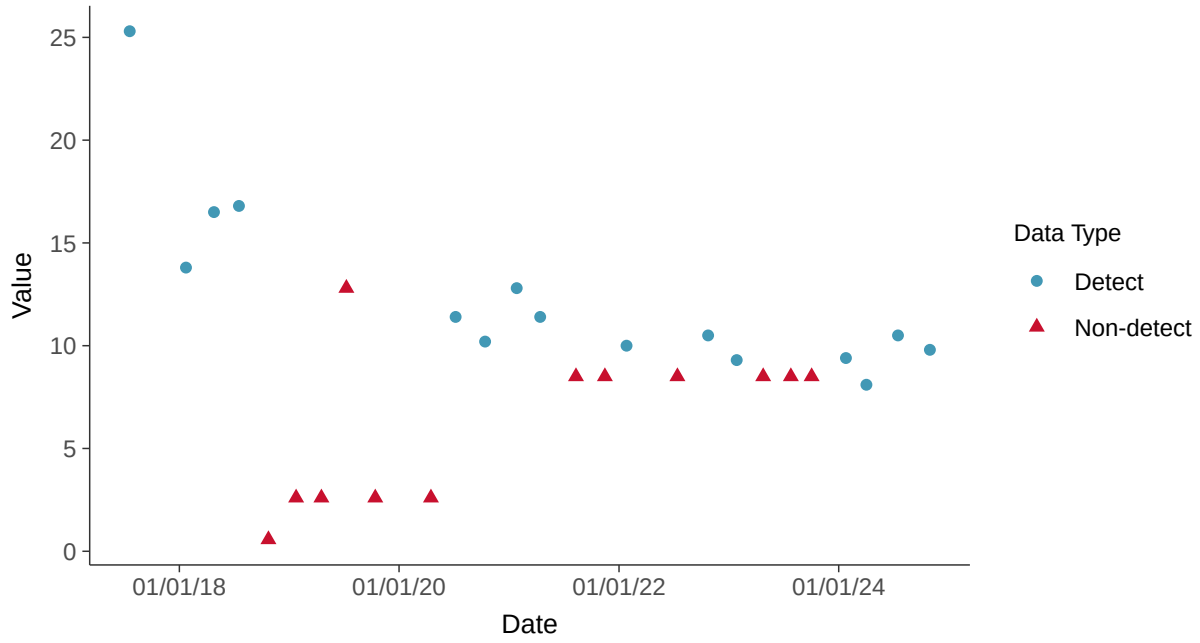


App. III: Boron, MW-7R

ID: 07_02_105

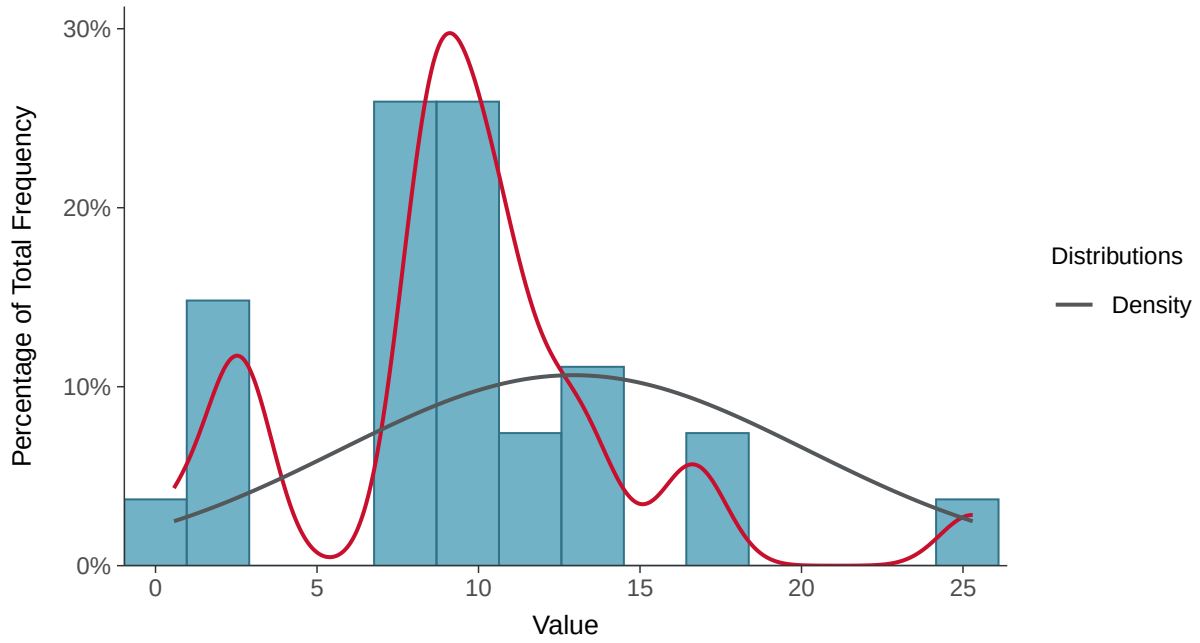
Scatter Plot

Boron, MW-7R (ug/L)



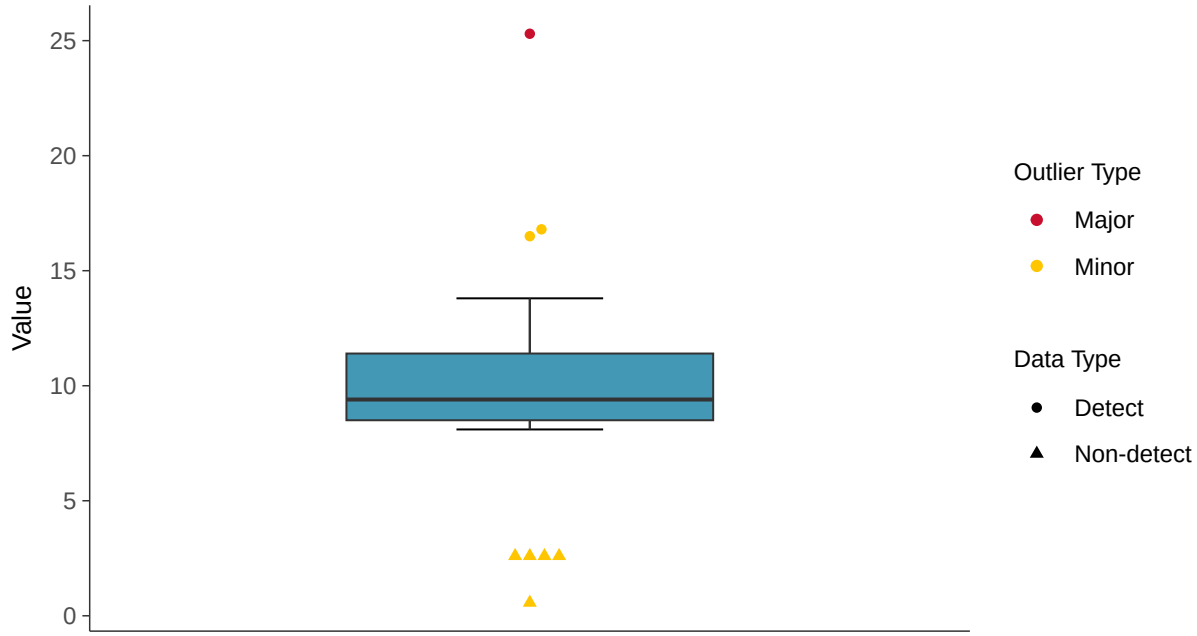
Histogram

Boron, MW-7R (ug/L)



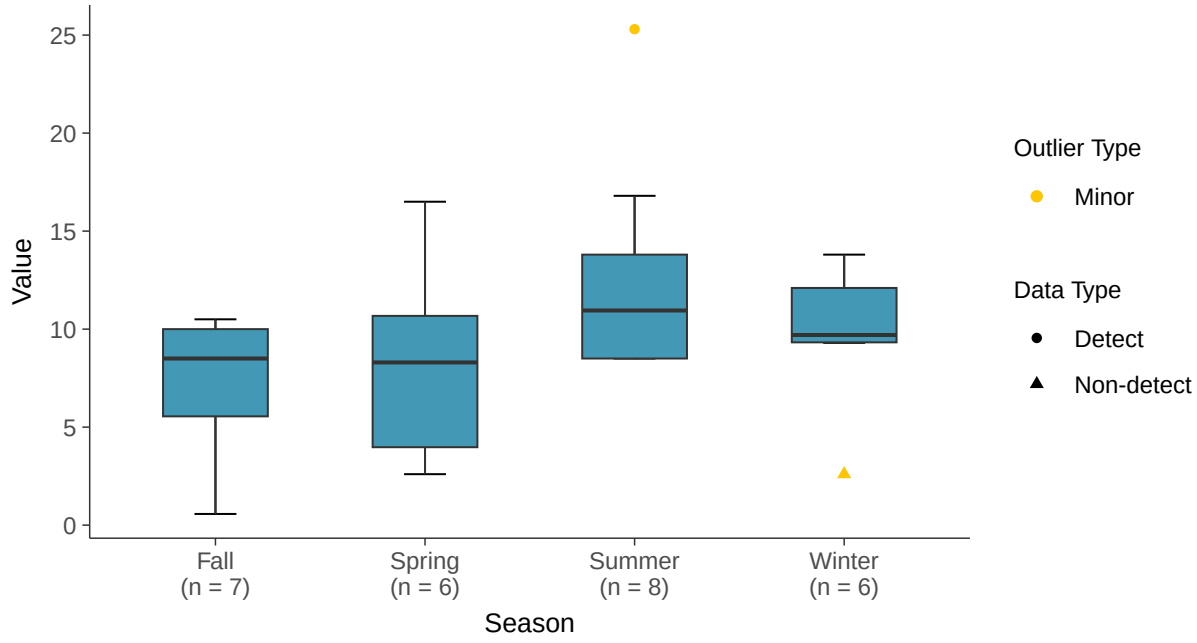
Boxplot

Boron, MW-7R (ug/L)



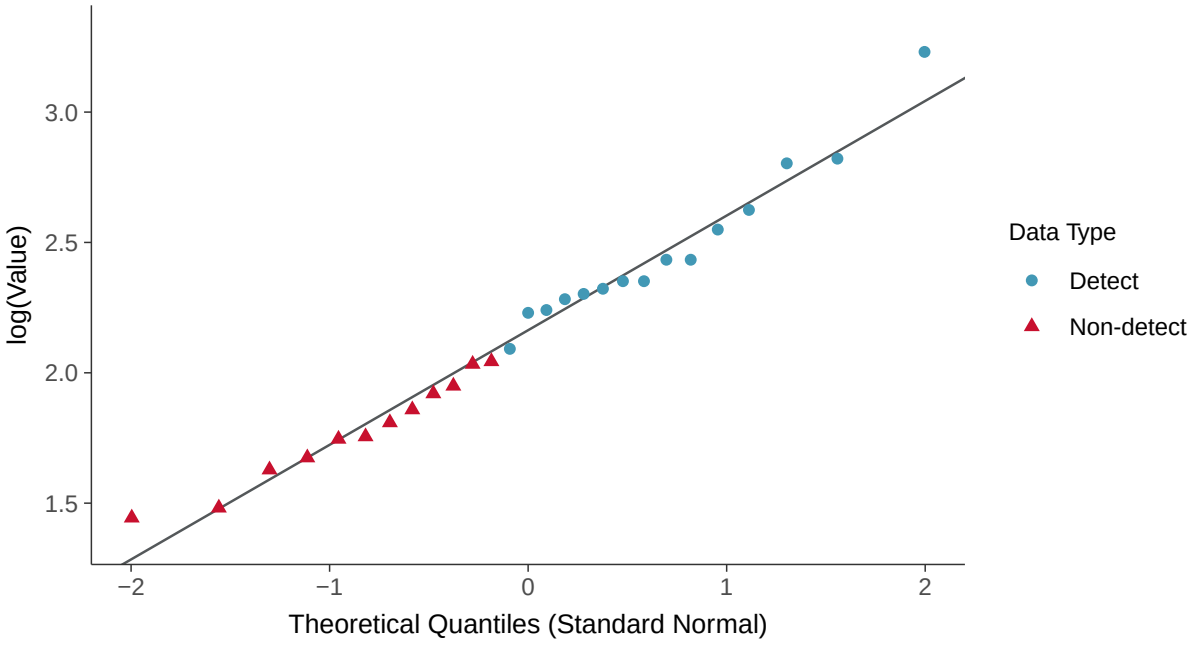
Boxplot by Season

Boron, MW-7R (ug/L)



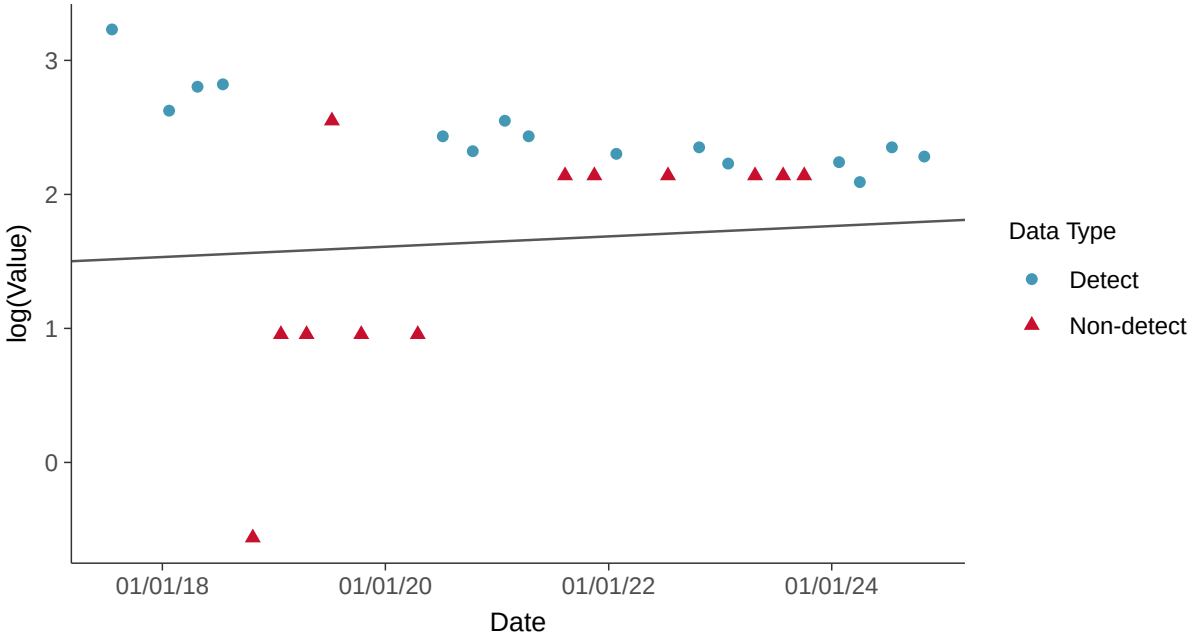
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-7R (ug/L)



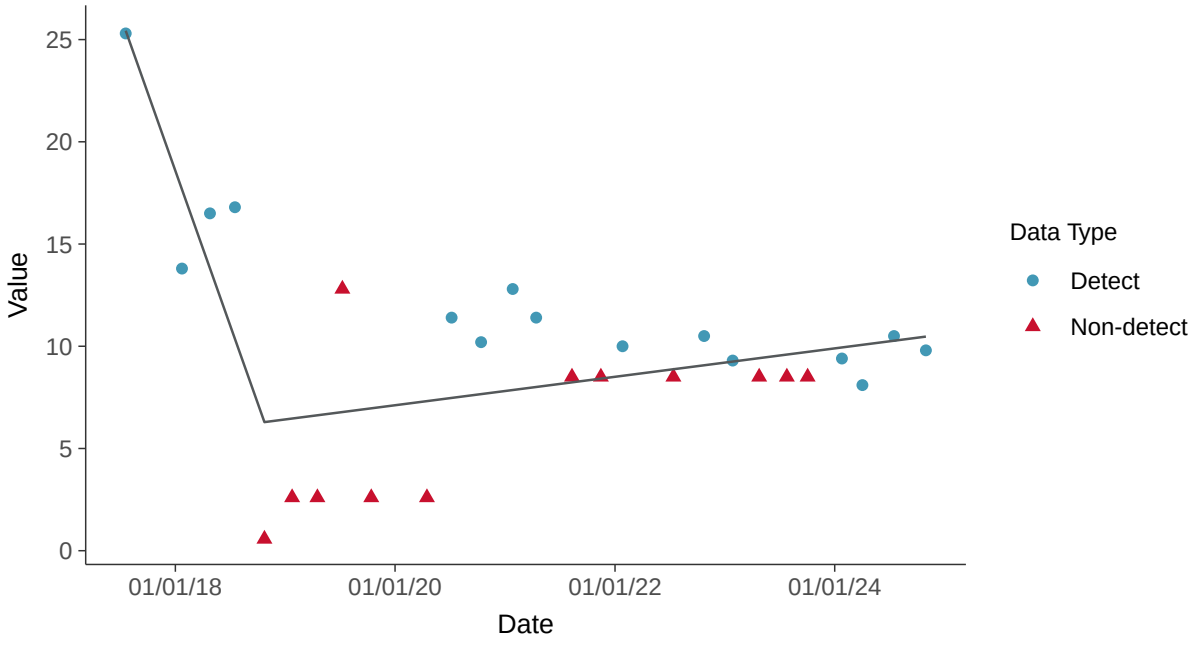
Trend Regression: Lognormal MLE

Boron, MW-7R (ug/L)



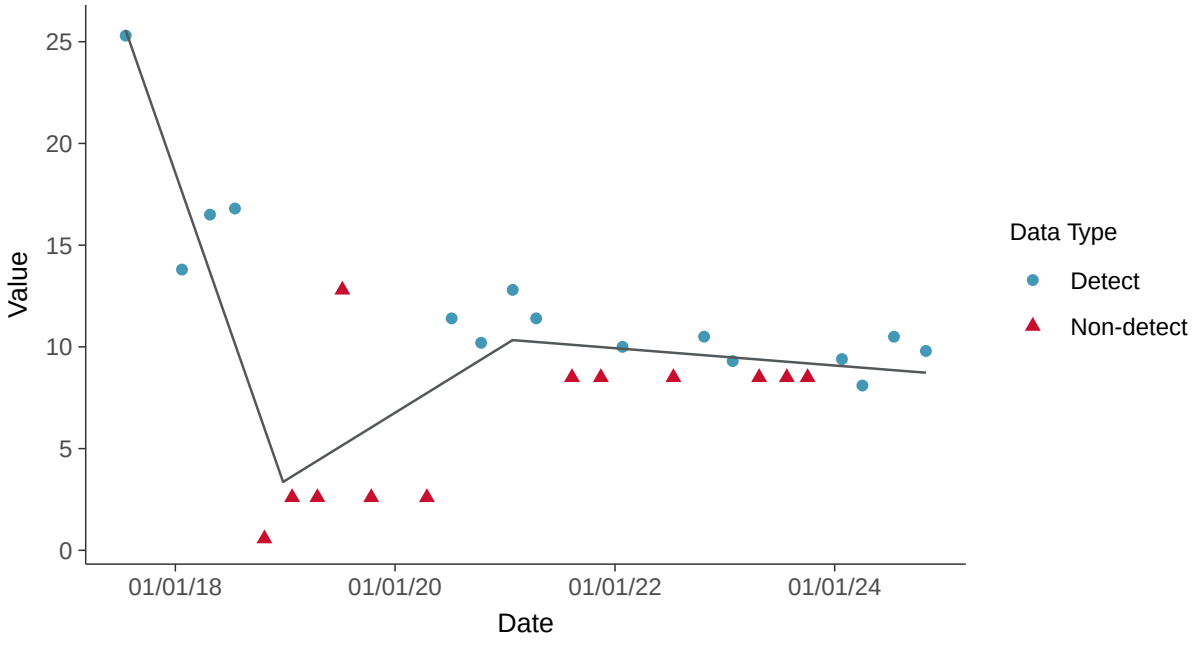
Trend Regression: Piecewise Linear-Linear

Boron, MW-7R (ug/L)



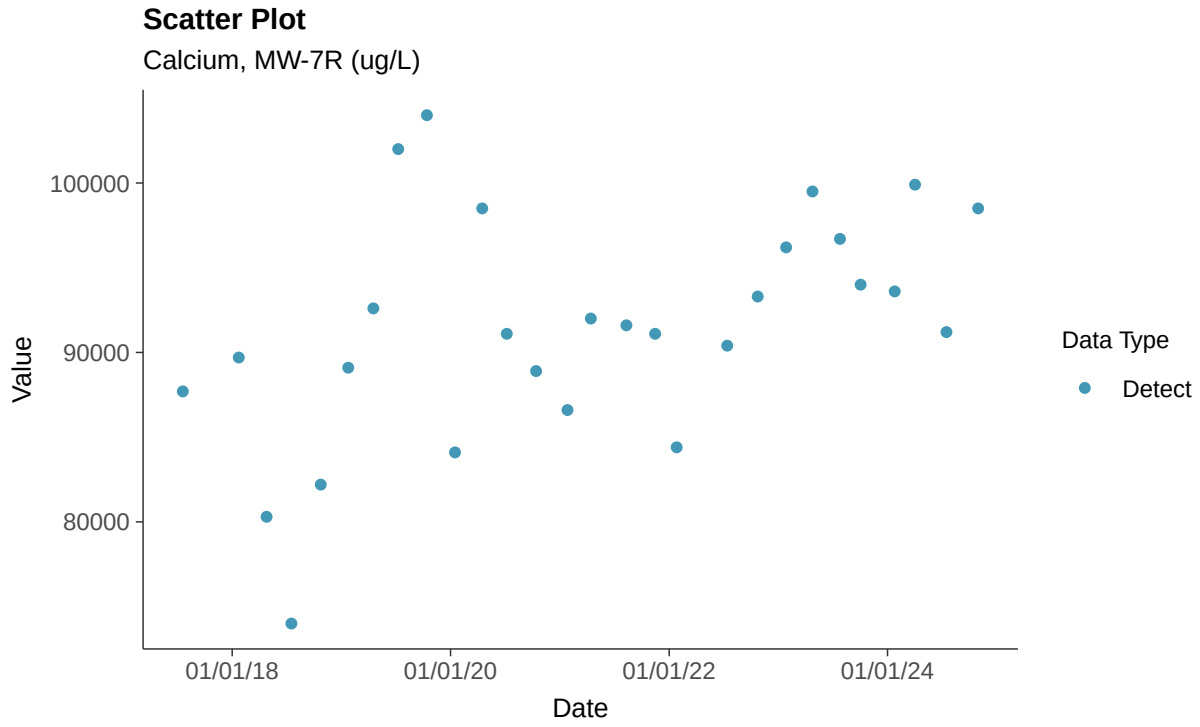
Trend Regression: Piecewise Linear-Linear-Linear

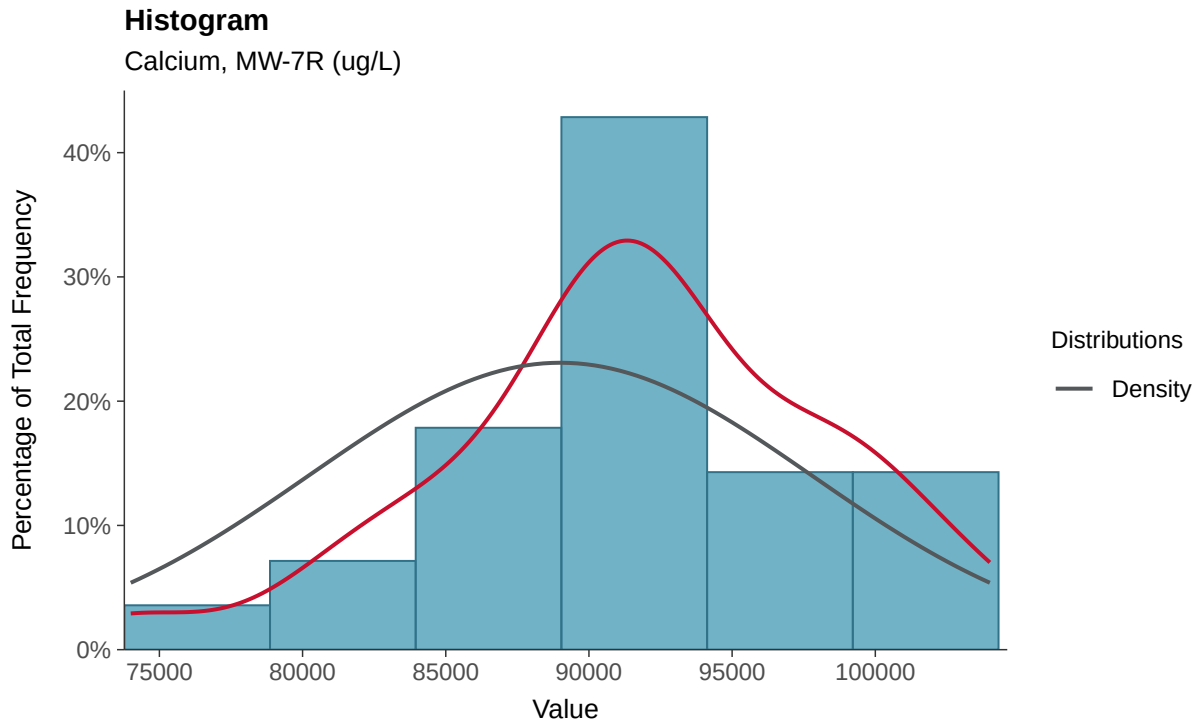
Boron, MW-7R (ug/L)



App. III: Calcium, MW-7R

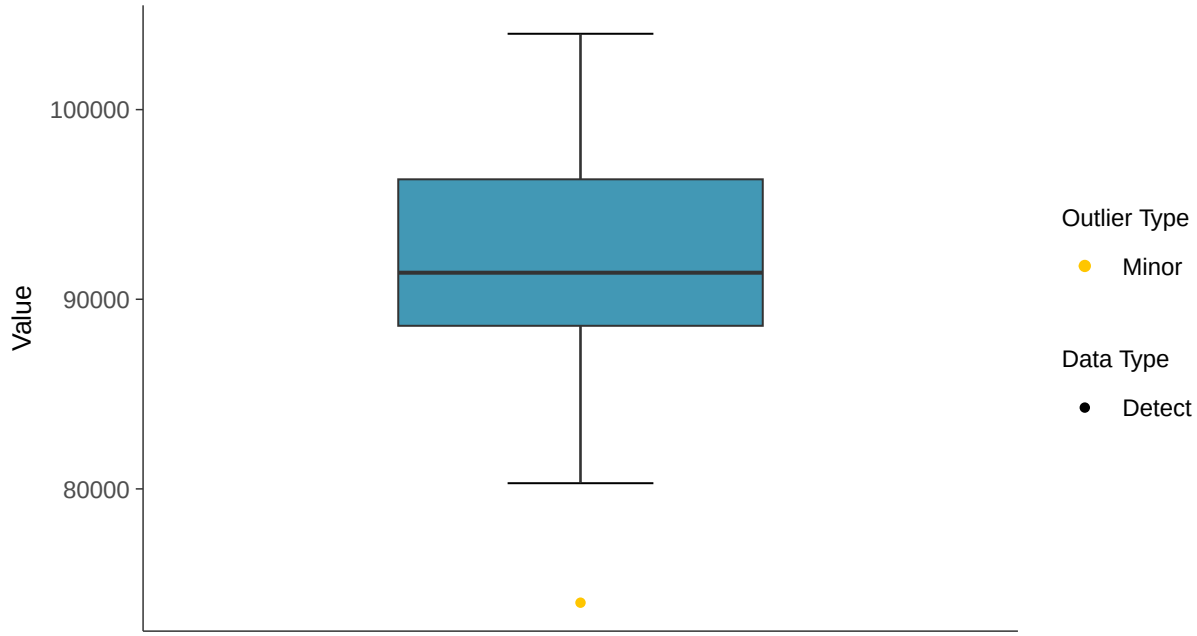
ID: 07_02_107





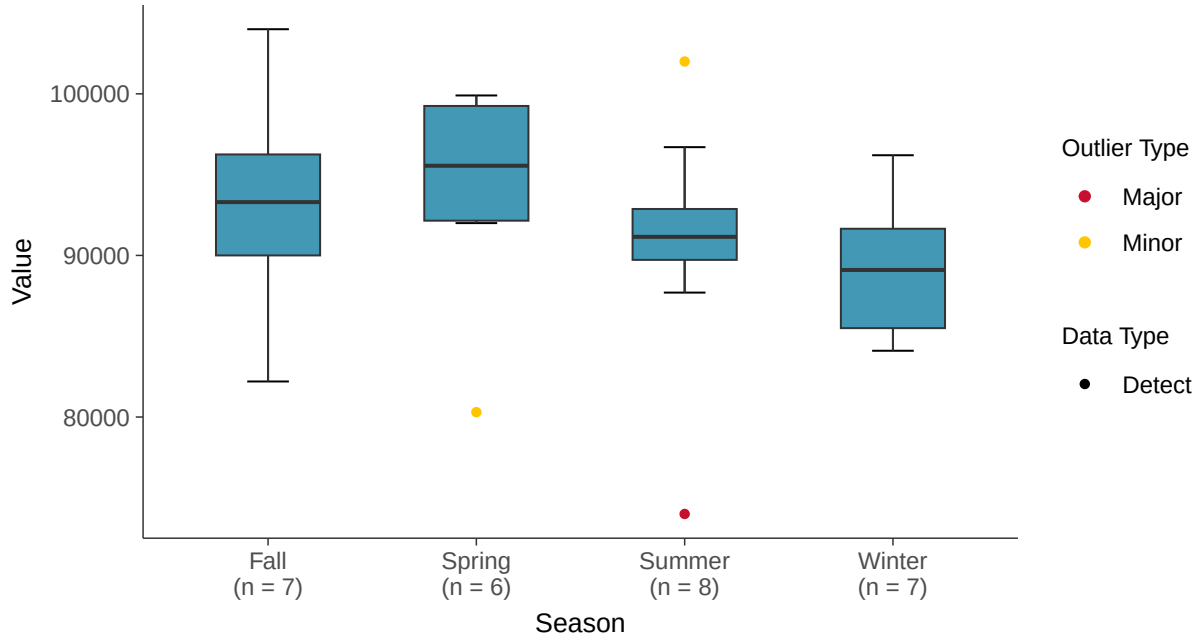
Boxplot

Calcium, MW-7R (ug/L)



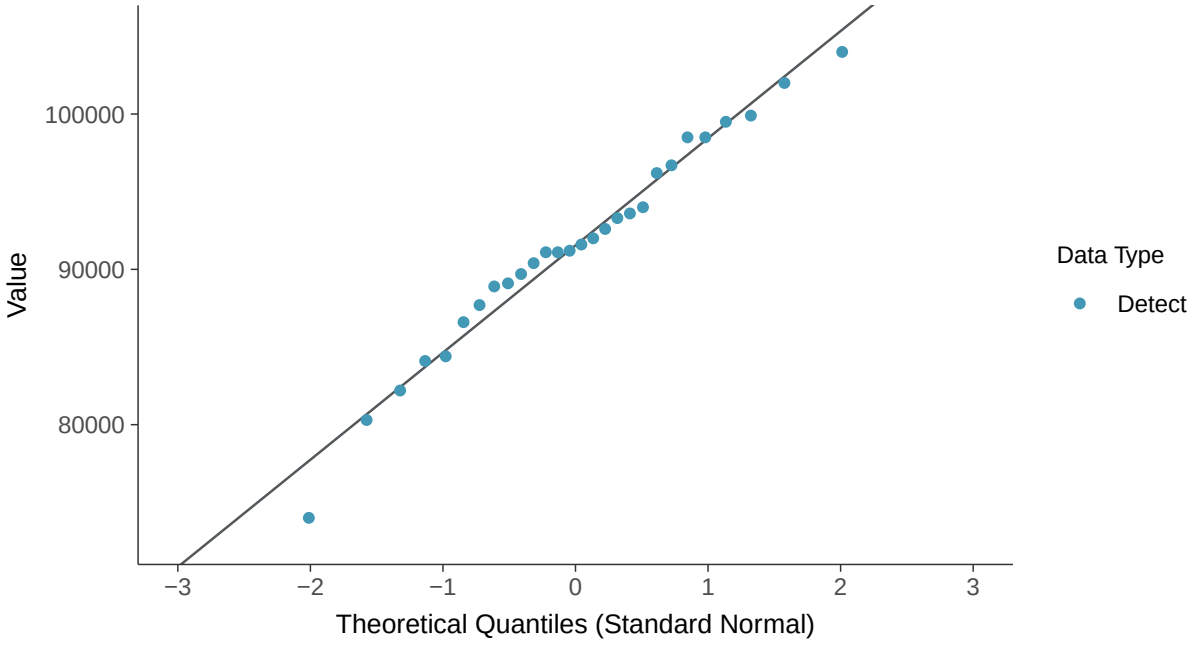
Boxplot by Season

Calcium, MW-7R (ug/L)



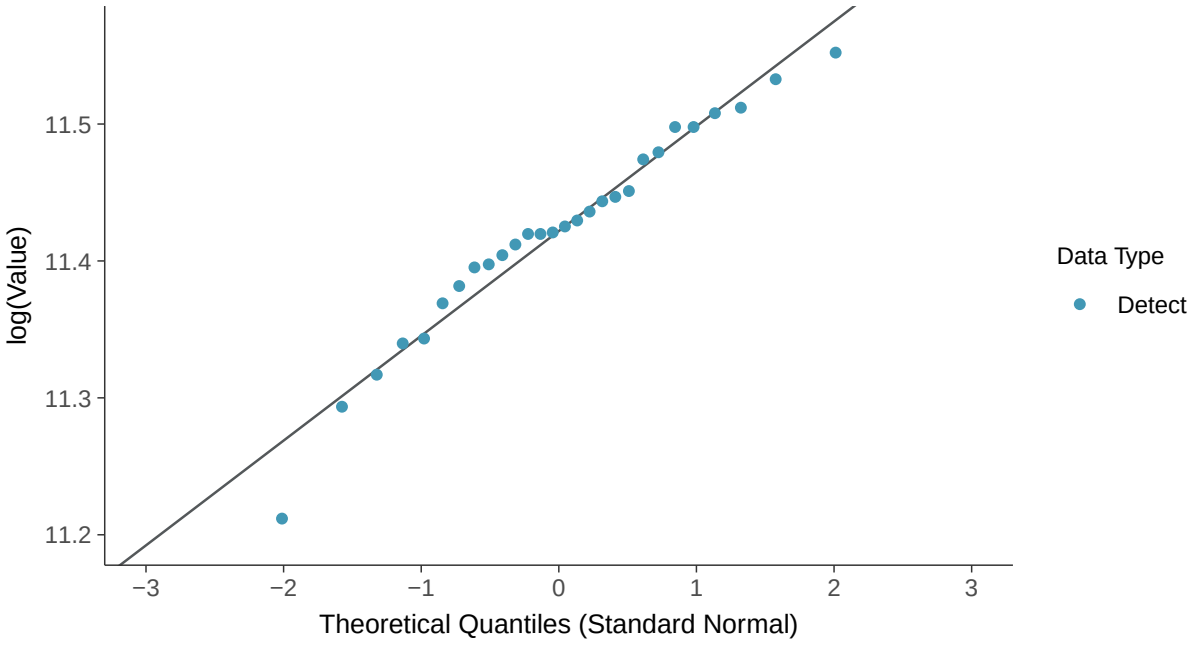
Normal Q-Q plot

Calcium, MW-7R (ug/L)



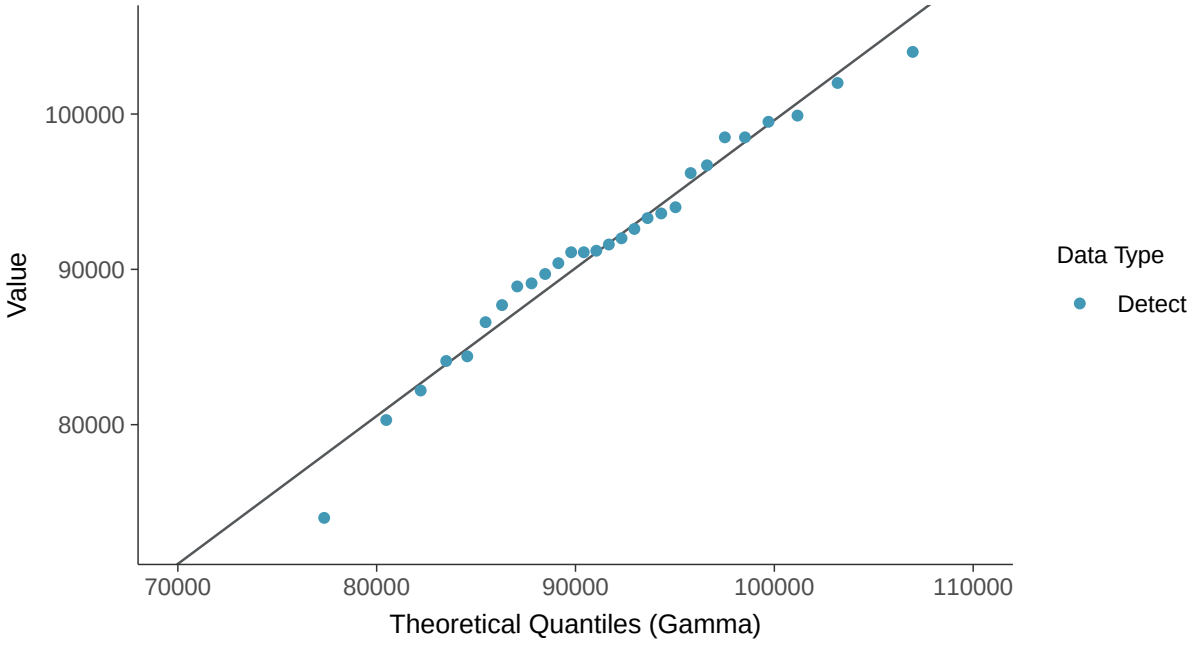
Lognormal Q-Q plot

Calcium, MW-7R (ug/L)



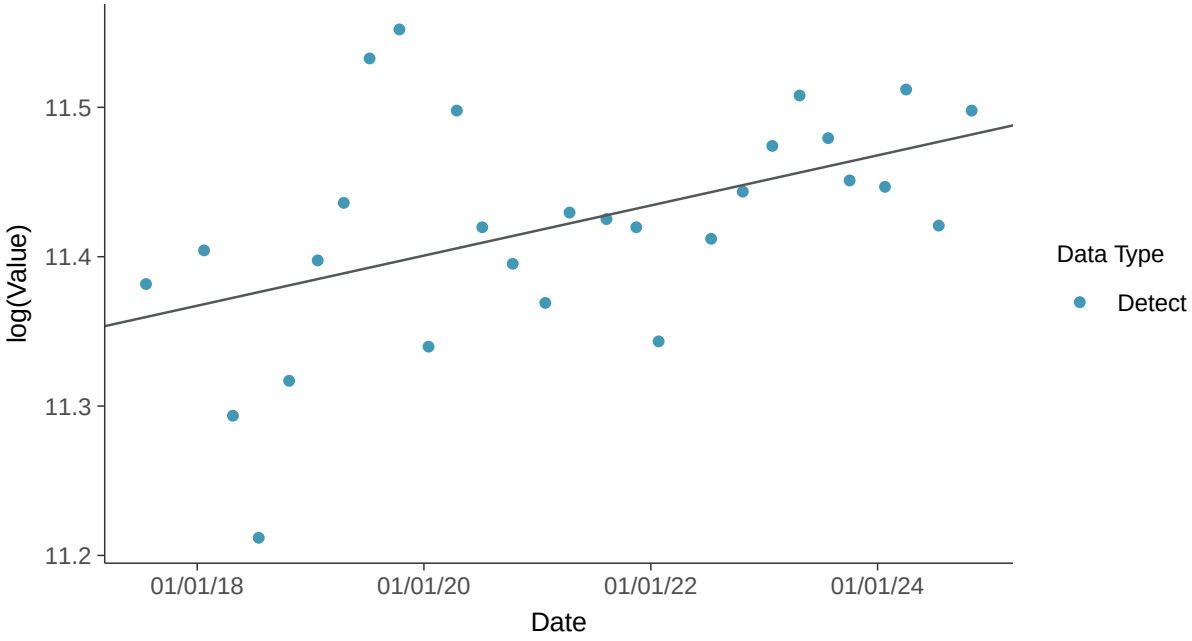
Gamma Q-Q plot

Calcium, MW-7R (ug/L)



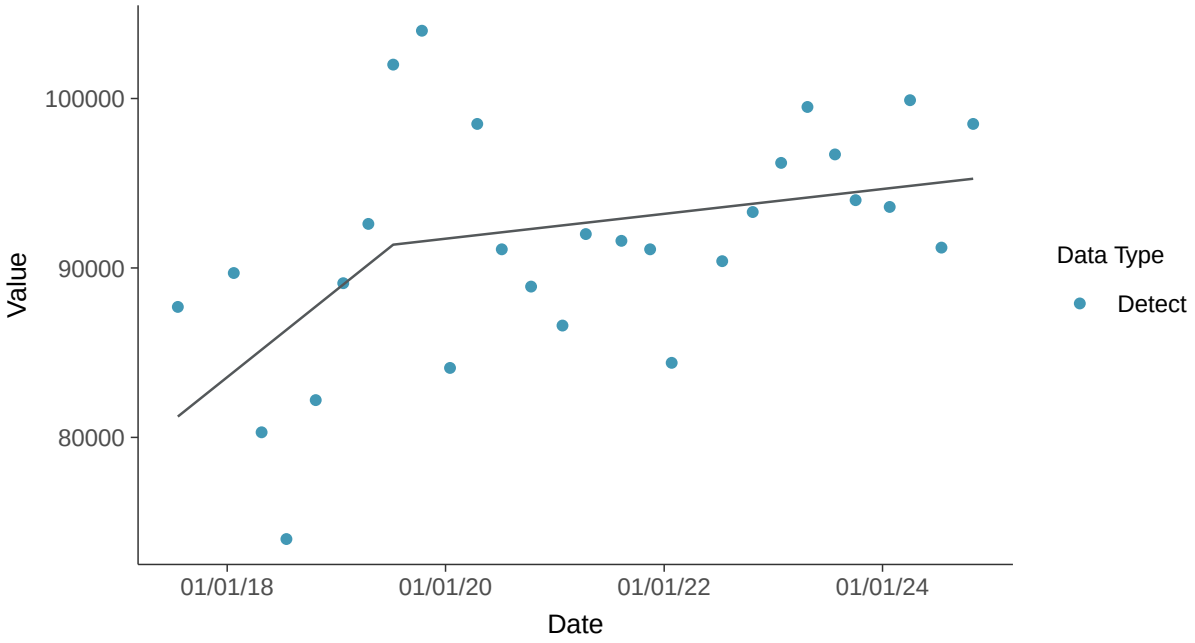
Trend Regression: Lognormal MLE

Calcium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, MW-7R (ug/L)

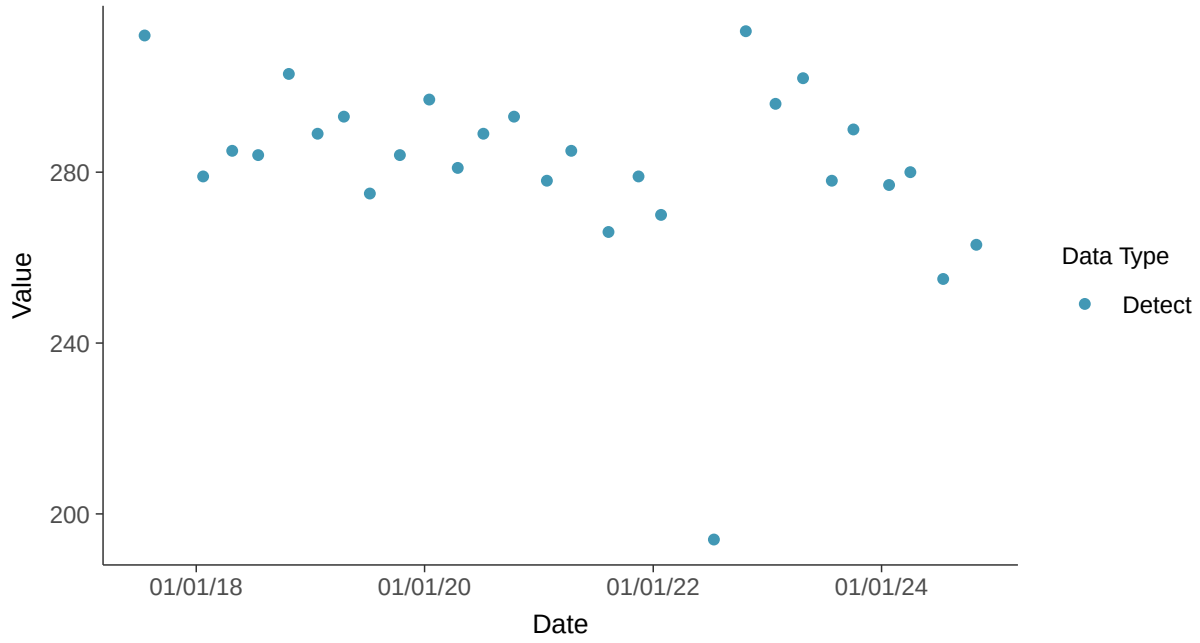


App. III: Chloride, MW-7R

ID: 07_02_108

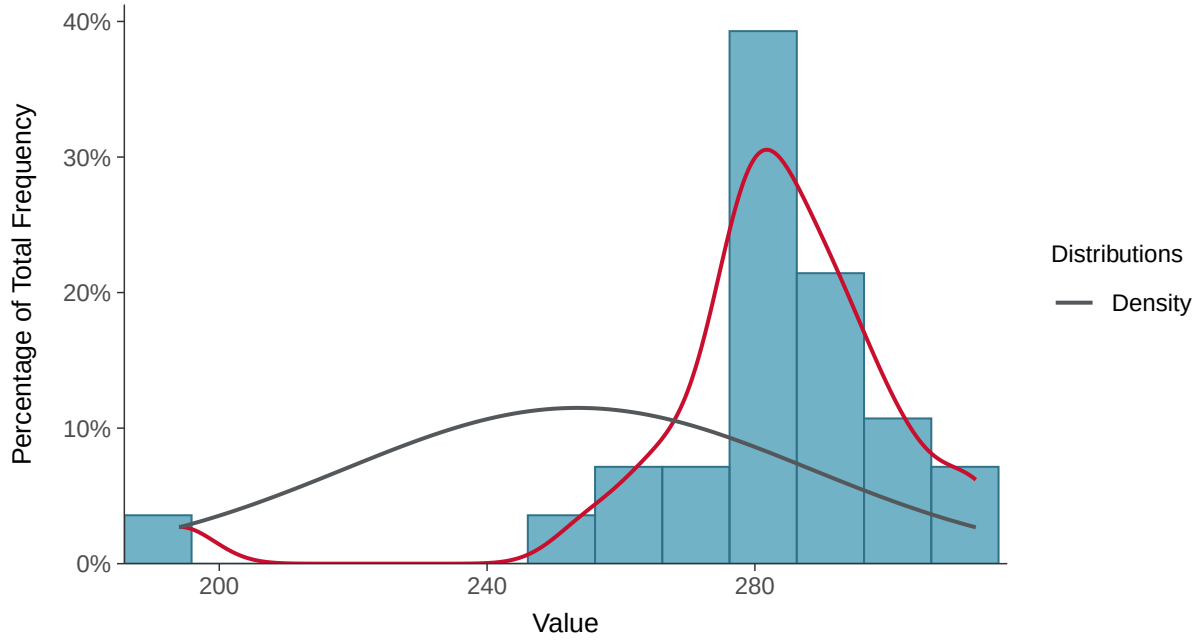
Scatter Plot

Chloride, MW-7R (mg/L)



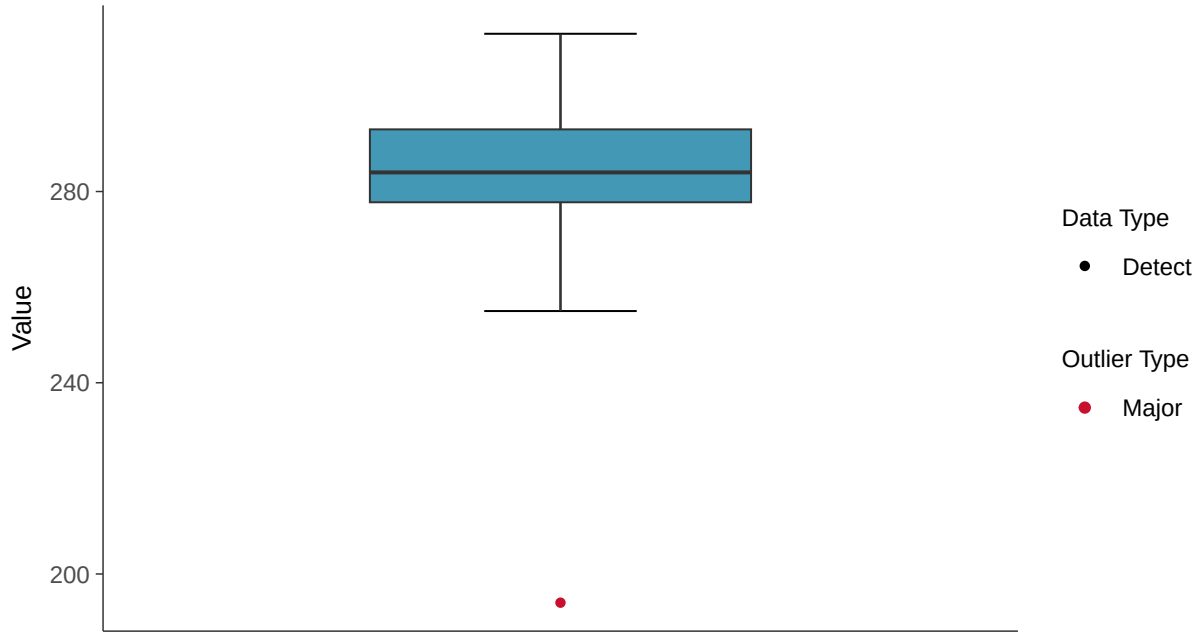
Histogram

Chloride, MW-7R (mg/L)



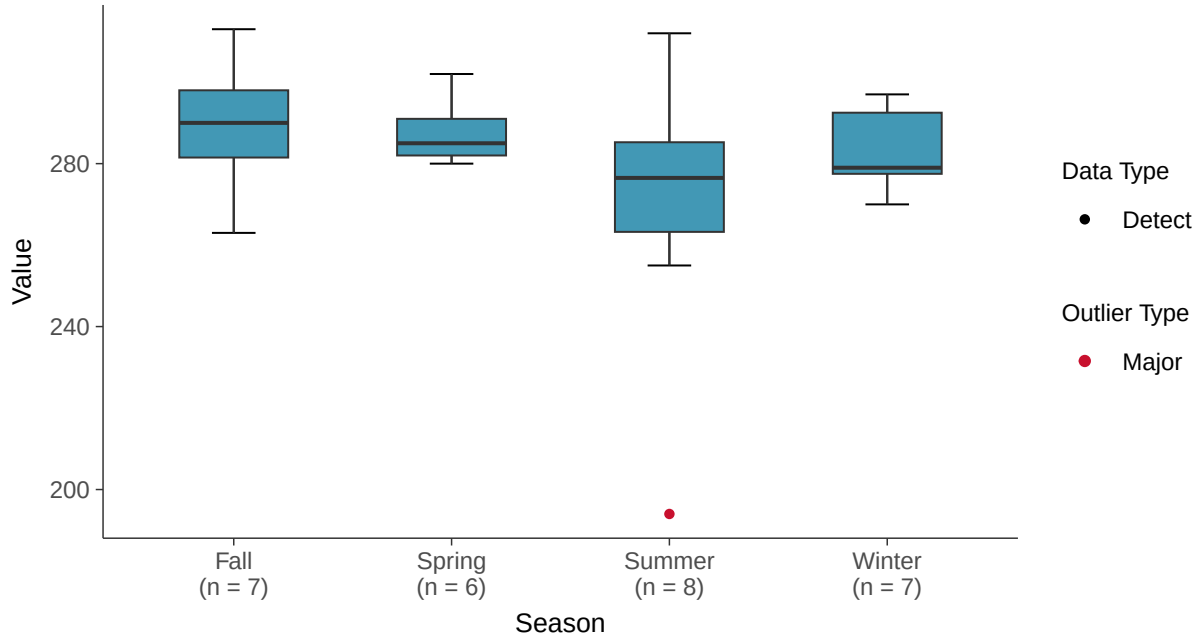
Boxplot

Chloride, MW-7R (mg/L)



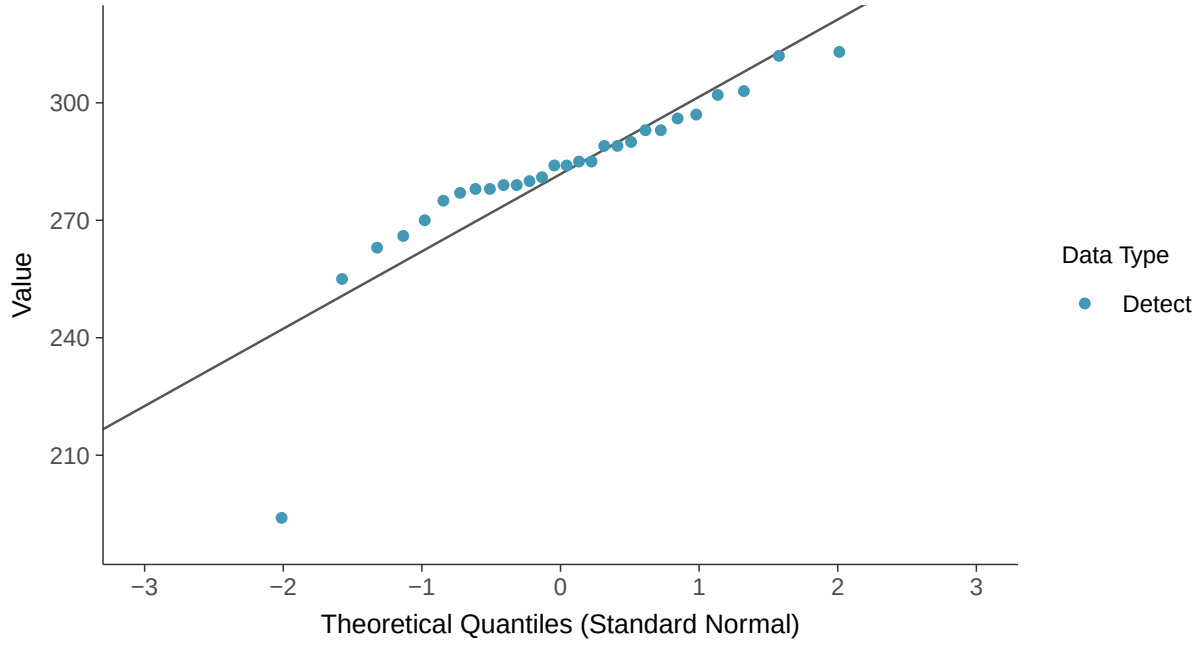
Boxplot by Season

Chloride, MW-7R (mg/L)



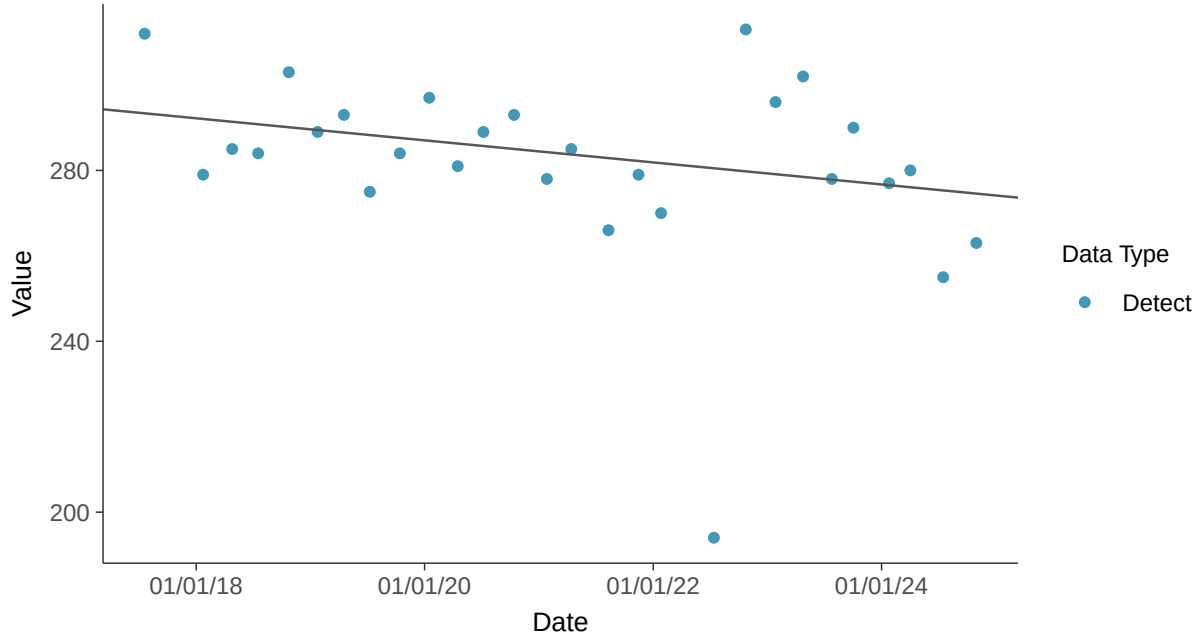
Normal Q-Q plot

Chloride, MW-7R (mg/L)



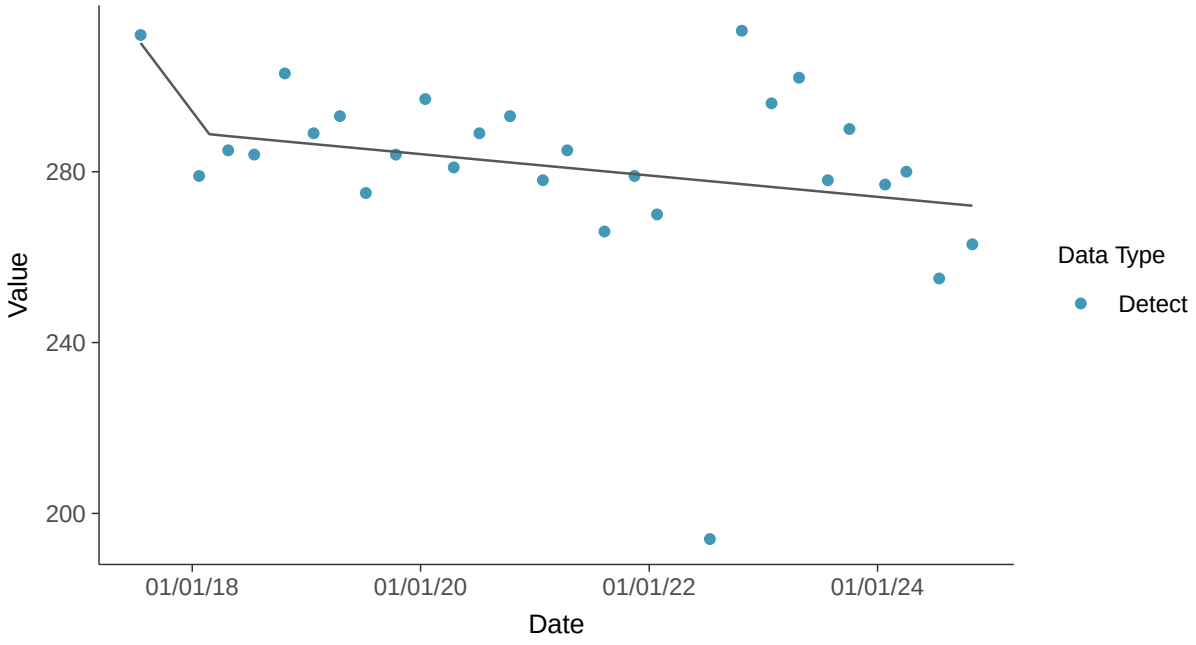
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-7R (mg/L)



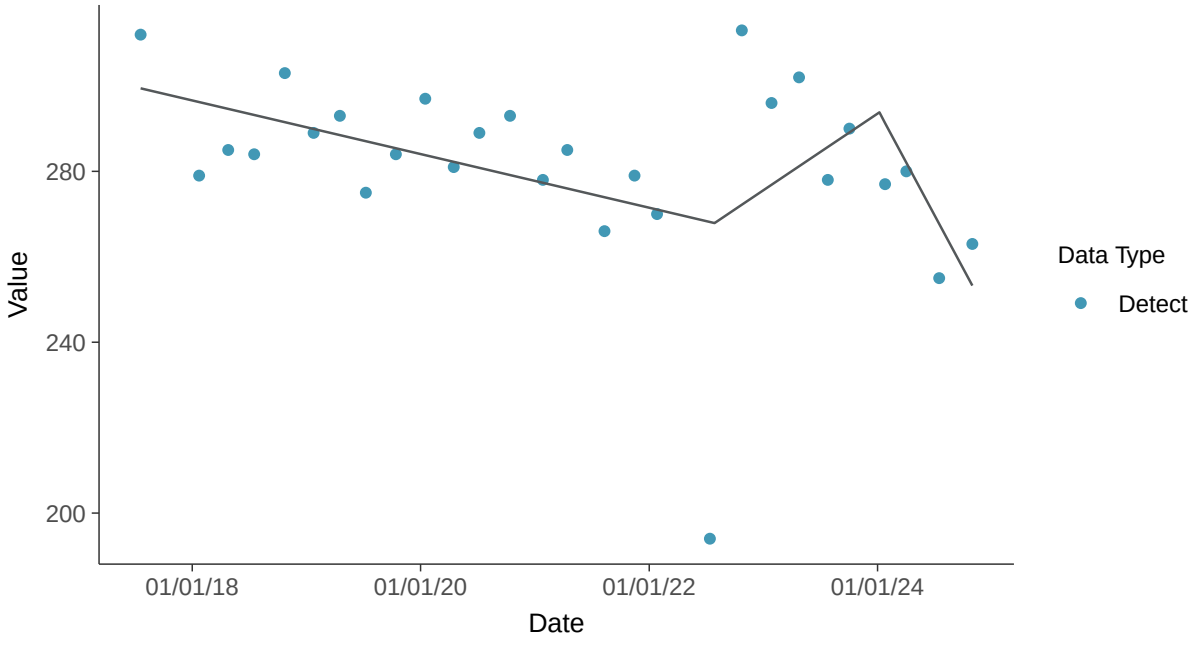
Trend Regression: Piecewise Linear-Linear

Chloride, MW-7R (mg/L)



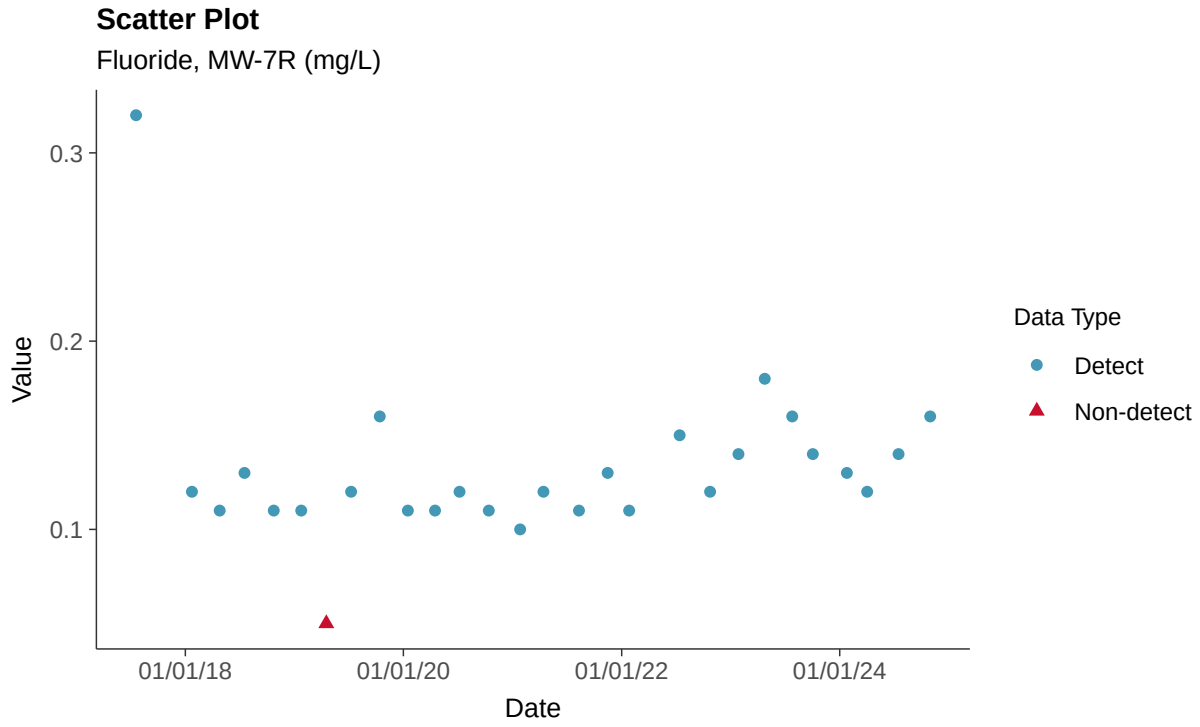
Trend Regression: Piecewise Linear-Linear-Linear

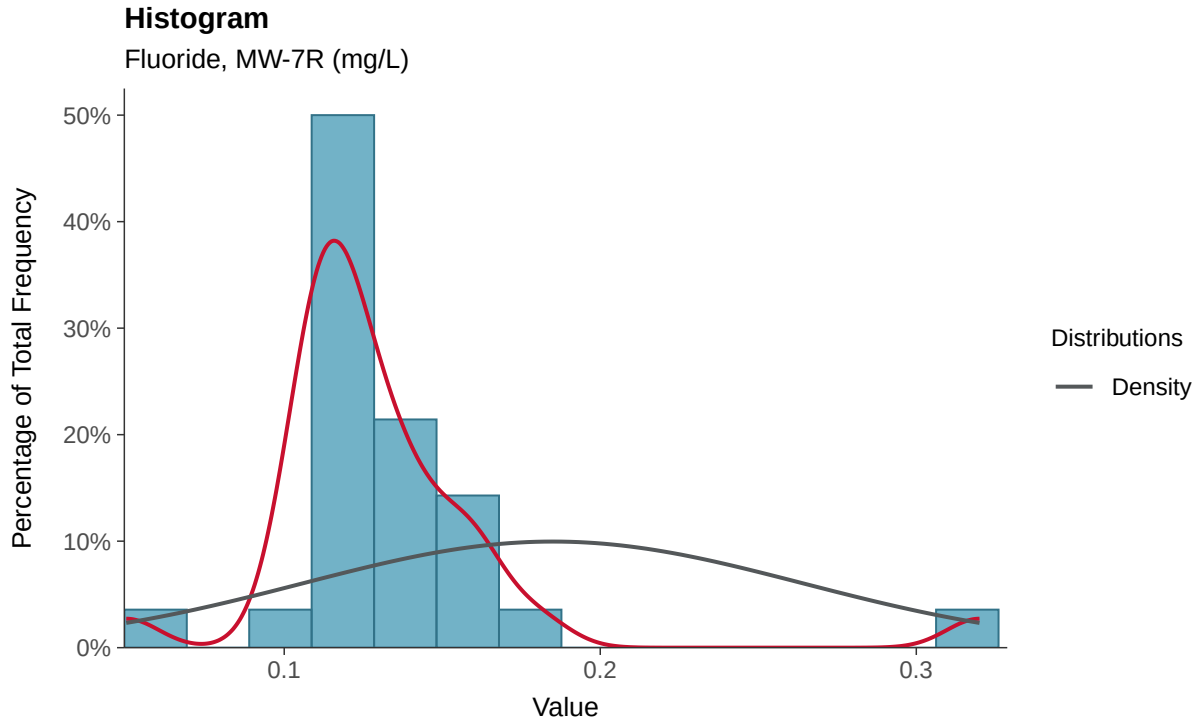
Chloride, MW-7R (mg/L)



App. III: Fluoride, MW-7R

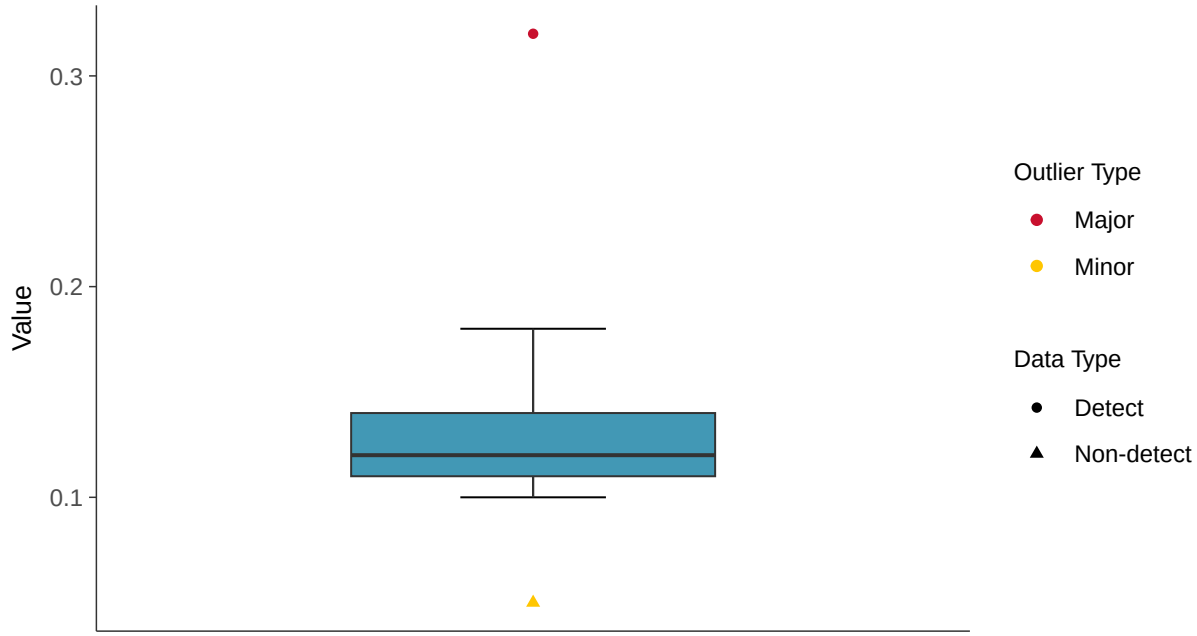
ID: 07_02_112





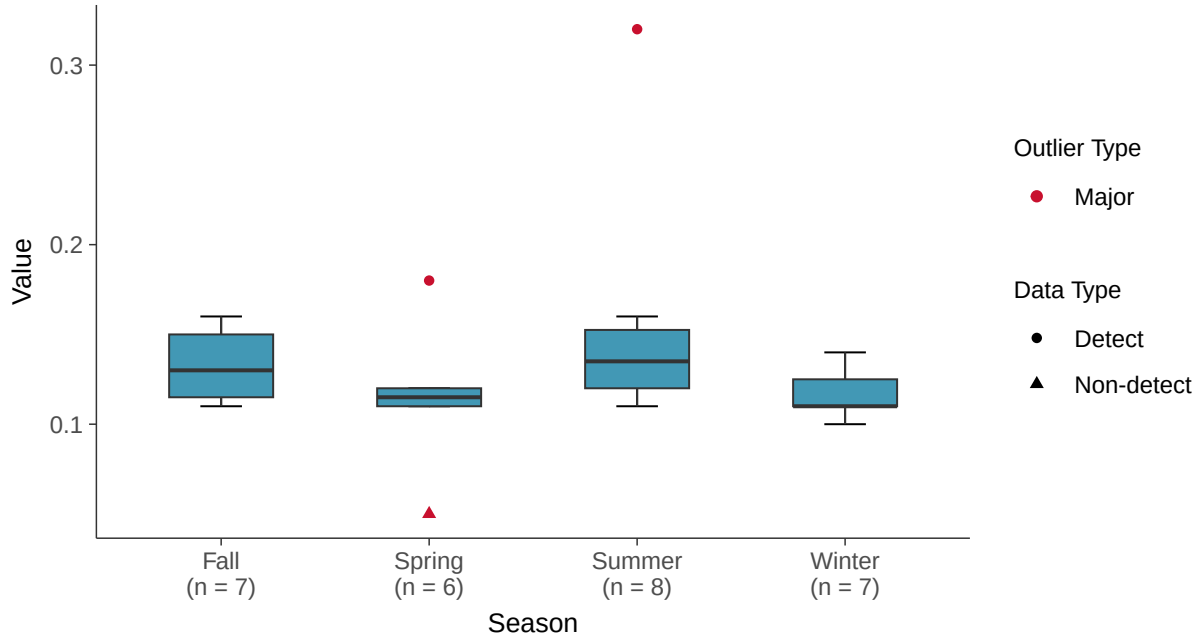
Boxplot

Fluoride, MW-7R (mg/L)



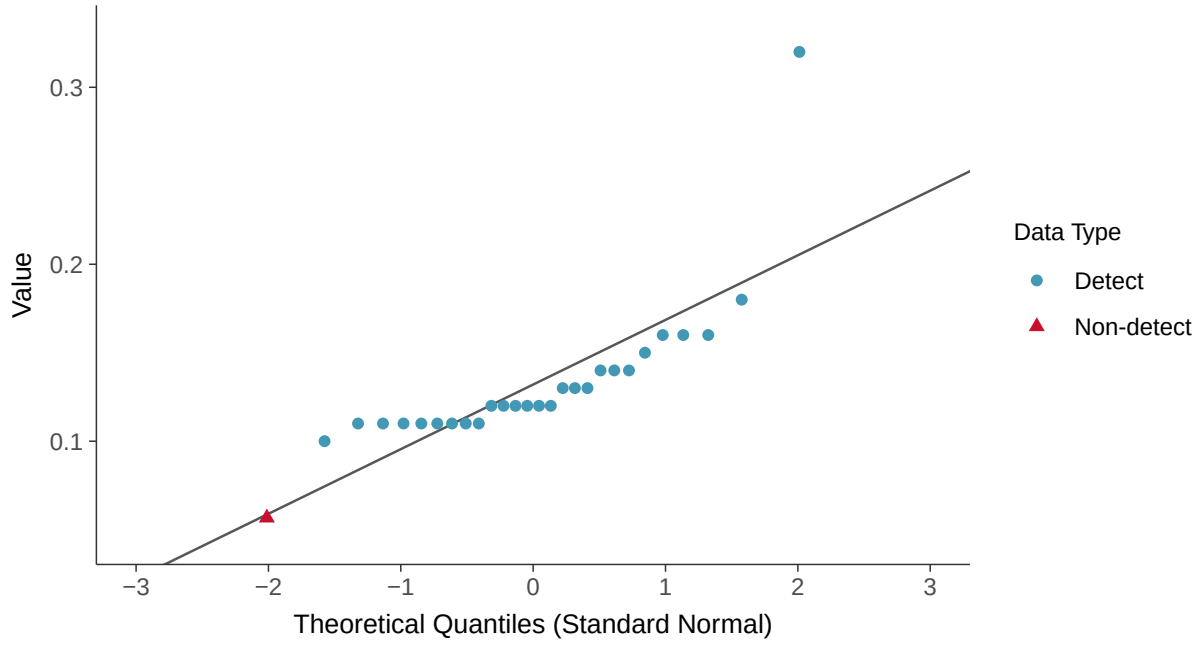
Boxplot by Season

Fluoride, MW-7R (mg/L)



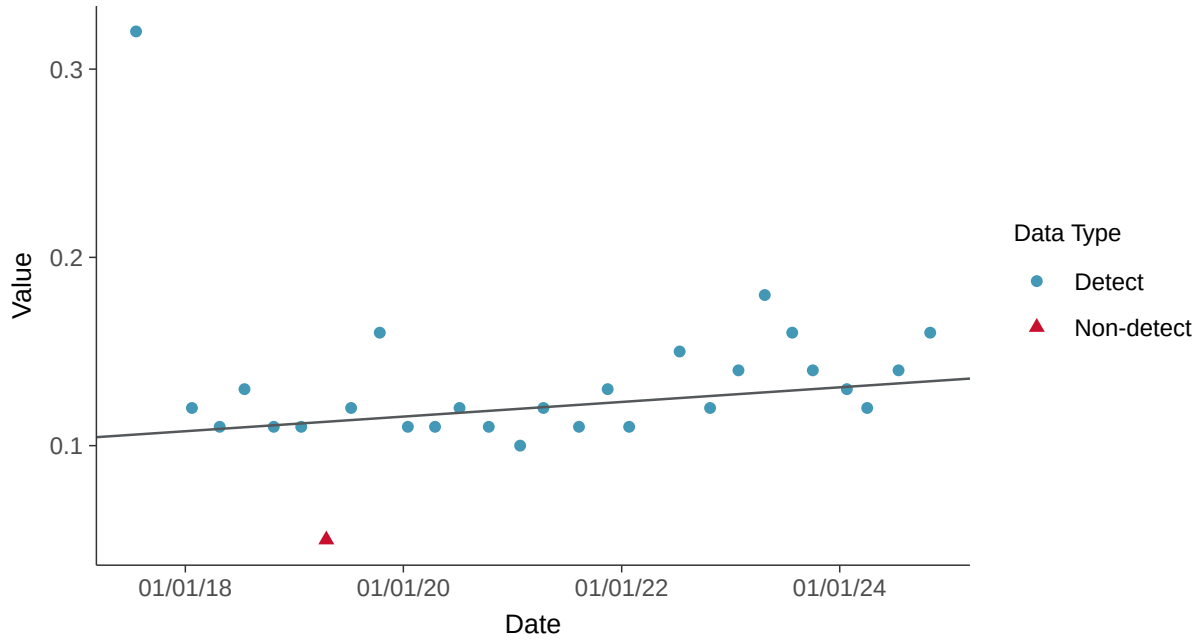
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-7R (mg/L)



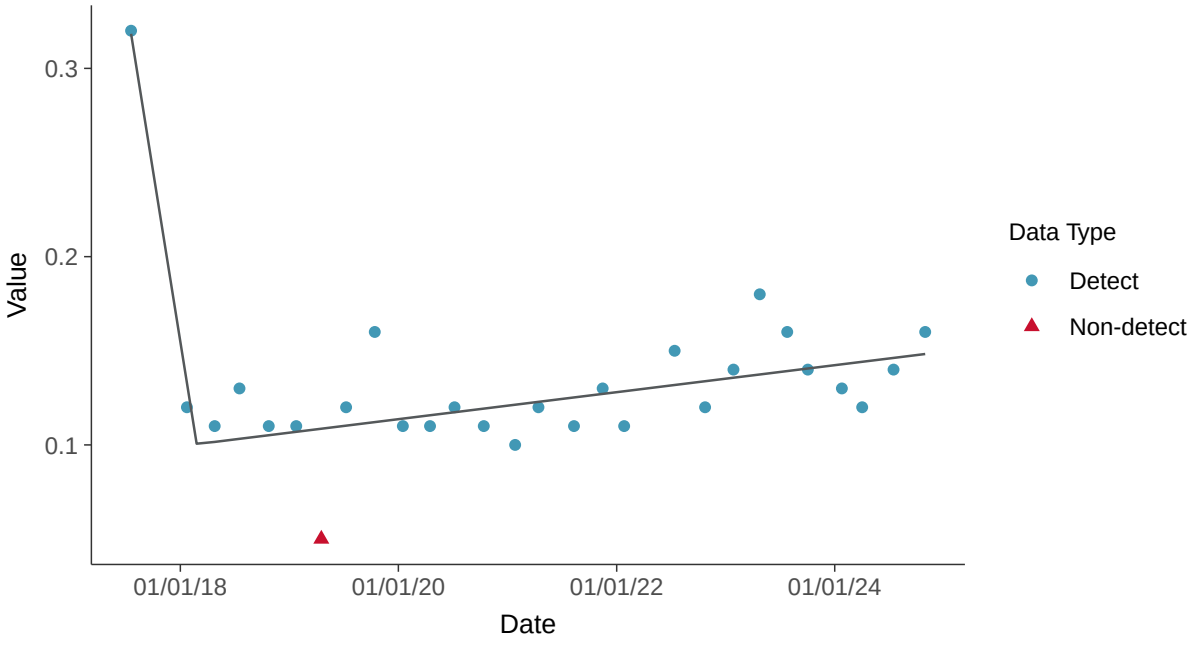
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-7R (mg/L)



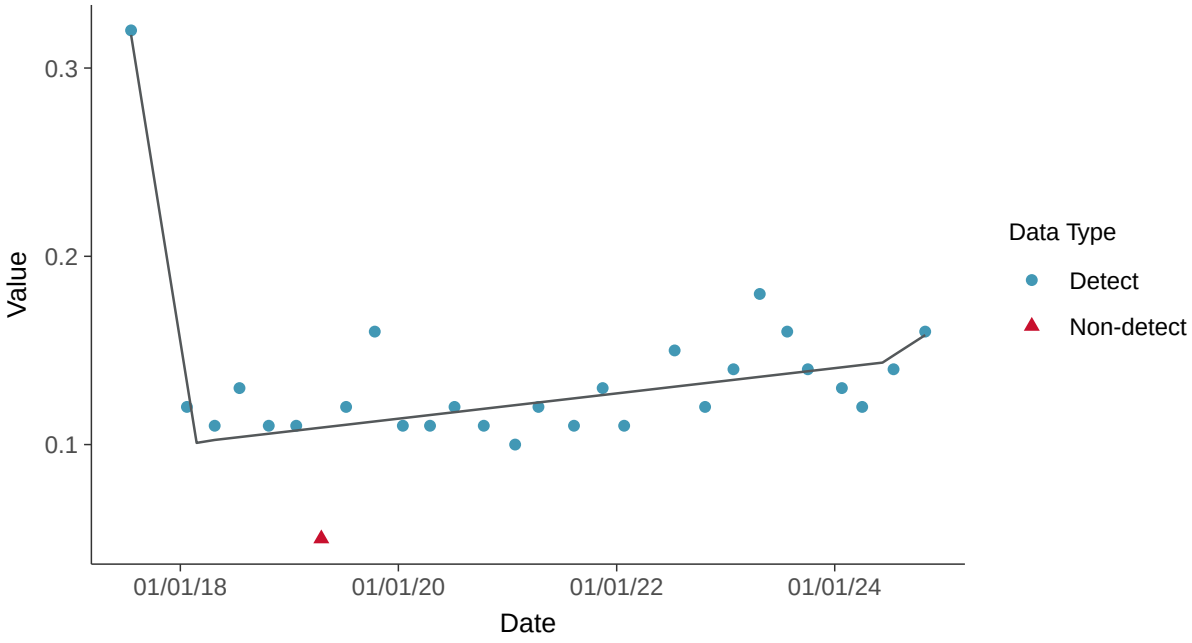
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-7R (mg/L)

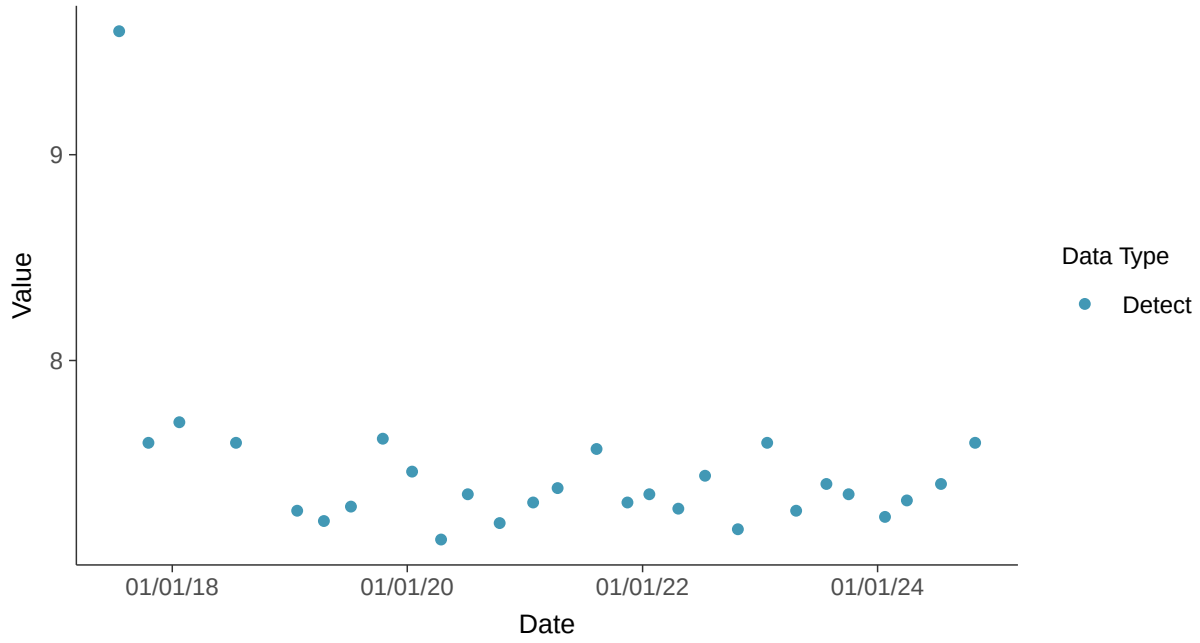


App. III: pH (Field), MW-7R

ID: 07_02_118

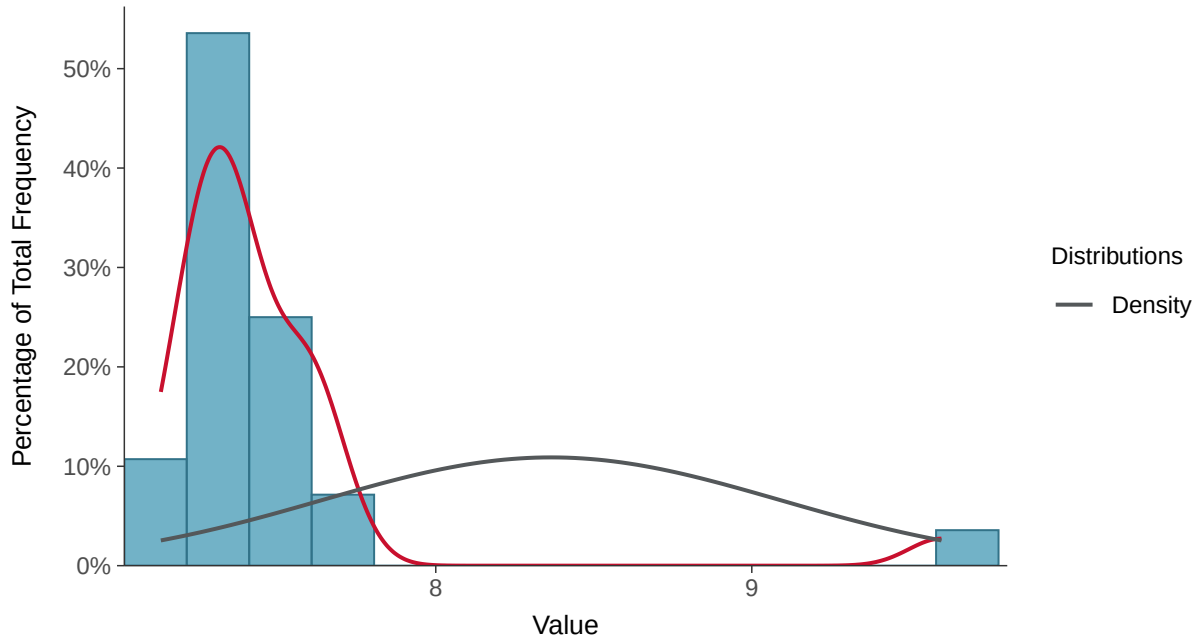
Scatter Plot

pH (Field), MW-7R (S.U.)



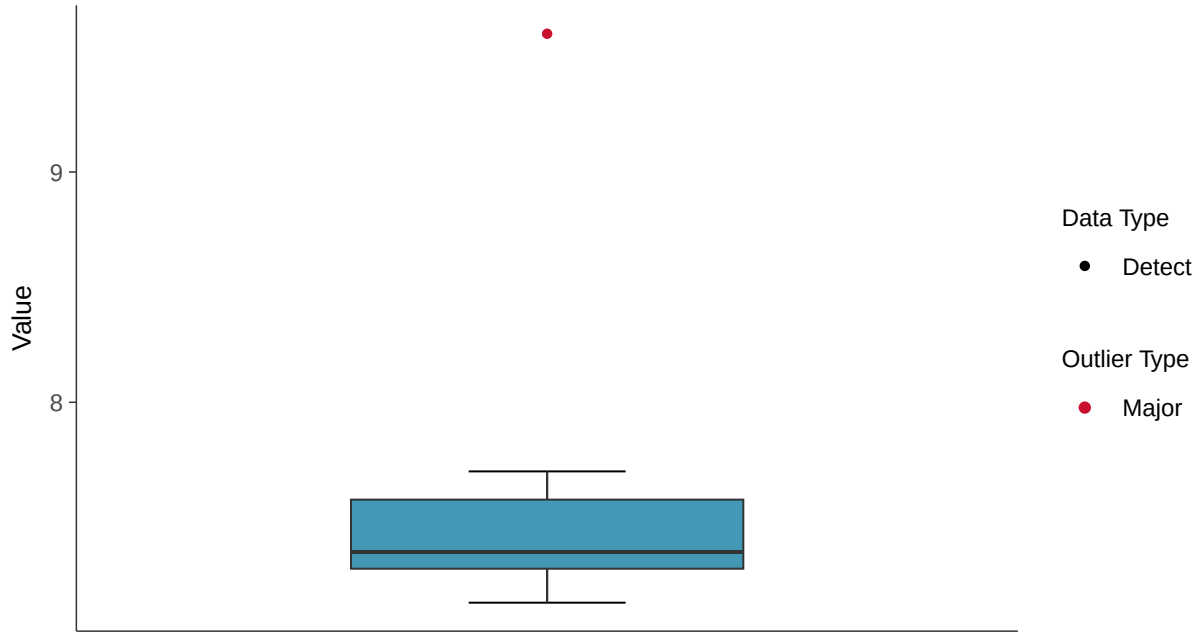
Histogram

pH (Field), MW-7R (S.U.)



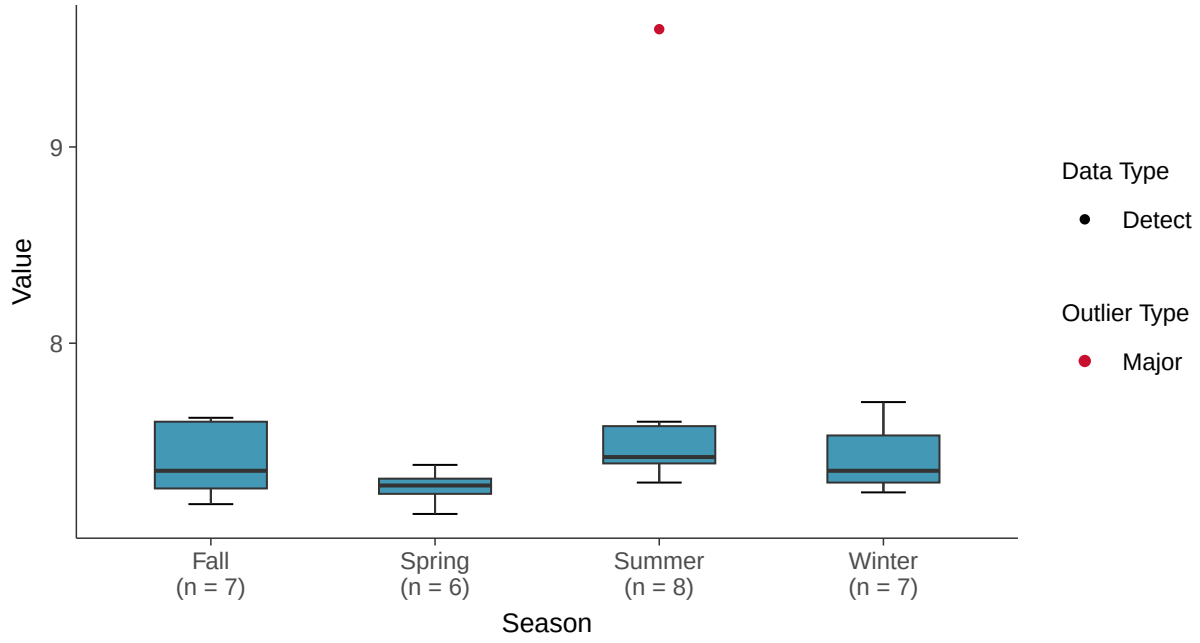
Boxplot

pH (Field), MW-7R (S.U.)



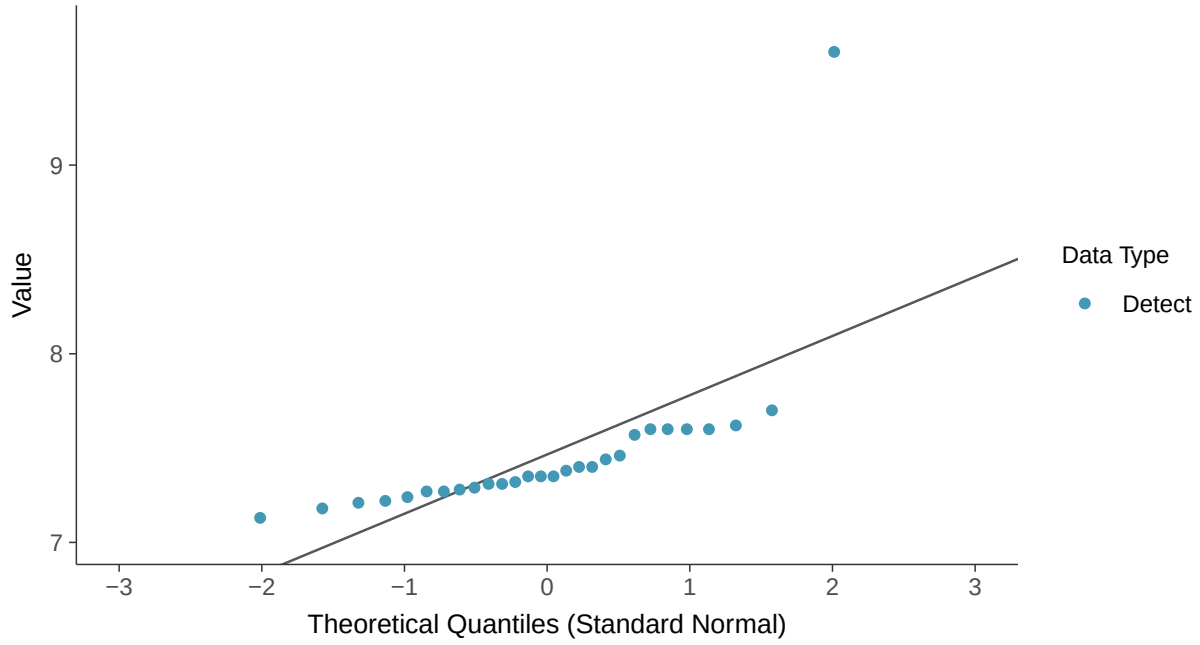
Boxplot by Season

pH (Field), MW-7R (S.U.)



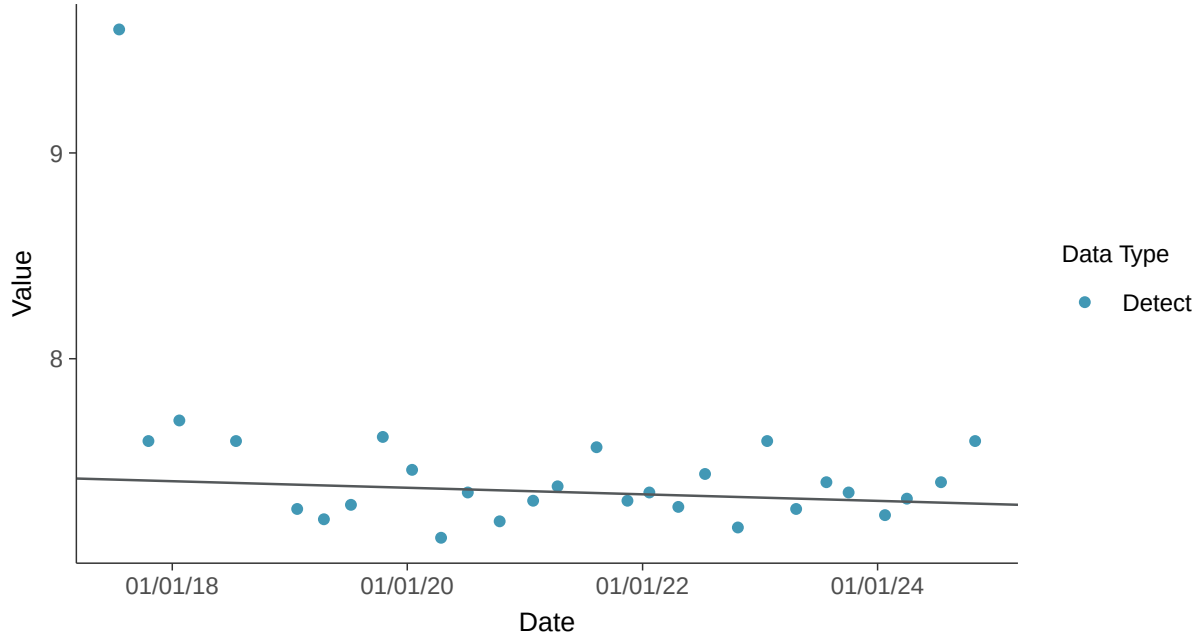
Normal Q-Q plot

pH (Field), MW-7R (S.U.)



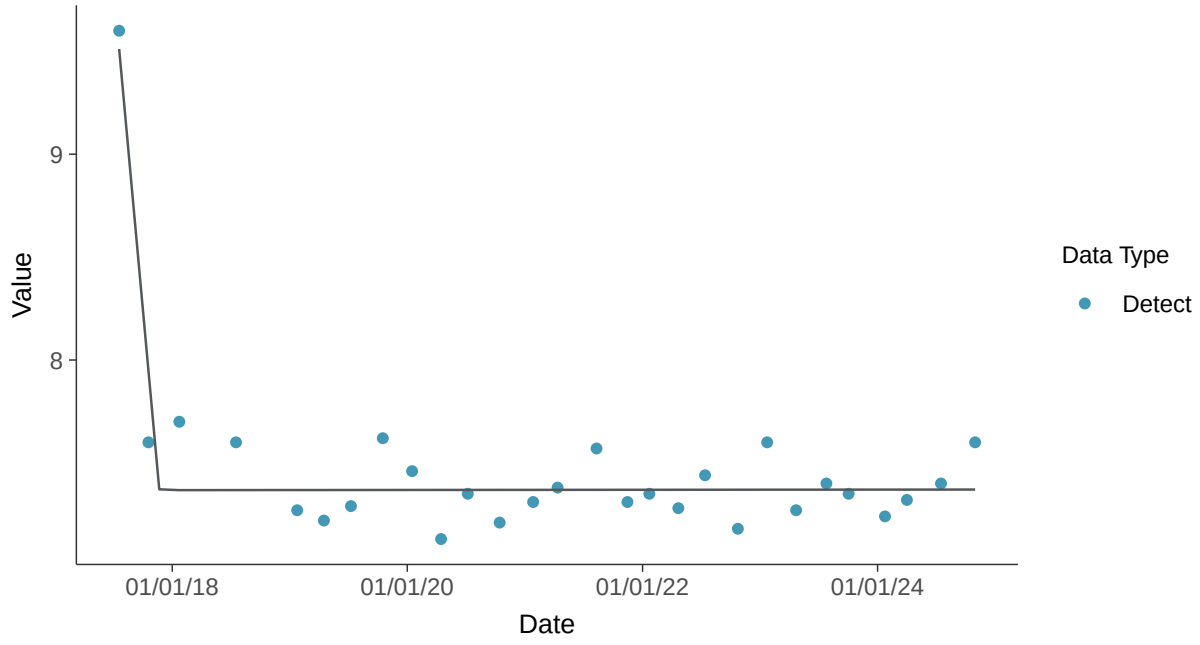
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-7R (S.U.)



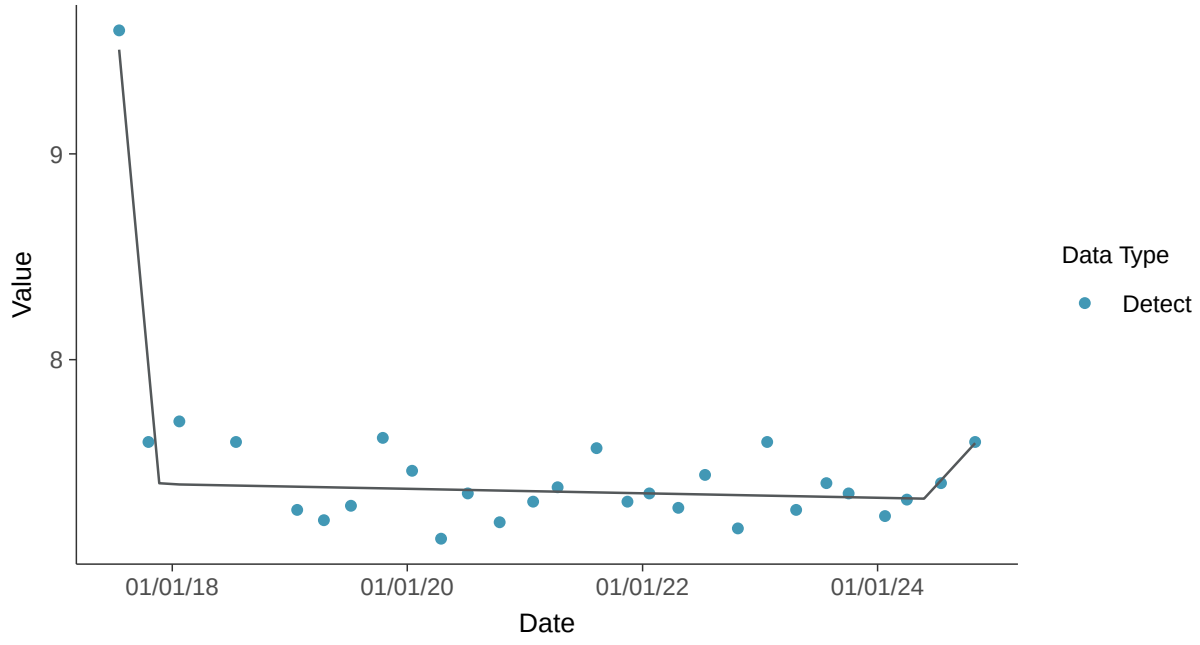
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-7R (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-7R (S.U.)

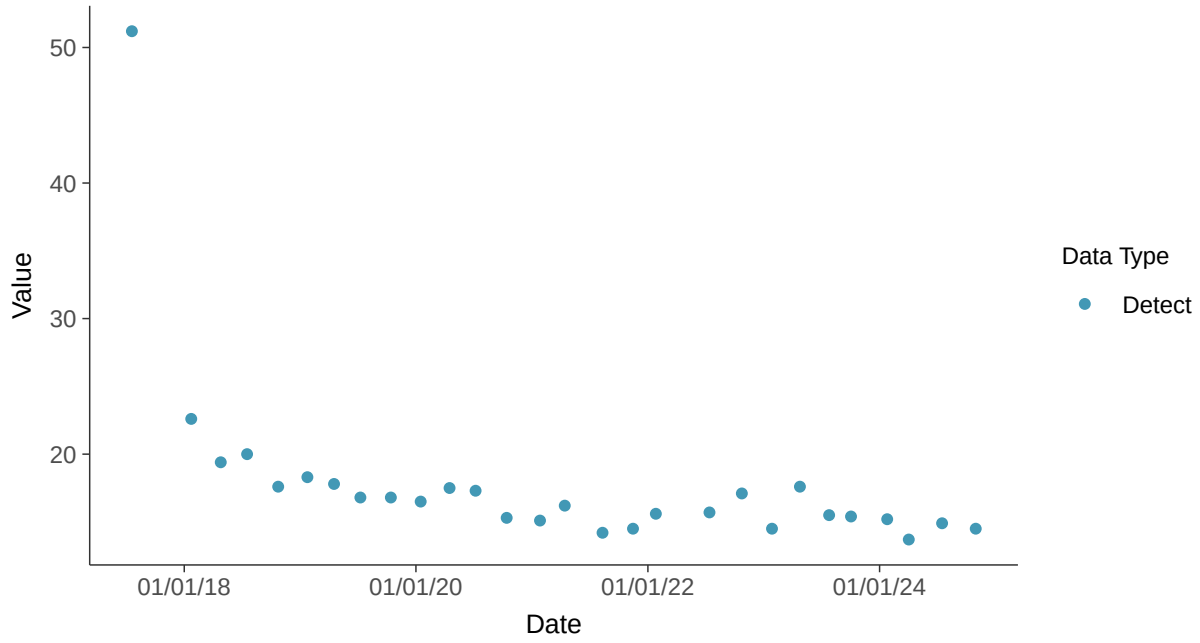


App. III: Sulfate, MW-7R

ID: 07_02_123

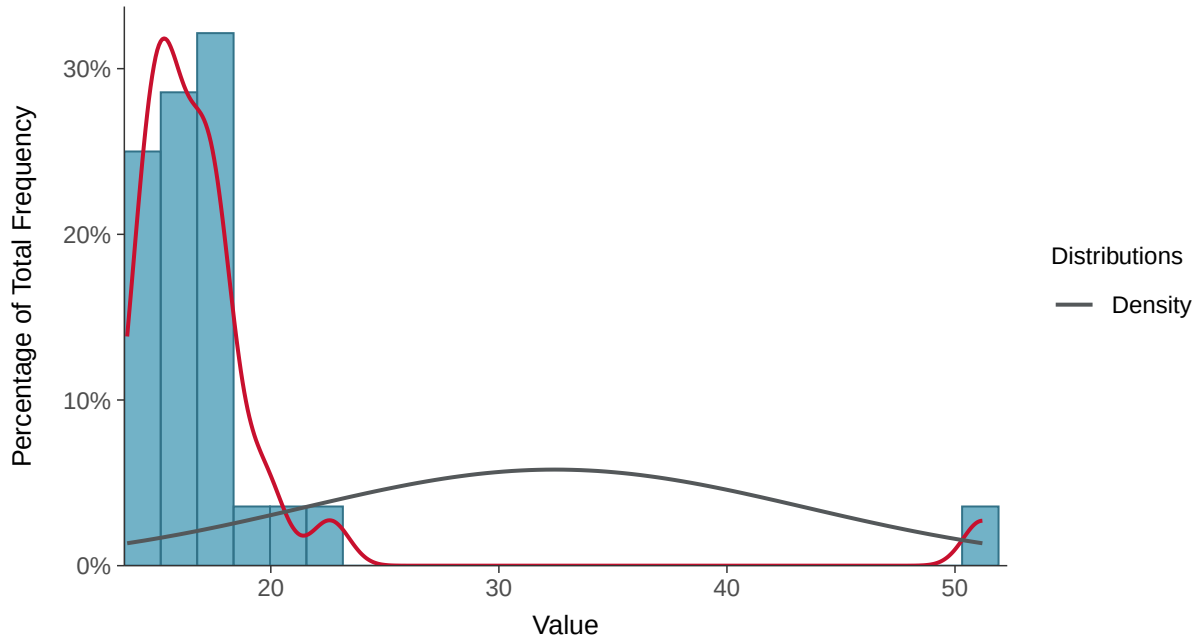
Scatter Plot

Sulfate, MW-7R (mg/L)



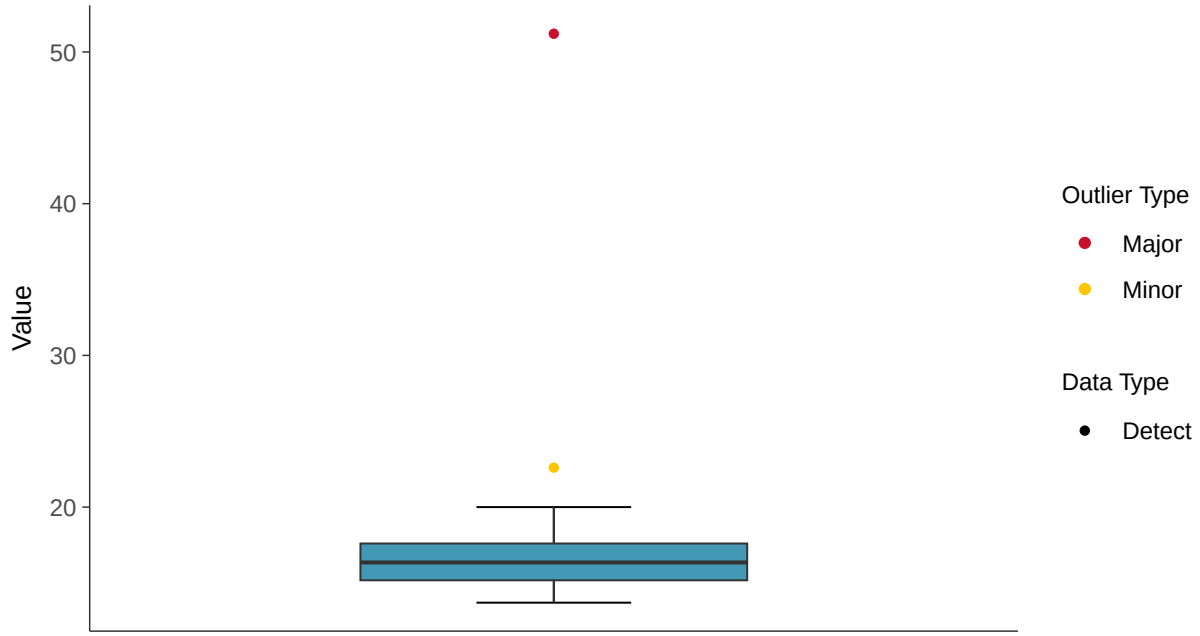
Histogram

Sulfate, MW-7R (mg/L)



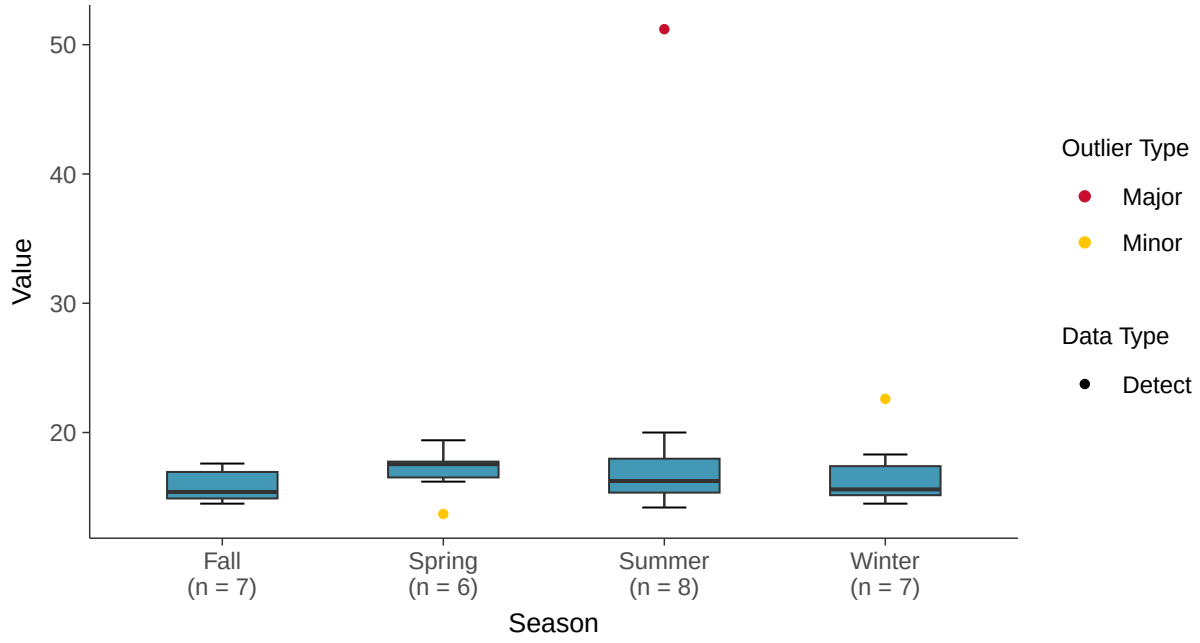
Boxplot

Sulfate, MW-7R (mg/L)



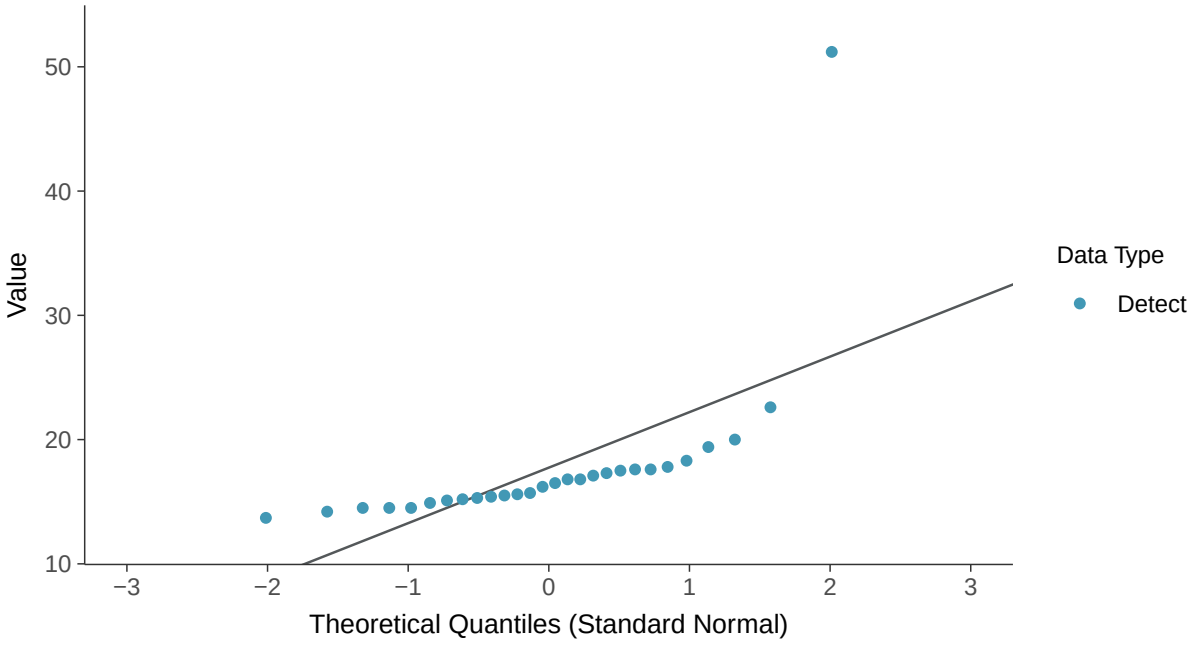
Boxplot by Season

Sulfate, MW-7R (mg/L)



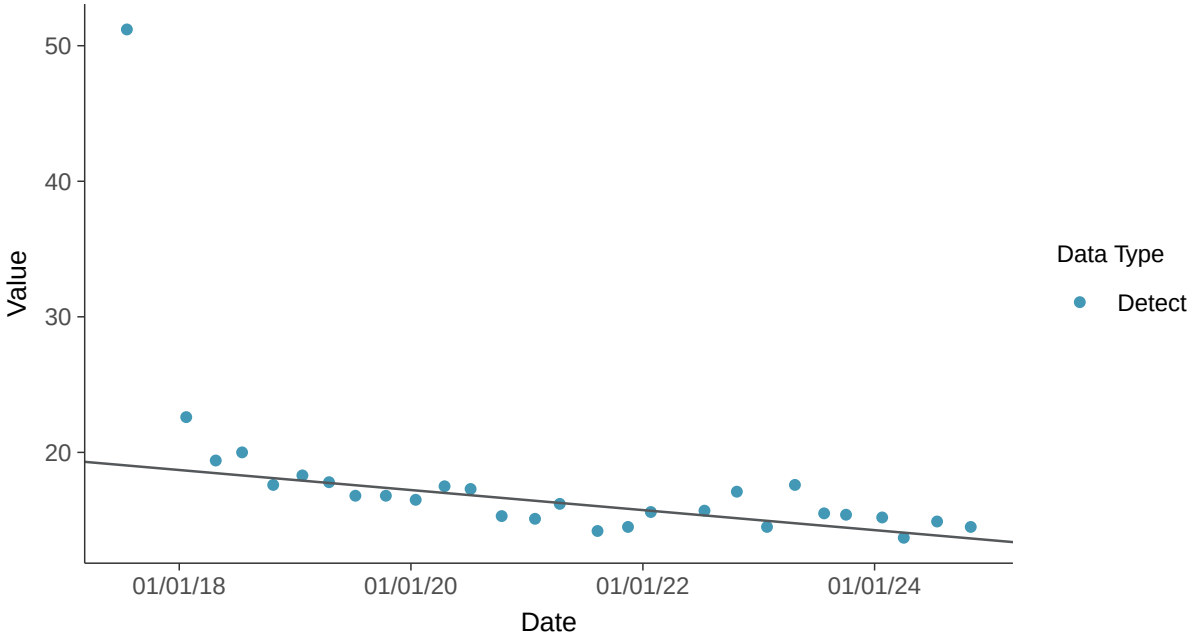
Normal Q-Q plot

Sulfate, MW-7R (mg/L)



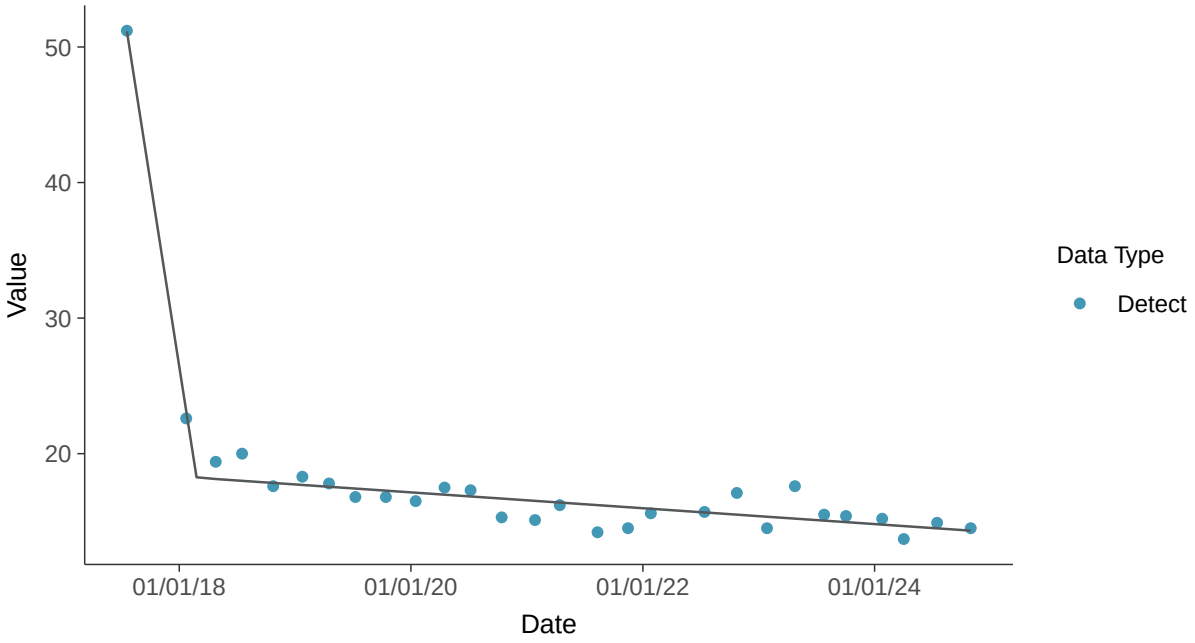
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-7R (mg/L)



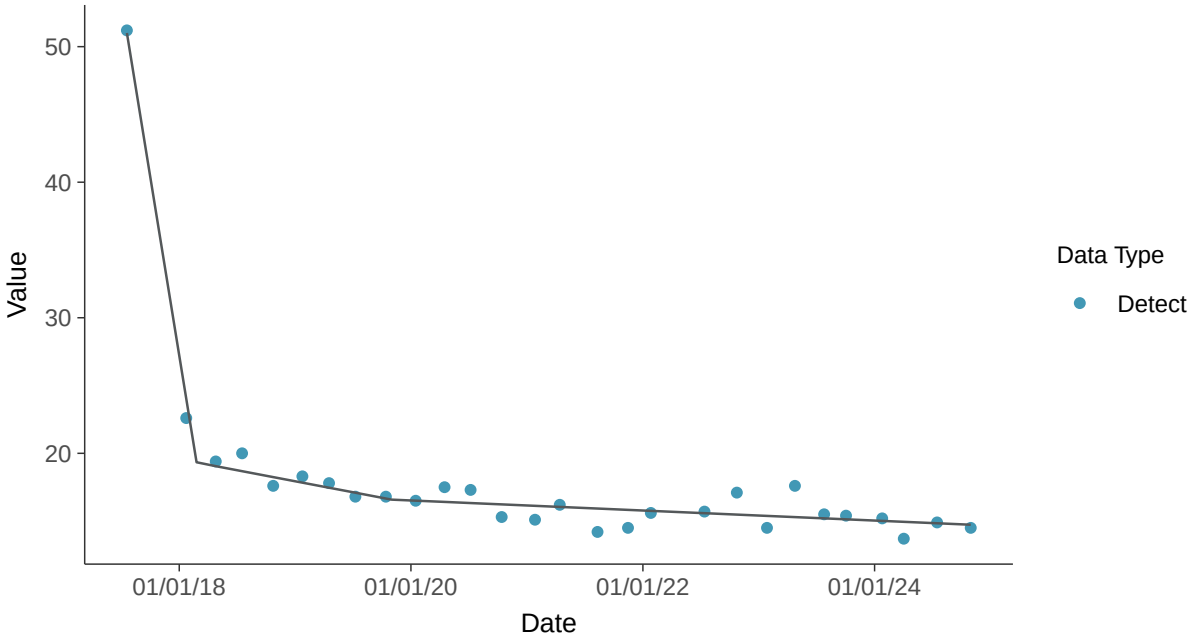
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-7R (mg/L)

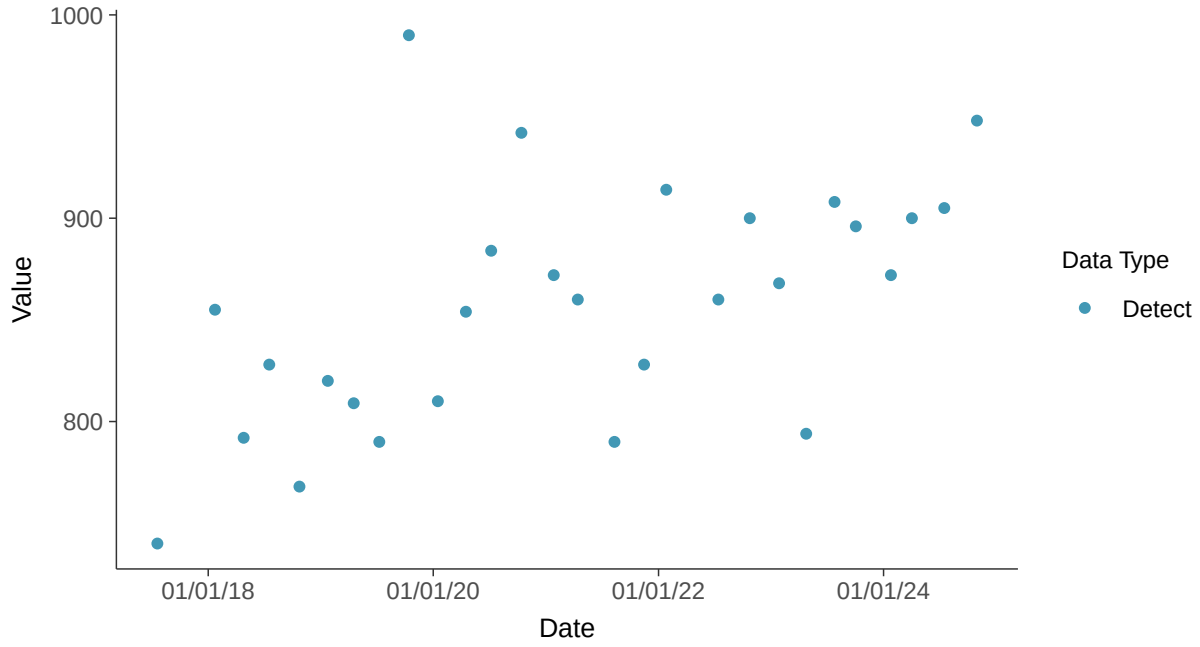


App. III: Total Dissolved Solids, MW-7R

ID: 07_02_125

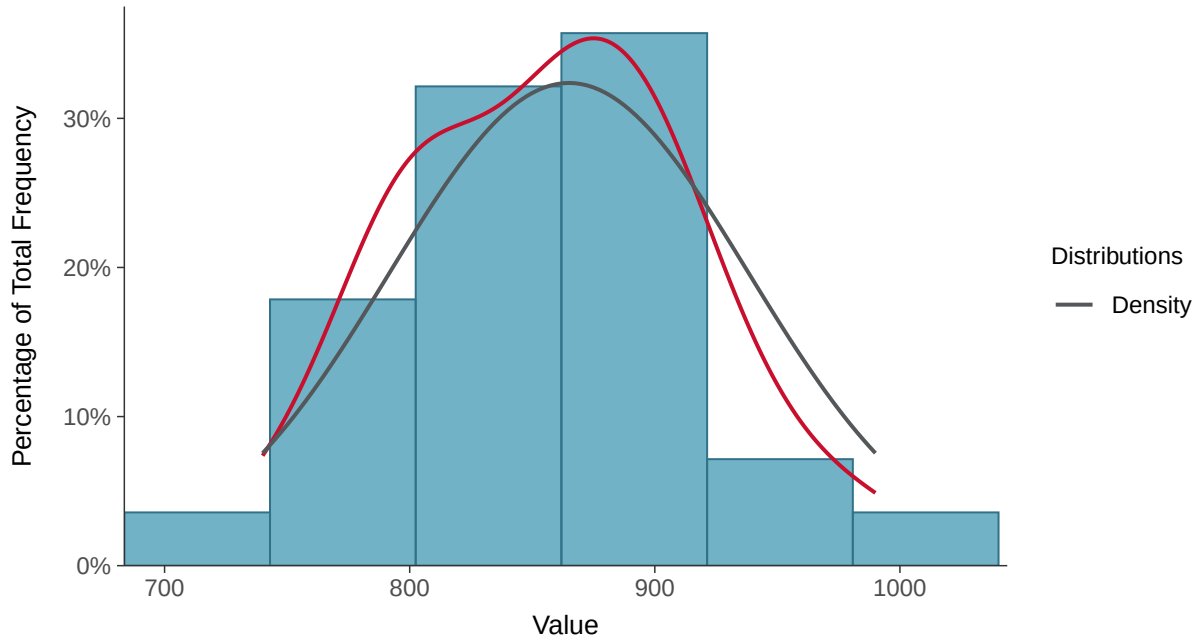
Scatter Plot

Total Dissolved Solids, MW-7R (mg/L)



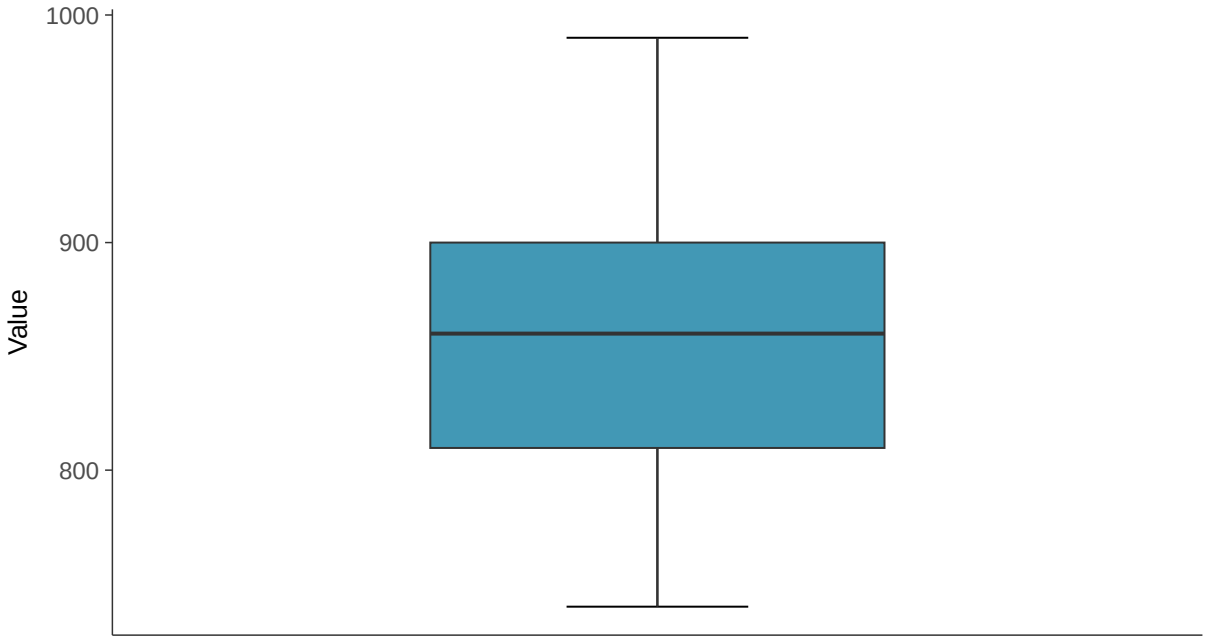
Histogram

Total Dissolved Solids, MW-7R (mg/L)



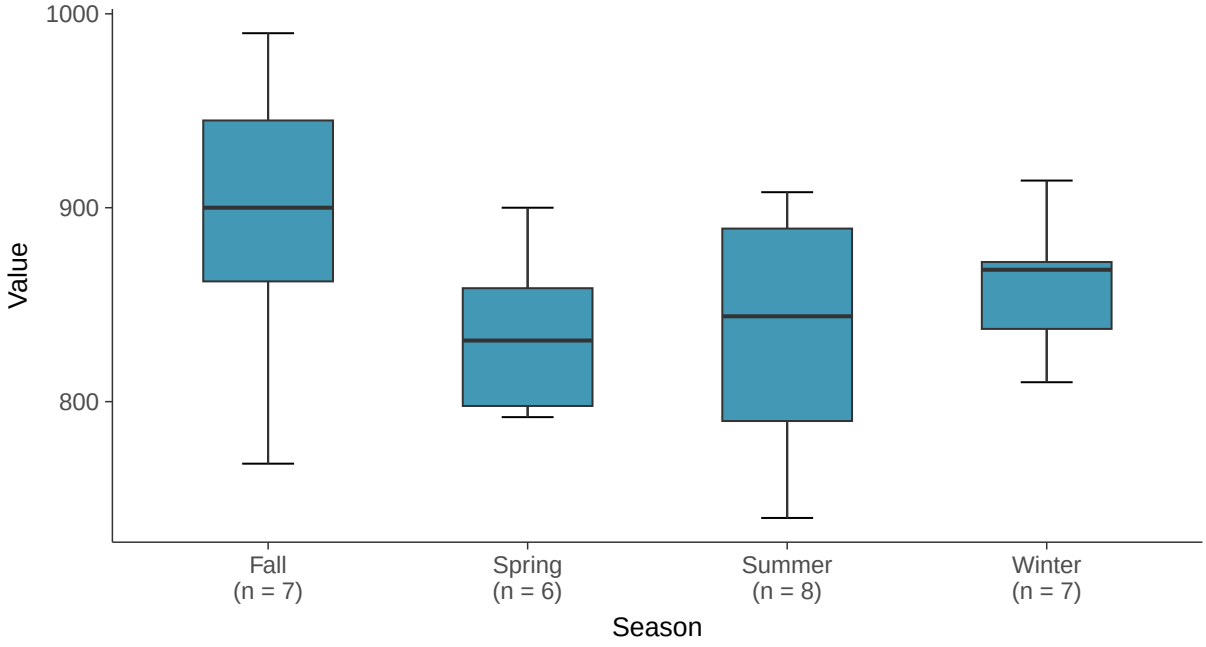
Boxplot

Total Dissolved Solids, MW-7R (mg/L)



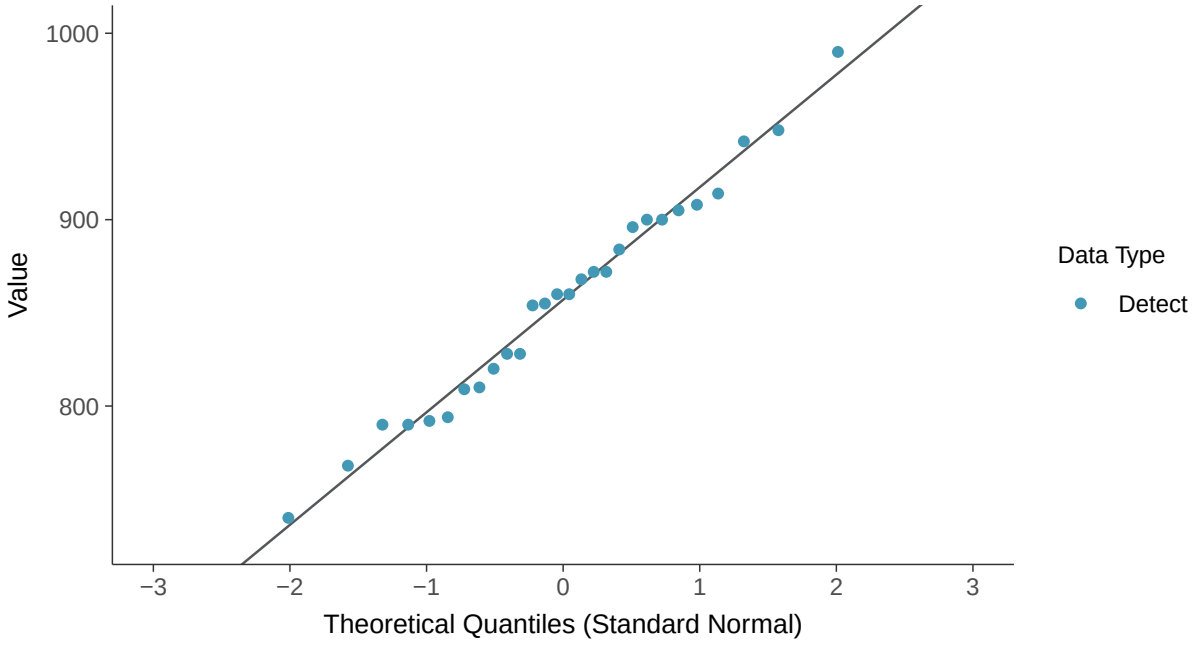
Boxplot by Season

Total Dissolved Solids, MW-7R (mg/L)



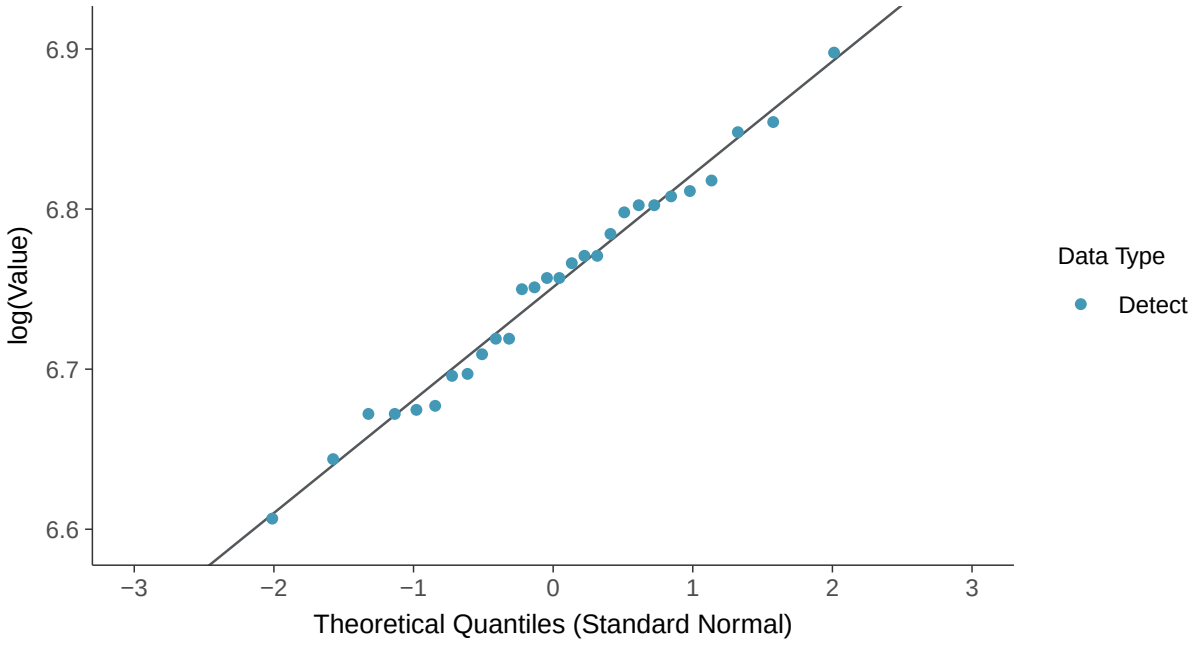
Normal Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



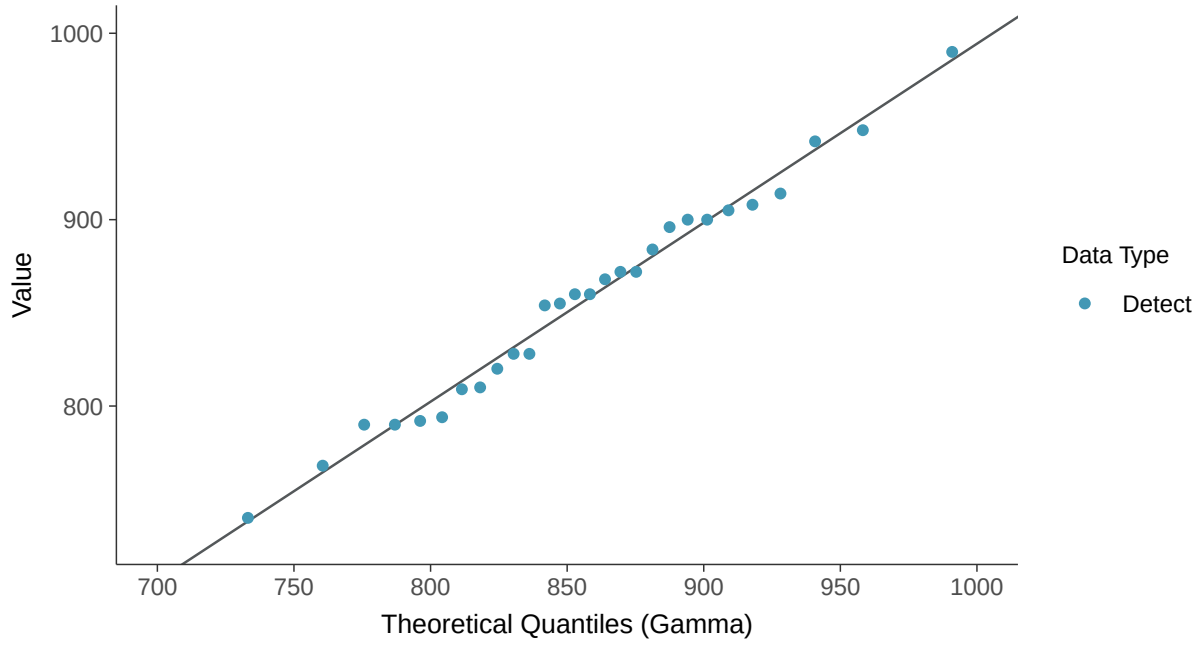
Lognormal Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



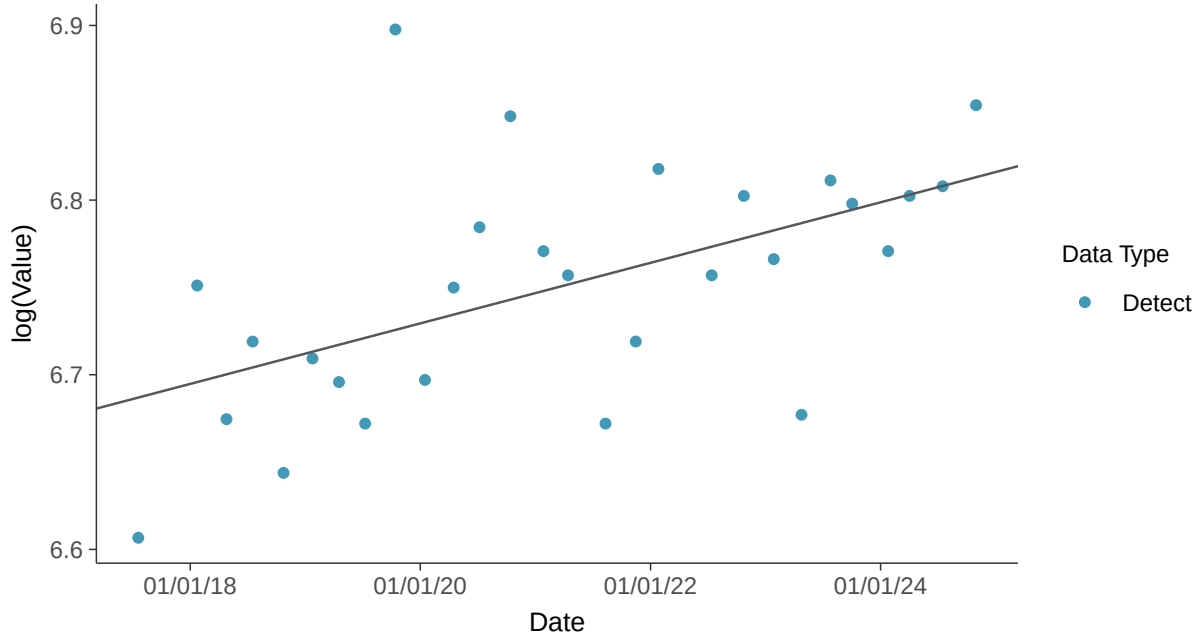
Gamma Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



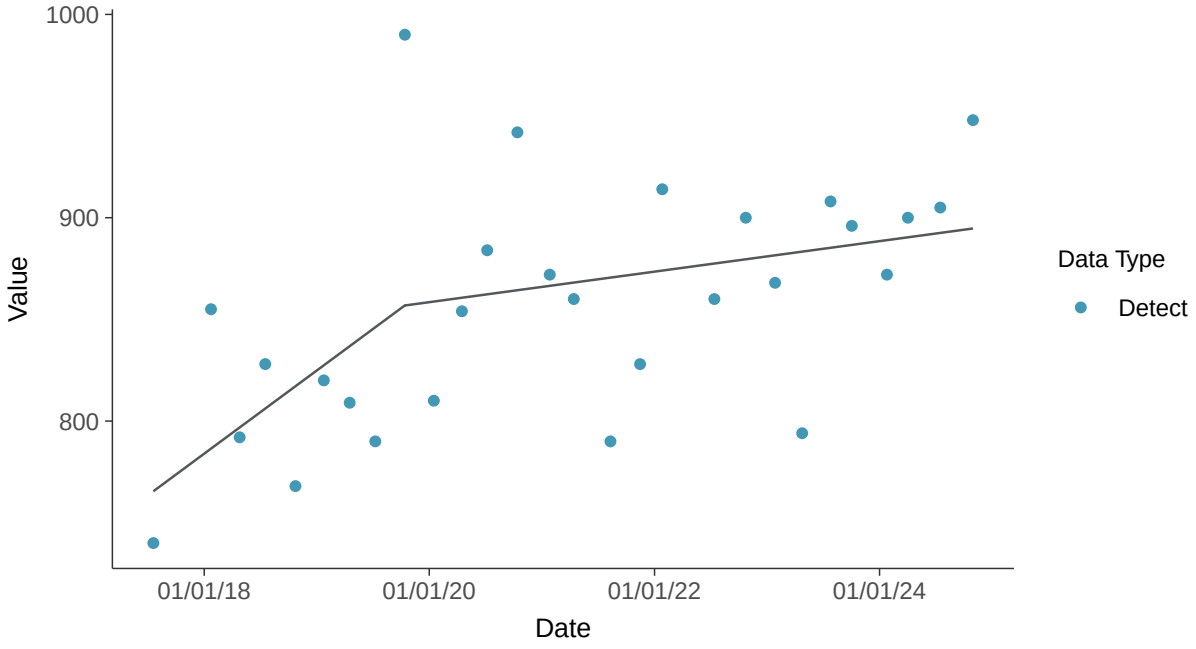
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-7R (mg/L)



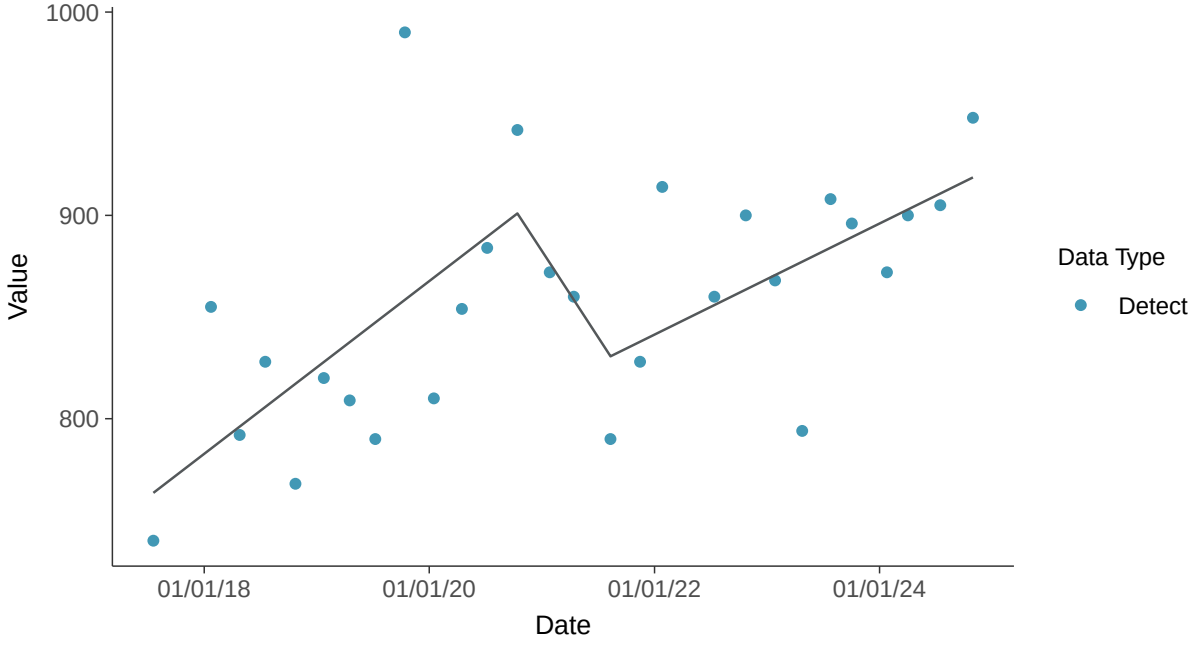
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-7R (mg/L)

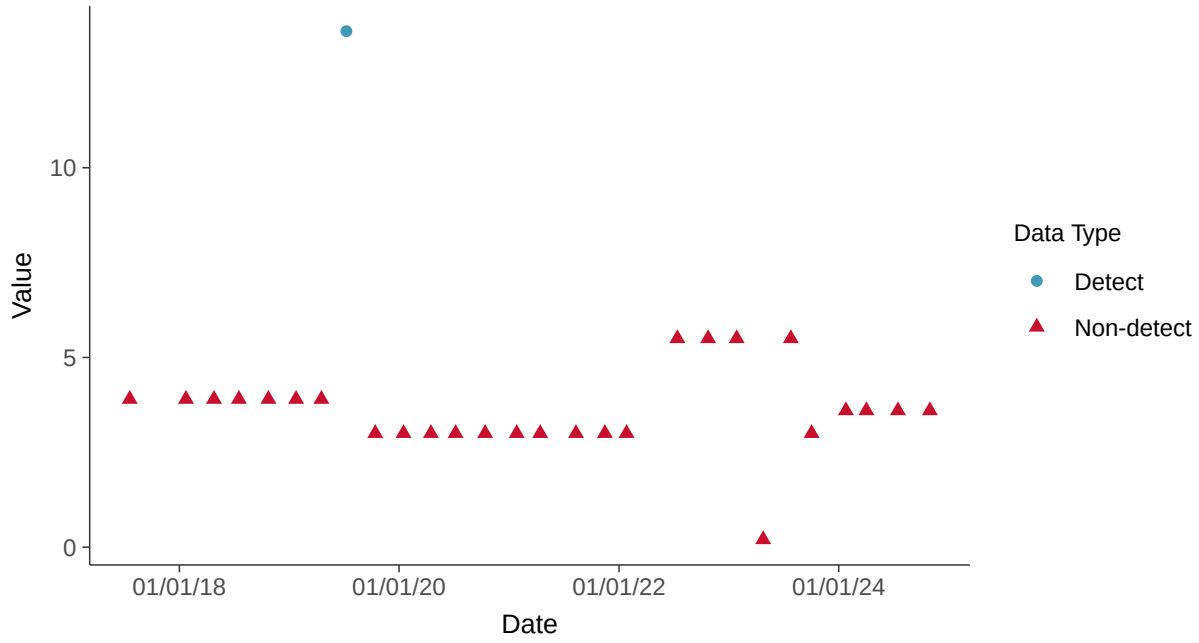


App. IV: Antimony, MW-7R

ID: 07_03_101

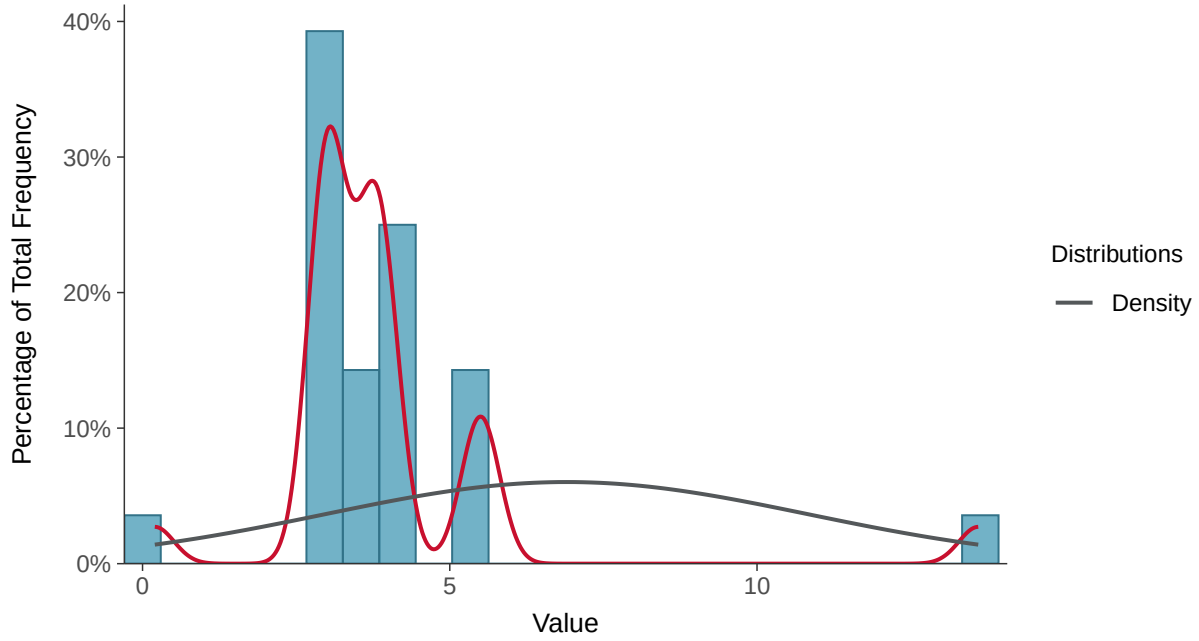
Scatter Plot

Antimony, MW-7R (ug/L)



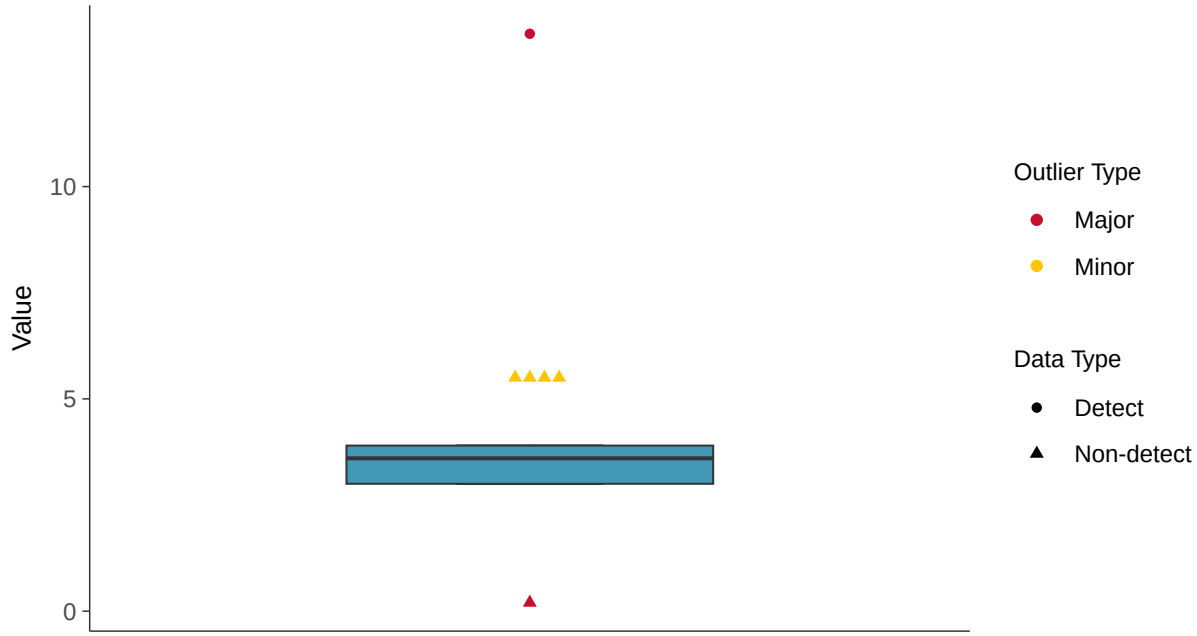
Histogram

Antimony, MW-7R (ug/L)



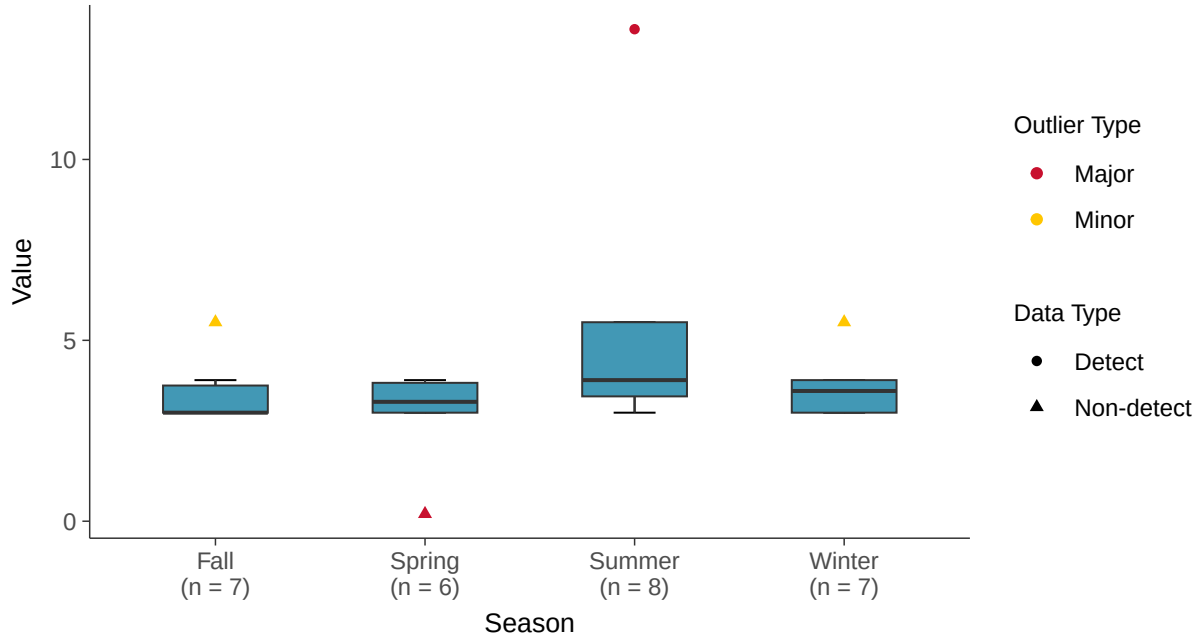
Boxplot

Antimony, MW-7R (ug/L)



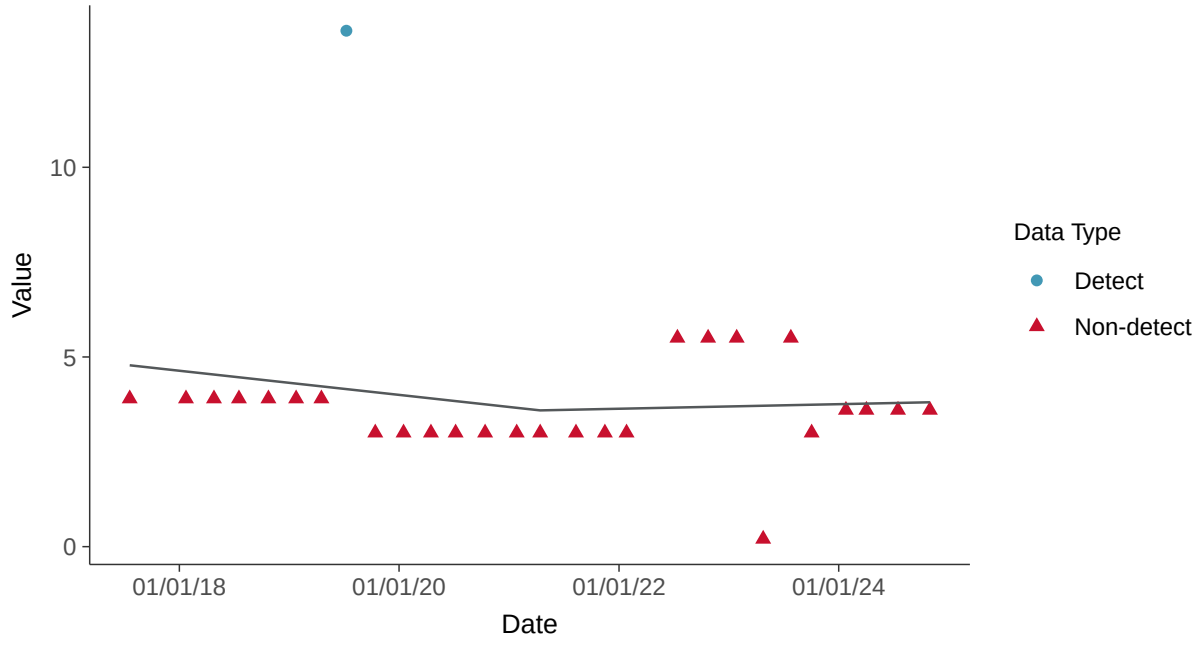
Boxplot by Season

Antimony, MW-7R (ug/L)



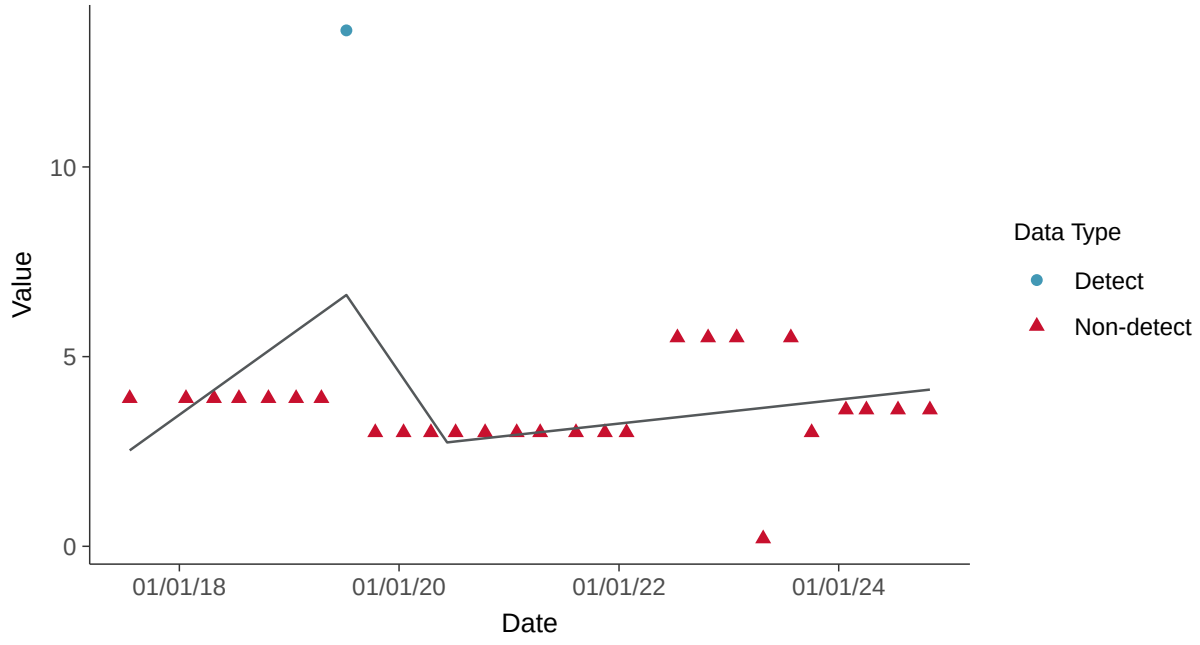
Trend Regression: Piecewise Linear-Linear

Antimony, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-7R (ug/L)

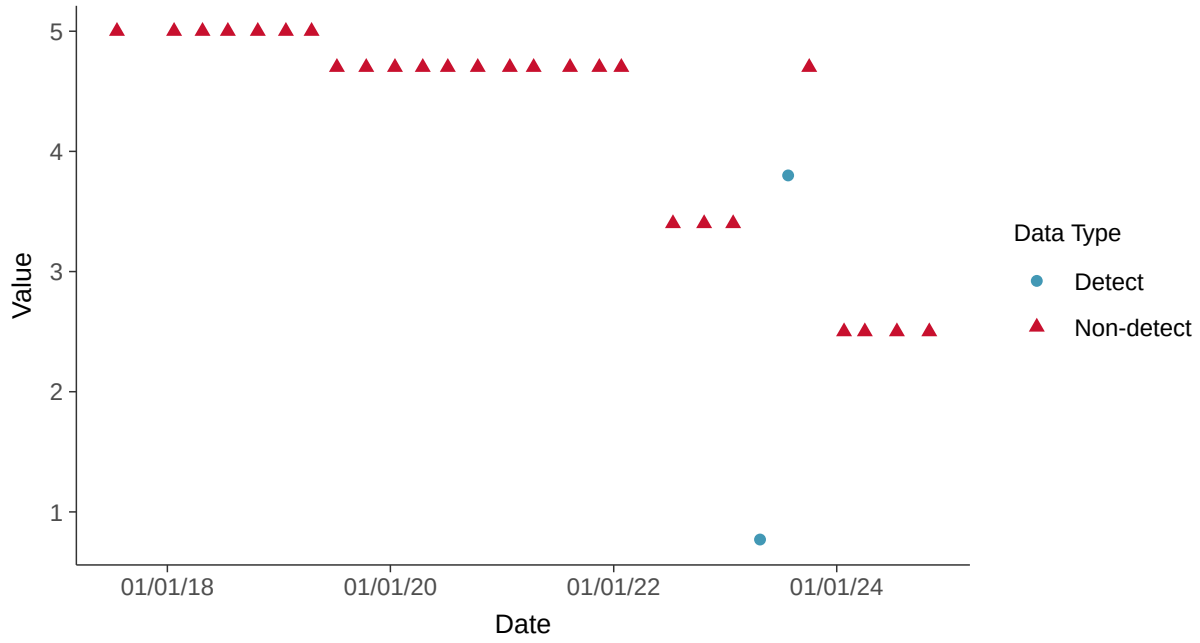


App. IV: Arsenic, MW-7R

ID: 07_03_102

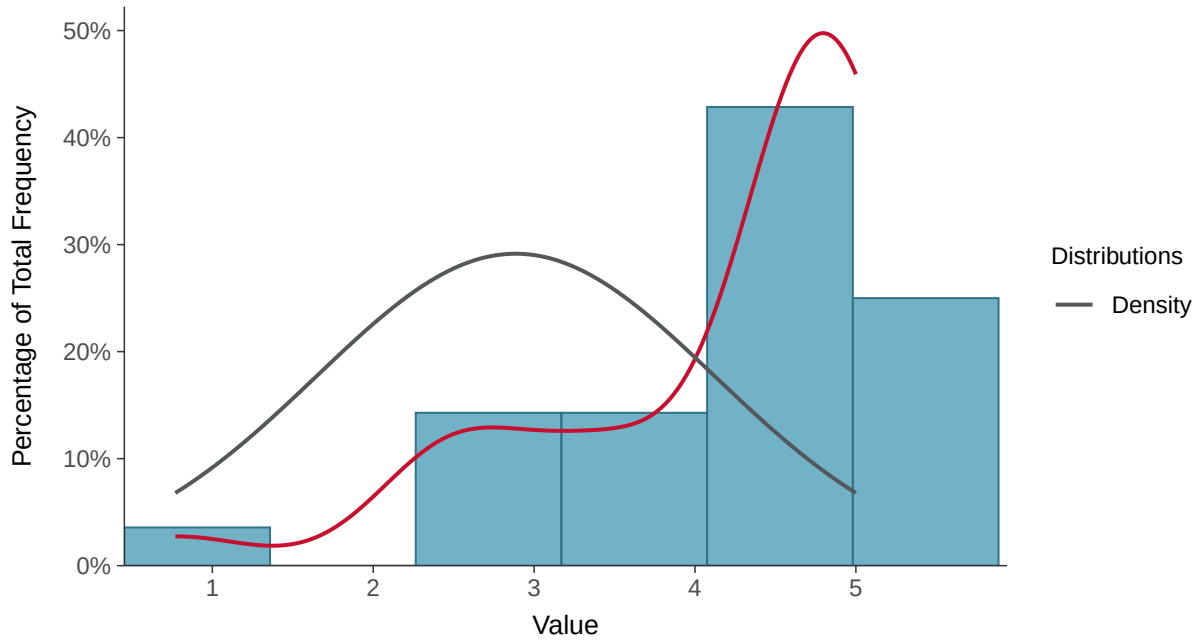
Scatter Plot

Arsenic, MW-7R (ug/L)



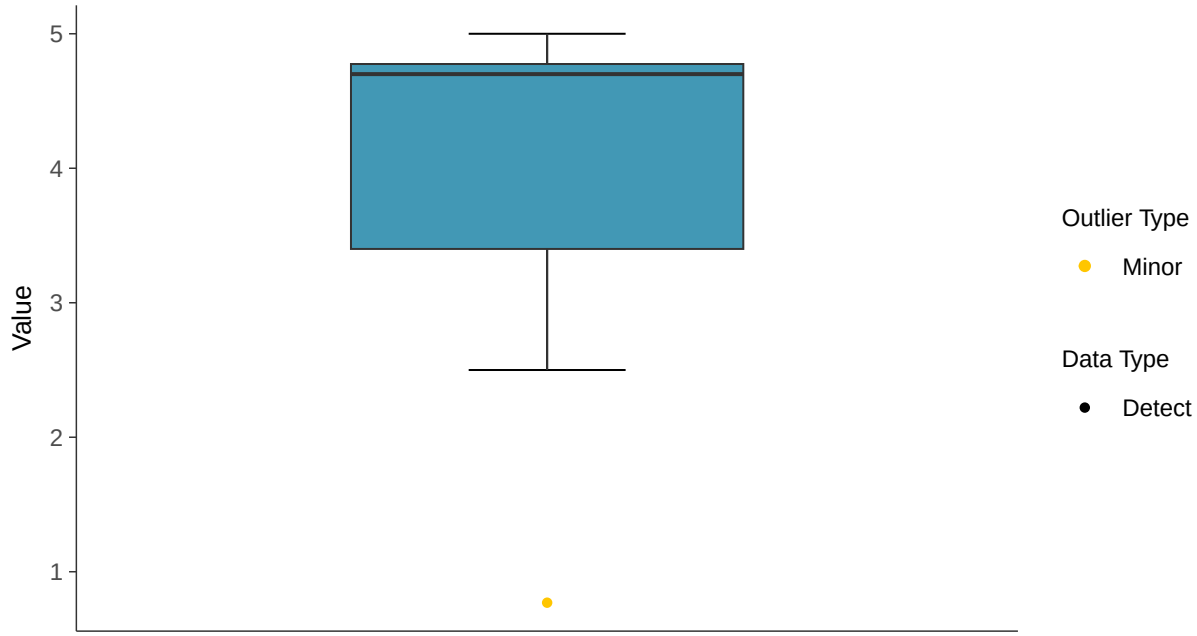
Histogram

Arsenic, MW-7R (ug/L)



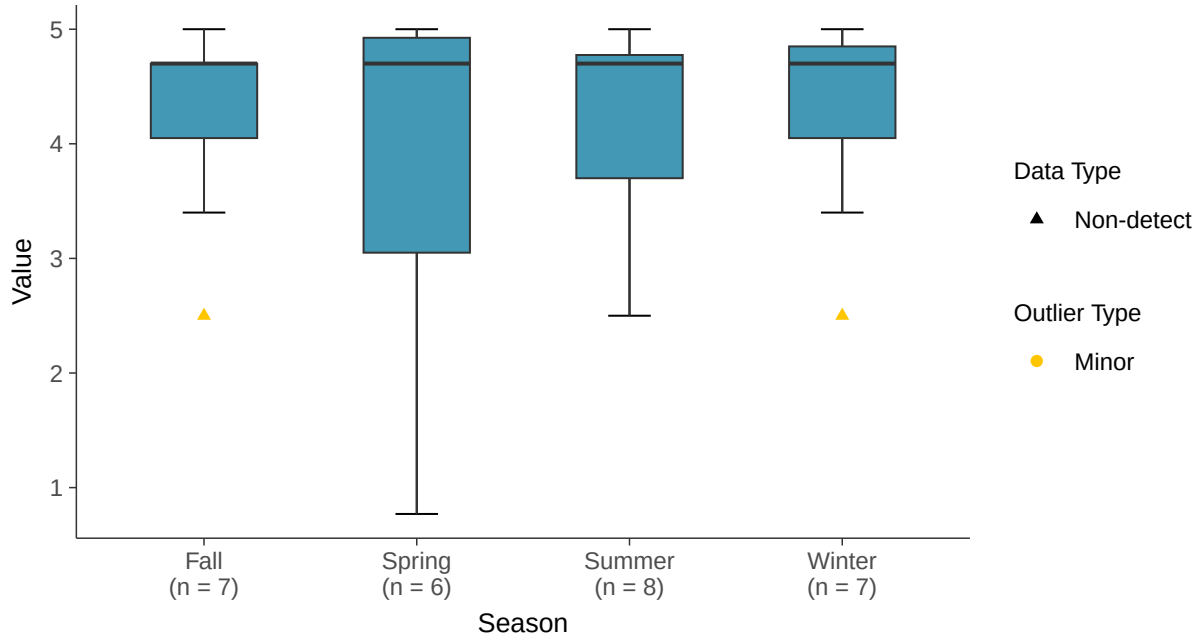
Boxplot

Arsenic, MW-7R (ug/L)



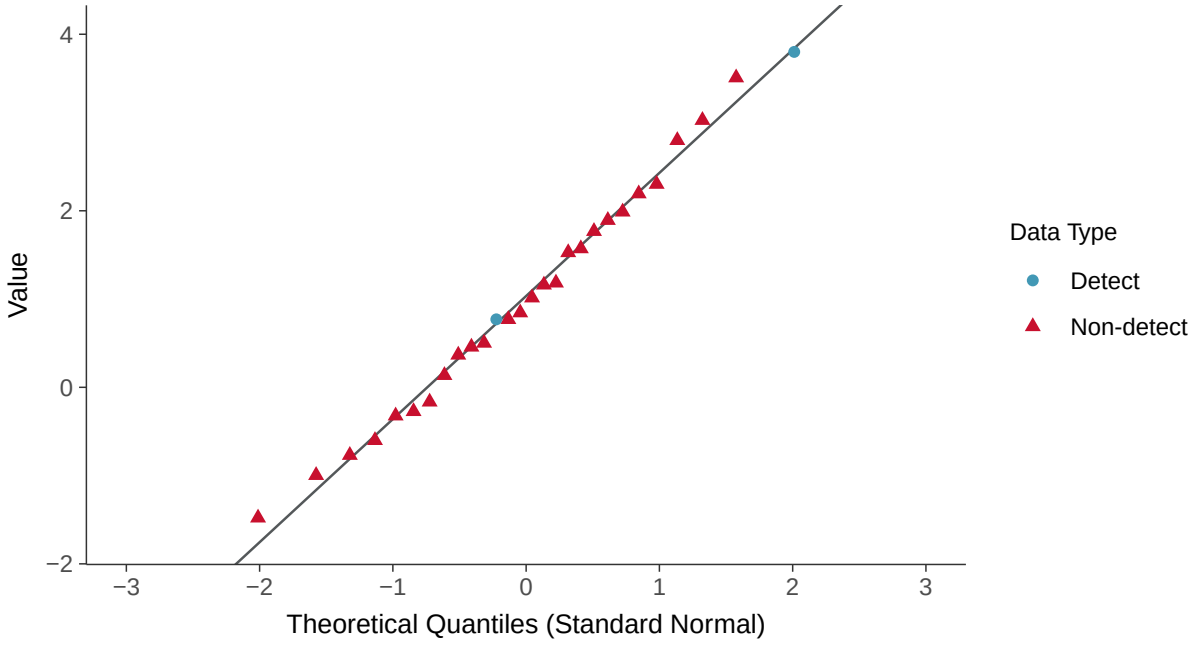
Boxplot by Season

Arsenic, MW-7R (ug/L)



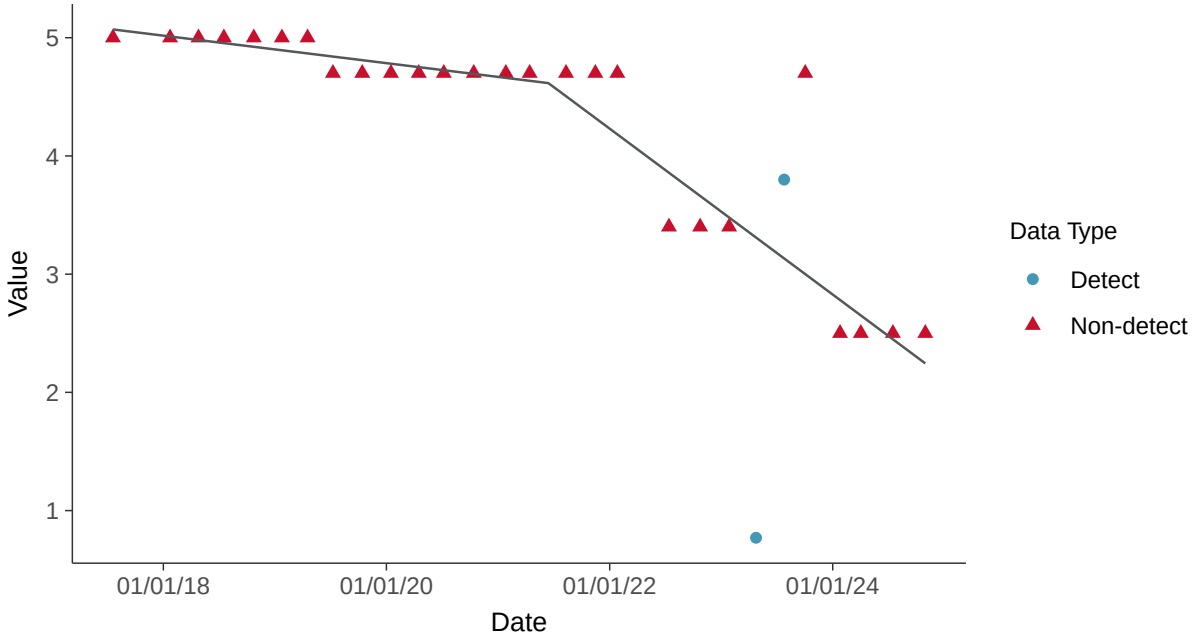
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-7R (ug/L)



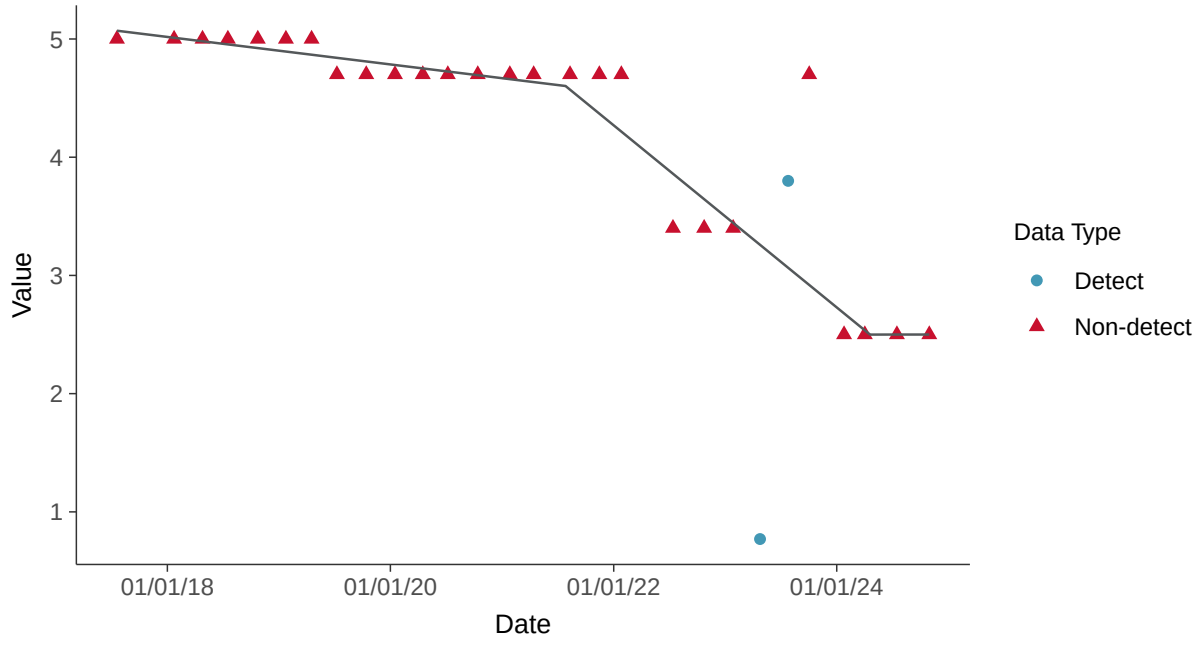
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-7R (ug/L)

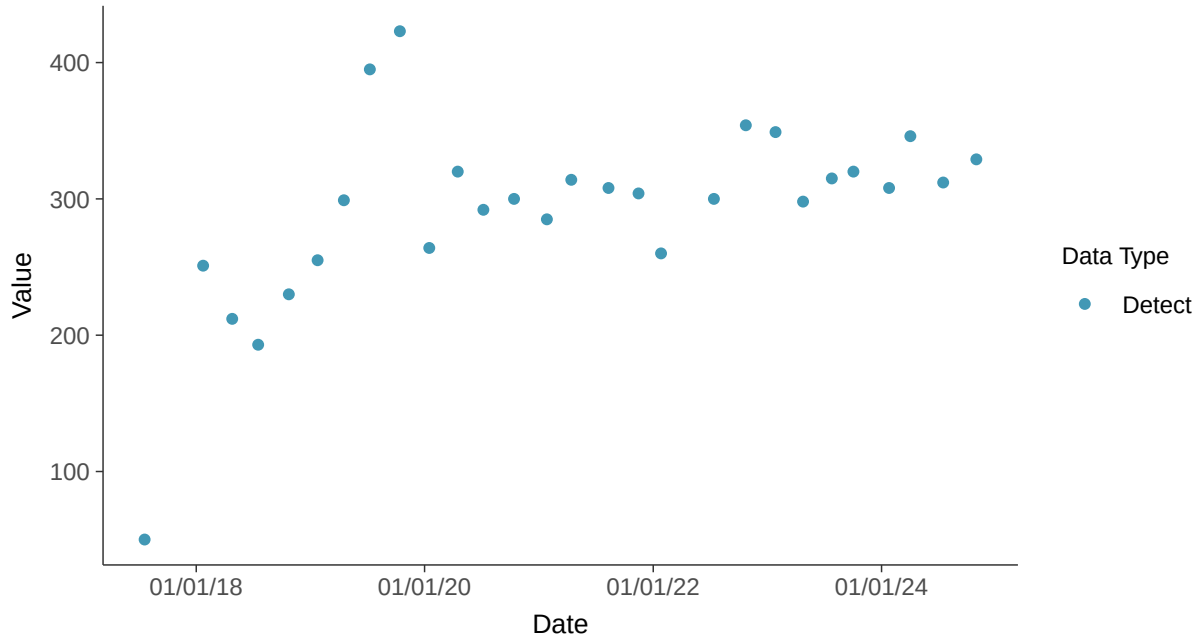


App. IV: Barium, MW-7R

ID: 07_03_103

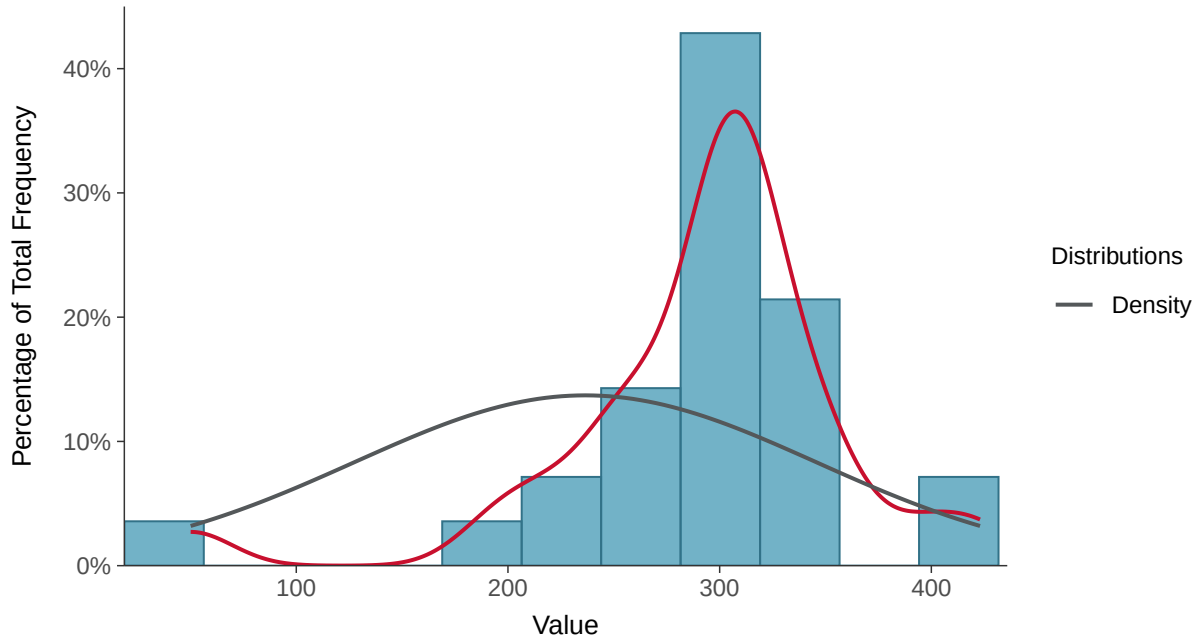
Scatter Plot

Barium, MW-7R (ug/L)



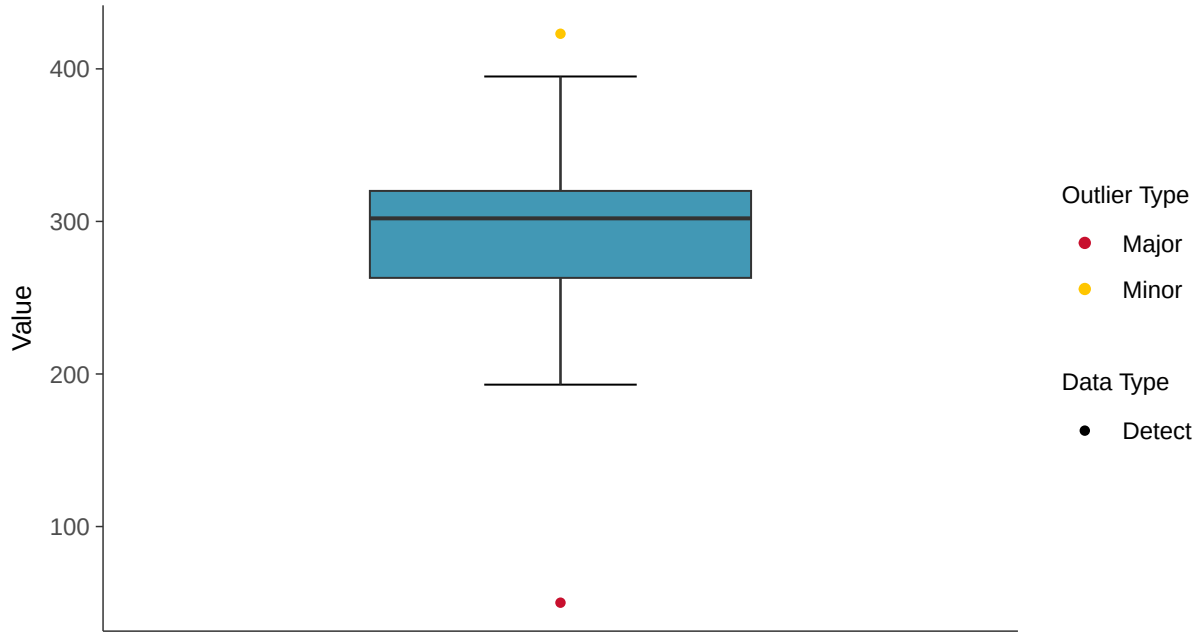
Histogram

Barium, MW-7R (ug/L)



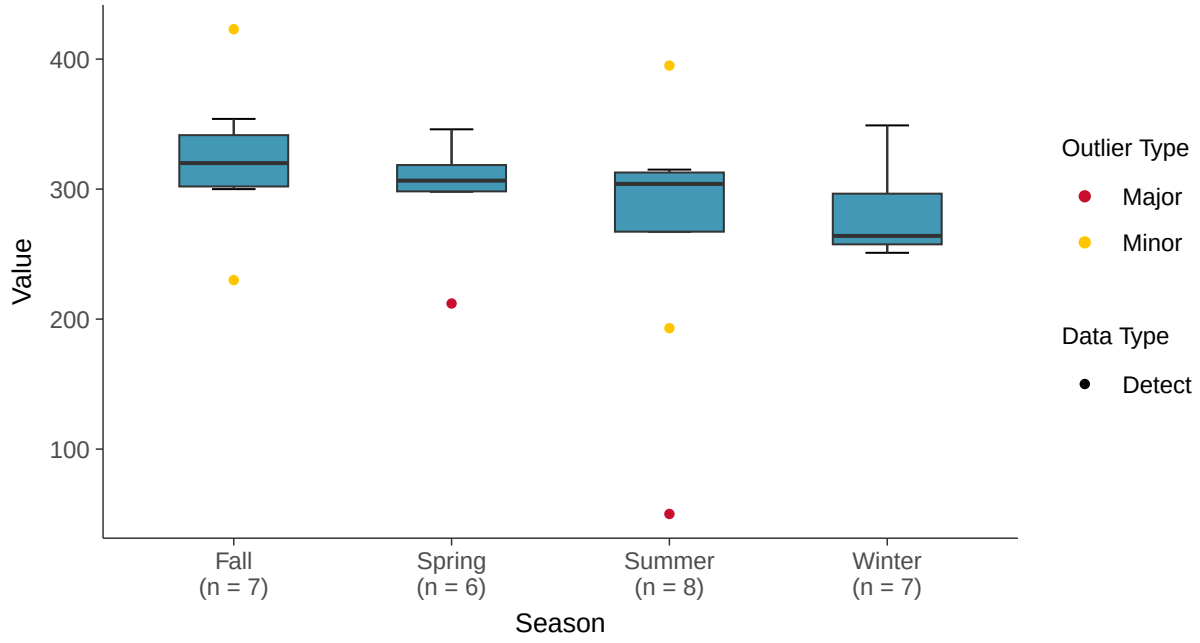
Boxplot

Barium, MW-7R (ug/L)



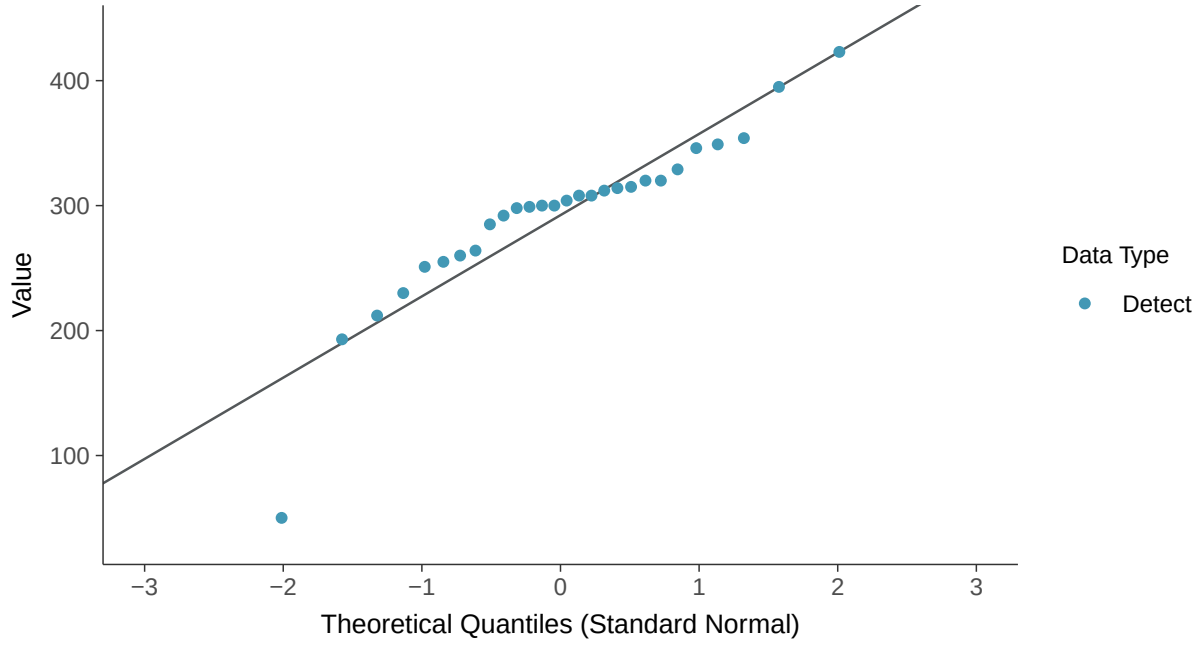
Boxplot by Season

Barium, MW-7R (ug/L)



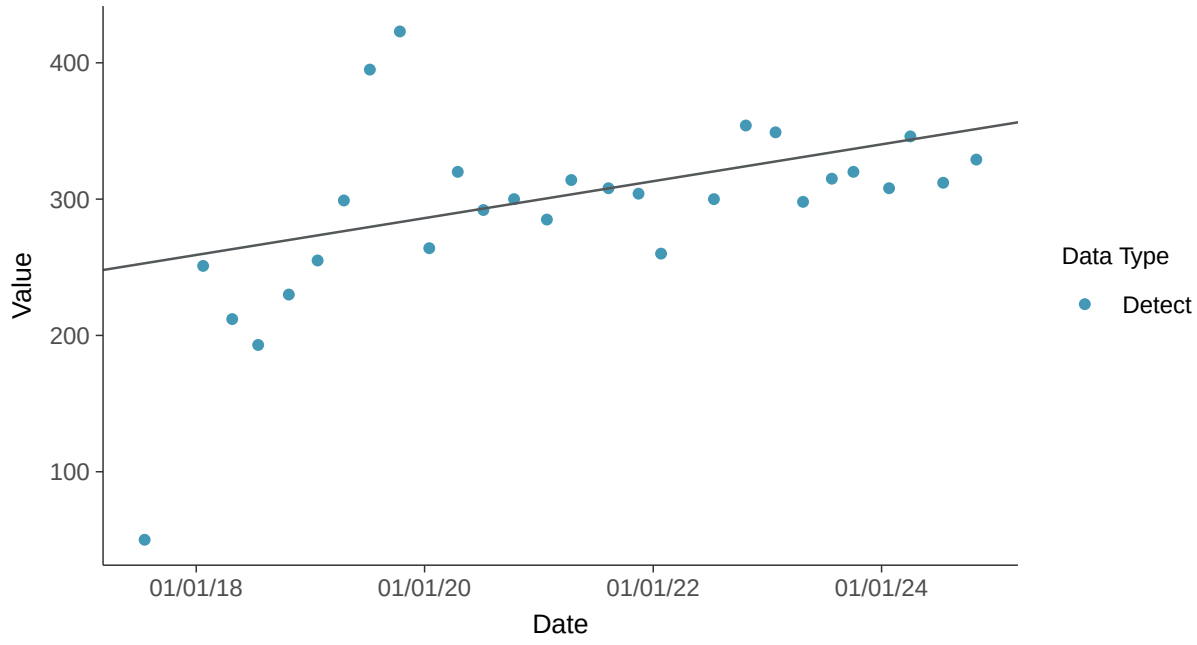
Normal Q-Q plot

Barium, MW-7R (ug/L)



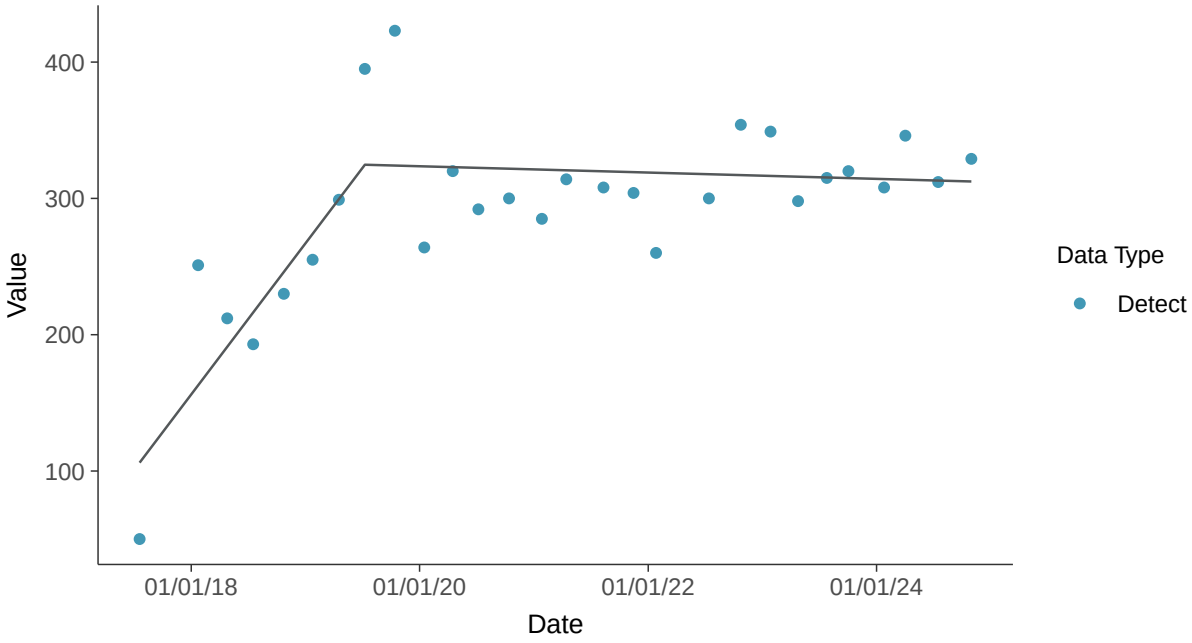
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-7R (ug/L)



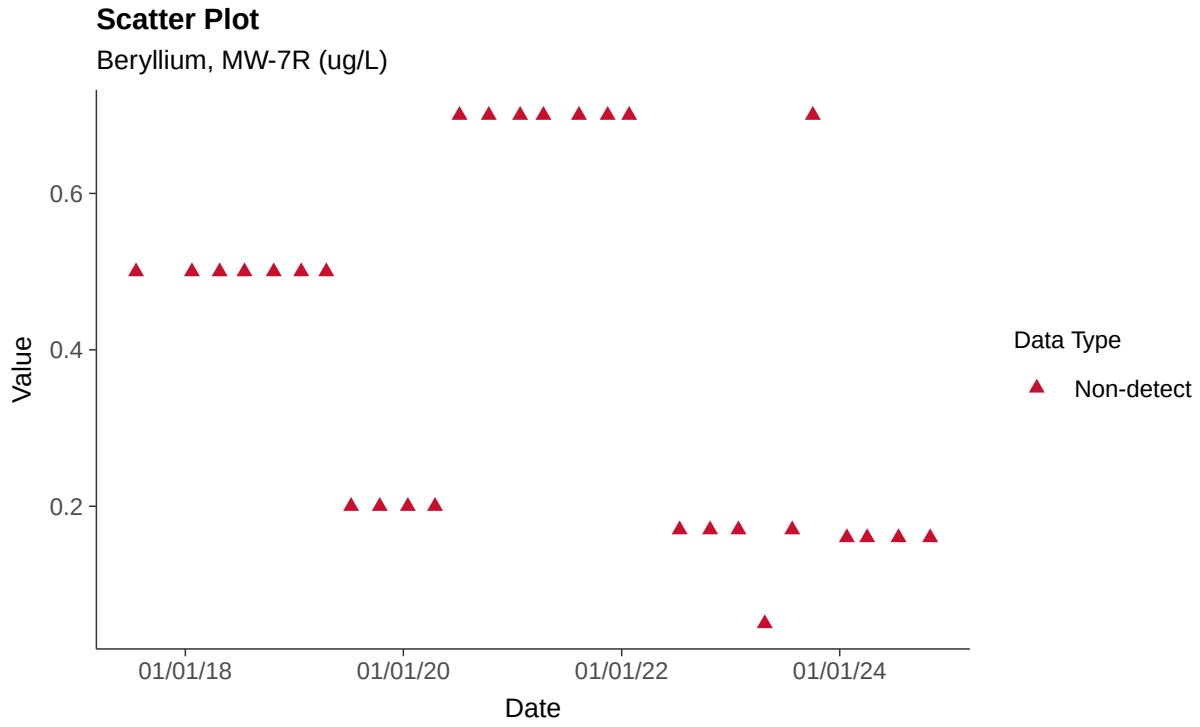
Trend Regression: Piecewise Linear-Linear

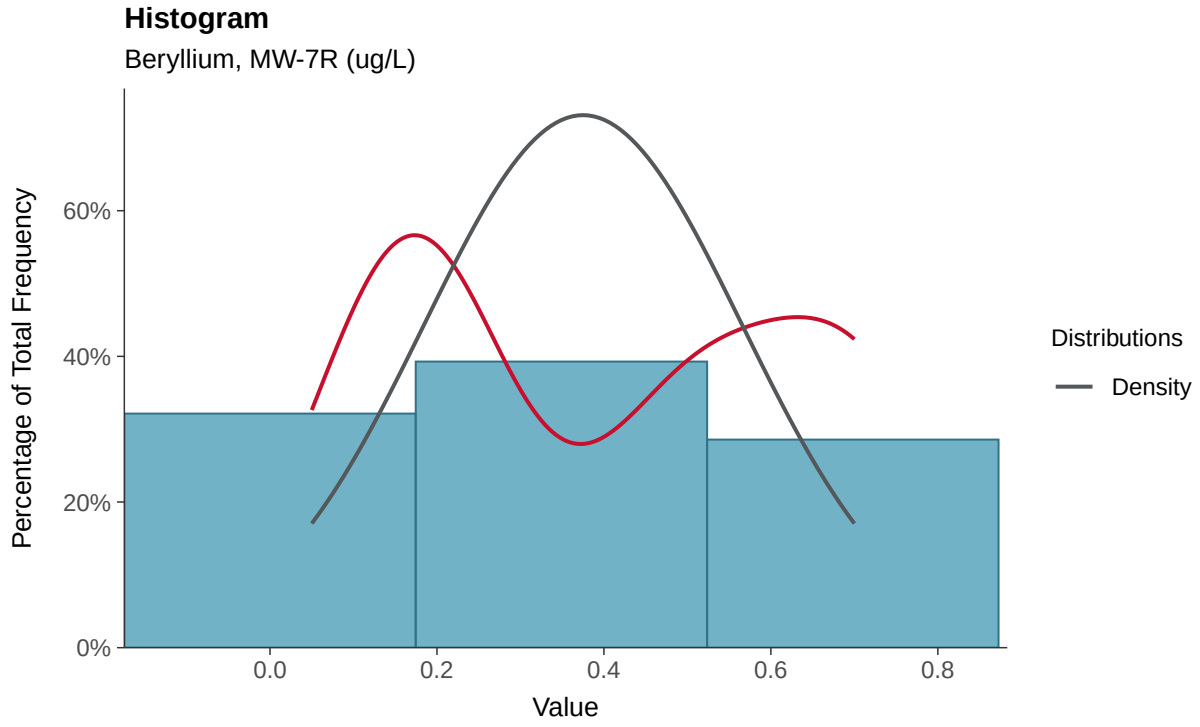
Barium, MW-7R (ug/L)



App. IV: Beryllium, MW-7R

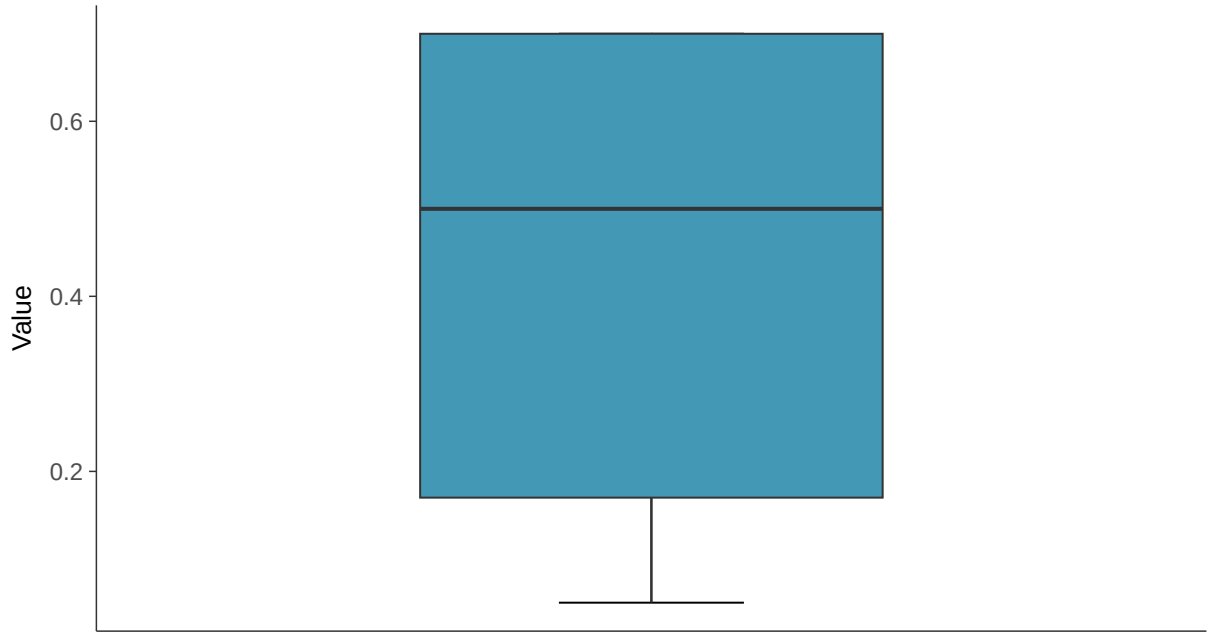
ID: 07_03_104





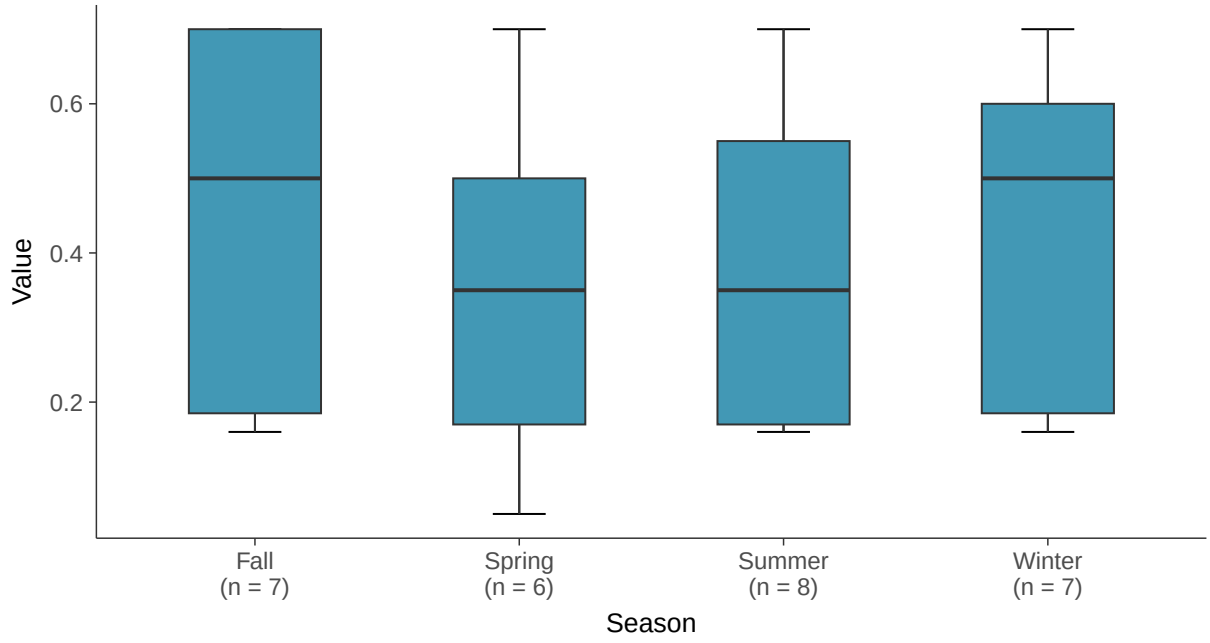
Boxplot

Beryllium, MW-7R (ug/L)



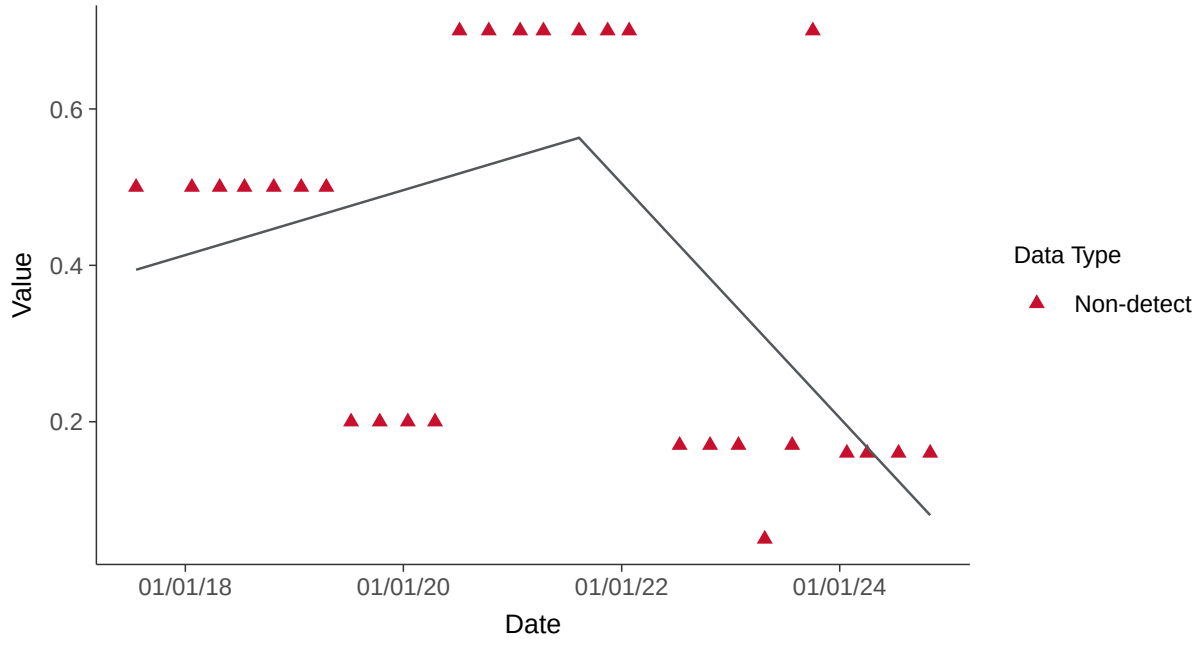
Boxplot by Season

Beryllium, MW-7R (ug/L)



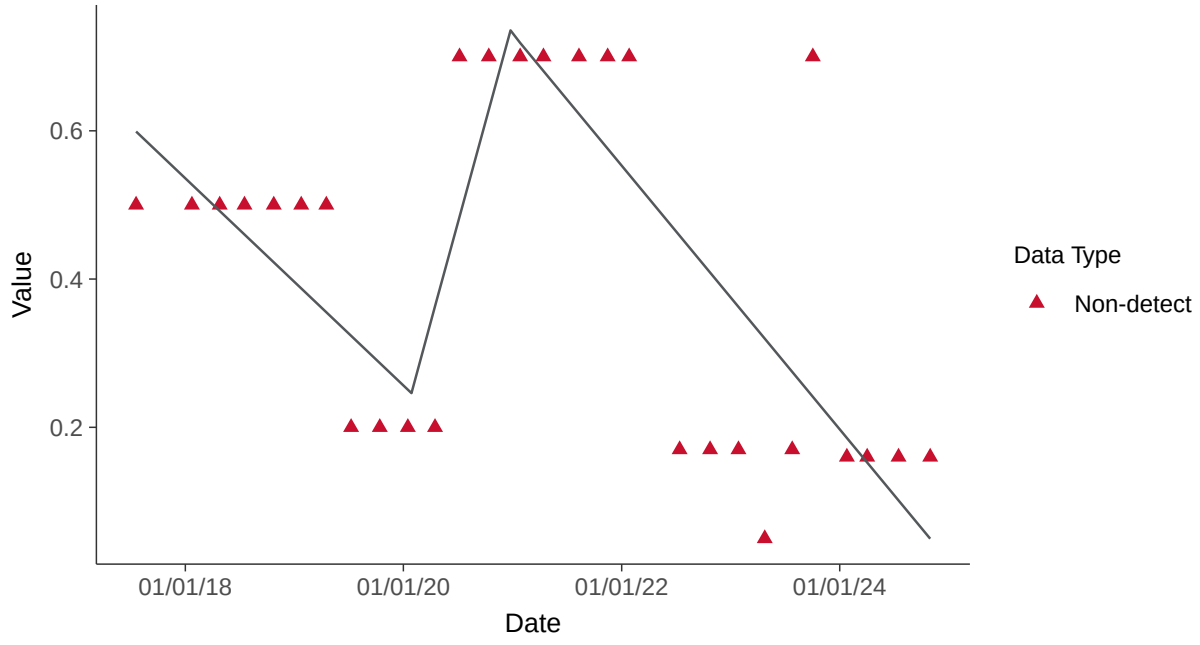
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-7R (ug/L)



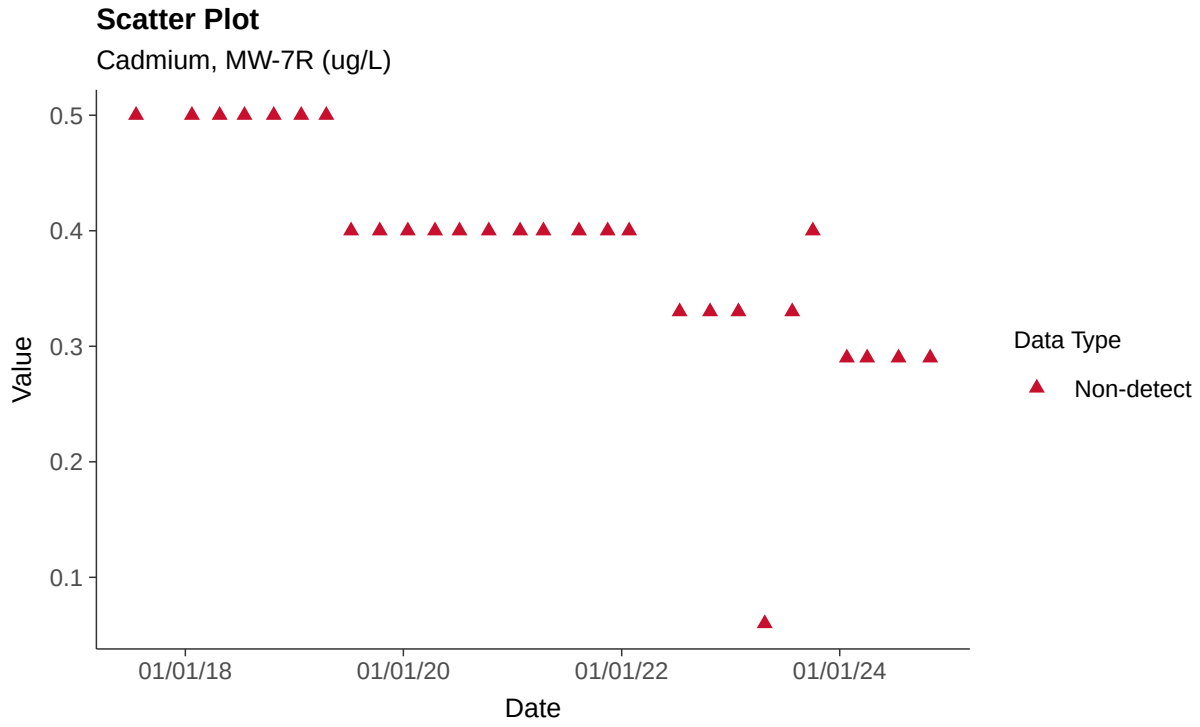
Trend Regression: Piecewise Linear-Linear-Linear

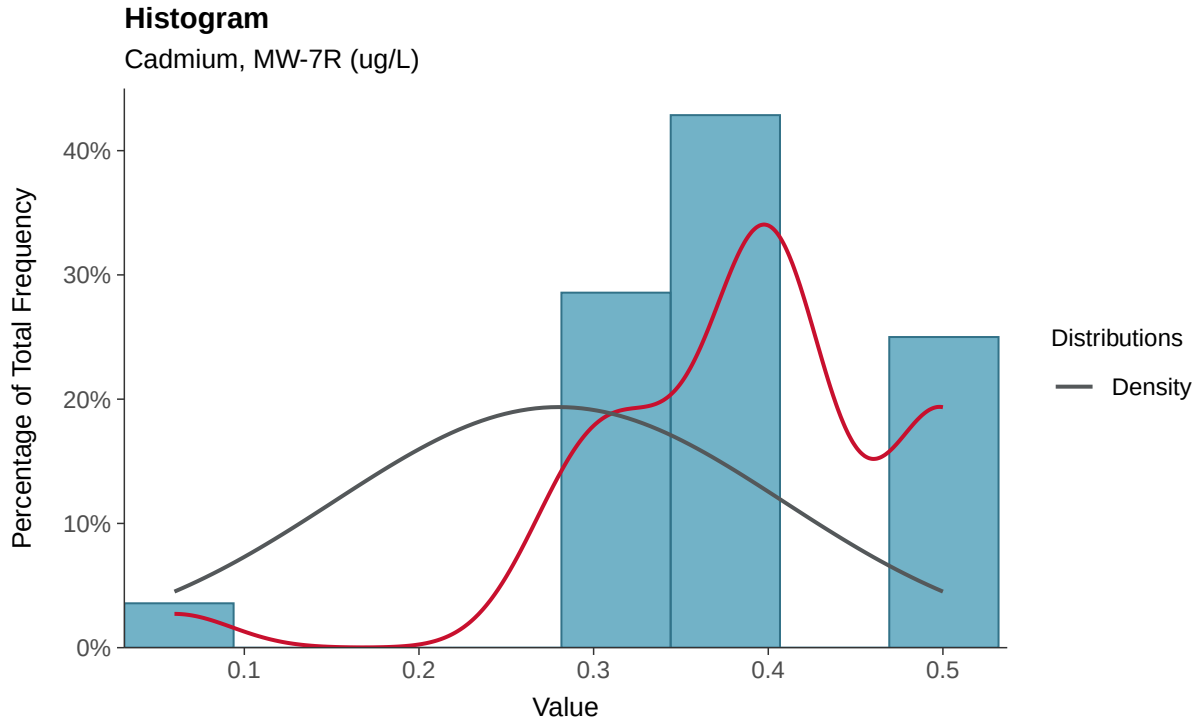
Beryllium, MW-7R (ug/L)



App. IV: Cadmium, MW-7R

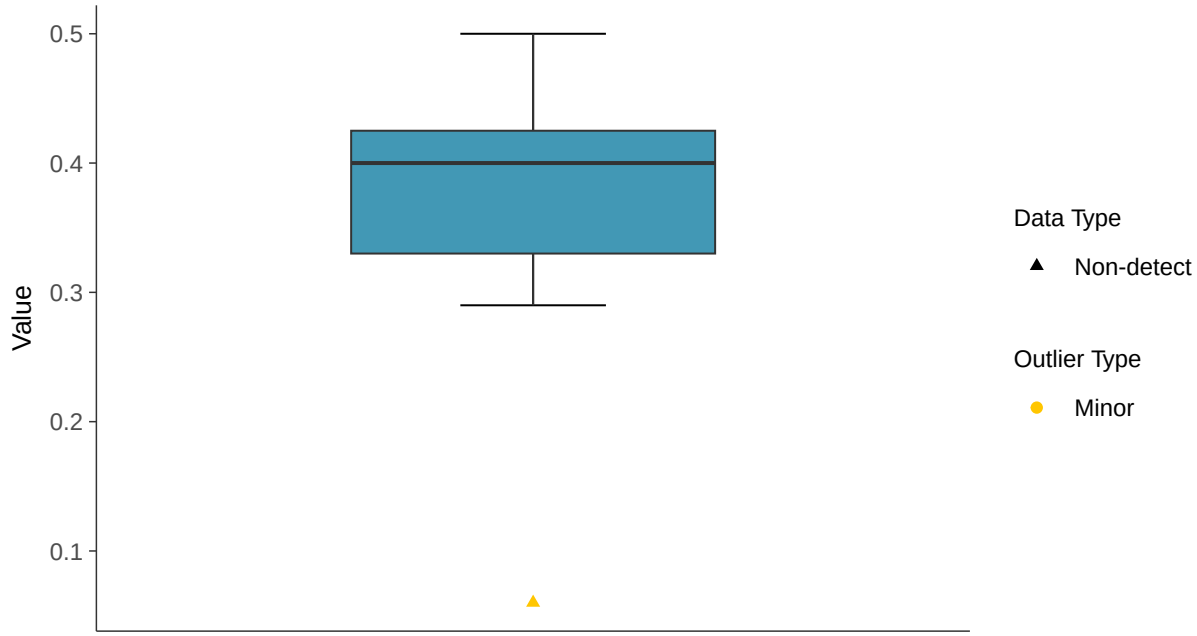
ID: 07_03_106





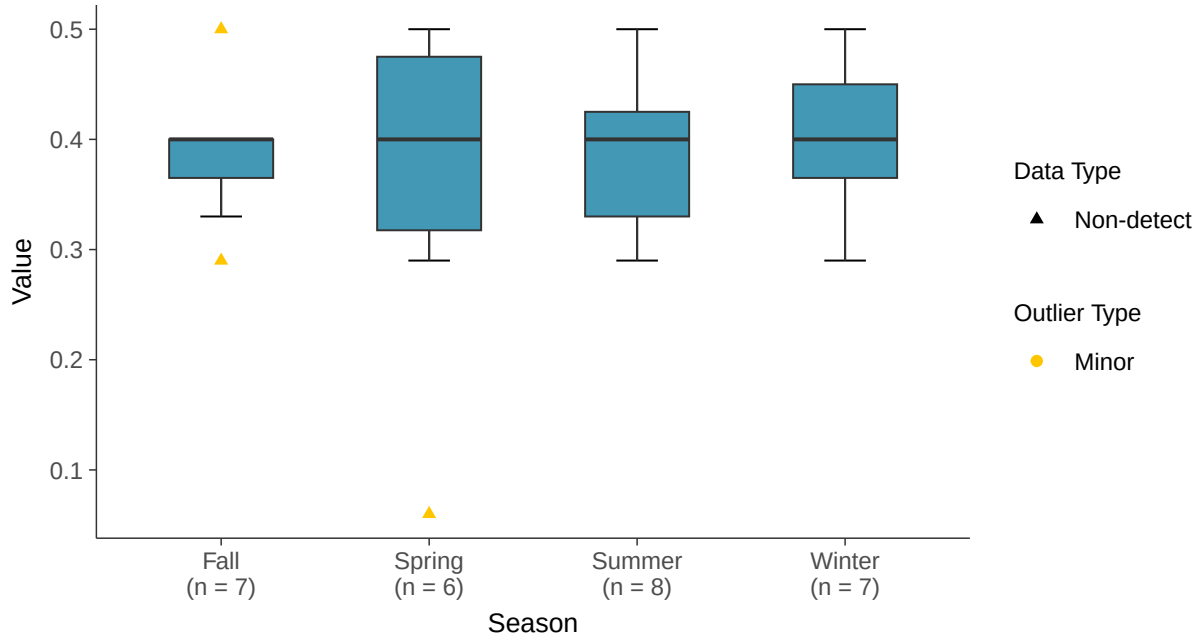
Boxplot

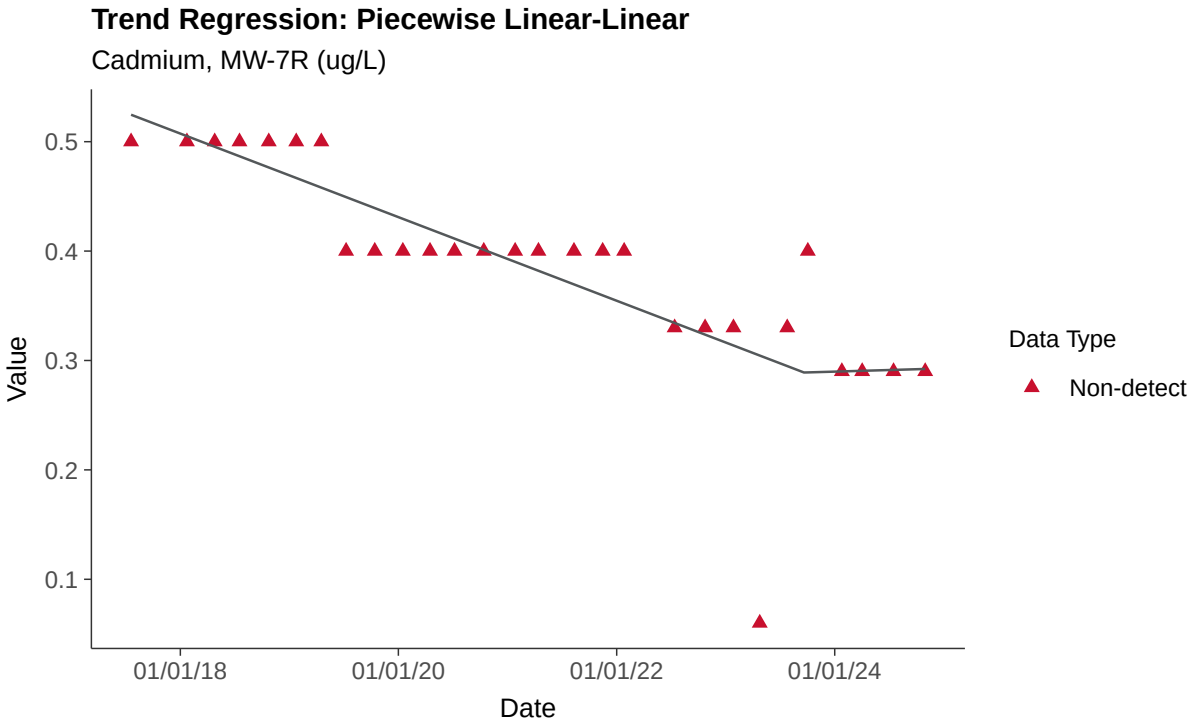
Cadmium, MW-7R (ug/L)



Boxplot by Season

Cadmium, MW-7R (ug/L)



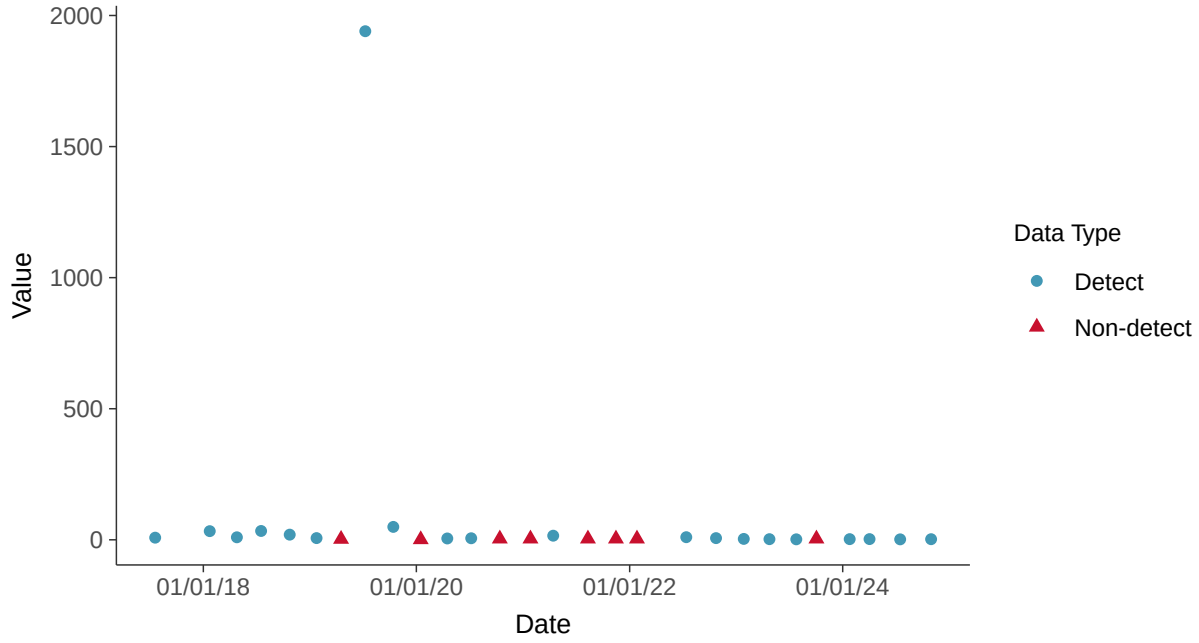

Trend Regression: Piecewise Linear-Linear
Cadmium, MW-7R (ug/L)
Value
0.5
0.4
0.3
0.2
0.1
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Non-detect

App. IV: Chromium, MW-7R

ID: 07_03_109

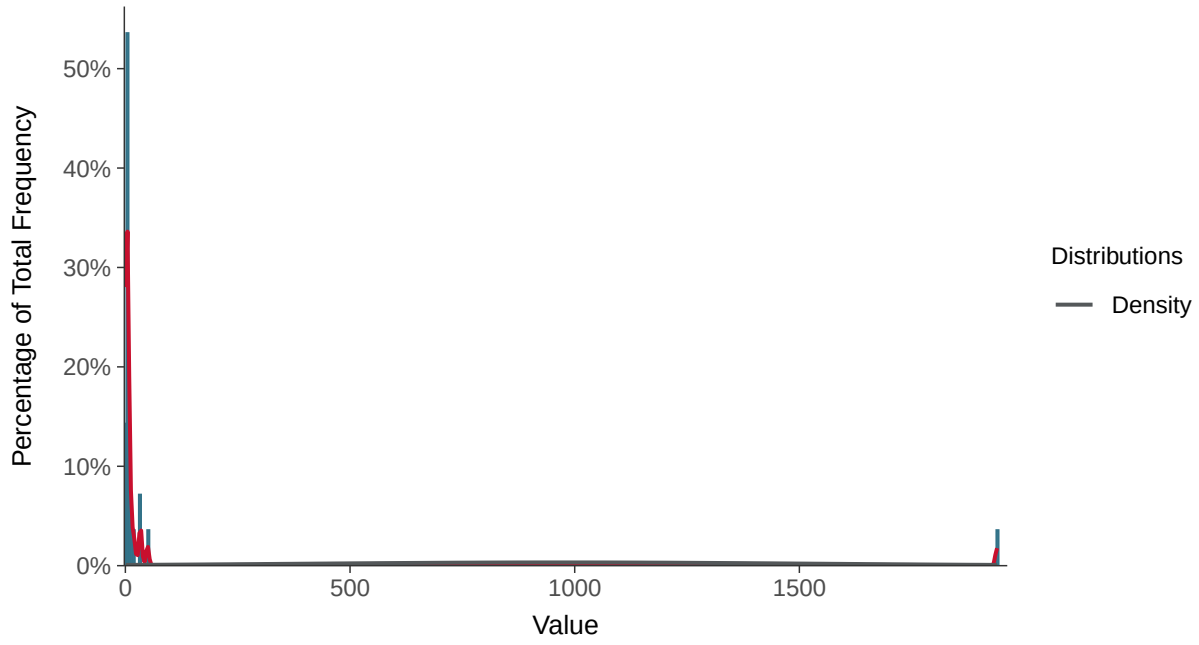
Scatter Plot

Chromium, MW-7R (ug/L)



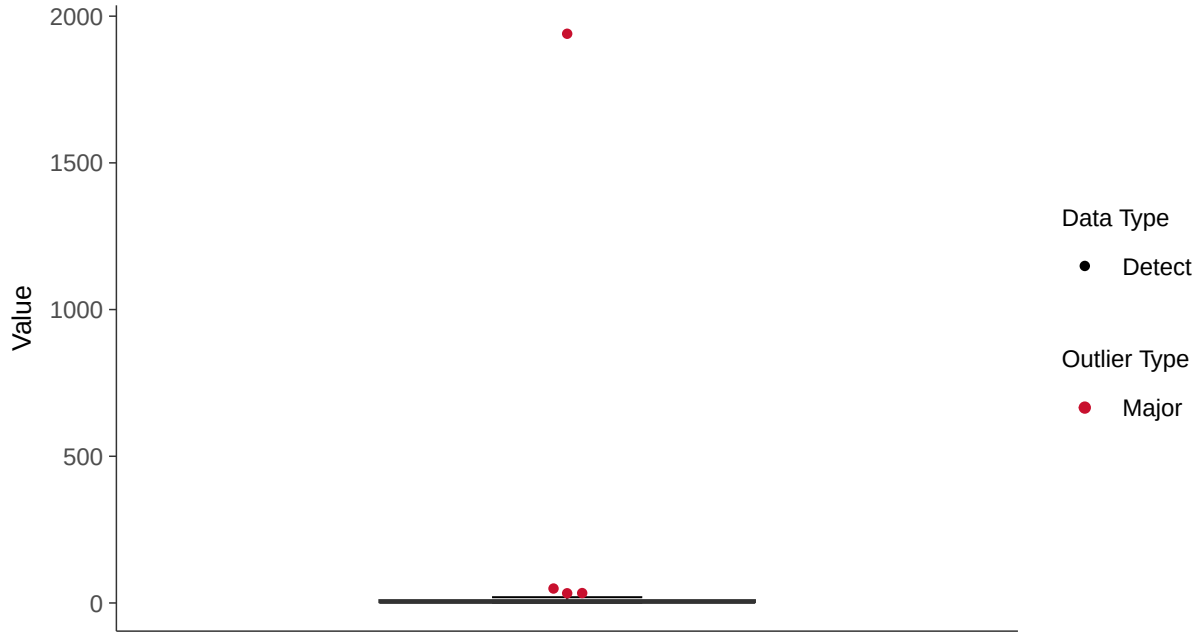
Histogram

Chromium, MW-7R (ug/L)



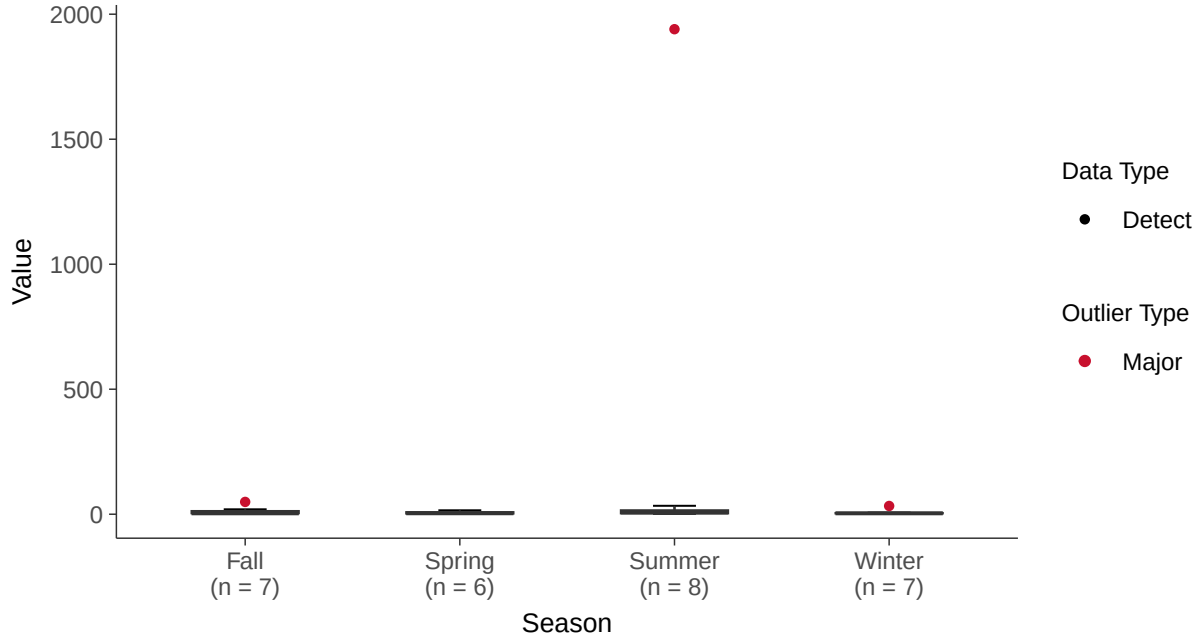
Boxplot

Chromium, MW-7R (ug/L)



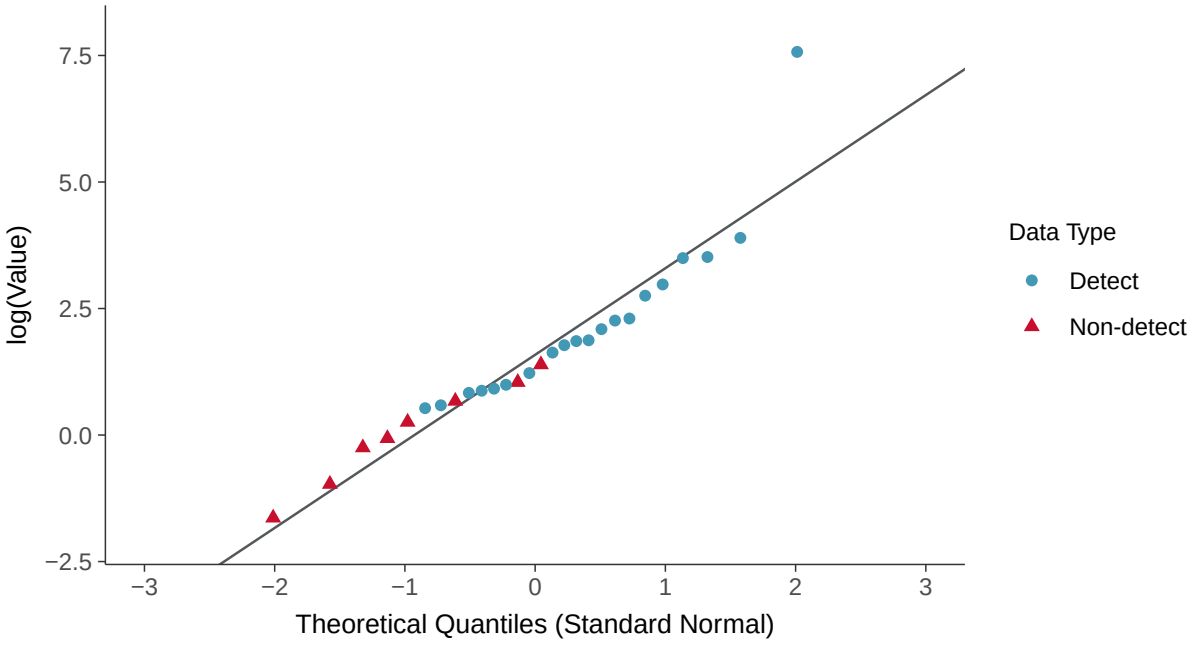
Boxplot by Season

Chromium, MW-7R (ug/L)



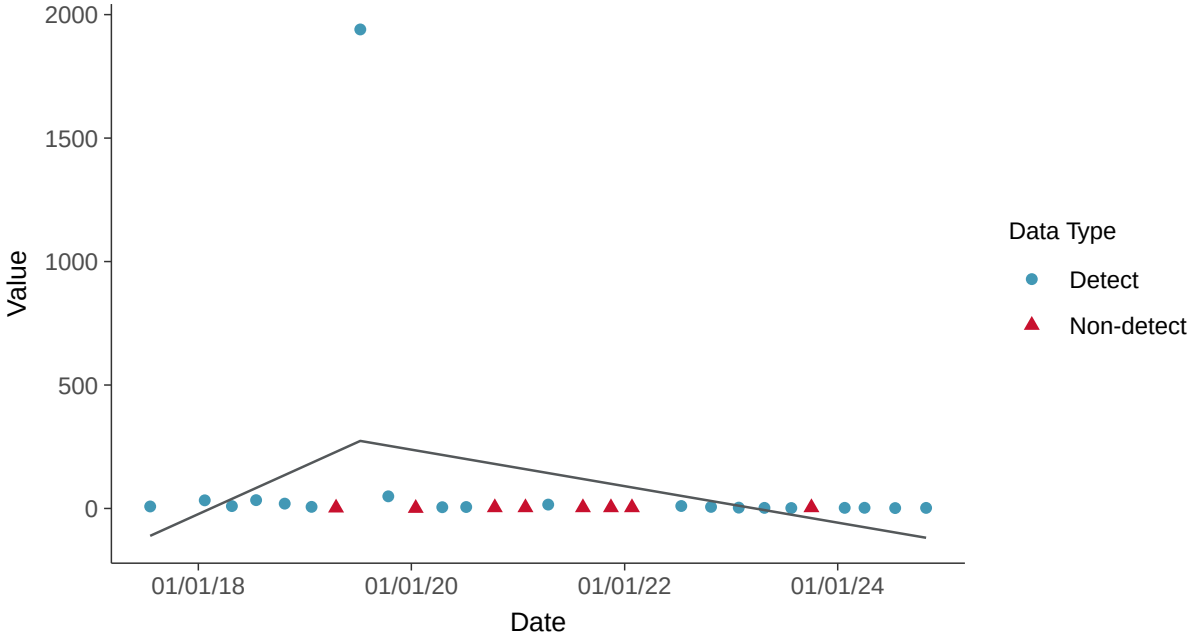
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Chromium, MW-7R (ug/L)

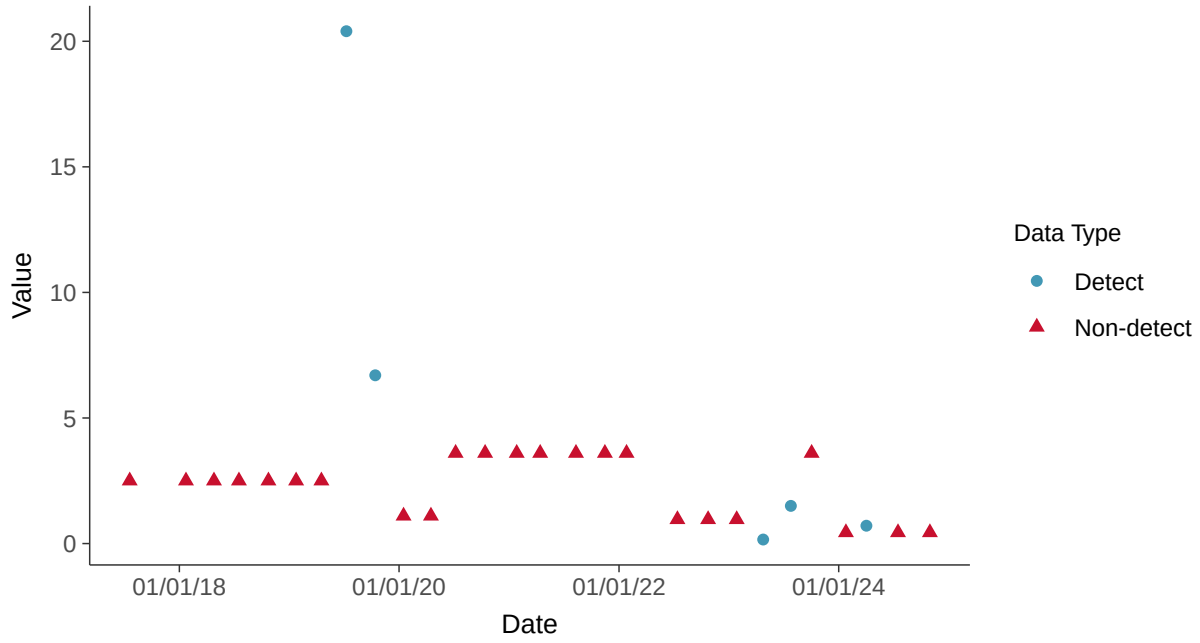


App. IV: Cobalt, MW-7R

ID: 07_03_110

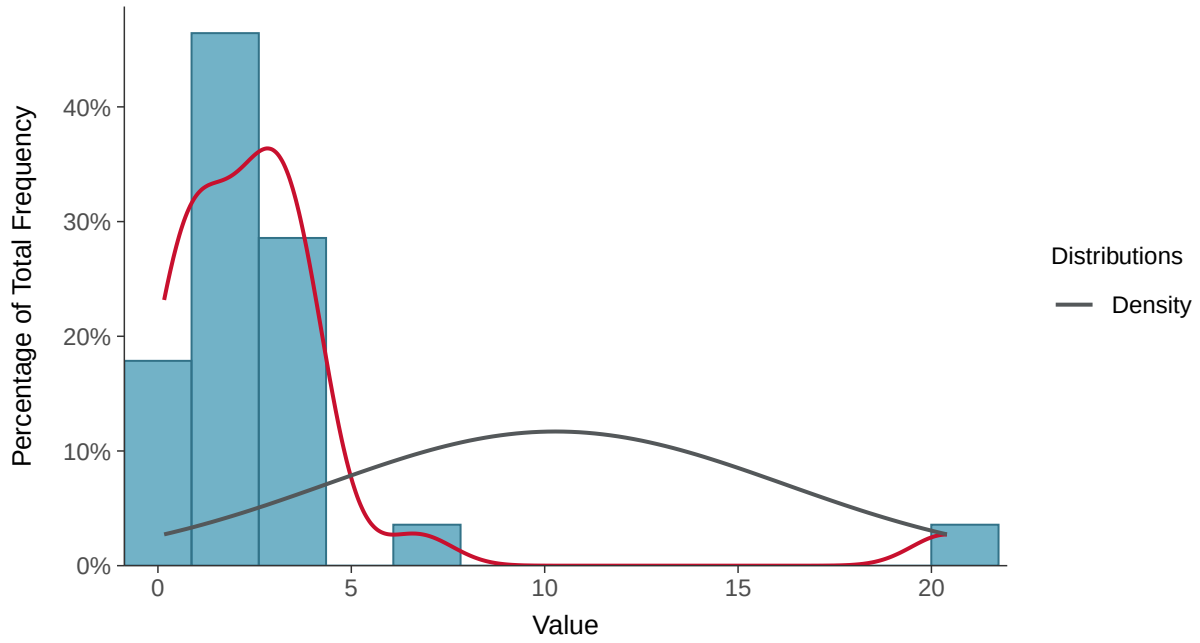
Scatter Plot

Cobalt, MW-7R (ug/L)



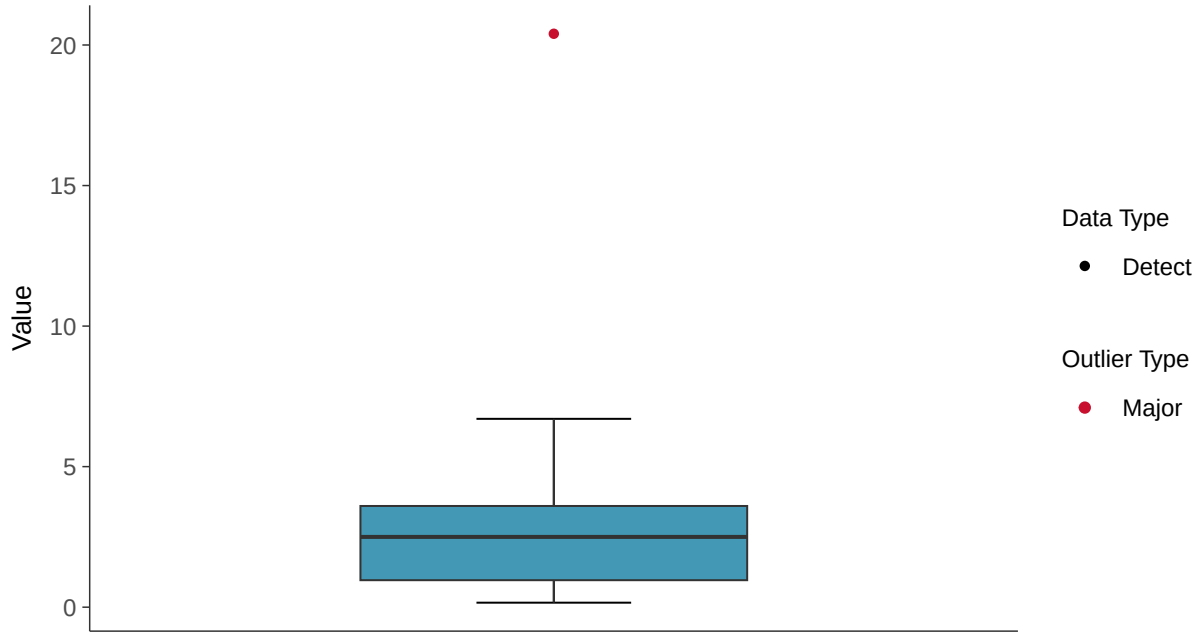
Histogram

Cobalt, MW-7R (ug/L)



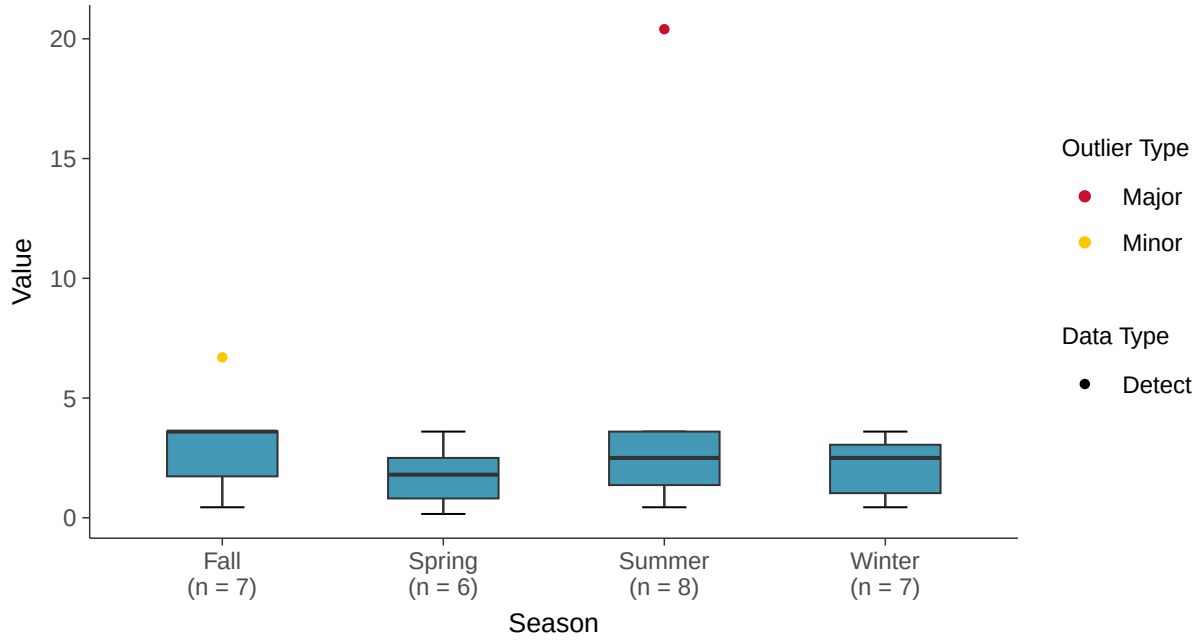
Boxplot

Cobalt, MW-7R (ug/L)



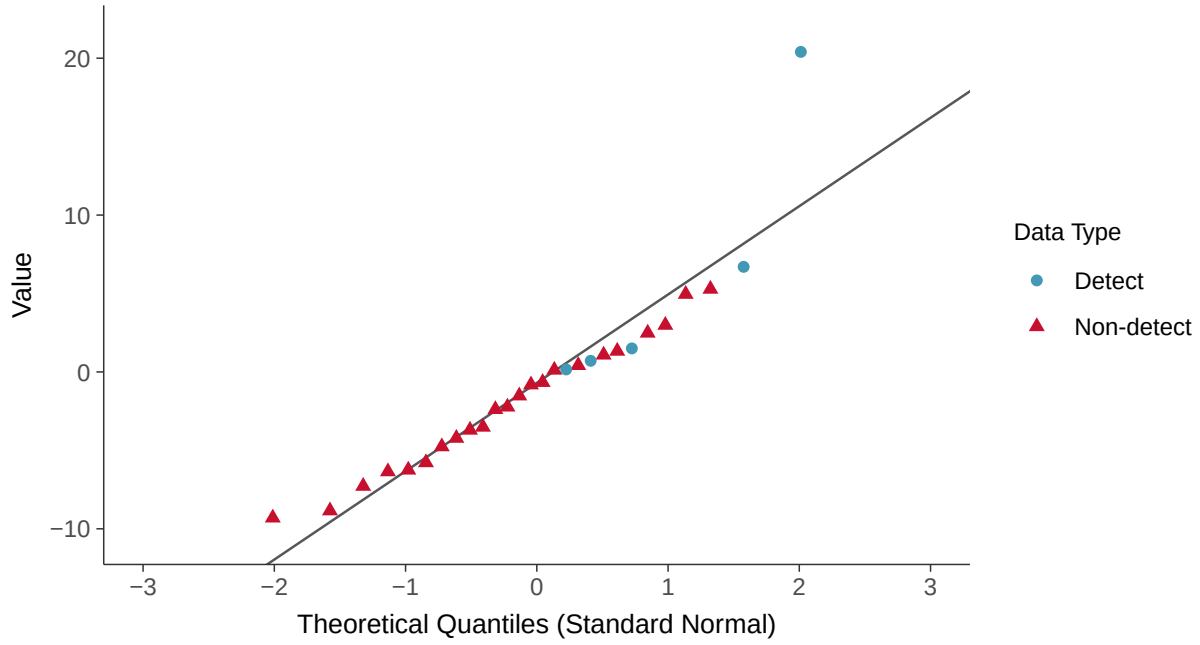
Boxplot by Season

Cobalt, MW-7R (ug/L)



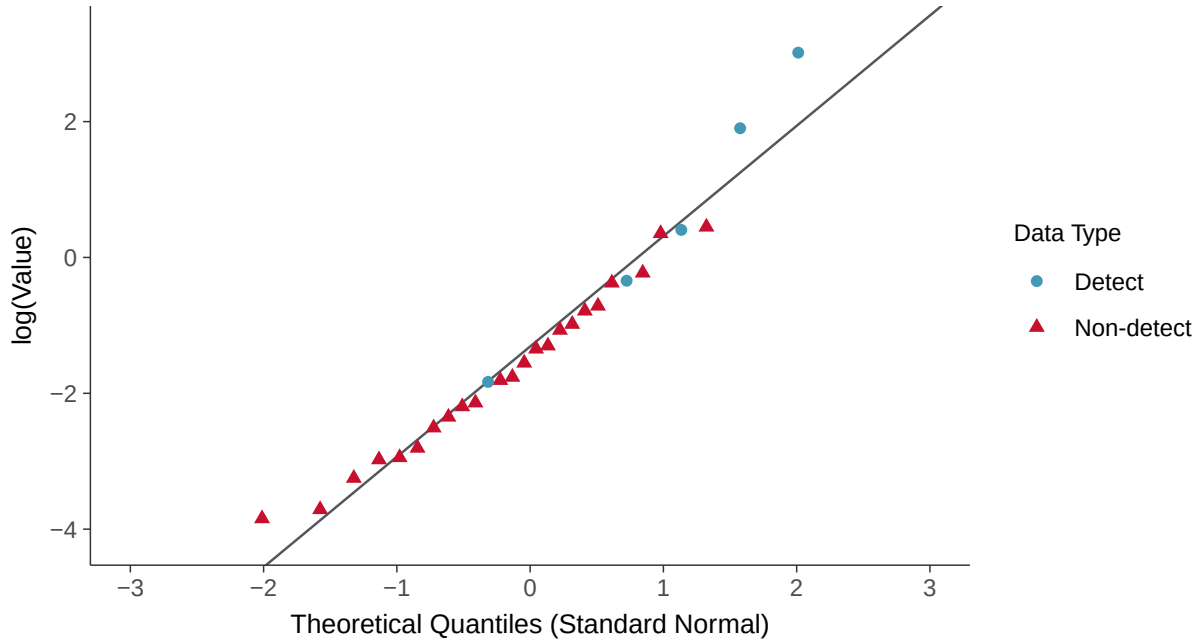
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



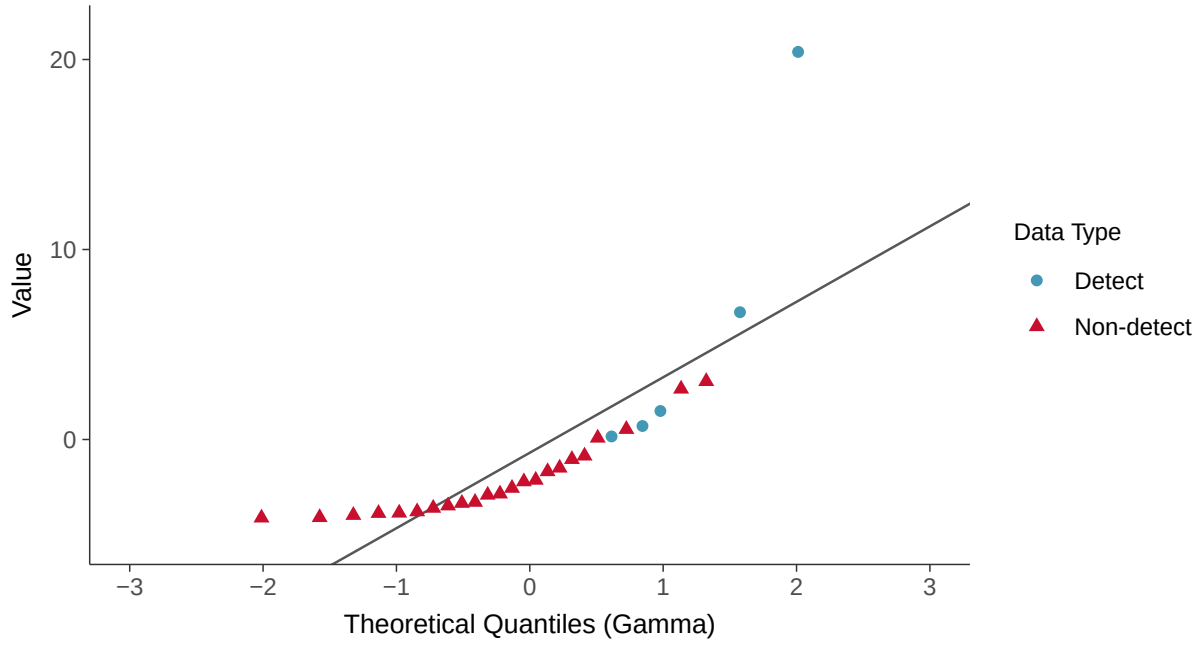
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



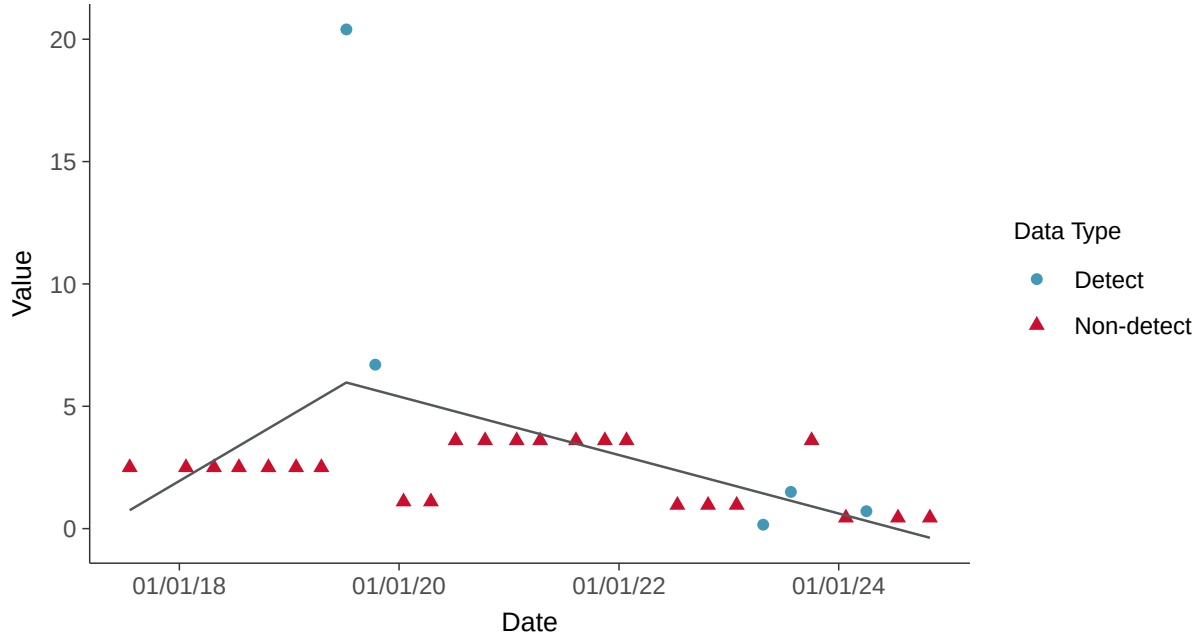
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



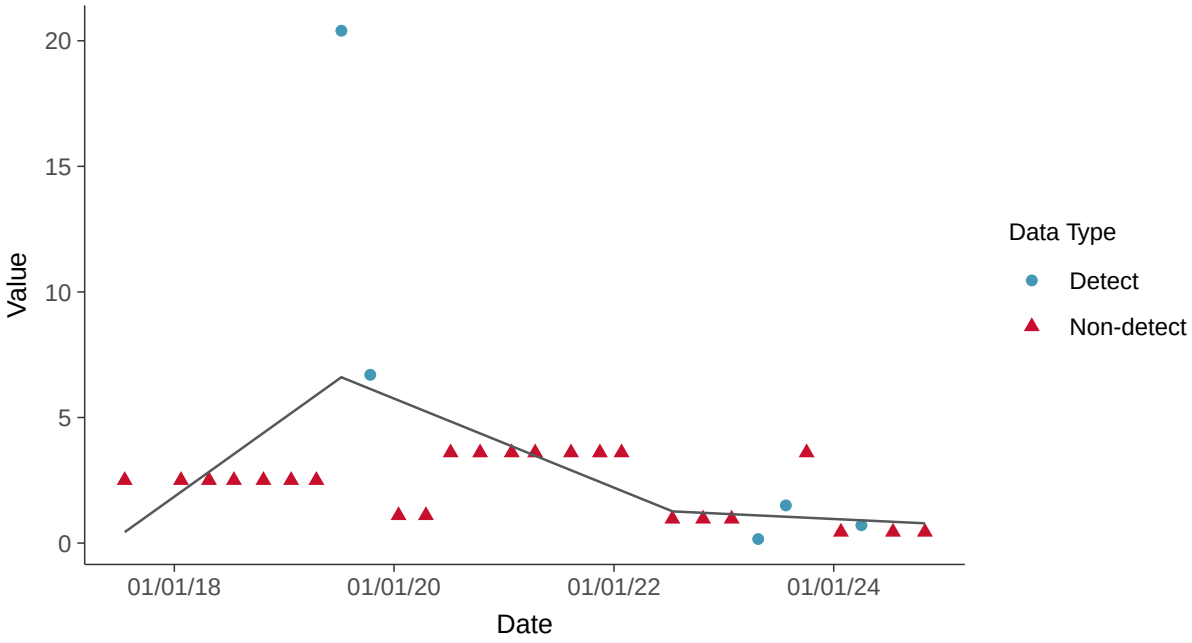
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-7R (ug/L)

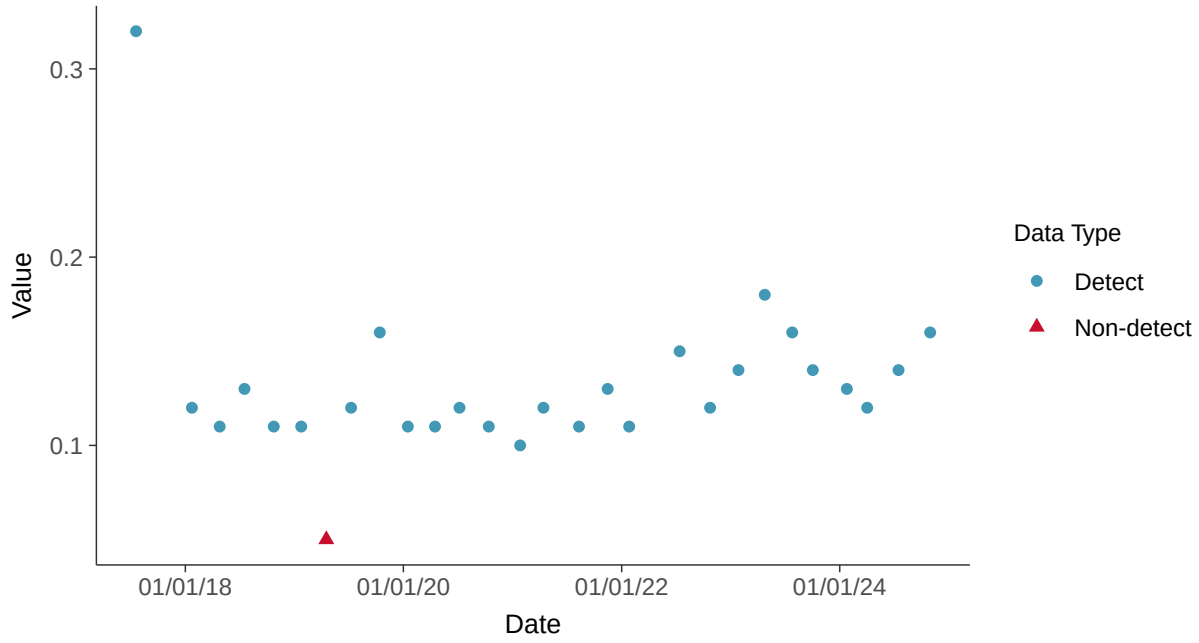


App. IV: Fluoride, MW-7R

ID: 07_03_112

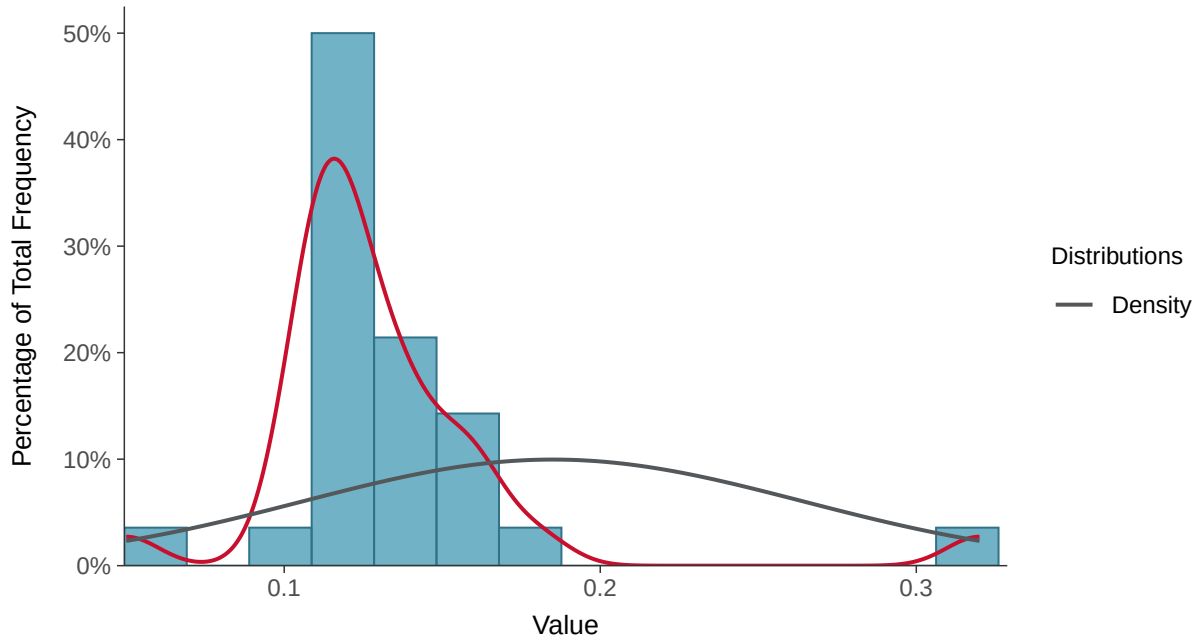
Scatter Plot

Fluoride, MW-7R (mg/L)



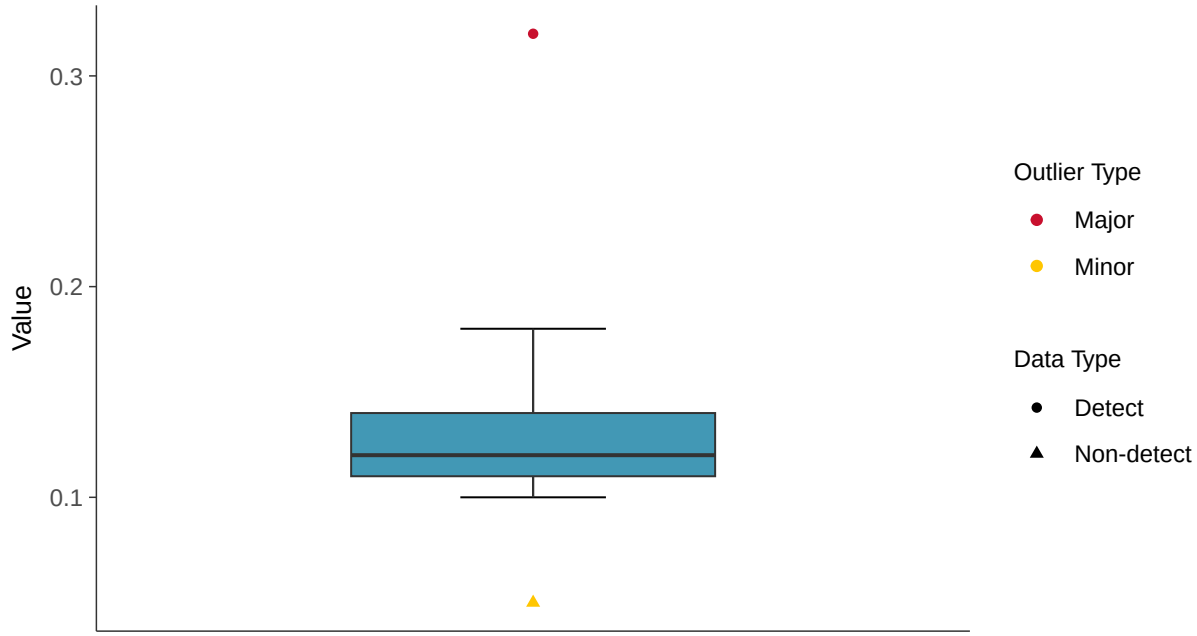
Histogram

Fluoride, MW-7R (mg/L)



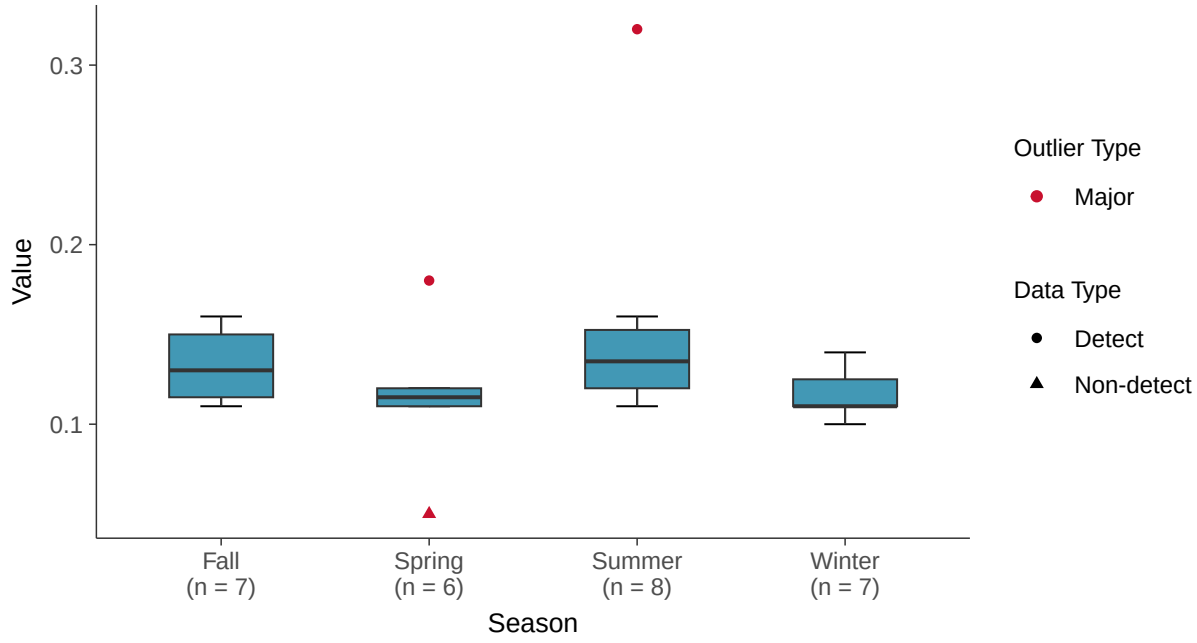
Boxplot

Fluoride, MW-7R (mg/L)



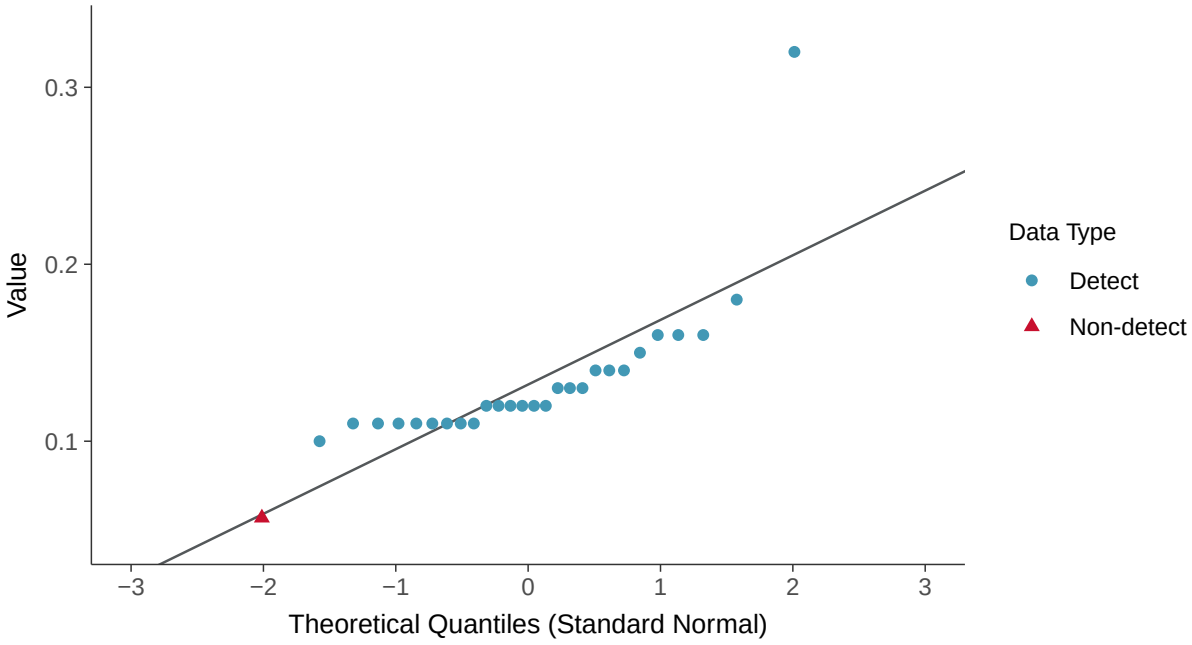
Boxplot by Season

Fluoride, MW-7R (mg/L)



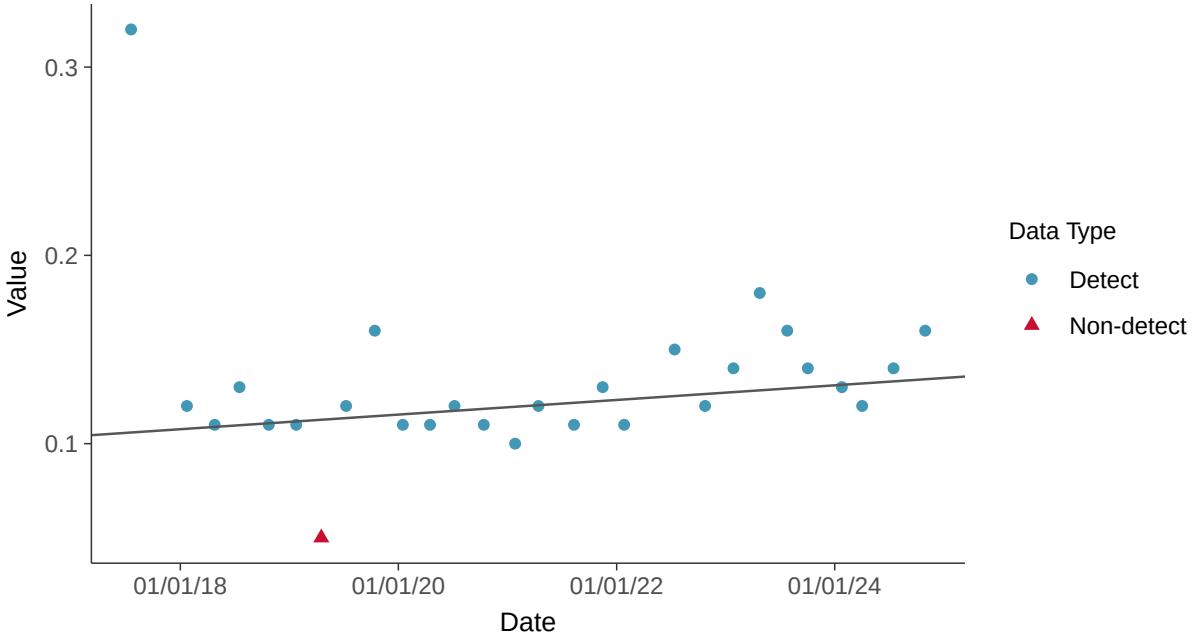
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-7R (mg/L)



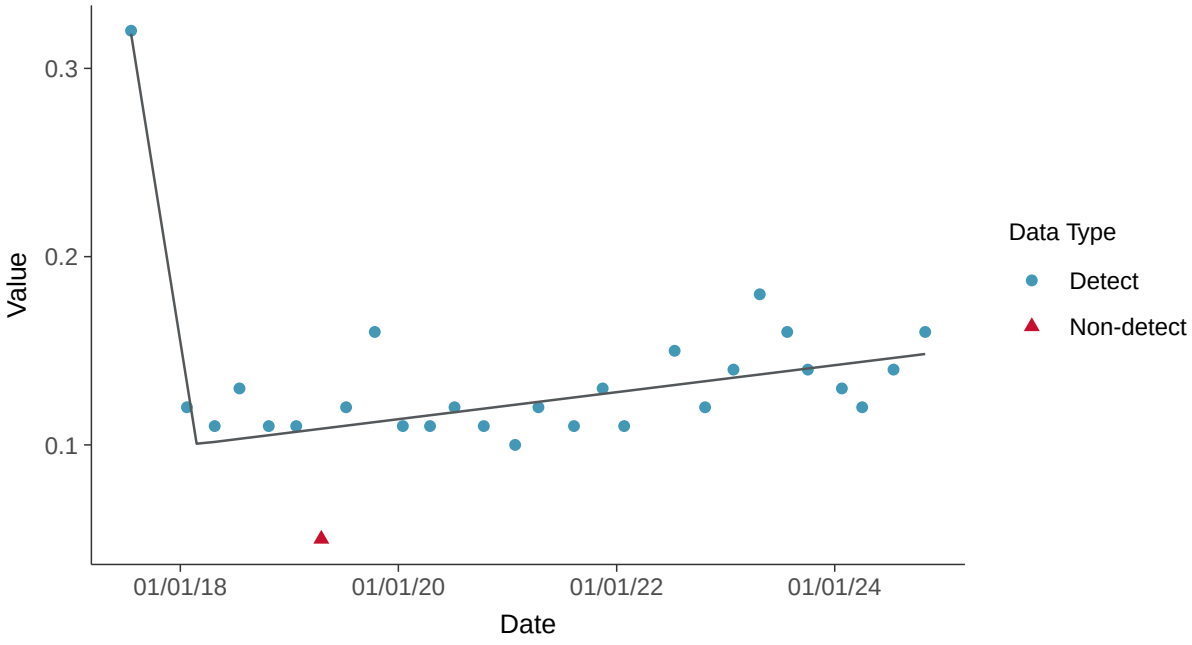
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-7R (mg/L)



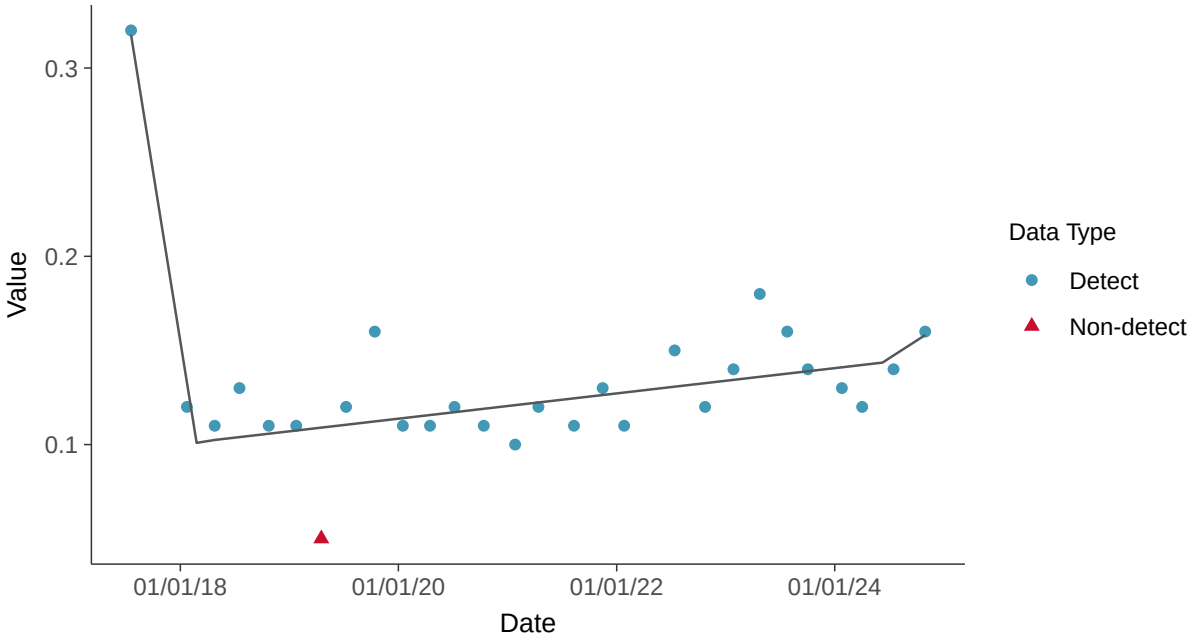
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-7R (mg/L)

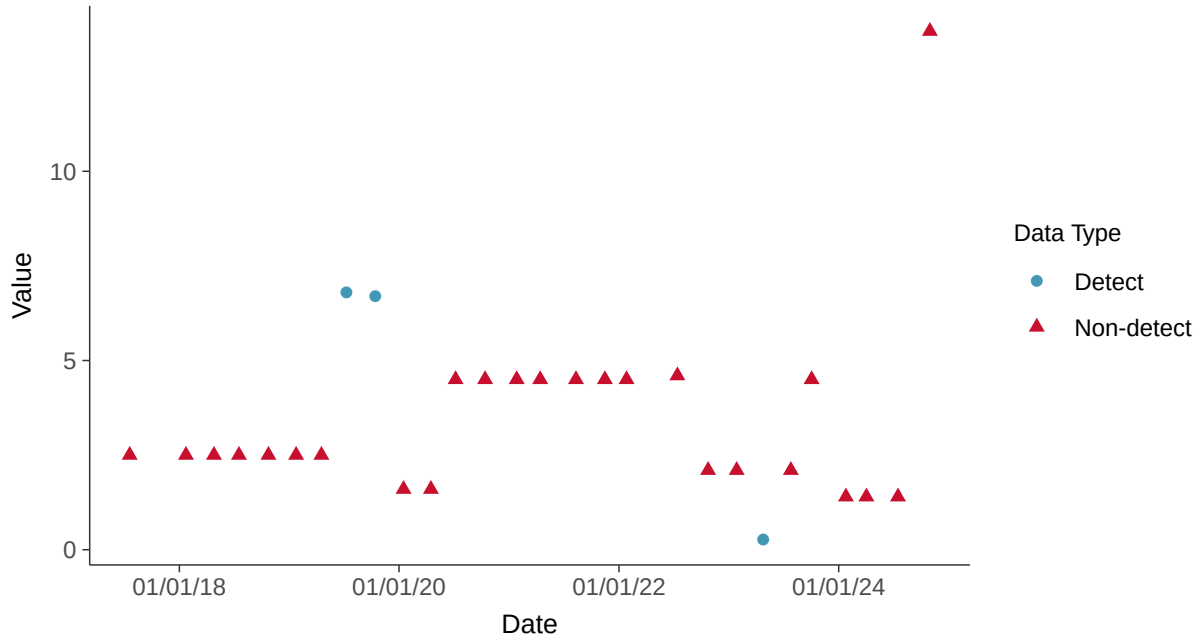


App. IV: Lead, MW-7R

ID: 07_03_113

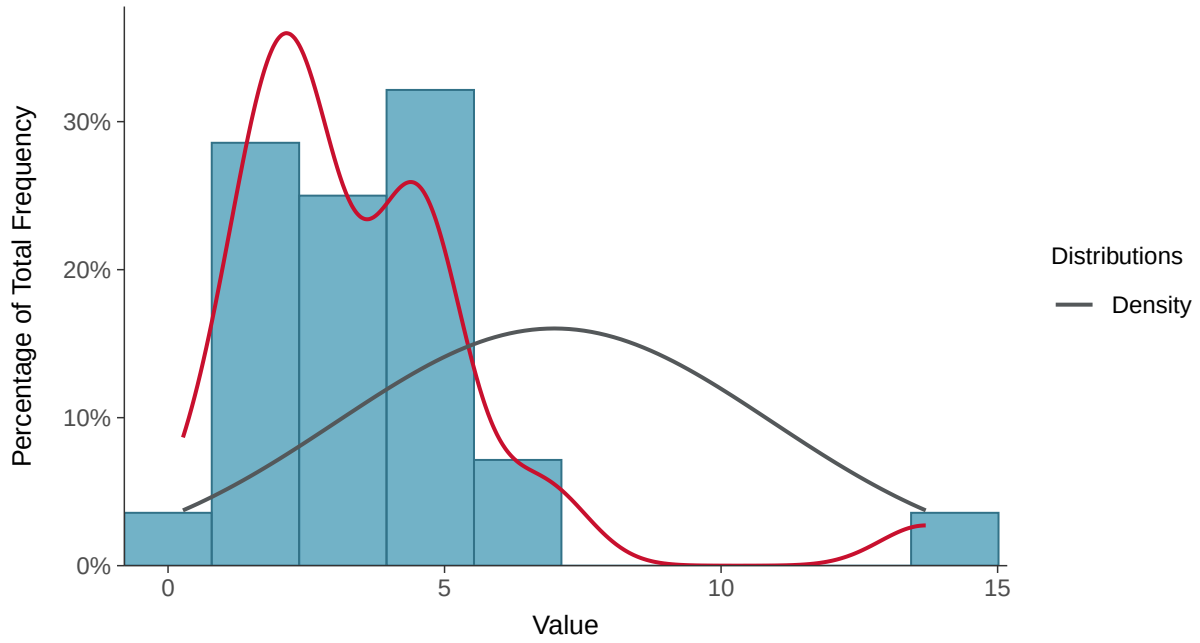
Scatter Plot

Lead, MW-7R (ug/L)



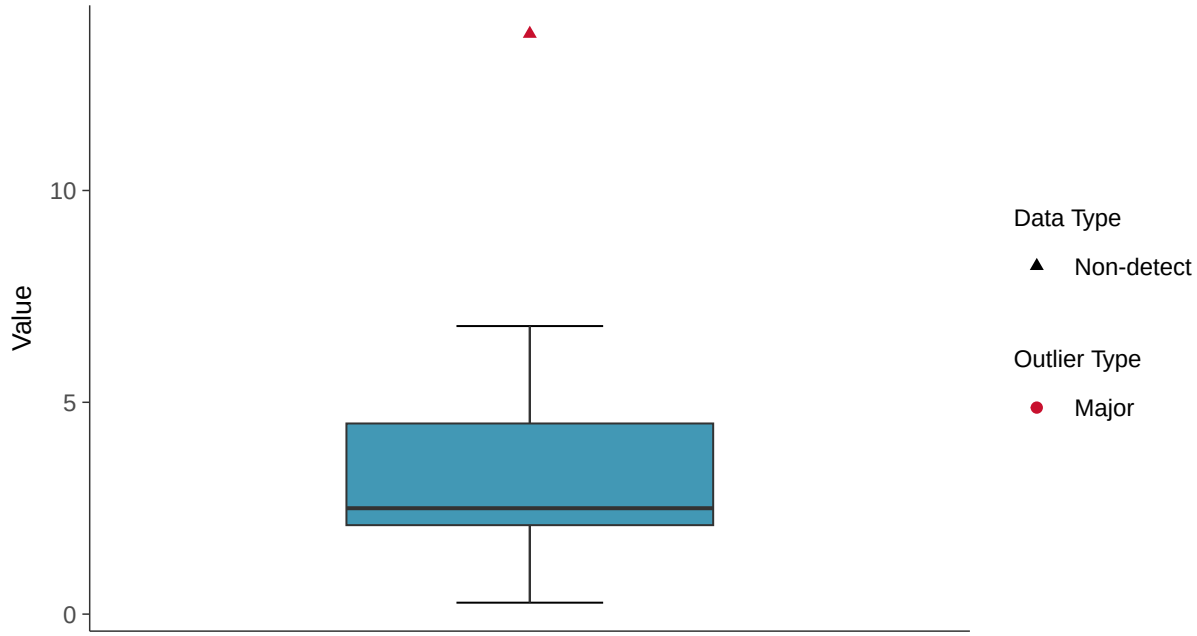
Histogram

Lead, MW-7R (ug/L)



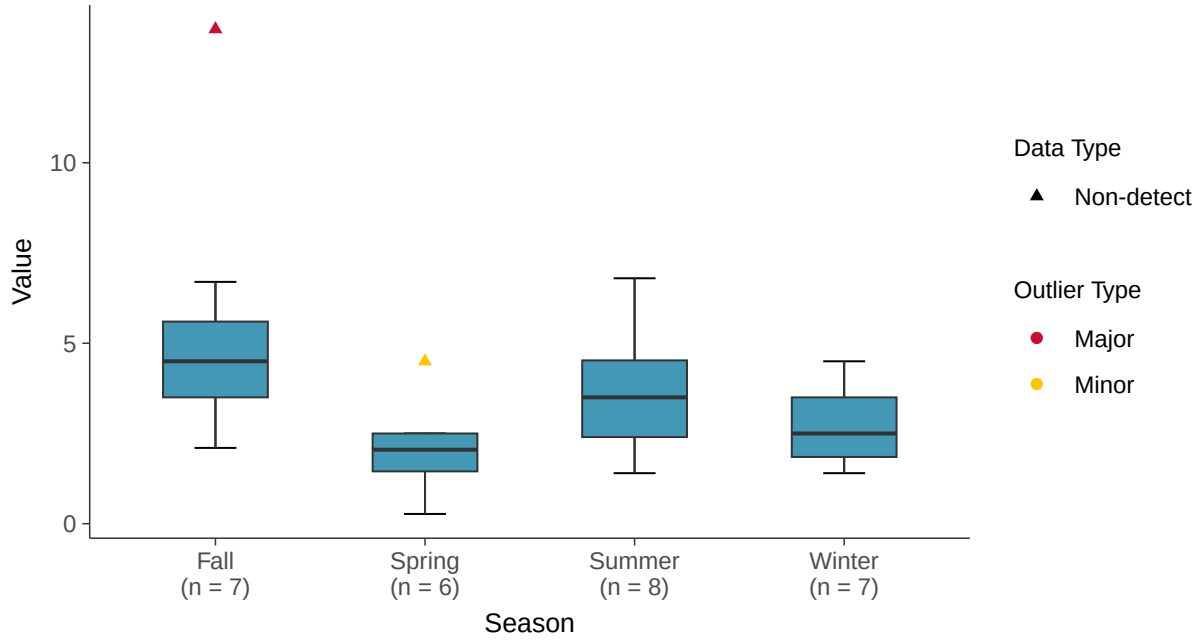
Boxplot

Lead, MW-7R (ug/L)



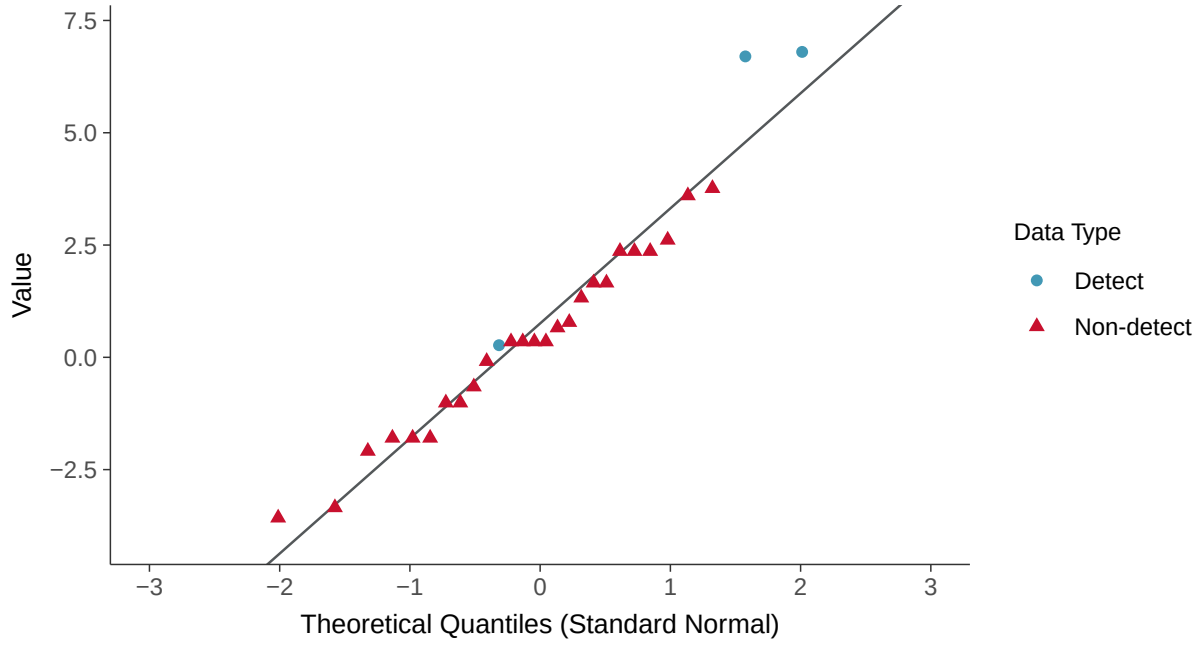
Boxplot by Season

Lead, MW-7R (ug/L)



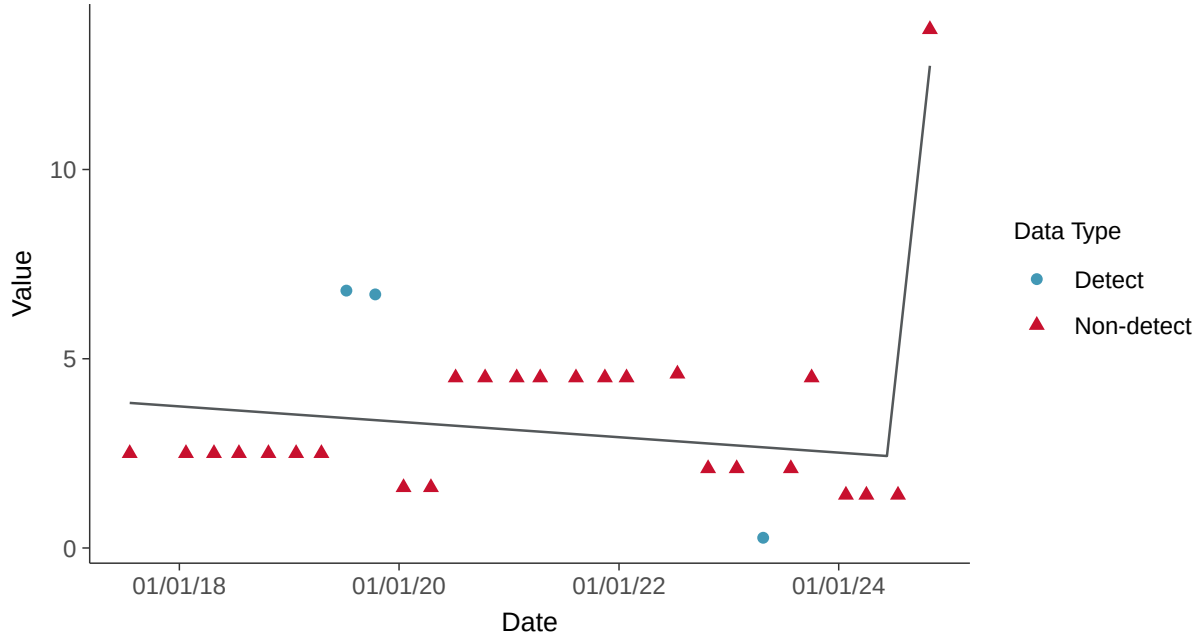
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-7R (ug/L)



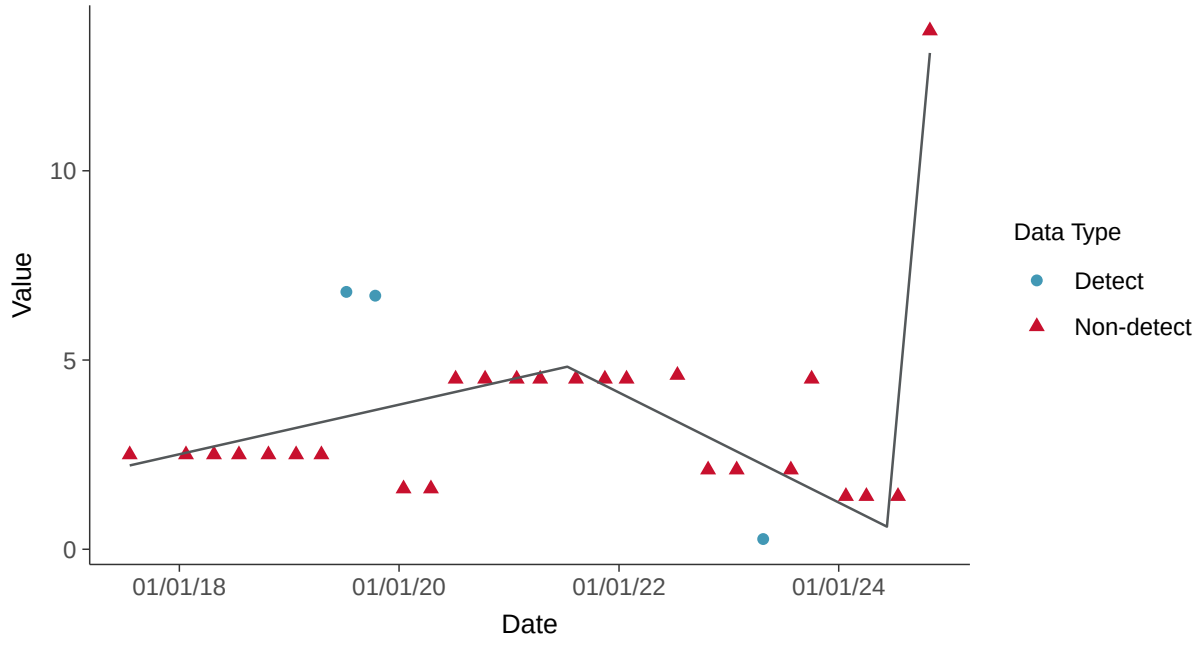
Trend Regression: Piecewise Linear-Linear

Lead, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-7R (ug/L)

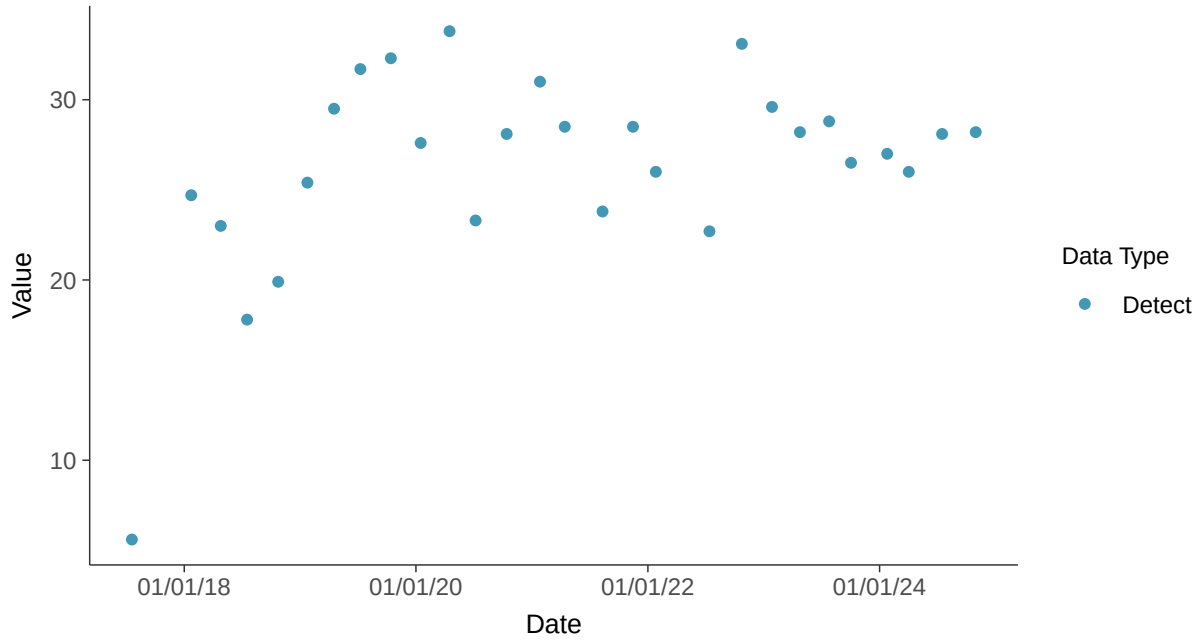


App. IV: Lithium, MW-7R

ID: 07_03_114

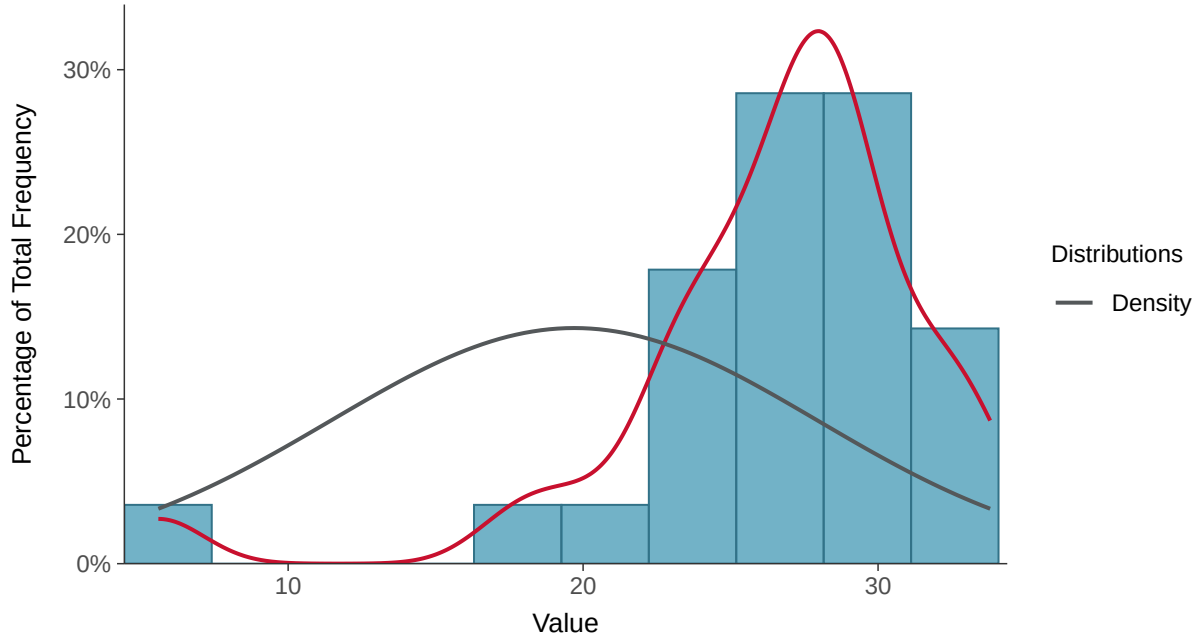
Scatter Plot

Lithium, MW-7R (ug/L)



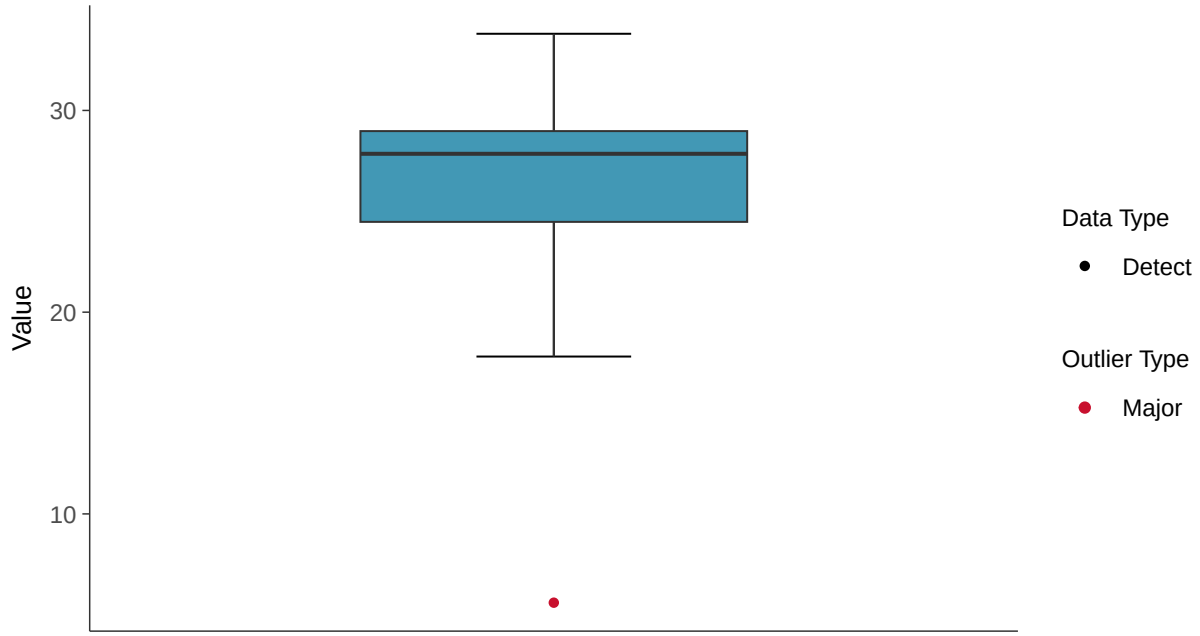
Histogram

Lithium, MW-7R (ug/L)



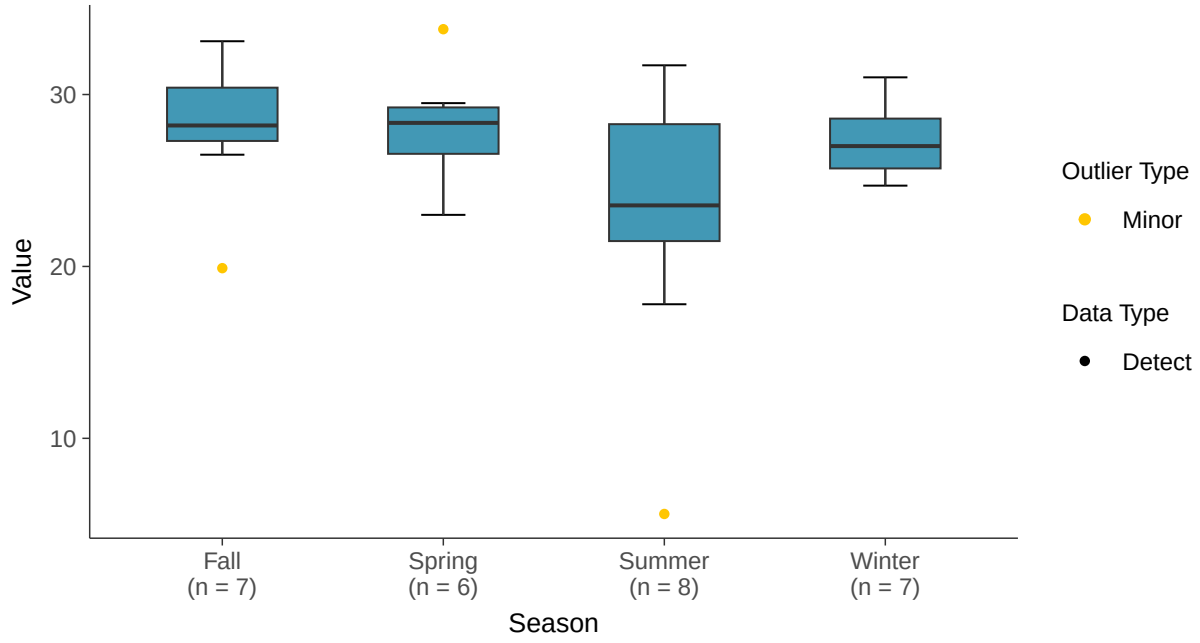
Boxplot

Lithium, MW-7R (ug/L)



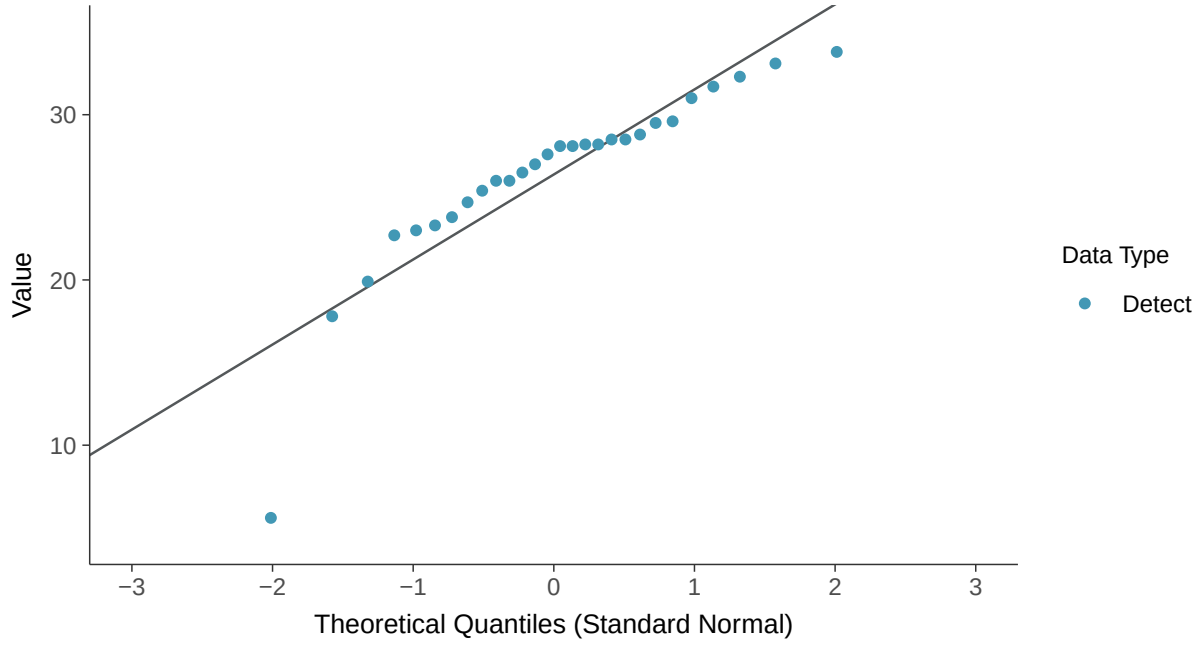
Boxplot by Season

Lithium, MW-7R (ug/L)



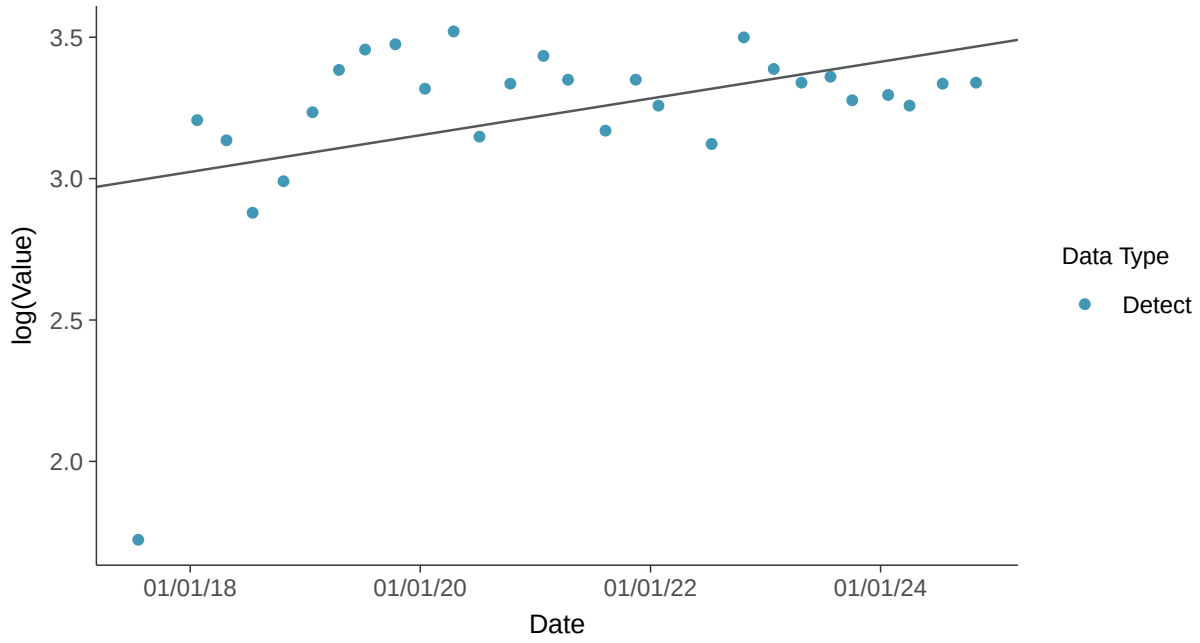
Normal Q-Q plot

Lithium, MW-7R (ug/L)



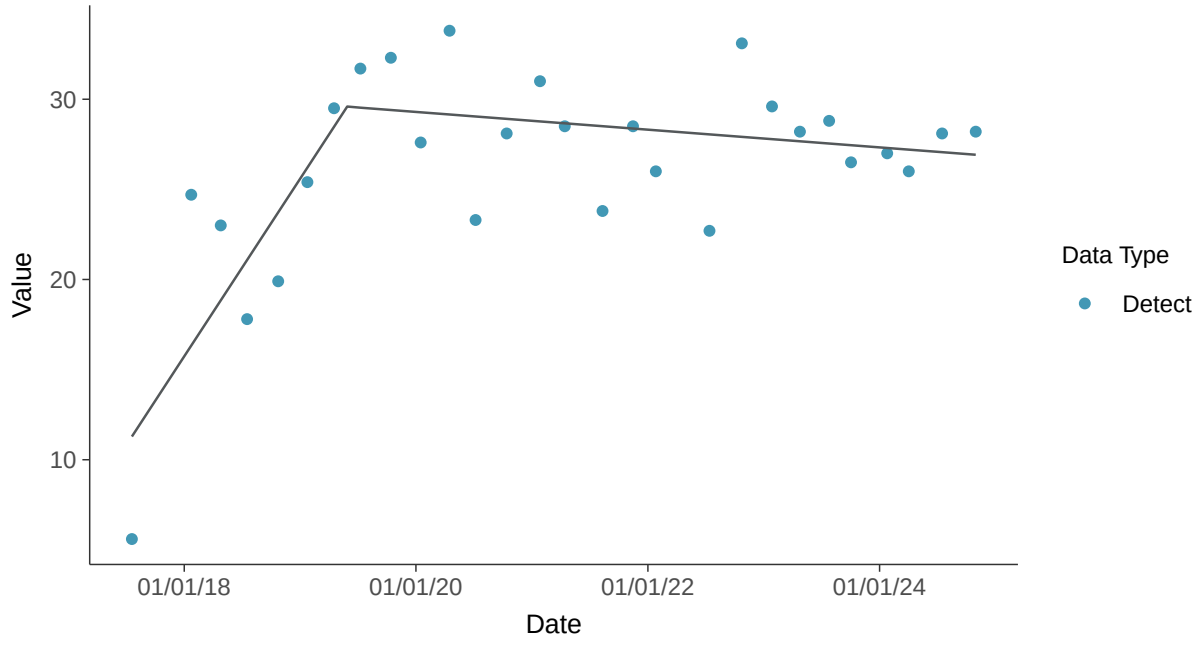
Trend Regression: Lognormal MLE

Lithium, MW-7R (ug/L)



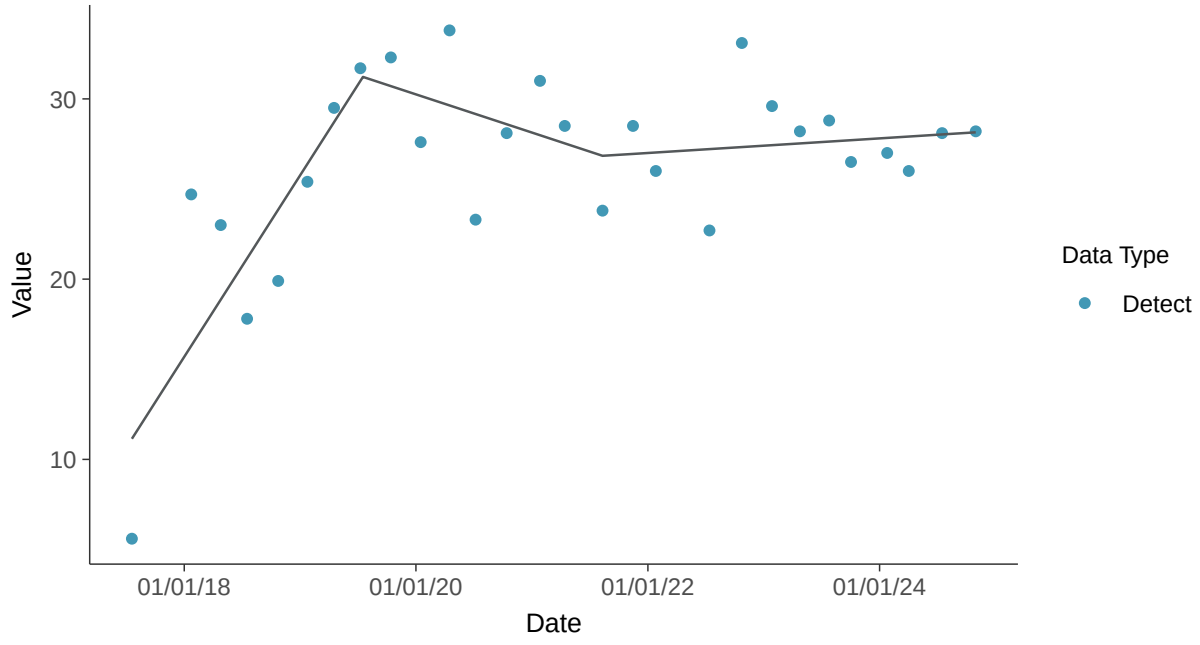
Trend Regression: Piecewise Linear-Linear

Lithium, MW-7R (ug/L)



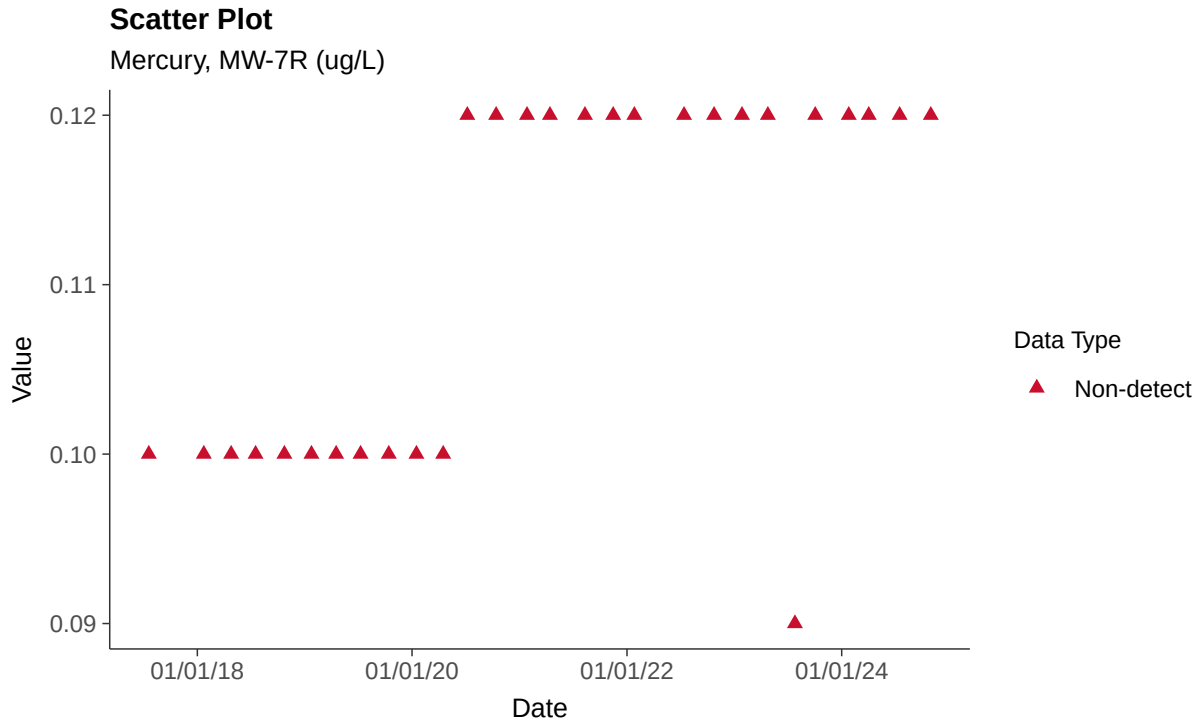
Trend Regression: Piecewise Linear-Linear-Linear

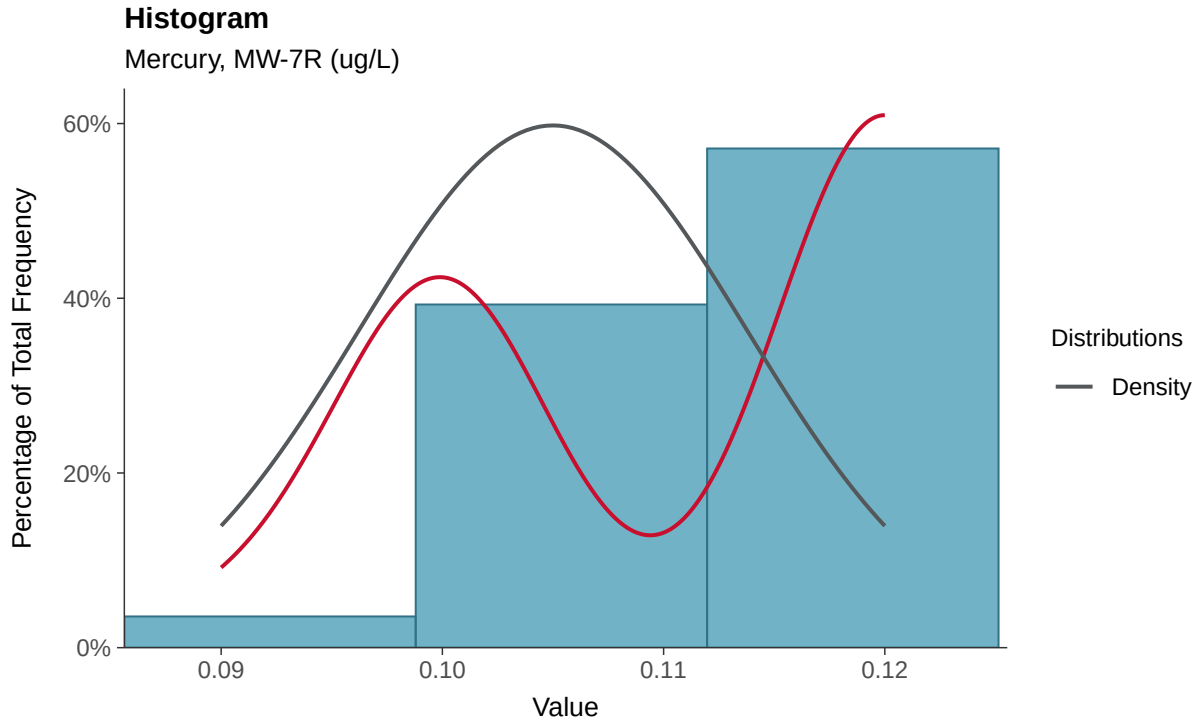
Lithium, MW-7R (ug/L)



App. IV: Mercury, MW-7R

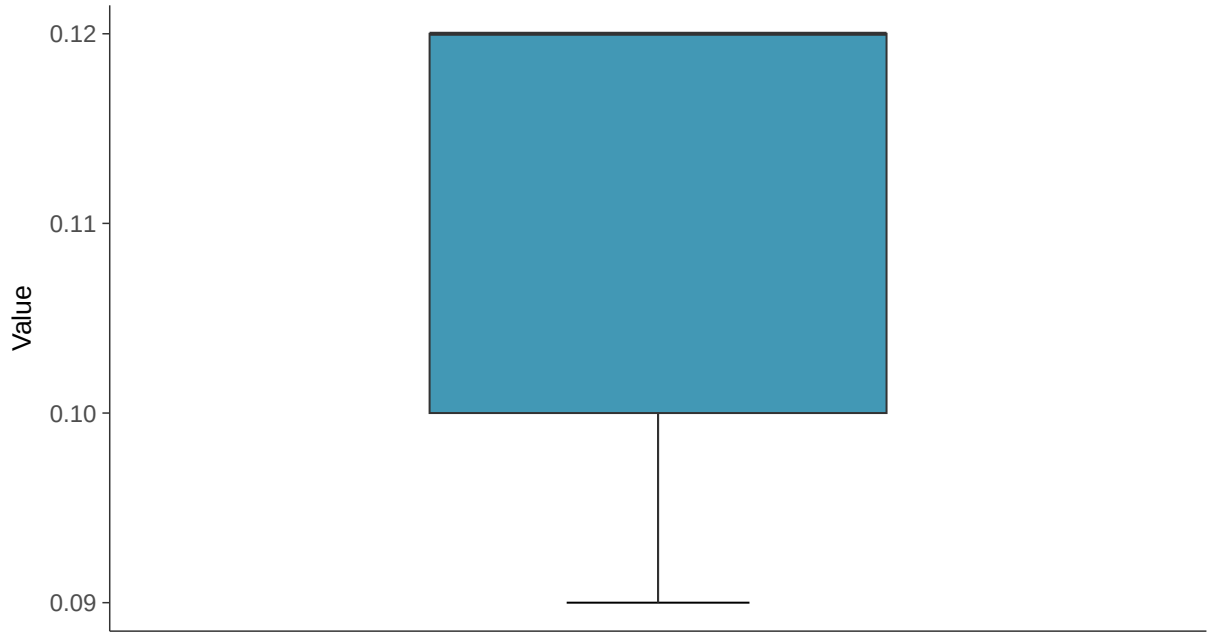
ID: 07_03_115





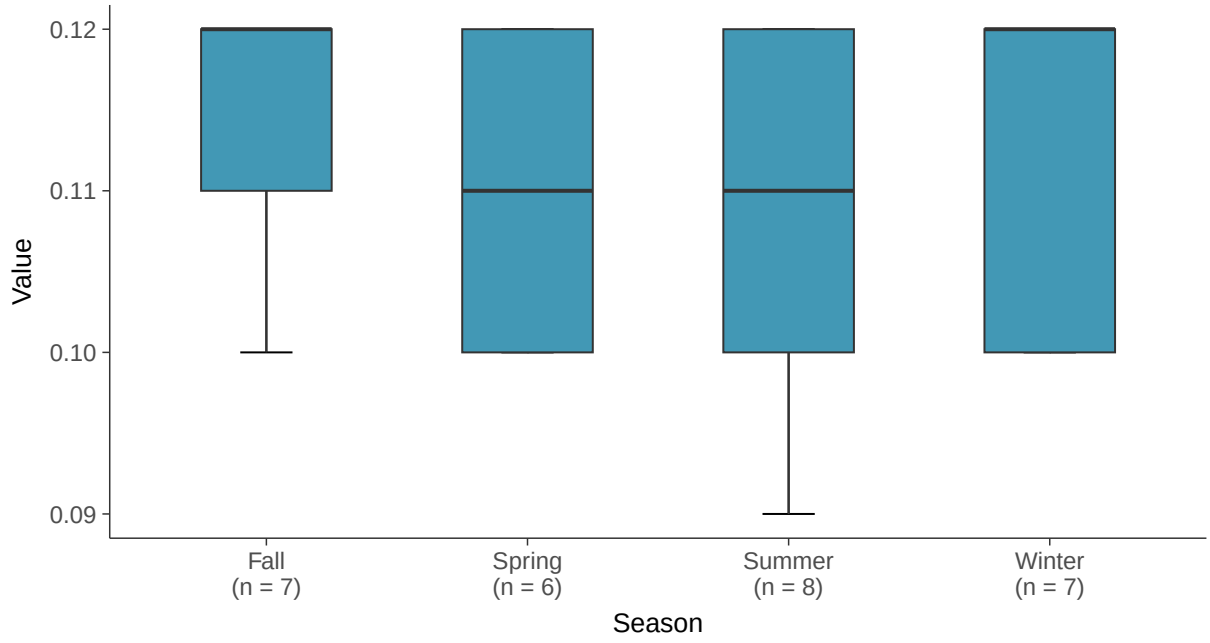
Boxplot

Mercury, MW-7R (ug/L)



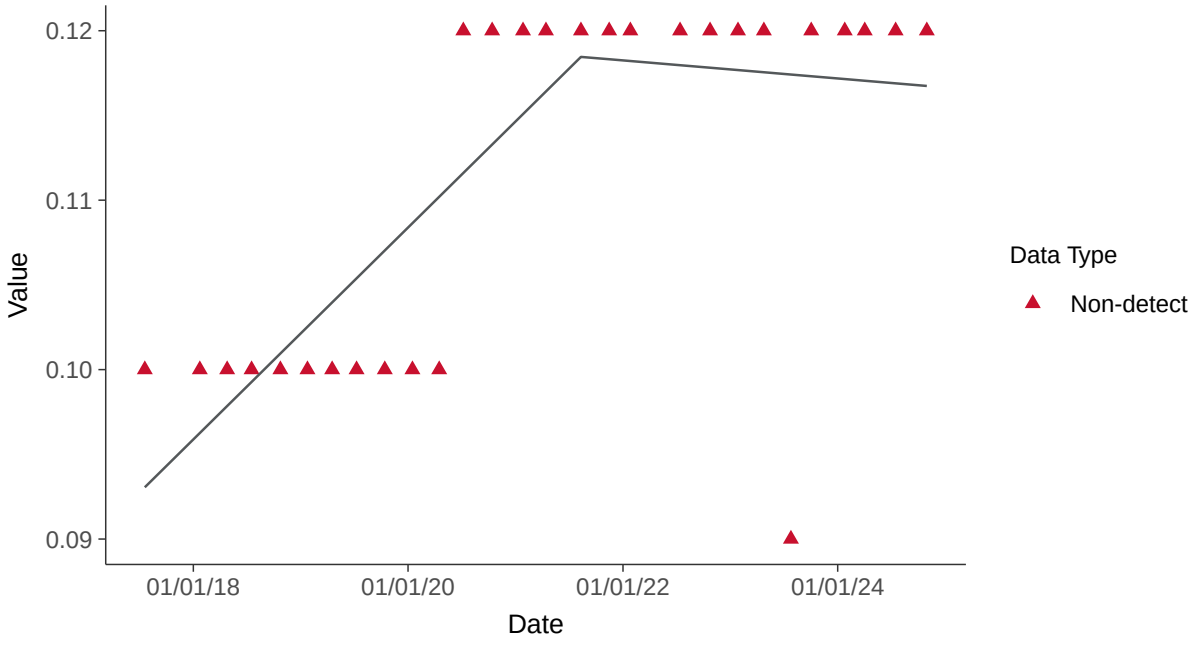
Boxplot by Season

Mercury, MW-7R (ug/L)



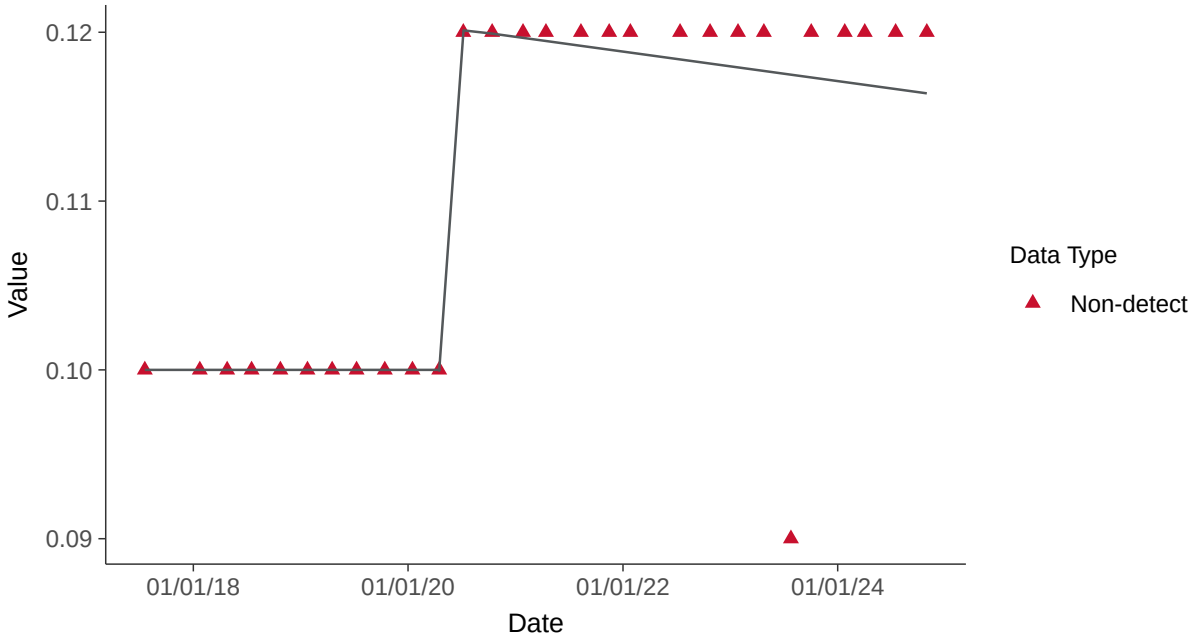
Trend Regression: Piecewise Linear-Linear

Mercury, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-7R (ug/L)

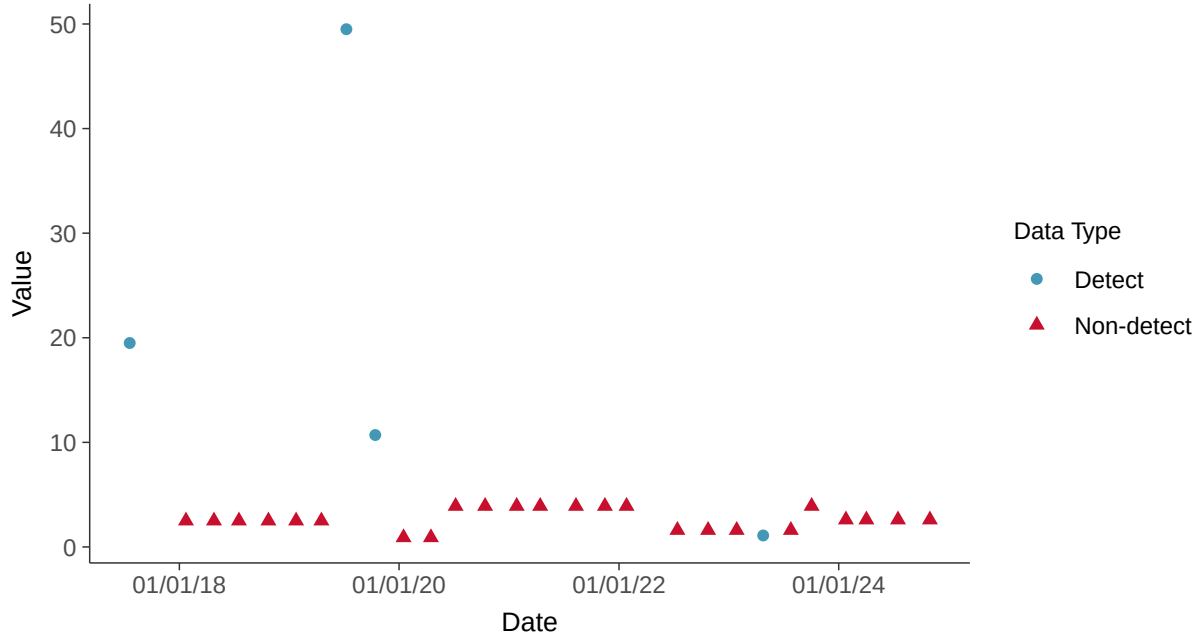


App. IV: Molybdenum, MW-7R

ID: 07_03_116

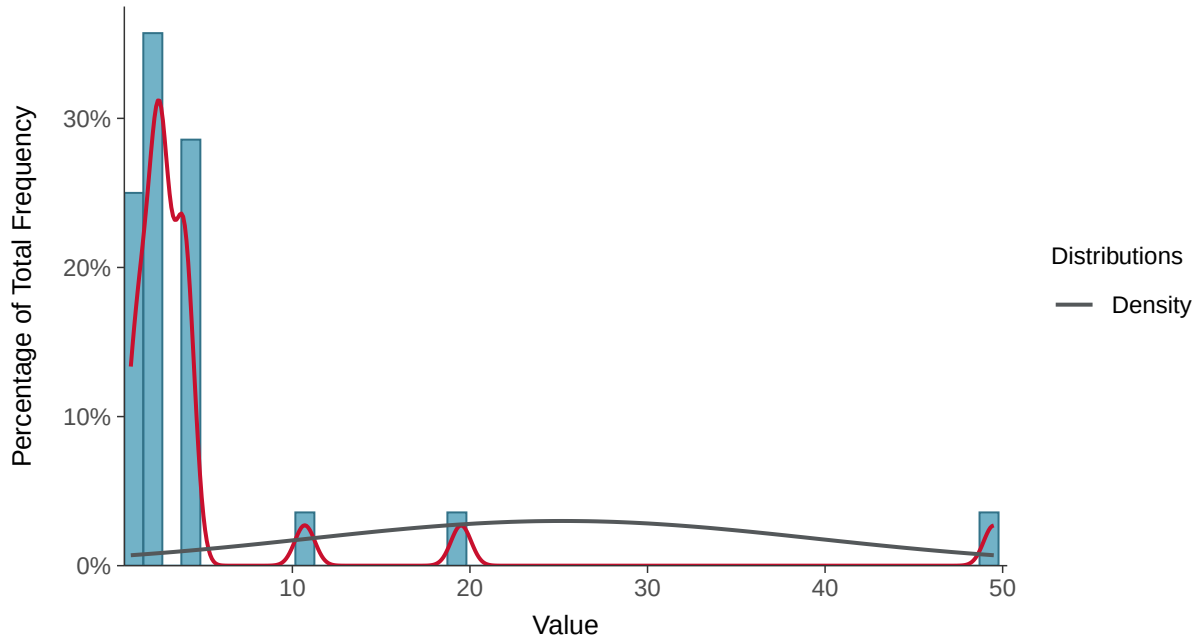
Scatter Plot

Molybdenum, MW-7R (ug/L)



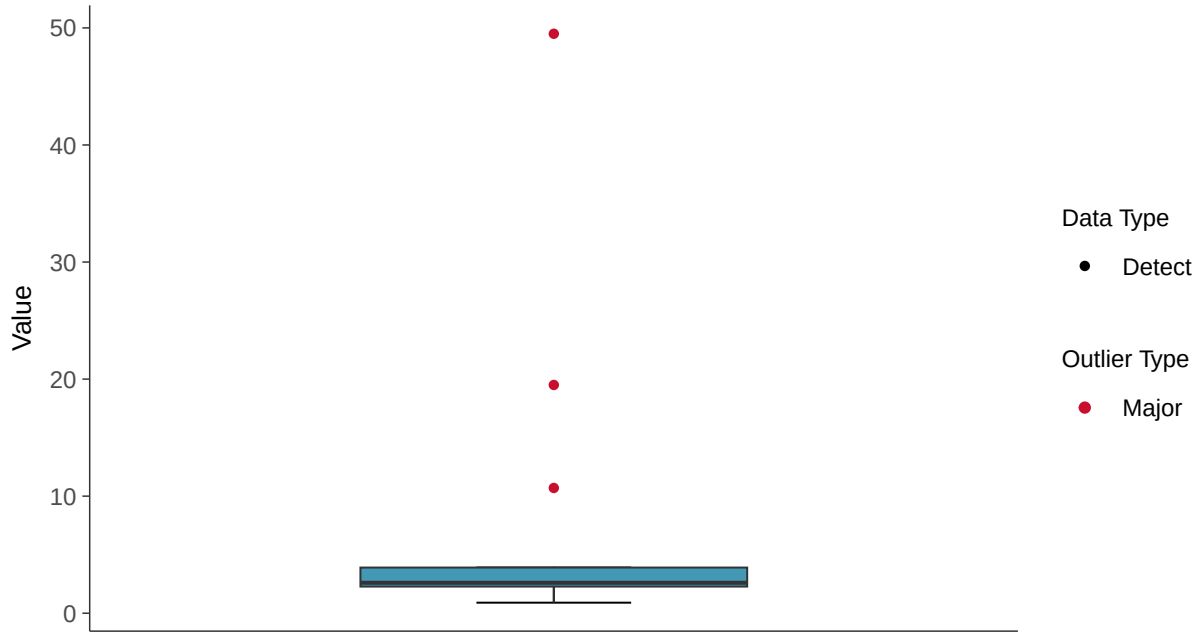
Histogram

Molybdenum, MW-7R (ug/L)



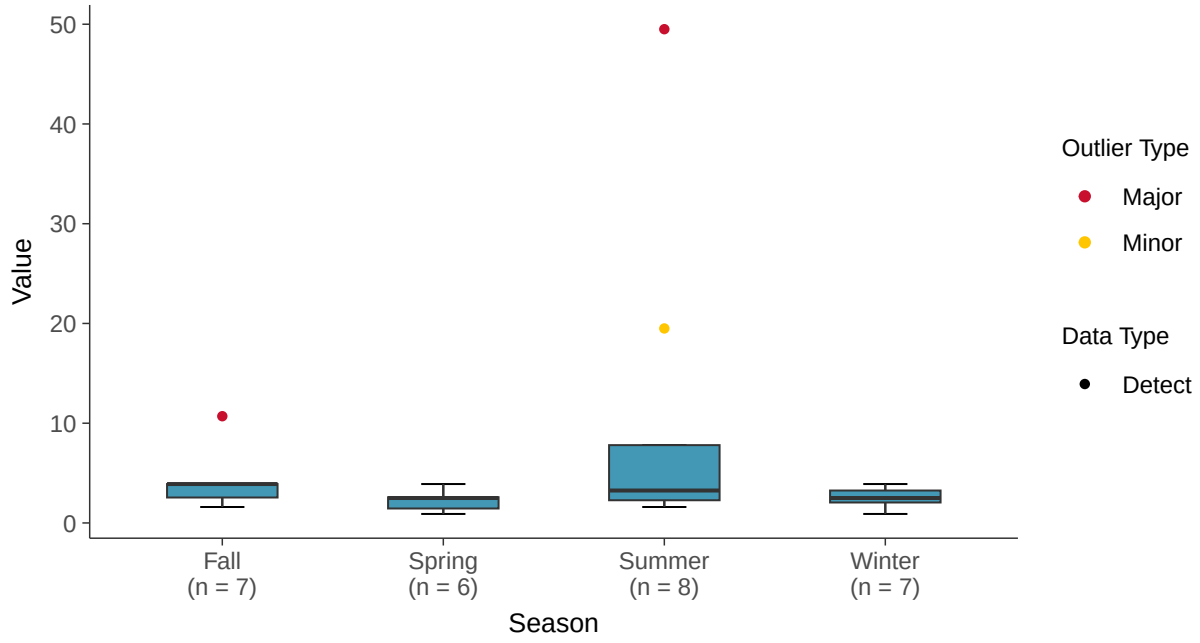
Boxplot

Molybdenum, MW-7R (ug/L)



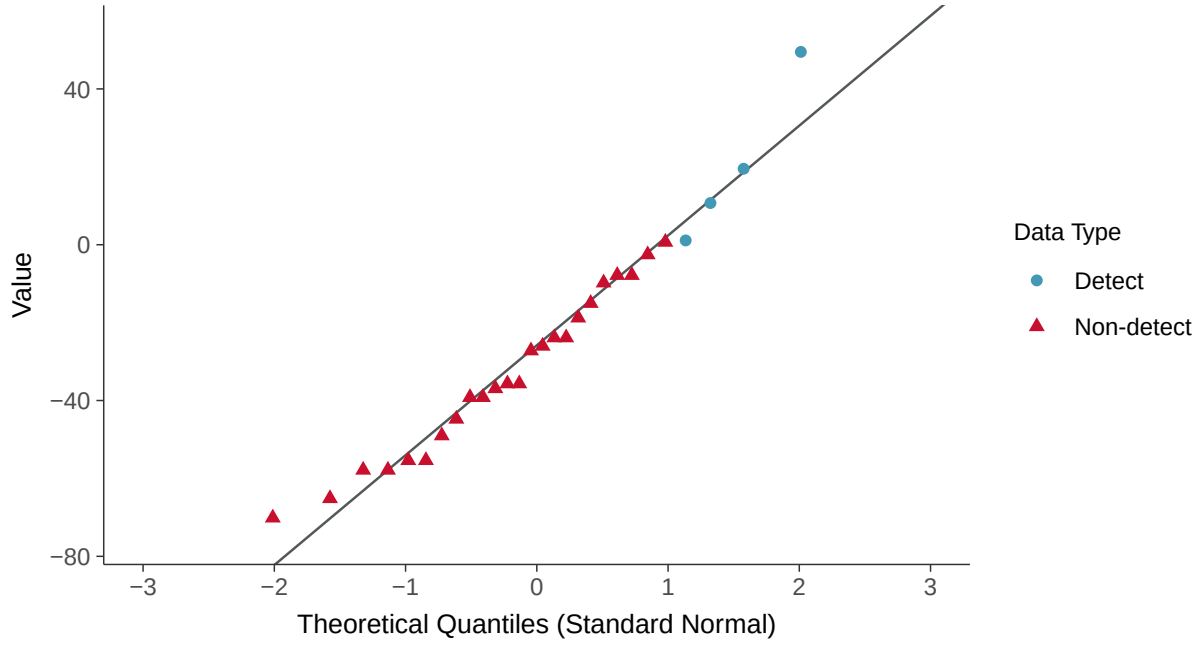
Boxplot by Season

Molybdenum, MW-7R (ug/L)



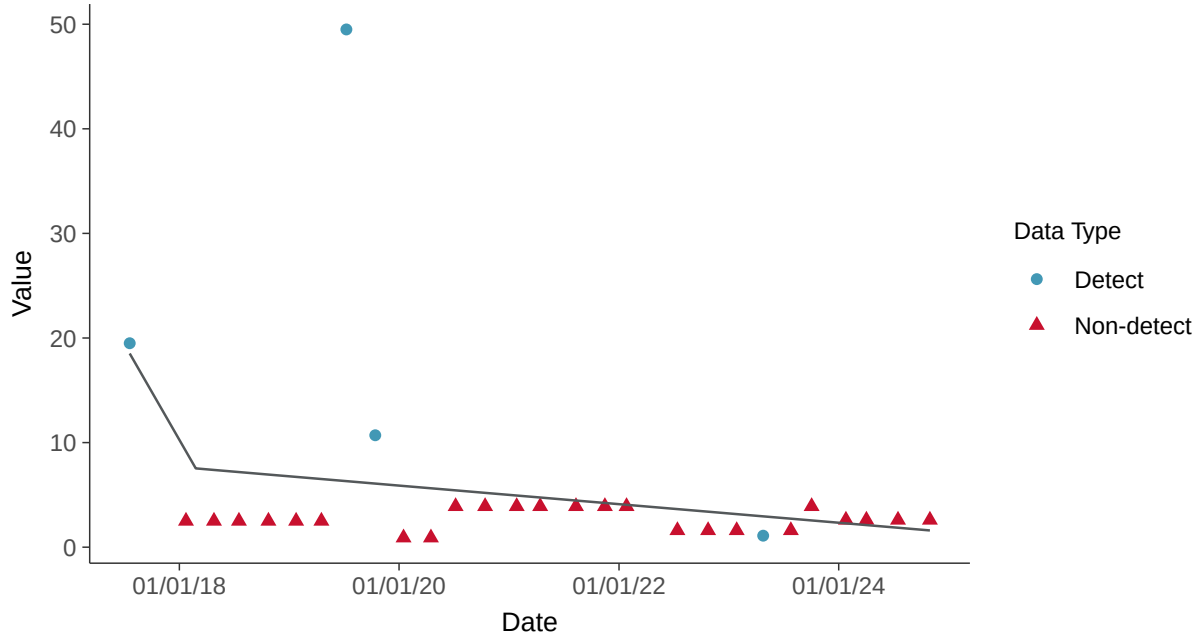
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-7R (ug/L)



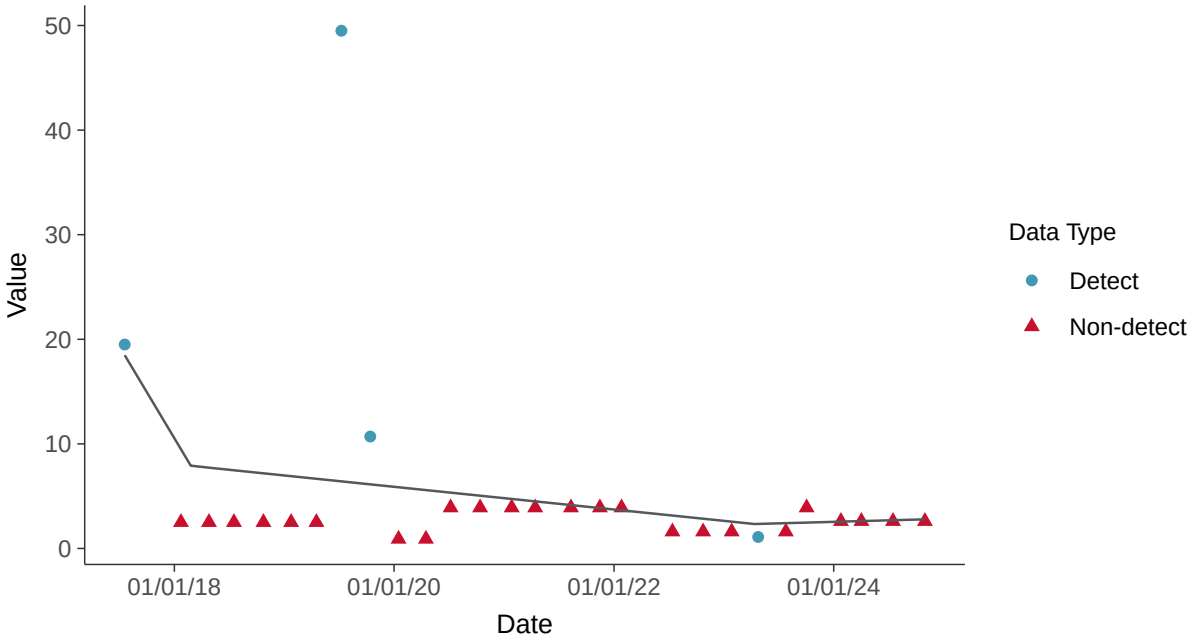
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-7R (ug/L)

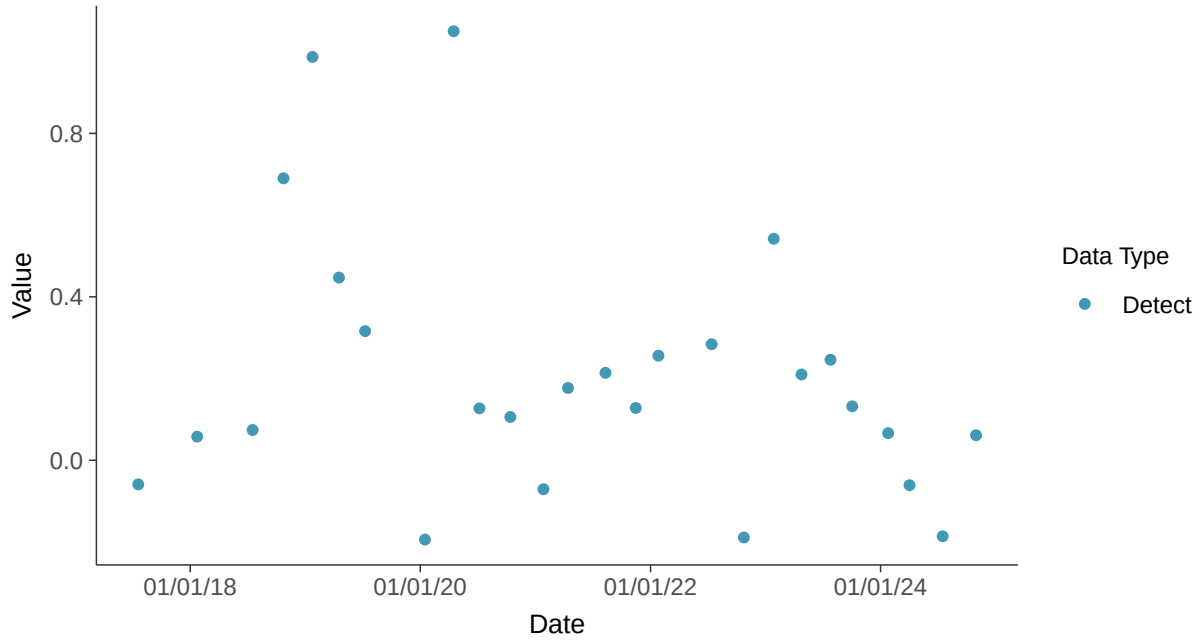


App. IV: Radium-226, MW-7R

ID: 07_03_119

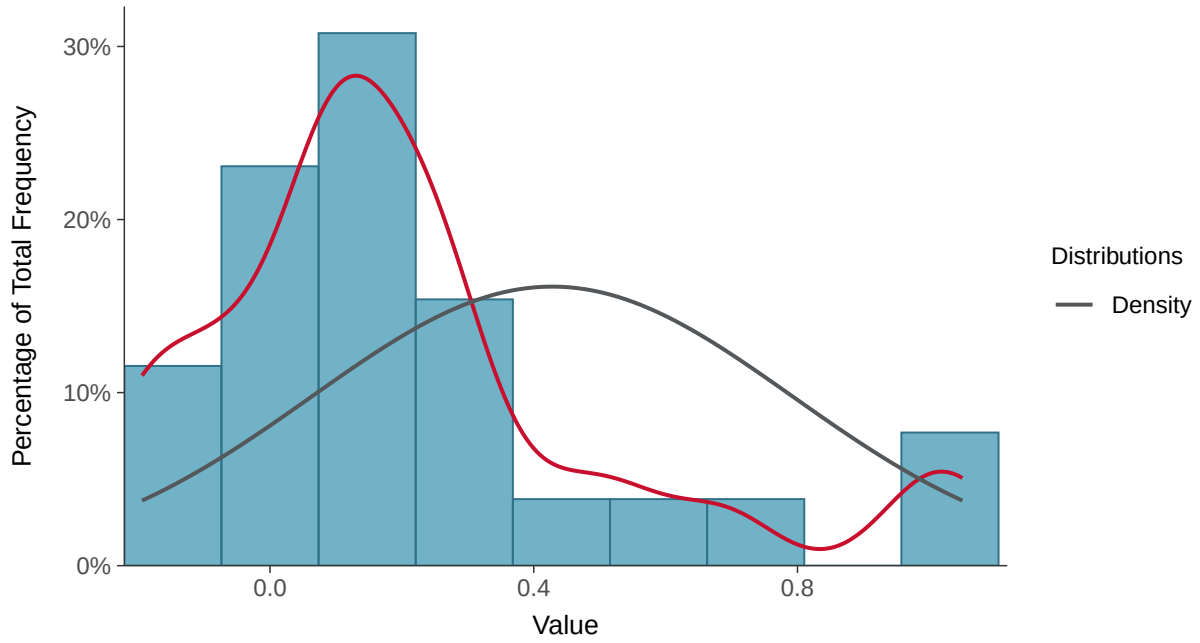
Scatter Plot

Radium-226, MW-7R (pCi/L)



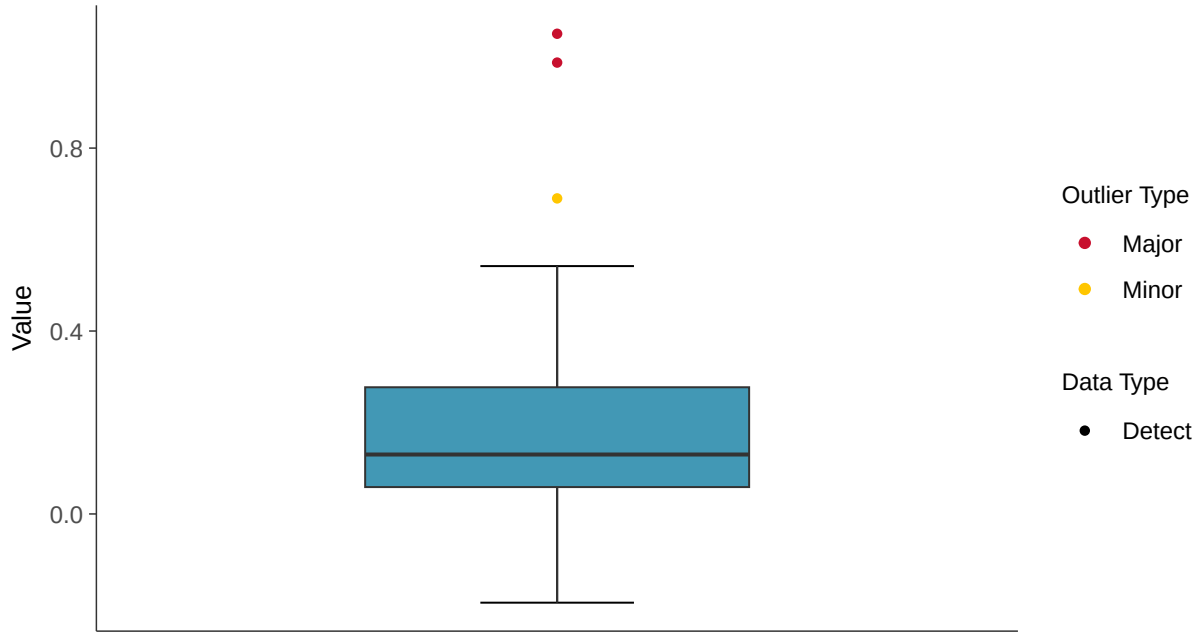
Histogram

Radium-226, MW-7R (pCi/L)



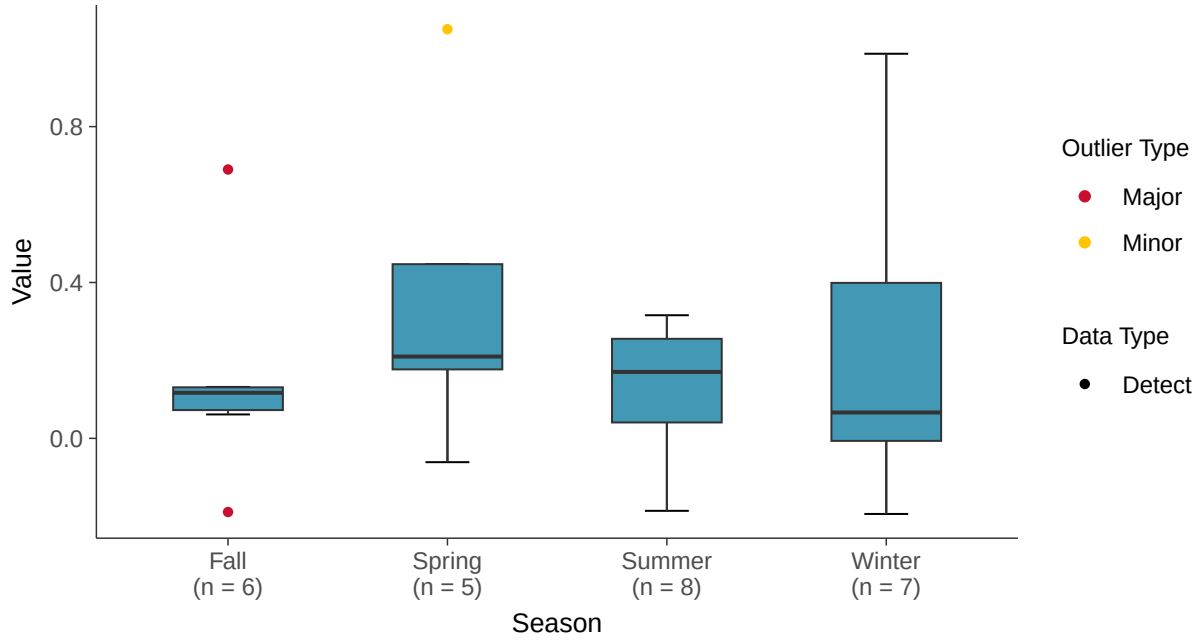
Boxplot

Radium-226, MW-7R (pCi/L)



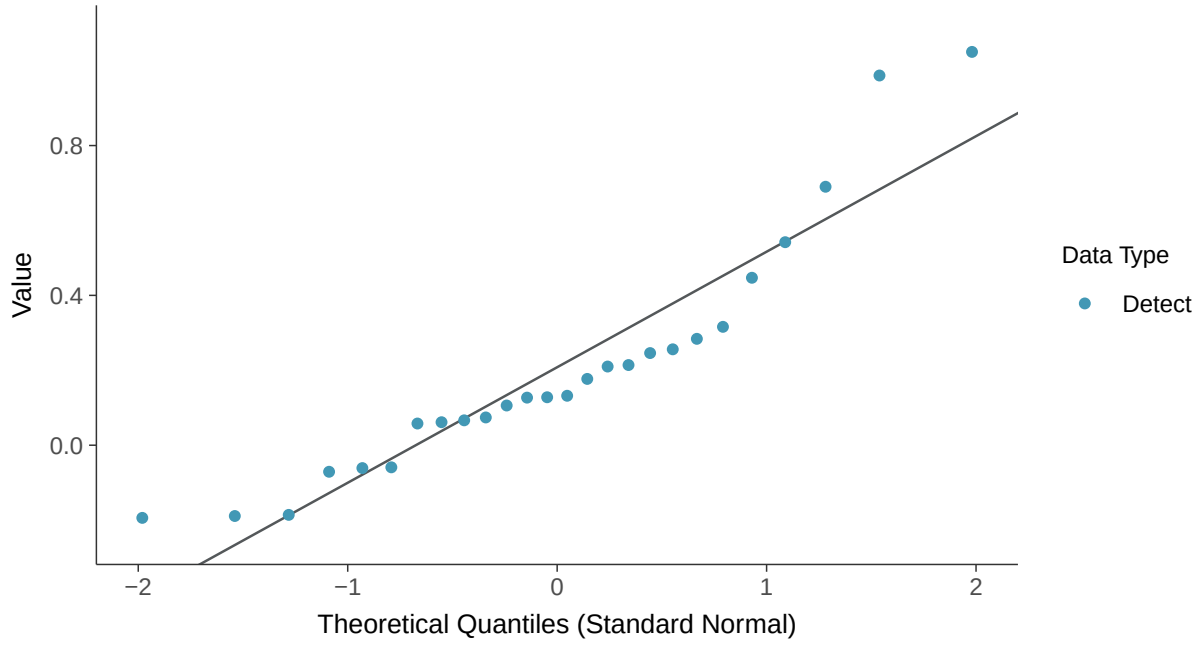
Boxplot by Season

Radium-226, MW-7R (pCi/L)



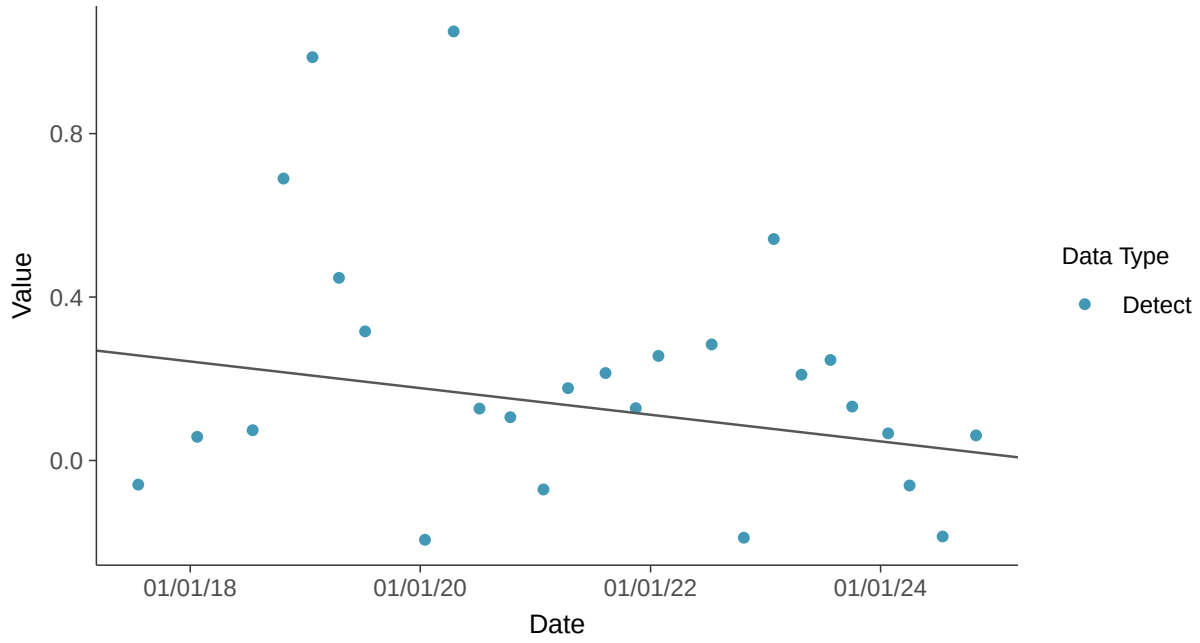
Normal Q-Q plot

Radium-226, MW-7R (pCi/L)



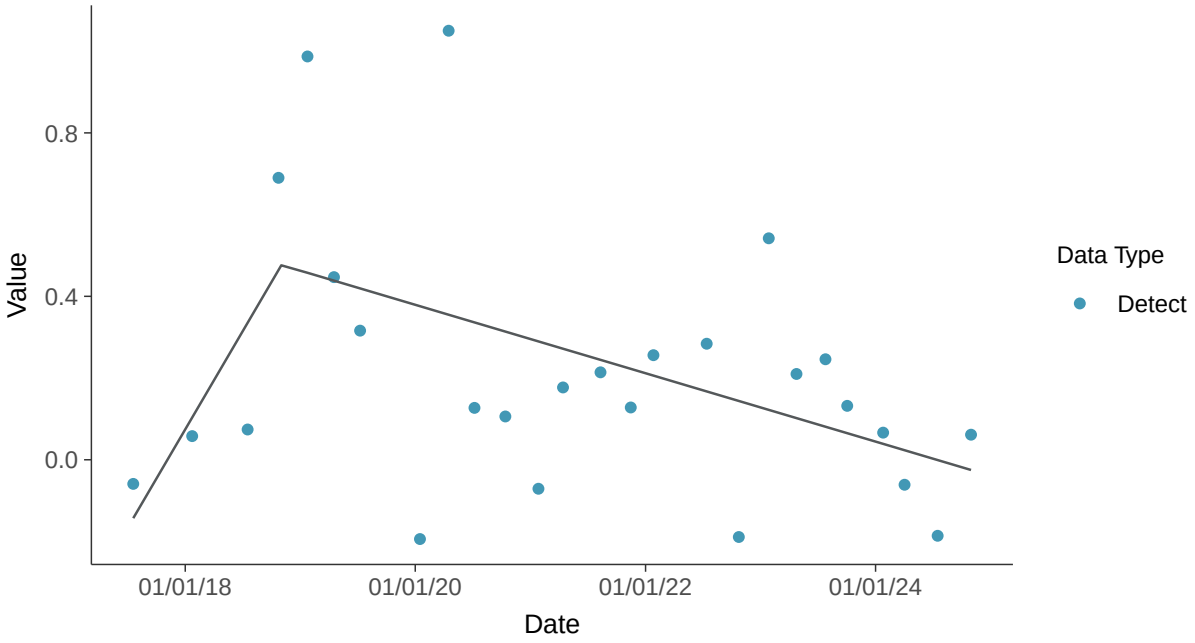
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-7R (pCi/L)



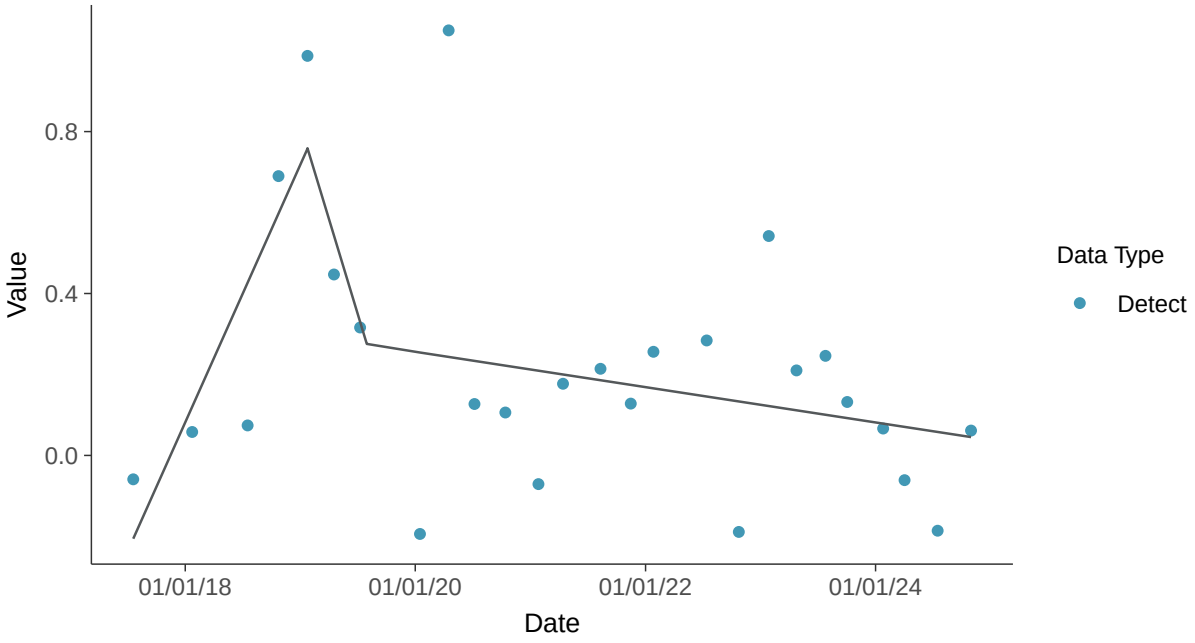
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-7R (pCi/L)



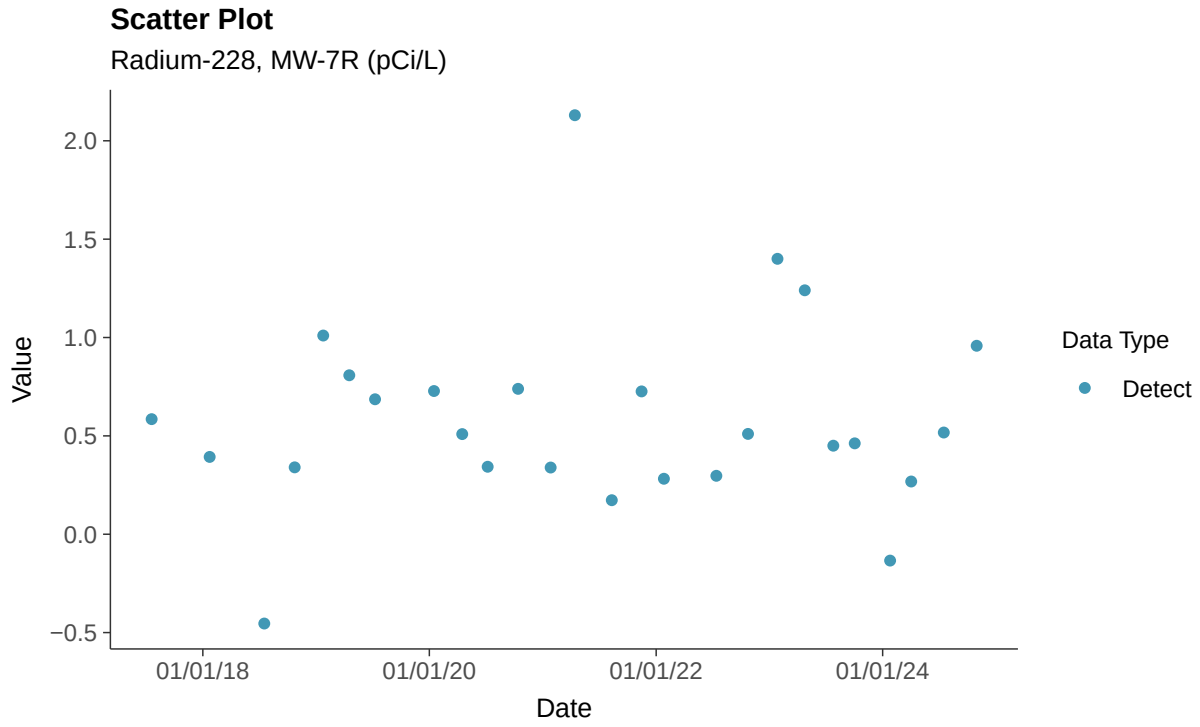
Trend Regression: Piecewise Linear-Linear-Linear

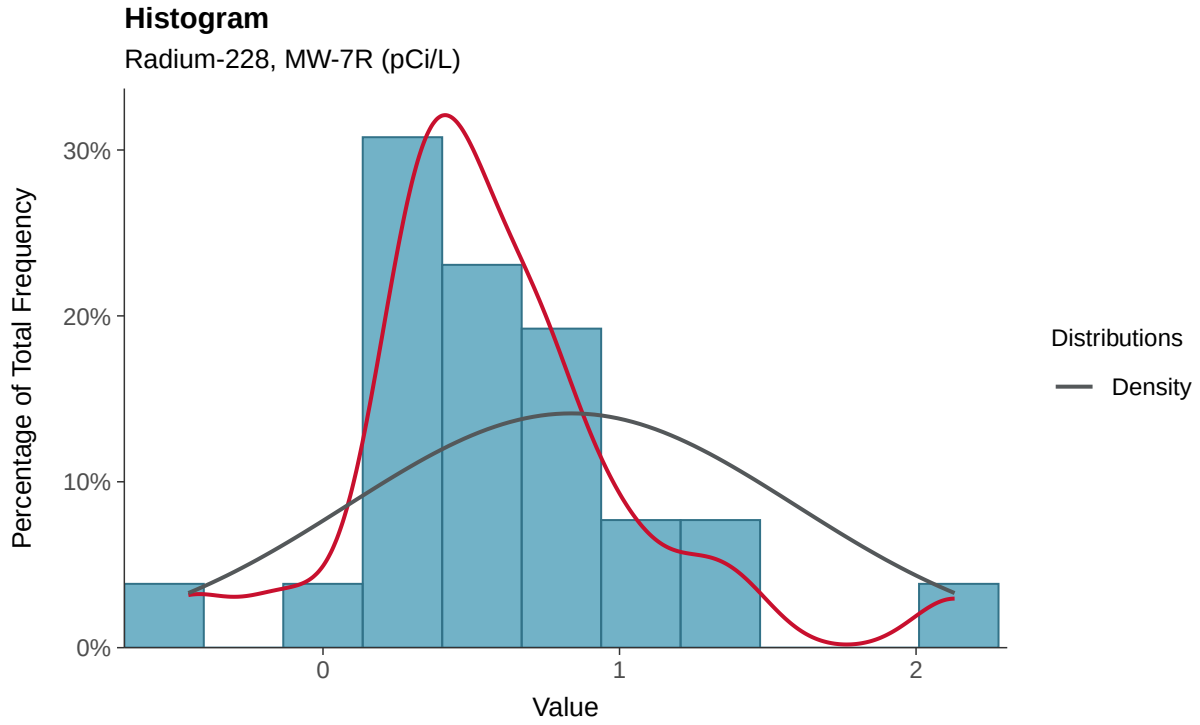
Radium-226, MW-7R (pCi/L)



App. IV: Radium-228, MW-7R

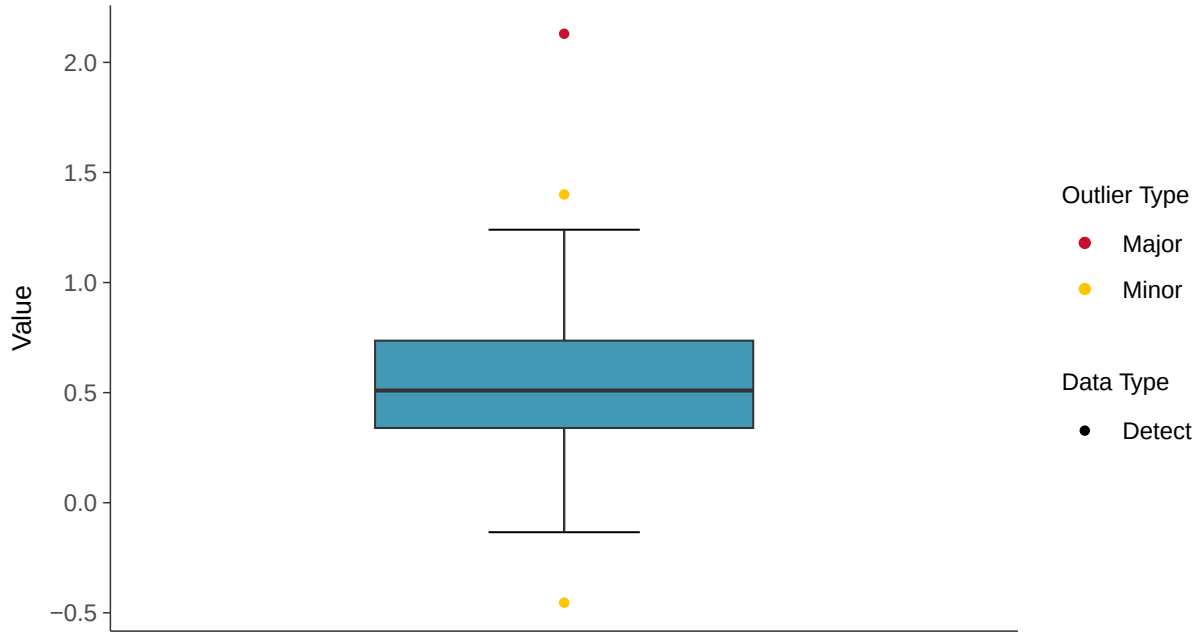
ID: 07_03_120





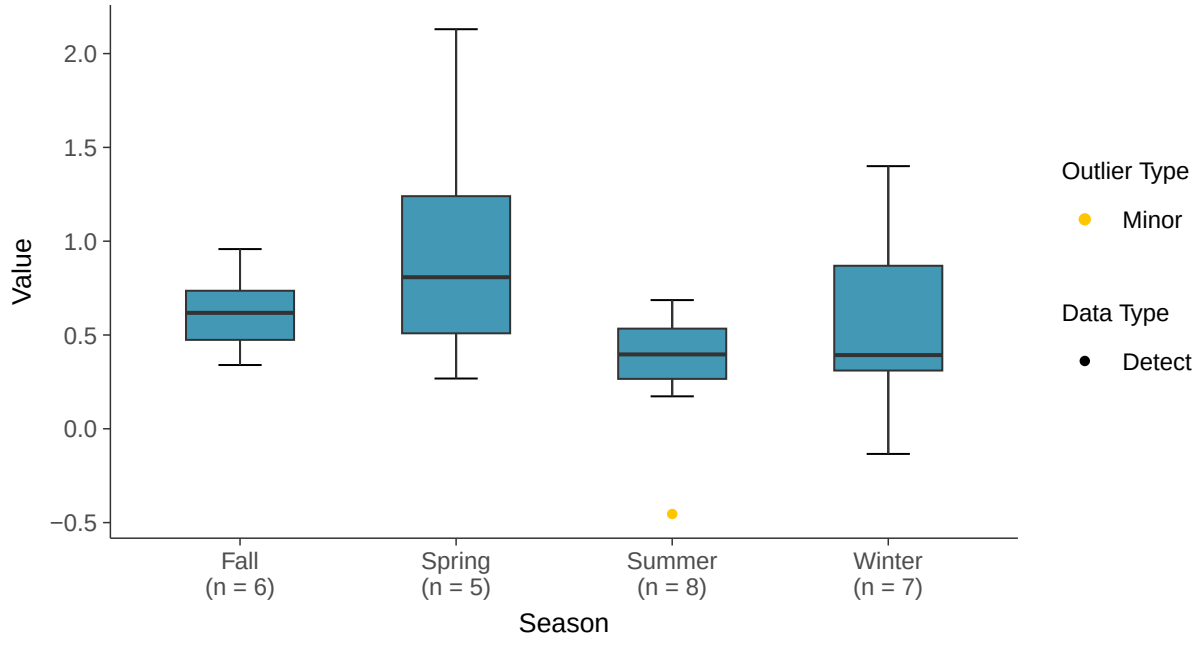
Boxplot

Radium-228, MW-7R (pCi/L)



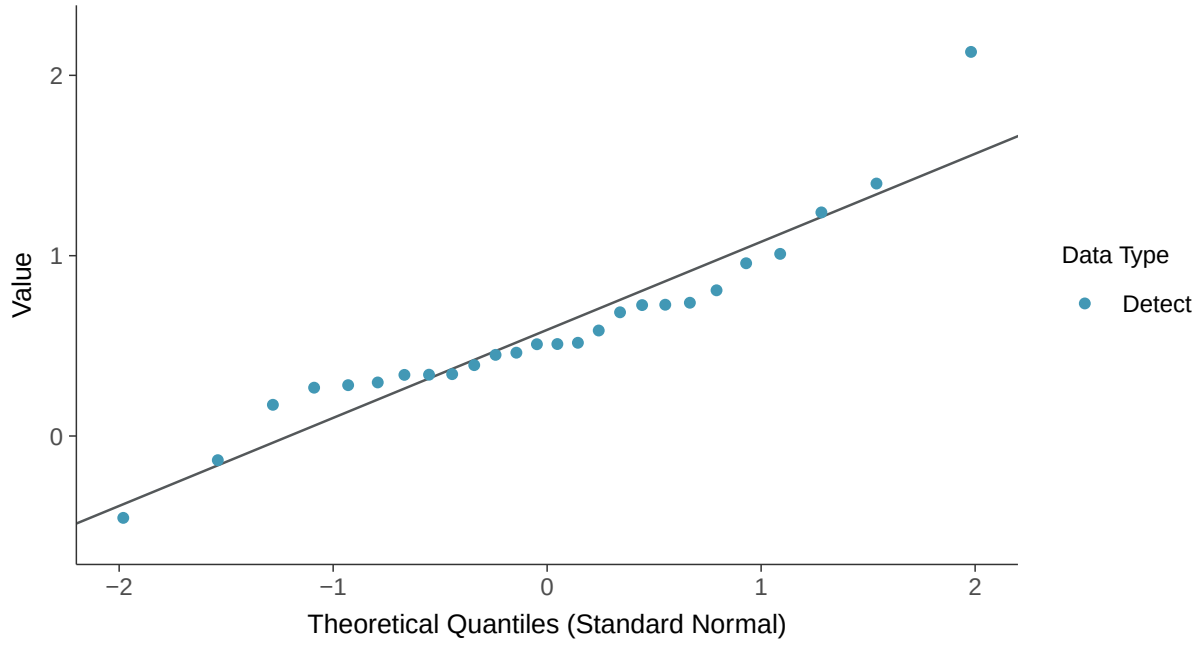
Boxplot by Season

Radium-228, MW-7R (pCi/L)



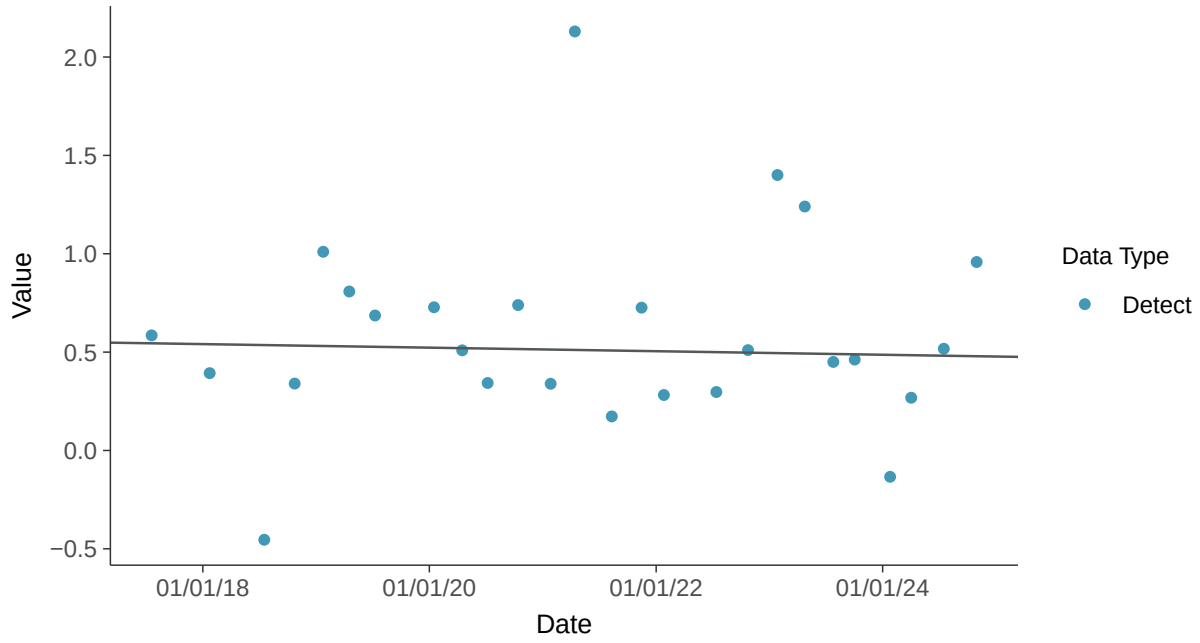
Normal Q-Q plot

Radium-228, MW-7R (pCi/L)



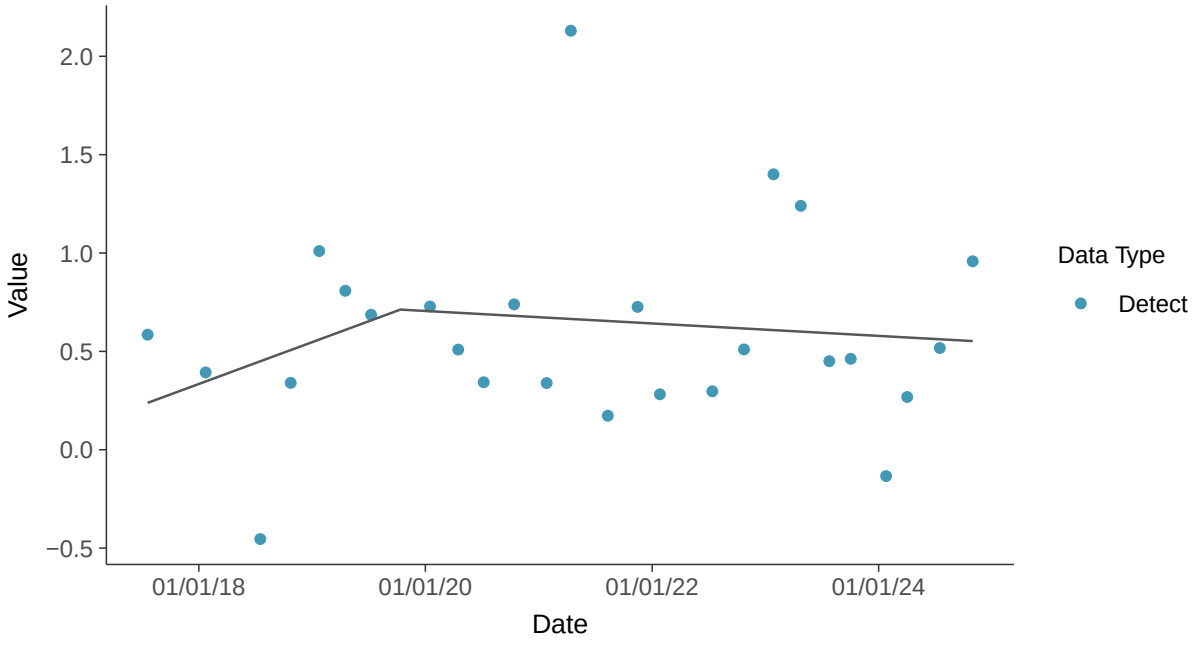
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-7R (pCi/L)



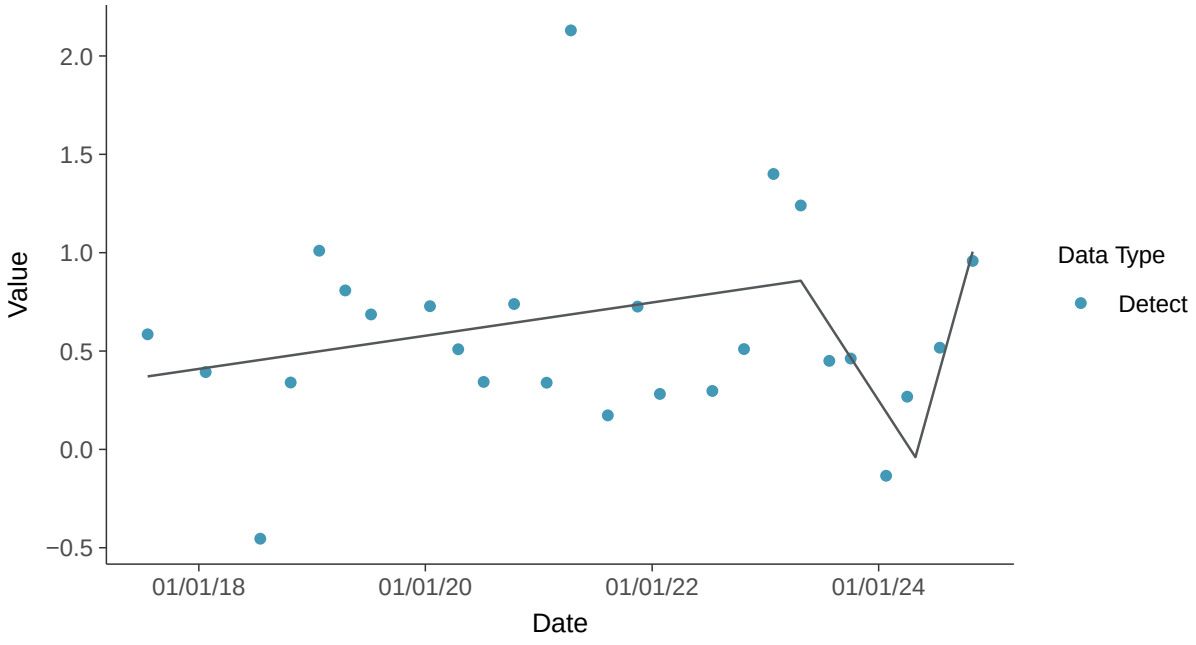
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-7R (pCi/L)



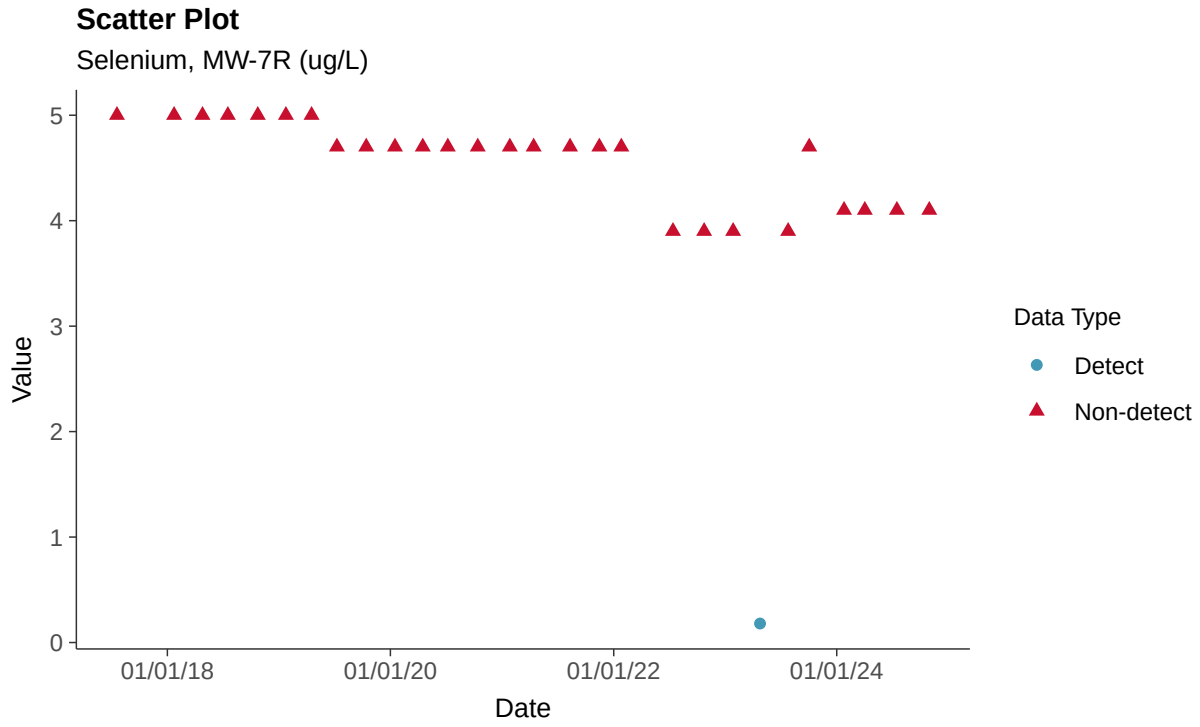
Trend Regression: Piecewise Linear-Linear-Linear

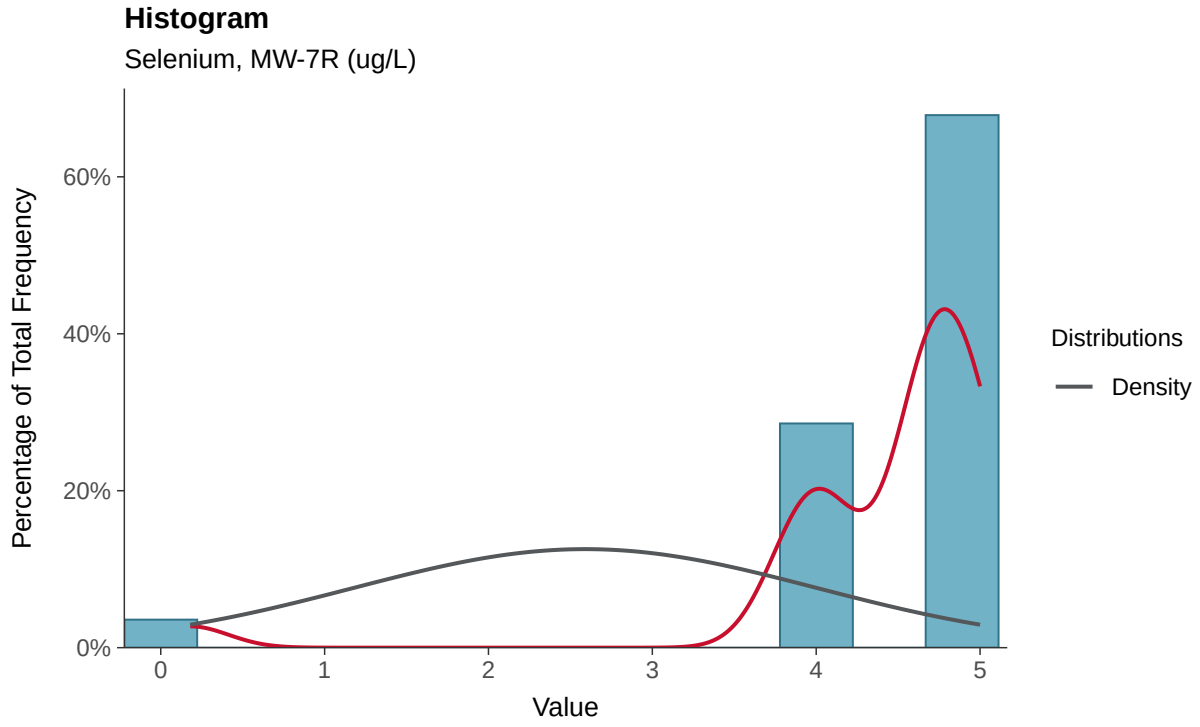
Radium-228, MW-7R (pCi/L)



App. IV: Selenium, MW-7R

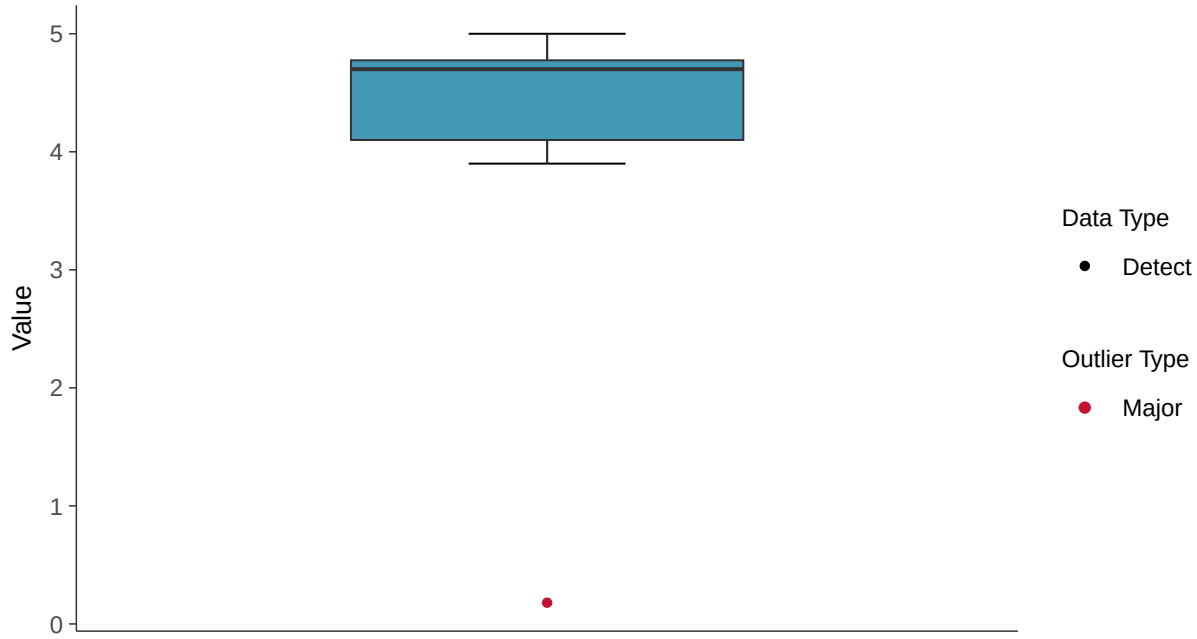
ID: 07_03_121





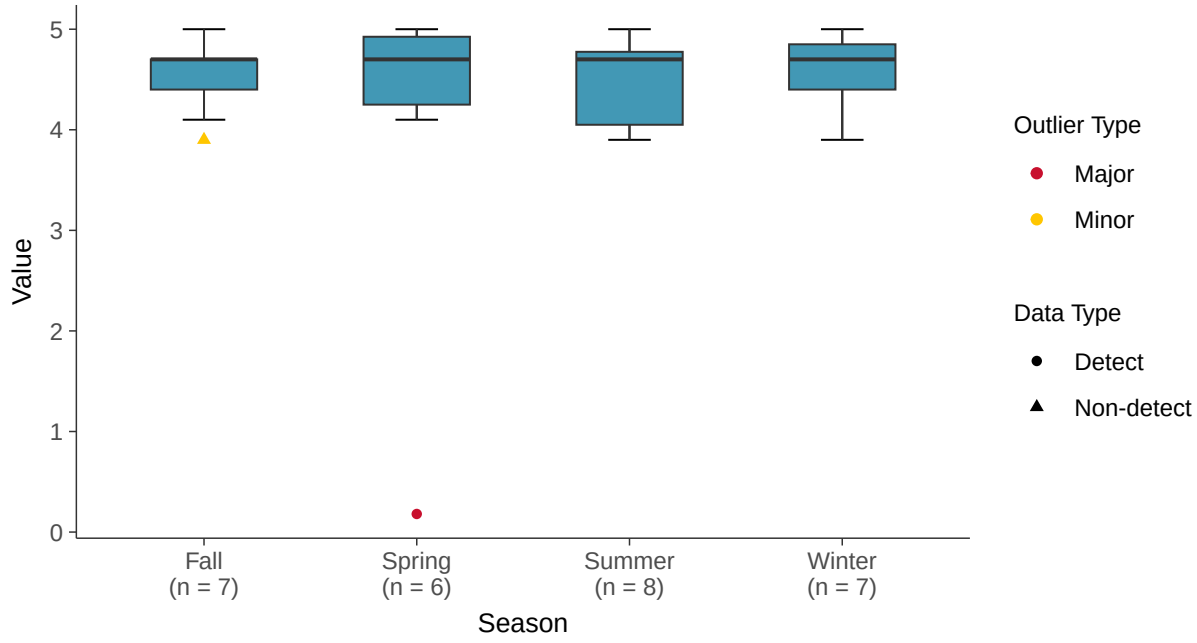
Boxplot

Selenium, MW-7R (ug/L)



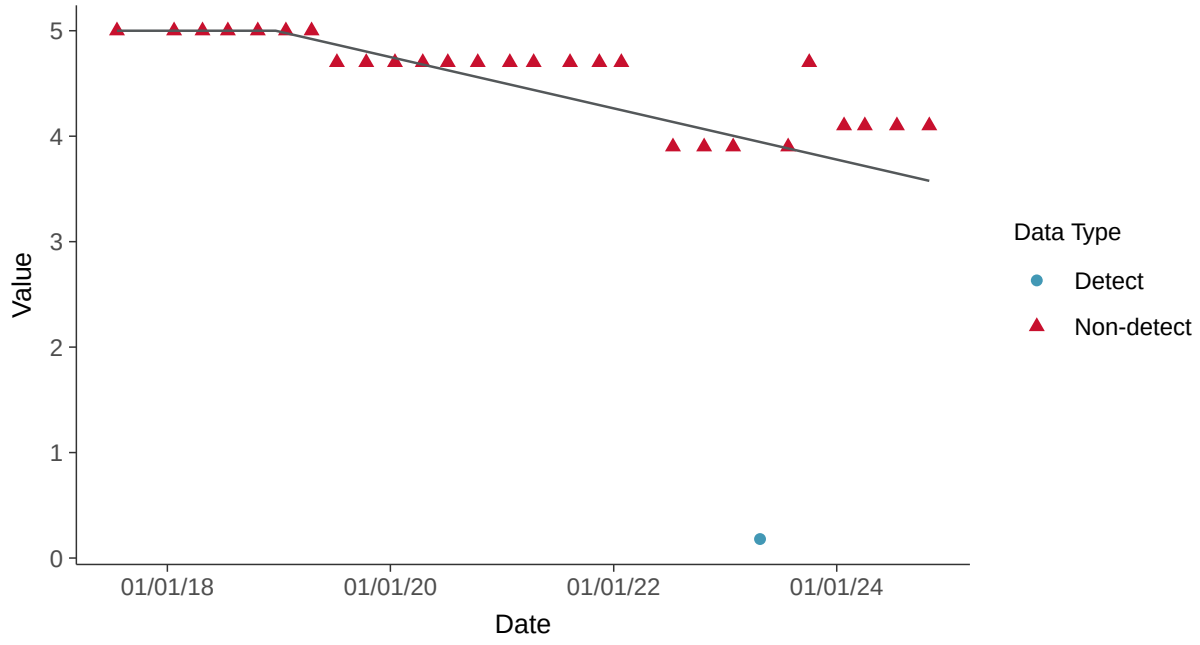
Boxplot by Season

Selenium, MW-7R (ug/L)



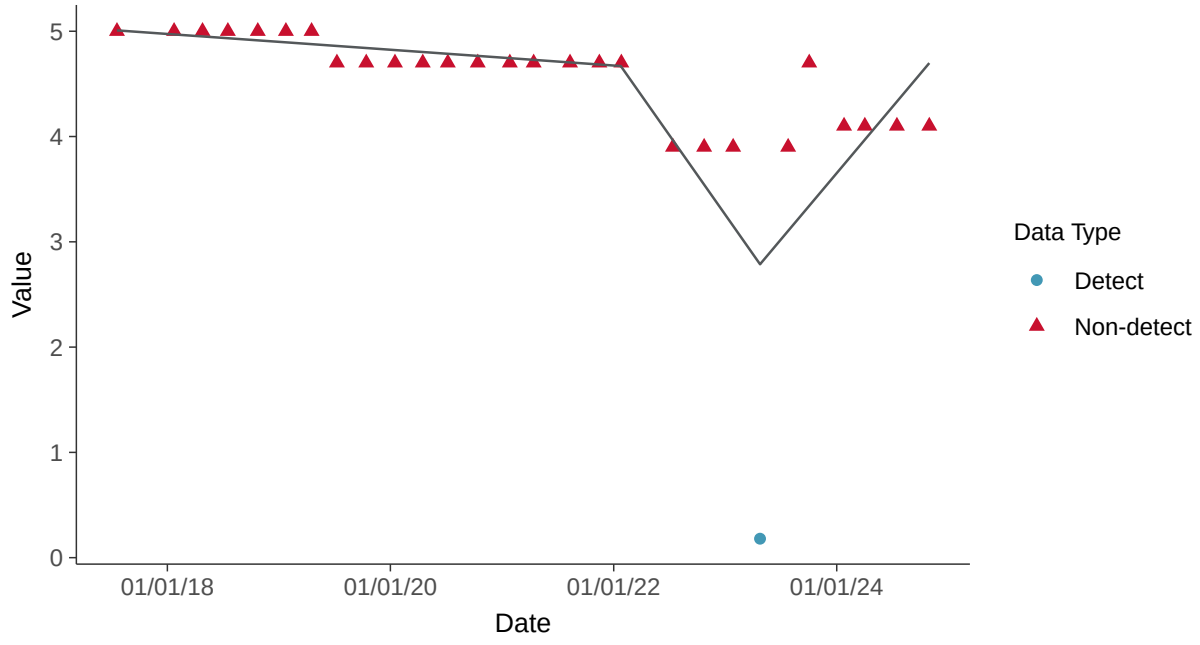
Trend Regression: Piecewise Linear-Linear

Selenium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-7R (ug/L)

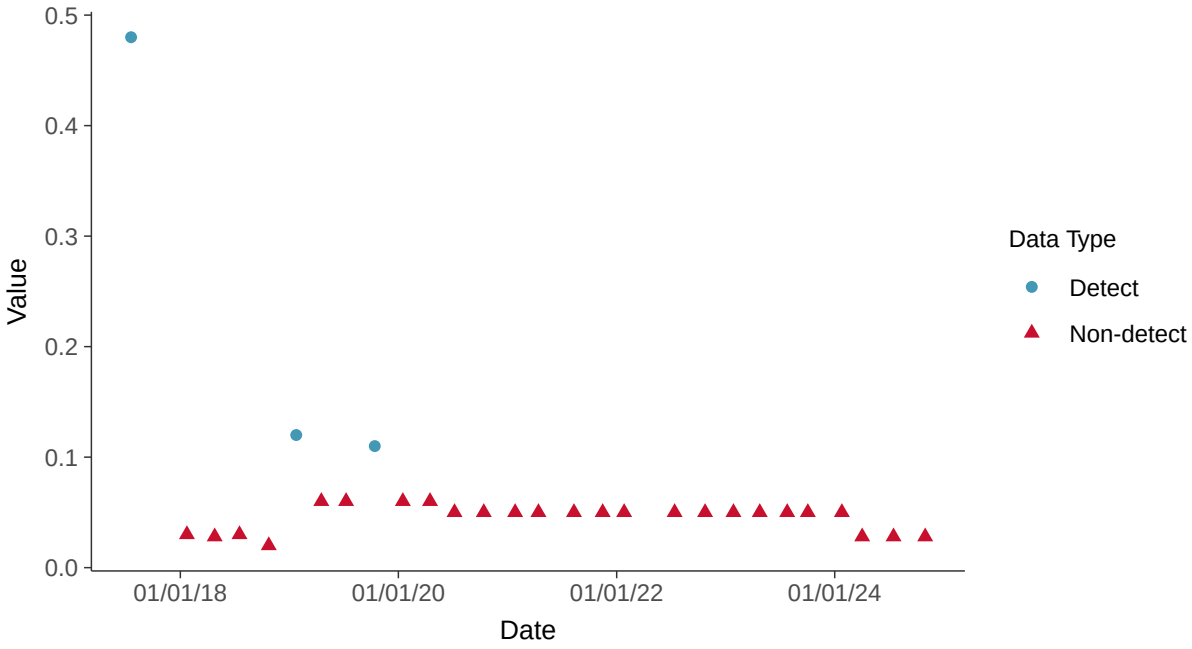


App. IV: Thallium, MW-7R

ID: 07_03_124

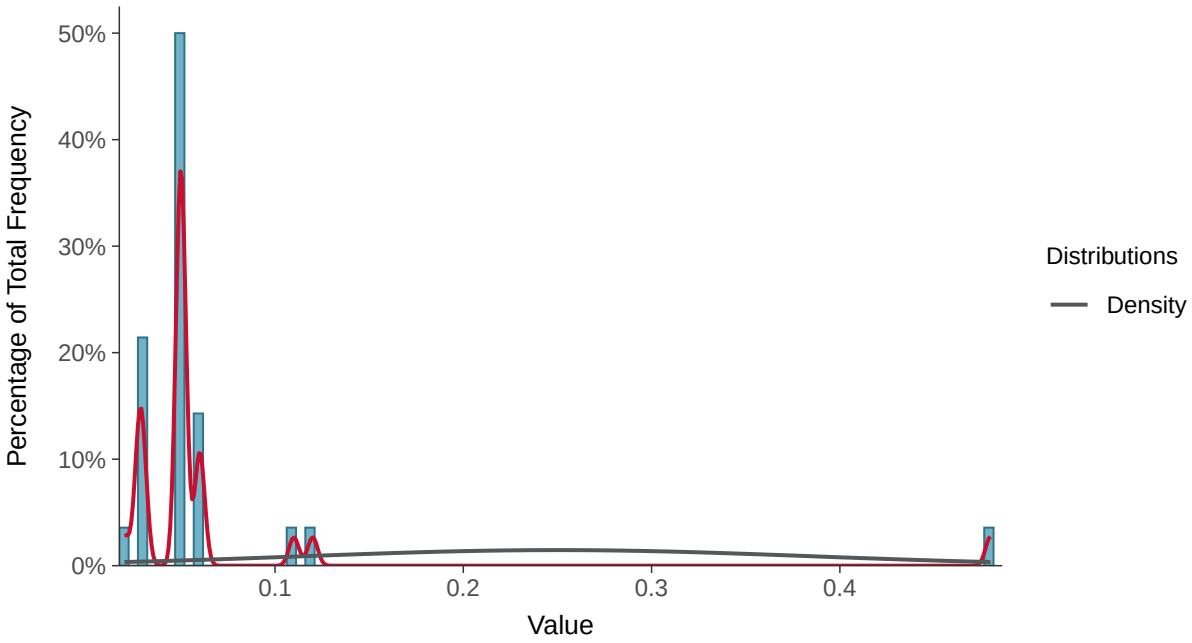
Scatter Plot

Thallium, MW-7R (ug/L)



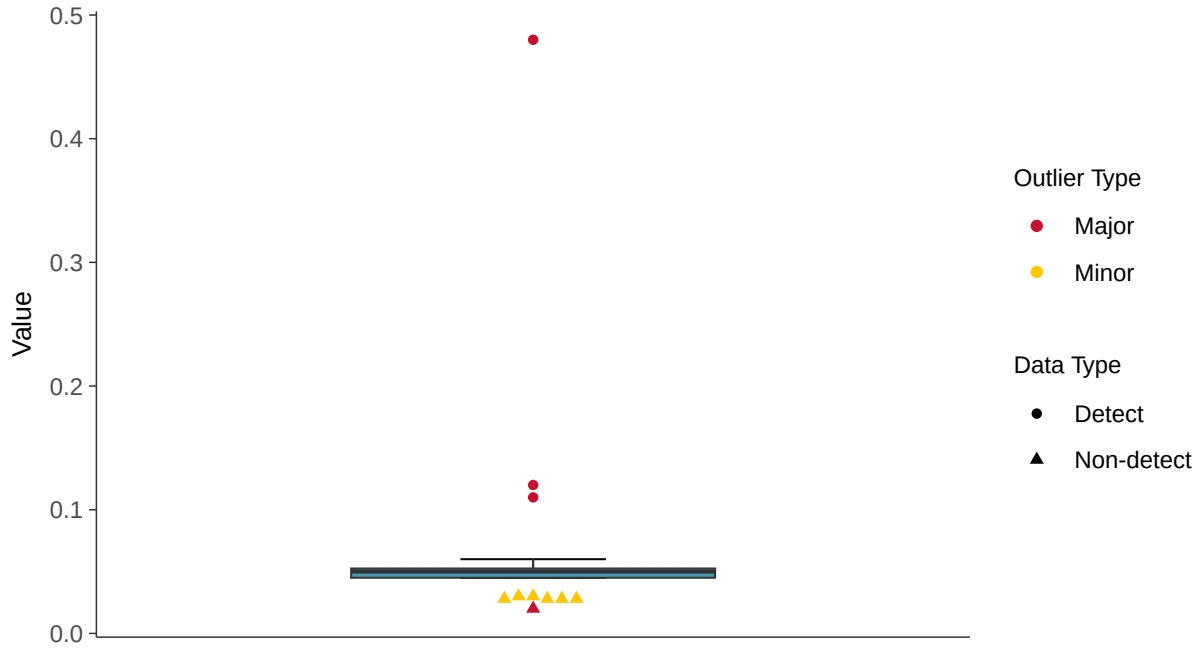
Histogram

Thallium, MW-7R (ug/L)



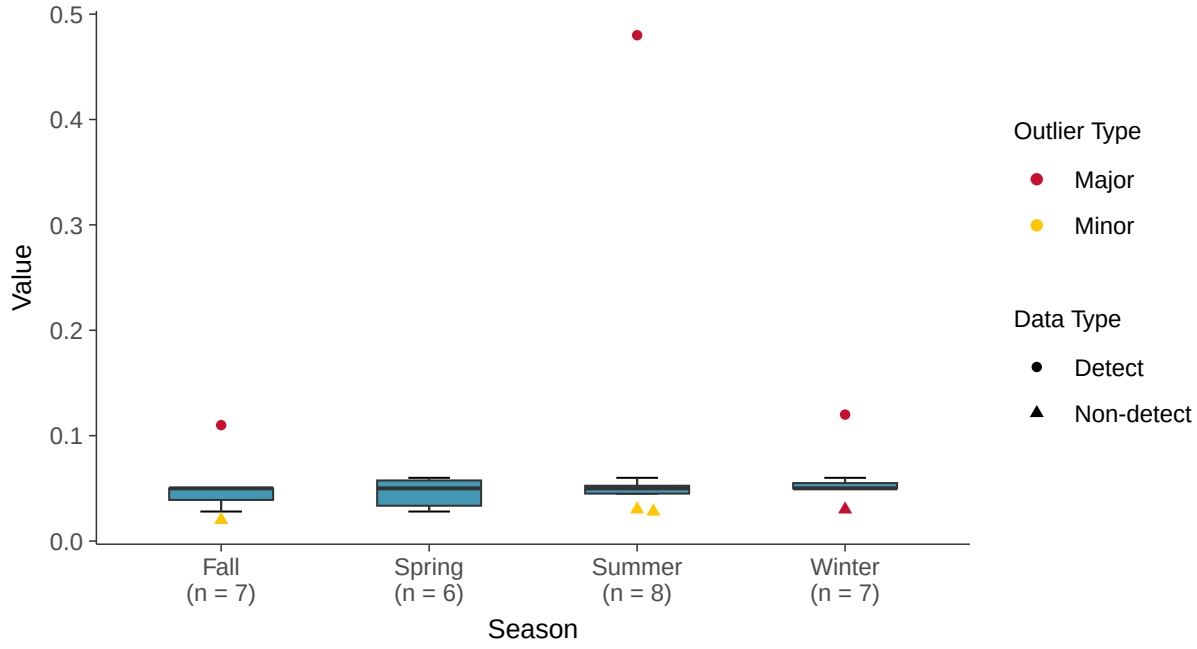
Boxplot

Thallium, MW-7R (ug/L)



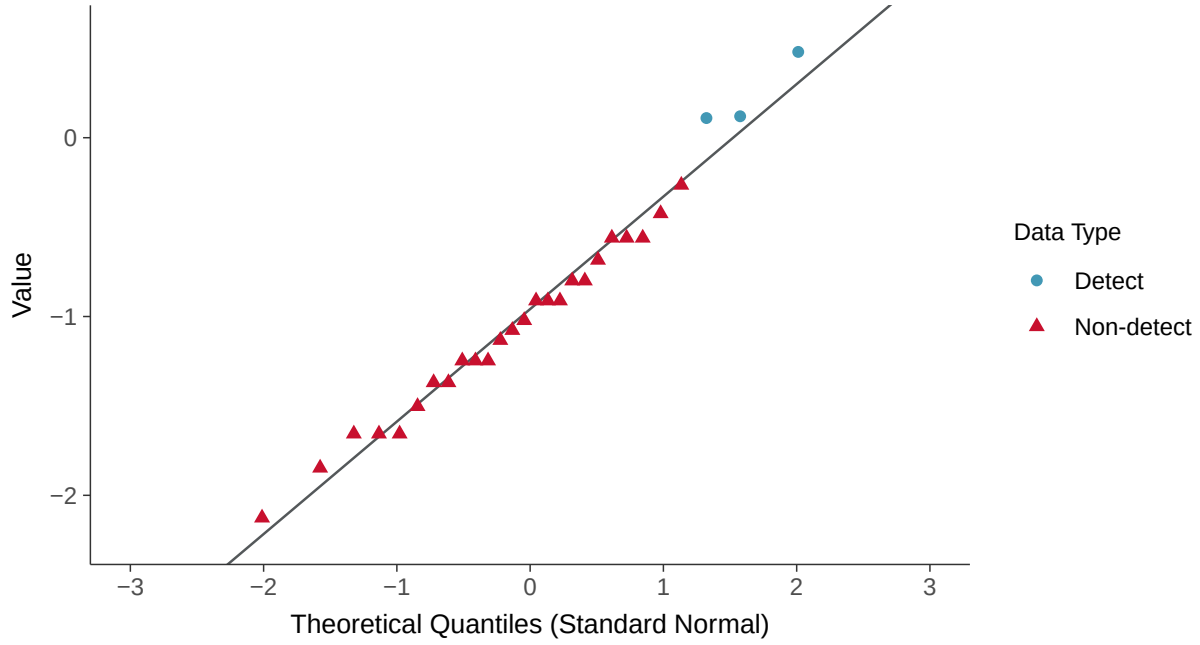
Boxplot by Season

Thallium, MW-7R (ug/L)



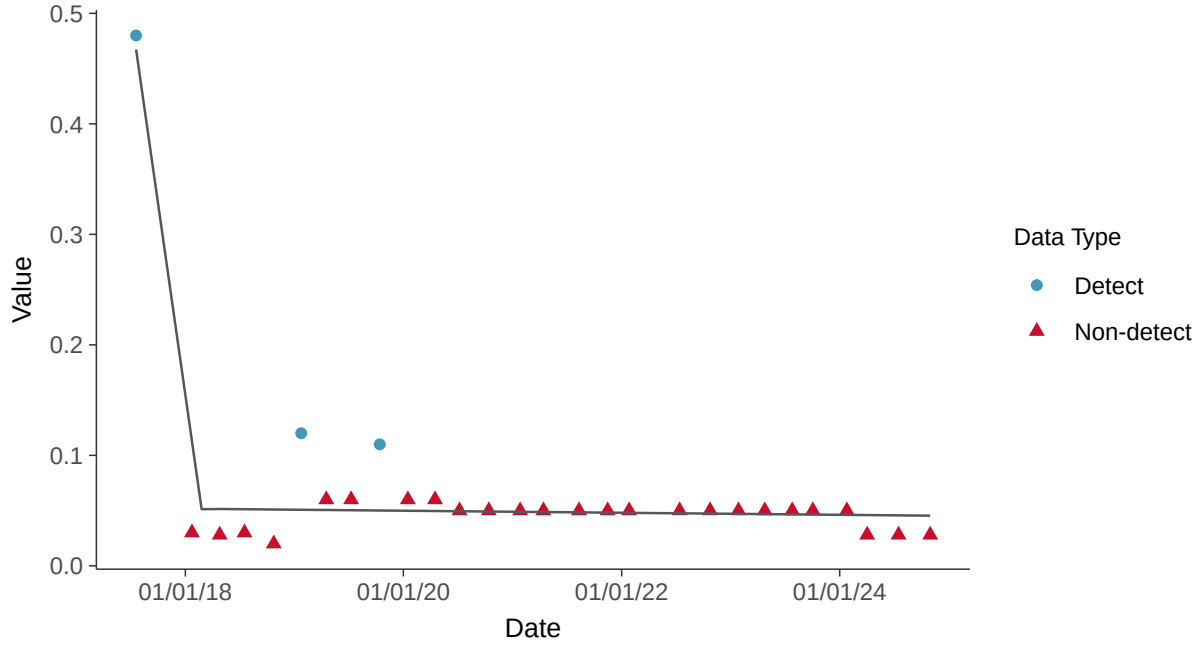
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-7R (ug/L)



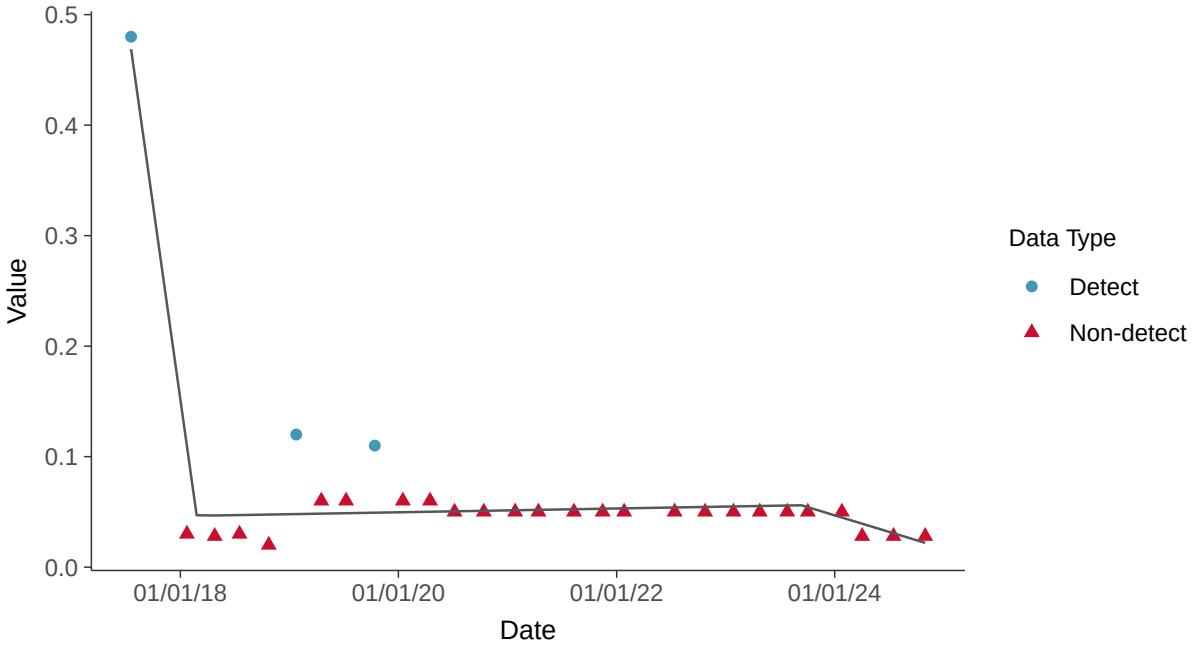
Trend Regression: Piecewise Linear-Linear

Thallium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-7R (ug/L)

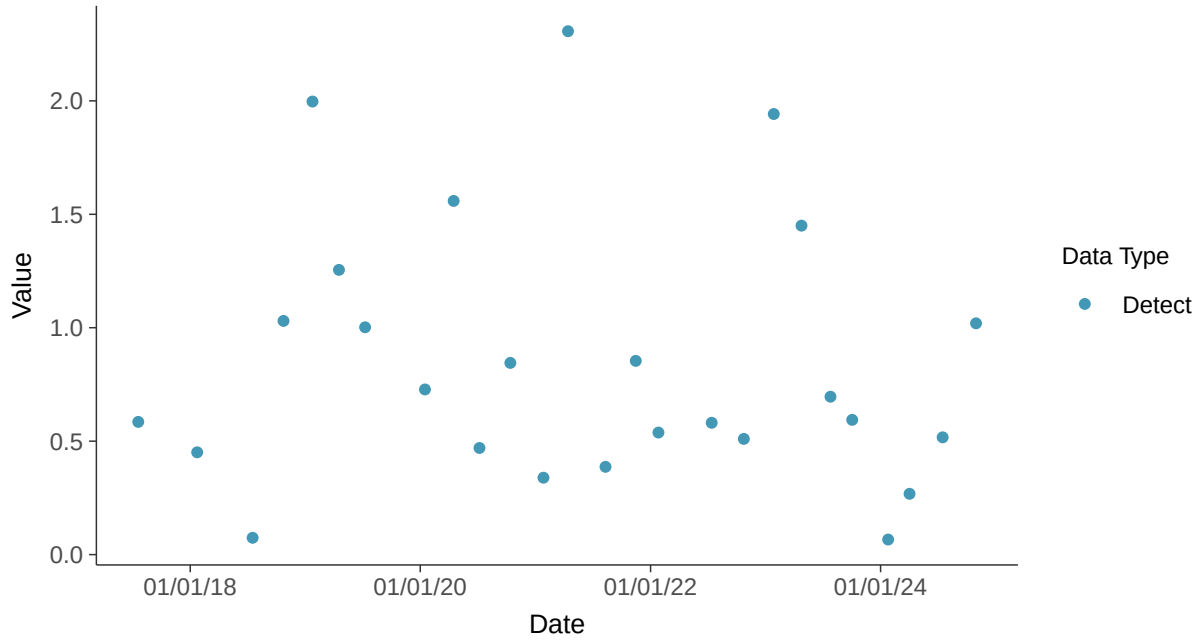


App. IV: Total Radium, MW-7R

ID: 07_03_126

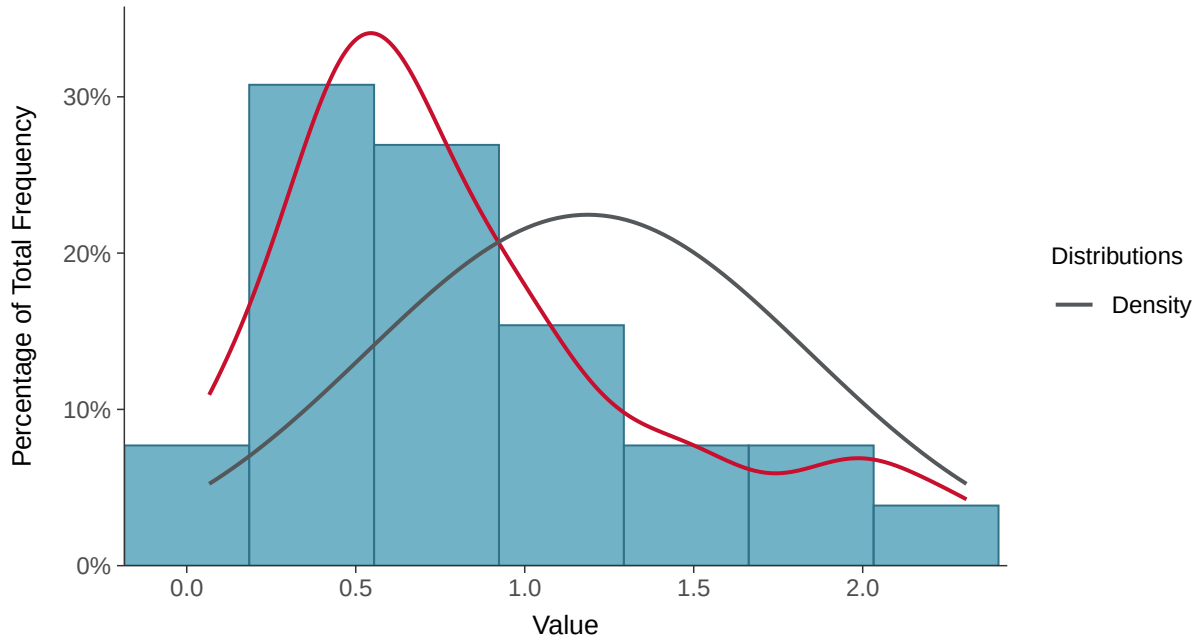
Scatter Plot

Total Radium, MW-7R (pCi/L)



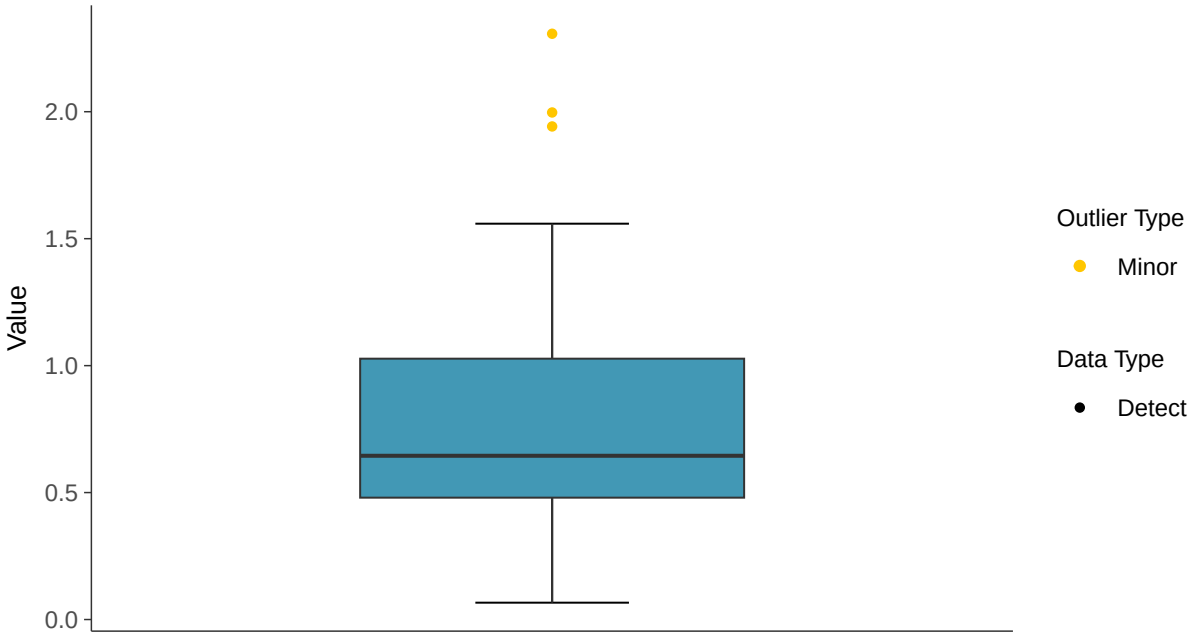
Histogram

Total Radium, MW-7R (pCi/L)



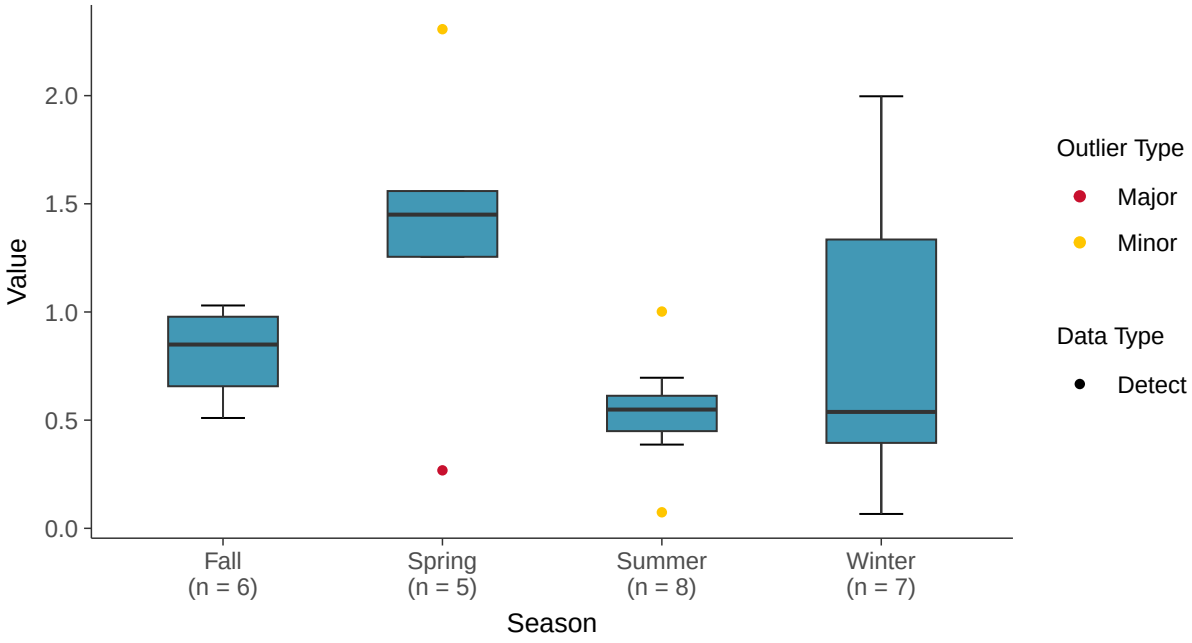
Boxplot

Total Radium, MW-7R (pCi/L)



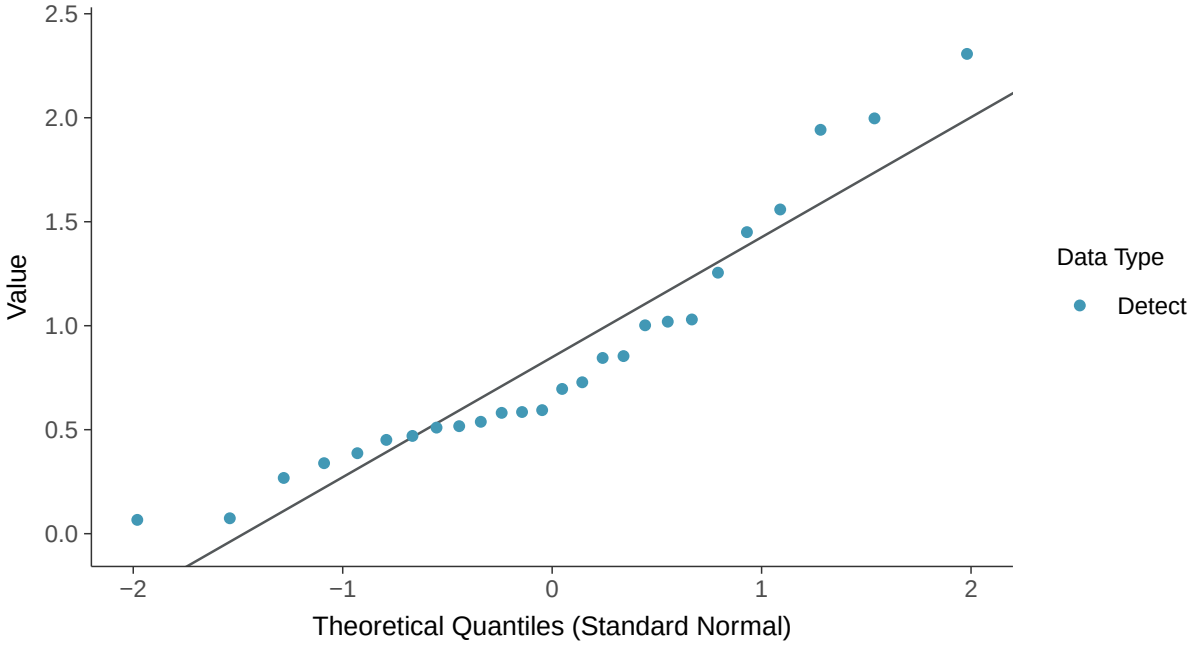
Boxplot by Season

Total Radium, MW-7R (pCi/L)



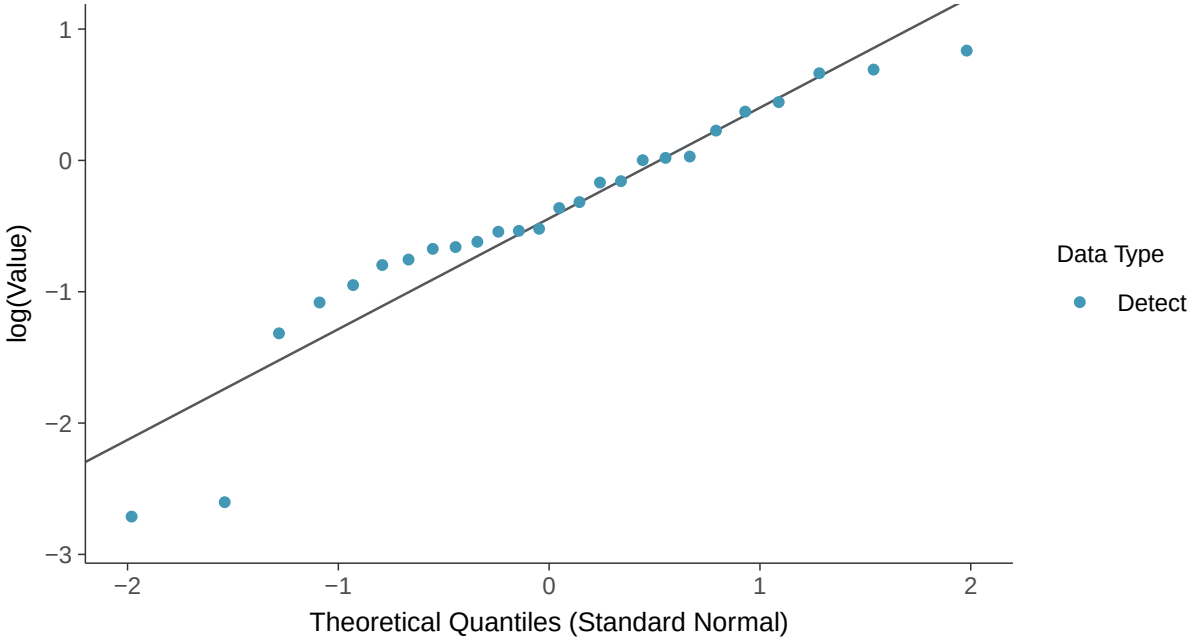
Normal Q-Q plot

Total Radium, MW-7R (pCi/L)



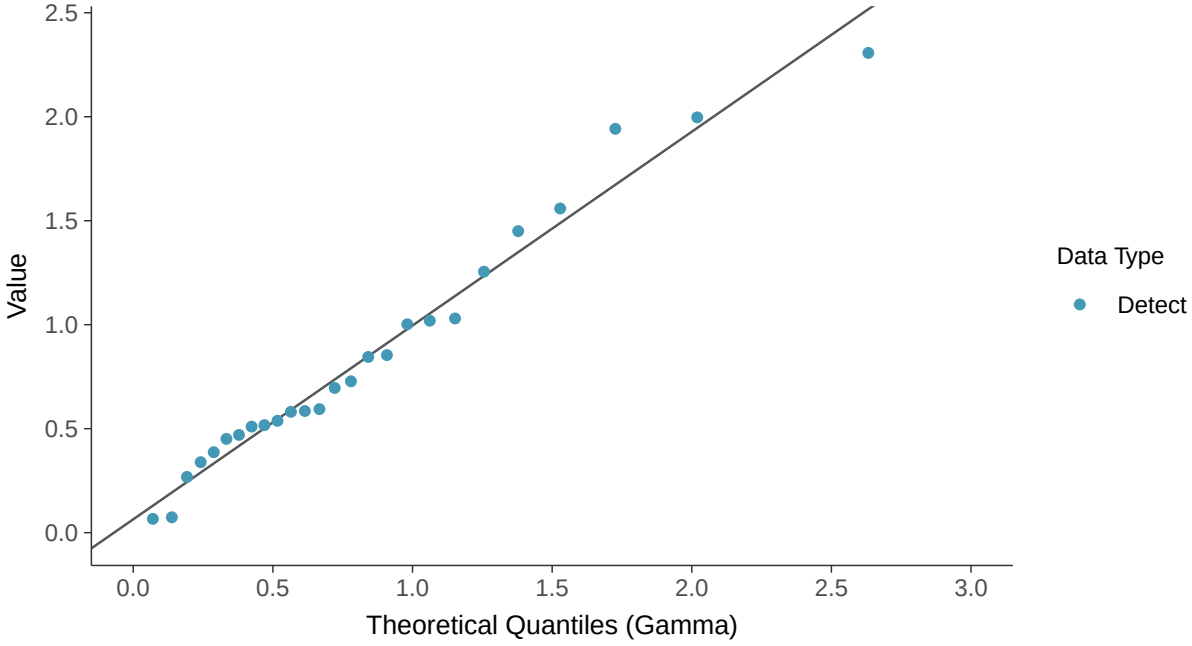
Lognormal Q-Q plot

Total Radium, MW-7R (pCi/L)



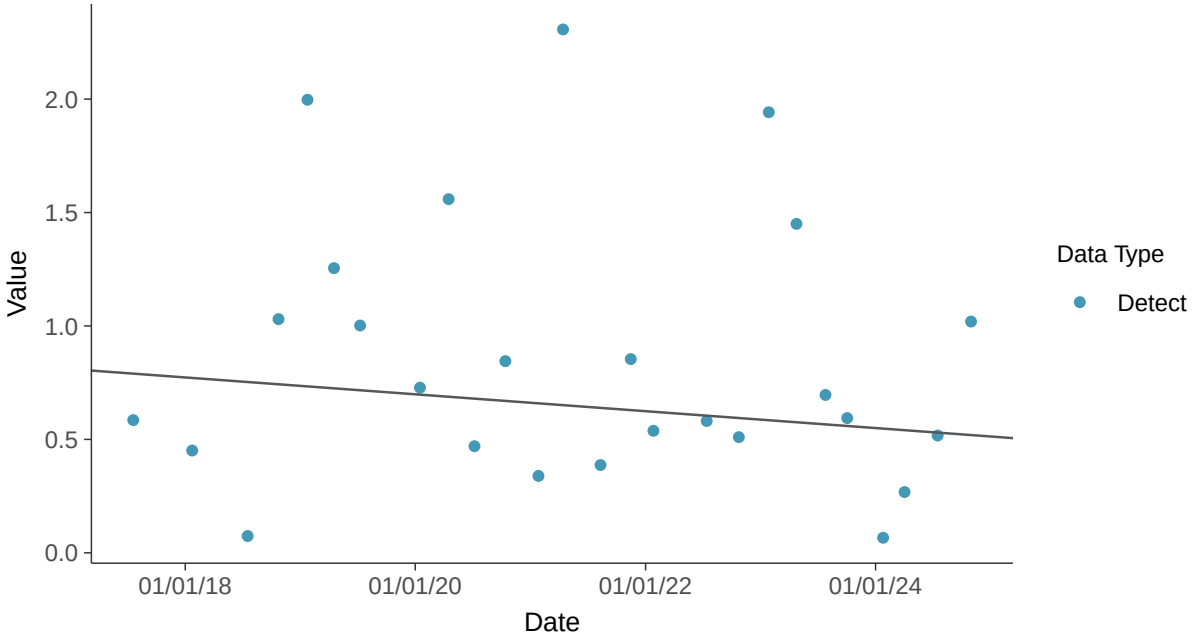
Gamma Q-Q plot

Total Radium, MW-7R (pCi/L)



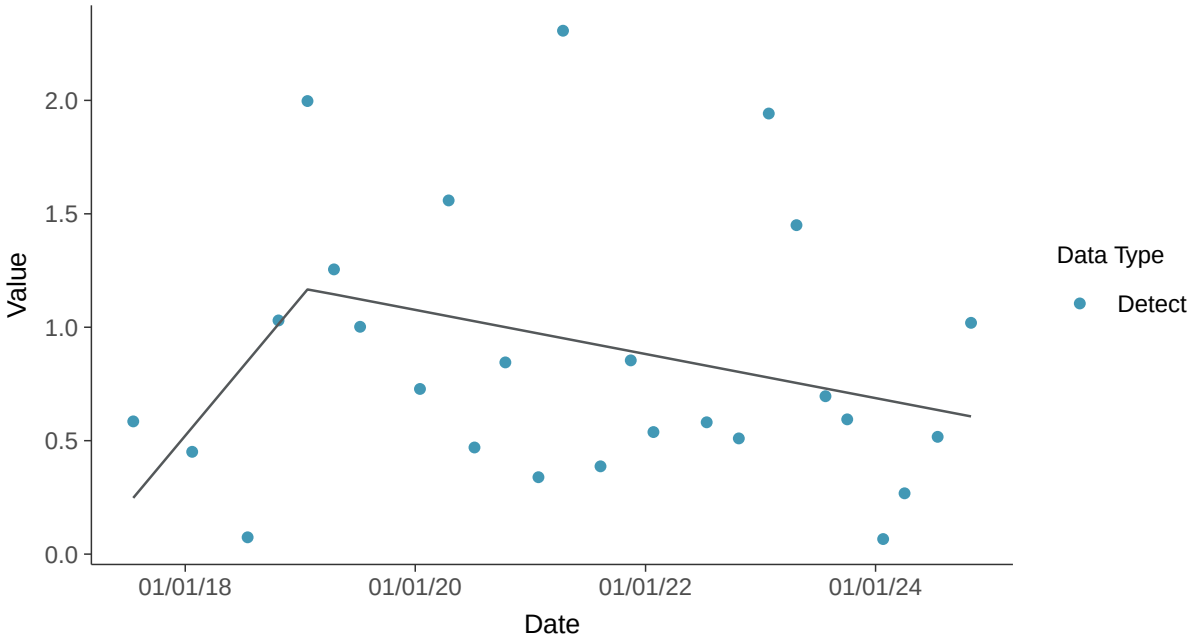
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-7R (pCi/L)



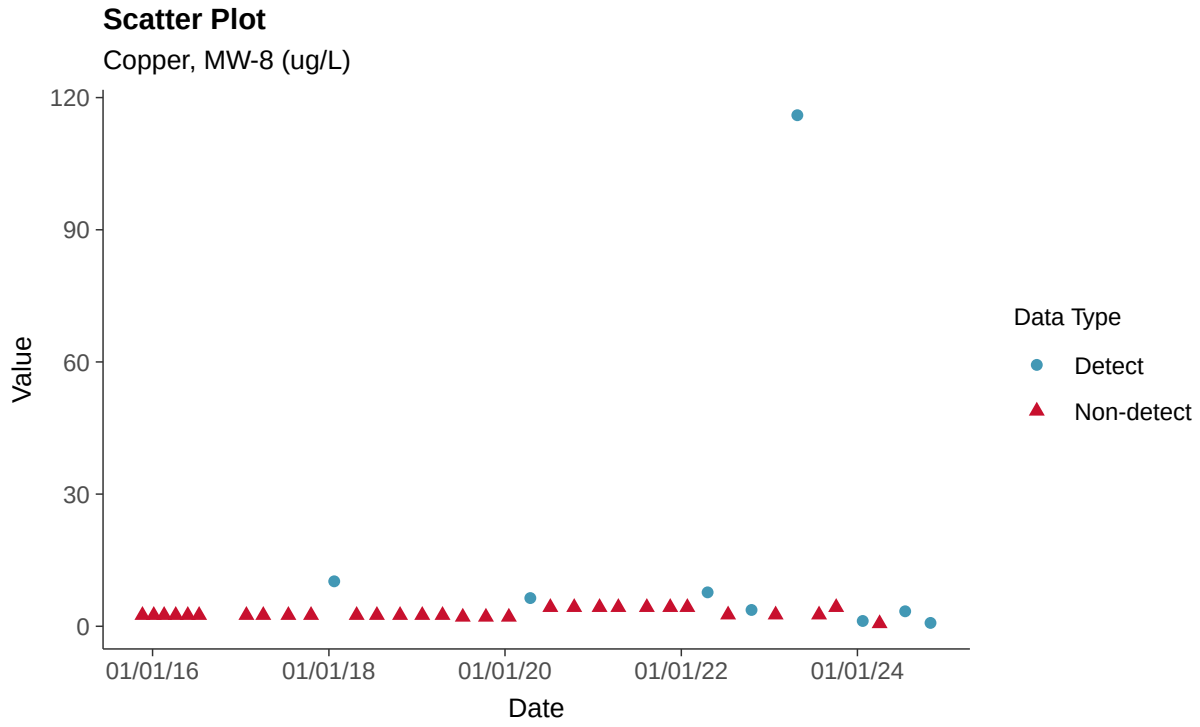
Trend Regression: Piecewise Linear-Linear

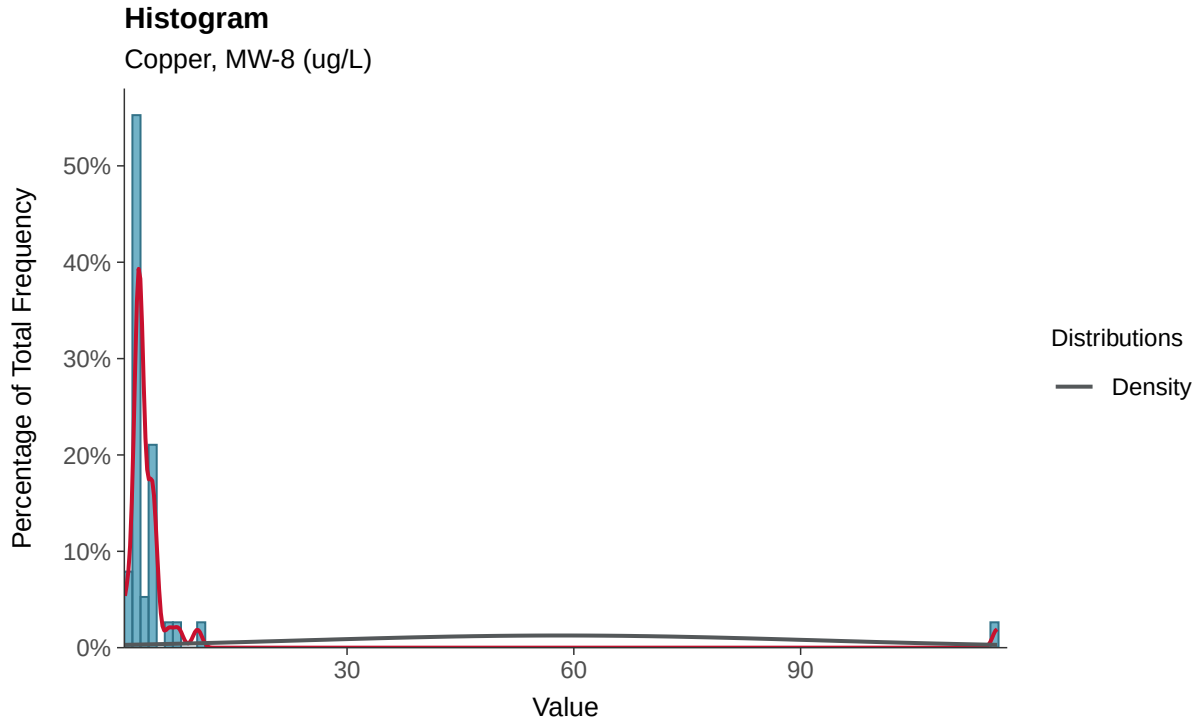
Total Radium, MW-7R (pCi/L)



App. I Metals: Copper, MW-8

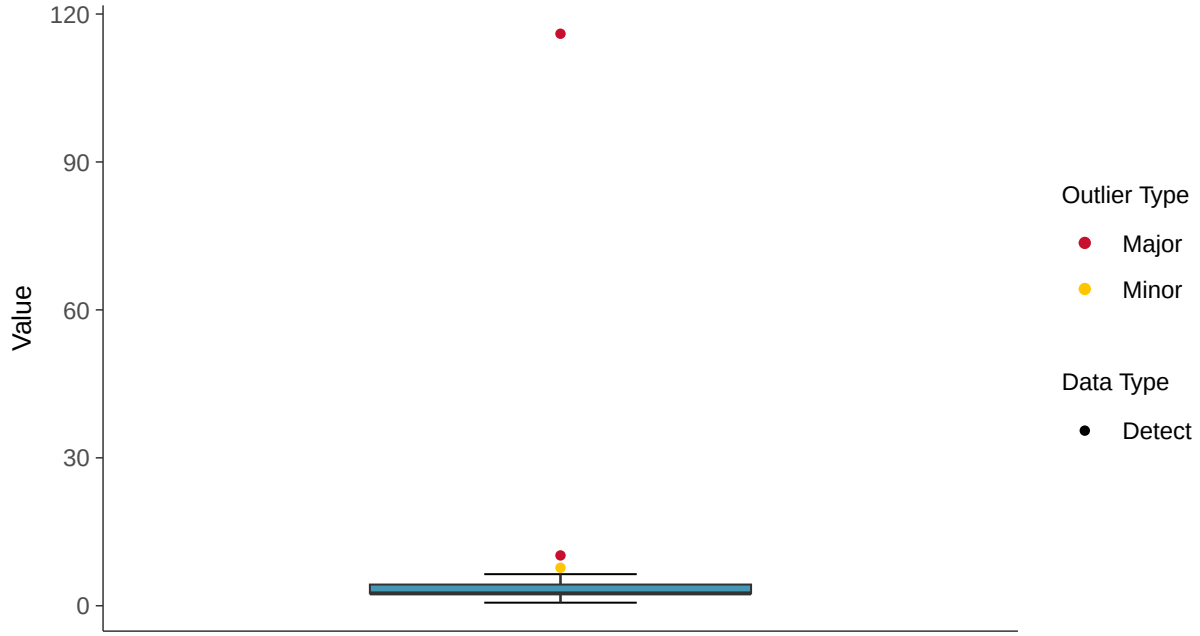
ID: 08_01_111





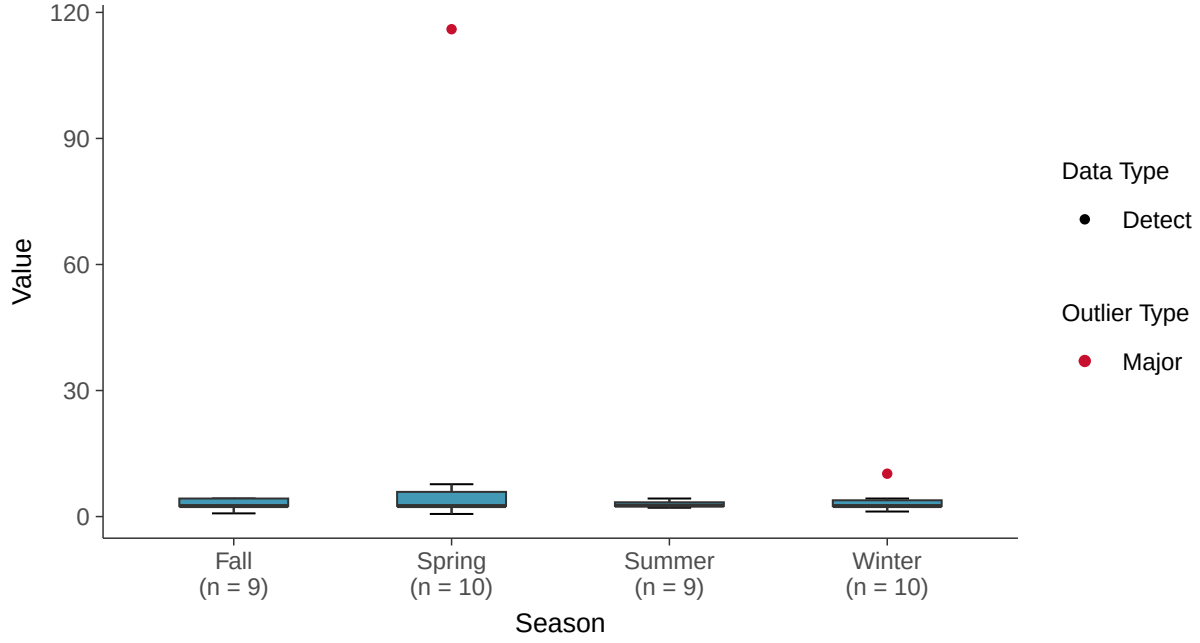
Boxplot

Copper, MW-8 (ug/L)



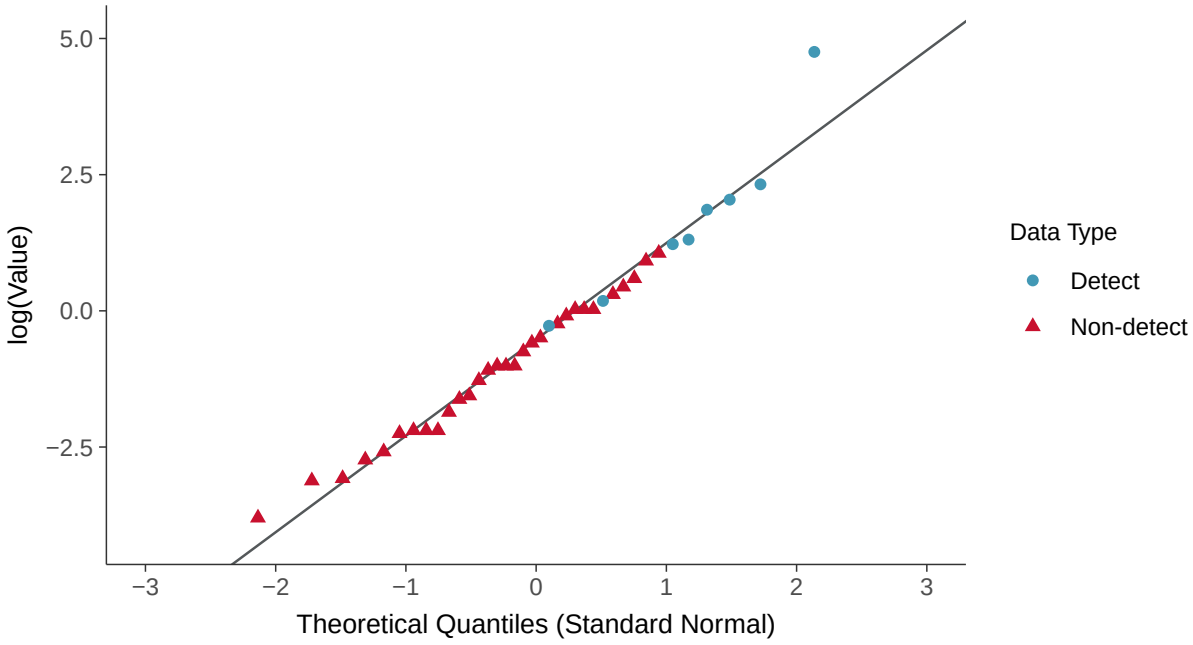
Boxplot by Season

Copper, MW-8 (ug/L)



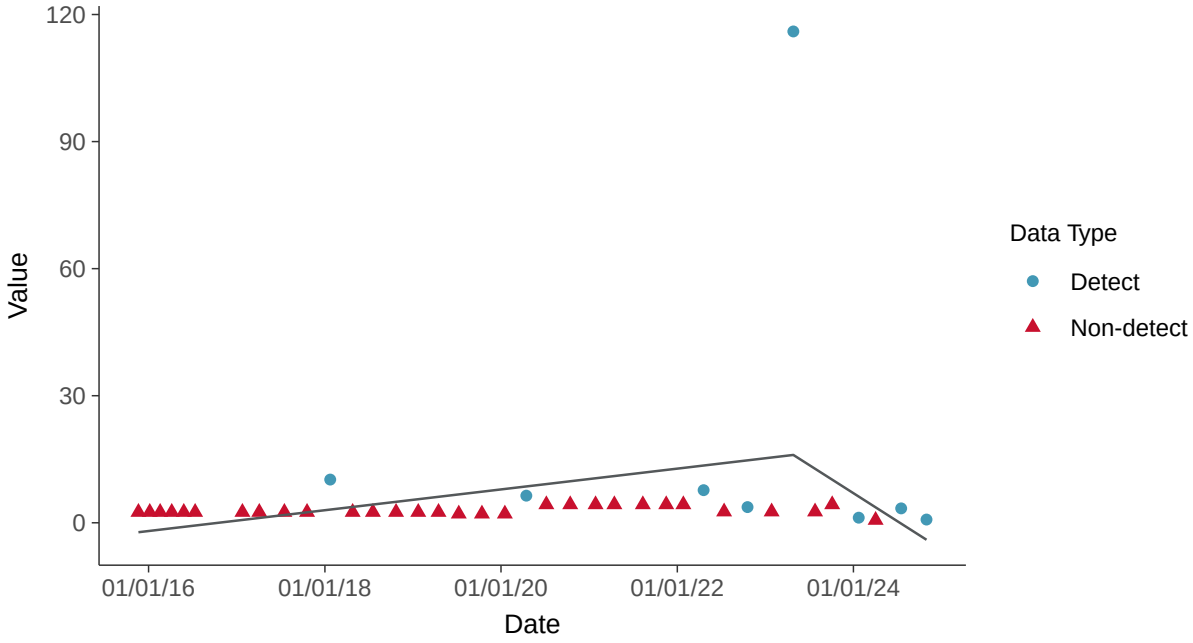
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-8 (ug/L)



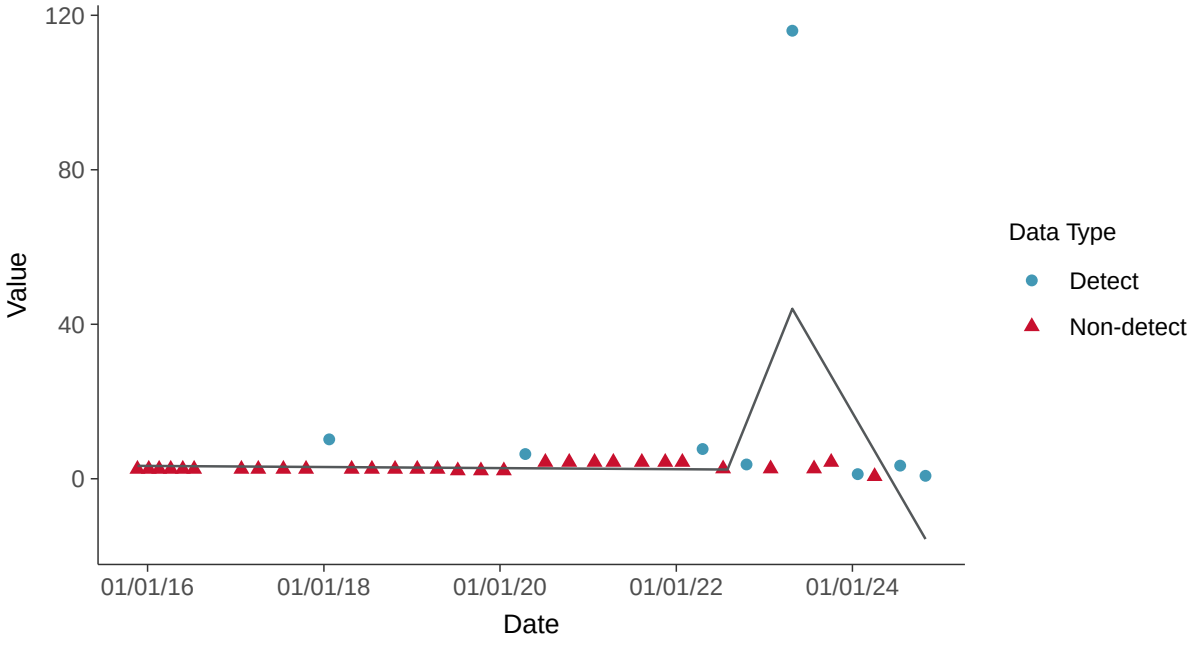
Trend Regression: Piecewise Linear-Linear

Copper, MW-8 (ug/L)



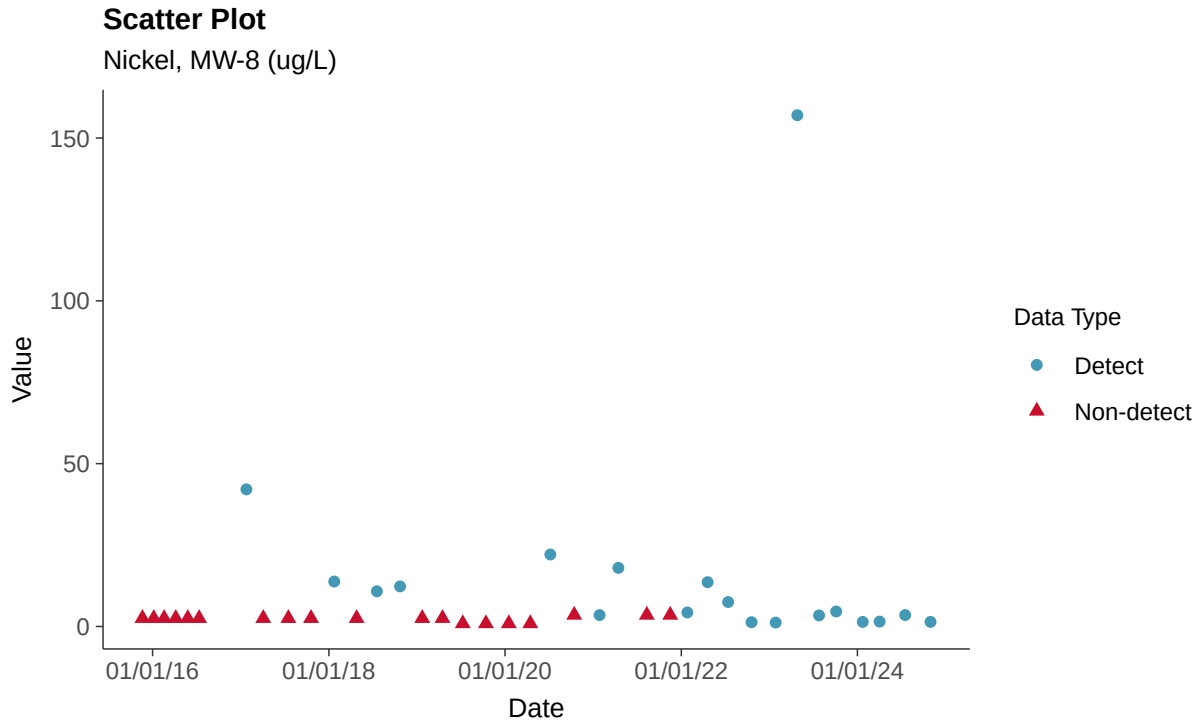
Trend Regression: Piecewise Linear-Linear-Linear

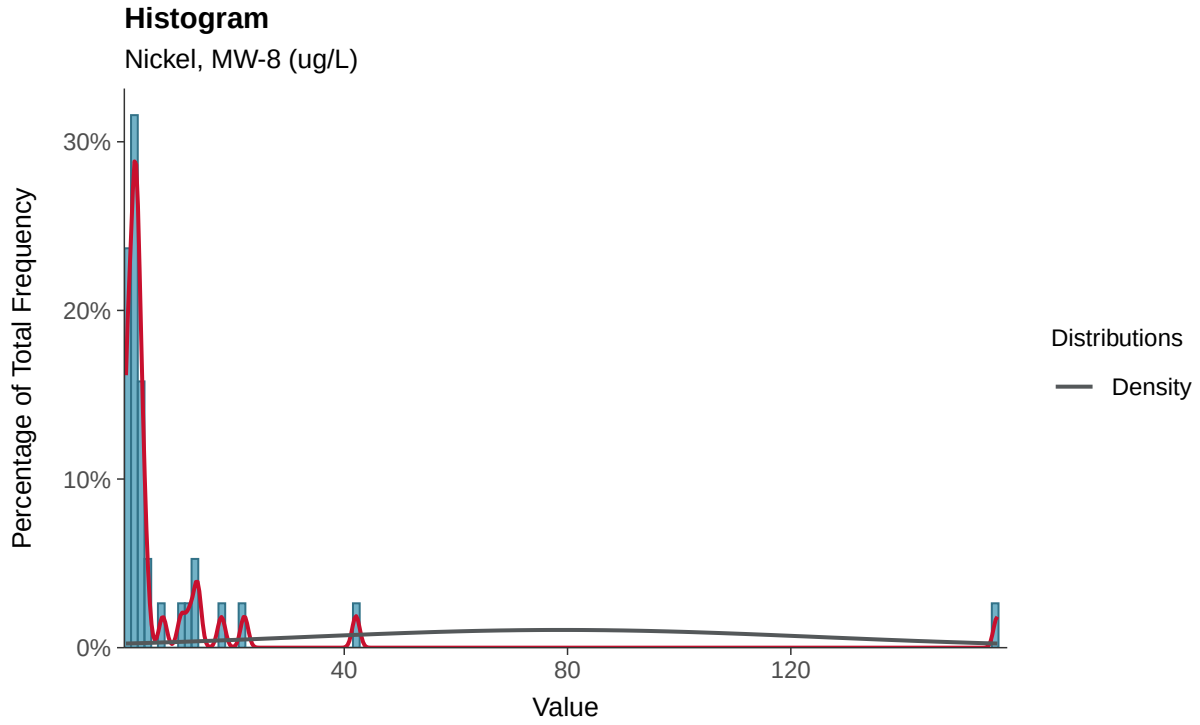
Copper, MW-8 (ug/L)



App. I Metals: Nickel, MW-8

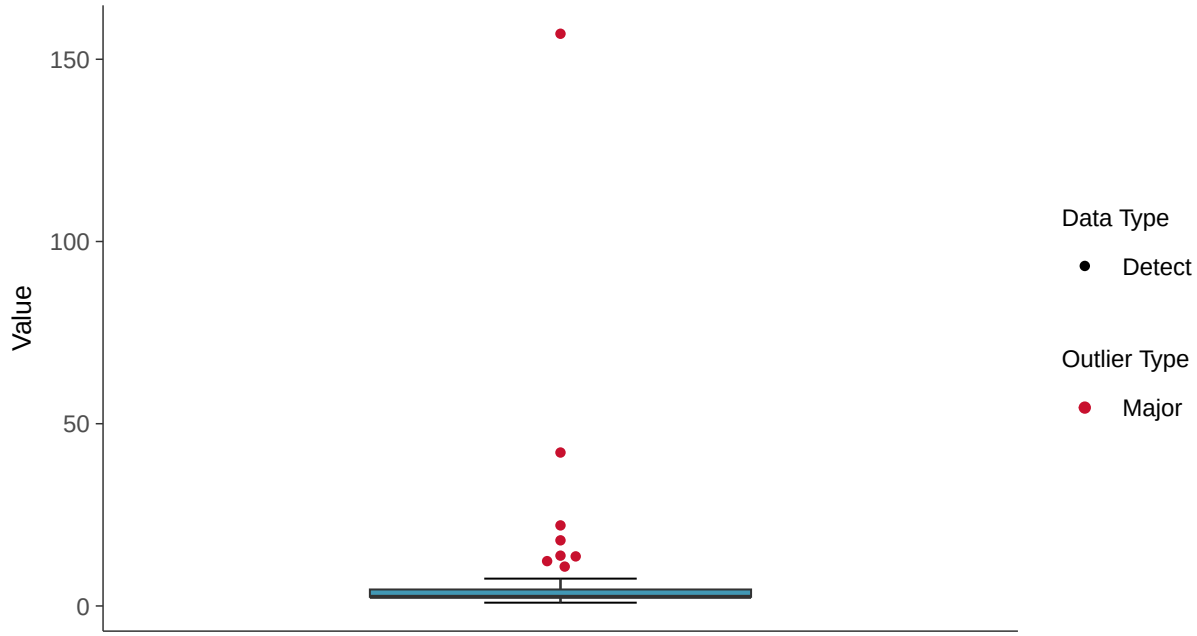
ID: 08_01_117





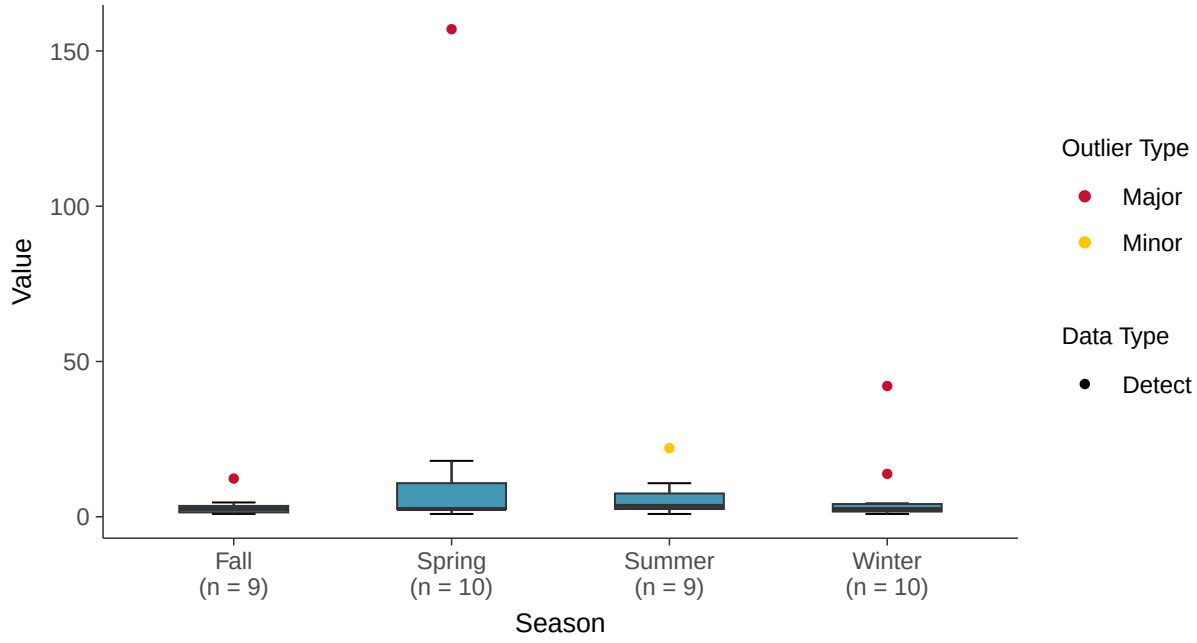
Boxplot

Nickel, MW-8 (ug/L)



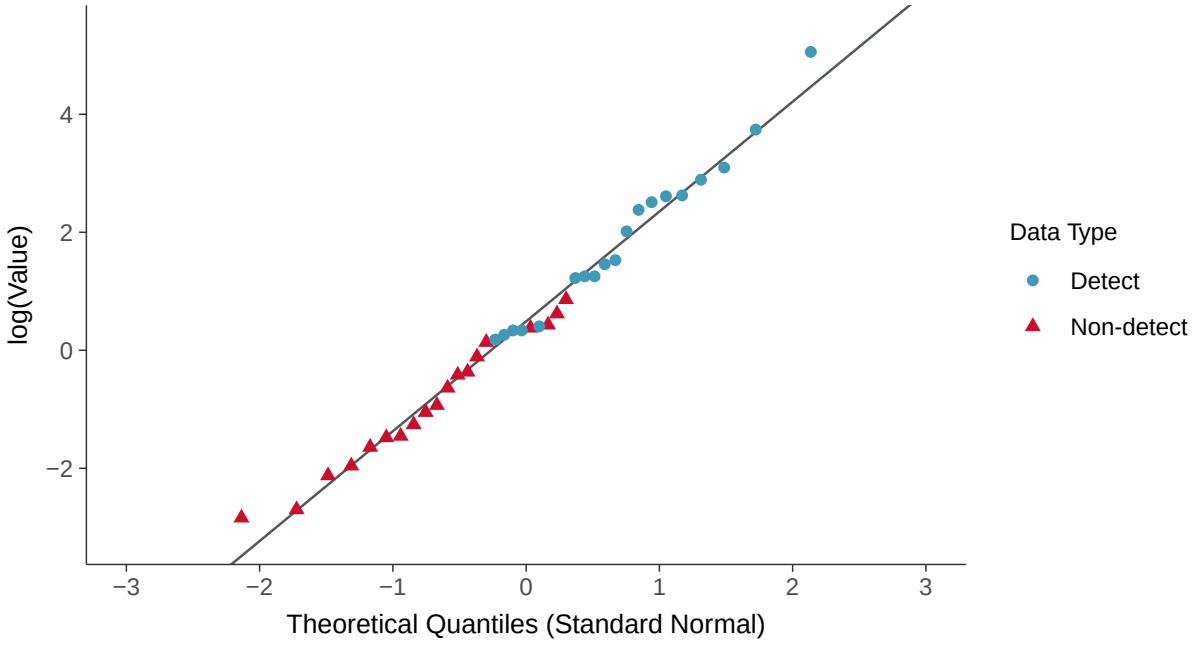
Boxplot by Season

Nickel, MW-8 (ug/L)



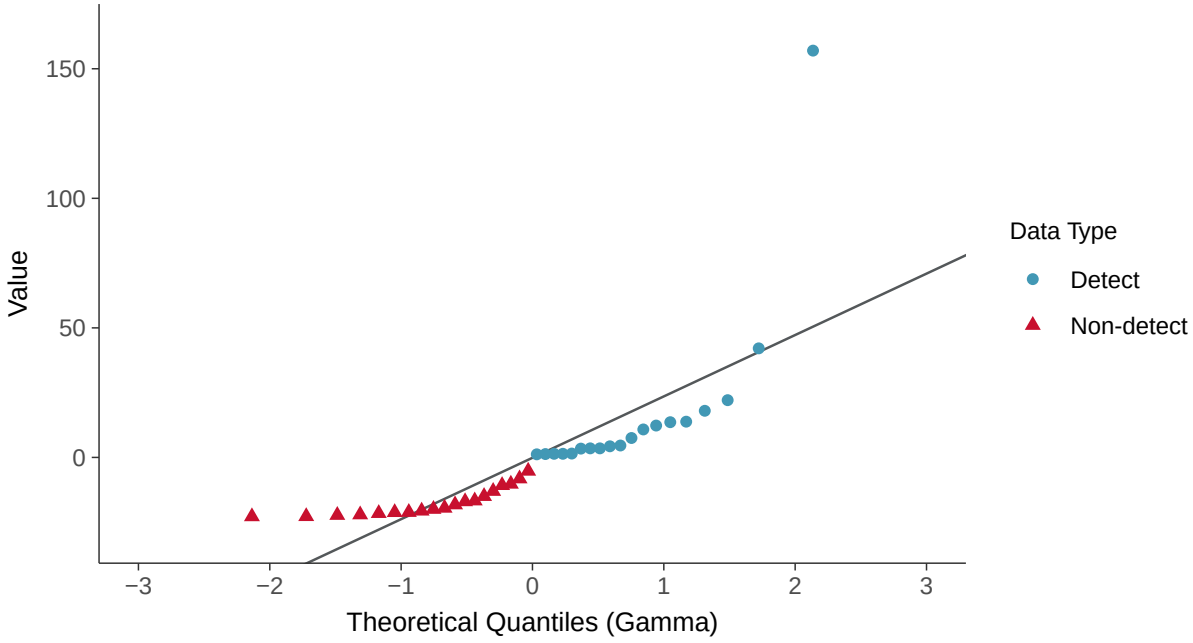
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-8 (ug/L)



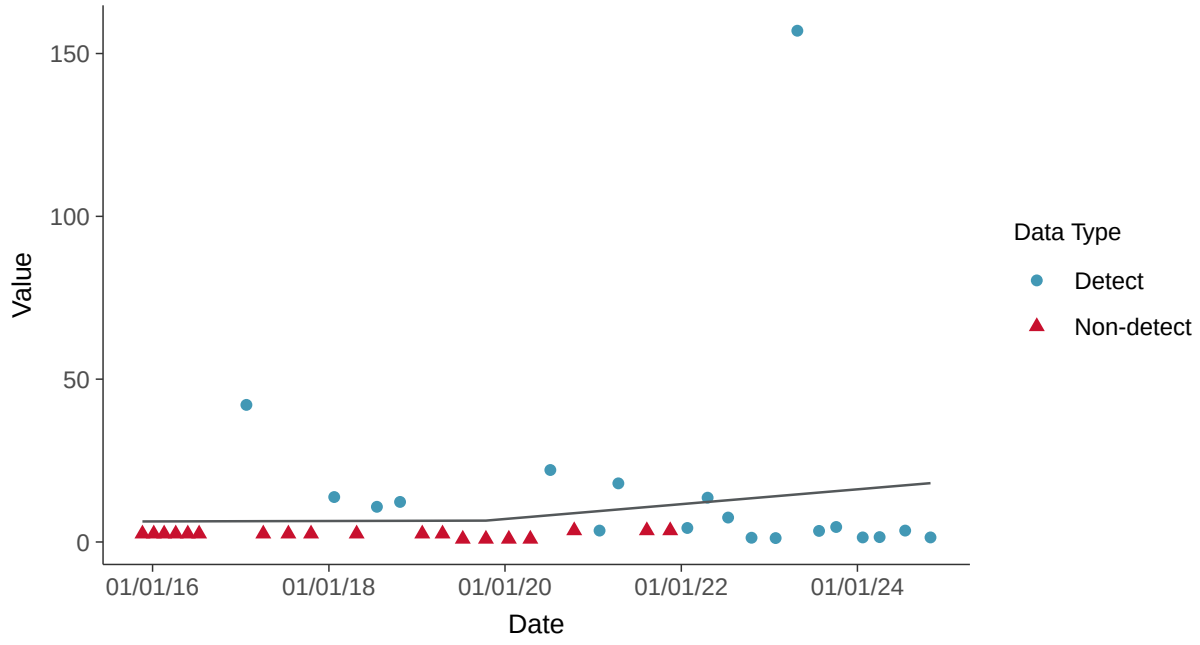
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-8 (ug/L)



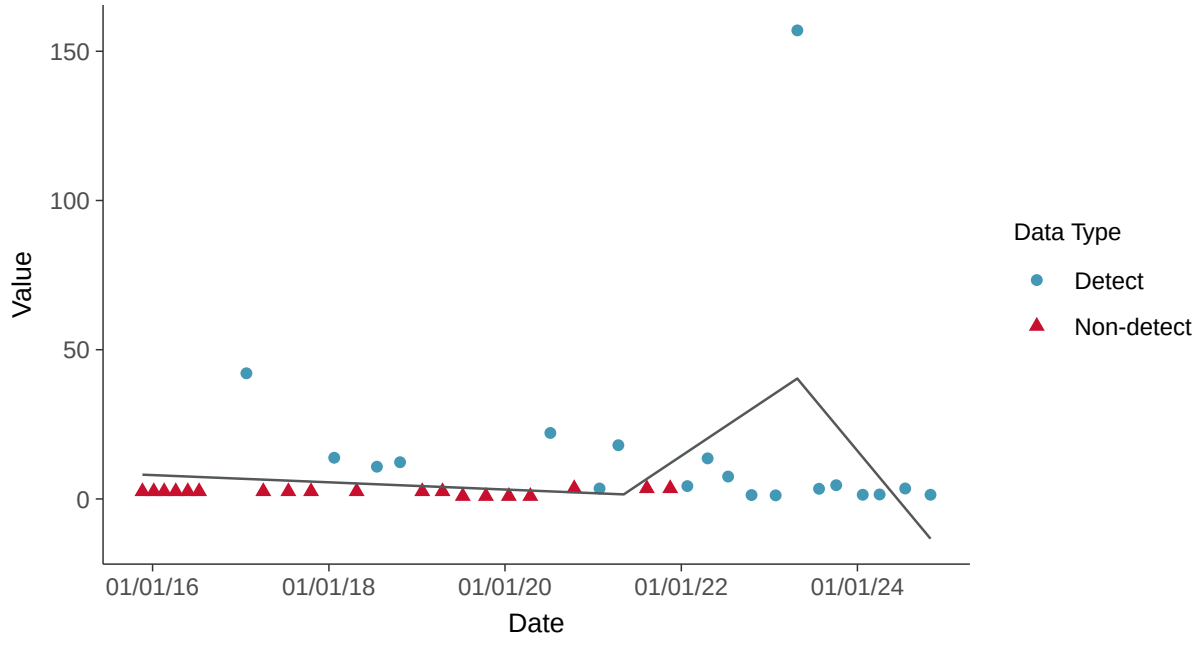
Trend Regression: Piecewise Linear-Linear

Nickel, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Nickel, MW-8 (ug/L)

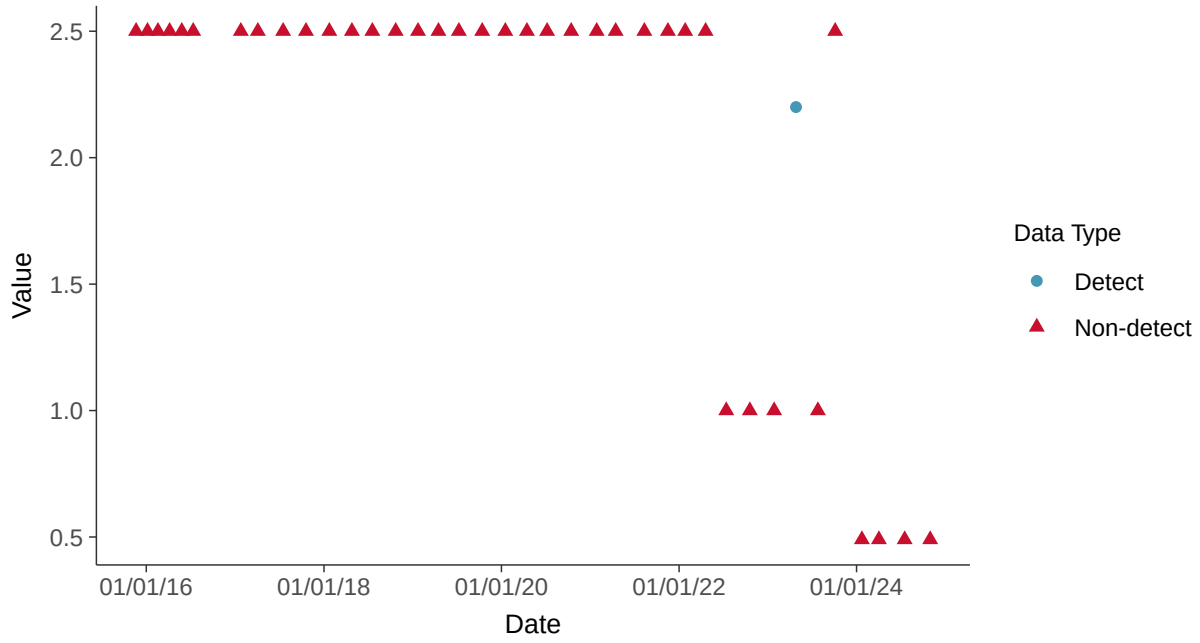


App. I Metals: Silver, MW-8

ID: 08_01_122

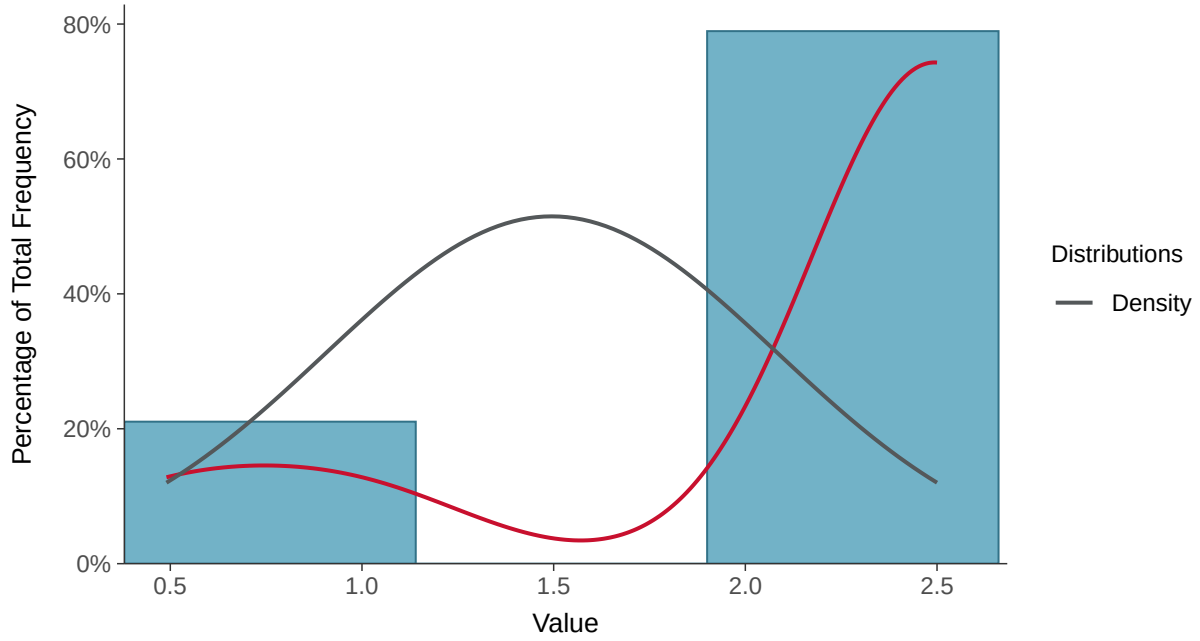
Scatter Plot

Silver, MW-8 (ug/L)



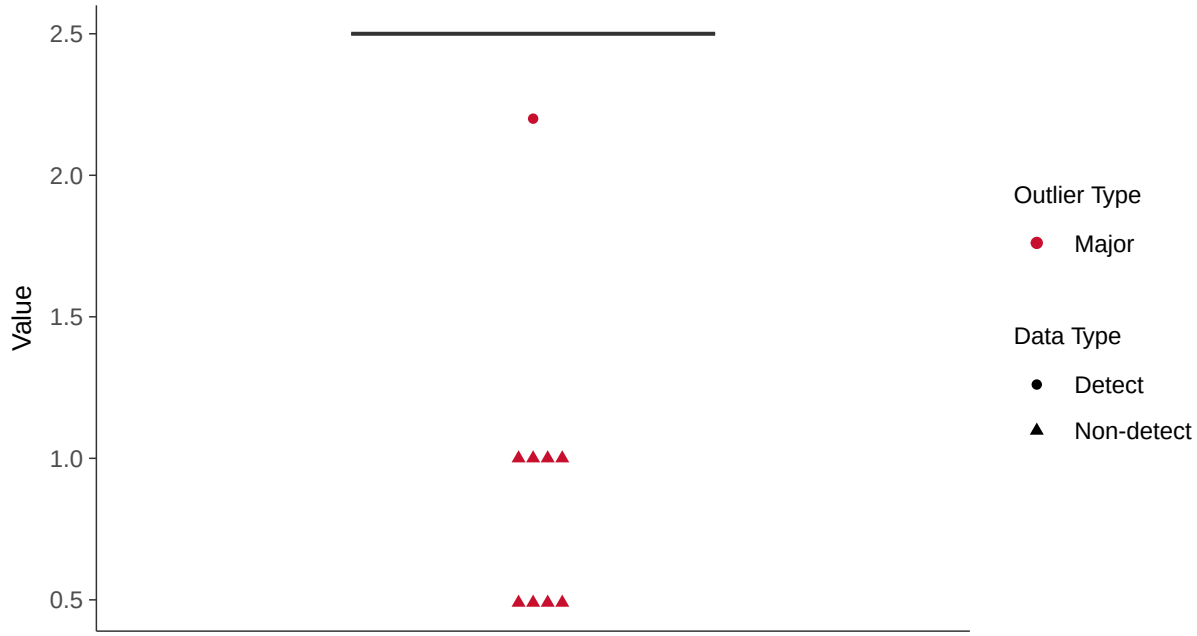
Histogram

Silver, MW-8 (ug/L)



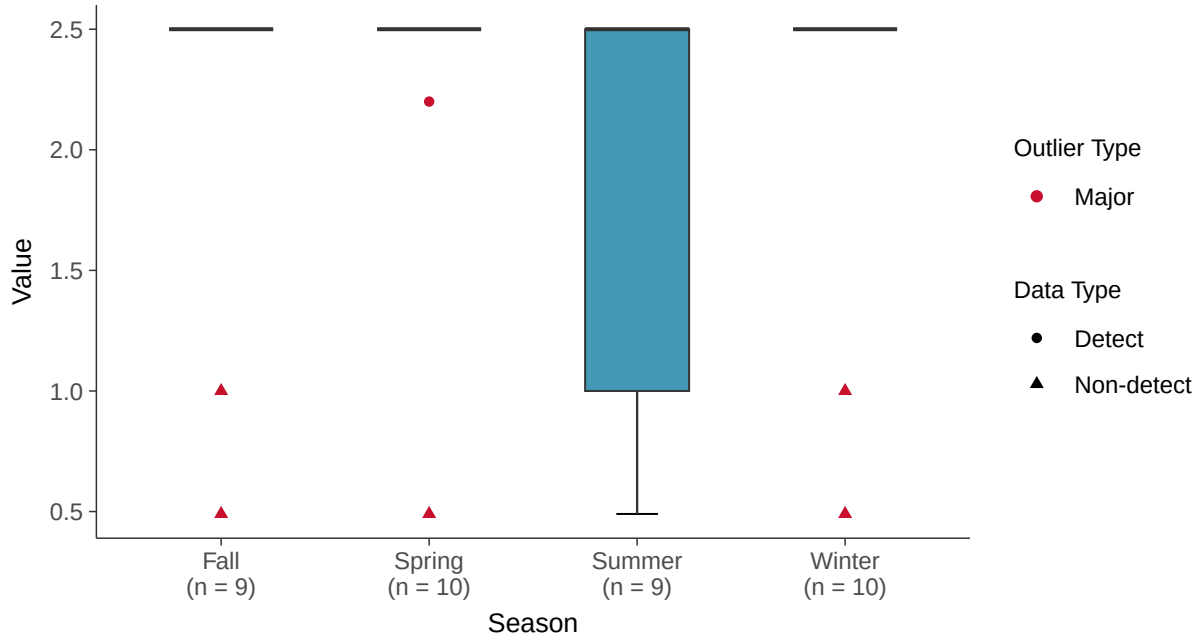
Boxplot

Silver, MW-8 (ug/L)



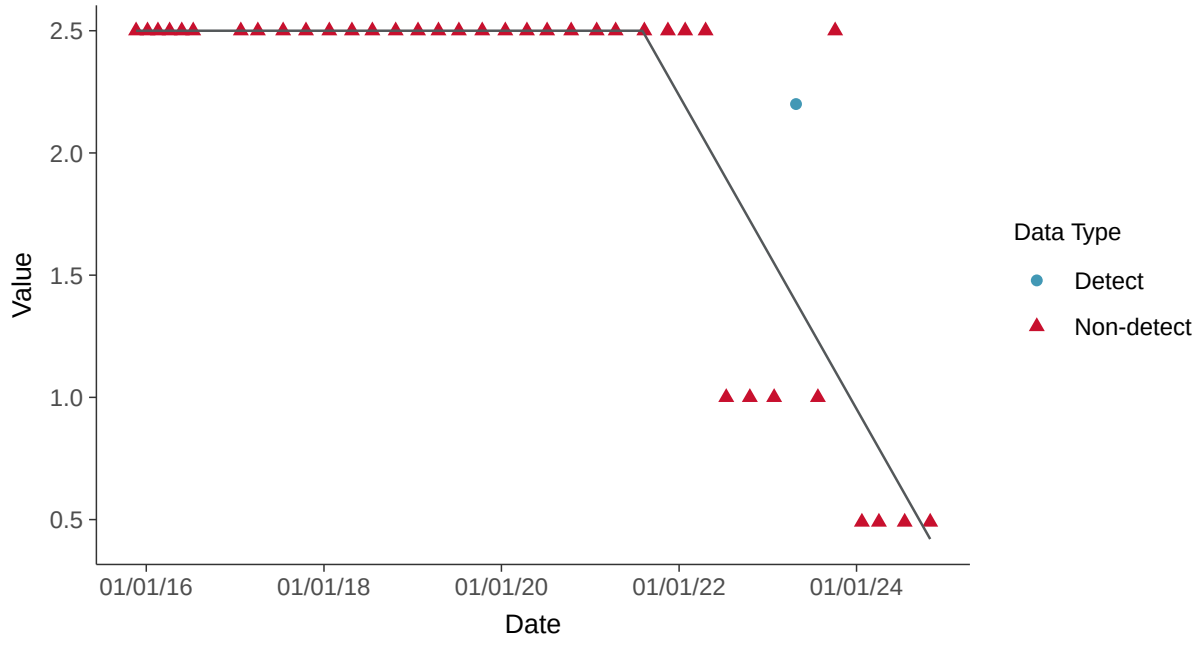
Boxplot by Season

Silver, MW-8 (ug/L)



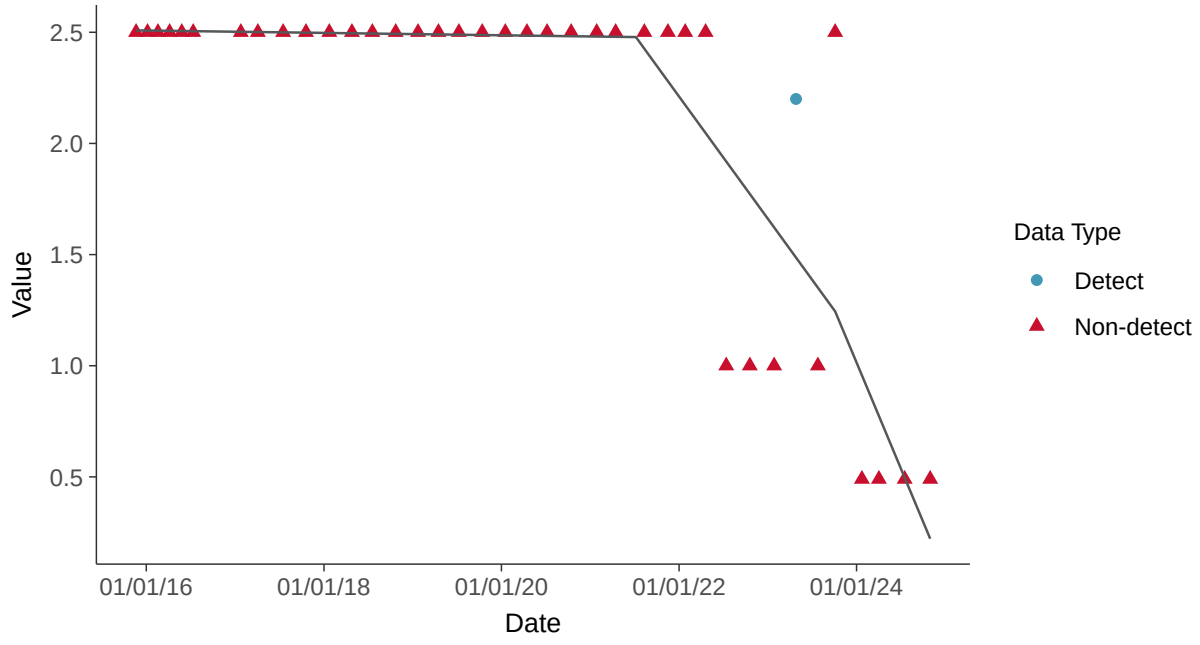
Trend Regression: Piecewise Linear-Linear

Silver, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-8 (ug/L)

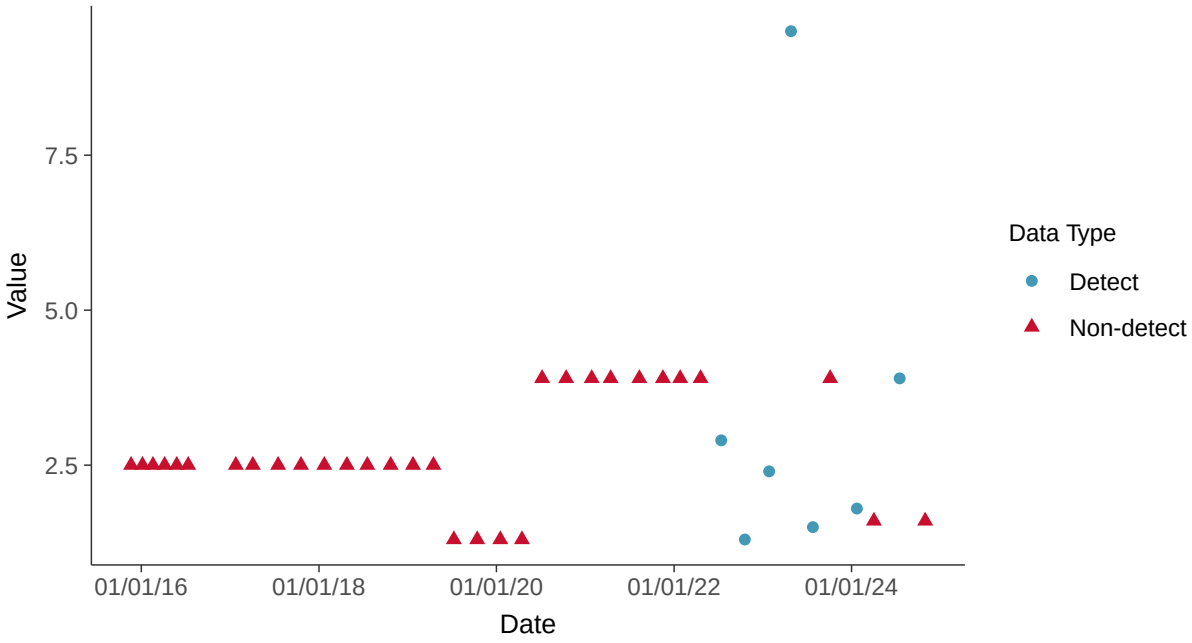


App. I Metals: Vanadium, MW-8

ID: 08_01_127

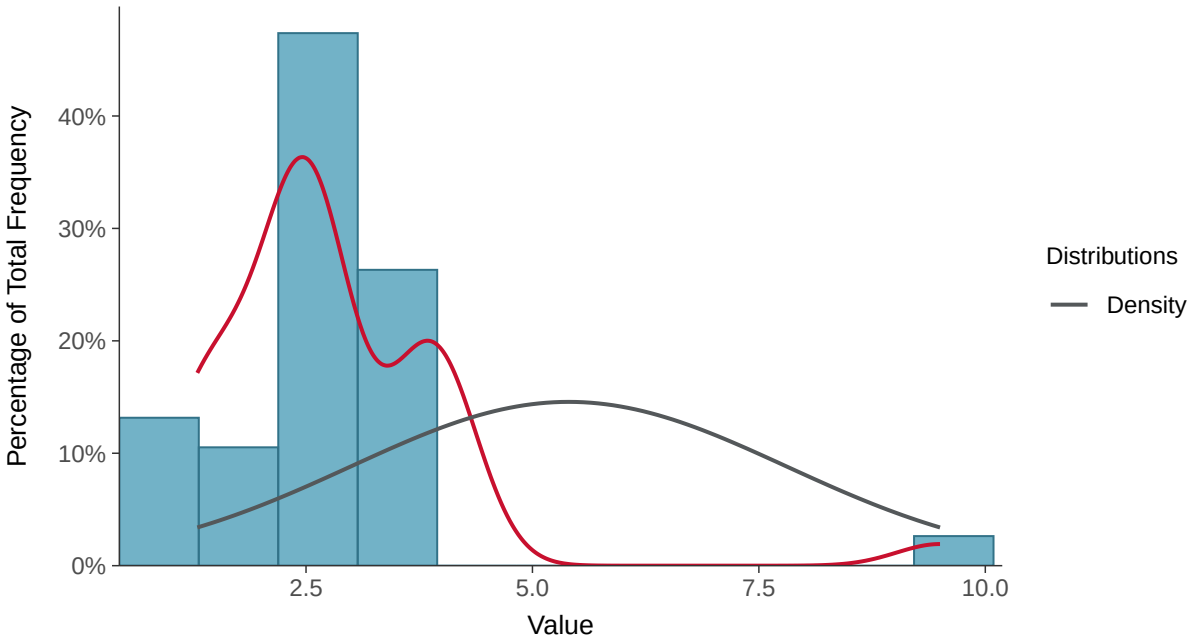
Scatter Plot

Vanadium, MW-8 (ug/L)



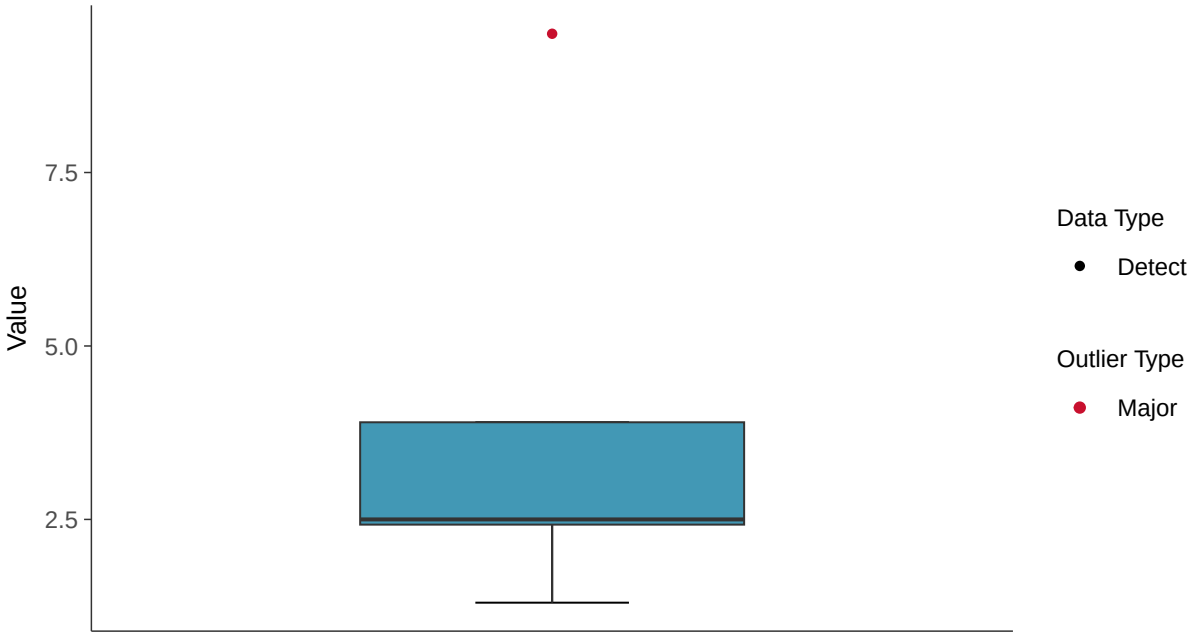
Histogram

Vanadium, MW-8 (ug/L)



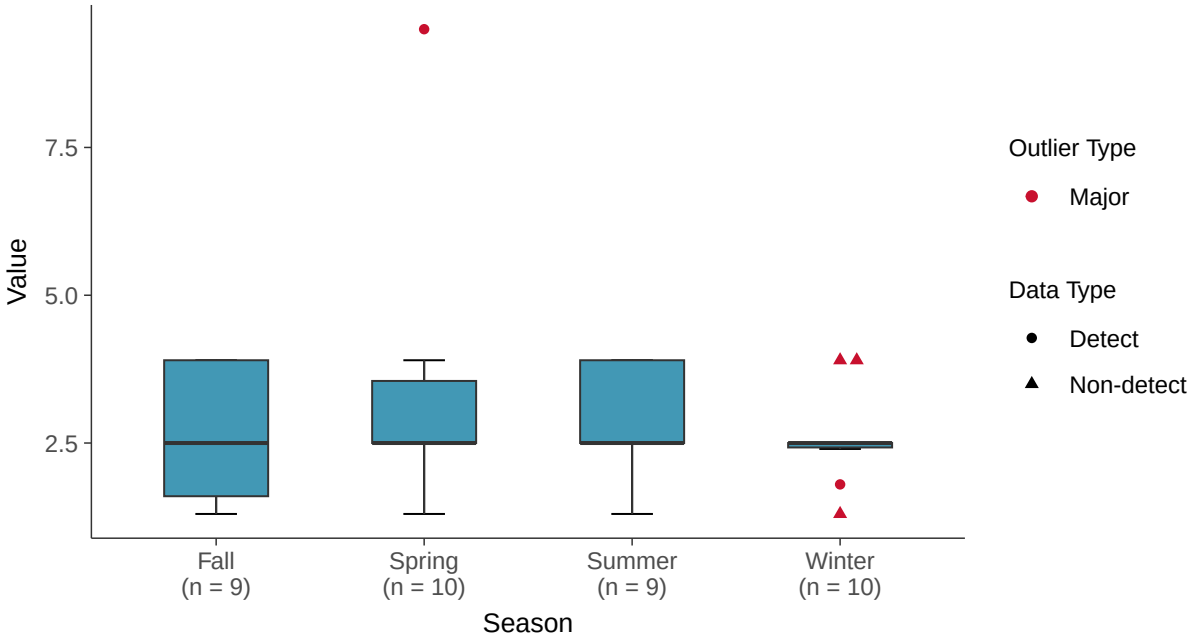
Boxplot

Vanadium, MW-8 (ug/L)



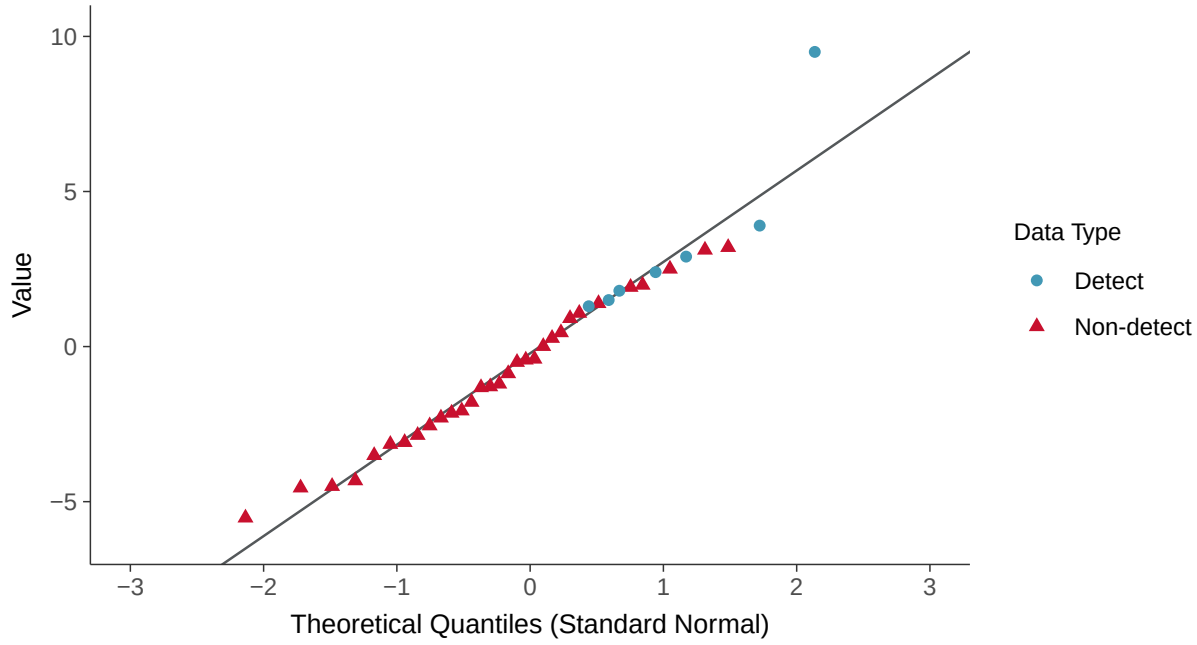
Boxplot by Season

Vanadium, MW-8 (ug/L)



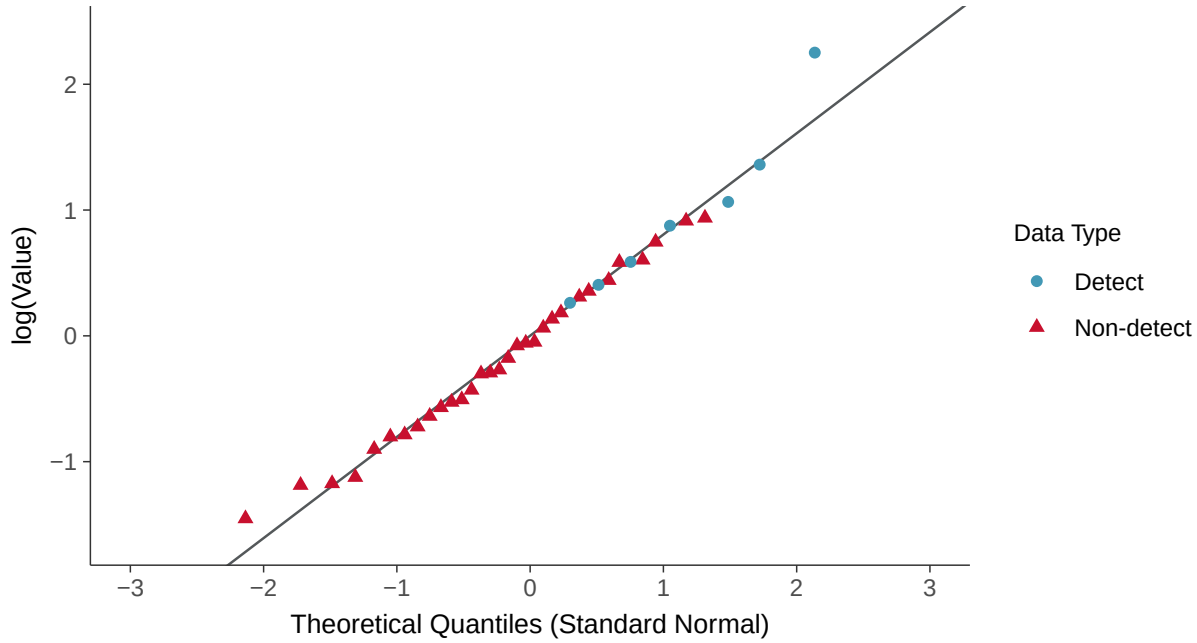
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



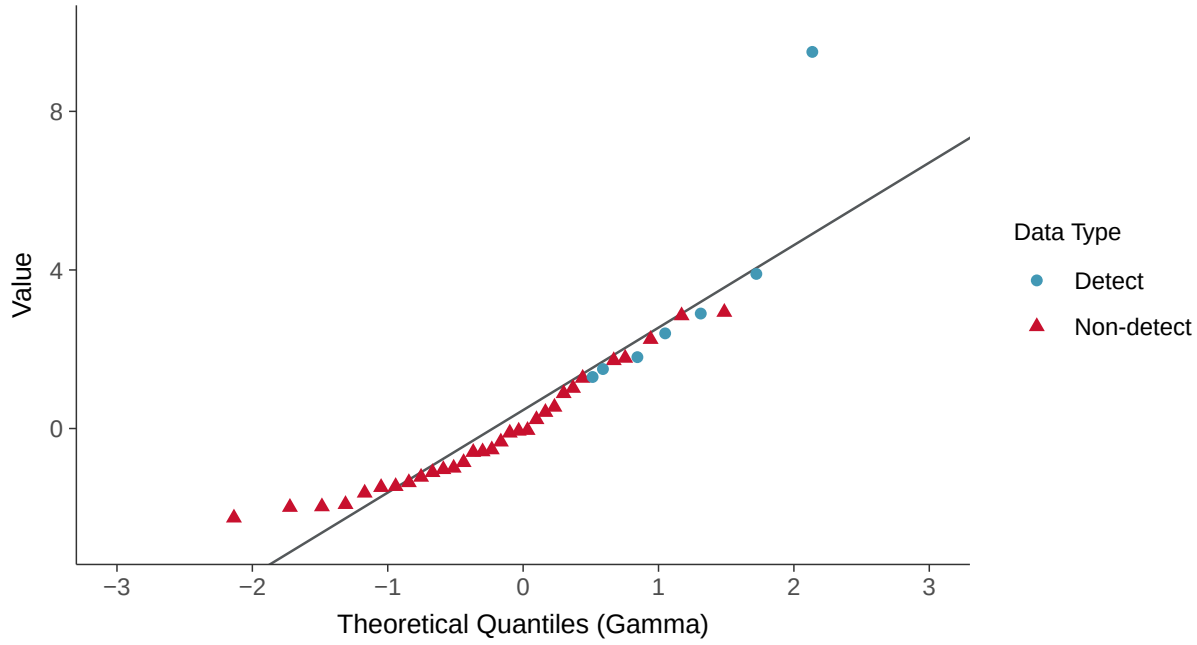
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



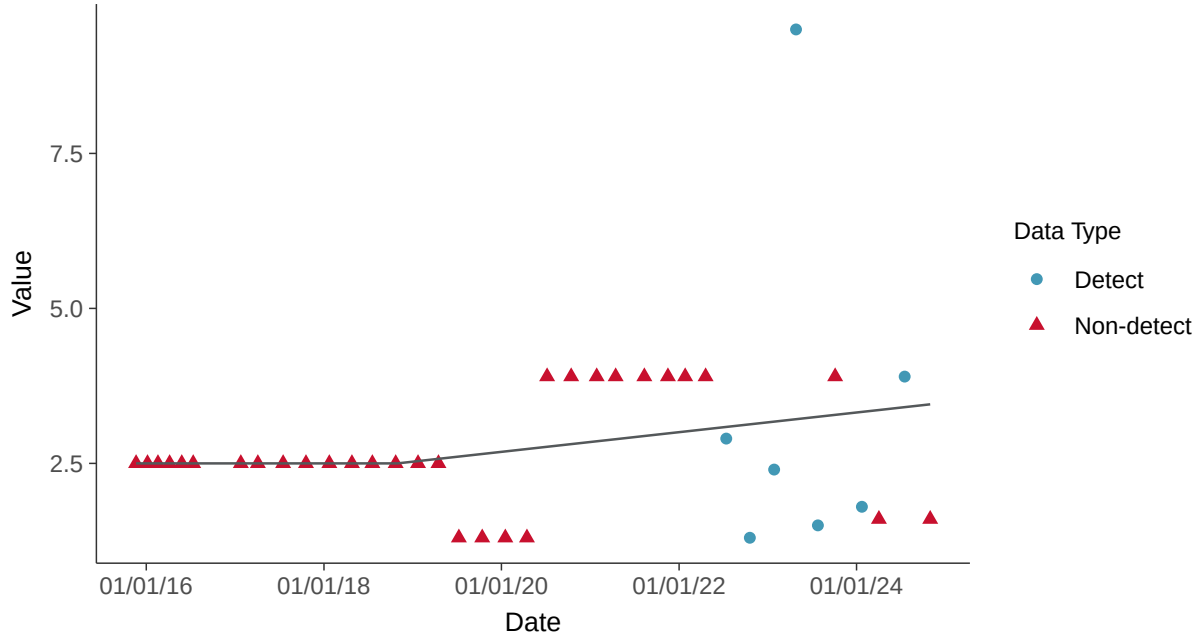
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



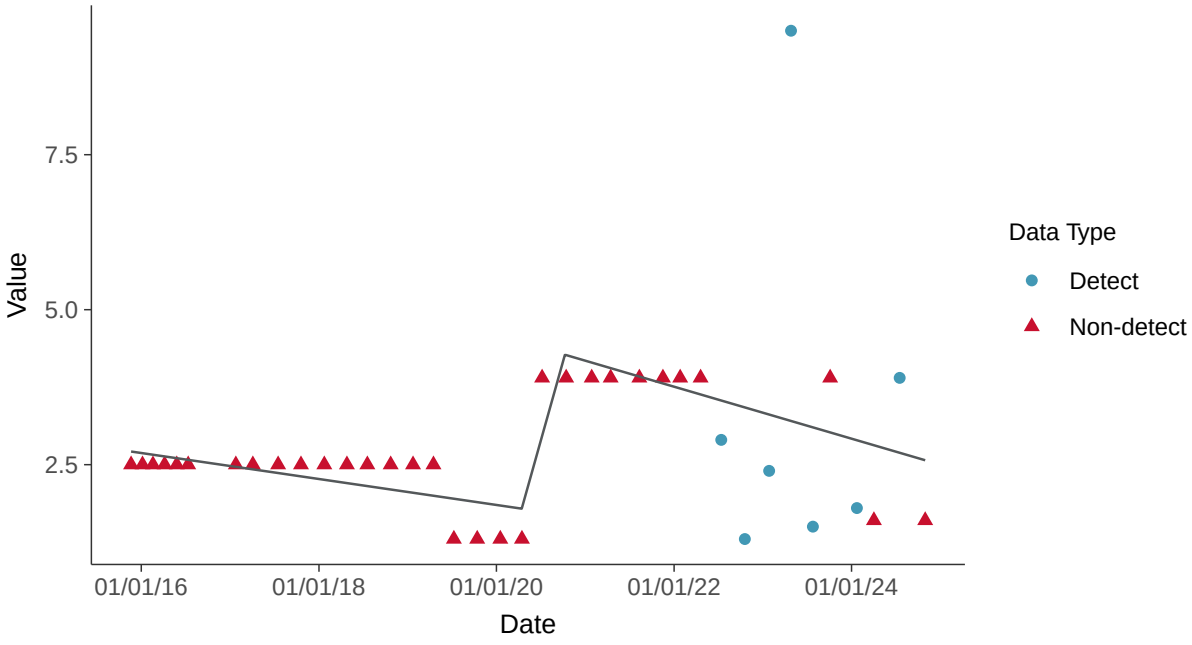
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-8 (ug/L)



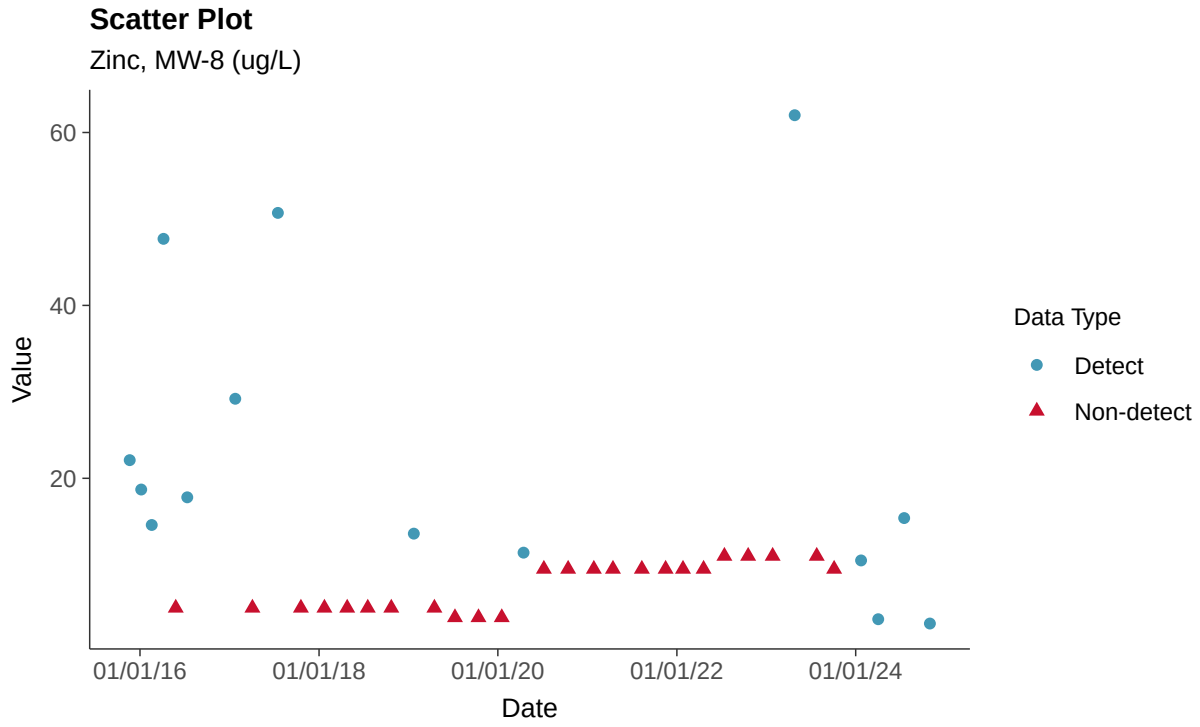
Trend Regression: Piecewise Linear-Linear-Linear

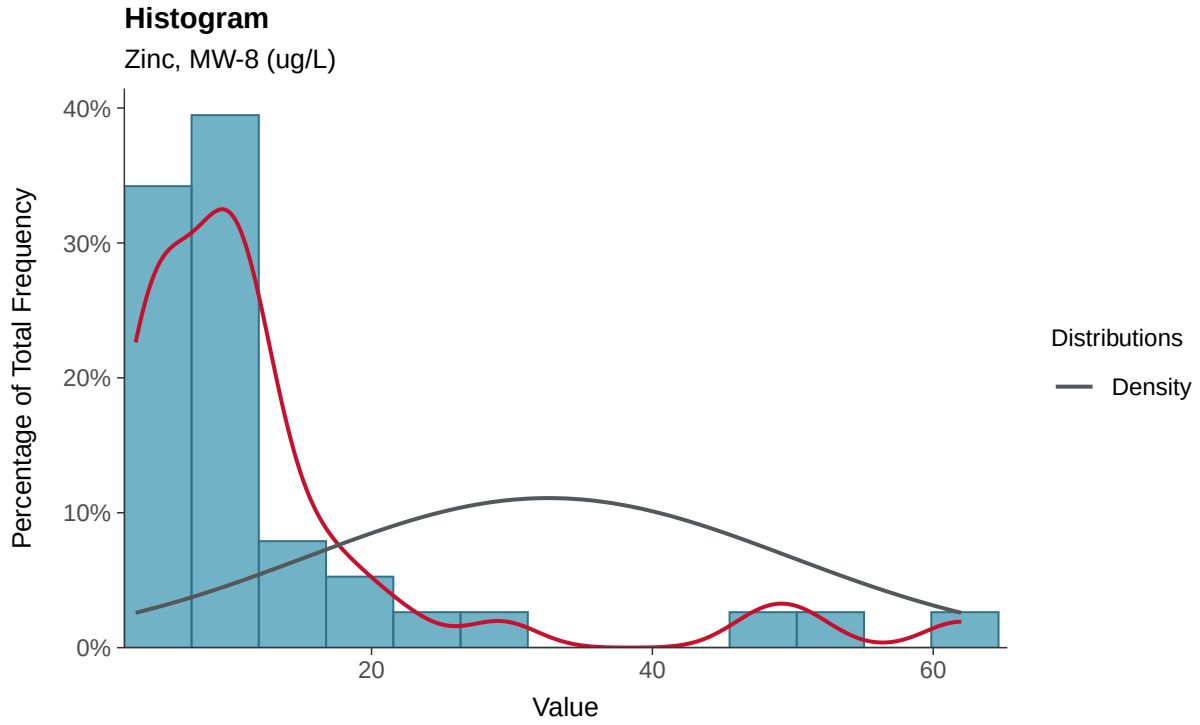
Vanadium, MW-8 (ug/L)



App. I Metals: Zinc, MW-8

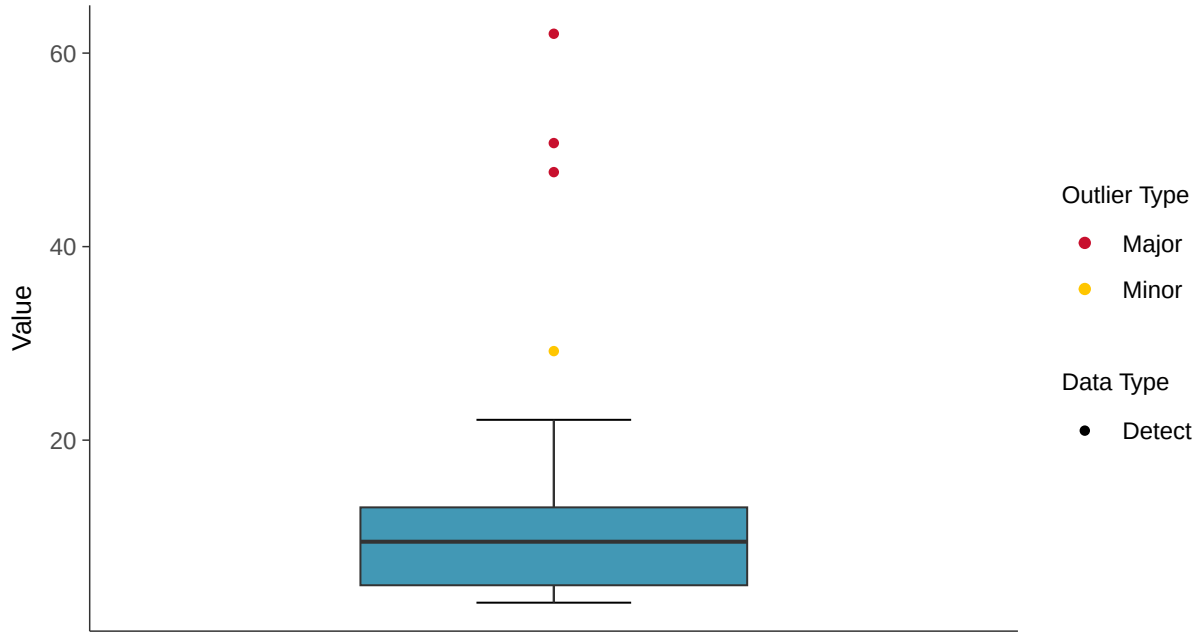
ID: 08_01_128





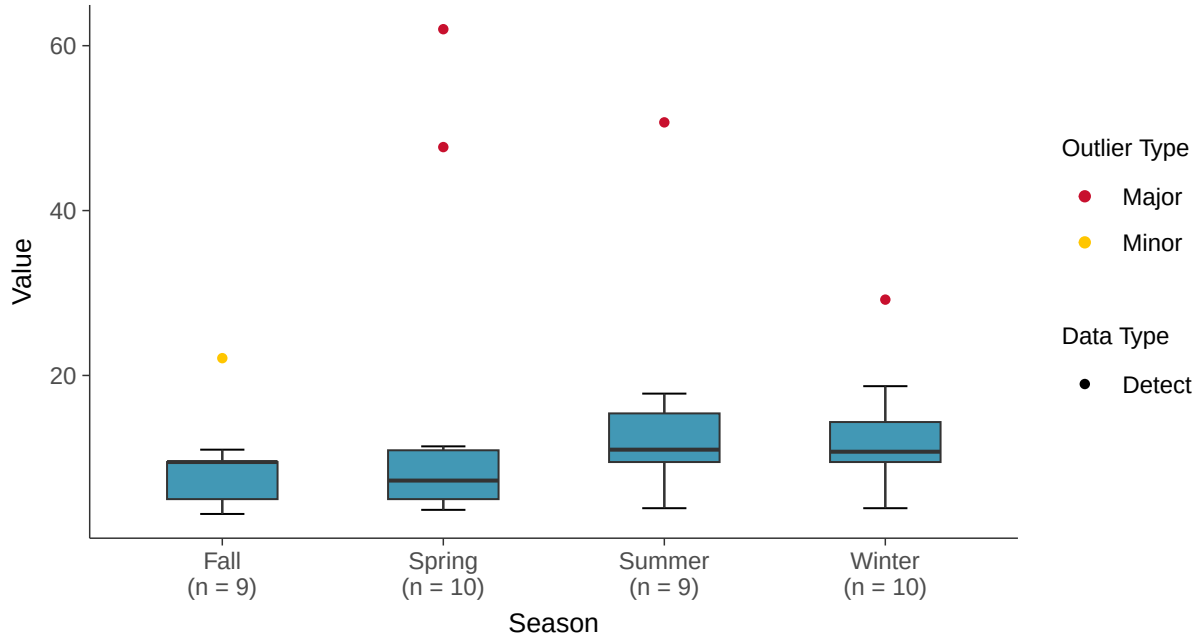
Boxplot

Zinc, MW-8 (ug/L)



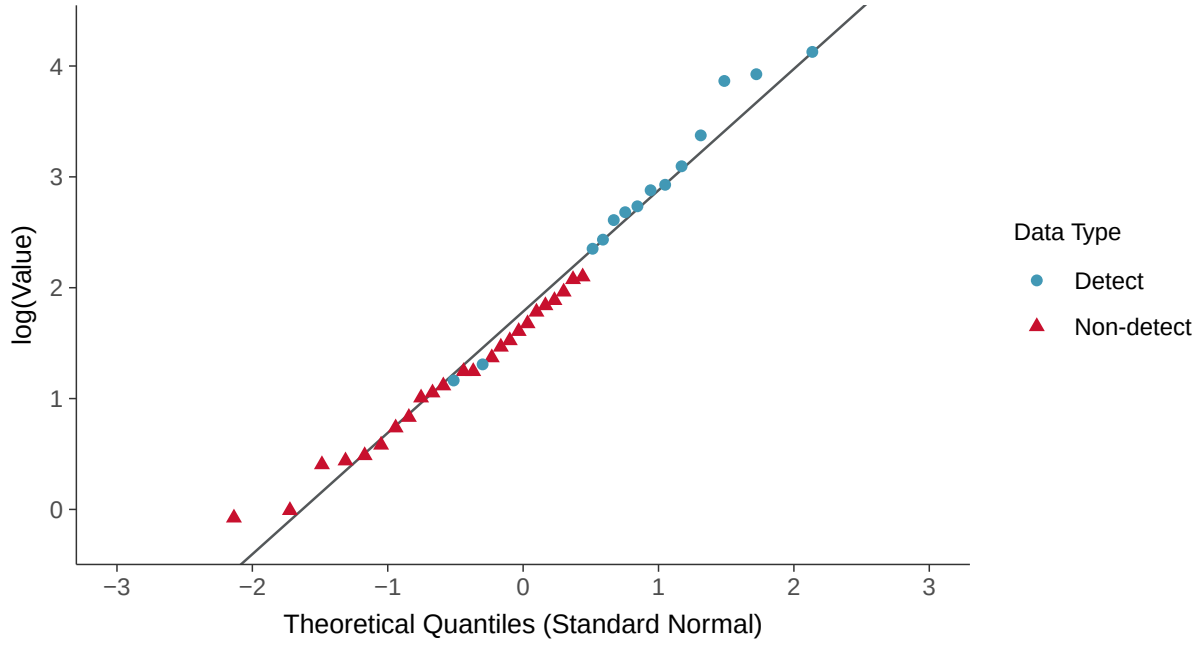
Boxplot by Season

Zinc, MW-8 (ug/L)



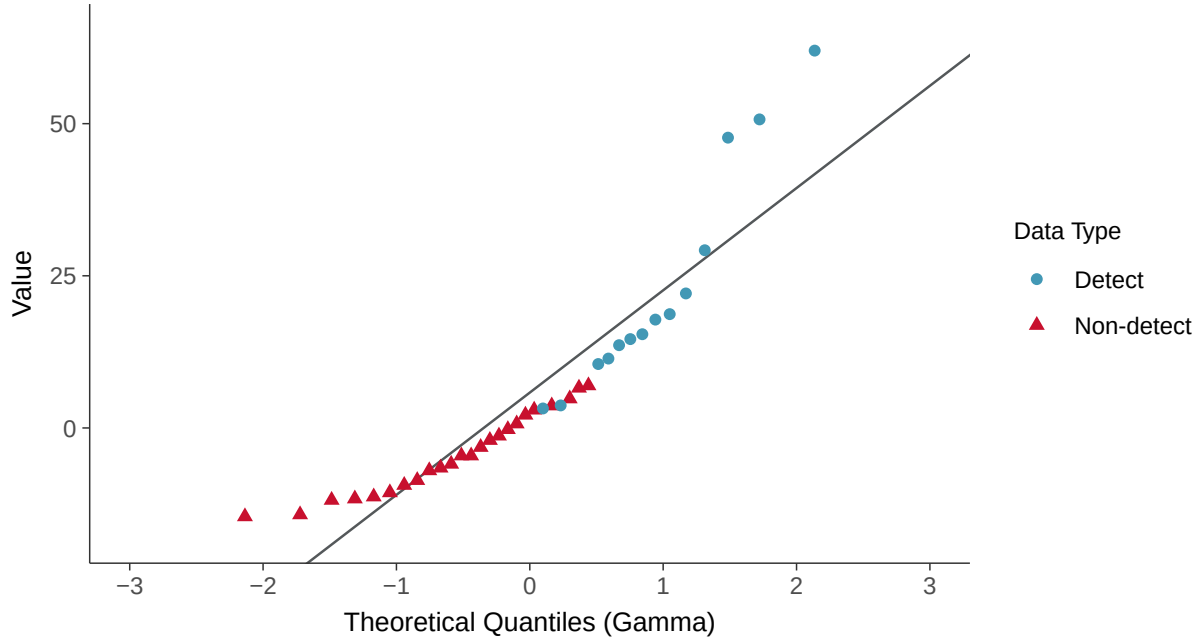
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-8 (ug/L)



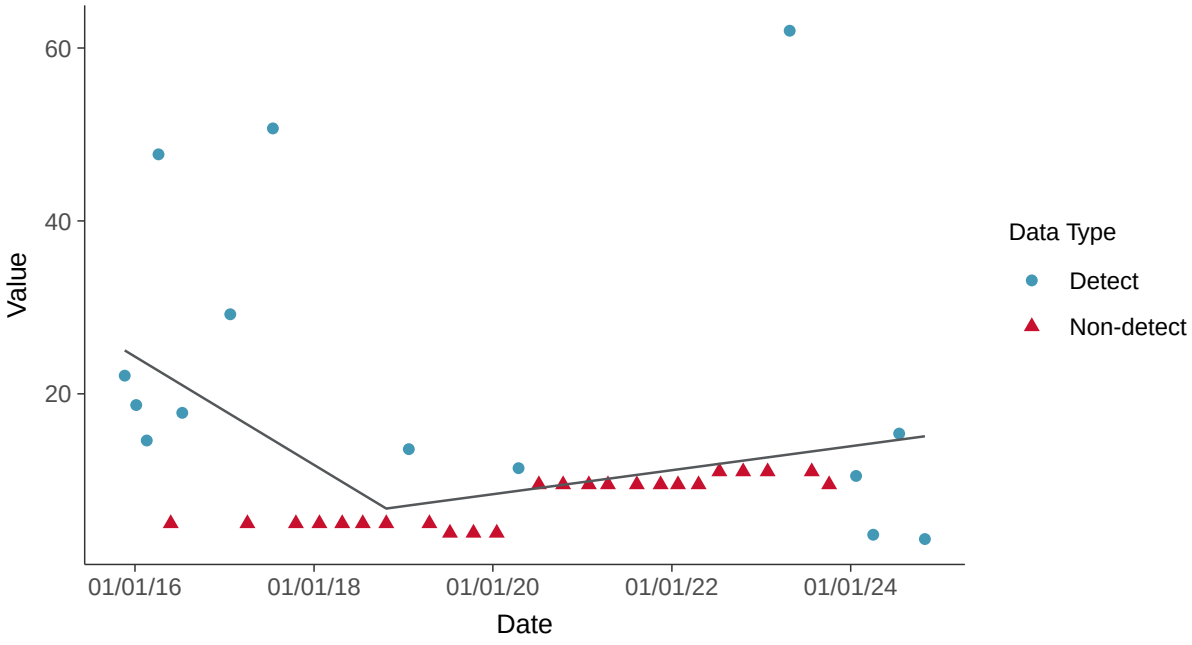
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-8 (ug/L)



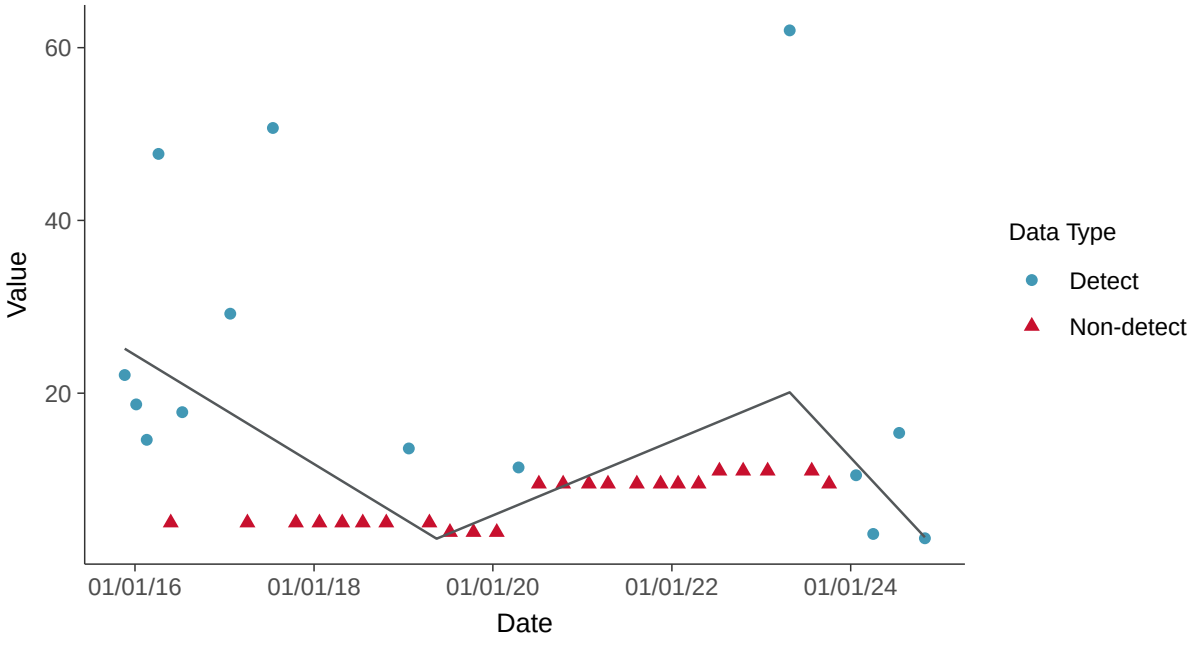
Trend Regression: Piecewise Linear-Linear

Zinc, MW-8 (ug/L)



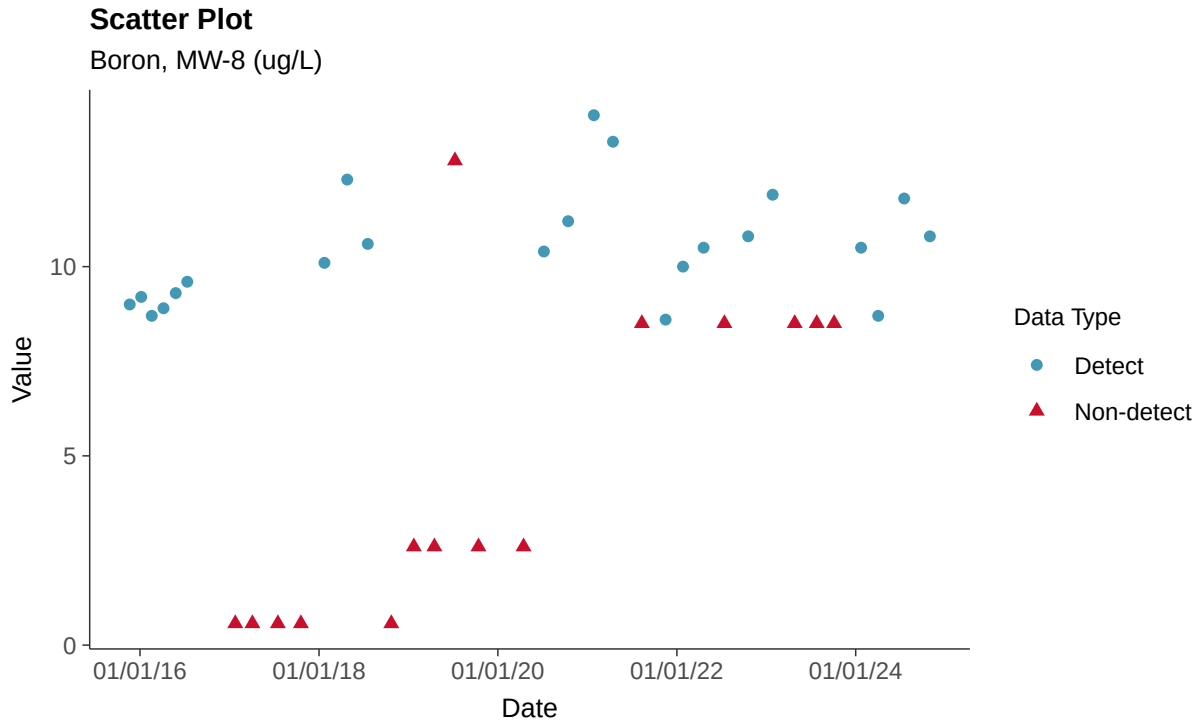
Trend Regression: Piecewise Linear-Linear-Linear

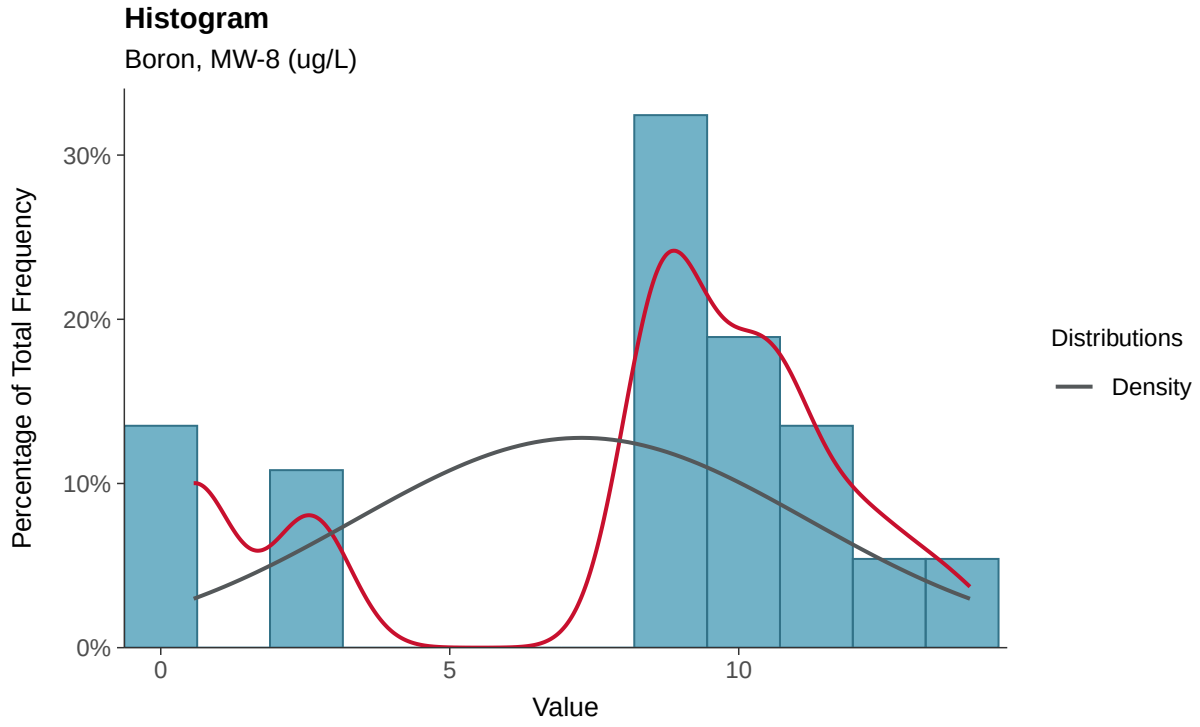
Zinc, MW-8 (ug/L)



App. III: Boron, MW-8

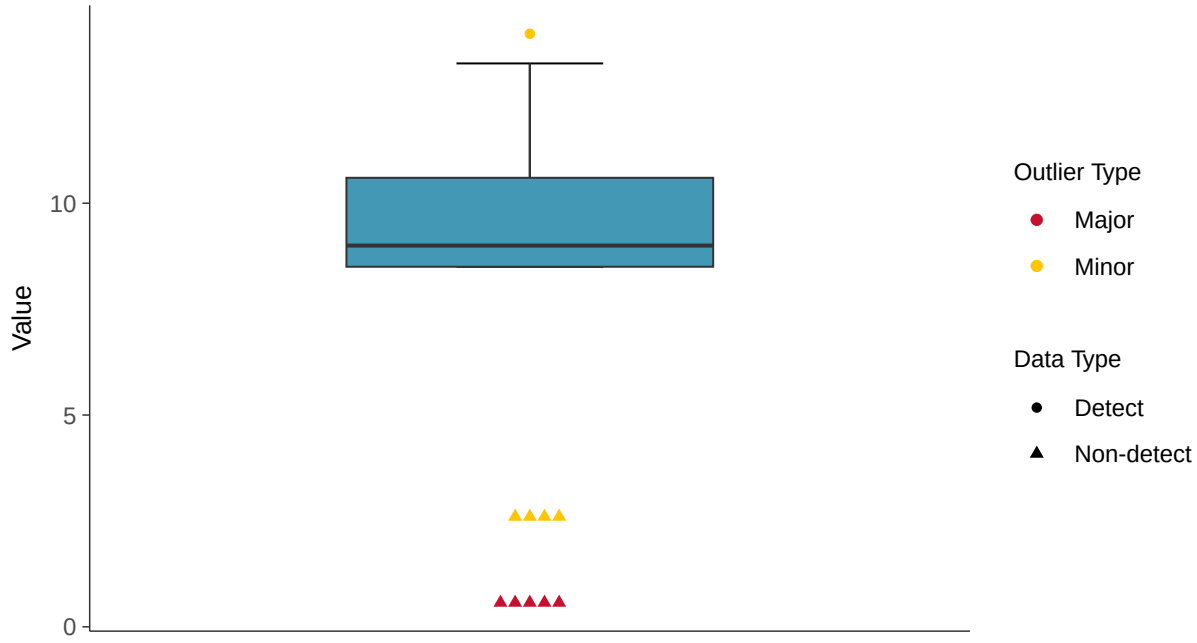
ID: 08_02_105





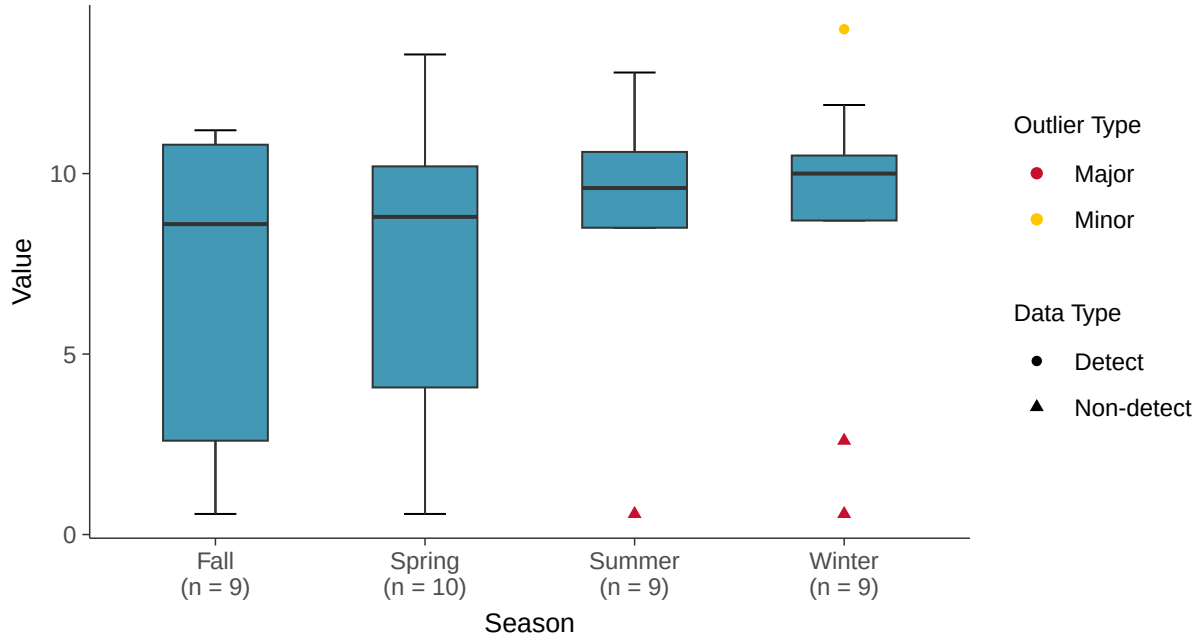
Boxplot

Boron, MW-8 (ug/L)



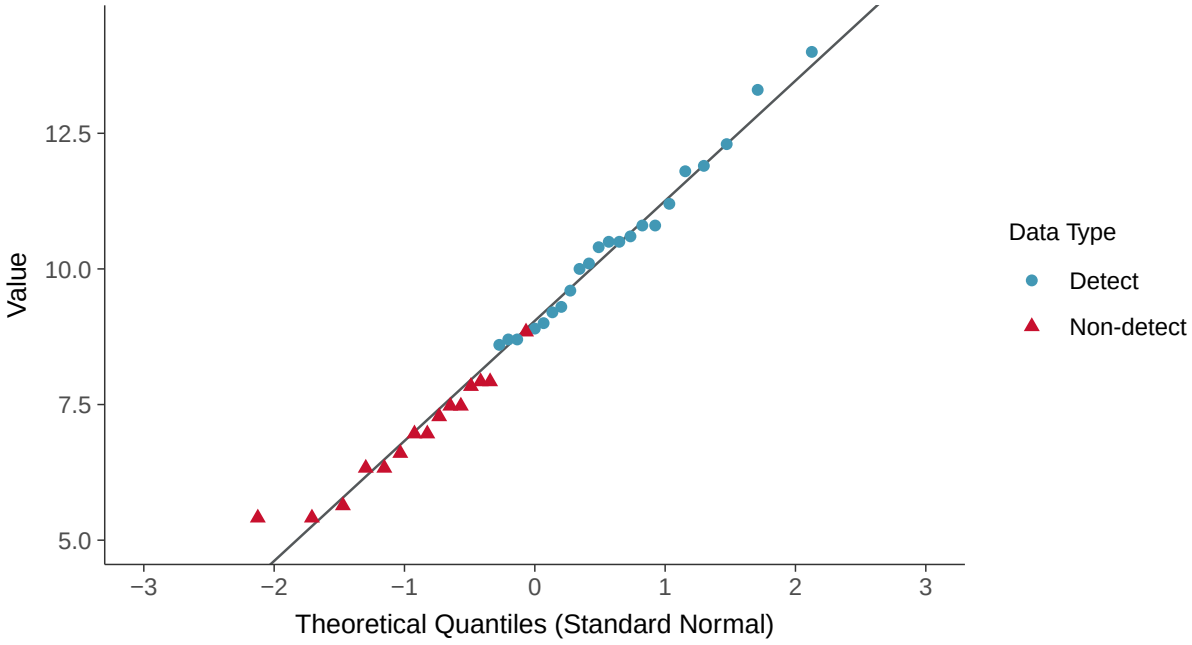
Boxplot by Season

Boron, MW-8 (ug/L)



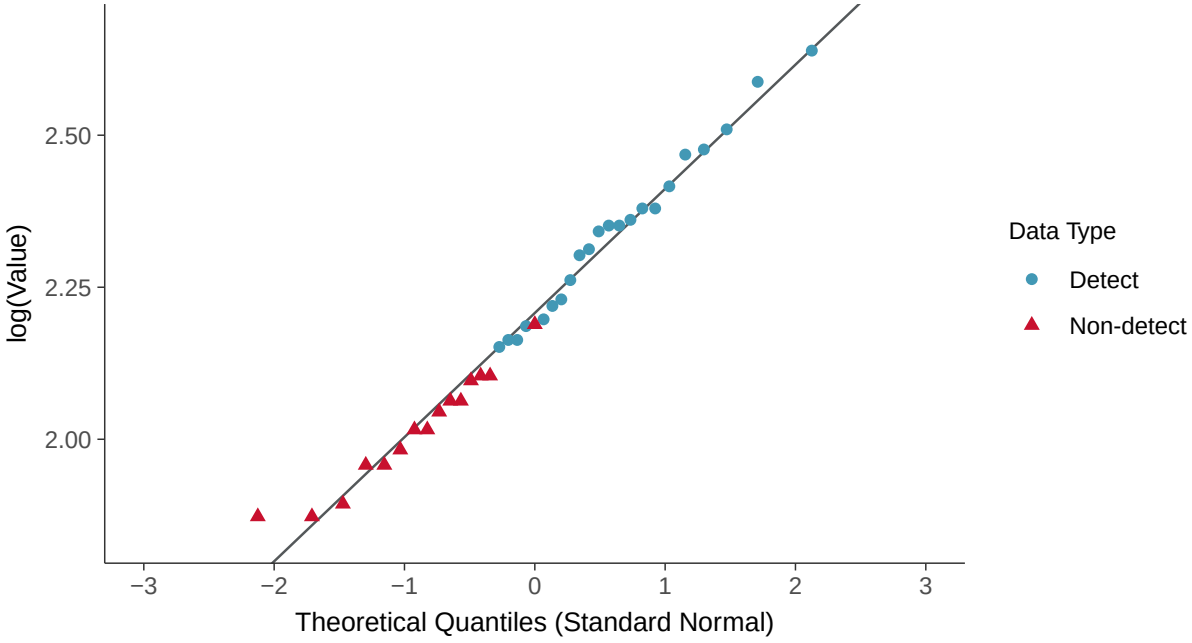
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



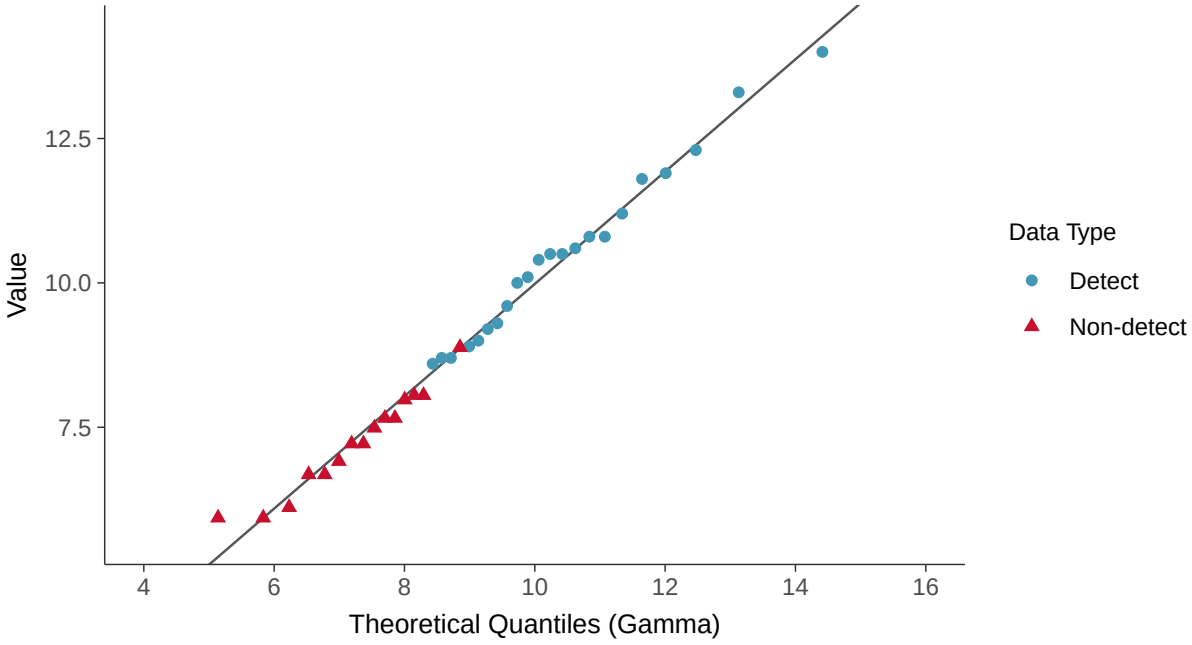
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



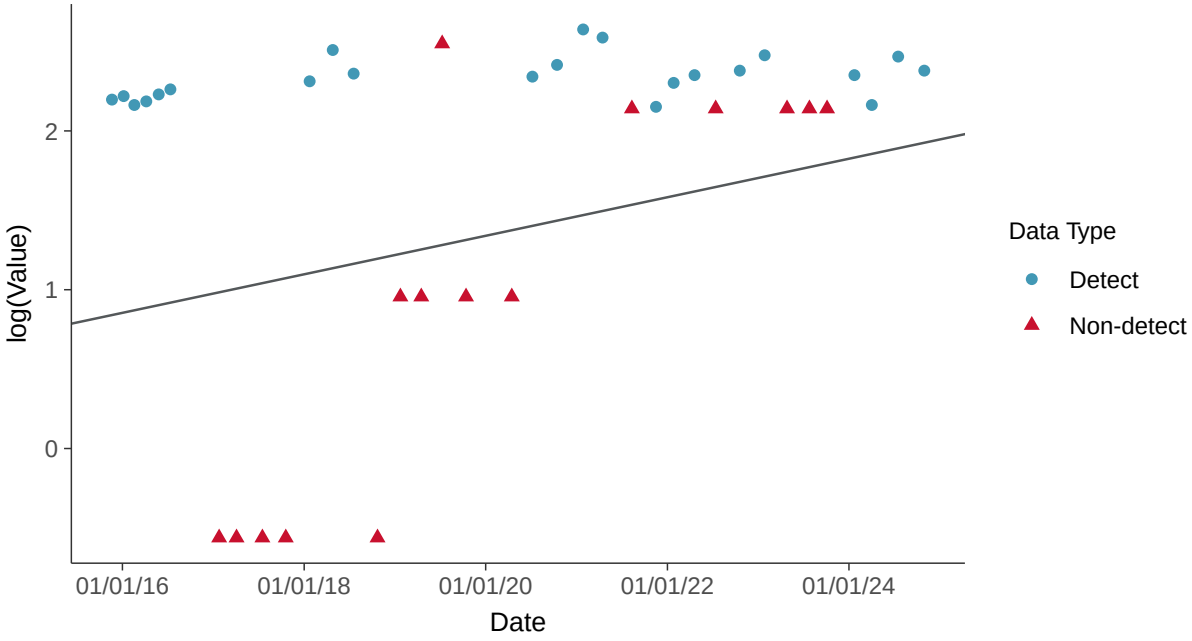
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



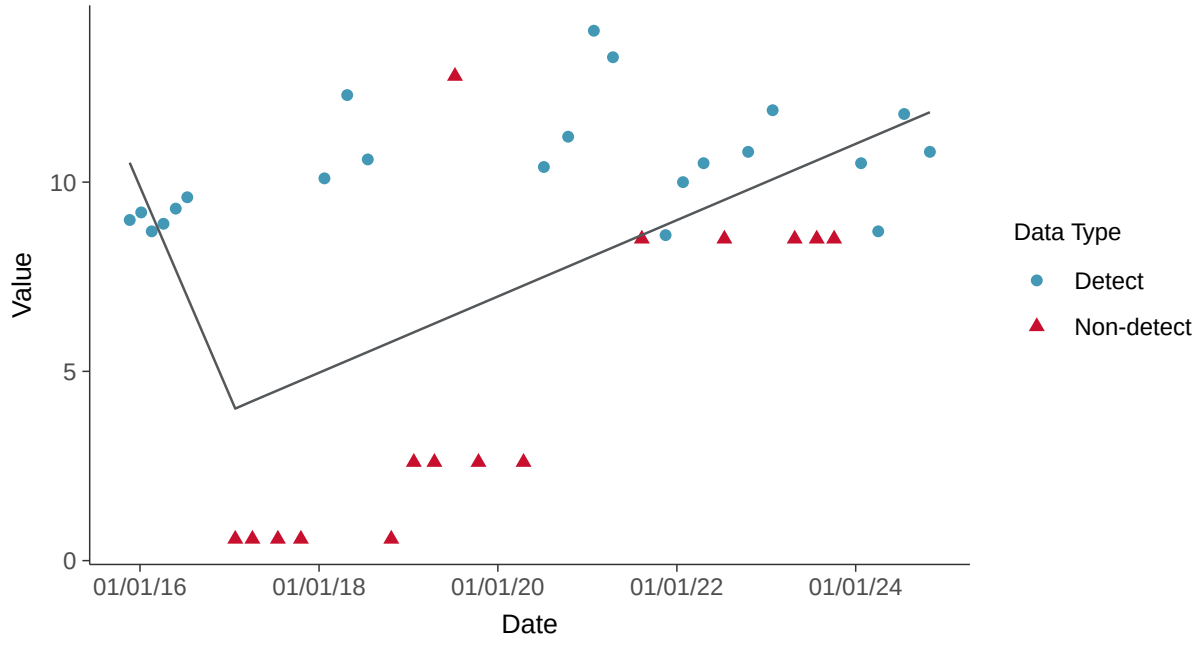
Trend Regression: Lognormal MLE

Boron, MW-8 (ug/L)



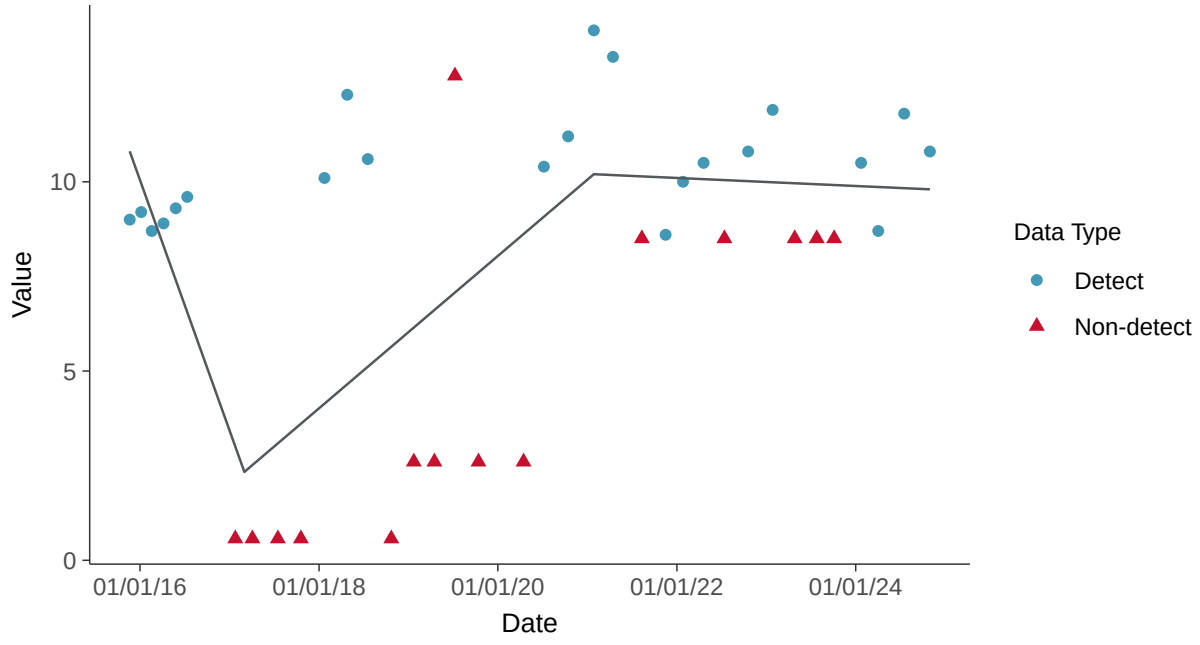
Trend Regression: Piecewise Linear-Linear

Boron, MW-8 (ug/L)



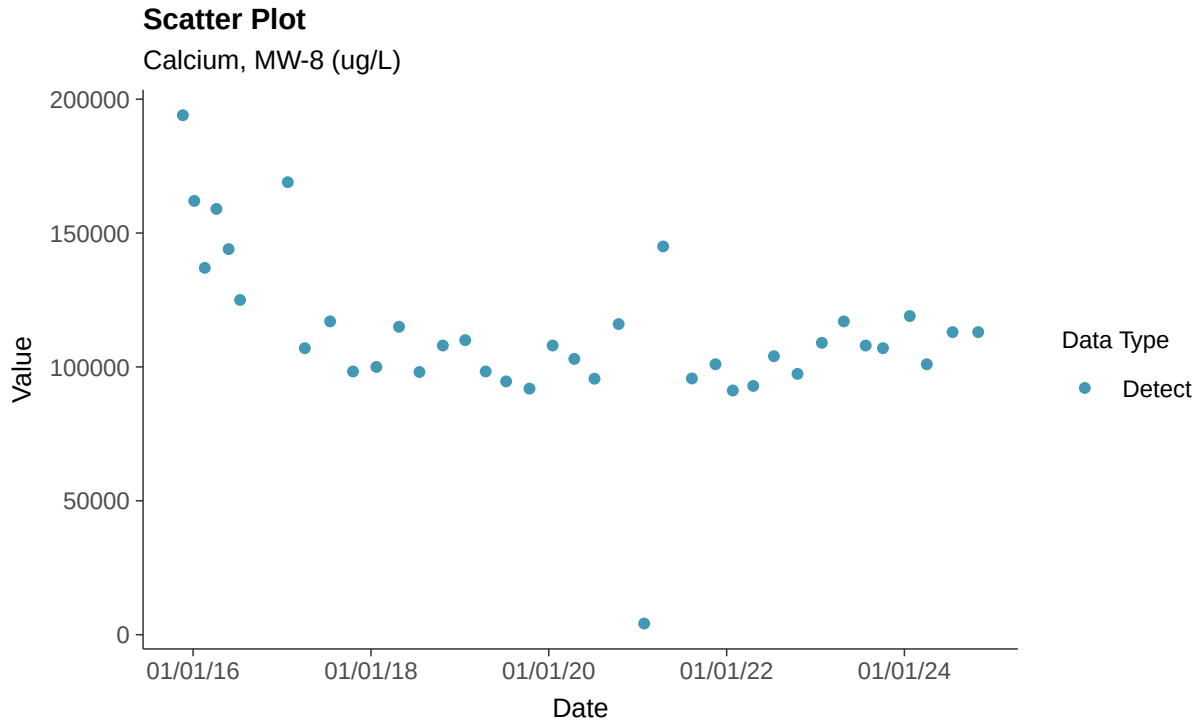
Trend Regression: Piecewise Linear-Linear-Linear

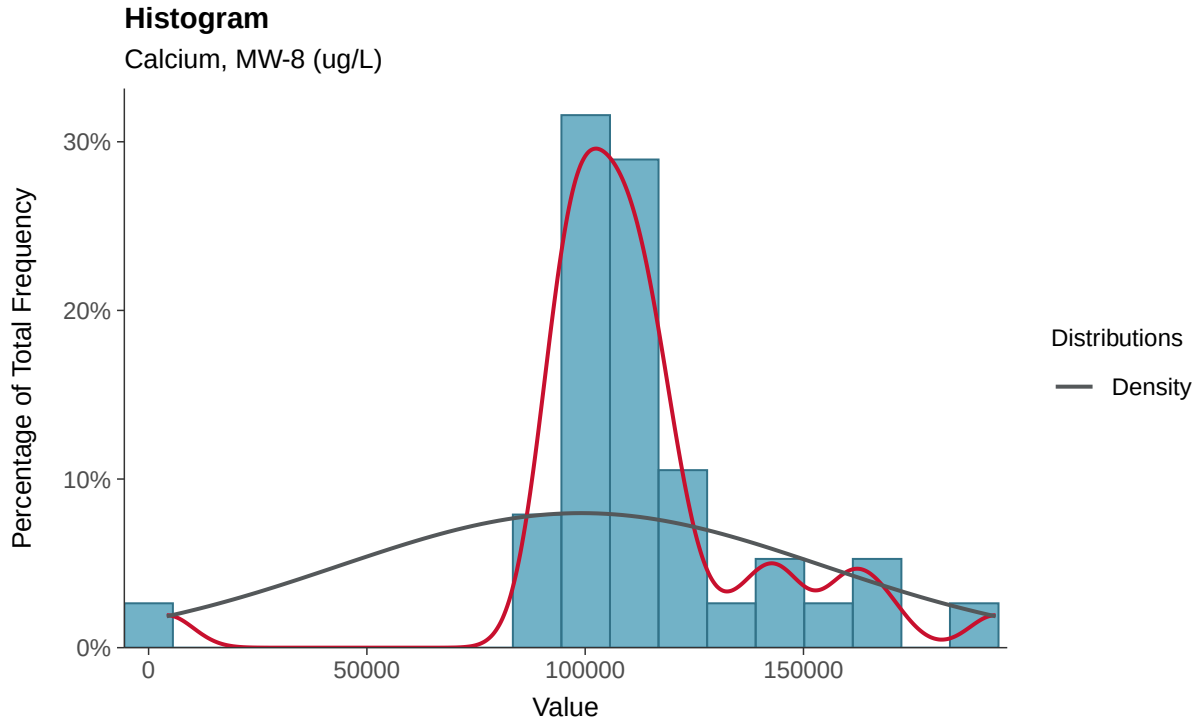
Boron, MW-8 (ug/L)

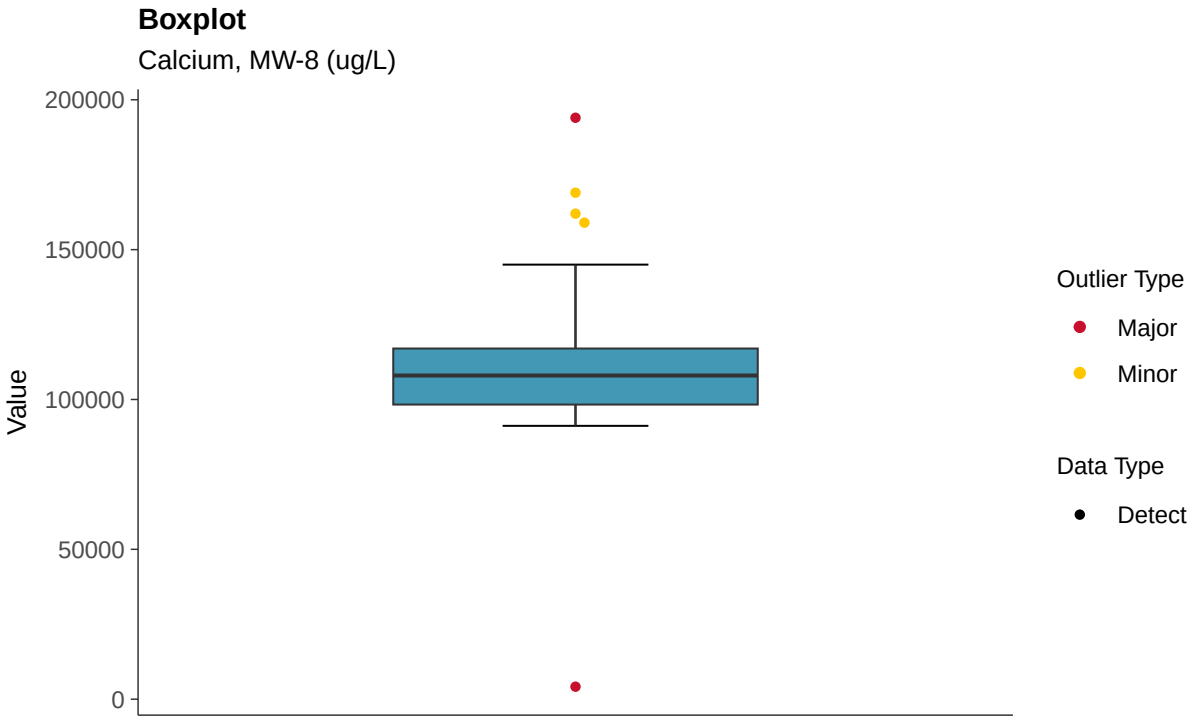


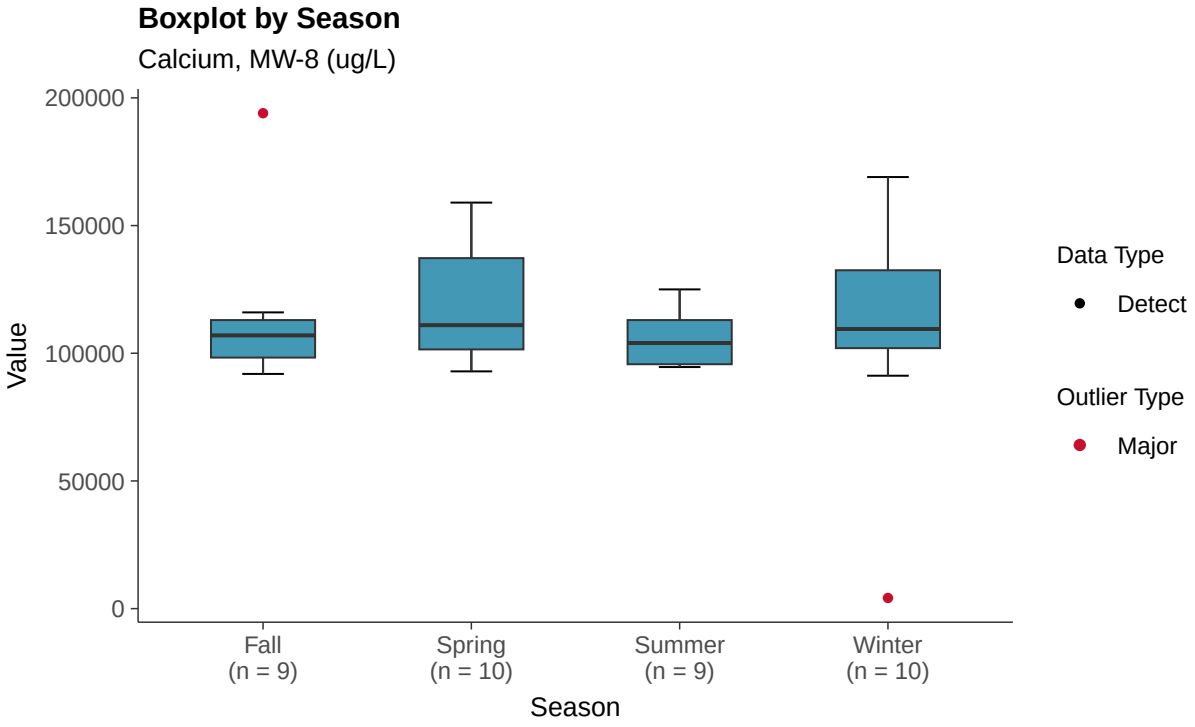
App. III: Calcium, MW-8

ID: 08_02_107



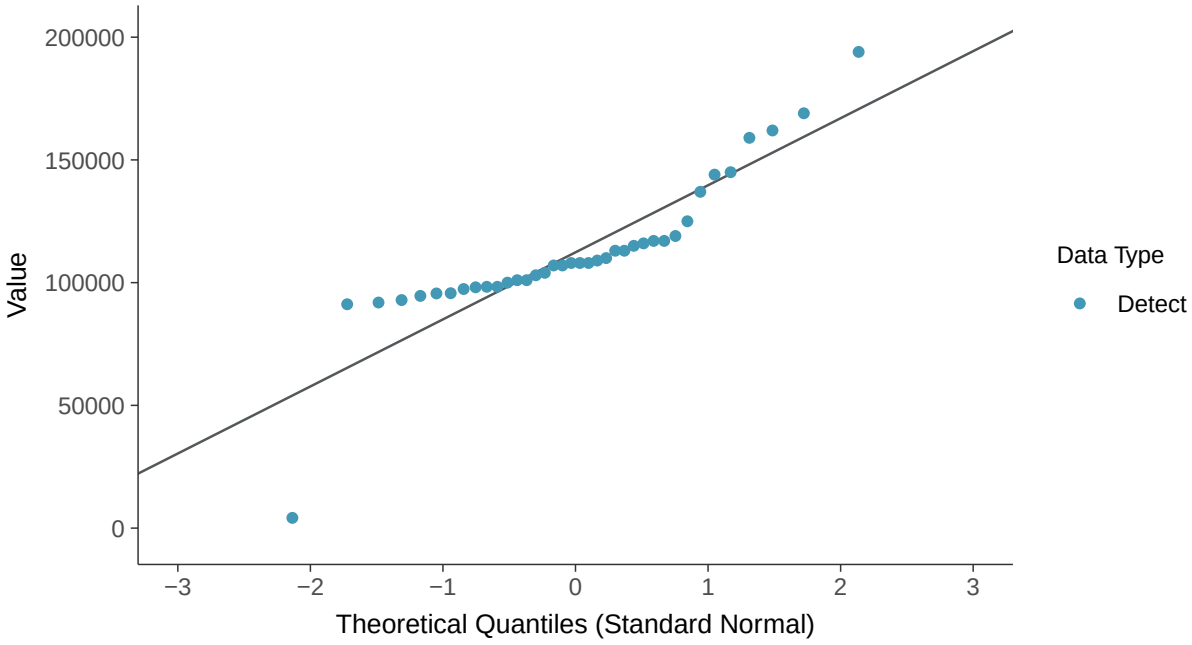



Boxplot
Calcium, MW-8 (ug/L)
200000
150000
100000
50000
0
Value
Outlier Type
Major
Minor
Data Type
Detect


Boxplot by Season
Calcium, MW-8 (ug/L)
200000
150000
100000
50000
0
Value
Fall
(n = 9)
Spring
(n = 10)
Summer
(n = 9)
Winter
(n = 10)
Season
Data Type
Detect
Outlier Type
Major

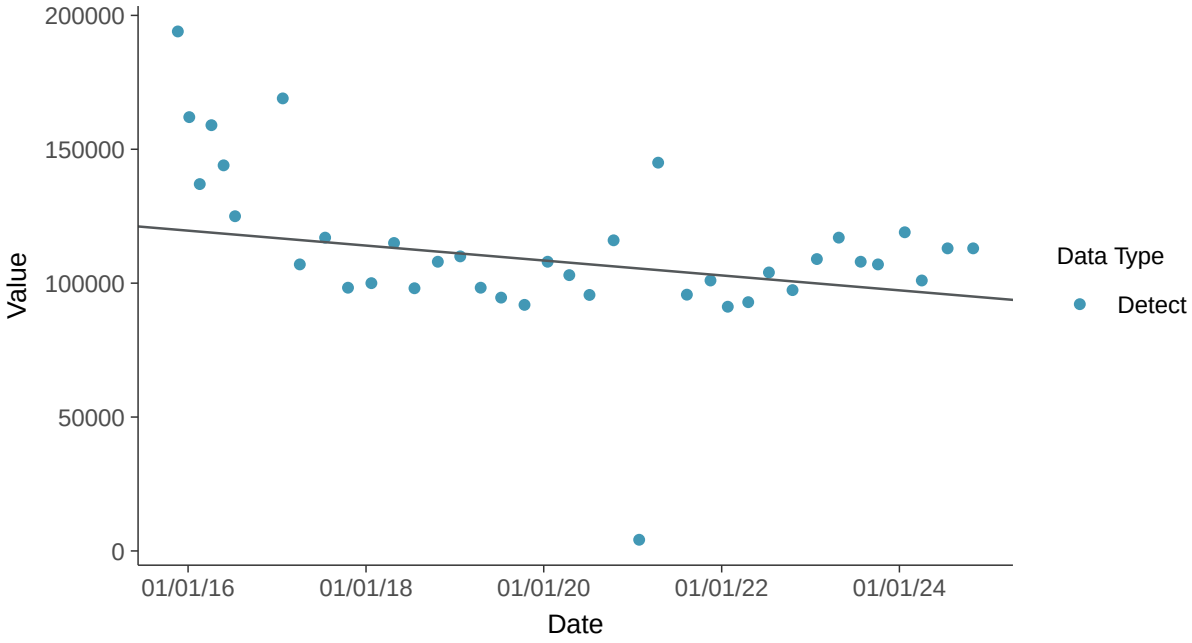
Normal Q-Q plot

Calcium, MW-8 (ug/L)



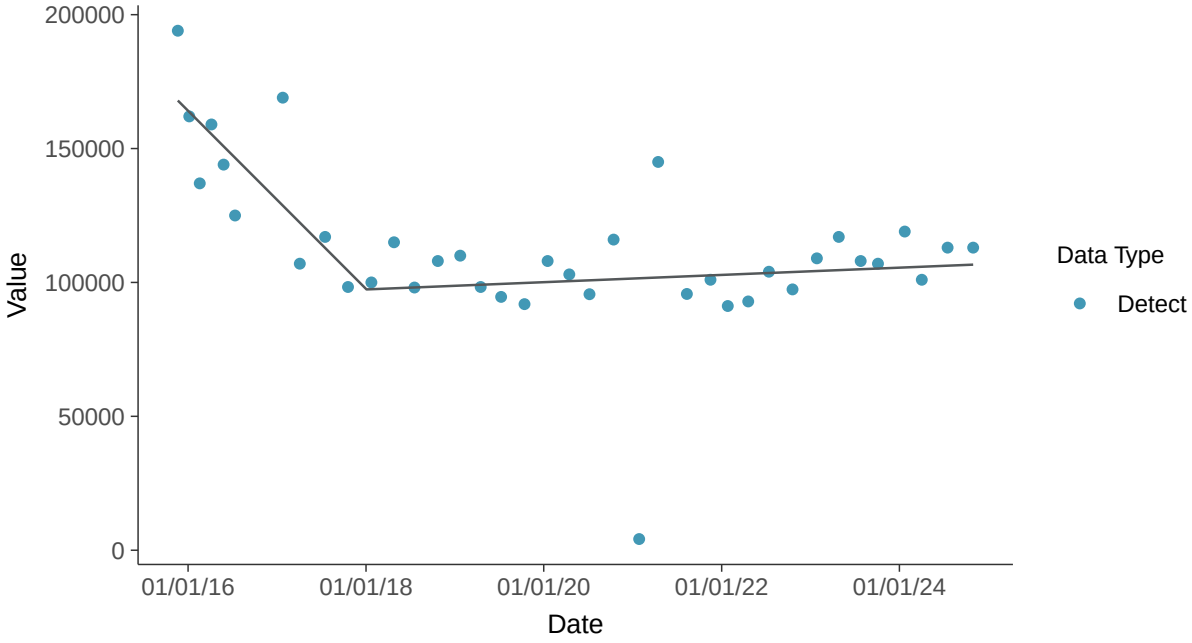
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-8 (ug/L)



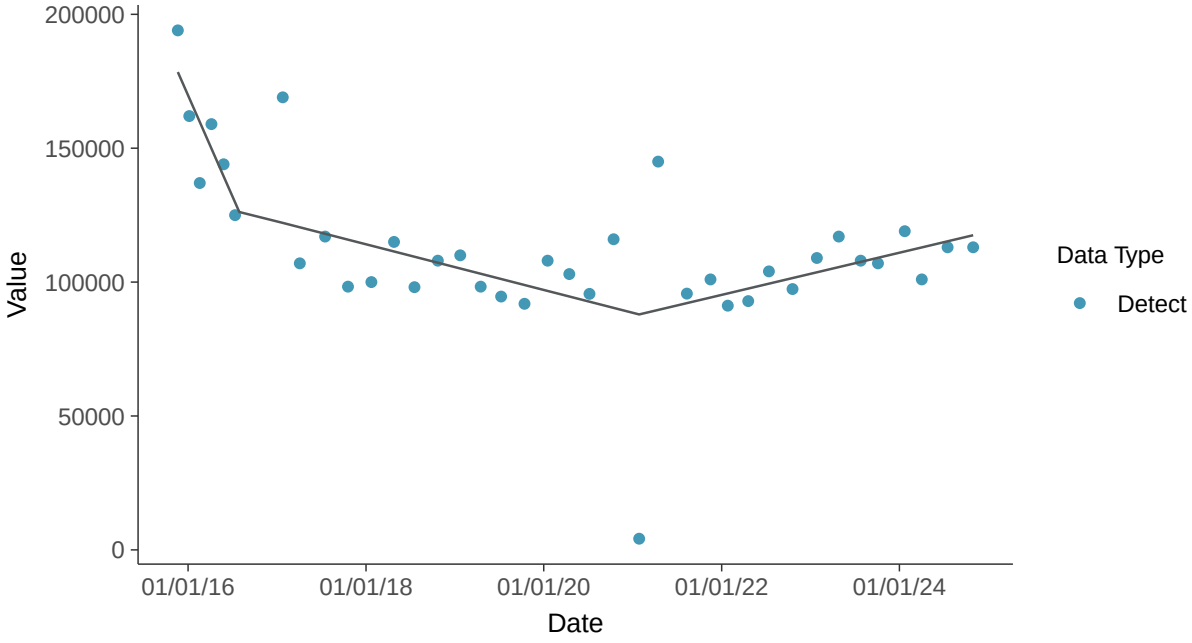
Trend Regression: Piecewise Linear-Linear

Calcium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-8 (ug/L)

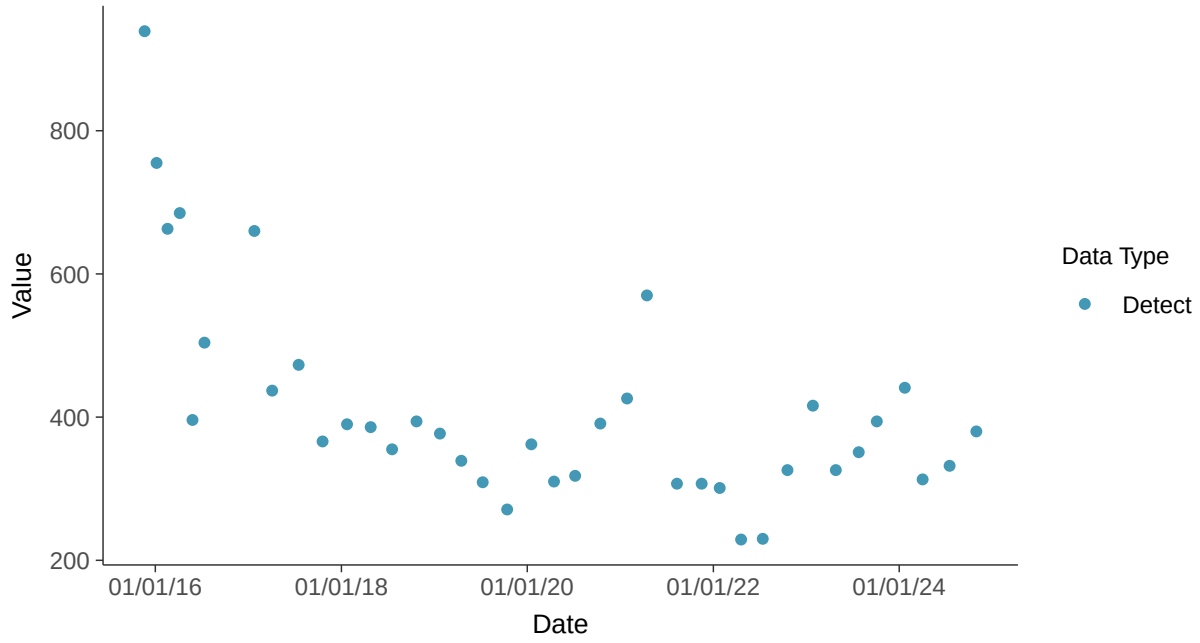


App. III: Chloride, MW-8

ID: 08_02_108

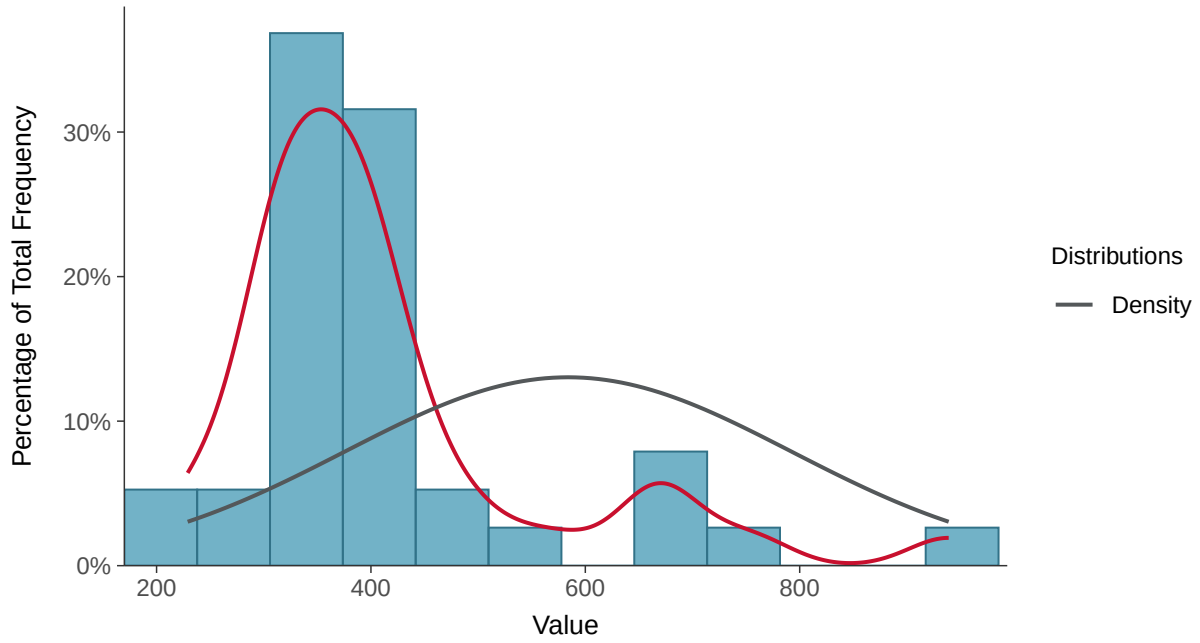
Scatter Plot

Chloride, MW-8 (mg/L)



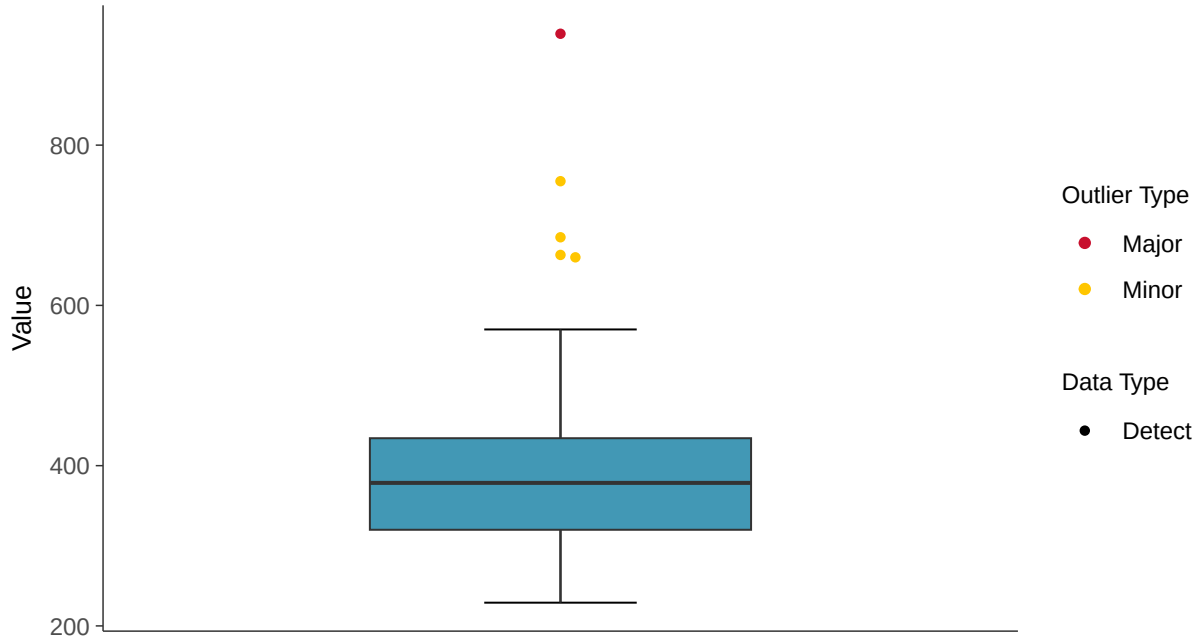
Histogram

Chloride, MW-8 (mg/L)



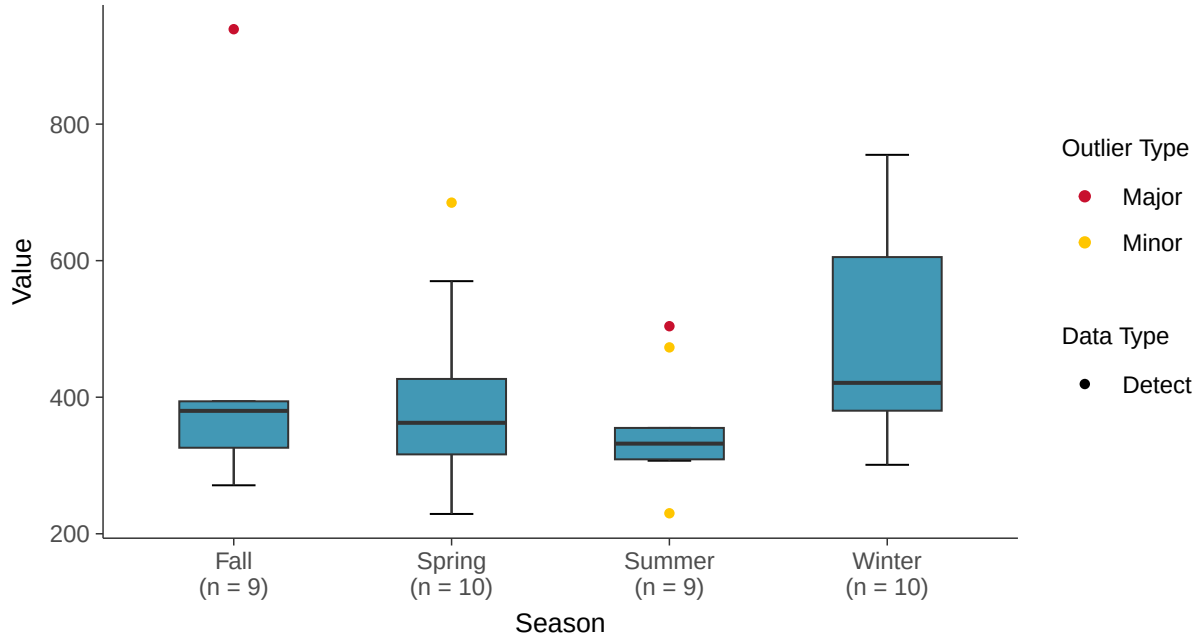
Boxplot

Chloride, MW-8 (mg/L)



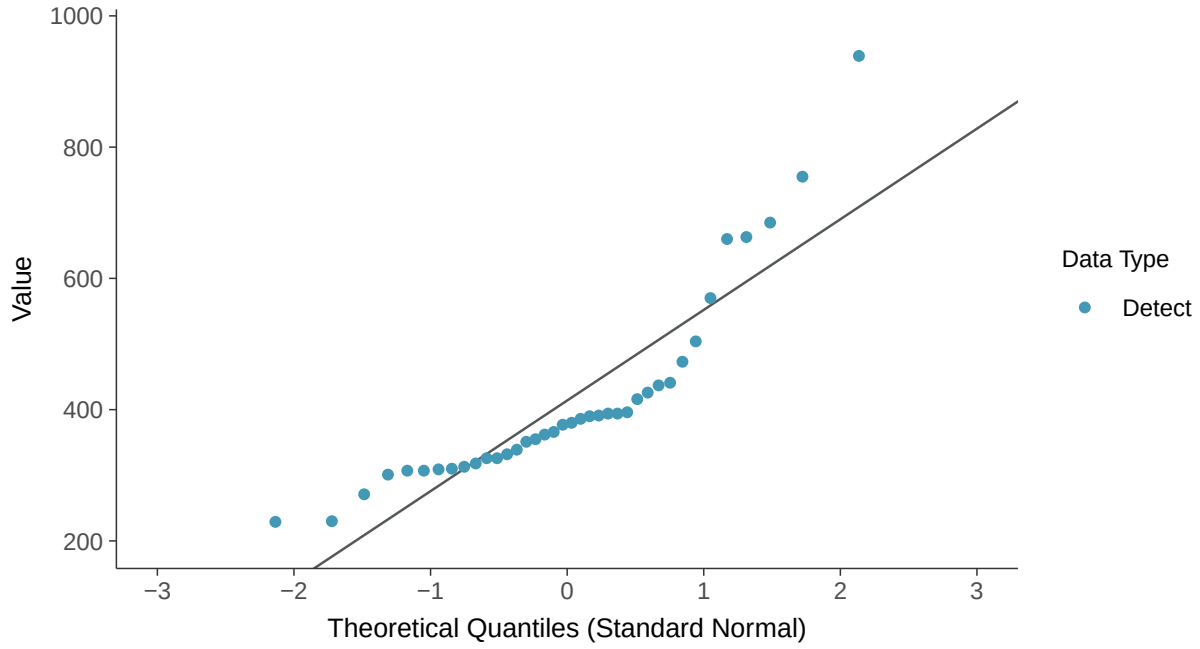
Boxplot by Season

Chloride, MW-8 (mg/L)



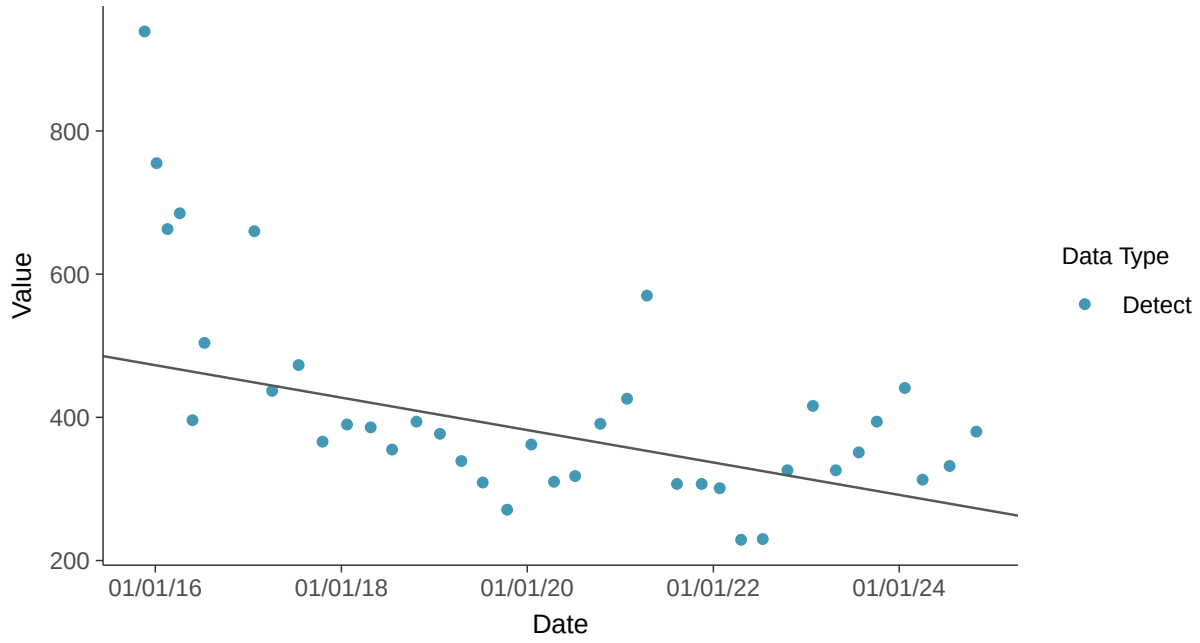
Normal Q-Q plot

Chloride, MW-8 (mg/L)



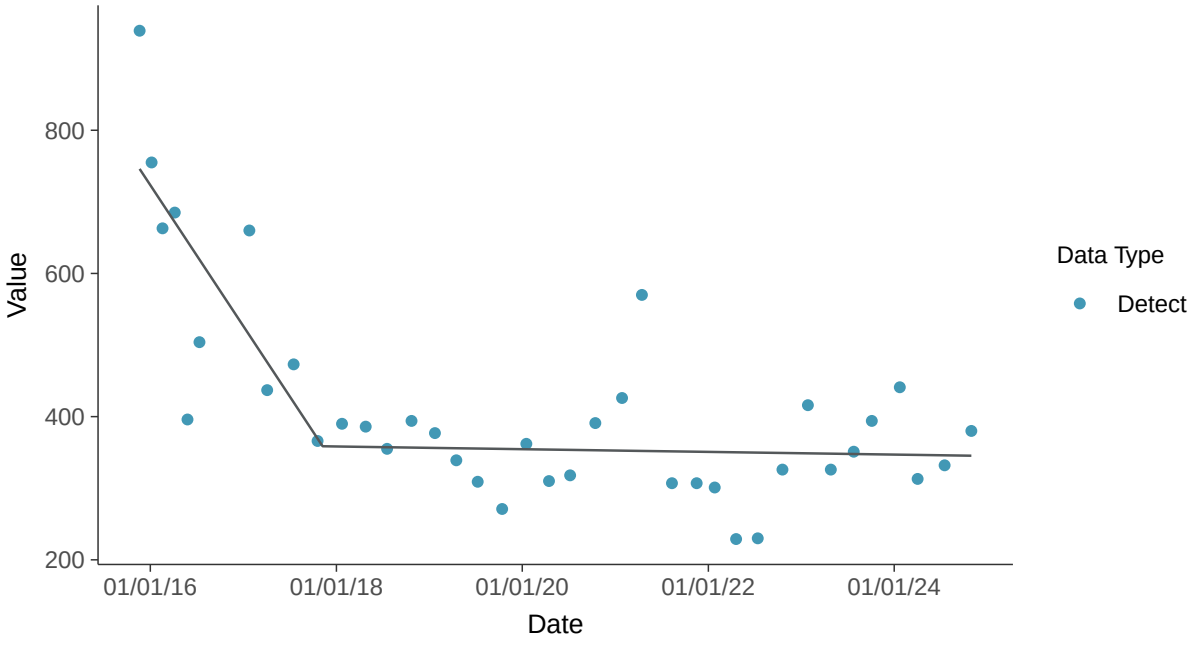
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-8 (mg/L)



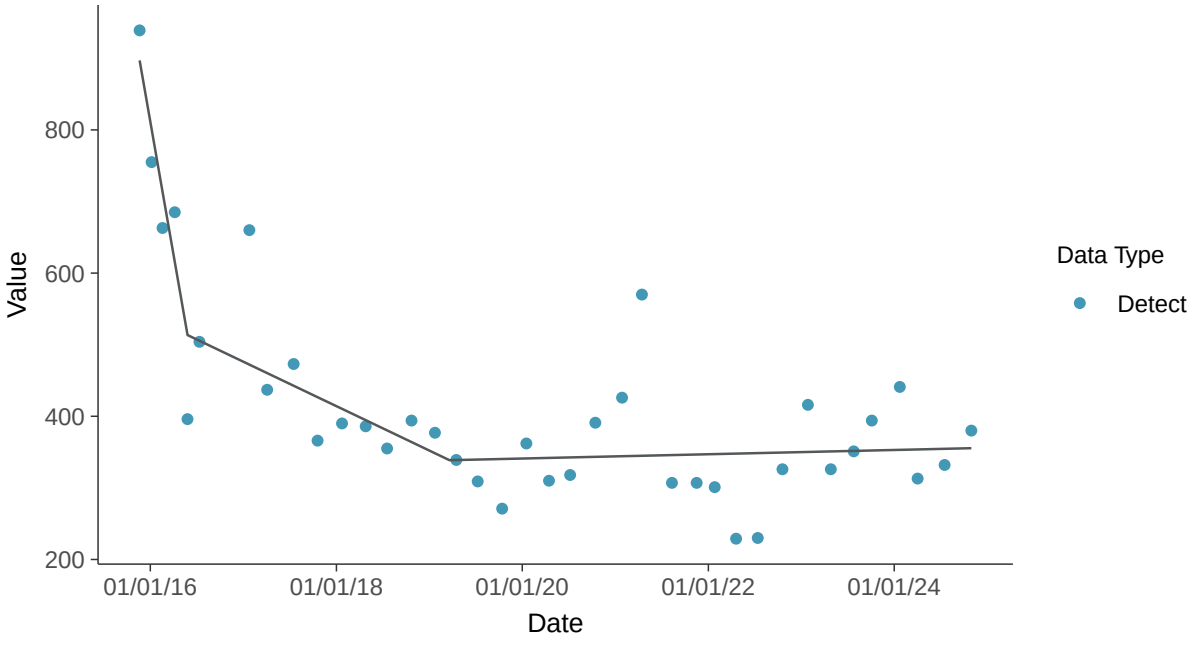
Trend Regression: Piecewise Linear-Linear

Chloride, MW-8 (mg/L)



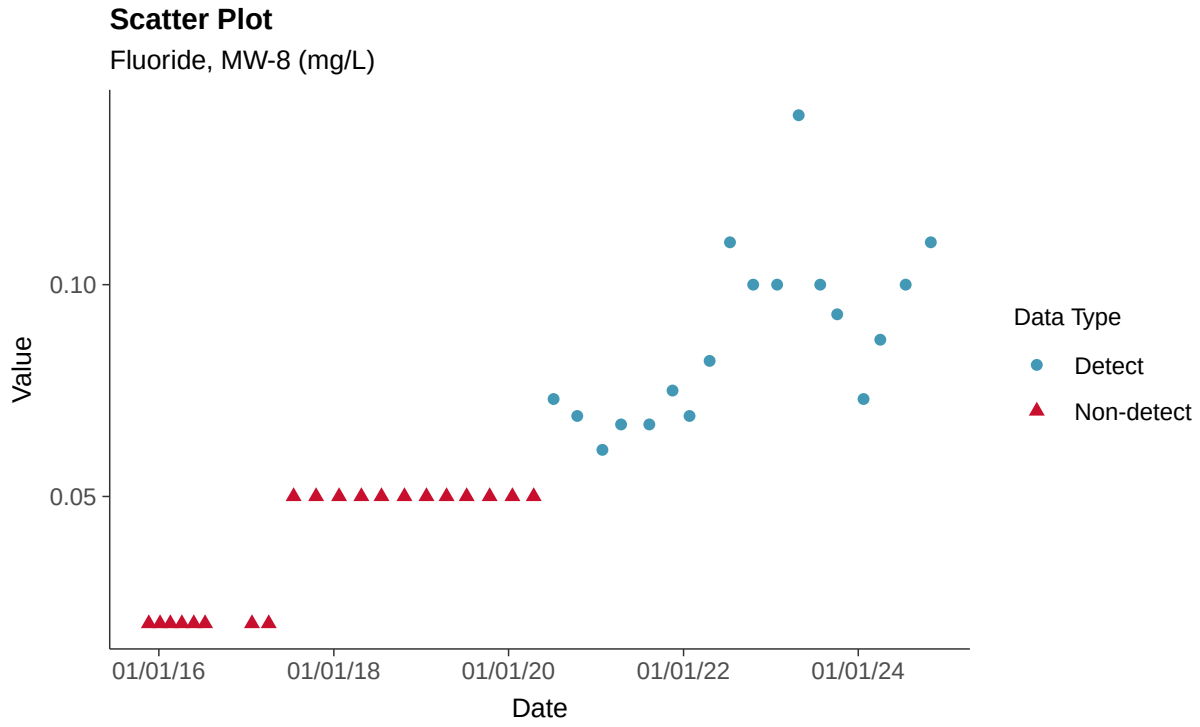
Trend Regression: Piecewise Linear-Linear-Linear

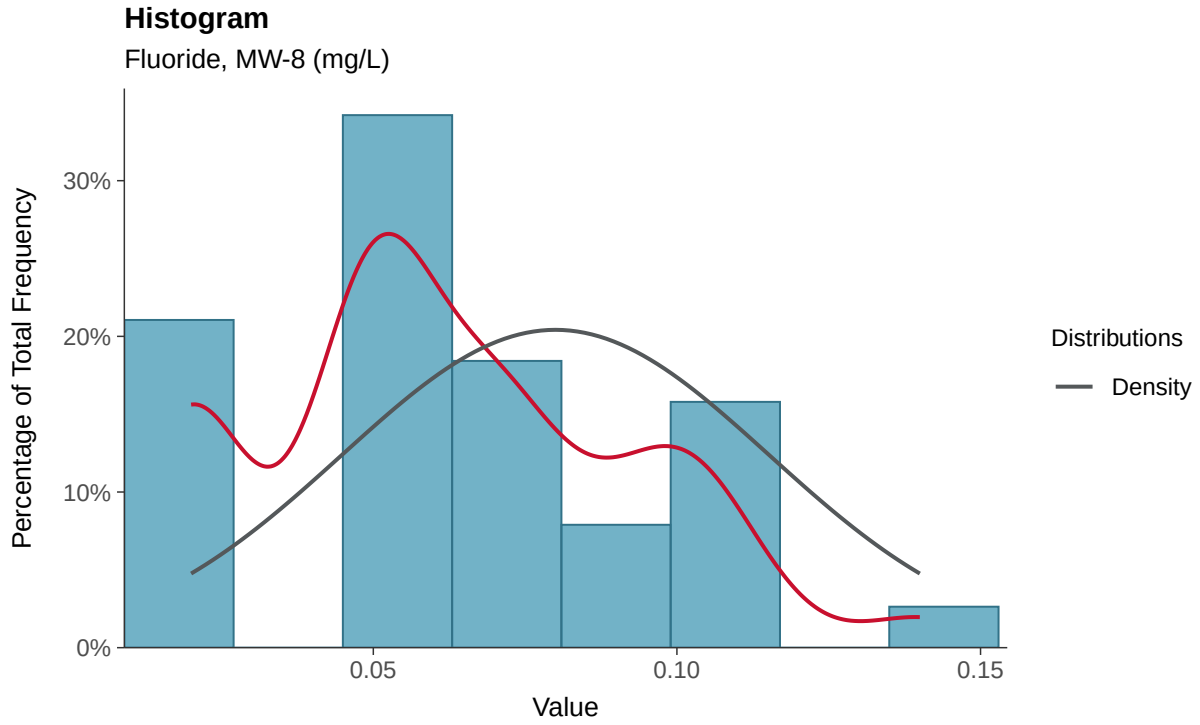
Chloride, MW-8 (mg/L)



App. III: Fluoride, MW-8

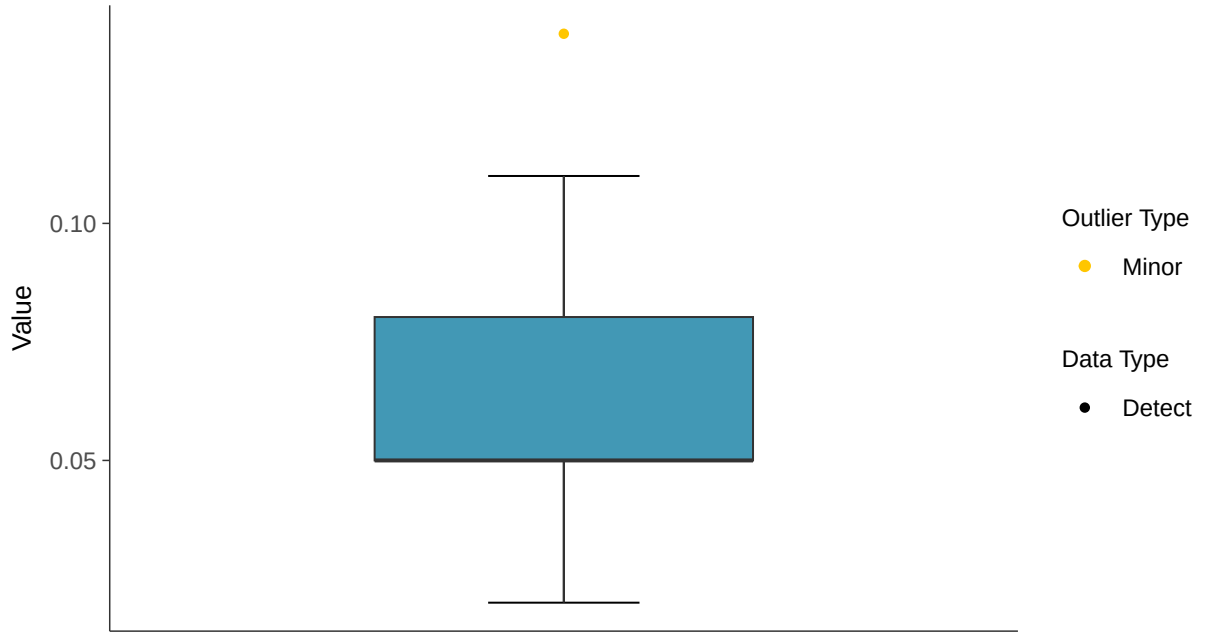
ID: 08_02_112





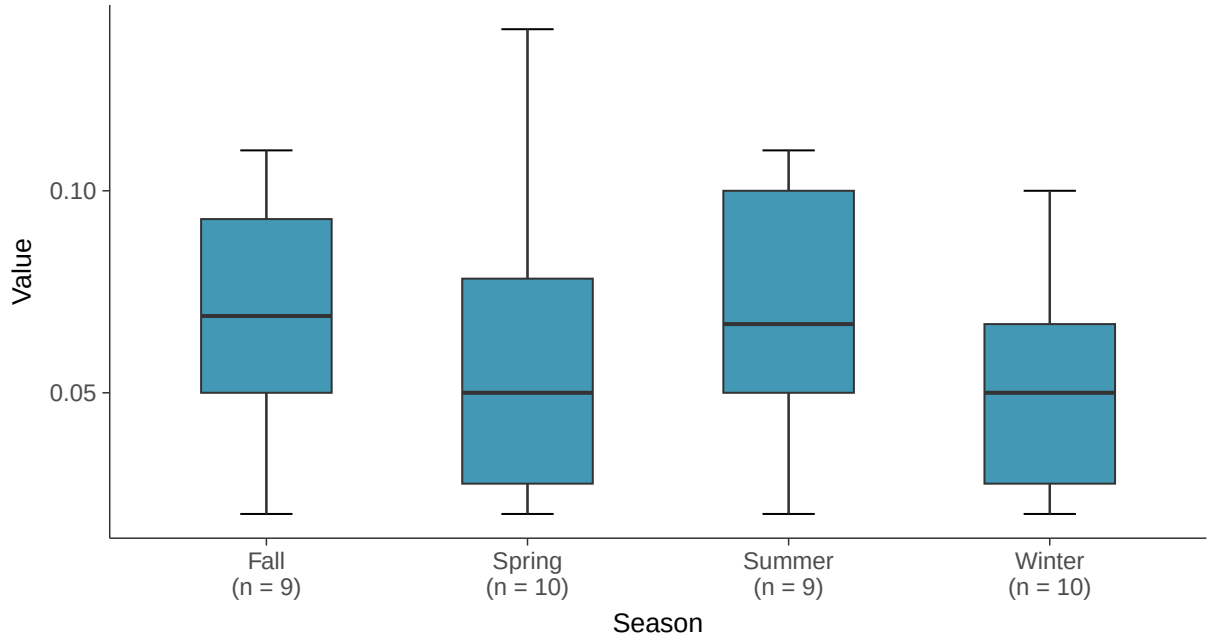
Boxplot

Fluoride, MW-8 (mg/L)



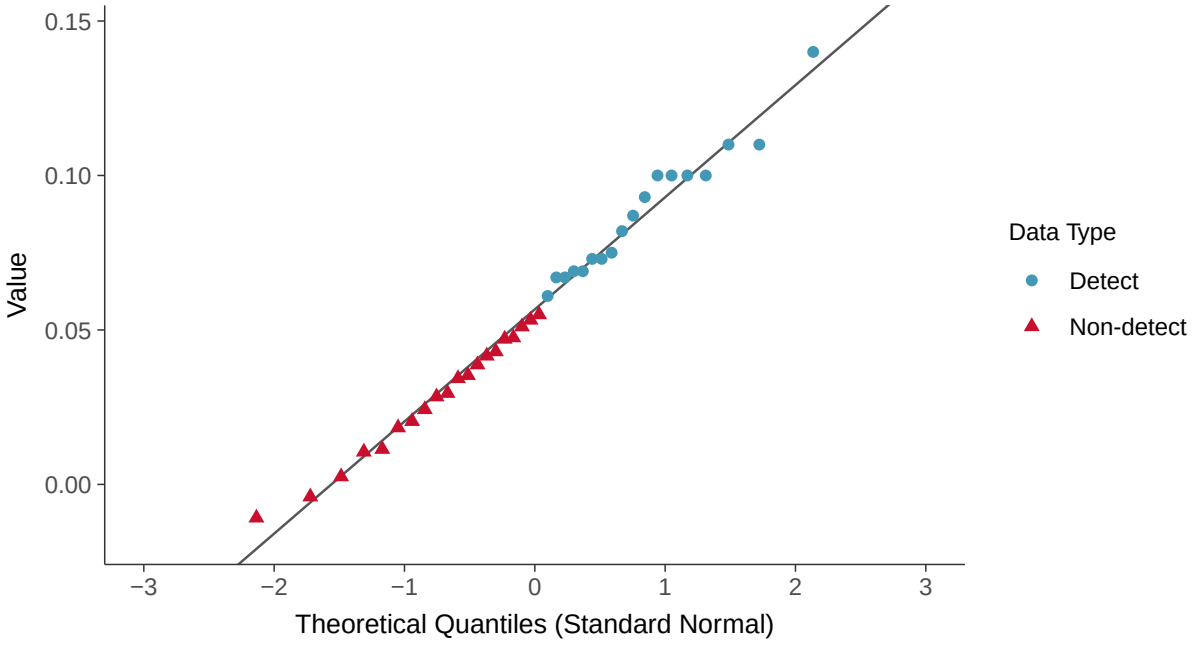
Boxplot by Season

Fluoride, MW-8 (mg/L)



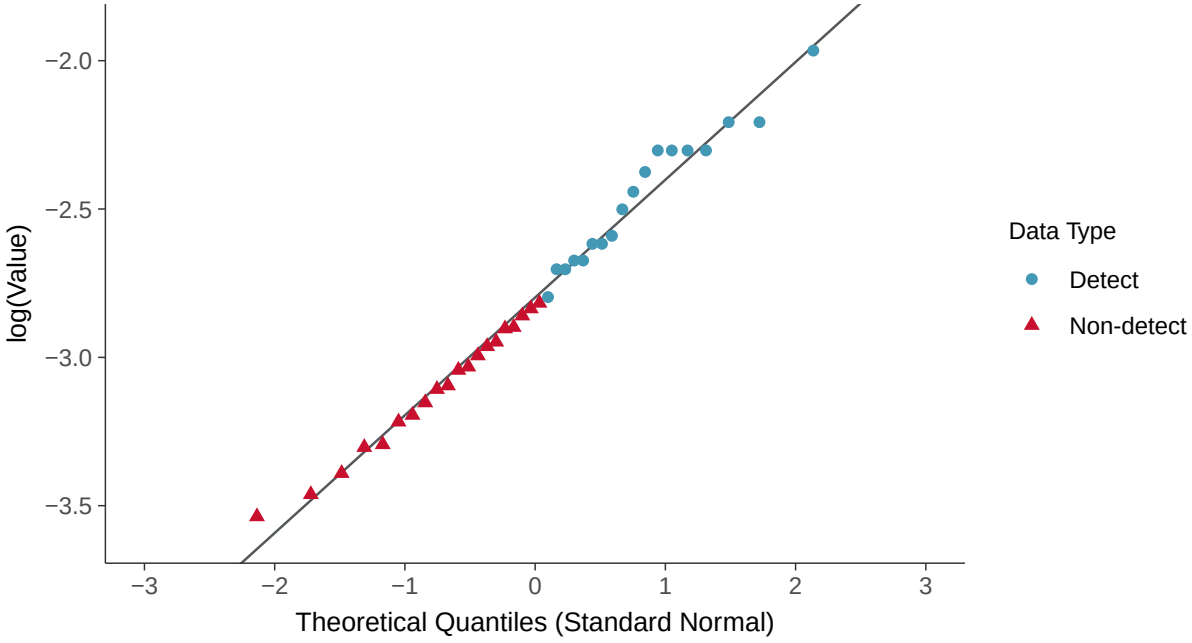
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



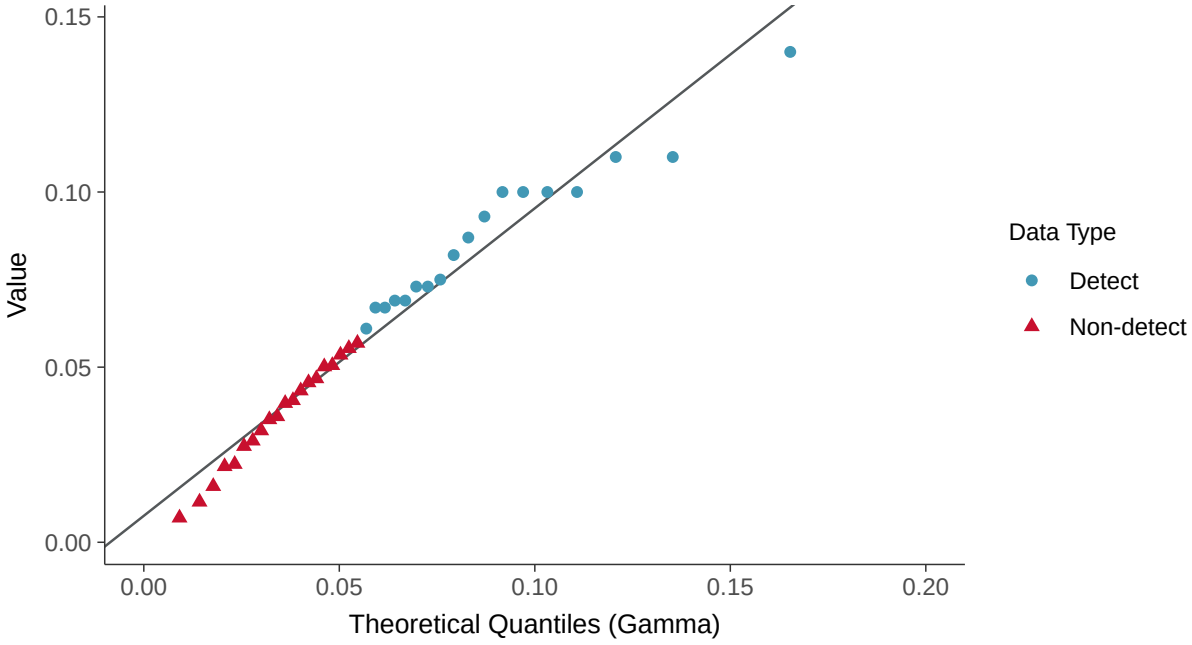
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



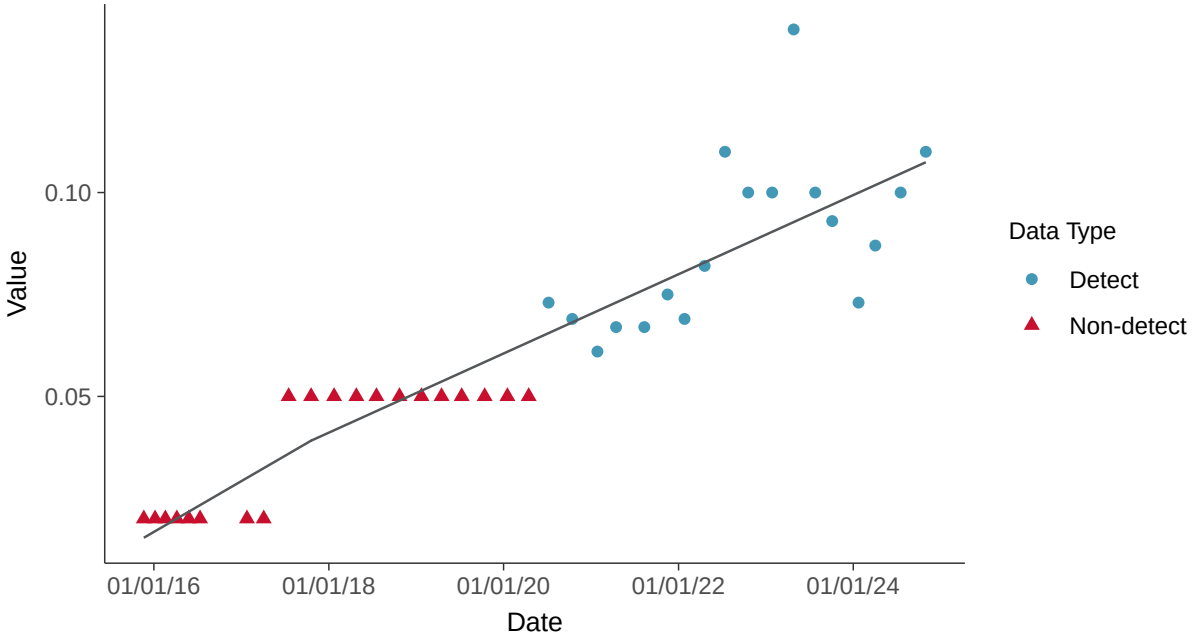
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



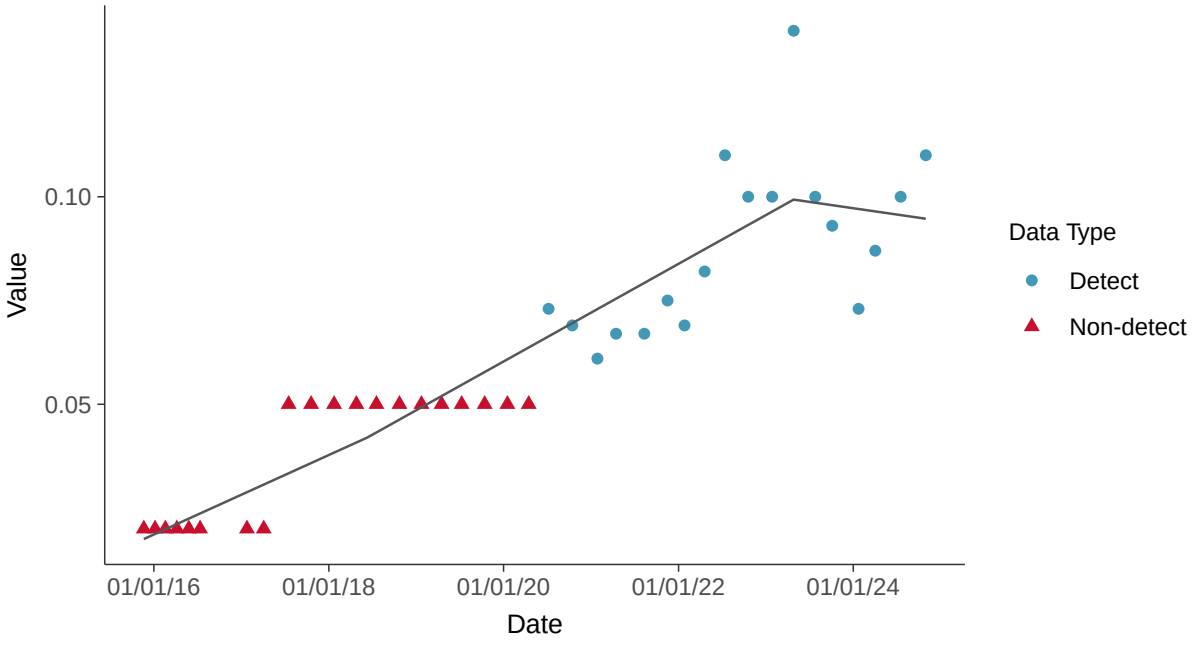
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-8 (mg/L)

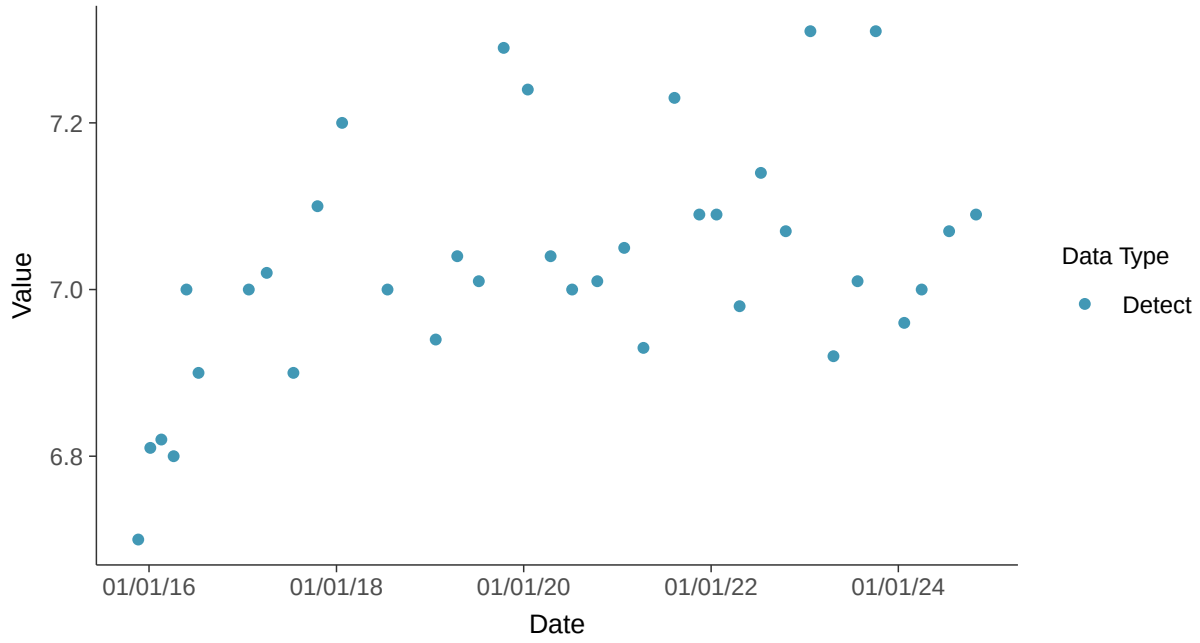


App. III: pH (Field), MW-8

ID: 08_02_118

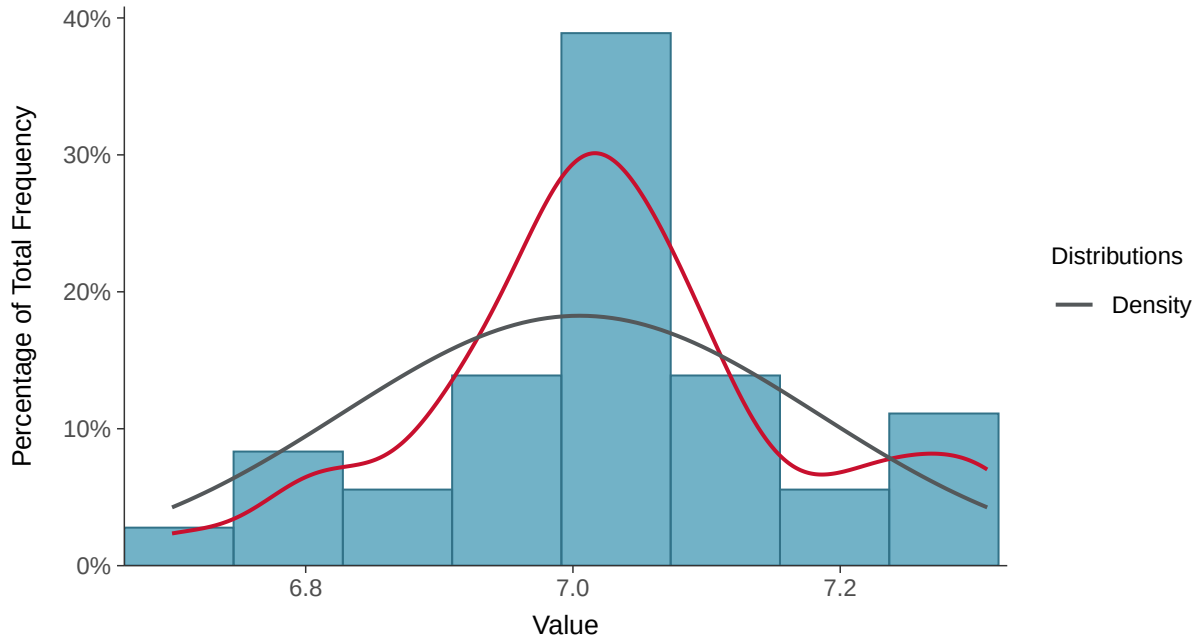
Scatter Plot

pH (Field), MW-8 (S.U.)



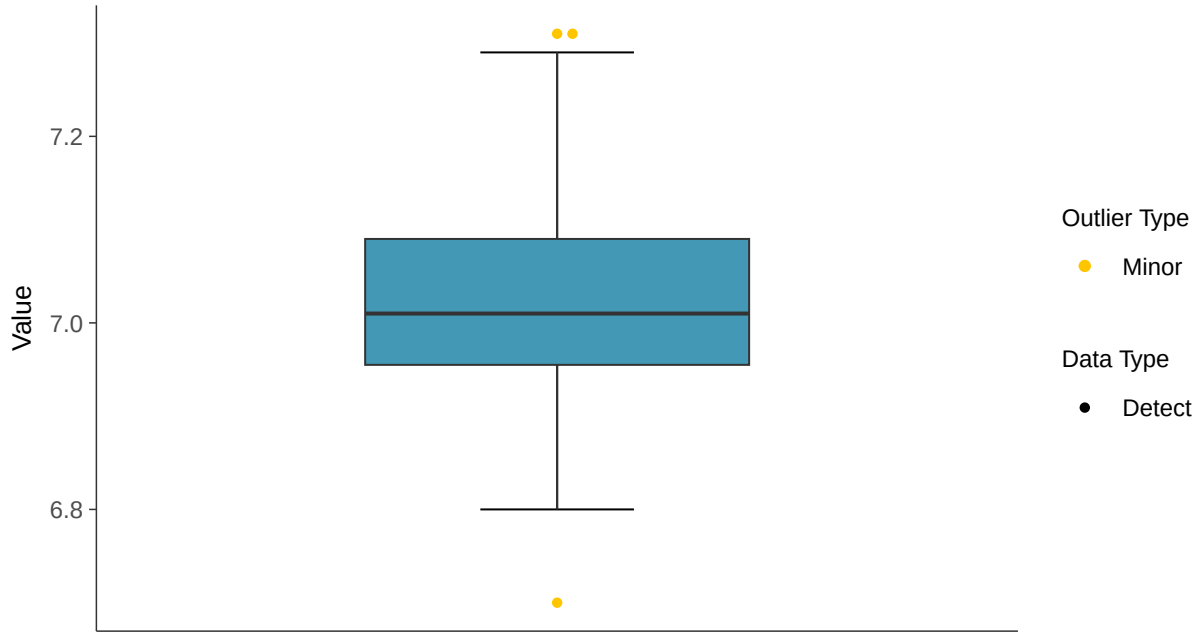
Histogram

pH (Field), MW-8 (S.U.)



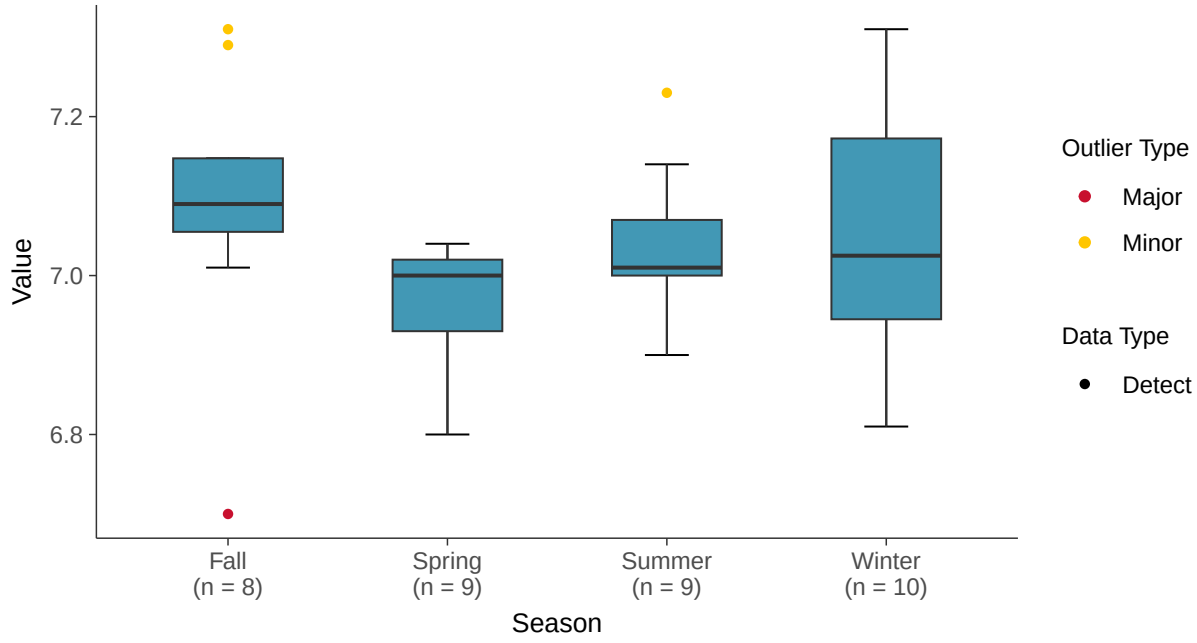
Boxplot

pH (Field), MW-8 (S.U.)



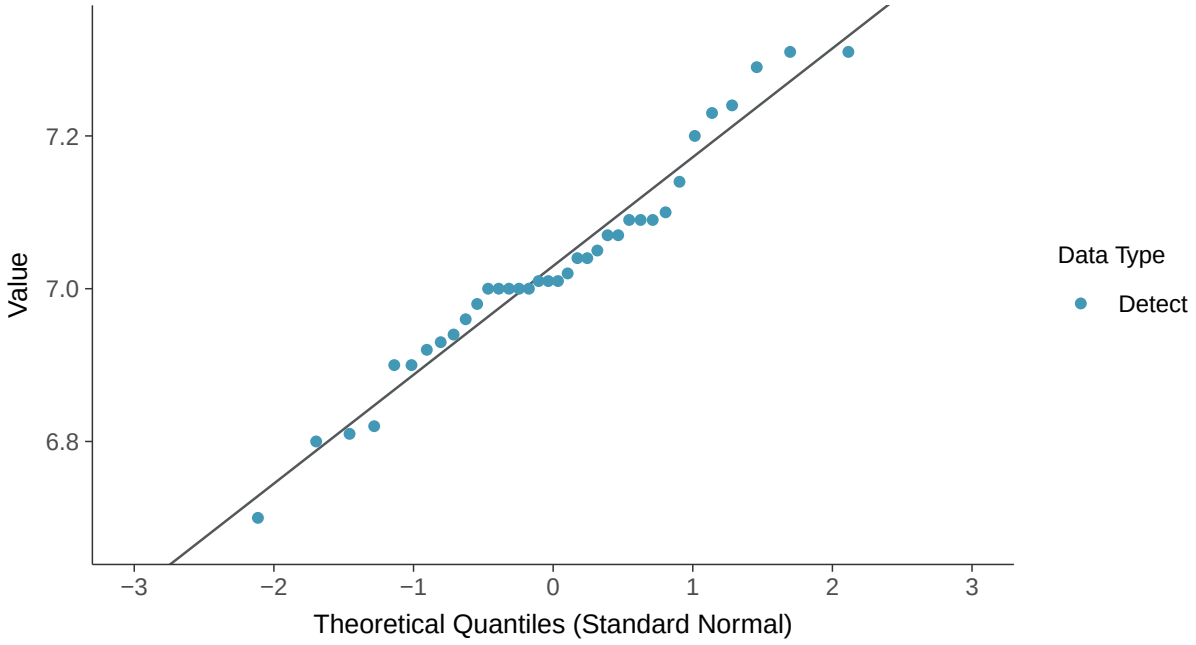
Boxplot by Season

pH (Field), MW-8 (S.U.)



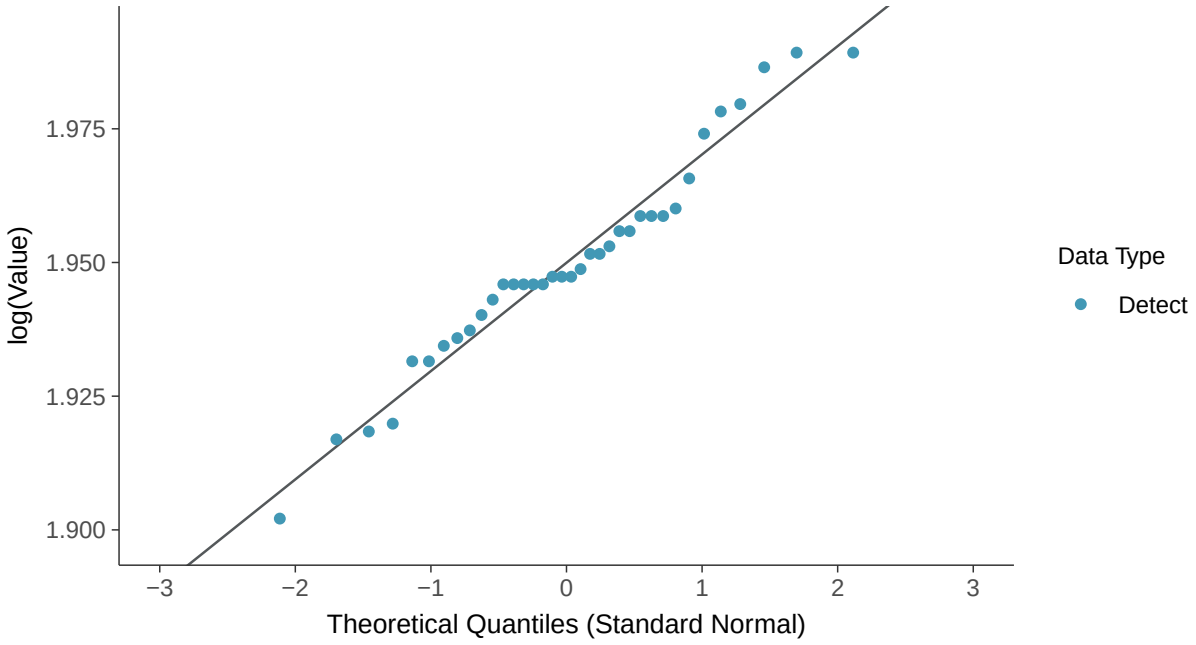
Normal Q-Q plot

pH (Field), MW-8 (S.U.)



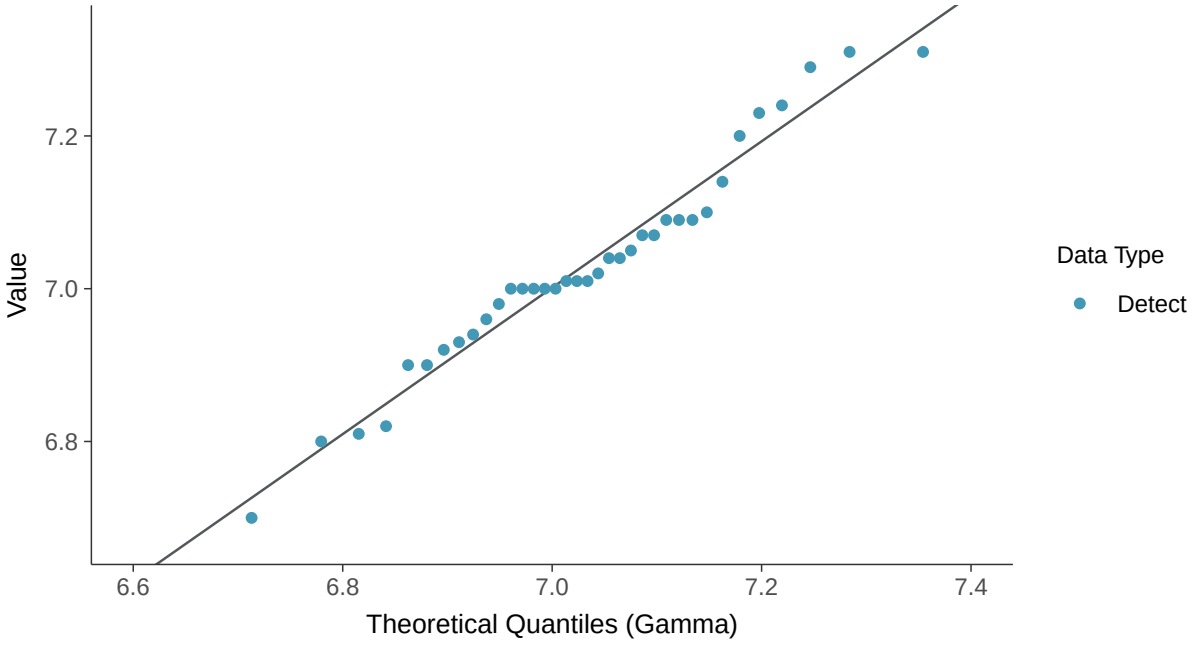
Lognormal Q-Q plot

pH (Field), MW-8 (S.U.)



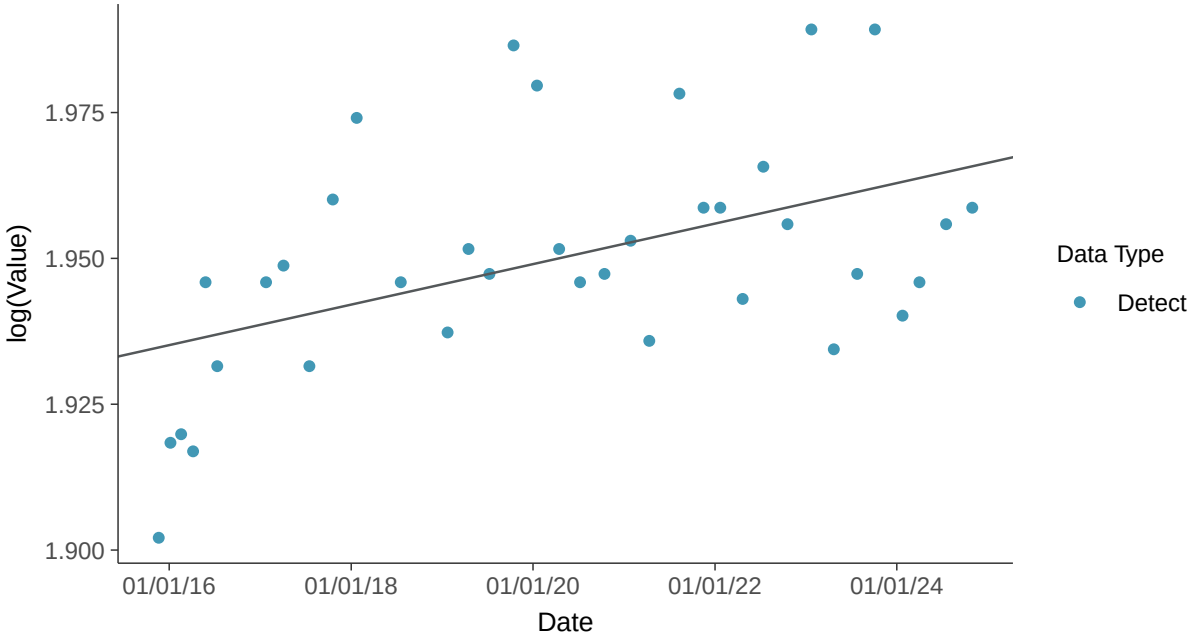
Gamma Q-Q plot

pH (Field), MW-8 (S.U.)



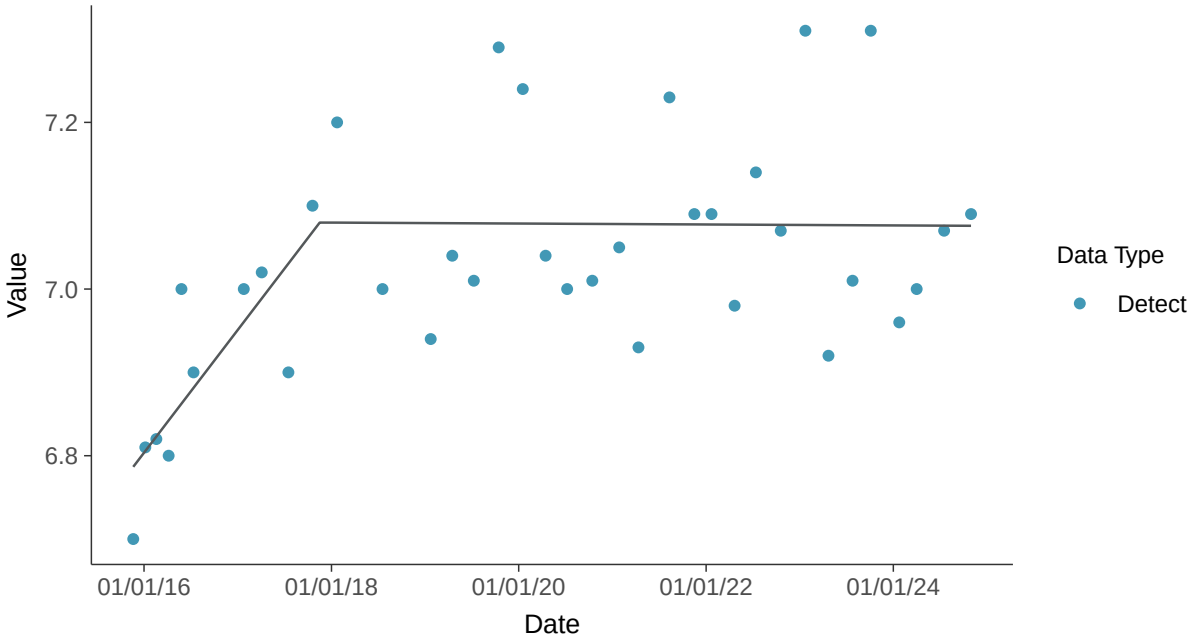
Trend Regression: Lognormal MLE

pH (Field), MW-8 (S.U.)



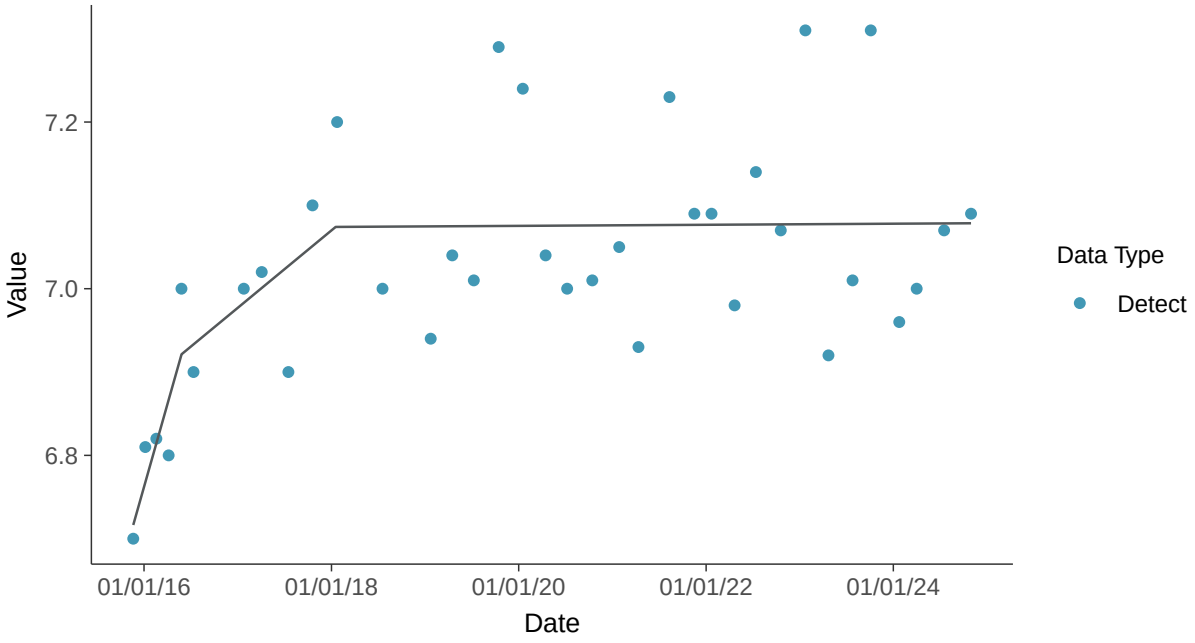
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-8 (S.U.)



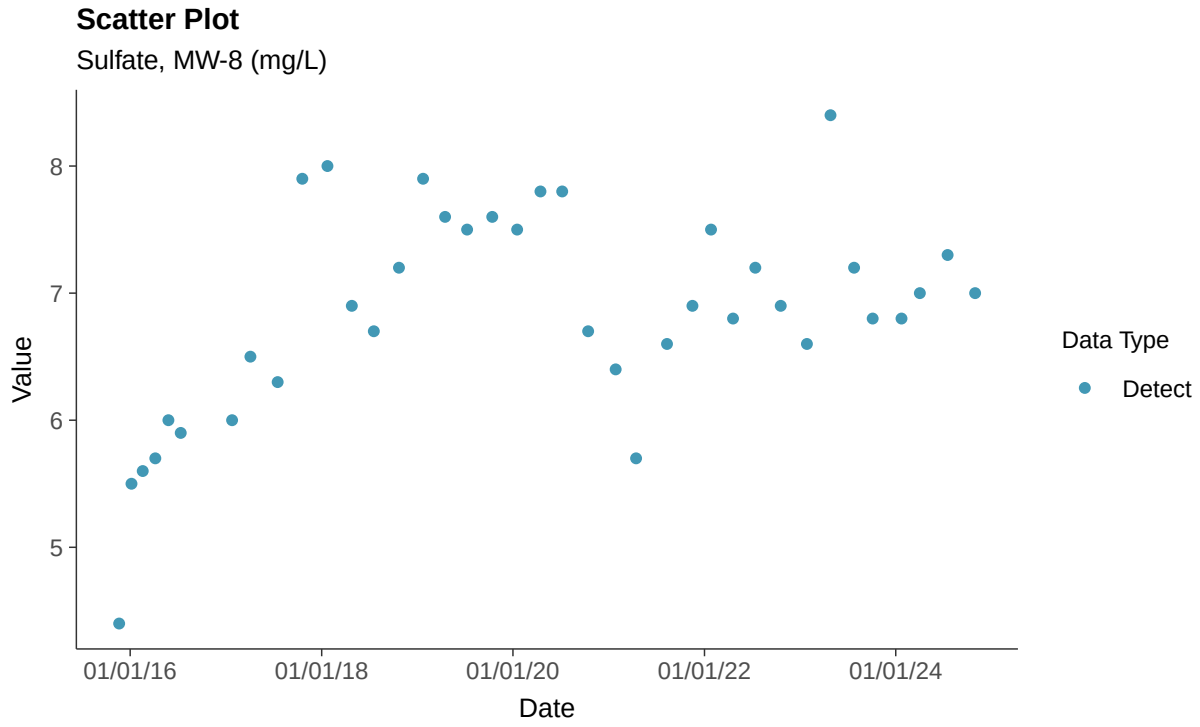
Trend Regression: Piecewise Linear-Linear-Linear

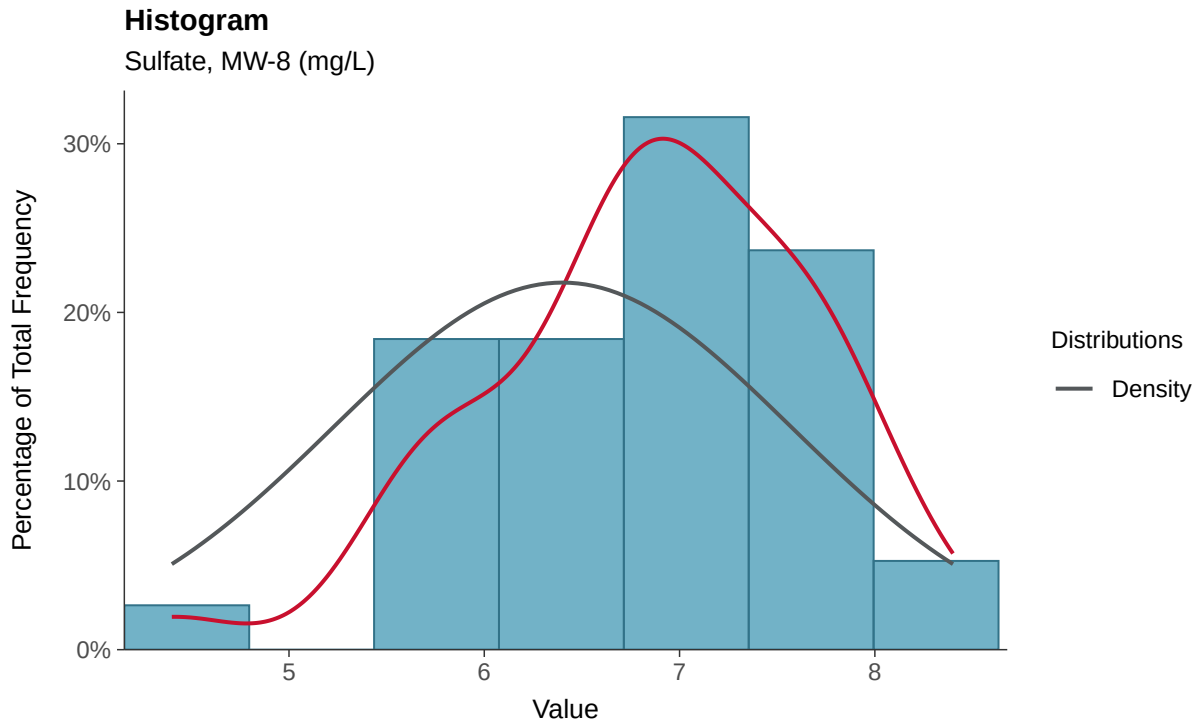
pH (Field), MW-8 (S.U.)



App. III: Sulfate, MW-8

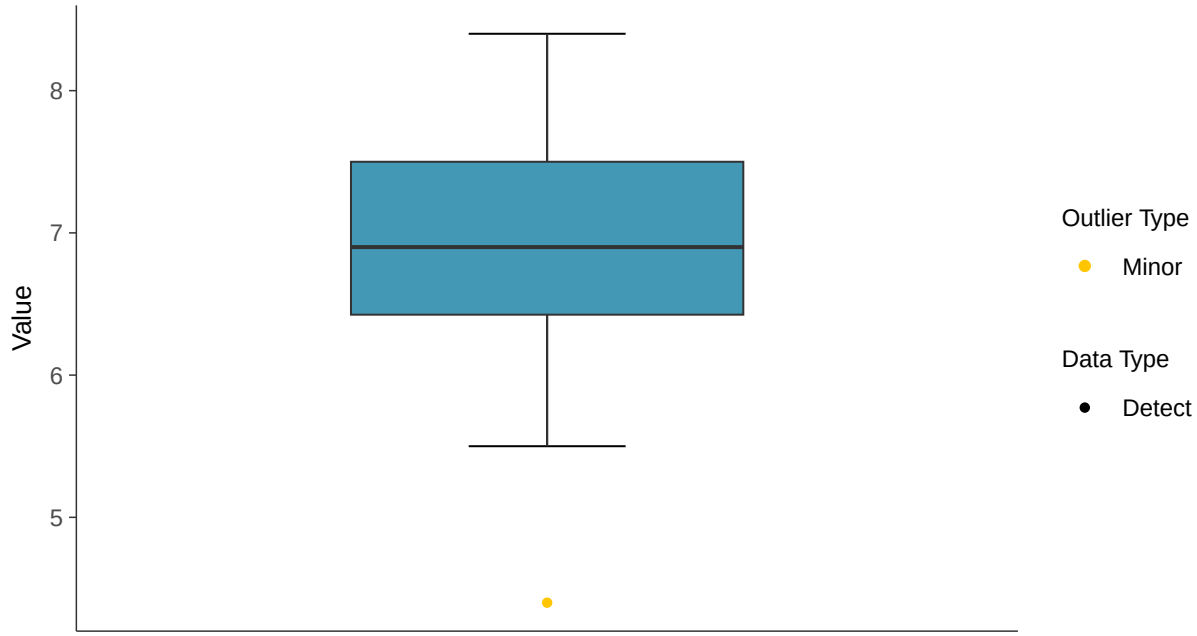
ID: 08_02_123





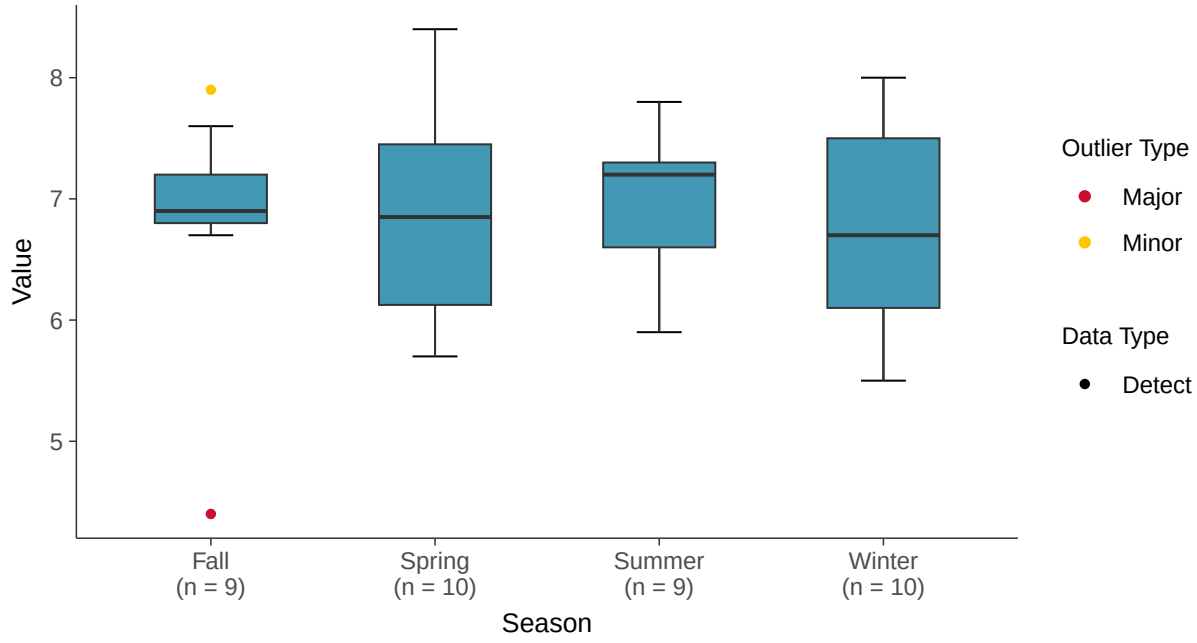
Boxplot

Sulfate, MW-8 (mg/L)



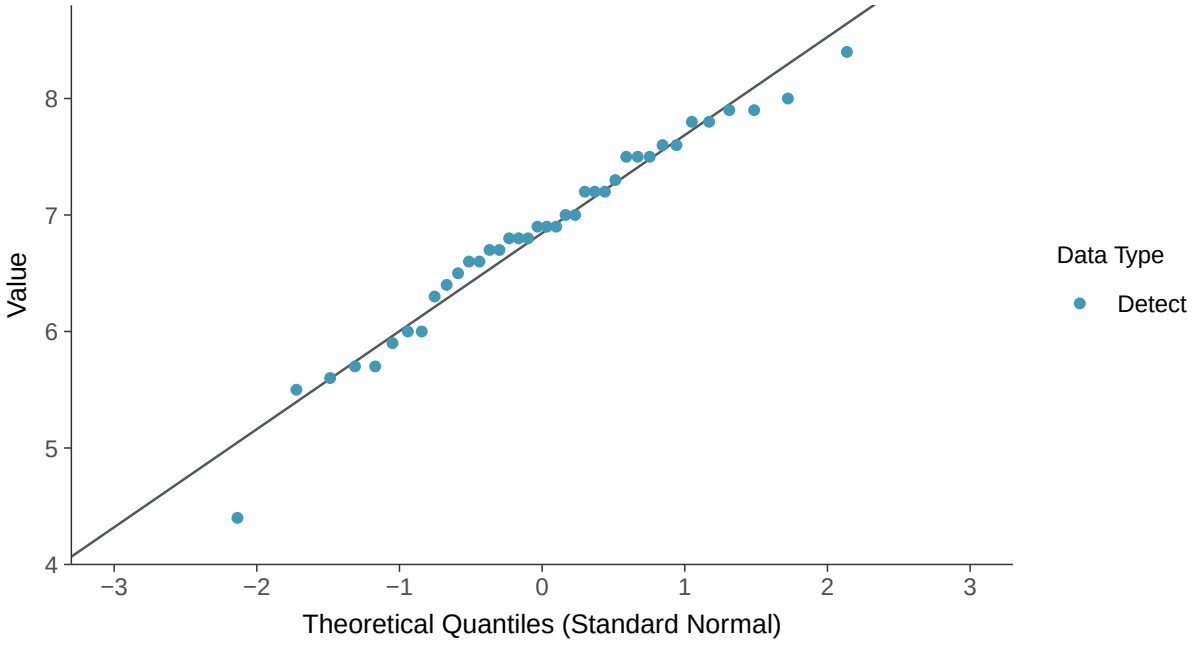
Boxplot by Season

Sulfate, MW-8 (mg/L)



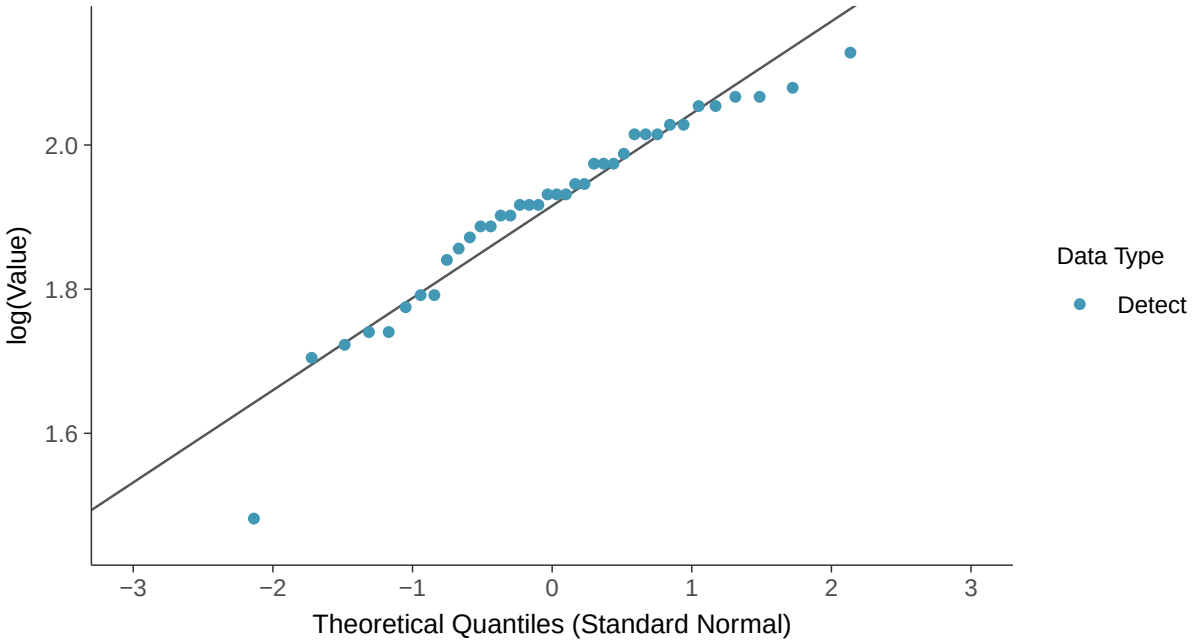
Normal Q-Q plot

Sulfate, MW-8 (mg/L)



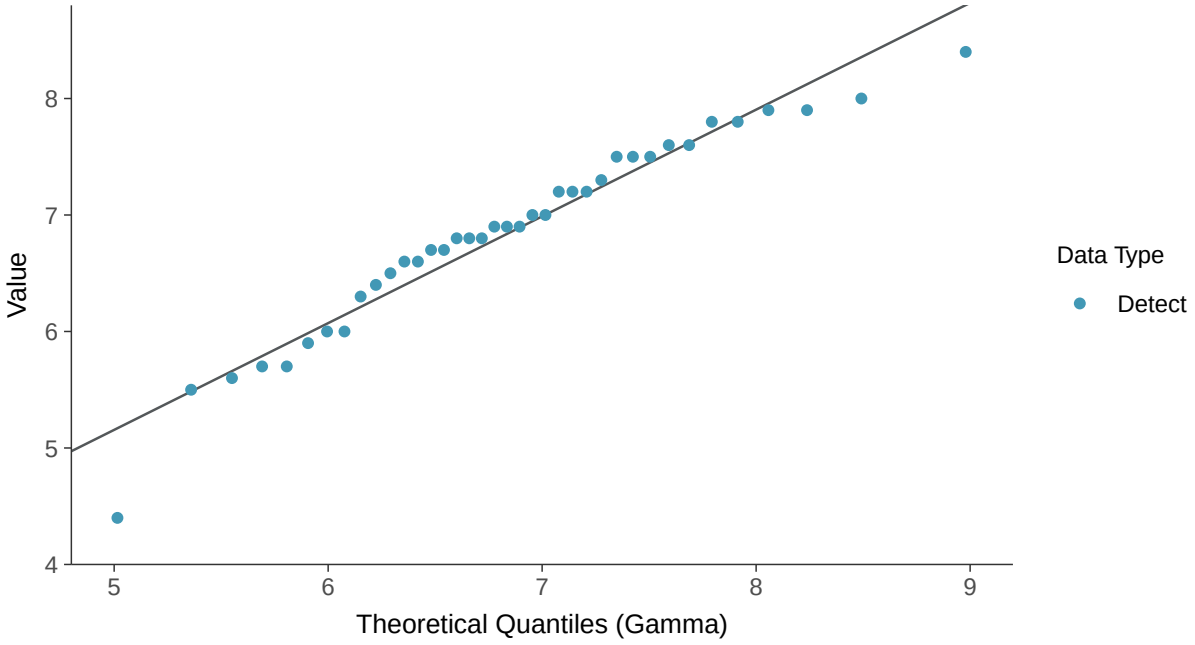
Lognormal Q-Q plot

Sulfate, MW-8 (mg/L)



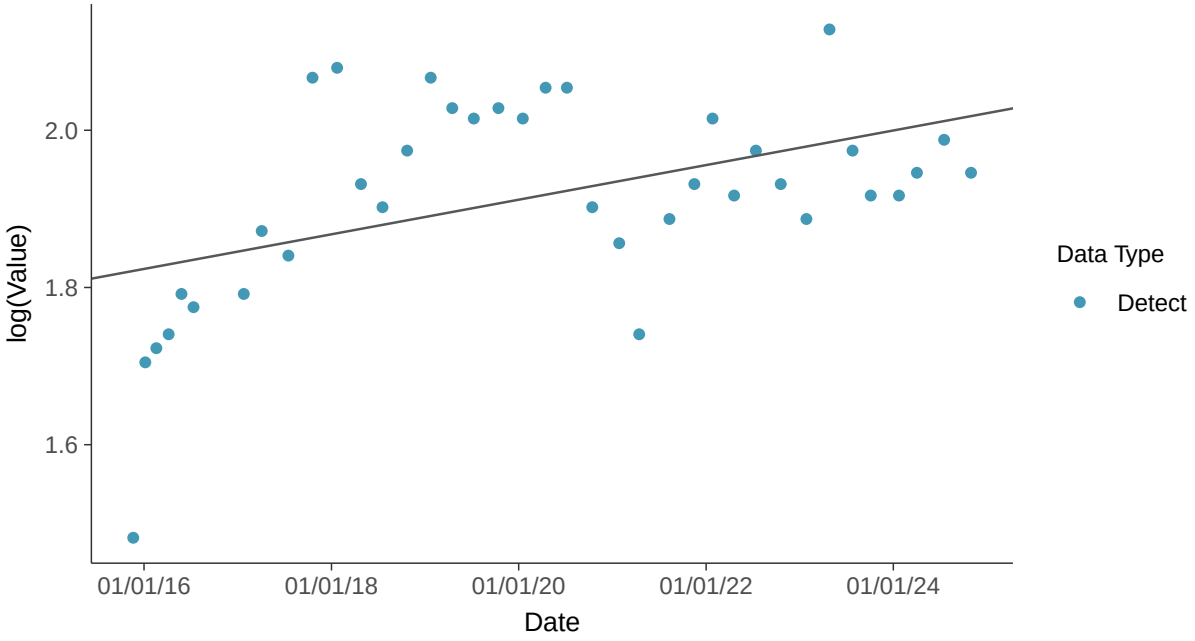
Gamma Q-Q plot

Sulfate, MW-8 (mg/L)



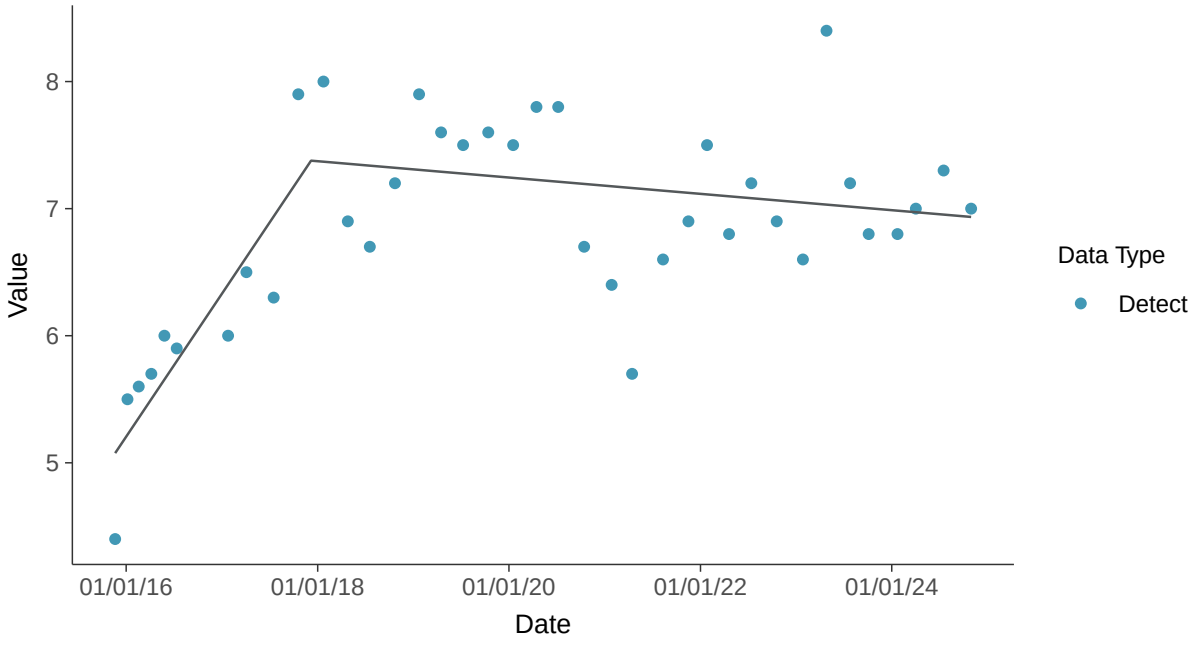
Trend Regression: Lognormal MLE

Sulfate, MW-8 (mg/L)



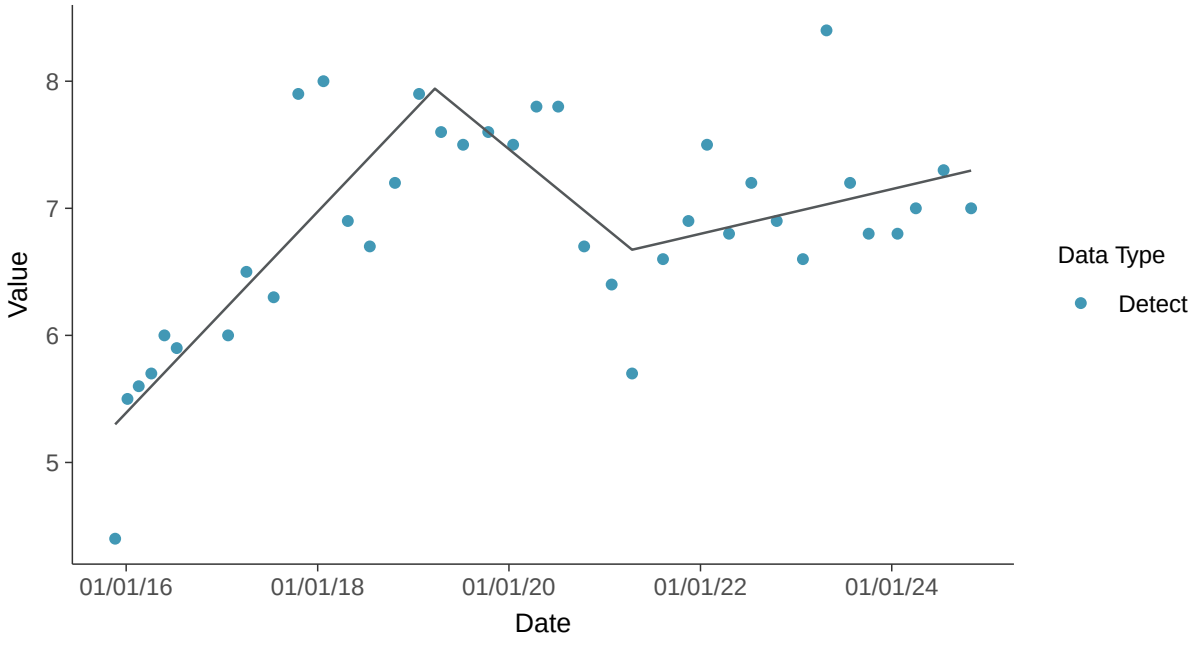
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-8 (mg/L)



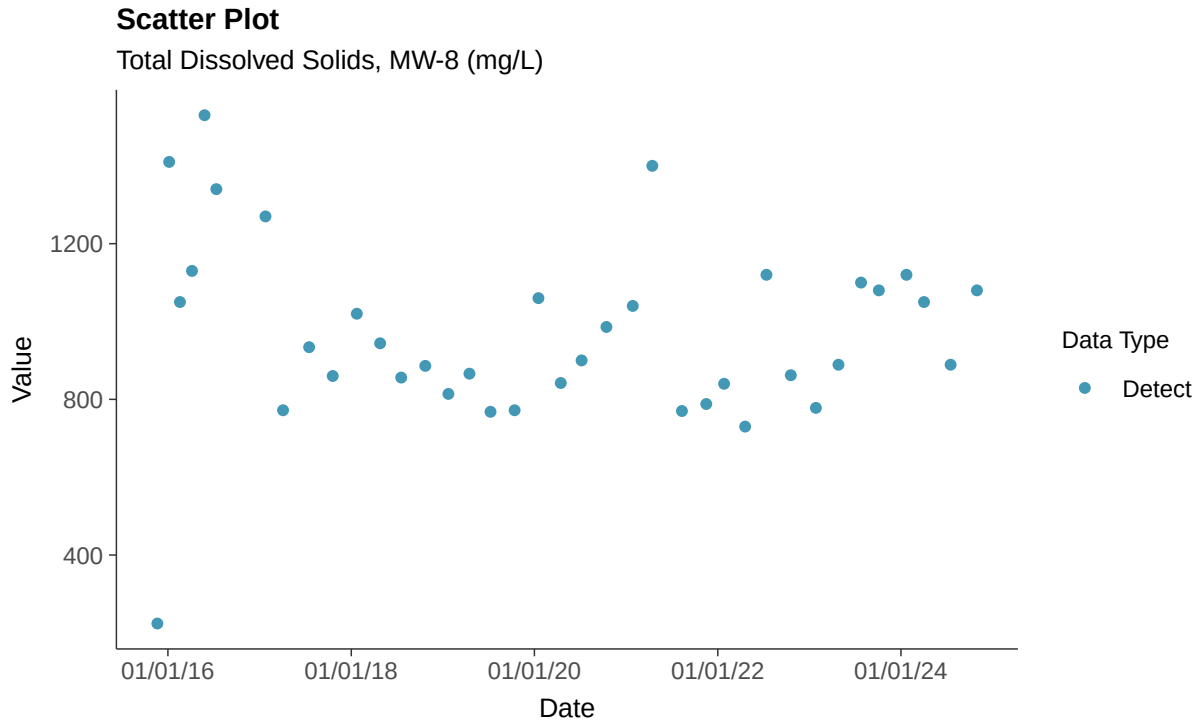
Trend Regression: Piecewise Linear-Linear-Linear

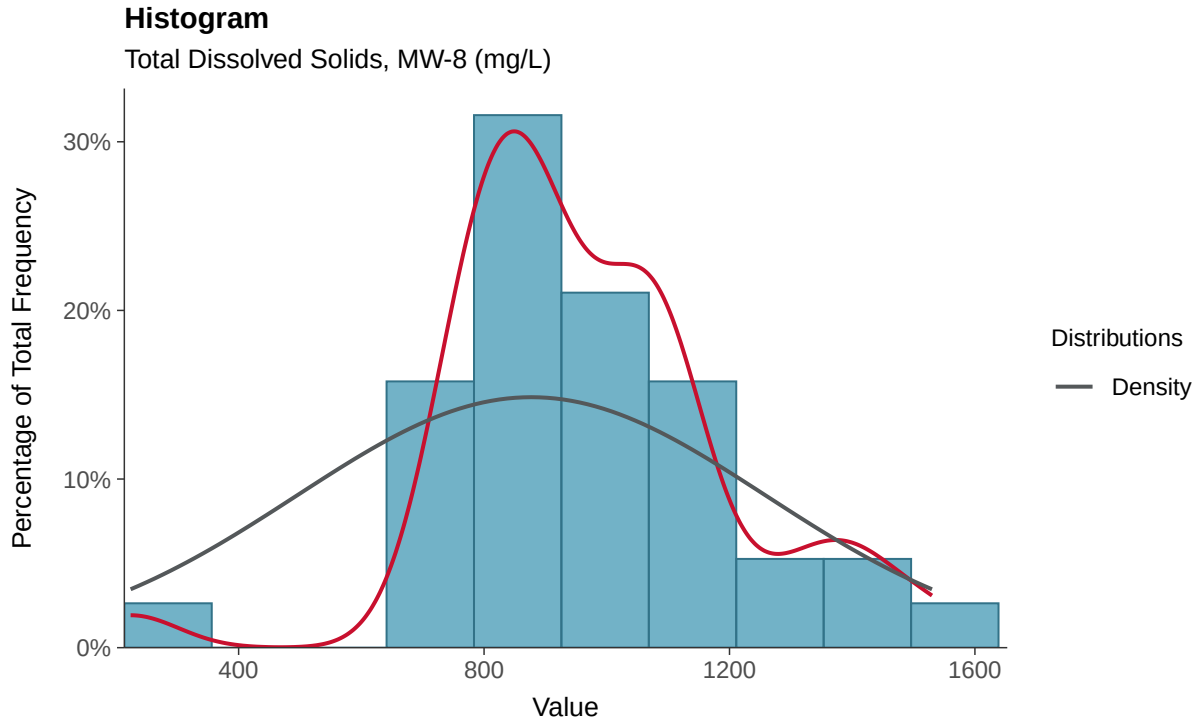
Sulfate, MW-8 (mg/L)



App. III: Total Dissolved Solids, MW-8

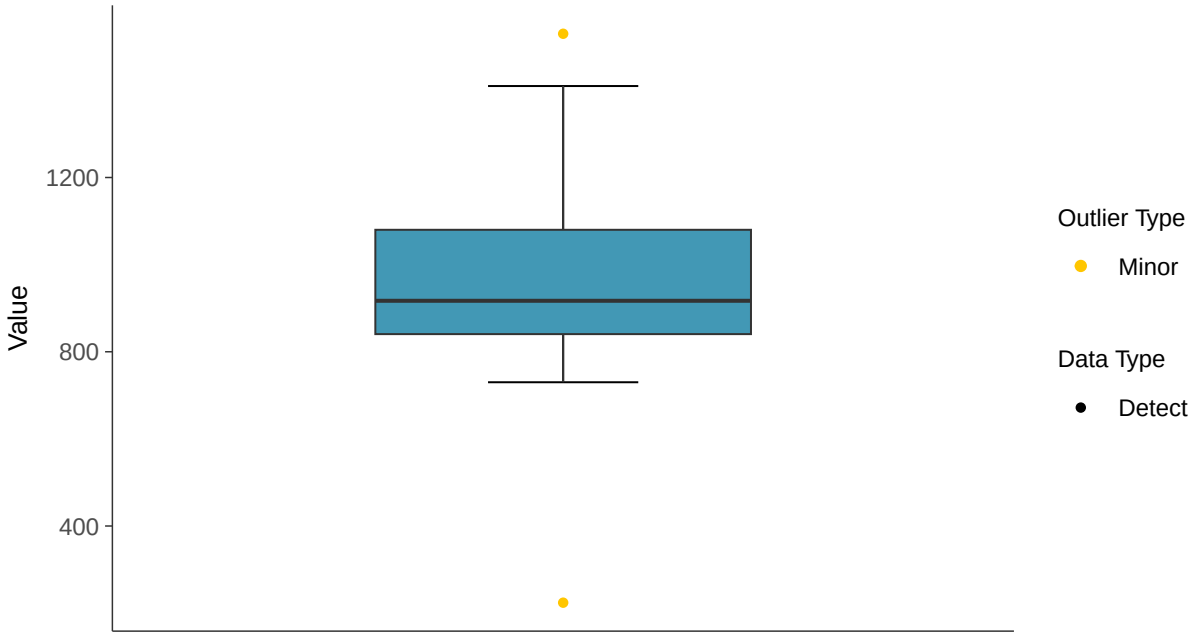
ID: 08_02_125





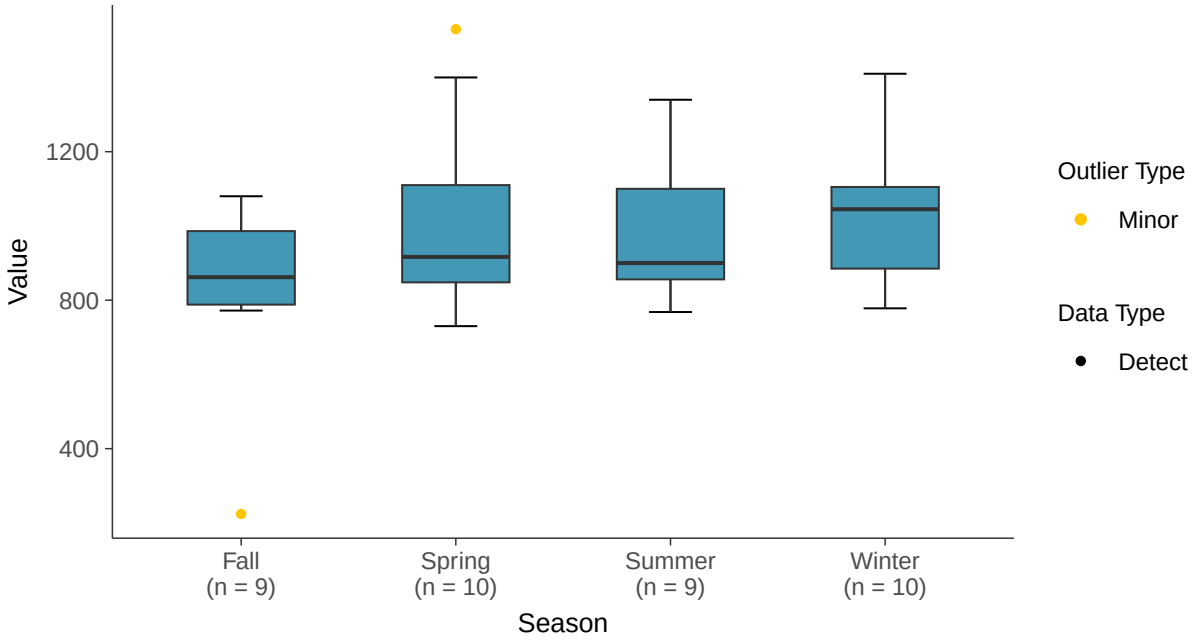
Boxplot

Total Dissolved Solids, MW-8 (mg/L)



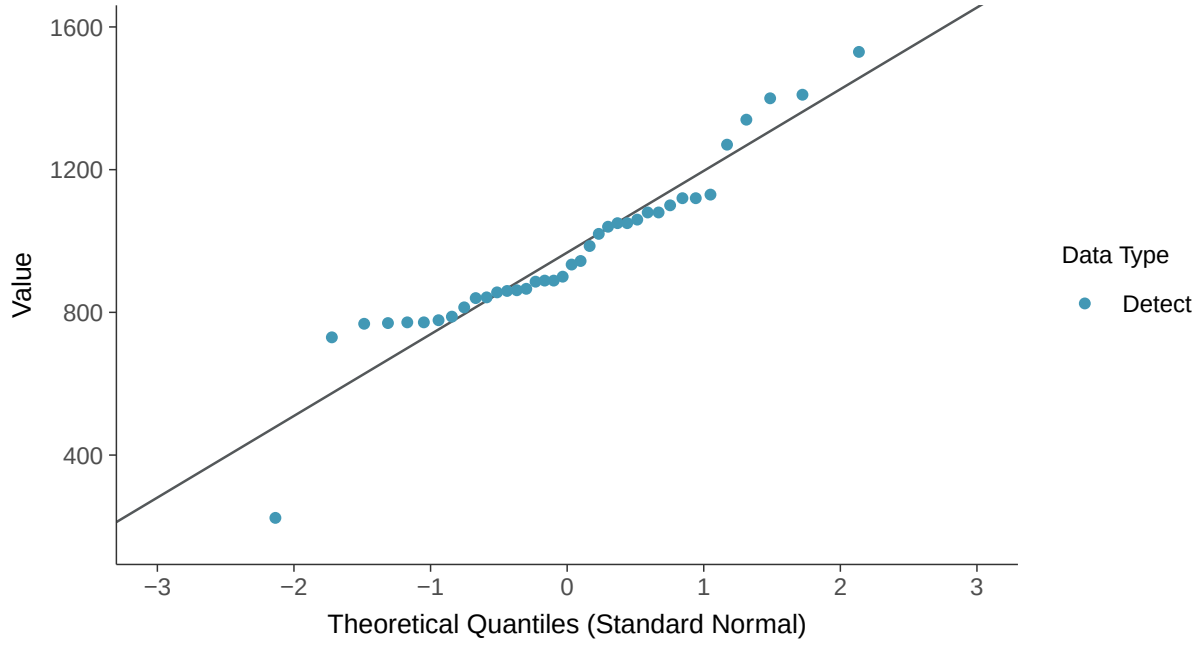
Boxplot by Season

Total Dissolved Solids, MW-8 (mg/L)



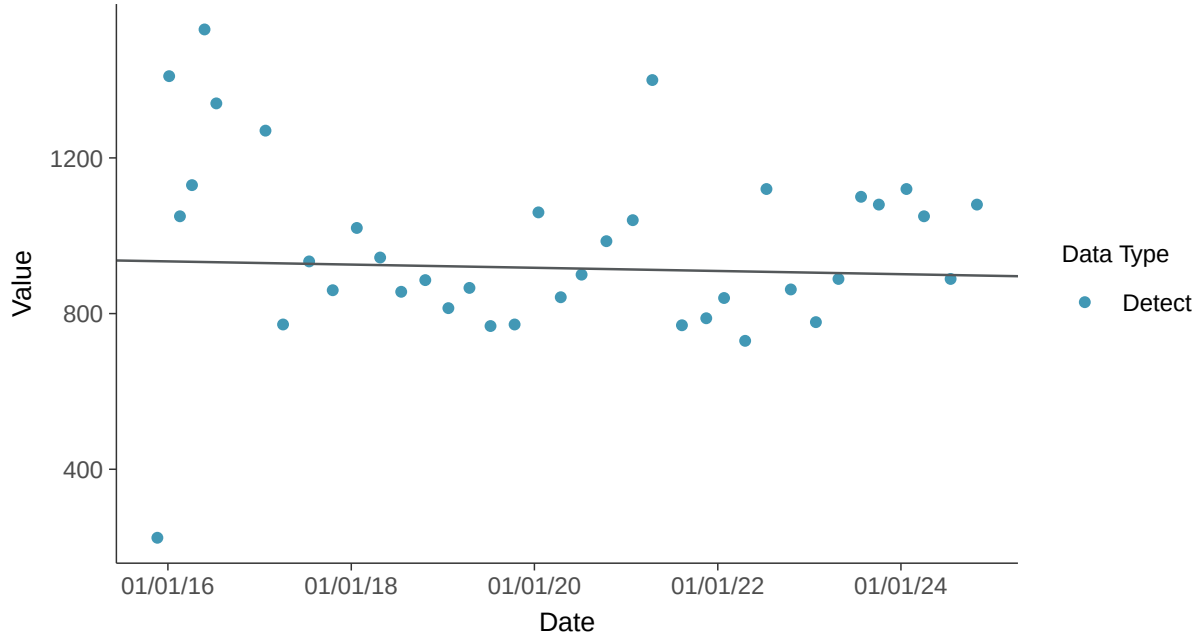
Normal Q-Q plot

Total Dissolved Solids, MW-8 (mg/L)



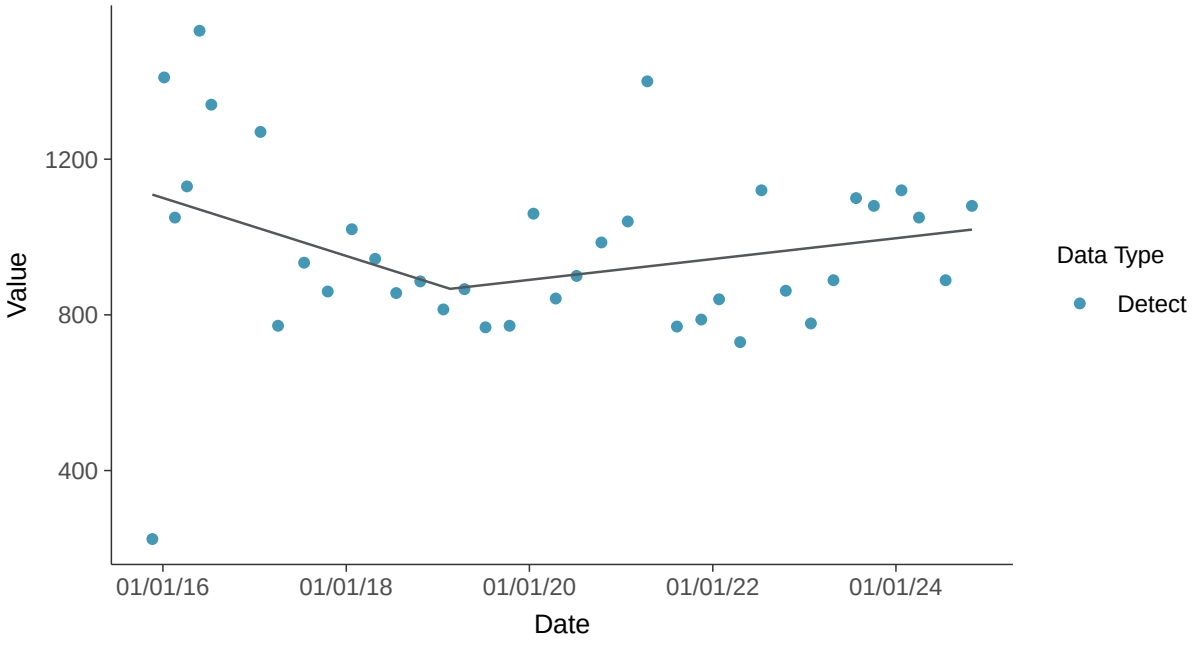
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-8 (mg/L)



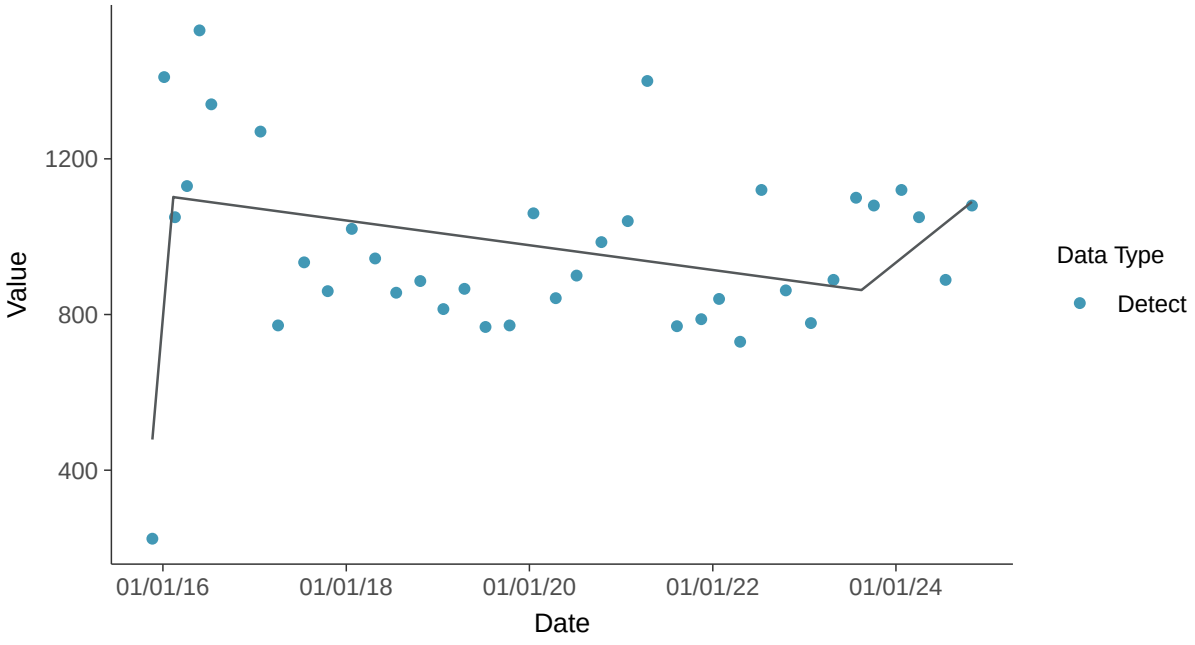
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-8 (mg/L)

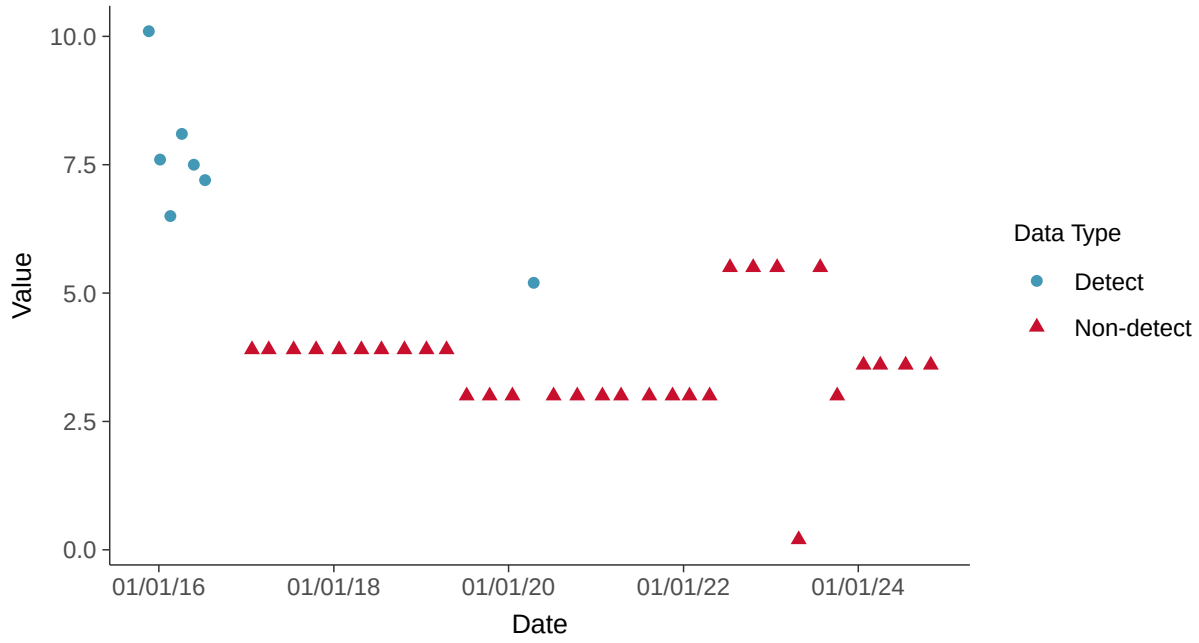


App. IV: Antimony, MW-8

ID: 08_03_101

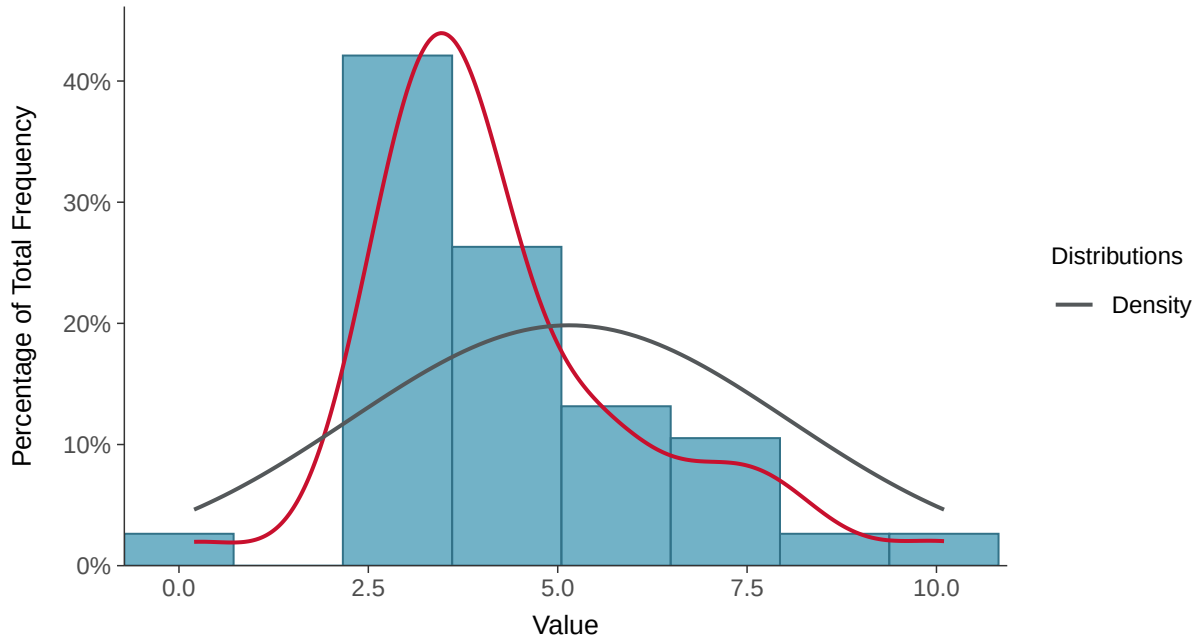
Scatter Plot

Antimony, MW-8 (ug/L)



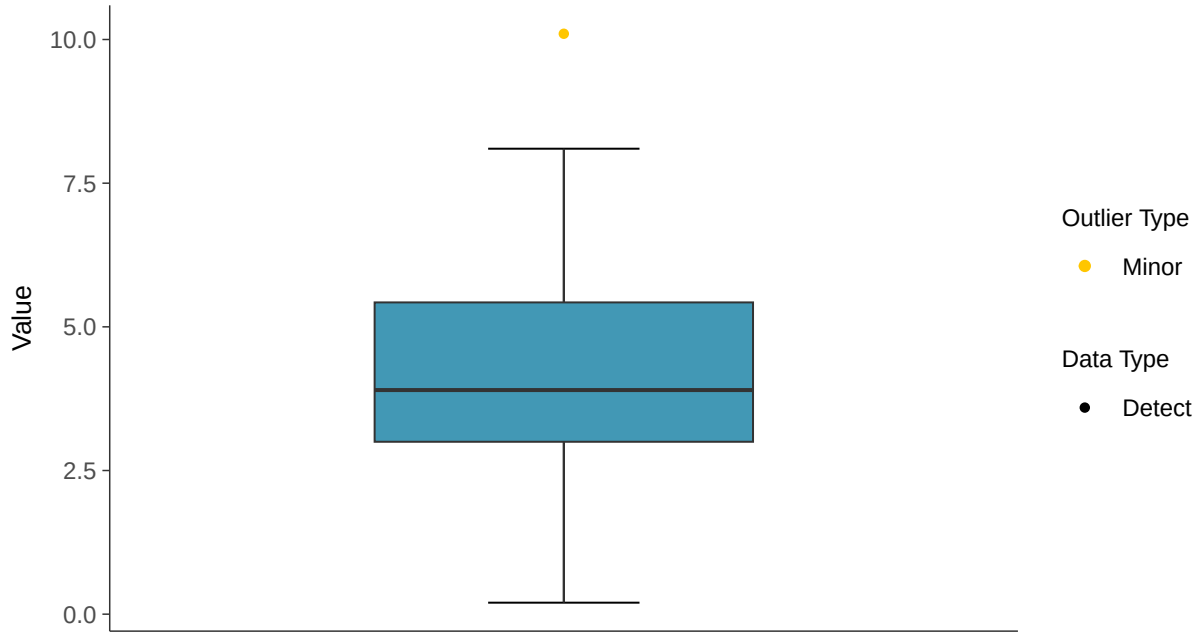
Histogram

Antimony, MW-8 (ug/L)



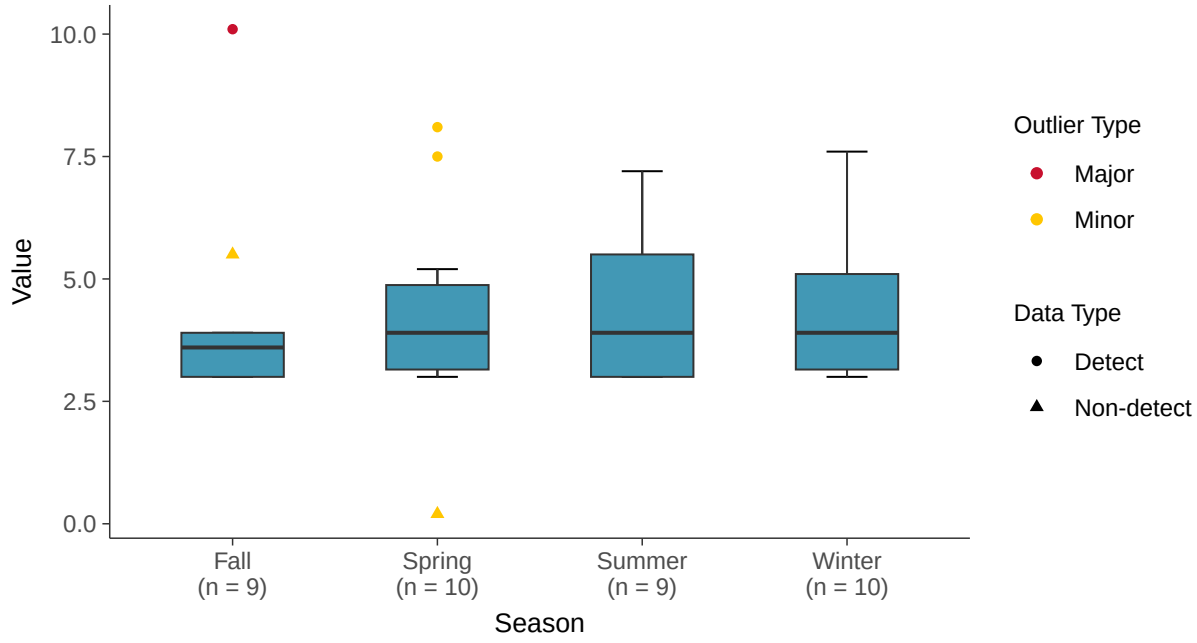
Boxplot

Antimony, MW-8 (ug/L)



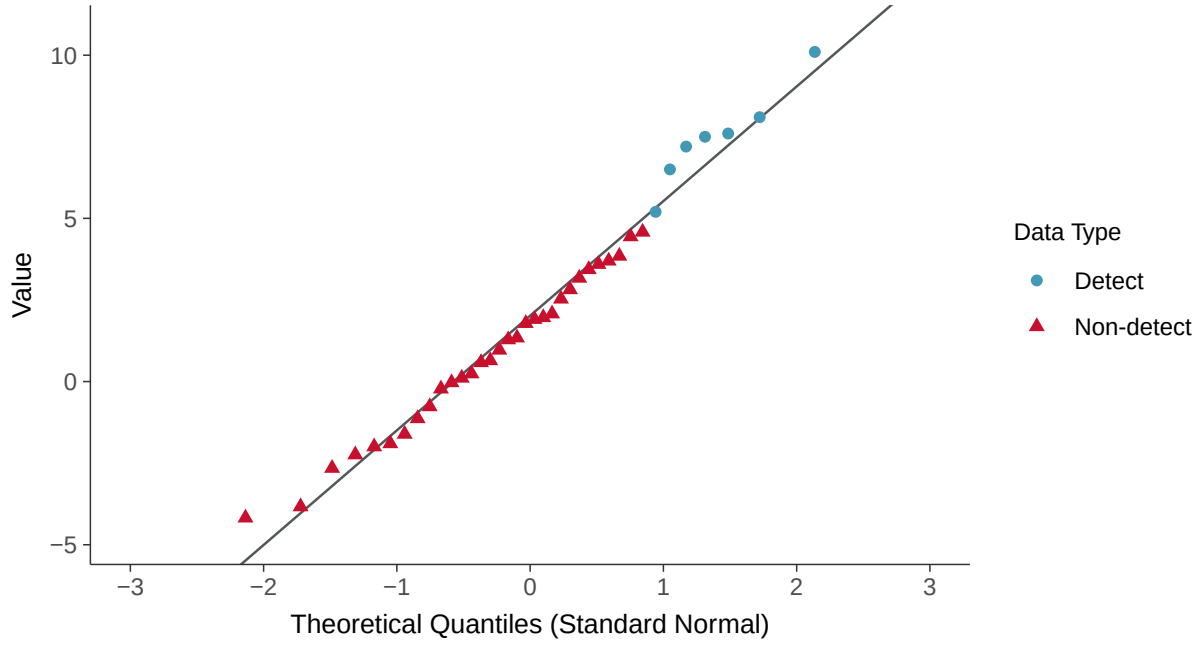
Boxplot by Season

Antimony, MW-8 (ug/L)



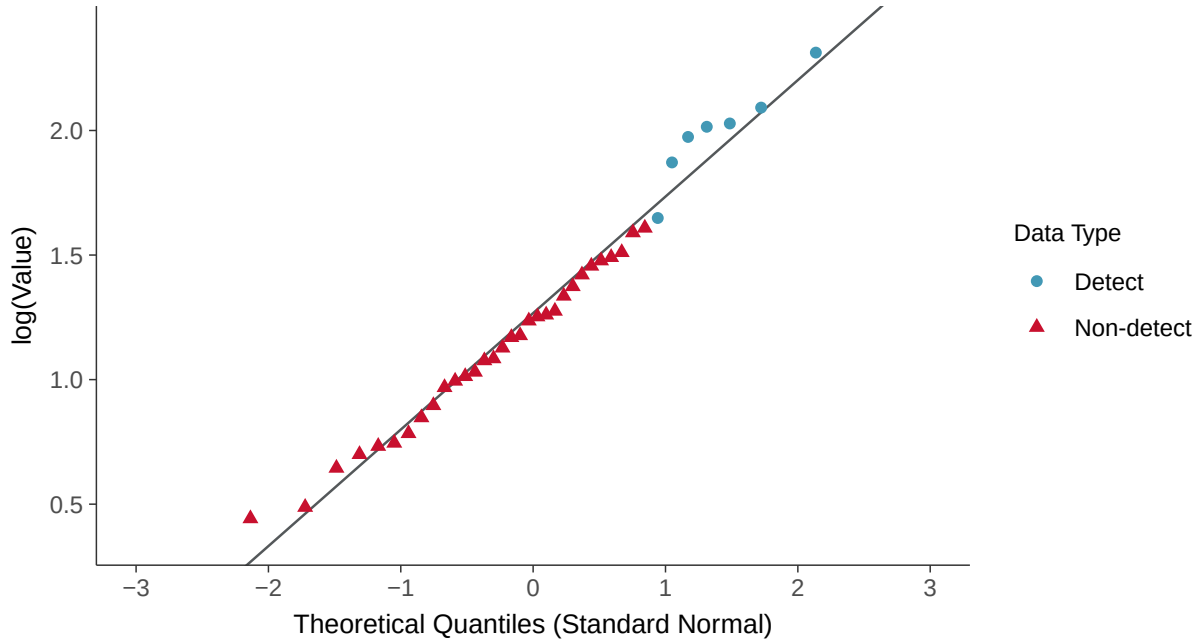
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



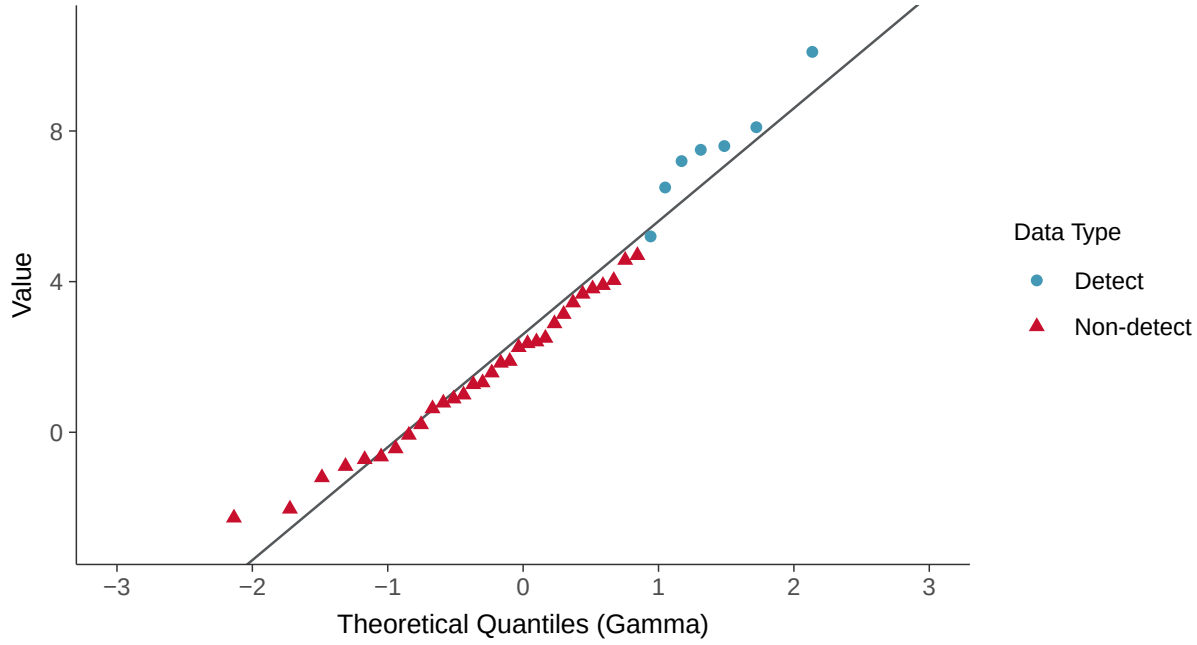
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



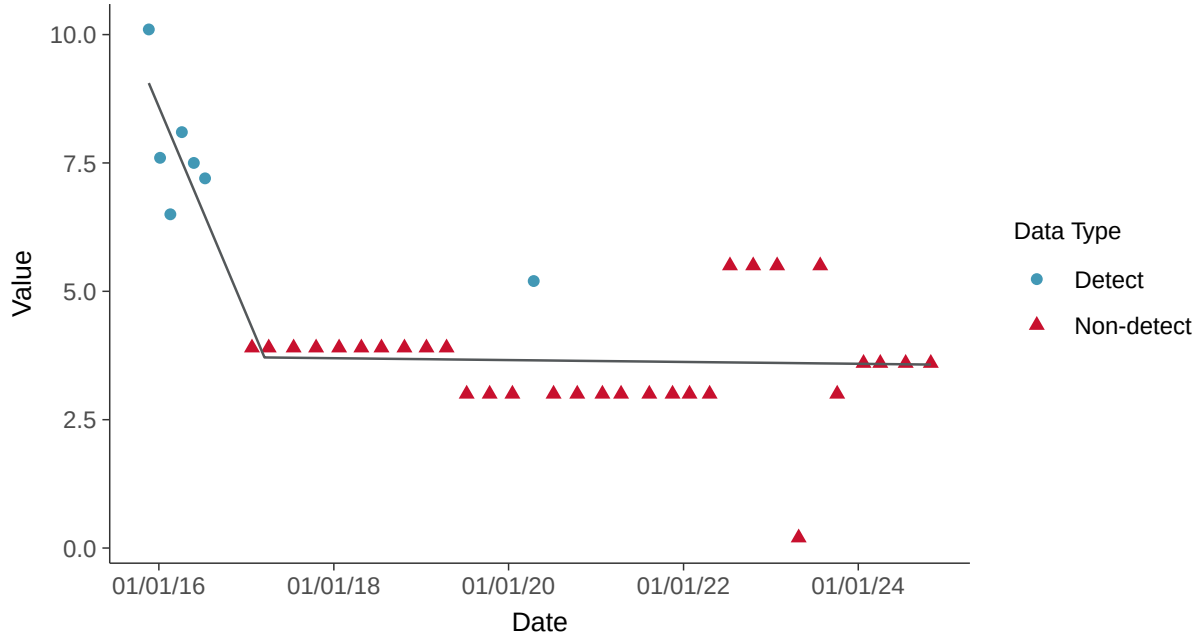
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



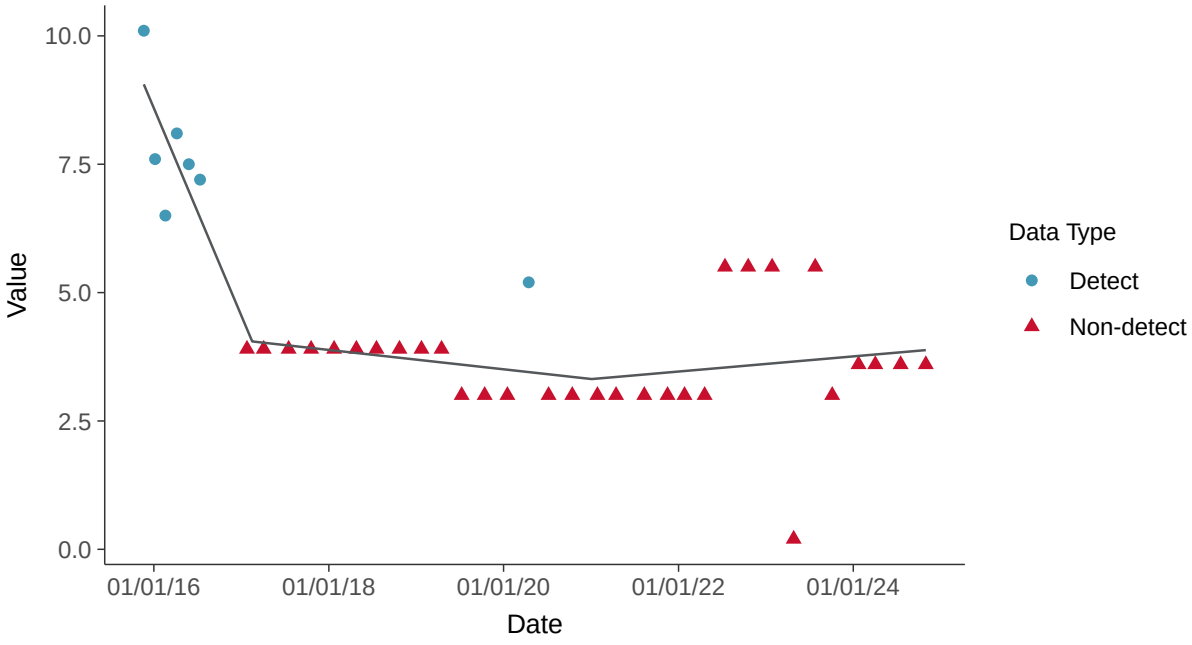
Trend Regression: Piecewise Linear-Linear

Antimony, MW-8 (ug/L)



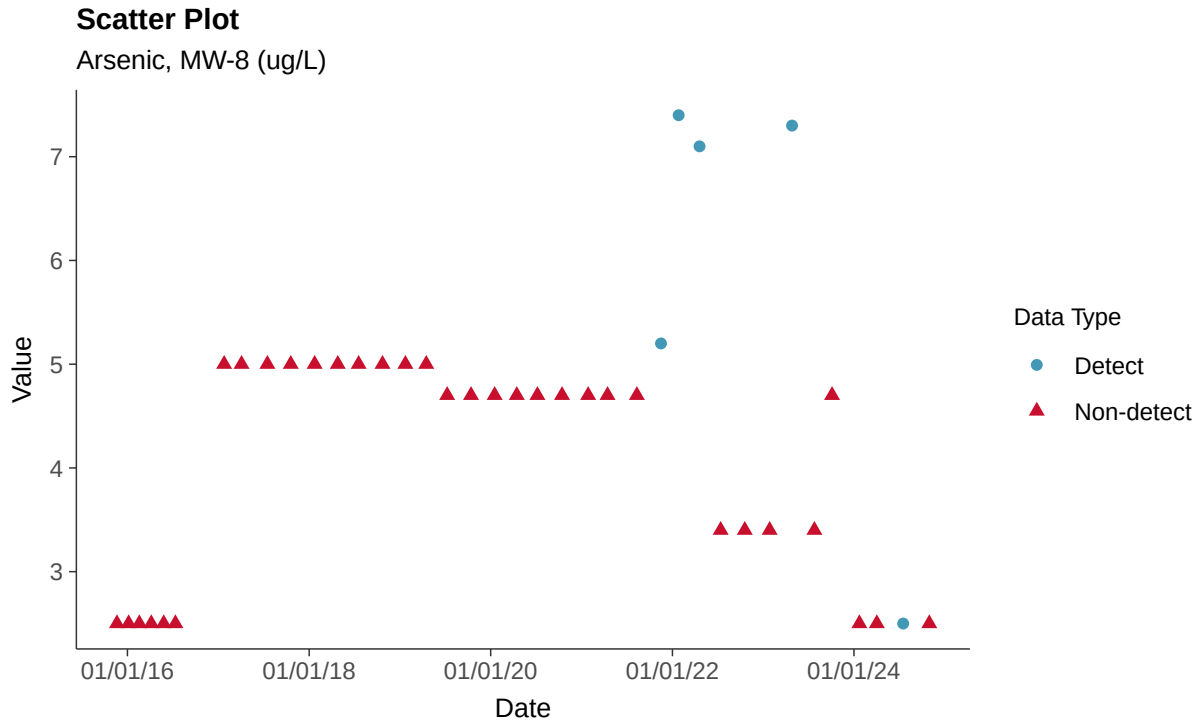
Trend Regression: Piecewise Linear-Linear-Linear

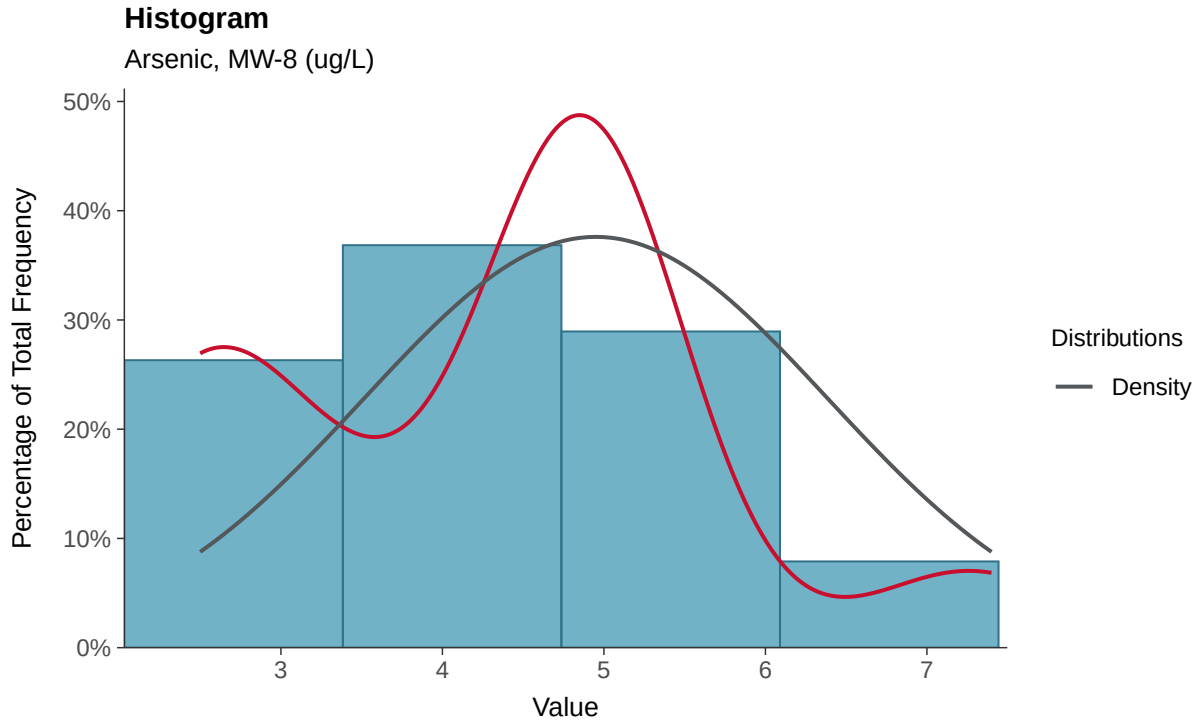
Antimony, MW-8 (ug/L)



App. IV: Arsenic, MW-8

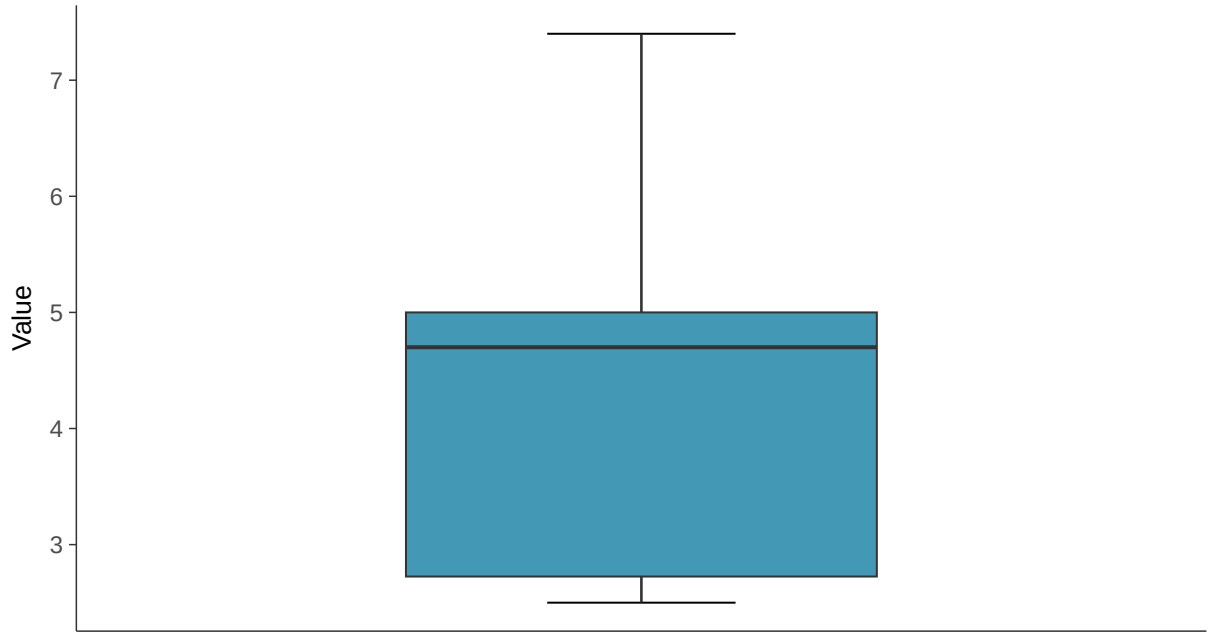
ID: 08_03_102





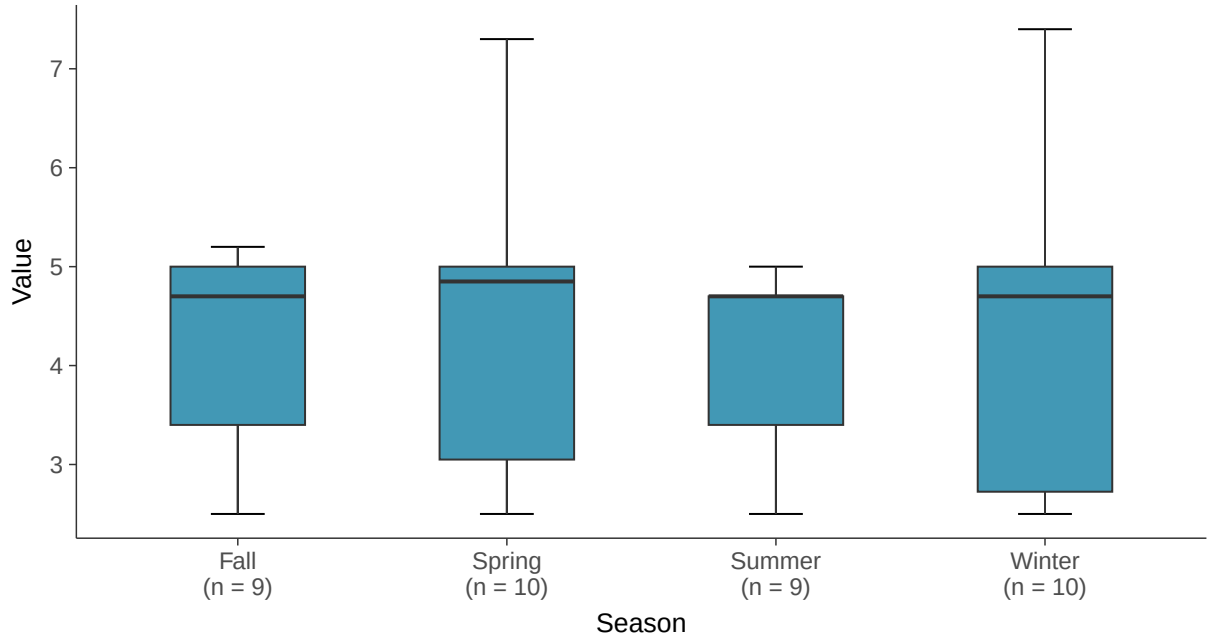
Boxplot

Arsenic, MW-8 (ug/L)



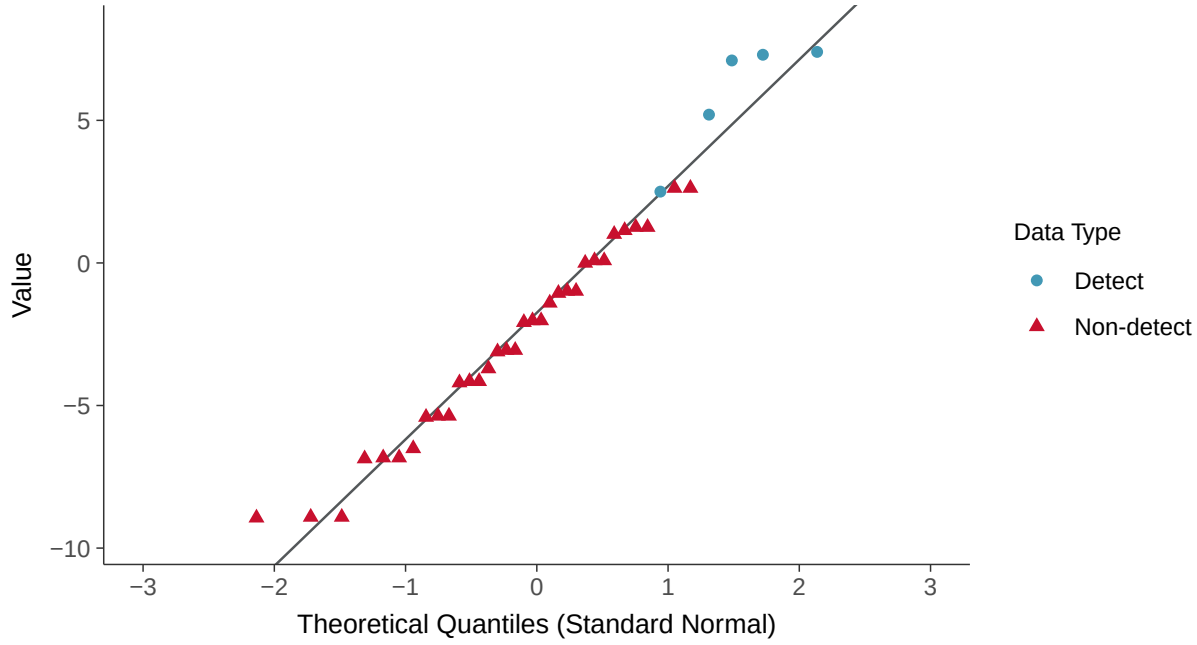
Boxplot by Season

Arsenic, MW-8 (ug/L)



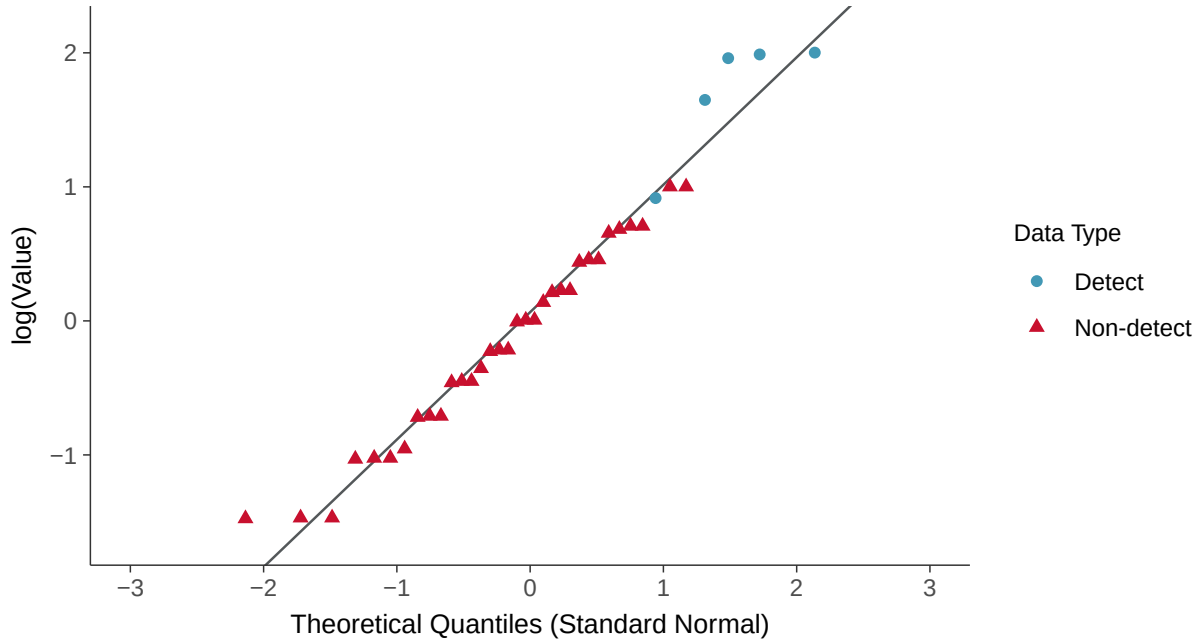
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-8 (ug/L)



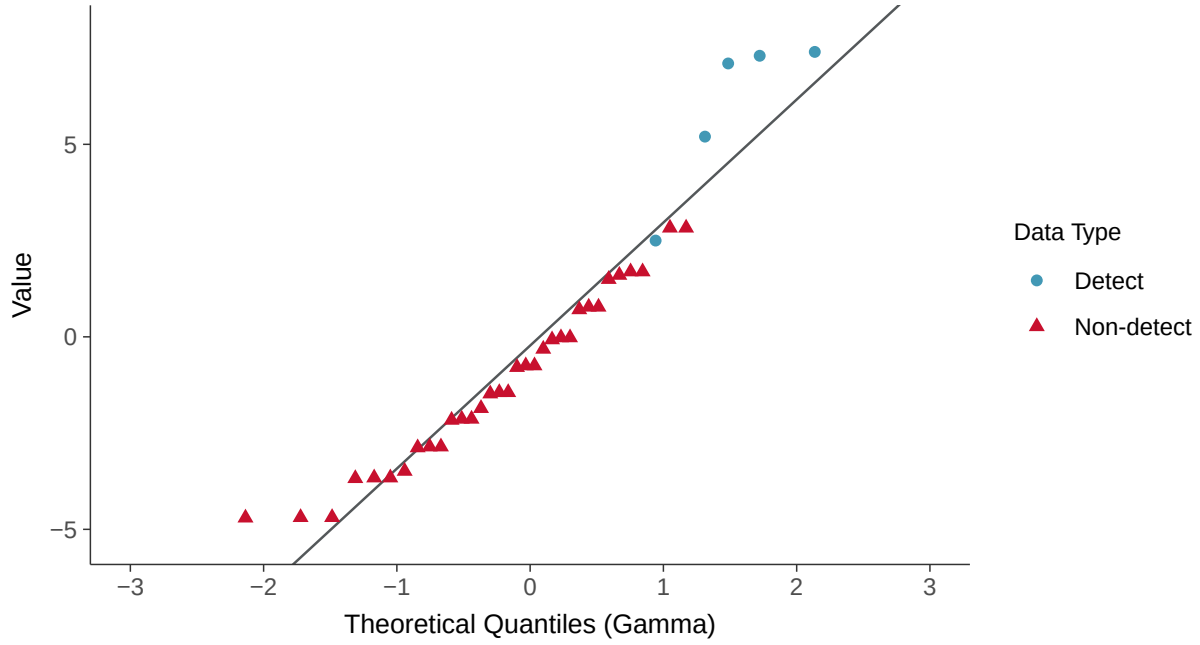
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-8 (ug/L)



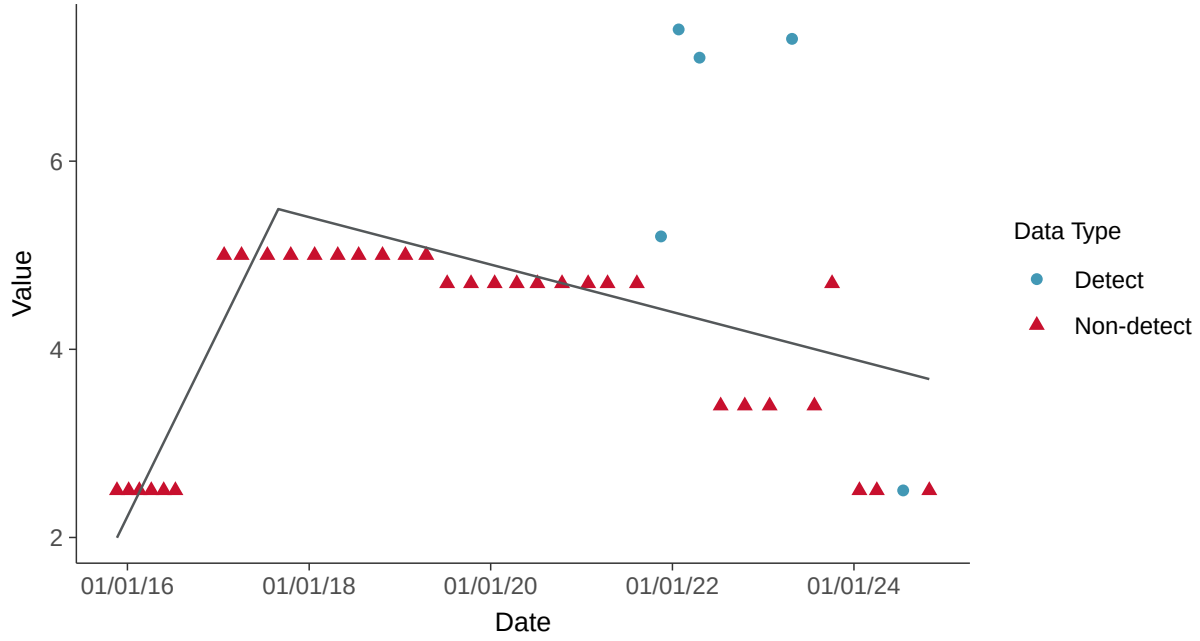
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-8 (ug/L)



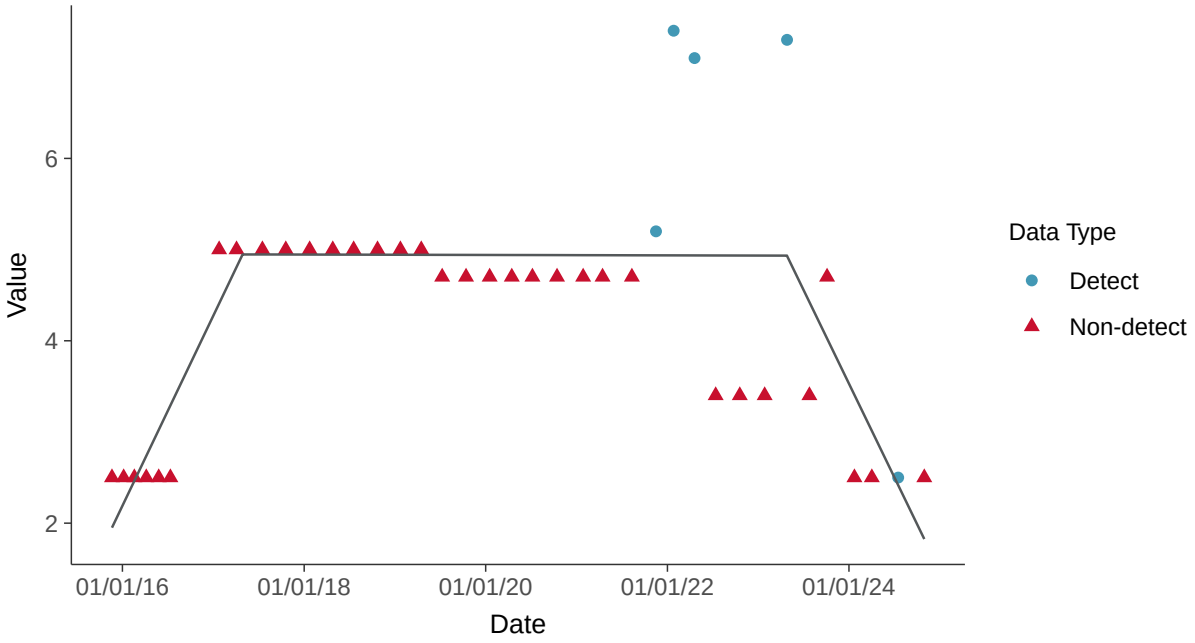
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-8 (ug/L)

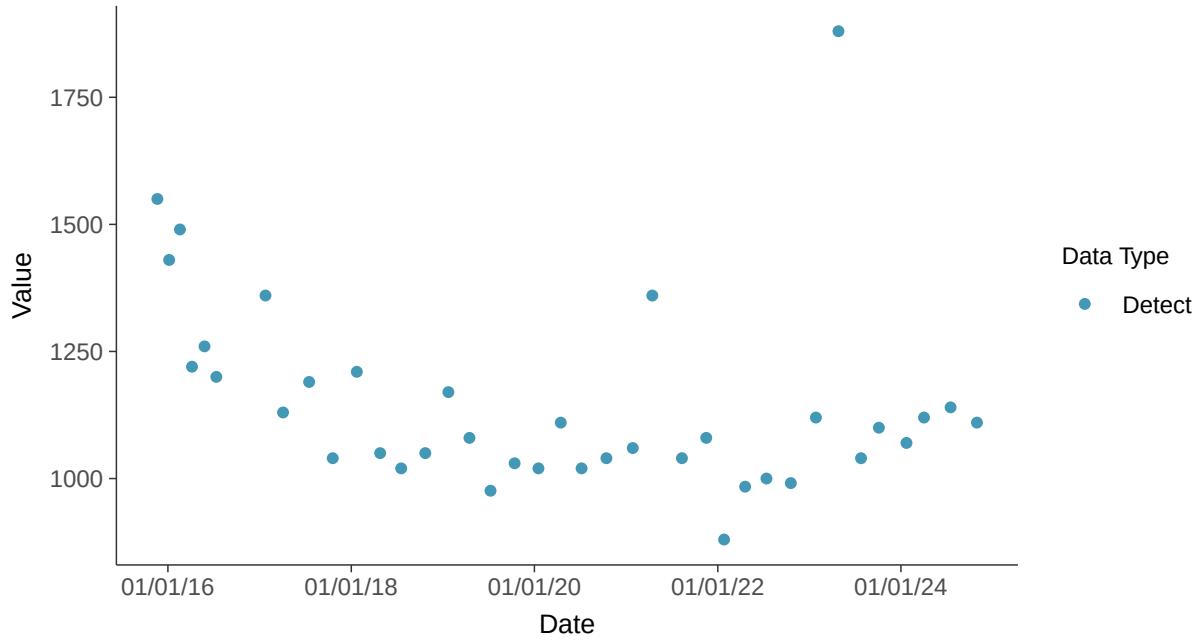


App. IV: Barium, MW-8

ID: 08_03_103

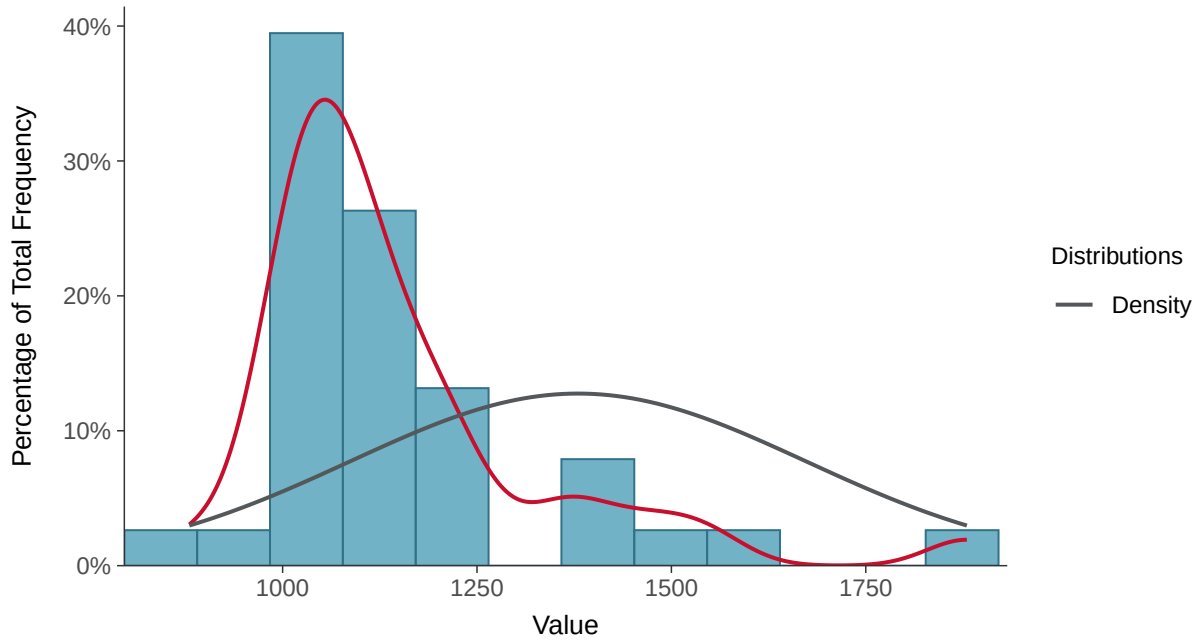
Scatter Plot

Barium, MW-8 (ug/L)



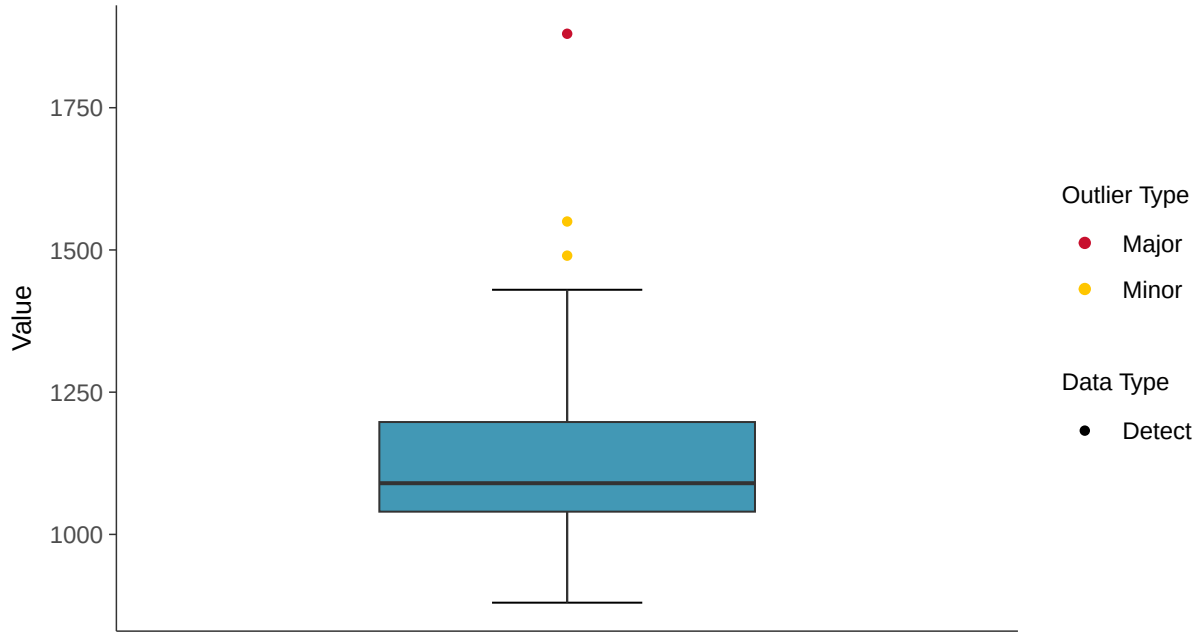
Histogram

Barium, MW-8 (ug/L)



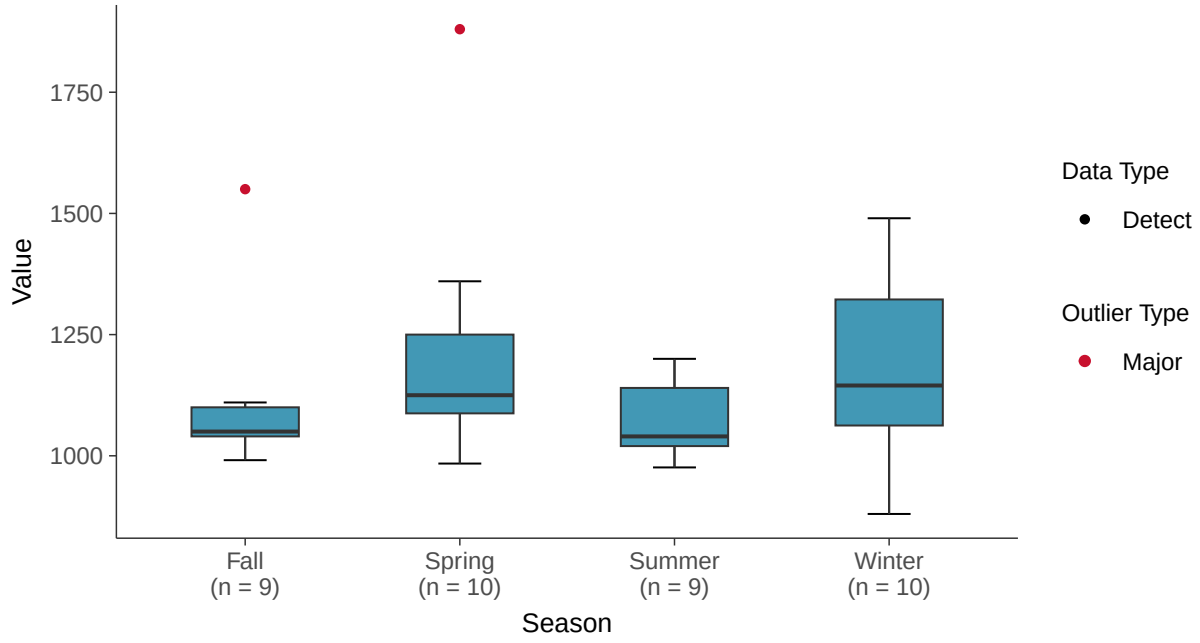
Boxplot

Barium, MW-8 (ug/L)



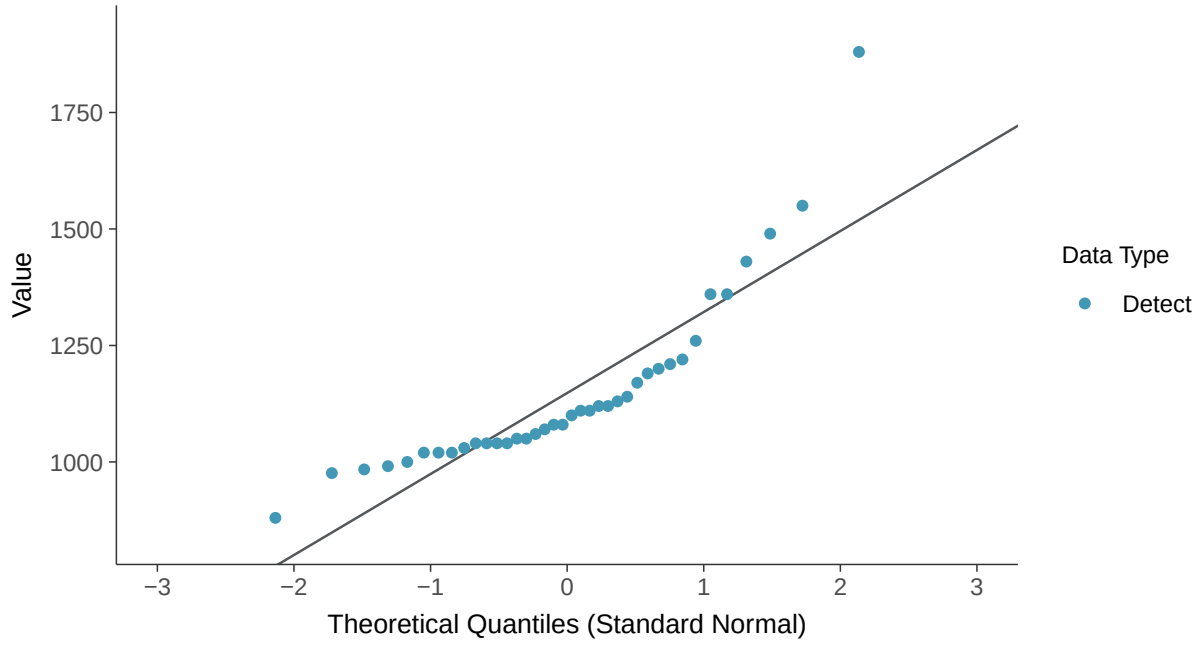
Boxplot by Season

Barium, MW-8 (ug/L)



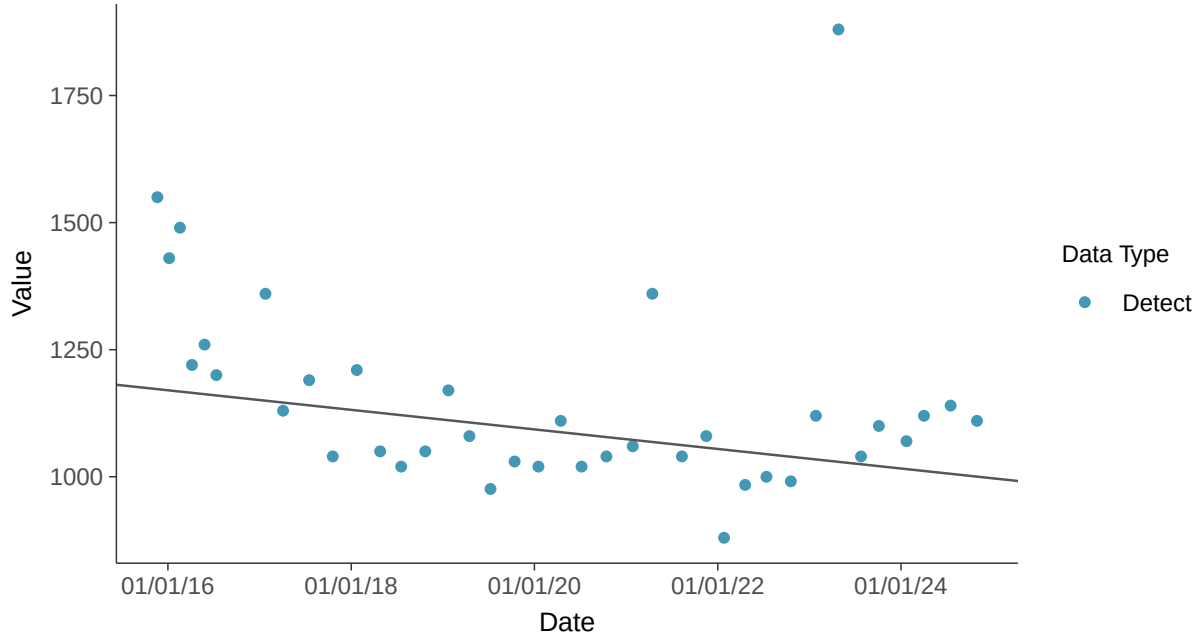
Normal Q-Q plot

Barium, MW-8 (ug/L)



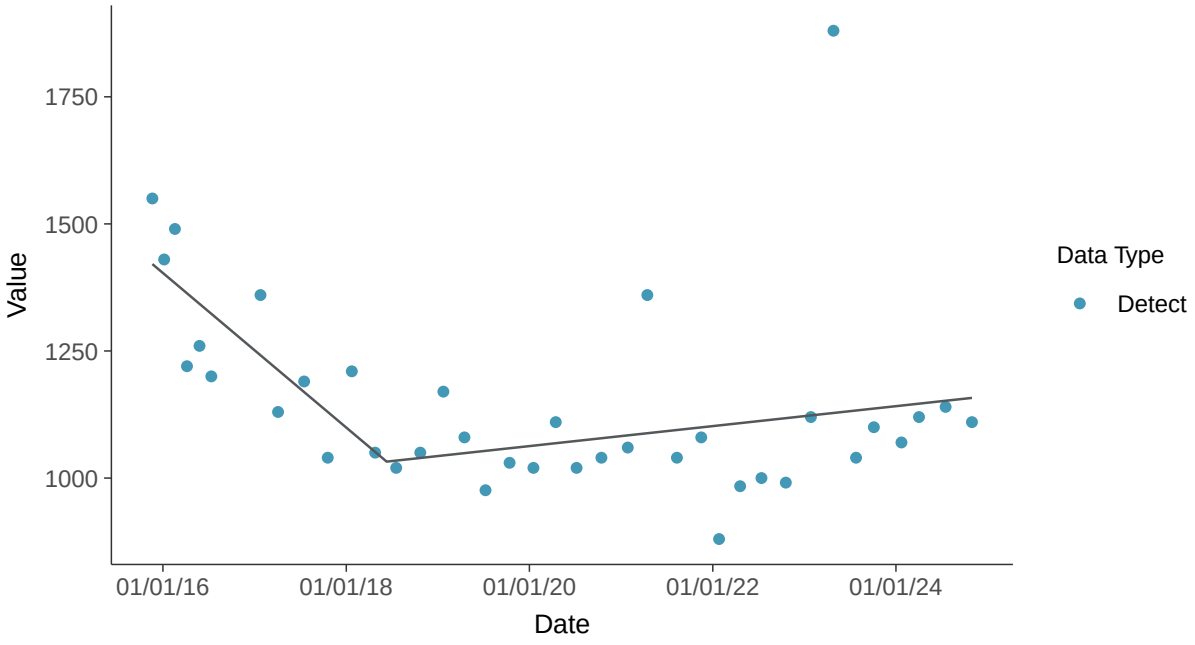
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-8 (ug/L)



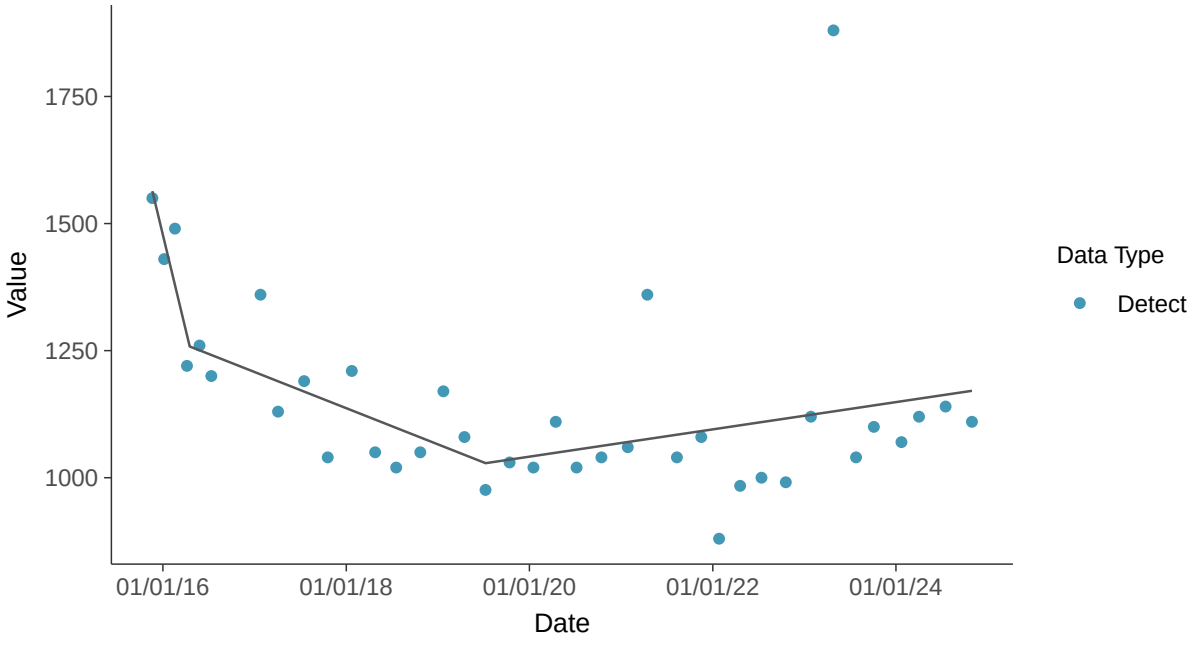
Trend Regression: Piecewise Linear-Linear

Barium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-8 (ug/L)

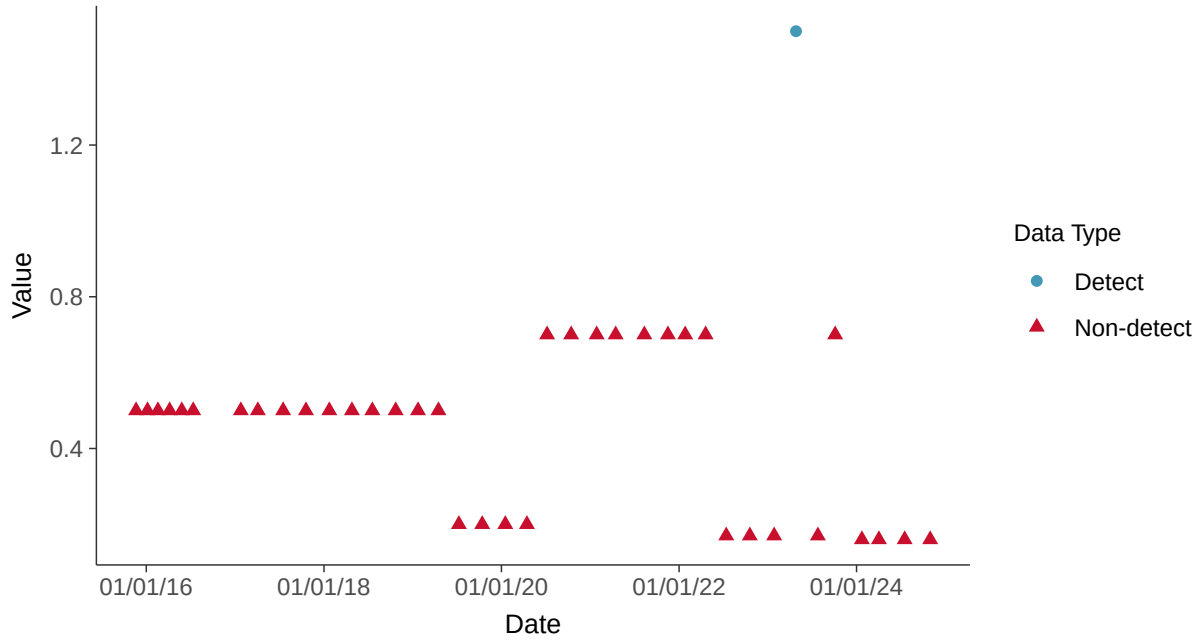


App. IV: Beryllium, MW-8

ID: 08_03_104

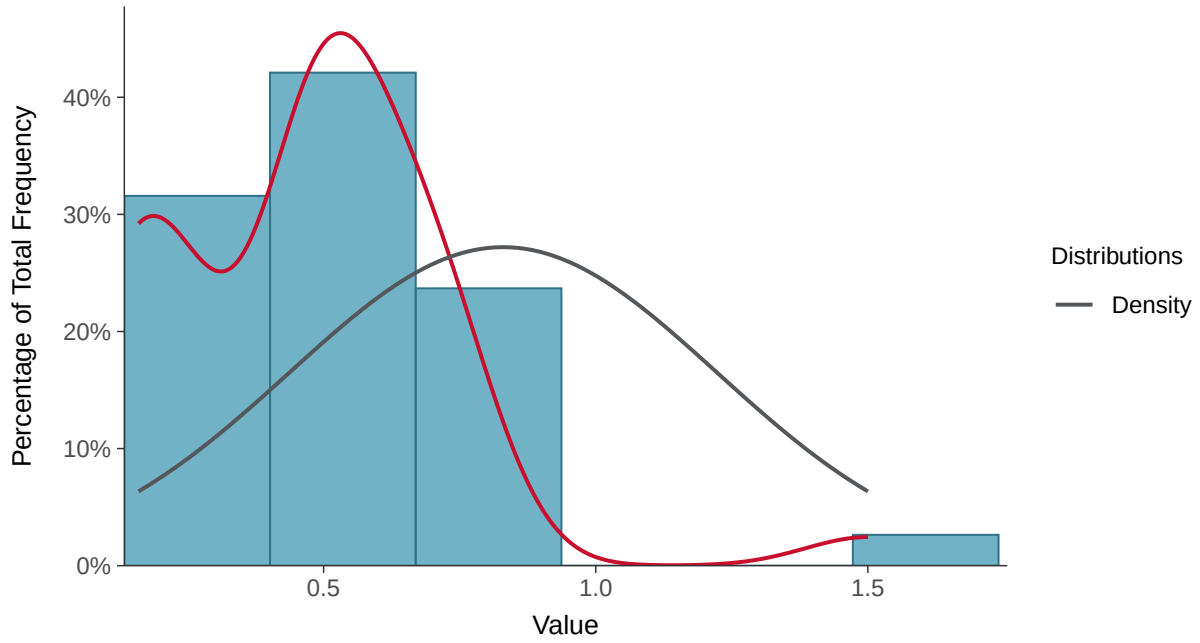
Scatter Plot

Beryllium, MW-8 (ug/L)



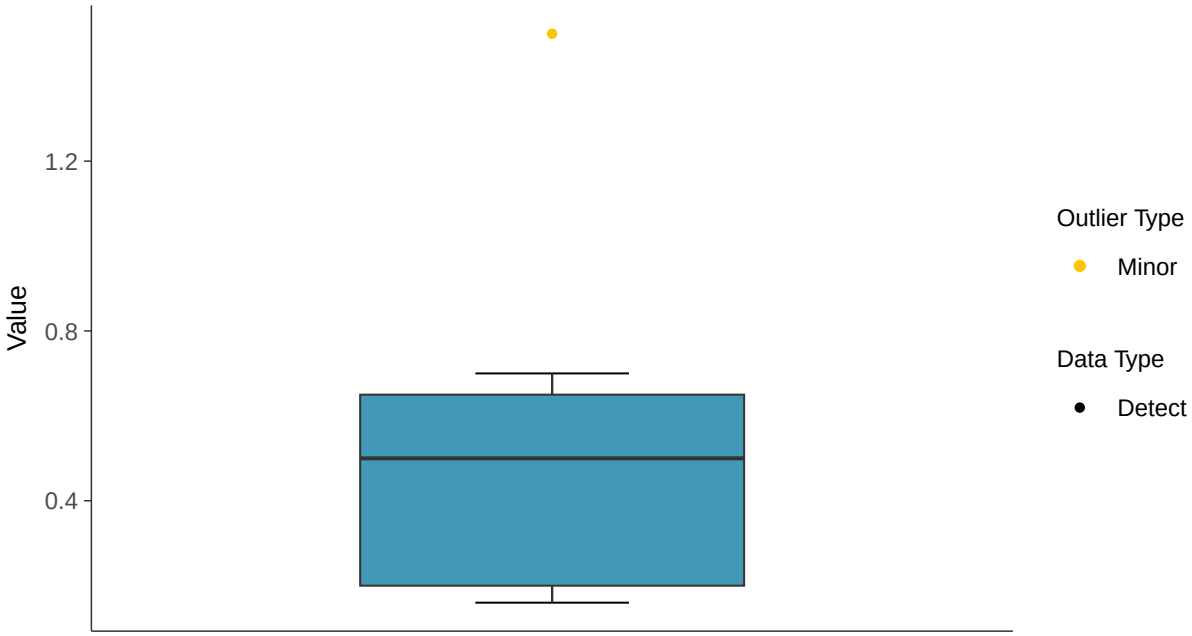
Histogram

Beryllium, MW-8 (ug/L)



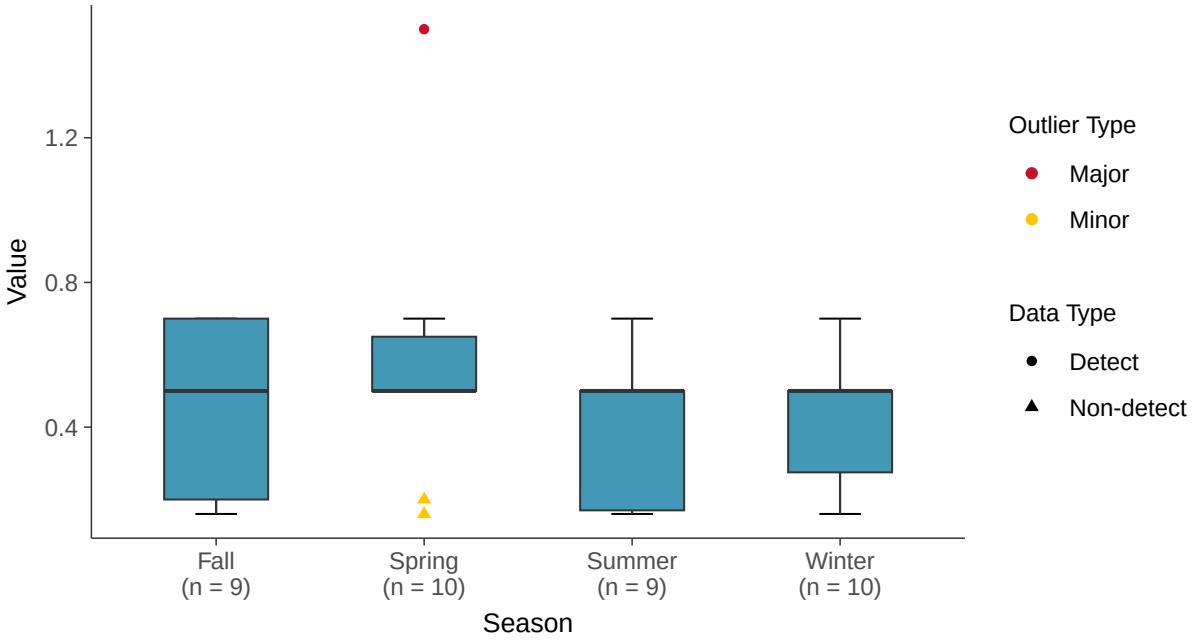
Boxplot

Beryllium, MW-8 (ug/L)



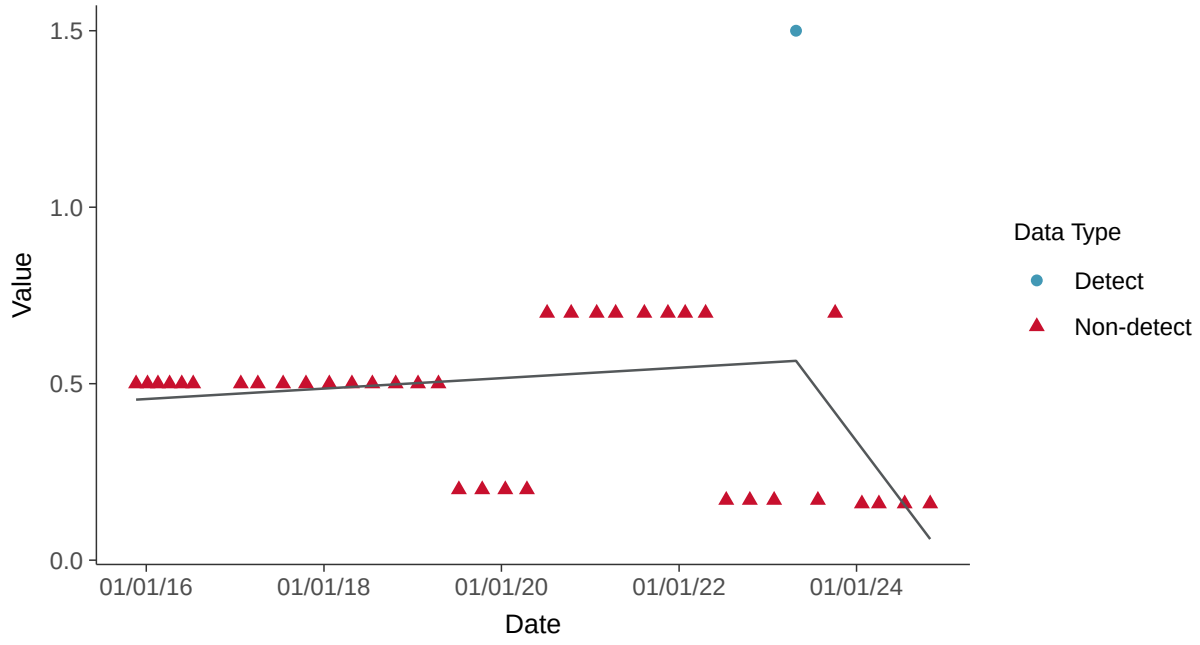
Boxplot by Season

Beryllium, MW-8 (ug/L)



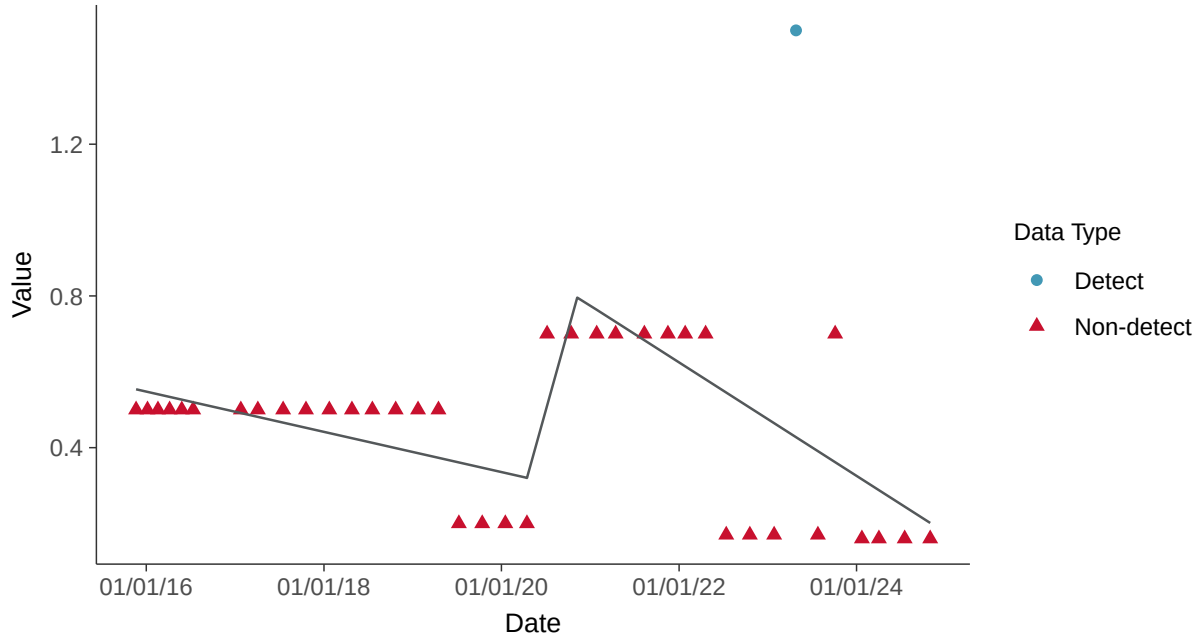
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-8 (ug/L)

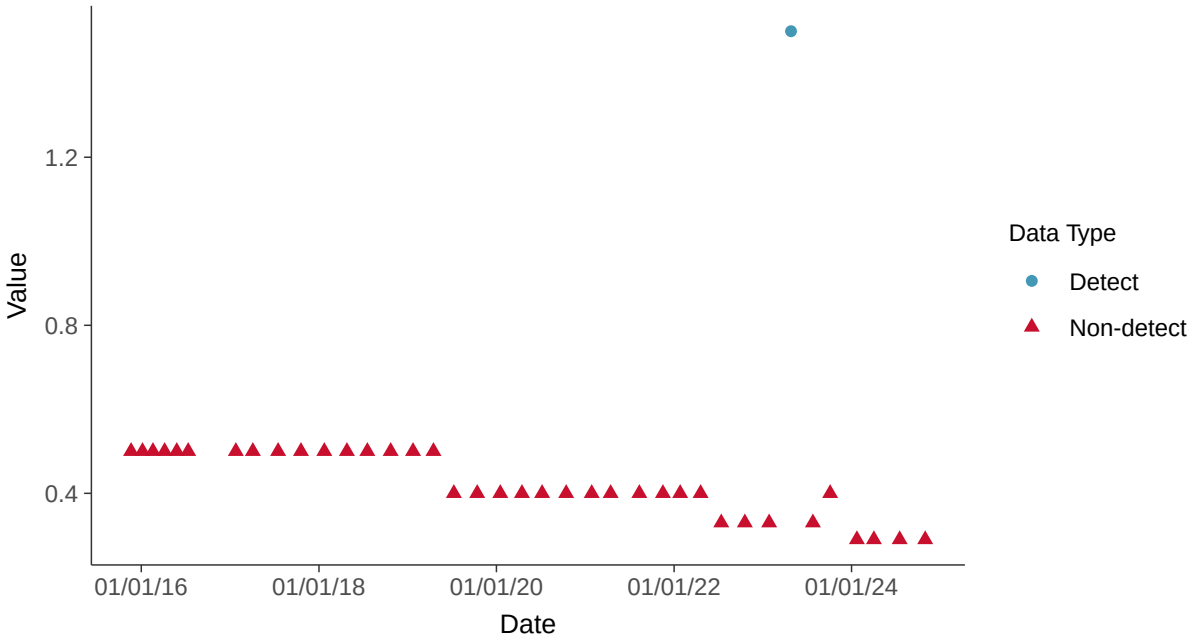


App. IV: Cadmium, MW-8

ID: 08_03_106

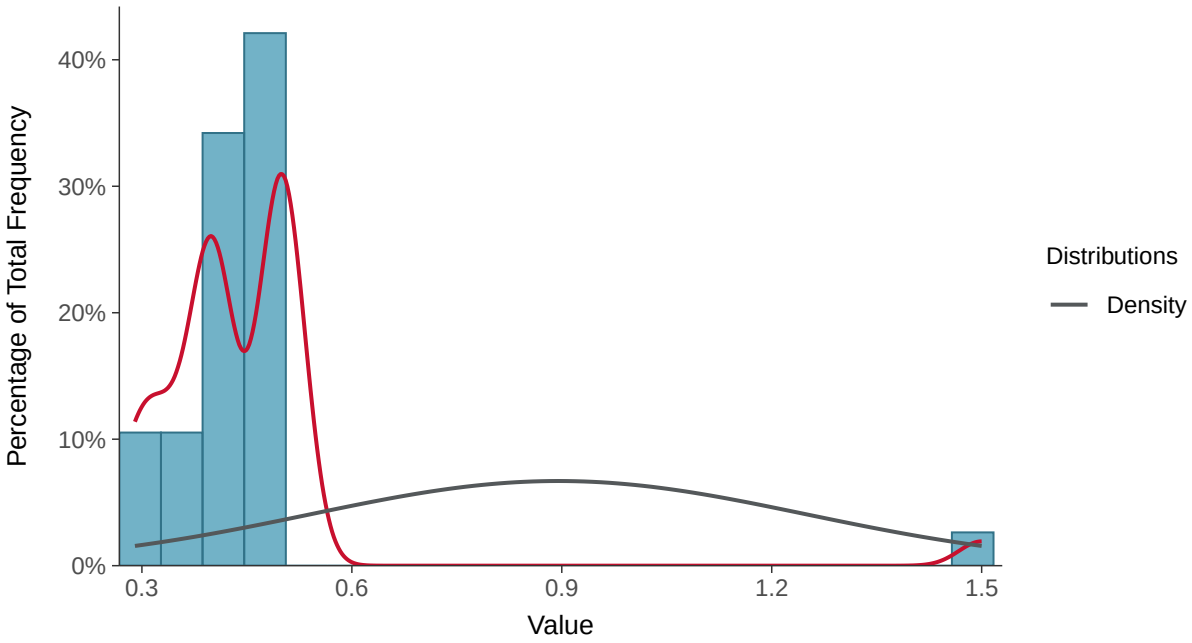
Scatter Plot

Cadmium, MW-8 (ug/L)



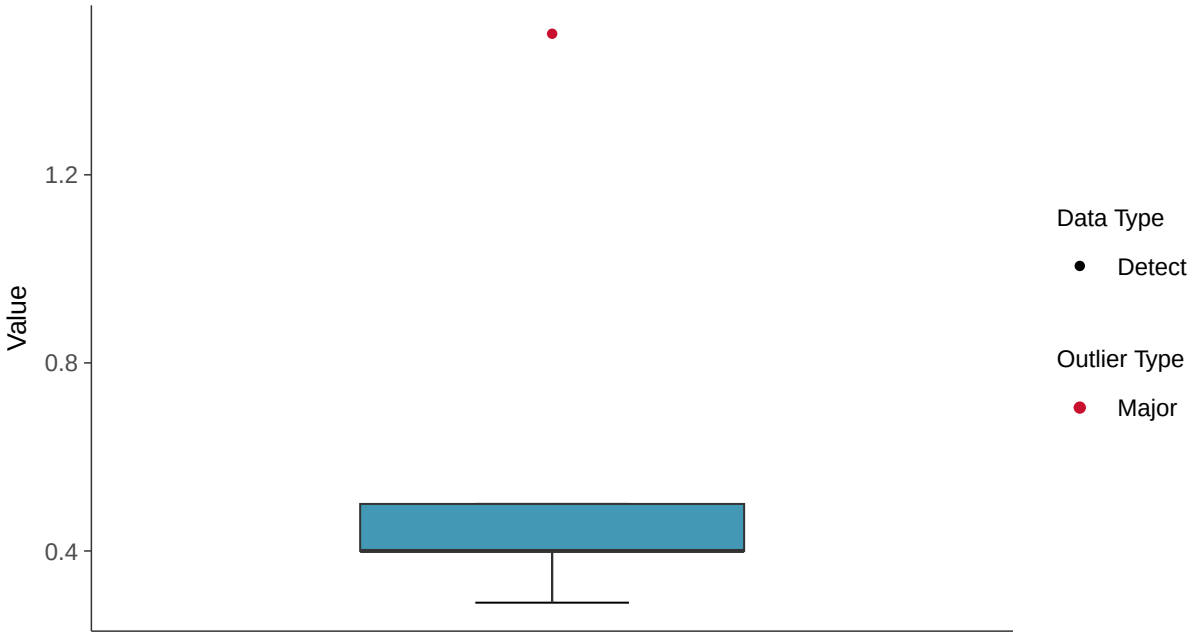
Histogram

Cadmium, MW-8 (ug/L)



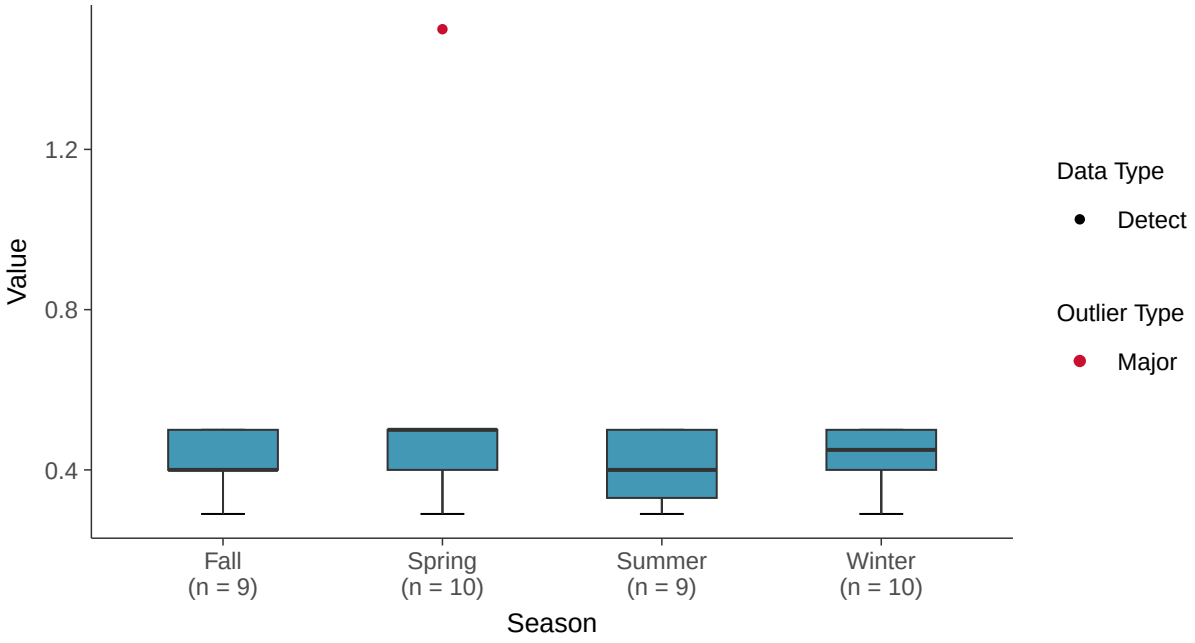
Boxplot

Cadmium, MW-8 (ug/L)



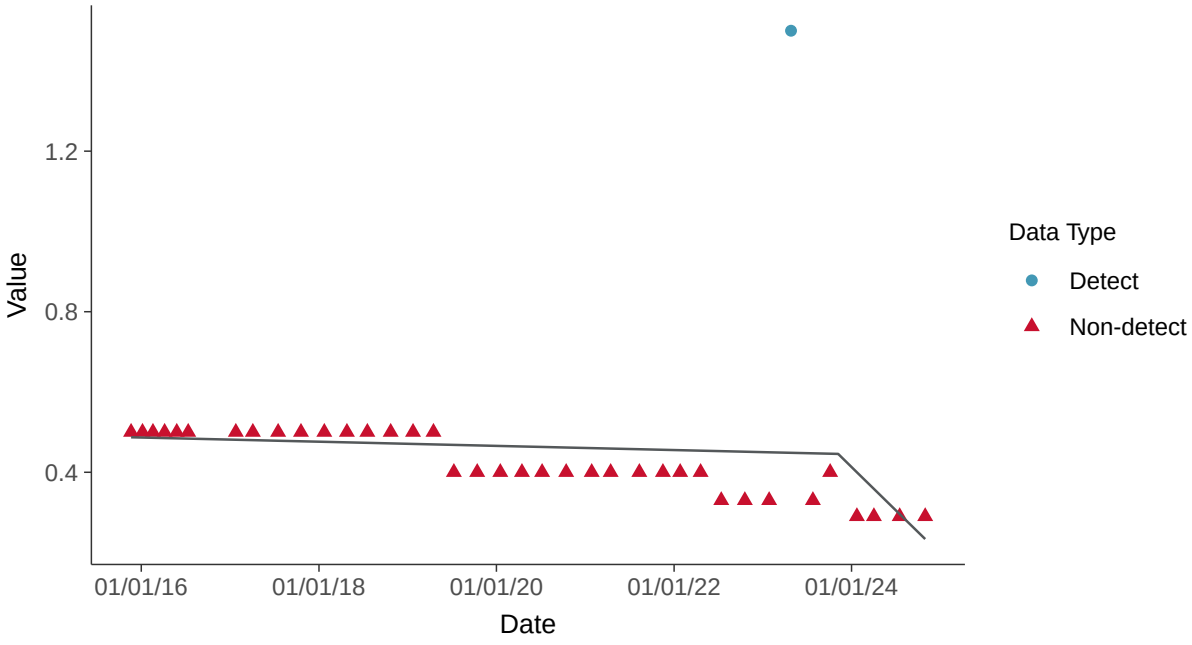
Boxplot by Season

Cadmium, MW-8 (ug/L)



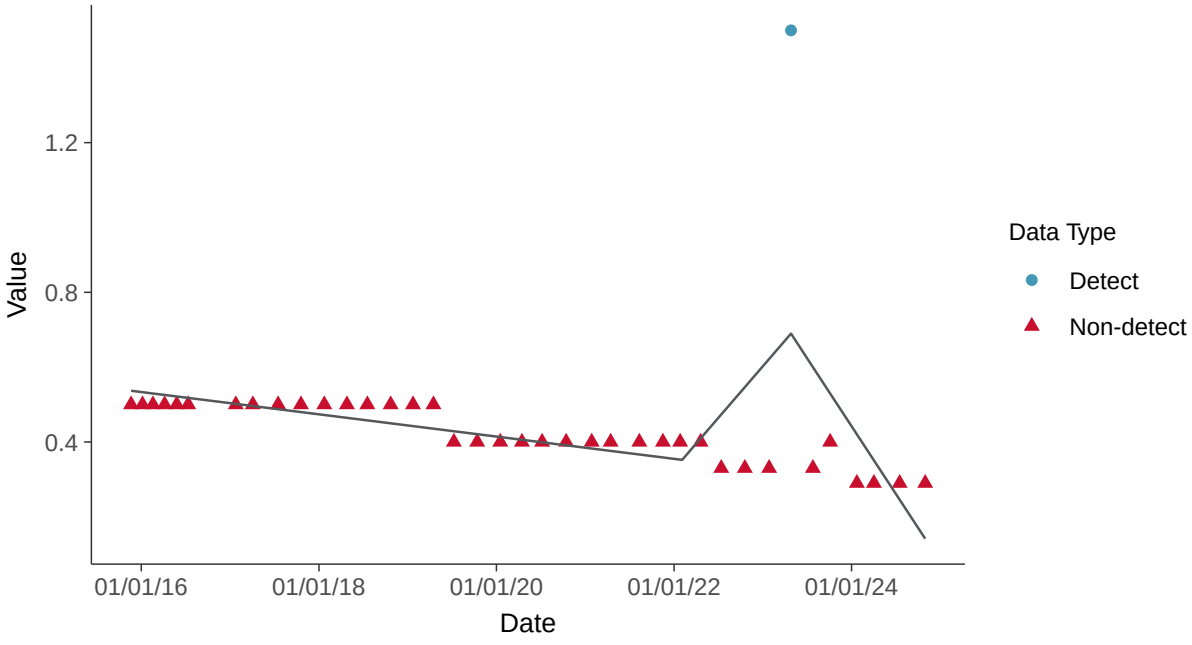
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-8 (ug/L)

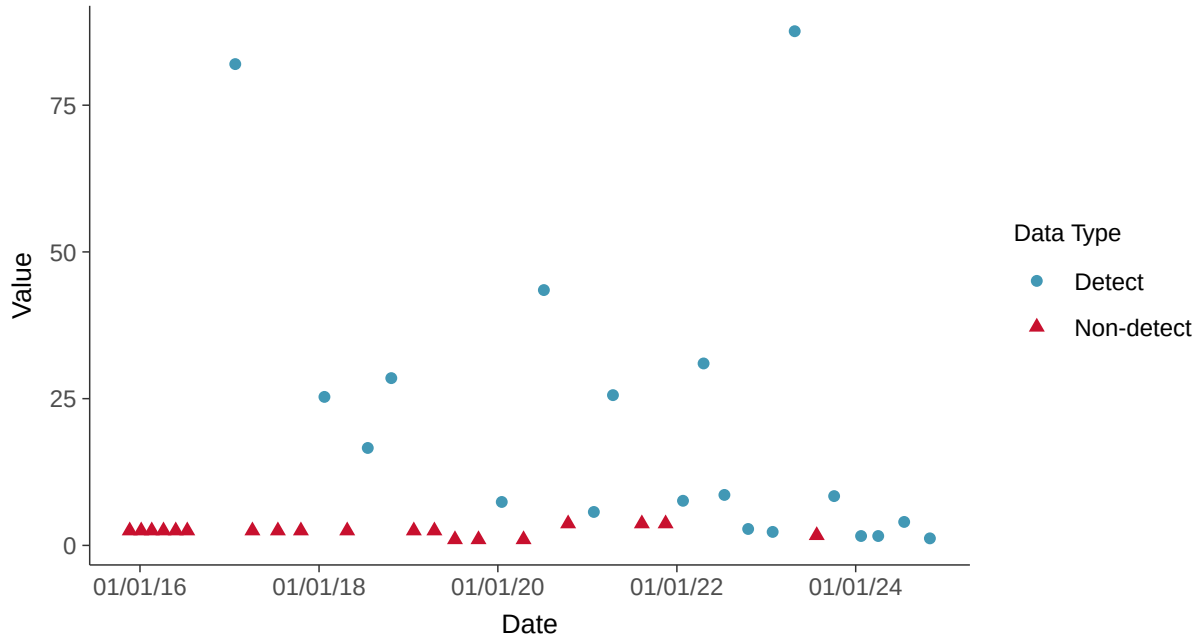


App. IV: Chromium, MW-8

ID: 08_03_109

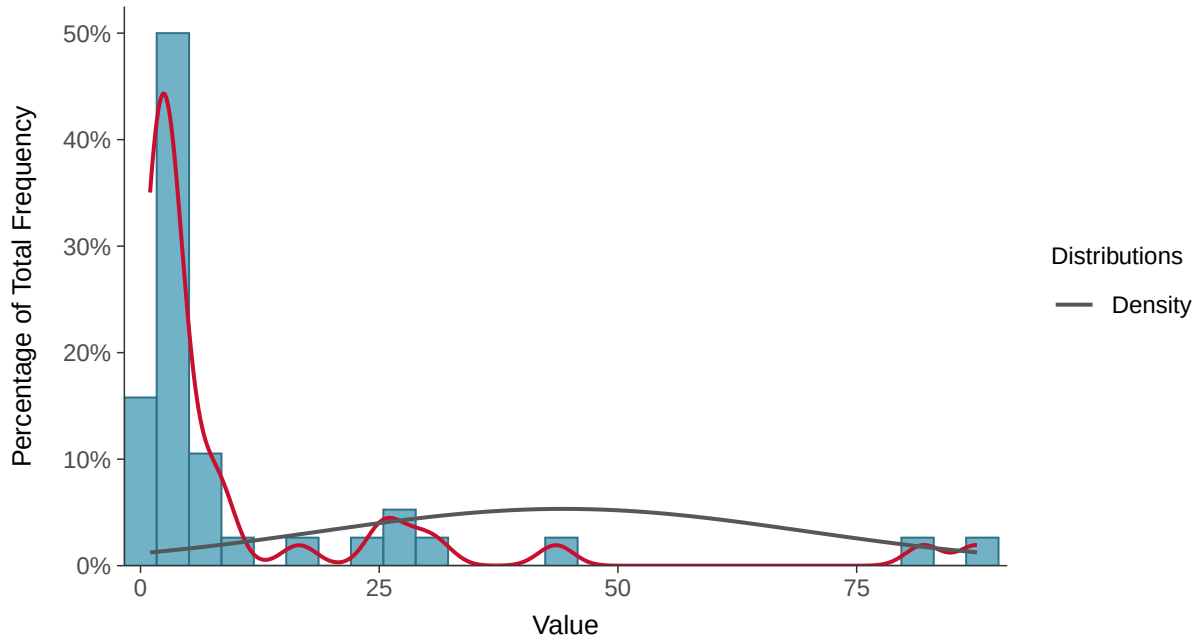
Scatter Plot

Chromium, MW-8 (ug/L)



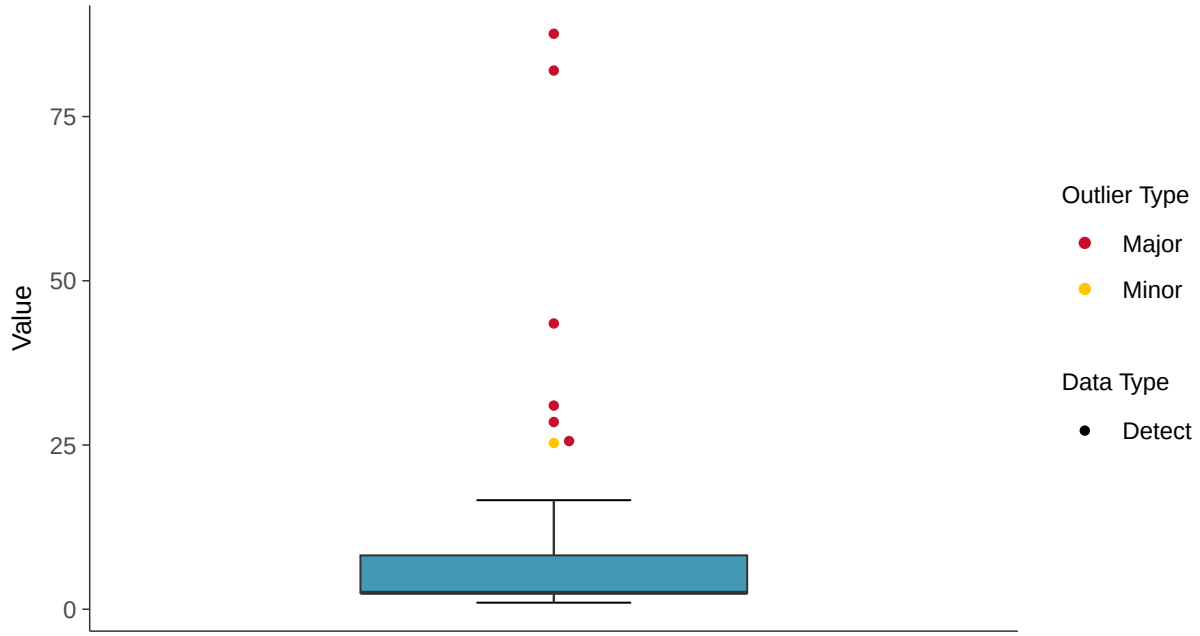
Histogram

Chromium, MW-8 (ug/L)



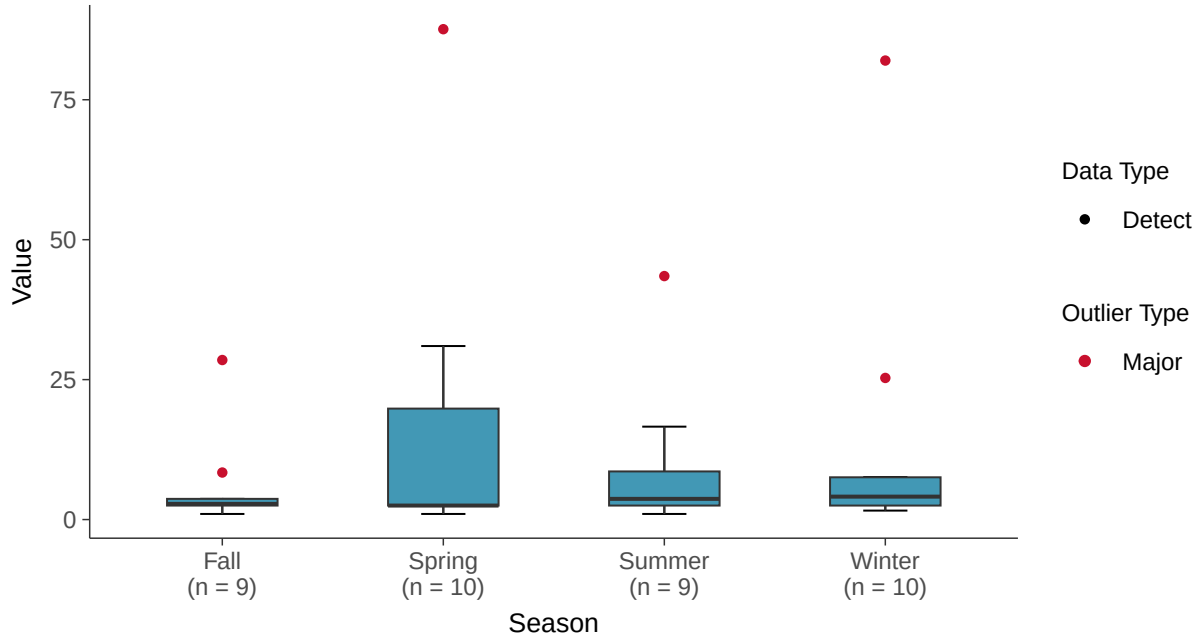
Boxplot

Chromium, MW-8 (ug/L)



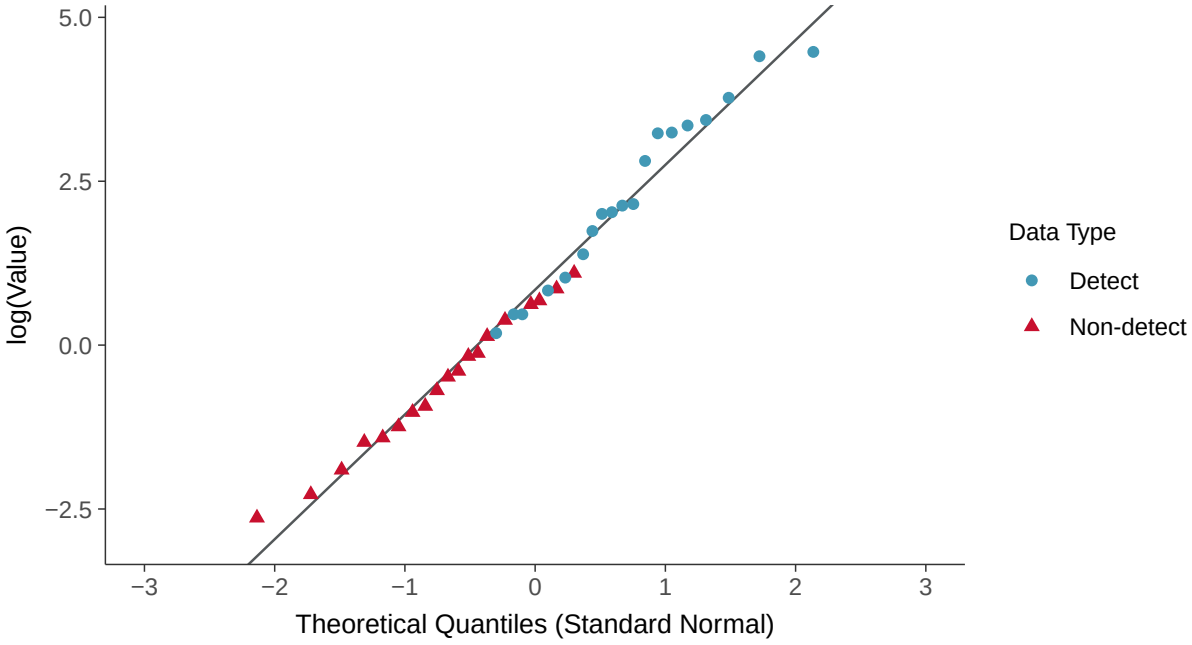
Boxplot by Season

Chromium, MW-8 (ug/L)



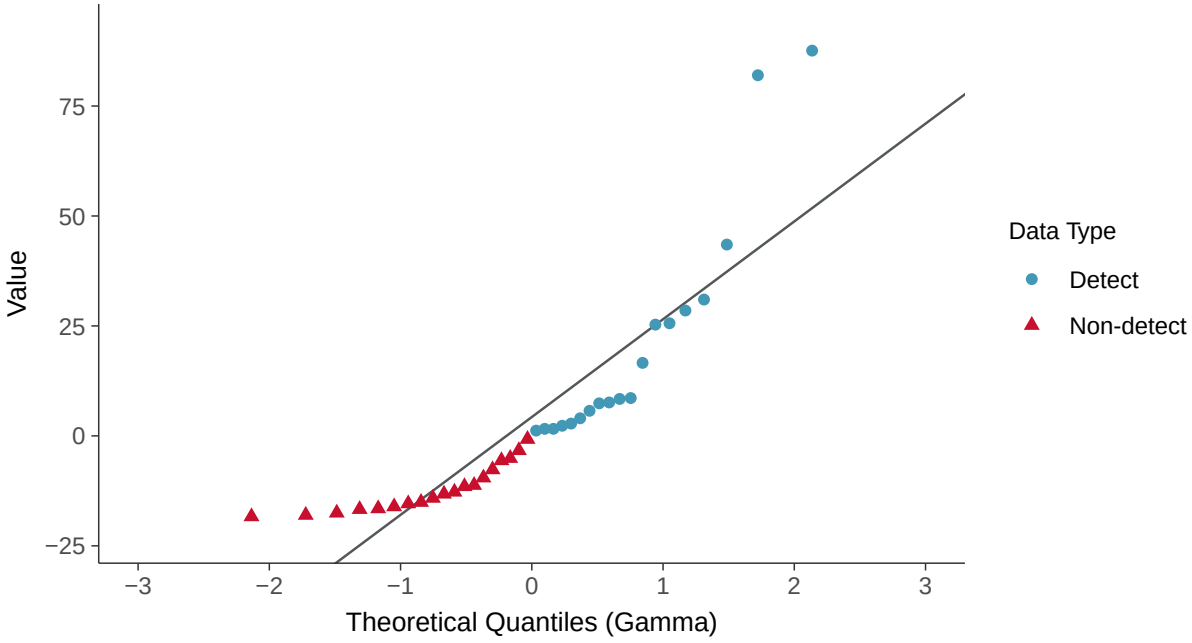
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-8 (ug/L)



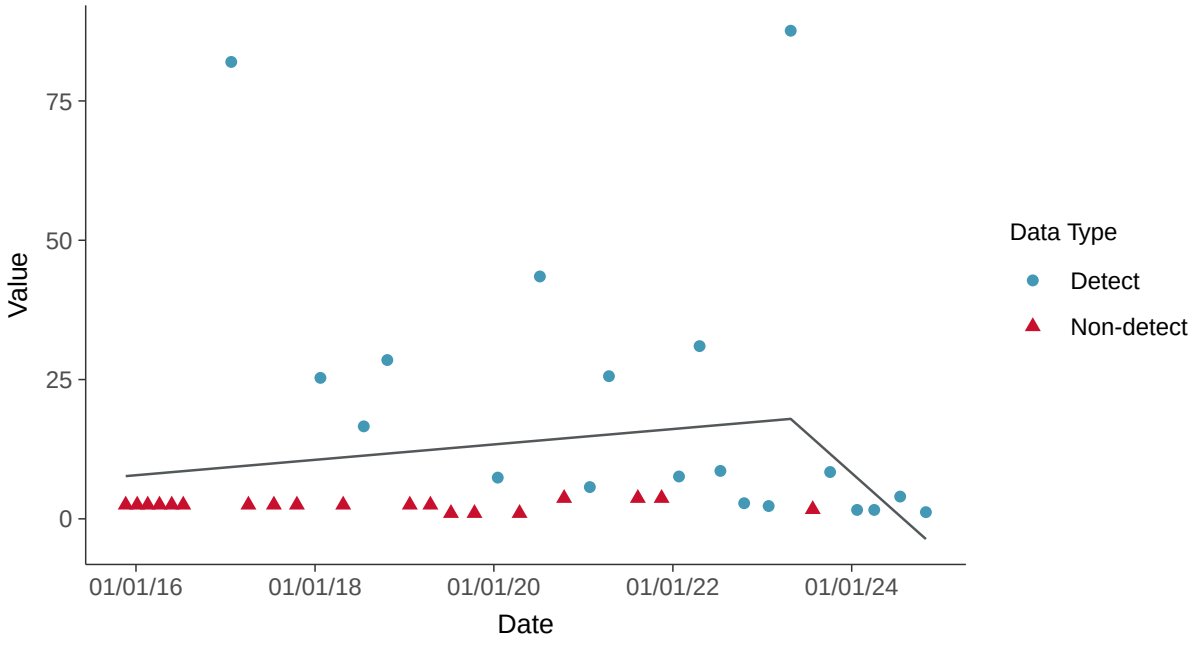
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-8 (ug/L)



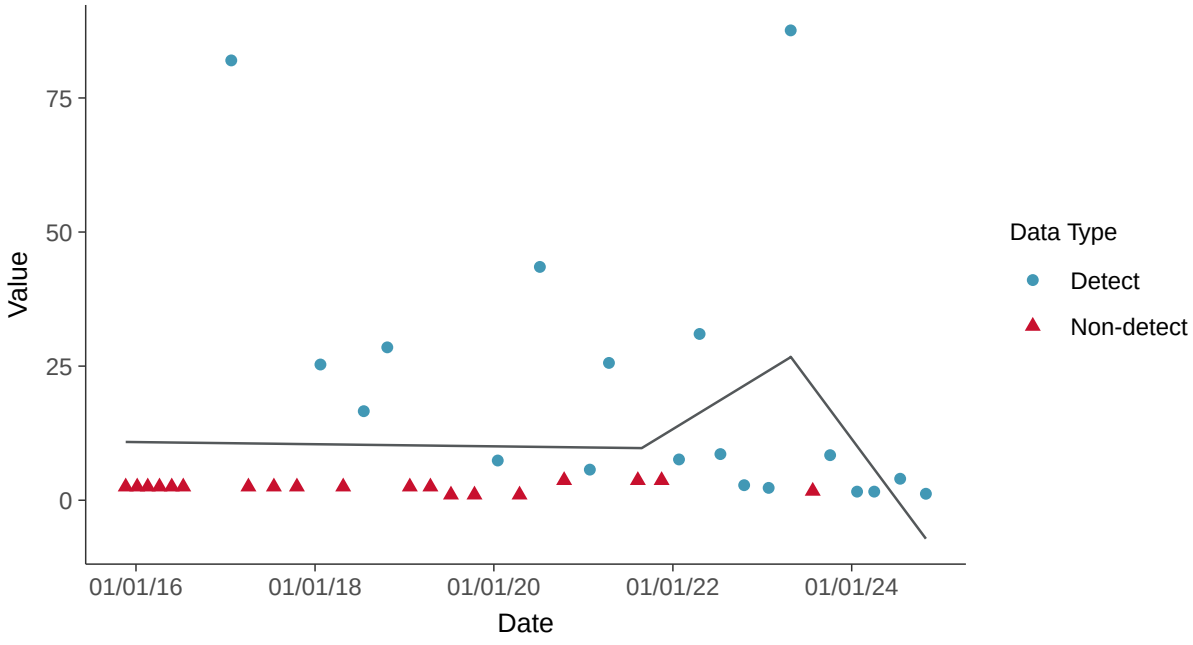
Trend Regression: Piecewise Linear-Linear

Chromium, MW-8 (ug/L)



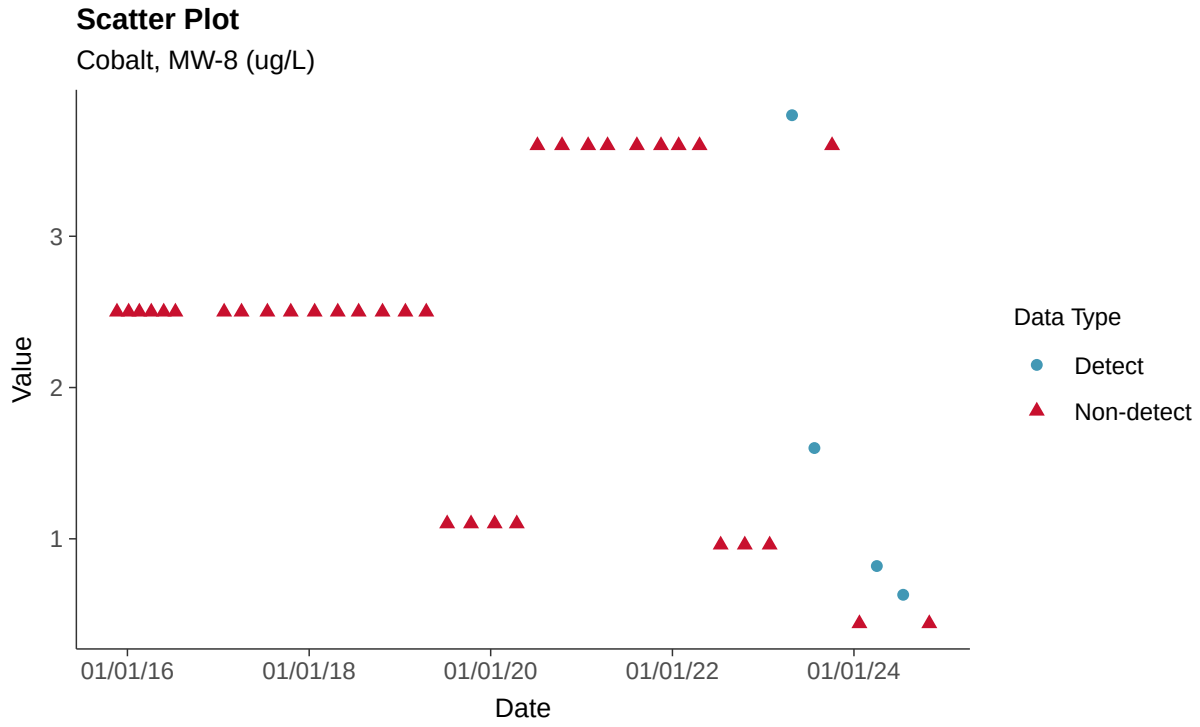
Trend Regression: Piecewise Linear-Linear-Linear

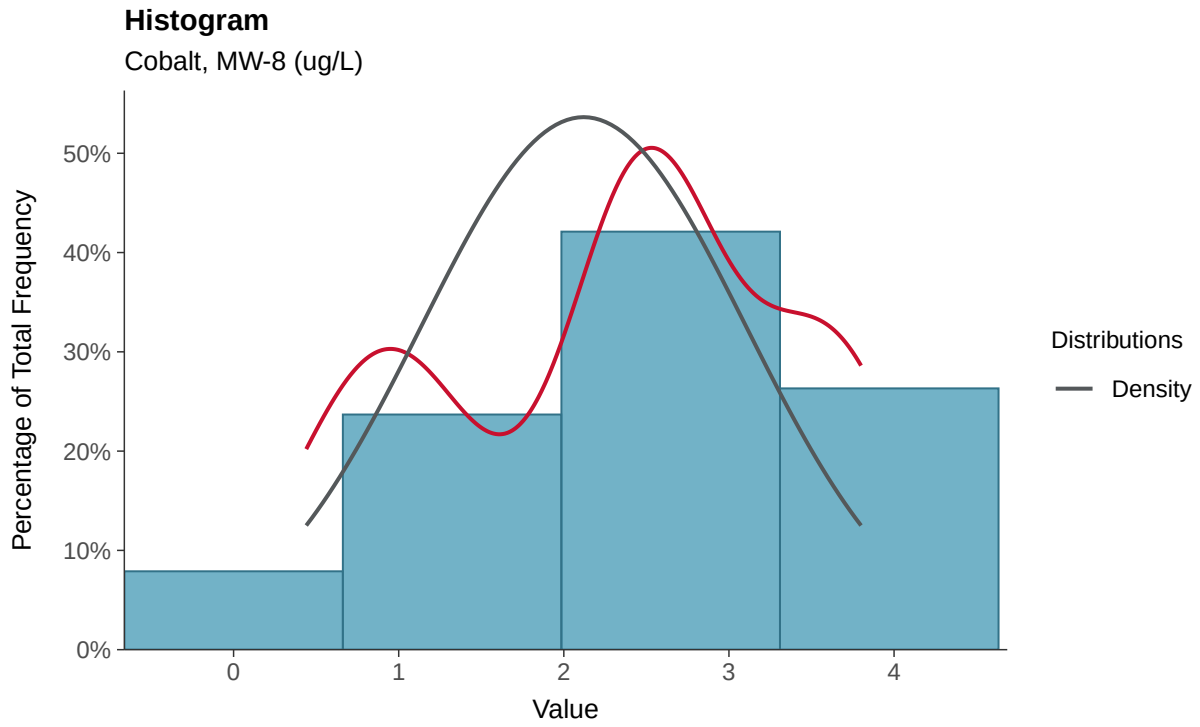
Chromium, MW-8 (ug/L)



App. IV: Cobalt, MW-8

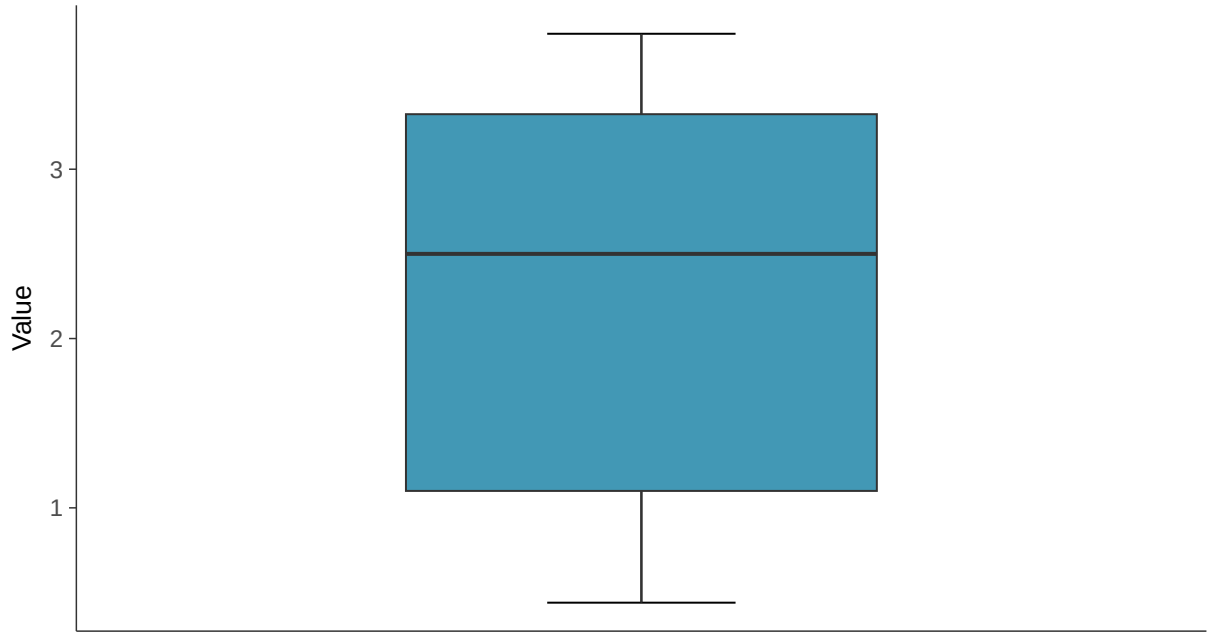
ID: 08_03_110





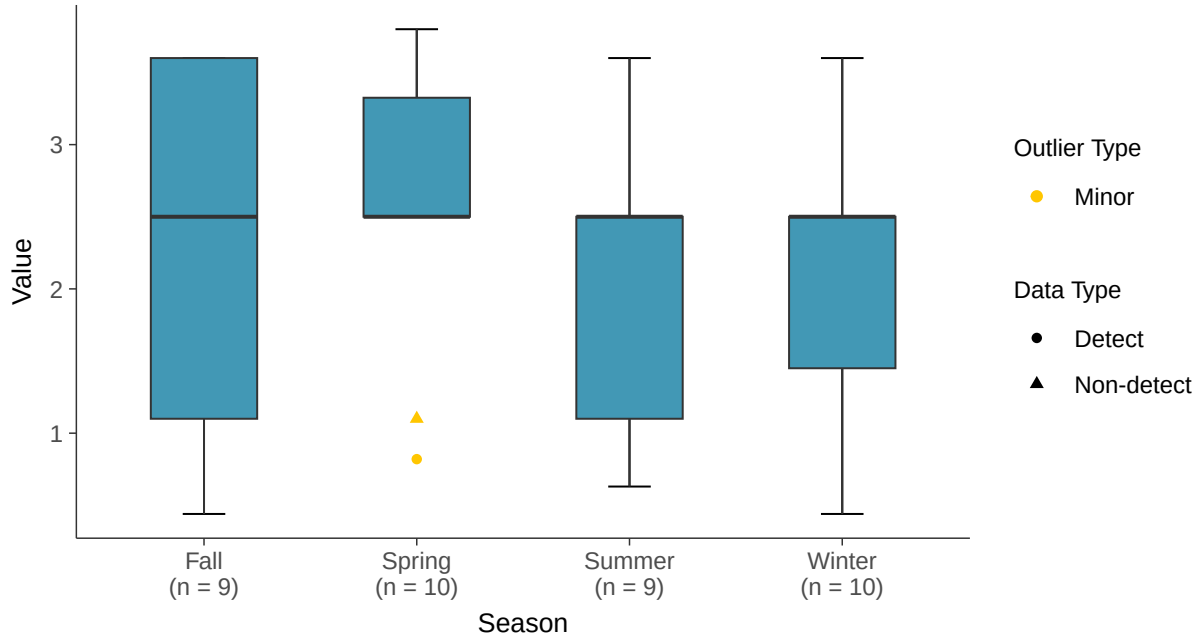
Boxplot

Cobalt, MW-8 (ug/L)



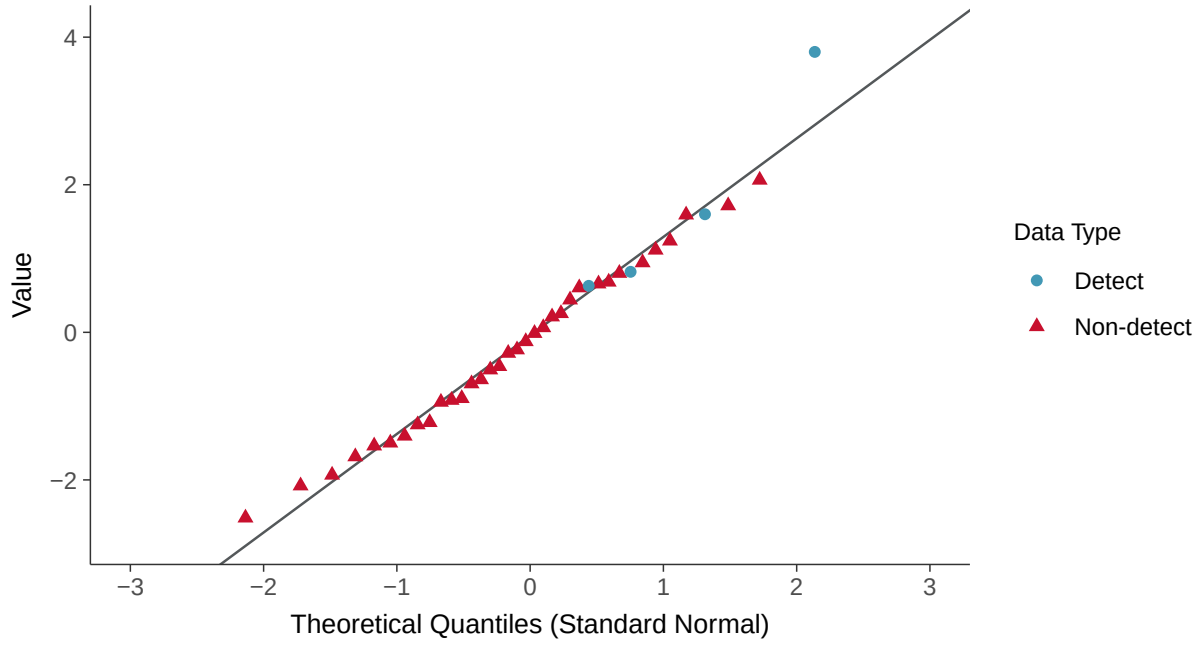
Boxplot by Season

Cobalt, MW-8 (ug/L)



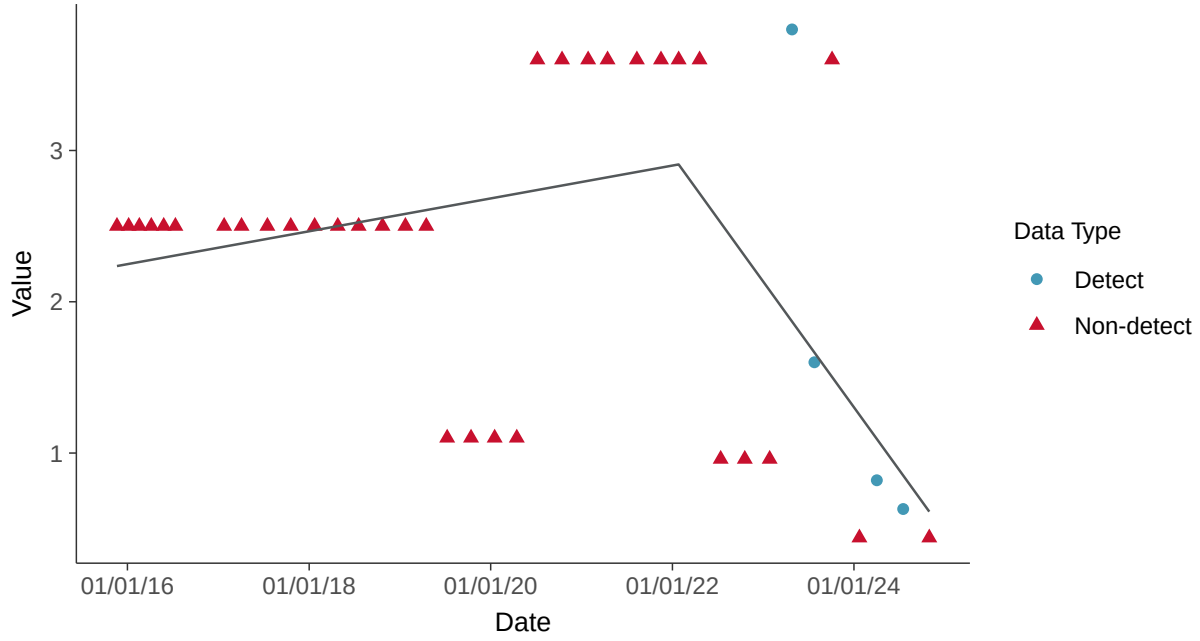
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-8 (ug/L)



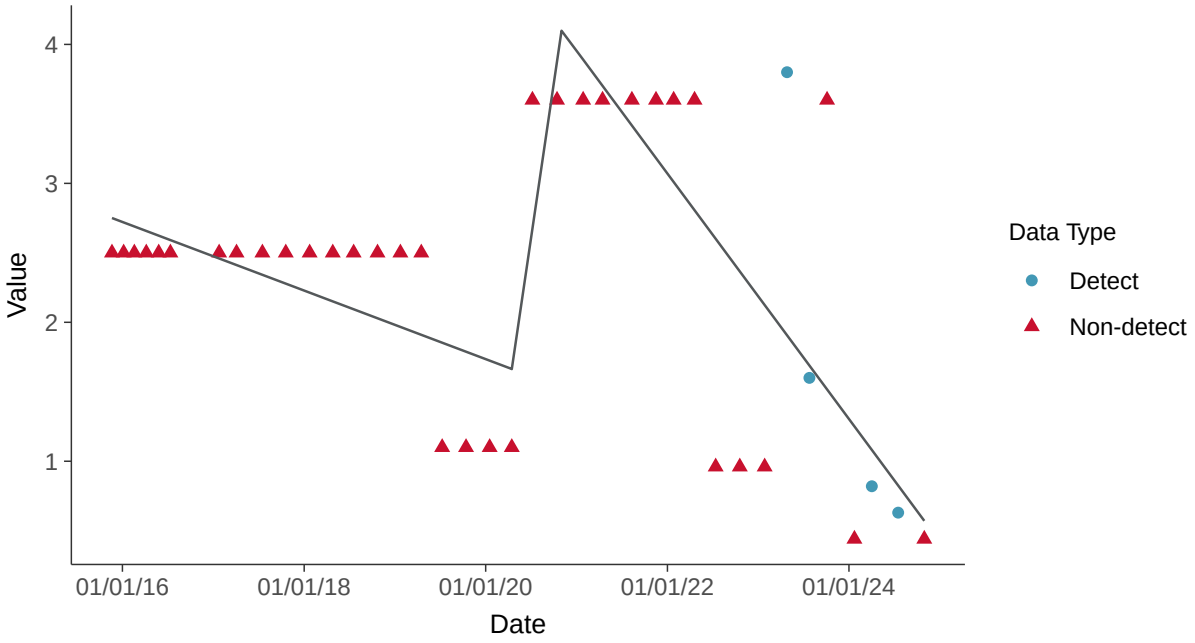
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-8 (ug/L)

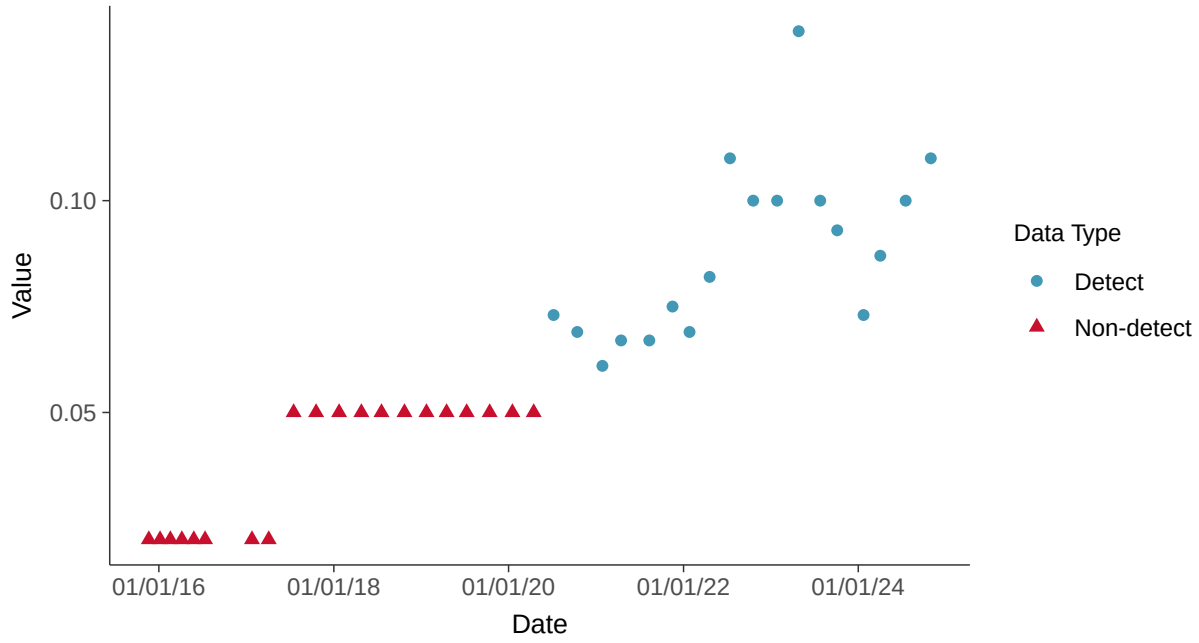


App. IV: Fluoride, MW-8

ID: 08_03_112

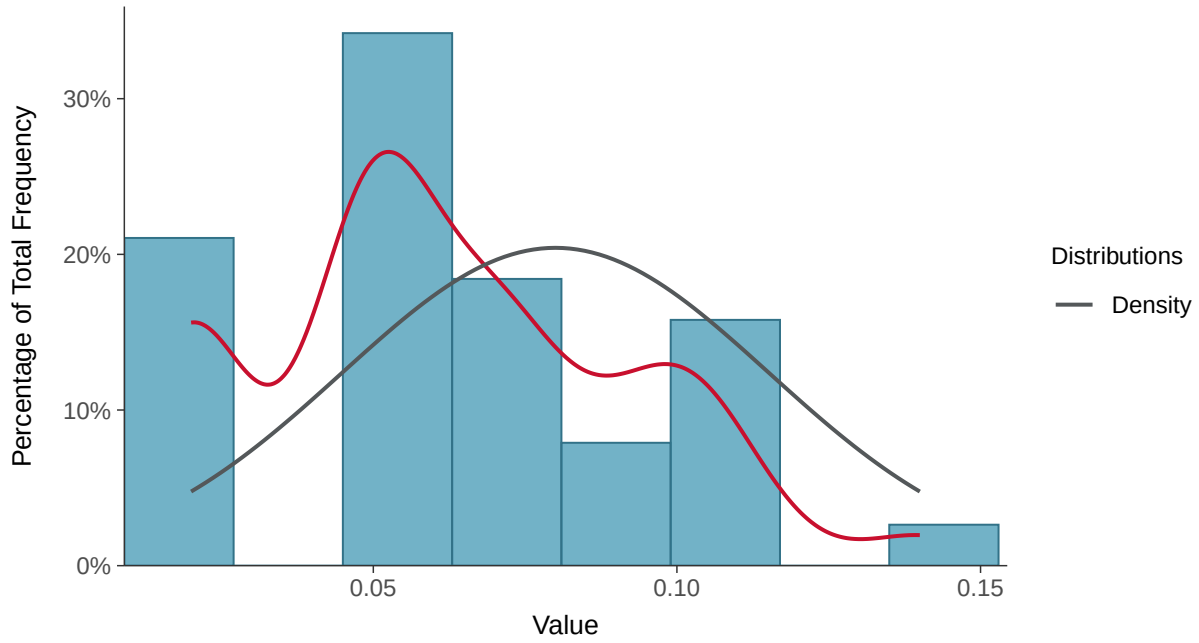
Scatter Plot

Fluoride, MW-8 (mg/L)



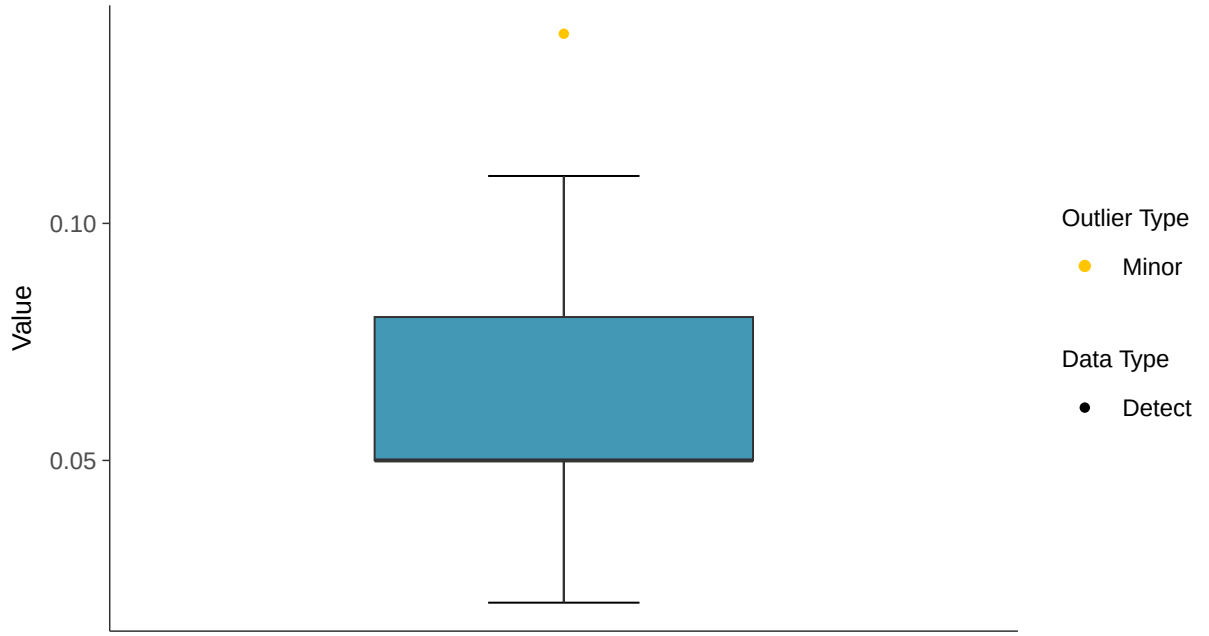
Histogram

Fluoride, MW-8 (mg/L)



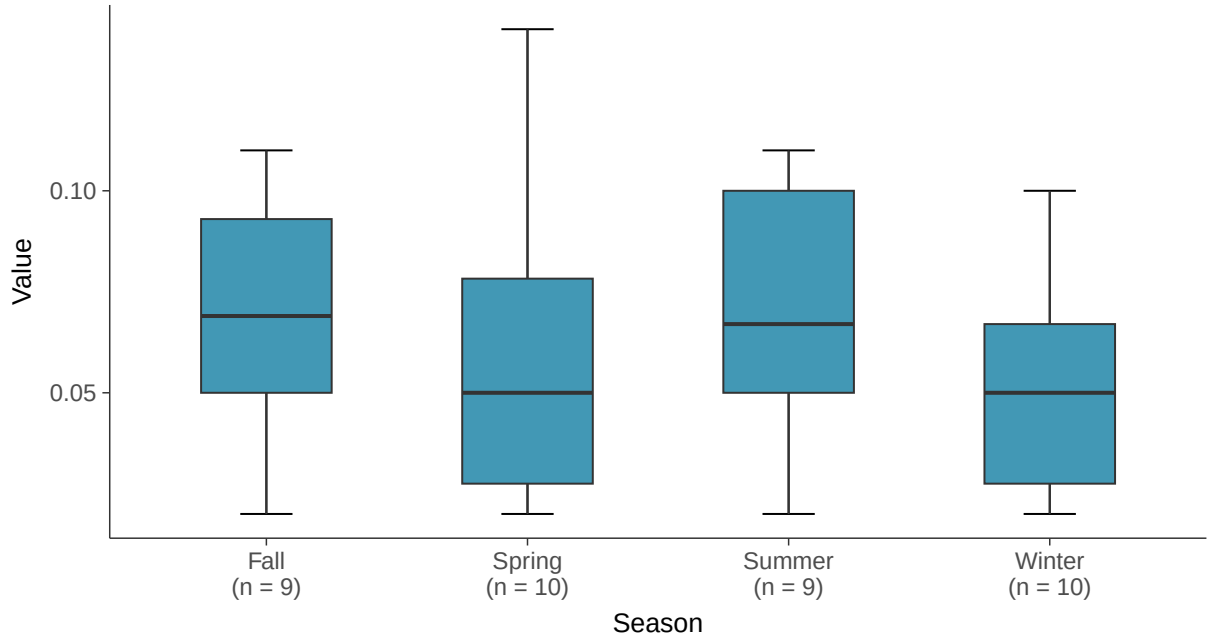
Boxplot

Fluoride, MW-8 (mg/L)



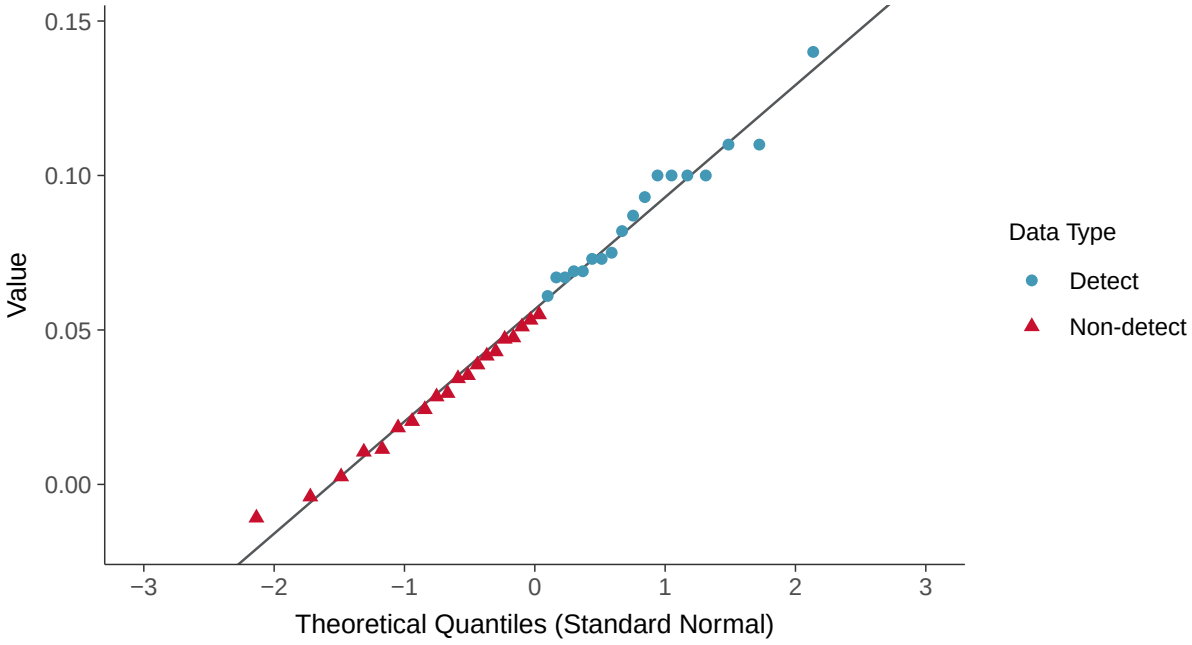
Boxplot by Season

Fluoride, MW-8 (mg/L)



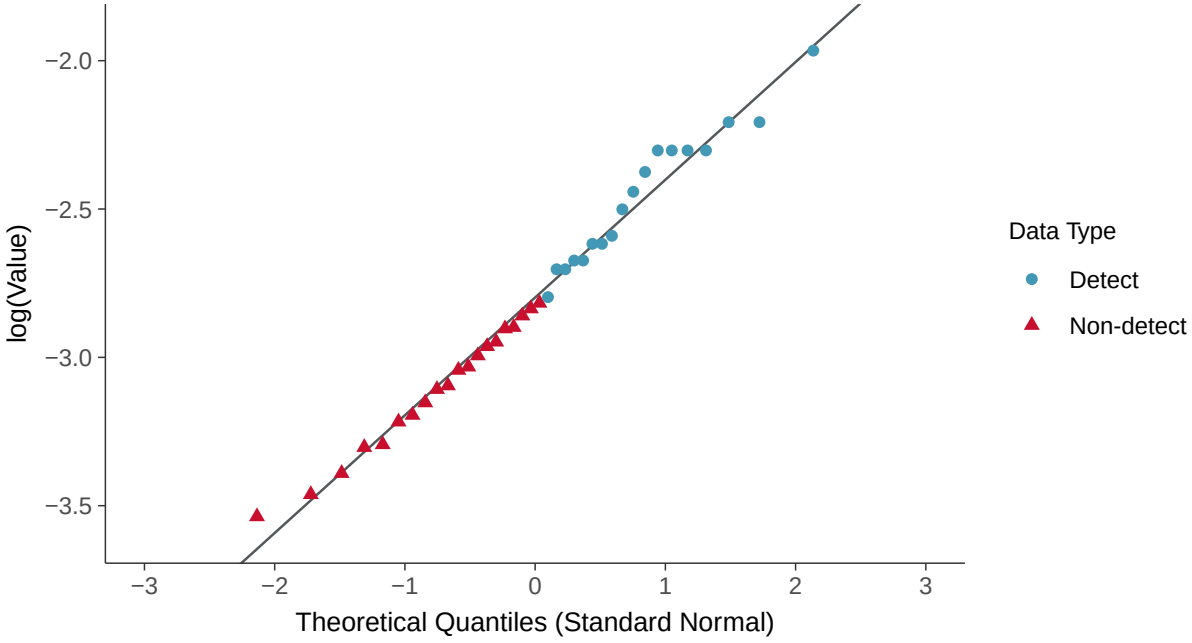
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



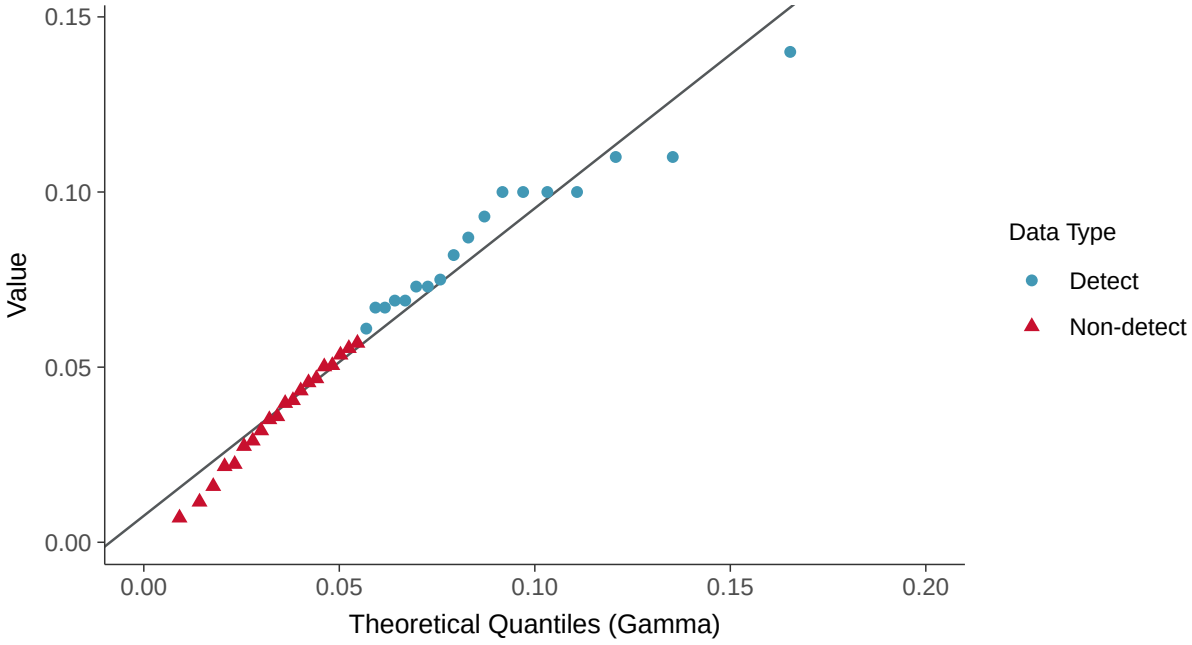
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



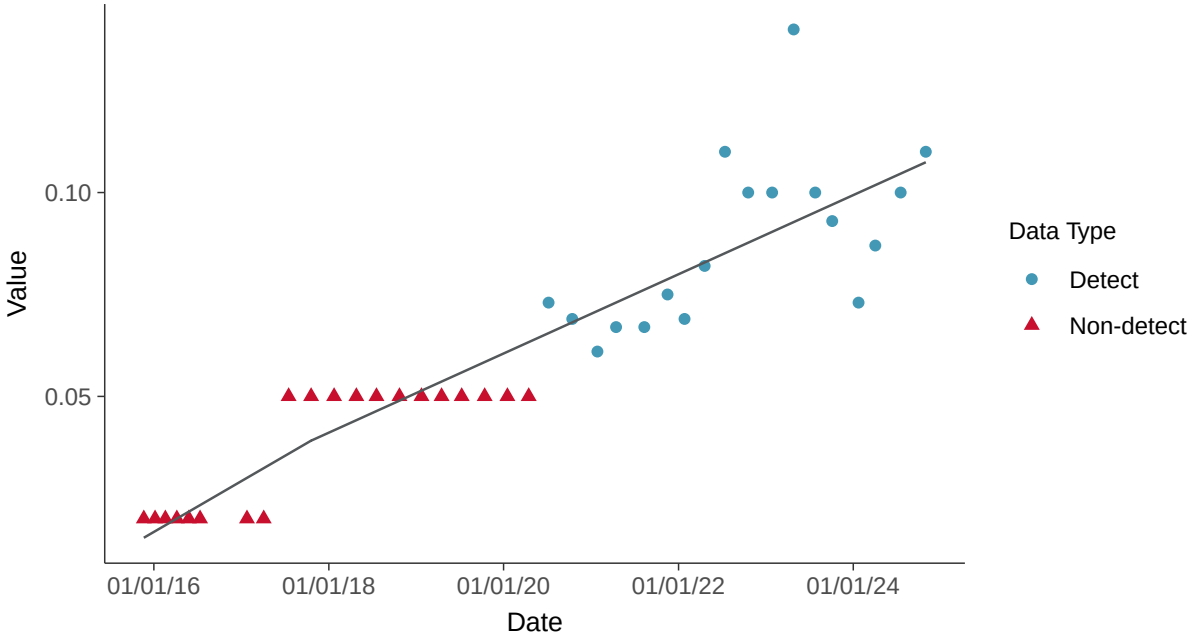
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



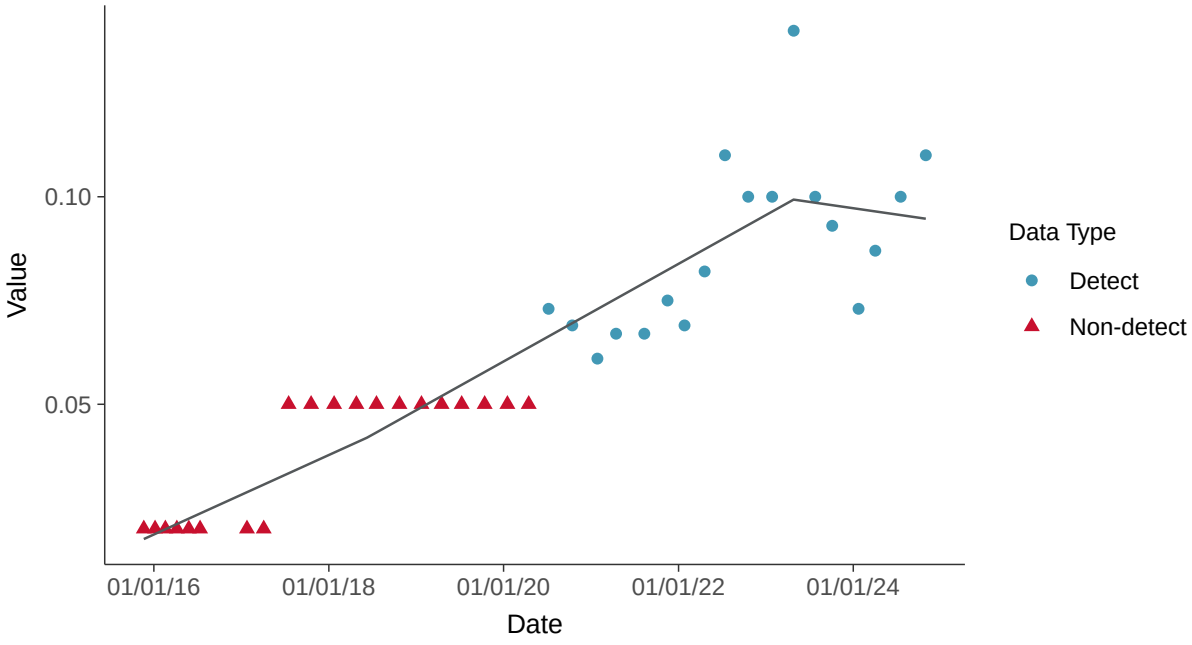
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-8 (mg/L)

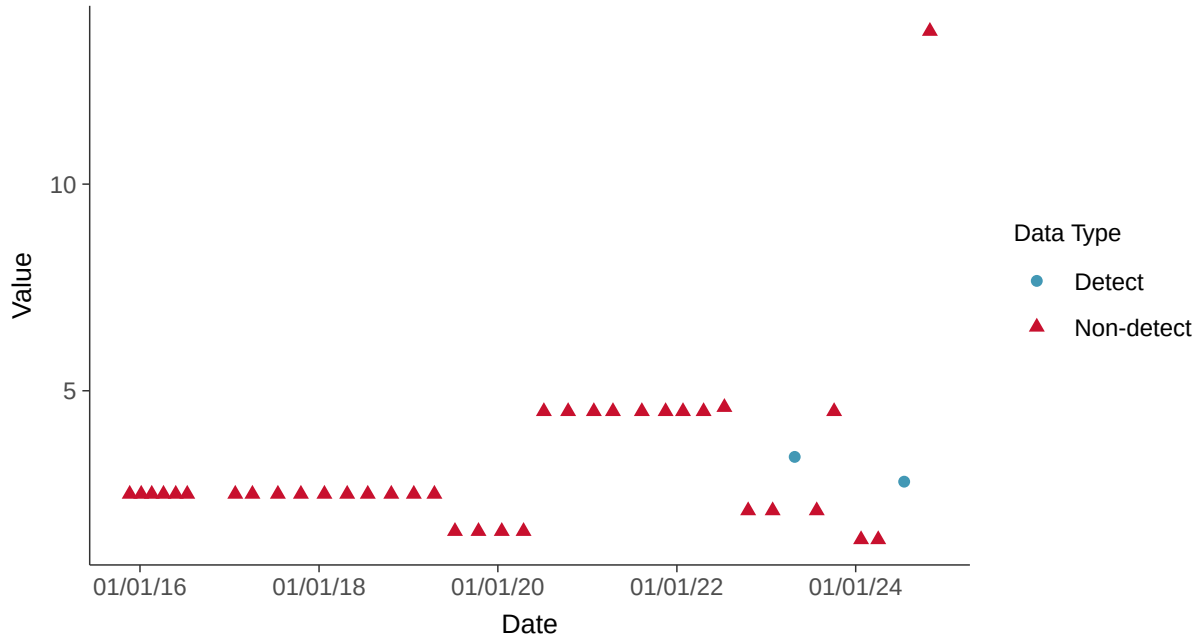


App. IV: Lead, MW-8

ID: 08_03_113

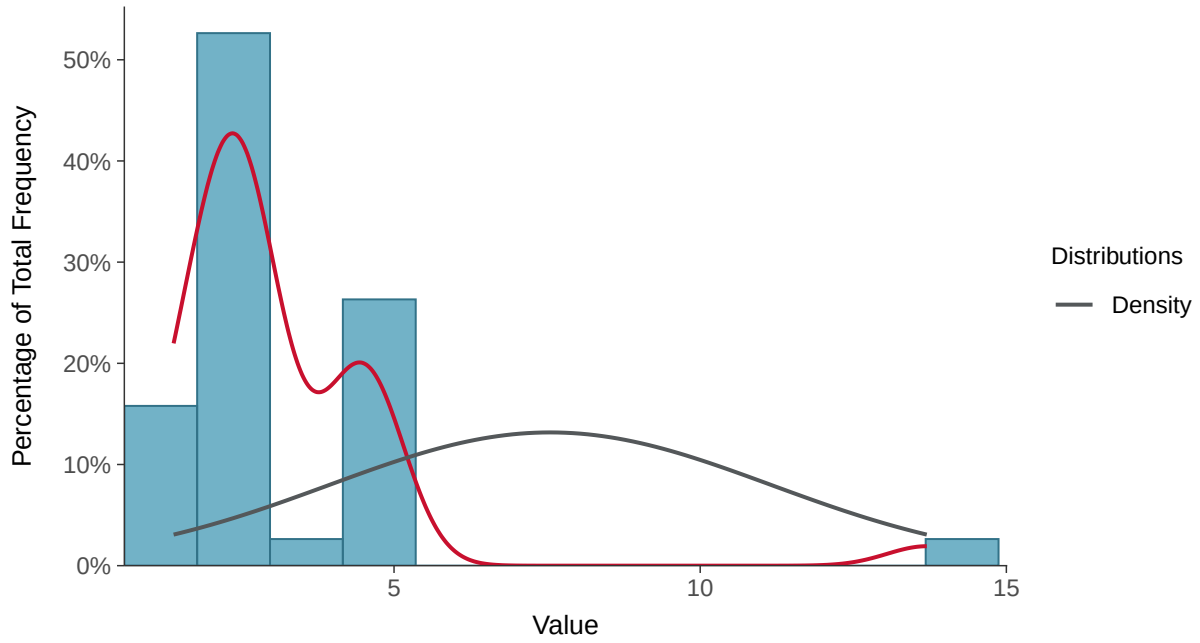
Scatter Plot

Lead, MW-8 (ug/L)



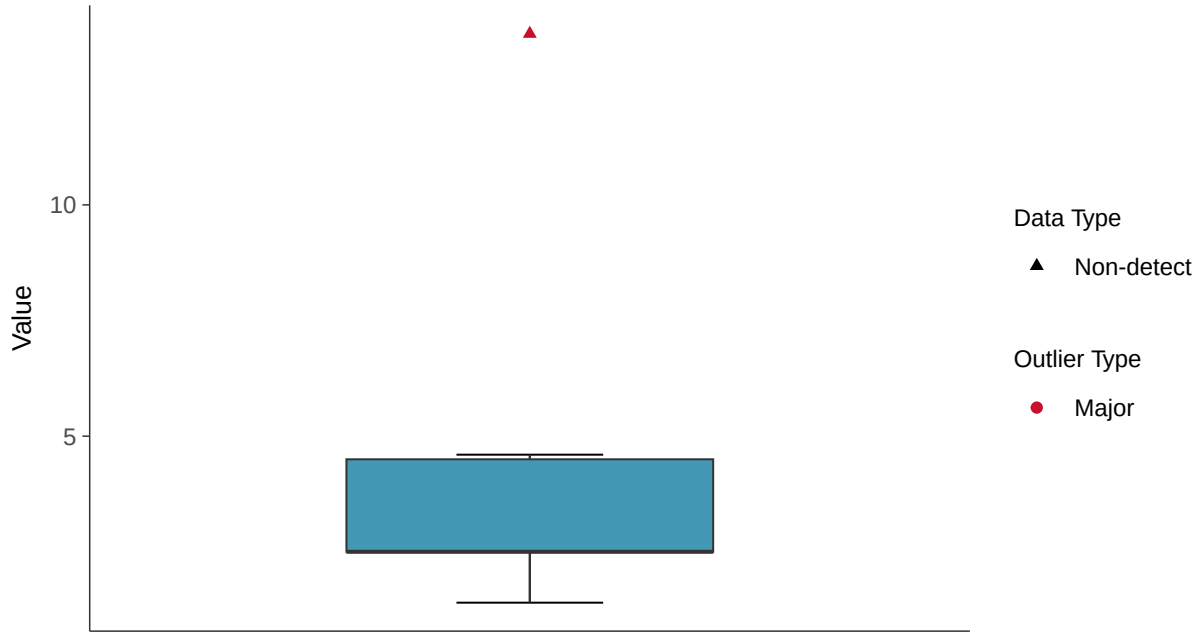
Histogram

Lead, MW-8 (ug/L)



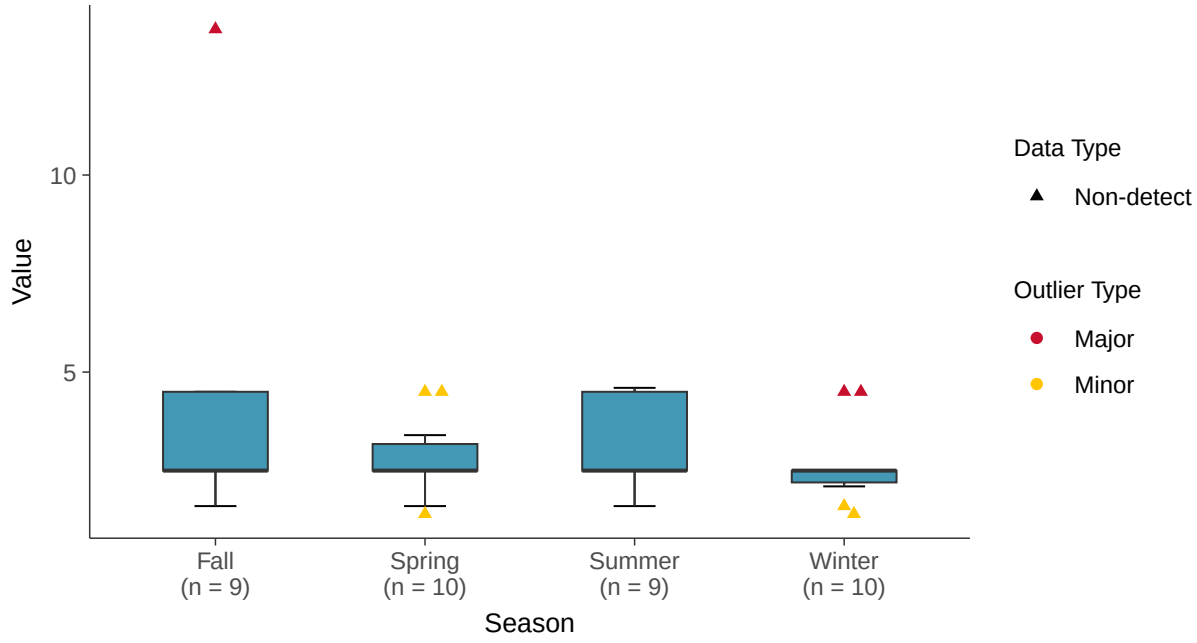
Boxplot

Lead, MW-8 (ug/L)



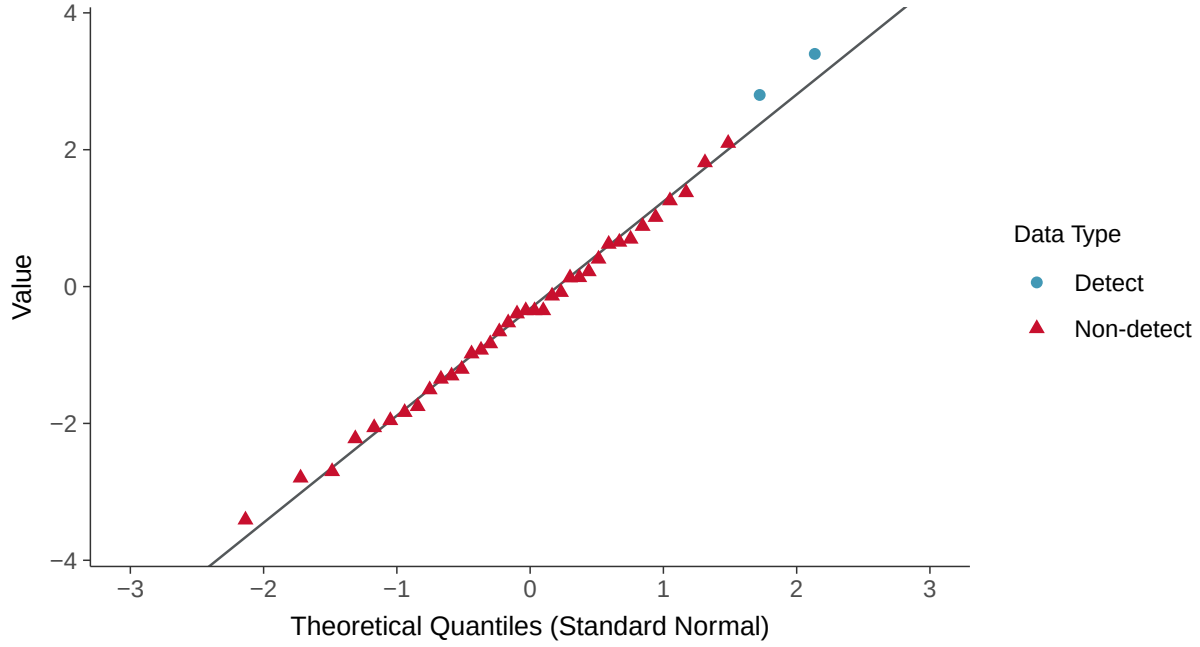
Boxplot by Season

Lead, MW-8 (ug/L)



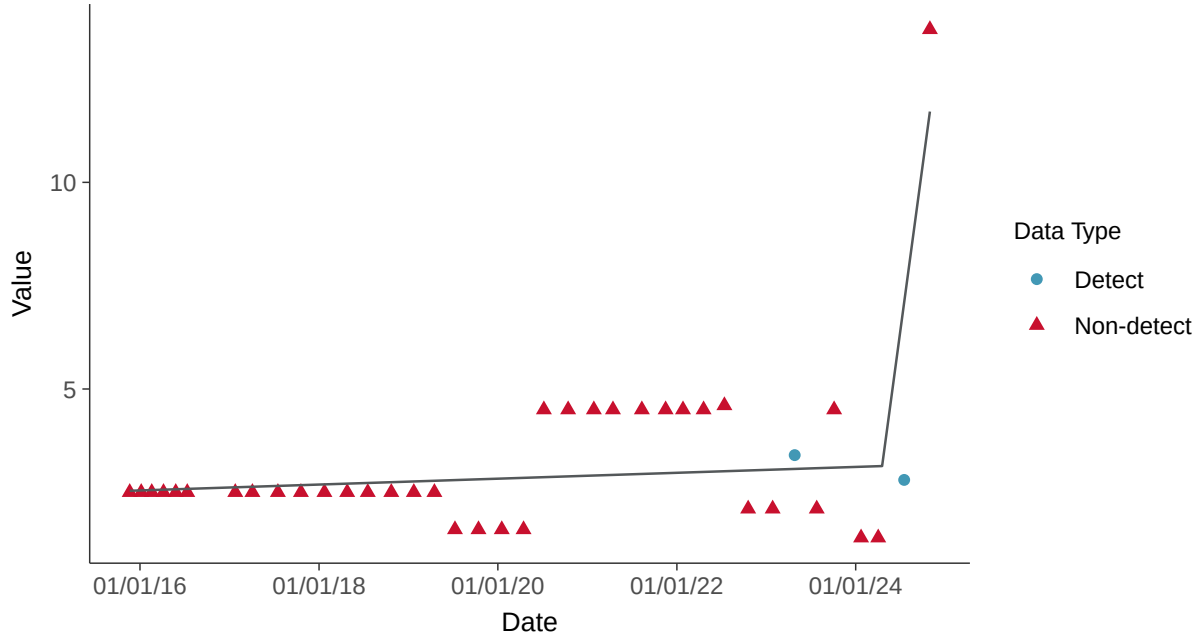
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-8 (ug/L)



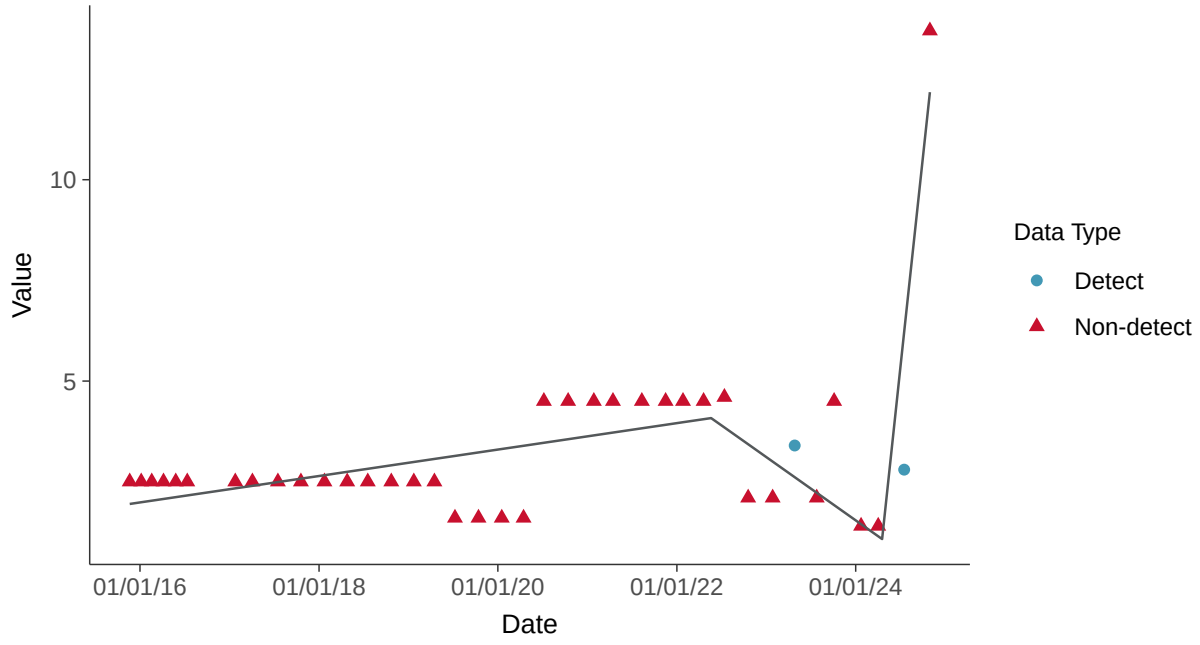
Trend Regression: Piecewise Linear-Linear

Lead, MW-8 (ug/L)



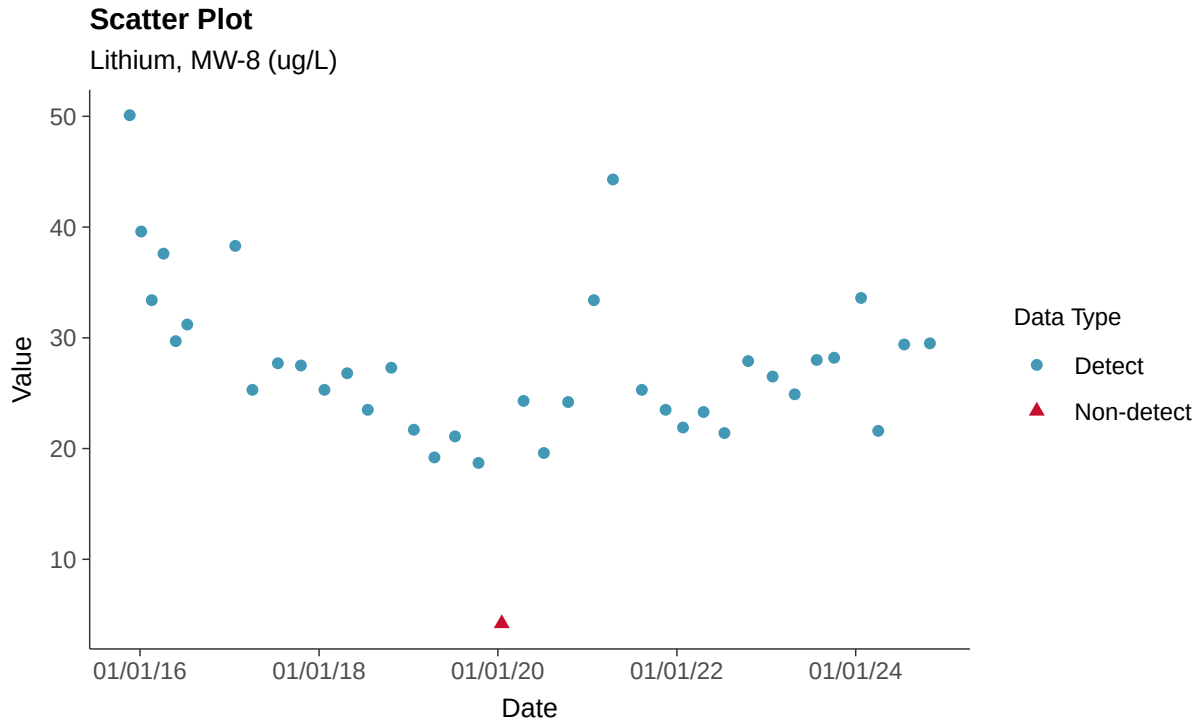
Trend Regression: Piecewise Linear-Linear-Linear

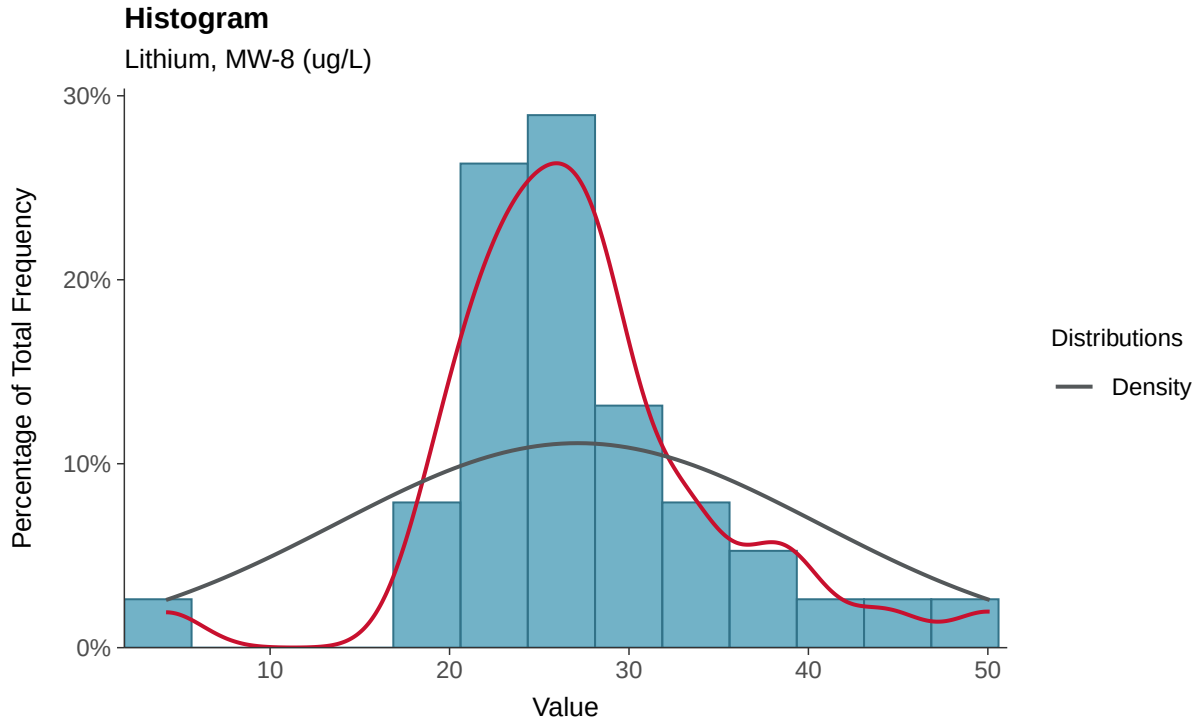
Lead, MW-8 (ug/L)



App. IV: Lithium, MW-8

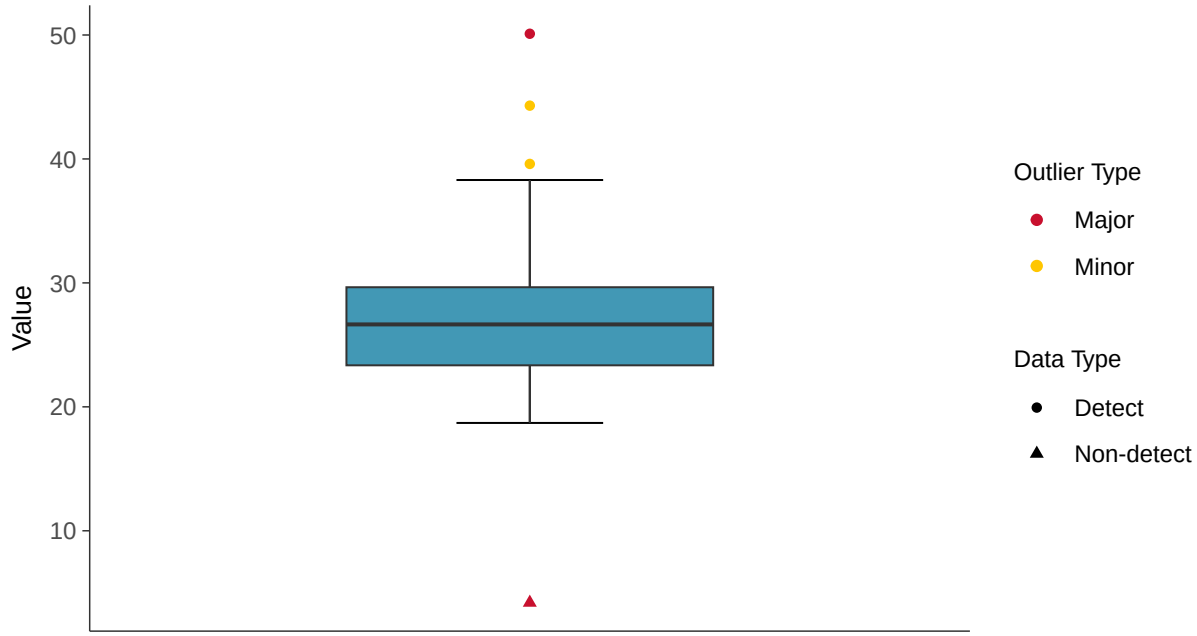
ID: 08_03_114





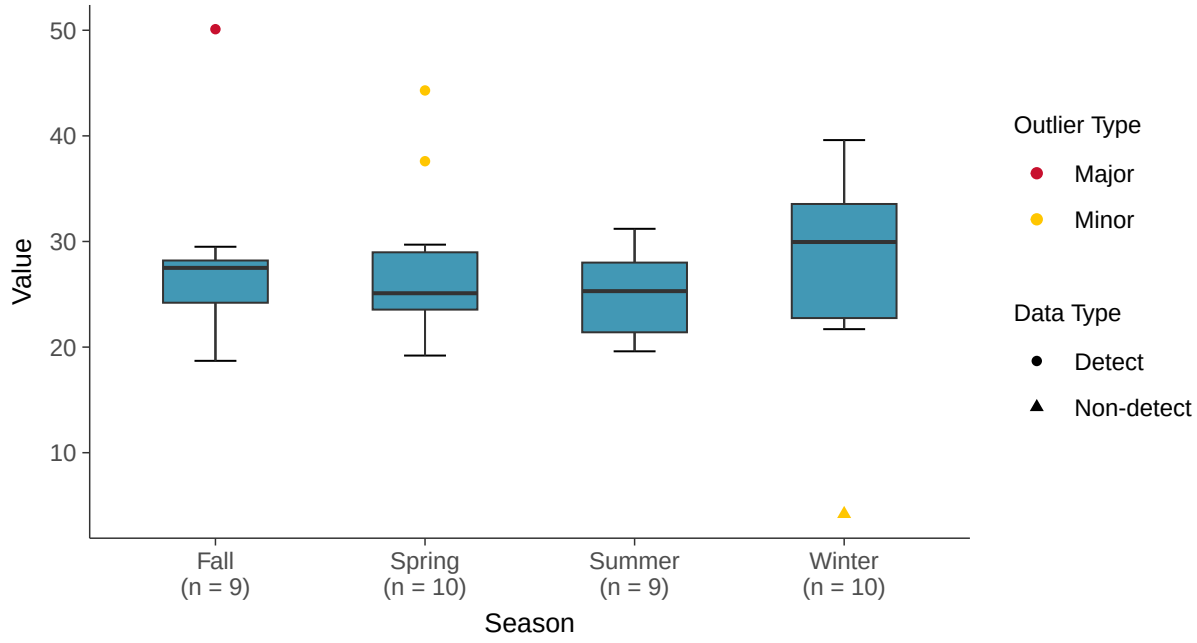
Boxplot

Lithium, MW-8 (ug/L)



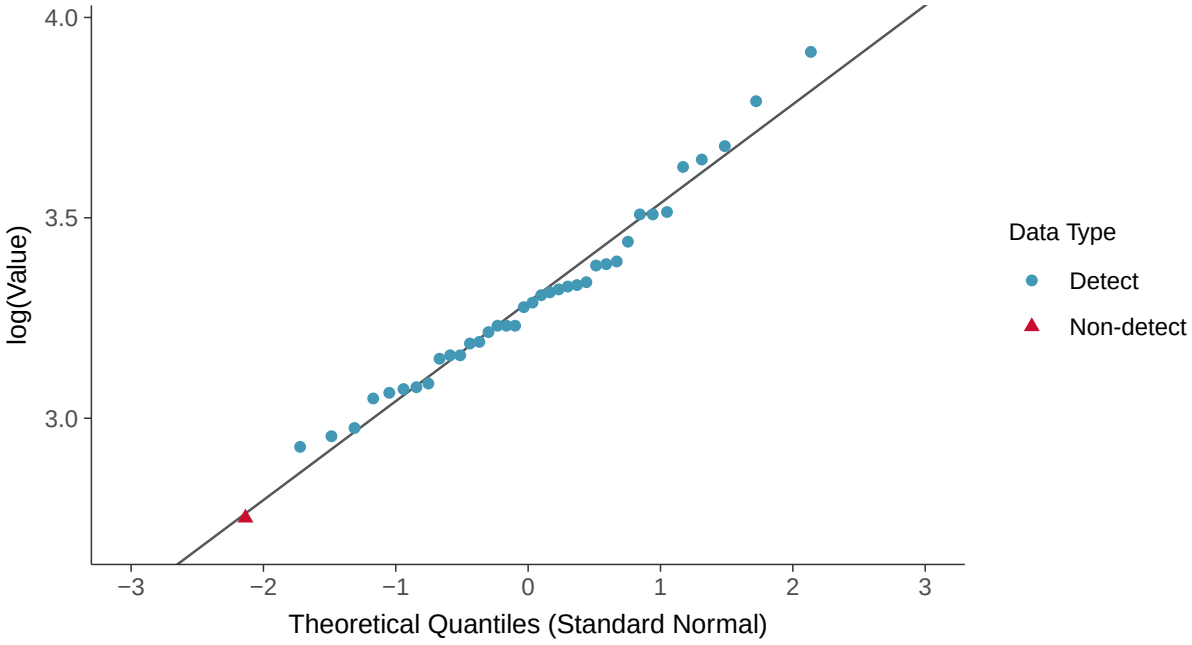
Boxplot by Season

Lithium, MW-8 (ug/L)



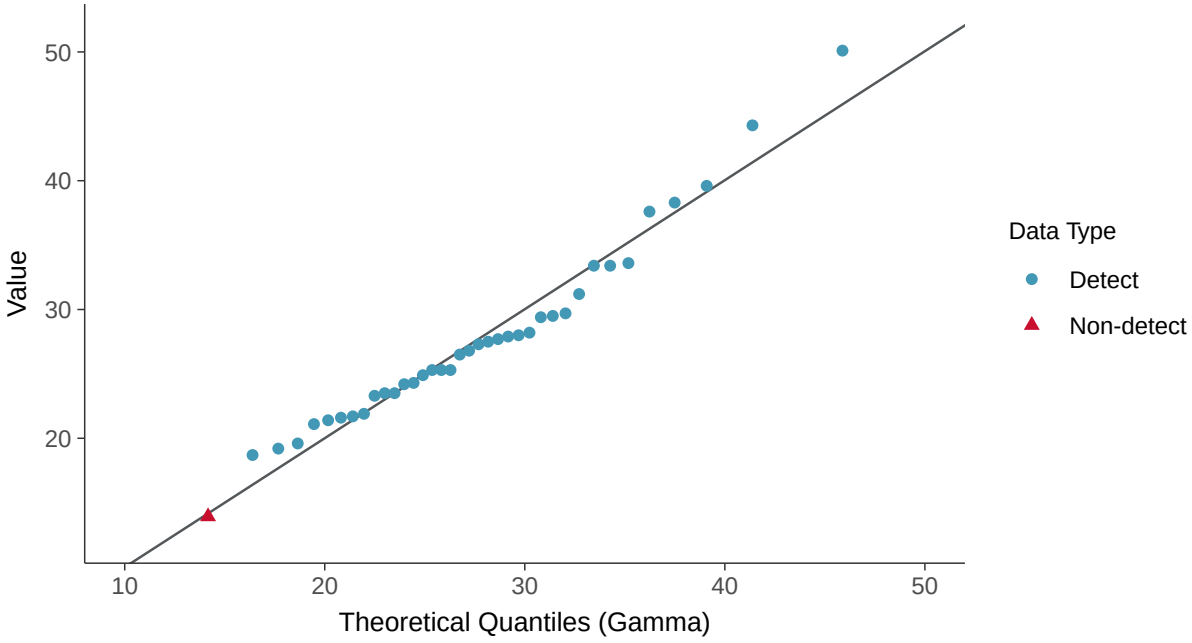
Lognormal Q-Q plot using ROS Imputed Estimates

Lithium, MW-8 (ug/L)



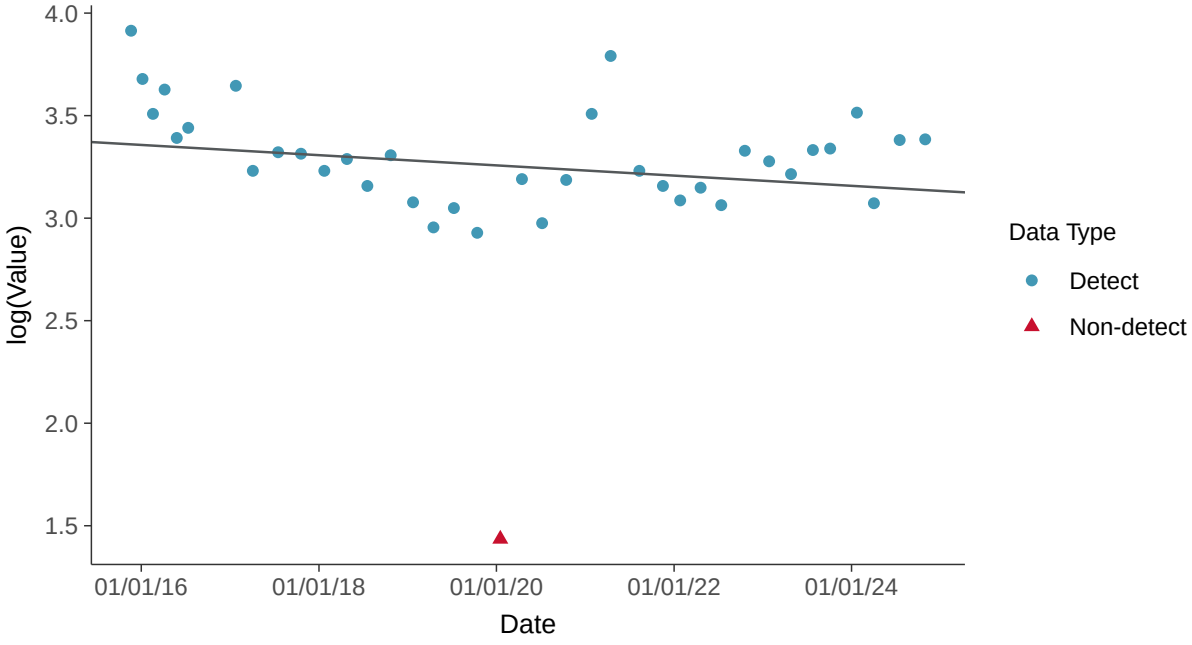
Gamma Q-Q plot using ROS Imputed Estimates

Lithium, MW-8 (ug/L)



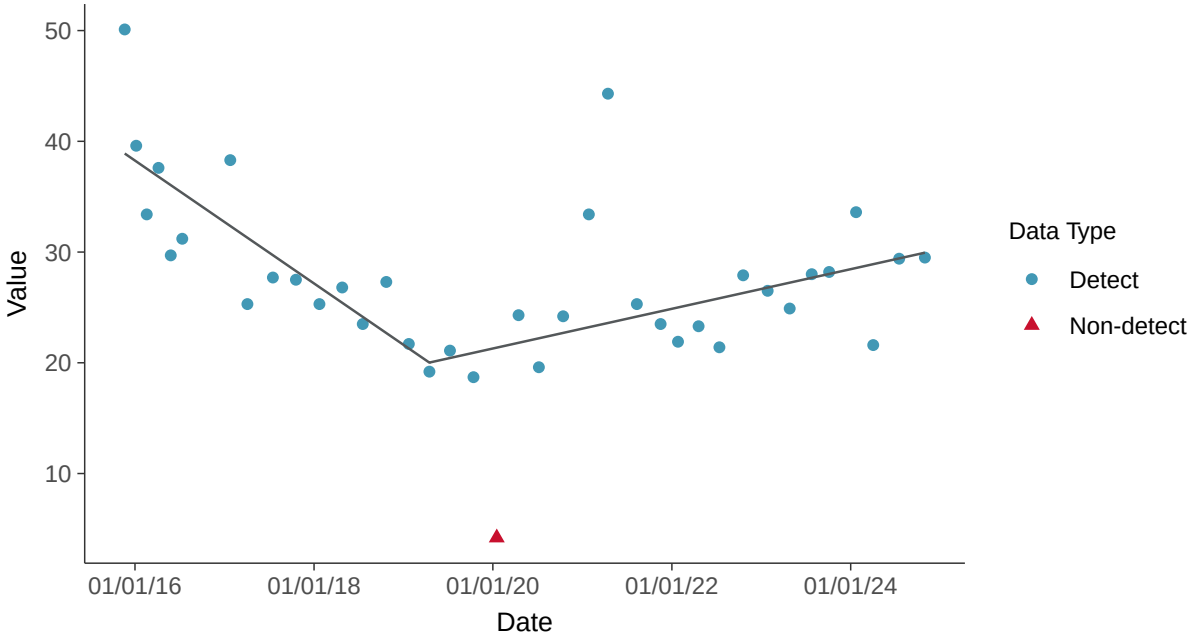
Trend Regression: Lognormal MLE

Lithium, MW-8 (ug/L)



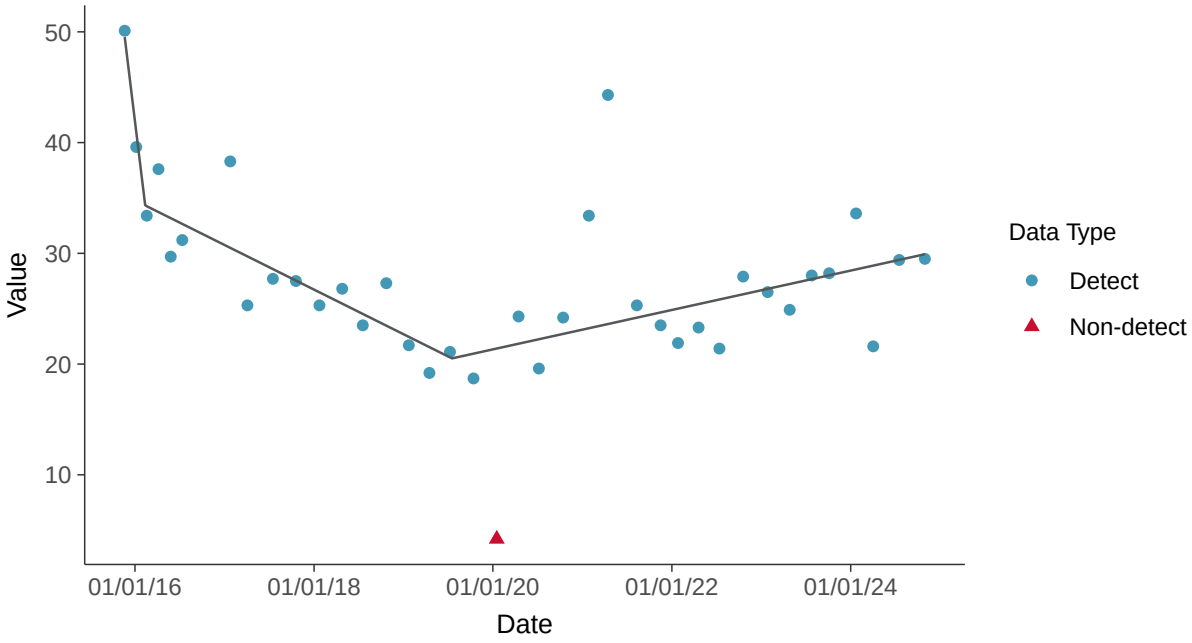
Trend Regression: Piecewise Linear-Linear

Lithium, MW-8 (ug/L)



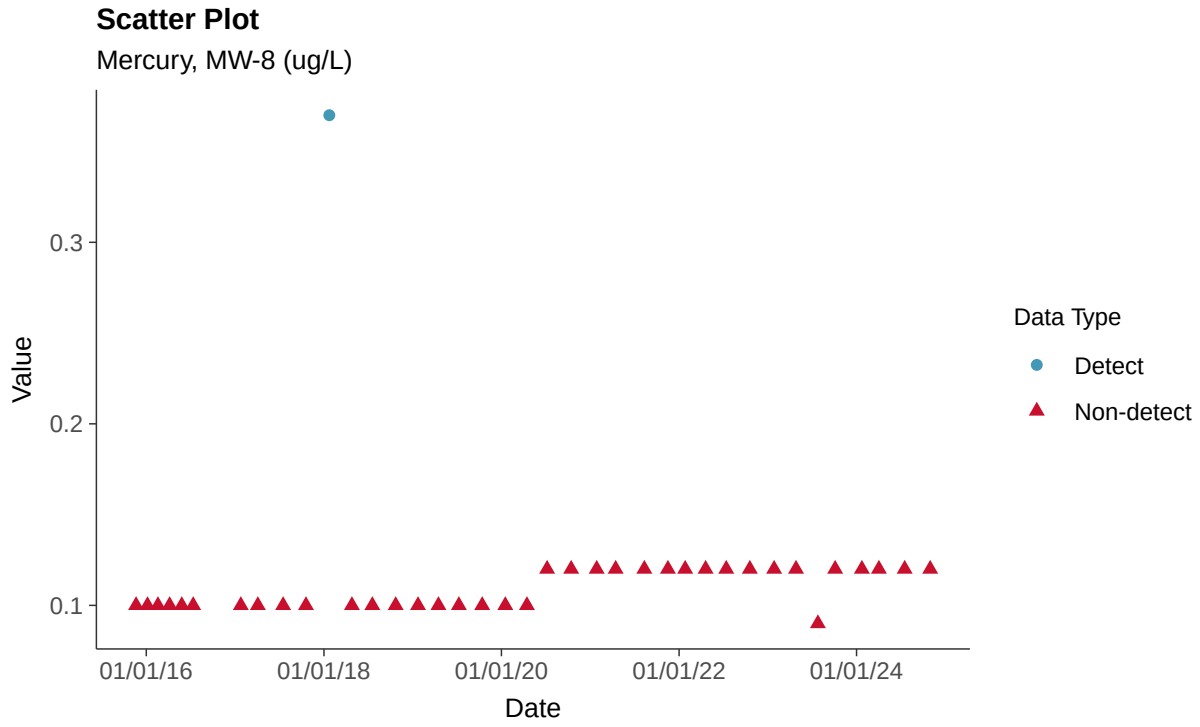
Trend Regression: Piecewise Linear-Linear-Linear

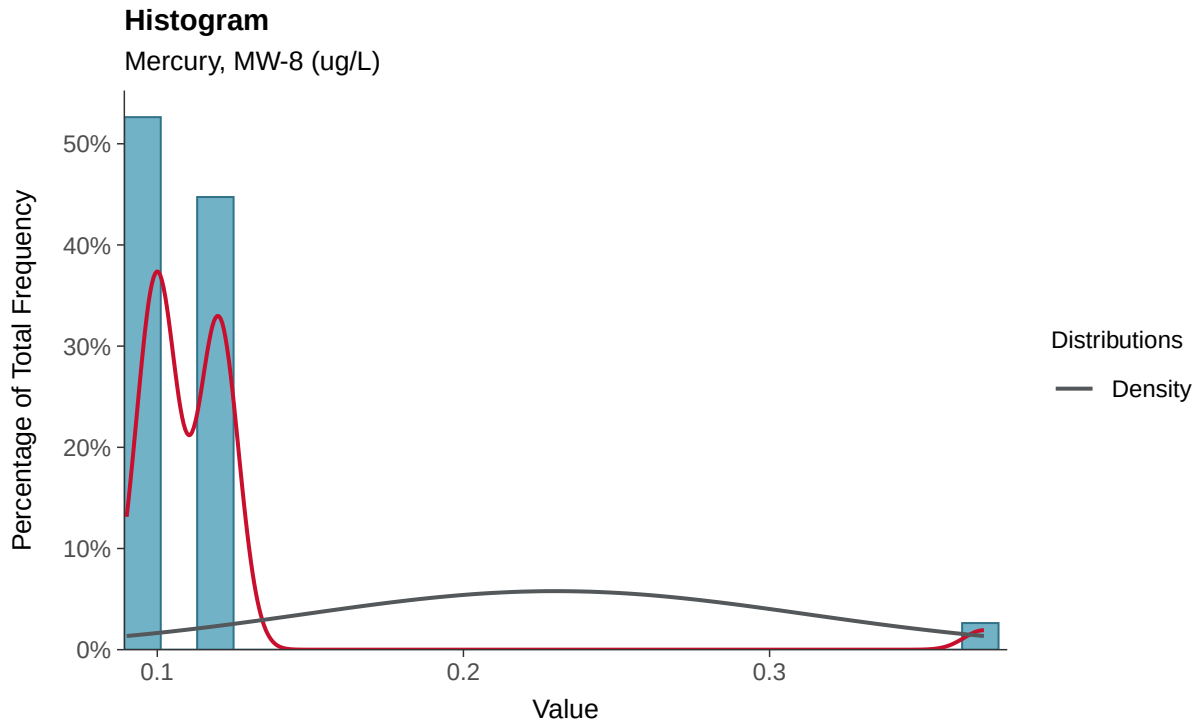
Lithium, MW-8 (ug/L)



App. IV: Mercury, MW-8

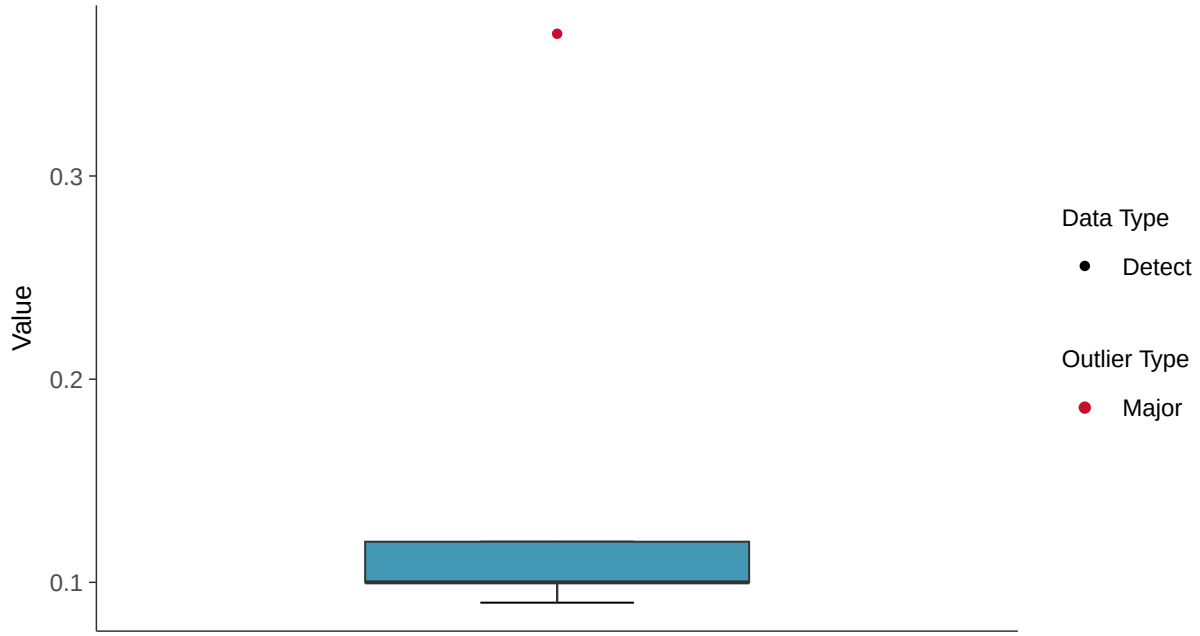
ID: 08_03_115





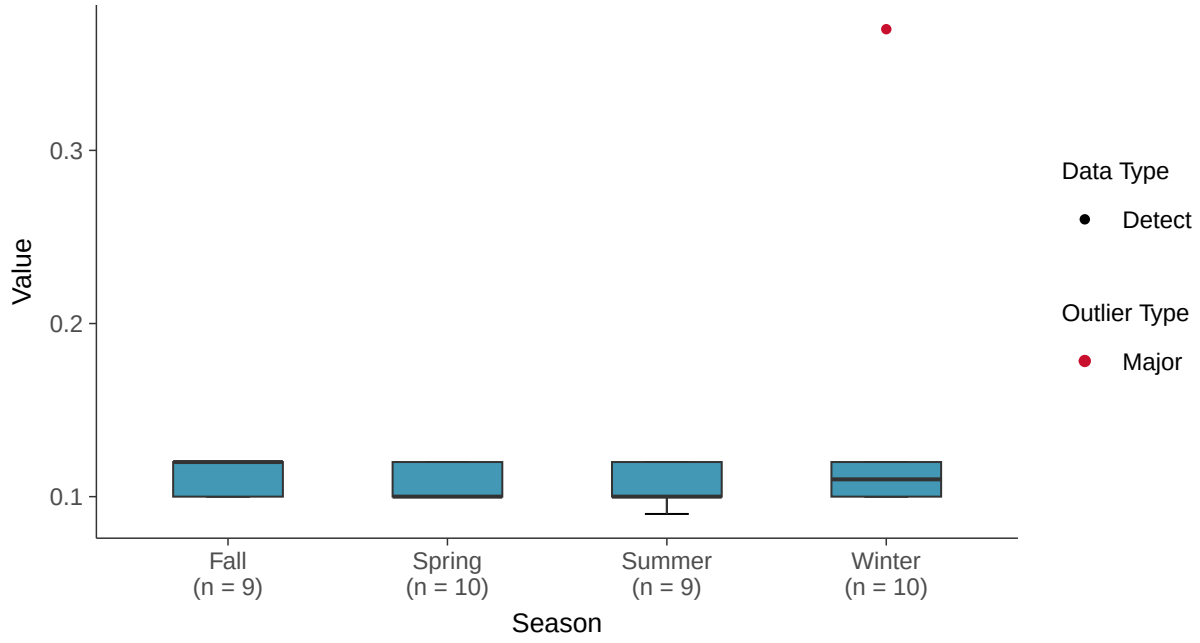
Boxplot

Mercury, MW-8 (ug/L)



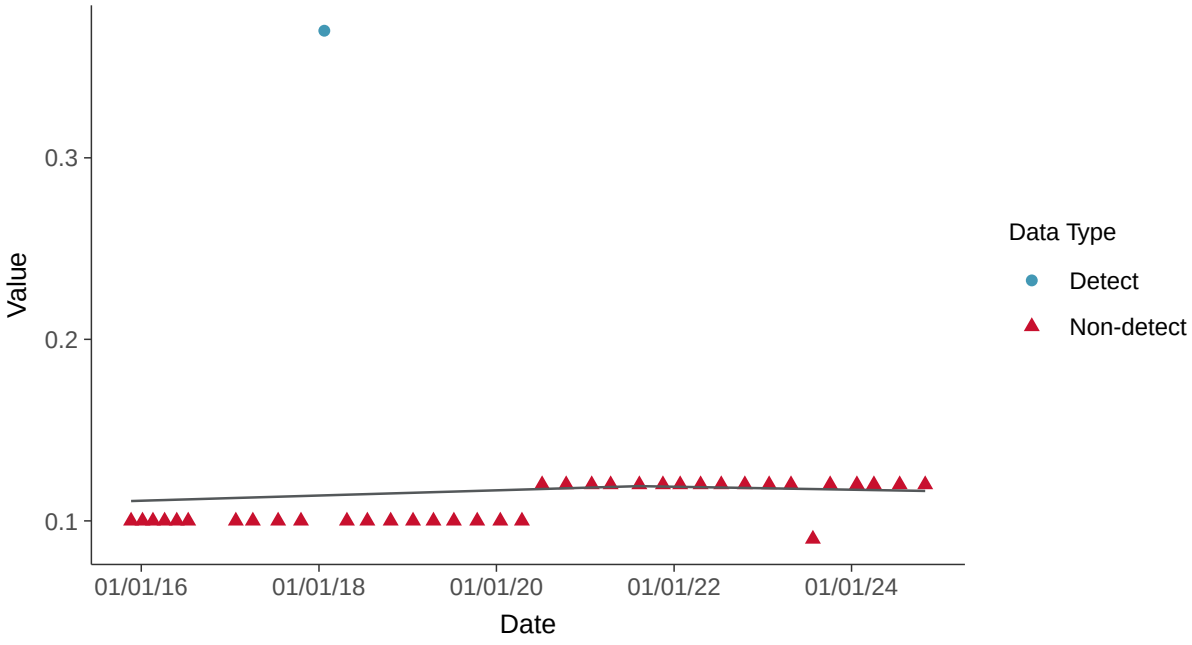
Boxplot by Season

Mercury, MW-8 (ug/L)



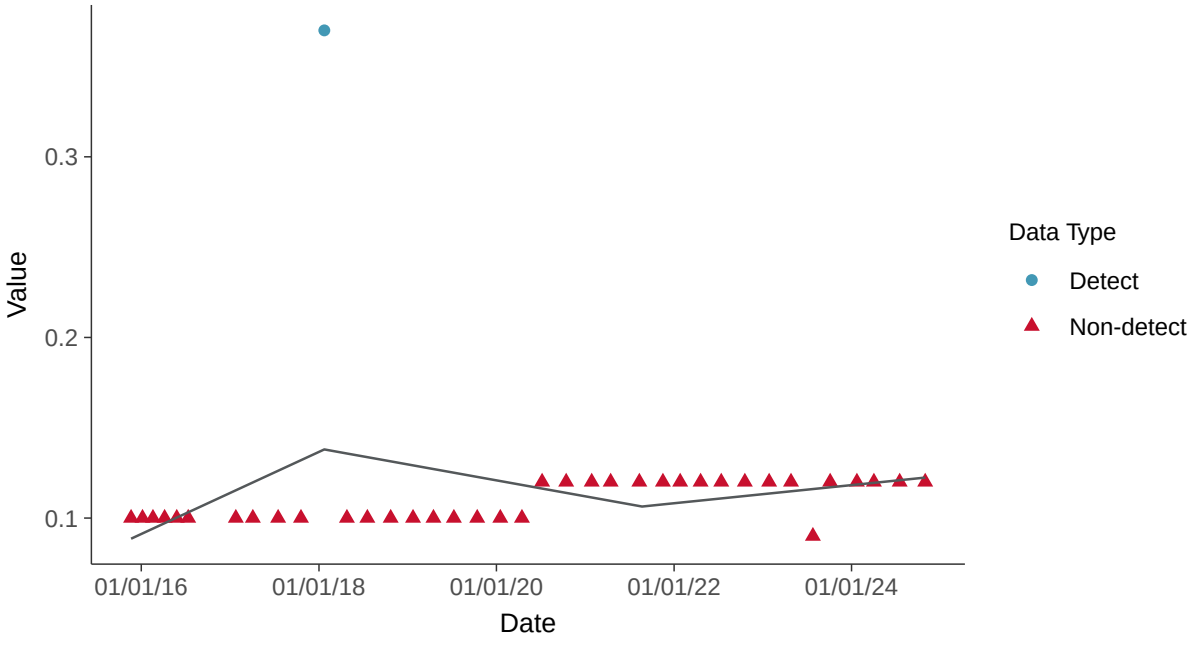
Trend Regression: Piecewise Linear-Linear

Mercury, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-8 (ug/L)

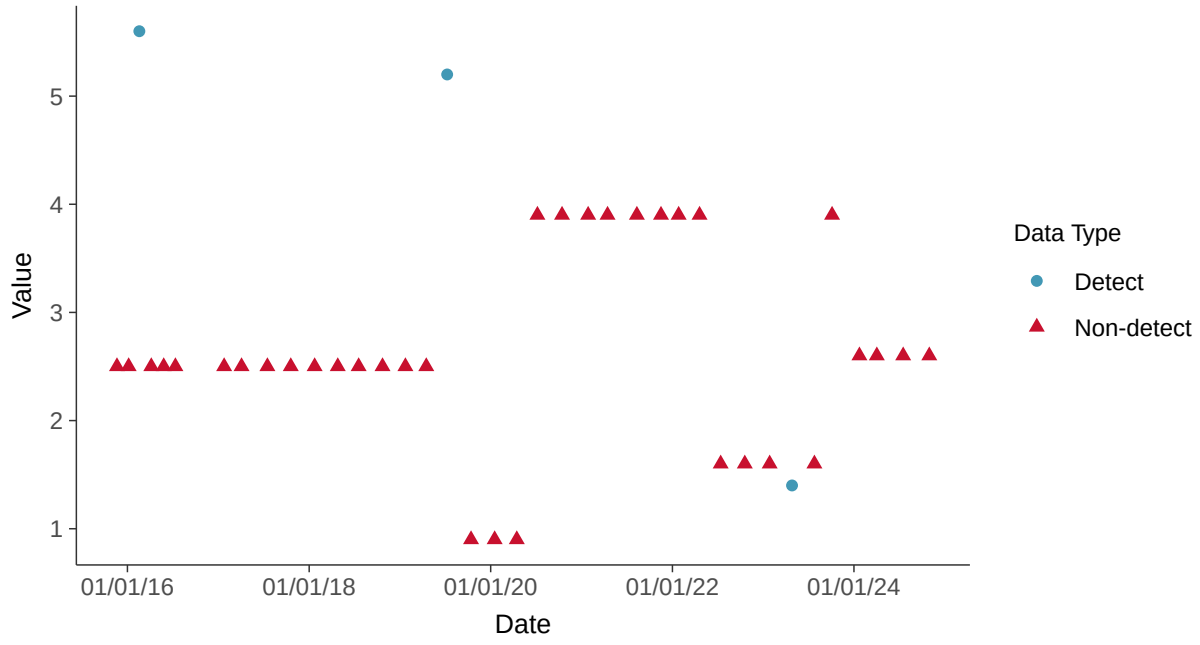


App. IV: Molybdenum, MW-8

ID: 08_03_116

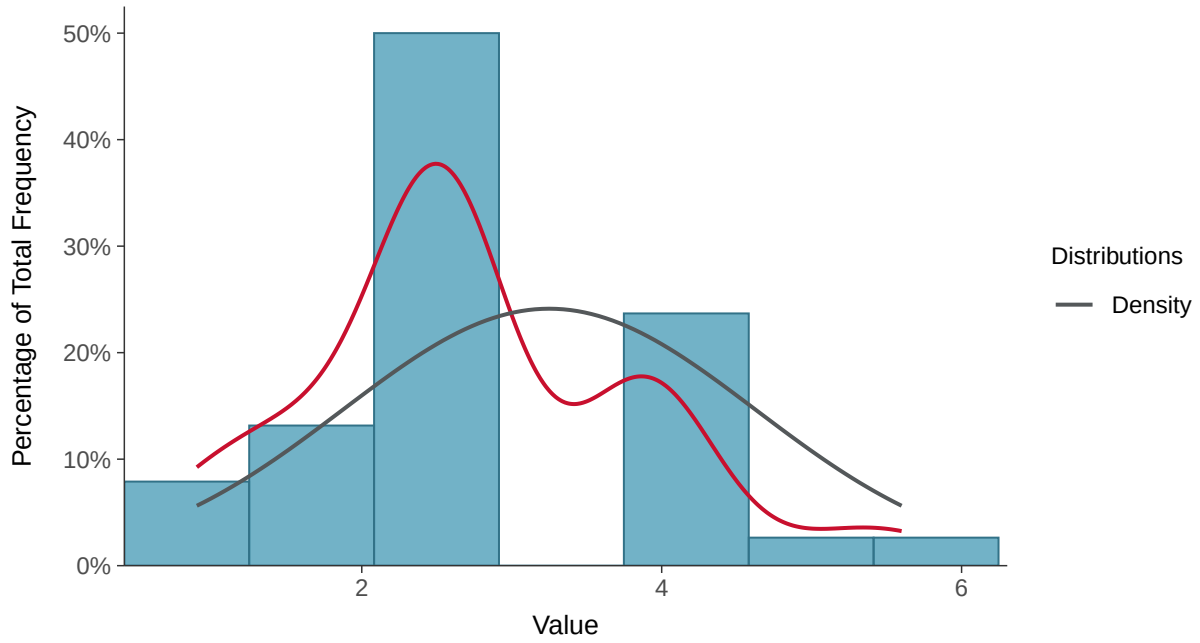
Scatter Plot

Molybdenum, MW-8 (ug/L)



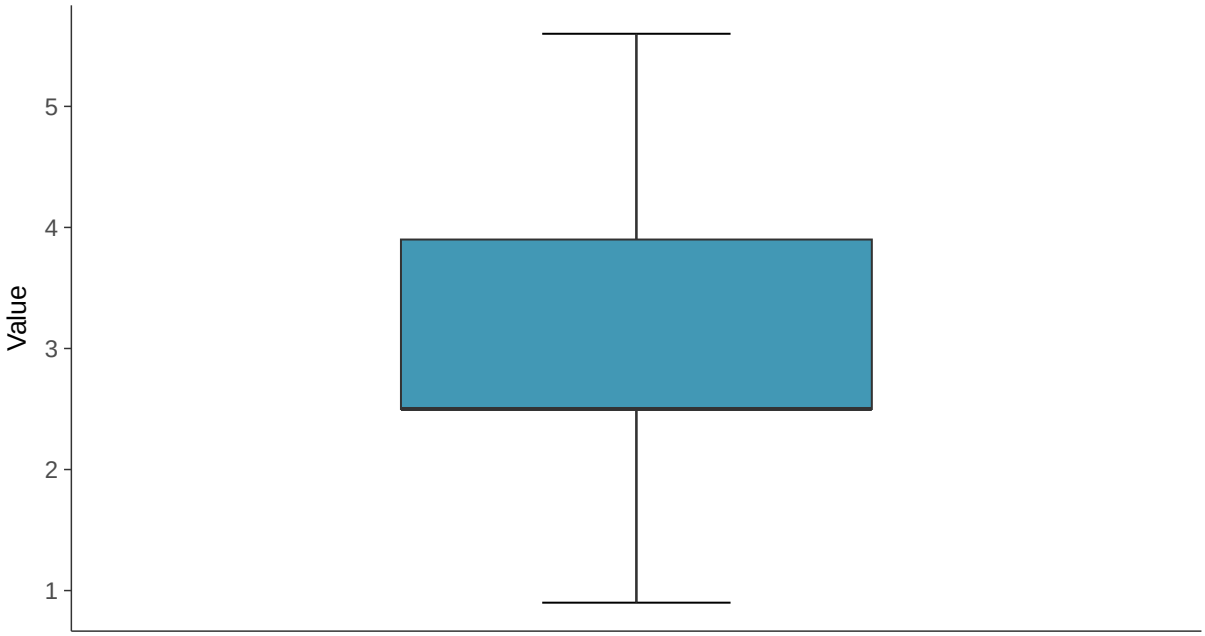
Histogram

Molybdenum, MW-8 (ug/L)



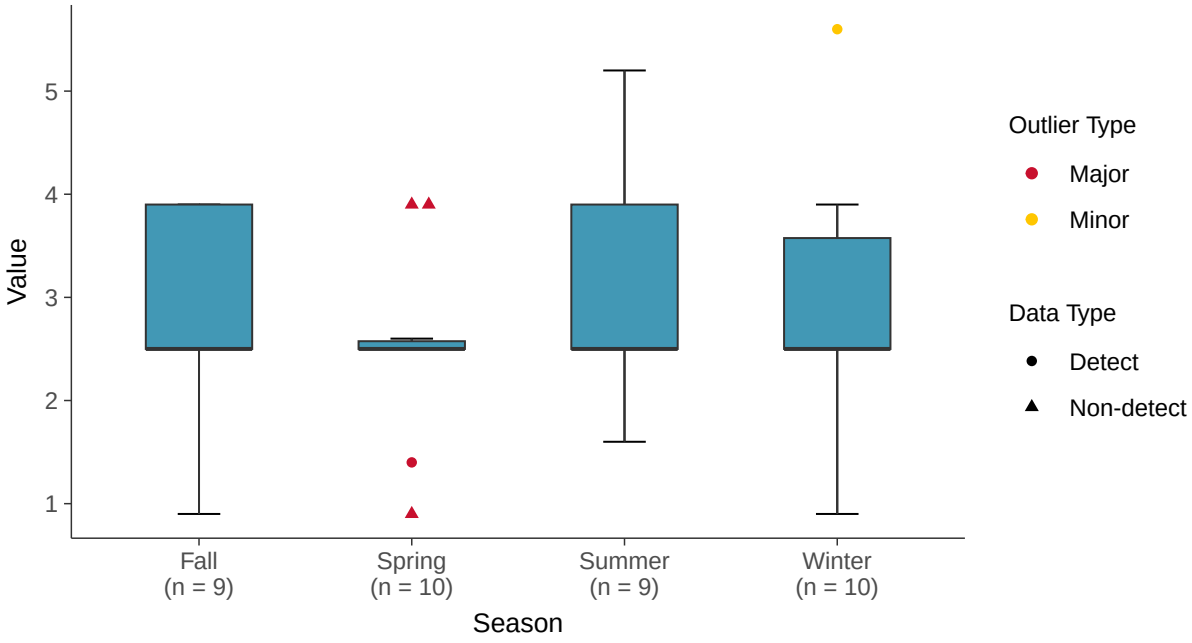
Boxplot

Molybdenum, MW-8 (ug/L)



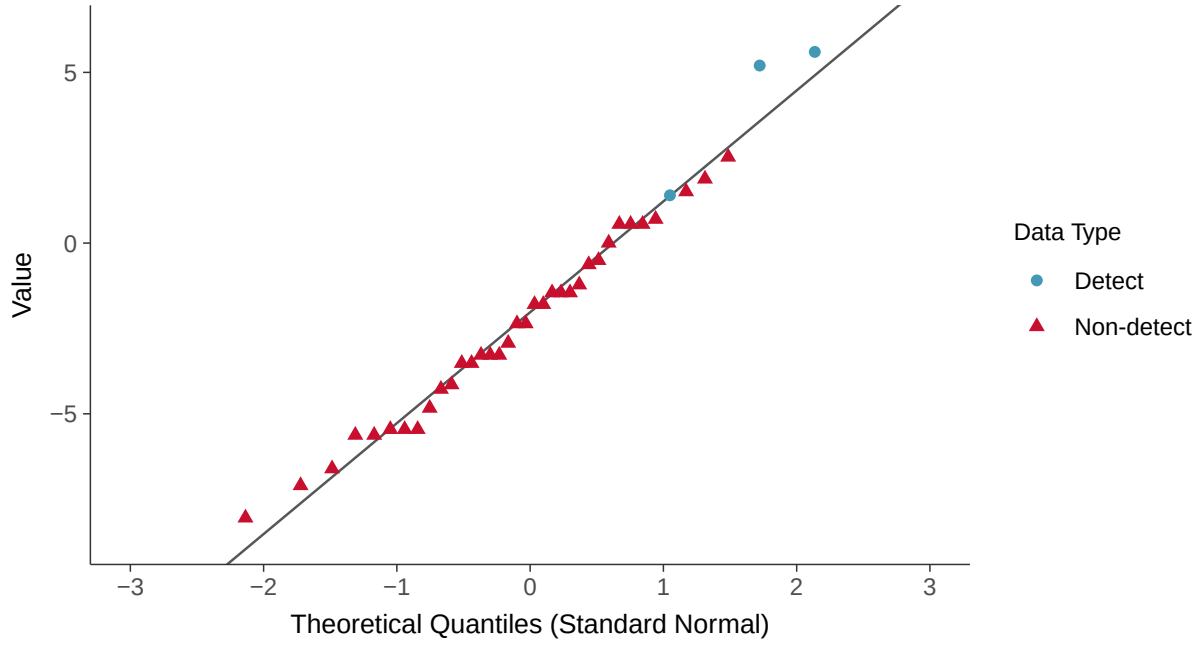
Boxplot by Season

Molybdenum, MW-8 (ug/L)



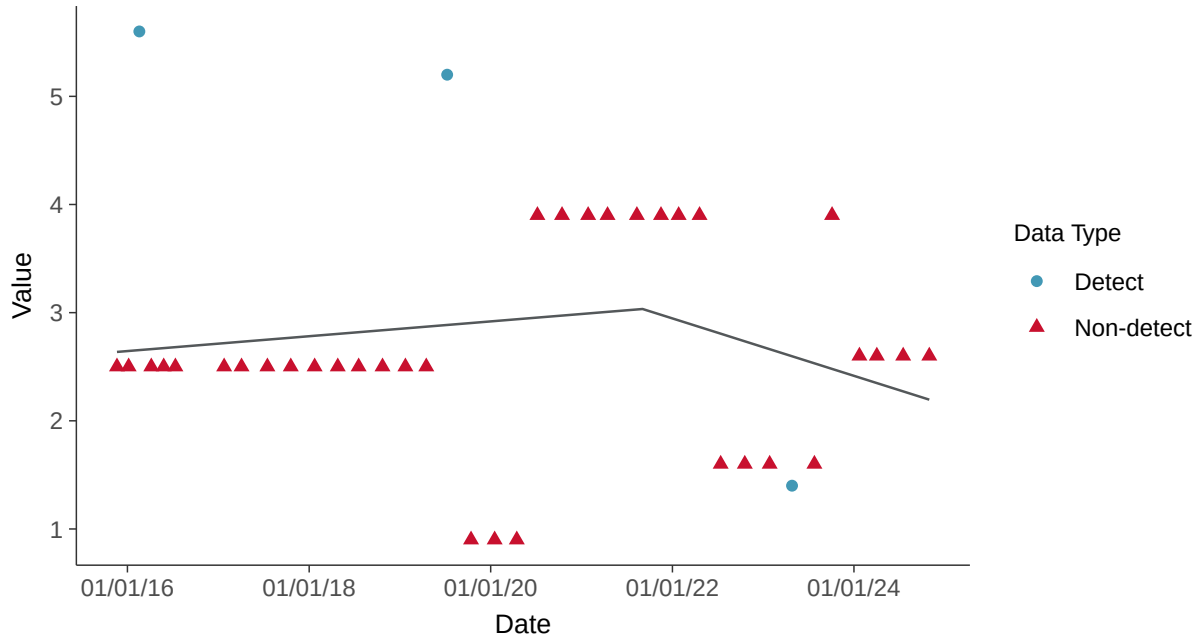
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-8 (ug/L)



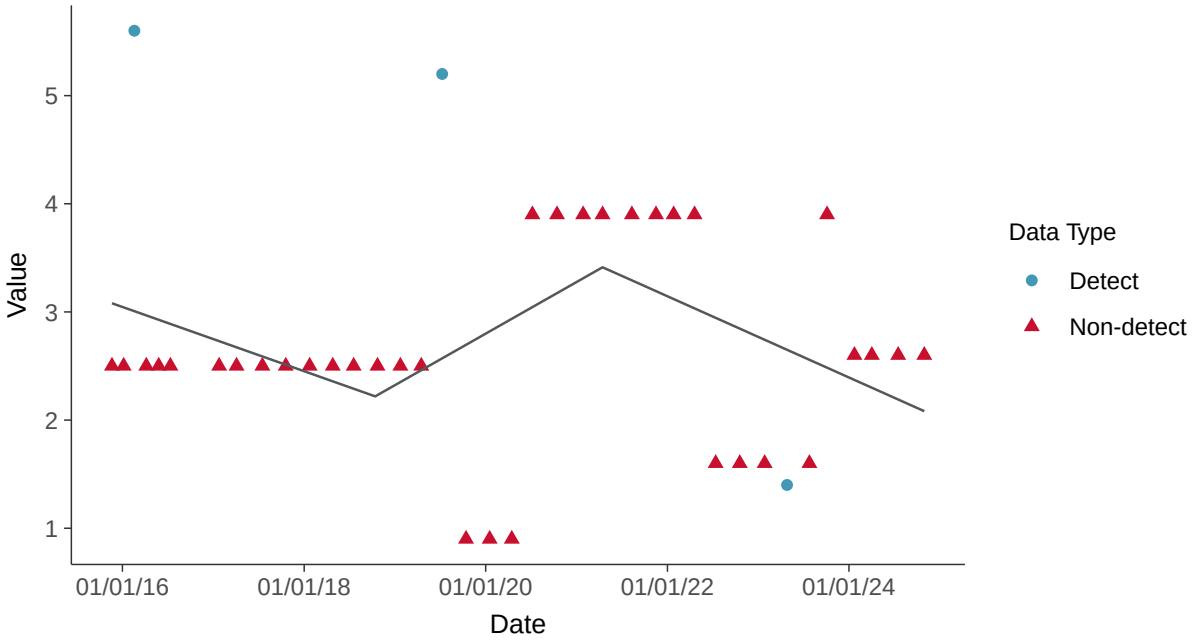
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-8 (ug/L)



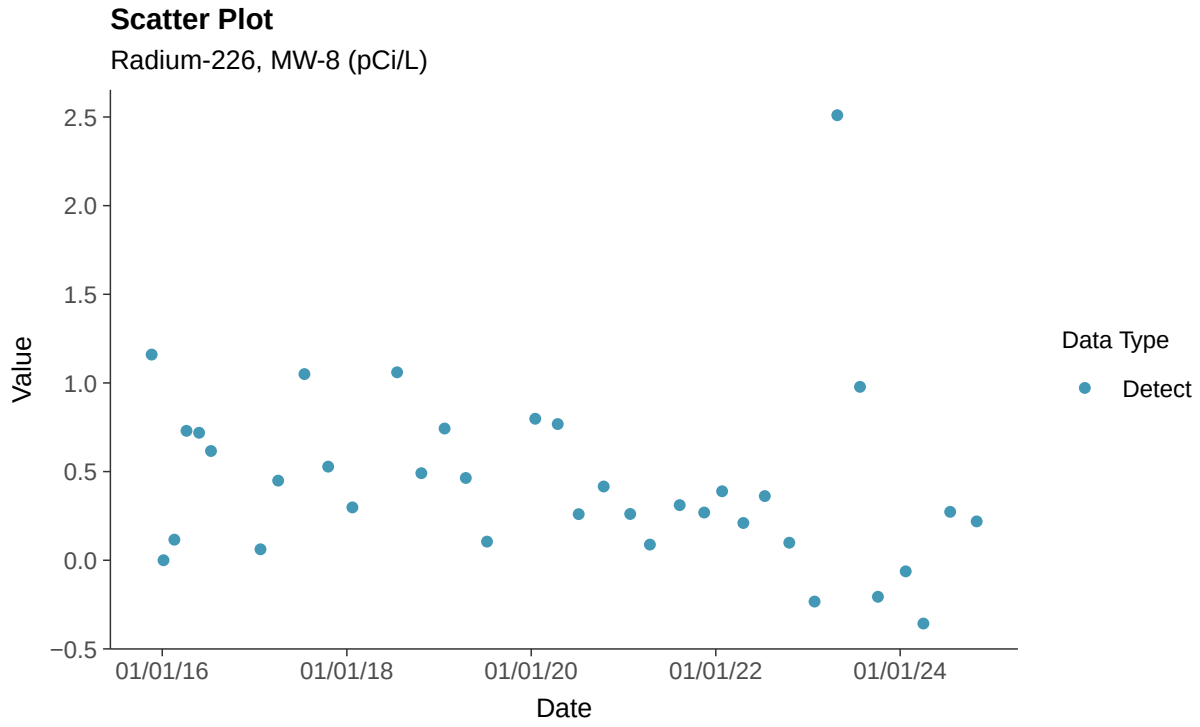
Trend Regression: Piecewise Linear-Linear-Linear

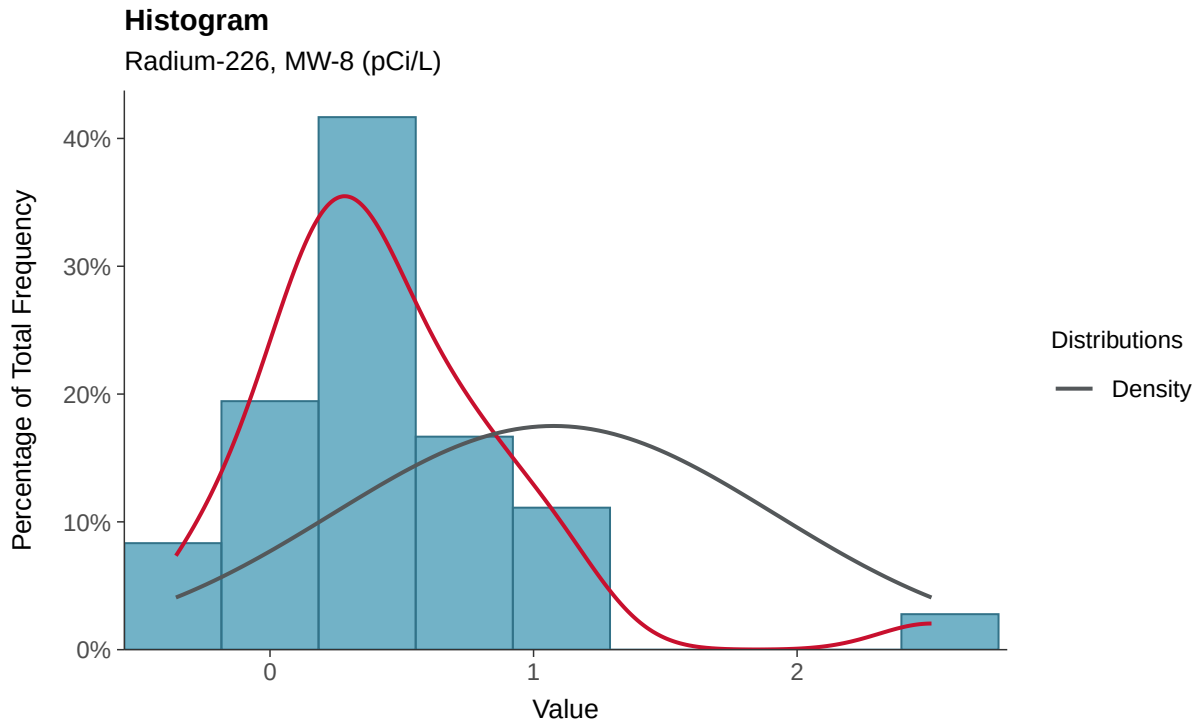
Molybdenum, MW-8 (ug/L)



App. IV: Radium-226, MW-8

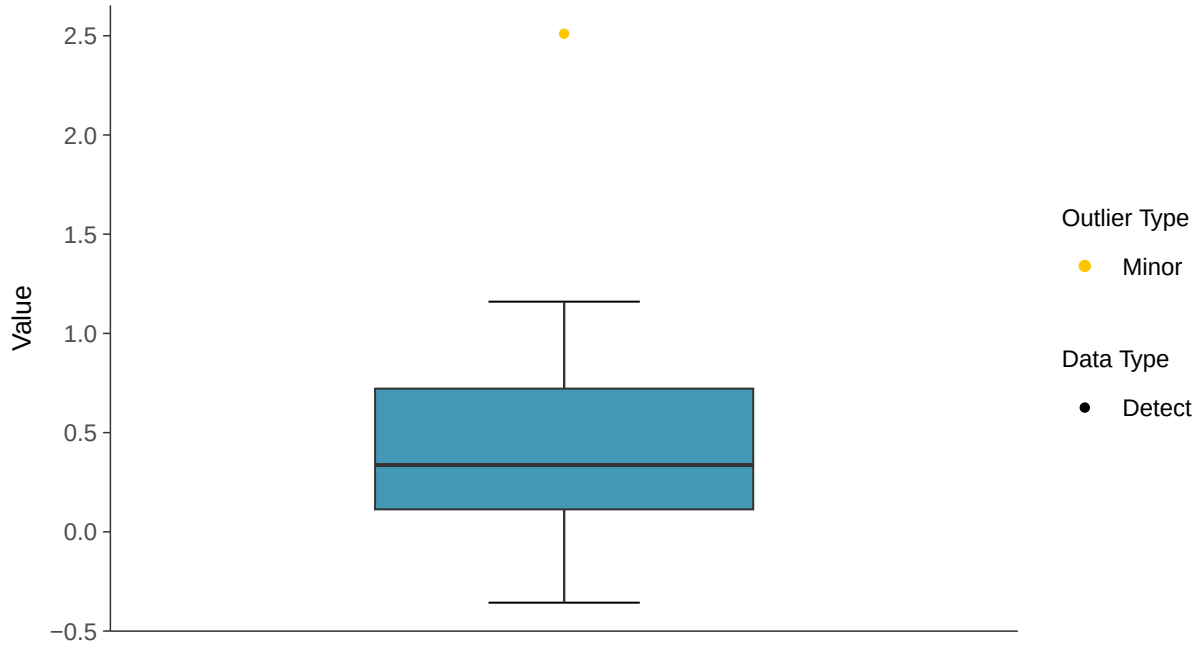
ID: 08_03_119





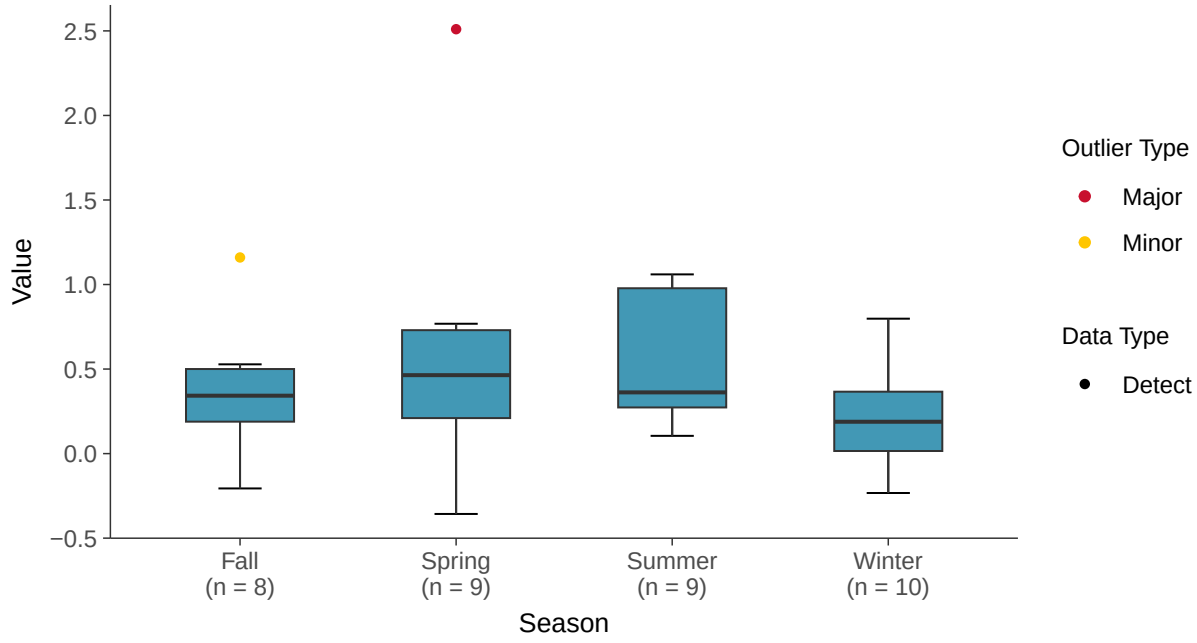
Boxplot

Radium-226, MW-8 (pCi/L)



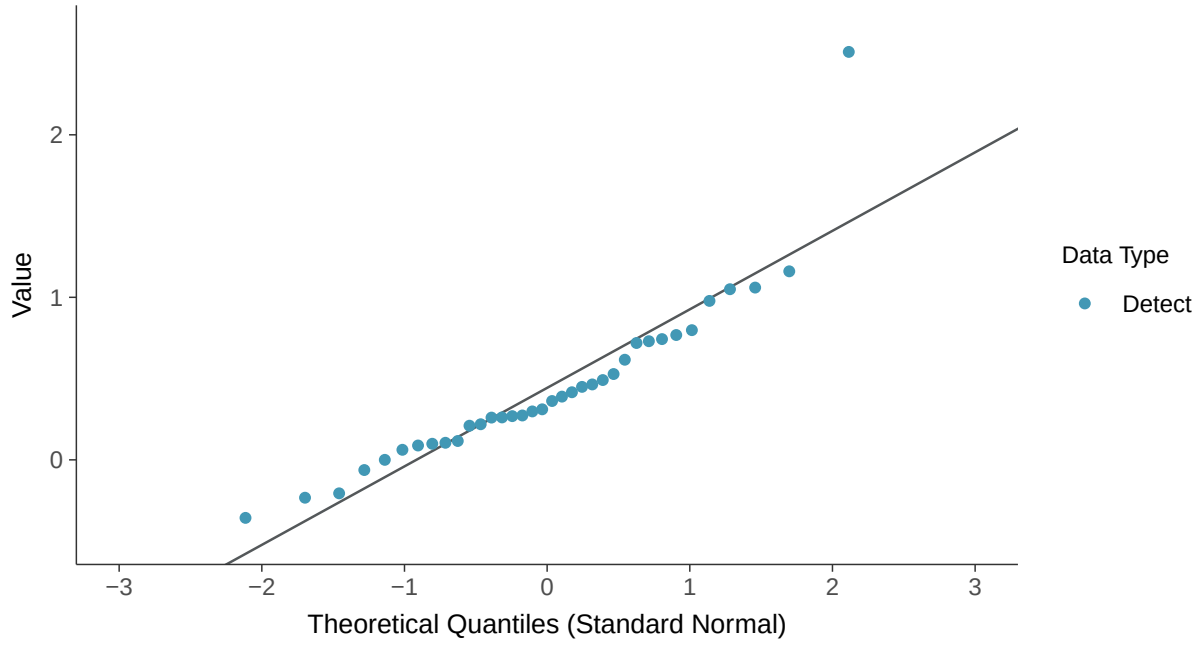
Boxplot by Season

Radium-226, MW-8 (pCi/L)



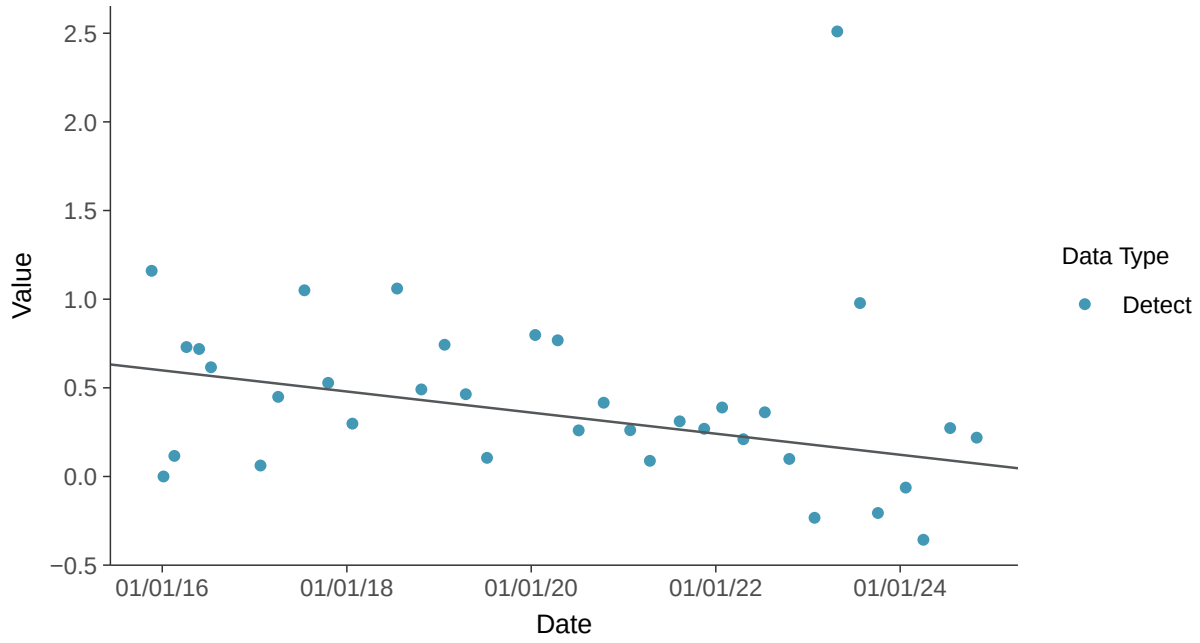
Normal Q-Q plot

Radium-226, MW-8 (pCi/L)



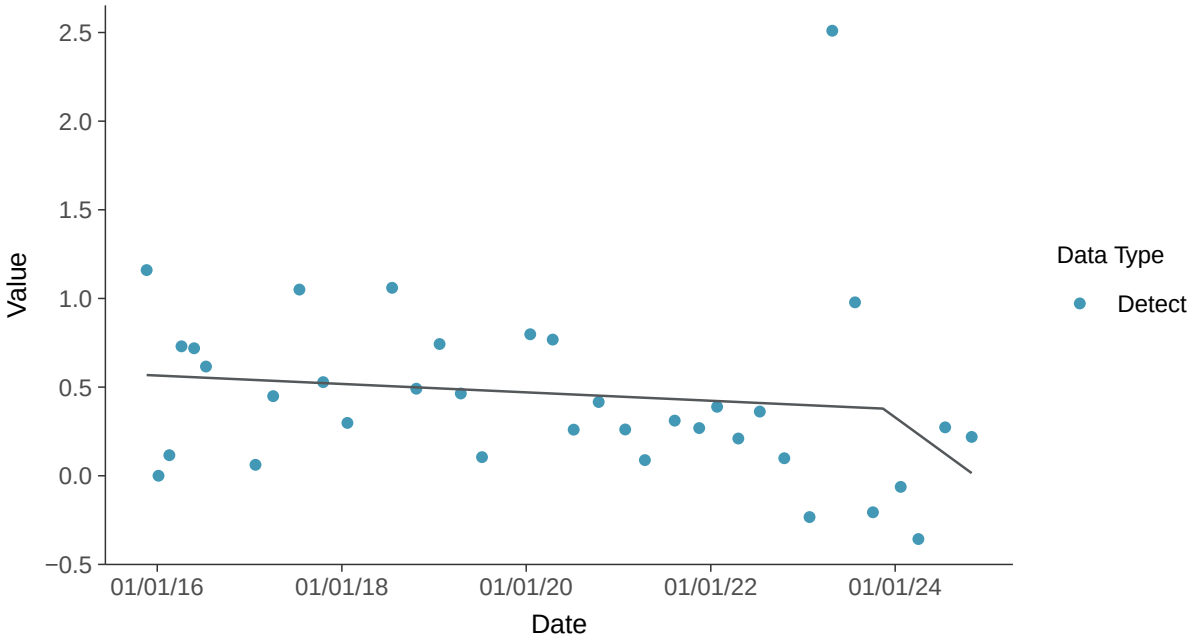
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-8 (pCi/L)



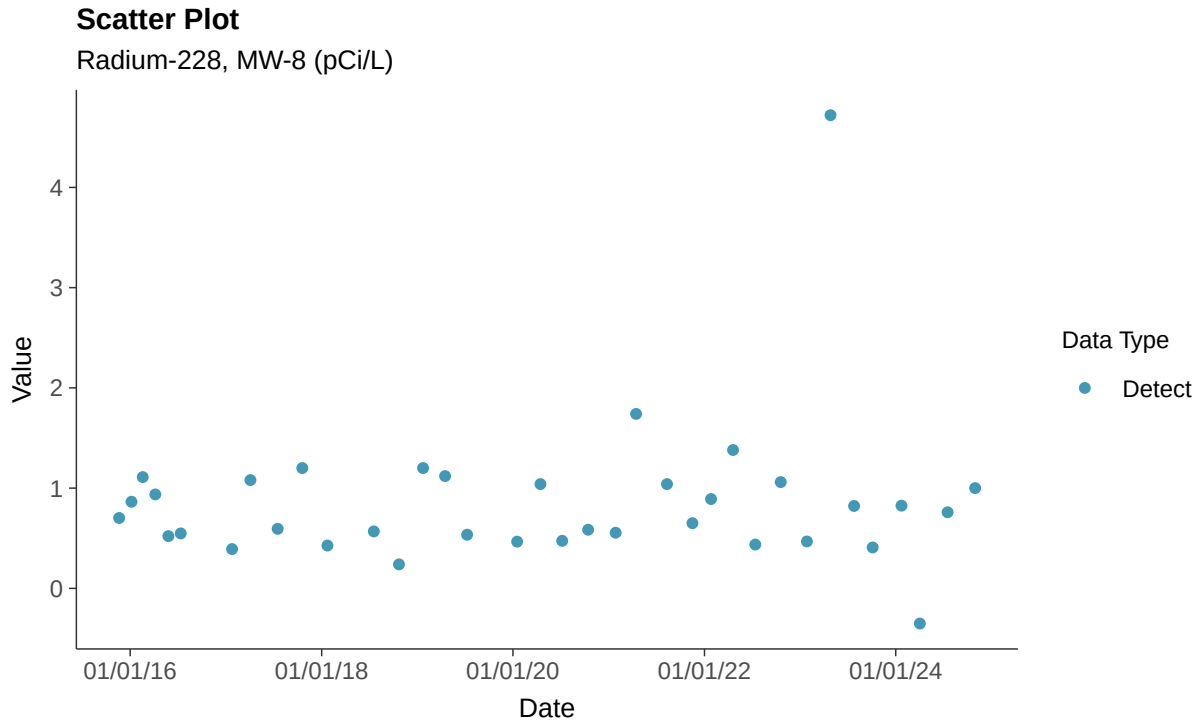
Trend Regression: Piecewise Linear-Linear

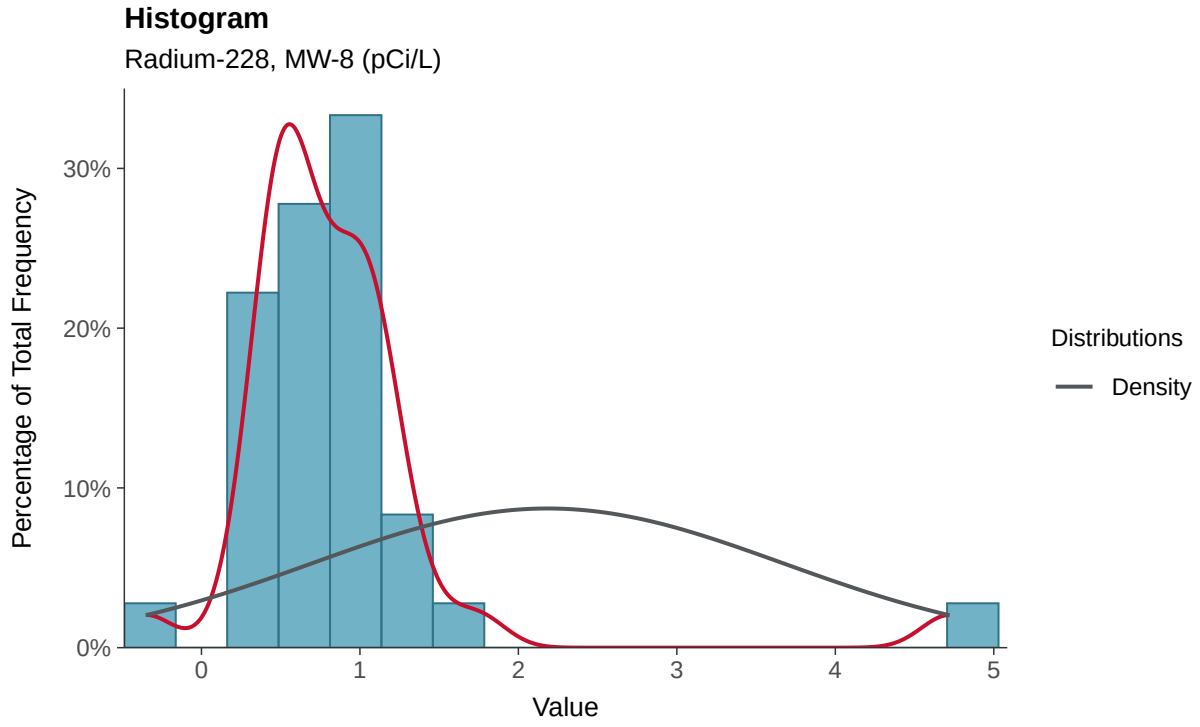
Radium-226, MW-8 (pCi/L)



App. IV: Radium-228, MW-8

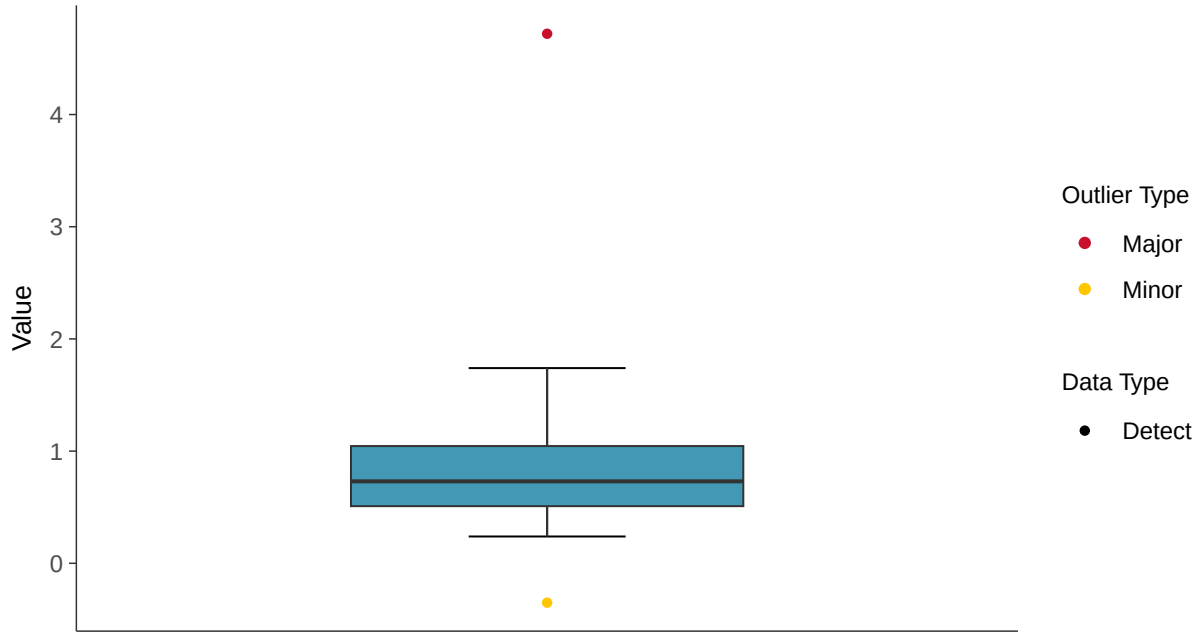
ID: 08_03_120





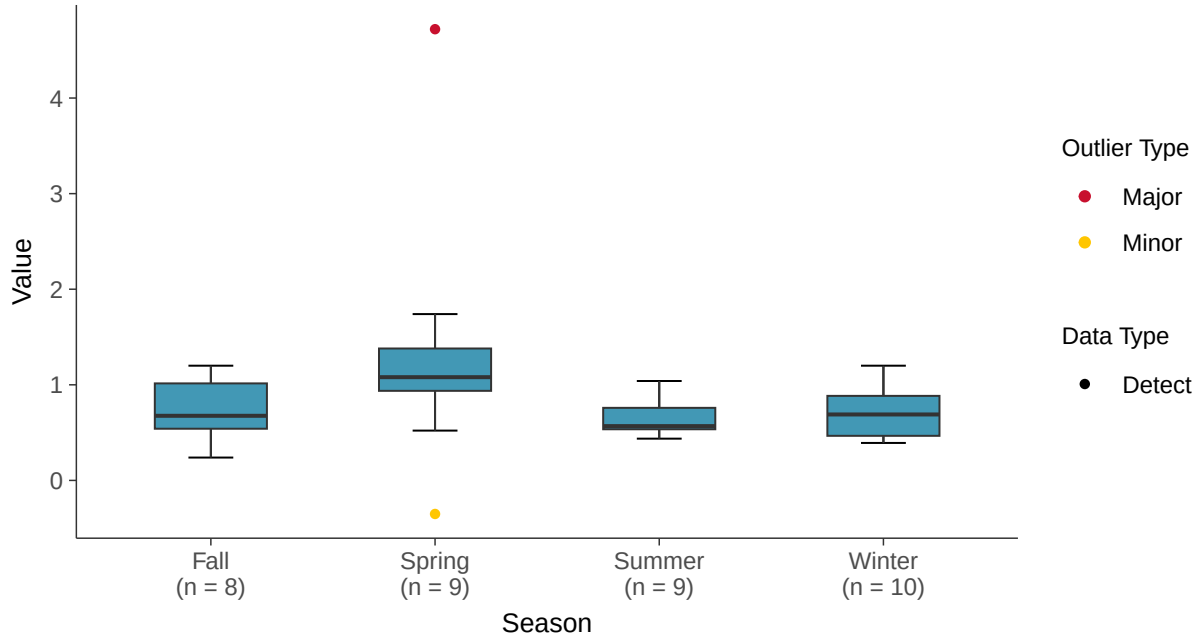
Boxplot

Radium-228, MW-8 (pCi/L)



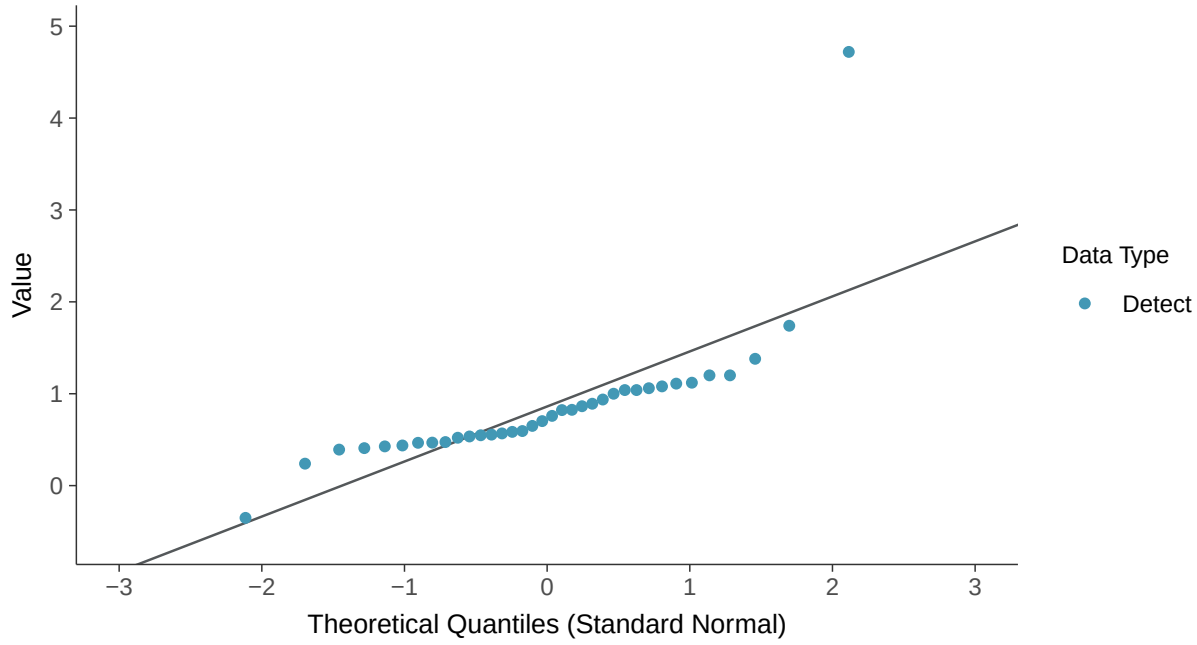
Boxplot by Season

Radium-228, MW-8 (pCi/L)



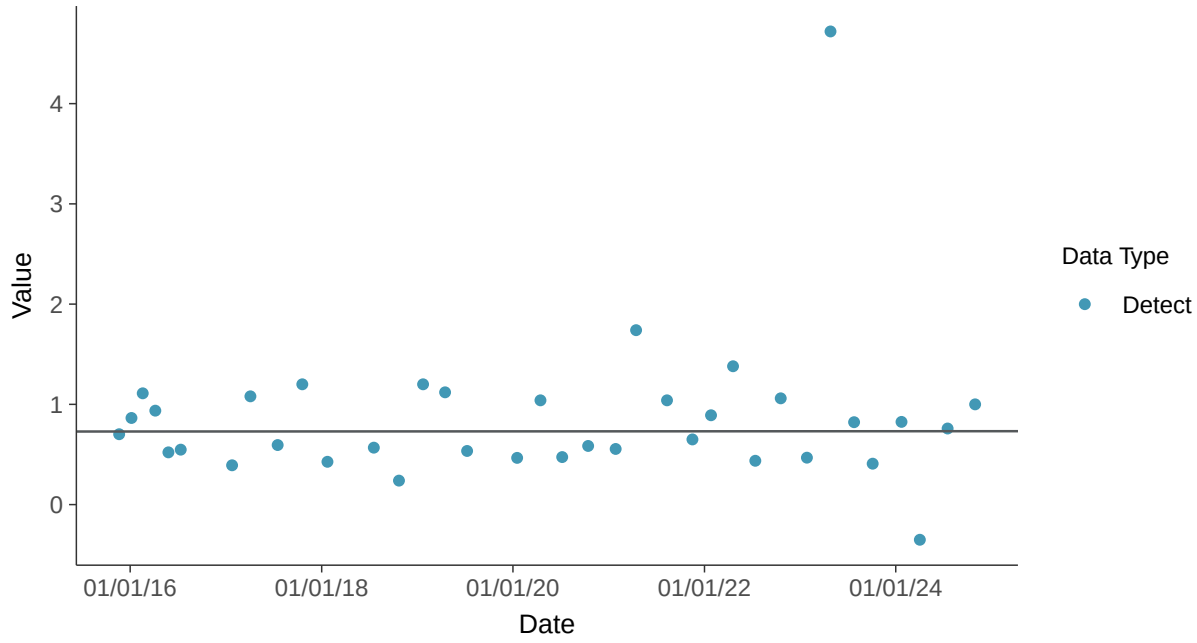
Normal Q-Q plot

Radium-228, MW-8 (pCi/L)



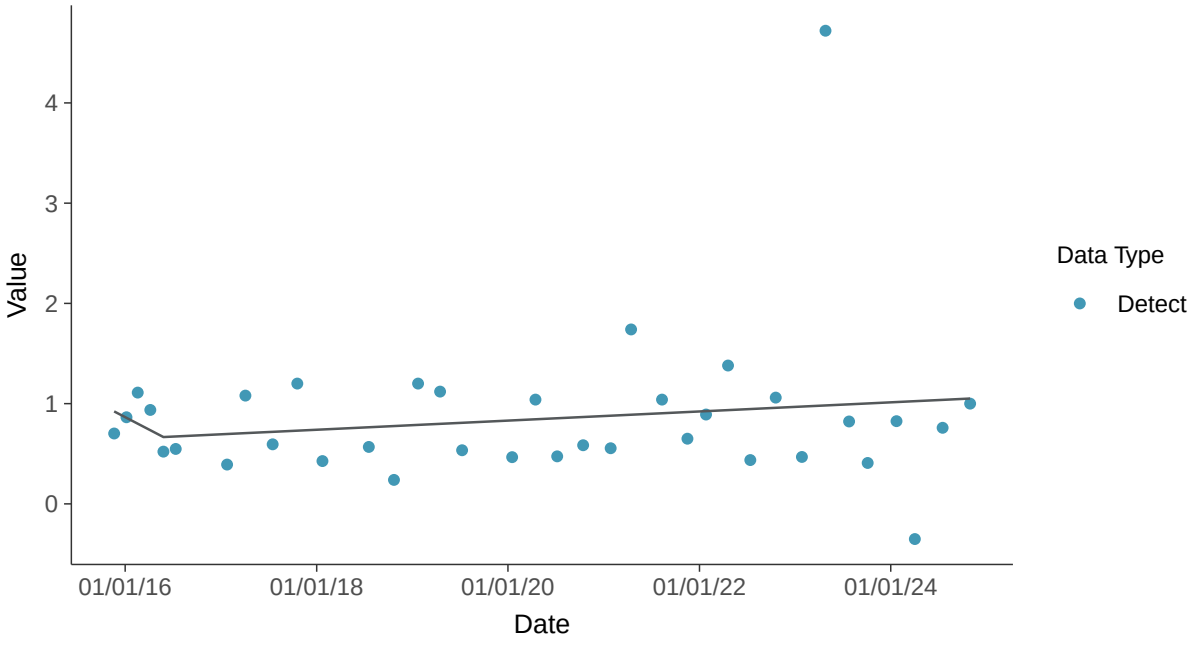
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-8 (pCi/L)



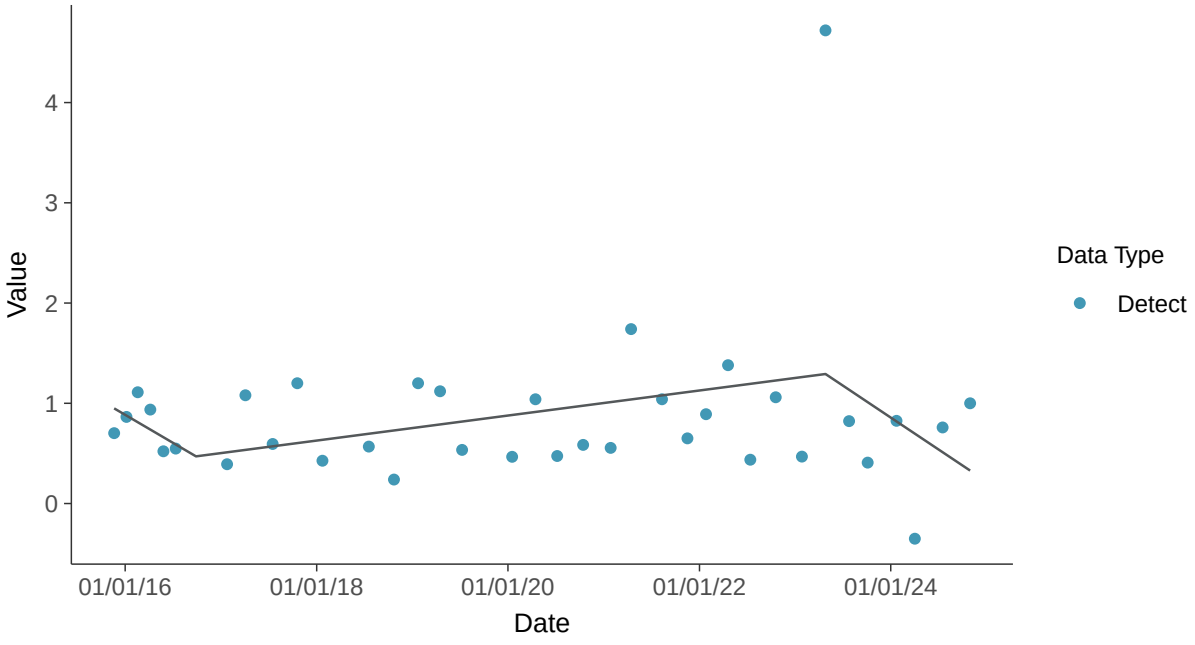
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-8 (pCi/L)



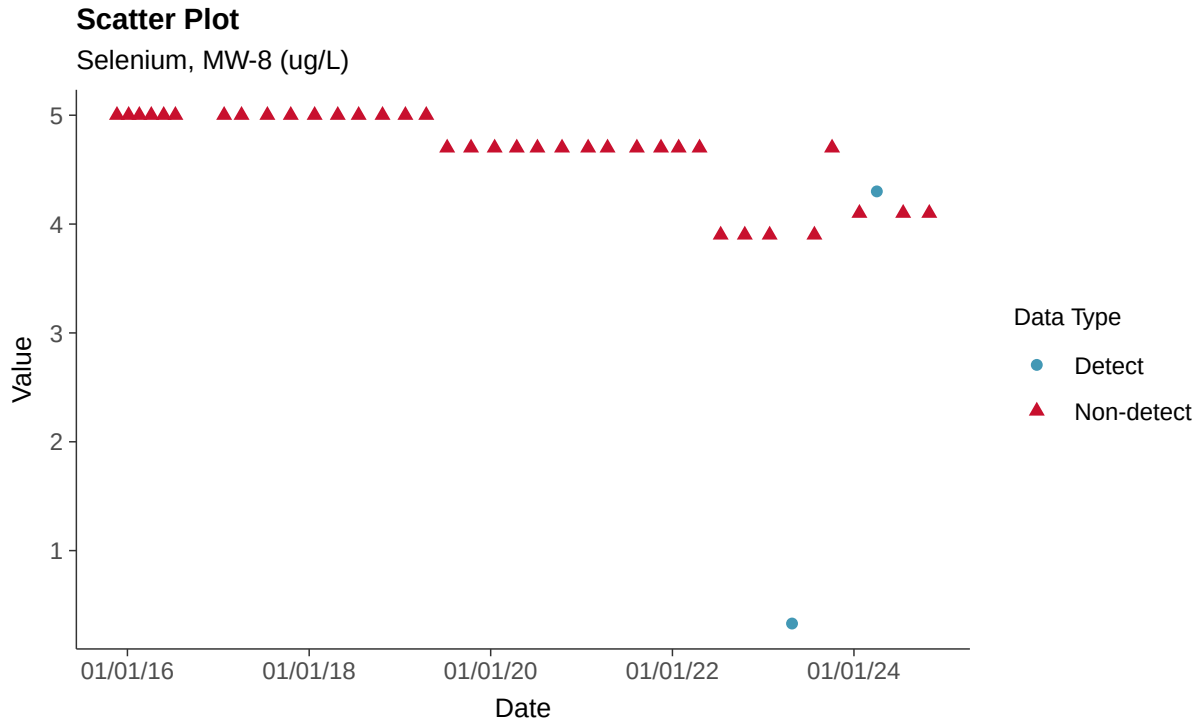
Trend Regression: Piecewise Linear-Linear-Linear

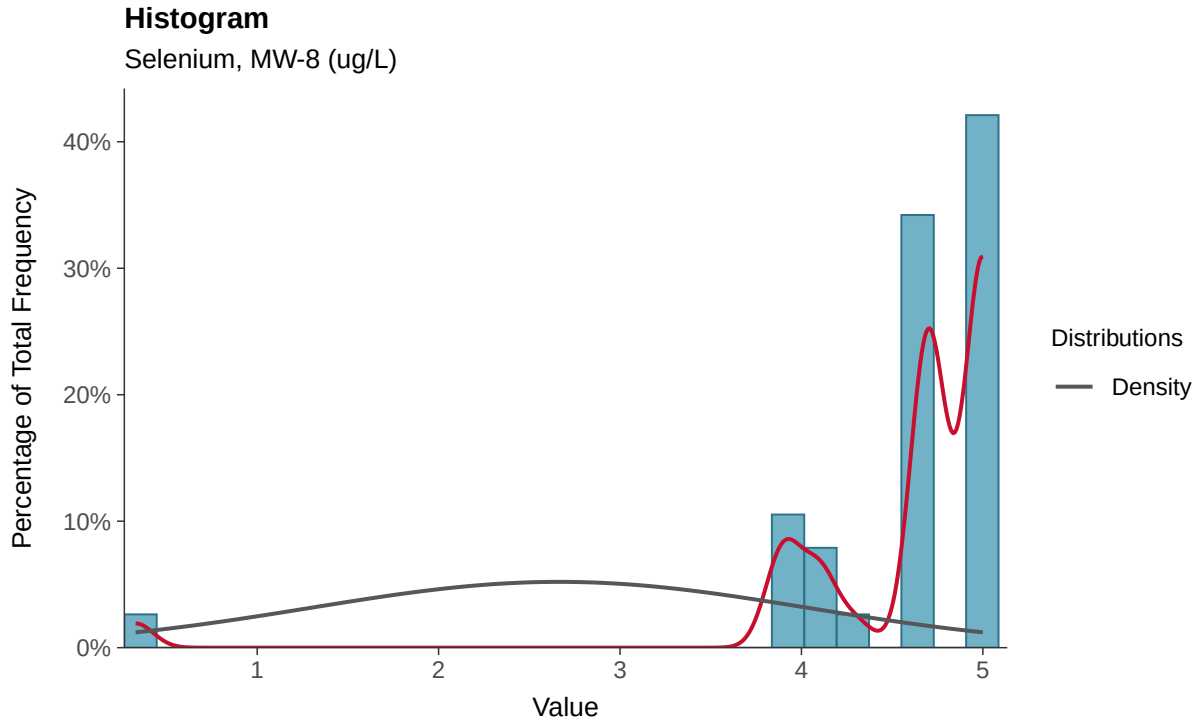
Radium-228, MW-8 (pCi/L)



App. IV: Selenium, MW-8

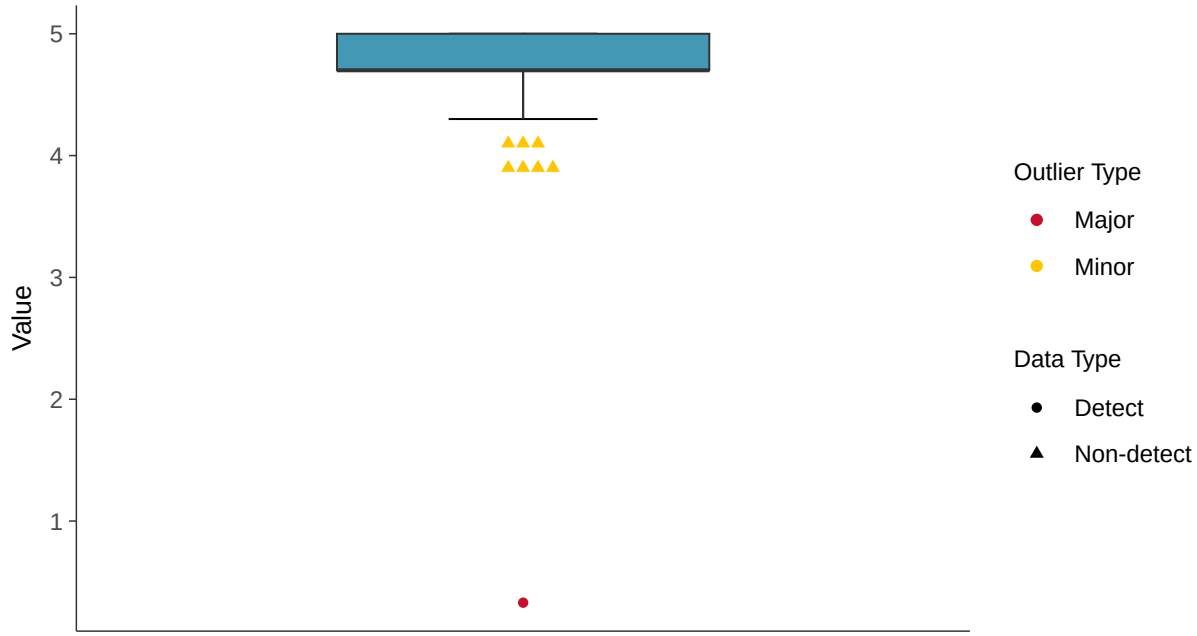
ID: 08_03_121





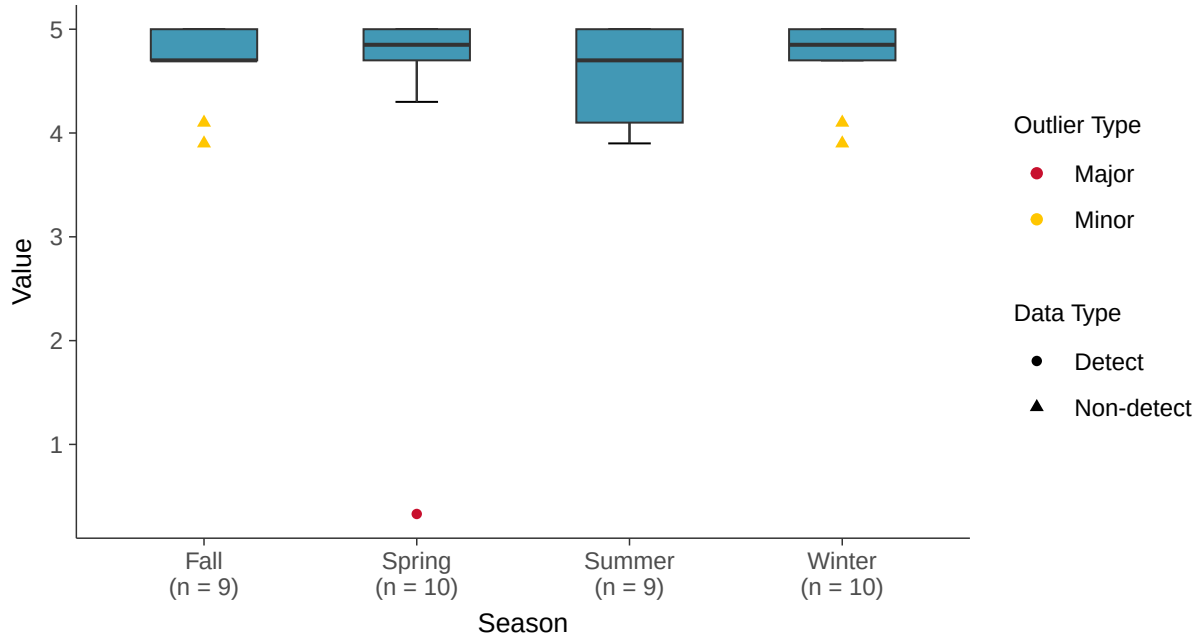
Boxplot

Selenium, MW-8 (ug/L)



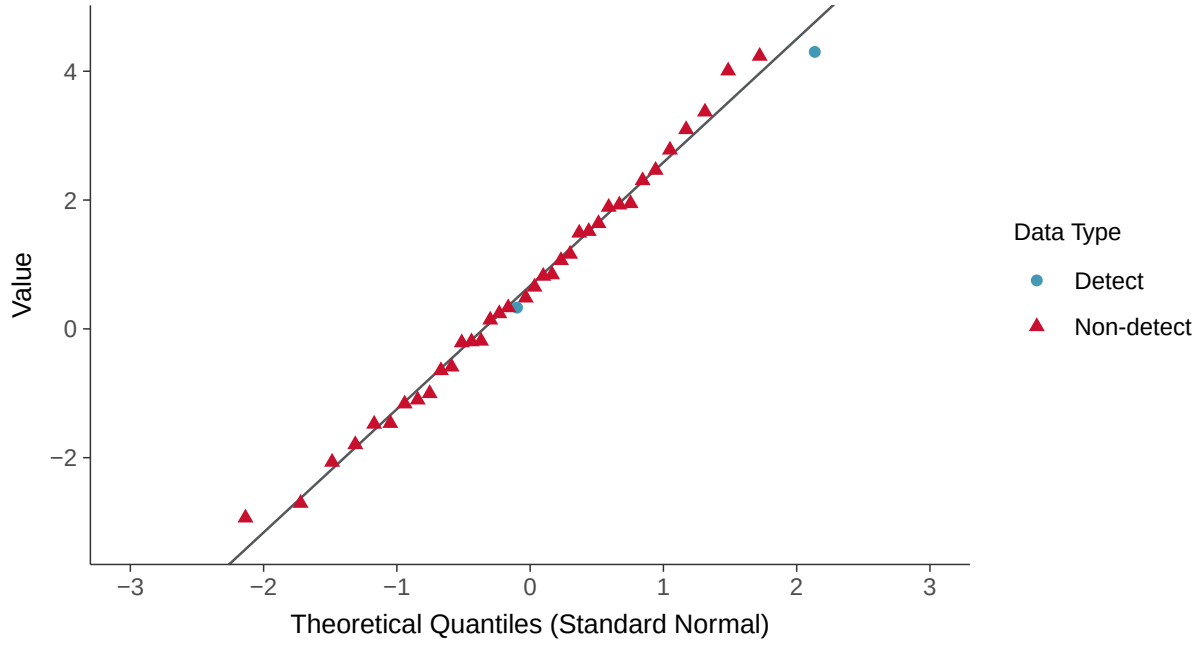
Boxplot by Season

Selenium, MW-8 (ug/L)



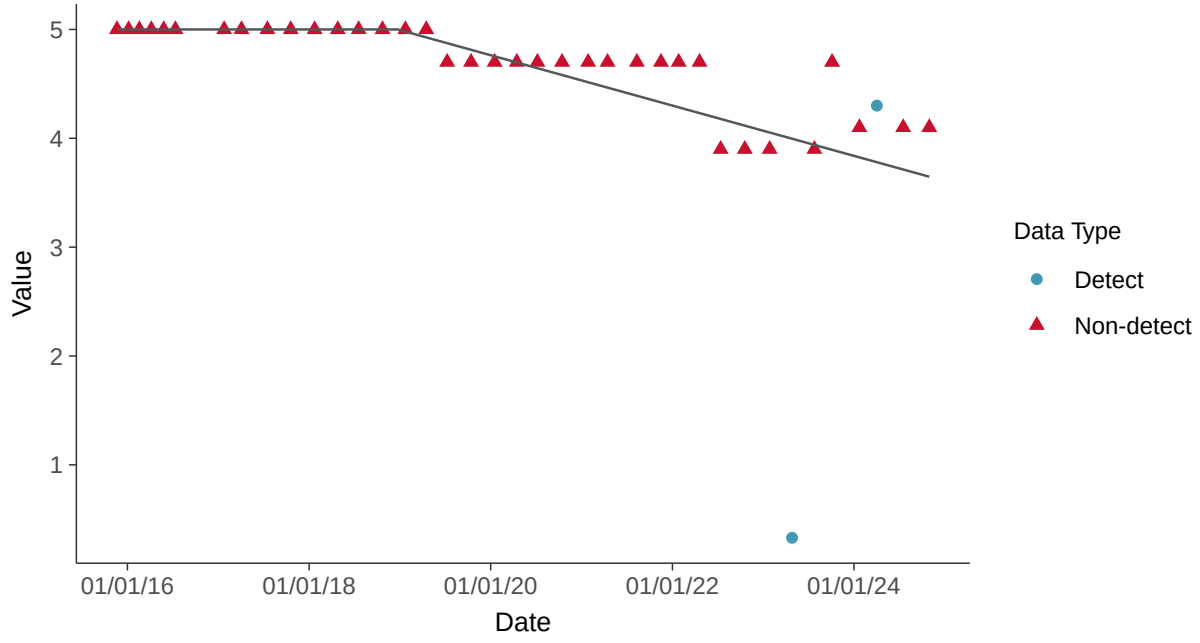
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-8 (ug/L)



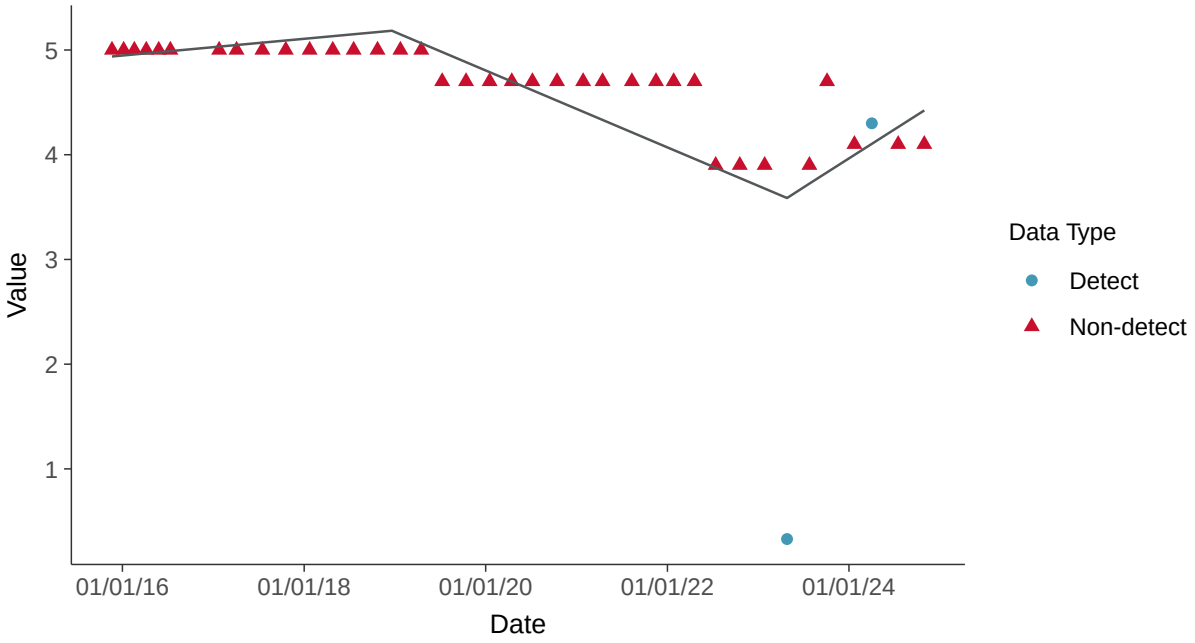
Trend Regression: Piecewise Linear-Linear

Selenium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-8 (ug/L)

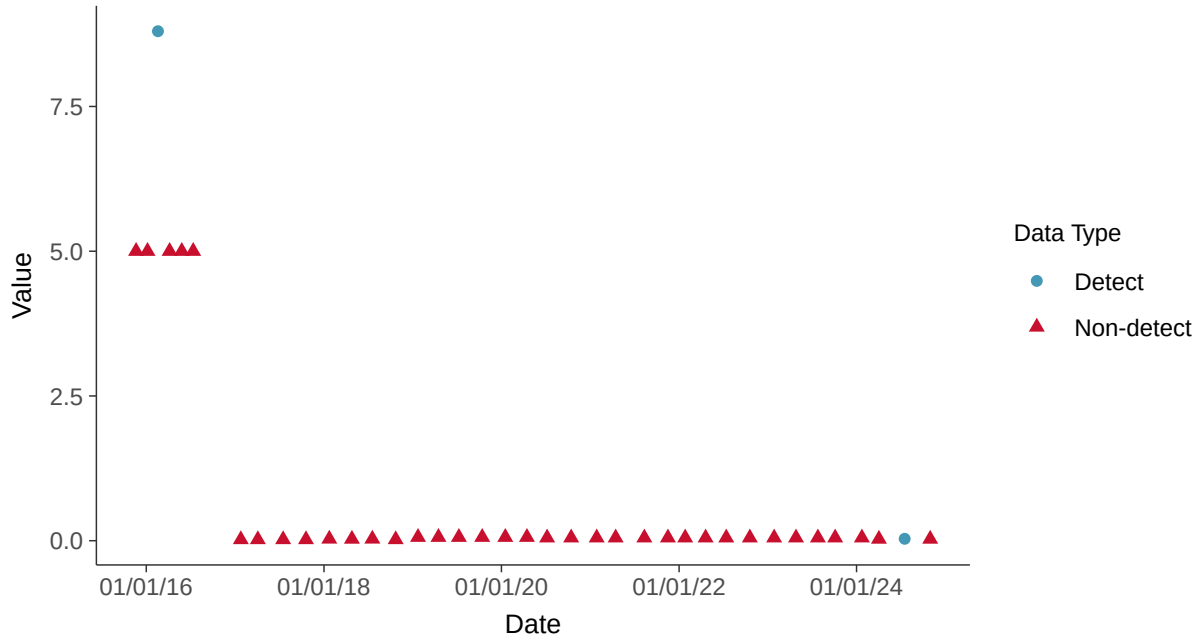


App. IV: Thallium, MW-8

ID: 08_03_124

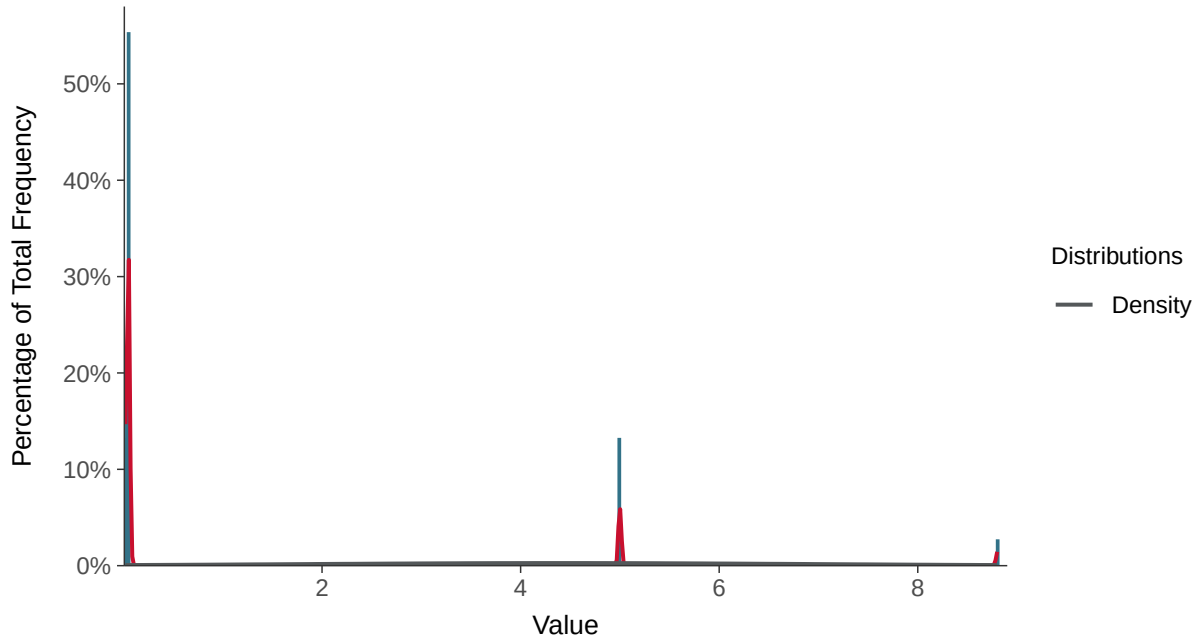
Scatter Plot

Thallium, MW-8 (ug/L)



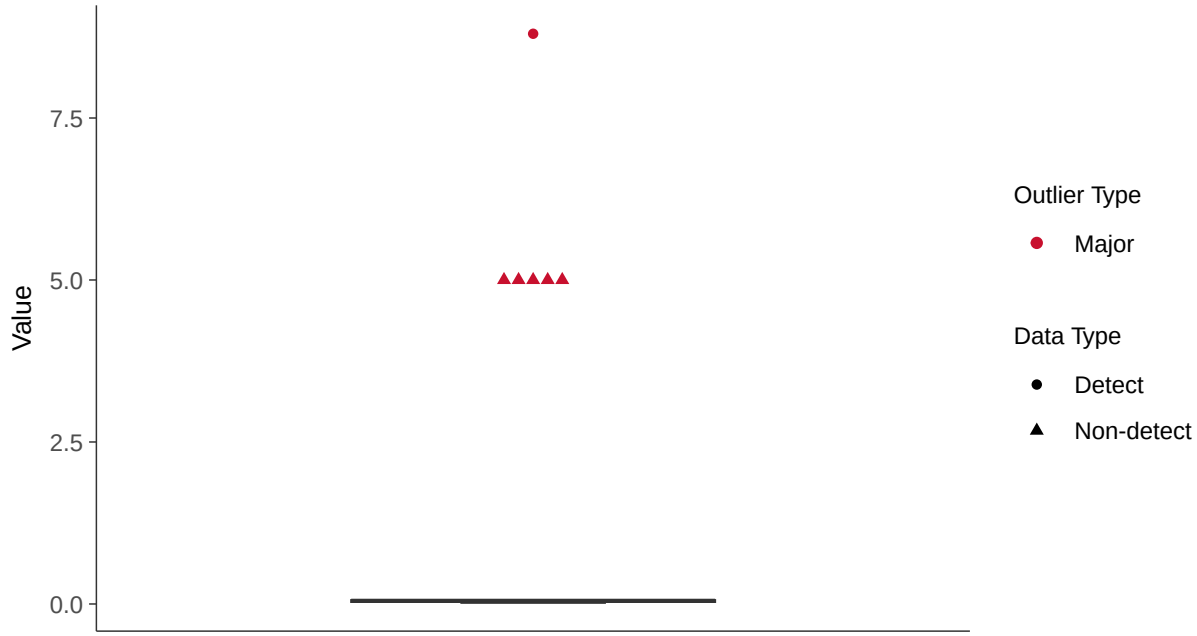
Histogram

Thallium, MW-8 (ug/L)



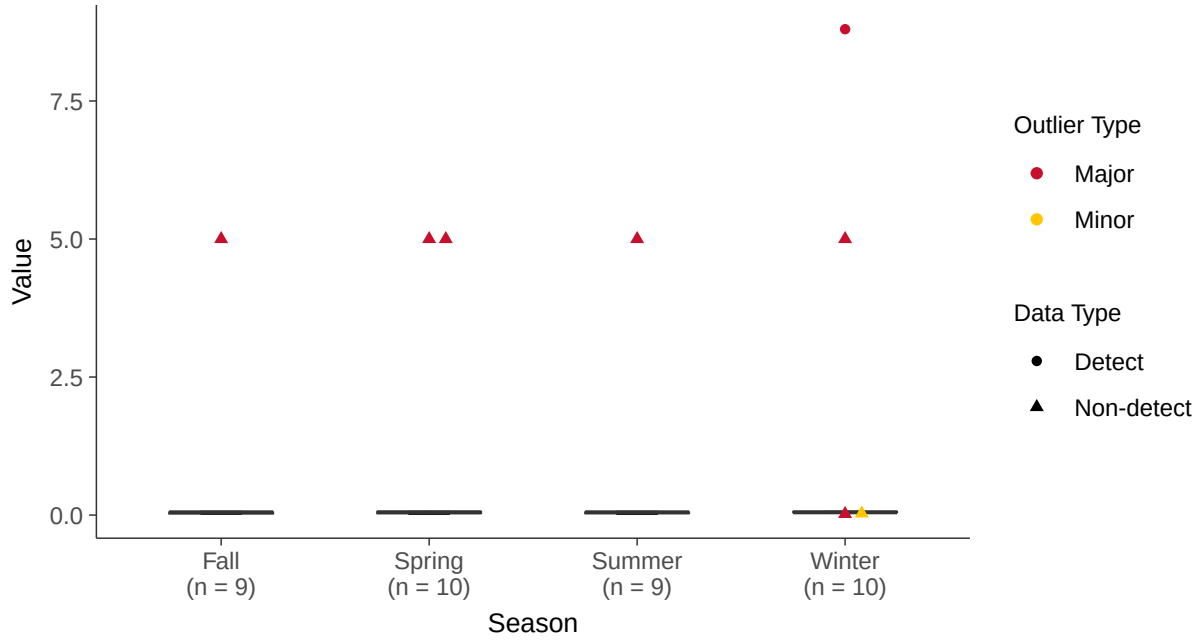
Boxplot

Thallium, MW-8 (ug/L)



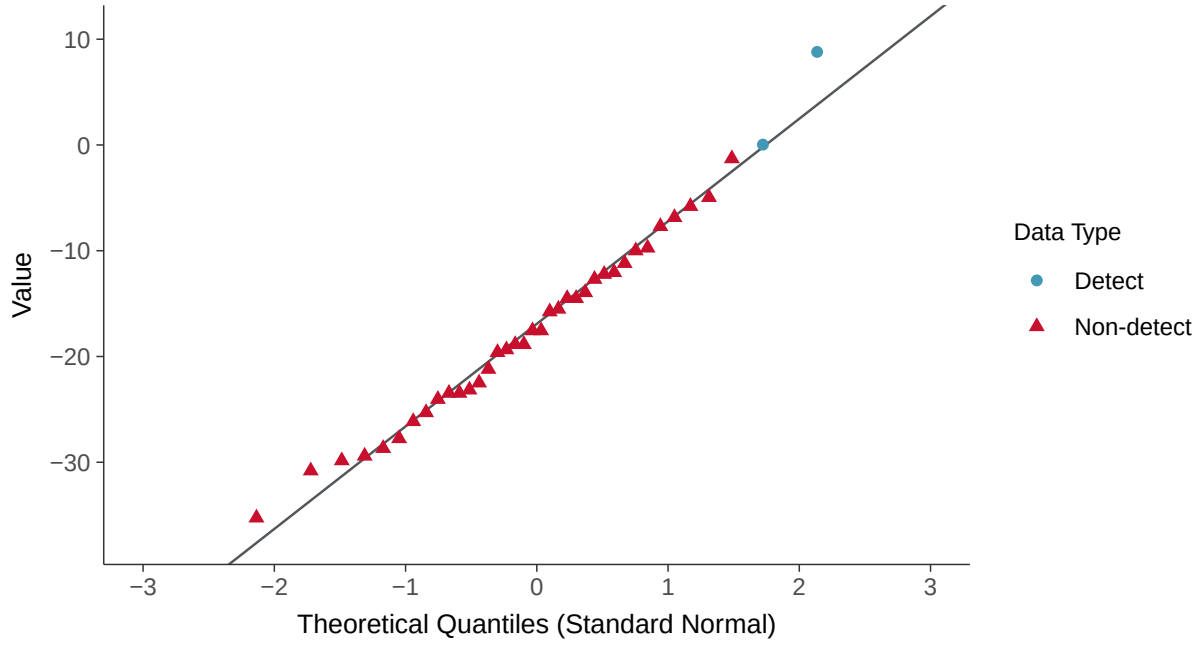
Boxplot by Season

Thallium, MW-8 (ug/L)



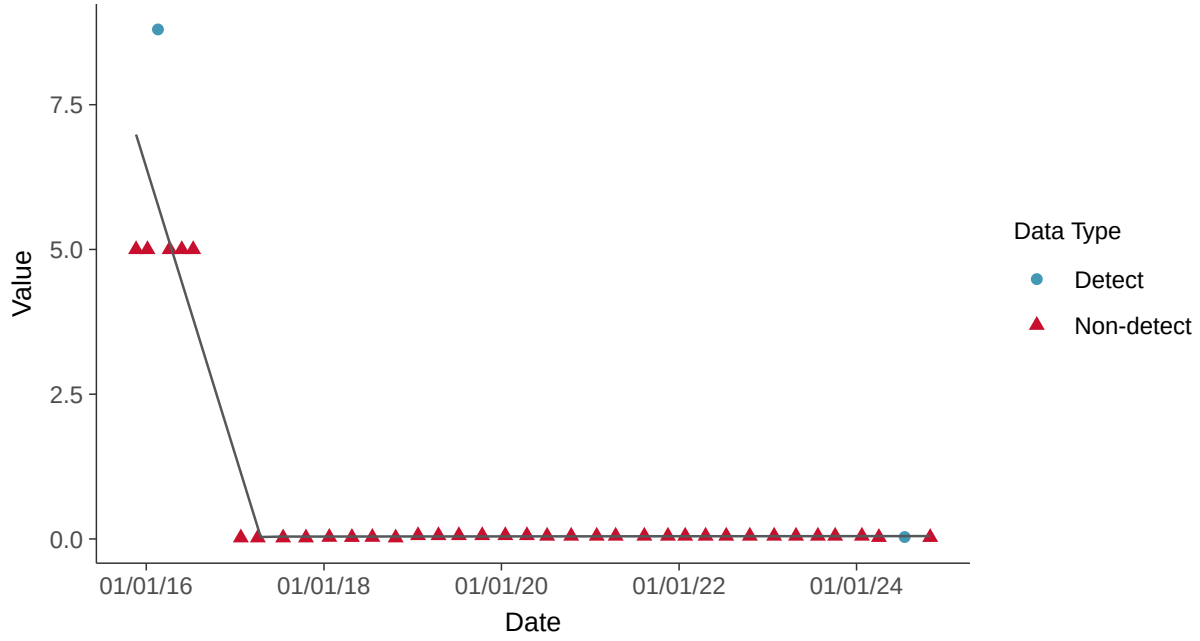
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-8 (ug/L)



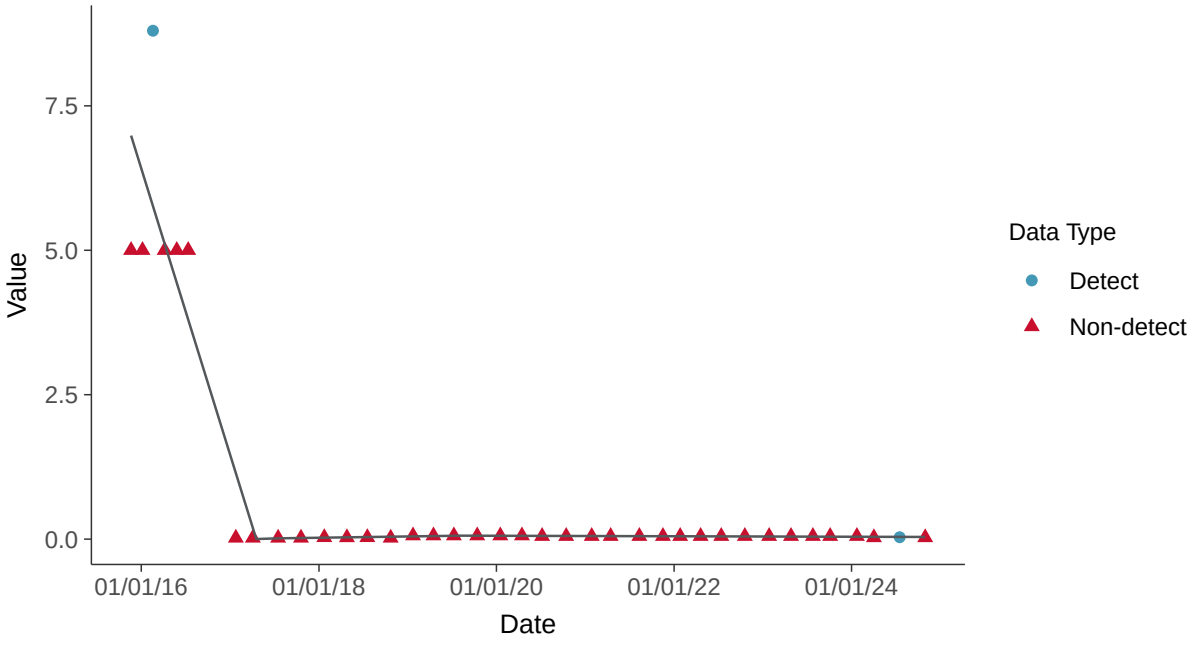
Trend Regression: Piecewise Linear-Linear

Thallium, MW-8 (ug/L)



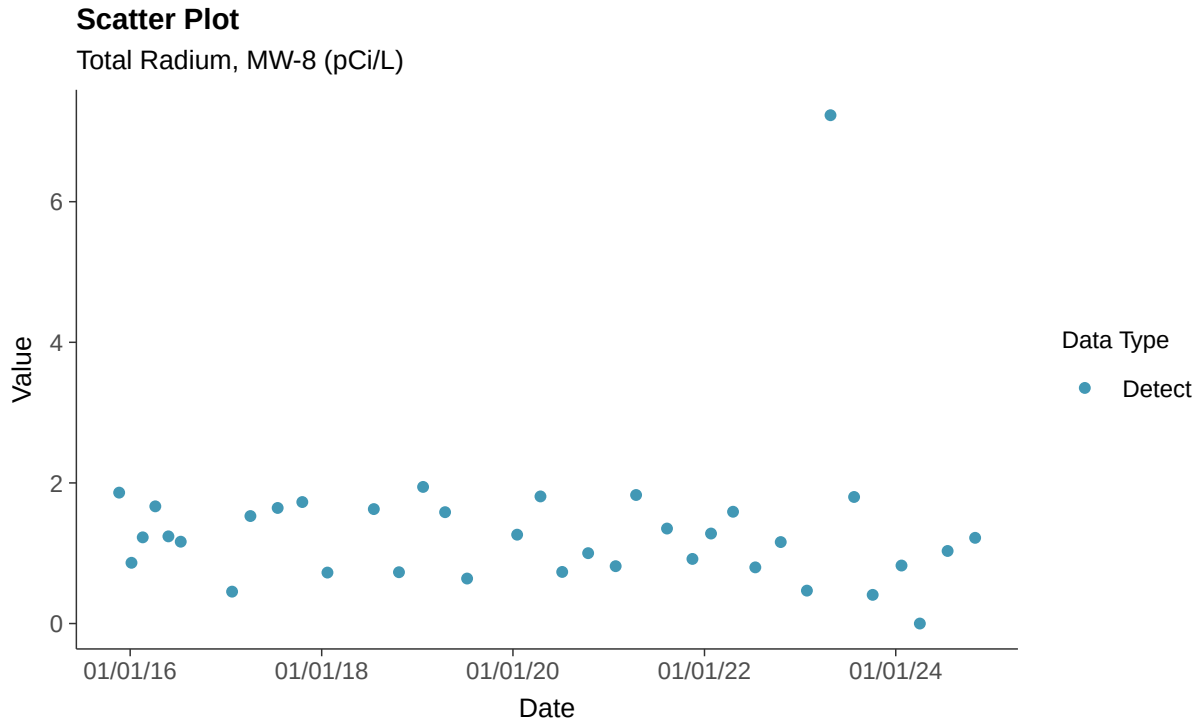
Trend Regression: Piecewise Linear-Linear-Linear

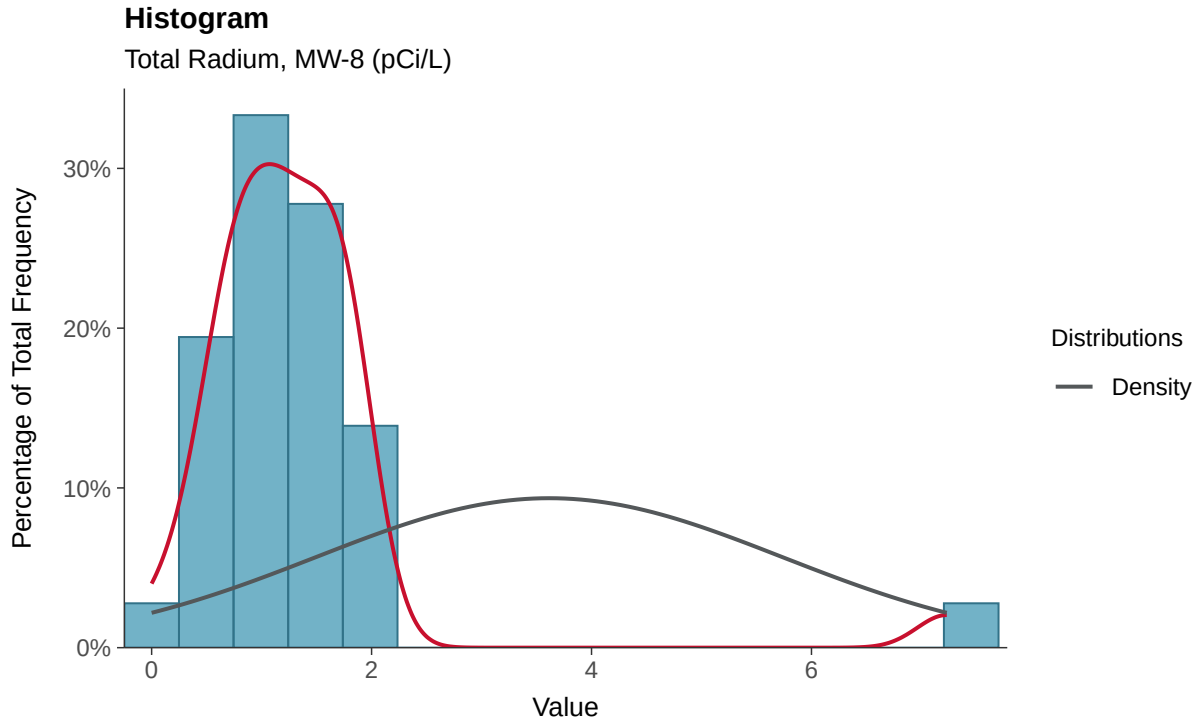
Thallium, MW-8 (ug/L)



App. IV: Total Radium, MW-8

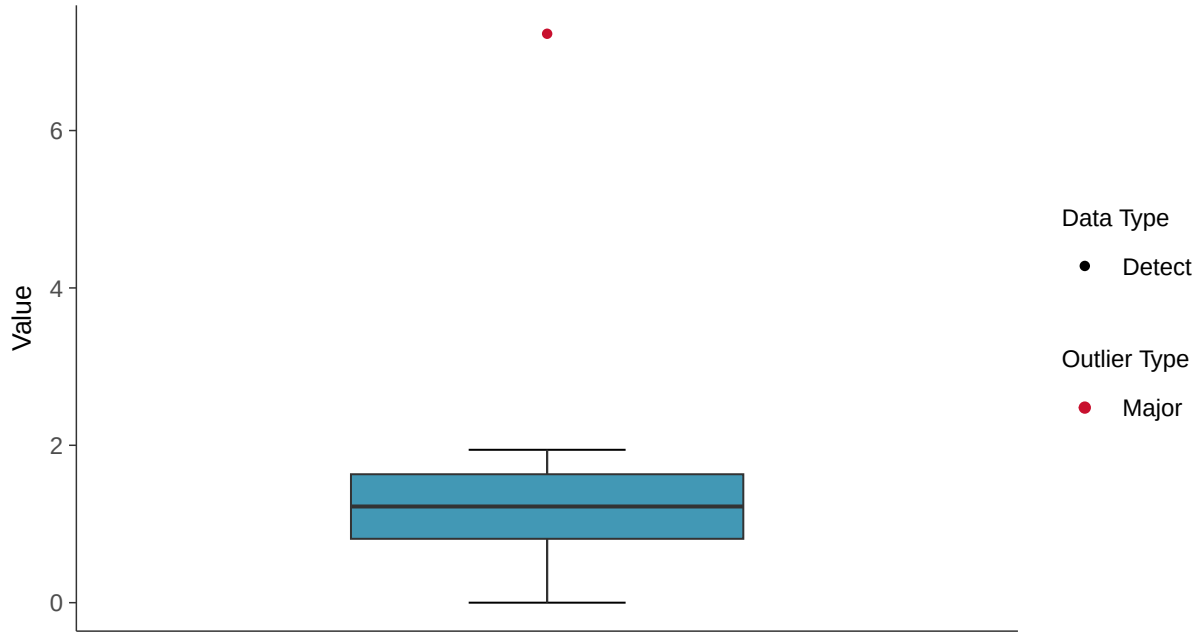
ID: 08_03_126





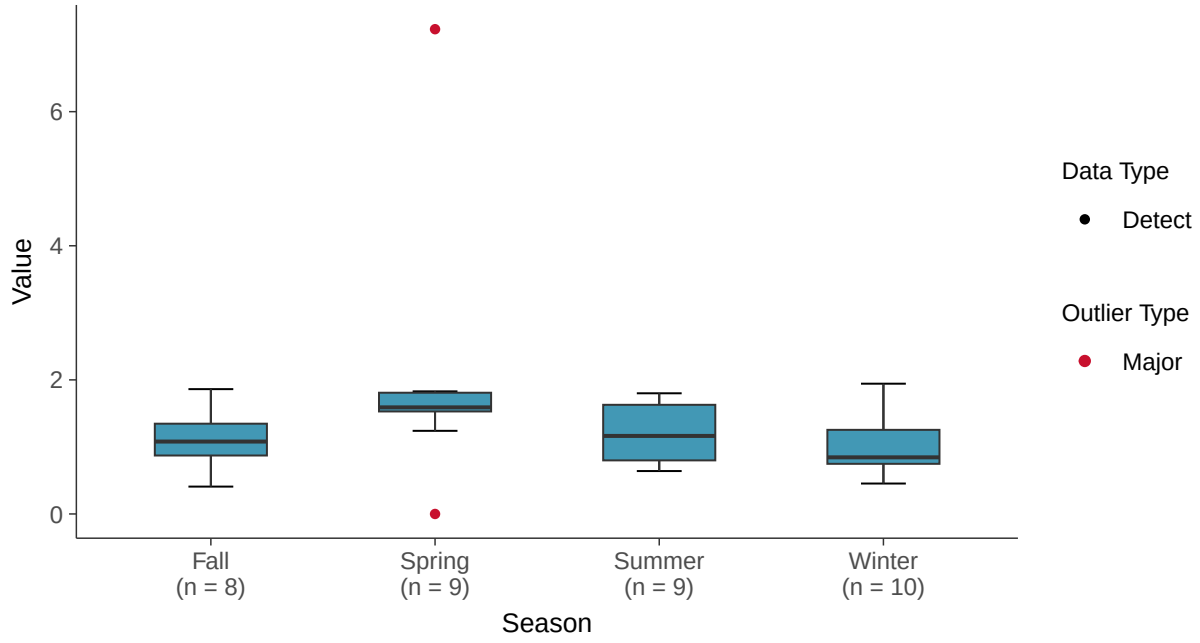
Boxplot

Total Radium, MW-8 (pCi/L)



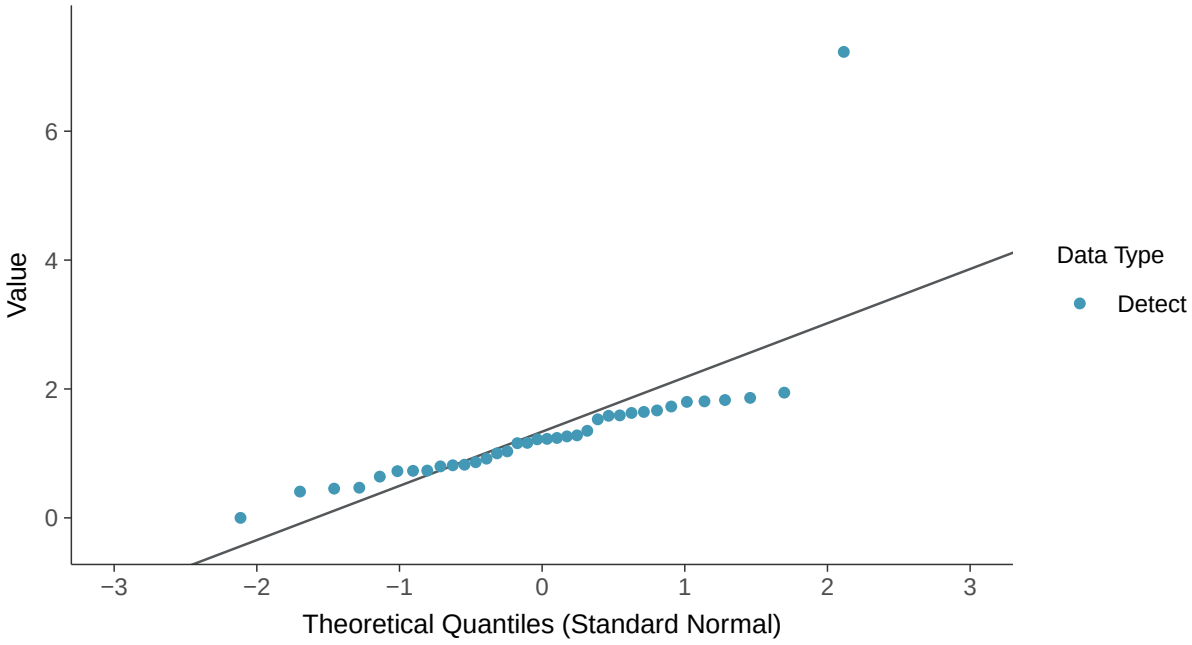
Boxplot by Season

Total Radium, MW-8 (pCi/L)



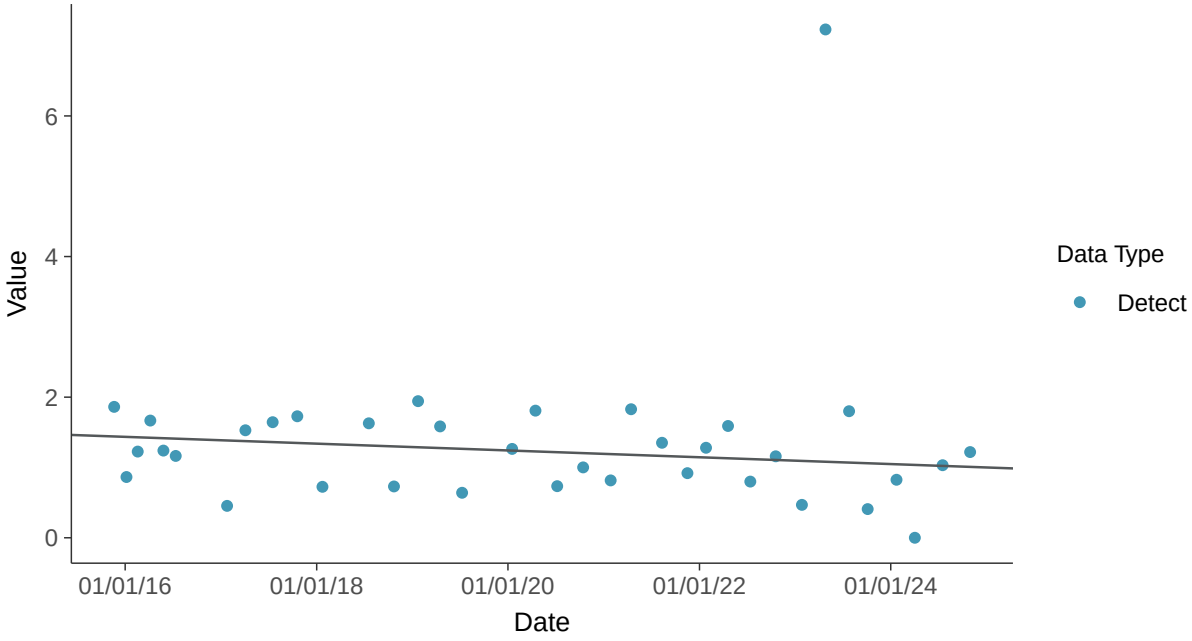
Normal Q-Q plot

Total Radium, MW-8 (pCi/L)



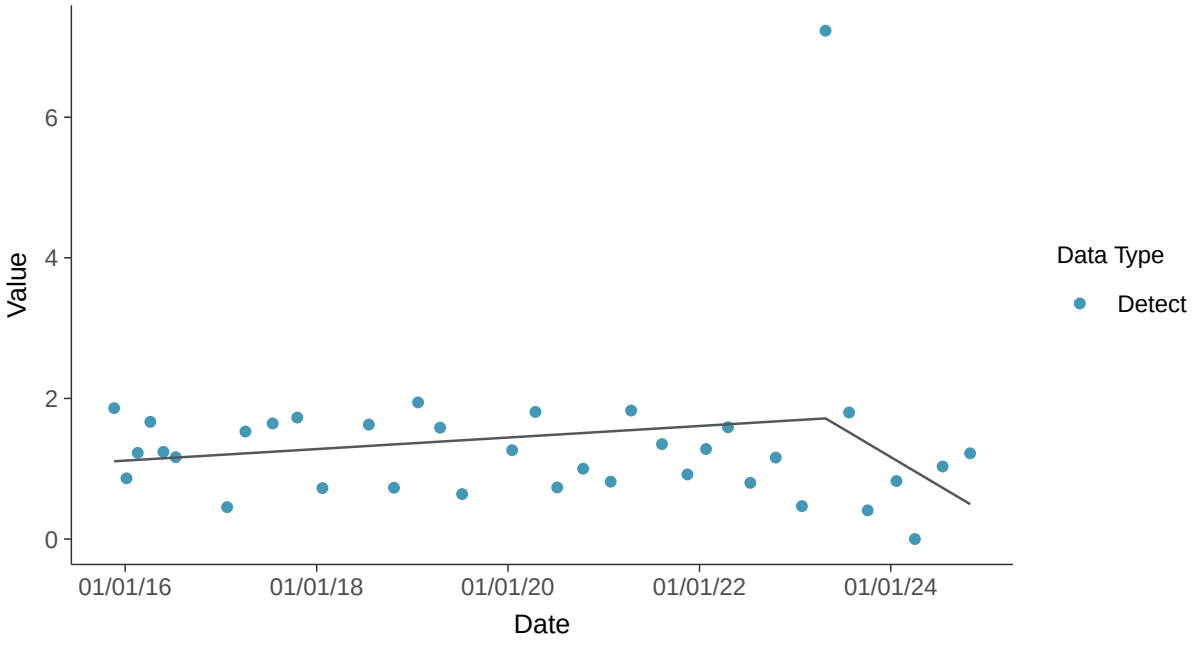
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-8 (pCi/L)



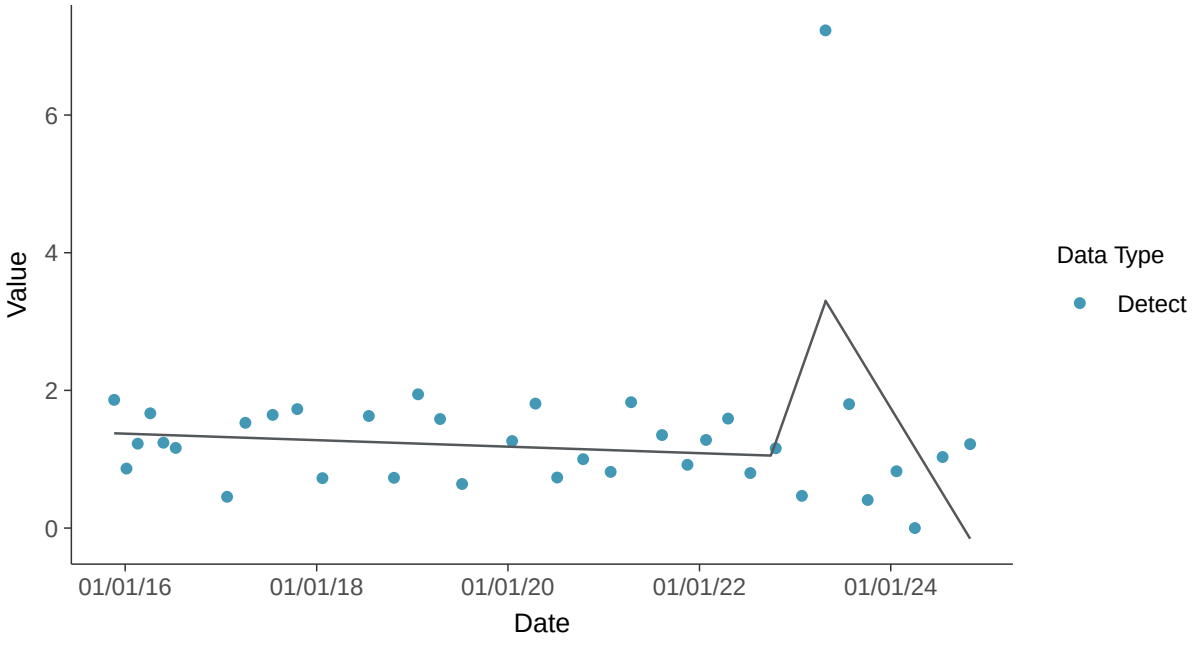
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-8 (pCi/L)



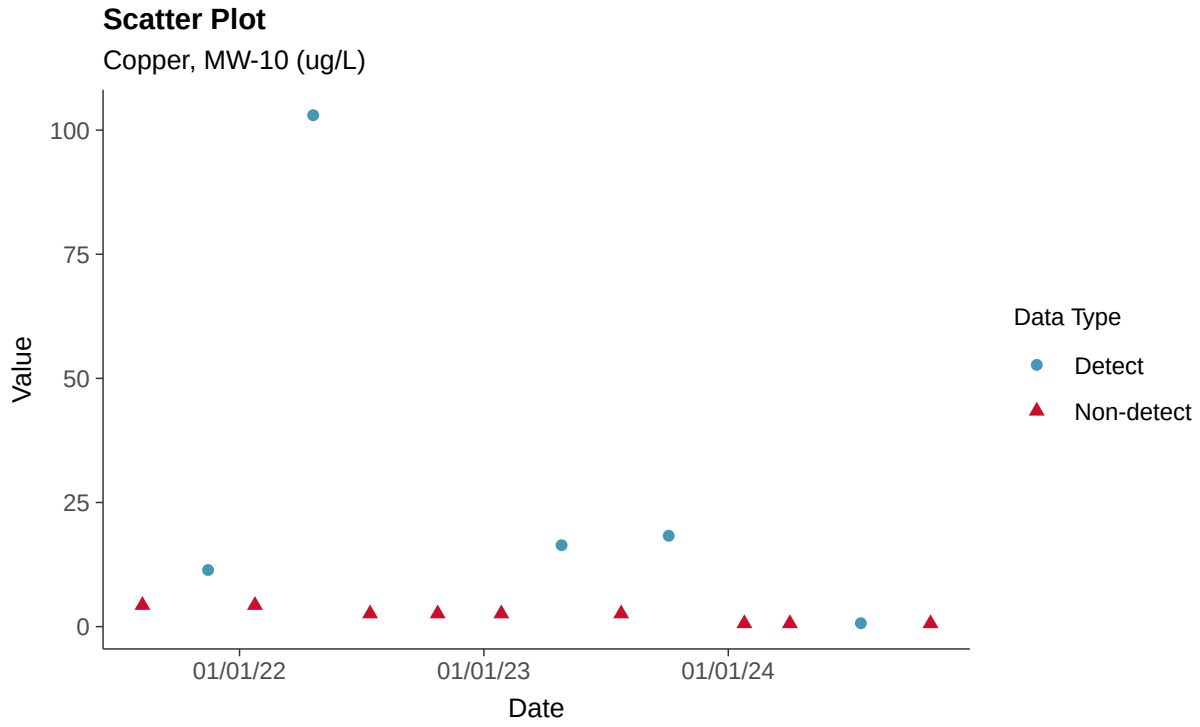
Trend Regression: Piecewise Linear-Linear-Linear

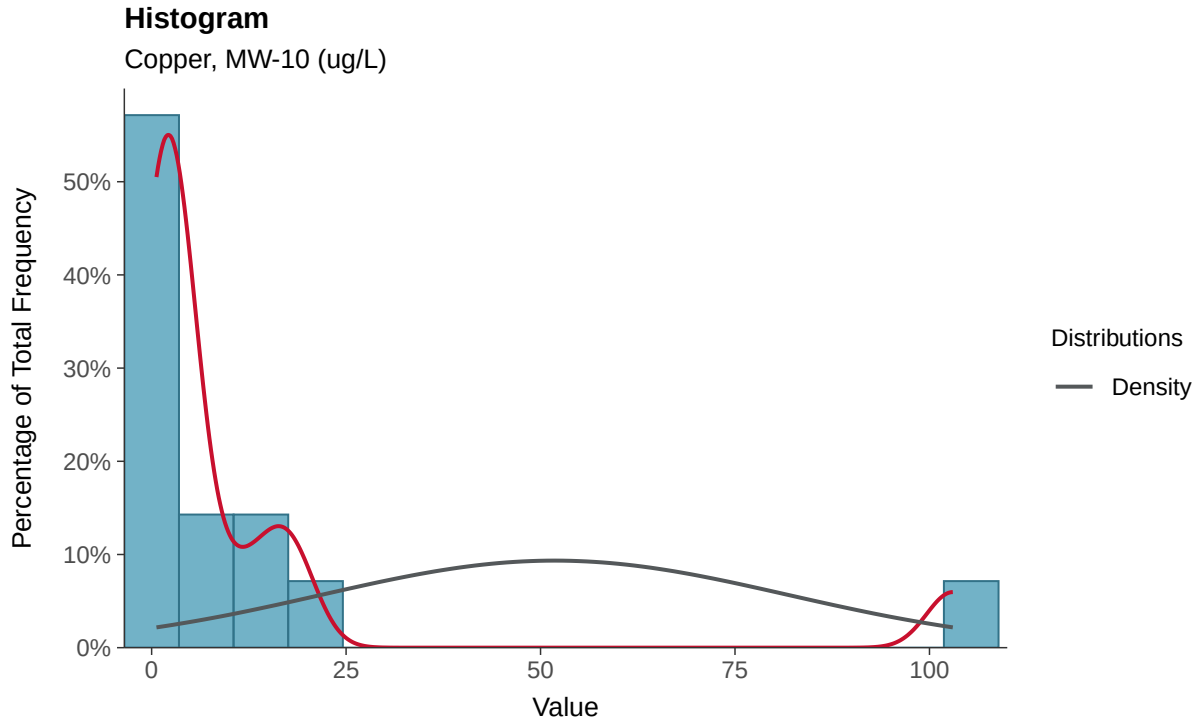
Total Radium, MW-8 (pCi/L)



App. I Metals: Copper, MW-10

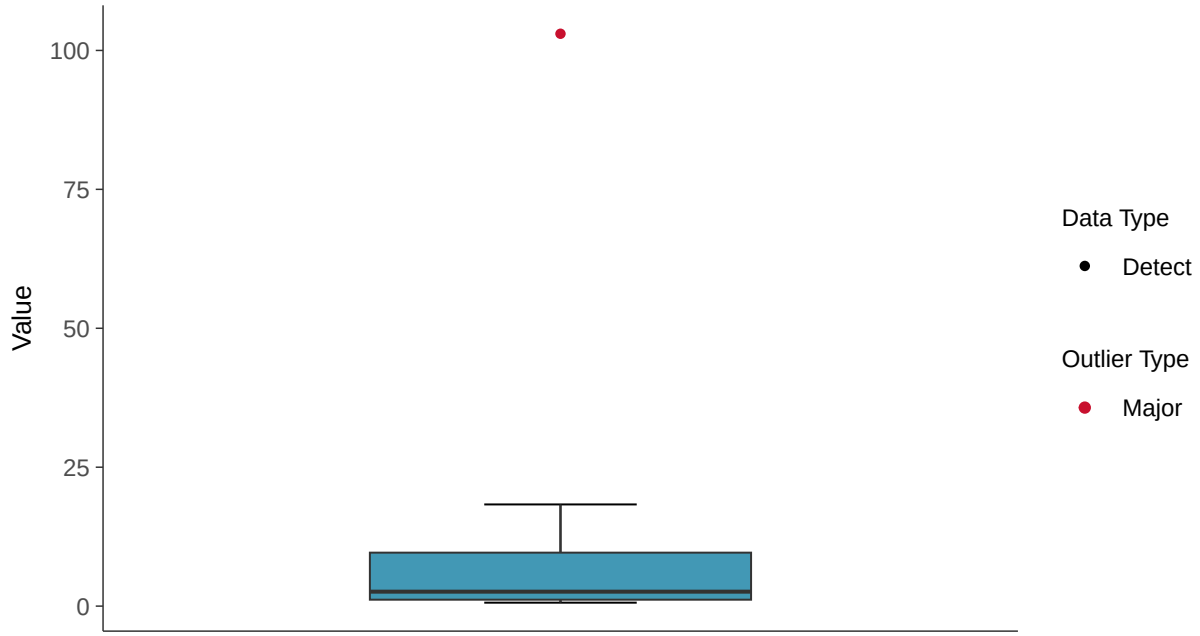
ID: 09_01_111





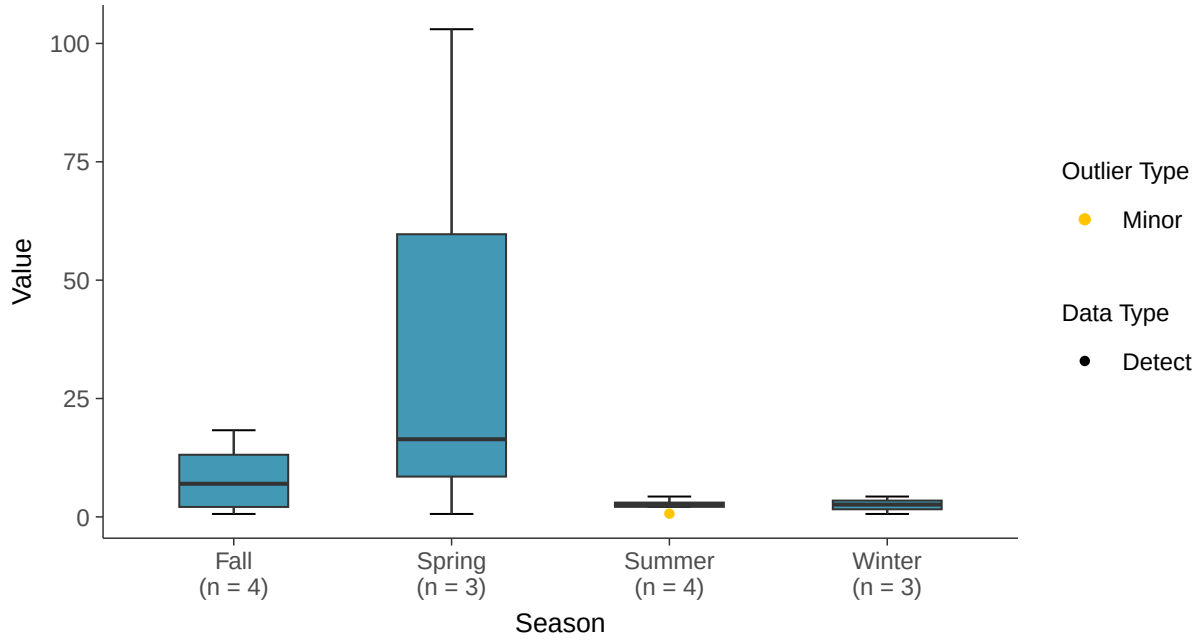
Boxplot

Copper, MW-10 (ug/L)



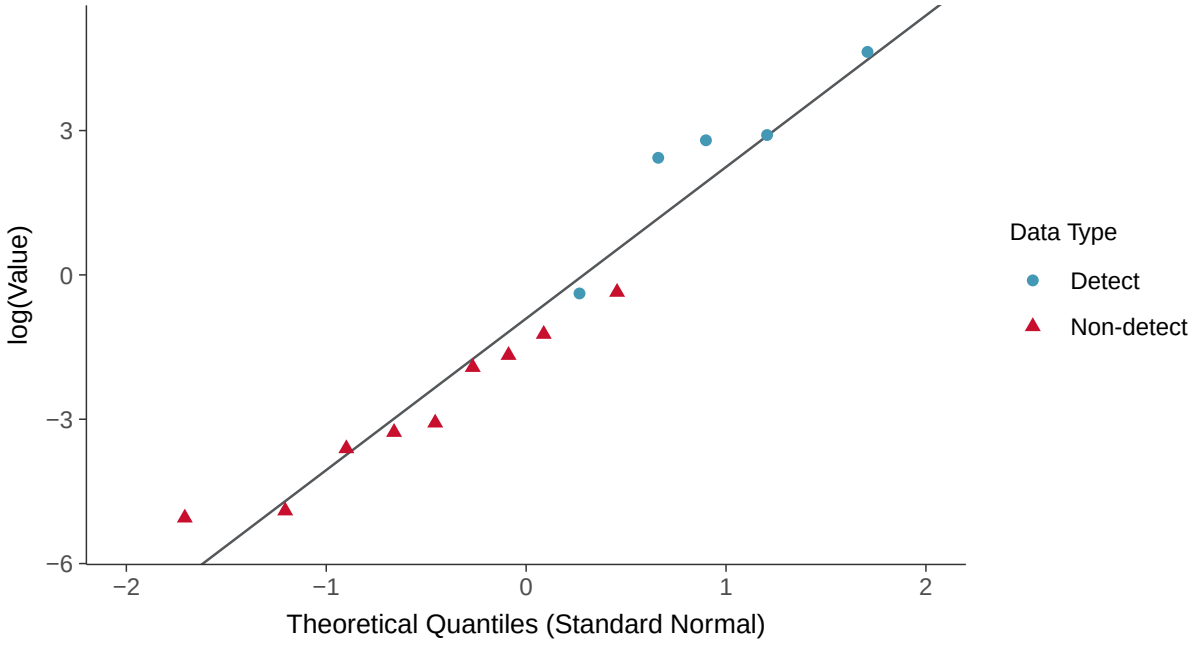
Boxplot by Season

Copper, MW-10 (ug/L)



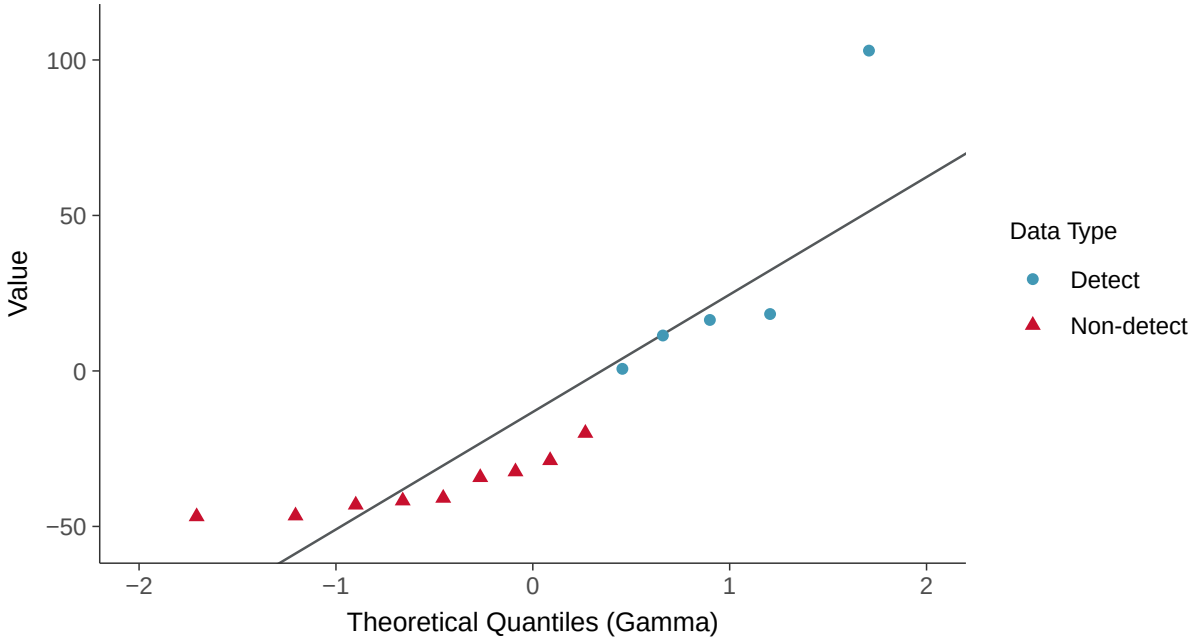
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-10 (ug/L)



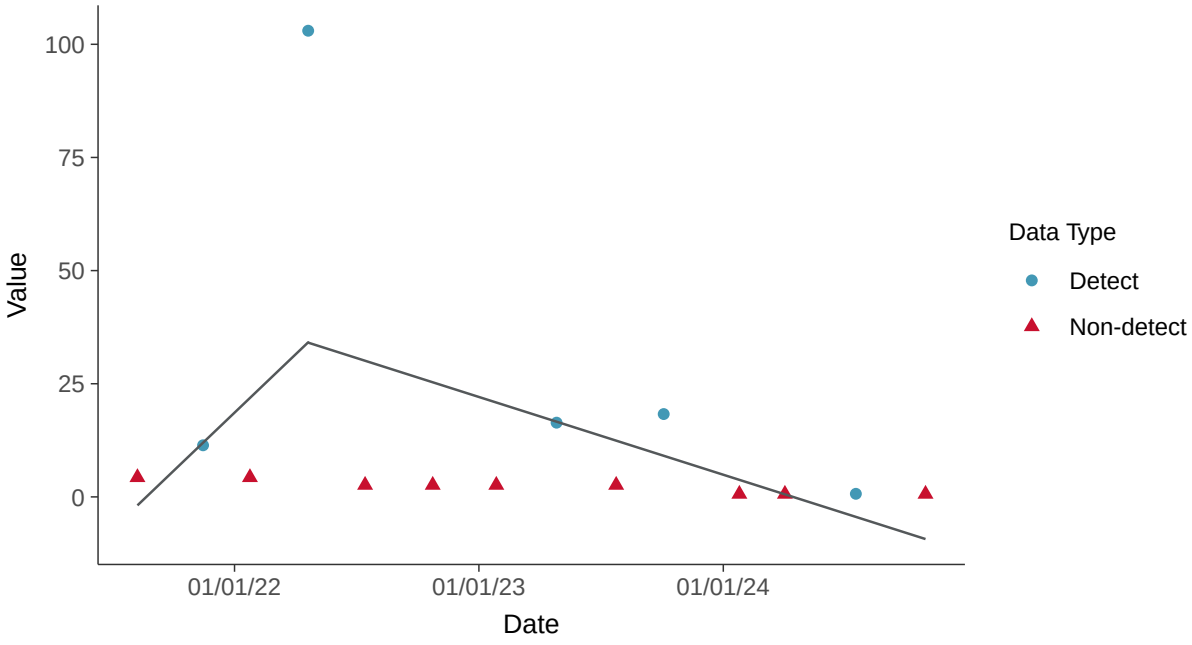
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-10 (ug/L)



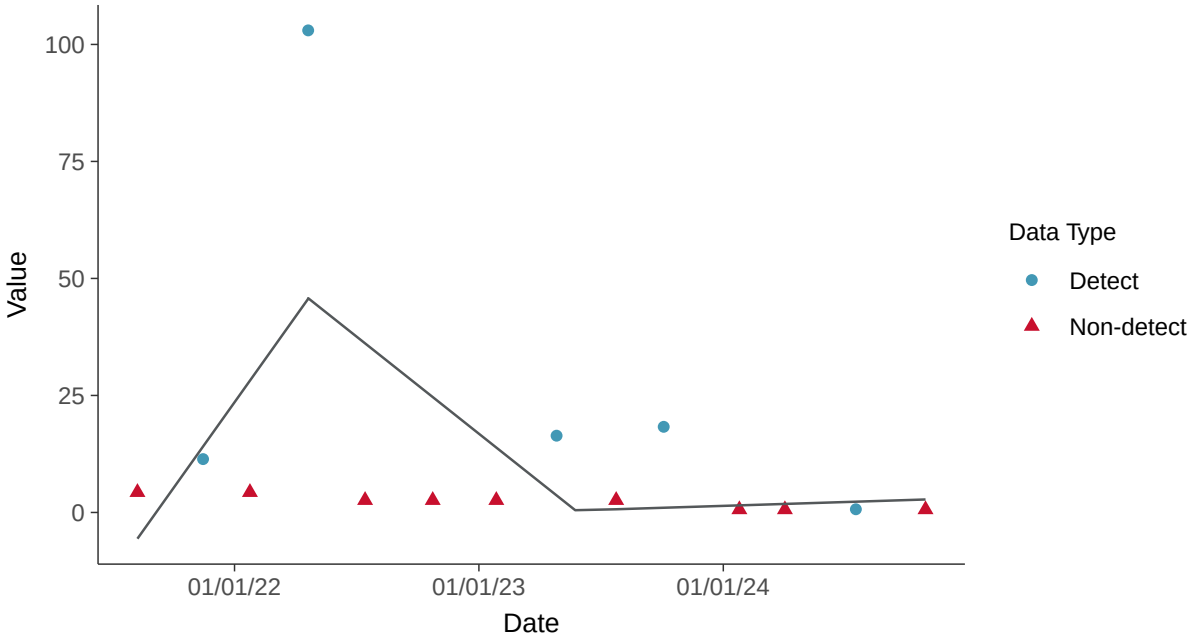
Trend Regression: Piecewise Linear-Linear

Copper, MW-10 (ug/L)



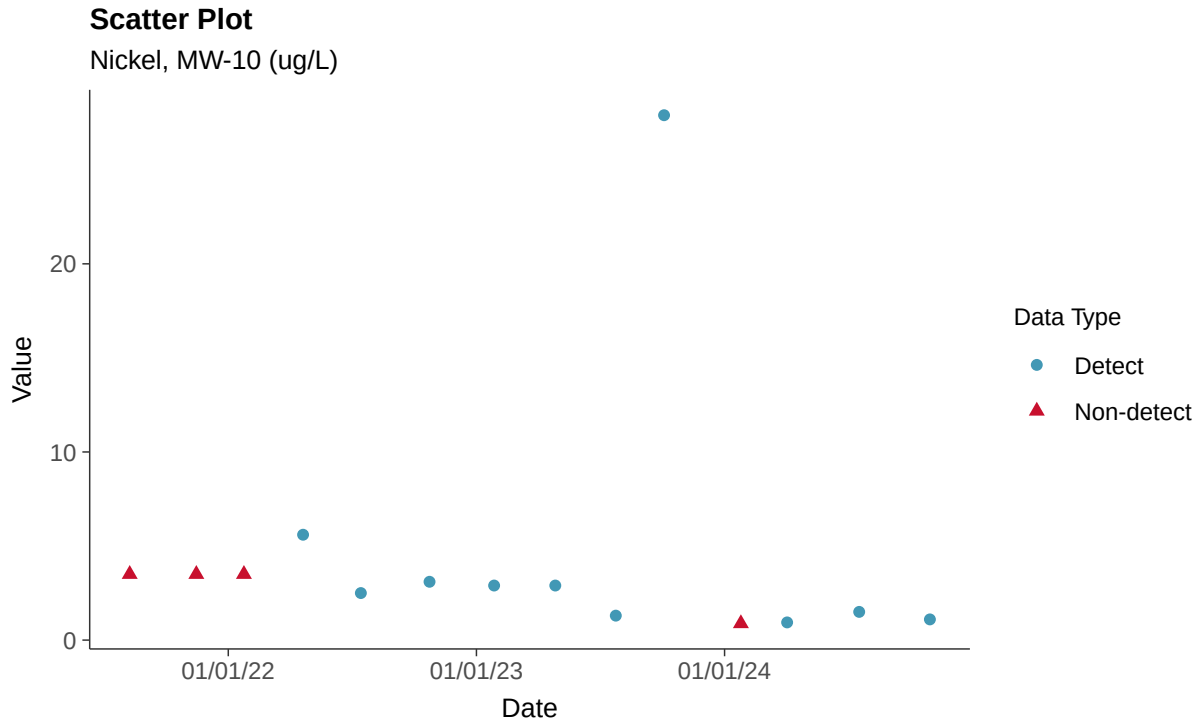
Trend Regression: Piecewise Linear-Linear-Linear

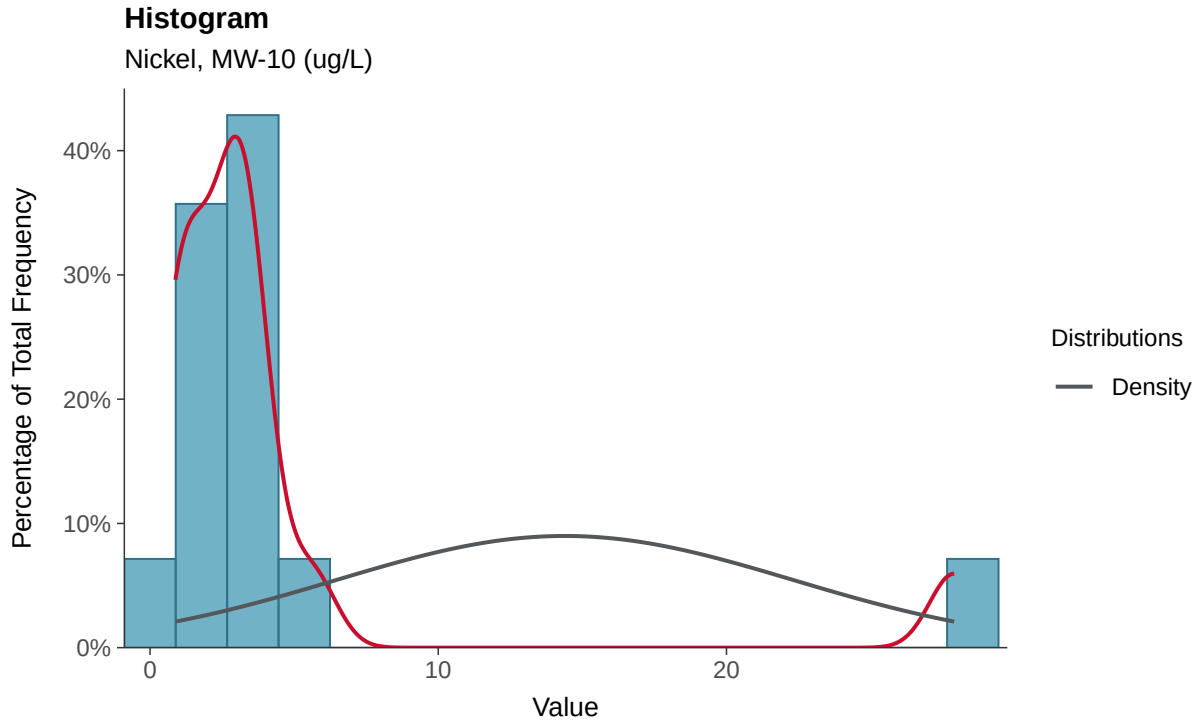
Copper, MW-10 (ug/L)



App. I Metals: Nickel, MW-10

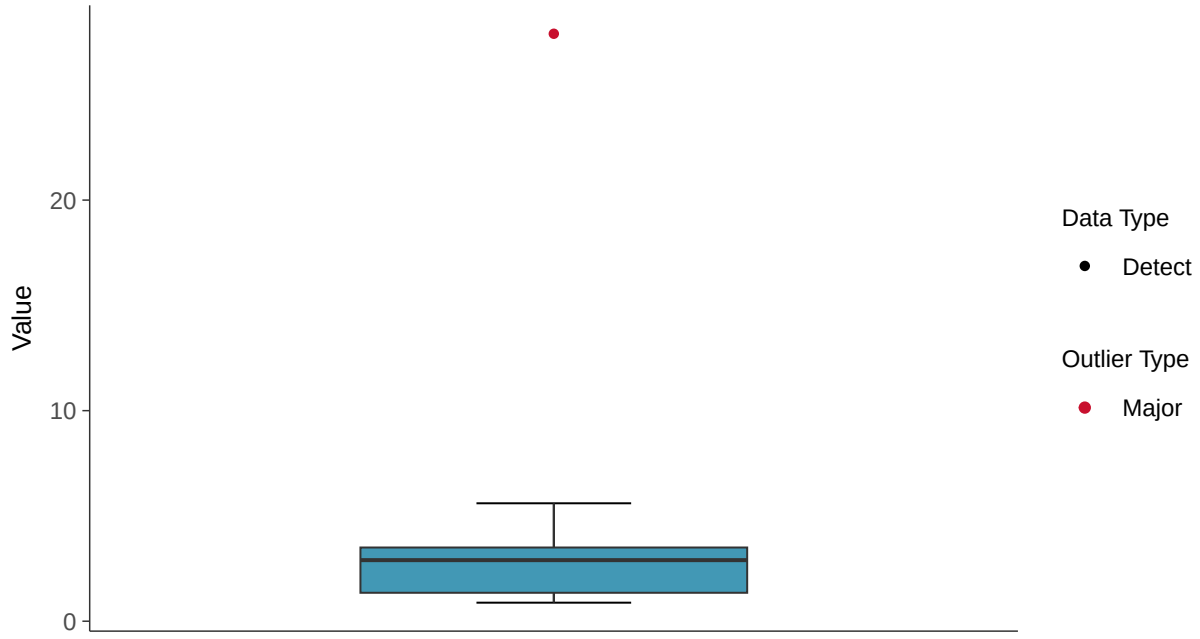
ID: 09_01_117





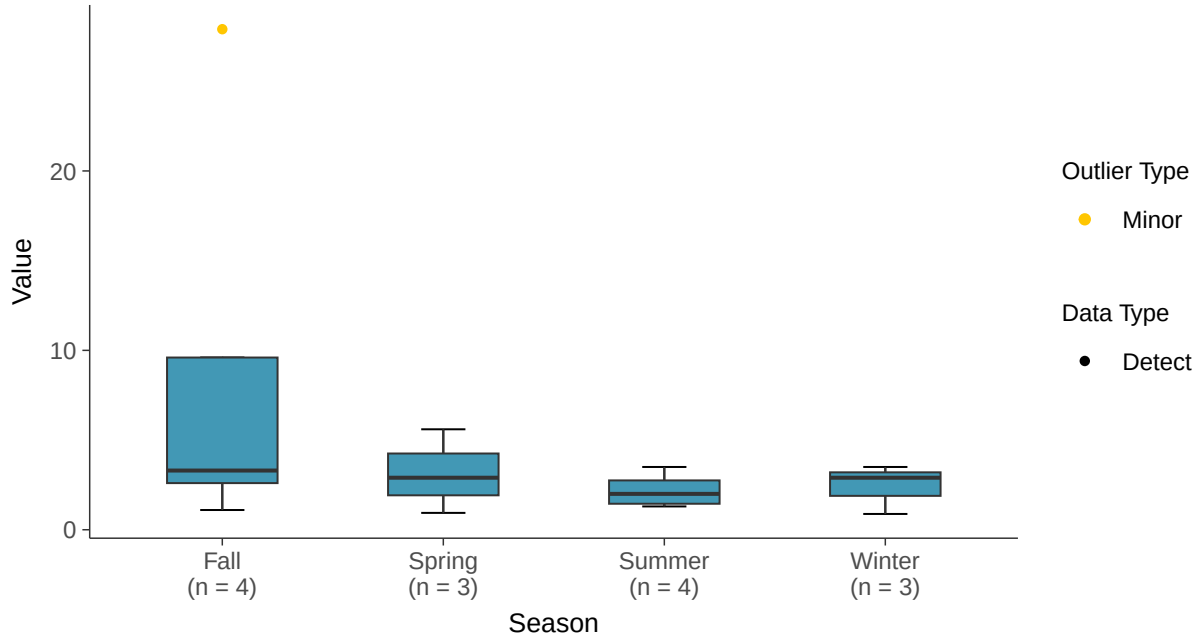
Boxplot

Nickel, MW-10 (ug/L)



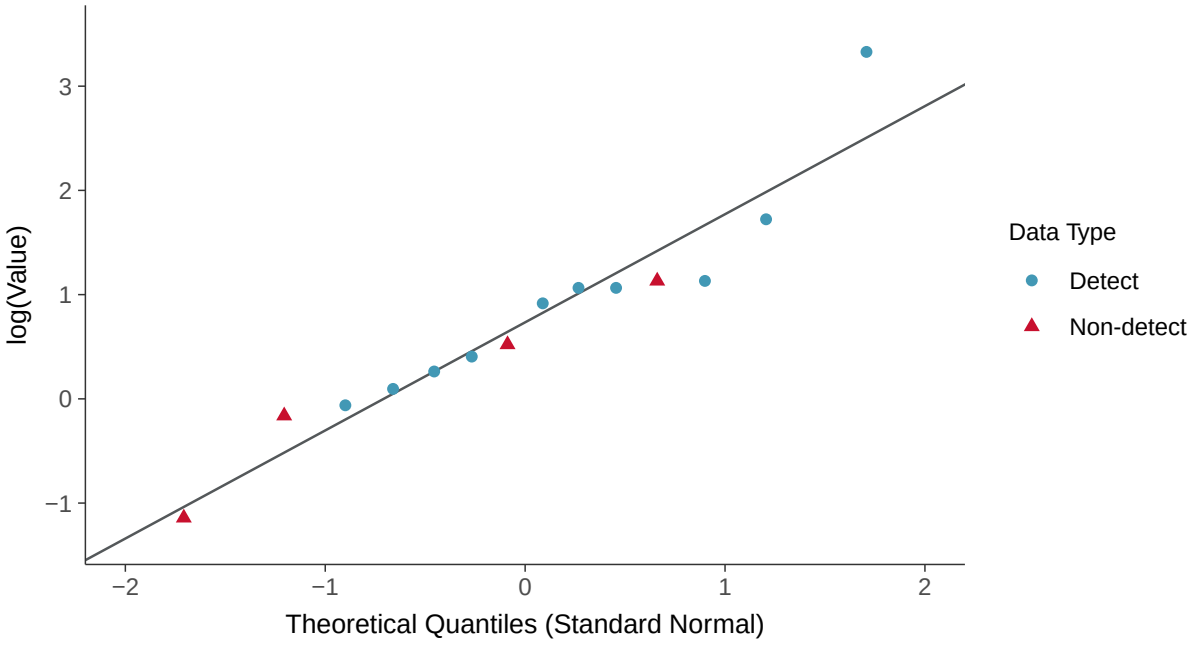
Boxplot by Season

Nickel, MW-10 (ug/L)



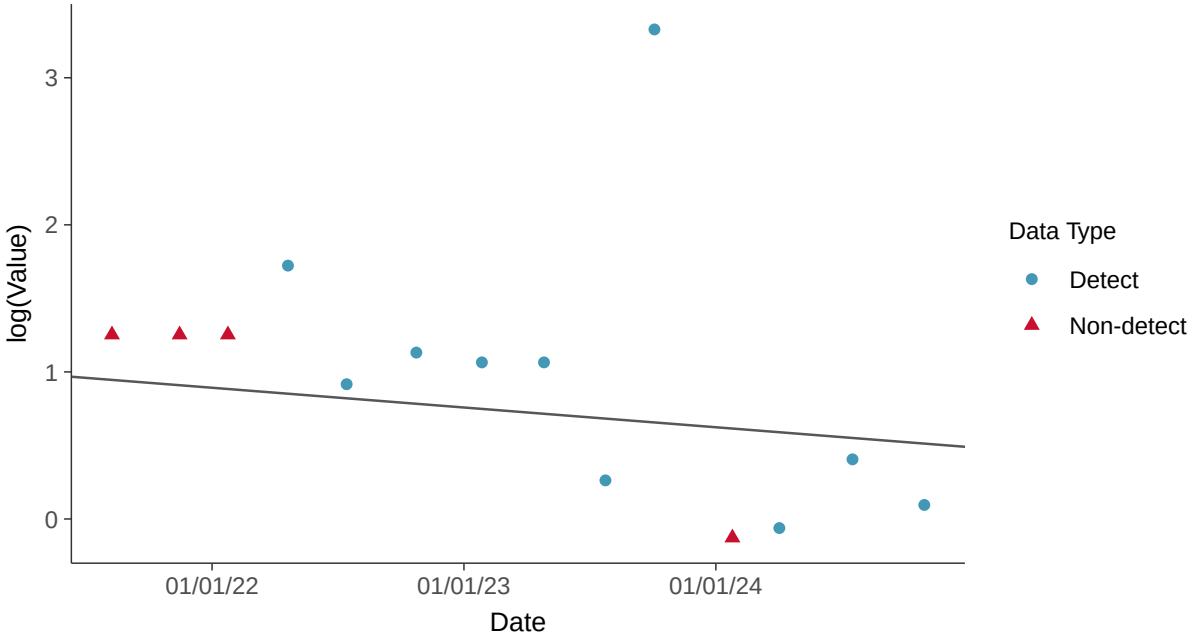
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-10 (ug/L)



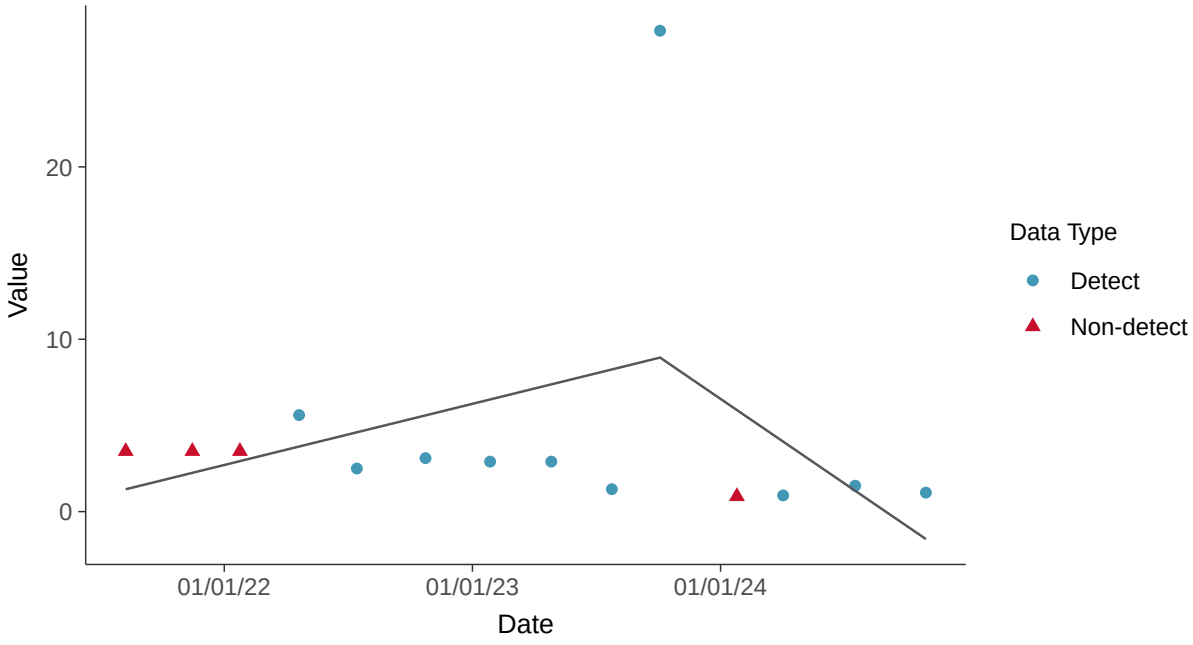
Trend Regression: Lognormal MLE

Nickel, MW-10 (ug/L)



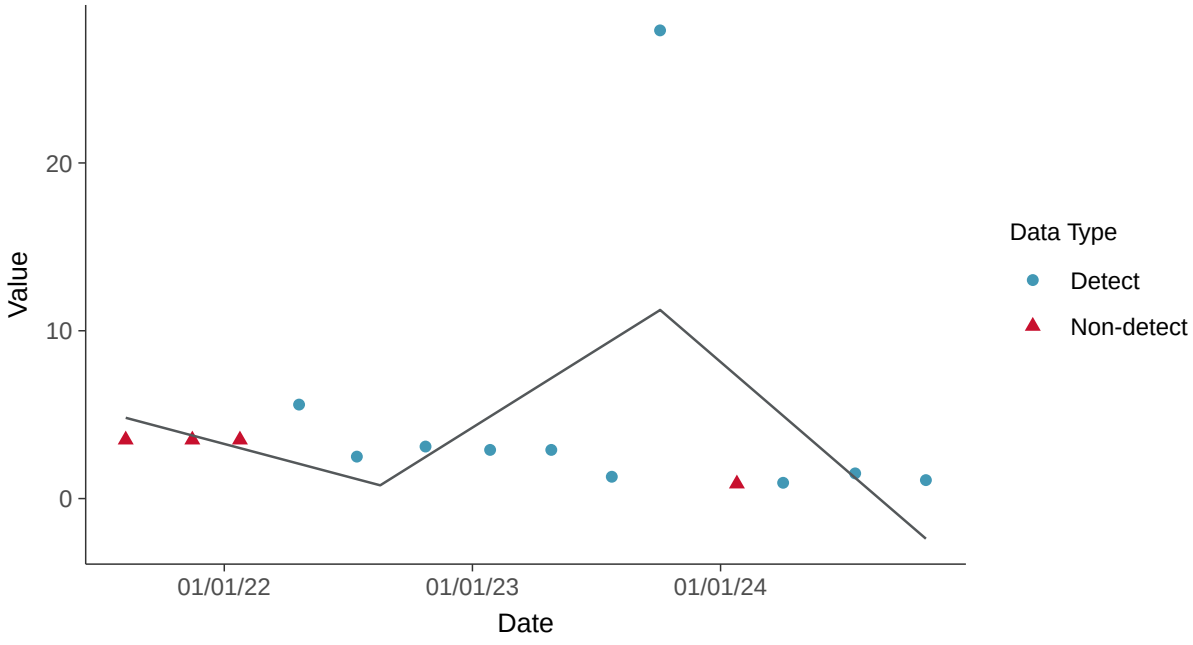
Trend Regression: Piecewise Linear-Linear

Nickel, MW-10 (ug/L)



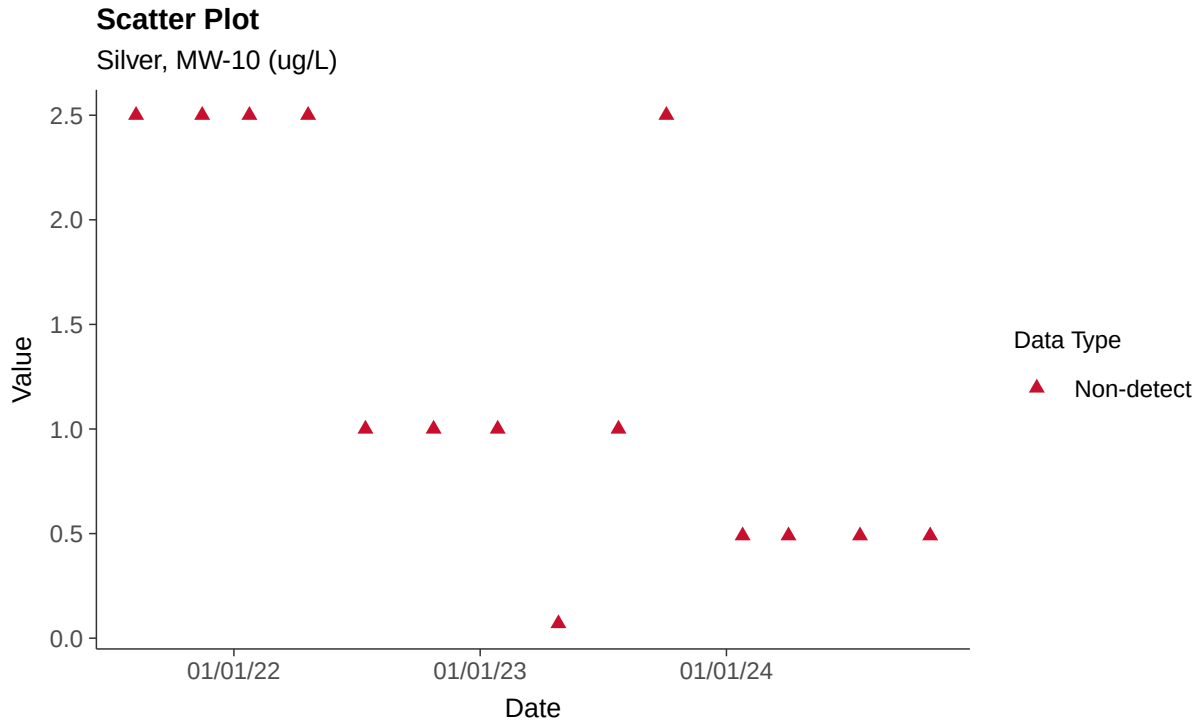
Trend Regression: Piecewise Linear-Linear-Linear

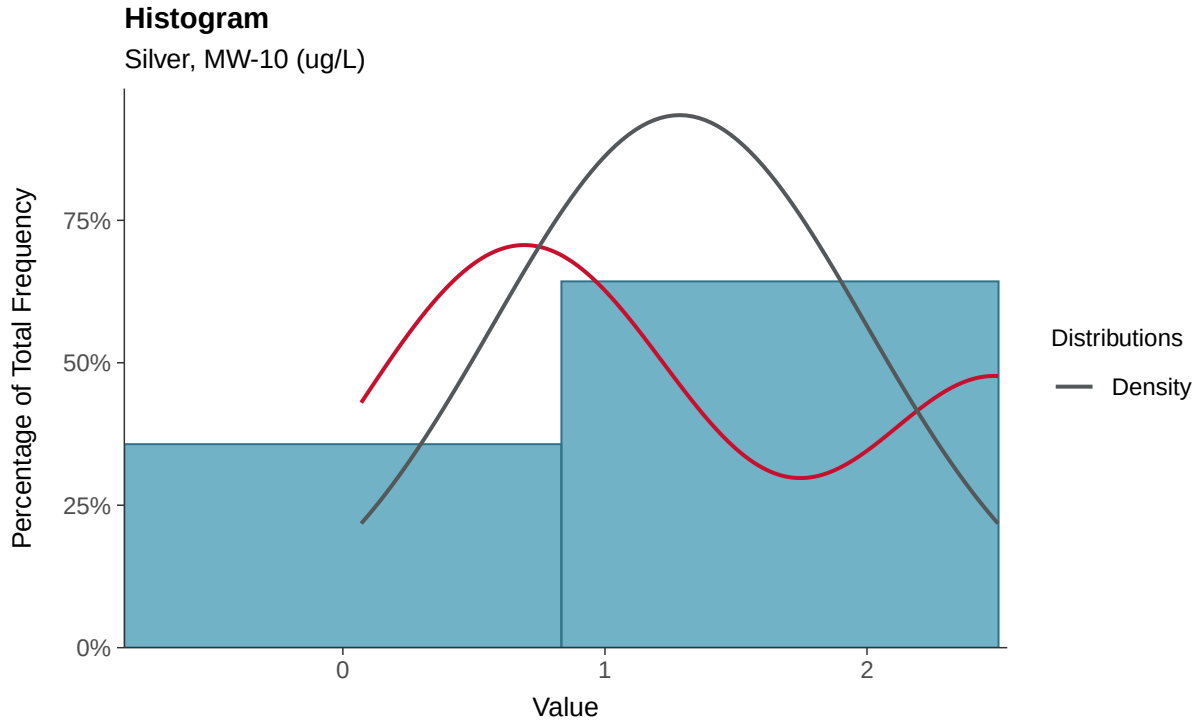
Nickel, MW-10 (ug/L)



App. I Metals: Silver, MW-10

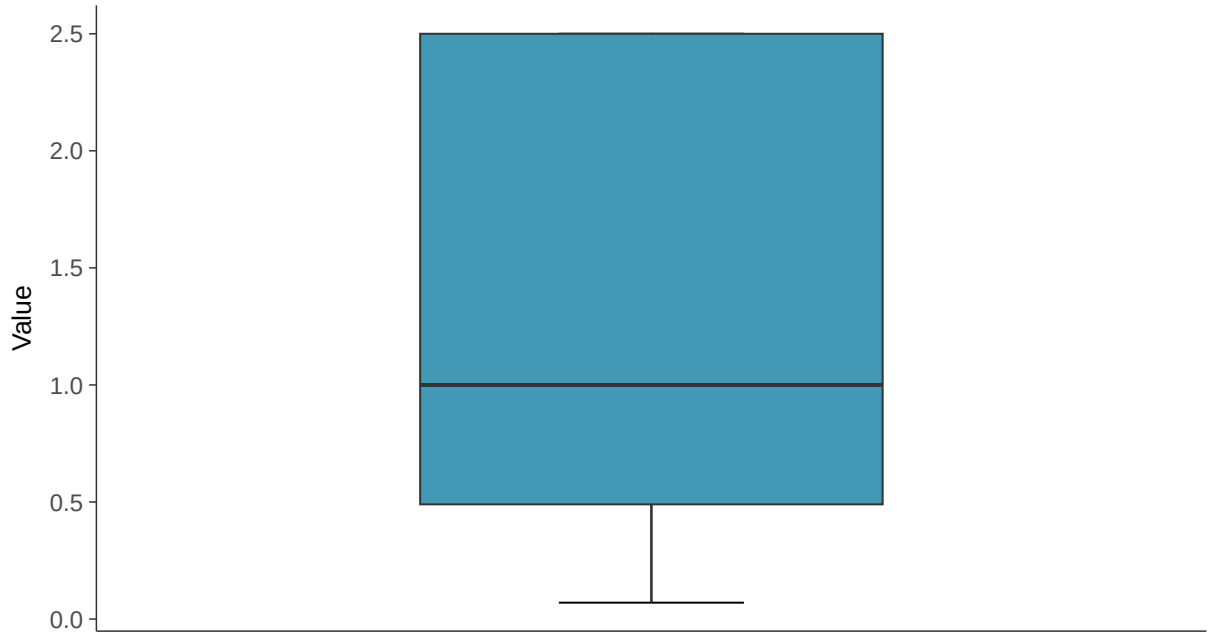
ID: 09_01_122





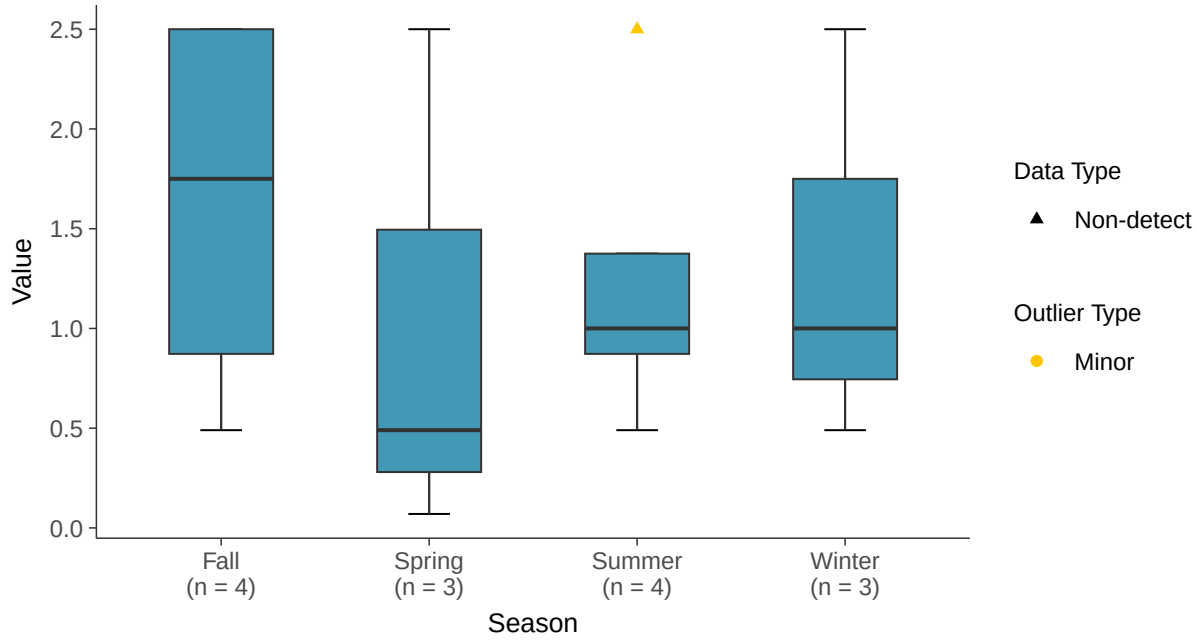
Boxplot

Silver, MW-10 (ug/L)



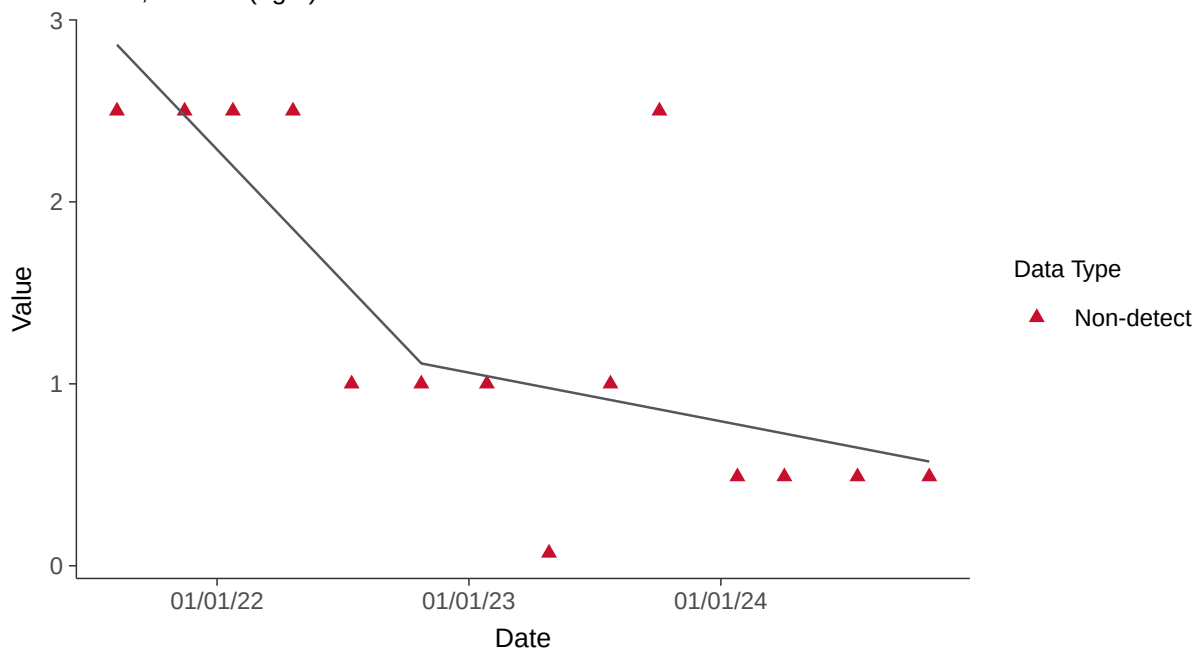
Boxplot by Season

Silver, MW-10 (ug/L)



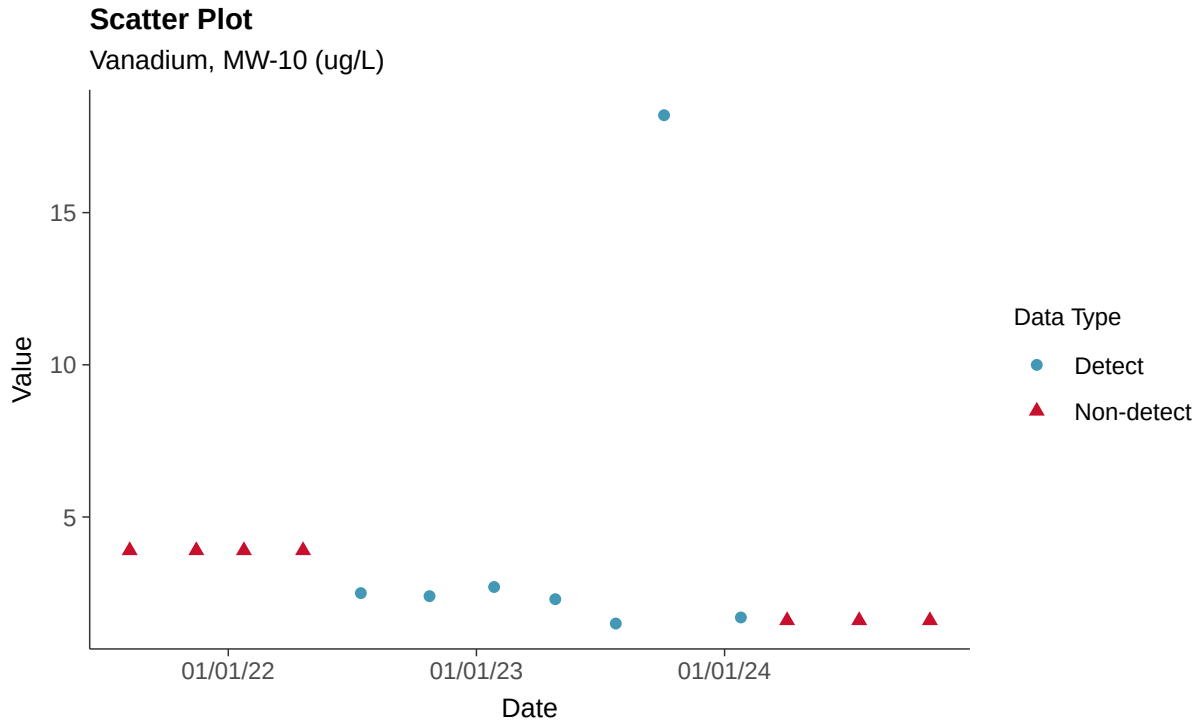
Trend Regression: Piecewise Linear-Linear

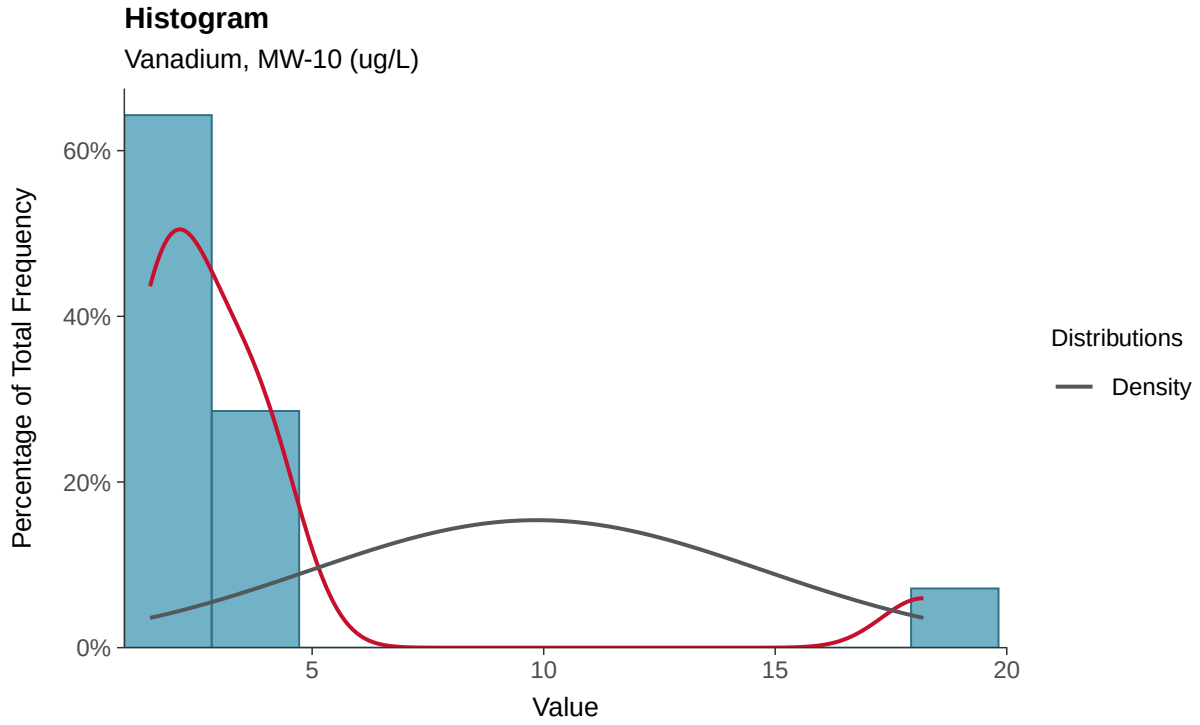
Silver, MW-10 (ug/L)



App. I Metals: Vanadium, MW-10

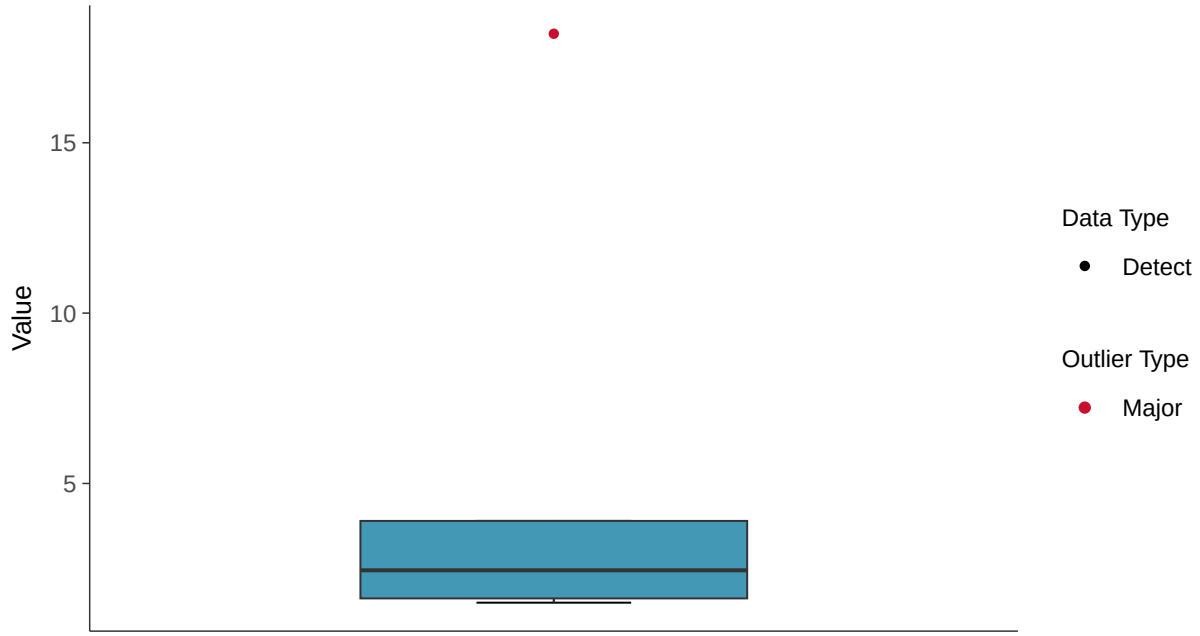
ID: 09_01_127





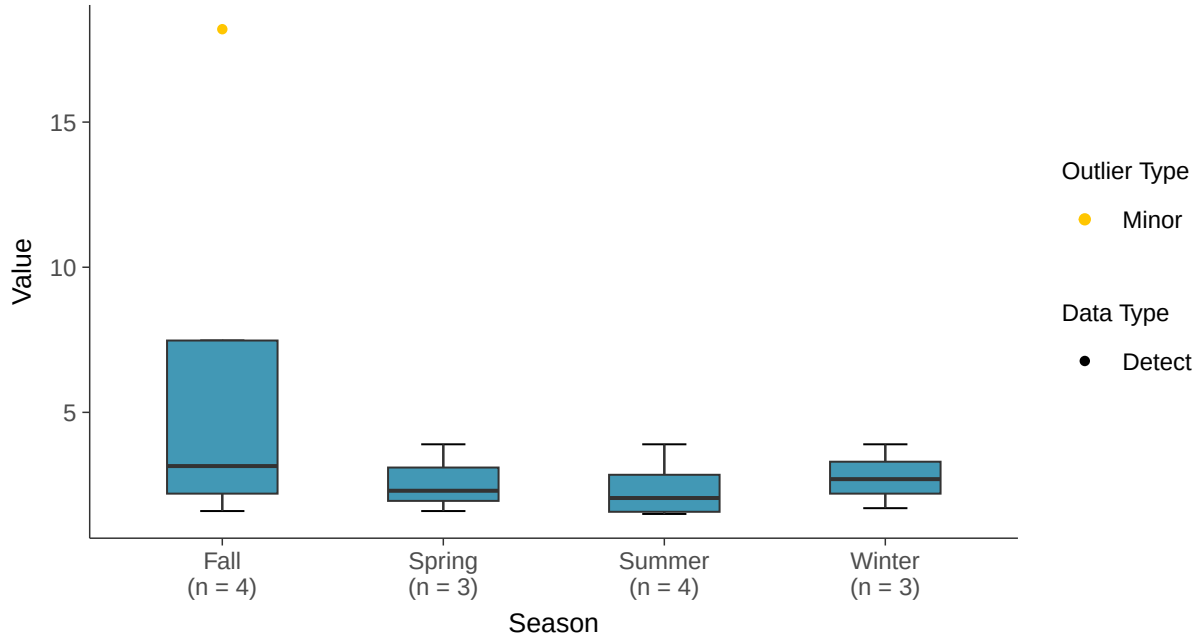
Boxplot

Vanadium, MW-10 (ug/L)



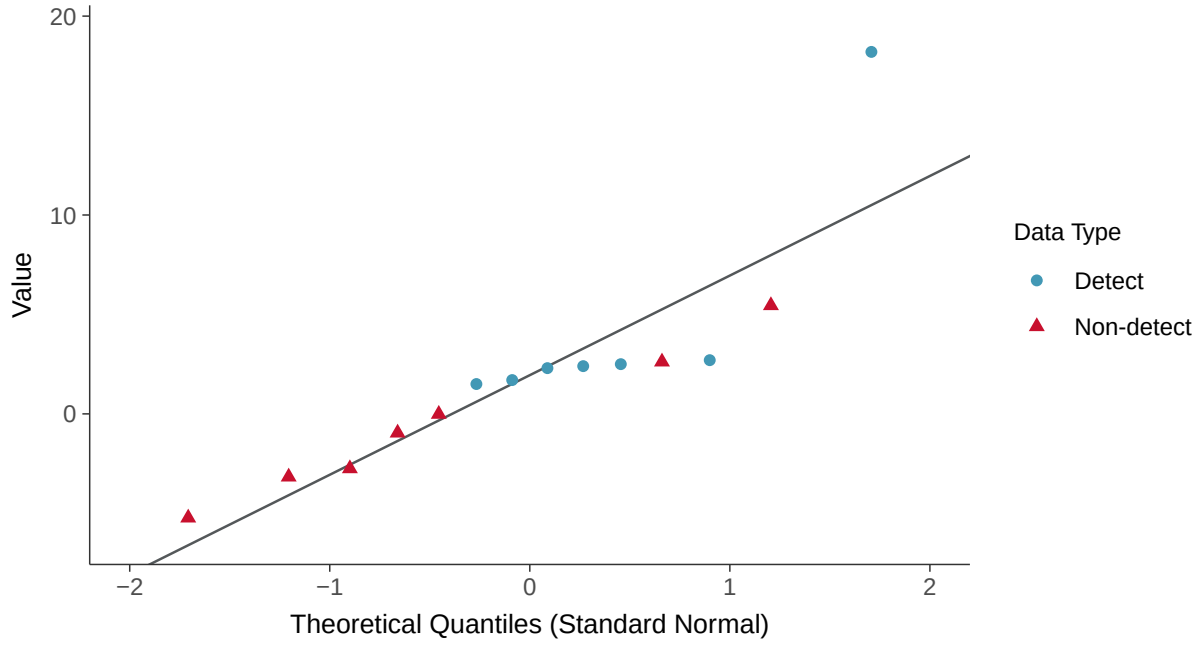
Boxplot by Season

Vanadium, MW-10 (ug/L)



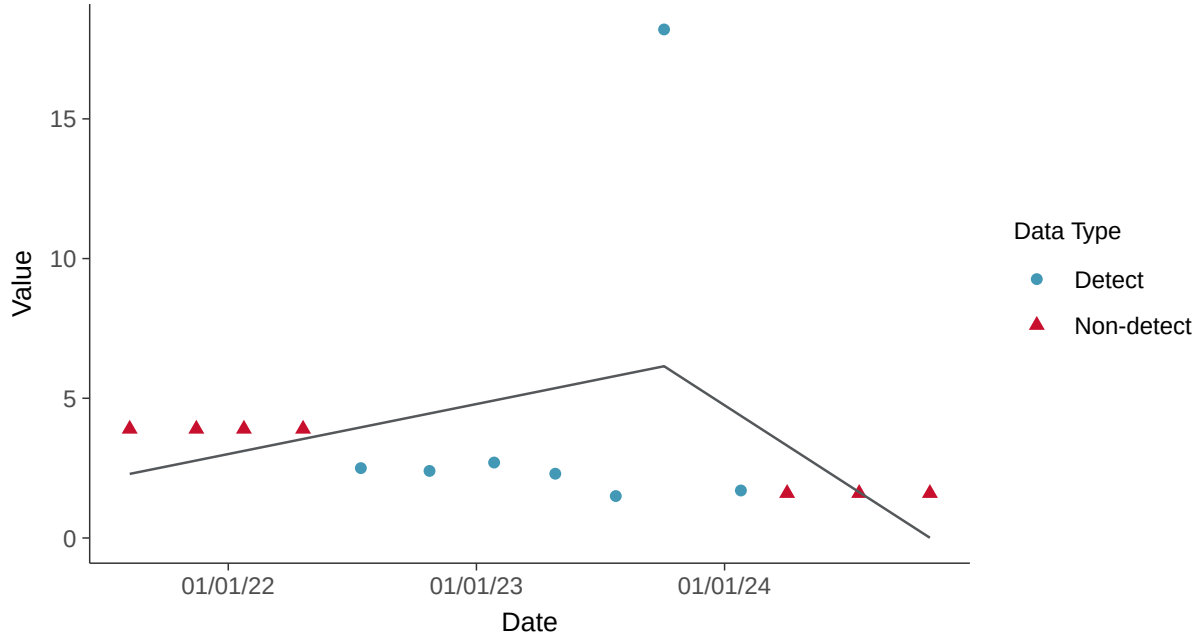
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-10 (ug/L)



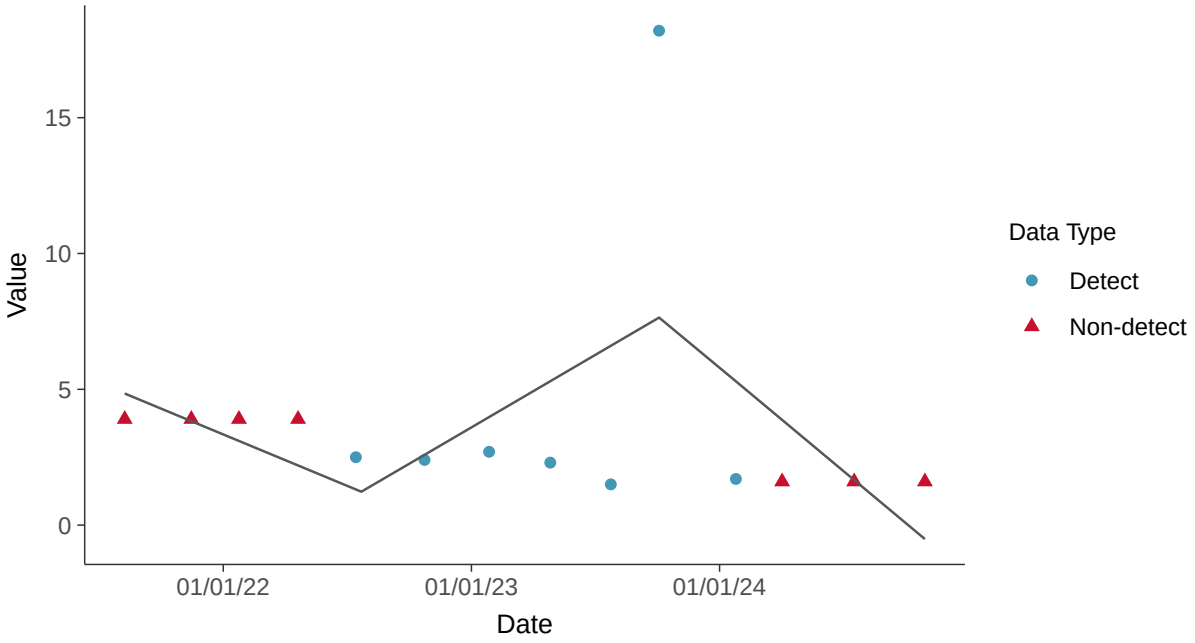
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-10 (ug/L)



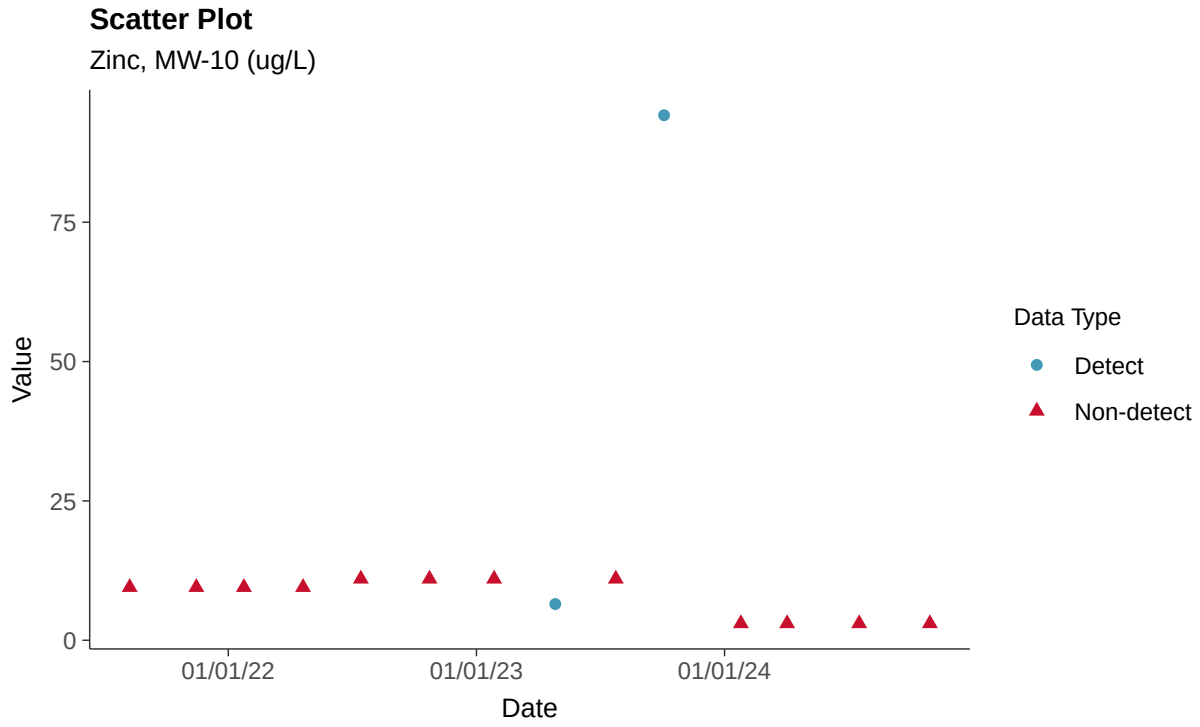
Trend Regression: Piecewise Linear-Linear-Linear

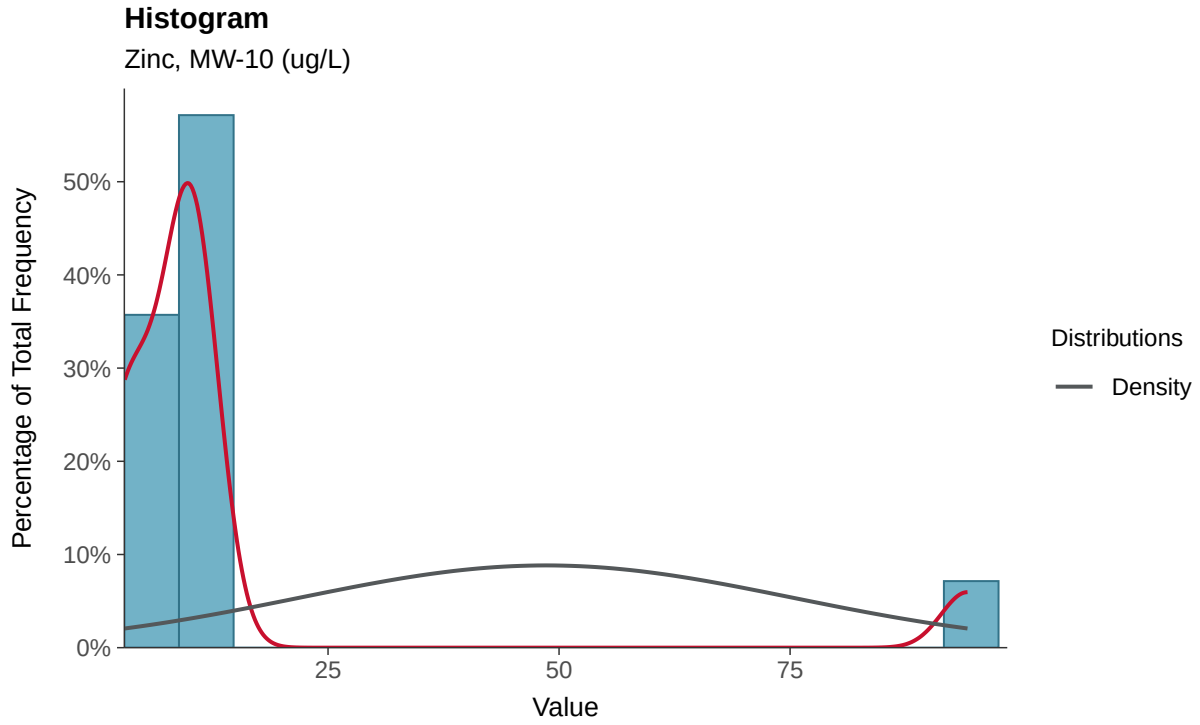
Vanadium, MW-10 (ug/L)



App. I Metals: Zinc, MW-10

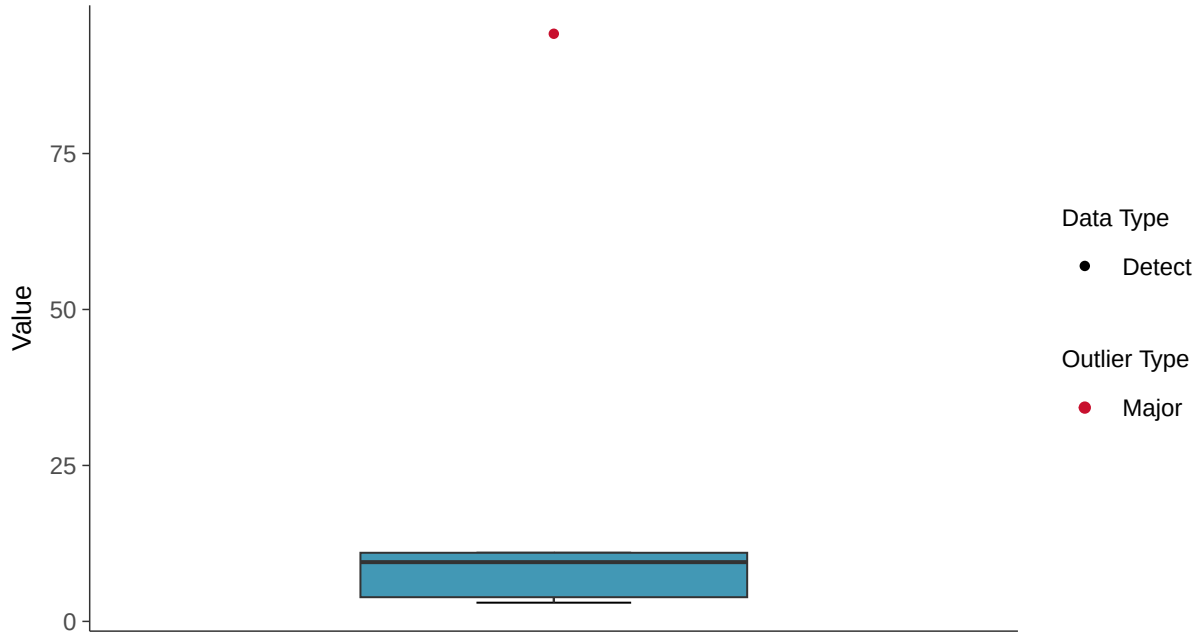
ID: 09_01_128





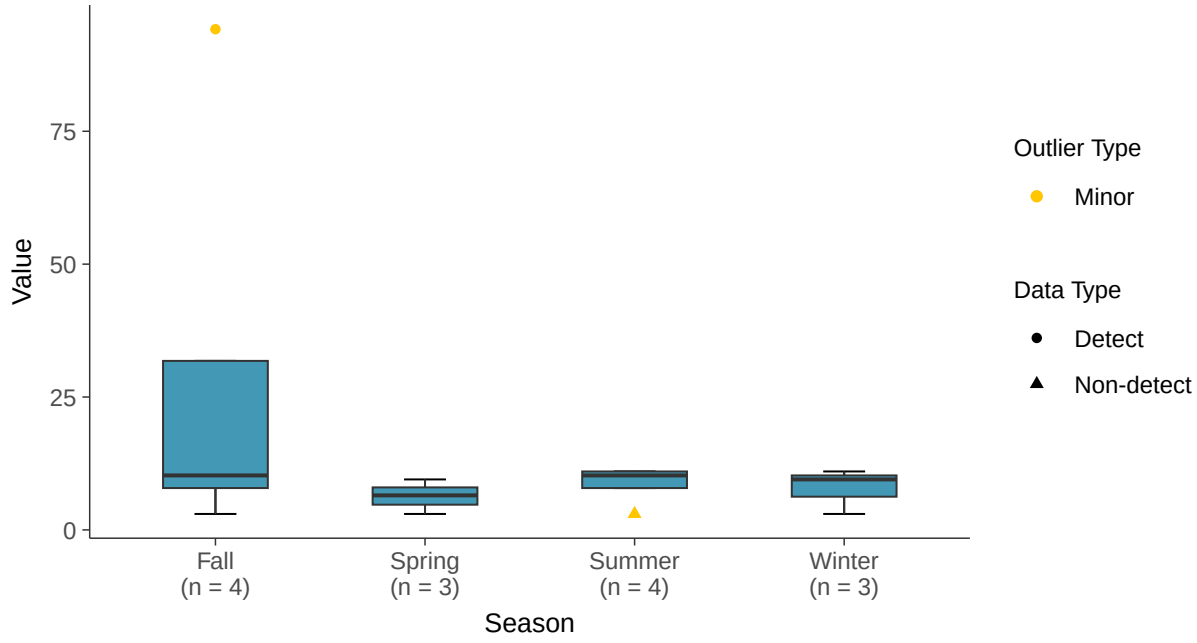
Boxplot

Zinc, MW-10 (ug/L)



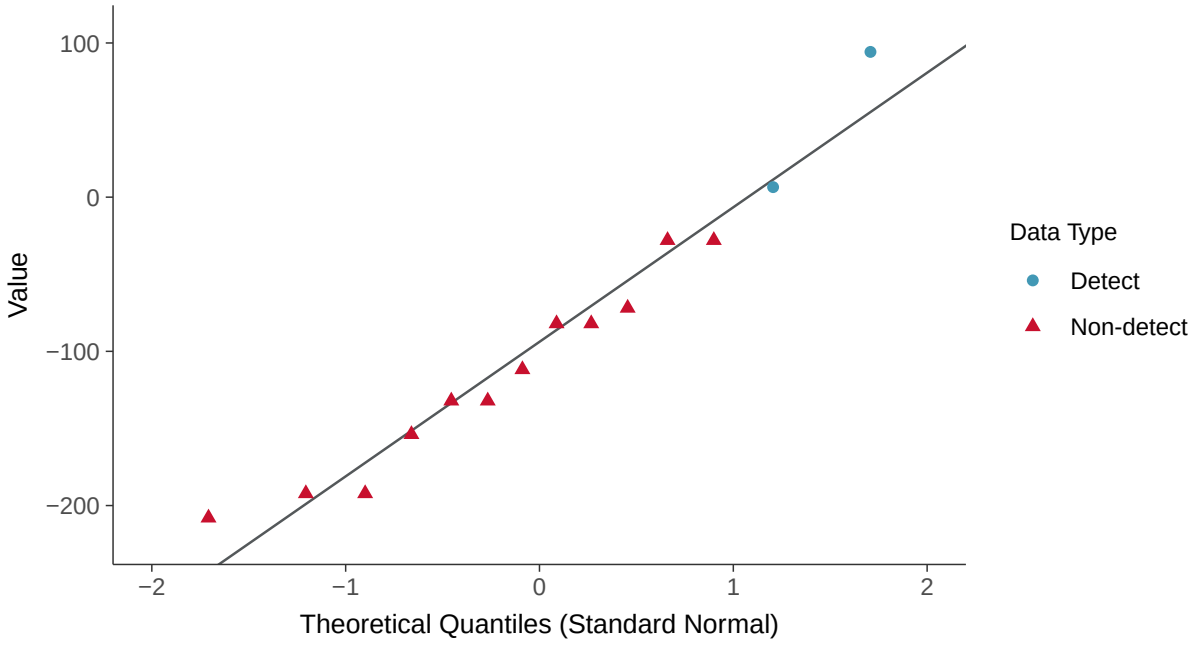
Boxplot by Season

Zinc, MW-10 (ug/L)



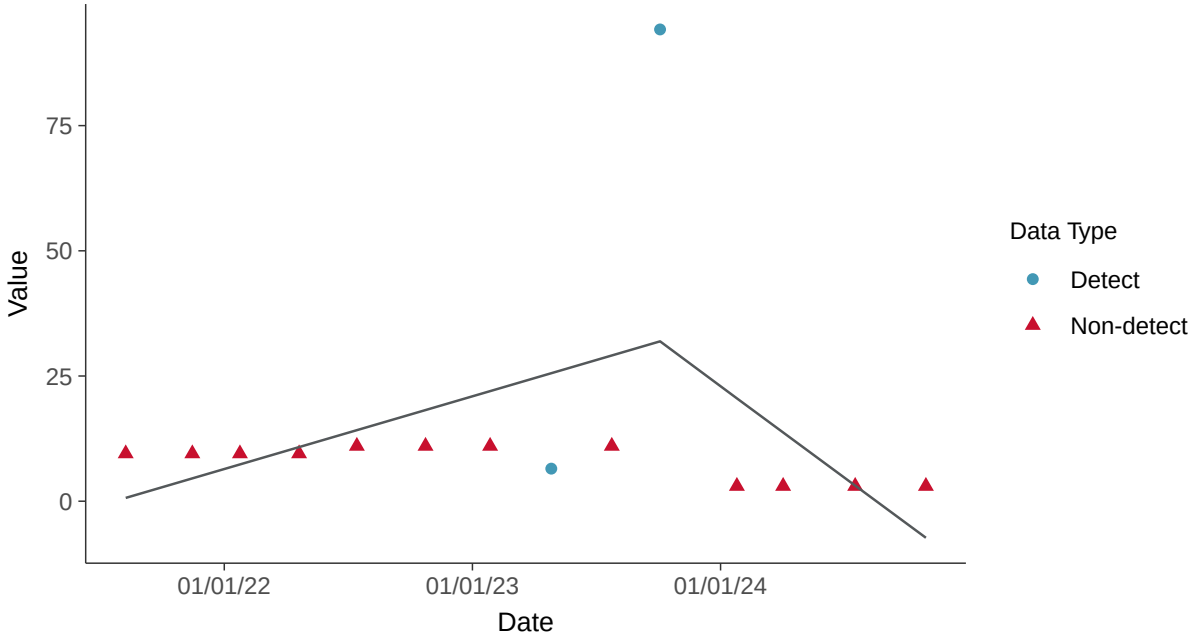
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-10 (ug/L)



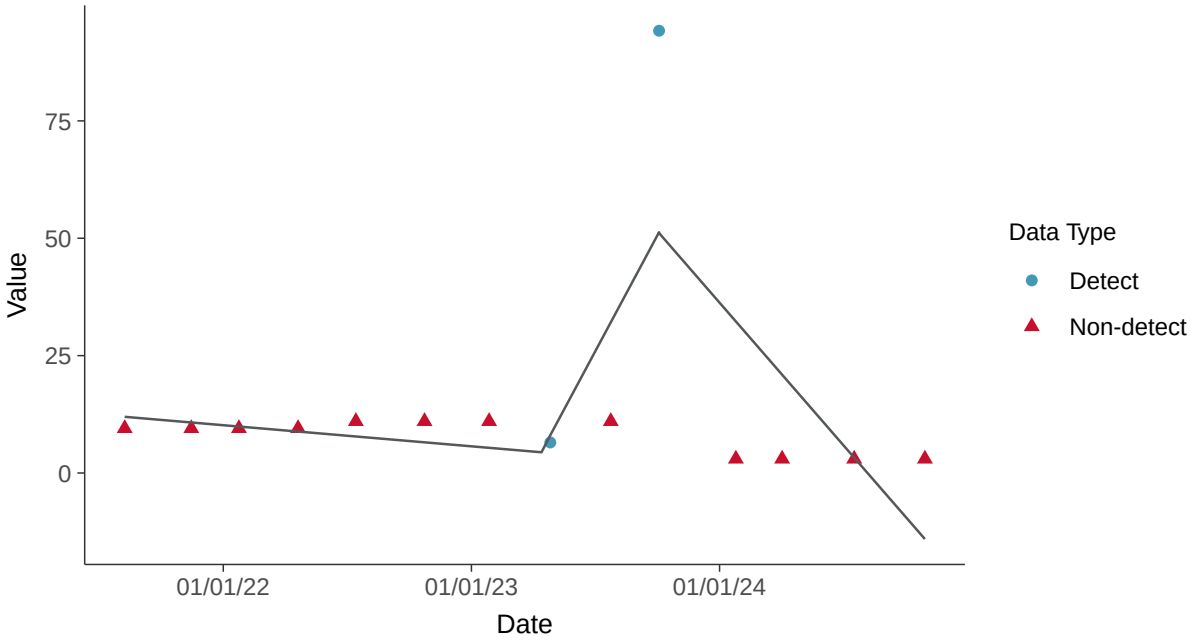
Trend Regression: Piecewise Linear-Linear

Zinc, MW-10 (ug/L)



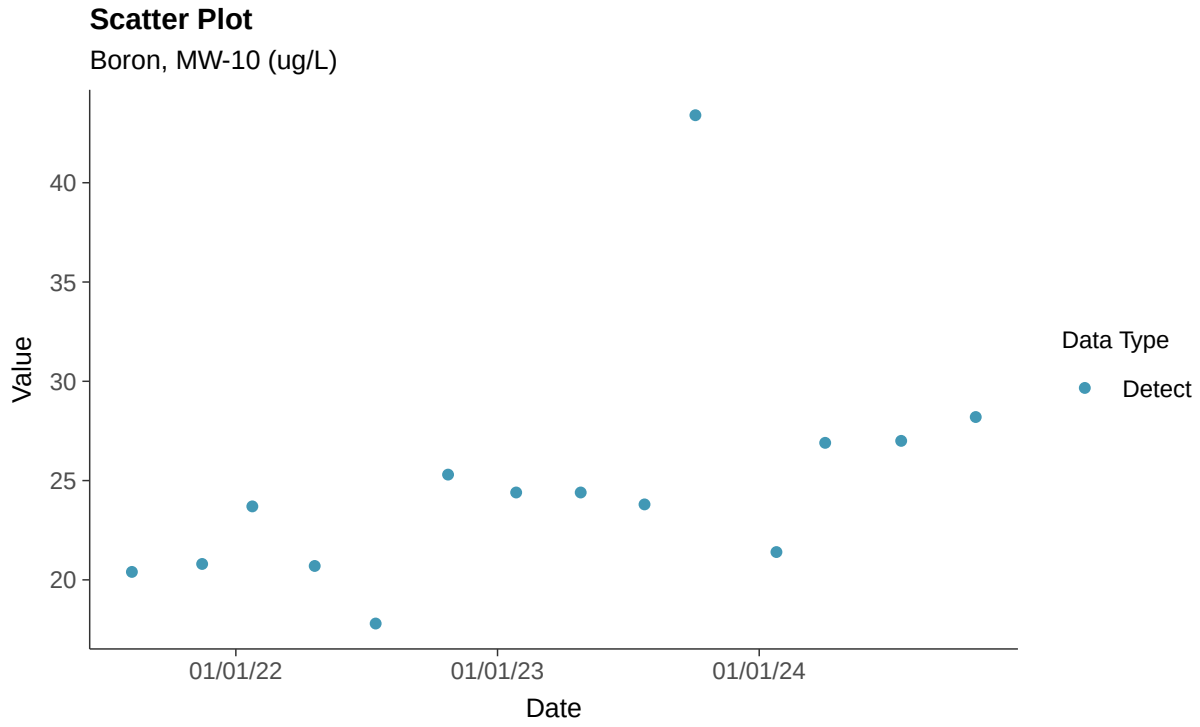
Trend Regression: Piecewise Linear-Linear-Linear

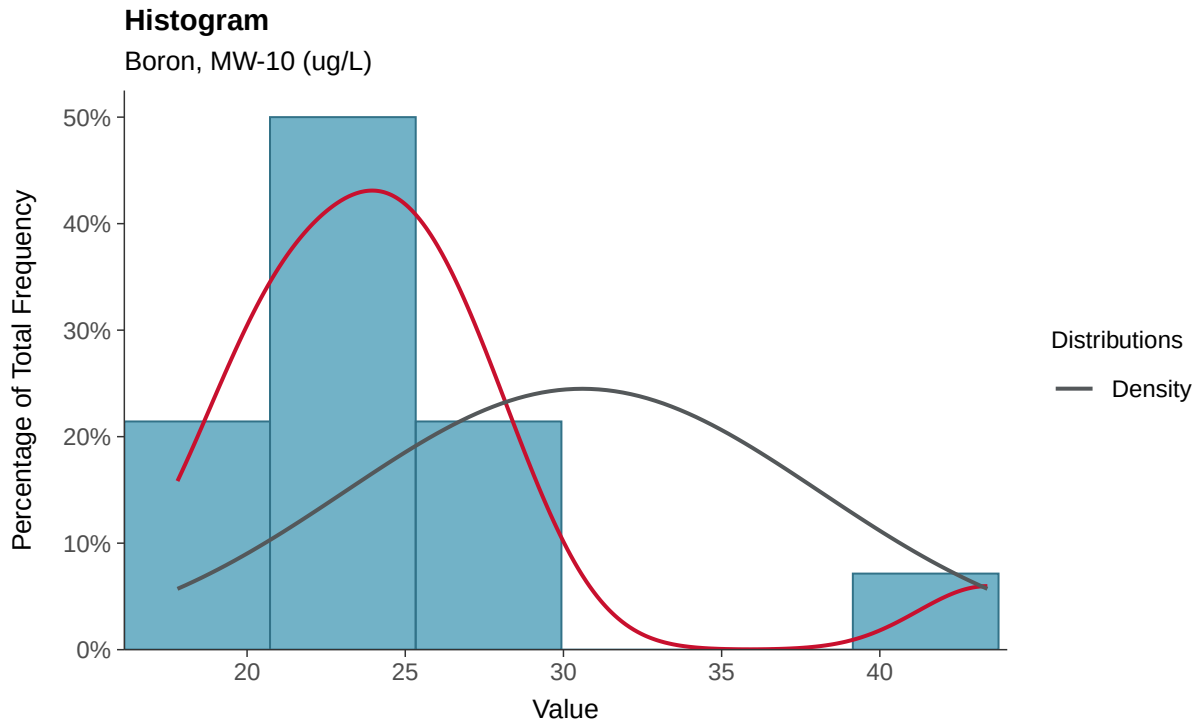
Zinc, MW-10 (ug/L)



App. III: Boron, MW-10

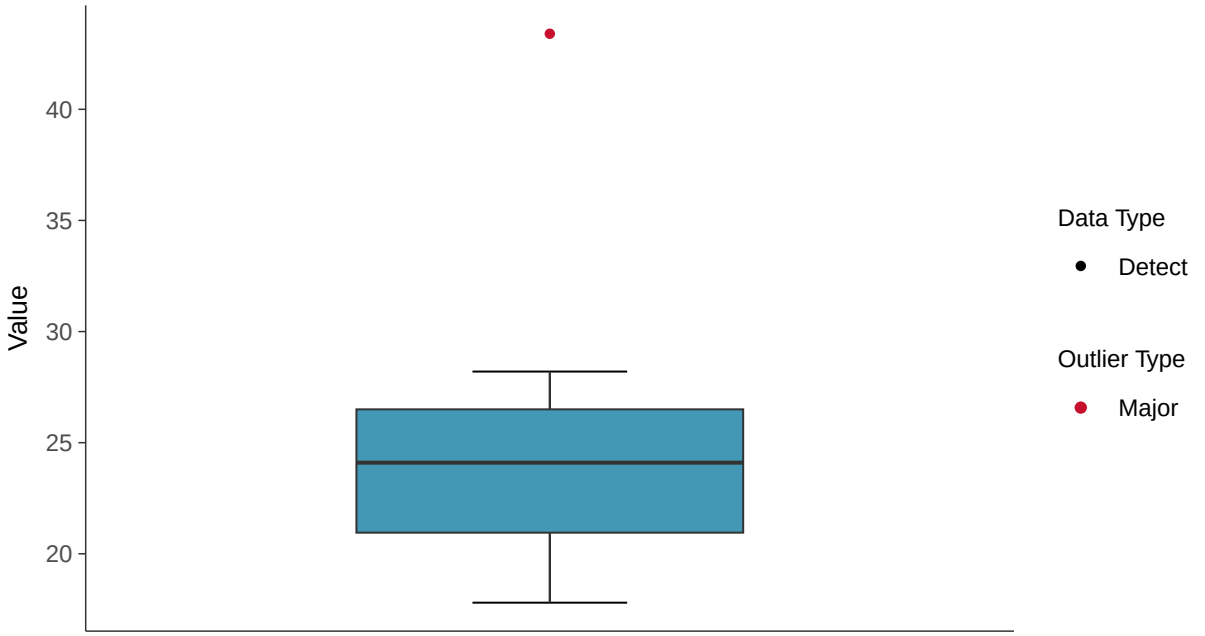
ID: 09_02_105





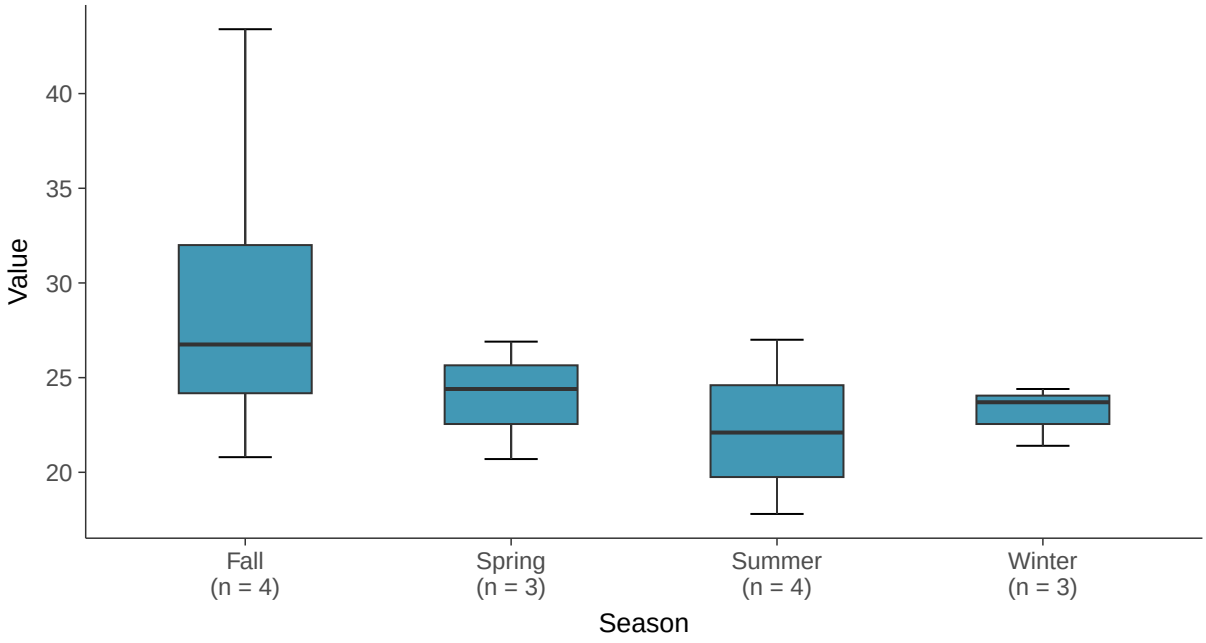
Boxplot

Boron, MW-10 (ug/L)



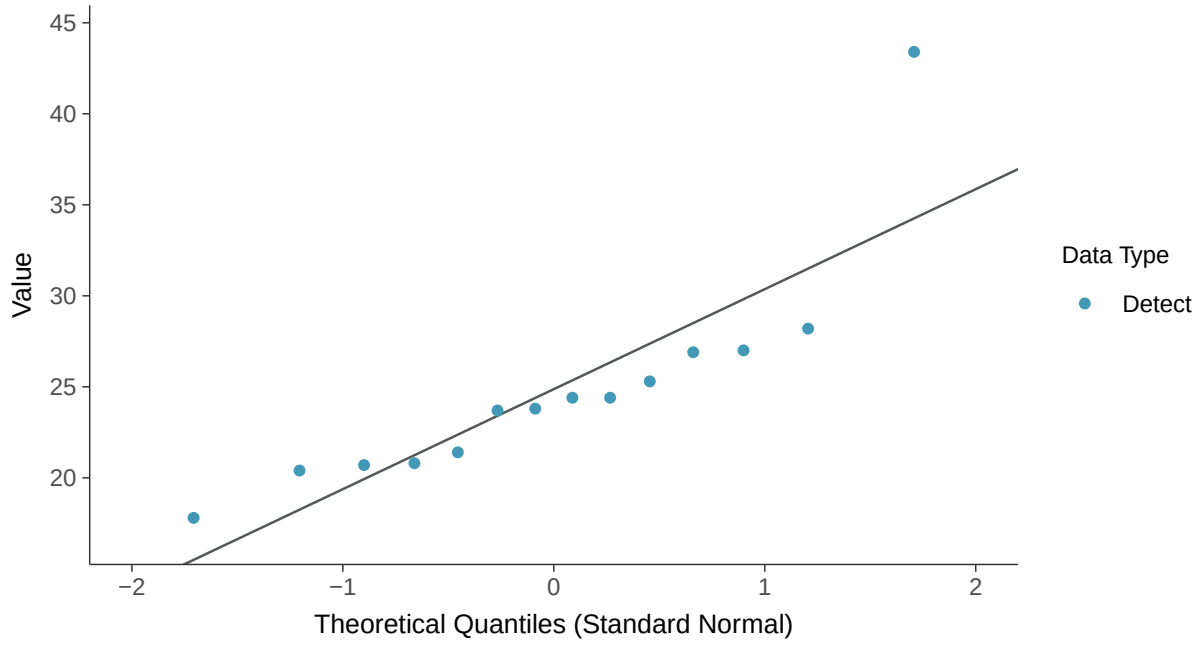
Boxplot by Season

Boron, MW-10 (ug/L)



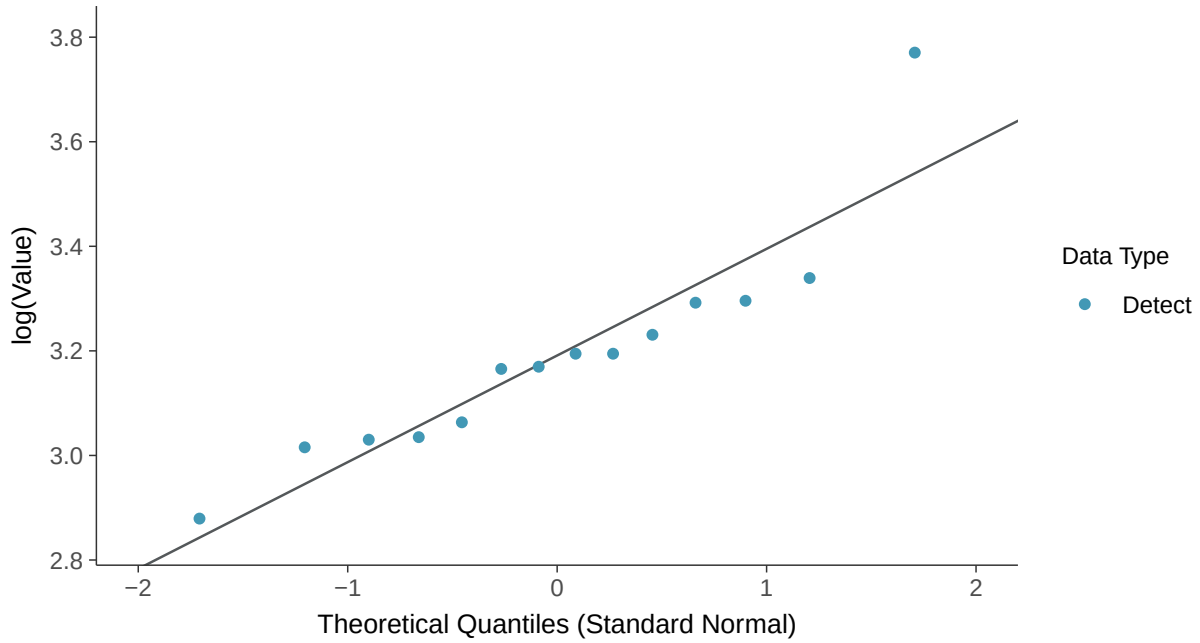
Normal Q-Q plot

Boron, MW-10 (ug/L)



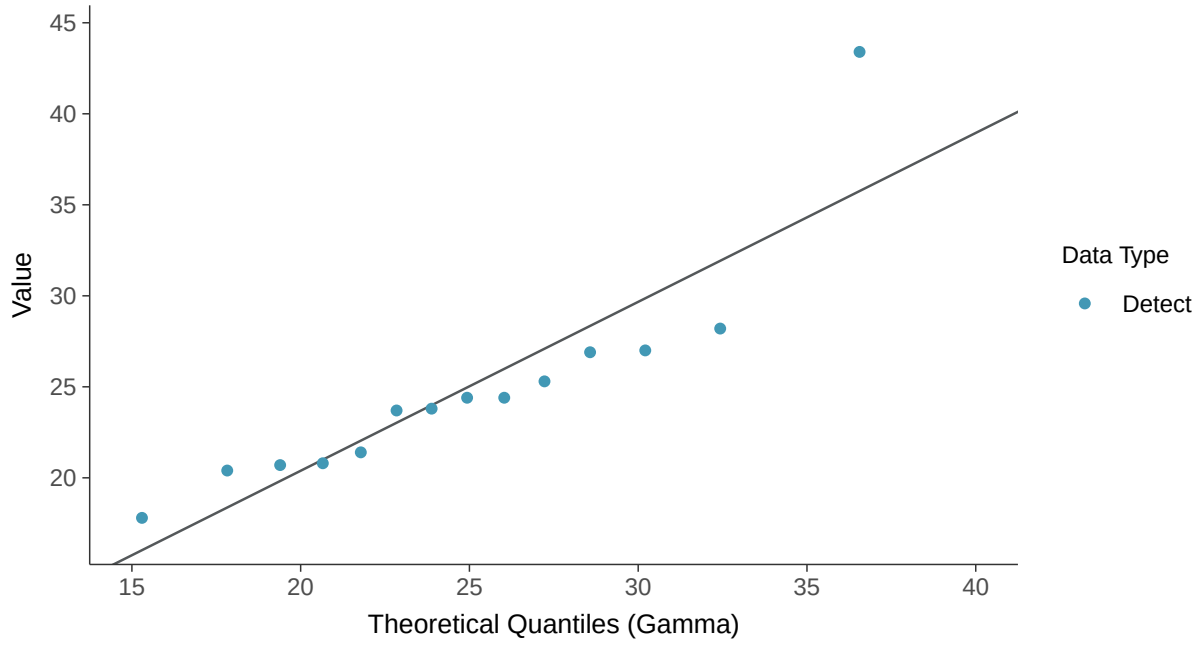
Lognormal Q-Q plot

Boron, MW-10 (ug/L)



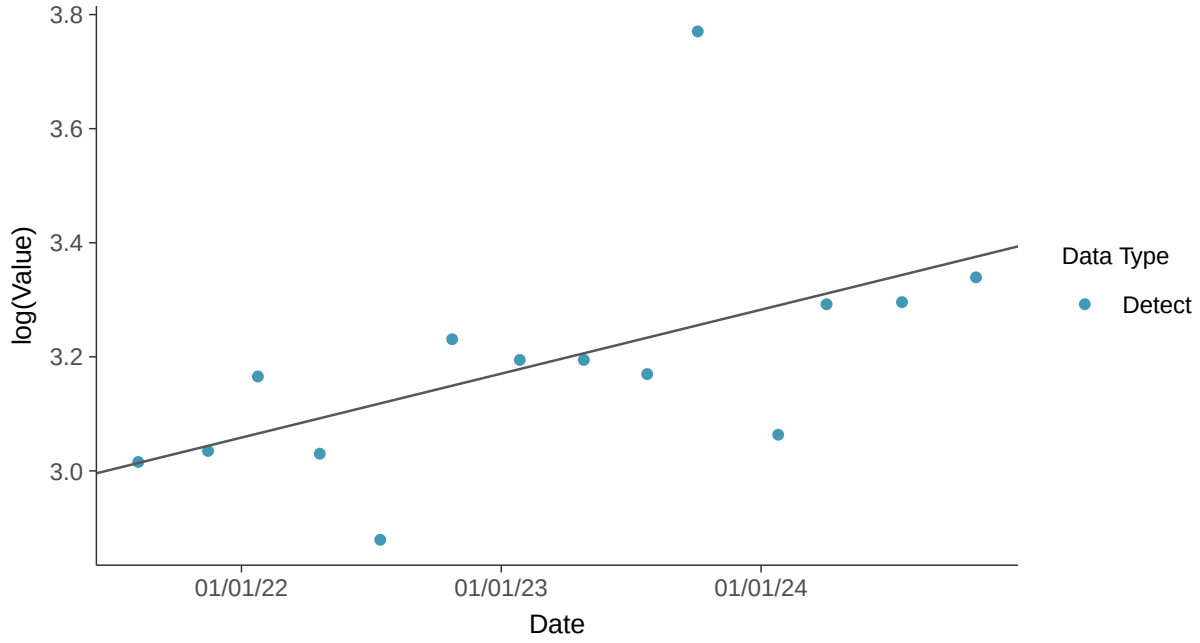
Gamma Q-Q plot

Boron, MW-10 (ug/L)



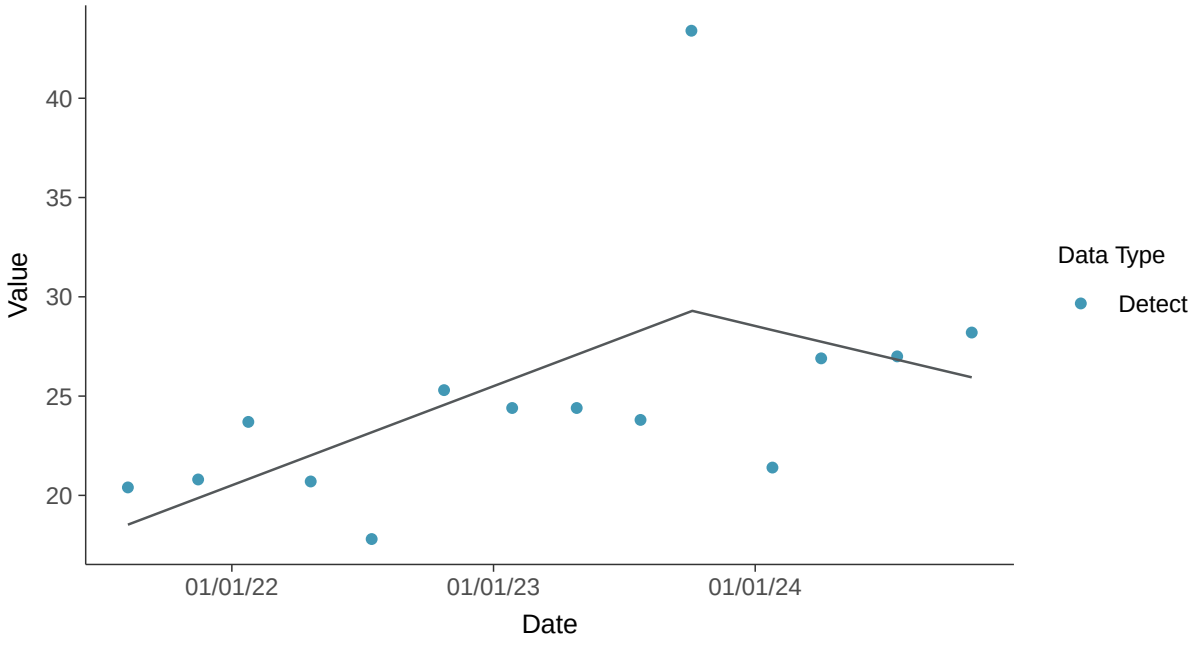
Trend Regression: Lognormal MLE

Boron, MW-10 (ug/L)



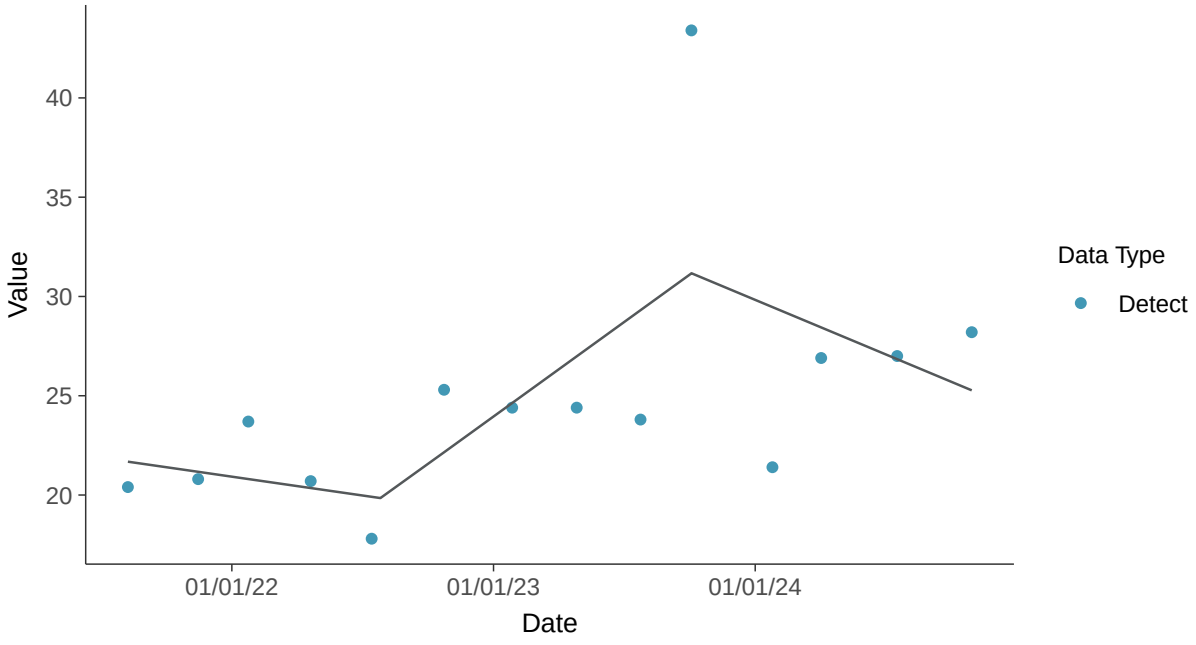
Trend Regression: Piecewise Linear-Linear

Boron, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-10 (ug/L)

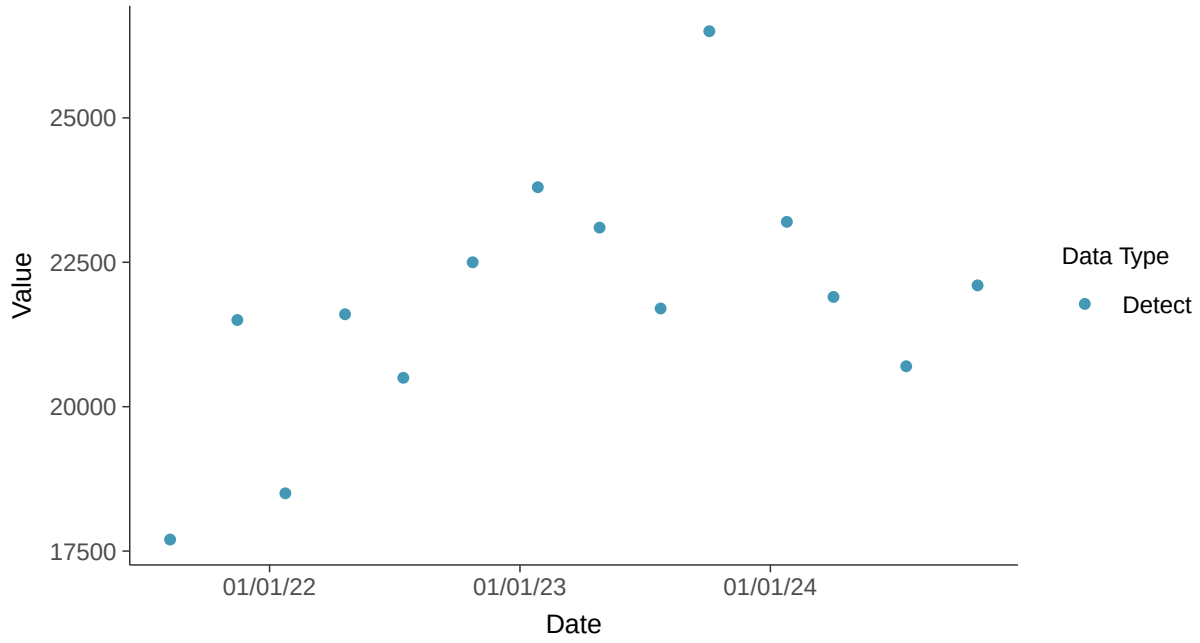


App. III: Calcium, MW-10

ID: 09_02_107

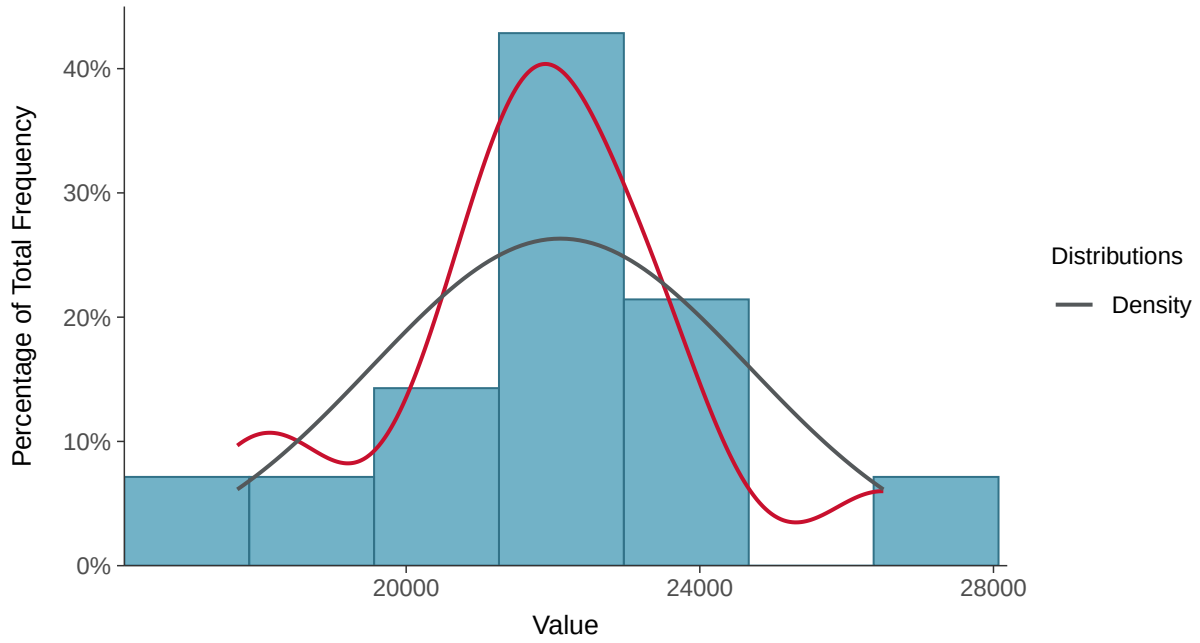
Scatter Plot

Calcium, MW-10 (ug/L)



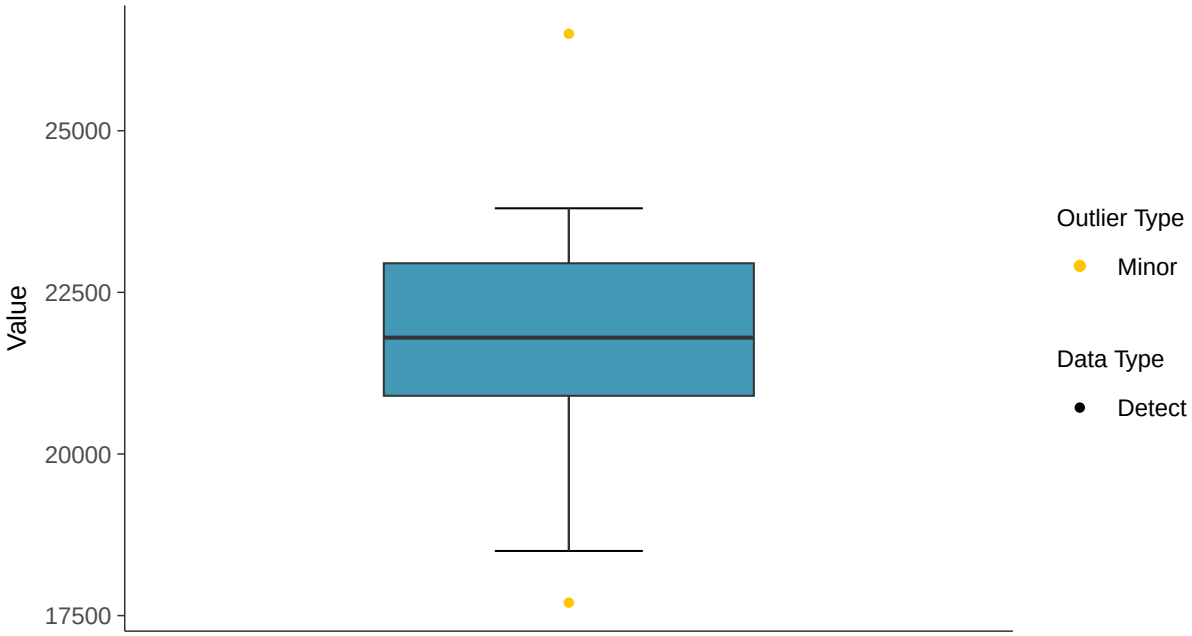
Histogram

Calcium, MW-10 (ug/L)



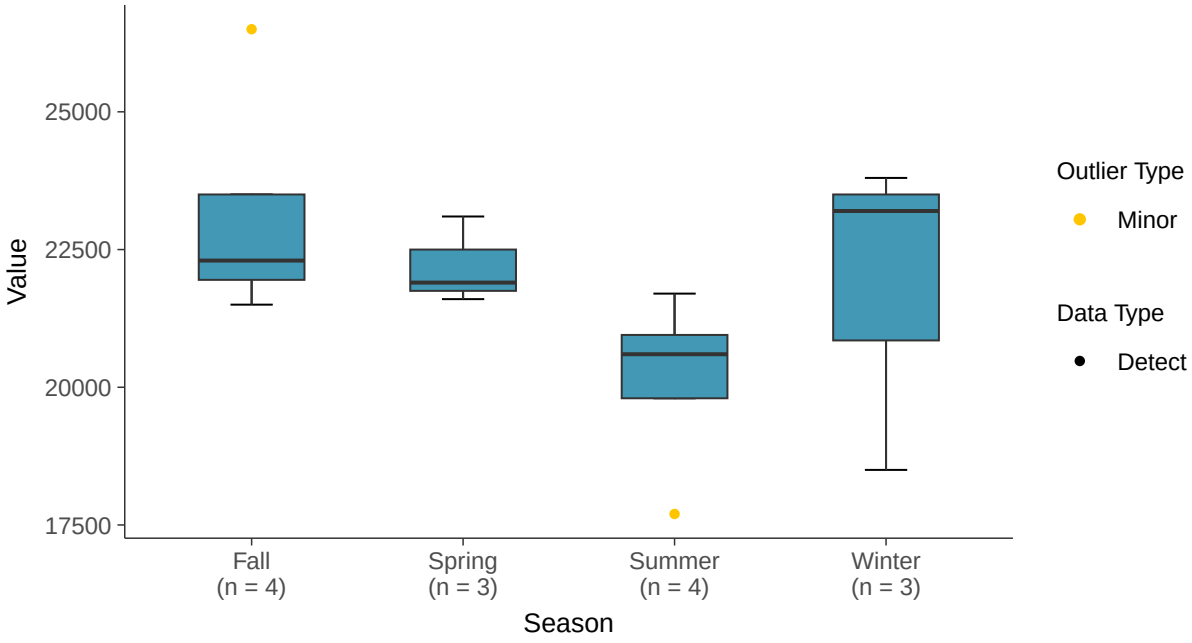
Boxplot

Calcium, MW-10 (ug/L)



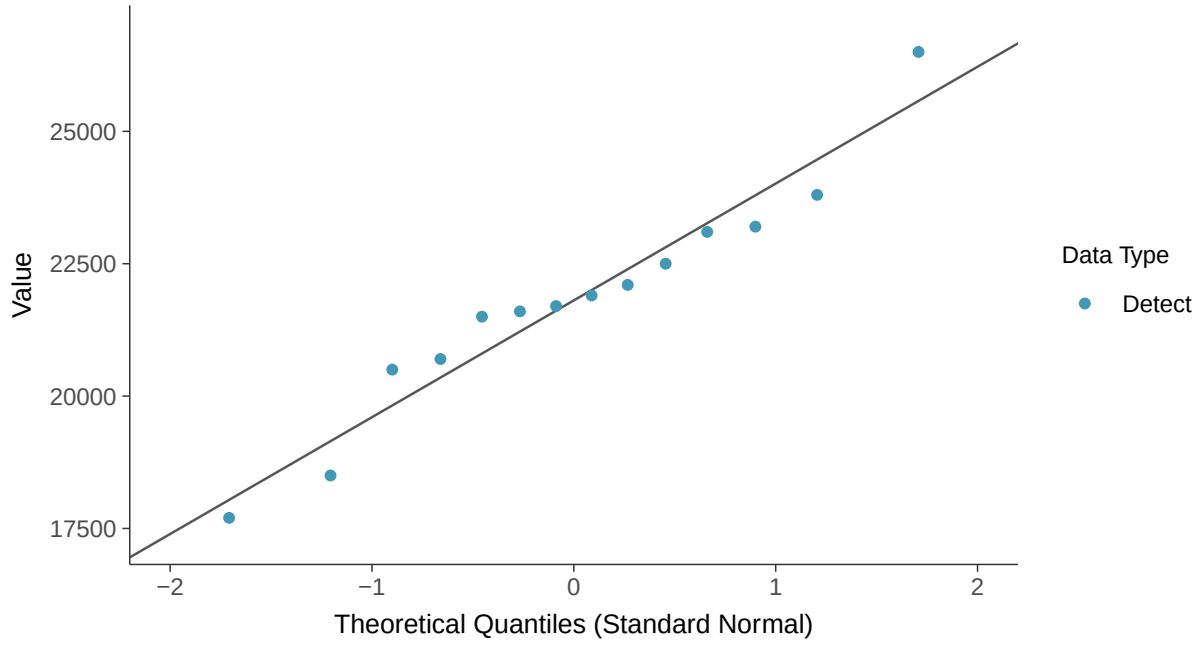
Boxplot by Season

Calcium, MW-10 (ug/L)



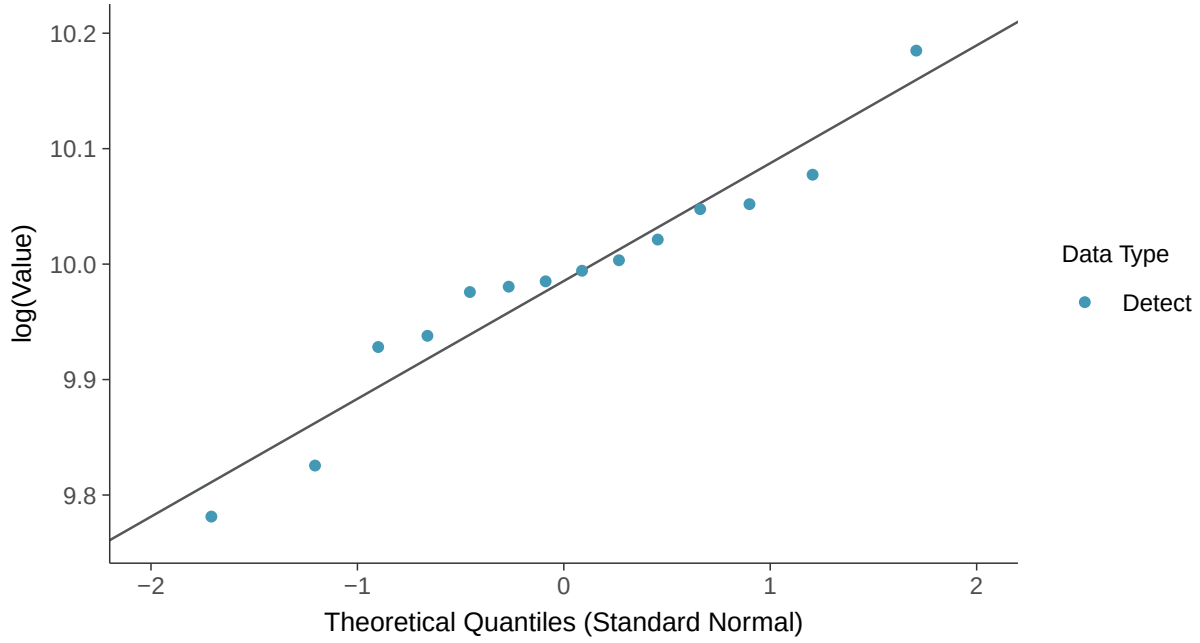
Normal Q-Q plot

Calcium, MW-10 (ug/L)



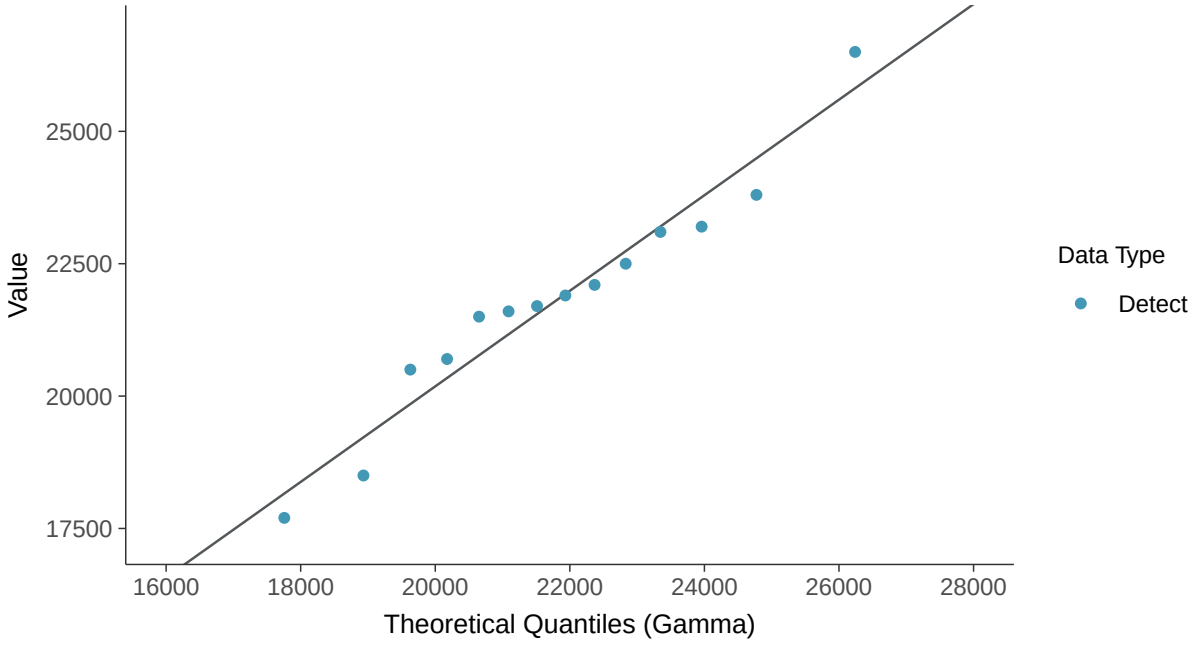
Lognormal Q-Q plot

Calcium, MW-10 (ug/L)



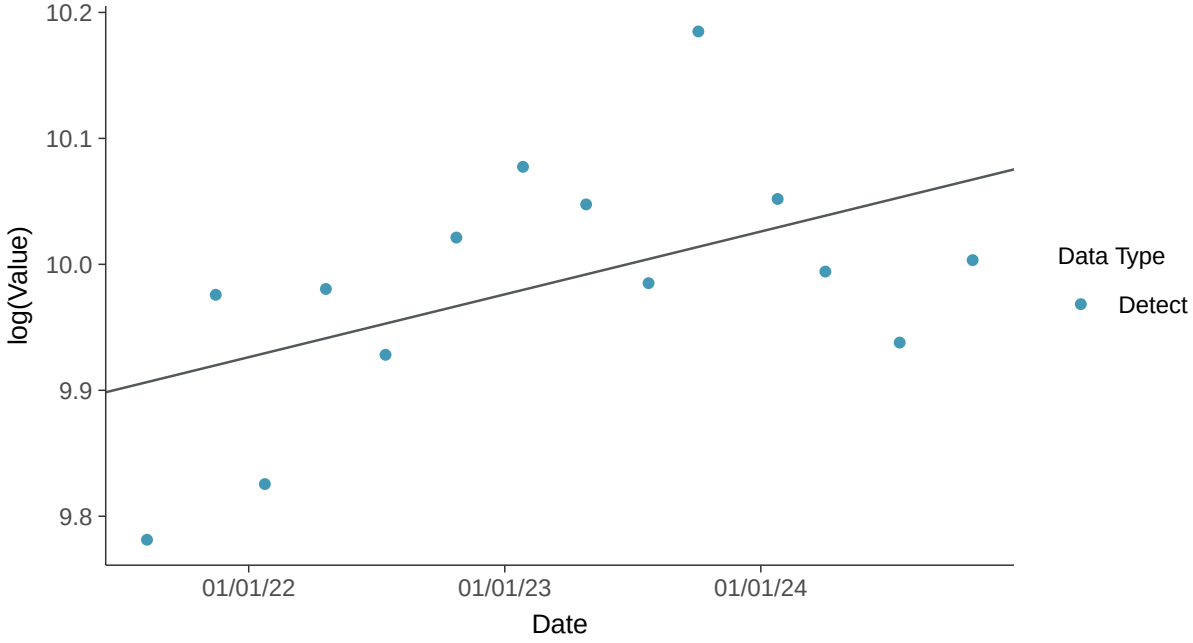
Gamma Q-Q plot

Calcium, MW-10 (ug/L)



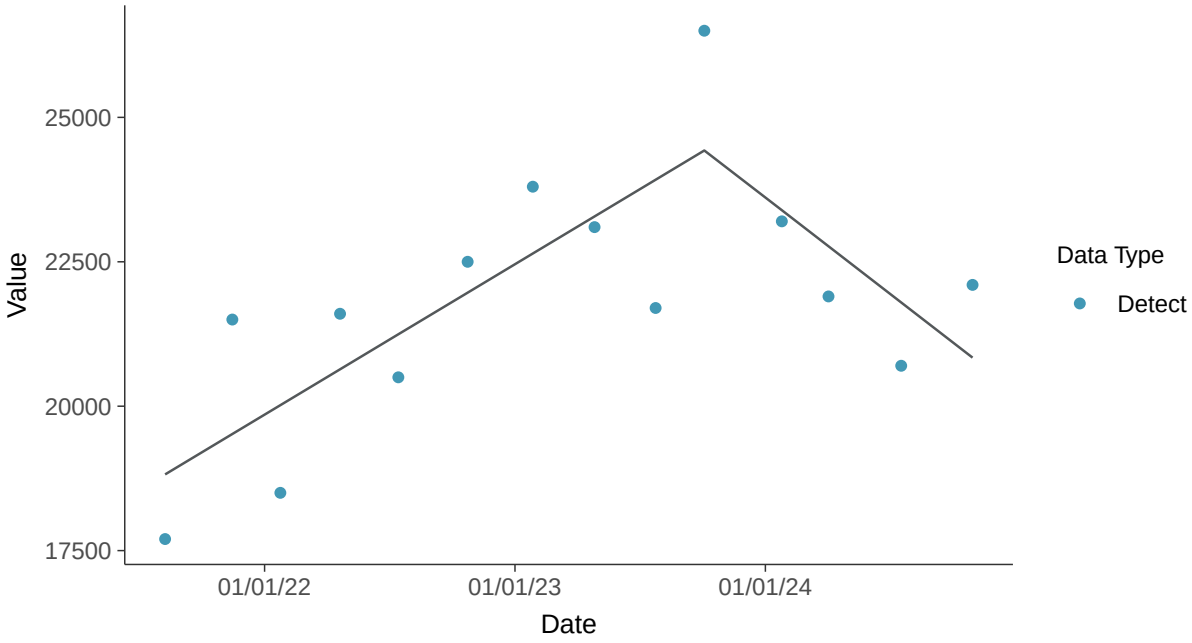
Trend Regression: Lognormal MLE

Calcium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, MW-10 (ug/L)

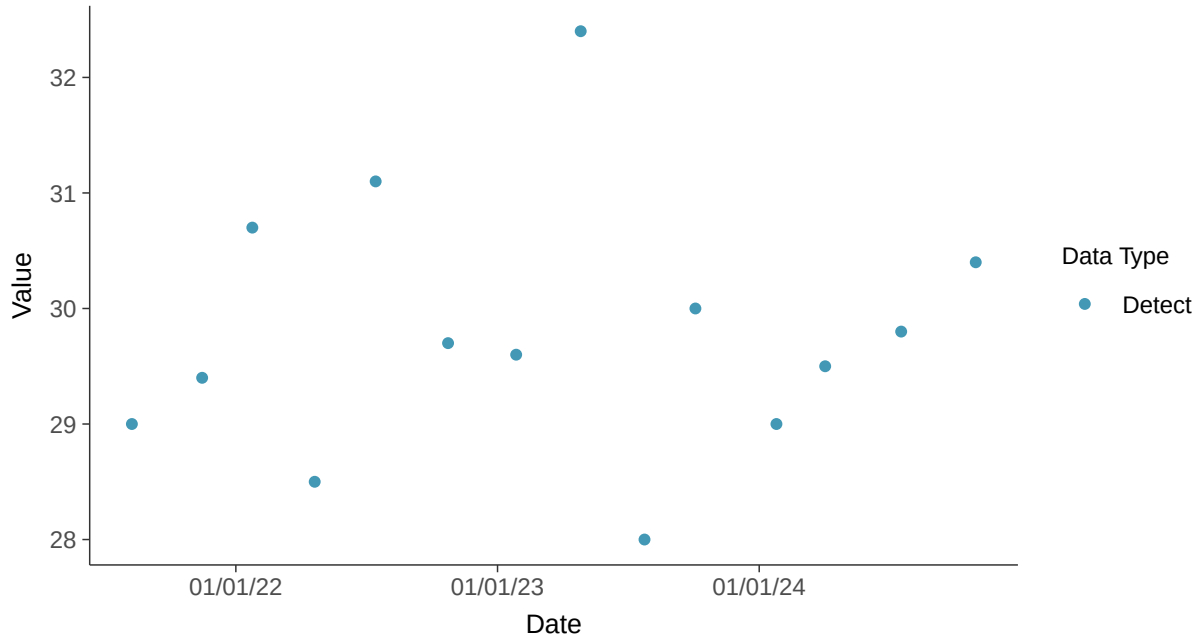


App. III: Chloride, MW-10

ID: 09_02_108

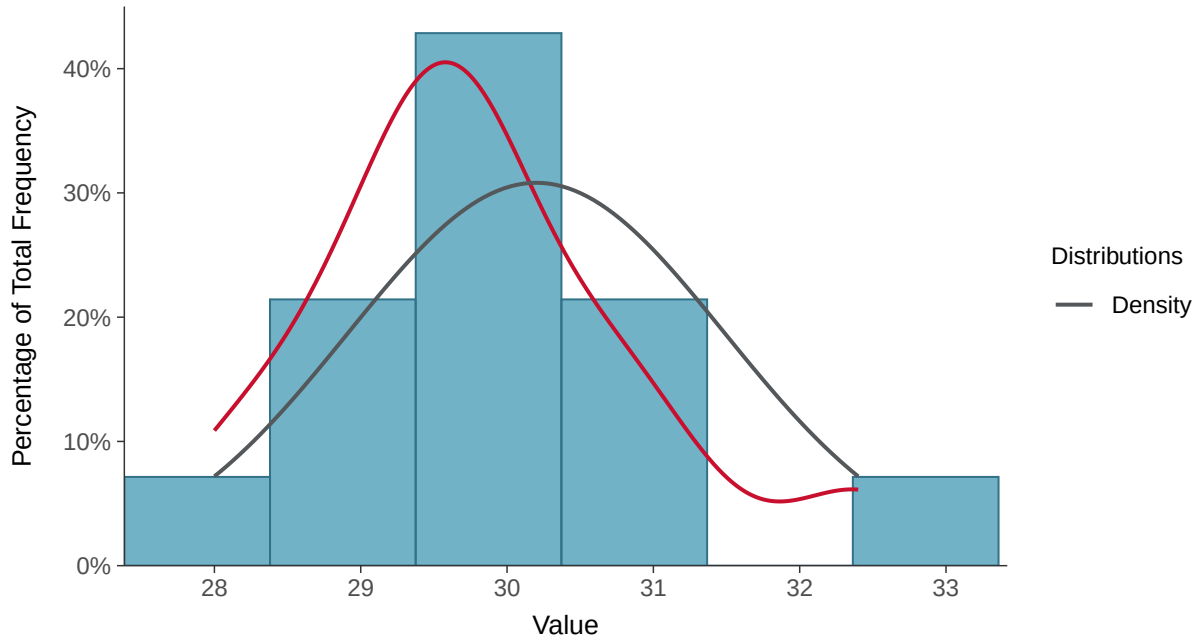
Scatter Plot

Chloride, MW-10 (mg/L)



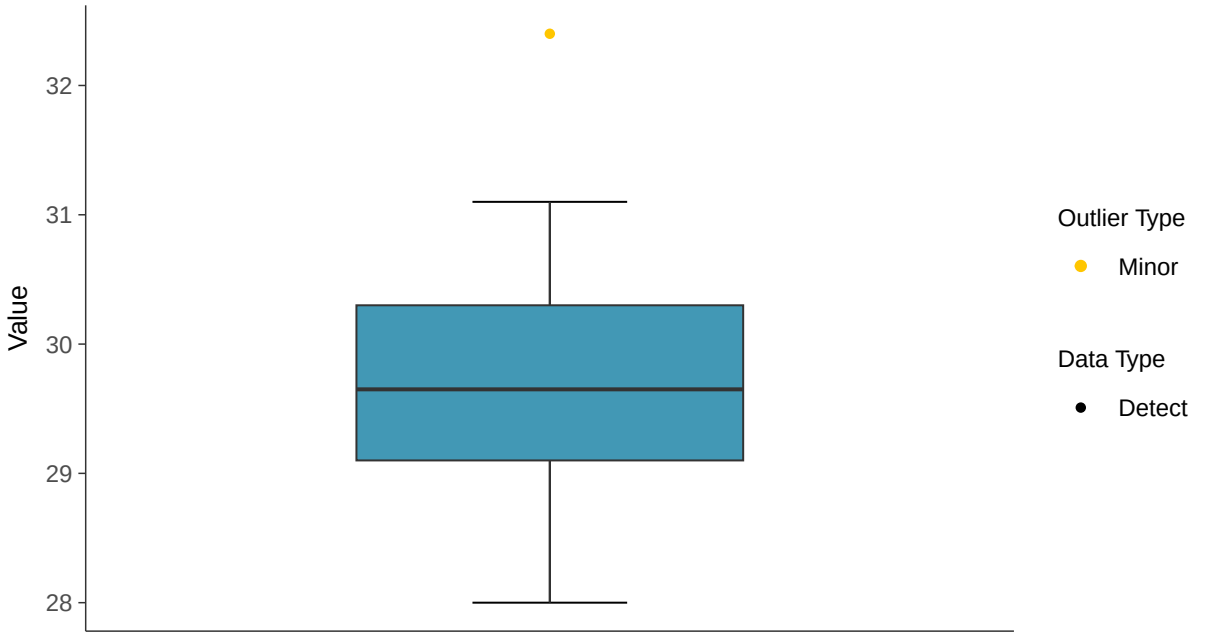
Histogram

Chloride, MW-10 (mg/L)



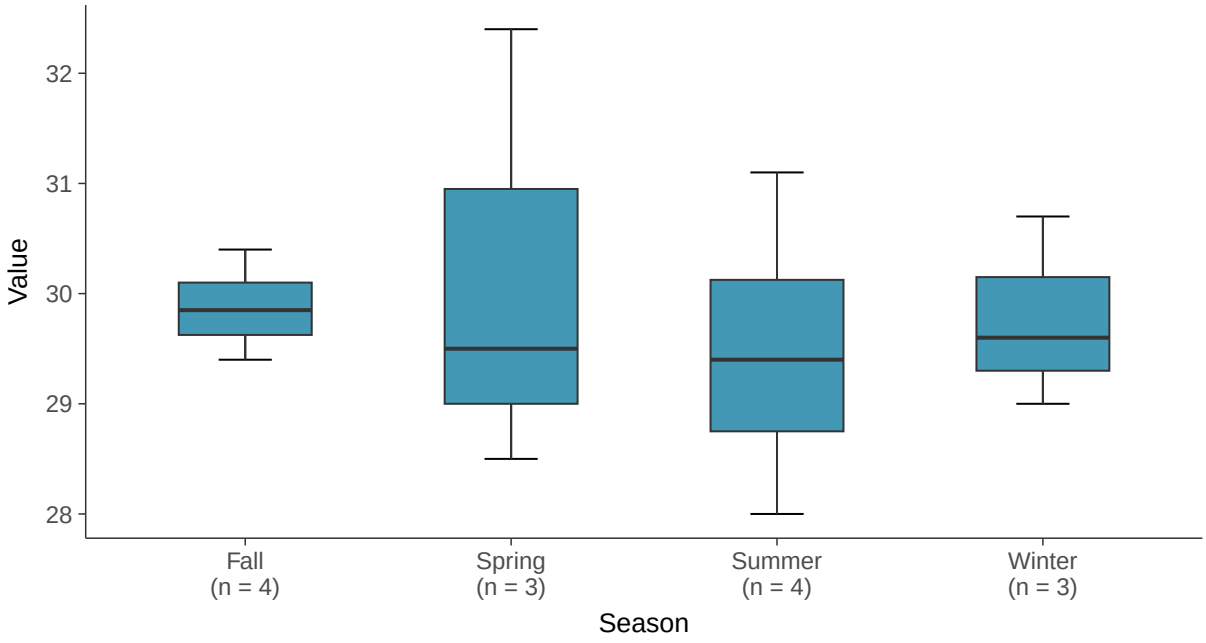
Boxplot

Chloride, MW-10 (mg/L)



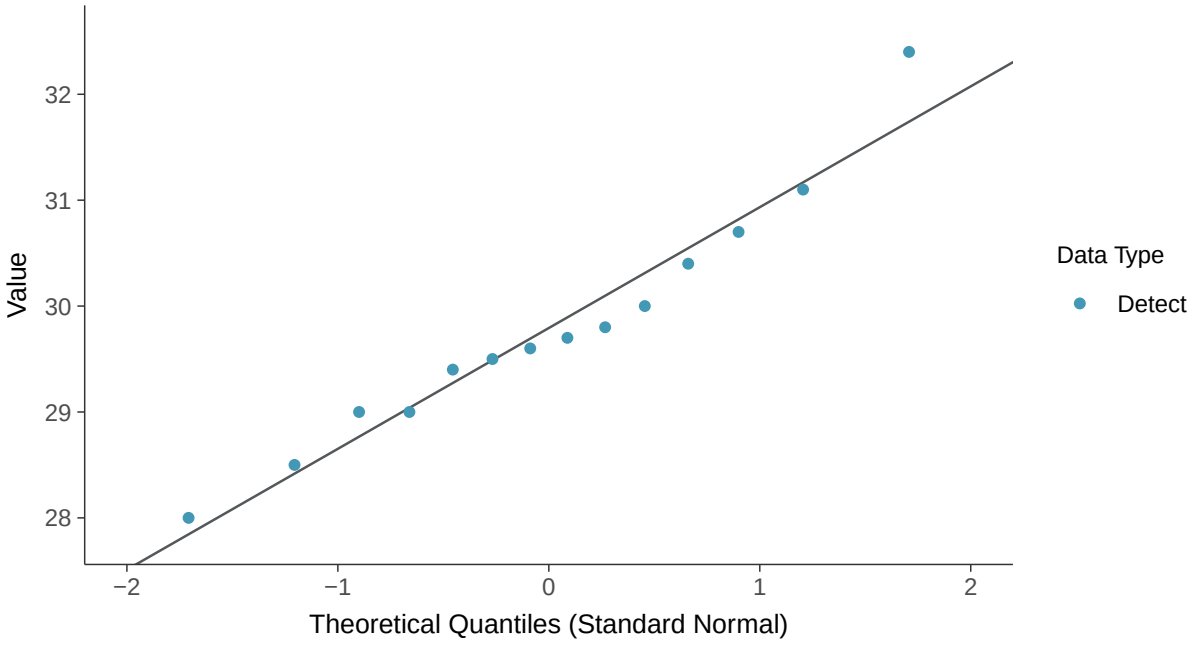
Boxplot by Season

Chloride, MW-10 (mg/L)



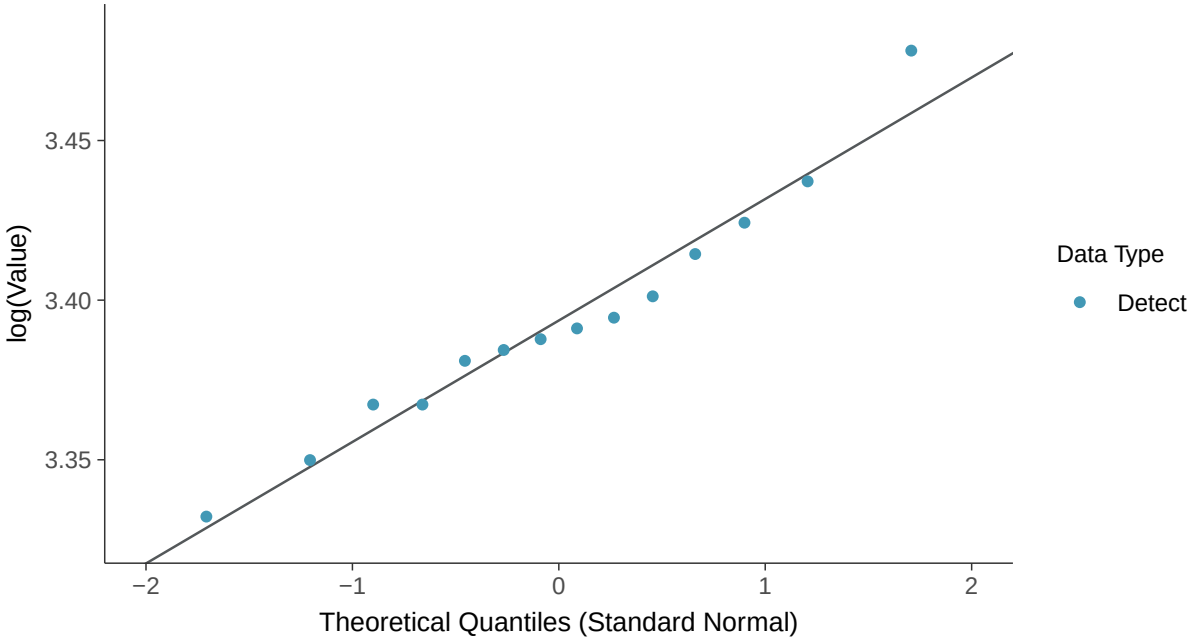
Normal Q-Q plot

Chloride, MW-10 (mg/L)



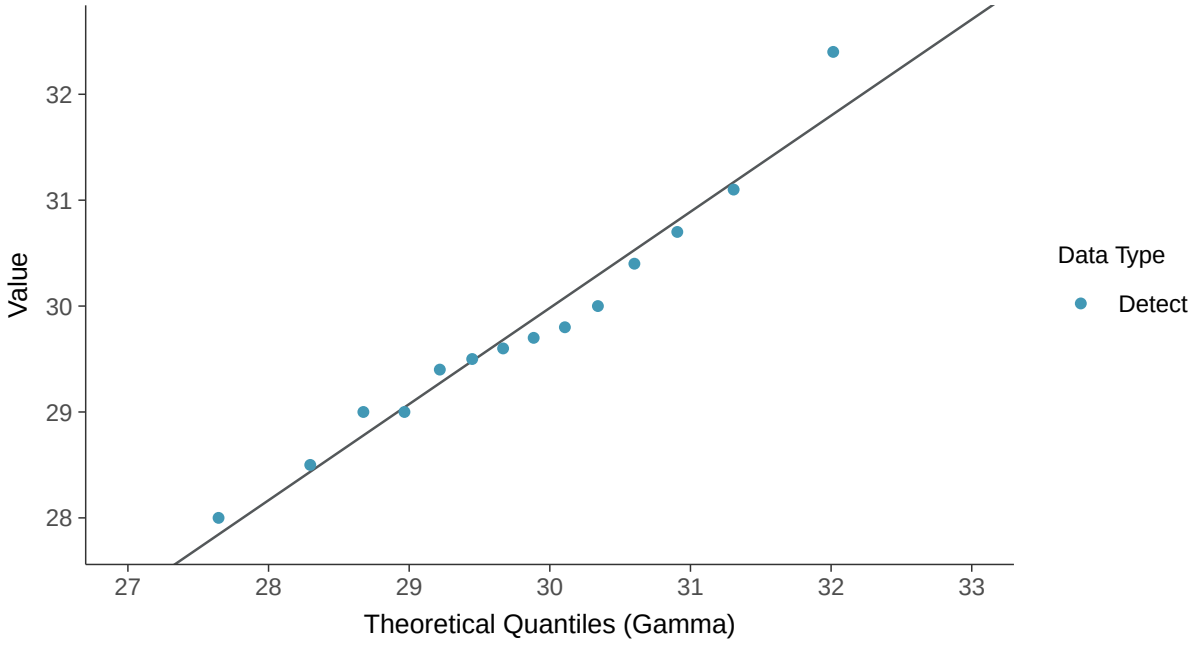
Lognormal Q-Q plot

Chloride, MW-10 (mg/L)



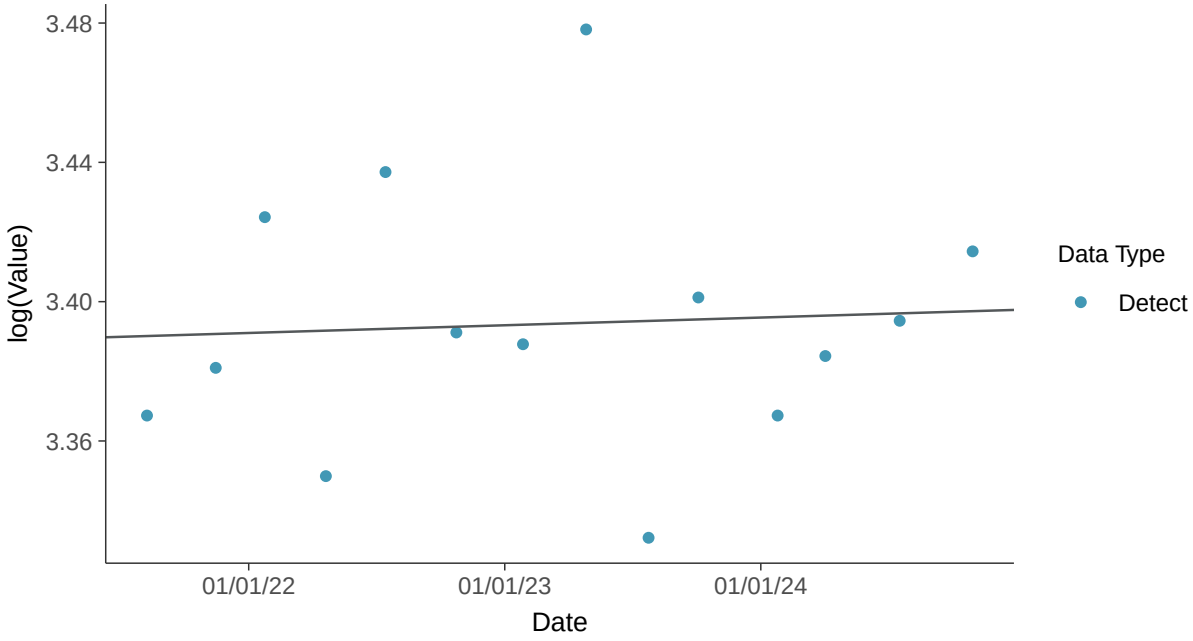
Gamma Q-Q plot

Chloride, MW-10 (mg/L)



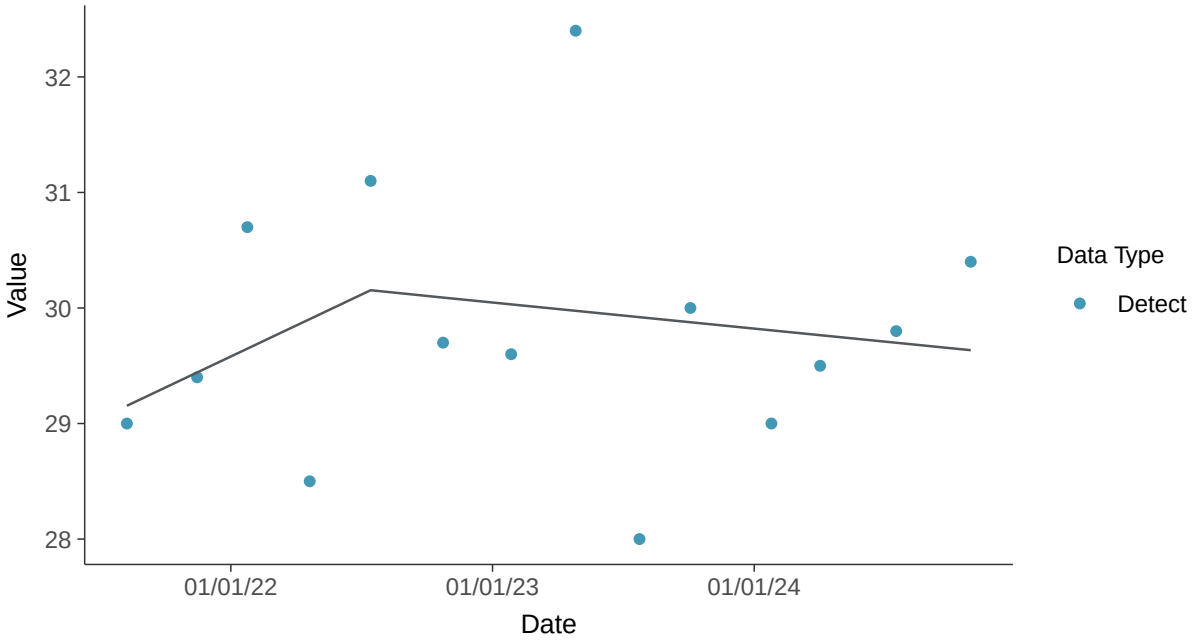
Trend Regression: Lognormal MLE

Chloride, MW-10 (mg/L)



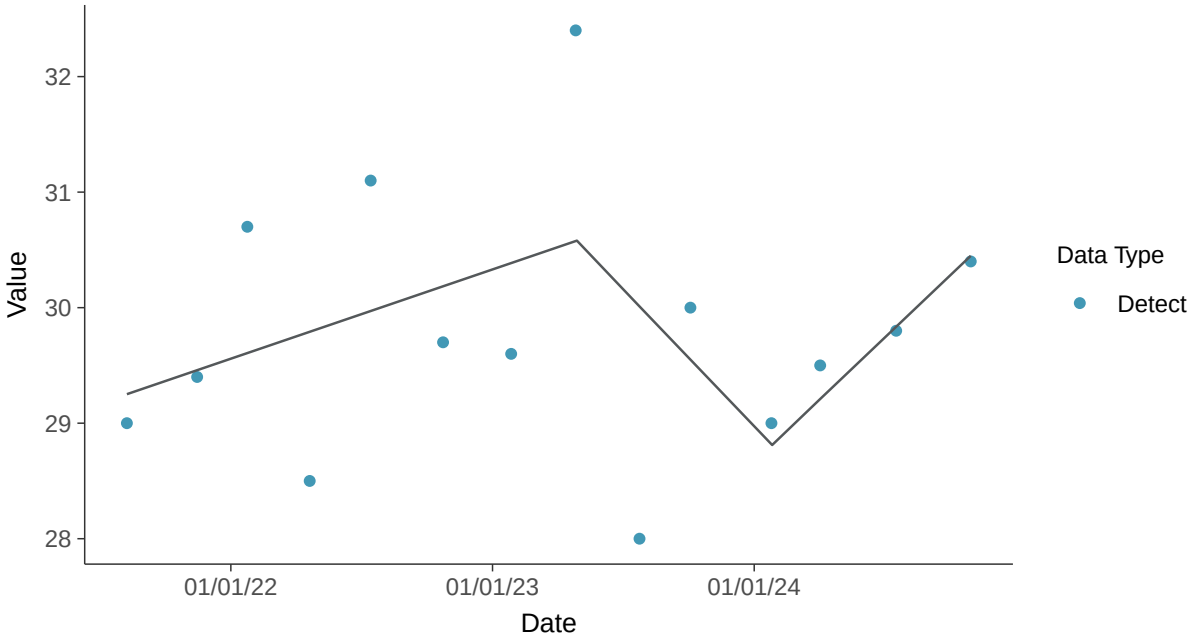
Trend Regression: Piecewise Linear-Linear

Chloride, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride, MW-10 (mg/L)

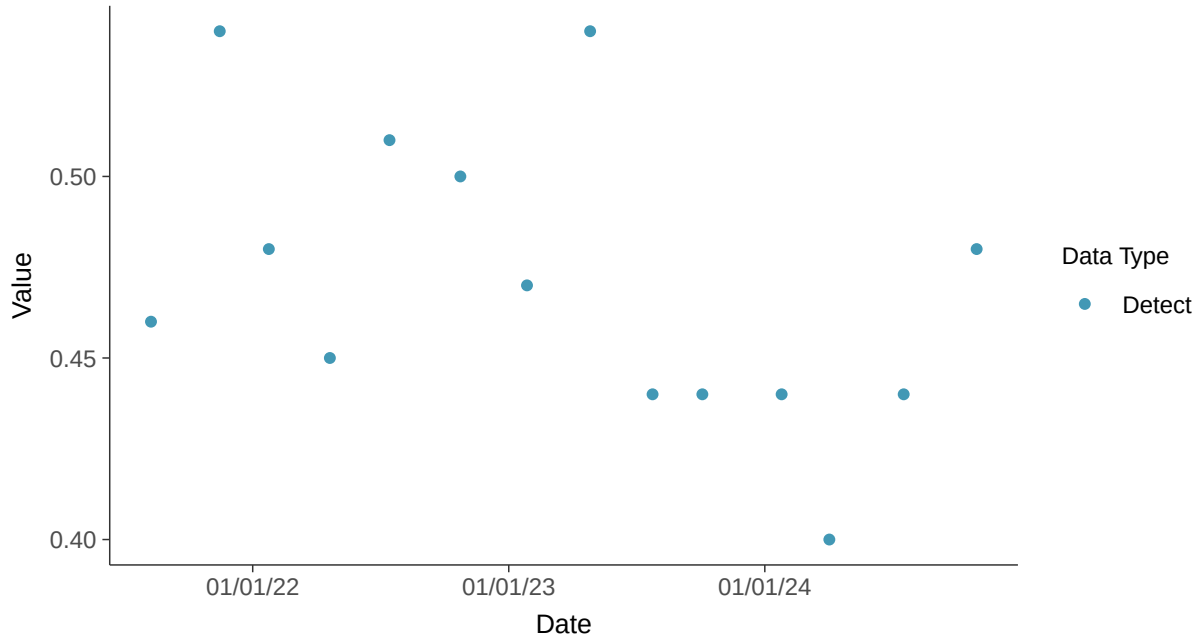


App. III: Fluoride, MW-10

ID: 09_02_112

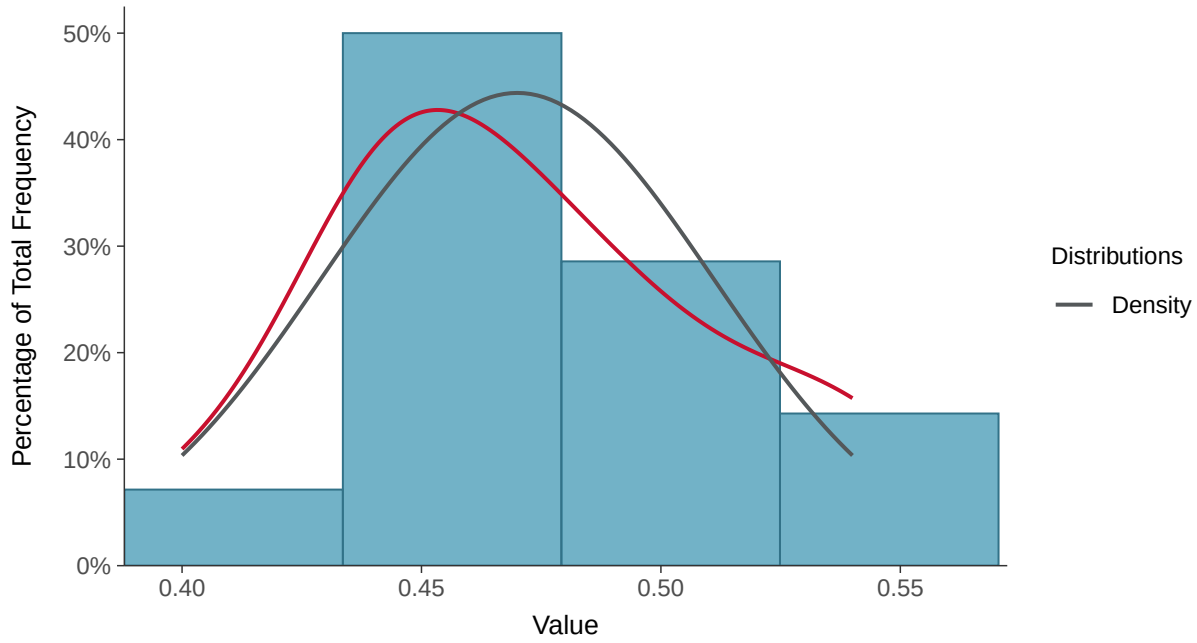
Scatter Plot

Fluoride, MW-10 (mg/L)



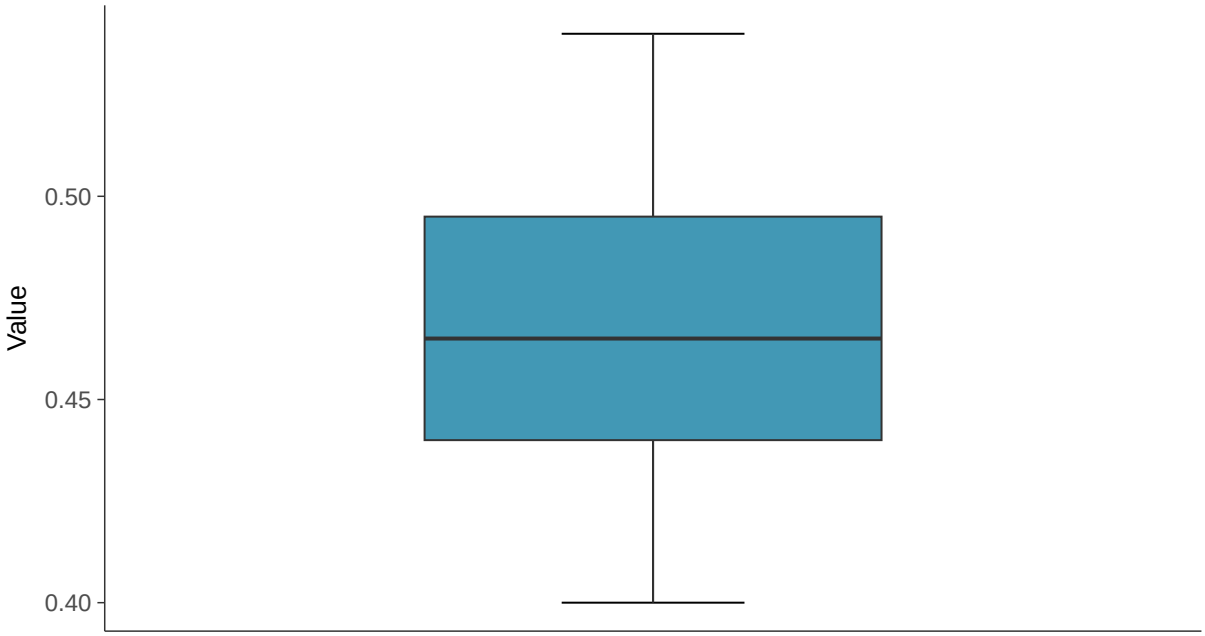
Histogram

Fluoride, MW-10 (mg/L)



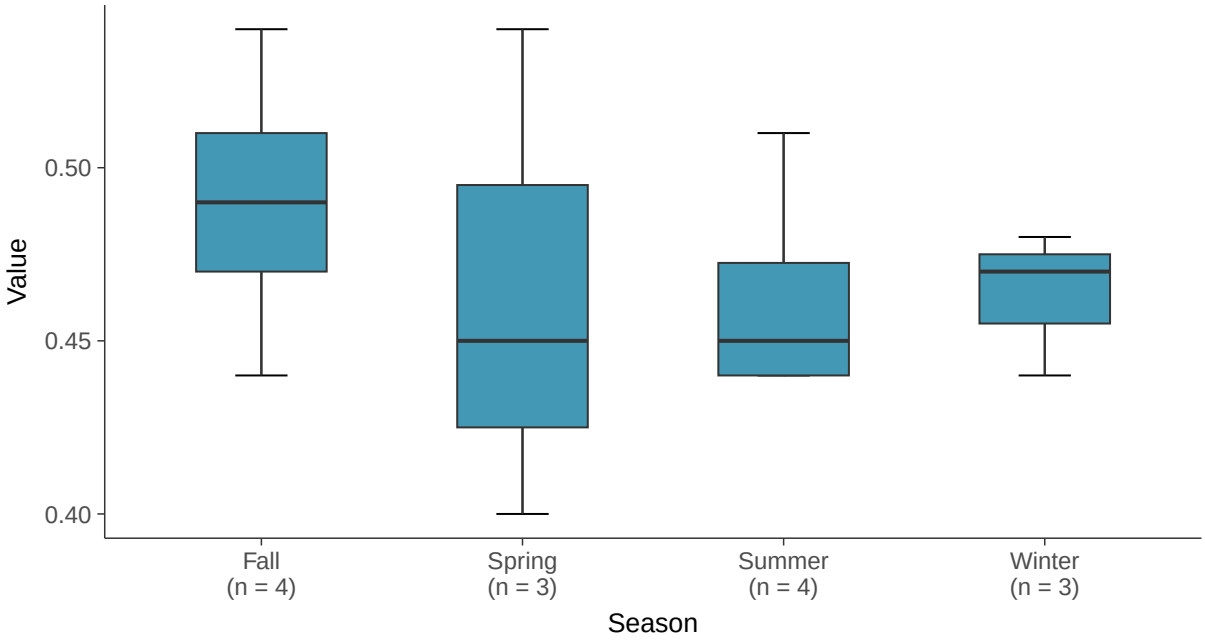
Boxplot

Fluoride, MW-10 (mg/L)



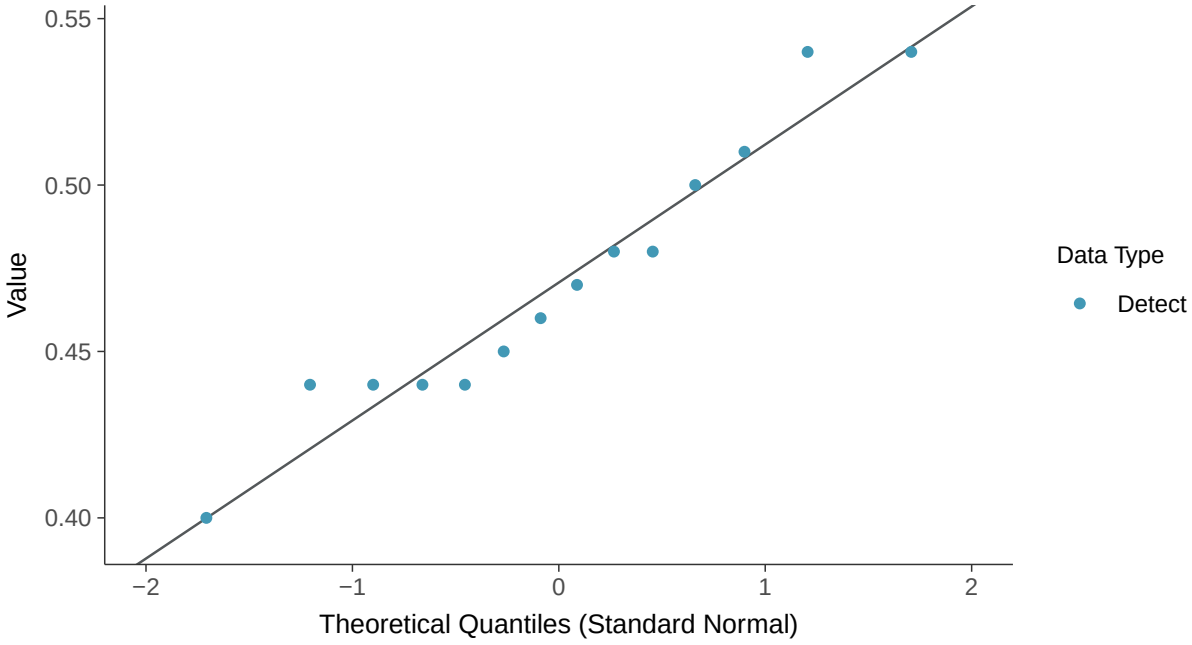
Boxplot by Season

Fluoride, MW-10 (mg/L)



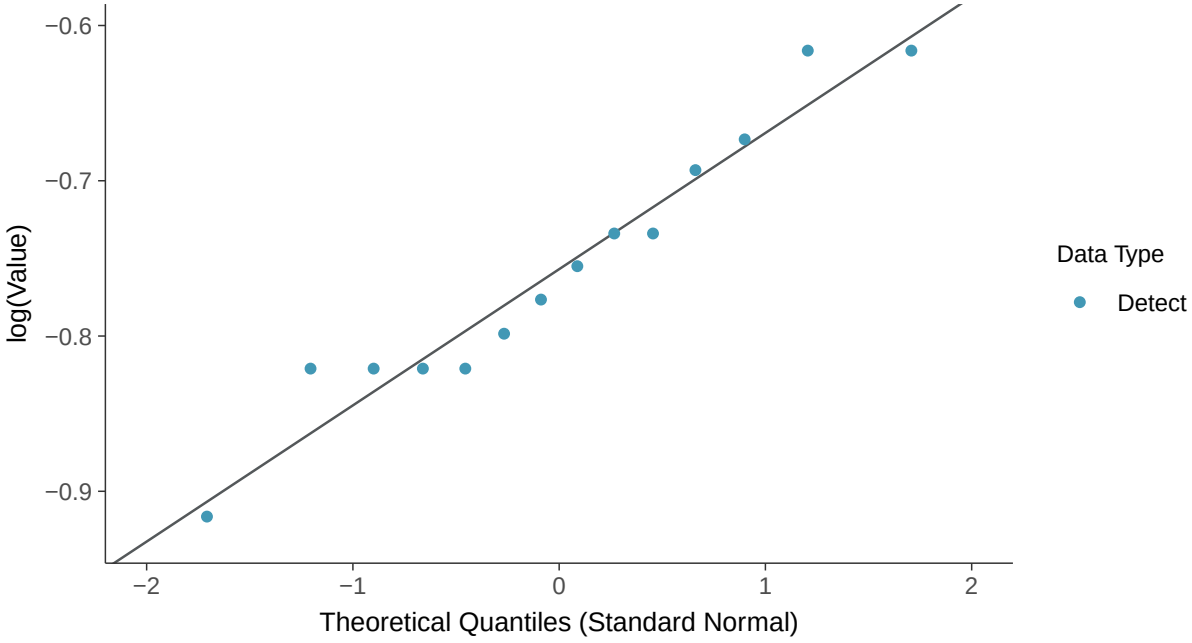
Normal Q-Q plot

Fluoride, MW-10 (mg/L)



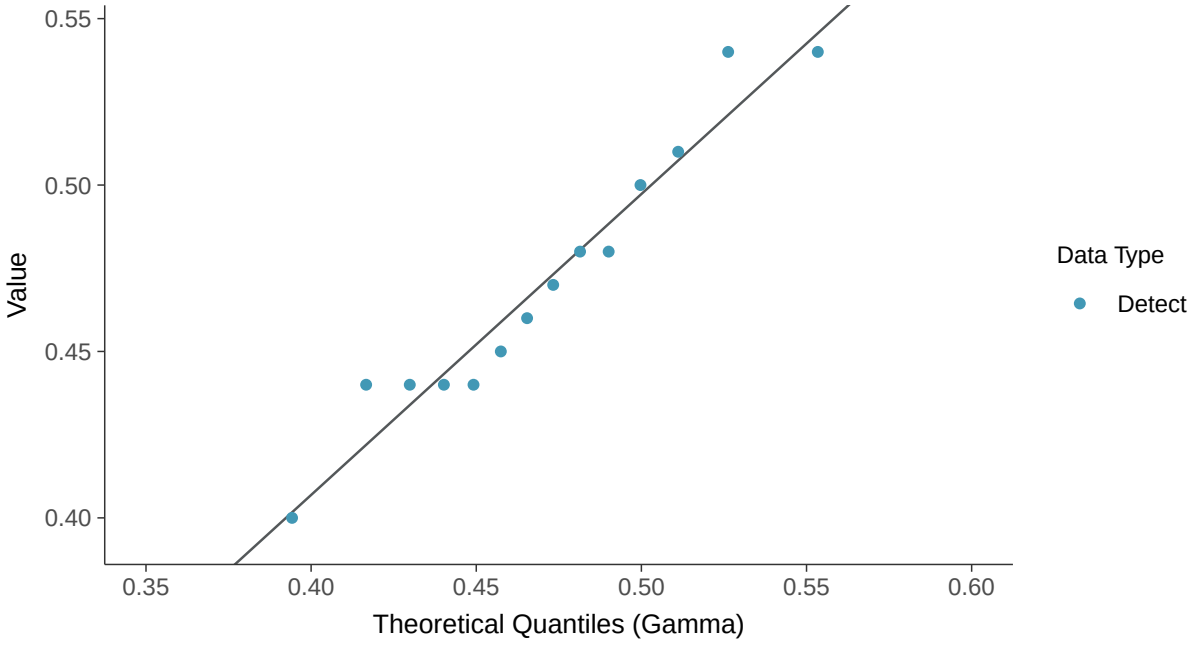
Lognormal Q-Q plot

Fluoride, MW-10 (mg/L)



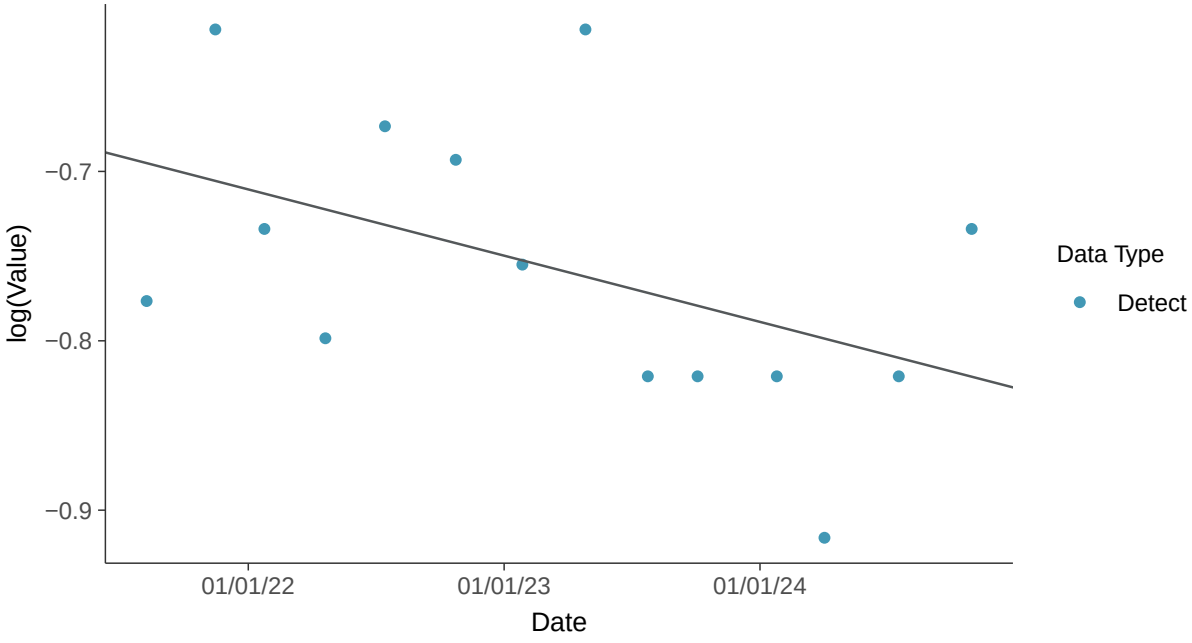
Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



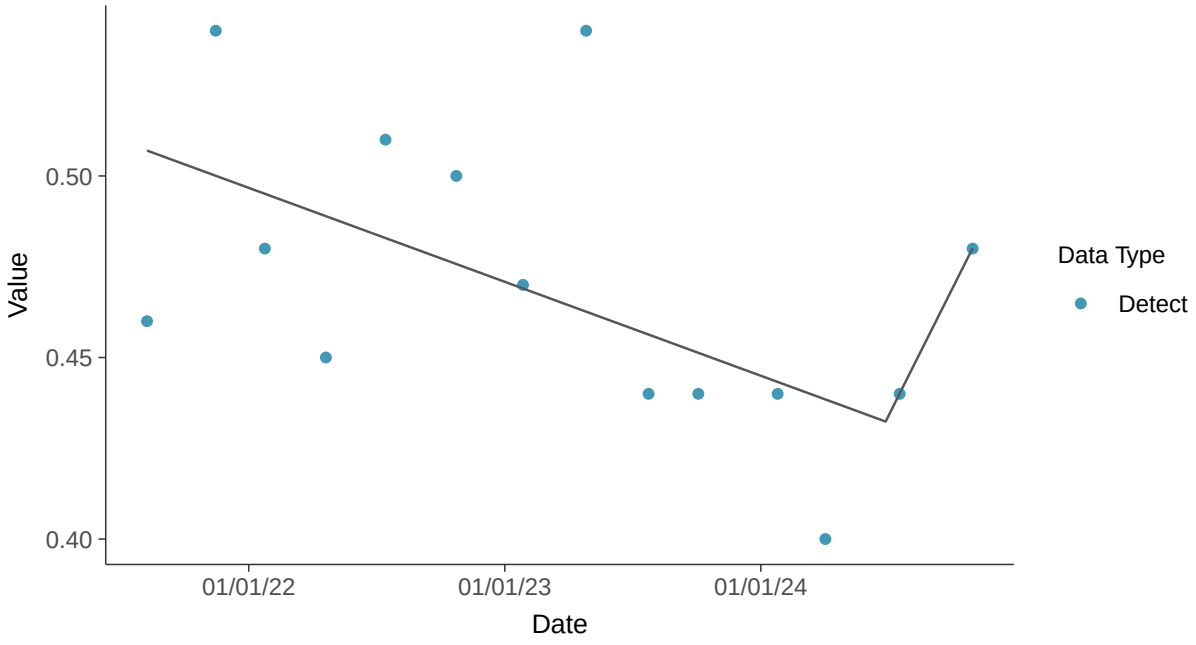
Trend Regression: Lognormal MLE

Fluoride, MW-10 (mg/L)



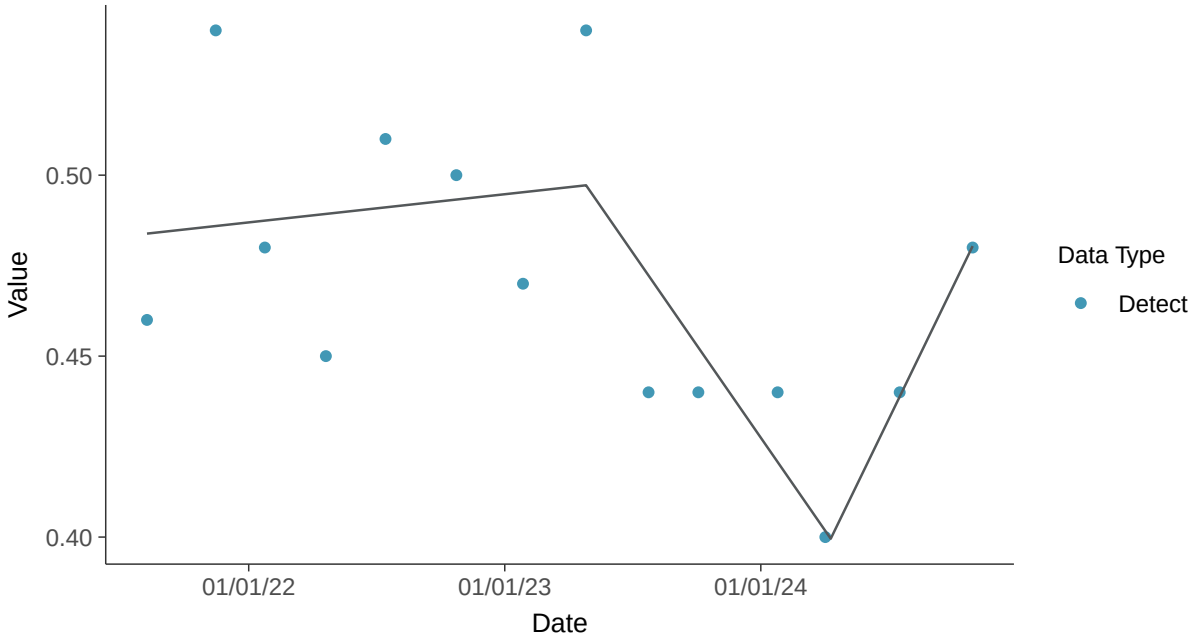
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-10 (mg/L)

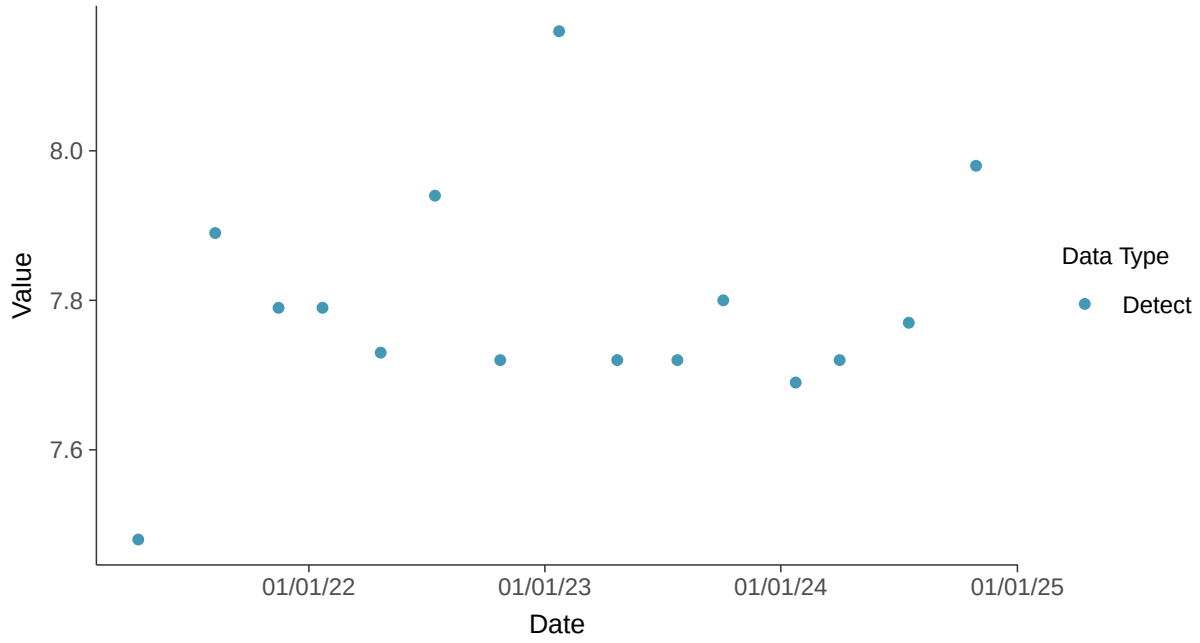


App. III: pH (Field), MW-10

ID: 09_02_118

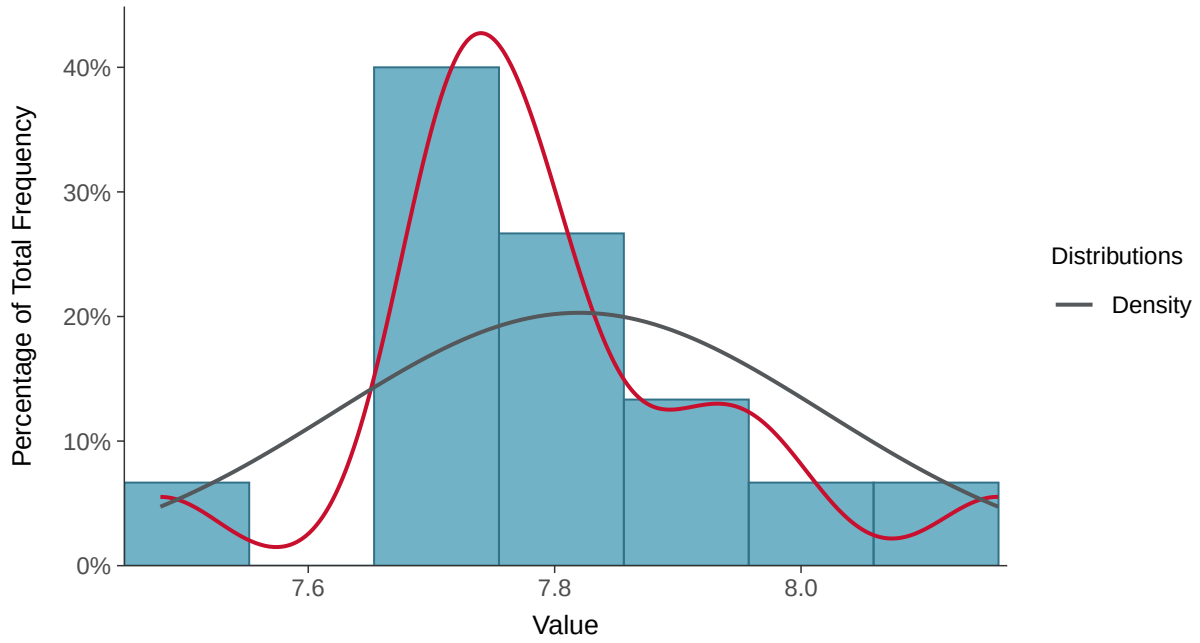
Scatter Plot

pH (Field), MW-10 (S.U.)



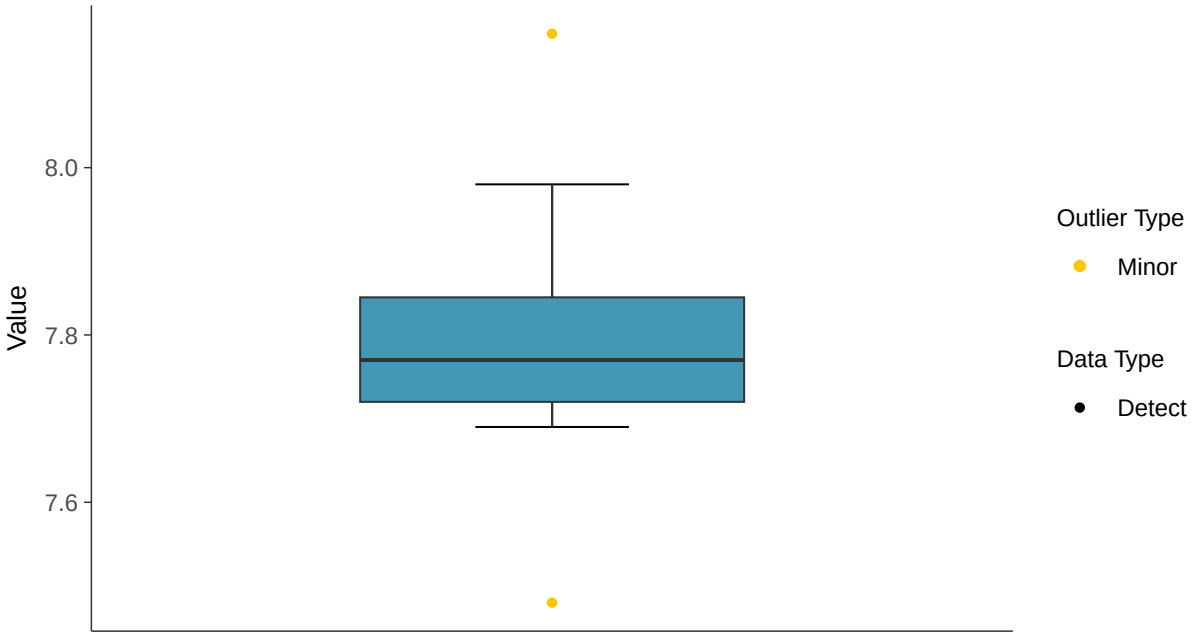
Histogram

pH (Field), MW-10 (S.U.)



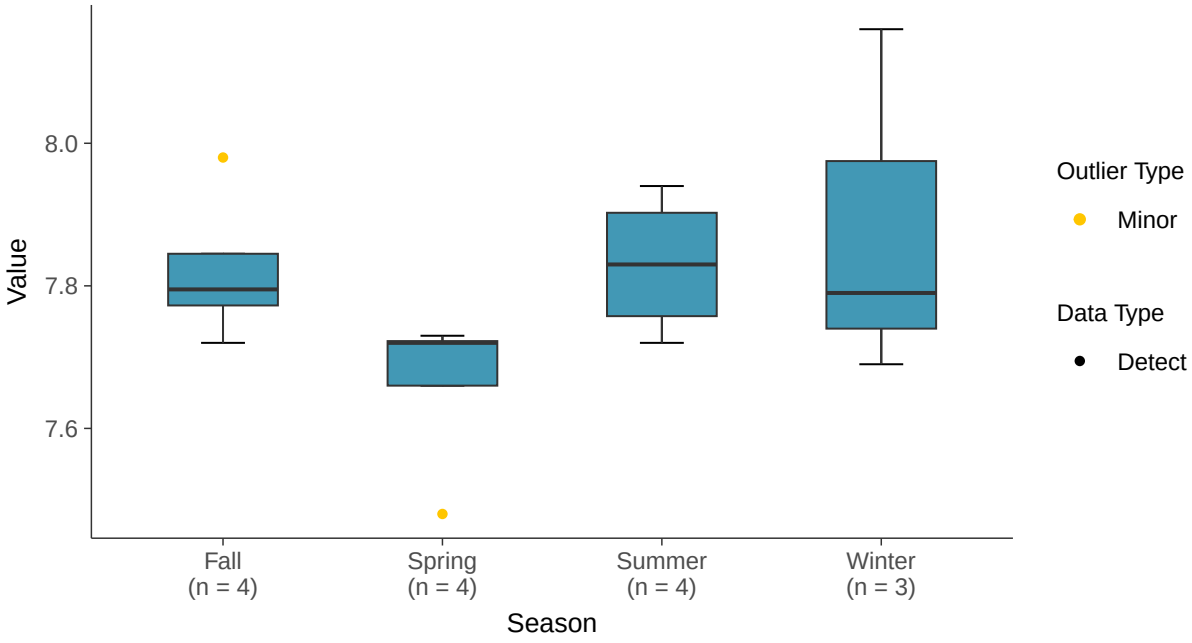
Boxplot

pH (Field), MW-10 (S.U.)



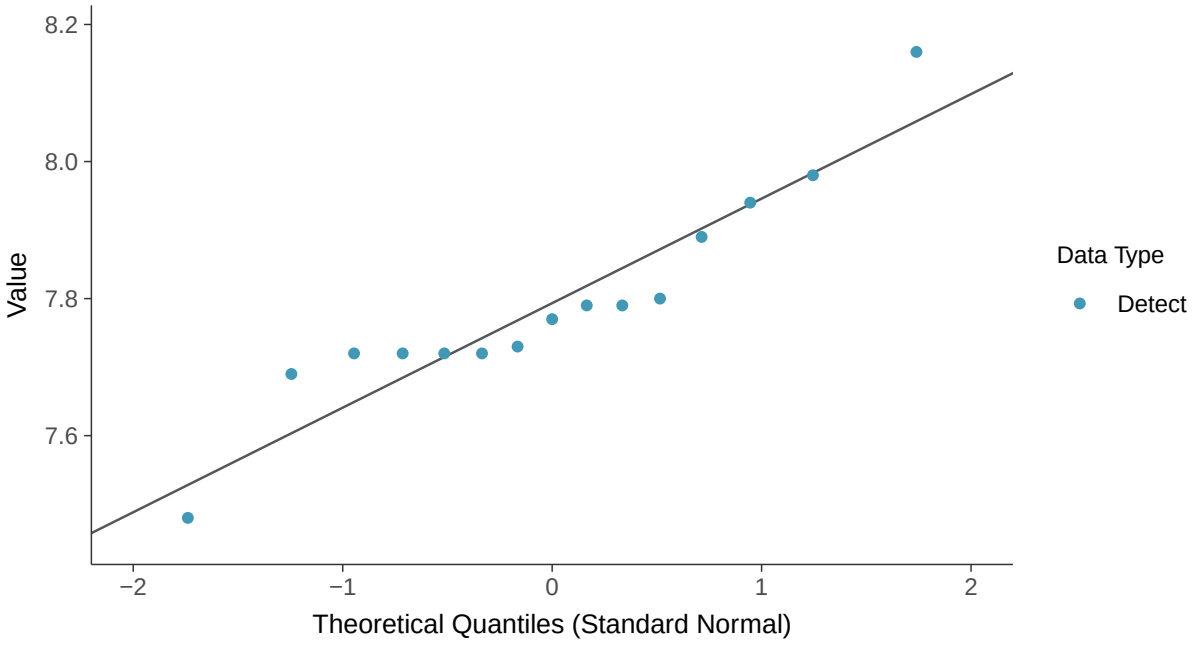
Boxplot by Season

pH (Field), MW-10 (S.U.)



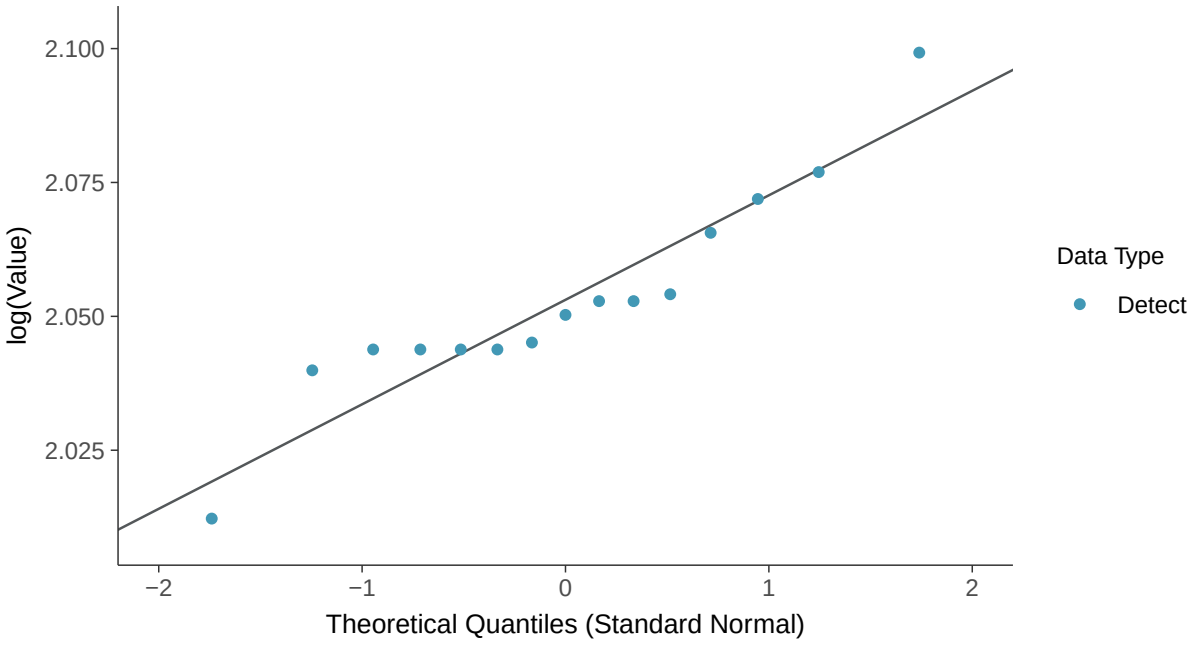
Normal Q-Q plot

pH (Field), MW-10 (S.U.)



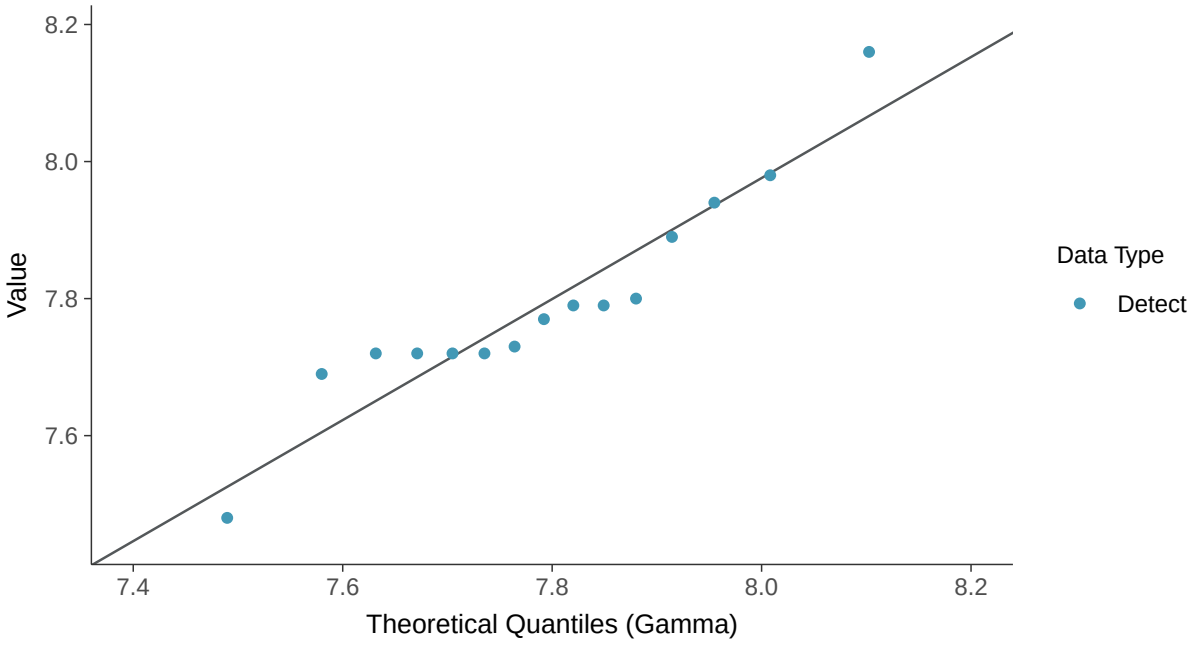
Lognormal Q-Q plot

pH (Field), MW-10 (S.U.)



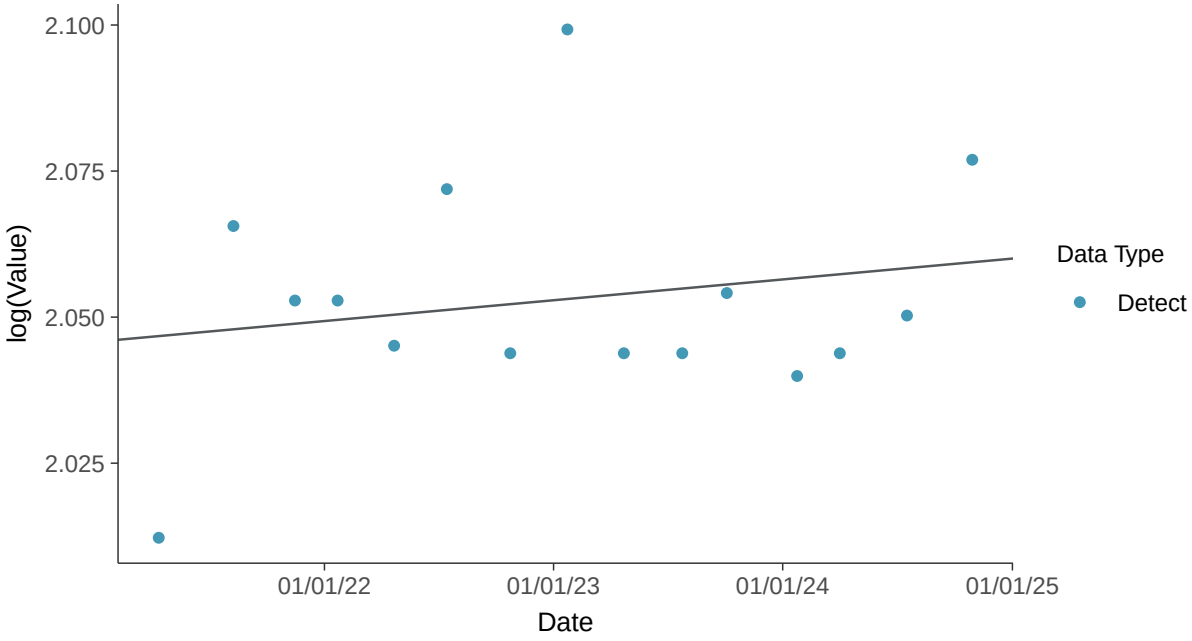
Gamma Q-Q plot

pH (Field), MW-10 (S.U.)



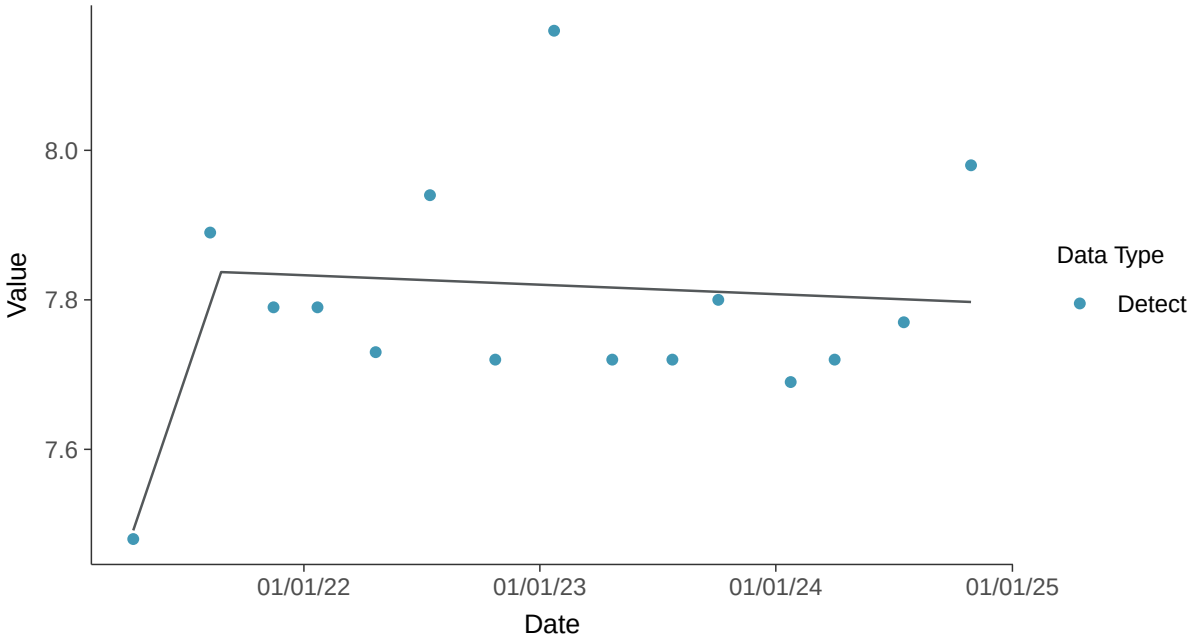
Trend Regression: Lognormal MLE

pH (Field), MW-10 (S.U.)



Trend Regression: Piecewise Linear-Linear

pH (Field), MW-10 (S.U.)

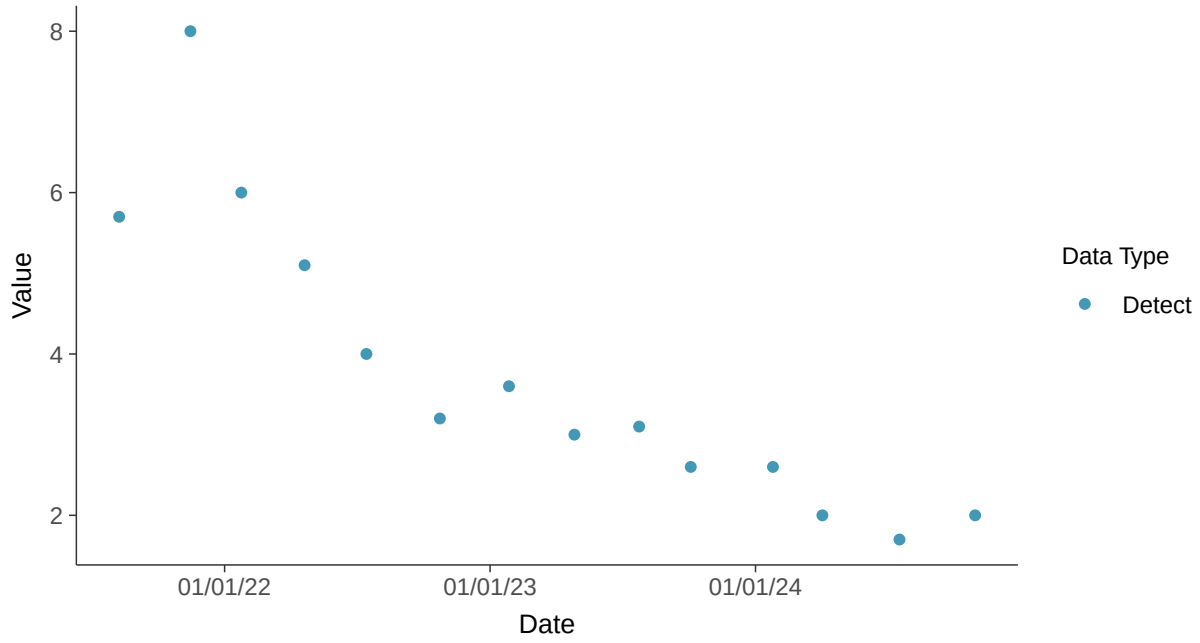


App. III: Sulfate, MW-10

ID: 09_02_123

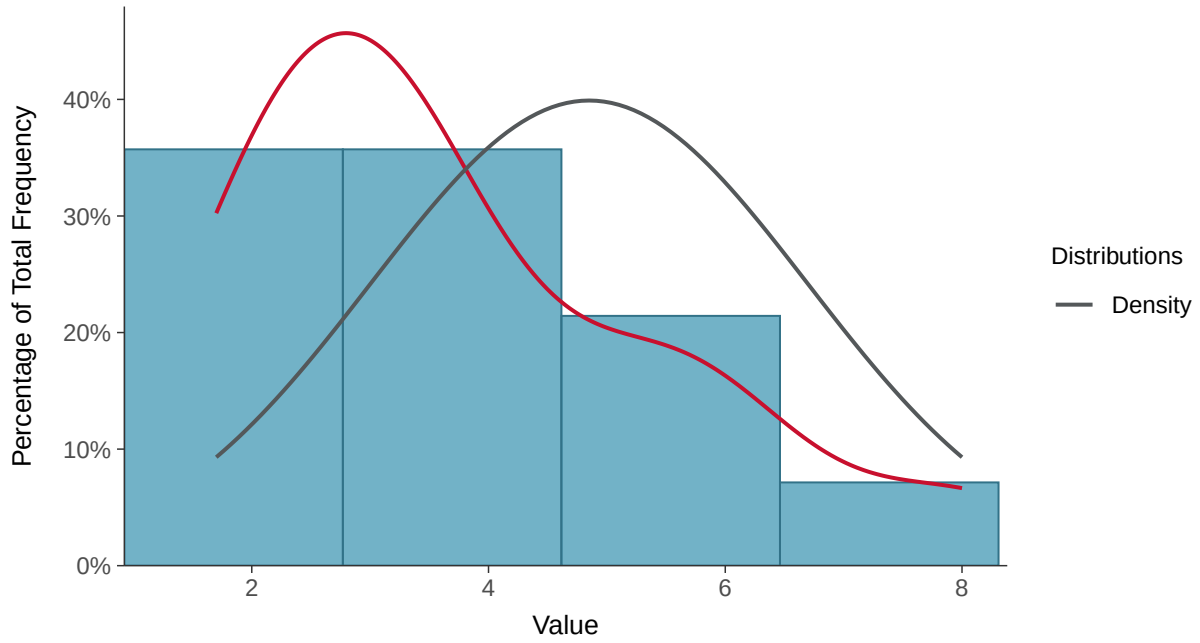
Scatter Plot

Sulfate, MW-10 (mg/L)



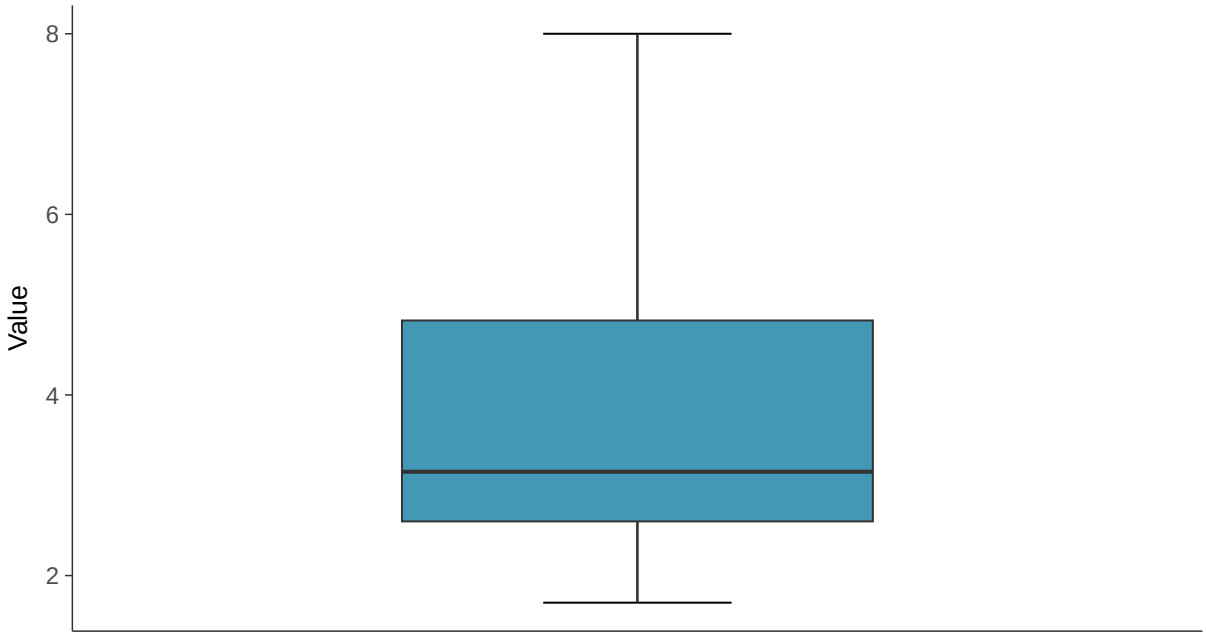
Histogram

Sulfate, MW-10 (mg/L)



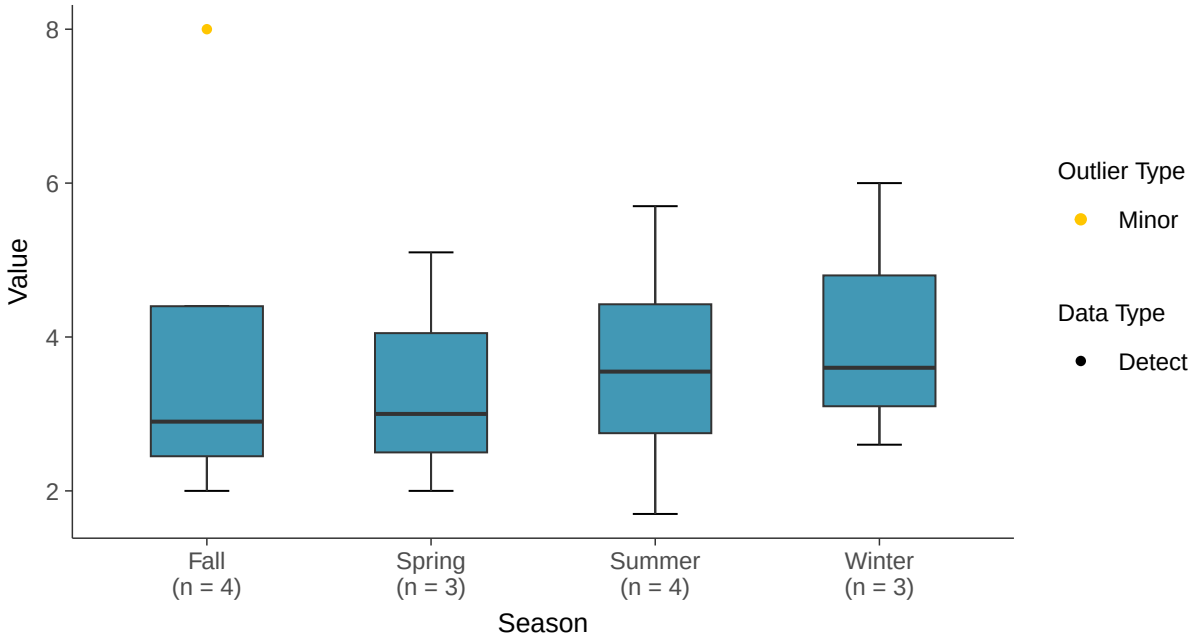
Boxplot

Sulfate, MW-10 (mg/L)



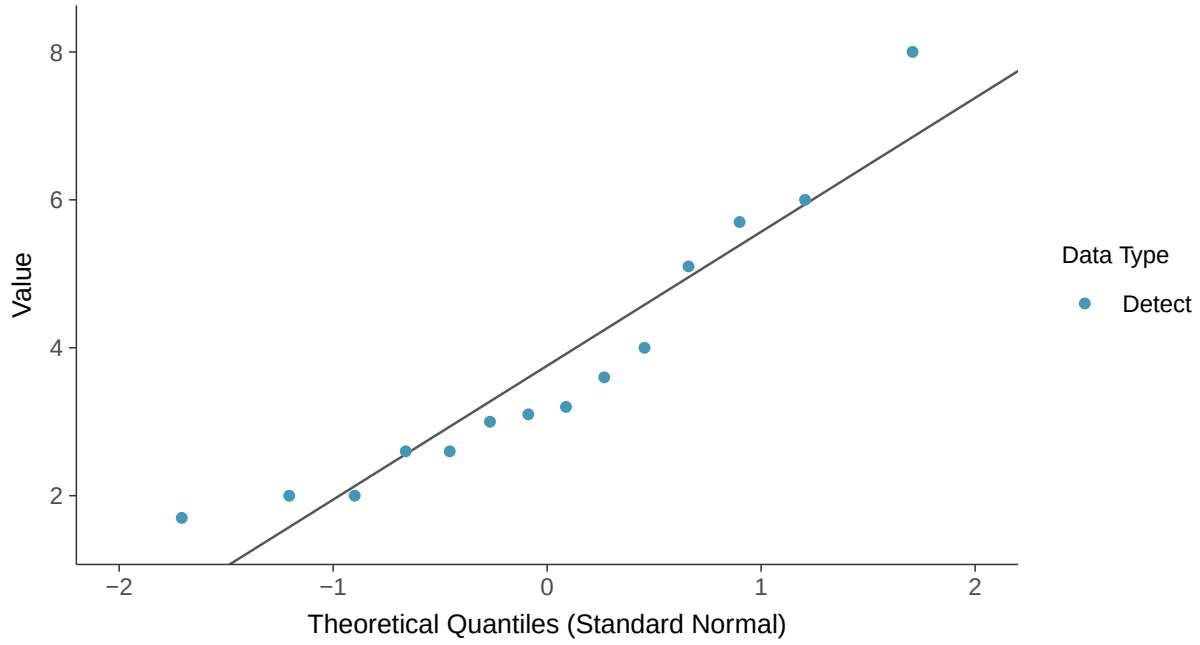
Boxplot by Season

Sulfate, MW-10 (mg/L)



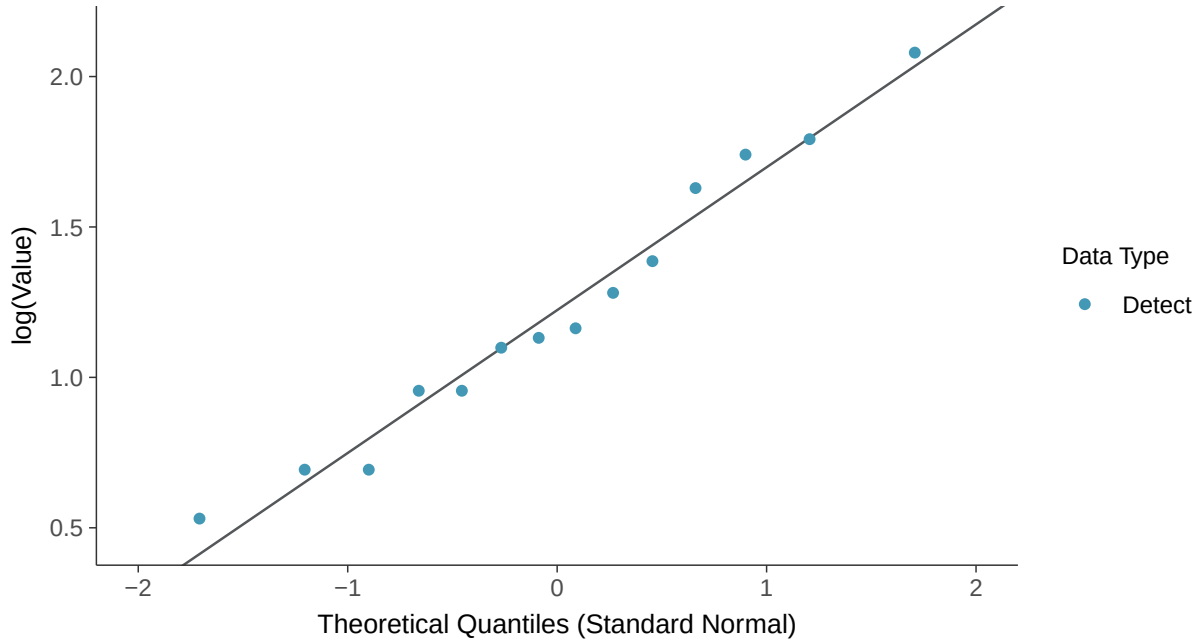
Normal Q-Q plot

Sulfate, MW-10 (mg/L)



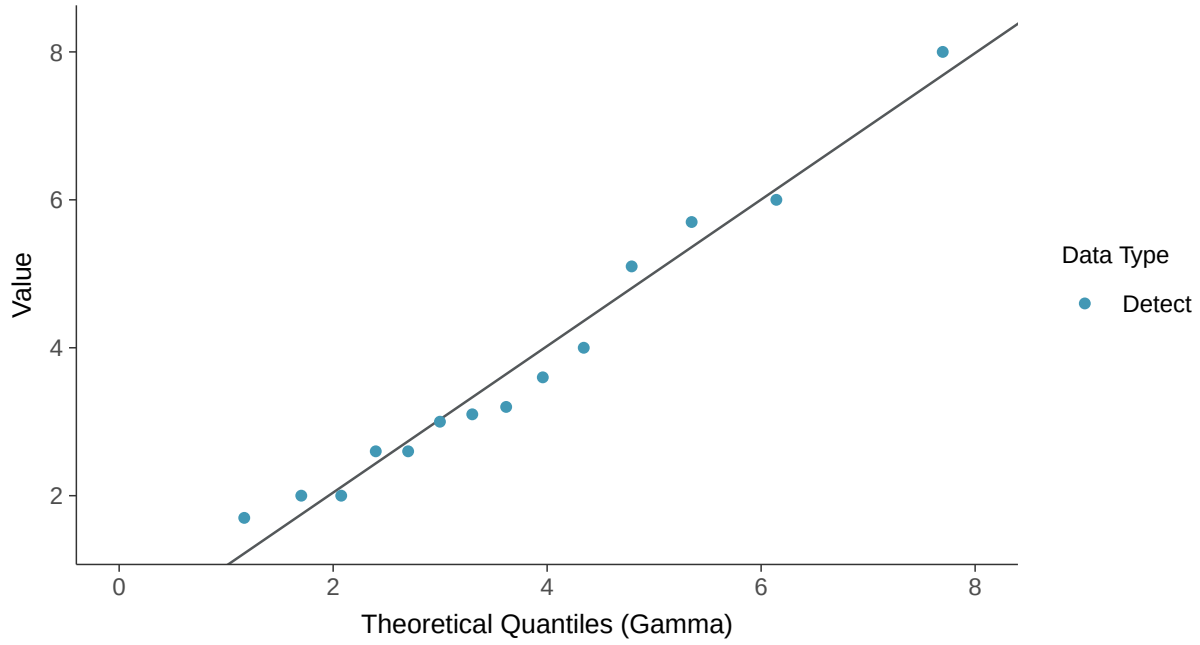
Lognormal Q-Q plot

Sulfate, MW-10 (mg/L)



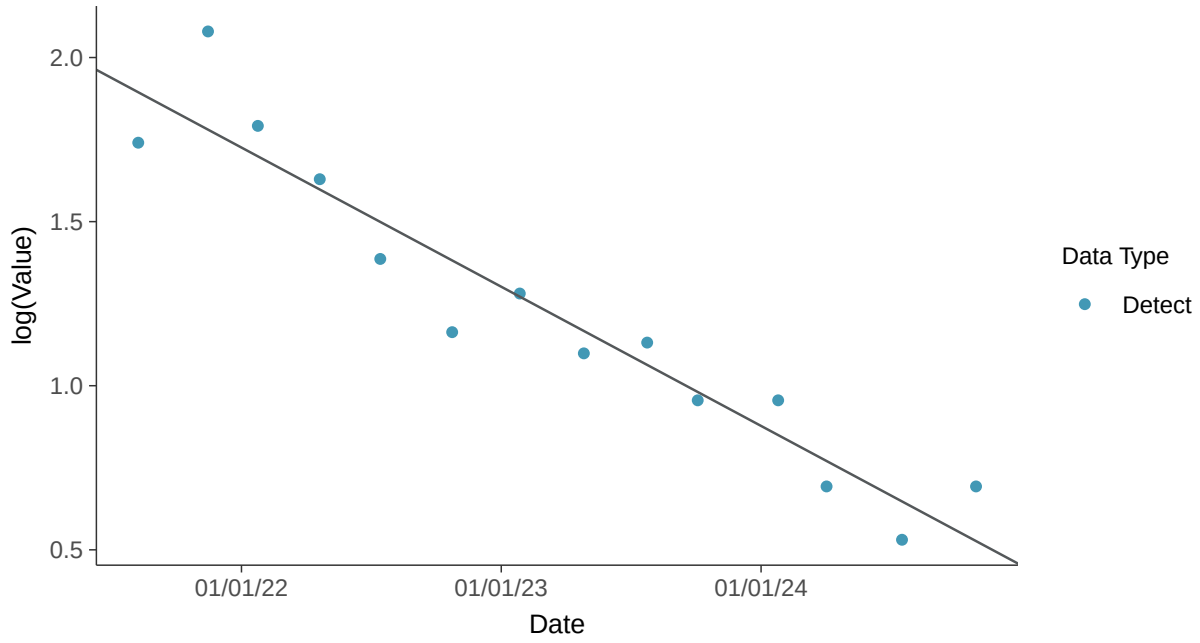
Gamma Q-Q plot

Sulfate, MW-10 (mg/L)



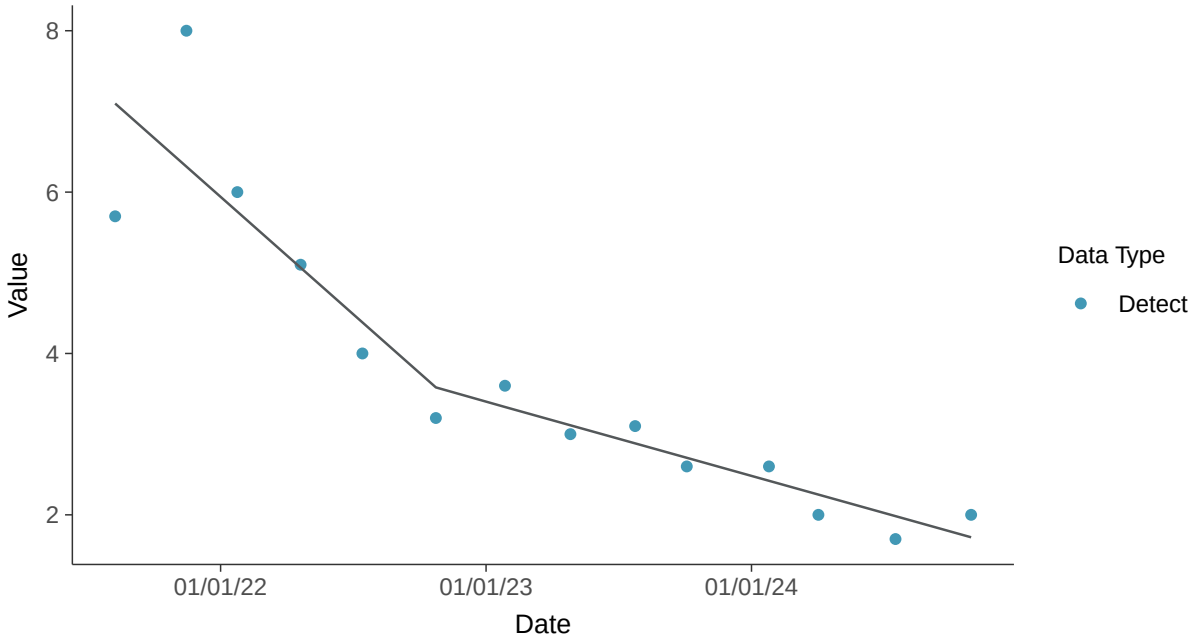
Trend Regression: Lognormal MLE

Sulfate, MW-10 (mg/L)



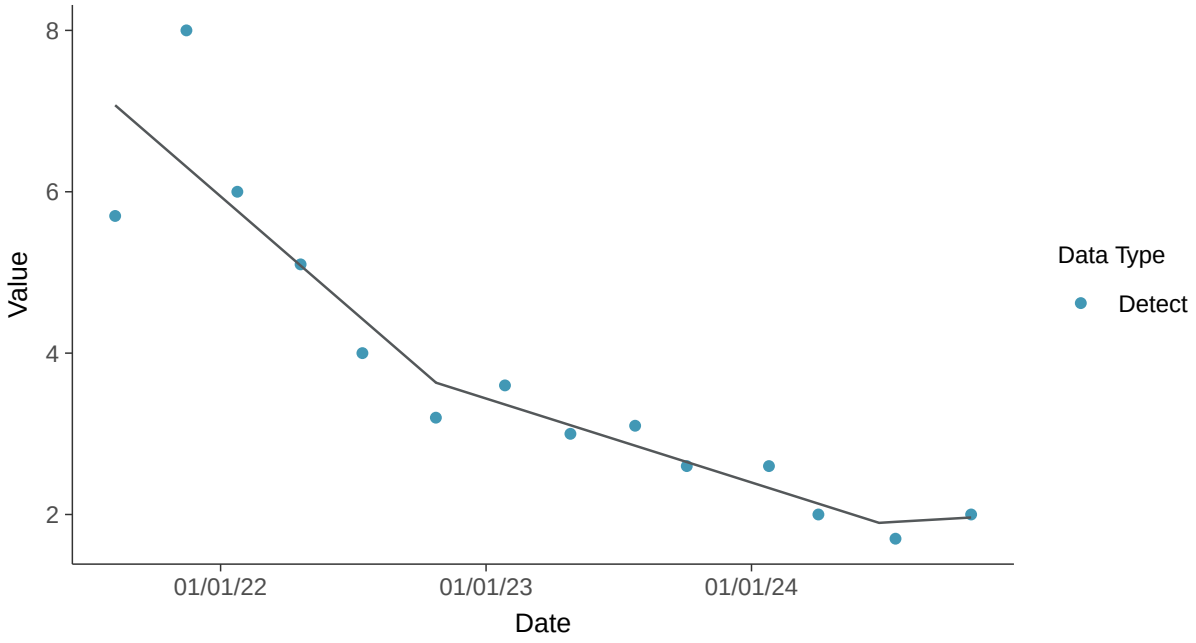
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-10 (mg/L)

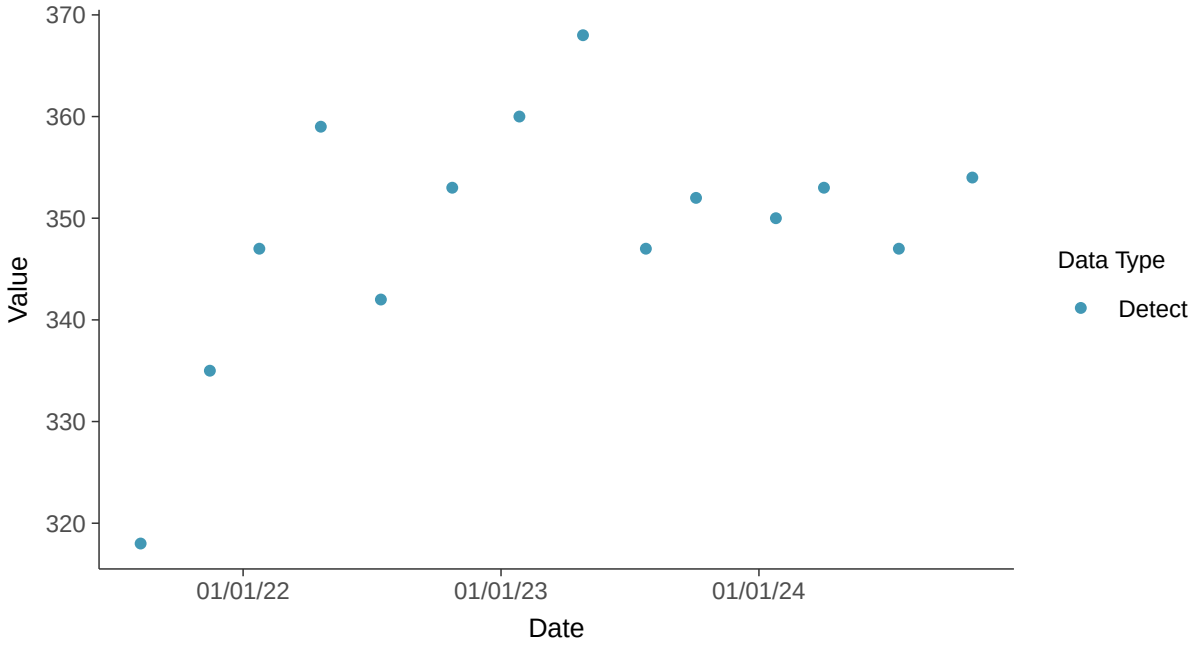


App. III: Total Dissolved Solids, MW-10

ID: 09_02_125

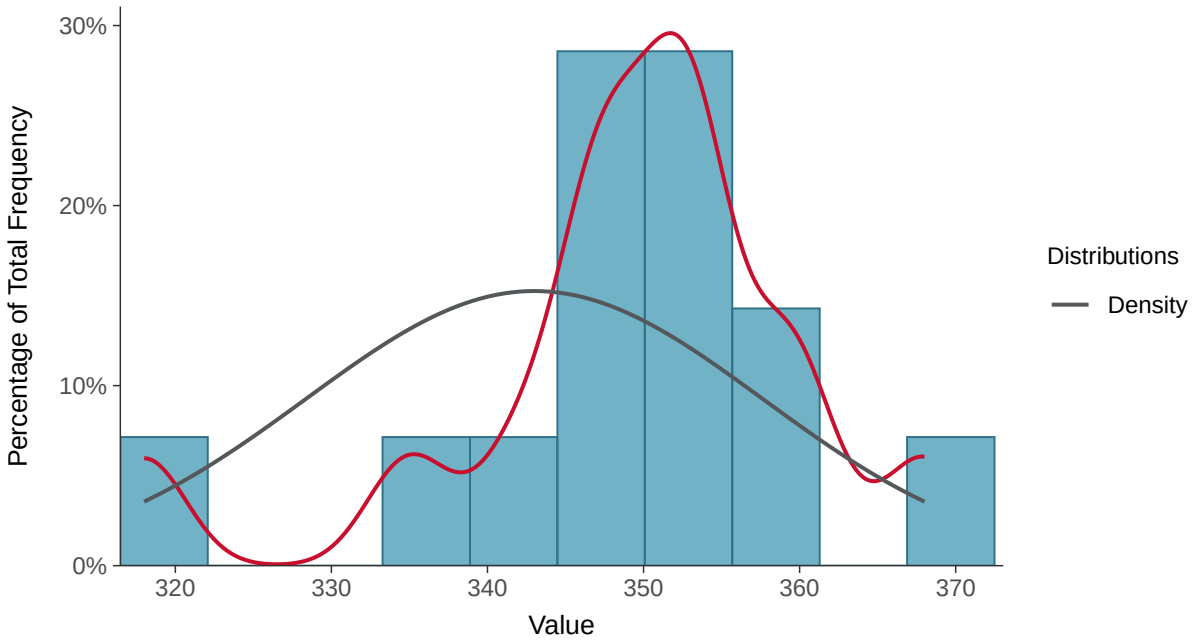
Scatter Plot

Total Dissolved Solids, MW-10 (mg/L)



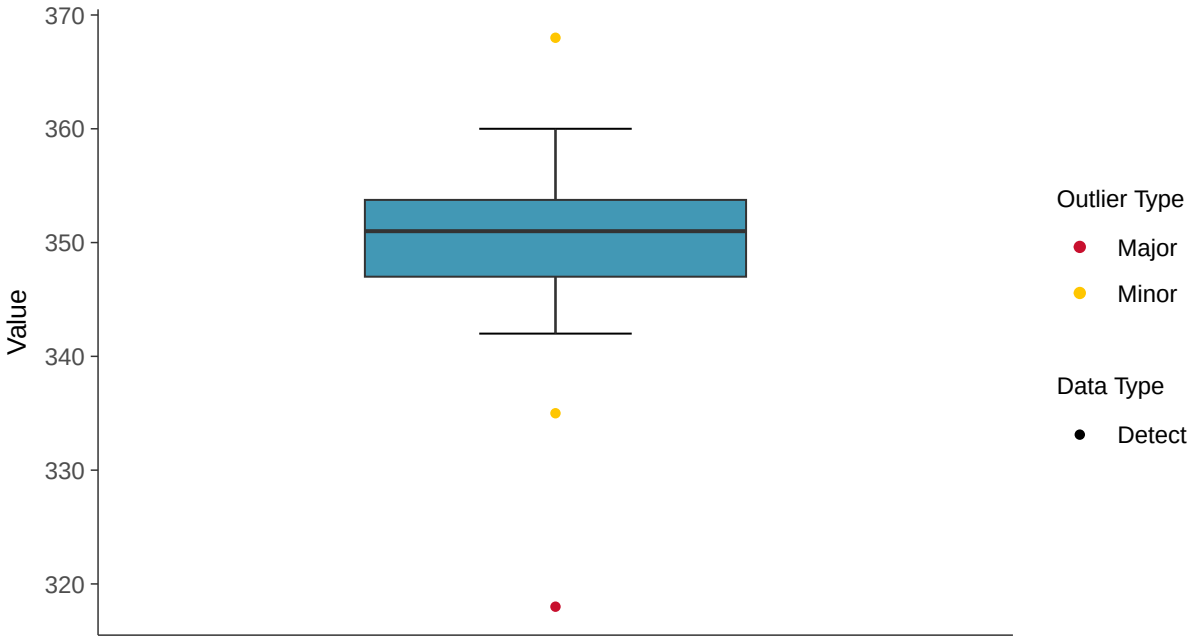
Histogram

Total Dissolved Solids, MW-10 (mg/L)



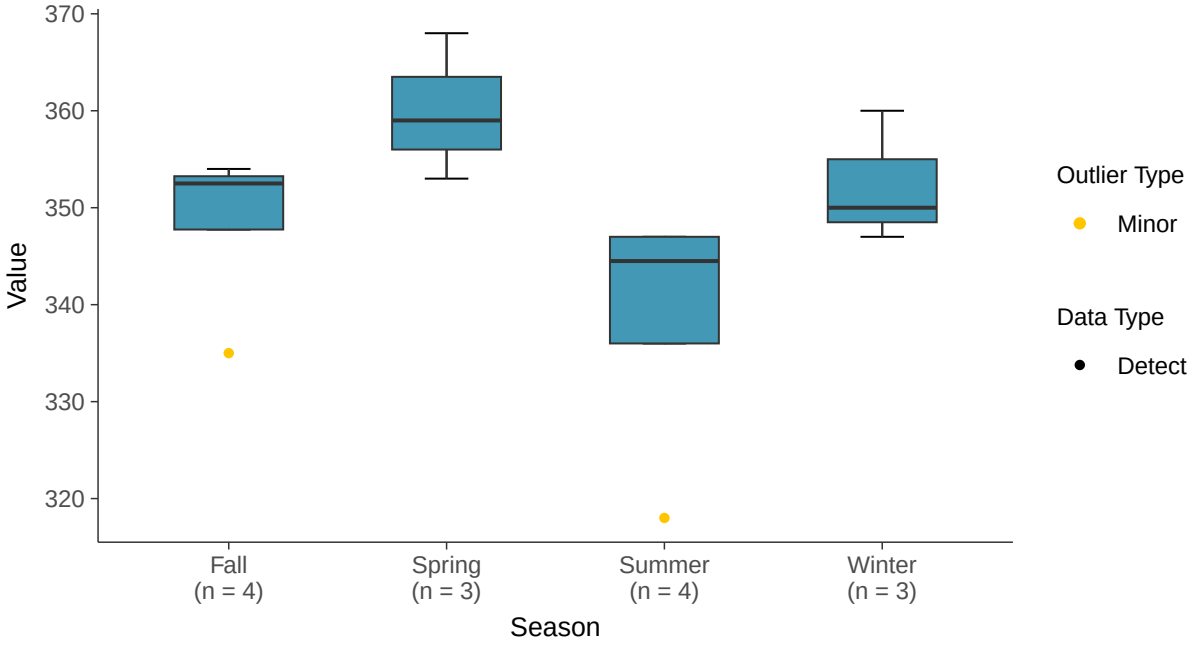
Boxplot

Total Dissolved Solids, MW-10 (mg/L)



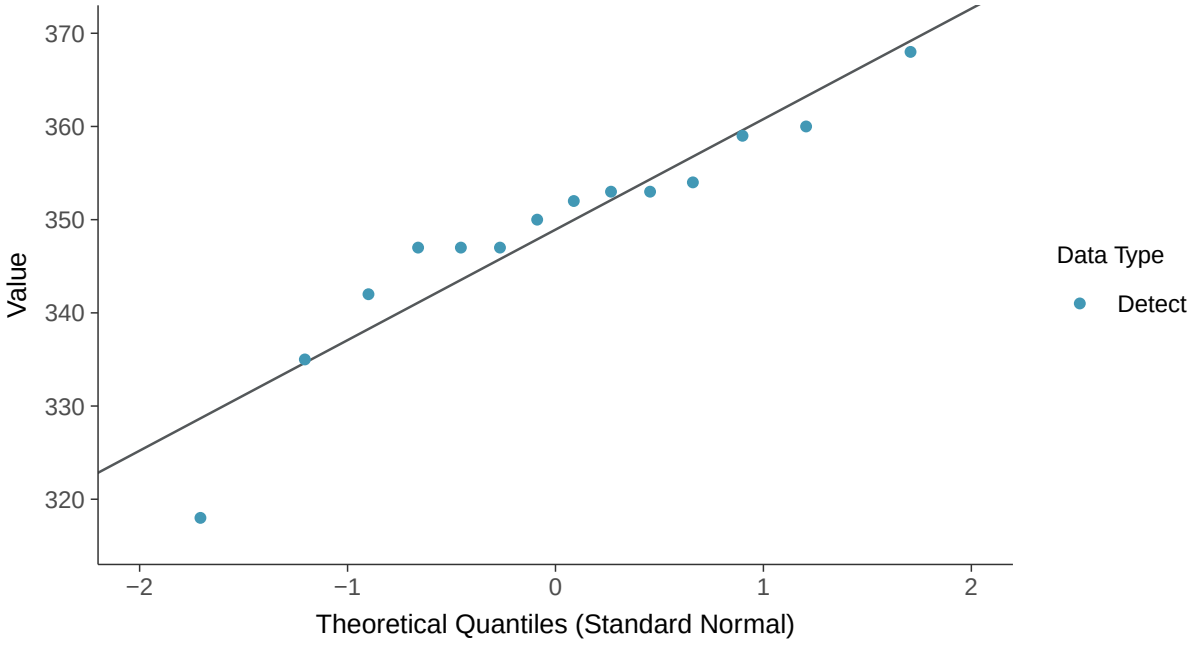
Boxplot by Season

Total Dissolved Solids, MW-10 (mg/L)



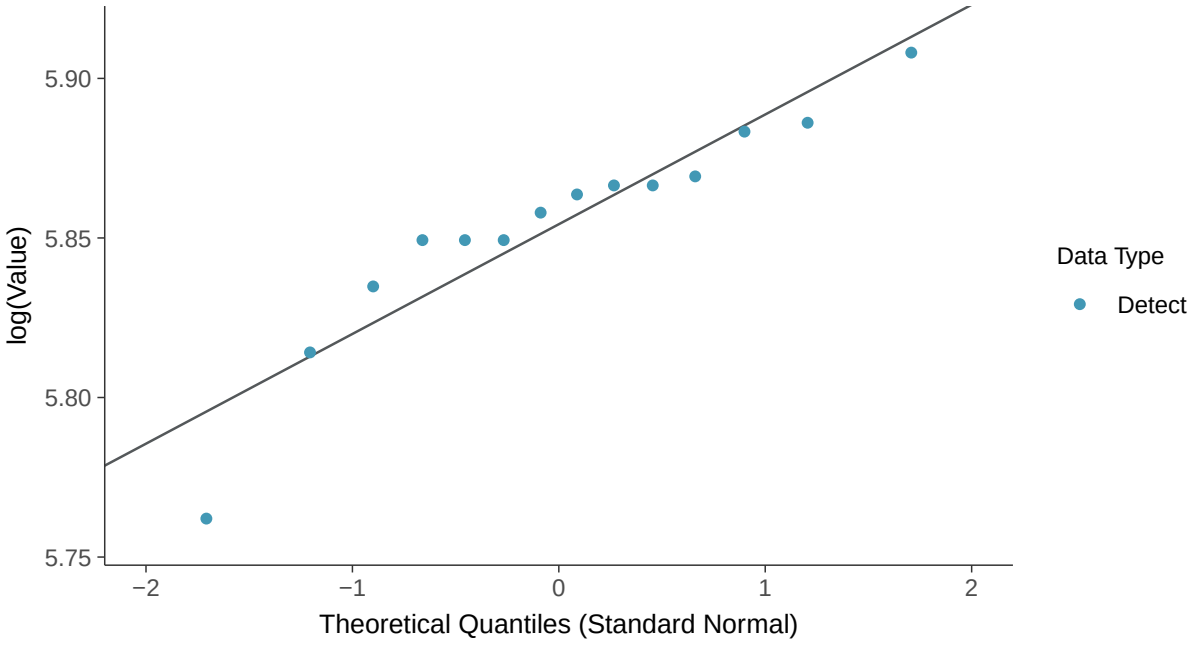
Normal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



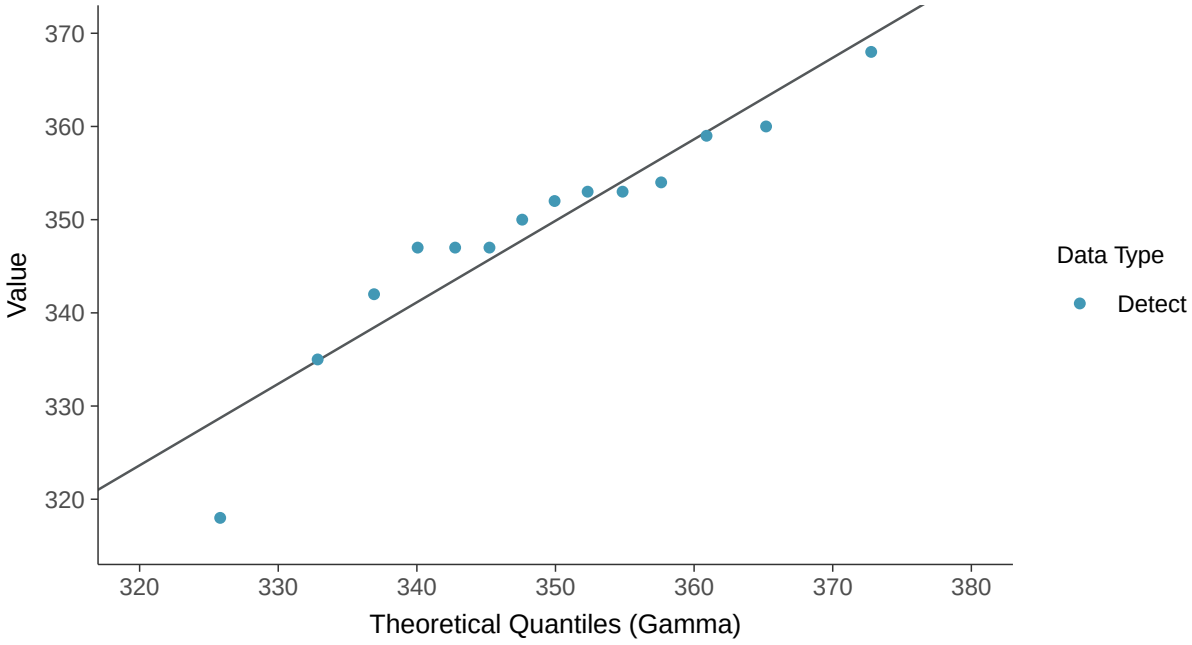
Lognormal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



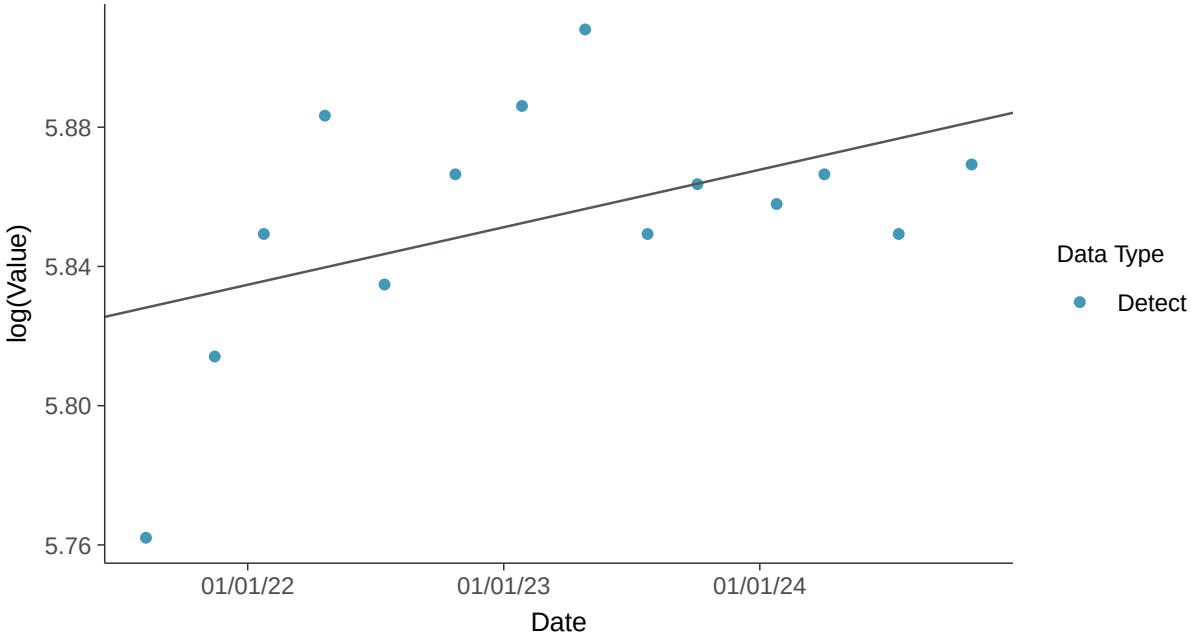
Gamma Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



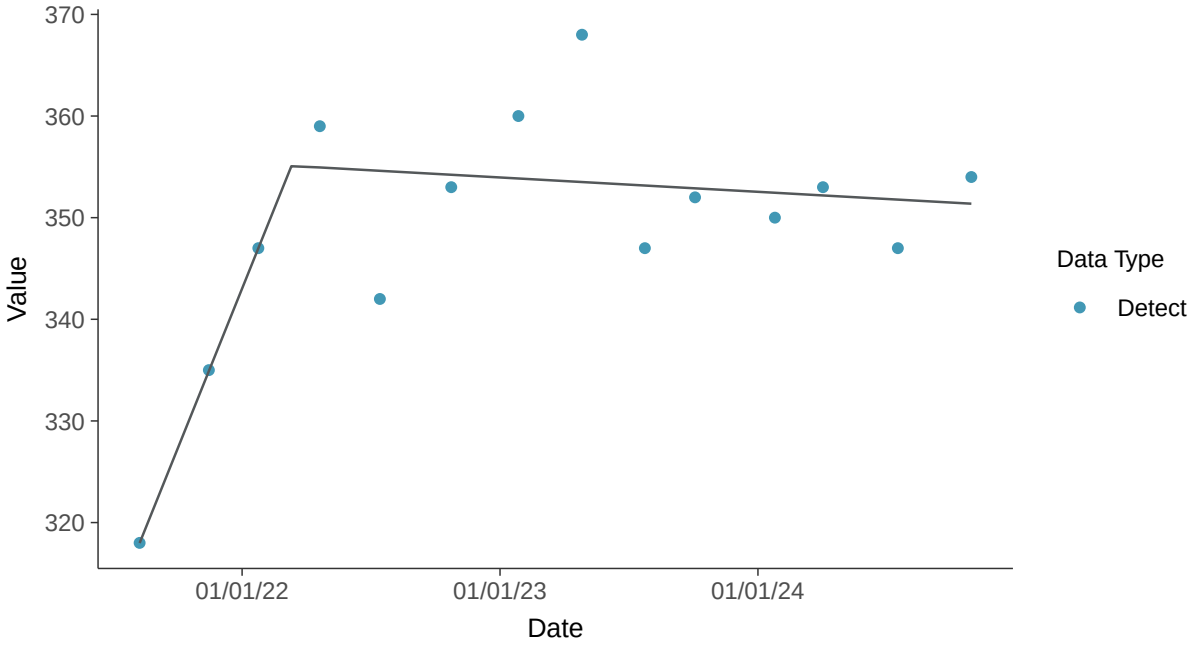
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-10 (mg/L)



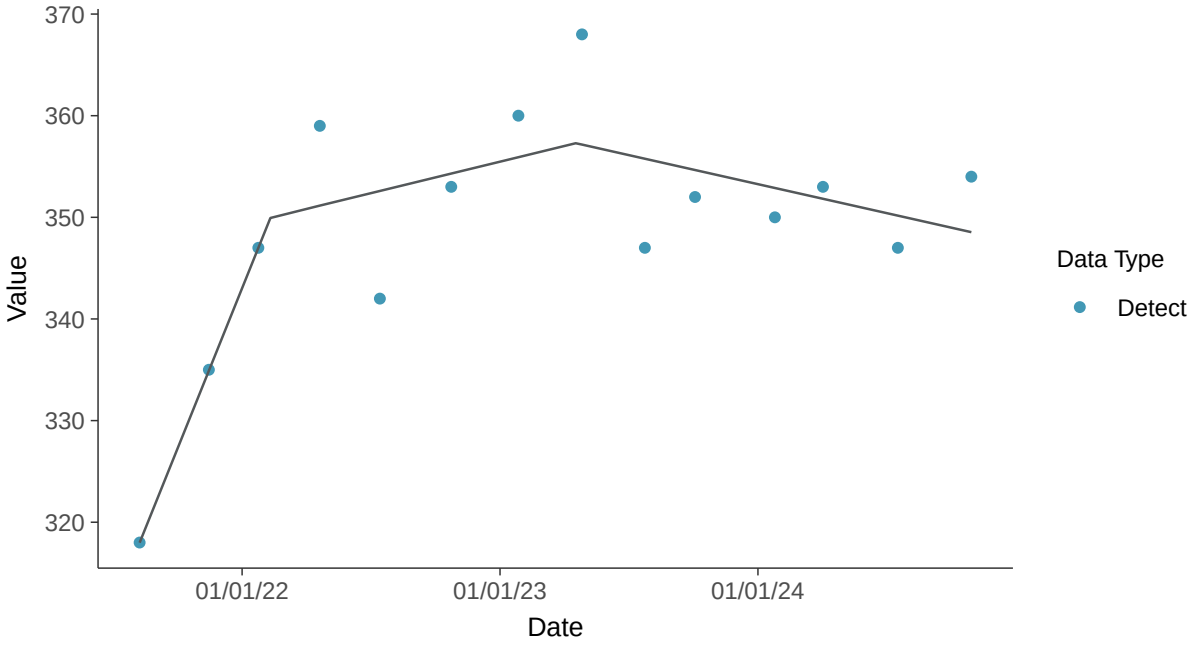
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-10 (mg/L)

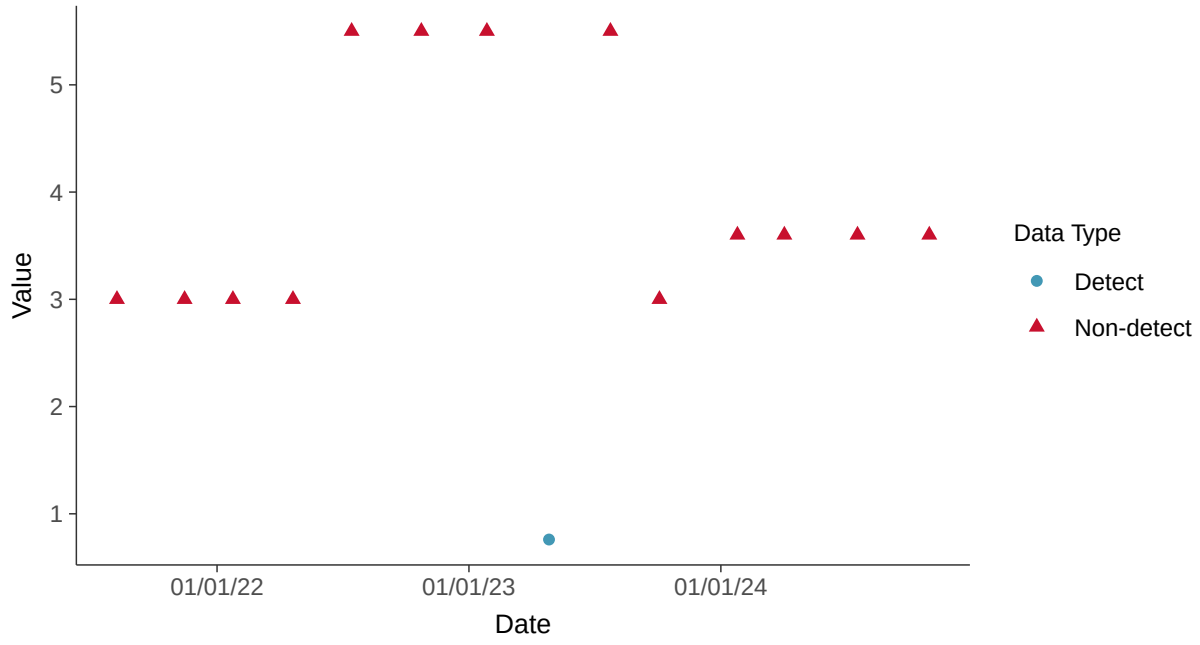


App. IV: Antimony, MW-10

ID: 09_03_101

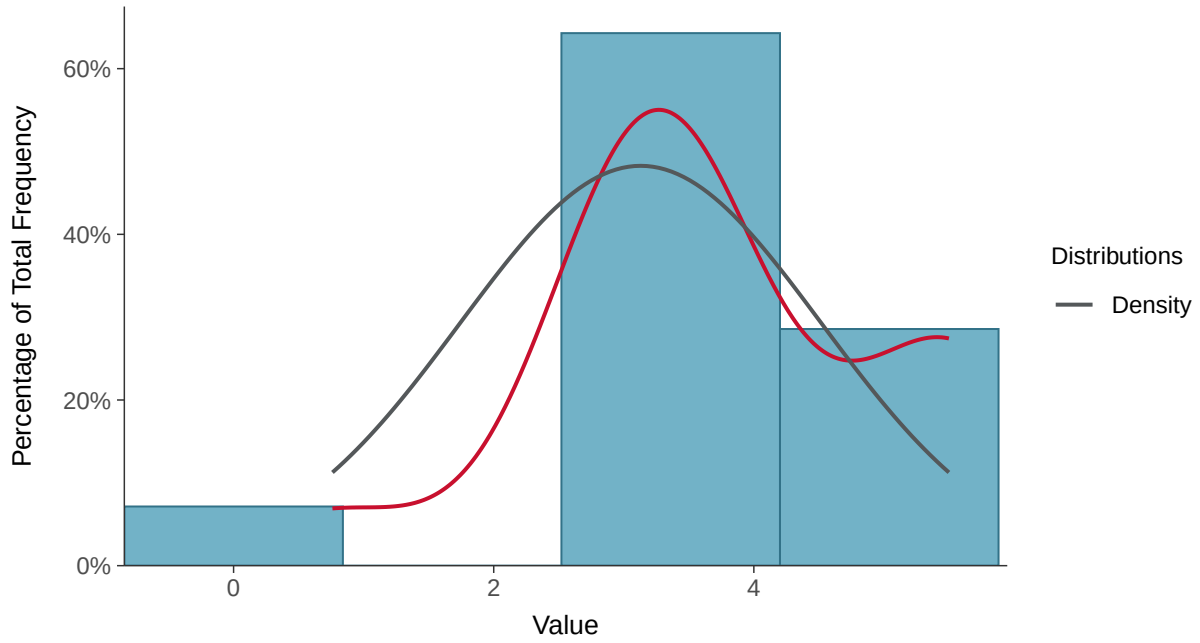
Scatter Plot

Antimony, MW-10 (ug/L)



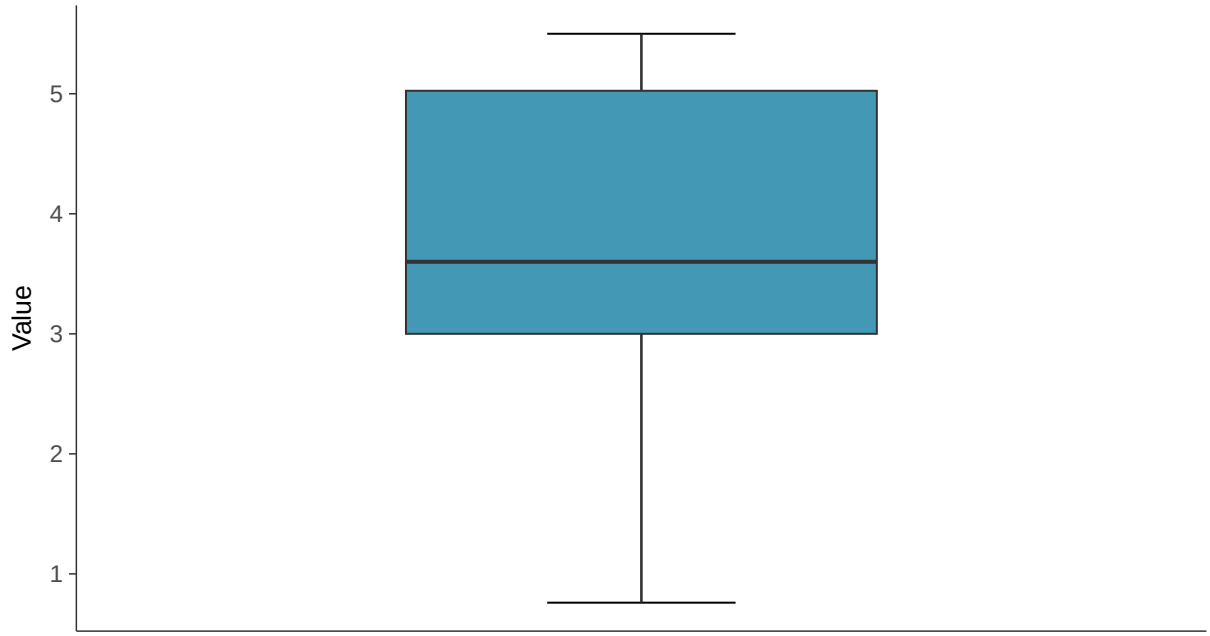
Histogram

Antimony, MW-10 (ug/L)



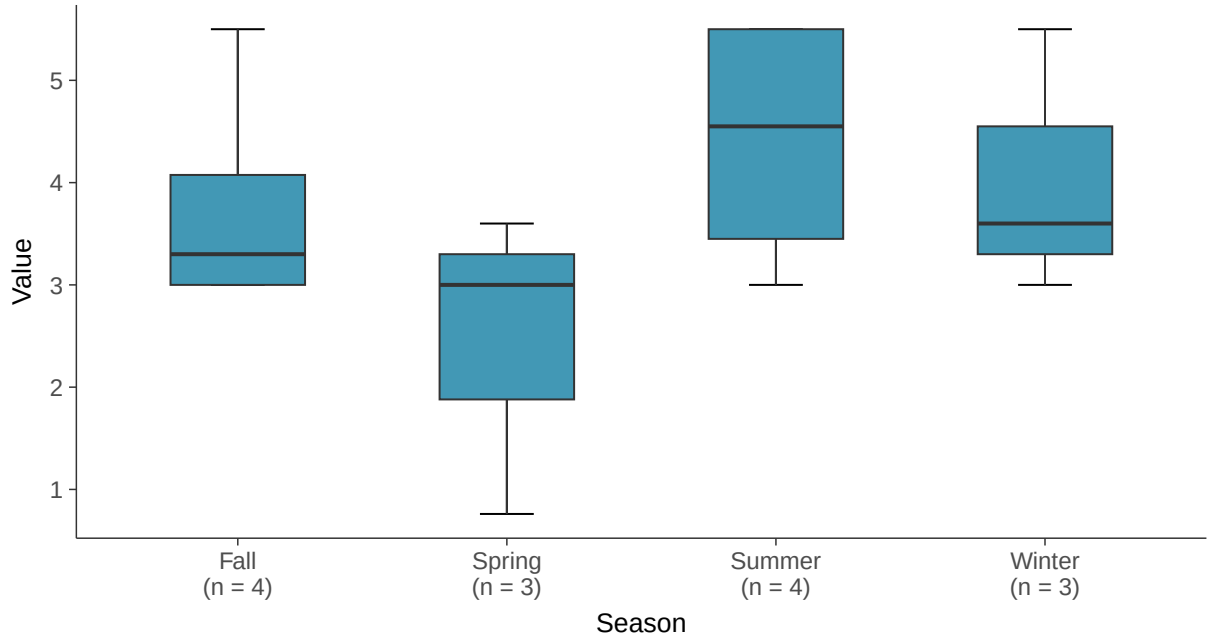
Boxplot

Antimony, MW-10 (ug/L)



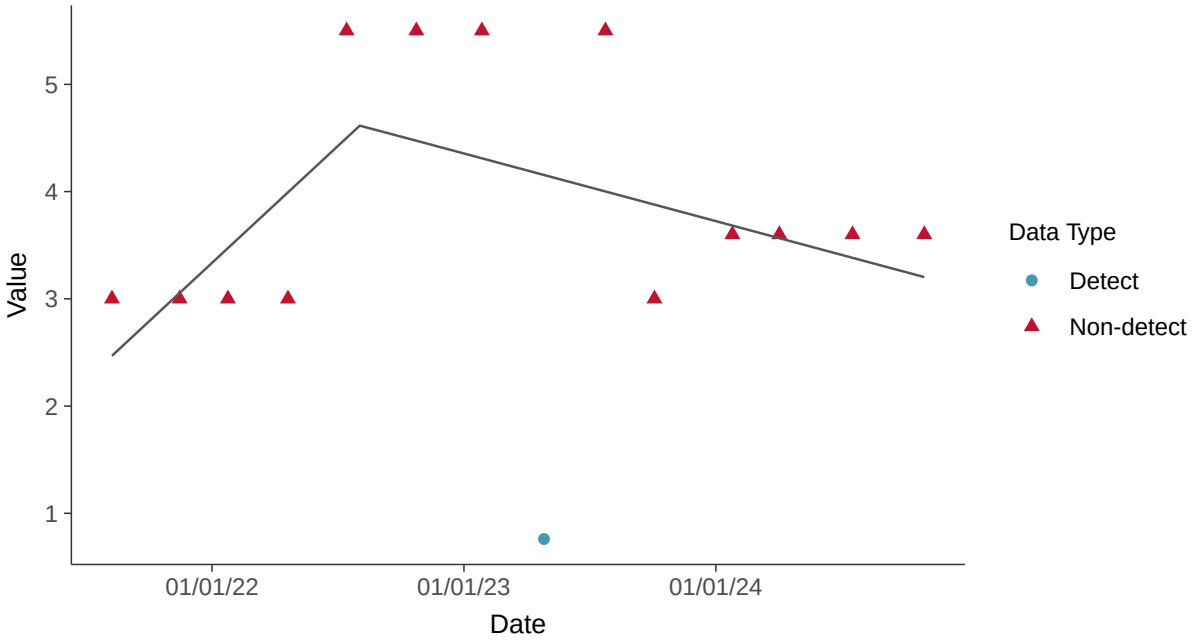
Boxplot by Season

Antimony, MW-10 (ug/L)



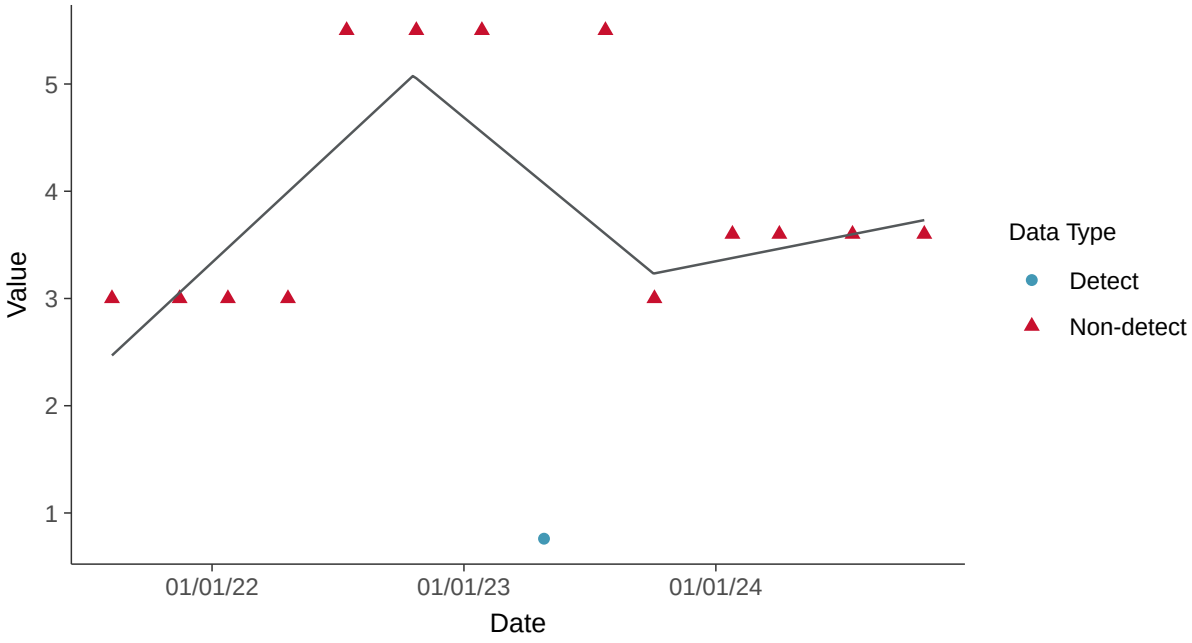
Trend Regression: Piecewise Linear-Linear

Antimony, MW-10 (ug/L)



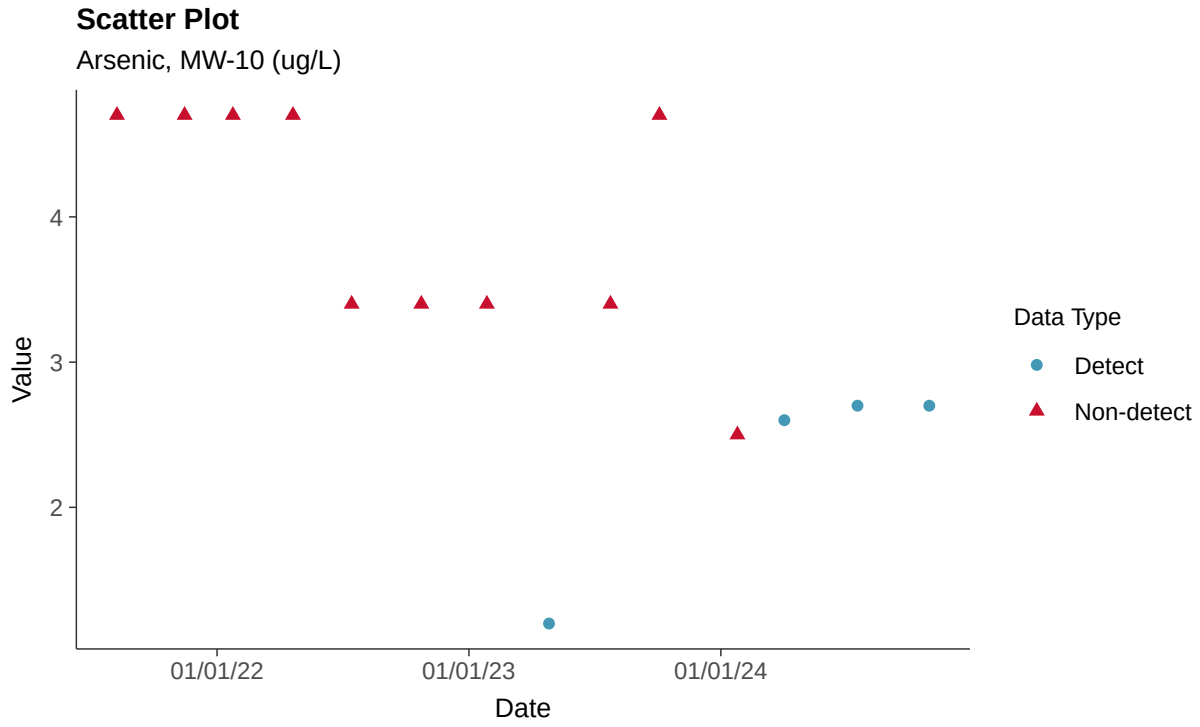
Trend Regression: Piecewise Linear-Linear-Linear

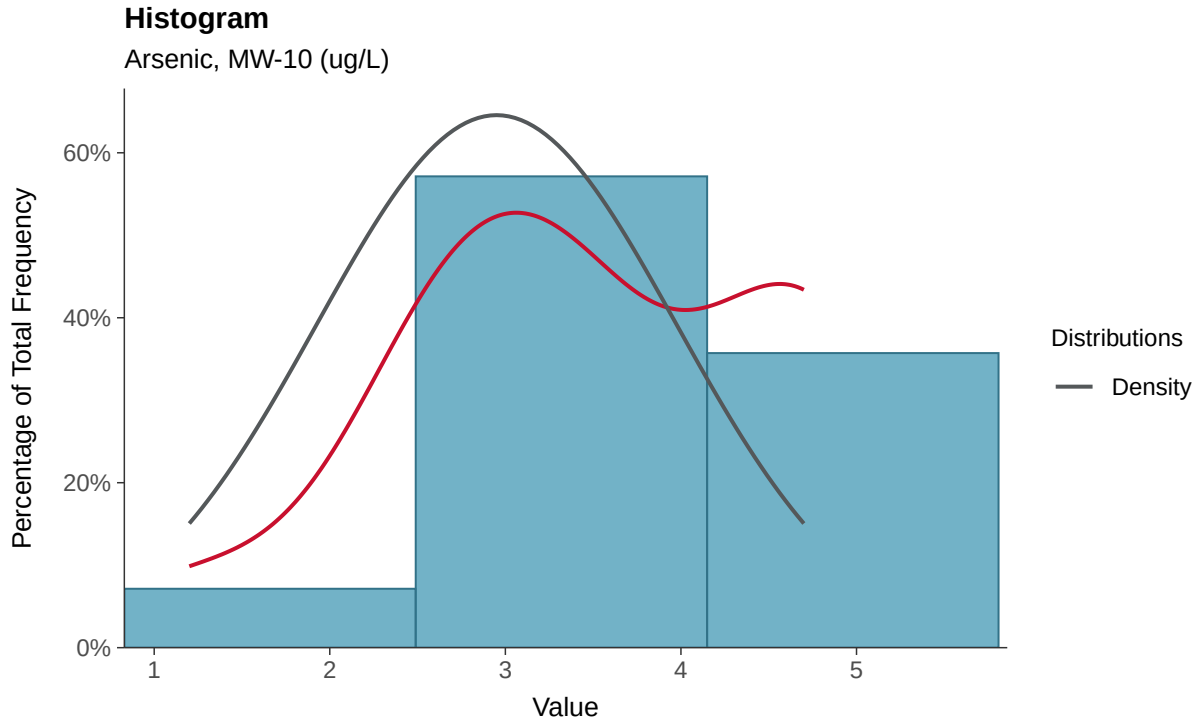
Antimony, MW-10 (ug/L)



App. IV: Arsenic, MW-10

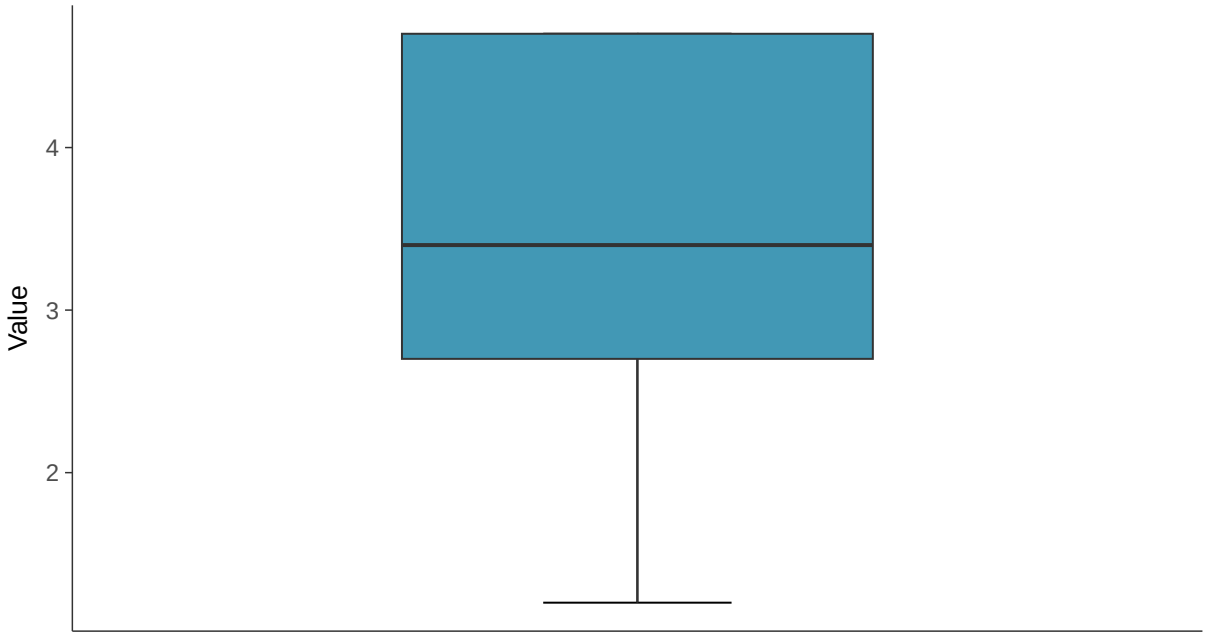
ID: 09_03_102





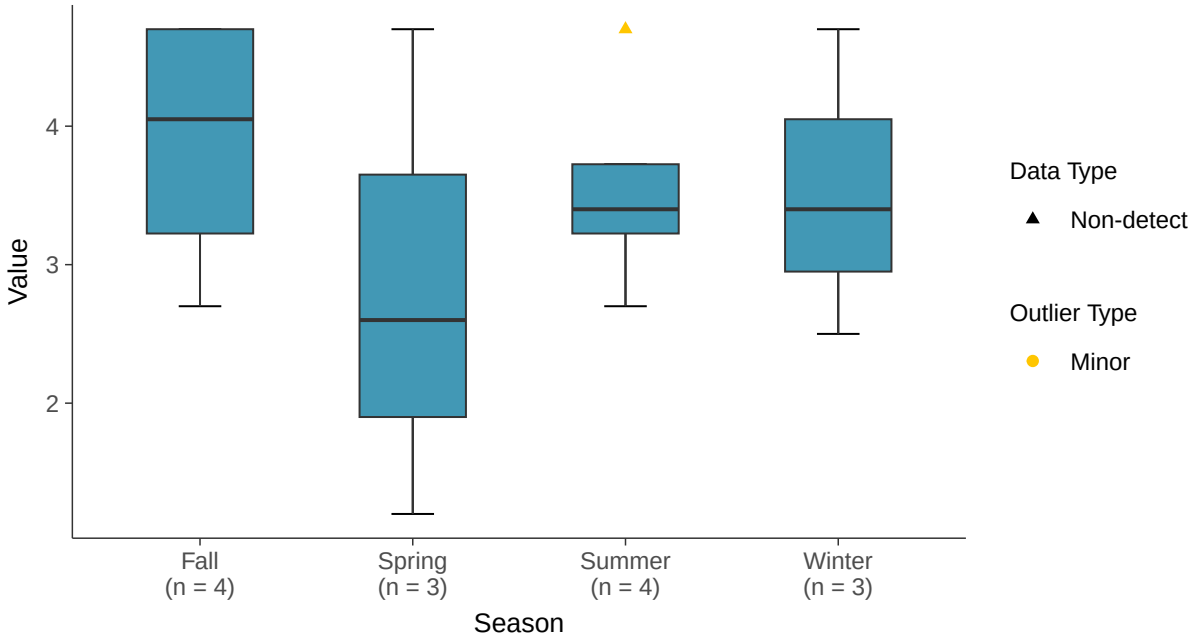
Boxplot

Arsenic, MW-10 (ug/L)



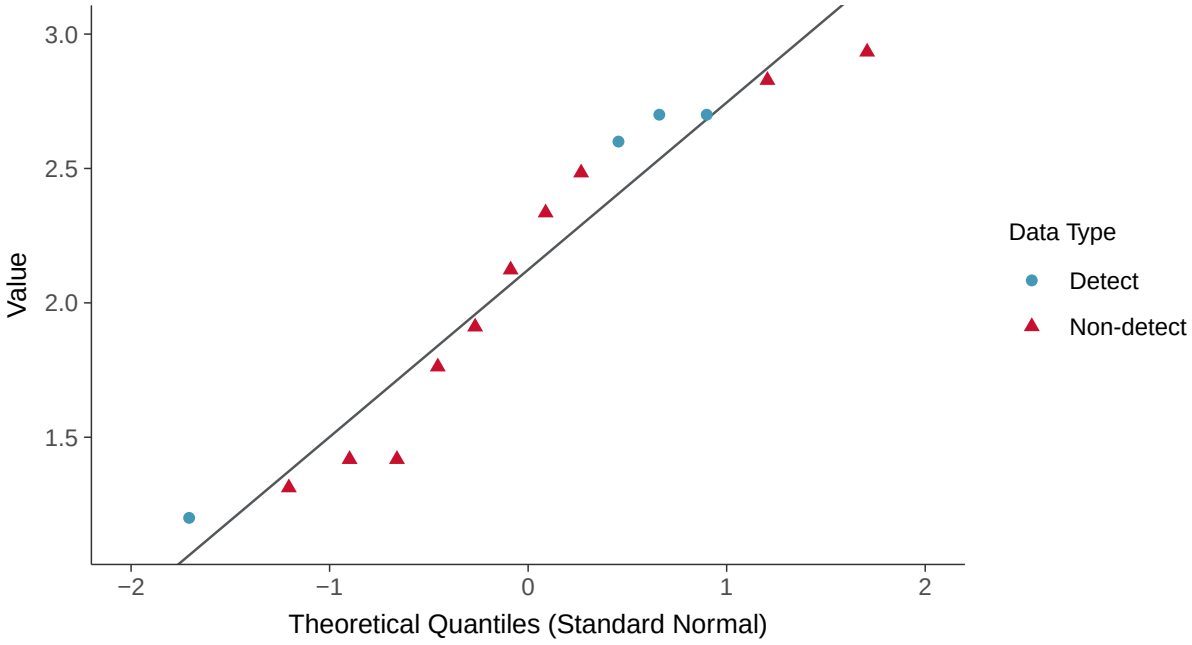
Boxplot by Season

Arsenic, MW-10 (ug/L)



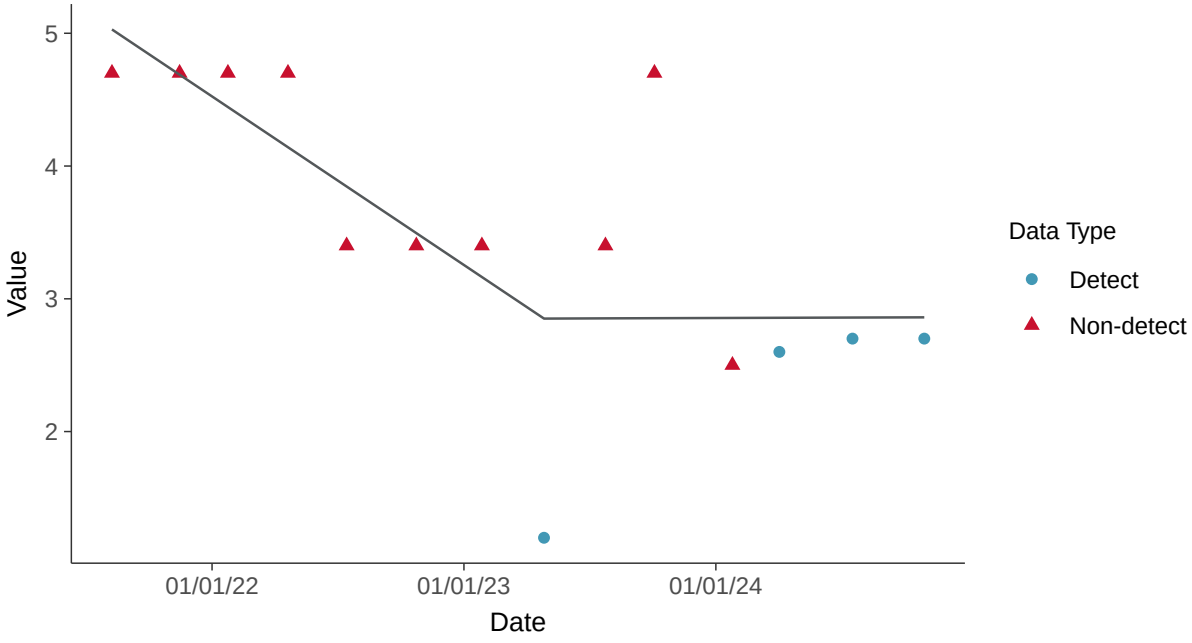
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-10 (ug/L)



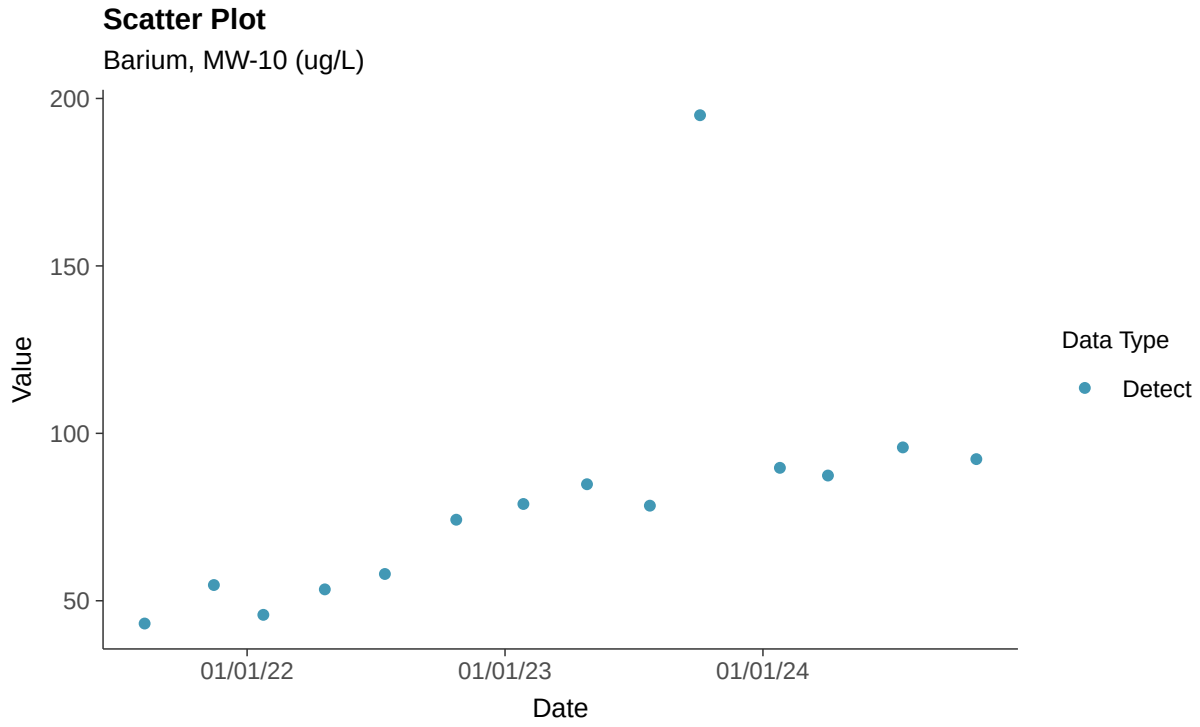
Trend Regression: Piecewise Linear-Linear

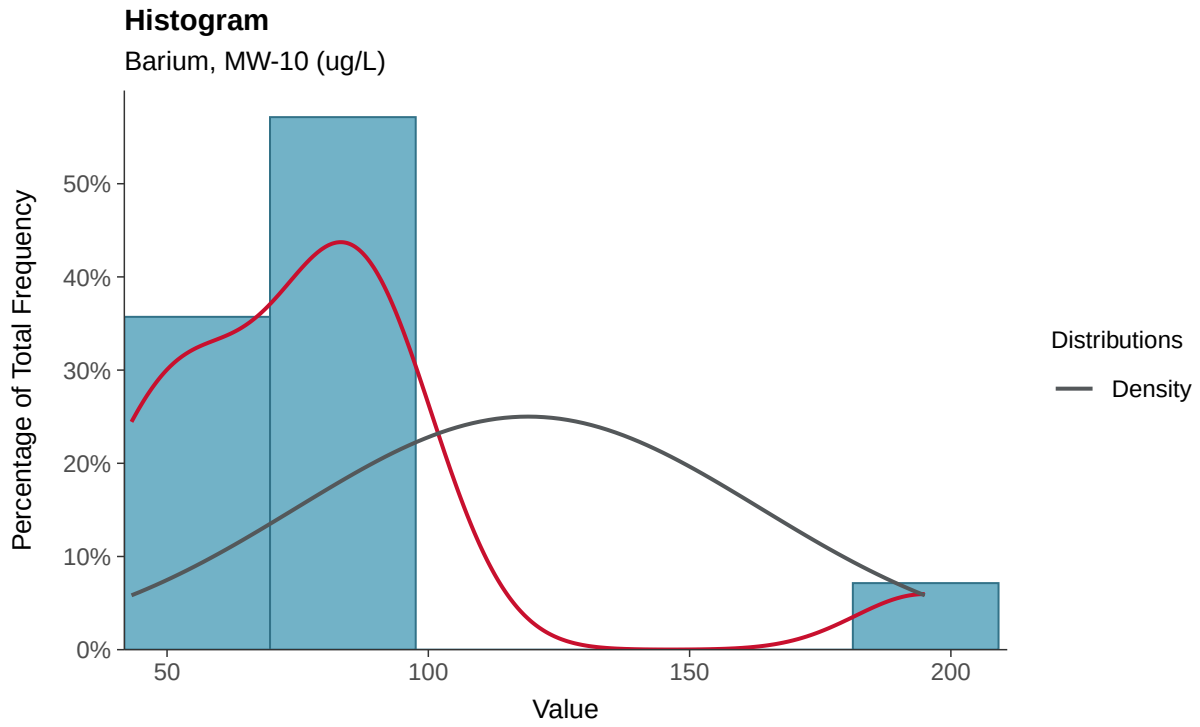
Arsenic, MW-10 (ug/L)



App. IV: Barium, MW-10

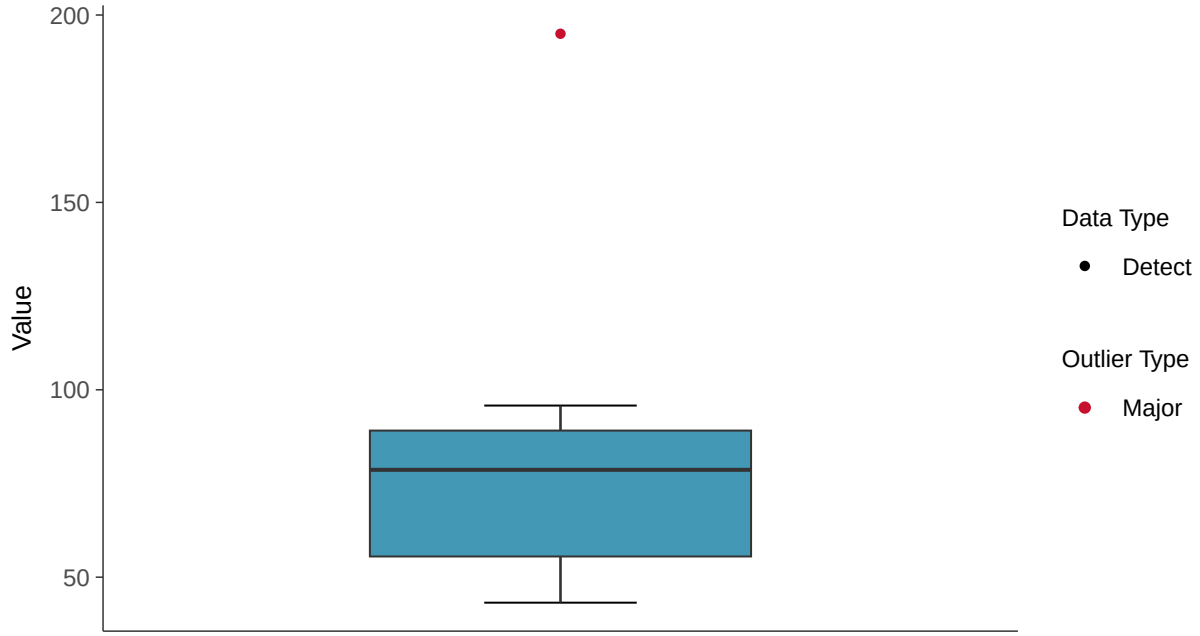
ID: 09_03_103





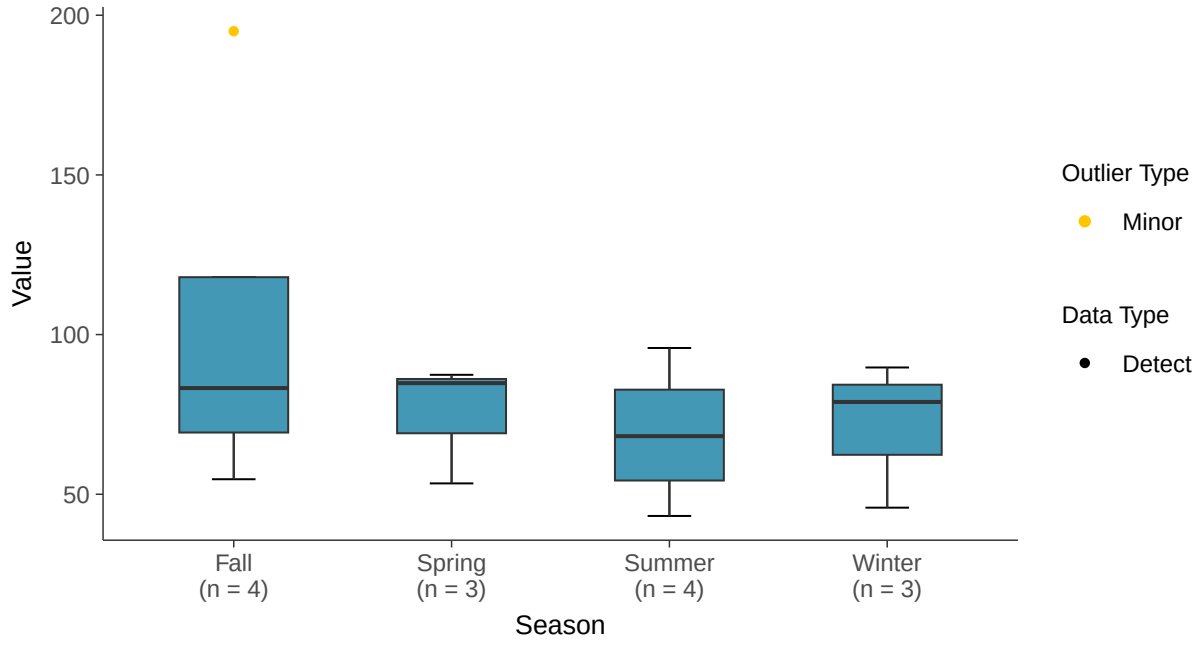
Boxplot

Barium, MW-10 (ug/L)



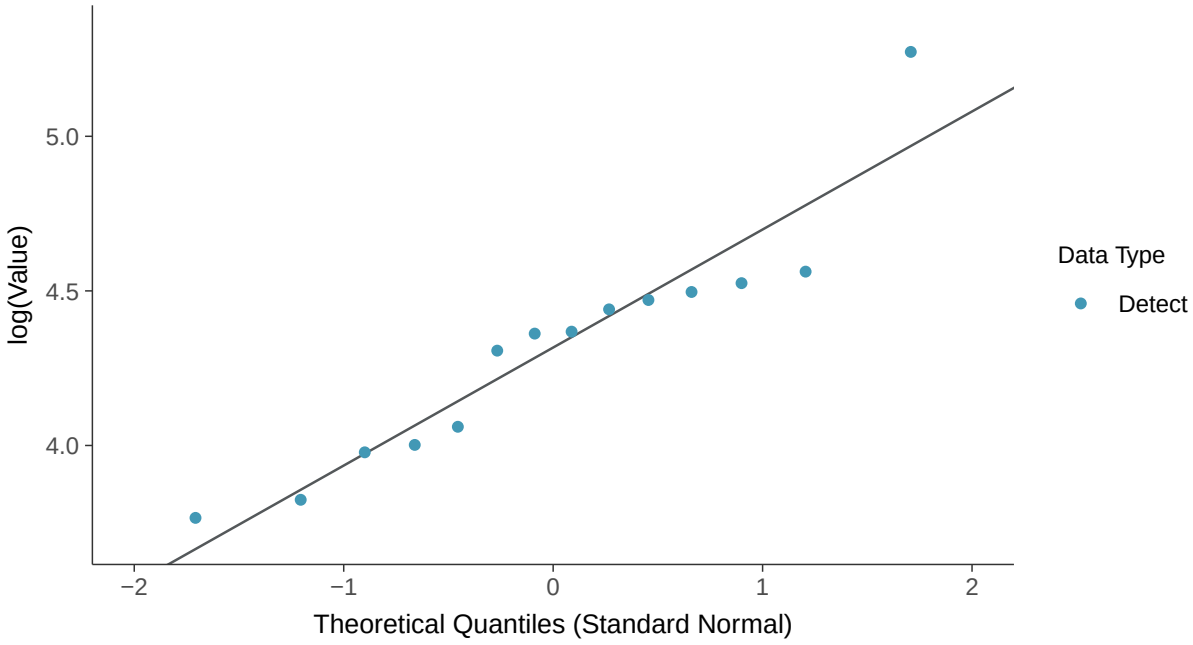
Boxplot by Season

Barium, MW-10 (ug/L)



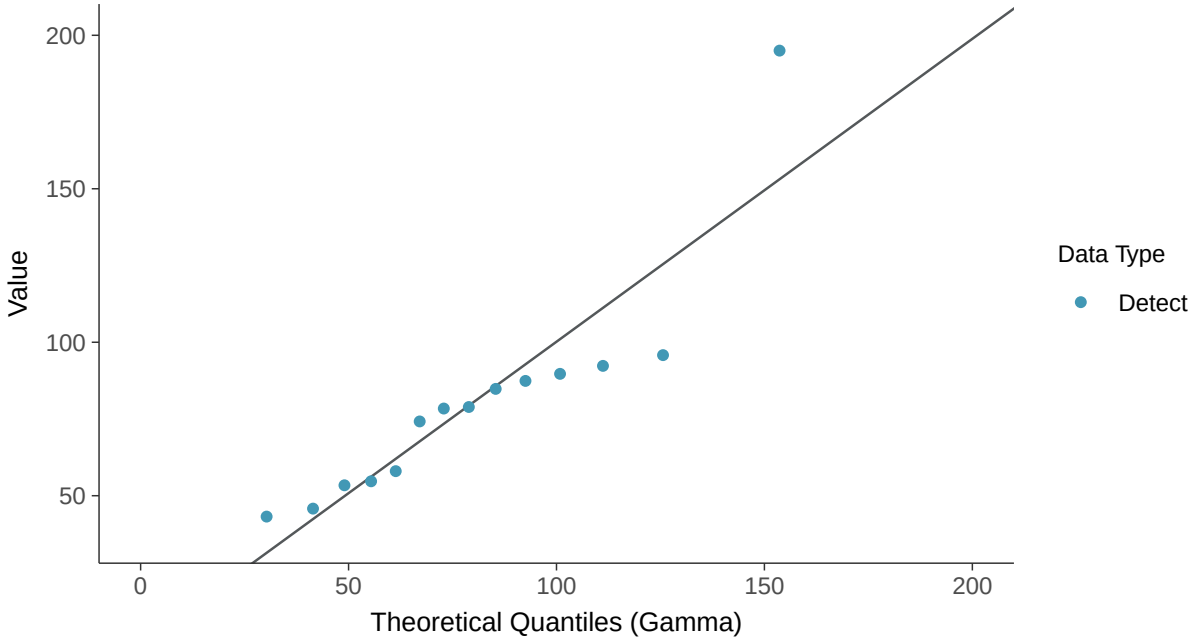
Lognormal Q-Q plot

Barium, MW-10 (ug/L)



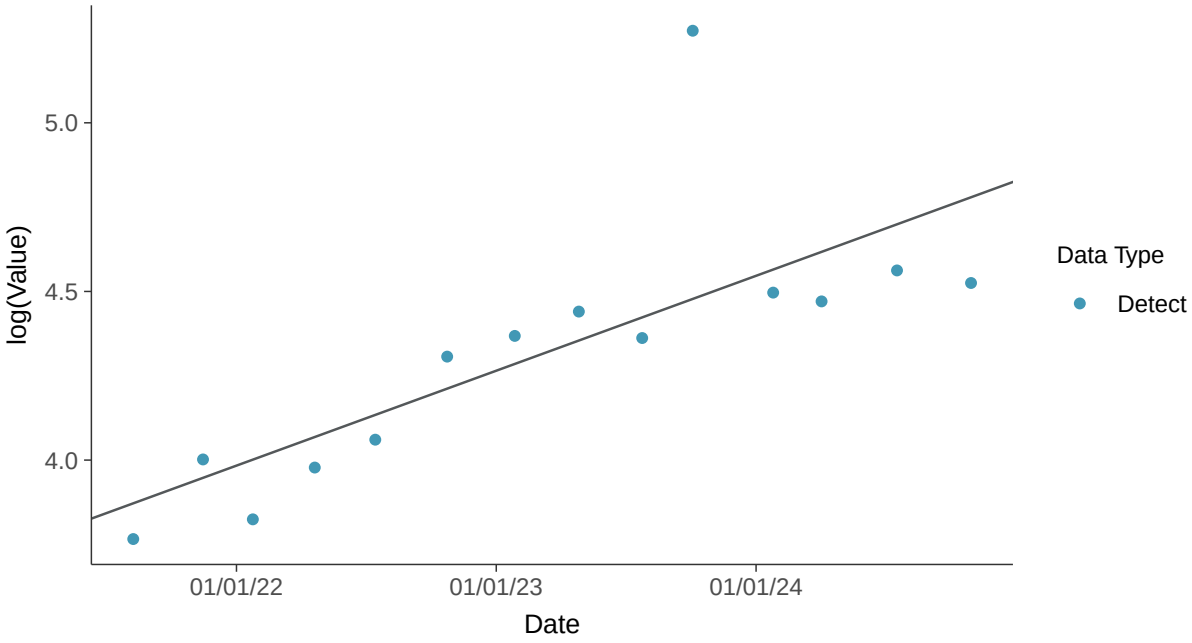
Gamma Q-Q plot

Barium, MW-10 (ug/L)



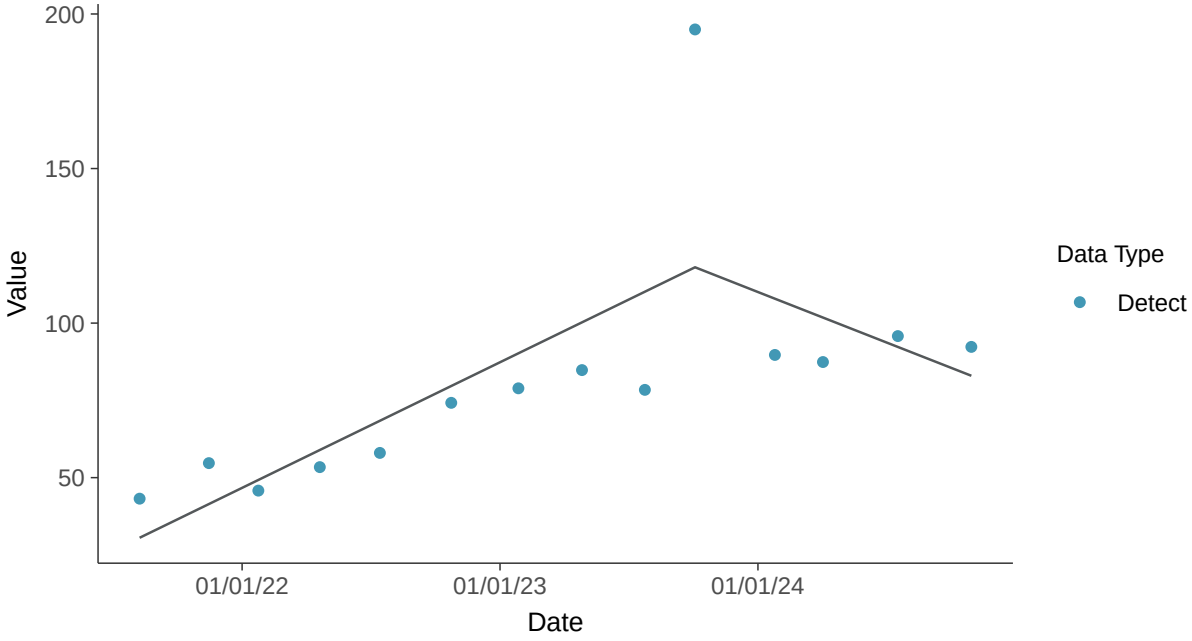
Trend Regression: Lognormal MLE

Barium, MW-10 (ug/L)



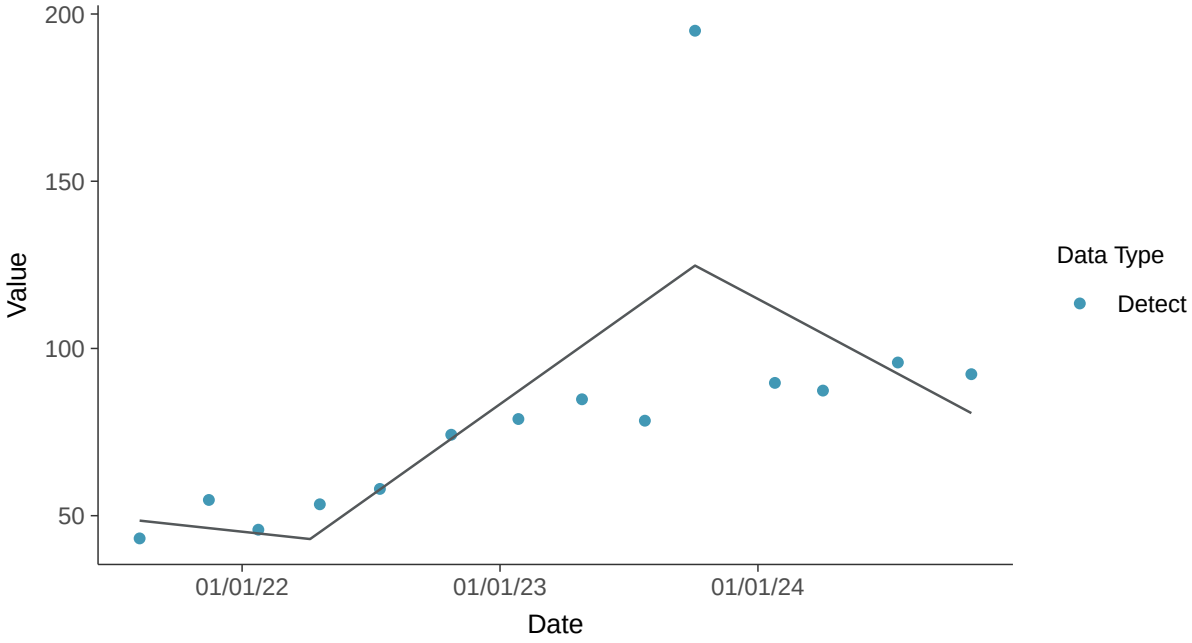
Trend Regression: Piecewise Linear-Linear

Barium, MW-10 (ug/L)



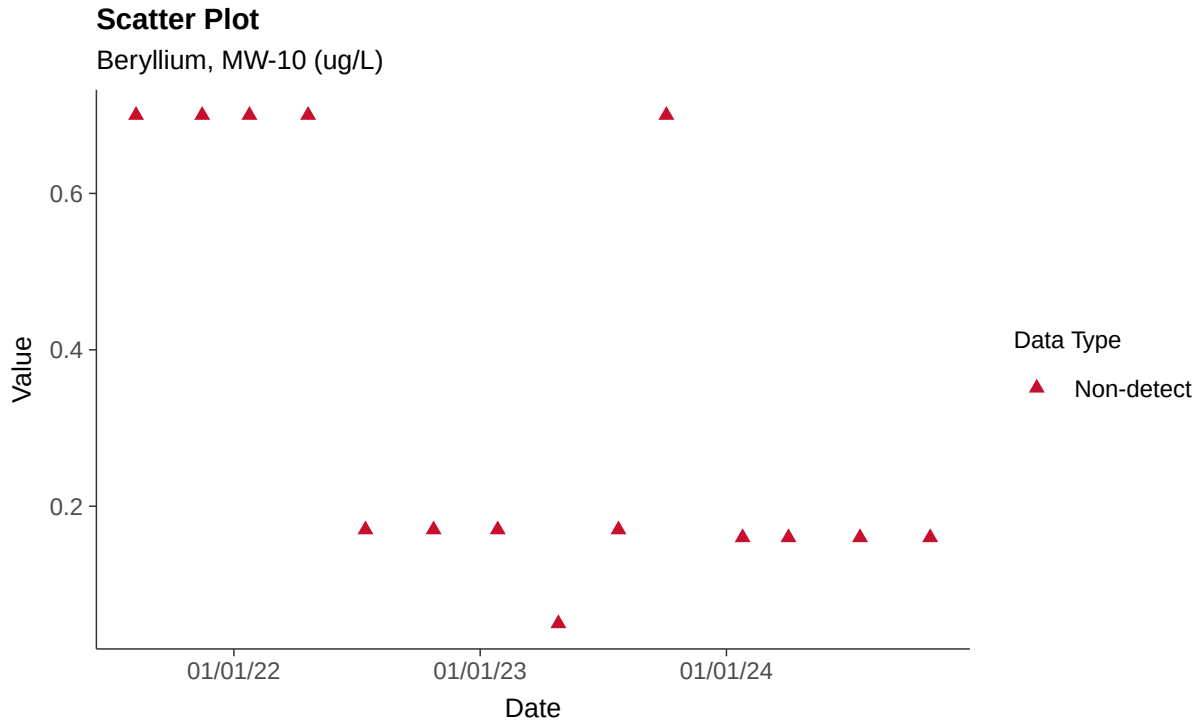
Trend Regression: Piecewise Linear-Linear-Linear

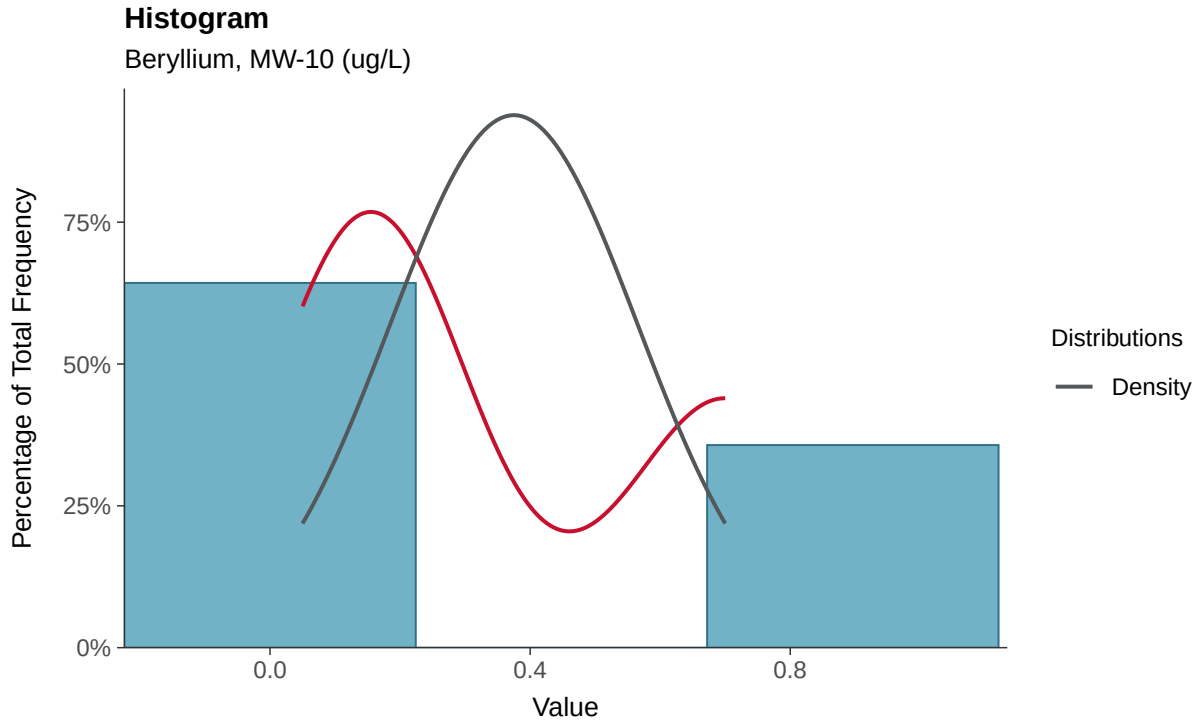
Barium, MW-10 (ug/L)



App. IV: Beryllium, MW-10

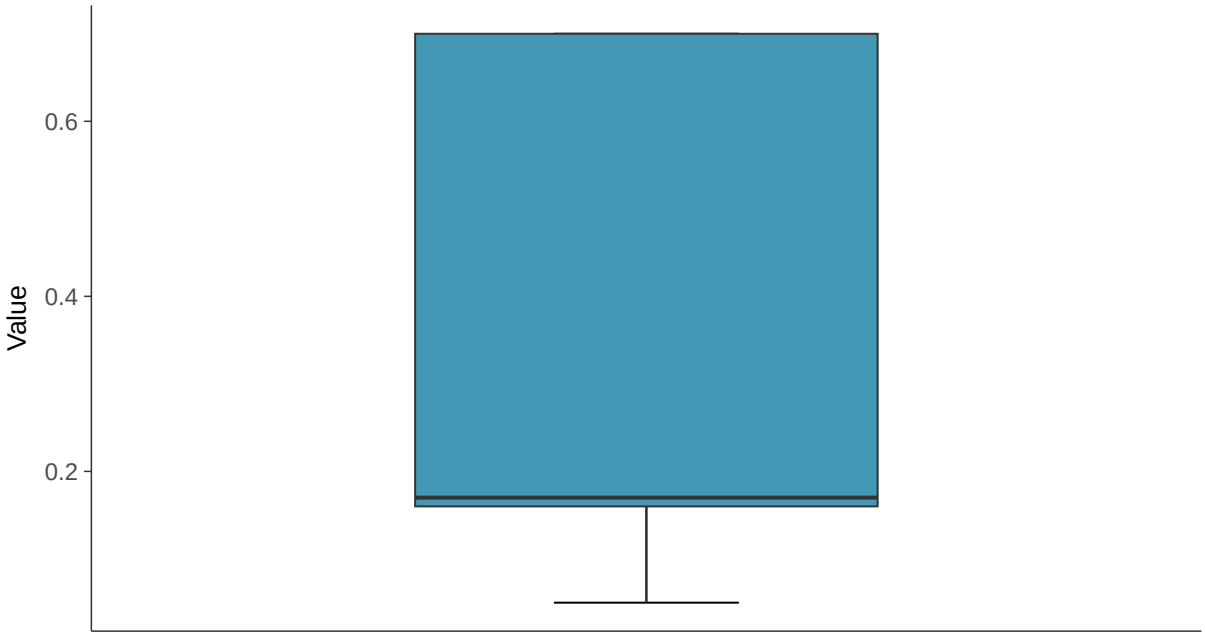
ID: 09_03_104





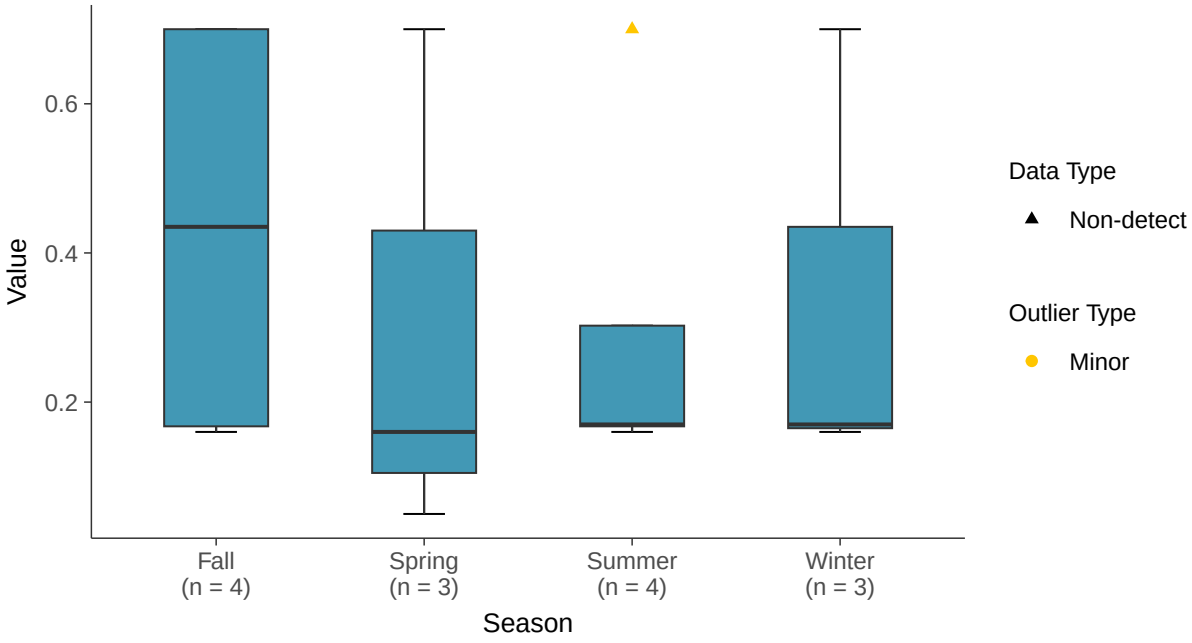
Boxplot

Beryllium, MW-10 (ug/L)



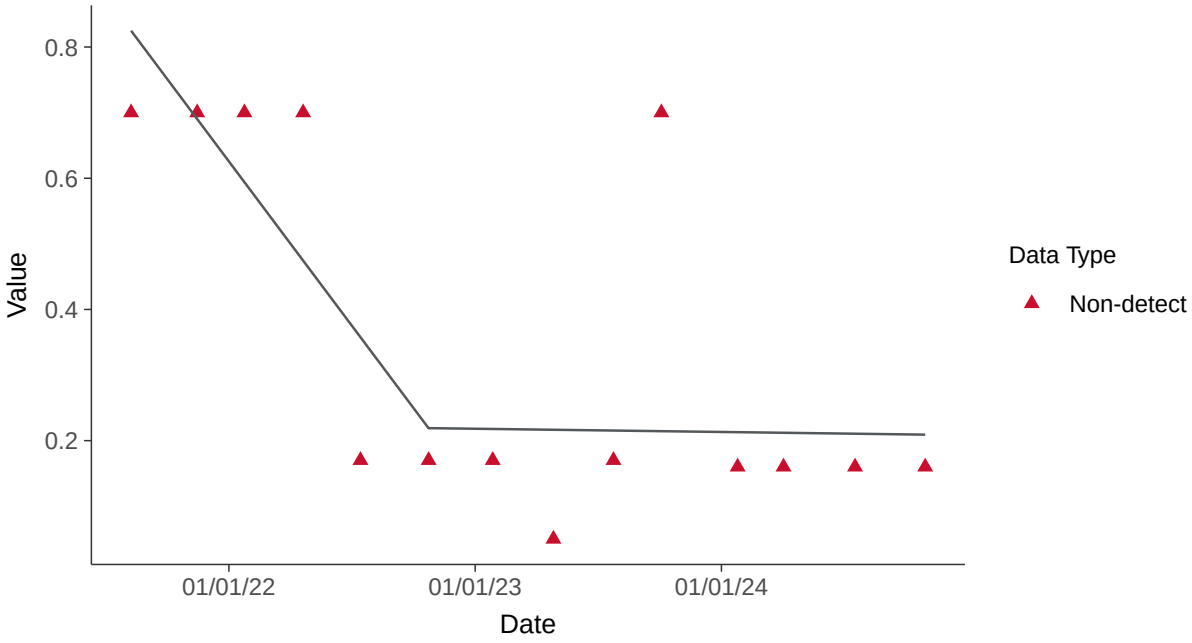
Boxplot by Season

Beryllium, MW-10 (ug/L)



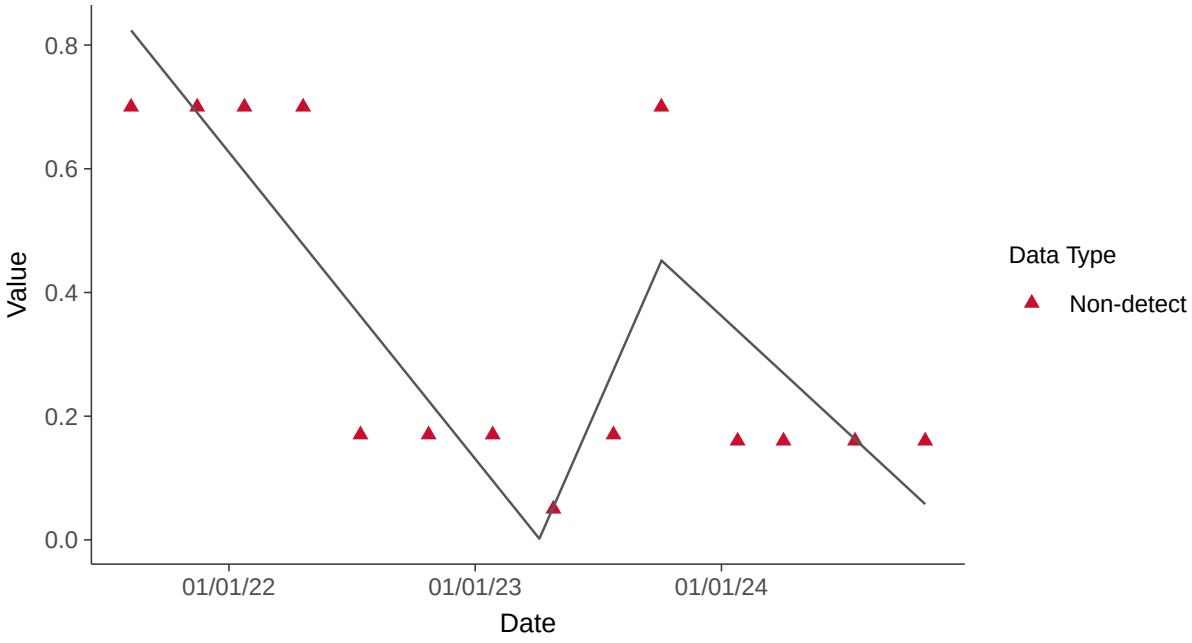
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-10 (ug/L)

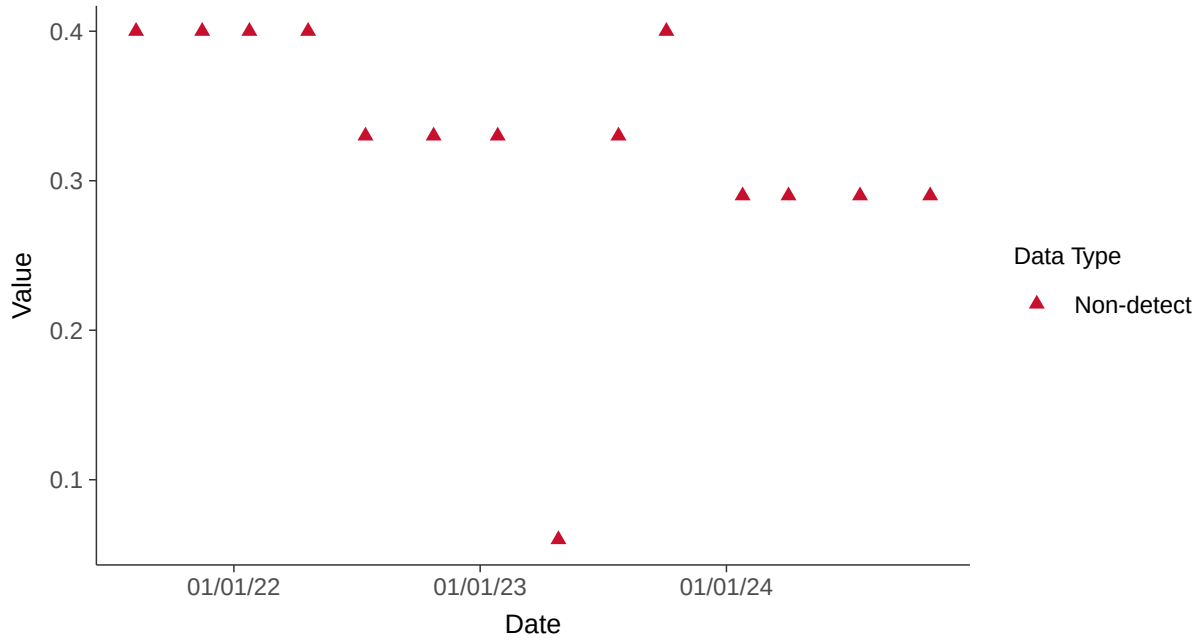


App. IV: Cadmium, MW-10

ID: 09_03_106

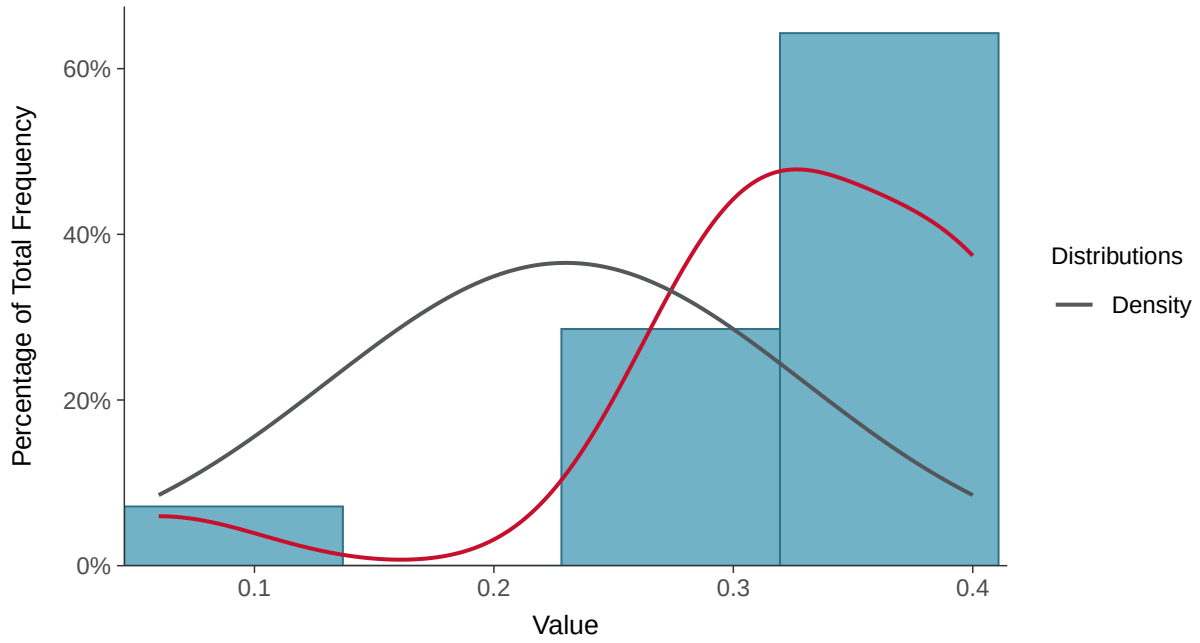
Scatter Plot

Cadmium, MW-10 (ug/L)



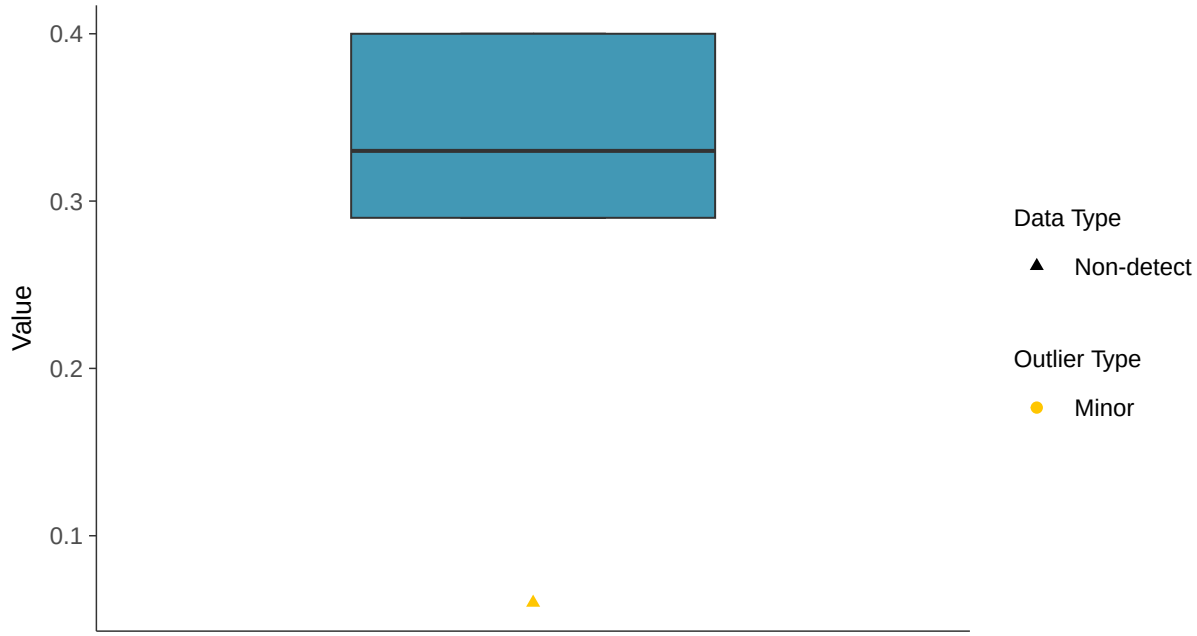
Histogram

Cadmium, MW-10 (ug/L)



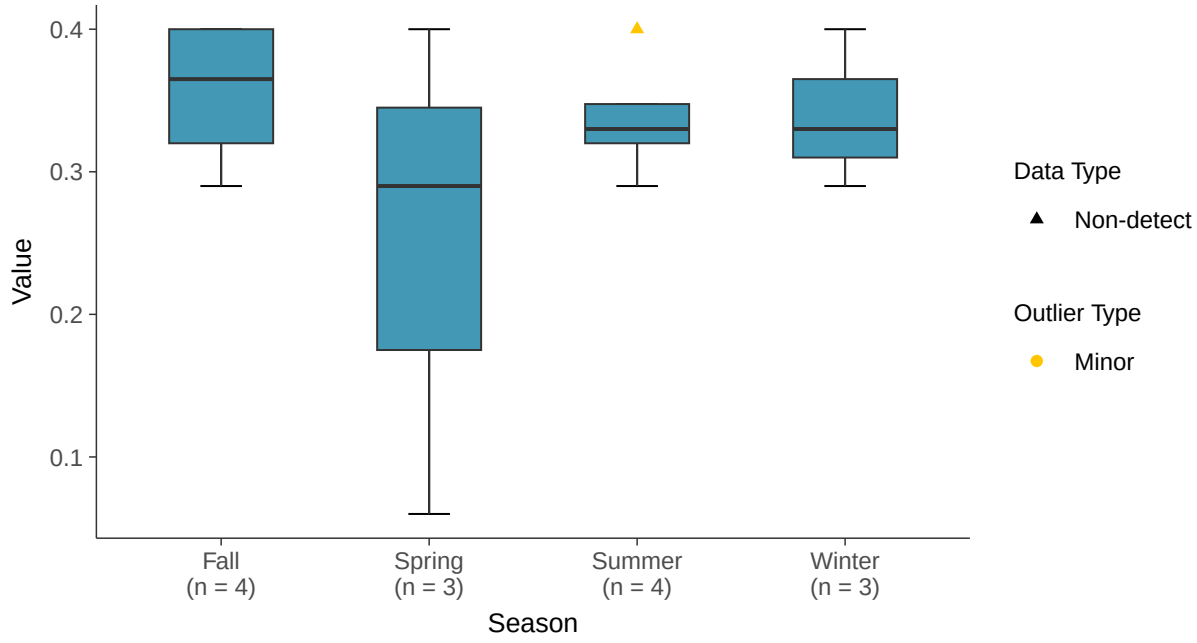
Boxplot

Cadmium, MW-10 (ug/L)



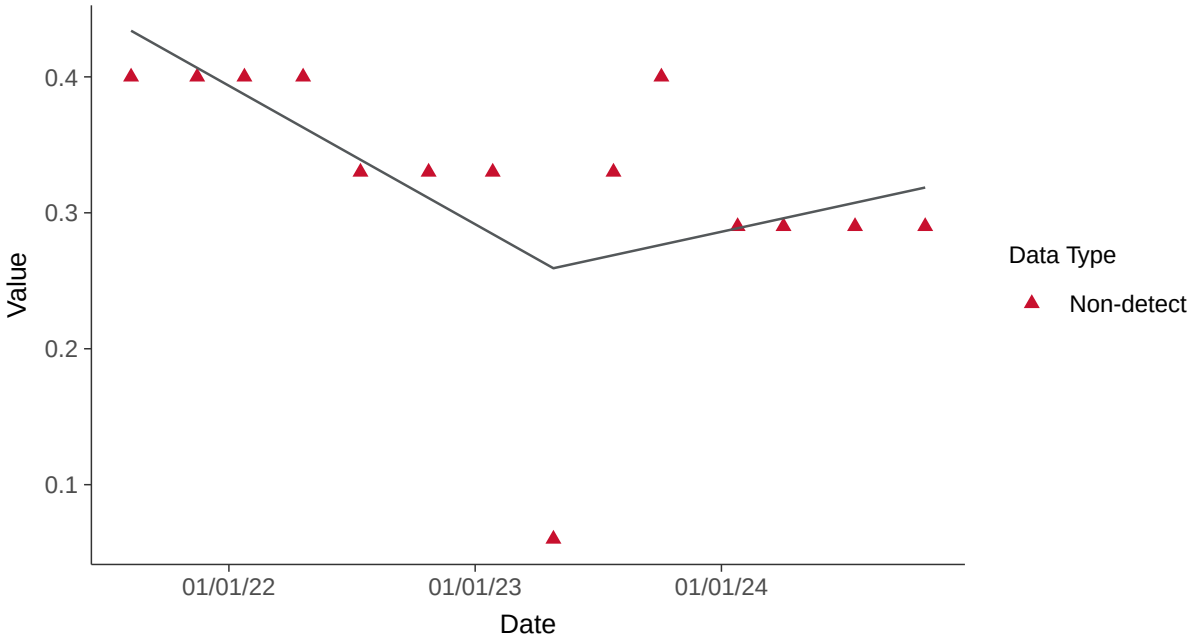
Boxplot by Season

Cadmium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cadmium, MW-10 (ug/L)

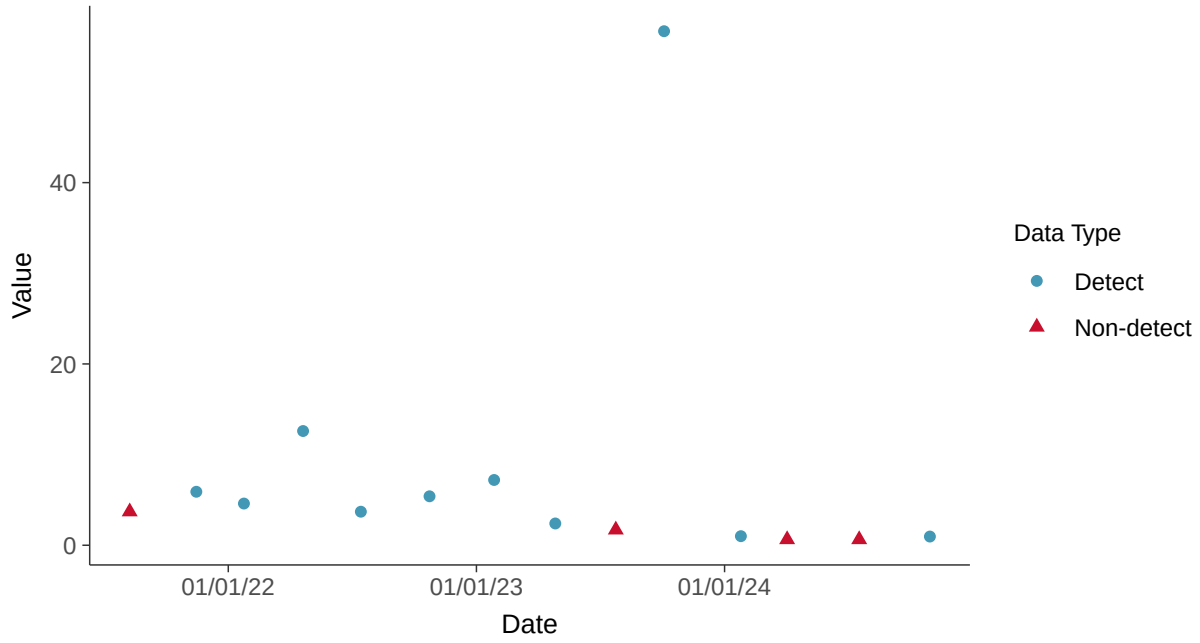


App. IV: Chromium, MW-10

ID: 09_03_109

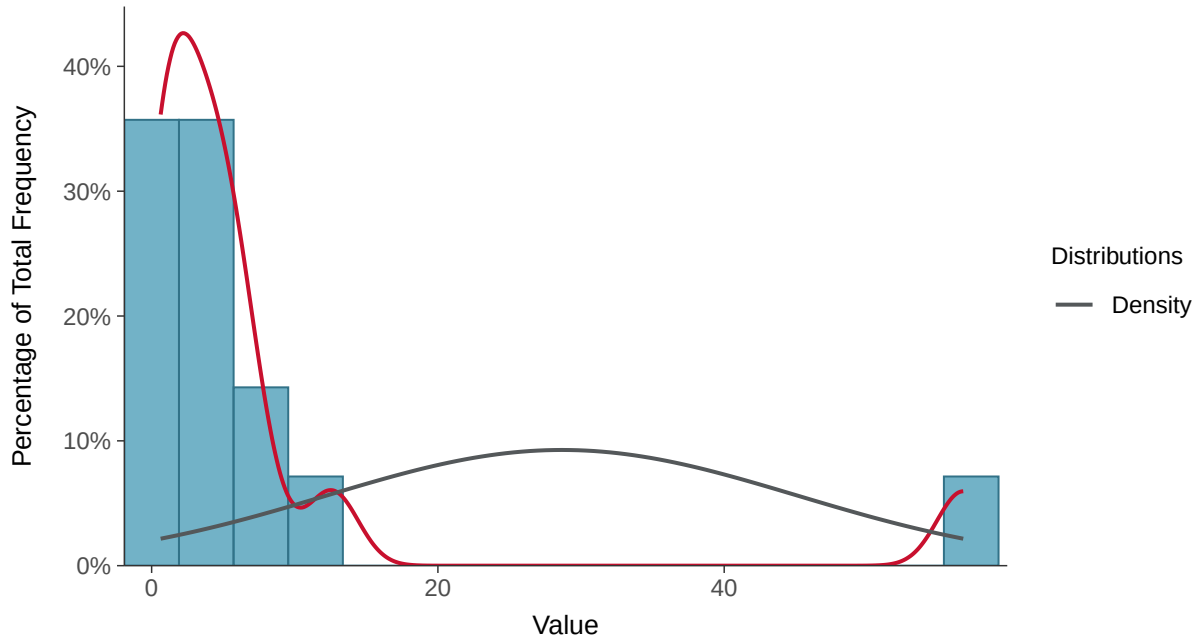
Scatter Plot

Chromium, MW-10 (ug/L)



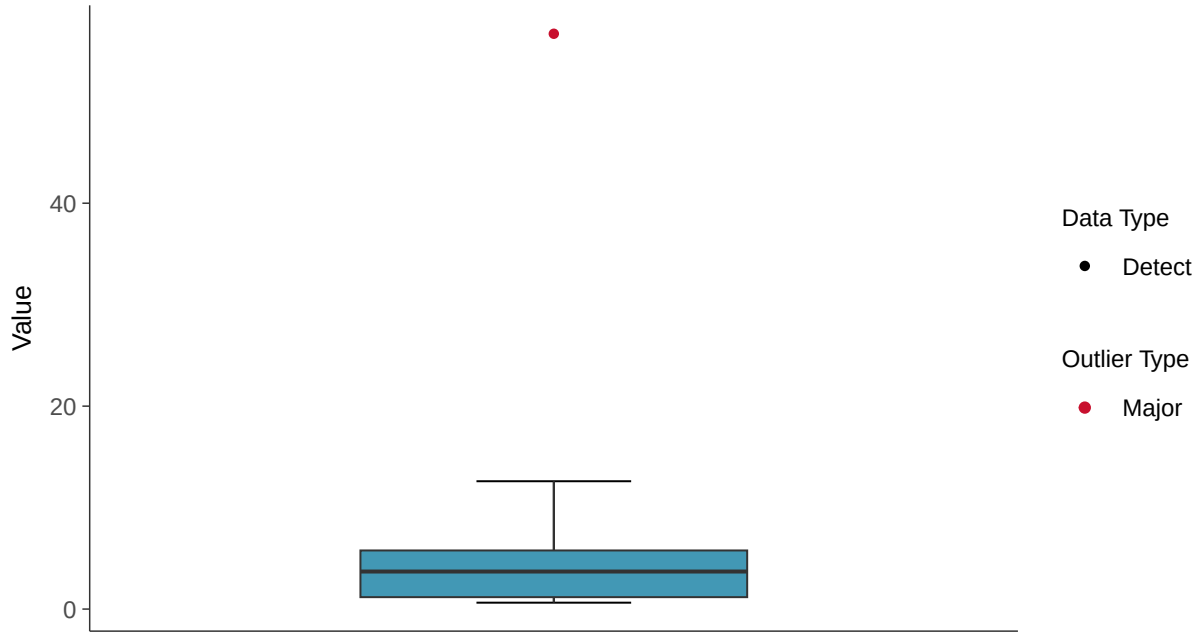
Histogram

Chromium, MW-10 (ug/L)



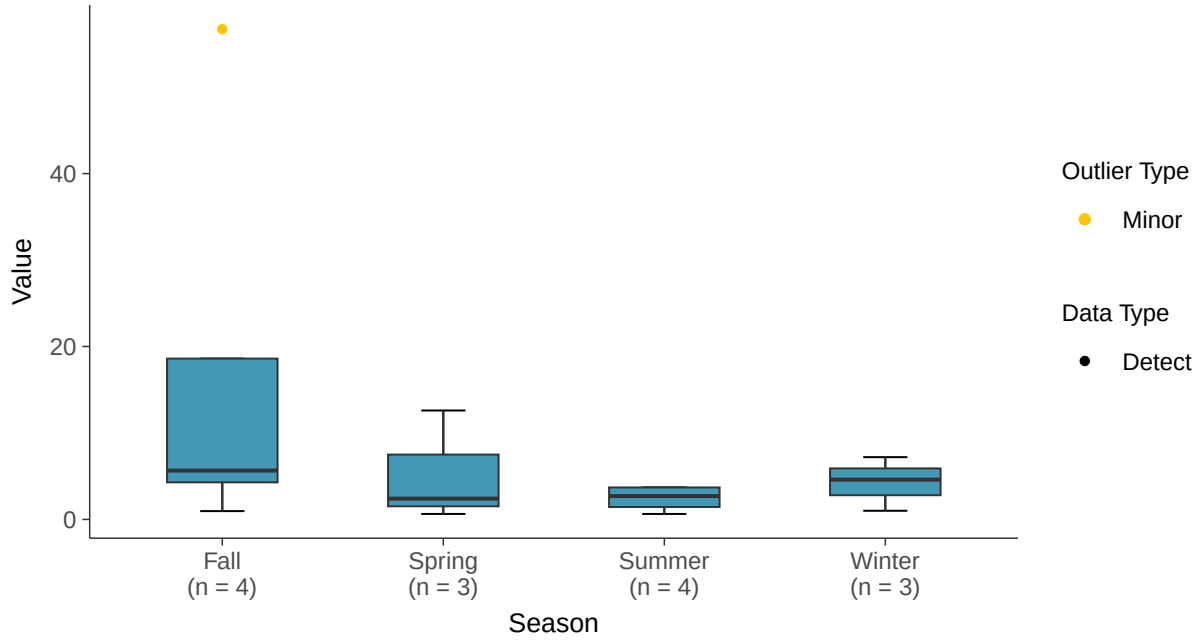
Boxplot

Chromium, MW-10 (ug/L)



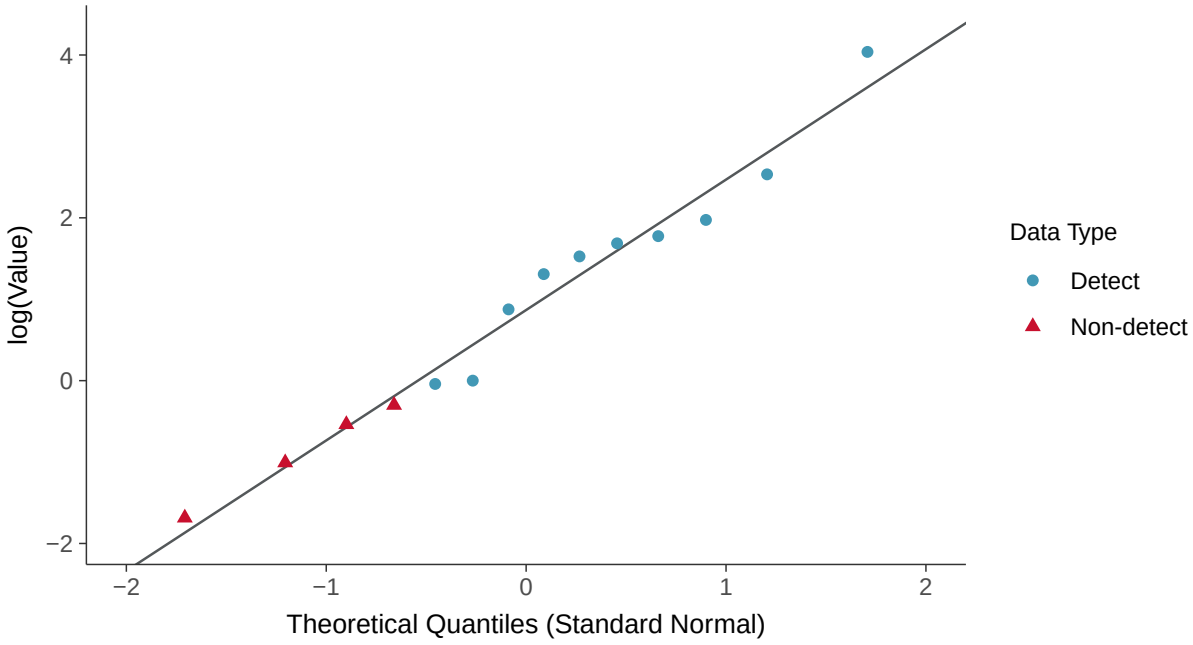
Boxplot by Season

Chromium, MW-10 (ug/L)



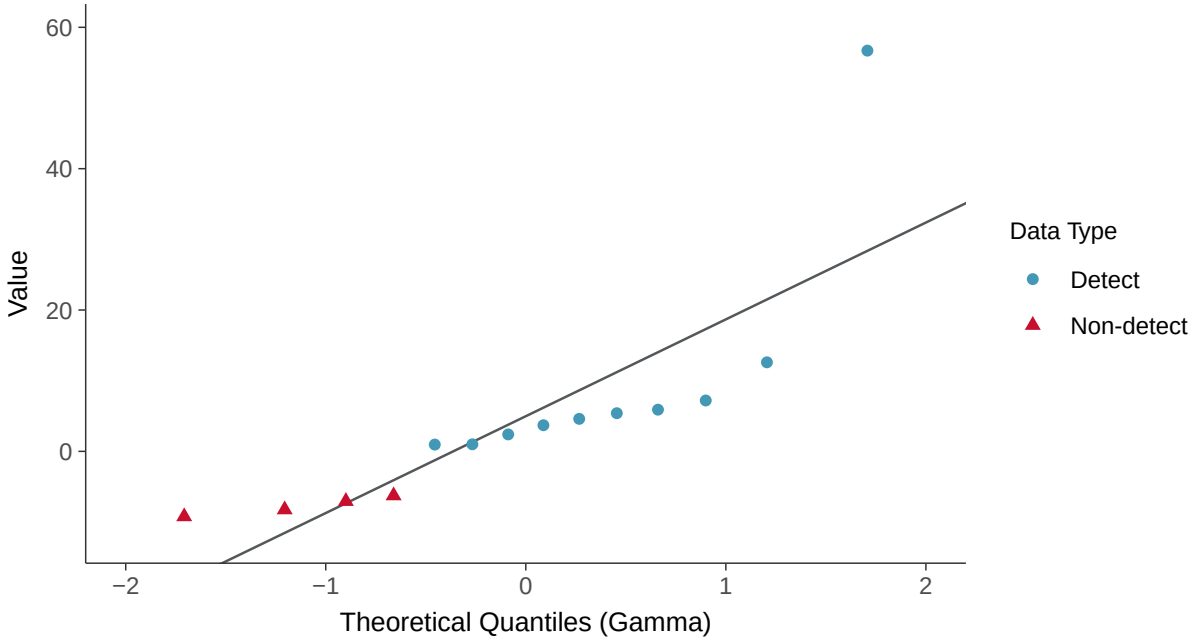
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-10 (ug/L)



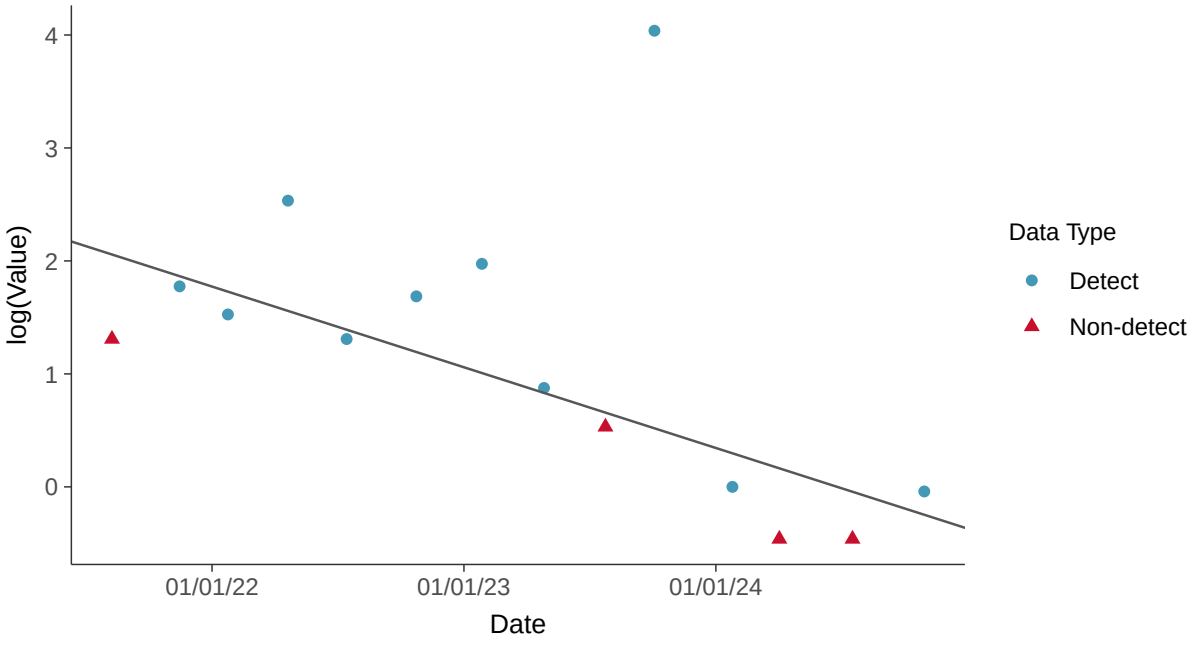
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-10 (ug/L)



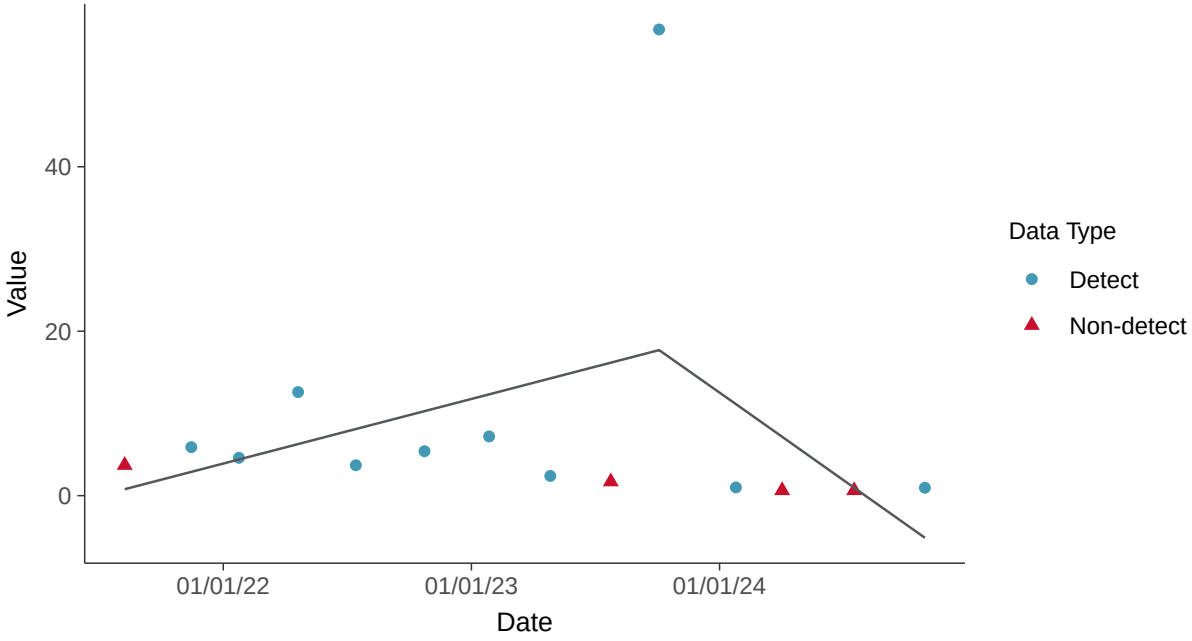
Trend Regression: Lognormal MLE

Chromium, MW-10 (ug/L)



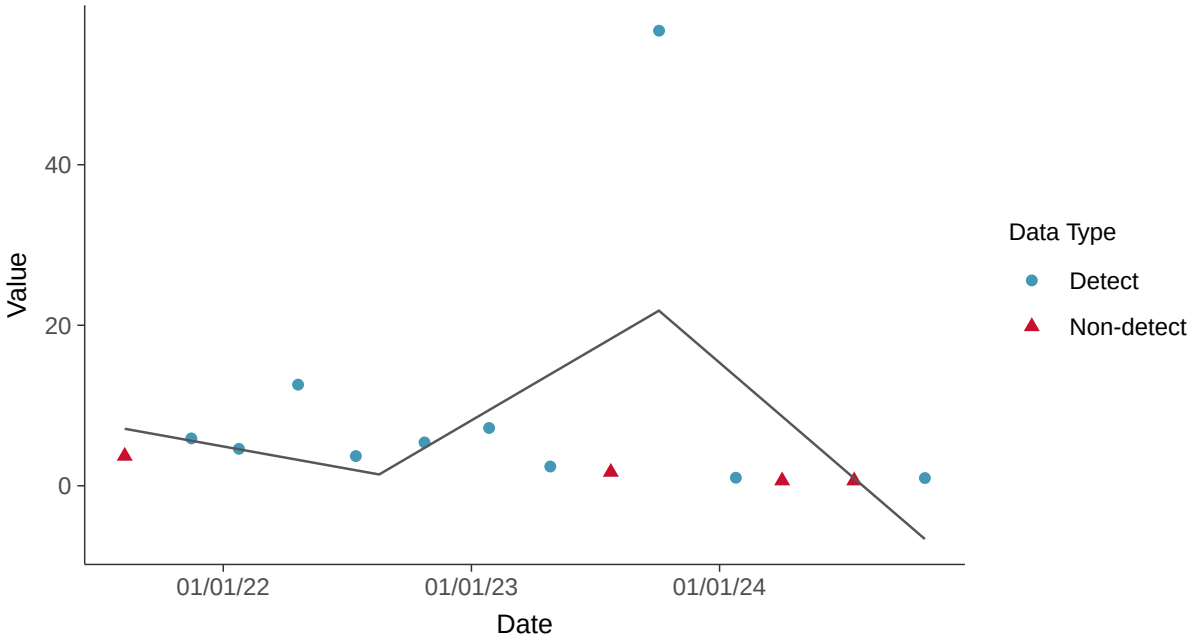
Trend Regression: Piecewise Linear-Linear

Chromium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-10 (ug/L)

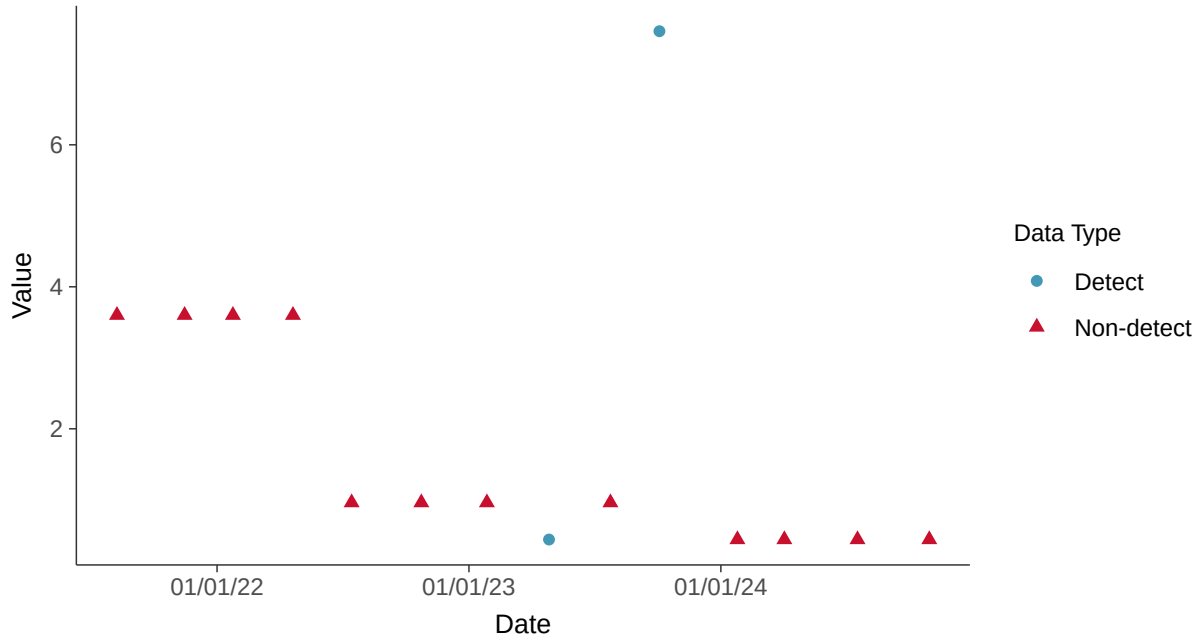


App. IV: Cobalt, MW-10

ID: 09_03_110

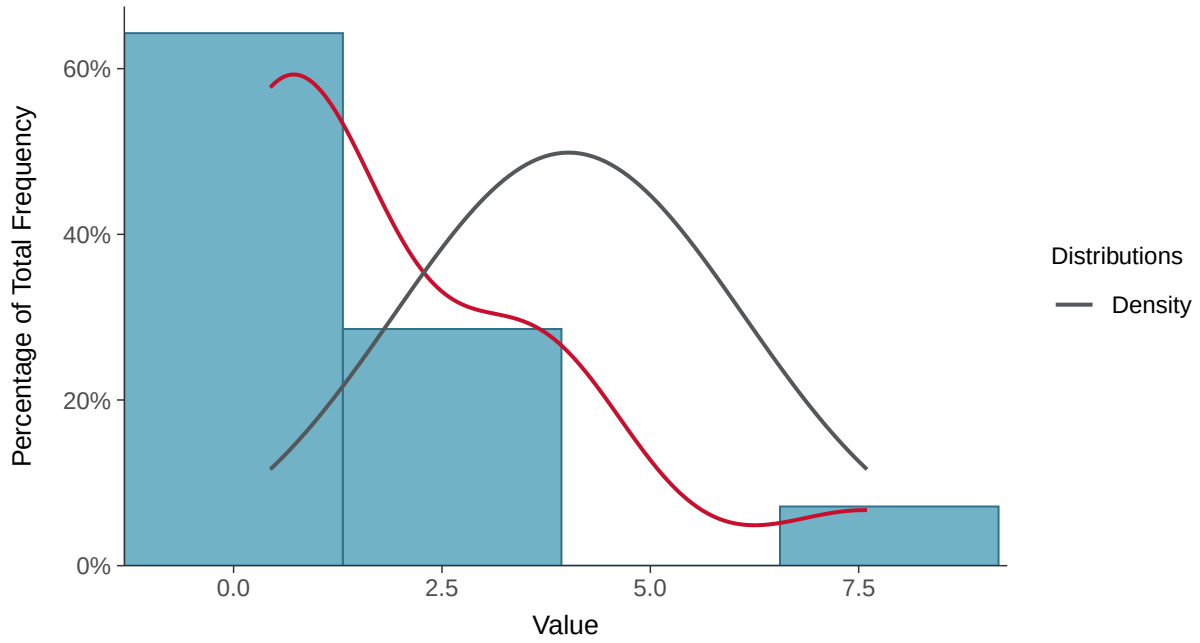
Scatter Plot

Cobalt, MW-10 (ug/L)



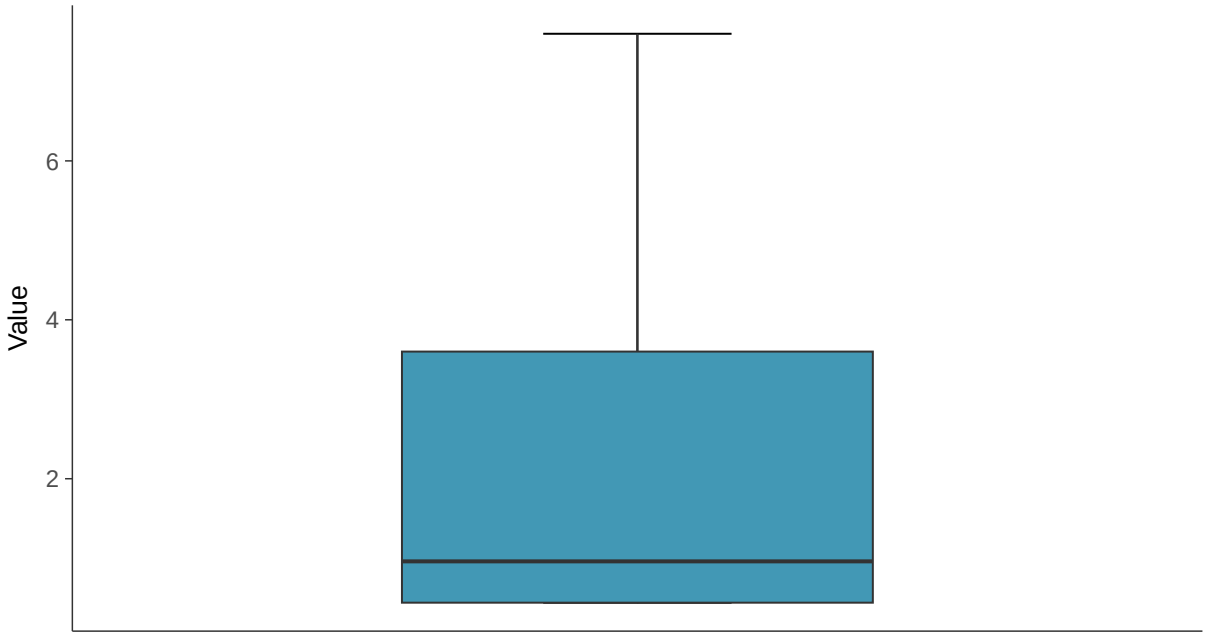
Histogram

Cobalt, MW-10 (ug/L)



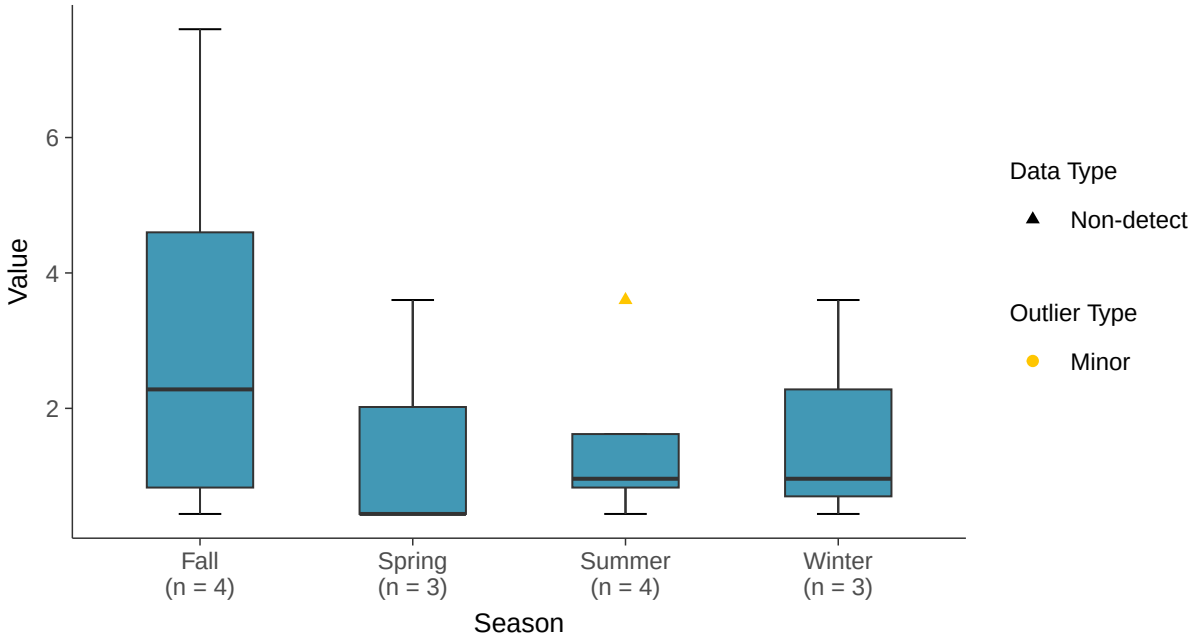
Boxplot

Cobalt, MW-10 (ug/L)



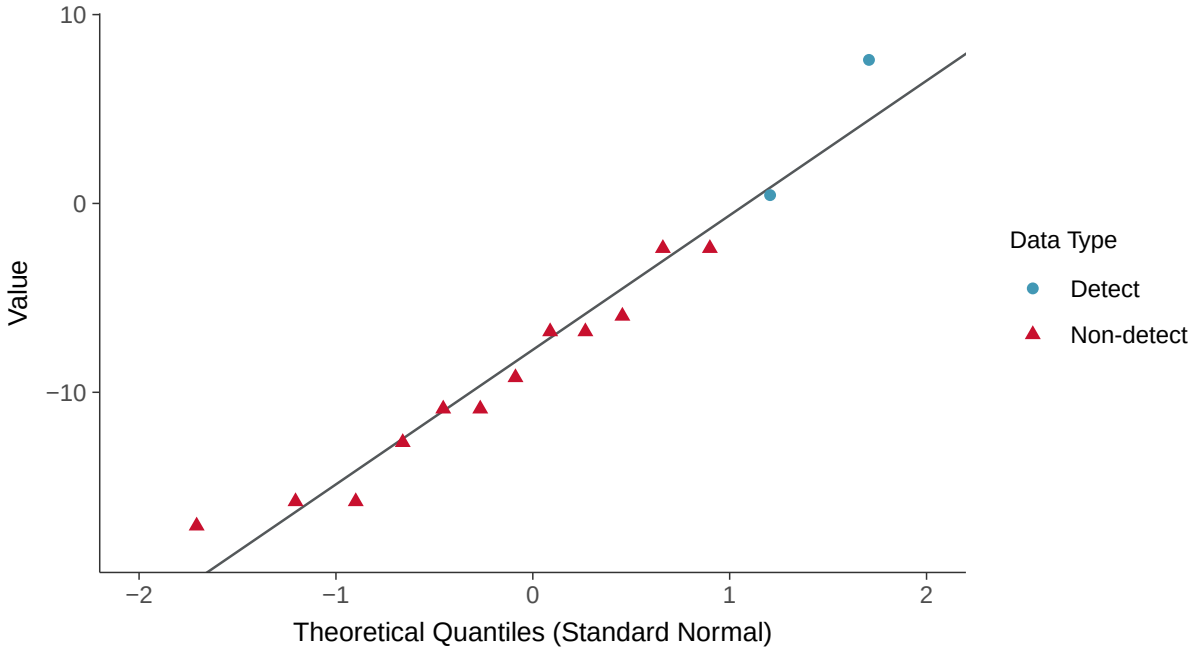
Boxplot by Season

Cobalt, MW-10 (ug/L)



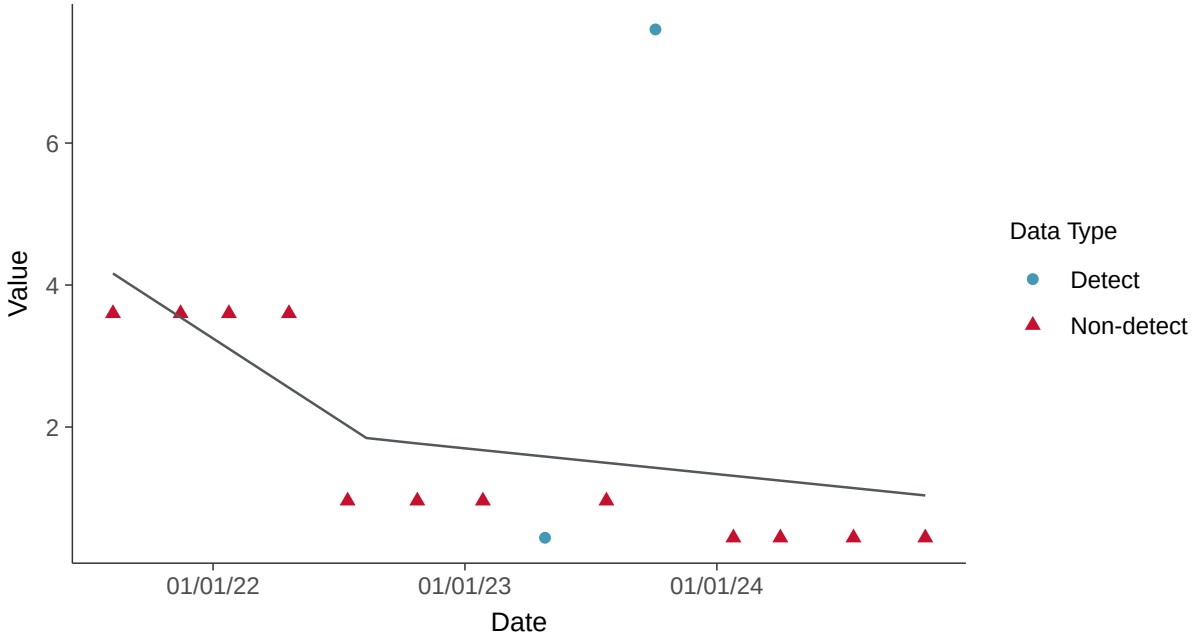
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-10 (ug/L)



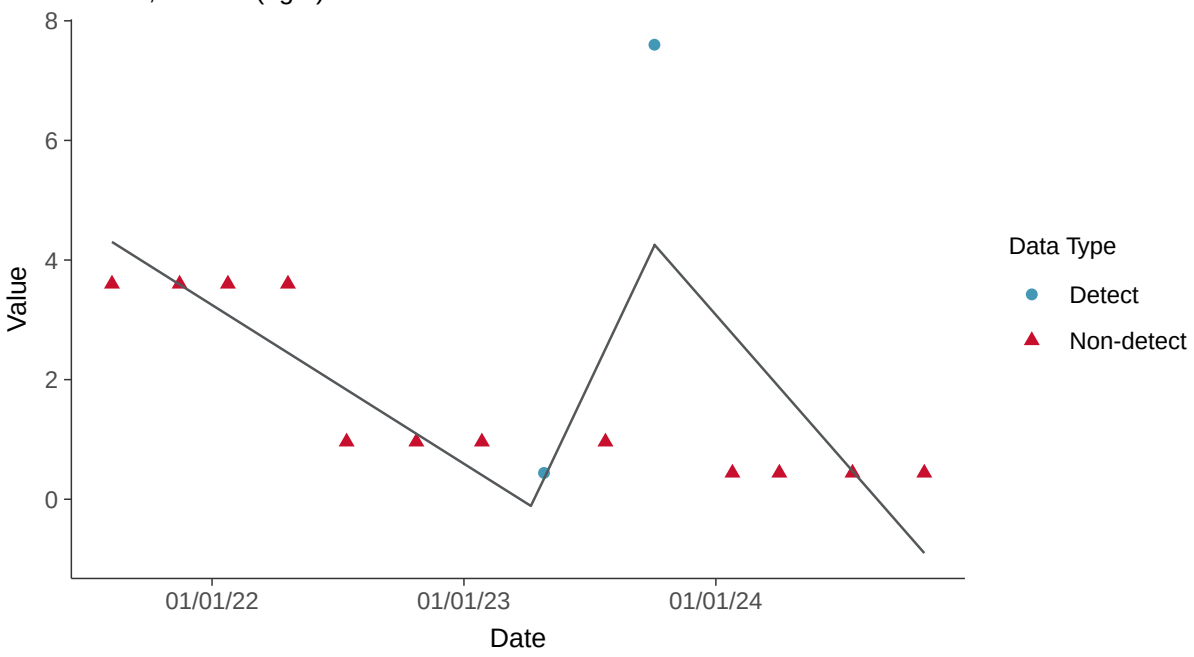
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-10 (ug/L)

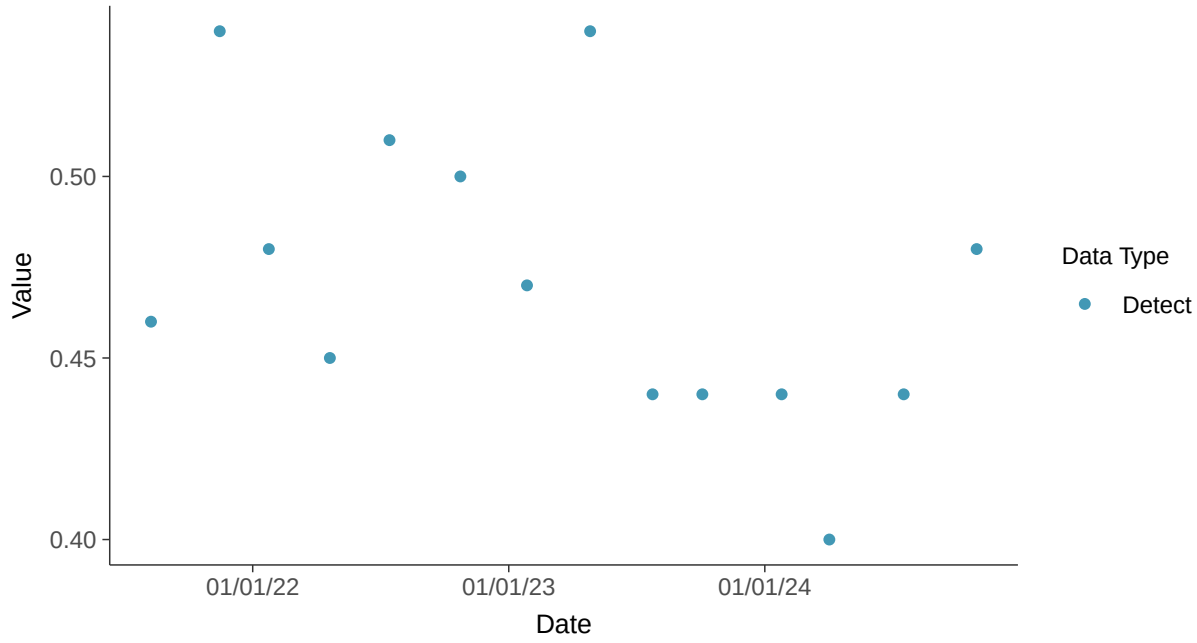


App. IV: Fluoride, MW-10

ID: 09_03_112

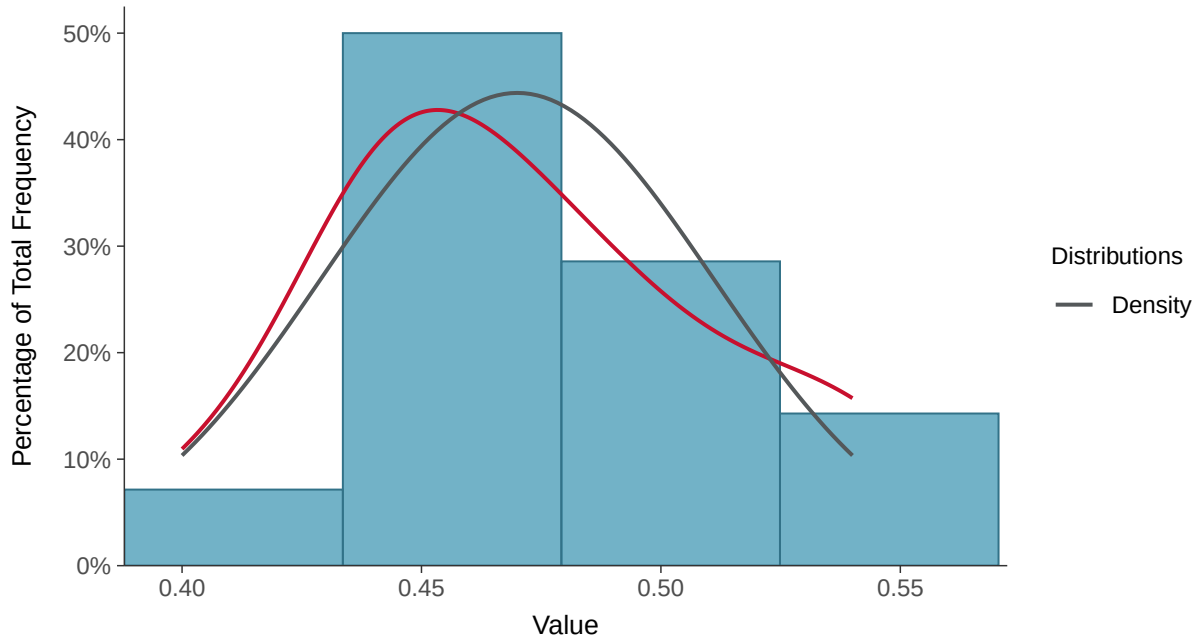
Scatter Plot

Fluoride, MW-10 (mg/L)



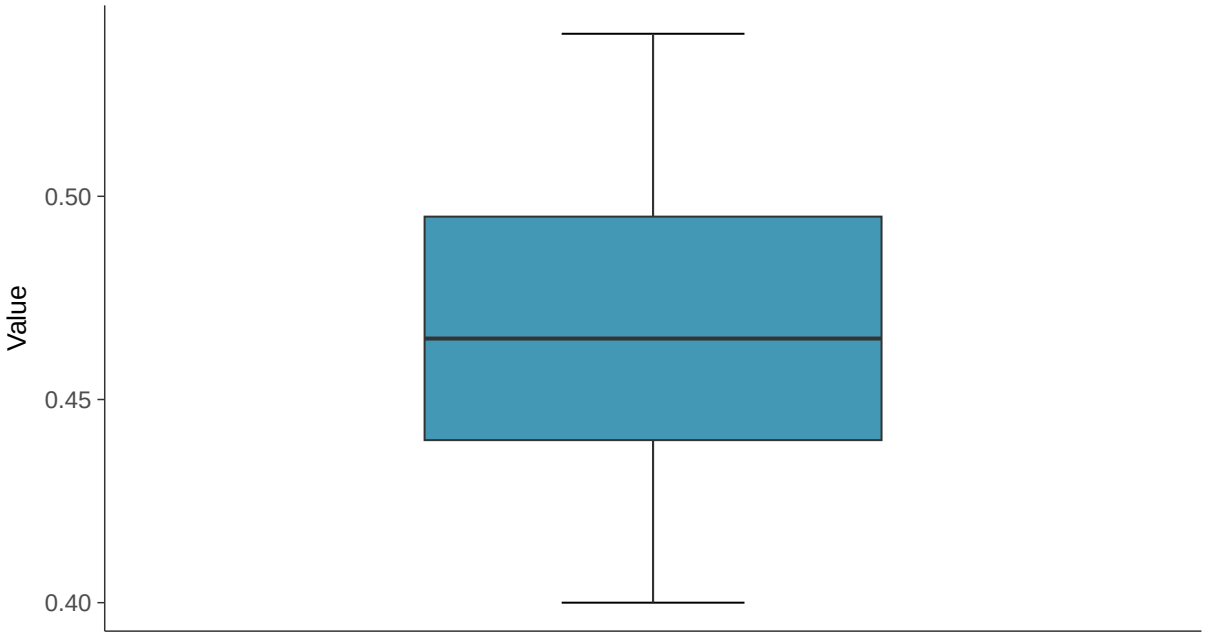
Histogram

Fluoride, MW-10 (mg/L)



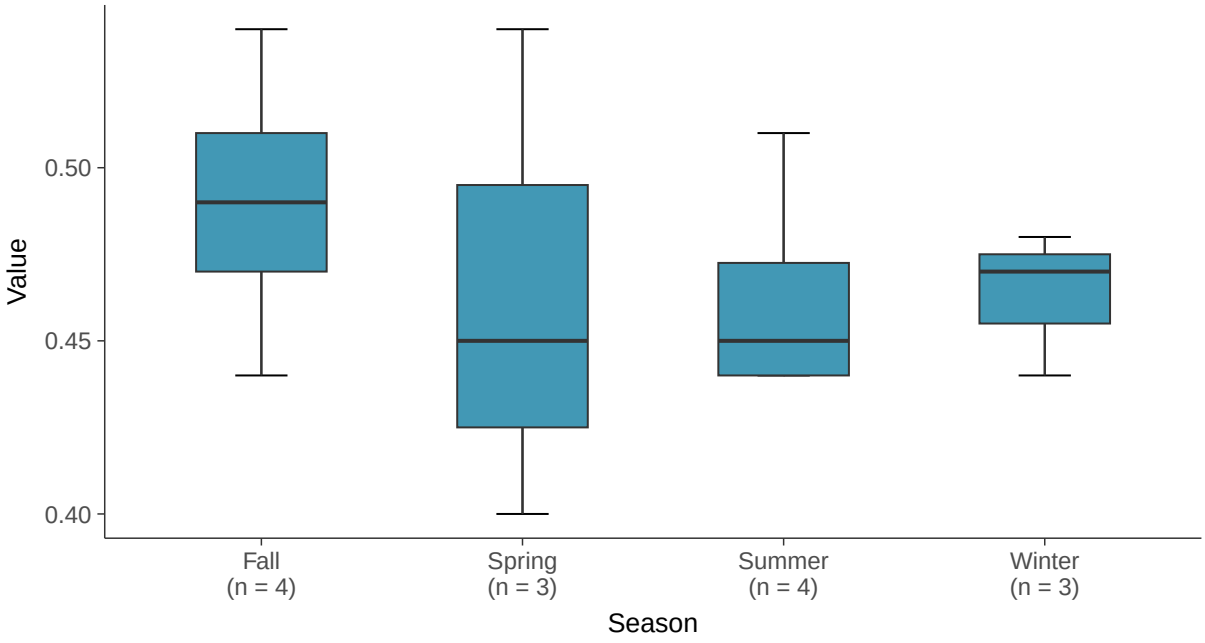
Boxplot

Fluoride, MW-10 (mg/L)



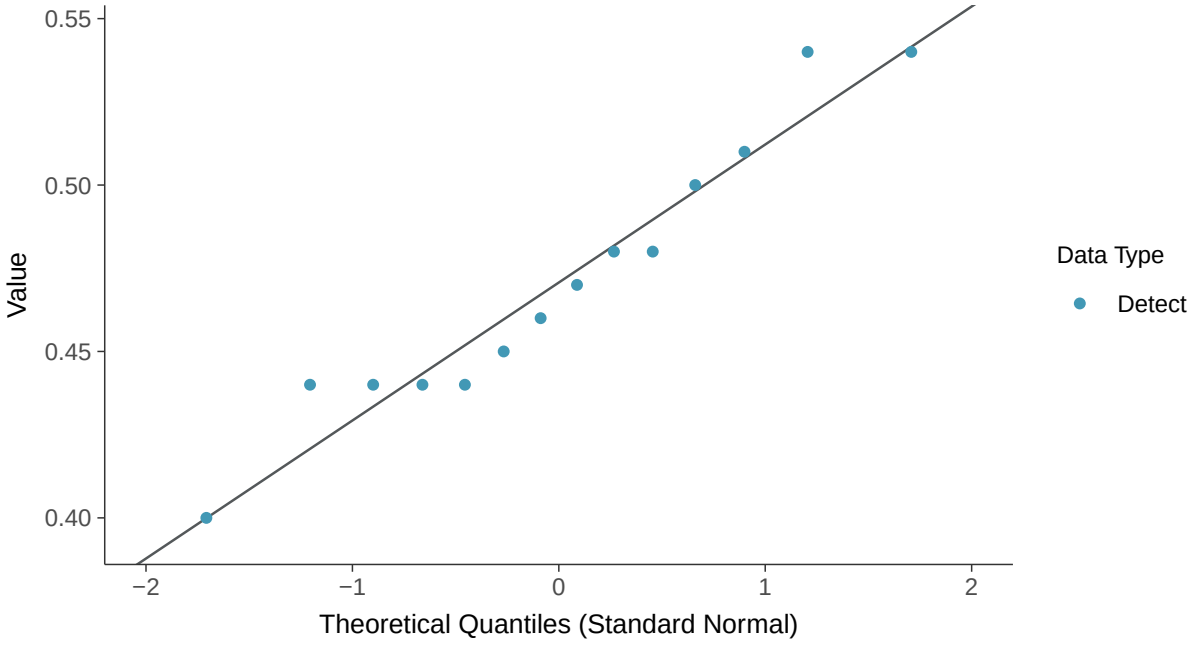
Boxplot by Season

Fluoride, MW-10 (mg/L)



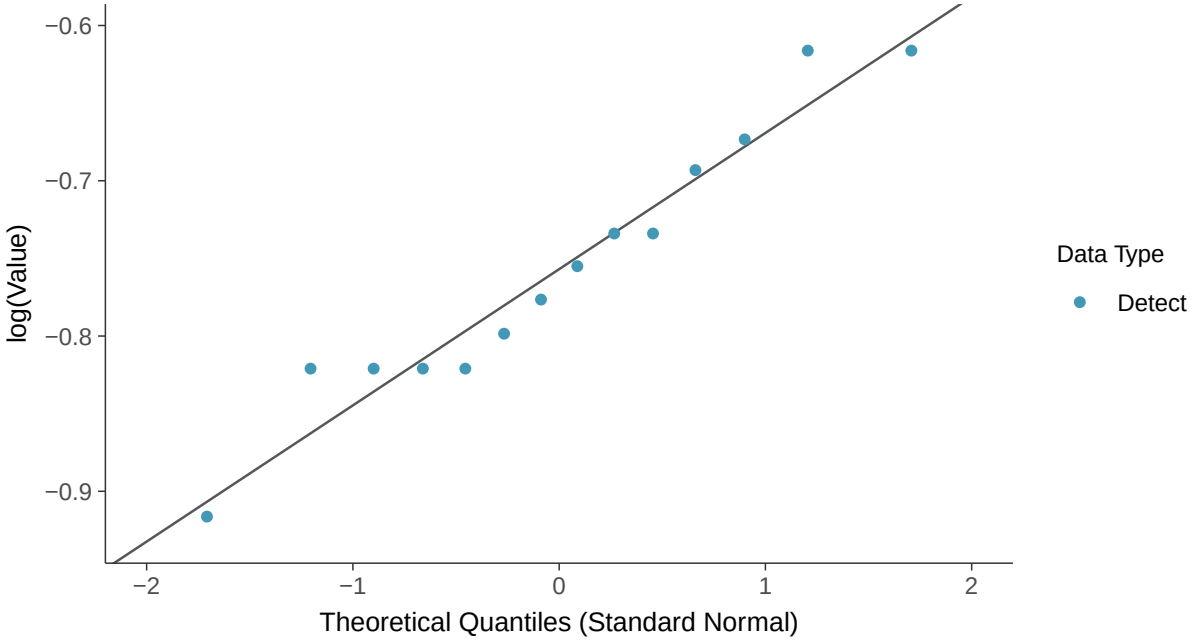
Normal Q-Q plot

Fluoride, MW-10 (mg/L)



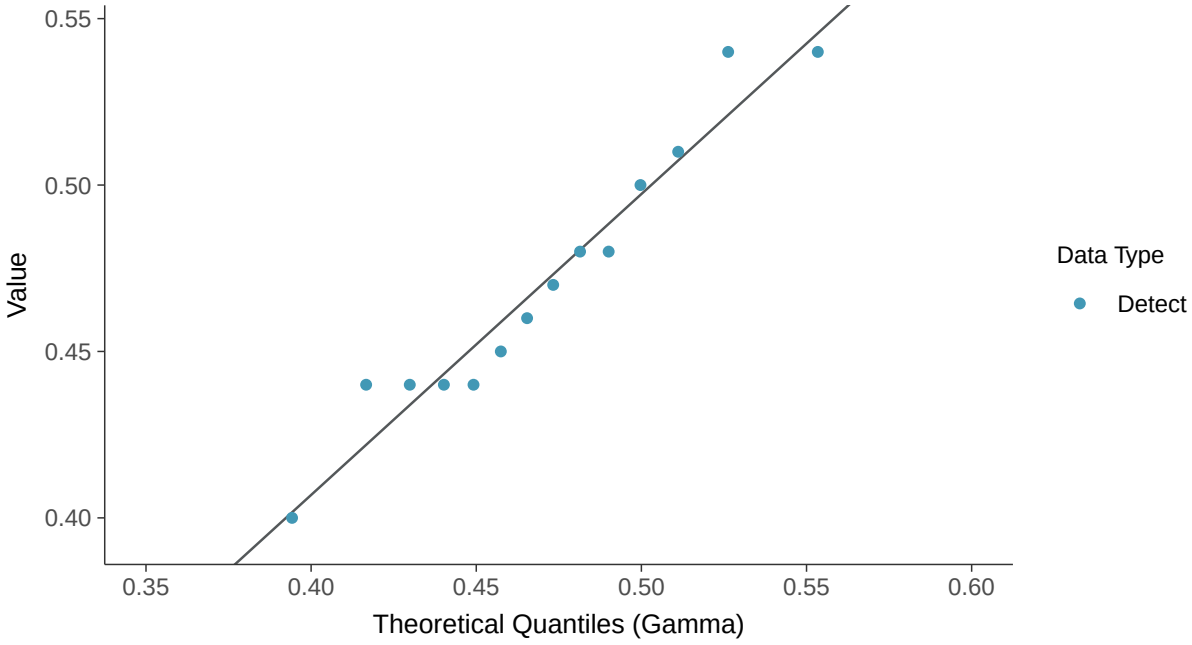
Lognormal Q-Q plot

Fluoride, MW-10 (mg/L)



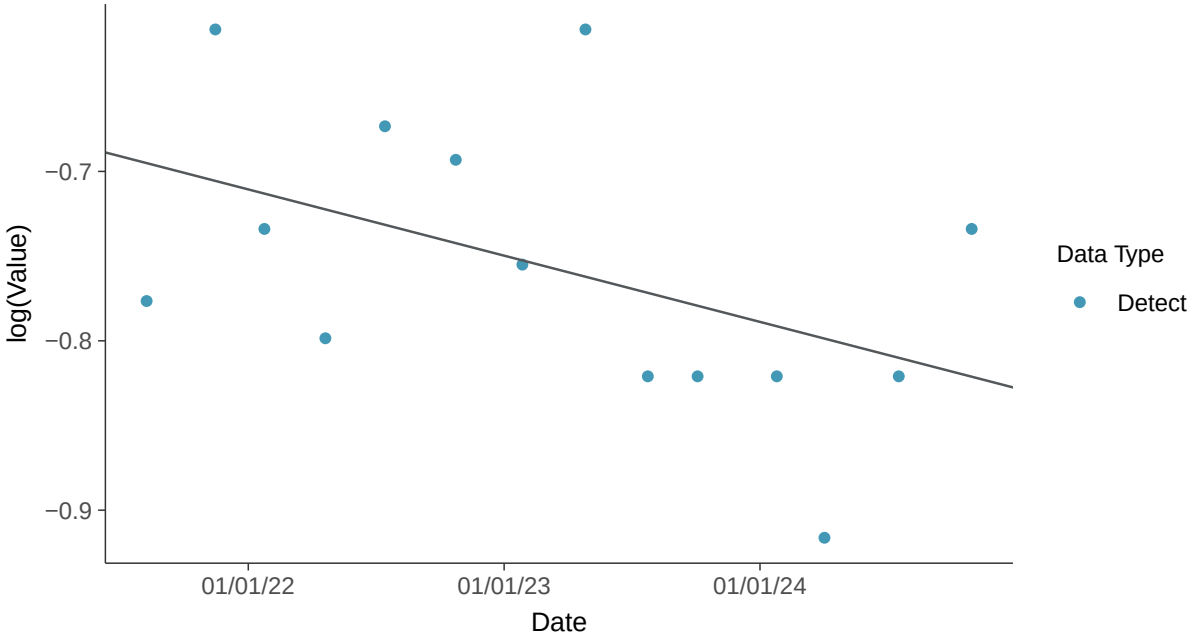
Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



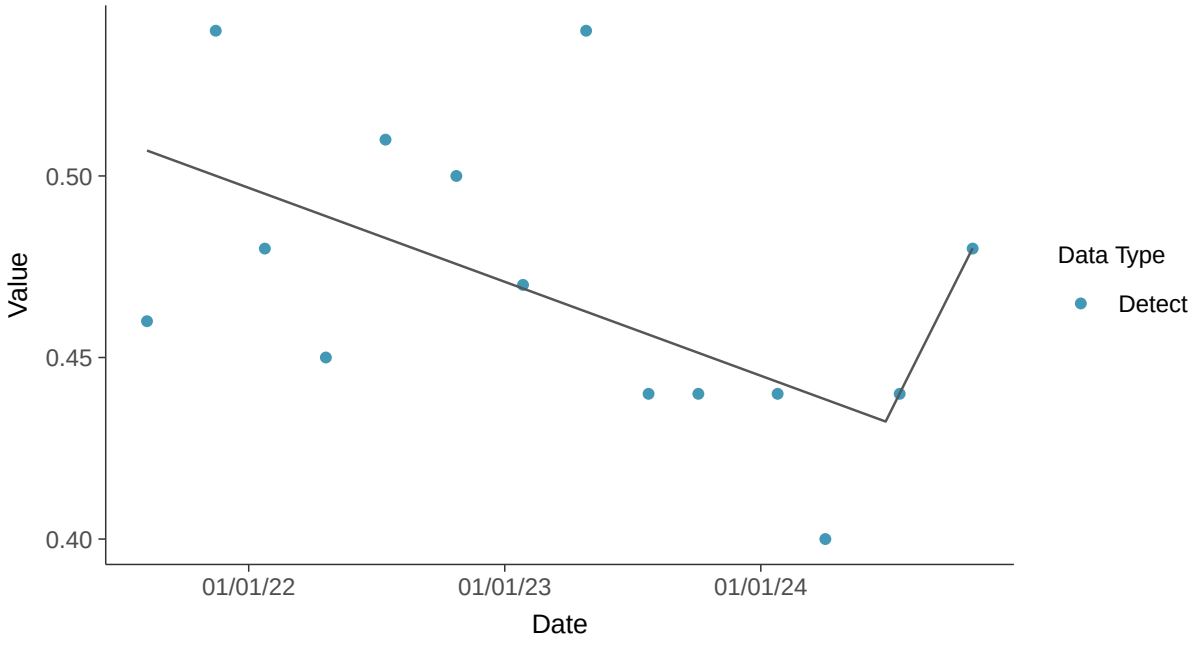
Trend Regression: Lognormal MLE

Fluoride, MW-10 (mg/L)



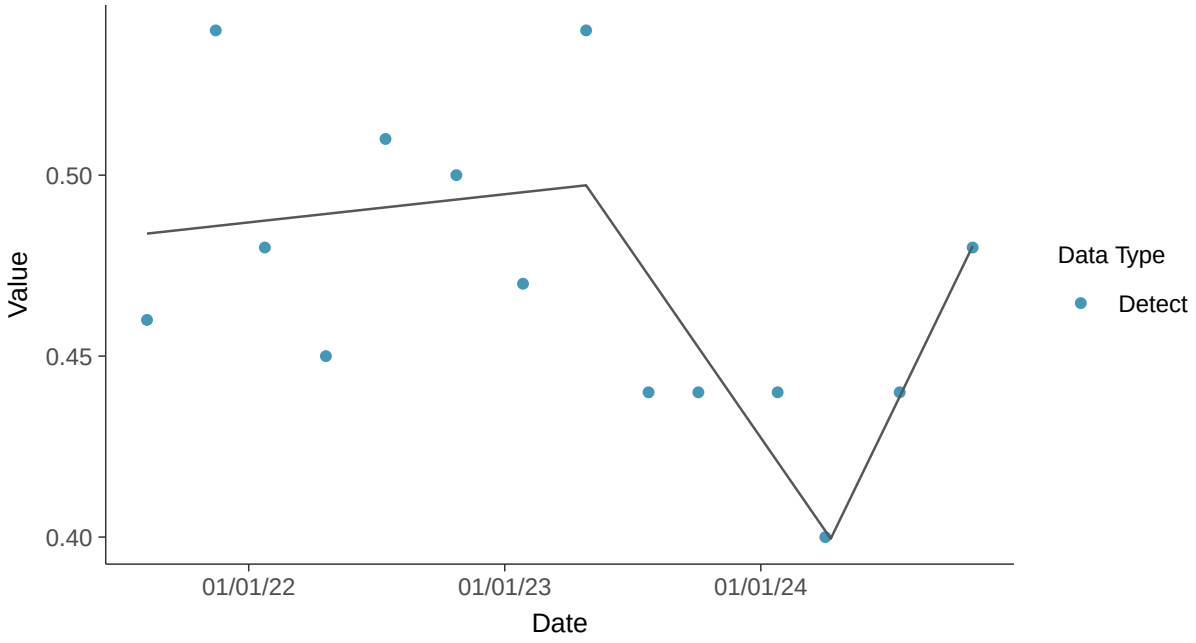
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-10 (mg/L)

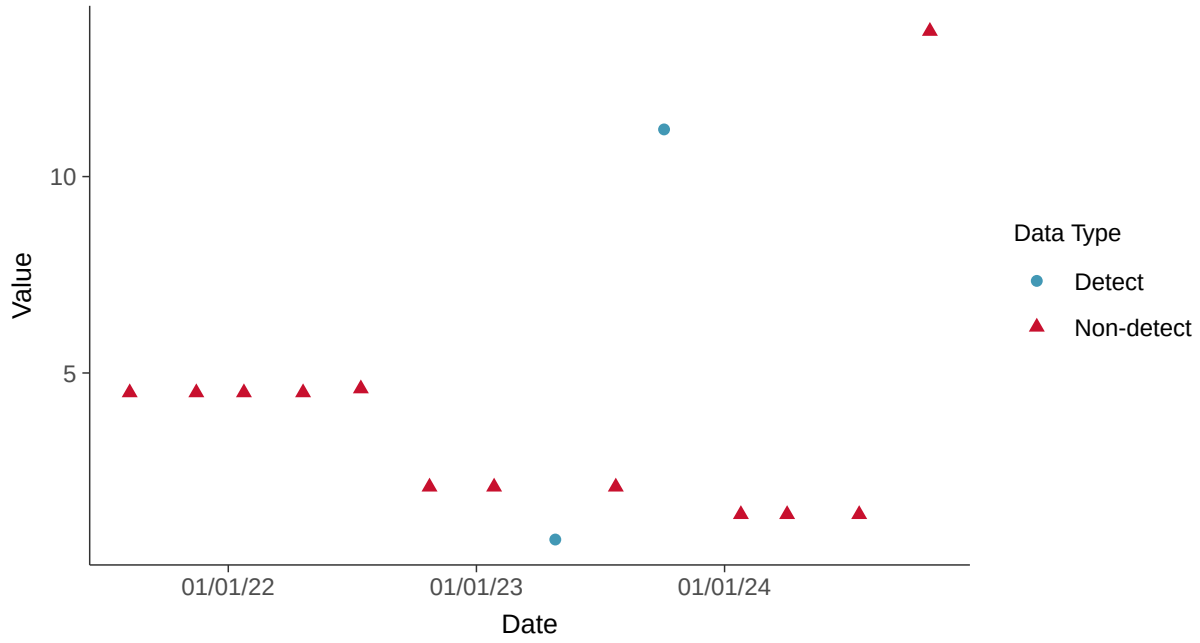


App. IV: Lead, MW-10

ID: 09_03_113

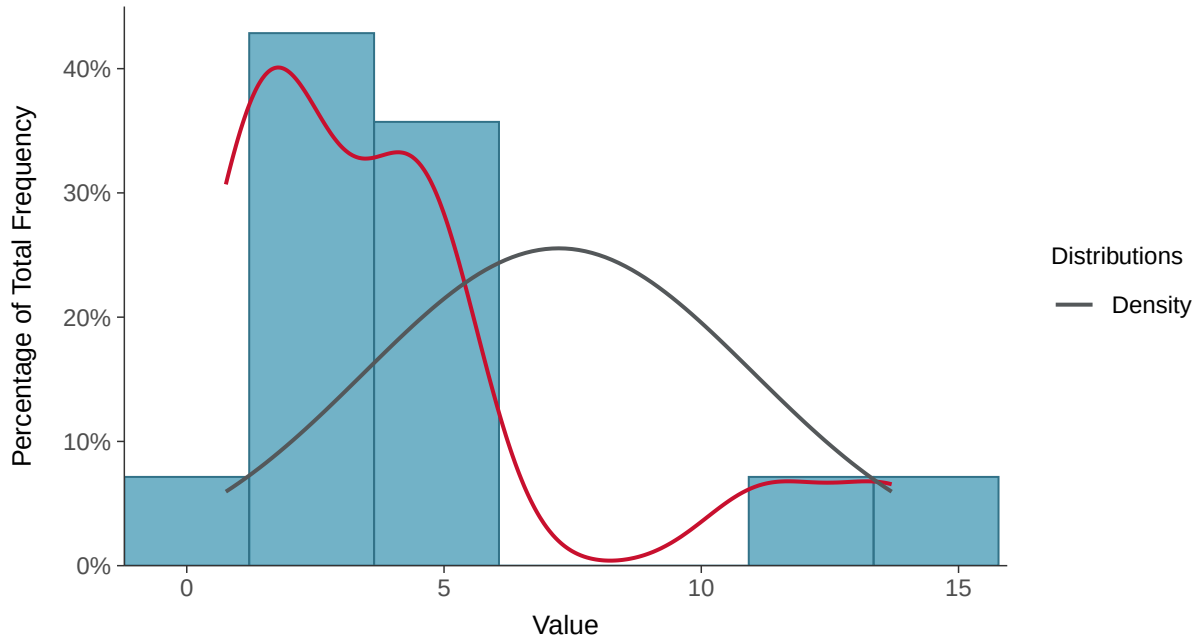
Scatter Plot

Lead, MW-10 (ug/L)



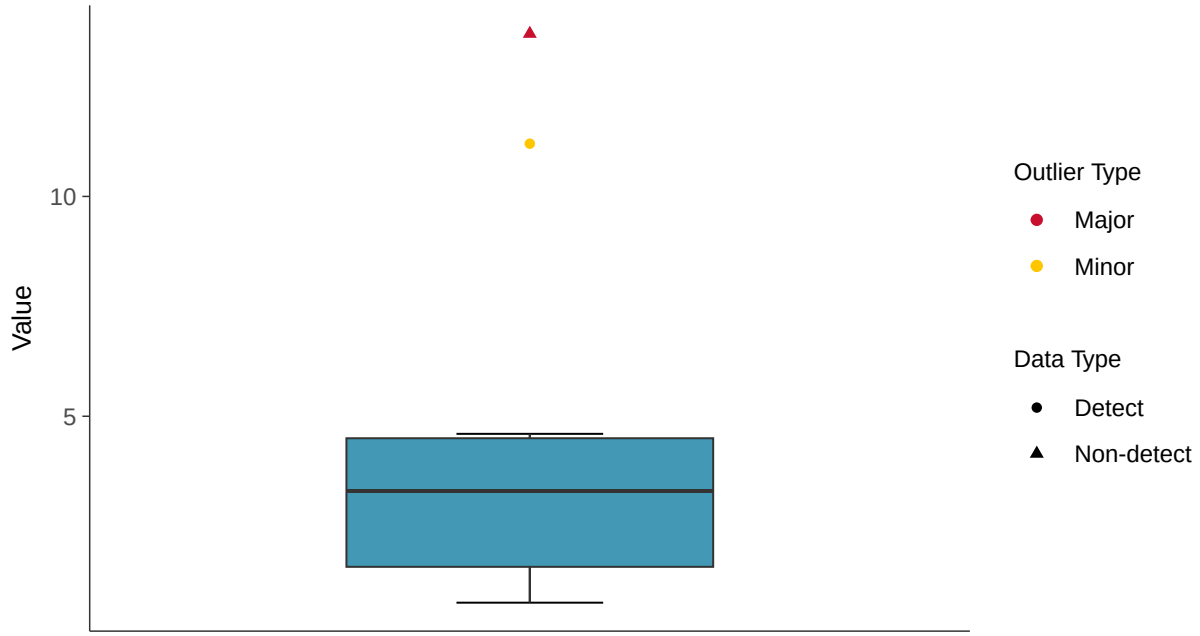
Histogram

Lead, MW-10 (ug/L)



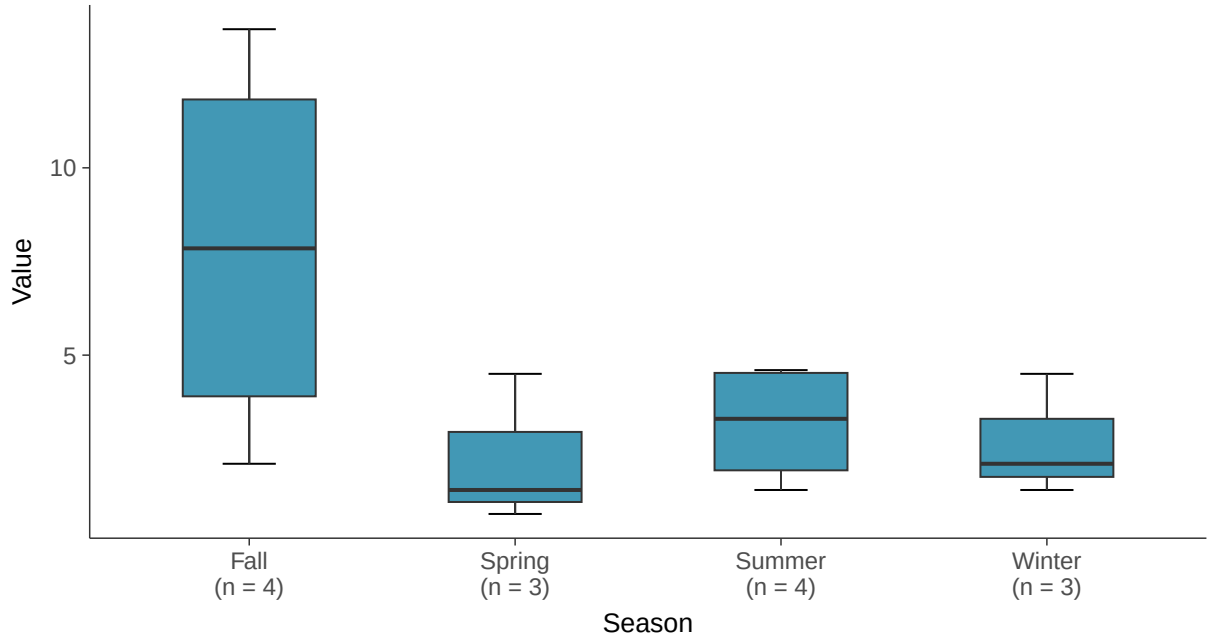
Boxplot

Lead, MW-10 (ug/L)



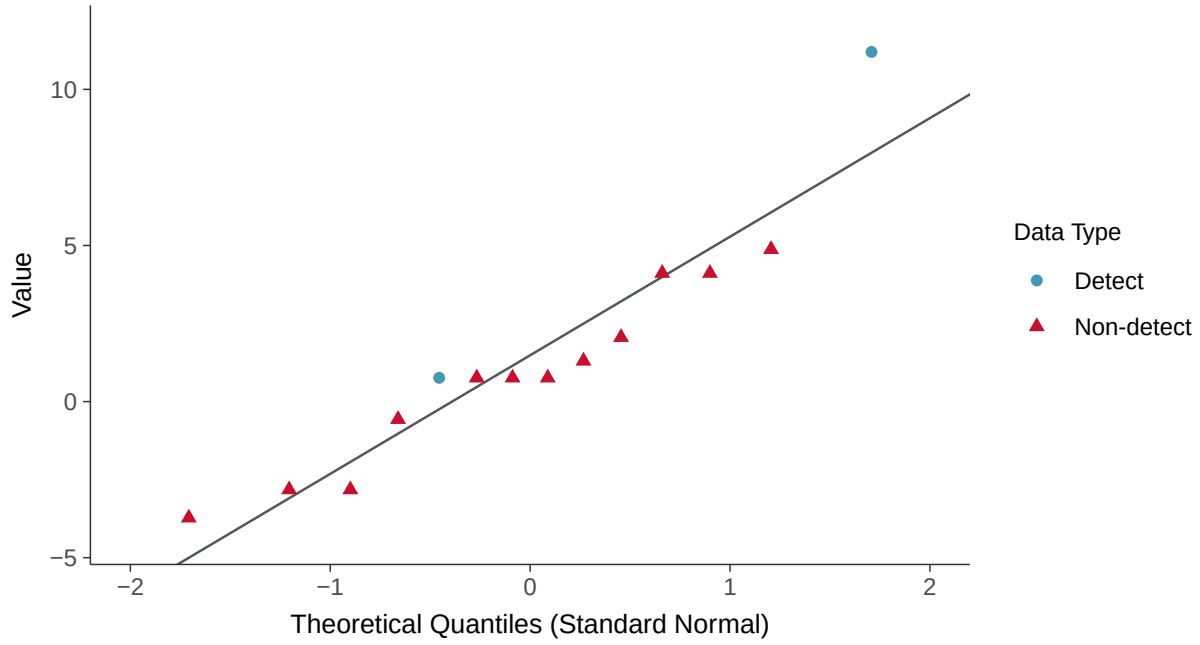
Boxplot by Season

Lead, MW-10 (ug/L)



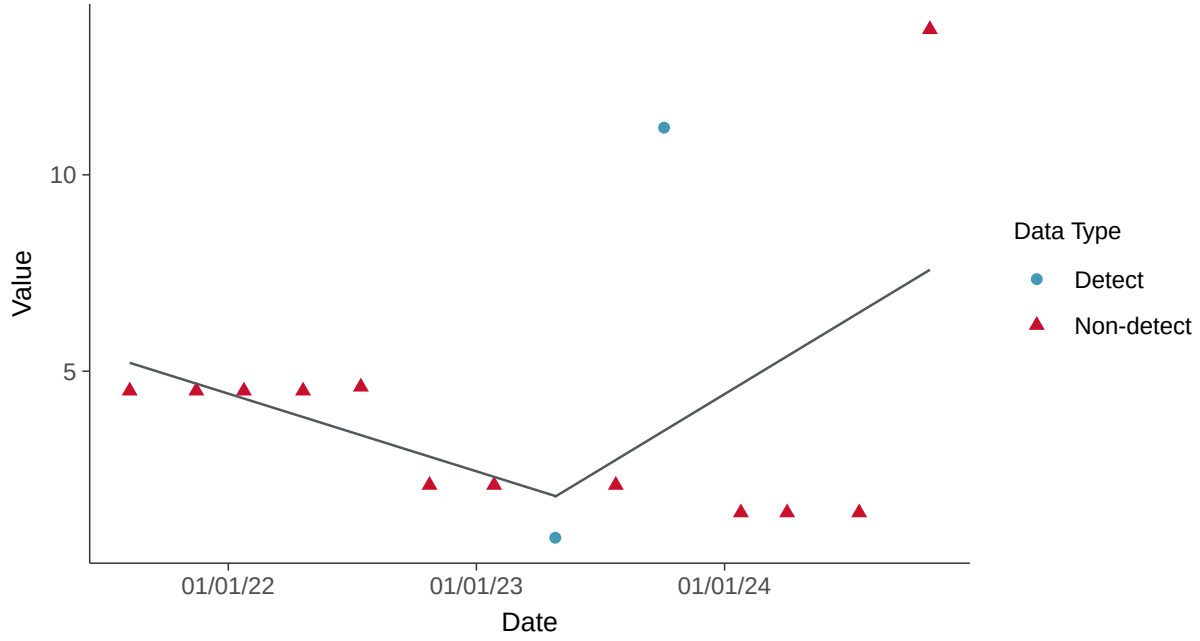
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-10 (ug/L)



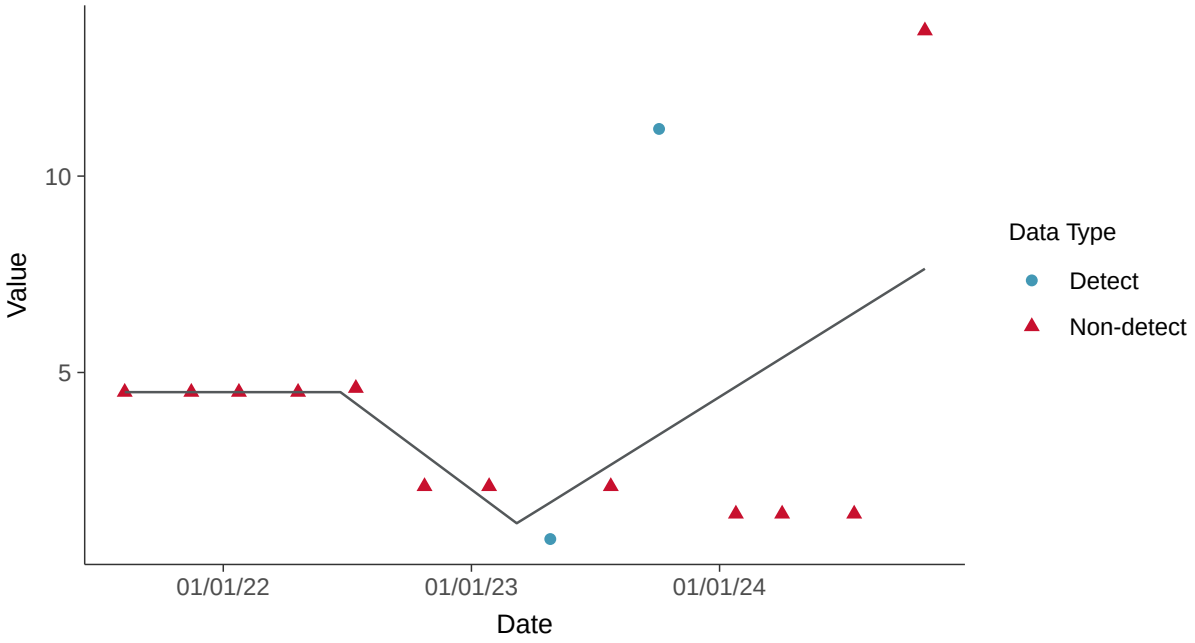
Trend Regression: Piecewise Linear-Linear

Lead, MW-10 (ug/L)



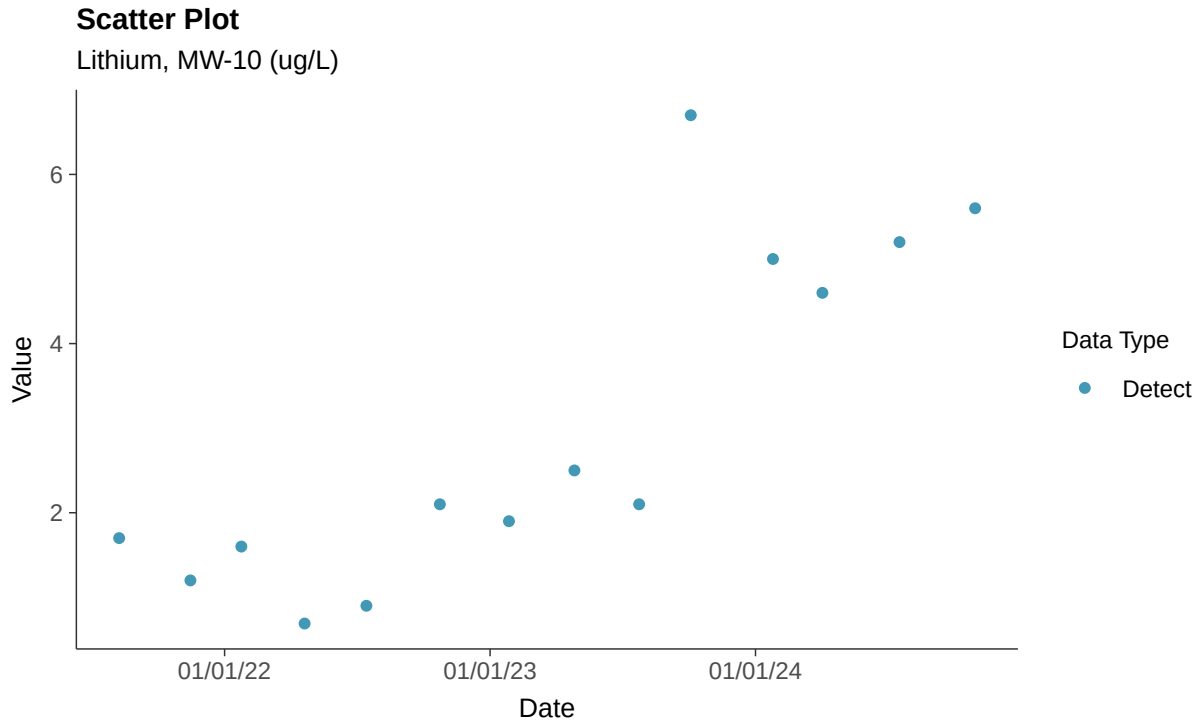
Trend Regression: Piecewise Linear-Linear-Linear

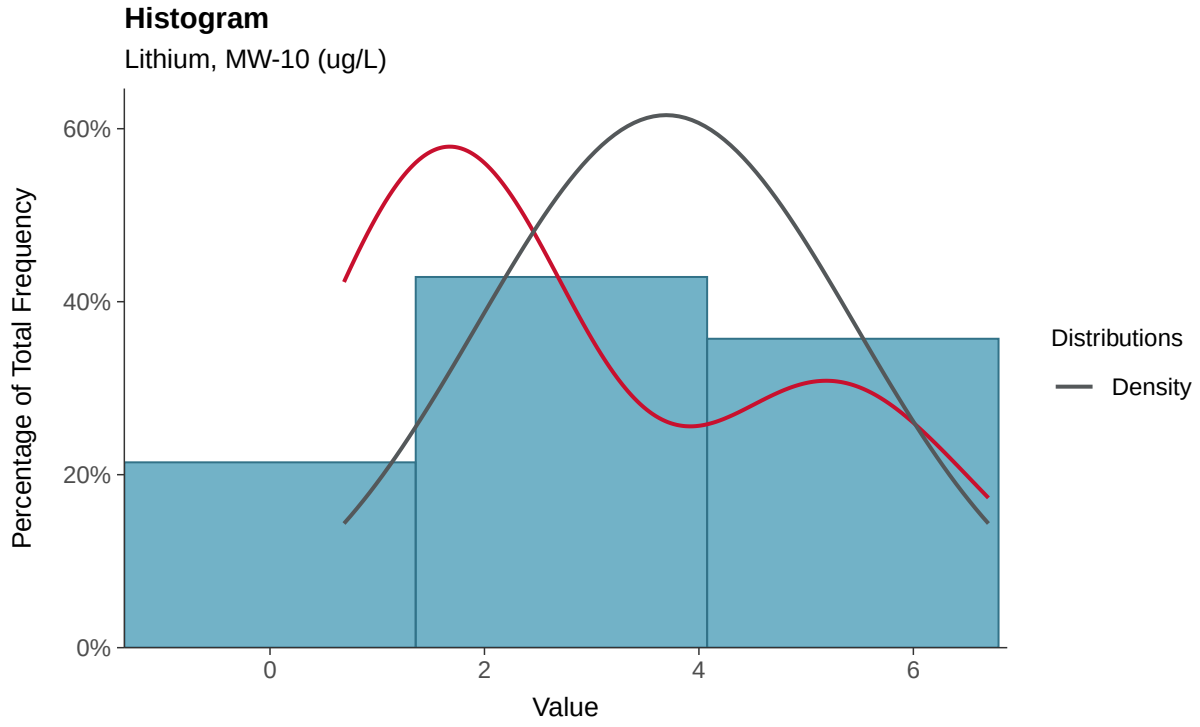
Lead, MW-10 (ug/L)



App. IV: Lithium, MW-10

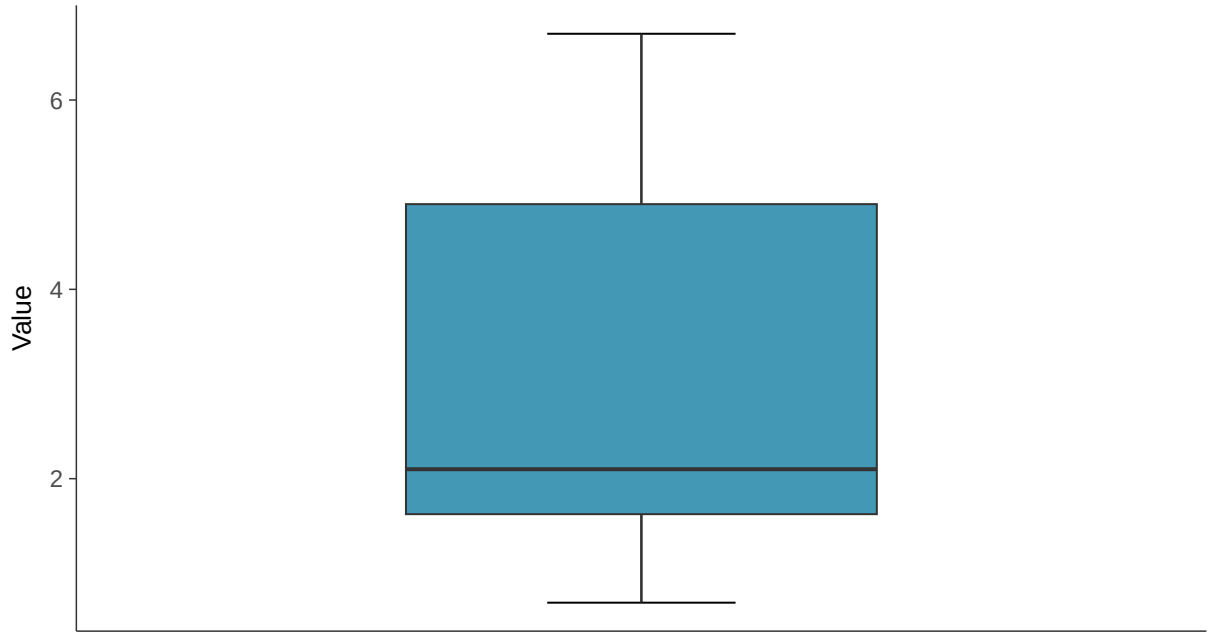
ID: 09_03_114





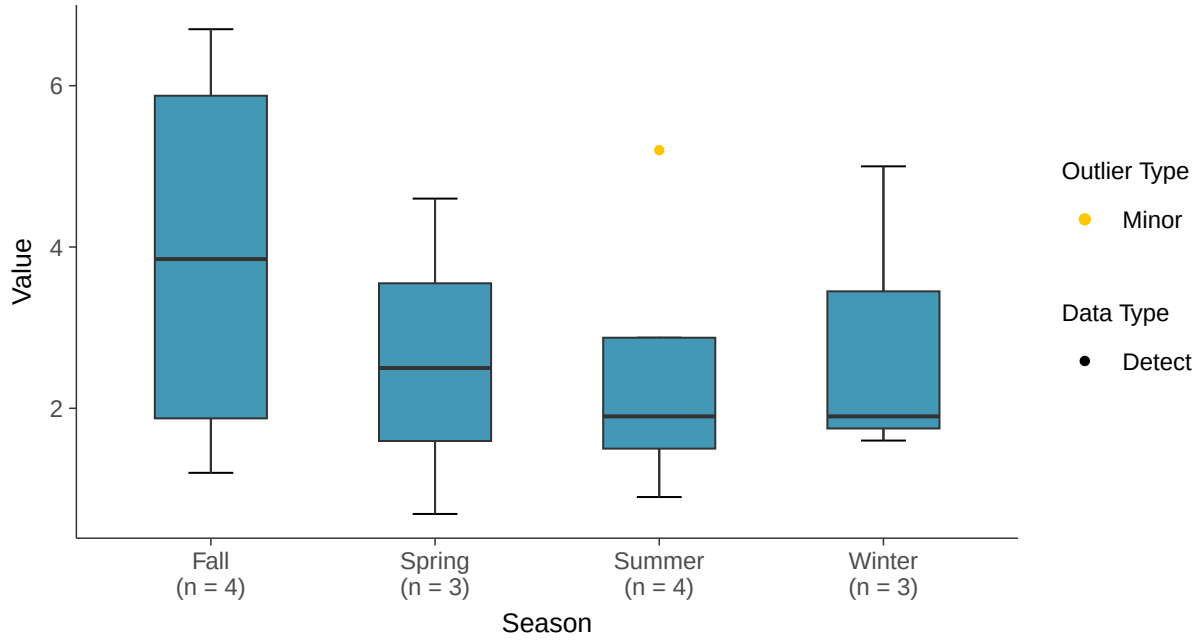
Boxplot

Lithium, MW-10 (ug/L)



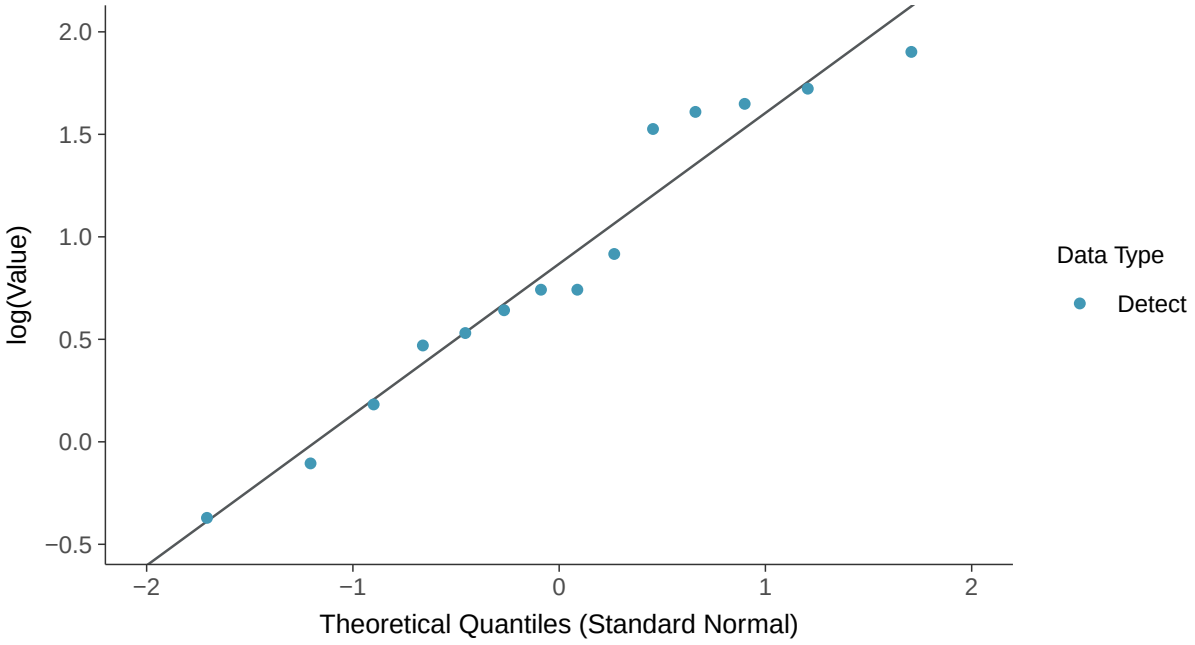
Boxplot by Season

Lithium, MW-10 (ug/L)



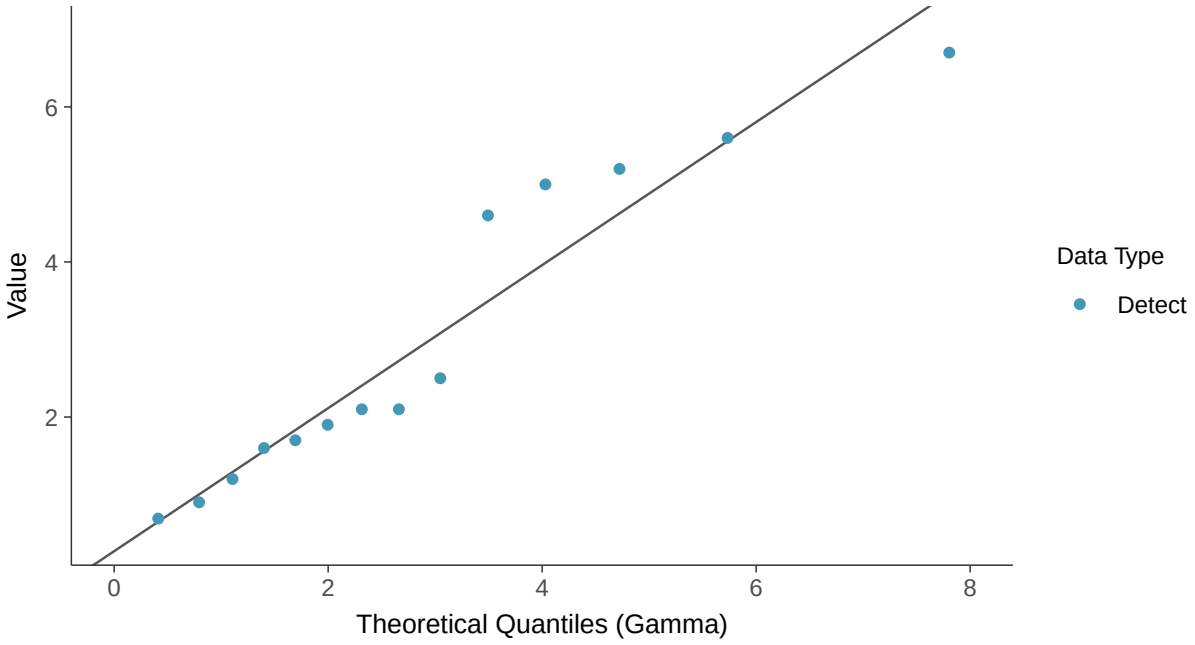
Lognormal Q-Q plot

Lithium, MW-10 (ug/L)



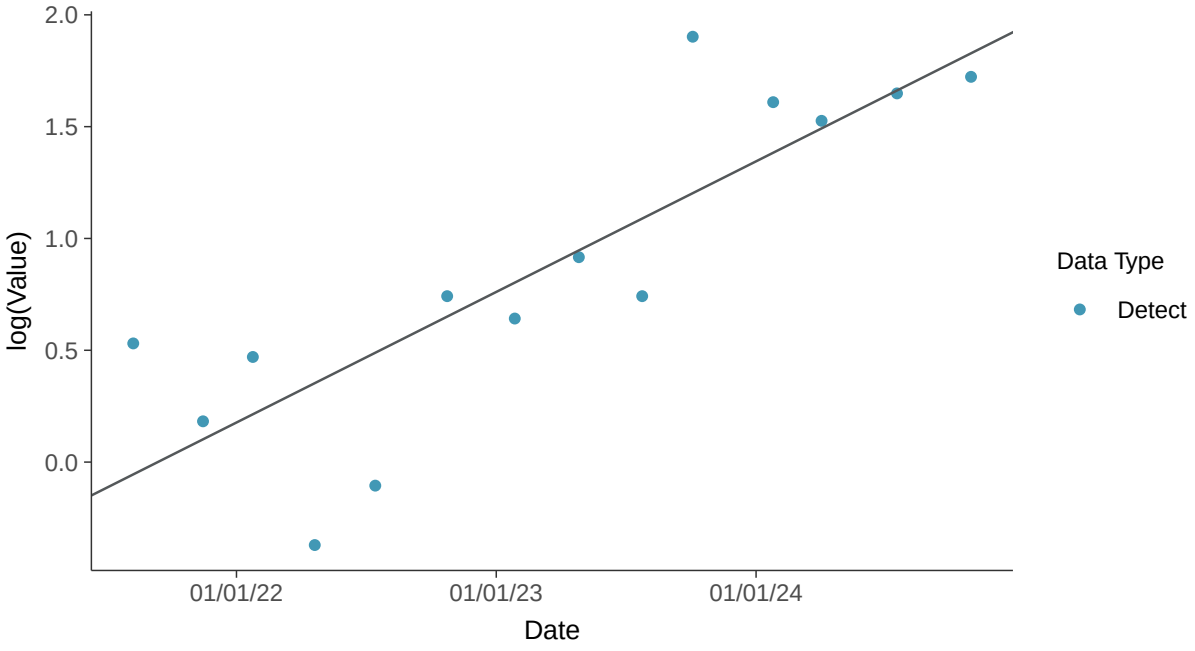
Gamma Q-Q plot

Lithium, MW-10 (ug/L)



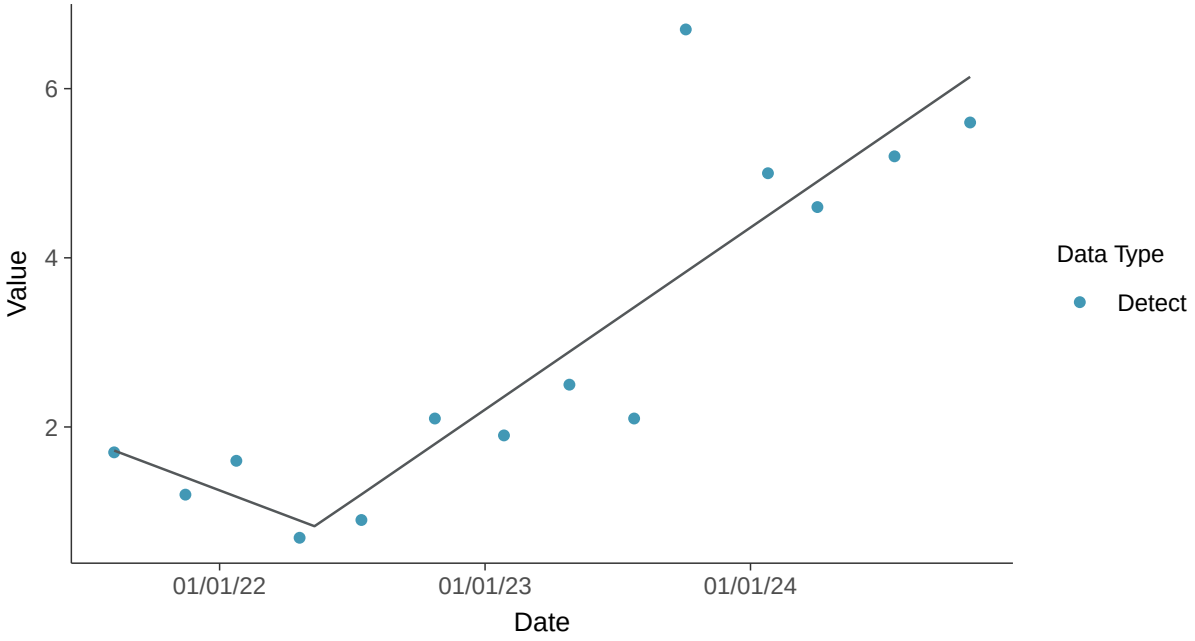
Trend Regression: Lognormal MLE

Lithium, MW-10 (ug/L)



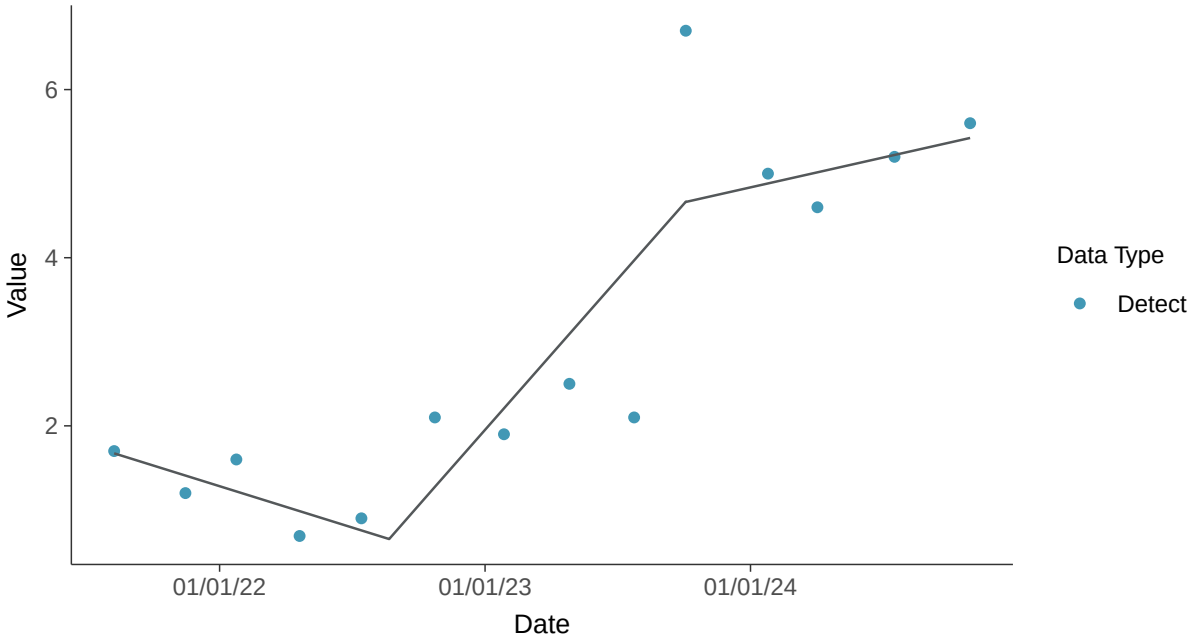
Trend Regression: Piecewise Linear-Linear

Lithium, MW-10 (ug/L)



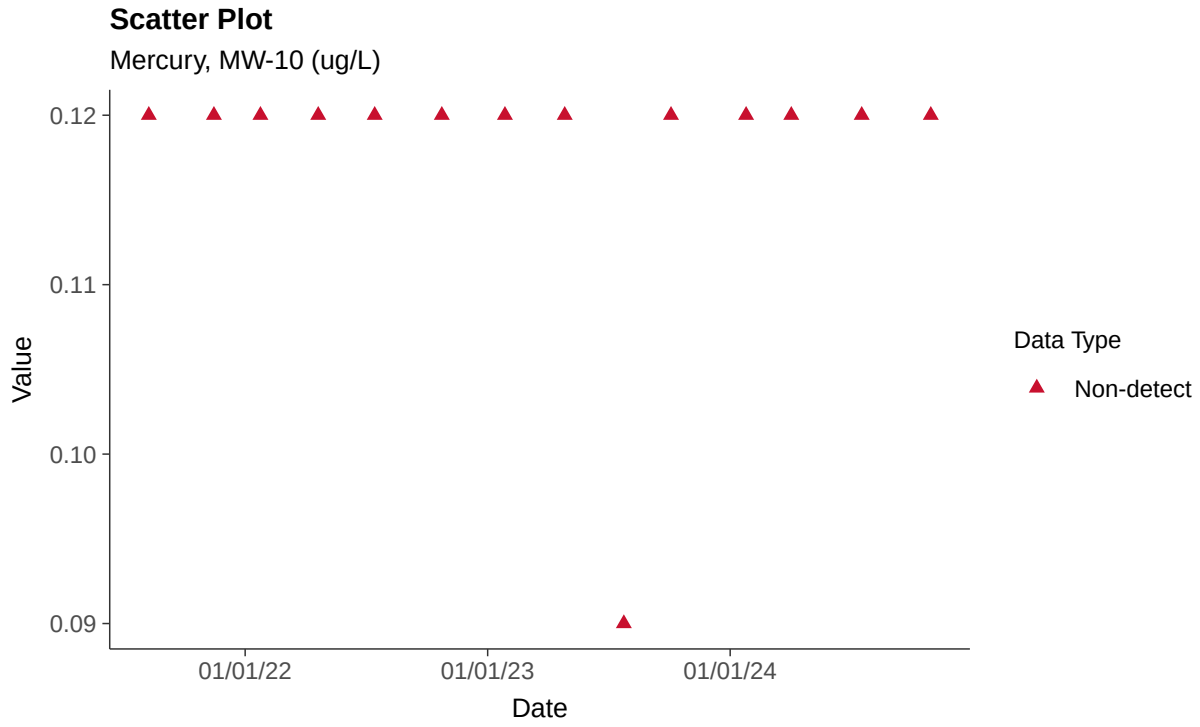
Trend Regression: Piecewise Linear-Linear-Linear

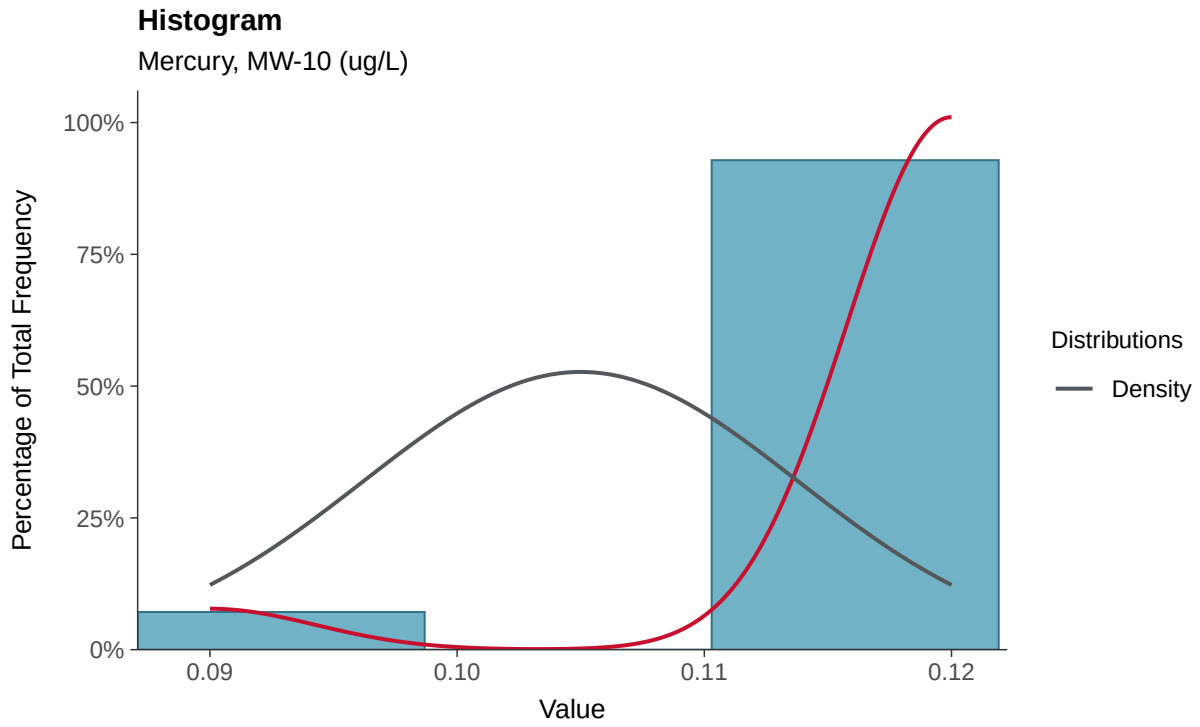
Lithium, MW-10 (ug/L)



App. IV: Mercury, MW-10

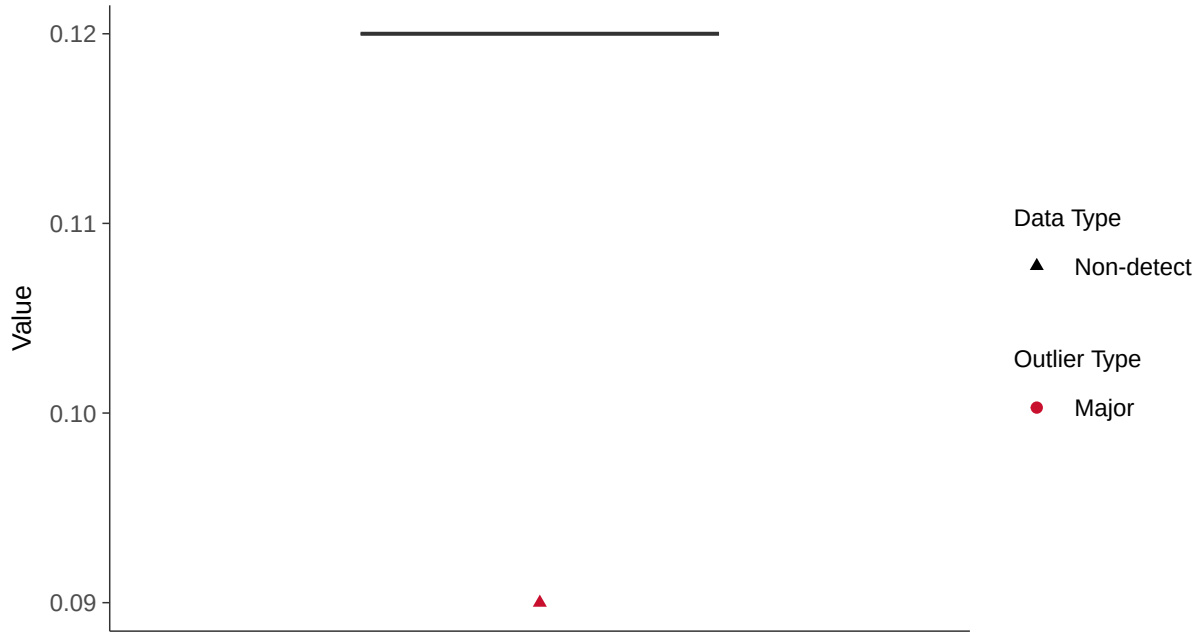
ID: 09_03_115





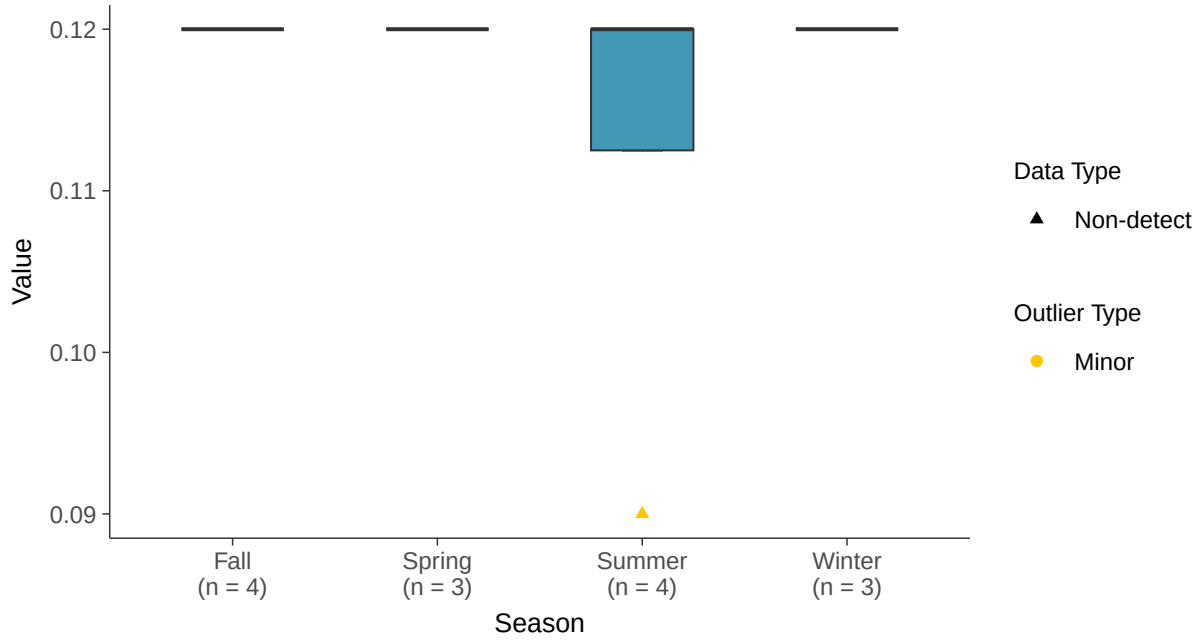
Boxplot

Mercury, MW-10 (ug/L)



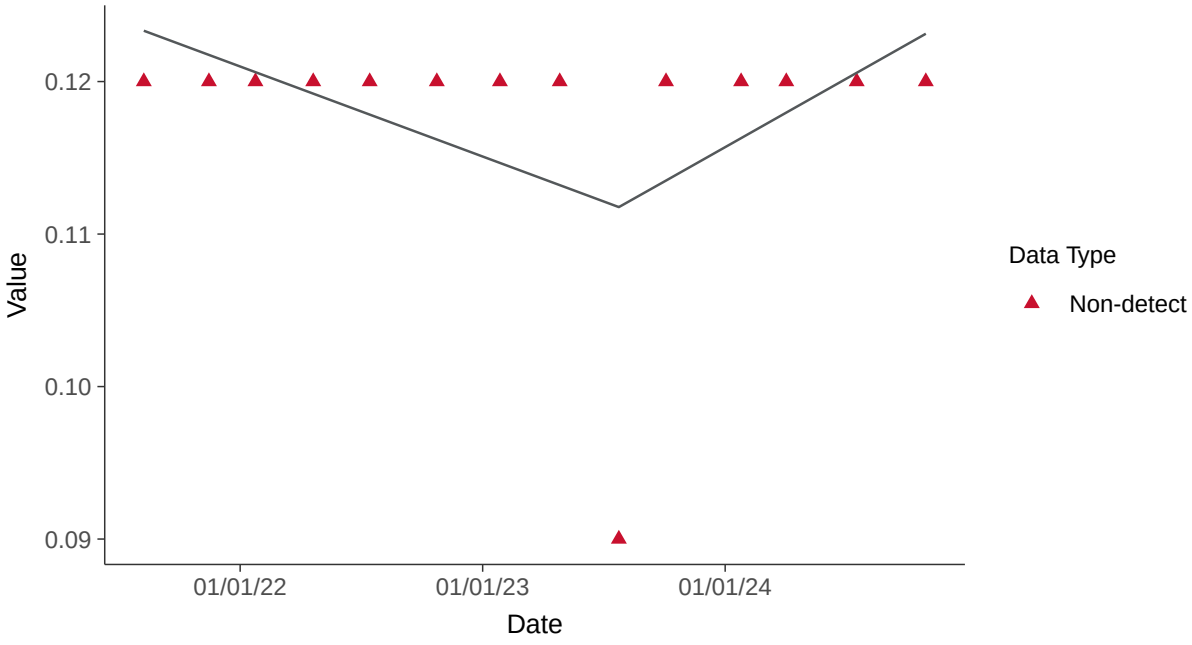
Boxplot by Season

Mercury, MW-10 (ug/L)



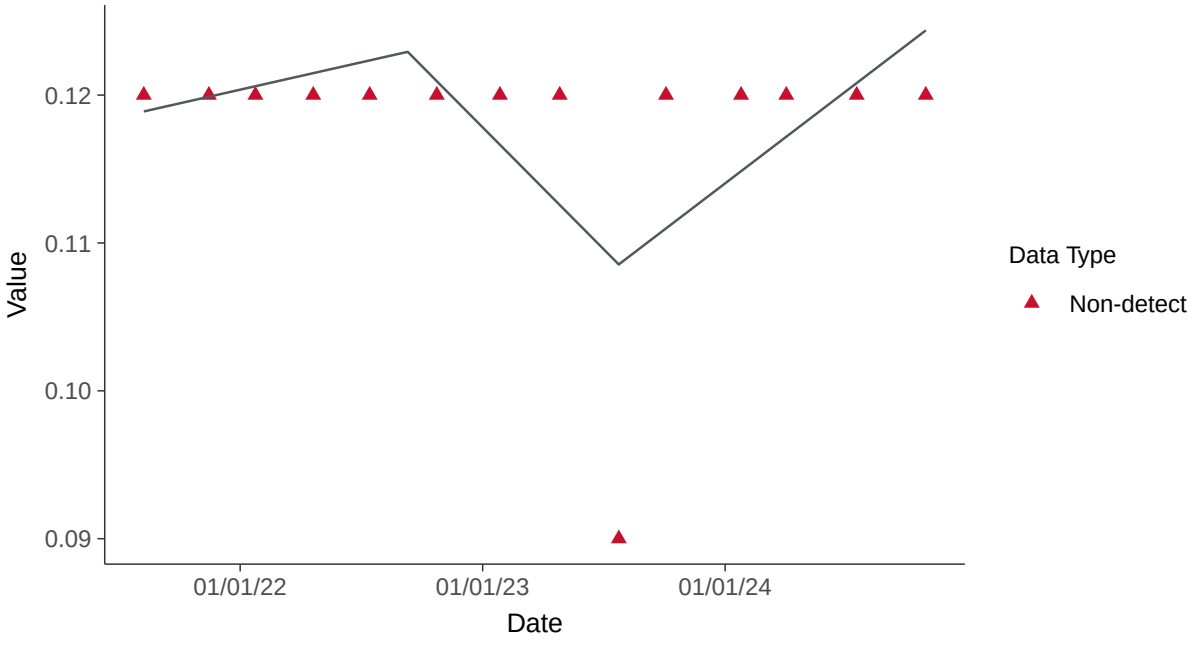
Trend Regression: Piecewise Linear-Linear

Mercury, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-10 (ug/L)

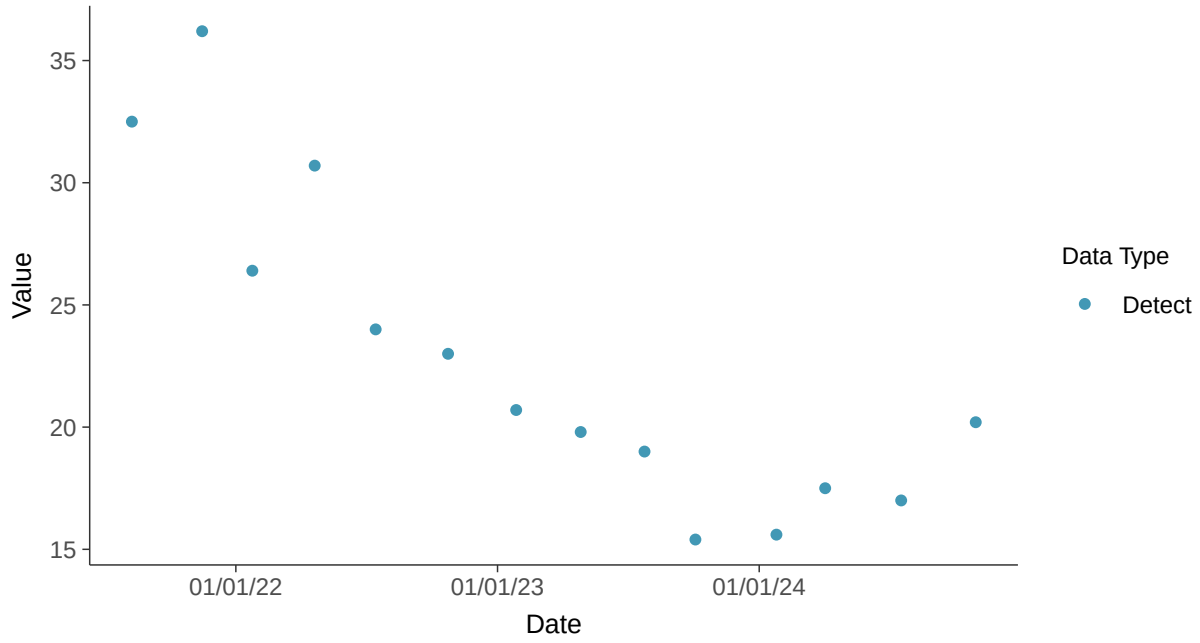


App. IV: Molybdenum, MW-10

ID: 09_03_116

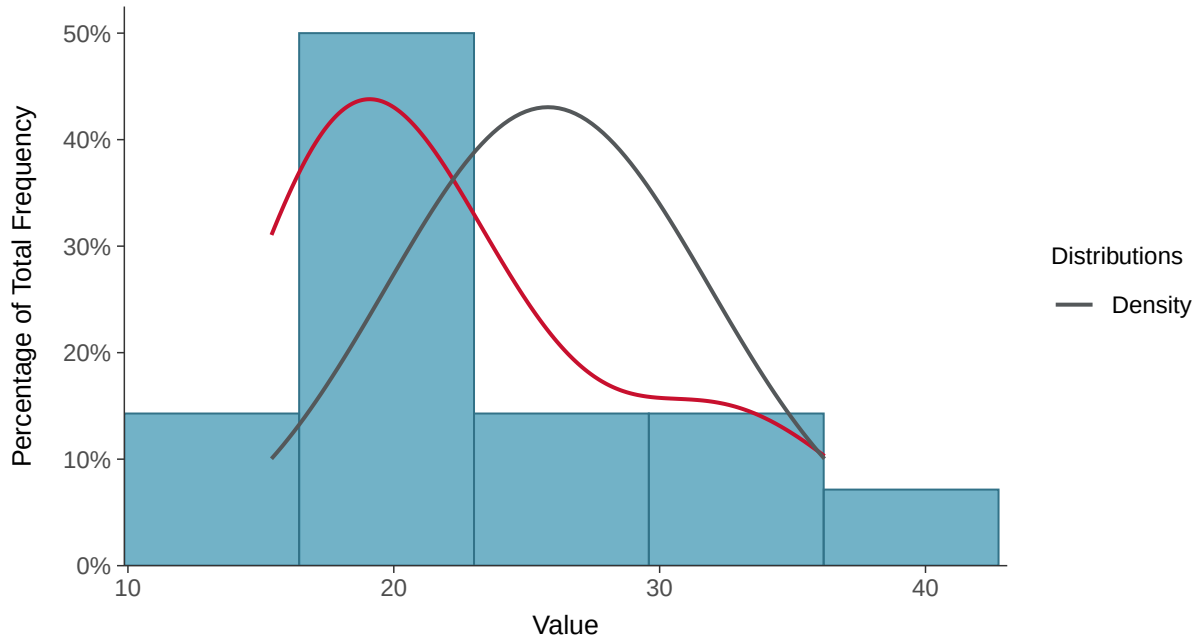
Scatter Plot

Molybdenum, MW-10 (ug/L)



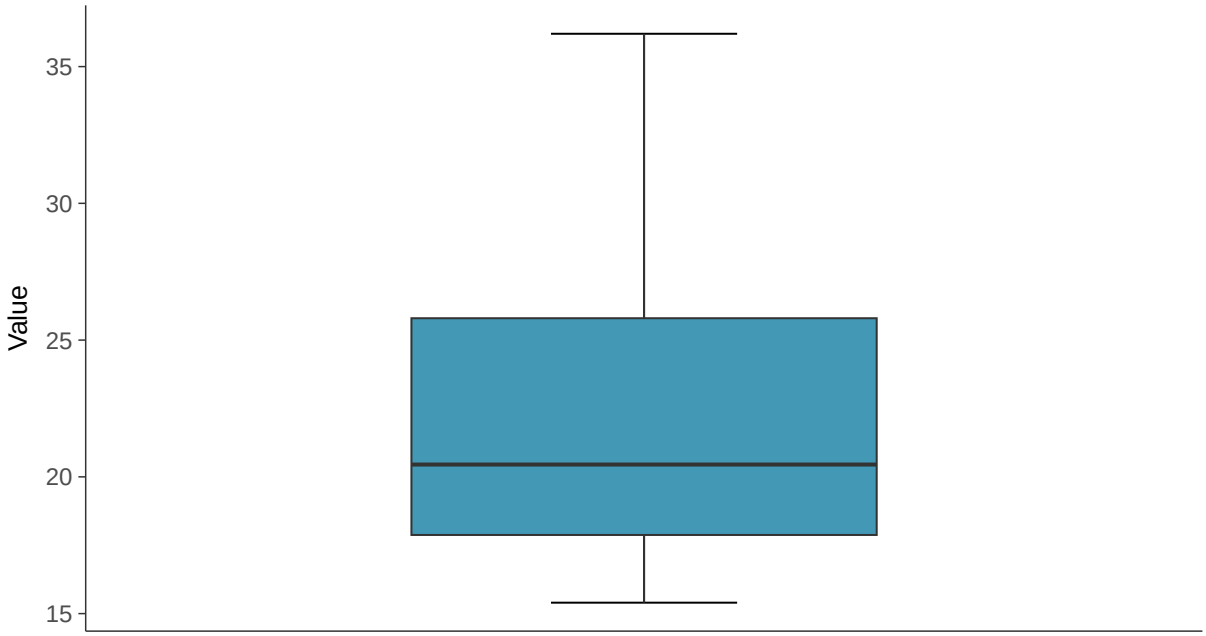
Histogram

Molybdenum, MW-10 (ug/L)



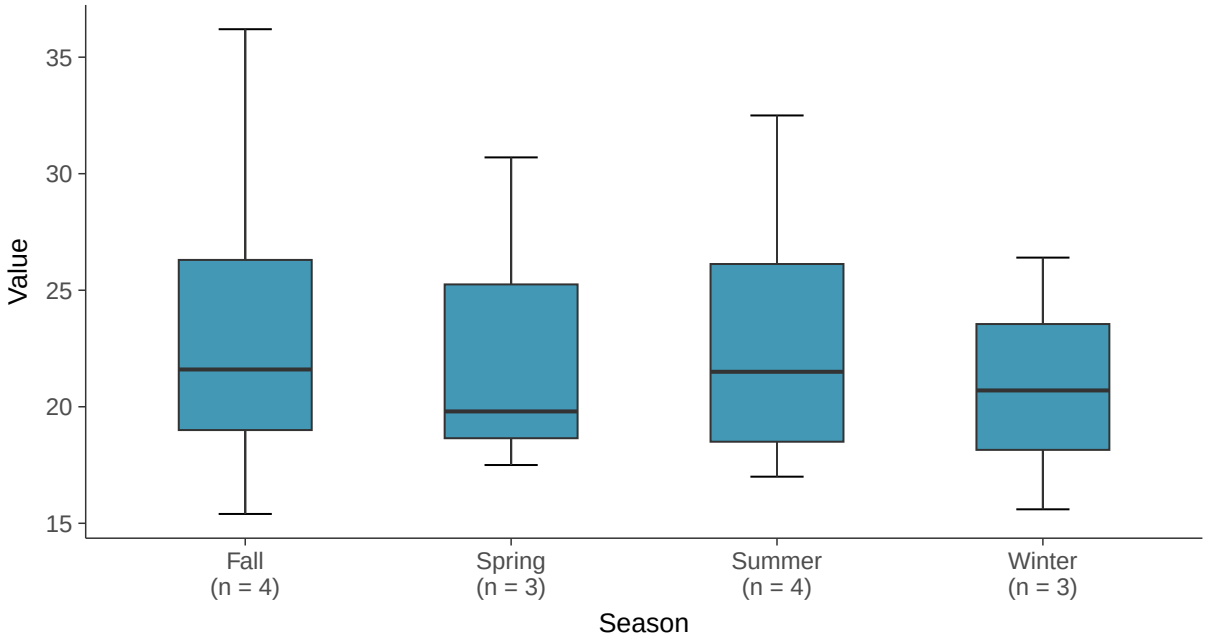
Boxplot

Molybdenum, MW-10 (ug/L)



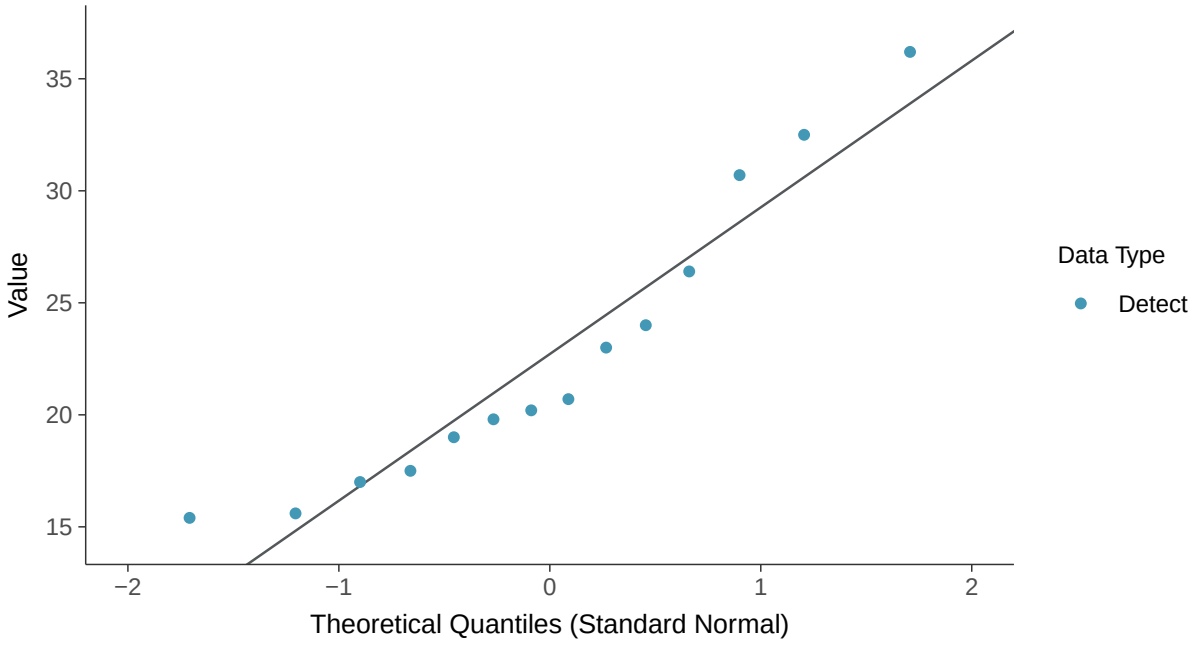
Boxplot by Season

Molybdenum, MW-10 (ug/L)



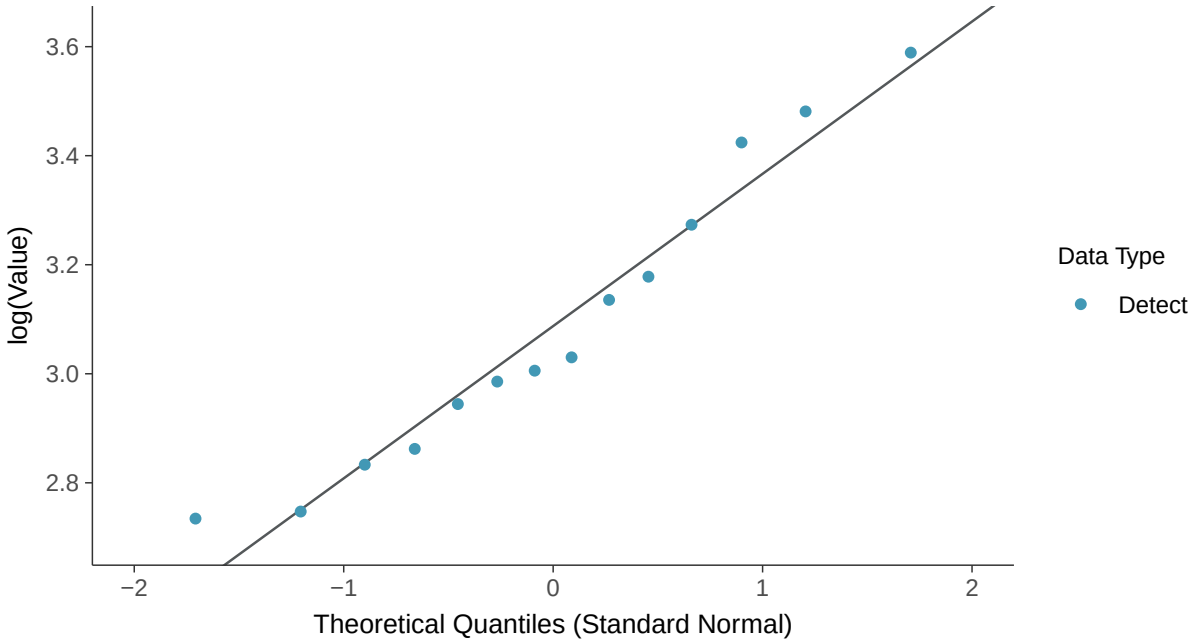
Normal Q-Q plot

Molybdenum, MW-10 (ug/L)



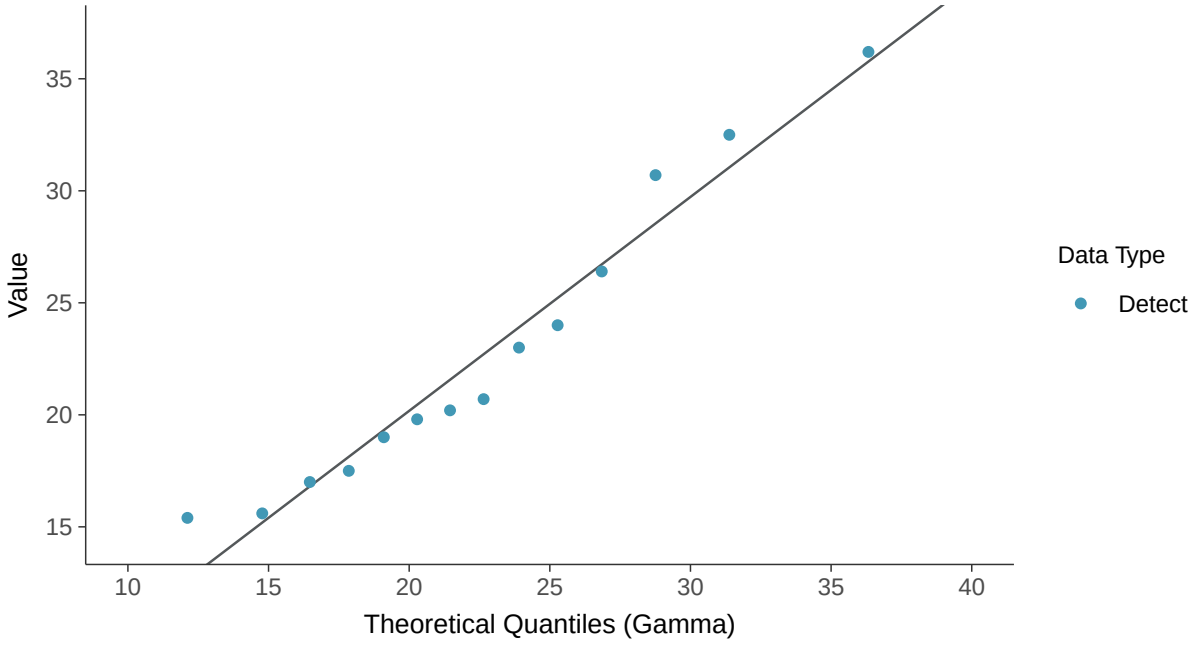
Lognormal Q-Q plot

Molybdenum, MW-10 (ug/L)



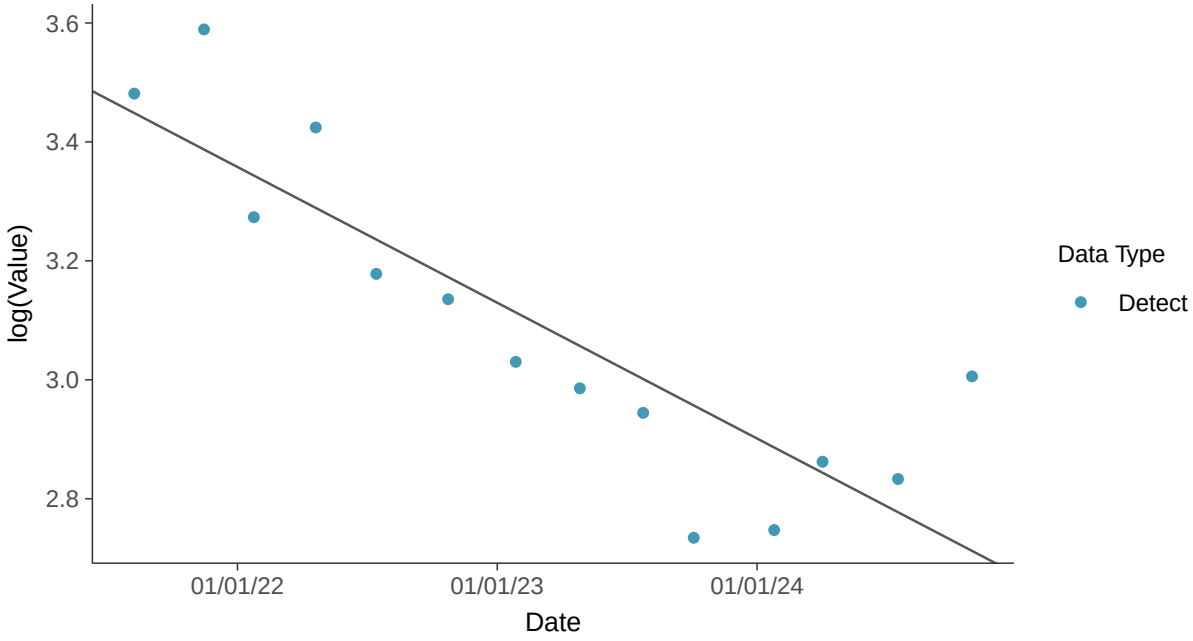
Gamma Q-Q plot

Molybdenum, MW-10 (ug/L)



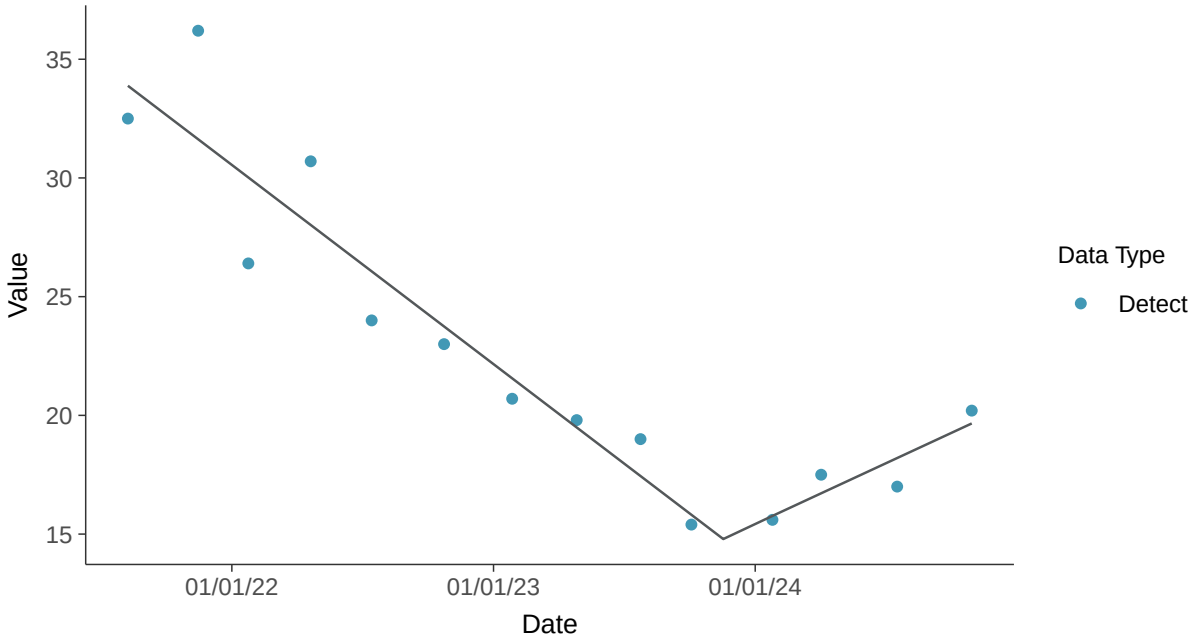
Trend Regression: Lognormal MLE

Molybdenum, MW-10 (ug/L)



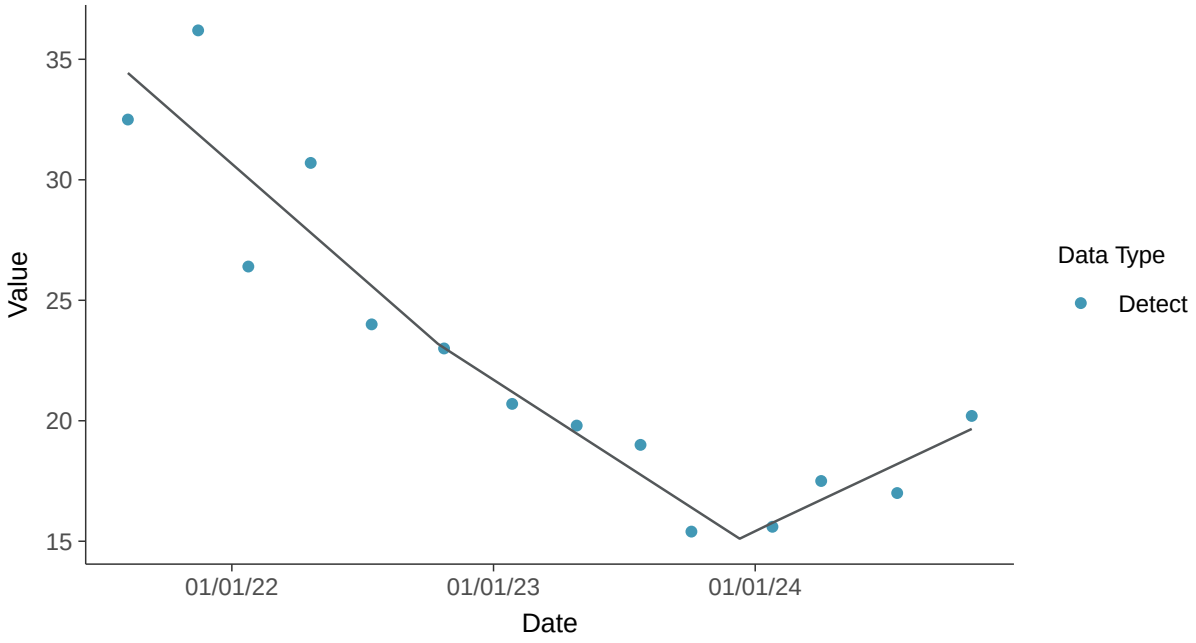
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-10 (ug/L)

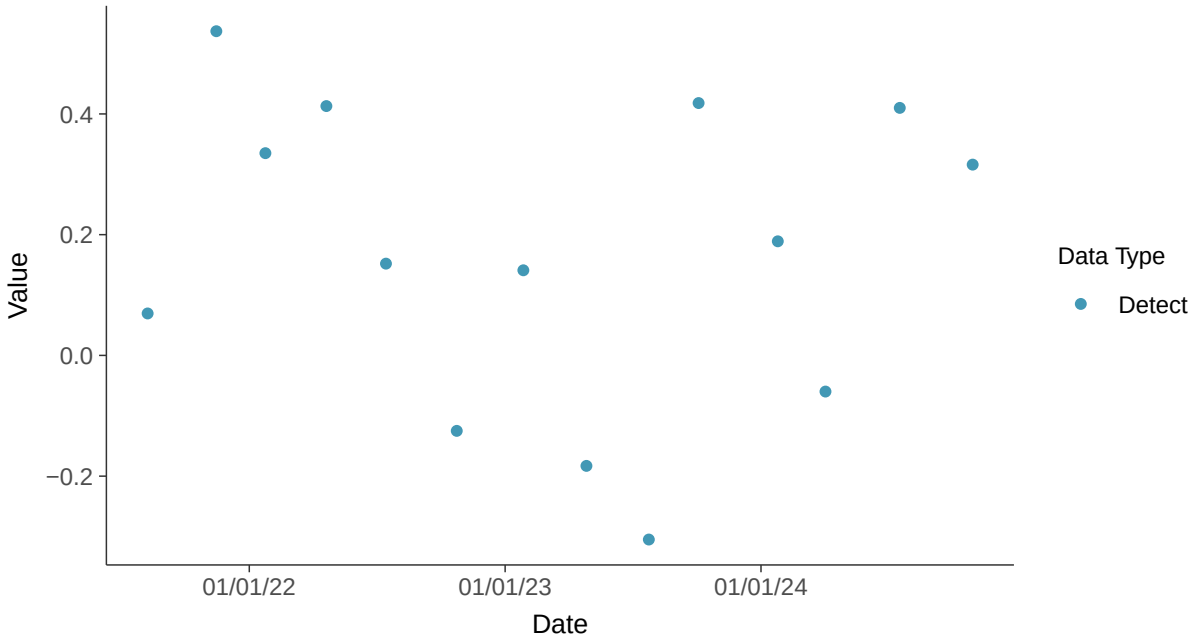


App. IV: Radium-226, MW-10

ID: 09_03_119

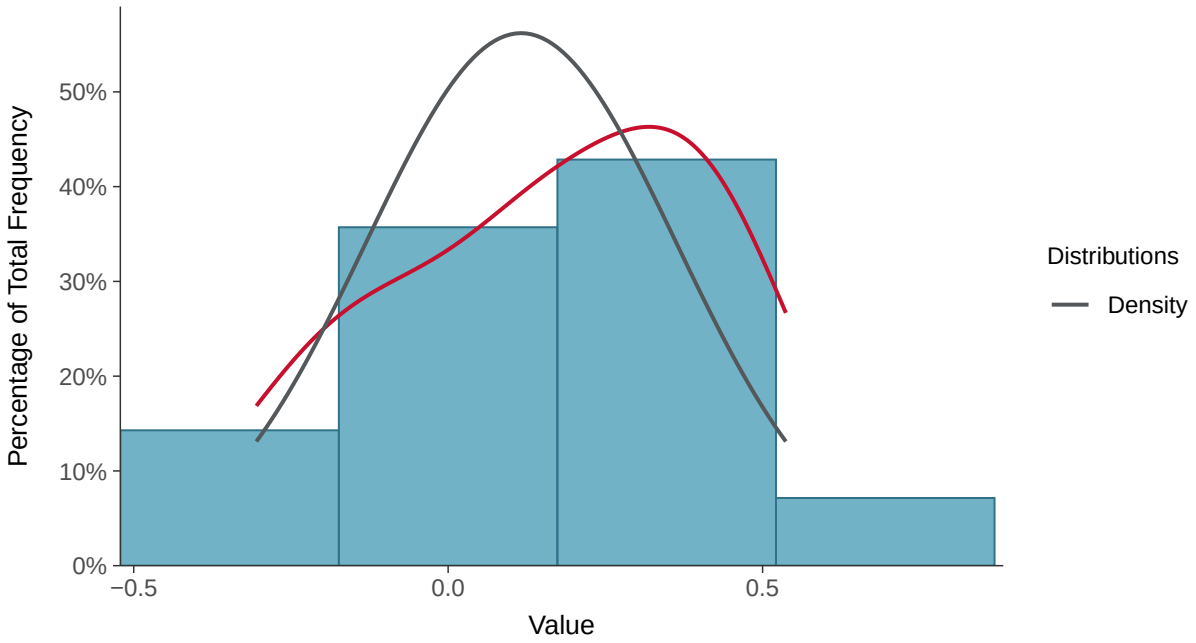
Scatter Plot

Radium-226, MW-10 (pCi/L)



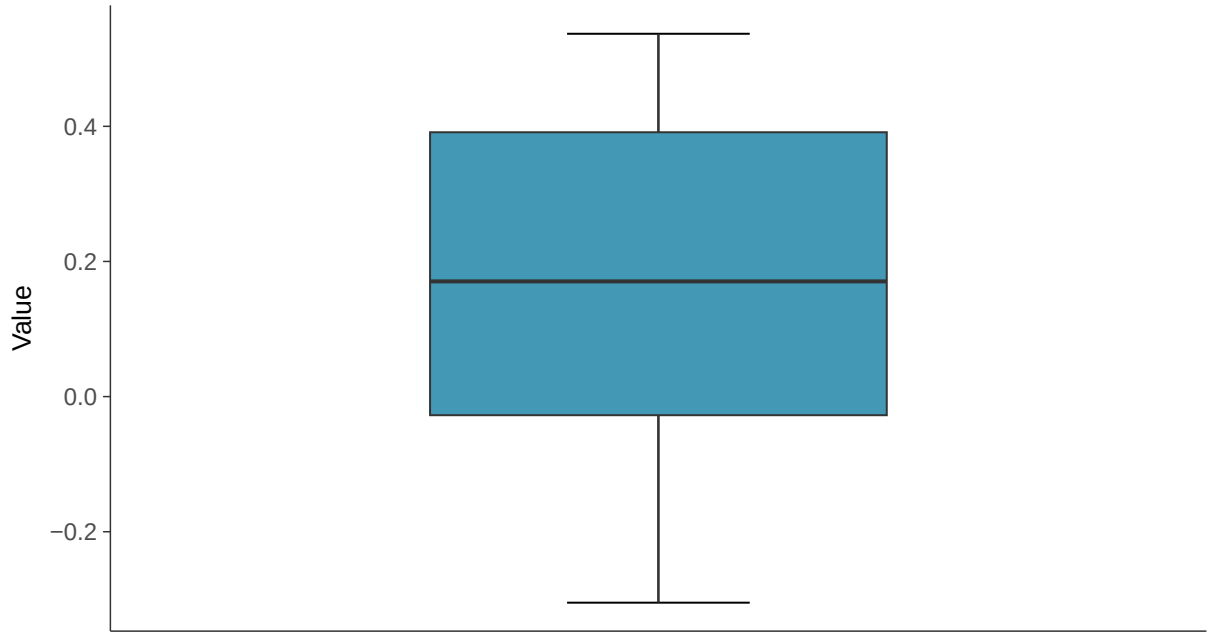
Histogram

Radium-226, MW-10 (pCi/L)



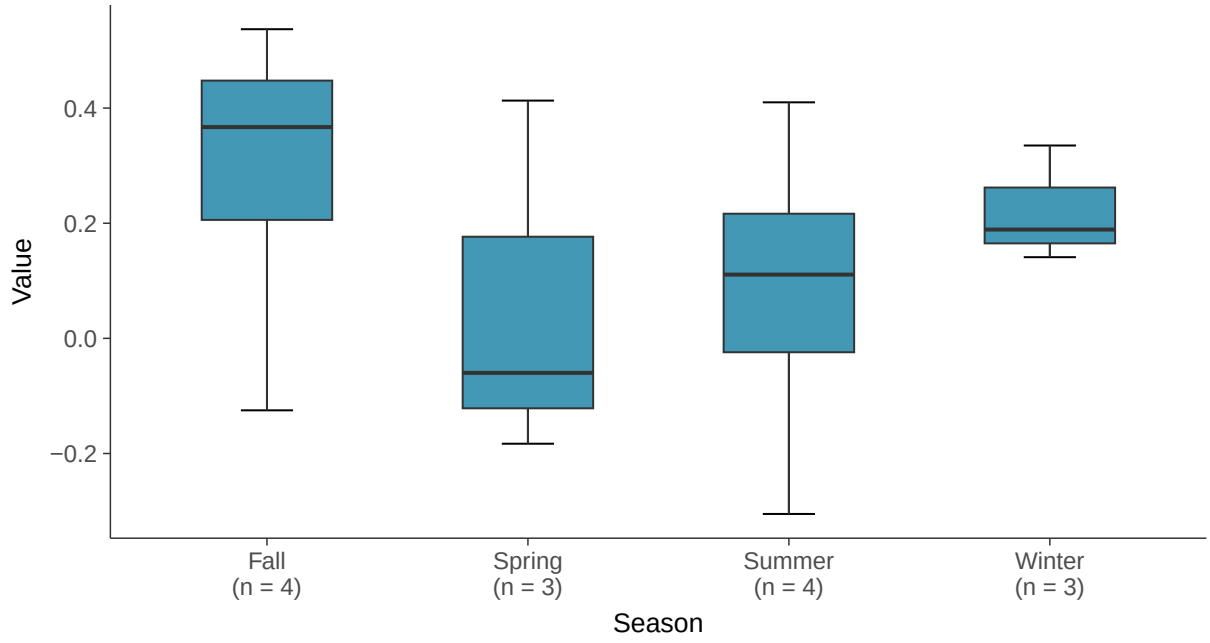
Boxplot

Radium-226, MW-10 (pCi/L)



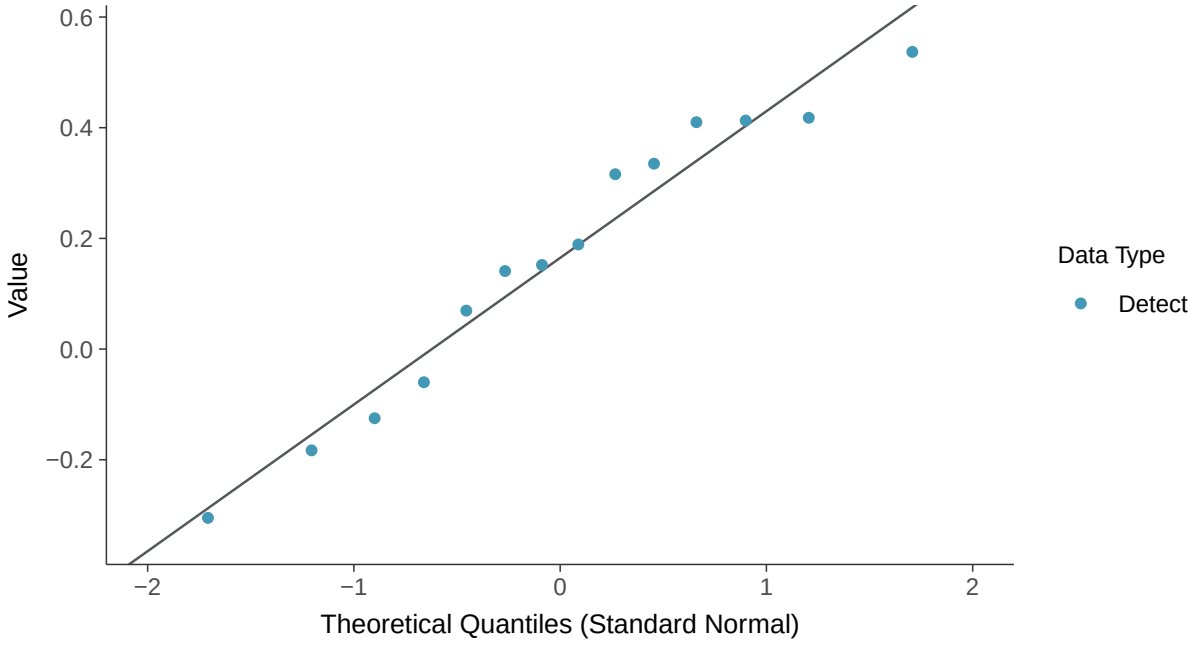
Boxplot by Season

Radium-226, MW-10 (pCi/L)



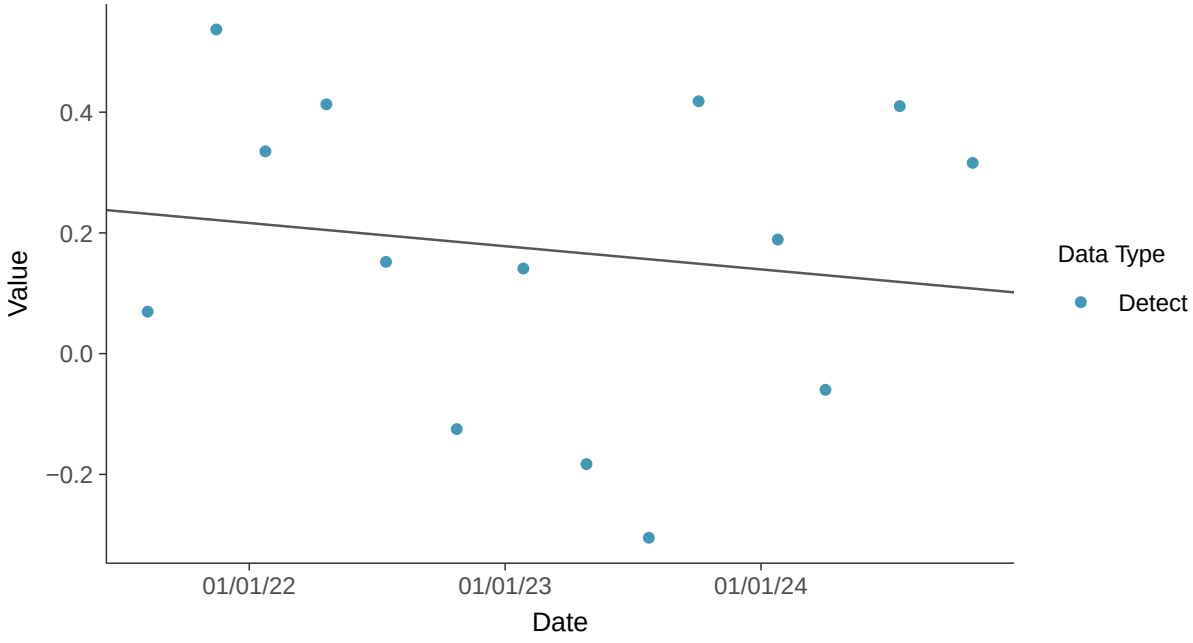
Normal Q-Q plot

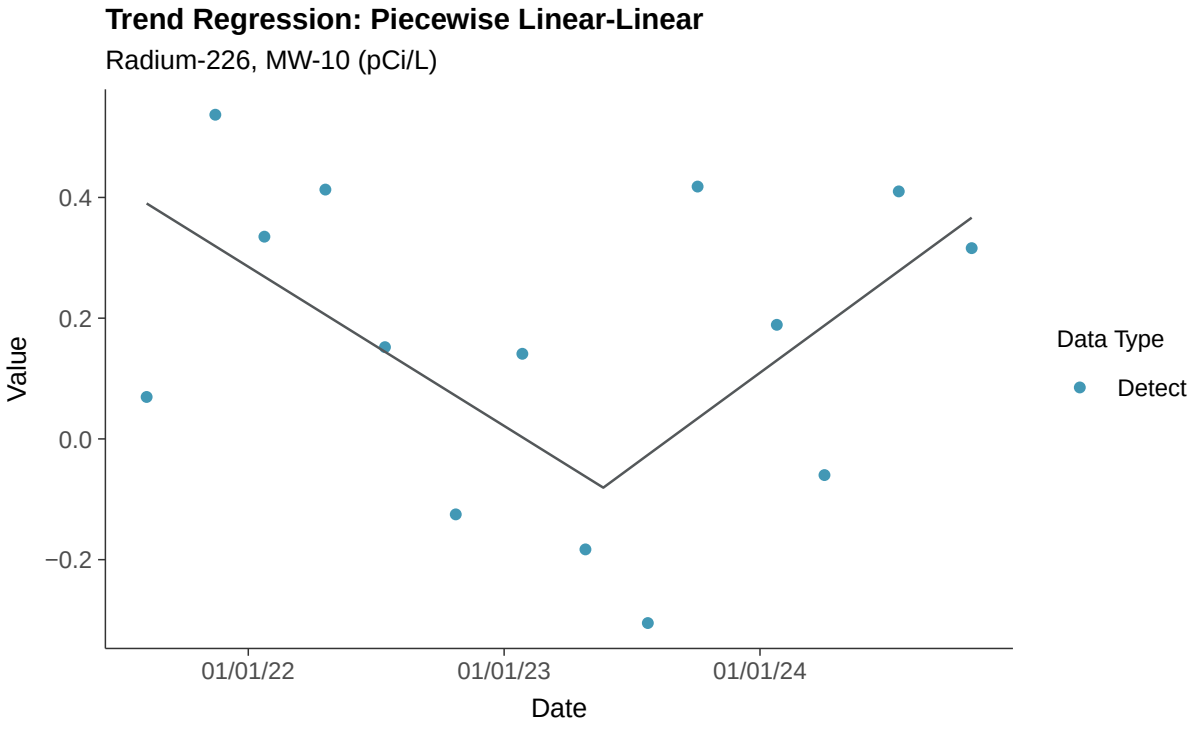
Radium-226, MW-10 (pCi/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-10 (pCi/L)



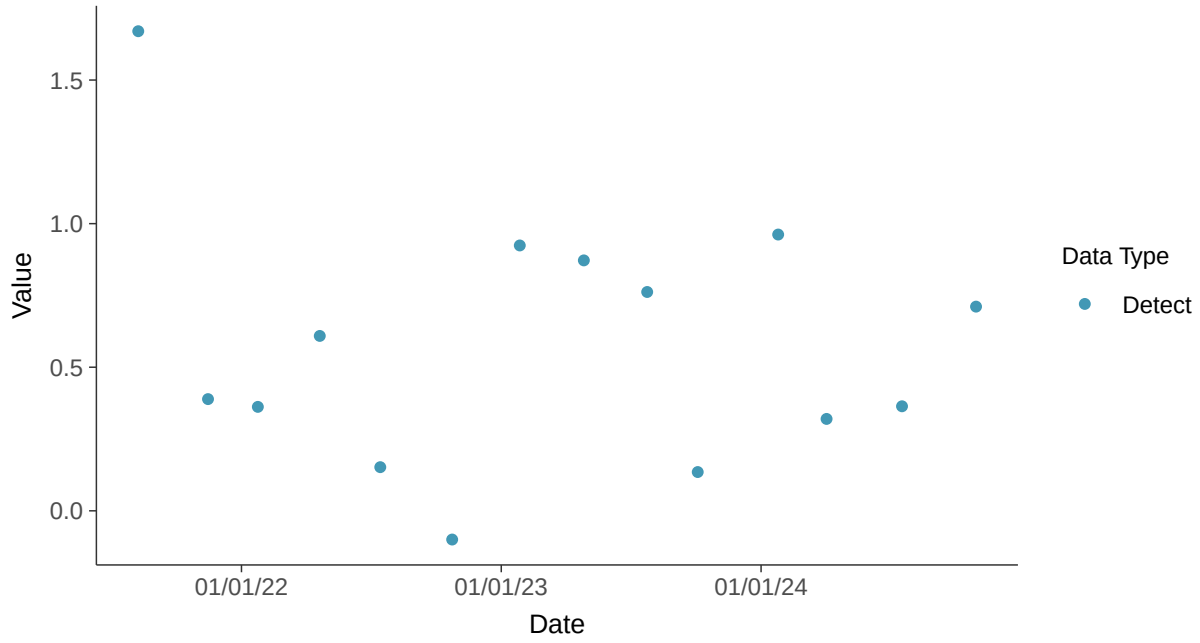

Trend Regression: Piecewise Linear-Linear
Radium-226, MW-10 (pCi/L)
Value
0.4
0.2
0.0
−0.2
01/01/22
01/01/23
01/01/24
Date
Data Type
Detect

App. IV: Radium-228, MW-10

ID: 09_03_120

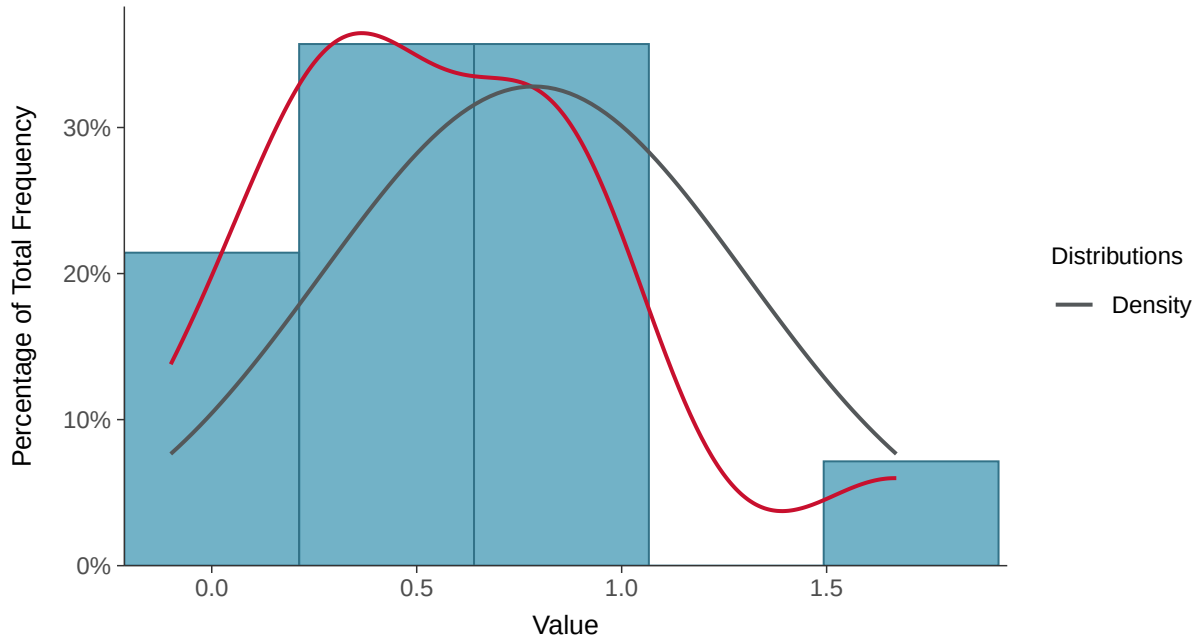
Scatter Plot

Radium-228, MW-10 (pCi/L)



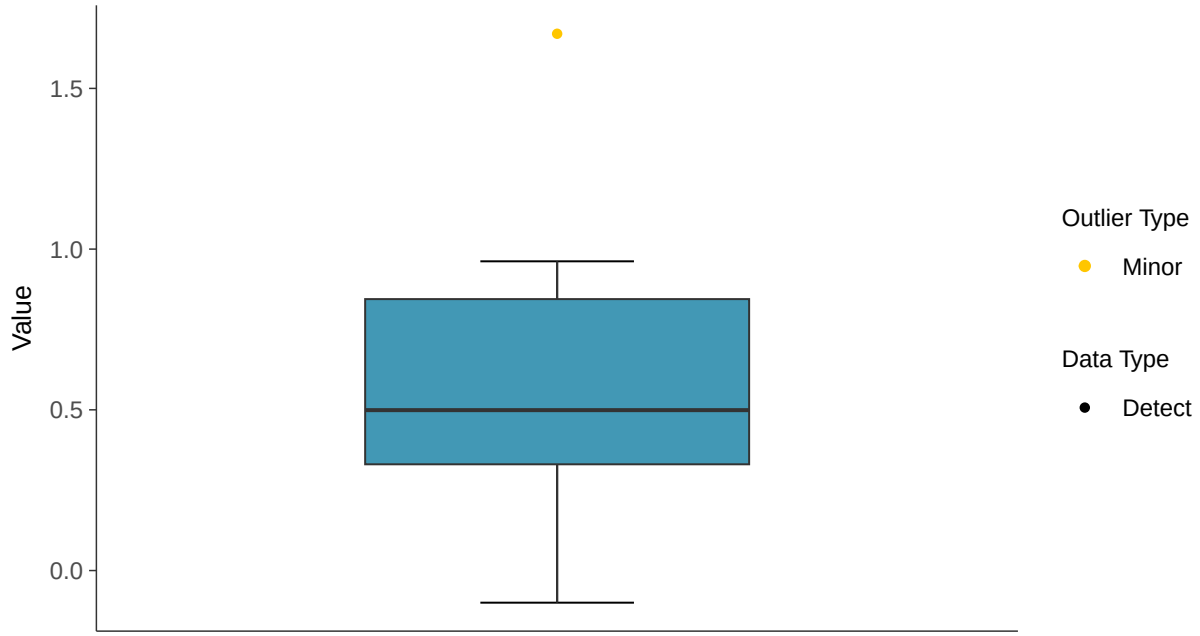
Histogram

Radium-228, MW-10 (pCi/L)



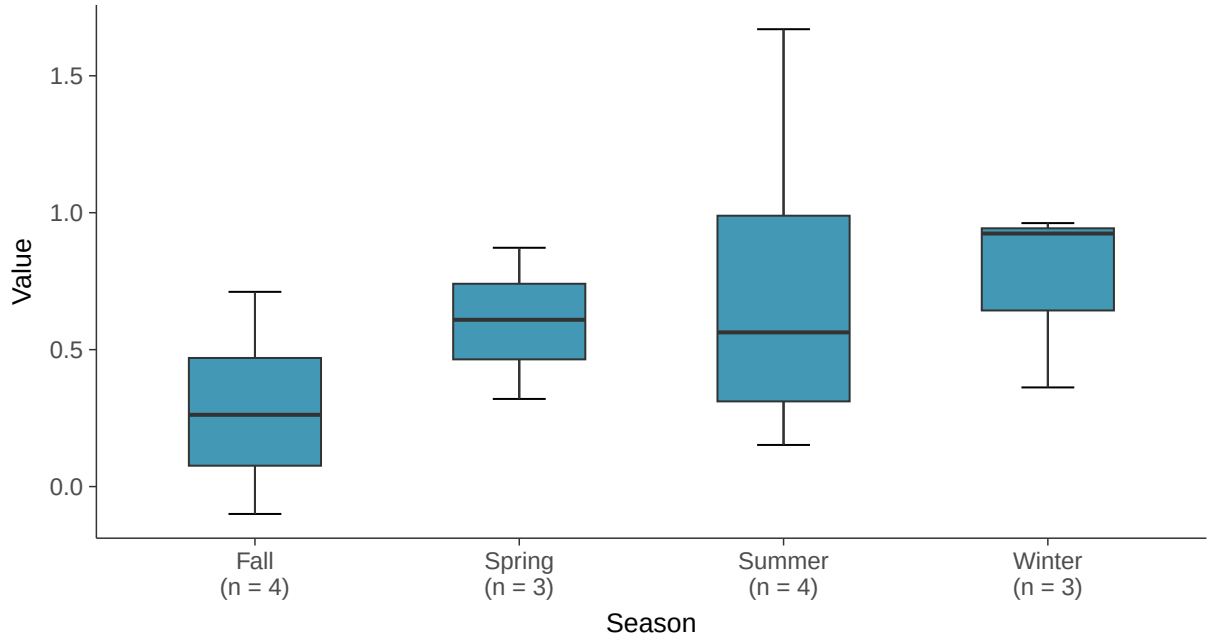
Boxplot

Radium-228, MW-10 (pCi/L)



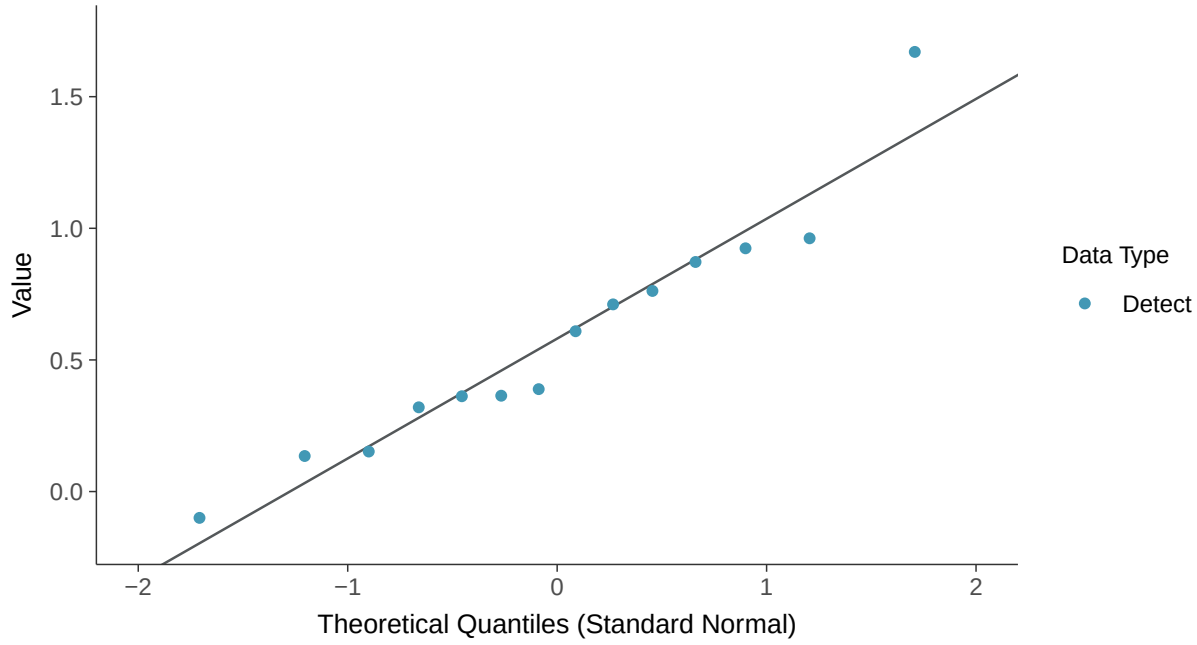
Boxplot by Season

Radium-228, MW-10 (pCi/L)



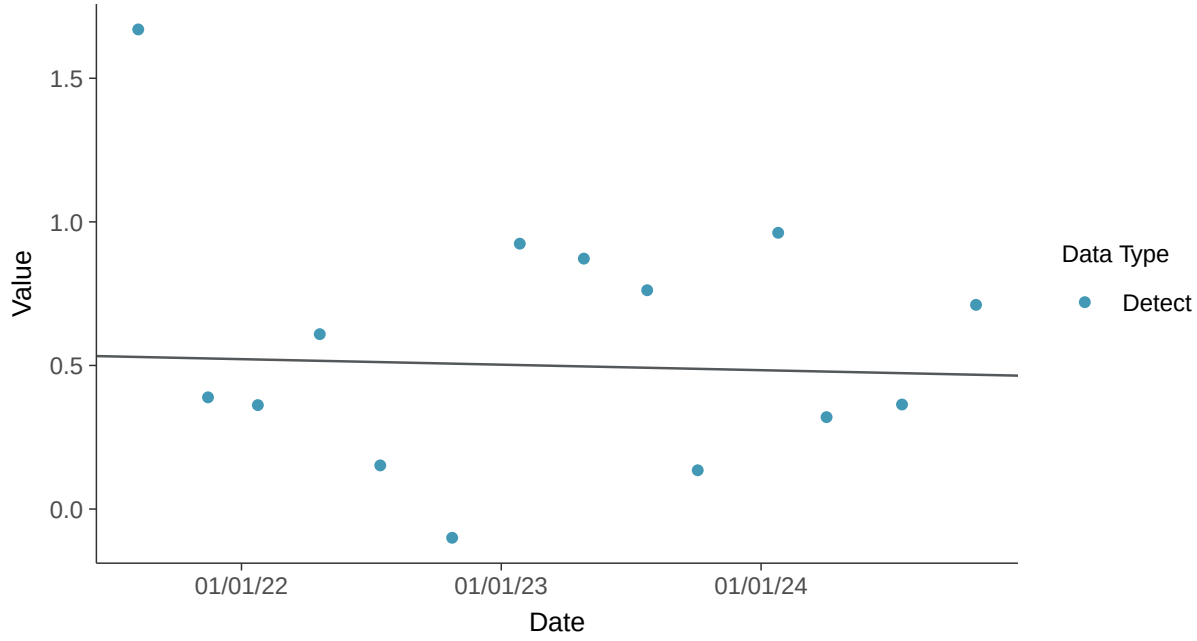
Normal Q-Q plot

Radium-228, MW-10 (pCi/L)



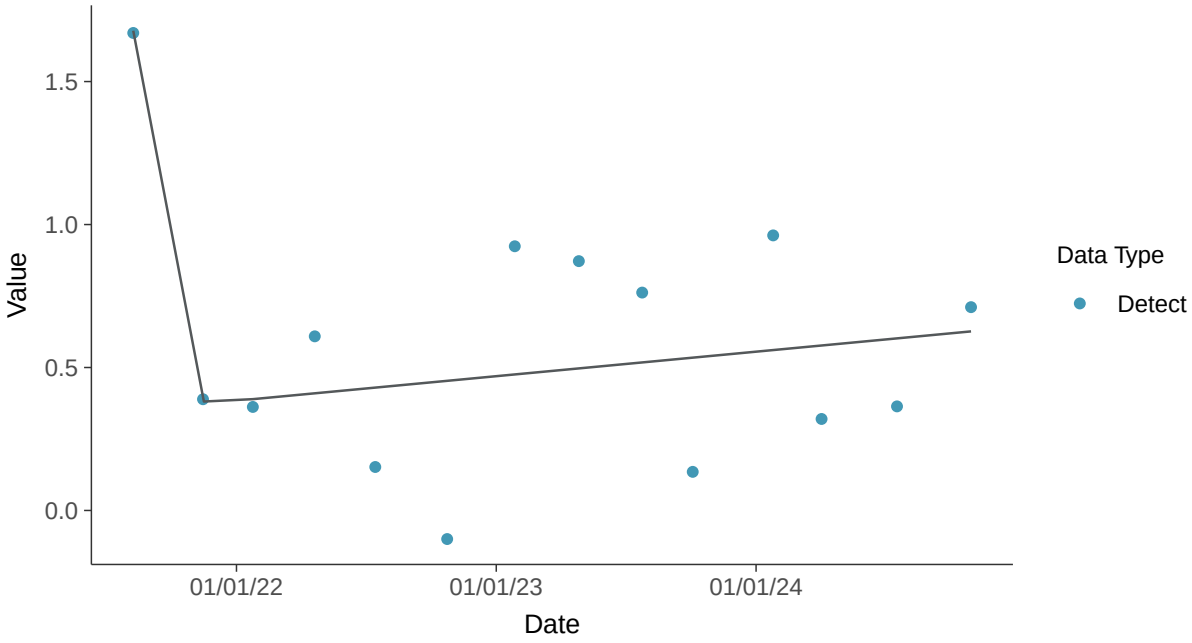
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-10 (pCi/L)



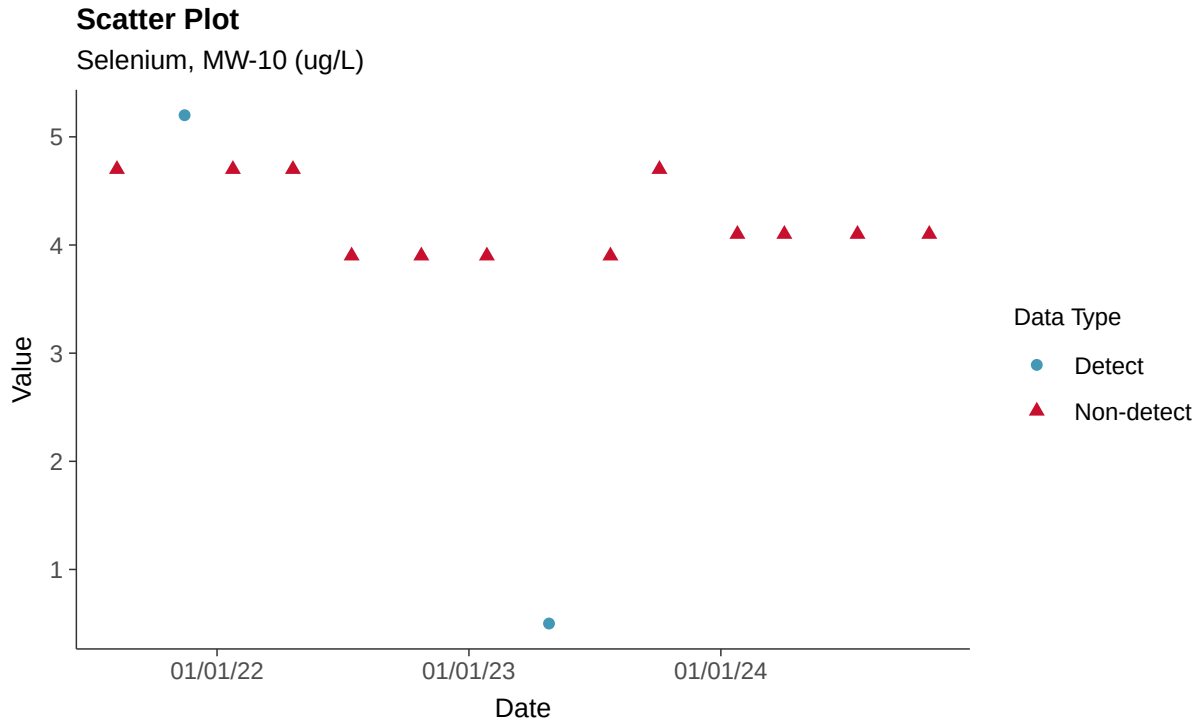
Trend Regression: Piecewise Linear-Linear

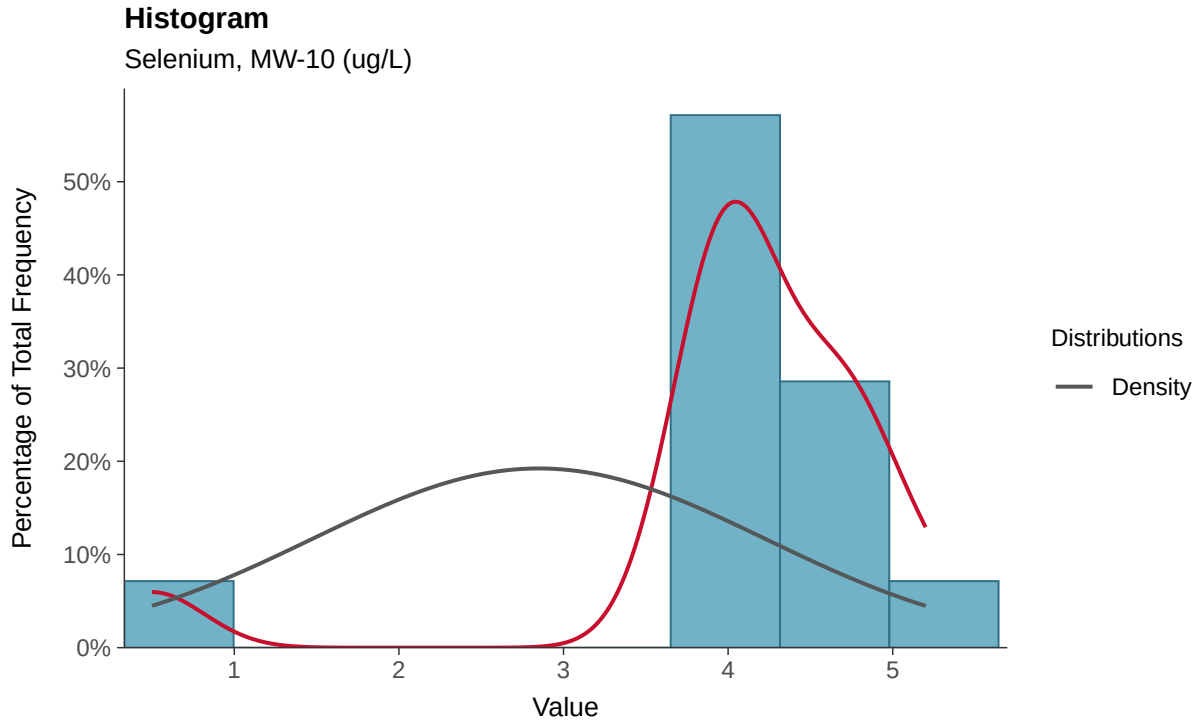
Radium-228, MW-10 (pCi/L)



App. IV: Selenium, MW-10

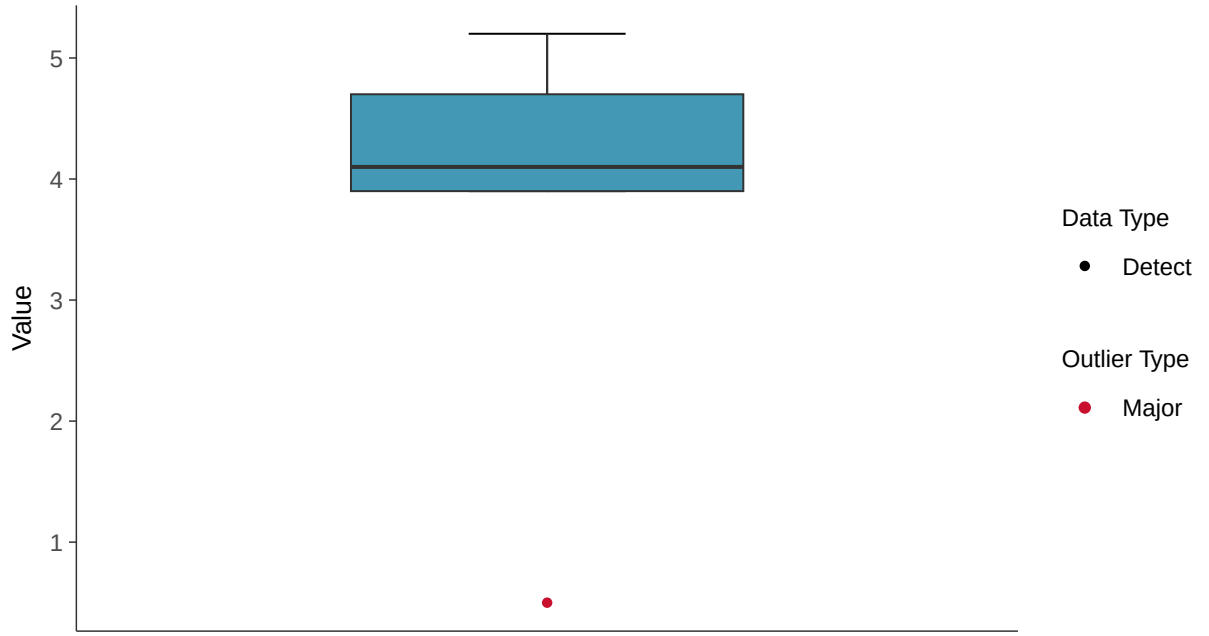
ID: 09_03_121





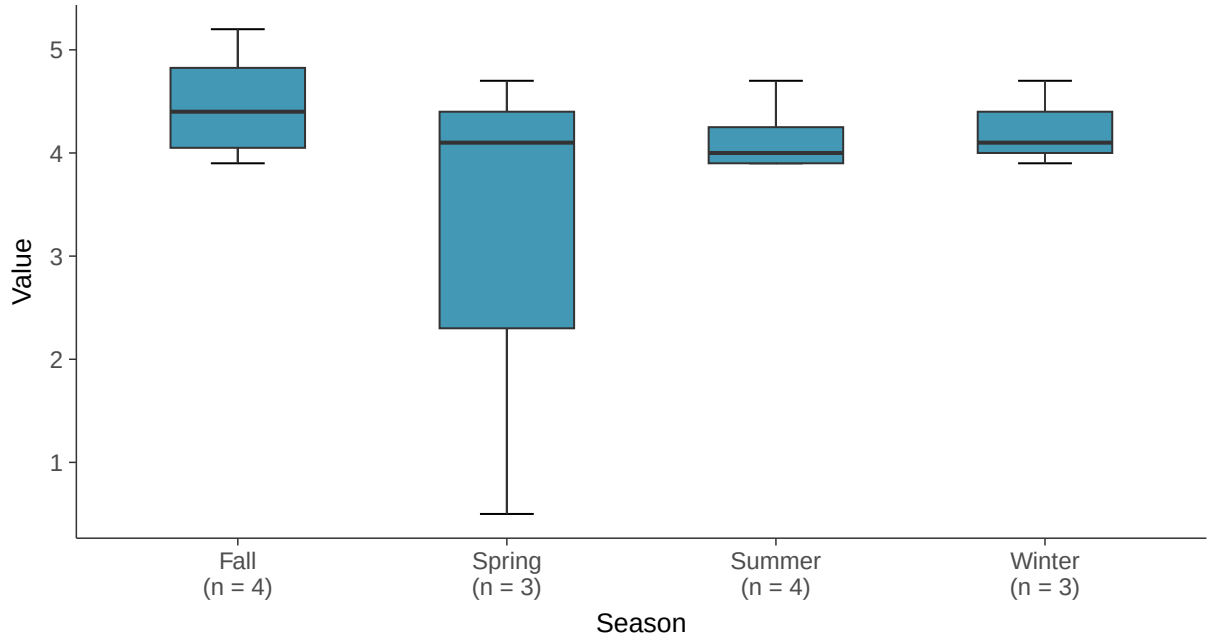
Boxplot

Selenium, MW-10 (ug/L)



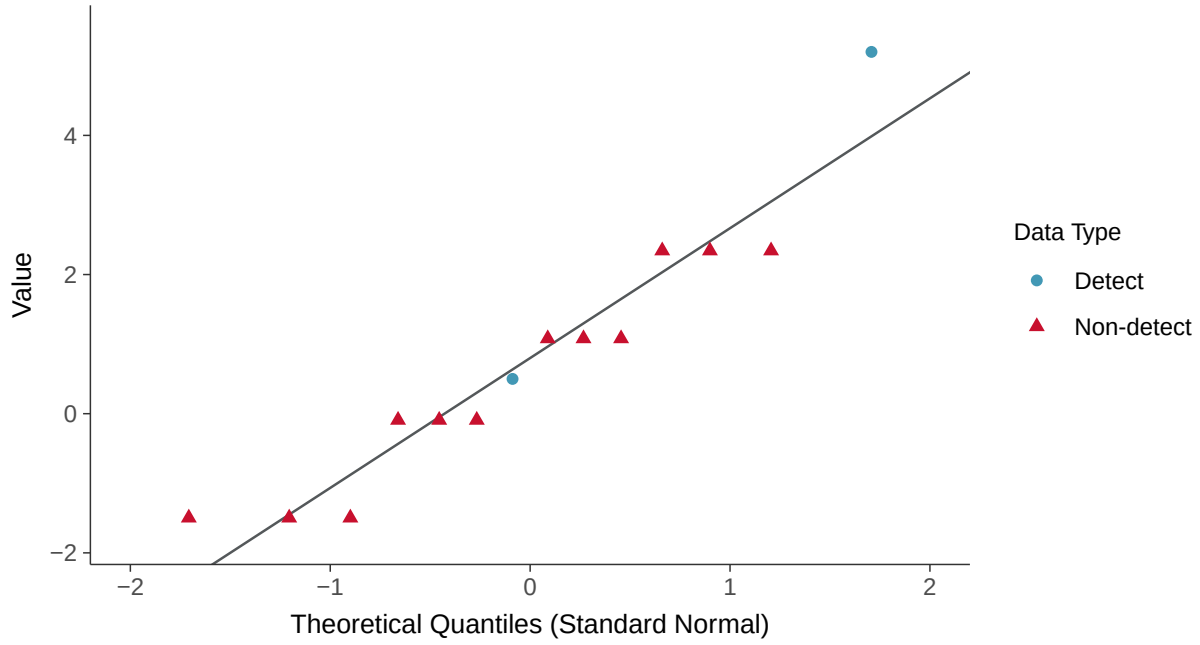
Boxplot by Season

Selenium, MW-10 (ug/L)



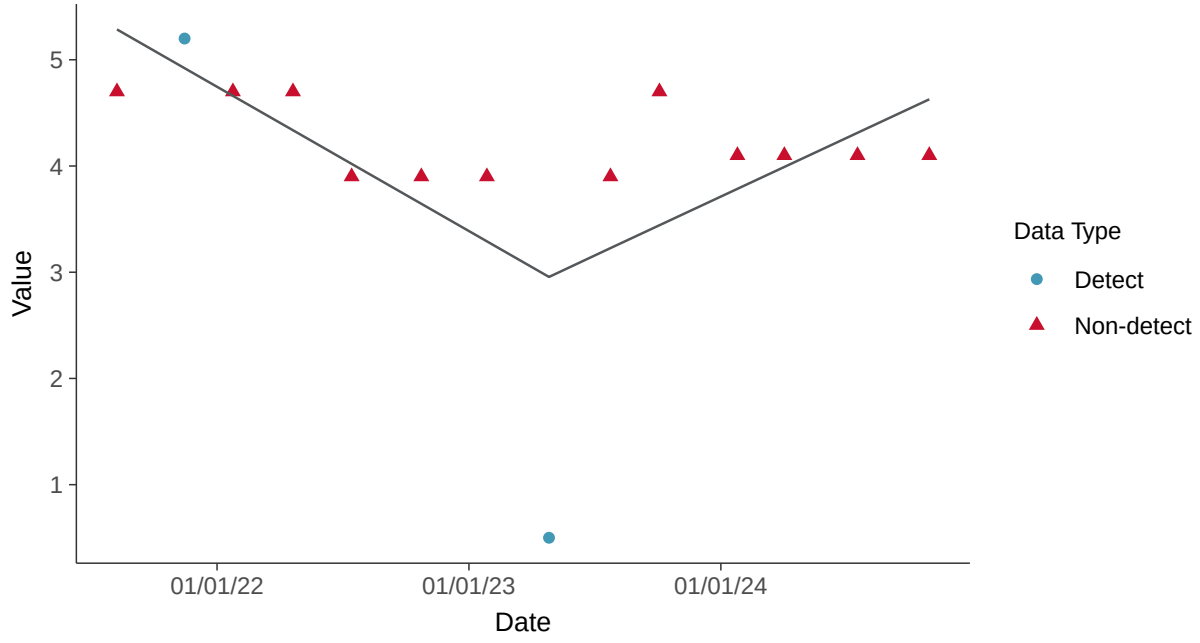
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (ug/L)



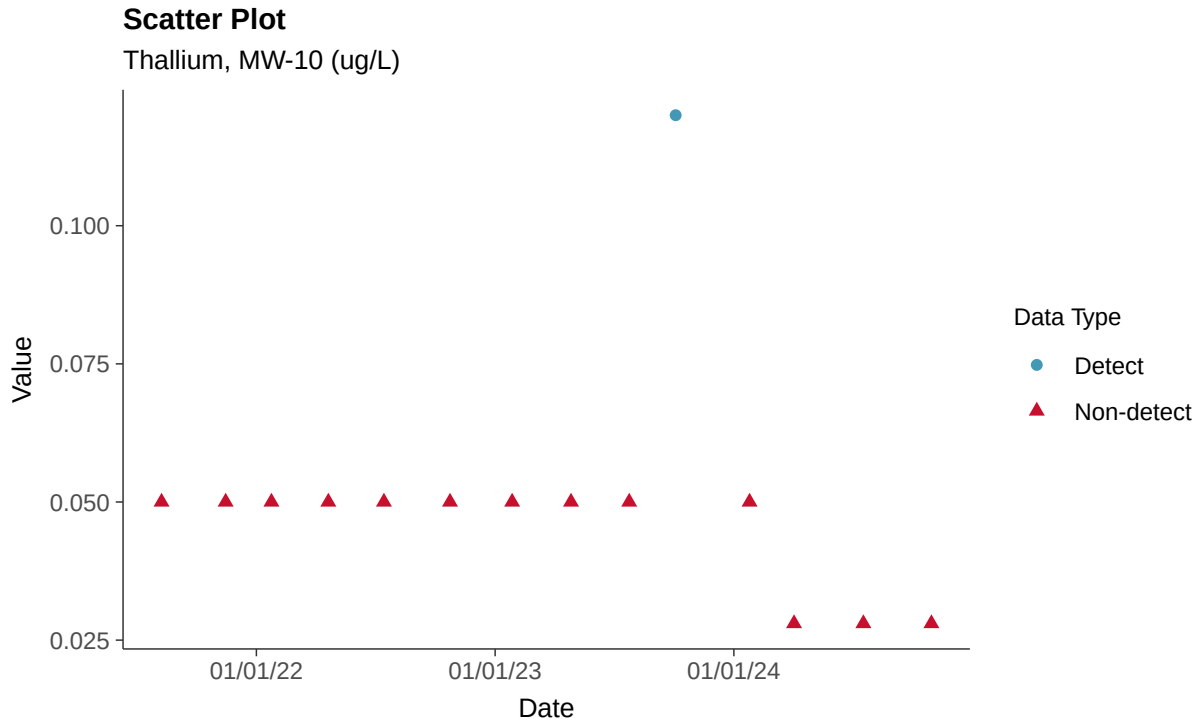
Trend Regression: Piecewise Linear-Linear

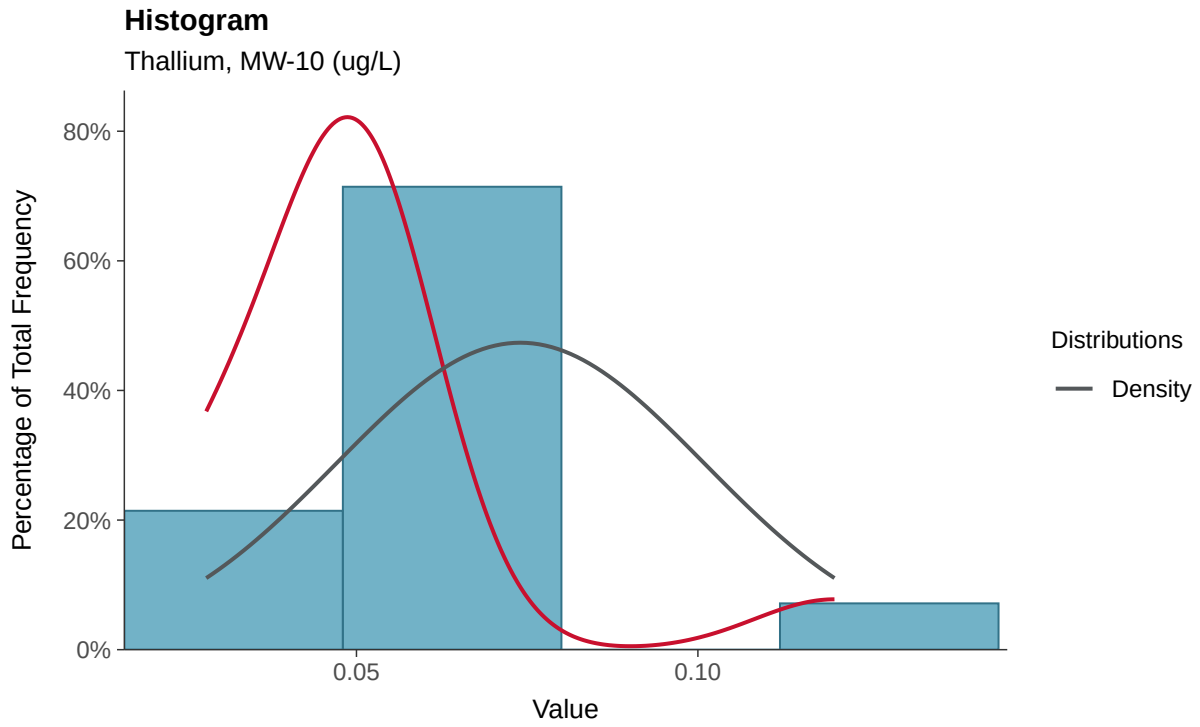
Selenium, MW-10 (ug/L)



App. IV: Thallium, MW-10

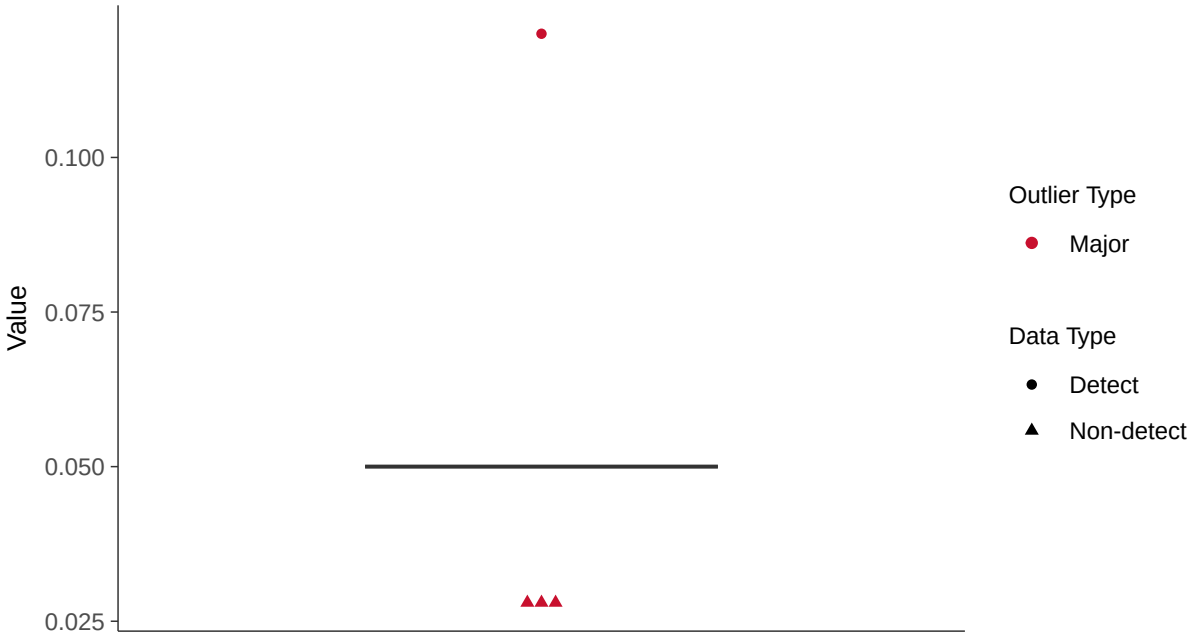
ID: 09_03_124





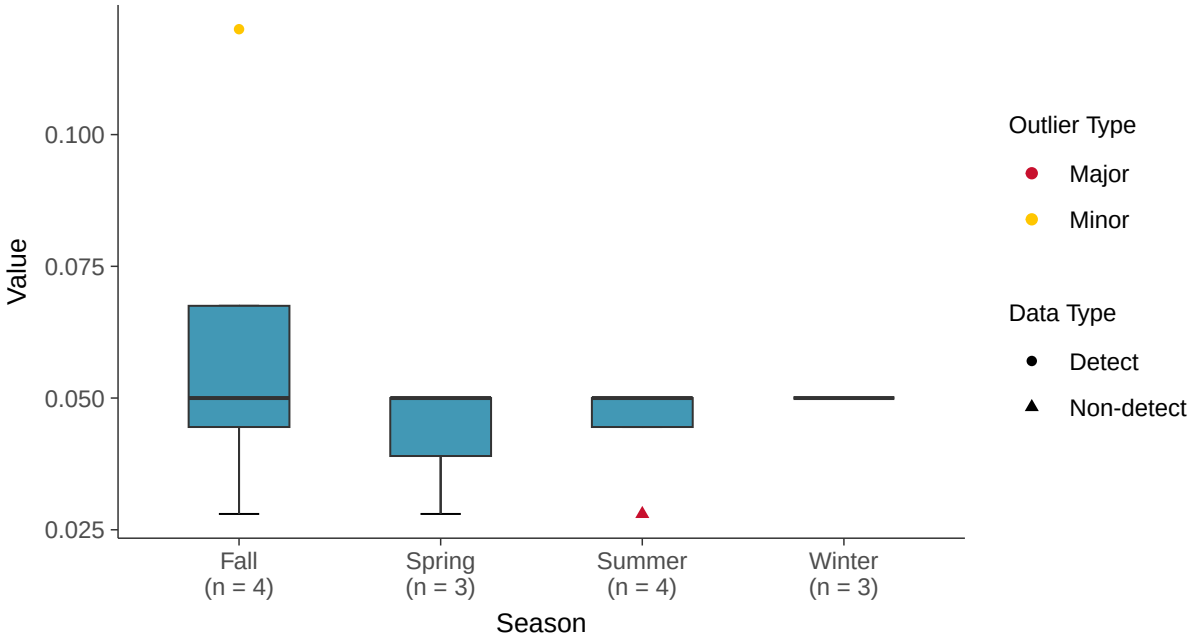
Boxplot

Thallium, MW-10 (ug/L)



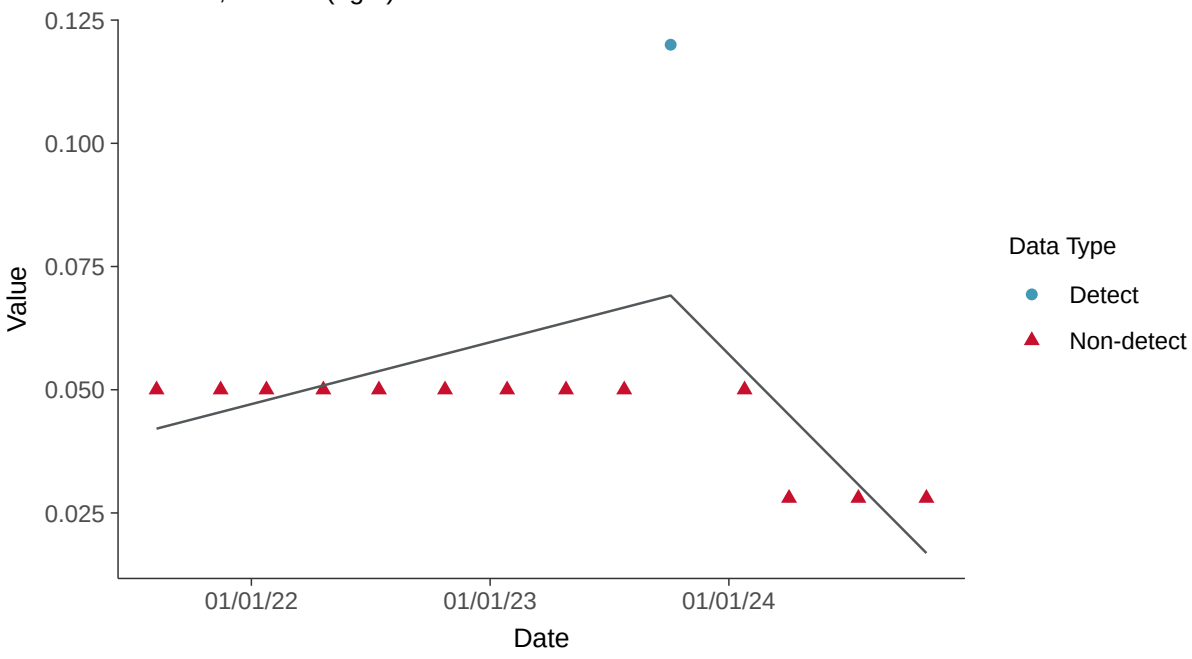
Boxplot by Season

Thallium, MW-10 (ug/L)



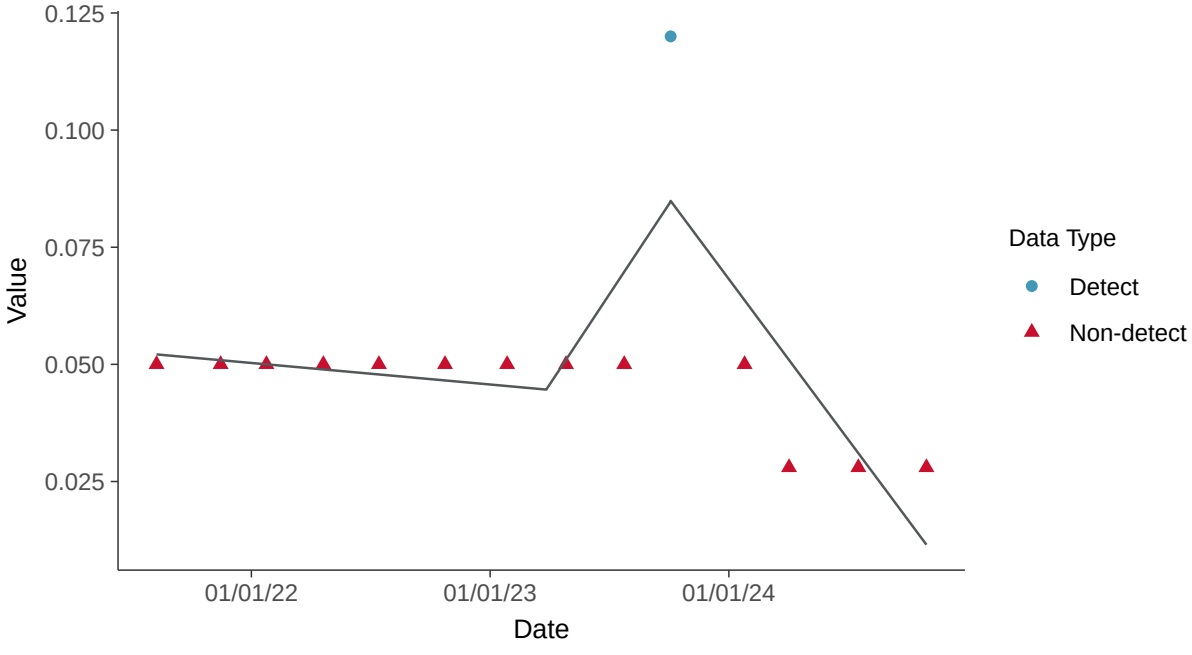
Trend Regression: Piecewise Linear-Linear

Thallium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-10 (ug/L)

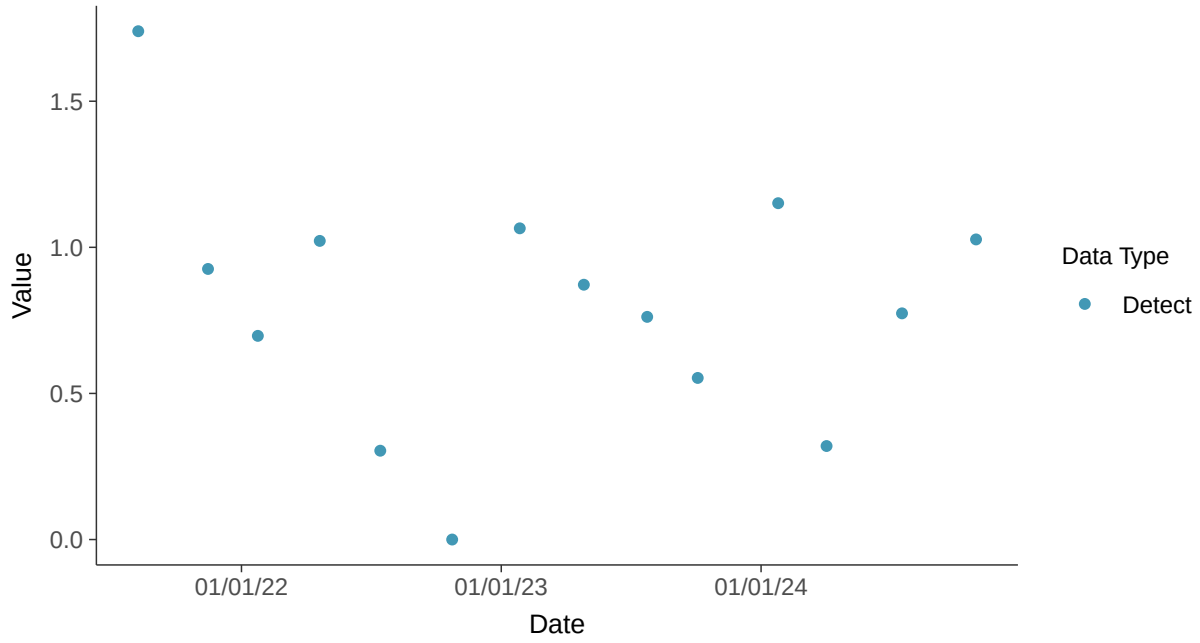


App. IV: Total Radium, MW-10

ID: 09_03_126

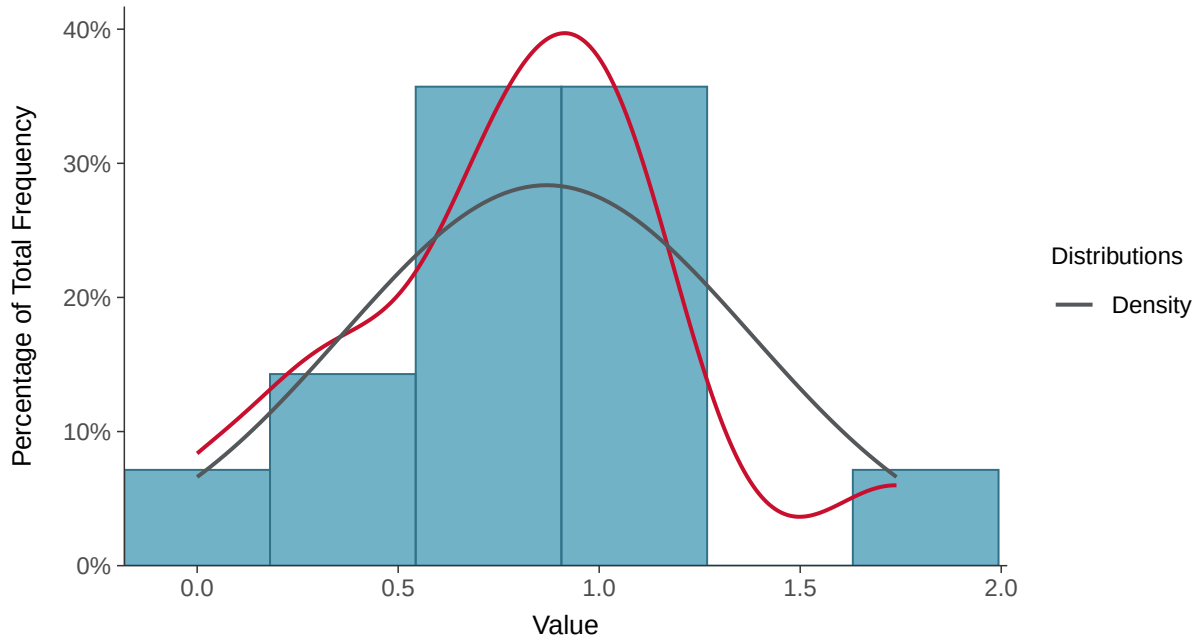
Scatter Plot

Total Radium, MW-10 (pCi/L)



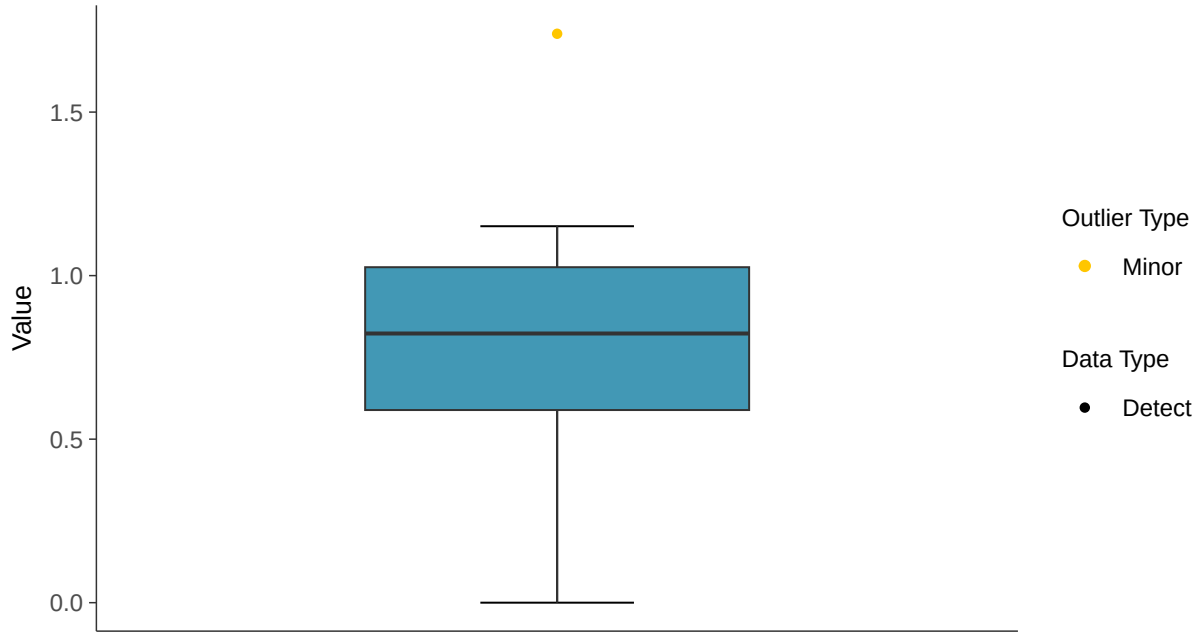
Histogram

Total Radium, MW-10 (pCi/L)



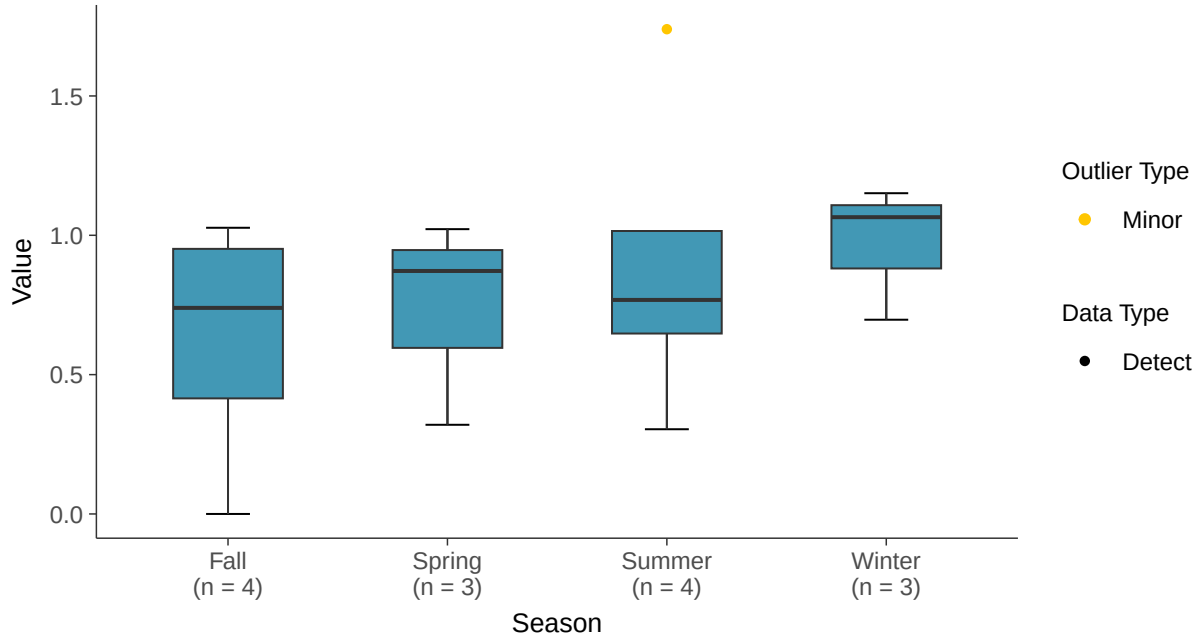
Boxplot

Total Radium, MW-10 (pCi/L)



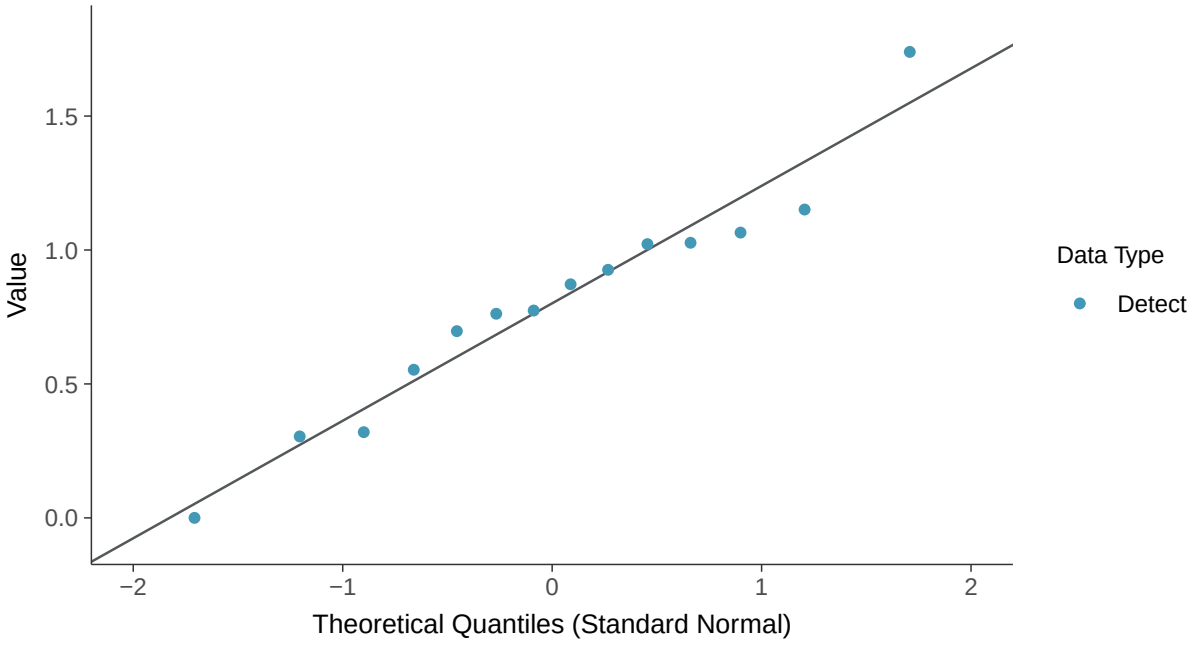
Boxplot by Season

Total Radium, MW-10 (pCi/L)



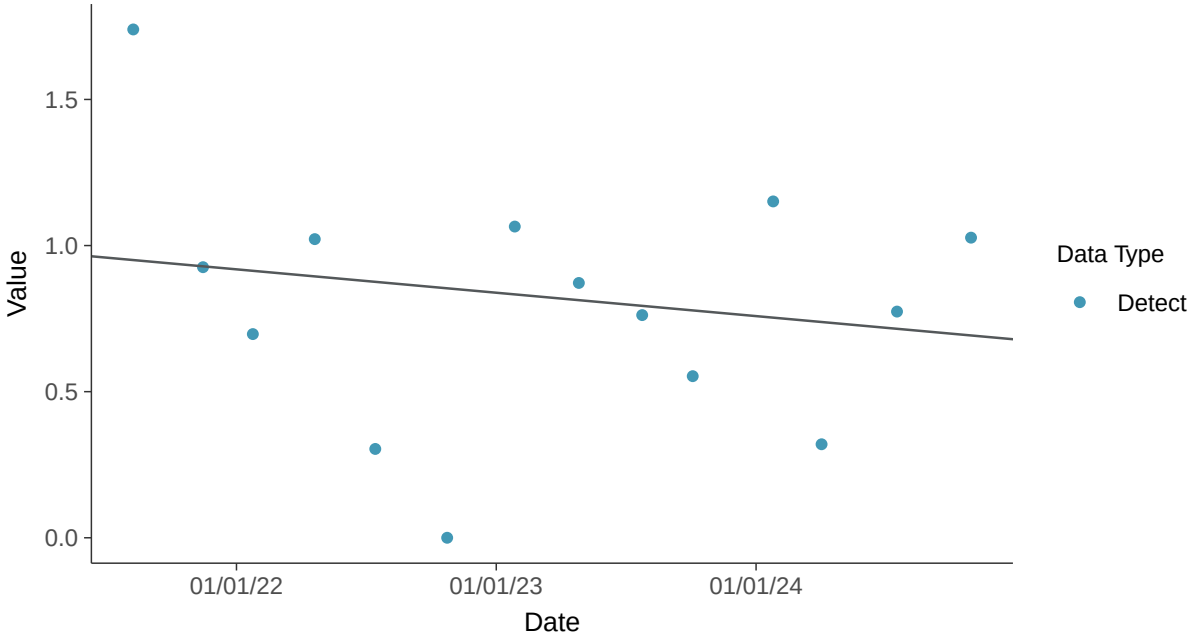
Normal Q-Q plot

Total Radium, MW-10 (pCi/L)



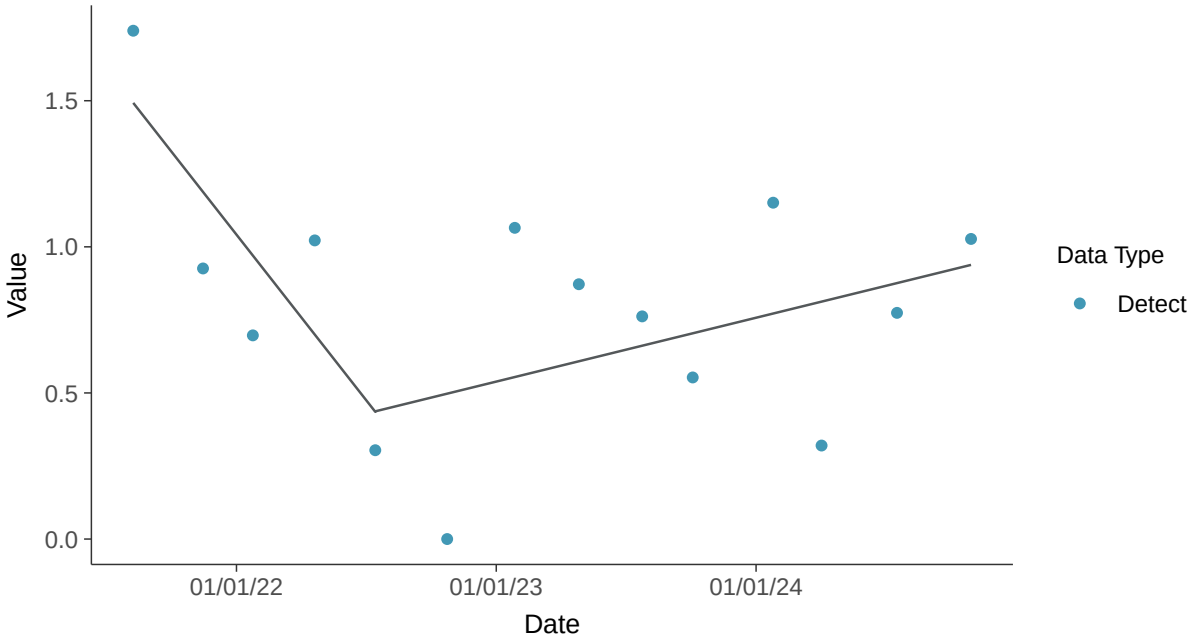
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-10 (pCi/L)



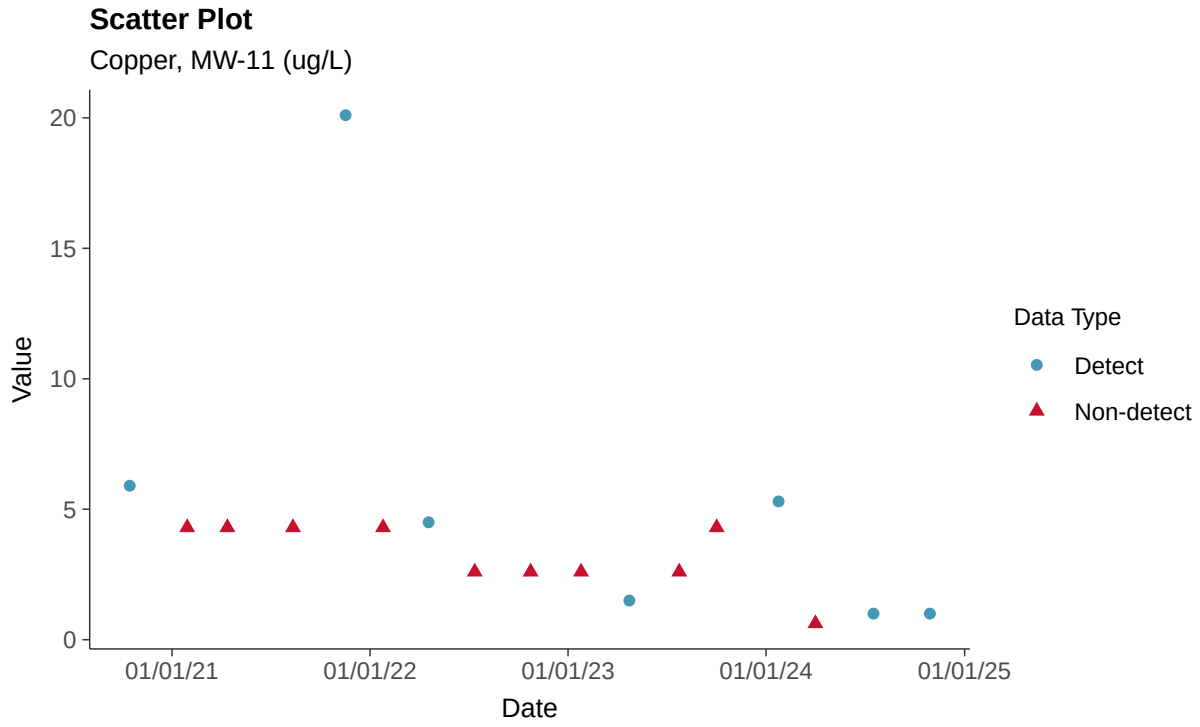
Trend Regression: Piecewise Linear-Linear

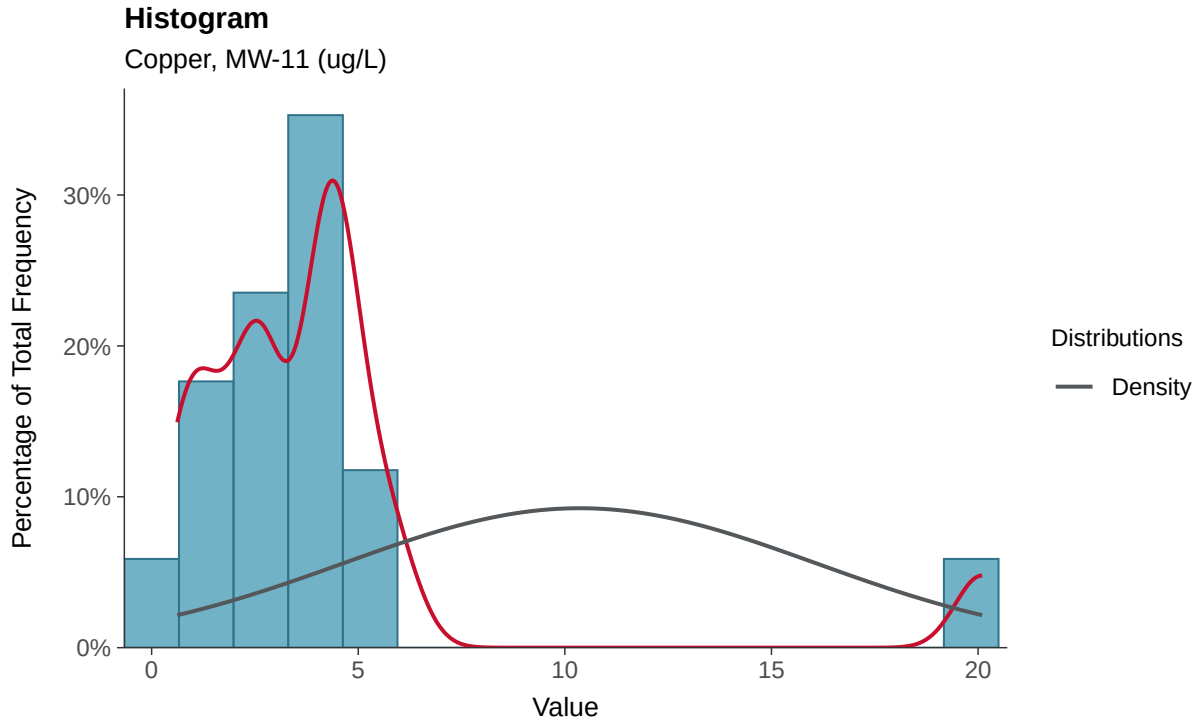
Total Radium, MW-10 (pCi/L)



App. I Metals: Copper, MW-11

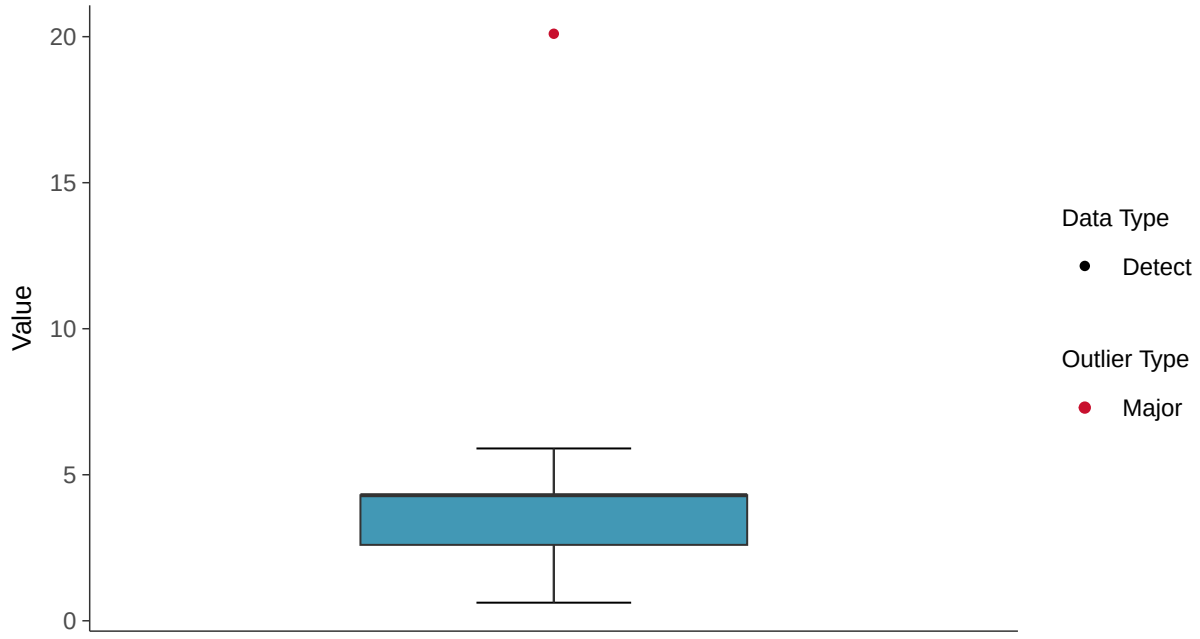
ID: 10_01_111





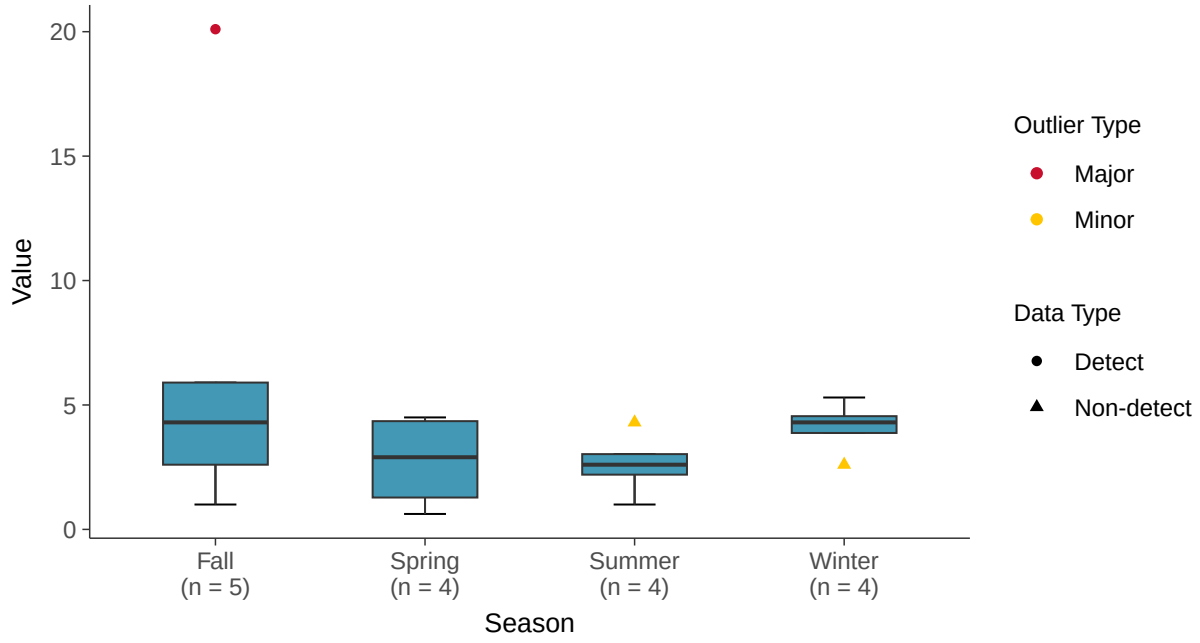
Boxplot

Copper, MW-11 (ug/L)



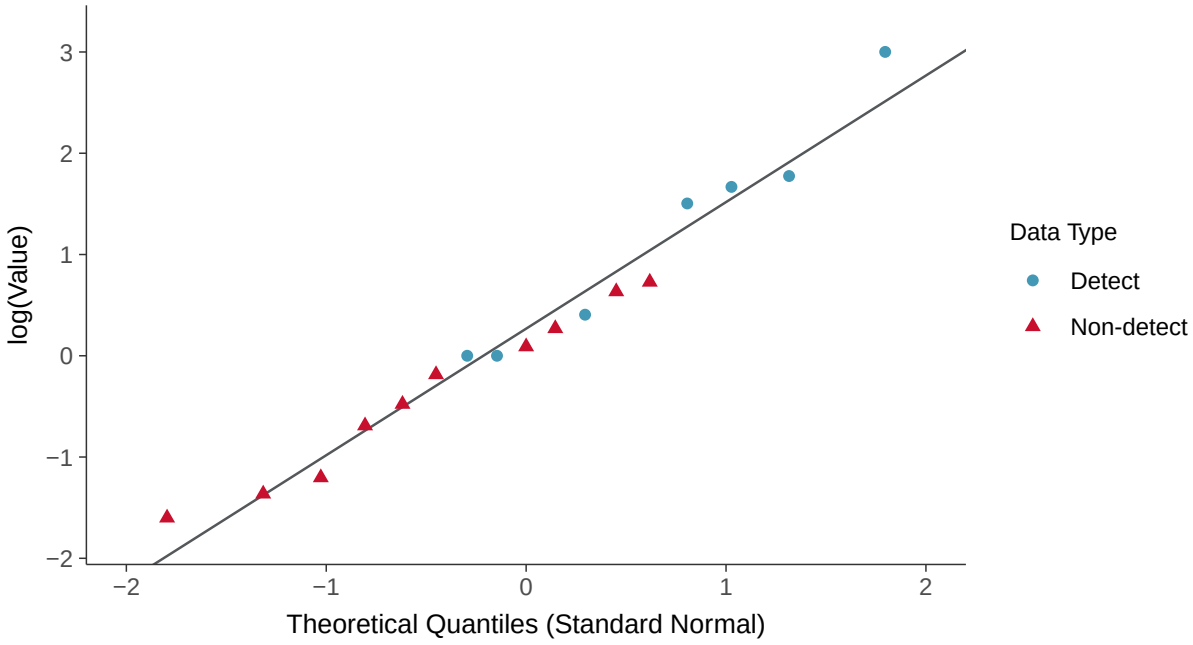
Boxplot by Season

Copper, MW-11 (ug/L)



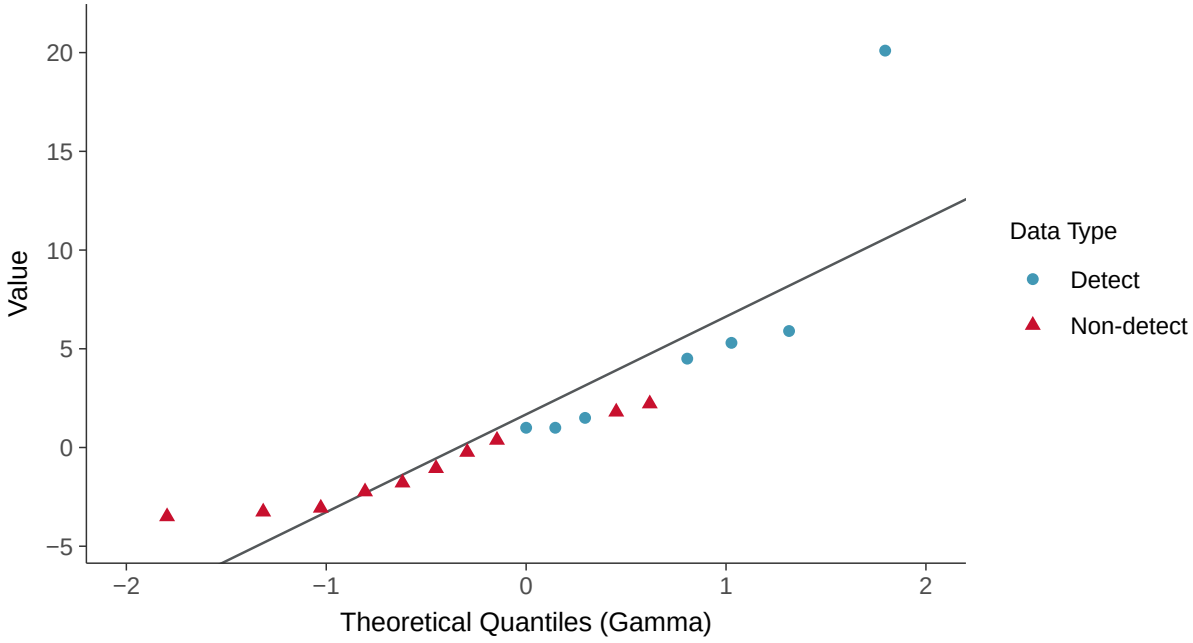
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (ug/L)



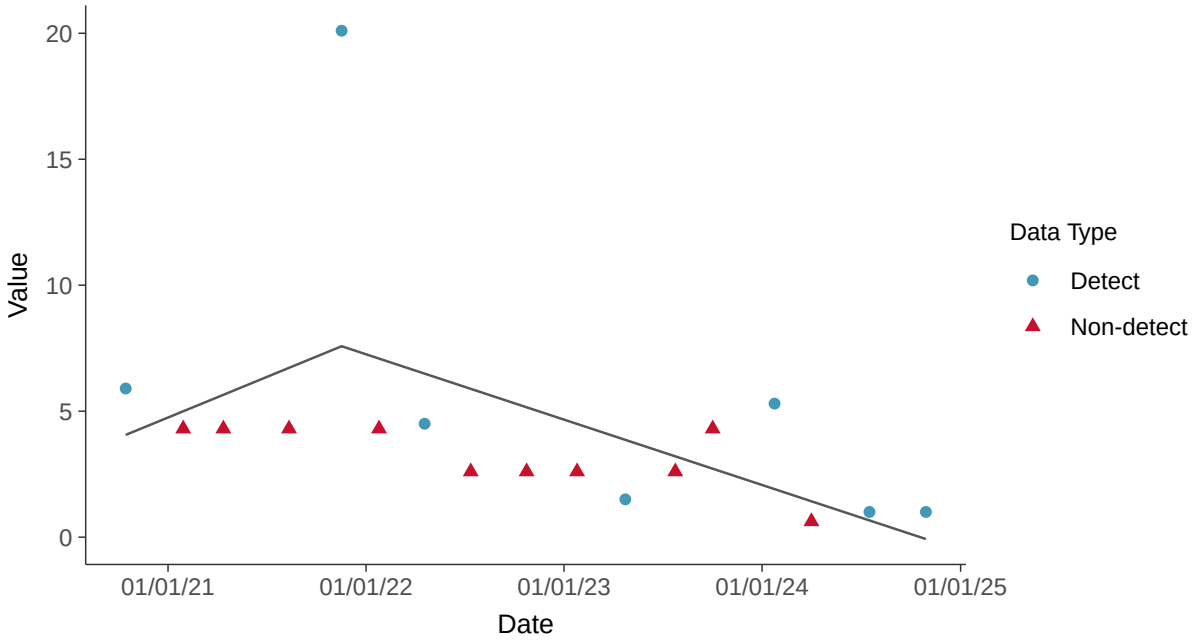
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (ug/L)



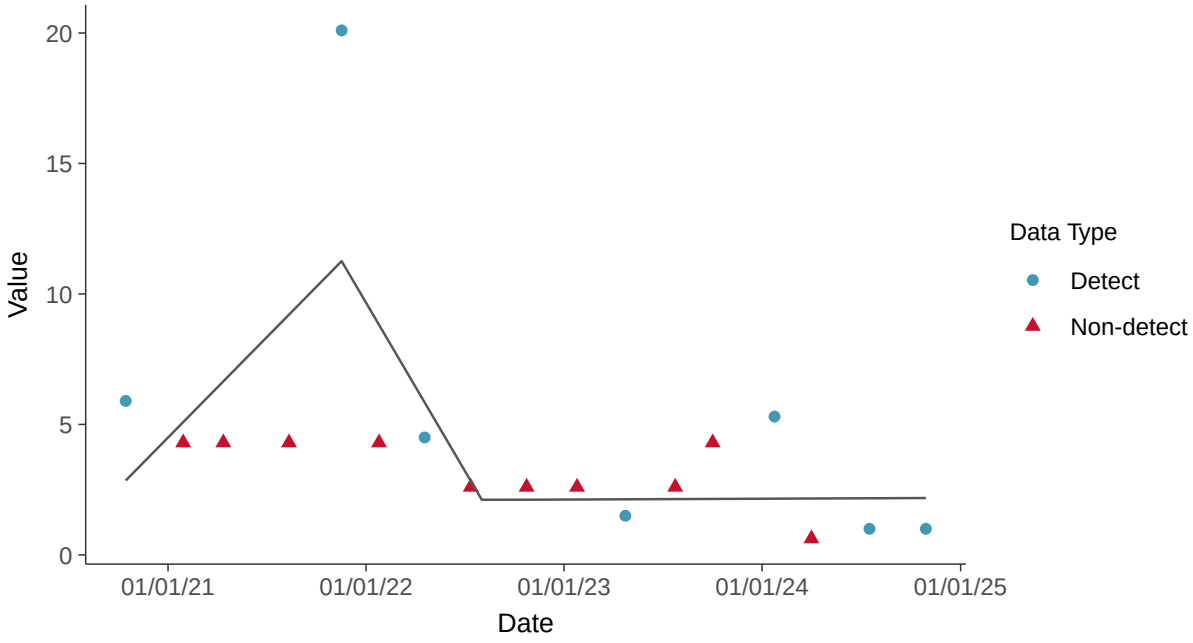
Trend Regression: Piecewise Linear-Linear

Copper, MW-11 (ug/L)



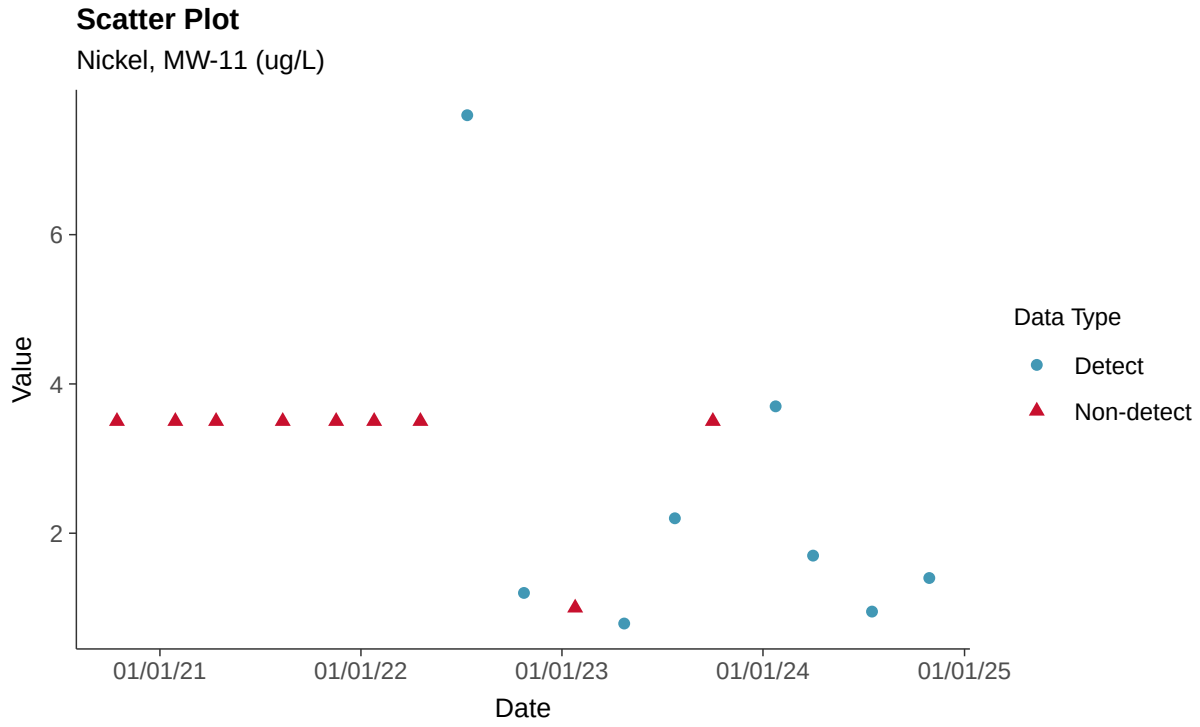
Trend Regression: Piecewise Linear-Linear-Linear

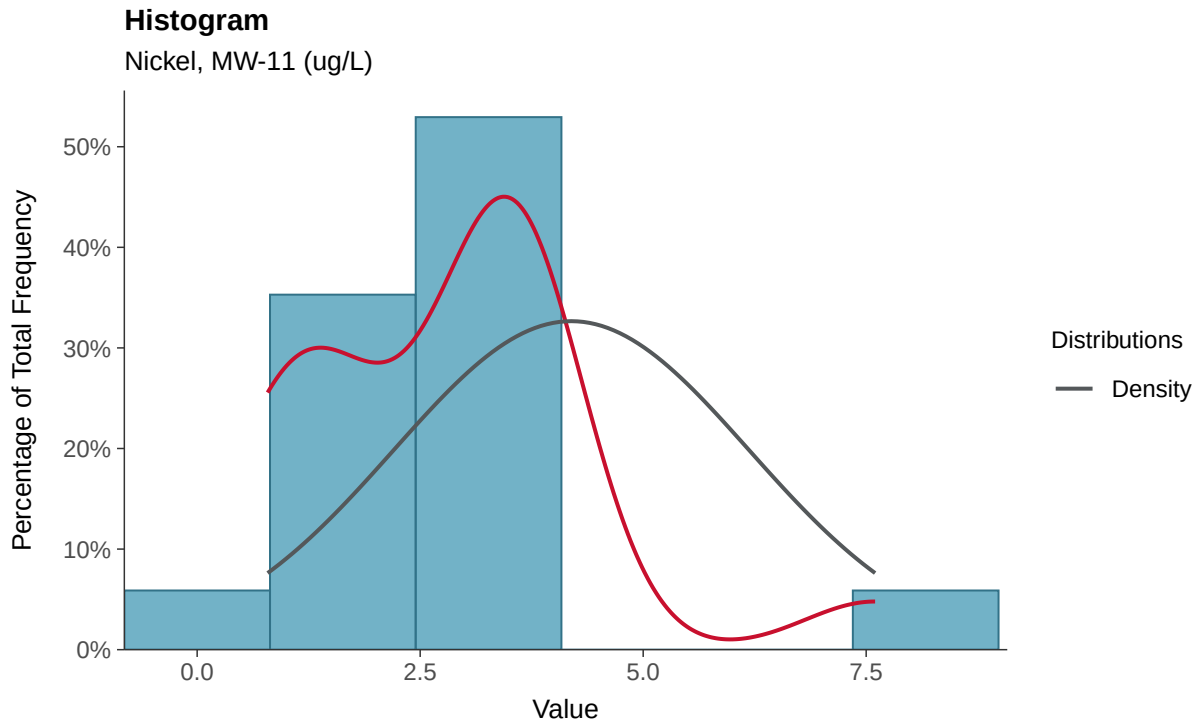
Copper, MW-11 (ug/L)



App. I Metals: Nickel, MW-11

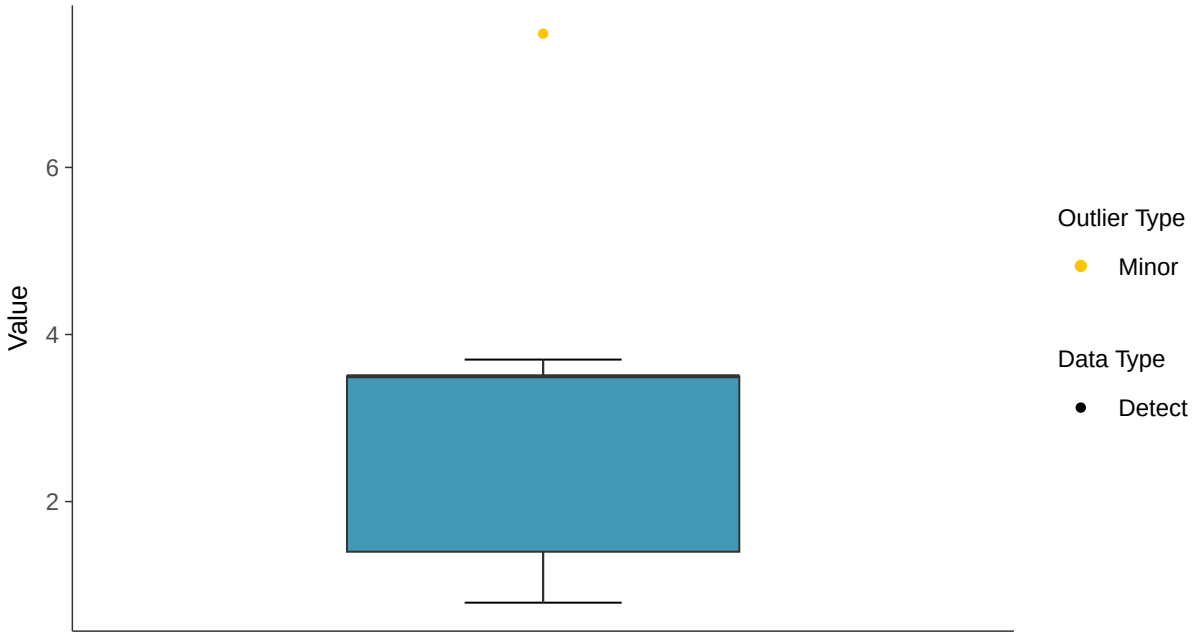
ID: 10_01_117





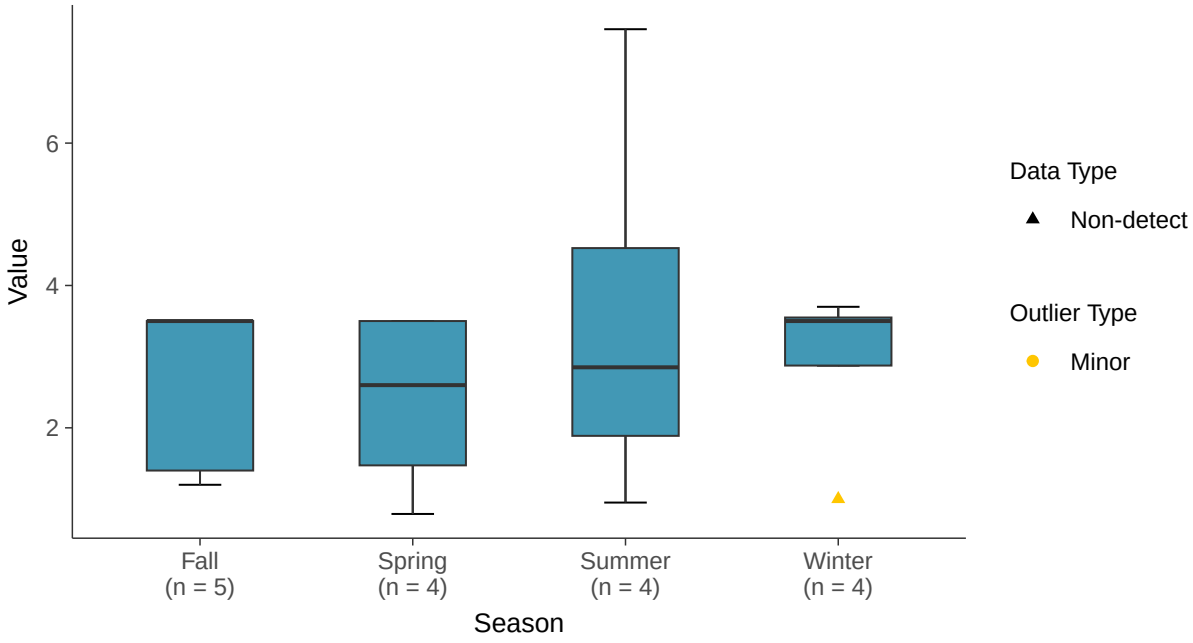
Boxplot

Nickel, MW-11 (ug/L)



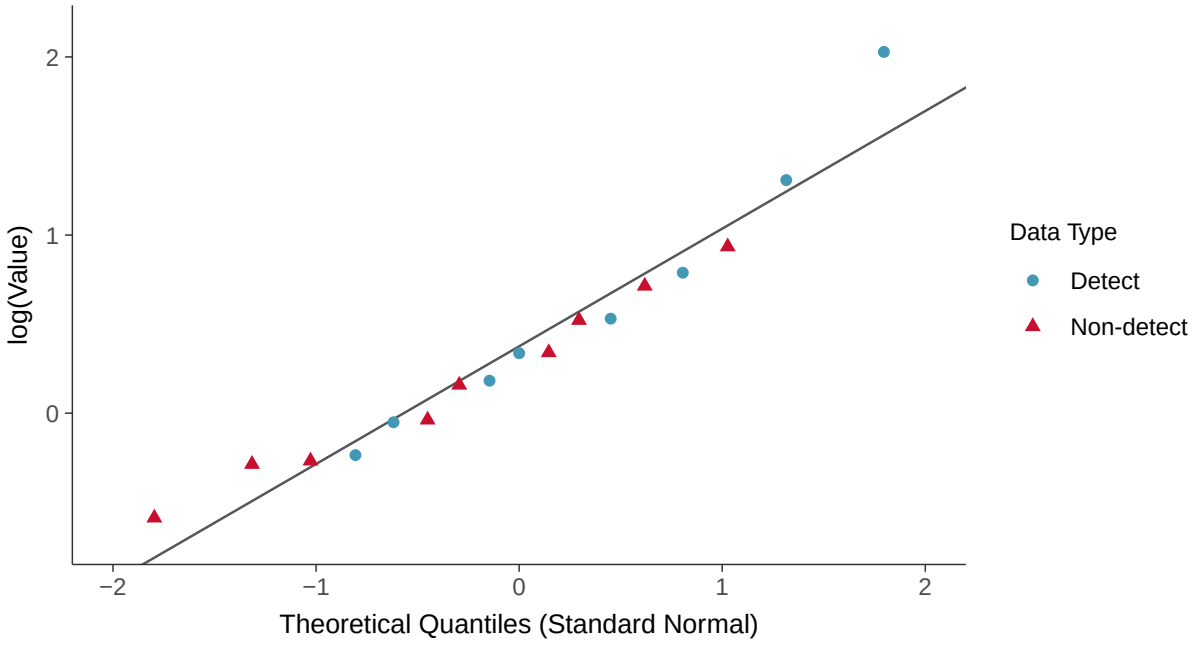
Boxplot by Season

Nickel, MW-11 (ug/L)



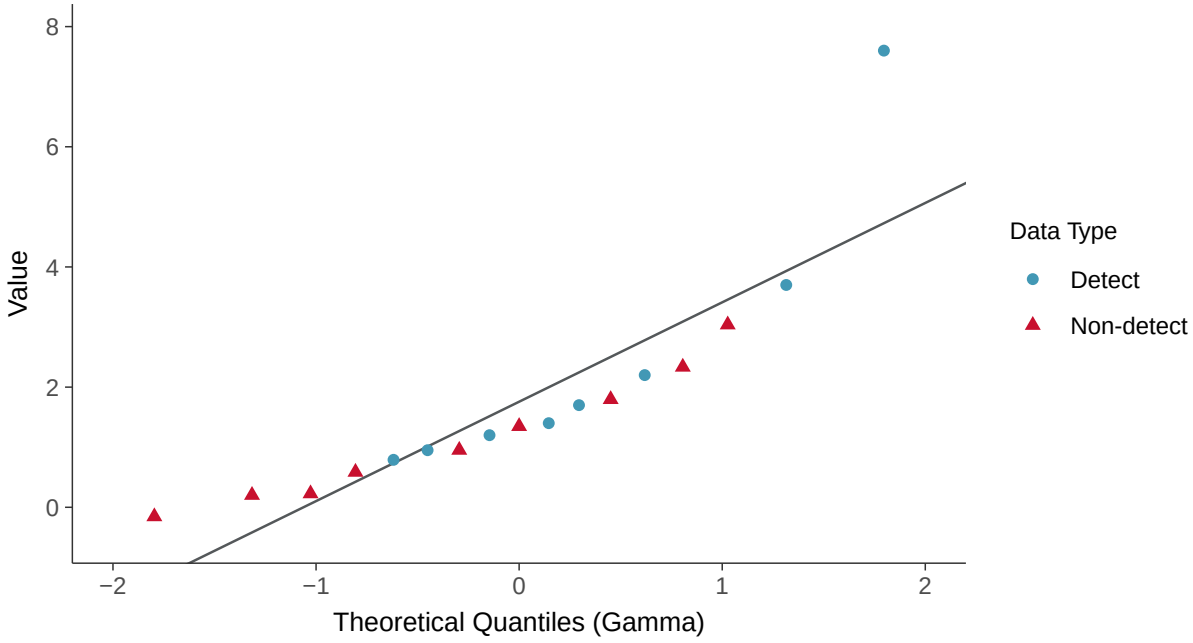
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-11 (ug/L)



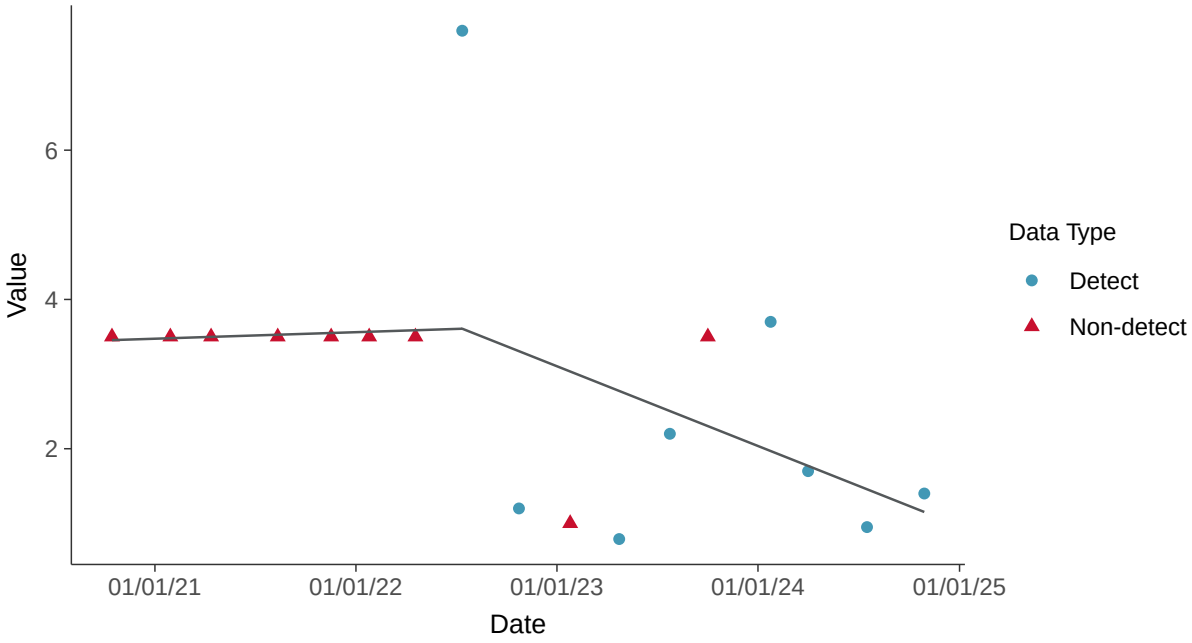
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-11 (ug/L)



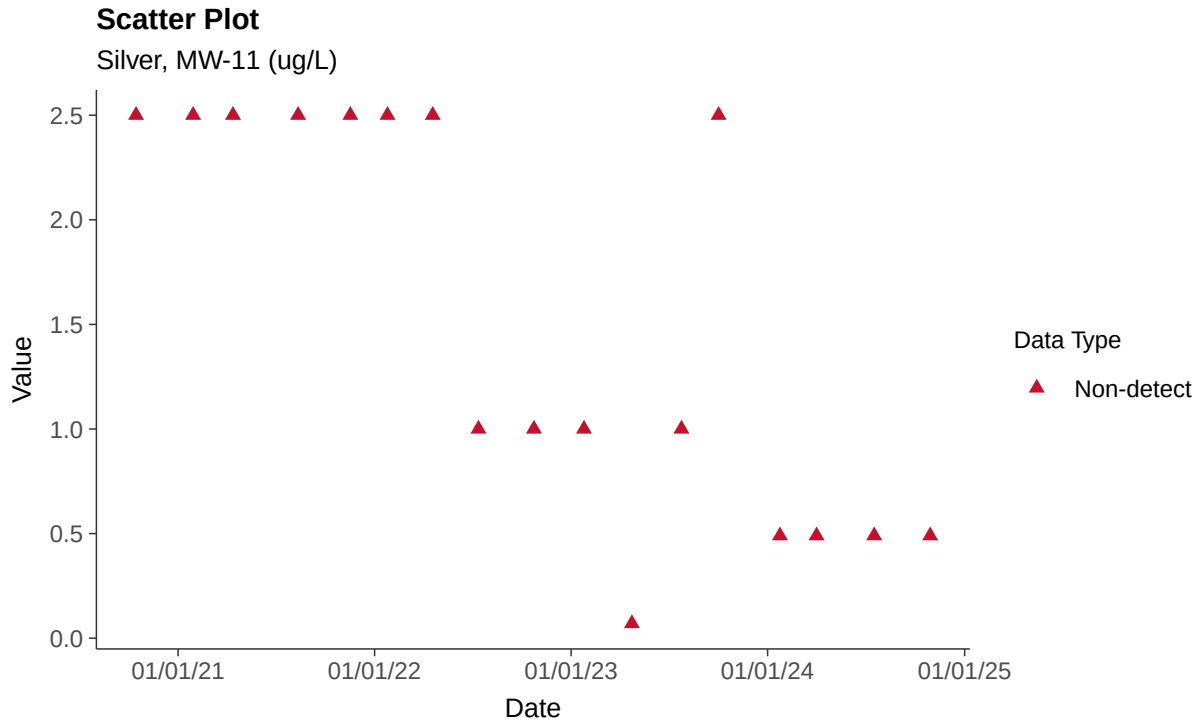
Trend Regression: Piecewise Linear-Linear

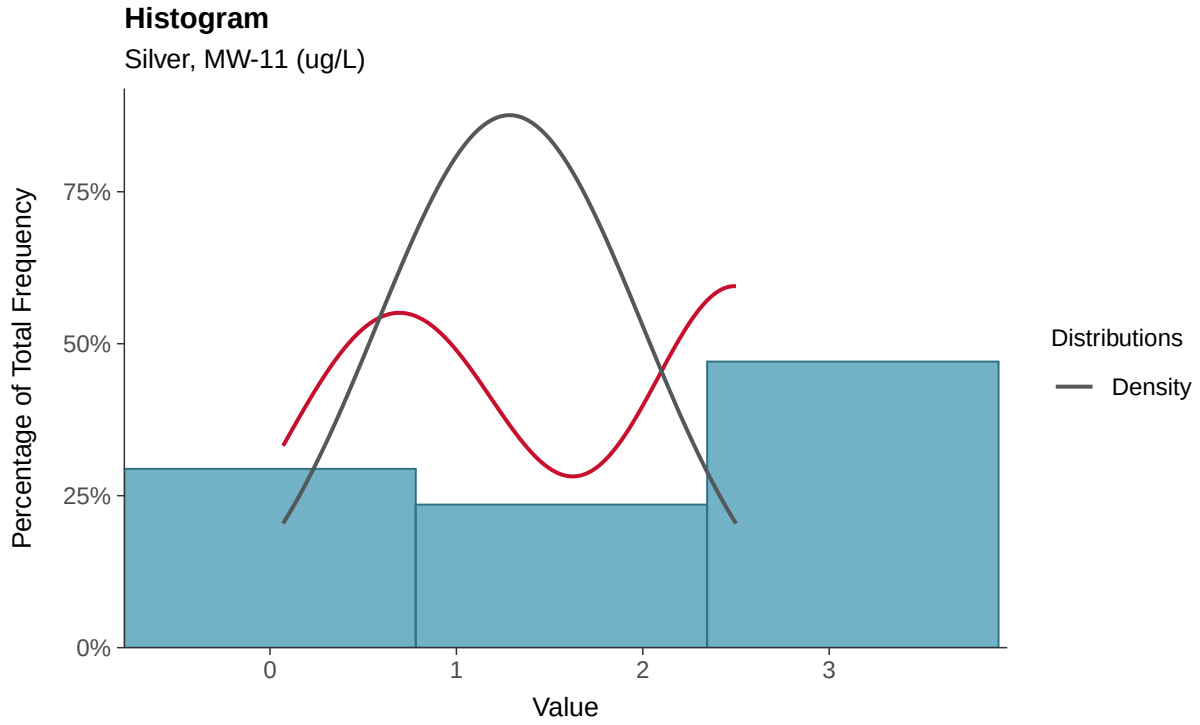
Nickel, MW-11 (ug/L)



App. I Metals: Silver, MW-11

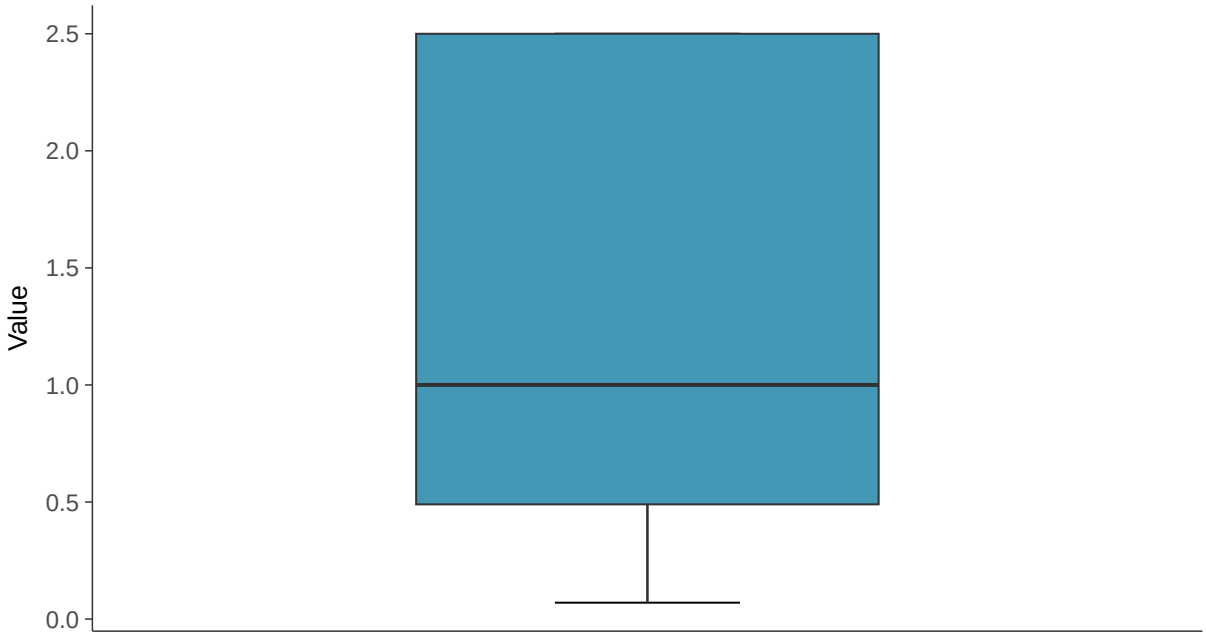
ID: 10_01_122





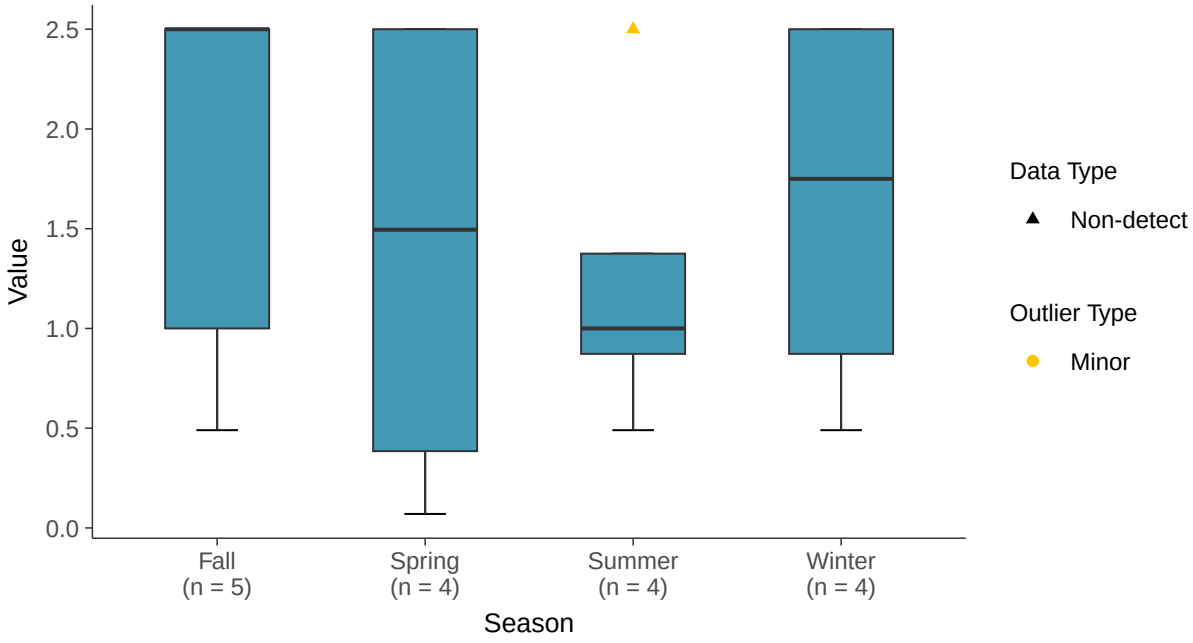
Boxplot

Silver, MW-11 (ug/L)



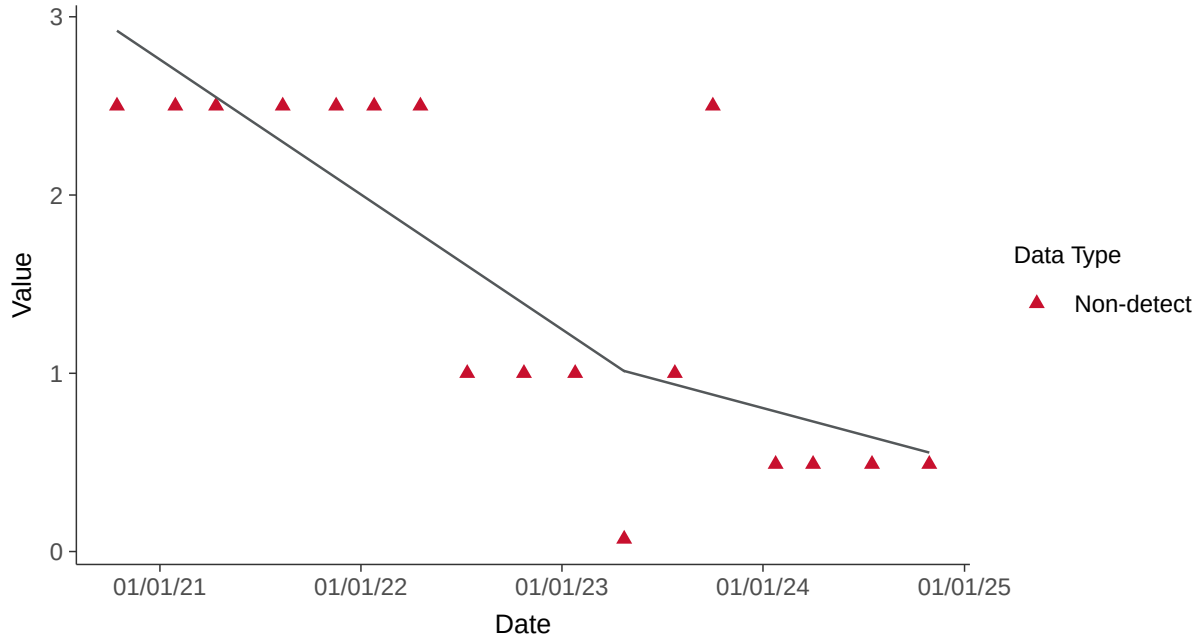
Boxplot by Season

Silver, MW-11 (ug/L)



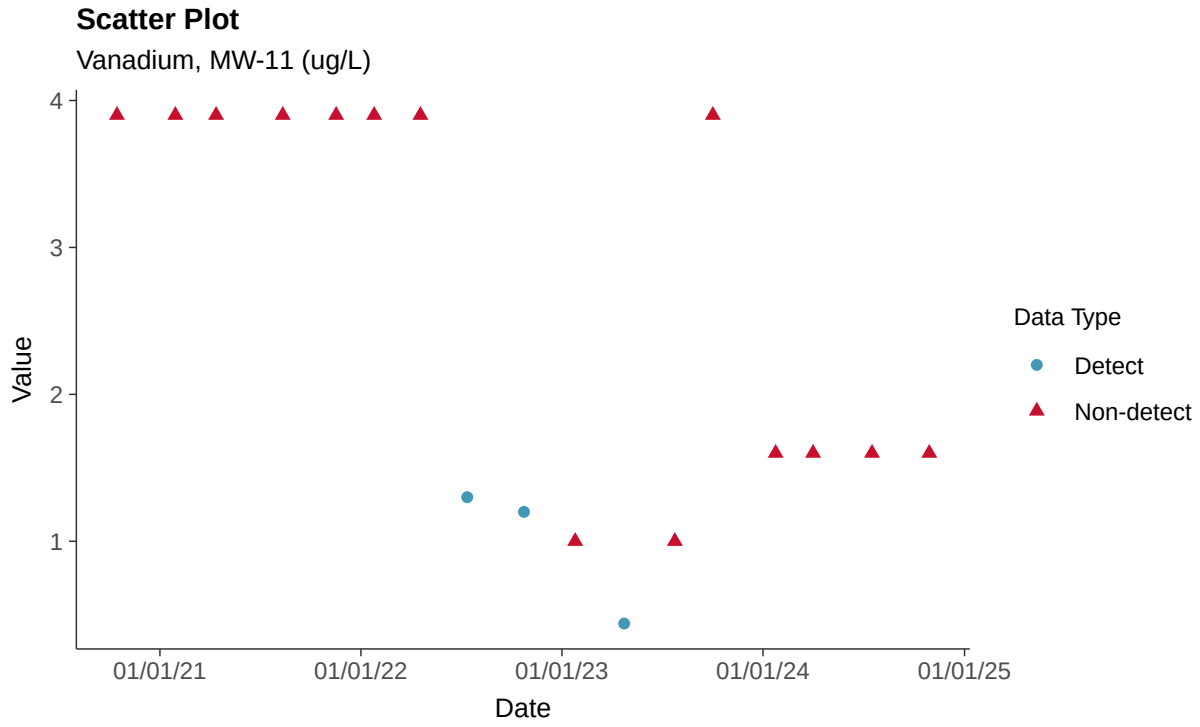
Trend Regression: Piecewise Linear-Linear

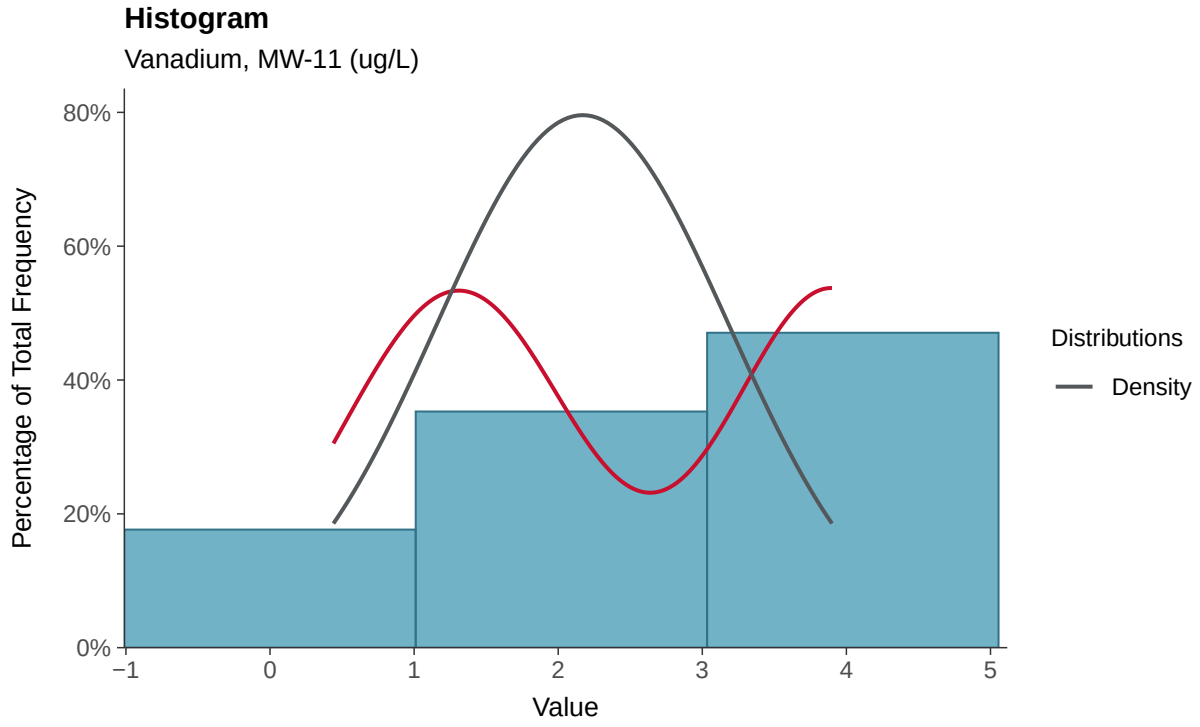
Silver, MW-11 (ug/L)



App. I Metals: Vanadium, MW-11

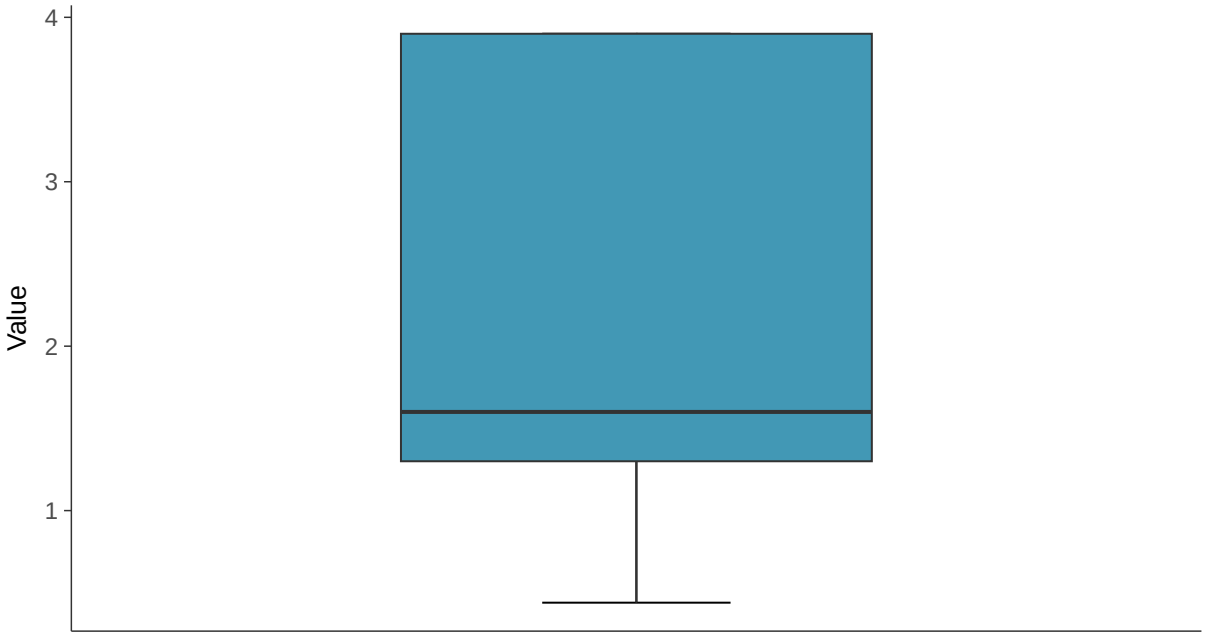
ID: 10_01_127





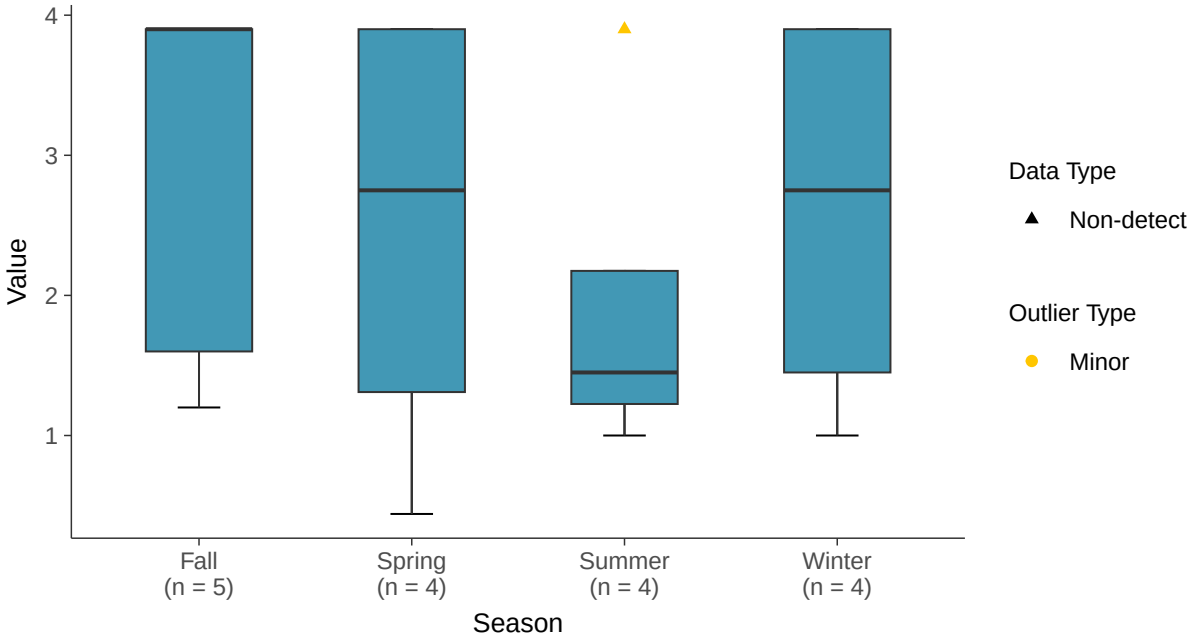
Boxplot

Vanadium, MW-11 (ug/L)



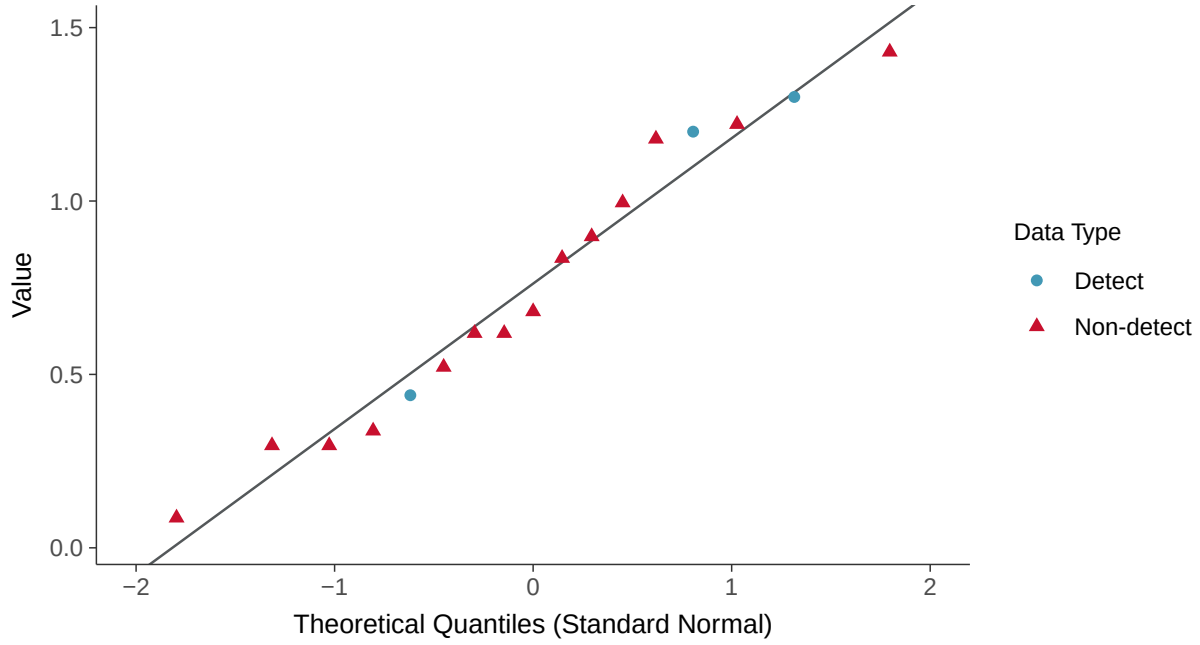
Boxplot by Season

Vanadium, MW-11 (ug/L)



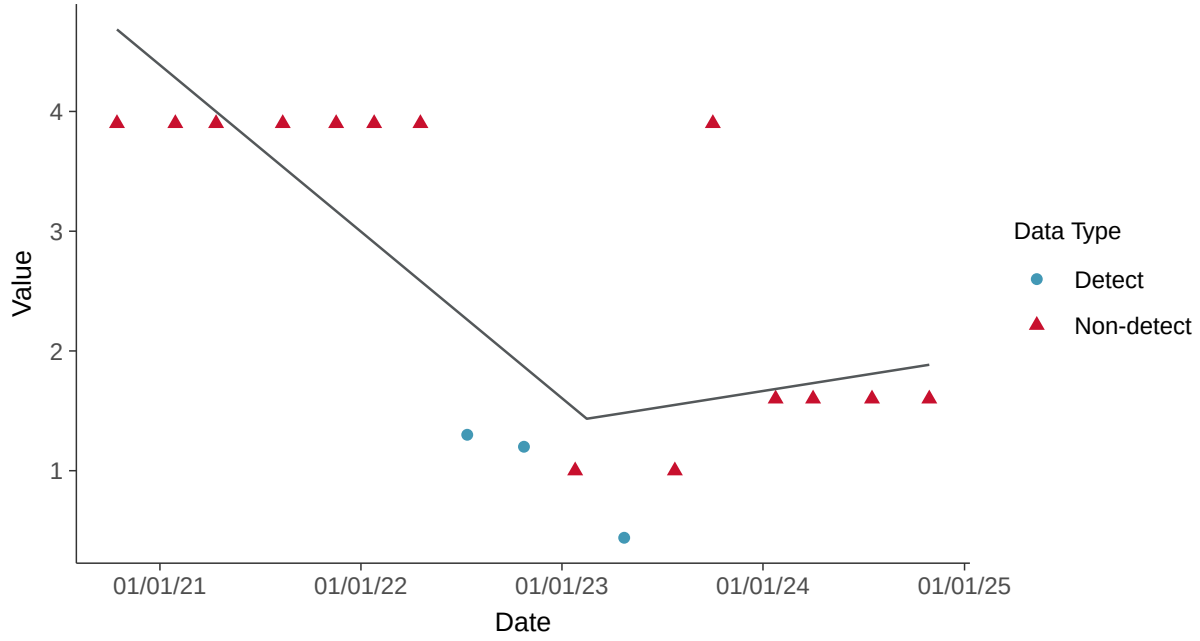
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-11 (ug/L)



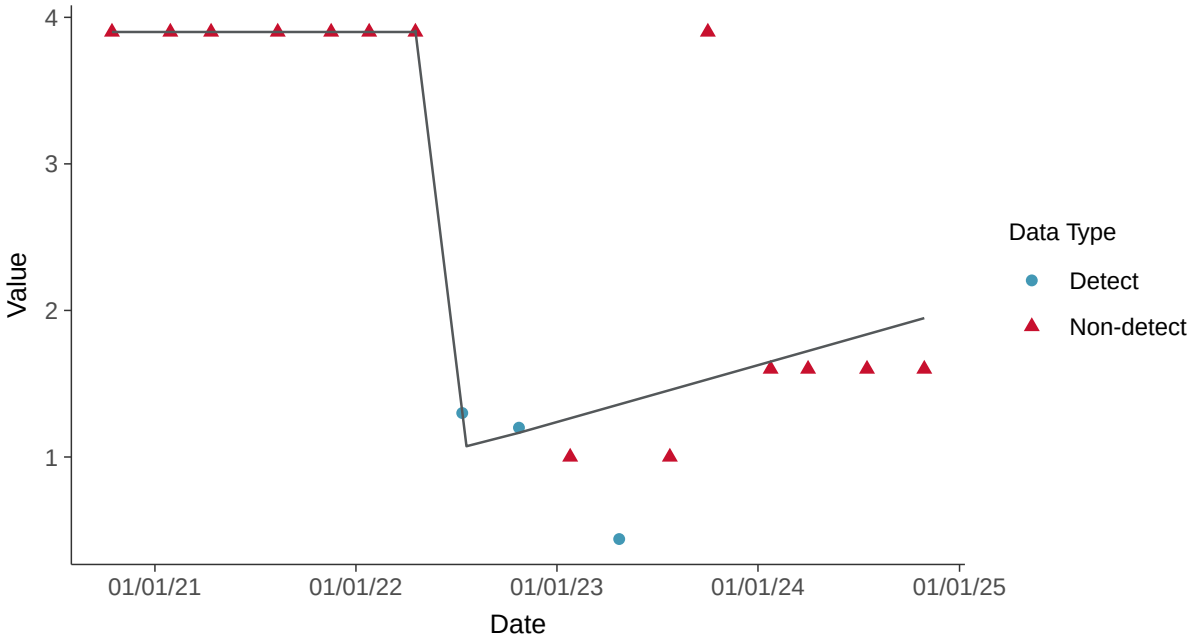
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-11 (ug/L)



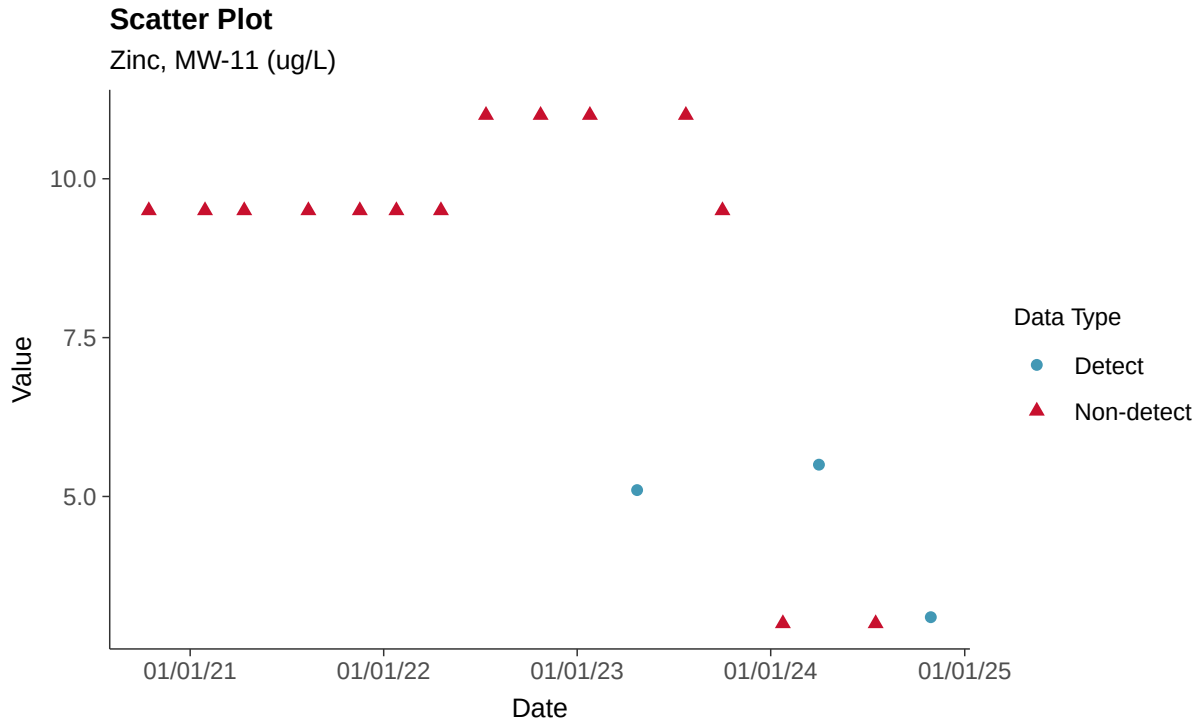
Trend Regression: Piecewise Linear-Linear-Linear

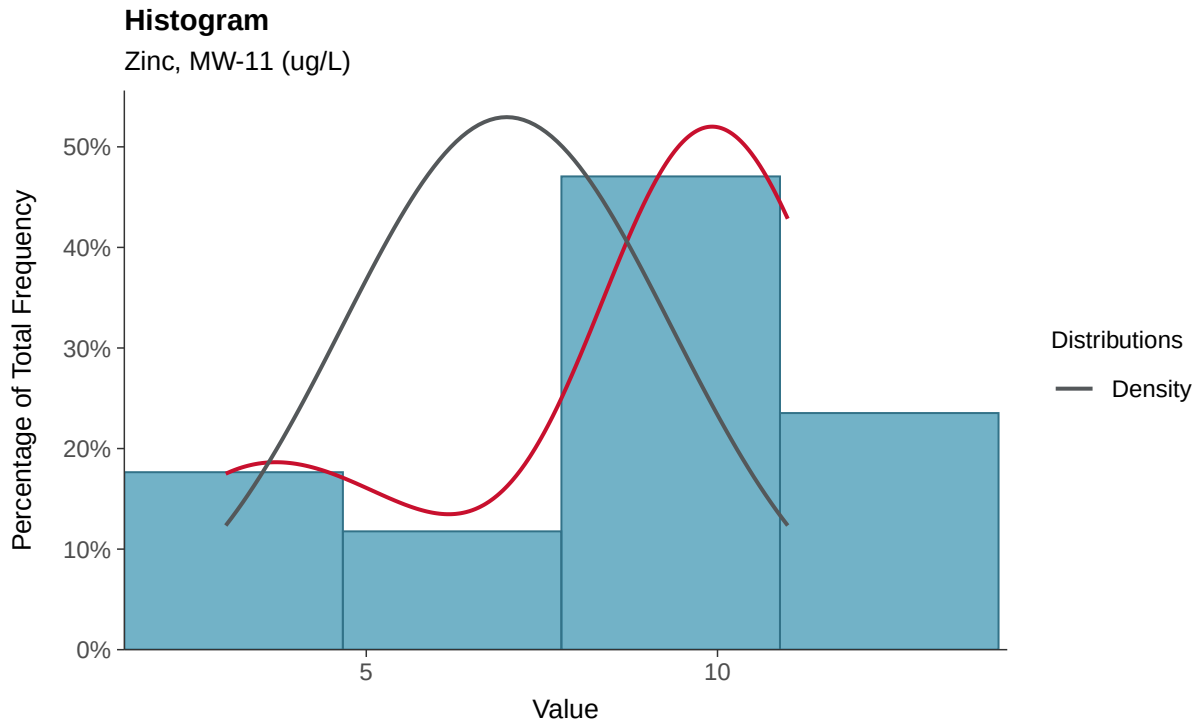
Vanadium, MW-11 (ug/L)



App. I Metals: Zinc, MW-11

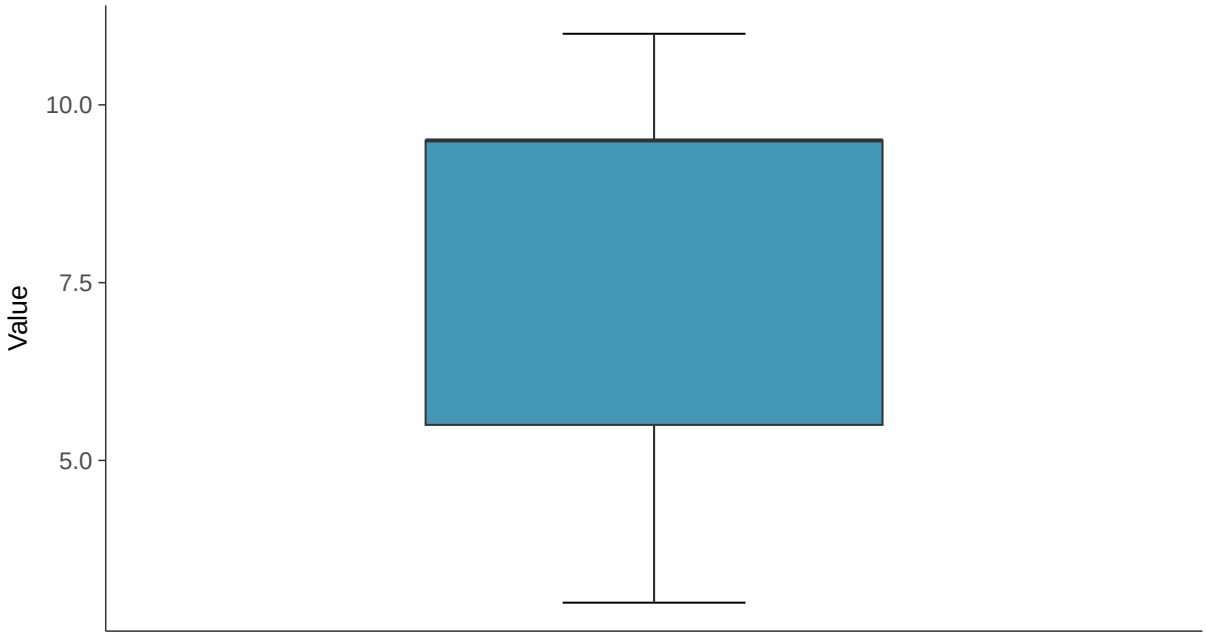
ID: 10_01_128





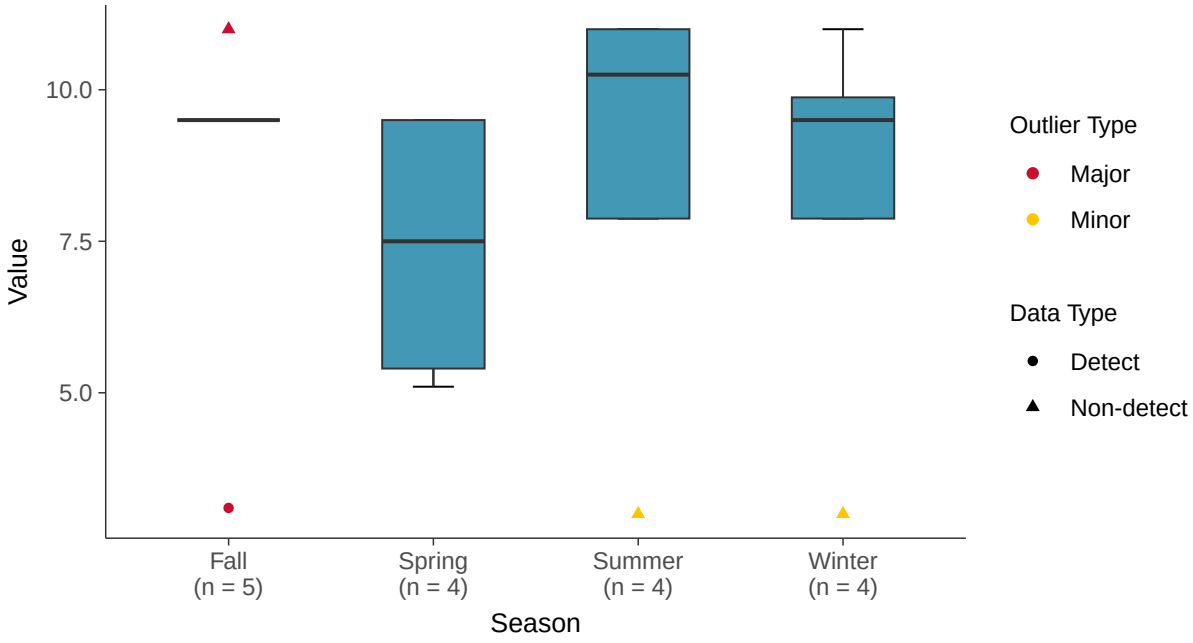
Boxplot

Zinc, MW-11 (ug/L)



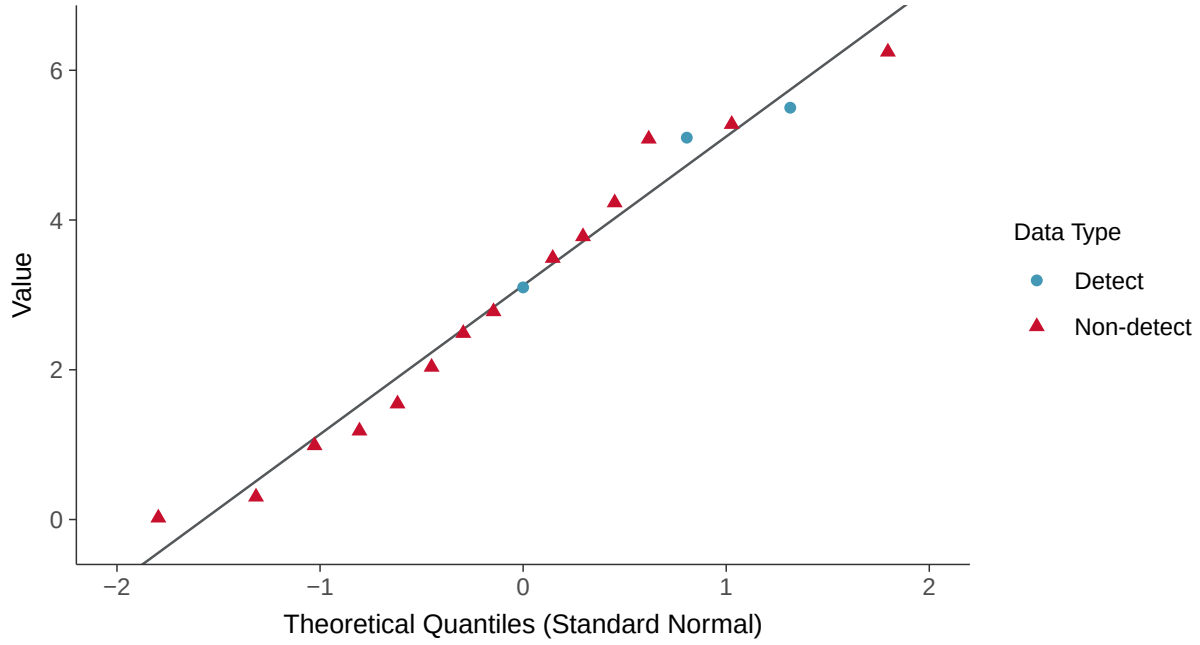
Boxplot by Season

Zinc, MW-11 (ug/L)



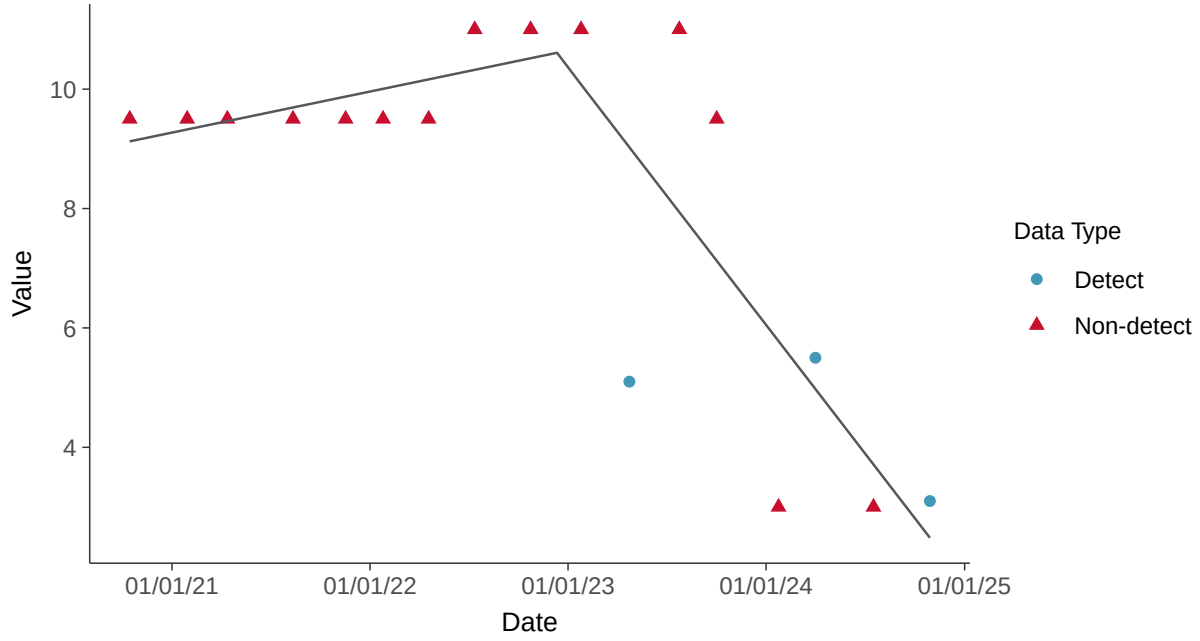
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-11 (ug/L)

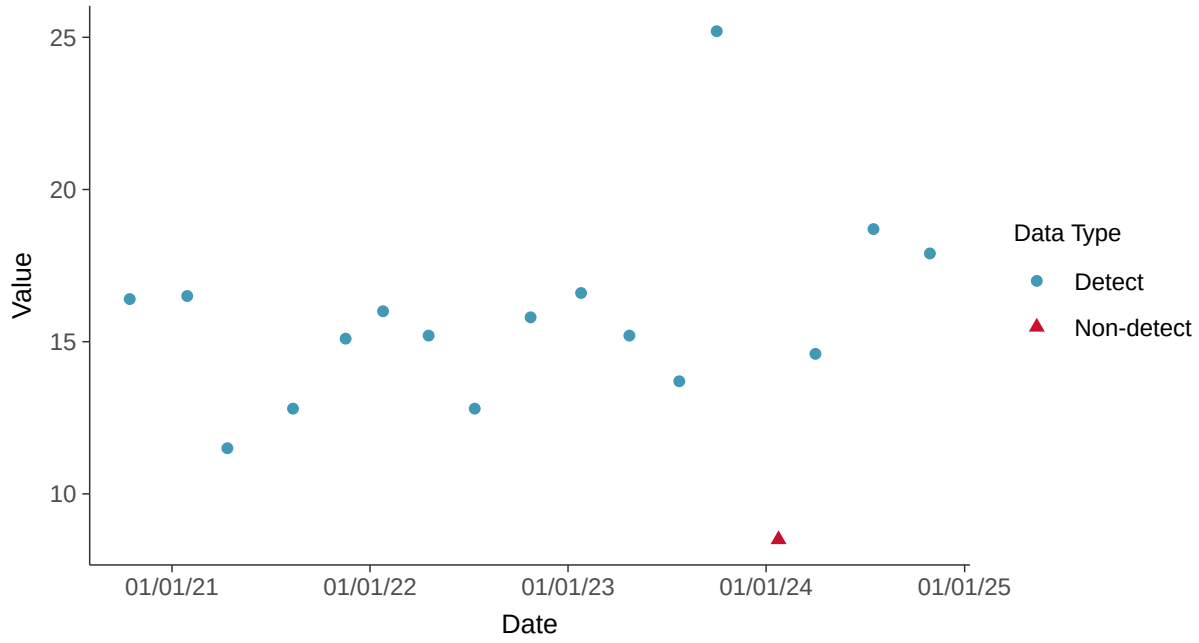


App. III: Boron, MW-11

ID: 10_02_105

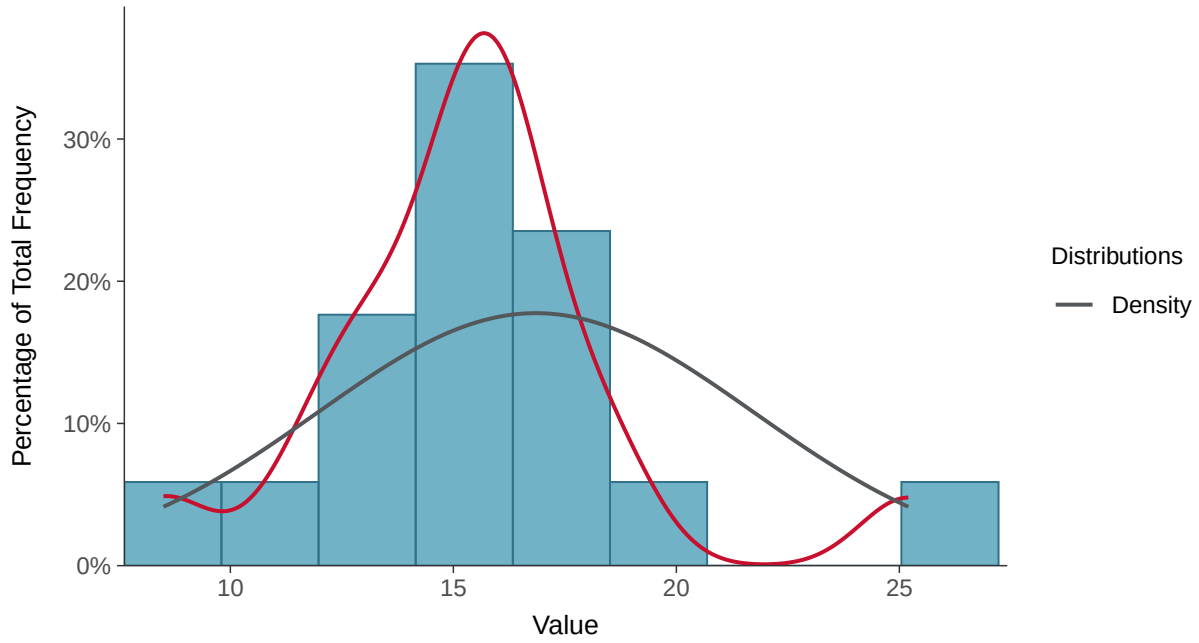
Scatter Plot

Boron, MW-11 (ug/L)



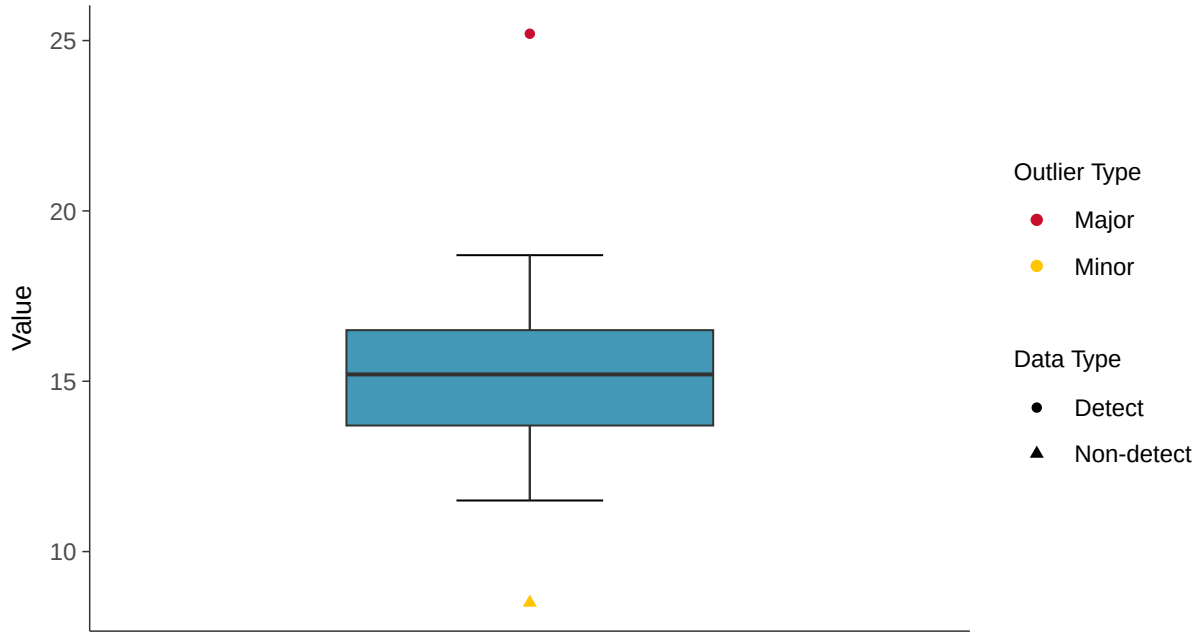
Histogram

Boron, MW-11 (ug/L)



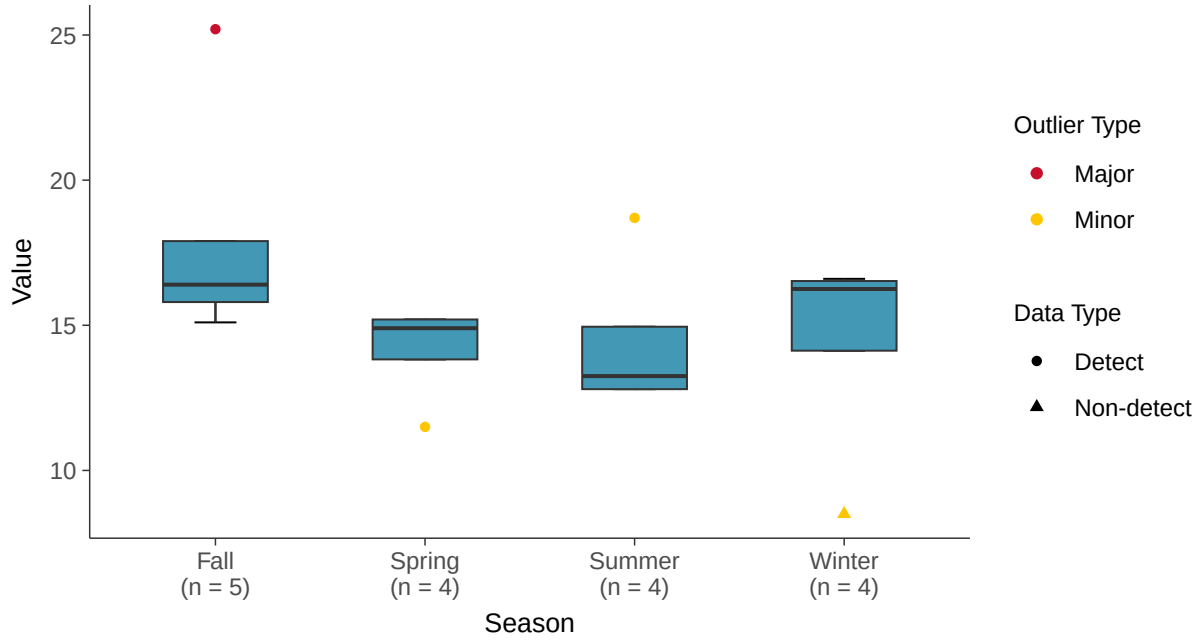
Boxplot

Boron, MW-11 (ug/L)



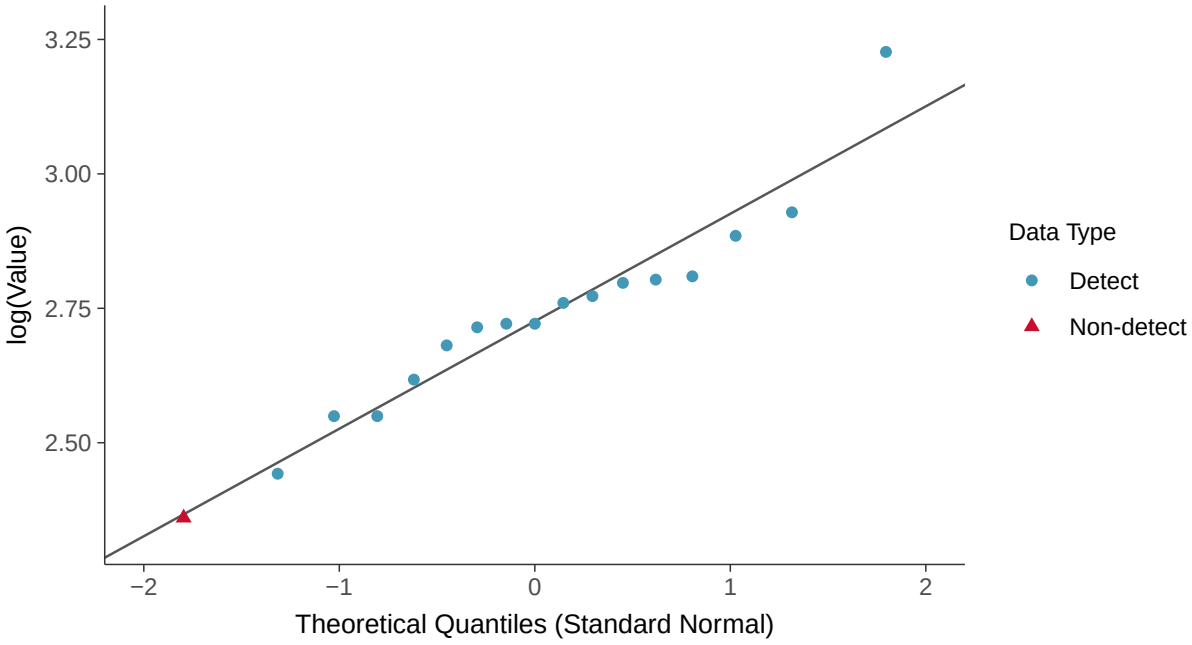
Boxplot by Season

Boron, MW-11 (ug/L)



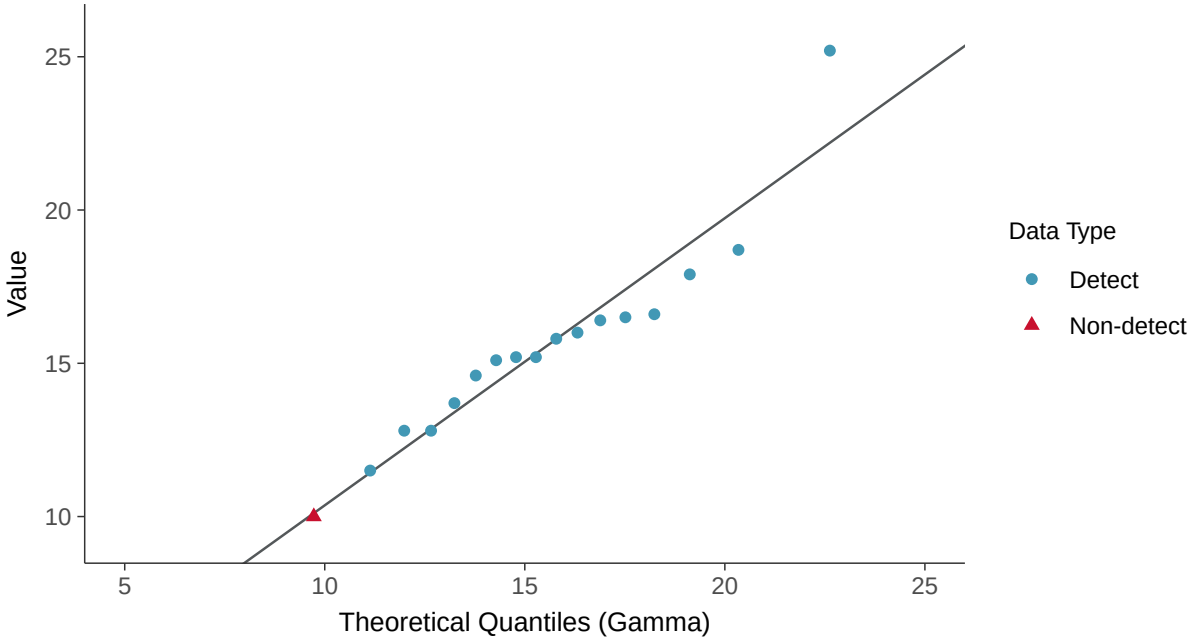
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-11 (ug/L)



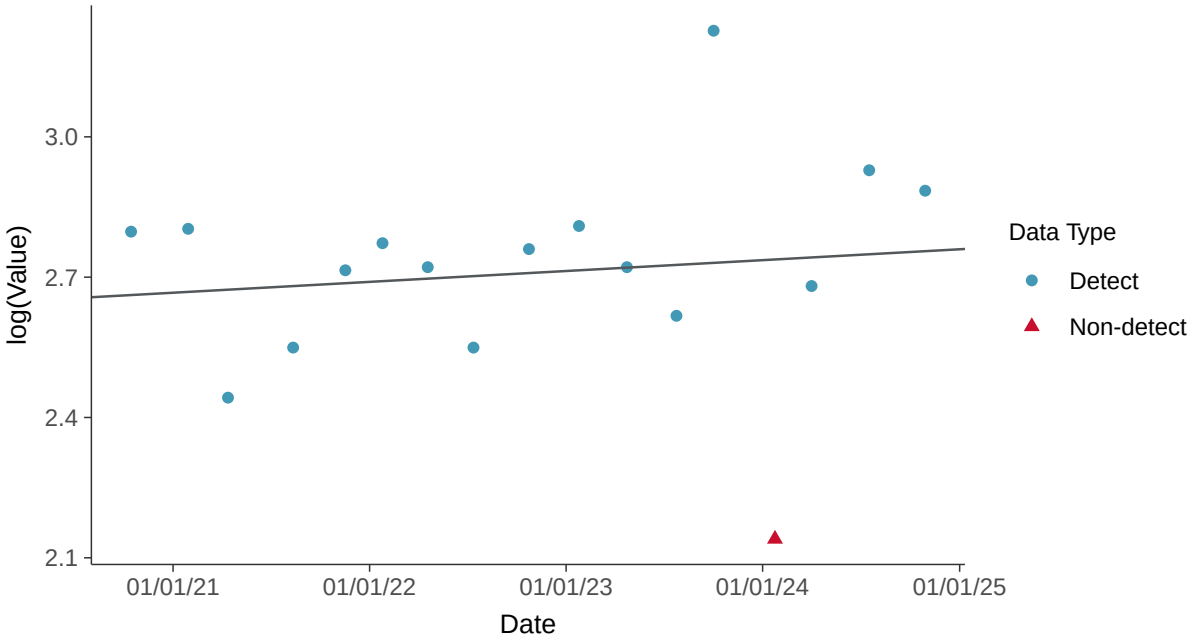
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-11 (ug/L)



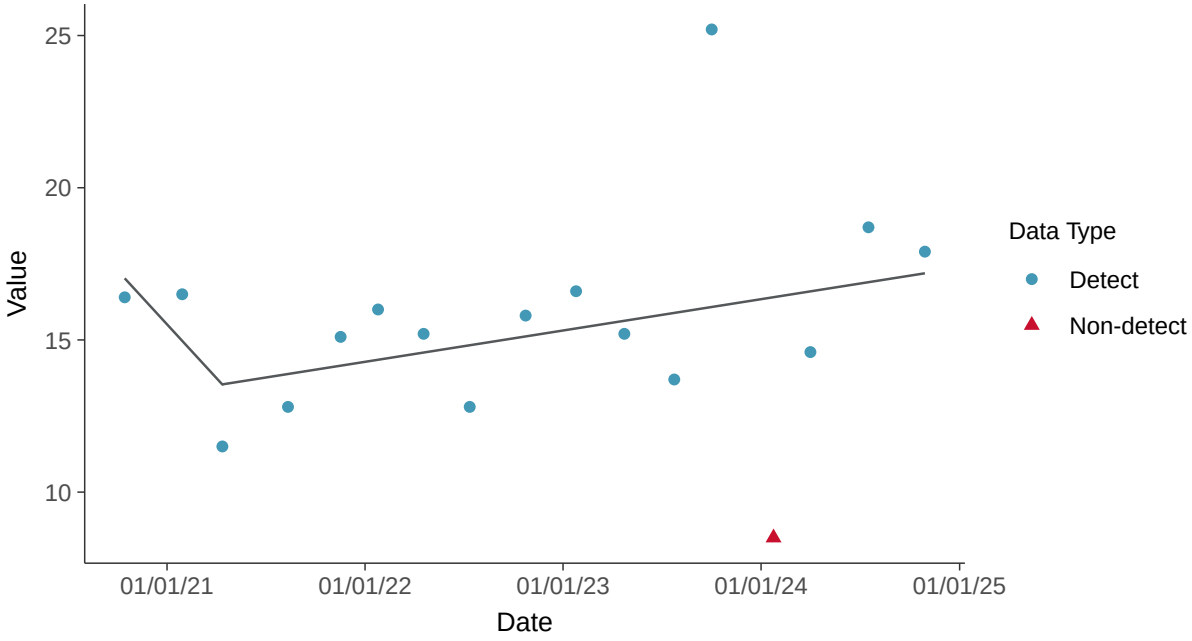
Trend Regression: Lognormal MLE

Boron, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Boron, MW-11 (ug/L)

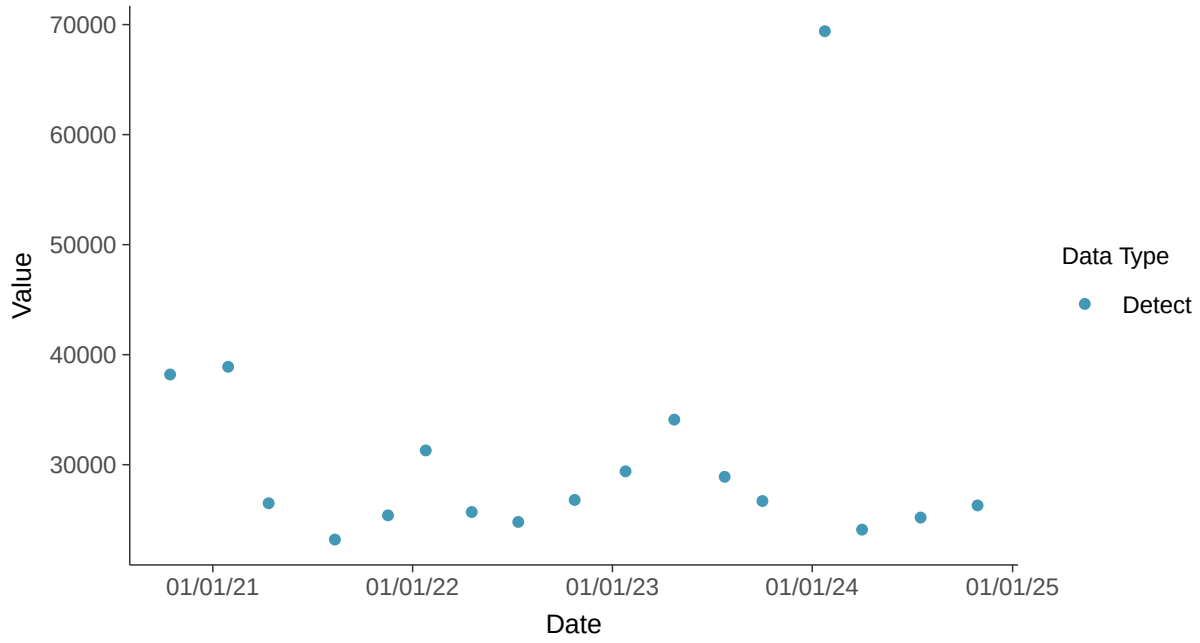


App. III: Calcium, MW-11

ID: 10_02_107

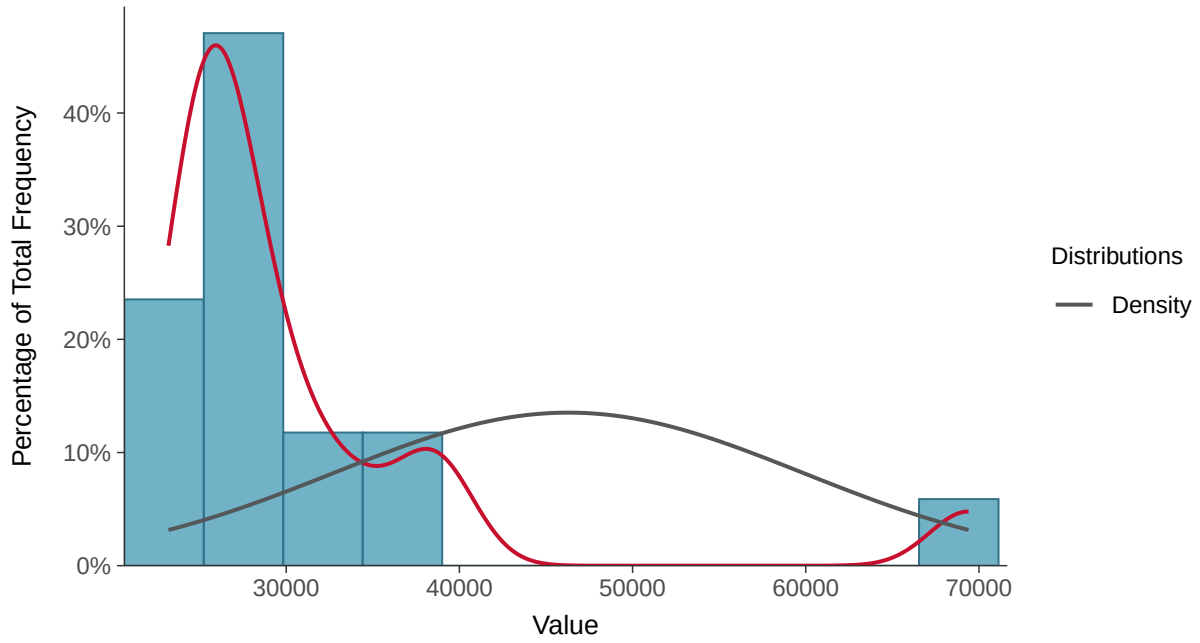
Scatter Plot

Calcium, MW-11 (ug/L)



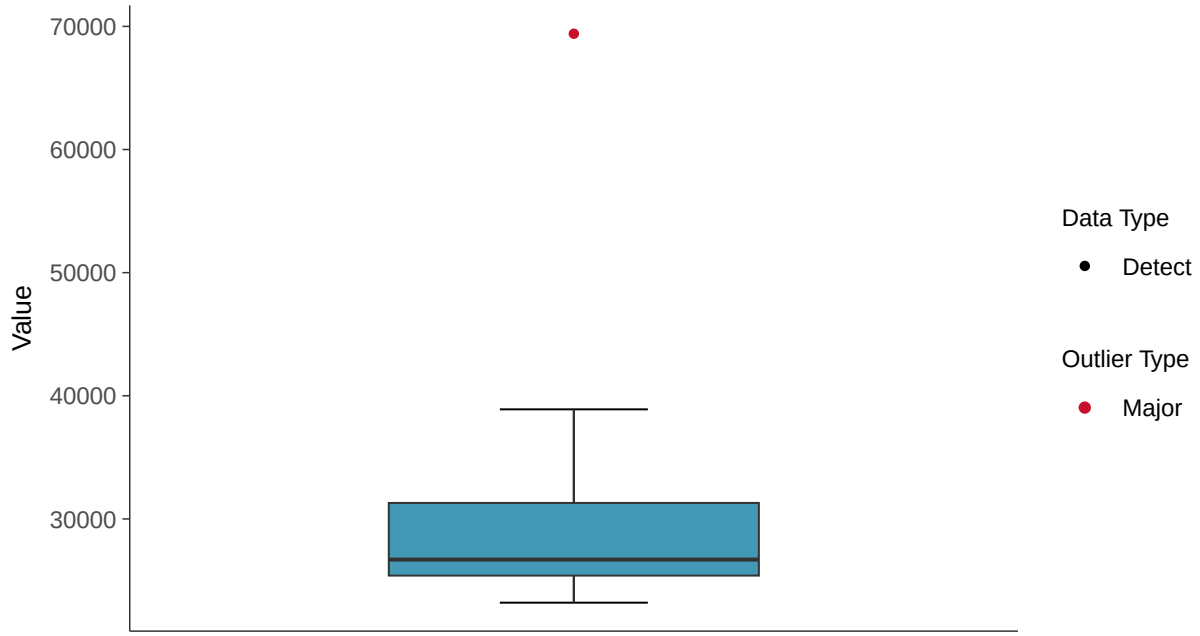
Histogram

Calcium, MW-11 (ug/L)



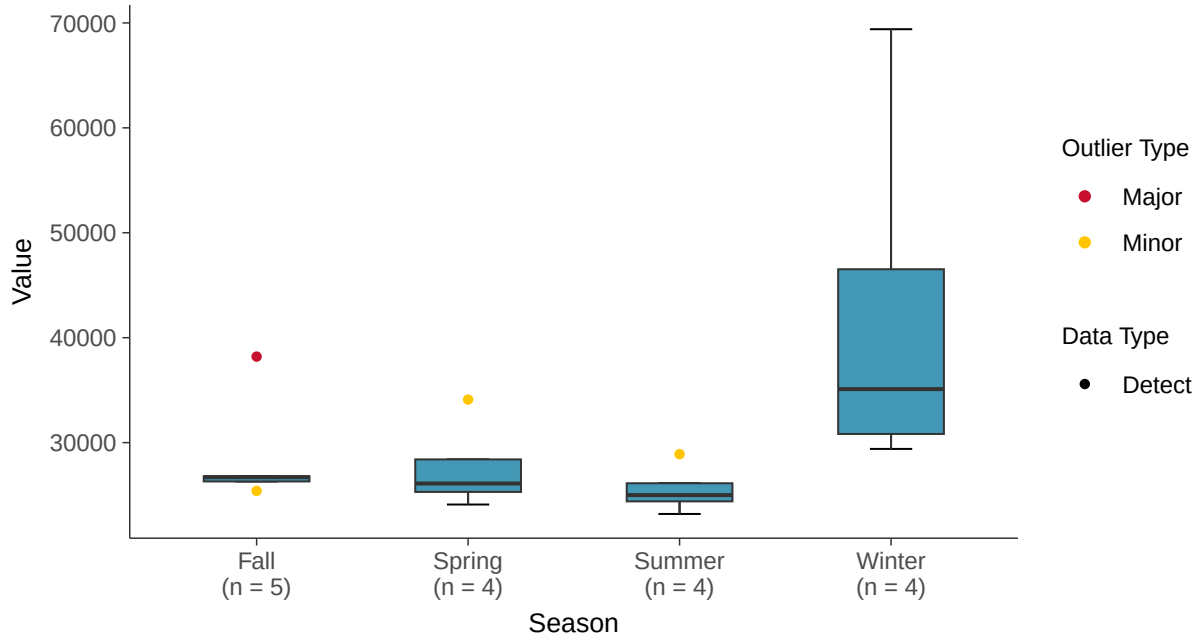
Boxplot

Calcium, MW-11 (ug/L)



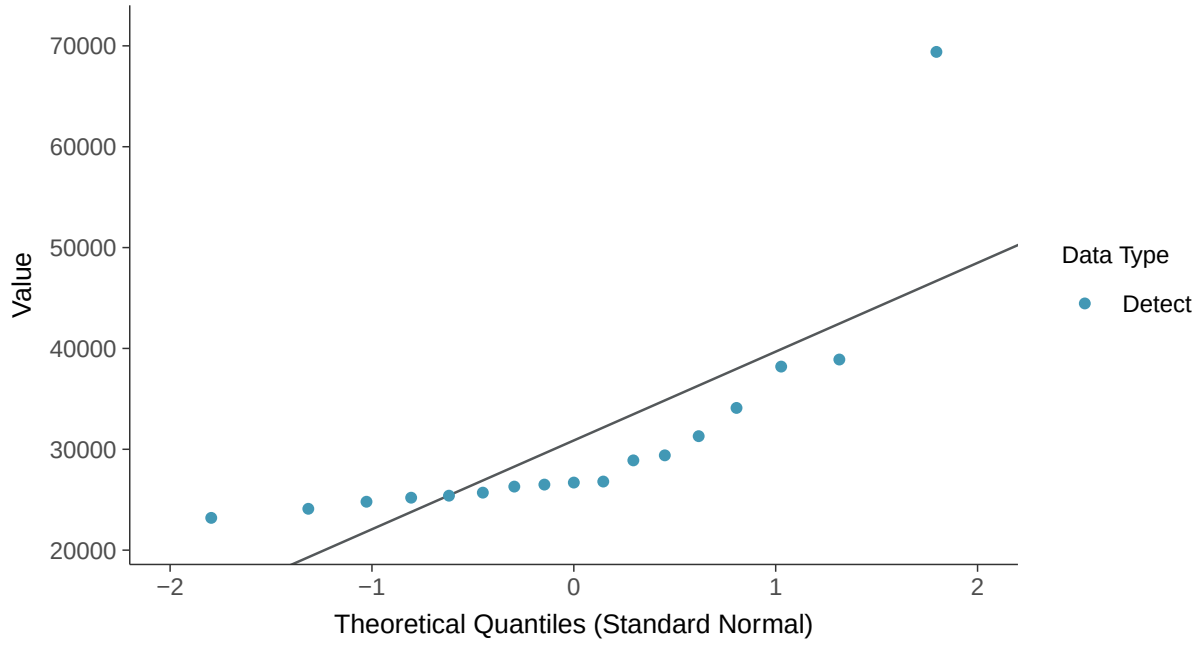
Boxplot by Season

Calcium, MW-11 (ug/L)



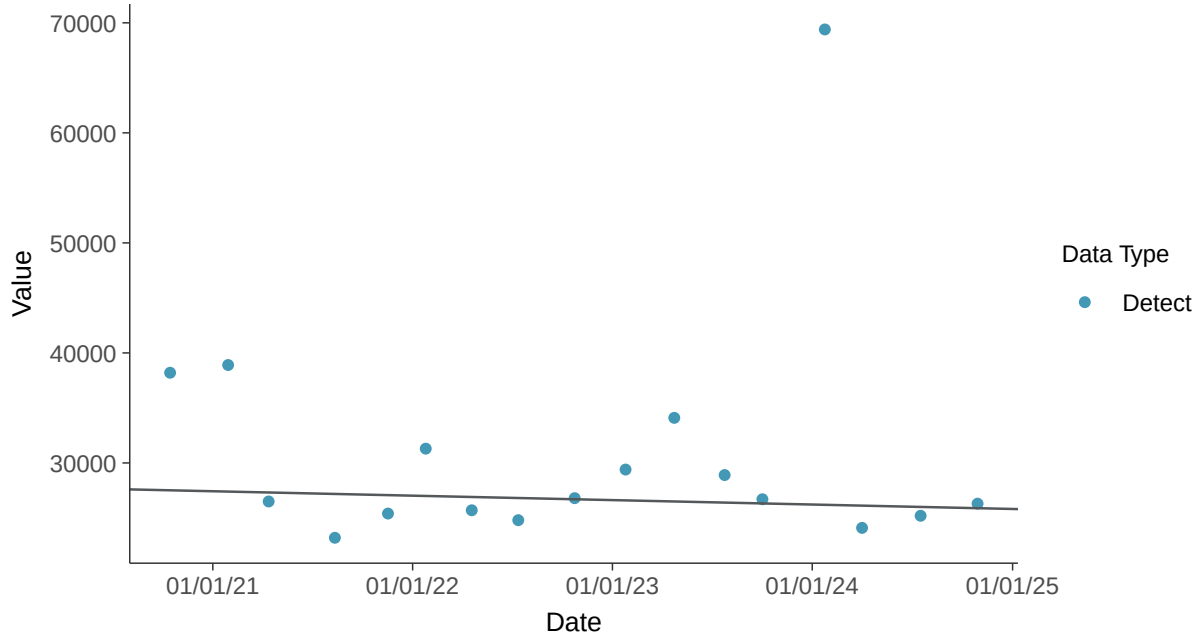
Normal Q-Q plot

Calcium, MW-11 (ug/L)



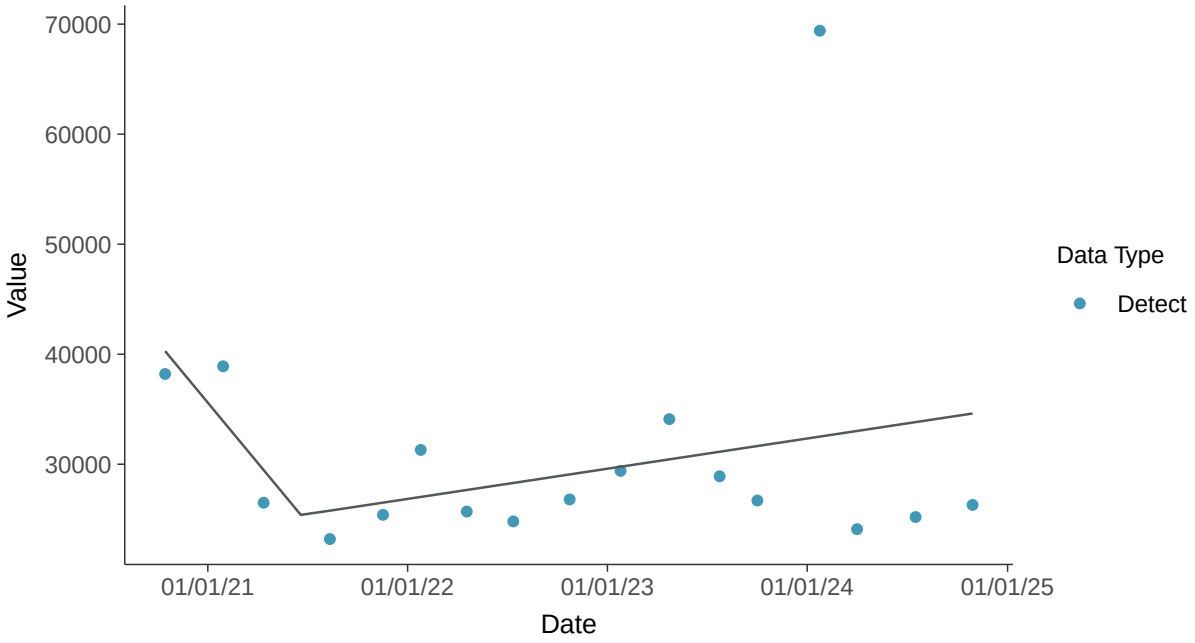
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-11 (ug/L)



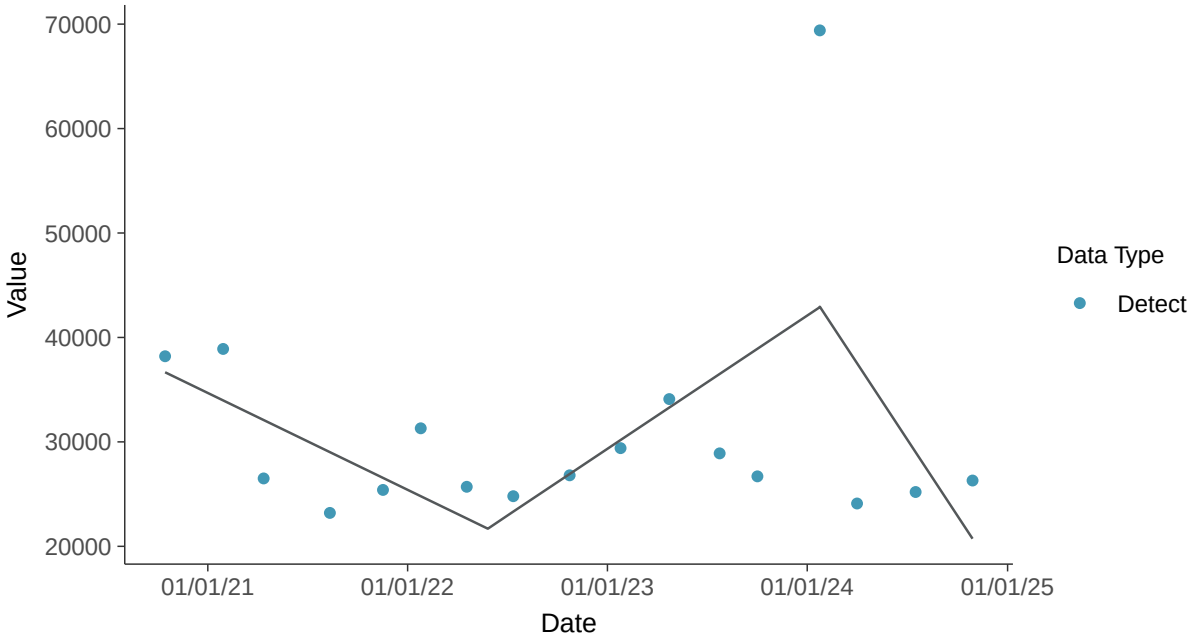
Trend Regression: Piecewise Linear-Linear

Calcium, MW-11 (ug/L)



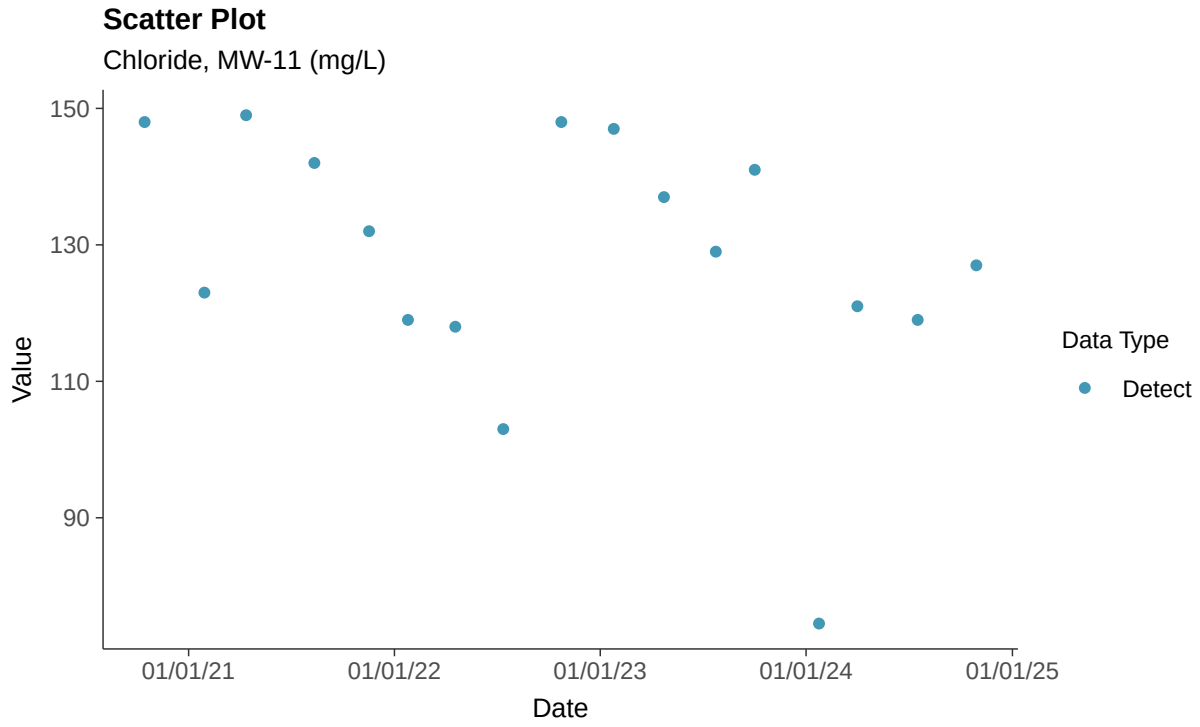
Trend Regression: Piecewise Linear-Linear-Linear

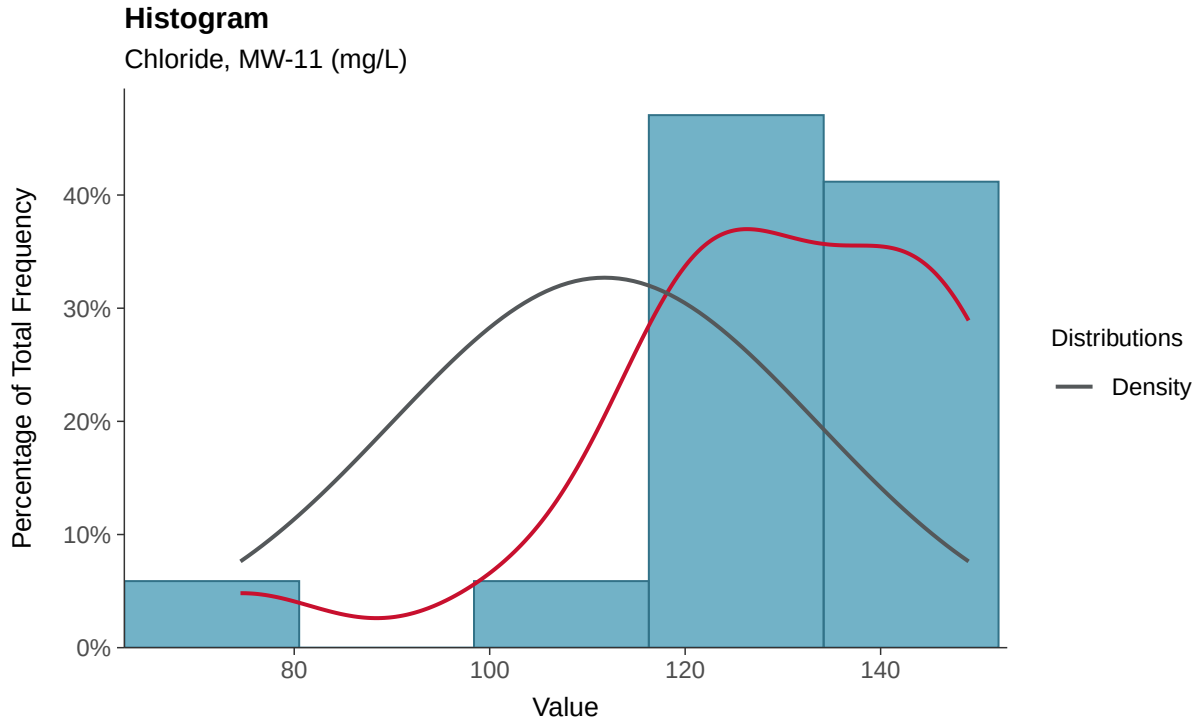
Calcium, MW-11 (ug/L)



App. III: Chloride, MW-11

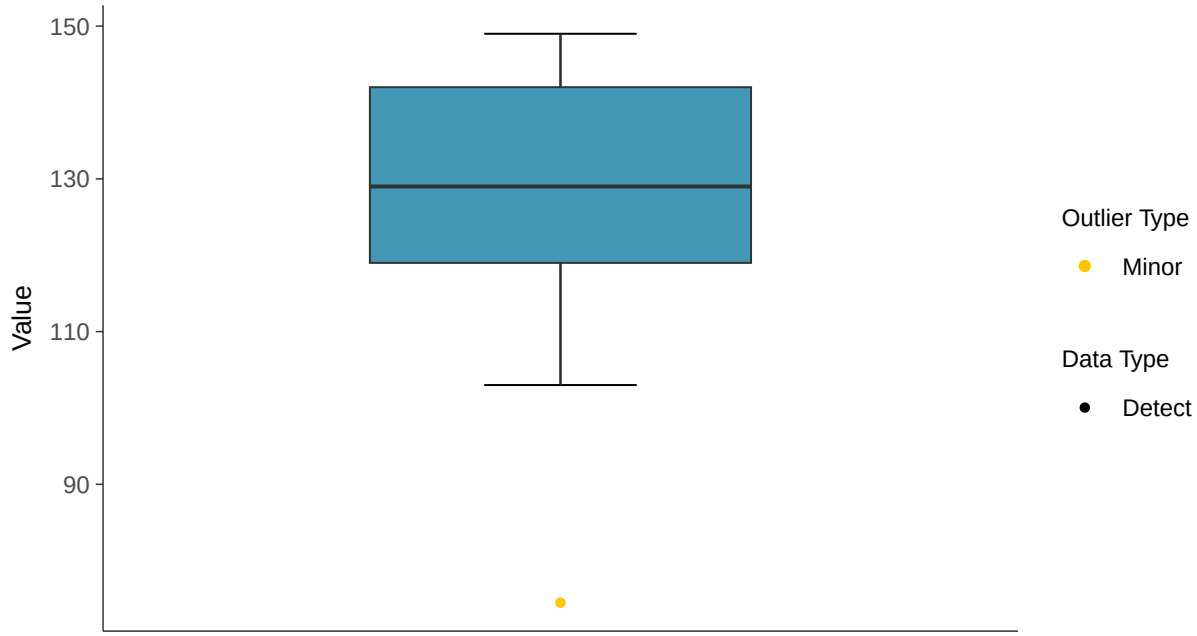
ID: 10_02_108





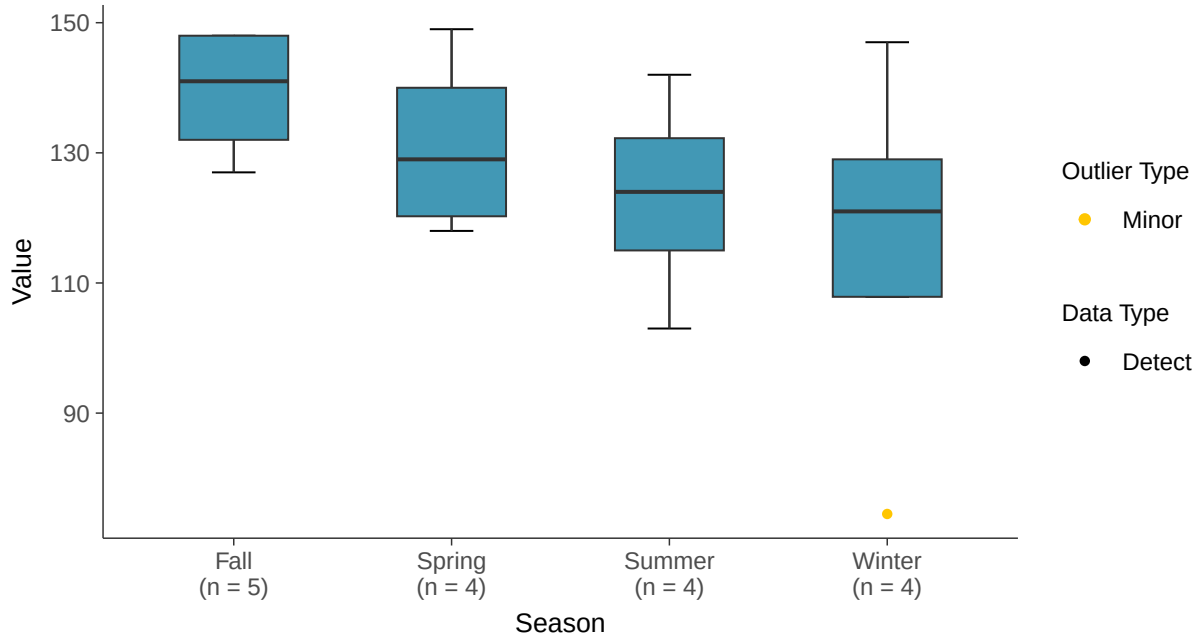
Boxplot

Chloride, MW-11 (mg/L)



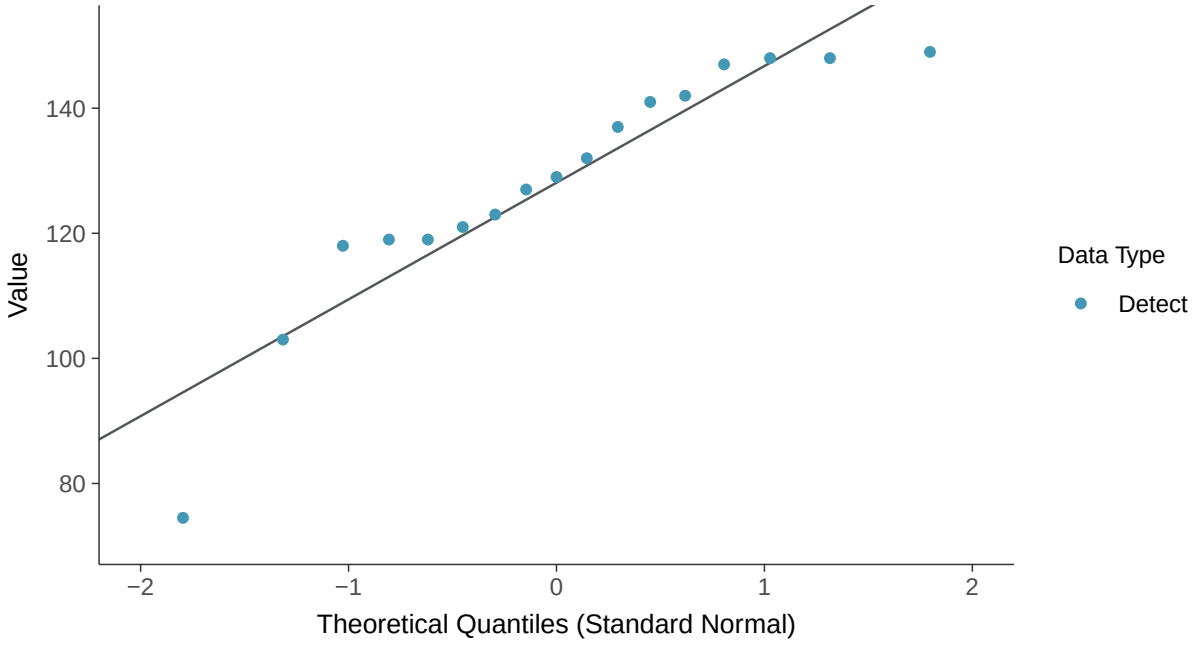
Boxplot by Season

Chloride, MW-11 (mg/L)



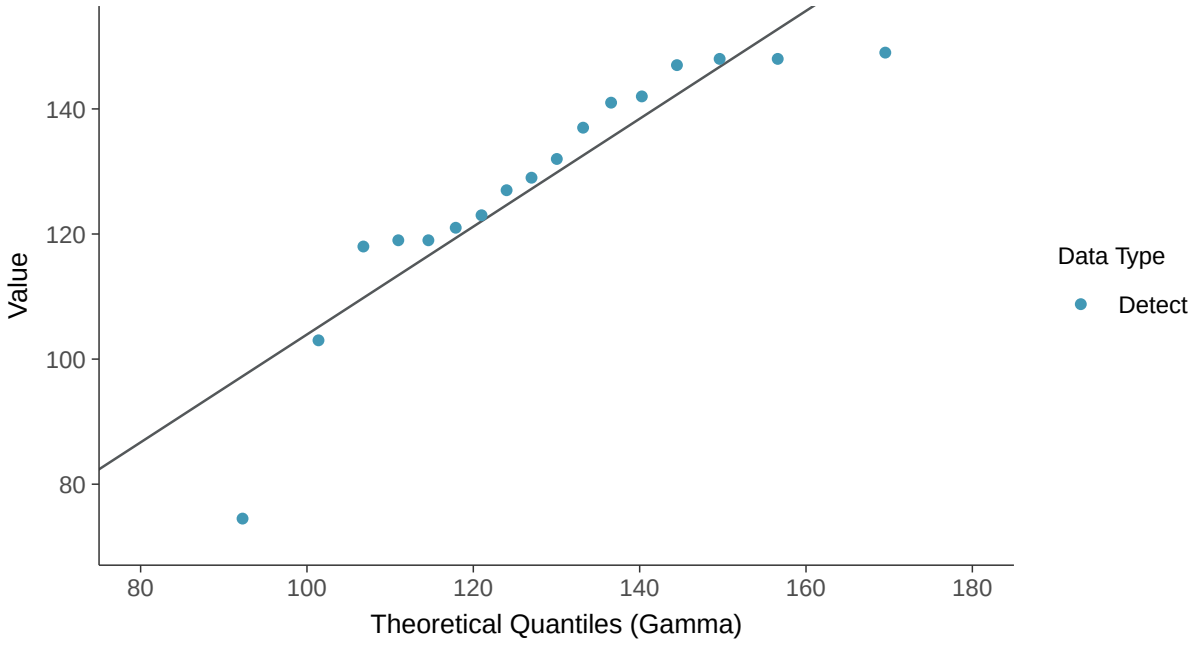
Normal Q-Q plot

Chloride, MW-11 (mg/L)



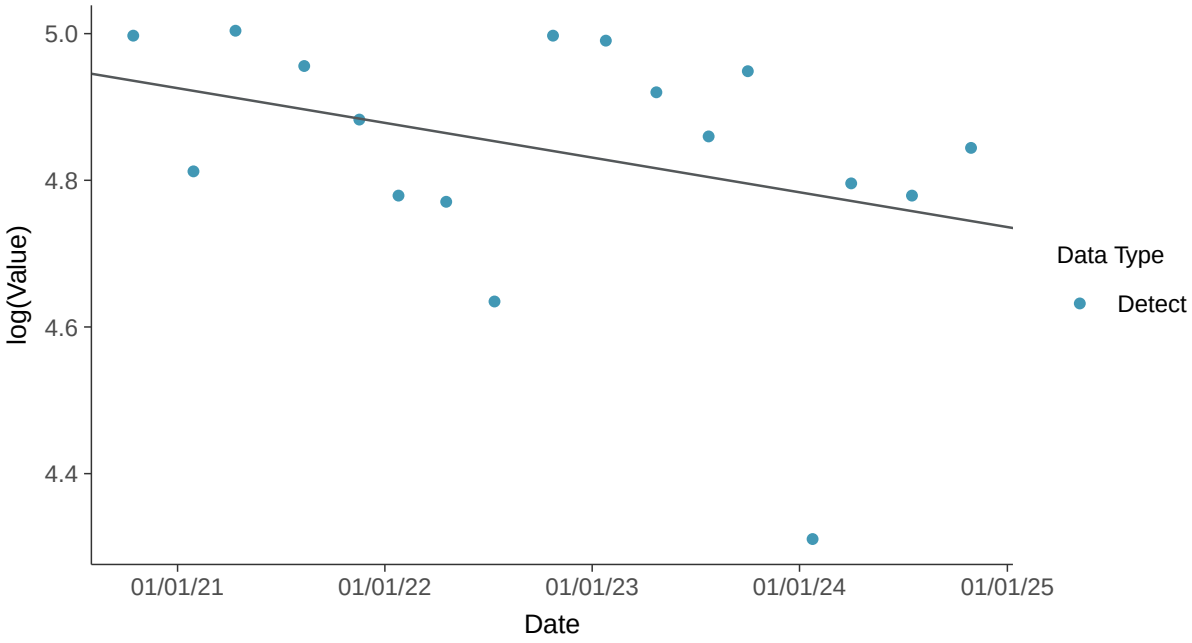
Gamma Q-Q plot

Chloride, MW-11 (mg/L)



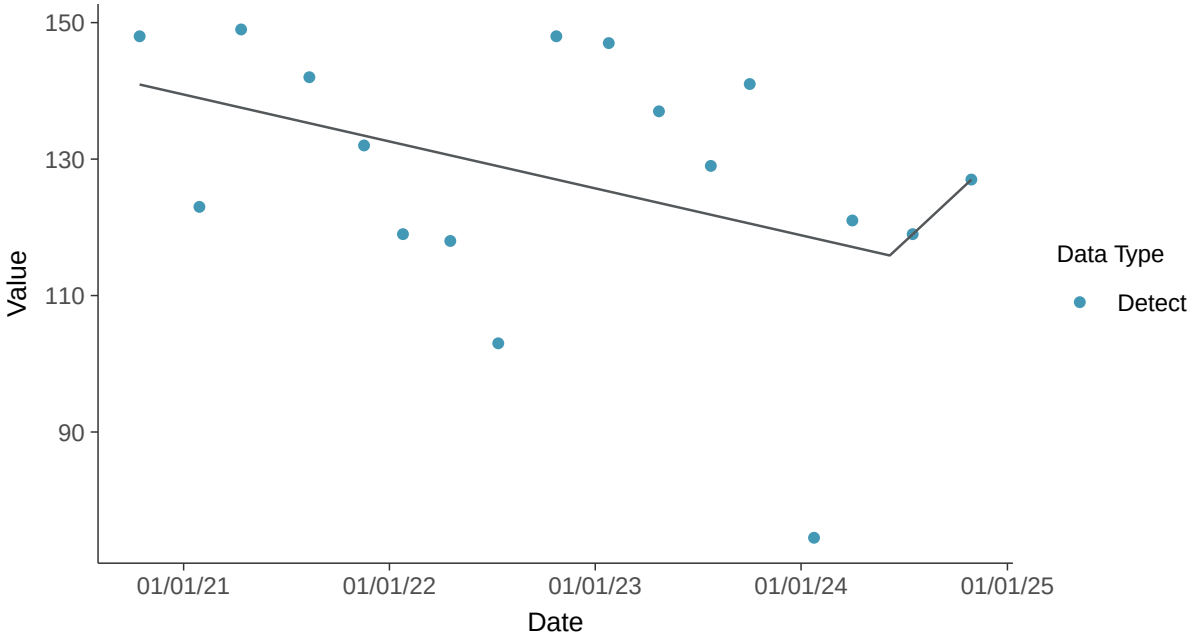
Trend Regression: Lognormal MLE

Chloride, MW-11 (mg/L)



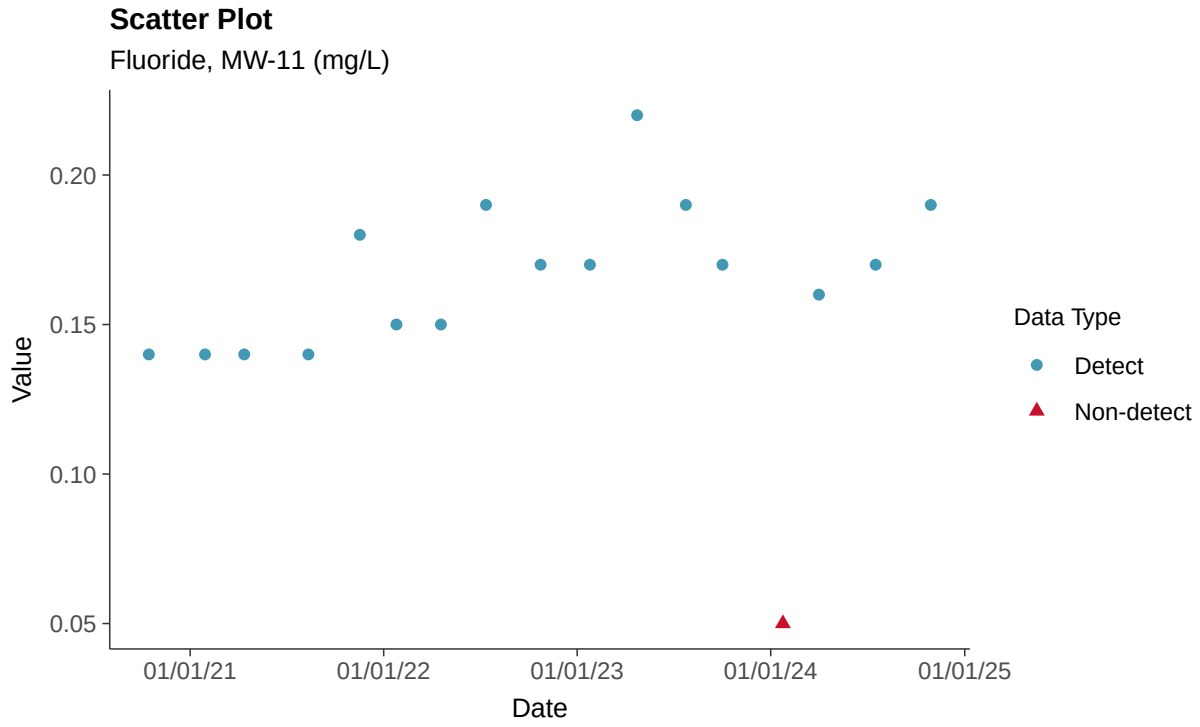
Trend Regression: Piecewise Linear-Linear

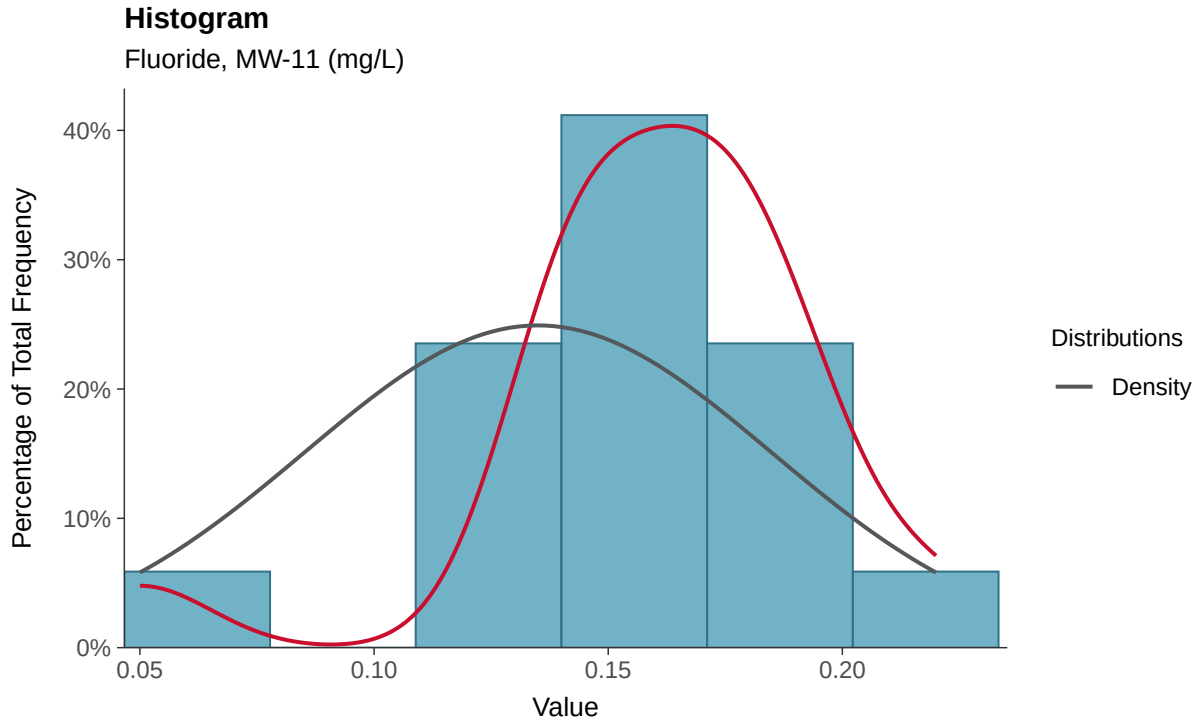
Chloride, MW-11 (mg/L)



App. III: Fluoride, MW-11

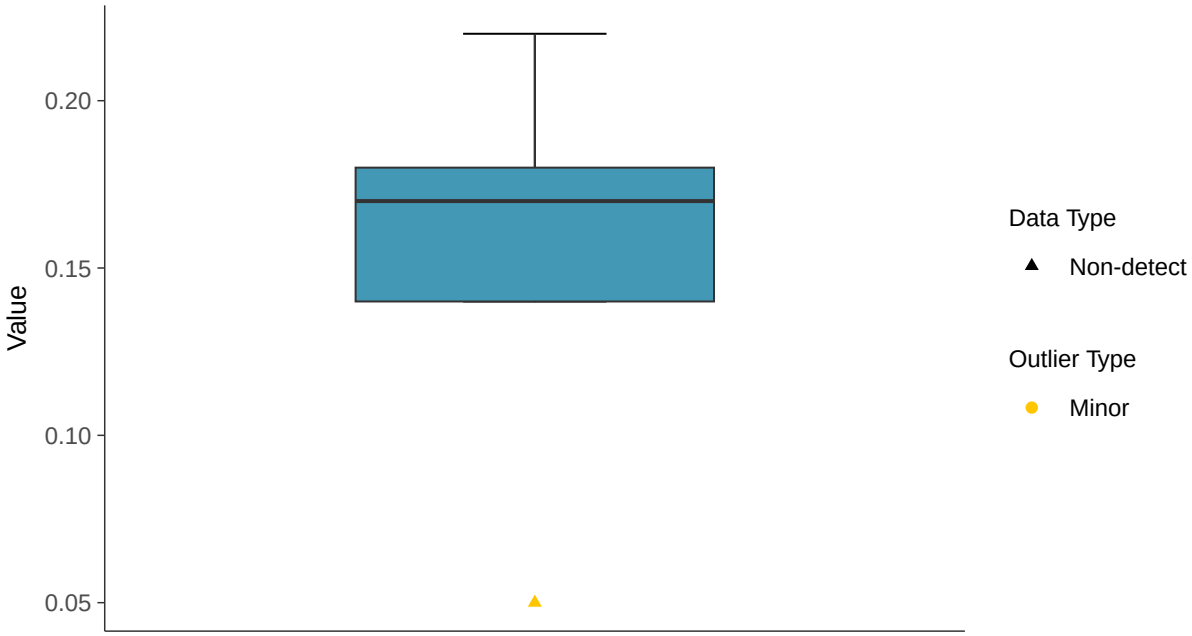
ID: 10_02_112





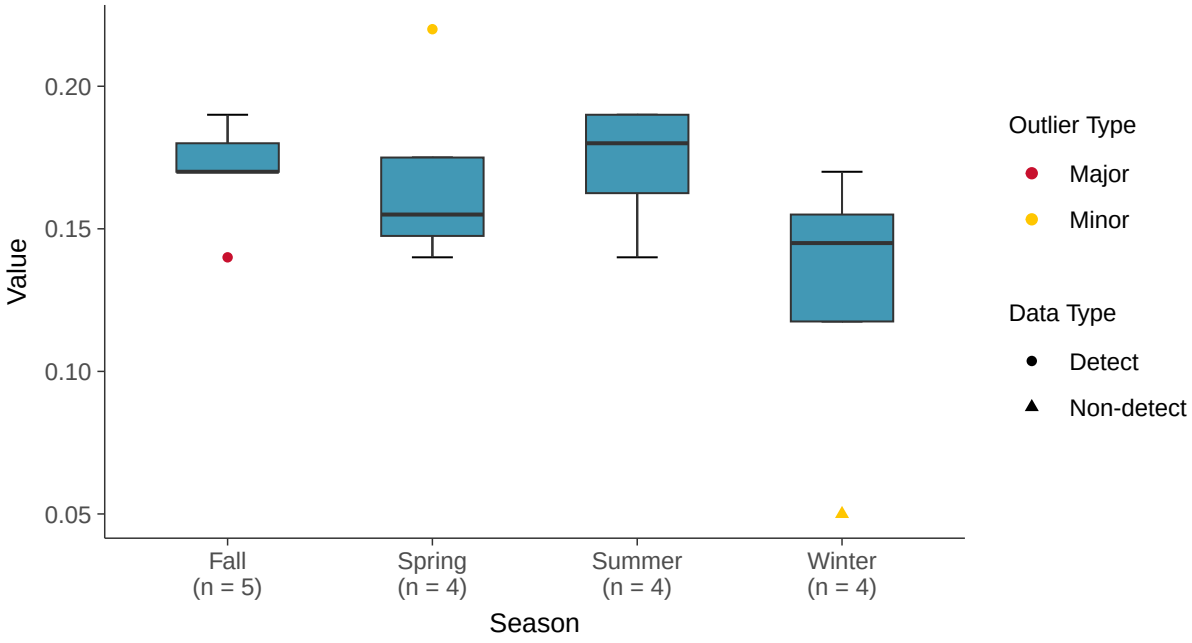
Boxplot

Fluoride, MW-11 (mg/L)



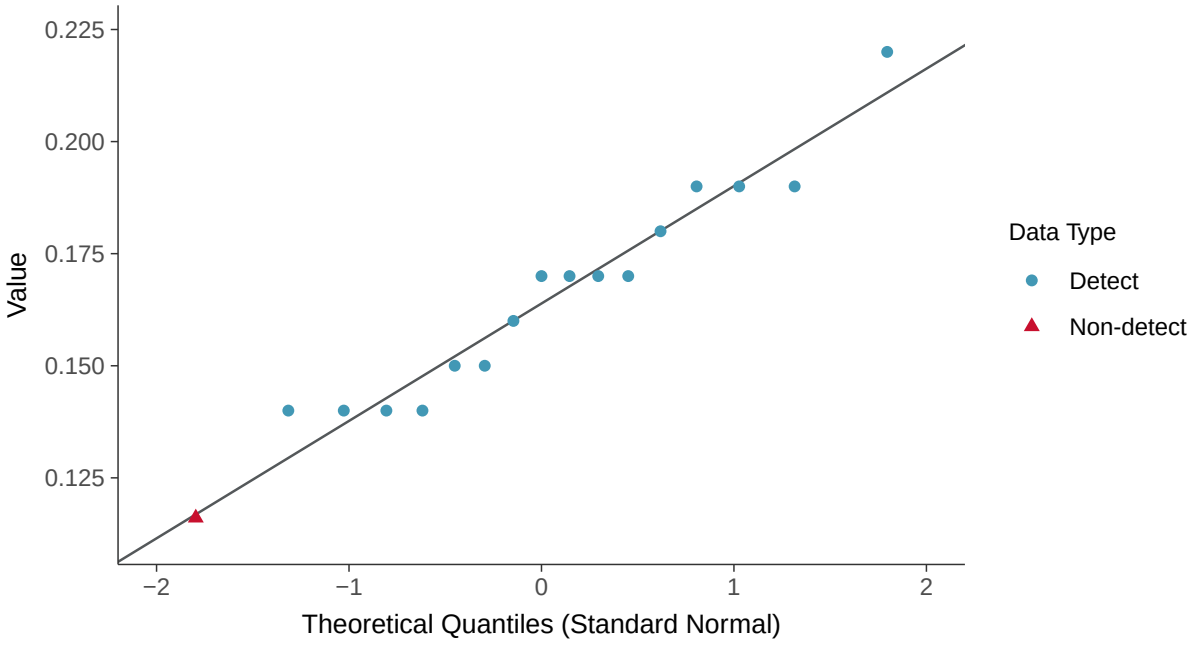
Boxplot by Season

Fluoride, MW-11 (mg/L)



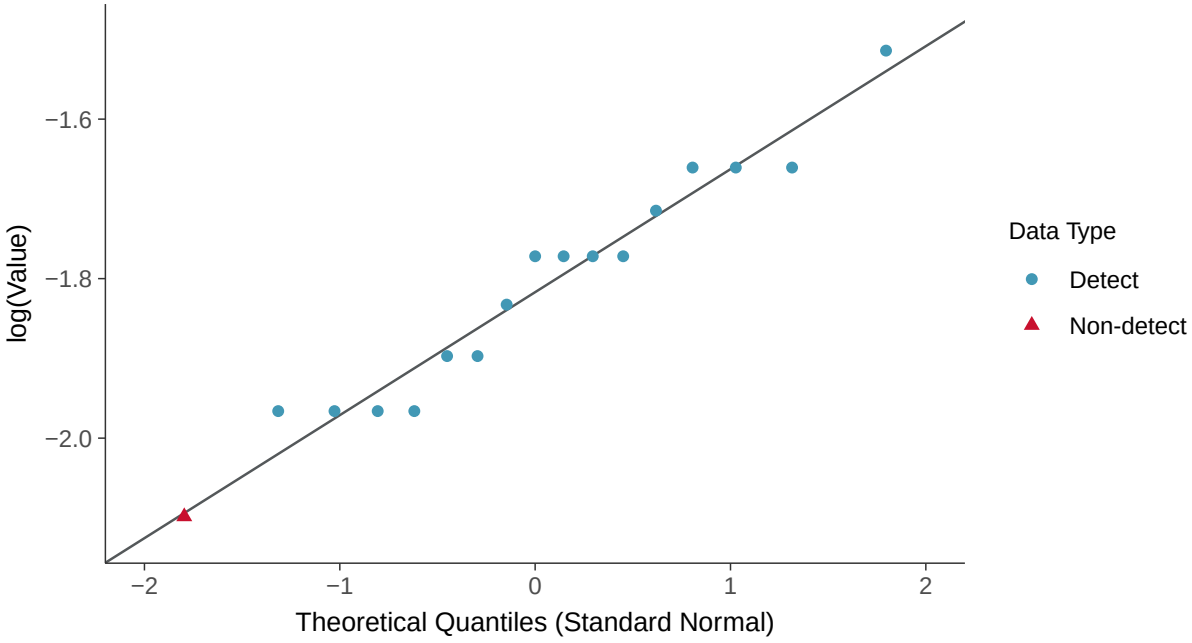
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



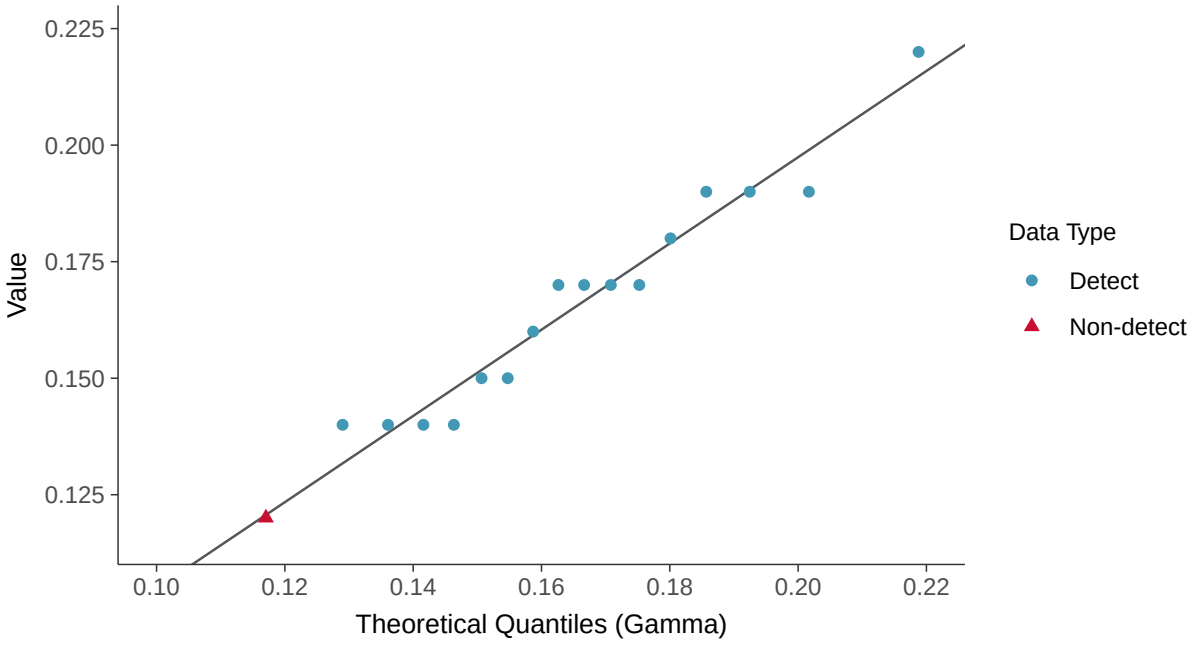
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



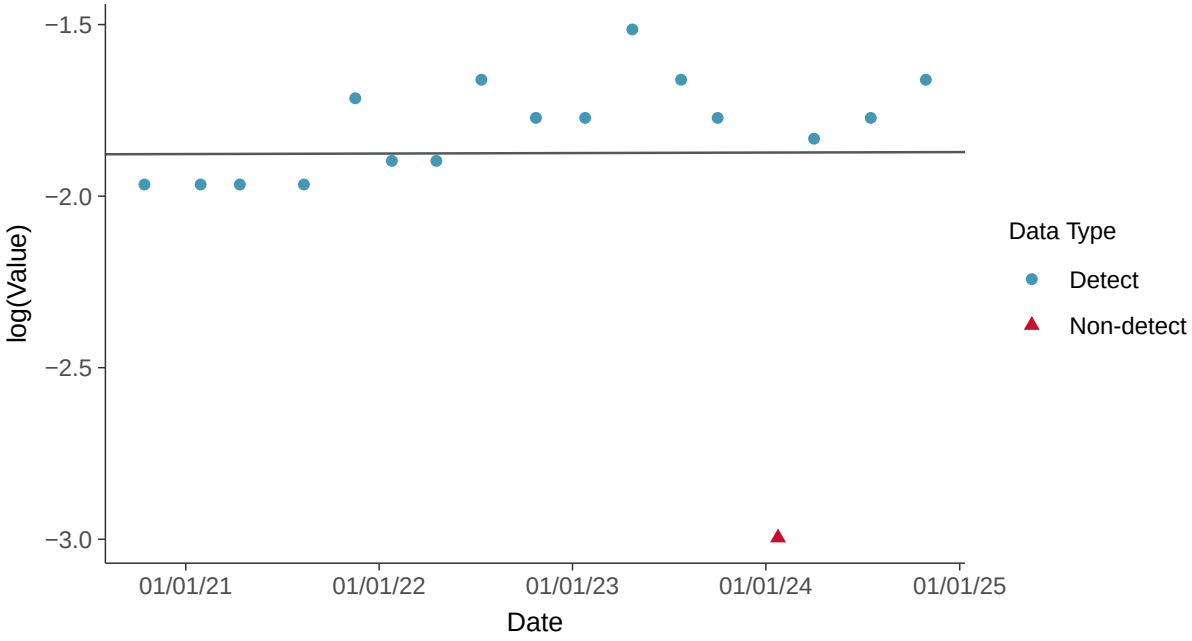
Gamma Q-Q plot using ROS Imputed Estimates

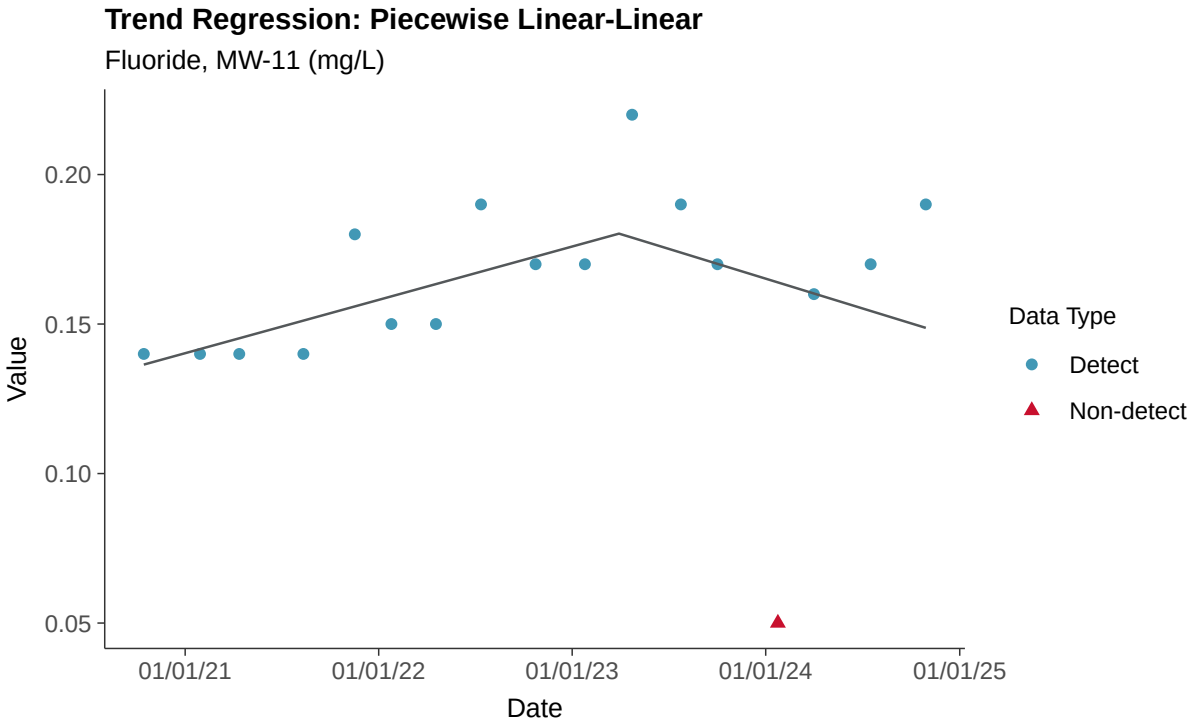
Fluoride, MW-11 (mg/L)



Trend Regression: Lognormal MLE

Fluoride, MW-11 (mg/L)



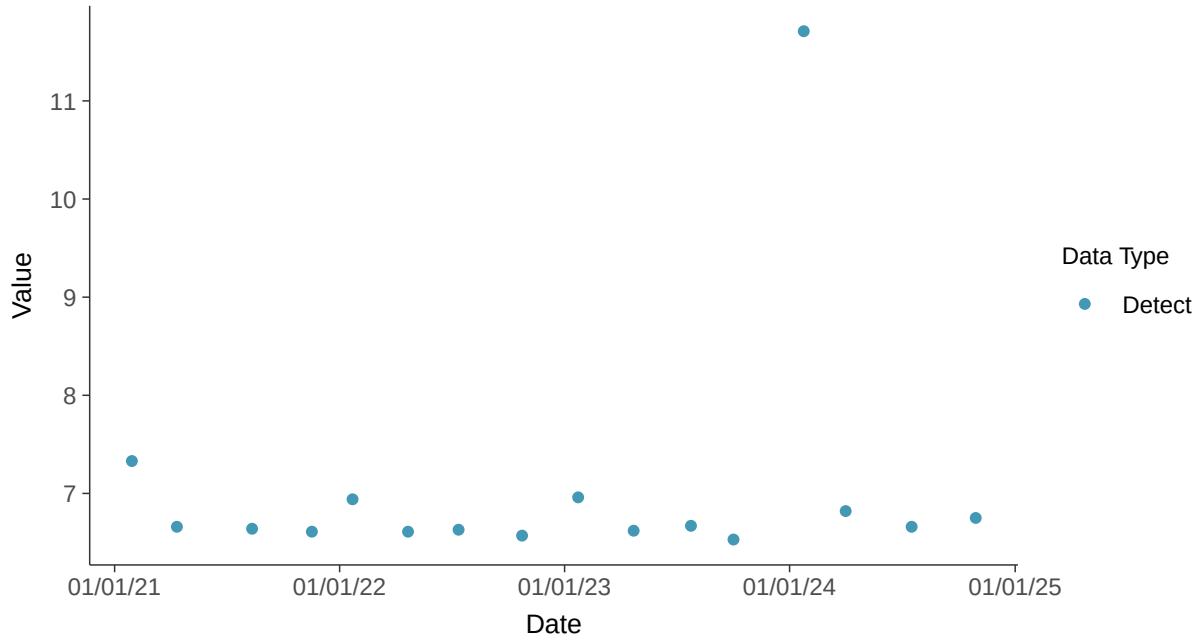

Trend Regression: Piecewise Linear-Linear
Fluoride, MW-11 (mg/L)
Value
0.20
0.15
0.10
0.05
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. III: pH (Field), MW-11

ID: 10_02_118

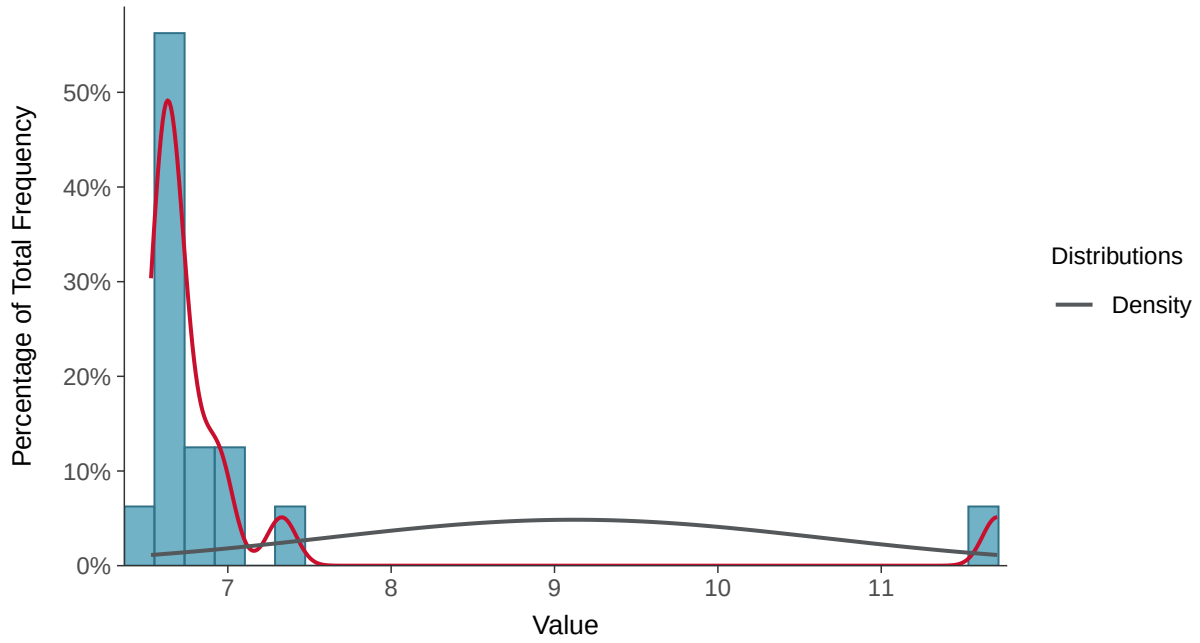
Scatter Plot

pH (Field), MW-11 (S.U.)



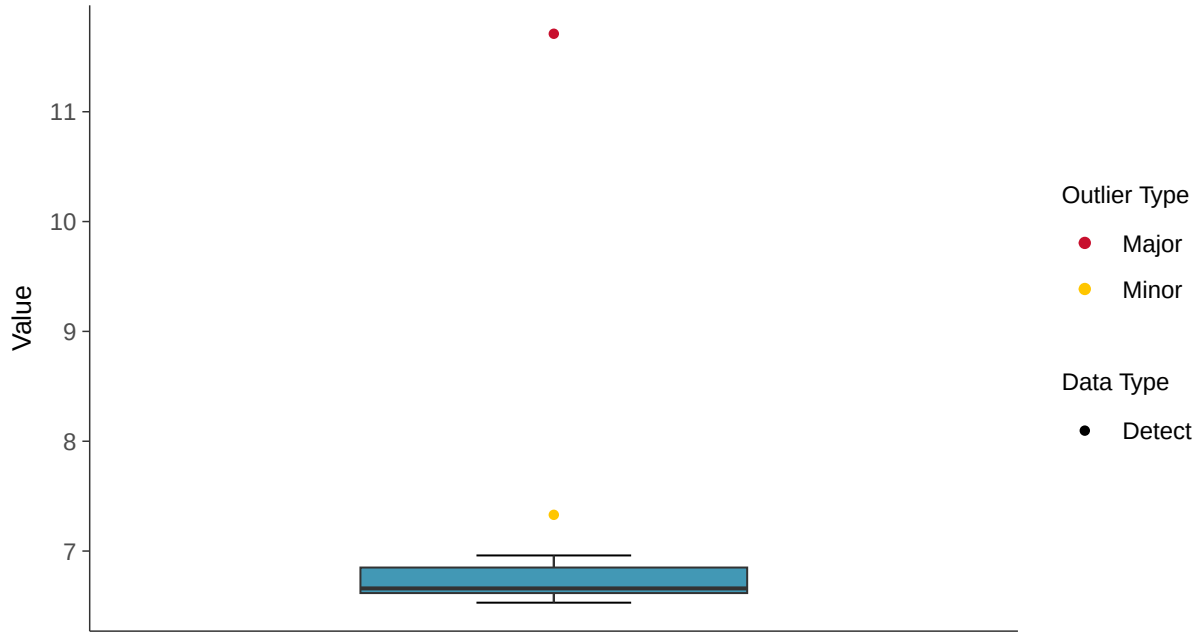
Histogram

pH (Field), MW-11 (S.U.)



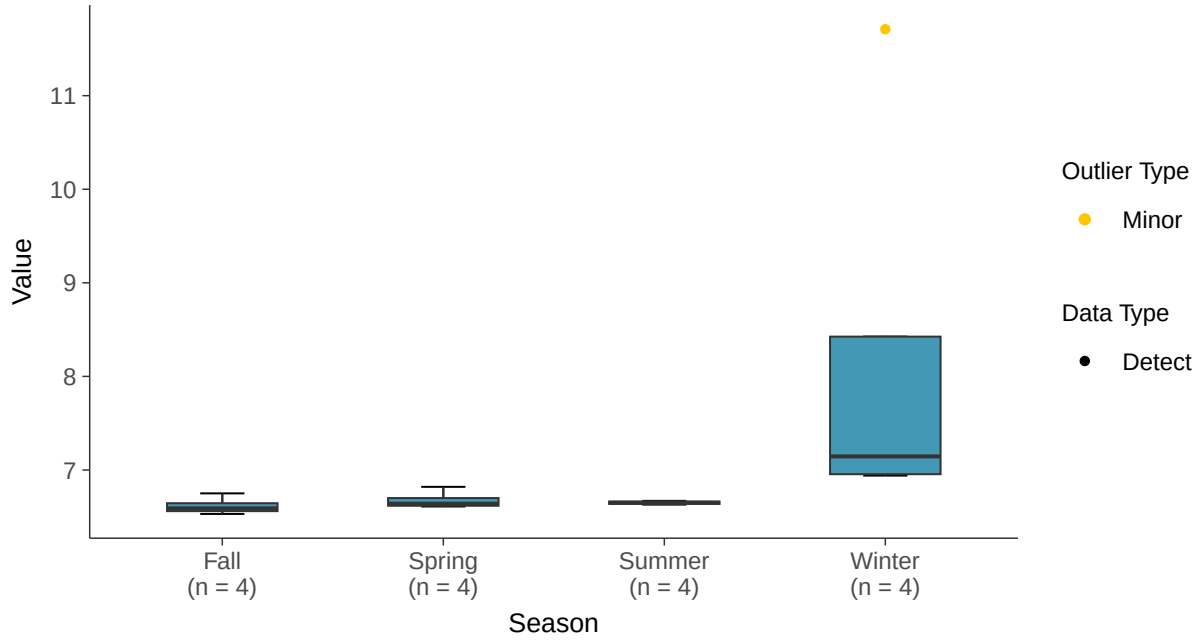
Boxplot

pH (Field), MW-11 (S.U.)



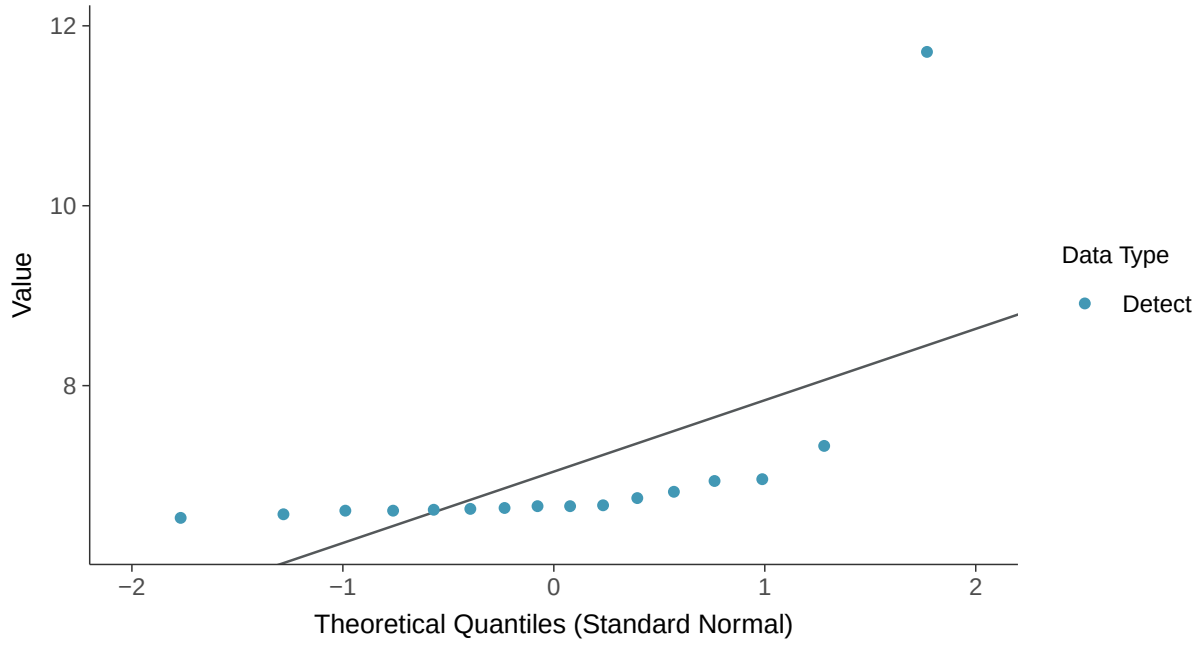
Boxplot by Season

pH (Field), MW-11 (S.U.)



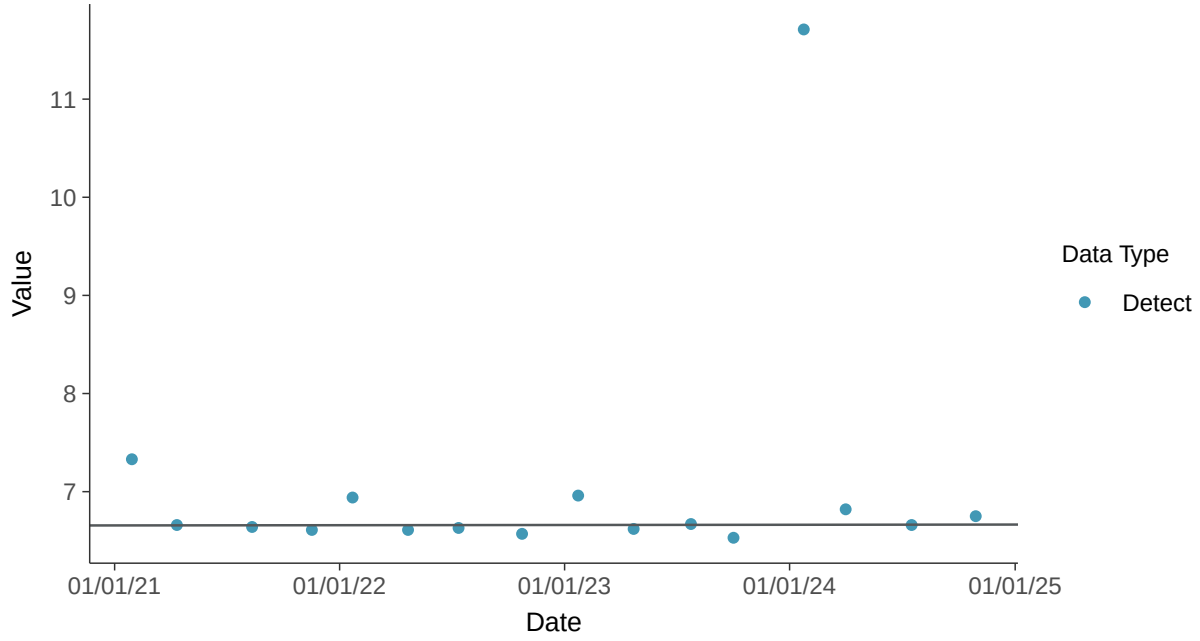
Normal Q-Q plot

pH (Field), MW-11 (S.U.)



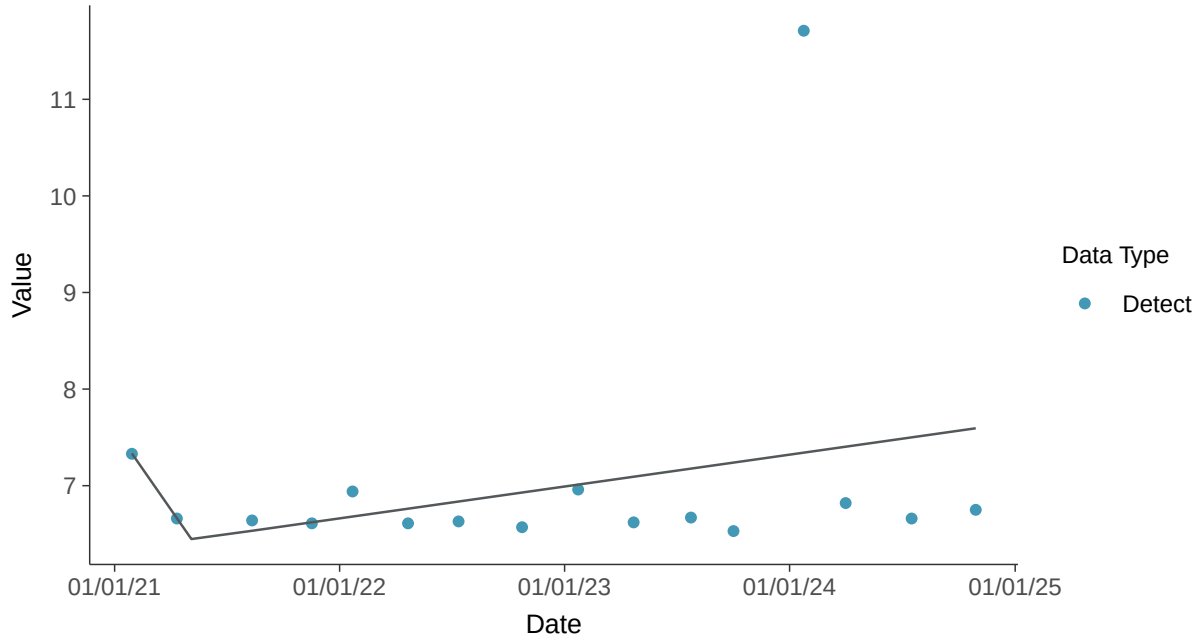
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-11 (S.U.)



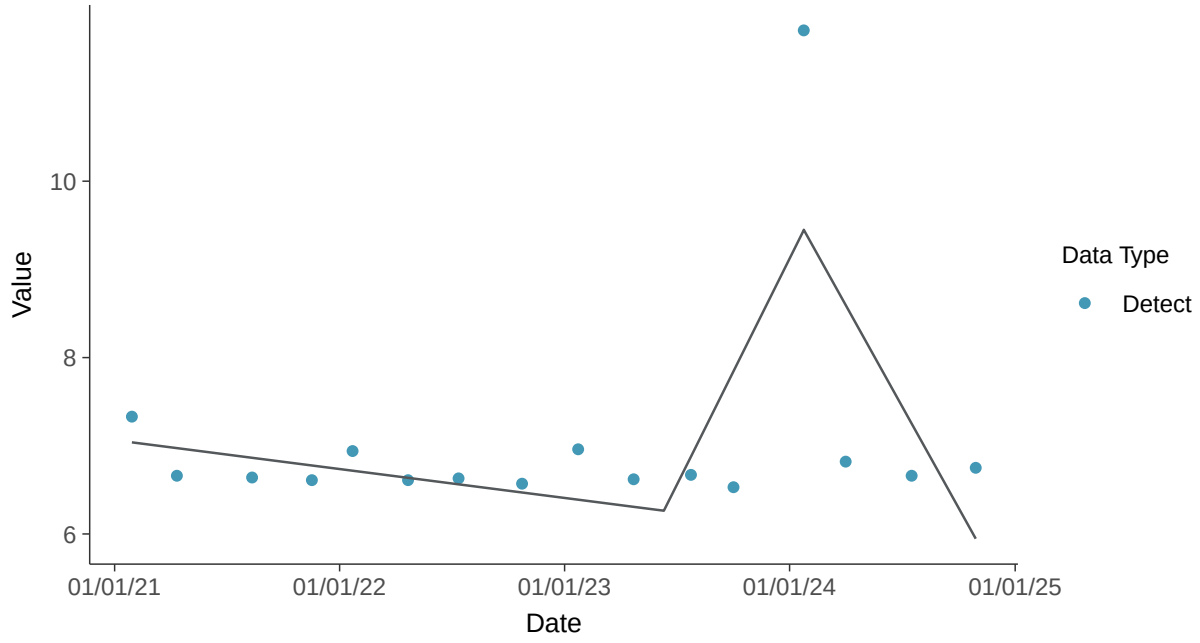
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-11 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-11 (S.U.)

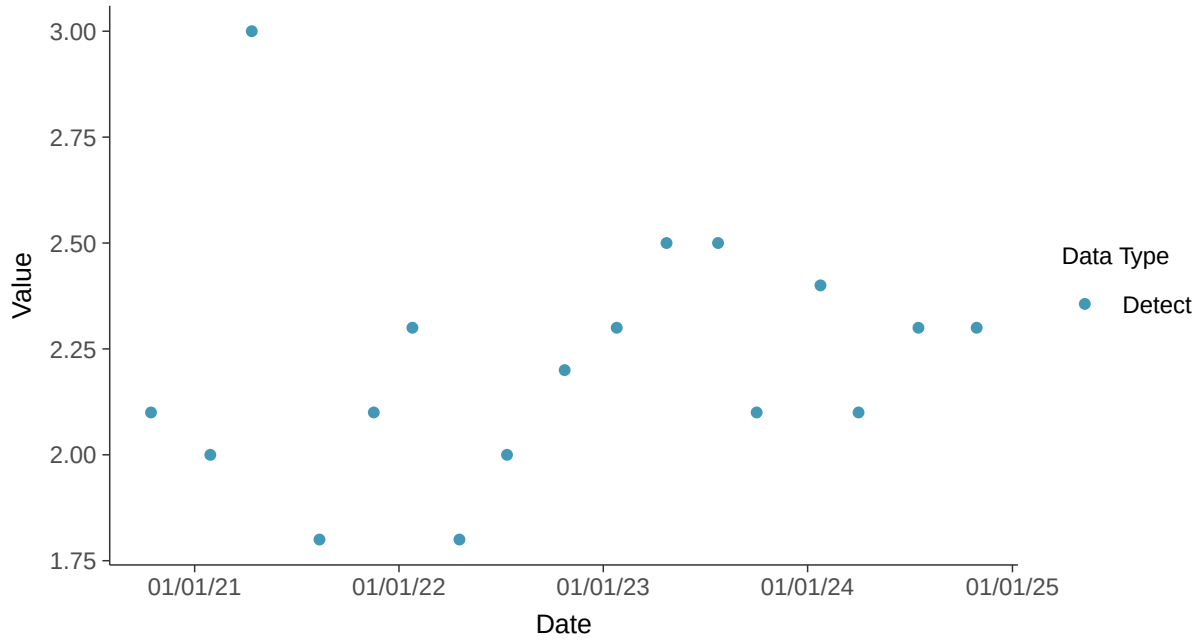


App. III: Sulfate, MW-11

ID: 10_02_123

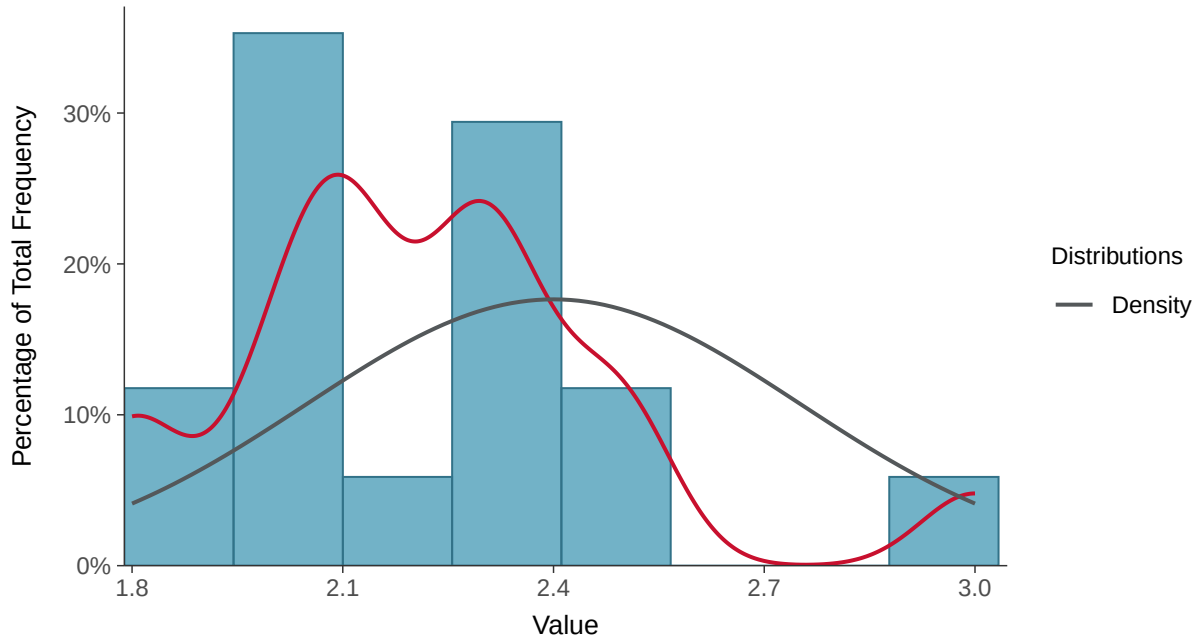
Scatter Plot

Sulfate, MW-11 (mg/L)



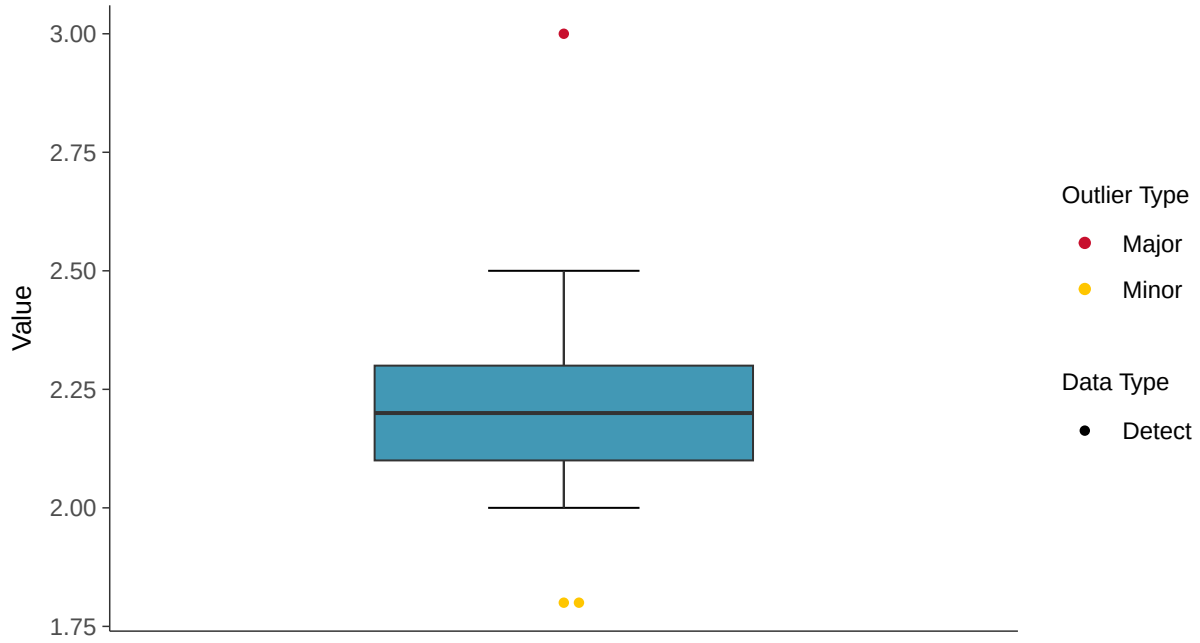
Histogram

Sulfate, MW-11 (mg/L)



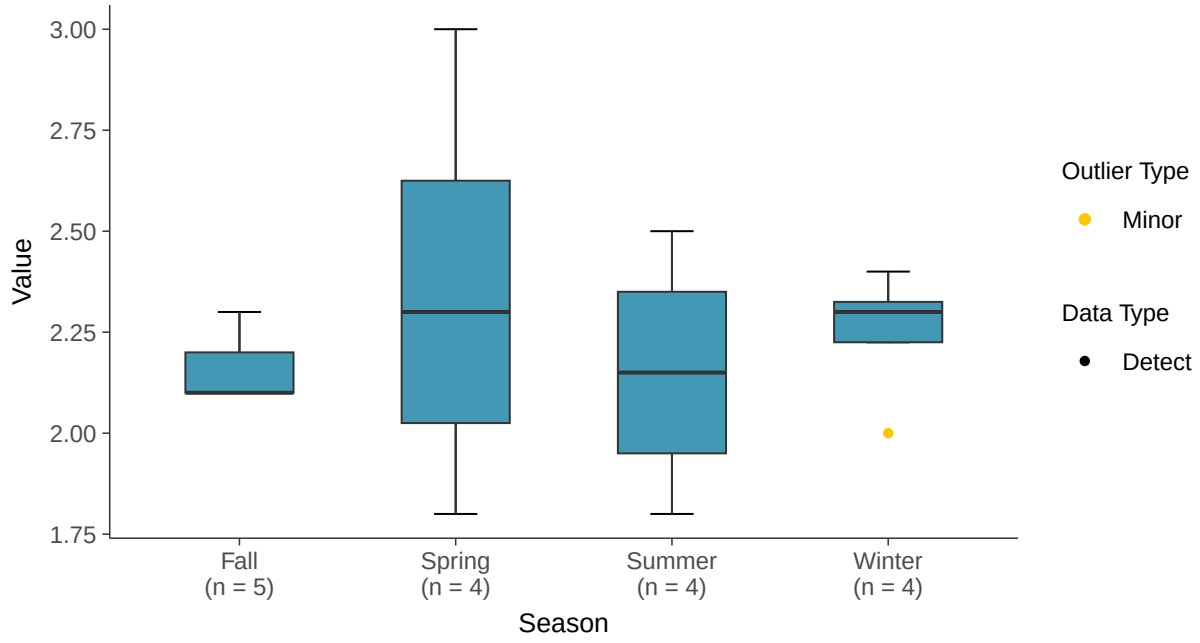
Boxplot

Sulfate, MW-11 (mg/L)



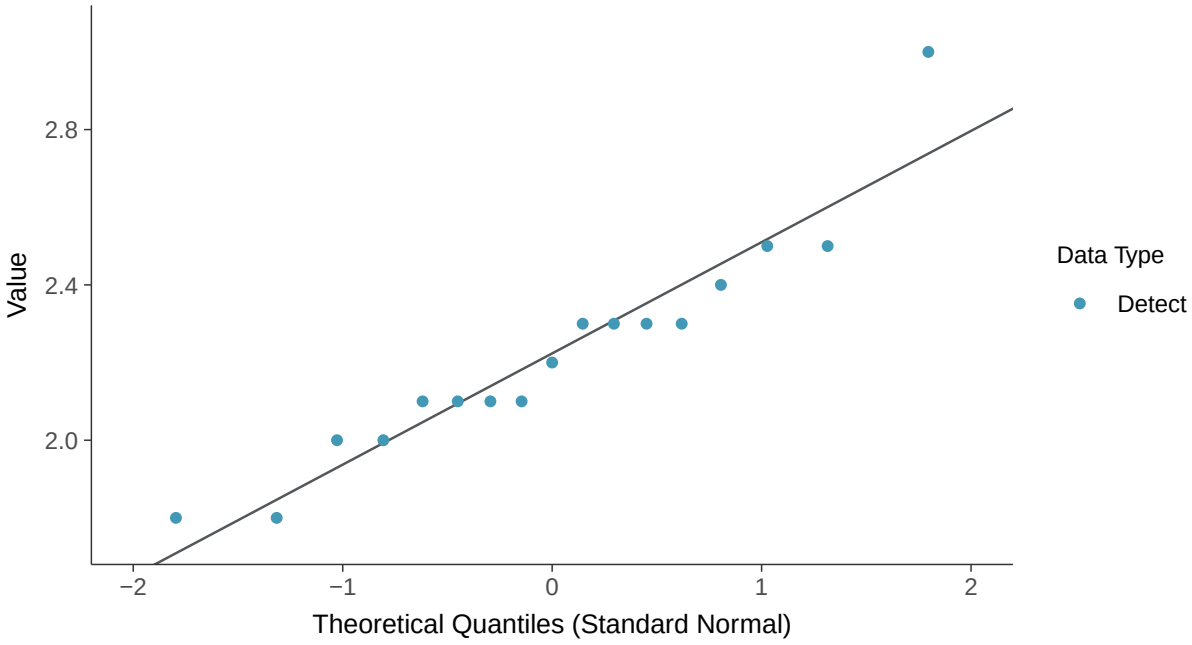
Boxplot by Season

Sulfate, MW-11 (mg/L)



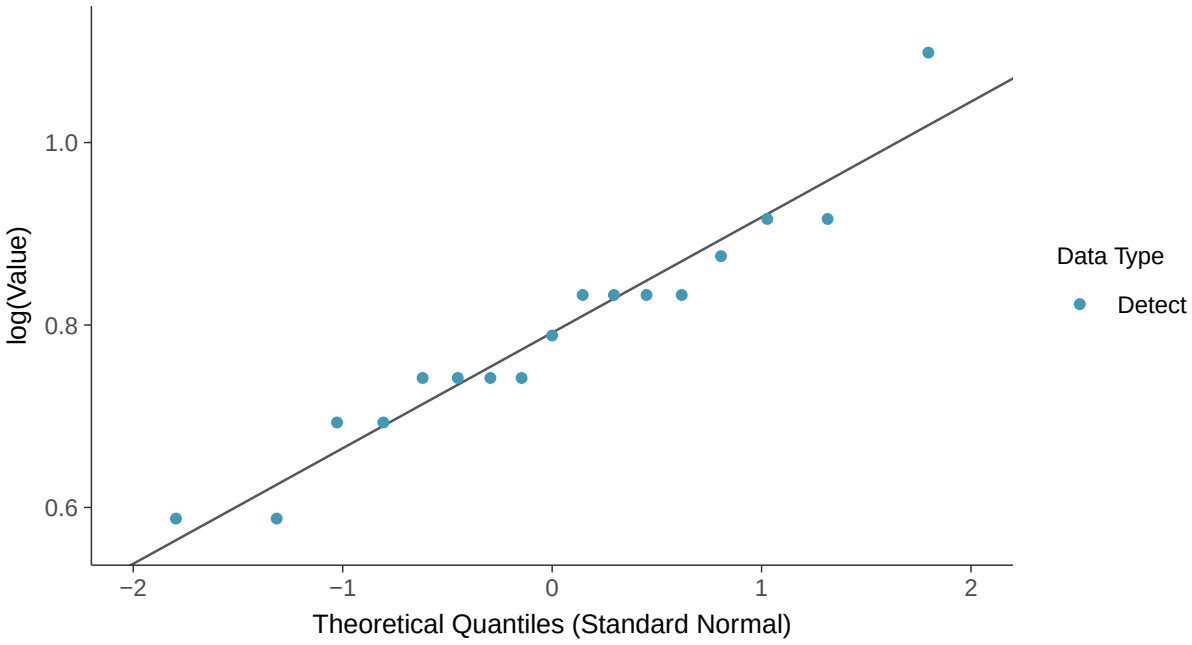
Normal Q-Q plot

Sulfate, MW-11 (mg/L)



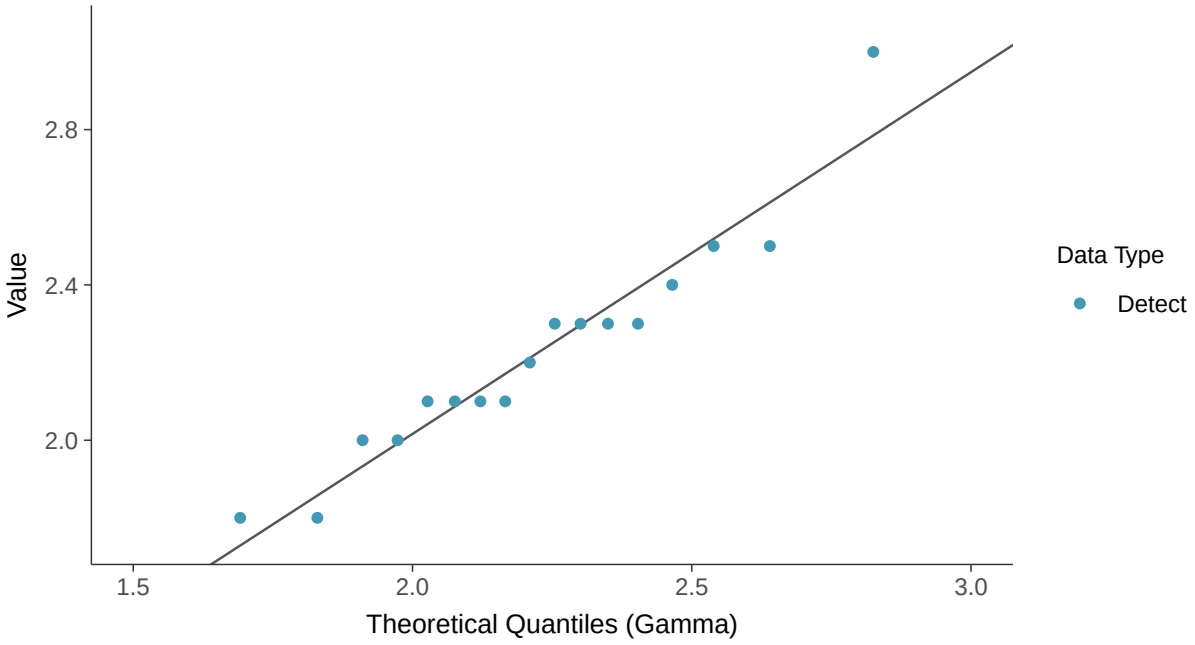
Lognormal Q-Q plot

Sulfate, MW-11 (mg/L)



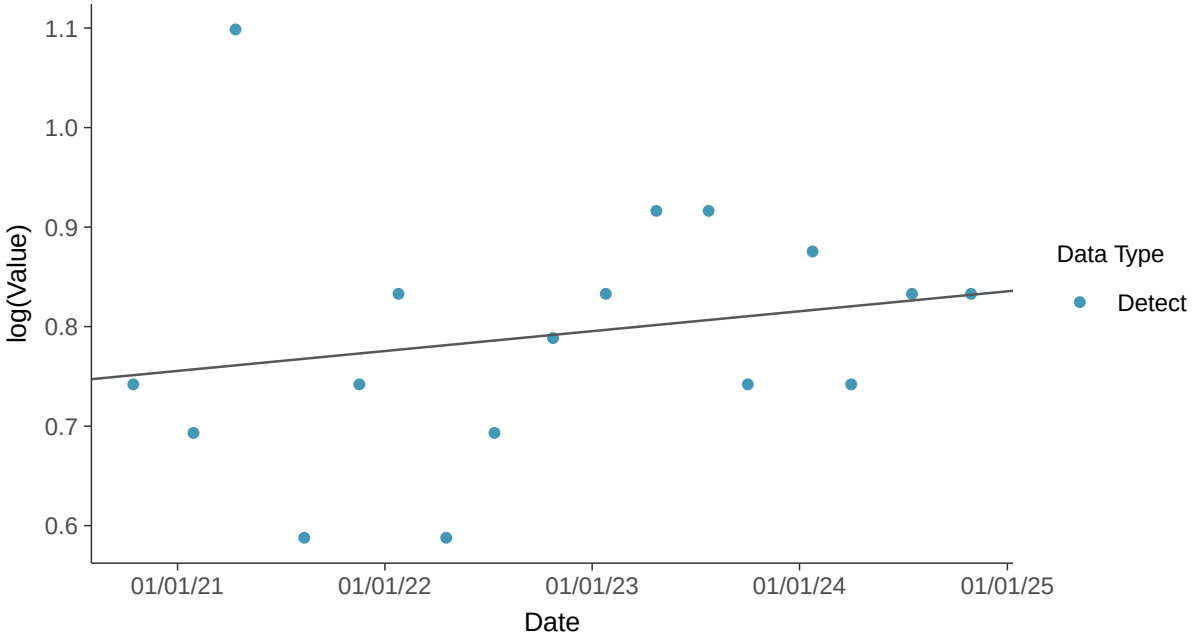
Gamma Q-Q plot

Sulfate, MW-11 (mg/L)



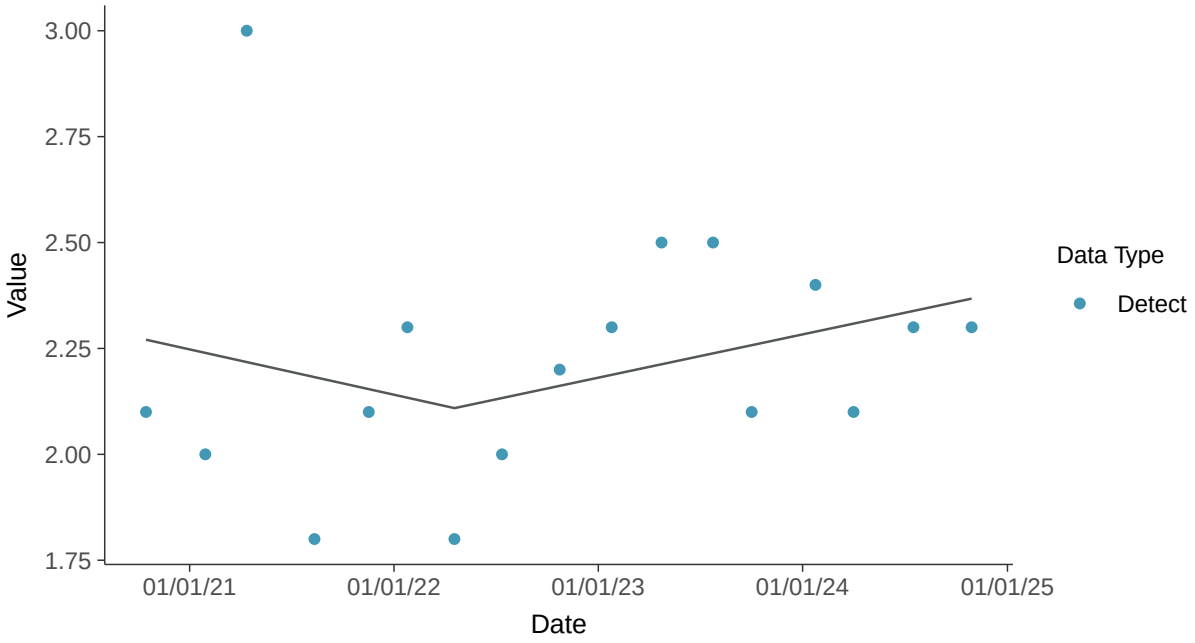
Trend Regression: Lognormal MLE

Sulfate, MW-11 (mg/L)



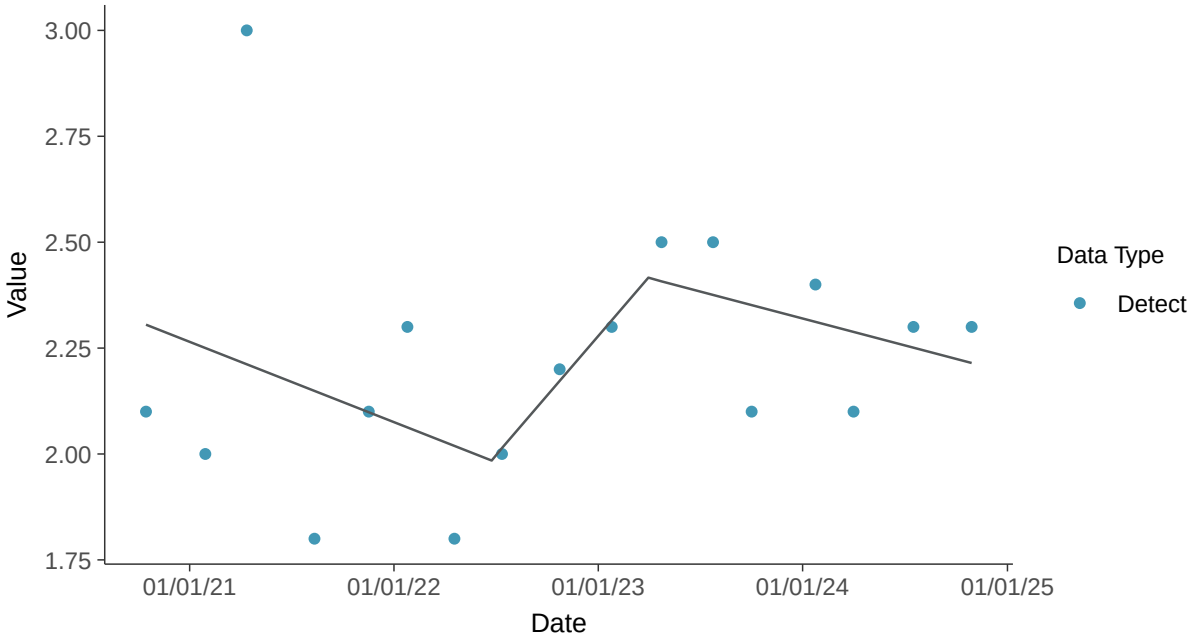
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-11 (mg/L)

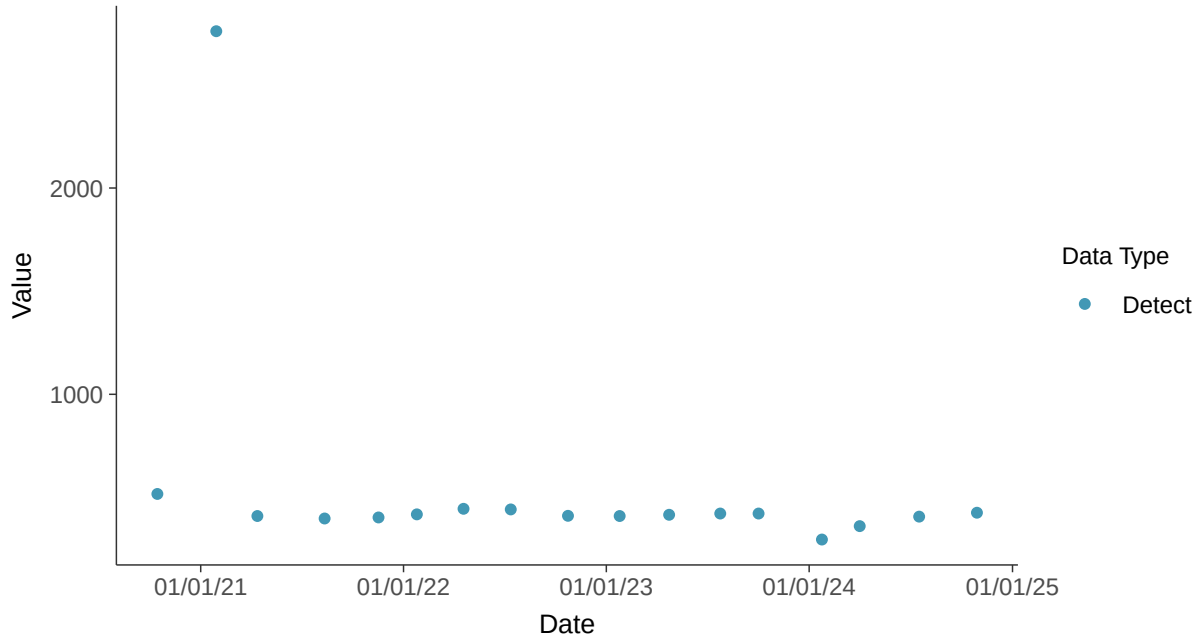


App. III: Total Dissolved Solids, MW-11

ID: 10_02_125

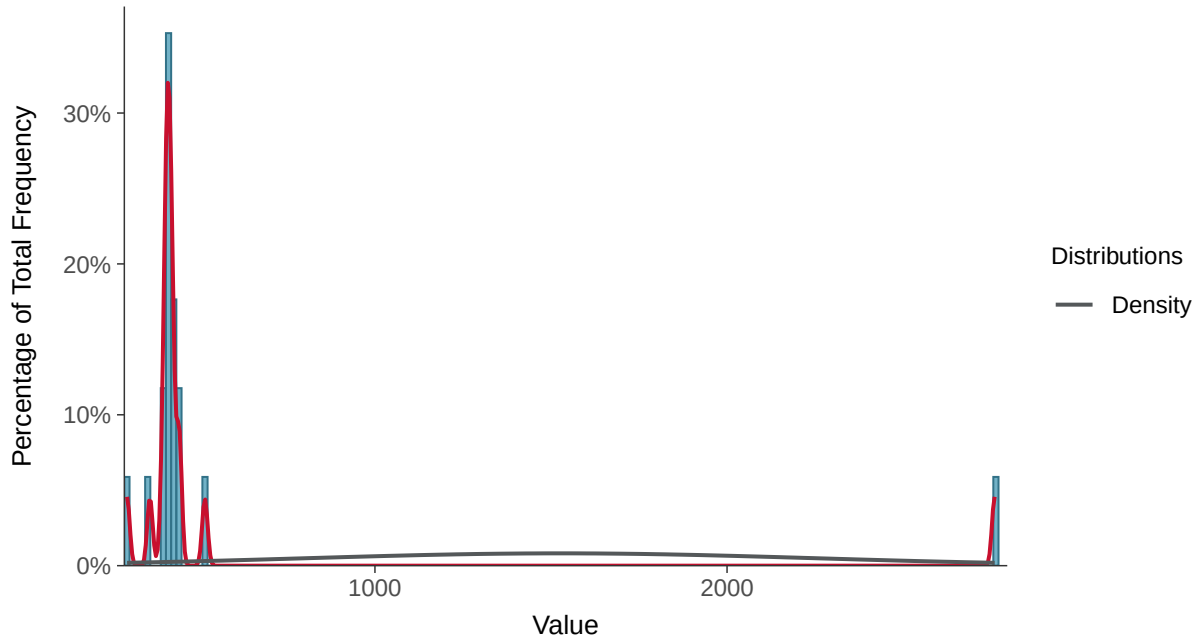
Scatter Plot

Total Dissolved Solids, MW-11 (mg/L)



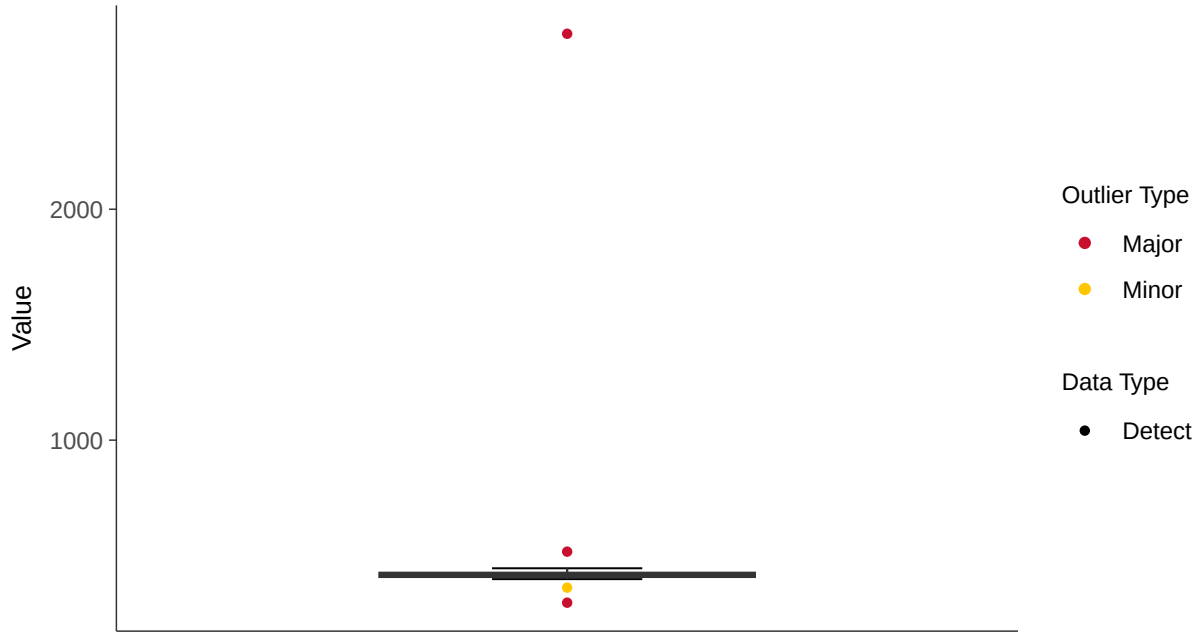
Histogram

Total Dissolved Solids, MW-11 (mg/L)



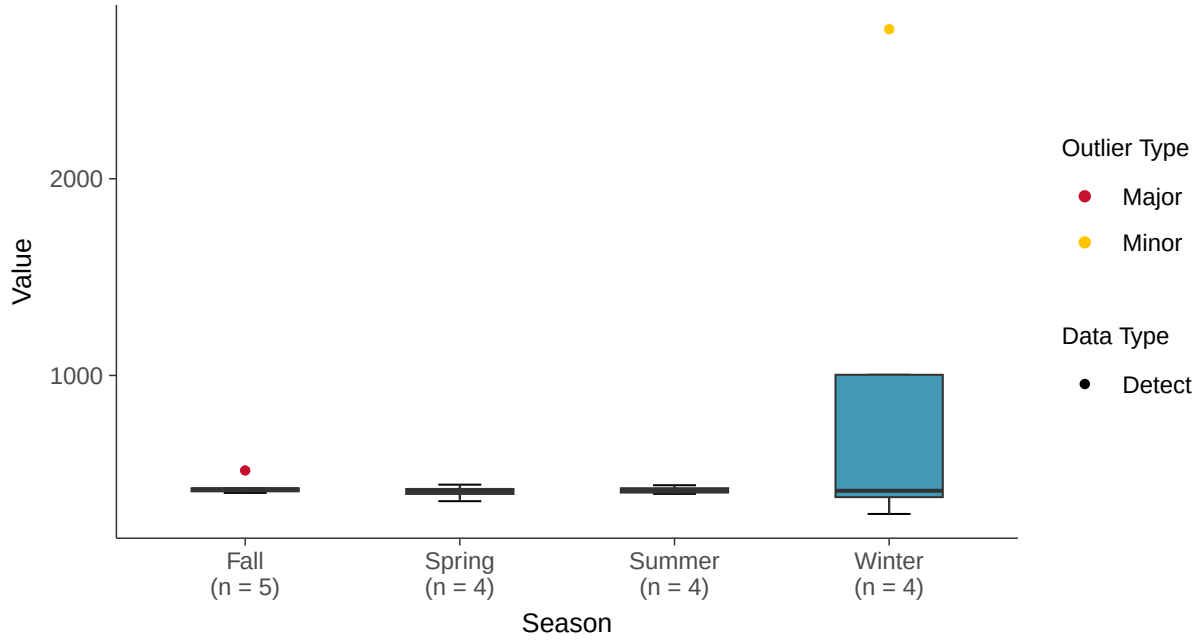
Boxplot

Total Dissolved Solids, MW-11 (mg/L)



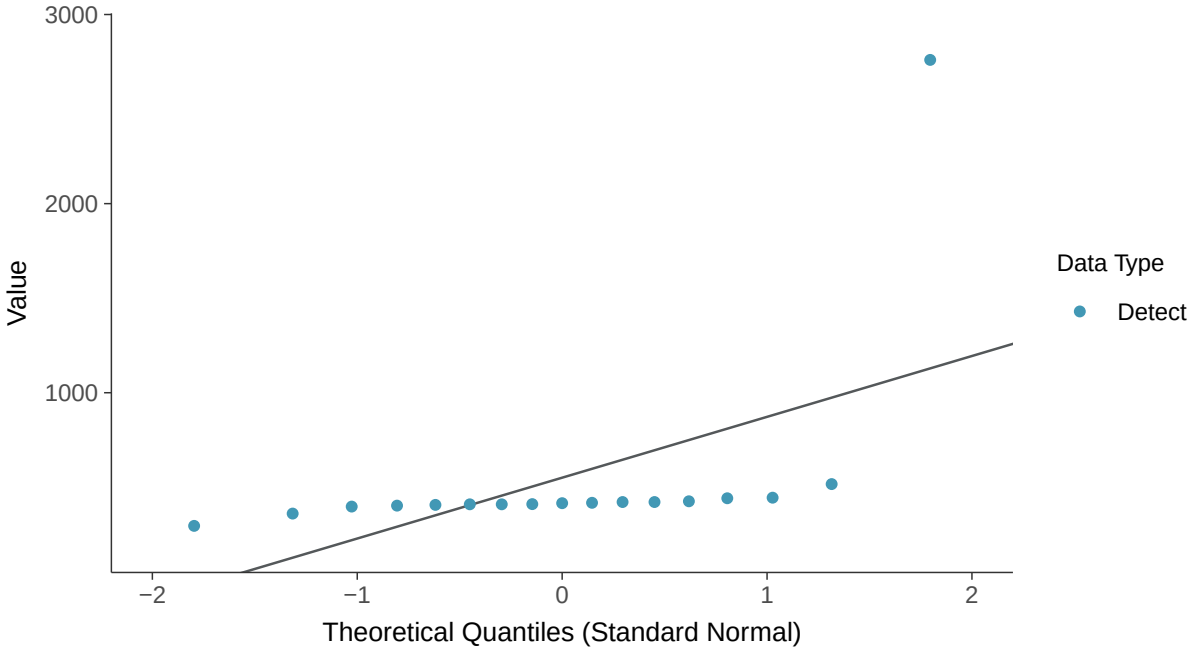
Boxplot by Season

Total Dissolved Solids, MW-11 (mg/L)



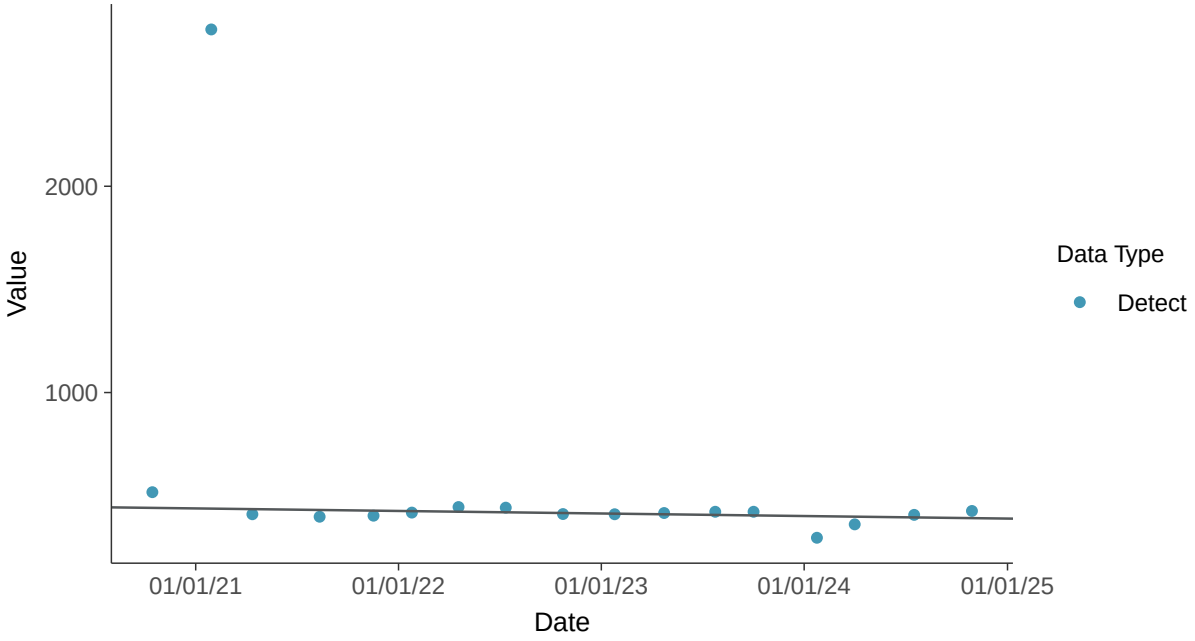
Normal Q-Q plot

Total Dissolved Solids, MW-11 (mg/L)



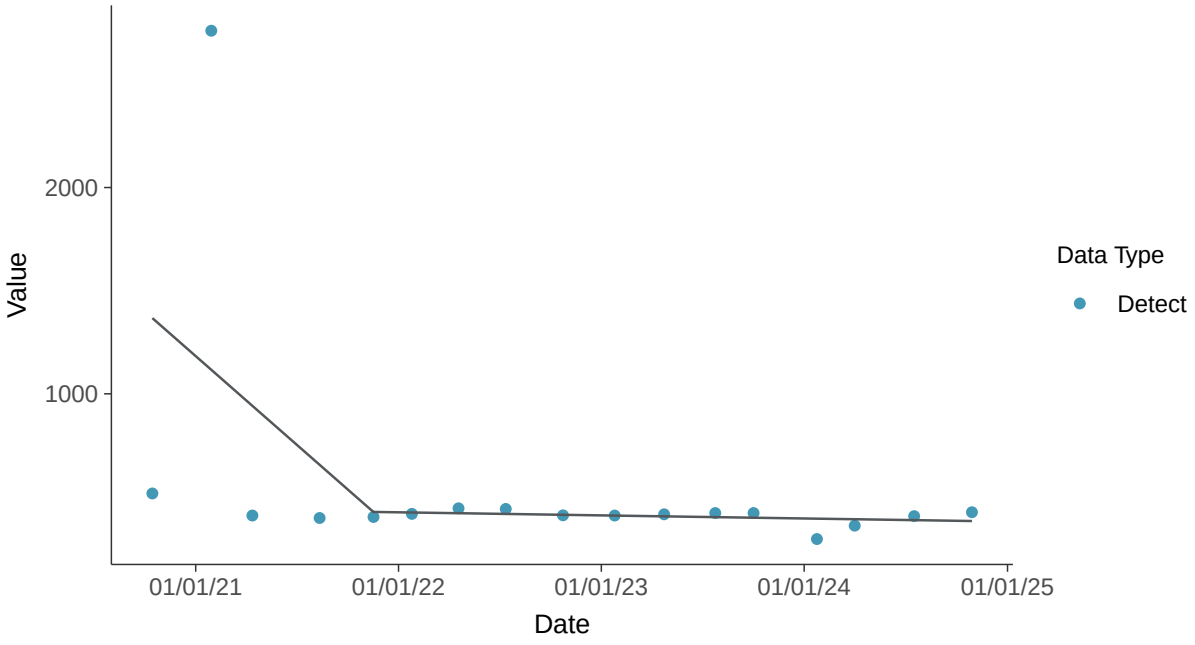
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-11 (mg/L)



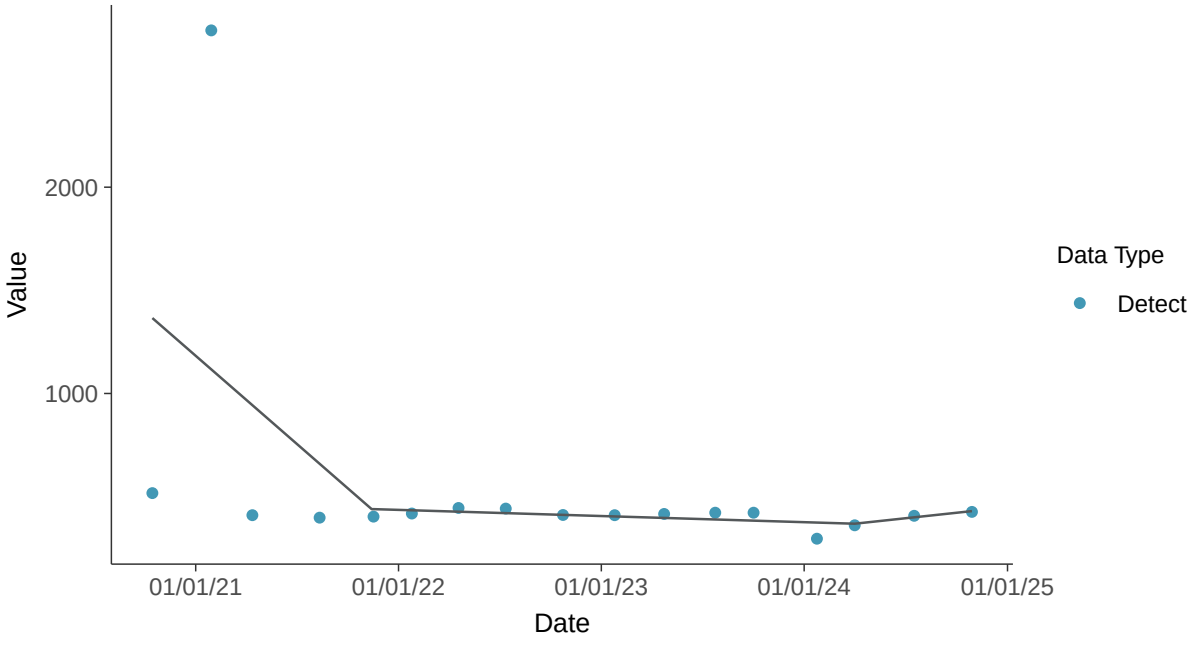
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-11 (mg/L)

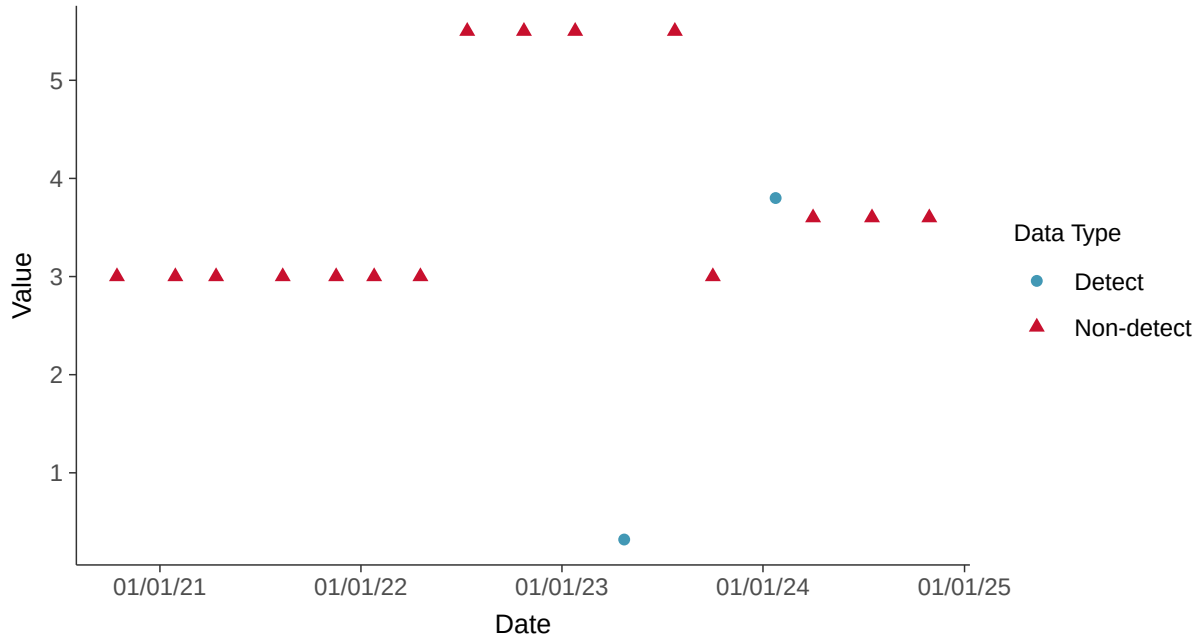


App. IV: Antimony, MW-11

ID: 10_03_101

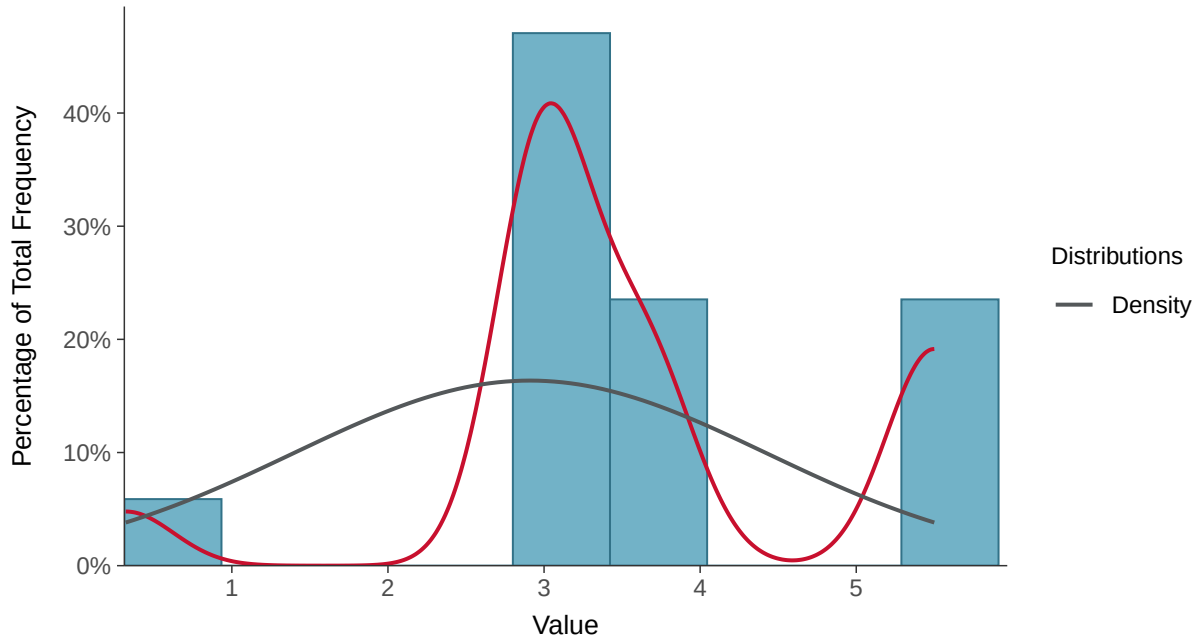
Scatter Plot

Antimony, MW-11 (ug/L)



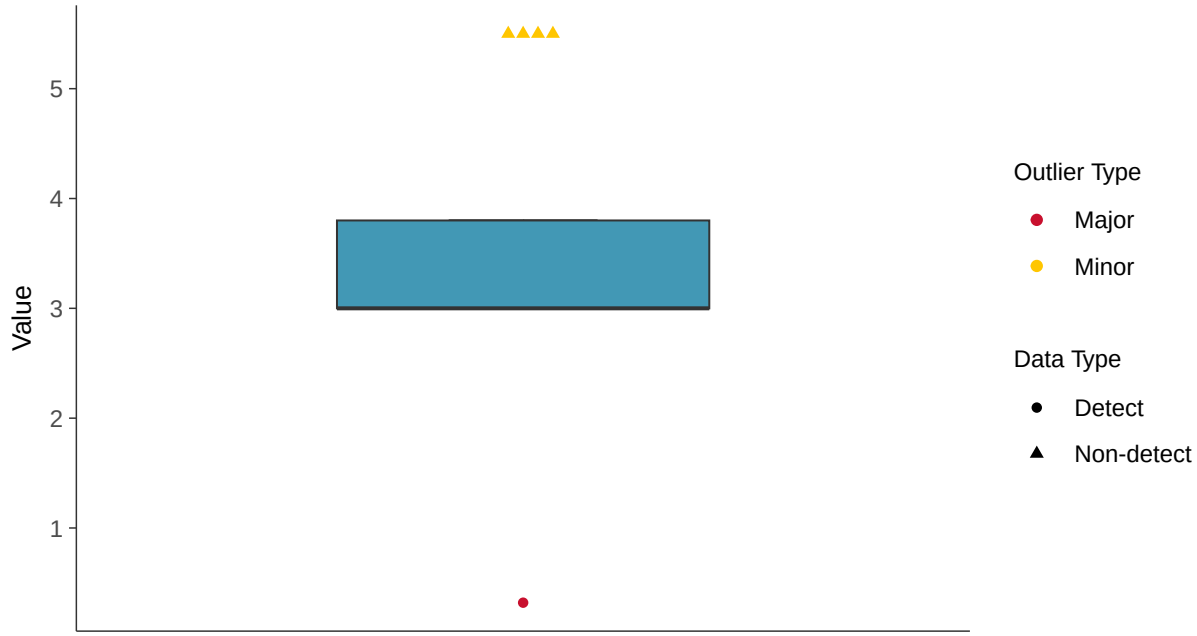
Histogram

Antimony, MW-11 (ug/L)



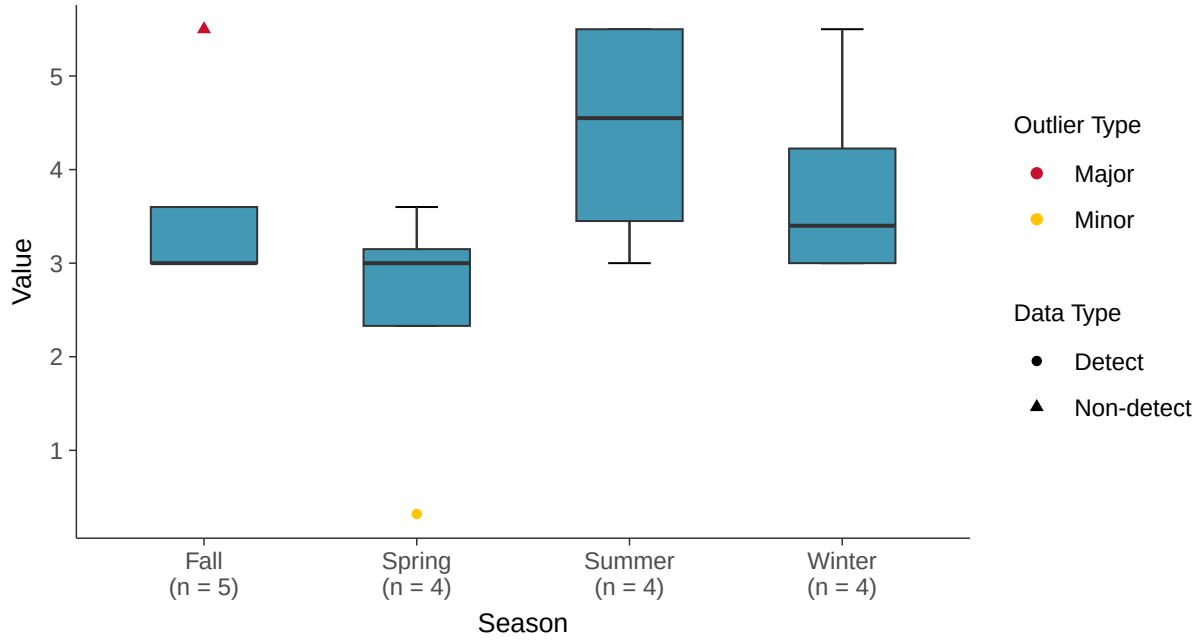
Boxplot

Antimony, MW-11 (ug/L)



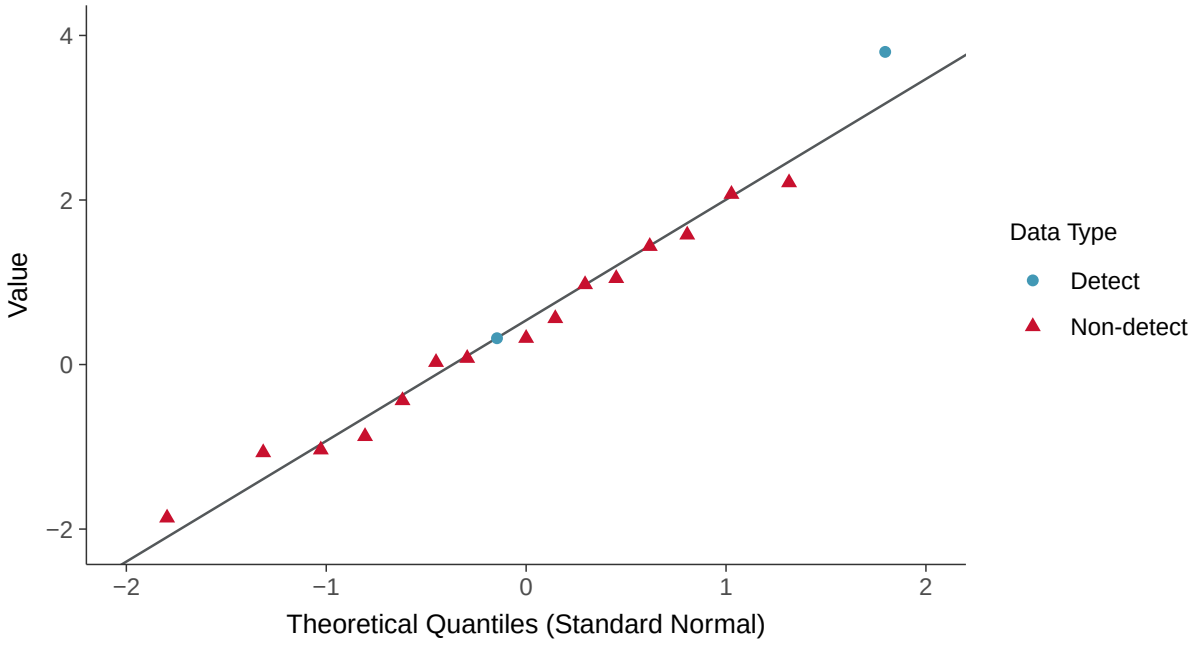
Boxplot by Season

Antimony, MW-11 (ug/L)



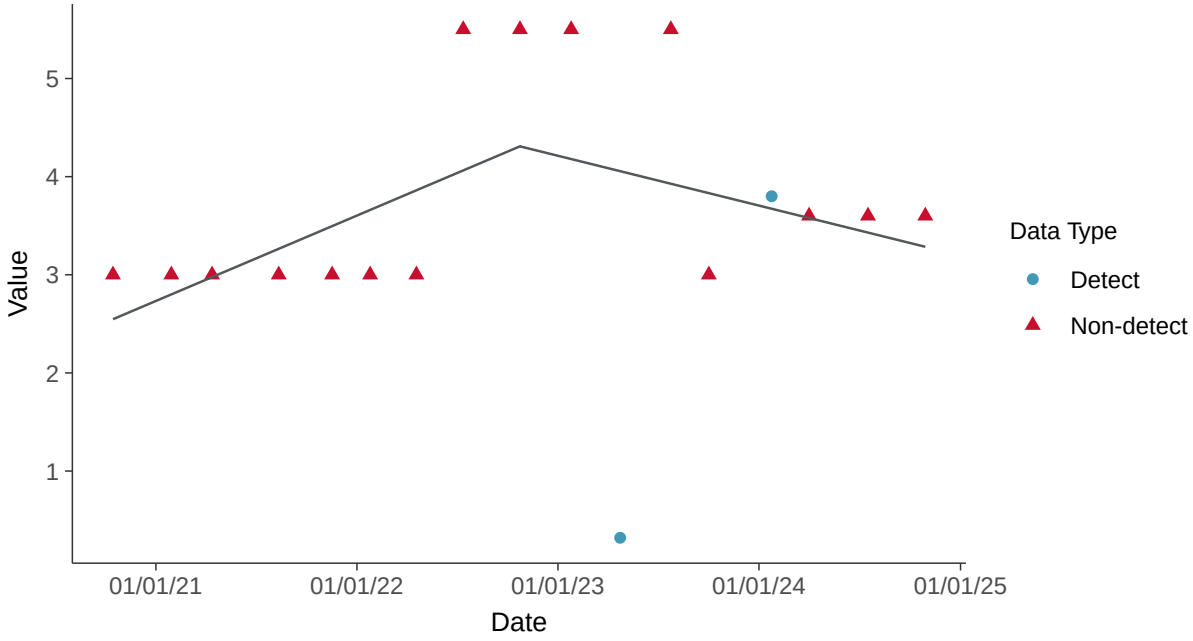
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11 (ug/L)



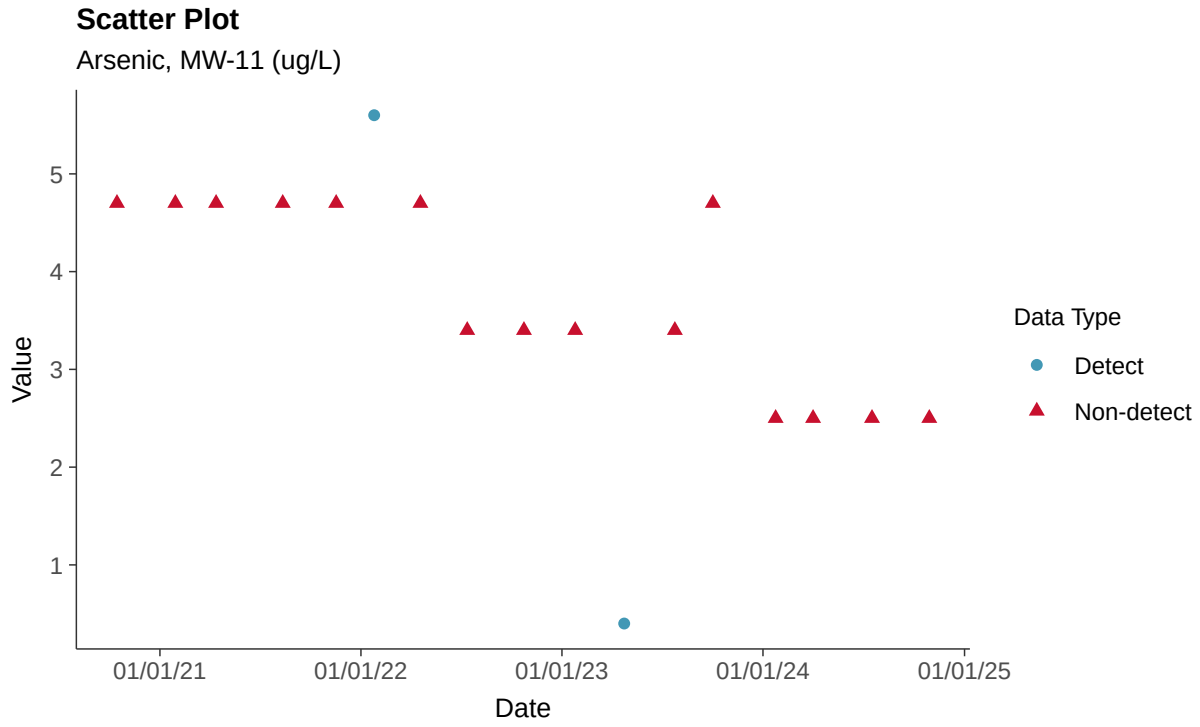
Trend Regression: Piecewise Linear-Linear

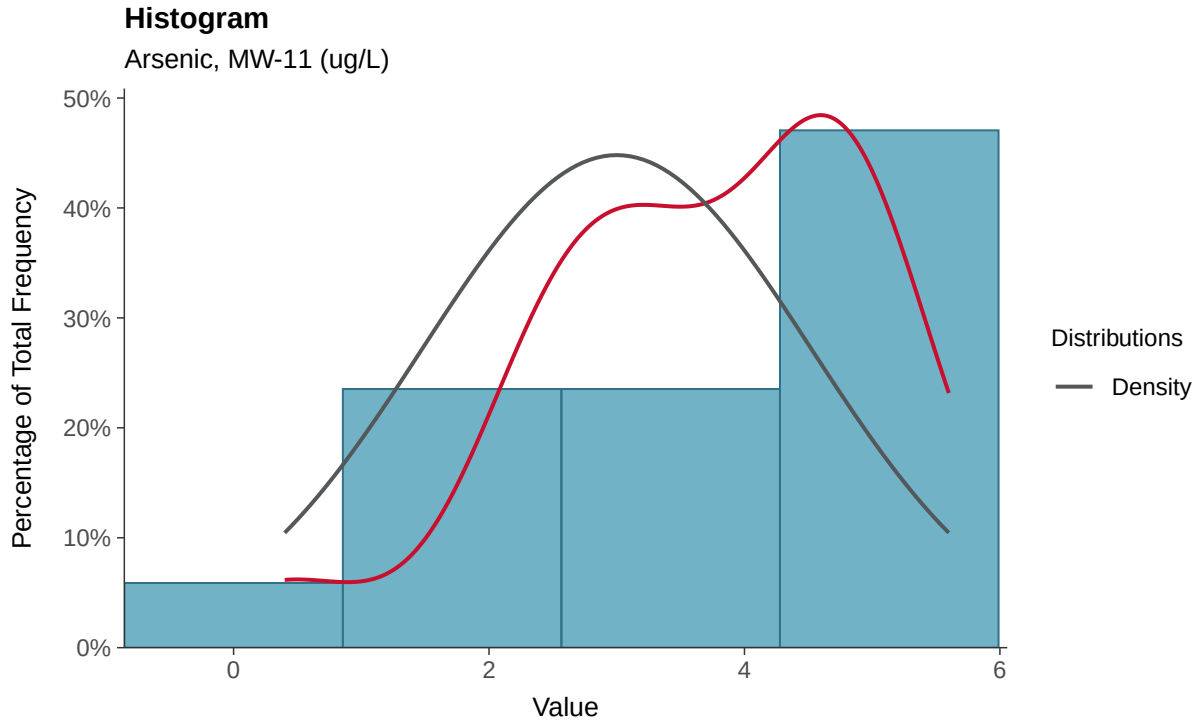
Antimony, MW-11 (ug/L)



App. IV: Arsenic, MW-11

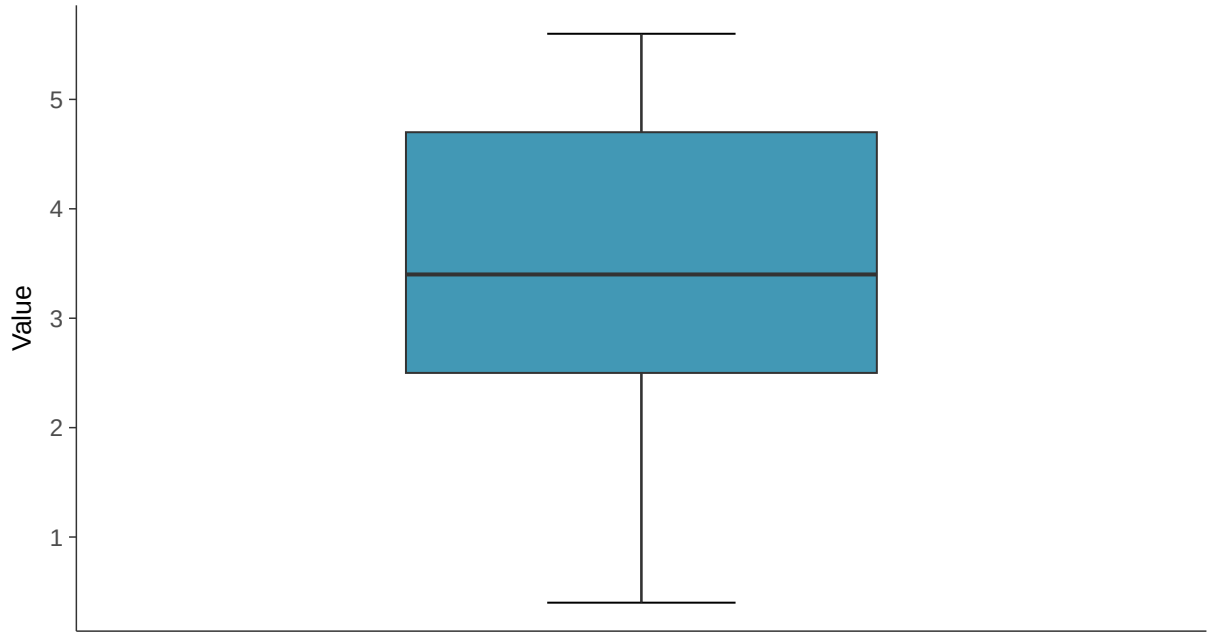
ID: 10_03_102





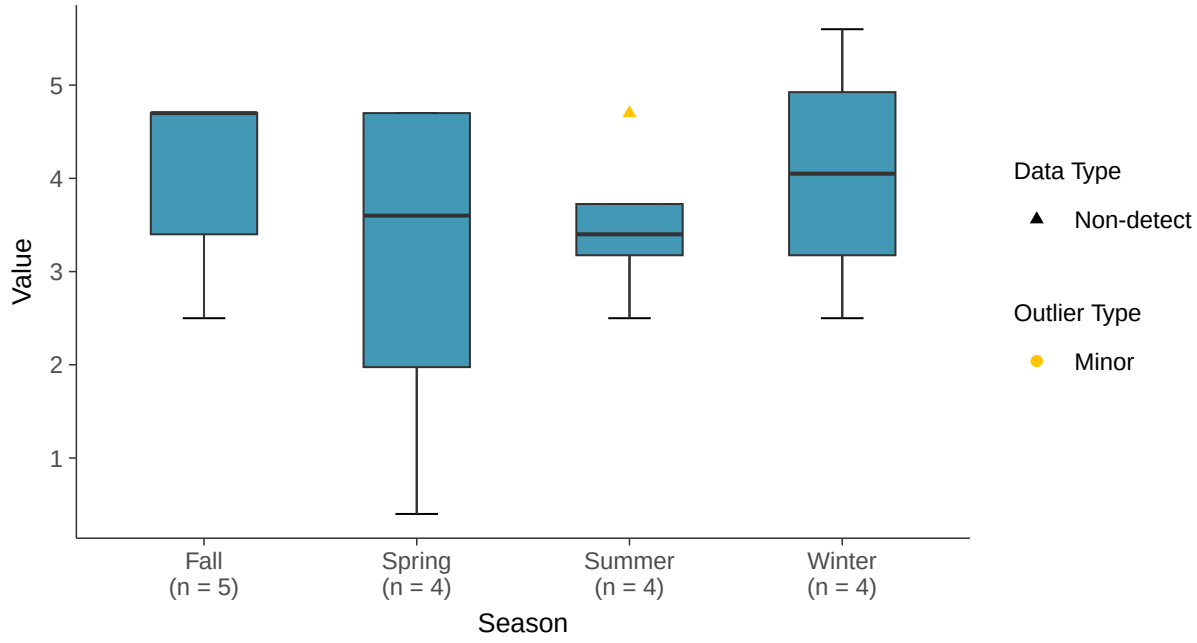
Boxplot

Arsenic, MW-11 (ug/L)



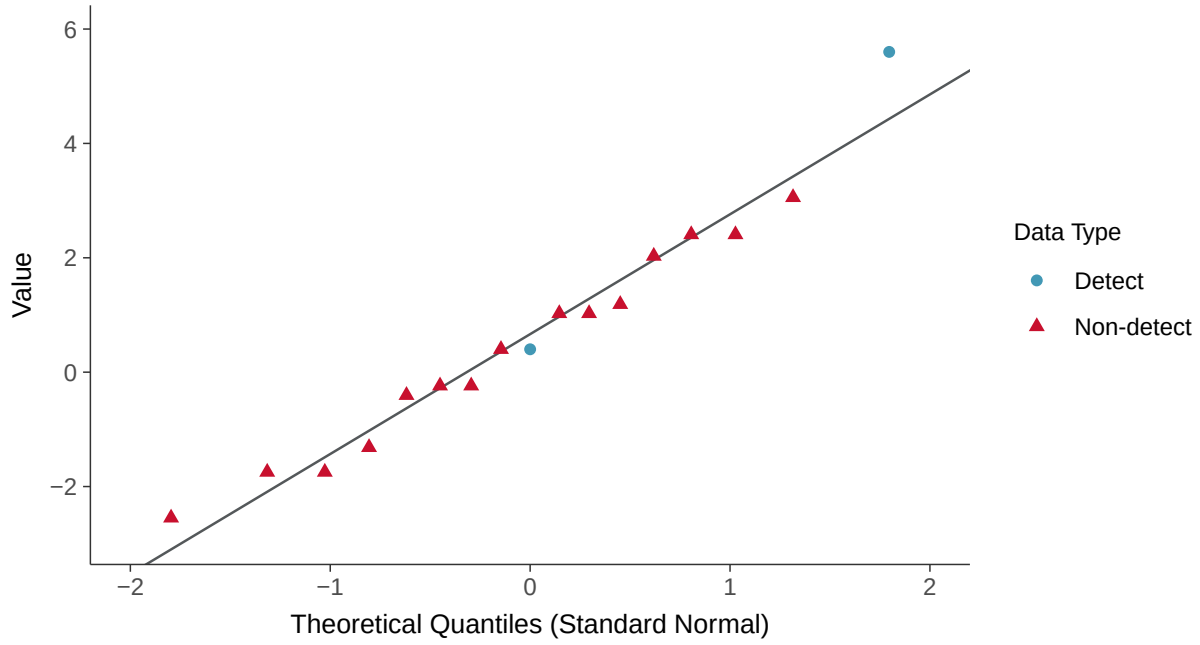
Boxplot by Season

Arsenic, MW-11 (ug/L)



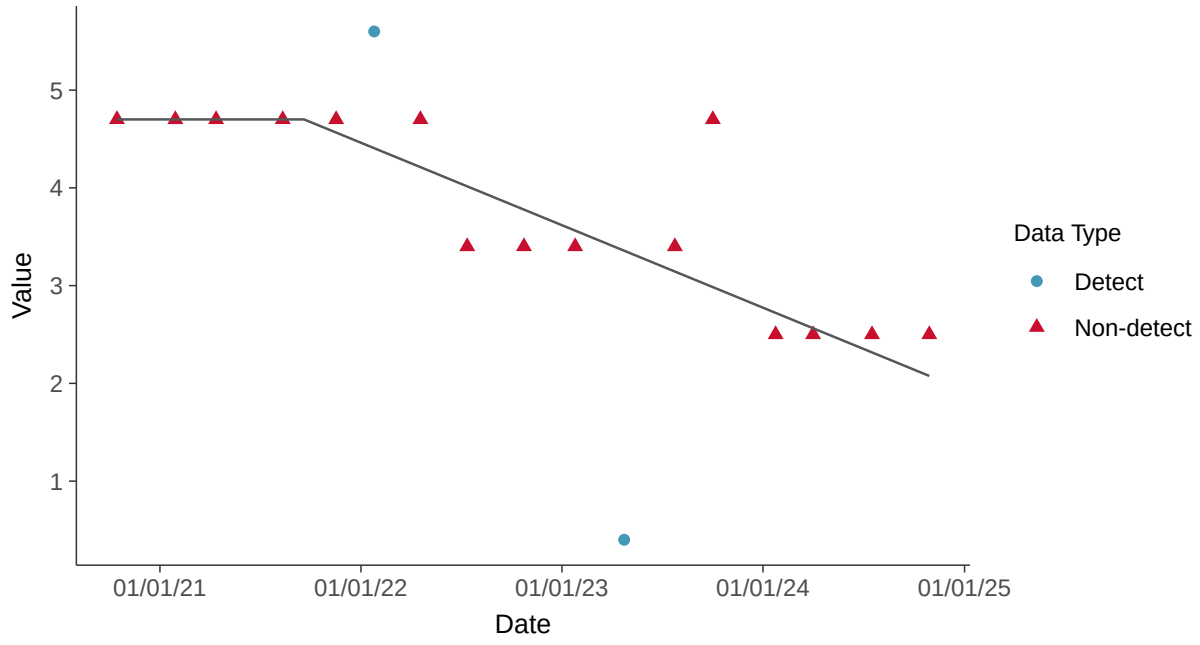
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11 (ug/L)



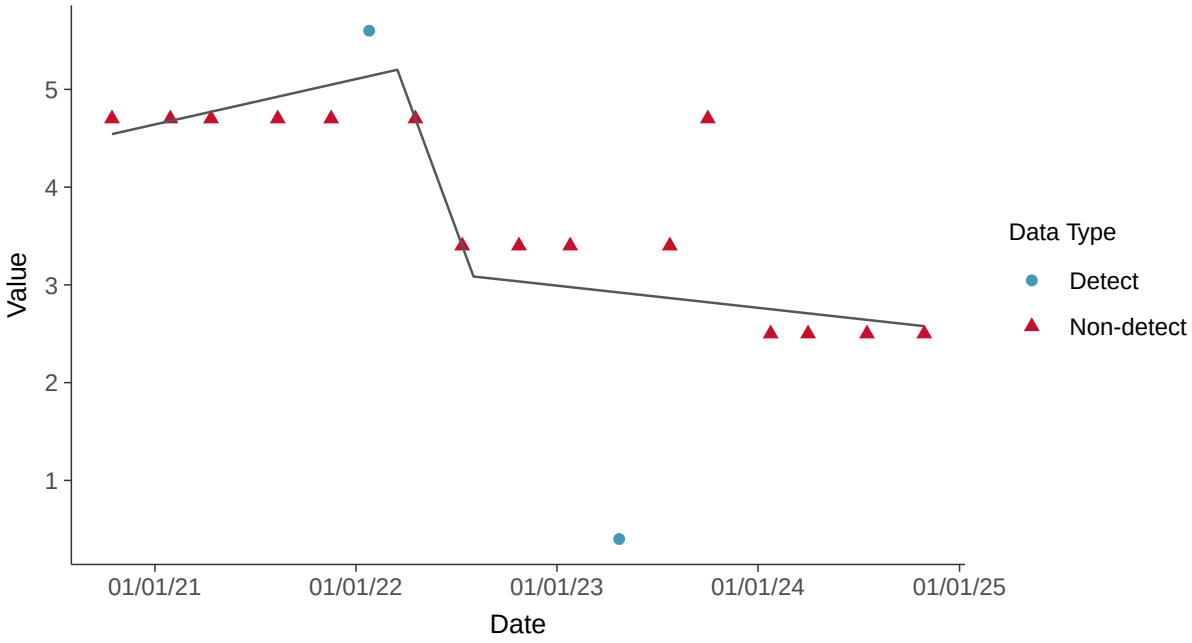
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-11 (ug/L)



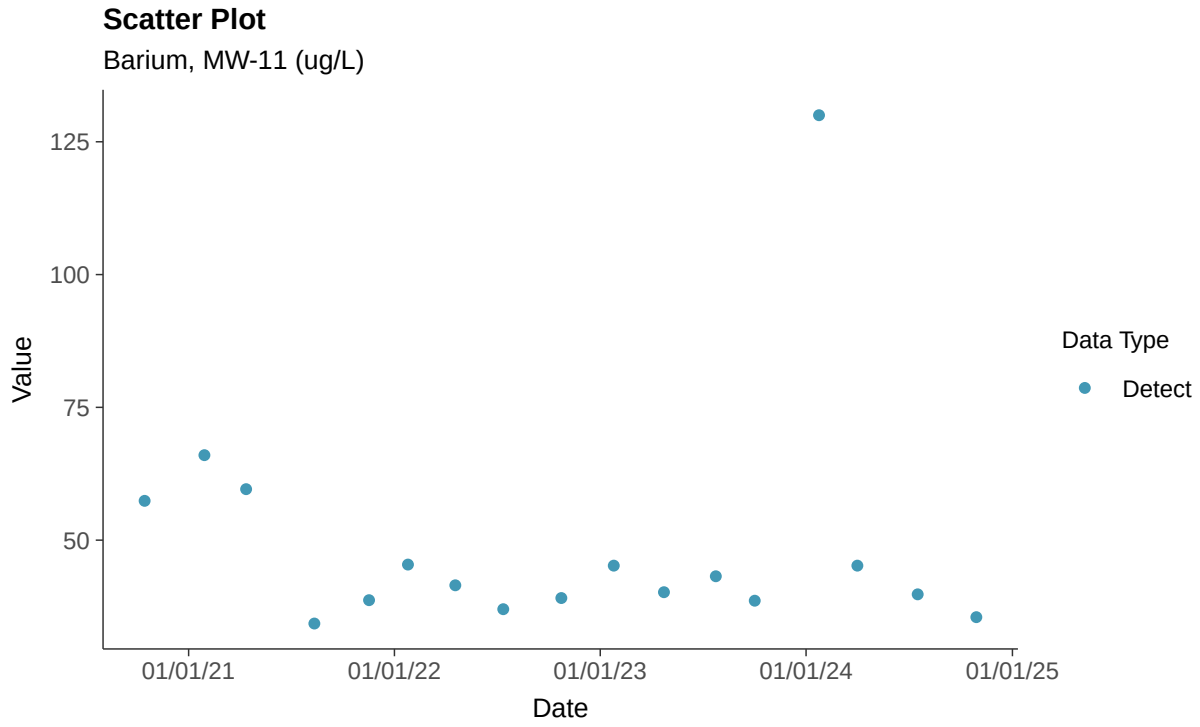
Trend Regression: Piecewise Linear-Linear-Linear

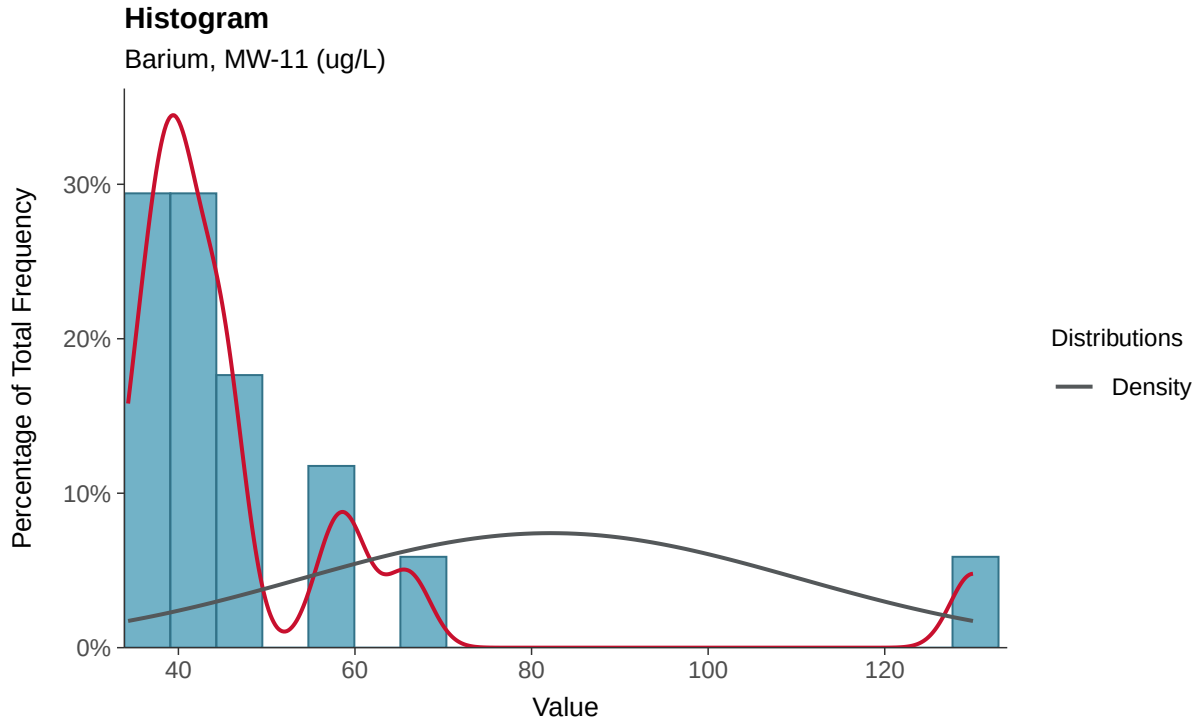
Arsenic, MW-11 (ug/L)



App. IV: Barium, MW-11

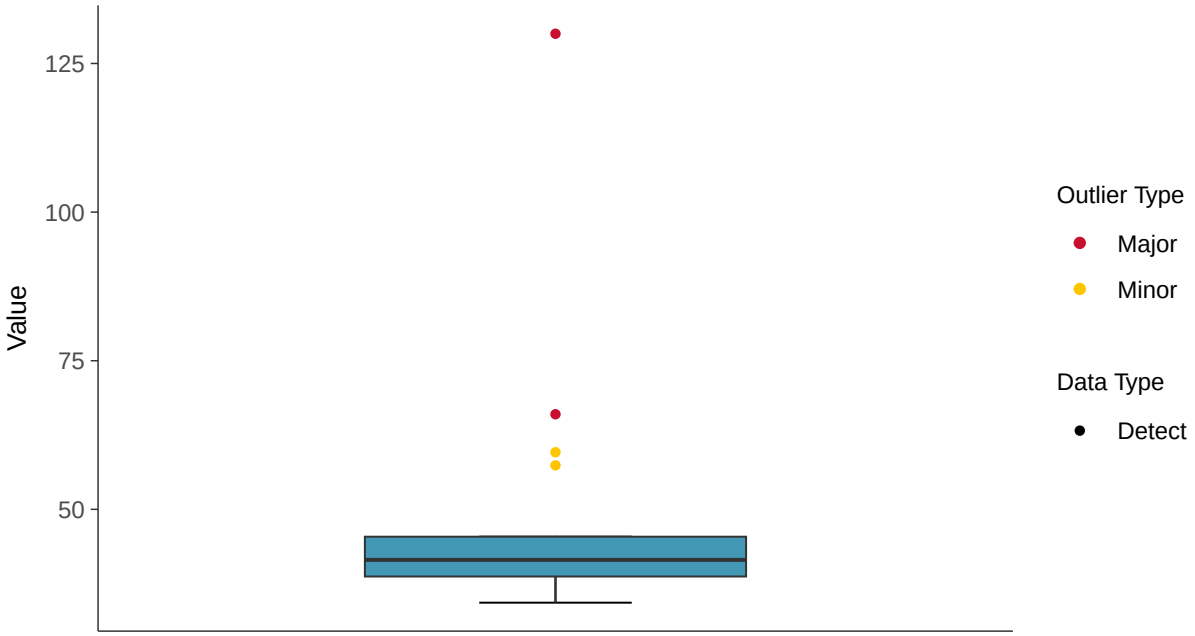
ID: 10_03_103





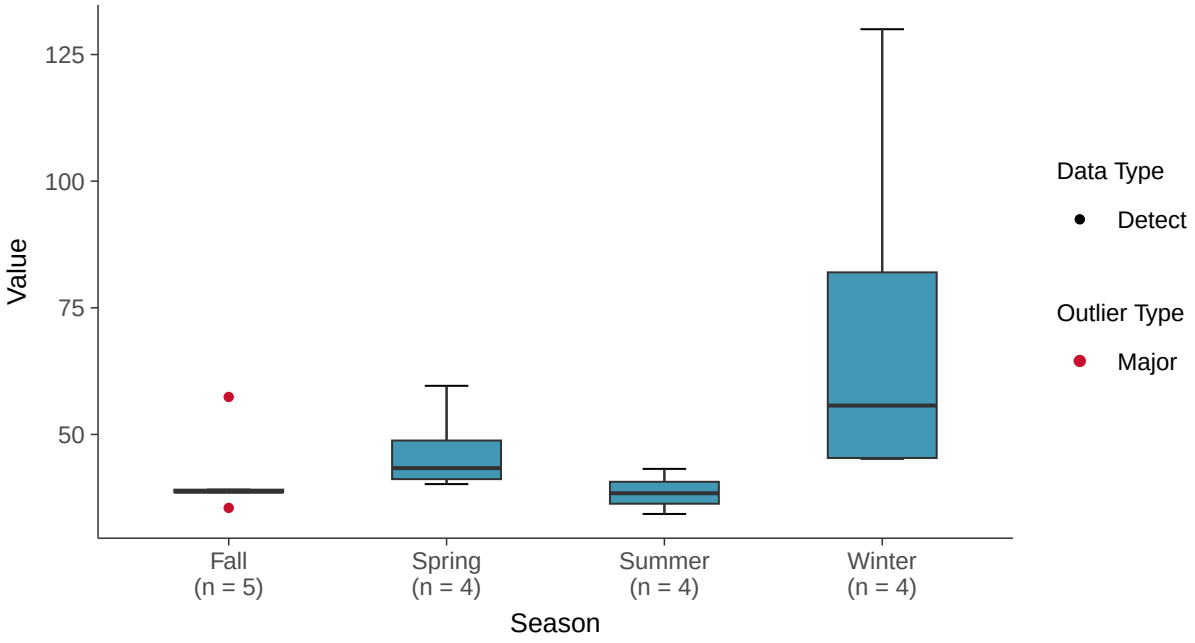
Boxplot

Barium, MW-11 (ug/L)



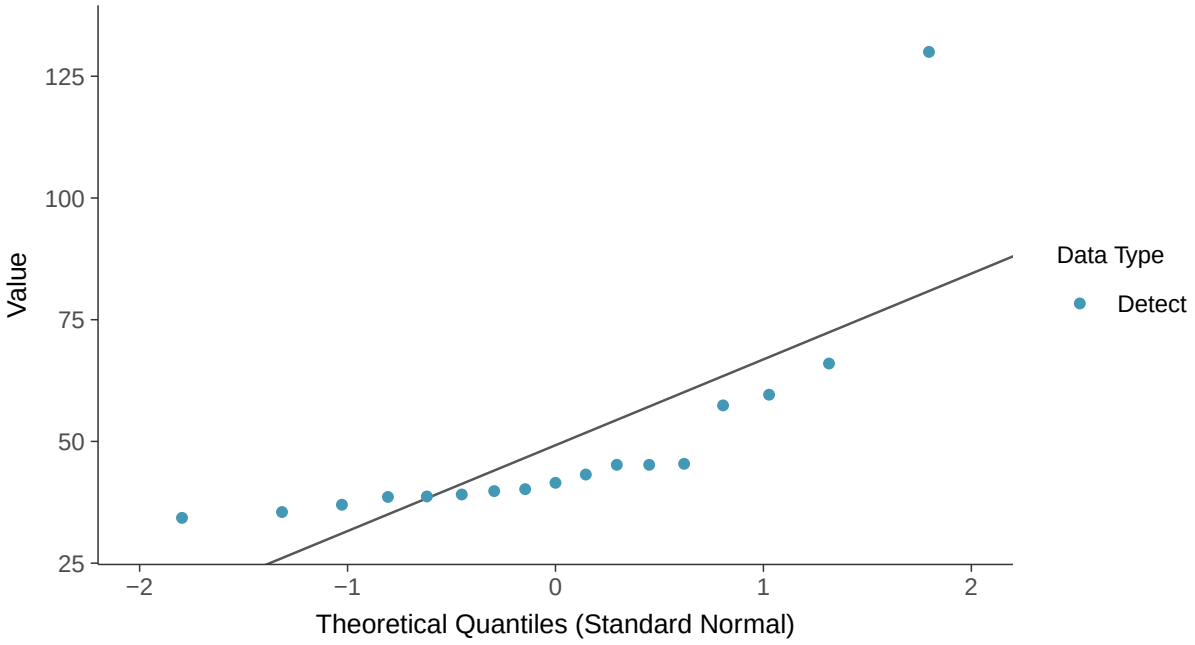
Boxplot by Season

Barium, MW-11 (ug/L)



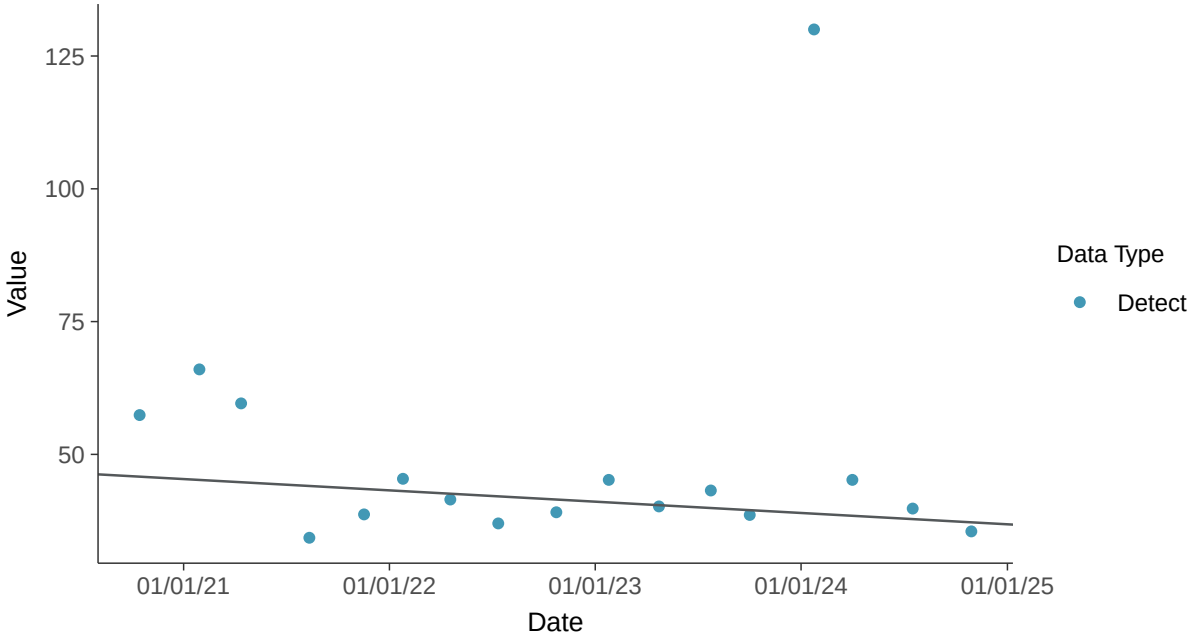
Normal Q-Q plot

Barium, MW-11 (ug/L)



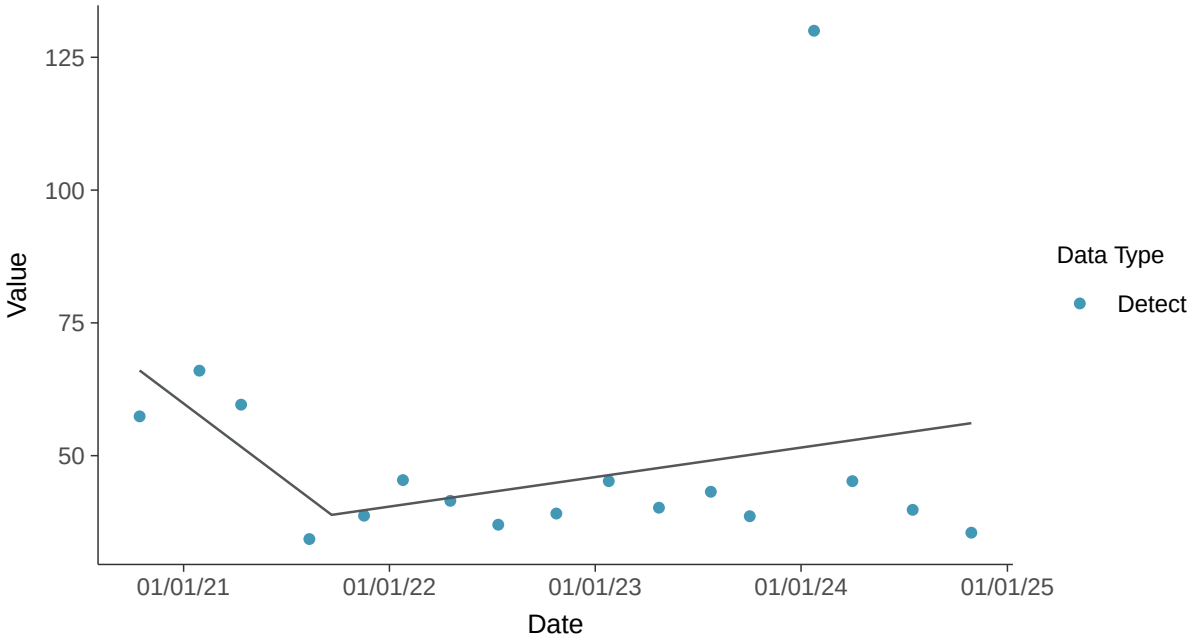
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Barium, MW-11 (ug/L)

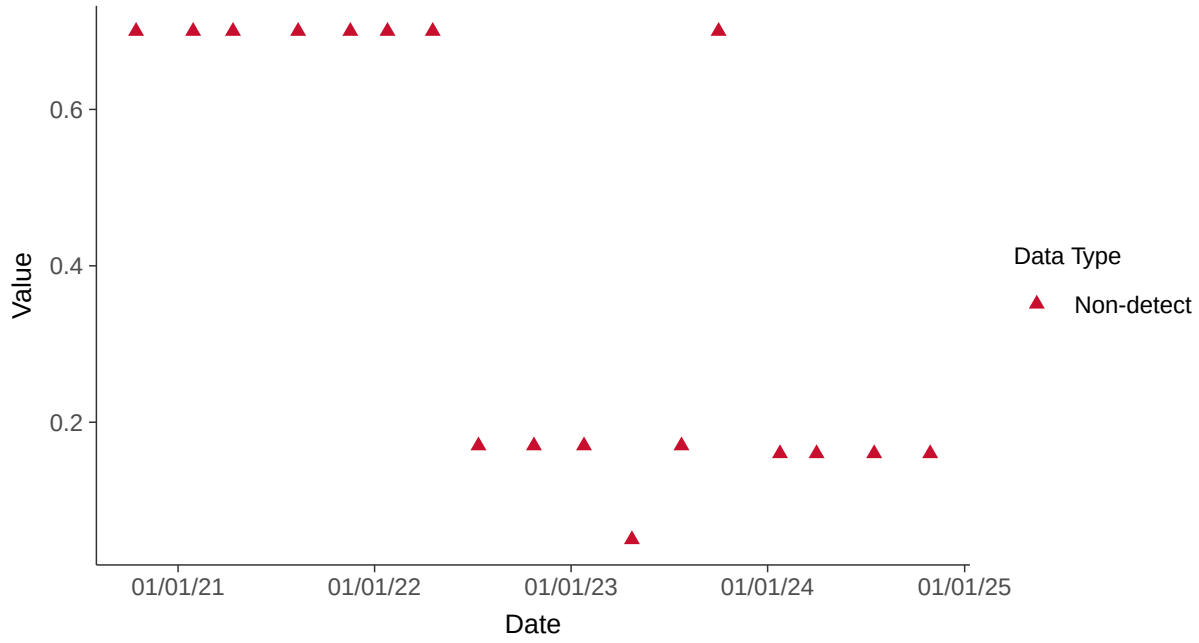


App. IV: Beryllium, MW-11

ID: 10_03_104

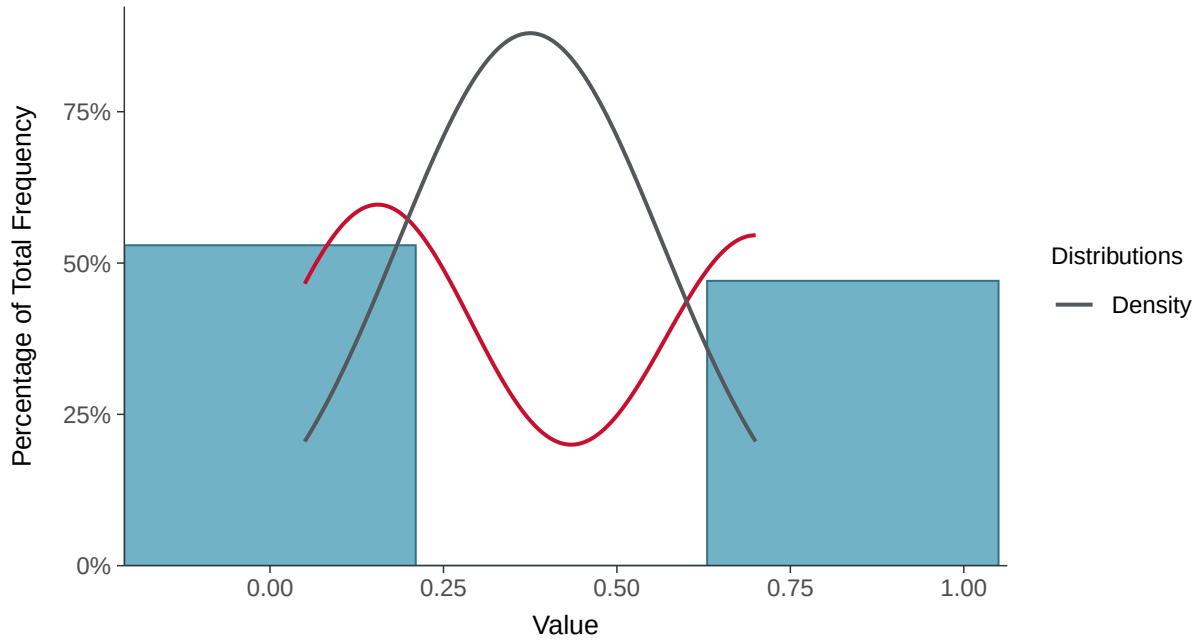
Scatter Plot

Beryllium, MW-11 (ug/L)



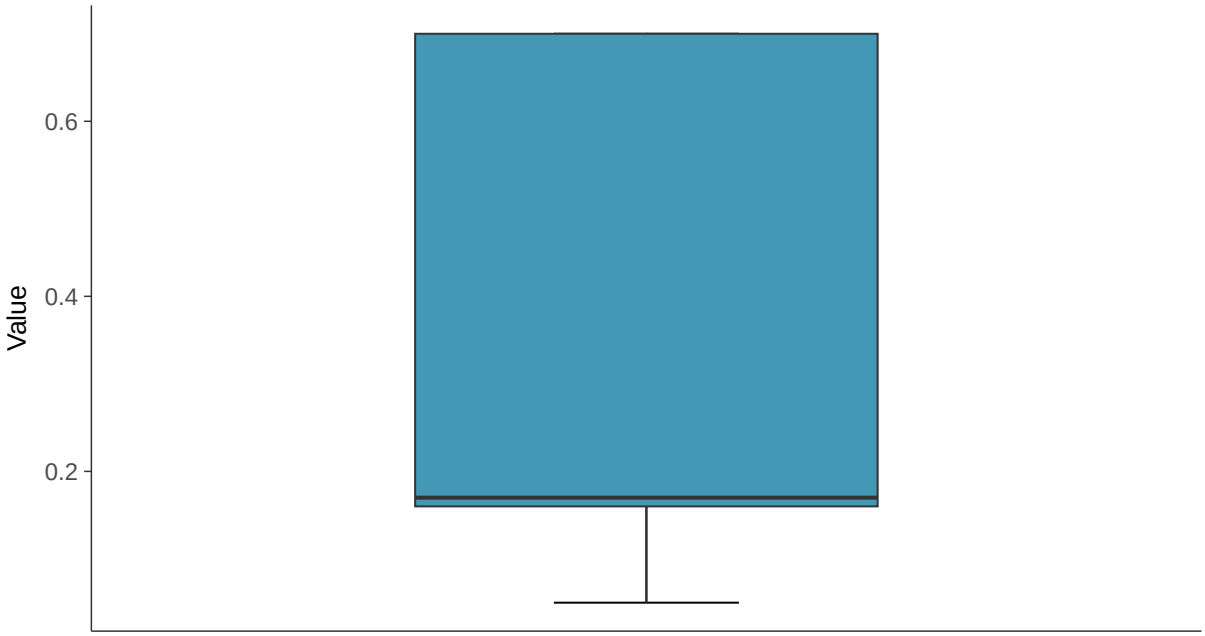
Histogram

Beryllium, MW-11 (ug/L)



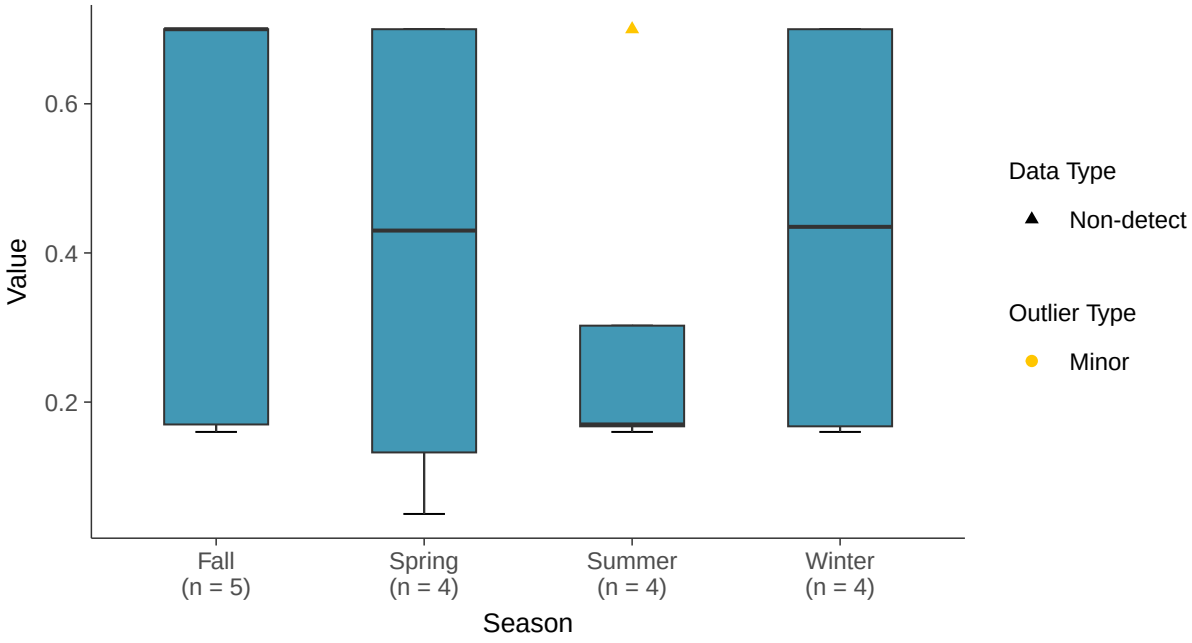
Boxplot

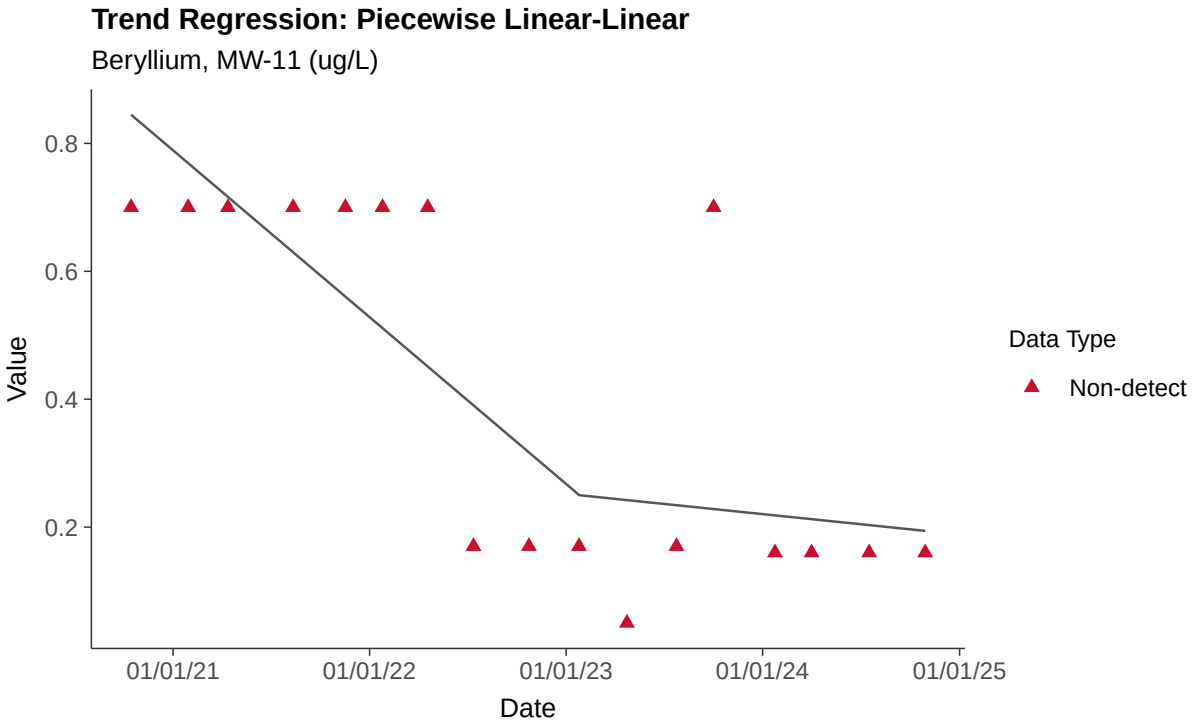
Beryllium, MW-11 (ug/L)



Boxplot by Season

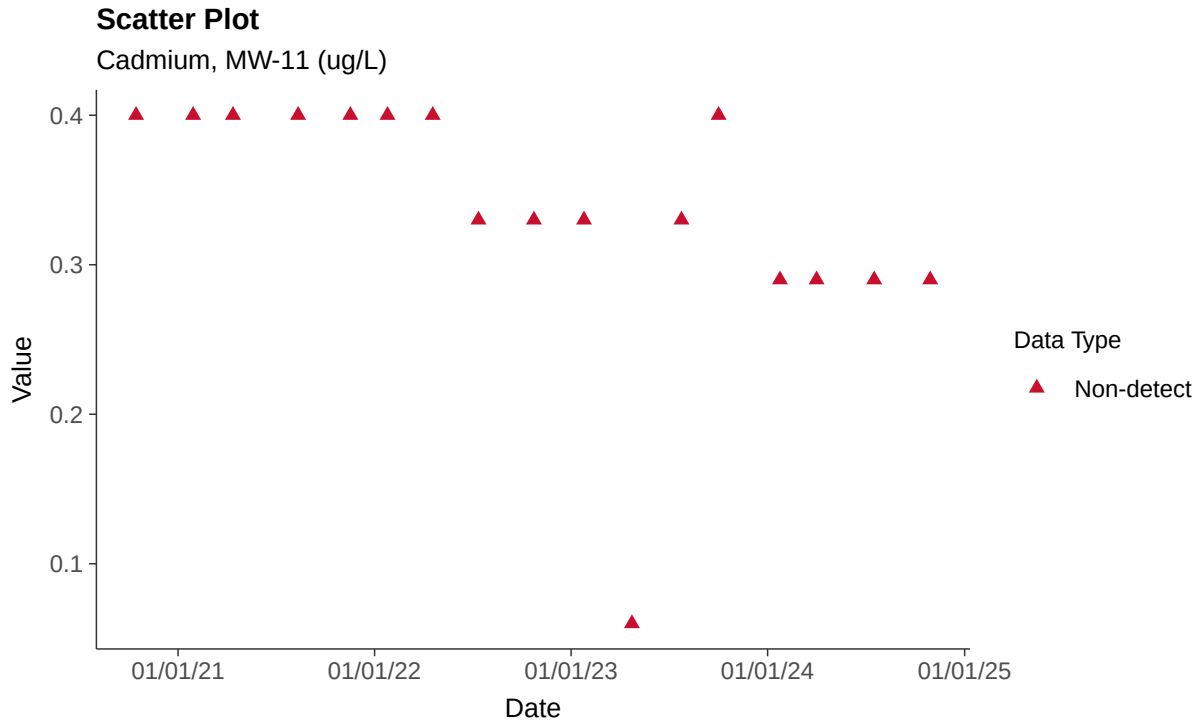
Beryllium, MW-11 (ug/L)

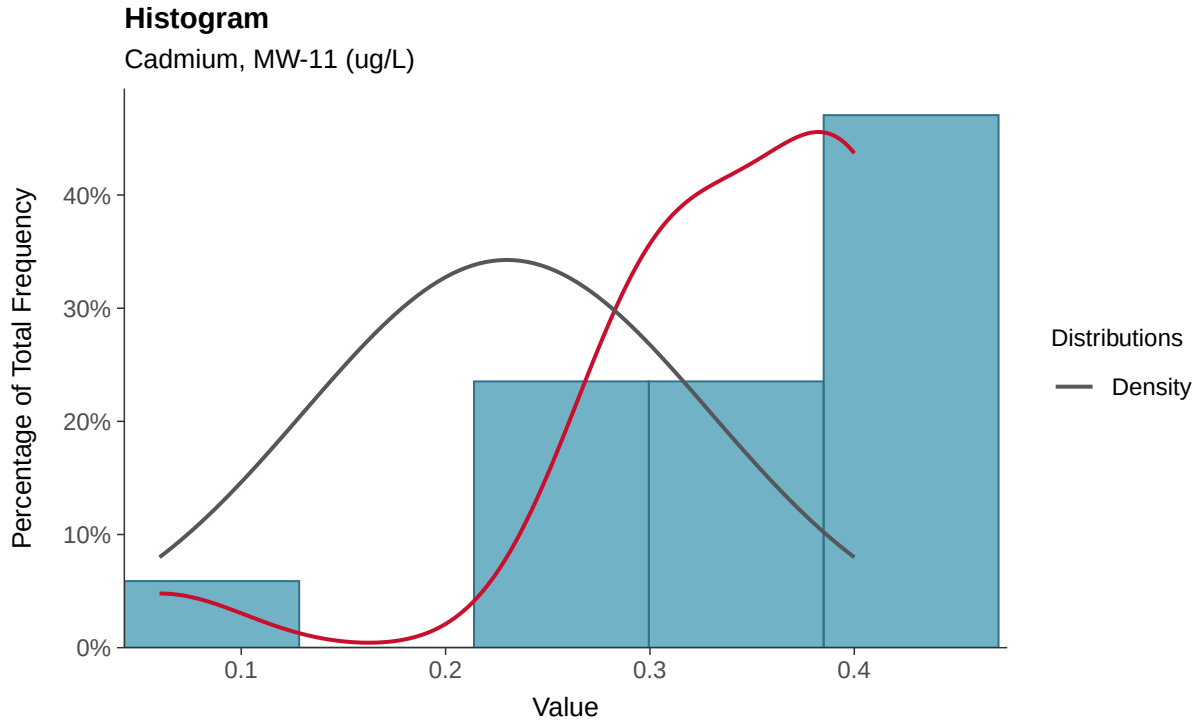



Trend Regression: Piecewise Linear-Linear
Beryllium, MW-11 (ug/L)
Value
0.8
0.6
0.4
0.2
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Non-detect

App. IV: Cadmium, MW-11

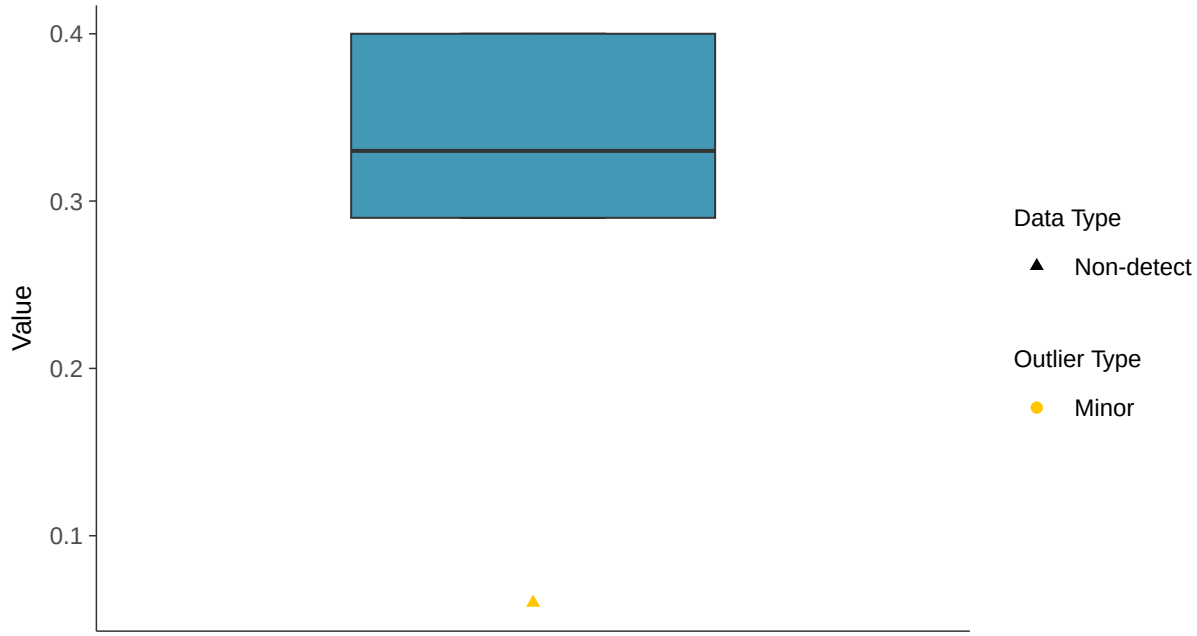
ID: 10_03_106





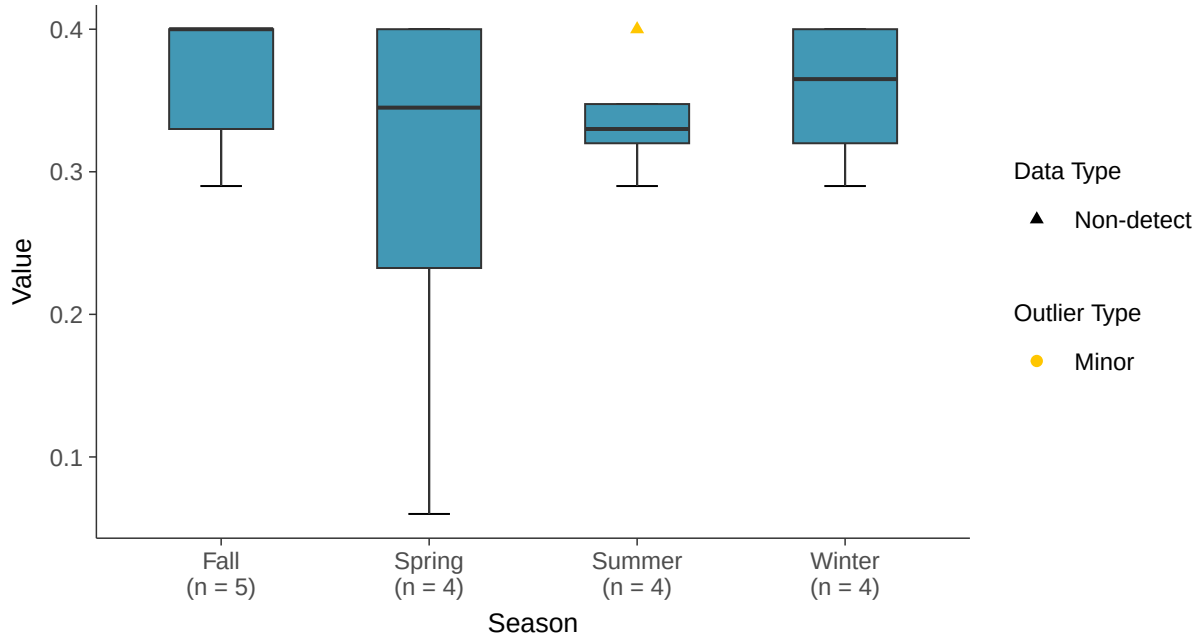
Boxplot

Cadmium, MW-11 (ug/L)



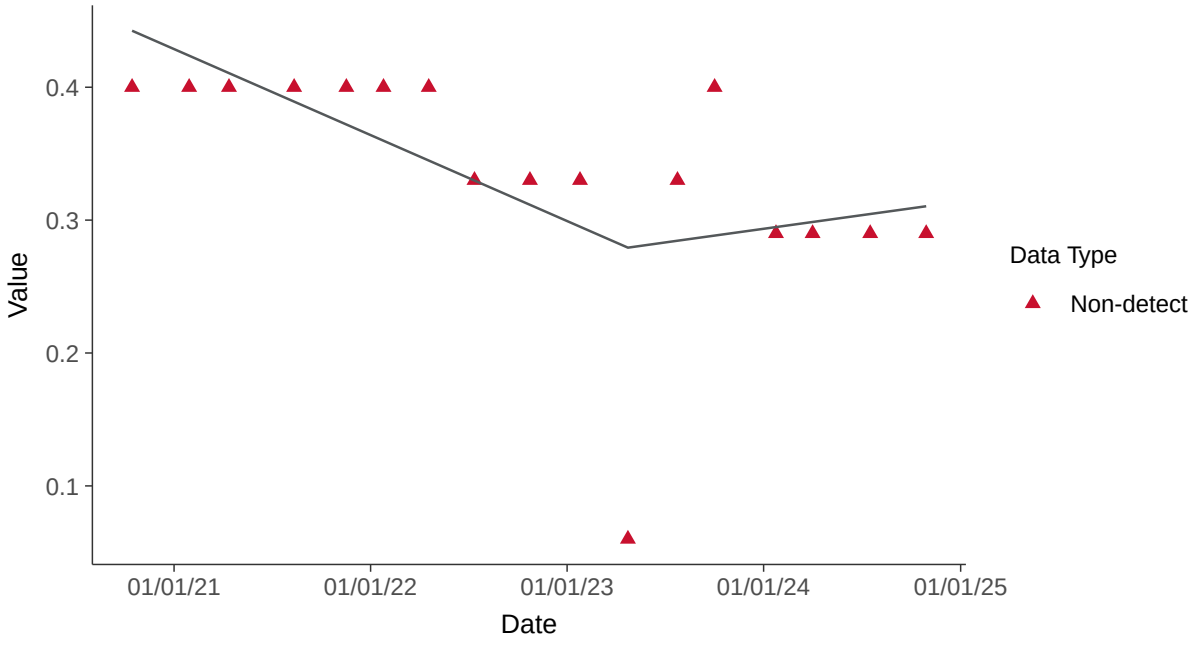
Boxplot by Season

Cadmium, MW-11 (ug/L)



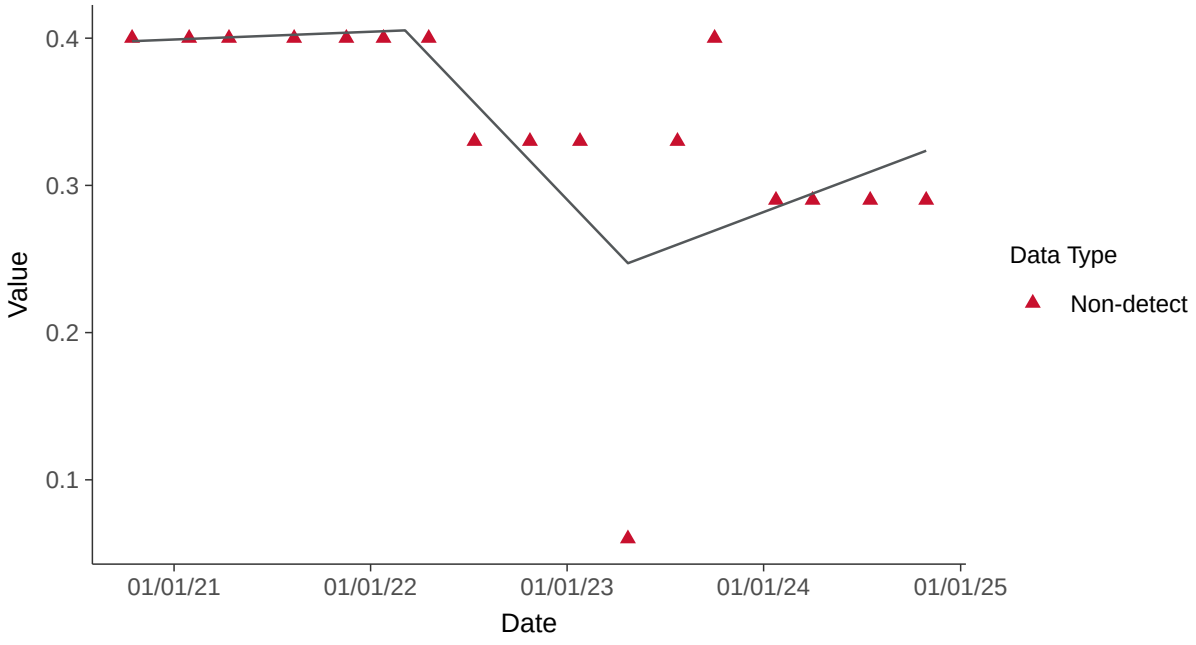
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-11 (ug/L)

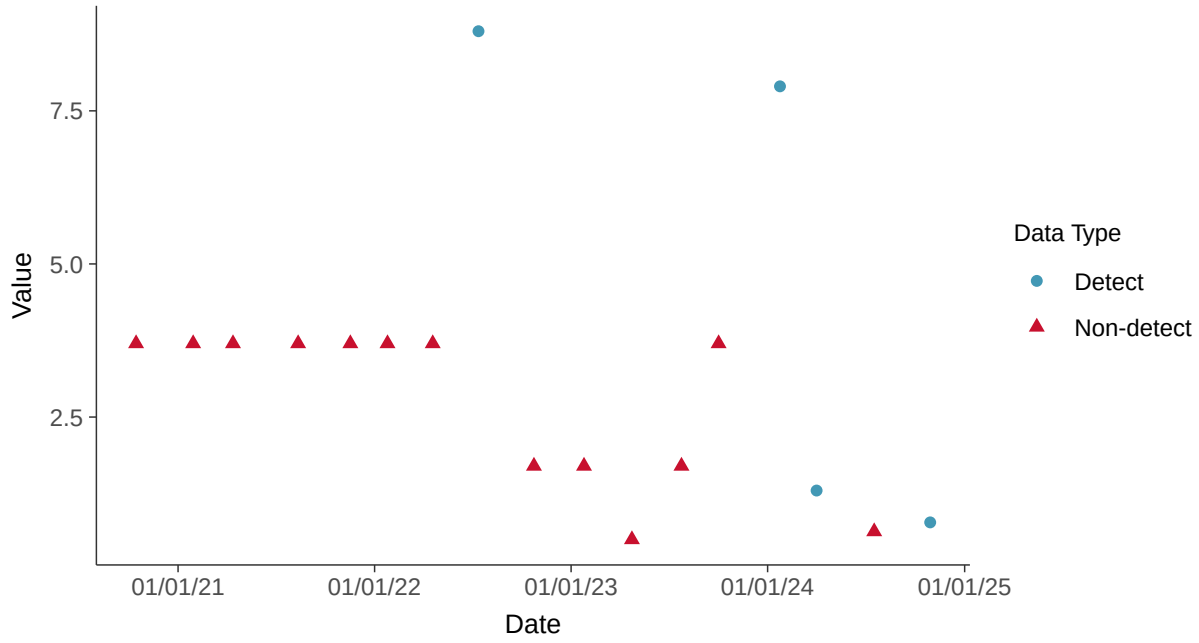


App. IV: Chromium, MW-11

ID: 10_03_109

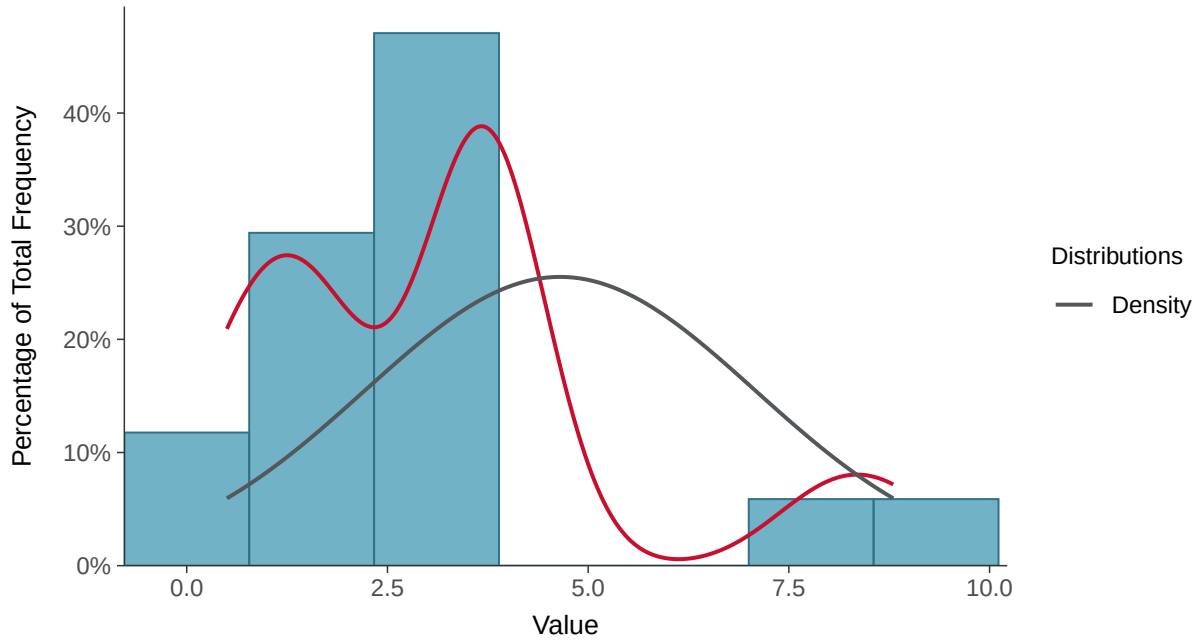
Scatter Plot

Chromium, MW-11 (ug/L)



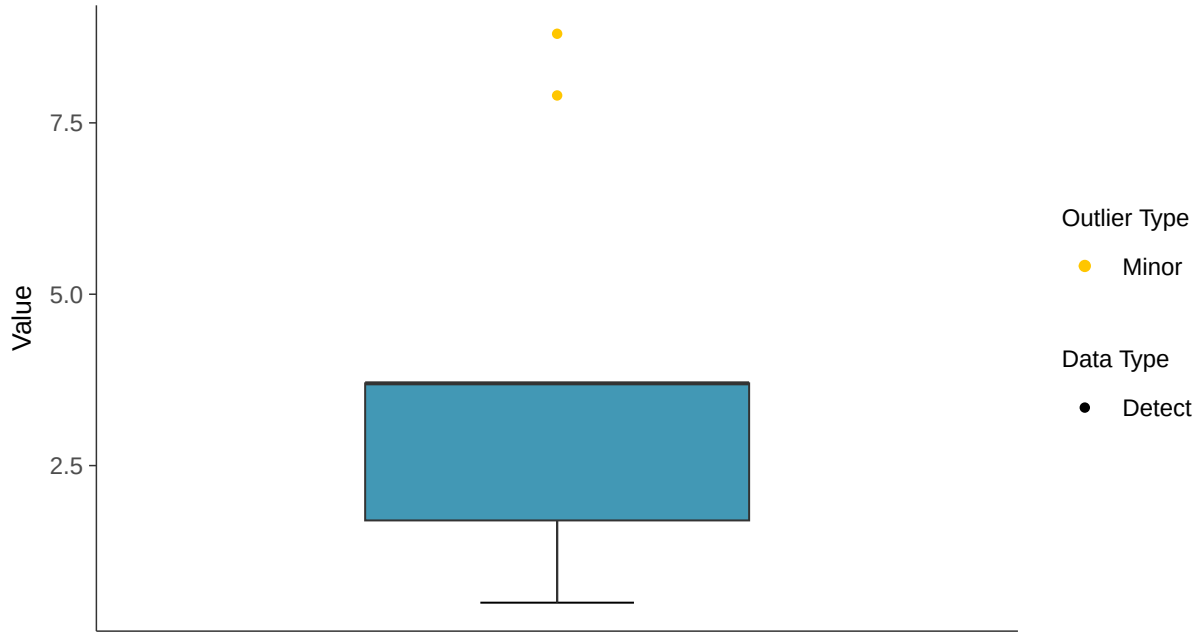
Histogram

Chromium, MW-11 (ug/L)



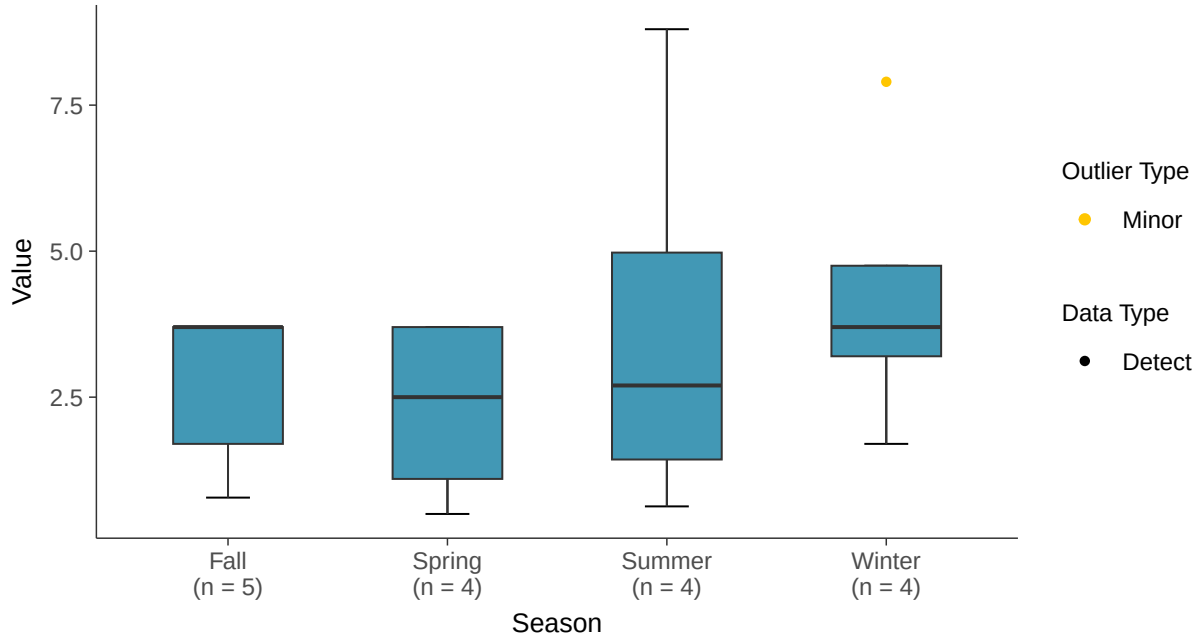
Boxplot

Chromium, MW-11 (ug/L)



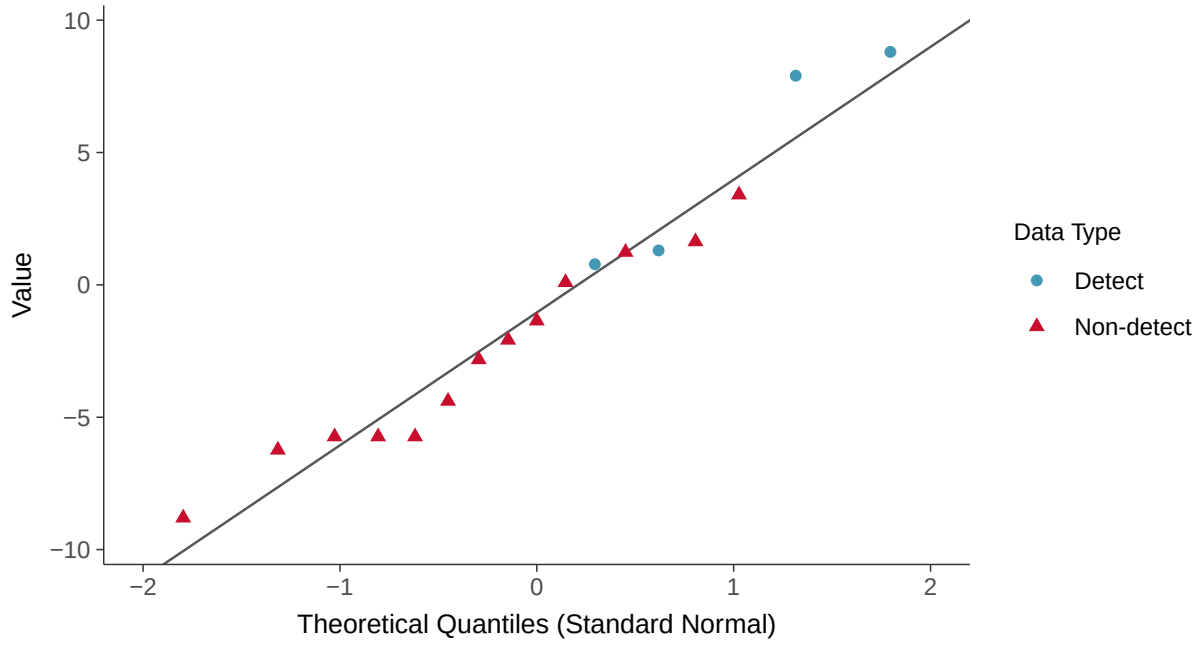
Boxplot by Season

Chromium, MW-11 (ug/L)



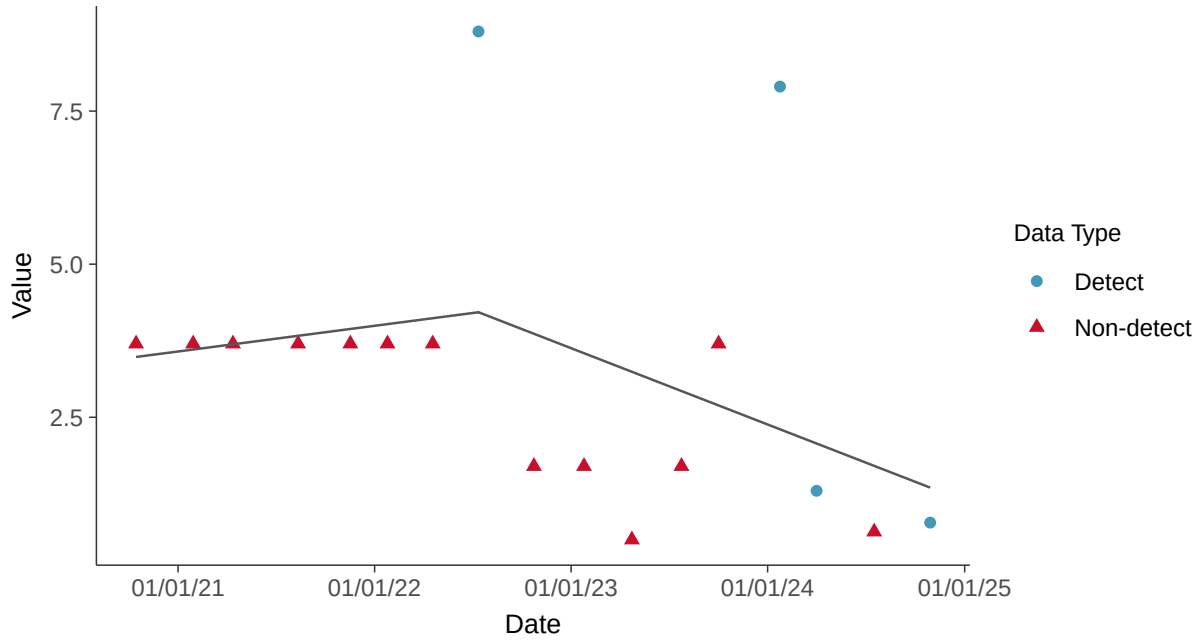
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-11 (ug/L)



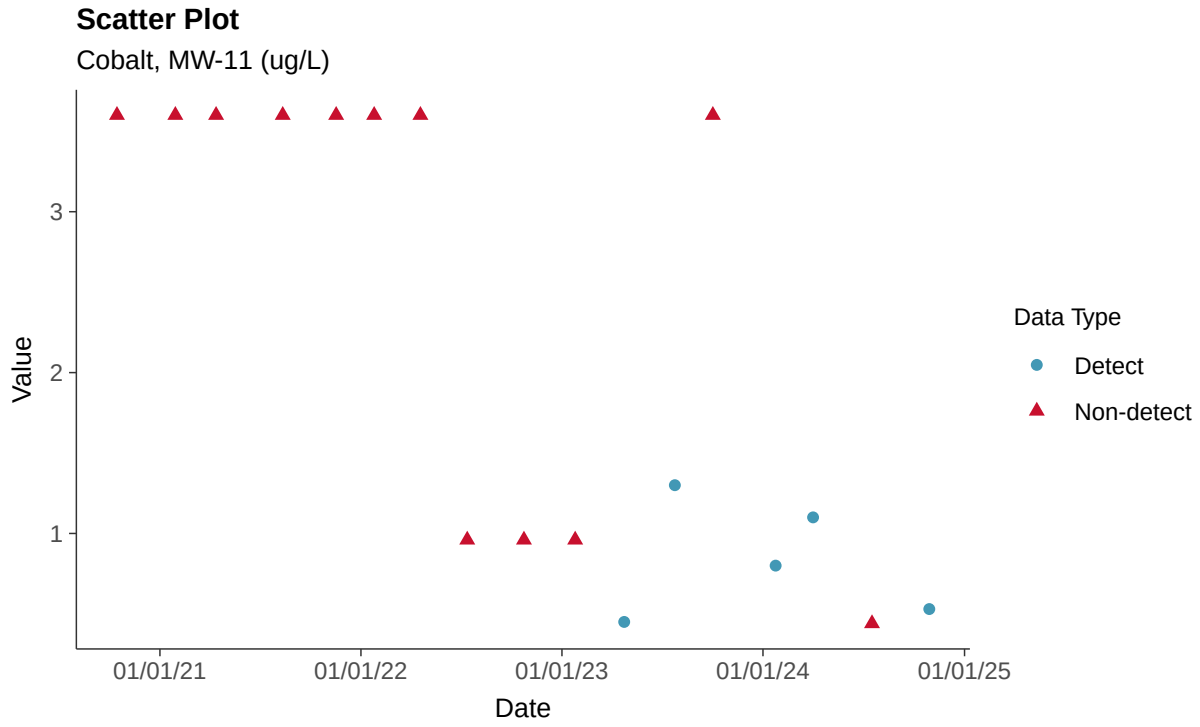
Trend Regression: Piecewise Linear-Linear

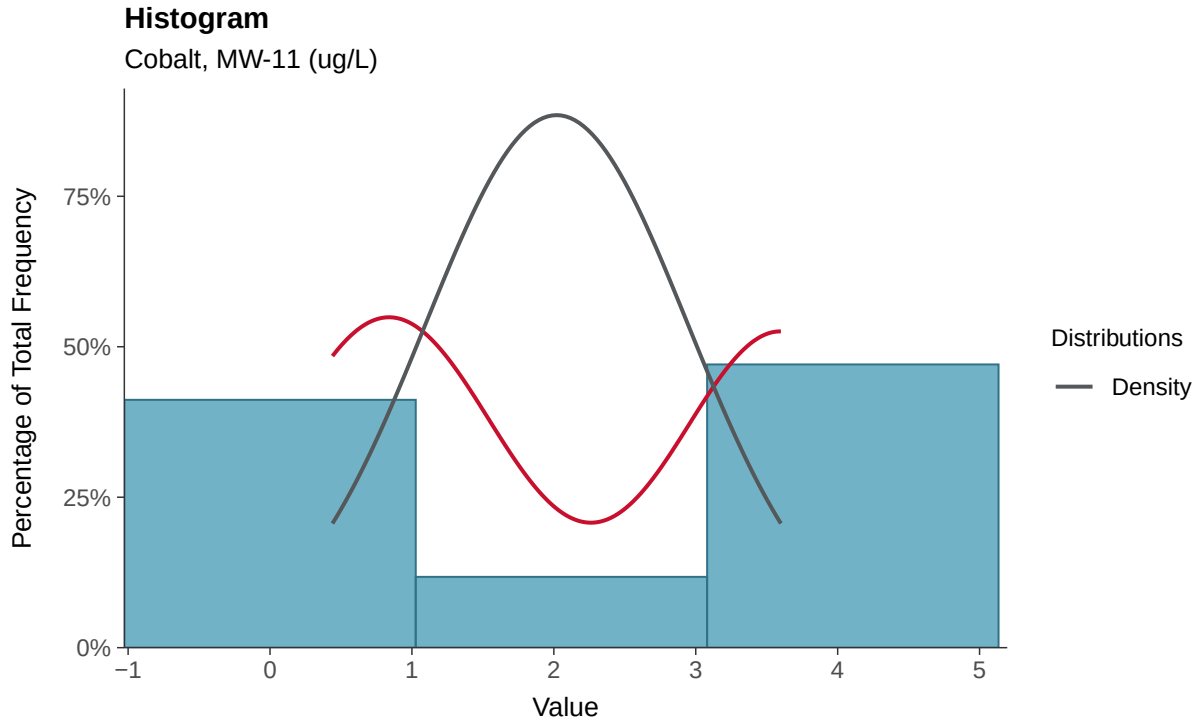
Chromium, MW-11 (ug/L)



App. IV: Cobalt, MW-11

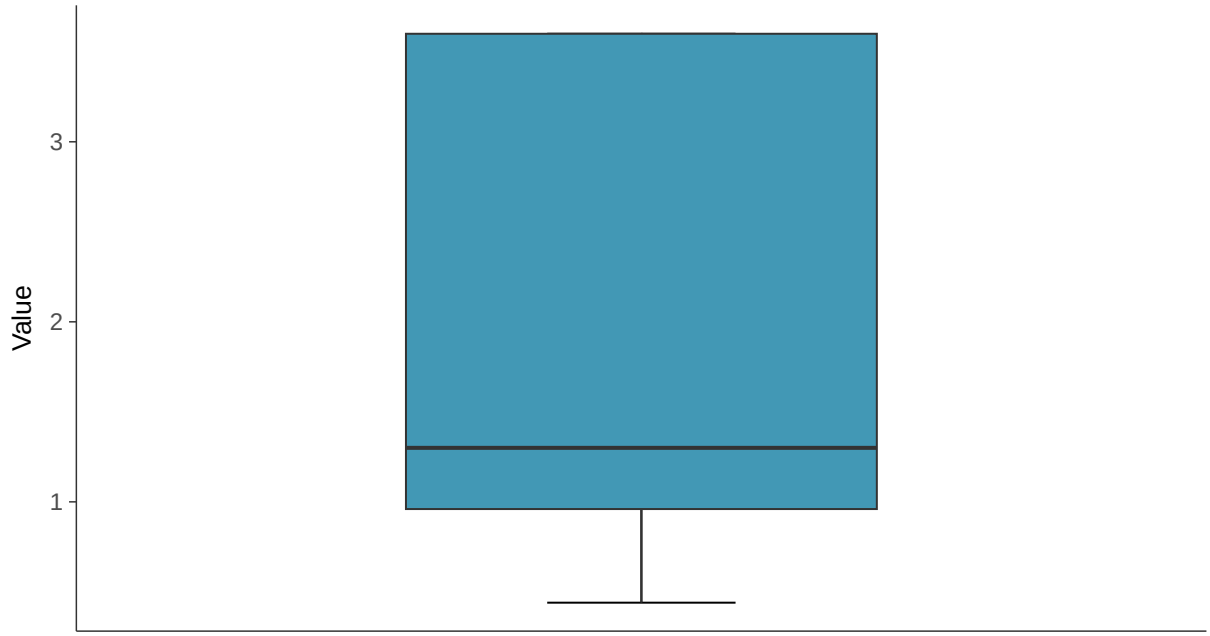
ID: 10_03_110





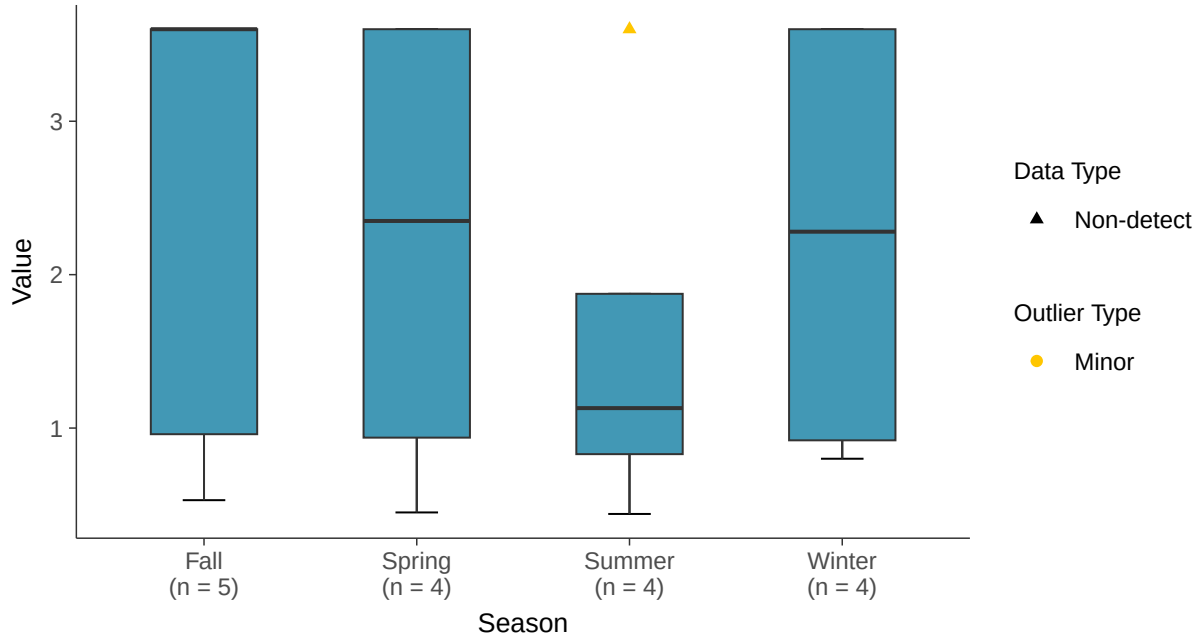
Boxplot

Cobalt, MW-11 (ug/L)



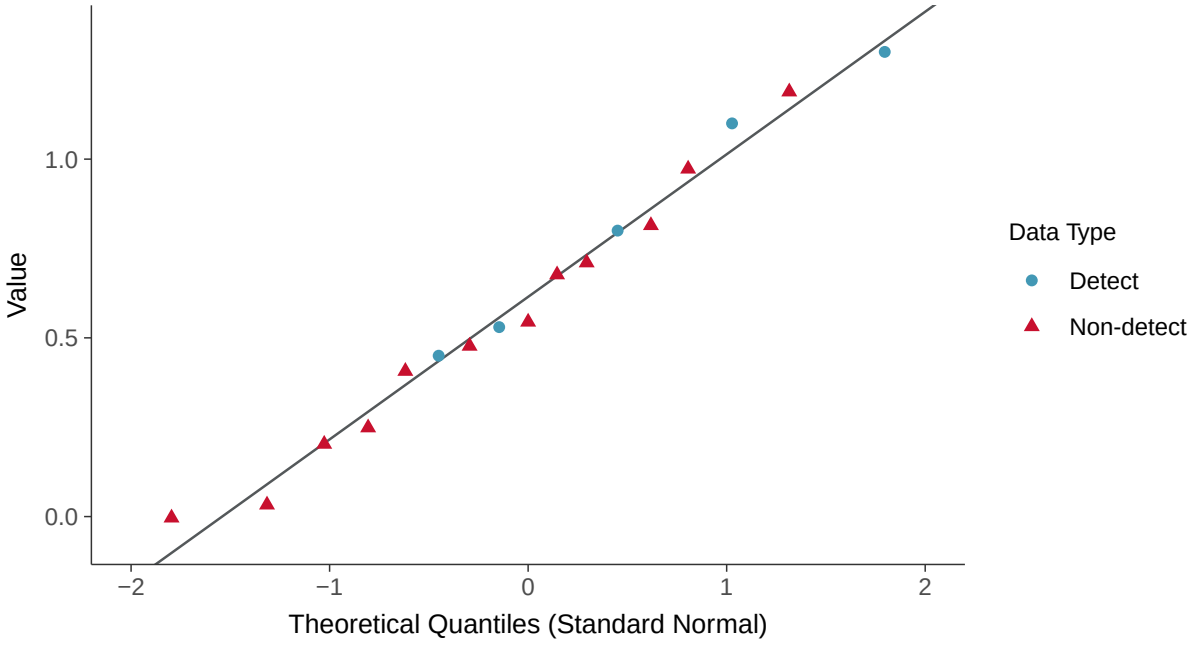
Boxplot by Season

Cobalt, MW-11 (ug/L)



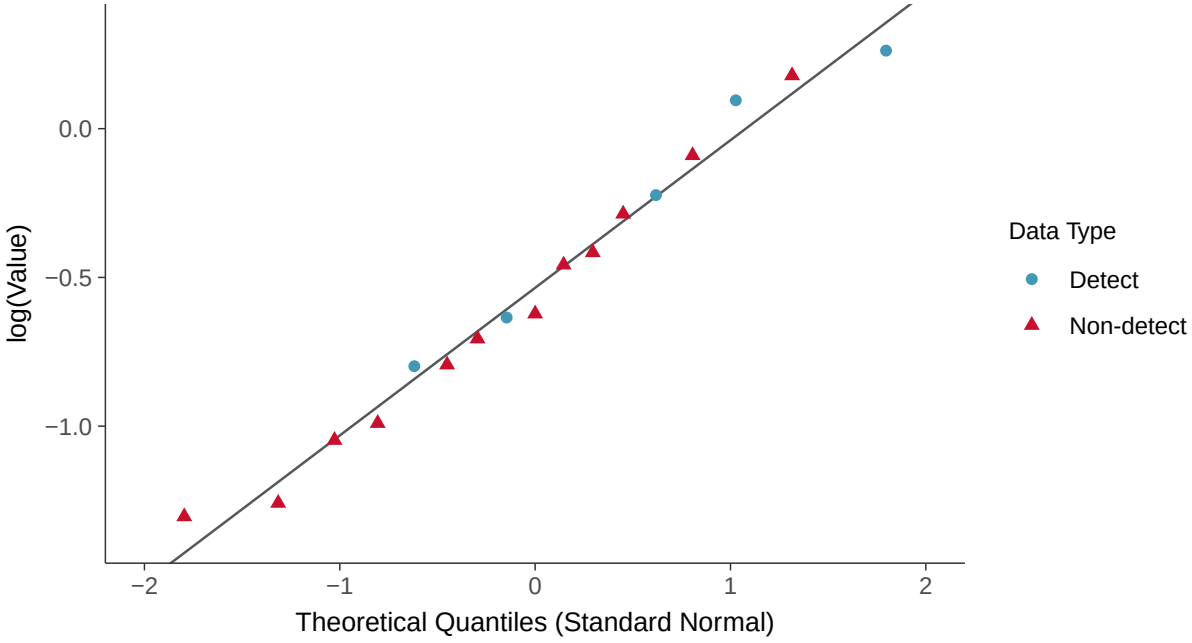
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-11 (ug/L)



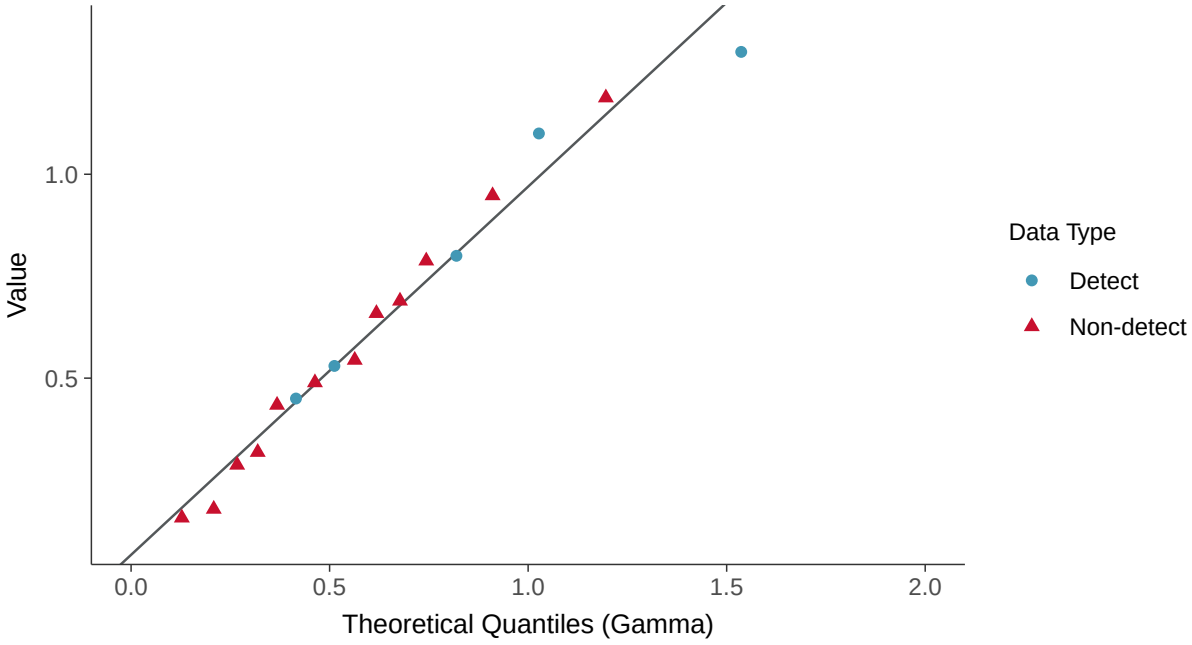
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-11 (ug/L)



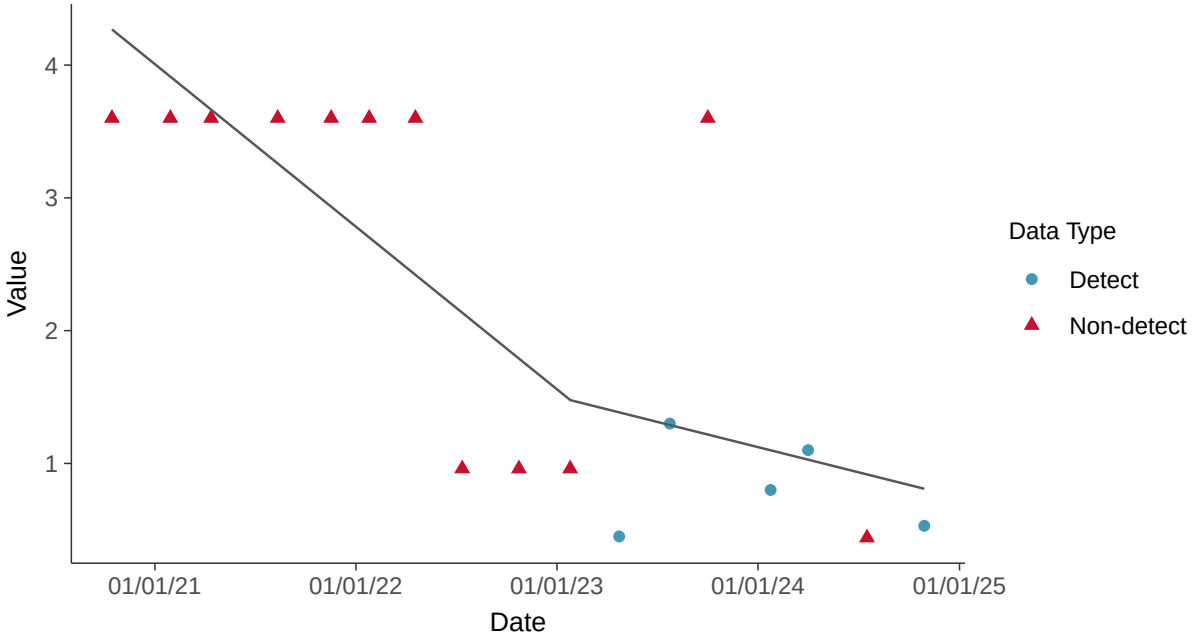
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, MW-11 (ug/L)

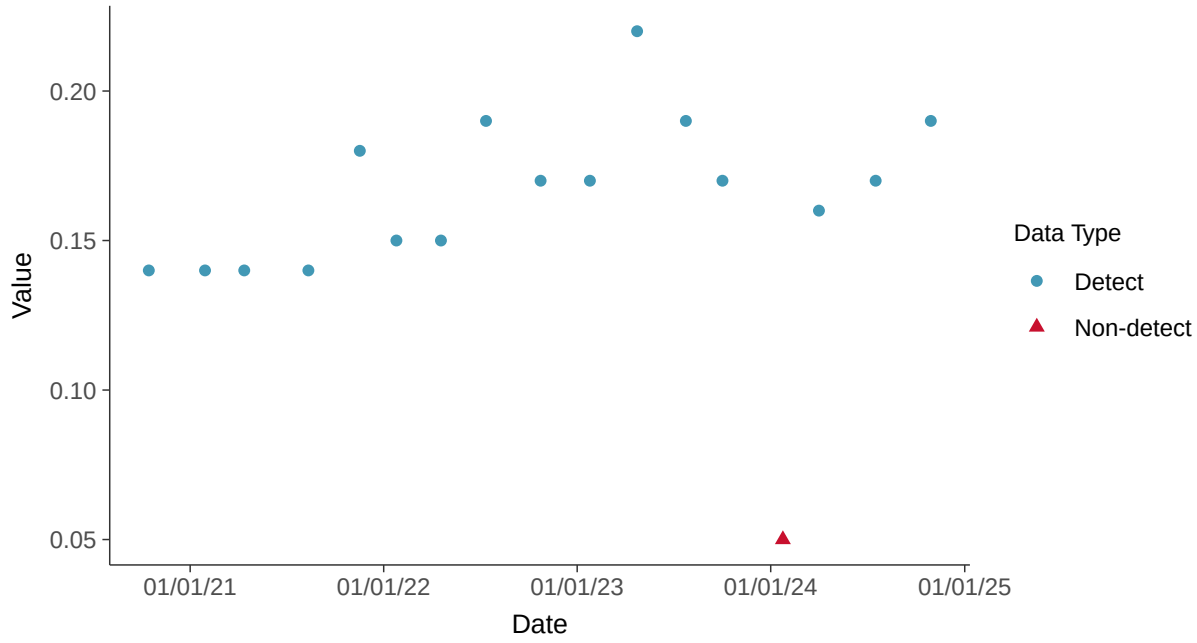


App. IV: Fluoride, MW-11

ID: 10_03_112

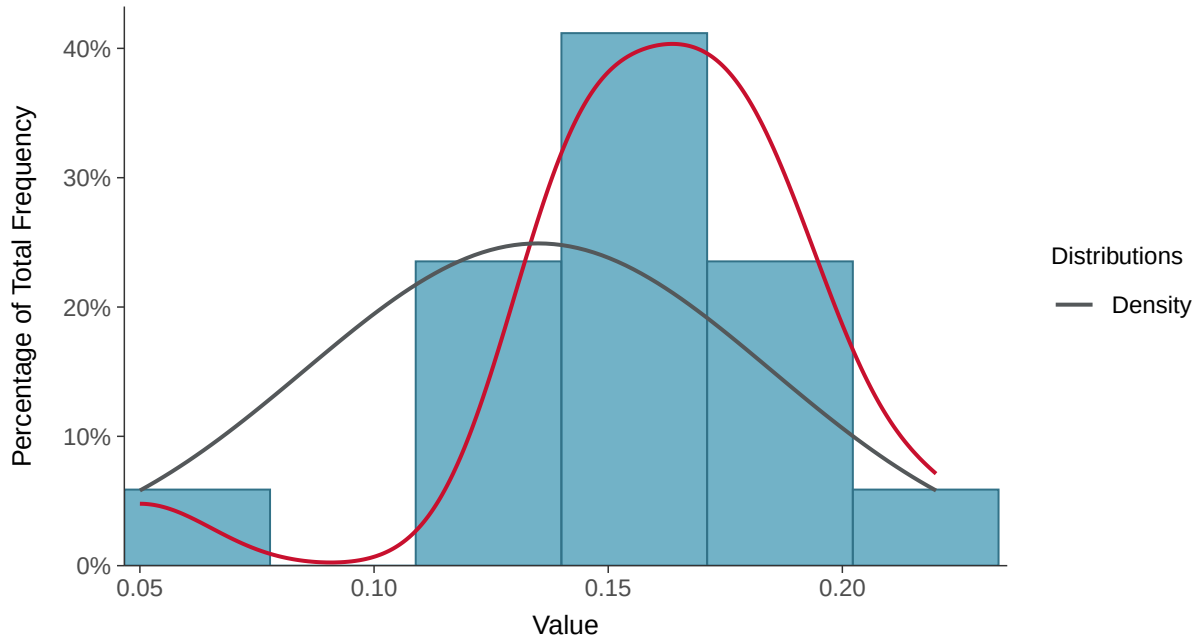
Scatter Plot

Fluoride, MW-11 (mg/L)



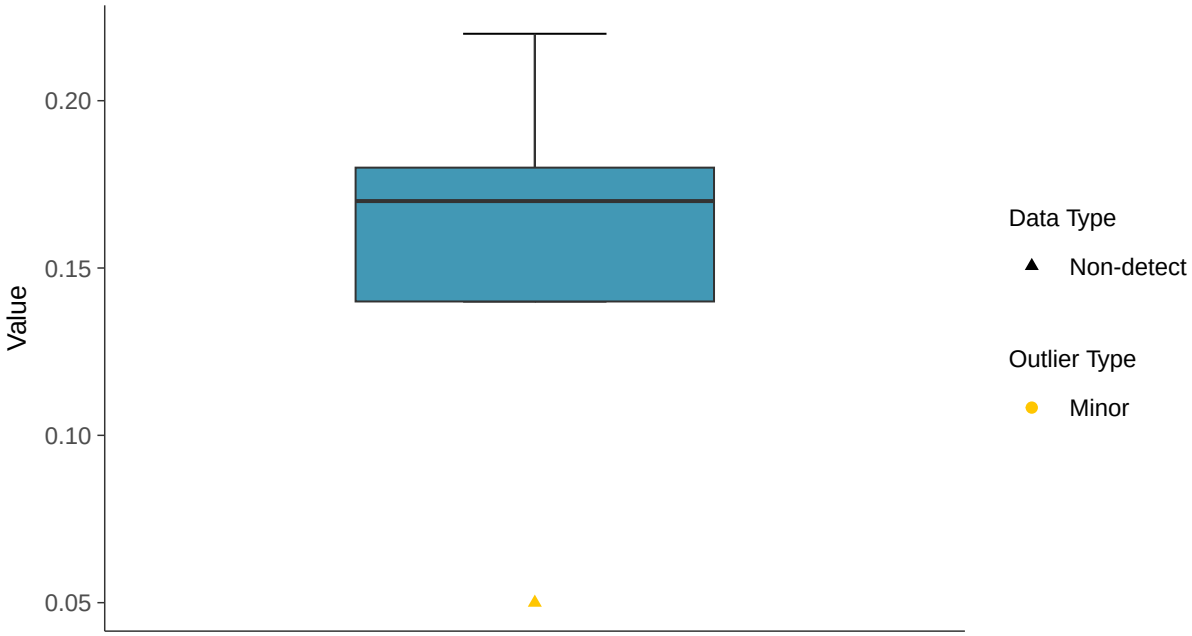
Histogram

Fluoride, MW-11 (mg/L)



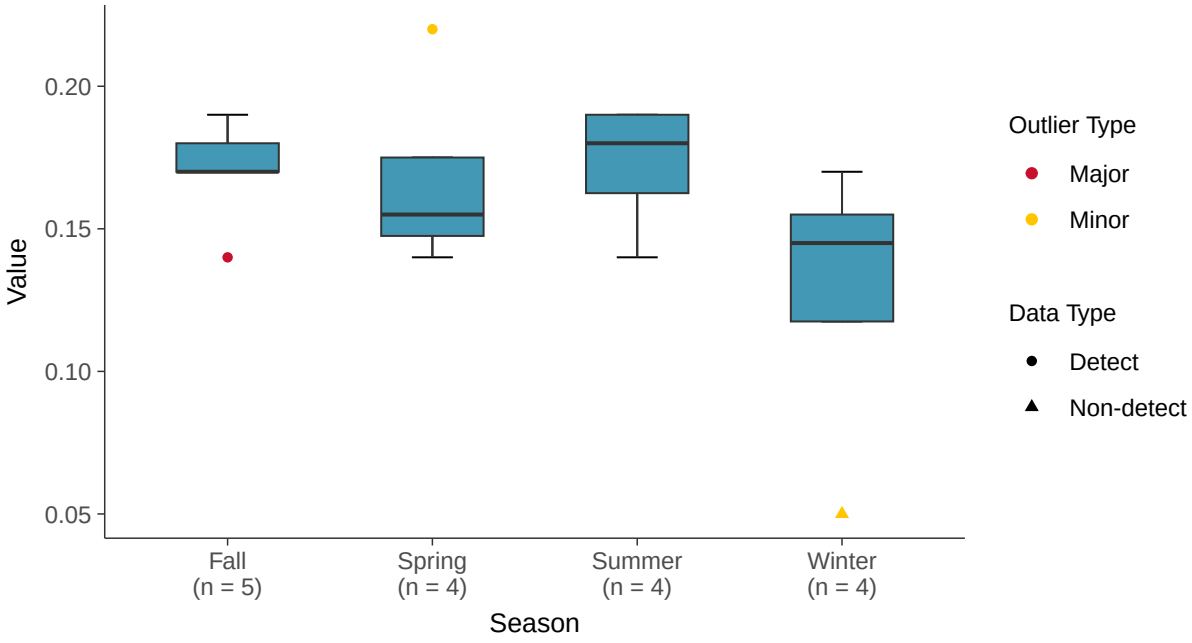
Boxplot

Fluoride, MW-11 (mg/L)



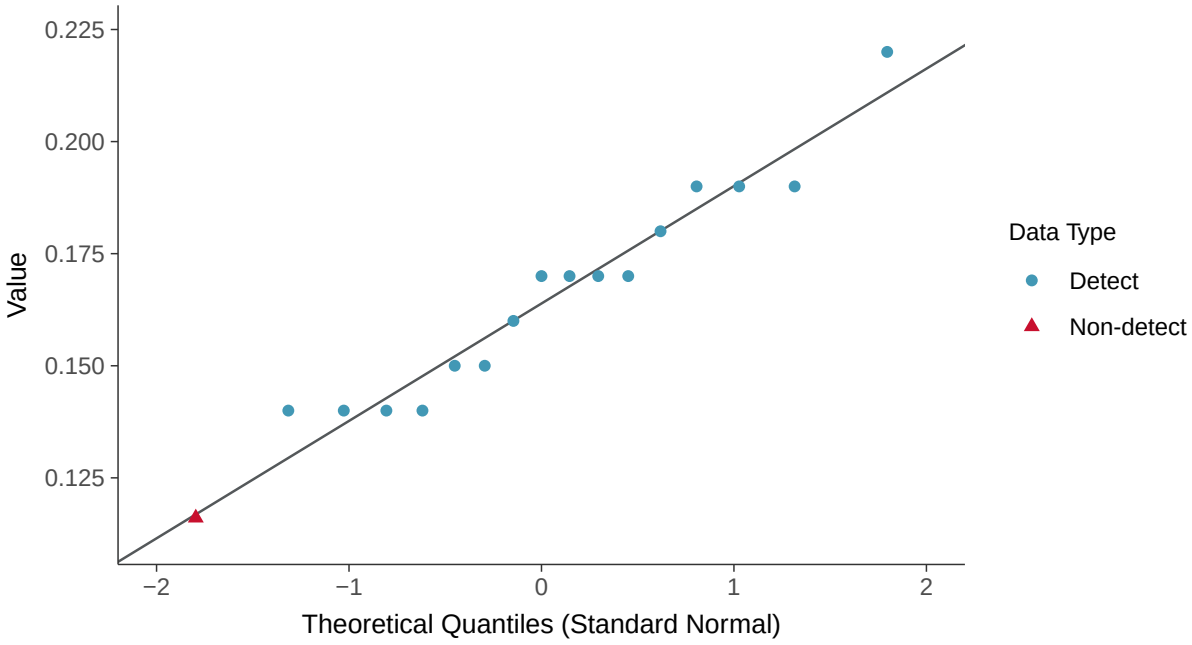
Boxplot by Season

Fluoride, MW-11 (mg/L)



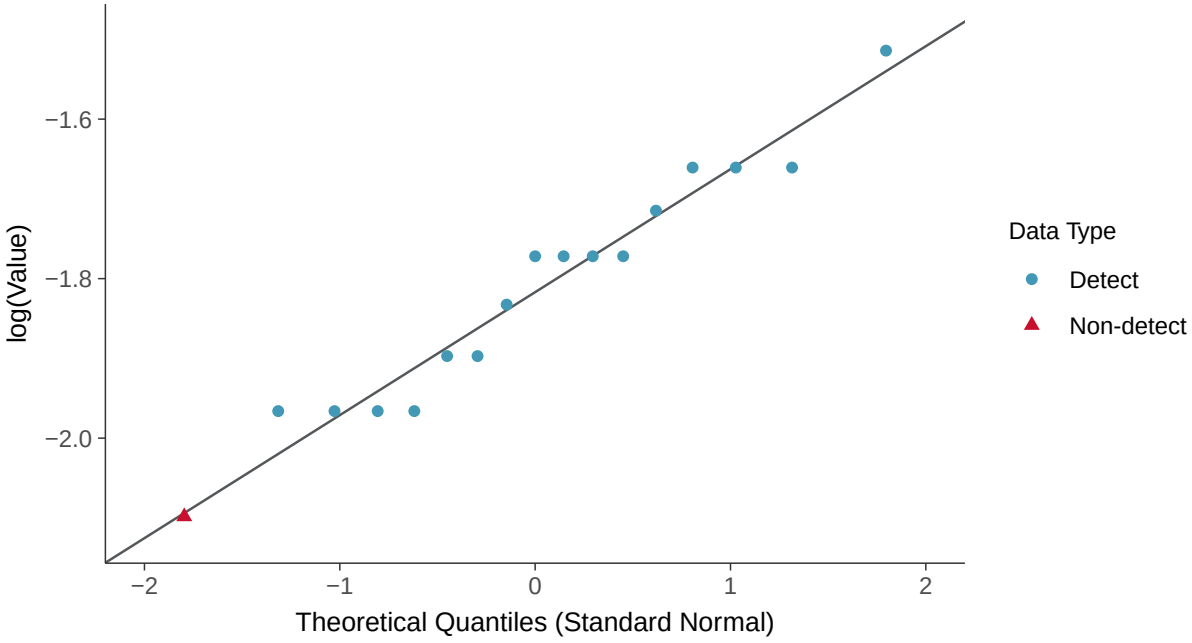
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



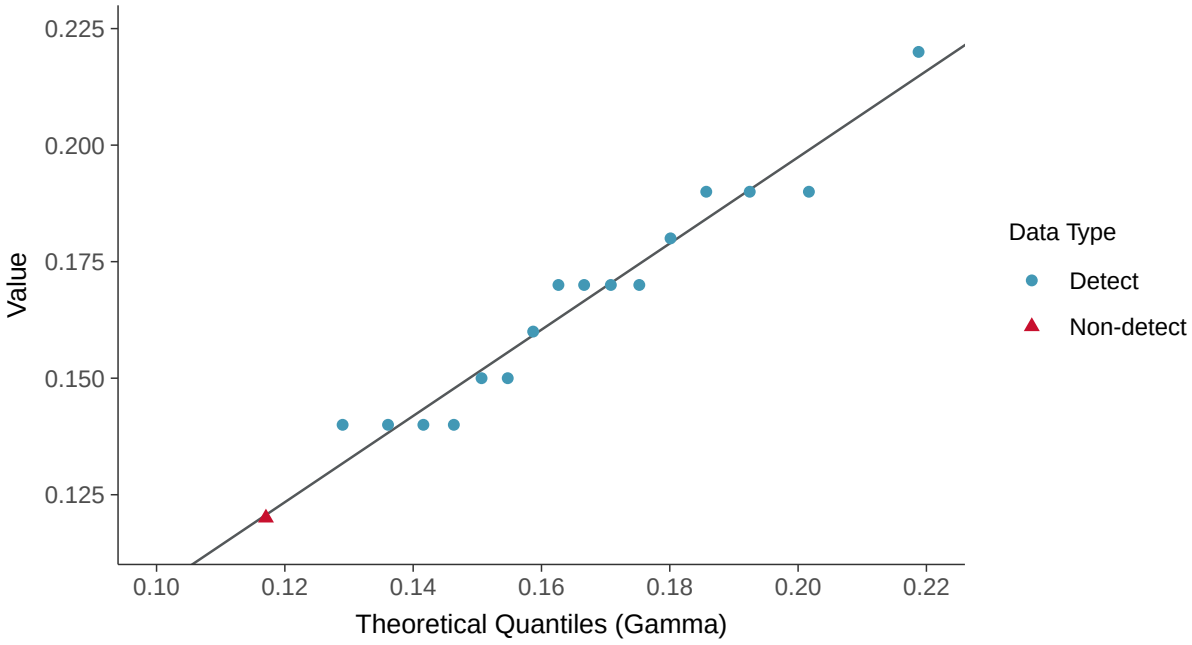
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



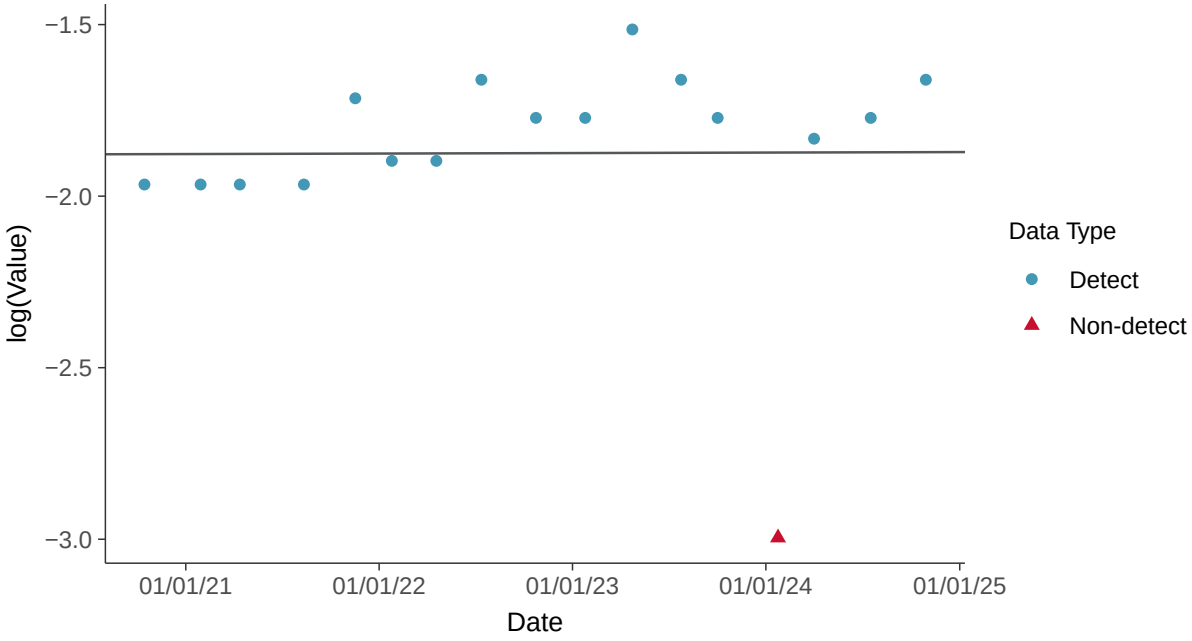
Gamma Q-Q plot using ROS Imputed Estimates

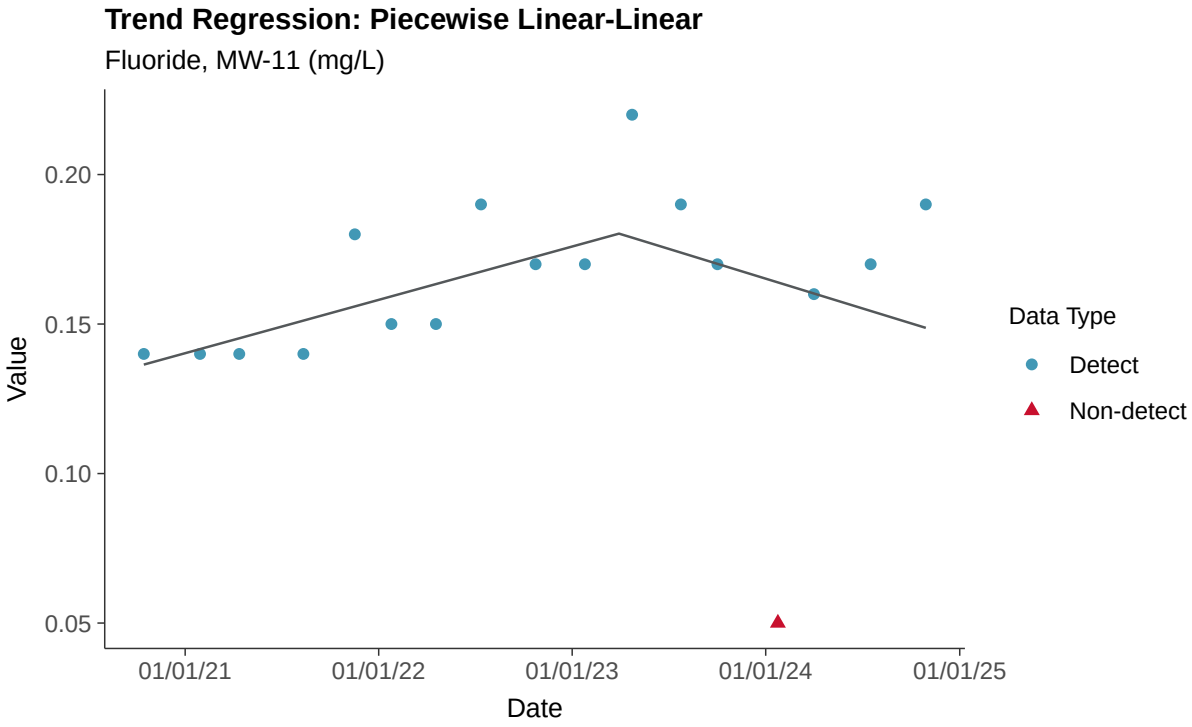
Fluoride, MW-11 (mg/L)



Trend Regression: Lognormal MLE

Fluoride, MW-11 (mg/L)



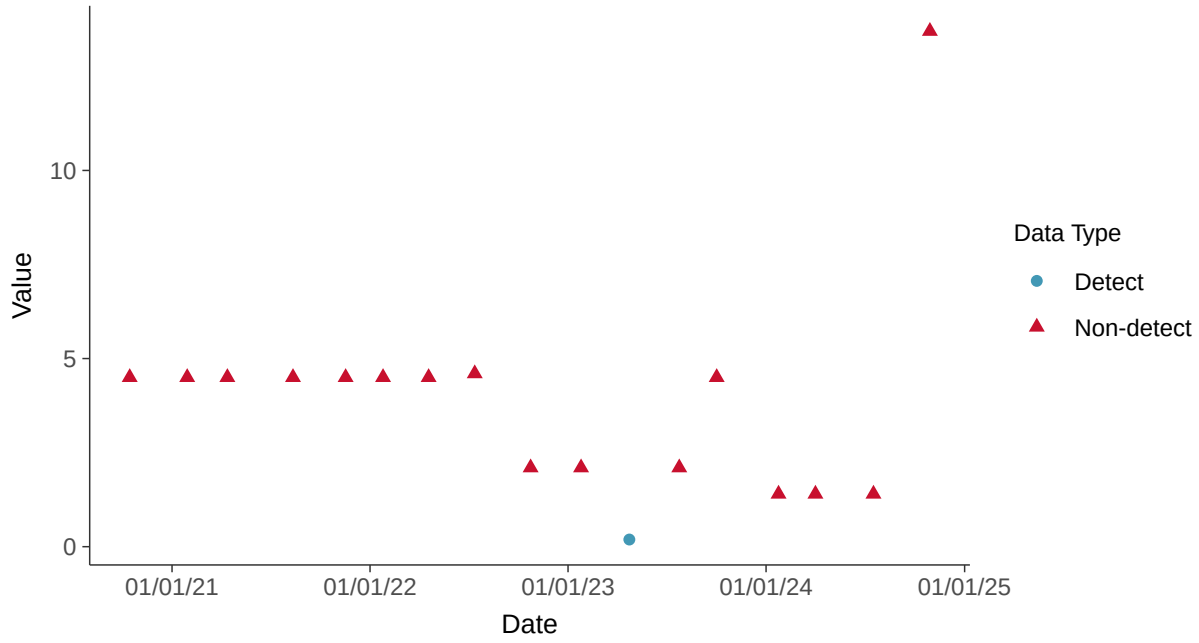

Trend Regression: Piecewise Linear-Linear
Fluoride, MW-11 (mg/L)
Value
0.20
0.15
0.10
0.05
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. IV: Lead, MW-11

ID: 10_03_113

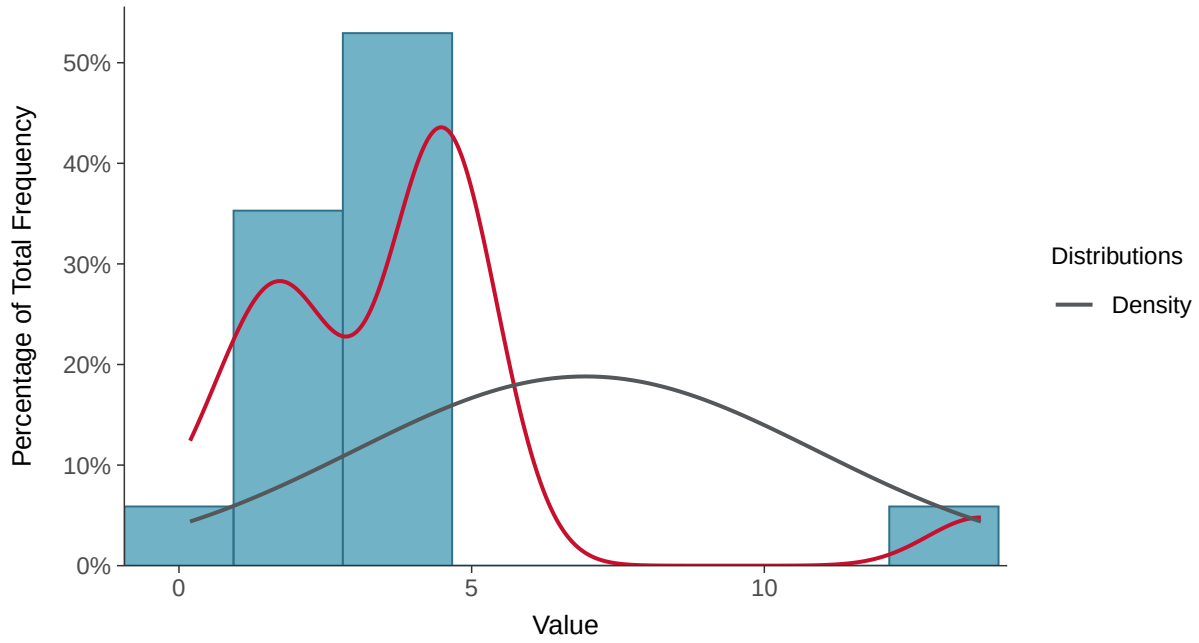
Scatter Plot

Lead, MW-11 (ug/L)



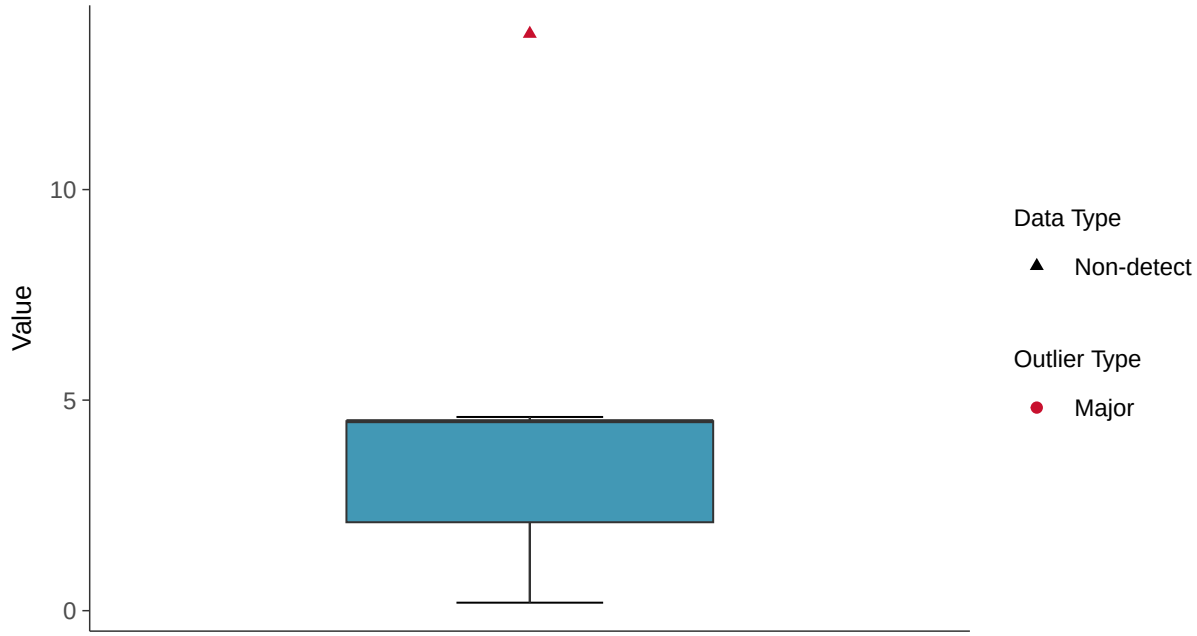
Histogram

Lead, MW-11 (ug/L)



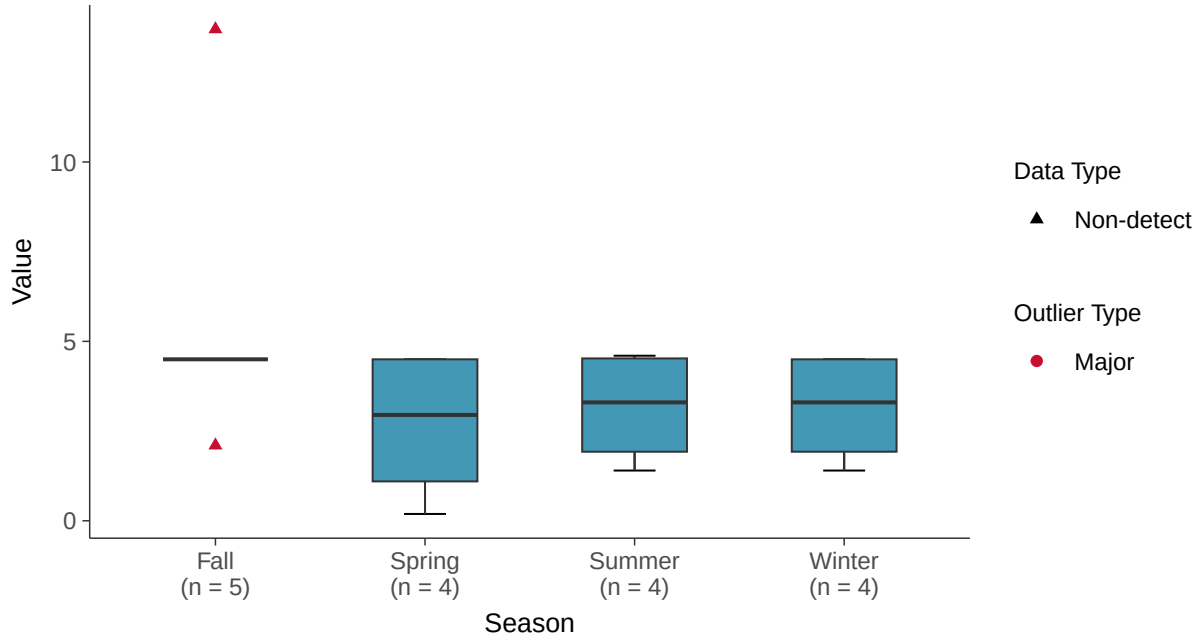
Boxplot

Lead, MW-11 (ug/L)



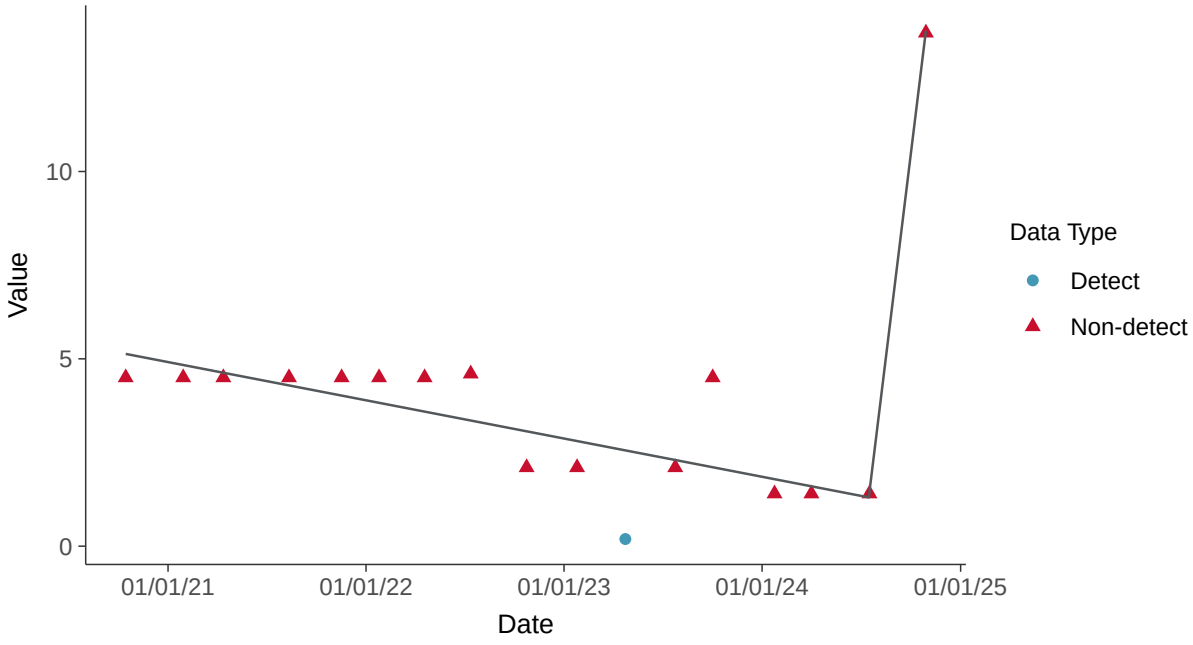
Boxplot by Season

Lead, MW-11 (ug/L)



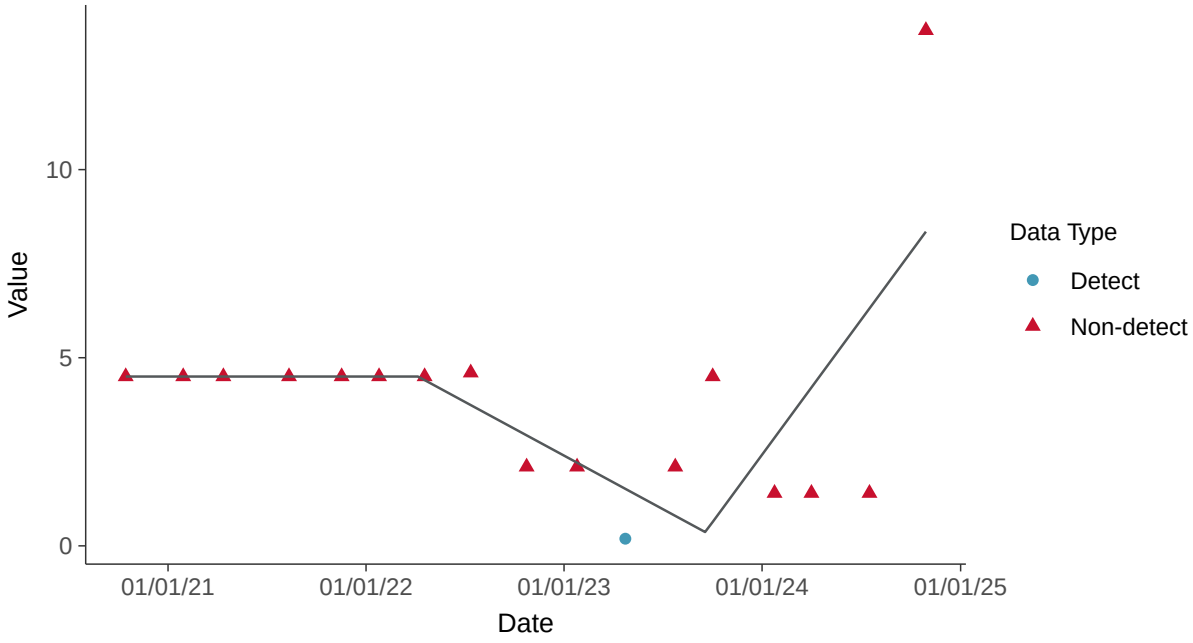
Trend Regression: Piecewise Linear-Linear

Lead, MW-11 (ug/L)



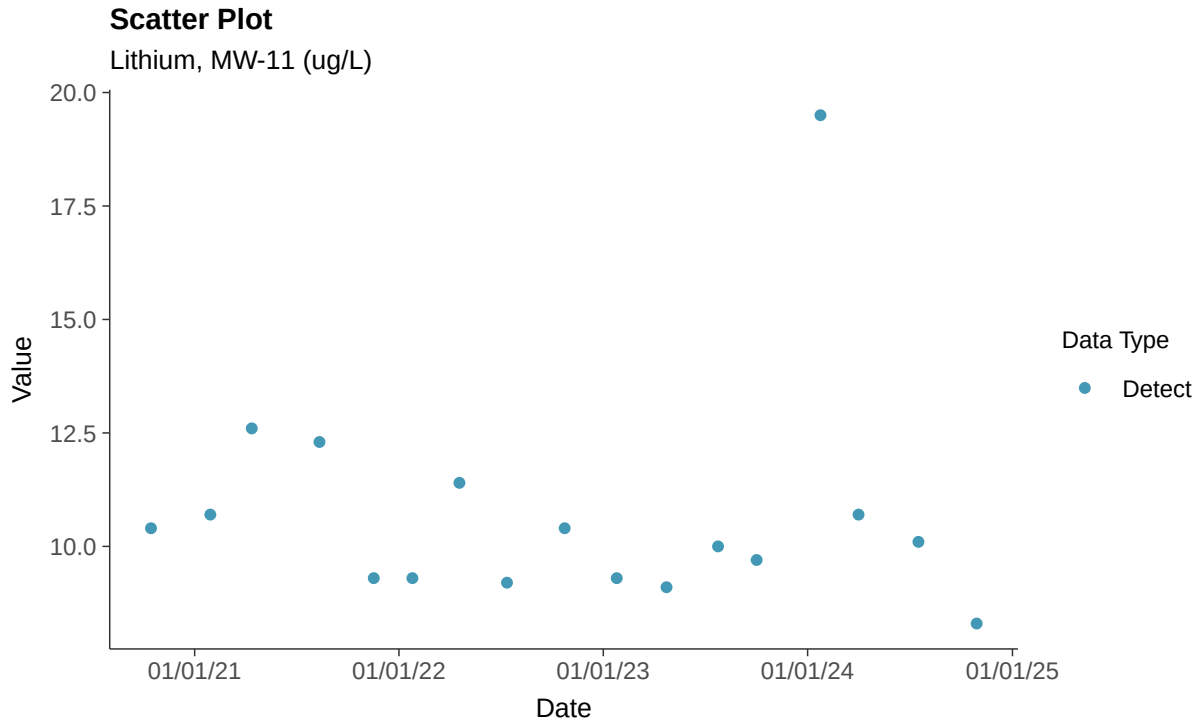
Trend Regression: Piecewise Linear-Linear-Linear

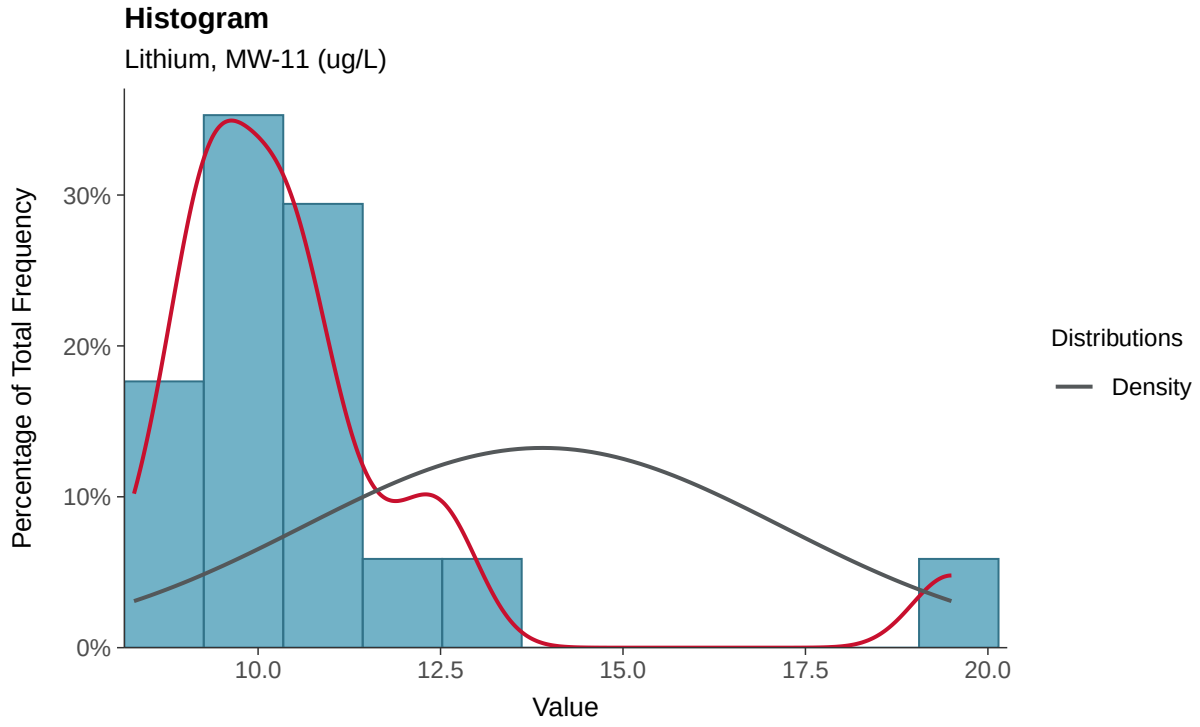
Lead, MW-11 (ug/L)



App. IV: Lithium, MW-11

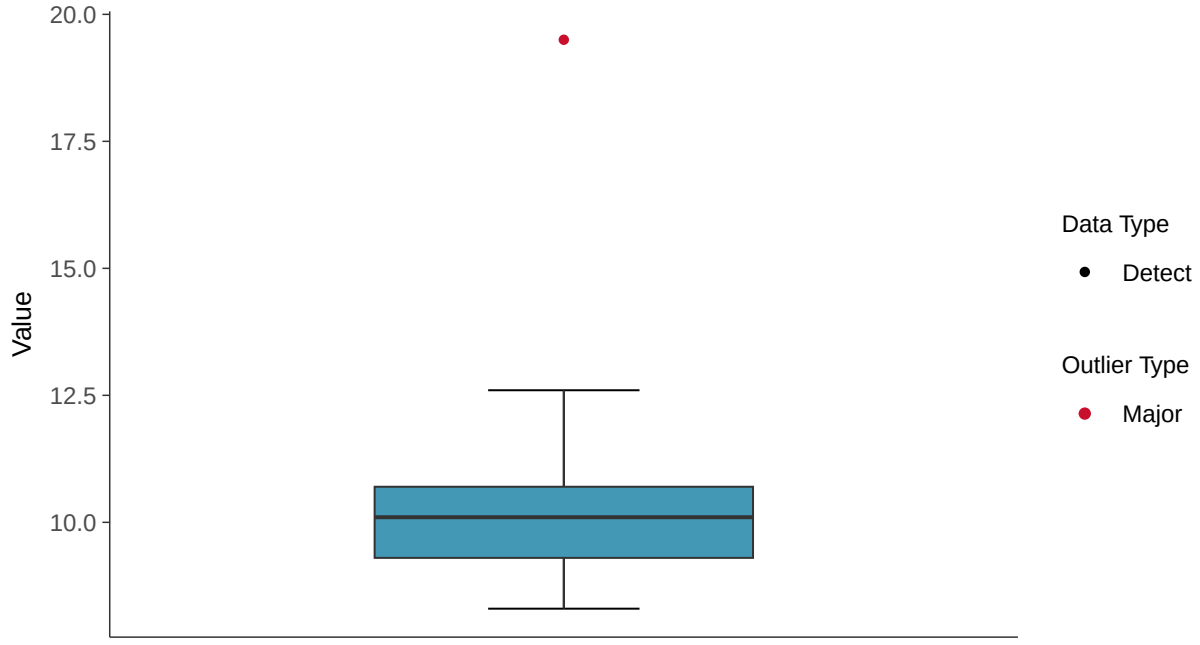
ID: 10_03_114





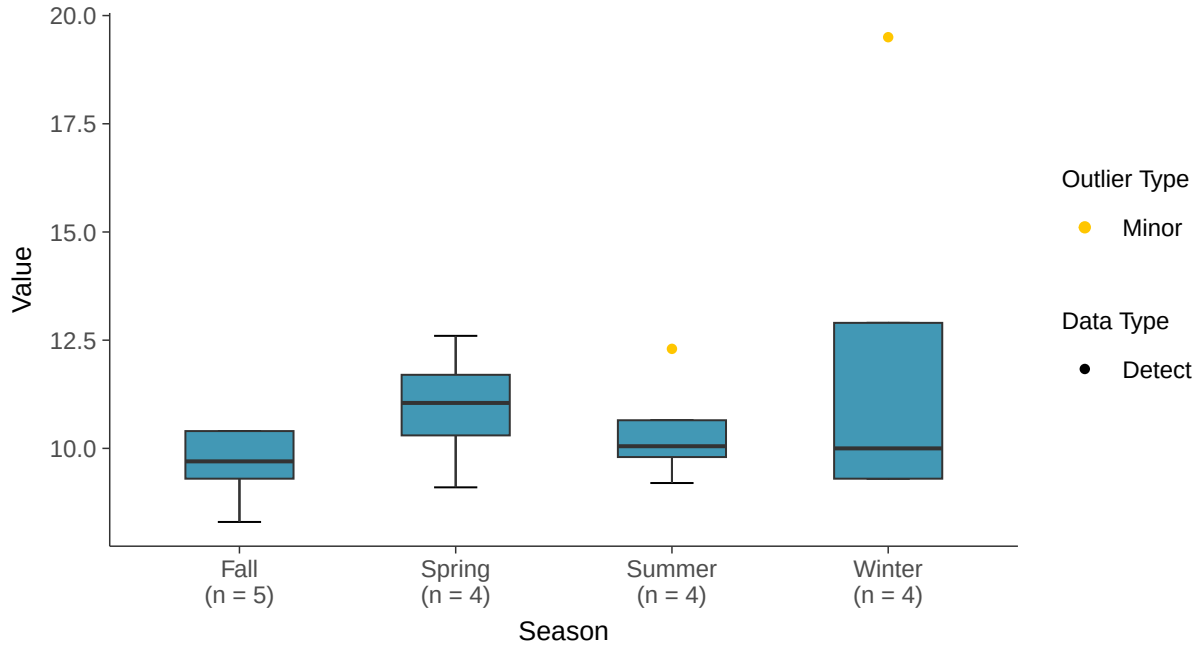
Boxplot

Lithium, MW-11 (ug/L)



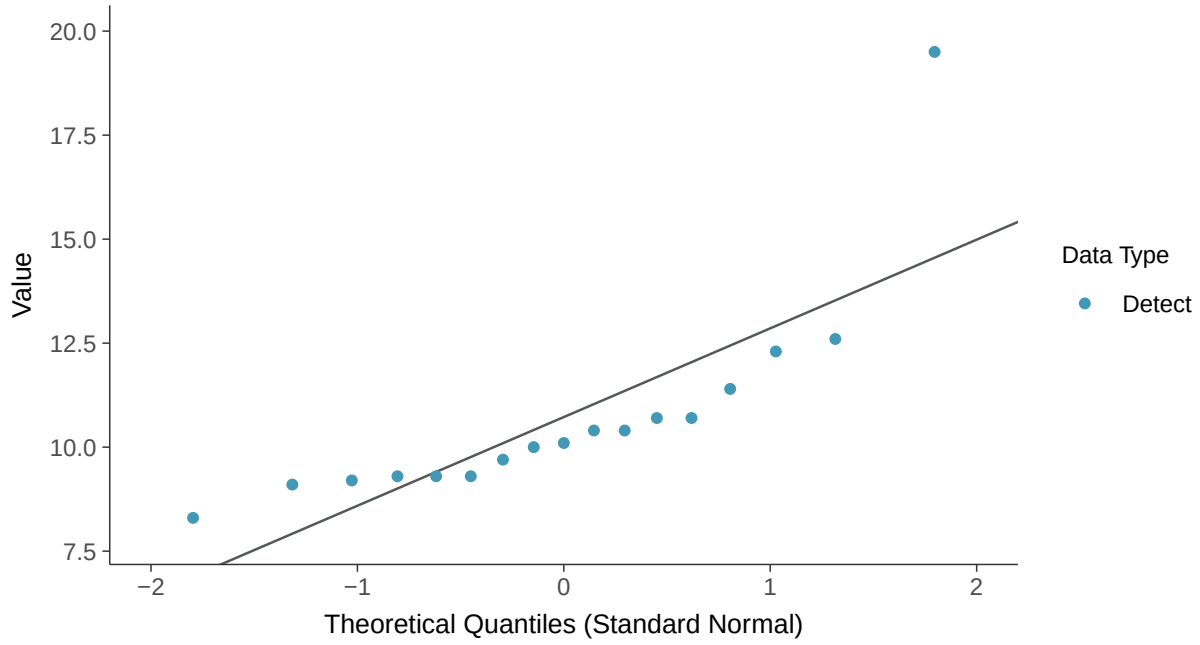
Boxplot by Season

Lithium, MW-11 (ug/L)



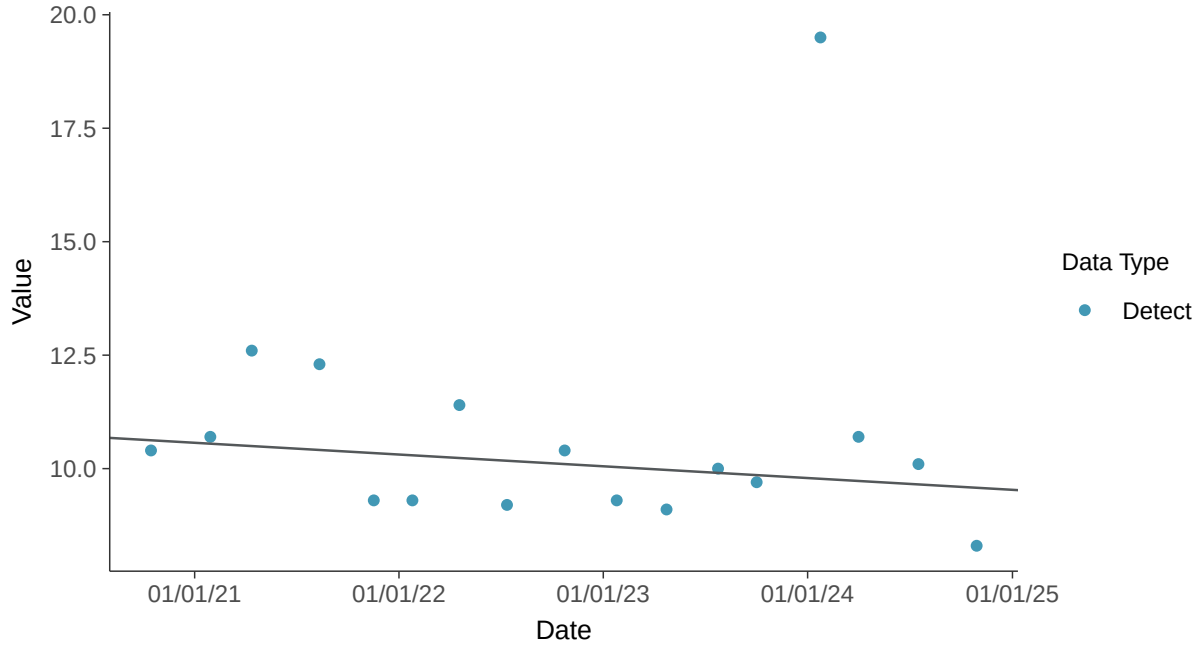
Normal Q-Q plot

Lithium, MW-11 (ug/L)



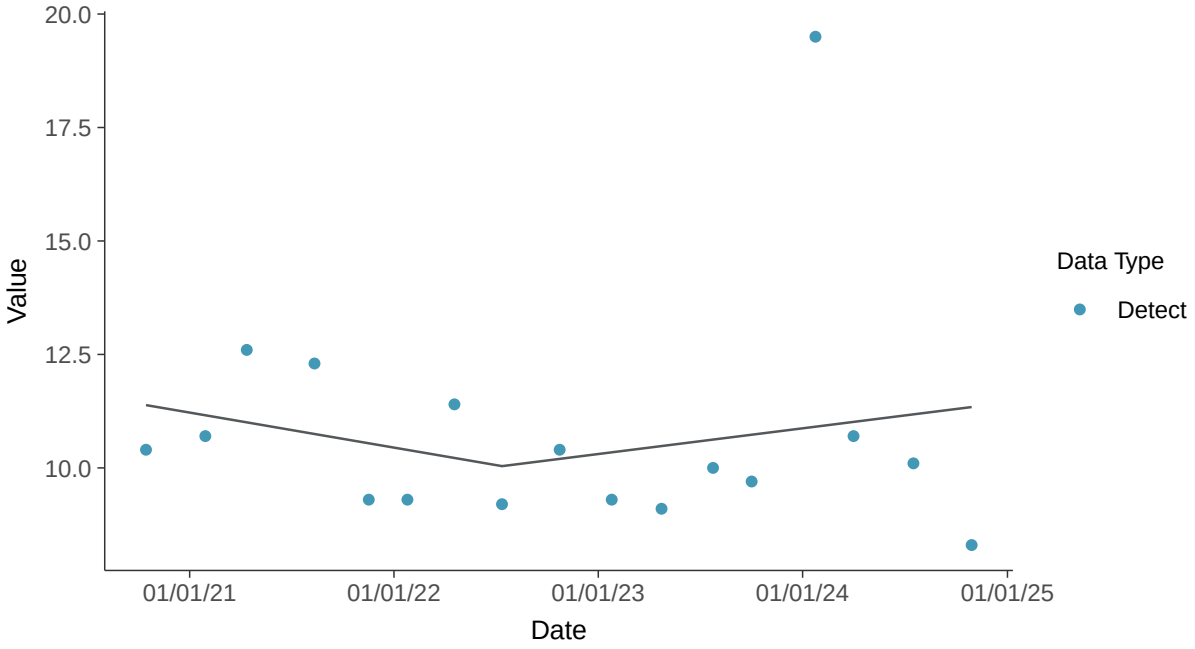
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-11 (ug/L)



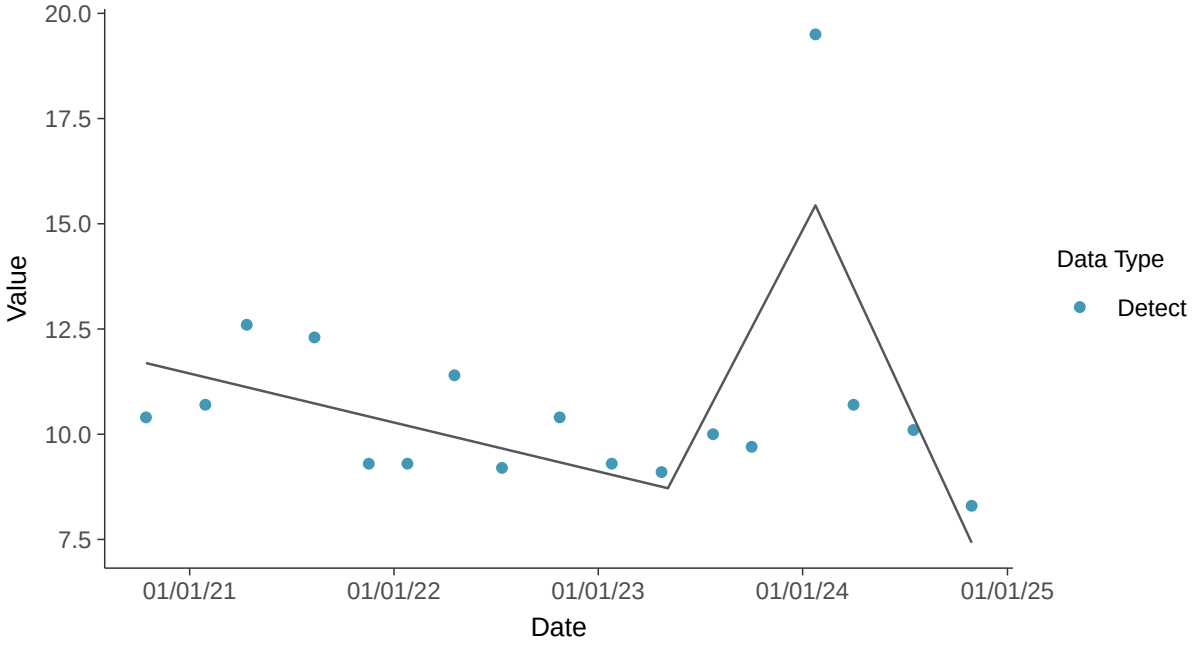
Trend Regression: Piecewise Linear-Linear

Lithium, MW-11 (ug/L)



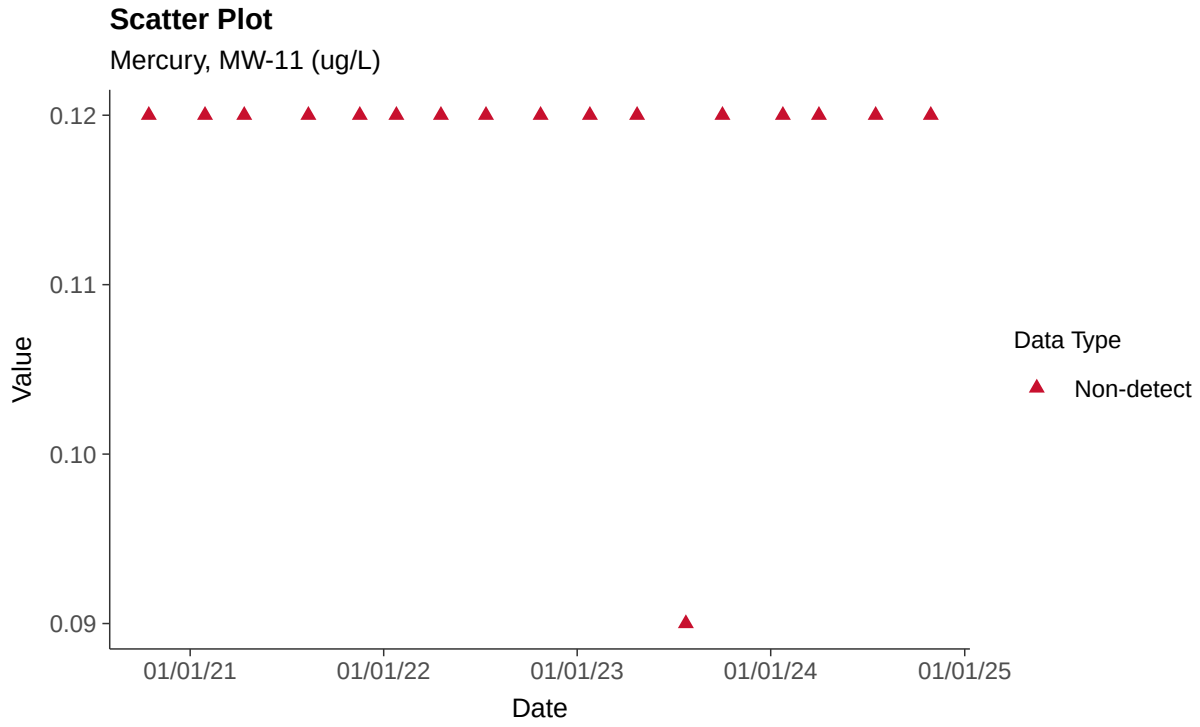
Trend Regression: Piecewise Linear-Linear-Linear

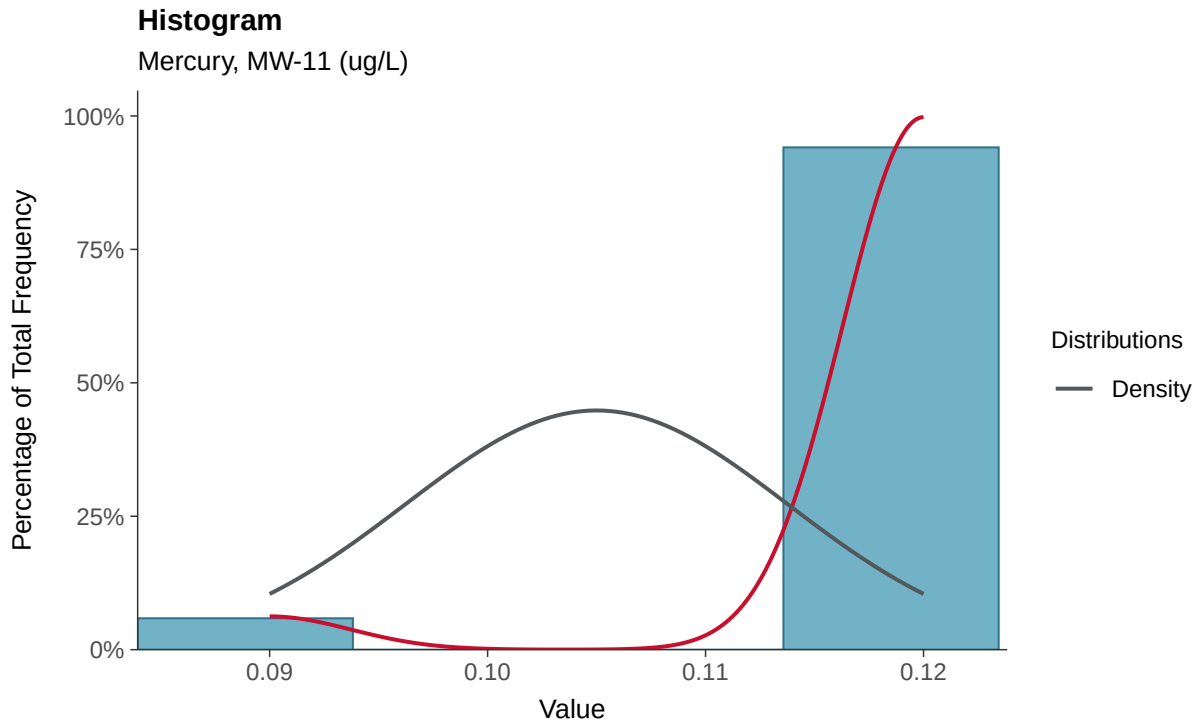
Lithium, MW-11 (ug/L)



App. IV: Mercury, MW-11

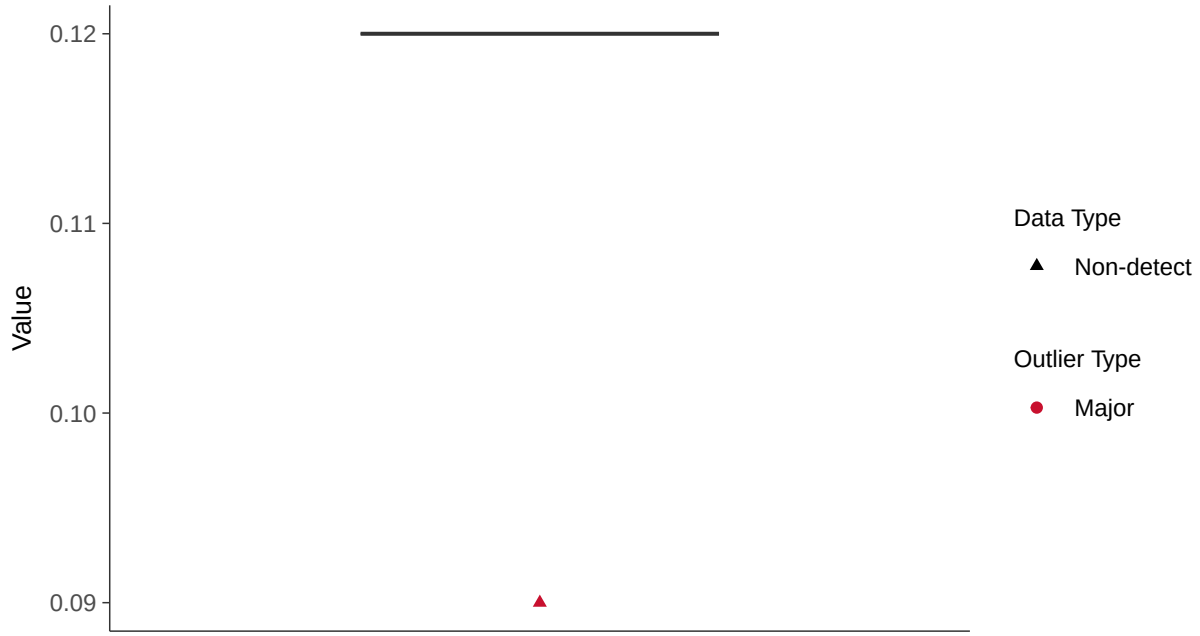
ID: 10_03_115





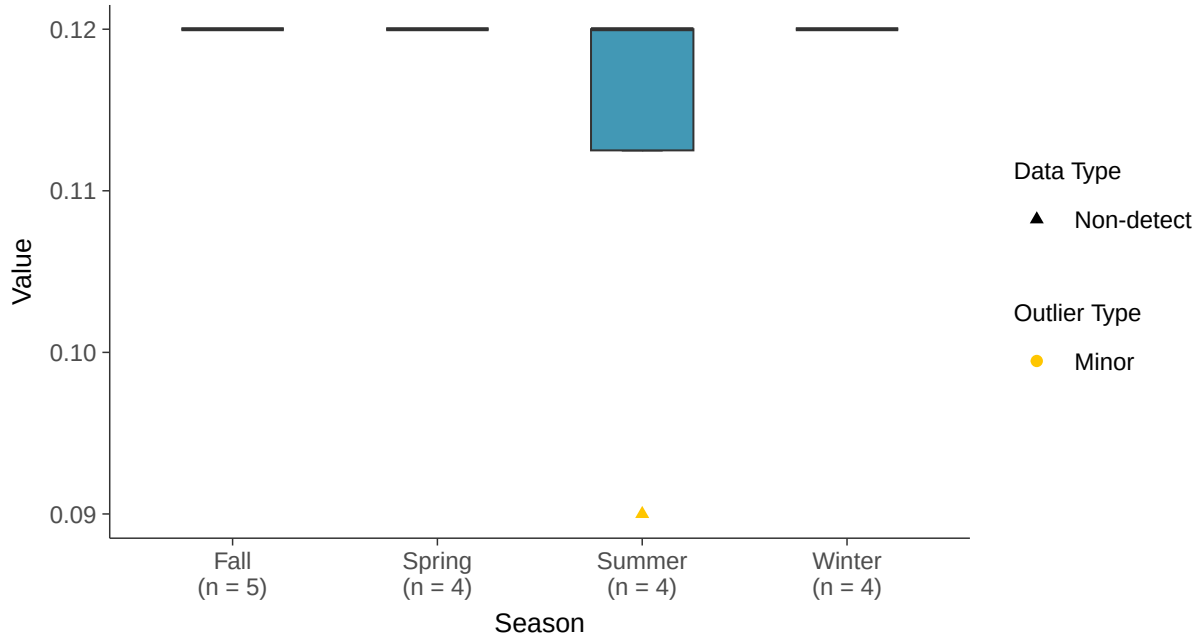
Boxplot

Mercury, MW-11 (ug/L)



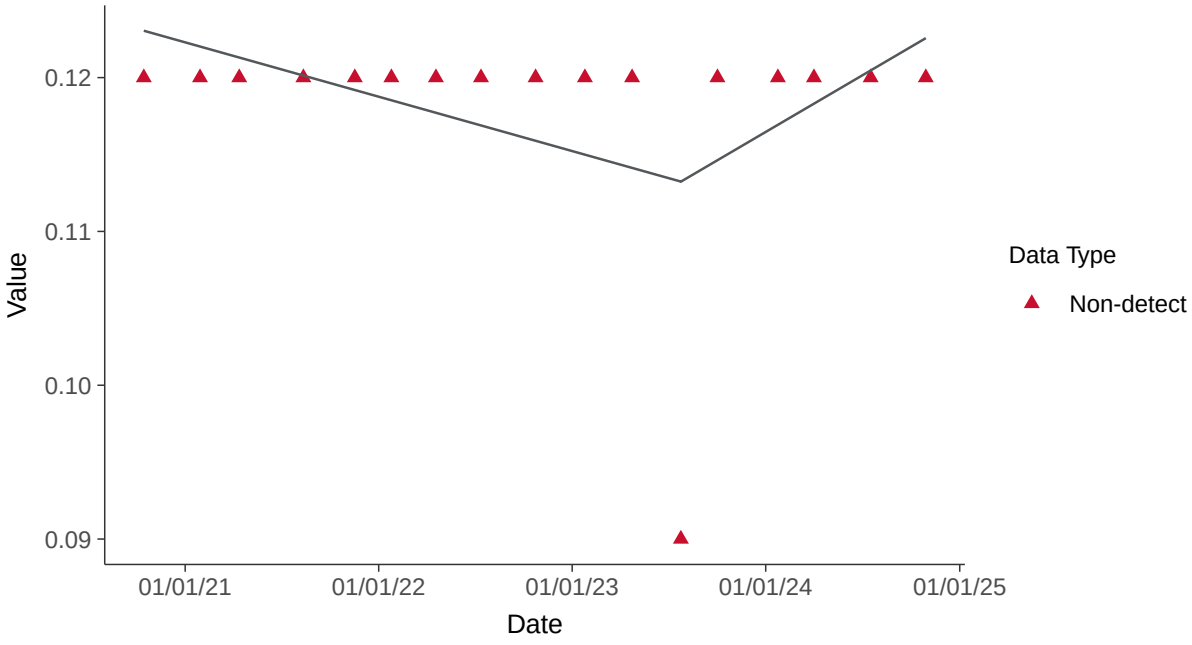
Boxplot by Season

Mercury, MW-11 (ug/L)



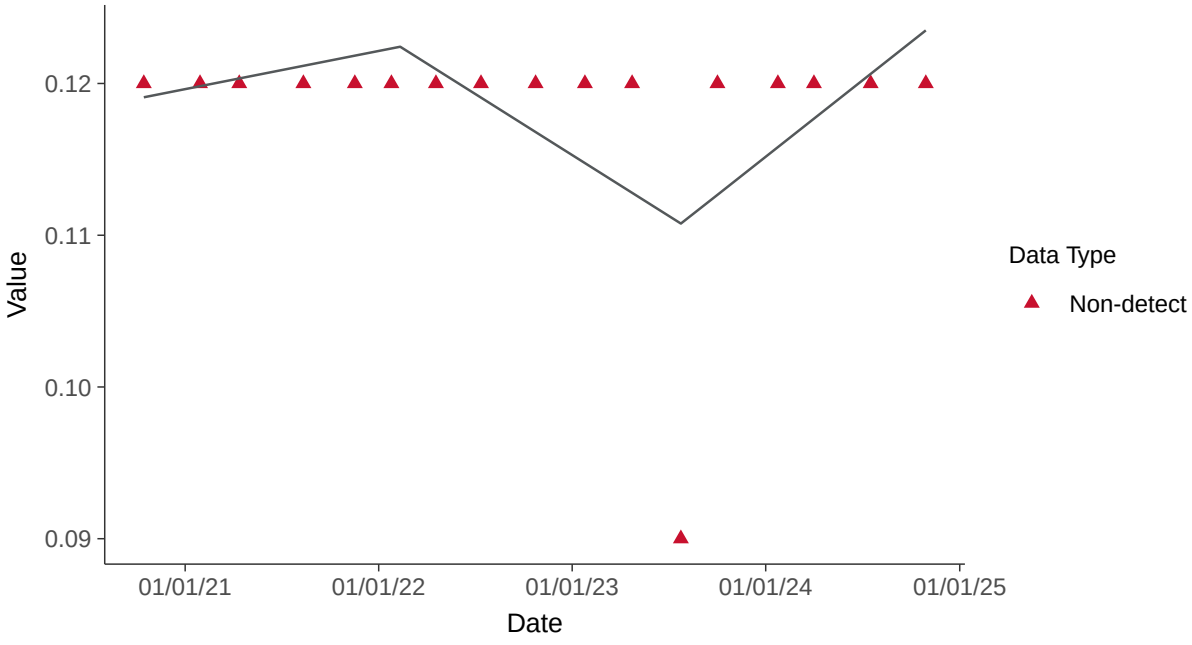
Trend Regression: Piecewise Linear-Linear

Mercury, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-11 (ug/L)

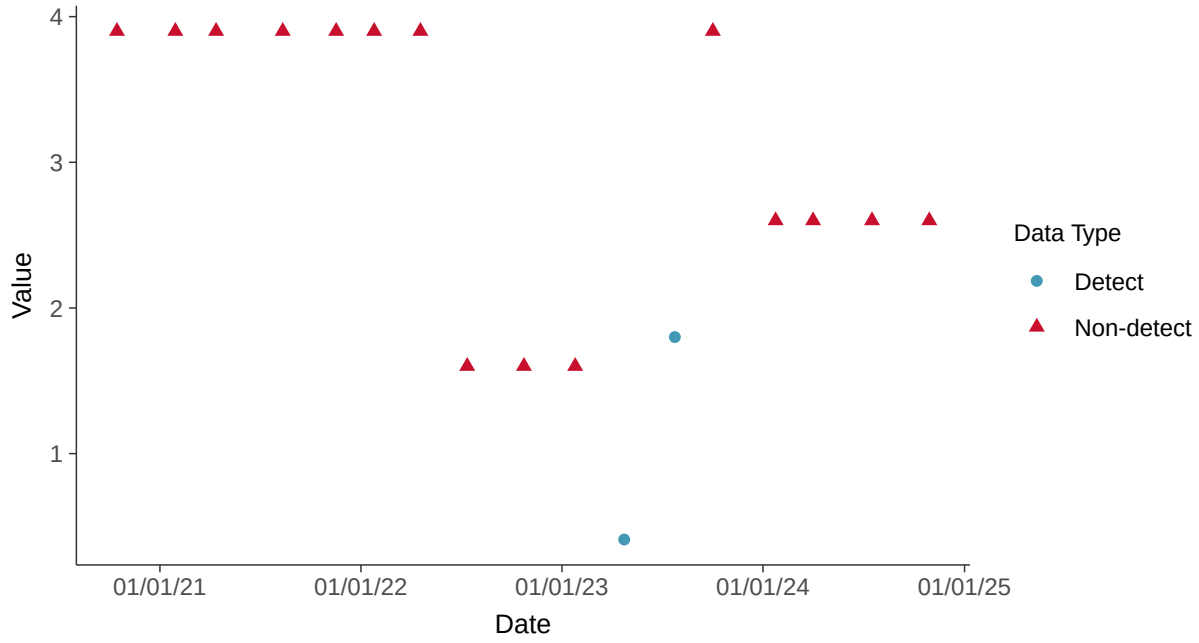


App. IV: Molybdenum, MW-11

ID: 10_03_116

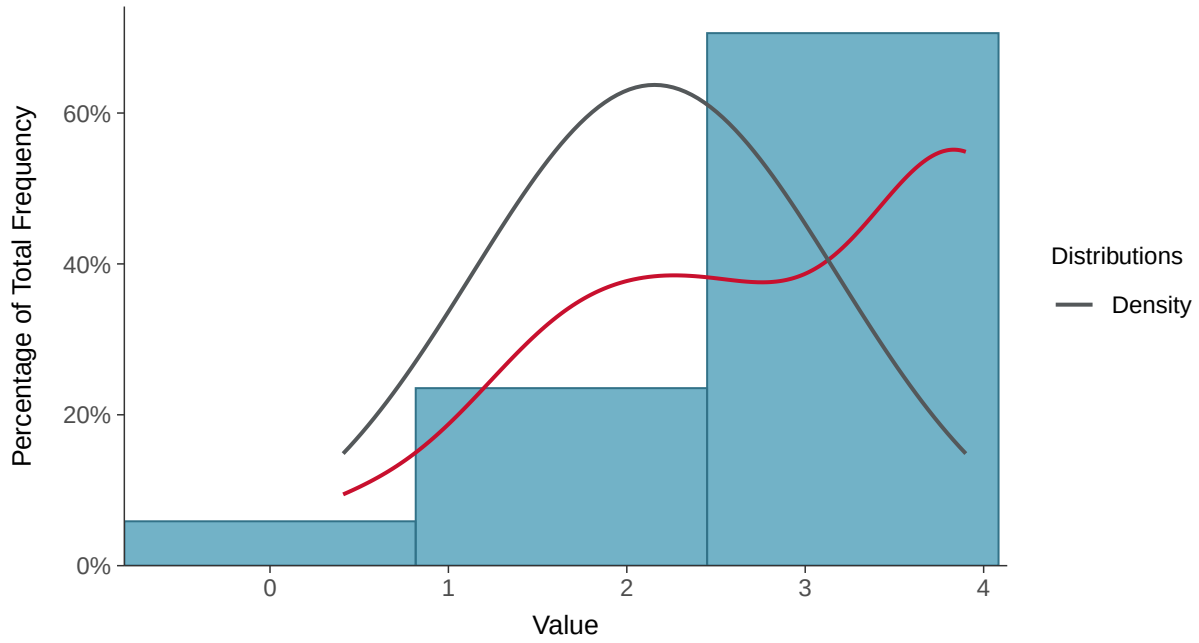
Scatter Plot

Molybdenum, MW-11 (ug/L)



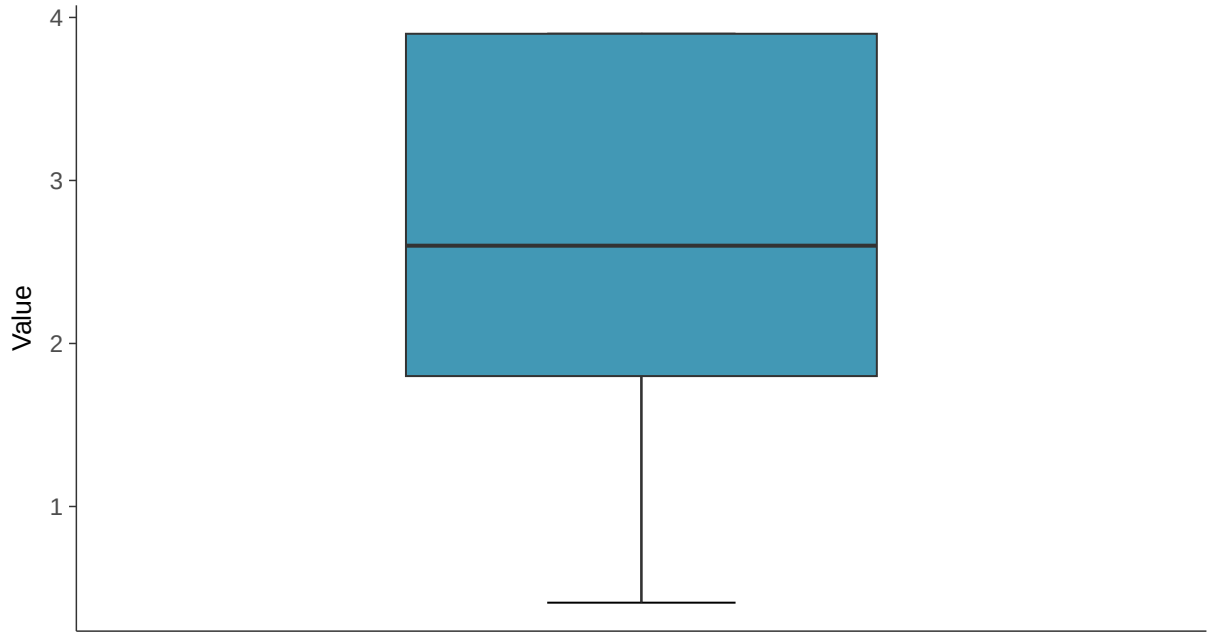
Histogram

Molybdenum, MW-11 (ug/L)



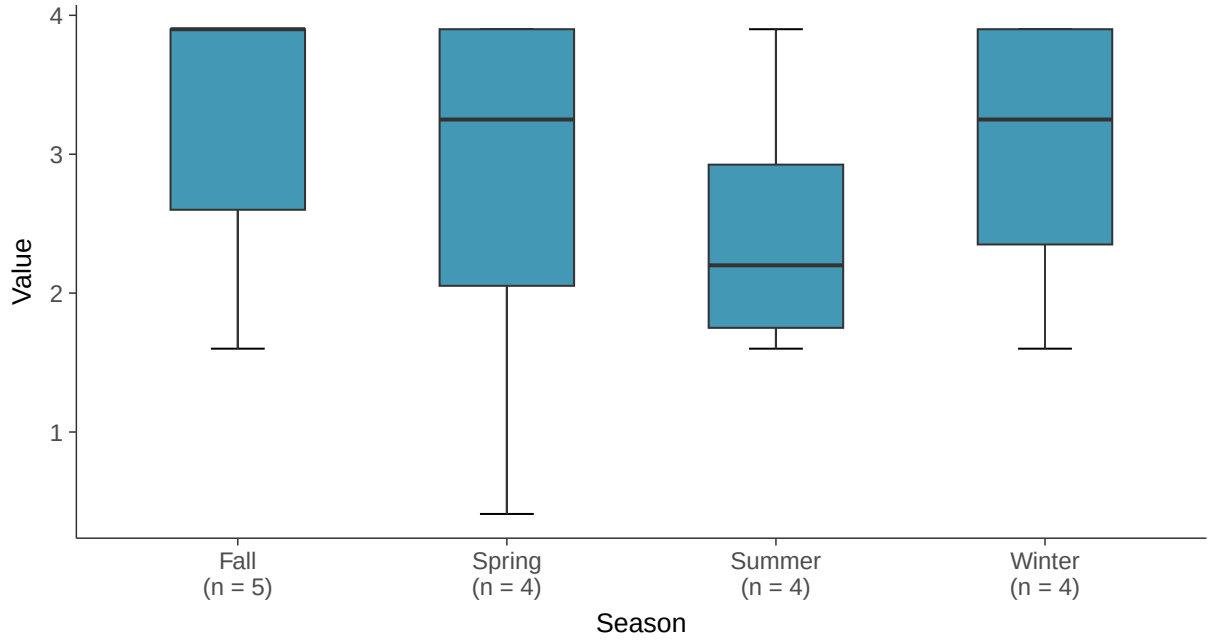
Boxplot

Molybdenum, MW-11 (ug/L)



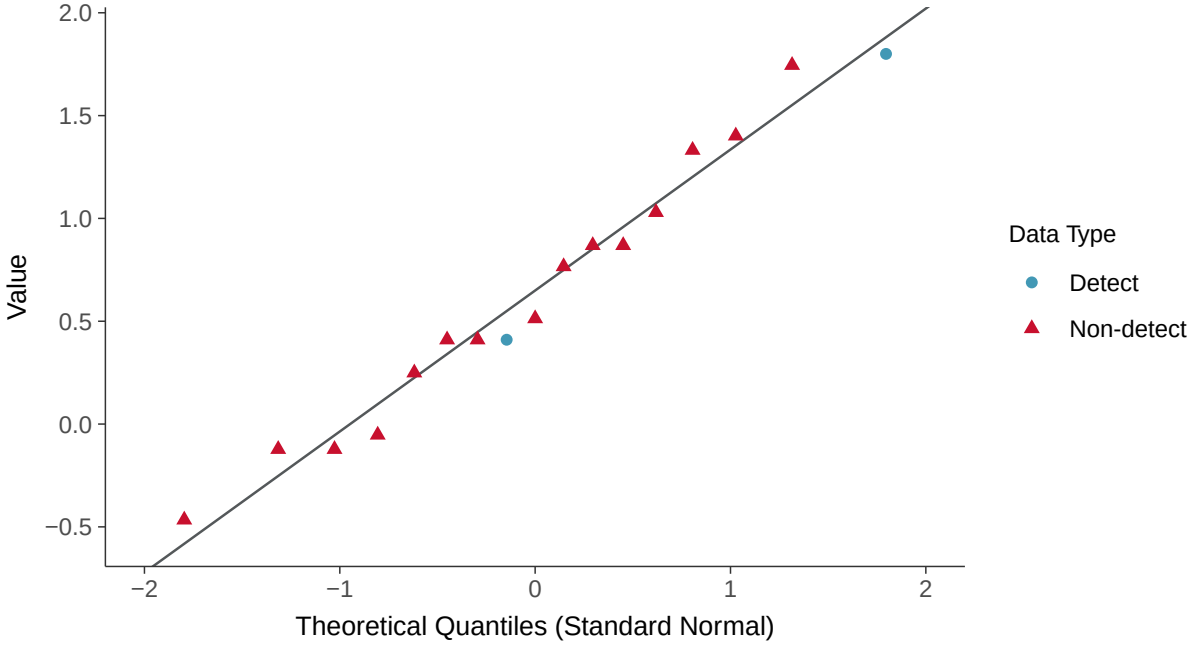
Boxplot by Season

Molybdenum, MW-11 (ug/L)



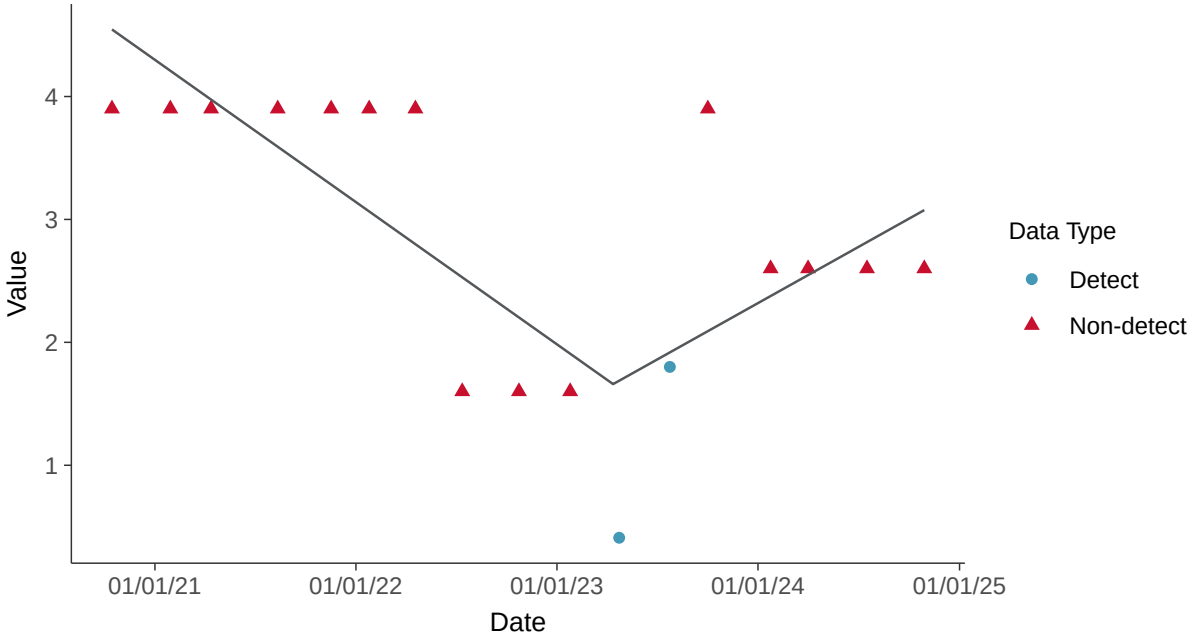
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (ug/L)



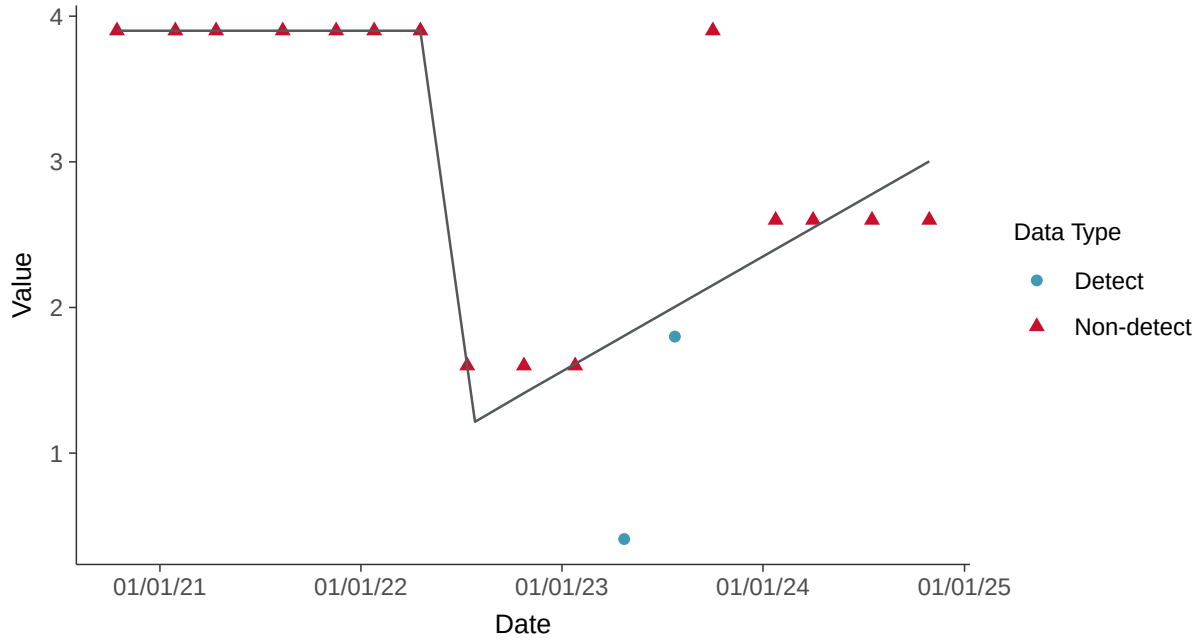
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11 (ug/L)



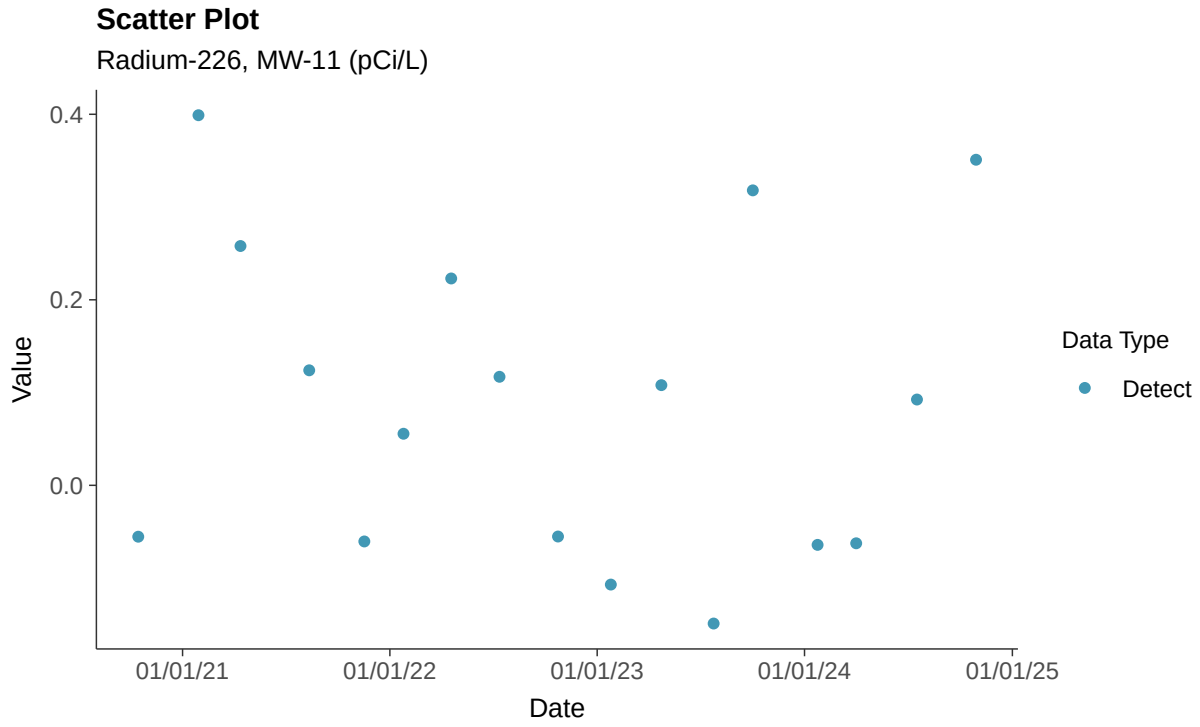
Trend Regression: Piecewise Linear-Linear-Linear

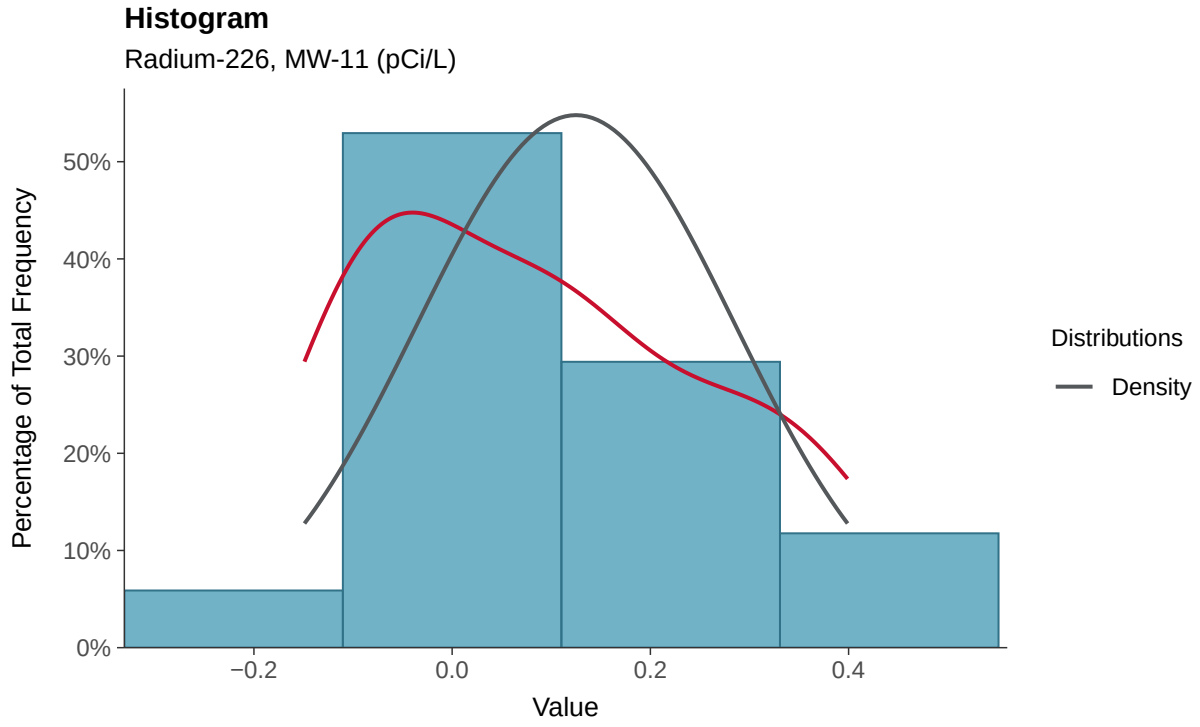
Molybdenum, MW-11 (ug/L)



App. IV: Radium-226, MW-11

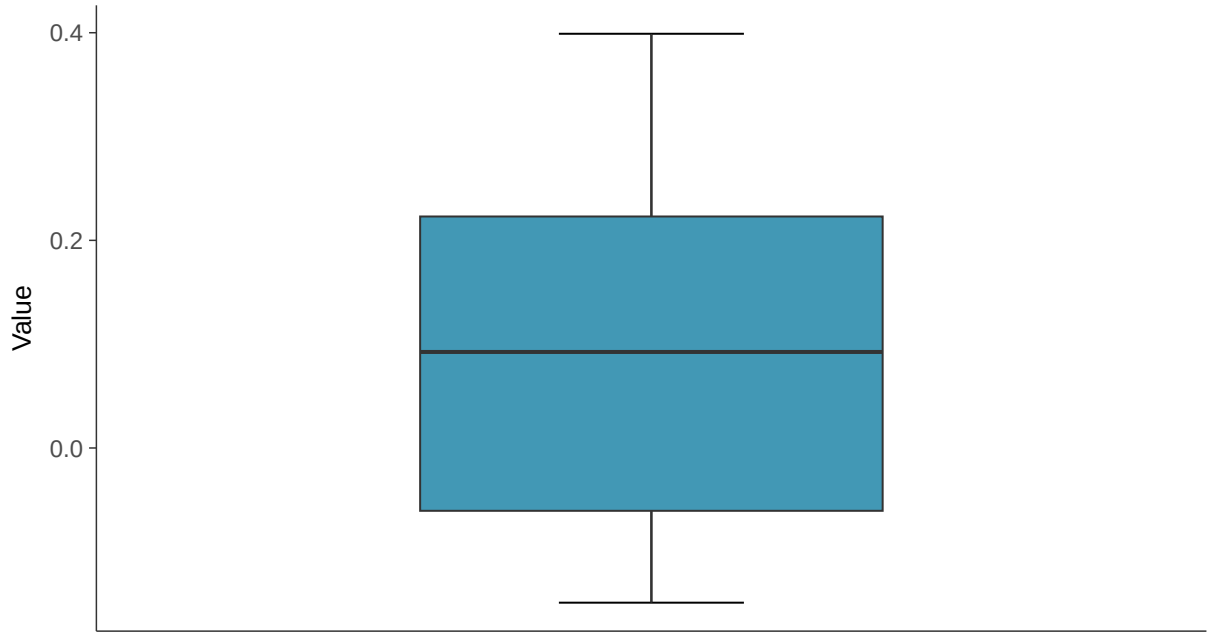
ID: 10_03_119





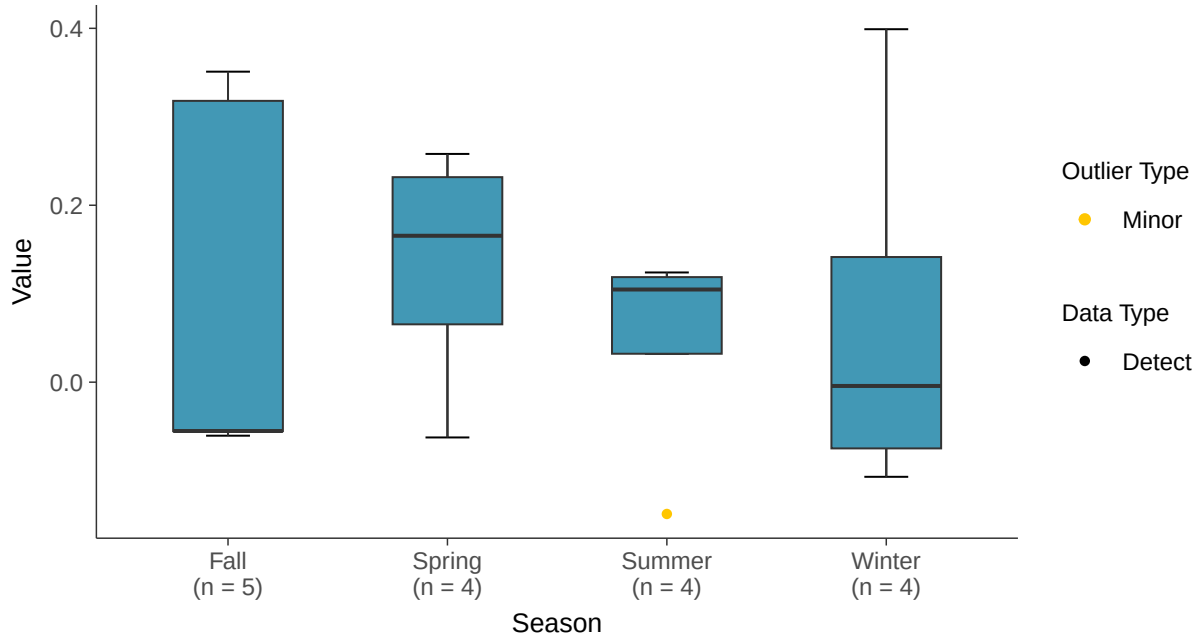
Boxplot

Radium-226, MW-11 (pCi/L)



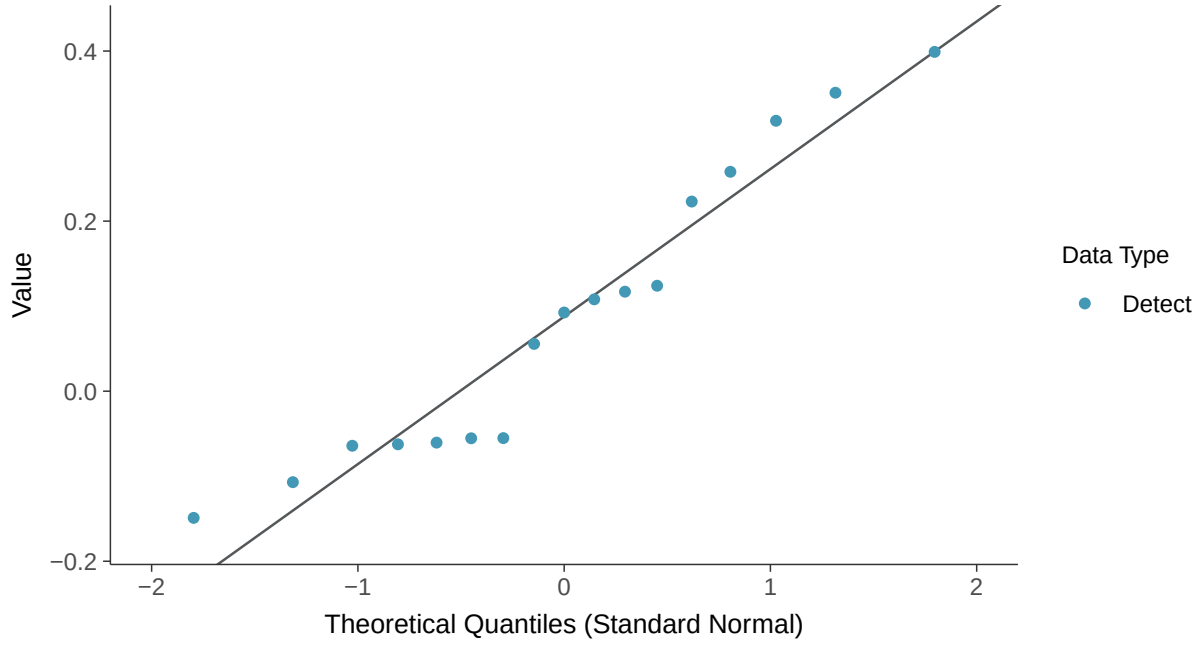
Boxplot by Season

Radium-226, MW-11 (pCi/L)



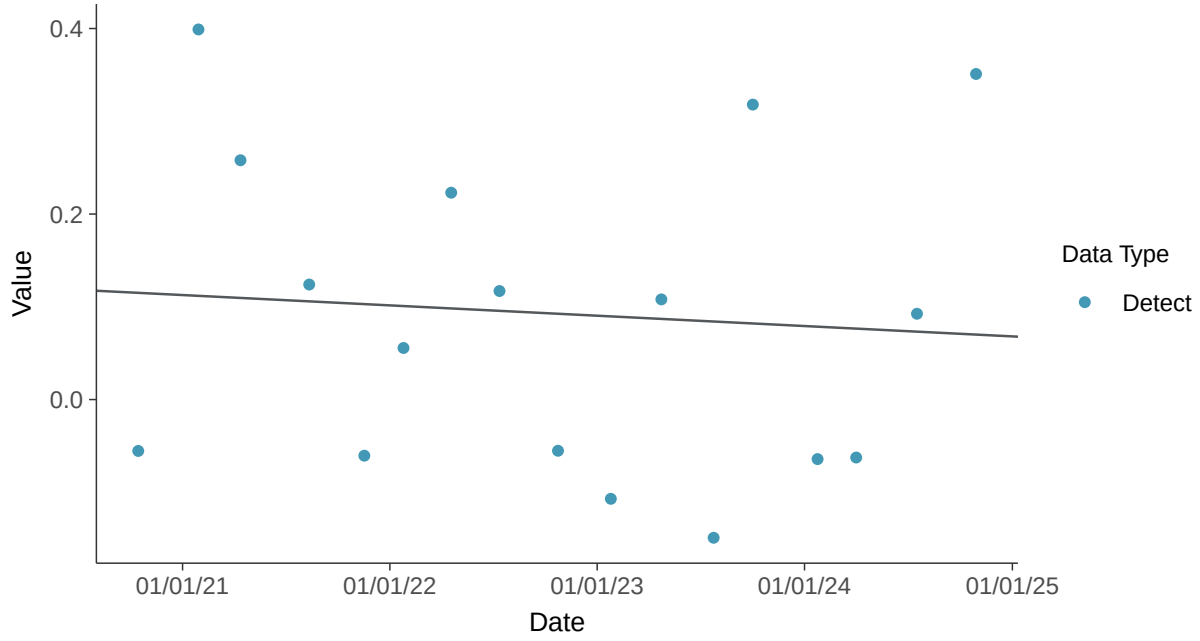
Normal Q-Q plot

Radium-226, MW-11 (pCi/L)



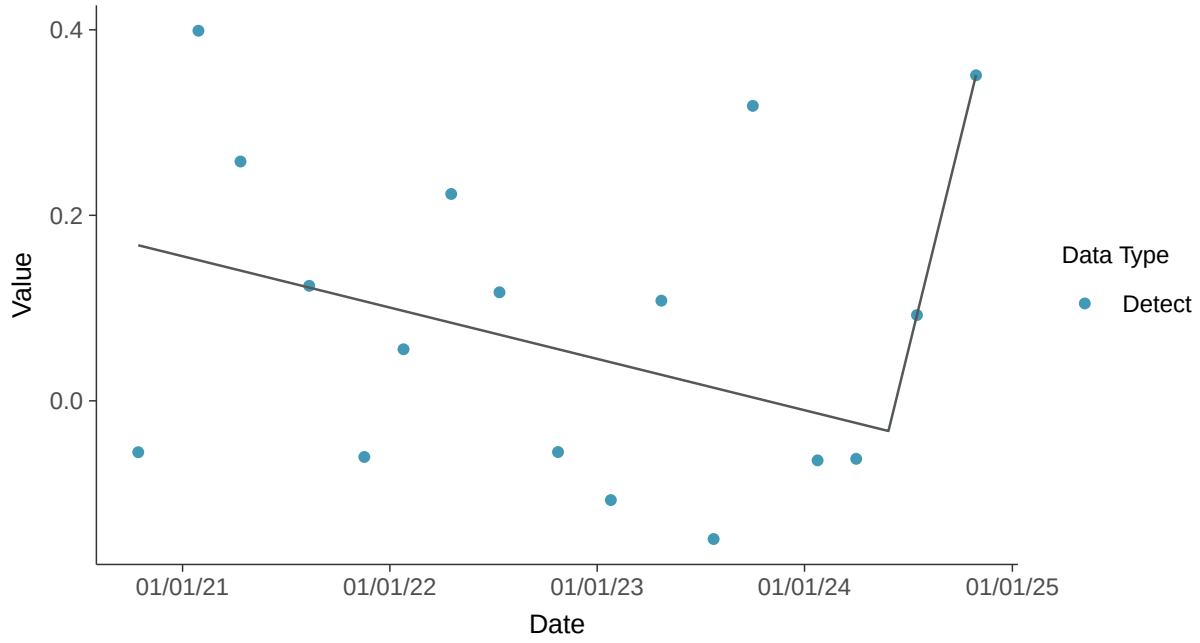
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-11 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, MW-11 (pCi/L)

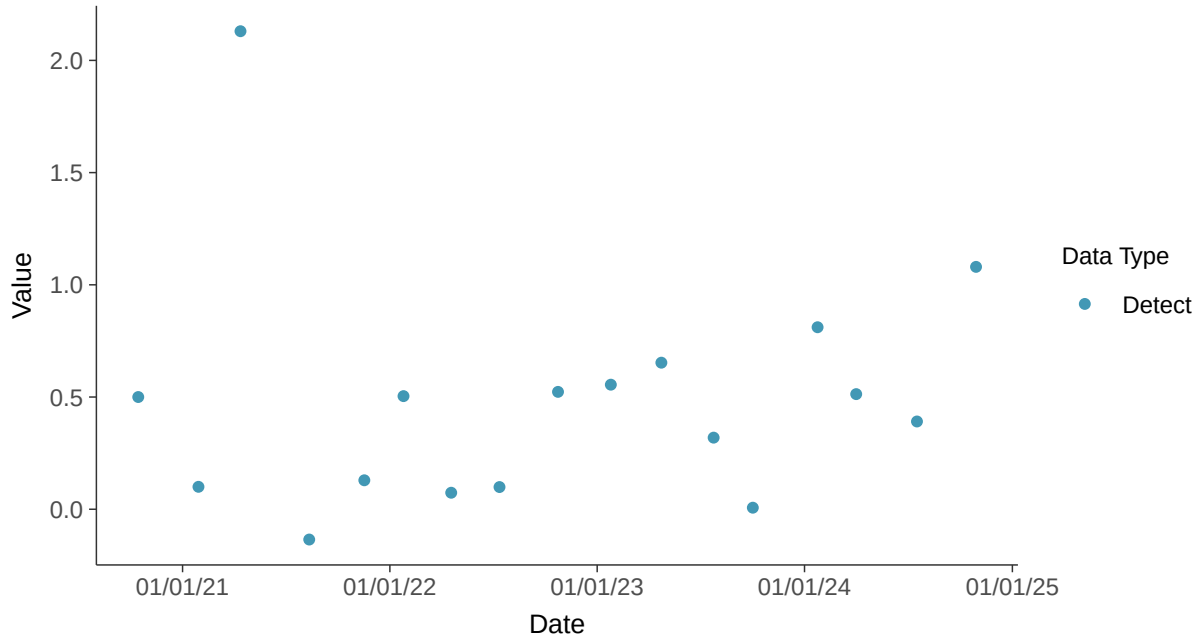


App. IV: Radium-228, MW-11

ID: 10_03_120

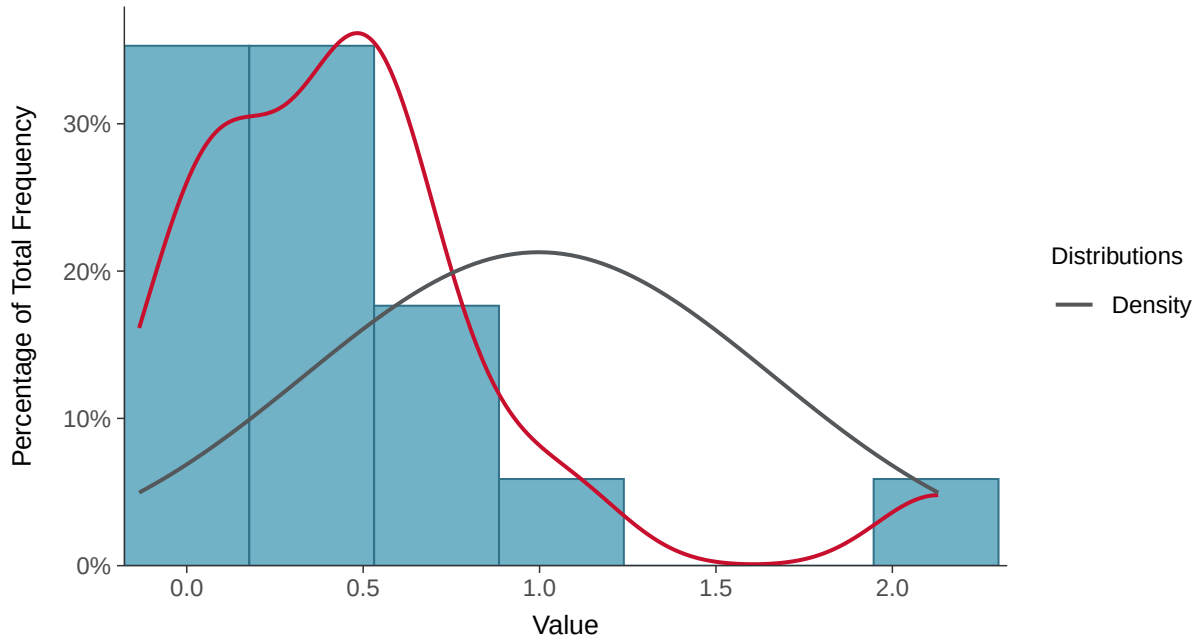
Scatter Plot

Radium-228, MW-11 (pCi/L)



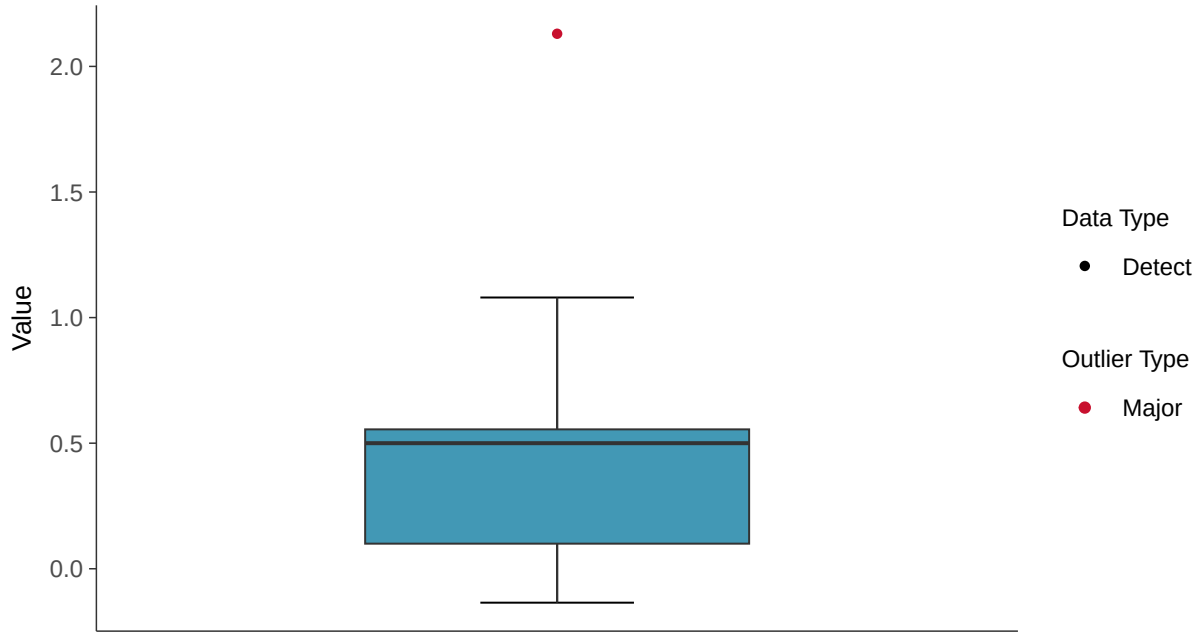
Histogram

Radium-228, MW-11 (pCi/L)



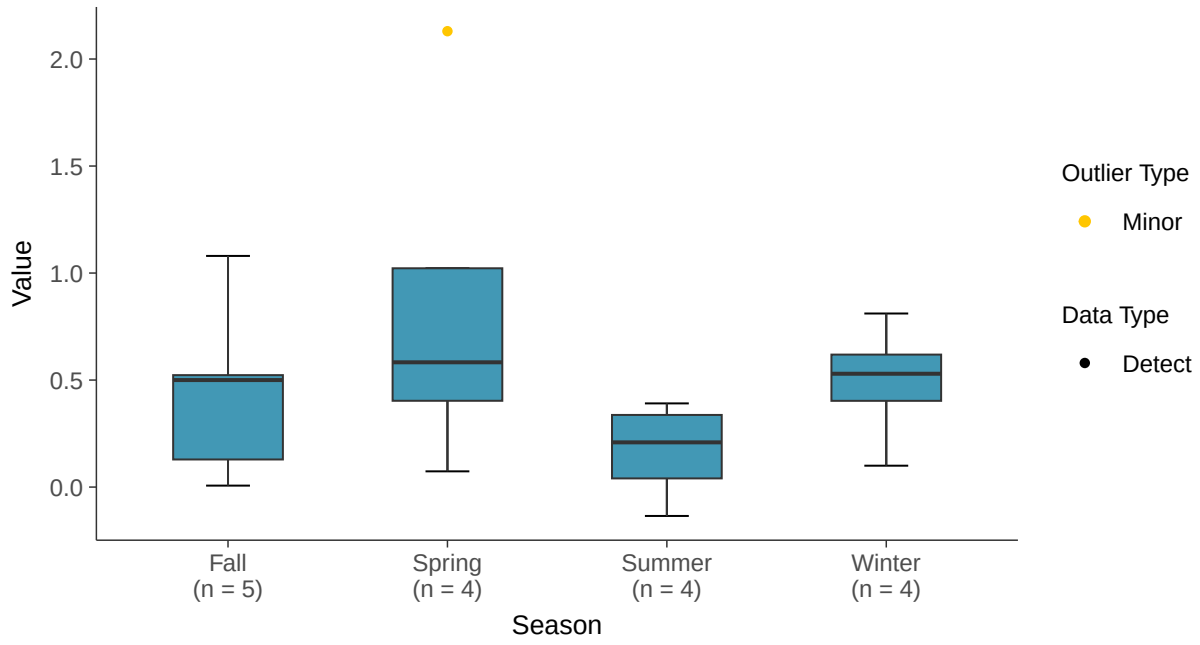
Boxplot

Radium-228, MW-11 (pCi/L)



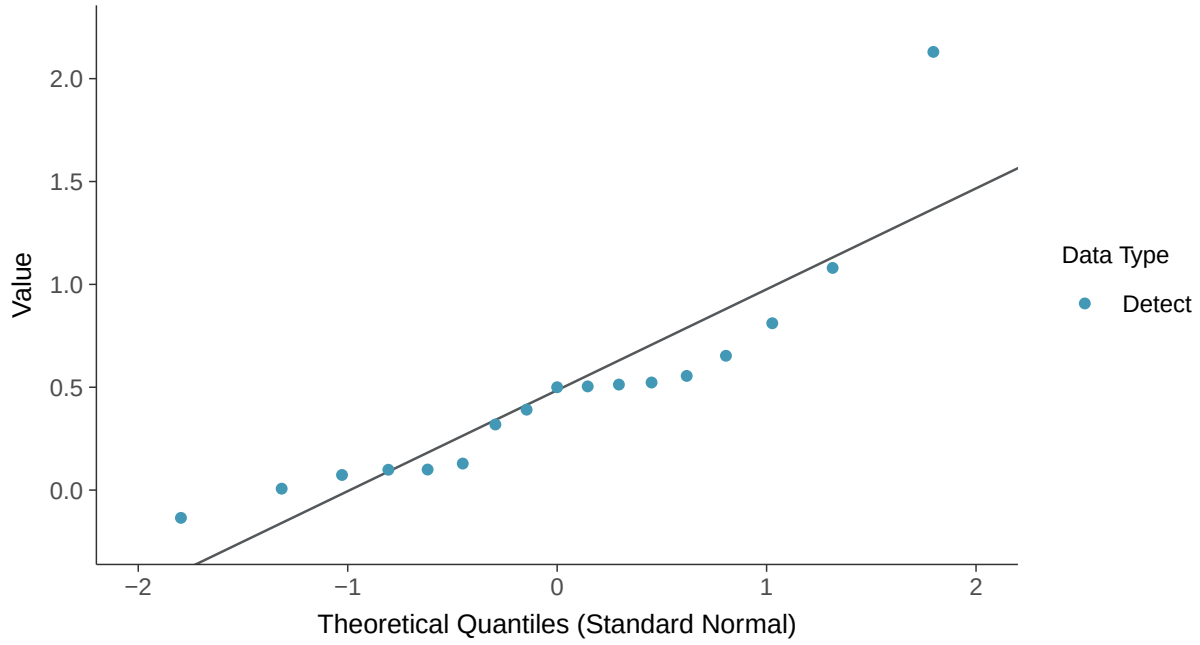
Boxplot by Season

Radium-228, MW-11 (pCi/L)



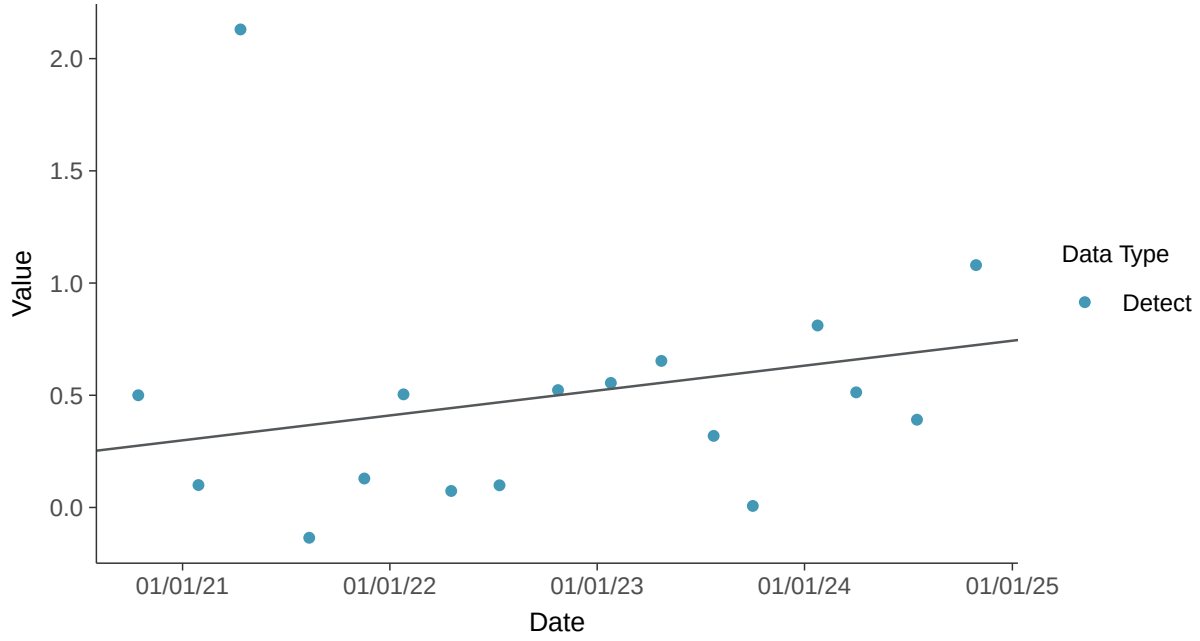
Normal Q-Q plot

Radium-228, MW-11 (pCi/L)



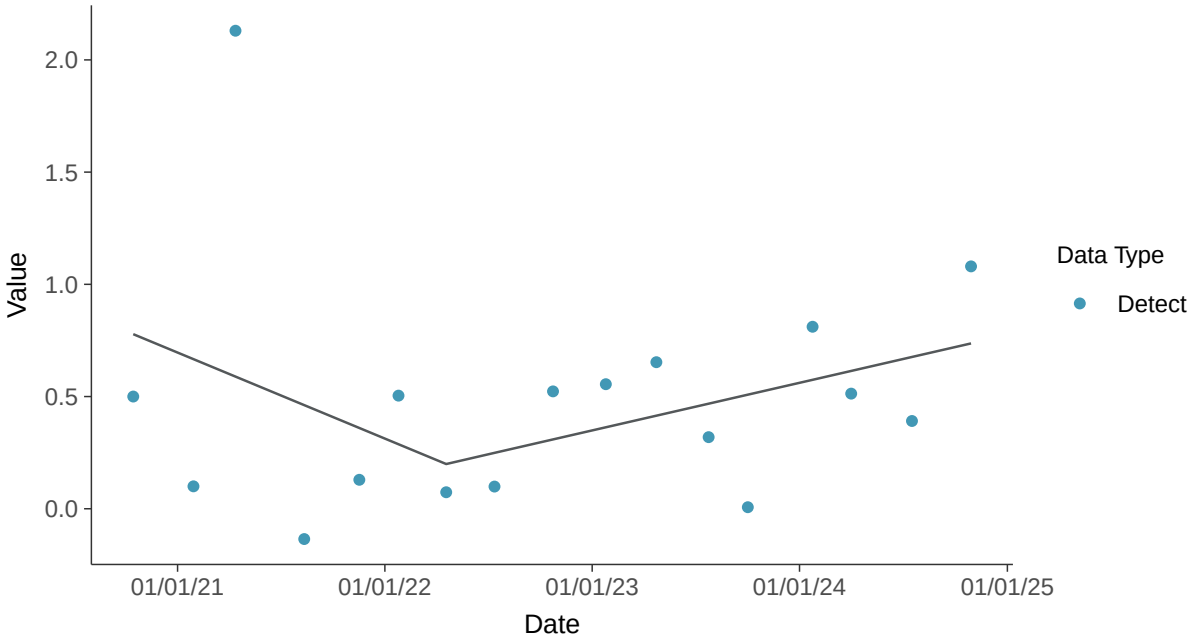
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-11 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-228, MW-11 (pCi/L)

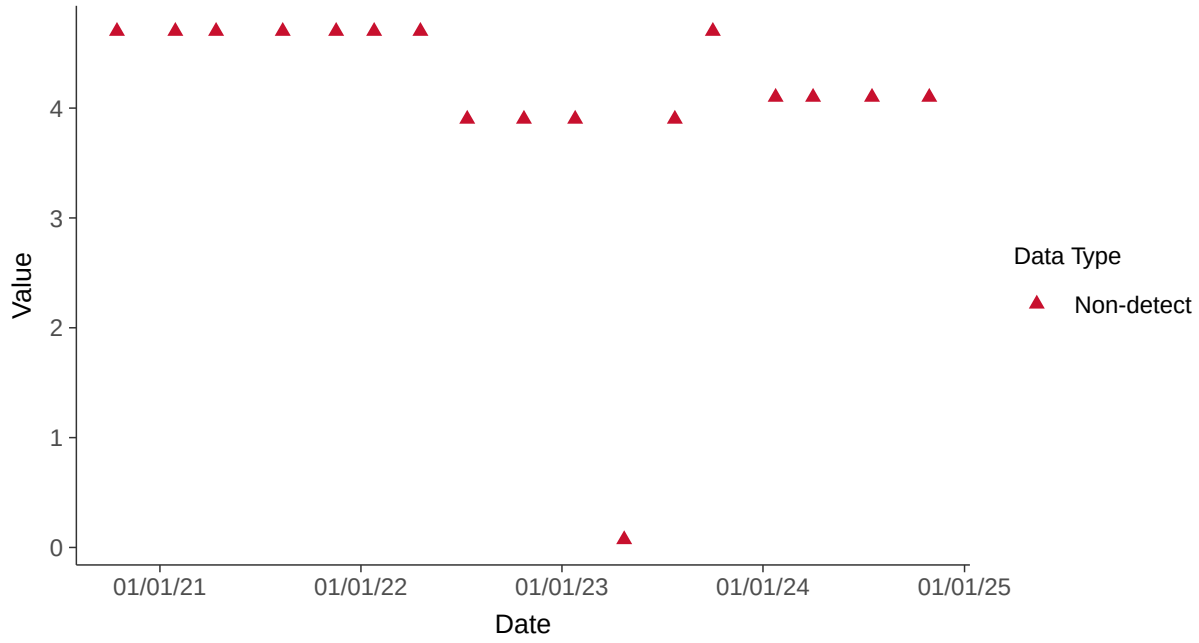


App. IV: Selenium, MW-11

ID: 10_03_121

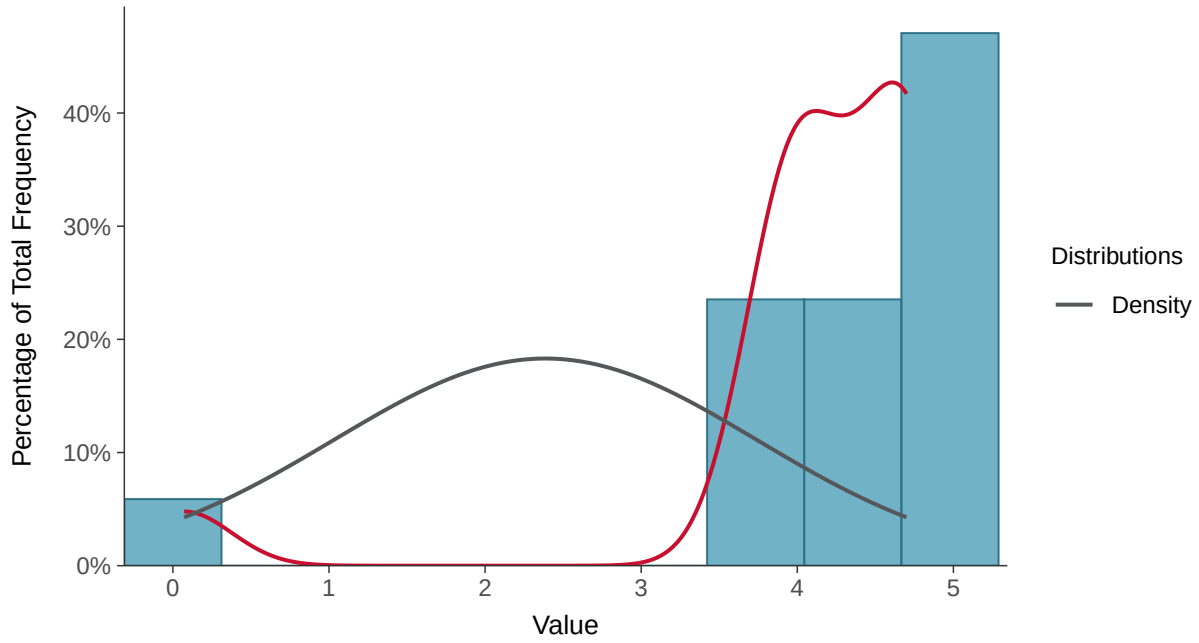
Scatter Plot

Selenium, MW-11 (ug/L)



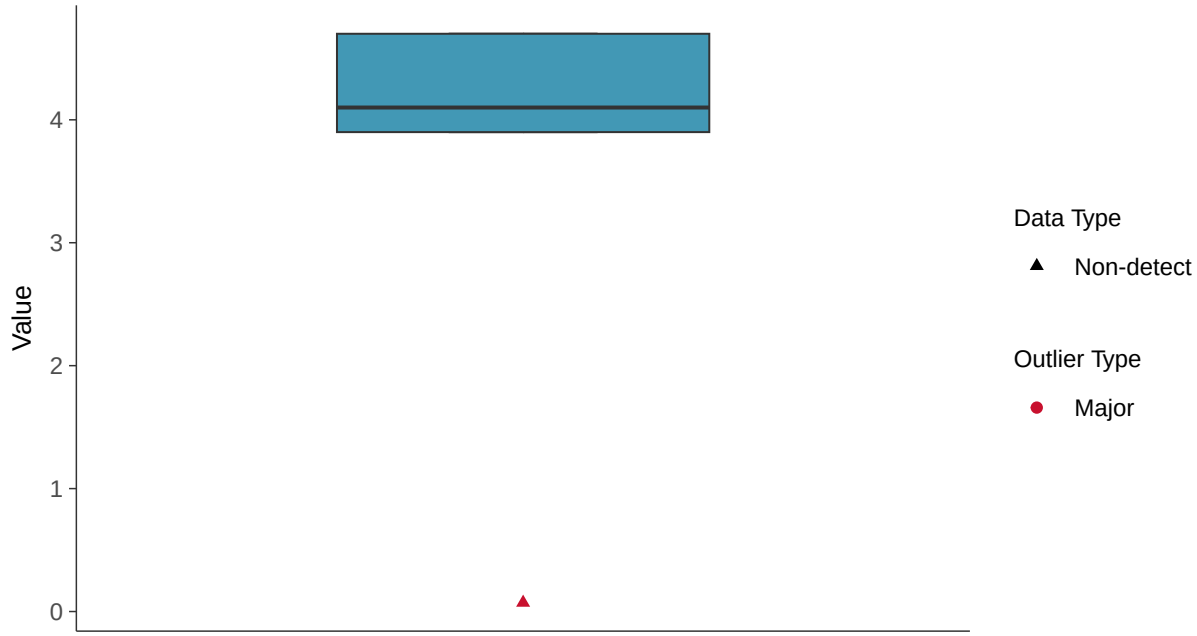
Histogram

Selenium, MW-11 (ug/L)



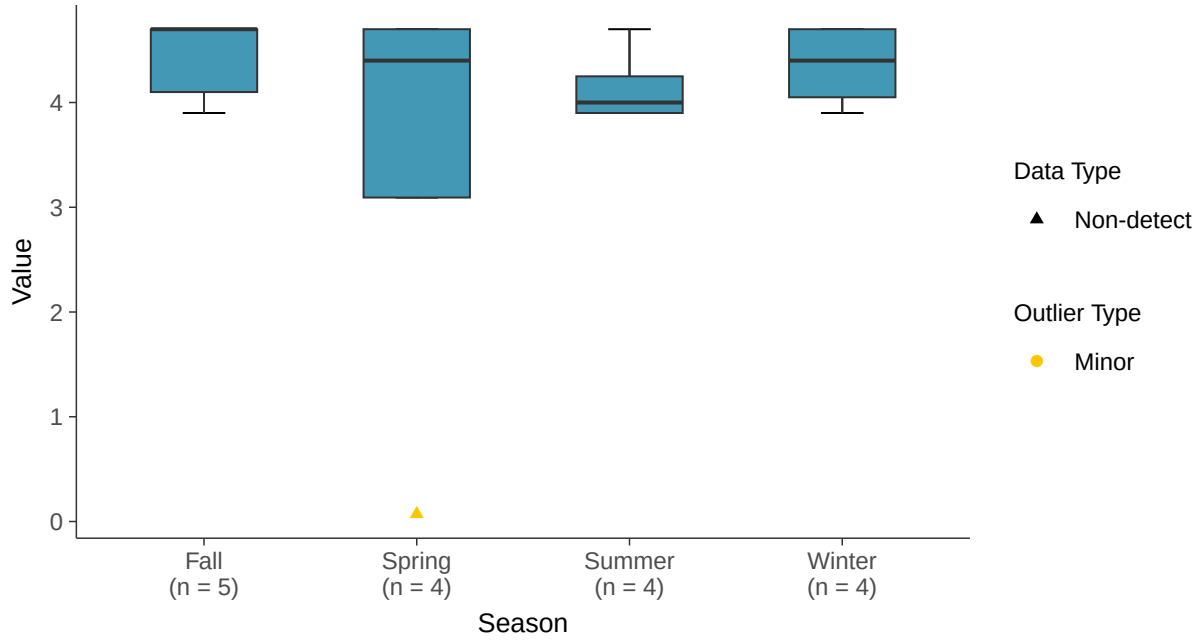
Boxplot

Selenium, MW-11 (ug/L)



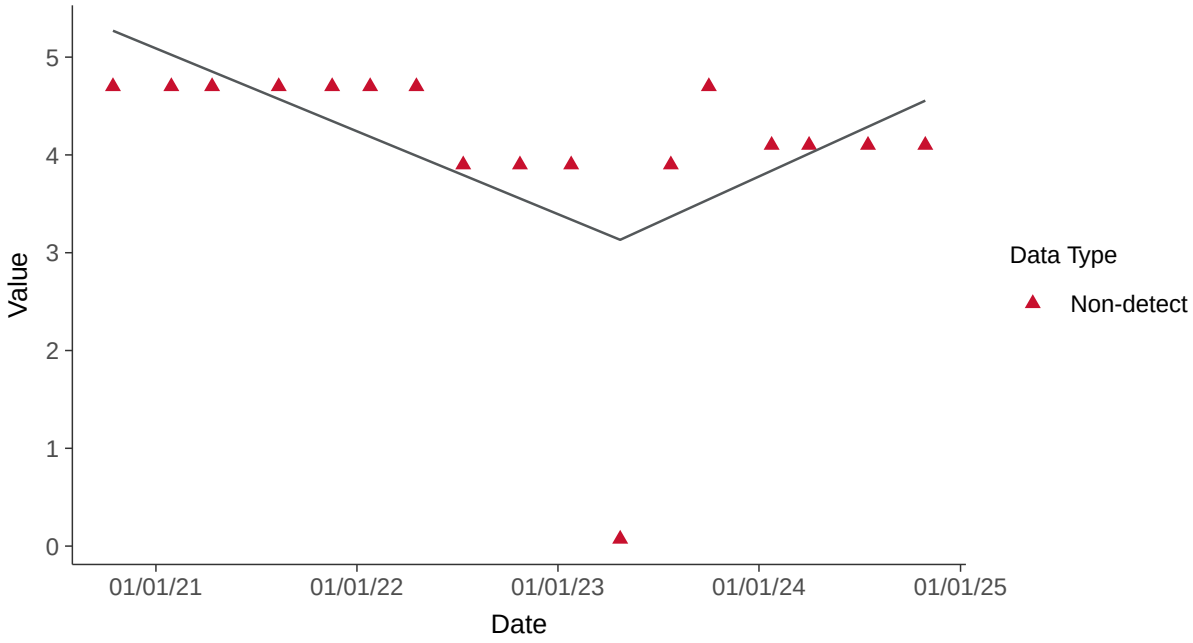
Boxplot by Season

Selenium, MW-11 (ug/L)



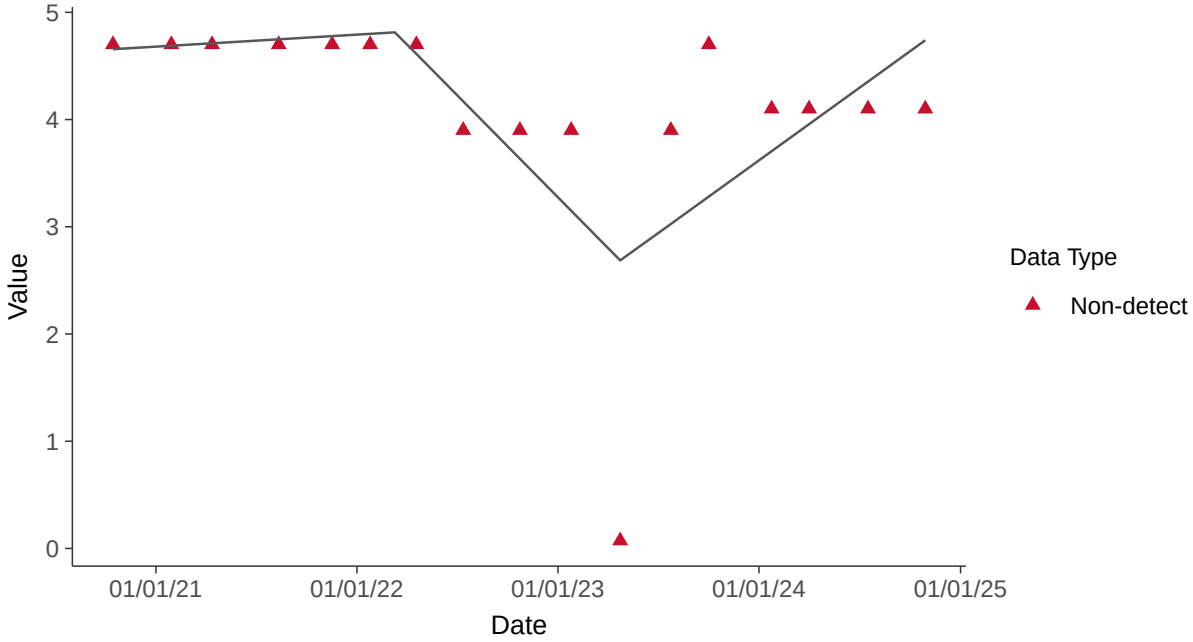
Trend Regression: Piecewise Linear-Linear

Selenium, MW-11 (ug/L)



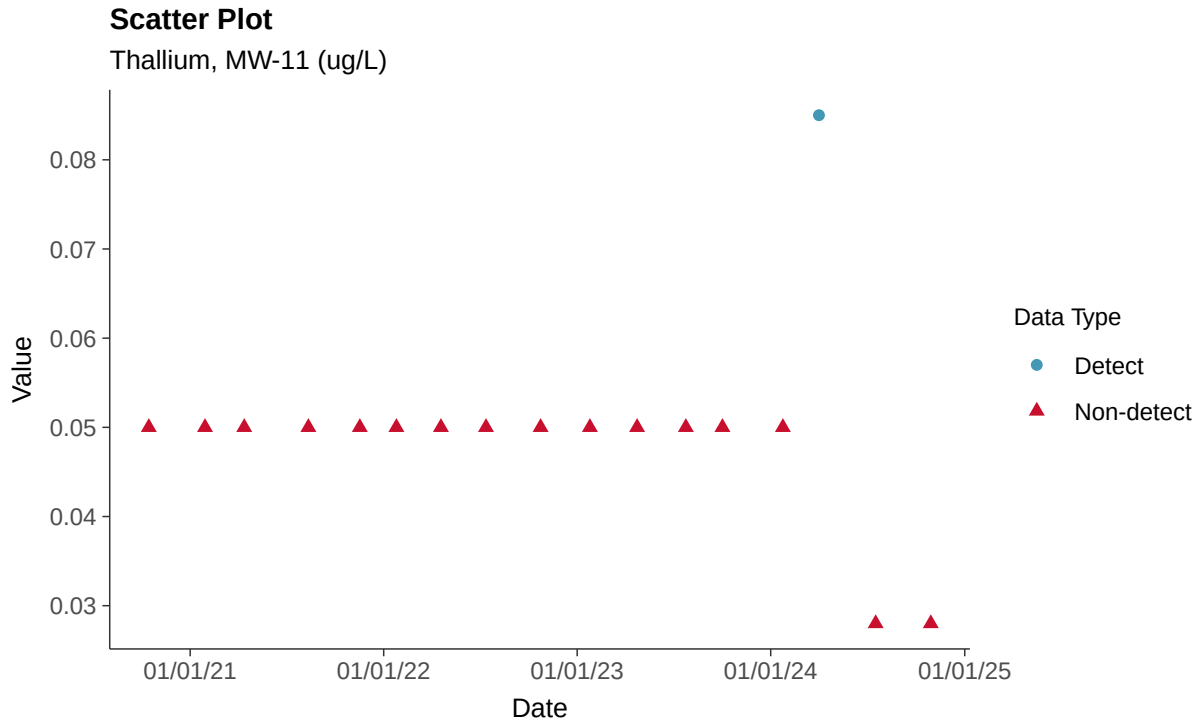
Trend Regression: Piecewise Linear-Linear-Linear

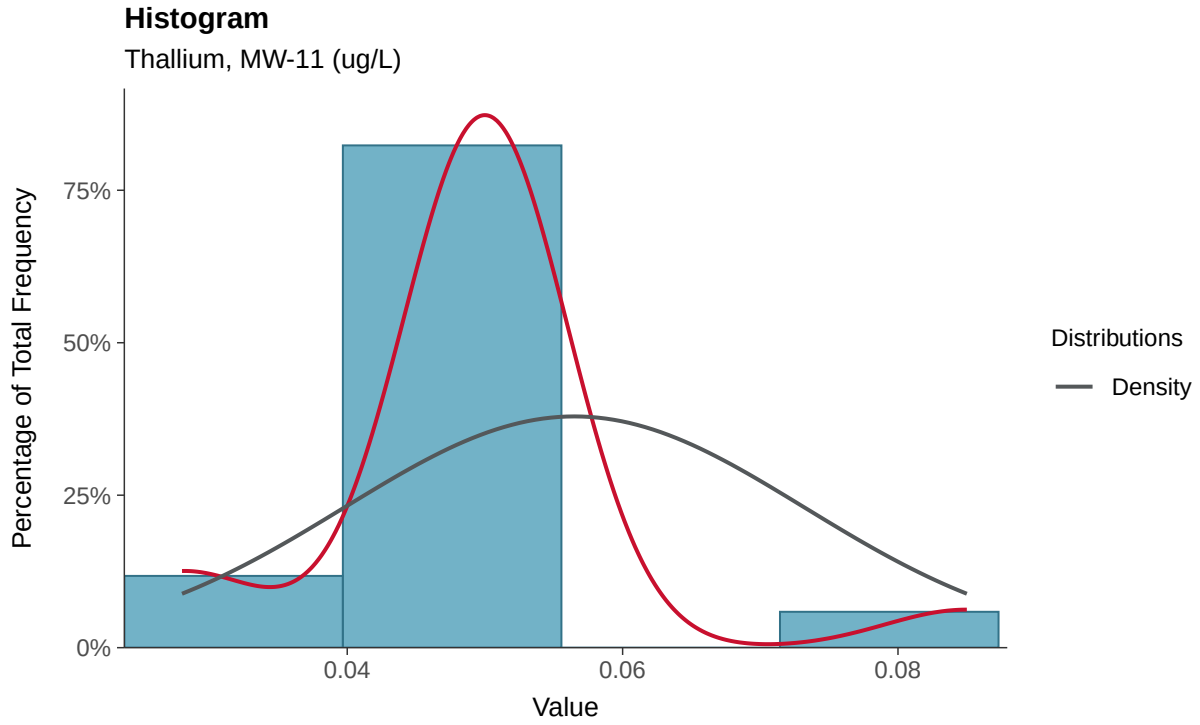
Selenium, MW-11 (ug/L)



App. IV: Thallium, MW-11

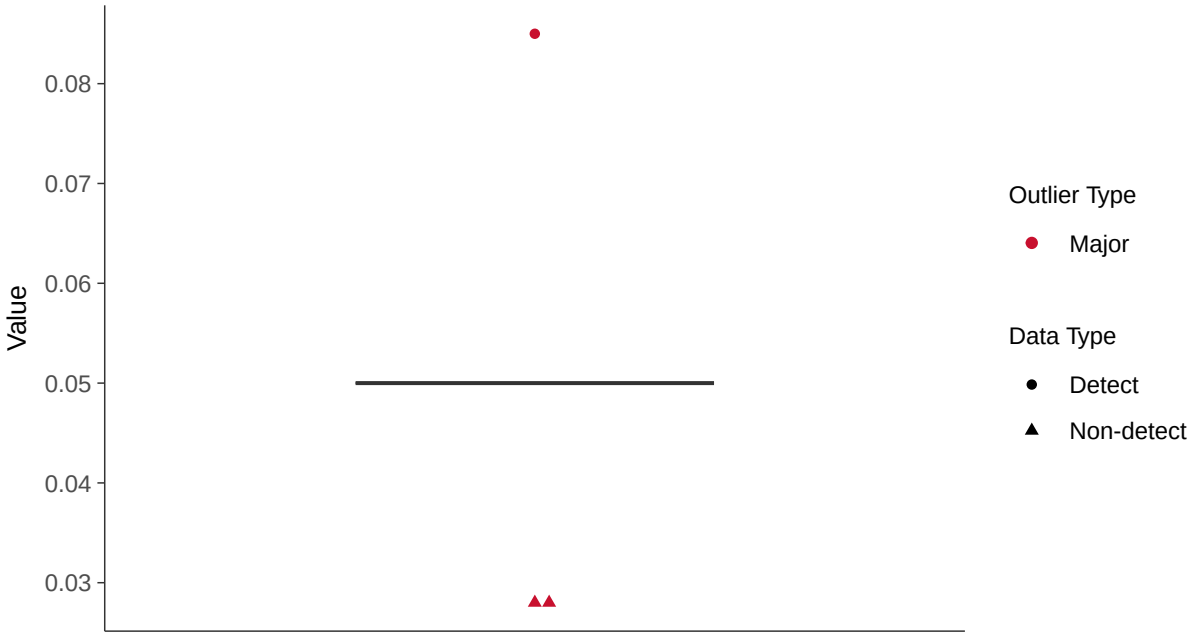
ID: 10_03_124





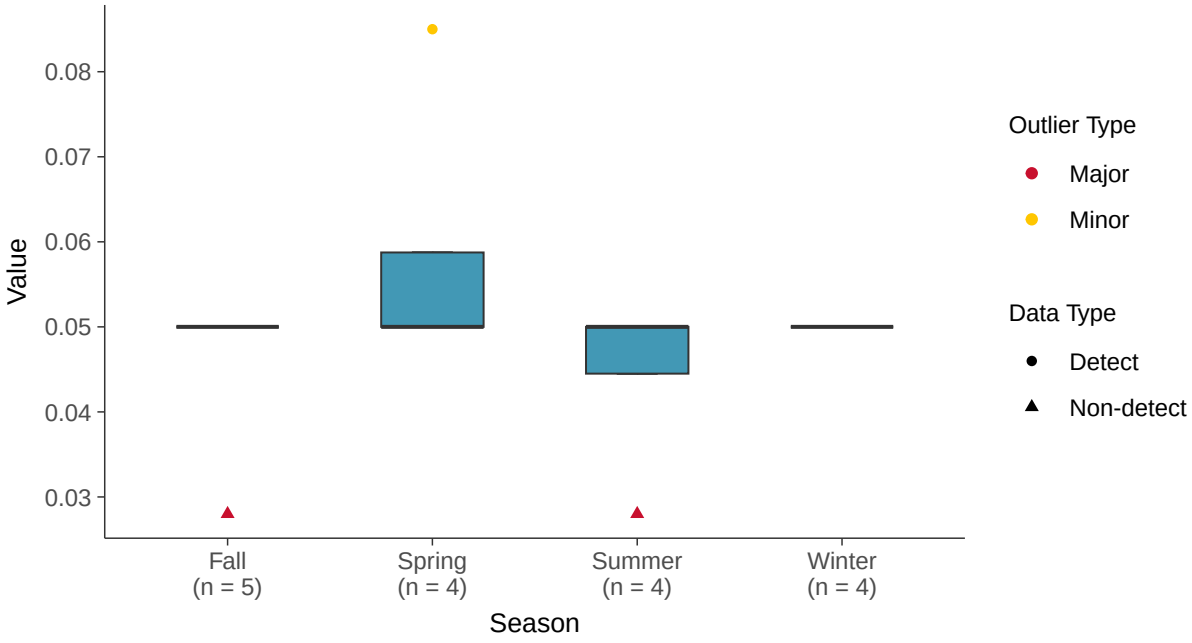
Boxplot

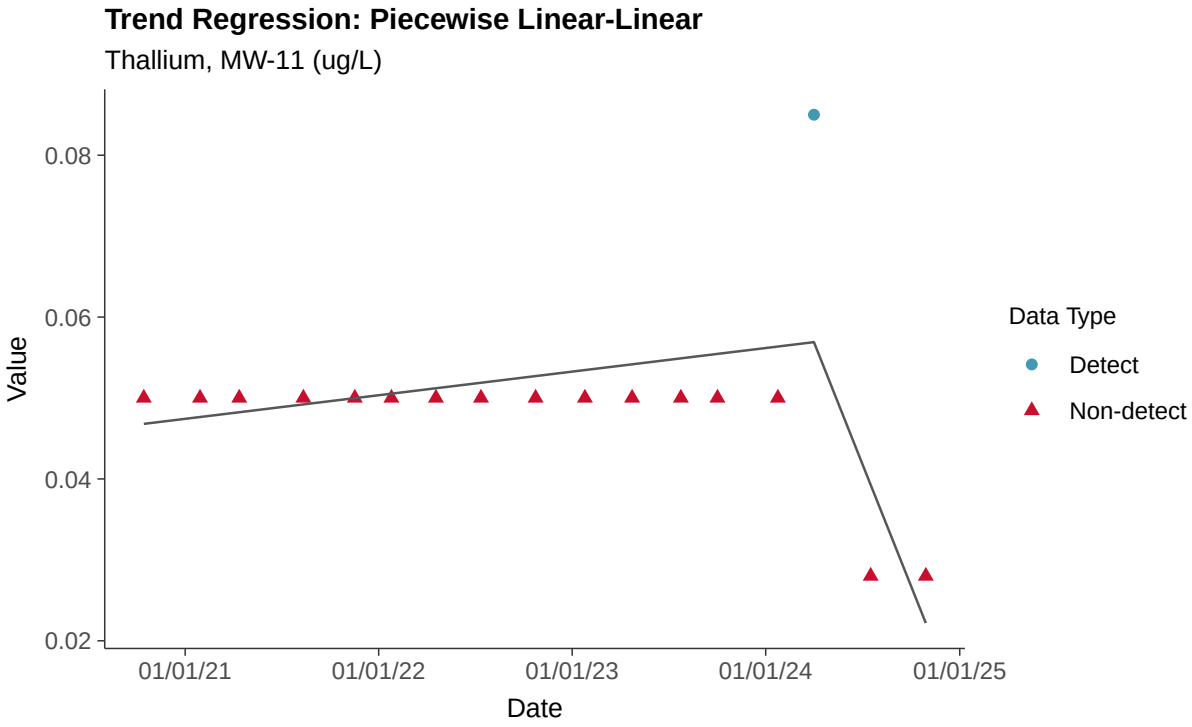
Thallium, MW-11 (ug/L)



Boxplot by Season

Thallium, MW-11 (ug/L)



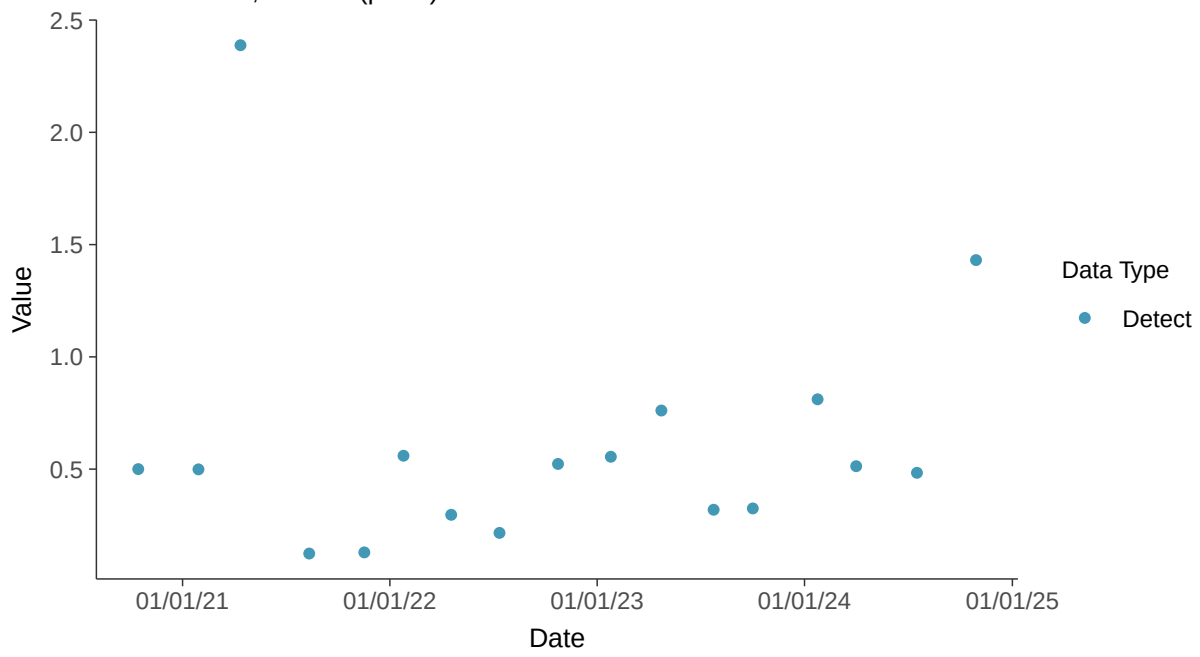

Trend Regression: Piecewise Linear-Linear
Thallium, MW-11 (ug/L)
0.08
0.06
0.04
0.02
Value
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. IV: Total Radium, MW-11

ID: 10_03_126

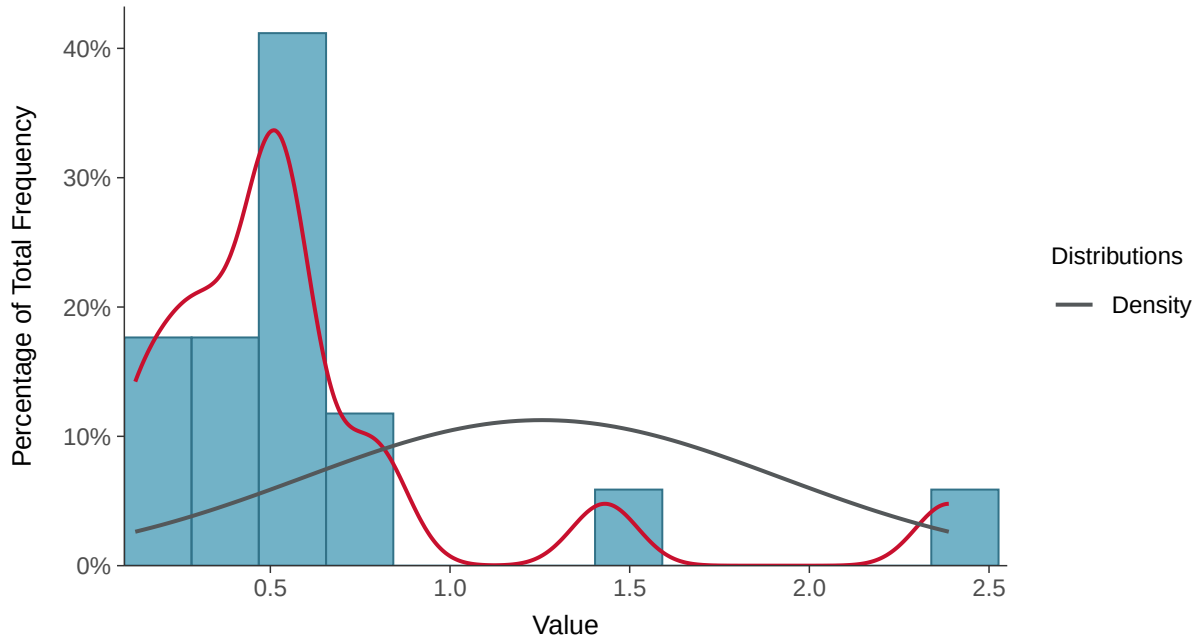
Scatter Plot

Total Radium, MW-11 (pCi/L)



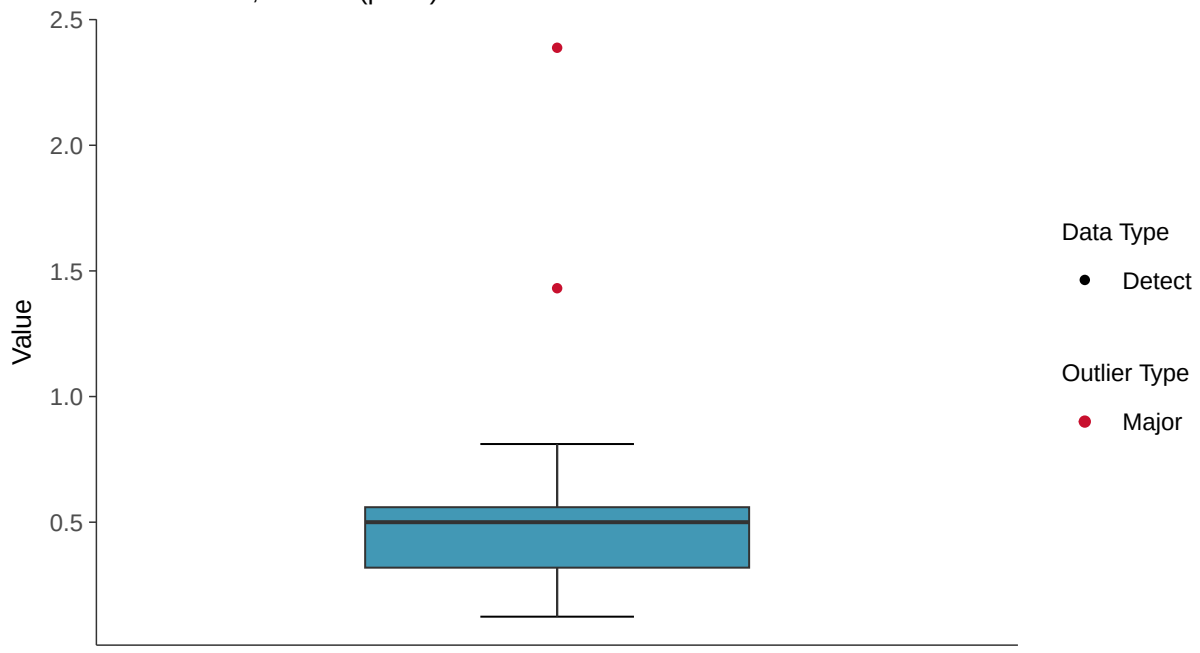
Histogram

Total Radium, MW-11 (pCi/L)



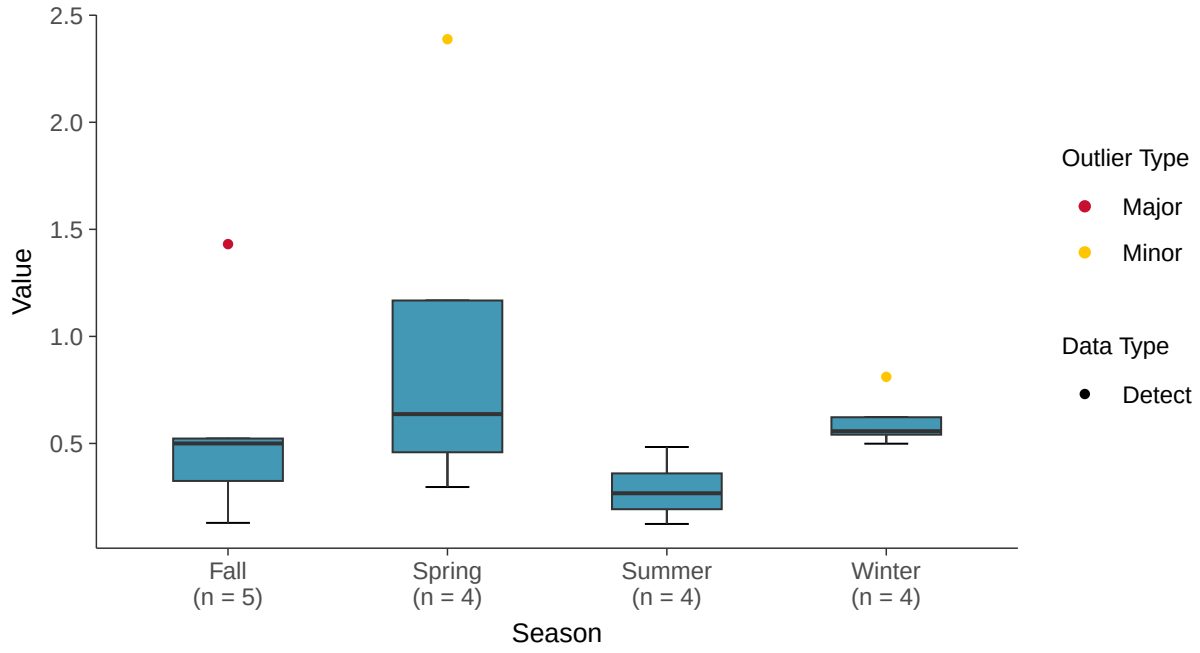
Boxplot

Total Radium, MW-11 (pCi/L)



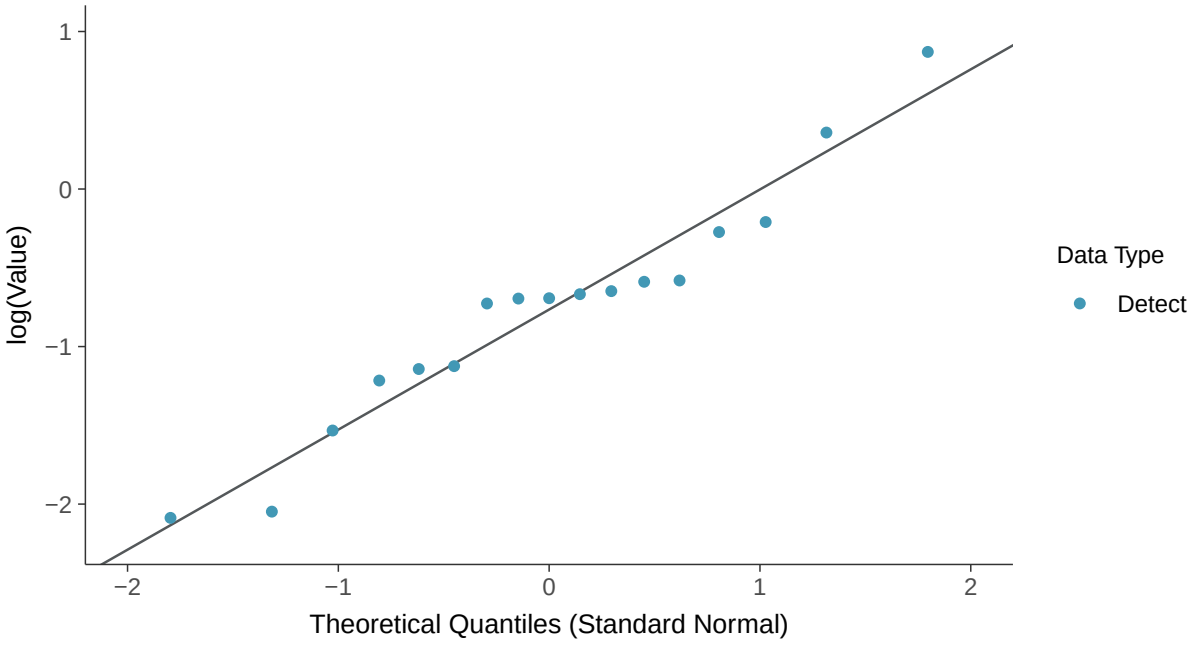
Boxplot by Season

Total Radium, MW-11 (pCi/L)



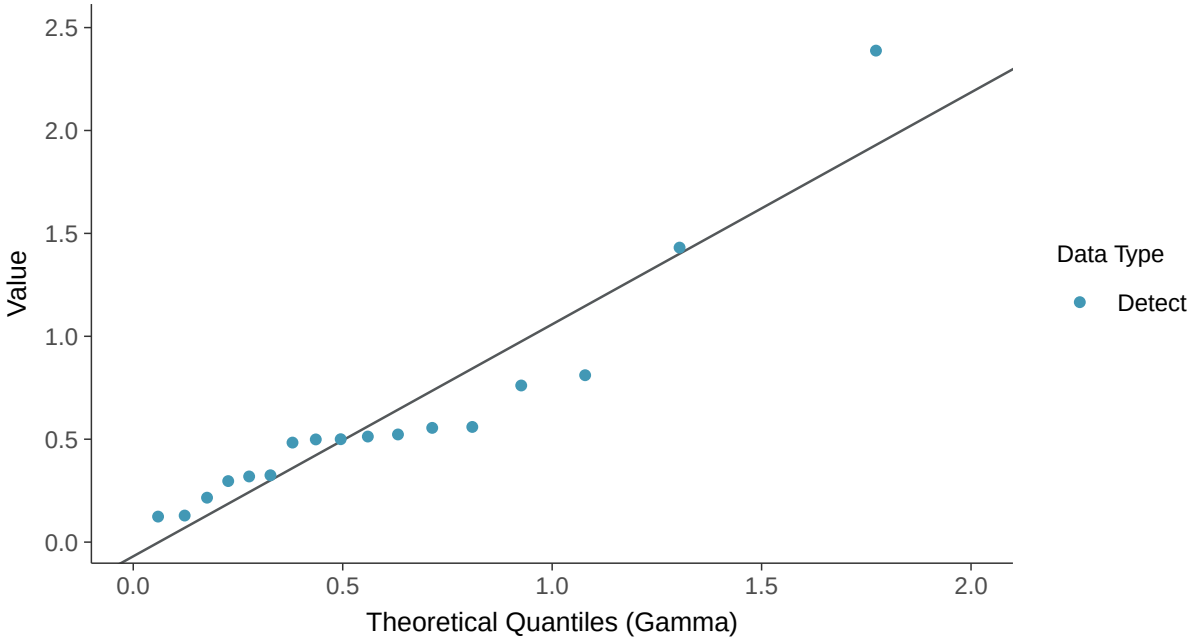
Lognormal Q-Q plot

Total Radium, MW-11 (pCi/L)



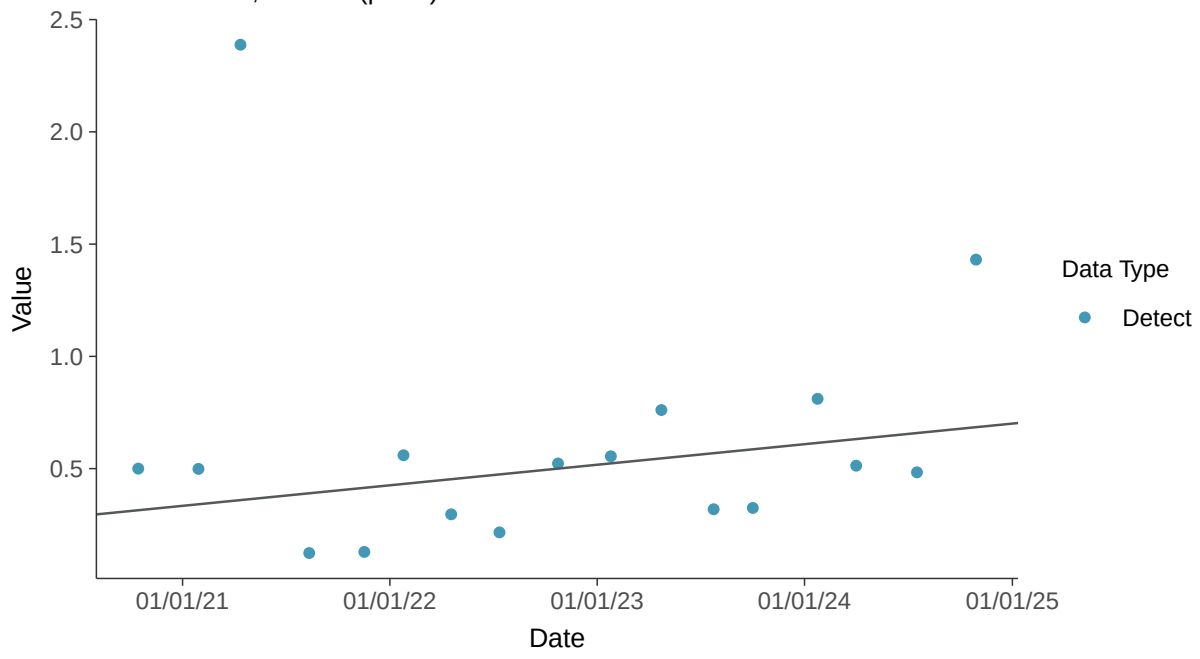
Gamma Q-Q plot

Total Radium, MW-11 (pCi/L)



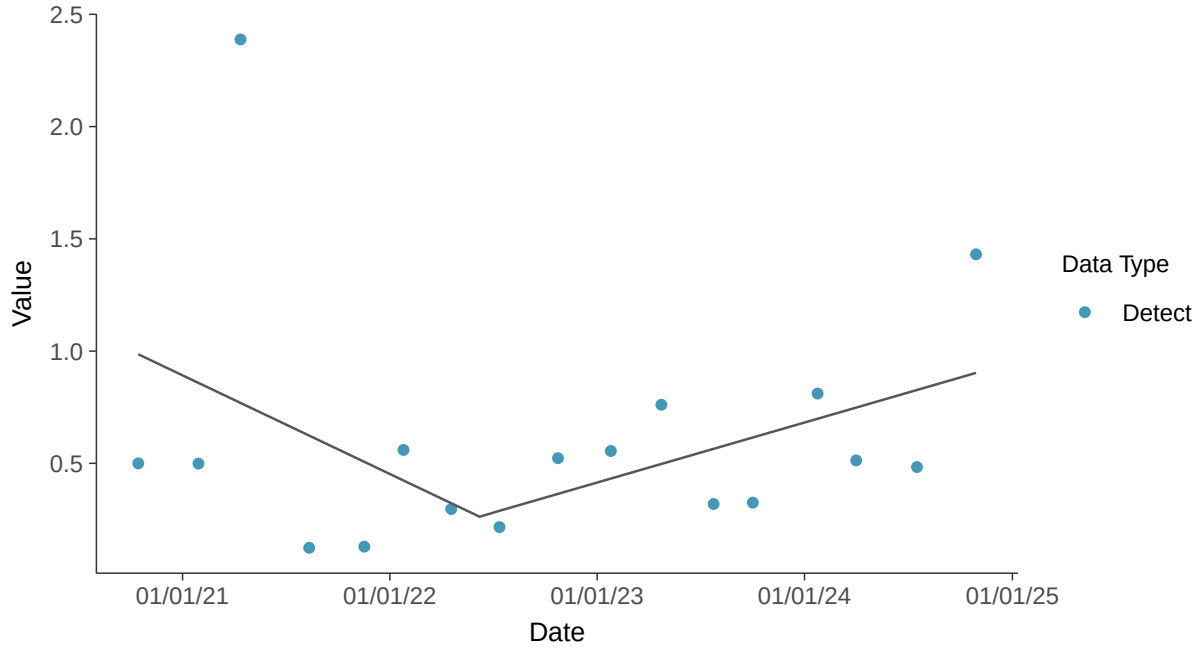
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-11 (pCi/L)



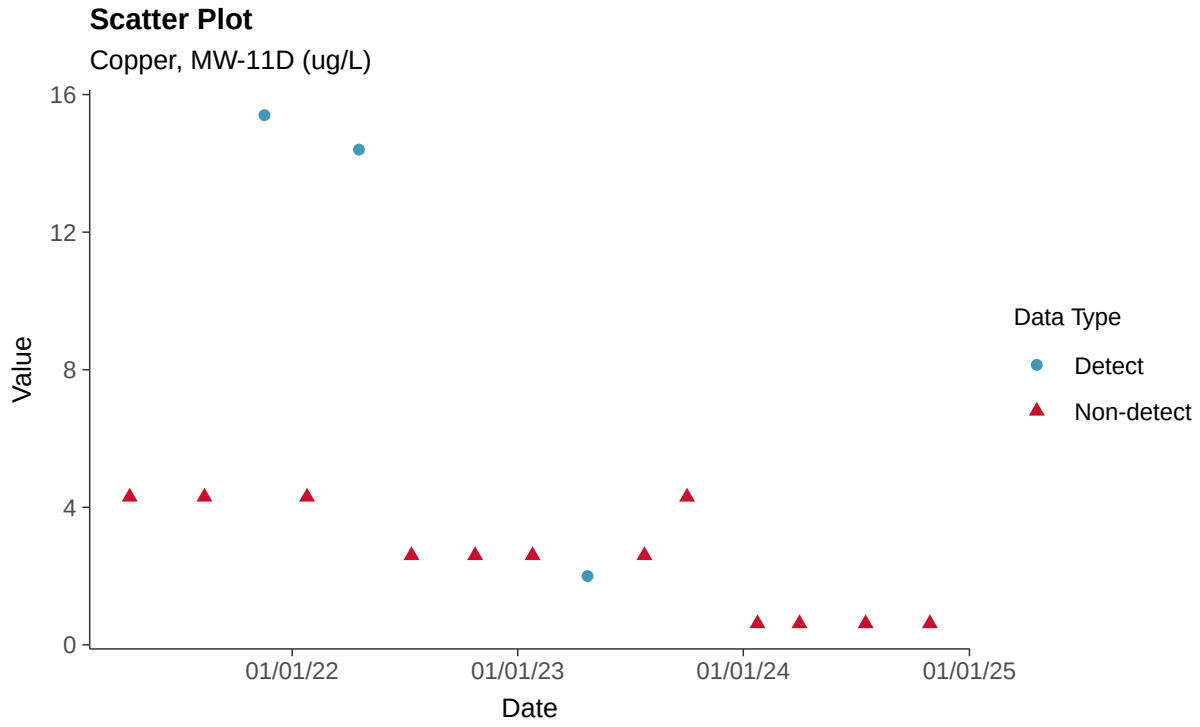
Trend Regression: Piecewise Linear-Linear

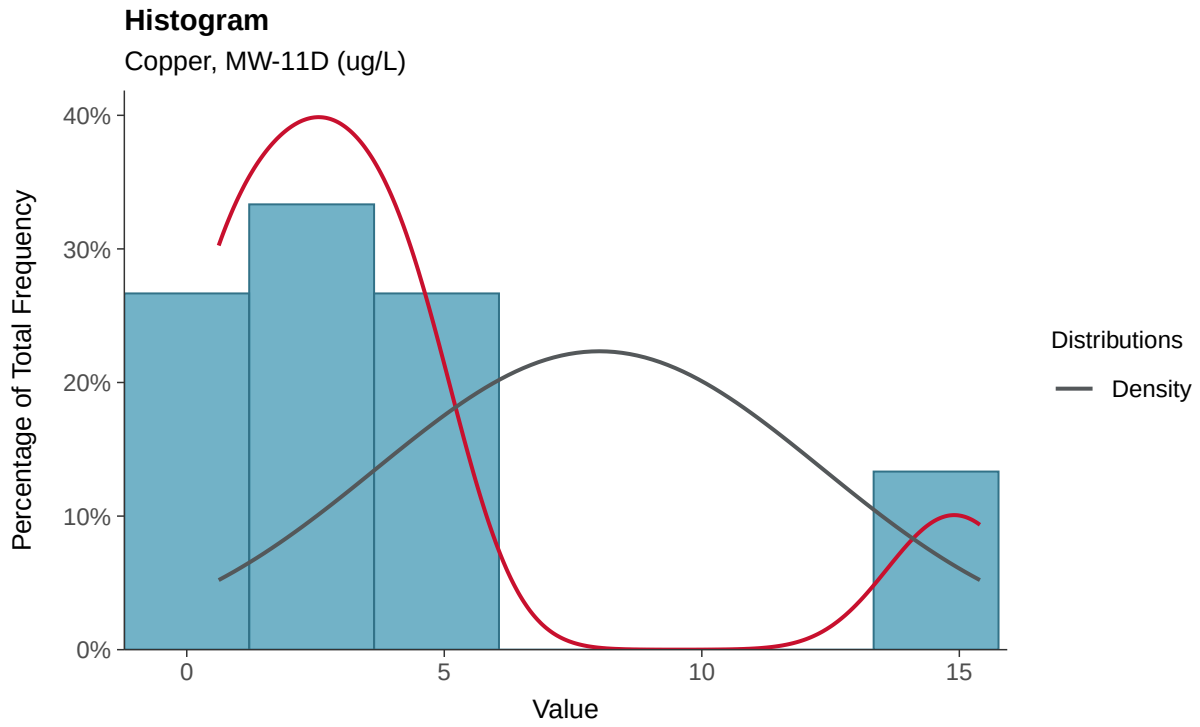
Total Radium, MW-11 (pCi/L)



App. I Metals: Copper, MW-11D

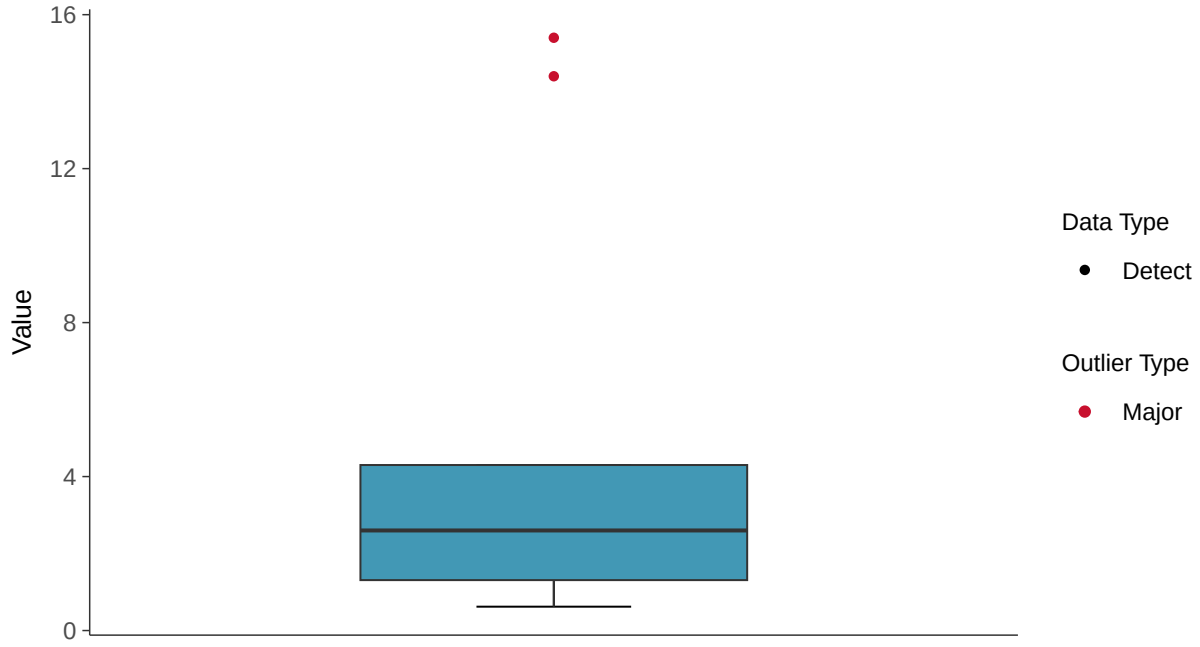
ID: 11_01_111





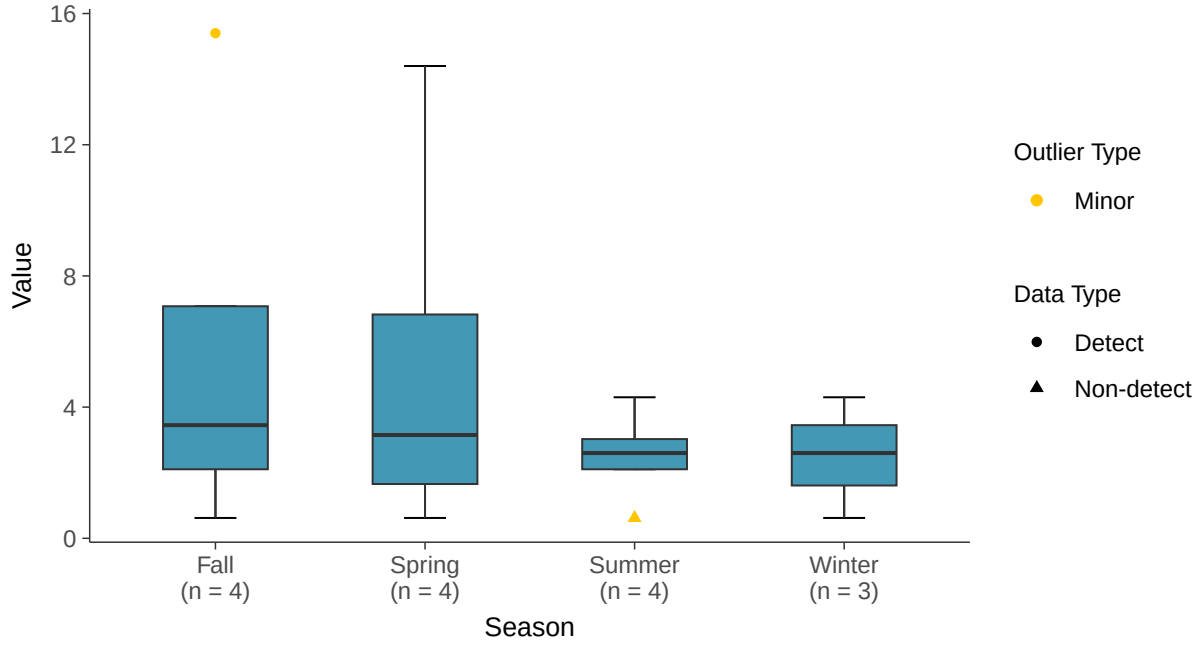
Boxplot

Copper, MW-11D (ug/L)



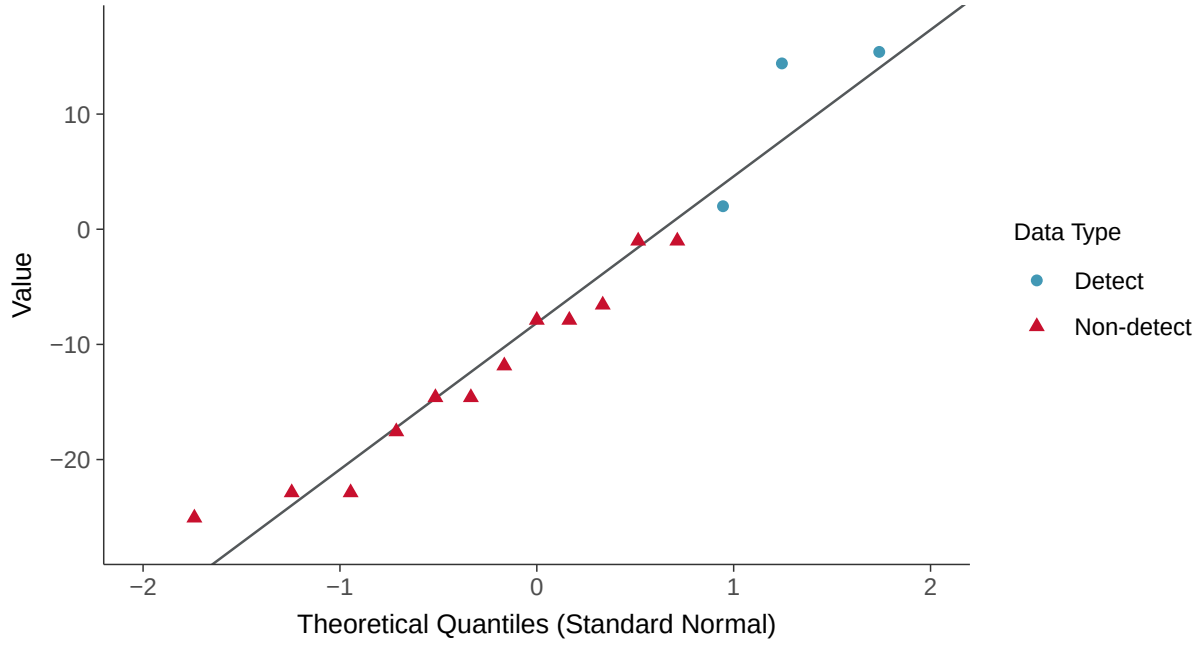
Boxplot by Season

Copper, MW-11D (ug/L)



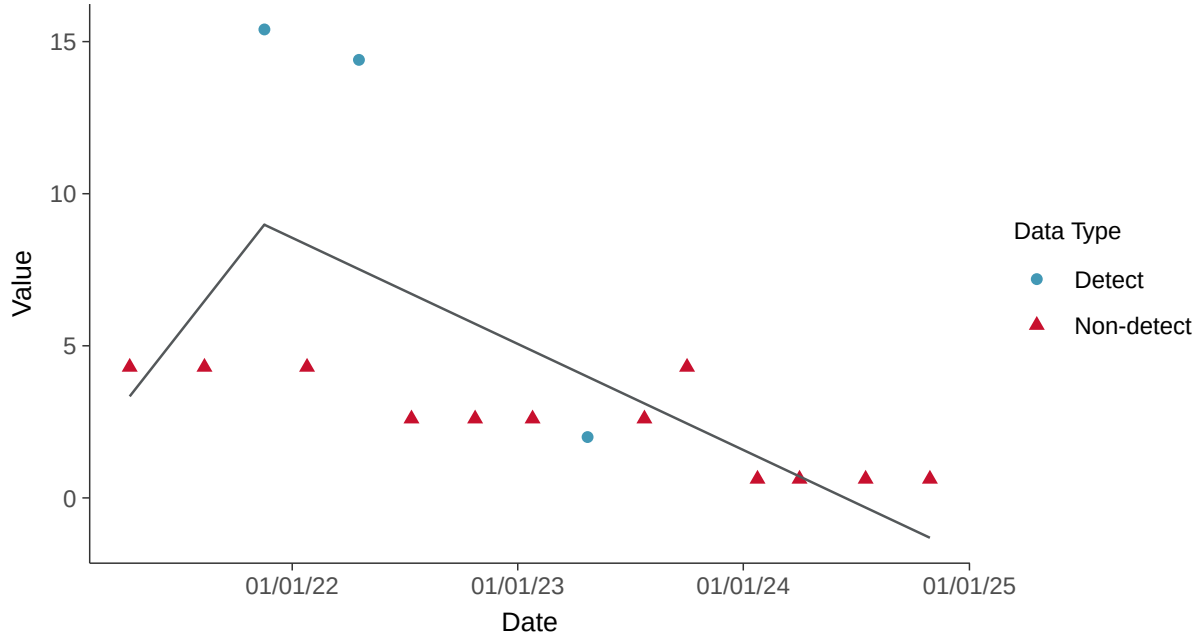
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-11D (ug/L)



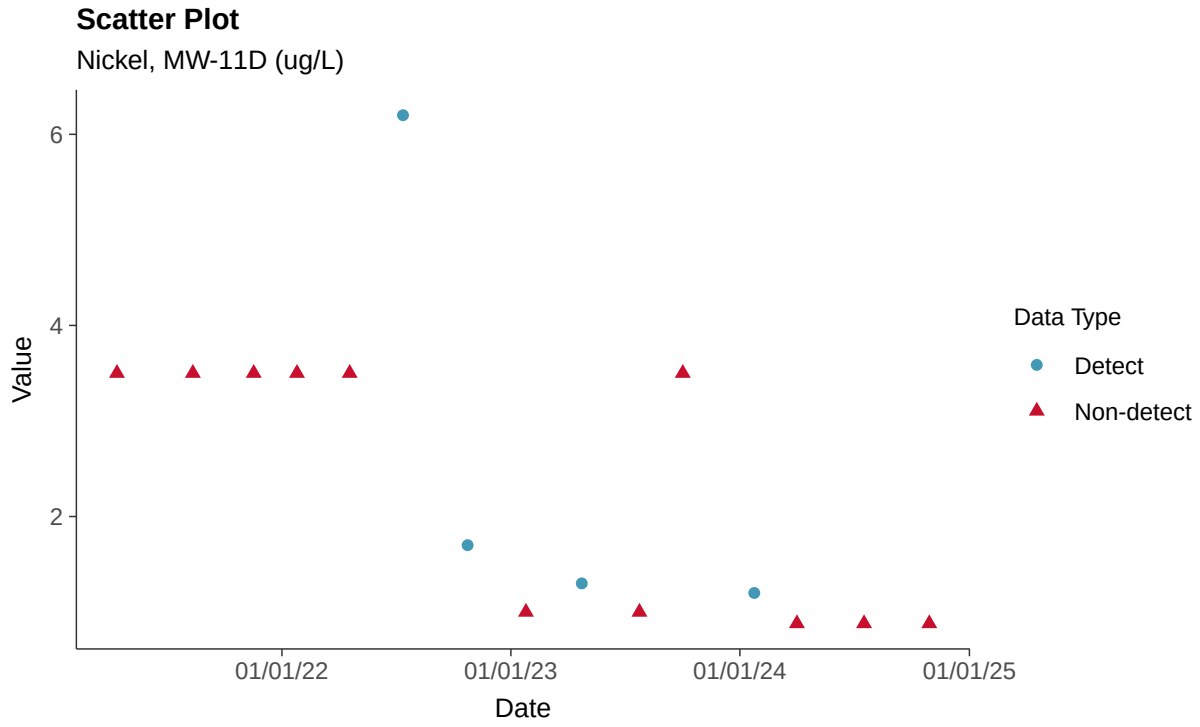
Trend Regression: Piecewise Linear-Linear

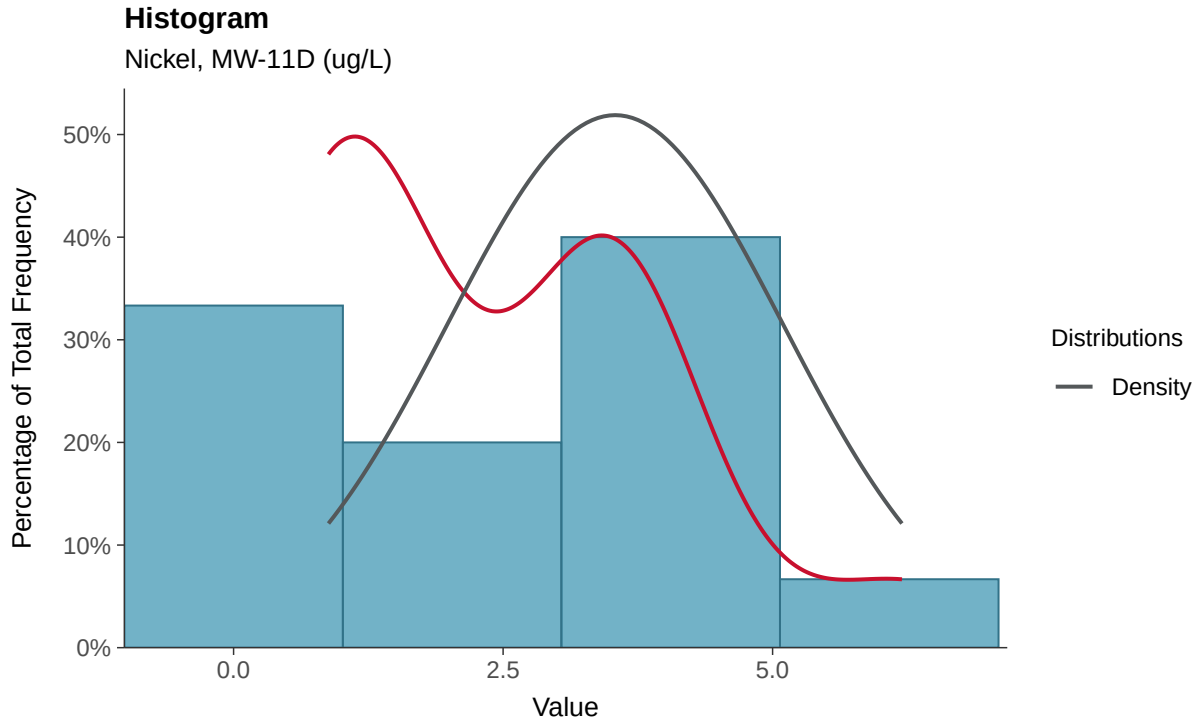
Copper, MW-11D (ug/L)



App. I Metals: Nickel, MW-11D

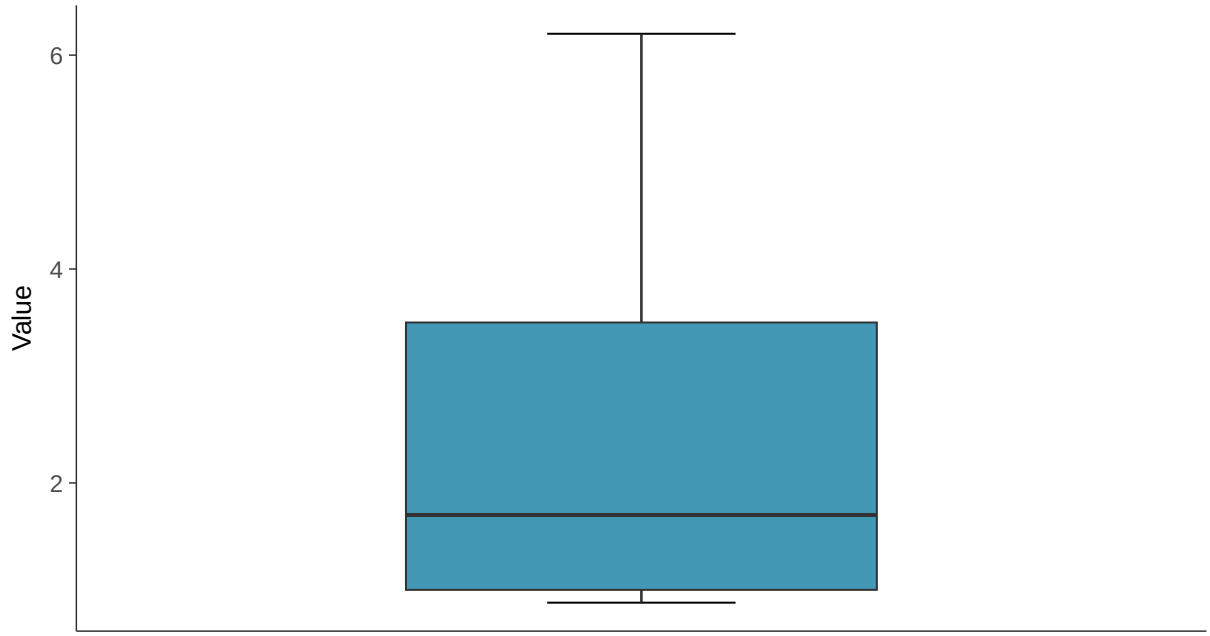
ID: 11_01_117





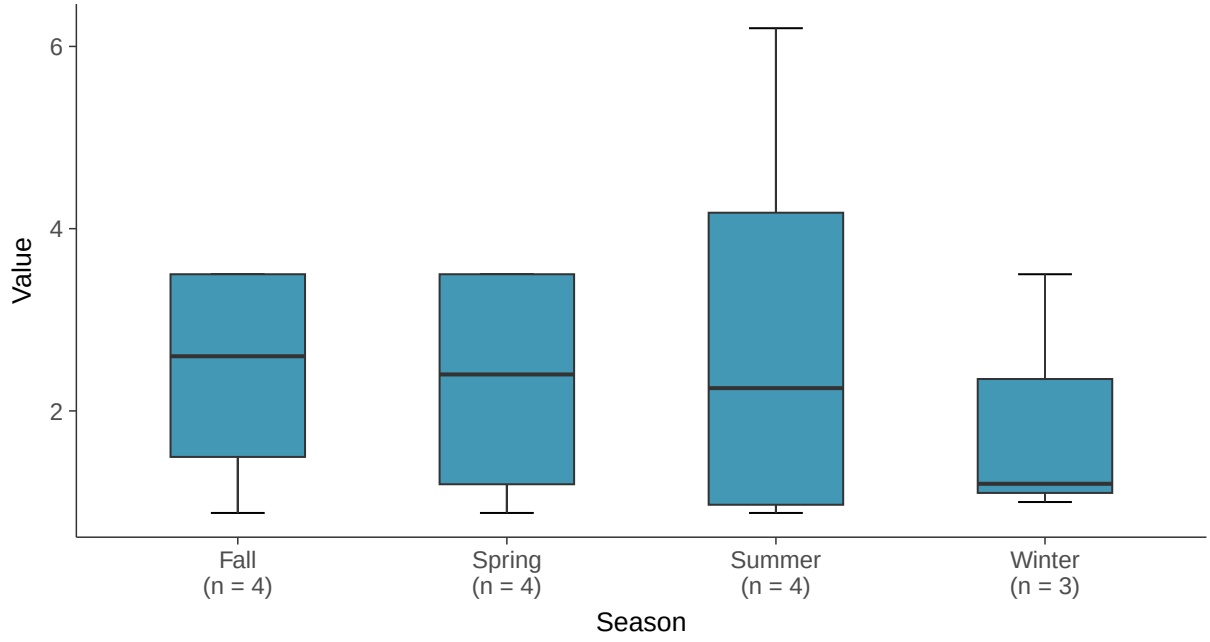
Boxplot

Nickel, MW-11D (ug/L)



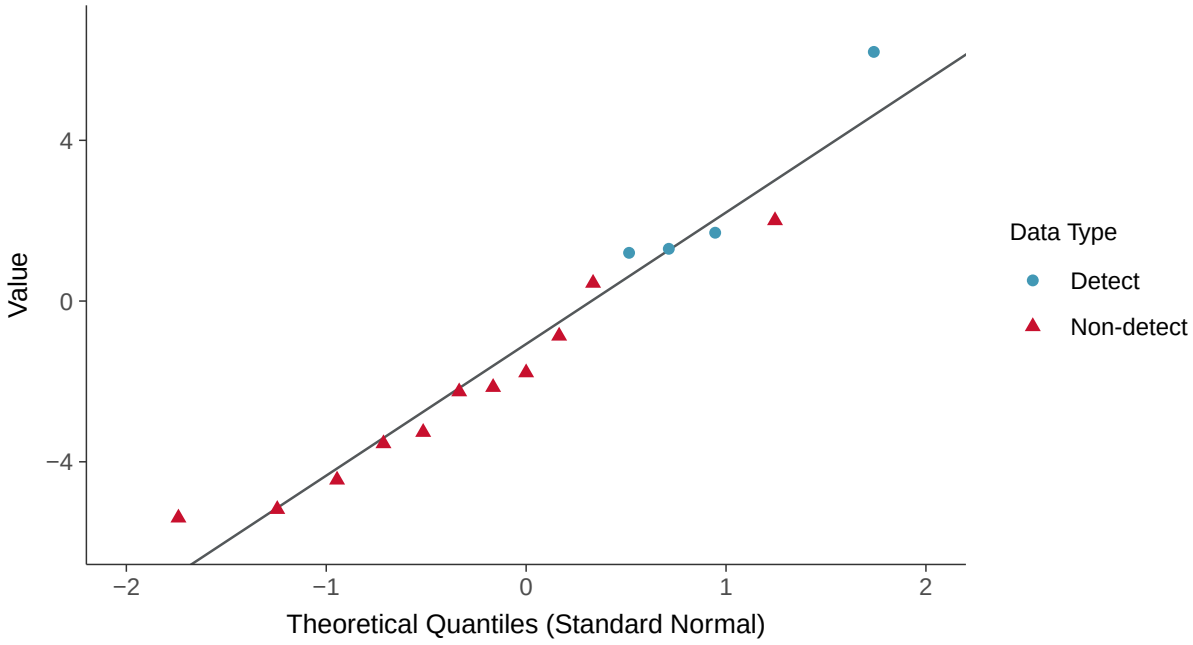
Boxplot by Season

Nickel, MW-11D (ug/L)



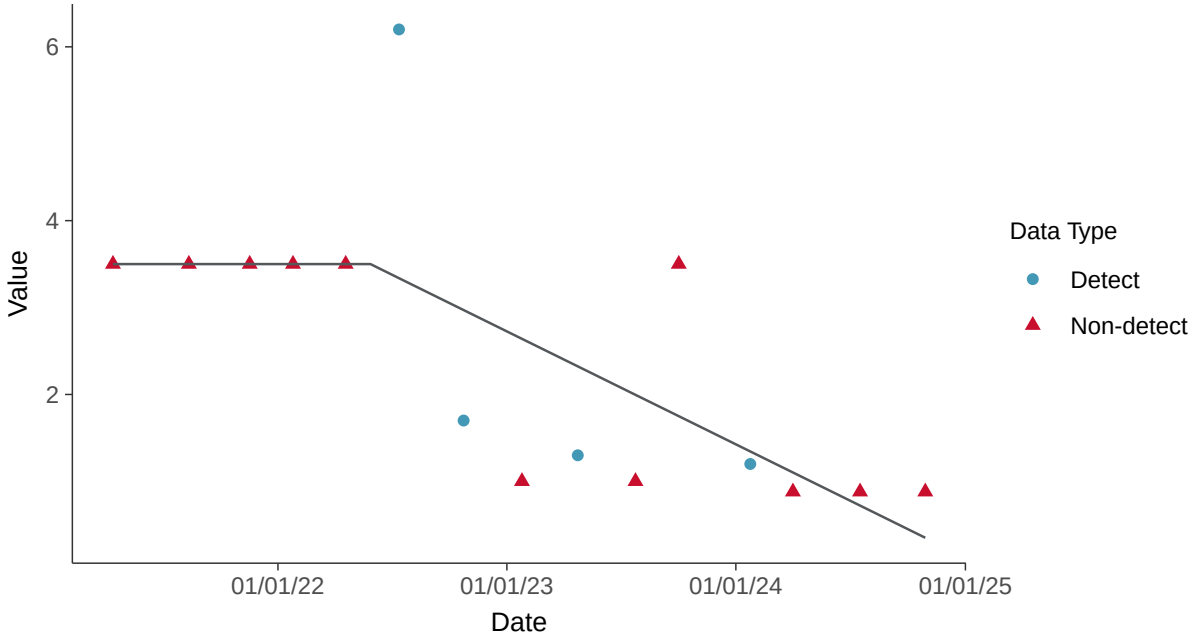
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-11D (ug/L)



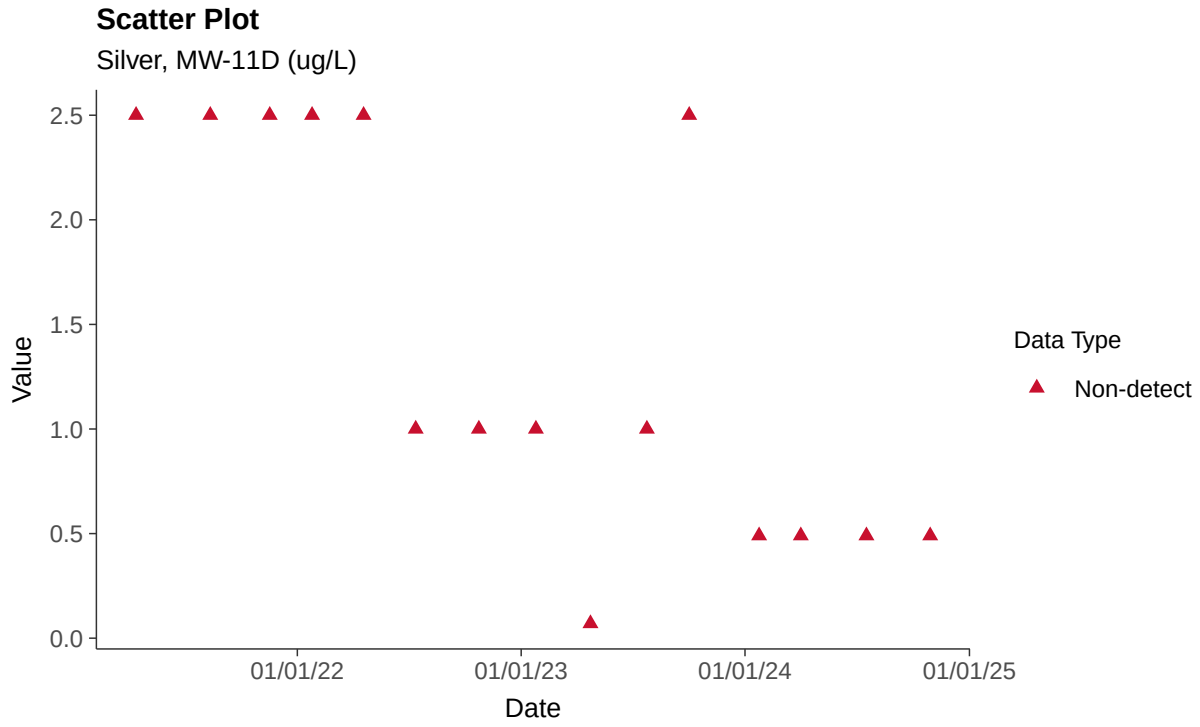
Trend Regression: Piecewise Linear-Linear

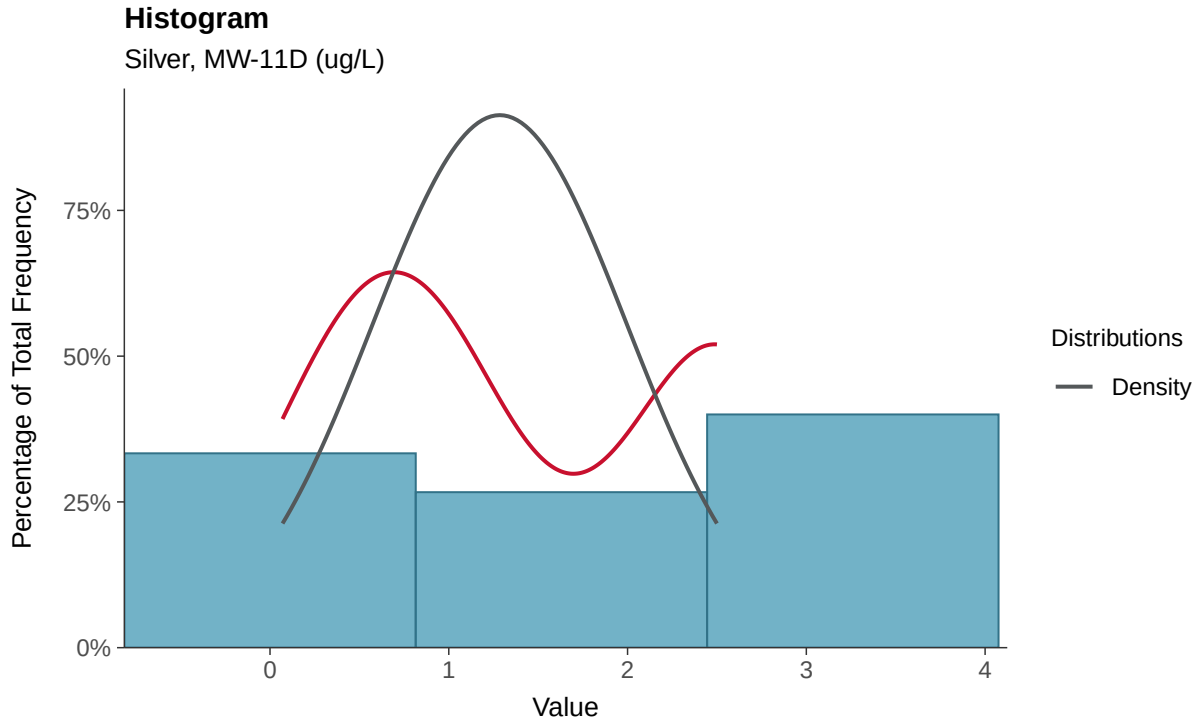
Nickel, MW-11D (ug/L)



App. I Metals: Silver, MW-11D

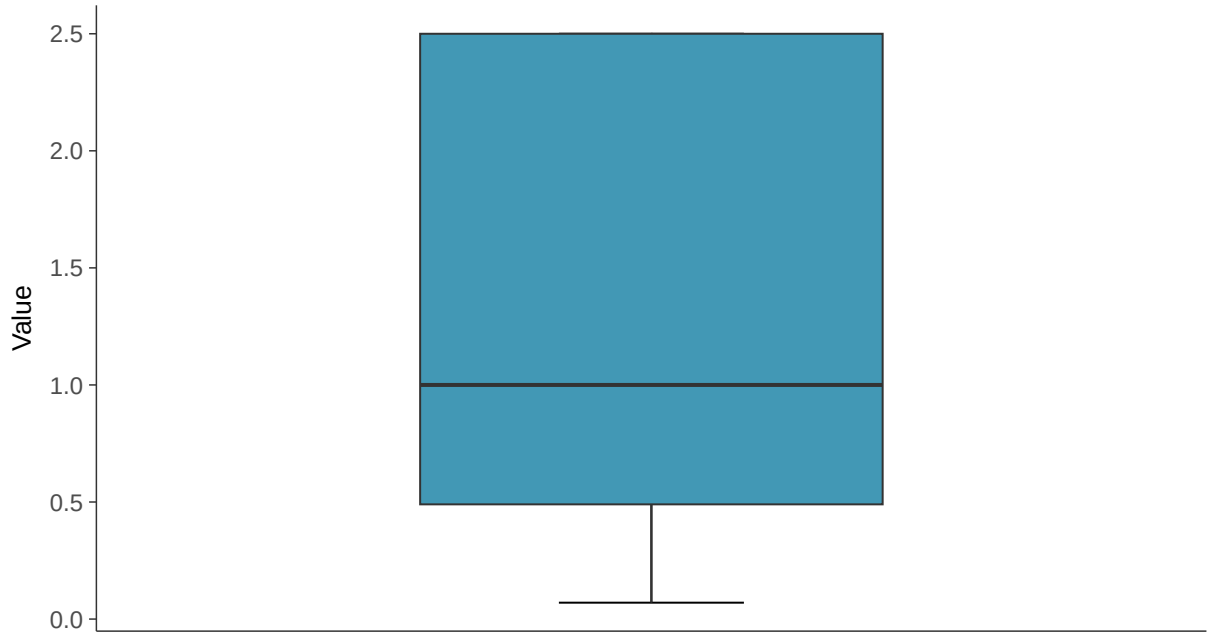
ID: 11_01_122





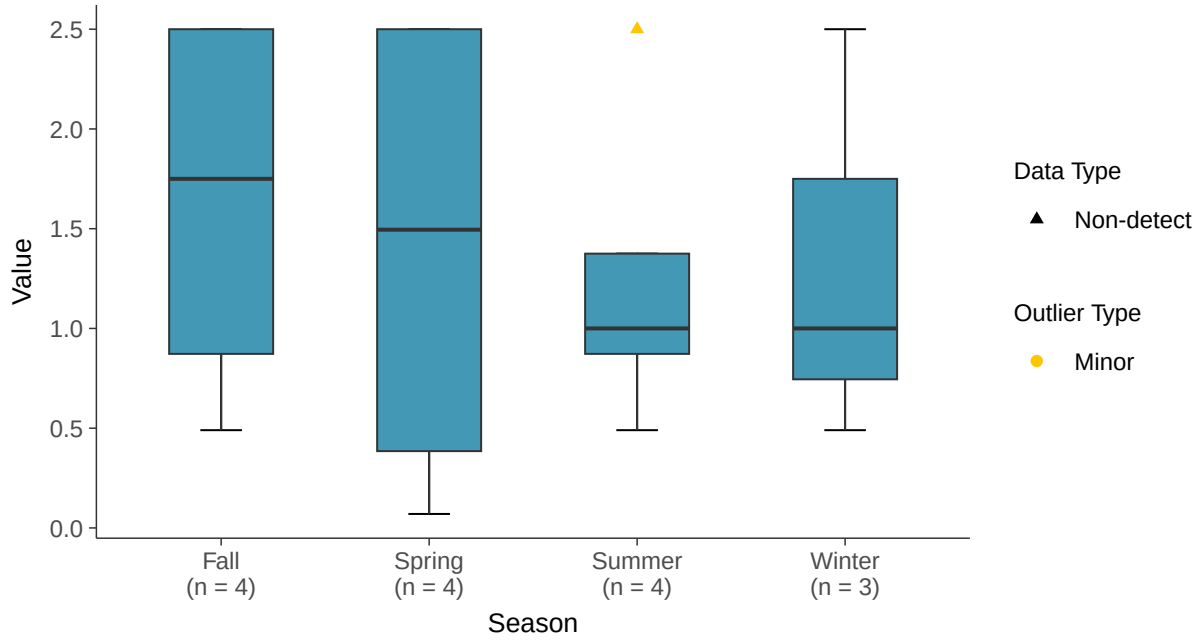
Boxplot

Silver, MW-11D (ug/L)



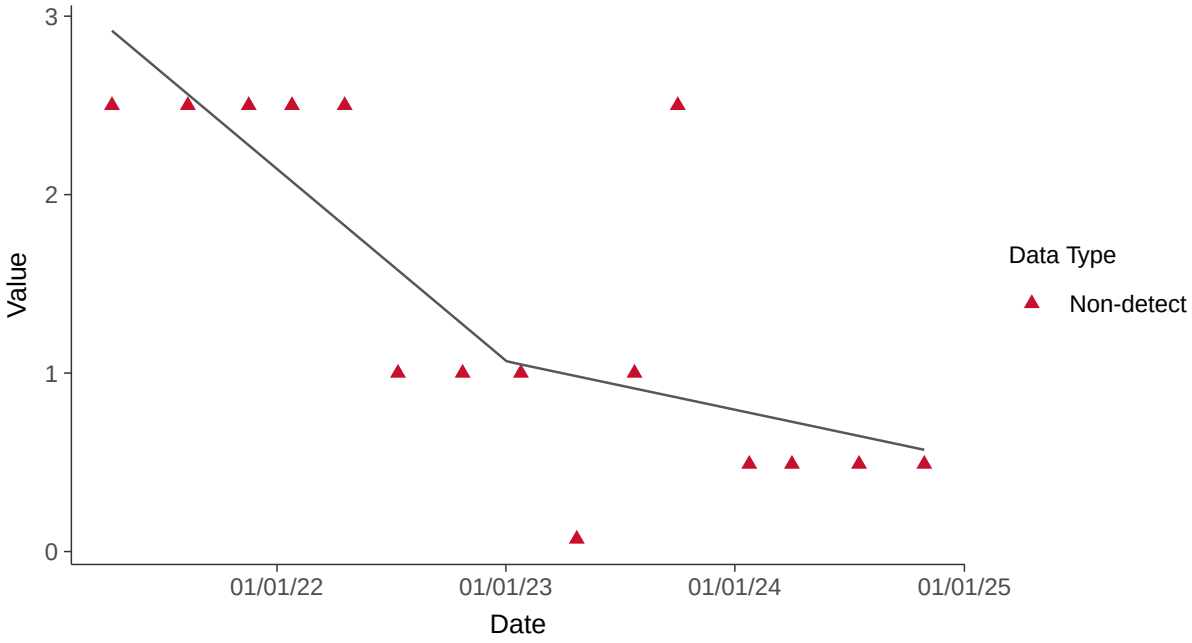
Boxplot by Season

Silver, MW-11D (ug/L)



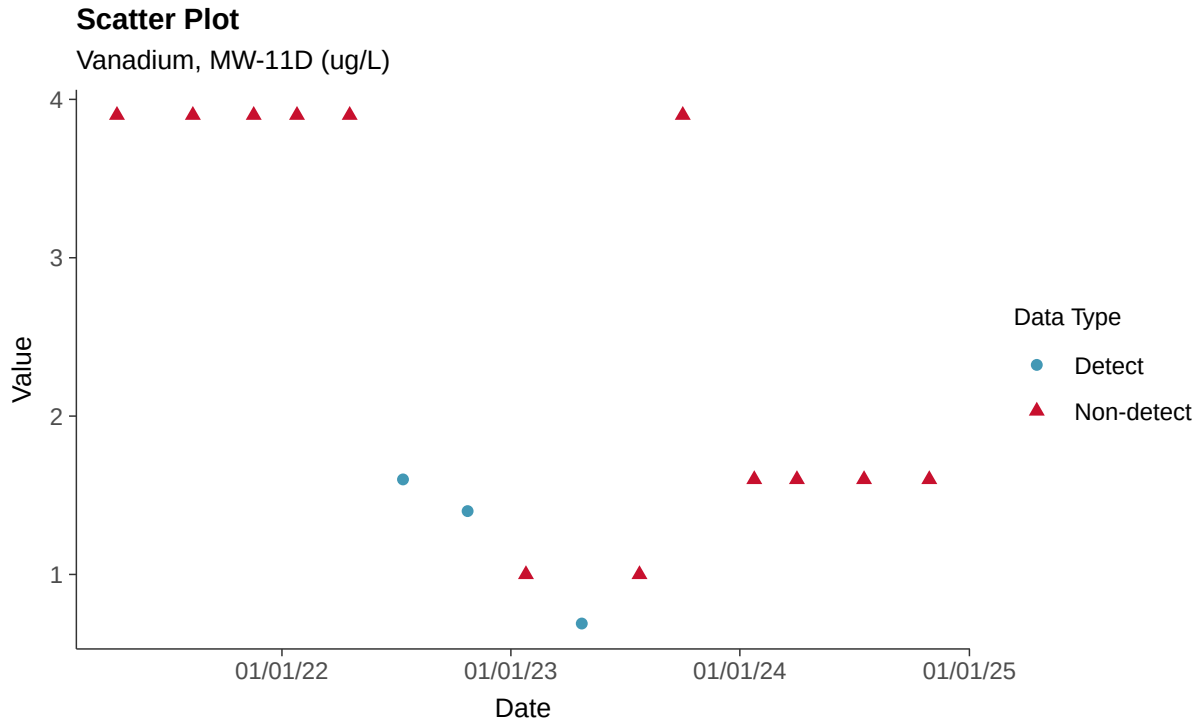
Trend Regression: Piecewise Linear-Linear

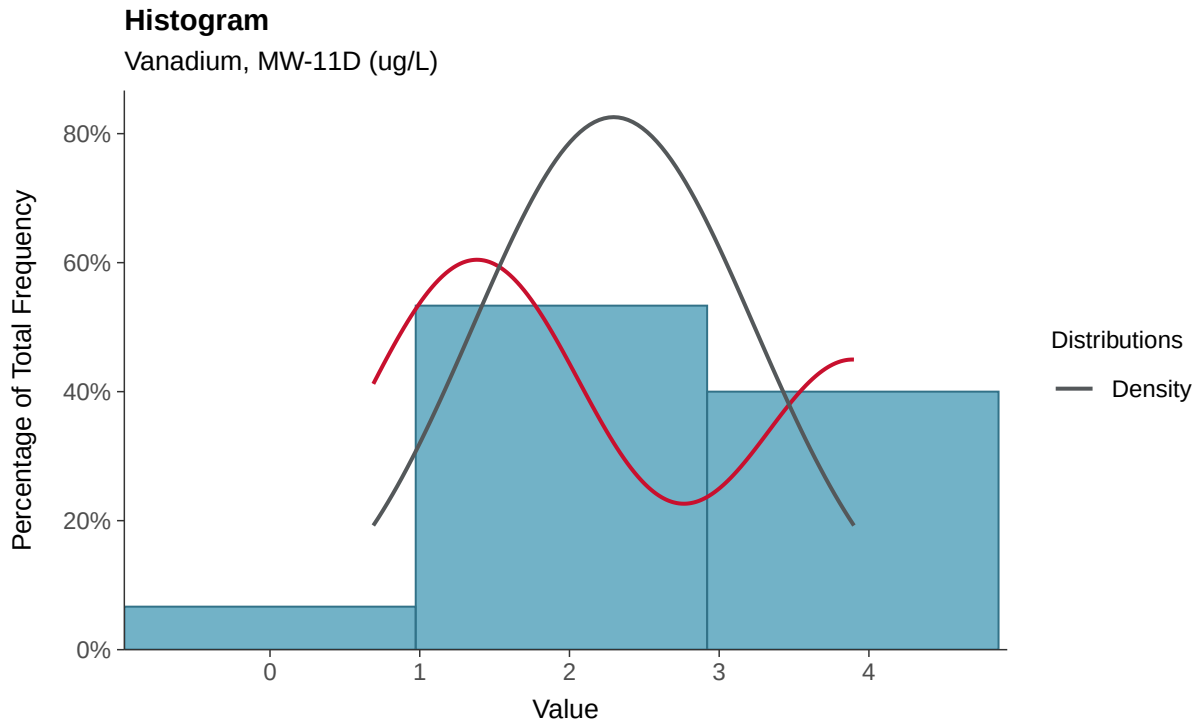
Silver, MW-11D (ug/L)



App. I Metals: Vanadium, MW-11D

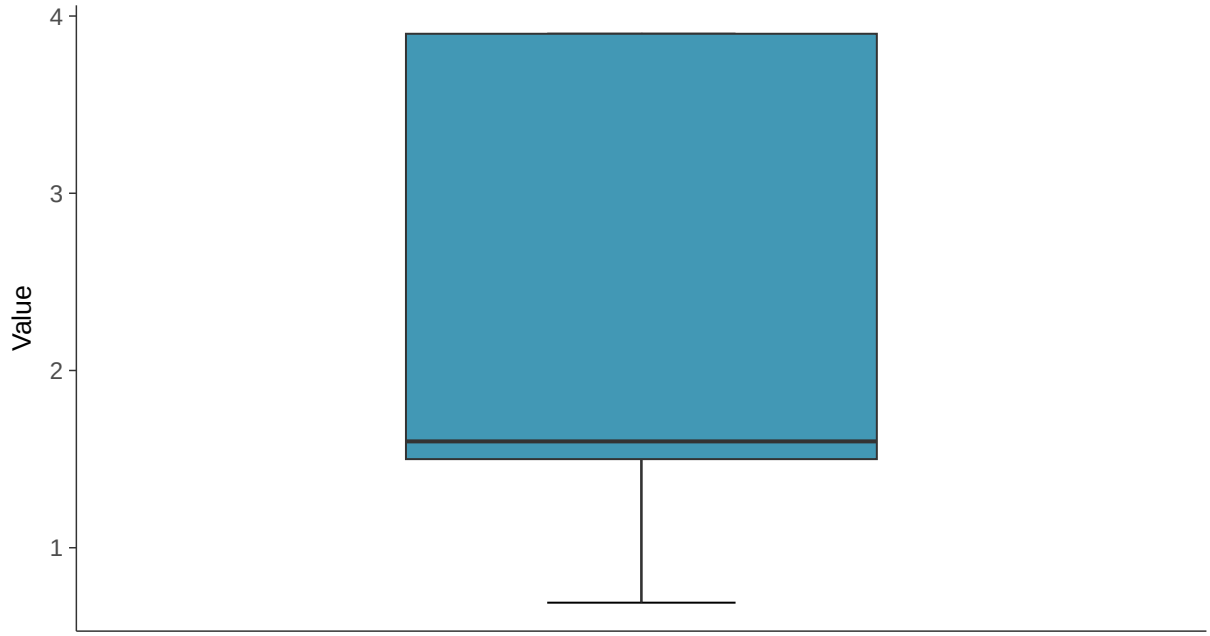
ID: 11_01_127





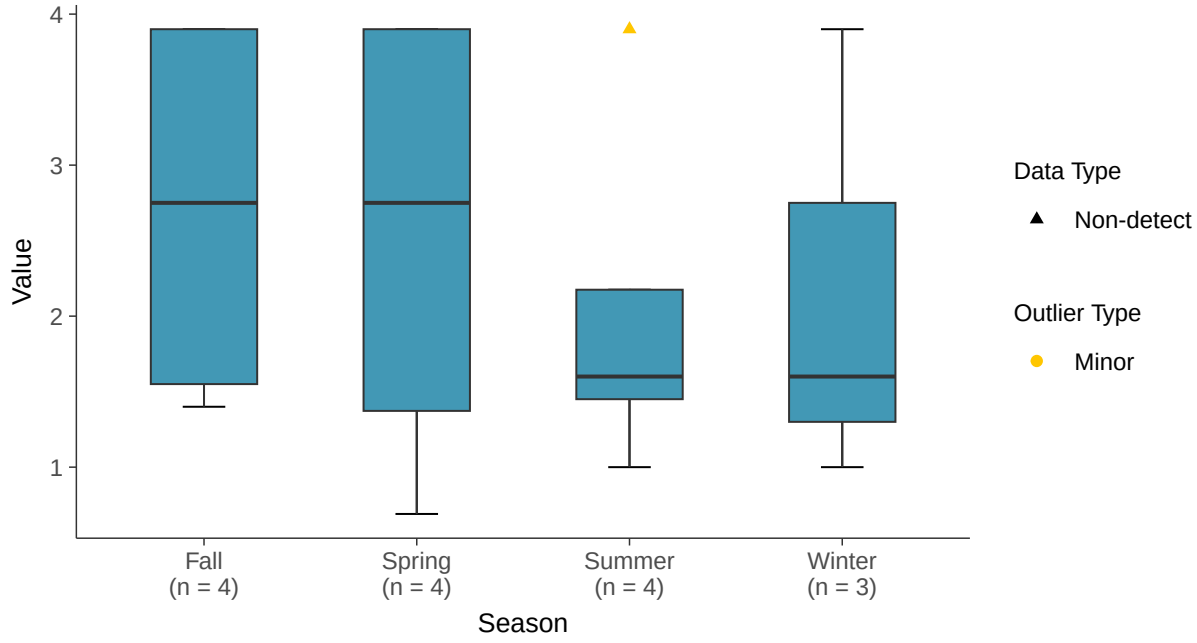
Boxplot

Vanadium, MW-11D (ug/L)



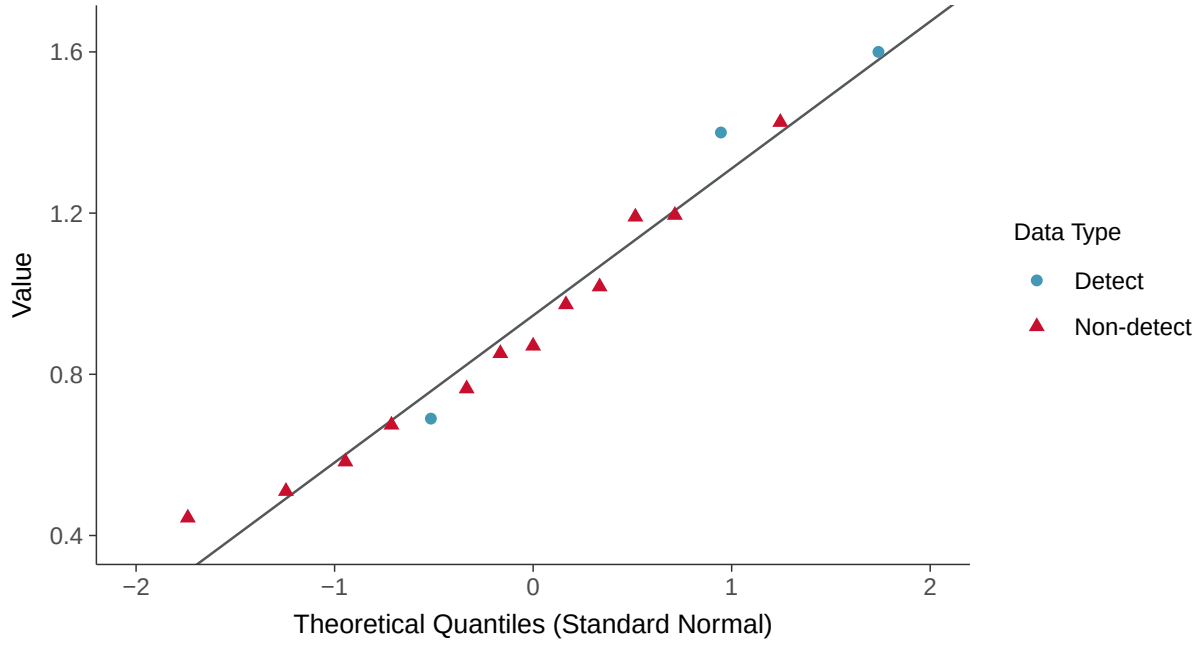
Boxplot by Season

Vanadium, MW-11D (ug/L)



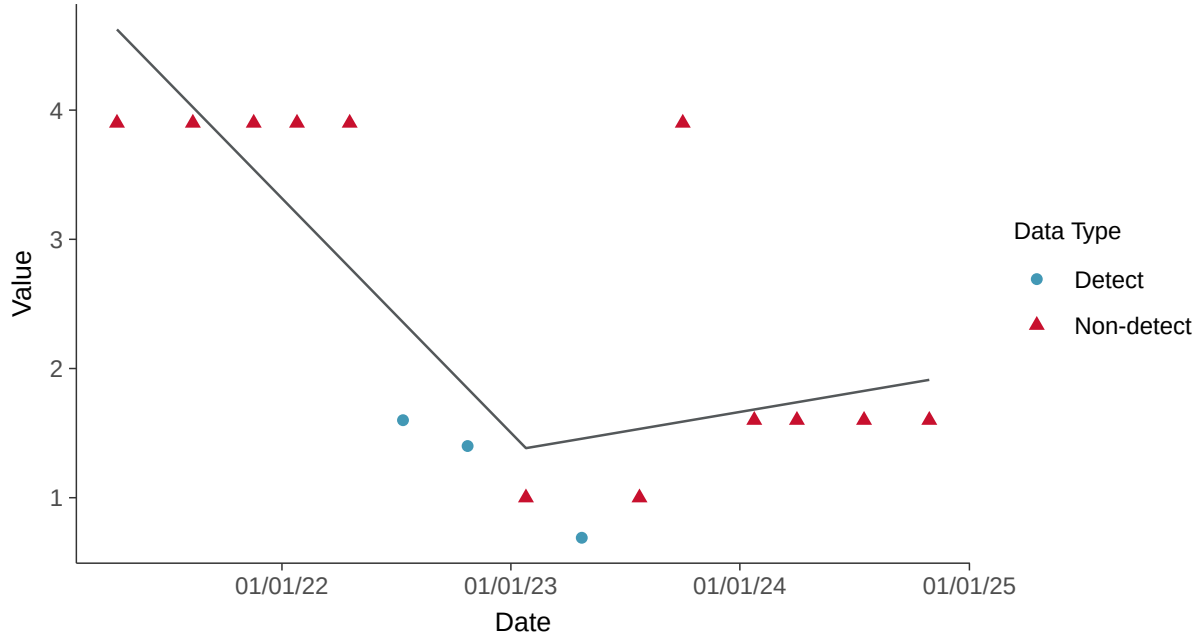
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-11D (ug/L)



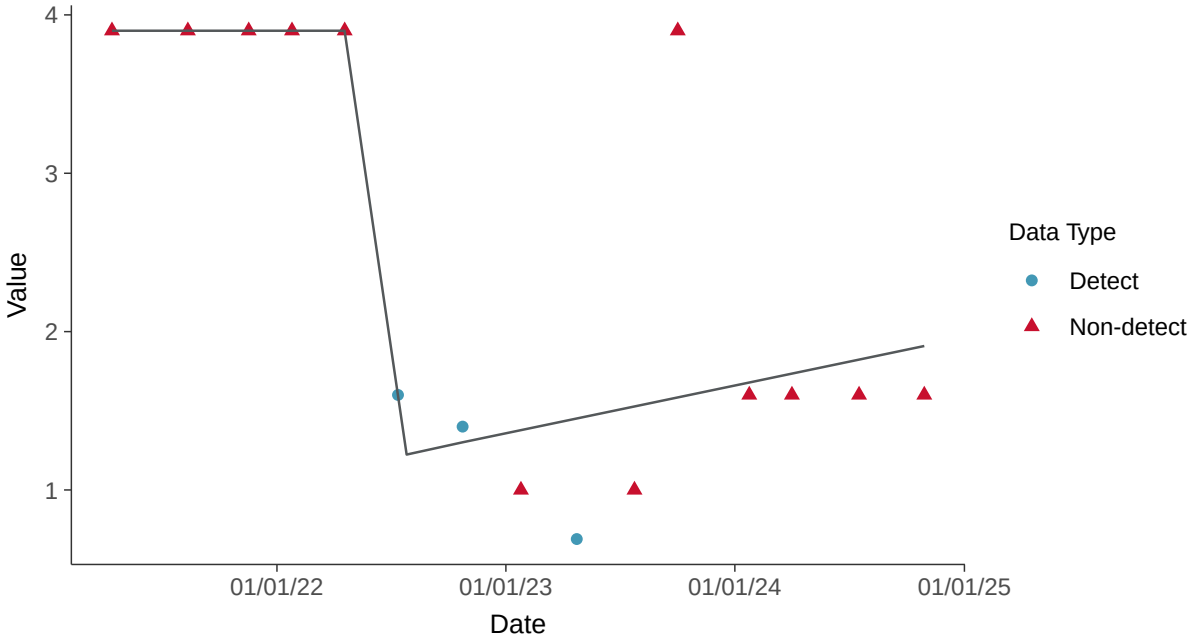
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-11D (ug/L)



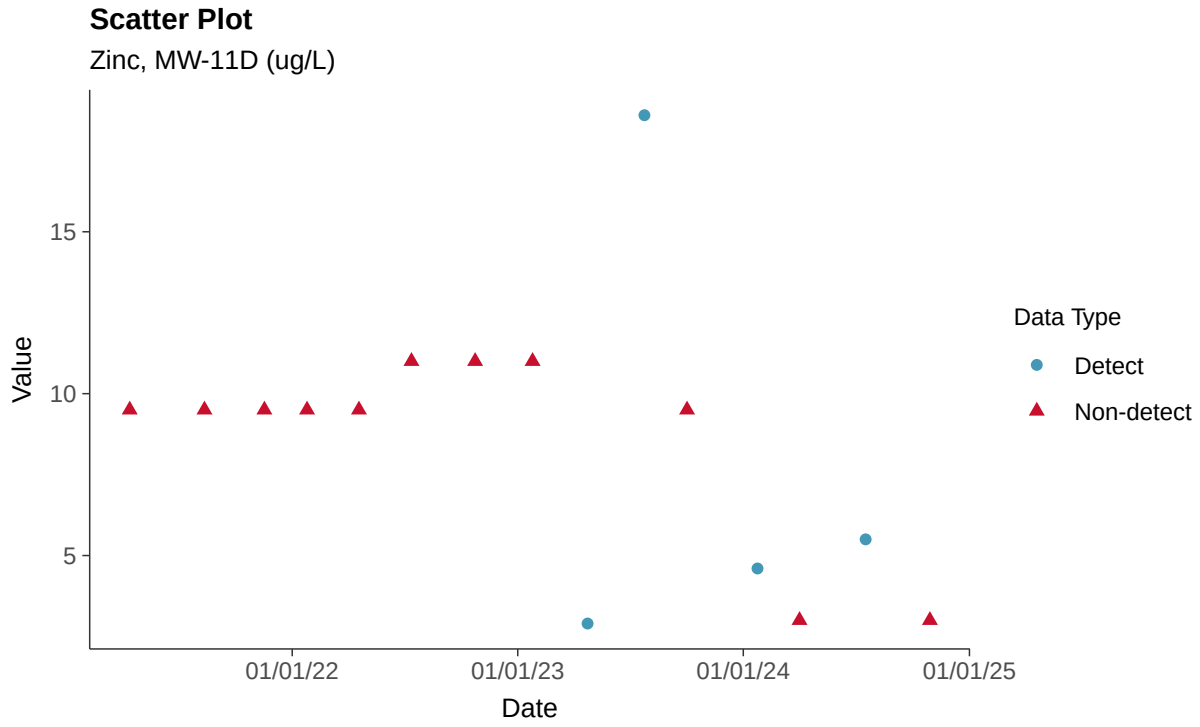
Trend Regression: Piecewise Linear-Linear-Linear

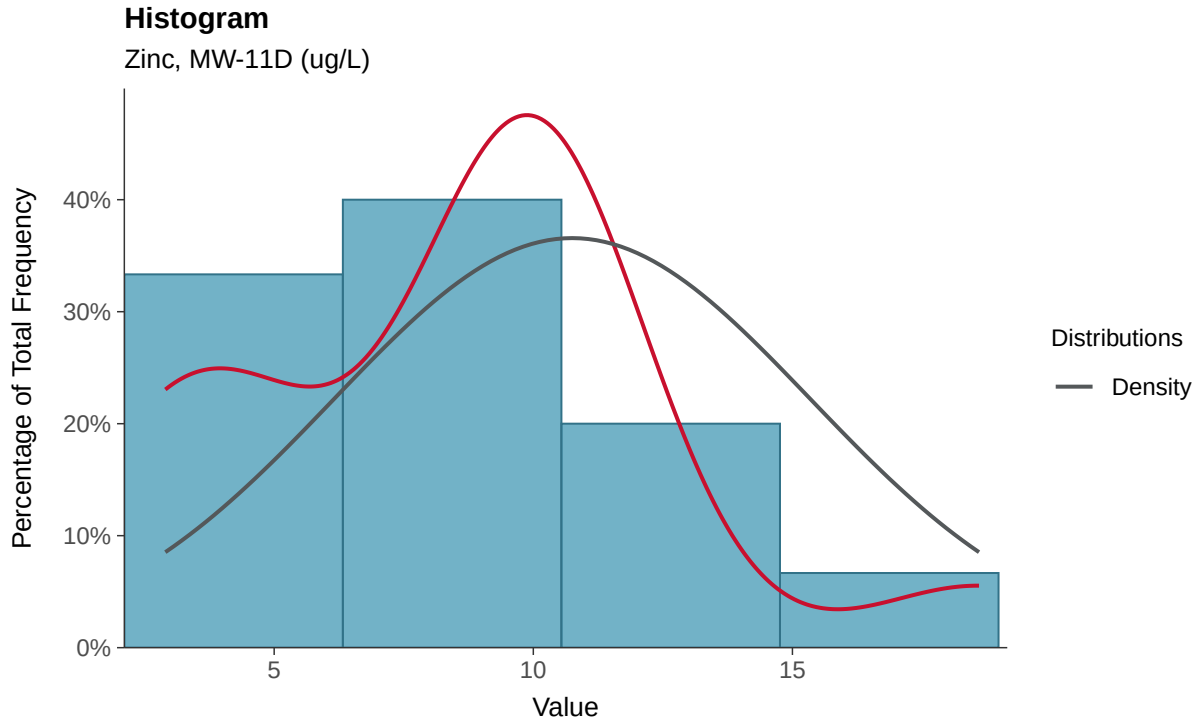
Vanadium, MW-11D (ug/L)



App. I Metals: Zinc, MW-11D

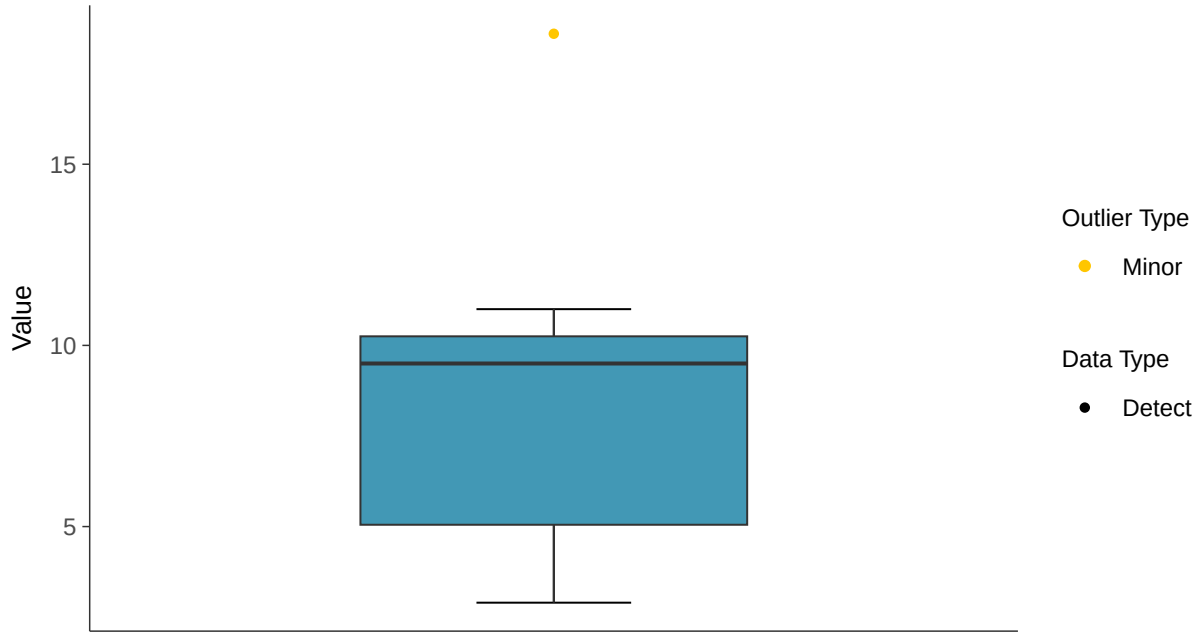
ID: 11_01_128





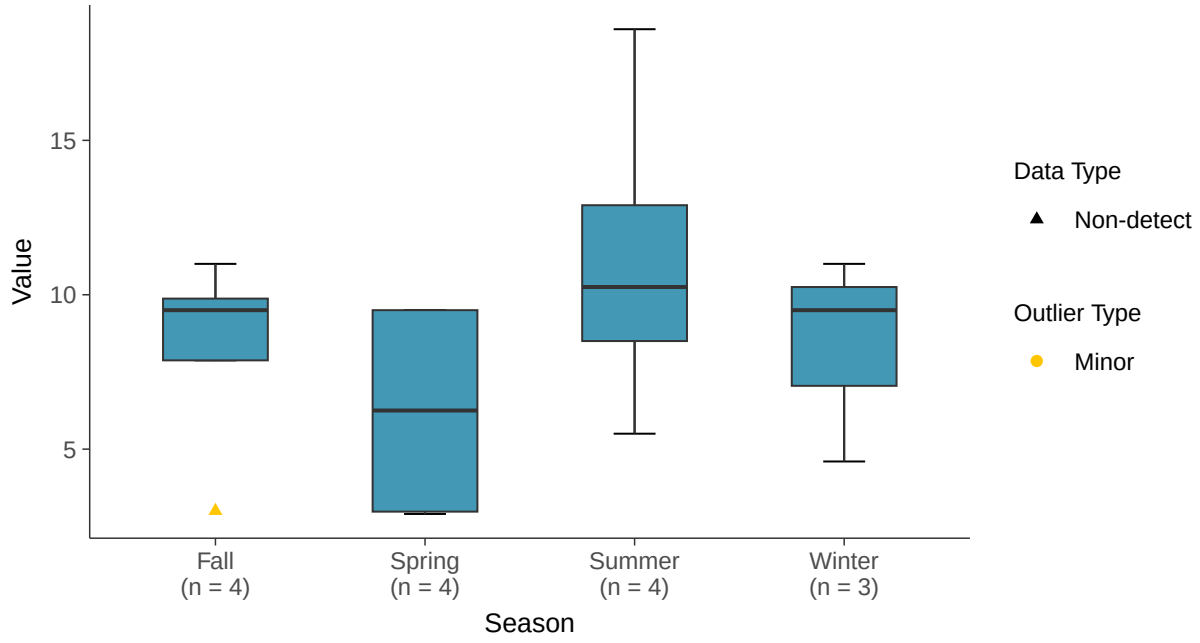
Boxplot

Zinc, MW-11D (ug/L)



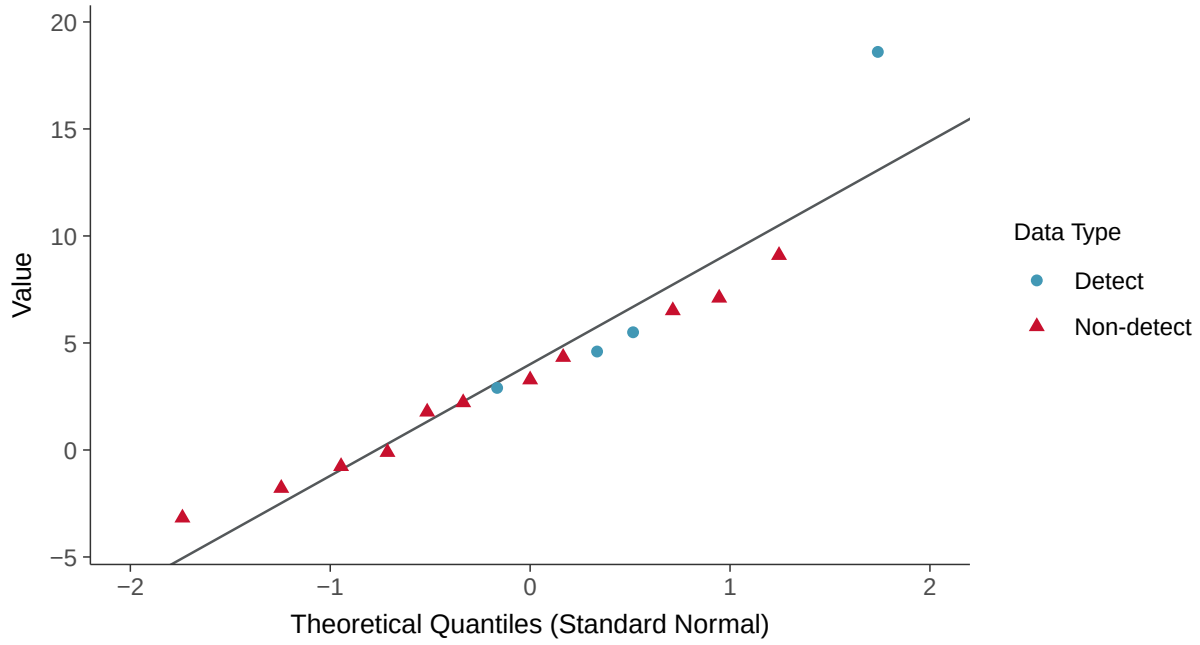
Boxplot by Season

Zinc, MW-11D (ug/L)



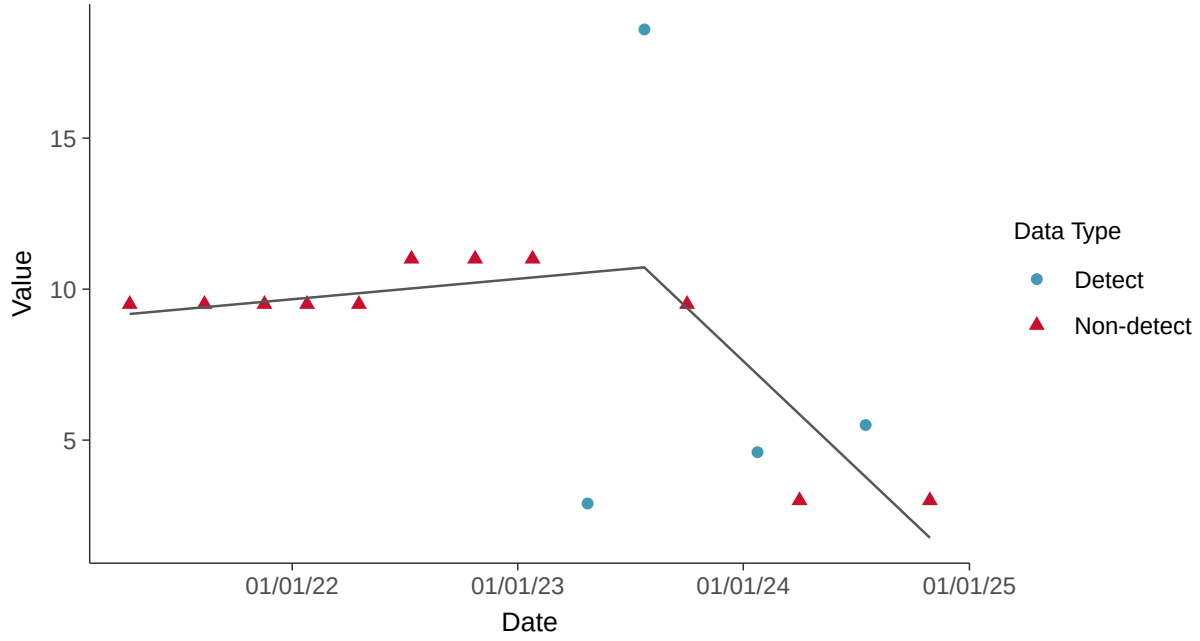
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-11D (ug/L)

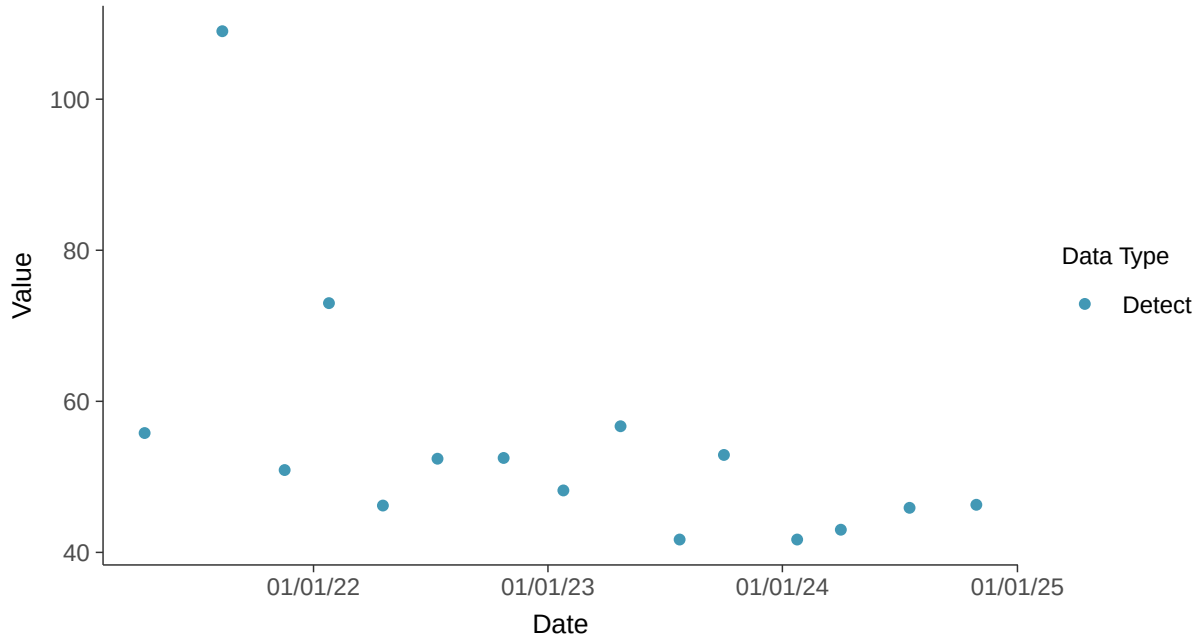


App. III: Boron, MW-11D

ID: 11_02_105

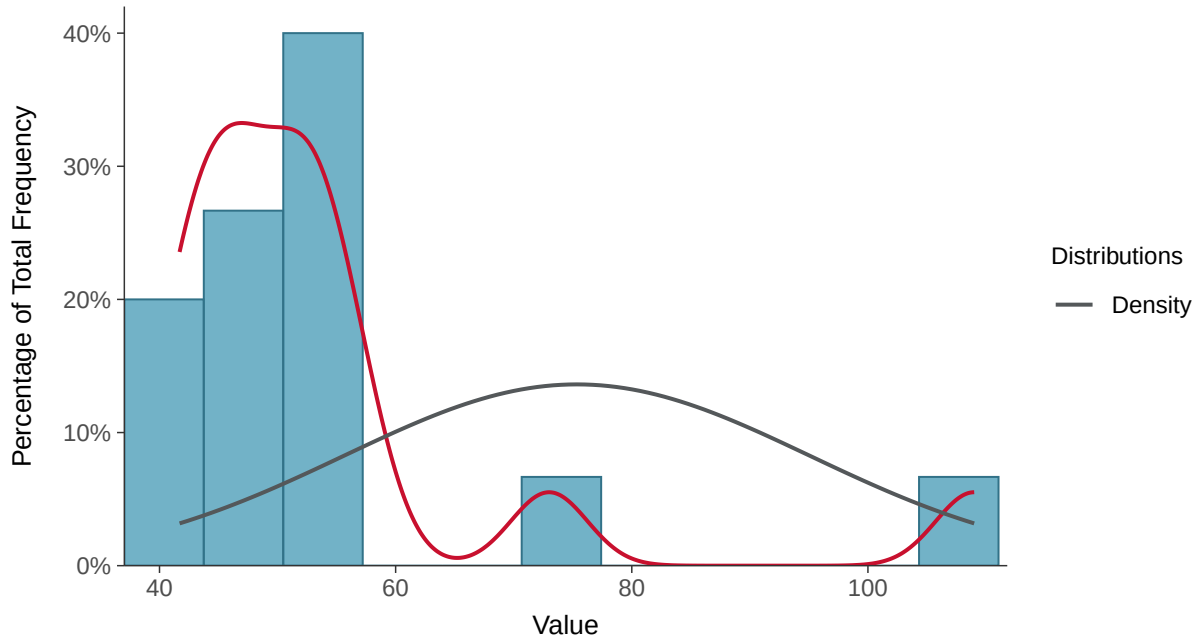
Scatter Plot

Boron, MW-11D (ug/L)



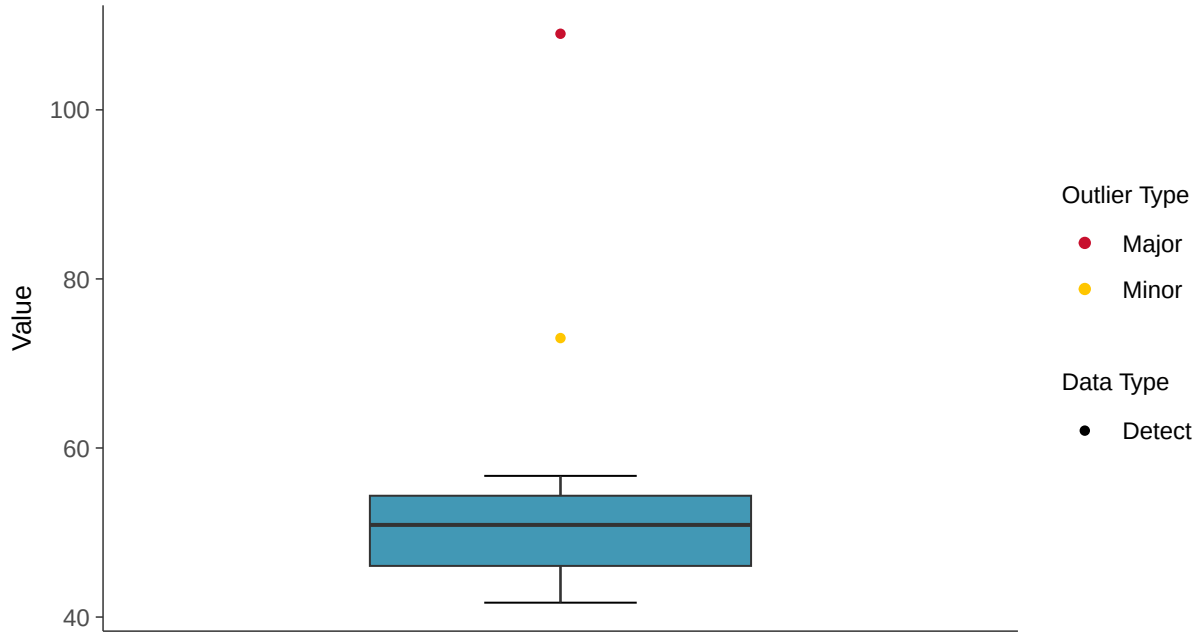
Histogram

Boron, MW-11D (ug/L)



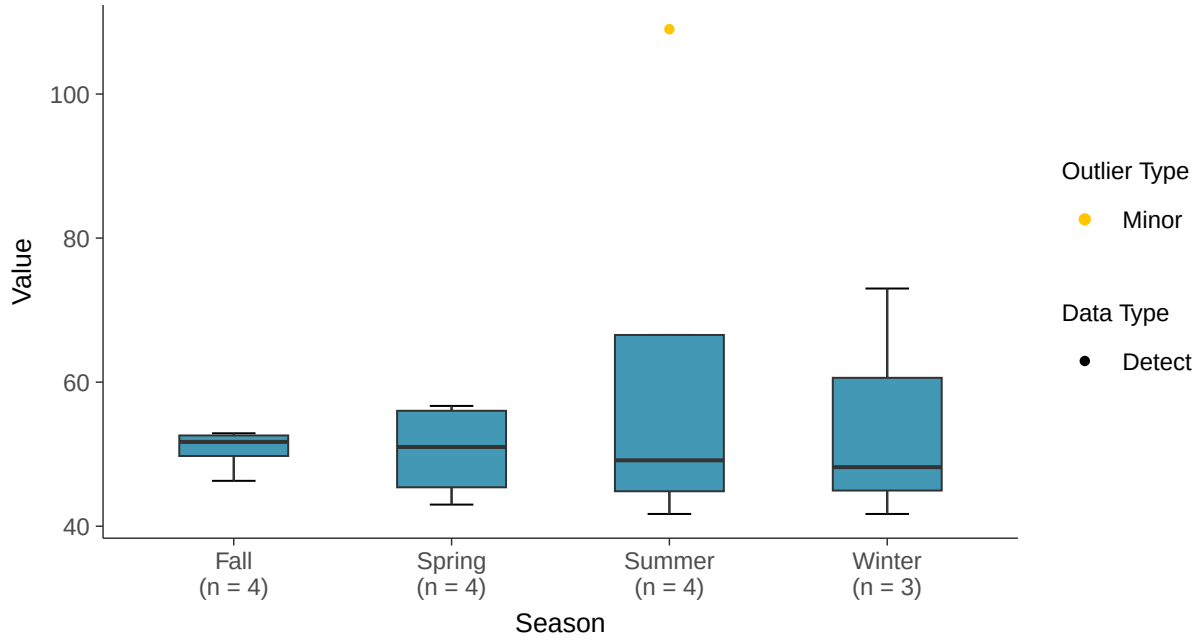
Boxplot

Boron, MW-11D (ug/L)



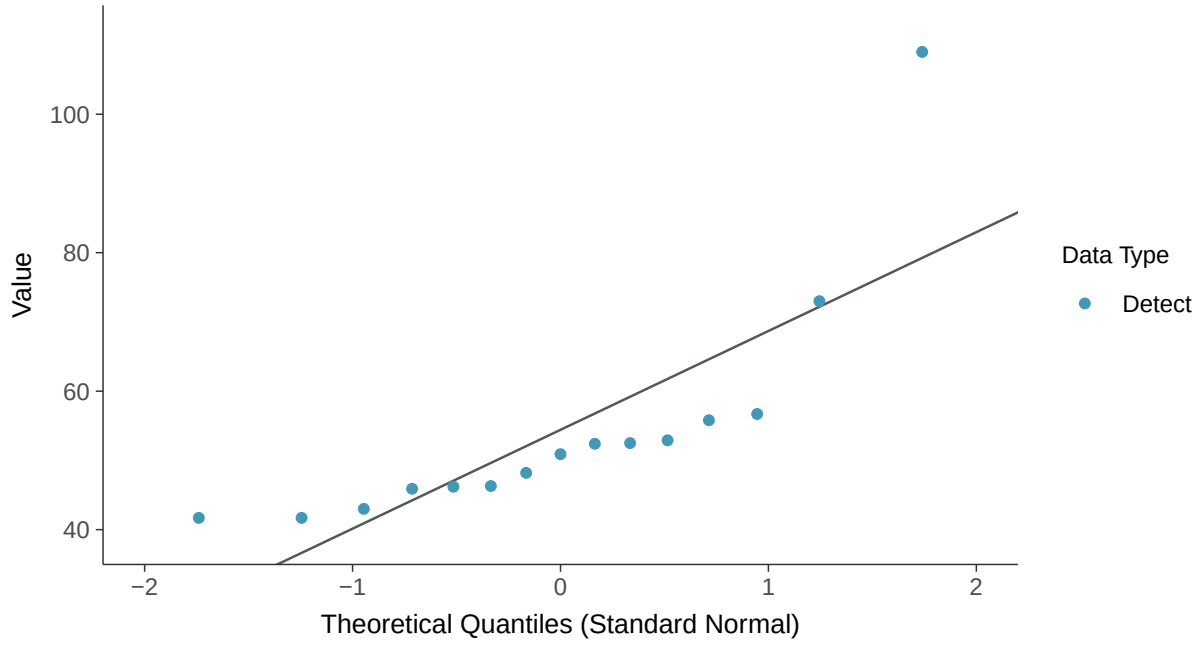
Boxplot by Season

Boron, MW-11D (ug/L)



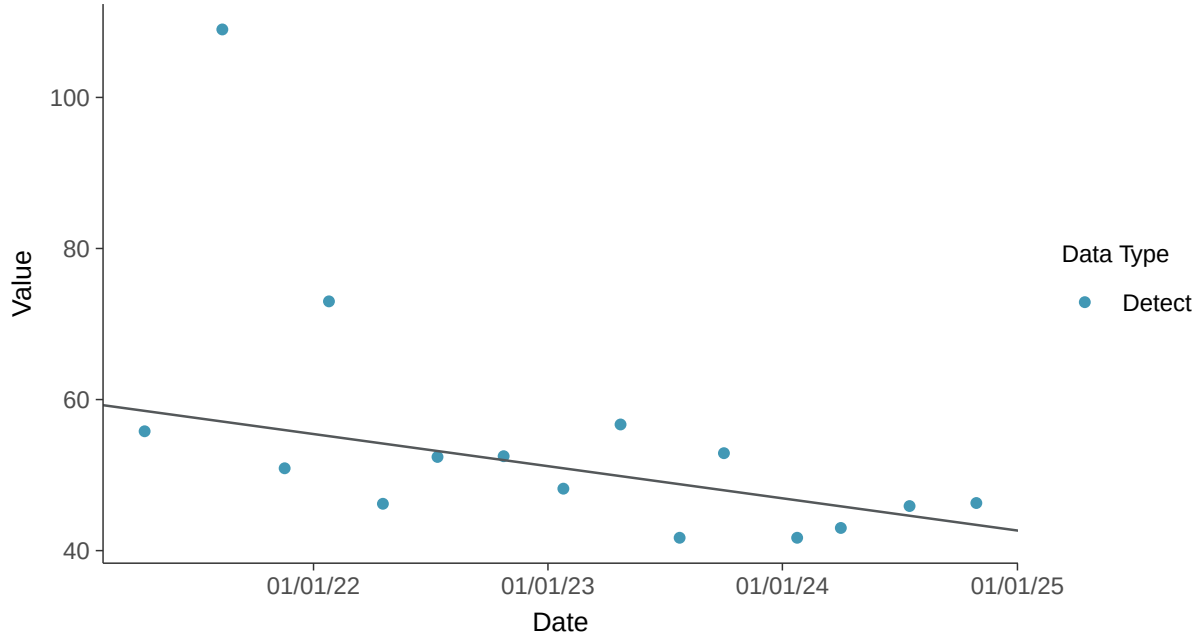
Normal Q-Q plot

Boron, MW-11D (ug/L)



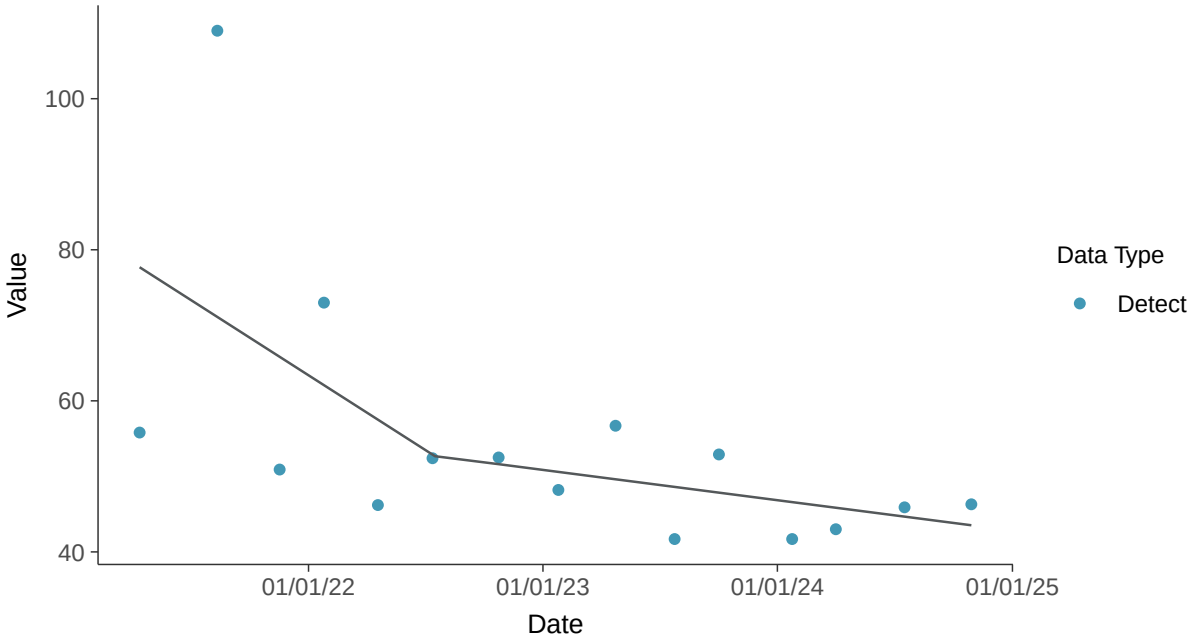
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Boron, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Boron, MW-11D (ug/L)

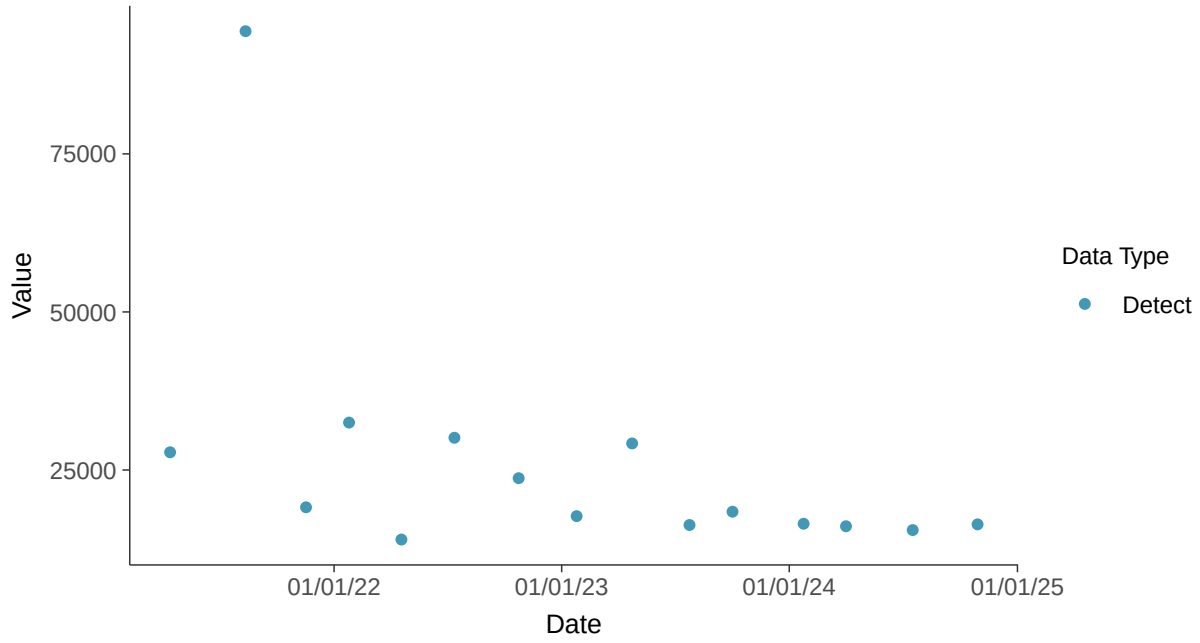


App. III: Calcium, MW-11D

ID: 11_02_107

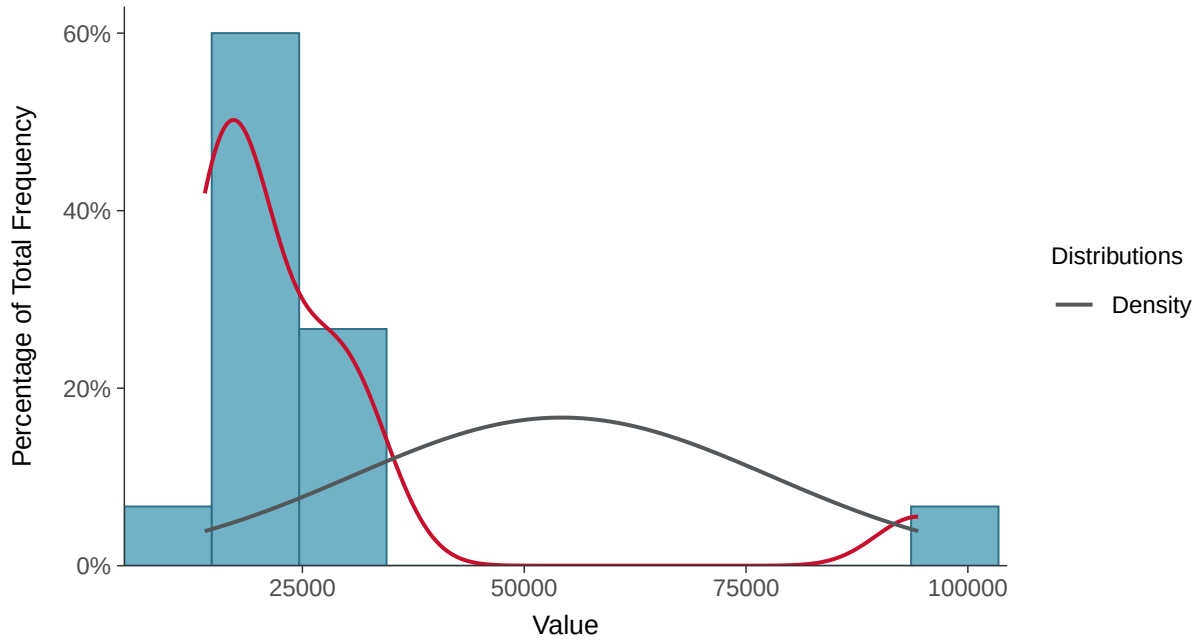
Scatter Plot

Calcium, MW-11D (ug/L)



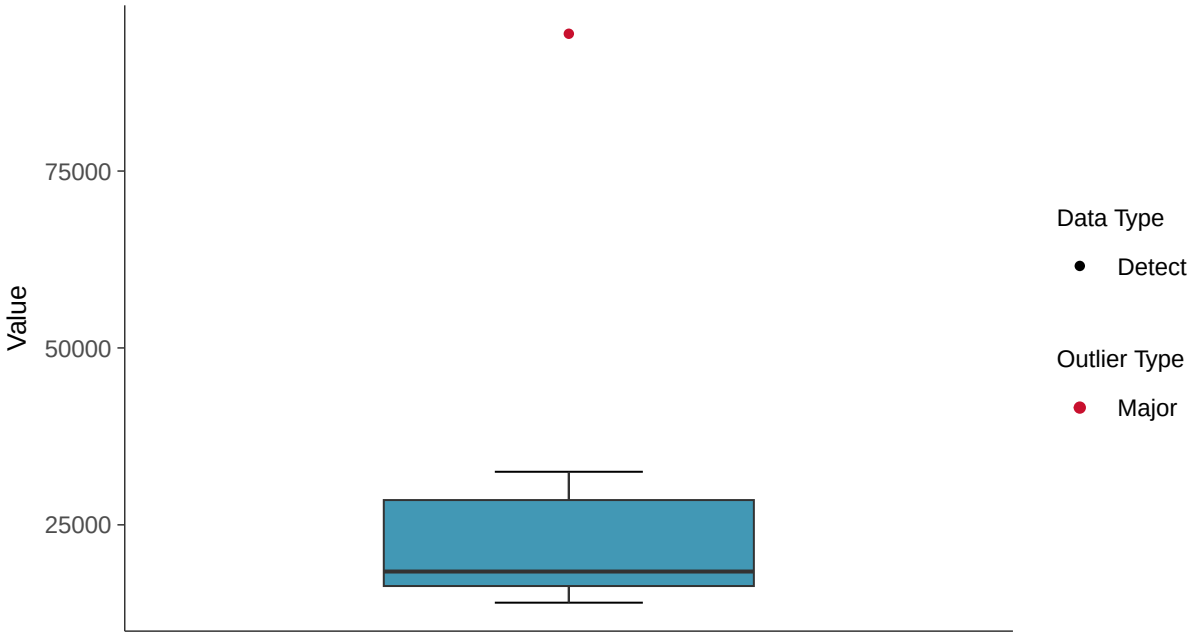
Histogram

Calcium, MW-11D (ug/L)



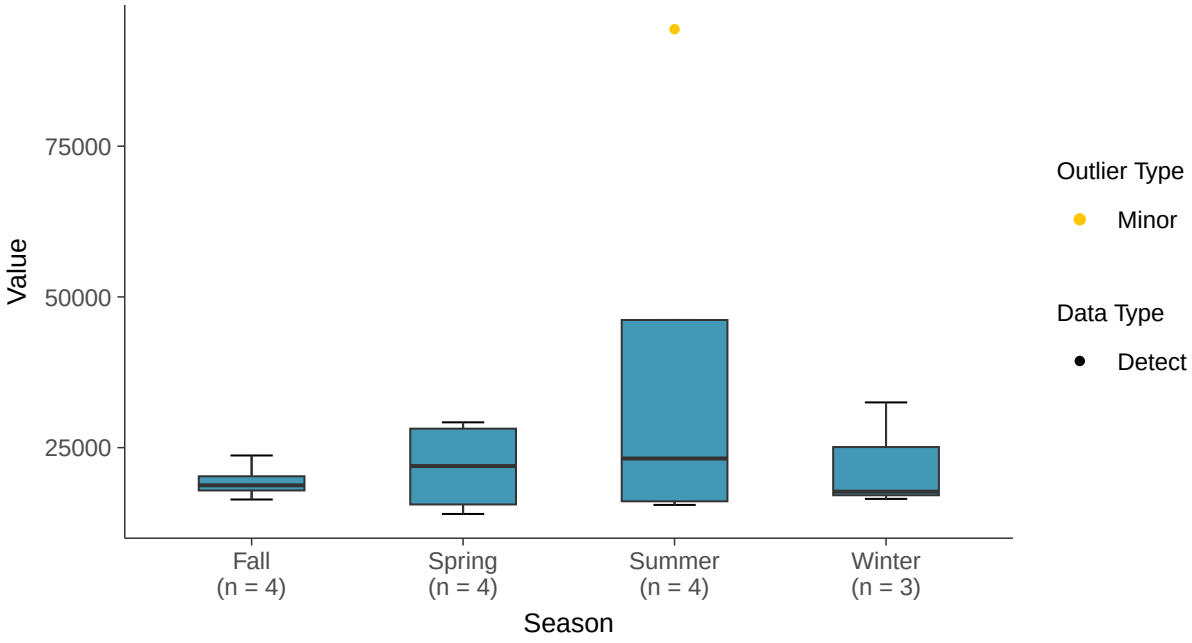
Boxplot

Calcium, MW-11D (ug/L)



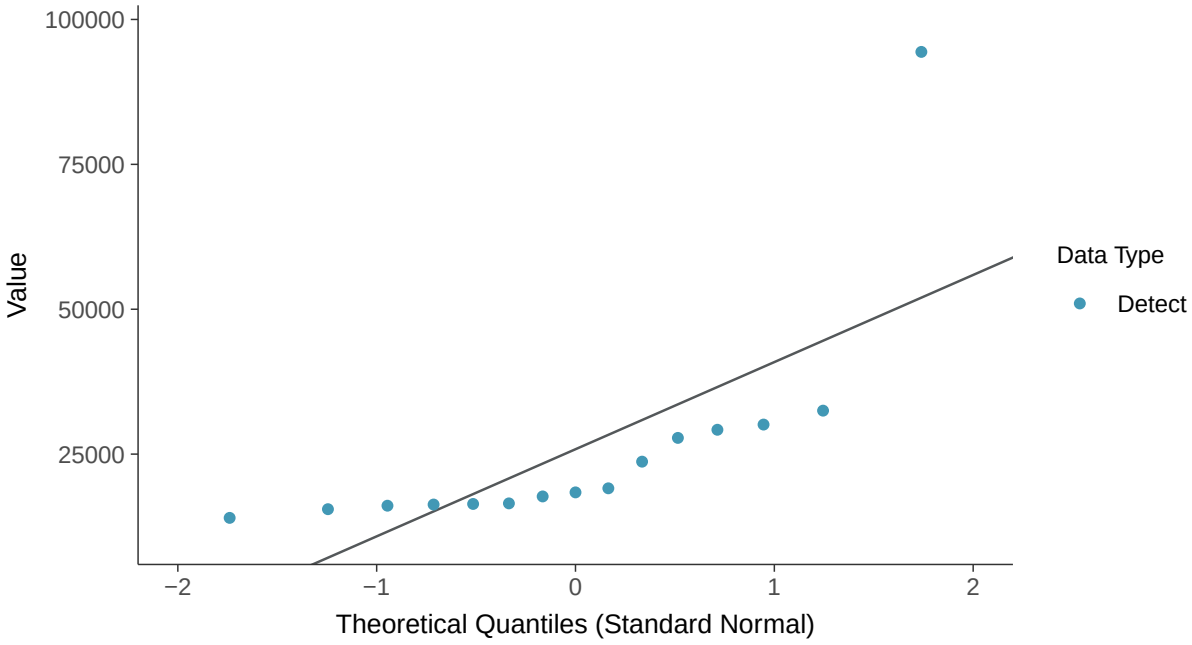
Boxplot by Season

Calcium, MW-11D (ug/L)



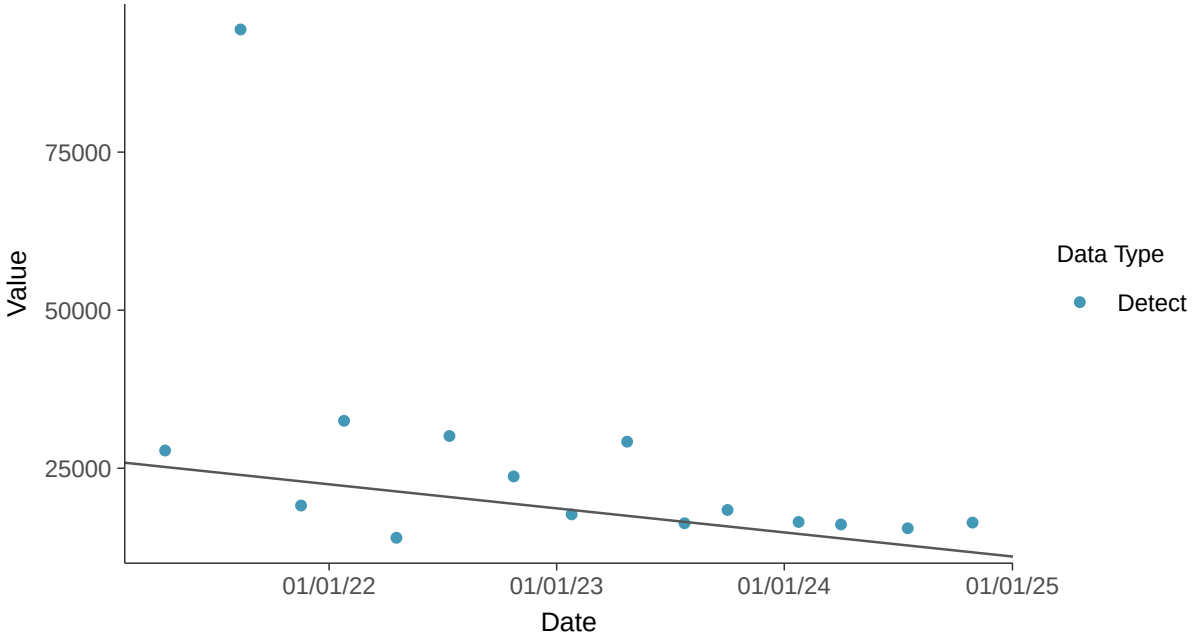
Normal Q-Q plot

Calcium, MW-11D (ug/L)



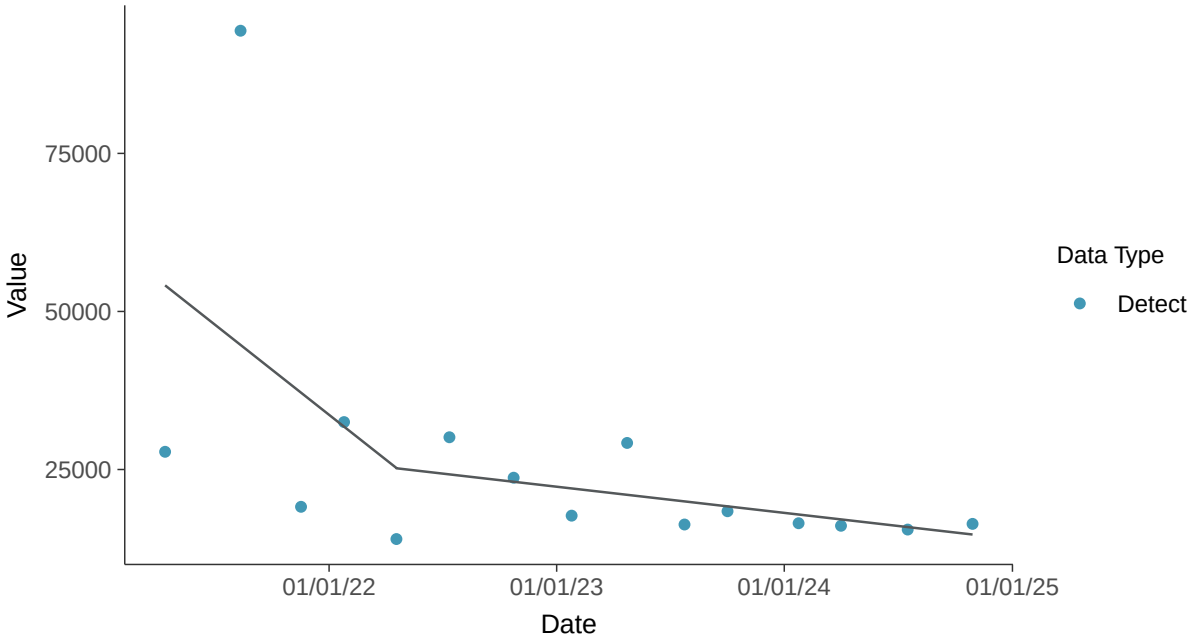
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, MW-11D (ug/L)

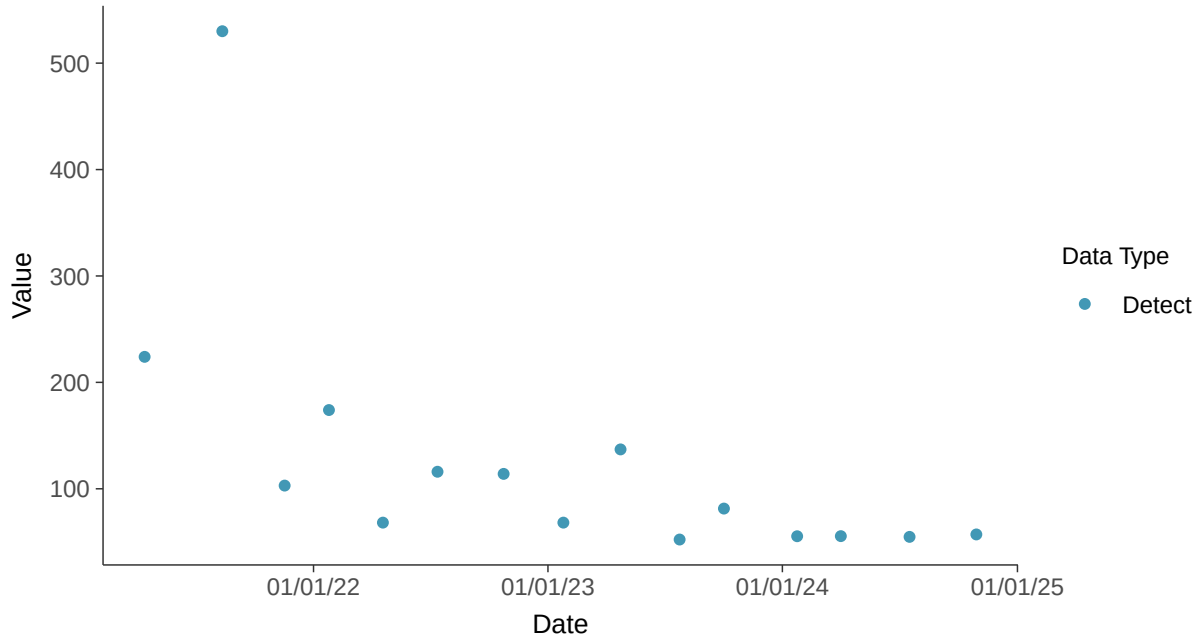


App. III: Chloride, MW-11D

ID: 11_02_108

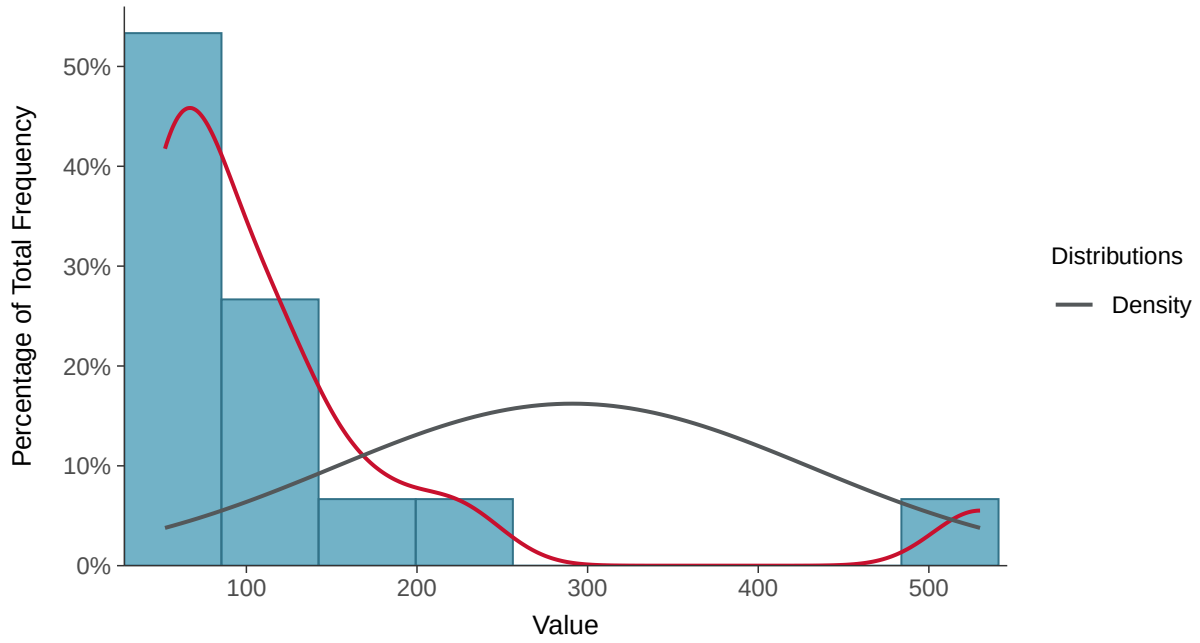
Scatter Plot

Chloride, MW-11D (mg/L)



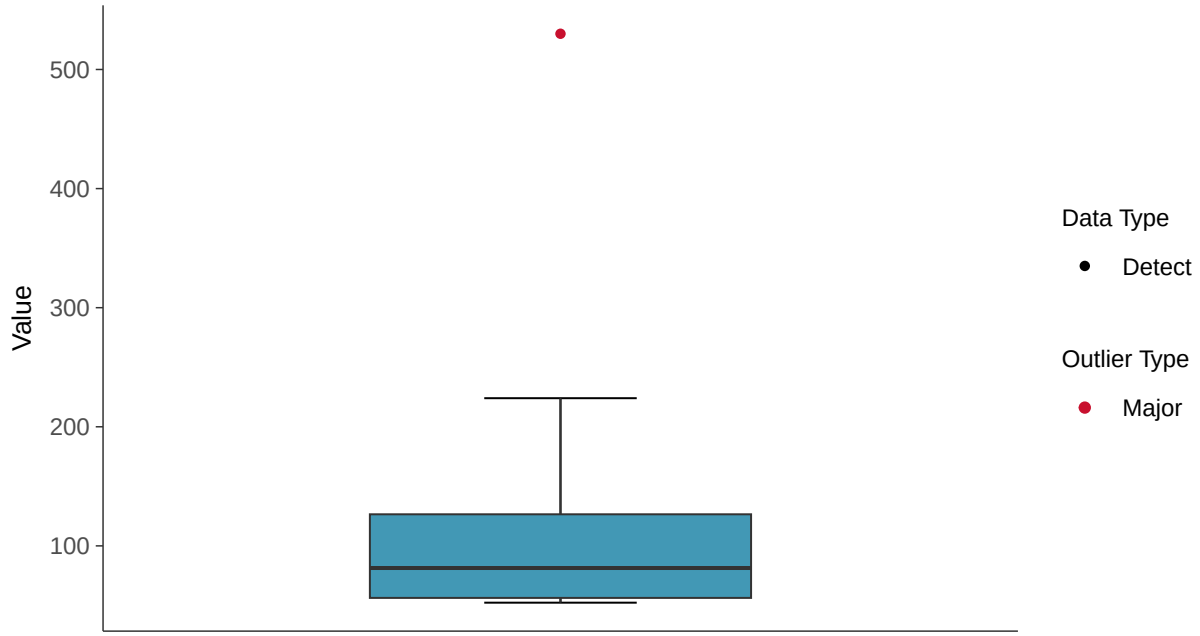
Histogram

Chloride, MW-11D (mg/L)



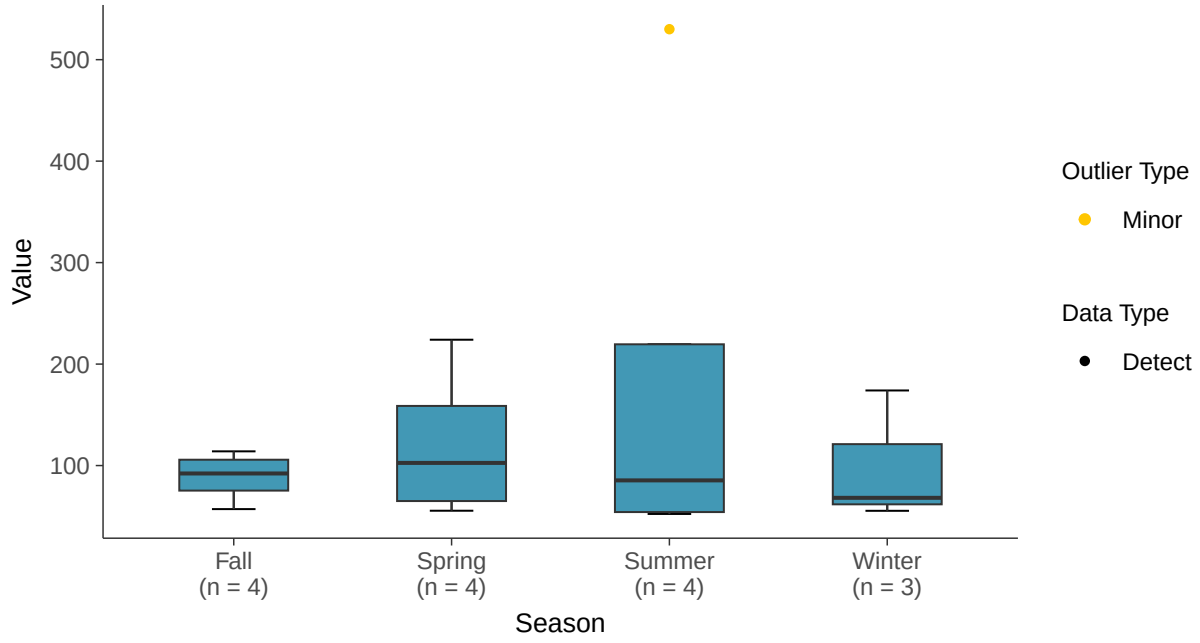
Boxplot

Chloride, MW-11D (mg/L)



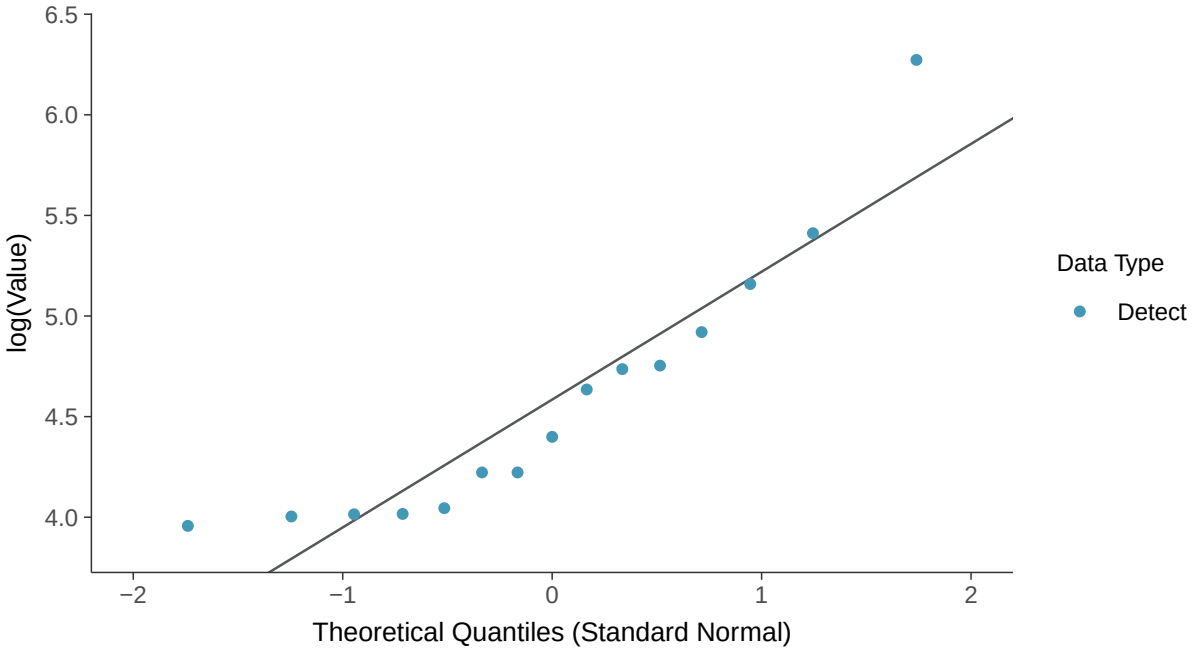
Boxplot by Season

Chloride, MW-11D (mg/L)



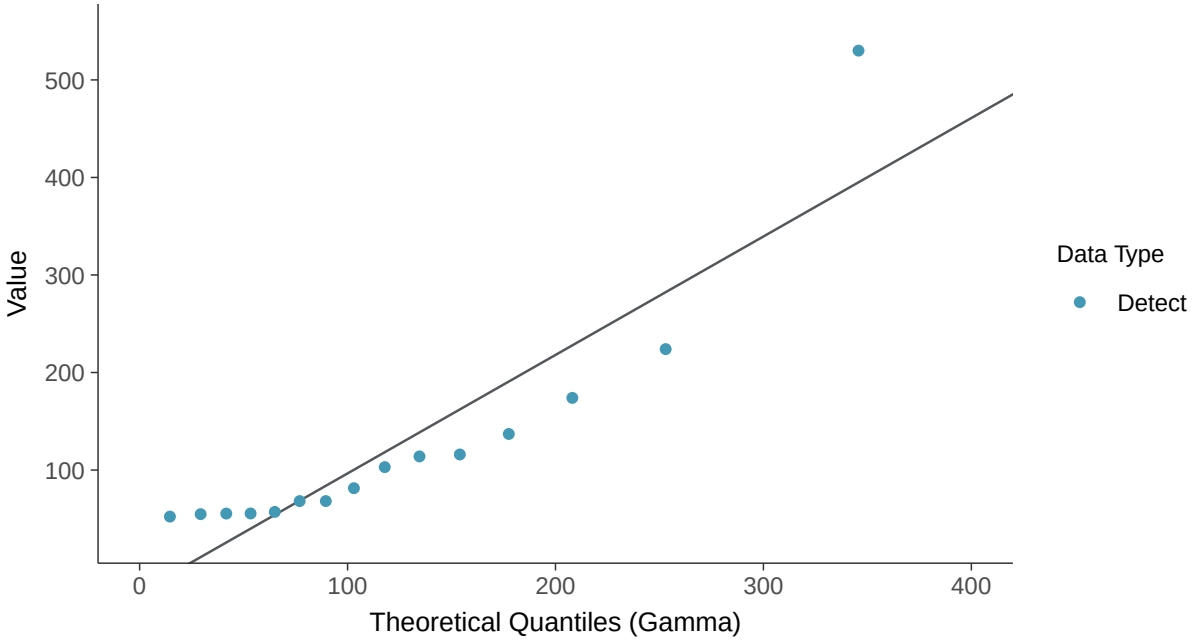
Lognormal Q-Q plot

Chloride, MW-11D (mg/L)



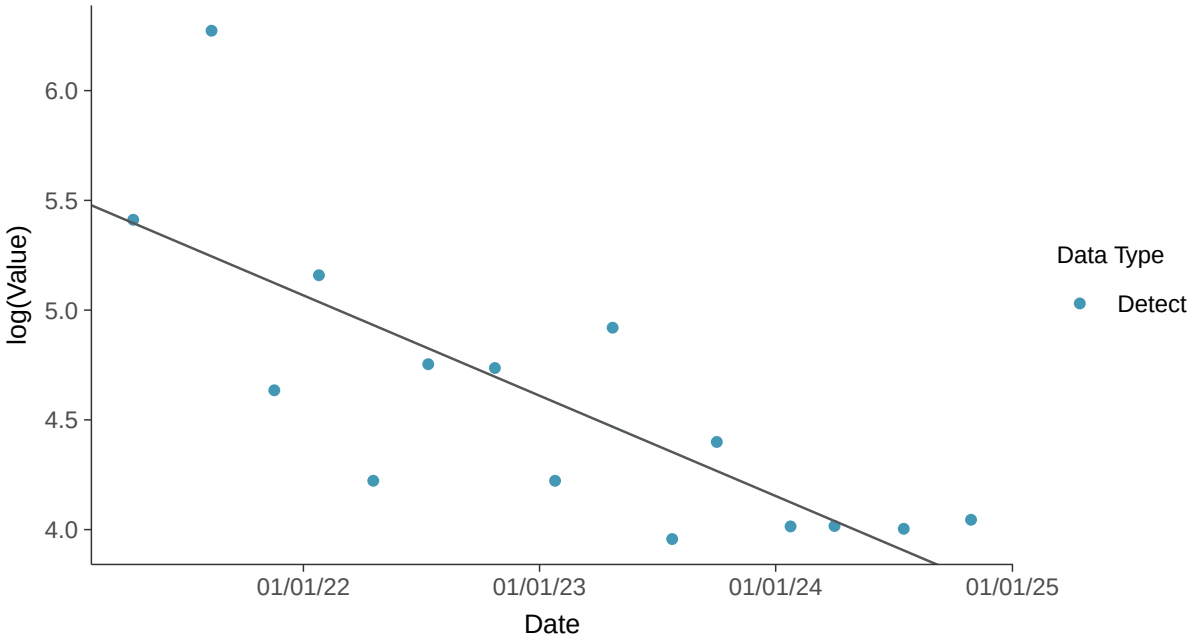
Gamma Q-Q plot

Chloride, MW-11D (mg/L)



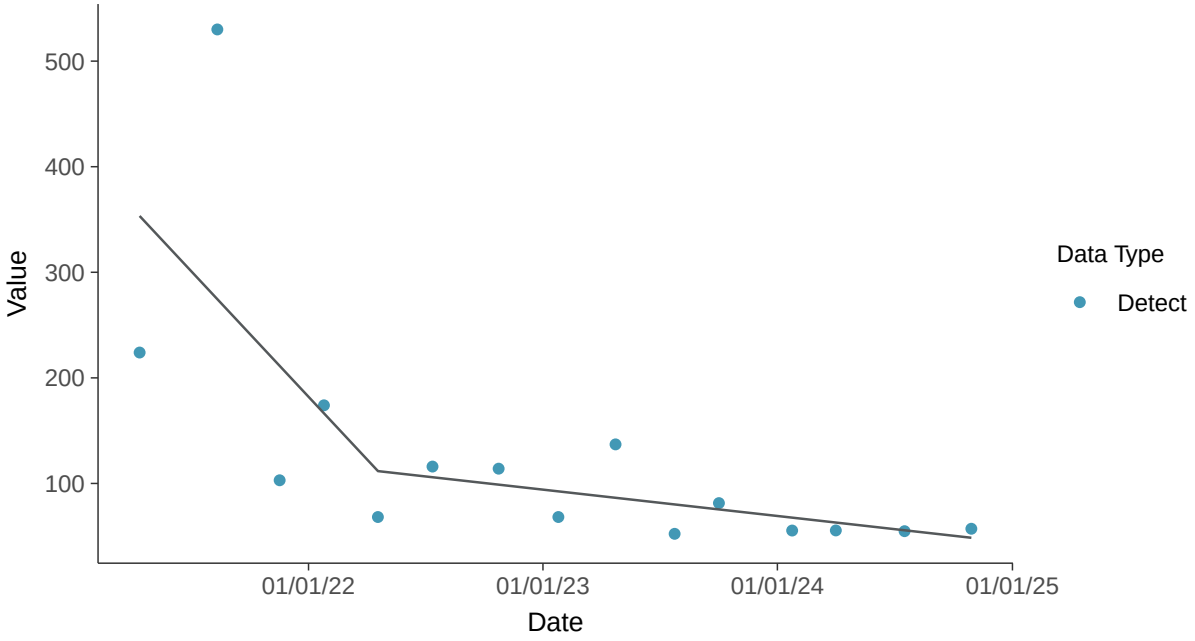
Trend Regression: Lognormal MLE

Chloride, MW-11D (mg/L)



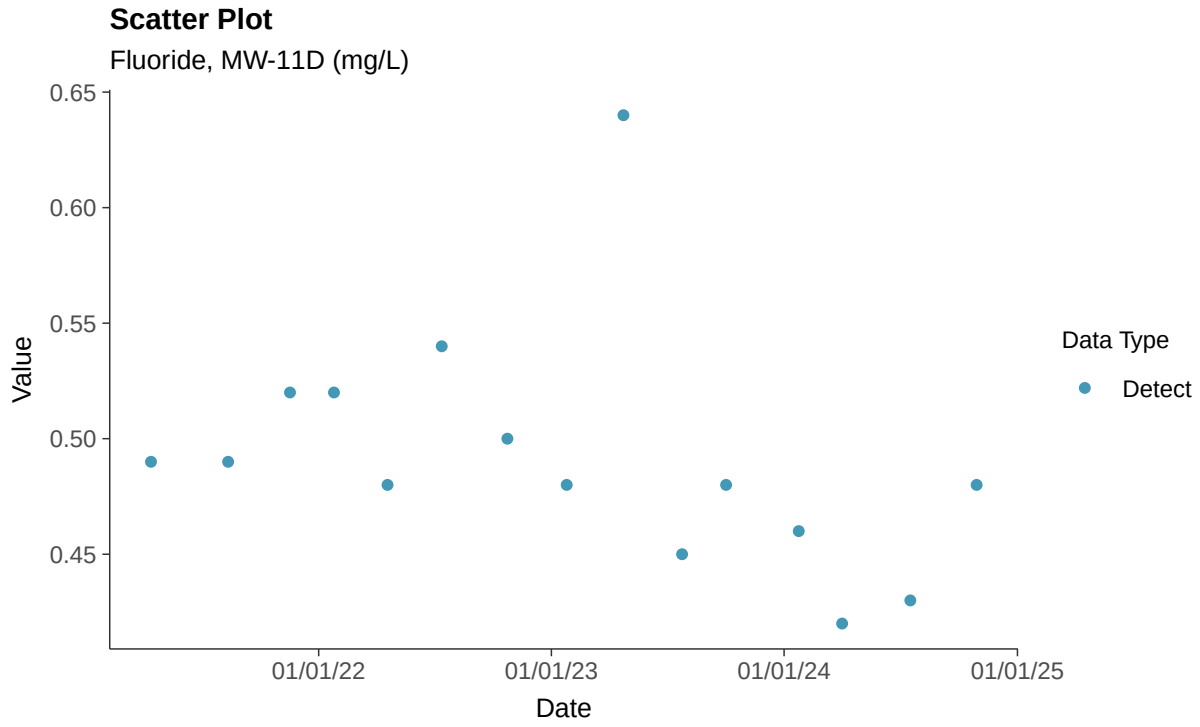
Trend Regression: Piecewise Linear-Linear

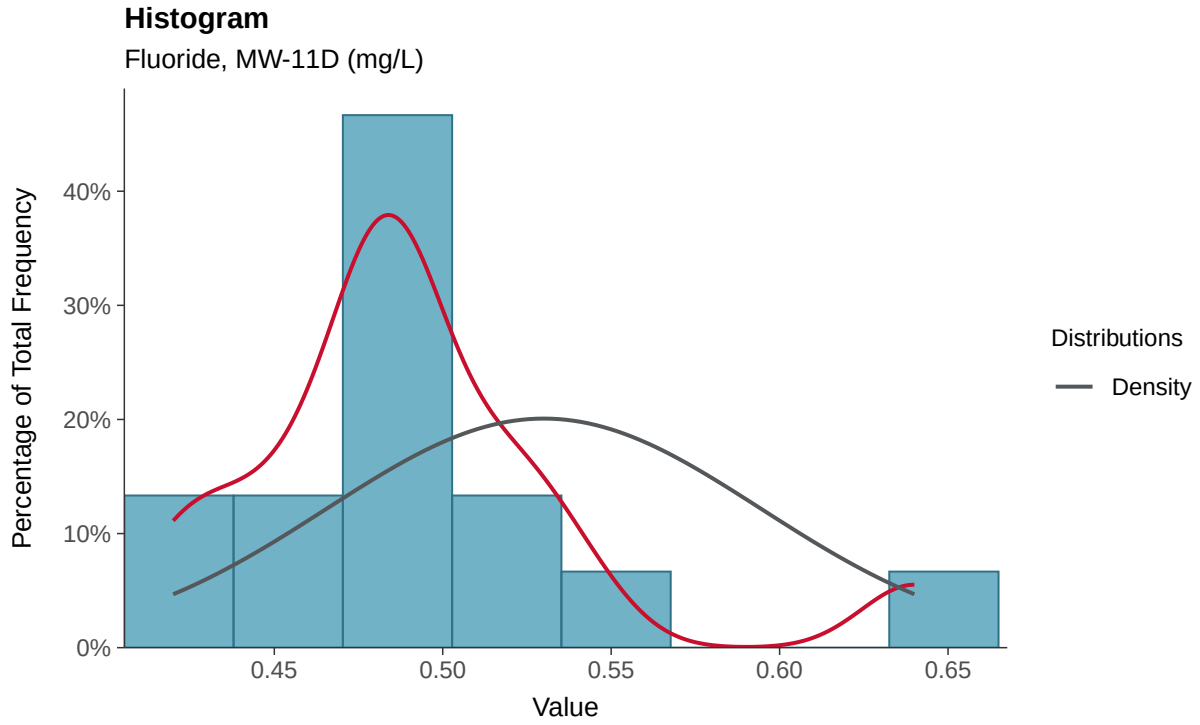
Chloride, MW-11D (mg/L)



App. III: Fluoride, MW-11D

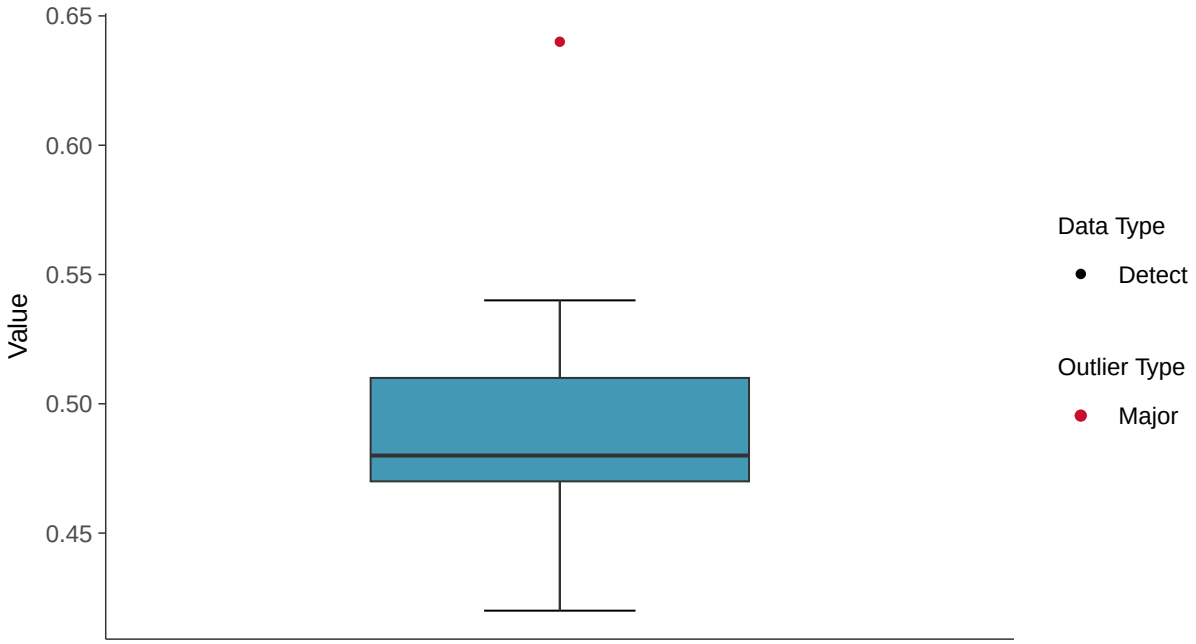
ID: 11_02_112





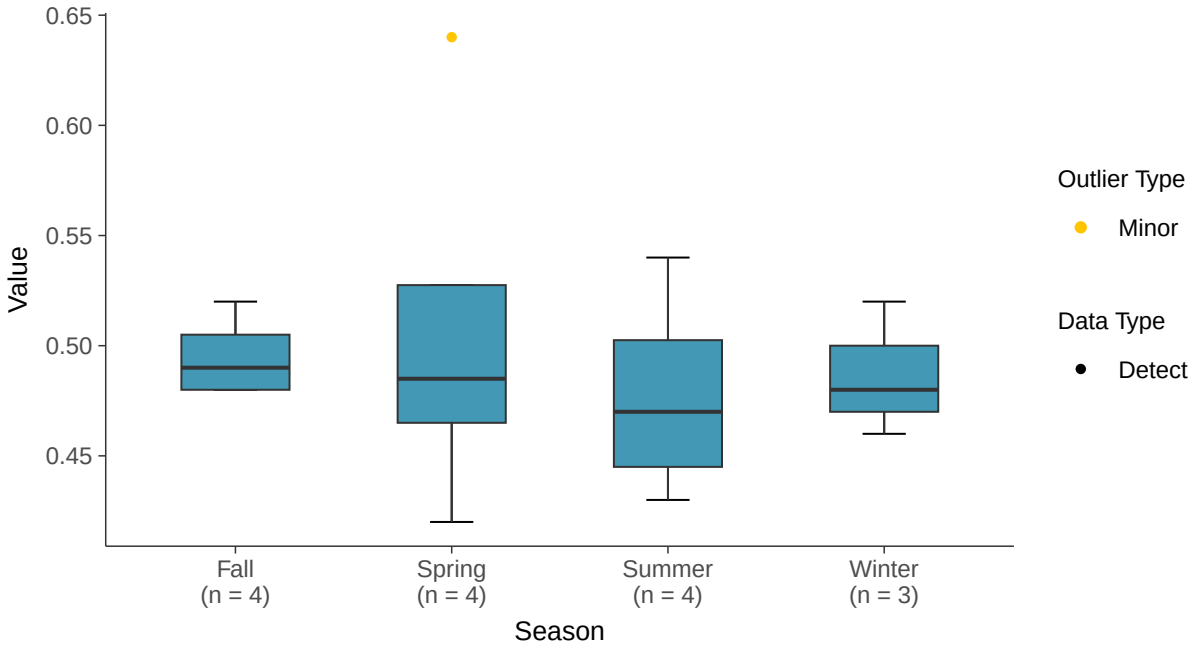
Boxplot

Fluoride, MW-11D (mg/L)



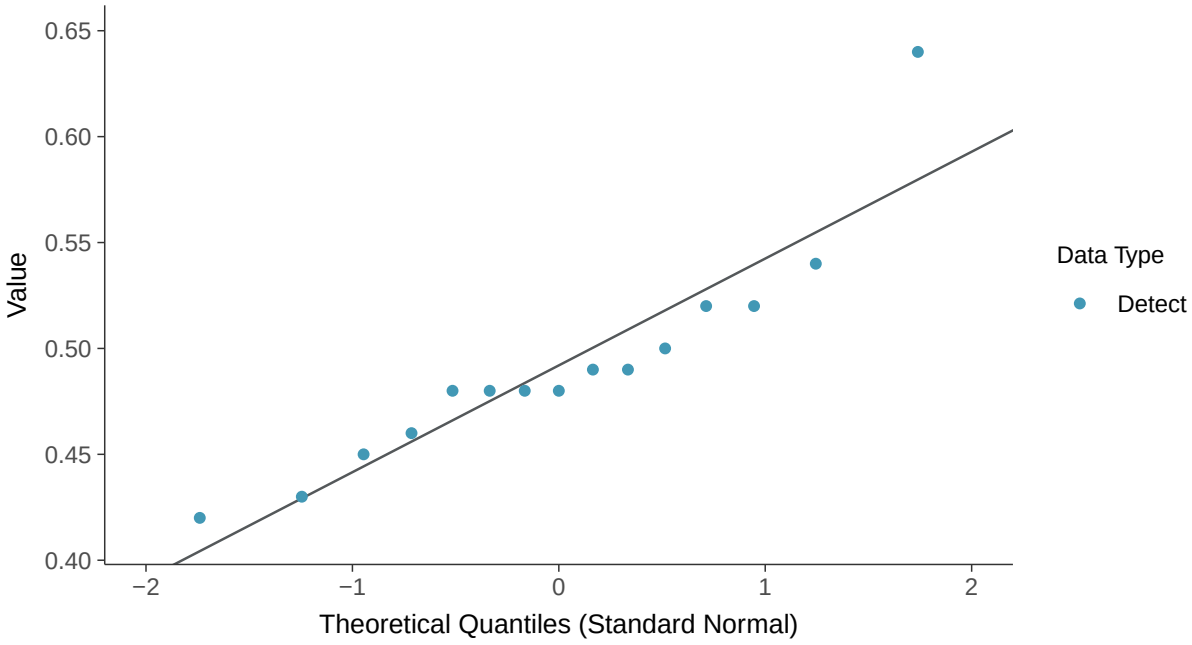
Boxplot by Season

Fluoride, MW-11D (mg/L)



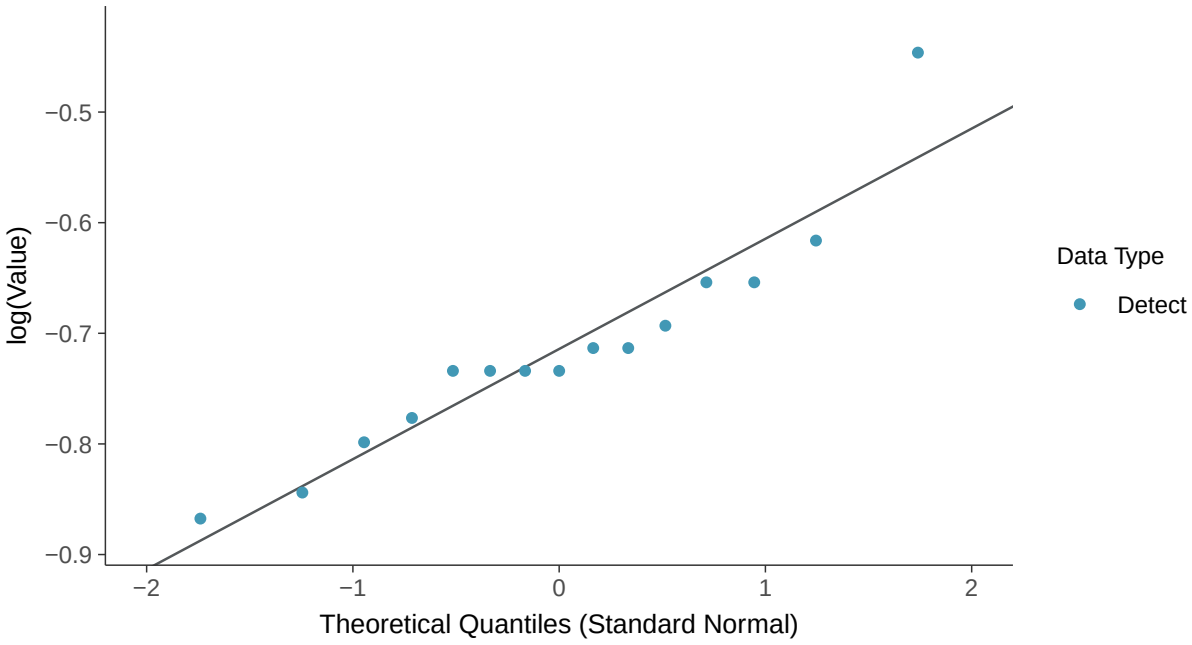
Normal Q-Q plot

Fluoride, MW-11D (mg/L)



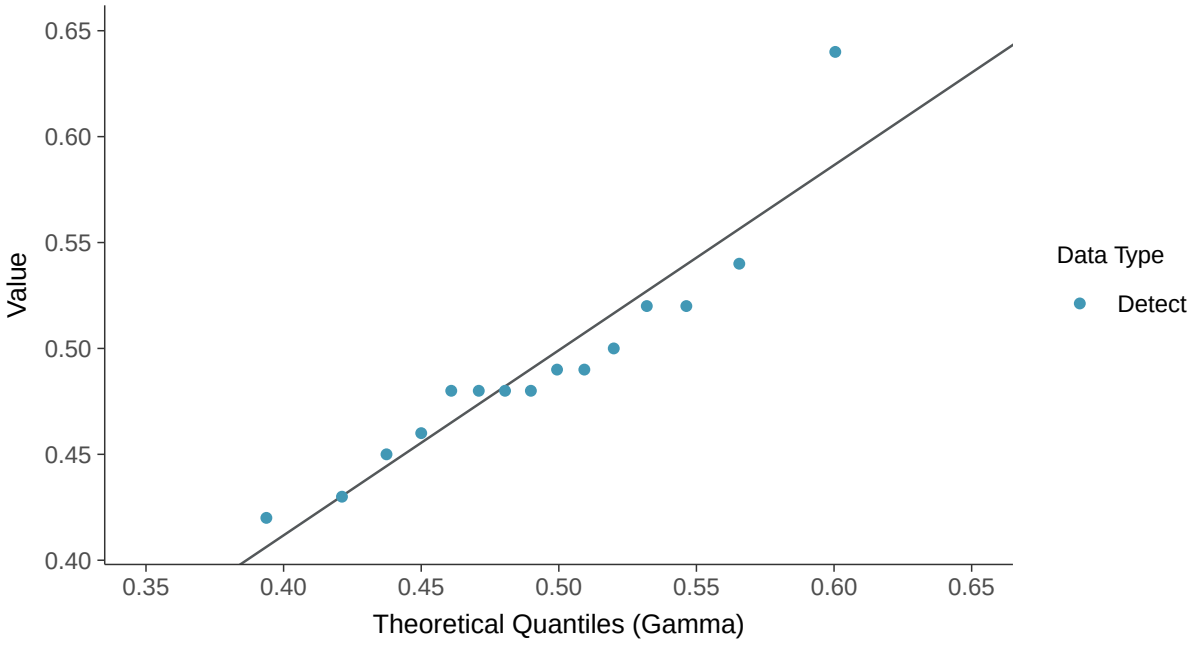
Lognormal Q-Q plot

Fluoride, MW-11D (mg/L)



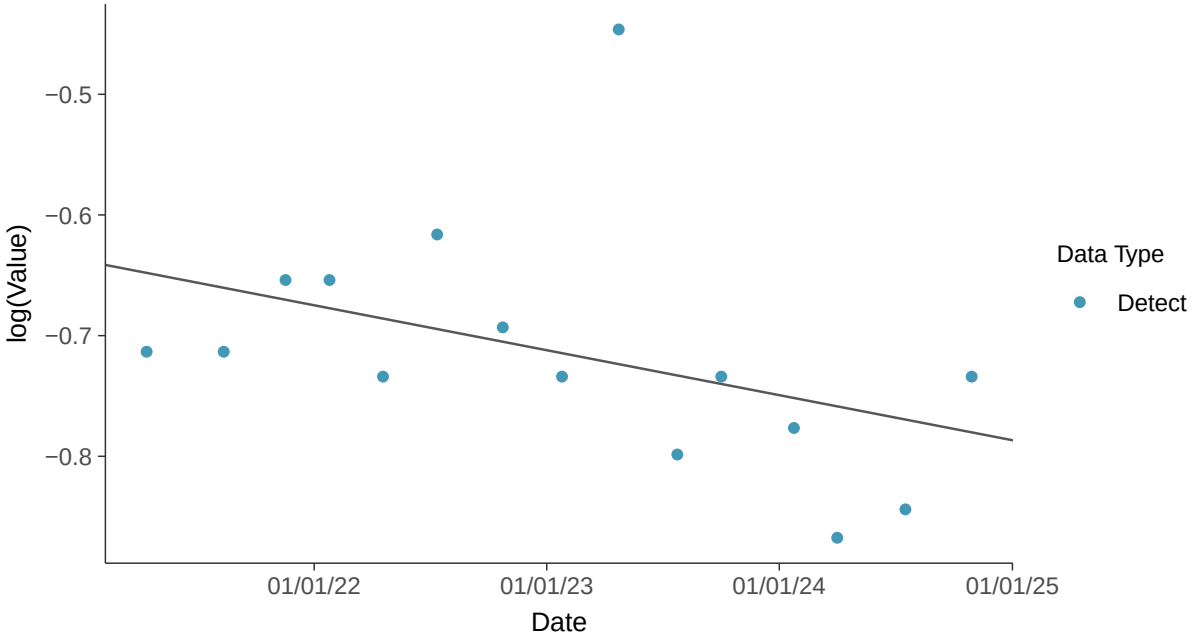
Gamma Q-Q plot

Fluoride, MW-11D (mg/L)



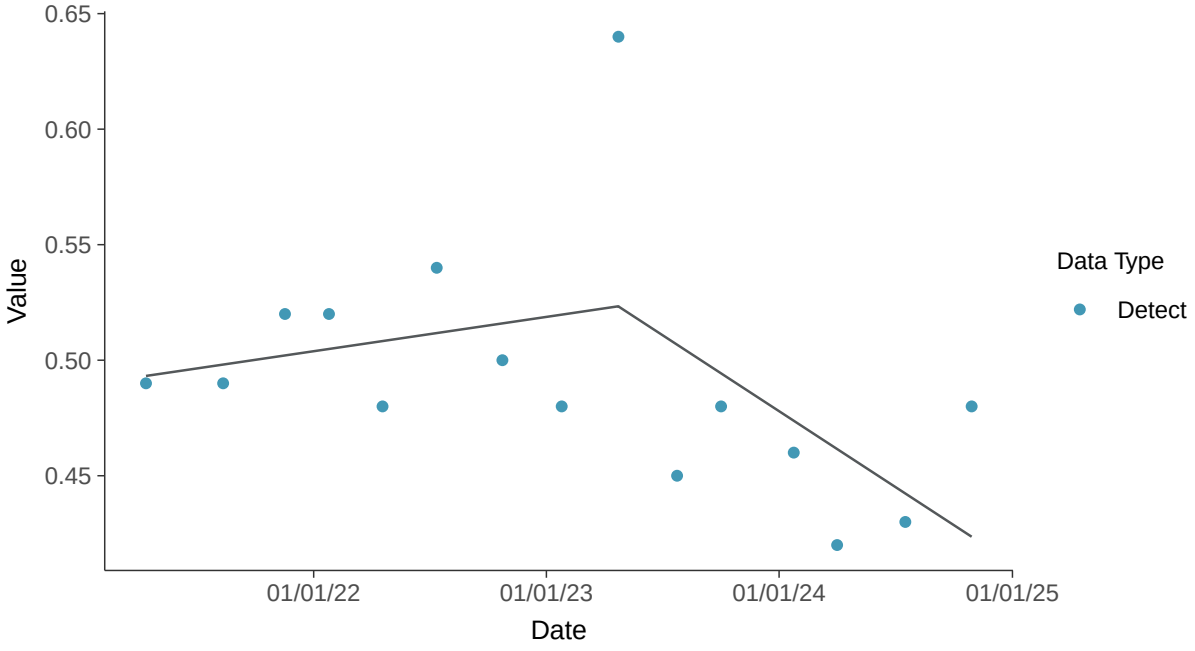
Trend Regression: Lognormal MLE

Fluoride, MW-11D (mg/L)



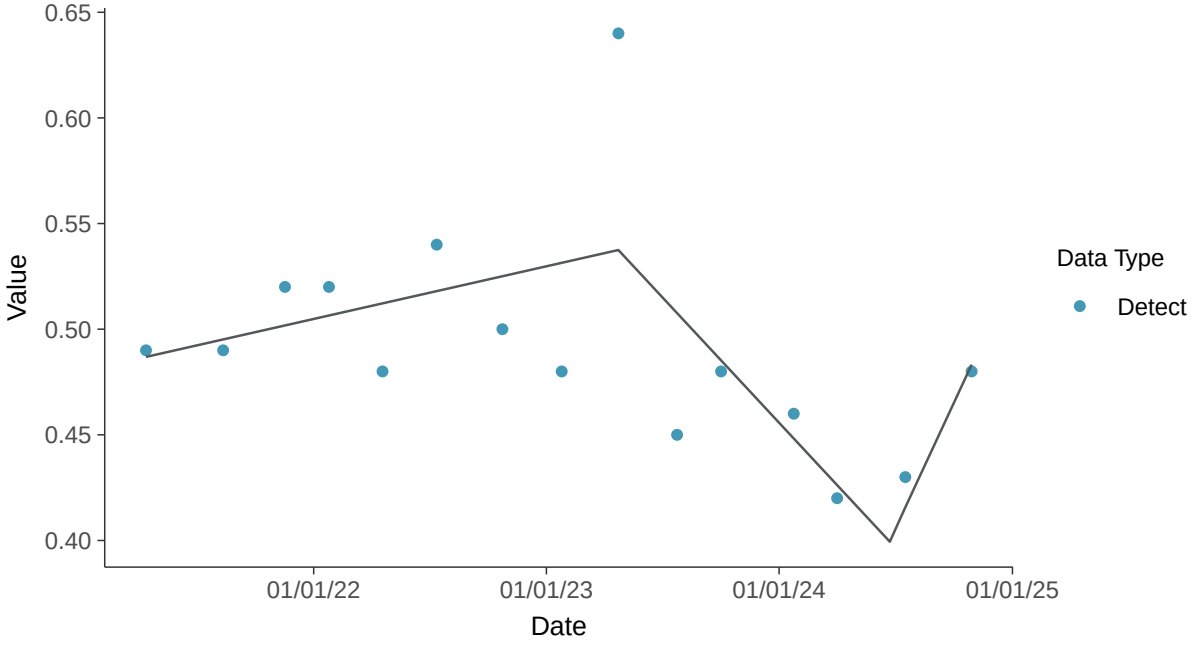
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-11D (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-11D (mg/L)

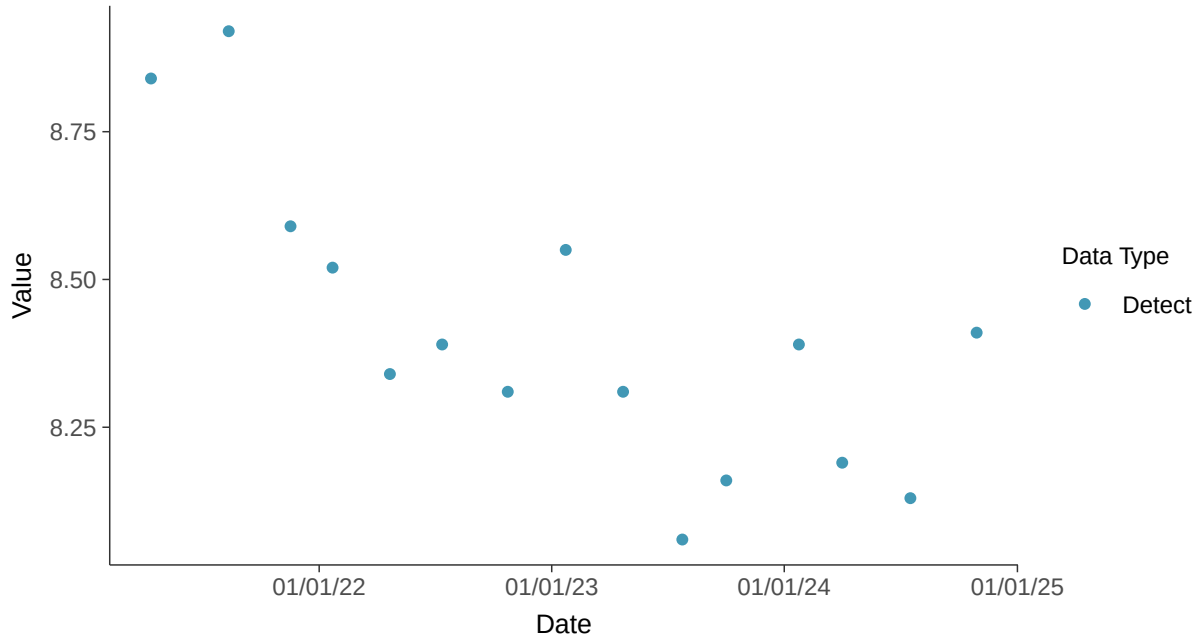


App. III: pH (Field), MW-11D

ID: 11_02_118

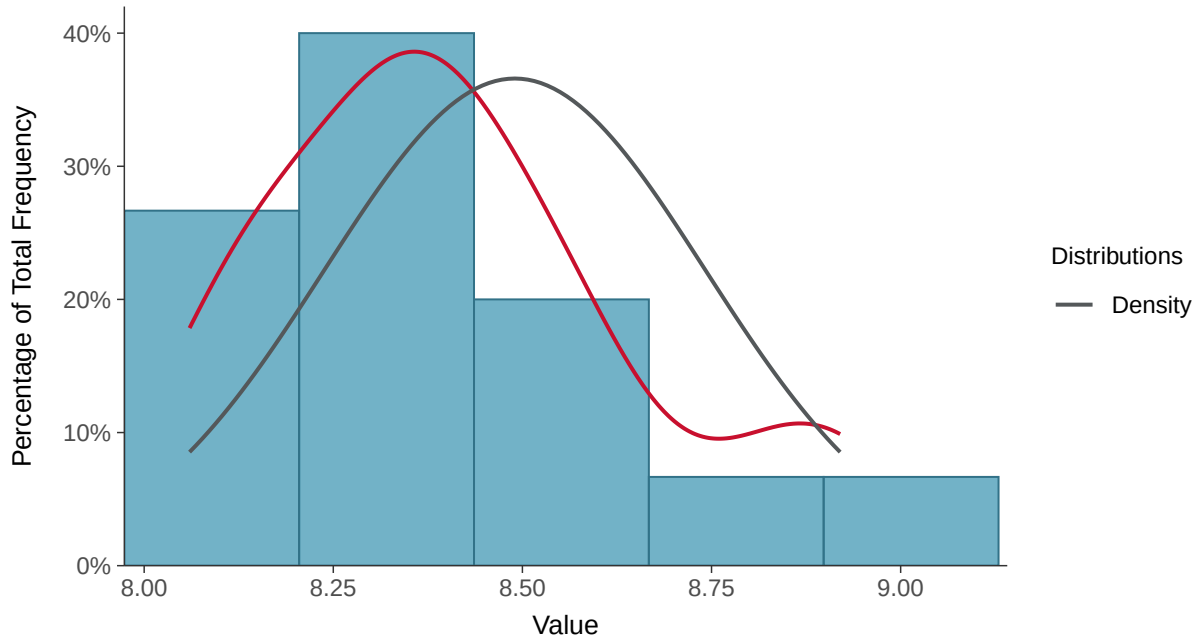
Scatter Plot

pH (Field), MW-11D (S.U.)



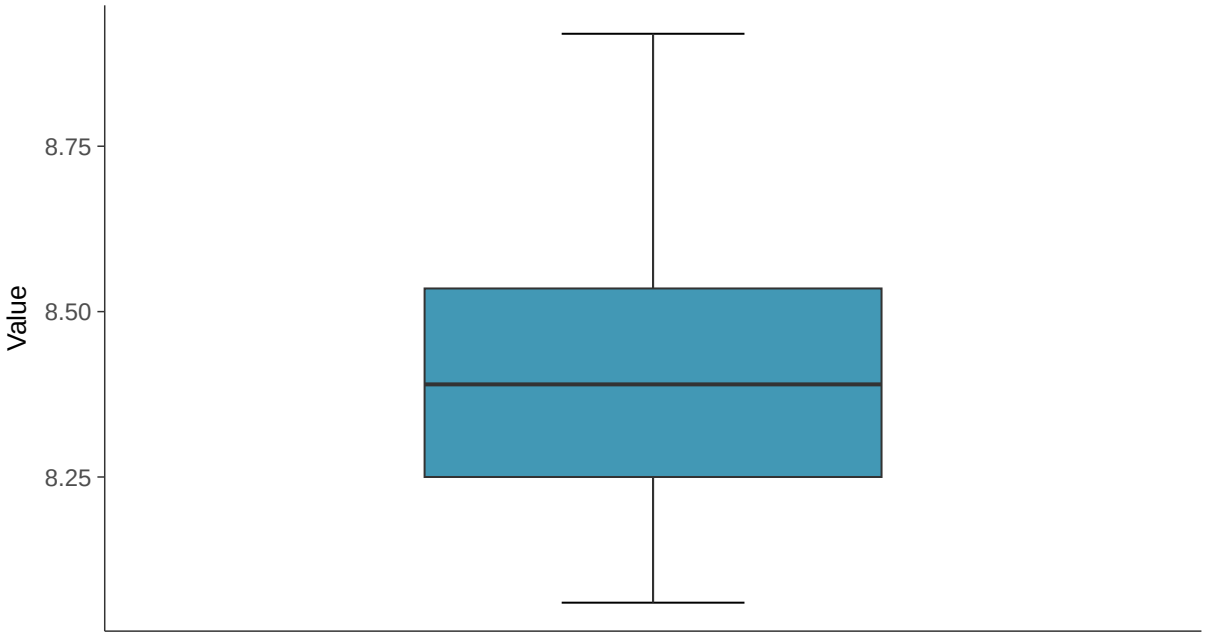
Histogram

pH (Field), MW-11D (S.U.)



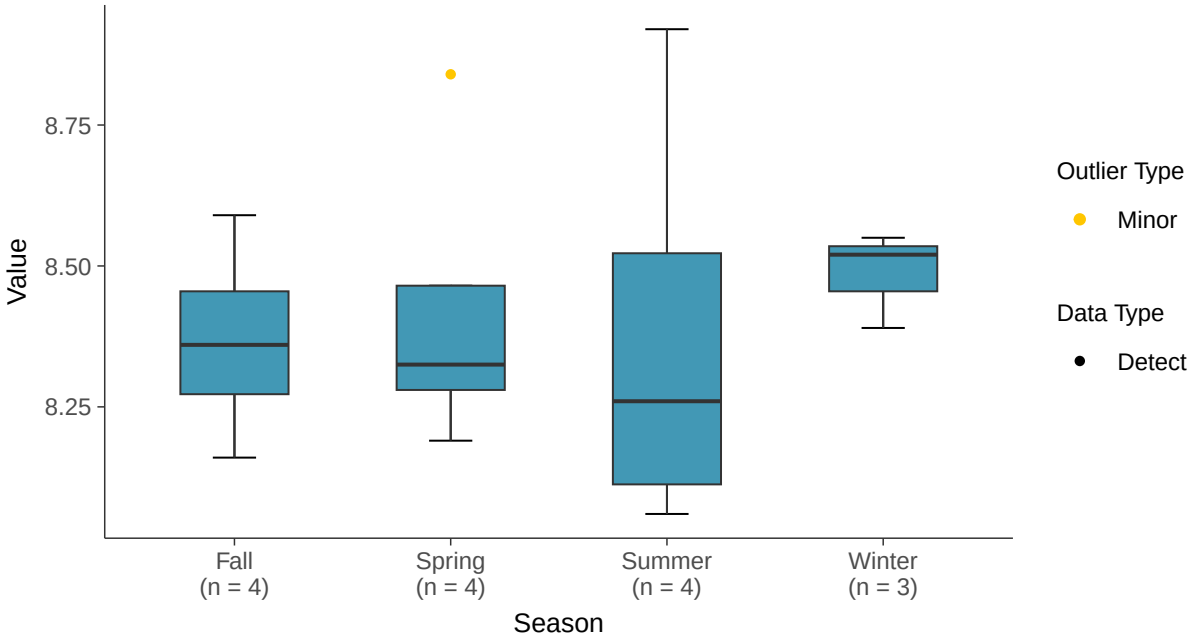
Boxplot

pH (Field), MW-11D (S.U.)



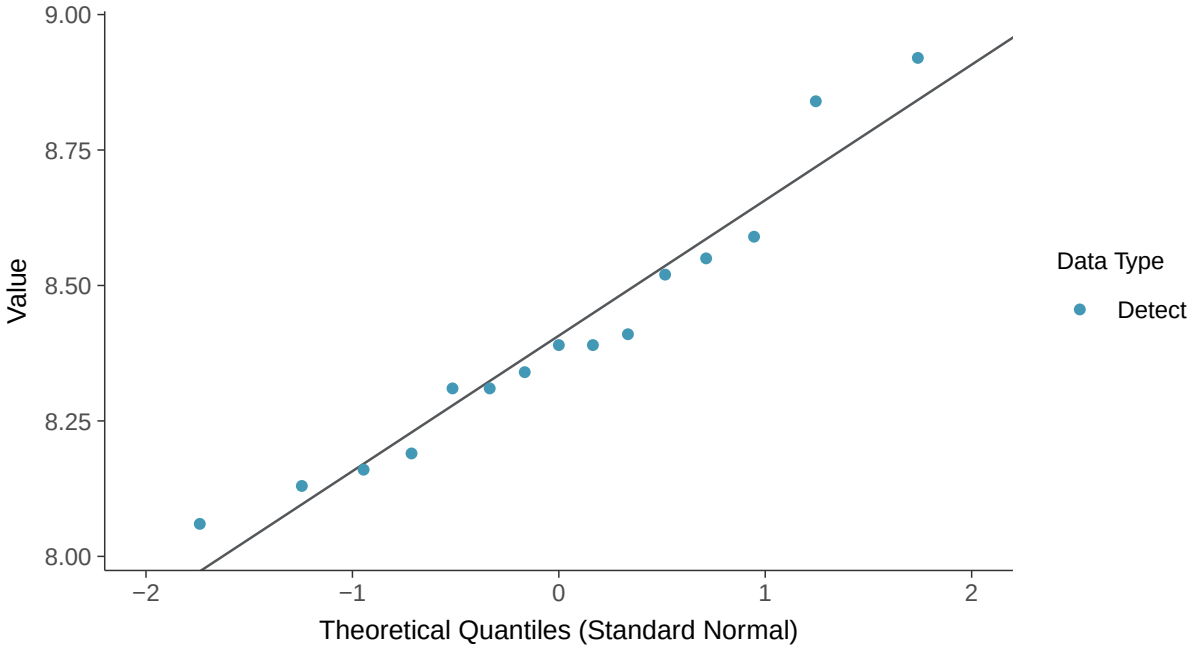
Boxplot by Season

pH (Field), MW-11D (S.U.)



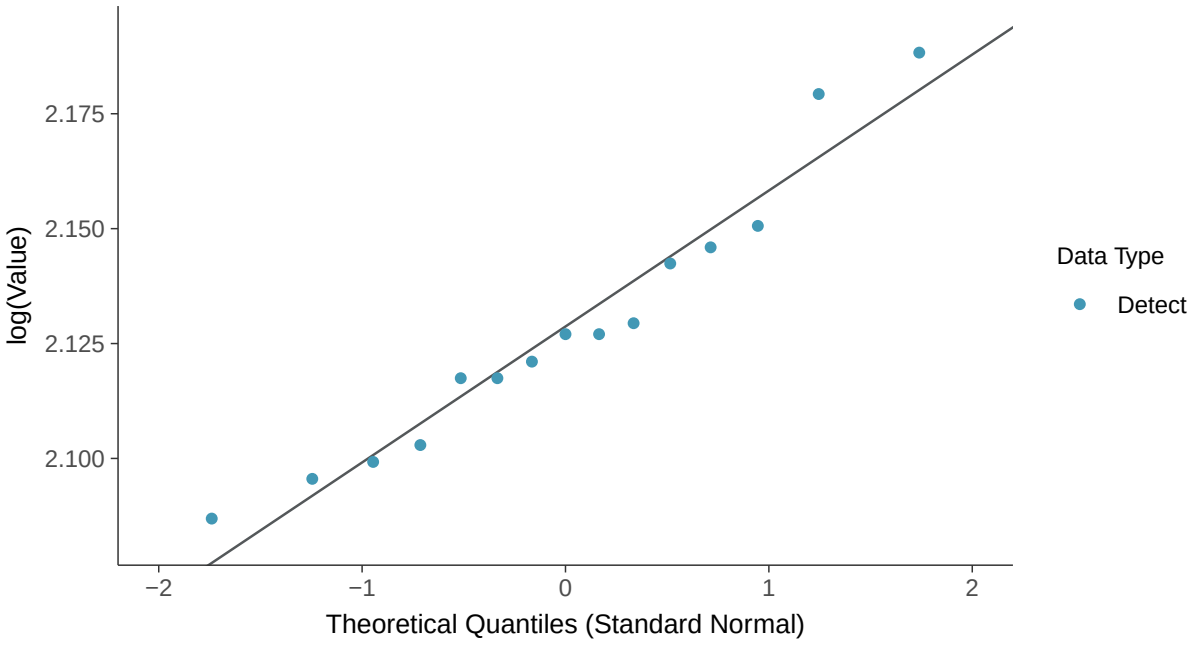
Normal Q-Q plot

pH (Field), MW-11D (S.U.)



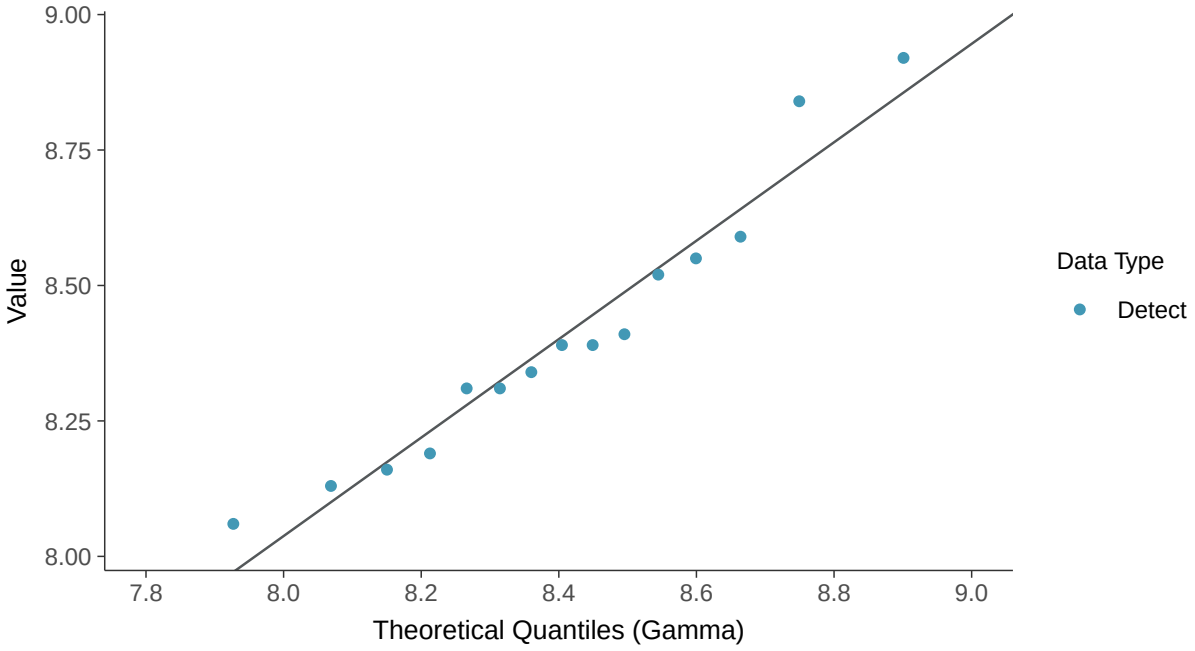
Lognormal Q-Q plot

pH (Field), MW-11D (S.U.)



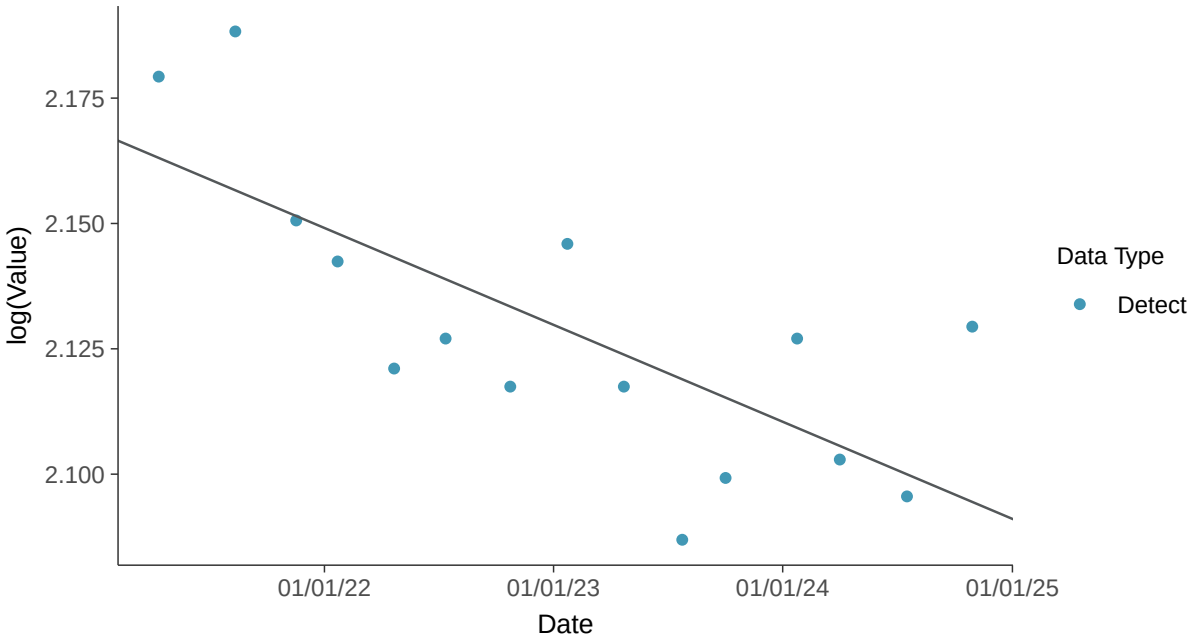
Gamma Q-Q plot

pH (Field), MW-11D (S.U.)



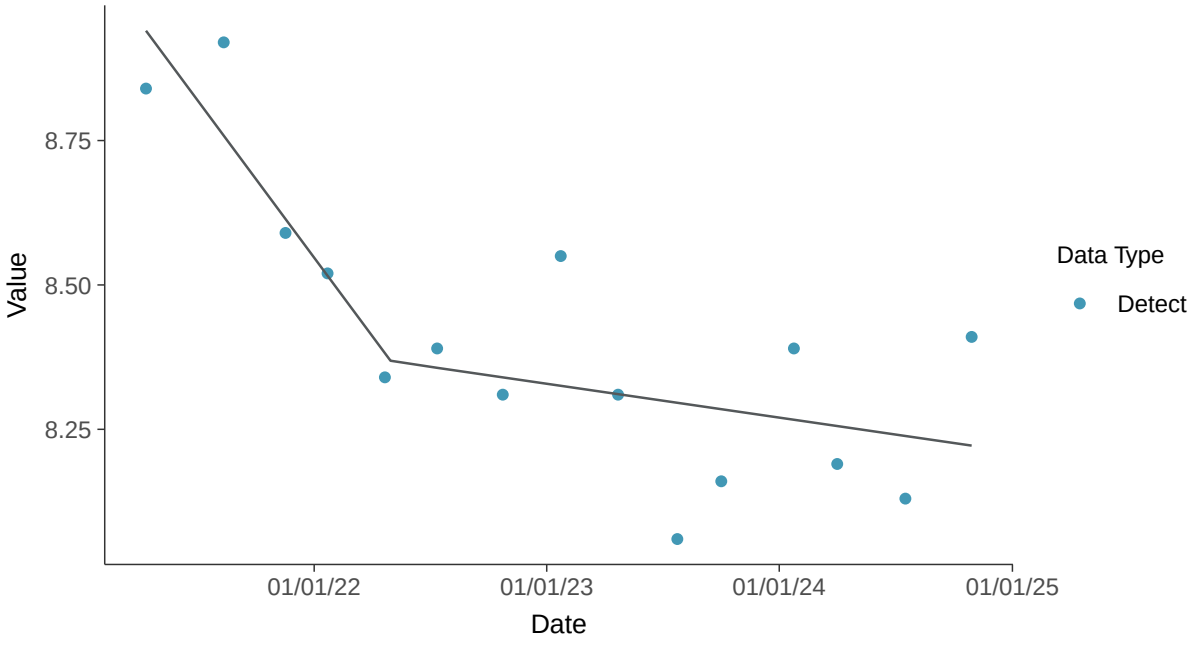
Trend Regression: Lognormal MLE

pH (Field), MW-11D (S.U.)



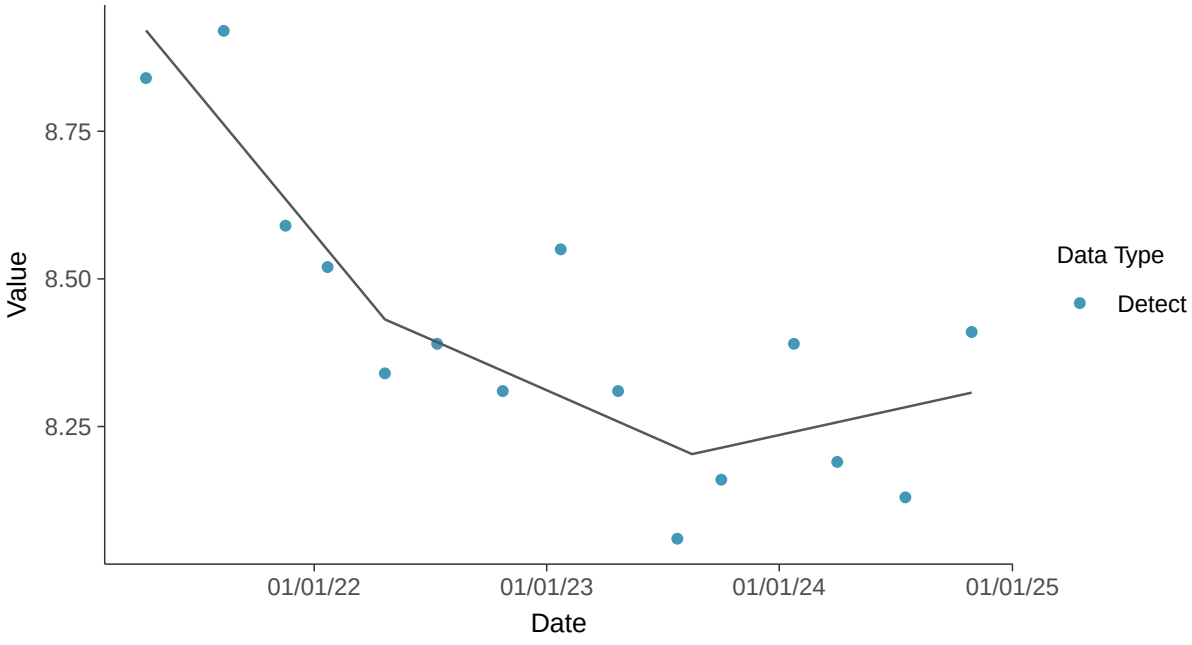
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-11D (S.U.)



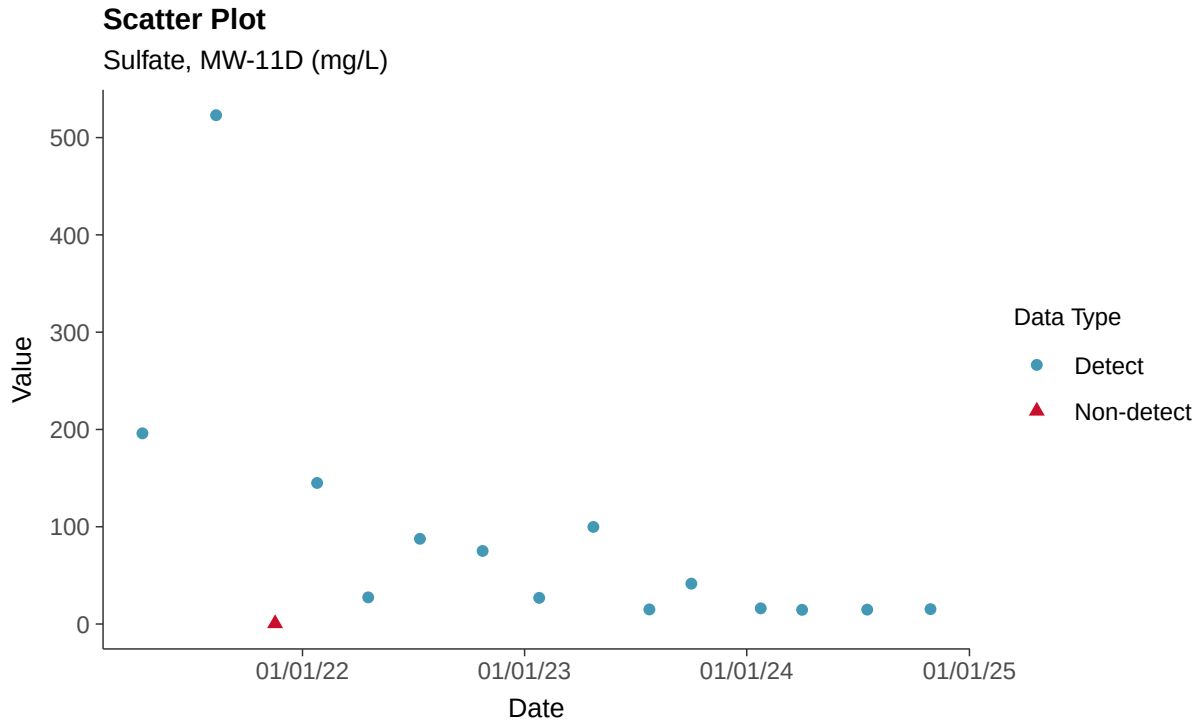
Trend Regression: Piecewise Linear-Linear-Linear

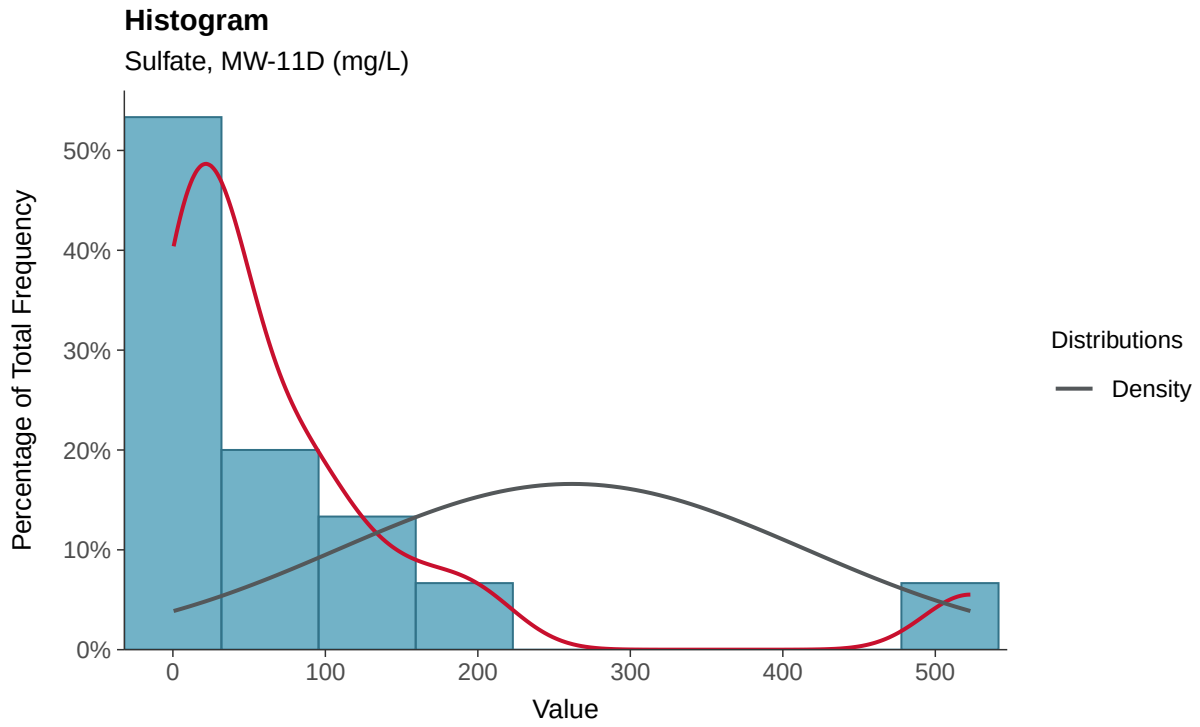
pH (Field), MW-11D (S.U.)



App. III: Sulfate, MW-11D

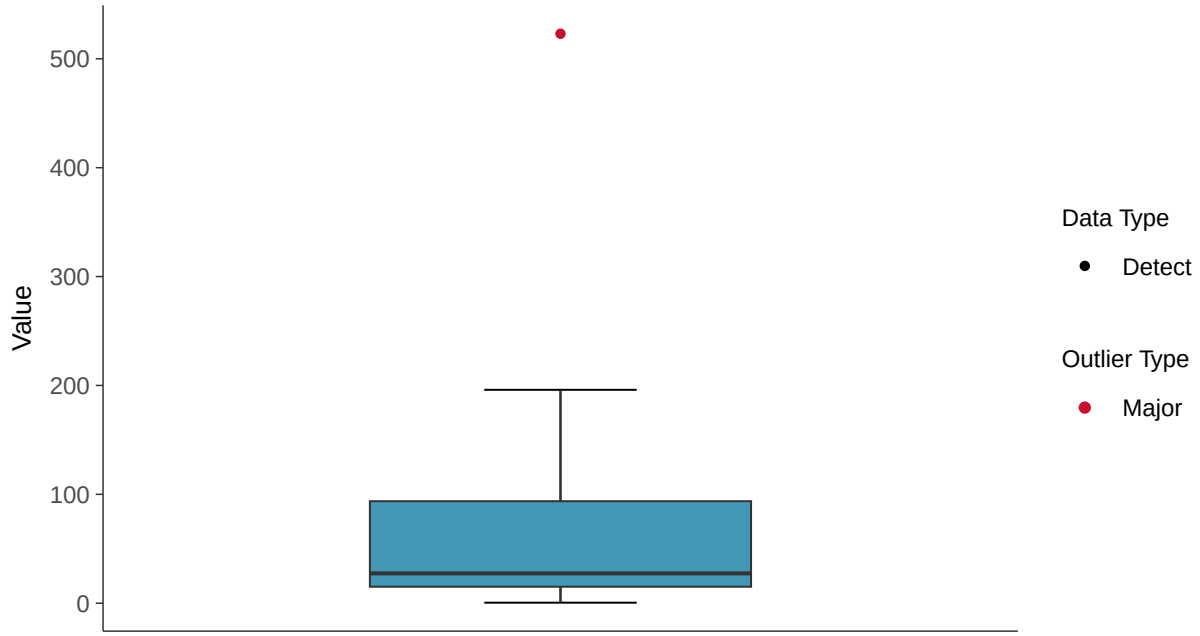
ID: 11_02_123





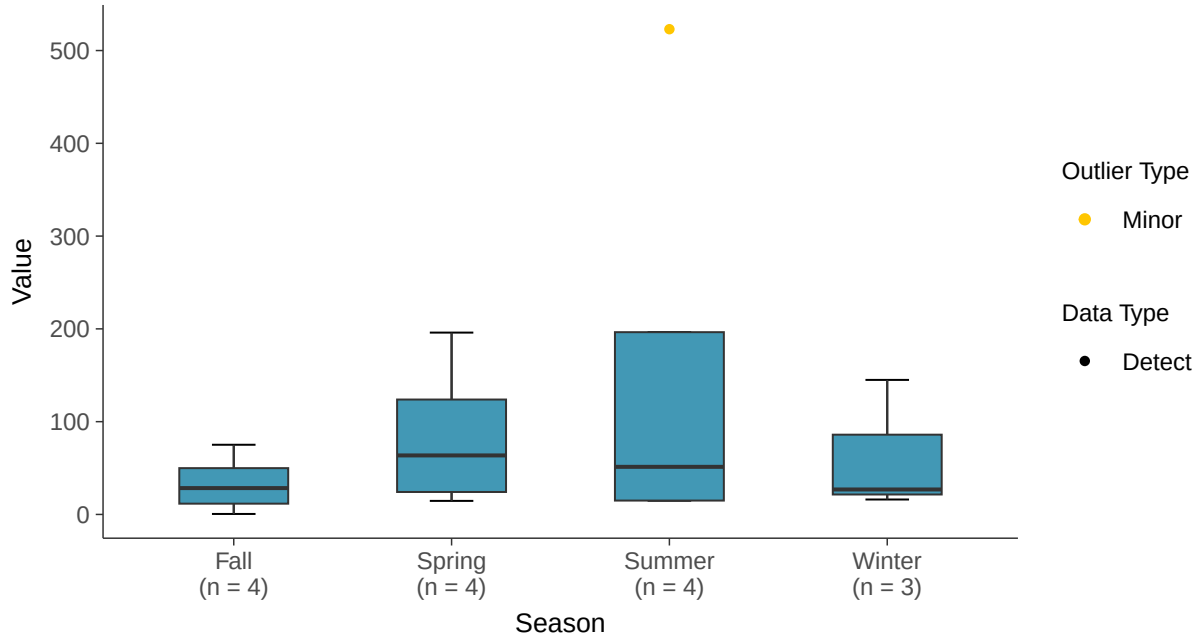
Boxplot

Sulfate, MW-11D (mg/L)



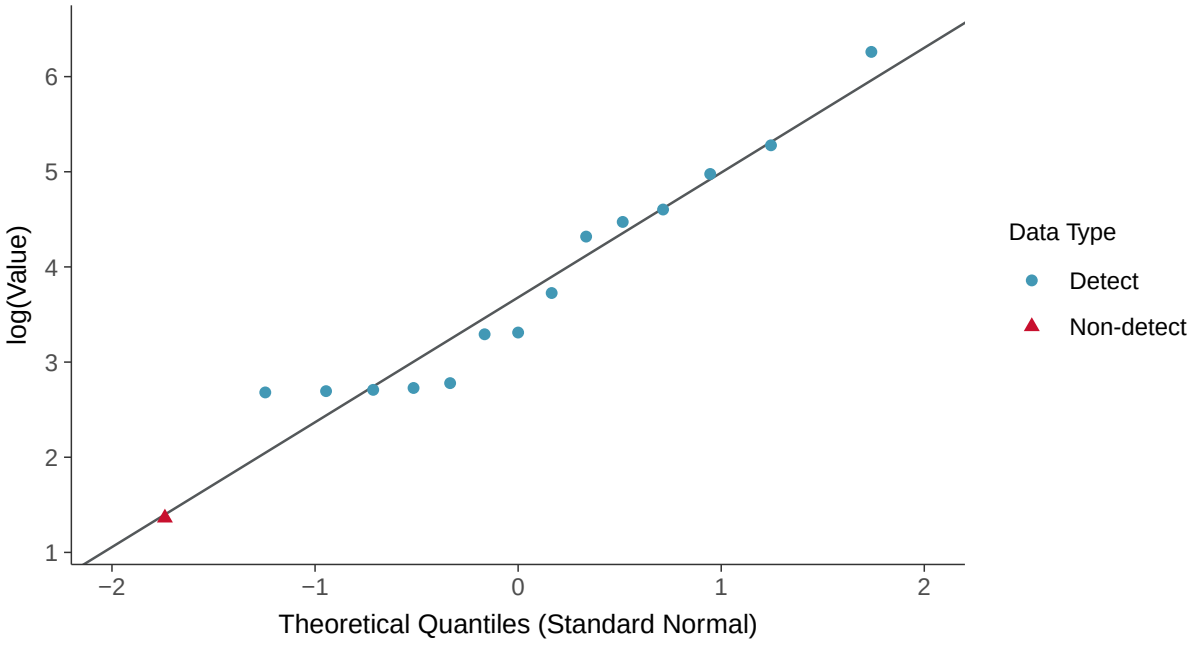
Boxplot by Season

Sulfate, MW-11D (mg/L)



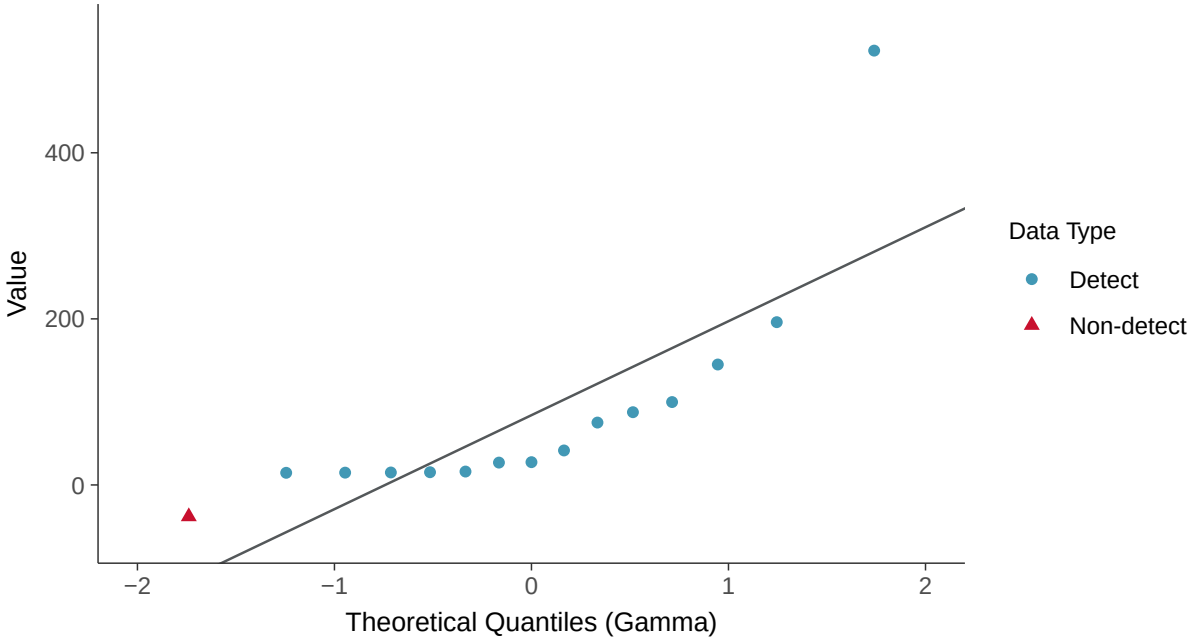
Lognormal Q-Q plot using ROS Imputed Estimates

Sulfate, MW-11D (mg/L)



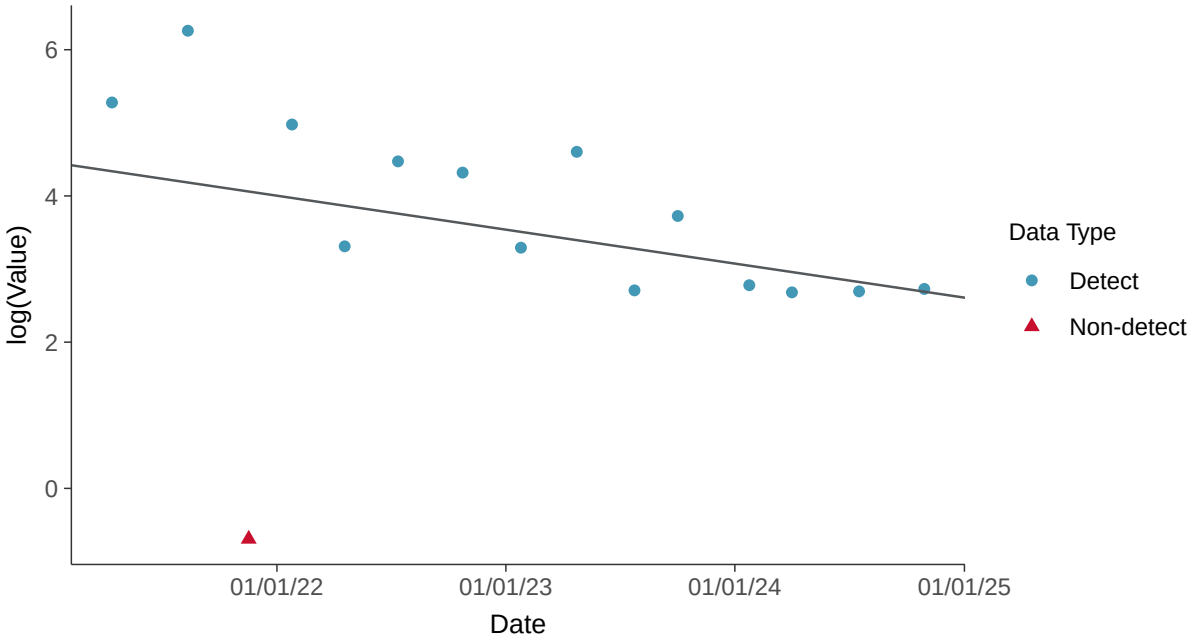
Gamma Q-Q plot using ROS Imputed Estimates

Sulfate, MW-11D (mg/L)



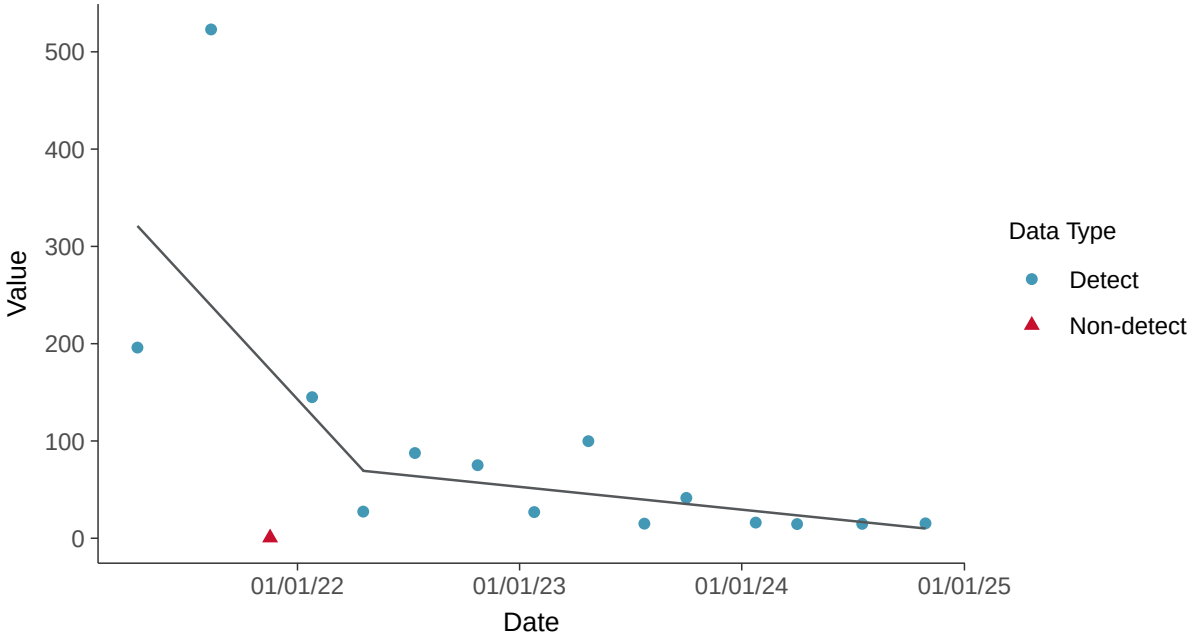
Trend Regression: Lognormal MLE

Sulfate, MW-11D (mg/L)



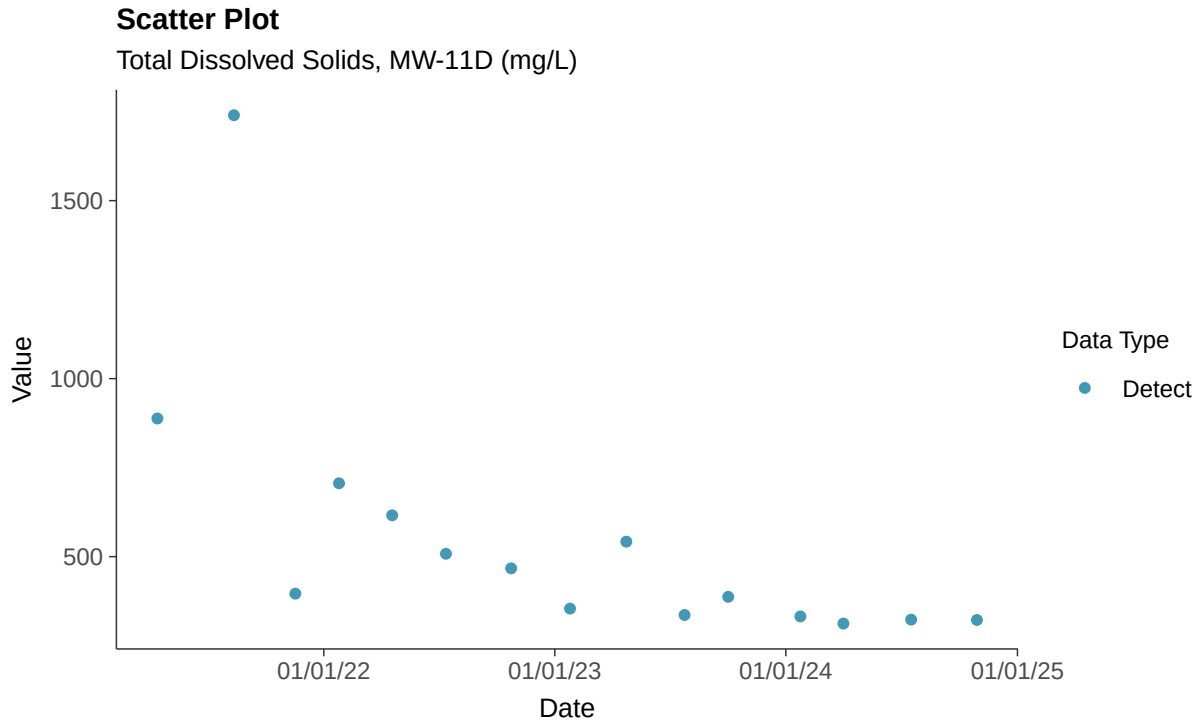
Trend Regression: Piecewise Linear-Linear

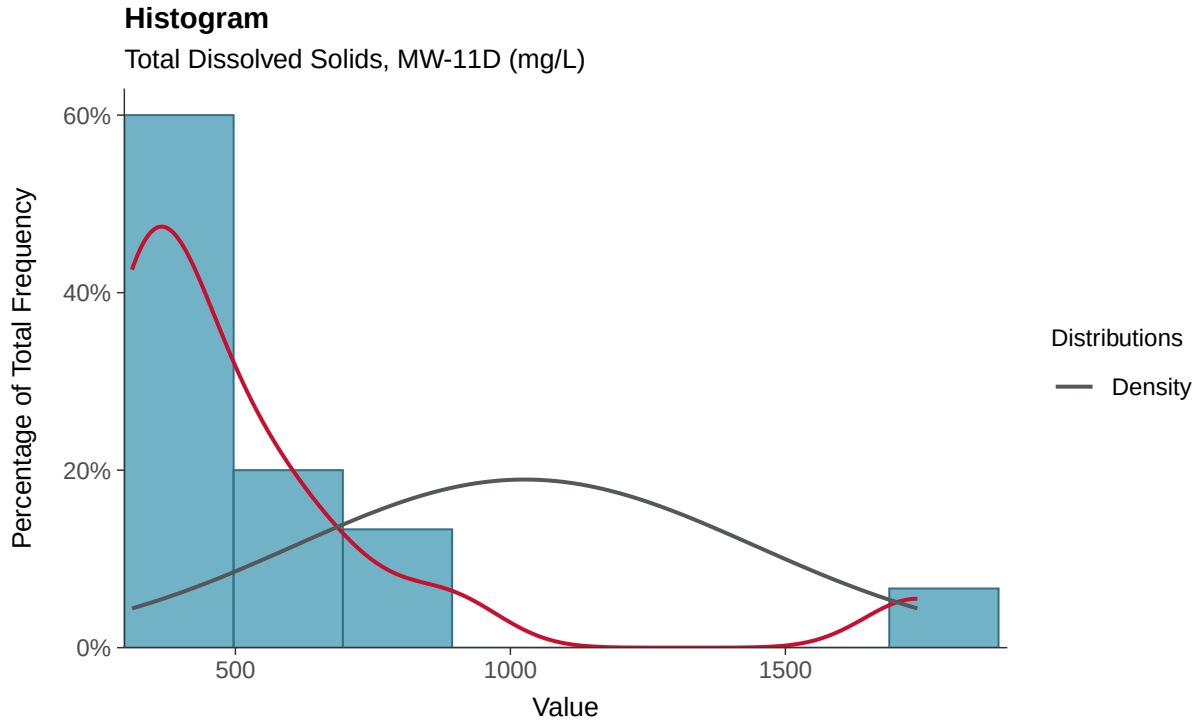
Sulfate, MW-11D (mg/L)



App. III: Total Dissolved Solids, MW-11D

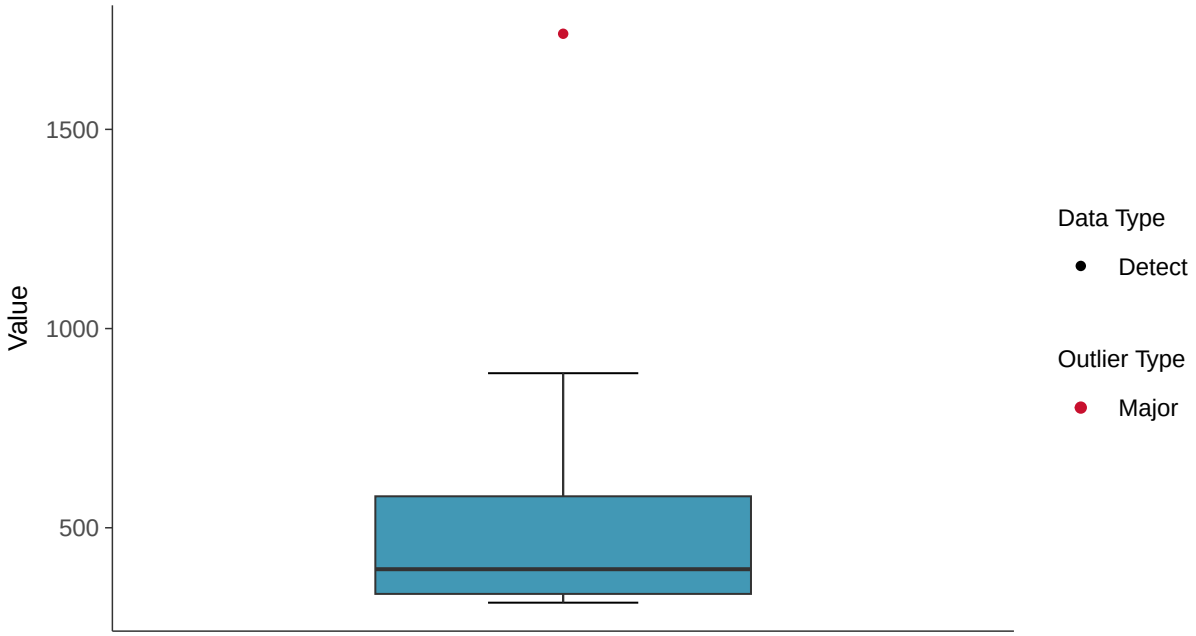
ID: 11_02_125





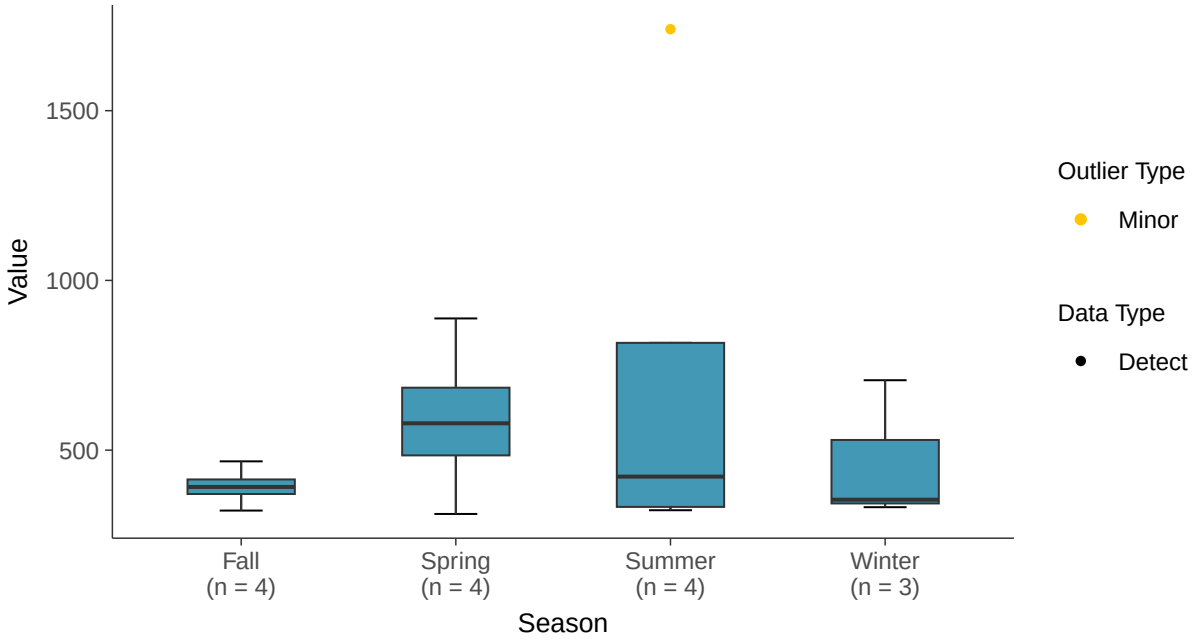
Boxplot

Total Dissolved Solids, MW-11D (mg/L)



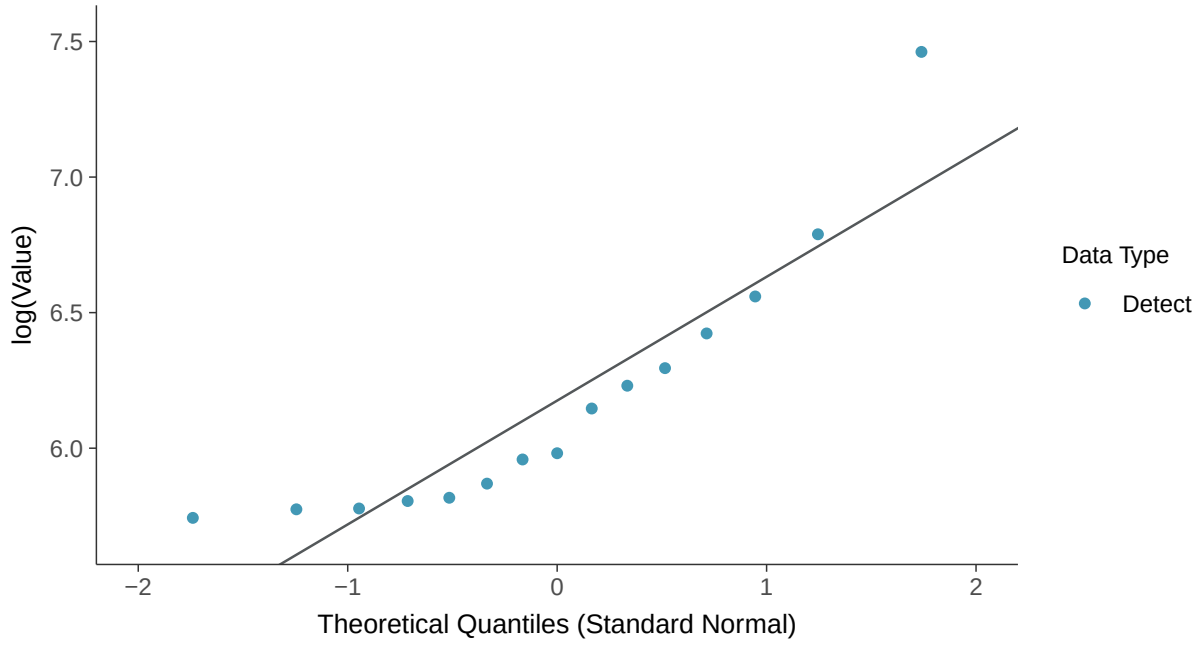
Boxplot by Season

Total Dissolved Solids, MW-11D (mg/L)



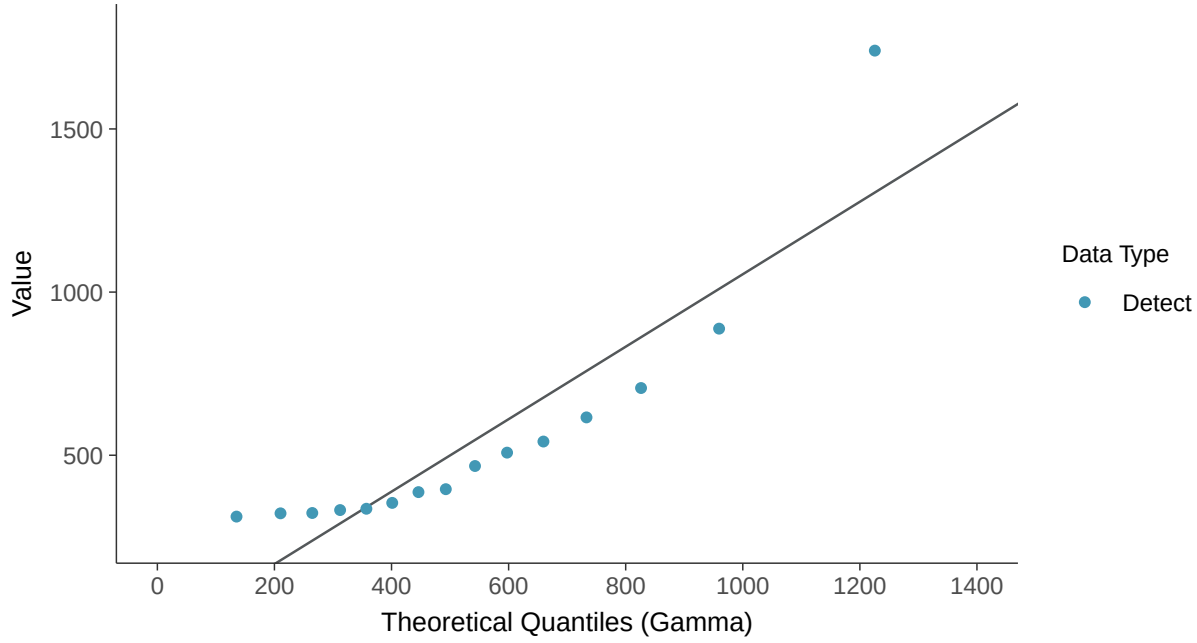
Lognormal Q-Q plot

Total Dissolved Solids, MW-11D (mg/L)



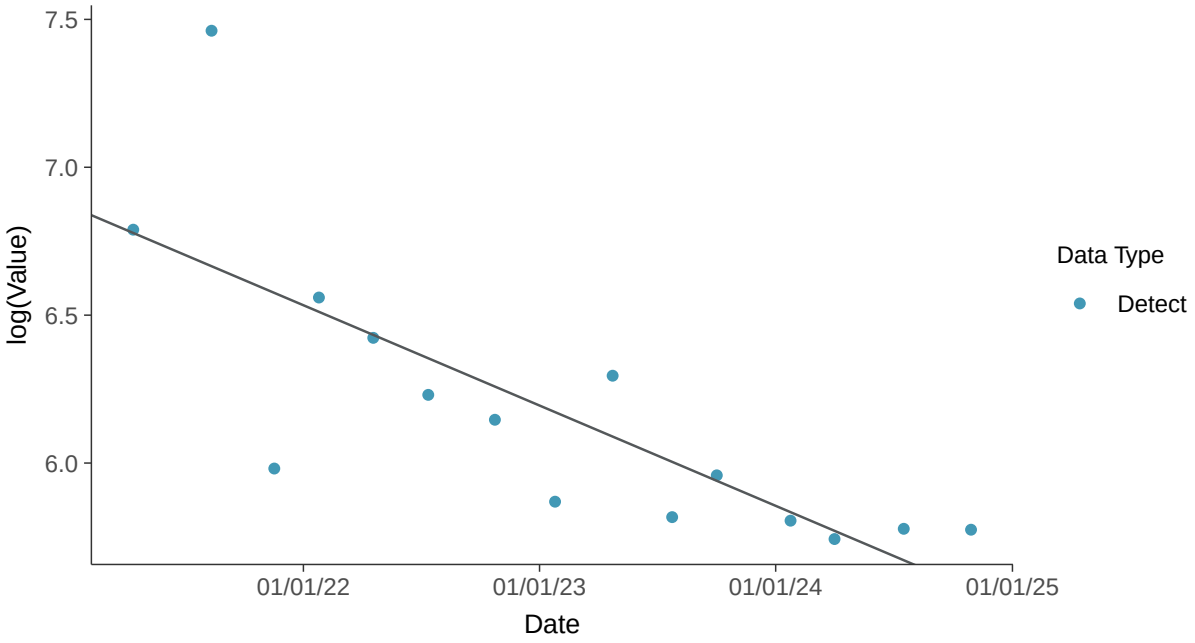
Gamma Q-Q plot

Total Dissolved Solids, MW-11D (mg/L)



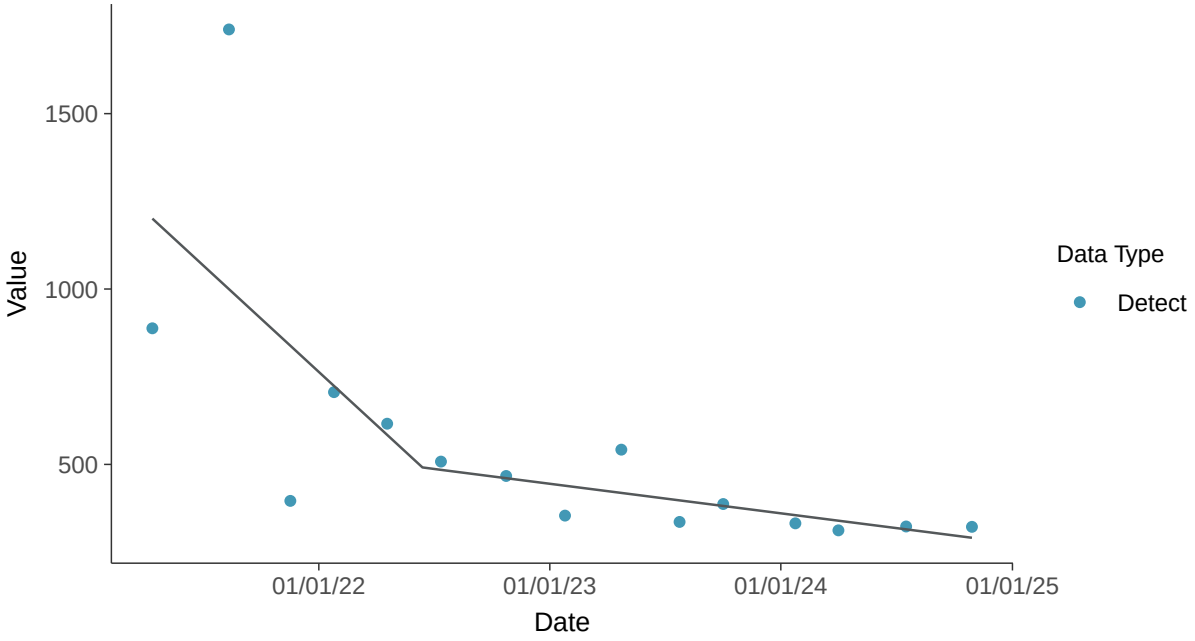
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-11D (mg/L)



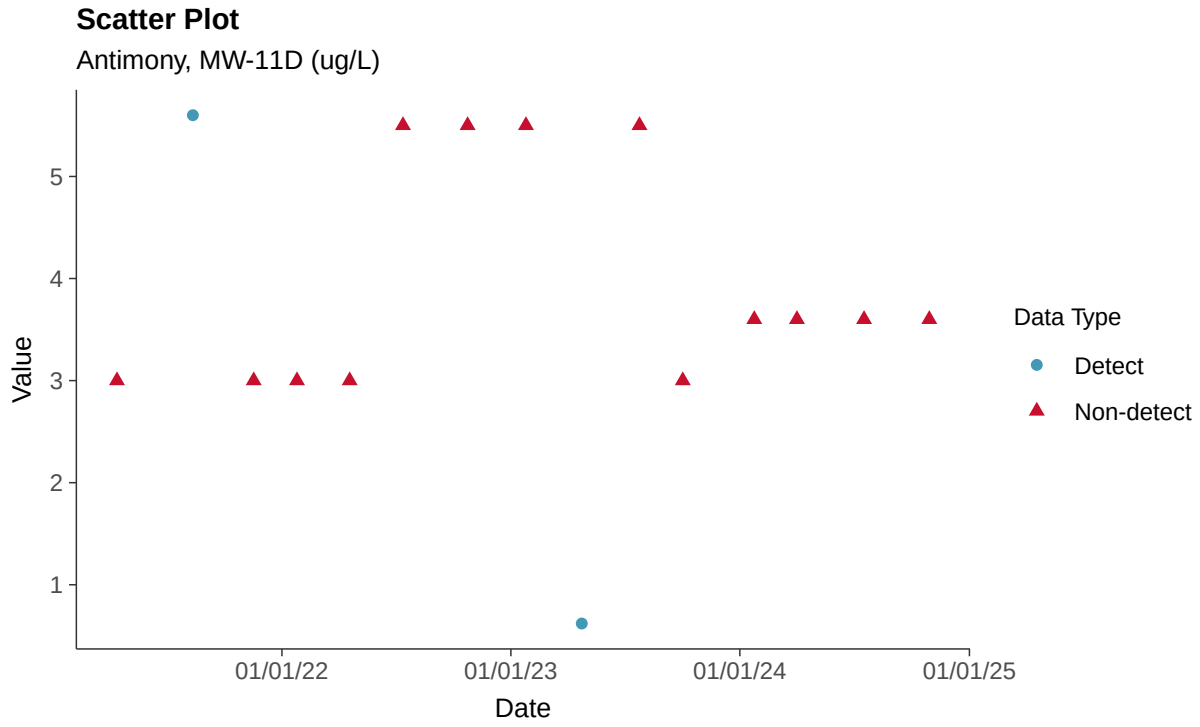
Trend Regression: Piecewise Linear-Linear

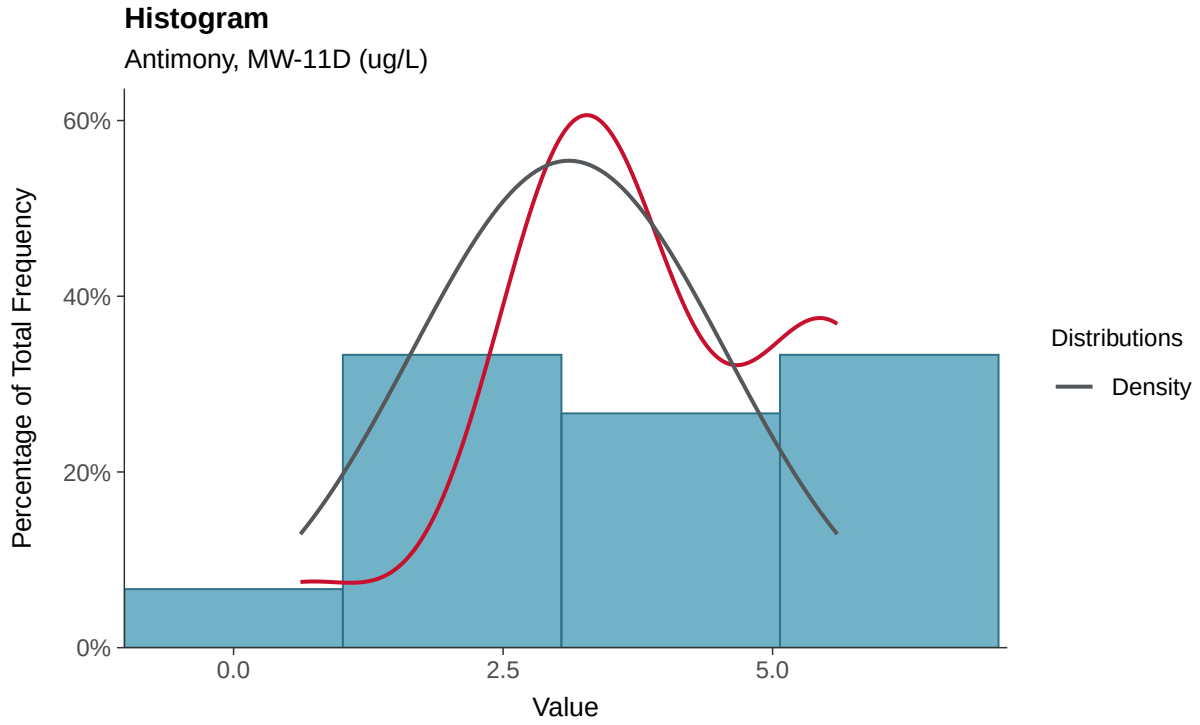
Total Dissolved Solids, MW-11D (mg/L)



App. IV: Antimony, MW-11D

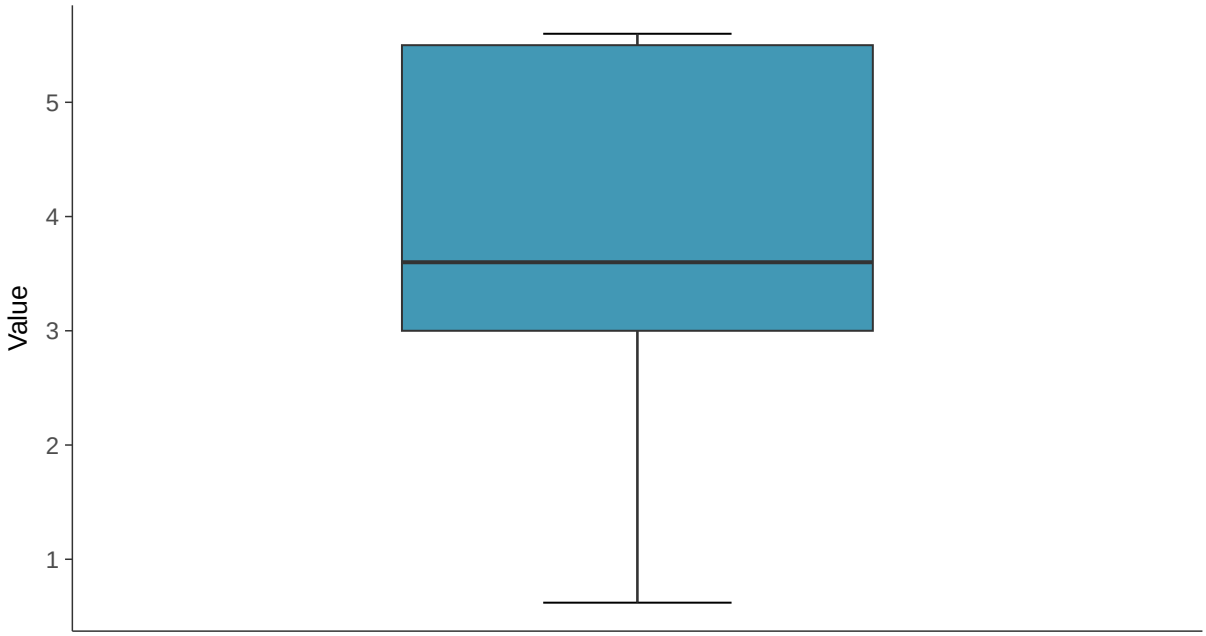
ID: 11_03_101





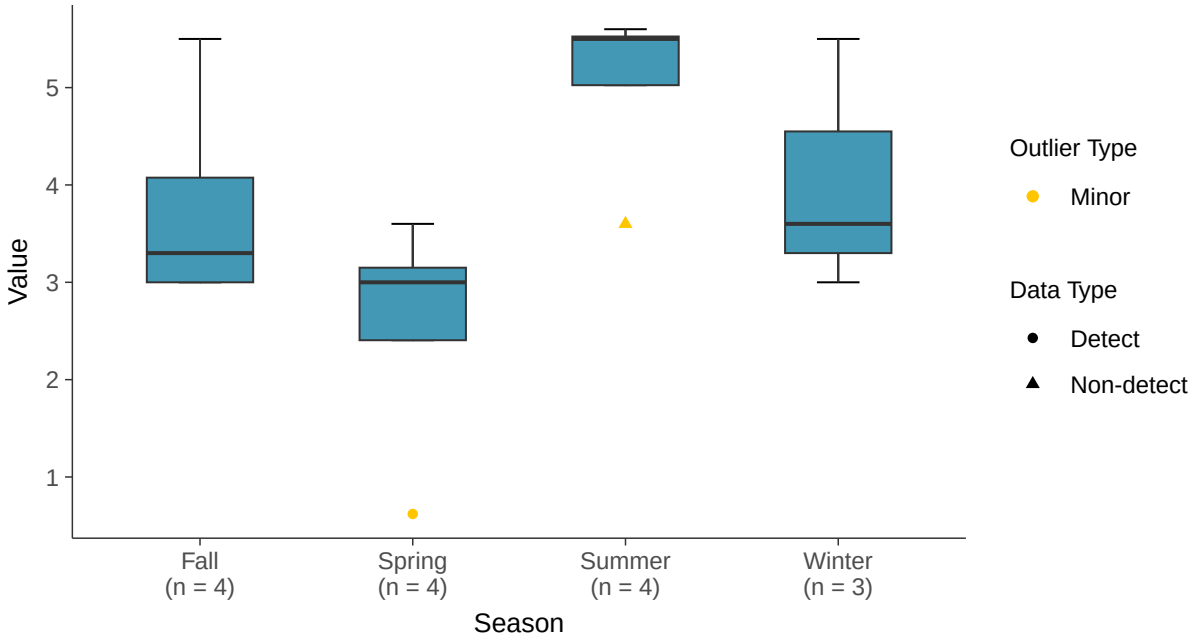
Boxplot

Antimony, MW-11D (ug/L)



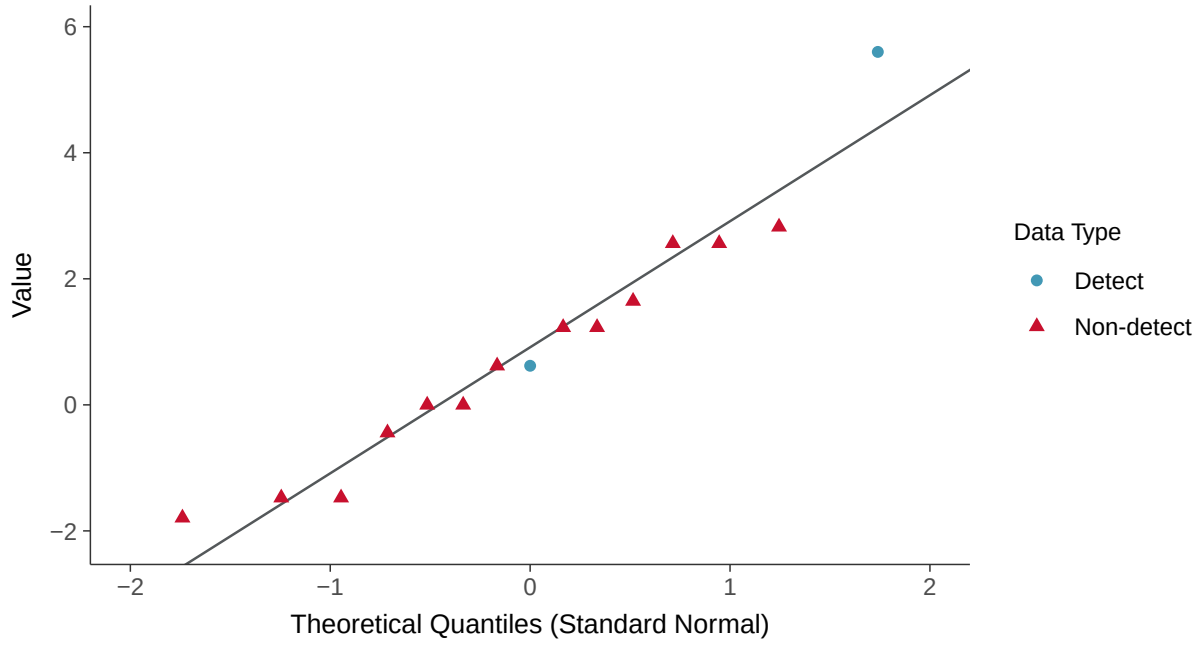
Boxplot by Season

Antimony, MW-11D (ug/L)



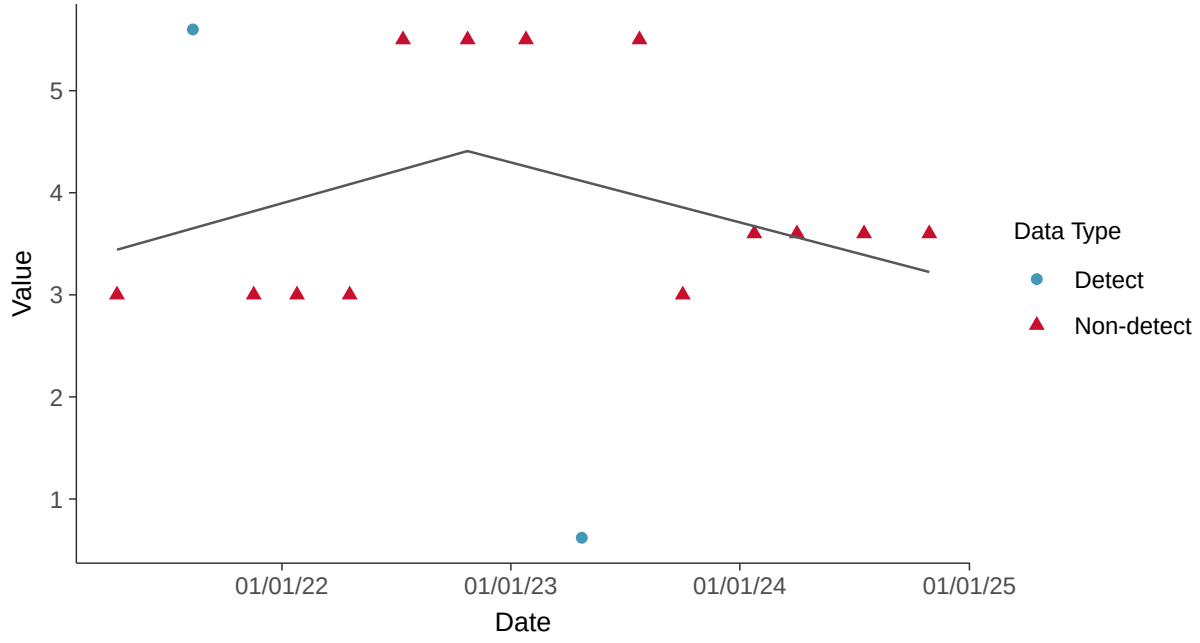
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-11D (ug/L)

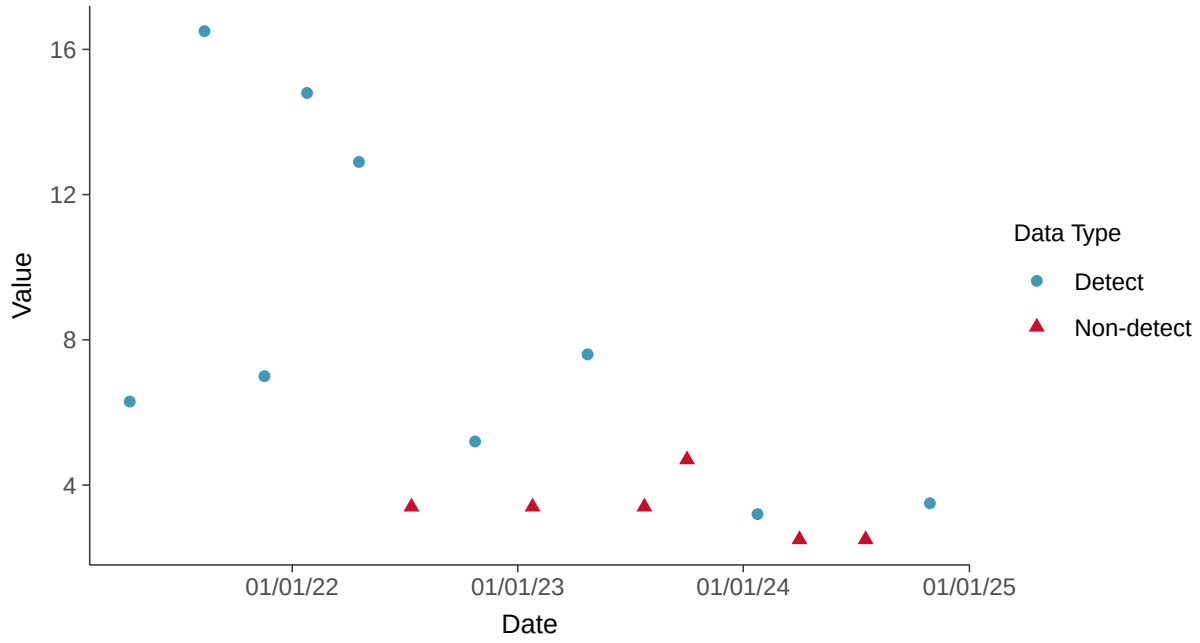


App. IV: Arsenic, MW-11D

ID: 11_03_102

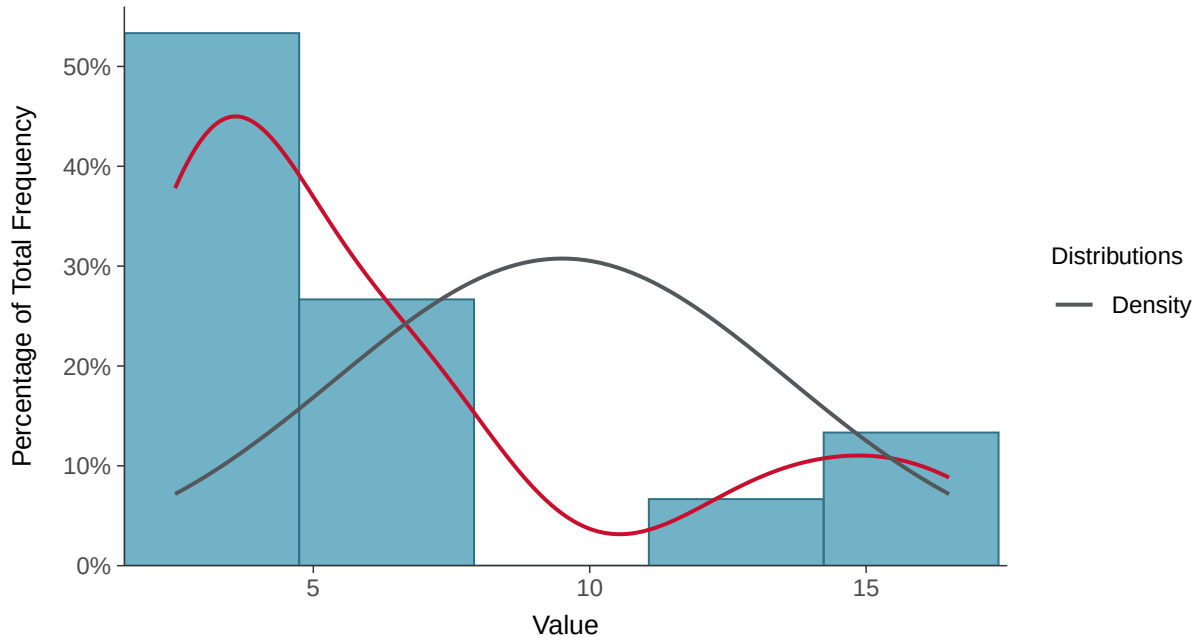
Scatter Plot

Arsenic, MW-11D (ug/L)



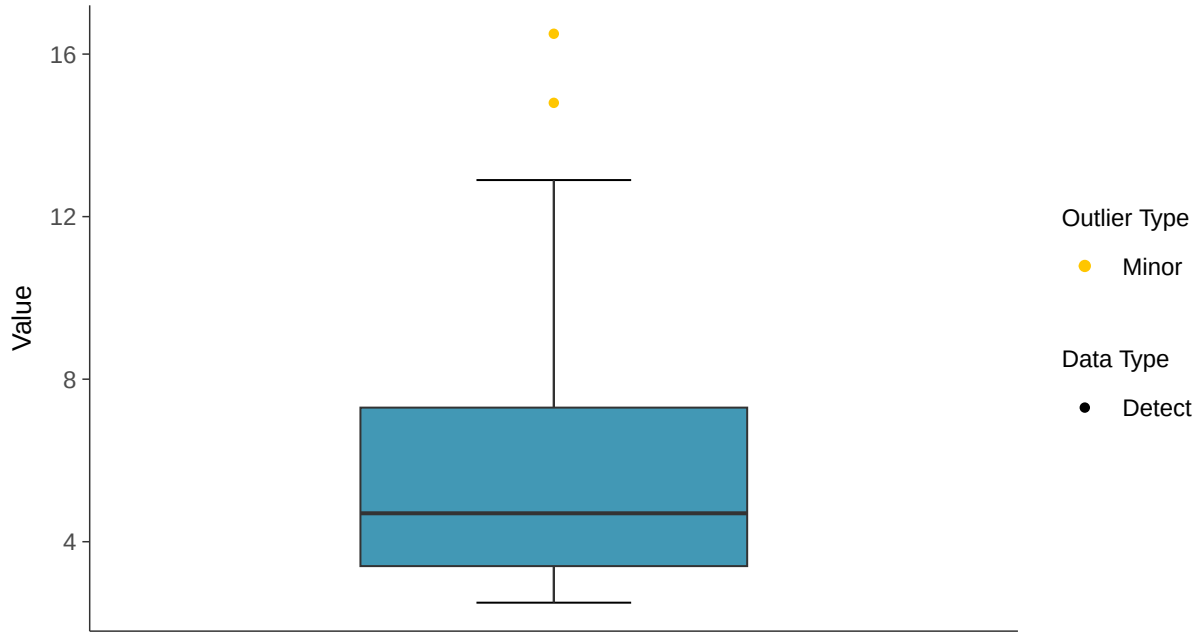
Histogram

Arsenic, MW-11D (ug/L)



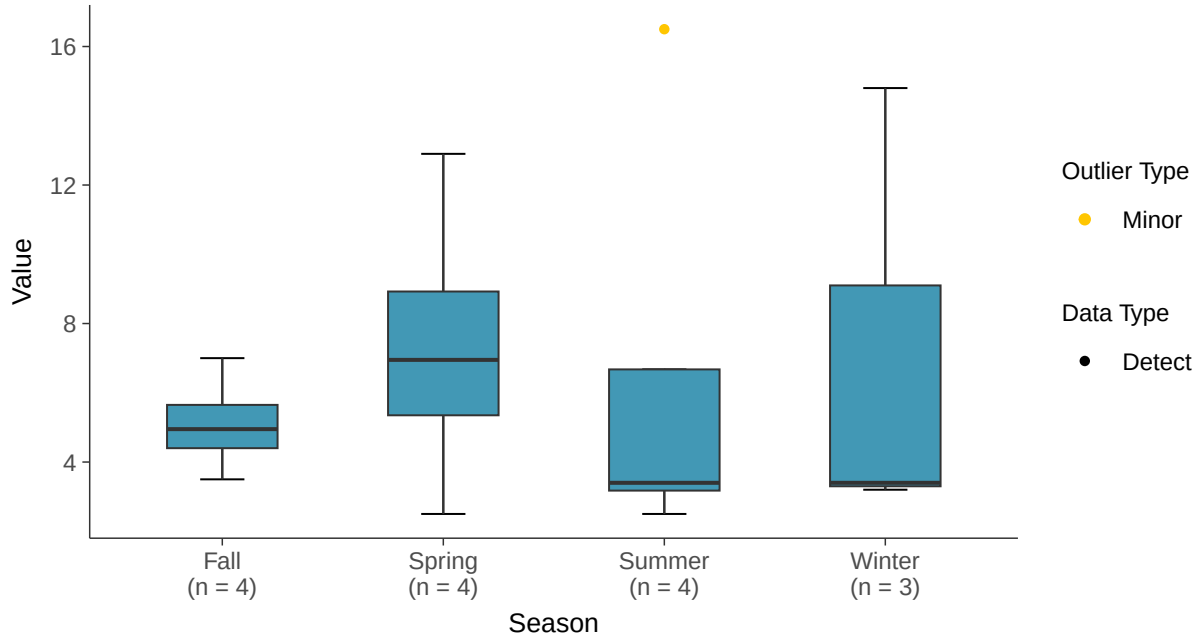
Boxplot

Arsenic, MW-11D (ug/L)



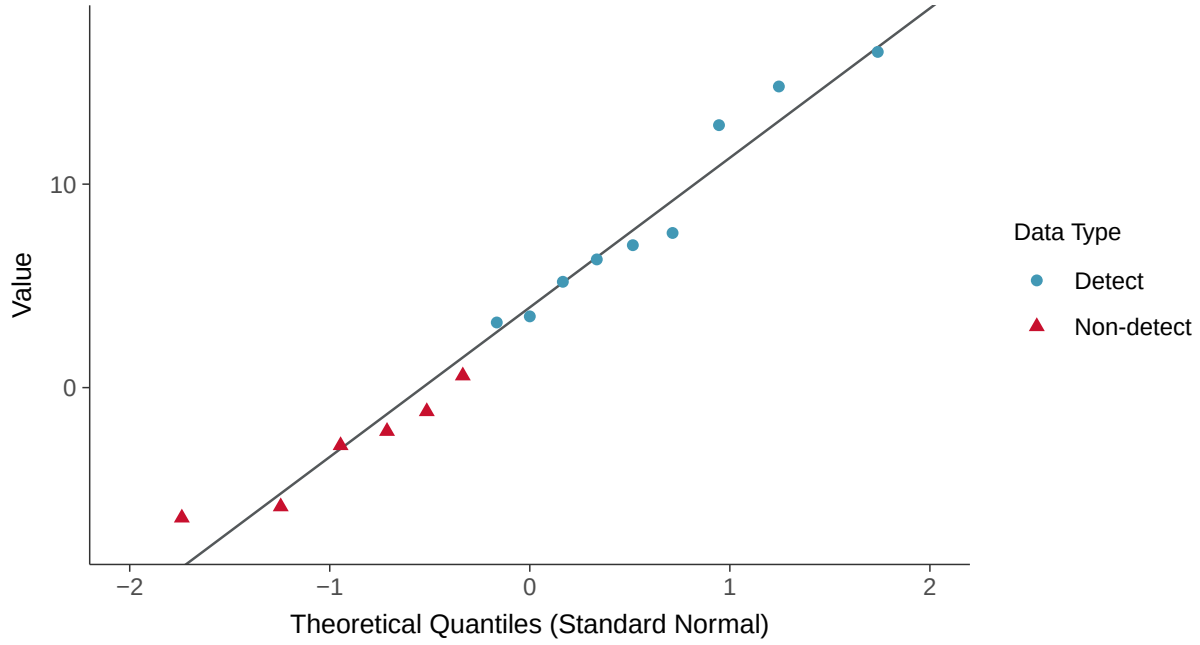
Boxplot by Season

Arsenic, MW-11D (ug/L)



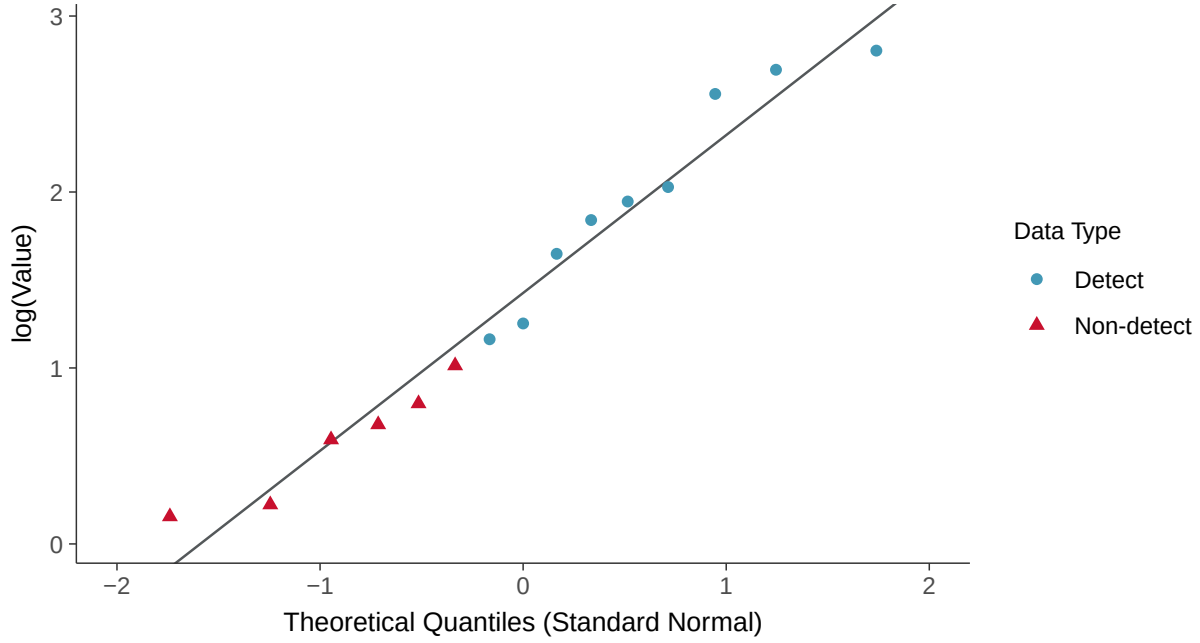
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11D (ug/L)



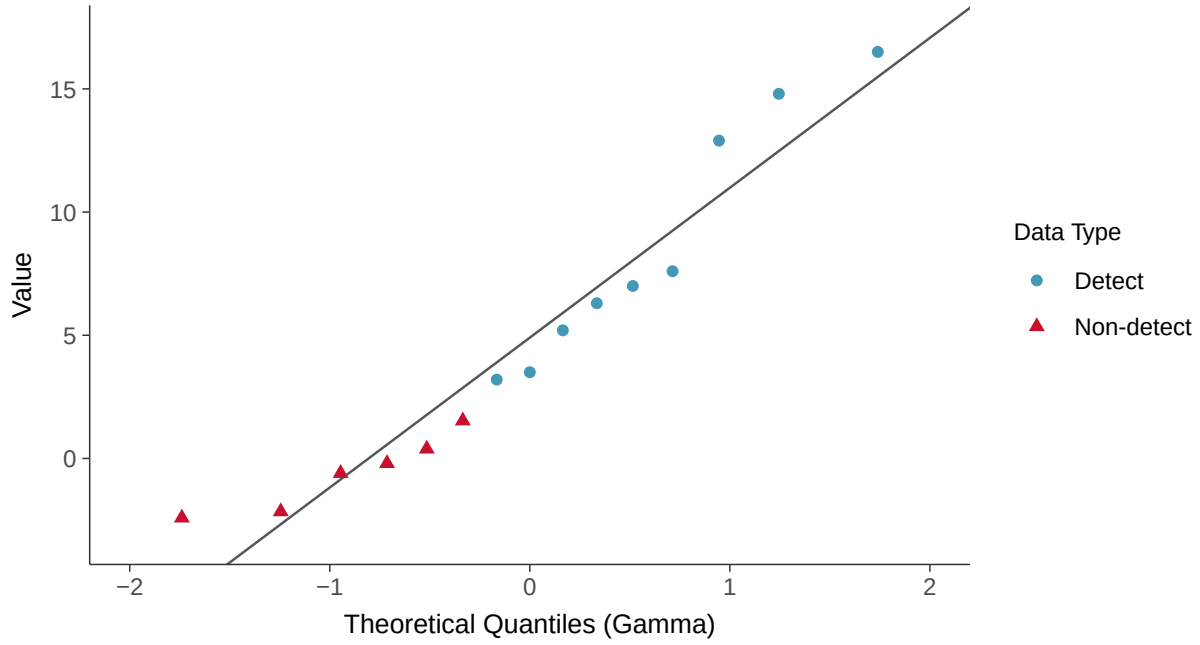
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11D (ug/L)



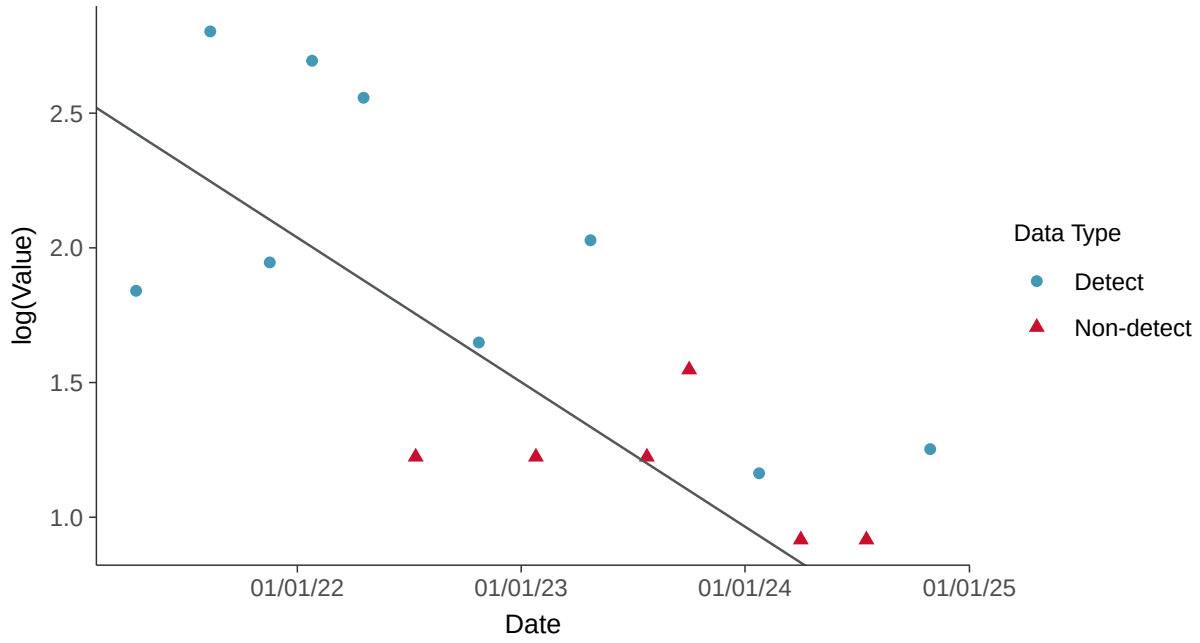
Gamma Q-Q plot using ROS Imputed Estimates

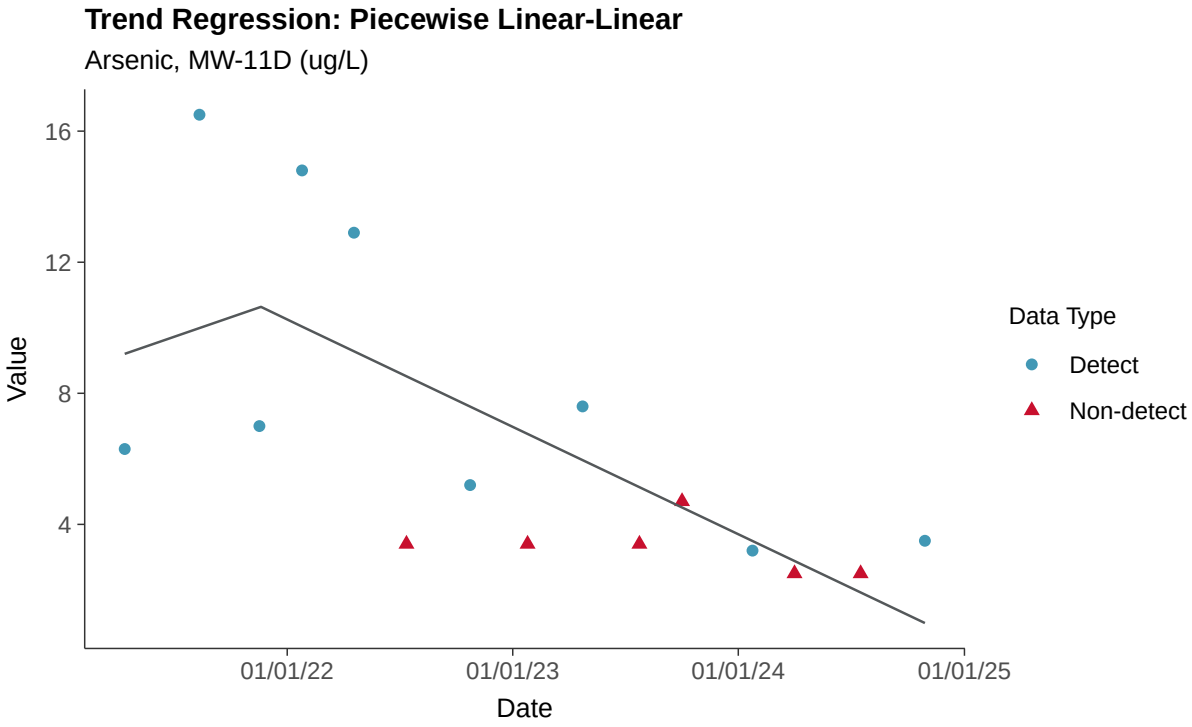
Arsenic, MW-11D (ug/L)



Trend Regression: Lognormal MLE

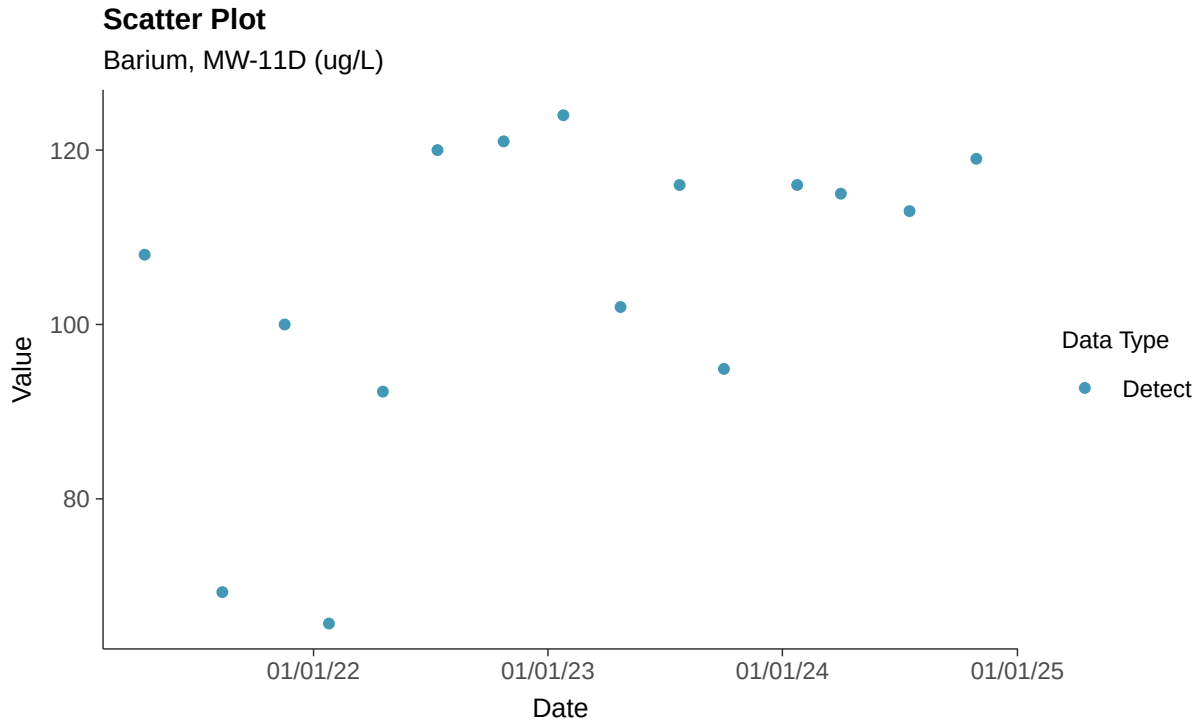
Arsenic, MW-11D (ug/L)

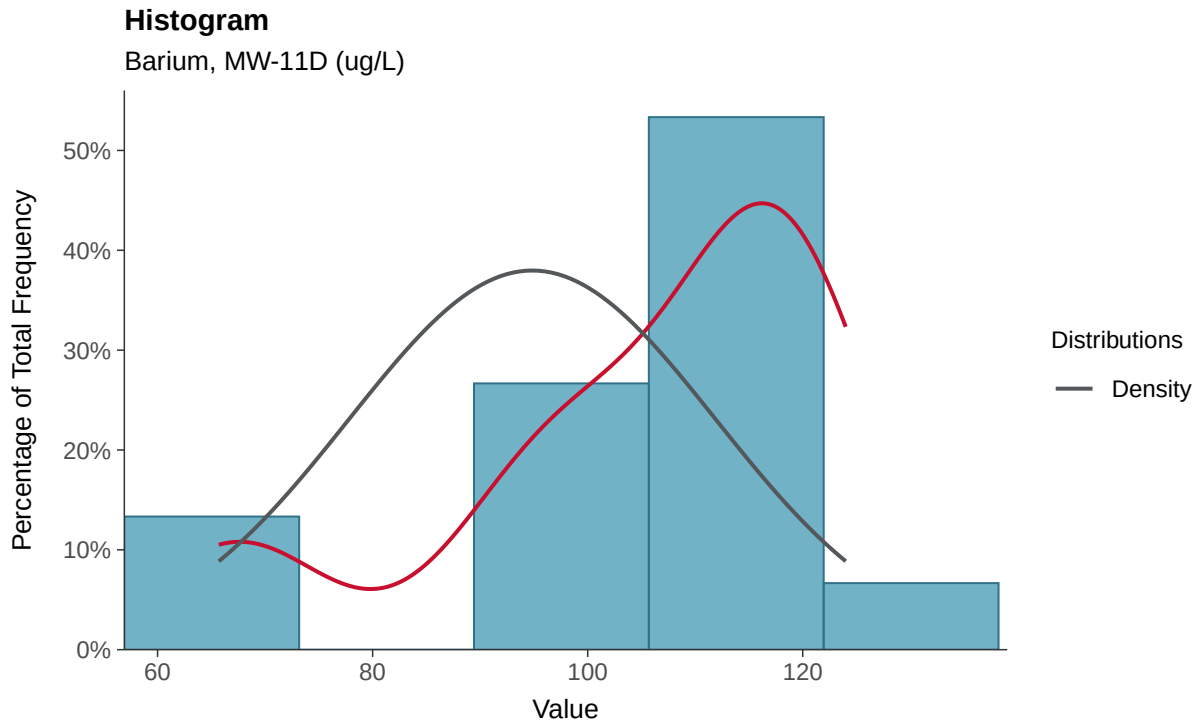



Trend Regression: Piecewise Linear-Linear
Arsenic, MW-11D (ug/L)
Value
16
12
8
4
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. IV: Barium, MW-11D

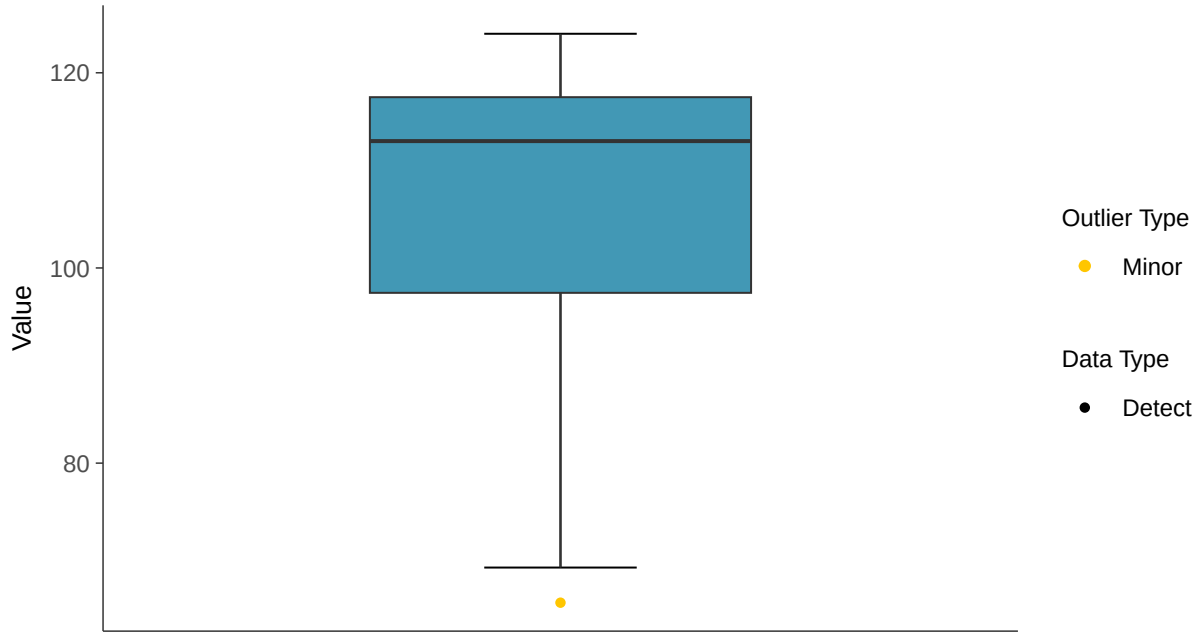
ID: 11_03_103





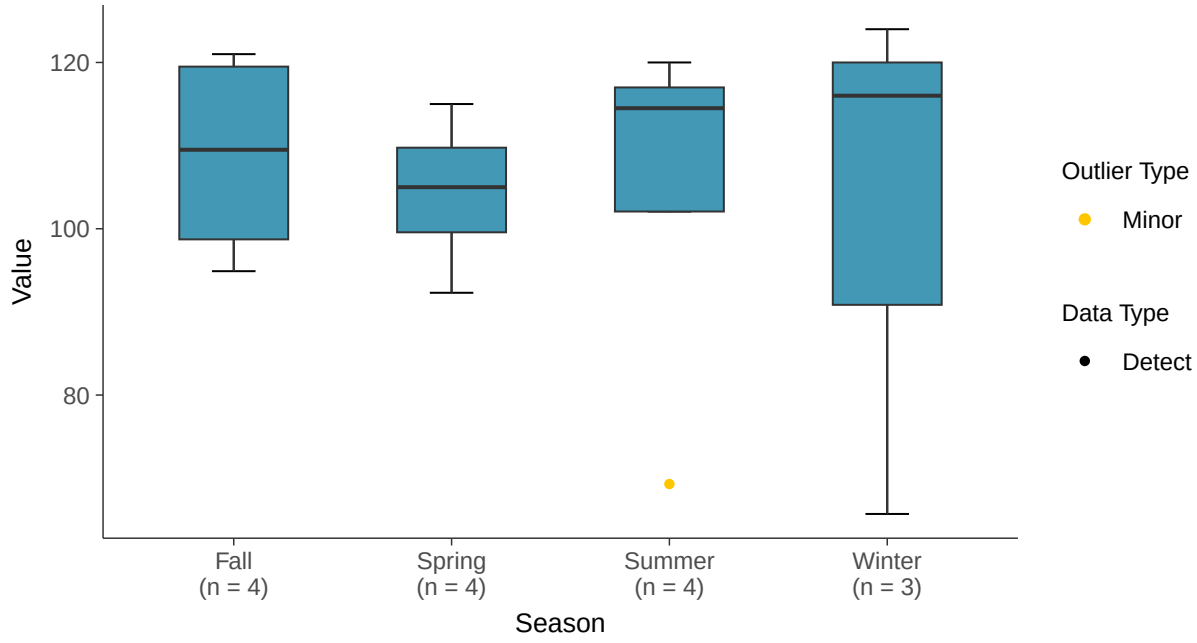
Boxplot

Barium, MW-11D (ug/L)



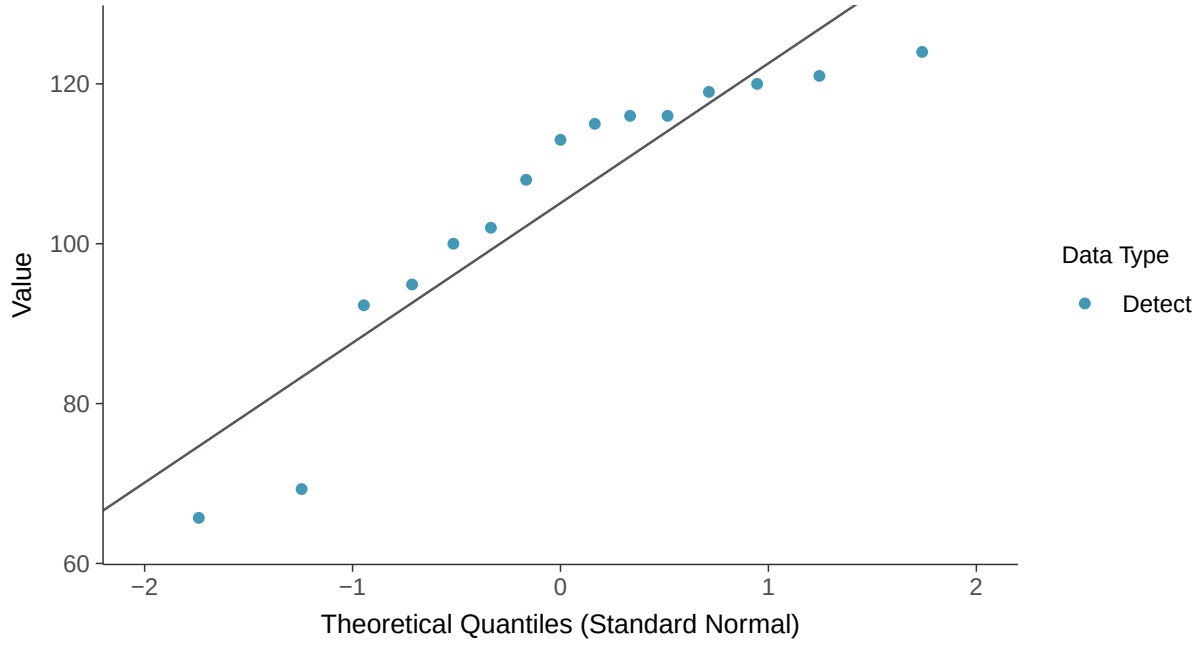
Boxplot by Season

Barium, MW-11D (ug/L)



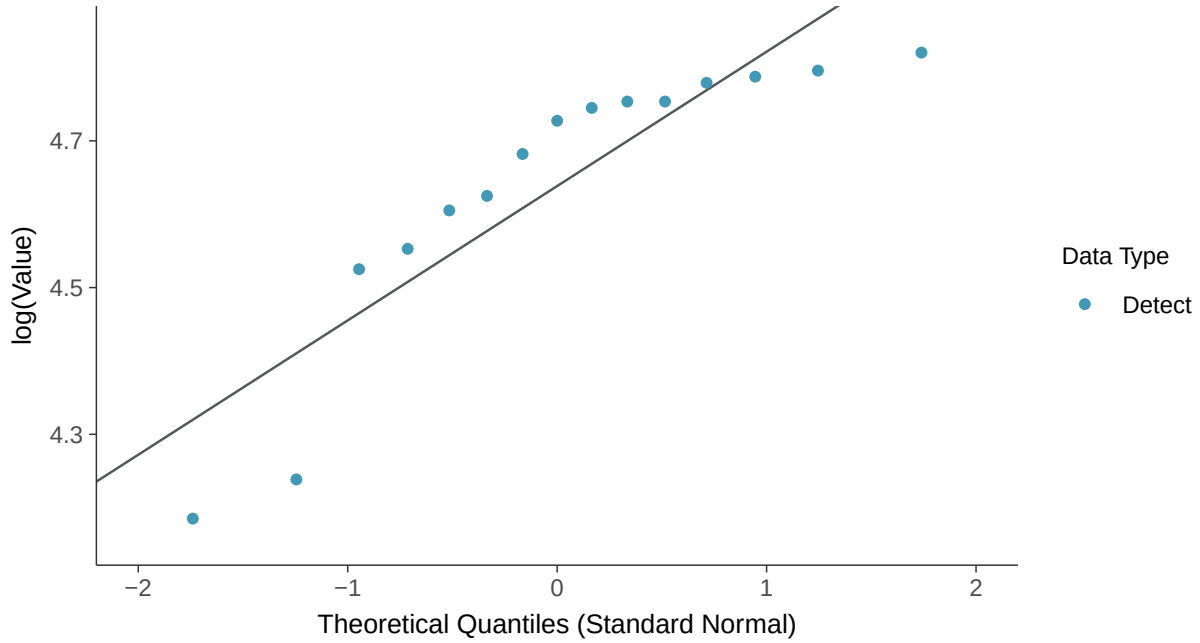
Normal Q-Q plot

Barium, MW-11D (ug/L)



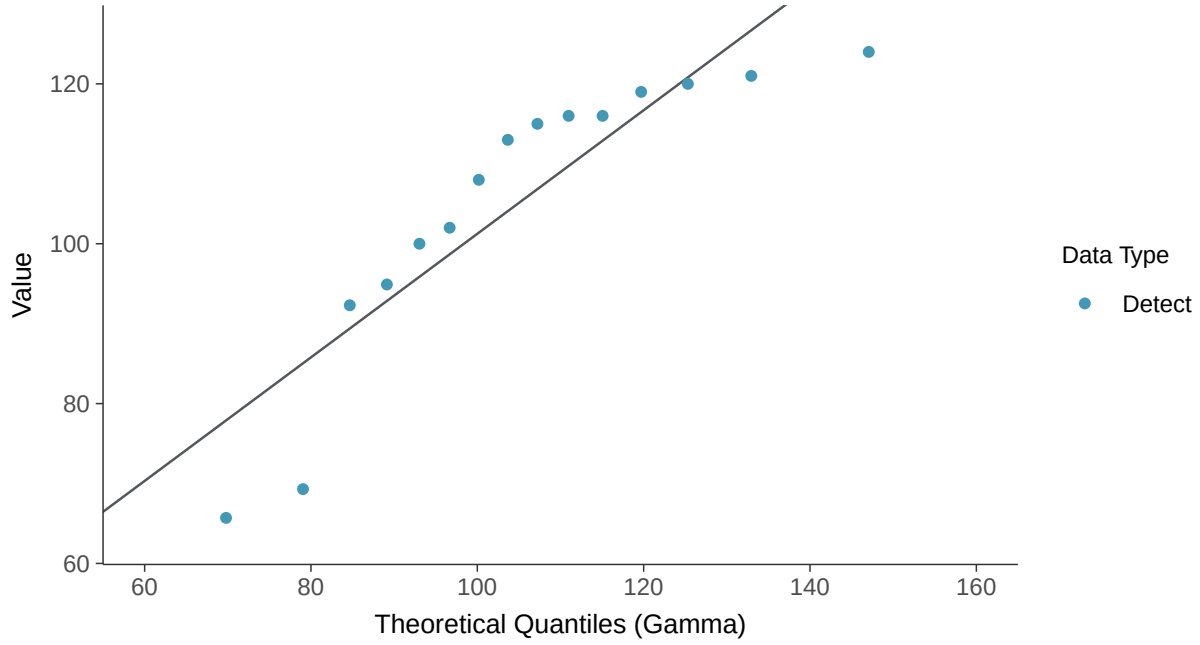
Lognormal Q-Q plot

Barium, MW-11D (ug/L)



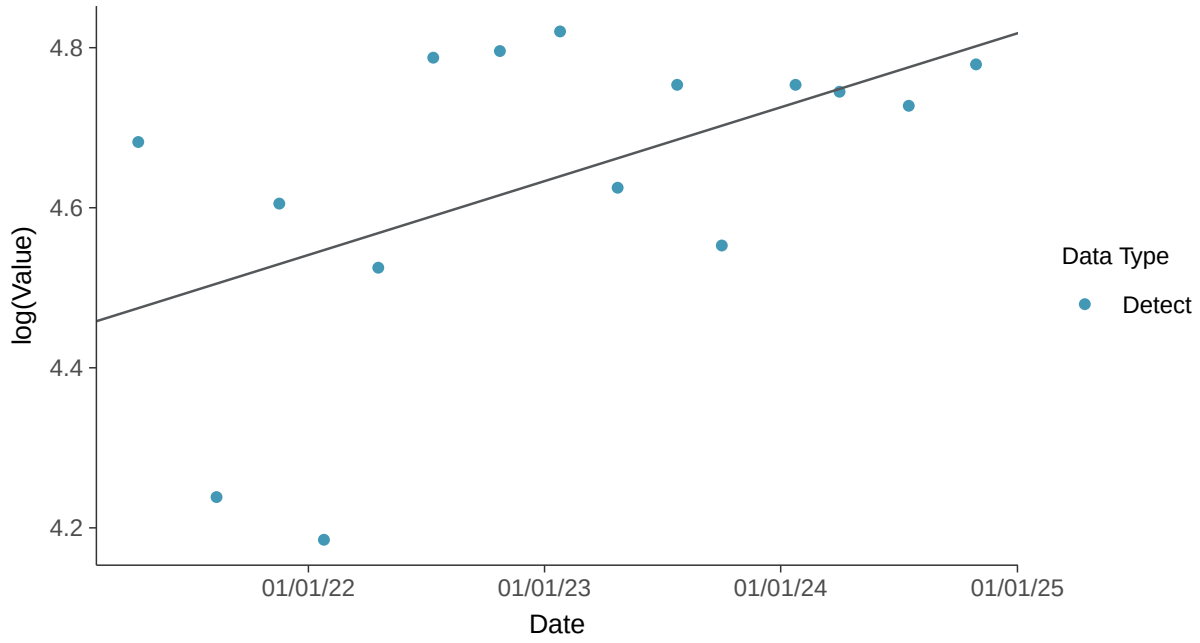
Gamma Q-Q plot

Barium, MW-11D (ug/L)



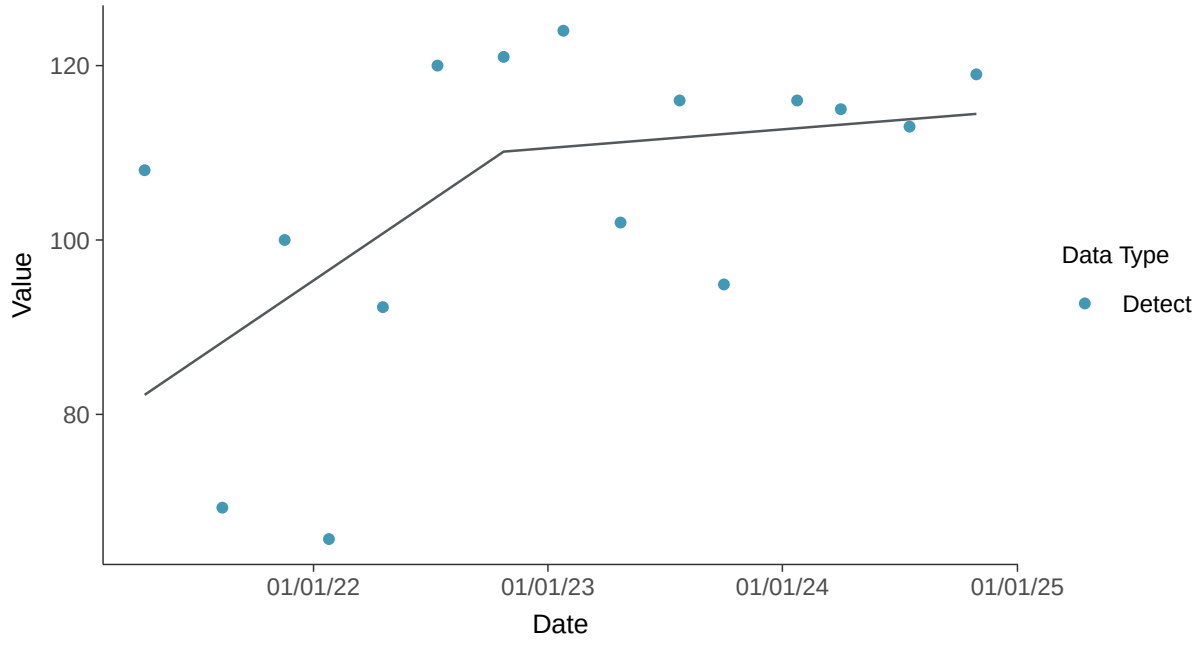
Trend Regression: Lognormal MLE

Barium, MW-11D (ug/L)



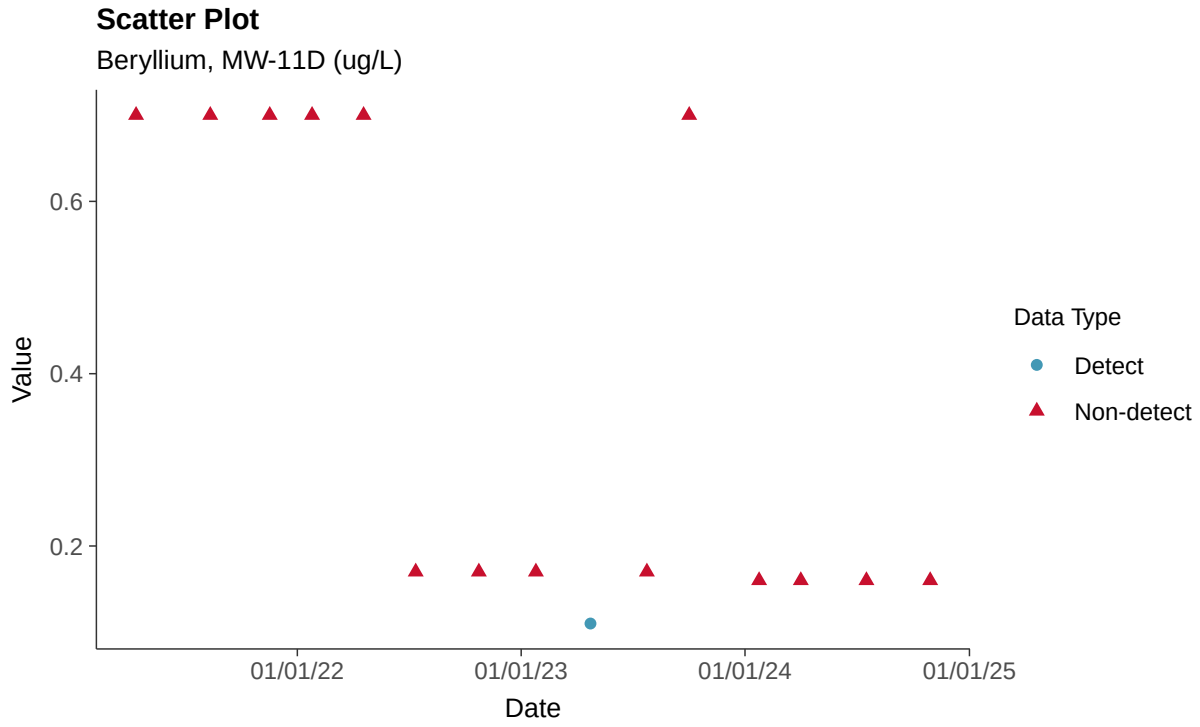
Trend Regression: Piecewise Linear-Linear

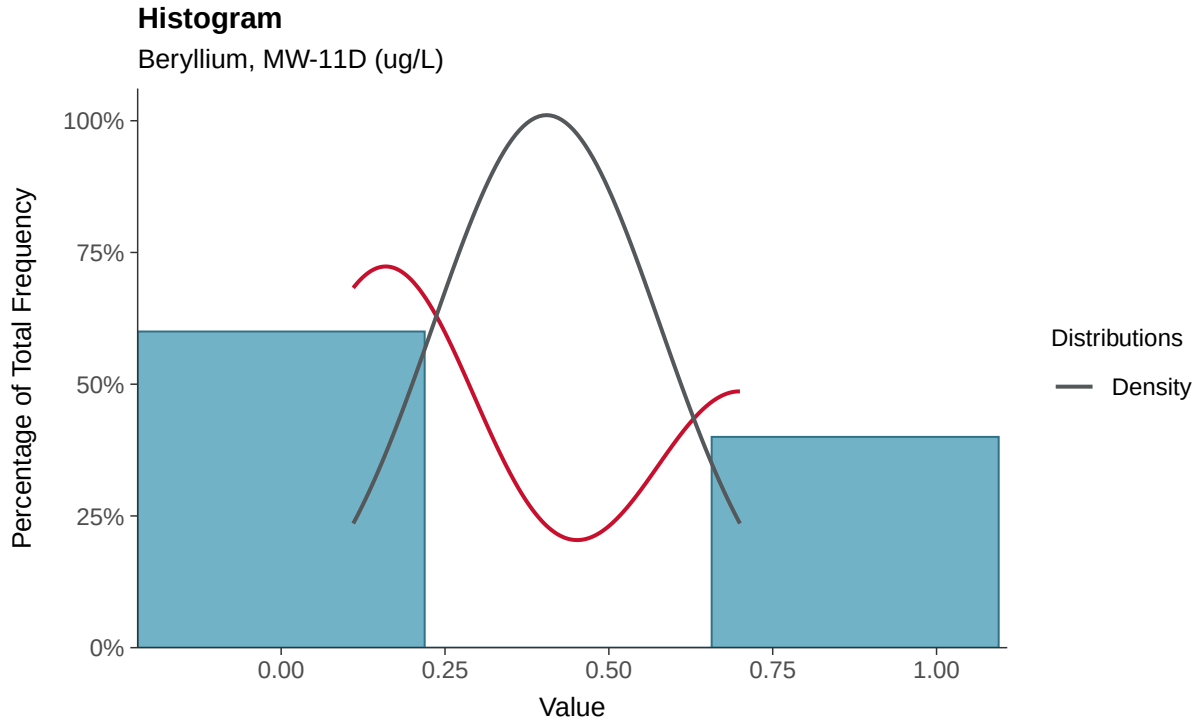
Barium, MW-11D (ug/L)



App. IV: Beryllium, MW-11D

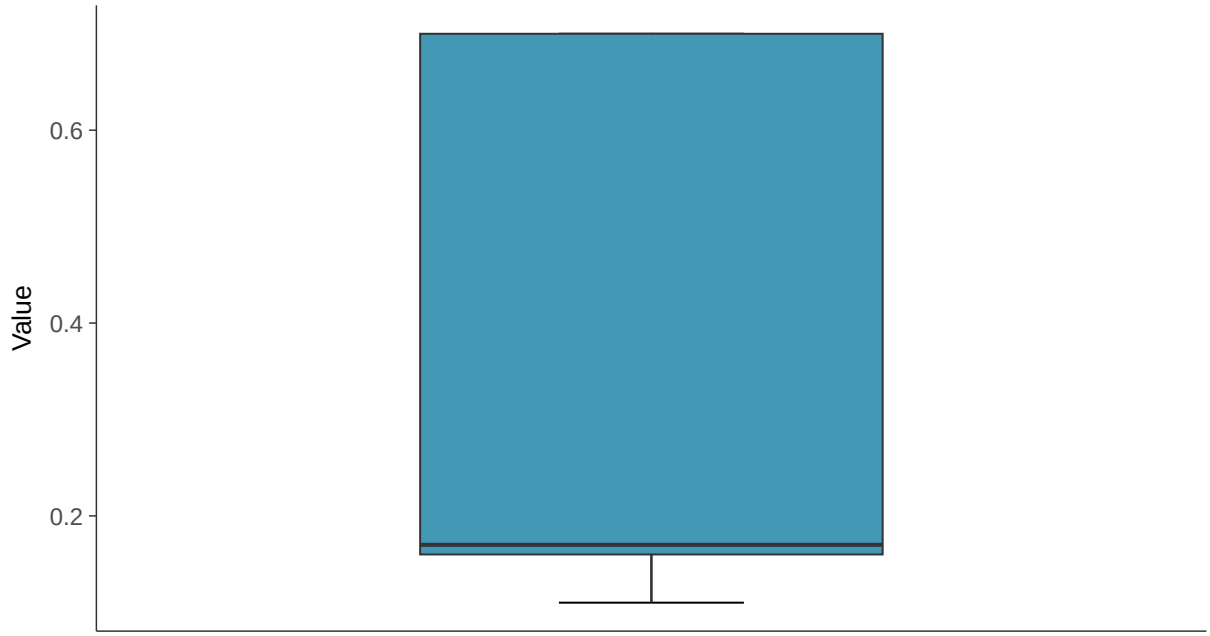
ID: 11_03_104





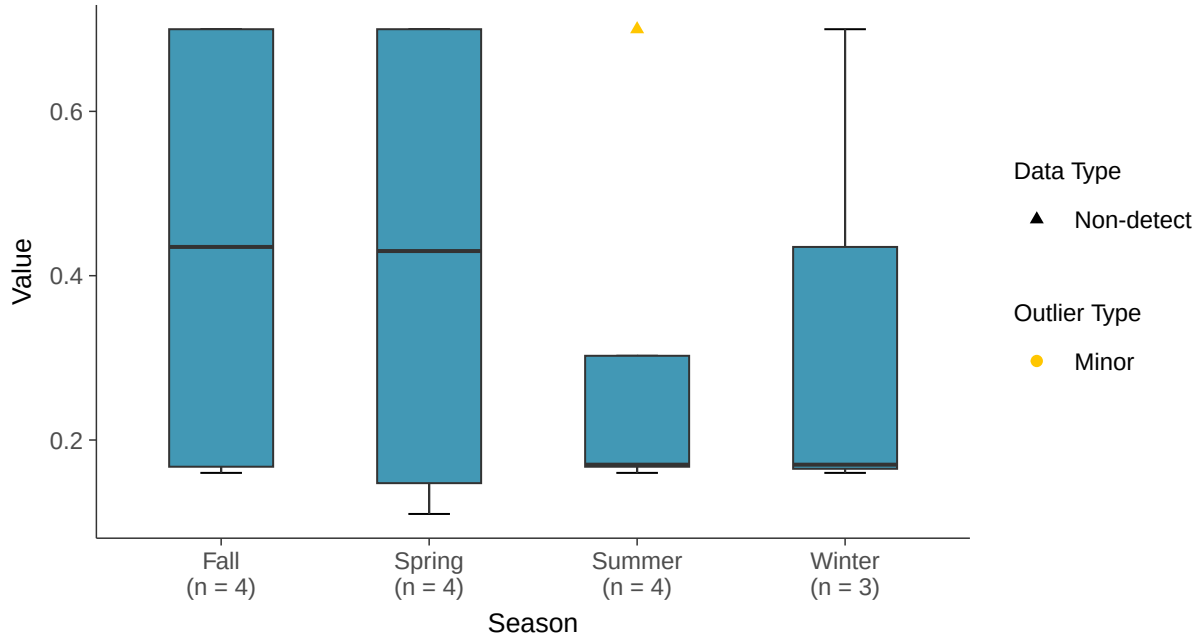
Boxplot

Beryllium, MW-11D (ug/L)



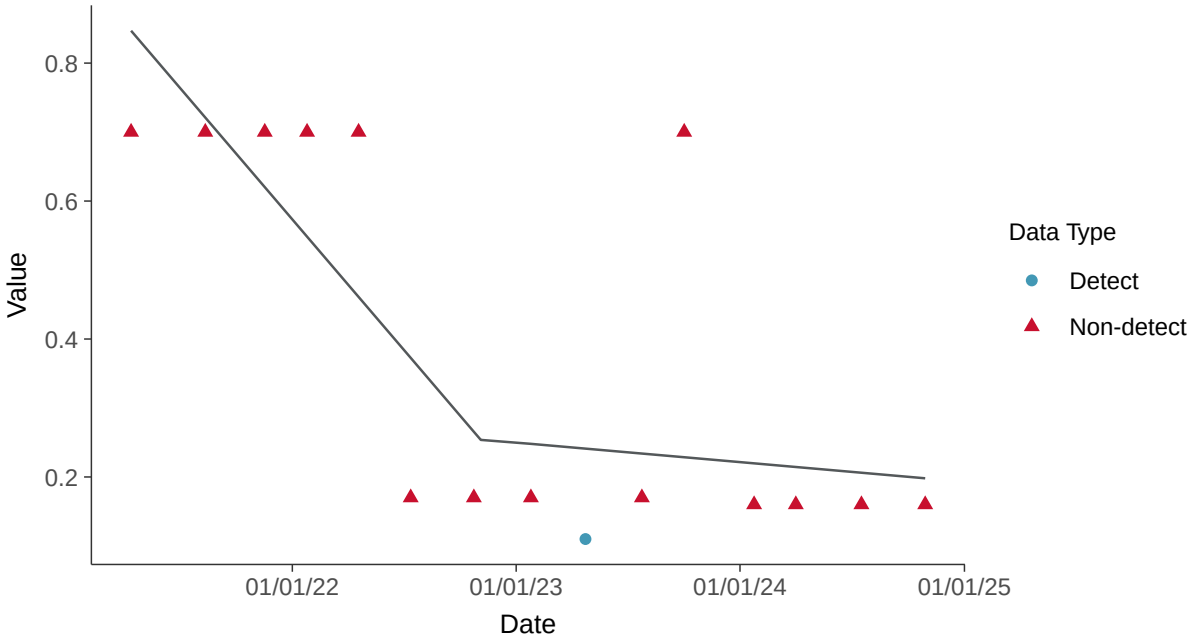
Boxplot by Season

Beryllium, MW-11D (ug/L)



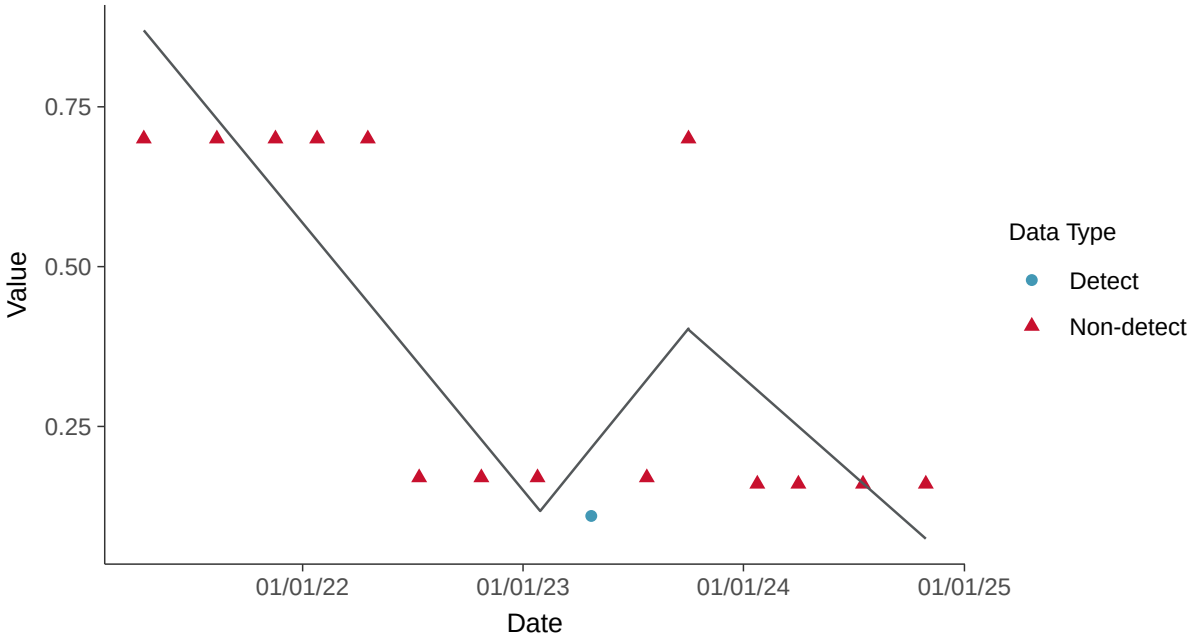
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-11D (ug/L)



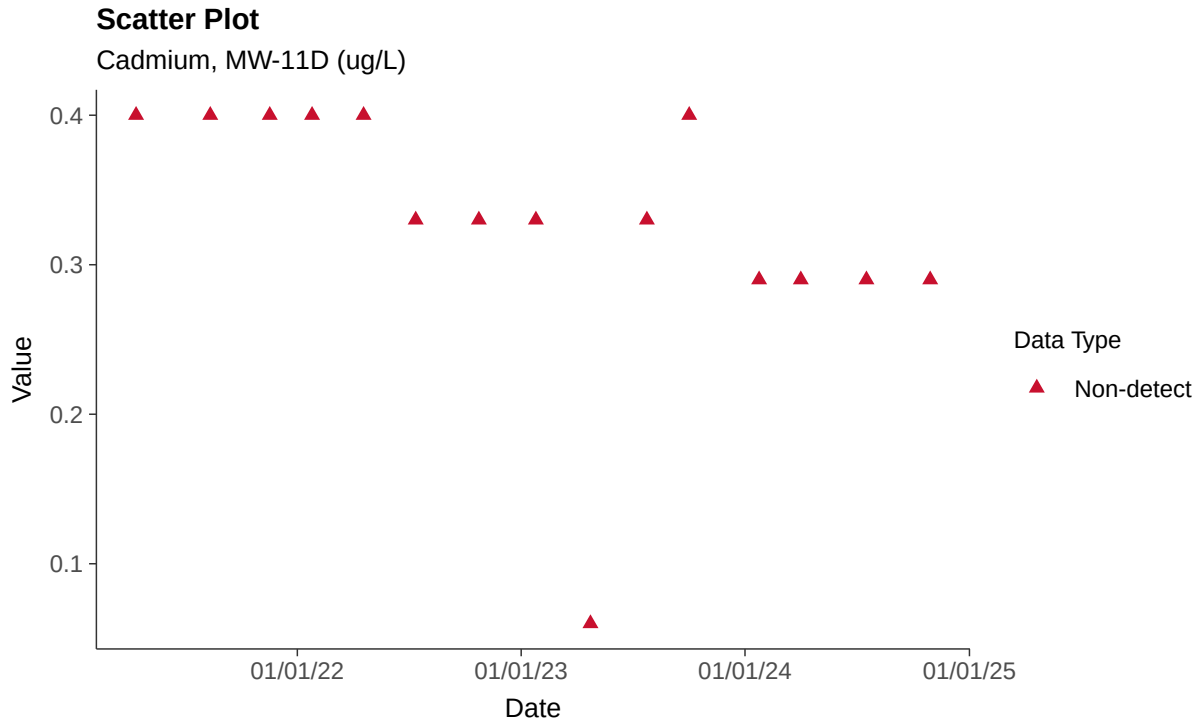
Trend Regression: Piecewise Linear-Linear-Linear

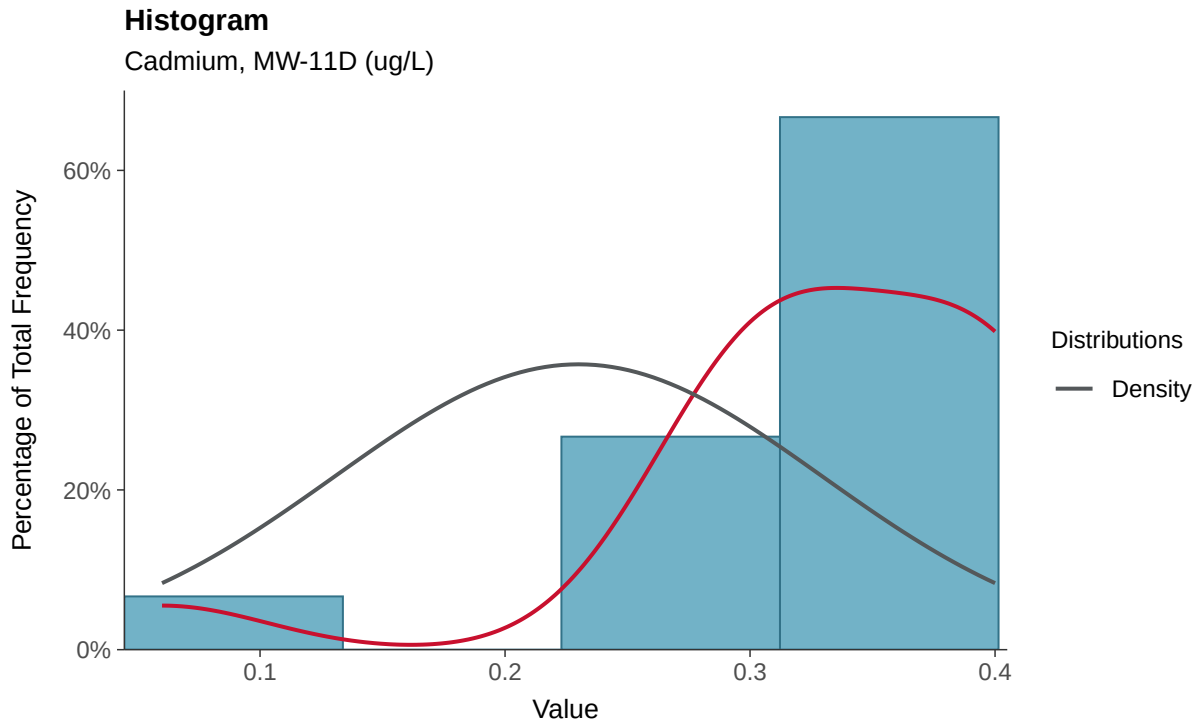
Beryllium, MW-11D (ug/L)



App. IV: Cadmium, MW-11D

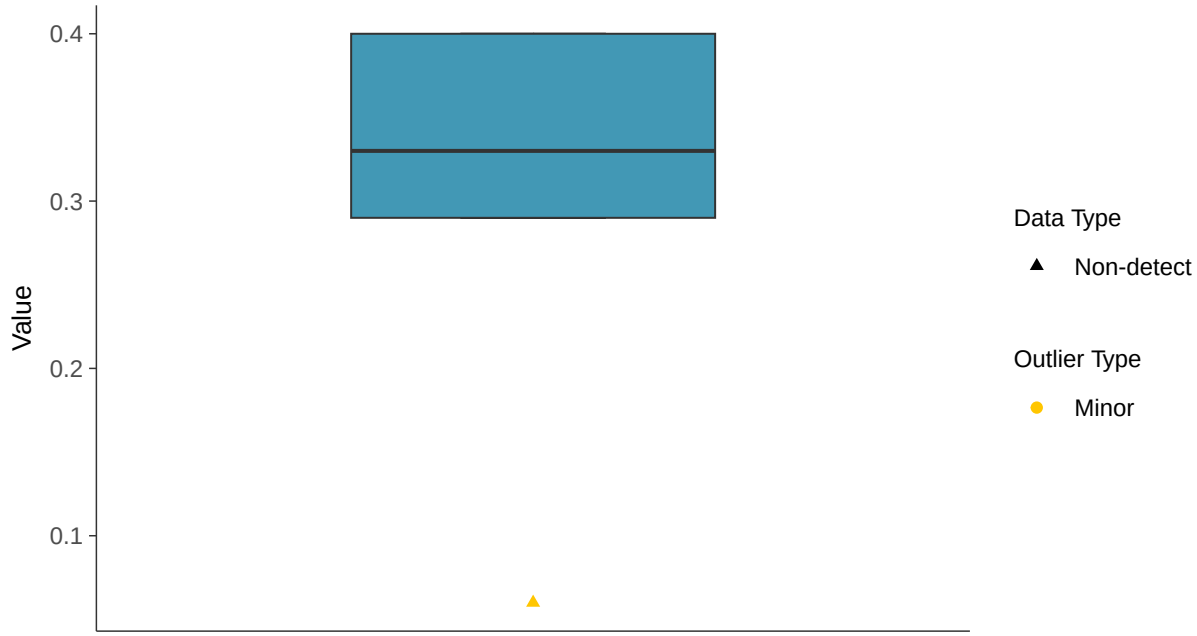
ID: 11_03_106





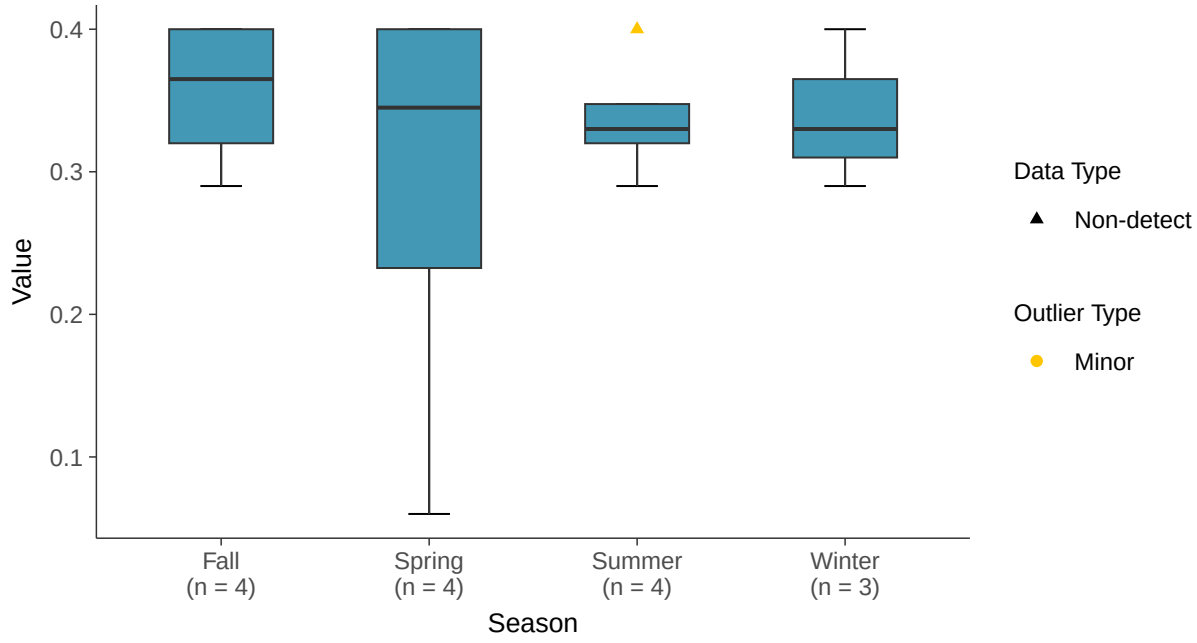
Boxplot

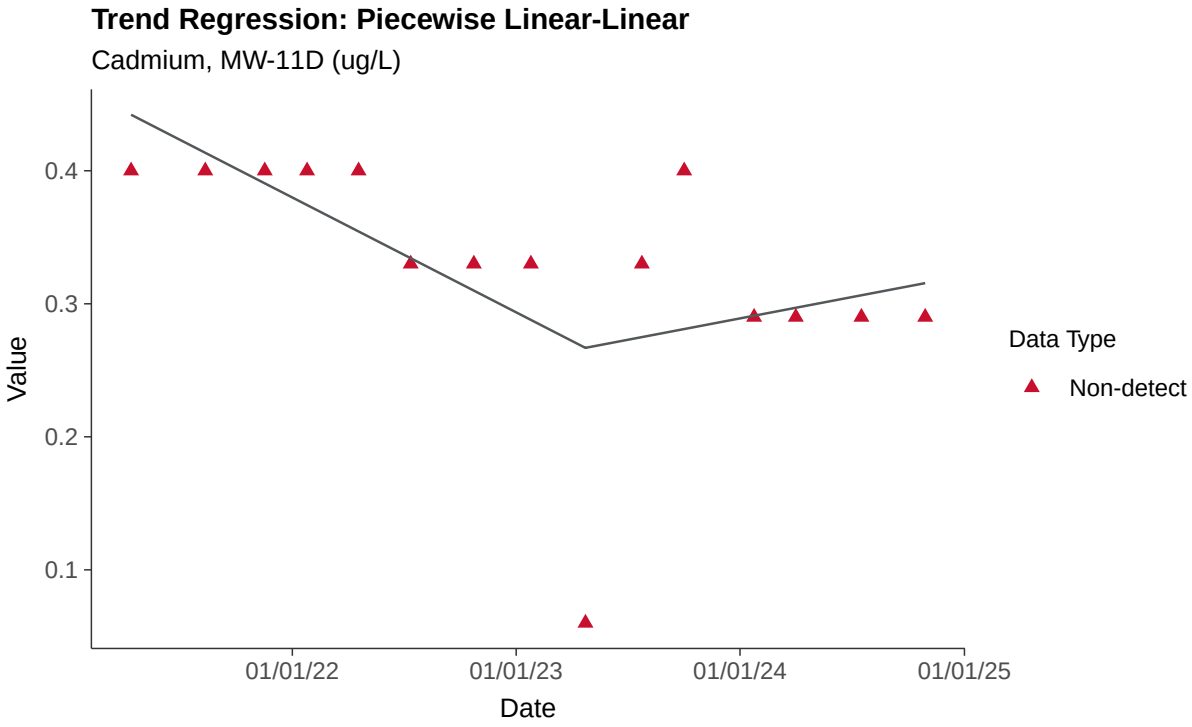
Cadmium, MW-11D (ug/L)



Boxplot by Season

Cadmium, MW-11D (ug/L)



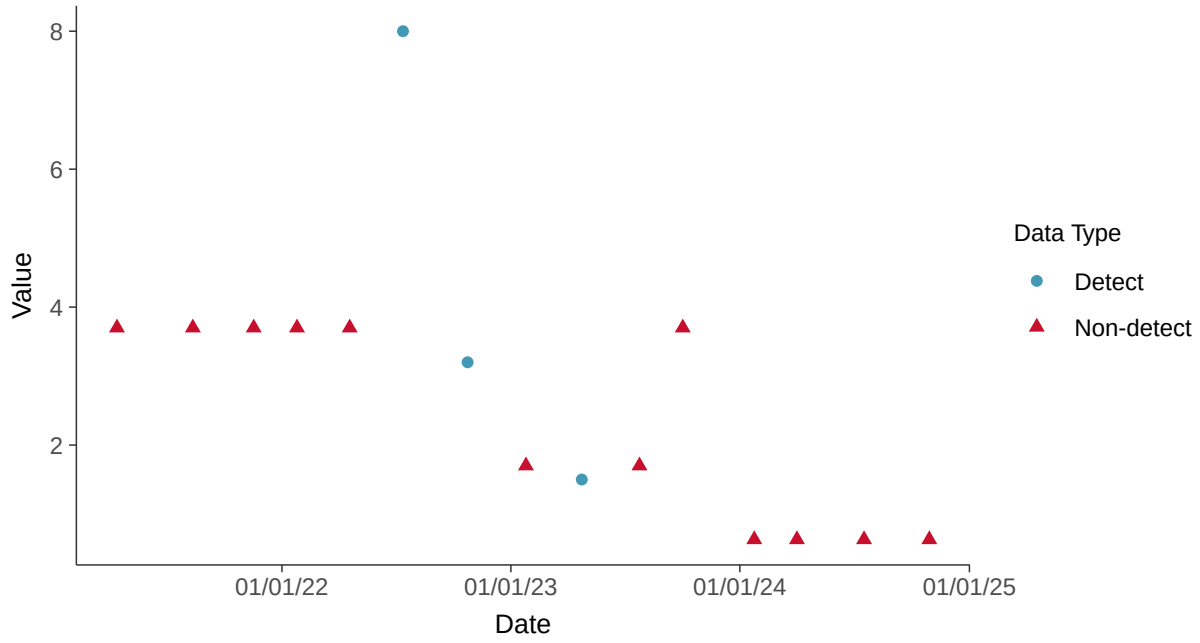

Trend Regression: Piecewise Linear-Linear
Cadmium, MW-11D (ug/L)
Value
0.4
0.3
0.2
0.1
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Non-detect

App. IV: Chromium, MW-11D

ID: 11_03_109

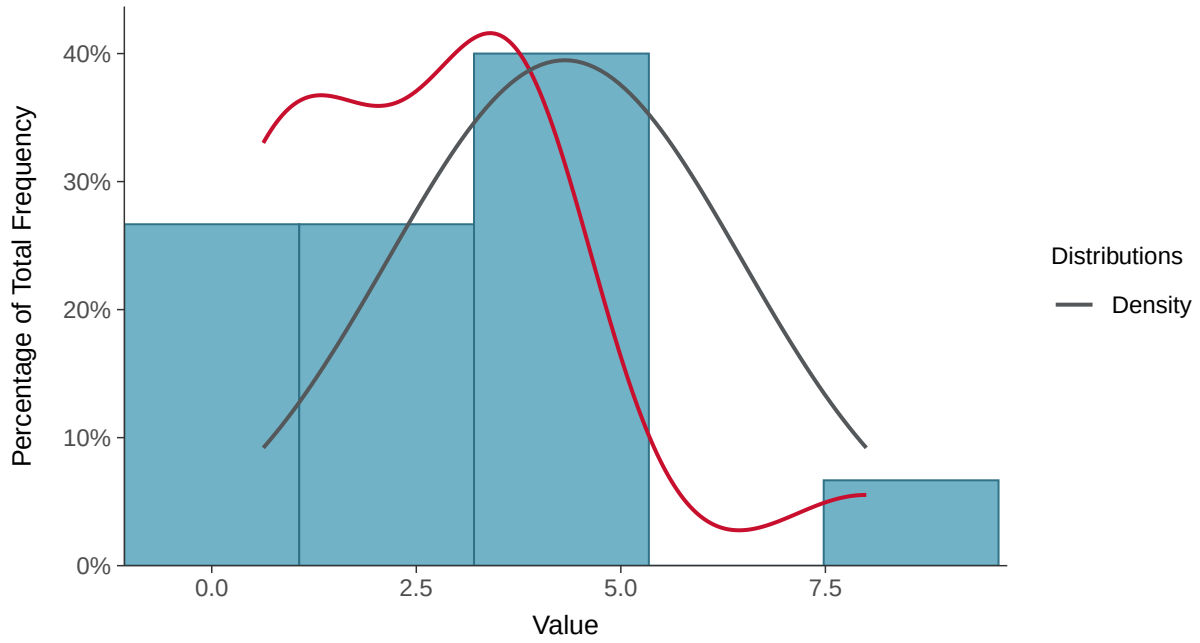
Scatter Plot

Chromium, MW-11D (ug/L)



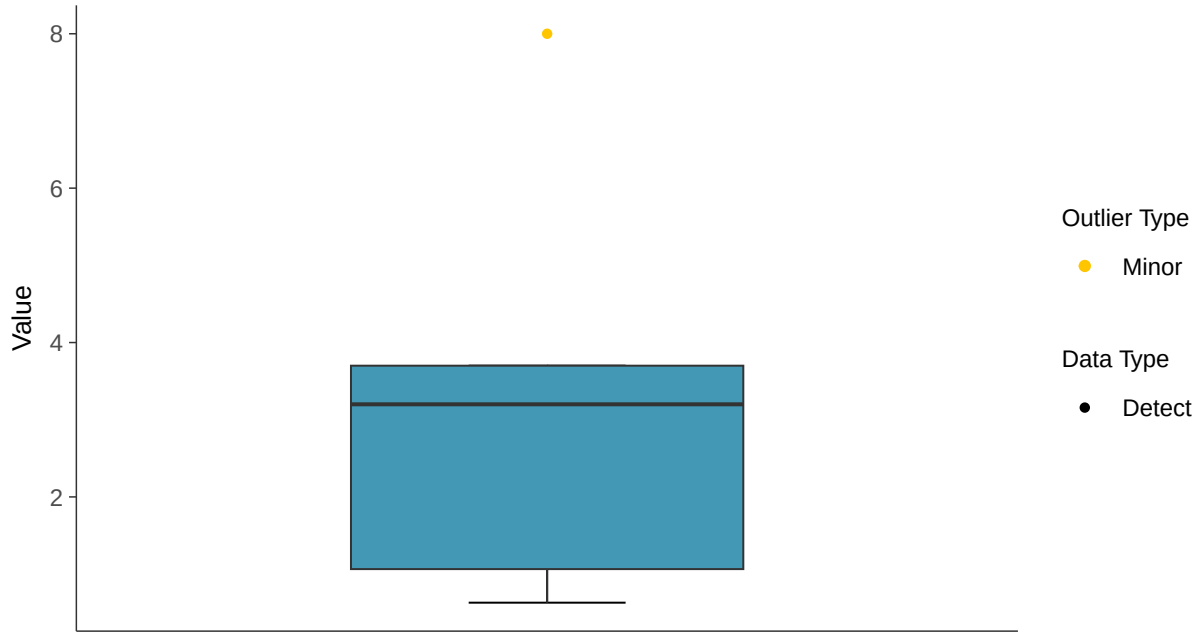
Histogram

Chromium, MW-11D (ug/L)



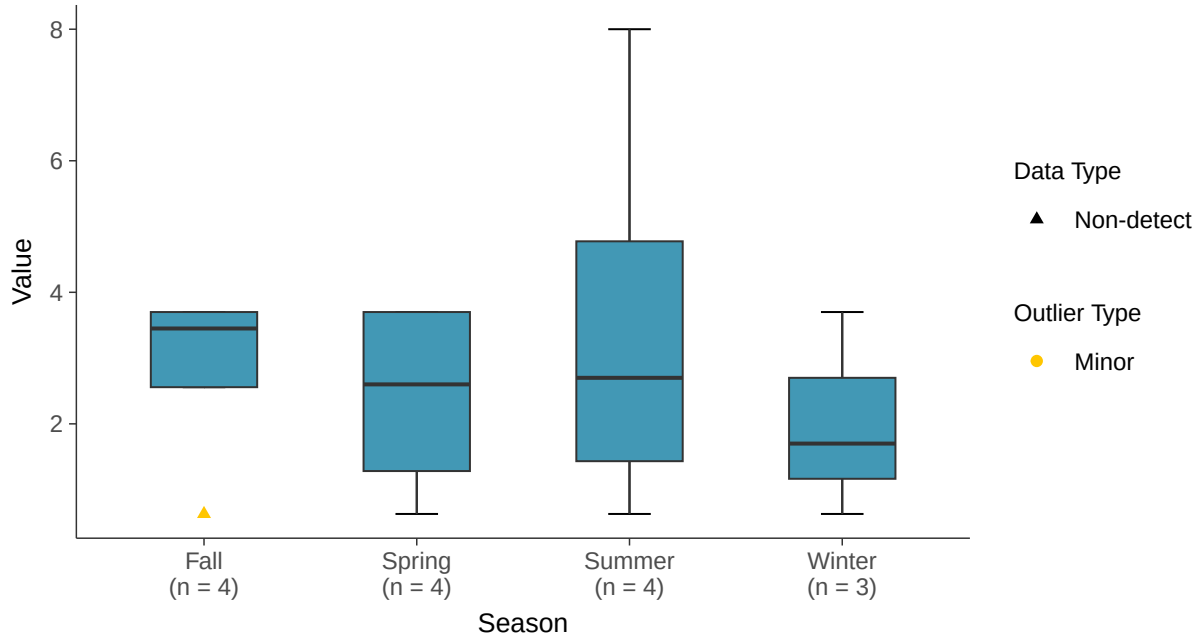
Boxplot

Chromium, MW-11D (ug/L)



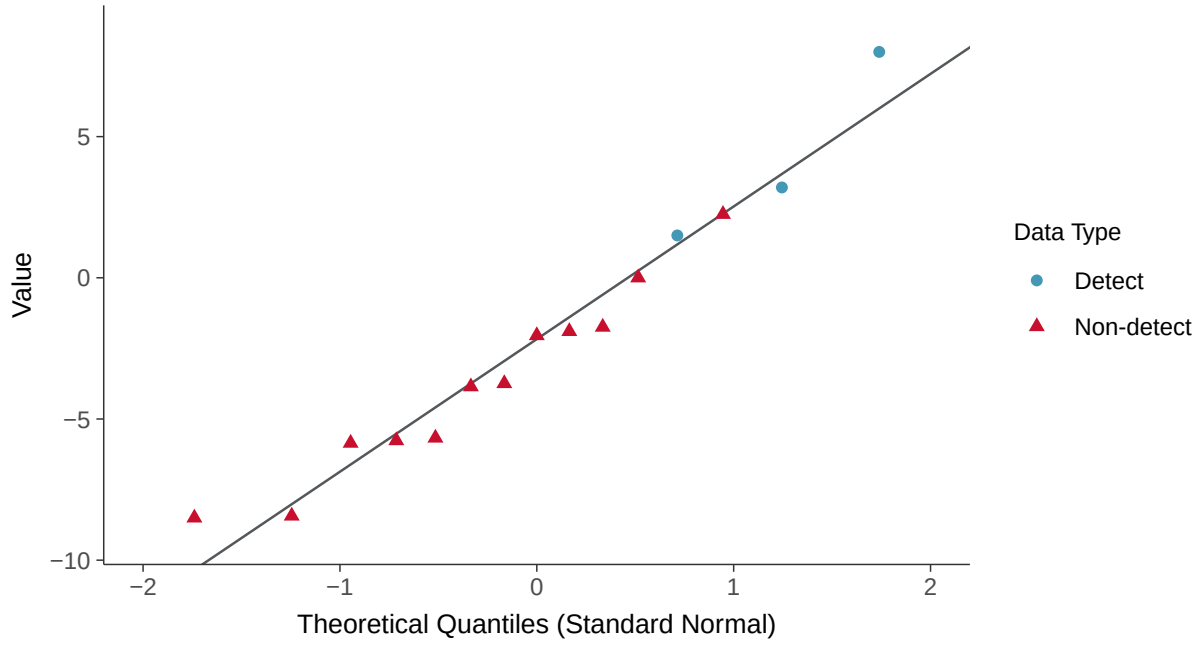
Boxplot by Season

Chromium, MW-11D (ug/L)



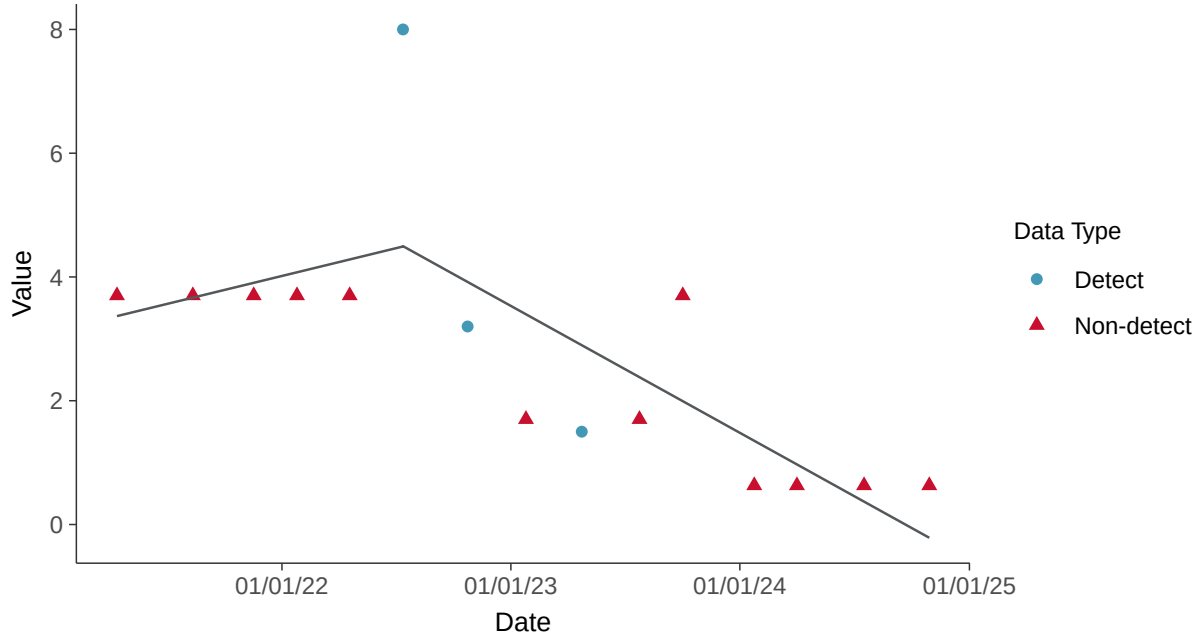
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-11D (ug/L)



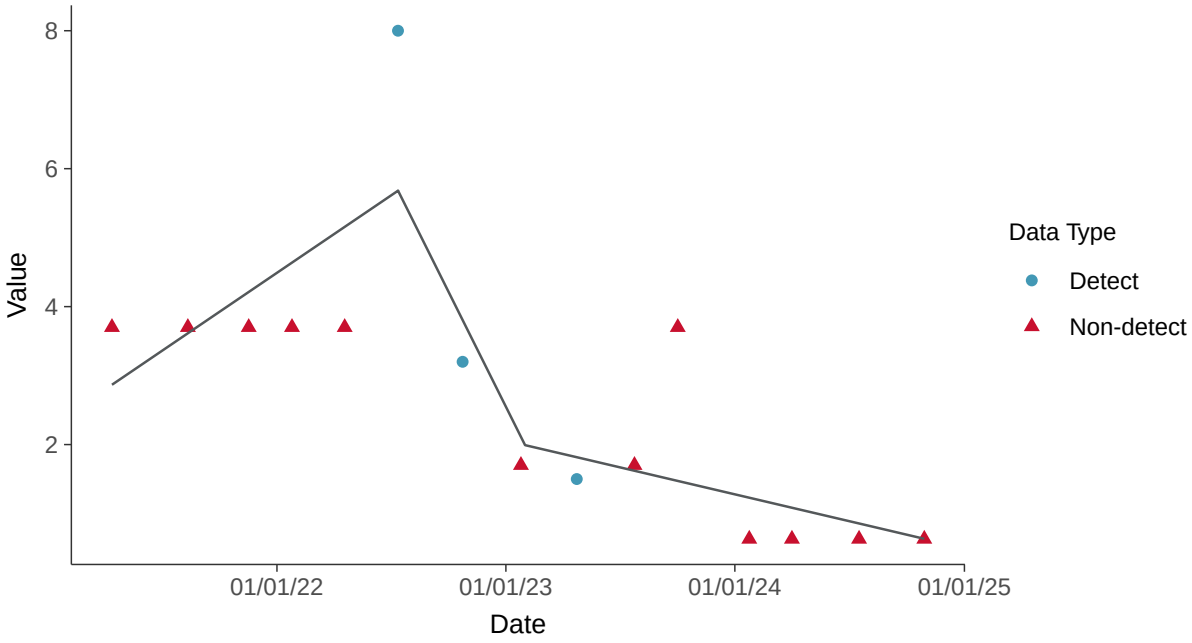
Trend Regression: Piecewise Linear-Linear

Chromium, MW-11D (ug/L)



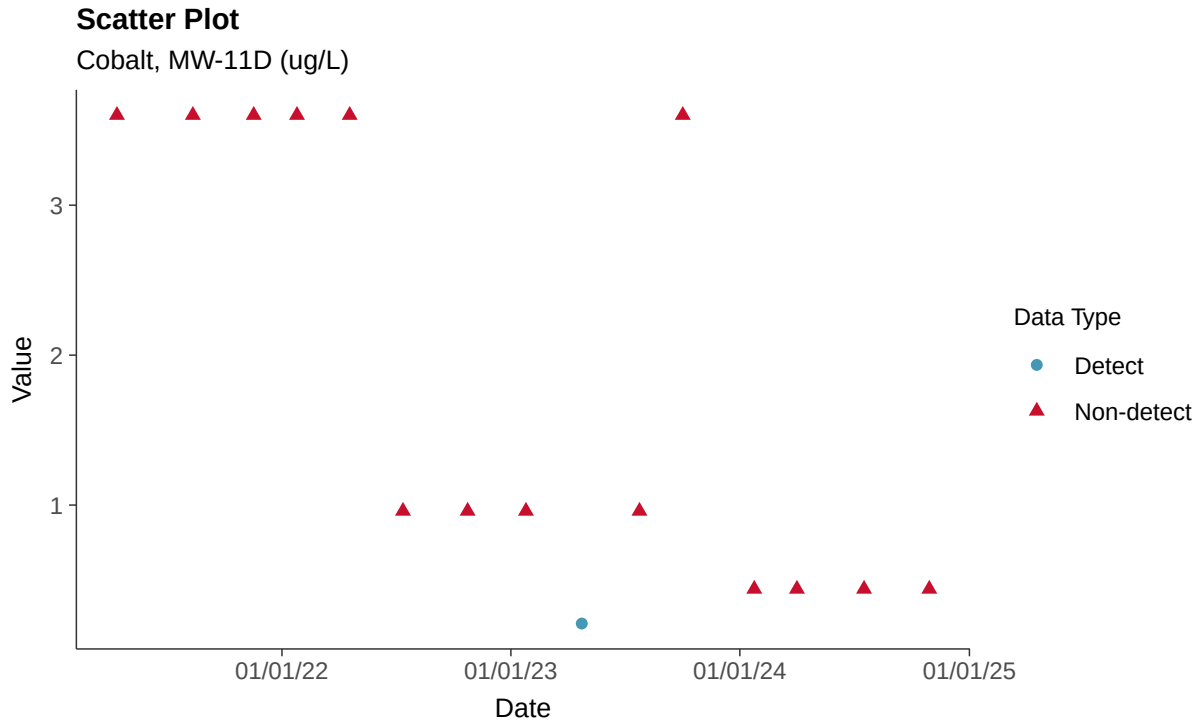
Trend Regression: Piecewise Linear-Linear-Linear

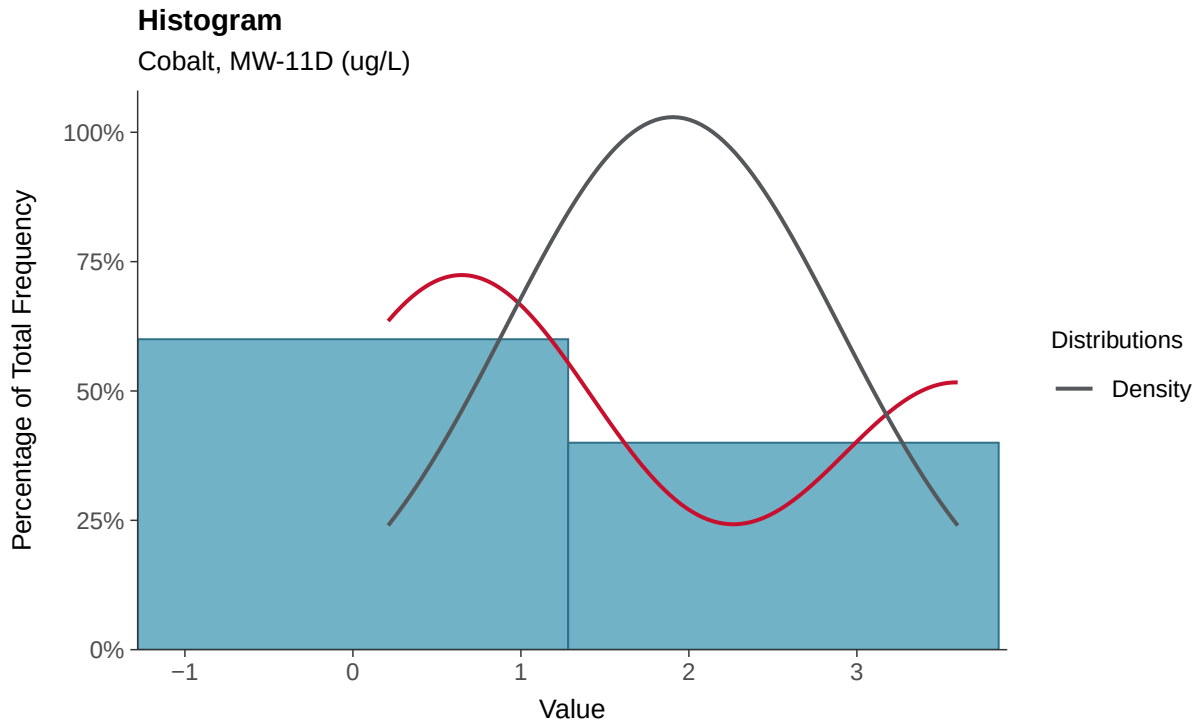
Chromium, MW-11D (ug/L)



App. IV: Cobalt, MW-11D

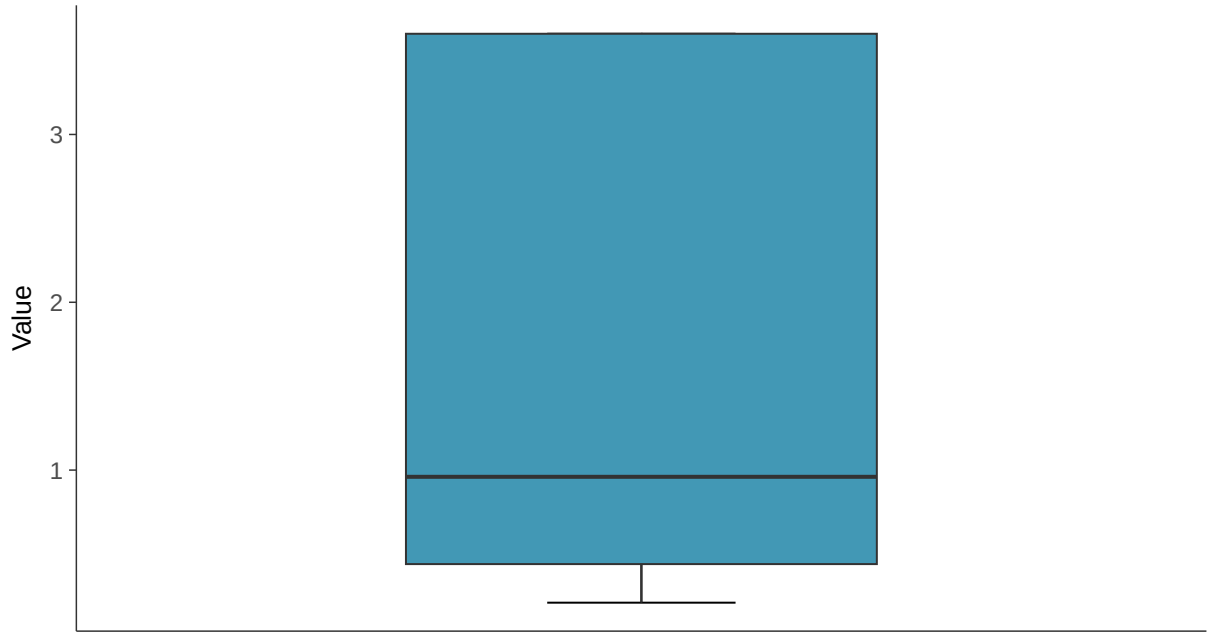
ID: 11_03_110





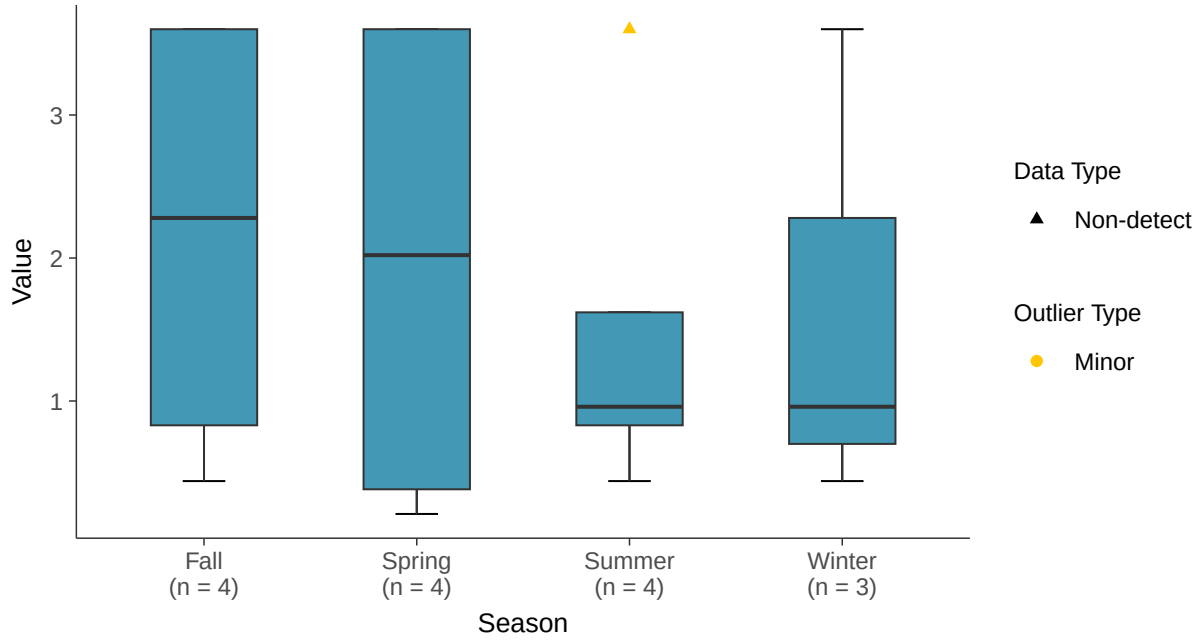
Boxplot

Cobalt, MW-11D (ug/L)



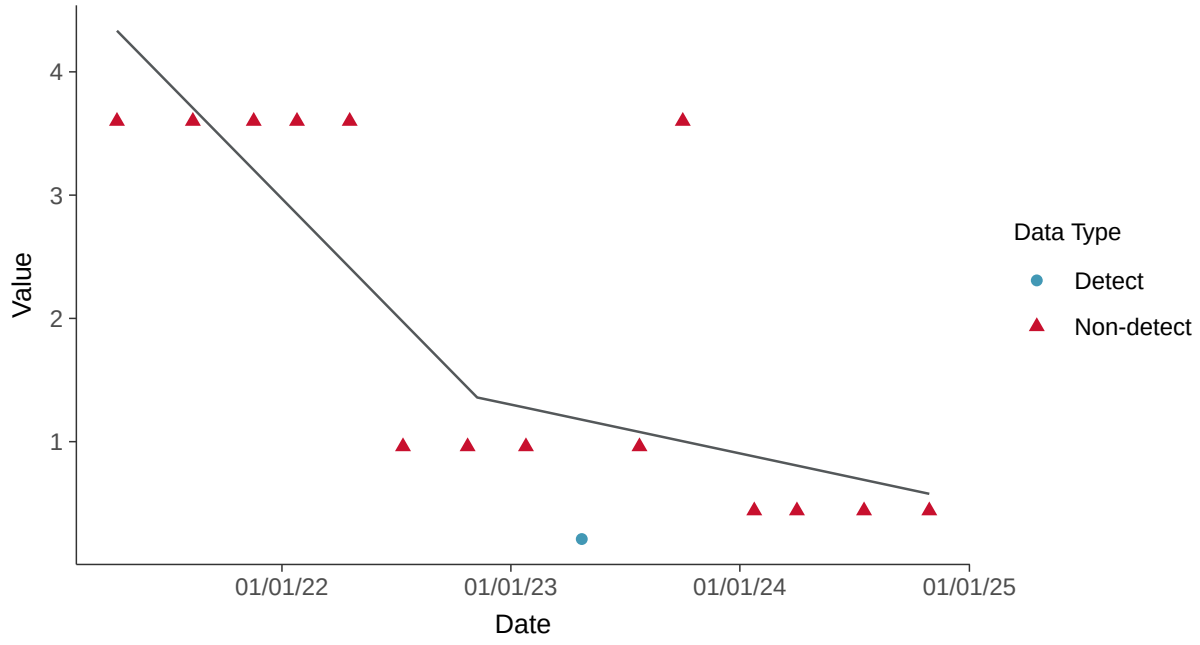
Boxplot by Season

Cobalt, MW-11D (ug/L)



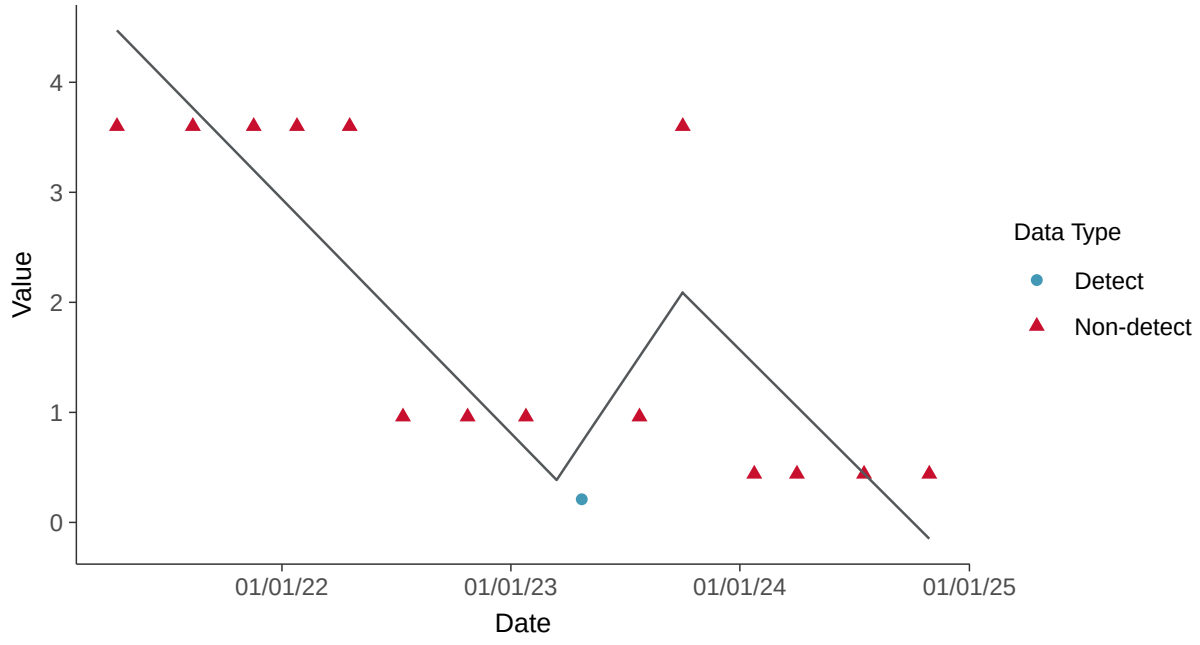
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-11D (ug/L)



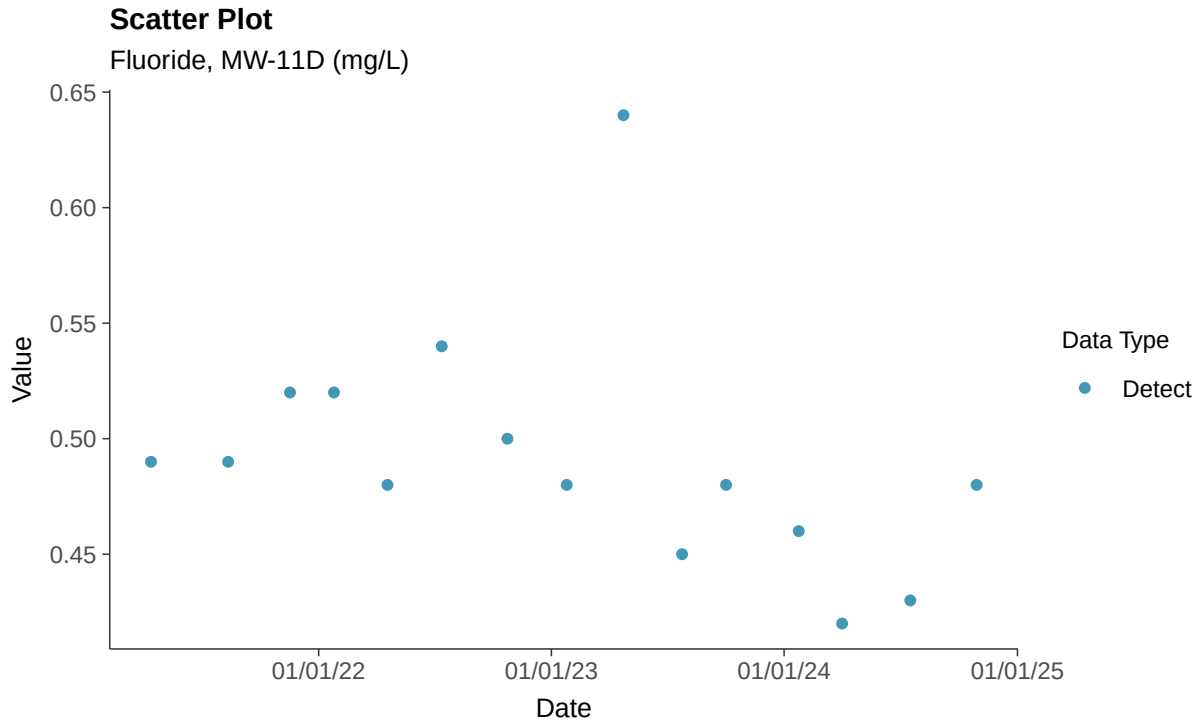
Trend Regression: Piecewise Linear-Linear-Linear

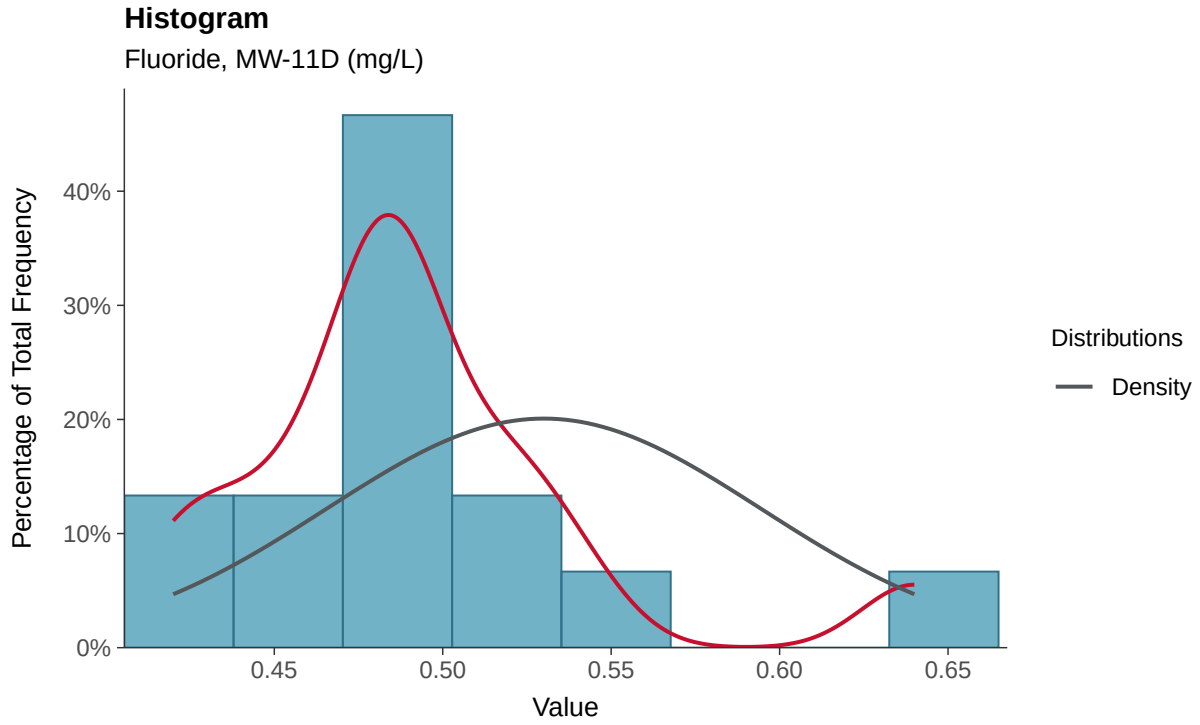
Cobalt, MW-11D (ug/L)



App. IV: Fluoride, MW-11D

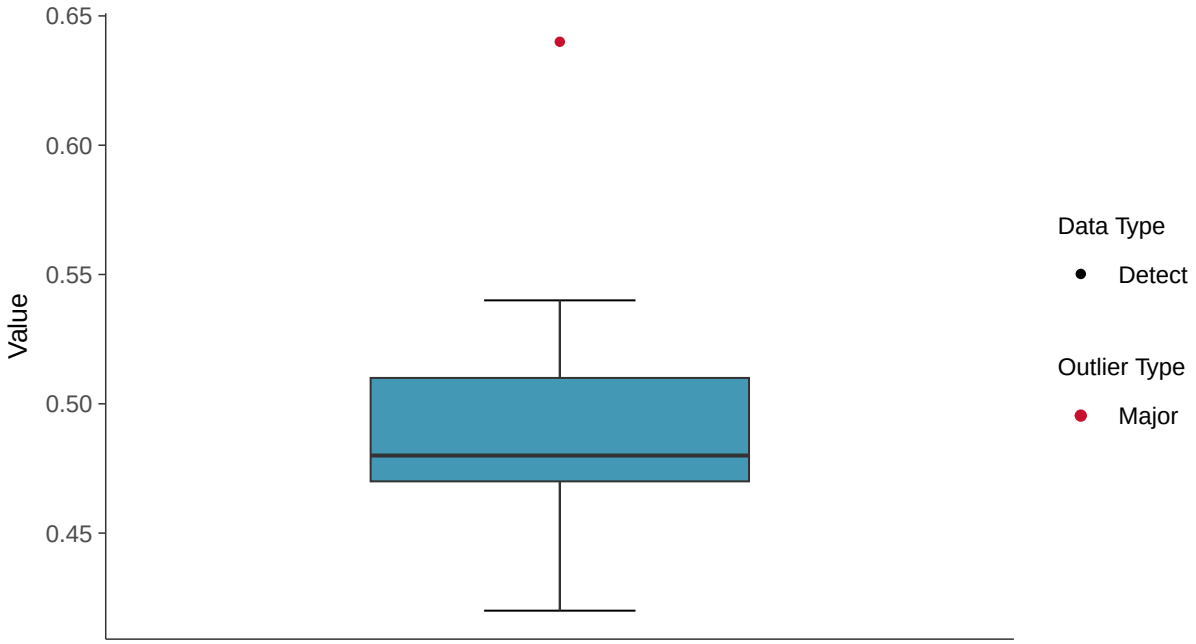
ID: 11_03_112





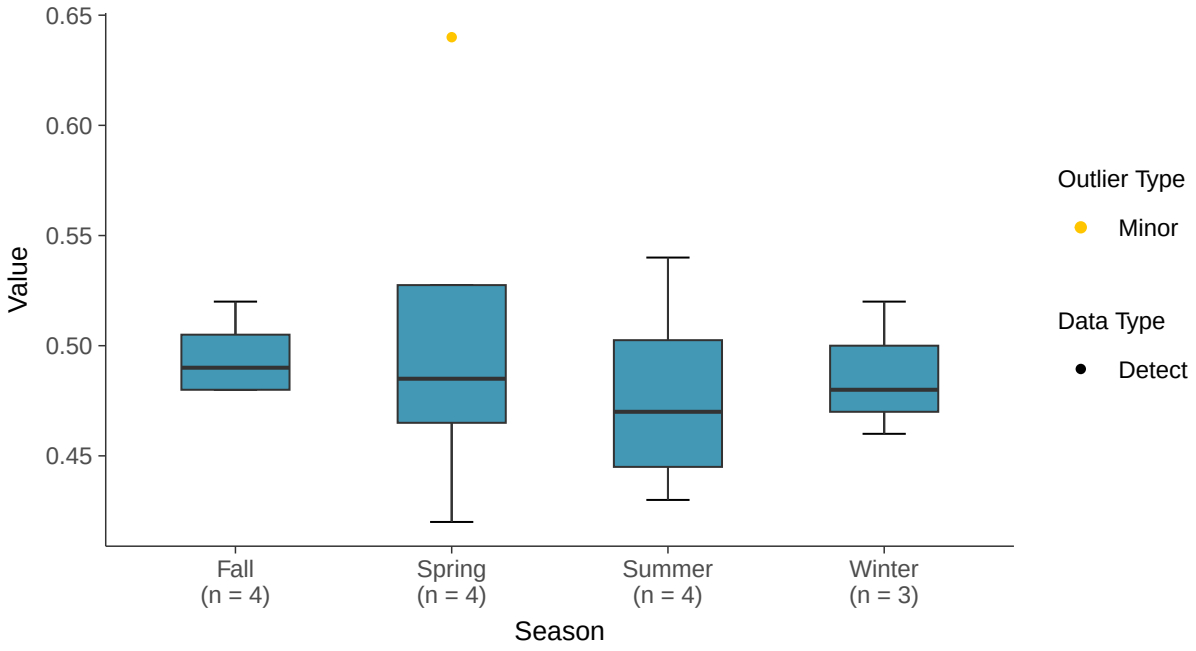
Boxplot

Fluoride, MW-11D (mg/L)



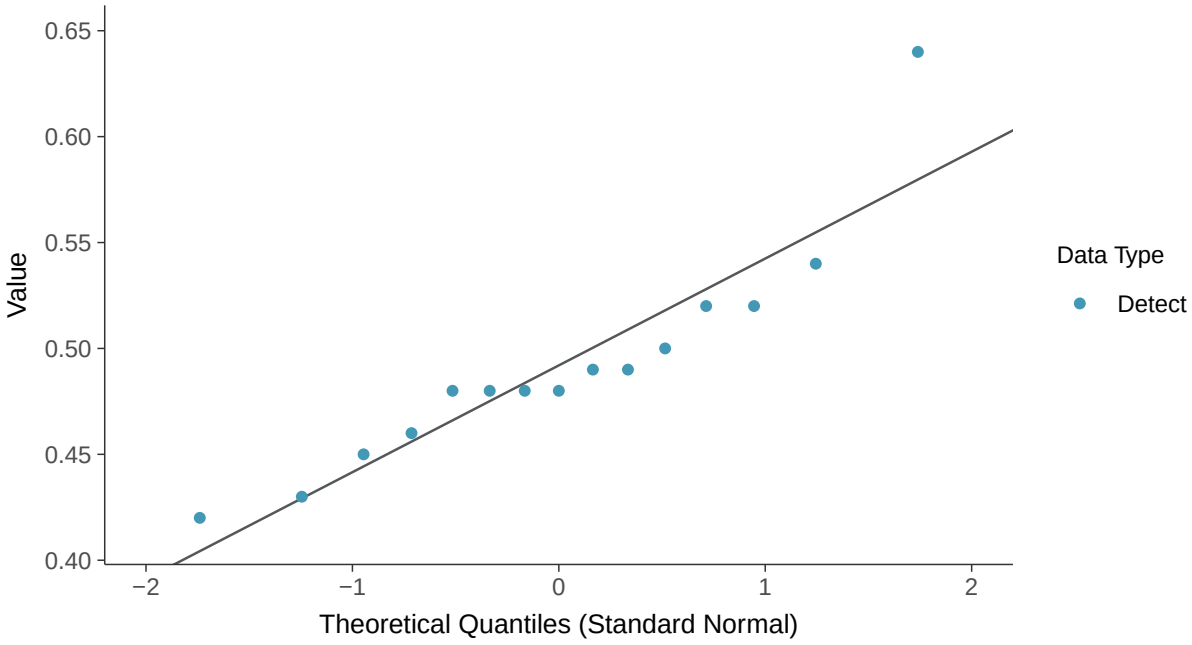
Boxplot by Season

Fluoride, MW-11D (mg/L)



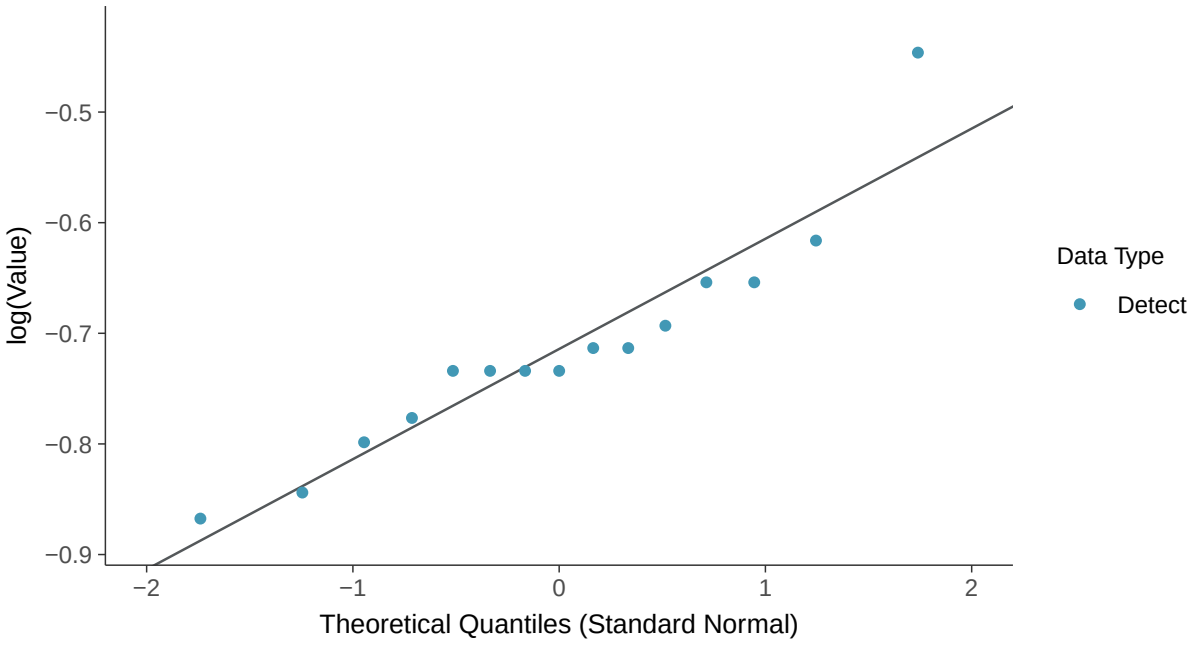
Normal Q-Q plot

Fluoride, MW-11D (mg/L)



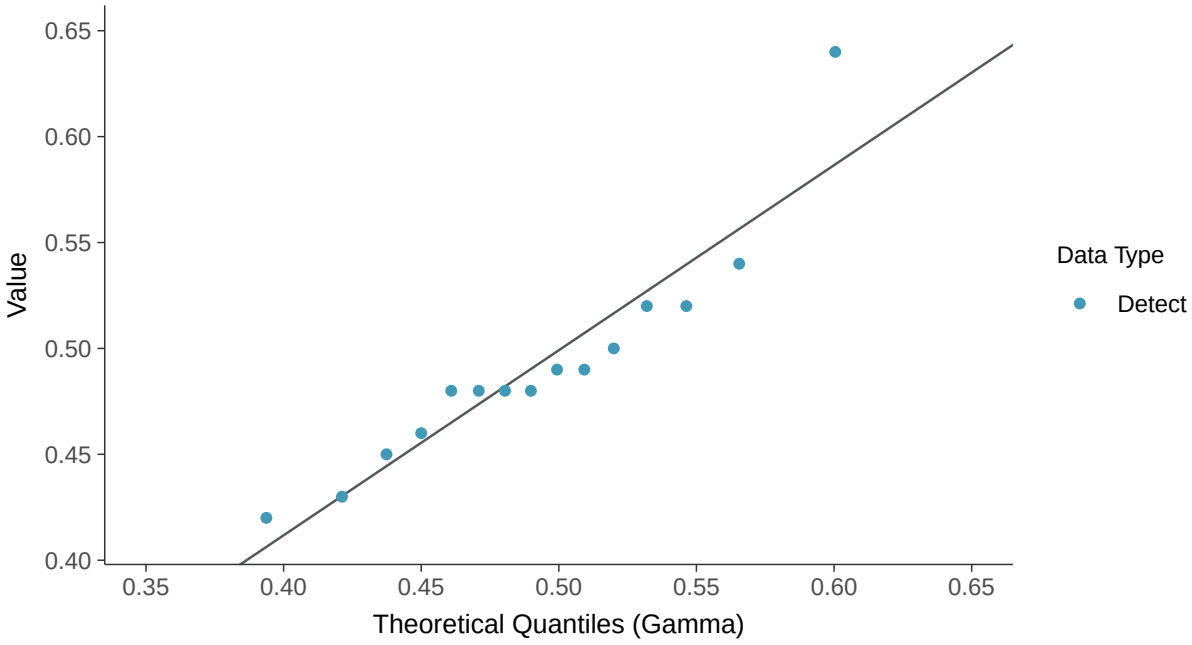
Lognormal Q-Q plot

Fluoride, MW-11D (mg/L)



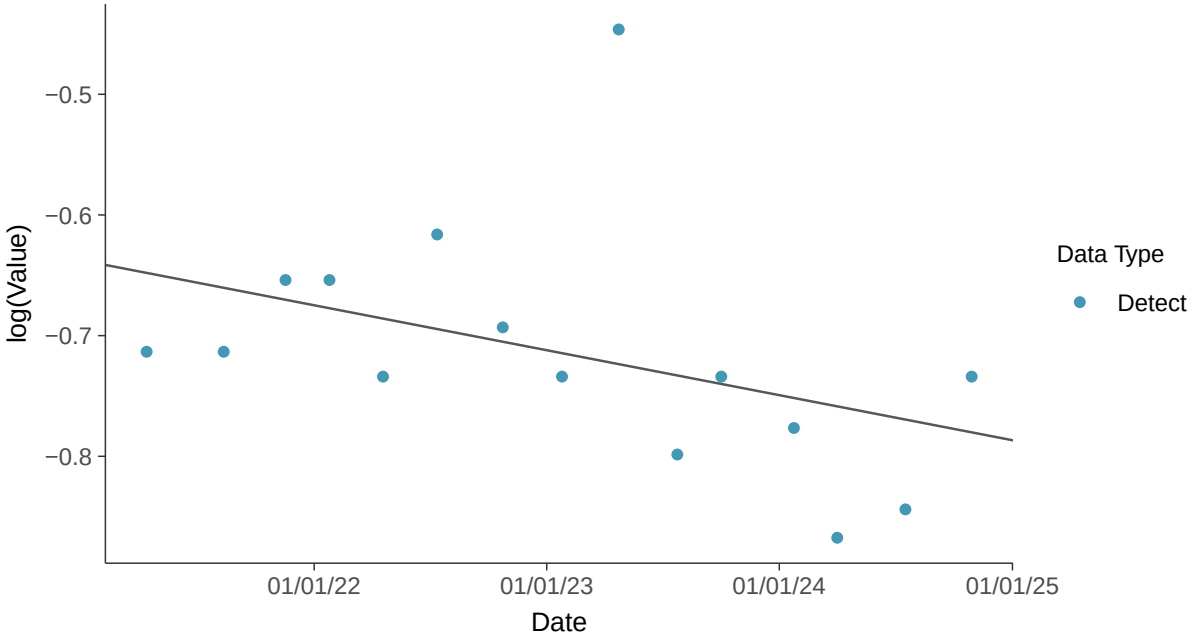
Gamma Q-Q plot

Fluoride, MW-11D (mg/L)



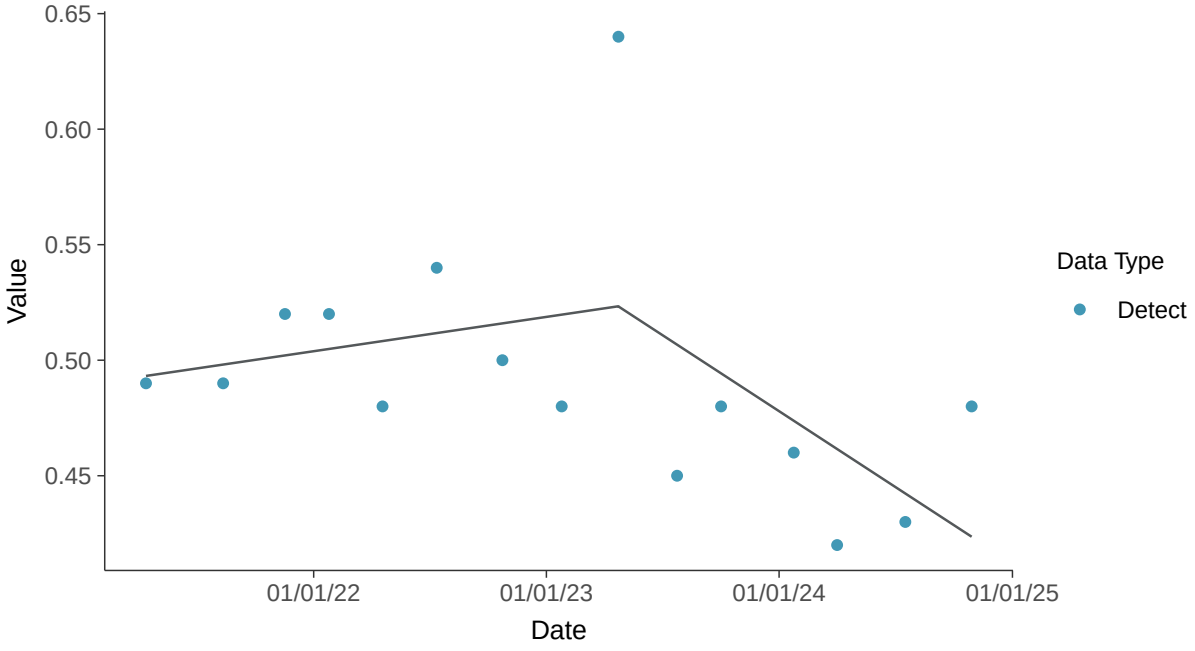
Trend Regression: Lognormal MLE

Fluoride, MW-11D (mg/L)



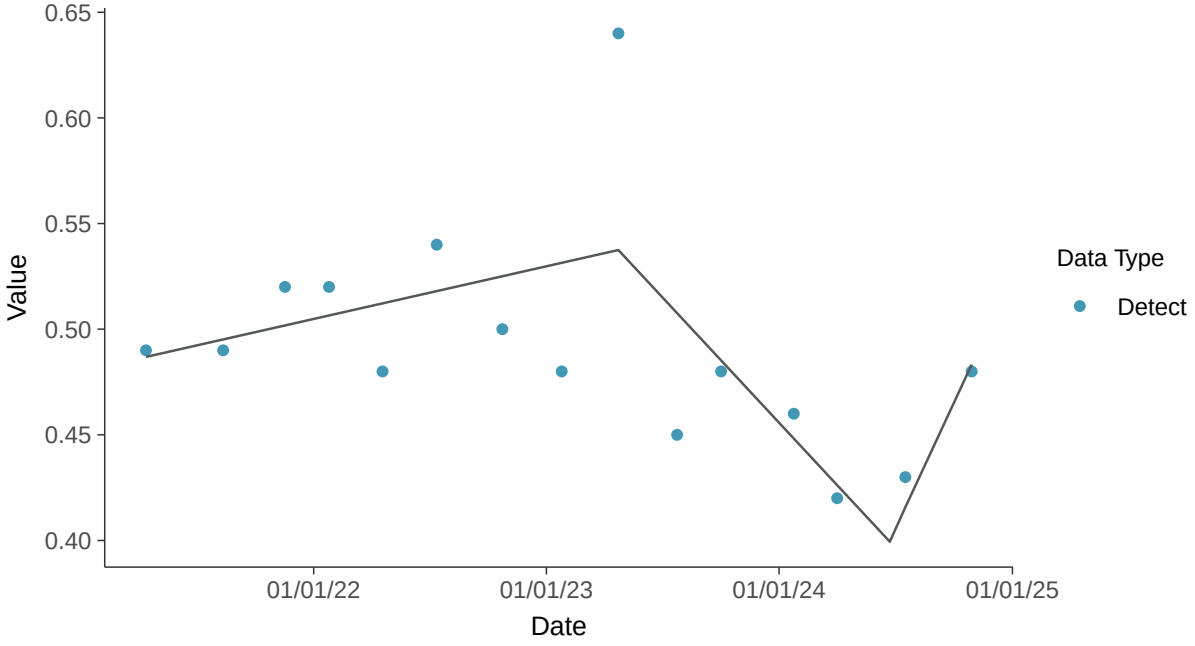
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-11D (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-11D (mg/L)

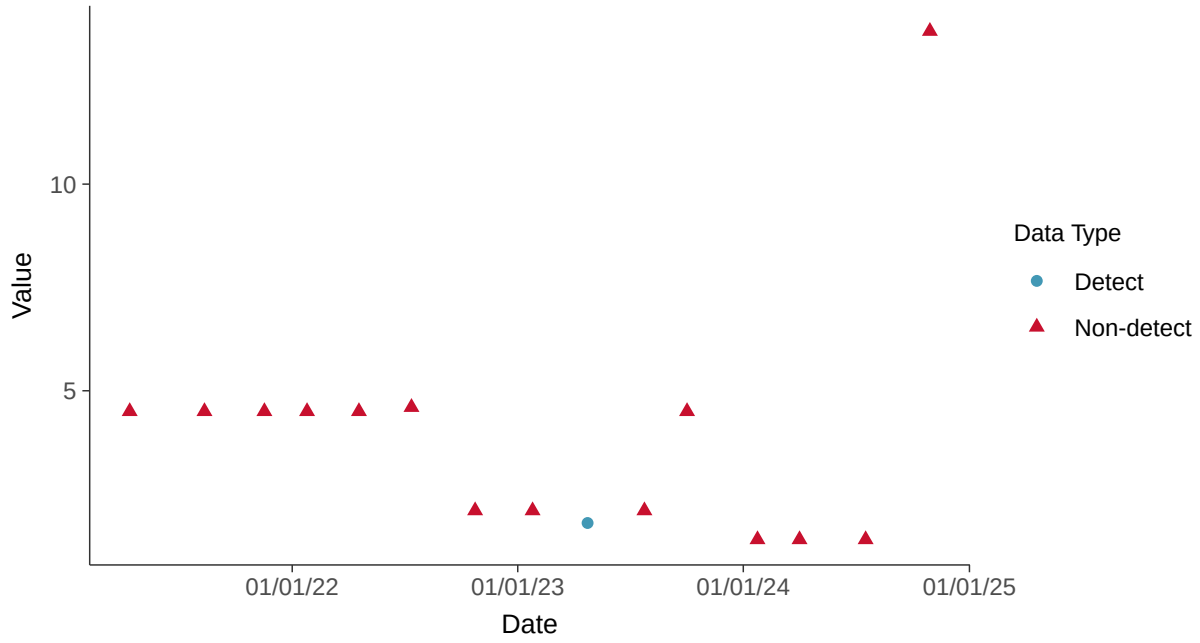


App. IV: Lead, MW-11D

ID: 11_03_113

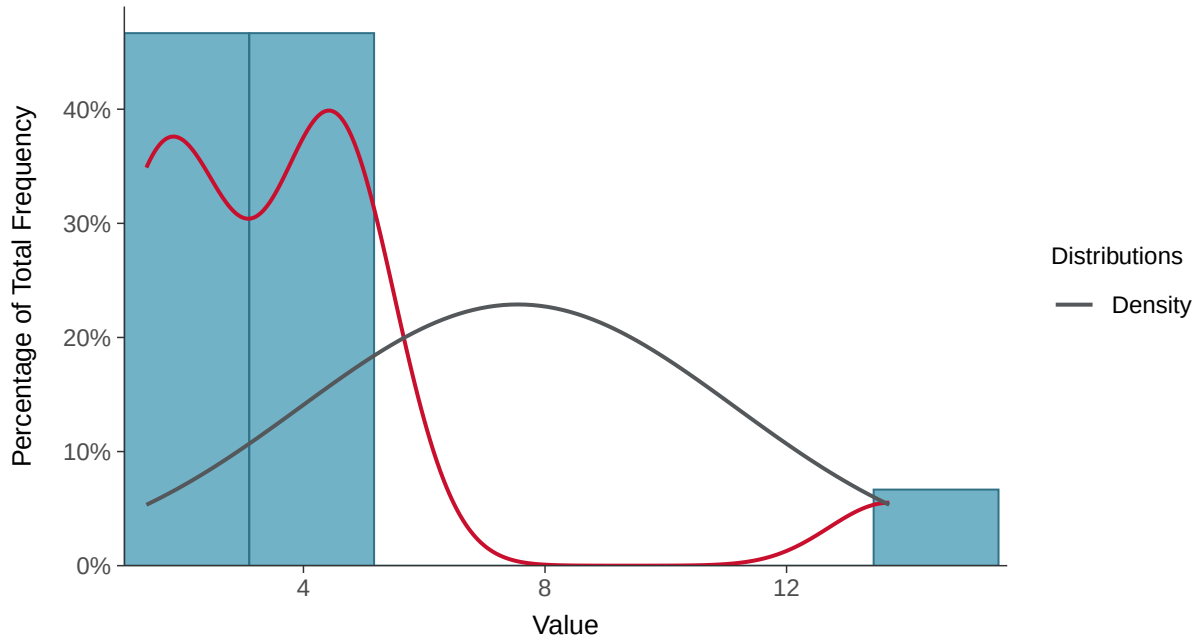
Scatter Plot

Lead, MW-11D (ug/L)



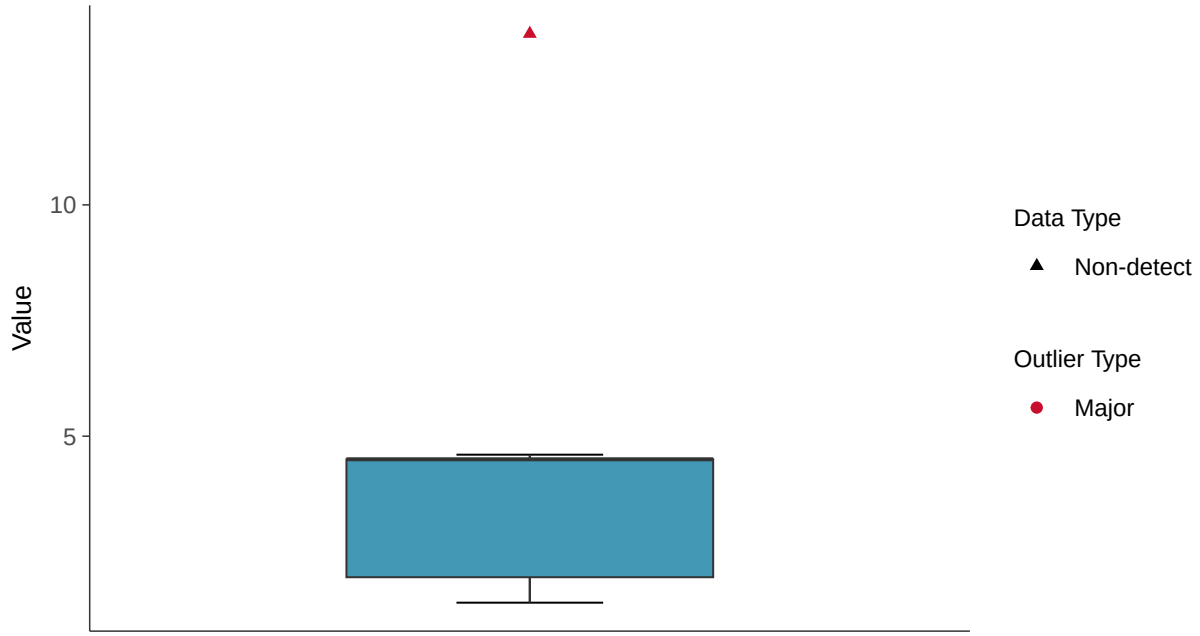
Histogram

Lead, MW-11D (ug/L)



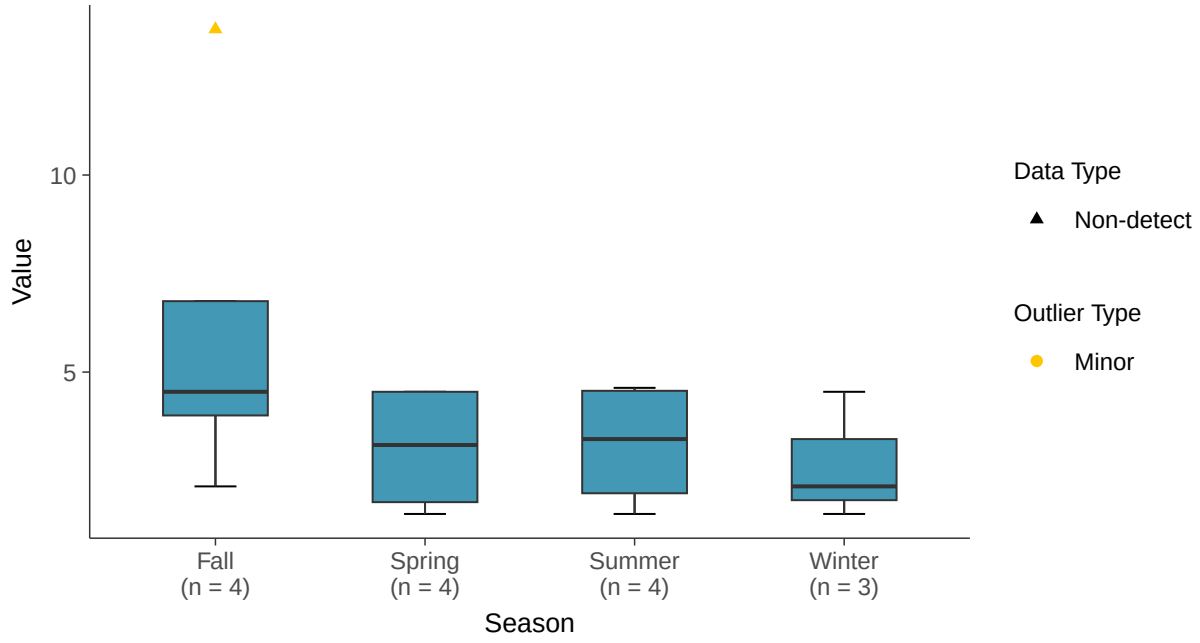
Boxplot

Lead, MW-11D (ug/L)



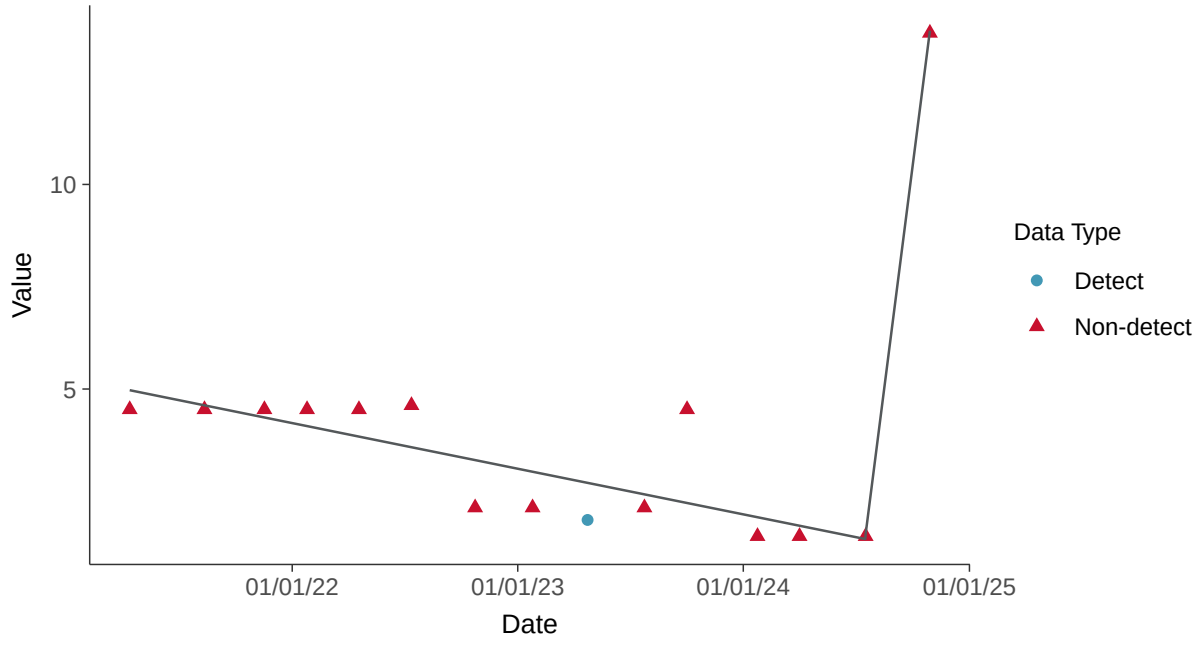
Boxplot by Season

Lead, MW-11D (ug/L)



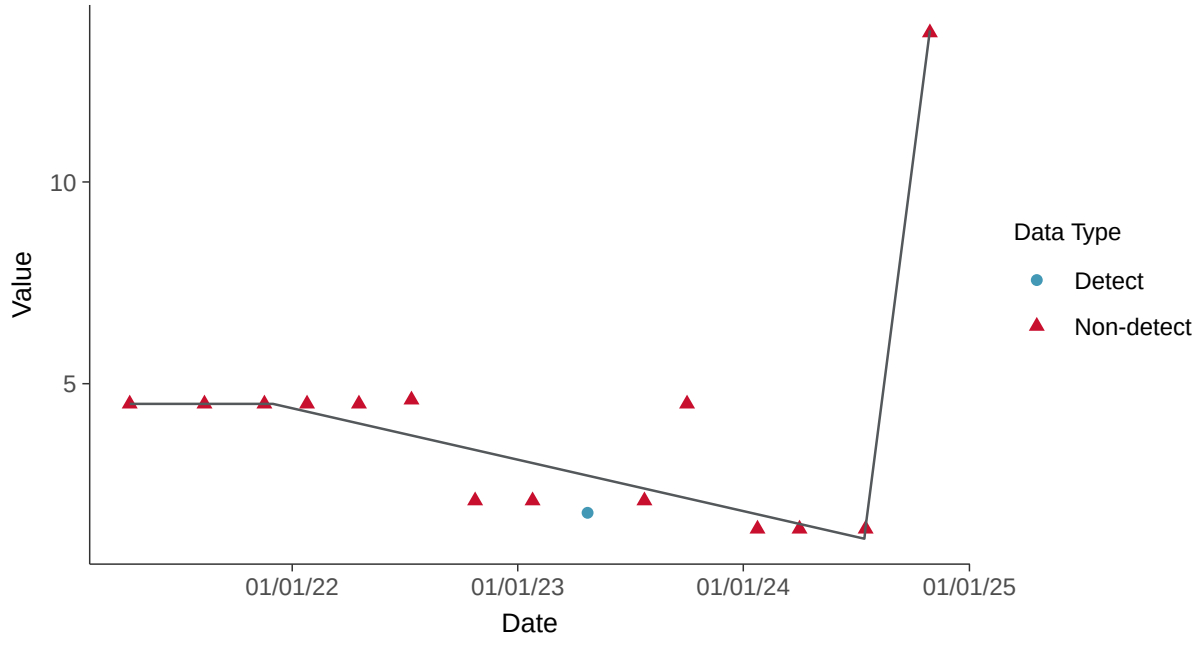
Trend Regression: Piecewise Linear-Linear

Lead, MW-11D (ug/L)



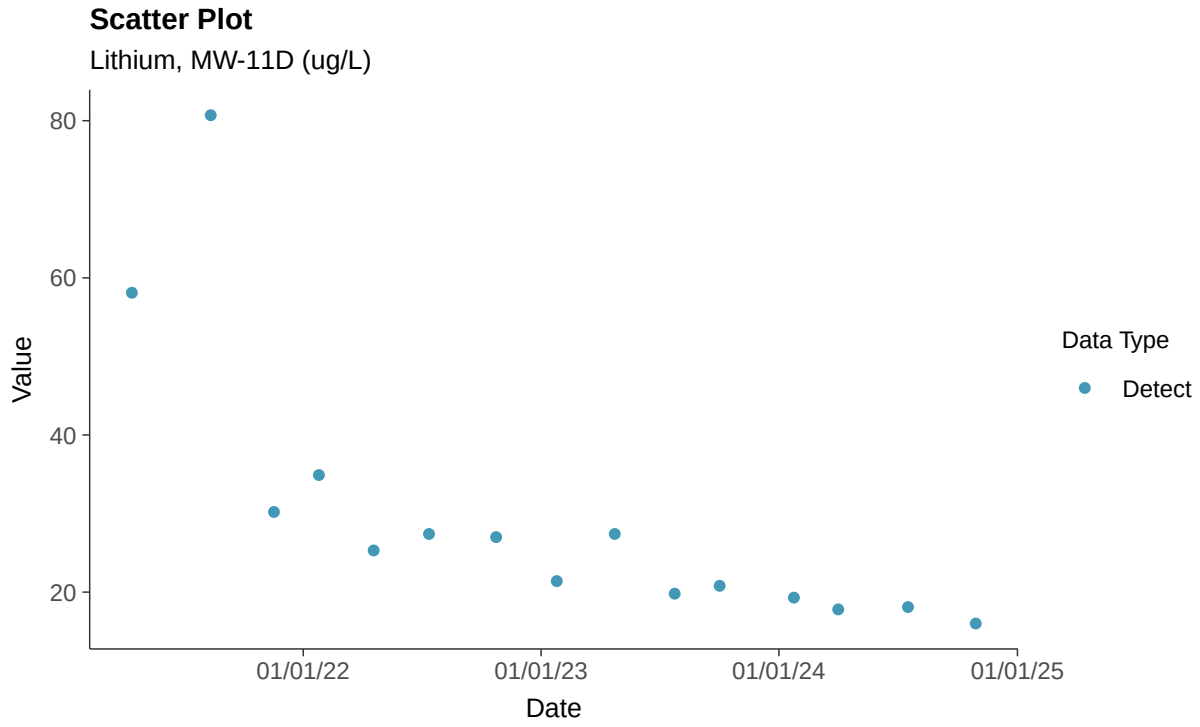
Trend Regression: Piecewise Linear-Linear-Linear

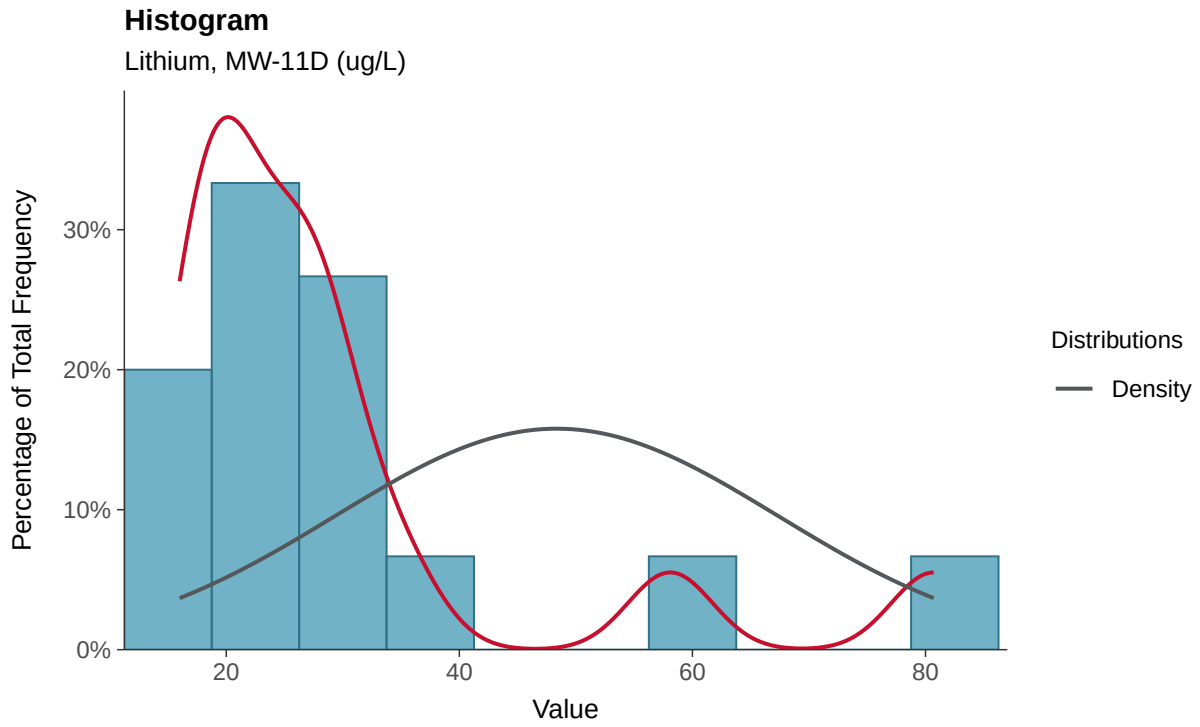
Lead, MW-11D (ug/L)



App. IV: Lithium, MW-11D

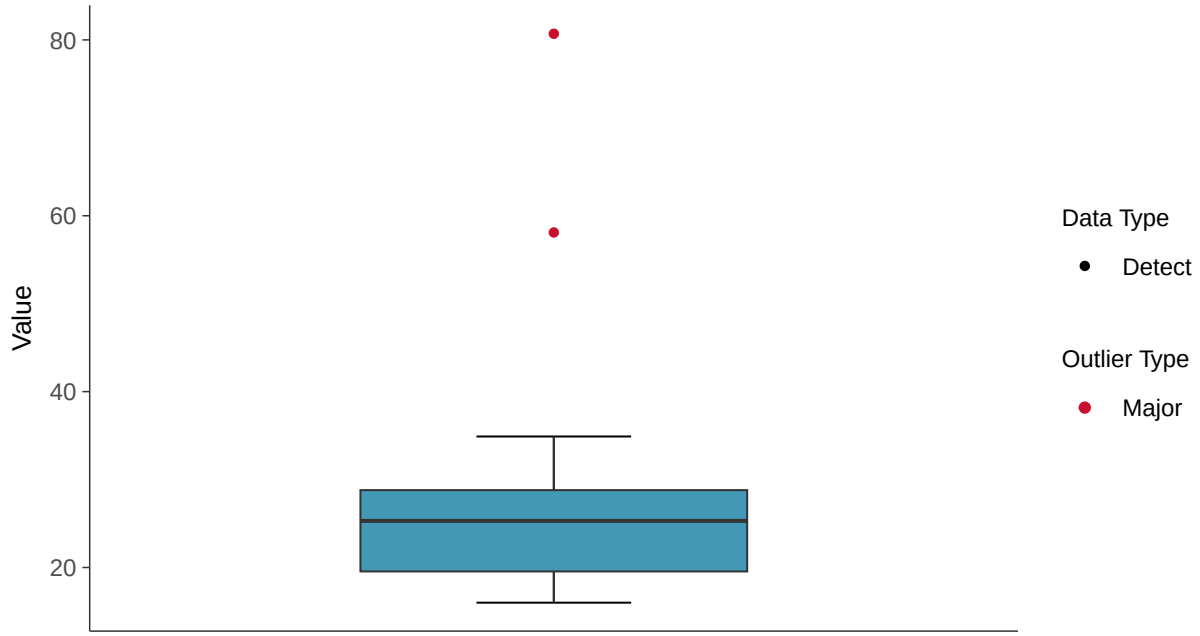
ID: 11_03_114





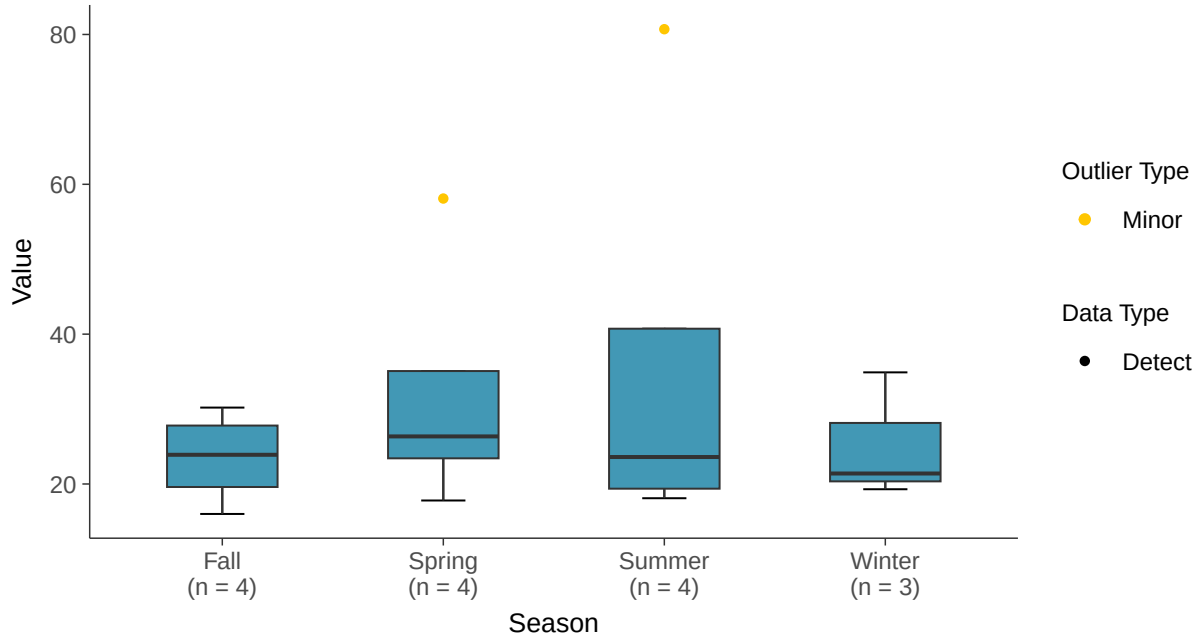
Boxplot

Lithium, MW-11D (ug/L)



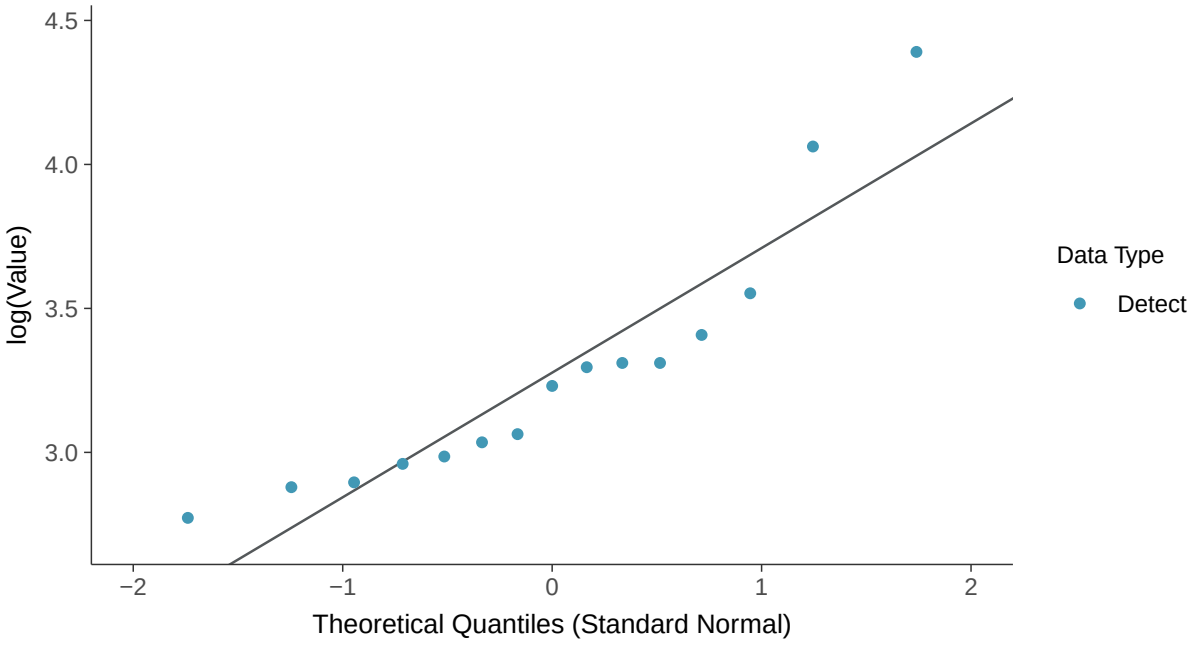
Boxplot by Season

Lithium, MW-11D (ug/L)



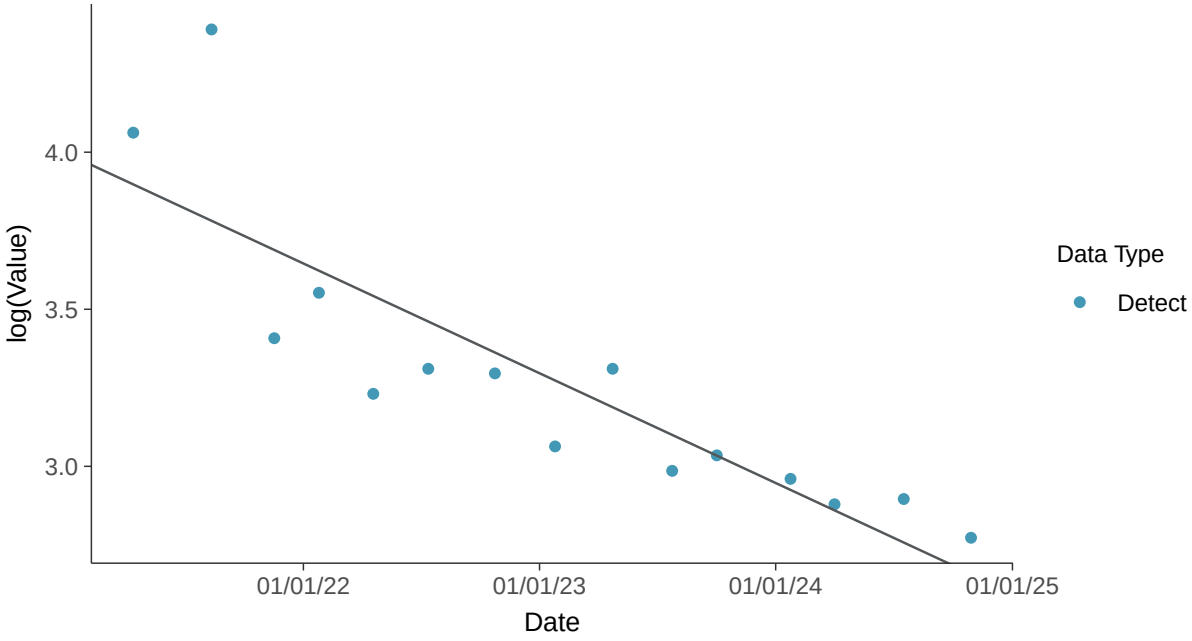
Lognormal Q-Q plot

Lithium, MW-11D (ug/L)



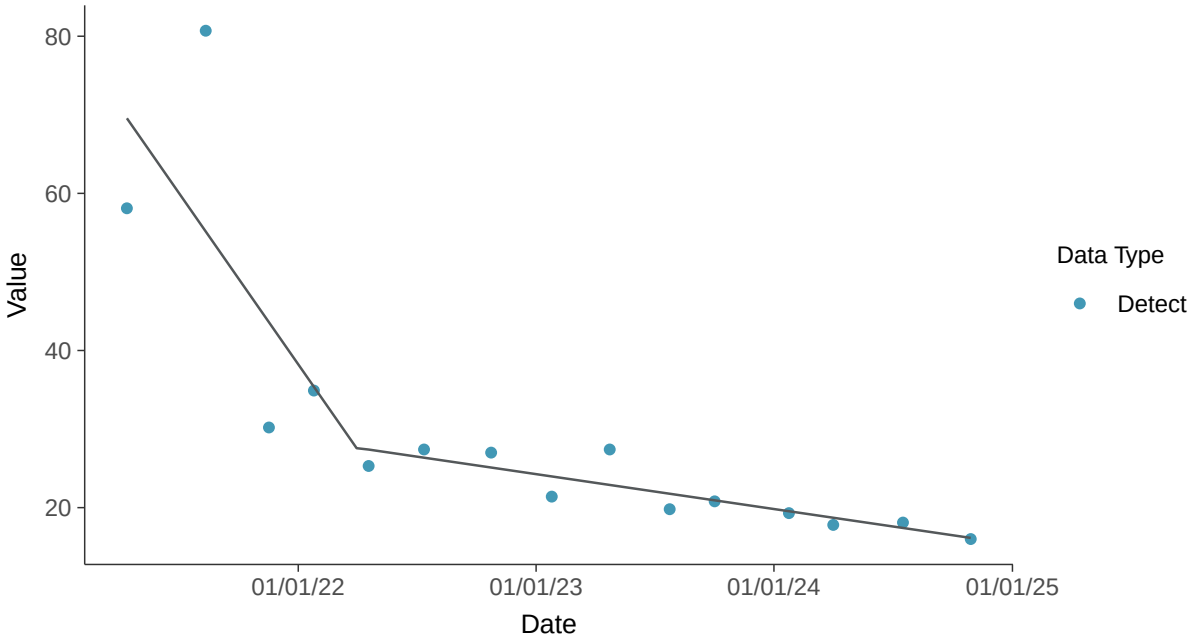
Trend Regression: Lognormal MLE

Lithium, MW-11D (ug/L)



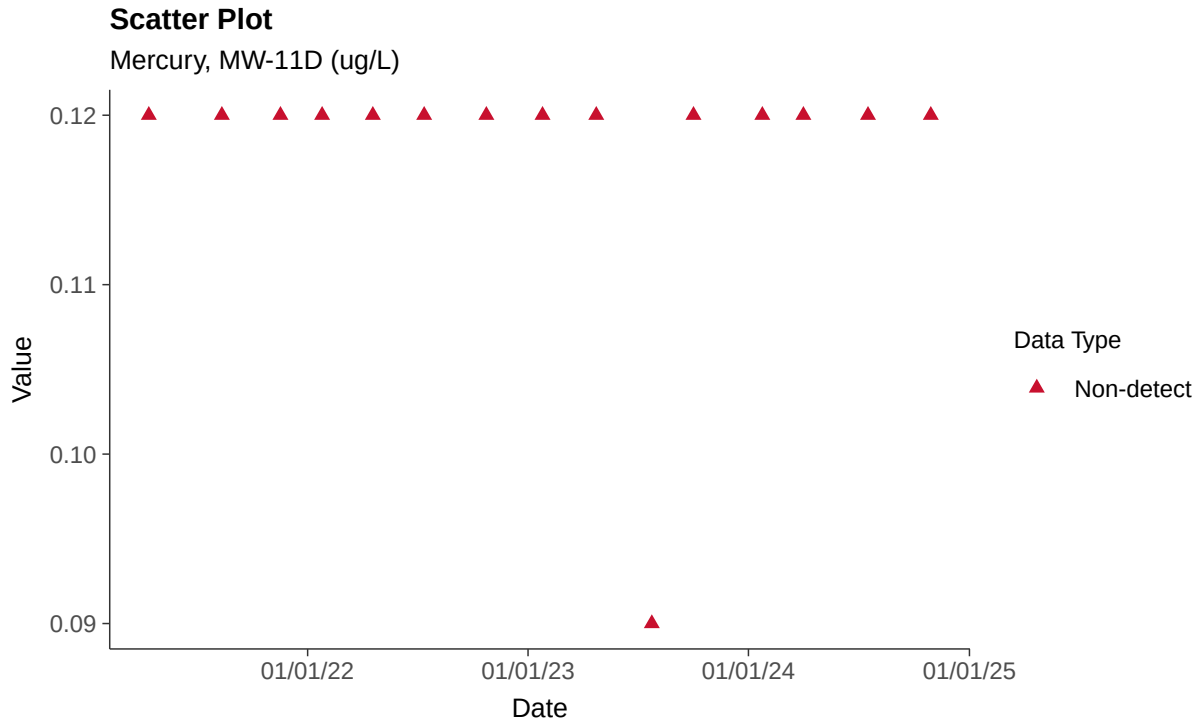
Trend Regression: Piecewise Linear-Linear

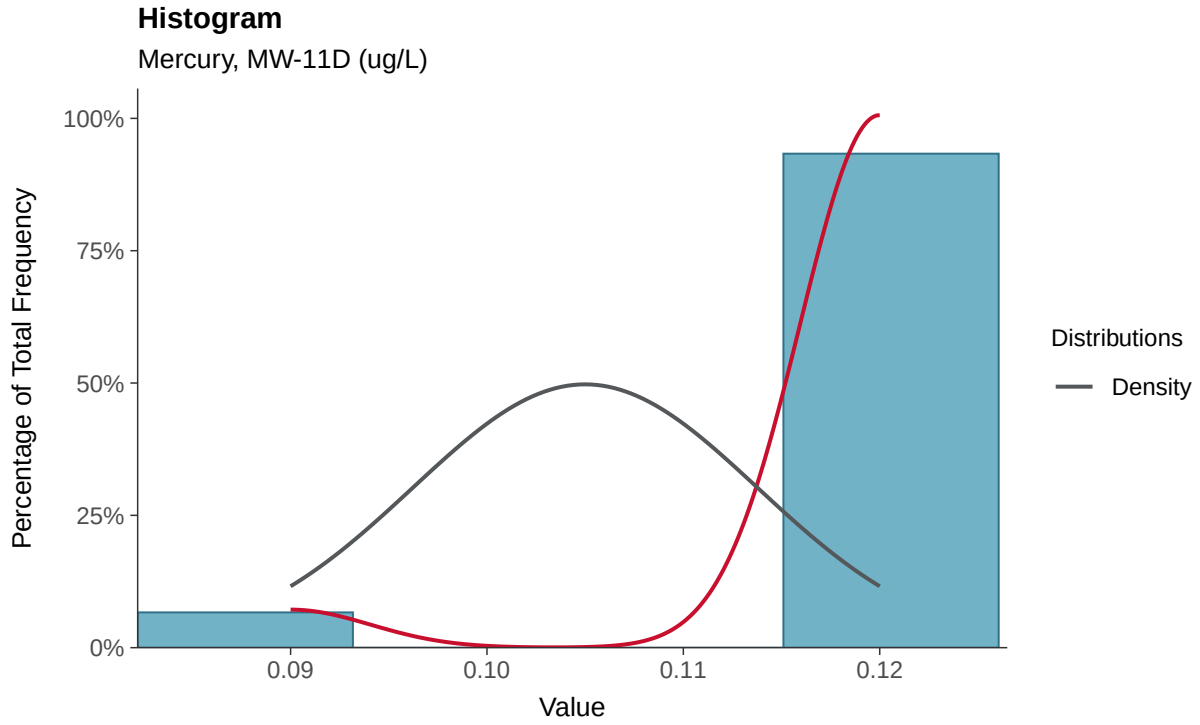
Lithium, MW-11D (ug/L)



App. IV: Mercury, MW-11D

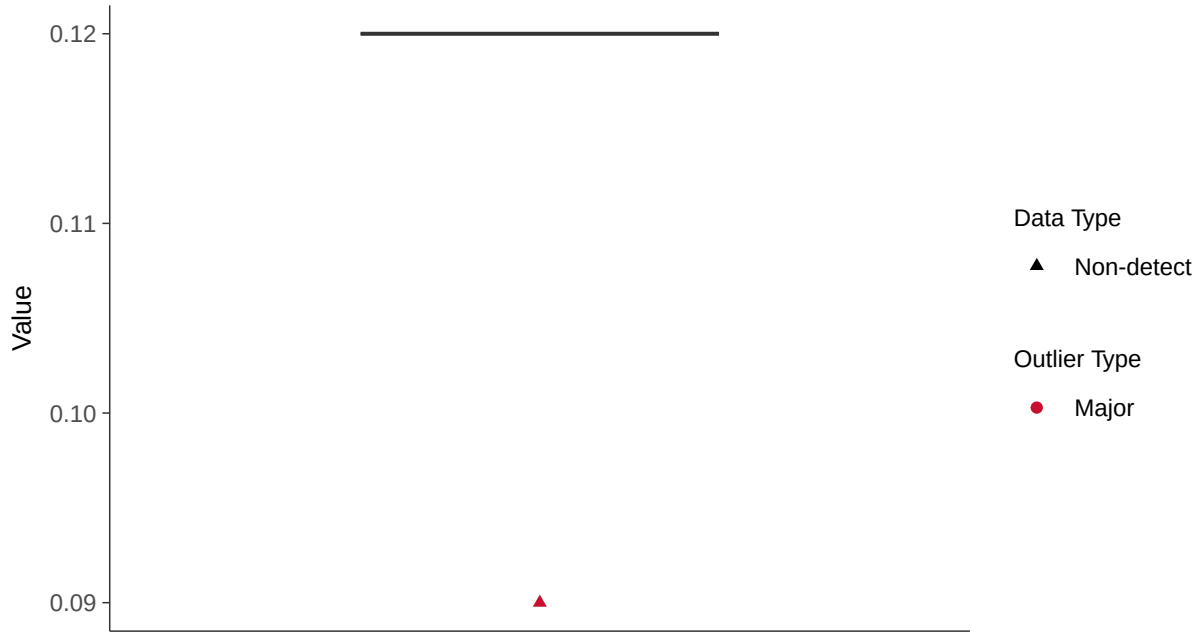
ID: 11_03_115





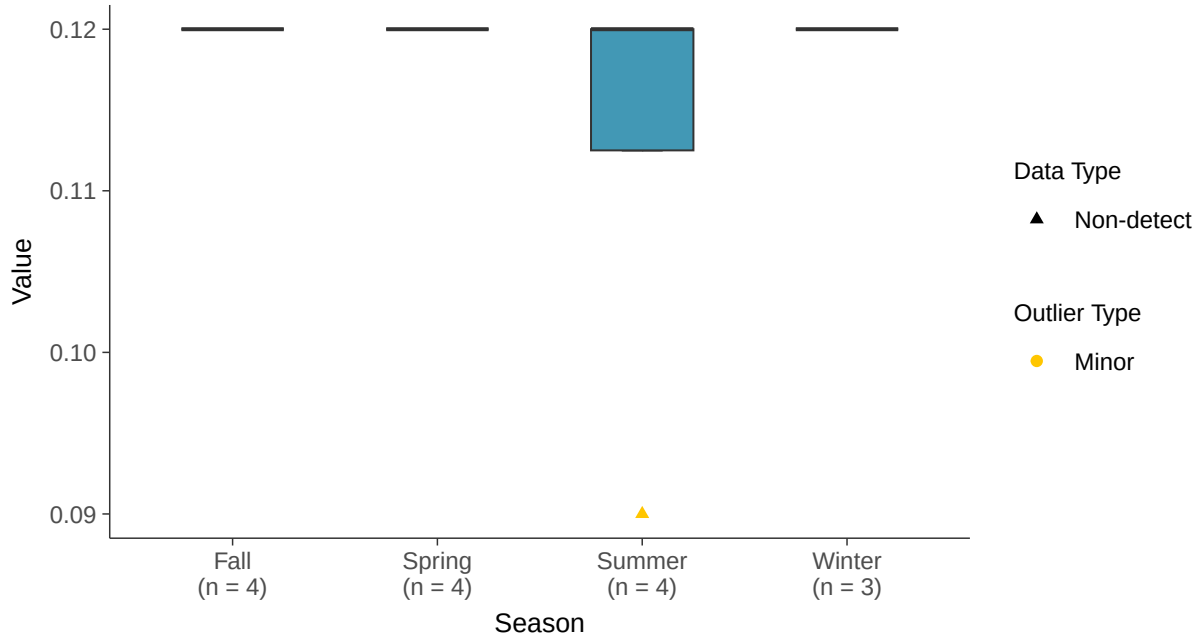
Boxplot

Mercury, MW-11D (ug/L)



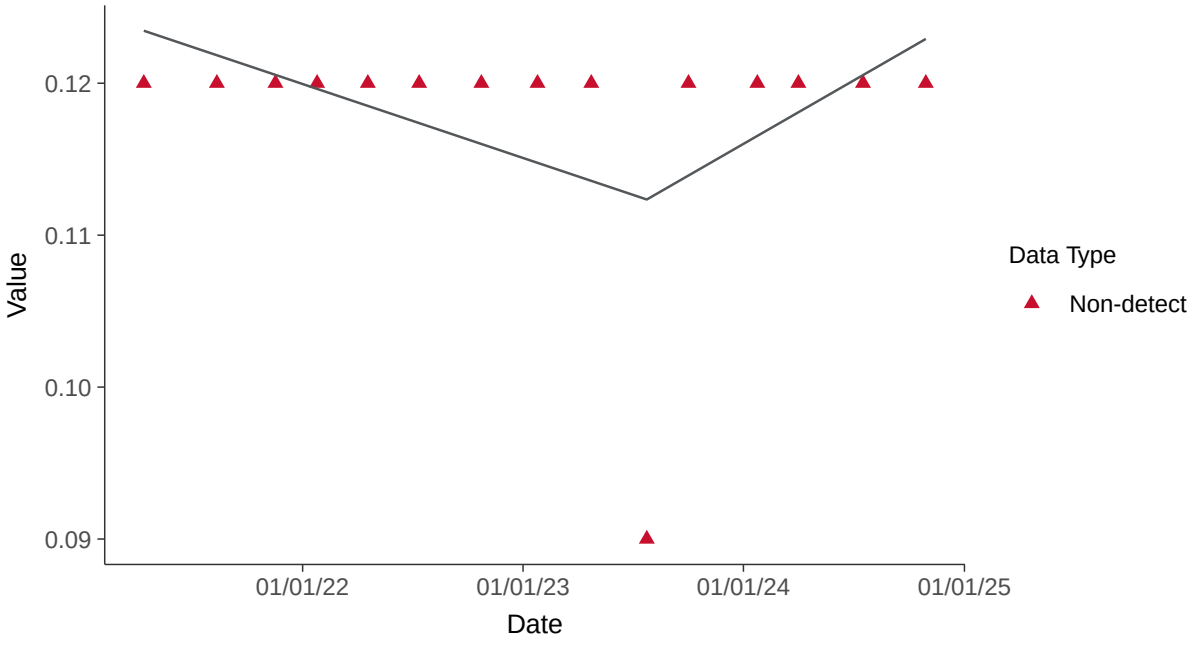
Boxplot by Season

Mercury, MW-11D (ug/L)



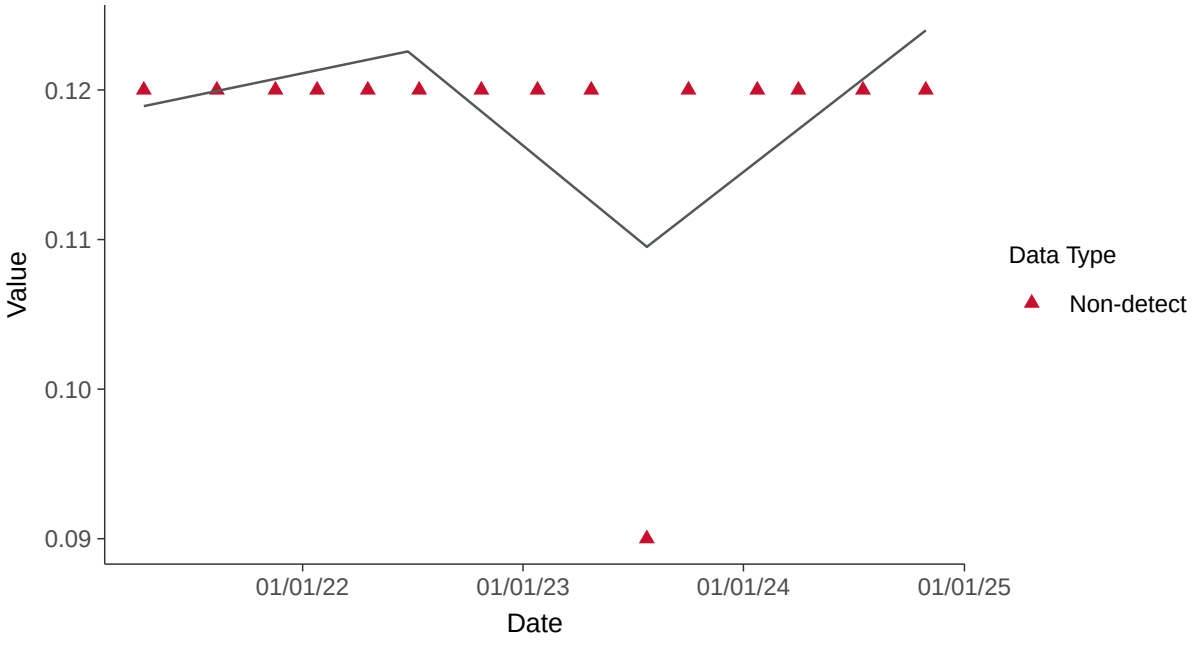
Trend Regression: Piecewise Linear-Linear

Mercury, MW-11D (ug/L)



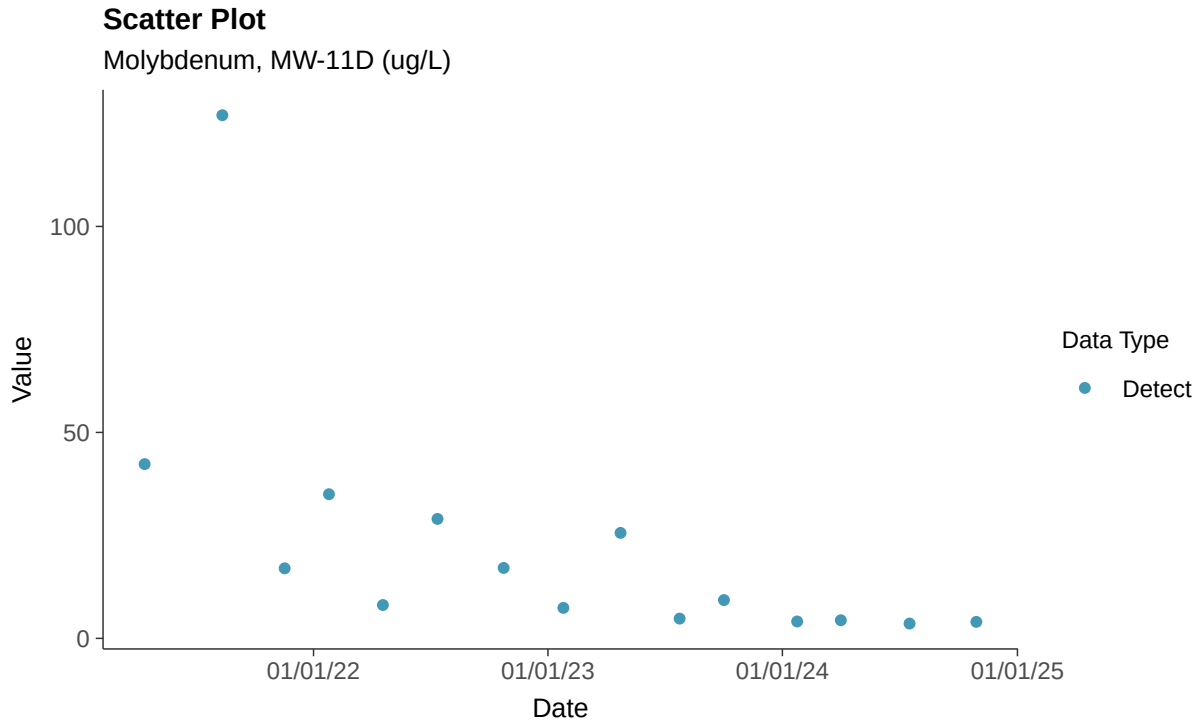
Trend Regression: Piecewise Linear-Linear-Linear

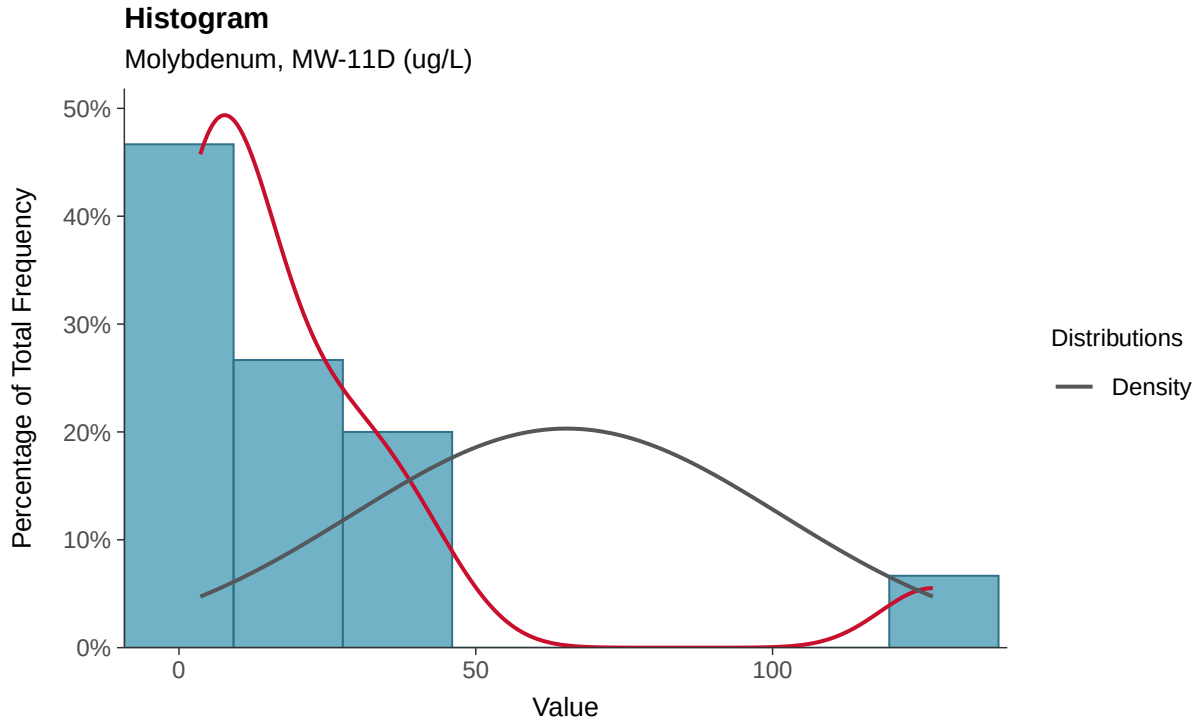
Mercury, MW-11D (ug/L)



App. IV: Molybdenum, MW-11D

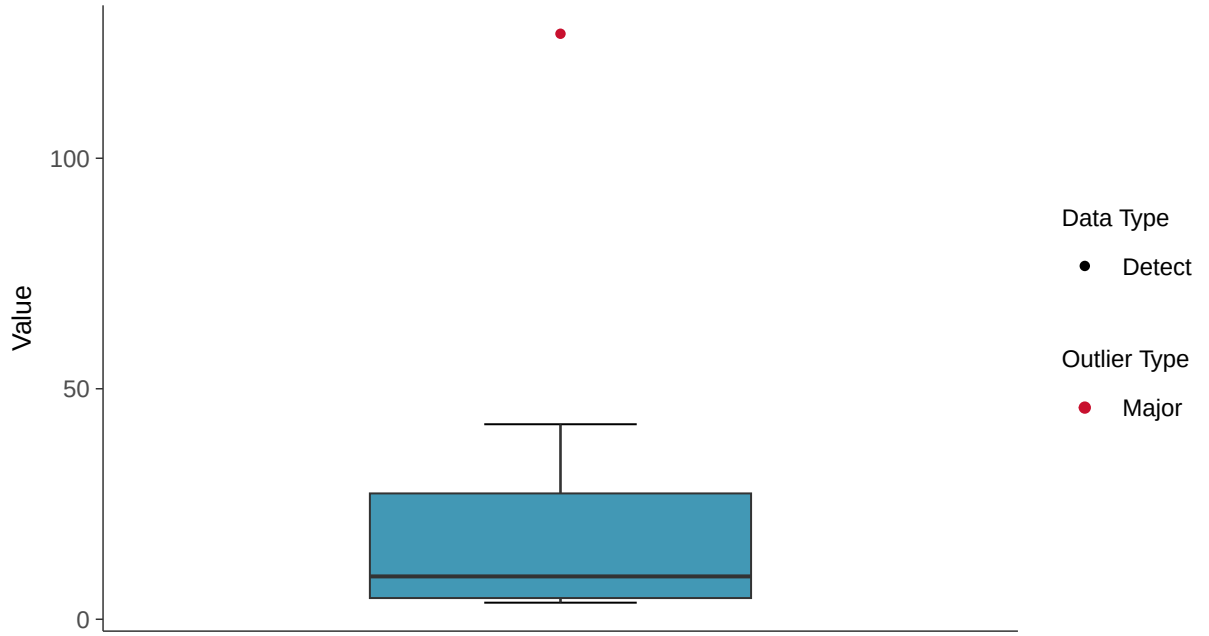
ID: 11_03_116





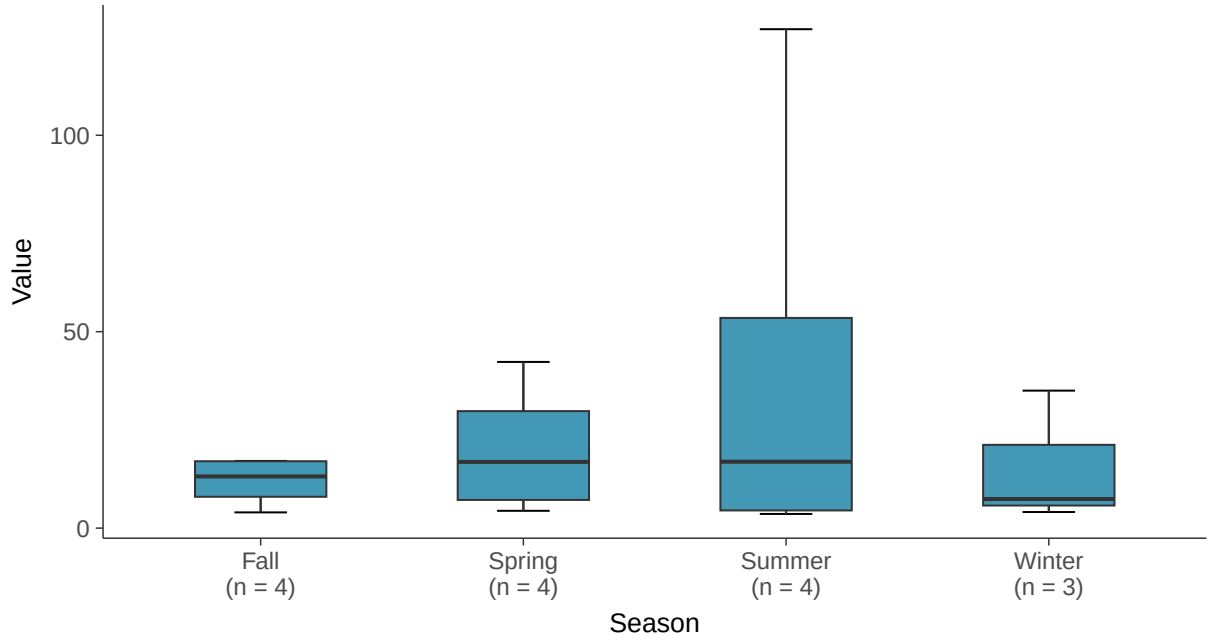
Boxplot

Molybdenum, MW-11D (ug/L)



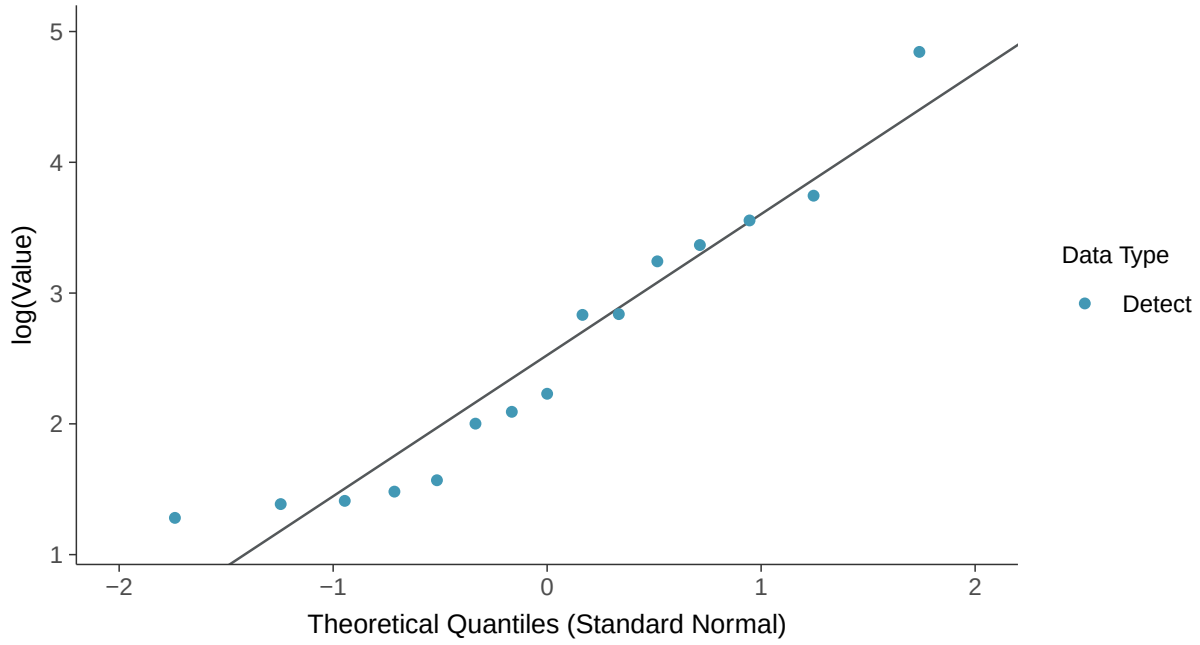
Boxplot by Season

Molybdenum, MW-11D (ug/L)



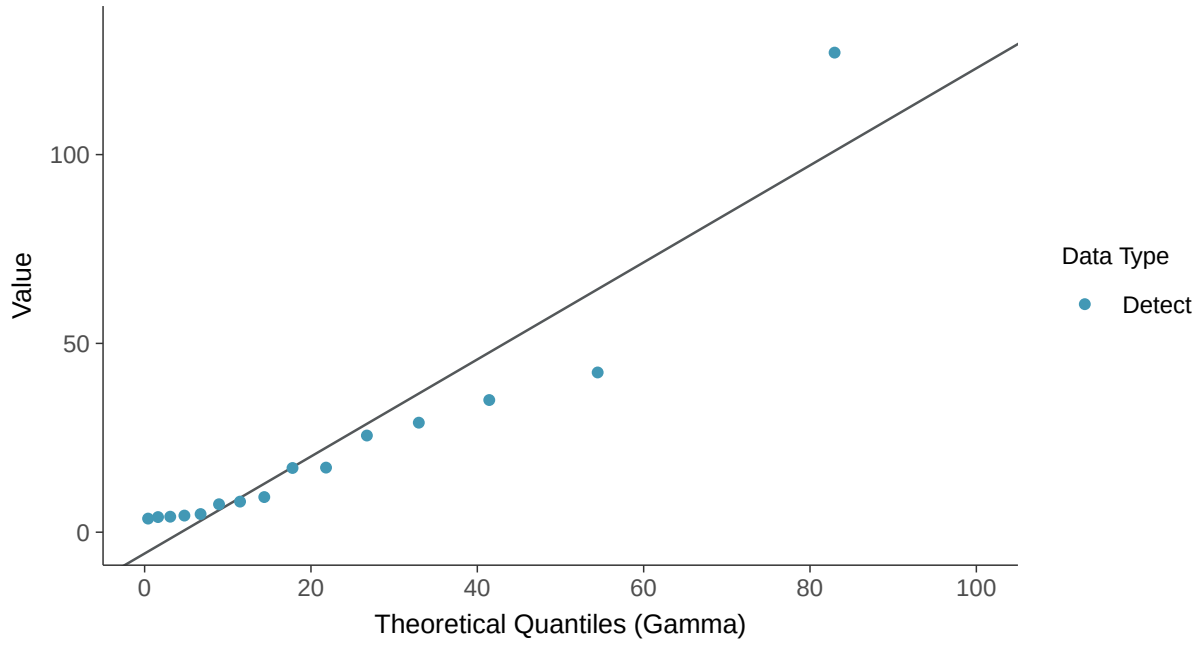
Lognormal Q-Q plot

Molybdenum, MW-11D (ug/L)



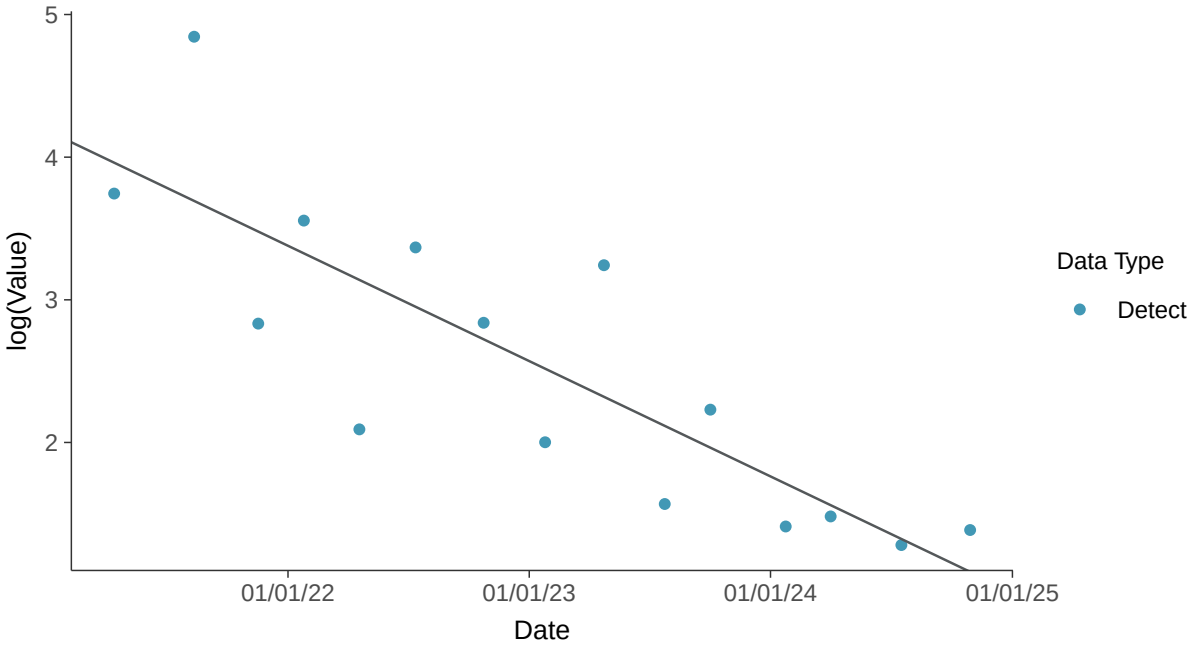
Gamma Q-Q plot

Molybdenum, MW-11D (ug/L)



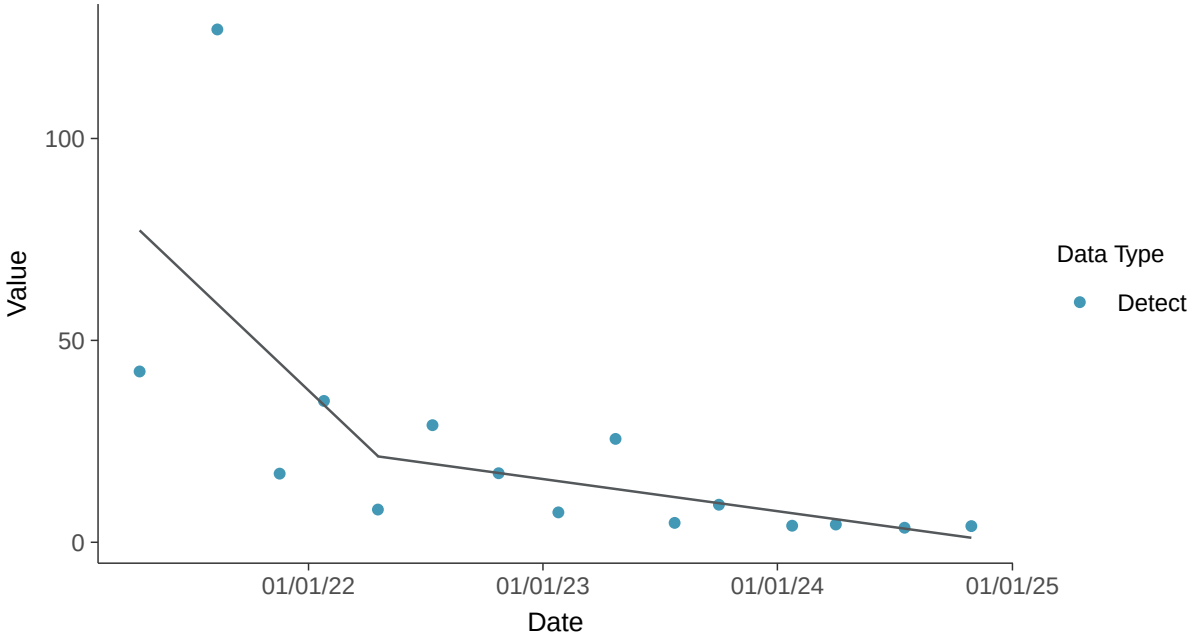
Trend Regression: Lognormal MLE

Molybdenum, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11D (ug/L)

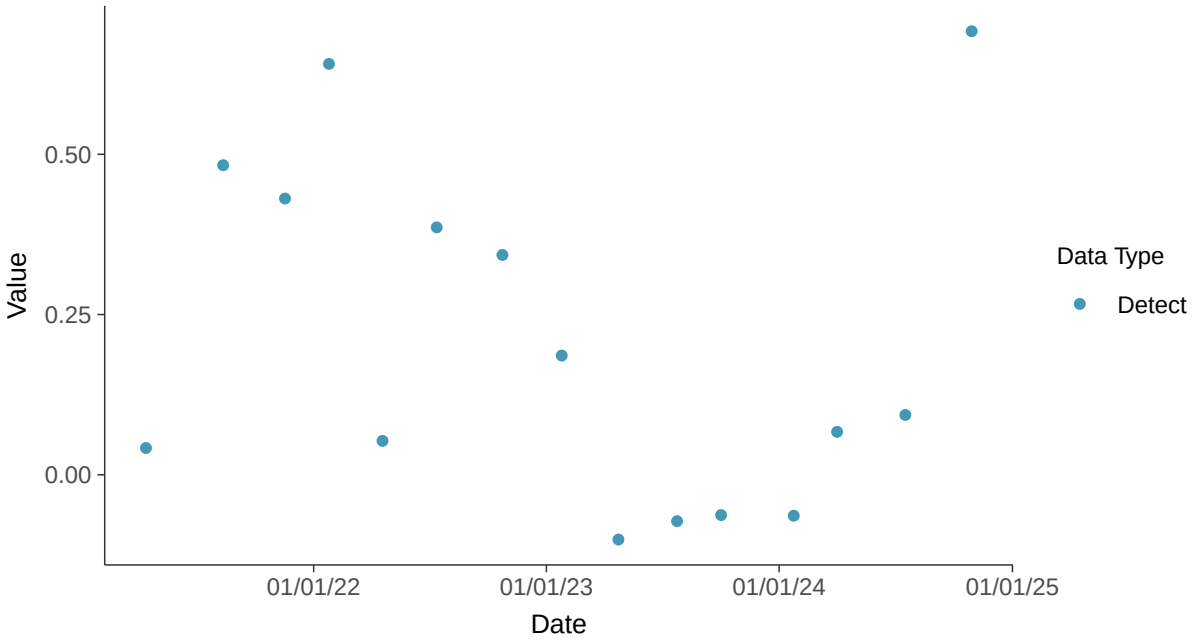


App. IV: Radium-226, MW-11D

ID: 11_03_119

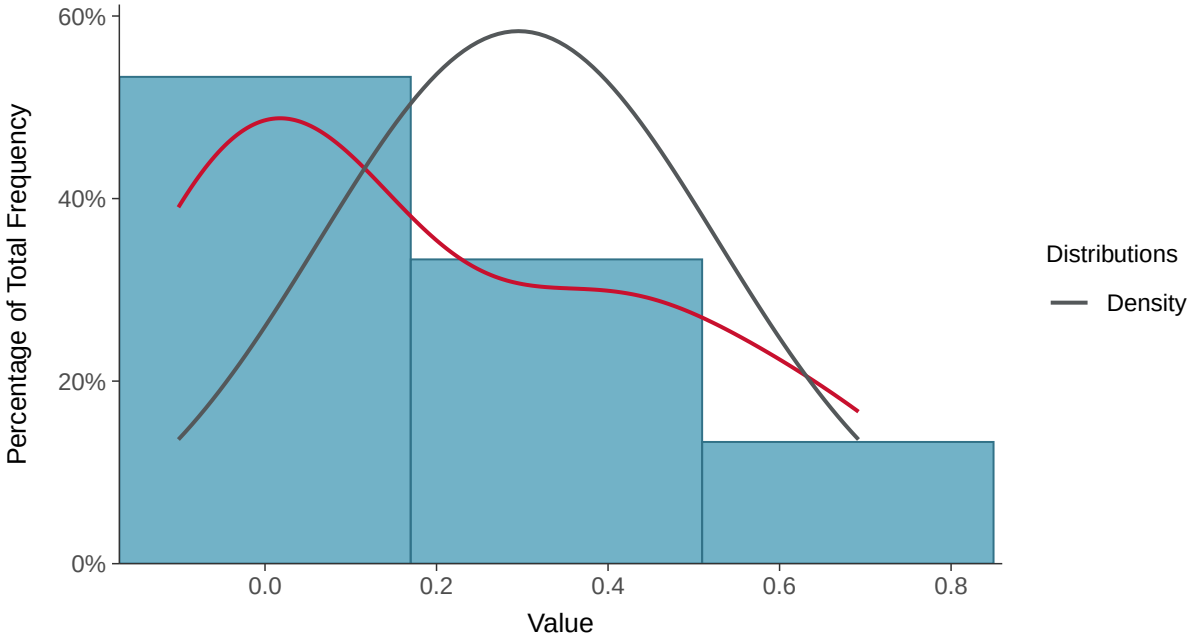
Scatter Plot

Radium-226, MW-11D (pCi/L)



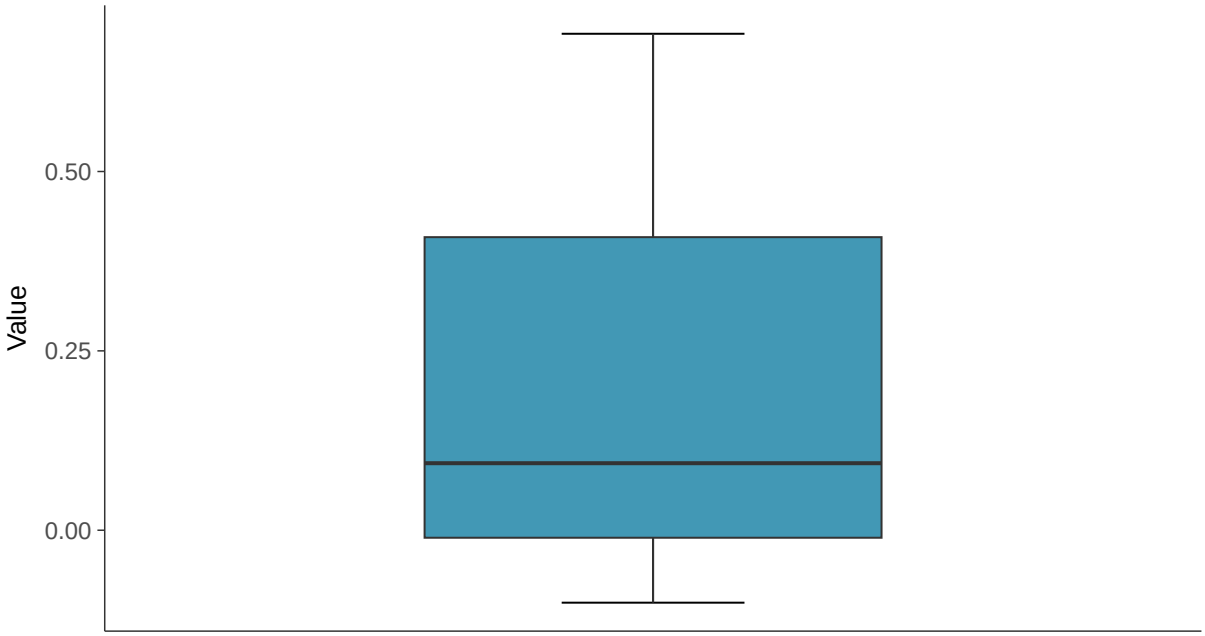
Histogram

Radium-226, MW-11D (pCi/L)



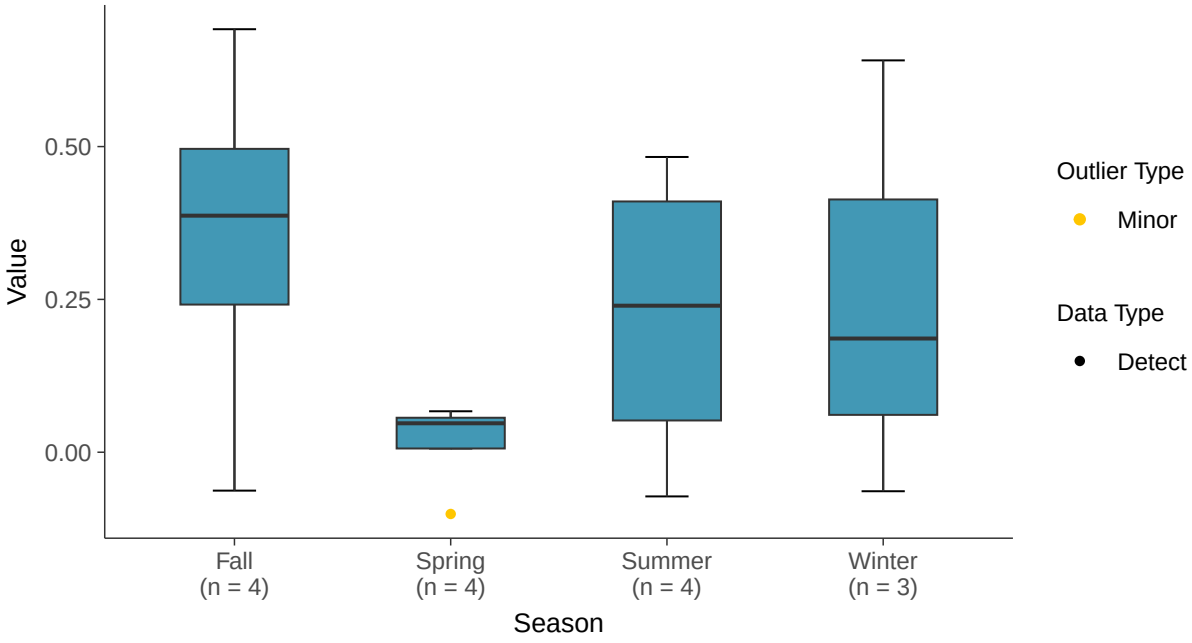
Boxplot

Radium-226, MW-11D (pCi/L)



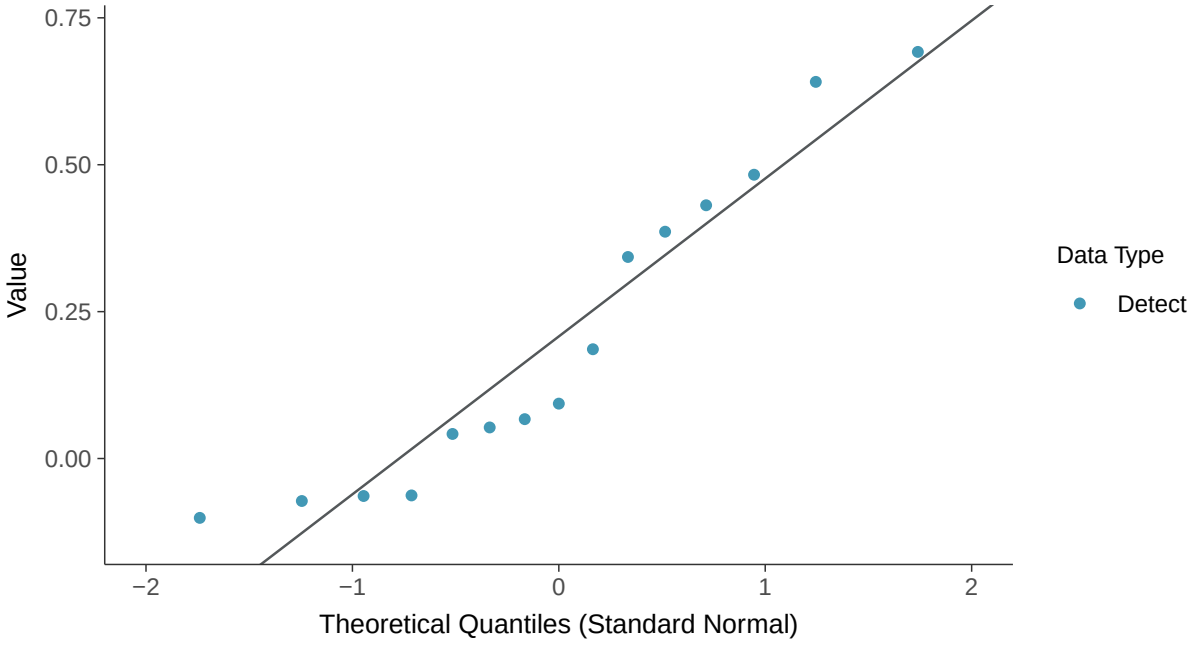
Boxplot by Season

Radium-226, MW-11D (pCi/L)



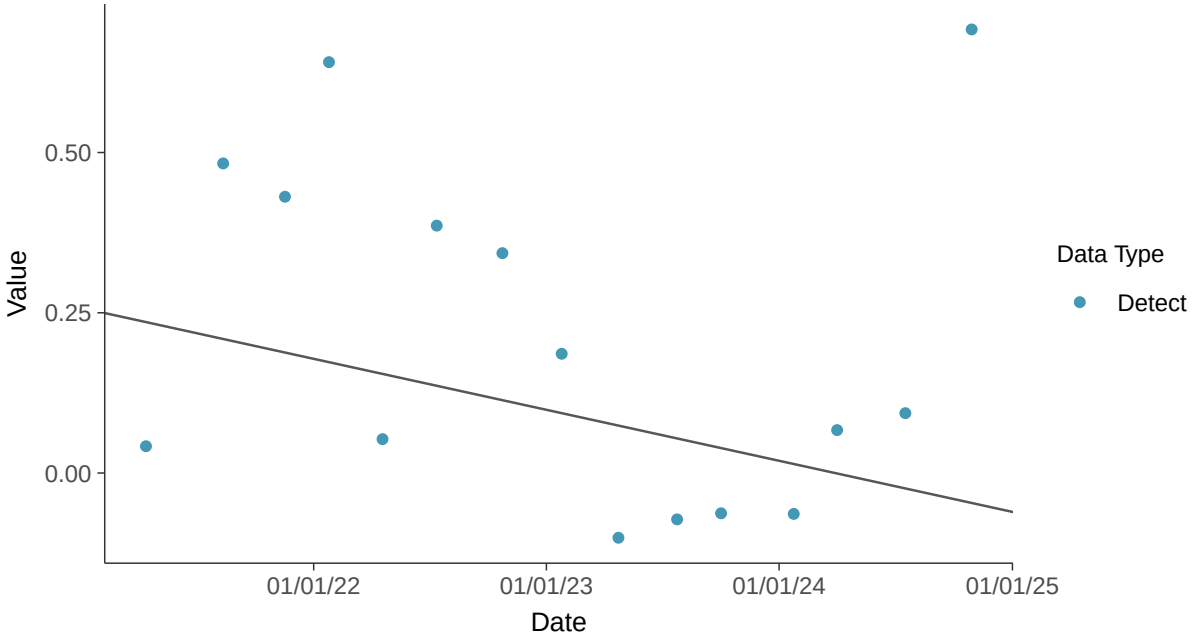
Normal Q-Q plot

Radium-226, MW-11D (pCi/L)



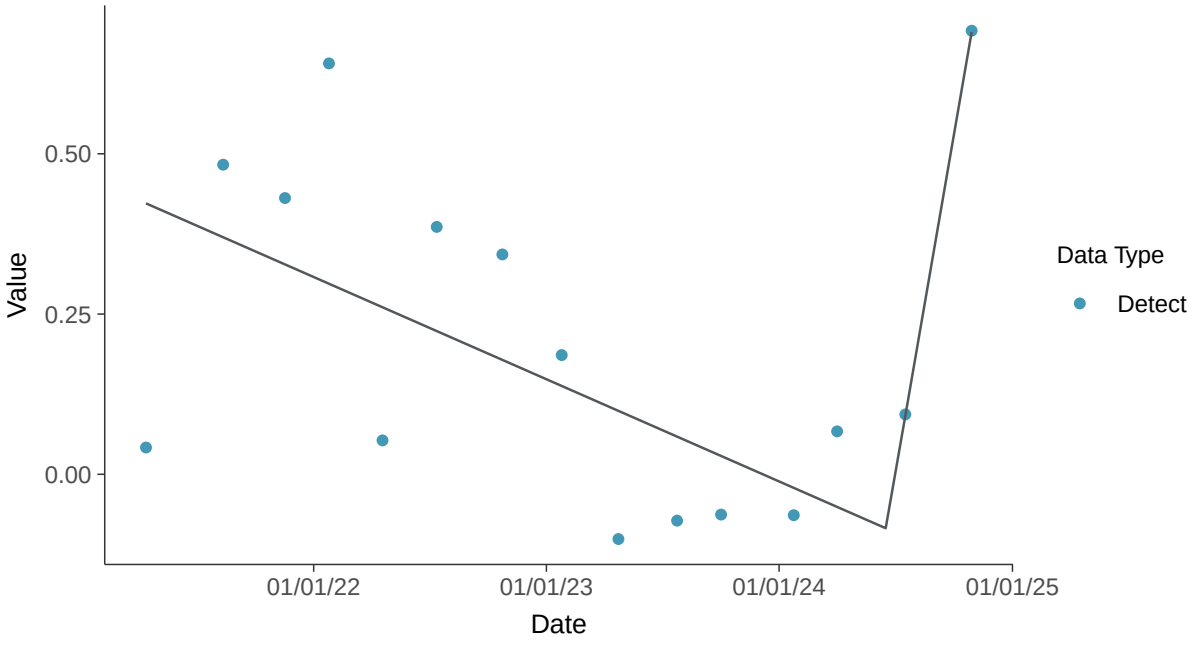
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-11D (pCi/L)



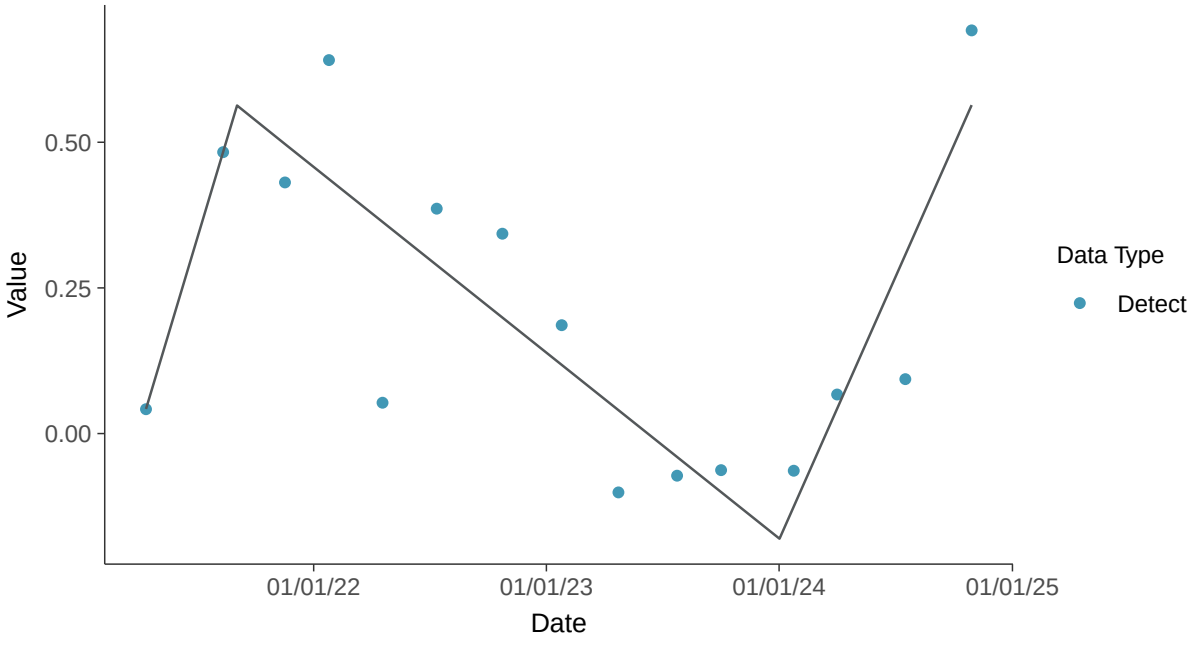
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-11D (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-11D (pCi/L)

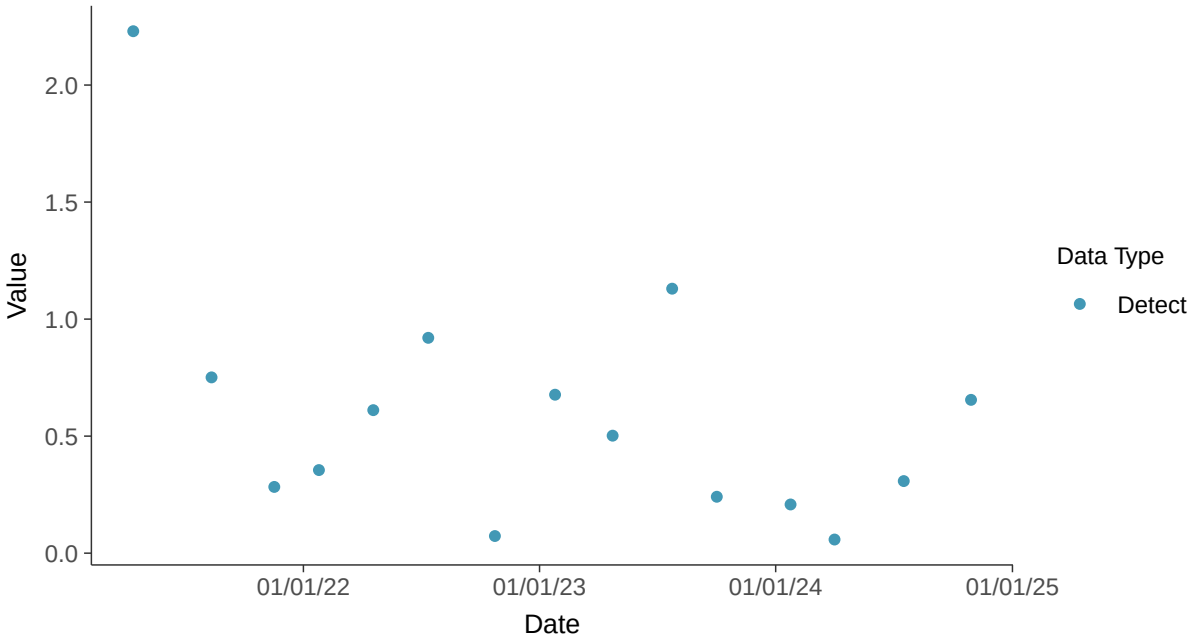


App. IV: Radium-228, MW-11D

ID: 11_03_120

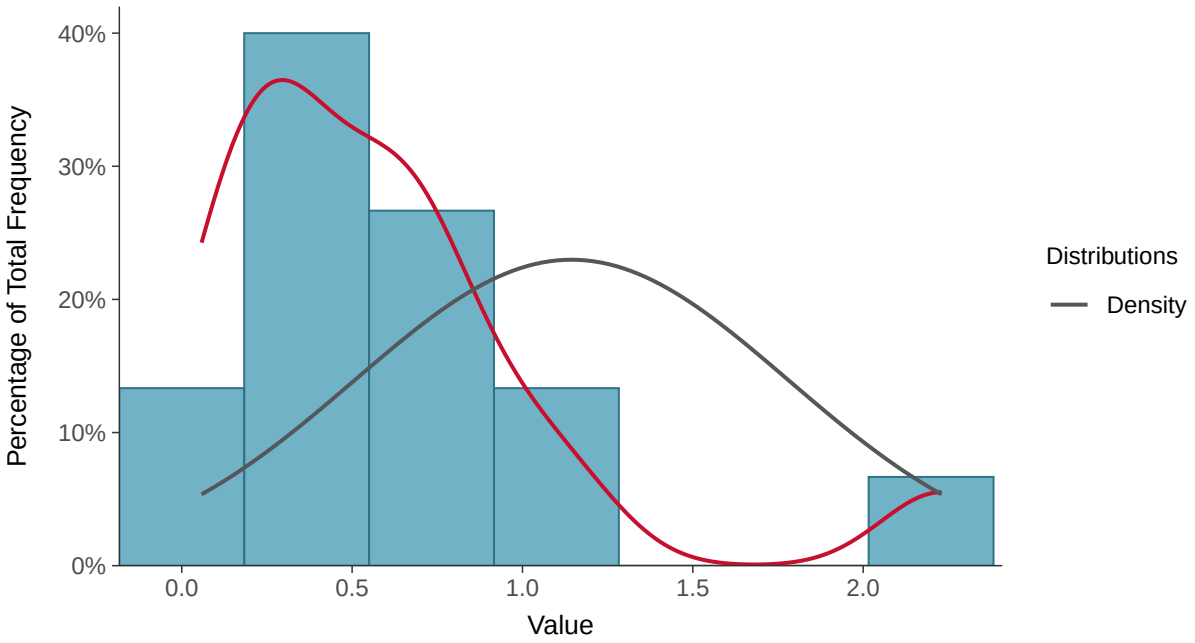
Scatter Plot

Radium-228, MW-11D (pCi/L)



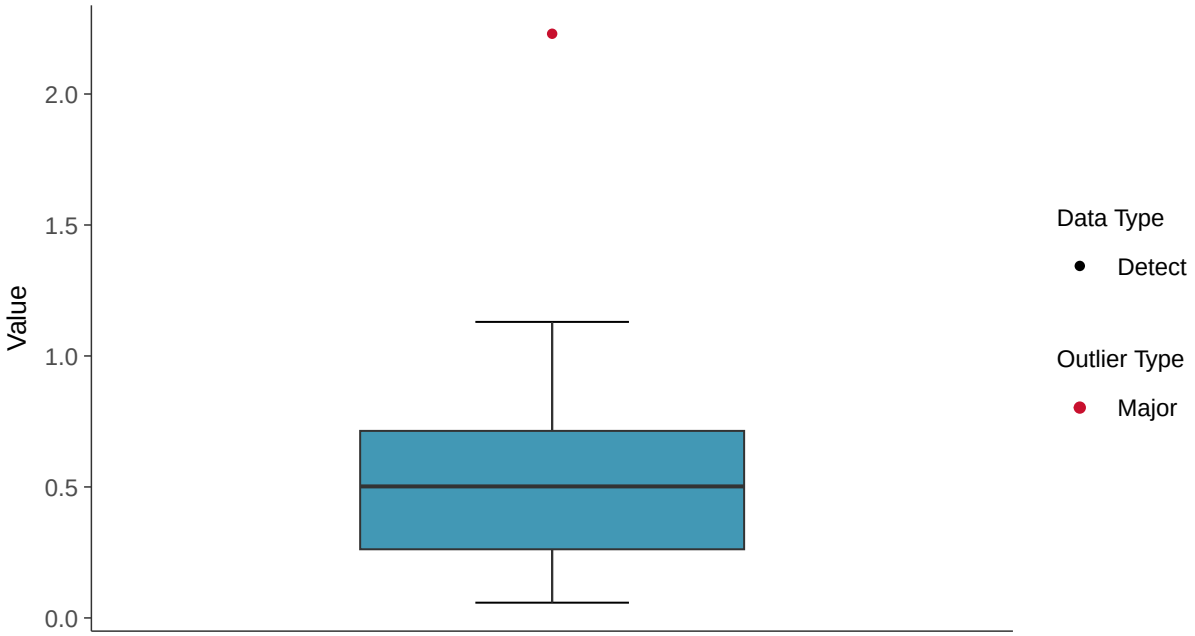
Histogram

Radium-228, MW-11D (pCi/L)



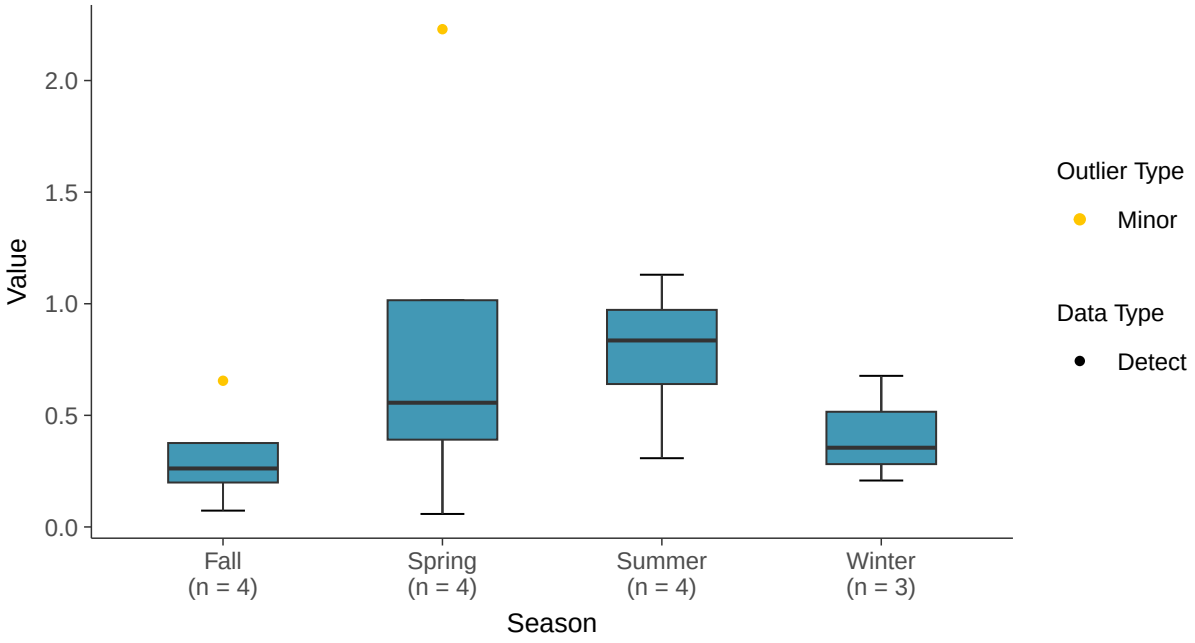
Boxplot

Radium-228, MW-11D (pCi/L)



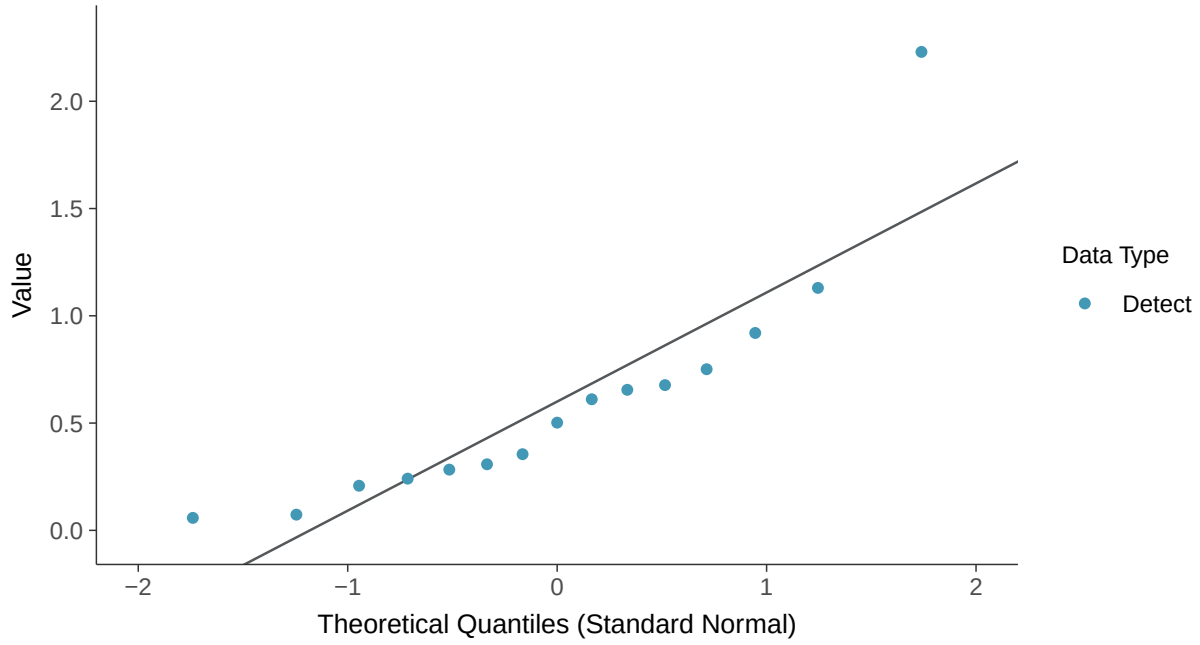
Boxplot by Season

Radium-228, MW-11D (pCi/L)



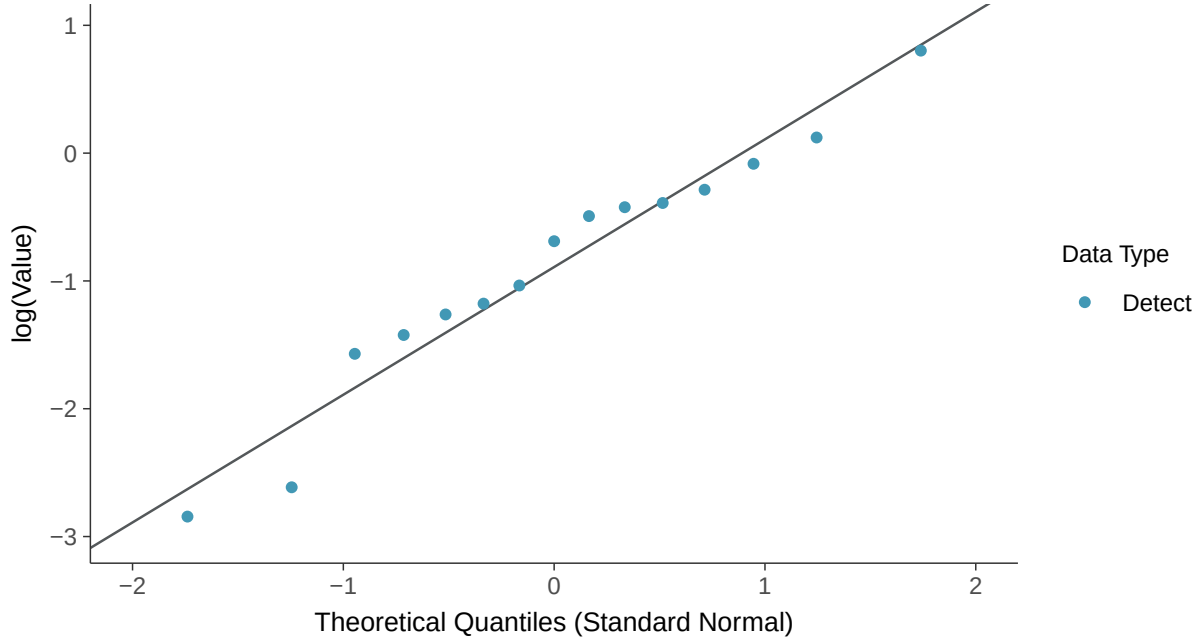
Normal Q-Q plot

Radium-228, MW-11D (pCi/L)



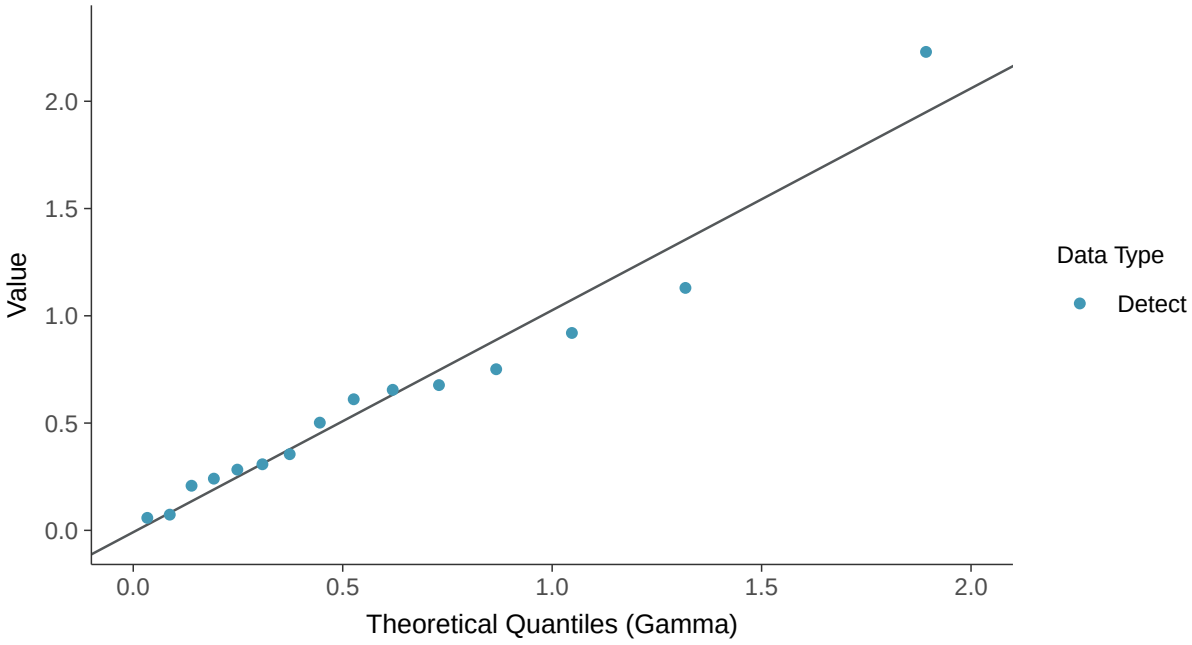
Lognormal Q-Q plot

Radium-228, MW-11D (pCi/L)



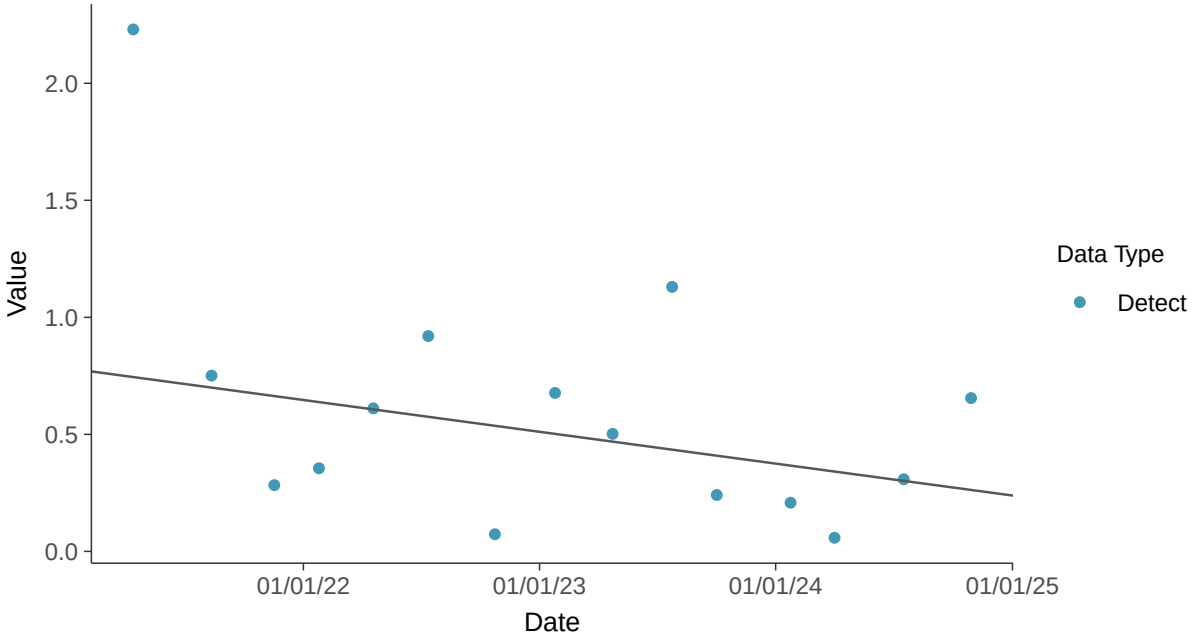
Gamma Q-Q plot

Radium-228, MW-11D (pCi/L)



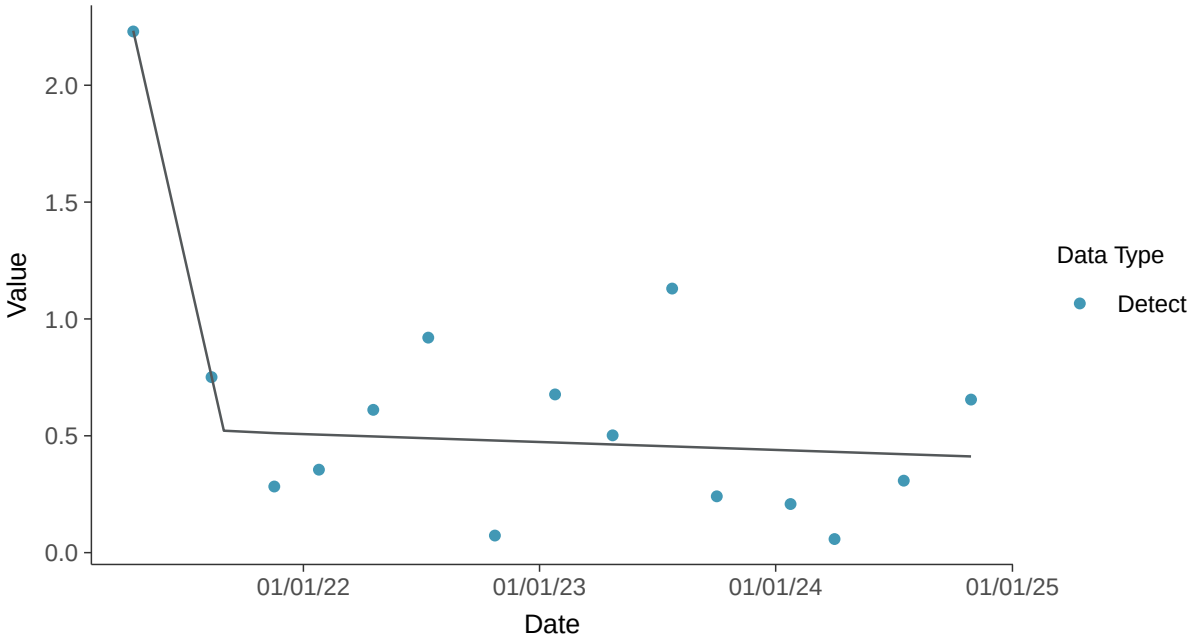
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-11D (pCi/L)



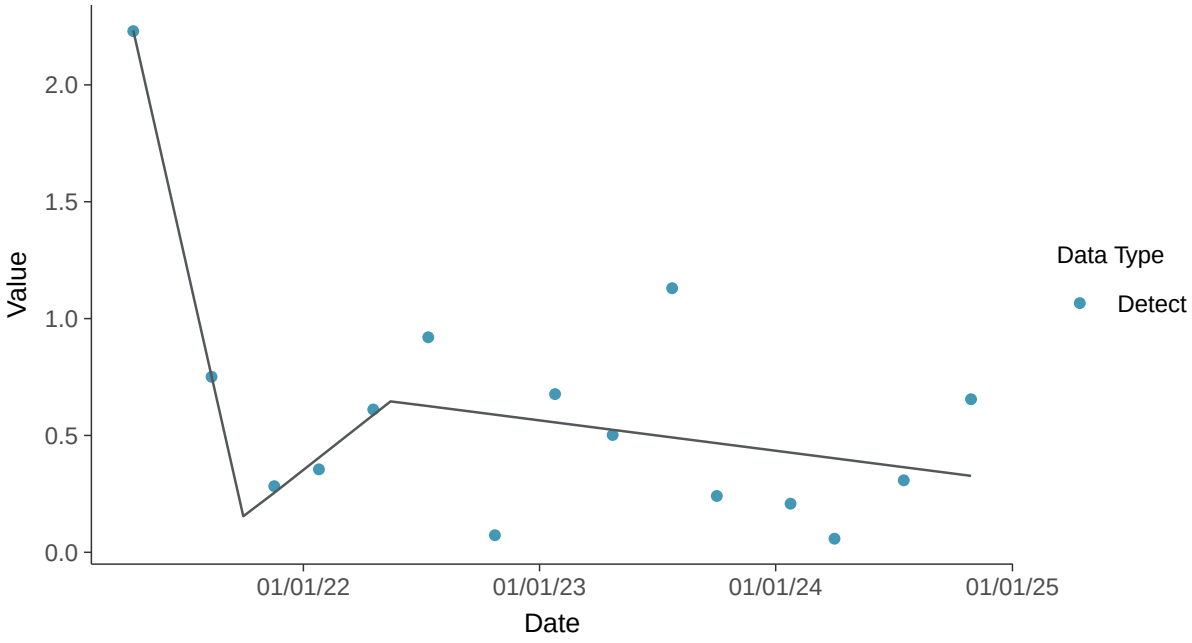
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-11D (pCi/L)



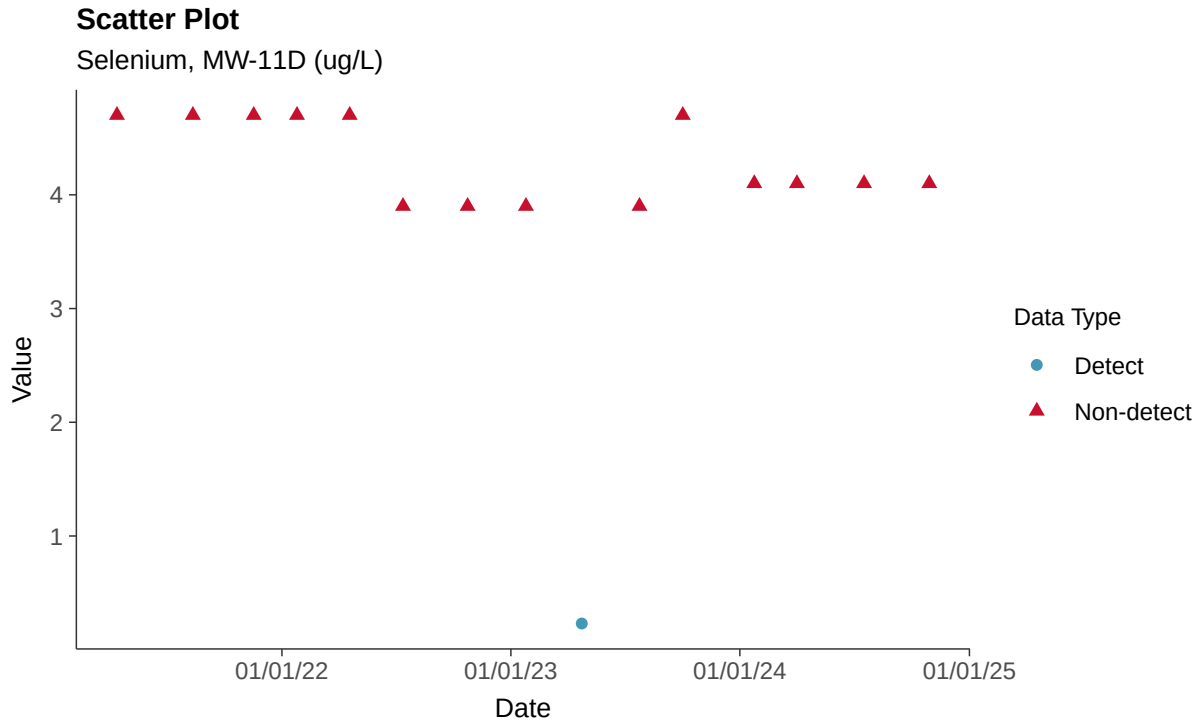
Trend Regression: Piecewise Linear-Linear-Linear

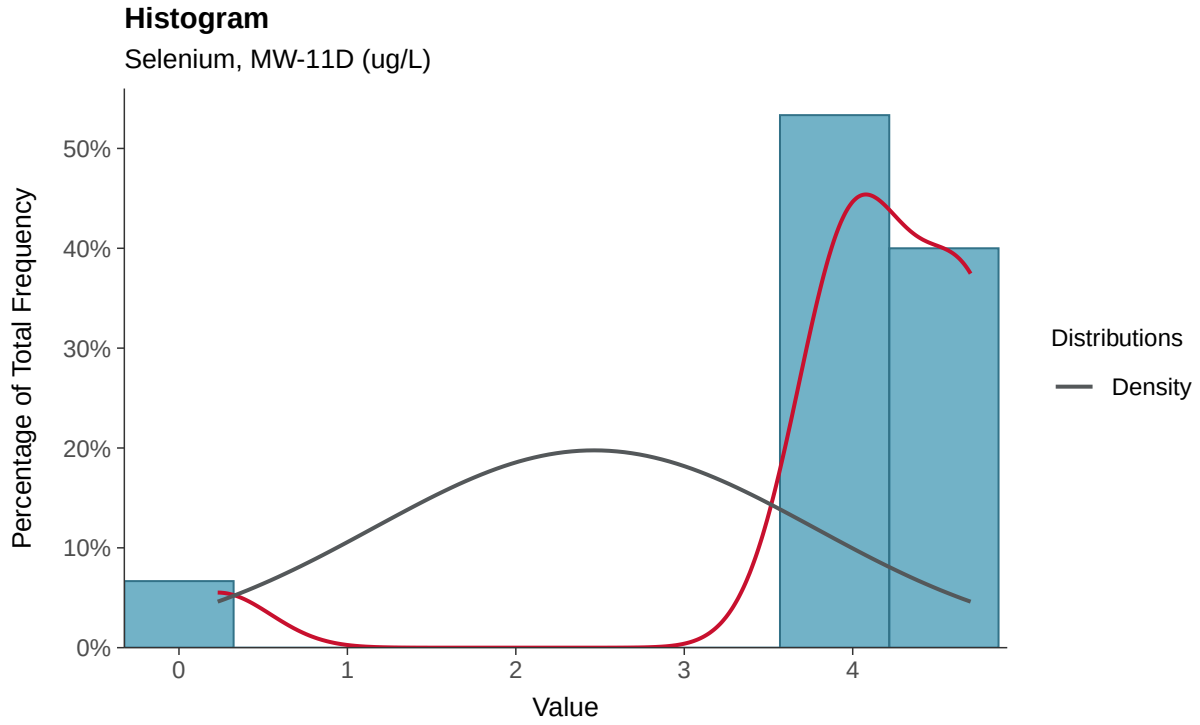
Radium-228, MW-11D (pCi/L)



App. IV: Selenium, MW-11D

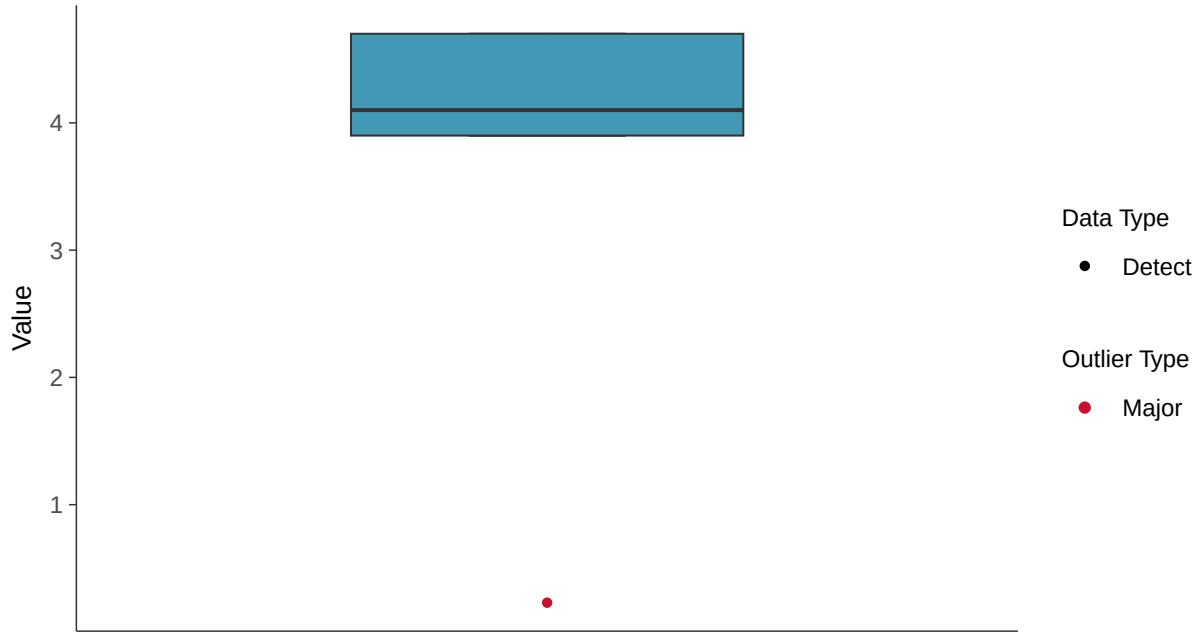
ID: 11_03_121





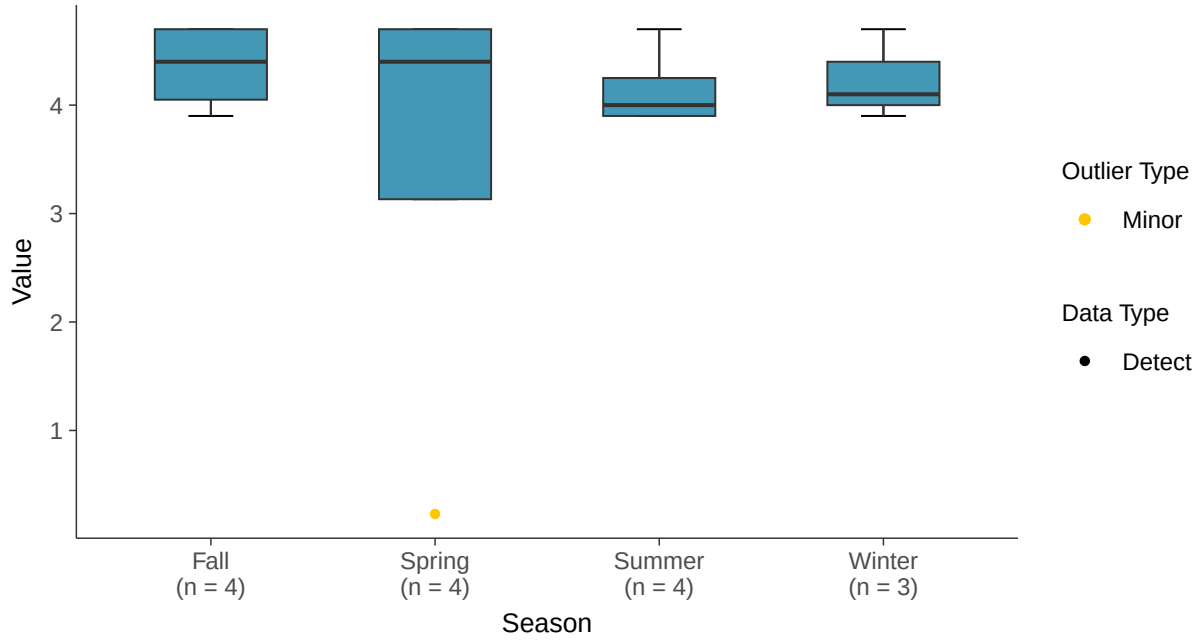
Boxplot

Selenium, MW-11D (ug/L)



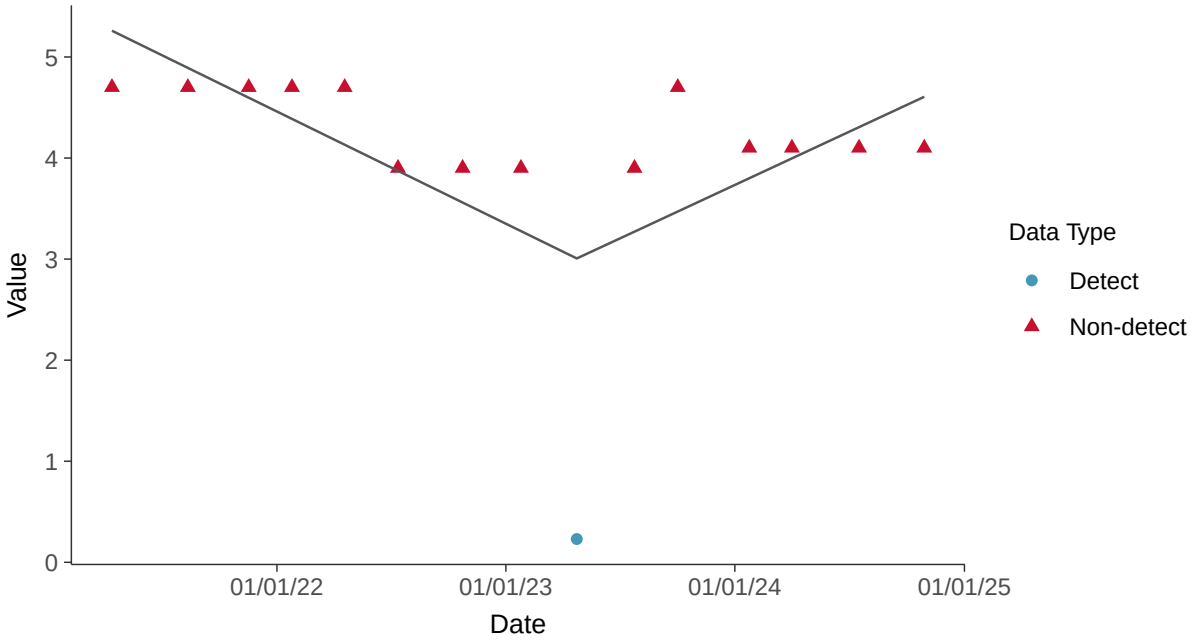
Boxplot by Season

Selenium, MW-11D (ug/L)



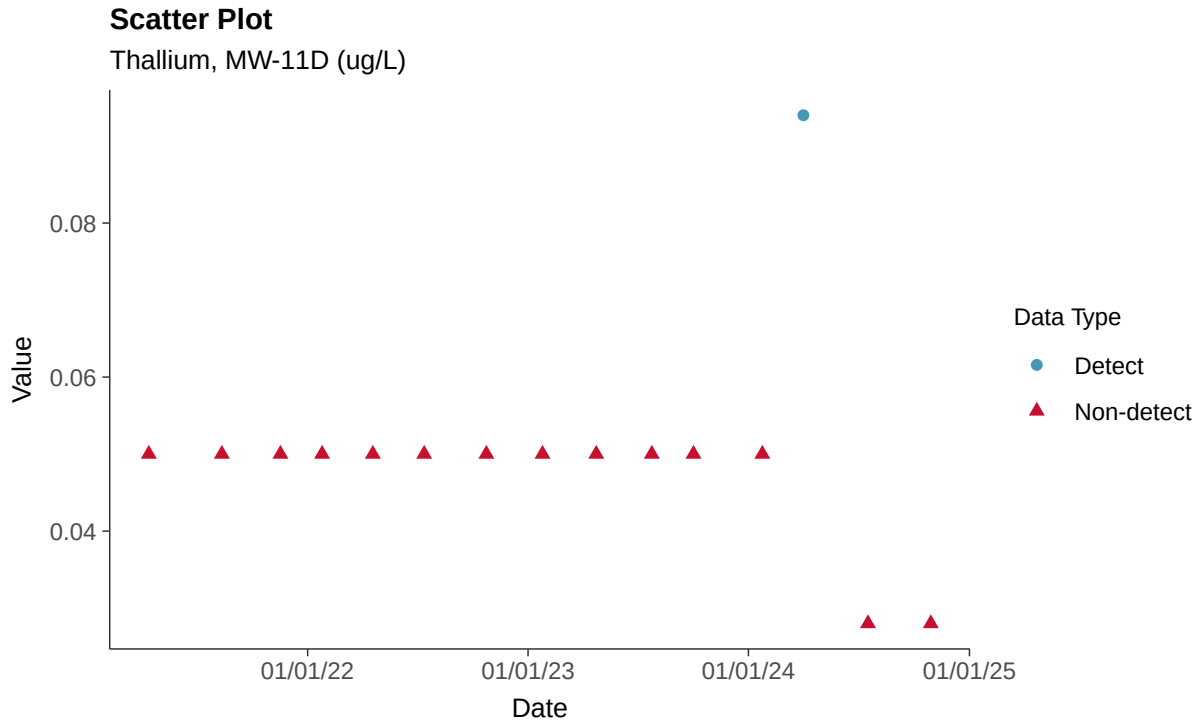
Trend Regression: Piecewise Linear-Linear

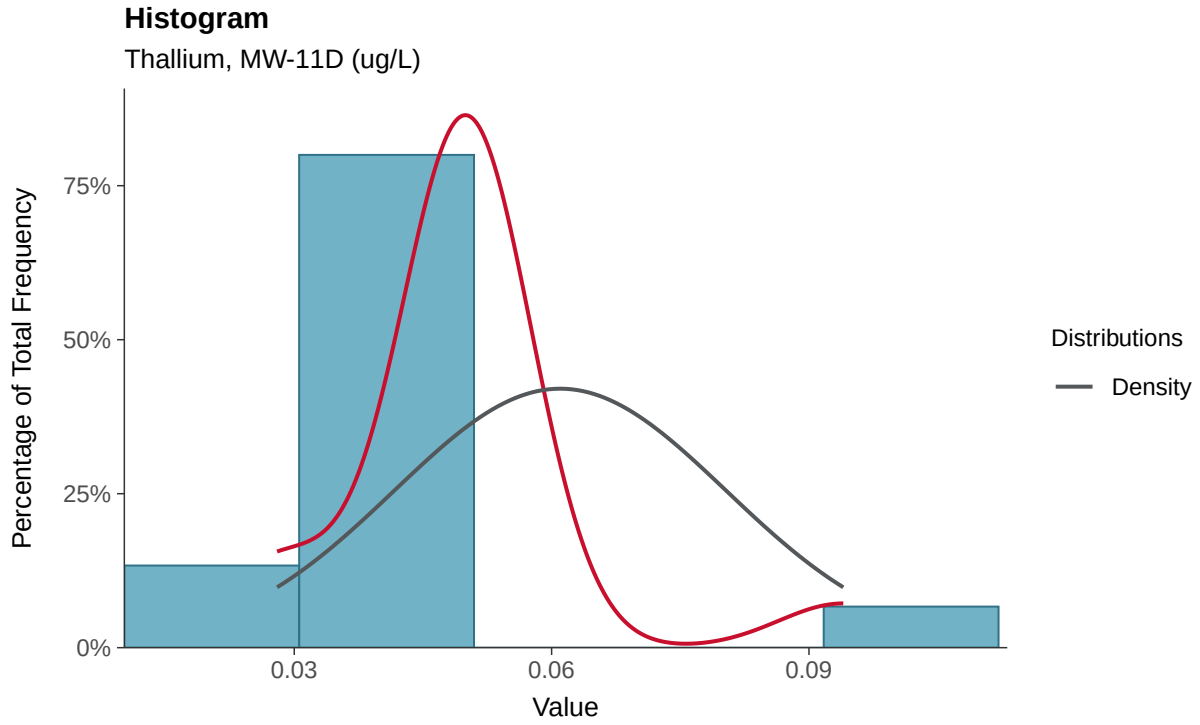
Selenium, MW-11D (ug/L)



App. IV: Thallium, MW-11D

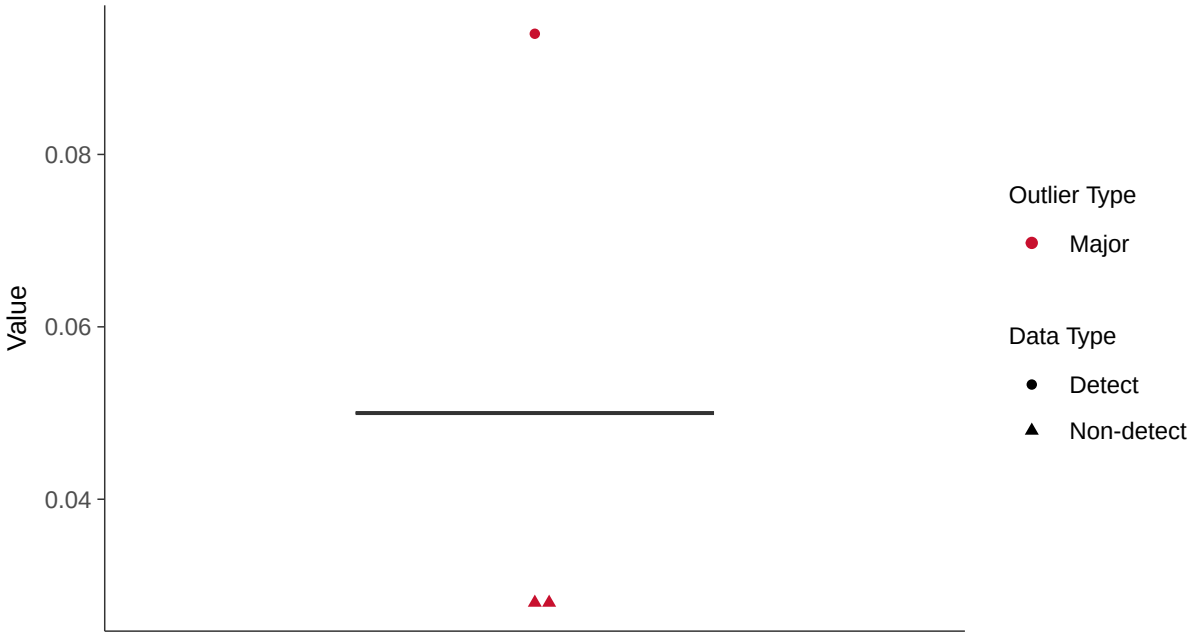
ID: 11_03_124





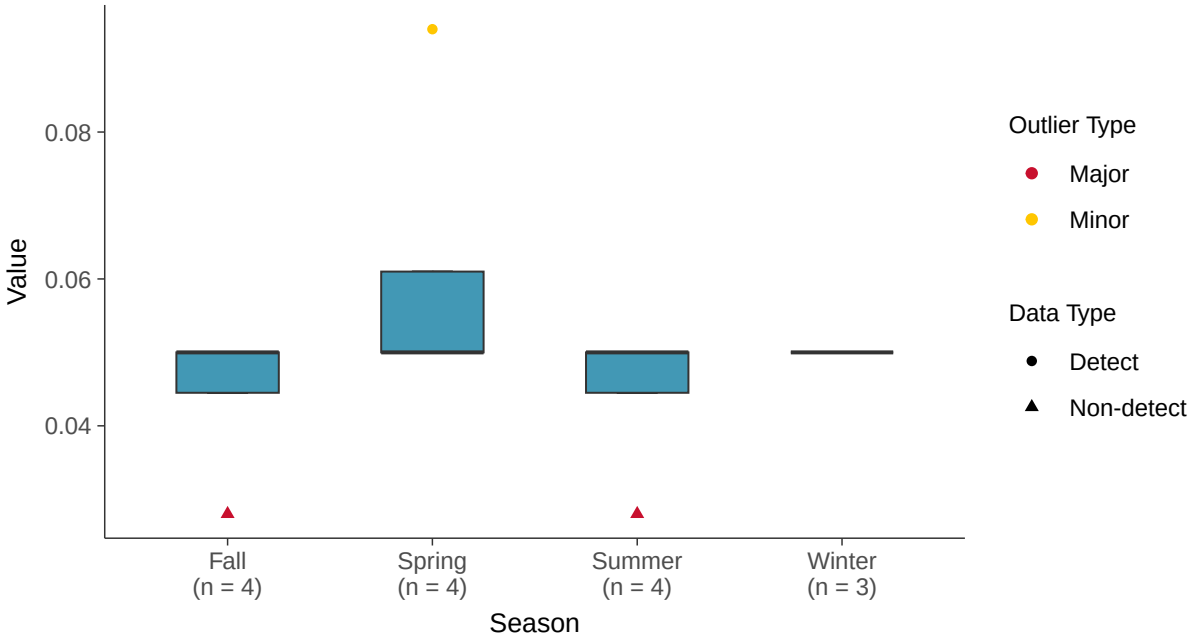
Boxplot

Thallium, MW-11D (ug/L)



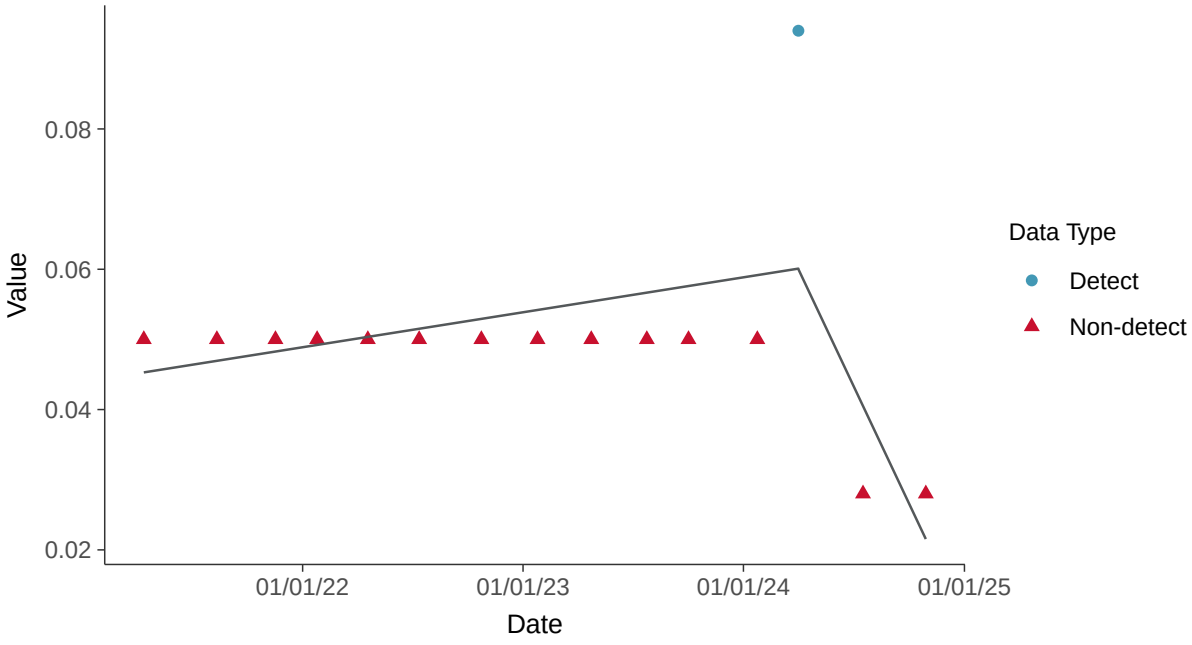
Boxplot by Season

Thallium, MW-11D (ug/L)



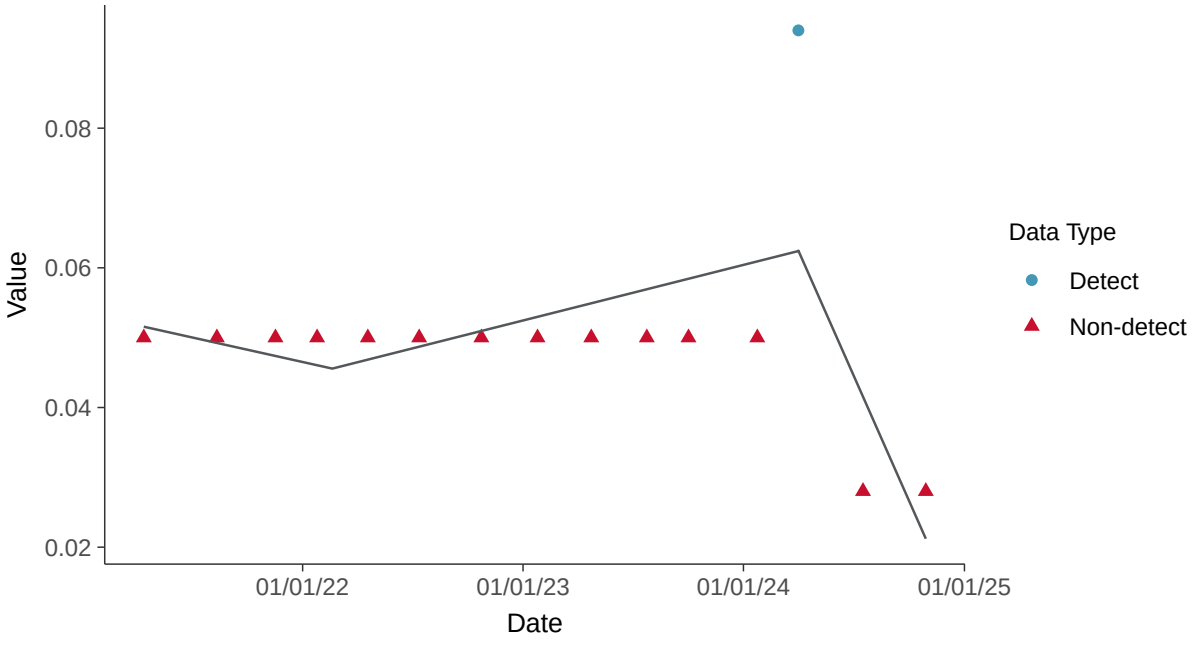
Trend Regression: Piecewise Linear-Linear

Thallium, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-11D (ug/L)

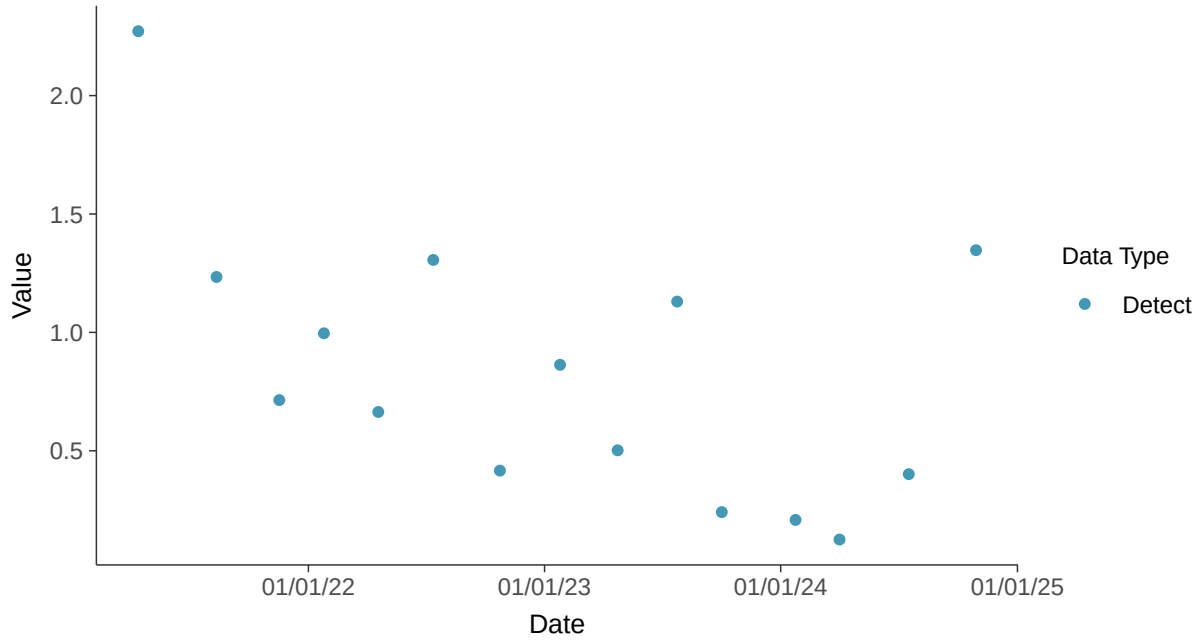


App. IV: Total Radium, MW-11D

ID: 11_03_126

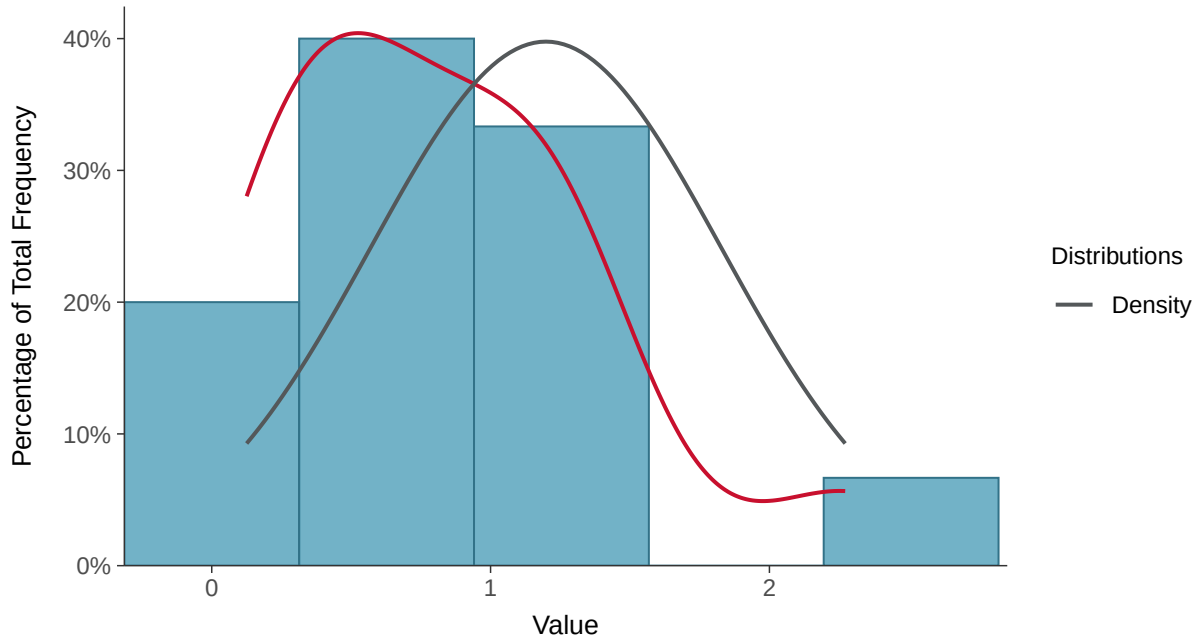
Scatter Plot

Total Radium, MW-11D (pCi/L)



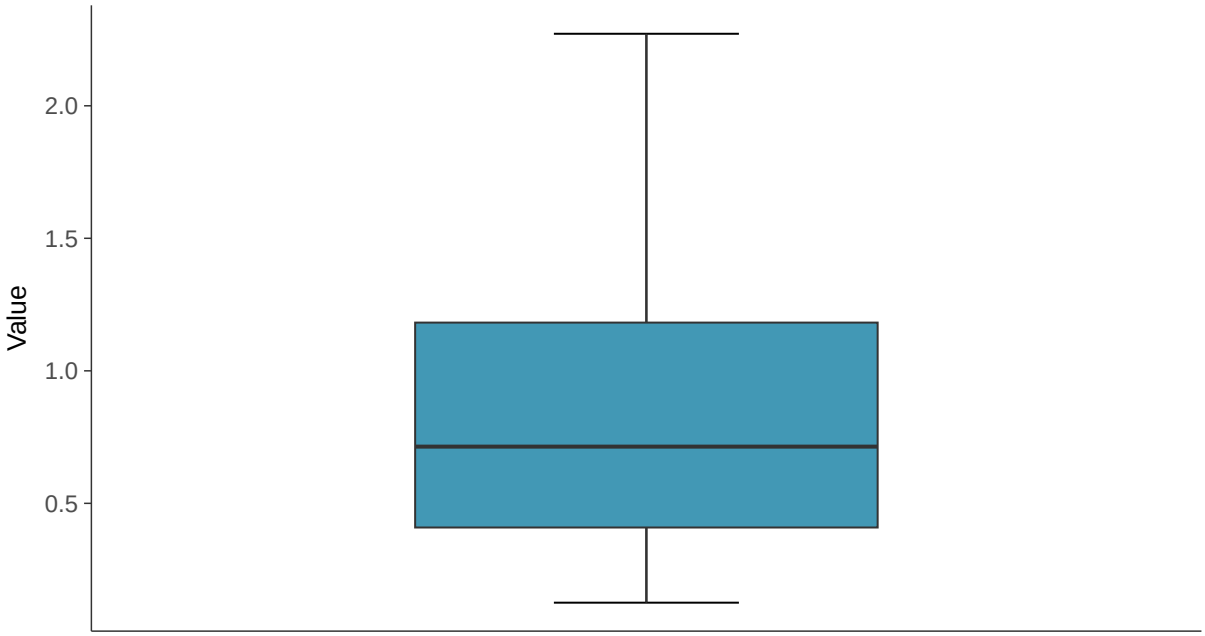
Histogram

Total Radium, MW-11D (pCi/L)



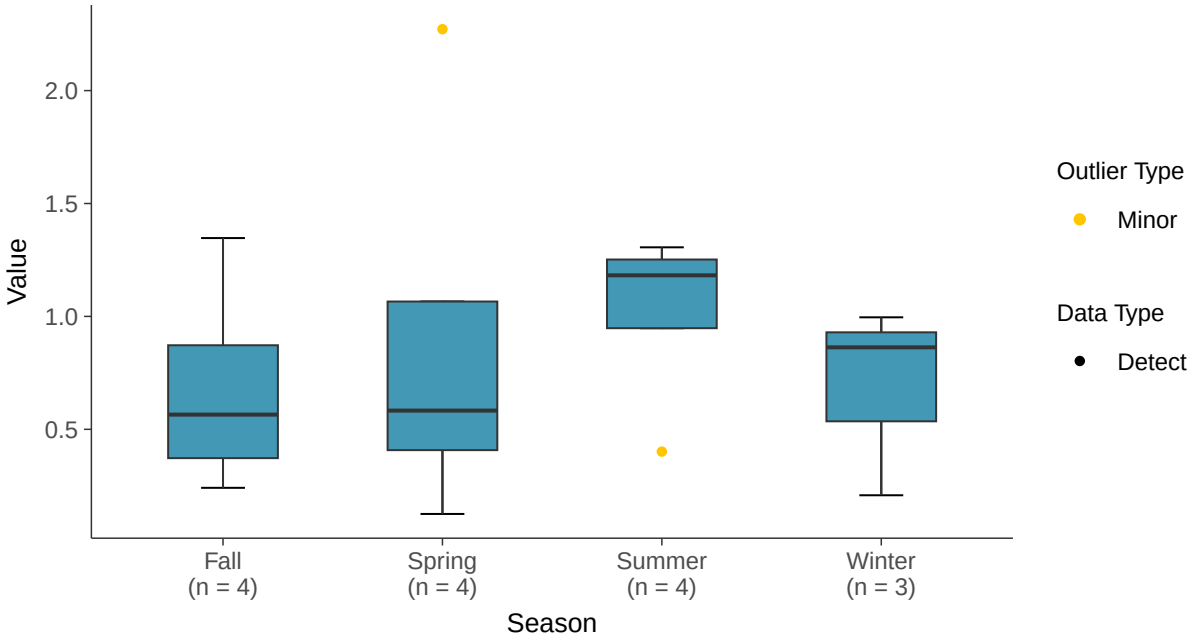
Boxplot

Total Radium, MW-11D (pCi/L)



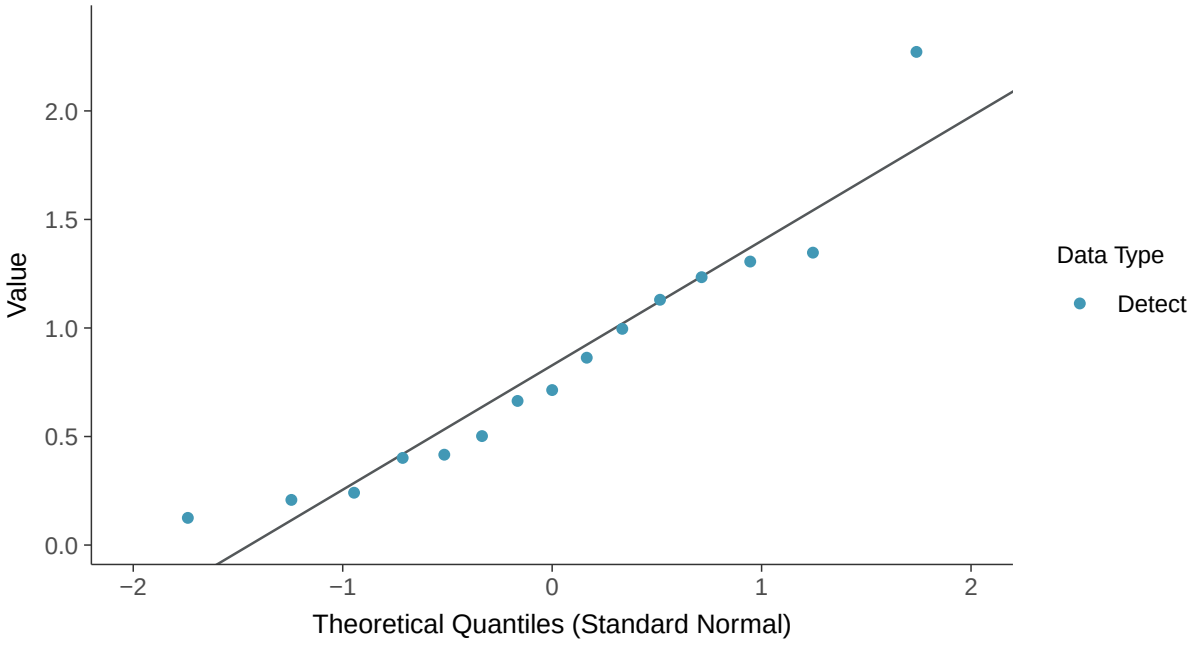
Boxplot by Season

Total Radium, MW-11D (pCi/L)



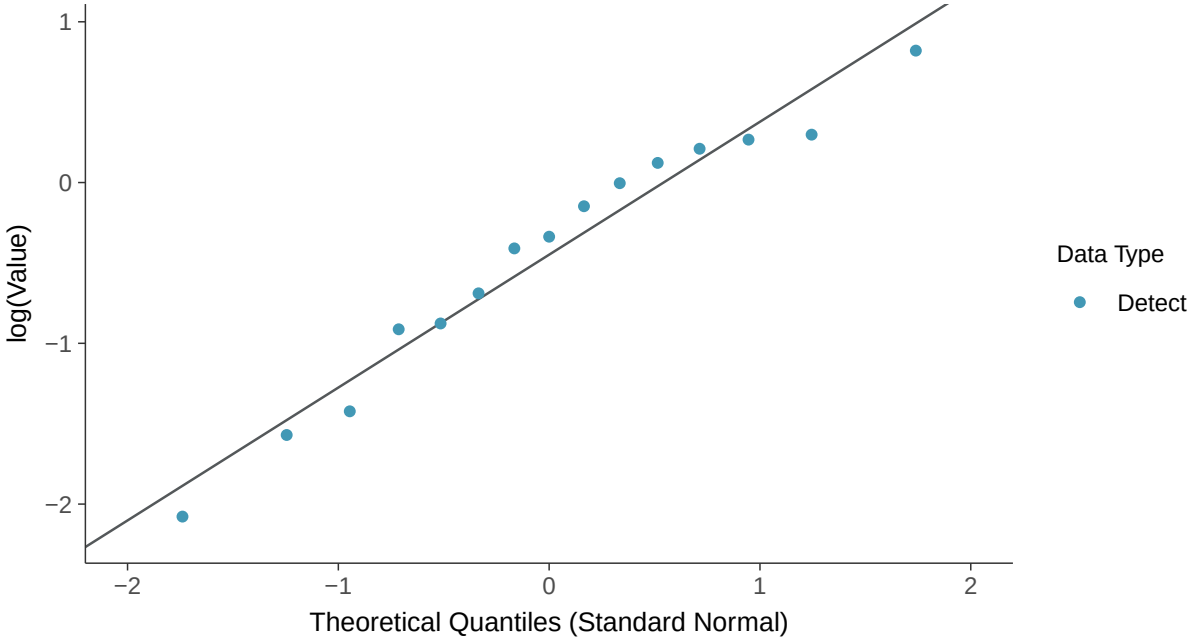
Normal Q-Q plot

Total Radium, MW-11D (pCi/L)



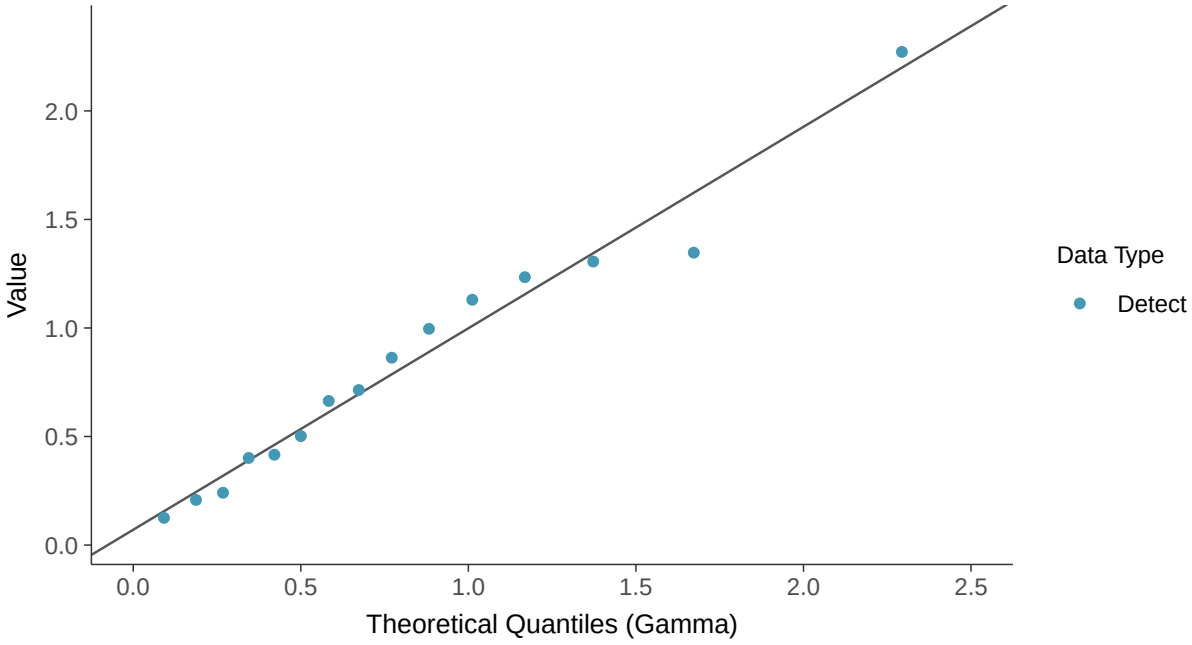
Lognormal Q-Q plot

Total Radium, MW-11D (pCi/L)



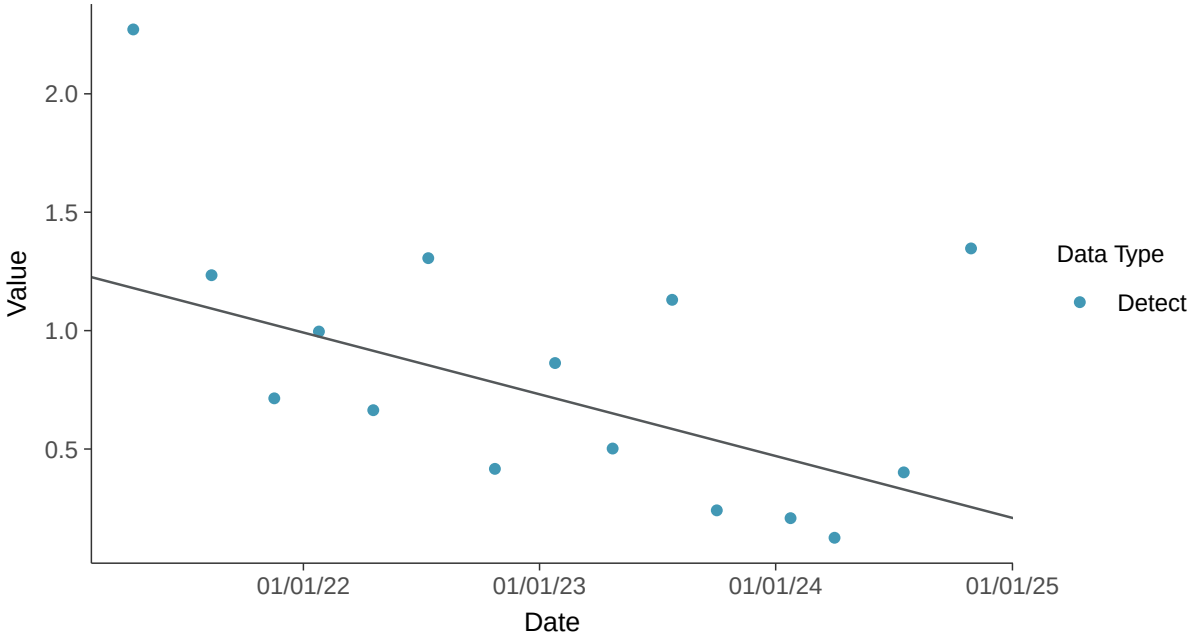
Gamma Q-Q plot

Total Radium, MW-11D (pCi/L)



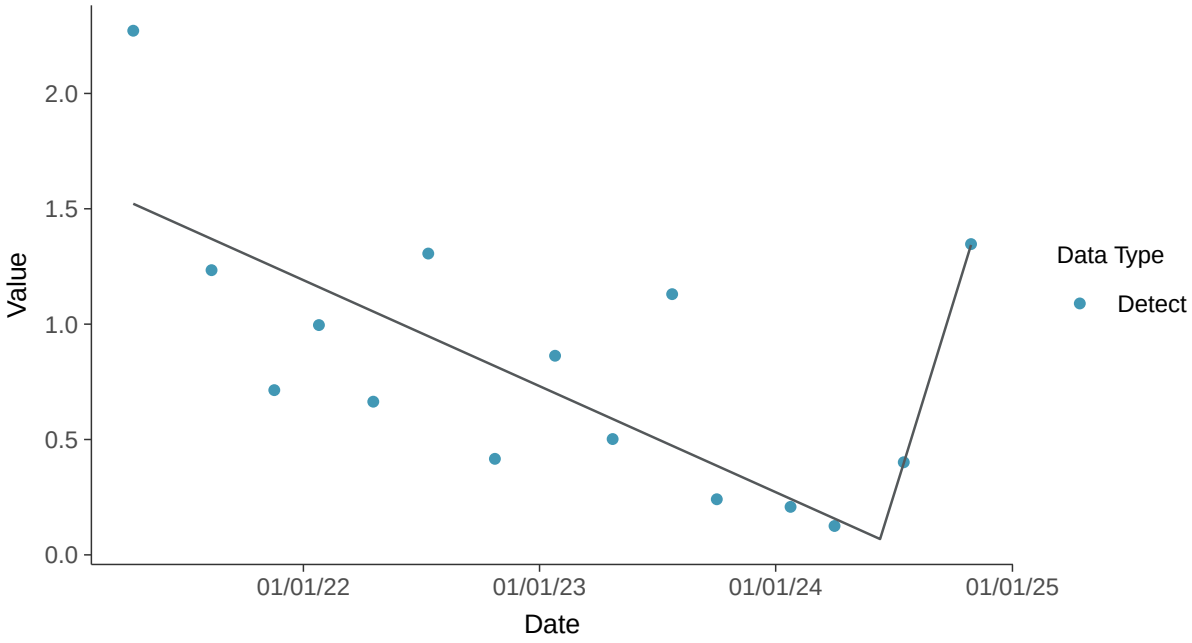
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-11D (pCi/L)



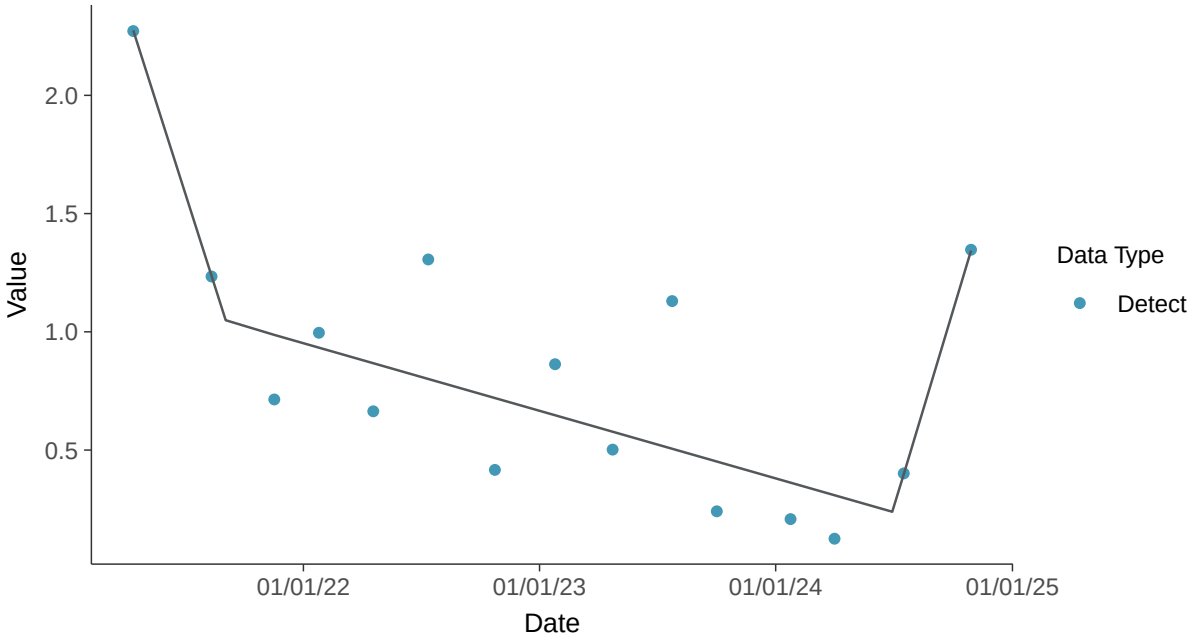
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-11D (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, MW-11D (pCi/L)



This page intentionally left blank.

E

Appendix E – Downgradient Wells Tables

This page intentionally left blank.

Table 1: Summary Statistics, Non-Detects Included

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.25	2.50	0.620	15.0	2.42	0.743	3.43	15.1
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.16	2.50	0.880	13.3	2.38	0.752	2.50	8.39
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.10	2.50	0.200	2.50	0.745	0.355	-1.47	0.494
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.39	2.50	1.30	9.80	1.75	0.517	1.81	4.39
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	10.3	9.50	2.70	35.3	7.40	0.715	1.85	3.56
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	8.94	8.50	0.570	44.6	9.30	1.04	2.90	9.57
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	165382	163000	43100	311000	75614	0.457	0.121	-0.869
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	604	636	83.9	1240	272	0.450	-0.0975	-0.398
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.148	0.155	0.0200	0.210	0.0319	0.216	-1.56	5.82
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.74	6.70	6.41	7.30	0.223	0.0330	0.747	0.0271
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	7.06	6.65	4.50	11.2	1.61	0.228	1.14	0.880
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	1449	1310	346	3390	727	0.502	0.575	-0.112
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	3.68	3.80	0.200	6.10	1.02	0.276	-0.181	3.61
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	4.0	4.70	1.70	5.20	1.12	0.281	-0.618	-1.38
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	213	216	36.3	421	99.7	0.468	0.240	-0.581
01_03_104	MW-1	App. IV	Beryllium	ug/L	38	38	100%	2015-11-20 to 2024-10-30		Nonparametric	0.433	0.500	0.0500	0.700	0.211	0.488	-0.263	-1.33
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	0.430	0.450	0.0600	0.670	0.109	0.253	-0.913	2.42
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.65	2.50	0.630	18.4	3.31	0.907	2.87	10.4
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	2.19	2.50	0.140	3.60	1.10	0.505	-0.280	-1.15
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.148	0.155	0.0200	0.210	0.0319	0.216	-1.56	5.82
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	3.11	2.50	0.250	13.7	2.19	0.703	3.26	14.5
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	32.9	33.0	19.2	47.5	5.94	0.180	-0.00405	0.381
01_03_115	MW-1	App. IV	Mercury	ug/L	38	38	100%	2015-11-20 to 2024-10-30		Nonparametric	0.109	0.100	0.0900	0.120	0.0104	0.0961	0.126	-1.88
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.47	2.50	0.340	15.1	3.02	0.871	3.10	9.82
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.250	0.234	-0.378	1.03	0.318	1.27	0.364	0.646
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.591	0.597	-0.0467	1.45	0.277	0.469	0.483	2.15
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	4.58	4.70	0.280	5.00	0.803	0.175	-4.38	22.9
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	2015-11-20 to 2024-10-30		Nonparametric	0.845	0.0500	0.0200	5.00	1.83	2.16	1.94	1.89
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.880	0.824	0.237	2.48	0.436	0.496	1.43	3.87
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	19.8	3.60	0.620	294	55.2	2.79	4.38	20.4
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Gamma	13.5	4.50	0.900	115	23.2	1.72	3.25	11.7
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	2.00	2.50	0.0730	2.50	0.841	0.420	-1.23	-0.284
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	4.05	2.50	1.30	37.2	6.09	1.50	5.35	29.8
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	70.3	10.7	3.60	1590	276	3.92	5.55	31.4
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	43.6	43.0	8.50	63.9	8.84	0.203	-1.61	7.83
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	183736	188000	34300	221000	33778	0.184	-2.88	11.7
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1084	1130	489	1360	192	0.177	-1.59	2.98
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.209	0.220	0.0200	0.400	0.0685	0.328	-0.340	2.71
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.69	7.60	7.35	9.29	0.392	0.0509	2.85	9.78
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	127	94.0	51.7	338	78.4	0.616	1.20	0.360
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2669	2560	257	11700	1746	0.654	4.42	23.9
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	6.04	3.90	0.610	30.0	5.06	0.837	3.56	16

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.60	4.70	2.50	11.5	2.02	0.440	1.82	4.60
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	299	308	90.8	565	85.0	0.285	0.620	2.91
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	0.467	0.500	0.160	1.10	0.224	0.479	0.301	0.497
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	2015-11-19 to 2024-10-31		Nonparametric	0.428	0.480	0.0780	0.680	0.107	0.251	-0.892	2.65
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	17.5	5.90	1.00	130	27.6	1.58	2.81	8.62
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	3.39	2.50	0.440	34.8	5.72	1.69	5.48	31
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.209	0.220	0.0200	0.400	0.0685	0.328	-0.340	2.71
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	2015-11-19 to 2024-10-31		Nonparametric	3.97	2.50	1.40	27.5	4.78	1.20	4.21	19.5
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	155	132	41.2	512	90.7	0.587	2.57	7.72
02_03_115	MW-2	App. IV	Mercury	ug/L	33	33	100%	2015-11-19 to 2024-10-31		Nonparametric	0.109	0.100	0.0900	0.120	0.0106	0.0968	-0.0412	-1.90
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	2015-11-19 to 2024-10-31	Lognormal	Lognormal	9.45	7.10	2.60	41.0	7.33	0.776	2.79	10.2
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.893	0.927	0.227	1.94	0.358	0.401	0.495	1.09
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	1.36	1.35	0.433	2.23	0.470	0.346	0.157	-0.770
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	4.57	4.70	0.940	5.00	0.763	0.167	-3.63	16.3
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1.15	0.0600	0.0200	10.3	2.43	2.11	2.38	5.58
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	2.25	2.37	1.10	3.35	0.683	0.303	-0.270	-1.07
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	9.87	2.85	0.620	137	24	2.43	4.69	23.9
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	7.30	2.50	0.900	86.0	15.9	2.17	4.26	19.0
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	2.06	2.50	0.0700	2.50	0.804	0.390	-1.44	0.355
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	3.42	2.50	1.30	13.9	2.30	0.672	3.22	12.4
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	8.73	5.00	3.00	42.7	7.21	0.825	3.43	14.5
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	2015-11-19 to 2024-10-31	Normal	Normal	27.1	31.1	0.570	49.6	17.2	0.636	-0.442	-1.33
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	173000	178500	117000	203000	19524	0.113	-0.856	0.604
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Normal	1063	1080	565	1280	137	0.128	-1.40	4.17
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.353	0.340	0.0200	0.610	0.123	0.349	0.0356	0.607
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.33	7.36	6.18	7.77	0.261	0.0356	-2.71	12.1
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	48.2	21.8	9.10	174	46.7	0.968	1.33	0.825
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2232	2370	256	3180	605	0.271	-2.01	4.94
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	5.22	3.90	1.30	15.0	3.09	0.592	1.59	1.93
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.31	4.70	1.90	9.60	1.66	0.384	0.886	1.64
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	653	664	353	855	108	0.166	-0.530	0.284
03_03_104	MW-3	App. IV	Beryllium	ug/L	36	36	100%	2015-11-19 to 2024-10-31		Nonparametric	0.446	0.500	0.0500	0.700	0.210	0.469	-0.399	-1.17
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	0.415	0.400	0.0600	0.500	0.0979	0.236	-1.47	3.36
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	11.5	3.70	0.630	179	31.7	2.75	4.76	23.9
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	2015-11-19 to 2024-10-31		Nonparametric	2.36	2.50	0.0610	6.20	1.28	0.544	0.325	0.895
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.353	0.340	0.0200	0.610	0.123	0.349	0.0356	0.607
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	2015-11-19 to 2024-10-31		Nonparametric	3.30	2.50	0.190	13.7	2.30	0.695	2.87	11.6
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	90.5	86.5	0.390	236	39.7	0.439	2.06	7.42
03_03_115	MW-3	App. IV	Mercury	ug/L	36	36	100%	2015-11-19 to 2024-10-31		Nonparametric	0.109	0.100	0.0900	0.120	0.0105	0.0964	0.0184	-1.90
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	9.01	8.00	5.10	35.7	4.96	0.551	4.69	25.3
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.905	0.816	0.213	1.92	0.363	0.401	0.399	0.279
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	1.46	1.54	0.326	2.86	0.563	0.387	-0.0423	0.215

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	4.55	4.70	0.270	5.00	0.833	0.183	-4.11	20.5
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	2015-11-19 to 2024-10-31		Nonparametric	0.898	0.0500	0.0200	5.00	1.86	2.08	1.86	1.55
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	2.36	2.31	0.857	3.92	0.712	0.302	-0.00199	-0.0996
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	9.02	2.50	0.620	170	29.2	3.24	5.13	27.4
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	6.18	5.30	0.900	12.8	3.45	0.558	0.430	-0.963
04_01_122	MW-4	App. I Metals	Silver	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	2.05	2.50	0.0700	2.50	0.812	0.395	-1.39	0.173
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-19 to 2024-10-31		Nonparametric	2.67	2.50	0.250	10.7	1.69	0.633	2.99	13.7
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	9.88	8.80	3.90	47.2	8.10	0.820	3.24	12.8
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	11.7	7.20	0.570	165	27.2	2.32	5.45	31.1
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	55549	58900	17900	71600	12766	0.230	-1.55	2.33
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	409	423	144	567	104	0.254	-0.932	0.320
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	6.26	6.25	5.91	6.56	0.139	0.0222	-0.00669	0.168
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	10.1	10.7	3.40	13.4	2.33	0.232	-1.41	1.96
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1077	1130	395	1580	229	0.212	-1.38	3.06
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	3.76	3.80	0.200	7.00	1.10	0.291	0.149	3.83
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	3.93	4.70	0.360	5.10	1.21	0.309	-0.942	0.0926
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	287	302	85.9	431	70.4	0.245	-1.29	2.36
04_03_104	MW-4	App. IV	Beryllium	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	0.432	0.500	0.0500	0.700	0.214	0.496	-0.235	-1.38
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	0.414	0.400	0.0600	0.500	0.0960	0.232	-1.48	3.56
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	2.86	2.50	0.580	9.90	1.95	0.682	1.97	5.26
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	7.42	3.60	1.10	28.2	7.11	0.958	1.54	1.50
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	3.12	2.50	0.0770	13.7	2.23	0.714	3.16	13.9
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	31.3	28.3	15.8	98.0	12.8	0.411	4.05	20.9
04_03_115	MW-4	App. IV	Mercury	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	0.109	0.100	0.0900	0.120	0.0105	0.0963	0.0734	-1.90
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.23	2.50	0.480	20.9	4.87	1.15	2.85	7.18
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	0.308	0.239	-0.259	0.913	0.284	0.923	0.249	-0.413
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.540	0.465	0.0190	1.57	0.369	0.682	0.923	0.688
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	4.58	4.70	0.140	5.90	0.867	0.189	-3.87	19.6
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	2015-11-19 to 2024-10-31		Nonparametric	0.864	0.0500	0.0200	5.00	1.85	2.14	1.90	1.72
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.864	0.760	0.146	2.26	0.497	0.575	1.07	0.841
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	3.55	2.50	0.620	12.9	2.44	0.688	2.23	5.74
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	5.76	2.50	0.640	120	19.1	3.32	6.09	37.4
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	2.07	2.50	0.0700	2.50	0.804	0.389	-1.43	0.298
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	2.44	2.50	0.510	3.90	1.00	0.411	0.0935	-0.862
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Nonparametric	9.06	9.50	3.80	36.1	5.92	0.653	2.87	11.4
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	9.08	9.60	0.570	39.3	6.36	0.701	2.77	14
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Gamma	10992	10300	7990	16900	2198	0.200	0.691	-0.184
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	20.1	19.6	17.6	23.1	1.56	0.0775	0.188	-1.13
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	6.90	6.96	5.50	8.54	0.480	0.0696	-0.118	5.98

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	3.62	3.60	2.60	5.60	0.623	0.172	1.19	2.33
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	254	226	194	1160	153	0.605	5.87	35.5
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	3.66	3.80	1.10	5.50	0.840	0.229	0.222	2.56
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	3.95	4.70	0.170	5.00	1.22	0.310	-1.05	0.518
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	103	102	75.0	153	15.7	0.153	0.814	1.34
05_03_104	MW-5	App. IV	Beryllium	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	0.433	0.500	0.0500	0.700	0.211	0.488	-0.263	-1.33
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	0.414	0.400	0.0600	0.500	0.0953	0.230	-1.47	3.59
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	10.0	2.50	0.500	260	41.8	4.17	6.11	37.5
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	2.22	2.50	0.100	3.60	1.11	0.501	-0.408	-1.03
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	3.05	2.50	0.180	13.7	2.13	0.697	3.52	17.0
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	9.53	9.30	4.20	28.6	3.49	0.366	4.51	25.4
05_03_115	MW-5	App. IV	Mercury	ug/L	38	38	100%	2015-11-18 to 2024-10-28		Nonparametric	0.109	0.100	0.0900	0.120	0.0104	0.0961	0.126	-1.88
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	3.28	2.50	0.520	25.3	3.92	1.20	5.10	28.7
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.0944	0.0687	-0.640	0.778	0.271	2.87	0.217	1.18
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.404	0.364	-0.0922	1.08	0.325	0.805	0.505	-0.513
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	4.56	4.70	0.260	5.00	0.813	0.178	-4.24	21.8
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	1.10	0.0500	0.0200	14.8	2.84	2.59	3.52	14.5
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	0.560	0.554	0.0262	1.23	0.345	0.616	0.234	-1.07
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.25	2.50	0.620	19.8	3.08	0.949	4.52	24.2
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	2.58	2.50	0.900	8.20	1.33	0.518	2.05	7.88
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	2015-11-20 to 2024-10-30		Nonparametric	2.10	2.50	0.0700	2.50	0.795	0.379	-1.57	0.715
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-20 to 2024-10-30		Nonparametric	2.51	2.50	0.810	5.10	1.03	0.410	0.485	-0.308
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	8.02	5.00	3.60	27.5	4.79	0.597	2.16	6.63
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	6.27	8.00	0.570	10.8	3.21	0.513	-0.809	-0.970
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	34792	34500	30300	40200	2280	0.0655	0.357	-0.0934
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	207	212	15.3	279	49.8	0.240	-1.97	5.88
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.366	0.370	0.0500	0.520	0.0808	0.220	-1.72	6.23
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	6.41	6.37	6.15	7.00	0.192	0.0299	1.08	1.24
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	60.4	28.4	25.1	214	53.1	0.879	1.62	1.71
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Normal	Normal	638	618	371	946	98.9	0.155	0.301	2.82
06_03_101	MW-6	App. IV	Antimony	ug/L	37	37	100%	2015-11-20 to 2024-10-30		Nonparametric	3.56	3.80	0.200	5.50	0.885	0.248	-0.774	5.94
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	4.06	4.70	0.430	8.10	1.38	0.341	-0.0972	1.30
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	79.8	66.1	43.0	142	29.9	0.374	0.539	-0.961
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.442	0.500	0.100	0.700	0.207	0.469	-0.293	-1.32
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	2015-11-20 to 2024-10-30		Nonparametric	0.416	0.400	0.0600	0.500	0.0955	0.229	-1.55	3.87
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.83	2.50	0.500	14.0	2.31	0.815	3.28	15.2
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	2.22	2.50	0.440	3.60	1.09	0.490	-0.302	-1.16
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.366	0.370	0.0500	0.520	0.0808	0.220	-1.72	6.23
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	3.13	2.50	0.890	13.7	2.16	0.690	3.43	15.8
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Lognormal	Lognormal	32.8	28.5	10.1	60.5	11.6	0.354	0.804	-0.0669
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.115	0.100	0.100	0.320	0.0360	0.313	5.36	31.1

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Normal	Nonparametric	3.14	2.50	0.200	8.30	1.61	0.514	1.54	3.40
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.163	0.207	-0.579	0.910	0.283	1.74	0.0582	1.28
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.554	0.533	-0.243	1.12	0.338	0.611	-0.110	-0.421
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	4.58	4.70	0.110	5.00	0.840	0.183	-4.44	23.2
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	2015-11-20 to 2024-10-30		Nonparametric	0.880	0.0500	0.0200	6.20	1.94	2.20	1.95	2.01
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.770	0.848	0.0513	1.47	0.407	0.528	-0.0649	-1.01
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	6.21	2.60	0.620	79.3	14.7	2.36	4.95	25.3
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	36.5	3.50	0.900	880	165	4.54	5.28	27.9
07_01_122	MW-7R	App. I Metals	Silver	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	1.91	2.50	0.0700	2.50	0.890	0.465	-0.957	-0.937
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	4.89	3.90	1.30	18.8	4.58	0.937	2.46	5.00
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	10.5	9.50	3.00	53.4	12.4	1.18	3.19	9.67
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	2017-07-20 to 2024-10-30	Lognormal	Lognormal	9.65	9.40	0.570	25.3	5.11	0.530	0.777	2.43
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	91543	91400	74000	104000	6784	0.0741	-0.450	0.474
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	282	284	194	313	21.9	0.0776	-2.37	9.25
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.132	0.120	0.0500	0.320	0.0443	0.336	2.83	12.4
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	7.47	7.35	7.13	9.60	0.445	0.0597	4.33	21.1
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	17.7	16.4	13.7	51.2	6.84	0.386	4.63	23.1
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	857	860	740	990	59.1	0.0689	0.123	-0.313
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	3.95	3.60	0.200	13.6	2.17	0.550	3.32	15.2
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	2017-07-20 to 2024-10-30		Nonparametric	4.15	4.70	0.770	5.00	1.10	0.266	-1.53	1.83
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	292	302	50.1	423	68.4	0.234	-1.51	5.17
07_03_104	MW-7R	App. IV	Beryllium	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	0.403	0.500	0.0500	0.700	0.237	0.588	0.0985	-1.73
07_03_106	MW-7R	App. IV	Cadmium	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	0.387	0.400	0.0600	0.500	0.0960	0.248	-1.32	3.70
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	78.0	3.70	1.00	1940	365	4.68	5.28	27.9
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.93	2.50	0.160	20.4	3.73	1.27	4.04	19
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.132	0.120	0.0500	0.320	0.0443	0.336	2.83	12.4
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	3.55	2.50	0.270	13.7	2.57	0.724	2.41	8.42
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Normal	Normal	26.4	27.9	5.60	33.8	5.53	0.210	-2.06	6.60
07_03_115	MW-7R	App. IV	Mercury	ug/L	28	28	100%	2017-07-20 to 2024-10-30		Nonparametric	0.111	0.120	0.0900	0.120	0.0107	0.0960	-0.425	-1.70
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	2017-07-20 to 2024-10-30		Nonparametric	5.20	2.60	0.900	49.5	9.40	1.81	4.29	19.7
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.208	0.130	-0.194	1.05	0.319	1.53	1.29	1.67
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Normal	Nonparametric	0.589	0.509	-0.454	2.13	0.499	0.848	1.01	3.02
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	4.41	4.70	0.180	5.00	0.918	0.208	-3.86	17.6
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	0.0658	0.0500	0.0200	0.480	0.0840	1.28	4.77	24.0
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.849	0.645	0.0664	2.31	0.588	0.693	1.05	0.500
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	2015-11-20 to 2024-10-30	Lognormal	Nonparametric	6.21	2.50	0.620	116	18.4	2.96	6.07	37.2
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	9.67	2.50	0.900	157	25.8	2.67	5.37	30.8
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	2.12	2.50	0.490	2.50	0.732	0.345	-1.56	0.650
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	2.81	2.50	1.30	9.50	1.43	0.508	2.82	12.4
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	13.2	9.50	3.20	62.0	13.3	1.00	2.51	6.19
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	8.07	9.00	0.570	14.0	4.07	0.504	-0.859	-0.519
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	112347	108000	4170	194000	29774	0.265	-0.314	5.08

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	414	378	229	939	150	0.363	1.79	3.39
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0615	0.0500	0.0200	0.140	0.0307	0.499	0.411	-0.267
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	7.03	7.01	6.70	7.31	0.141	0.0201	0.113	0.224
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.84	6.90	4.40	8.40	0.837	0.122	-0.632	0.614
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	968	917	224	1530	234	0.242	-0.0860	2.23
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	4.31	3.90	0.200	10.1	1.87	0.434	1.13	1.85
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	4.28	4.70	2.50	7.40	1.37	0.320	0.296	-0.115
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1148	1090	880	1880	191	0.166	2.01	5.10
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.472	0.500	0.160	1.50	0.264	0.561	1.36	4.77
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.452	0.400	0.290	1.50	0.190	0.420	4.69	26.3
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	11.5	2.50	1.00	87.6	20.2	1.75	2.86	8.22
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	2015-11-20 to 2024-10-30		Nonparametric	2.30	2.50	0.440	3.80	1.06	0.461	-0.287	-1.11
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0615	0.0500	0.0200	0.140	0.0307	0.499	0.411	-0.267
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	3.17	2.50	1.40	13.7	2.05	0.647	3.82	18.9
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Gamma	27.3	26.6	4.20	50.1	7.91	0.289	0.368	2.52
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.116	0.100	0.0900	0.370	0.0436	0.377	5.62	33.5
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	2.74	2.50	0.900	5.60	1.10	0.399	0.530	0.350
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.443	0.337	-0.357	2.51	0.513	1.16	1.88	6.50
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.861	0.731	-0.351	4.72	0.762	0.884	3.81	19.4
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	4.57	4.70	0.330	5.00	0.800	0.175	-4.26	21.9
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	0.926	0.0500	0.0200	8.80	2.14	2.31	2.33	4.64
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1.34	1.22	0	7.23	1.12	0.838	4.28	22.8
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Nonparametric	12.2	2.60	0.620	103	26.8	2.20	3.45	12.3
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Lognormal	Lognormal	4.37	2.90	0.880	27.9	6.90	1.58	3.51	12.7
09_01_122	MW-10	App. I Metals	Silver	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	1.32	1.00	0.0700	2.50	0.948	0.716	0.391	-1.72
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	2021-08-09 to 2024-10-29	Nonparametric	Nonparametric	3.69	2.45	1.50	18.2	4.28	1.16	3.42	12.3
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	13.9	9.50	3.00	94.2	23.4	1.68	3.61	13.3
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	24.9	24.1	17.8	43.4	6.09	0.245	2.30	6.98
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	21807	21800	17700	26500	2167	0.0994	0.0653	1.24
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	29.8	29.6	28.0	32.4	1.12	0.0374	0.771	1.21
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	7.79	7.77	7.48	8.16	0.155	0.0199	0.582	1.93
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	3.76	3.15	1.70	8.00	1.82	0.485	1.10	0.703
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	349	351	318	368	12	0.0343	-1.20	2.77
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	3.73	3.60	0.760	5.50	1.36	0.365	-0.201	0.380
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	2021-08-09 to 2024-10-29		Nonparametric	3.49	3.40	1.20	4.70	1.10	0.314	-0.383	-0.408
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	80.8	78.7	43.2	195	37.4	0.463	2.31	7.10
09_03_104	MW-10	App. IV	Beryllium	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	0.348	0.170	0.0500	0.700	0.274	0.788	0.623	-1.81
09_03_106	MW-10	App. IV	Cadmium	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	0.324	0.330	0.0600	0.400	0.0892	0.275	-2.08	5.94
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	7.65	3.70	0.630	56.7	14.5	1.89	3.43	12.3
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	2.00	0.960	0.440	7.60	2.11	1.06	1.60	2.54
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	4.20	3.30	0.760	13.7	3.81	0.907	1.74	2.54
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	2.98	2.10	0.690	6.70	1.99	0.667	0.659	-1.11
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	2021-08-09 to 2024-10-29		Nonparametric	0.118	0.120	0.0900	0.120	0.00802	0.0680	-3.74	14.0
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	22.7	20.4	15.4	36.2	6.52	0.287	0.896	-0.190
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.165	0.171	-0.305	0.537	0.258	1.56	-0.400	-0.920
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.581	0.499	-0.100	1.67	0.450	0.774	0.879	1.39
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	4.04	4.10	0.500	5.20	1.10	0.272	-2.80	9.47
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	0.0503	0.0500	0.0280	0.120	0.0221	0.440	2.54	8.65
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.801	0.823	0	1.74	0.429	0.535	0.170	0.986
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	4.22	4.30	0.620	20.1	4.39	1.04	3.24	12.1
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	2.86	3.50	0.790	7.60	1.67	0.584	1.19	3.00
10_01_122	MW-11	App. I Metals	Silver	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	1.53	1.00	0.0700	2.50	0.972	0.635	-0.0740	-1.96
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	2.50	1.60	0.440	3.90	1.39	0.554	-0.0159	-2.02
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	8.22	9.50	3.00	11.0	2.98	0.362	-0.981	-0.670
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	15.4	15.2	8.50	25.2	3.51	0.227	0.890	3.46
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	30876	26700	23200	69400	10965	0.355	3.03	10.3
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Normal	Normal	128	129	74.5	149	19.2	0.150	-1.36	2.65
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.160	0.170	0.0500	0.220	0.0362	0.226	-1.57	4.94
10_02_118	MW-11	App. III	pH (Field)	S.U.	15	0	0%	2021-01-29 to 2024-10-29	Nonparametric	Nonparametric	6.73	6.66	6.53	7.33	0.208	0.0308	1.96	4.19
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	2.22	2.20	1.80	3.00	0.288	0.130	0.992	2.22
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	551	416	296	2760	571	1.04	4.08	16.8
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	3.58	3.00	0.320	5.50	1.33	0.370	-0.249	1.31
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	3.68	3.40	0.400	5.60	1.31	0.357	-0.848	0.756
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	49.2	41.5	34.3	130	22.6	0.459	3.19	11.3
10_03_104	MW-11	App. IV	Beryllium	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	0.410	0.170	0.0500	0.700	0.283	0.691	0.0957	-2.21
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	0.338	0.330	0.0600	0.400	0.0857	0.254	-2.24	6.62
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	2020-10-15 to 2024-10-29		Nonparametric	3.21	3.70	0.500	8.80	2.31	0.720	1.20	1.50
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	2.14	1.30	0.440	3.60	1.44	0.674	0.0570	-2.17
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.160	0.170	0.0500	0.220	0.0362	0.226	-1.57	4.94
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	3.82	4.50	0.190	13.7	2.97	0.778	2.32	7.77
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	10.7	10.1	8.30	19.5	2.53	0.236	2.86	9.67
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	0.118	0.120	0.0900	0.120	0.00728	0.0615	-4.12	17.0
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	2.86	2.60	0.410	3.90	1.14	0.399	-0.618	-0.740
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Normal	Nonparametric	0.0878	0.0925	-0.149	0.399	0.172	1.96	0.437	-1.04
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	0.485	0.500	-0.135	2.13	0.527	1.09	1.99	5.48
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	2020-10-15 to 2024-10-29		Nonparametric	4.10	4.10	0.0720	4.70	1.10	0.268	-3.41	12.9
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	0.0495	0.0500	0.0280	0.0850	0.0117	0.236	1.11	6.17
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	0.614	0.500	0.124	2.39	0.550	0.897	2.45	6.78
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	4.13	2.60	0.620	15.4	4.60	1.11	1.97	3.11
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	2.40	1.70	0.880	6.20	1.60	0.665	0.874	0.362
11_01_122	MW-11D	App. I Metals	Silver	ug/L	15	15	100%	2021-04-13 to 2024-10-29		Nonparametric	1.40	1.00	0.0700	2.50	0.963	0.687	0.211	-1.89
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	2.37	1.60	0.690	3.90	1.32	0.559	0.309	-1.96

(Table continues on next page)

[a] Non-detects are excluded from goodness-of-fit tests.

Table 1: Summary Statistics, Non-Detects Included *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit[a]	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	8.51	9.50	2.90	18.6	4.16	0.490	0.552	1.21
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	54.4	50.9	41.7	109	17.0	0.313	2.70	8.14
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	25847	18400	14000	94400	19927	0.771	3.28	11.7
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	126	81.4	52.3	530	122	0.971	2.90	9.37
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	8.41	8.39	8.06	8.92	0.246	0.0292	0.750	0.212
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	86.6	27.4	0.500	523	133	1.54	2.85	9.05
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	549	396	312	1740	369	0.673	2.72	8.30
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	2021-04-13 to 2024-10-29		Nonparametric	3.84	3.60	0.620	5.60	1.42	0.370	-0.367	0.281
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	6.46	4.70	2.50	16.5	4.61	0.713	1.34	0.548
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	105	113	65.7	124	18.1	0.172	-1.25	0.774
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.375	0.170	0.110	0.700	0.275	0.732	0.445	-2.09
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	2021-04-13 to 2024-10-29		Nonparametric	0.329	0.330	0.0600	0.400	0.0881	0.268	-2.13	6.11
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	2.72	3.20	0.630	8.00	1.98	0.728	1.19	2.39
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	1.83	0.960	0.210	3.60	1.52	0.830	0.376	-2.04
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	3.84	4.50	1.40	13.7	3.06	0.798	2.56	8.19
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Lognormal	Lognormal	29.6	25.3	16.0	80.7	17.5	0.591	2.27	5.09
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	2021-04-13 to 2024-10-29		Nonparametric	0.118	0.120	0.0900	0.120	0.00775	0.0656	-3.87	15.0
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	22.6	9.30	3.60	127	31.5	1.39	2.93	9.64
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Normal	Nonparametric	0.208	0.0934	-0.101	0.692	0.268	1.29	0.563	-1.04
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.600	0.502	0.0582	2.23	0.546	0.911	2.04	5.31
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	4.03	4.10	0.230	4.70	1.11	0.275	-3.20	11.4
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.0500	0.0500	0.0280	0.0940	0.0144	0.288	1.76	7.00
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.828	0.714	0.125	2.27	0.572	0.691	1.05	1.44

[a] Non-detects are excluded from goodness-of-fit tests.

Table 2: Summary Statistics, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.63	4.50	0.860	15.0	5.42	0.963	1.14	0.845
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.33	5.25	1.50	13.3	3.65	0.685	1.08	1.36
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.888	1.00	0.200	1.20	0.379	0.427	-1.47	2.04
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	4.45	3.85	1.90	9.80	2.30	0.516	1.10	0.834
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	17.1	13.8	5.00	35.3	8.85	0.519	0.909	-0.0370
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	12.5	9.70	6.20	44.6	9.27	0.744	3.37	12.2
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	165382	163000	43100	311000	75614	0.457	0.121	-0.869
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	604	636	83.9	1240	272	0.450	-0.0975	-0.398
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.151	0.160	0.110	0.210	0.0241	0.160	0.167	-0.508
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.74	6.70	6.41	7.30	0.223	0.0330	0.747	0.0271
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	7.06	6.65	4.50	11.2	1.61	0.228	1.14	0.880
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	1449	1310	346	3390	727	0.502	0.575	-0.112
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	5.85	5.85	5.60	6.10	0.354	0.0604	NA	NA
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	3.13	2.50	1.70	5.20	1.83	0.585	1.37	NA
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Normal	Normal	213	216	36.3	421	99.7	0.468	0.240	-0.581
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	0.603	0.570	0.570	0.670	0.0577	0.0957	1.73	NA
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	6.13	5.80	0.760	18.4	4.98	0.812	1.39	2.40
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	0.697	0.750	0.140	1.20	0.532	0.764	-0.447	NA
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.151	0.160	0.110	0.210	0.0241	0.160	0.167	-0.508
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	2.88	1.60	0.250	6.80	3.46	1.20	1.44	NA
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	32.9	33.0	19.2	47.5	5.94	0.180	-0.00405	0.381
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	8.11	9.00	0.340	15.1	6.95	0.857	-0.175	-2.91
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.250	0.234	-0.378	1.03	0.318	1.27	0.364	0.646
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.591	0.597	-0.0467	1.45	0.277	0.469	0.483	2.15
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	2.34	2.34	0.280	4.40	2.91	1.24	NA	NA
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.880	0.824	0.237	2.48	0.436	0.496	1.43	3.87
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	34.0	6.45	0.950	294	72.5	2.13	3.18	10.6
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Gamma	19.8	9.70	2.30	115	27.4	1.38	2.56	7.05
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	0.587	0.587	0.0730	1.10	0.726	1.24	NA	NA
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	7.30	4.05	1.60	37.2	10.7	1.46	3.0	9.21
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	129	15.8	3.60	1590	380	2.94	3.99	16.2
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	44.7	43.3	34.5	63.9	6.20	0.139	1.04	1.67
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	183736	188000	34300	221000	33778	0.184	-2.88	11.7
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1084	1130	489	1360	192	0.177	-1.59	2.98
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.220	0.220	0.130	0.400	0.0533	0.242	1.07	3.39
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.69	7.60	7.35	9.29	0.392	0.0509	2.85	9.78
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	127	94.0	51.7	338	78.4	0.616	1.20	0.360
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2669	2560	257	11700	1746	0.654	4.42	23.9
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	7.39	6.90	0.610	12.3	3.12	0.423	-0.492	0.469
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	6.12	5.10	3.70	11.5	2.76	0.450	1.21	0.378
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	299	308	90.8	565	85.0	0.285	0.620	2.91
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	0.750	0.750	0.400	1.10	0.495	0.660	NA	NA
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	2015-11-19 to 2024-10-31		Nonparametric	0.413	0.480	0.0780	0.680	0.307	0.743	-0.941	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	20.8	8.80	1.80	130	29.6	1.42	2.52	6.80
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	7.53	2.45	0.890	34.8	13.4	1.78	2.42	5.88
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	0.220	0.220	0.130	0.400	0.0533	0.242	1.07	3.39
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	2015-11-19 to 2024-10-31		Nonparametric	10.2	5.75	1.80	27.5	11.7	1.15	1.82	3.45
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	155	132	41.2	512	90.7	0.587	2.57	7.72
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	2015-11-19 to 2024-10-31	Lognormal	Lognormal	10.1	8.40	4.40	41.0	7.52	0.748	2.89	10.3
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.893	0.927	0.227	1.94	0.358	0.401	0.495	1.09
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	1.36	1.35	0.433	2.23	0.470	0.346	0.157	-0.770
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	2015-11-19 to 2024-10-31		Nonparametric	2.87	2.87	0.940	4.80	2.73	0.951	NA	NA
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1.11	0.0865	0.0370	10.3	3.23	2.90	3.16	9.99
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	2.25	2.37	1.10	3.35	0.683	0.303	-0.270	-1.07
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	19.7	5.60	1.40	137	35.5	1.80	2.98	9.48
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	12.4	4.80	1.10	86.0	22.3	1.80	2.81	7.89
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	1.60	1.60	1.60	1.60	NA	NA	NA	NA
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	4.45	2.70	1.90	13.9	3.53	0.793	1.87	3.55
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	14.9	12.2	4.30	42.7	13.2	0.882	1.59	2.38
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	2015-11-19 to 2024-10-31	Normal	Normal	35.3	35.9	9.70	49.6	10.4	0.295	-0.682	0.0212
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	173000	178500	117000	203000	19524	0.113	-0.856	0.604
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Normal	1063	1080	565	1280	137	0.128	-1.40	4.17
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.362	0.350	0.210	0.610	0.111	0.305	0.627	-0.309
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	7.33	7.36	6.18	7.77	0.261	0.0356	-2.71	12.1
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	48.2	21.8	9.10	174	46.7	0.968	1.33	0.825
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	2232	2370	256	3180	605	0.271	-2.01	4.94
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	7.54	8.70	1.30	11.4	3.36	0.446	-0.601	-0.852
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	5.67	6.10	1.90	9.60	2.75	0.485	-0.186	-0.854
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	653	664	353	855	108	0.166	-0.530	0.284
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	0.410	0.410	0.410	0.410	NA	NA	NA	NA
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	2015-11-19 to 2024-10-31	Lognormal	Nonparametric	20.3	6.80	1.10	179	43.7	2.15	3.32	11.4
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	2015-11-19 to 2024-10-31		Nonparametric	2.17	1.21	0.0610	6.20	2.78	1.28	1.62	2.59
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.362	0.350	0.210	0.610	0.111	0.305	0.627	-0.309
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	2015-11-19 to 2024-10-31		Nonparametric	4.50	6.00	0.190	7.30	3.79	0.842	-1.51	NA
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	93.0	87.0	36.7	236	37.1	0.399	2.82	9.08
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	9.01	8.00	5.10	35.7	4.96	0.551	4.69	25.3
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.905	0.816	0.213	1.92	0.363	0.401	0.399	0.279
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Normal	Nonparametric	1.46	1.54	0.326	2.86	0.563	0.387	-0.0423	0.215
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	2015-11-19 to 2024-10-31		Nonparametric	0.270	0.270	0.270	0.270	NA	NA	NA	NA
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	2.36	2.31	0.857	3.92	0.712	0.302	-0.00199	-0.0996
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	49.4	7.60	0.900	170	73.0	1.48	1.56	1.94
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	7.80	7.45	3.50	12.8	2.80	0.359	0.360	-1.04
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-19 to 2024-10-31		Nonparametric	3.51	1.55	0.250	10.7	4.84	1.38	1.87	3.57
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	2015-11-19 to 2024-10-31	Gamma; Lognormal	Nonparametric	16.0	13.0	7.40	47.2	11.0	0.687	2.25	5.33
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	19.5	7.20	5.70	165	43.7	2.24	3.60	13
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	55549	58900	17900	71600	12766	0.230	-1.55	2.33

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	409	423	144	567	104	0.254	-0.932	0.320
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	6.26	6.25	5.91	6.56	0.139	0.0222	-0.00669	0.168
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	10.1	10.7	3.40	13.4	2.33	0.232	-1.41	1.96
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	1077	1130	395	1580	229	0.212	-1.38	3.06
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.32	3.40	3.10	7.00	1.69	0.392	1.30	0.660
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	2.73	2.73	0.360	5.10	3.35	1.23	NA	NA
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	287	302	85.9	431	70.4	0.245	-1.29	2.36
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	0.470	0.470	0.470	0.470	NA	NA	NA	NA
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	4.14	4.10	0.580	9.90	3.40	0.823	0.680	-0.787
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	12.9	13.0	3.90	28.2	7.32	0.566	0.734	-0.505
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Normal	0.330	0.330	0.210	0.500	0.0600	0.182	0.627	0.723
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	2015-11-19 to 2024-10-31		Nonparametric	6.80	6.80	6.80	6.80	NA	NA	NA	NA
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	2015-11-19 to 2024-10-31	Nonparametric	Nonparametric	31.3	28.3	15.8	98.0	12.8	0.411	4.05	20.9
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	13.7	18.7	0.480	20.9	8.81	0.642	-1.06	-0.553
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Normal	Nonparametric	0.308	0.239	-0.259	0.913	0.284	0.923	0.249	-0.413
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.540	0.465	0.0190	1.57	0.369	0.682	0.923	0.688
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	2015-11-19 to 2024-10-31		Nonparametric	3.02	3.02	0.140	5.90	4.07	1.35	NA	NA
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-19 to 2024-10-31	Gamma; Lognormal; Normal	Nonparametric	0.864	0.760	0.146	2.26	0.497	0.575	1.07	0.841
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	5.48	5.50	1.10	12.9	4.05	0.739	0.549	-0.661
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	16.3	1.80	0.640	120	39	2.39	2.96	8.84
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	1.37	1.00	0.510	2.60	1.09	0.798	1.35	NA
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Nonparametric	12.9	11.4	3.80	36.1	8.38	0.650	1.93	4.67
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	11.8	10.5	7.70	39.3	6.25	0.530	4.42	20.2
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal	Gamma	10992	10300	7990	16900	2198	0.200	0.691	-0.184
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	20.1	19.6	17.6	23.1	1.56	0.0775	0.188	-1.13
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	6.90	6.96	5.50	8.54	0.480	0.0696	-0.118	5.98
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	3.62	3.60	2.60	5.60	0.623	0.172	1.19	2.33
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	254	226	194	1160	153	0.605	5.87	35.5
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	2.50	2.50	1.10	3.90	1.98	0.792	NA	NA
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	2.58	2.58	0.170	5.00	3.42	1.32	NA	NA
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	103	102	75.0	153	15.7	0.153	0.814	1.34
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	2015-11-18 to 2024-10-28	Lognormal	Nonparametric	31.1	3.80	0.920	260	80.7	2.60	3.13	9.86
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	2015-11-18 to 2024-10-28		Nonparametric	1.50	1.50	0.100	2.90	1.98	1.32	NA	NA
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Normal	0.547	0.555	0.410	0.690	0.0600	0.110	0.00229	0.451
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	0.180	0.180	0.180	0.180	NA	NA	NA	NA
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	2015-11-18 to 2024-10-28	Nonparametric	Nonparametric	9.67	9.30	6.30	28.6	3.42	0.353	4.90	27.7
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-18 to 2024-10-28		Nonparametric	11.5	8.70	0.520	25.3	12.6	1.10	0.951	NA
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.0944	0.0687	-0.640	0.778	0.271	2.87	0.217	1.18
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Normal	Nonparametric	0.404	0.364	-0.0922	1.08	0.325	0.805	0.505	-0.513
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	0.260	0.260	0.260	0.260	NA	NA	NA	NA
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	2015-11-18 to 2024-10-28		Nonparametric	14.8	14.8	14.8	14.8	NA	NA	NA	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-18 to 2024-10-28	Gamma; Lognormal; Normal	Nonparametric	0.560	0.554	0.0262	1.23	0.345	0.616	0.234	-1.07
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	6.73	5.50	0.640	19.8	7.76	1.15	1.63	2.86
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	2.79	1.80	0.920	8.20	2.17	0.777	1.78	3.25
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	2015-11-20 to 2024-10-30		Nonparametric	2.30	1.65	0.810	5.10	1.93	0.837	1.63	2.72
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	11.0	11.3	3.60	27.5	7.10	0.643	1.25	1.78
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	8.14	8.30	6.10	10.8	1.24	0.153	0.317	0.564
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	34792	34500	30300	40200	2280	0.0655	0.357	-0.0934
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	207	212	15.3	279	49.8	0.240	-1.97	5.88
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.375	0.375	0.180	0.520	0.0614	0.164	-0.358	2.25
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	6.41	6.37	6.15	7.00	0.192	0.0299	1.08	1.24
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	60.4	28.4	25.1	214	53.1	0.879	1.62	1.71
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	2015-11-20 to 2024-10-30	Normal	Normal	638	618	371	946	98.9	0.155	0.301	2.82
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	4.26	4.26	0.430	8.10	5.42	1.27	NA	NA
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	79.8	66.1	43.0	142	29.9	0.374	0.539	-0.961
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.100	0.100	0.100	0.100	NA	NA	NA	NA
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.09	4.70	0.640	14.0	4.36	0.857	1.63	3.37
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.840	0.840	0.840	0.840	NA	NA	NA	NA
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	0.375	0.375	0.180	0.520	0.0614	0.164	-0.358	2.25
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	3.35	3.35	0.890	5.80	3.47	1.04	NA	NA
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	2015-11-20 to 2024-10-30	Lognormal	Lognormal	32.8	28.5	10.1	60.5	11.6	0.354	0.804	-0.0669
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	2015-11-20 to 2024-10-30		Nonparametric	0.320	0.320	0.320	0.320	NA	NA	NA	NA
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	2015-11-20 to 2024-10-30	Normal	Nonparametric	5.50	5.80	0.200	8.30	3.21	0.584	-1.44	2.29
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.163	0.207	-0.579	0.910	0.283	1.74	0.0582	1.28
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.554	0.533	-0.243	1.12	0.338	0.611	-0.110	-0.421
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	2015-11-20 to 2024-10-30		Nonparametric	2.50	2.50	0.110	4.90	3.39	1.35	NA	NA
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	2015-11-20 to 2024-10-30		Nonparametric	2.10	0.0600	0.0300	6.20	3.55	1.69	1.73	NA
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.770	0.848	0.0513	1.47	0.407	0.528	-0.0649	-1.01
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	14.2	3.40	0.740	79.3	26.9	1.90	2.60	6.95
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	61.8	4.20	1.00	880	218	3.53	3.99	16
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	7.08	4.30	2.80	18.8	6.04	0.853	1.39	0.133
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	2017-07-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	21.6	8.05	3.20	53.4	24.5	1.14	0.922	-1.88
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	2017-07-20 to 2024-10-30	Lognormal	Lognormal	12.4	10.5	8.10	25.3	4.38	0.353	2.08	4.94
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	91543	91400	74000	104000	6784	0.0741	-0.450	0.474
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	282	284	194	313	21.9	0.0776	-2.37	9.25
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.135	0.120	0.100	0.320	0.0421	0.312	3.51	14.9
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	7.47	7.35	7.13	9.60	0.445	0.0597	4.33	21.1
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	17.7	16.4	13.7	51.2	6.84	0.386	4.63	23.1
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	857	860	740	990	59.1	0.0689	0.123	-0.313
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	13.6	13.6	13.6	13.6	NA	NA	NA	NA
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	2017-07-20 to 2024-10-30		Nonparametric	2.29	2.29	0.770	3.80	2.14	0.938	NA	NA
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	292	302	50.1	423	68.4	0.234	-1.51	5.17
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	2017-07-20 to 2024-10-30	Lognormal	Nonparametric	108	6.45	1.70	1940	431	4.0	4.47	20
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.89	1.50	0.160	20.4	8.52	1.44	1.78	3.04

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.135	0.120	0.100	0.320	0.0421	0.312	3.51	14.9
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	4.59	6.70	0.270	6.80	3.74	0.815	-1.73	NA
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	2017-07-20 to 2024-10-30	Normal	Normal	26.4	27.9	5.60	33.8	5.53	0.210	-2.06	6.60
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	2017-07-20 to 2024-10-30		Nonparametric	20.2	15.1	1.10	49.5	20.9	1.04	1.26	1.76
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Nonparametric	Nonparametric	0.208	0.130	-0.194	1.05	0.319	1.53	1.29	1.67
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Normal	Nonparametric	0.589	0.509	-0.454	2.13	0.499	0.848	1.01	3.02
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	2017-07-20 to 2024-10-30		Nonparametric	0.180	0.180	0.180	0.180	NA	NA	NA	NA
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	2017-07-20 to 2024-10-30		Nonparametric	0.237	0.120	0.110	0.480	0.211	0.891	1.73	NA
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	2017-07-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.849	0.645	0.0664	2.31	0.588	0.693	1.05	0.500
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	2015-11-20 to 2024-10-30	Lognormal	Nonparametric	18.7	5.05	0.760	116	39.5	2.11	2.79	7.84
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	17.0	4.60	1.20	157	35.4	2.08	3.83	15.5
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	2.20	2.20	2.20	2.20	NA	NA	NA	NA
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	3.33	2.40	1.30	9.50	2.87	0.861	2.15	4.88
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	22.9	16.6	3.20	62.0	18.1	0.790	1.16	0.338
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	10.5	10.4	8.60	14.0	1.49	0.143	0.789	0.171
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	112347	108000	4170	194000	29774	0.265	-0.314	5.08
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	414	378	229	939	150	0.363	1.79	3.39
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0876	0.0845	0.0610	0.140	0.0207	0.236	0.882	0.699
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	7.03	7.01	6.70	7.31	0.141	0.0201	0.113	0.224
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Normal	6.84	6.90	4.40	8.40	0.837	0.122	-0.632	0.614
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	968	917	224	1530	234	0.242	-0.0860	2.23
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	7.46	7.50	5.20	10.1	1.50	0.201	0.438	1.59
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	5.90	7.10	2.50	7.40	2.10	0.357	-1.42	1.25
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1148	1090	880	1880	191	0.166	2.01	5.10
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	1.50	1.50	1.50	1.50	NA	NA	NA	NA
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	1.50	1.50	1.50	1.50	NA	NA	NA	NA
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Nonparametric	20.6	8.40	1.20	87.6	25.7	1.25	1.82	2.73
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	2015-11-20 to 2024-10-30		Nonparametric	1.71	1.21	0.630	3.80	1.45	0.849	1.54	2.18
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	2015-11-20 to 2024-10-30	Gamma; Lognormal; Normal	Nonparametric	0.0876	0.0845	0.0610	0.140	0.0207	0.236	0.882	0.699
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	3.10	3.10	2.80	3.40	0.424	0.137	NA	NA
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	2015-11-20 to 2024-10-30	Gamma; Lognormal	Gamma	28	26.8	18.7	50.1	7.00	0.250	1.32	1.94
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	2015-11-20 to 2024-10-30		Nonparametric	0.370	0.370	0.370	0.370	NA	NA	NA	NA
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	2015-11-20 to 2024-10-30		Nonparametric	4.07	5.20	1.40	5.60	2.32	0.570	-1.67	NA
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Normal	Nonparametric	0.443	0.337	-0.357	2.51	0.513	1.16	1.88	6.50
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	0.861	0.731	-0.351	4.72	0.762	0.884	3.81	19.4
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	2.31	2.31	0.330	4.30	2.81	1.21	NA	NA
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	2015-11-20 to 2024-10-30		Nonparametric	4.42	4.42	0.0330	8.80	6.20	1.40	NA	NA
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	2015-11-20 to 2024-10-30	Nonparametric	Nonparametric	1.34	1.22	0	7.23	1.12	0.838	4.28	22.8
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Nonparametric	30	16.4	0.680	103	41.4	1.38	2.08	4.50
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Lognormal	Lognormal	4.97	2.70	0.940	27.9	8.17	1.64	3.00	9.22
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	2021-08-09 to 2024-10-29	Nonparametric	Nonparametric	4.47	2.40	1.50	18.2	6.07	1.36	2.62	6.89
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	50.4	50.4	6.50	94.2	62.0	1.23	NA	NA
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	24.9	24.1	17.8	43.4	6.09	0.245	2.30	6.98

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	21807	21800	17700	26500	2167	0.0994	0.0653	1.24
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	29.8	29.6	28.0	32.4	1.12	0.0374	0.771	1.21
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	7.79	7.77	7.48	8.16	0.155	0.0199	0.582	1.93
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	3.76	3.15	1.70	8.00	1.82	0.485	1.10	0.703
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	349	351	318	368	12	0.0343	-1.20	2.77
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	0.760	0.760	0.760	0.760	NA	NA	NA	NA
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	2021-08-09 to 2024-10-29		Nonparametric	2.30	2.65	1.20	2.70	0.735	0.319	-1.98	3.91
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	80.8	78.7	43.2	195	37.4	0.463	2.31	7.10
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	10.0	5.00	0.960	56.7	16.7	1.67	2.93	8.88
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	4.02	4.02	0.440	7.60	5.06	1.26	NA	NA
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.471	0.465	0.400	0.540	0.0407	0.0864	0.364	-0.349
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	5.98	5.98	0.760	11.2	7.38	1.23	NA	NA
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal	Gamma	2.98	2.10	0.690	6.70	1.99	0.667	0.659	-1.11
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	2021-08-09 to 2024-10-29	Gamma; Lognormal; Normal	Normal	22.7	20.4	15.4	36.2	6.52	0.287	0.896	-0.190
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.165	0.171	-0.305	0.537	0.258	1.56	-0.400	-0.920
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.581	0.499	-0.100	1.67	0.450	0.774	0.879	1.39
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	2021-08-09 to 2024-10-29		Nonparametric	2.85	2.85	0.500	5.20	3.32	1.17	NA	NA
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	2021-08-09 to 2024-10-29		Nonparametric	0.120	0.120	0.120	0.120	NA	NA	NA	NA
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	2021-08-09 to 2024-10-29	Normal	Nonparametric	0.801	0.823	0	1.74	0.429	0.535	0.170	0.986
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	5.61	4.50	1.00	20.1	6.72	1.20	2.13	4.96
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	2.44	1.55	0.790	7.60	2.28	0.933	2.06	4.32
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	0.980	1.20	0.440	1.30	0.470	0.480	-1.64	NA
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	2020-10-15 to 2024-10-29		Nonparametric	4.57	5.10	3.10	5.50	1.29	0.282	-1.55	NA
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Gamma	15.9	15.5	11.5	25.2	3.12	0.197	1.72	4.91
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	30876	26700	23200	69400	10965	0.355	3.03	10.3
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Normal	Normal	128	129	74.5	149	19.2	0.150	-1.36	2.65
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.167	0.170	0.140	0.220	0.0233	0.140	0.613	0.0446
10_02_118	MW-11	App. III	pH (Field)	S.U.	15	0	0%	2021-01-29 to 2024-10-29	Nonparametric	Nonparametric	6.73	6.66	6.53	7.33	0.208	0.0308	1.96	4.19
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	2.22	2.20	1.80	3.00	0.288	0.130	0.992	2.22
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	551	416	296	2760	571	1.04	4.08	16.8
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	2.06	2.06	0.320	3.80	2.46	1.19	NA	NA
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	3.00	3.00	0.400	5.60	3.68	1.23	NA	NA
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	49.2	41.5	34.3	130	22.6	0.459	3.19	11.3
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	2020-10-15 to 2024-10-29		Nonparametric	4.70	4.60	0.780	8.80	4.24	0.903	0.0258	-5.70
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.836	0.800	0.450	1.30	0.364	0.435	0.278	-2.12
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	2020-10-15 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.167	0.170	0.140	0.220	0.0233	0.140	0.613	0.0446
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	0.190	0.190	0.190	0.190	NA	NA	NA	NA
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	10.7	10.1	8.30	19.5	2.53	0.236	2.86	9.67
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	2020-10-15 to 2024-10-29		Nonparametric	1.10	1.10	0.410	1.80	0.983	0.889	NA	NA
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Normal	Nonparametric	0.0878	0.0925	-0.149	0.399	0.172	1.96	0.437	-1.04
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Nonparametric	Nonparametric	0.485	0.500	-0.135	2.13	0.527	1.09	1.99	5.48
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	2020-10-15 to 2024-10-29		Nonparametric	0.0850	0.0850	0.0850	0.0850	NA	NA	NA	NA

(Table continues on next page)

Table 2: Summary Statistics, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Date Range	Distributions Fit	Recommended Distribution	Mean	Median	Minimum	Maximum	SD	CV	Skewness	Kurtosis
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	2020-10-15 to 2024-10-29	Gamma; Lognormal	Nonparametric	0.614	0.500	0.124	2.39	0.550	0.897	2.45	6.78
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	10.6	14.4	2.00	15.4	7.46	0.704	-1.70	NA
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	2.60	1.50	1.20	6.20	2.41	0.927	1.95	3.83
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	1.23	1.40	0.690	1.60	0.478	0.389	-1.40	NA
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	2021-04-13 to 2024-10-29		Nonparametric	7.90	5.05	2.90	18.6	7.21	0.913	1.86	3.59
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	54.4	50.9	41.7	109	17.0	0.313	2.70	8.14
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Nonparametric	Nonparametric	25847	18400	14000	94400	19927	0.771	3.28	11.7
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	126	81.4	52.3	530	122	0.971	2.90	9.37
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	2021-04-12 to 2024-10-29	Gamma; Lognormal; Normal	Normal	8.41	8.39	8.06	8.92	0.246	0.0292	0.750	0.212
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	92.7	34.5	14.6	523	136	1.47	2.78	8.57
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	549	396	312	1740	369	0.673	2.72	8.30
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	2021-04-13 to 2024-10-29		Nonparametric	3.11	3.11	0.620	5.60	3.52	1.13	NA	NA
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	8.56	7.00	3.20	16.5	4.94	0.577	0.655	-1.19
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	105	113	65.7	124	18.1	0.172	-1.25	0.774
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.110	0.110	0.110	0.110	NA	NA	NA	NA
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	2021-04-13 to 2024-10-29		Nonparametric	4.23	3.20	1.50	8.00	3.37	0.796	1.25	NA
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.210	0.210	0.210	0.210	NA	NA	NA	NA
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Normal	0.492	0.480	0.420	0.640	0.0523	0.106	1.54	4.07
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	1.80	1.80	1.80	1.80	NA	NA	NA	NA
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Lognormal	Lognormal	29.6	25.3	16.0	80.7	17.5	0.591	2.27	5.09
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal	Gamma	22.6	9.30	3.60	127	31.5	1.39	2.93	9.64
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Normal	Nonparametric	0.208	0.0934	-0.101	0.692	0.268	1.29	0.563	-1.04
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.600	0.502	0.0582	2.23	0.546	0.911	2.04	5.31
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.230	0.230	0.230	0.230	NA	NA	NA	NA
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	2021-04-13 to 2024-10-29		Nonparametric	0.0940	0.0940	0.0940	0.0940	NA	NA	NA	NA
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	2021-04-13 to 2024-10-29	Gamma; Lognormal; Normal	Nonparametric	0.828	0.714	0.125	2.27	0.572	0.691	1.05	1.44

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	0.850	0.158	0.260	0.230	0.918	0.493	0.238	0.353	0.268	>= 0.10	0.397	>= 0.10	1.114	Gamma; Lognormal; Normal	Nonparametric
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	0.898	0.211	0.164	0.622	0.940	0.551	0.176	0.507	0.162	>= 0.10	0.291	>= 0.10	0.733	Gamma; Lognormal; Normal	Nonparametric
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.836	0.121	0.283	0.140	0.710	0.008	0.314	0.065	0.324	0.05 <= p < 0.10	0.782	0.01 <= p < 0.05	0.686	Gamma; Lognormal; Normal	Nonparametric
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	0.906	0.137	0.144	0.597	0.973	0.913	0.110	0.918	0.115	>= 0.10	0.226	>= 0.10	0.495	Gamma; Lognormal; Normal	Nonparametric
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	0.896	0.119	0.235	0.048	0.951	0.609	0.153	0.555	0.173	>= 0.10	0.411	>= 0.10	0.528	Gamma; Lognormal; Normal	Nonparametric
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	0.536	0.000	0.313	0.000	0.782	0.002	0.257	0.009	0.288	< 0.01	1.628	< 0.01	0.461	Nonparametric	Nonparametric
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	0.966	0.303	0.096	0.499	0.929	0.018	0.116	0.218	0.104	>= 0.10	0.549	>= 0.10	0.546	Gamma; Lognormal; Normal	Normal
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.978	0.632	0.078	0.817	0.872	0.000	0.168	0.008	0.133	0.05 <= p < 0.10	1.066	< 0.01	0.617	Gamma; Normal	Normal
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	0.941	0.050	0.158	0.021	0.937	0.036	0.181	0.004	0.176	< 0.01	1.025	< 0.01	0.161	Nonparametric	Nonparametric
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	0.941	0.054	0.144	0.056	0.947	0.083	0.139	0.077	0.141	0.05 <= p < 0.10	0.644	0.05 <= p < 0.10	0.033	Gamma; Lognormal; Normal	Normal
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	0.883	0.001	0.228	0.000	0.940	0.041	0.183	0.002	0.198	< 0.01	1.251	< 0.01	0.213	Nonparametric	Nonparametric
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.963	0.246	0.097	0.491	0.966	0.299	0.078	0.805	0.070	>= 0.10	0.187	>= 0.10	0.563	Gamma; Lognormal; Normal	Normal
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.060		Nonparametric
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.568		Nonparametric
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.978	0.652	0.079	0.800	0.930	0.020	0.145	0.042	0.120	>= 0.10	0.359	>= 0.10	0.576	Gamma; Normal	Normal
01_03_104	MW-1	App. IV	Beryllium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.093		Nonparametric
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.880	0.088	0.158	0.555	0.965	0.856	0.172	0.423	0.140	>= 0.10	0.202	>= 0.10	0.924	Gamma; Lognormal; Normal	Nonparametric
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.129		Nonparametric
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	0.941	0.050	0.158	0.021	0.937	0.036	0.181	0.004	0.176	< 0.01	1.025	< 0.01	0.161	Nonparametric	Nonparametric
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.656		Nonparametric
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.983	0.816	0.108	0.323	0.964	0.251	0.140	0.058	0.122	>= 0.10	0.444	>= 0.10	0.189	Gamma; Lognormal; Normal	Normal
01_03_115	MW-1	App. IV	Mercury	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	0.864	0.244	0.225	0.551	0.848	0.188	0.286	0.197	0.278	>= 0.10	0.454	>= 0.10	1.658	Gamma; Lognormal; Normal	Nonparametric
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	0.966	0.331	0.078	0.838	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	0.959	0.199	0.104	0.415	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.948		Nonparametric
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.906	0.005	0.124	0.174	0.971	0.463	0.092	0.624	0.078	>= 0.10	0.221	>= 0.10	0.504	Gamma; Lognormal; Normal	Nonparametric
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	0.494	0.000	0.370	0.000	0.918	0.118	0.177	0.143	0.272	< 0.01	1.744	< 0.01	1.449	Lognormal	Nonparametric
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	0.647	0.000	0.292	0.000	0.953	0.394	0.104	0.796	0.180	>= 0.10	0.933	0.01 <= p < 0.05	1.090	Gamma; Lognormal	Gamma
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.918		Nonparametric
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	0.525	0.000	0.389	0.000	0.871	0.103	0.181	0.463	0.263	0.05 <= p < 0.10	1.069	< 0.01	0.882	Gamma; Lognormal	Nonparametric
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	0.352	0.000	0.406	0.000	0.896	0.058	0.167	0.239	0.314	< 0.01	2.232	< 0.01	1.502	Lognormal	Nonparametric
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	0.939	0.079	0.112	0.410	0.972	0.577	0.096	0.667	0.104	>= 0.10	0.350	>= 0.10	0.133	Gamma; Lognormal; Normal	Normal
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	0.734	0.000	0.207	0.001	0.479	0.000	0.284	0.000	0.259	< 0.01	3.899	< 0.01	0.317	Nonparametric	Nonparametric
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	0.856	0.000	0.179	0.009	0.749	0.000	0.213	0.001	0.204	< 0.01	2.177	< 0.01	0.219	Nonparametric	Nonparametric
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	0.898	0.006	0.168	0.027	0.931	0.048	0.193	0.005	0.179	0.01 <= p < 0.05	0.952	0.01 <= p < 0.05	0.237	Nonparametric	Nonparametric
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	0.690	0.000	0.252	0.000	0.721	0.000	0.242	0.000	0.246	< 0.01	2.533	< 0.01	0.048	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	0.816	0.000	0.233	0.000	0.901	0.005	0.169	0.018	0.187	< 0.01	1.720	< 0.01	0.549	Nonparametric	Nonparametric
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	0.467	0.000	0.363	0.000	0.642	0.000	0.310	0.000	0.285	< 0.01	4.486	< 0.01	0.597	Nonparametric	Nonparametric
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	0.965	0.835	0.124	0.848	0.695	0.000	0.266	0.013	0.202	>= 0.10	0.828	0.01 <= p < 0.05	0.763	Gamma; Normal	Nonparametric
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	0.830	0.033	0.203	0.287	0.893	0.184	0.155	0.707	0.176	>= 0.10	0.534	>= 0.10	0.408	Gamma; Lognormal; Normal	Nonparametric
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	0.919	0.017	0.163	0.026	0.880	0.002	0.171	0.015	0.156	0.01 <= p < 0.05	1.024	< 0.01	0.316	Nonparametric	Nonparametric
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.715		Nonparametric
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.163		Nonparametric
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	0.650	0.000	0.296	0.000	0.956	0.303	0.134	0.241	0.210	< 0.01	1.228	< 0.01	1.157	Lognormal	Nonparametric
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	0.567	0.000	0.454	0.000	0.845	0.142	0.293	0.111	0.387	0.01 <= p < 0.05	0.859	0.01 <= p < 0.05	1.316	Lognormal	Nonparametric
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	0.898	0.006	0.168	0.027	0.931	0.048	0.193	0.005	0.179	0.01 <= p < 0.05	0.952	0.01 <= p < 0.05	0.237	Nonparametric	Nonparametric
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.128		Nonparametric
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	0.702	0.000	0.285	0.000	0.904	0.007	0.179	0.009	0.212	< 0.01	1.823	< 0.01	0.472	Nonparametric	Nonparametric
02_03_115	MW-2	App. IV	Mercury	ug/L	33	33	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	0.677	0.000	0.248	0.000	0.911	0.021	0.125	0.314	0.172	0.01 <= p < 0.05	1.154	< 0.01	0.542	Lognormal	Lognormal
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	0.962	0.316	0.103	0.520	0.918	0.018	0.136	0.137	0.118	>= 0.10	0.502	>= 0.10	0.467	Gamma; Lognormal; Normal	Nonparametric
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	0.974	0.618	0.090	0.727	0.958	0.238	0.092	0.709	0.077	>= 0.10	0.212	>= 0.10	0.382	Gamma; Lognormal; Normal	Nonparametric
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.153		Nonparametric
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	0.379	0.000	0.514	0.000	0.673	0.000	0.326	0.003	0.473	< 0.01	2.389	< 0.01	1.611	Nonparametric	Nonparametric
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	0.939	0.070	0.127	0.212	0.901	0.007	0.187	0.006	0.169	0.01 <= p < 0.05	1.016	0.01 <= p < 0.05	0.340	Normal	Nonparametric
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.554	0.000	0.344	0.000	0.919	0.185	0.200	0.108	0.266	0.01 <= p < 0.05	1.211	< 0.01	1.274	Lognormal	Nonparametric
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.543	0.000	0.404	0.000	0.905	0.084	0.183	0.137	0.294	< 0.01	1.465	< 0.01	1.234	Lognormal	Nonparametric
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	0.755	0.002	0.254	0.021	0.879	0.069	0.206	0.137	0.229	0.05 <= p < 0.10	0.813	0.01 <= p < 0.05	0.648	Gamma; Lognormal	Nonparametric
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	0.807	0.034	0.293	0.041	0.911	0.360	0.201	0.446	0.206	>= 0.10	0.423	>= 0.10	0.836	Gamma; Lognormal	Nonparametric
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	0.944	0.180	0.142	0.214	0.840	0.001	0.202	0.010	0.186	0.01 <= p < 0.05	0.860	0.01 <= p < 0.05	0.377	Normal	Normal
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	0.947	0.086	0.131	0.121	0.914	0.008	0.143	0.061	0.145	0.05 <= p < 0.10	0.804	0.01 <= p < 0.05	0.120	Gamma; Lognormal; Normal	Normal
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	0.900	0.003	0.128	0.146	0.807	0.000	0.167	0.013	0.143	0.05 <= p < 0.10	1.093	< 0.01	0.147	Gamma; Normal	Normal
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	0.944	0.074	0.101	0.494	0.970	0.451	0.082	0.795	0.088	>= 0.10	0.271	>= 0.10	0.301	Gamma; Lognormal; Normal	Normal
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	0.745	0.000	0.233	0.000	0.711	0.000	0.242	0.000	0.236	< 0.01	2.052	< 0.01	0.037	Nonparametric	Nonparametric
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.785	0.000	0.236	0.000	0.896	0.003	0.182	0.004	0.208	< 0.01	1.871	< 0.01	0.918	Nonparametric	Nonparametric
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.790	0.000	0.206	0.000	0.527	0.000	0.324	0.000	0.294	< 0.01	4.959	< 0.01	0.525	Nonparametric	Nonparametric
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	0.921	0.324	0.181	0.402	0.815	0.015	0.216	0.159	0.220	>= 0.10	0.600	>= 0.10	0.655	Gamma; Lognormal; Normal	Nonparametric
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	0.955	0.778	0.161	0.840	0.891	0.279	0.232	0.305	0.200	>= 0.10	0.381	>= 0.10	0.600	Gamma; Lognormal; Normal	Nonparametric
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	0.971	0.459	0.106	0.382	0.926	0.018	0.137	0.086	0.128	>= 0.10	0.566	>= 0.10	0.180	Gamma; Lognormal; Normal	Normal
03_03_104	MW-3	App. IV	Beryllium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	0.466	0.000	0.420	0.000	0.919	0.123	0.198	0.061	0.322	< 0.01	1.659	< 0.01	1.355	Lognormal	Nonparametric
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.961		Nonparametric
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	0.944	0.074	0.101	0.494	0.970	0.451	0.082	0.795	0.088	>= 0.10	0.271	>= 0.10	0.301	Gamma; Lognormal; Normal	Normal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.052		Nonparametric
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	0.644	0.000	0.300	0.000	0.813	0.000	0.232	0.000	0.257	< 0.01	3.022	< 0.01	0.314	Nonparametric	Nonparametric
03_03_115	MW-3	App. IV	Mercury	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	0.497	0.000	0.267	0.000	0.811	0.000	0.192	0.002	0.224	< 0.01	2.403	< 0.01	0.335	Nonparametric	Nonparametric
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	0.960	0.236	0.129	0.148	0.938	0.048	0.127	0.165	0.124	>= 0.10	0.536	>= 0.10	0.457	Gamma; Lognormal; Normal	Nonparametric
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	0.981	0.777	0.074	0.896	0.877	0.001	0.154	0.036	0.123	>= 0.10	0.877	0.01 <= p < 0.05	0.496	Gamma; Normal	Nonparametric
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	0.985	0.893	0.084	0.770	0.940	0.057	0.147	0.055	0.126	>= 0.10	0.482	>= 0.10	0.340	Gamma; Lognormal; Normal	Nonparametric
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	0.774	0.049	0.316	0.102	0.880	0.309	0.232	0.502	0.239	>= 0.10	0.389	>= 0.10	2.409	Gamma; Lognormal; Normal	Nonparametric
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.941	0.140	0.130	0.310	0.958	0.352	0.115	0.501	0.124	>= 0.10	0.392	>= 0.10	0.371	Gamma; Lognormal; Normal	Normal
04_01_122	MW-4	App. I Metals	Silver	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.554		Nonparametric
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	0.720	0.001	0.290	0.004	0.898	0.124	0.169	0.398	0.208	>= 0.10	0.773	0.01 <= p < 0.05	0.526	Gamma; Lognormal	Nonparametric
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	0.341	0.000	0.493	0.000	0.504	0.000	0.370	0.000	0.439	< 0.01	3.538	< 0.01	0.890	Nonparametric	Nonparametric
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	0.849	0.000	0.190	0.002	0.709	0.000	0.255	0.000	0.237	< 0.01	2.827	< 0.01	0.313	Nonparametric	Nonparametric
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.914	0.007	0.168	0.010	0.821	0.000	0.177	0.005	0.172	< 0.01	1.692	< 0.01	0.317	Nonparametric	Nonparametric
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	0.967	0.333	0.099	0.474	0.986	0.924	0.088	0.669	0.095	>= 0.10	0.316	>= 0.10	0.179	Gamma; Lognormal; Normal	Normal
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	0.984	0.869	0.095	0.593	0.983	0.861	0.091	0.654	0.094	>= 0.10	0.251	>= 0.10	0.022	Gamma; Lognormal; Normal	Normal
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.853	0.000	0.201	0.001	0.731	0.000	0.270	0.000	0.248	< 0.01	3.128	< 0.01	0.307	Nonparametric	Nonparametric
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.825	0.000	0.230	0.000	0.704	0.000	0.291	0.000	0.273	< 0.01	3.755	< 0.01	0.276	Nonparametric	Nonparametric
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	0.812	0.100	0.307	0.127	0.834	0.150	0.296	0.158	0.322	>= 0.10	0.536	>= 0.10	0.359	Gamma; Lognormal; Normal	Nonparametric
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.874		Nonparametric
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.874	0.001	0.199	0.001	0.720	0.000	0.277	0.000	0.253	< 0.01	3.008	< 0.01	0.336	Nonparametric	Nonparametric
04_03_104	MW-4	App. IV	Beryllium	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	0.902	0.262	0.170	0.641	0.925	0.434	0.203	0.351	0.165	>= 0.10	0.283	>= 0.10	1.045	Gamma; Lognormal; Normal	Nonparametric
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	0.911	0.102	0.160	0.294	0.960	0.639	0.139	0.521	0.125	>= 0.10	0.344	>= 0.10	0.587	Gamma; Lognormal; Normal	Nonparametric
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	0.967	0.333	0.099	0.474	0.986	0.924	0.088	0.669	0.095	>= 0.10	0.316	>= 0.10	0.179	Gamma; Lognormal; Normal	Normal
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.600	0.000	0.212	0.000	0.860	0.000	0.172	0.007	0.191	< 0.01	1.842	< 0.01	0.295	Nonparametric	Nonparametric
04_03_115	MW-4	App. IV	Mercury	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	0.843	0.172	0.313	0.109	0.702	0.010	0.326	0.088	0.344	0.05 <= p < 0.10	0.746	0.01 <= p < 0.05	1.611	Gamma; Lognormal; Normal	Nonparametric
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.977	0.676	0.110	0.345	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.936	0.041	0.107	0.400	0.917	0.012	0.138	0.090	0.084	>= 0.10	0.259	>= 0.10	0.902	Gamma; Lognormal; Normal	Nonparametric
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.645		Nonparametric
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.919	0.013	0.132	0.125	0.984	0.869	0.072	0.913	0.064	>= 0.10	0.175	>= 0.10	0.600	Gamma; Lognormal; Normal	Nonparametric
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.912	0.292	0.205	0.274	0.893	0.185	0.232	0.133	0.204	>= 0.10	0.464	>= 0.10	0.907	Gamma; Lognormal; Normal	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	0.453	0.000	0.463	0.000	0.861	0.098	0.220	0.236	0.320	0.01 <= p < 0.05	1.271	< 0.01	1.584	Lognormal	Nonparametric
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.818		Nonparametric
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	0.823	0.013	0.240	0.039	0.985	0.995	0.130	0.789	0.163	>= 0.10	0.267	>= 0.10	0.585	Gamma; Lognormal	Nonparametric
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	0.391	0.000	0.384	0.000	0.580	0.000	0.284	0.000	0.325	< 0.01	3.695	< 0.01	0.305	Nonparametric	Nonparametric
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	0.937	0.033	0.158	0.018	0.958	0.161	0.133	0.085	0.144	0.01 <= p < 0.05	0.670	0.05 <= p < 0.10	0.194	Gamma; Lognormal	Gamma
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	0.948	0.078	0.135	0.077	0.951	0.098	0.122	0.162	0.128	>= 0.10	0.648	0.05 <= p < 0.10	0.077	Gamma; Lognormal; Normal	Normal
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	0.980	0.724	0.083	0.726	0.975	0.540	0.102	0.409	0.098	>= 0.10	0.364	>= 0.10	0.111	Gamma; Lognormal; Normal	Normal
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	0.799	0.000	0.226	0.000	0.789	0.000	0.239	0.000	0.231	< 0.01	2.579	< 0.01	0.071	Nonparametric	Nonparametric
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.905	0.003	0.119	0.193	0.951	0.098	0.124	0.147	0.114	>= 0.10	0.661	0.05 <= p < 0.10	0.163	Gamma; Lognormal; Normal	Normal
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.287	0.000	0.420	0.000	0.497	0.000	0.304	0.000	0.356	< 0.01	6.520	< 0.01	0.287	Nonparametric	Nonparametric
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.895		Nonparametric
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.391		Nonparametric
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.957	0.151	0.102	0.409	0.984	0.840	0.092	0.582	0.098	>= 0.10	0.260	>= 0.10	0.148	Gamma; Lognormal; Normal	Normal
05_03_104	MW-5	App. IV	Beryllium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	0.422	0.000	0.470	0.000	0.871	0.102	0.194	0.352	0.312	0.01 <= p < 0.05	1.367	< 0.01	1.708	Lognormal	Nonparametric
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.381		Nonparametric
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	0.980	0.724	0.083	0.726	0.975	0.540	0.102	0.409	0.098	>= 0.10	0.364	>= 0.10	0.111	Gamma; Lognormal; Normal	Normal
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	0.475	0.000	0.301	0.000	0.723	0.000	0.209	0.000	0.238	< 0.01	3.183	< 0.01	0.235	Nonparametric	Nonparametric
05_03_115	MW-5	App. IV	Mercury	ug/L	38	38	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.007		Nonparametric
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	0.964	0.290	0.118	0.231	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	0.951	0.111	0.093	0.606	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	0.951	0.114	0.127	0.152	0.897	0.003	0.144	0.058	0.108	>= 0.10	0.656	0.05 <= p < 0.10	0.877	Gamma; Lognormal; Normal	Nonparametric
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	0.820	0.117	0.307	0.127	0.940	0.663	0.229	0.528	0.224	>= 0.10	0.288	>= 0.10	1.400	Gamma; Lognormal; Normal	Nonparametric
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	0.777	0.005	0.313	0.004	0.915	0.278	0.268	0.027	0.299	0.01 <= p < 0.05	0.686	0.05 <= p < 0.10	0.660	Gamma; Lognormal	Nonparametric
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.783		Nonparametric
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	0.888	0.131	0.156	0.645	0.962	0.801	0.171	0.489	0.139	>= 0.10	0.259	>= 0.10	0.639	Gamma; Lognormal; Normal	Nonparametric
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	0.961	0.772	0.143	0.662	0.966	0.836	0.155	0.533	0.142	>= 0.10	0.281	>= 0.10	0.154	Gamma; Lognormal; Normal	Nonparametric
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	0.981	0.753	0.101	0.442	0.986	0.918	0.089	0.652	0.093	>= 0.10	0.249	>= 0.10	0.065	Gamma; Lognormal; Normal	Normal
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.836	0.000	0.163	0.014	0.499	0.000	0.316	0.000	0.271	< 0.01	3.973	< 0.01	0.481	Nonparametric	Nonparametric
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.953	0.132	0.094	0.578	0.878	0.001	0.112	0.302	0.101	>= 0.10	0.616	>= 0.10	0.181	Gamma; Lognormal; Normal	Normal
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	0.913	0.010	0.163	0.022	0.921	0.017	0.157	0.032	0.159	0.01 <= p < 0.05	0.887	0.01 <= p < 0.05	0.030	Nonparametric	Nonparametric
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	0.708	0.000	0.320	0.000	0.775	0.000	0.336	0.000	0.340	< 0.01	3.842	< 0.01	0.715	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.927	0.018	0.143	0.054	0.906	0.004	0.163	0.015	0.148	0.01 <= p < 0.05	0.997	0.01 <= p < 0.05	0.160	Normal	Normal
06_03_101	MW-6	App. IV	Antimony	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.076		Nonparametric
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	0.899	0.003	0.191	0.002	0.915	0.008	0.159	0.019	0.174	< 0.01	1.267	< 0.01	0.371	Nonparametric	Nonparametric
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	0.852	0.128	0.275	0.113	0.959	0.811	0.178	0.721	0.174	>= 0.10	0.211	>= 0.10	0.974	Gamma; Lognormal; Normal	Nonparametric
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.953	0.132	0.094	0.578	0.878	0.001	0.112	0.302	0.101	>= 0.10	0.616	>= 0.10	0.181	Gamma; Lognormal; Normal	Normal
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.325		Nonparametric
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	0.895	0.002	0.205	0.000	0.917	0.009	0.138	0.073	0.160	0.01 <= p < 0.05	1.256	< 0.01	0.355	Lognormal	Lognormal
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	0.860	0.230	0.288	0.190	0.657	0.003	0.421	0.004	0.417	0.01 <= p < 0.05	0.880	0.01 <= p < 0.05	1.582	Normal	Nonparametric
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.977	0.671	0.088	0.707	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	0.975	0.602	0.080	0.824	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.685		Nonparametric
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.899		Nonparametric
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	0.964	0.310	0.094	0.609	0.833	0.000	0.176	0.007	0.158	0.01 <= p < 0.05	0.931	0.01 <= p < 0.05	0.828	Normal	Nonparametric
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.576	0.000	0.354	0.004	0.892	0.245	0.248	0.158	0.260	>= 0.10	0.698	0.05 <= p < 0.10	1.658	Gamma; Lognormal	Nonparametric
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	0.299	0.000	0.503	0.000	0.842	0.010	0.155	0.388	0.353	< 0.01	2.766	< 0.01	1.724	Lognormal	Nonparametric
07_01_122	MW-7R	App. I Metals	Silver	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	0.687	0.000	0.340	0.000	0.801	0.007	0.221	0.082	0.266	0.01 <= p < 0.05	1.429	< 0.01	0.705	Lognormal	Nonparametric
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	0.716	0.009	0.338	0.031	0.841	0.134	0.222	0.467	0.258	>= 0.10	0.663	0.05 <= p < 0.10	1.261	Gamma; Lognormal	Nonparametric
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	0.771	0.002	0.256	0.009	0.881	0.049	0.218	0.054	0.236	0.01 <= p < 0.05	0.887	0.01 <= p < 0.05	0.294	Lognormal	Lognormal
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	0.979	0.826	0.098	0.695	0.966	0.470	0.113	0.477	0.103	>= 0.10	0.271	>= 0.10	0.076	Gamma; Lognormal; Normal	Normal
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	0.793	0.000	0.200	0.006	0.720	0.000	0.226	0.001	0.207	< 0.01	1.503	< 0.01	0.087	Nonparametric	Nonparametric
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	0.607	0.000	0.241	0.000	0.769	0.000	0.198	0.008	0.203	< 0.01	2.008	< 0.01	0.233	Nonparametric	Nonparametric
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	0.498	0.000	0.293	0.000	0.539	0.000	0.270	0.000	0.285	< 0.01	3.890	< 0.01	0.054	Nonparametric	Nonparametric
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	0.430	0.000	0.325	0.000	0.615	0.000	0.254	0.000	0.280	< 0.01	3.613	< 0.01	0.243	Nonparametric	Nonparametric
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.985	0.945	0.087	0.852	0.985	0.954	0.100	0.674	0.095	>= 0.10	0.229	>= 0.10	0.069	Gamma; Lognormal; Normal	Normal
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.129		Nonparametric
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	0.875	0.003	0.176	0.026	0.603	0.000	0.247	0.000	0.222	< 0.01	2.332	< 0.01	0.376	Nonparametric	Nonparametric
07_03_104	MW-7R	App. IV	Beryllium	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_106	MW-7R	App. IV	Cadmium	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	0.257	0.000	0.504	0.000	0.816	0.002	0.174	0.115	0.350	< 0.01	3.929	< 0.01	1.620	Lognormal	Nonparametric
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.765	0.041	0.297	0.155	0.986	0.964	0.149	0.972	0.236	>= 0.10	0.247	>= 0.10	1.895	Gamma; Lognormal; Normal	Nonparametric
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	0.607	0.000	0.241	0.000	0.769	0.000	0.198	0.008	0.203	< 0.01	2.008	< 0.01	0.233	Nonparametric	Nonparametric
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.858		Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.834	0.000	0.151	0.104	0.589	0.000	0.259	0.000	0.220	< 0.01	2.391	< 0.01	0.330	Normal	Normal
07_03_115	MW-7R	App. IV	Mercury	ug/L	28	28	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.620		Nonparametric
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.878	0.005	0.175	0.039	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.919	0.043	0.151	0.133	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.827		Nonparametric
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.902	0.017	0.167	0.059	0.907	0.023	0.148	0.153	0.099	>= 0.10	0.333	>= 0.10	0.860	Gamma; Lognormal; Normal	Nonparametric
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	0.495	0.000	0.460	0.000	0.923	0.451	0.212	0.363	0.337	0.01 <= p < 0.05	0.897	0.01 <= p < 0.05	1.532	Lognormal	Nonparametric
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	0.457	0.000	0.338	0.000	0.933	0.200	0.125	0.607	0.182	>= 0.10	1.113	< 0.01	1.328	Gamma; Lognormal	Nonparametric
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	0.729	0.008	0.278	0.104	0.917	0.447	0.160	0.846	0.207	>= 0.10	0.481	>= 0.10	0.680	Gamma; Lognormal; Normal	Nonparametric
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	0.853	0.024	0.235	0.035	0.939	0.410	0.153	0.504	0.144	>= 0.10	0.357	>= 0.10	0.872	Gamma; Lognormal	Nonparametric
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	0.931	0.130	0.138	0.336	0.950	0.316	0.111	0.687	0.117	>= 0.10	0.372	>= 0.10	0.138	Gamma; Lognormal; Normal	Normal
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	0.828	0.000	0.212	0.000	0.425	0.000	0.383	0.000	0.326	< 0.01	4.414	< 0.01	0.566	Nonparametric	Nonparametric
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	0.813	0.000	0.232	0.000	0.924	0.013	0.175	0.005	0.197	< 0.01	1.570	< 0.01	0.311	Nonparametric	Nonparametric
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.909	0.083	0.173	0.167	0.939	0.277	0.162	0.243	0.172	>= 0.10	0.535	>= 0.10	0.226	Gamma; Lognormal; Normal	Nonparametric
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.965	0.306	0.115	0.263	0.966	0.325	0.115	0.268	0.113	>= 0.10	0.534	>= 0.10	0.020	Gamma; Lognormal; Normal	Normal
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.968	0.353	0.096	0.514	0.934	0.026	0.124	0.152	0.113	>= 0.10	0.509	>= 0.10	0.130	Gamma; Lognormal; Normal	Normal
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.924	0.013	0.145	0.043	0.755	0.000	0.209	0.000	0.179	< 0.01	1.243	< 0.01	0.304	Nonparametric	Nonparametric
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	0.957	0.795	0.191	0.613	0.963	0.846	0.180	0.707	0.165	>= 0.10	0.265	>= 0.10	0.203	Gamma; Lognormal; Normal	Nonparametric
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	0.800	0.081	0.316	0.103	0.752	0.031	0.311	0.116	0.336	0.05 <= p < 0.10	0.676	0.05 <= p < 0.10	0.463	Gamma; Lognormal; Normal	Nonparametric
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	0.807	0.000	0.201	0.000	0.876	0.001	0.172	0.006	0.182	< 0.01	1.872	< 0.01	0.148	Nonparametric	Nonparametric
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	0.736	0.000	0.259	0.002	0.953	0.448	0.133	0.510	0.189	0.05 <= p < 0.10	0.494	>= 0.10	1.334	Gamma; Lognormal	Nonparametric
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.802		Nonparametric
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.909	0.083	0.173	0.167	0.939	0.277	0.162	0.243	0.172	>= 0.10	0.535	>= 0.10	0.226	Gamma; Lognormal; Normal	Nonparametric
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.137		Nonparametric
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	0.897	0.002	0.162	0.015	0.961	0.222	0.115	0.252	0.131	>= 0.10	0.627	>= 0.10	0.230	Gamma; Lognormal	Gamma
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.780		Nonparametric
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	0.863	0.000	0.129	0.134	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	0.620	0.000	0.245	0.000	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.815		Nonparametric
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		3.950		Nonparametric
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	0.566	0.000	0.267	0.000	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	0.708	0.012	0.411	0.006	0.906	0.446	0.290	0.179	0.278	>= 0.10	0.360	>= 0.10	1.812	Gamma; Lognormal	Nonparametric
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	0.511	0.000	0.391	0.000	0.860	0.076	0.244	0.092	0.328	< 0.01	1.130	< 0.01	0.990	Lognormal	Lognormal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
09_01_122	MW-10	App. I Metals	Silver	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	0.522	0.000	0.472	0.000	0.692	0.003	0.391	0.002	0.446	< 0.01	1.388	< 0.01	0.838	Nonparametric	Nonparametric
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.891		Nonparametric
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	0.767	0.002	0.221	0.062	0.876	0.051	0.169	0.339	0.179	>= 0.10	0.731	0.05 <= p < 0.10	0.211	Gamma; Lognormal; Normal	Normal
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	0.956	0.658	0.158	0.450	0.952	0.587	0.176	0.279	0.168	>= 0.10	0.375	>= 0.10	0.100	Gamma; Lognormal; Normal	Normal
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	0.961	0.740	0.141	0.637	0.969	0.860	0.133	0.716	0.135	>= 0.10	0.244	>= 0.10	0.037	Gamma; Lognormal; Normal	Normal
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	0.940	0.413	0.154	0.495	0.947	0.508	0.156	0.468	0.148	>= 0.10	0.375	>= 0.10	0.086	Gamma; Lognormal; Normal	Normal
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	0.911	0.139	0.216	0.058	0.913	0.152	0.212	0.067	0.213	0.05 <= p < 0.10	0.702	0.05 <= p < 0.10	0.020	Gamma; Lognormal; Normal	Normal
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	0.896	0.100	0.192	0.176	0.966	0.816	0.124	0.811	0.153	>= 0.10	0.320	>= 0.10	0.458	Gamma; Lognormal; Normal	Normal
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.910	0.158	0.222	0.060	0.897	0.102	0.229	0.045	0.224	0.05 <= p < 0.10	0.564	>= 0.10	0.035	Gamma; Lognormal; Normal	Normal
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.400		Nonparametric
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.748	0.001	0.273	0.006	0.909	0.150	0.190	0.185	0.209	>= 0.10	0.629	0.05 <= p < 0.10	0.384	Gamma; Lognormal	Gamma
09_03_104	MW-10	App. IV	Beryllium	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_106	MW-10	App. IV	Cadmium	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	0.546	0.000	0.367	0.000	0.938	0.536	0.167	0.598	0.259	0.05 <= p < 0.10	0.712	0.05 <= p < 0.10	1.195	Gamma; Lognormal	Gamma
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		2.015		Nonparametric
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	0.940	0.413	0.154	0.495	0.947	0.508	0.156	0.468	0.148	>= 0.10	0.375	>= 0.10	0.086	Gamma; Lognormal; Normal	Normal
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.902		Nonparametric
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	0.874	0.049	0.243	0.024	0.940	0.414	0.177	0.272	0.185	>= 0.10	0.506	>= 0.10	0.718	Gamma; Lognormal	Gamma
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	0.904	0.129	0.193	0.171	0.943	0.455	0.155	0.481	0.172	>= 0.10	0.388	>= 0.10	0.272	Gamma; Lognormal; Normal	Normal
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	0.949	0.552	0.150	0.535	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	0.941	0.429	0.165	0.378	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.656		Nonparametric
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	0.964	0.794	0.136	0.693	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.716	0.006	0.340	0.014	0.904	0.357	0.190	0.626	0.211	>= 0.10	0.453	>= 0.10	1.110	Gamma; Lognormal	Nonparametric
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	0.738	0.006	0.292	0.043	0.931	0.525	0.168	0.731	0.214	>= 0.10	0.489	>= 0.10	0.751	Gamma; Lognormal	Nonparametric
10_01_122	MW-11	App. I Metals	Silver	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.604		Nonparametric
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.312		Nonparametric
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	0.855	0.016	0.221	0.036	0.930	0.243	0.181	0.175	0.190	>= 0.10	0.504	>= 0.10	0.180	Gamma; Lognormal	Gamma
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	0.618	0.000	0.259	0.003	0.751	0.000	0.236	0.012	0.242	0.01 <= p < 0.05	1.671	< 0.01	0.267	Nonparametric	Nonparametric
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	0.877	0.028	0.182	0.142	0.807	0.002	0.225	0.022	0.188	>= 0.10	0.767	0.01 <= p < 0.05	0.171	Gamma; Normal	Normal
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.911	0.121	0.141	0.543	0.919	0.161	0.142	0.526	0.142	>= 0.10	0.490	>= 0.10	0.137	Gamma; Lognormal; Normal	Normal
10_02_118	MW-11	App. III	pH (Field)	S.U.	15	0	0%	0.777	0.002	0.287	0.002	0.788	0.003	0.285	0.002	0.287	< 0.01	1.252	< 0.01	0.030	Nonparametric	Nonparametric
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	0.920	0.145	0.160	0.293	0.947	0.408	0.135	0.558	0.140	>= 0.10	0.389	>= 0.10	0.125	Gamma; Lognormal; Normal	Normal
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	0.324	0.000	0.465	0.000	0.458	0.000	0.408	0.000	0.442	< 0.01	4.468	< 0.01	0.475	Nonparametric	Nonparametric

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.750		Nonparametric
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.866		Nonparametric
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	0.585	0.000	0.332	0.000	0.748	0.000	0.289	0.001	0.310	< 0.01	1.783	< 0.01	0.323	Nonparametric	Nonparametric
10_03_104	MW-11	App. IV	Beryllium	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.239		Nonparametric
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	0.933	0.618	0.200	0.735	0.935	0.629	0.195	0.770	0.224	>= 0.10	0.284	>= 0.10	0.456	Gamma; Lognormal; Normal	Nonparametric
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.911	0.121	0.141	0.543	0.919	0.161	0.142	0.526	0.142	>= 0.10	0.490	>= 0.10	0.137	Gamma; Lognormal; Normal	Normal
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	0.679	0.000	0.268	0.002	0.794	0.002	0.228	0.019	0.243	< 0.01	1.286	< 0.01	0.193	Nonparametric	Nonparametric
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.046		Nonparametric
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	0.923	0.164	0.209	0.047	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	0.817	0.003	0.212	0.041	NA	NA	NA	NA	NA		NA		NA	Nonparametric	Nonparametric
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	0.714	0.000	0.304	0.000	0.951	0.466	0.168	0.230	0.219	0.01 <= p < 0.05	0.631	>= 0.10	0.752	Gamma; Lognormal	Nonparametric
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.160		Nonparametric
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.764		Nonparametric
11_01_122	MW-11D	App. I Metals	Silver	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.452		Nonparametric
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.793		Nonparametric
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	0.665	0.000	0.313	0.000	0.783	0.002	0.249	0.013	0.269	< 0.01	1.331	< 0.01	0.247	Nonparametric	Nonparametric
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	0.548	0.000	0.303	0.001	0.778	0.002	0.226	0.038	0.242	0.01 <= p < 0.05	1.524	< 0.01	0.485	Nonparametric	Nonparametric
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	0.619	0.000	0.273	0.004	0.861	0.025	0.177	0.236	0.190	>= 0.10	1.051	< 0.01	0.655	Gamma; Lognormal	Gamma
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.870	0.034	0.182	0.200	0.911	0.138	0.163	0.347	0.169	>= 0.10	0.575	>= 0.10	0.101	Gamma; Lognormal; Normal	Normal
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	0.940	0.381	0.162	0.357	0.945	0.454	0.157	0.411	0.158	>= 0.10	0.344	>= 0.10	0.029	Gamma; Lognormal; Normal	Normal
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	0.623	0.000	0.283	0.003	0.890	0.082	0.179	0.257	0.210	>= 0.10	0.823	0.01 <= p < 0.05	1.154	Gamma; Lognormal	Gamma
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	0.653	0.000	0.261	0.007	0.835	0.011	0.191	0.150	0.204	>= 0.10	1.117	< 0.01	0.479	Gamma; Lognormal	Gamma
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		1.556		Nonparametric
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	0.886	0.183	0.243	0.129	0.934	0.517	0.161	0.717	0.179	>= 0.10	0.346	>= 0.10	0.597	Gamma; Lognormal; Normal	Normal
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	0.848	0.016	0.203	0.098	0.799	0.004	0.209	0.077	0.213	0.05 <= p < 0.10	1.073	< 0.01	0.195	Gamma; Lognormal; Normal	Normal
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		0.838		Nonparametric
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.870	0.034	0.182	0.200	0.911	0.138	0.163	0.347	0.169	>= 0.10	0.575	>= 0.10	0.101	Gamma; Lognormal; Normal	Normal
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	0.698	0.000	0.287	0.002	0.858	0.023	0.203	0.096	0.237	0.01 <= p < 0.05	1.112	< 0.01	0.447	Lognormal	Lognormal

(Table continues on next page)

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 3: Goodness-of-Fit Tests, Non-Detects Excluded *(continued)*

								Normal				Lognormal				Gamma						
								S-W		Lilliefors		S-W		Lilliefors		K-S		A-D				
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Stat.	p-Value	Log-SD (NDs excl.)	ProUCL Distributions Fit	Recommended Distribution
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	0.618	0.000	0.273	0.004	0.921	0.198	0.148	0.506	0.191	>= 0.10	0.712	0.05 <= p < 0.10	1.068	Gamma; Lognormal	Gamma
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	0.901	0.098	0.199	0.114	NA	NA	NA	NA	NA		NA		NA	Normal	Nonparametric
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	0.806	0.004	0.191	0.147	0.957	0.649	0.125	0.762	0.089	>= 0.10	0.202	>= 0.10	0.976	Gamma; Lognormal; Normal	Nonparametric
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA		NA		Nonparametric
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	0.918	0.182	0.116	0.851	0.960	0.696	0.119	0.818	0.095	>= 0.10	0.192	>= 0.10	0.804	Gamma; Lognormal; Normal	Nonparametric

Note: p-values above 0.05 suggest a fit to the tested distribution; a distribution passes its GOF test when at least one of the two p-values is above 0.05.

Table 4: Autocorrelation Tests, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	0.391	0.226	
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	0.103	0.707	
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.204	0.528	
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	0.105	0.664	
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	-0.348	0.160	
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	-0.056	0.810	
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	0.592	0.000	***
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.384	0.014	*
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	0.386	0.014	*
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	0.172	0.281	
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	0.722	0.000	***
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.651	0.000	***
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	-0.500	0.157	
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	-0.305	0.403	
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.498	0.001	**
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	-0.667	0.068	
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.192	0.454	
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	-0.448	0.220	
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	0.386	0.014	*
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	-0.290	0.427	
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.327	0.036	*
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	0.489	0.148	
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	0.240	0.134	
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	-0.104	0.515	
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	-0.500	0.157	
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.049	0.757	
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	0.266	0.221	
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	-0.119	0.559	
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	-0.500	0.157	
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	-0.251	0.359	
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	-0.028	0.901	
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	0.087	0.612	
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	0.060	0.720	
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	0.269	0.106	
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	0.042	0.805	
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	-0.106	0.549	
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	0.836	0.000	***
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	0.004	0.981	
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	0.474	0.056	
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	-0.137	0.617	
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	-0.051	0.759	
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	-0.500	0.157	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	-0.596	0.103	
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	-0.066	0.716	
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	-0.277	0.391	
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	0.042	0.805	
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	-0.236	0.505	
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	0.271	0.104	
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	0.062	0.731	
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	-0.225	0.182	
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	0.220	0.192	
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	-0.500	0.157	
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	-0.014	0.959	
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	-0.081	0.631	
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.171	0.465	
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.362	0.104	
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	NA	NA	
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	0.510	0.040	*
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	0.376	0.204	
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	0.512	0.007	**
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	0.536	0.001	***
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	0.533	0.001	***
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	0.692	0.000	***
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	-0.190	0.261	
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.864	0.000	***
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.176	0.272	
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	0.584	0.027	*
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	-0.238	0.441	
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	0.596	0.000	***
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	NA	NA	
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	-0.075	0.731	
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	-0.308	0.384	
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	0.692	0.000	***
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	-0.079	0.829	
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	0.041	0.800	
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	-0.007	0.968	
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	-0.314	0.053	
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	0.322	0.047	*
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	NA	NA	
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	0.074	0.646	
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	-0.065	0.848	
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.192	0.300	
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	0.009	0.979	
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	-0.130	0.600	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	-0.099	0.689	
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	0.710	0.000	***
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.768	0.000	***
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	0.391	0.013	*
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	0.301	0.063	
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.690	0.000	***
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.607	0.000	***
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	0.172	0.612	
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	-0.500	0.157	
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.704	0.000	***
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	NA	NA	
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	0.173	0.543	
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	-0.090	0.687	
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	0.391	0.013	*
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	NA	NA	
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.147	0.354	
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	-0.150	0.657	
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.387	0.017	*
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.217	0.181	
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	-0.500	0.157	
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.361	0.026	*
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.418	0.127	
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	-0.087	0.760	
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	-0.057	0.875	
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	0.413	0.096	
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	-0.047	0.815	
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	0.565	0.000	***
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	0.507	0.001	**
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	0.068	0.664	
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	-0.550	0.001	***
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.280	0.073	
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.005	0.976	
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	-0.500	0.157	
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	-0.500	0.157	
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.226	0.148	
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	-0.090	0.742	
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	-0.500	0.157	
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	0.068	0.664	
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	NA	NA	
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	0.053	0.735	
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	-0.025	0.946	
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	-0.358	0.025	*

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	-0.131	0.412	
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	NA	NA	
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	NA	NA	
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	-0.036	0.823	
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	0.072	0.832	
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	0.255	0.336	
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	-0.213	0.547	
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	-0.091	0.729	
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	-0.490	0.048	*
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	0.289	0.067	
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.181	0.251	
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.181	0.259	
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	0.419	0.011	*
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	0.580	0.000	***
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	-0.009	0.954	
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	-0.500	0.157	
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	0.734	0.000	***
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	NA	NA	
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	0.172	0.578	
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	NA	NA	
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.181	0.259	
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	-0.500	0.157	
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	0.707	0.000	***
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	NA	NA	
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	0.127	0.707	
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.051	0.755	
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	-0.283	0.080	
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	-0.500	0.157	
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	-0.164	0.653	
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	-0.118	0.466	
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.070	0.813	
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	-0.043	0.849	
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	0.676	0.006	**
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	0.225	0.486	
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	0.322	0.170	
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	0.435	0.015	*
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	-0.030	0.866	
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	0.046	0.802	
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	0.103	0.565	
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	0.208	0.247	
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.087	0.626	
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	NA	NA	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	-0.500	0.157	
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	0.371	0.038	*
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	-0.038	0.856	
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.190	0.575	
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	0.046	0.802	
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	-0.159	0.663	
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.220	0.220	
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	-0.089	0.800	
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.088	0.633	
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.019	0.917	
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	NA	NA	
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	-0.153	0.675	
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.048	0.795	
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	-0.203	0.492	
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	-0.123	0.562	
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	NA	NA	
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	-0.251	0.417	
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	-0.166	0.490	
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	0.347	0.082	
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	0.191	0.222	
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	0.599	0.000	***
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.580	0.008	**
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.263	0.100	
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.589	0.000	***
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.095	0.544	
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	0.016	0.957	
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	-0.132	0.697	
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	0.246	0.115	
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	NA	NA	
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	NA	NA	
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	-0.099	0.640	
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	0.131	0.711	
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.580	0.008	**
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	-0.500	0.157	
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	0.442	0.005	**
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	NA	NA	
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	-0.120	0.743	
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	0.048	0.766	
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	-0.092	0.564	
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	-0.500	0.157	
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	-0.500	0.157	
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	-0.053	0.743	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	-0.269	0.426	
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	-0.217	0.428	
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	-0.275	0.373	
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	-0.500	0.157	
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	-0.052	0.830	
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	0.195	0.419	
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	-0.525	0.029	*
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	0.176	0.464	
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	-0.284	0.226	
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	0.766	0.001	**
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.291	0.227	
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	NA	NA	
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	-0.031	0.930	
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.258	0.284	
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	-0.254	0.355	
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	-0.500	0.157	
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	0.176	0.464	
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	-0.500	0.157	
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	0.646	0.007	**
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	0.720	0.003	**
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	0.131	0.587	
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	-0.113	0.640	
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	-0.500	0.157	
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	NA	NA	
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	-0.027	0.911	
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.061	0.842	
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	-0.070	0.814	
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	-0.109	0.764	
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	-0.263	0.471	
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	-0.093	0.684	
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	-0.106	0.635	
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	0.047	0.834	
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.376	0.099	
10_02_118	MW-11	App. III	pH (Field)	S.U.	15	0	0%	-0.190	0.418	
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	-0.263	0.237	
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	-0.016	0.944	
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	-0.500	0.157	
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	-0.500	0.157	
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	-0.027	0.904	
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	0.288	0.415	
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	-0.541	0.110	
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.376	0.099	

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 4: Autocorrelation Tests, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Autocorrelation	Box-Ljung p-value	Sig.
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	NA	NA	
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	-0.017	0.938	
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	-0.500	0.157	
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	-0.080	0.721	
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	-0.326	0.143	
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	NA	NA	
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	-0.154	0.488	
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	-0.130	0.723	
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	-0.014	0.968	
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	-0.063	0.863	
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	-0.518	0.143	
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	0.001	0.996	
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	-0.022	0.925	
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	0.227	0.332	
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.013	0.954	
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	0.580	0.013	*
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	0.375	0.120	
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	0.237	0.311	
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	-0.500	0.157	
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	0.041	0.886	
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	0.243	0.299	
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	NA	NA	
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	-0.047	0.898	
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	NA	NA	
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.013	0.954	
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	NA	NA	
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	0.497	0.034	*
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	0.187	0.424	
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	0.279	0.233	
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	0.075	0.749	
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	NA	NA	
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	NA	NA	
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	0.173	0.460	

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 5: Outlier Counts by Date

Date	Count
2015-11-19	4
2015-11-20	2
2016-01-05	2
2016-02-17	2
2016-04-05	3
2016-04-07	3
2016-05-25	2
2016-05-27	1
2016-07-12	2
2017-01-23	1
2017-01-24	2
2017-04-04	1
2017-04-05	2
2017-07-18	2
2017-07-19	1
2017-07-20	6
2017-10-17	3
2017-10-18	1
2018-01-24	2
2018-01-25	1
2018-04-23	1
2018-07-17	1
2018-10-25	1
2019-01-25	2
2019-07-10	4
2020-01-16	2
2020-01-17	2
2020-04-15	1
2020-04-17	1
2020-07-07	2
2020-10-14	1
2021-01-27	1
2021-01-28	1
2021-01-29	1
2021-04-13	3
2021-04-15	1
2021-08-09	1
2021-08-10	1
2021-08-12	8
2021-11-17	1
2021-11-18	1
2022-04-20	1
2022-04-21	1

(Table continues on next page)

Table 5: Outlier Counts by Date *(continued)*

Date	Count
2022-07-12	2
2022-07-13	3
2022-07-14	1
2022-10-19	2
2023-04-24	2
2023-04-27	8
2023-10-04	9
2024-01-24	5
2024-01-26	2
2024-10-31	1

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	15	2023-10-04	1	44.6
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	3	2020-10-14	1	0.670
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	36	2019-07-10	1	2.48
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	18	2021-11-18	1	294
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	21	2022-10-19	1	115
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	10	2023-10-04	1	37.2
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	17	2024-10-31	1	1590
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	33	2024-01-26	1	34300
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	33	2024-01-26	11	489
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	33	2022-07-12	26	552
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	31	2017-07-18	NA	0.400
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	29	2024-01-24	NA	9.29
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	29	2016-07-12	NA	8.50
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	33	2020-01-17	1	11700
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	33	2015-11-19	NA	257
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	33	2021-01-28	1	428
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2022-10-19	1	130
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2018-10-25	1	84.0
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2018-01-25	NA	56.8
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2017-04-05	NA	48.8
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	27	2023-10-04	1	46.2
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	6	2023-10-04	1	34.8
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	31	2017-07-18	NA	0.400
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	33	2021-08-10	5	512
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	33	2016-07-12	NA	356
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	33	2016-05-27	NA	350
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	28	2020-01-17	1	41.0
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	10	2016-02-17	NA	10.3

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	15	2022-04-20	1	137
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	17	2019-01-25	1	86.0
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	36	2022-07-12	25	565
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	32	2020-07-07	NA	6.18
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	36	2015-11-19	NA	256
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	36	2017-01-24	NA	303
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	36	2018-01-24	NA	1060
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	18	2019-01-25	1	179
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2017-10-18	NA	236
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2016-04-07	NA	217
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2018-07-17	NA	36.7
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2017-04-05	NA	129
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	35	2015-11-19	NA	128
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	36	2020-01-16	1	35.7
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	13	2020-04-17	1	47.2
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	13	2017-10-17	NA	165
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	37	2016-04-07	NA	17900
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	37	2016-05-25	NA	18600
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	37	2015-11-19	NA	395
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	37	2016-05-25	NA	486
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	37	2016-04-07	NA	513
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	37	2021-08-12	5	98.0
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	9	2022-07-13	1	120
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	13	2016-04-05	NA	36.1
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	22	2017-01-23	NA	39.3
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	35	2020-04-15	NA	8.54
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	35	2020-07-07	NA	5.50
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	35	2020-01-16	NA	5.62
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	38	2017-10-17	NA	1160
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	10	2022-07-13	1	260
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	37	2021-08-09	1	28.6
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	37	2016-04-05	NA	15.3
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	37	2021-04-15	4	80.3
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2016-04-05	NA	214
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2016-01-05	NA	194
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-04-04	NA	179
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-01-24	NA	145
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2015-11-20	NA	137
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2018-01-24	NA	126
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2018-04-23	NA	96.1
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-10-17	NA	90.9
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2016-02-17	NA	87.7
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	37	2017-07-19	NA	86.9

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	3	2016-01-05	NA	6.20
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	8	2019-07-10	1	79.3
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	16	2019-07-10	1	880
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	28	2022-07-14	7	194
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	27	2017-07-20	NA	0.320
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	28	2017-07-20	NA	9.60
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	28	2017-07-20	NA	51.2
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	28	2017-07-20	NA	50.1
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	20	2019-07-10	1	1940
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	27	2017-07-20	NA	0.320
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	28	2017-07-20	NA	5.60
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	8	2023-04-27	1	116
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	19	2023-04-27	1	157
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	7	2023-04-27	1	9.50
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	38	2021-01-27	10	4170
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	38	2015-11-20	NA	939
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	38	2023-04-27	10	1880
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	36	2023-04-27	1	2.51
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	36	2023-04-27	1	4.72
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	36	2023-04-27	1	7.23
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	5	2022-04-21	1	103
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	10	2023-10-04	1	27.9
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	7	2023-10-04	1	18.2
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	14	2023-10-04	1	43.4
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	4	2023-04-27	1	1.20
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	14	2023-10-04	1	195
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	10	2023-10-04	1	56.7
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	7	2021-11-17	1	20.1
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	17	2024-01-24	1	69400
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	17	2024-01-24	1	74.5
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	17	2021-01-29	1	2760
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	17	2024-01-24	1	130
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	17	2024-01-24	1	19.5
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	17	2021-04-13	1	2.13
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	17	2021-04-13	1	2.39
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	4	2022-07-13	1	6.20
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	15	2021-08-12	2	109
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	15	2021-08-12	1	94400
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	15	2021-08-12	12	530
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	15	2023-04-24	1	0.640
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	14	2021-08-12	12	523
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	15	2021-08-12	1	1740
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	15	2023-04-24	1	0.640

(Table continues on next page)

Table 6: Outliers Identified at the 1% Significance Level, Non-Detects Excluded *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	No. Detects	Date	Dilution	Value
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	15	2021-08-12	2	80.7
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	15	2021-08-12	1	127
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	15	2021-04-13	1	2.23

Table 7: Seasonality Tests

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
01_01_111	MW-1	App. I Metals	Copper	ug/L	84%	10	10	9	9	38	0.932	0.623	0.979	1	2	1	2	6	0.543	0.474	0.549
01_01_117	MW-1	App. I Metals	Nickel	ug/L	74%	10	10	9	9	38	0.640	0.555	0.695	2	2	4	2	10	0.295	0.168	0.354
01_01_122	MW-1	App. I Metals	Silver	ug/L	84%	10	10	9	9	38	0.941	0.950	0.868	1	1	2	2	6	0.468	0.260	0.088
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	63%	10	10	9	9	38	0.942	0.833	0.933	3	4	4	3	14	0.504	0.478	0.517
01_01_128	MW-1	App. I Metals	Zinc	ug/L	66%	10	10	9	9	38	0.312	0.579	0.394	4	3	3	3	13	0.514	0.853	0.712
01_02_105	MW-1	App. III	Boron	ug/L	59%	9	10	9	9	37	0.872	0.636	0.968	4	5	2	4	15	0.388	0.274	0.181
01_02_107	MW-1	App. III	Calcium	ug/L	0%	10	10	9	9	38	0.453	0.510	0.504	10	10	9	9	38	0.453	0.510	0.504
01_02_108	MW-1	App. III	Chloride	mg/L	0%	10	10	9	9	38	0.514	0.487	0.693	10	10	9	9	38	0.514	0.487	0.693
01_02_112	MW-1	App. III	Fluoride	mg/L	3%	10	10	9	9	38	0.494	0.562	0.495	10	9	9	9	37	0.487	0.495	0.499
01_02_118	MW-1	App. III	pH (Field)	S.U.	0%	10	9	9	8	36	0.346	0.443	0.442	10	9	9	8	36	0.346	0.443	0.442
01_02_123	MW-1	App. III	Sulfate	mg/L	0%	10	10	9	9	38	0.937	0.908	0.928	10	10	9	9	38	0.937	0.908	0.928
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	0%	10	10	9	9	38	0.419	0.393	0.470	10	10	9	9	38	0.419	0.393	0.470
01_03_101	MW-1	App. IV	Antimony	ug/L	95%	10	10	9	9	38	0.613	0.229	0.306	0	0	2	0	2	NA	NA	NA
01_03_102	MW-1	App. IV	Arsenic	ug/L	92%	10	10	9	9	38	0.919	0.929	0.885	0	1	0	2	3	0.221	0.527	0.446
01_03_103	MW-1	App. IV	Barium	ug/L	0%	10	10	9	9	38	0.328	0.418	0.427	10	10	9	9	38	0.328	0.418	0.427
01_03_104	MW-1	App. IV	Beryllium	ug/L	100%	10	10	9	9	38	0.947	0.950	0.938	NA	NA	NA	NA	NA	NA	NA	NA
01_03_106	MW-1	App. IV	Cadmium	ug/L	92%	10	10	9	9	38	0.922	0.817	0.647	1	0	1	1	3	0.368	NA	NA
01_03_109	MW-1	App. IV	Chromium	ug/L	68%	10	10	9	9	38	0.713	0.427	0.586	3	3	3	3	12	0.369	0.254	0.369
01_03_110	MW-1	App. IV	Cobalt	ug/L	92%	10	10	9	9	38	0.976	0.975	0.938	0	1	2	0	3	0.221	0.278	0.133
01_03_112	MW-1	App. IV	Fluoride	mg/L	3%	10	10	9	9	38	0.494	0.562	0.495	10	9	9	9	37	0.487	0.495	0.499
01_03_113	MW-1	App. IV	Lead	ug/L	92%	10	10	9	9	38	0.634	0.299	0.308	1	1	1	0	3	0.368	NA	NA
01_03_114	MW-1	App. IV	Lithium	ug/L	0%	10	10	9	9	38	0.306	0.471	0.482	10	10	9	9	38	0.306	0.471	0.482
01_03_115	MW-1	App. IV	Mercury	ug/L	100%	10	10	9	9	38	0.884	0.896	0.892	NA	NA	NA	NA	NA	NA	NA	NA
01_03_116	MW-1	App. IV	Molybdenum	ug/L	87%	10	10	9	9	38	0.623	0.566	0.318	1	1	2	1	5	0.362	0.771	0.576
01_03_119	MW-1	App. IV	Radium-226	pCi/L	0%	10	9	9	8	36	0.953	0.951	NA	10	9	9	8	36	0.953	0.951	NA
01_03_120	MW-1	App. IV	Radium-228	pCi/L	0%	10	9	9	8	36	0.951	0.852	NA	10	9	9	8	36	0.951	0.852	NA
01_03_121	MW-1	App. IV	Selenium	ug/L	95%	10	10	9	9	38	0.853	0.775	0.552	0	1	1	0	2	0.317	NA	NA
01_03_124	MW-1	App. IV	Thallium	ug/L	100%	10	10	9	9	38	0.574	0.891	0.668	NA	NA	NA	NA	NA	NA	NA	NA
01_03_126	MW-1	App. IV	Total Radium	pCi/L	0%	10	9	9	8	36	0.983	0.868	0.973	10	9	9	8	36	0.983	0.868	0.973
02_01_111	MW-2	App. I Metals	Copper	ug/L	45%	10	9	6	8	33	0.233	0.290	0.123	4	5	3	6	18	0.066	0.546	0.144
02_01_117	MW-2	App. I Metals	Nickel	ug/L	36%	10	9	6	8	33	0.509	0.083	0.354	7	4	4	6	21	0.543	0.146	0.401
02_01_122	MW-2	App. I Metals	Silver	ug/L	94%	10	9	6	8	33	0.741	0.767	0.802	0	1	1	0	2	0.317	NA	NA
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	70%	10	9	6	8	33	0.604	0.378	0.461	2	2	3	3	10	0.233	0.545	0.367
02_01_128	MW-2	App. I Metals	Zinc	ug/L	48%	10	9	6	8	33	0.475	0.273	0.240	5	4	3	5	17	0.406	0.415	0.240
02_02_105	MW-2	App. III	Boron	ug/L	3%	9	9	6	8	32	0.589	0.671	0.525	8	9	6	8	31	0.653	0.927	0.876
02_02_107	MW-2	App. III	Calcium	ug/L	0%	10	9	6	8	33	0.250	0.776	0.767	10	9	6	8	33	0.250	0.776	0.767
02_02_108	MW-2	App. III	Chloride	mg/L	0%	10	9	6	8	33	0.520	0.577	0.584	10	9	6	8	33	0.520	0.577	0.584
02_02_112	MW-2	App. III	Fluoride	mg/L	6%	10	9	6	8	33	0.952	0.690	0.738	9	9	6	7	31	0.945	0.635	0.704
02_02_118	MW-2	App. III	pH (Field)	S.U.	0%	10	7	6	6	29	0.540	0.685	0.687	10	7	6	6	29	0.540	0.685	0.687

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
02_02_123	MW-2	App. III	Sulfate	mg/L	0%	10	9	6	8	33	0.878	0.899	0.953	10	9	6	8	33	0.878	0.899	0.953
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	0%	10	9	6	8	33	0.257	0.699	0.530	10	9	6	8	33	0.257	0.699	0.530
02_03_101	MW-2	App. IV	Antimony	ug/L	61%	10	9	6	8	33	0.743	0.582	0.562	4	4	3	2	13	0.931	0.912	0.707
02_03_102	MW-2	App. IV	Arsenic	ug/L	70%	10	9	6	8	33	0.969	0.848	0.932	2	3	3	2	10	0.600	0.635	0.685
02_03_103	MW-2	App. IV	Barium	ug/L	0%	10	9	6	8	33	0.775	0.593	0.629	10	9	6	8	33	0.775	0.593	0.629
02_03_104	MW-2	App. IV	Beryllium	ug/L	94%	10	9	6	8	33	0.682	0.523	0.537	0	1	0	1	2	0.317	NA	NA
02_03_106	MW-2	App. IV	Cadmium	ug/L	91%	10	9	6	8	33	0.672	0.587	0.589	1	1	0	1	3	0.368	NA	NA
02_03_109	MW-2	App. IV	Chromium	ug/L	18%	10	9	6	8	33	0.524	0.165	0.365	7	8	5	7	27	0.259	0.175	0.196
02_03_110	MW-2	App. IV	Cobalt	ug/L	82%	10	9	6	8	33	0.112	0.239	0.071	0	2	1	3	6	0.117	0.633	0.284
02_03_112	MW-2	App. IV	Fluoride	mg/L	6%	10	9	6	8	33	0.952	0.690	0.738	9	9	6	7	31	0.945	0.635	0.704
02_03_113	MW-2	App. IV	Lead	ug/L	88%	10	9	6	8	33	0.413	0.120	0.122	0	2	1	1	4	0.259	0.105	0.355
02_03_114	MW-2	App. IV	Lithium	ug/L	0%	10	9	6	8	33	0.416	0.091	0.140	10	9	6	8	33	0.416	0.091	0.140
02_03_115	MW-2	App. IV	Mercury	ug/L	100%	10	9	6	8	33	0.814	0.830	0.826	NA	NA	NA	NA	NA	NA	NA	NA
02_03_116	MW-2	App. IV	Molybdenum	ug/L	15%	10	9	6	8	33	0.813	0.414	0.695	8	8	5	7	28	0.248	0.156	0.138
02_03_119	MW-2	App. IV	Radium-226	pCi/L	0%	10	8	6	8	32	0.057	0.032 *	0.035 *	10	8	6	8	32	0.057	0.032 *	0.035 *
02_03_120	MW-2	App. IV	Radium-228	pCi/L	0%	10	8	6	8	32	0.467	0.598	0.675	10	8	6	8	32	0.467	0.598	0.675
02_03_121	MW-2	App. IV	Selenium	ug/L	94%	10	9	6	8	33	0.586	0.867	0.754	0	2	0	0	2	NA	NA	NA
02_03_124	MW-2	App. IV	Thallium	ug/L	70%	10	9	6	8	33	0.585	0.858	0.798	2	3	2	3	10	0.186	0.283	0.225
02_03_126	MW-2	App. IV	Total Radium	pCi/L	0%	10	8	6	8	32	0.153	0.132	0.169	10	8	6	8	32	0.153	0.132	0.169
03_01_111	MW-3	App. I Metals	Copper	ug/L	58%	10	10	8	8	36	0.687	0.621	0.717	4	4	3	4	15	0.251	0.576	0.343
03_01_117	MW-3	App. I Metals	Nickel	ug/L	53%	10	10	8	8	36	0.568	0.787	0.930	3	6	5	3	17	0.974	0.506	0.985
03_01_122	MW-3	App. I Metals	Silver	ug/L	97%	10	10	8	8	36	0.915	0.968	0.899	0	0	1	0	1	NA	NA	NA
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	64%	10	10	8	8	36	0.986	0.829	0.910	3	4	3	3	13	0.887	0.763	0.923
03_01_128	MW-3	App. I Metals	Zinc	ug/L	78%	10	10	8	8	36	0.946	0.851	0.980	2	4	1	1	8	0.900	0.785	0.868
03_02_105	MW-3	App. III	Boron	ug/L	29%	9	10	8	8	35	0.843	0.790	0.922	5	7	6	7	25	0.837	0.895	0.856
03_02_107	MW-3	App. III	Calcium	ug/L	0%	10	10	8	8	36	0.676	0.657	0.628	10	10	8	8	36	0.676	0.657	0.628
03_02_108	MW-3	App. III	Chloride	mg/L	0%	10	10	8	8	36	0.531	0.359	0.357	10	10	8	8	36	0.531	0.359	0.357
03_02_112	MW-3	App. III	Fluoride	mg/L	3%	10	10	8	8	36	0.380	0.267	0.240	9	10	8	8	35	0.581	0.548	0.597
03_02_118	MW-3	App. III	pH (Field)	S.U.	0%	10	8	8	6	32	0.554	0.216	0.215	10	8	8	6	32	0.554	0.216	0.215
03_02_123	MW-3	App. III	Sulfate	mg/L	0%	10	10	8	8	36	0.901	0.924	0.934	10	10	8	8	36	0.901	0.924	0.934
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	0%	10	10	8	8	36	0.873	0.567	0.512	10	10	8	8	36	0.873	0.567	0.512
03_03_101	MW-3	App. IV	Antimony	ug/L	69%	10	10	8	8	36	0.931	0.879	0.978	3	4	2	2	11	0.626	0.775	0.696
03_03_102	MW-3	App. IV	Arsenic	ug/L	81%	10	10	8	8	36	0.743	0.709	0.812	0	2	2	3	7	0.738	0.822	0.743
03_03_103	MW-3	App. IV	Barium	ug/L	0%	10	10	8	8	36	0.752	0.705	0.677	10	10	8	8	36	0.752	0.705	0.677
03_03_104	MW-3	App. IV	Beryllium	ug/L	100%	10	10	8	8	36	0.914	0.925	0.914	NA	NA	NA	NA	NA	NA	NA	NA
03_03_106	MW-3	App. IV	Cadmium	ug/L	97%	10	10	8	8	36	0.925	0.932	0.788	0	0	0	1	1	NA	NA	NA
03_03_109	MW-3	App. IV	Chromium	ug/L	50%	10	10	8	8	36	0.573	0.727	0.964	4	6	3	5	18	0.771	0.495	0.860
03_03_110	MW-3	App. IV	Cobalt	ug/L	89%	10	10	8	8	36	0.923	0.879	0.845	1	2	1	0	4	0.259	0.082	0.483
03_03_112	MW-3	App. IV	Fluoride	mg/L	3%	10	10	8	8	36	0.380	0.267	0.240	9	10	8	8	35	0.581	0.548	0.597

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
03_03_113	MW-3	App. IV	Lead	ug/L	92%	10	10	8	8	36	0.462	0.277	0.226	1	1	1	0	3	0.368	NA	NA
03_03_114	MW-3	App. IV	Lithium	ug/L	3%	10	10	8	8	36	0.341	0.153	0.314	9	10	8	8	35	0.394	0.224	0.137
03_03_115	MW-3	App. IV	Mercury	ug/L	100%	10	10	8	8	36	0.787	0.801	0.802	NA	NA	NA	NA	NA	NA	NA	NA
03_03_116	MW-3	App. IV	Molybdenum	ug/L	0%	10	10	8	8	36	0.632	0.250	0.228	10	10	8	8	36	0.632	0.250	0.228
03_03_119	MW-3	App. IV	Radium-226	pCi/L	0%	10	9	8	8	35	0.506	0.523	0.789	10	9	8	8	35	0.506	0.523	0.789
03_03_120	MW-3	App. IV	Radium-228	pCi/L	0%	10	9	8	8	35	0.849	0.773	0.780	10	9	8	8	35	0.849	0.773	0.780
03_03_121	MW-3	App. IV	Selenium	ug/L	97%	10	10	8	8	36	0.855	0.804	0.598	0	1	0	0	1	NA	NA	NA
03_03_124	MW-3	App. IV	Thallium	ug/L	100%	10	10	8	8	36	0.403	0.932	0.629	NA	NA	NA	NA	NA	NA	NA	NA
03_03_126	MW-3	App. IV	Total Radium	pCi/L	0%	10	9	8	8	35	0.638	0.605	0.570	10	9	8	8	35	0.638	0.605	0.570
04_01_111	MW-4	App. I Metals	Copper	ug/L	86%	10	9	9	9	37	0.969	0.495	0.758	1	2	1	1	5	0.284	0.364	0.401
04_01_117	MW-4	App. I Metals	Nickel	ug/L	30%	10	9	9	9	37	0.748	0.833	0.683	6	7	7	6	26	0.958	0.993	0.967
04_01_122	MW-4	App. I Metals	Silver	ug/L	100%	10	9	9	9	37	0.943	0.950	0.818	NA	NA	NA	NA	NA	NA	NA	NA
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	89%	10	9	9	9	37	0.854	0.571	0.987	1	2	1	0	4	0.861	0.881	0.987
04_01_128	MW-4	App. I Metals	Zinc	ug/L	65%	10	9	9	9	37	0.930	0.741	0.854	4	4	2	3	13	0.663	0.841	0.821
04_02_105	MW-4	App. III	Boron	ug/L	64%	9	9	9	9	36	0.973	0.501	0.881	4	4	2	3	13	1.000	0.397	0.509
04_02_107	MW-4	App. III	Calcium	ug/L	0%	10	9	9	9	37	0.841	0.372	0.244	10	9	9	9	37	0.841	0.372	0.244
04_02_108	MW-4	App. III	Chloride	mg/L	0%	10	9	9	9	37	0.880	0.748	0.555	10	9	9	9	37	0.880	0.748	0.555
04_02_112	MW-4	App. III	Fluoride	mg/L	0%	10	9	9	9	37	0.790	0.584	0.527	10	9	9	9	37	0.790	0.584	0.527
04_02_118	MW-4	App. III	pH (Field)	S.U.	0%	10	8	9	8	35	0.212	0.204	0.200	10	8	9	8	35	0.212	0.204	0.200
04_02_123	MW-4	App. III	Sulfate	mg/L	0%	10	9	9	9	37	0.774	0.899	0.716	10	9	9	9	37	0.774	0.899	0.716
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	0%	10	9	9	9	37	0.149	0.300	0.351	10	9	9	9	37	0.149	0.300	0.351
04_03_101	MW-4	App. IV	Antimony	ug/L	86%	10	9	9	9	37	0.814	0.878	0.545	2	2	1	0	5	0.949	0.821	0.863
04_03_102	MW-4	App. IV	Arsenic	ug/L	95%	10	9	9	9	37	0.993	0.817	0.520	0	2	0	0	2	NA	NA	NA
04_03_103	MW-4	App. IV	Barium	ug/L	0%	10	9	9	9	37	0.380	0.417	0.290	10	9	9	9	37	0.380	0.417	0.290
04_03_104	MW-4	App. IV	Beryllium	ug/L	100%	10	9	9	9	37	0.945	0.948	0.917	NA	NA	NA	NA	NA	NA	NA	NA
04_03_106	MW-4	App. IV	Cadmium	ug/L	97%	10	9	9	9	37	0.929	0.877	0.658	0	0	1	0	1	NA	NA	NA
04_03_109	MW-4	App. IV	Chromium	ug/L	76%	10	9	9	9	37	0.752	0.402	0.893	3	4	2	0	9	0.638	0.401	0.692
04_03_110	MW-4	App. IV	Cobalt	ug/L	54%	10	9	9	9	37	0.697	0.896	0.762	3	4	6	4	17	0.915	0.960	0.906
04_03_112	MW-4	App. IV	Fluoride	mg/L	0%	10	9	9	9	37	0.790	0.584	0.527	10	9	9	9	37	0.790	0.584	0.527
04_03_113	MW-4	App. IV	Lead	ug/L	97%	10	9	9	9	37	0.615	0.315	0.289	0	0	1	0	1	NA	NA	NA
04_03_114	MW-4	App. IV	Lithium	ug/L	0%	10	9	9	9	37	0.944	0.386	0.429	10	9	9	9	37	0.944	0.386	0.429
04_03_115	MW-4	App. IV	Mercury	ug/L	100%	10	9	9	9	37	0.898	0.910	0.904	NA	NA	NA	NA	NA	NA	NA	NA
04_03_116	MW-4	App. IV	Molybdenum	ug/L	86%	10	9	9	9	37	0.586	0.643	0.324	2	1	1	1	5	0.532	0.588	0.237
04_03_119	MW-4	App. IV	Radium-226	pCi/L	0%	10	8	9	8	35	0.667	0.771	NA	10	8	9	8	35	0.667	0.771	NA
04_03_120	MW-4	App. IV	Radium-228	pCi/L	0%	10	8	9	8	35	0.798	0.935	0.847	10	8	9	8	35	0.798	0.935	0.847
04_03_121	MW-4	App. IV	Selenium	ug/L	95%	10	9	9	9	37	0.844	0.606	0.448	0	1	0	1	2	0.317	NA	NA
04_03_124	MW-4	App. IV	Thallium	ug/L	100%	10	9	9	9	37	0.611	0.869	0.709	NA	NA	NA	NA	NA	NA	NA	NA
04_03_126	MW-4	App. IV	Total Radium	pCi/L	0%	10	8	9	8	35	0.919	0.983	0.882	10	8	9	8	35	0.919	0.983	0.882
05_01_111	MW-5	App. I Metals	Copper	ug/L	74%	10	10	9	9	38	0.806	0.749	0.824	2	3	3	2	10	0.647	0.759	0.856

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
05_01_117	MW-5	App. I Metals	Nickel	ug/L	76%	10	10	9	9	38	0.624	0.406	0.629	3	1	2	3	9	0.362	0.396	0.488
05_01_122	MW-5	App. I Metals	Silver	ug/L	100%	10	10	9	9	38	0.942	0.956	0.877	NA	NA	NA	NA	NA	NA	NA	NA
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	92%	10	10	9	9	38	0.988	0.980	0.976	0	1	1	1	3	0.368	NA	NA
05_01_128	MW-5	App. I Metals	Zinc	ug/L	66%	10	10	9	9	38	0.036 *	0.135	0.051	2	5	5	1	13	0.550	0.746	0.660
05_02_105	MW-5	App. III	Boron	ug/L	41%	9	10	9	9	37	0.276	0.221	0.336	8	6	4	4	22	0.726	0.718	0.751
05_02_107	MW-5	App. III	Calcium	ug/L	0%	10	10	9	9	38	0.742	0.522	0.639	10	10	9	9	38	0.742	0.522	0.639
05_02_108	MW-5	App. III	Chloride	mg/L	0%	10	10	9	9	38	0.864	0.930	0.924	10	10	9	9	38	0.864	0.930	0.924
05_02_112	MW-5	App. III	Fluoride	mg/L	0%	10	10	9	9	38	0.599	0.612	0.586	10	10	9	9	38	0.599	0.612	0.586
05_02_118	MW-5	App. III	pH (Field)	S.U.	0%	10	9	9	7	35	0.636	0.285	0.295	10	9	9	7	35	0.636	0.285	0.295
05_02_123	MW-5	App. III	Sulfate	mg/L	0%	10	10	9	9	38	0.210	0.300	0.300	10	10	9	9	38	0.210	0.300	0.300
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	0%	10	10	9	9	38	0.615	0.340	0.352	10	10	9	9	38	0.615	0.340	0.352
05_03_101	MW-5	App. IV	Antimony	ug/L	95%	10	10	9	9	38	0.614	0.395	0.343	1	1	0	0	2	0.317	NA	NA
05_03_102	MW-5	App. IV	Arsenic	ug/L	95%	10	10	9	9	38	0.998	0.900	0.577	0	2	0	0	2	NA	NA	NA
05_03_103	MW-5	App. IV	Barium	ug/L	0%	10	10	9	9	38	0.294	0.246	0.235	10	10	9	9	38	0.294	0.246	0.235
05_03_104	MW-5	App. IV	Beryllium	ug/L	100%	10	10	9	9	38	0.947	0.950	0.938	NA	NA	NA	NA	NA	NA	NA	NA
05_03_106	MW-5	App. IV	Cadmium	ug/L	100%	10	10	9	9	38	0.865	0.922	0.775	NA	NA	NA	NA	NA	NA	NA	NA
05_03_109	MW-5	App. IV	Chromium	ug/L	74%	10	10	9	9	38	0.895	0.396	0.585	3	1	3	3	10	0.905	0.614	0.863
05_03_110	MW-5	App. IV	Cobalt	ug/L	95%	10	10	9	9	38	0.980	0.990	0.913	0	1	1	0	2	0.317	NA	NA
05_03_112	MW-5	App. IV	Fluoride	mg/L	0%	10	10	9	9	38	0.599	0.612	0.586	10	10	9	9	38	0.599	0.612	0.586
05_03_113	MW-5	App. IV	Lead	ug/L	97%	10	10	9	9	38	0.622	0.259	0.300	0	1	0	0	1	NA	NA	NA
05_03_114	MW-5	App. IV	Lithium	ug/L	3%	10	10	9	9	38	0.223	0.138	0.059	9	10	9	9	37	0.364	0.207	0.135
05_03_115	MW-5	App. IV	Mercury	ug/L	100%	10	10	9	9	38	0.884	0.896	0.892	NA	NA	NA	NA	NA	NA	NA	NA
05_03_116	MW-5	App. IV	Molybdenum	ug/L	92%	10	10	9	9	38	0.931	0.667	0.979	0	2	1	0	3	1.000	0.877	0.838
05_03_119	MW-5	App. IV	Radium-226	pCi/L	0%	10	9	9	8	36	0.053	0.050 *	NA	10	9	9	8	36	0.053	0.050 *	NA
05_03_120	MW-5	App. IV	Radium-228	pCi/L	0%	10	9	9	8	36	0.218	0.437	NA	10	9	9	8	36	0.218	0.437	NA
05_03_121	MW-5	App. IV	Selenium	ug/L	97%	10	10	9	9	38	0.806	0.784	0.561	0	1	0	0	1	NA	NA	NA
05_03_124	MW-5	App. IV	Thallium	ug/L	97%	10	10	9	9	38	0.698	0.644	0.729	1	0	0	0	1	NA	NA	NA
05_03_126	MW-5	App. IV	Total Radium	pCi/L	0%	10	9	9	8	36	0.124	0.083	0.305	10	9	9	8	36	0.124	0.083	0.305
06_01_111	MW-6	App. I Metals	Copper	ug/L	86%	10	10	8	9	37	0.628	0.516	0.772	0	1	2	2	5	0.741	0.801	0.917
06_01_117	MW-6	App. I Metals	Nickel	ug/L	70%	10	10	8	9	37	0.801	0.353	0.657	2	3	3	3	11	0.083	0.236	0.166
06_01_122	MW-6	App. I Metals	Silver	ug/L	100%	10	10	8	9	37	0.996	0.994	0.878	NA	NA	NA	NA	NA	NA	NA	NA
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	89%	10	10	8	9	37	0.972	0.902	0.942	0	1	1	2	4	0.407	0.805	0.713
06_01_128	MW-6	App. I Metals	Zinc	ug/L	70%	10	10	8	9	37	0.889	0.685	0.858	3	3	2	3	11	0.892	0.712	0.909
06_02_105	MW-6	App. III	Boron	ug/L	64%	9	10	8	9	36	0.903	0.959	0.943	4	3	3	3	13	0.907	0.910	0.933
06_02_107	MW-6	App. III	Calcium	ug/L	0%	10	10	8	9	37	0.774	0.659	0.678	10	10	8	9	37	0.774	0.659	0.678
06_02_108	MW-6	App. III	Chloride	mg/L	0%	10	10	8	9	37	0.662	0.572	0.374	10	10	8	9	37	0.662	0.572	0.374
06_02_112	MW-6	App. III	Fluoride	mg/L	3%	10	10	8	9	37	0.648	0.771	0.536	10	9	8	9	36	0.472	0.711	0.807
06_02_118	MW-6	App. III	pH (Field)	S.U.	0%	10	8	8	8	34	0.452	0.319	0.325	10	8	8	8	34	0.452	0.319	0.325
06_02_123	MW-6	App. III	Sulfate	mg/L	0%	10	10	8	9	37	0.594	0.552	0.699	10	10	8	9	37	0.594	0.552	0.699

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	0%	10	10	8	9	37	0.068	0.021 *	0.021 *	10	10	8	9	37	0.068	0.021 *	0.021 *
06_03_101	MW-6	App. IV	Antimony	ug/L	100%	10	10	8	9	37	0.890	0.534	0.422	NA	NA	NA	NA	NA	NA	NA	NA
06_03_102	MW-6	App. IV	Arsenic	ug/L	95%	10	10	8	9	37	1.000	0.998	0.824	0	2	0	0	2	NA	NA	NA
06_03_103	MW-6	App. IV	Barium	ug/L	0%	10	10	8	9	37	0.617	0.652	0.674	10	10	8	9	37	0.617	0.652	0.674
06_03_104	MW-6	App. IV	Beryllium	ug/L	97%	10	10	8	9	37	0.982	0.993	0.993	0	1	0	0	1	NA	NA	NA
06_03_106	MW-6	App. IV	Cadmium	ug/L	100%	10	10	8	9	37	0.930	0.942	0.771	NA	NA	NA	NA	NA	NA	NA	NA
06_03_109	MW-6	App. IV	Chromium	ug/L	81%	10	10	8	9	37	0.993	0.679	0.953	2	2	2	1	7	0.543	0.667	0.635
06_03_110	MW-6	App. IV	Cobalt	ug/L	97%	10	10	8	9	37	0.988	0.993	0.996	0	1	0	0	1	NA	NA	NA
06_03_112	MW-6	App. IV	Fluoride	mg/L	3%	10	10	8	9	37	0.648	0.771	0.536	10	9	8	9	36	0.472	0.711	0.807
06_03_113	MW-6	App. IV	Lead	ug/L	95%	10	10	8	9	37	0.520	0.223	0.298	0	1	0	1	2	0.317	NA	NA
06_03_114	MW-6	App. IV	Lithium	ug/L	0%	10	10	8	9	37	0.282	0.504	0.308	10	10	8	9	37	0.282	0.504	0.308
06_03_115	MW-6	App. IV	Mercury	ug/L	97%	10	10	8	9	37	0.908	0.516	0.592	1	0	0	0	1	NA	NA	NA
06_03_116	MW-6	App. IV	Molybdenum	ug/L	86%	10	10	8	9	37	0.527	0.415	0.221	2	1	1	1	5	0.284	0.056	0.020 *
06_03_119	MW-6	App. IV	Radium-226	pCi/L	0%	10	9	8	8	35	0.533	0.960	NA	10	9	8	8	35	0.533	0.960	NA
06_03_120	MW-6	App. IV	Radium-228	pCi/L	0%	10	9	8	8	35	0.176	0.205	NA	10	9	8	8	35	0.176	0.205	NA
06_03_121	MW-6	App. IV	Selenium	ug/L	95%	10	10	8	9	37	0.933	0.757	0.530	0	1	1	0	2	0.317	NA	NA
06_03_124	MW-6	App. IV	Thallium	ug/L	92%	10	10	8	9	37	0.806	0.911	0.896	1	1	0	1	3	0.368	NA	NA
06_03_126	MW-6	App. IV	Total Radium	pCi/L	0%	10	9	8	8	35	0.264	0.223	0.218	10	9	8	8	35	0.264	0.223	0.218
07_01_111	MW-7R	App. I Metals	Copper	ug/L	71%	7	6	8	7	28	0.276	0.565	0.461	2	1	2	3	8	0.868	0.570	0.836
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	43%	7	6	8	7	28	0.197	0.494	0.367	3	3	6	4	16	0.856	0.694	0.742
07_01_122	MW-7R	App. I Metals	Silver	ug/L	100%	7	6	8	7	28	0.961	0.961	0.708	NA	NA	NA	NA	NA	NA	NA	NA
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	54%	7	6	8	7	28	0.079	0.180	0.086	2	2	6	3	13	0.530	0.657	0.607
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	79%	7	6	8	7	28	0.143	0.447	0.204	1	2	1	2	6	0.232	0.504	0.452
07_02_105	MW-7R	App. III	Boron	ug/L	44%	6	6	8	7	27	0.244	0.171	0.220	5	3	4	3	15	0.300	0.280	0.299
07_02_107	MW-7R	App. III	Calcium	ug/L	0%	7	6	8	7	28	0.361	0.572	0.604	7	6	8	7	28	0.361	0.572	0.604
07_02_108	MW-7R	App. III	Chloride	mg/L	0%	7	6	8	7	28	0.258	0.270	0.265	7	6	8	7	28	0.258	0.270	0.265
07_02_112	MW-7R	App. III	Fluoride	mg/L	4%	7	6	8	7	28	0.170	0.262	0.201	7	5	8	7	27	0.219	0.341	0.275
07_02_118	MW-7R	App. III	pH (Field)	S.U.	0%	7	6	8	7	28	0.112	0.304	0.281	7	6	8	7	28	0.112	0.304	0.281
07_02_123	MW-7R	App. III	Sulfate	mg/L	0%	7	6	8	7	28	0.664	0.556	0.609	7	6	8	7	28	0.664	0.556	0.609
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	0%	7	6	8	7	28	0.257	0.195	0.221	7	6	8	7	28	0.257	0.195	0.221
07_03_101	MW-7R	App. IV	Antimony	ug/L	96%	7	6	8	7	28	0.357	0.216	0.179	0	0	1	0	1	NA	NA	NA
07_03_102	MW-7R	App. IV	Arsenic	ug/L	93%	7	6	8	7	28	0.990	0.848	0.598	0	1	1	0	2	0.317	NA	NA
07_03_103	MW-7R	App. IV	Barium	ug/L	0%	7	6	8	7	28	0.347	0.515	0.507	7	6	8	7	28	0.347	0.515	0.507
07_03_104	MW-7R	App. IV	Beryllium	ug/L	100%	7	6	8	7	28	0.862	0.910	0.829	NA	NA	NA	NA	NA	NA	NA	NA
07_03_106	MW-7R	App. IV	Cadmium	ug/L	100%	7	6	8	7	28	0.989	0.872	0.569	NA	NA	NA	NA	NA	NA	NA	NA
07_03_109	MW-7R	App. IV	Chromium	ug/L	29%	7	6	8	7	28	0.741	0.497	0.570	4	5	7	4	20	0.907	0.643	0.790
07_03_110	MW-7R	App. IV	Cobalt	ug/L	82%	7	6	8	7	28	0.600	0.546	0.574	0	2	2	1	5	0.223	0.616	0.314
07_03_112	MW-7R	App. IV	Fluoride	mg/L	4%	7	6	8	7	28	0.170	0.262	0.201	7	5	8	7	27	0.219	0.341	0.275
07_03_113	MW-7R	App. IV	Lead	ug/L	89%	7	6	8	7	28	0.100	0.077	0.049 *	0	1	1	1	3	0.368	NA	NA

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
07_03_114	MW-7R	App. IV	Lithium	ug/L	0%	7	6	8	7	28	0.314	0.172	0.208	7	6	8	7	28	0.314	0.172	0.208
07_03_115	MW-7R	App. IV	Mercury	ug/L	100%	7	6	8	7	28	0.788	0.800	0.791	NA	NA	NA	NA	NA	NA	NA	NA
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	86%	7	6	8	7	28	0.302	0.281	0.207	0	1	2	1	4	0.259	0.585	0.235
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	0%	7	5	8	6	26	0.737	0.612	NA	7	5	8	6	26	0.737	0.612	NA
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	0%	7	5	8	6	26	0.276	0.132	NA	7	5	8	6	26	0.276	0.132	NA
07_03_121	MW-7R	App. IV	Selenium	ug/L	96%	7	6	8	7	28	0.981	0.595	0.379	0	1	0	0	1	NA	NA	NA
07_03_124	MW-7R	App. IV	Thallium	ug/L	89%	7	6	8	7	28	0.820	0.617	0.755	1	0	1	1	3	0.368	NA	NA
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	0%	7	5	8	6	26	0.162	0.096	0.269	7	5	8	6	26	0.162	0.096	0.269
08_01_111	MW-8	App. I Metals	Copper	ug/L	79%	10	10	9	9	38	0.943	0.415	0.650	2	3	1	2	8	0.335	0.706	0.430
08_01_117	MW-8	App. I Metals	Nickel	ug/L	50%	10	10	9	9	38	0.791	0.502	0.734	6	4	5	4	19	0.413	0.293	0.394
08_01_122	MW-8	App. I Metals	Silver	ug/L	97%	10	10	9	9	38	0.901	0.825	0.883	0	1	0	0	1	NA	NA	NA
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	82%	10	10	9	9	38	0.900	0.699	0.868	2	1	3	1	7	0.258	0.026 *	0.129
08_01_128	MW-8	App. I Metals	Zinc	ug/L	63%	10	10	9	9	38	0.408	0.642	0.626	5	4	3	2	14	0.746	0.586	0.660
08_02_105	MW-8	App. III	Boron	ug/L	41%	9	10	9	9	37	0.812	0.722	0.796	7	6	4	5	22	0.974	0.940	0.941
08_02_107	MW-8	App. III	Calcium	ug/L	0%	10	10	9	9	38	0.657	0.839	0.663	10	10	9	9	38	0.657	0.839	0.663
08_02_108	MW-8	App. III	Chloride	mg/L	0%	10	10	9	9	38	0.208	0.337	0.246	10	10	9	9	38	0.208	0.337	0.246
08_02_112	MW-8	App. III	Fluoride	mg/L	53%	10	10	9	9	38	0.493	0.551	0.504	4	4	5	5	18	0.605	0.654	0.626
08_02_118	MW-8	App. III	pH (Field)	S.U.	0%	10	9	9	8	36	0.178	0.440	0.455	10	9	9	8	36	0.178	0.440	0.455
08_02_123	MW-8	App. III	Sulfate	mg/L	0%	10	10	9	9	38	0.960	0.981	0.968	10	10	9	9	38	0.960	0.981	0.968
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	0%	10	10	9	9	38	0.506	0.251	0.209	10	10	9	9	38	0.506	0.251	0.209
08_03_101	MW-8	App. IV	Antimony	ug/L	82%	10	10	9	9	38	0.948	0.998	0.774	2	3	1	1	7	0.508	0.364	0.504
08_03_102	MW-8	App. IV	Arsenic	ug/L	87%	10	10	9	9	38	0.831	0.791	0.914	1	2	1	1	5	0.284	0.043 *	0.027 *
08_03_103	MW-8	App. IV	Barium	ug/L	0%	10	10	9	9	38	0.152	0.319	0.305	10	10	9	9	38	0.152	0.319	0.305
08_03_104	MW-8	App. IV	Beryllium	ug/L	97%	10	10	9	9	38	0.783	0.518	0.640	0	1	0	0	1	NA	NA	NA
08_03_106	MW-8	App. IV	Cadmium	ug/L	97%	10	10	9	9	38	0.492	0.313	0.328	0	1	0	0	1	NA	NA	NA
08_03_109	MW-8	App. IV	Chromium	ug/L	50%	10	10	9	9	38	0.952	0.724	0.842	7	4	4	4	19	0.513	0.561	0.616
08_03_110	MW-8	App. IV	Cobalt	ug/L	89%	10	10	9	9	38	0.815	0.845	0.841	0	2	2	0	4	0.439	0.525	0.594
08_03_112	MW-8	App. IV	Fluoride	mg/L	53%	10	10	9	9	38	0.493	0.551	0.504	4	4	5	5	18	0.605	0.654	0.626
08_03_113	MW-8	App. IV	Lead	ug/L	95%	10	10	9	9	38	0.640	0.323	0.448	0	1	1	0	2	0.317	NA	NA
08_03_114	MW-8	App. IV	Lithium	ug/L	3%	10	10	9	9	38	0.715	0.839	0.890	9	10	9	9	37	0.448	0.485	0.460
08_03_115	MW-8	App. IV	Mercury	ug/L	97%	10	10	9	9	38	0.843	0.461	0.510	1	0	0	0	1	NA	NA	NA
08_03_116	MW-8	App. IV	Molybdenum	ug/L	92%	10	10	9	9	38	0.918	0.869	0.905	1	1	1	0	3	0.368	NA	NA
08_03_119	MW-8	App. IV	Radium-226	pCi/L	0%	10	9	9	8	36	0.323	0.361	NA	10	9	9	8	36	0.323	0.361	NA
08_03_120	MW-8	App. IV	Radium-228	pCi/L	0%	10	9	9	8	36	0.163	0.164	NA	10	9	9	8	36	0.163	0.164	NA
08_03_121	MW-8	App. IV	Selenium	ug/L	95%	10	10	9	9	38	0.792	0.816	0.589	0	2	0	0	2	NA	NA	NA
08_03_124	MW-8	App. IV	Thallium	ug/L	95%	10	10	9	9	38	0.749	0.818	0.869	1	0	1	0	2	0.317	NA	NA
08_03_126	MW-8	App. IV	Total Radium	pCi/L	0%	10	9	9	8	36	0.147	0.166	NA	10	9	9	8	36	0.147	0.166	NA
09_01_111	MW-10	App. I Metals	Copper	ug/L	64%	3	3	4	4	14	0.737	0.249	0.532	0	2	1	2	5	0.301	0.550	0.137
09_01_117	MW-10	App. I Metals	Nickel	ug/L	29%	3	3	4	4	14	0.774	0.534	0.678	1	3	3	3	10	0.729	0.623	0.751

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
09_01_122	MW-10	App. I Metals	Silver	ug/L	100%	3	3	4	4	14	0.764	0.895	0.576	NA	NA	NA	NA	NA	NA	NA	NA
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	50%	3	3	4	4	14	0.723	0.532	0.626	2	1	2	2	7	0.658	0.588	0.556
09_01_128	MW-10	App. I Metals	Zinc	ug/L	86%	3	3	4	4	14	0.622	0.527	0.682	0	1	0	1	2	0.317	NA	NA
09_02_105	MW-10	App. III	Boron	ug/L	0%	3	3	4	4	14	0.420	0.386	0.395	3	3	4	4	14	0.420	0.386	0.395
09_02_107	MW-10	App. III	Calcium	ug/L	0%	3	3	4	4	14	0.201	0.282	0.280	3	3	4	4	14	0.201	0.282	0.280
09_02_108	MW-10	App. III	Chloride	mg/L	0%	3	3	4	4	14	0.938	0.915	0.917	3	3	4	4	14	0.938	0.915	0.917
09_02_112	MW-10	App. III	Fluoride	mg/L	0%	3	3	4	4	14	0.757	0.785	0.780	3	3	4	4	14	0.757	0.785	0.780
09_02_118	MW-10	App. III	pH (Field)	S.U.	0%	3	4	4	4	15	0.263	0.256	0.251	3	4	4	4	15	0.263	0.256	0.251
09_02_123	MW-10	App. III	Sulfate	mg/L	0%	3	3	4	4	14	0.921	0.971	0.968	3	3	4	4	14	0.921	0.971	0.968
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	0%	3	3	4	4	14	0.069	0.101	0.108	3	3	4	4	14	0.069	0.101	0.108
09_03_101	MW-10	App. IV	Antimony	ug/L	93%	3	3	4	4	14	0.437	0.311	0.233	0	1	0	0	1	NA	NA	NA
09_03_102	MW-10	App. IV	Arsenic	ug/L	71%	3	3	4	4	14	0.689	0.714	0.531	0	2	1	1	4	0.264	0.778	0.790
09_03_103	MW-10	App. IV	Barium	ug/L	0%	3	3	4	4	14	0.852	0.583	0.667	3	3	4	4	14	0.852	0.583	0.667
09_03_104	MW-10	App. IV	Beryllium	ug/L	100%	3	3	4	4	14	0.764	0.923	0.831	NA	NA	NA	NA	NA	NA	NA	NA
09_03_106	MW-10	App. IV	Cadmium	ug/L	100%	3	3	4	4	14	0.764	0.480	0.361	NA	NA	NA	NA	NA	NA	NA	NA
09_03_109	MW-10	App. IV	Chromium	ug/L	29%	3	3	4	4	14	0.542	0.521	0.637	3	2	1	4	10	0.921	0.802	0.921
09_03_110	MW-10	App. IV	Cobalt	ug/L	86%	3	3	4	4	14	0.778	0.698	0.839	0	1	0	1	2	0.317	NA	NA
09_03_112	MW-10	App. IV	Fluoride	mg/L	0%	3	3	4	4	14	0.757	0.785	0.780	3	3	4	4	14	0.757	0.785	0.780
09_03_113	MW-10	App. IV	Lead	ug/L	86%	3	3	4	4	14	0.236	0.137	0.188	0	1	0	1	2	0.317	NA	NA
09_03_114	MW-10	App. IV	Lithium	ug/L	0%	3	3	4	4	14	0.767	0.790	0.848	3	3	4	4	14	0.767	0.790	0.848
09_03_115	MW-10	App. IV	Mercury	ug/L	100%	3	3	4	4	14	0.475	0.525	0.525	NA	NA	NA	NA	NA	NA	NA	NA
09_03_116	MW-10	App. IV	Molybdenum	ug/L	0%	3	3	4	4	14	0.995	0.964	0.974	3	3	4	4	14	0.995	0.964	0.974
09_03_119	MW-10	App. IV	Radium-226	pCi/L	0%	3	3	4	4	14	0.552	0.629	NA	3	3	4	4	14	0.552	0.629	NA
09_03_120	MW-10	App. IV	Radium-228	pCi/L	0%	3	3	4	4	14	0.402	0.495	NA	3	3	4	4	14	0.402	0.495	NA
09_03_121	MW-10	App. IV	Selenium	ug/L	86%	3	3	4	4	14	0.797	0.441	0.364	0	1	0	1	2	0.317	NA	NA
09_03_124	MW-10	App. IV	Thallium	ug/L	93%	3	3	4	4	14	0.804	0.678	0.788	0	0	0	1	1	NA	NA	NA
09_03_126	MW-10	App. IV	Total Radium	pCi/L	0%	3	3	4	4	14	0.686	0.756	NA	3	3	4	4	14	0.686	0.756	NA
10_01_111	MW-11	App. I Metals	Copper	ug/L	59%	4	4	4	5	17	0.497	0.478	0.497	1	2	1	3	7	0.543	0.797	0.744
10_01_117	MW-11	App. I Metals	Nickel	ug/L	53%	4	4	4	5	17	0.842	0.798	0.927	1	2	3	2	8	0.480	0.661	0.565
10_01_122	MW-11	App. I Metals	Silver	ug/L	100%	4	4	4	5	17	0.842	0.867	0.704	NA	NA	NA	NA	NA	NA	NA	NA
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	82%	4	4	4	5	17	0.784	0.818	0.816	0	1	1	1	3	0.368	NA	NA
10_01_128	MW-11	App. I Metals	Zinc	ug/L	82%	4	4	4	5	17	0.766	0.947	0.993	0	2	0	1	3	0.221	0.099	0.077
10_02_105	MW-11	App. III	Boron	ug/L	6%	4	4	4	5	17	0.270	0.272	0.319	3	4	4	5	16	0.116	0.206	0.161
10_02_107	MW-11	App. III	Calcium	ug/L	0%	4	4	4	5	17	0.047 *	0.108	0.066	4	4	4	5	17	0.047 *	0.108	0.066
10_02_108	MW-11	App. III	Chloride	mg/L	0%	4	4	4	5	17	0.326	0.321	0.322	4	4	4	5	17	0.326	0.321	0.322
10_02_112	MW-11	App. III	Fluoride	mg/L	6%	4	4	4	5	17	0.356	0.245	0.240	3	4	4	5	16	0.632	0.761	0.750
10_02_118	MW-11	App. III	pH (Field)	S.U.	0%	3	4	4	4	15	0.043 *	0.001 **	0.001 **	3	4	4	4	15	0.043 *	0.001 **	0.001 **
10_02_123	MW-11	App. III	Sulfate	mg/L	0%	4	4	4	5	17	0.856	0.766	0.826	4	4	4	5	17	0.856	0.766	0.826
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	0%	4	4	4	5	17	0.886	0.452	0.625	4	4	4	5	17	0.886	0.452	0.625

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
10_03_101	MW-11	App. IV	Antimony	ug/L	88%	4	4	4	5	17	0.317	0.225	0.233	1	1	0	0	2	0.317	NA	NA
10_03_102	MW-11	App. IV	Arsenic	ug/L	88%	4	4	4	5	17	0.793	0.715	0.505	1	1	0	0	2	0.317	NA	NA
10_03_103	MW-11	App. IV	Barium	ug/L	0%	4	4	4	5	17	0.032 *	0.136	0.080	4	4	4	5	17	0.032 *	0.136	0.080
10_03_104	MW-11	App. IV	Beryllium	ug/L	100%	4	4	4	5	17	0.842	0.834	0.825	NA	NA	NA	NA	NA	NA	NA	NA
10_03_106	MW-11	App. IV	Cadmium	ug/L	100%	4	4	4	5	17	0.842	0.614	0.470	NA	NA	NA	NA	NA	NA	NA	NA
10_03_109	MW-11	App. IV	Chromium	ug/L	76%	4	4	4	5	17	0.656	0.648	0.674	1	1	1	1	4	0.392	NA	NA
10_03_110	MW-11	App. IV	Cobalt	ug/L	71%	4	4	4	5	17	0.882	0.858	0.882	1	2	1	1	5	0.532	0.747	0.806
10_03_112	MW-11	App. IV	Fluoride	mg/L	6%	4	4	4	5	17	0.356	0.245	0.240	3	4	4	5	16	0.632	0.761	0.750
10_03_113	MW-11	App. IV	Lead	ug/L	94%	4	4	4	5	17	0.483	0.360	0.342	0	1	0	0	1	NA	NA	NA
10_03_114	MW-11	App. IV	Lithium	ug/L	0%	4	4	4	5	17	0.615	0.532	0.551	4	4	4	5	17	0.615	0.532	0.551
10_03_115	MW-11	App. IV	Mercury	ug/L	100%	4	4	4	5	17	0.355	0.383	0.383	NA	NA	NA	NA	NA	NA	NA	NA
10_03_116	MW-11	App. IV	Molybdenum	ug/L	88%	4	4	4	5	17	0.827	0.836	0.774	0	1	1	0	2	0.317	NA	NA
10_03_119	MW-11	App. IV	Radium-226	pCi/L	0%	4	4	4	5	17	0.847	0.924	NA	4	4	4	5	17	0.847	0.924	NA
10_03_120	MW-11	App. IV	Radium-228	pCi/L	0%	4	4	4	5	17	0.286	0.373	NA	4	4	4	5	17	0.286	0.373	NA
10_03_121	MW-11	App. IV	Selenium	ug/L	100%	4	4	4	5	17	0.766	0.553	0.420	NA	NA	NA	NA	NA	NA	NA	NA
10_03_124	MW-11	App. IV	Thallium	ug/L	94%	4	4	4	5	17	0.330	0.302	0.357	0	1	0	0	1	NA	NA	NA
10_03_126	MW-11	App. IV	Total Radium	pCi/L	0%	4	4	4	5	17	0.105	0.374	0.220	4	4	4	5	17	0.105	0.374	0.220
11_01_111	MW-11D	App. I Metals	Copper	ug/L	80%	3	4	4	4	15	0.917	0.704	0.905	0	2	0	1	3	0.221	0.624	0.648
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	73%	3	4	4	4	15	0.992	0.900	0.970	1	1	1	1	4	0.392	NA	NA
11_01_122	MW-11D	App. I Metals	Silver	ug/L	100%	3	4	4	4	15	0.955	0.965	0.854	NA	NA	NA	NA	NA	NA	NA	NA
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	80%	3	4	4	4	15	0.933	0.910	0.919	0	1	1	1	3	0.368	NA	NA
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	73%	3	4	4	4	15	0.386	0.459	0.488	1	1	2	0	4	0.259	0.741	0.627
11_02_105	MW-11D	App. III	Boron	ug/L	0%	3	4	4	4	15	0.971	0.780	0.883	3	4	4	4	15	0.971	0.780	0.883
11_02_107	MW-11D	App. III	Calcium	ug/L	0%	3	4	4	4	15	0.916	0.531	0.683	3	4	4	4	15	0.916	0.531	0.683
11_02_108	MW-11D	App. III	Chloride	mg/L	0%	3	4	4	4	15	0.939	0.718	0.930	3	4	4	4	15	0.939	0.718	0.930
11_02_112	MW-11D	App. III	Fluoride	mg/L	0%	3	4	4	4	15	0.934	0.898	0.916	3	4	4	4	15	0.934	0.898	0.916
11_02_118	MW-11D	App. III	pH (Field)	S.U.	0%	3	4	4	4	15	0.717	0.937	0.931	3	4	4	4	15	0.717	0.937	0.931
11_02_123	MW-11D	App. III	Sulfate	mg/L	7%	3	4	4	4	15	0.827	0.629	0.566	3	4	4	3	14	0.989	0.726	0.961
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	0%	3	4	4	4	15	0.818	0.654	0.708	3	4	4	4	15	0.818	0.654	0.708
11_03_101	MW-11D	App. IV	Antimony	ug/L	87%	3	4	4	4	15	0.085	0.080	0.149	0	1	1	0	2	0.317	NA	NA
11_03_102	MW-11D	App. IV	Arsenic	ug/L	40%	3	4	4	4	15	0.845	0.927	0.937	2	3	1	3	9	0.322	0.290	0.417
11_03_103	MW-11D	App. IV	Barium	ug/L	0%	3	4	4	4	15	0.835	0.974	0.947	3	4	4	4	15	0.835	0.974	0.947
11_03_104	MW-11D	App. IV	Beryllium	ug/L	93%	3	4	4	4	15	0.955	0.917	0.940	0	1	0	0	1	NA	NA	NA
11_03_106	MW-11D	App. IV	Cadmium	ug/L	100%	3	4	4	4	15	0.955	0.768	0.601	NA	NA	NA	NA	NA	NA	NA	NA
11_03_109	MW-11D	App. IV	Chromium	ug/L	80%	3	4	4	4	15	0.930	0.807	0.935	0	1	1	1	3	0.368	NA	NA
11_03_110	MW-11D	App. IV	Cobalt	ug/L	93%	3	4	4	4	15	0.955	0.946	0.964	0	1	0	0	1	NA	NA	NA
11_03_112	MW-11D	App. IV	Fluoride	mg/L	0%	3	4	4	4	15	0.934	0.898	0.916	3	4	4	4	15	0.934	0.898	0.916
11_03_113	MW-11D	App. IV	Lead	ug/L	93%	3	4	4	4	15	0.524	0.382	0.451	0	1	0	0	1	NA	NA	NA
11_03_114	MW-11D	App. IV	Lithium	ug/L	0%	3	4	4	4	15	0.959	0.755	0.835	3	4	4	4	15	0.959	0.755	0.835

(Table continues on next page)

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 7: Seasonality Tests *(continued)*

						Full								Without Non-Detects							
						Sample Size					p-Value			Sample Size					p-Value		
ID	Well	Constituent Type	Constituent	Unit	% NDs	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA	Winter	Spring	Summer	Fall	Total	Kruskal-Wallis	ANOVA	Log ANOVA
11_03_115	MW-11D	App. IV	Mercury	ug/L	100%	3	4	4	4	15	0.432	0.474	0.474	NA	NA	NA	NA	NA	NA	NA	NA
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	0%	3	4	4	4	15	0.942	0.616	0.937	3	4	4	4	15	0.942	0.616	0.937
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	0%	3	4	4	4	15	0.356	0.377	NA	3	4	4	4	15	0.356	0.377	NA
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	0%	3	4	4	4	15	0.285	0.481	0.523	3	4	4	4	15	0.285	0.481	0.523
11_03_121	MW-11D	App. IV	Selenium	ug/L	93%	3	4	4	4	15	0.895	0.698	0.544	0	1	0	0	1	NA	NA	NA
11_03_124	MW-11D	App. IV	Thallium	ug/L	93%	3	4	4	4	15	0.360	0.348	0.377	0	1	0	0	1	NA	NA	NA
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	0%	3	4	4	4	15	0.774	0.851	0.804	3	4	4	4	15	0.774	0.851	0.804

*** p < 0.001, ** p < 0.01, * p < 0.05

Table 8: Trend Tests: Lognormal MLE and MK

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	Parametric	Lognormal MLE	0.000171	0.040	↔
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000862	0.379	↔
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	Nonparametric	MK	0.0000138	0.001	↑
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	Parametric	Lognormal MLE	0.00000639	0.218	↔
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	Nonparametric	MK	-0.00109	0.000	↓
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	Parametric	Lognormal MLE	0.000121	0.168	↔
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	Parametric	Lognormal MLE	0.0000717	0.434	↔
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	Nonparametric	MK	0.0000138	0.001	↑
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	Parametric	Lognormal MLE	0.0000533	0.066	↔
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	Nonparametric	MK	-0.000116	0.013	↔
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	Nonparametric	MK	0.0000615	0.186	↔
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	Nonparametric	MK	-0.0000444	0.505	↔
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	Parametric	Lognormal MLE	0.000309	0.272	↔
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	Parametric	Lognormal MLE	-0.0000701	0.175	↔
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	Nonparametric	MK	-6.32	0.100	↔
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	Nonparametric	MK	-0.0660	0.008	↓
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	Nonparametric	MK	-0.0000748	0.009	↓
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	Nonparametric	MK	-0.0459	0.000	↓
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	Nonparametric	MK	-0.0126	0.865	↔
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	Nonparametric	MK	0.0287	0.006	↑
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	Nonparametric	MK	-0.000615	0.951	↔
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	Parametric	Lognormal MLE	-0.000404	0.000	↓
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	Nonparametric	MK	-0.0000295	0.638	↔
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	Nonparametric	MK	0.0000499	0.758	↔
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	Nonparametric	MK	0.0000237	0.910	↔
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	Parametric	Lognormal MLE	0.000582	0.049	↔
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	Parametric	Lognormal MLE	0.0000506	0.004	↑
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	Parametric	Lognormal MLE	-0.0000411	0.069	↔
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	Parametric	Lognormal MLE	0.0000797	0.384	↔
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	Nonparametric	MK	0.0000343	0.090	↔
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	Nonparametric	MK	-0.0272	0.000	↓
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	Nonparametric	MK	0.152	0.038	↔
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	Parametric	Lognormal MLE	0.0000650	0.015	↔
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	Parametric	Lognormal MLE	0.0000797	0.384	↔
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	Nonparametric	MK	-0.00280	0.215	↔
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	Nonparametric	MK	-0.000408	0.294	↔
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	Nonparametric	MK	-0.00000712	0.876	↔
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	Nonparametric	MK	0	0.989	↔
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	Nonparametric	MK	-0.0000192	0.787	↔
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	Parametric	Lognormal MLE	0.000586	0.000	↑
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	Nonparametric	MK	-1.57	0.417	↔
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	Nonparametric	MK	-0.0475	0.010	↓
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	Parametric	Lognormal MLE	0.0000483	0.081	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	Parametric	Lognormal MLE	-0.0000126	0.000	↓
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	Nonparametric	MK	0.000834	0.029	↔
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	Nonparametric	MK	0.0117	0.656	↔
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	Nonparametric	MK	0.0196	0.058	↔
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	Parametric	Lognormal MLE	0.0000483	0.081	↔
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	Nonparametric	MK	0.00483	0.000	↑
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	Nonparametric	MK	-0.0000628	0.268	↔
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	Nonparametric	MK	-0.00000840	0.921	↔
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	Nonparametric	MK	-0.0000345	0.629	↔
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	Parametric	Lognormal MLE	-0.000123	0.000	↓
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	Parametric	Lognormal MLE	-0.00000545	0.659	↔
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000330	0.053	↔
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	Nonparametric	MK	-0.0000651	0.098	↔
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	Parametric	Lognormal MLE	-0.00000715	0.784	↔
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	Nonparametric	MK	-0.0122	0.004	↓
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	Parametric	Lognormal MLE	-0.0000559	0.011	↔
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000330	0.053	↔
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	Nonparametric	MK	0.000642	0.003	↑
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	Nonparametric	MK	0	1.000	↔
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	Nonparametric	MK	0.0000304	0.496	↔
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	Nonparametric	MK	0.0000311	0.531	↔
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	Parametric	Lognormal MLE	-0.00000810	0.444	↔
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	Nonparametric	MK	-0.0225	0.000	↓
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	Parametric	Lognormal MLE	-0.0000508	0.415	↔
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	Nonparametric	MK	-0.0000622	0.028	↔
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	Nonparametric	MK	-0.0221	0.000	↓
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	Parametric	Lognormal MLE	-0.0000510	0.040	↔
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	Nonparametric	MK	-0.0218	0.000	↓
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	Parametric	Lognormal MLE	-0.0000508	0.415	↔
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	Parametric	Lognormal MLE	-0.000236	0.000	↓
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	Nonparametric	MK	-0.0000502	0.293	↔
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	Nonparametric	MK	-0.0000340	0.680	↔
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	Nonparametric	MK	-0.0000531	0.410	↔
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	Parametric	Lognormal MLE	0.000105	0.714	↔
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	Parametric	Lognormal MLE	0.0000460	0.004	↑
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	Nonparametric	MK	-0.00707	0.050	↔
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	Nonparametric	MK	0.0000106	0.042	↔
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	Nonparametric	MK	-0.0000436	0.352	↔
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	Nonparametric	MK	-0.00202	0.000	↓
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	Parametric	Lognormal MLE	0.0000475	0.001	↑
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	Nonparametric	MK	0.0370	0.001	↑
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	Nonparametric	MK	0.0000106	0.042	↔
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	Parametric	Lognormal MLE	0.000178	0.012	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	Nonparametric	MK	-0.0000893	0.332	↔
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	Nonparametric	MK	-0.0000247	0.860	↔
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	Nonparametric	MK	-0.000102	0.508	↔
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	Parametric	Lognormal MLE	0.000332	0.154	↔
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	Nonparametric	MK	-7.63	0.030	↔
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	Nonparametric	MK	-0.0620	0.000	↓
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	Parametric	Lognormal MLE	0.00000950	0.001	↑
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	Parametric	Lognormal MLE	0.0000603	0.001	↑
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	Nonparametric	MK	-0.0112	0.715	↔
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	Nonparametric	MK	-0.0527	0.016	↔
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	Parametric	Lognormal MLE	-0.0000682	0.265	↔
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	Nonparametric	MK	-0.000163	0.017	↔
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	Nonparametric	MK	0.000000904	0.989	↔
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	Nonparametric	MK	-0.000132	0.258	↔
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	Parametric	Lognormal MLE	-0.000368	0.653	↔
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	Parametric	Lognormal MLE	0.000307	0.014	↔
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	Parametric	Lognormal MLE	0.000137	0.026	↔
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	Parametric	Lognormal MLE	0.00000606	0.818	↔
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.000107	0.047	↔
09_02_118	MW-10	App. III	pH (Field)	S.U.	15	0	0%	Parametric	Lognormal MLE	0.00000976	0.430	↔
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.00116	0.000	↓
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	Parametric	Lognormal MLE	0.0000453	0.037	↔
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	Parametric	Lognormal MLE	0.000771	0.000	↑
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	Parametric	Lognormal MLE	-0.00196	0.060	↔
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	Parametric	Lognormal MLE	-0.000107	0.047	↔
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	Parametric	Lognormal MLE	0.00160	0.000	↑
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	Parametric	Lognormal MLE	-0.000625	0.000	↓
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	Nonparametric	MK	-0.000105	0.661	↔
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	Nonparametric	MK	-0.0000526	0.827	↔
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	Nonparametric	MK	-0.000219	0.743	↔
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	Parametric	Lognormal MLE	0.0000636	0.617	↔
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	Nonparametric	MK	-1.10	0.592	↔
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	Parametric	Lognormal MLE	-0.000130	0.128	↔
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	Parametric	Lognormal MLE	0.00000395	0.982	↔
10_02_118	MW-11	App. III	pH (Field)	S.U.	15	0	0%	Nonparametric	MK	-0.0000323	0.766	↔
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	Parametric	Lognormal MLE	0.0000547	0.401	↔
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	Nonparametric	MK	-0.0337	0.302	↔
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	Nonparametric	MK	-0.00583	0.322	↔
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	Parametric	Lognormal MLE	0.00000395	0.982	↔
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	Nonparametric	MK	-0.000709	0.282	↔
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	Nonparametric	MK	-0.0000305	0.434	↔
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	Nonparametric	MK	0.000304	0.202	↔
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	Nonparametric	MK	0.000251	0.232	↔

(Table continues on next page)

Table 8: Trend Tests: Lognormal MLE and MK *(continued)*

ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Type	Method	Slope	p-value	Trend
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	Nonparametric	MK	-0.0117	0.042	↔
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	Nonparametric	MK	-10.4	0.010	↔
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.00125	0.000	↓
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.000102	0.083	↔
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	Parametric	Lognormal MLE	-0.0000529	0.000	↓
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	Parametric	Lognormal MLE	-0.00127	0.222	↔
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.000929	0.000	↓
11_03_102	MW-11D	App. IV	Arsenic	ug/L	15	6	40%	Parametric	Lognormal MLE	-0.00147	0.001	↓
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	Parametric	Lognormal MLE	0.000253	0.018	↔
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	Parametric	Lognormal MLE	-0.000102	0.083	↔
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	Parametric	Lognormal MLE	-0.000957	0.000	↓
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	Parametric	Lognormal MLE	-0.00221	0.000	↓
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	Nonparametric	MK	-0.000218	0.428	↔
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	Nonparametric	MK	-0.000372	0.166	↔
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	Nonparametric	MK	-0.000714	0.038	↔

Table 9: Trend Tests: Piecewise Linear-Linear

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
01_01_111	MW-1	App. I Metals	Copper	ug/L	38	32	84%	0.00160	0.009	↑	-0.00538	0.021	↔	2022-04-19	0.290	↔
01_01_117	MW-1	App. I Metals	Nickel	ug/L	38	28	74%	0.000142	0.824	↔	-0.00140	0.640	↔	2022-04-29	0.017	↔
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.00000000000115	1.000	↔	-0.00162	0.000	↓	2021-05-07	0.740	↔
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	-0.000291	0.752	↔	0.000683	0.376	↔	2019-11-23	0.039	↔
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	0.00848	0.828	↔	0.000839	0.603	↔	2016-07-12	0.023	↔
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	-0.0262	0.127	↔	0.00682	0.001	↑	2017-04-27	0.331	↔
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	77.2	0.000	↑	-179	0.010	↓	2022-04-20	0.530	↔
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.293	0.000	↑	-0.424	0.012	↔	2021-06-18	0.423	↔
01_02_112	MW-1	App. III	Fluoride	mg/L	38	1	3%	-0.000239	0.183	↔	0.0000226	0.000	↑	2016-06-12	0.385	↔
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	-0.000129	0.160	↔	0.000249	0.021	↔	2020-06-09	0.228	↔
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	-0.00687	0.003	↓	-0.000790	0.000	↓	2017-02-20	0.795	↓
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.759	0.000	↑	-1.91	0.001	↓	2022-03-20	0.571	↔
01_03_101	MW-1	App. IV	Antimony	ug/L	38	36	95%	-0.000662	0.111	↔	0.000473	0.395	↔	2020-07-08	0.100	↔
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	0.00537	0.000	↑	-0.00104	0.000	↓	2017-09-15	0.736	↔
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.0800	0.001	↑	-0.239	0.022	↔	2022-06-07	0.371	↔
01_03_104	MW-1	App. IV	Beryllium	ug/L	38	38	100%	0.0000347	0.511	↔	-0.000418	0.017	↔	2021-11-16	0.324	↔
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	-0.0000129	0.661	↔	-0.000165	0.000	↓	2020-10-13	0.596	↔
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.00501	0.251	↔	-0.00172	0.043	↔	2018-01-24	0.148	↔
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	0.000257	0.332	↔	-0.00242	0.006	↓	2021-11-16	0.379	↔
01_03_112	MW-1	App. IV	Fluoride	mg/L	38	1	3%	-0.000239	0.183	↔	0.0000226	0.000	↑	2016-06-12	0.385	↔
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	0.000119	0.687	↔	0.0423	0.070	↔	2024-04-18	0.468	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.00470	0.002	↑	-0.0108	0.050	↔	2022-04-19	0.318	↔
01_03_115	MW-1	App. IV	Mercury	ug/L	38	38	100%	0.00000949	0.000	↑	-0.0000000805	0.991	↔	2022-04-19	0.585	↔
01_03_116	MW-1	App. IV	Molybdenum	ug/L	38	33	87%	0.00333	0.023	↔	-0.00273	0.025	↔	2019-10-14	0.249	↔
01_03_119	MW-1	App. IV	Radium-226	pCi/L	36	0	0%	0.000251	0.144	↔	-0.000354	0.002	↓	2019-07-09	0.345	↔
01_03_120	MW-1	App. IV	Radium-228	pCi/L	36	0	0%	0.000244	0.121	↔	-0.0000616	0.597	↔	2019-07-10	0.121	↔
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	-0.00000000000245	1.000	↔	-0.000641	0.006	↓	2019-01-21	0.333	↔
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	-0.0116	0.000	↓	-0.00000172	0.987	↔	2017-04-24	0.942	↔
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.000460	0.080	↔	-0.000349	0.035	↔	2019-07-09	0.202	↔
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	0.0327	0.051	↔	-0.0609	0.219	↔	2021-11-18	0.167	↔
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	0.0196	0.775	↔	0.00111	0.842	↔	2017-04-04	0.026	↔
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	-0.00000000000534	1.000	↔	-0.00180	0.000	↓	2021-05-29	0.751	↔
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	-0.0000000000681	1.000	↔	0.00139	0.369	↔	2017-06-10	0.049	↔
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	-0.0143	0.481	↔	8.34	0.000	↑	2024-05-15	0.849	↔
02_02_105	MW-2	App. III	Boron	ug/L	32	1	3%	0.0270	0.259	↔	-0.00456	0.024	↔	2017-03-17	0.207	↔
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	21.3	0.299	↔	-27.4	0.085	↔	2019-05-06	0.190	↔
02_02_108	MW-2	App. III	Chloride	mg/L	33	0	0%	0.634	0.180	↔	-0.135	0.001	↓	2017-01-26	0.343	↔
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	-0.00000554	0.666	↔	0.000182	0.852	↔	2024-05-15	0.010	↔
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	-0.000278	0.421	↔	0.000135	0.516	↔	2019-08-17	0.062	↔
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	-0.120	0.000	↓	-0.0122	0.539	↔	2019-09-26	0.755	↔
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	1.47	0.123	↔	-1.33	0.163	↔	2020-01-17	0.136	↔
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	-0.00785	0.110	↔	0.00171	0.308	↔	2018-06-23	0.153	↔
02_03_102	MW-2	App. IV	Arsenic	ug/L	33	23	70%	0.00581	0.148	↔	-0.0000994	0.828	↔	2017-06-06	0.235	↔
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	0.0644	0.031	↔	-0.0354	0.544	↔	2021-04-15	0.236	↔
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	0.0000720	0.286	↔	-0.000387	0.026	↔	2021-08-21	0.273	↔
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	-0.0000806	0.000	↓	0.00201	0.027	↔	2024-05-15	0.677	↔
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	0.0367	0.653	↔	-0.00471	0.478	↔	2017-04-04	0.031	↔
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	0.00155	0.175	↔	-0.0146	0.596	↔	2023-10-05	0.076	↔
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	-0.00000554	0.666	↔	0.000182	0.852	↔	2024-05-15	0.010	↔
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	0.000964	0.390	↔	0.00588	0.466	↔	2023-01-25	0.127	↔
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	0.0171	0.581	↔	-0.0708	0.360	↔	2021-08-10	0.054	↔
02_03_115	MW-2	App. IV	Mercury	ug/L	33	33	100%	0.00000985	0.000	↑	-0.000000930	0.881	↔	2022-01-26	0.633	↔
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	-0.0726	0.272	↔	-0.00214	0.107	↔	2016-04-06	0.255	↔
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	-0.000783	0.676	↔	-0.0000436	0.597	↔	2016-07-12	0.051	↔
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	0.000189	0.037	↔	-0.00273	0.060	↔	2023-10-01	0.266	↔
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	-0.0000000000105	1.000	↔	-0.000585	0.022	↔	2019-01-06	0.342	↔
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	-0.0143	0.000	↓	0.0000197	0.937	↔	2017-04-11	0.845	↔
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	0.000145	0.264	↔	-0.00336	0.287	↔	2023-10-04	0.163	↔
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.0124	0.045	↔	-0.0371	0.187	↔	2022-04-20	0.164	↔
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.0183	0.081	↔	-0.0108	0.072	↔	2019-01-25	0.174	↔
03_01_122	MW-3	App. I Metals	Silver	ug/L	36	35	97%	-0.000000000000210	1.000	↔	-0.00176	0.000	↓	2021-06-04	0.738	↔
03_01_127	MW-3	App. I Metals	Vanadium	ug/L	36	23	64%	0.00340	0.018	↔	-0.00203	0.014	↔	2019-04-17	0.291	↔
03_01_128	MW-3	App. I Metals	Zinc	ug/L	36	28	78%	0.00971	0.038	↔	-0.00514	0.053	↔	2019-04-05	0.220	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	-0.0395	0.000	↓	0.0215	0.000	↑	2018-09-18	0.631	↔
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	-49.5	0.303	↔	14.2	0.001	↑	2017-04-04	0.332	↔
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	-0.486	0.059	↔	0.0139	0.620	↔	2017-06-05	0.317	↔
03_02_112	MW-3	App. III	Fluoride	mg/L	36	1	3%	0.000403	0.000	↑	-0.000107	0.000	↓	2018-03-17	0.582	↔
03_02_118	MW-3	App. III	pH (Field)	S.U.	32	0	0%	-0.0000888	0.724	↔	0.000103	0.327	↔	2018-10-11	0.058	↔
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.355	0.005	↑	-0.0483	0.000	↓	2016-12-01	0.776	↔
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	0.369	0.111	↔	-0.0205	0.953	↔	2021-01-27	0.178	↔
03_03_101	MW-3	App. IV	Antimony	ug/L	36	25	69%	-0.00265	0.017	↔	0.000280	0.864	↔	2020-10-31	0.304	↔
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	0.00196	0.001	↑	-0.00270	0.000	↓	2020-10-14	0.470	↔
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	-0.608	0.002	↓	0.103	0.000	↑	2017-04-04	0.691	↔
03_03_104	MW-3	App. IV	Beryllium	ug/L	36	36	100%	0.0000558	0.296	↔	-0.000431	0.004	↓	2021-08-23	0.409	↔
03_03_106	MW-3	App. IV	Cadmium	ug/L	36	35	97%	0.000000000000743	1.000	↔	-0.000104	0.000	↓	2018-06-28	0.739	↔
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	0.0358	0.087	↔	-0.0226	0.058	↔	2019-01-25	0.182	↔
03_03_110	MW-3	App. IV	Cobalt	ug/L	36	32	89%	0.000406	0.221	↔	-0.00261	0.005	↓	2021-08-12	0.394	↔
03_03_112	MW-3	App. IV	Fluoride	mg/L	36	1	3%	0.000403	0.000	↑	-0.000107	0.000	↓	2018-03-17	0.582	↔
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	0.0000229	0.943	↔	0.0458	0.068	↔	2024-04-29	0.440	↔
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	-0.0288	0.061	↔	0.0195	0.396	↔	2021-01-27	0.174	↔
03_03_115	MW-3	App. IV	Mercury	ug/L	36	36	100%	0.00000984	0.000	↑	-0.000000432	0.953	↔	2022-01-27	0.605	↔
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	-0.00612	0.814	↔	-0.000200	0.854	↔	2017-01-23	0.031	↔
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	0.000432	0.086	↔	-0.000215	0.119	↔	2019-01-25	0.158	↔
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	-0.00352	0.354	↔	0.000111	0.341	↔	2016-07-10	0.094	↔
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	-0.0000000000170	1.000	↔	-0.000694	0.015	↔	2019-04-08	0.344	↔
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	-0.0116	0.000	↓	0.000000155	0.999	↔	2017-04-23	0.941	↔
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	0.000475	0.355	↔	-0.000268	0.343	↔	2019-04-17	0.057	↔
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	0.0157	0.081	↔	-0.0330	0.167	↔	2021-11-16	0.138	↔
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.00398	0.481	↔	0.00208	0.002	↑	2017-04-05	0.453	↔
04_01_122	MW-4	App. I Metals	Silver	ug/L	37	37	100%	0.0000000000000436	1.000	↔	-0.00181	0.000	↓	2021-05-28	0.761	↔
04_01_127	MW-4	App. I Metals	Vanadium	ug/L	37	33	89%	0.000991	0.107	↔	-0.00212	0.032	↔	2021-01-14	0.202	↔
04_01_128	MW-4	App. I Metals	Zinc	ug/L	37	24	65%	0.00724	0.039	↔	-0.00261	0.496	↔	2020-04-17	0.193	↔
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	0.0309	0.501	↔	-0.00704	0.315	↔	2017-10-10	0.050	↔
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	75.5	0.000	↑	-5.74	0.003	↓	2017-05-22	0.671	↔
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.688	0.000	↑	-0.0762	0.000	↓	2017-04-19	0.730	↔
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	-0.0000428	0.018	↔	0.000114	0.000	↑	2020-12-12	0.481	↔
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	-0.0000867	0.000	↓	0.000644	0.675	↔	2024-05-02	0.373	↔
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.00875	0.000	↑	-0.000191	0.588	↔	2017-11-21	0.698	↔
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	1.06	0.000	↑	-0.0789	0.021	↔	2017-09-18	0.697	↔
04_03_101	MW-4	App. IV	Antimony	ug/L	37	32	86%	-0.000258	0.495	↔	0.000184	0.827	↔	2021-04-13	0.020	↔
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	0.00535	0.000	↑	-0.00108	0.000	↓	2017-09-17	0.642	↔
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.369	0.001	↑	0.0000712	0.995	↔	2017-04-08	0.611	↔
04_03_104	MW-4	App. IV	Beryllium	ug/L	37	37	100%	0.0000345	0.547	↔	-0.000418	0.009	↓	2021-11-16	0.322	↔
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	0.000000000000806	1.000	↔	-0.0000967	0.000	↓	2018-02-28	0.717	↔
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	0.000901	0.055	↔	-0.00446	0.042	↔	2022-04-21	0.256	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	0.00190	0.275	↔	0.0113	0.018	↔	2021-11-16	0.440	↔
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	-0.0000428	0.018	↔	0.000114	0.000	↑	2020-12-12	0.481	↔
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	0.0000978	0.744	↔	0.0445	0.054	↔	2024-04-23	0.477	↔
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.0143	0.811	↔	0.00528	0.041	↔	2017-01-24	0.230	↔
04_03_115	MW-4	App. IV	Mercury	ug/L	37	37	100%	0.00000957	0.000	↑	-0.000000205	0.978	↔	2022-03-20	0.589	↔
04_03_116	MW-4	App. IV	Molybdenum	ug/L	37	32	86%	0.00525	0.032	↔	-0.00473	0.016	↔	2019-10-14	0.258	↔
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.000351	0.099	↔	-0.000237	0.015	↔	2018-10-22	0.247	↔
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.00109	0.156	↔	-0.0000961	0.281	↔	2017-04-05	0.136	↔
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	-0.000193	0.477	↔	-0.000902	0.083	↔	2021-04-08	0.292	↔
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	-0.0116	0.000	↓	-0.00000973	0.929	↔	2017-04-24	0.942	↔
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.00191	0.051	↔	-0.000251	0.029	↔	2017-04-09	0.255	↔
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.00176	0.002	↑	-0.00613	0.018	↔	2022-04-19	0.356	↔
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	0.00721	0.130	↔	-0.0238	0.387	↔	2022-07-13	0.087	↔
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	0.000000000000898	1.000	↔	-0.00181	0.000	↓	2021-05-29	0.764	↔
05_01_127	MW-5	App. I Metals	Vanadium	ug/L	38	35	92%	0.000412	0.128	↔	-0.00184	0.036	↔	2021-11-16	0.233	↔
05_01_128	MW-5	App. I Metals	Zinc	ug/L	38	25	66%	-0.00616	0.294	↔	0.00107	0.534	↔	2018-07-01	0.074	↔
05_02_105	MW-5	App. III	Boron	ug/L	37	15	41%	-0.00556	0.256	↔	0.00219	0.307	↔	2019-01-23	0.080	↔
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	0.385	0.672	↔	-2.67	0.000	↓	2019-10-13	0.500	↔
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	0.00151	0.024	↔	-0.00185	0.006	↓	2020-04-15	0.299	↔
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	-0.000480	0.396	↔	0.0000257	0.025	↔	2016-05-07	0.157	↔
05_02_118	MW-5	App. III	pH (Field)	S.U.	35	0	0%	-0.0000875	0.323	↔	0.00309	0.646	↔	2024-05-02	0.052	↔
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.00114	0.387	↔	-0.000213	0.145	↔	2017-07-18	0.094	↔
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.220	0.374	↔	-0.0759	0.044	↔	2017-10-16	0.133	↔
05_03_101	MW-5	App. IV	Antimony	ug/L	38	36	95%	-0.000416	0.265	↔	0.000422	0.326	↔	2020-07-03	0.064	↔
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	0.00481	0.000	↑	-0.00114	0.000	↓	2017-11-17	0.641	↔
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.0144	0.051	↔	-0.0185	0.001	↓	2019-07-09	0.389	↔
05_03_104	MW-5	App. IV	Beryllium	ug/L	38	38	100%	0.0000347	0.510	↔	-0.000418	0.017	↔	2021-11-16	0.325	↔
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	0.000000000000434	1.000	↔	-0.0000973	0.000	↓	2018-02-24	0.724	↔
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	0.0155	0.138	↔	-0.0500	0.406	↔	2022-07-13	0.083	↔
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	0.000309	0.234	↔	-0.00284	0.001	↓	2022-01-25	0.419	↔
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	-0.000480	0.396	↔	0.0000257	0.025	↔	2016-05-07	0.157	↔
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	0.0000437	0.874	↔	0.0438	0.046	↔	2024-04-17	0.506	↔
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	0.00192	0.076	↔	-0.00172	0.544	↔	2021-08-09	0.118	↔
05_03_115	MW-5	App. IV	Mercury	ug/L	38	38	100%	0.00000949	0.000	↑	-0.0000000889	0.990	↔	2022-04-18	0.584	↔
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	0.00197	0.064	↔	-0.00506	0.211	↔	2022-04-18	0.135	↔
05_03_119	MW-5	App. IV	Radium-226	pCi/L	36	0	0%	-0.0000503	0.318	↔	0.00172	0.350	↔	2024-01-25	0.106	↔
05_03_120	MW-5	App. IV	Radium-228	pCi/L	36	0	0%	0.0000000340	1.000	↔	0.00144	0.756	↔	2024-04-28	0.021	↔
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	0.0000000000256	1.000	↔	-0.000654	0.006	↓	2019-01-09	0.342	↔
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	-0.0165	0.001	↓	-0.00000536	0.988	↔	2017-04-03	0.719	↔
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	-0.00000410	0.947	↔	0.00327	0.489	↔	2024-04-28	0.094	↔
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	0.00206	0.014	↔	-0.00559	0.034	↔	2021-11-17	0.269	↔
06_01_117	MW-6	App. I Metals	Nickel	ug/L	37	26	70%	0.000516	0.151	↔	-0.00203	0.141	↔	2022-01-25	0.142	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	-0.00000000000161	1.000	↔	-0.00181	0.000	↓	2021-05-30	0.752	↔
06_01_127	MW-6	App. I Metals	Vanadium	ug/L	37	33	89%	0.000421	0.149	↔	-0.00153	0.101	↔	2021-11-17	0.156	↔
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	0.00246	0.008	↑	-0.0255	0.220	↔	2023-10-03	0.245	↔
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	-0.0188	0.004	↓	0.00289	0.000	↑	2017-01-29	0.595	↔
06_02_107	MW-6	App. III	Calcium	ug/L	37	0	0%	-24.4	0.505	↔	-0.0166	0.969	↔	2016-04-04	0.088	↔
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.0860	0.523	↔	-0.0278	0.012	↔	2017-04-03	0.187	↔
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.0000774	0.482	↔	-0.0000332	0.126	↔	2018-01-23	0.083	↔
06_02_118	MW-6	App. III	pH (Field)	S.U.	34	0	0%	-0.000167	0.030	↔	0.0000383	0.686	↔	2020-10-13	0.285	↔
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	-0.0804	0.000	↓	0.00132	0.929	↔	2020-01-26	0.678	↔
06_02_125	MW-6	App. III	Total Dissolved Solids	mg/L	37	0	0%	1.99	0.478	↔	-0.0494	0.004	↓	2016-02-08	0.238	↔
06_03_101	MW-6	App. IV	Antimony	ug/L	37	37	100%	-0.000460	0.208	↔	0.000307	0.537	↔	2020-09-11	0.072	↔
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	0.00428	0.001	↑	-0.00112	0.000	↓	2018-01-30	0.487	↔
06_03_103	MW-6	App. IV	Barium	ug/L	37	0	0%	-0.0411	0.000	↓	0.00613	0.520	↔	2020-10-09	0.701	↔
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	0.0000370	0.482	↔	-0.000404	0.021	↔	2021-11-17	0.302	↔
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	0.000000000000123	1.000	↔	-0.0000985	0.000	↓	2018-03-02	0.719	↔
06_03_109	MW-6	App. IV	Chromium	ug/L	37	30	81%	0.000981	0.179	↔	-0.00299	0.074	↔	2021-04-15	0.177	↔
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	0.000279	0.286	↔	-0.00244	0.006	↓	2021-11-17	0.382	↔
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.0000774	0.482	↔	-0.0000332	0.126	↔	2018-01-23	0.083	↔
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	0.000159	0.584	↔	0.0437	0.047	↔	2024-04-22	0.507	↔
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	-0.0132	0.000	↓	0.00304	0.598	↔	2021-05-24	0.598	↔
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	0.00000509	0.600	↔	-0.000000000000692	1.000	↔	2022-05-22	0.014	↔
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	0.00137	0.119	↔	-0.00126	0.049	↔	2019-10-13	0.169	↔
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.0000303	0.863	↔	-0.000145	0.201	↔	2019-04-17	0.106	↔
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	-0.000137	0.309	↔	0.000168	0.428	↔	2021-01-24	0.055	↔
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	0.0000000000260	1.000	↔	-0.000664	0.013	↔	2019-01-28	0.316	↔
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	-0.0125	0.000	↓	0.00000338	0.974	↔	2017-04-16	0.952	↔
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	-0.000107	0.162	↔	0.00302	0.582	↔	2024-05-03	0.084	↔
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.0257	0.341	↔	-0.00994	0.070	↔	2019-07-09	0.159	↔
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	0.244	0.435	↔	-0.0922	0.143	↔	2019-07-09	0.109	↔
07_01_122	MW-7R	App. I Metals	Silver	ug/L	28	28	100%	-0.0000000000114	1.000	↔	-0.00171	0.000	↓	2021-03-25	0.755	↔
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	-0.0545	0.093	↔	-0.000515	0.649	↔	2018-02-24	0.283	↔
07_01_128	MW-7R	App. I Metals	Zinc	ug/L	28	22	79%	0.0309	0.160	↔	-0.00948	0.034	↔	2019-07-09	0.234	↔
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	-0.0415	0.000	↓	0.00190	0.110	↔	2018-10-24	0.595	↔
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	14.1	0.225	↔	2.01	0.379	↔	2019-07-09	0.283	↔
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	-0.0972	0.559	↔	-0.00685	0.256	↔	2018-02-24	0.124	↔
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	-0.000992	0.000	↓	0.0000196	0.003	↑	2018-02-24	0.779	↔
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	-0.0172	0.000	↓	0.00000116	0.981	↔	2017-11-21	0.866	↔
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	-0.150	0.000	↓	-0.00160	0.000	↓	2018-02-24	0.977	↓
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.112	0.172	↔	0.0205	0.315	↔	2019-10-13	0.343	↔
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	0.00146	0.731	↔	-0.000717	0.396	↔	2019-07-09	0.036	↔
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	-0.000318	0.466	↔	-0.00192	0.001	↓	2021-06-14	0.672	↔
07_03_103	MW-7R	App. IV	Barium	ug/L	28	0	0%	0.303	0.001	↑	-0.00633	0.683	↔	2019-07-09	0.670	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
07_03_104	MW-7R	App. IV	Beryllium	ug/L	28	28	100%	0.000114	0.350	↔	-0.000411	0.030	↔	2021-08-11	0.330	↔
07_03_106	MW-7R	App. IV	Cadmium	ug/L	28	28	100%	-0.000113	0.000	↓	0.0000212	0.891	↔	2023-04-29	0.659	↔
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	-0.0890	0.509	↔	-0.00118	0.999	↔	2023-05-31	0.030	↔
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.00725	0.264	↔	-0.00327	0.015	↔	2019-07-09	0.256	↔
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	-0.000992	0.000	↓	0.0000196	0.003	↑	2018-02-24	0.779	↔
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	-0.000557	0.277	↔	0.0723	0.007	↑	2024-06-09	0.538	↔
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.0270	0.001	↑	-0.00135	0.322	↔	2019-05-29	0.618	↔
07_03_115	MW-7R	App. IV	Mercury	ug/L	28	28	100%	0.0000171	0.001	↑	-0.00000146	0.822	↔	2021-08-11	0.568	↔
07_03_116	MW-7R	App. IV	Molybdenum	ug/L	28	24	86%	-0.00441	0.265	↔	0.00198	0.904	↔	2023-01-26	0.089	↔
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.00132	0.125	↔	-0.000229	0.028	↔	2018-11-01	0.270	↔
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.000177	0.394	↔	-0.000577	0.596	↔	2023-01-27	0.046	↔
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	-0.000809	0.005	↓	0.00161	0.546	↔	2023-08-15	0.328	↔
07_03_124	MW-7R	App. IV	Thallium	ug/L	28	25	89%	-0.00189	0.000	↓	-0.00000253	0.742	↔	2018-02-24	0.901	↔
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.00166	0.328	↔	-0.000266	0.186	↔	2019-01-23	0.131	↔
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	0.000546	0.959	↔	0.00536	0.474	↔	2019-07-10	0.041	↔
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	0.000180	0.990	↔	0.00624	0.555	↔	2019-10-13	0.023	↔
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	0.000000000000813	1.000	↔	-0.00176	0.000	↓	2021-08-03	0.753	↔
08_01_127	MW-8	App. I Metals	Vanadium	ug/L	38	31	82%	0.000614	0.042	↔	-0.00342	0.345	↔	2023-04-27	0.139	↔
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	-0.0171	0.085	↔	0.00380	0.363	↔	2018-10-23	0.146	↔
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	-0.0151	0.143	↔	0.00276	0.001	↑	2017-01-24	0.310	↔
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	-58.7	0.000	↓	9.68	0.218	↔	2019-02-13	0.478	↔
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	-0.539	0.000	↓	-0.00516	0.821	↔	2017-11-07	0.682	↔
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.0000341	0.119	↔	0.0000266	0.000	↑	2017-10-18	0.837	↔
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.000946	0.104	↔	0.0000178	0.466	↔	2016-10-14	0.436	↔
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.00308	0.000	↑	-0.000176	0.216	↔	2017-12-06	0.611	↔
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	7.01	0.300	↔	-0.0543	0.170	↔	2016-02-11	0.179	↔
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	-0.0111	0.001	↓	-0.0000496	0.835	↔	2017-03-17	0.697	↔
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	0.00539	0.005	↑	-0.000690	0.013	↔	2017-08-29	0.422	↔
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	-0.416	0.013	↔	0.0537	0.257	↔	2018-06-10	0.329	↔
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	0.0000587	0.412	↔	-0.000358	0.197	↔	2022-01-26	0.109	↔
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	-0.0000142	0.700	↔	-0.000592	0.513	↔	2023-11-07	0.073	↔
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	0.00378	0.386	↔	-0.0391	0.464	↔	2023-04-27	0.052	↔
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	0.000297	0.277	↔	-0.00228	0.012	↔	2022-01-25	0.286	↔
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.0000341	0.119	↔	0.0000266	0.000	↑	2017-10-18	0.837	↔
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	0.000195	0.418	↔	0.0440	0.021	↔	2024-04-17	0.603	↔
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	-0.0152	0.000	↓	0.00490	0.036	↔	2019-04-17	0.448	↔
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	0.00000392	0.793	↔	-0.00000225	0.947	↔	2021-08-10	0.004	↔
08_03_116	MW-8	App. IV	Molybdenum	ug/L	38	35	92%	0.000188	0.589	↔	-0.000727	0.436	↔	2021-09-02	0.035	↔
08_03_119	MW-8	App. IV	Radium-226	pCi/L	36	0	0%	-0.0000282	0.797	↔	-0.000956	0.477	↔	2023-04-27	0.078	↔
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	-0.00109	0.787	↔	0.000131	0.444	↔	2016-07-12	0.022	↔
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	0.00000000000596	1.000	↔	-0.000633	0.007	↓	2018-12-22	0.336	↔
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	-0.0136	0.000	↓	0.00000318	0.985	↔	2017-04-15	0.894	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	-0.00538	0.879	↔	0.0000666	0.749	↔	2016-02-07	0.006	↔
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	0.141	0.539	↔	-0.0471	0.121	↔	2022-04-20	0.248	↔
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	0.00972	0.296	↔	-0.0269	0.442	↔	2023-10-04	0.186	↔
09_01_122	MW-10	App. I Metals	Silver	ug/L	14	14	100%	-0.00397	0.061	↔	-0.000733	0.541	↔	2022-10-24	0.605	↔
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	0.00490	0.467	↔	-0.0157	0.314	↔	2023-10-03	0.155	↔
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	0.0398	0.198	↔	-0.100	0.384	↔	2023-10-04	0.239	↔
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	0.0136	0.084	↔	-0.00860	0.758	↔	2023-10-08	0.321	↔
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	8.16	0.016	↔	-5.39	0.228	↔	2023-06-10	0.567	↔
09_02_108	MW-10	App. III	Chloride	mg/L	14	0	0%	0.00114	0.610	↔	-0.00102	0.758	↔	2023-04-27	0.037	↔
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	-0.0000709	0.078	↔	0.000385	0.478	↔	2024-06-26	0.314	↔
09_02_123	MW-10	App. III	Sulfate	mg/L	14	0	0%	-0.00798	0.018	↔	-0.00252	0.039	↔	2022-10-23	0.872	↔
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.173	0.015	↔	-0.00387	0.613	↔	2022-03-11	0.732	↔
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	0.00598	0.286	↔	-0.00173	0.409	↔	2022-08-03	0.181	↔
09_03_102	MW-10	App. IV	Arsenic	ug/L	14	10	71%	-0.00348	0.089	↔	0.0000164	0.993	↔	2023-04-26	0.524	↔
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.111	0.012	↔	-0.0897	0.529	↔	2023-10-04	0.535	↔
09_03_104	MW-10	App. IV	Beryllium	ug/L	14	14	100%	-0.00137	0.096	↔	-0.0000135	0.963	↔	2022-10-23	0.597	↔
09_03_106	MW-10	App. IV	Cadmium	ug/L	14	14	100%	-0.000279	0.138	↔	0.000108	0.534	↔	2023-04-26	0.370	↔
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	0.0215	0.267	↔	-0.0585	0.422	↔	2023-10-04	0.202	↔
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	-0.00631	0.453	↔	-0.000994	0.752	↔	2022-08-11	0.210	↔
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	-0.0000709	0.078	↔	0.000385	0.478	↔	2024-06-26	0.314	↔
09_03_113	MW-10	App. IV	Lead	ug/L	14	12	86%	-0.00542	0.534	↔	0.0105	0.226	↔	2023-04-26	0.182	↔
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	-0.00325	0.583	↔	0.00590	0.001	↑	2022-05-11	0.777	↔
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	-0.0000162	0.275	↔	0.0000246	0.264	↔	2023-07-24	0.219	↔
09_03_116	MW-10	App. IV	Molybdenum	ug/L	14	0	0%	-0.0230	0.000	↓	0.0140	0.231	↔	2023-11-17	0.903	↔
09_03_119	MW-10	App. IV	Radium-226	pCi/L	14	0	0%	-0.000723	0.114	↔	0.000851	0.201	↔	2023-05-22	0.328	↔
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	-0.0131	0.030	↔	0.000235	0.491	↔	2021-11-16	0.515	↔
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	-0.00372	0.052	↔	0.00303	0.256	↔	2023-04-27	0.395	↔
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	0.0000344	0.183	↔	-0.000134	0.176	↔	2023-10-04	0.409	↔
09_03_126	MW-10	App. IV	Total Radium	pCi/L	14	0	0%	-0.00830	0.146	↔	0.000233	0.504	↔	2021-12-25	0.442	↔
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.00884	0.647	↔	-0.00711	0.057	↔	2021-11-16	0.276	↔
10_01_117	MW-11	App. I Metals	Nickel	ug/L	17	9	53%	0.000240	0.942	↔	-0.00293	0.154	↔	2022-07-12	0.252	↔
10_01_122	MW-11	App. I Metals	Silver	ug/L	17	17	100%	-0.00207	0.020	↔	-0.000826	0.548	↔	2023-04-23	0.637	↔
10_01_127	MW-11	App. I Metals	Vanadium	ug/L	17	14	82%	-0.00381	0.007	↓	0.000726	0.727	↔	2023-02-15	0.590	↔
10_01_128	MW-11	App. I Metals	Zinc	ug/L	17	14	82%	0.00188	0.472	↔	-0.0118	0.002	↓	2022-12-11	0.705	↔
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	-0.0194	0.700	↔	0.00282	0.269	↔	2021-04-12	0.106	↔
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	-60.1	0.515	↔	7.52	0.391	↔	2021-06-19	0.110	↔
10_02_108	MW-11	App. III	Chloride	mg/L	17	0	0%	-0.0202	0.183	↔	0.0287	0.831	↔	2024-01-24	0.153	↔
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.0000489	0.303	↔	-0.0000545	0.496	↔	2023-03-30	0.121	↔
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	-0.000379	0.707	↔	0.000226	0.443	↔	2021-12-16	0.059	↔
10_02_125	MW-11	App. III	Total Dissolved Solids	mg/L	17	0	0%	-2.36	0.355	↔	-0.0410	0.928	↔	2021-11-16	0.274	↔
10_03_101	MW-11	App. IV	Antimony	ug/L	17	15	88%	0.00238	0.322	↔	-0.00139	0.487	↔	2022-10-23	0.138	↔
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	-0.0000000000454	1.000	↔	-0.00231	0.019	↔	2021-09-19	0.484	↔

(Table continues on next page)

Table 9: Trend Tests: Piecewise Linear-Linear *(continued)*

								Line 1			Line 2					
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	R-Squared	Overall Trend
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	-0.0799	0.476	↔	0.0152	0.452	↔	2021-09-20	0.096	↔
10_03_104	MW-11	App. IV	Beryllium	ug/L	17	17	100%	-0.000715	0.010	↓	-0.0000869	0.833	↔	2023-01-25	0.612	↔
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	-0.000177	0.072	↔	0.0000561	0.723	↔	2023-04-23	0.379	↔
10_03_109	MW-11	App. IV	Chromium	ug/L	17	13	76%	0.00115	0.779	↔	-0.00341	0.331	↔	2022-07-13	0.147	↔
10_03_110	MW-11	App. IV	Cobalt	ug/L	17	12	71%	-0.00335	0.032	↔	-0.00104	0.545	↔	2023-01-24	0.620	↔
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.0000489	0.303	↔	-0.0000545	0.496	↔	2023-03-30	0.121	↔
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	-0.00280	0.003	↓	0.118	0.000	↑	2024-07-16	0.883	↔
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	0.00151	0.451	↔	-0.0121	0.509	↔	2024-01-24	0.108	↔
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	-0.00000968	0.174	↔	0.0000202	0.416	↔	2023-07-25	0.177	↔
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	-0.00317	0.009	↓	0.00251	0.178	↔	2023-04-12	0.545	↔
10_03_119	MW-11	App. IV	Radium-226	pCi/L	17	0	0%	-0.000152	0.185	↔	0.00249	0.283	↔	2024-05-27	0.267	↔
10_03_120	MW-11	App. IV	Radium-228	pCi/L	17	0	0%	-0.00105	0.366	↔	0.000581	0.398	↔	2022-04-19	0.112	↔
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	-0.00232	0.046	↔	0.00257	0.338	↔	2023-04-24	0.320	↔
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	0.00000799	0.214	↔	-0.000164	0.213	↔	2024-04-01	0.494	↔
10_03_126	MW-11	App. IV	Total Radium	pCi/L	17	0	0%	-0.000231	0.542	↔	0.00911	0.249	↔	2024-07-08	0.173	↔
11_01_111	MW-11D	App. I Metals	Copper	ug/L	15	12	80%	0.0259	0.566	↔	-0.00955	0.010	↔	2021-11-16	0.477	↔
11_01_117	MW-11D	App. I Metals	Nickel	ug/L	15	11	73%	-0.0000000000373	1.000	↔	-0.00356	0.042	↔	2022-05-28	0.496	↔
11_01_122	MW-11D	App. I Metals	Silver	ug/L	15	15	100%	-0.00294	0.062	↔	-0.000744	0.528	↔	2023-01-02	0.618	↔
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	-0.00497	0.029	↔	0.000823	0.617	↔	2023-01-24	0.604	↔
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	0.00294	0.663	↔	-0.0125	0.141	↔	2023-02-07	0.335	↔
11_02_105	MW-11D	App. III	Boron	ug/L	15	0	0%	-0.0544	0.211	↔	-0.0110	0.623	↔	2022-07-16	0.369	↔
11_02_107	MW-11D	App. III	Calcium	ug/L	15	0	0%	-77.9	0.383	↔	-11.3	0.569	↔	2022-04-18	0.324	↔
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	-0.651	0.169	↔	-0.0683	0.508	↔	2022-04-18	0.522	↔
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.0000407	0.637	↔	-0.000180	0.102	↔	2023-04-23	0.311	↔
11_02_118	MW-11D	App. III	pH (Field)	S.U.	15	0	0%	-0.00149	0.012	↔	-0.000161	0.376	↔	2022-04-30	0.730	↔
11_02_123	MW-11D	App. III	Sulfate	mg/L	15	1	7%	-0.678	0.211	↔	-0.0642	0.589	↔	2022-04-18	0.462	↔
11_02_125	MW-11D	App. III	Total Dissolved Solids	mg/L	15	0	0%	-1.56	0.064	↔	-0.209	0.614	↔	2022-07-15	0.543	↔
11_03_101	MW-11D	App. IV	Antimony	ug/L	15	13	87%	0.00173	0.687	↔	-0.00161	0.483	↔	2022-10-23	0.060	↔
11_03_103	MW-11D	App. IV	Barium	ug/L	15	0	0%	0.0499	0.184	↔	0.00589	0.839	↔	2022-10-24	0.332	↔
11_03_104	MW-11D	App. IV	Beryllium	ug/L	15	14	93%	-0.00104	0.028	↔	-0.0000776	0.819	↔	2022-11-04	0.604	↔
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	-0.000237	0.107	↔	0.0000878	0.599	↔	2023-04-23	0.375	↔
11_03_109	MW-11D	App. IV	Chromium	ug/L	15	12	80%	0.00247	0.632	↔	-0.00562	0.008	↓	2022-07-12	0.580	↔
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	-0.00518	0.039	↔	-0.00109	0.555	↔	2022-11-08	0.623	↔
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.0000407	0.637	↔	-0.000180	0.102	↔	2023-04-23	0.311	↔
11_03_114	MW-11D	App. IV	Lithium	ug/L	15	0	0%	-0.119	0.021	↔	-0.0122	0.249	↔	2022-03-31	0.766	↔
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	-0.0000133	0.188	↔	0.0000229	0.391	↔	2023-07-25	0.202	↔
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	-0.151	0.228	↔	-0.0218	0.430	↔	2022-04-18	0.485	↔
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	-0.000437	0.026	↔	0.00576	0.064	↔	2024-06-16	0.535	↔
11_03_120	MW-11D	App. IV	Radium-228	pCi/L	15	0	0%	-0.0122	0.010	↓	-0.0000926	0.744	↔	2021-08-31	0.702	↔
11_03_121	MW-11D	App. IV	Selenium	ug/L	15	14	93%	-0.00304	0.108	↔	0.00289	0.195	↔	2023-04-23	0.344	↔
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	0.0000136	0.202	↔	-0.000182	0.294	↔	2024-04-01	0.439	↔
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	-0.00126	0.003	↓	0.00909	0.129	↔	2024-06-10	0.603	↔

Table 10: Trend Tests: Piecewise Linear-Linear-Linear

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
01_01_122	MW-1	App. I Metals	Silver	ug/L	38	32	84%	0.00000000000164	1.000	↔	-0.0153	0.009	↓	-0.000325	0.490	↔	2022-04-19	2022-07-20	0.832	↔
01_01_127	MW-1	App. I Metals	Vanadium	ug/L	38	24	63%	-0.000480	0.604	↔	0.00125	0.208	↔	-0.00786	0.520	↔	2019-12-15	2024-01-23	0.092	↔
01_01_128	MW-1	App. I Metals	Zinc	ug/L	38	25	66%	0.00435	0.934	↔	0.00158	0.381	↔	-0.0244	0.644	↔	2016-06-29	2024-01-23	0.051	↔
01_02_105	MW-1	App. III	Boron	ug/L	37	22	59%	-0.0107	0.123	↔	0.0110	0.002	↑	-0.0231	0.539	↔	2018-10-03	2023-10-08	0.373	↔
01_02_107	MW-1	App. III	Calcium	ug/L	38	0	0%	140	0.711	↔	74.2	0.000	↑	-177	0.013	↔	2016-07-11	2022-04-22	0.532	↔
01_02_108	MW-1	App. III	Chloride	mg/L	38	0	0%	0.273	0.000	↑	-0.921	0.003	↓	2.94	0.282	↔	2022-02-25	2024-04-18	0.544	↔
01_02_118	MW-1	App. III	pH (Field)	S.U.	36	0	0%	-0.0000624	0.198	↔	0.00126	0.078	↔	-0.00139	0.135	↔	2022-09-14	2023-12-16	0.355	↔
01_02_123	MW-1	App. III	Sulfate	mg/L	38	0	0%	0.00422	0.724	↔	-0.00992	0.368	↔	-0.000760	0.000	↓	2016-04-03	2017-01-24	0.814	↔
01_02_125	MW-1	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.796	0.000	↑	-8.69	0.005	↓	1.81	0.076	↔	2022-10-18	2023-06-26	0.757	↔
01_03_102	MW-1	App. IV	Arsenic	ug/L	38	35	92%	0.00582	0.000	↑	-0.000221	0.486	↔	-0.00204	0.000	↓	2017-05-07	2021-07-17	0.810	↔
01_03_103	MW-1	App. IV	Barium	ug/L	38	0	0%	0.0136	0.867	↔	0.116	0.039	↔	-0.249	0.007	↓	2018-04-25	2022-04-19	0.396	↔
01_03_106	MW-1	App. IV	Cadmium	ug/L	38	35	92%	-0.00000209	0.935	↔	-0.000287	0.006	↓	0.000113	0.426	↔	2021-01-27	2023-04-24	0.662	↔
01_03_109	MW-1	App. IV	Chromium	ug/L	38	26	68%	0.00632	0.010	↑	-0.0223	0.393	↔	0.000302	0.802	↔	2018-10-23	2019-07-17	0.273	↔
01_03_110	MW-1	App. IV	Cobalt	ug/L	38	35	92%	-0.000679	0.068	↔	0.0126	0.044	↔	-0.00266	0.000	↓	2020-04-15	2020-10-22	0.582	↔
01_03_113	MW-1	App. IV	Lead	ug/L	38	35	92%	0.000934	0.016	↔	-0.00598	0.020	↔	0.0587	0.005	↑	2022-07-13	2024-04-18	0.634	↔
01_03_114	MW-1	App. IV	Lithium	ug/L	38	0	0%	0.0291	0.272	↔	0.00355	0.087	↔	-0.00974	0.078	↔	2016-07-12	2022-04-19	0.354	↔
01_03_121	MW-1	App. IV	Selenium	ug/L	38	36	95%	0.00000580	0.993	↔	-0.000439	0.555	↔	-0.000730	0.127	↔	2018-07-16	2021-01-28	0.335	↔
01_03_124	MW-1	App. IV	Thallium	ug/L	38	38	100%	-0.0117	0.000	↓	0.000143	0.805	↔	-0.0000630	0.755	↔	2017-04-29	2020-01-15	0.942	↔
01_03_126	MW-1	App. IV	Total Radium	pCi/L	36	0	0%	0.000656	0.007	↑	-0.00133	0.687	↔	-0.000102	0.647	↔	2019-07-13	2020-09-17	0.266	↔
02_01_111	MW-2	App. I Metals	Copper	ug/L	33	15	45%	-0.0113	0.796	↔	0.0738	0.168	↔	-0.0801	0.111	↔	2018-12-08	2021-11-18	0.223	↔
02_01_117	MW-2	App. I Metals	Nickel	ug/L	33	12	36%	0.0130	0.917	↔	0.00544	0.400	↔	-0.0663	0.567	↔	2016-10-04	2023-10-04	0.078	↔
02_01_122	MW-2	App. I Metals	Silver	ug/L	33	31	94%	-0.00000000000171	1.000	↔	0.000000000000443	1.000	↔	-0.00180	0.000	↓	2016-04-29	2021-05-29	0.751	↔
02_01_127	MW-2	App. I Metals	Vanadium	ug/L	33	23	70%	0.0000544	0.976	↔	0.0146	0.233	↔	-0.0365	0.066	↔	2021-12-30	2023-10-03	0.235	↔
02_01_128	MW-2	App. I Metals	Zinc	ug/L	33	16	48%	0.00151	0.958	↔	-0.129	0.602	↔	8.70	0.000	↑	2022-07-12	2024-05-15	0.853	↔
02_02_107	MW-2	App. III	Calcium	ug/L	33	0	0%	-119	0.712	↔	35.8	0.289	↔	-28.4	0.046	↔	2016-05-26	2019-03-04	0.210	↔
02_02_112	MW-2	App. III	Fluoride	mg/L	33	2	6%	-0.000773	0.007	↓	0.00188	0.094	↔	-0.0000243	0.070	↔	2017-01-07	2017-05-29	0.496	↔
02_02_118	MW-2	App. III	pH (Field)	S.U.	29	0	0%	-0.000154	0.132	↔	0.00128	0.365	↔	-0.00259	0.168	↔	2022-09-08	2024-01-23	0.195	↔
02_02_123	MW-2	App. III	Sulfate	mg/L	33	0	0%	0.310	0.804	↔	-0.129	0.000	↓	-0.0122	0.551	↔	2016-01-31	2019-08-14	0.759	↔
02_02_125	MW-2	App. III	Total Dissolved Solids	mg/L	33	0	0%	-0.222	0.895	↔	4.79	0.731	↔	-1.90	0.028	↔	2018-07-29	2020-01-16	0.196	↔
02_03_101	MW-2	App. IV	Antimony	ug/L	33	20	61%	-0.0110	0.306	↔	-0.00144	0.867	↔	0.00218	0.376	↔	2017-06-03	2020-01-16	0.164	↔
02_03_103	MW-2	App. IV	Barium	ug/L	33	0	0%	-0.437	0.266	↔	0.140	0.063	↔	-0.0334	0.428	↔	2016-09-01	2020-04-02	0.324	↔
02_03_104	MW-2	App. IV	Beryllium	ug/L	33	31	94%	-0.0000754	0.486	↔	0.000804	0.764	↔	-0.000426	0.003	↓	2020-01-17	2021-02-09	0.347	↔
02_03_106	MW-2	App. IV	Cadmium	ug/L	33	30	91%	0.00000322	0.940	↔	-0.000128	0.000	↓	0.00226	0.009	↑	2019-02-09	2024-05-15	0.742	↔
02_03_109	MW-2	App. IV	Chromium	ug/L	33	6	18%	-0.00675	0.380	↔	0.197	0.665	↔	-0.0885	0.027	↔	2022-02-17	2022-10-18	0.208	↔
02_03_110	MW-2	App. IV	Cobalt	ug/L	33	27	82%	-0.00162	0.702	↔	0.00350	0.302	↔	-0.0188	0.505	↔	2019-01-23	2023-10-04	0.107	↔
02_03_112	MW-2	App. IV	Fluoride	mg/L	33	2	6%	-0.000773	0.007	↓	0.00188	0.094	↔	-0.0000243	0.070	↔	2017-01-07	2017-05-29	0.496	↔
02_03_113	MW-2	App. IV	Lead	ug/L	33	29	88%	0.00000628	0.999	↔	0.00158	0.396	↔	0.0327	0.616	↔	2018-09-23	2024-05-15	0.155	↔
02_03_114	MW-2	App. IV	Lithium	ug/L	33	0	0%	-0.0675	0.170	↔	0.272	0.694	↔	-0.132	0.052	↔	2020-02-04	2021-08-09	0.197	↔
02_03_116	MW-2	App. IV	Molybdenum	ug/L	33	5	15%	-0.106	0.322	↔	0.00220	0.623	↔	-0.00563	0.133	↔	2016-03-24	2020-01-17	0.303	↔
02_03_119	MW-2	App. IV	Radium-226	pCi/L	32	0	0%	-0.000326	0.445	↔	0.0000301	0.834	↔	-0.00235	0.642	↔	2018-01-25	2024-05-05	0.095	↔
02_03_120	MW-2	App. IV	Radium-228	pCi/L	32	0	0%	-0.00606	0.168	↔	0.000675	0.098	↔	-0.000287	0.186	↔	2016-05-03	2020-01-16	0.268	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
02_03_121	MW-2	App. IV	Selenium	ug/L	33	31	94%	-0.00000954	0.967	↔	-0.00211	0.015	↔	0.00245	0.105	↔	2021-02-23	2023-04-26	0.532	↔
02_03_124	MW-2	App. IV	Thallium	ug/L	33	23	70%	-0.0142	0.000	↓	0.000262	0.883	↔	-0.0000775	0.878	↔	2017-04-22	2020-01-16	0.845	↔
02_03_126	MW-2	App. IV	Total Radium	pCi/L	32	0	0%	-0.00475	0.460	↔	0.000270	0.103	↔	-0.00347	0.117	↔	2016-05-26	2023-09-17	0.238	↔
03_01_111	MW-3	App. I Metals	Copper	ug/L	36	21	58%	0.0137	0.031	↔	-0.0592	0.342	↔	0.0228	0.837	↔	2022-04-20	2023-10-29	0.186	↔
03_01_117	MW-3	App. I Metals	Nickel	ug/L	36	19	53%	0.0244	0.022	↔	-0.0247	0.247	↔	0.00231	0.853	↔	2019-01-25	2021-08-30	0.233	↔
03_02_105	MW-3	App. III	Boron	ug/L	35	10	29%	-0.0398	0.000	↓	0.0285	0.016	↔	0.0136	0.194	↔	2018-11-20	2022-01-26	0.644	↔
03_02_107	MW-3	App. III	Calcium	ug/L	36	0	0%	-51.6	0.296	↔	15.2	0.001	↑	-44.6	0.848	↔	2017-04-04	2024-04-29	0.341	↔
03_02_108	MW-3	App. III	Chloride	mg/L	36	0	0%	-0.438	0.002	↓	0.583	0.309	↔	-0.0306	0.501	↔	2018-03-25	2019-01-25	0.370	↔
03_02_123	MW-3	App. III	Sulfate	mg/L	36	0	0%	0.364	0.000	↑	-0.0870	0.000	↓	-0.0102	0.336	↔	2017-01-24	2020-11-12	0.881	↔
03_02_125	MW-3	App. III	Total Dissolved Solids	mg/L	36	0	0%	30.2	0.035	↔	-3.42	0.419	↔	0.345	0.001	↑	2016-02-07	2017-01-18	0.515	↔
03_03_102	MW-3	App. IV	Arsenic	ug/L	36	29	81%	0.00535	0.139	↔	0.00115	0.181	↔	-0.00240	0.003	↓	2017-03-10	2020-10-15	0.519	↔
03_03_103	MW-3	App. IV	Barium	ug/L	36	0	0%	-0.601	0.003	↓	0.0998	0.000	↑	0.134	0.425	↔	2017-04-04	2023-04-26	0.692	↔
03_03_109	MW-3	App. IV	Chromium	ug/L	36	18	50%	0.0500	0.017	↔	-0.0550	0.189	↔	0.00792	0.746	↔	2019-01-25	2021-08-30	0.262	↔
03_03_113	MW-3	App. IV	Lead	ug/L	36	33	92%	0.000967	0.020	↔	-0.00588	0.030	↔	0.0638	0.004	↑	2022-05-13	2024-04-29	0.627	↔
03_03_114	MW-3	App. IV	Lithium	ug/L	36	1	3%	0.0401	0.425	↔	-0.131	0.189	↔	0.0169	0.288	↔	2017-10-18	2019-05-02	0.264	↔
03_03_116	MW-3	App. IV	Molybdenum	ug/L	36	0	0%	-0.00655	0.807	↔	-0.0000285	0.983	↔	-0.00384	0.878	↔	2017-01-23	2023-11-19	0.034	↔
03_03_119	MW-3	App. IV	Radium-226	pCi/L	35	0	0%	0.000244	0.552	↔	0.00106	0.836	↔	-0.000248	0.058	↔	2018-05-01	2019-01-23	0.168	↔
03_03_120	MW-3	App. IV	Radium-228	pCi/L	35	0	0%	-0.00440	0.118	↔	0.00136	0.156	↔	-0.000159	0.409	↔	2016-10-17	2018-11-26	0.214	↔
03_03_121	MW-3	App. IV	Selenium	ug/L	36	35	97%	-0.000107	0.541	↔	-0.00371	0.082	↔	0.00322	0.013	↔	2021-11-23	2023-04-25	0.567	↔
03_03_124	MW-3	App. IV	Thallium	ug/L	36	36	100%	-0.0116	0.000	↓	0.000218	0.719	↔	-0.0000890	0.694	↔	2017-05-04	2020-01-16	0.941	↔
03_03_126	MW-3	App. IV	Total Radium	pCi/L	35	0	0%	-0.00445	0.213	↔	0.00229	0.153	↔	-0.000322	0.163	↔	2016-10-22	2018-08-06	0.195	↔
04_01_111	MW-4	App. I Metals	Copper	ug/L	37	32	86%	-0.00185	0.853	↔	0.168	0.372	↔	-0.0680	0.003	↓	2021-01-02	2021-11-16	0.319	↔
04_01_117	MW-4	App. I Metals	Nickel	ug/L	37	11	30%	0.00324	0.003	↑	-0.00907	0.632	↔	0.00450	0.046	↔	2020-11-20	2021-08-12	0.498	↔
04_02_105	MW-4	App. III	Boron	ug/L	36	23	64%	0.0361	0.353	↔	-0.0120	0.485	↔	0.00310	0.906	↔	2017-10-17	2022-01-17	0.059	↔
04_02_107	MW-4	App. III	Calcium	ug/L	37	0	0%	75.5	0.000	↑	-6.32	0.004	↓	24.1	0.817	↔	2017-05-28	2024-04-23	0.677	↔
04_02_108	MW-4	App. III	Chloride	mg/L	37	0	0%	0.664	0.000	↑	-0.0426	0.372	↔	-0.0959	0.002	↓	2017-04-04	2020-05-14	0.739	↔
04_02_112	MW-4	App. III	Fluoride	mg/L	37	0	0%	-0.000229	0.300	↔	0.000000676	0.975	↔	0.000118	0.001	↑	2017-01-20	2021-08-10	0.554	↔
04_02_118	MW-4	App. III	pH (Field)	S.U.	35	0	0%	-0.0000505	0.192	↔	-0.000204	0.070	↔	0.00109	0.477	↔	2021-08-11	2024-05-02	0.419	↔
04_02_123	MW-4	App. III	Sulfate	mg/L	37	0	0%	0.00875	0.000	↑	-0.00102	0.130	↔	0.00185	0.249	↔	2018-01-23	2022-06-14	0.729	↔
04_02_125	MW-4	App. III	Total Dissolved Solids	mg/L	37	0	0%	0.986	0.000	↑	-0.101	0.015	↔	0.561	0.753	↔	2017-11-17	2024-04-15	0.705	↔
04_03_102	MW-4	App. IV	Arsenic	ug/L	37	35	95%	0.00580	0.000	↑	-0.000284	0.464	↔	-0.00213	0.001	↓	2017-05-10	2021-08-21	0.709	↔
04_03_103	MW-4	App. IV	Barium	ug/L	37	0	0%	0.371	0.001	↑	-0.0107	0.509	↔	0.0815	0.401	↔	2017-05-02	2023-04-25	0.628	↔
04_03_106	MW-4	App. IV	Cadmium	ug/L	37	36	97%	0.0000127	0.835	↔	-0.000111	0.000	↓	0.00000385	0.978	↔	2018-03-14	2023-04-26	0.731	↔
04_03_109	MW-4	App. IV	Chromium	ug/L	37	28	76%	-0.0000208	0.986	↔	0.00214	0.186	↔	-0.00528	0.019	↔	2019-07-08	2022-04-21	0.289	↔
04_03_110	MW-4	App. IV	Cobalt	ug/L	37	20	54%	0.00422	0.097	↔	-0.0131	0.619	↔	0.0128	0.004	↑	2020-04-17	2021-05-01	0.473	↔
04_03_112	MW-4	App. IV	Fluoride	mg/L	37	0	0%	-0.000229	0.300	↔	0.000000676	0.975	↔	0.000118	0.001	↑	2017-01-20	2021-08-10	0.554	↔
04_03_113	MW-4	App. IV	Lead	ug/L	37	36	97%	0.000935	0.016	↔	-0.00612	0.017	↔	0.0617	0.003	↑	2022-07-11	2024-04-23	0.650	↔
04_03_114	MW-4	App. IV	Lithium	ug/L	37	0	0%	0.00251	0.781	↔	0.0151	0.342	↔	-0.00362	0.681	↔	2018-12-09	2021-08-11	0.270	↔
04_03_119	MW-4	App. IV	Radium-226	pCi/L	35	0	0%	0.000451	0.002	↑	-0.00153	0.050	↔	0.000159	0.285	↔	2019-10-22	2021-02-28	0.485	↔
04_03_120	MW-4	App. IV	Radium-228	pCi/L	35	0	0%	0.000809	0.417	↔	0.0000479	0.700	↔	-0.000866	0.154	↔	2017-04-04	2022-12-09	0.241	↔
04_03_121	MW-4	App. IV	Selenium	ug/L	37	35	95%	-0.0000380	0.835	↔	-0.00450	0.048	↔	0.00353	0.011	↔	2022-01-06	2023-04-25	0.549	↔
04_03_124	MW-4	App. IV	Thallium	ug/L	37	37	100%	-0.0115	0.000	↓	0.000184	0.724	↔	-0.0000847	0.703	↔	2017-05-04	2020-01-16	0.942	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
04_03_126	MW-4	App. IV	Total Radium	pCi/L	35	0	0%	0.000815	0.015	↔	-0.00136	0.300	↔	-0.0000629	0.818	↔	2019-06-17	2021-01-26	0.292	↔
05_01_111	MW-5	App. I Metals	Copper	ug/L	38	28	74%	0.000902	0.278	↔	0.00512	0.320	↔	-0.00772	0.001	↓	2020-09-05	2022-04-18	0.401	↔
05_01_117	MW-5	App. I Metals	Nickel	ug/L	38	29	76%	-0.00604	0.715	↔	0.0155	0.223	↔	-0.0316	0.183	↔	2018-08-30	2022-07-12	0.124	↔
05_01_122	MW-5	App. I Metals	Silver	ug/L	38	38	100%	0.000000000000149	1.000	↔	-0.00200	0.000	↓	0.0000000000568	1.000	↔	2021-07-07	2024-04-05	0.769	↔
05_02_107	MW-5	App. III	Calcium	ug/L	38	0	0%	-14.7	0.061	↔	2.64	0.101	↔	-2.90	0.000	↓	2016-08-10	2019-07-09	0.599	↔
05_02_108	MW-5	App. III	Chloride	mg/L	38	0	0%	-0.0191	0.001	↓	0.00468	0.000	↑	-0.00188	0.000	↓	2016-08-09	2019-07-13	0.638	↔
05_02_112	MW-5	App. III	Fluoride	mg/L	38	0	0%	-0.000398	0.181	↔	0.0000874	0.213	↔	0.00000408	0.848	↔	2016-08-31	2019-07-08	0.207	↔
05_02_123	MW-5	App. III	Sulfate	mg/L	38	0	0%	0.00221	0.002	↑	-0.00474	0.060	↔	0.000294	0.072	↔	2018-01-24	2019-01-20	0.466	↔
05_02_125	MW-5	App. III	Total Dissolved Solids	mg/L	38	0	0%	0.261	0.302	↔	-0.109	0.098	↔	0.0625	0.774	↔	2017-10-16	2022-10-11	0.154	↔
05_03_102	MW-5	App. IV	Arsenic	ug/L	38	36	95%	0.00581	0.001	↑	-0.000295	0.453	↔	-0.00212	0.001	↓	2017-05-11	2021-08-09	0.704	↔
05_03_103	MW-5	App. IV	Barium	ug/L	38	0	0%	0.0176	0.030	↔	-0.0269	0.006	↓	0.00338	0.877	↔	2019-07-08	2022-10-23	0.435	↔
05_03_106	MW-5	App. IV	Cadmium	ug/L	38	38	100%	0.0000182	0.761	↔	-0.000111	0.000	↓	0.00000838	0.951	↔	2018-01-26	2023-04-28	0.739	↔
05_03_109	MW-5	App. IV	Chromium	ug/L	38	28	74%	-0.0125	0.763	↔	0.0310	0.223	↔	-0.0649	0.213	↔	2018-07-09	2022-07-12	0.113	↔
05_03_110	MW-5	App. IV	Cobalt	ug/L	38	36	95%	-0.000673	0.041	↔	0.0123	0.247	↔	-0.00286	0.000	↓	2020-04-16	2020-11-09	0.625	↔
05_03_112	MW-5	App. IV	Fluoride	mg/L	38	0	0%	-0.000398	0.181	↔	0.0000874	0.213	↔	0.00000408	0.848	↔	2016-08-31	2019-07-08	0.207	↔
05_03_113	MW-5	App. IV	Lead	ug/L	38	37	97%	0.000869	0.023	↔	-0.00481	0.017	↔	0.0581	0.003	↑	2022-04-18	2024-04-17	0.659	↔
05_03_114	MW-5	App. IV	Lithium	ug/L	38	1	3%	-0.000259	0.901	↔	0.00601	0.298	↔	-0.00340	0.184	↔	2019-07-08	2021-08-08	0.180	↔
05_03_116	MW-5	App. IV	Molybdenum	ug/L	38	35	92%	-0.00114	0.499	↔	0.00866	0.143	↔	-0.00906	0.021	↔	2020-01-20	2022-04-18	0.284	↔
05_03_121	MW-5	App. IV	Selenium	ug/L	38	37	97%	-0.000113	0.503	↔	-0.00360	0.081	↔	0.00320	0.012	↔	2021-11-16	2023-04-25	0.563	↔
05_03_124	MW-5	App. IV	Thallium	ug/L	38	37	97%	-0.0165	0.000	↓	0.000167	0.923	↔	-0.0000761	0.919	↔	2017-04-08	2020-01-16	0.719	↔
05_03_126	MW-5	App. IV	Total Radium	pCi/L	36	0	0%	-0.00466	0.659	↔	0.0000200	0.767	↔	0.00312	0.515	↔	2016-02-05	2024-04-28	0.127	↔
06_01_111	MW-6	App. I Metals	Copper	ug/L	37	32	86%	-0.000480	0.792	↔	0.00532	0.058	↔	-0.00732	0.006	↓	2019-04-03	2021-11-17	0.357	↔
06_01_122	MW-6	App. I Metals	Silver	ug/L	37	37	100%	-0.00000000000131	1.000	↔	-0.00201	0.000	↓	-0.0000000000354	1.000	↔	2021-07-08	2024-04-04	0.757	↔
06_01_128	MW-6	App. I Metals	Zinc	ug/L	37	26	70%	-0.0101	0.653	↔	0.00333	0.008	↑	-0.0282	0.180	↔	2016-10-22	2023-10-03	0.283	↔
06_02_105	MW-6	App. III	Boron	ug/L	36	23	64%	-0.0188	0.003	↓	0.00440	0.000	↑	-0.000348	0.852	↔	2017-03-22	2021-12-20	0.662	↔
06_02_108	MW-6	App. III	Chloride	mg/L	37	0	0%	0.0343	0.334	↔	-0.100	0.135	↔	0.0222	0.476	↔	2019-01-09	2021-04-14	0.261	↔
06_02_112	MW-6	App. III	Fluoride	mg/L	37	1	3%	0.000151	0.090	↔	-0.000225	0.095	↔	0.0000266	0.460	↔	2018-04-22	2020-01-19	0.235	↔
06_02_123	MW-6	App. III	Sulfate	mg/L	37	0	0%	-0.0340	0.341	↔	-0.172	0.122	↔	0.00139	0.905	↔	2018-01-24	2019-05-23	0.706	↔
06_03_102	MW-6	App. IV	Arsenic	ug/L	37	35	95%	0.00584	0.007	↑	-0.000178	0.685	↔	-0.00302	0.005	↓	2017-04-28	2022-04-18	0.590	↔
06_03_104	MW-6	App. IV	Beryllium	ug/L	37	36	97%	-0.000147	0.049	↔	0.00245	0.048	↔	-0.000464	0.000	↓	2020-04-14	2020-10-15	0.533	↔
06_03_106	MW-6	App. IV	Cadmium	ug/L	37	37	100%	0.0000113	0.851	↔	-0.000117	0.000	↓	0.0000169	0.923	↔	2018-04-10	2023-04-25	0.738	↔
06_03_110	MW-6	App. IV	Cobalt	ug/L	37	36	97%	-0.000677	0.044	↔	0.0125	0.250	↔	-0.00268	0.000	↓	2020-04-15	2020-10-25	0.598	↔
06_03_112	MW-6	App. IV	Fluoride	mg/L	37	1	3%	0.000151	0.090	↔	-0.000225	0.095	↔	0.0000266	0.460	↔	2018-04-22	2020-01-19	0.235	↔
06_03_113	MW-6	App. IV	Lead	ug/L	37	35	95%	0.000883	0.021	↔	-0.00436	0.083	↔	0.0578	0.004	↑	2022-04-19	2024-04-22	0.632	↔
06_03_114	MW-6	App. IV	Lithium	ug/L	37	0	0%	0.00663	0.380	↔	-0.0812	0.016	↔	-0.000288	0.901	↔	2018-04-22	2019-02-09	0.724	↔
06_03_115	MW-6	App. IV	Mercury	ug/L	37	36	97%	0.0000489	0.255	↔	-0.0000158	0.562	↔	0.0000134	0.666	↔	2018-01-24	2021-08-26	0.076	↔
06_03_116	MW-6	App. IV	Molybdenum	ug/L	37	32	86%	-0.00171	0.303	↔	0.00638	0.214	↔	-0.00167	0.004	↓	2018-03-07	2019-07-08	0.311	↔
06_03_119	MW-6	App. IV	Radium-226	pCi/L	35	0	0%	0.000111	0.491	↔	-0.000577	0.687	↔	-0.0000148	0.932	↔	2019-07-10	2020-11-04	0.143	↔
06_03_120	MW-6	App. IV	Radium-228	pCi/L	35	0	0%	0.000325	0.402	↔	-0.000951	0.230	↔	0.000202	0.210	↔	2018-07-16	2020-01-16	0.150	↔
06_03_121	MW-6	App. IV	Selenium	ug/L	37	35	95%	-0.0000577	0.756	↔	-0.00372	0.030	↔	0.00350	0.014	↔	2021-09-24	2023-04-24	0.561	↔
06_03_124	MW-6	App. IV	Thallium	ug/L	37	34	92%	-0.0125	0.000	↓	0.0000611	0.926	↔	-0.0000117	0.950	↔	2017-04-18	2019-08-09	0.952	↔
06_03_126	MW-6	App. IV	Total Radium	pCi/L	35	0	0%	0.000179	0.435	↔	-0.00152	0.649	↔	0.000279	0.217	↔	2019-07-17	2020-08-19	0.173	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
07_01_111	MW-7R	App. I Metals	Copper	ug/L	28	20	71%	0.0354	0.199	↔	-0.0227	0.188	↔	0.00281	0.847	↔	2019-07-09	2022-01-06	0.215	↔
07_01_117	MW-7R	App. I Metals	Nickel	ug/L	28	12	43%	0.461	0.137	↔	-0.482	0.264	↔	0.0380	0.700	↔	2019-07-09	2021-01-07	0.232	↔
07_01_127	MW-7R	App. I Metals	Vanadium	ug/L	28	15	54%	-0.0575	0.089	↔	0.000378	0.868	↔	-0.00282	0.648	↔	2018-02-24	2022-07-14	0.294	↔
07_02_105	MW-7R	App. III	Boron	ug/L	27	12	44%	-0.0425	0.000	↓	0.00914	0.121	↔	-0.00117	0.565	↔	2018-12-24	2021-01-25	0.665	↔
07_02_107	MW-7R	App. III	Calcium	ug/L	28	0	0%	17.7	0.038	↔	-8.31	0.494	↔	8.18	0.129	↔	2019-10-14	2021-09-13	0.365	↔
07_02_108	MW-7R	App. III	Chloride	mg/L	28	0	0%	-0.0189	0.053	↔	0.0648	0.403	↔	-0.124	0.221	↔	2022-07-14	2023-11-08	0.257	↔
07_02_112	MW-7R	App. III	Fluoride	mg/L	28	1	4%	-0.000987	0.000	↓	0.0000184	0.016	↔	0.000102	0.742	↔	2018-02-24	2024-06-09	0.781	↔
07_02_118	MW-7R	App. III	pH (Field)	S.U.	28	0	0%	-0.0169	0.000	↓	-0.0000291	0.595	↔	0.00183	0.433	↔	2017-11-21	2024-06-02	0.878	↔
07_02_123	MW-7R	App. III	Sulfate	mg/L	28	0	0%	-0.144	0.000	↓	-0.00608	0.485	↔	-0.00133	0.001	↓	2018-02-24	2019-01-15	0.979	↔
07_02_125	MW-7R	App. III	Total Dissolved Solids	mg/L	28	0	0%	0.0951	0.047	↔	-0.0345	0.582	↔	0.154	0.156	↔	2020-09-29	2023-04-24	0.401	↔
07_03_101	MW-7R	App. IV	Antimony	ug/L	28	27	96%	0.00444	0.287	↔	-0.00620	0.292	↔	0.00102	0.450	↔	2019-07-09	2020-12-22	0.168	↔
07_03_102	MW-7R	App. IV	Arsenic	ug/L	28	26	93%	0.00000000000771	1.000	↔	-0.000367	0.575	↔	-0.00192	0.002	↓	2018-06-03	2021-06-28	0.672	↔
07_03_109	MW-7R	App. IV	Chromium	ug/L	28	8	29%	1.04	0.129	↔	-1.14	0.231	↔	0.0847	0.696	↔	2019-07-09	2020-12-12	0.238	↔
07_03_110	MW-7R	App. IV	Cobalt	ug/L	28	23	82%	0.00925	0.106	↔	-0.00630	0.390	↔	-0.00150	0.578	↔	2019-07-10	2021-07-04	0.283	↔
07_03_112	MW-7R	App. IV	Fluoride	mg/L	28	1	4%	-0.000987	0.000	↓	0.0000184	0.016	↔	0.000102	0.742	↔	2018-02-24	2024-06-09	0.781	↔
07_03_113	MW-7R	App. IV	Lead	ug/L	28	25	89%	0.00160	0.092	↔	-0.00442	0.020	↔	0.0885	0.000	↑	2021-10-05	2024-06-09	0.696	↔
07_03_114	MW-7R	App. IV	Lithium	ug/L	28	0	0%	0.0649	0.022	↔	0.0165	0.091	↔	-0.00100	0.472	↔	2018-02-24	2019-07-14	0.678	↔
07_03_119	MW-7R	App. IV	Radium-226	pCi/L	26	0	0%	0.00172	0.044	↔	-0.00237	0.334	↔	-0.000116	0.347	↔	2019-01-23	2019-08-15	0.371	↔
07_03_120	MW-7R	App. IV	Radium-228	pCi/L	26	0	0%	0.000254	0.176	↔	-0.00348	0.736	↔	0.00361	0.139	↔	2023-04-27	2024-01-24	0.210	↔
07_03_121	MW-7R	App. IV	Selenium	ug/L	28	27	96%	-0.0001000	0.830	↔	-0.00290	0.074	↔	0.00305	0.052	↔	2021-07-19	2023-04-24	0.503	↔
07_03_126	MW-7R	App. IV	Total Radium	pCi/L	26	0	0%	0.00175	0.321	↔	-0.000328	0.173	↔	0.00192	0.815	↔	2019-01-23	2024-04-28	0.148	↔
08_01_111	MW-8	App. I Metals	Copper	ug/L	38	30	79%	-0.00117	0.812	↔	0.0735	0.216	↔	-0.0883	0.016	↔	2022-01-02	2023-04-26	0.273	↔
08_01_117	MW-8	App. I Metals	Nickel	ug/L	38	19	50%	-0.00208	0.754	↔	0.115	0.324	↔	-0.124	0.019	↔	2022-03-06	2023-04-26	0.242	↔
08_01_122	MW-8	App. I Metals	Silver	ug/L	38	37	97%	-0.00000000000727	1.000	↔	0.000000000000878	1.000	↔	-0.00176	0.000	↓	2016-02-14	2021-08-03	0.753	↔
08_01_128	MW-8	App. I Metals	Zinc	ug/L	38	24	63%	-0.00848	0.034	↔	0.0414	0.232	↔	-0.0469	0.079	↔	2021-10-05	2023-04-26	0.233	↔
08_02_105	MW-8	App. III	Boron	ug/L	37	15	41%	-0.0223	0.004	↓	0.0285	0.578	↔	0.00170	0.060	↔	2017-05-06	2018-01-19	0.412	↔
08_02_107	MW-8	App. III	Calcium	ug/L	38	0	0%	-84.7	0.026	↔	-14.5	0.375	↔	18.5	0.213	↔	2017-10-13	2021-01-27	0.526	↔
08_02_108	MW-8	App. III	Chloride	mg/L	38	0	0%	-2.06	0.000	↓	-0.161	0.040	↔	0.0115	0.685	↔	2016-05-26	2019-05-24	0.777	↔
08_02_112	MW-8	App. III	Fluoride	mg/L	38	20	53%	0.0000387	0.573	↔	0.0000245	0.031	↔	0.0000294	0.000	↑	2016-10-07	2020-01-24	0.836	↔
08_02_118	MW-8	App. III	pH (Field)	S.U.	36	0	0%	0.000402	0.014	↔	0.00000957	0.815	↔	-0.000131	0.809	↔	2017-10-22	2023-10-05	0.440	↔
08_02_123	MW-8	App. III	Sulfate	mg/L	38	0	0%	0.00217	0.000	↑	-0.00168	0.031	↔	0.000481	0.229	↔	2019-03-23	2021-04-15	0.651	↔
08_02_125	MW-8	App. III	Total Dissolved Solids	mg/L	38	0	0%	10.8	0.069	↔	-0.593	0.012	↔	0.0775	0.165	↔	2016-02-11	2018-05-27	0.428	↔
08_03_101	MW-8	App. IV	Antimony	ug/L	38	31	82%	-0.0111	0.001	↓	-0.000516	0.477	↔	0.000404	0.542	↔	2017-02-14	2021-01-03	0.705	↔
08_03_102	MW-8	App. IV	Arsenic	ug/L	38	33	87%	0.00587	0.006	↑	0.00000686	0.982	↔	-0.00565	0.028	↔	2017-04-12	2023-04-27	0.585	↔
08_03_103	MW-8	App. IV	Barium	ug/L	38	0	0%	-2.00	0.221	↔	-0.277	0.196	↔	0.0520	0.303	↔	2016-04-06	2018-09-13	0.362	↔
08_03_104	MW-8	App. IV	Beryllium	ug/L	38	37	97%	-0.000146	0.178	↔	0.00239	0.500	↔	-0.000406	0.009	↓	2020-04-15	2020-10-31	0.259	↔
08_03_106	MW-8	App. IV	Cadmium	ug/L	38	37	97%	-0.0000937	0.181	↔	0.000289	0.203	↔	-0.000766	0.114	↔	2021-01-25	2023-04-27	0.199	↔
08_03_109	MW-8	App. IV	Chromium	ug/L	38	19	50%	0.0000451	0.993	↔	0.0621	0.677	↔	-0.0724	0.099	↔	2022-06-04	2023-04-26	0.099	↔
08_03_110	MW-8	App. IV	Cobalt	ug/L	38	34	89%	-0.000681	0.077	↔	0.0128	0.047	↔	-0.00239	0.000	↓	2020-04-14	2020-10-22	0.515	↔
08_03_112	MW-8	App. IV	Fluoride	mg/L	38	20	53%	0.0000387	0.573	↔	0.0000245	0.031	↔	0.0000294	0.000	↑	2016-10-07	2020-01-24	0.836	↔
08_03_113	MW-8	App. IV	Lead	ug/L	38	36	95%	0.000889	0.005	↑	-0.00443	0.032	↔	0.0567	0.001	↑	2022-06-04	2024-04-17	0.728	↔
08_03_114	MW-8	App. IV	Lithium	ug/L	38	1	3%	-0.0153	0.000	↓	0.00561	0.107	↔	0.0000660	0.997	↔	2019-04-28	2023-08-05	0.451	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
08_03_115	MW-8	App. IV	Mercury	ug/L	38	37	97%	0.0000772	0.205	↔	-0.0000497	0.298	↔	0.0000143	0.559	↔	2018-01-22	2020-07-12	0.108	↔
08_03_120	MW-8	App. IV	Radium-228	pCi/L	36	0	0%	-0.00121	0.762	↔	0.000348	0.135	↔	-0.00176	0.389	↔	2016-11-20	2023-04-27	0.104	↔
08_03_121	MW-8	App. IV	Selenium	ug/L	38	36	95%	0.000165	0.710	↔	-0.00106	0.005	↓	0.00159	0.352	↔	2019-03-24	2023-04-27	0.427	↔
08_03_124	MW-8	App. IV	Thallium	ug/L	38	36	95%	-0.0136	0.000	↓	0.0000609	0.955	↔	-0.0000116	0.969	↔	2017-04-18	2019-08-10	0.894	↔
08_03_126	MW-8	App. IV	Total Radium	pCi/L	36	0	0%	-0.000153	0.614	↔	0.00392	0.295	↔	-0.00488	0.094	↔	2022-02-11	2023-04-27	0.182	↔
09_01_111	MW-10	App. I Metals	Copper	ug/L	14	9	64%	0.216	0.174	↔	-0.139	0.497	↔	0.00416	0.943	↔	2022-04-21	2023-03-29	0.369	↔
09_01_117	MW-10	App. I Metals	Nickel	ug/L	14	4	29%	-0.0105	0.720	↔	0.0273	0.345	↔	-0.0356	0.344	↔	2022-09-06	2023-10-04	0.278	↔
09_01_127	MW-10	App. I Metals	Vanadium	ug/L	14	7	50%	-0.0101	0.579	↔	0.0177	0.457	↔	-0.0220	0.186	↔	2022-09-03	2023-10-03	0.284	↔
09_01_128	MW-10	App. I Metals	Zinc	ug/L	14	12	86%	-0.0215	0.752	↔	0.128	0.516	↔	-0.138	0.116	↔	2022-11-20	2023-10-03	0.360	↔
09_02_105	MW-10	App. III	Boron	ug/L	14	0	0%	0.00346	0.790	↔	0.0518	0.594	↔	-0.0203	0.326	↔	2023-03-26	2023-10-03	0.429	↔
09_02_107	MW-10	App. III	Calcium	ug/L	14	0	0%	9.46	0.328	↔	6.26	0.204	↔	-8.67	0.313	↔	2022-05-11	2023-10-04	0.622	↔
09_02_112	MW-10	App. III	Fluoride	mg/L	14	0	0%	0.0000213	0.780	↔	-0.000280	0.056	↔	0.000398	0.421	↔	2023-04-26	2024-04-09	0.556	↔
09_02_125	MW-10	App. III	Total Dissolved Solids	mg/L	14	0	0%	0.173	0.024	↔	0.0169	0.643	↔	-0.0156	0.340	↔	2022-02-10	2023-04-18	0.763	↔
09_03_101	MW-10	App. IV	Antimony	ug/L	14	13	93%	0.00598	0.326	↔	-0.00530	0.495	↔	0.00127	0.806	↔	2022-10-18	2023-10-02	0.240	↔
09_03_103	MW-10	App. IV	Barium	ug/L	14	0	0%	0.0359	0.674	↔	0.231	0.353	↔	-0.140	0.190	↔	2022-12-05	2023-10-03	0.612	↔
09_03_109	MW-10	App. IV	Chromium	ug/L	14	4	29%	-0.0124	0.780	↔	0.0658	0.450	↔	-0.0784	0.318	↔	2022-11-05	2023-10-04	0.292	↔
09_03_110	MW-10	App. IV	Cobalt	ug/L	14	12	86%	-0.0103	0.227	↔	0.00694	0.515	↔	-0.00963	0.197	↔	2022-09-09	2023-10-03	0.406	↔
09_03_112	MW-10	App. IV	Fluoride	mg/L	14	0	0%	0.0000213	0.780	↔	-0.000280	0.056	↔	0.000398	0.421	↔	2023-04-26	2024-04-09	0.556	↔
09_03_114	MW-10	App. IV	Lithium	ug/L	14	0	0%	-0.00249	0.557	↔	0.0100	0.034	↔	0.00189	0.721	↔	2022-08-31	2023-10-04	0.820	↔
09_03_115	MW-10	App. IV	Mercury	ug/L	14	14	100%	0.00000713	0.825	↔	-0.0000514	0.239	↔	0.0000355	0.229	↔	2022-10-22	2023-07-25	0.349	↔
09_03_120	MW-10	App. IV	Radium-228	pCi/L	14	0	0%	-0.0116	0.073	↔	0.000955	0.370	↔	-0.000269	0.796	↔	2021-12-13	2023-04-27	0.540	↔
09_03_121	MW-10	App. IV	Selenium	ug/L	14	12	86%	-0.00502	0.012	↔	0.0125	0.505	↔	-0.00228	0.607	↔	2023-04-27	2023-10-30	0.586	↔
09_03_124	MW-10	App. IV	Thallium	ug/L	14	13	93%	-0.0000277	0.724	↔	0.0000874	0.400	↔	-0.000160	0.042	↔	2022-09-03	2023-10-03	0.492	↔
10_01_111	MW-11	App. I Metals	Copper	ug/L	17	10	59%	0.0122	0.381	↔	-0.0440	0.548	↔	-0.000942	0.857	↔	2022-01-23	2022-07-04	0.366	↔
10_02_105	MW-11	App. III	Boron	ug/L	17	1	6%	0.00224	0.501	↔	-0.0272	0.746	↔	0.0320	0.562	↔	2023-11-30	2024-04-14	0.137	↔
10_02_107	MW-11	App. III	Calcium	ug/L	17	0	0%	-7.73	0.487	↔	123	0.144	↔	-112	0.132	↔	2023-07-06	2024-01-24	0.399	↔
10_02_112	MW-11	App. III	Fluoride	mg/L	17	1	6%	0.0000695	0.019	↔	-0.000580	0.010	↓	0.000413	0.028	↔	2023-07-17	2024-01-24	0.692	↔
10_02_123	MW-11	App. III	Sulfate	mg/L	17	0	0%	-0.000519	0.436	↔	0.00154	0.513	↔	-0.000348	0.604	↔	2022-06-24	2023-03-31	0.178	↔
10_03_102	MW-11	App. IV	Arsenic	ug/L	17	15	88%	0.000918	0.720	↔	-0.00559	0.260	↔	0.000648	0.758	↔	2022-01-25	2023-04-23	0.605	↔
10_03_103	MW-11	App. IV	Barium	ug/L	17	0	0%	-0.0545	0.163	↔	0.0837	0.174	↔	-0.171	0.260	↔	2022-07-16	2024-01-24	0.377	↔
10_03_106	MW-11	App. IV	Cadmium	ug/L	17	17	100%	0.0000239	0.901	↔	-0.000363	0.181	↔	0.000134	0.504	↔	2022-02-08	2023-04-24	0.470	↔
10_03_112	MW-11	App. IV	Fluoride	mg/L	17	1	6%	0.0000695	0.019	↔	-0.000580	0.010	↓	0.000413	0.028	↔	2023-07-17	2024-01-24	0.692	↔
10_03_113	MW-11	App. IV	Lead	ug/L	17	16	94%	0.0000000000588	1.000	↔	-0.00364	0.015	↔	0.118	0.000	↑	2021-11-06	2024-07-13	0.891	↔
10_03_114	MW-11	App. IV	Lithium	ug/L	17	0	0%	-0.00353	0.200	↔	0.0209	0.288	↔	-0.0271	0.021	↔	2023-03-22	2024-01-23	0.509	↔
10_03_115	MW-11	App. IV	Mercury	ug/L	17	17	100%	0.00000662	0.731	↔	-0.0000234	0.249	↔	0.0000282	0.276	↔	2022-03-06	2023-07-25	0.271	↔
10_03_116	MW-11	App. IV	Molybdenum	ug/L	17	15	88%	0.0000000000521	1.000	↔	-0.0271	0.039	↔	0.00216	0.052	↔	2022-04-18	2022-07-27	0.745	↔
10_03_121	MW-11	App. IV	Selenium	ug/L	17	17	100%	-0.00295	0.016	↔	0.0105	0.616	↔	-0.00180	0.707	↔	2023-04-24	2023-10-18	0.436	↔
10_03_124	MW-11	App. IV	Thallium	ug/L	17	16	94%	-0.00000197	0.797	↔	0.000105	0.121	↔	-0.000234	0.058	↔	2023-09-18	2024-04-01	0.667	↔
11_01_127	MW-11D	App. I Metals	Vanadium	ug/L	15	12	80%	-0.00567	0.003	↓	0.0121	0.372	↔	-0.00377	0.205	↔	2023-04-14	2023-10-01	0.741	↔
11_01_128	MW-11D	App. I Metals	Zinc	ug/L	15	11	73%	-0.000610	0.943	↔	0.0120	0.852	↔	-0.0218	0.060	↔	2023-01-21	2023-07-22	0.428	↔
11_02_108	MW-11D	App. III	Chloride	mg/L	15	0	0%	-0.644	0.112	↔	-0.0774	0.732	↔	-0.0237	0.974	↔	2022-04-19	2024-03-03	0.523	↔
11_02_112	MW-11D	App. III	Fluoride	mg/L	15	0	0%	0.0000768	0.363	↔	-0.000401	0.120	↔	0.000221	0.500	↔	2023-04-23	2024-03-01	0.484	↔

(Table continues on next page)

Table 10: Trend Tests: Piecewise Linear-Linear-Linear *(continued)*

								Line 1			Line 2			Line 3						
ID	Well	Constituent Type	Constituent	Unit	n	No. NDs	% NDs	Slope	p-Value	Trend	Slope	p-Value	Trend	Slope	p-Value	Trend	Break 1	Break 2	R-Squared	Overall Trend
11_03_106	MW-11D	App. IV	Cadmium	ug/L	15	15	100%	-0.0000151	0.959	↔	-0.000407	0.513	↔	0.000143	0.427	↔	2022-04-19	2023-04-23	0.431	↔
11_03_110	MW-11D	App. IV	Cobalt	ug/L	15	14	93%	-0.00579	0.007	↓	0.00929	0.550	↔	-0.00581	0.102	↔	2023-03-25	2023-10-01	0.735	↔
11_03_112	MW-11D	App. IV	Fluoride	mg/L	15	0	0%	0.0000768	0.363	↔	-0.000401	0.120	↔	0.000221	0.500	↔	2023-04-23	2024-03-01	0.484	↔
11_03_113	MW-11D	App. IV	Lead	ug/L	15	14	93%	-0.000000000146	1.000	↔	-0.00349	0.025	↔	0.118	0.000	↑	2021-11-30	2024-07-14	0.923	↔
11_03_115	MW-11D	App. IV	Mercury	ug/L	15	15	100%	0.00000754	0.733	↔	-0.0000376	0.363	↔	0.0000326	0.245	↔	2022-08-02	2023-07-25	0.318	↔
11_03_116	MW-11D	App. IV	Molybdenum	ug/L	15	0	0%	-0.148	0.163	↔	-0.0248	0.620	↔	0.00563	0.989	↔	2022-04-19	2024-05-16	0.487	↔
11_03_119	MW-11D	App. IV	Radium-226	pCi/L	15	0	0%	0.00365	0.103	↔	-0.000873	0.007	↓	0.00247	0.014	↔	2021-09-02	2024-01-01	0.735	↔
11_03_124	MW-11D	App. IV	Thallium	ug/L	15	14	93%	-0.0000161	0.794	↔	0.0000240	0.229	↔	-0.000198	0.290	↔	2022-04-15	2024-04-01	0.478	↔
11_03_126	MW-11D	App. IV	Total Radium	pCi/L	15	0	0%	-0.00858	0.056	↔	-0.000783	0.057	↔	0.00909	0.077	↔	2021-09-02	2024-06-29	0.780	↔

F

Appendix F – Downgradient Wells Plots

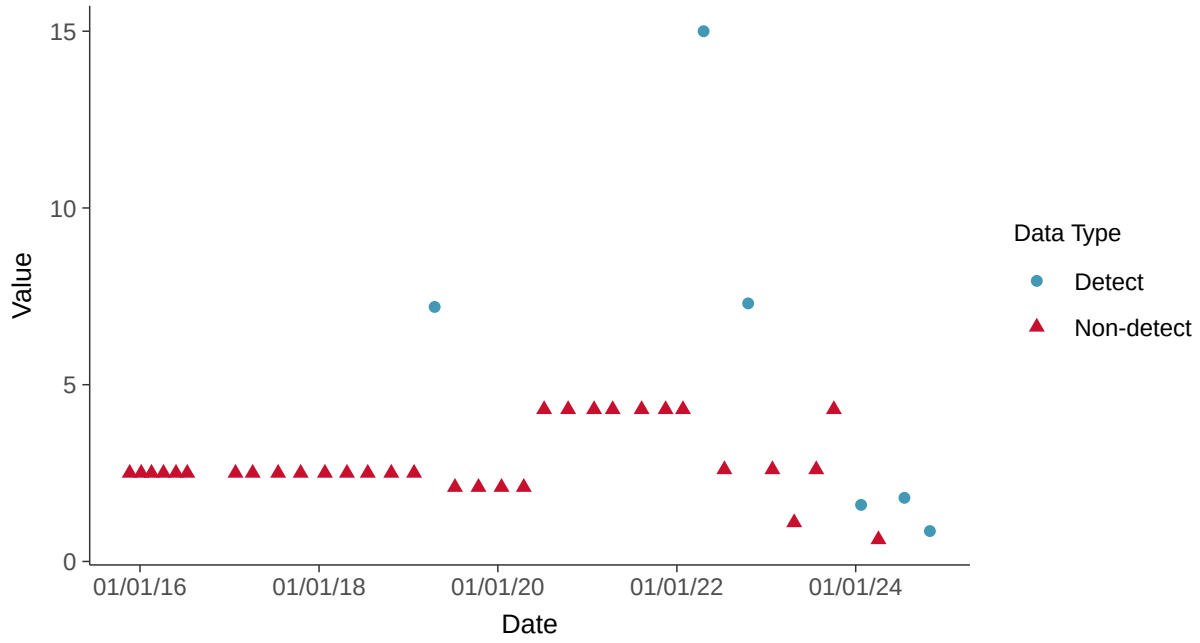
This page intentionally left blank.

App. I Metals: Copper, MW-1

ID: 01_01_111

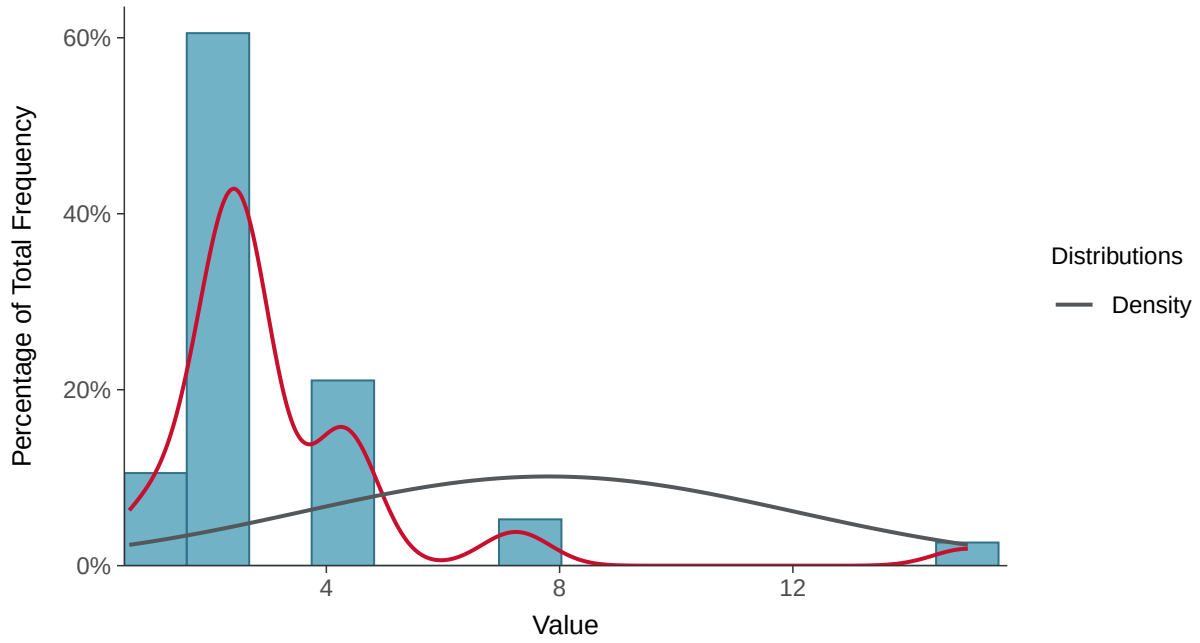
Scatter Plot

Copper, MW-1 (ug/L)



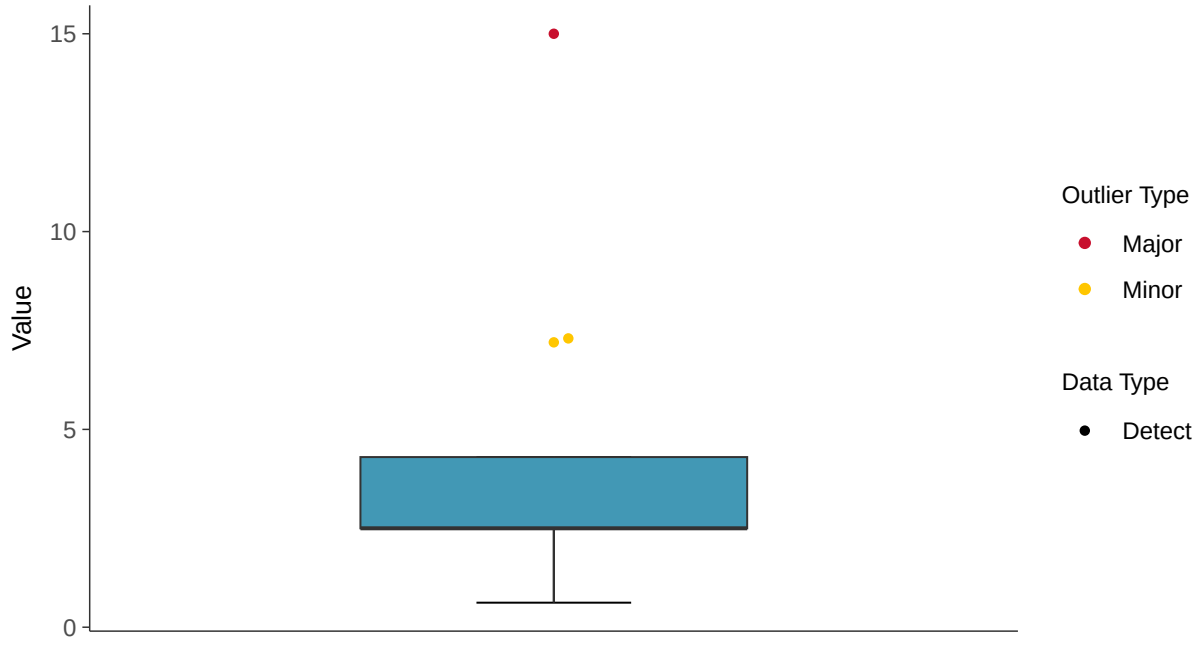
Histogram

Copper, MW-1 (ug/L)



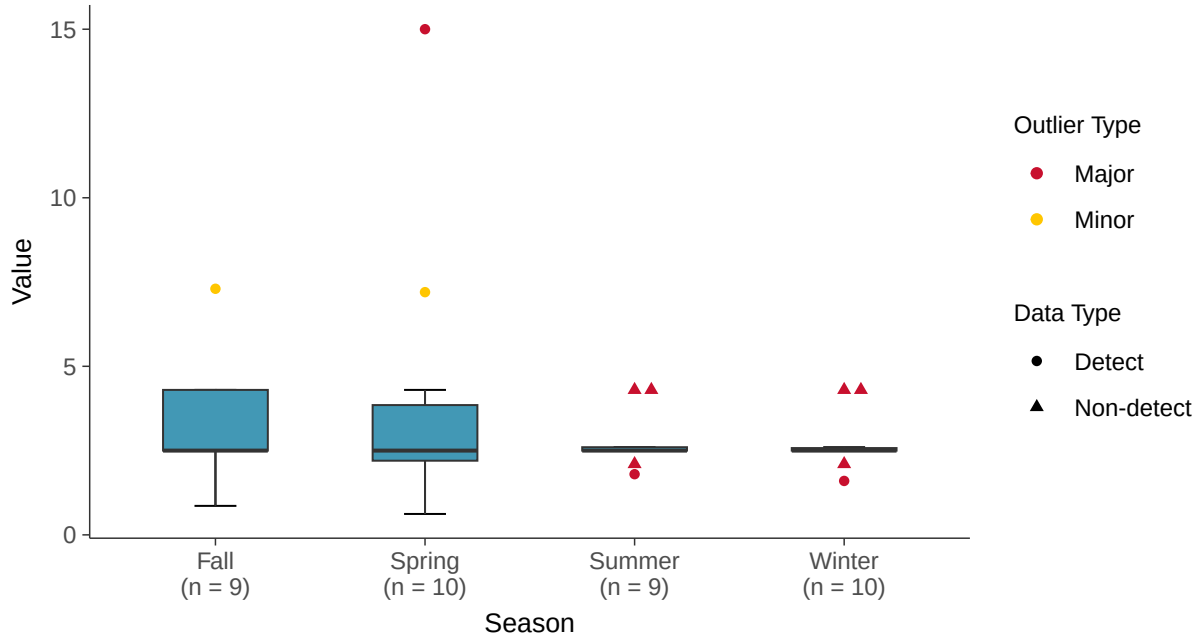
Boxplot

Copper, MW-1 (ug/L)



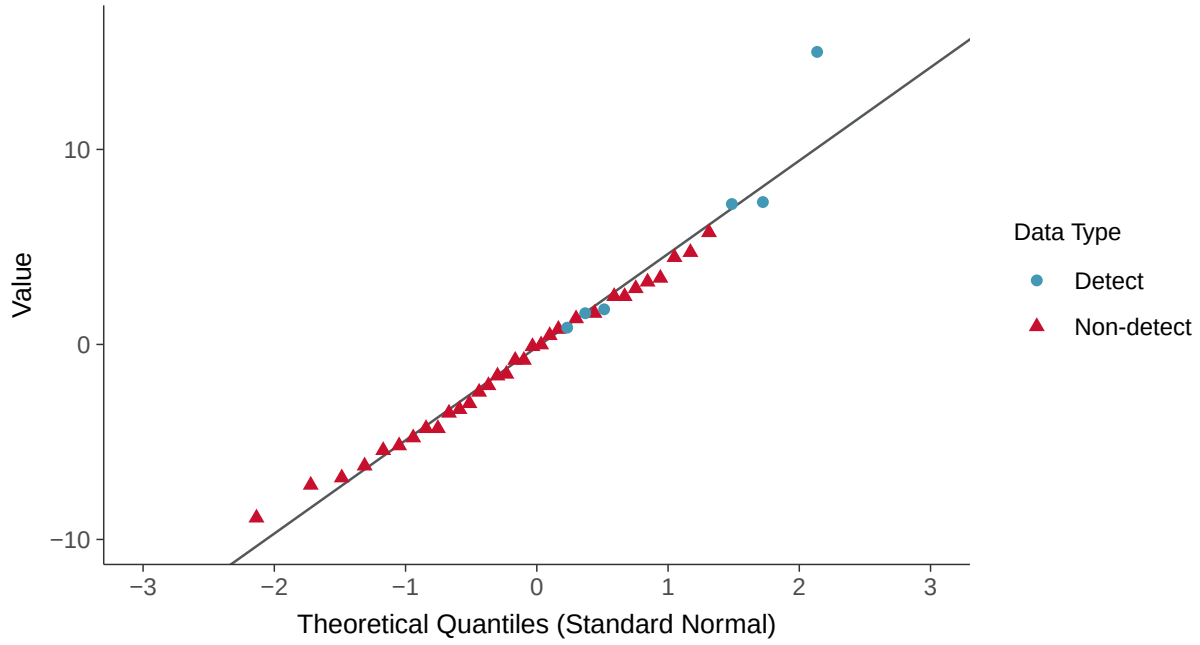
Boxplot by Season

Copper, MW-1 (ug/L)



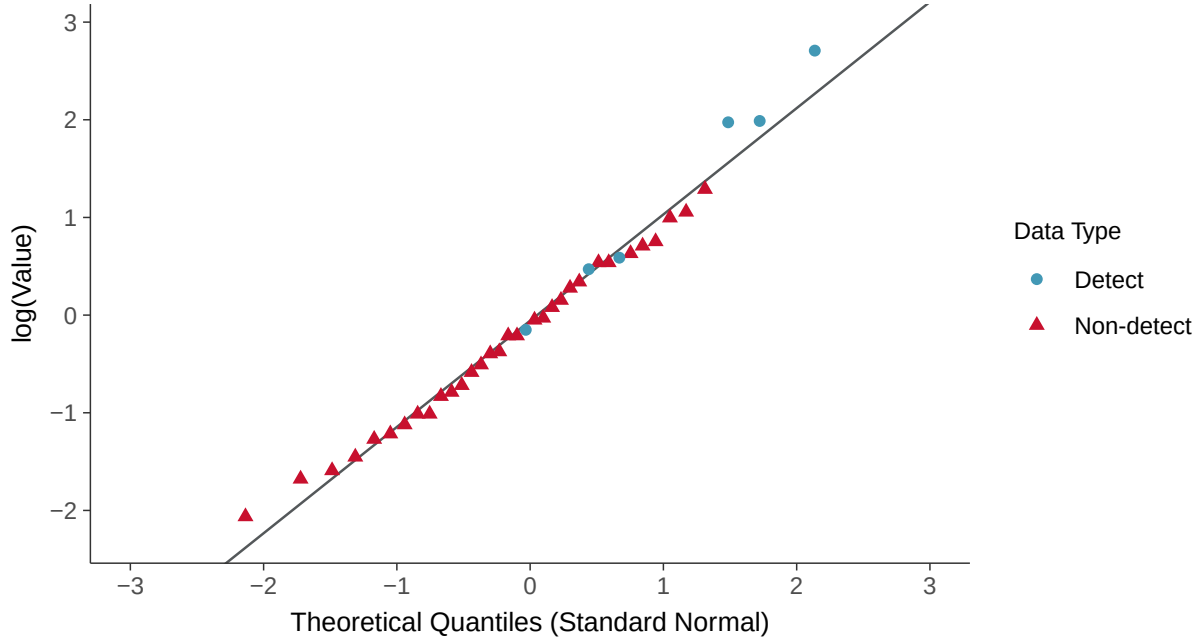
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-1 (ug/L)



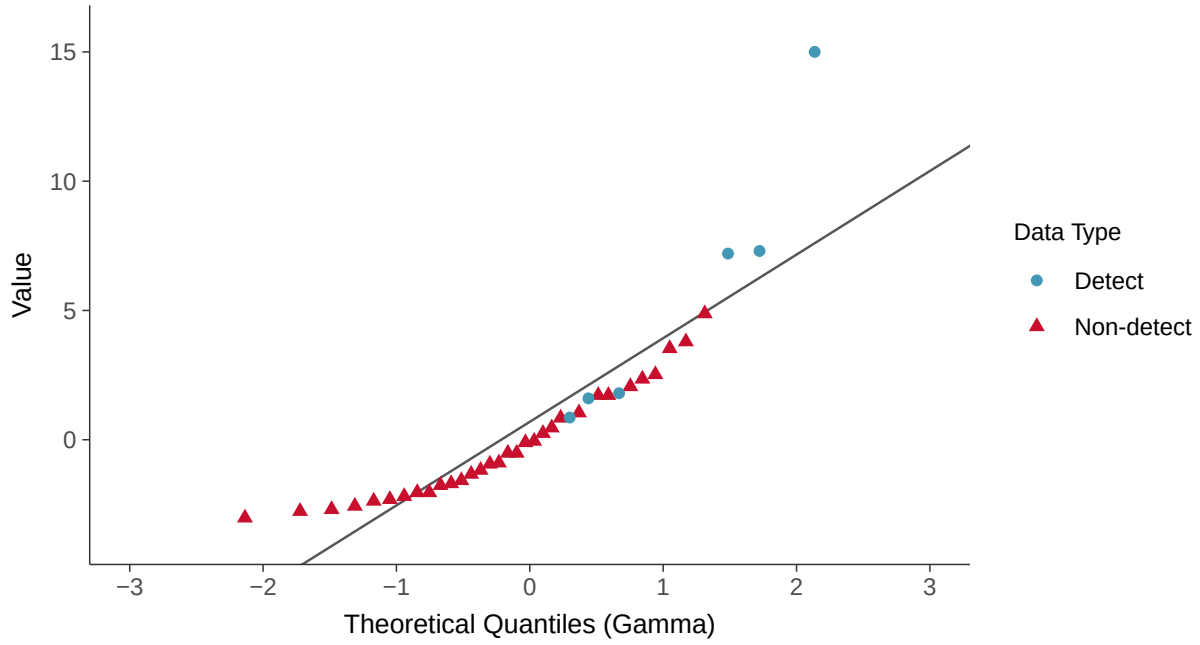
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-1 (ug/L)



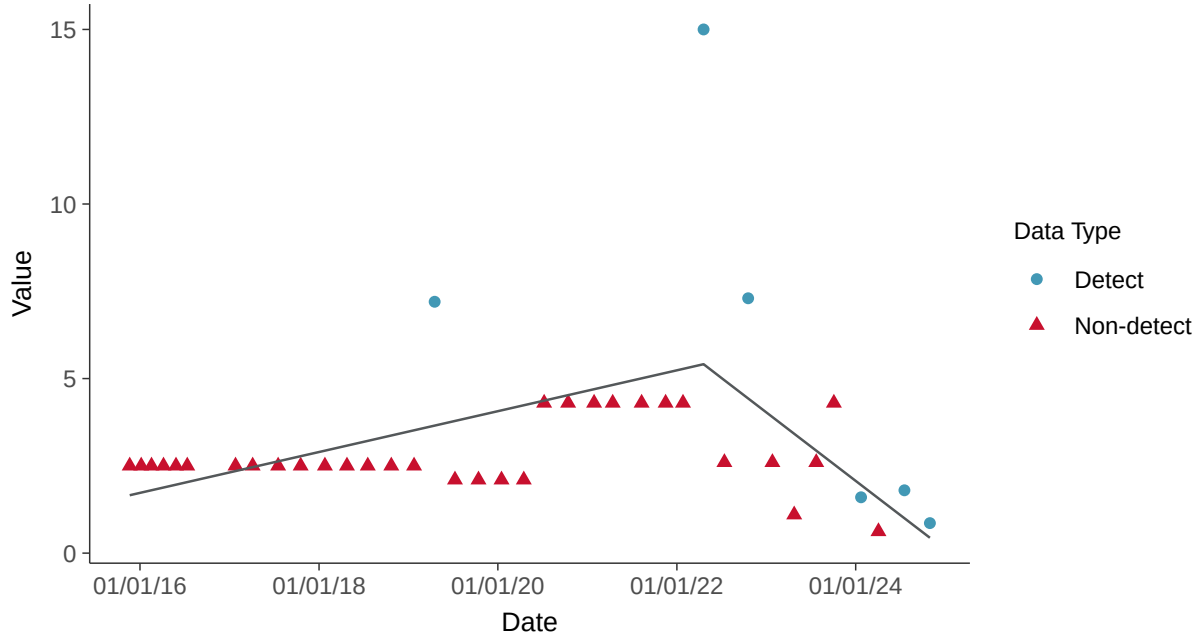
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-1 (ug/L)



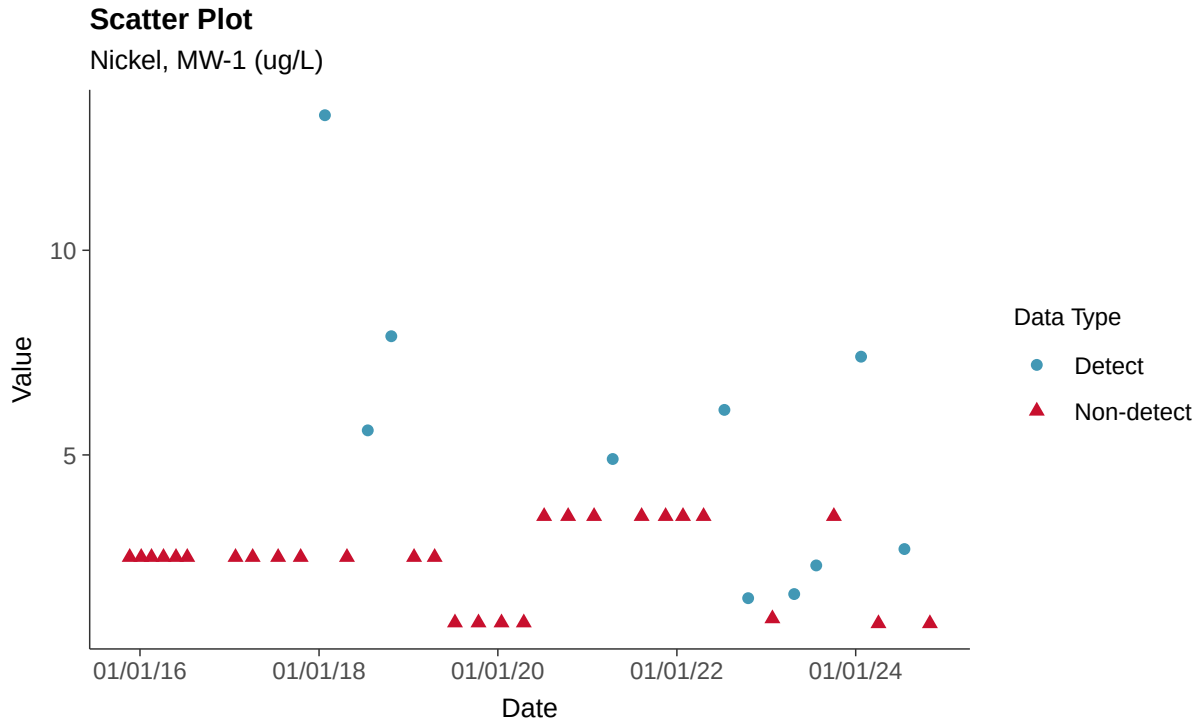
Trend Regression: Piecewise Linear-Linear

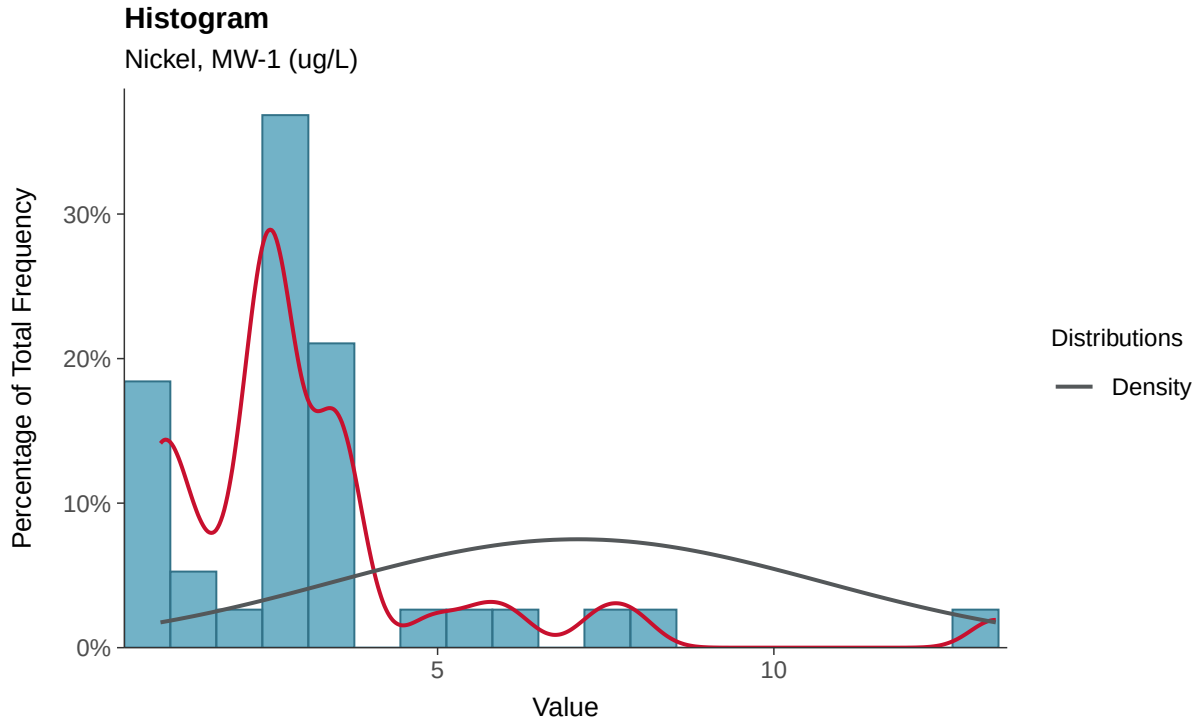
Copper, MW-1 (ug/L)



App. I Metals: Nickel, MW-1

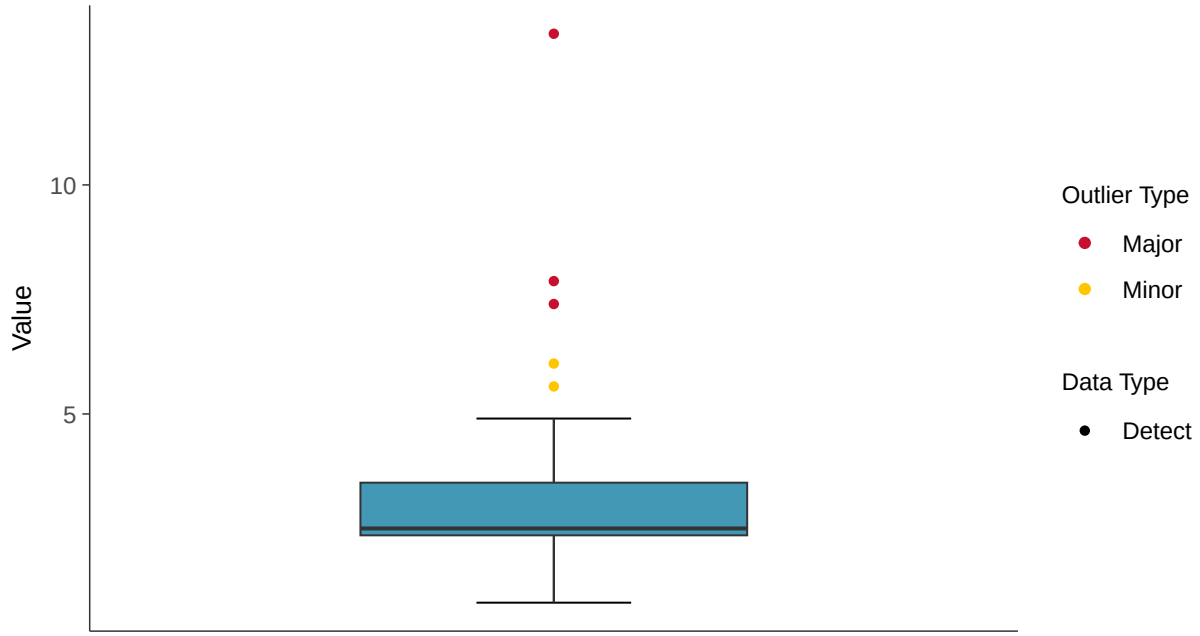
ID: 01_01_117





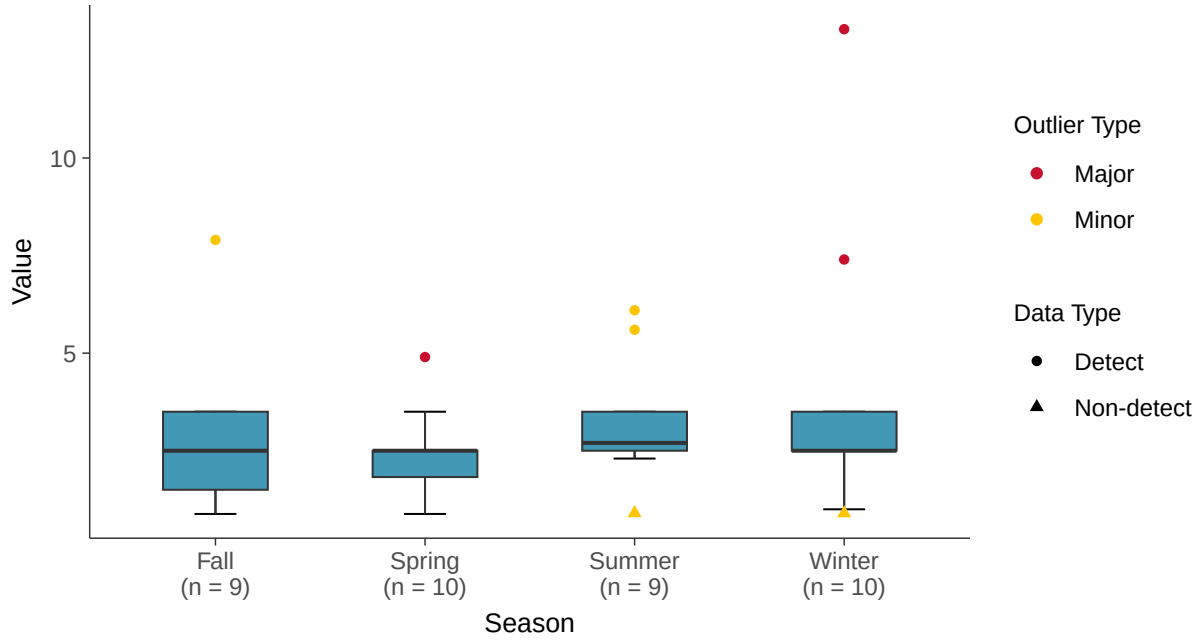
Boxplot

Nickel, MW-1 (ug/L)



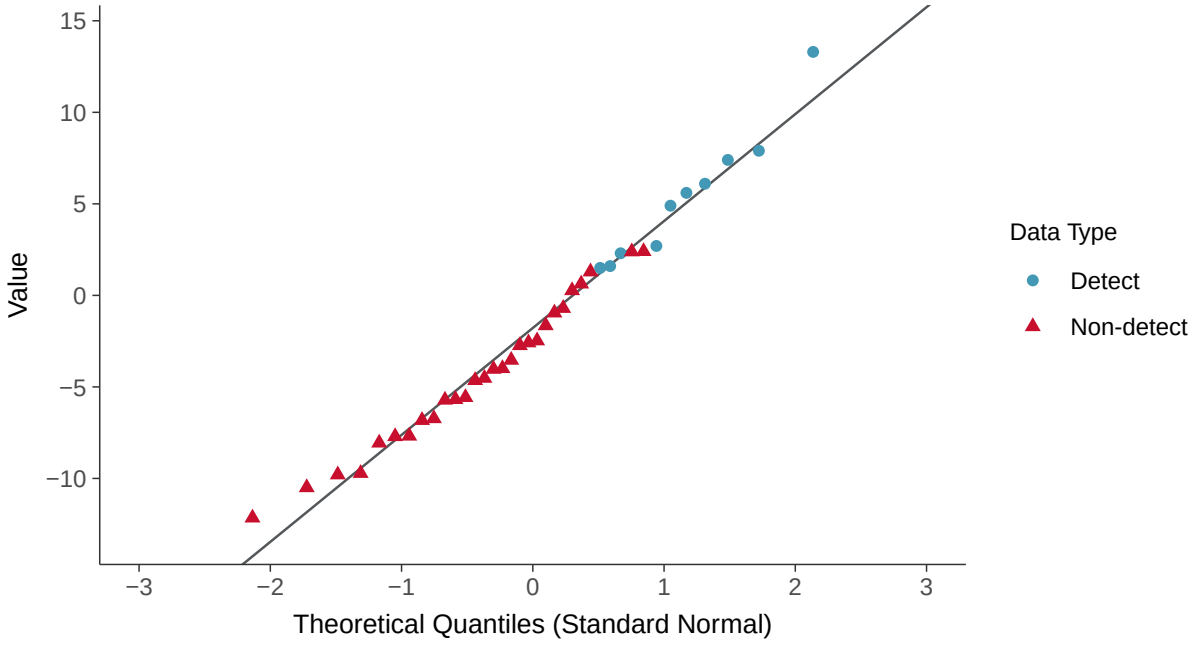
Boxplot by Season

Nickel, MW-1 (ug/L)



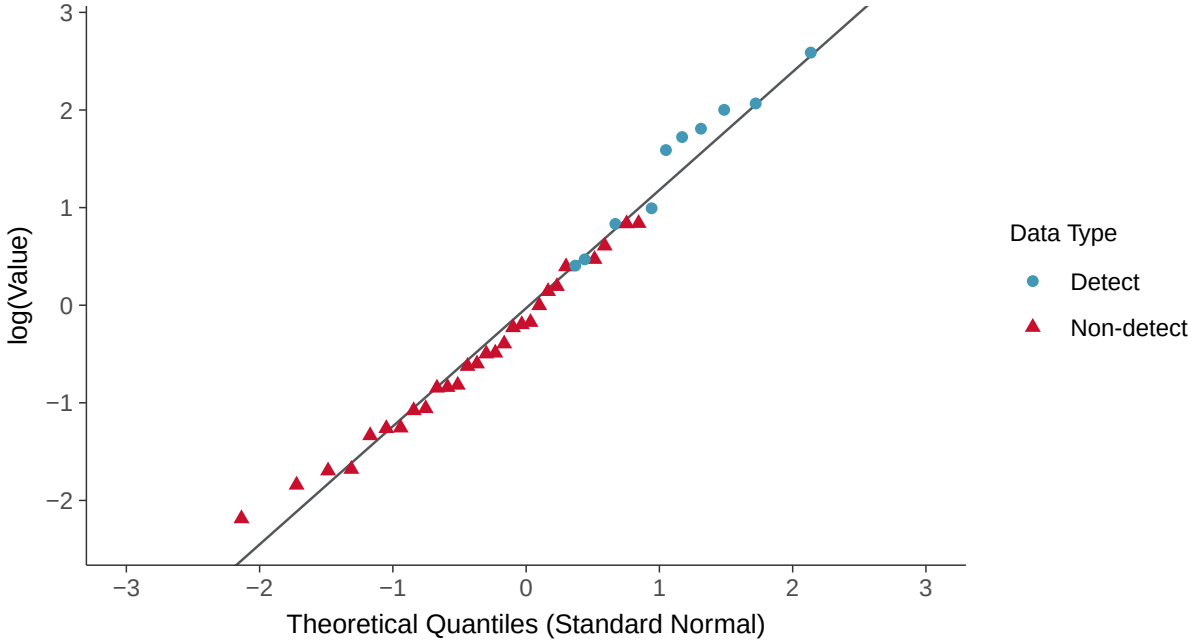
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



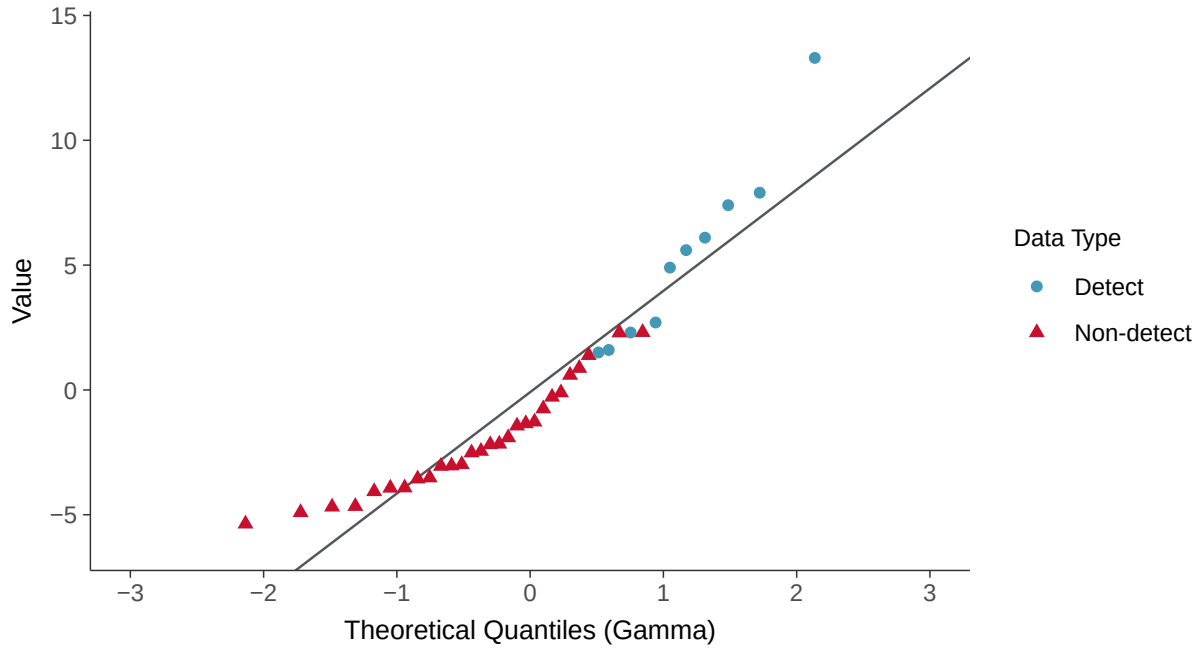
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



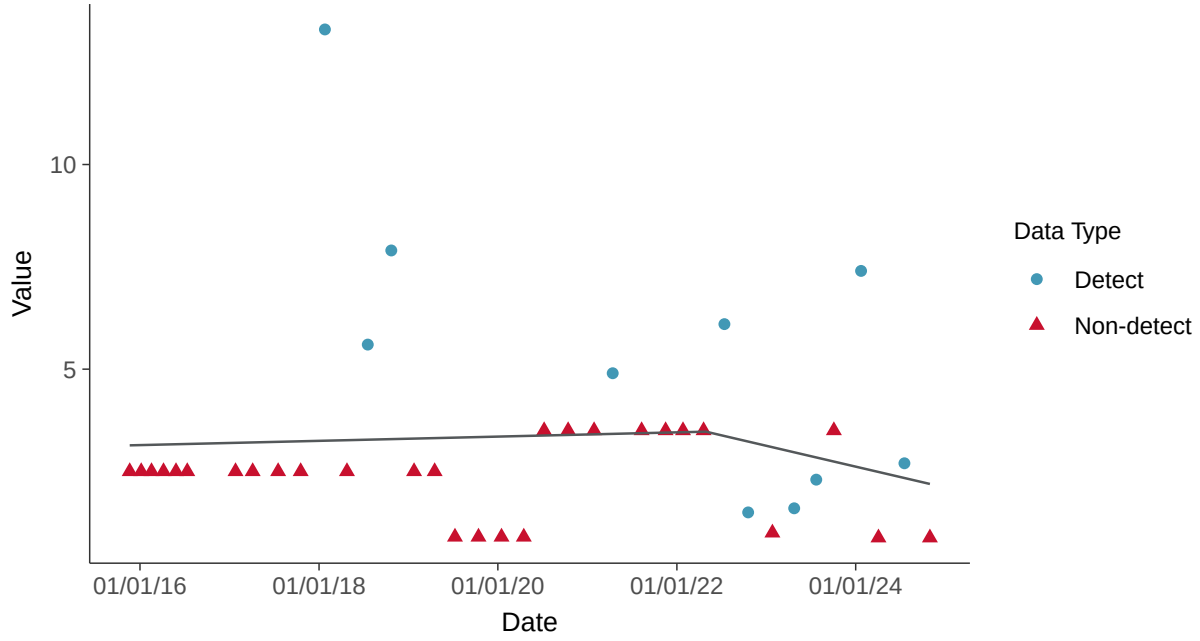
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-1 (ug/L)



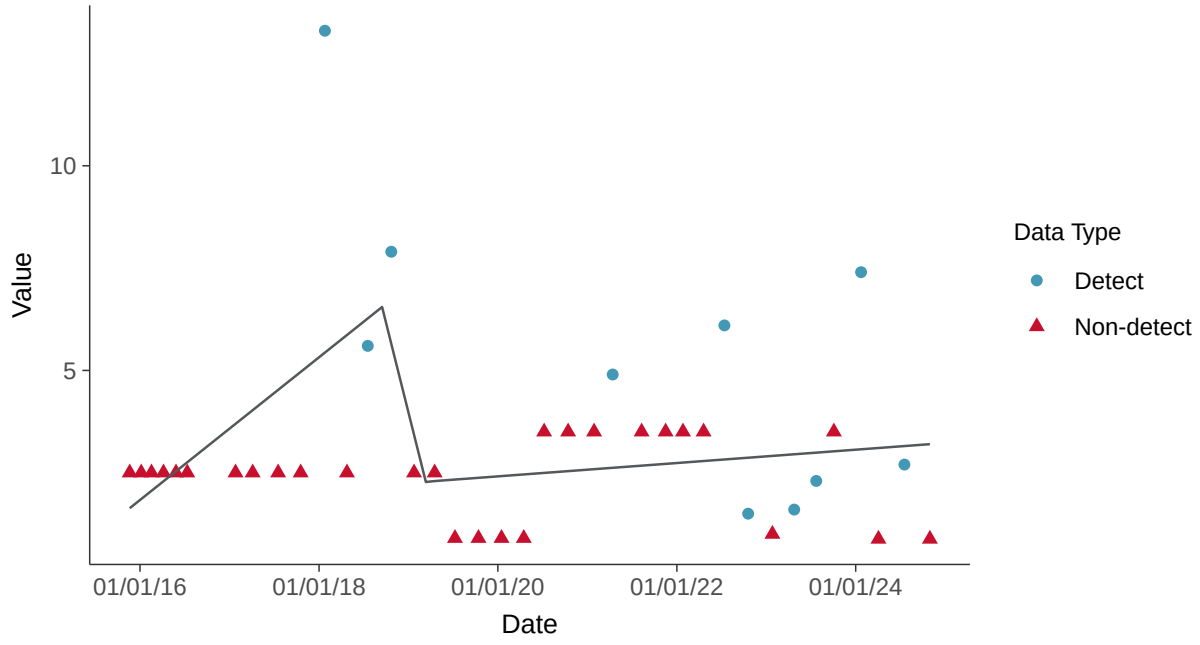
Trend Regression: Piecewise Linear-Linear

Nickel, MW-1 (ug/L)



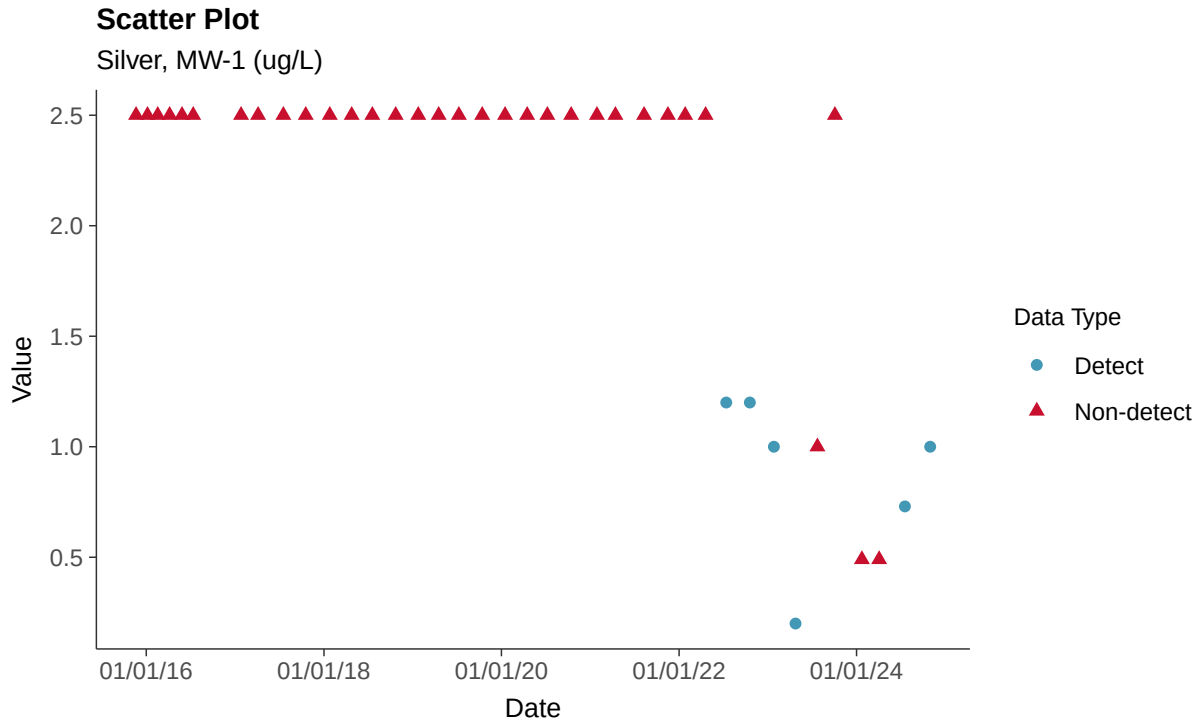
Trend Regression: Piecewise Linear-Linear-Linear

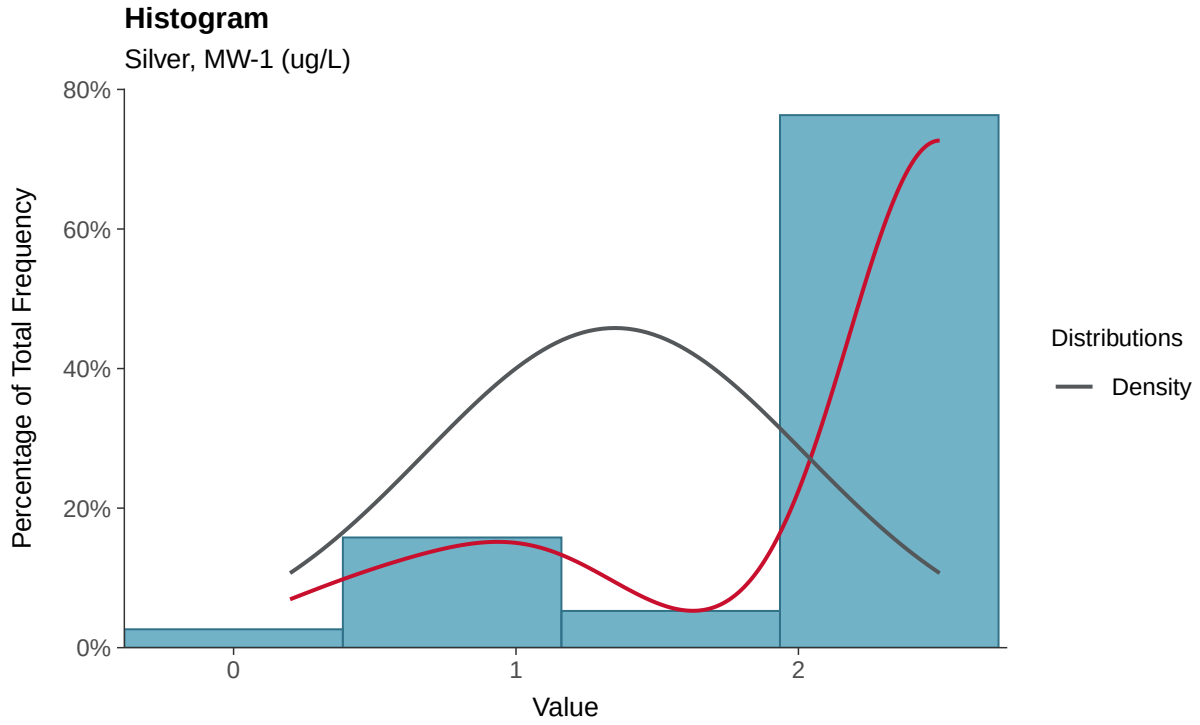
Nickel, MW-1 (ug/L)



App. I Metals: Silver, MW-1

ID: 01_01_122



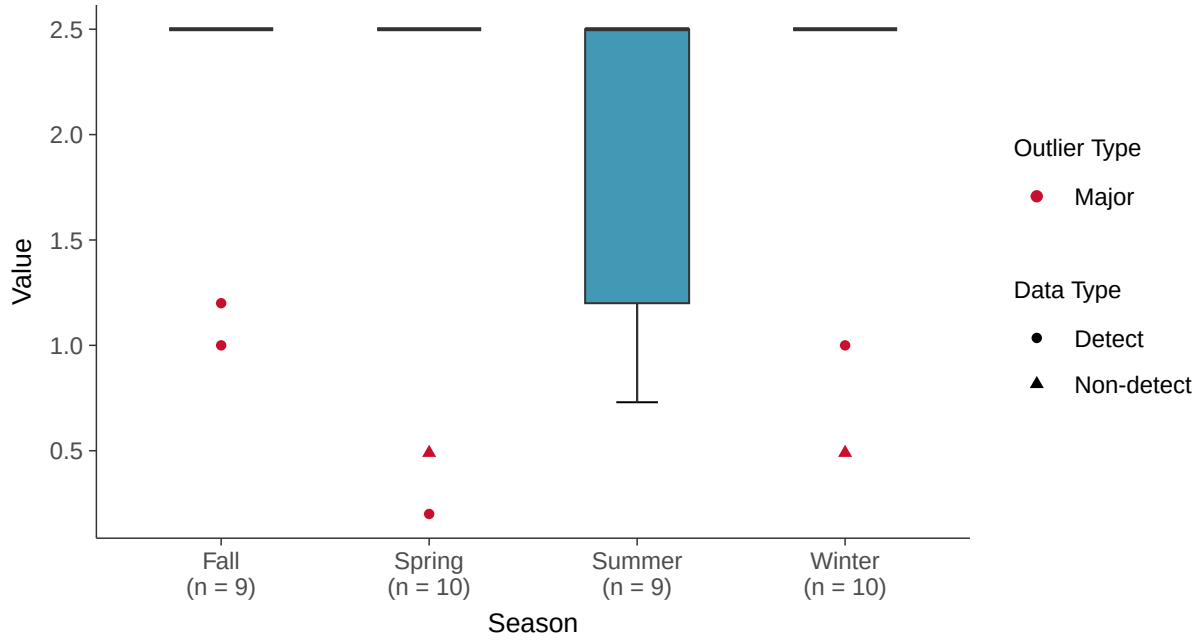


Boxplot

Silver, MW-1 (ug/L)

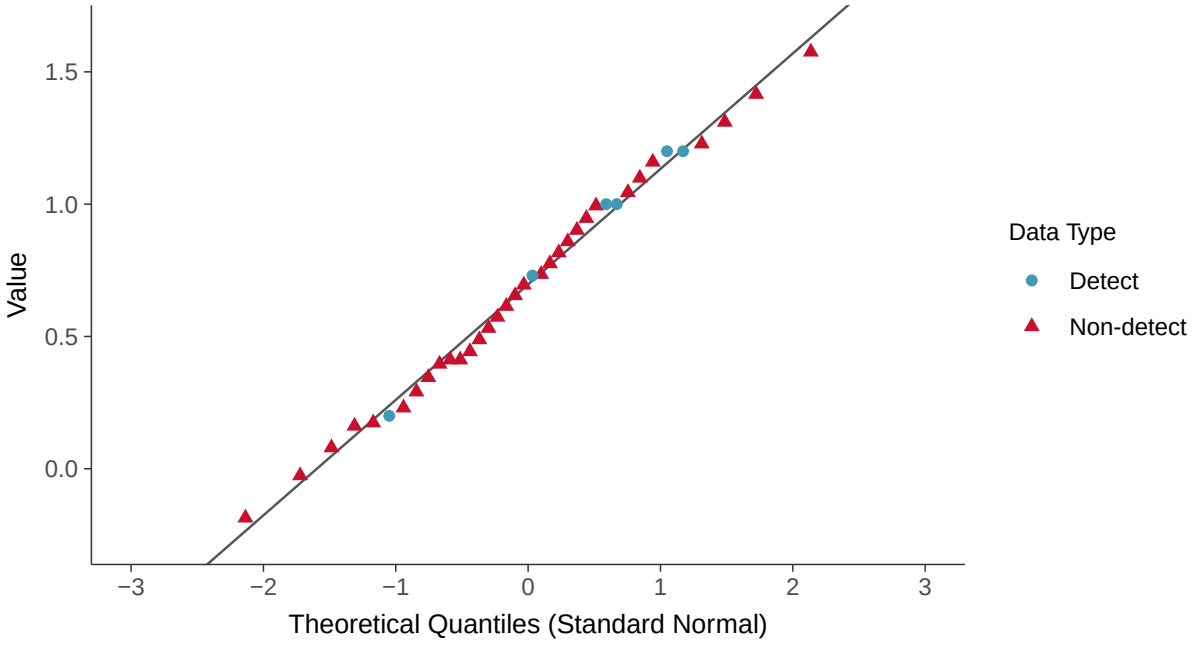
Boxplot by Season

Silver, MW-1 (ug/L)



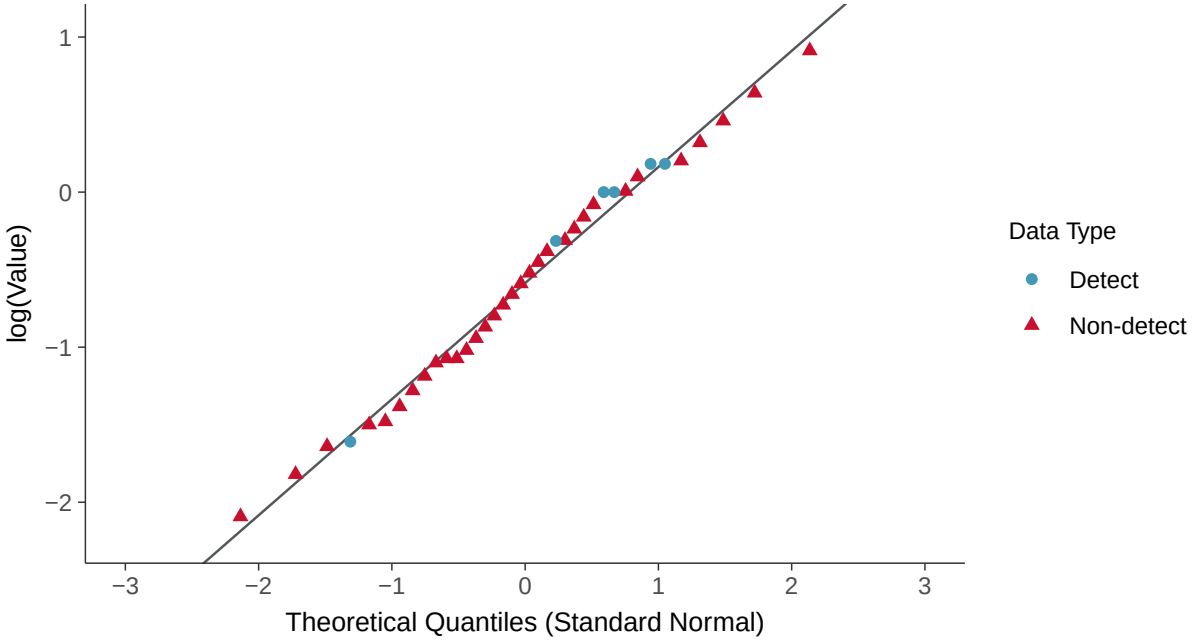
Normal Q-Q plot using ROS Imputed Estimates

Silver, MW-1 (ug/L)



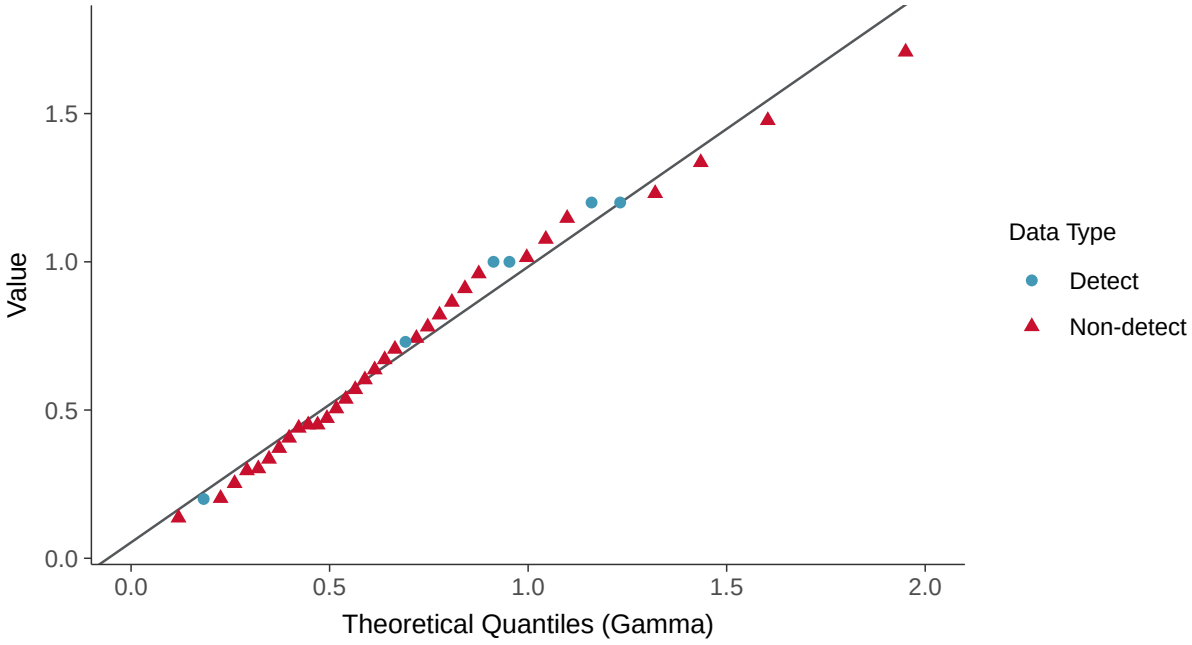
Lognormal Q-Q plot using ROS Imputed Estimates

Silver, MW-1 (ug/L)



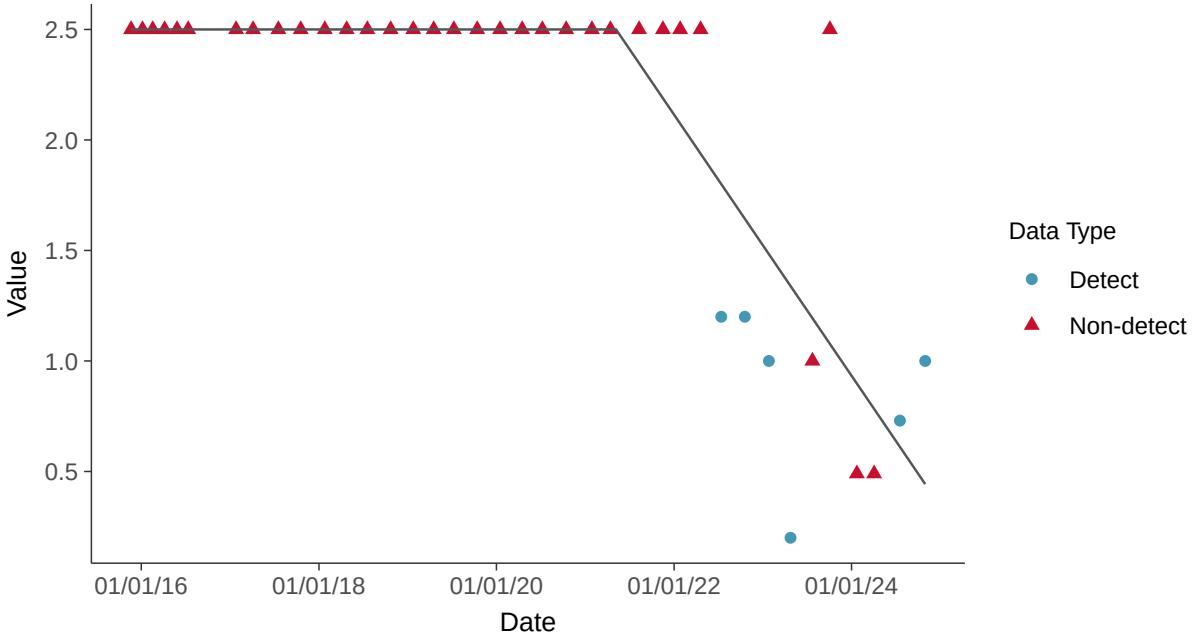
Gamma Q-Q plot using ROS Imputed Estimates

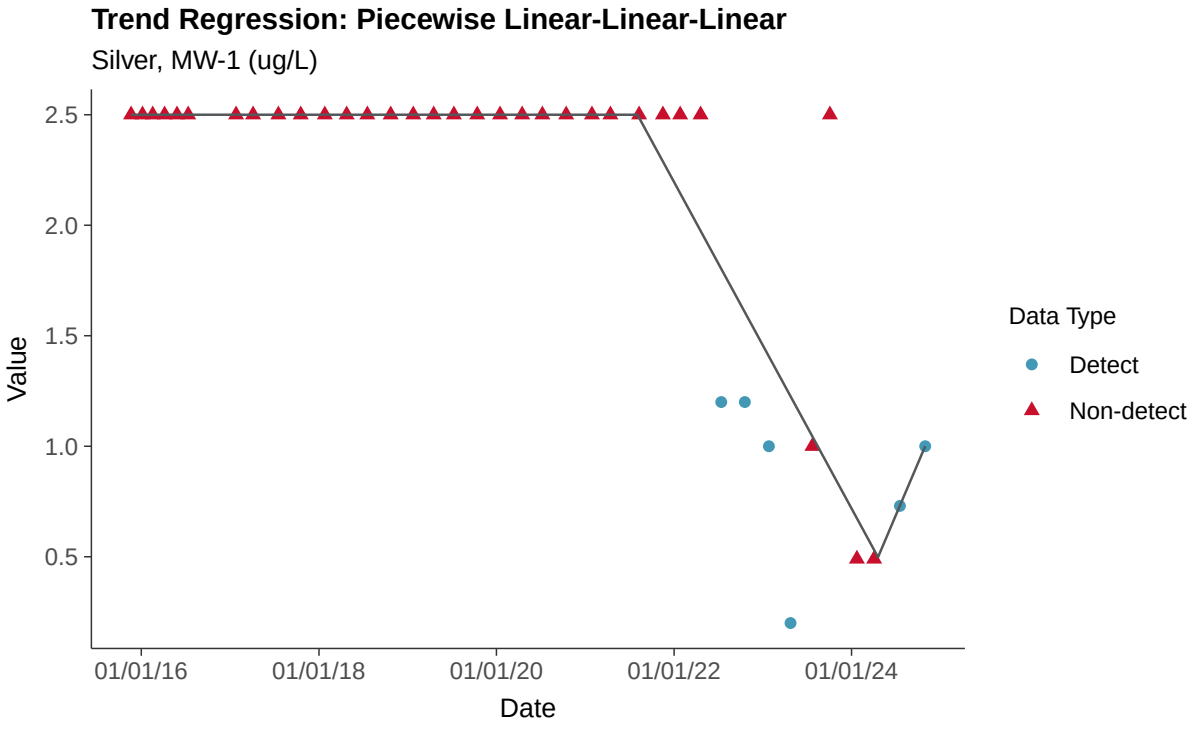
Silver, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear

Silver, MW-1 (ug/L)



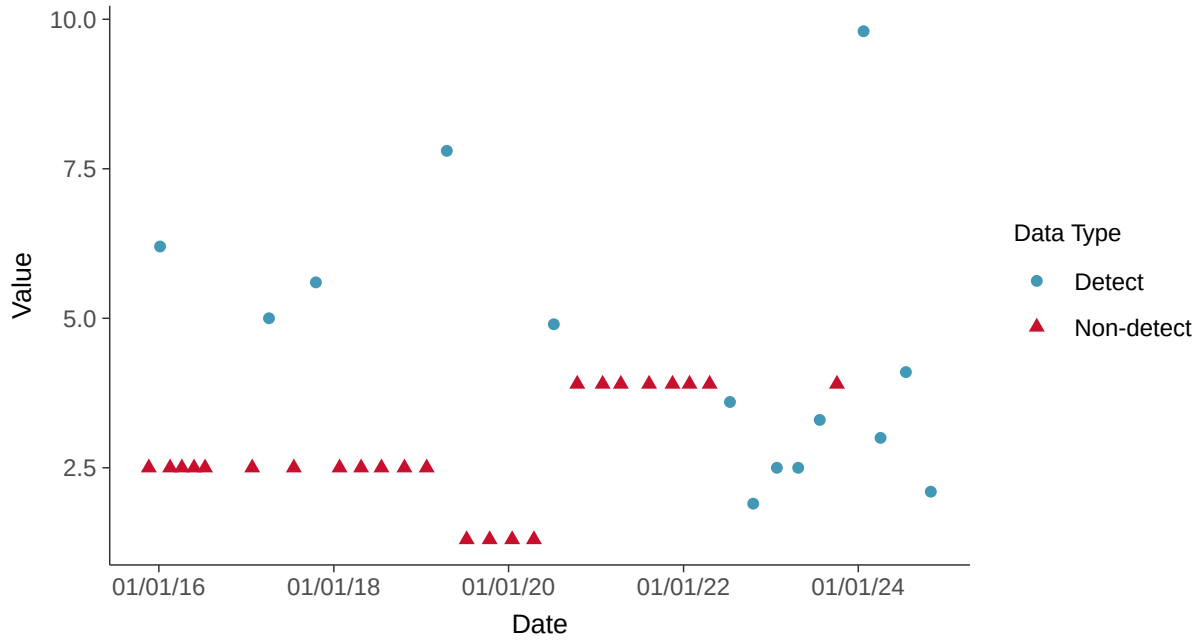

Trend Regression: Piecewise Linear-Linear-Linear
Silver, MW-1 (ug/L)
Value
2.5
2.0
1.5
1.0
0.5
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Vanadium, MW-1

ID: 01_01_127

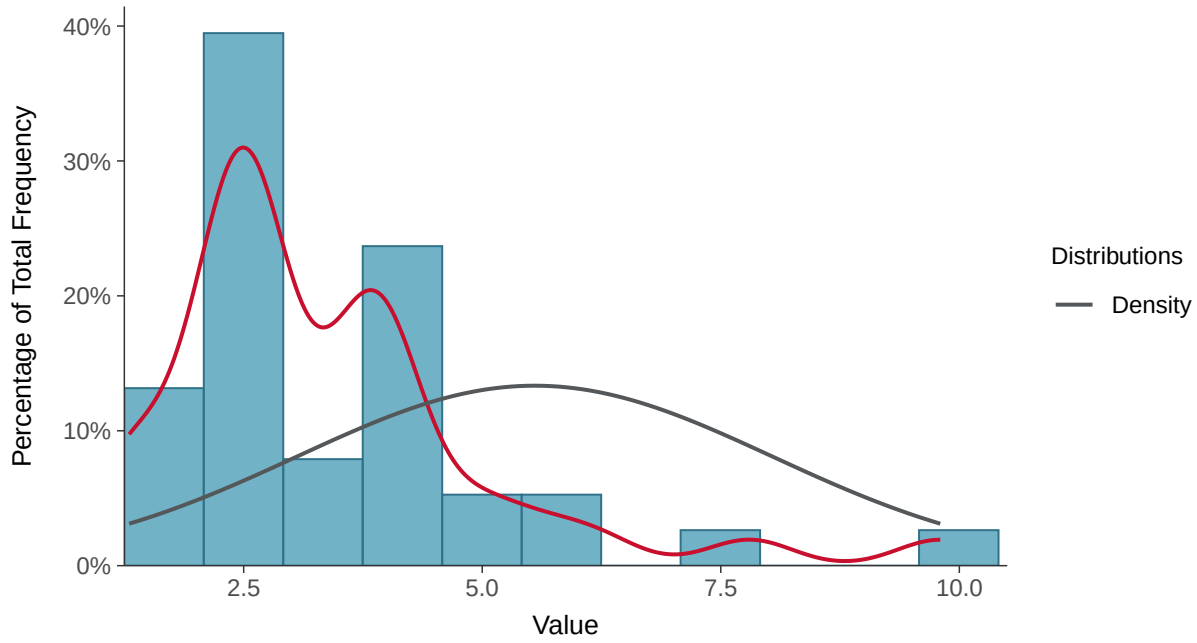
Scatter Plot

Vanadium, MW-1 (ug/L)



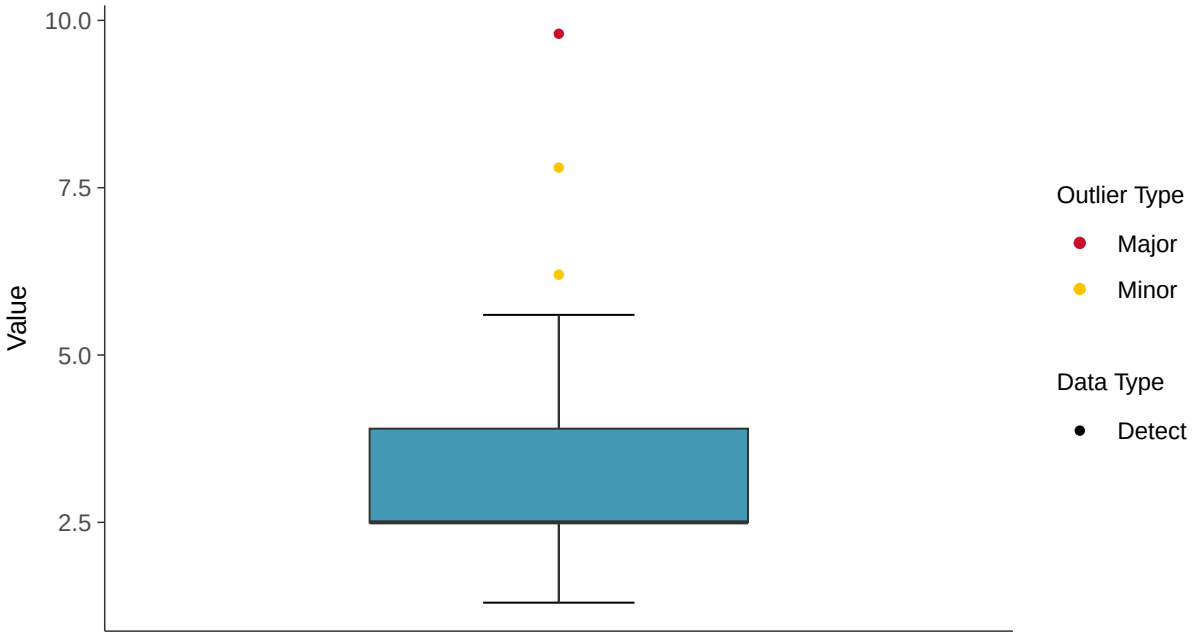
Histogram

Vanadium, MW-1 (ug/L)



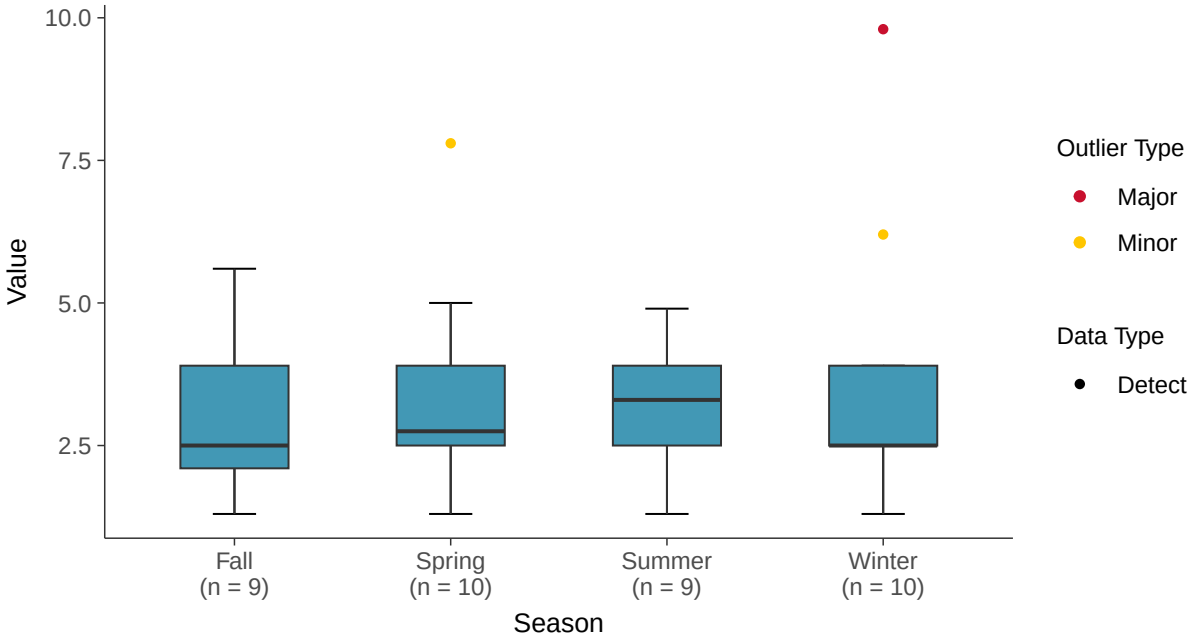
Boxplot

Vanadium, MW-1 (ug/L)



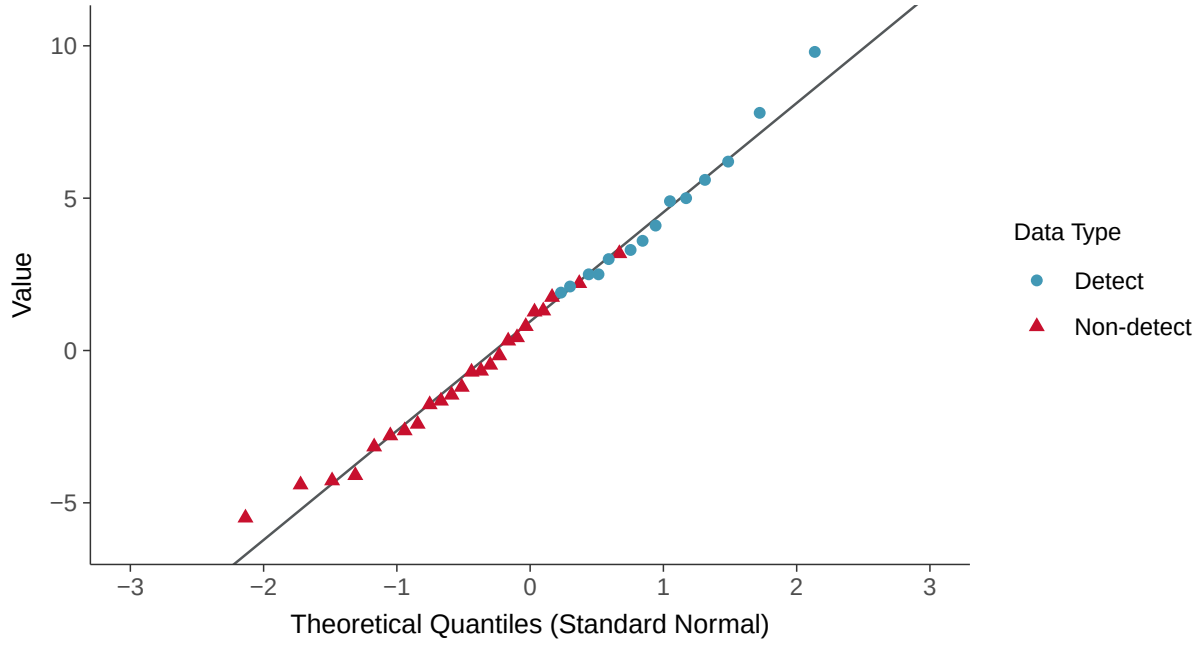
Boxplot by Season

Vanadium, MW-1 (ug/L)



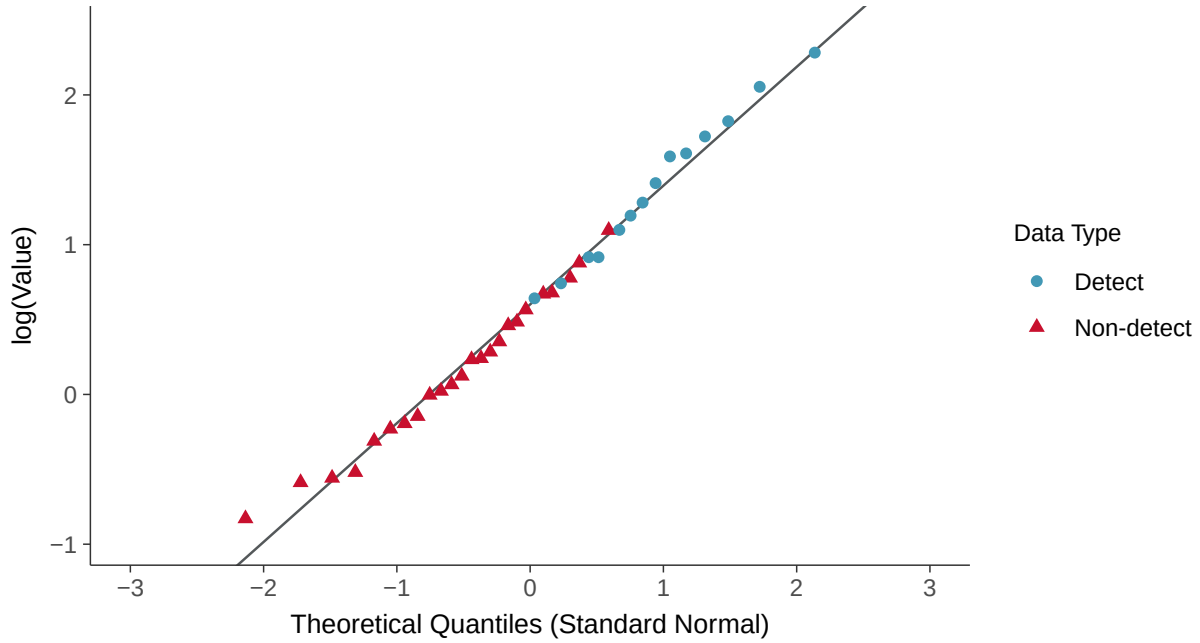
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-1 (ug/L)



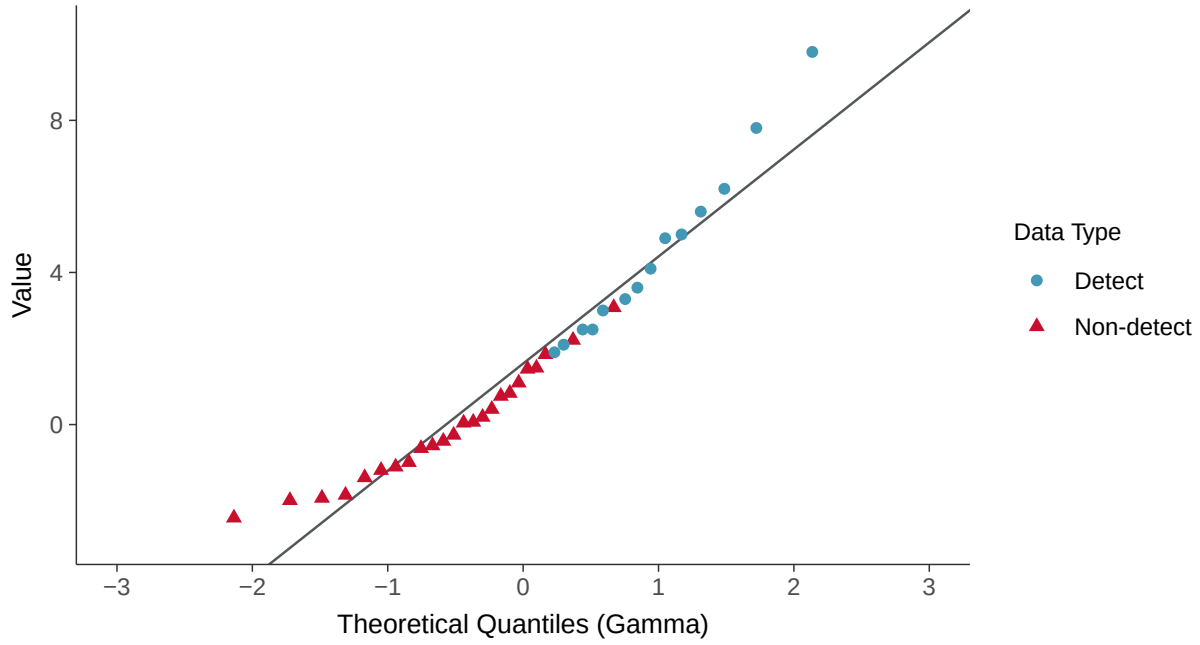
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-1 (ug/L)



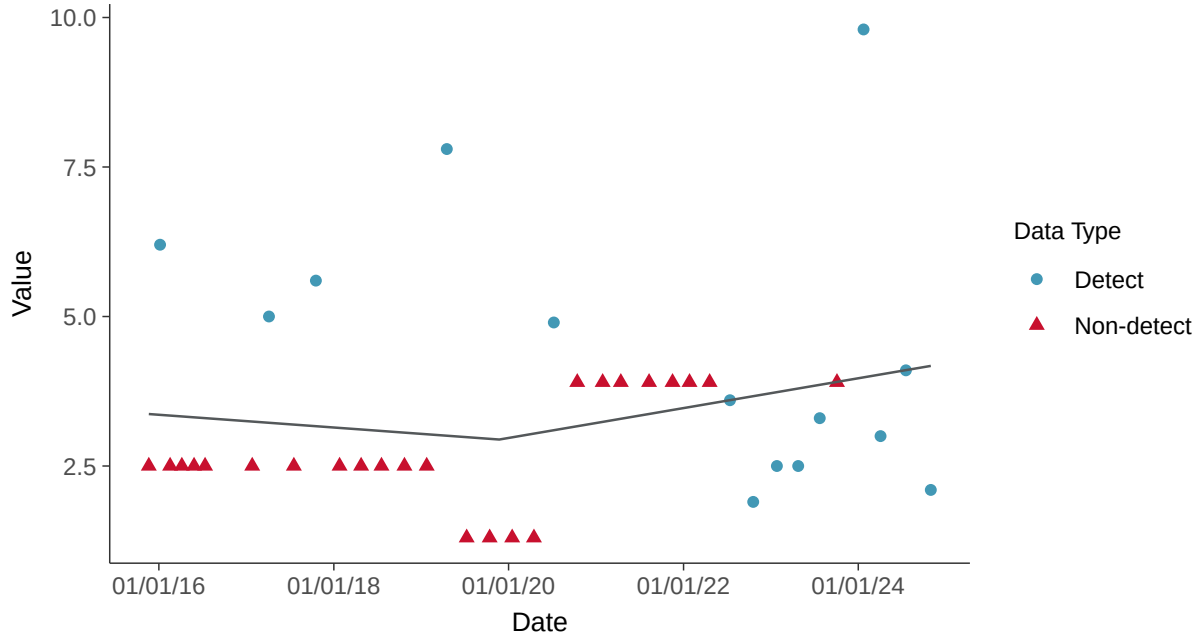
Gamma Q-Q plot using ROS Imputed Estimates

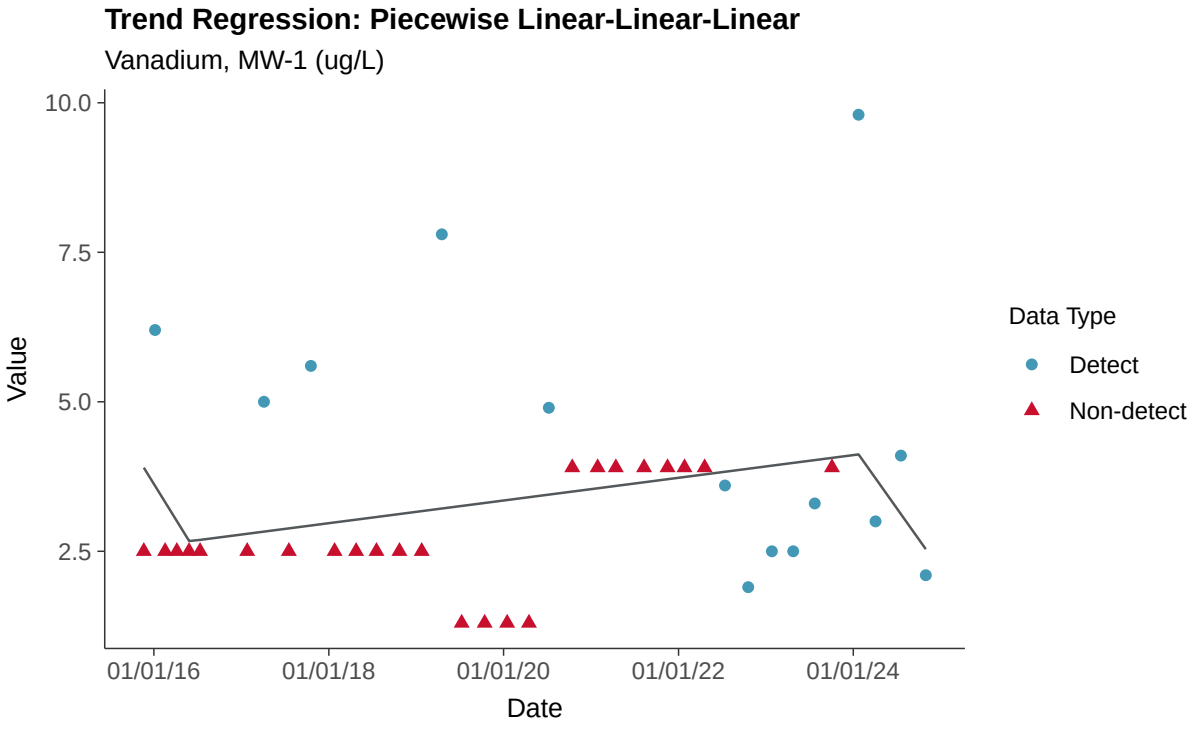
Vanadium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear

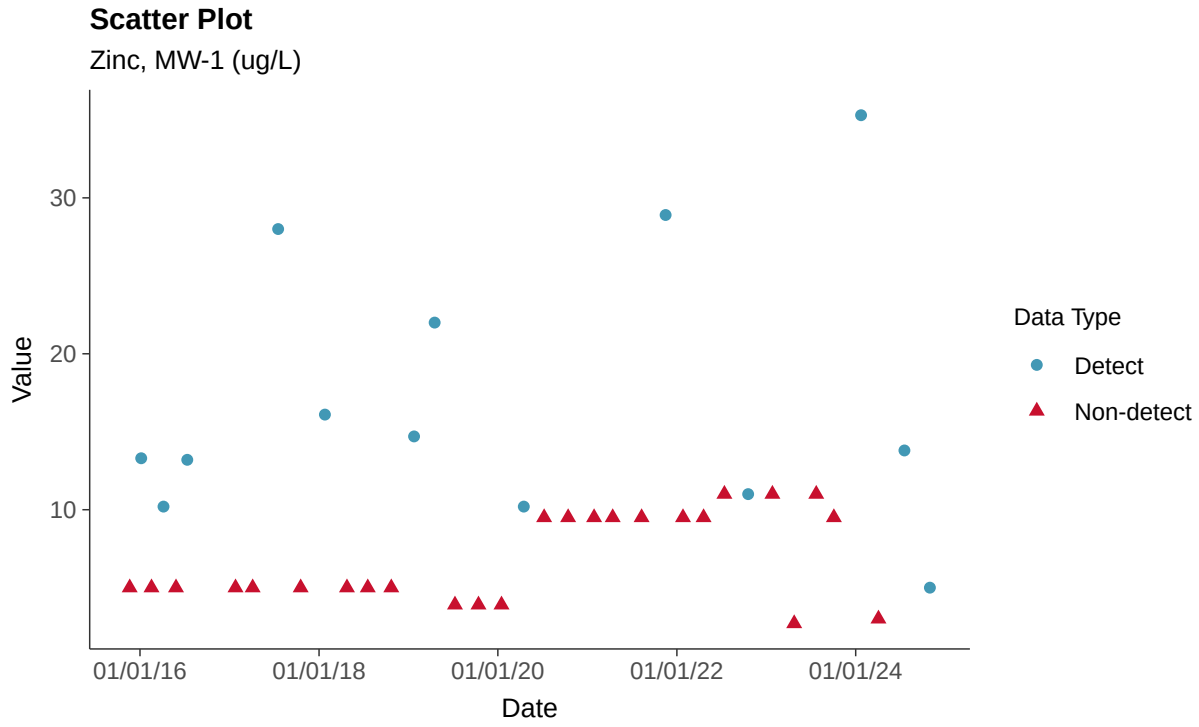
Vanadium, MW-1 (ug/L)

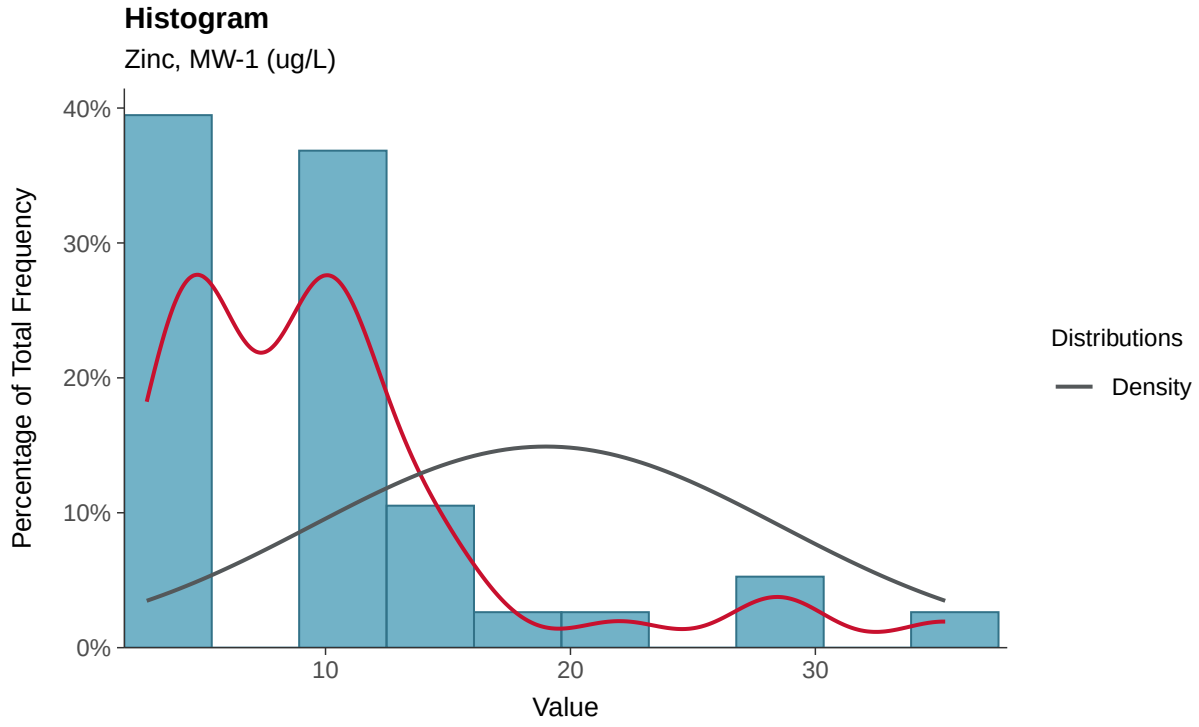



Trend Regression: Piecewise Linear-Linear-Linear
Vanadium, MW-1 (ug/L)
Value
10.0
7.5
5.0
2.5
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Zinc, MW-1

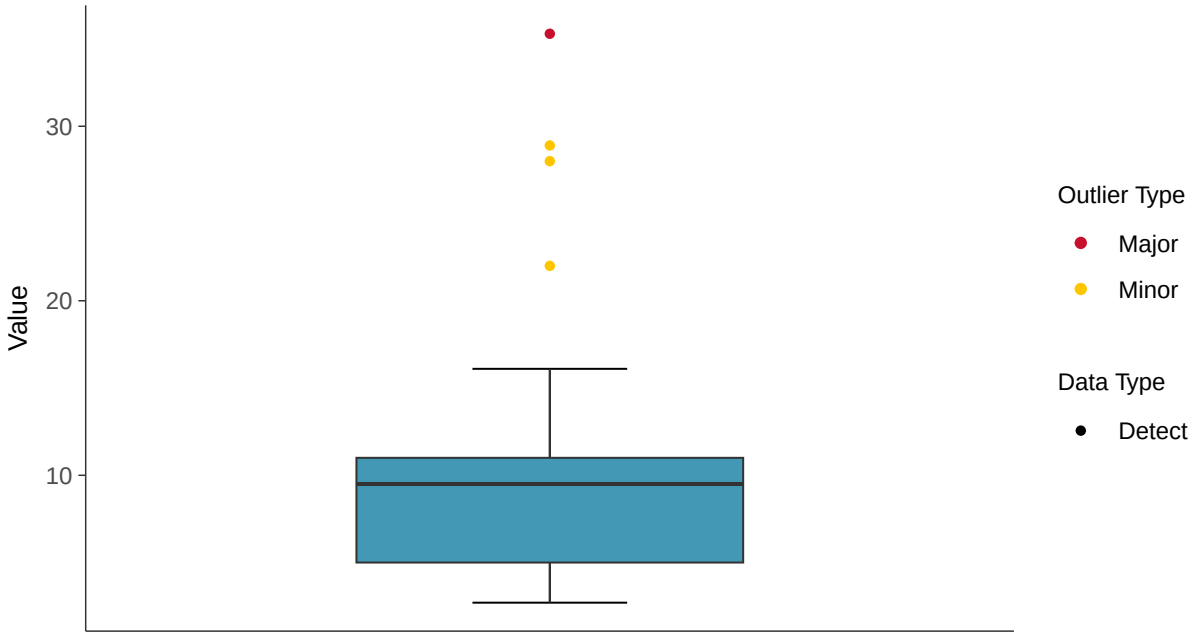
ID: 01_01_128





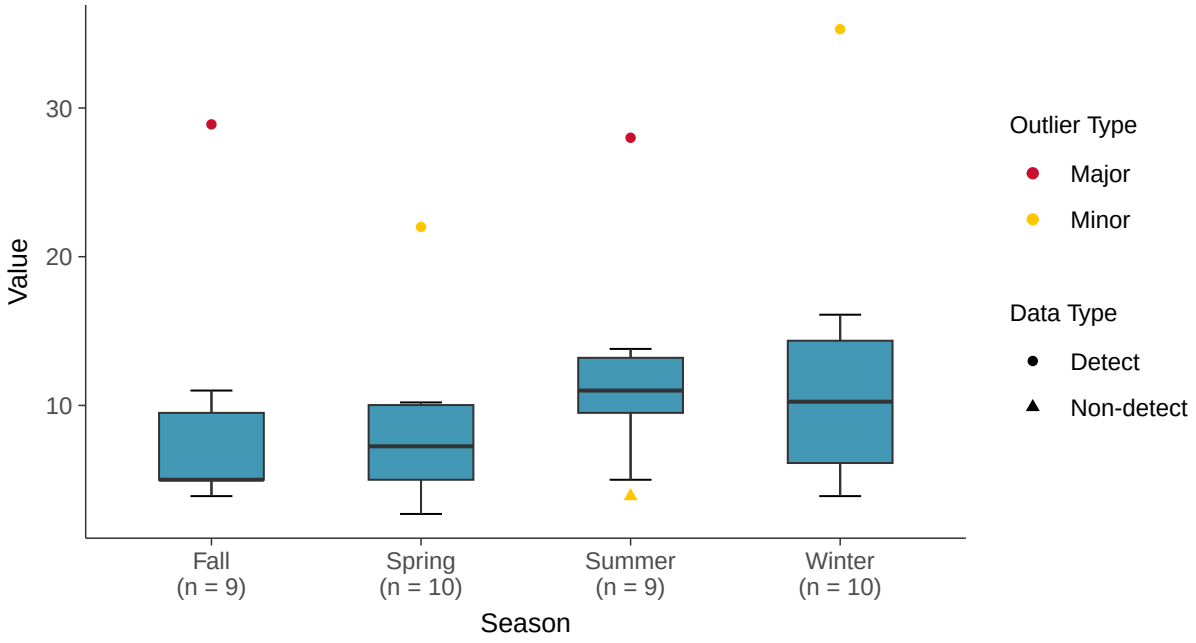
Boxplot

Zinc, MW-1 (ug/L)



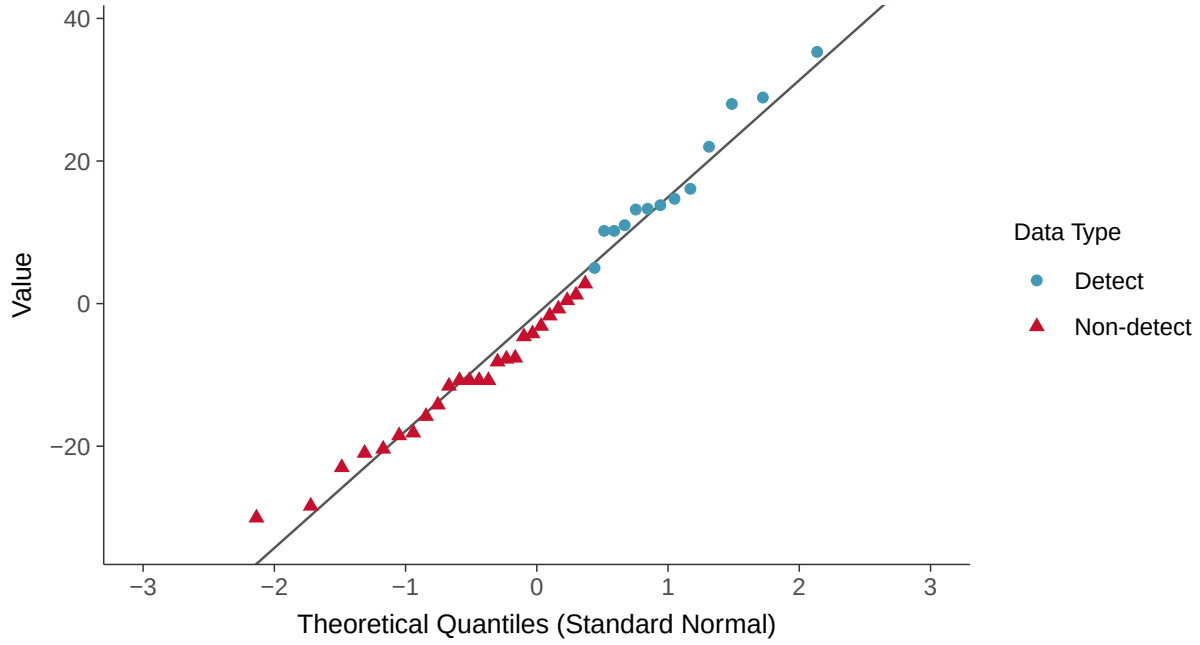
Boxplot by Season

Zinc, MW-1 (ug/L)



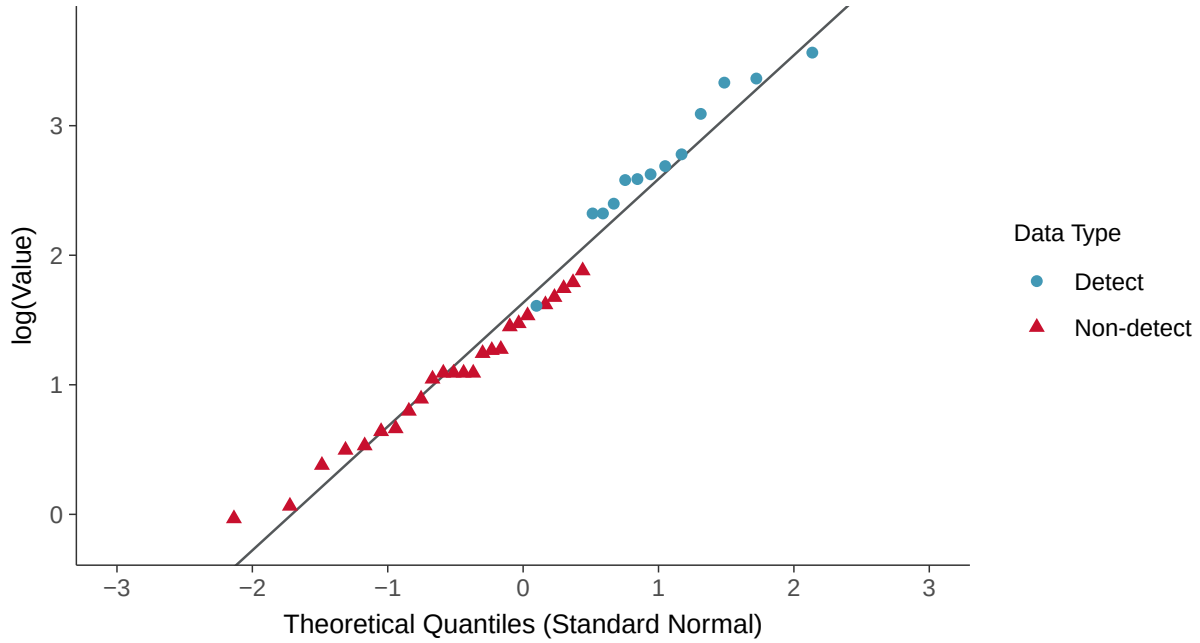
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



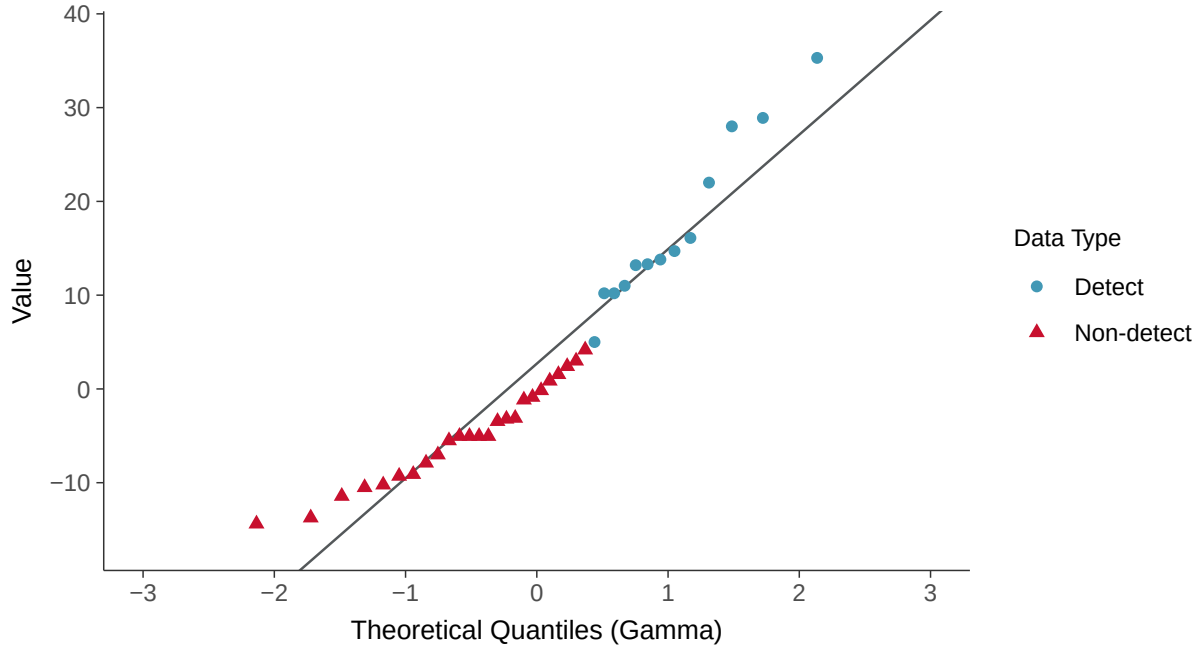
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



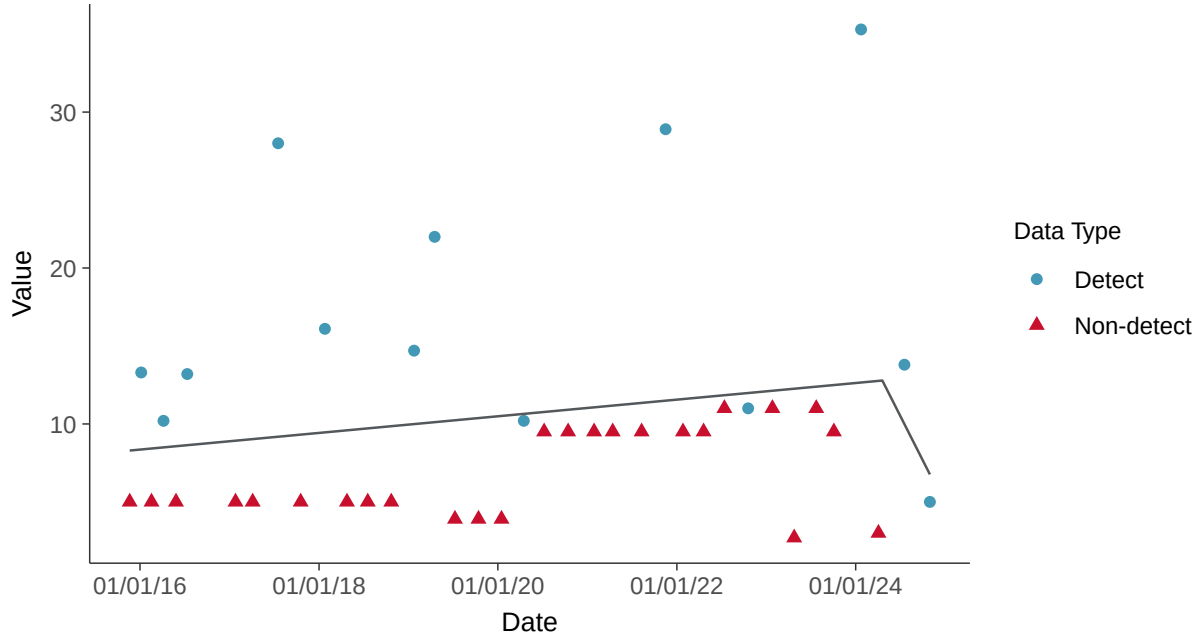
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-1 (ug/L)

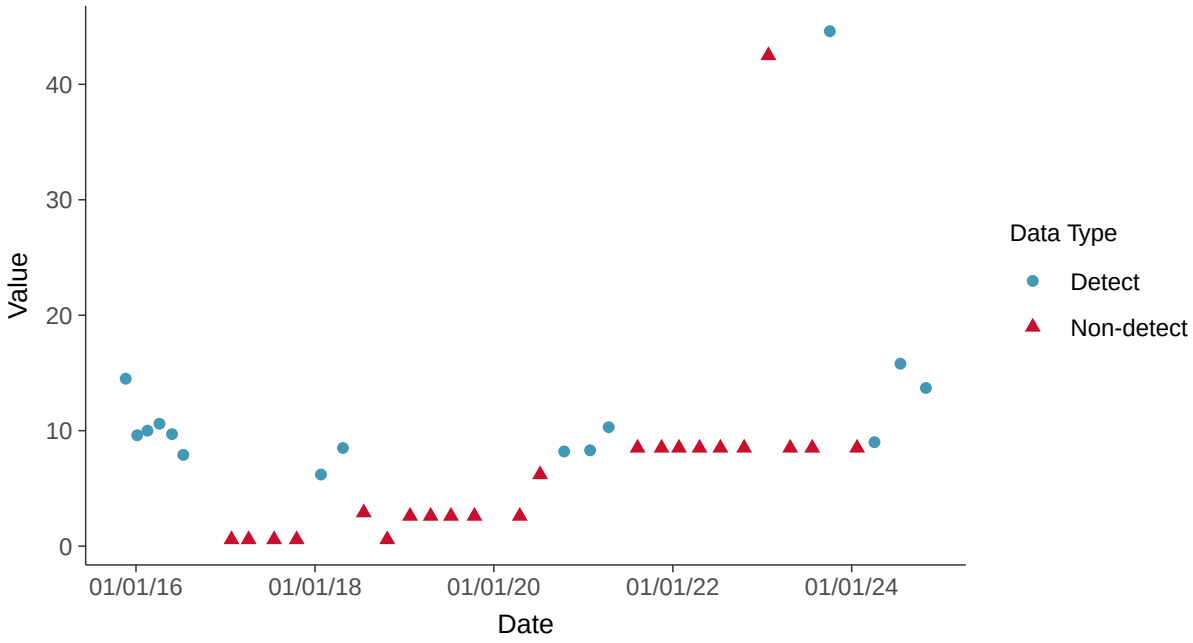


App. III: Boron, MW-1

ID: 01_02_105

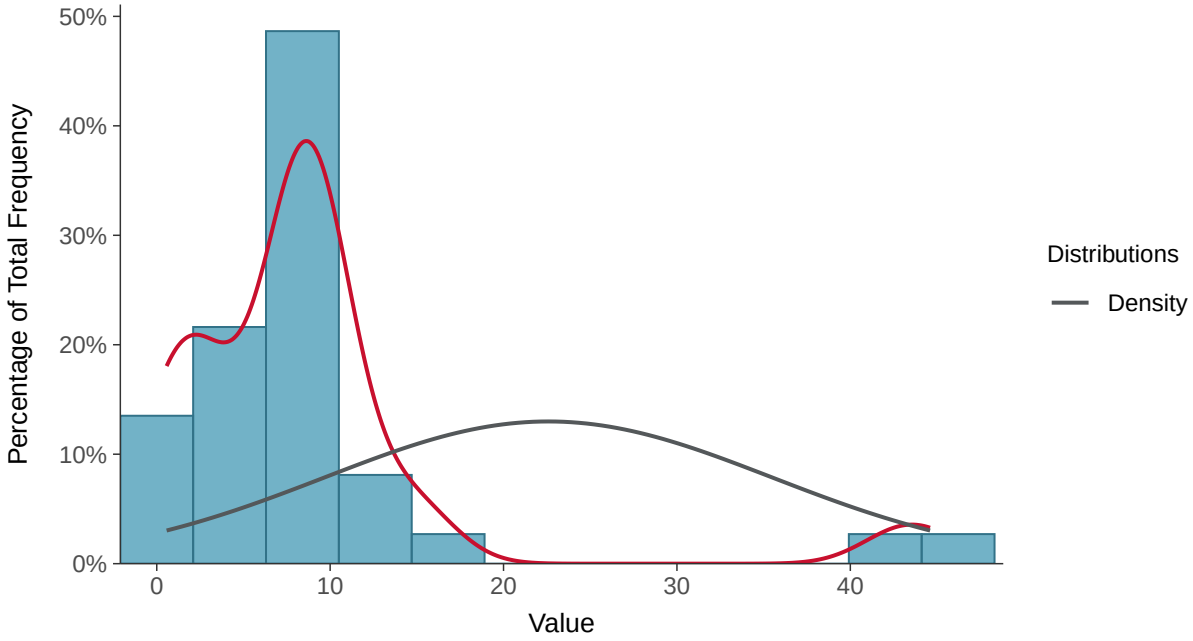
Scatter Plot

Boron, MW-1 (ug/L)



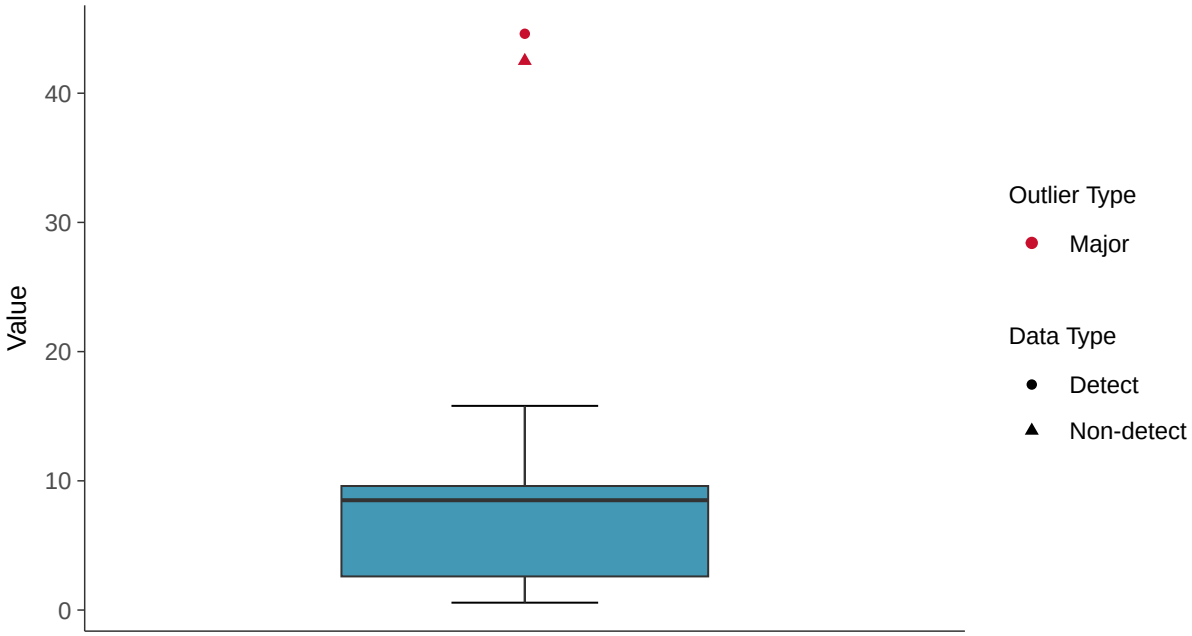
Histogram

Boron, MW-1 (ug/L)



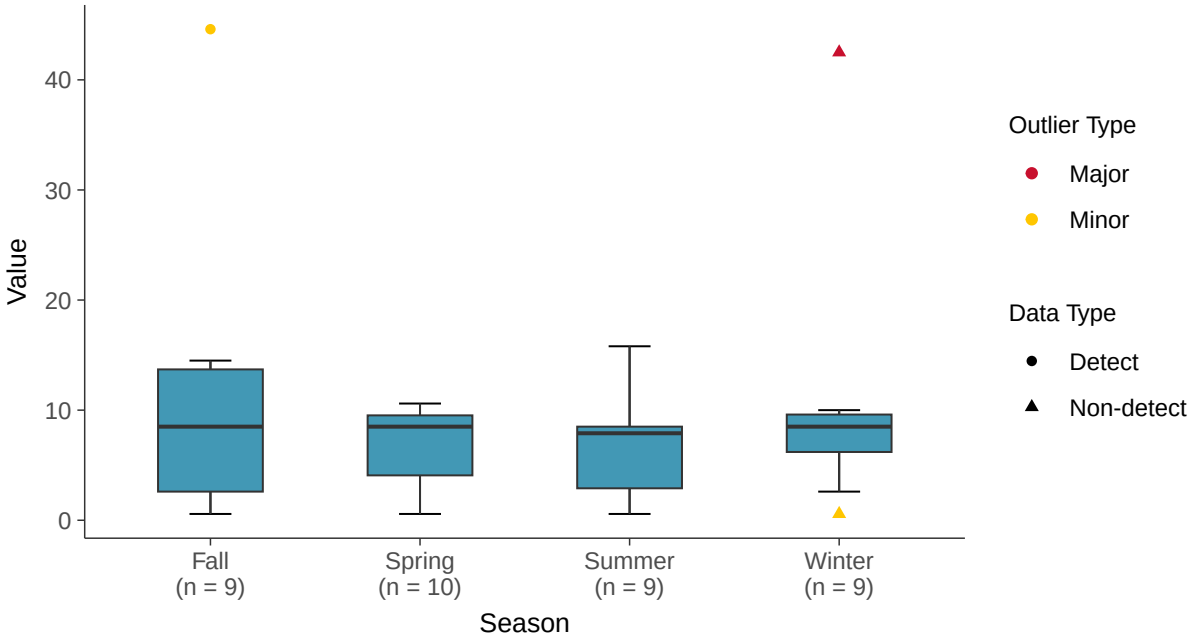
Boxplot

Boron, MW-1 (ug/L)



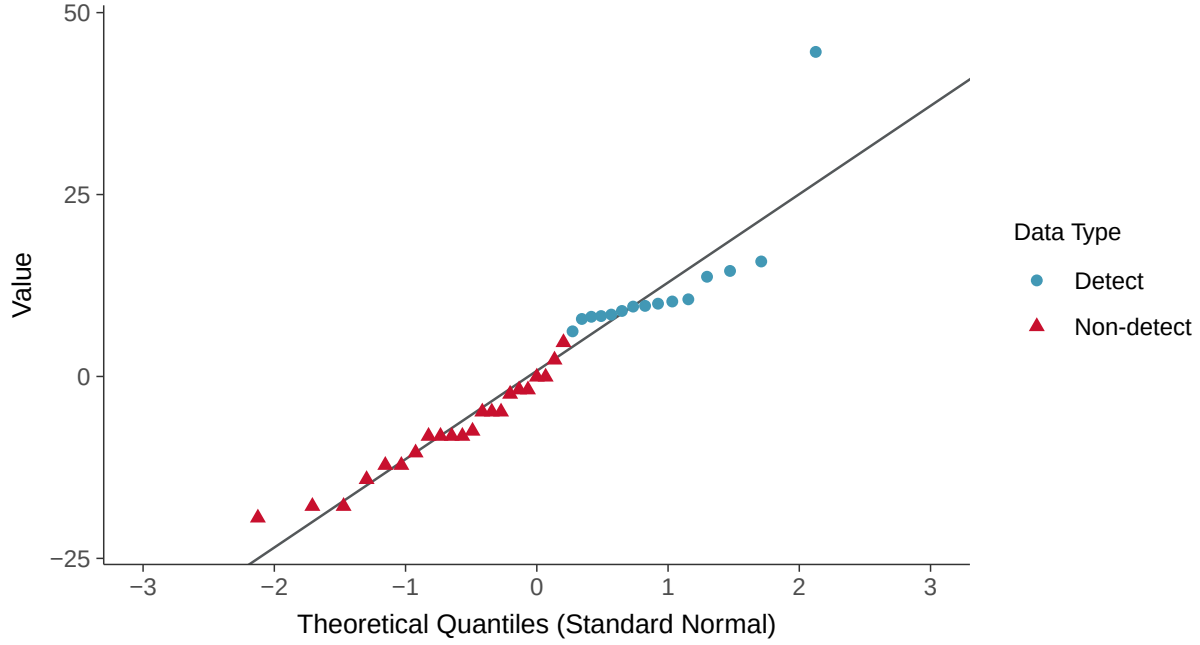
Boxplot by Season

Boron, MW-1 (ug/L)



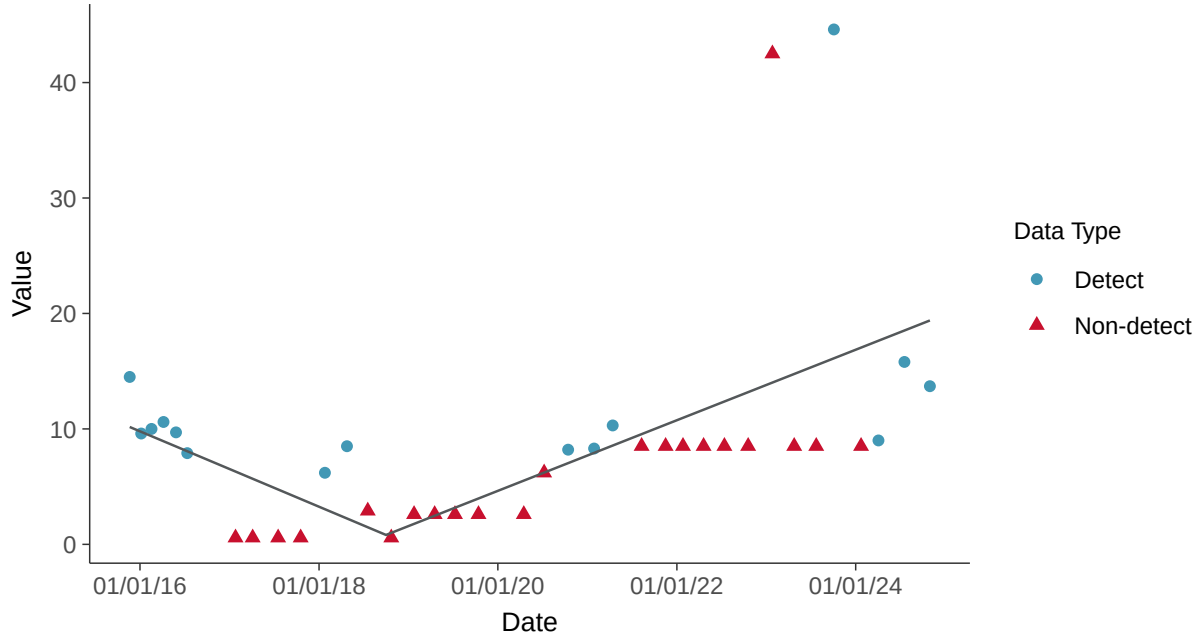
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-1 (ug/L)



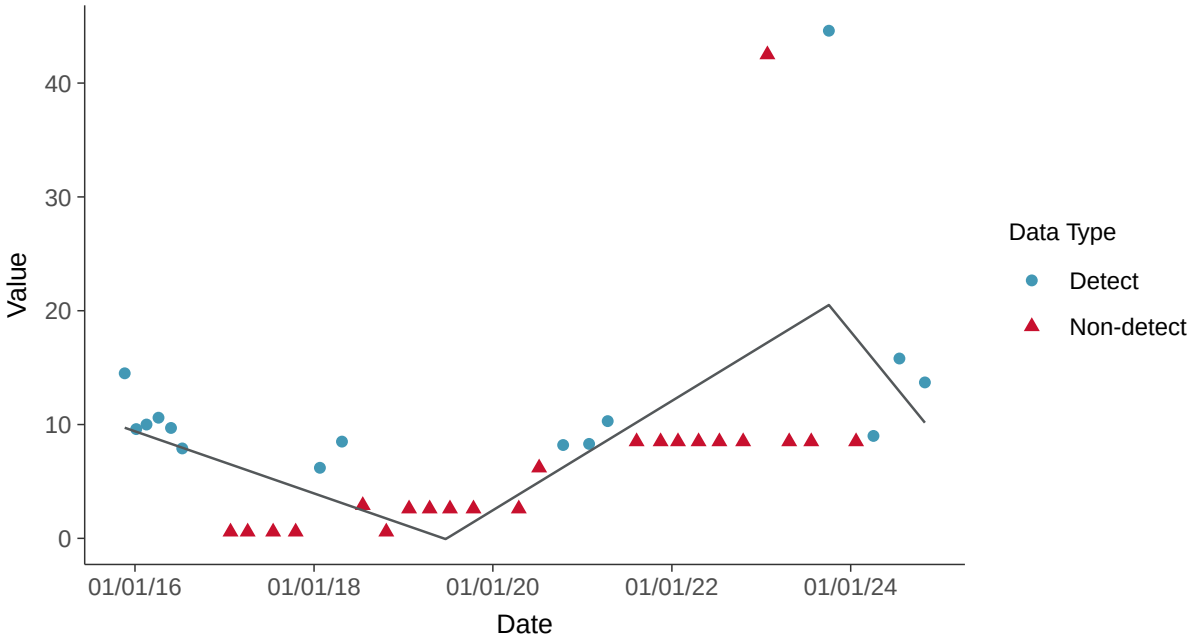
Trend Regression: Piecewise Linear-Linear

Boron, MW-1 (ug/L)



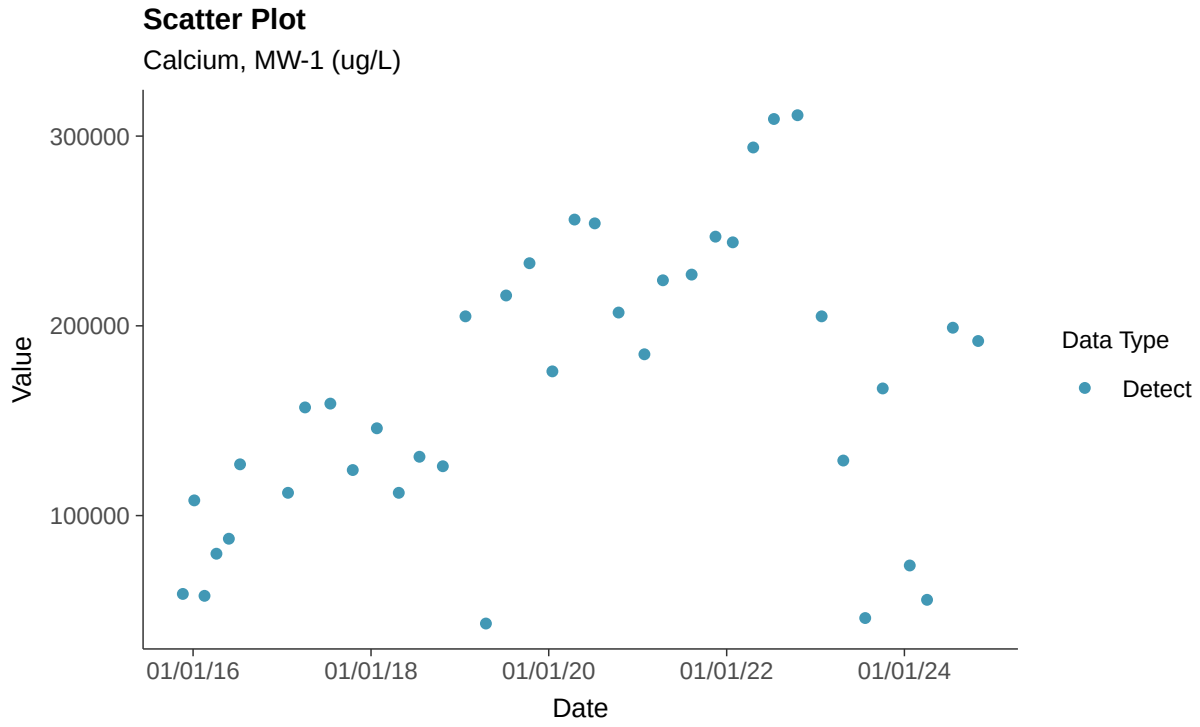
Trend Regression: Piecewise Linear-Linear-Linear

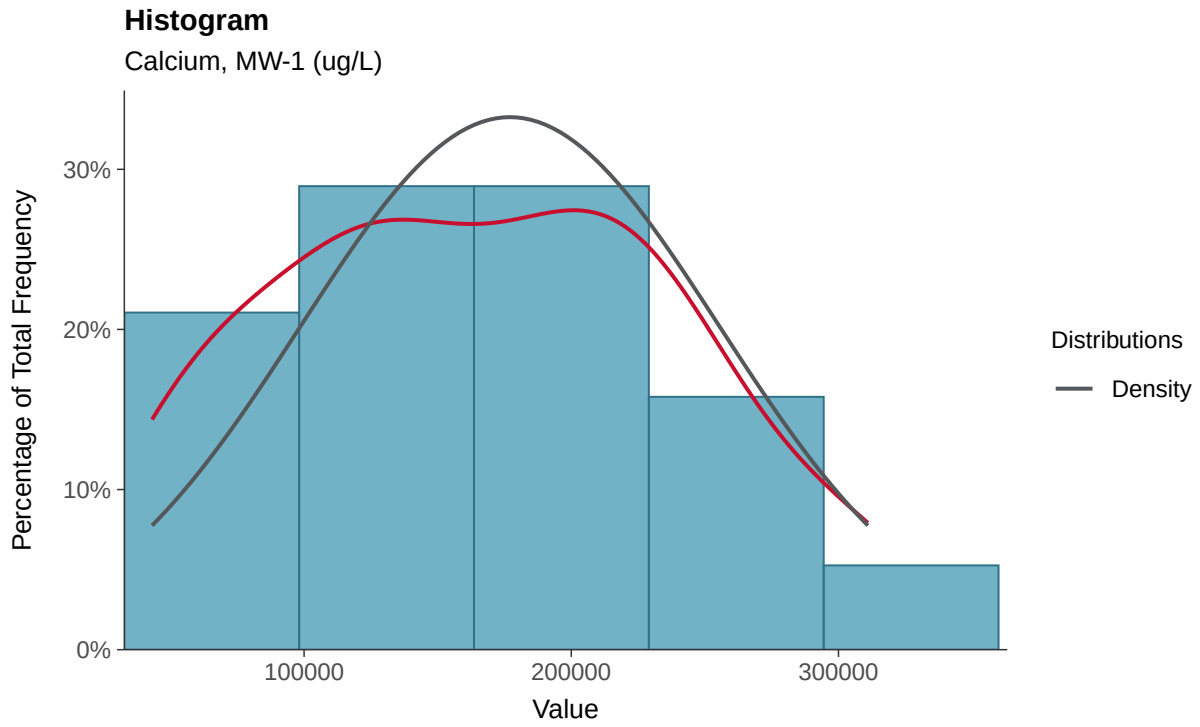
Boron, MW-1 (ug/L)



App. III: Calcium, MW-1

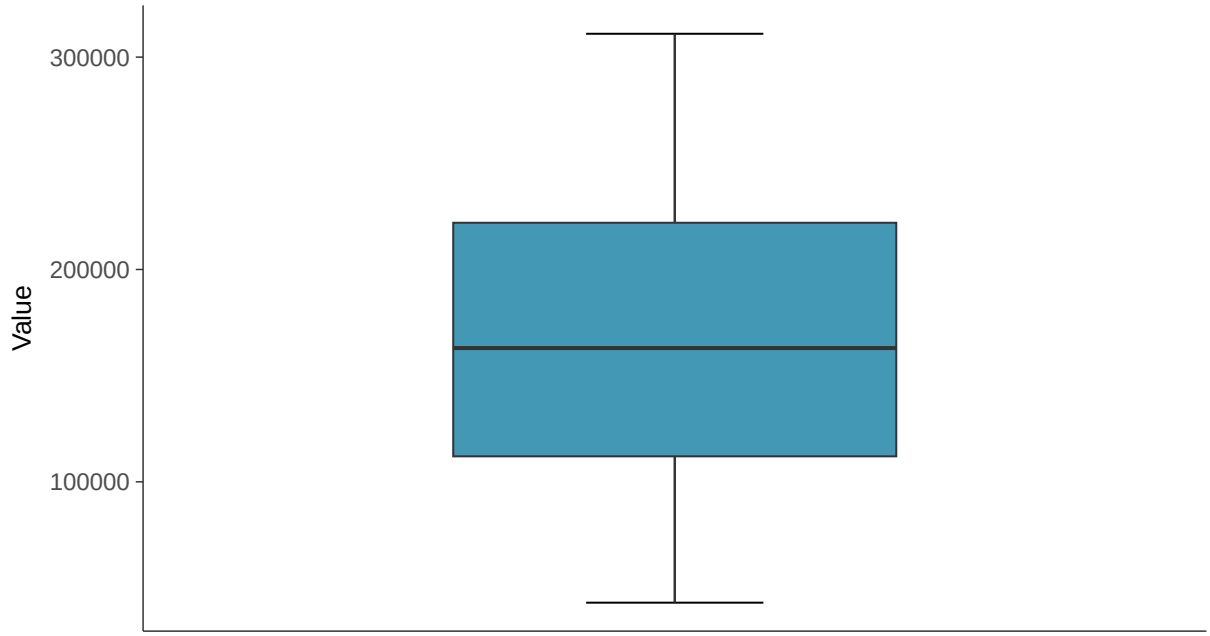
ID: 01_02_107





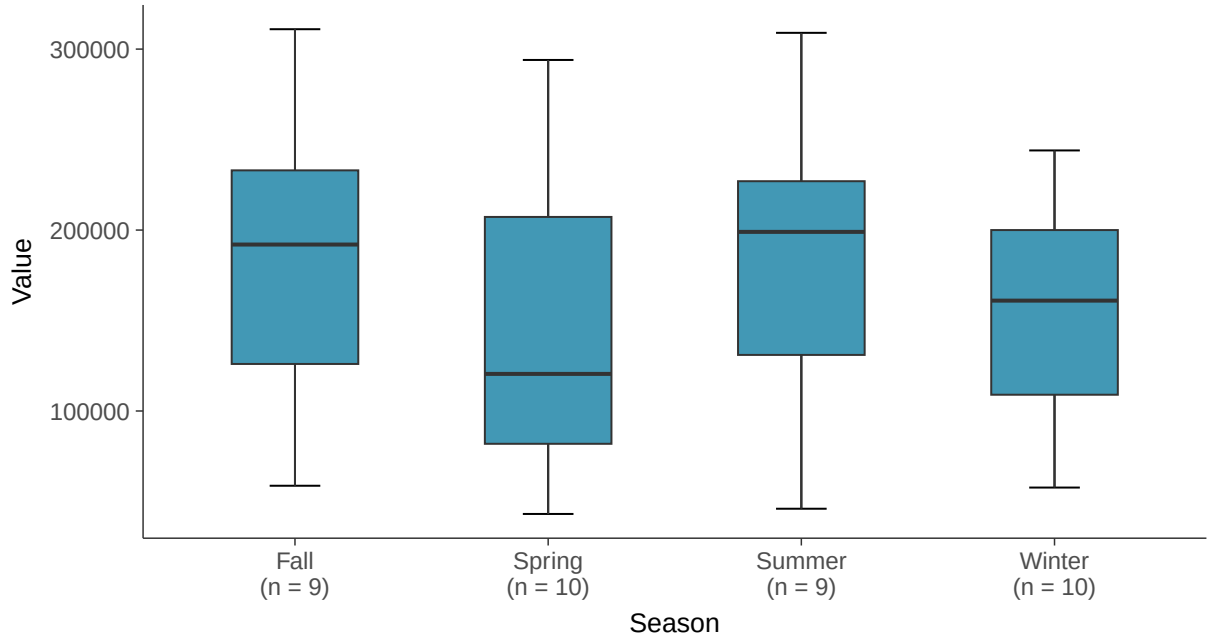
Boxplot

Calcium, MW-1 (ug/L)



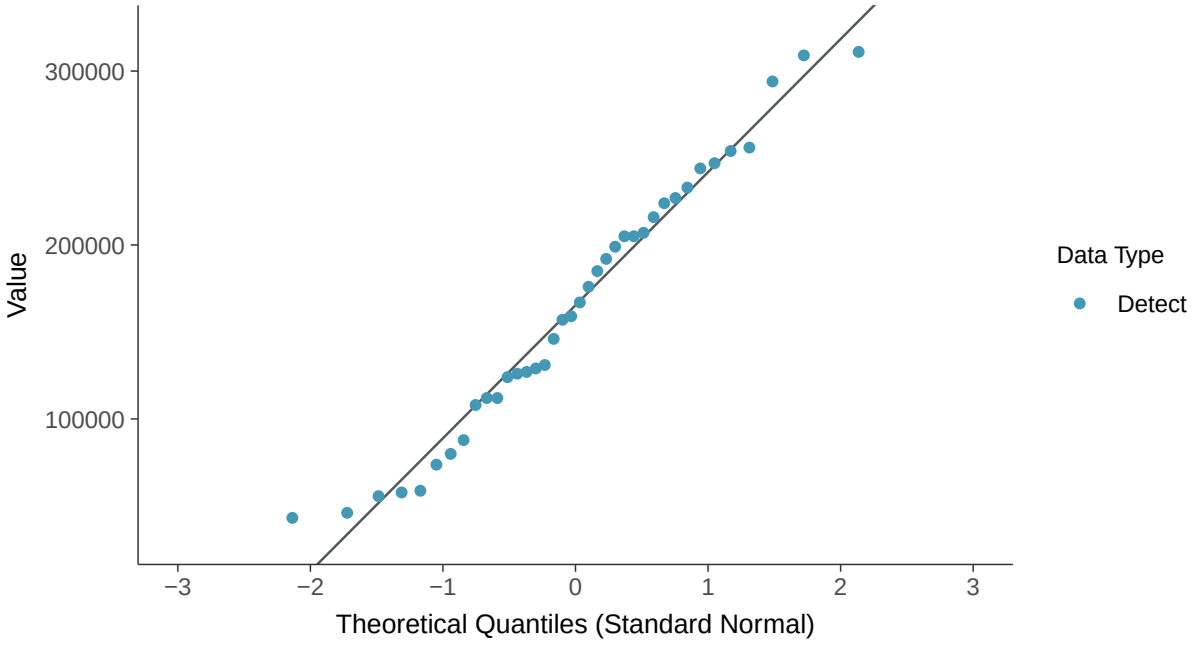
Boxplot by Season

Calcium, MW-1 (ug/L)



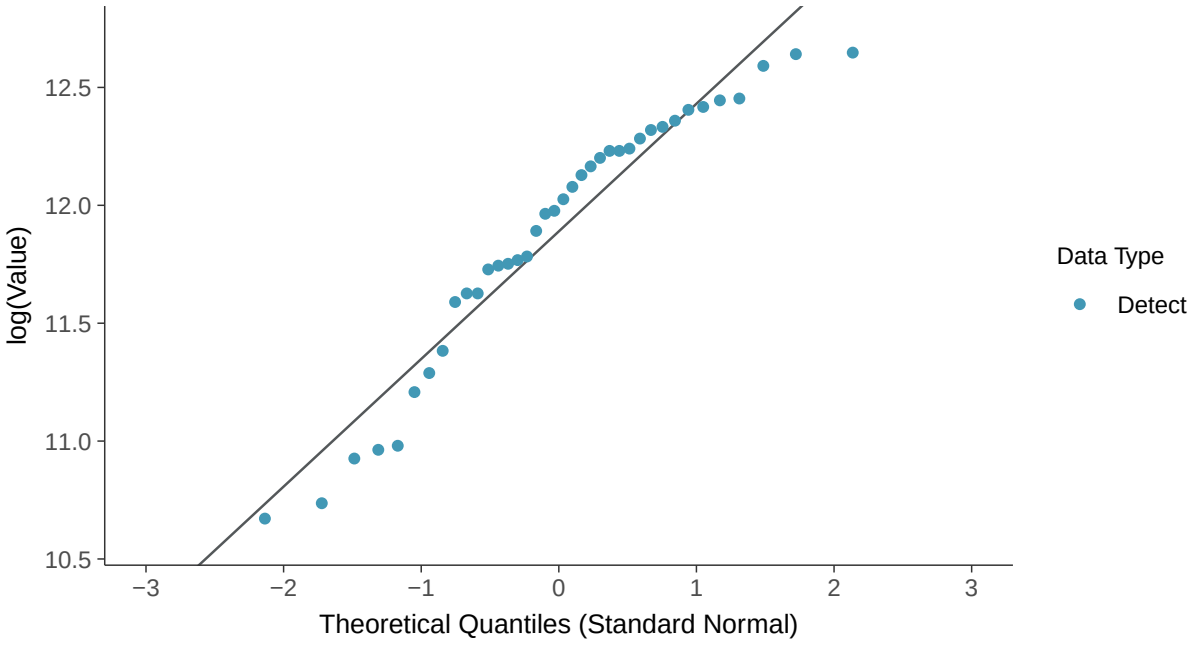
Normal Q-Q plot

Calcium, MW-1 (ug/L)



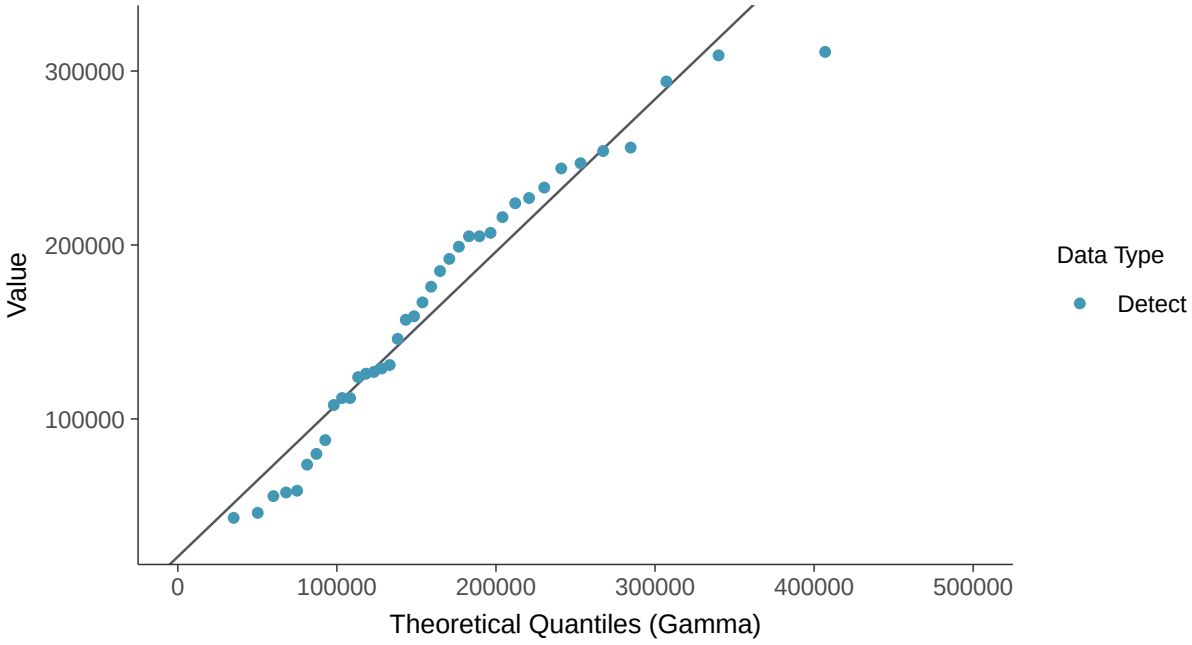
Lognormal Q-Q plot

Calcium, MW-1 (ug/L)



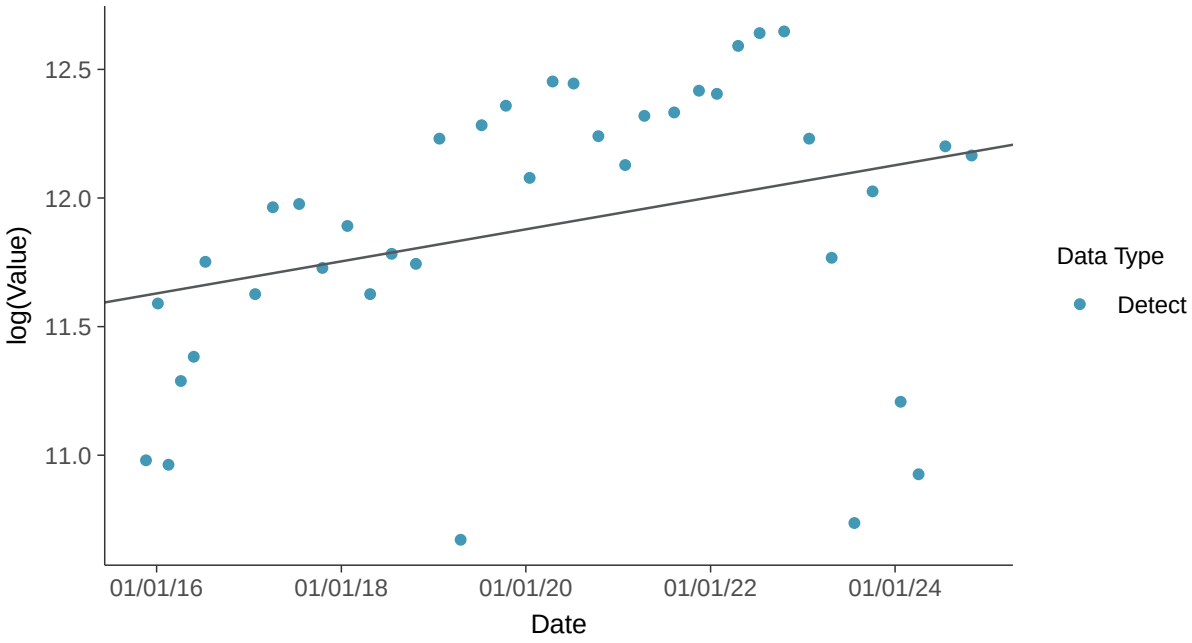
Gamma Q-Q plot

Calcium, MW-1 (ug/L)



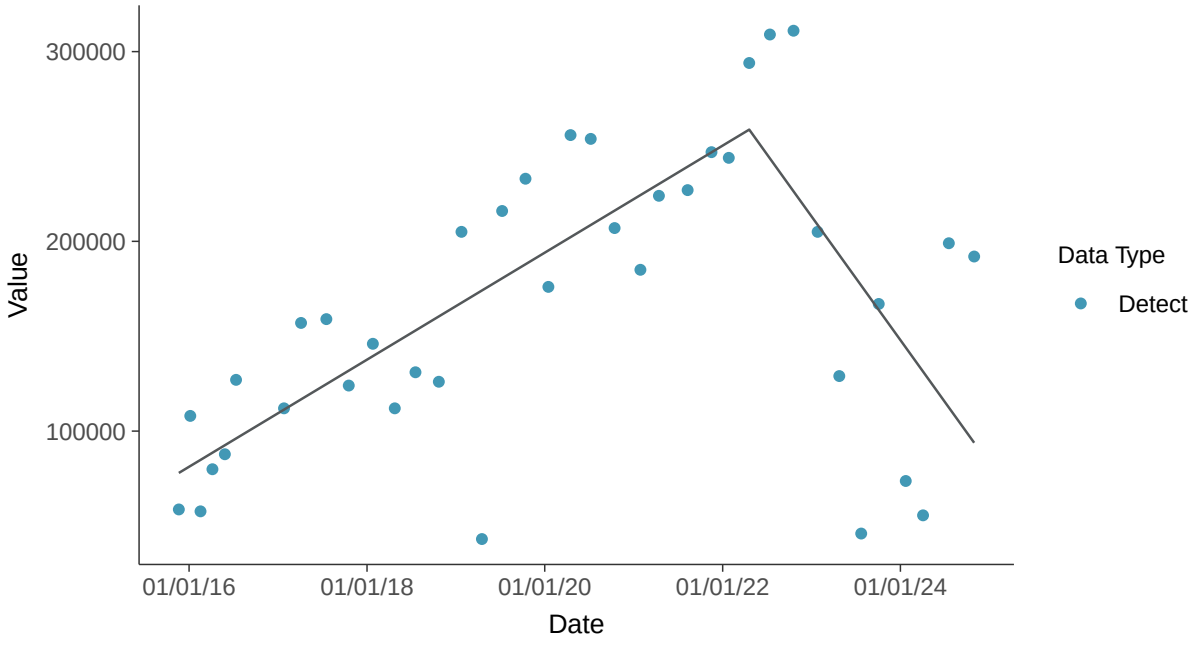
Trend Regression: Lognormal MLE

Calcium, MW-1 (ug/L)



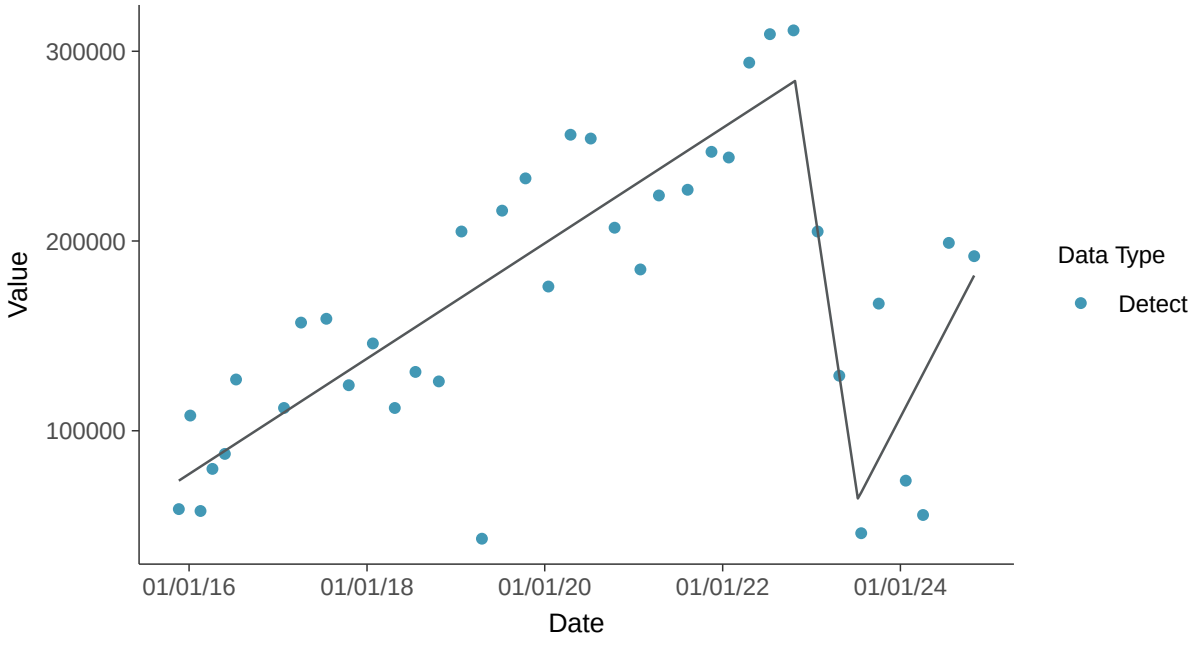
Trend Regression: Piecewise Linear-Linear

Calcium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-1 (ug/L)

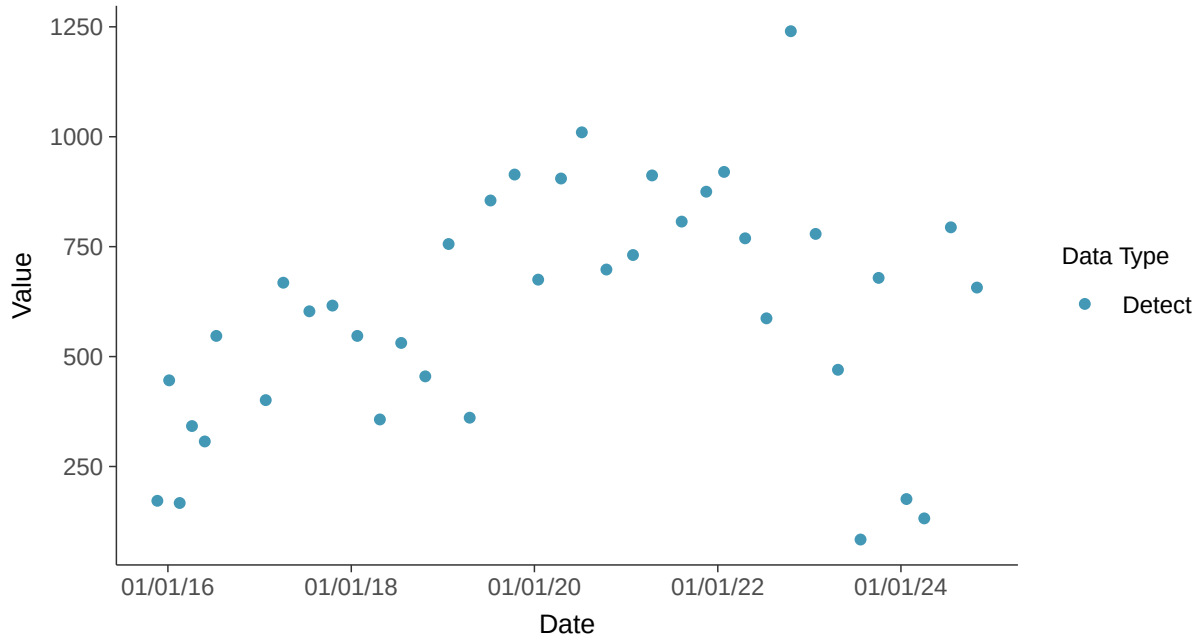


App. III: Chloride, MW-1

ID: 01_02_108

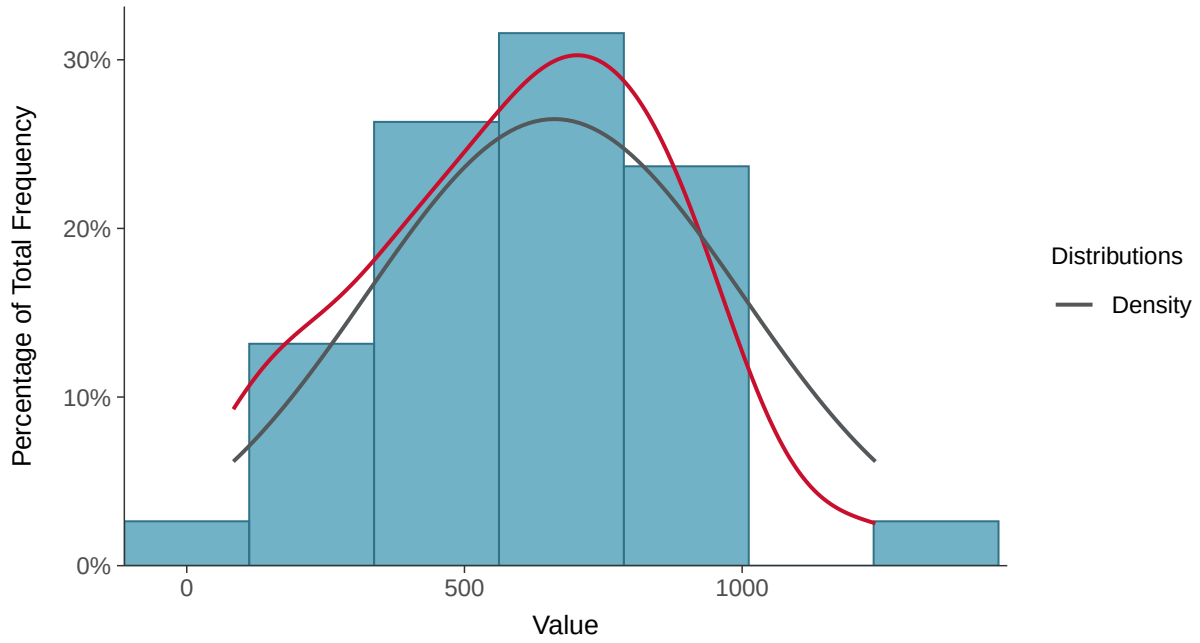
Scatter Plot

Chloride, MW-1 (mg/L)



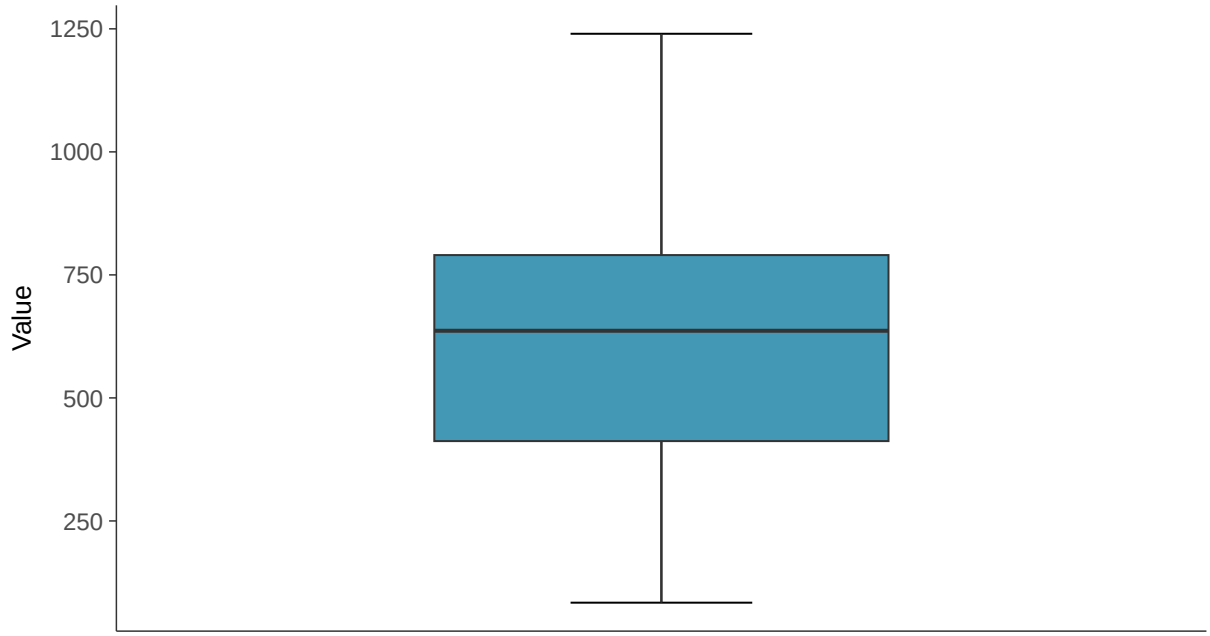
Histogram

Chloride, MW-1 (mg/L)



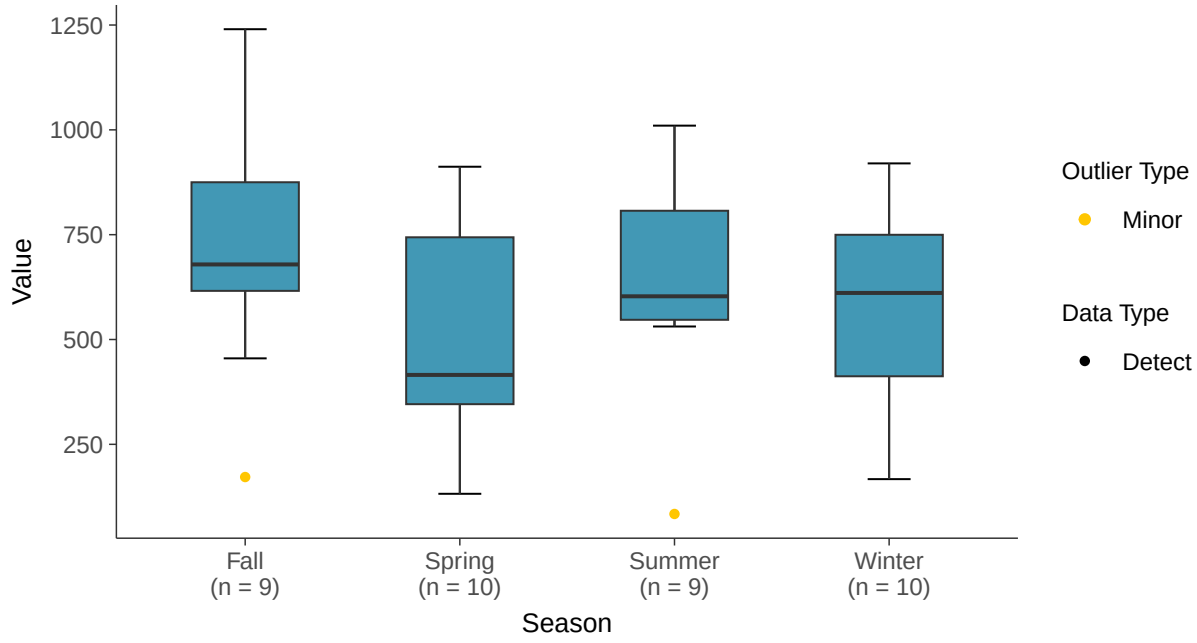
Boxplot

Chloride, MW-1 (mg/L)



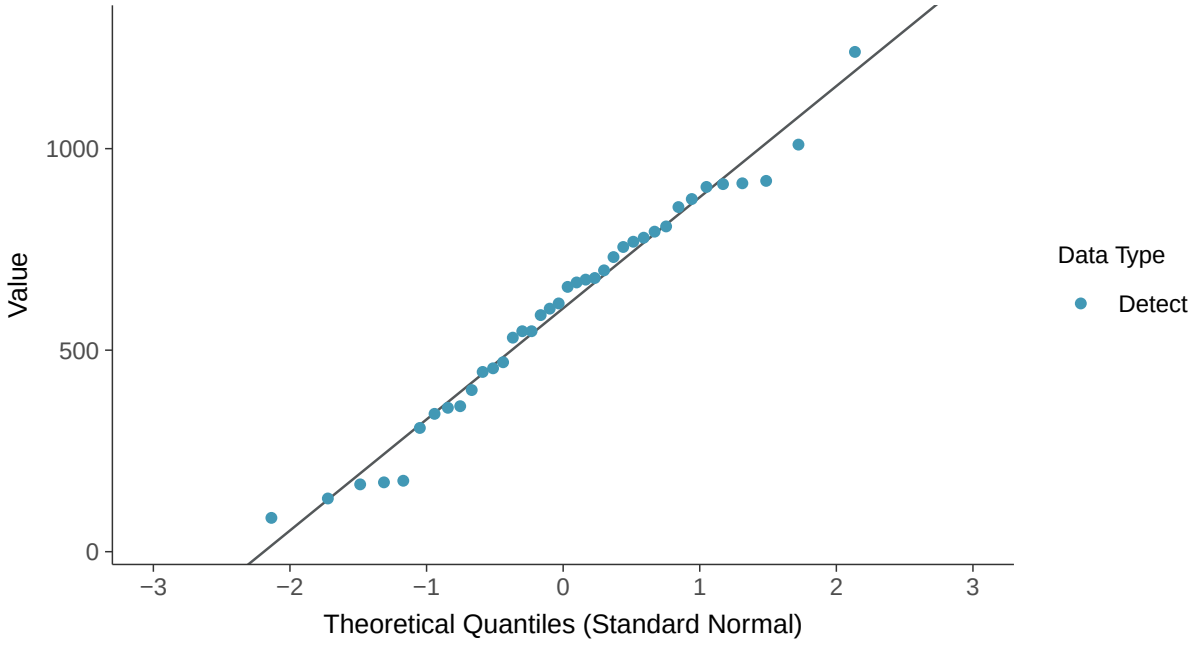
Boxplot by Season

Chloride, MW-1 (mg/L)



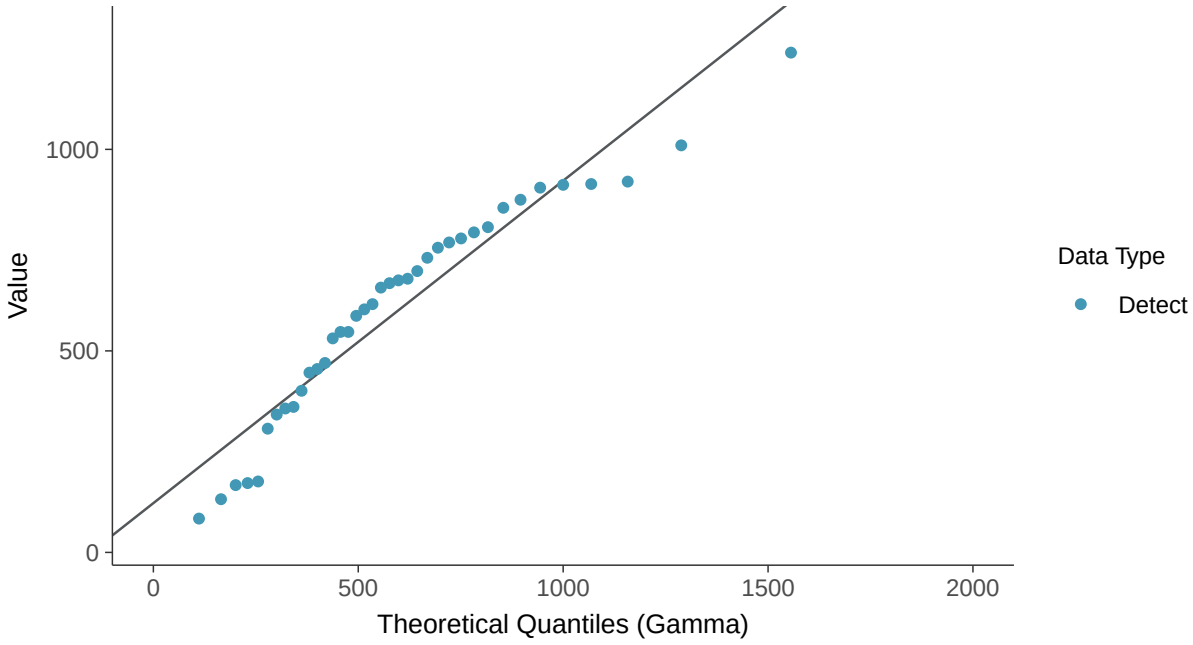
Normal Q-Q plot

Chloride, MW-1 (mg/L)



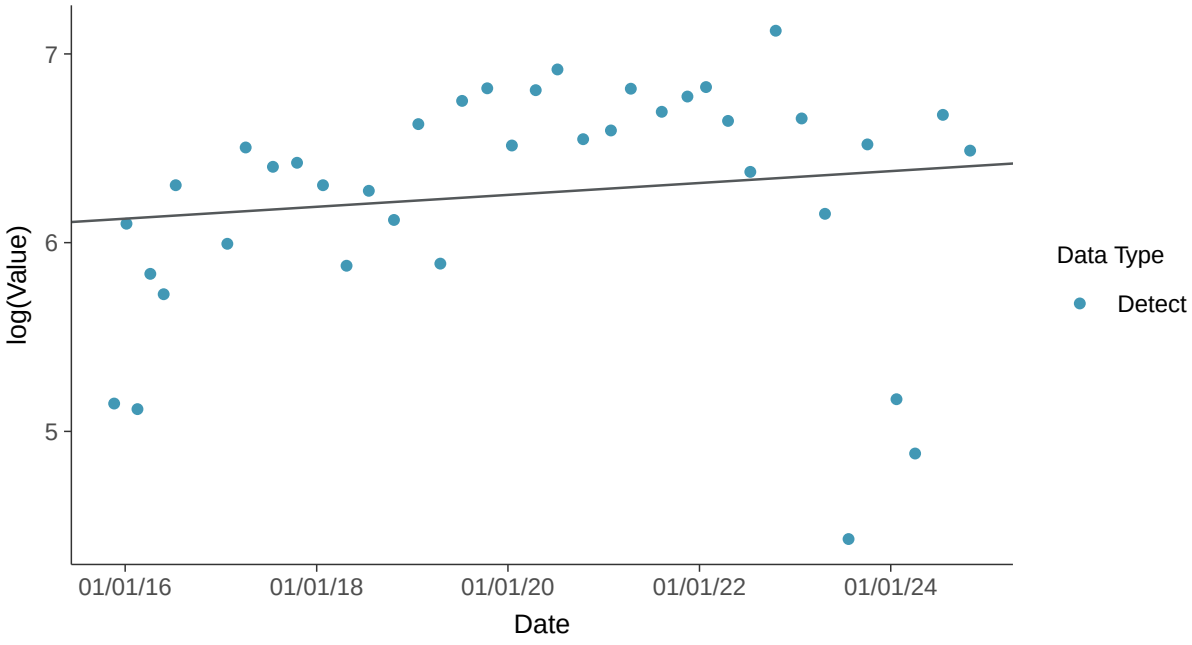
Gamma Q-Q plot

Chloride, MW-1 (mg/L)



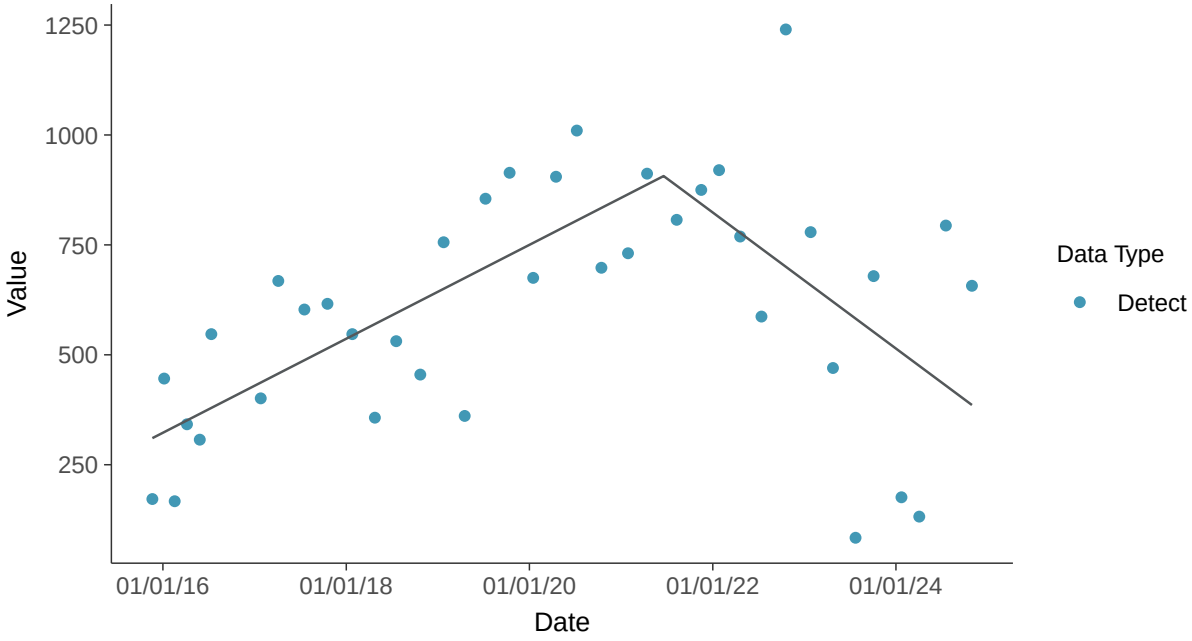
Trend Regression: Lognormal MLE

Chloride, MW-1 (mg/L)



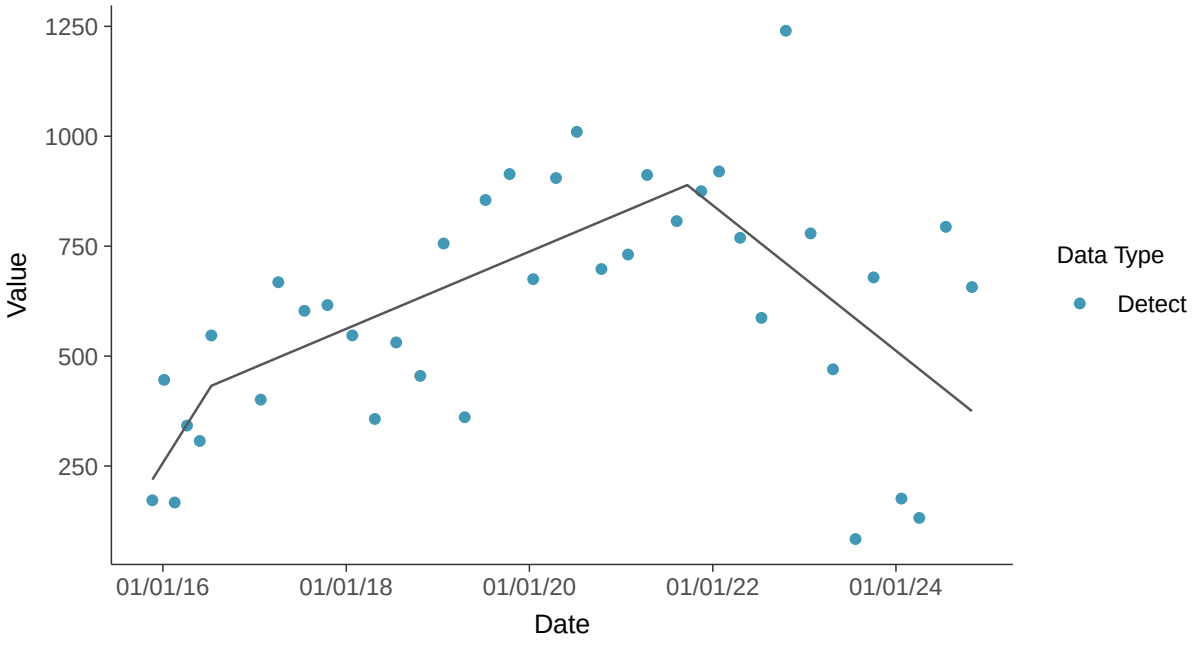
Trend Regression: Piecewise Linear-Linear

Chloride, MW-1 (mg/L)



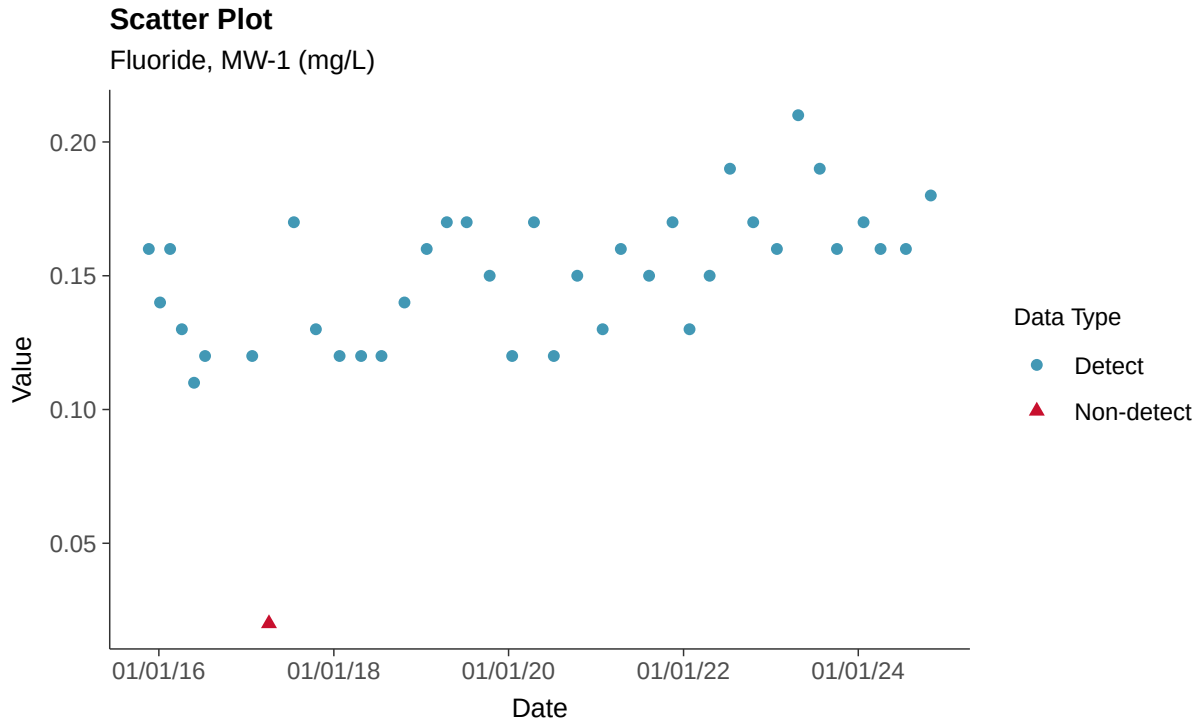
Trend Regression: Piecewise Linear-Linear-Linear

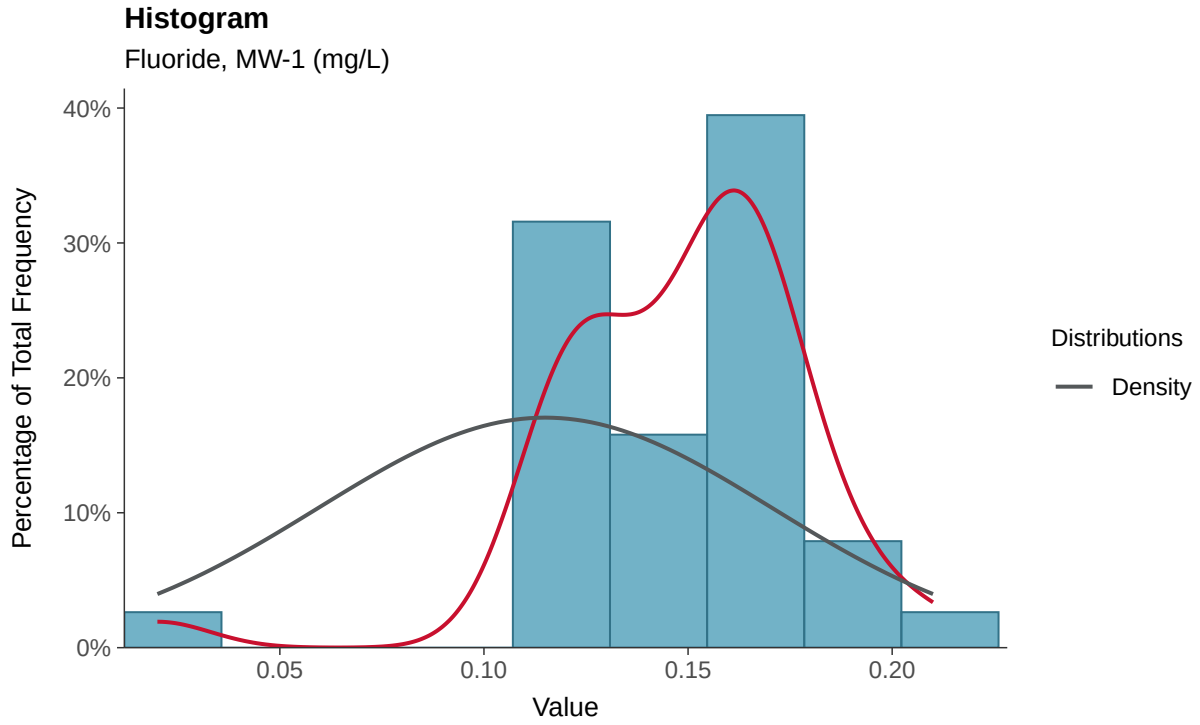
Chloride, MW-1 (mg/L)



App. III: Fluoride, MW-1

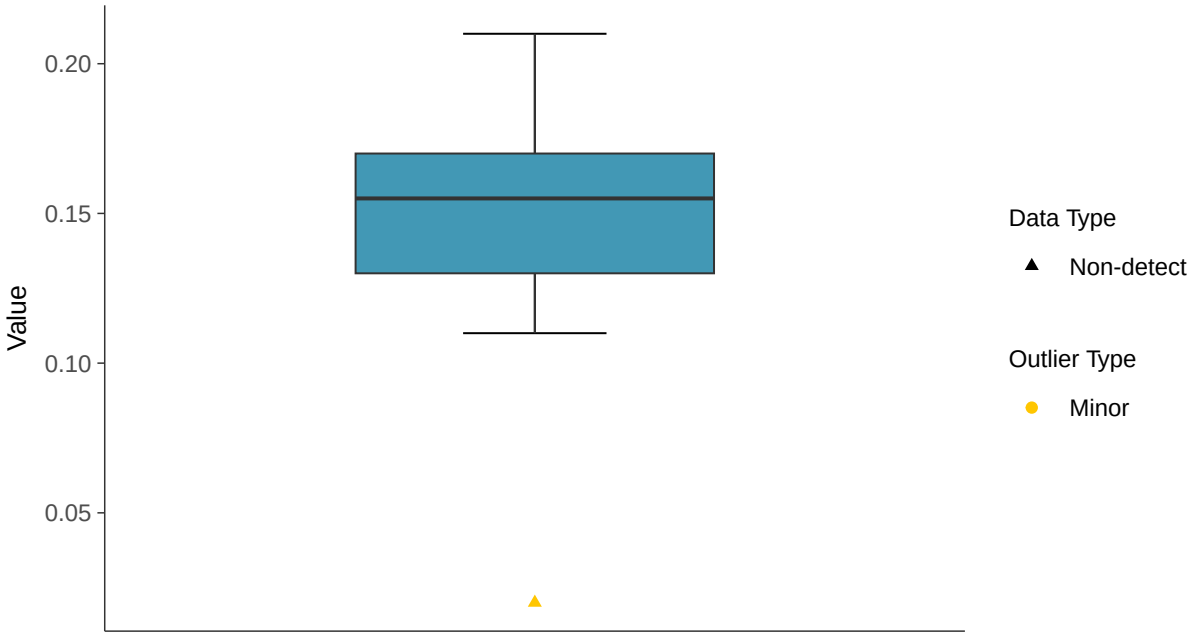
ID: 01_02_112





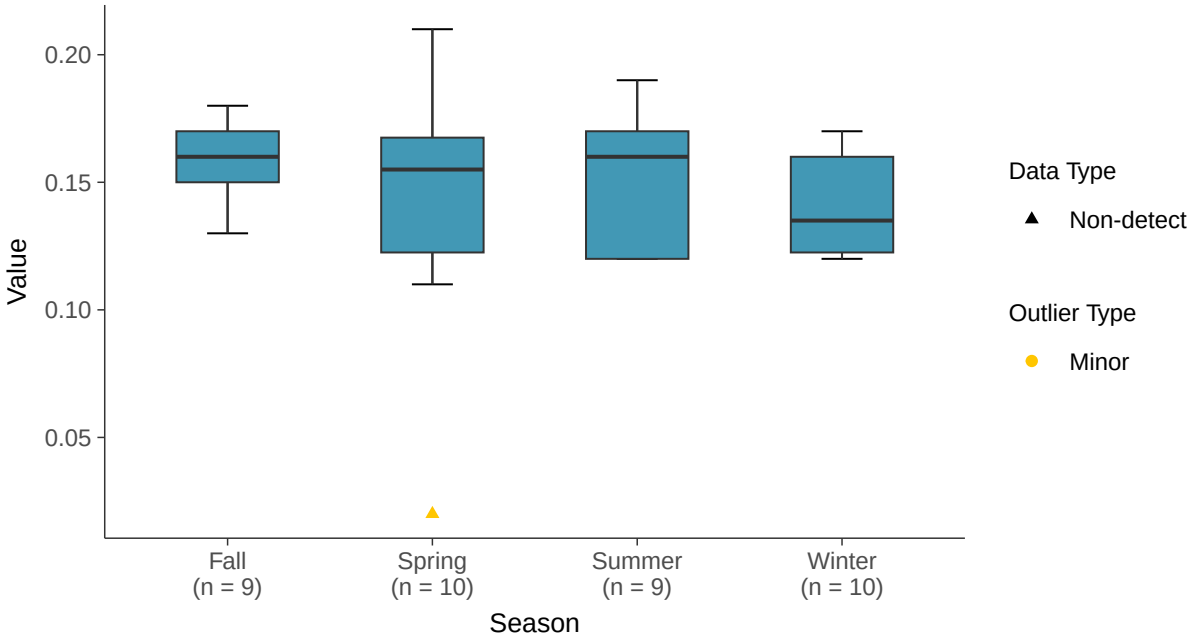
Boxplot

Fluoride, MW-1 (mg/L)



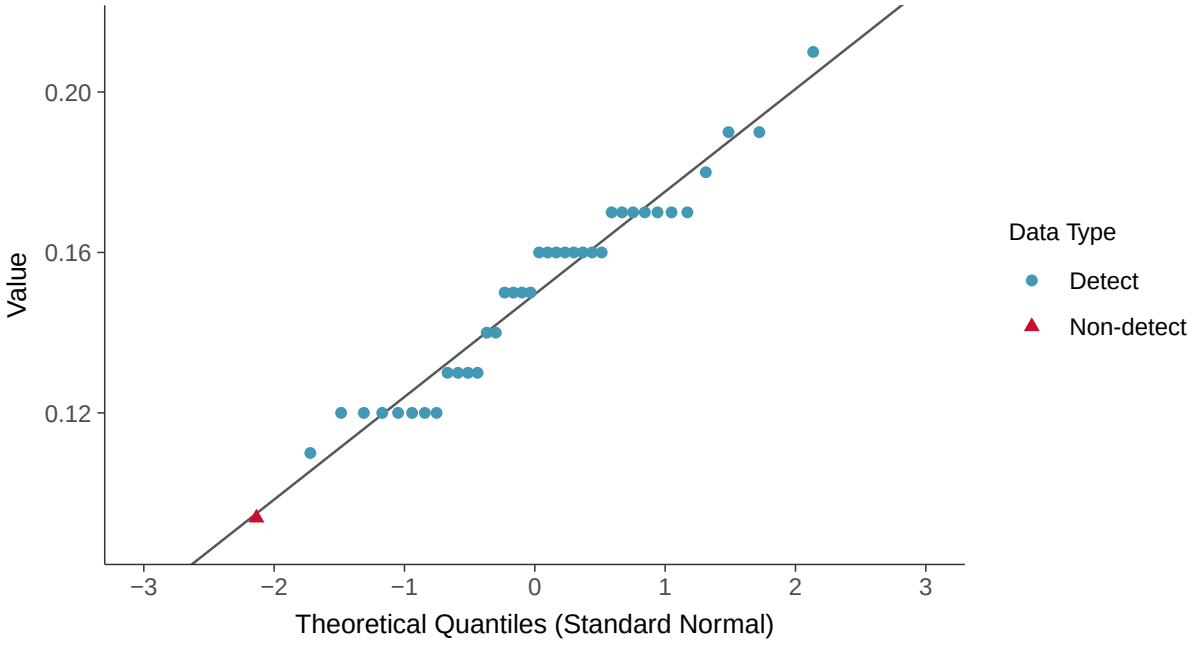
Boxplot by Season

Fluoride, MW-1 (mg/L)



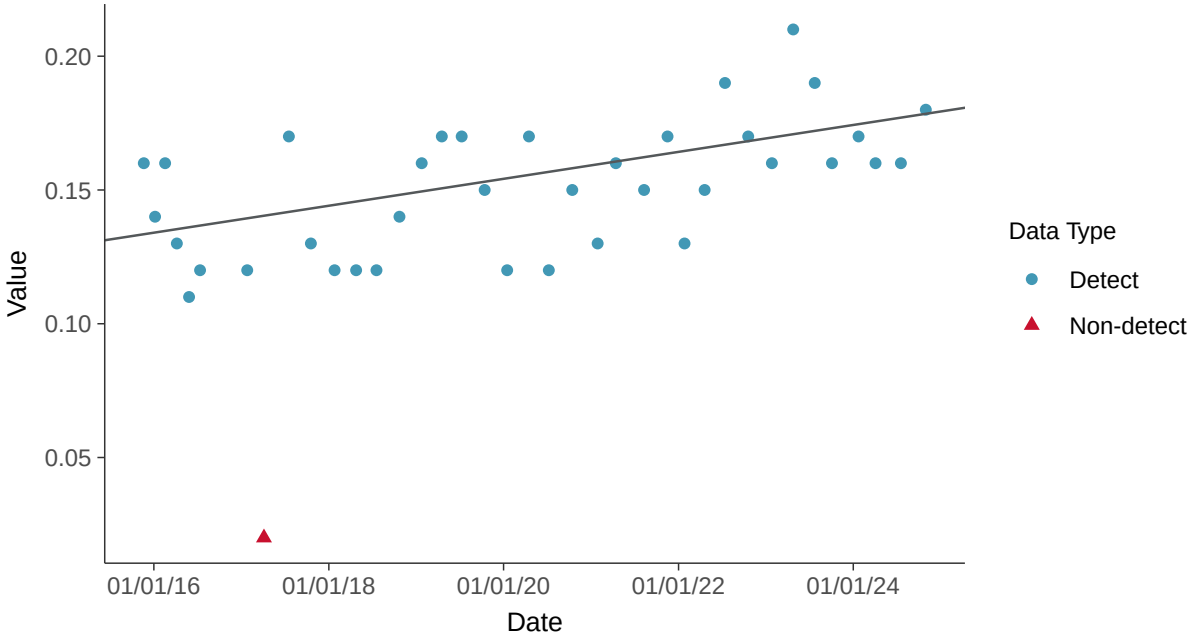
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-1 (mg/L)



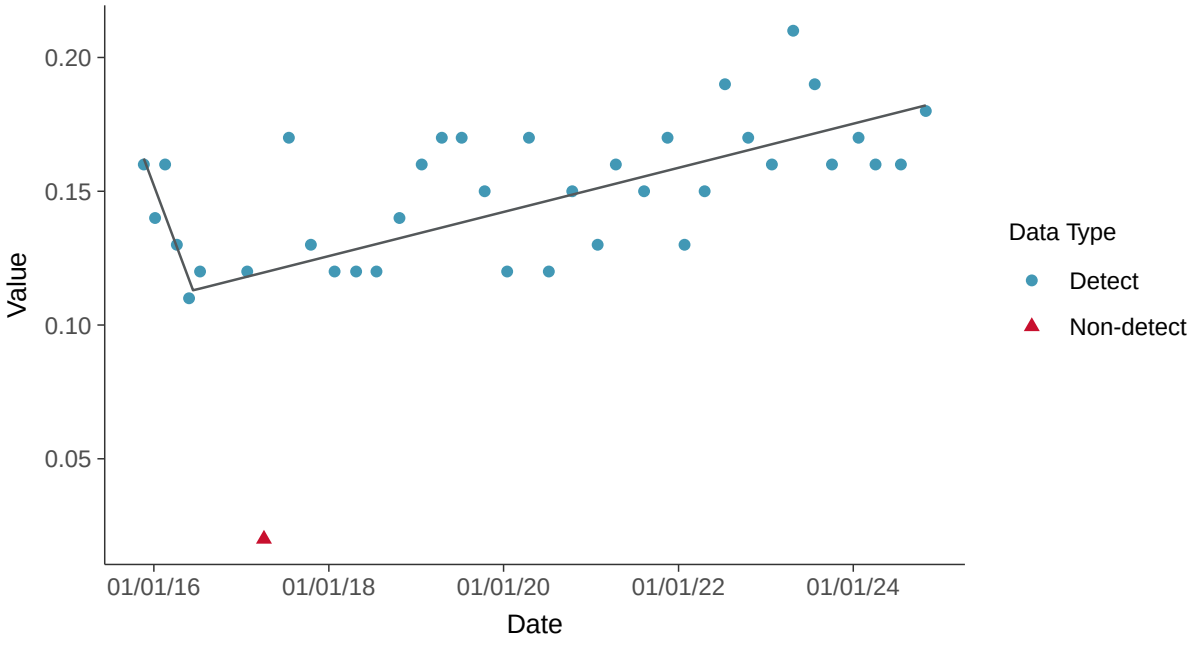
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-1 (mg/L)



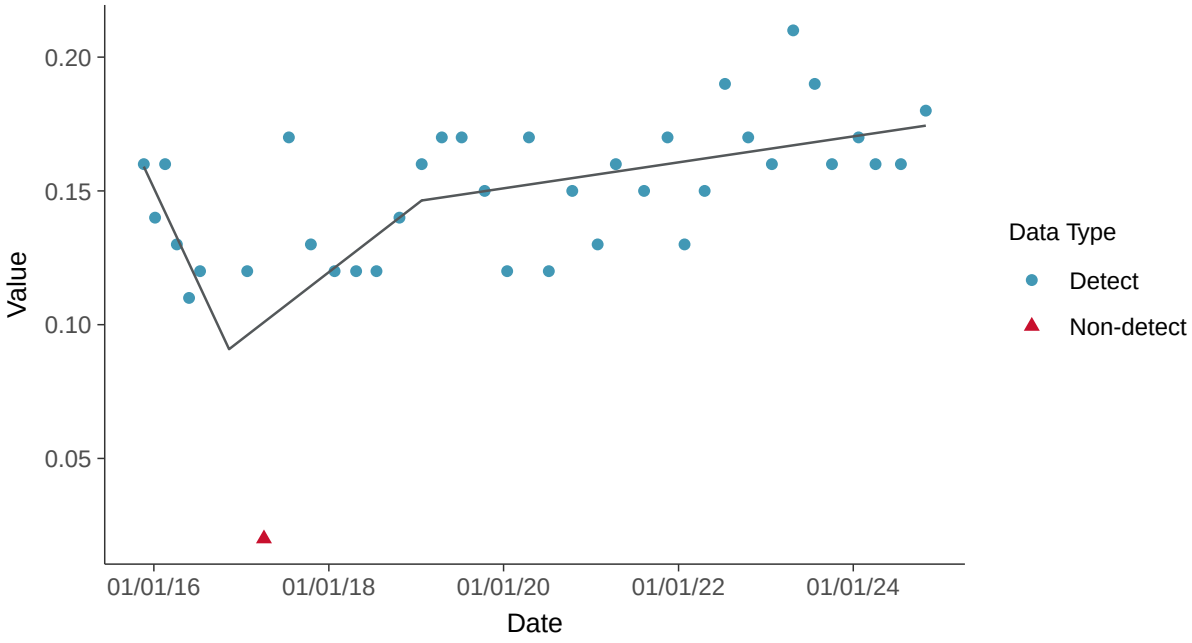
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-1 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-1 (mg/L)

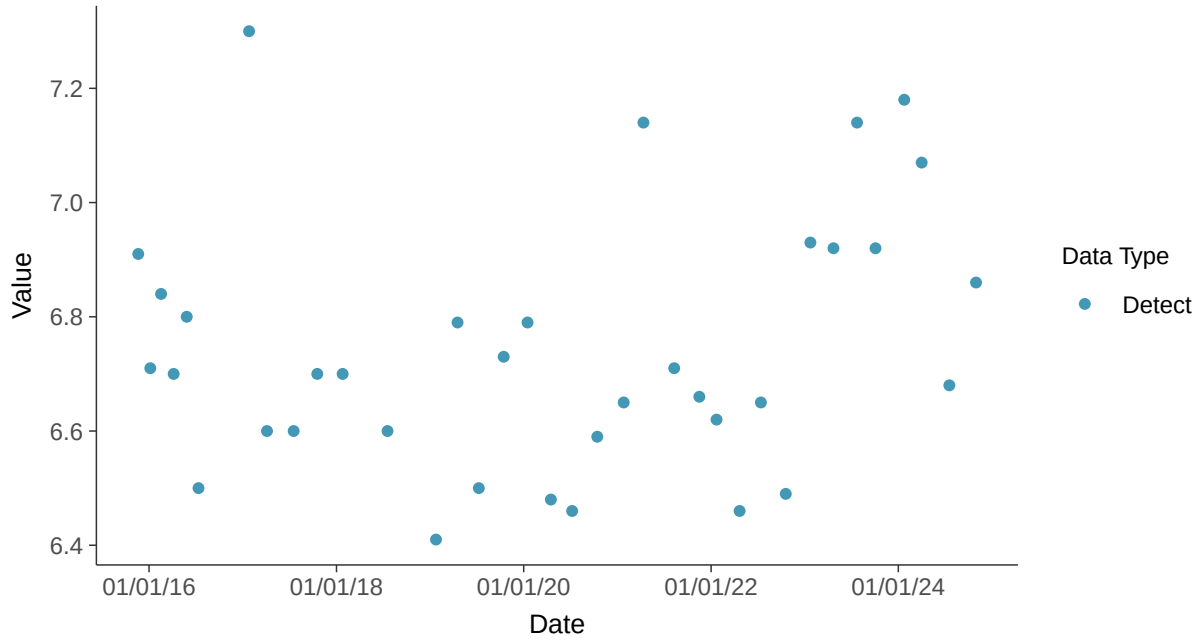


App. III: pH (Field), MW-1

ID: 01_02_118

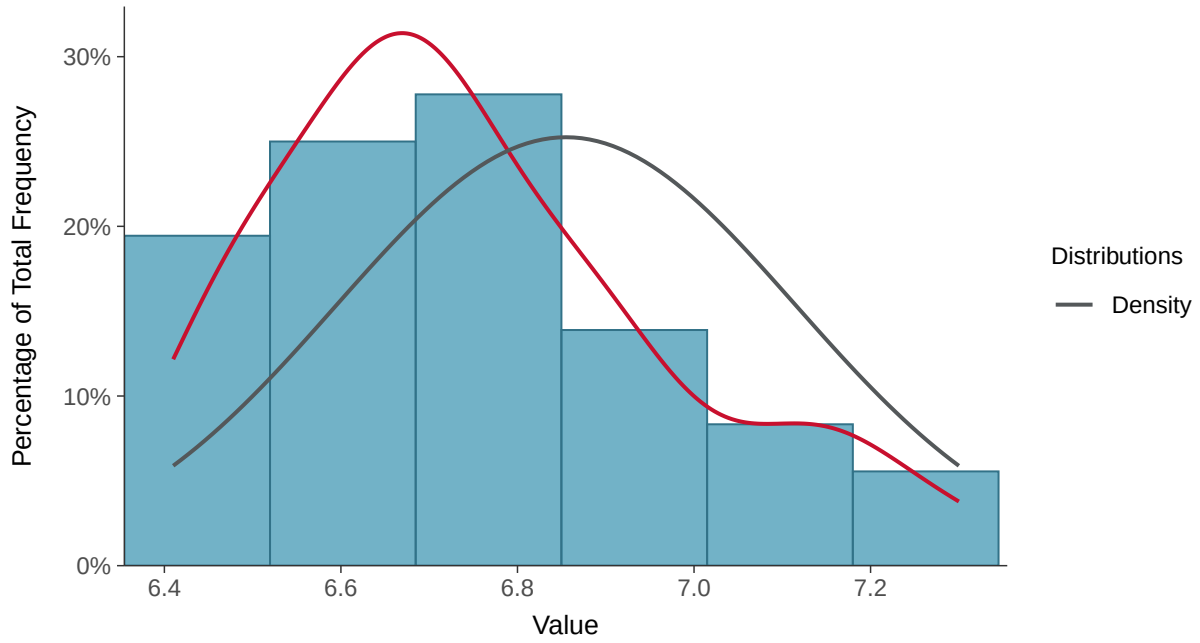
Scatter Plot

pH (Field), MW-1 (S.U.)



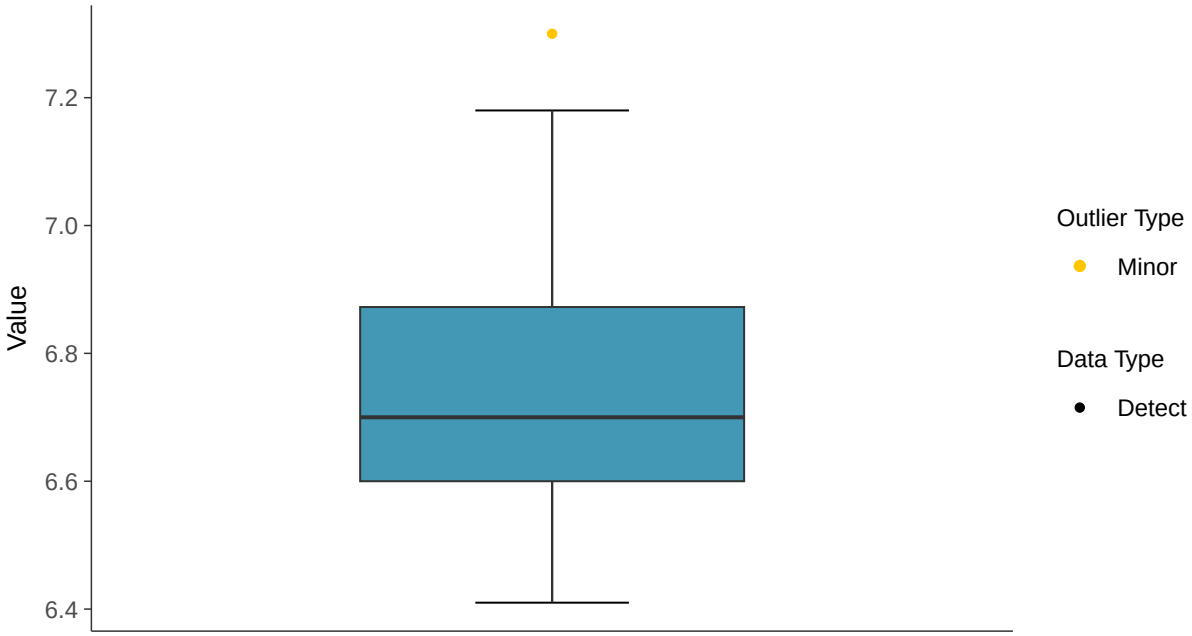
Histogram

pH (Field), MW-1 (S.U.)



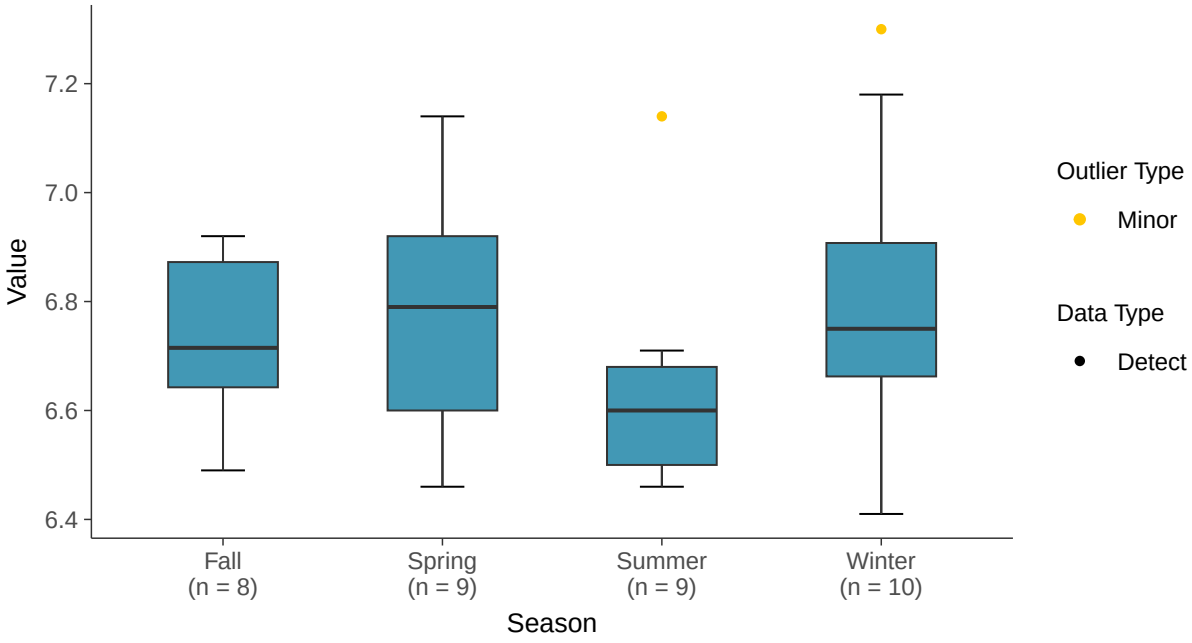
Boxplot

pH (Field), MW-1 (S.U.)



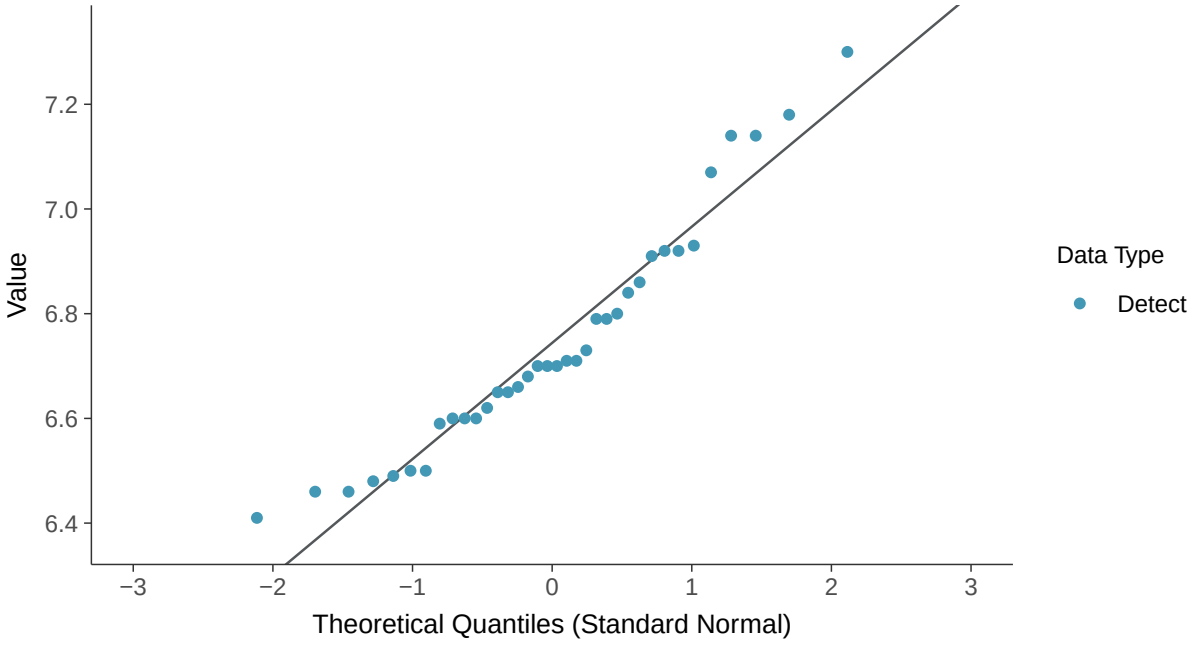
Boxplot by Season

pH (Field), MW-1 (S.U.)



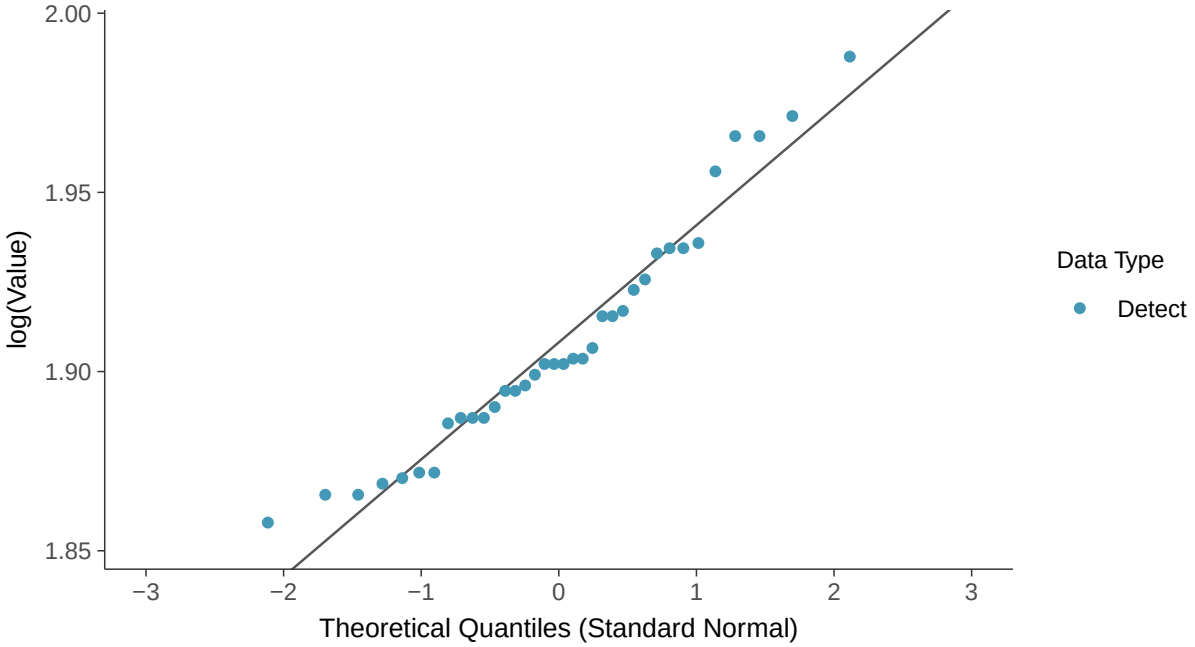
Normal Q-Q plot

pH (Field), MW-1 (S.U.)



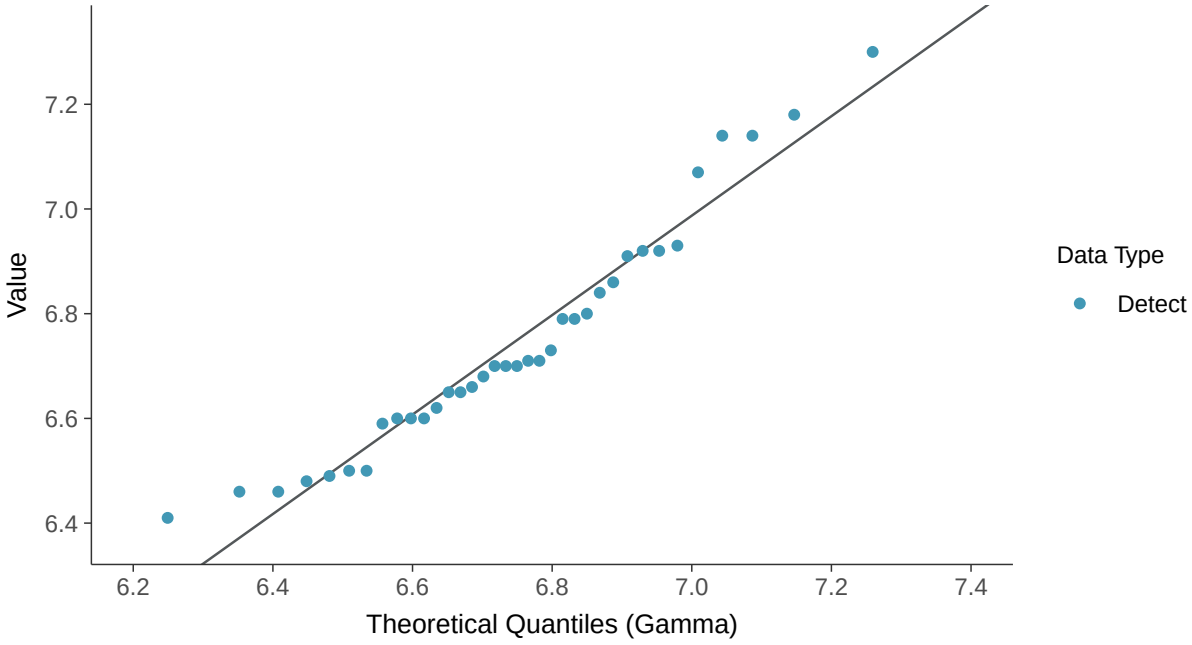
Lognormal Q-Q plot

pH (Field), MW-1 (S.U.)



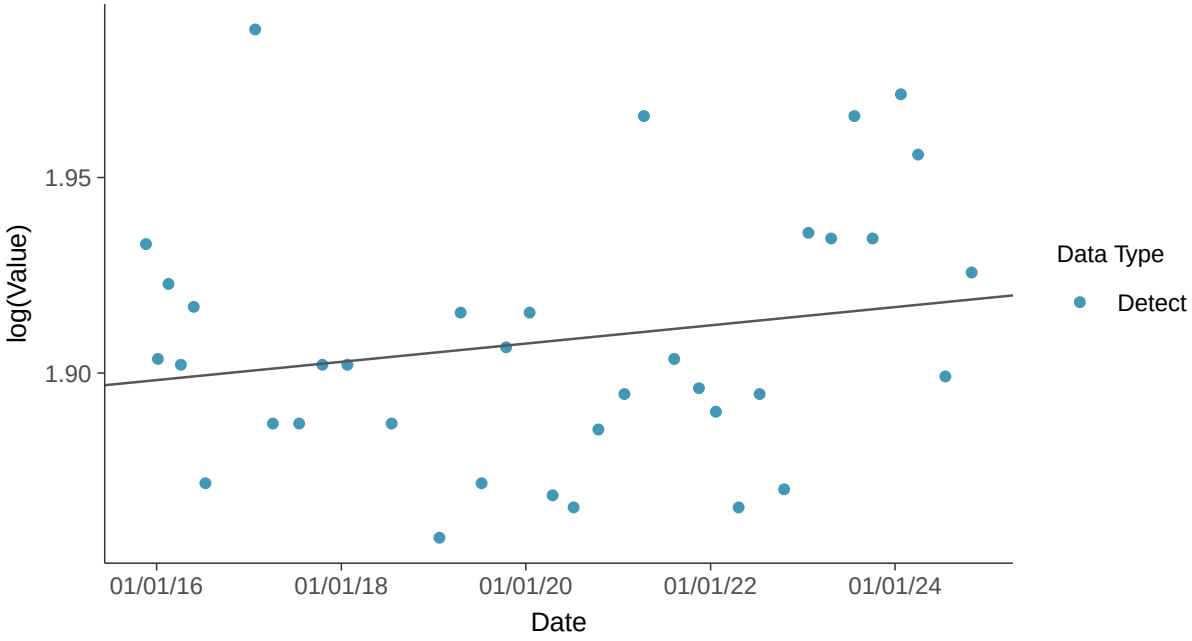
Gamma Q-Q plot

pH (Field), MW-1 (S.U.)



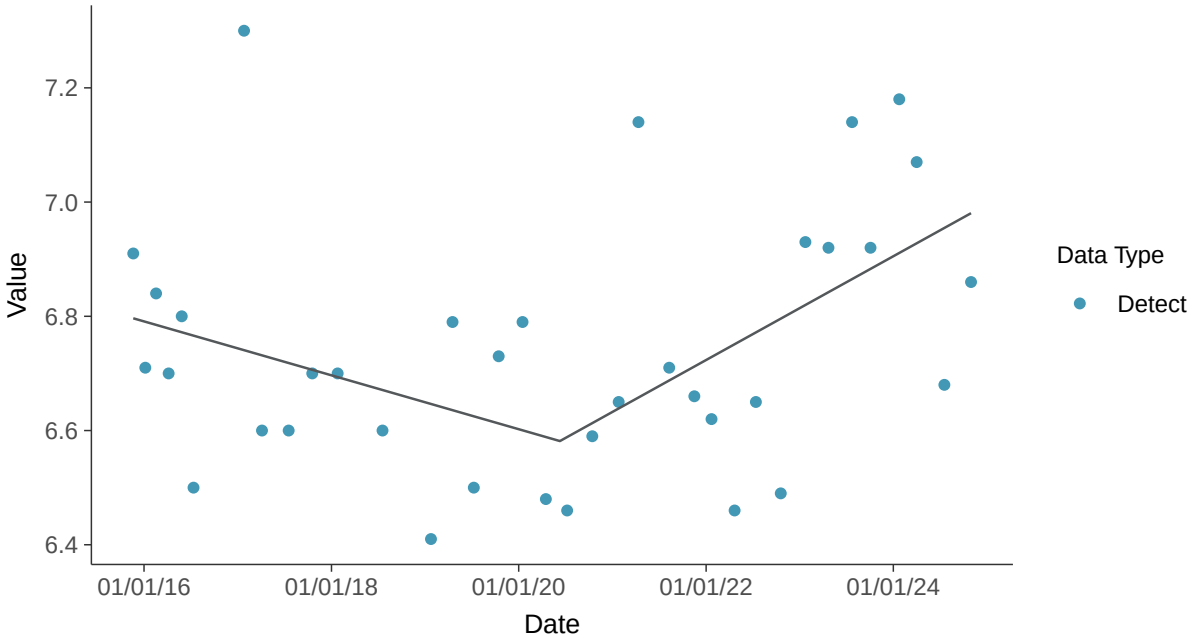
Trend Regression: Lognormal MLE

pH (Field), MW-1 (S.U.)



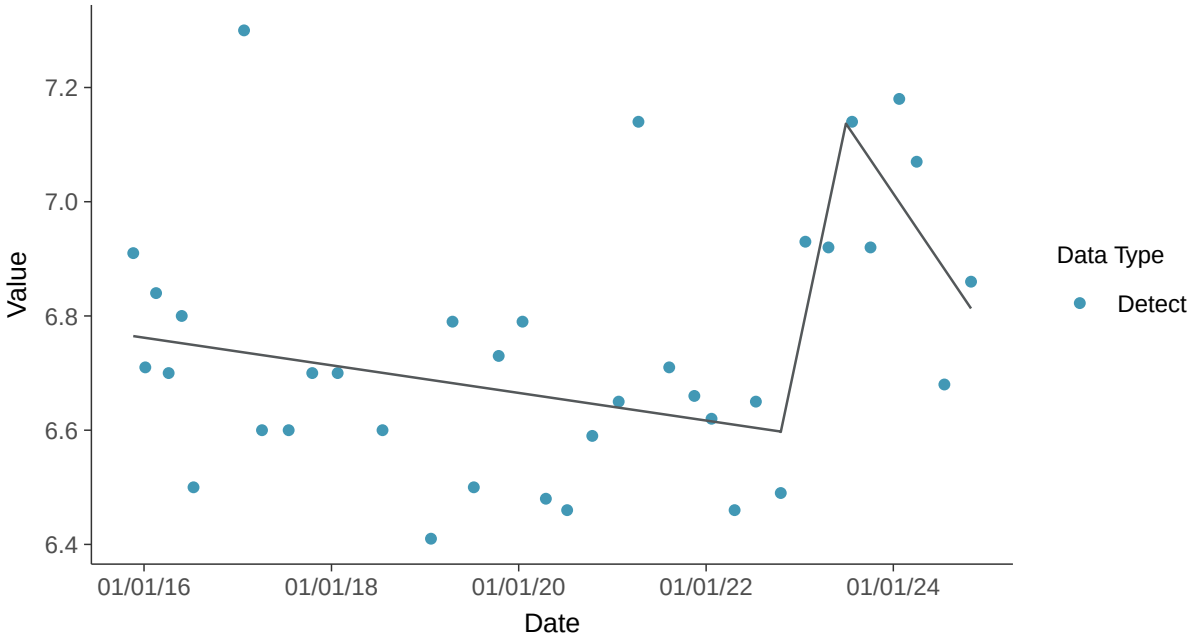
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-1 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-1 (S.U.)

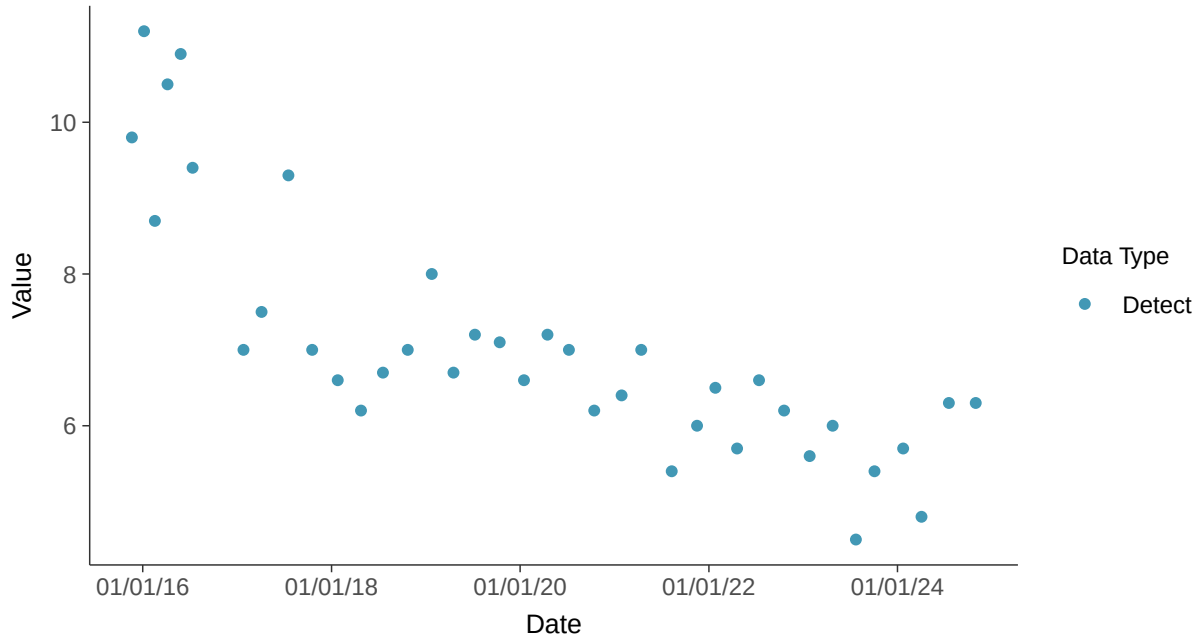


App. III: Sulfate, MW-1

ID: 01_02_123

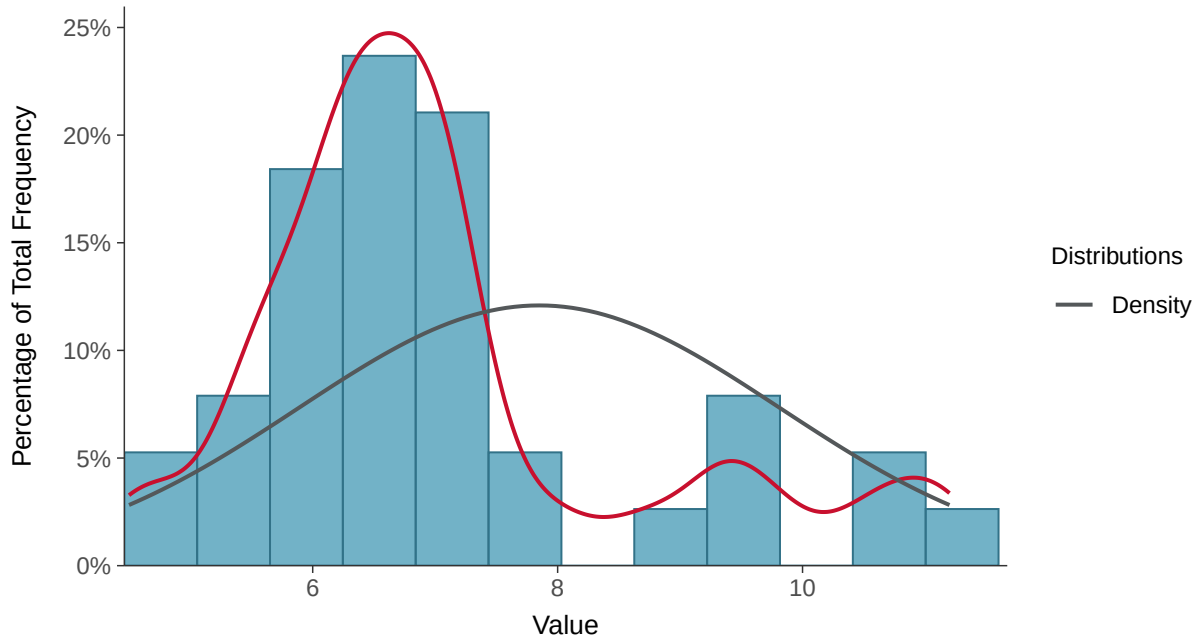
Scatter Plot

Sulfate, MW-1 (mg/L)



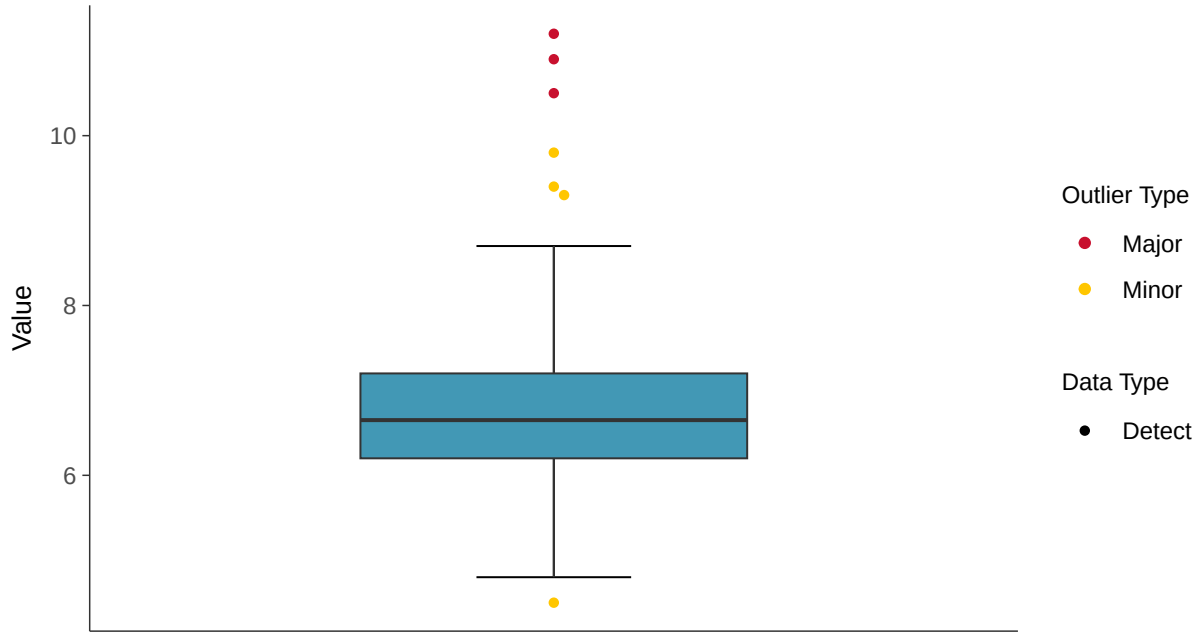
Histogram

Sulfate, MW-1 (mg/L)



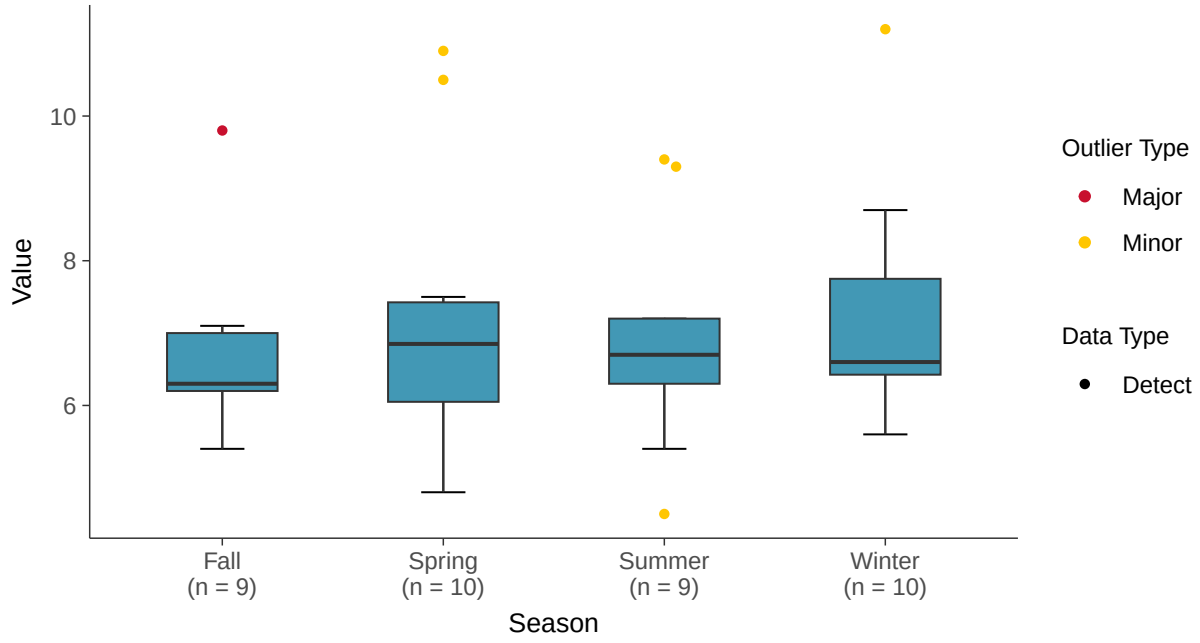
Boxplot

Sulfate, MW-1 (mg/L)



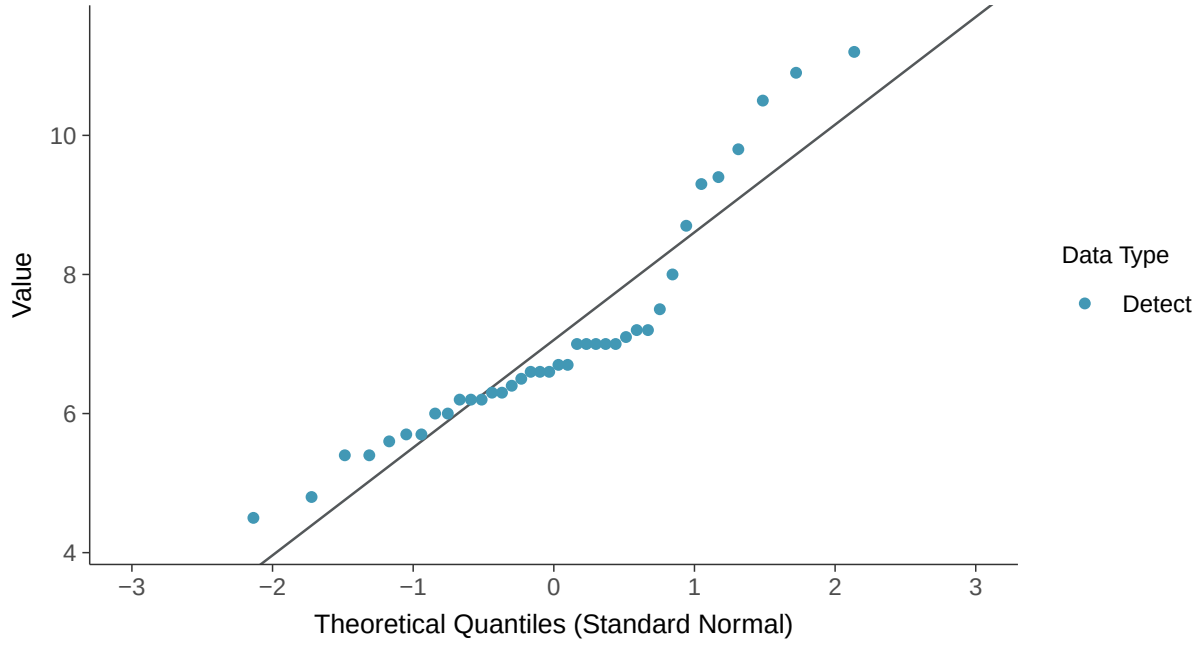
Boxplot by Season

Sulfate, MW-1 (mg/L)



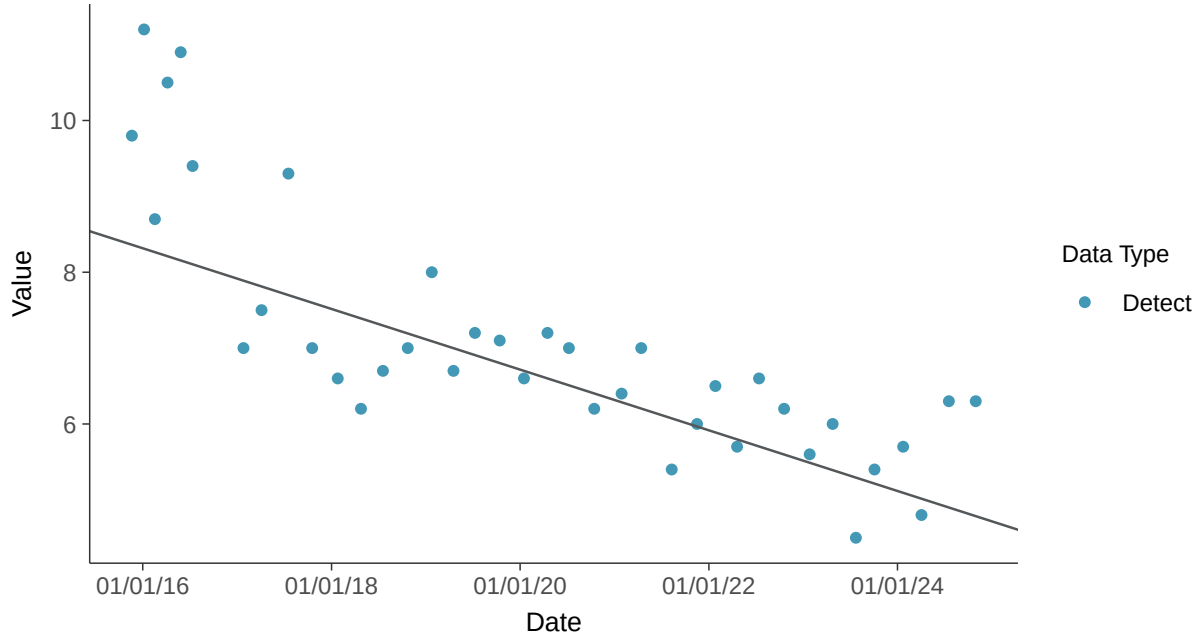
Normal Q-Q plot

Sulfate, MW-1 (mg/L)



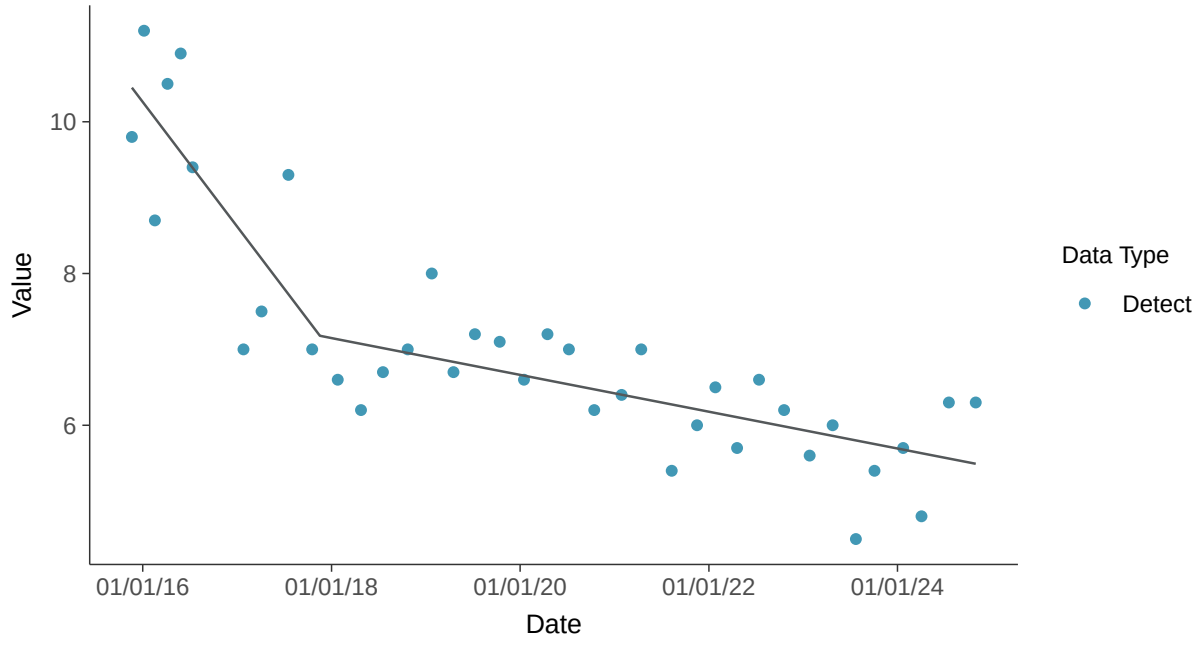
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-1 (mg/L)



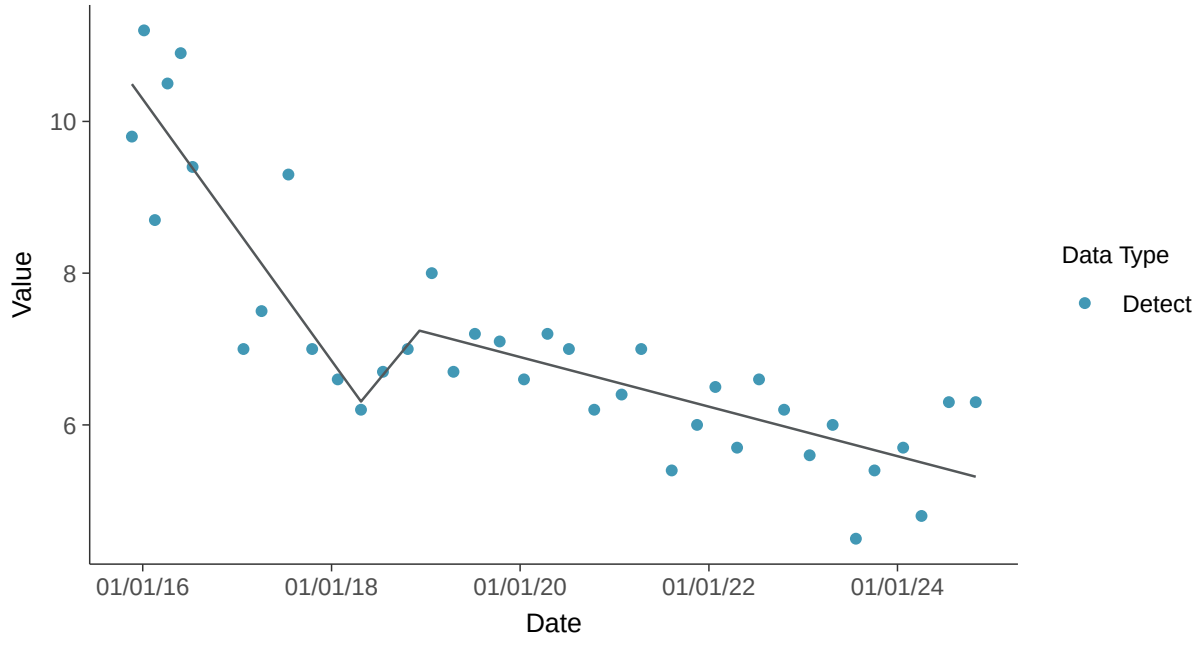
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-1 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-1 (mg/L)

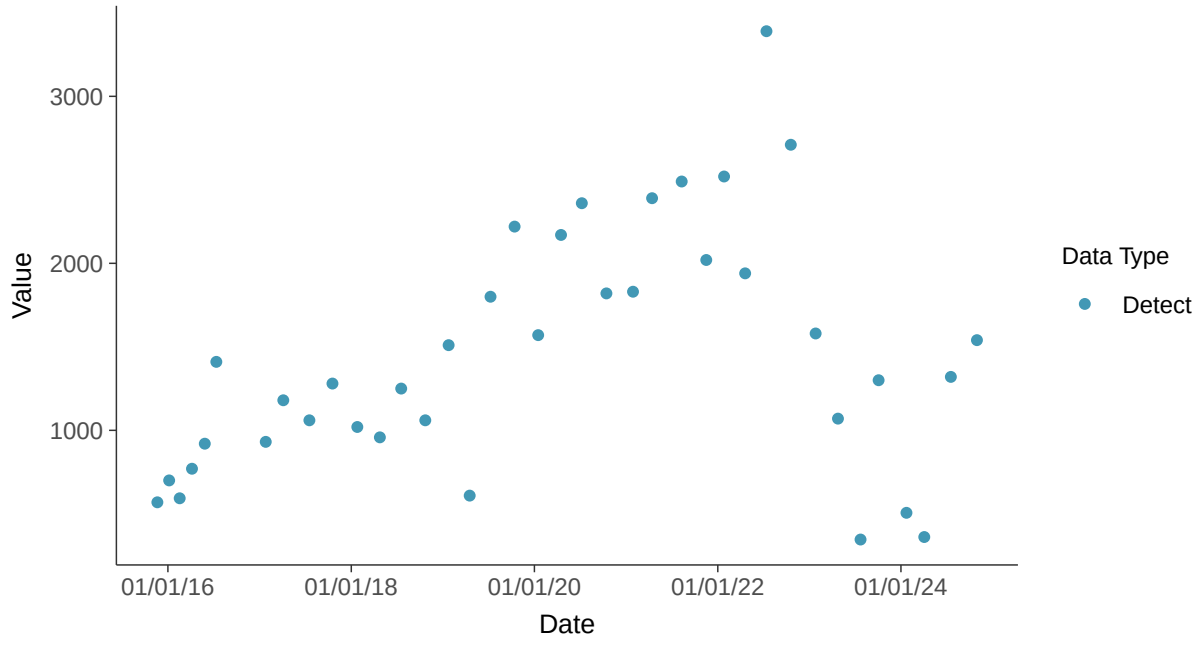


App. III: Total Dissolved Solids, MW-1

ID: 01_02_125

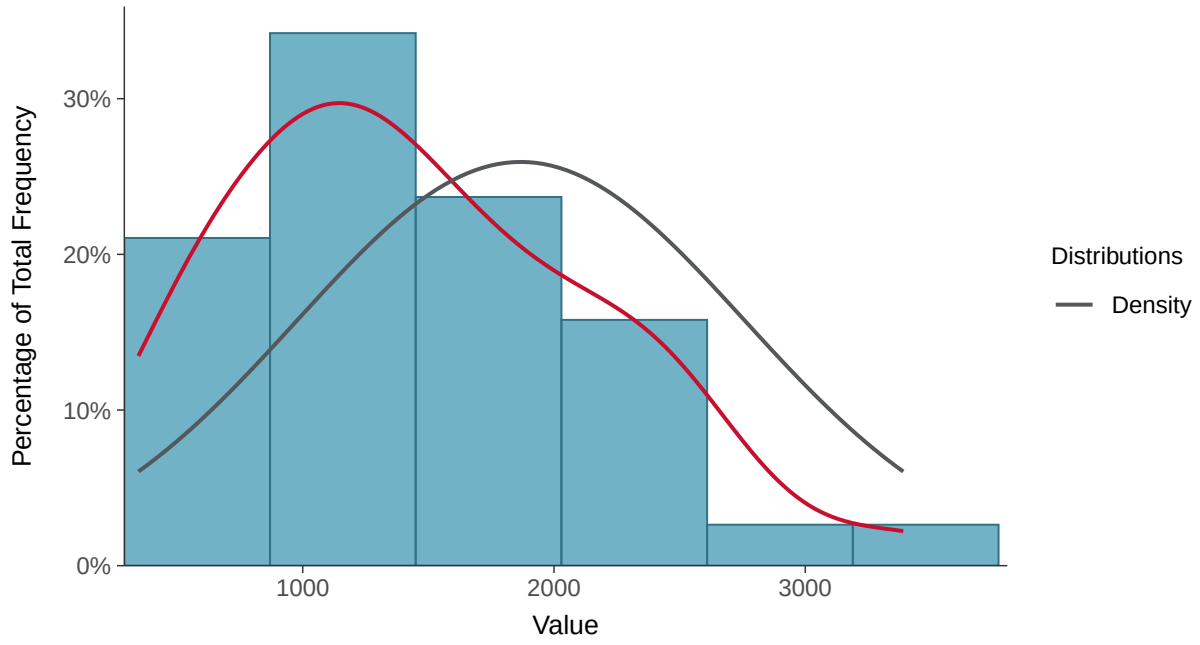
Scatter Plot

Total Dissolved Solids, MW-1 (mg/L)



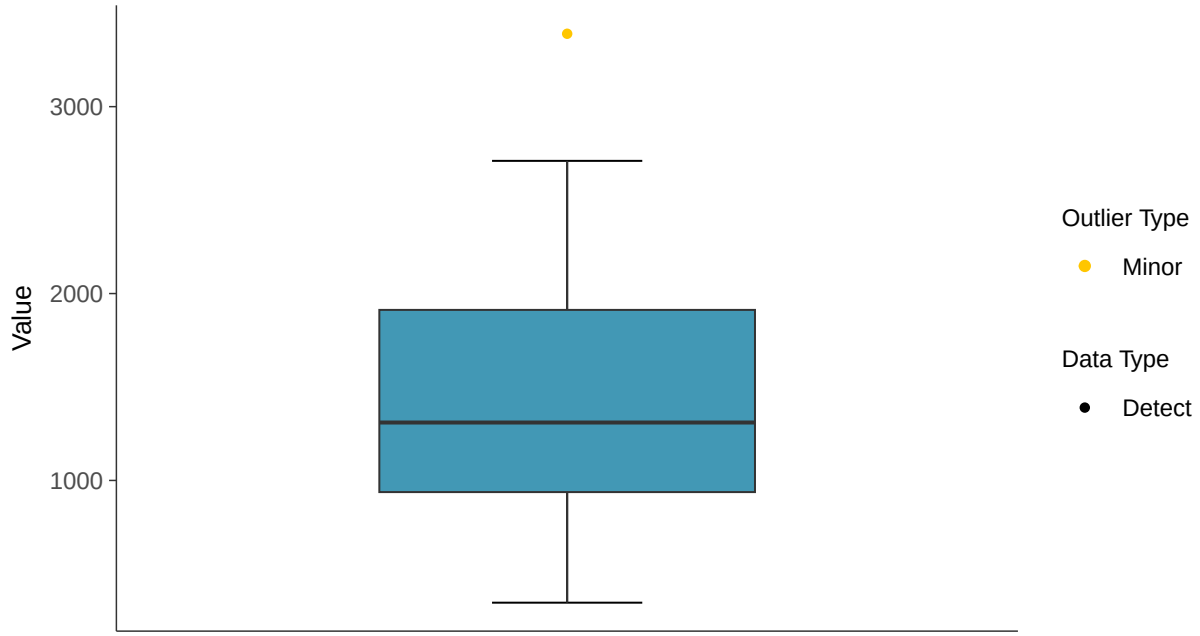
Histogram

Total Dissolved Solids, MW-1 (mg/L)



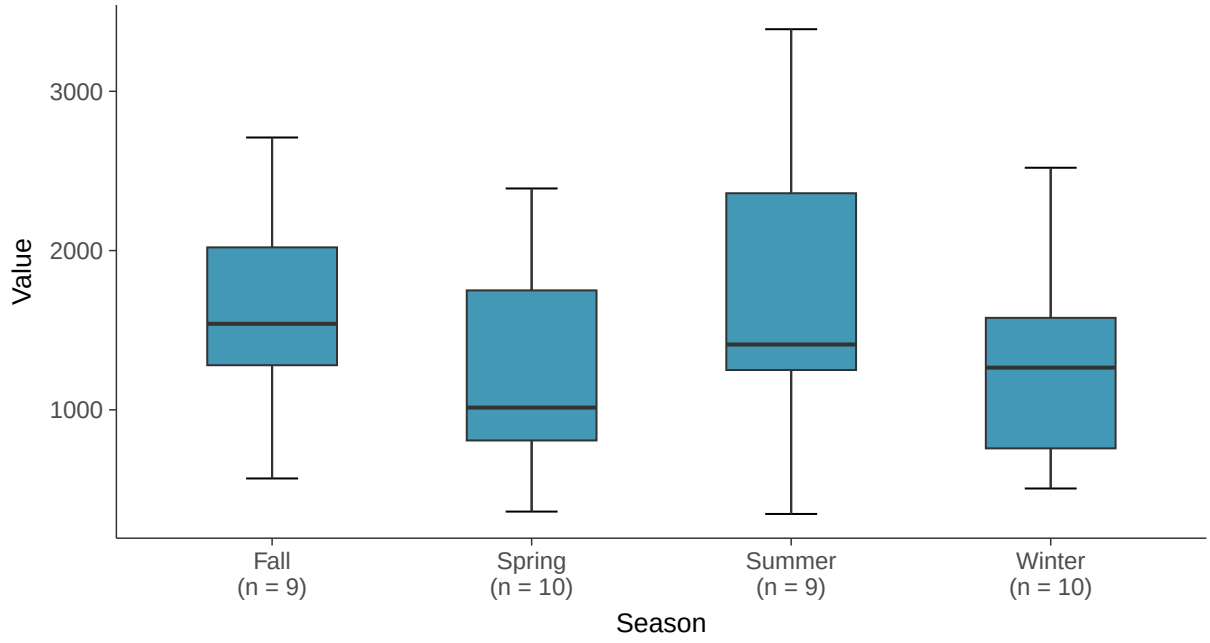
Boxplot

Total Dissolved Solids, MW-1 (mg/L)



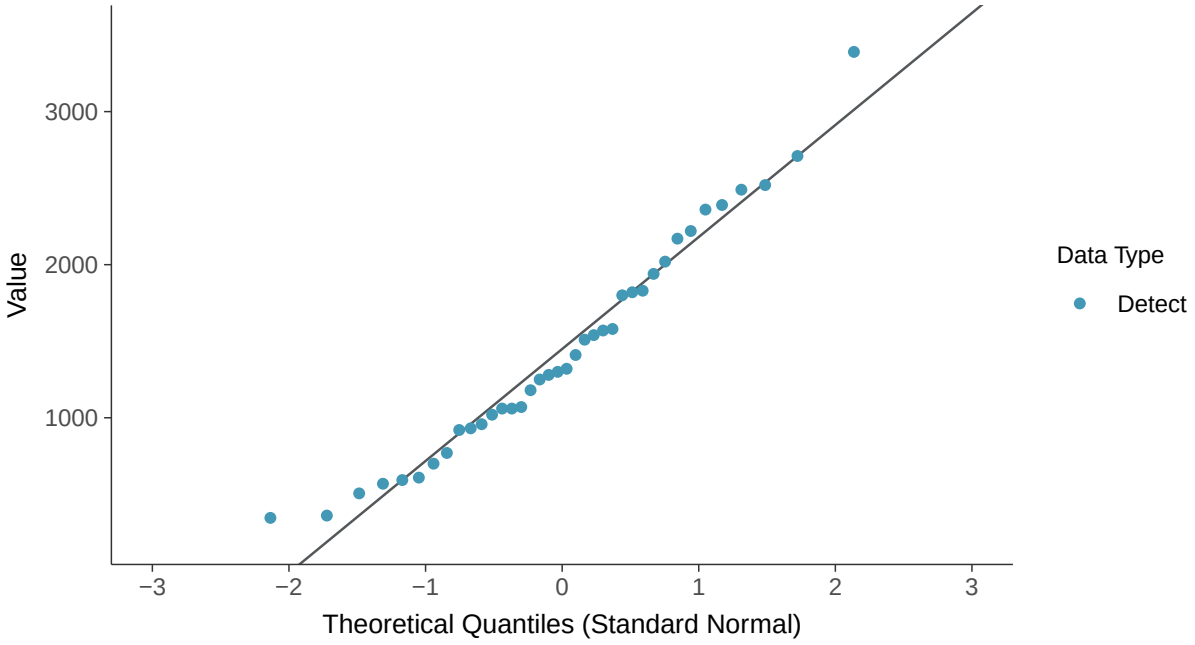
Boxplot by Season

Total Dissolved Solids, MW-1 (mg/L)



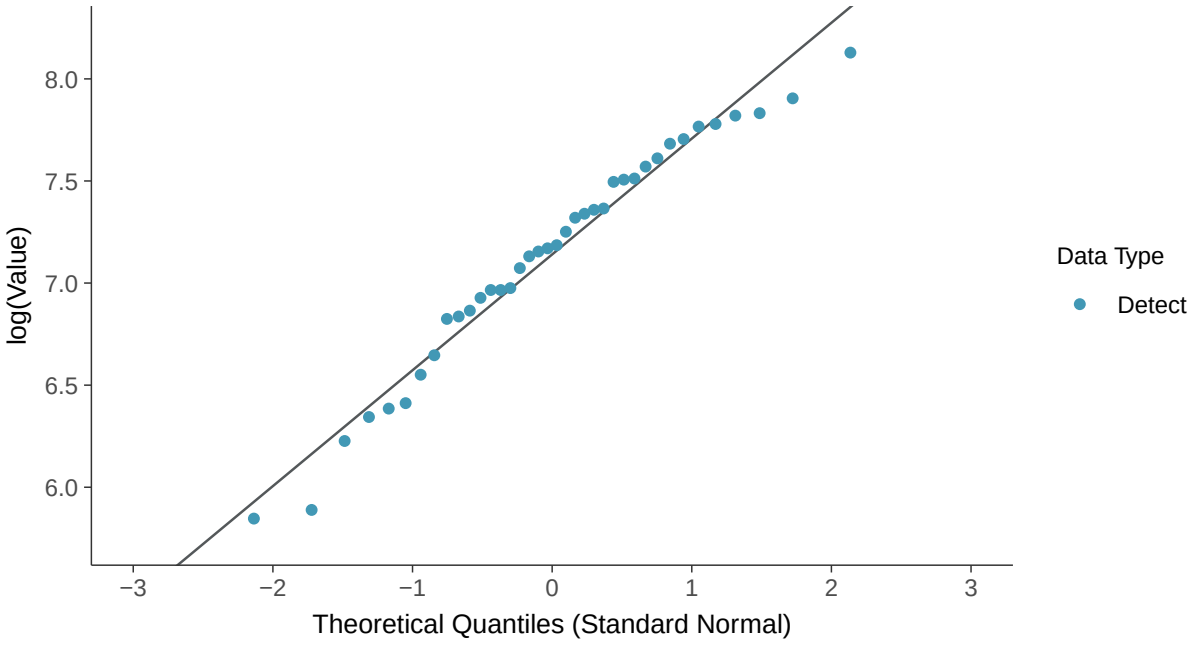
Normal Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



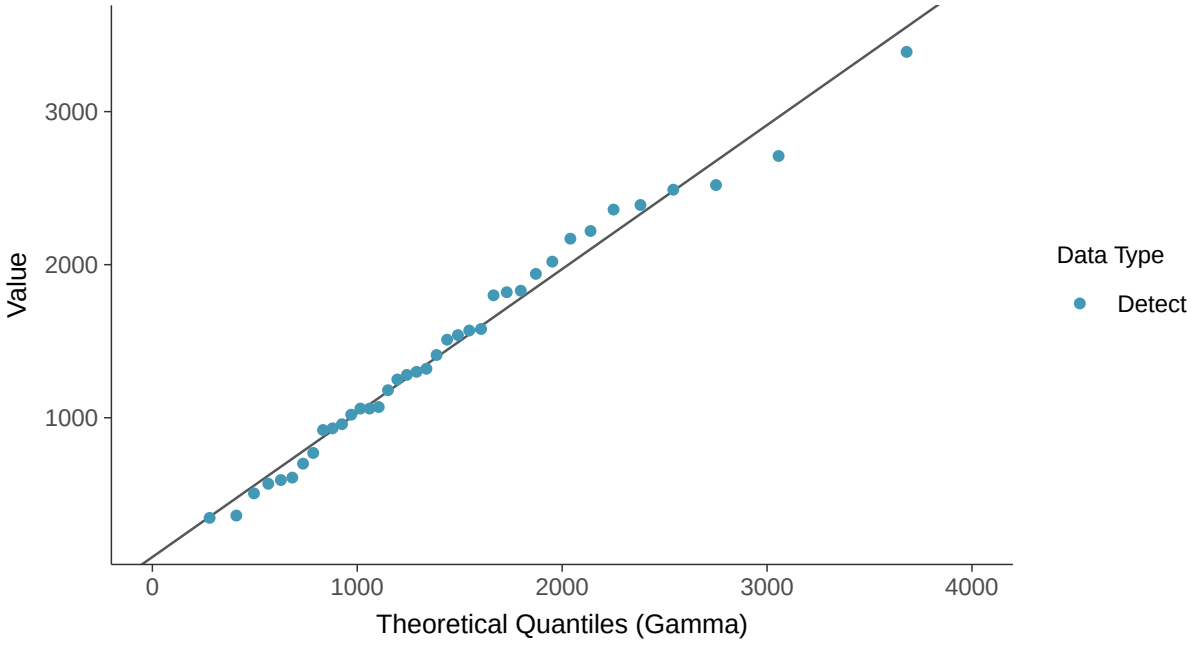
Lognormal Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



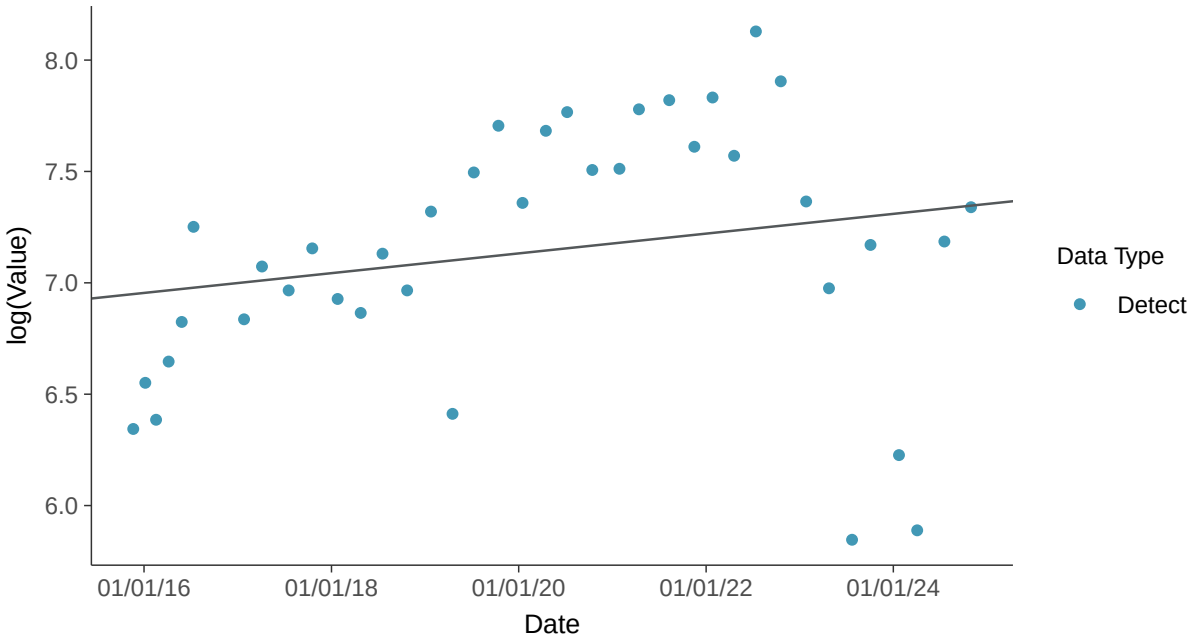
Gamma Q-Q plot

Total Dissolved Solids, MW-1 (mg/L)



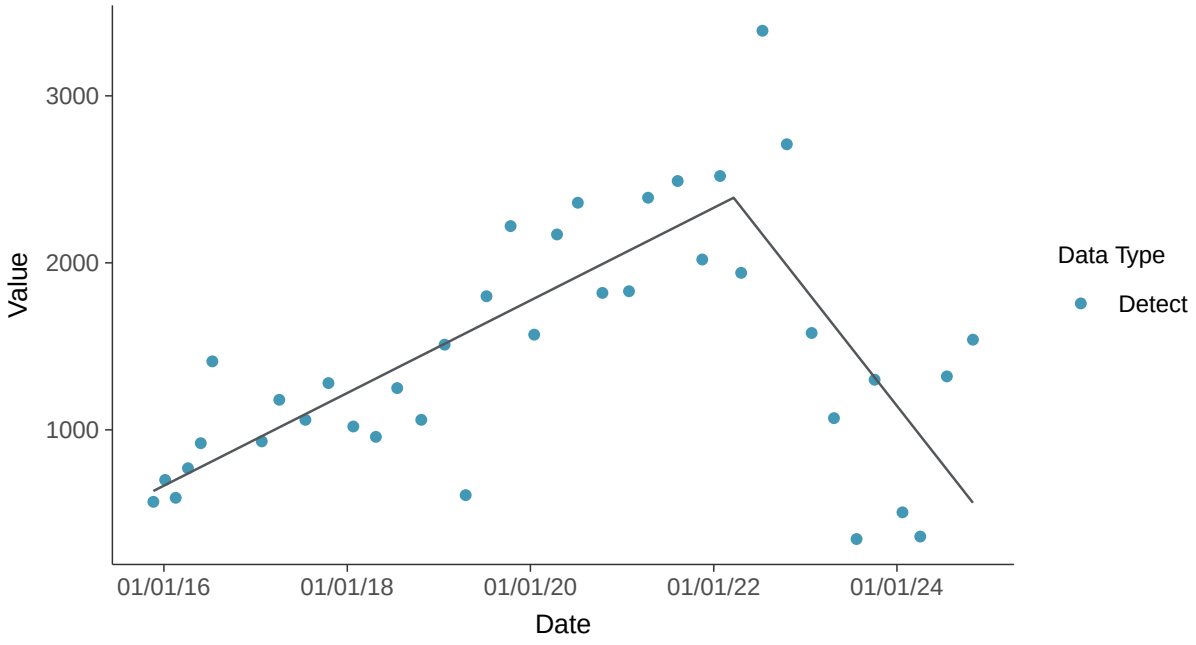
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-1 (mg/L)



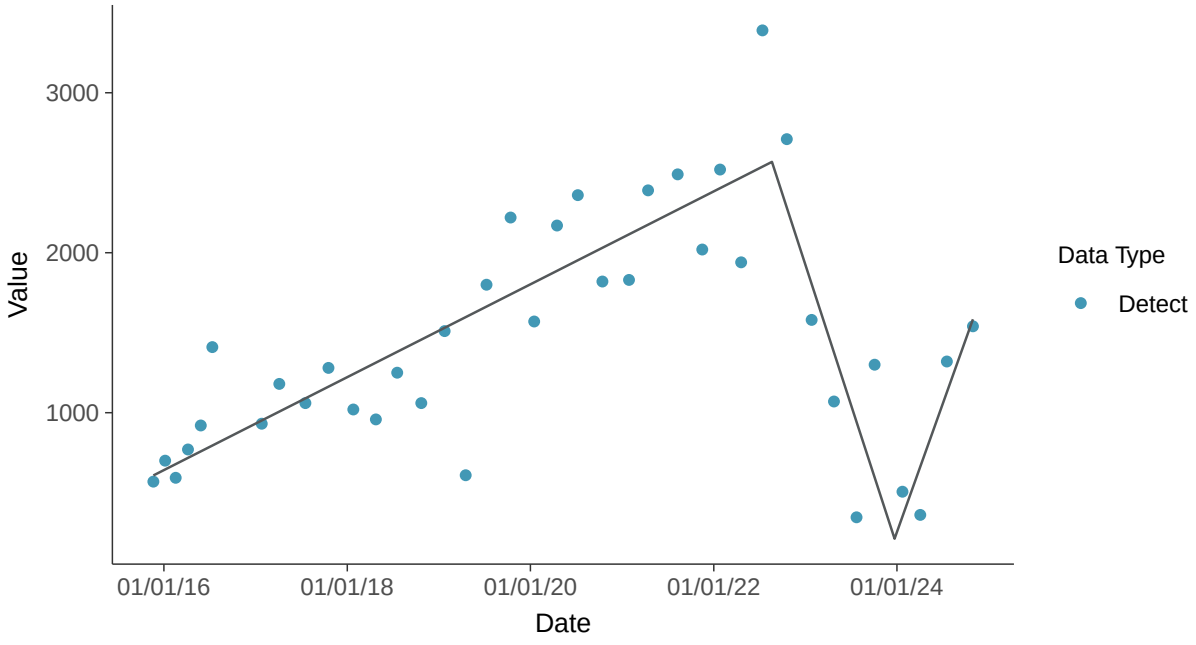
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-1 (mg/L)



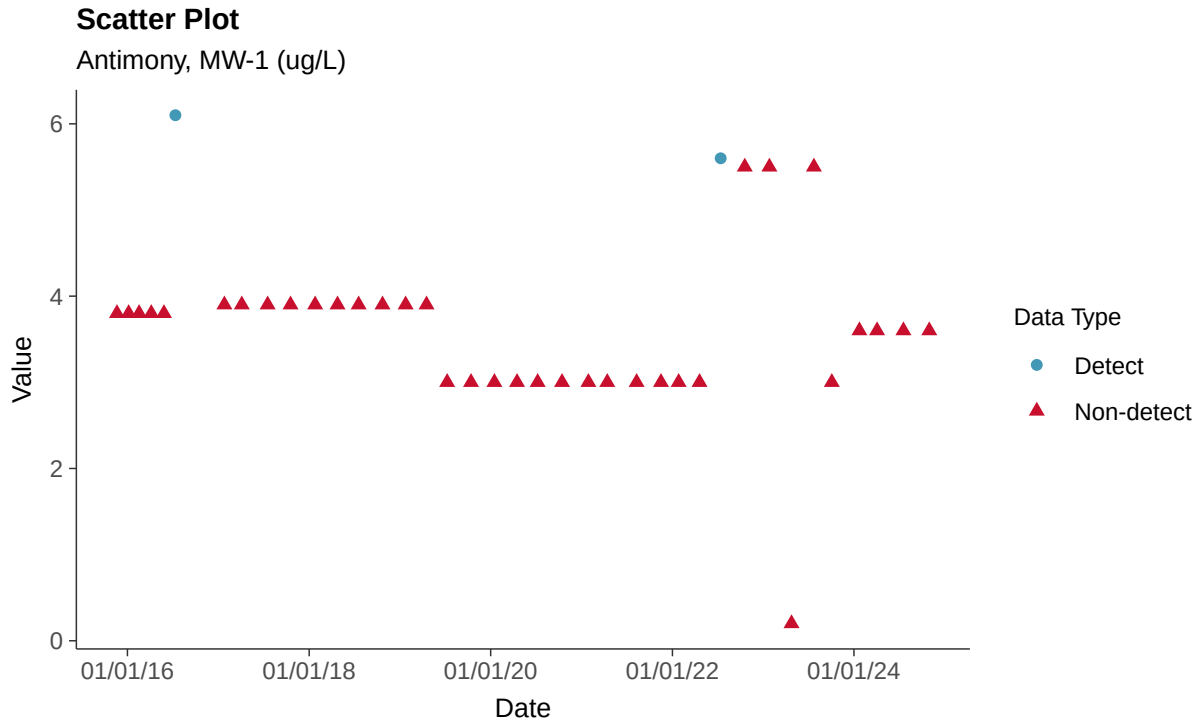
Trend Regression: Piecewise Linear-Linear-Linear

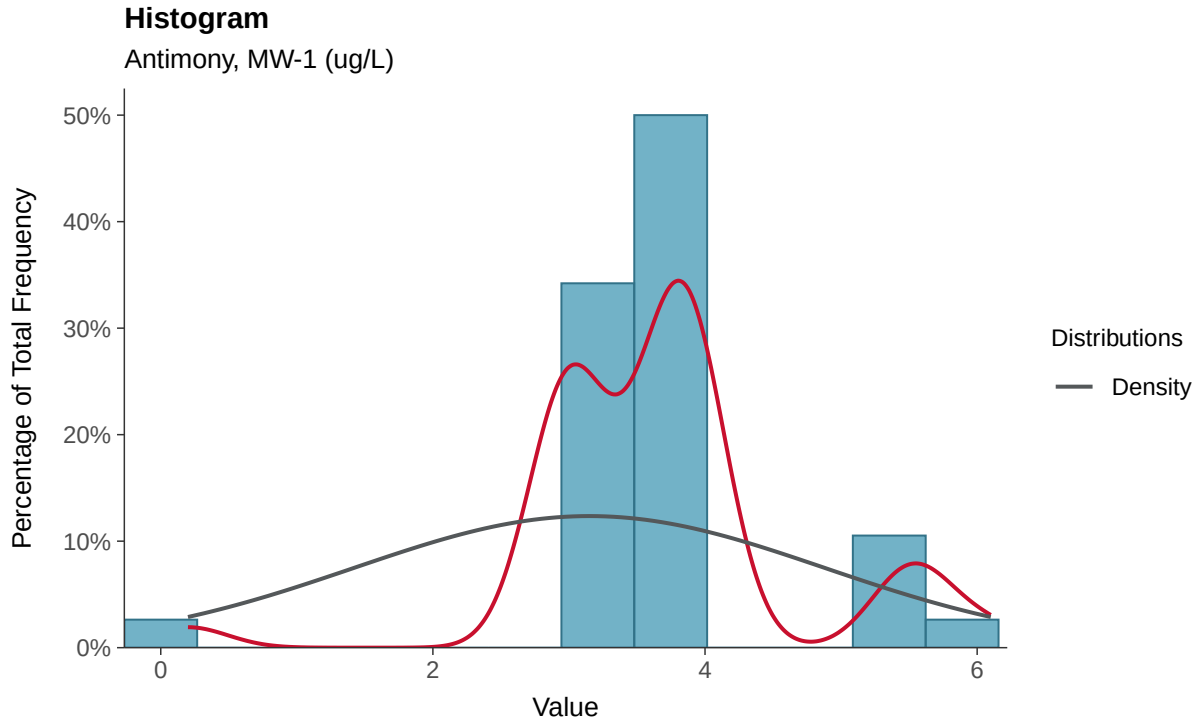
Total Dissolved Solids, MW-1 (mg/L)



App. IV: Antimony, MW-1

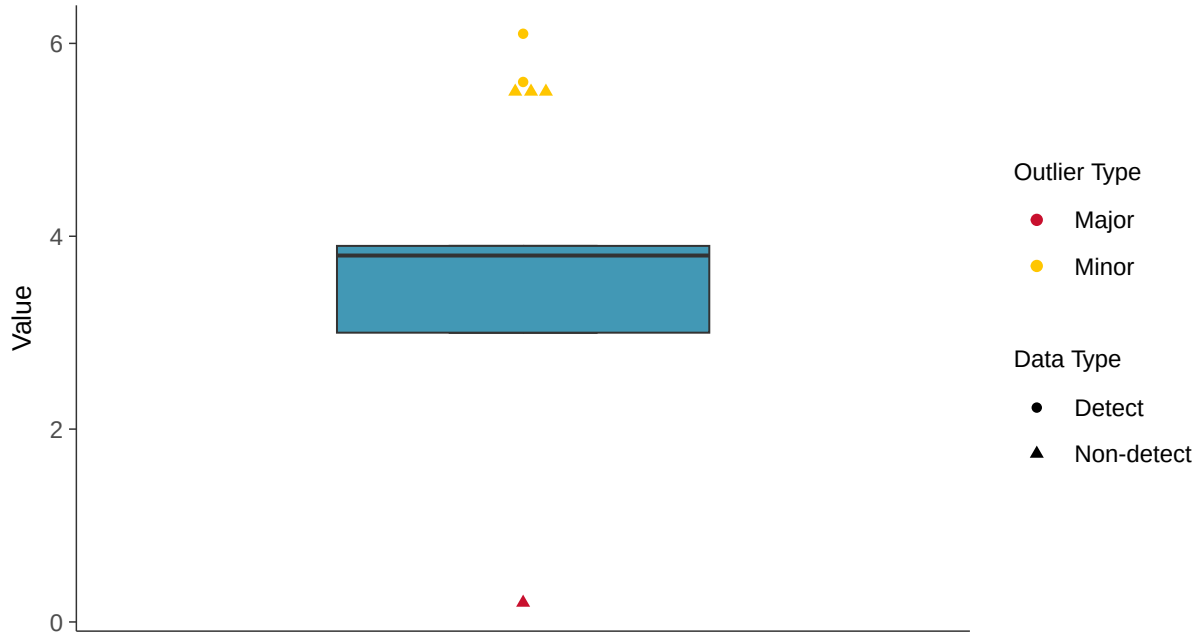
ID: 01_03_101





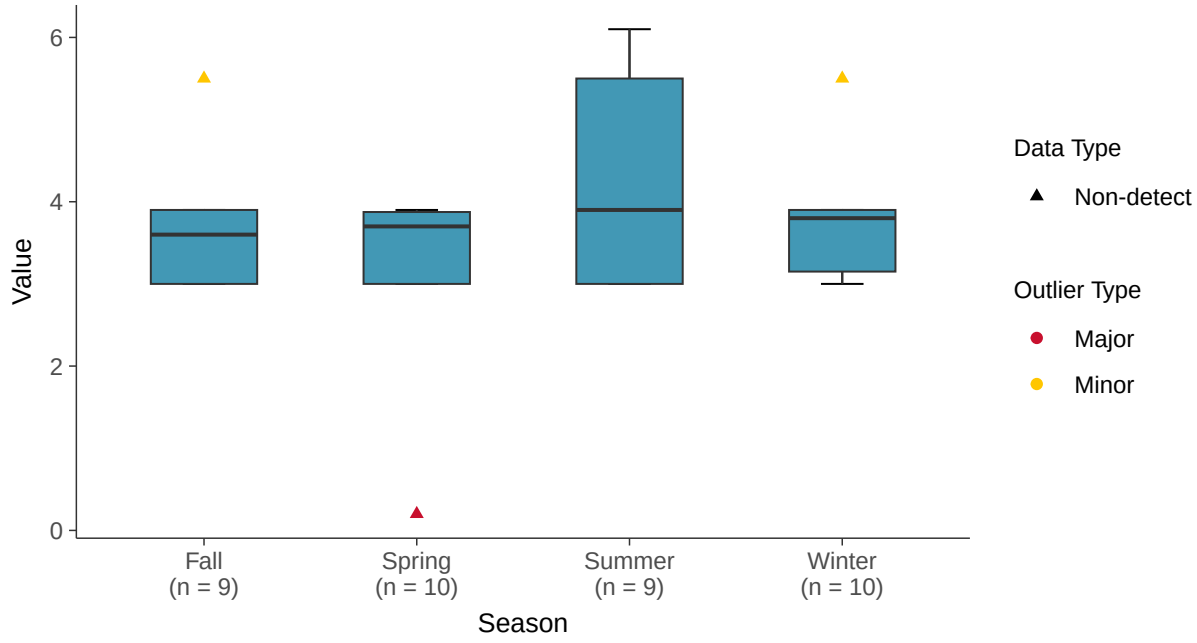
Boxplot

Antimony, MW-1 (ug/L)



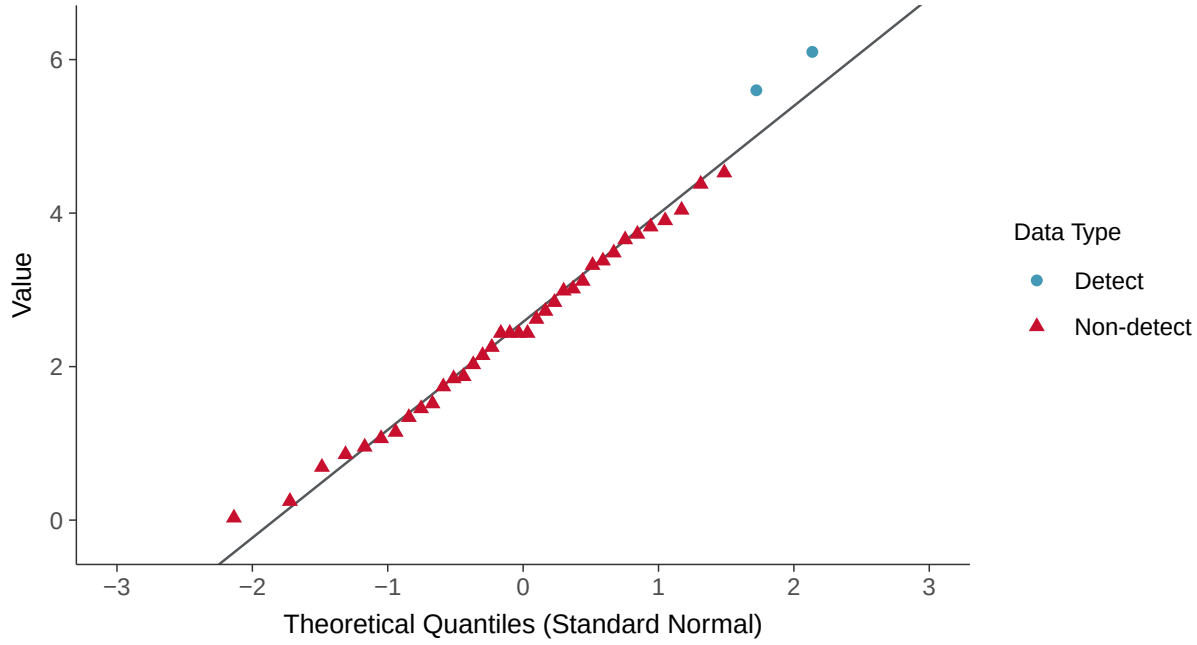
Boxplot by Season

Antimony, MW-1 (ug/L)



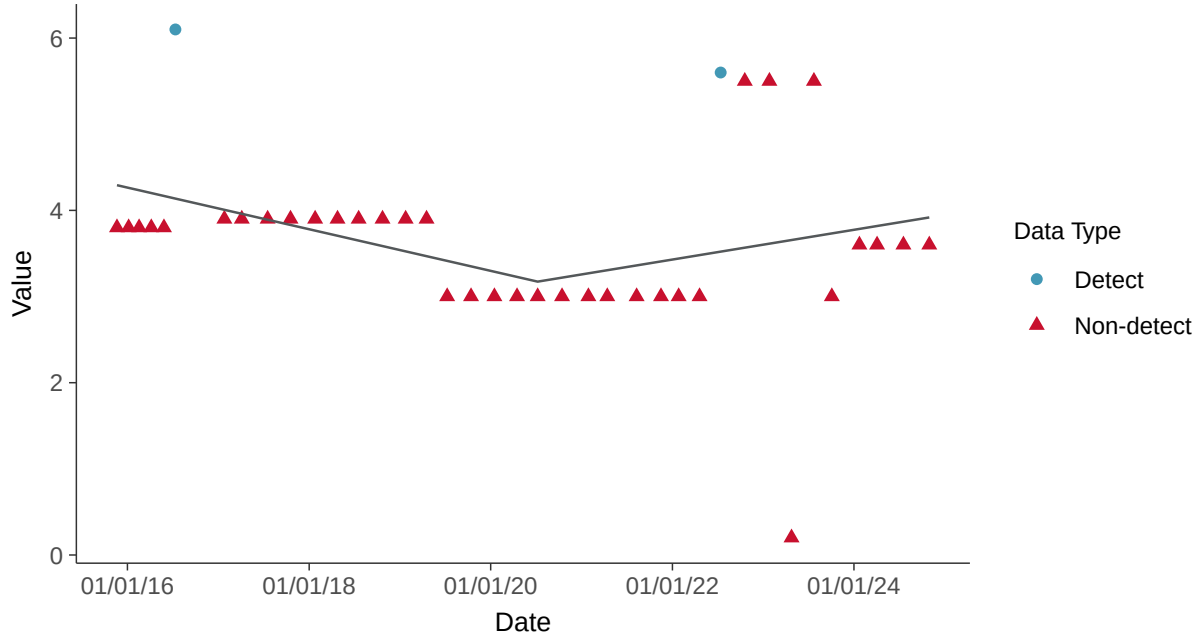
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-1 (ug/L)



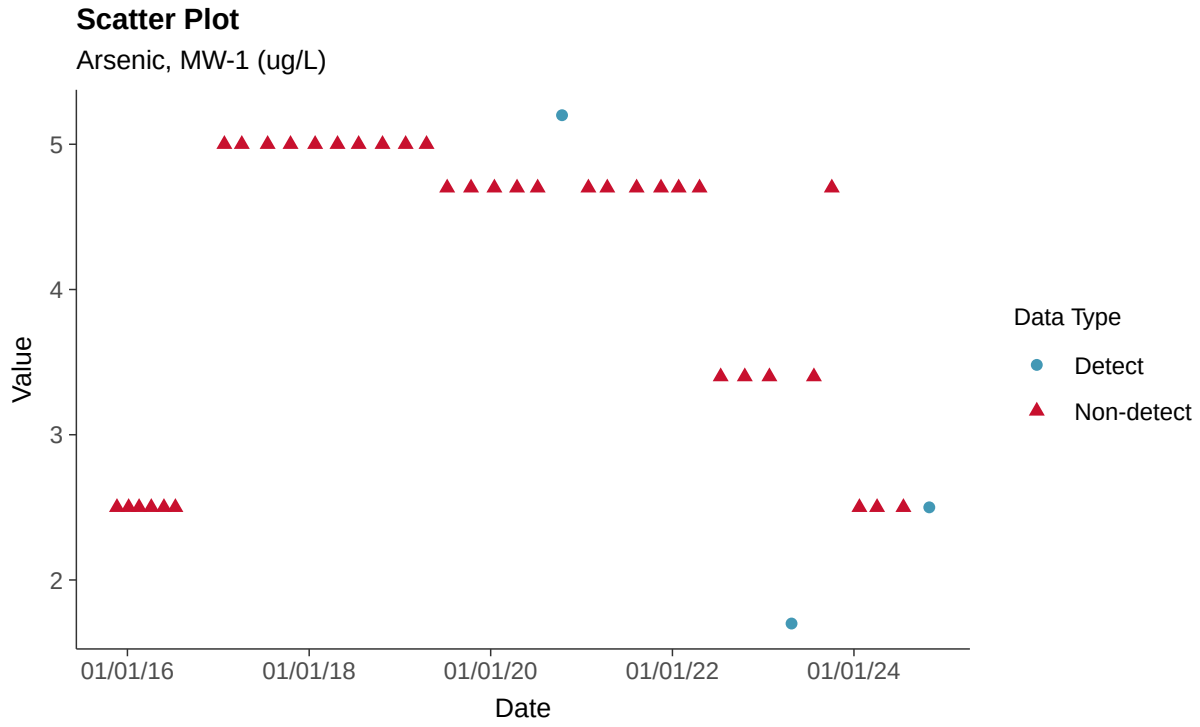
Trend Regression: Piecewise Linear-Linear

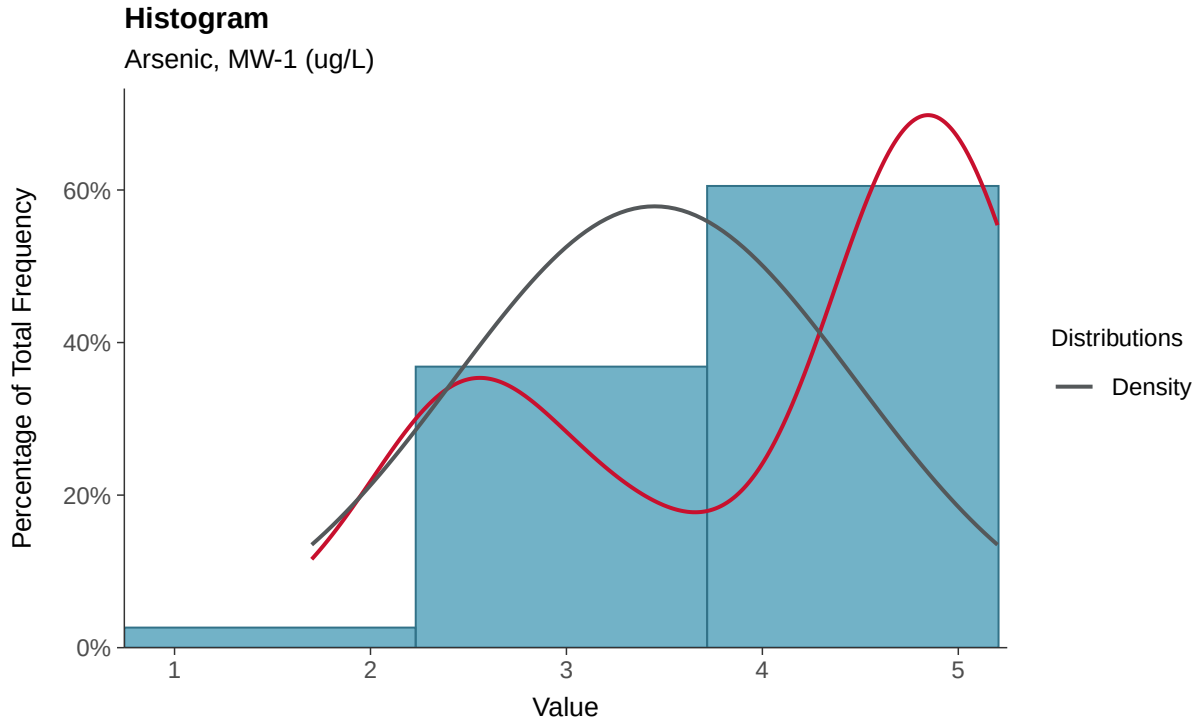
Antimony, MW-1 (ug/L)



App. IV: Arsenic, MW-1

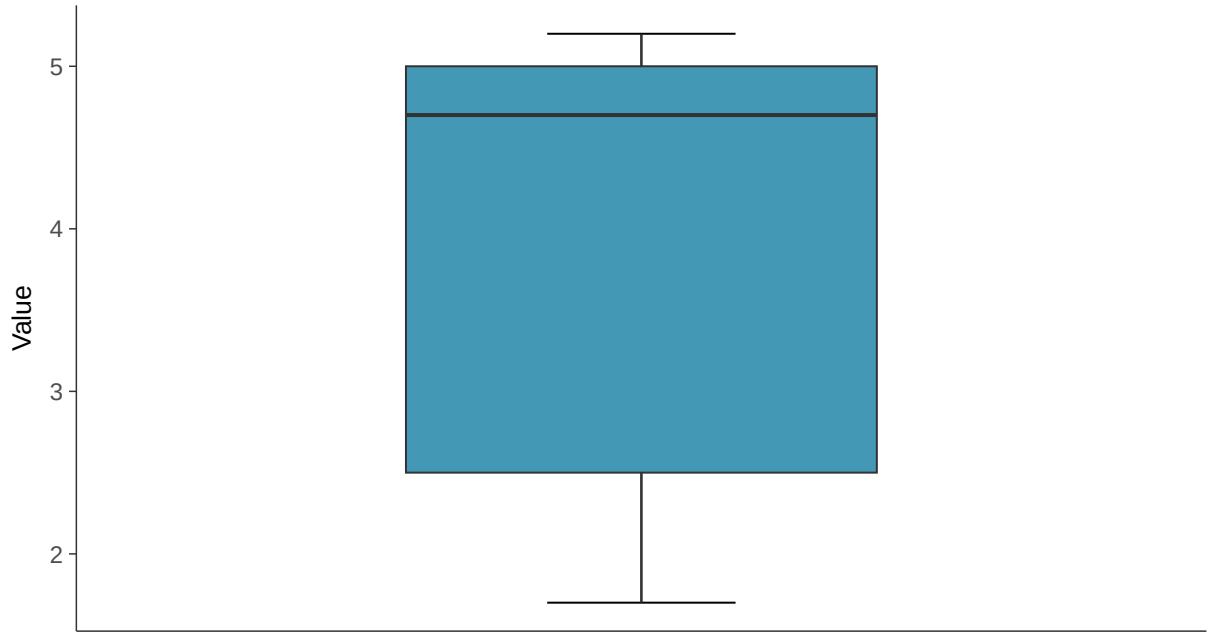
ID: 01_03_102





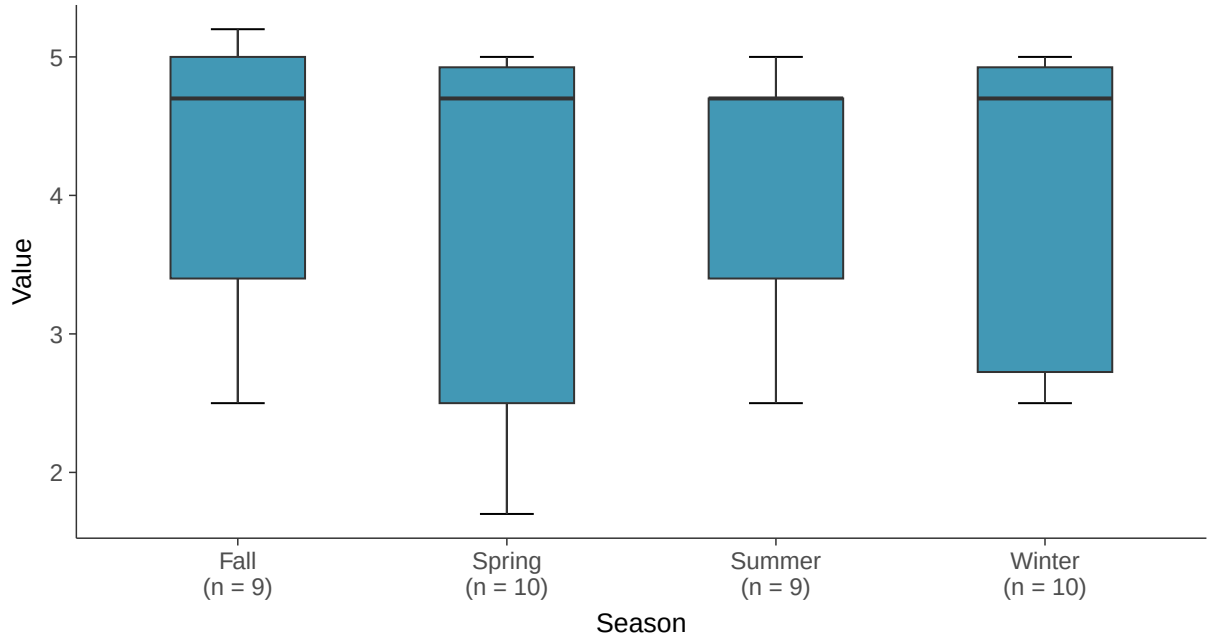
Boxplot

Arsenic, MW-1 (ug/L)



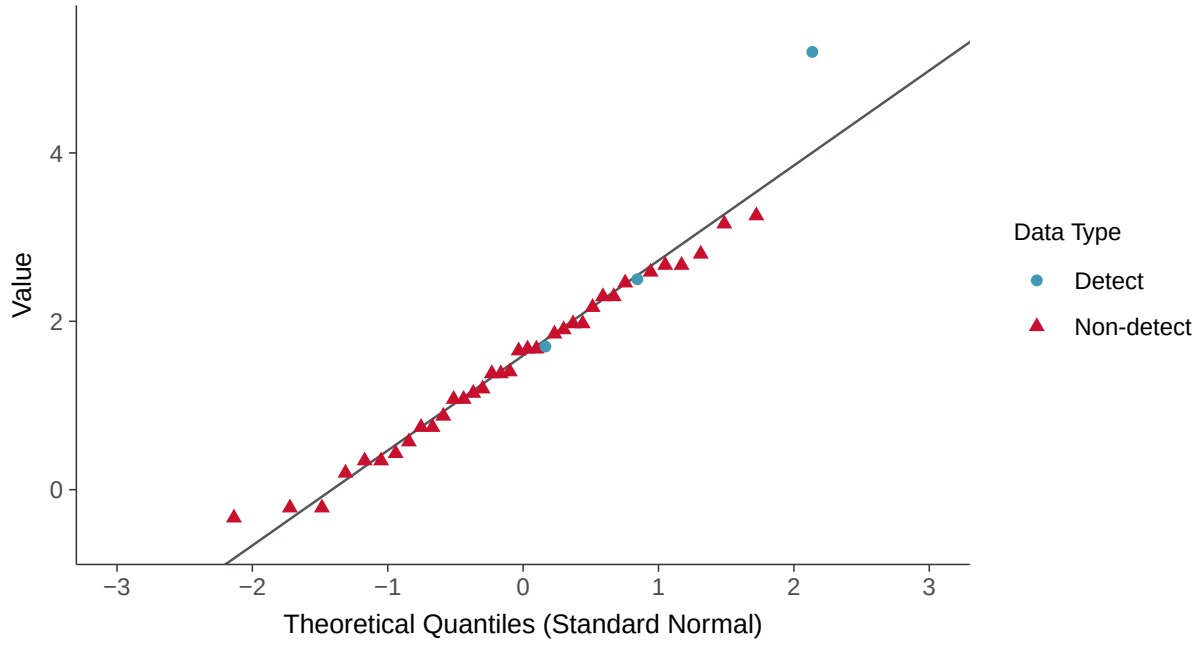
Boxplot by Season

Arsenic, MW-1 (ug/L)



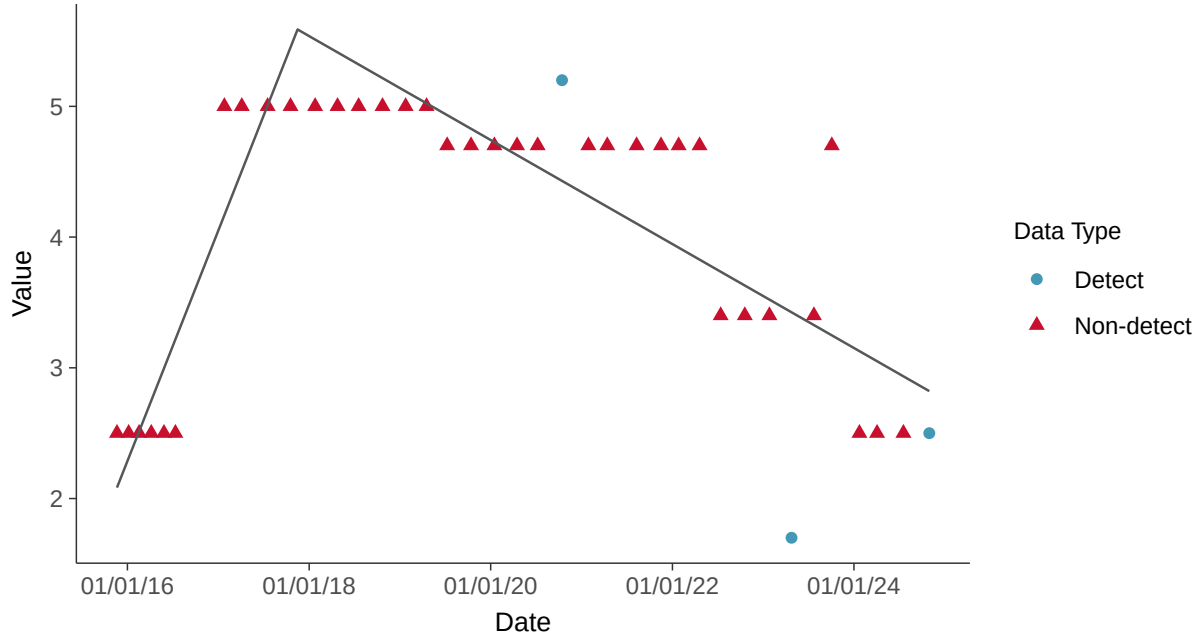
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-1 (ug/L)



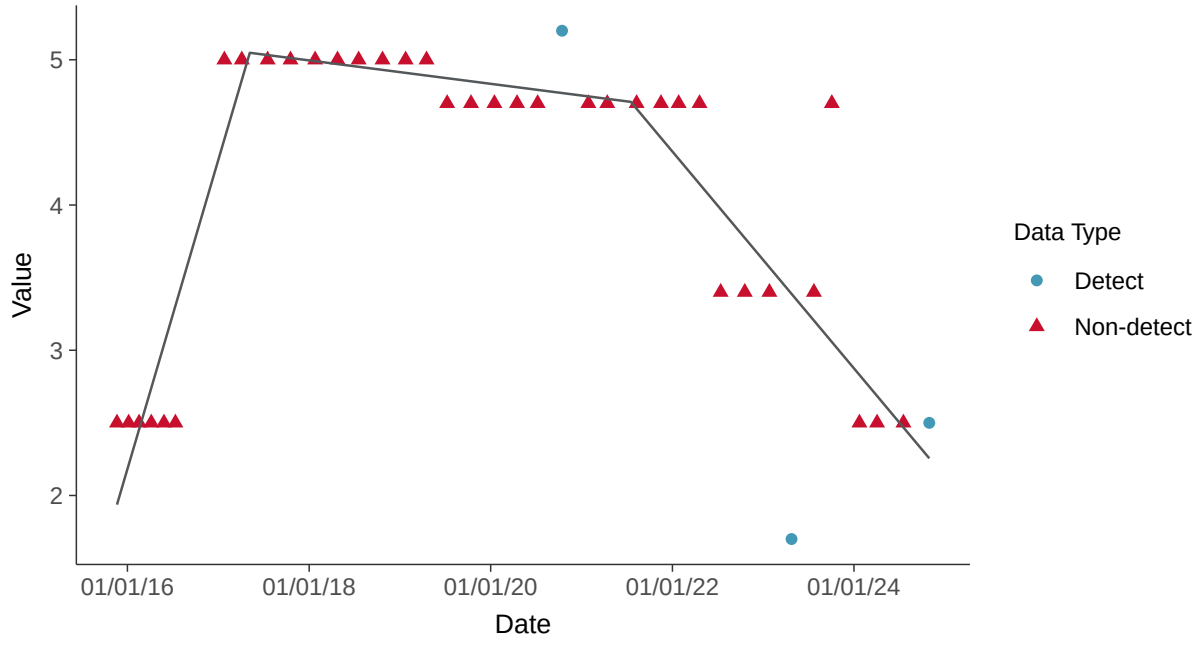
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-1 (ug/L)



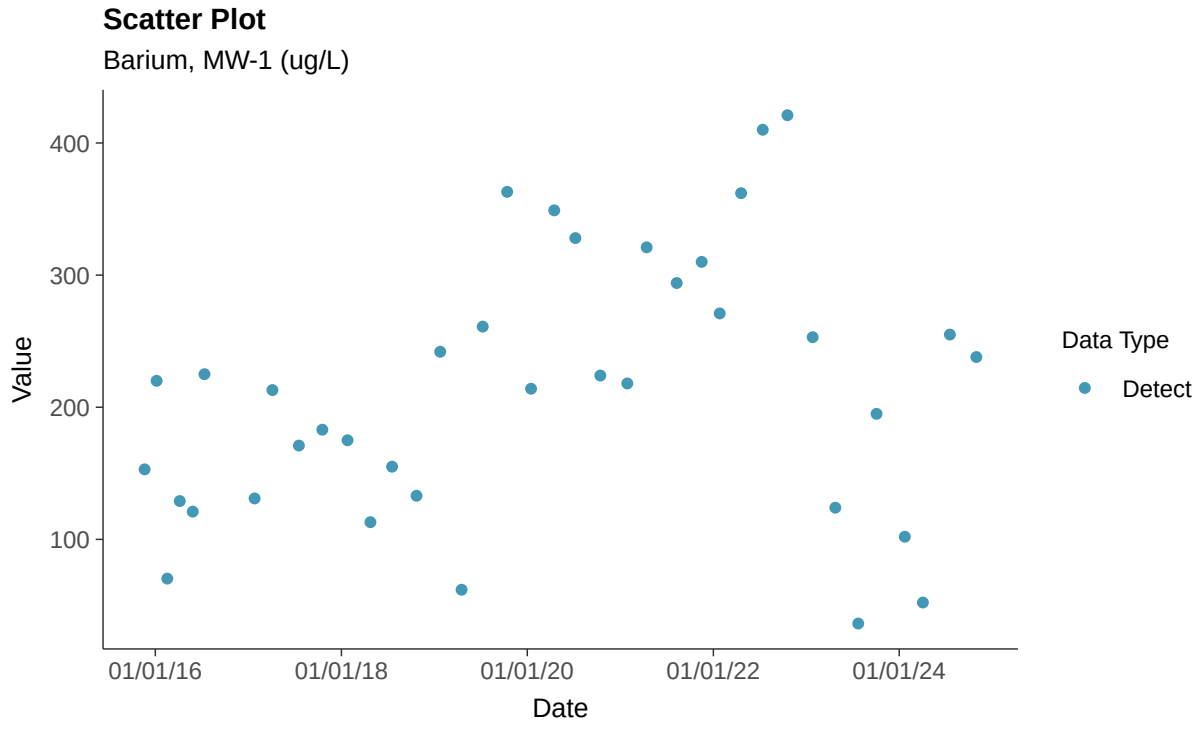
Trend Regression: Piecewise Linear-Linear-Linear

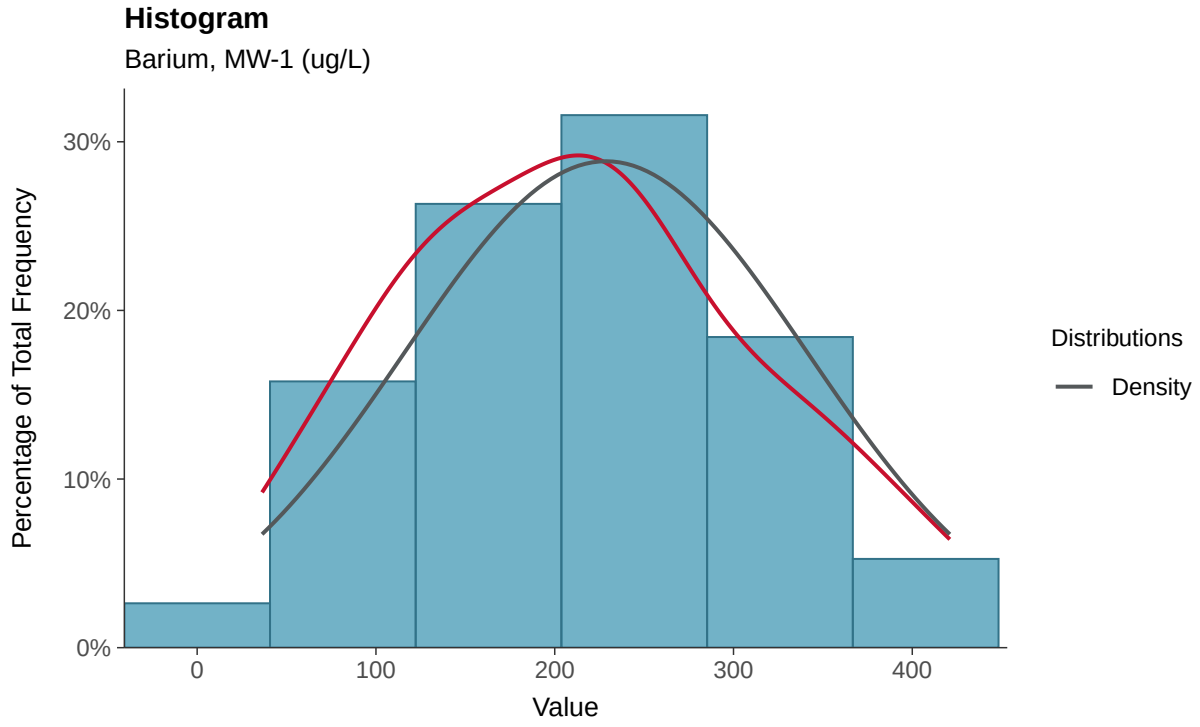
Arsenic, MW-1 (ug/L)



App. IV: Barium, MW-1

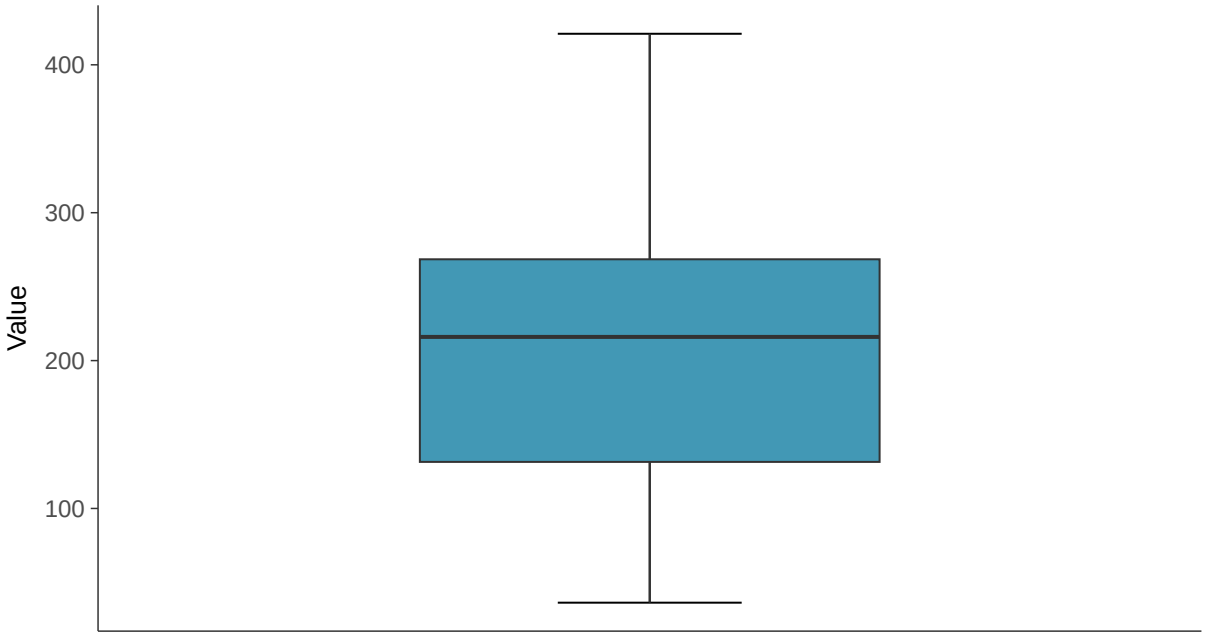
ID: 01_03_103





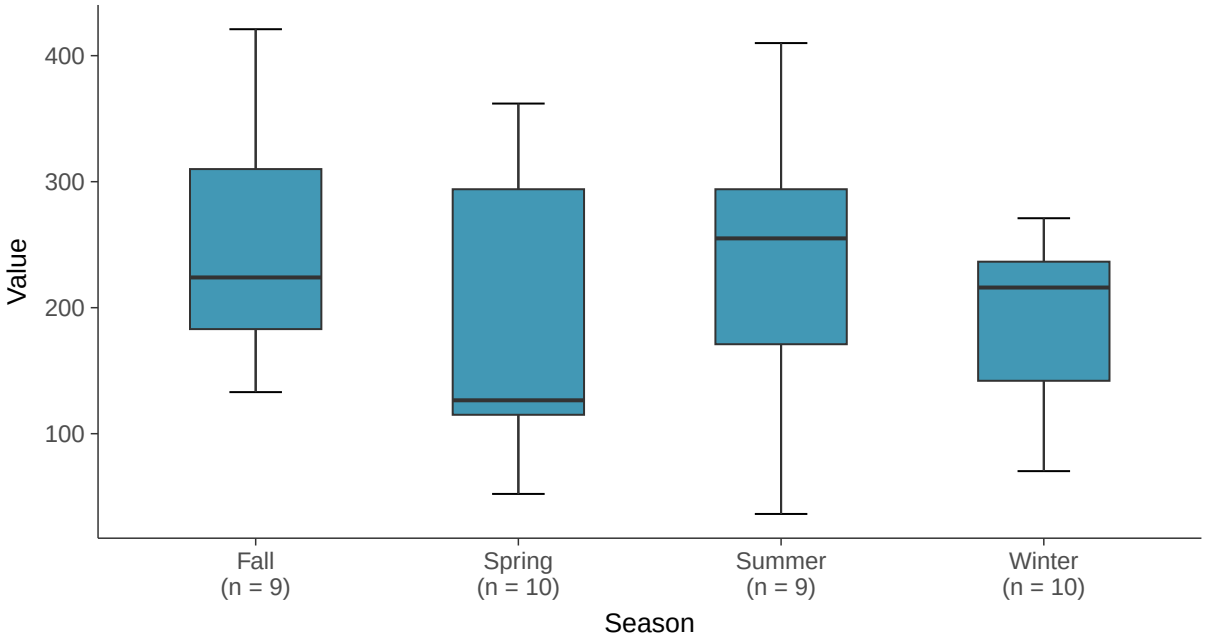
Boxplot

Barium, MW-1 (ug/L)



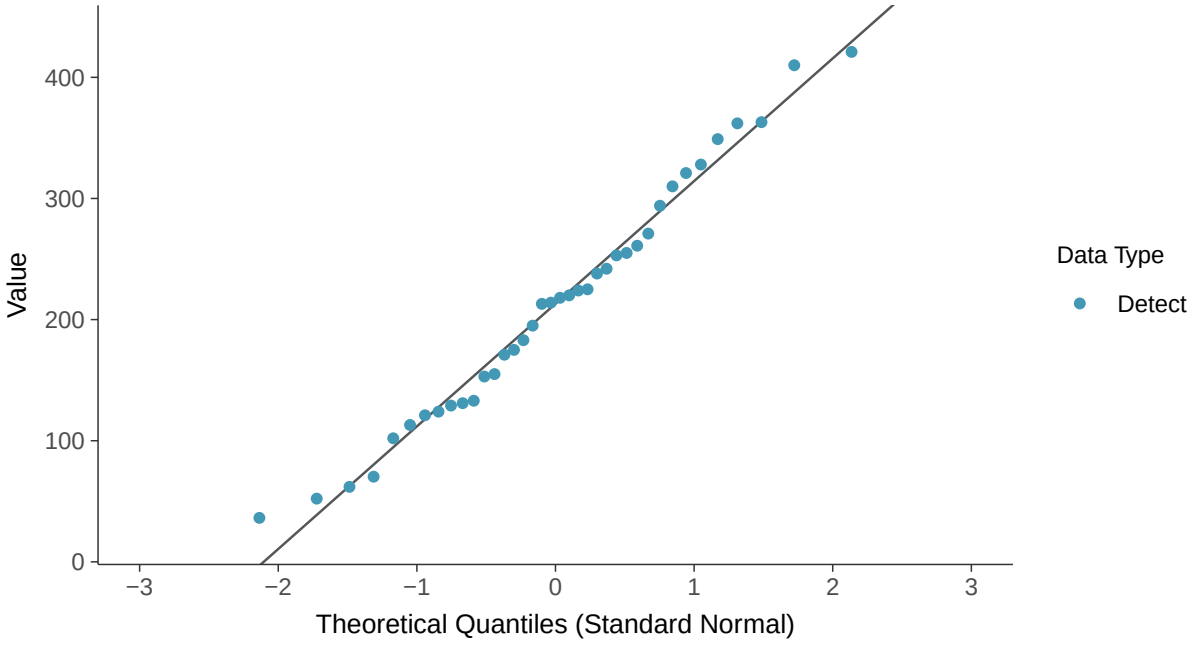
Boxplot by Season

Barium, MW-1 (ug/L)



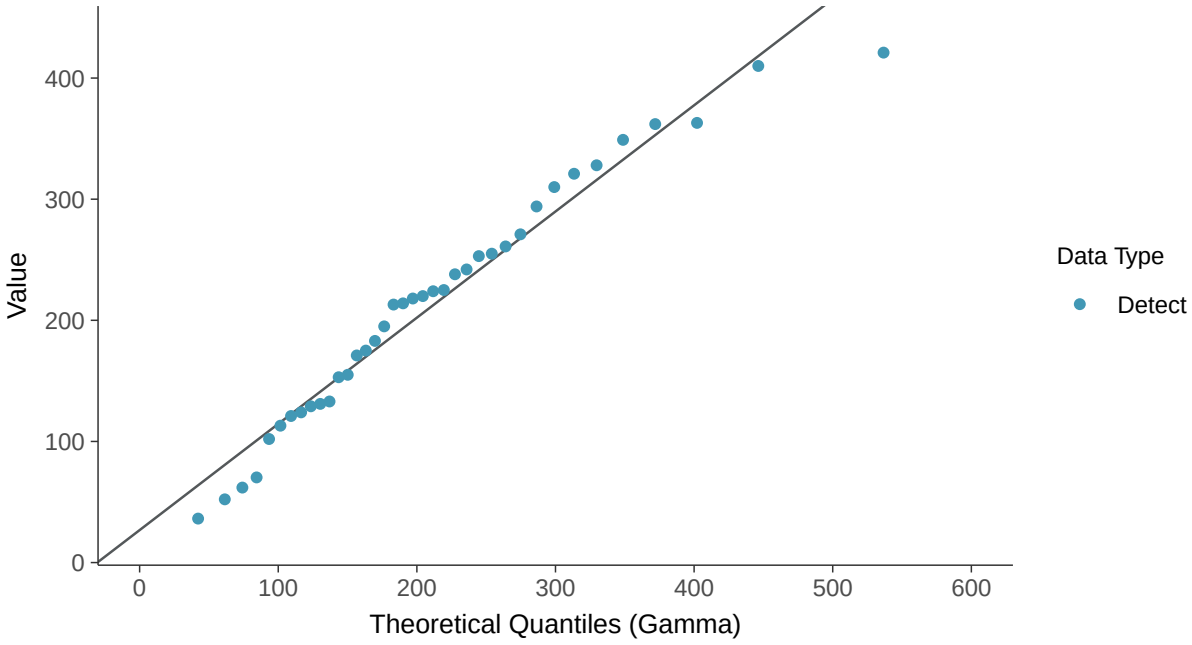
Normal Q-Q plot

Barium, MW-1 (ug/L)



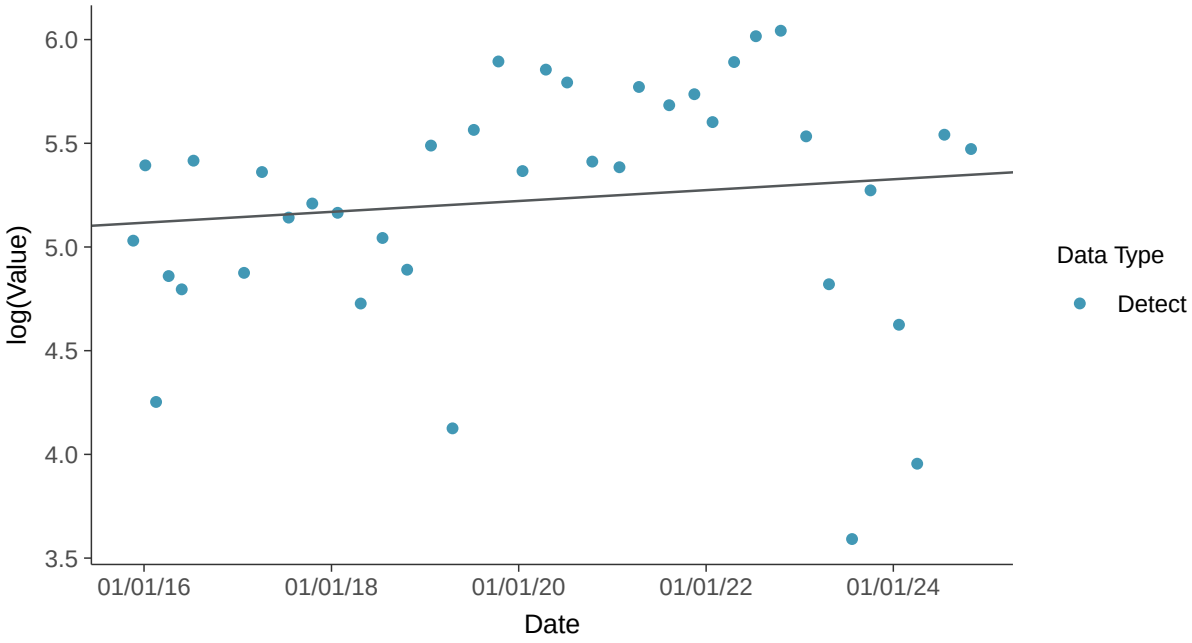
Gamma Q-Q plot

Barium, MW-1 (ug/L)



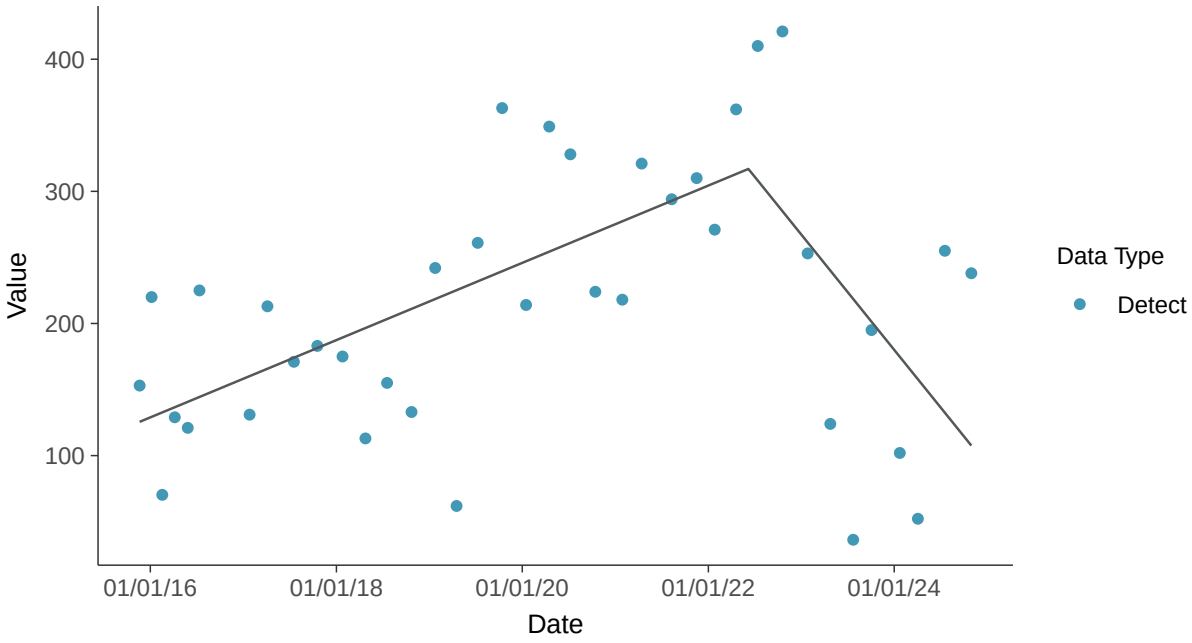
Trend Regression: Lognormal MLE

Barium, MW-1 (ug/L)



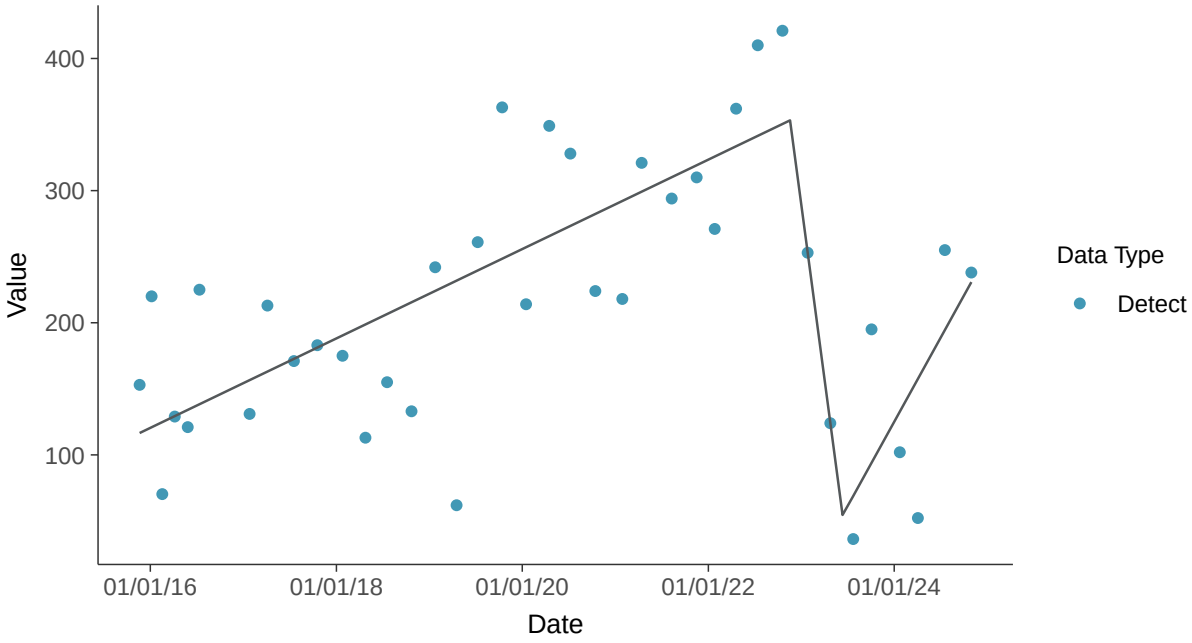
Trend Regression: Piecewise Linear-Linear

Barium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-1 (ug/L)

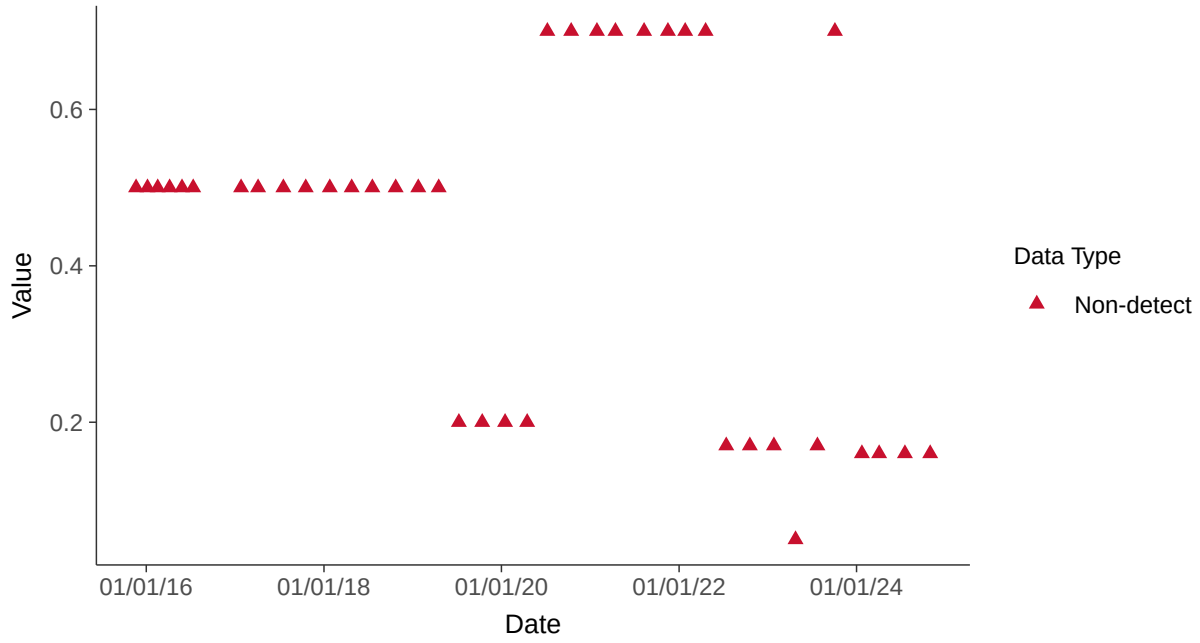


App. IV: Beryllium, MW-1

ID: 01_03_104

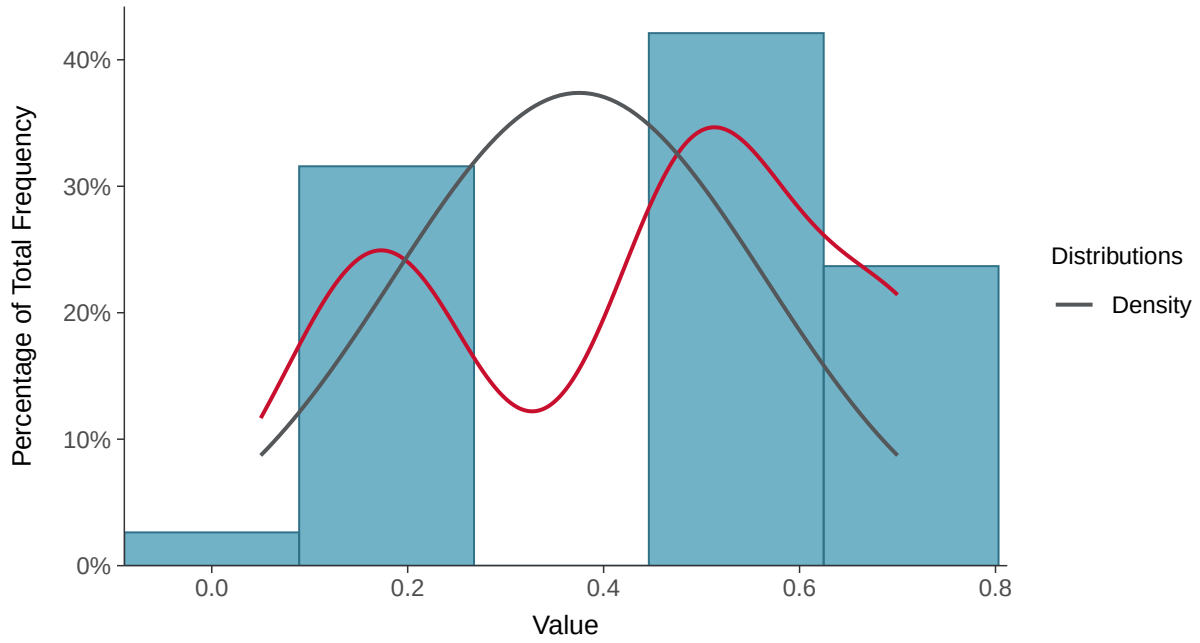
Scatter Plot

Beryllium, MW-1 (ug/L)



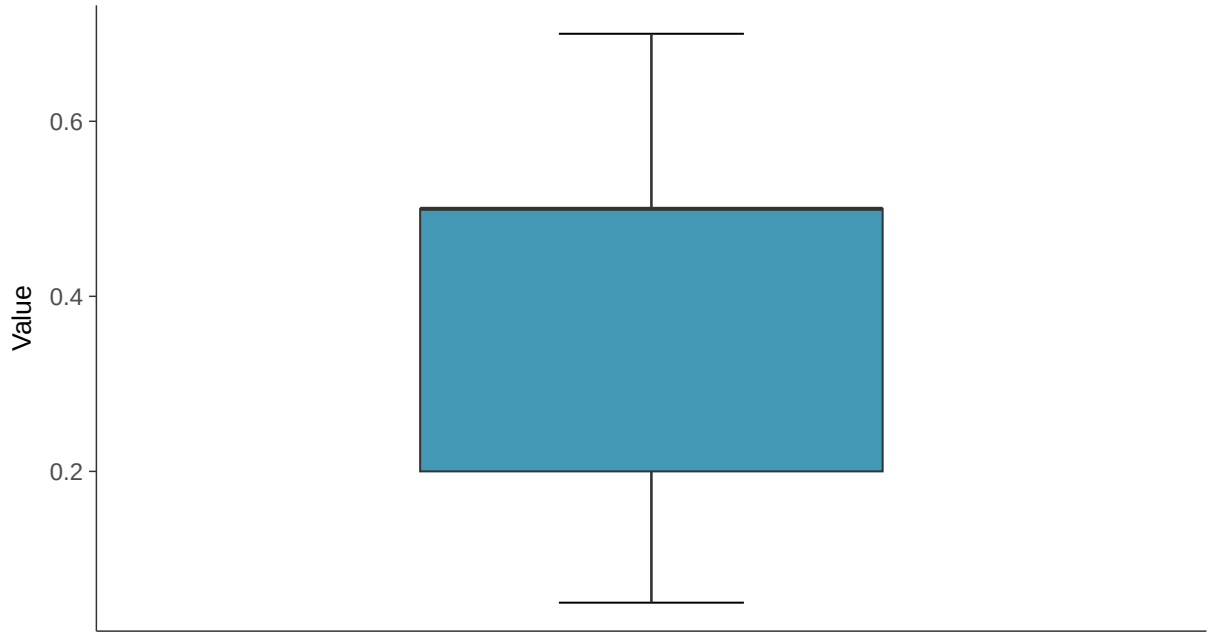
Histogram

Beryllium, MW-1 (ug/L)



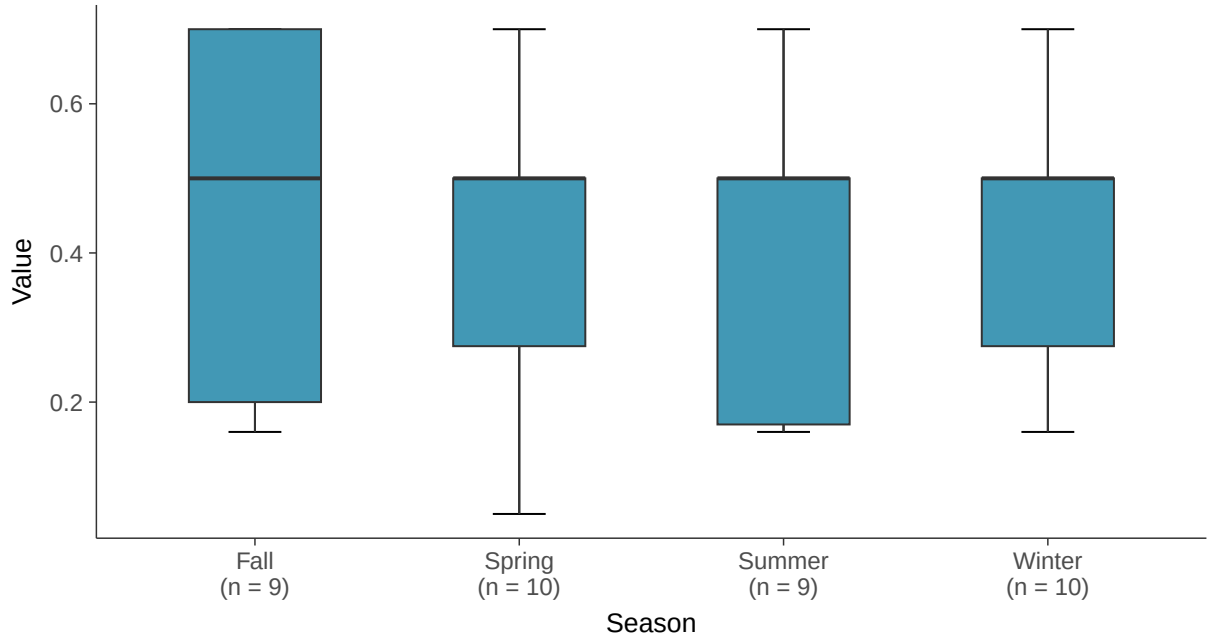
Boxplot

Beryllium, MW-1 (ug/L)



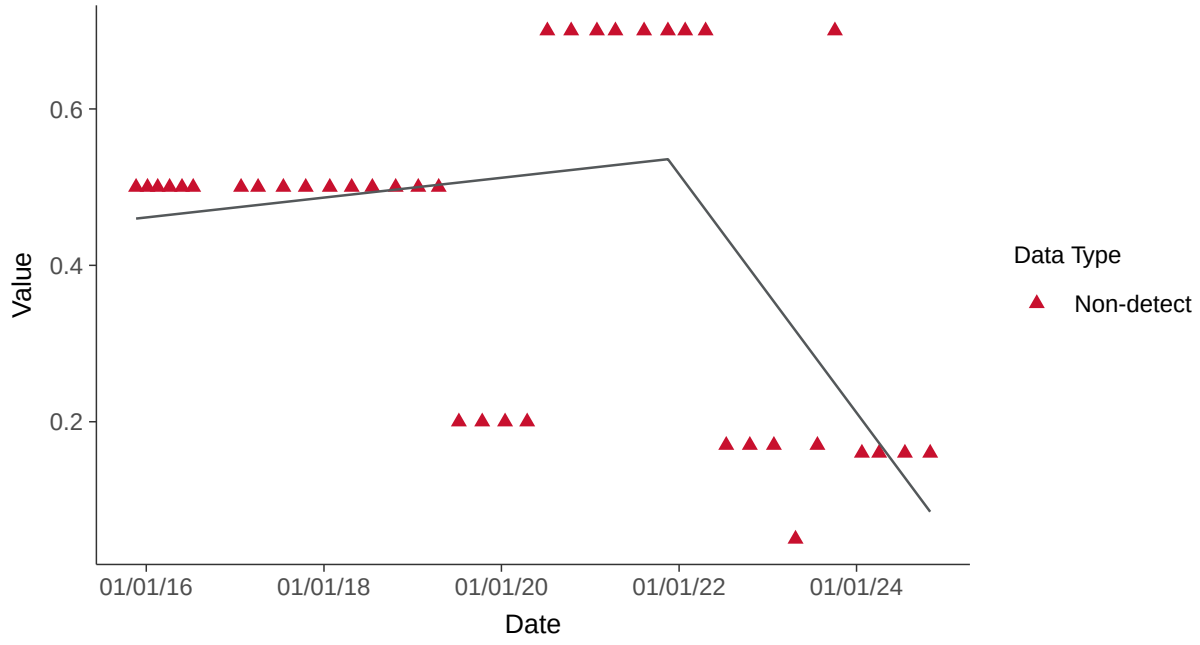
Boxplot by Season

Beryllium, MW-1 (ug/L)



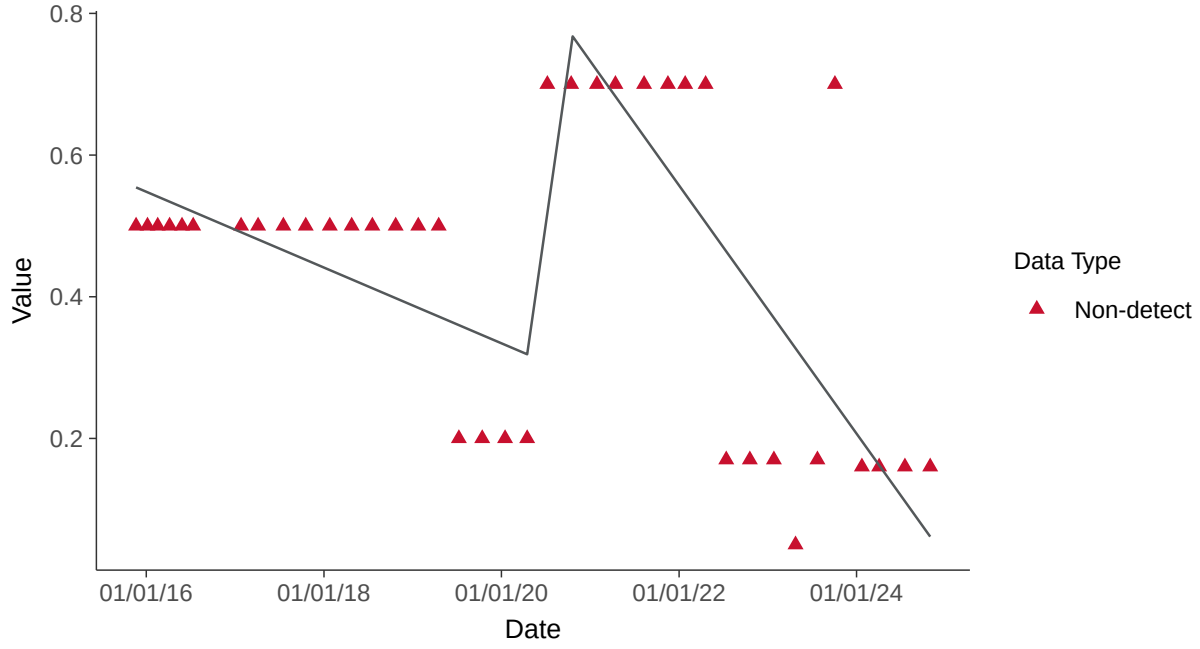
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-1 (ug/L)



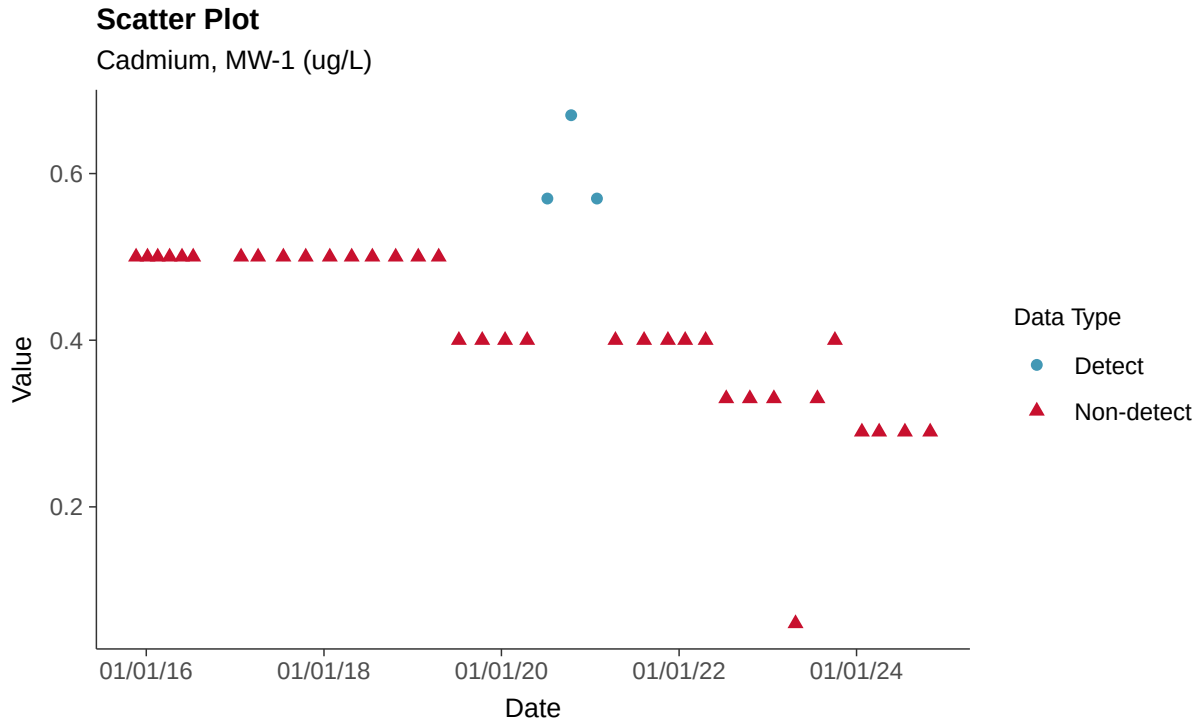
Trend Regression: Piecewise Linear-Linear-Linear

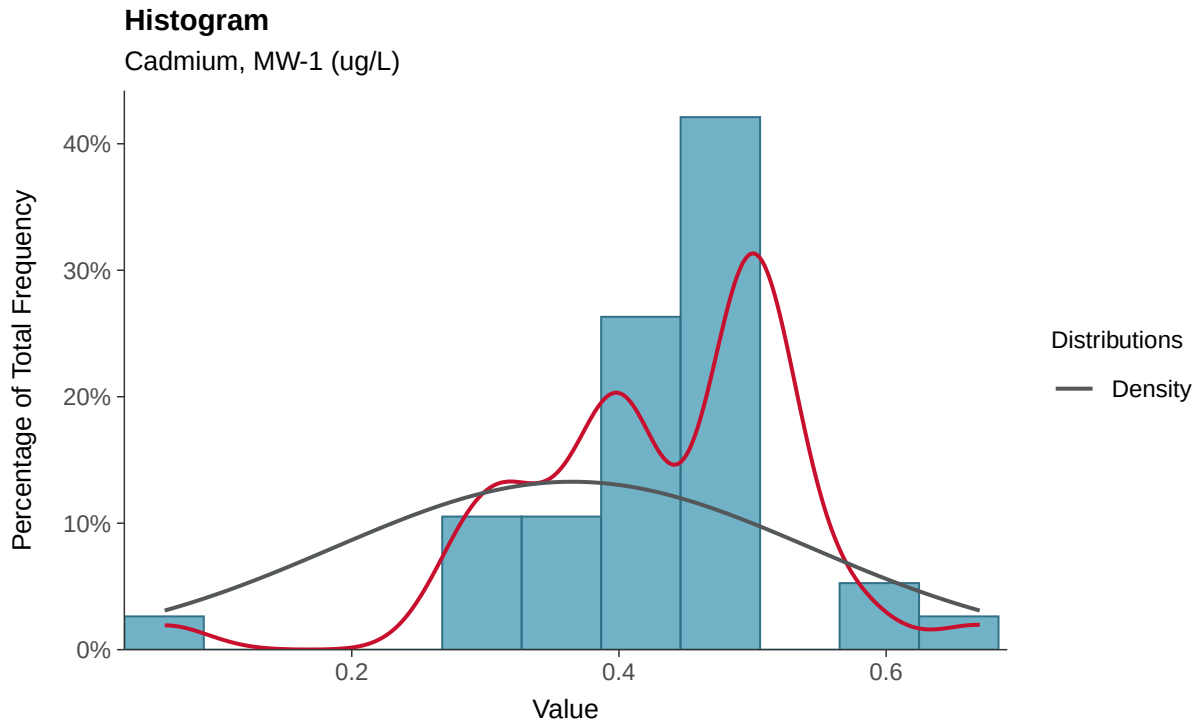
Beryllium, MW-1 (ug/L)



App. IV: Cadmium, MW-1

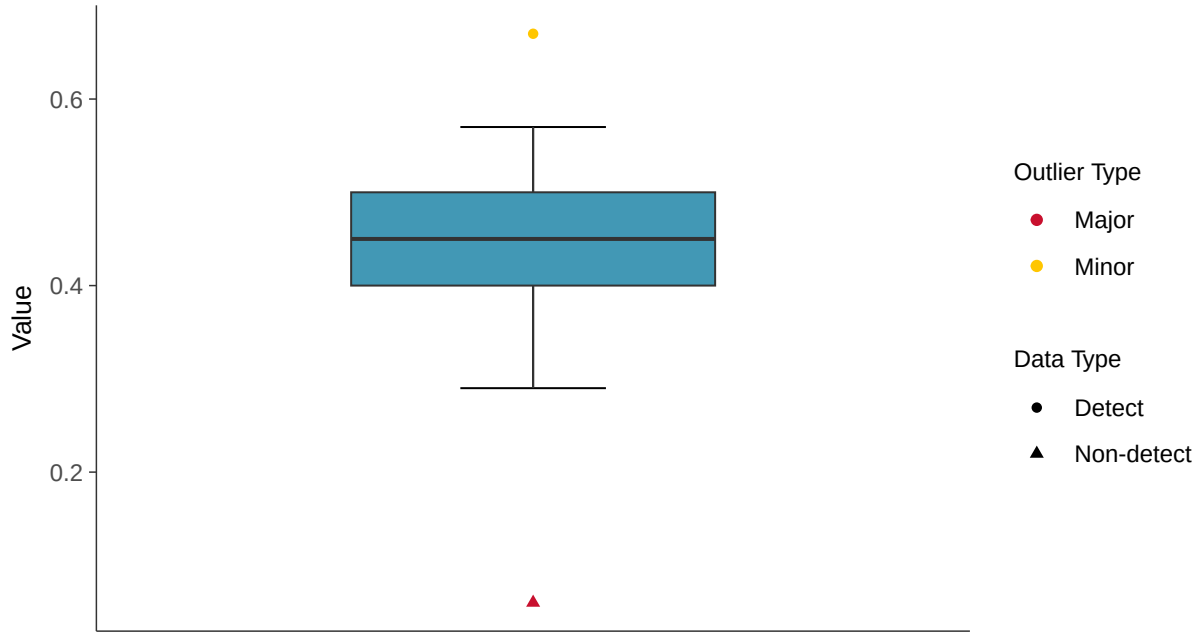
ID: 01_03_106





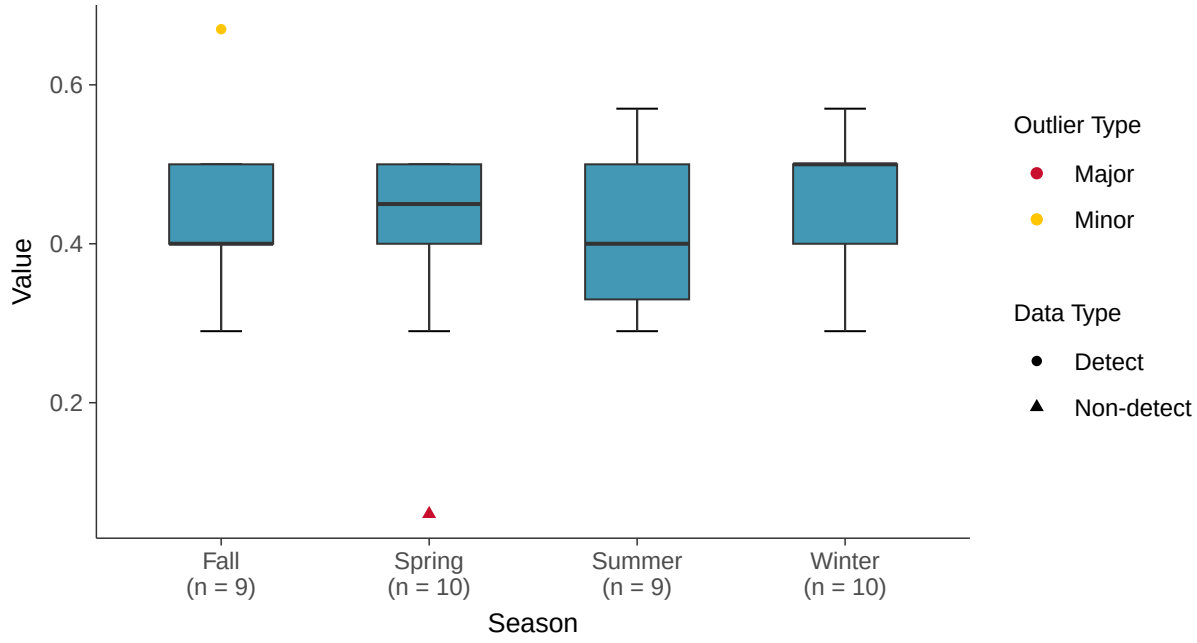
Boxplot

Cadmium, MW-1 (ug/L)



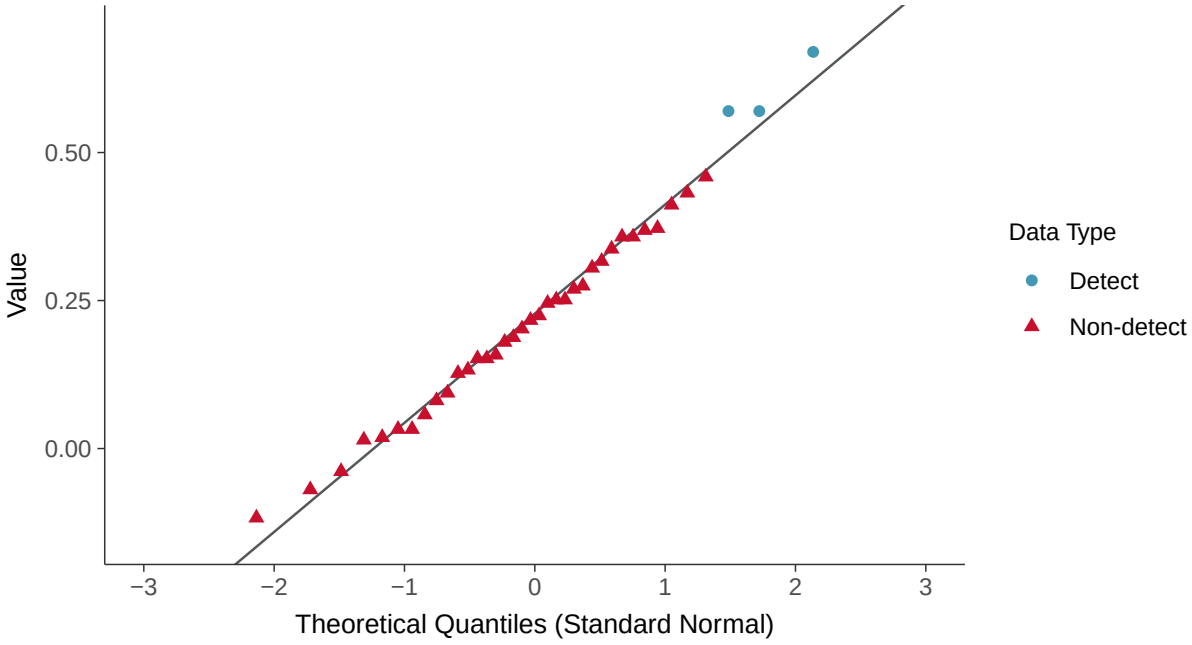
Boxplot by Season

Cadmium, MW-1 (ug/L)



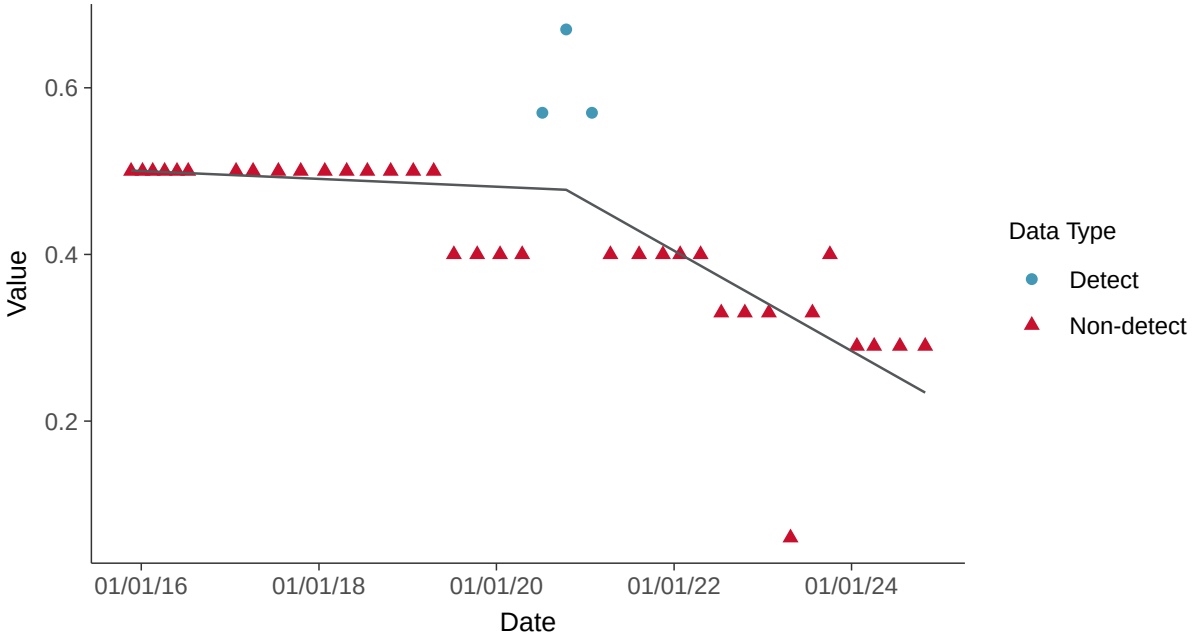
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-1 (ug/L)



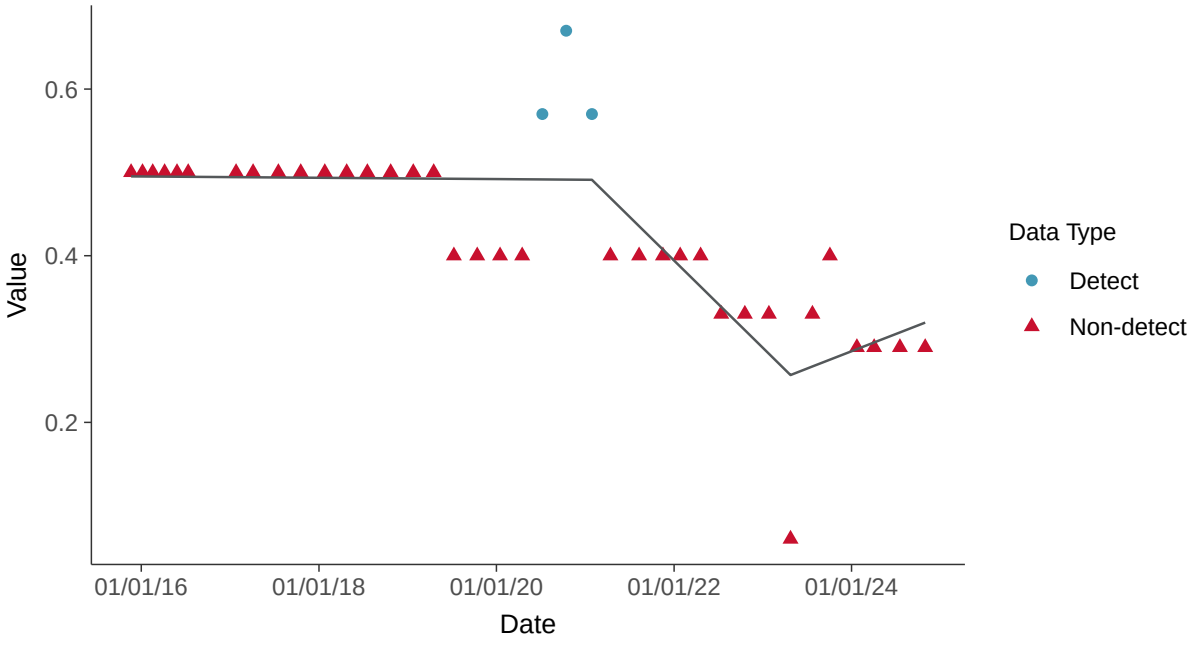
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-1 (ug/L)



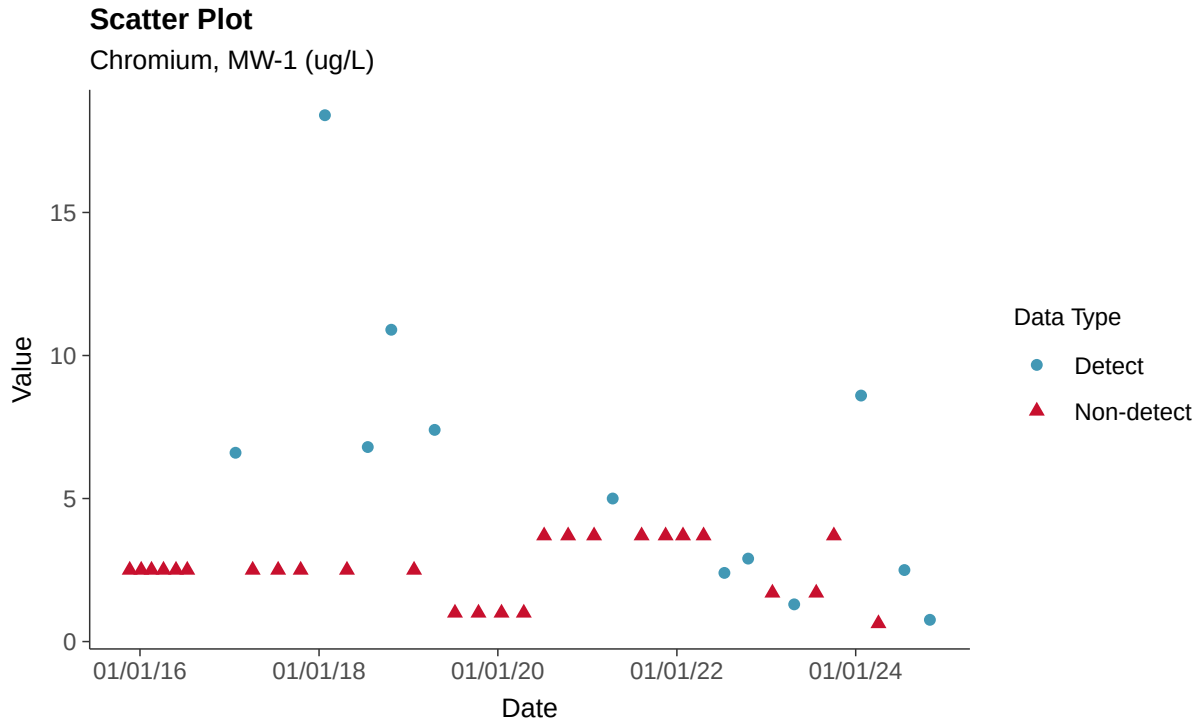
Trend Regression: Piecewise Linear-Linear-Linear

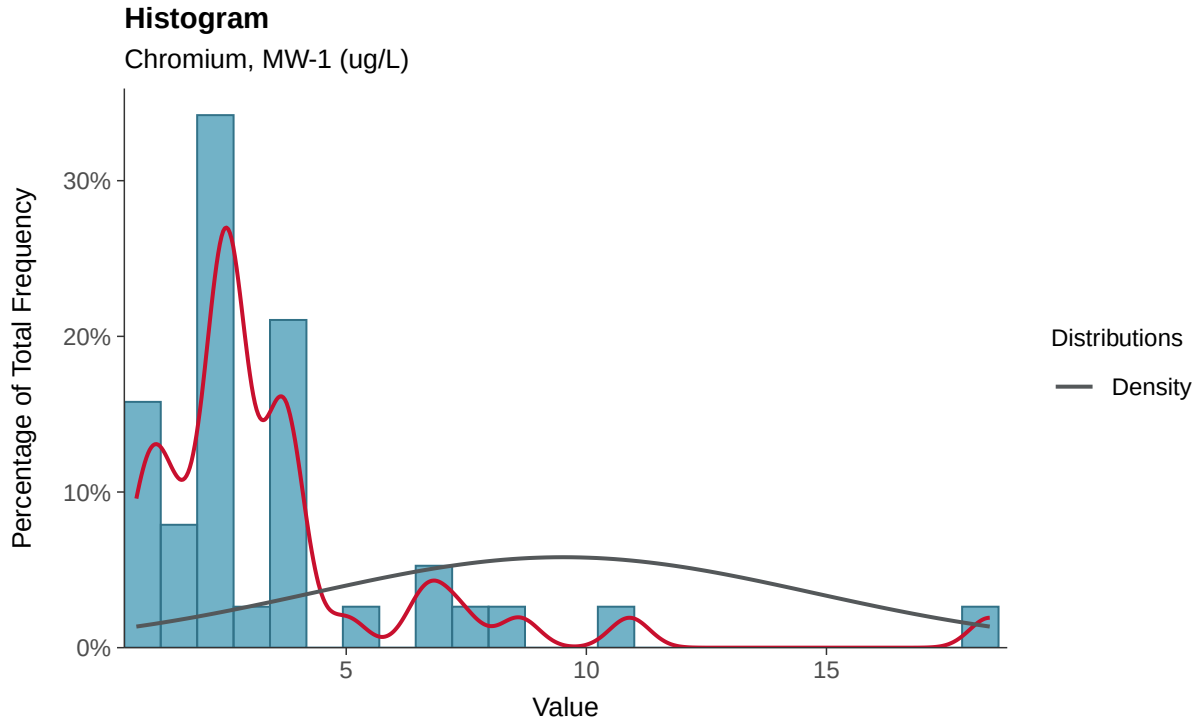
Cadmium, MW-1 (ug/L)



App. IV: Chromium, MW-1

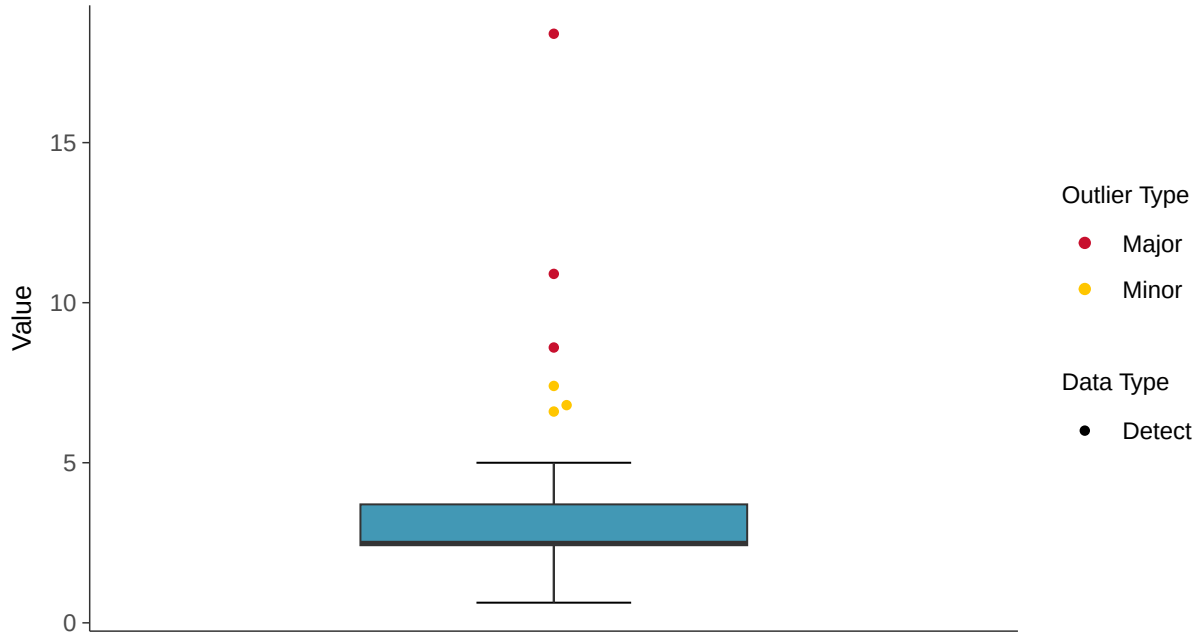
ID: 01_03_109





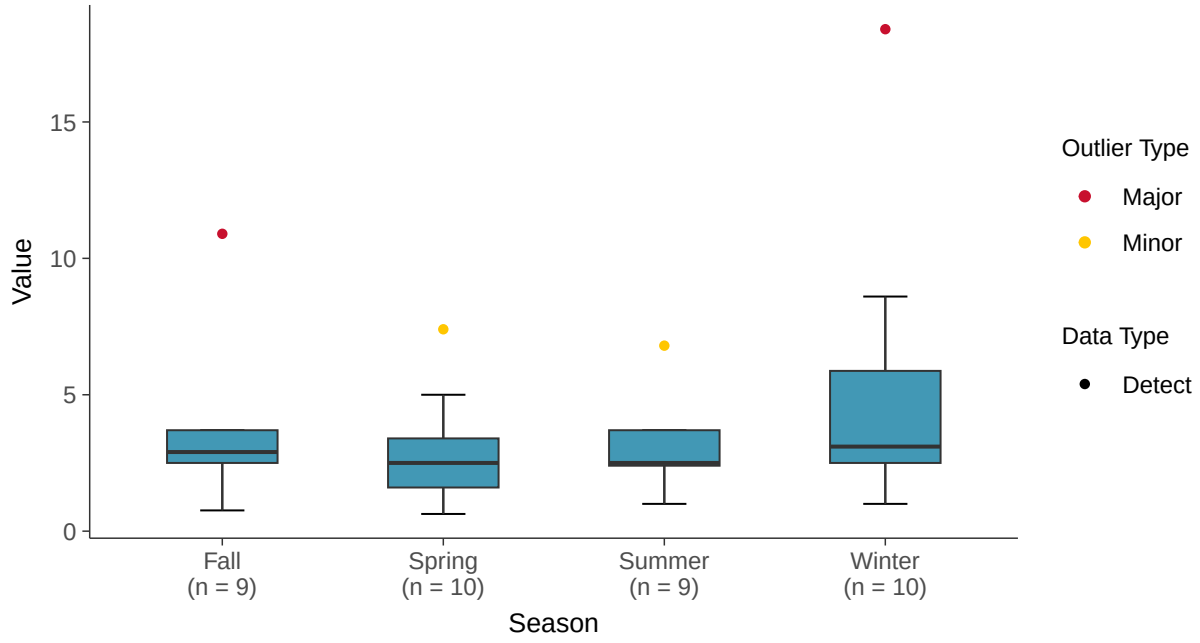
Boxplot

Chromium, MW-1 (ug/L)



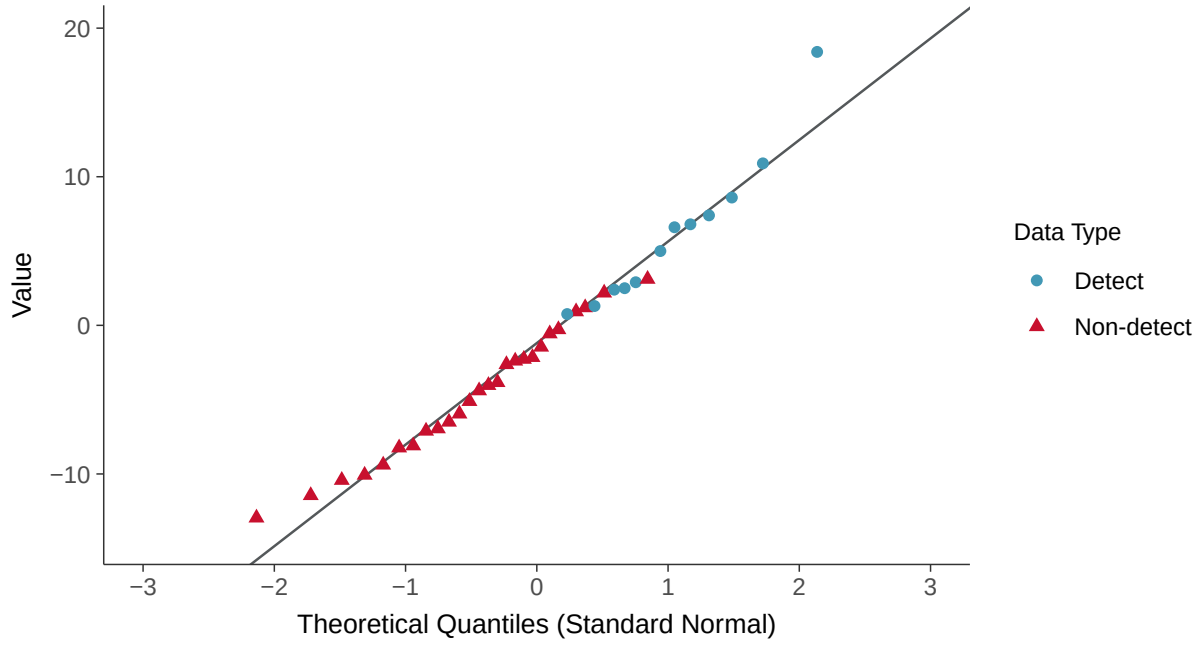
Boxplot by Season

Chromium, MW-1 (ug/L)



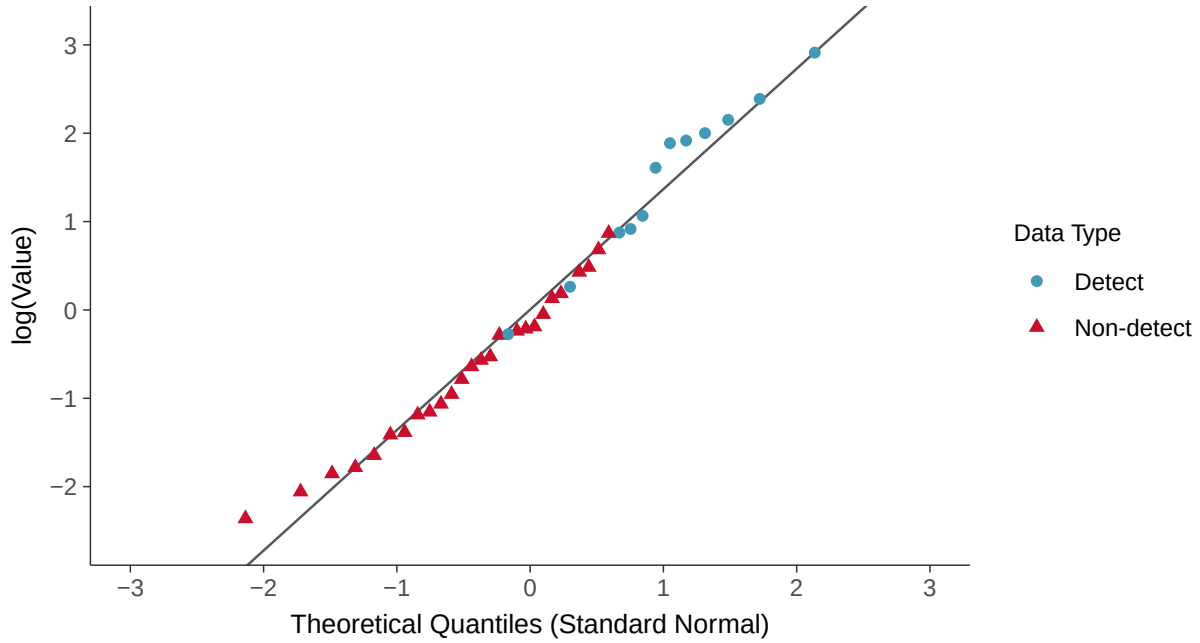
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



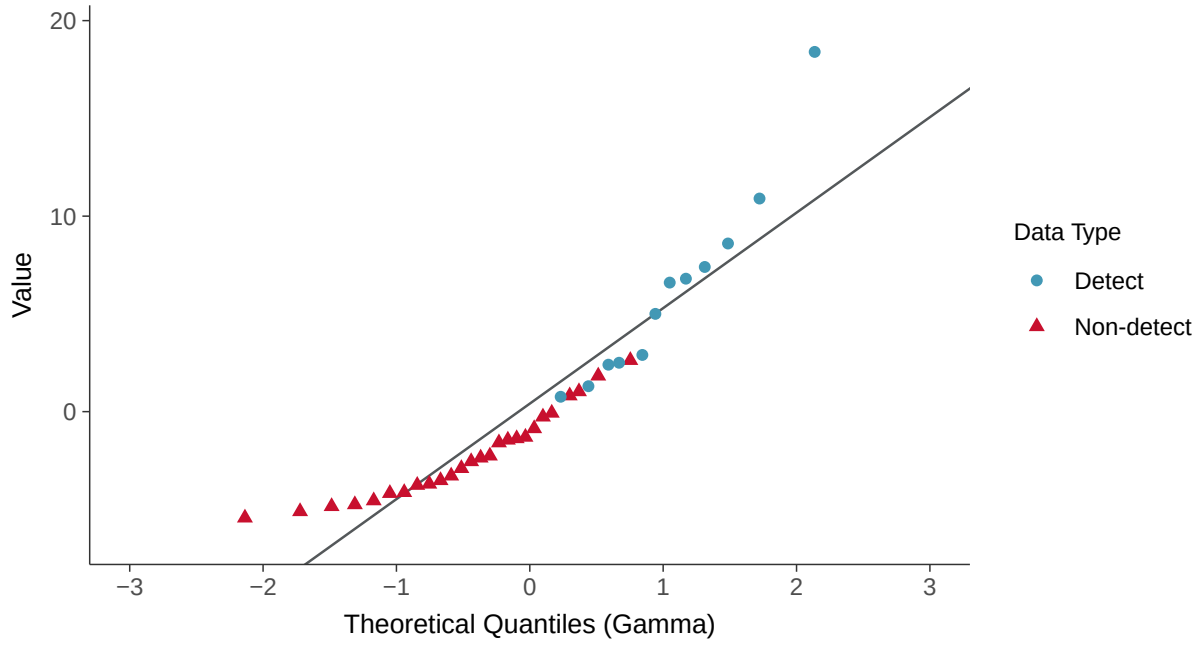
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



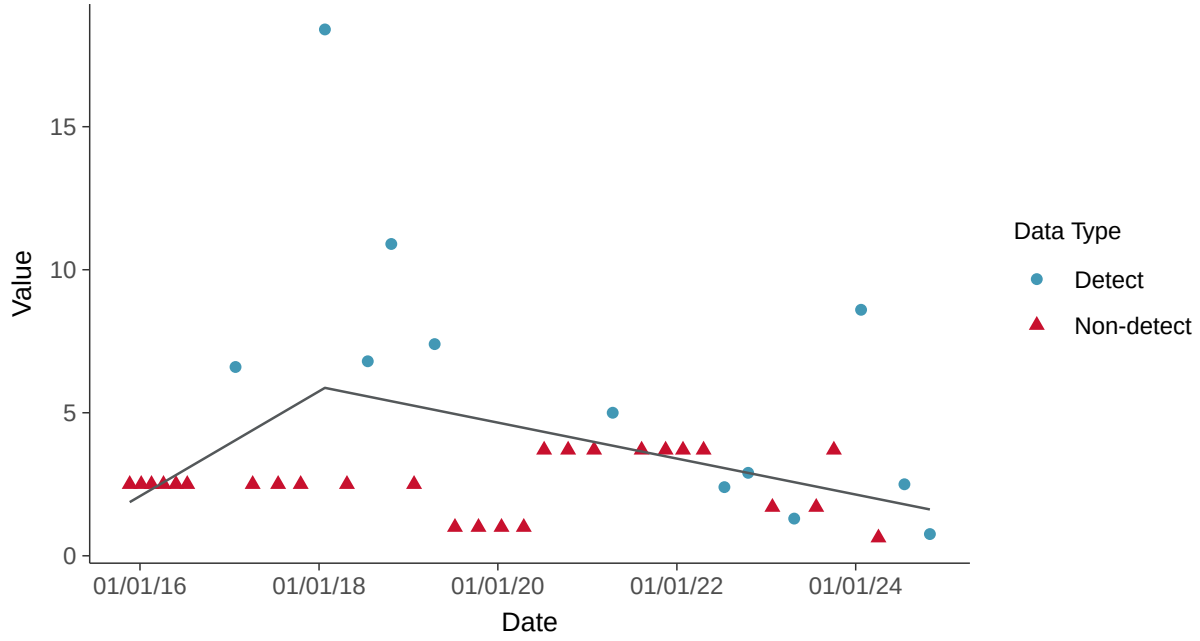
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-1 (ug/L)



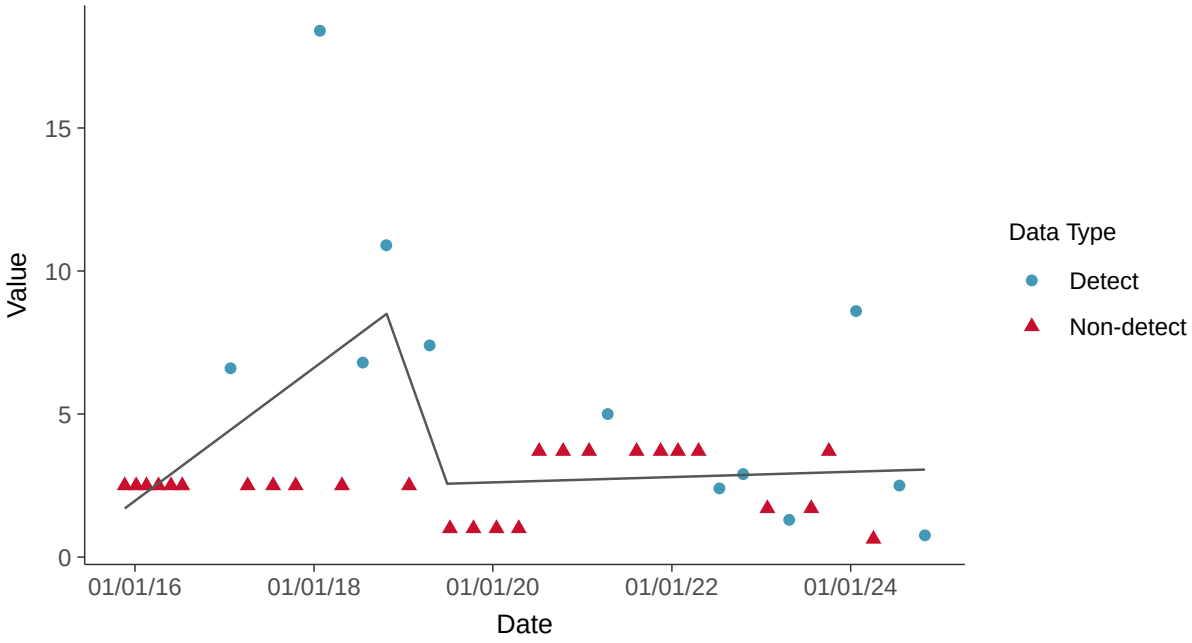
Trend Regression: Piecewise Linear-Linear

Chromium, MW-1 (ug/L)



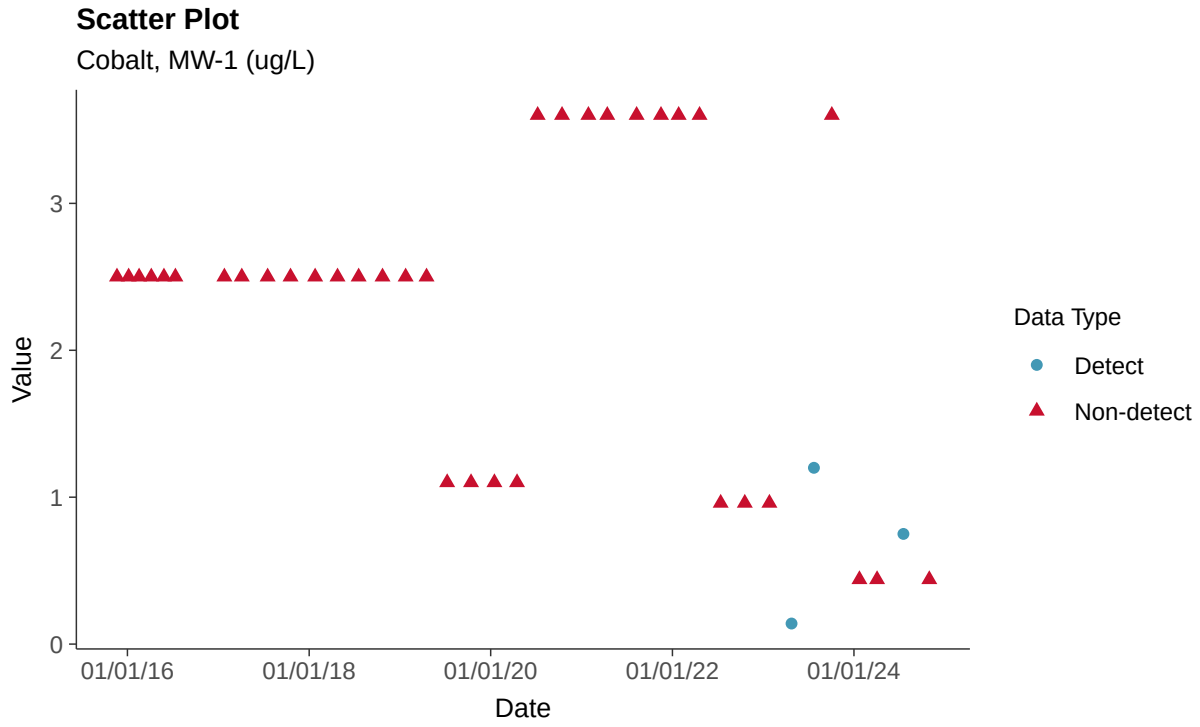
Trend Regression: Piecewise Linear-Linear-Linear

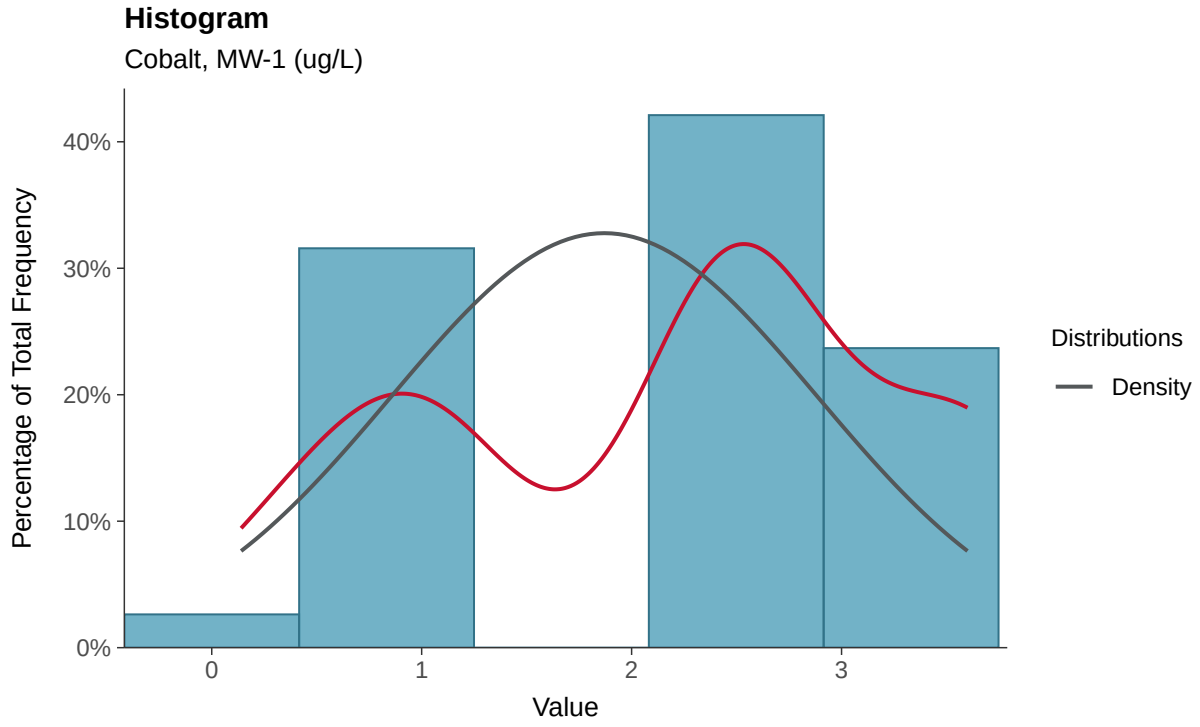
Chromium, MW-1 (ug/L)



App. IV: Cobalt, MW-1

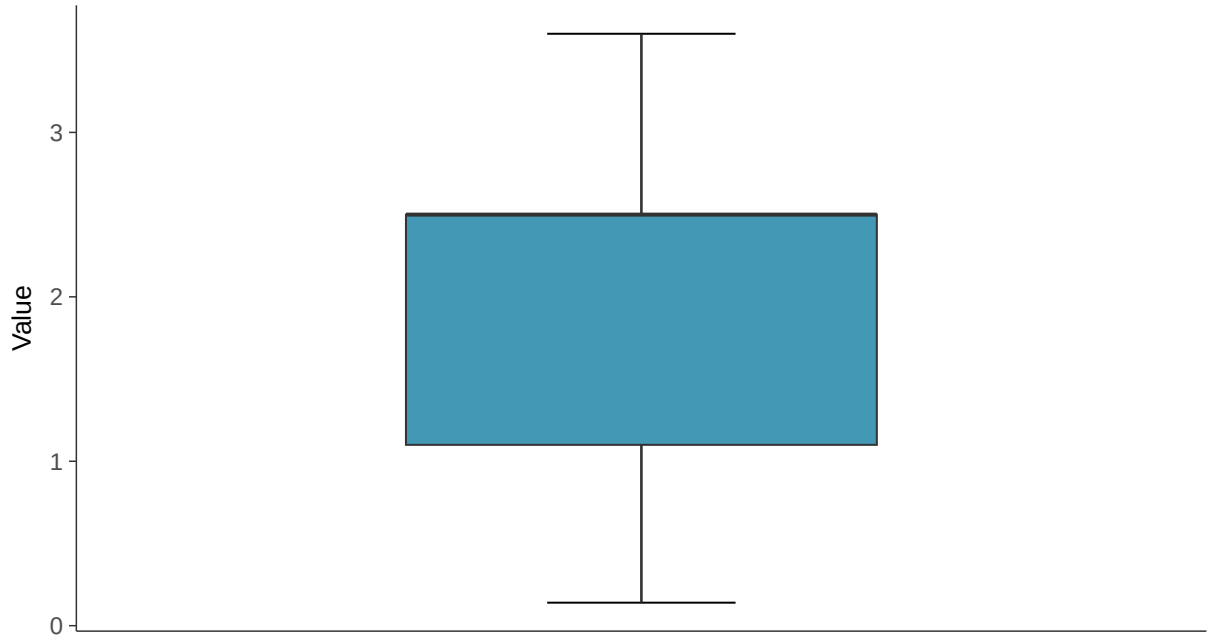
ID: 01_03_110





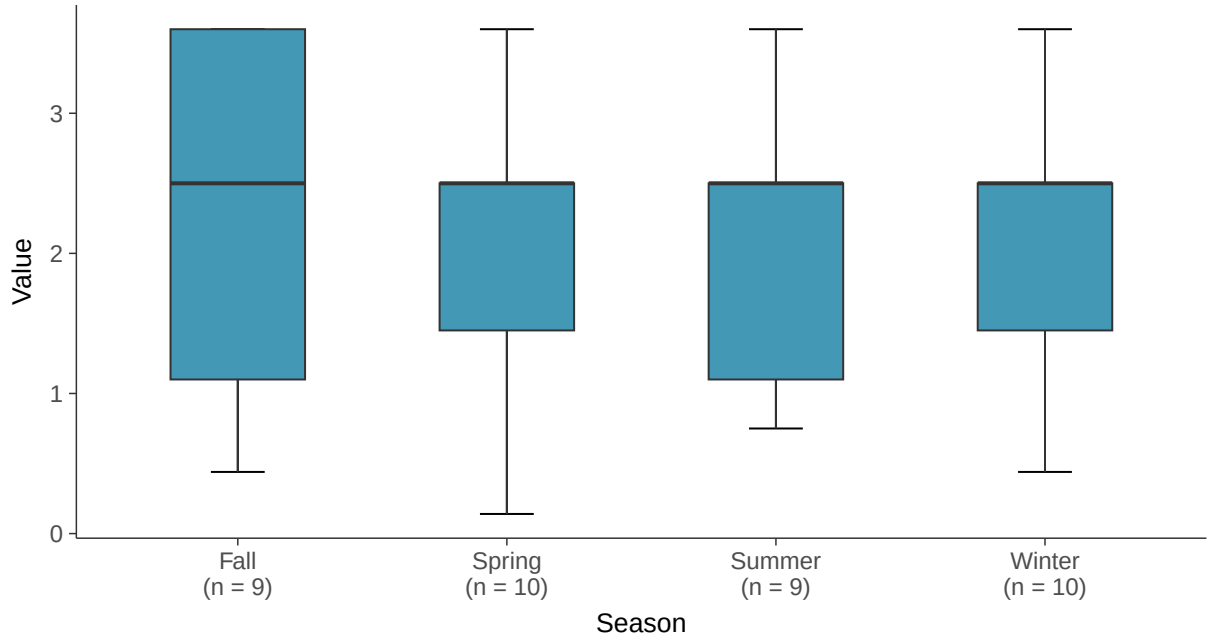
Boxplot

Cobalt, MW-1 (ug/L)



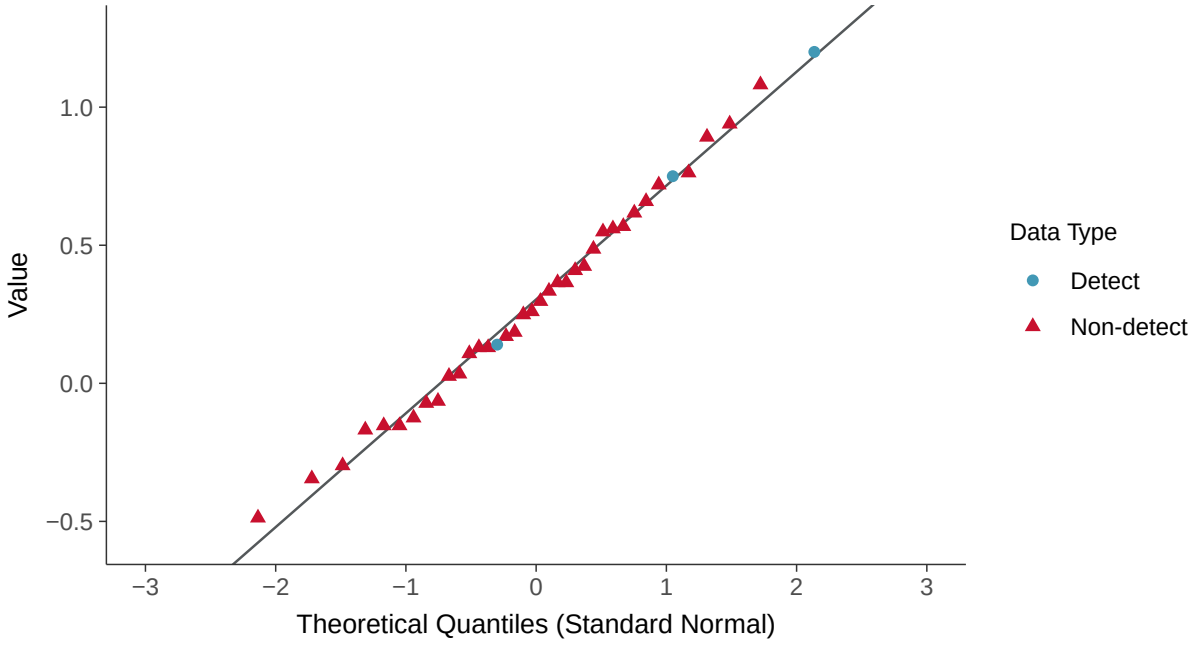
Boxplot by Season

Cobalt, MW-1 (ug/L)



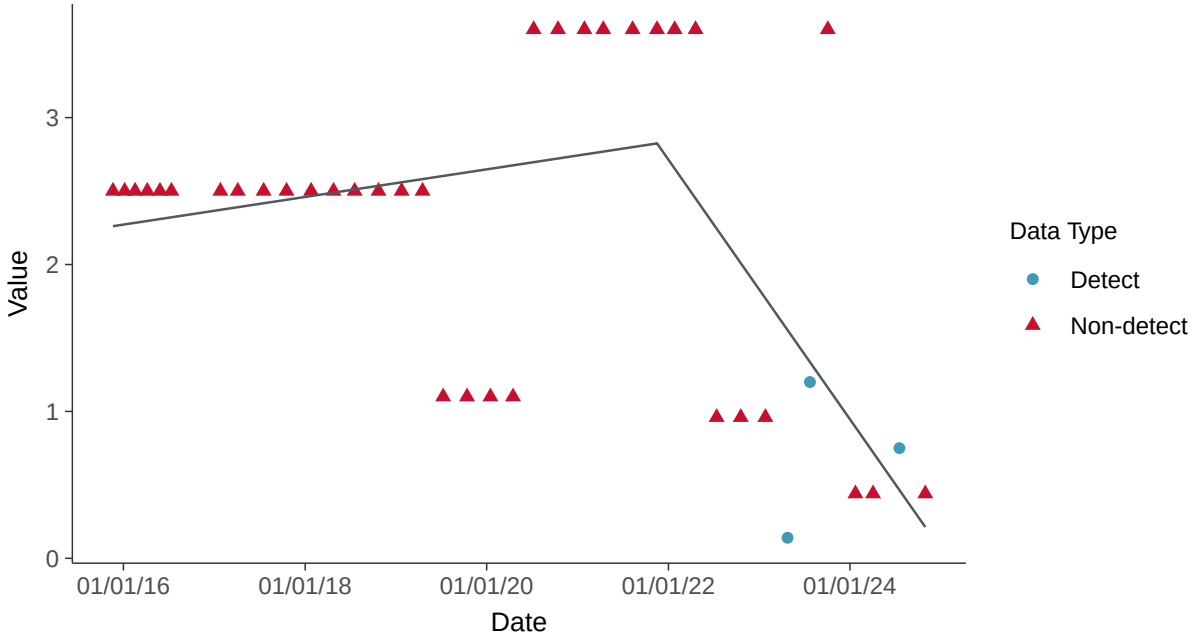
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-1 (ug/L)



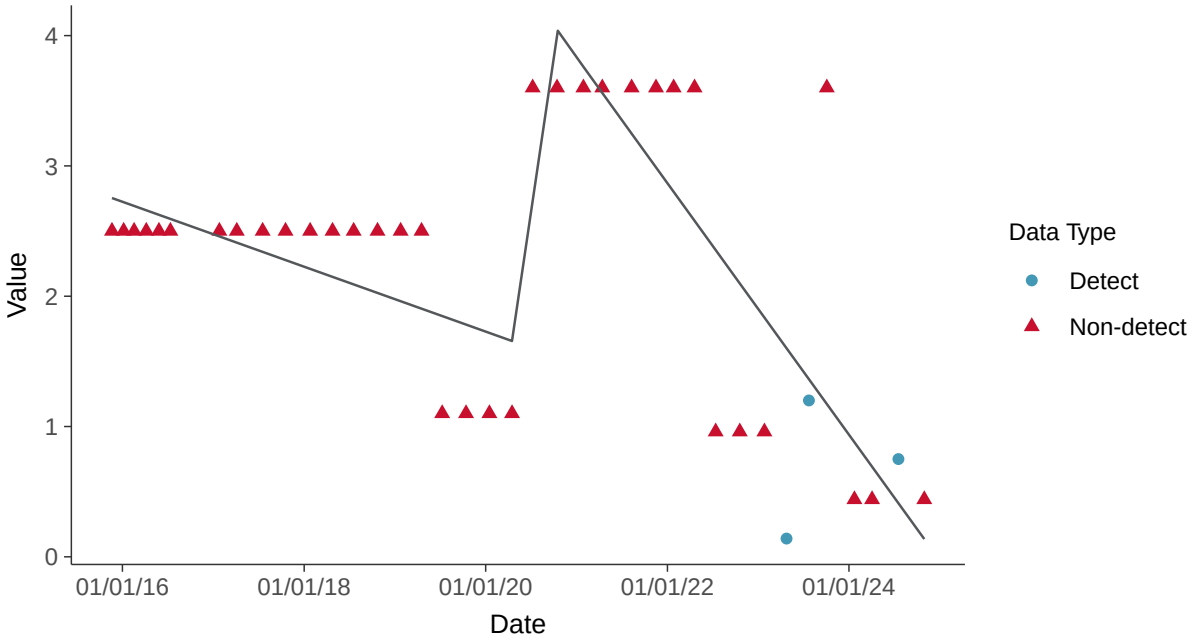
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-1 (ug/L)

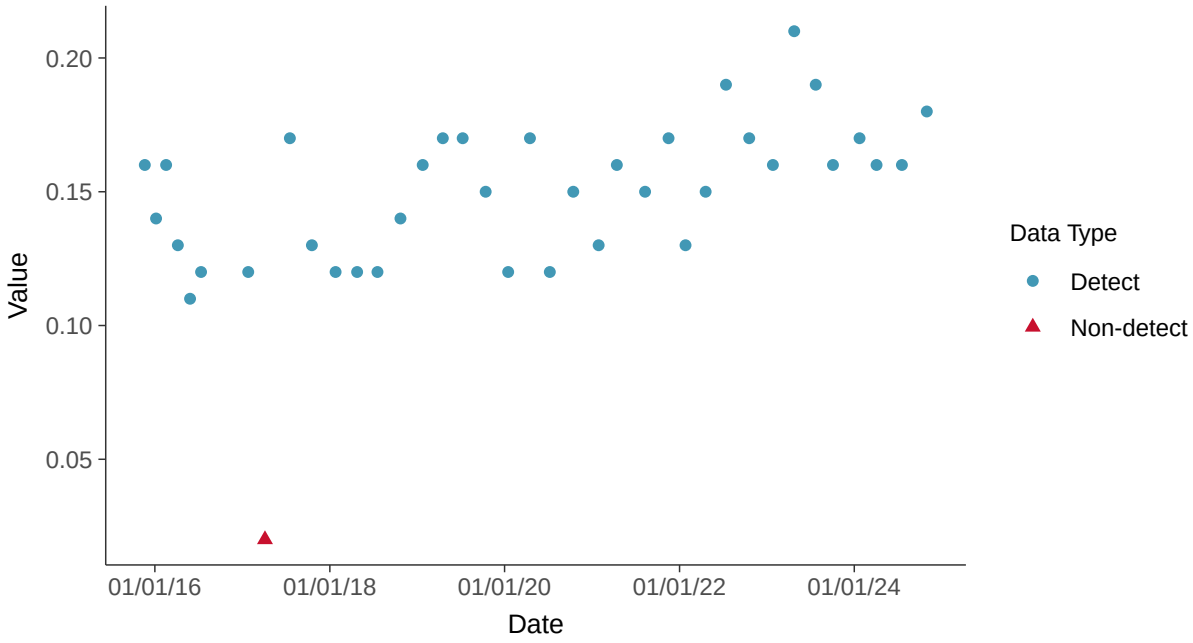


App. IV: Fluoride, MW-1

ID: 01_03_112

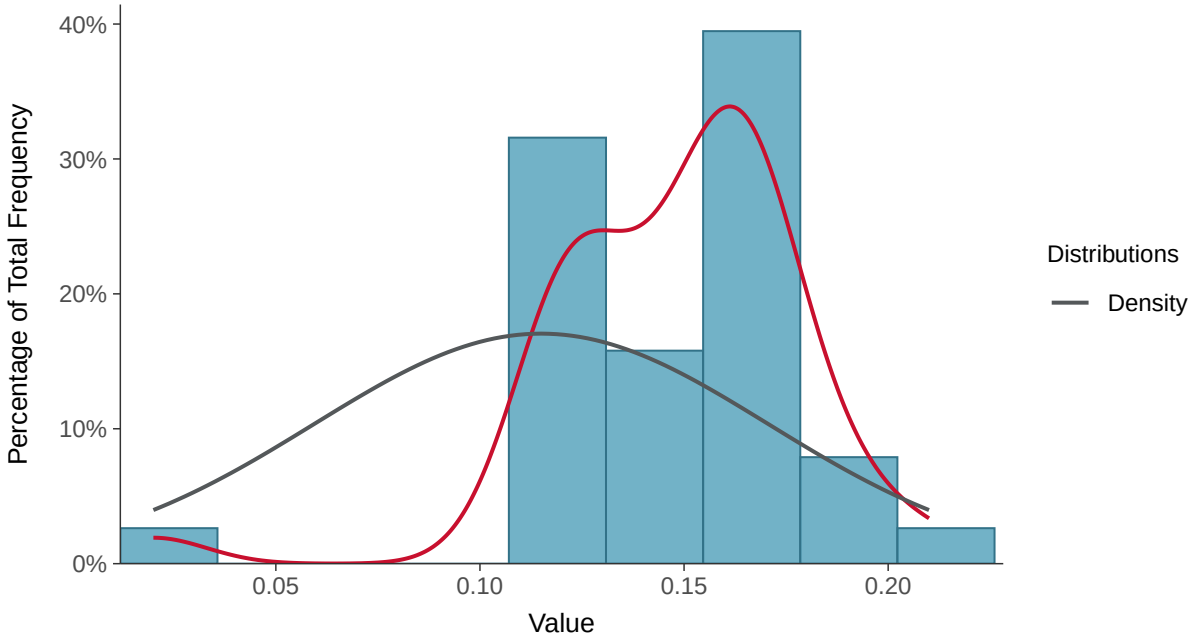
Scatter Plot

Fluoride, MW-1 (mg/L)



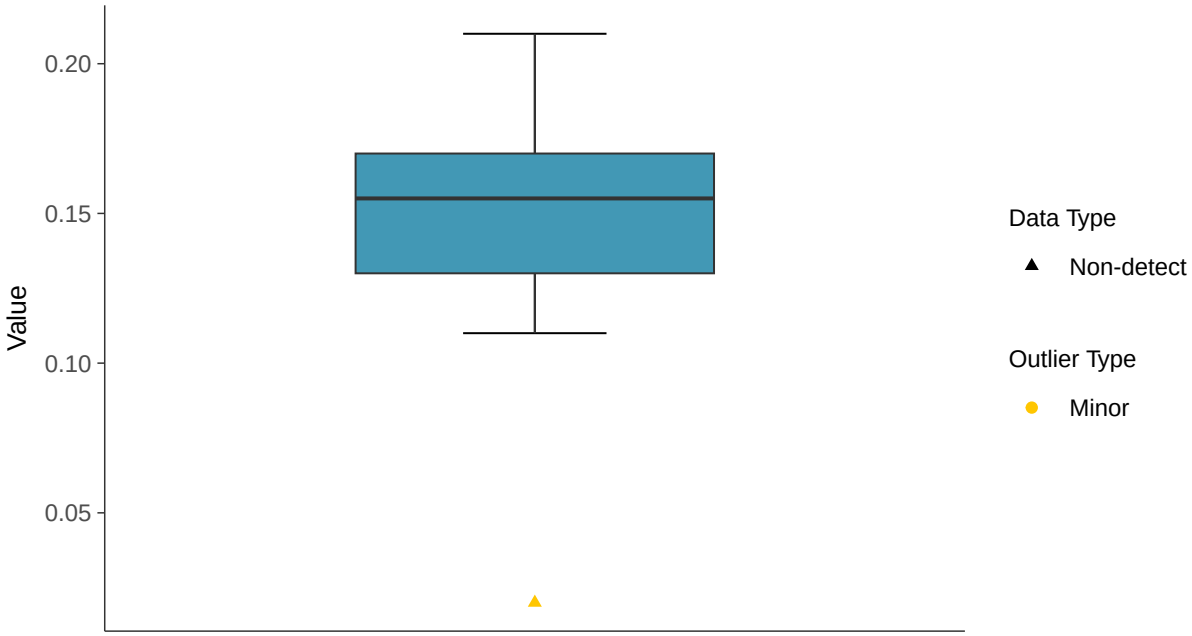
Histogram

Fluoride, MW-1 (mg/L)



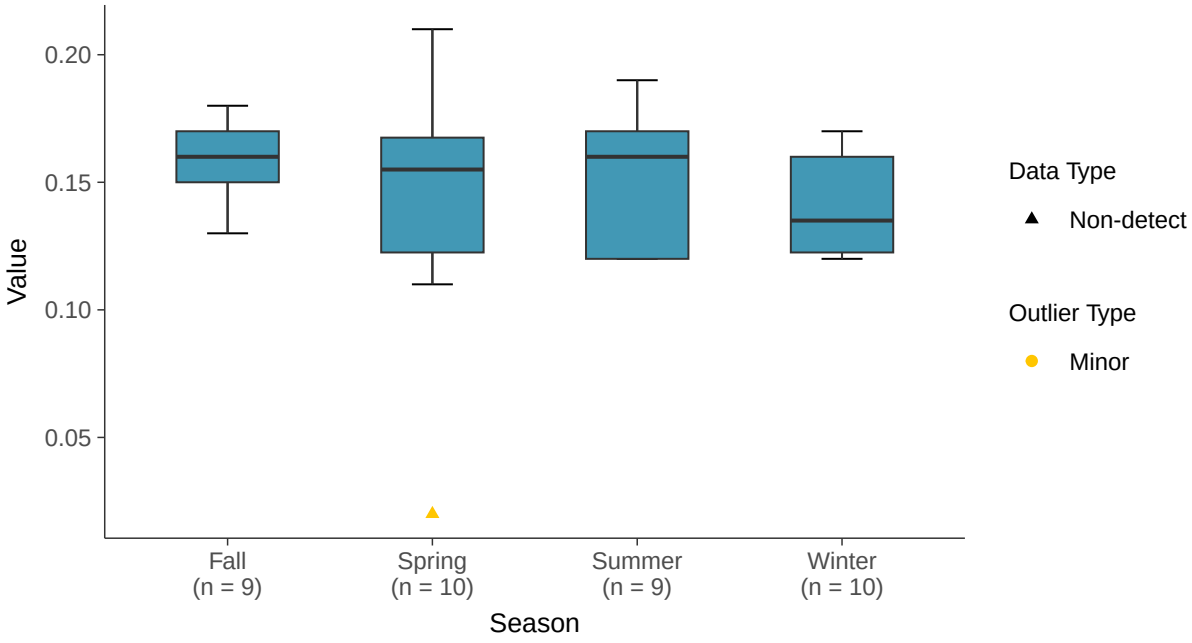
Boxplot

Fluoride, MW-1 (mg/L)



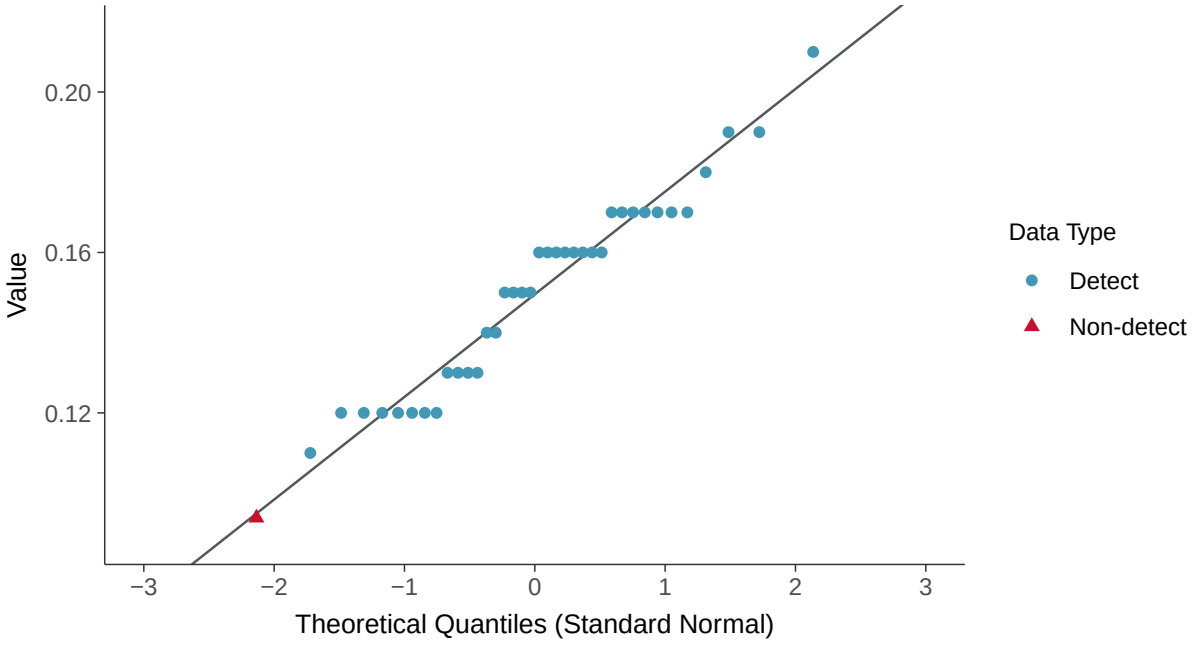
Boxplot by Season

Fluoride, MW-1 (mg/L)



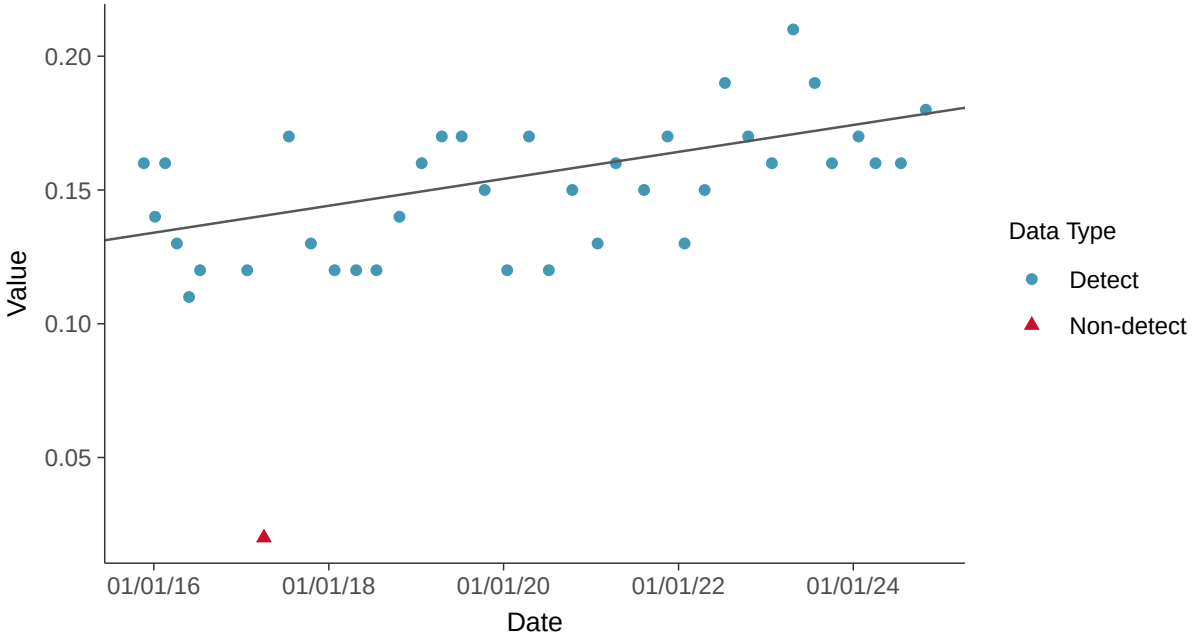
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-1 (mg/L)



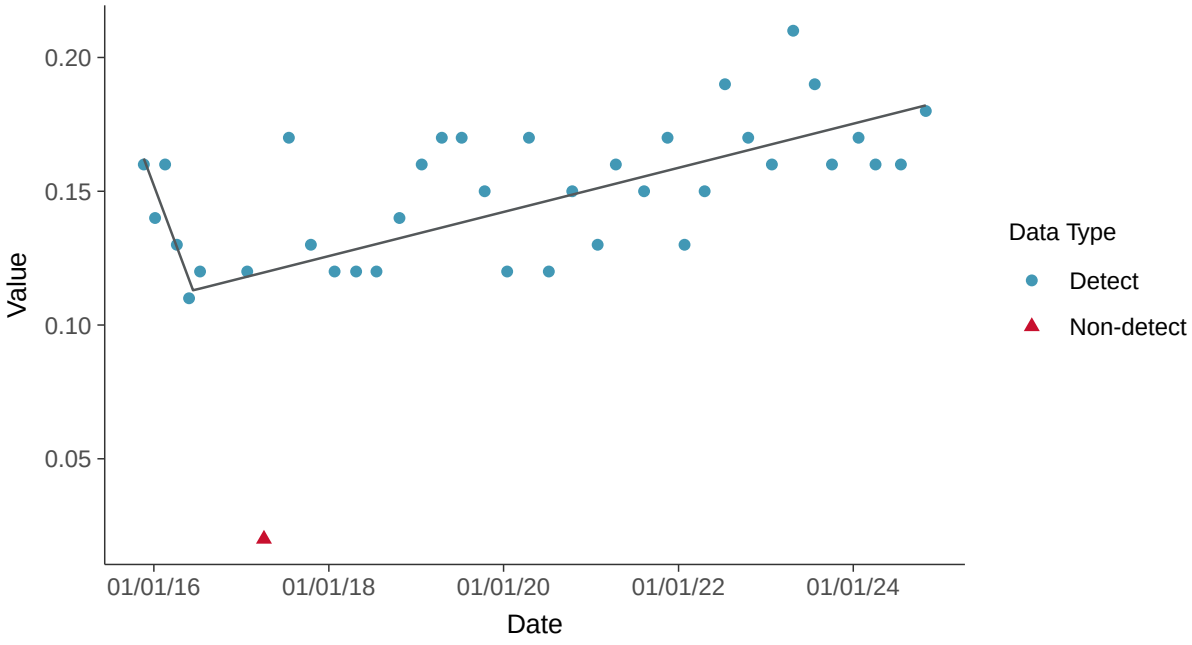
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-1 (mg/L)



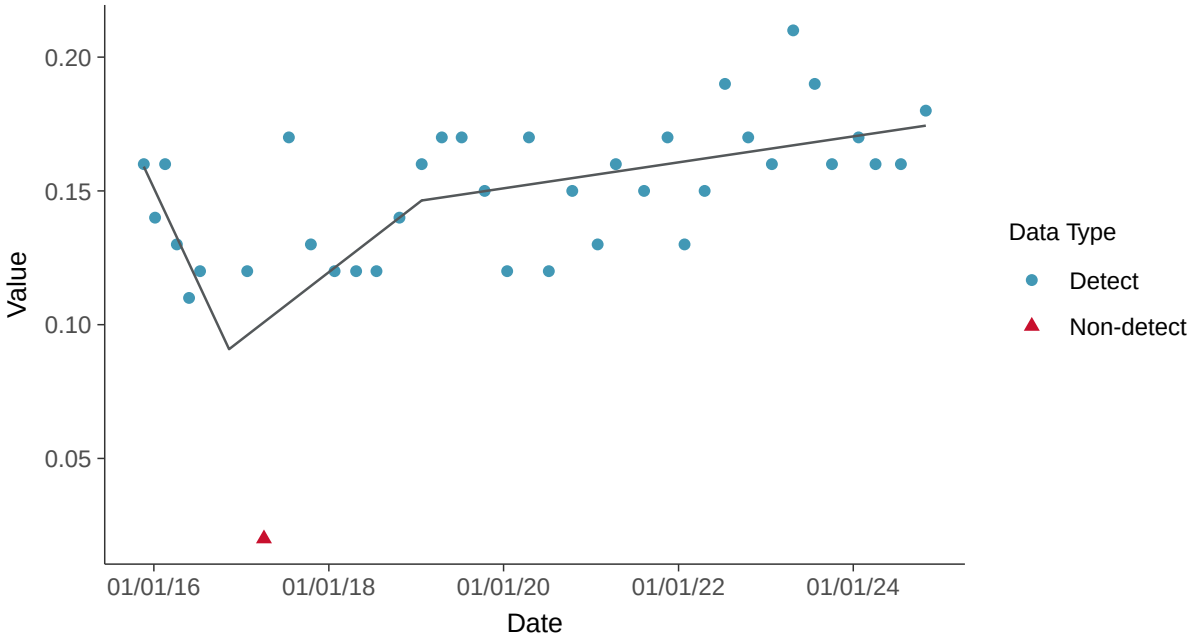
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-1 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-1 (mg/L)

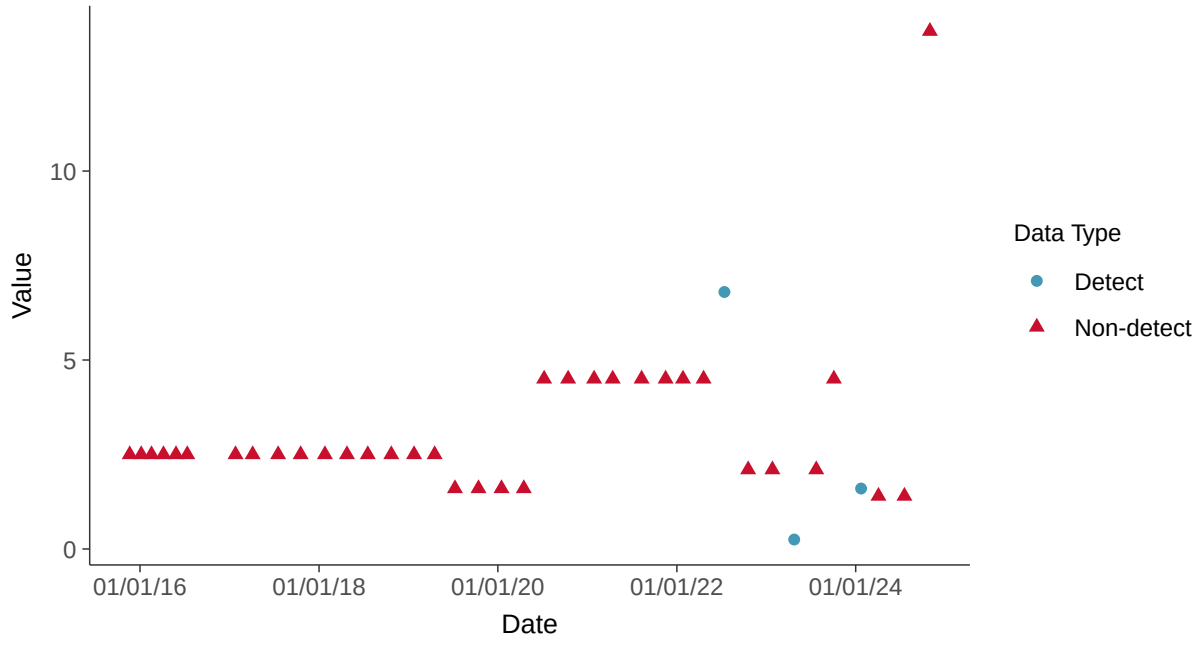


App. IV: Lead, MW-1

ID: 01_03_113

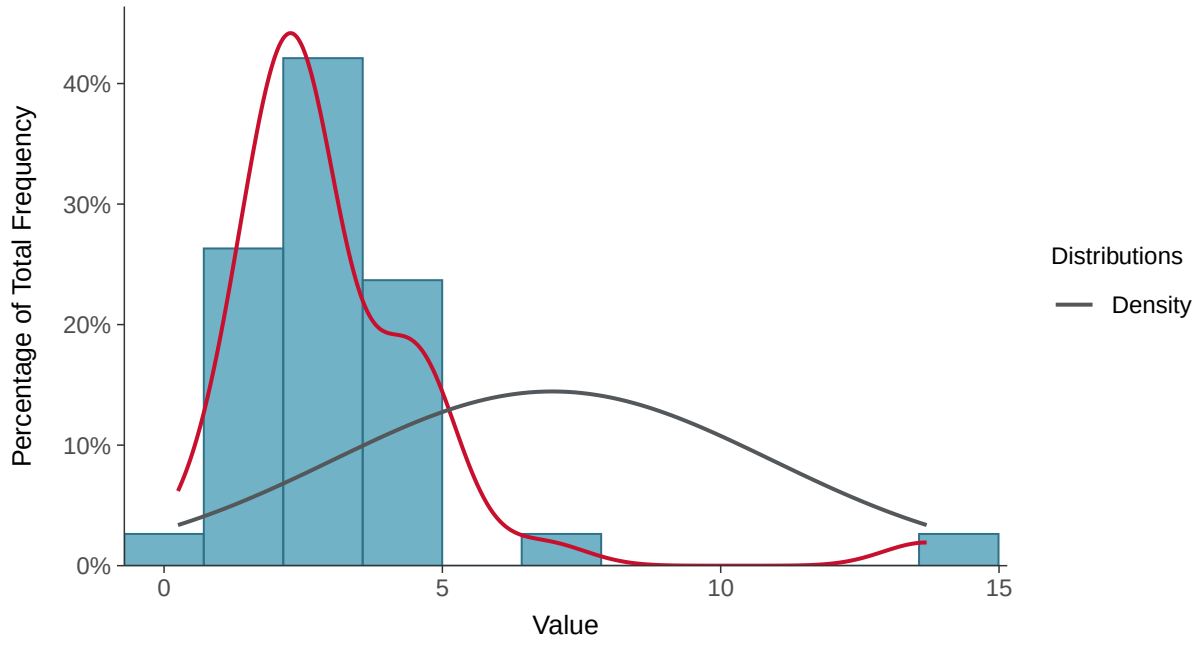
Scatter Plot

Lead, MW-1 (ug/L)



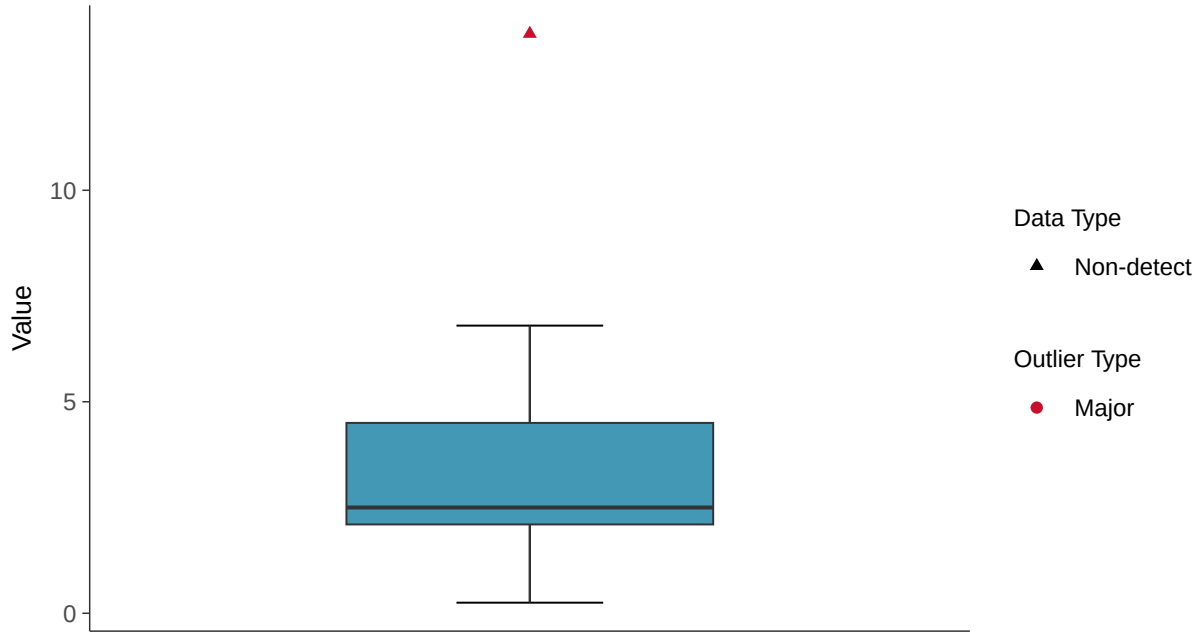
Histogram

Lead, MW-1 (ug/L)



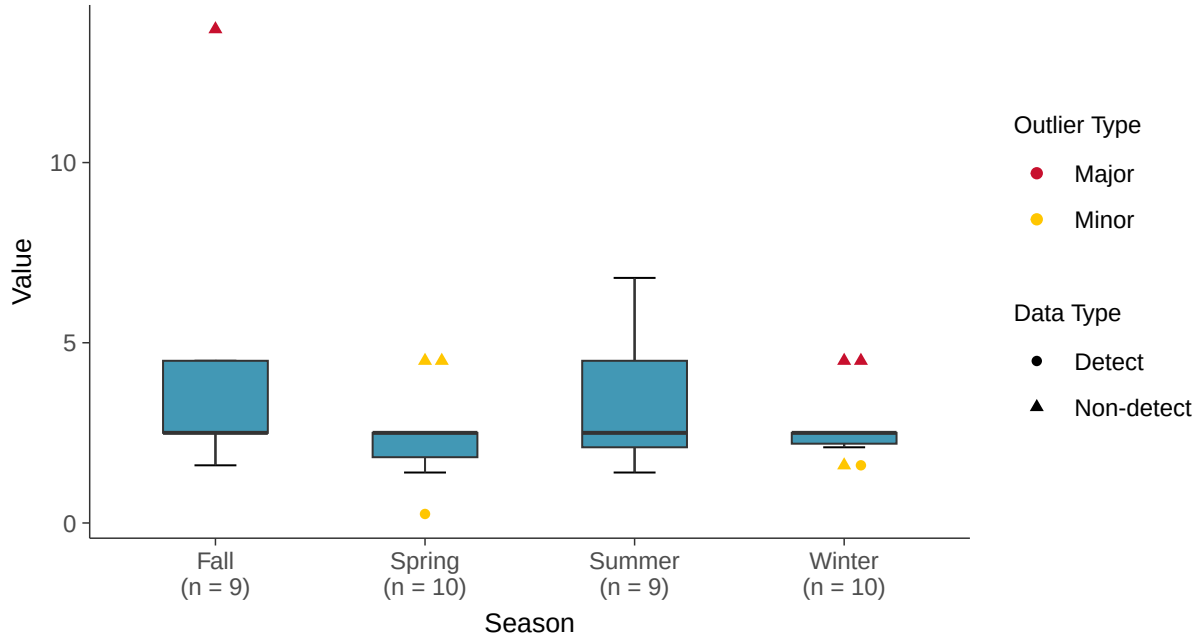
Boxplot

Lead, MW-1 (ug/L)



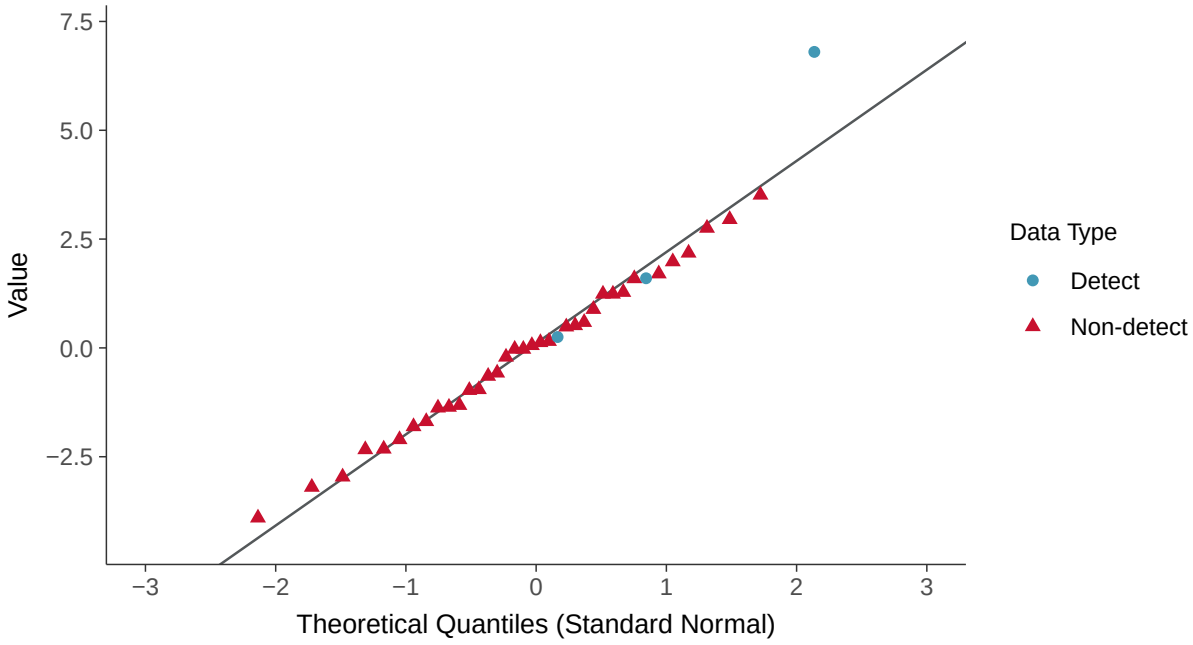
Boxplot by Season

Lead, MW-1 (ug/L)



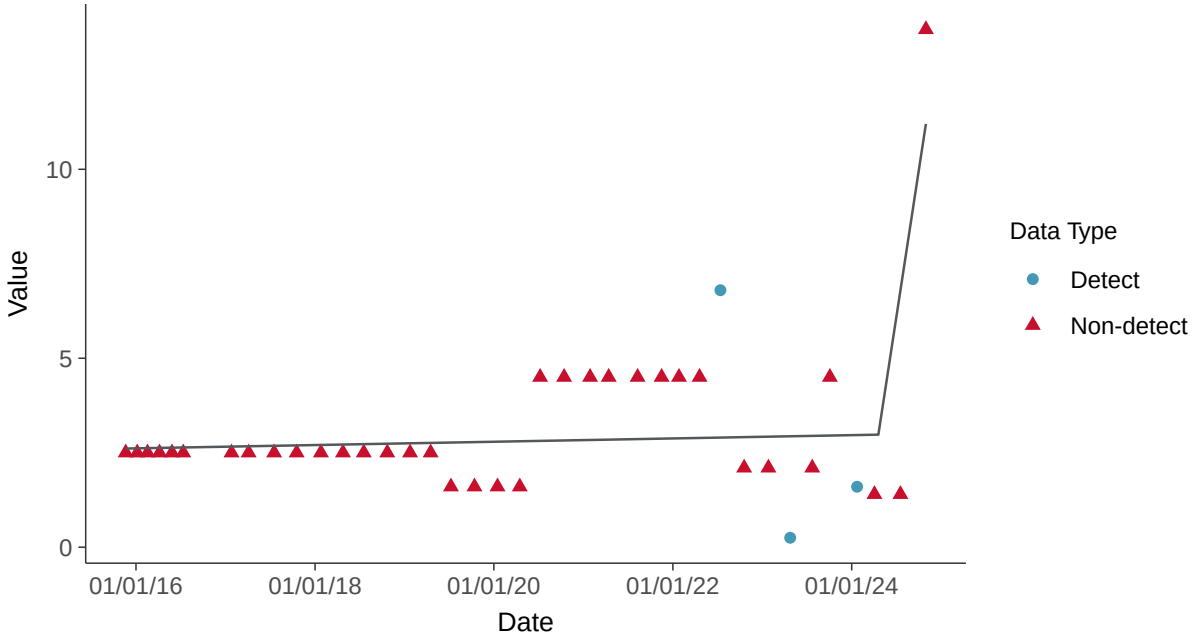
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-1 (ug/L)



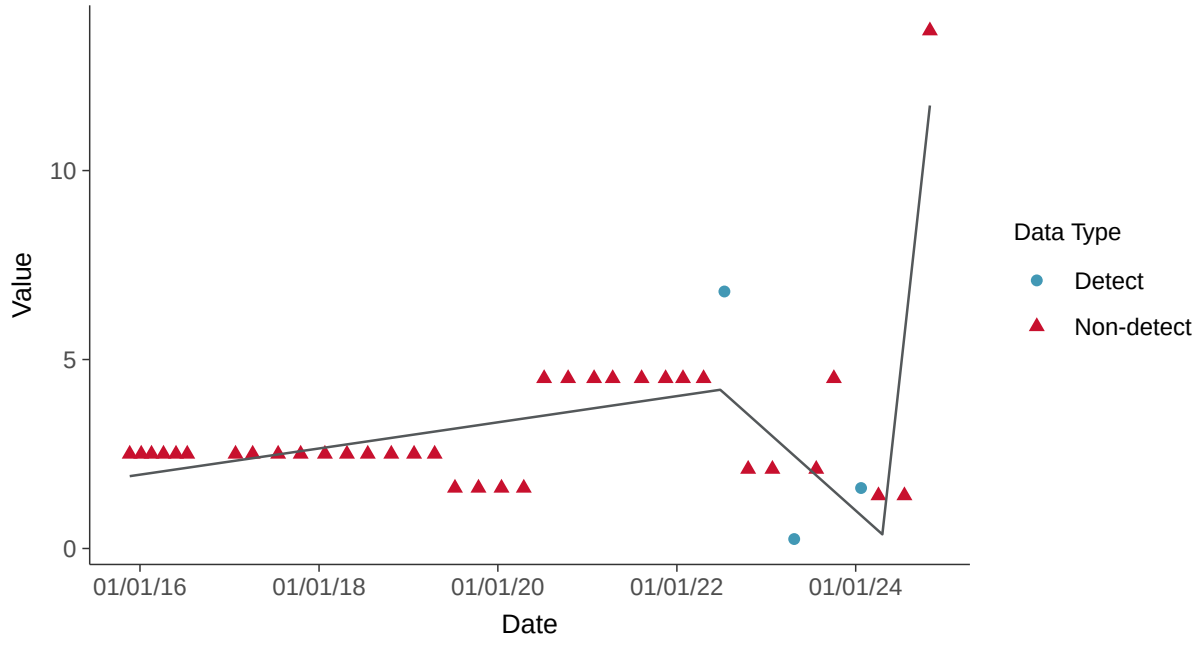
Trend Regression: Piecewise Linear-Linear

Lead, MW-1 (ug/L)



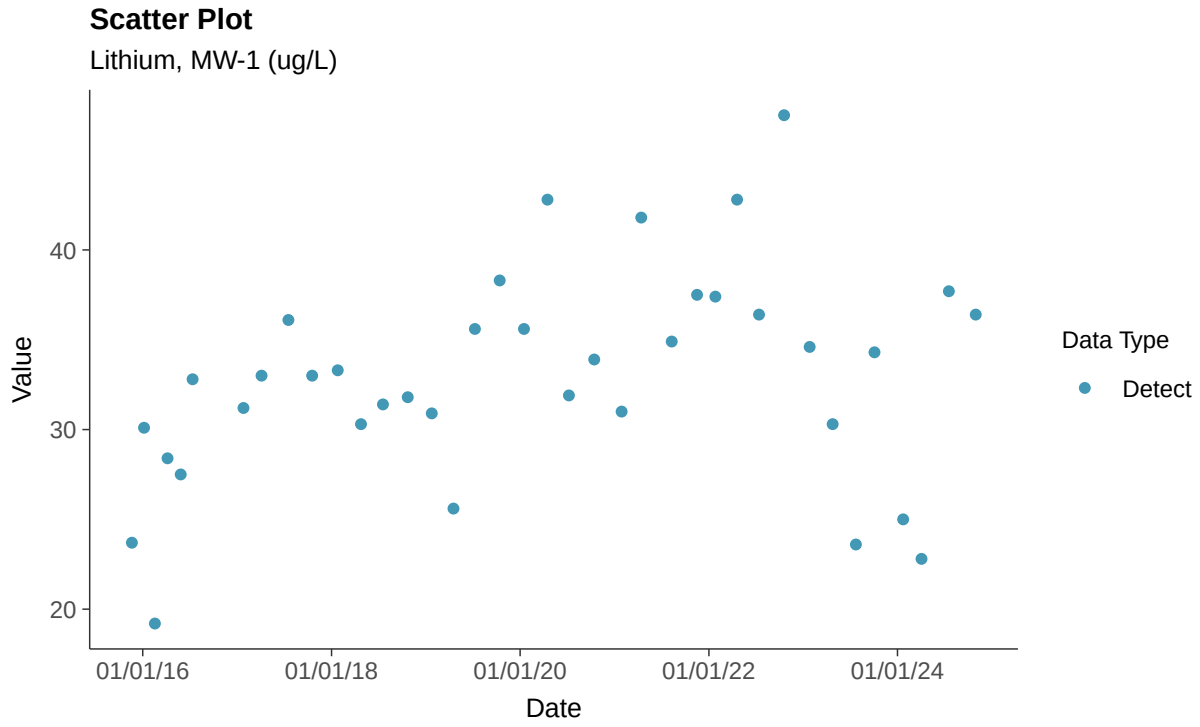
Trend Regression: Piecewise Linear-Linear-Linear

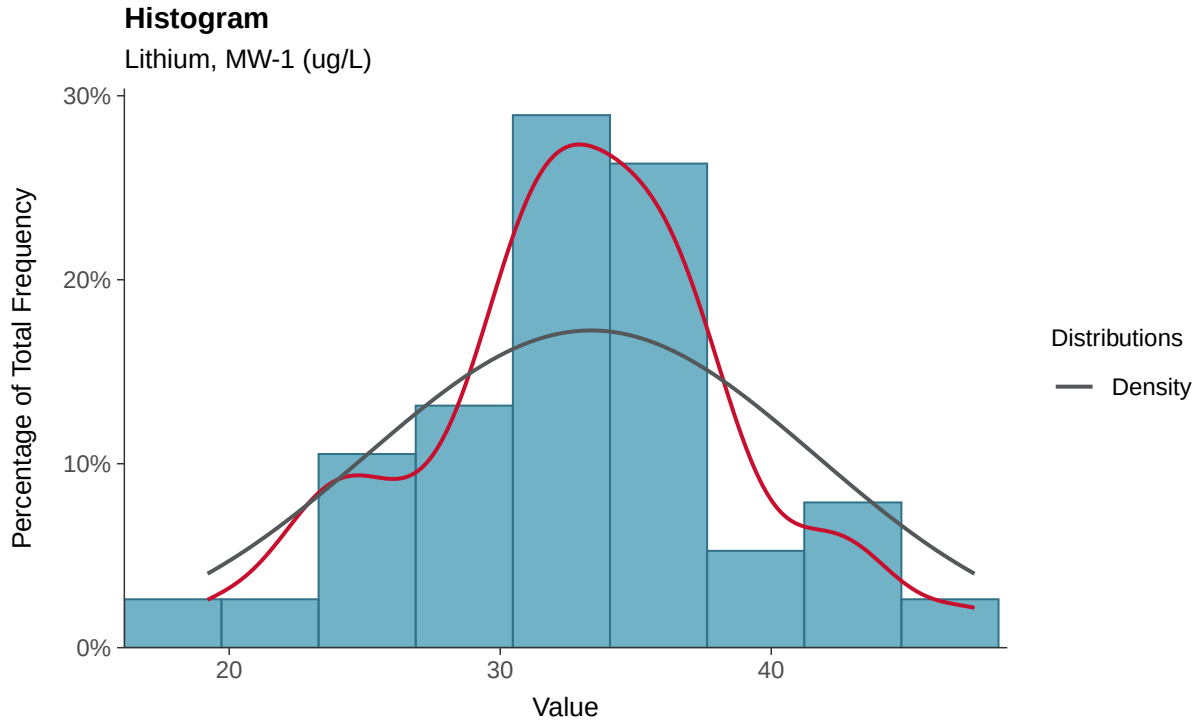
Lead, MW-1 (ug/L)



App. IV: Lithium, MW-1

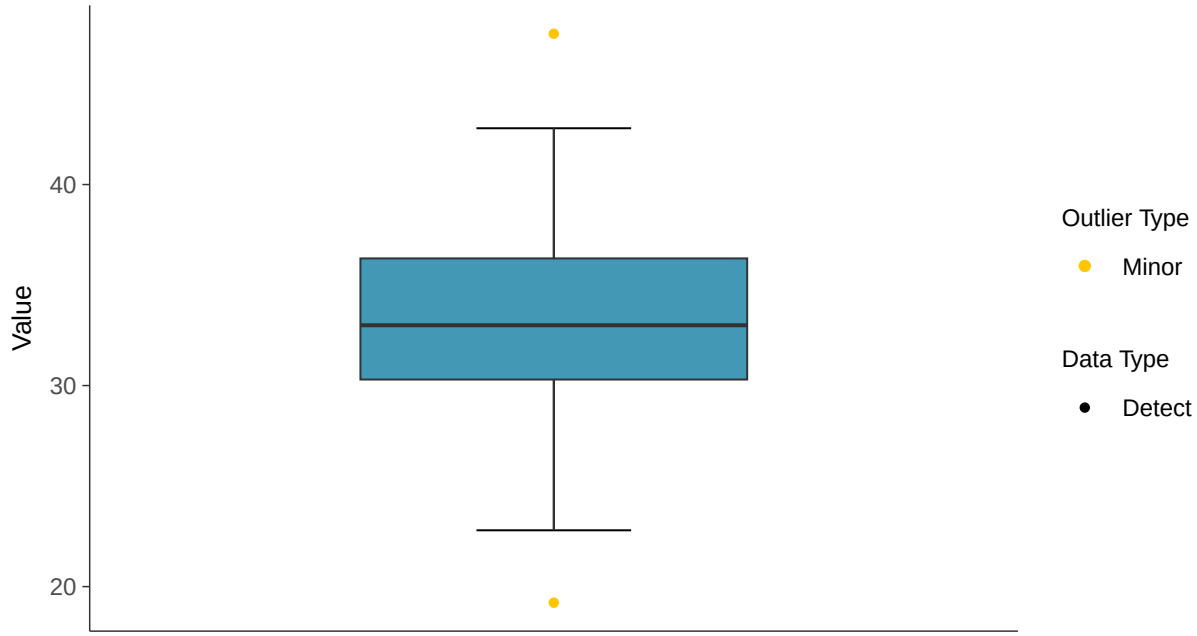
ID: 01_03_114





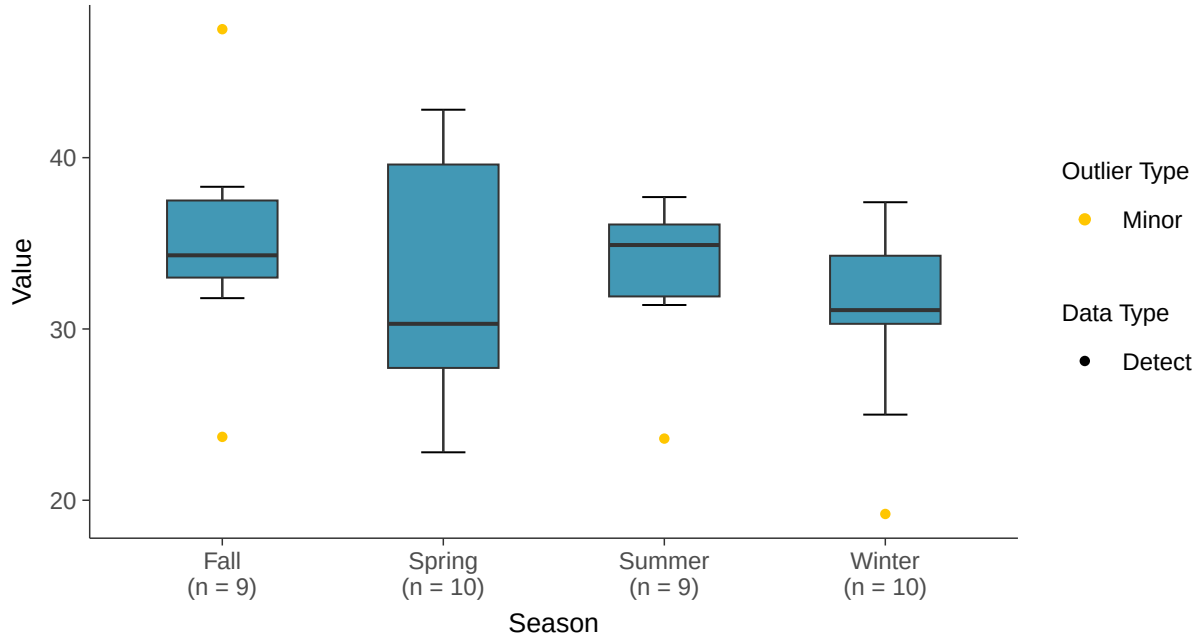
Boxplot

Lithium, MW-1 (ug/L)



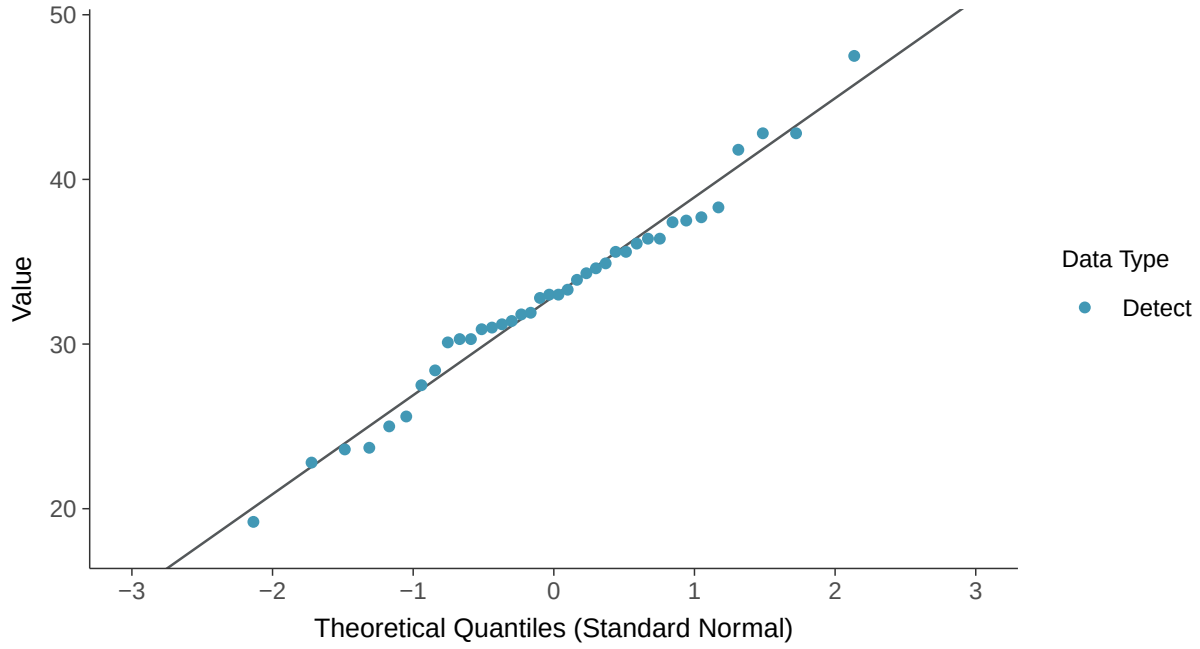
Boxplot by Season

Lithium, MW-1 (ug/L)



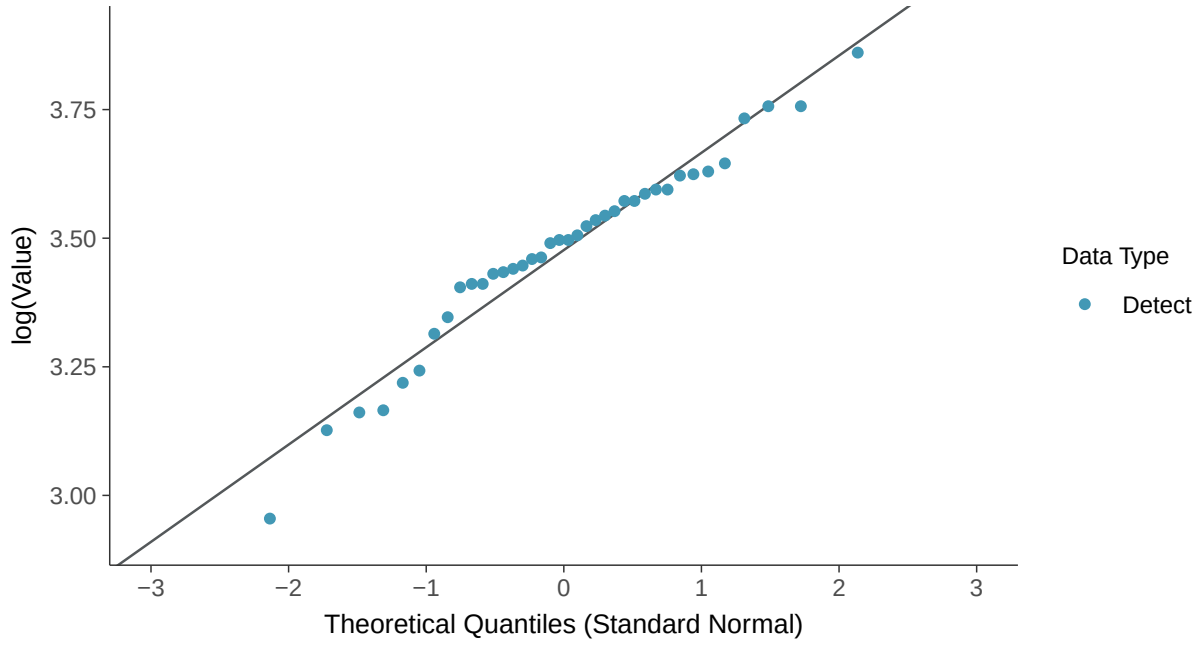
Normal Q-Q plot

Lithium, MW-1 (ug/L)



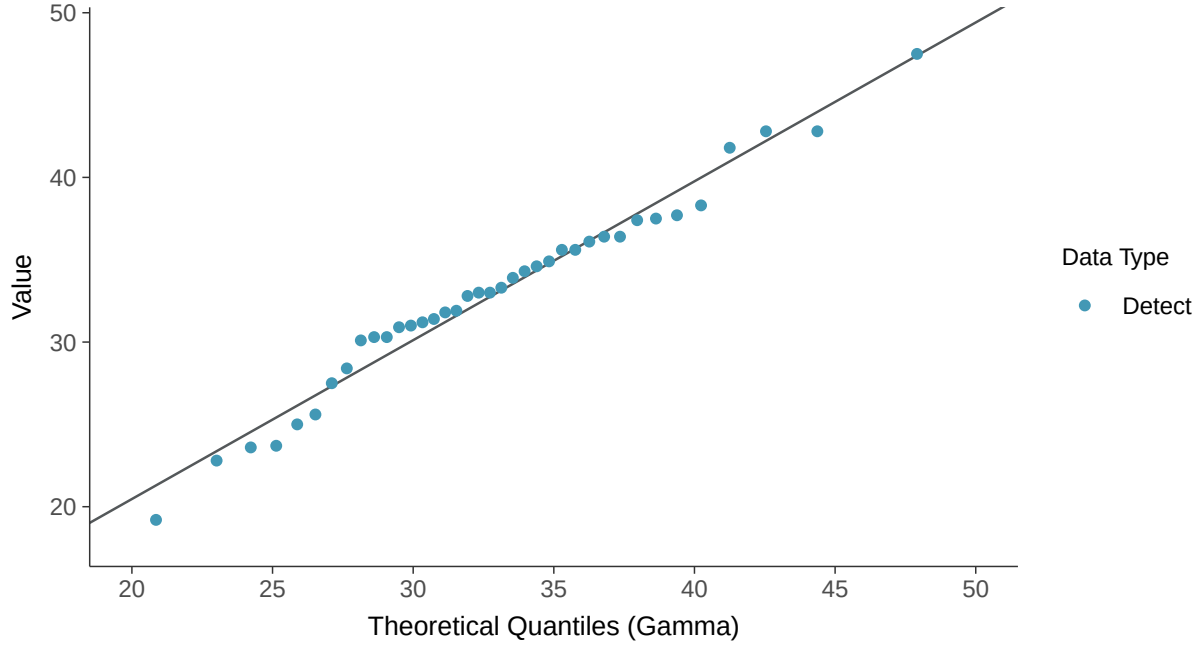
Lognormal Q-Q plot

Lithium, MW-1 (ug/L)



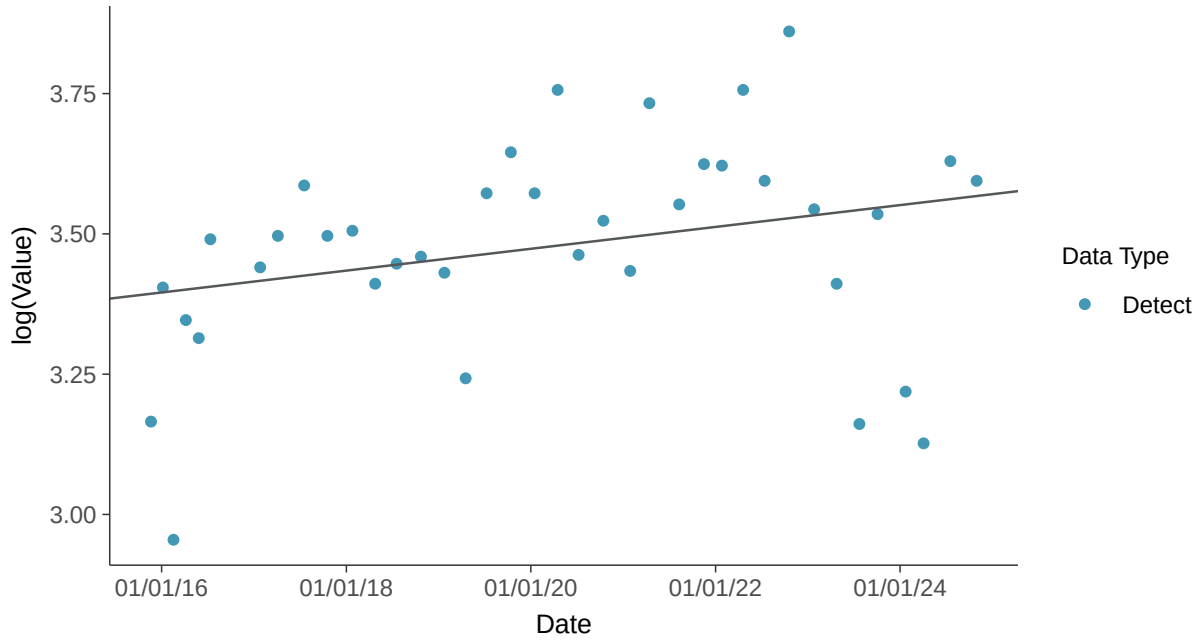
Gamma Q-Q plot

Lithium, MW-1 (ug/L)



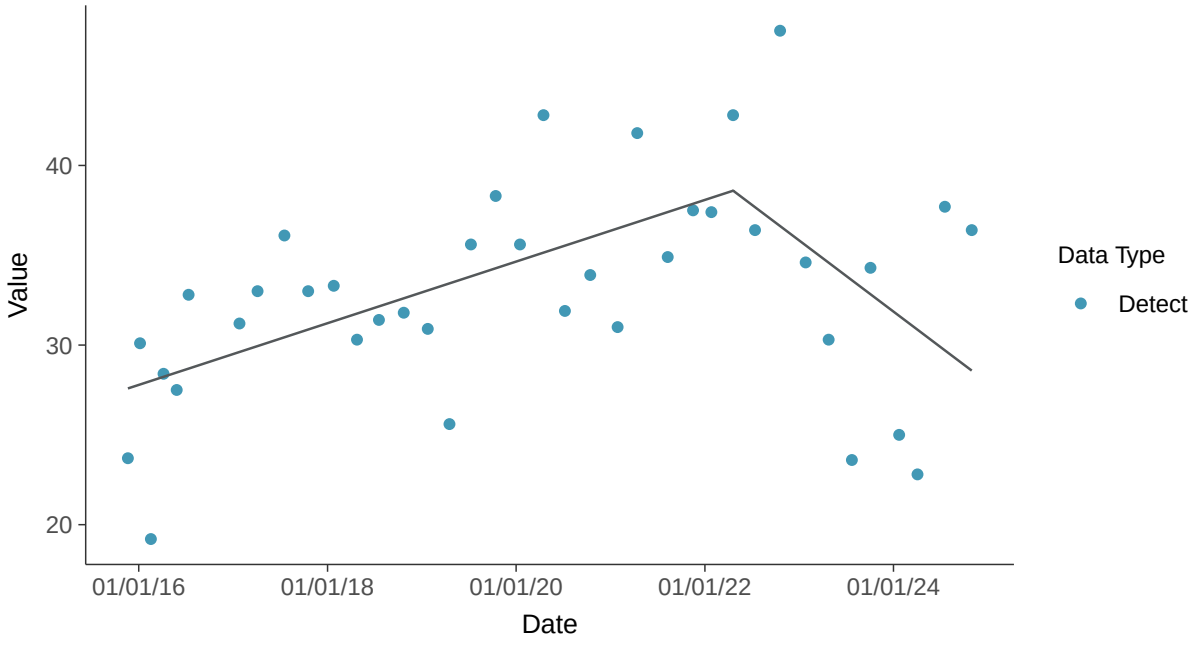
Trend Regression: Lognormal MLE

Lithium, MW-1 (ug/L)



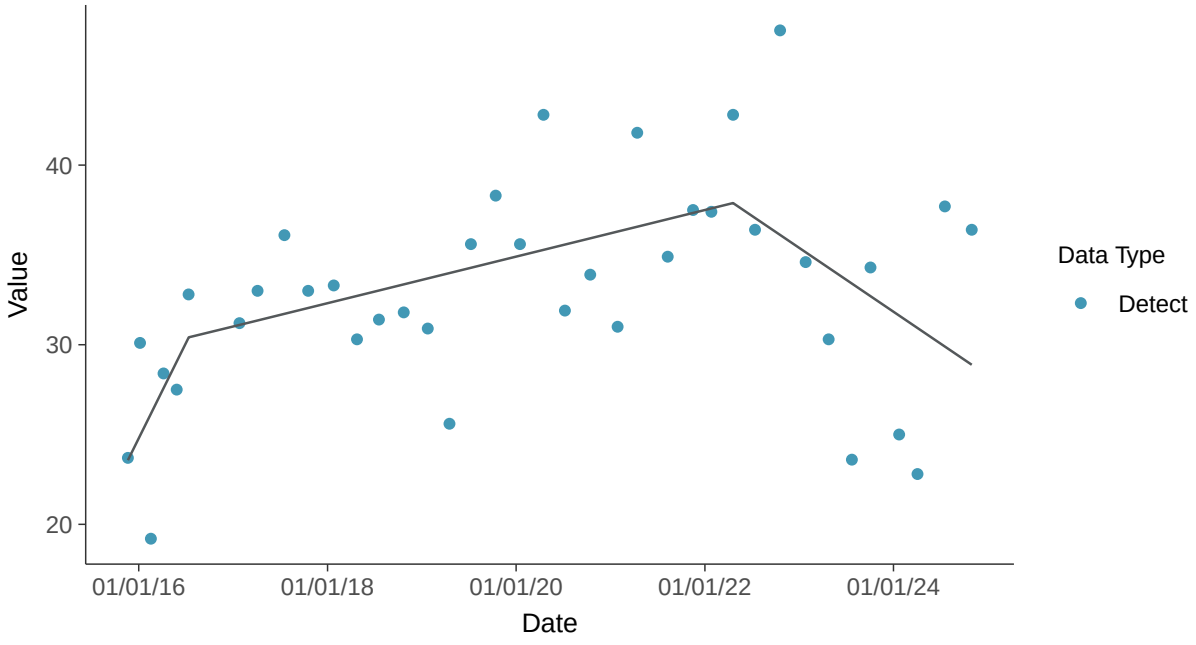
Trend Regression: Piecewise Linear-Linear

Lithium, MW-1 (ug/L)



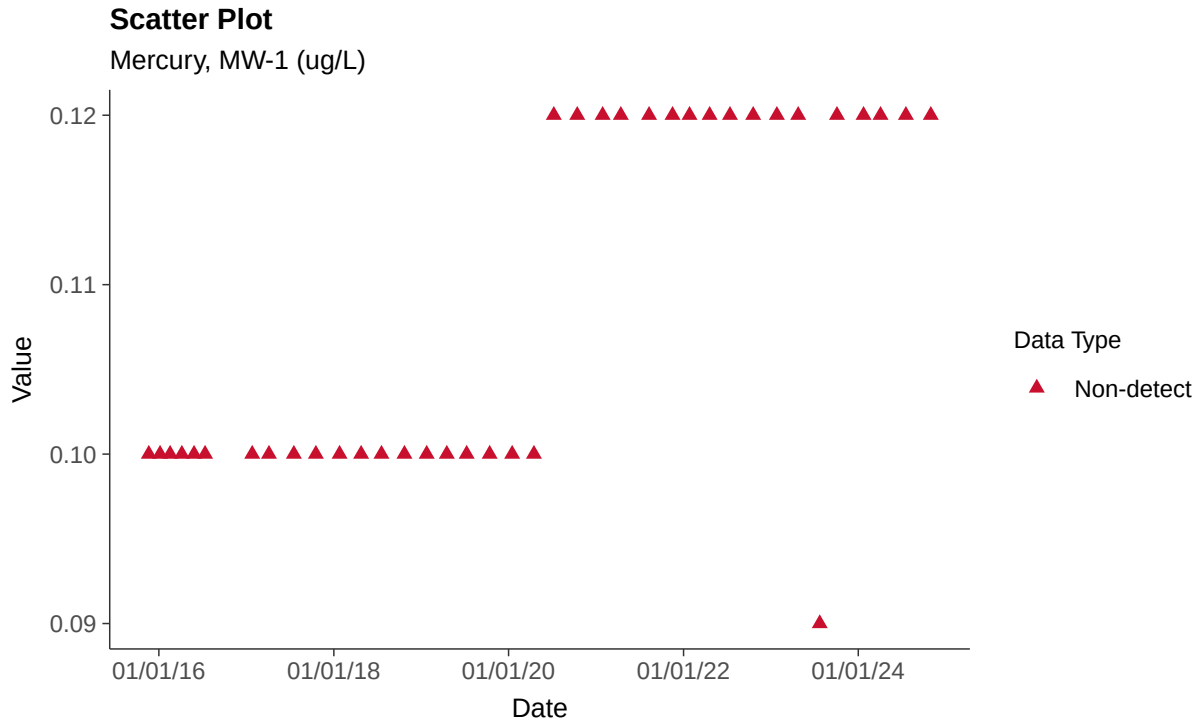
Trend Regression: Piecewise Linear-Linear-Linear

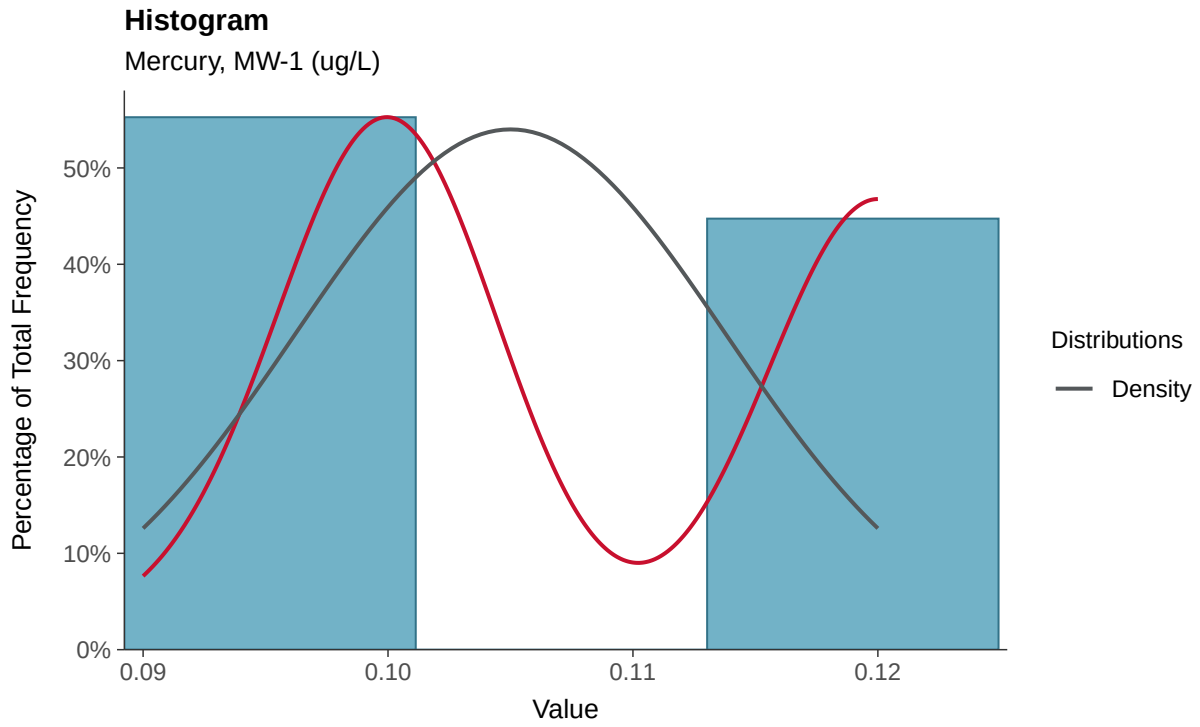
Lithium, MW-1 (ug/L)



App. IV: Mercury, MW-1

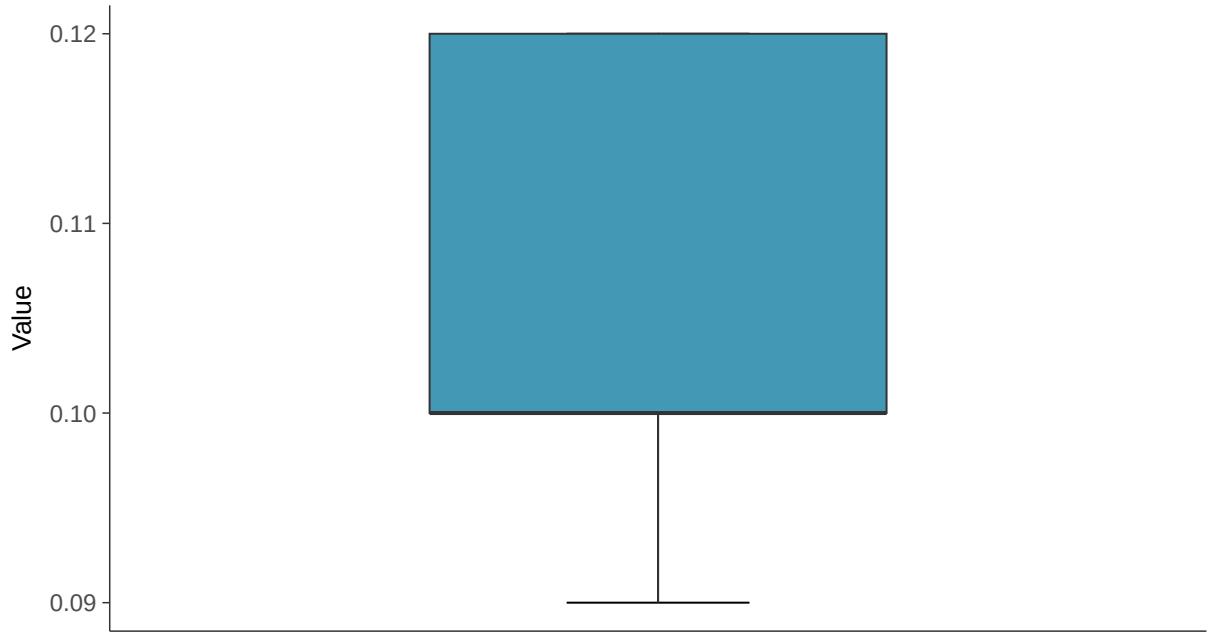
ID: 01_03_115





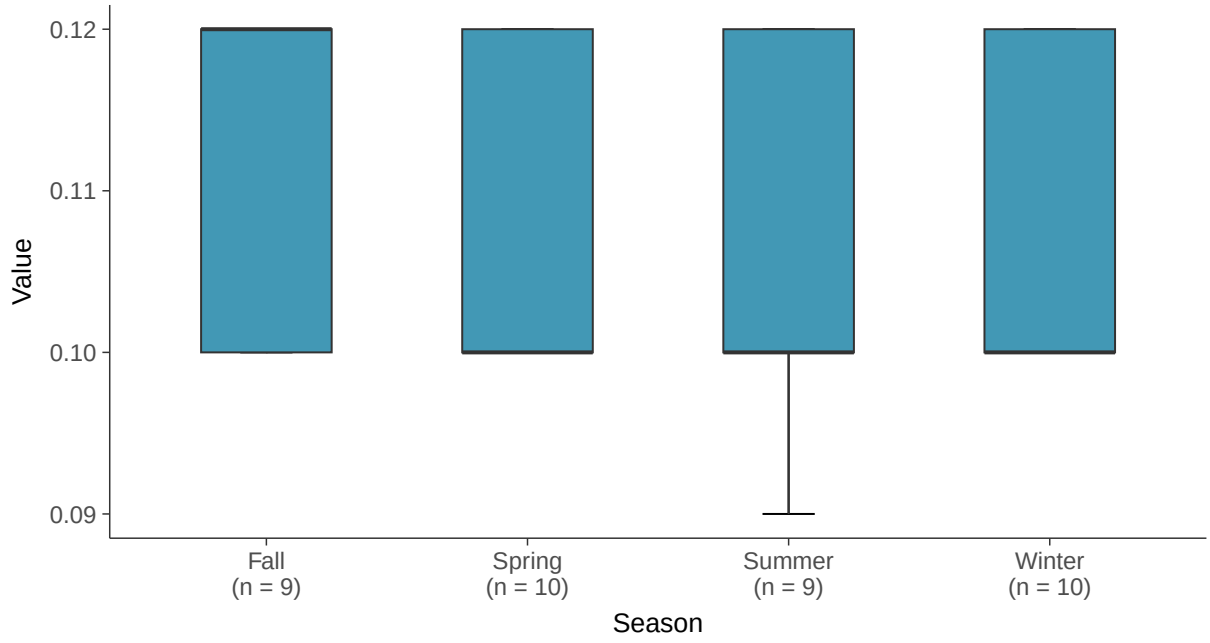
Boxplot

Mercury, MW-1 (ug/L)



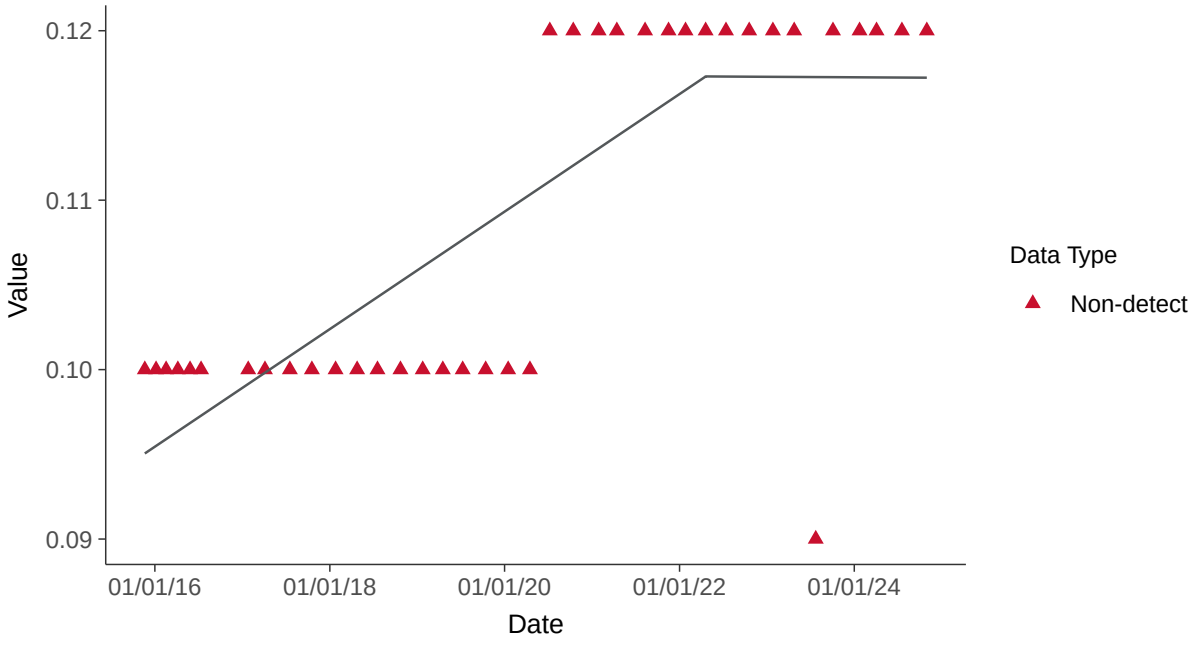
Boxplot by Season

Mercury, MW-1 (ug/L)



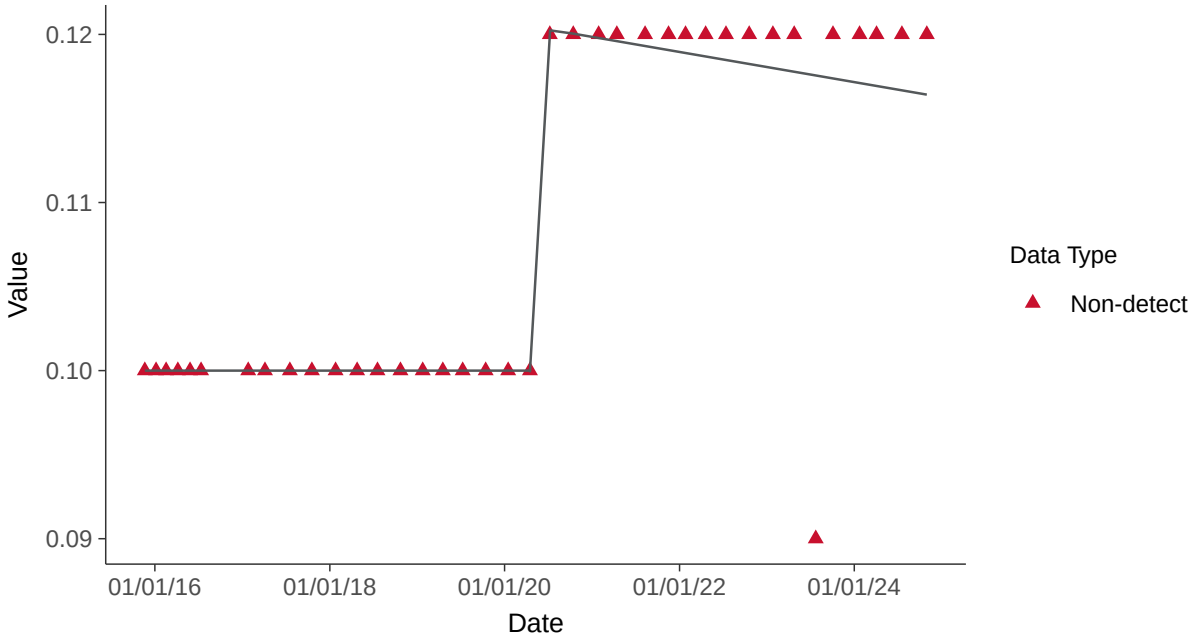
Trend Regression: Piecewise Linear-Linear

Mercury, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-1 (ug/L)

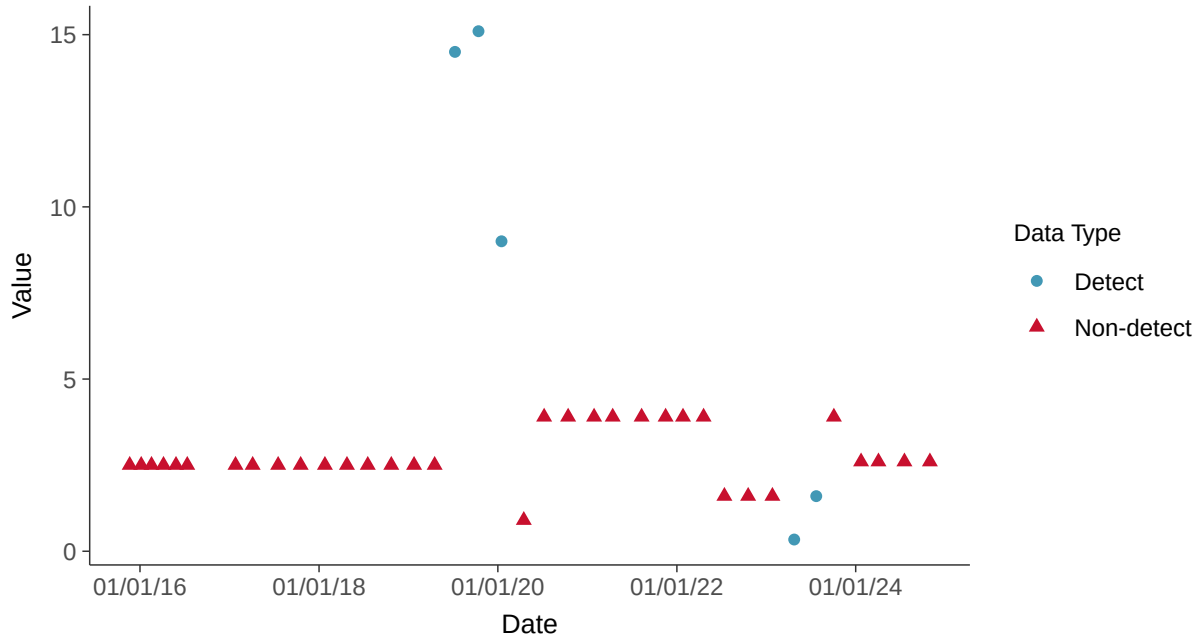


App. IV: Molybdenum, MW-1

ID: 01_03_116

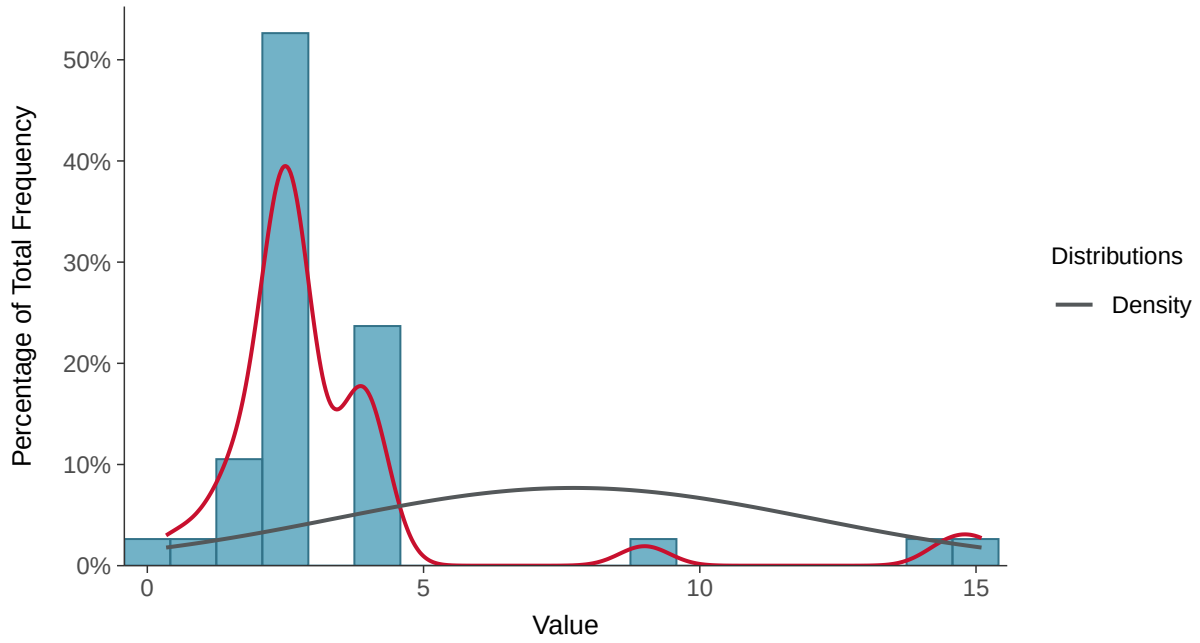
Scatter Plot

Molybdenum, MW-1 (ug/L)



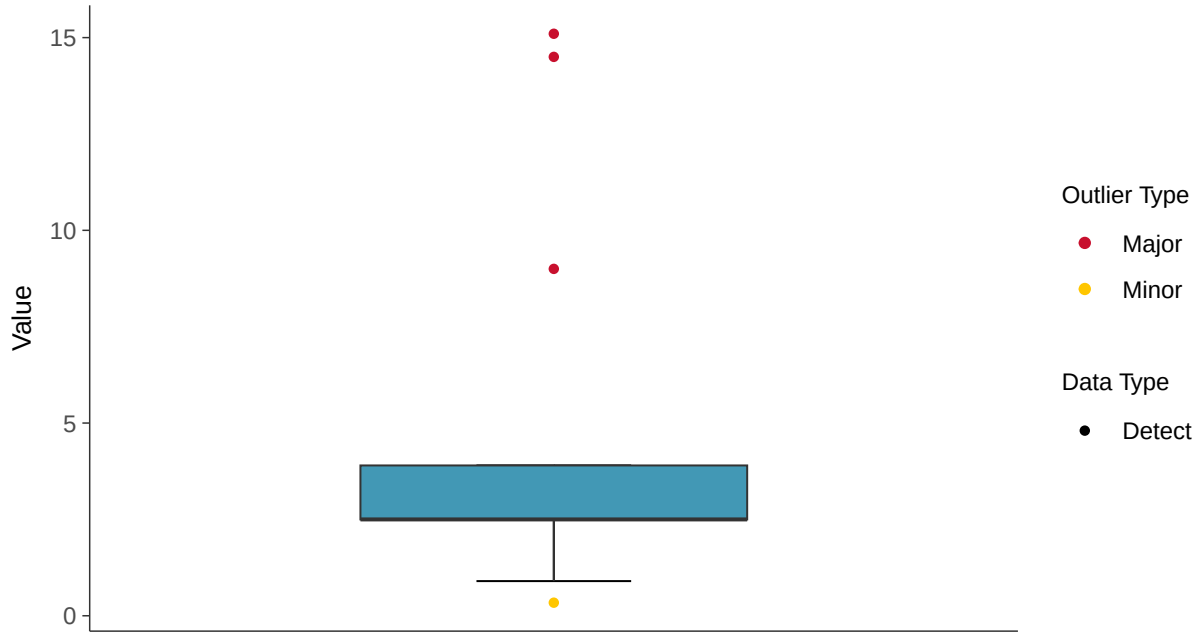
Histogram

Molybdenum, MW-1 (ug/L)



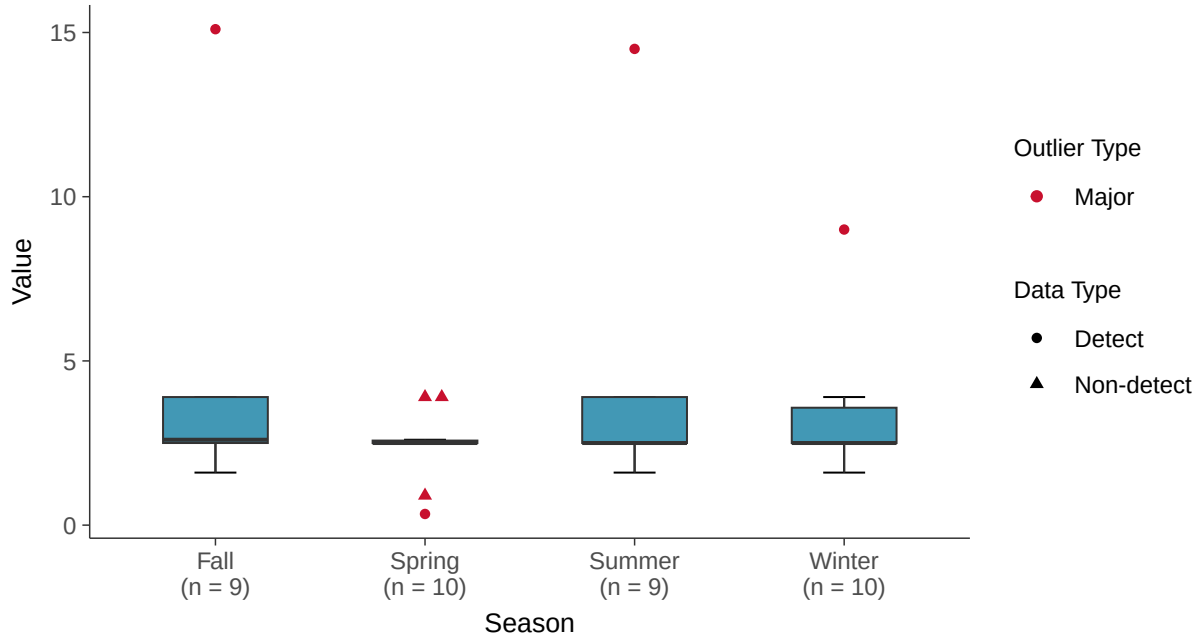
Boxplot

Molybdenum, MW-1 (ug/L)



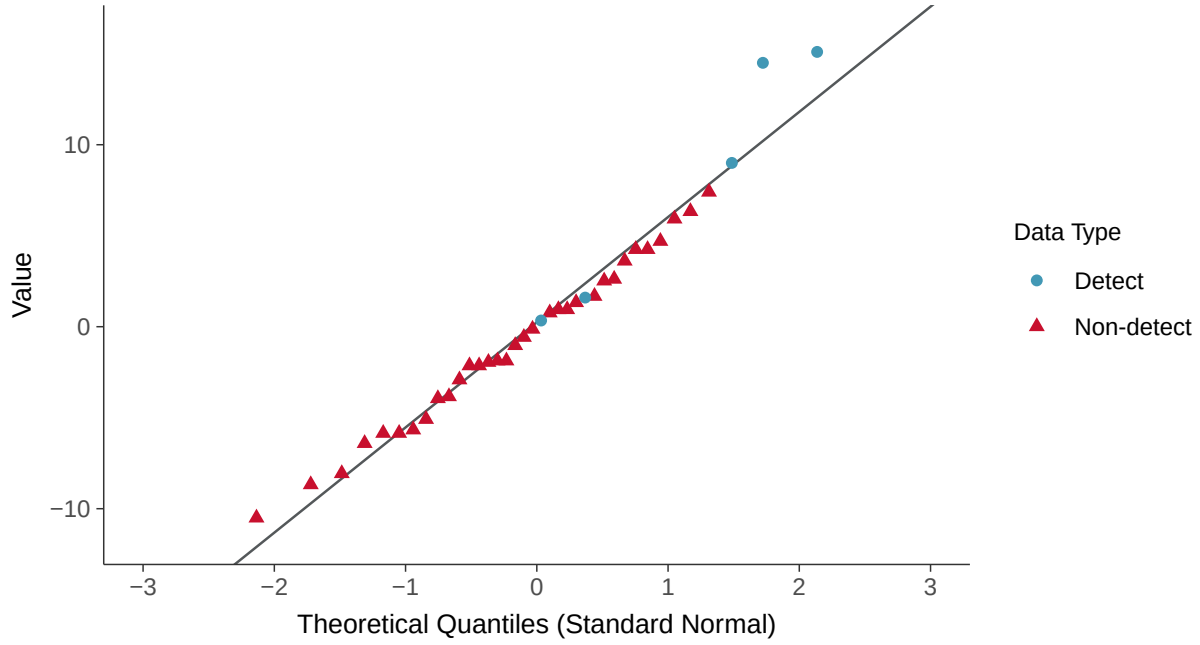
Boxplot by Season

Molybdenum, MW-1 (ug/L)



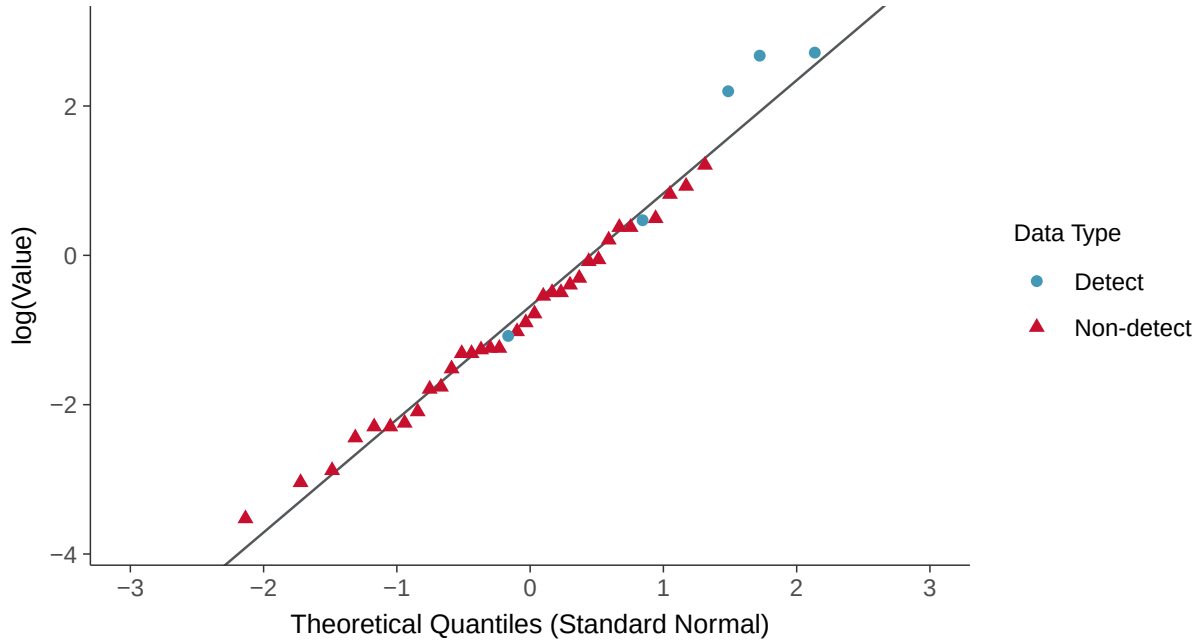
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



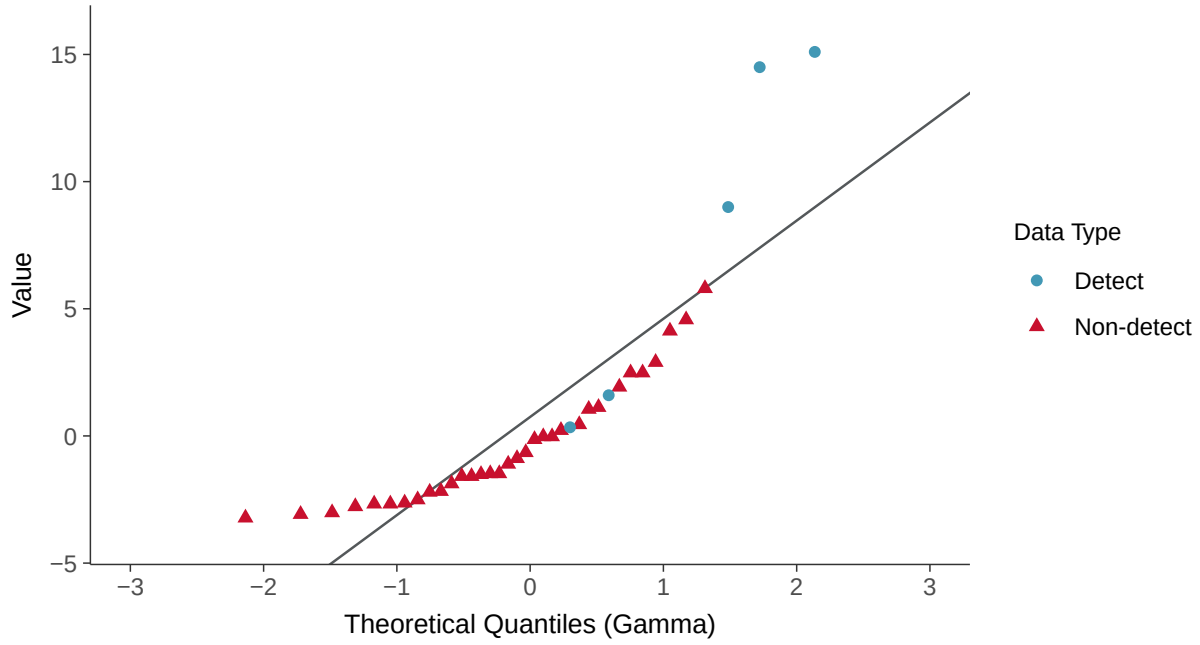
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



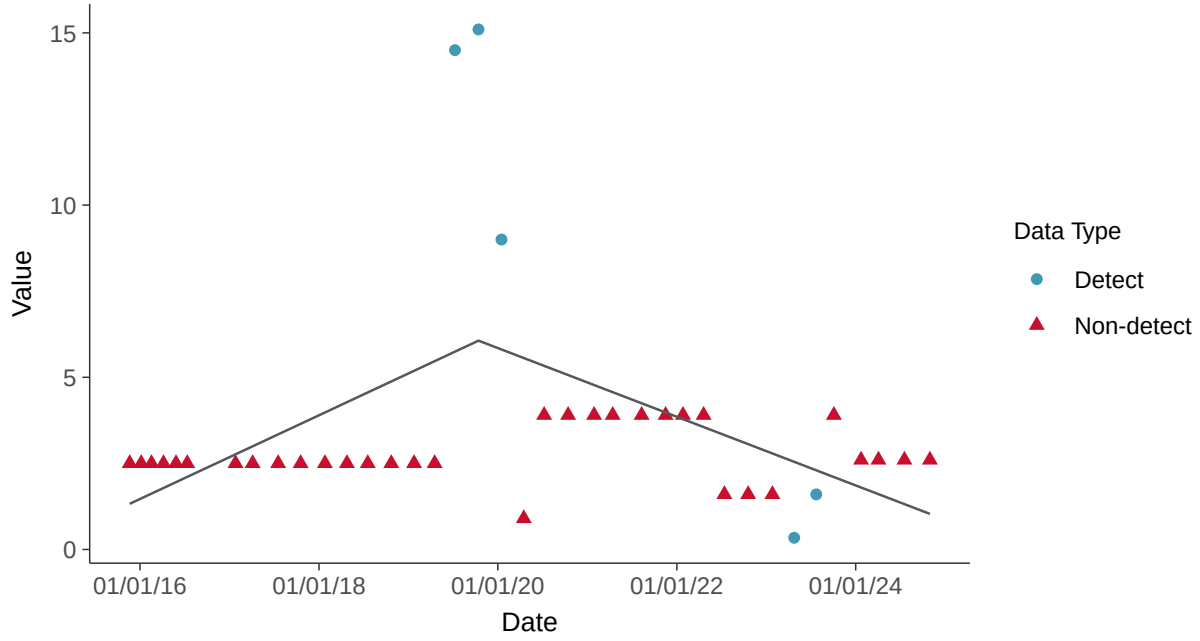
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-1 (ug/L)



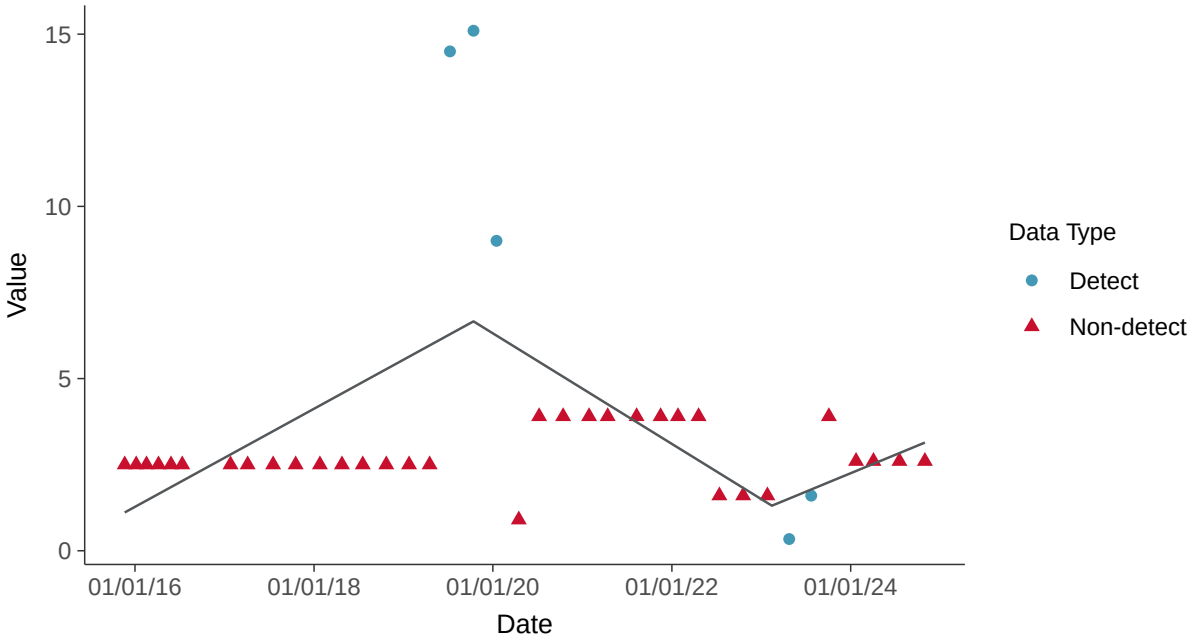
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-1 (ug/L)

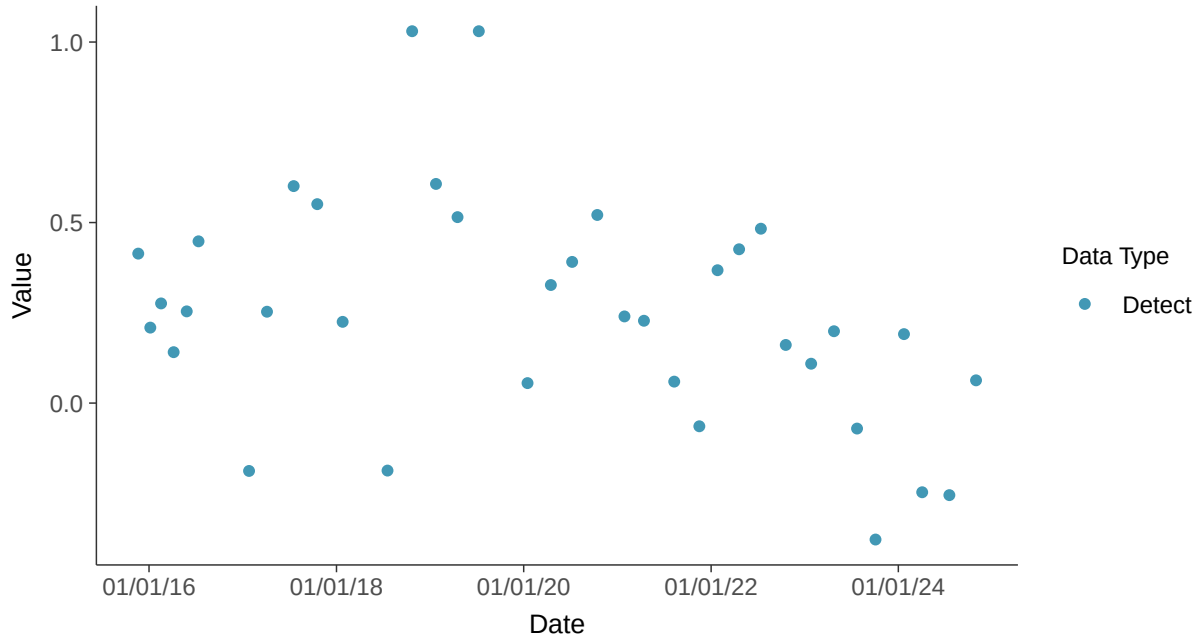


App. IV: Radium-226, MW-1

ID: 01_03_119

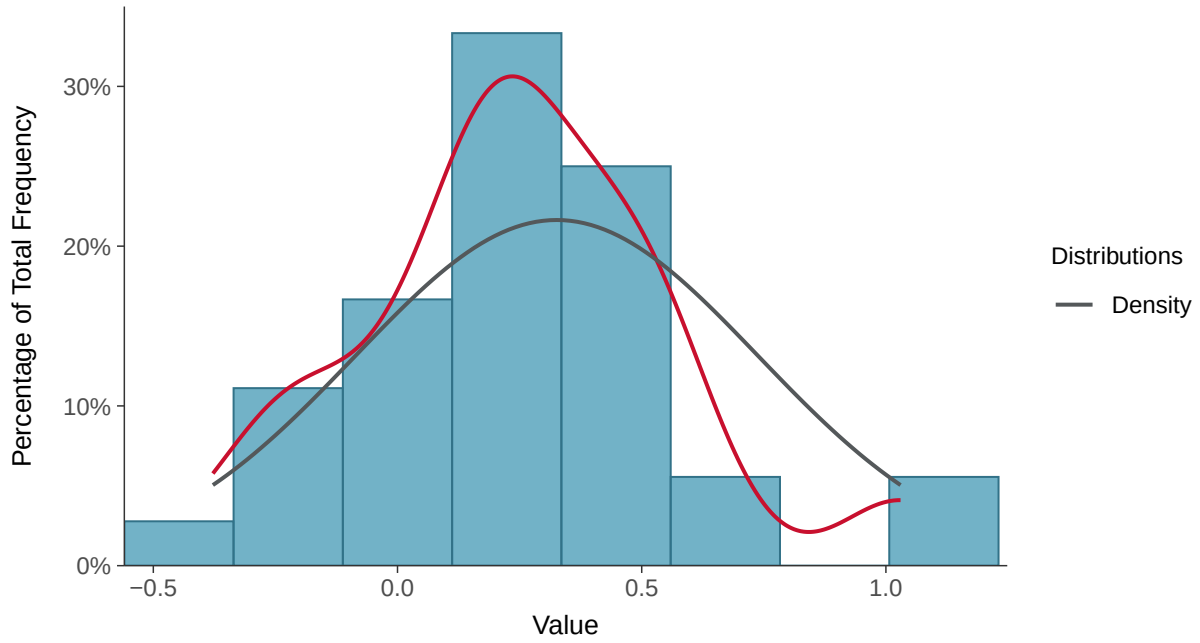
Scatter Plot

Radium-226, MW-1 (pCi/L)



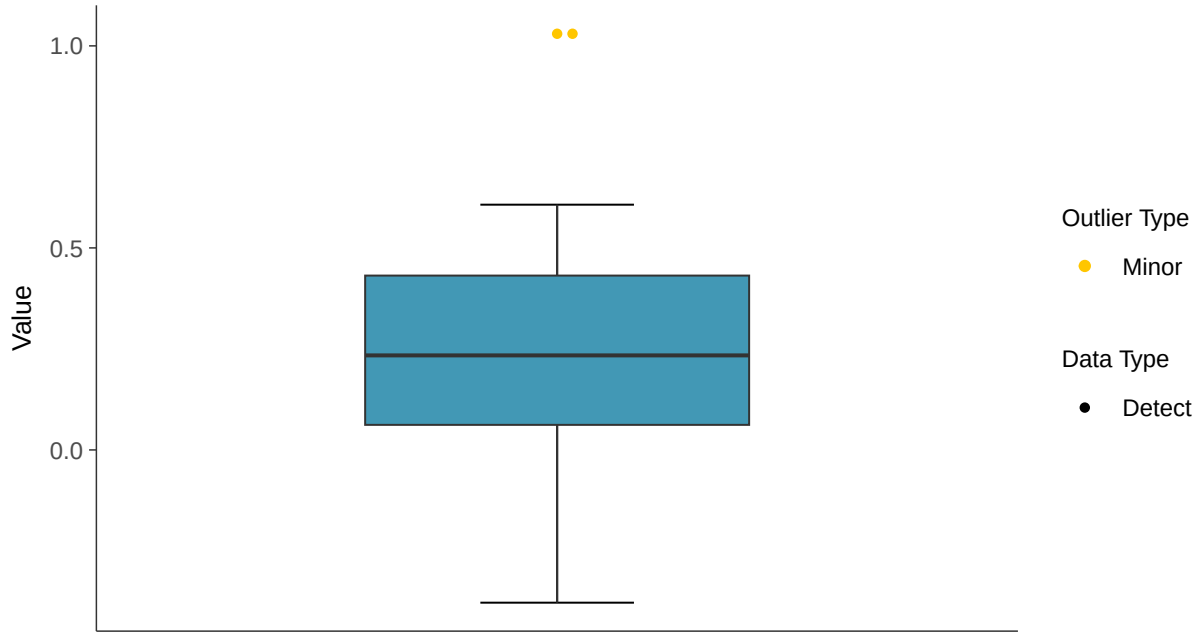
Histogram

Radium-226, MW-1 (pCi/L)



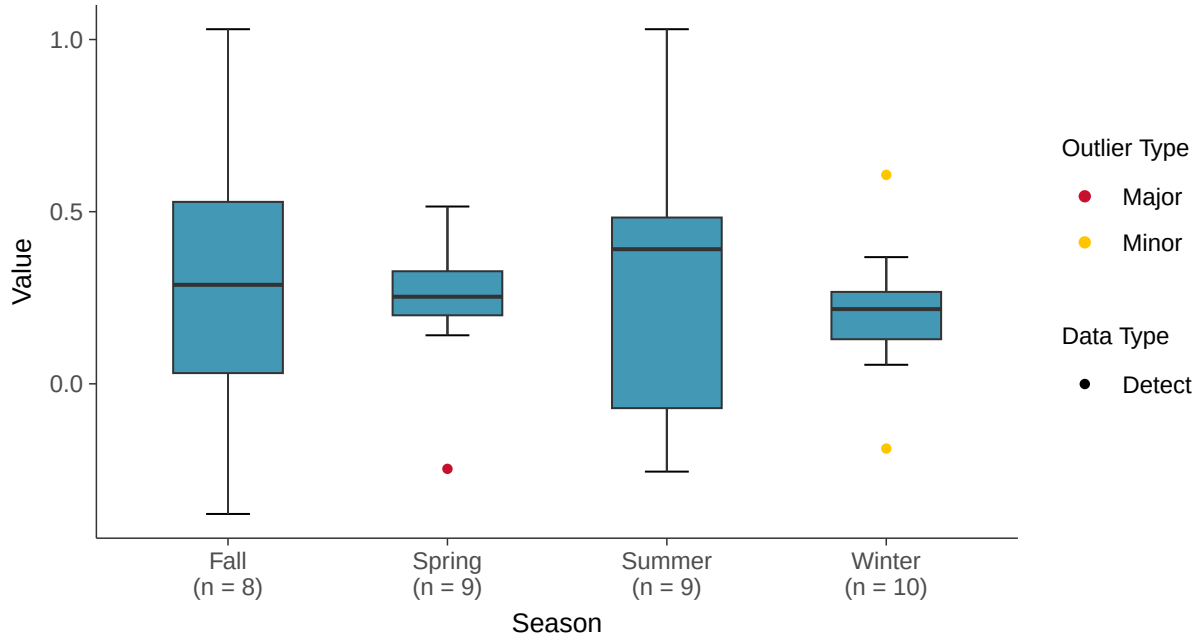
Boxplot

Radium-226, MW-1 (pCi/L)



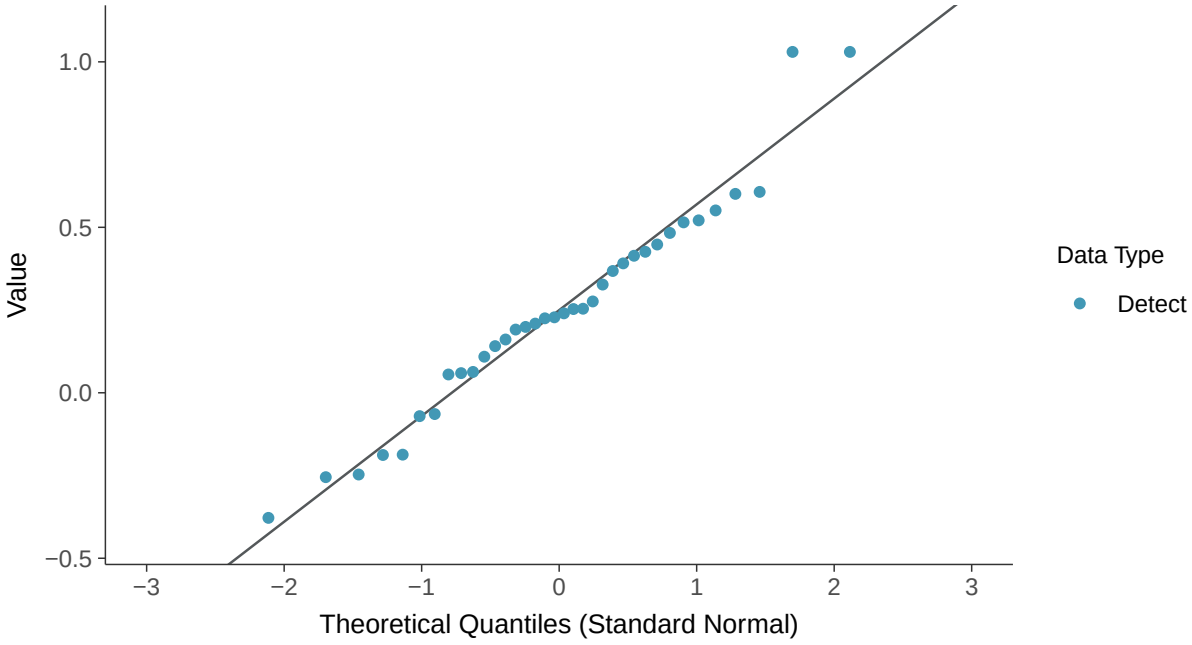
Boxplot by Season

Radium-226, MW-1 (pCi/L)



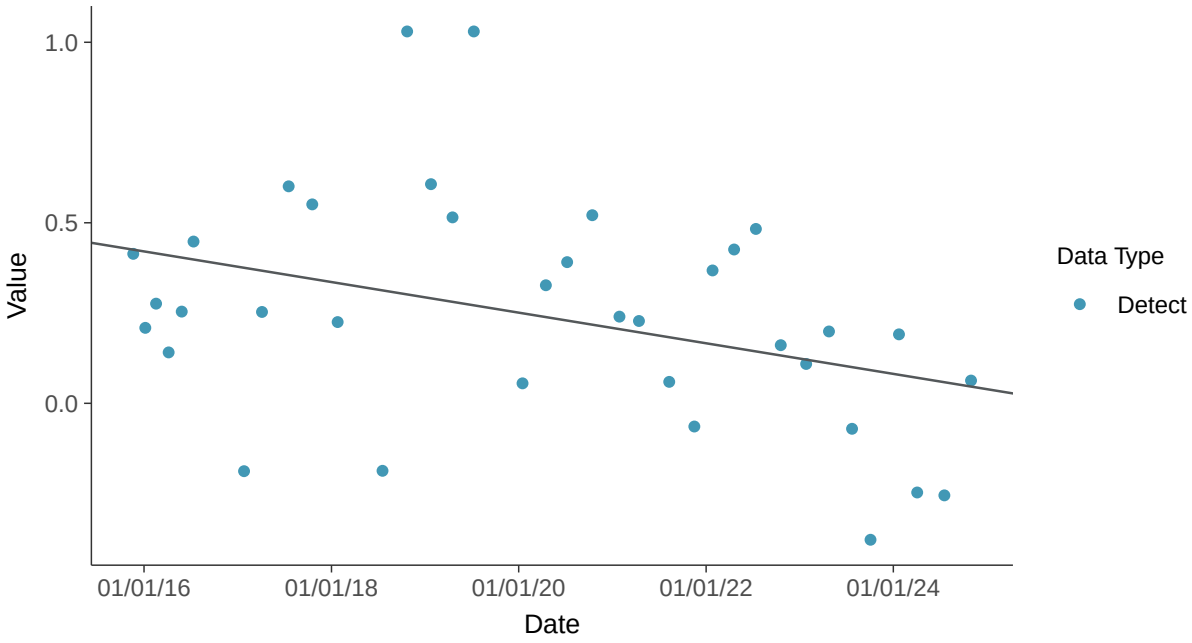
Normal Q-Q plot

Radium-226, MW-1 (pCi/L)



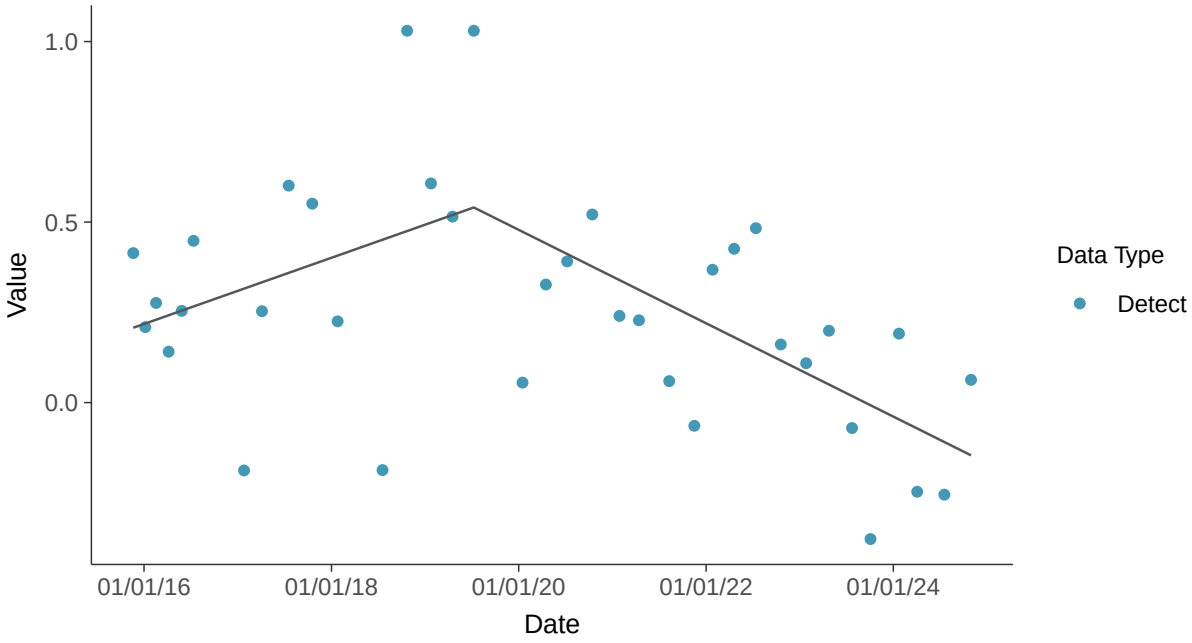
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-1 (pCi/L)



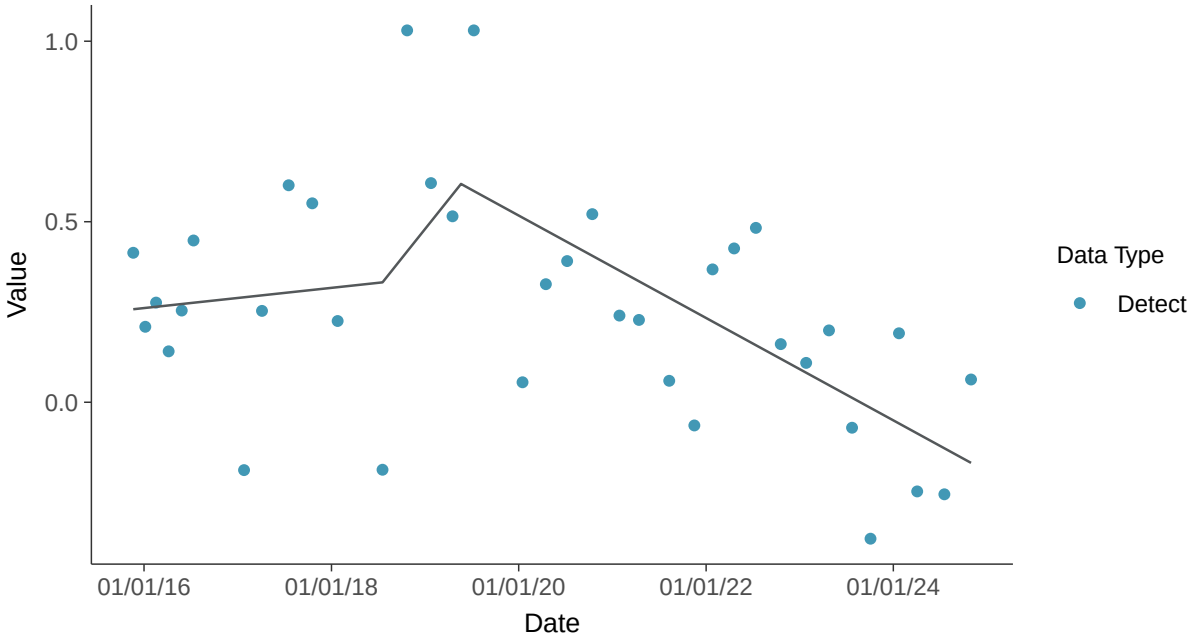
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-1 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-1 (pCi/L)

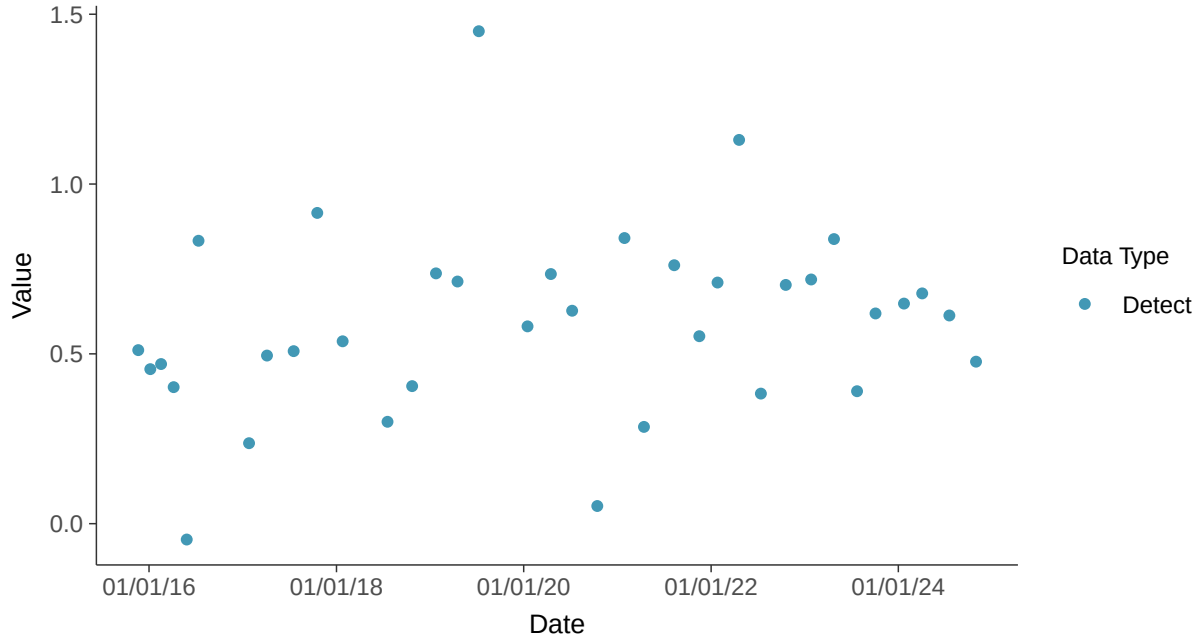


App. IV: Radium-228, MW-1

ID: 01_03_120

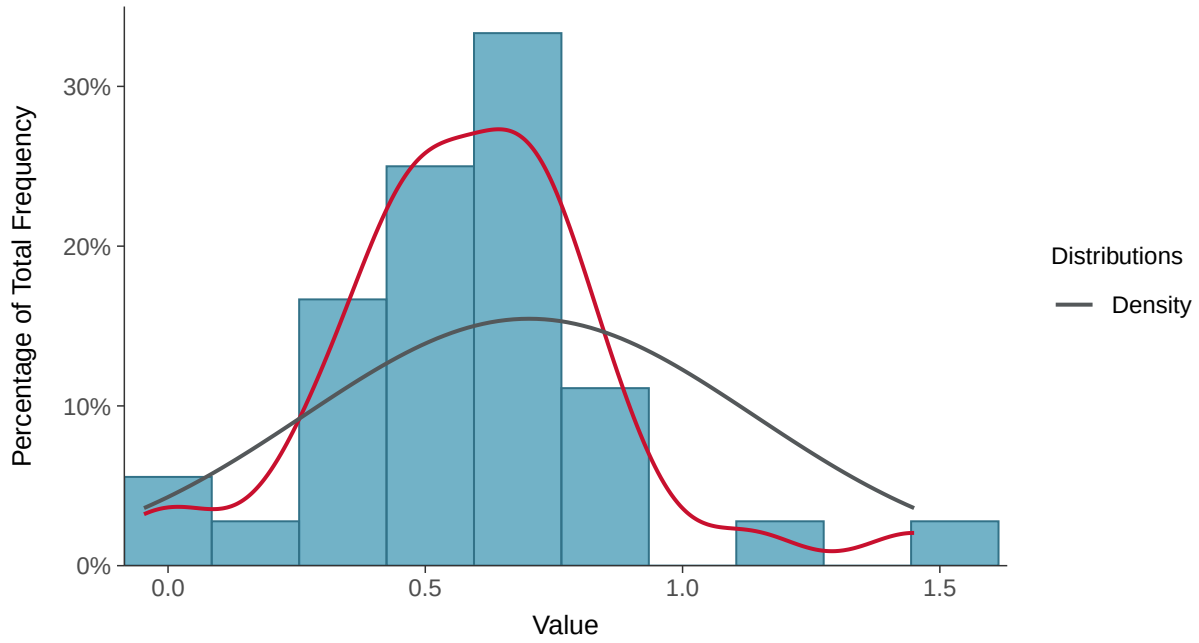
Scatter Plot

Radium-228, MW-1 (pCi/L)



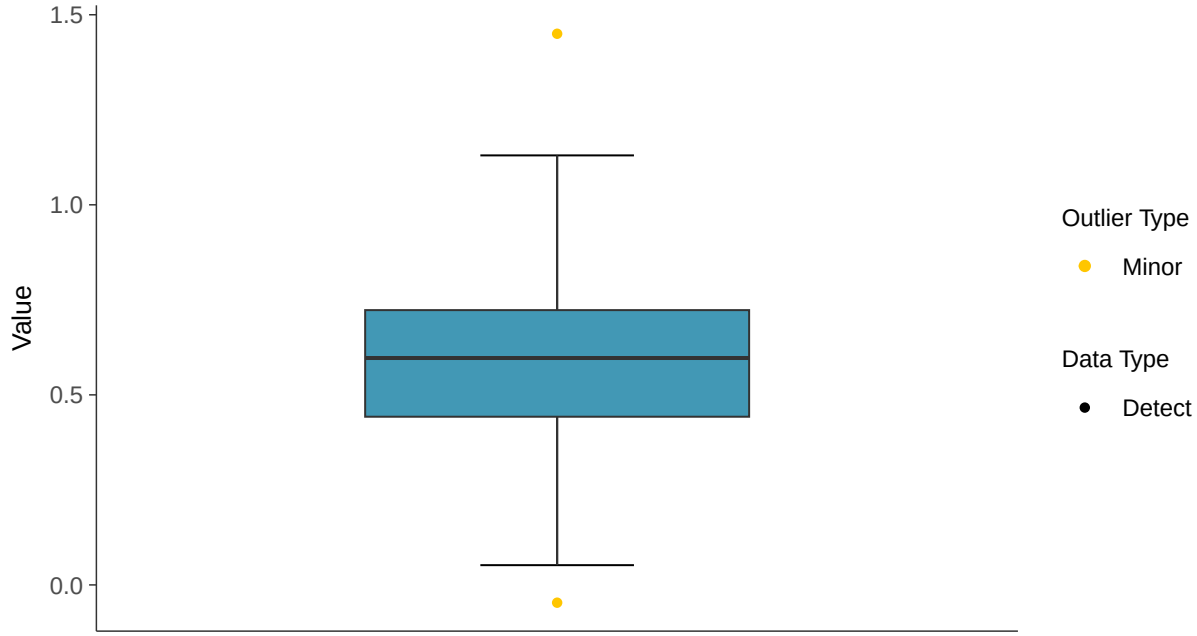
Histogram

Radium-228, MW-1 (pCi/L)



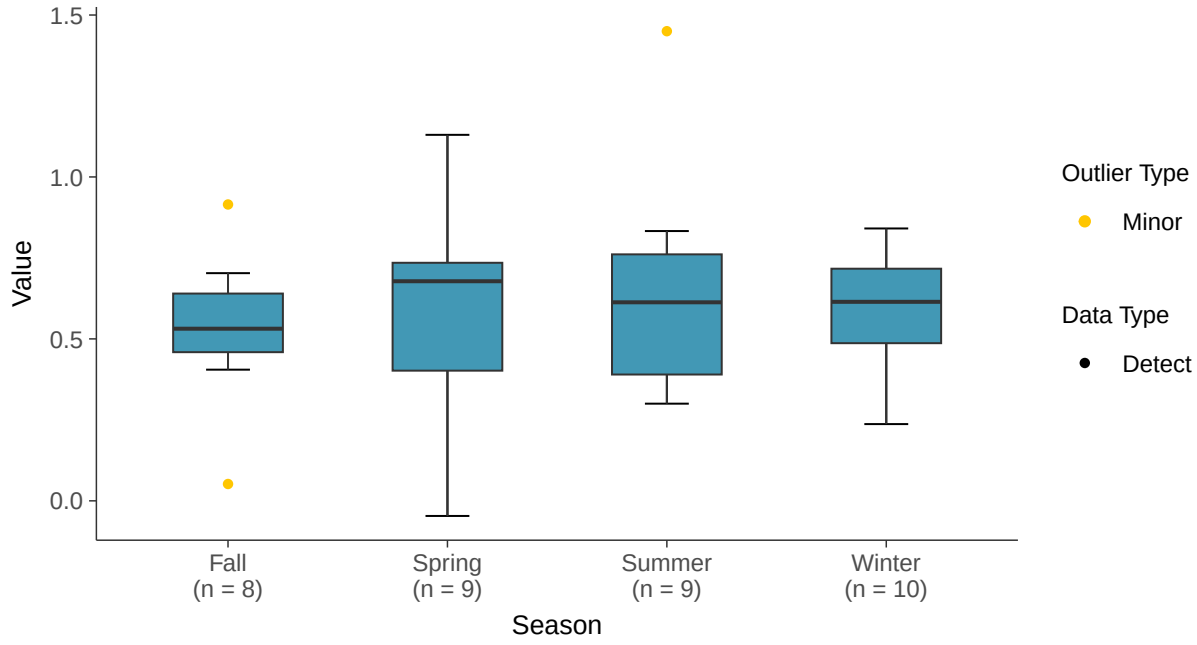
Boxplot

Radium-228, MW-1 (pCi/L)



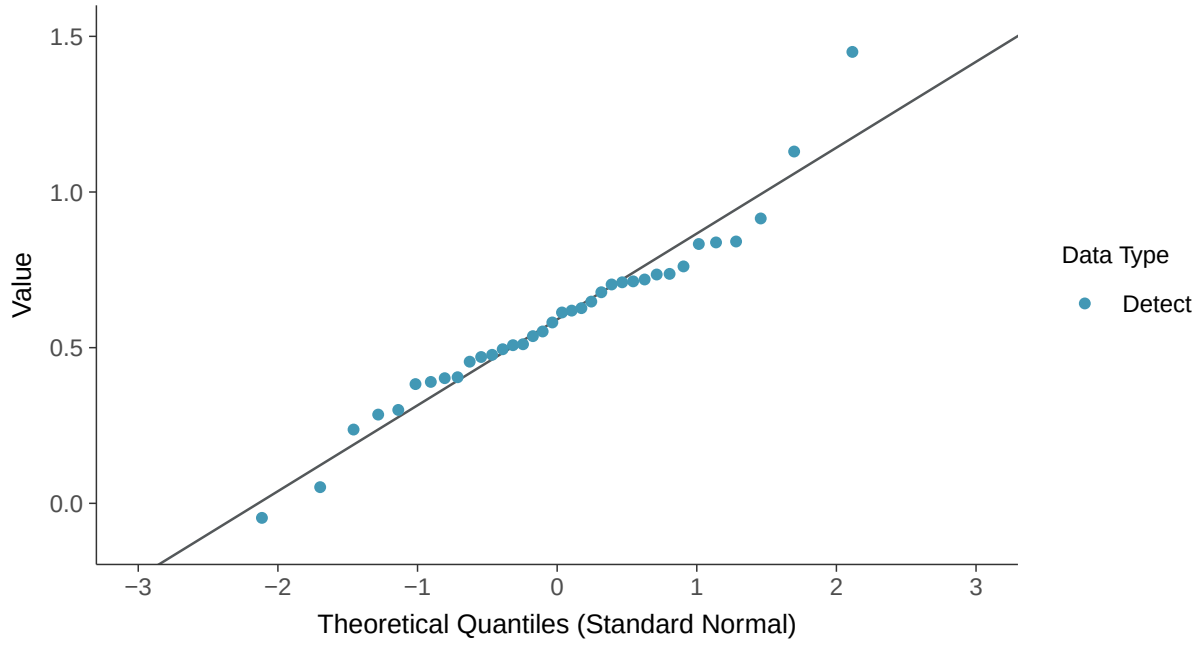
Boxplot by Season

Radium-228, MW-1 (pCi/L)



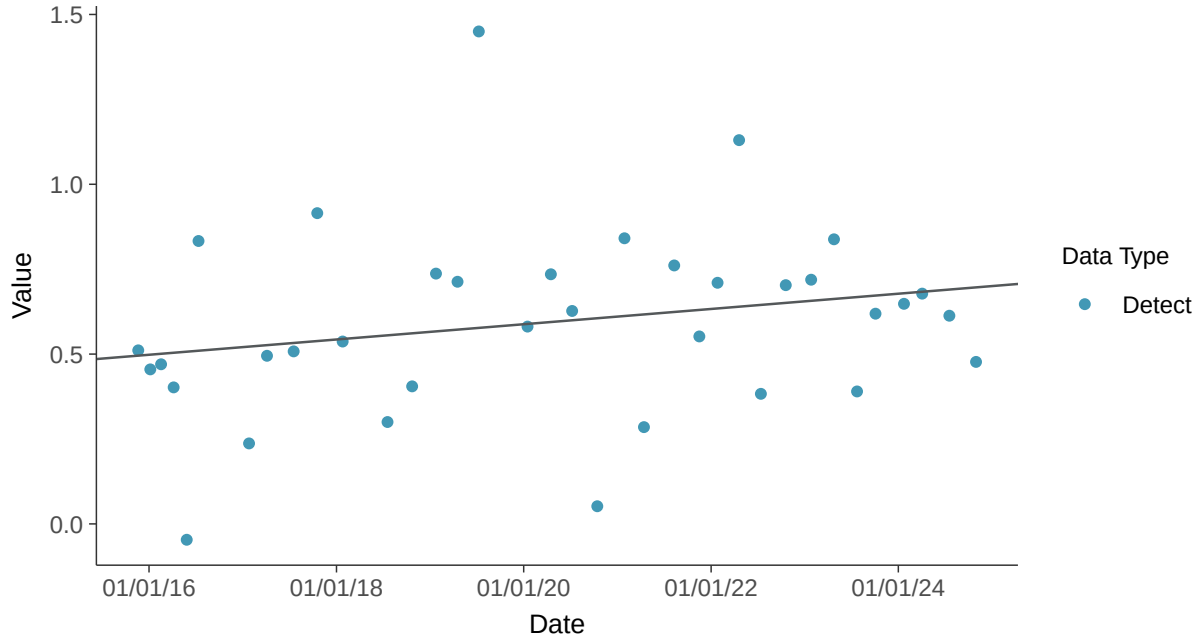
Normal Q-Q plot

Radium-228, MW-1 (pCi/L)



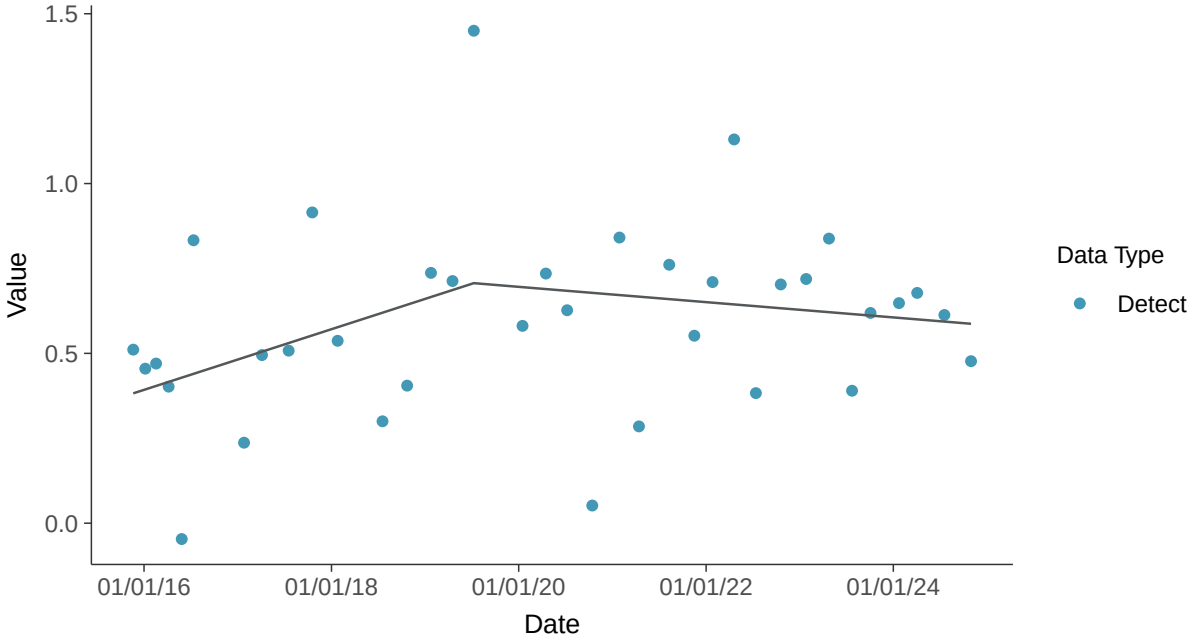
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-1 (pCi/L)



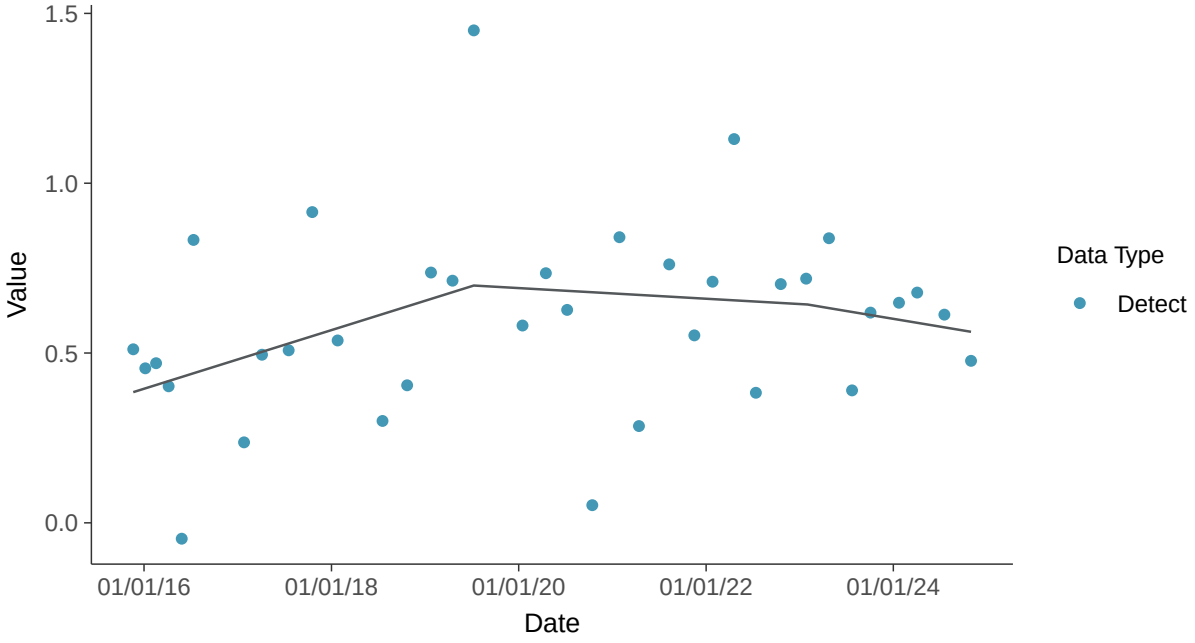
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-1 (pCi/L)



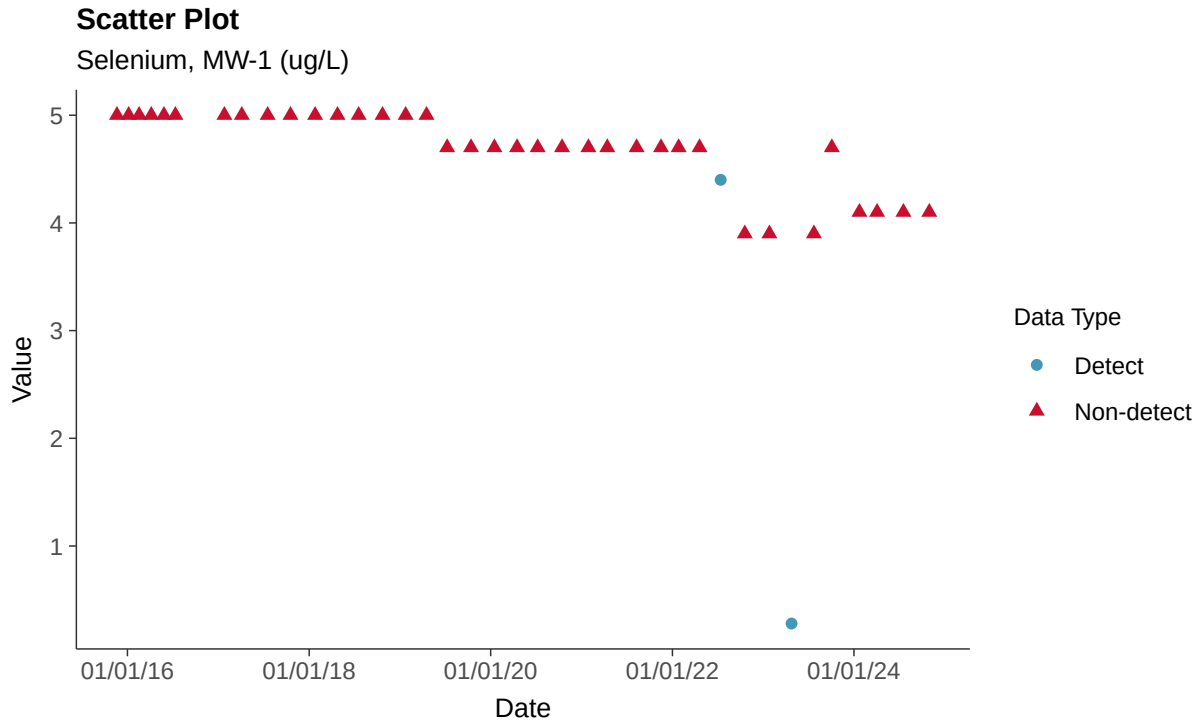
Trend Regression: Piecewise Linear-Linear-Linear

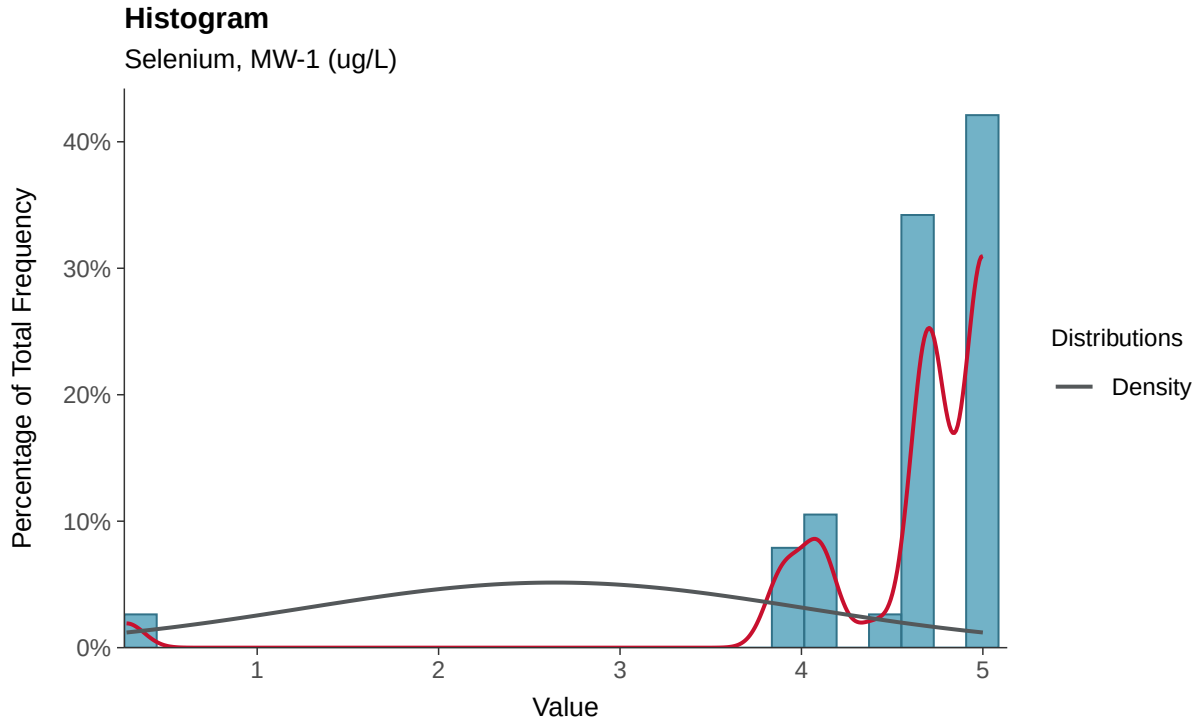
Radium-228, MW-1 (pCi/L)



App. IV: Selenium, MW-1

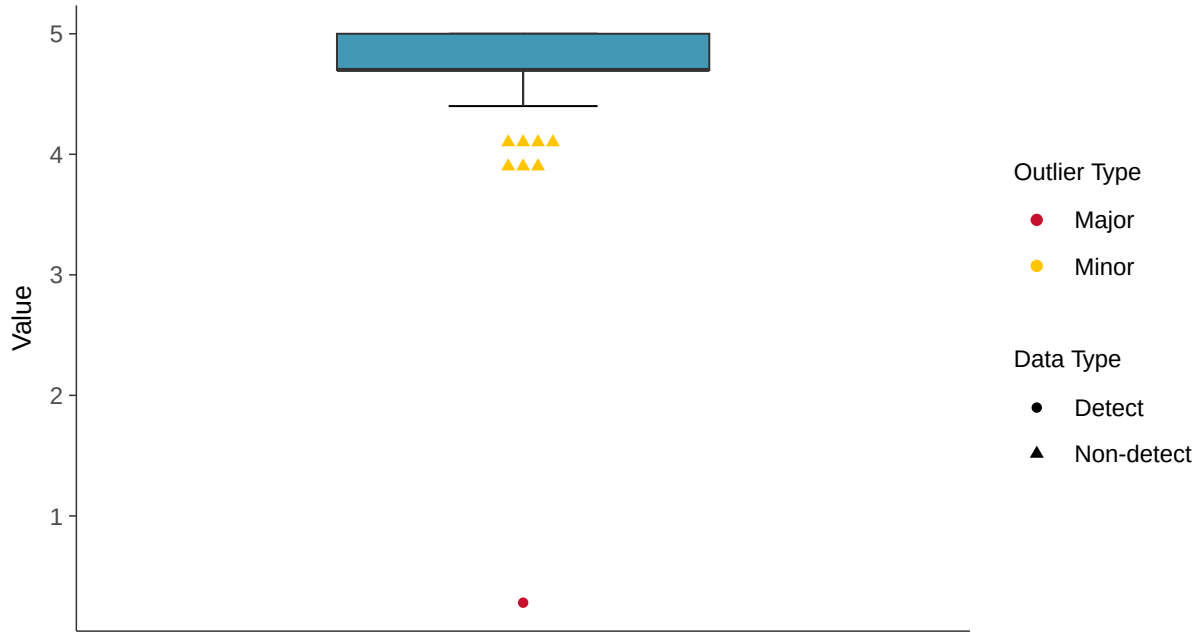
ID: 01_03_121





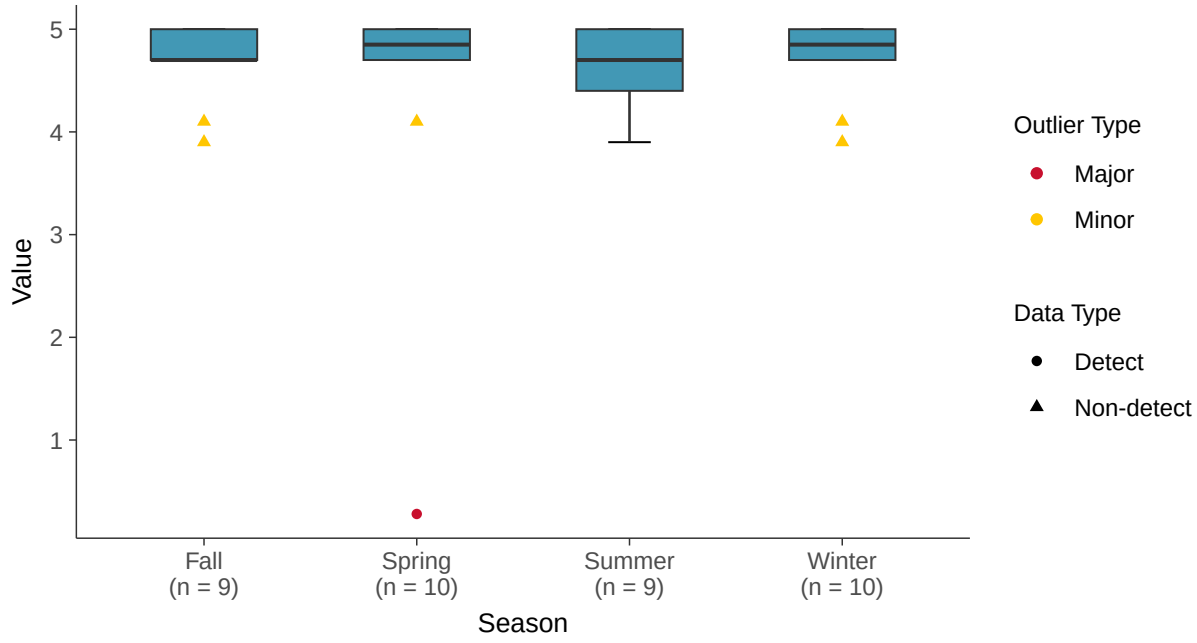
Boxplot

Selenium, MW-1 (ug/L)



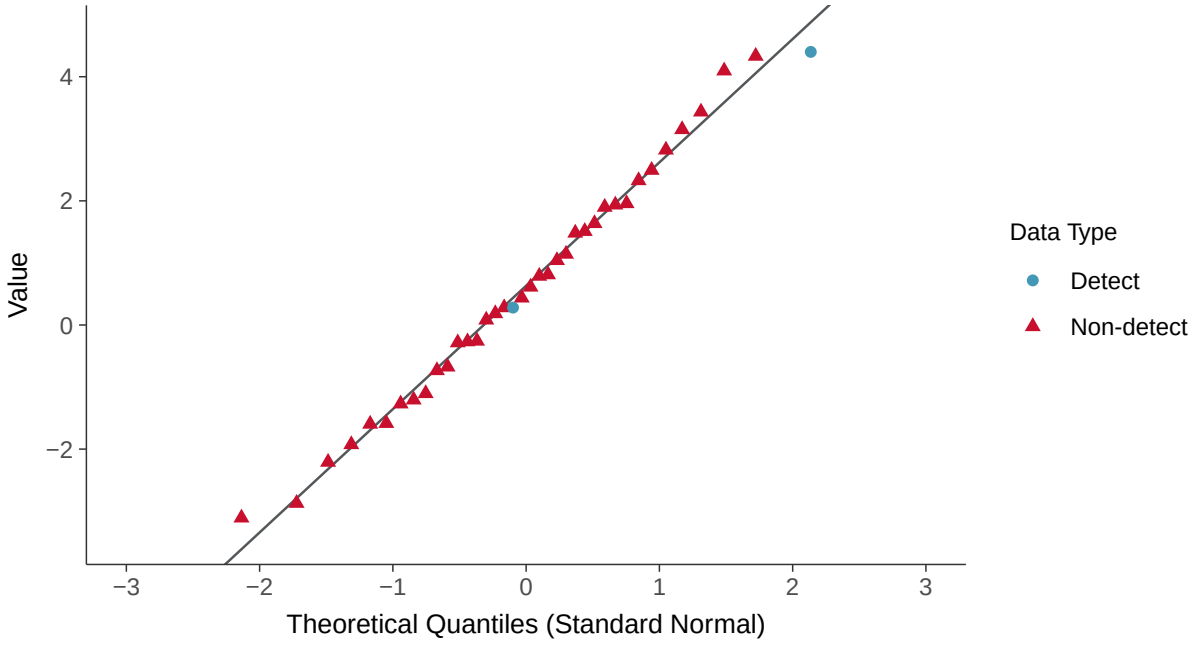
Boxplot by Season

Selenium, MW-1 (ug/L)



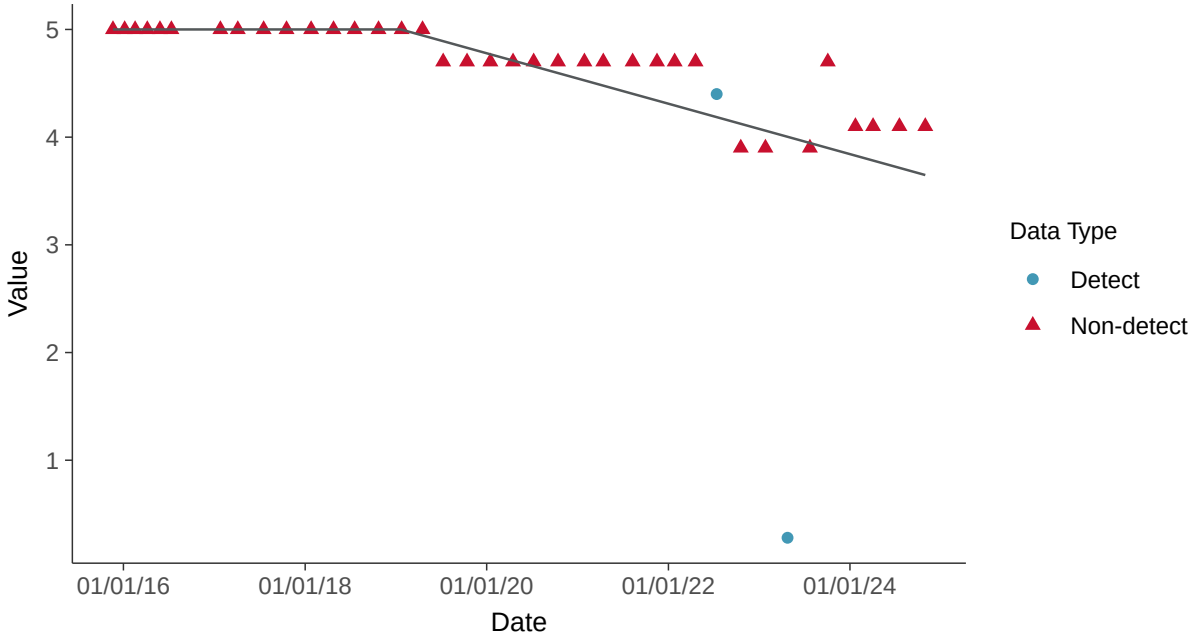
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-1 (ug/L)



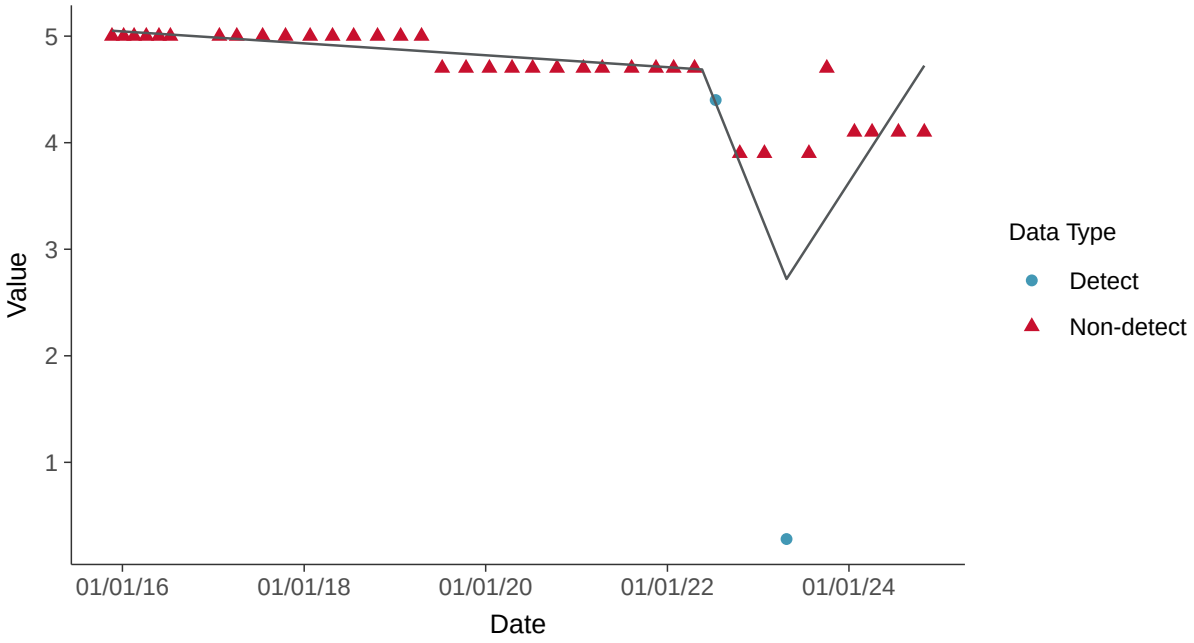
Trend Regression: Piecewise Linear-Linear

Selenium, MW-1 (ug/L)



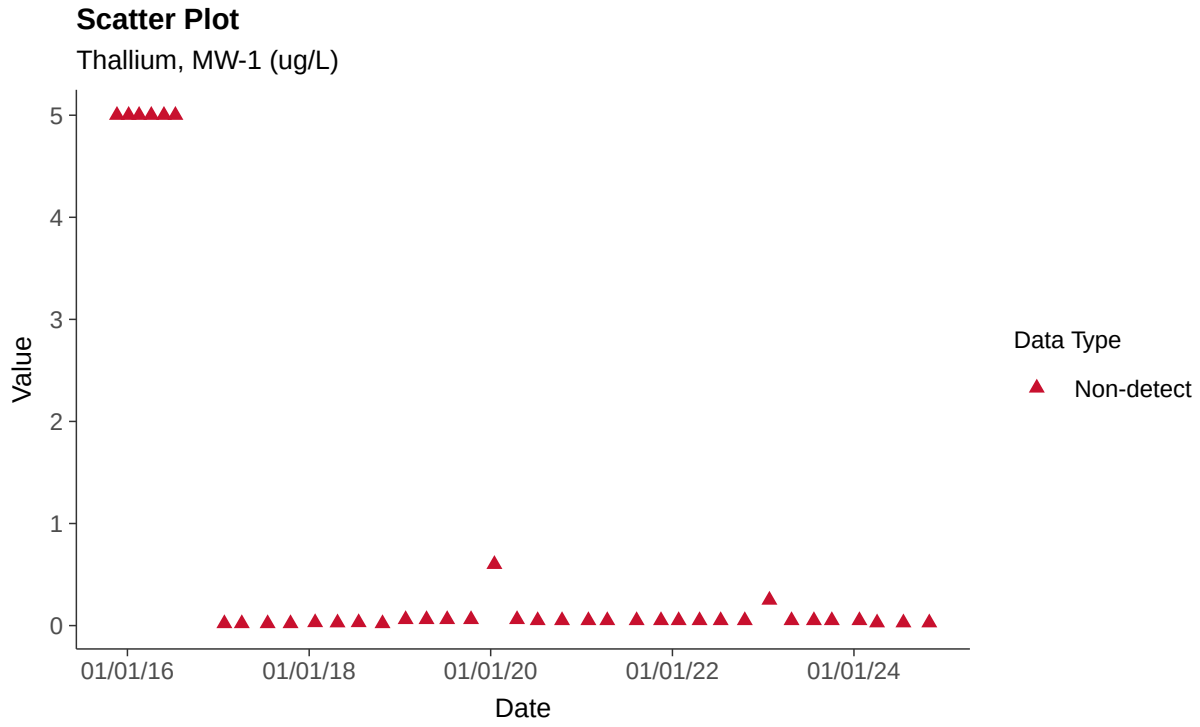
Trend Regression: Piecewise Linear-Linear-Linear

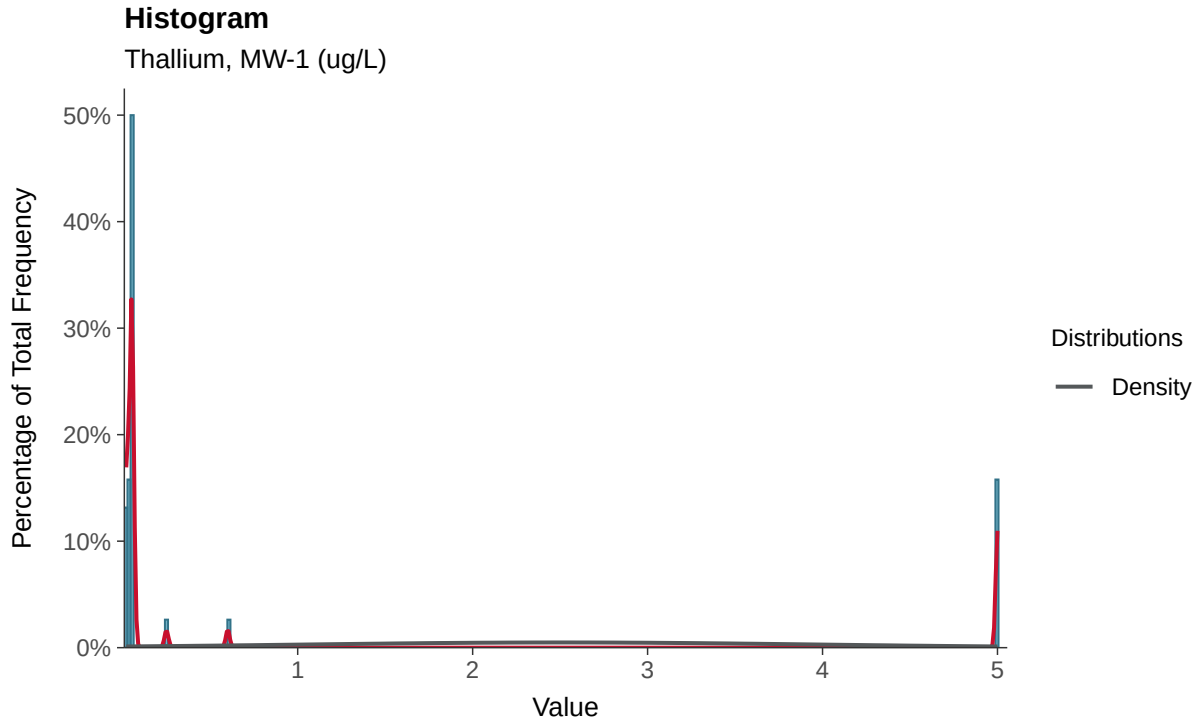
Selenium, MW-1 (ug/L)



App. IV: Thallium, MW-1

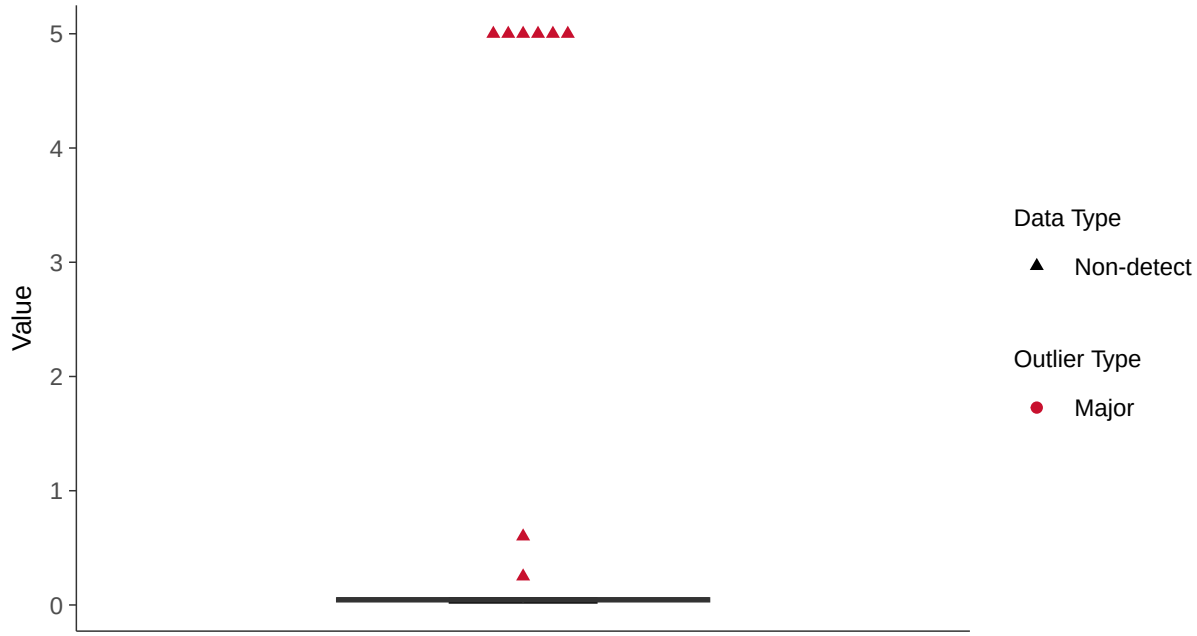
ID: 01_03_124





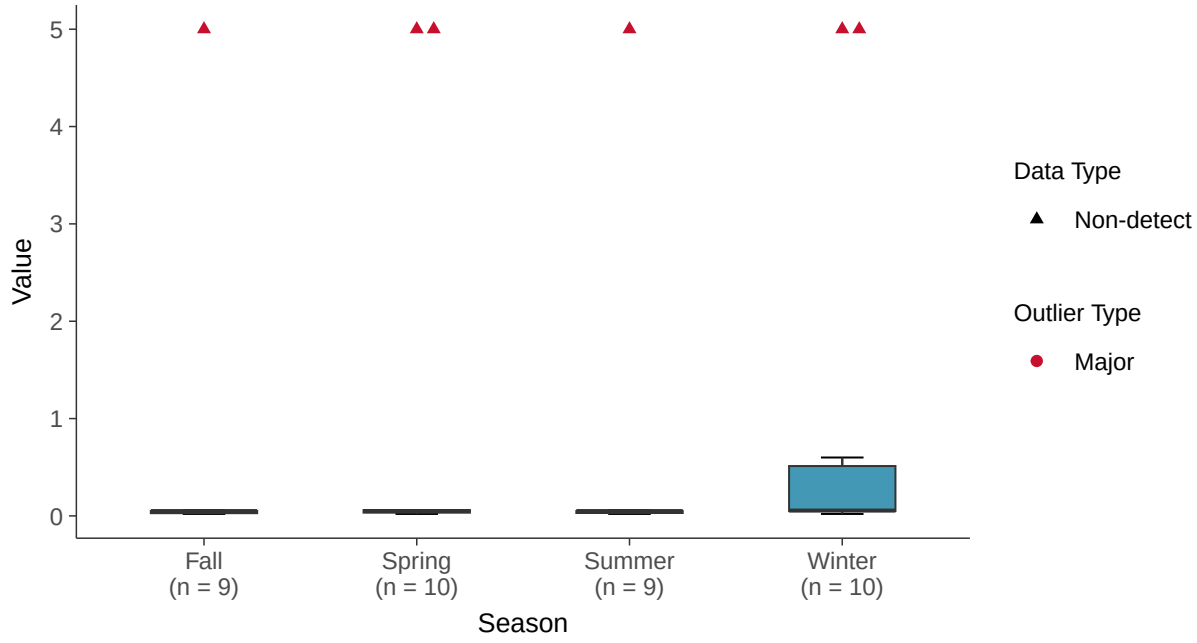
Boxplot

Thallium, MW-1 (ug/L)



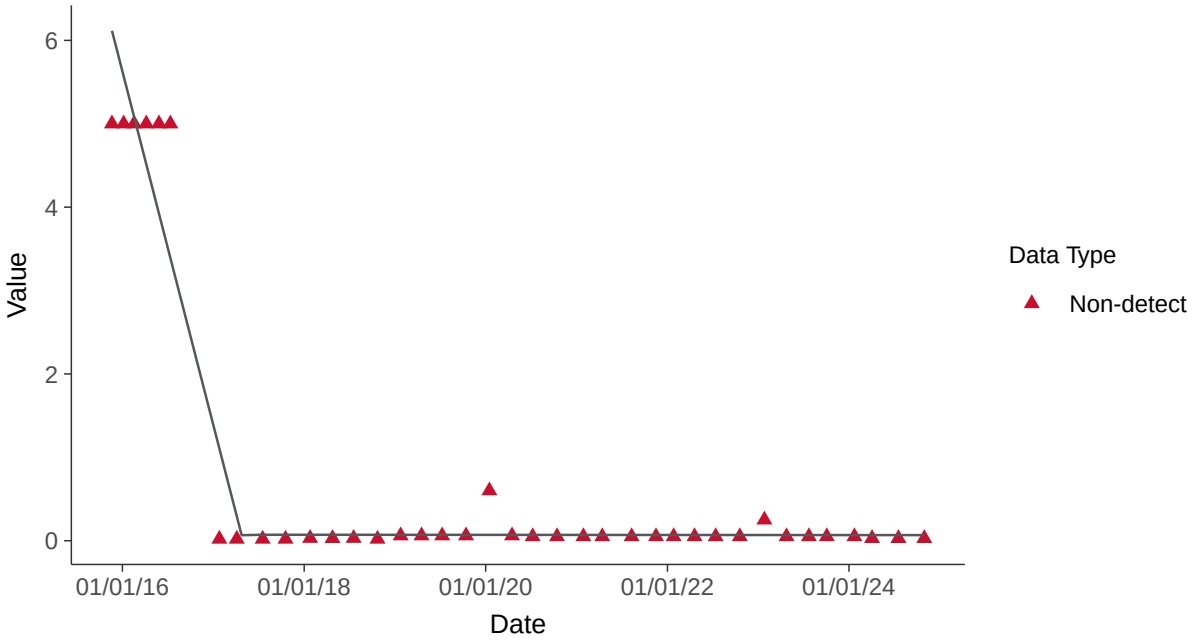
Boxplot by Season

Thallium, MW-1 (ug/L)



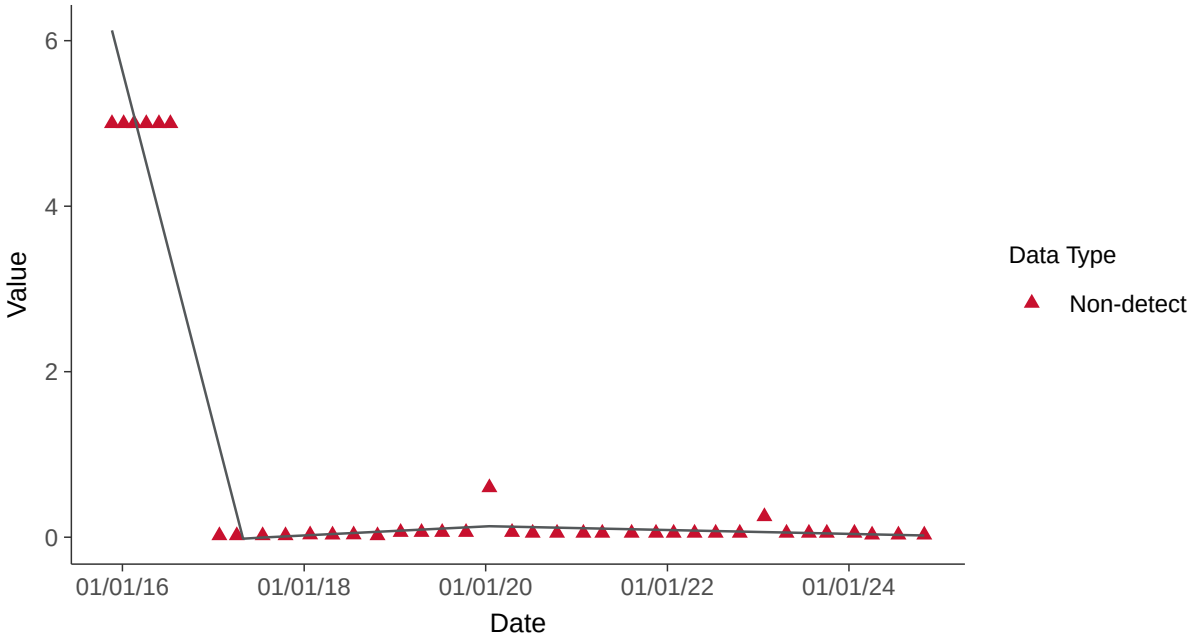
Trend Regression: Piecewise Linear-Linear

Thallium, MW-1 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-1 (ug/L)

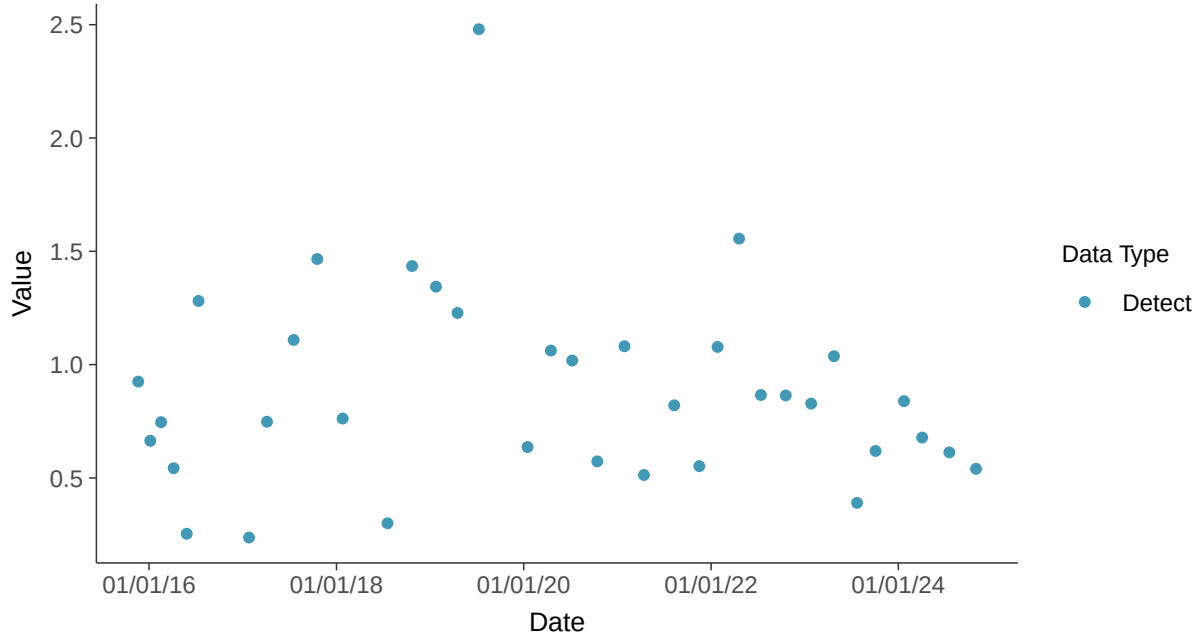


App. IV: Total Radium, MW-1

ID: 01_03_126

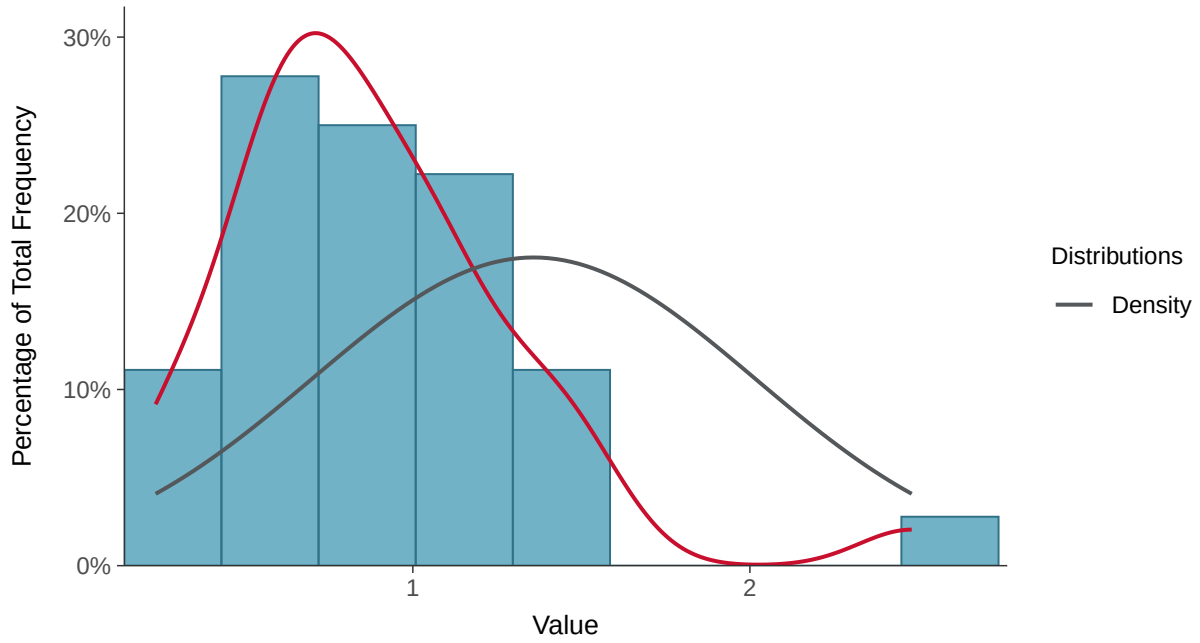
Scatter Plot

Total Radium, MW-1 (pCi/L)



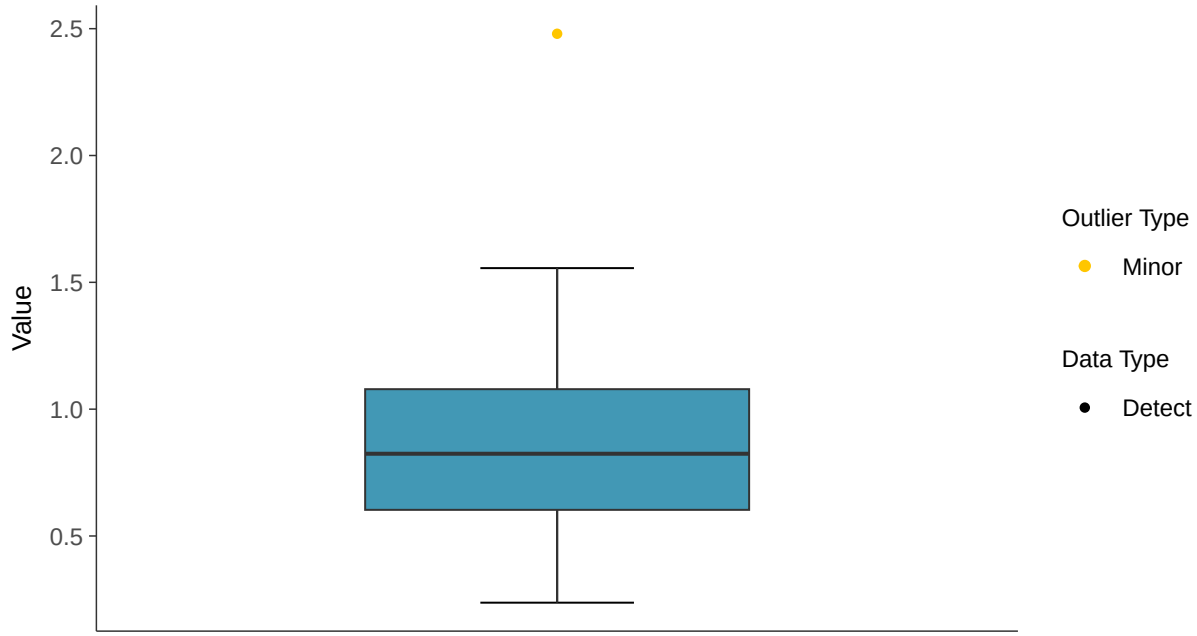
Histogram

Total Radium, MW-1 (pCi/L)



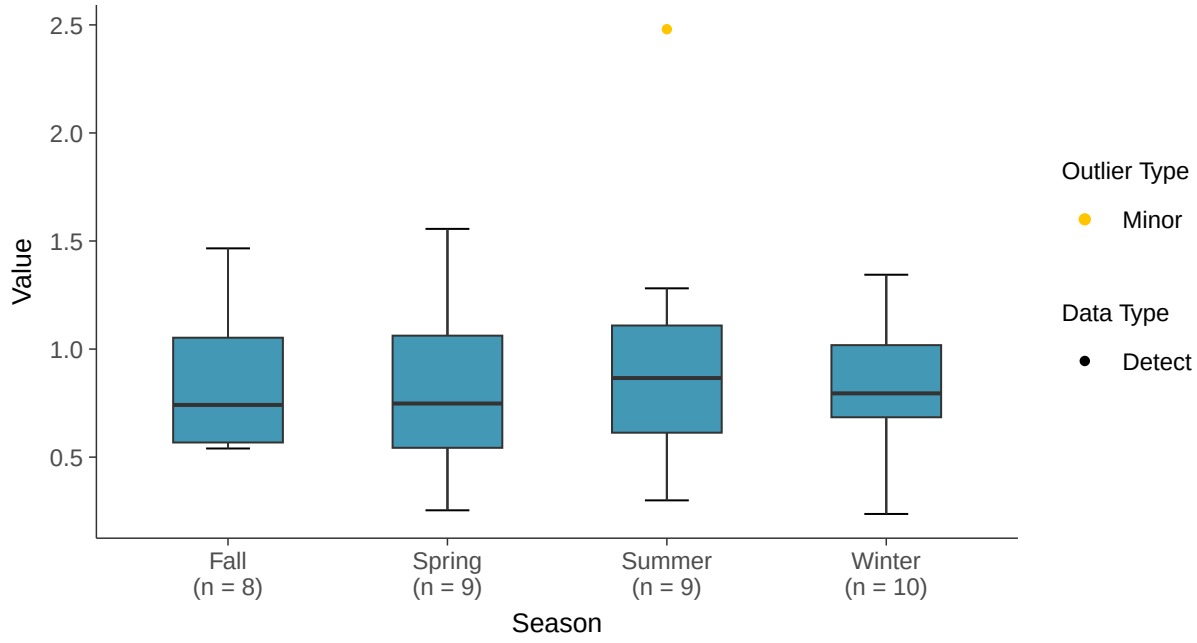
Boxplot

Total Radium, MW-1 (pCi/L)



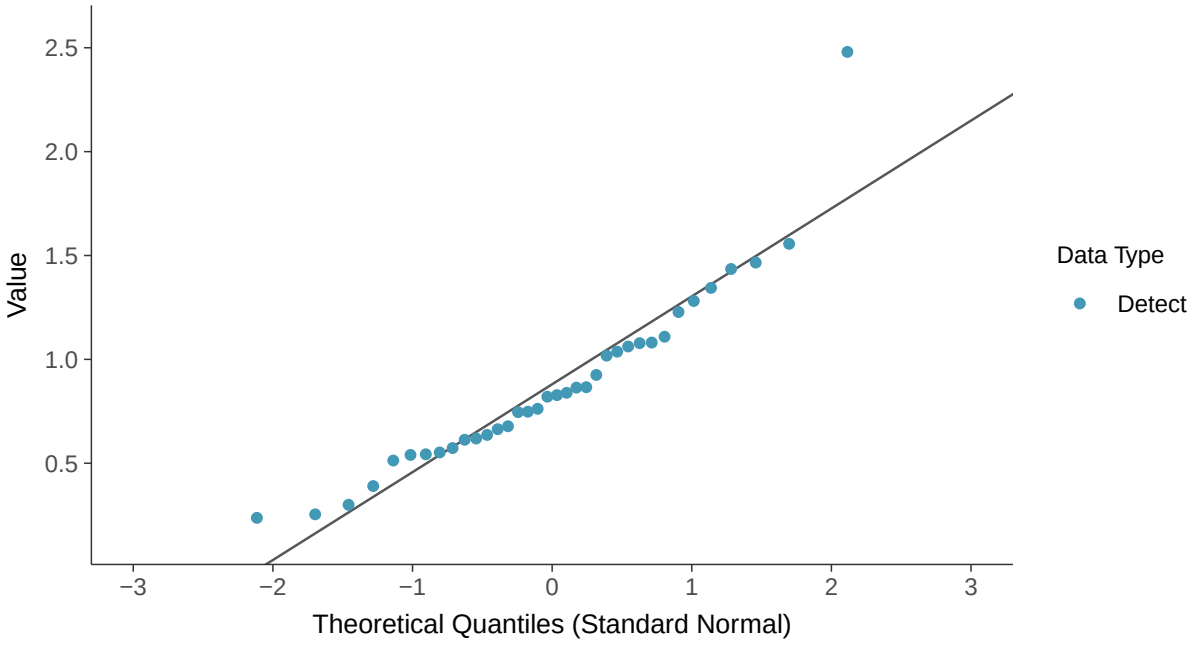
Boxplot by Season

Total Radium, MW-1 (pCi/L)



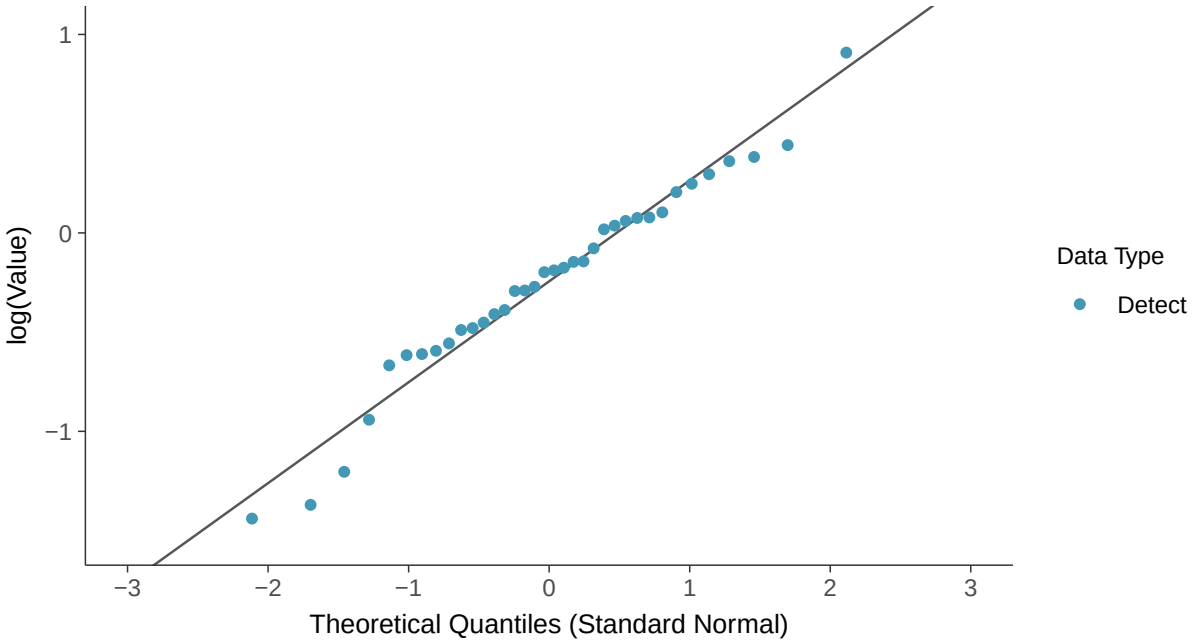
Normal Q-Q plot

Total Radium, MW-1 (pCi/L)



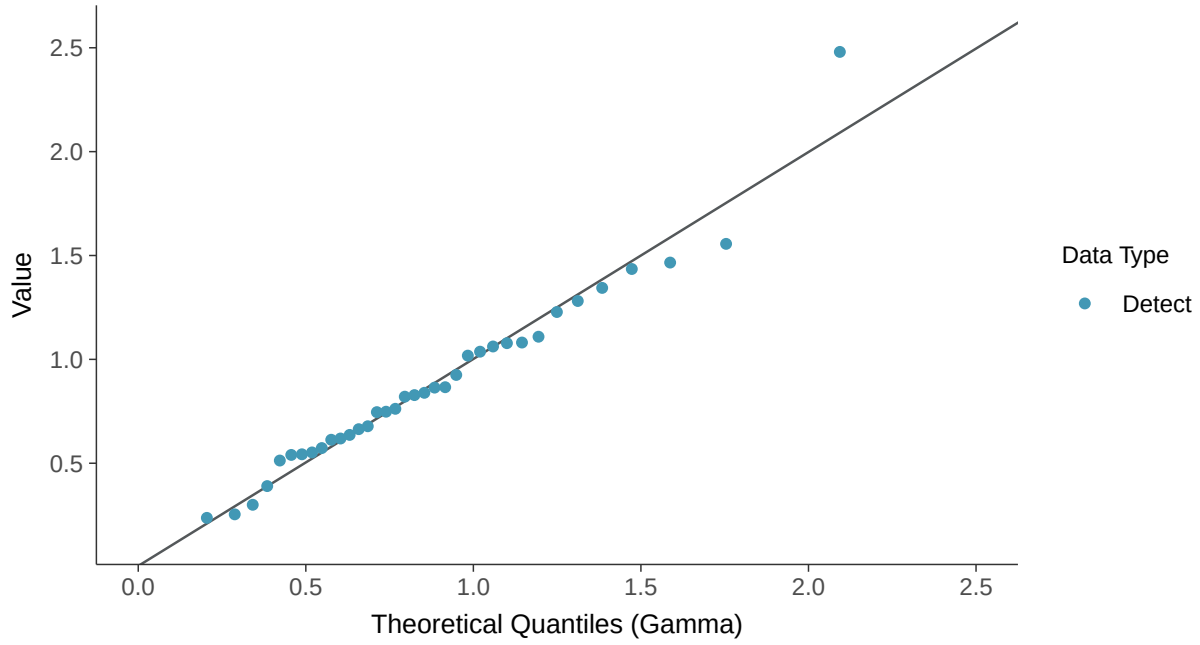
Lognormal Q-Q plot

Total Radium, MW-1 (pCi/L)



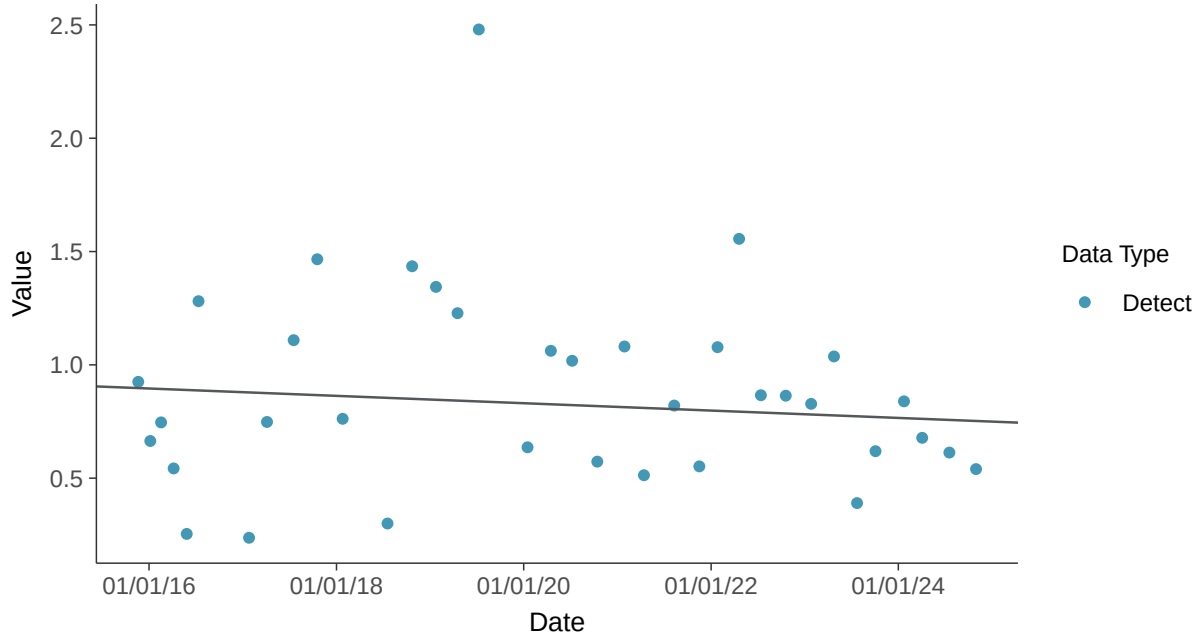
Gamma Q-Q plot

Total Radium, MW-1 (pCi/L)



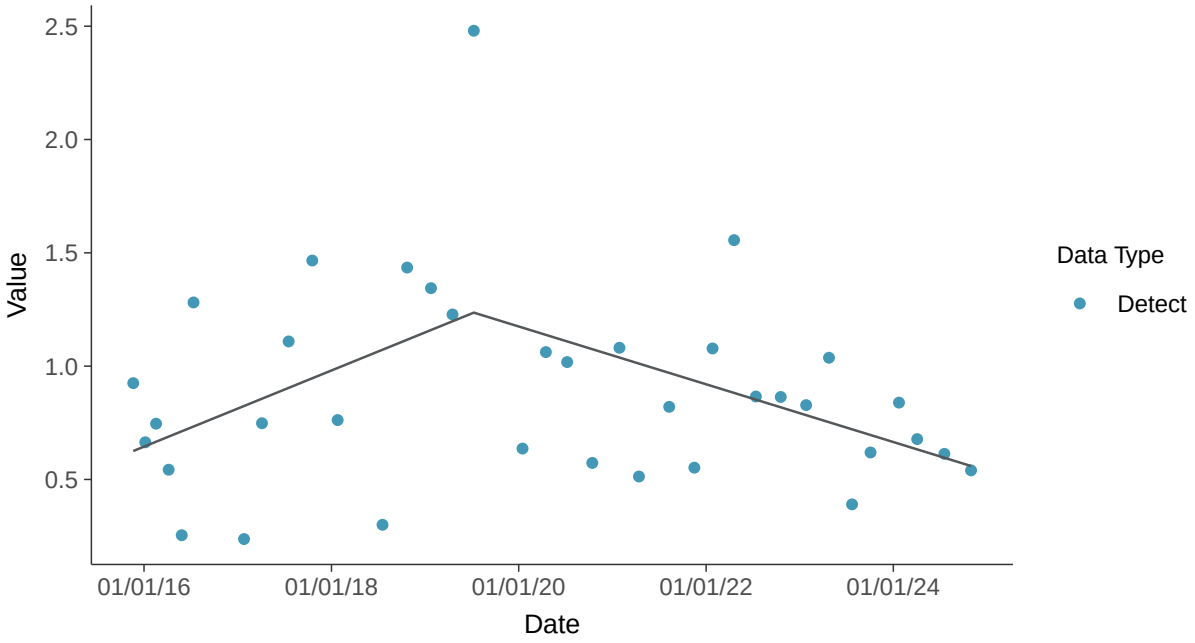
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-1 (pCi/L)



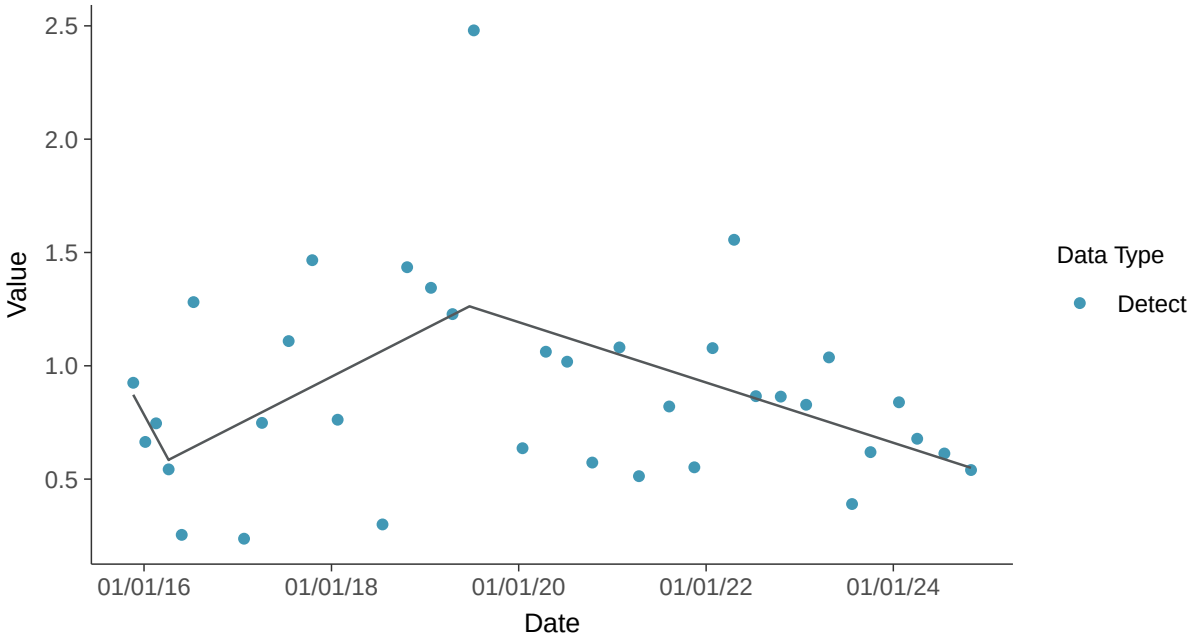
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-1 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, MW-1 (pCi/L)

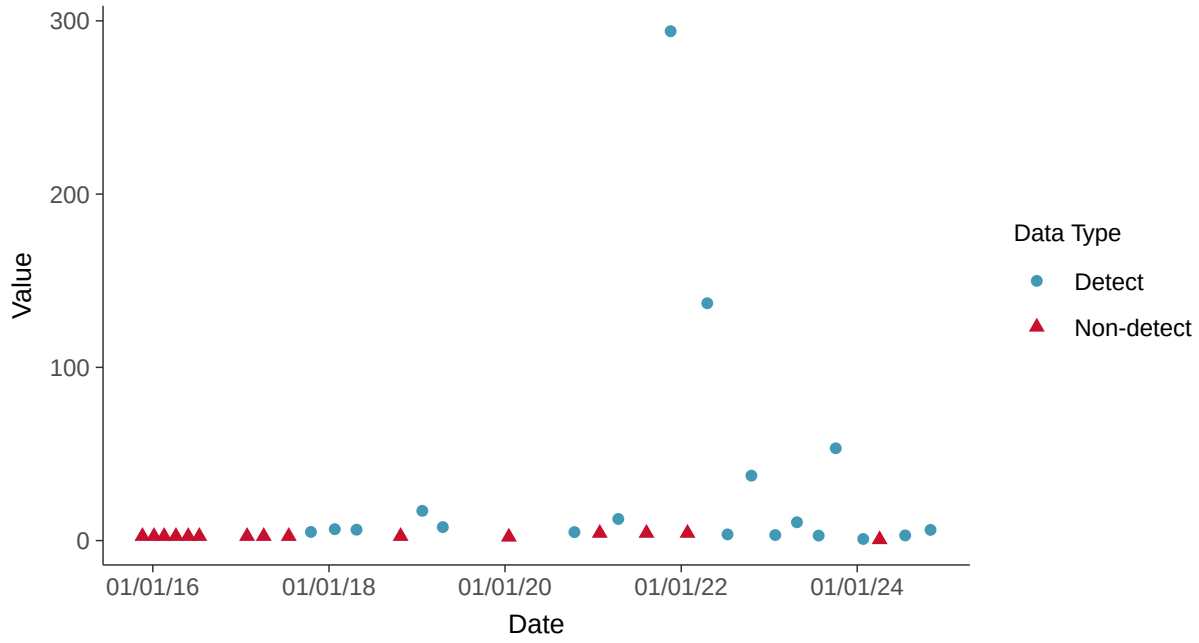


App. I Metals: Copper, MW-2

ID: 02_01_111

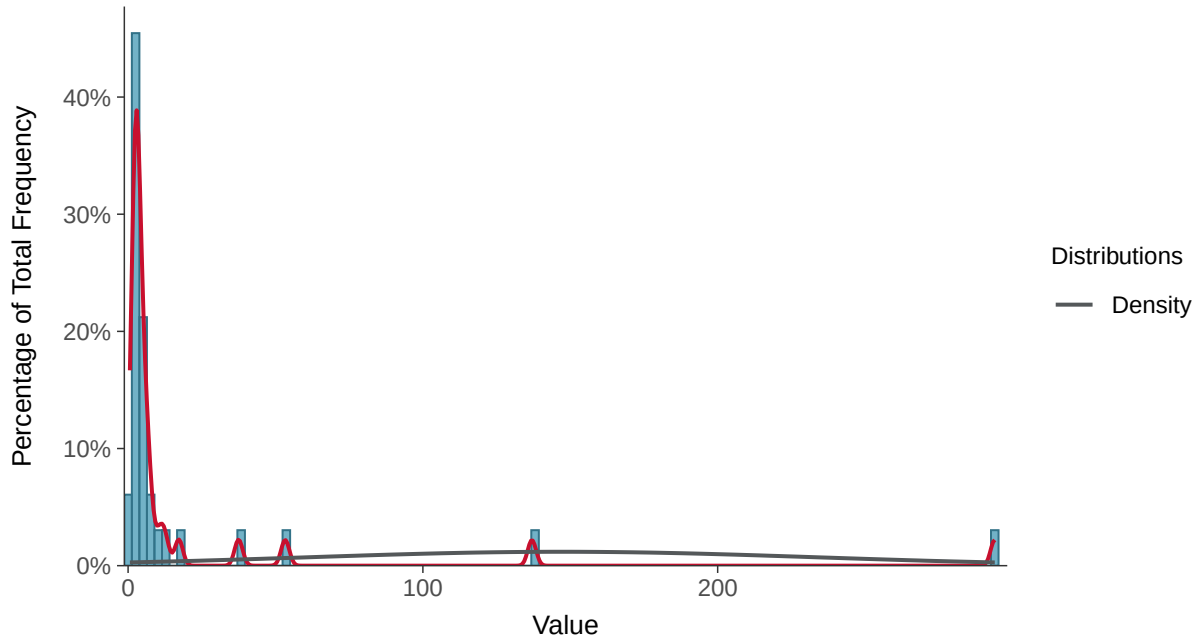
Scatter Plot

Copper, MW-2 (ug/L)



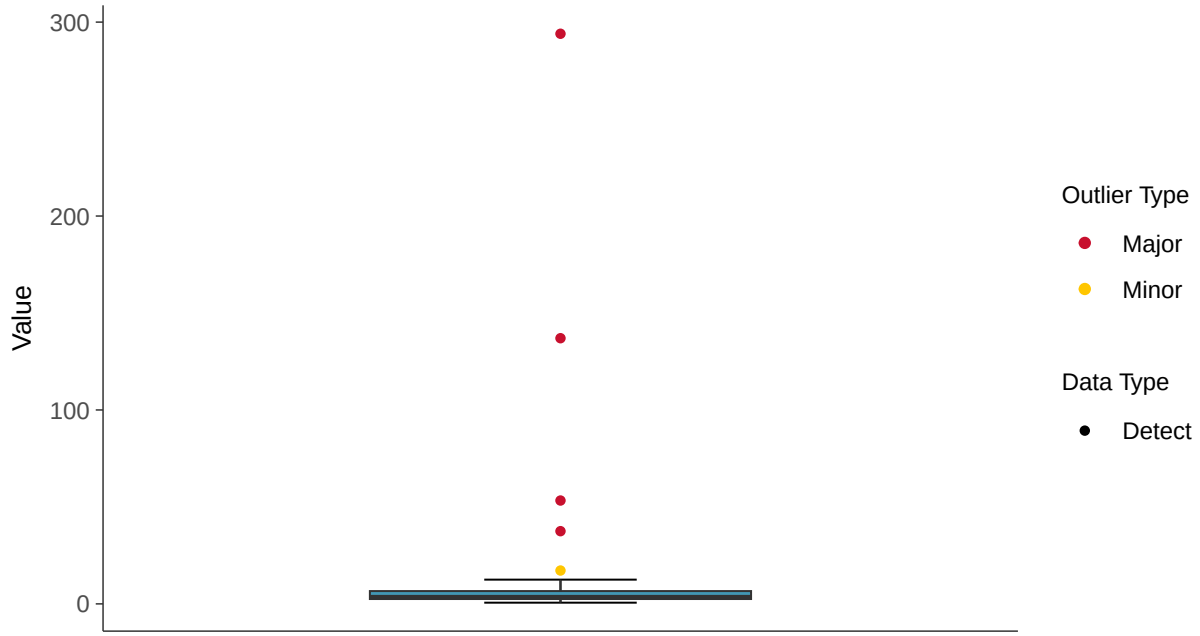
Histogram

Copper, MW-2 (ug/L)



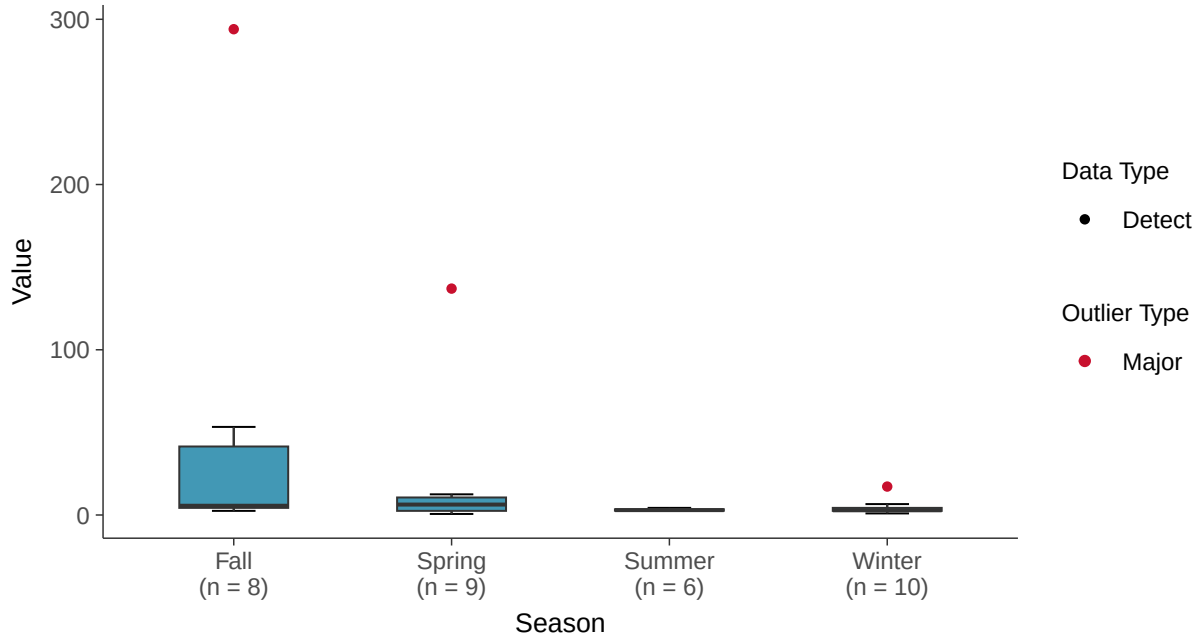
Boxplot

Copper, MW-2 (ug/L)



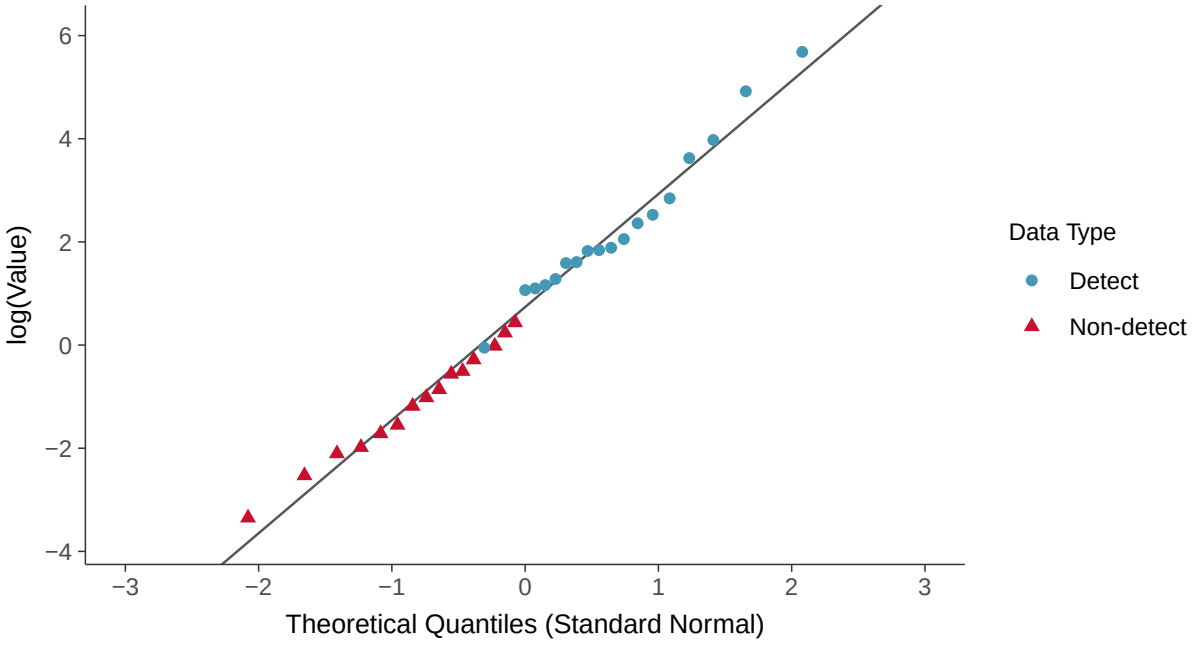
Boxplot by Season

Copper, MW-2 (ug/L)



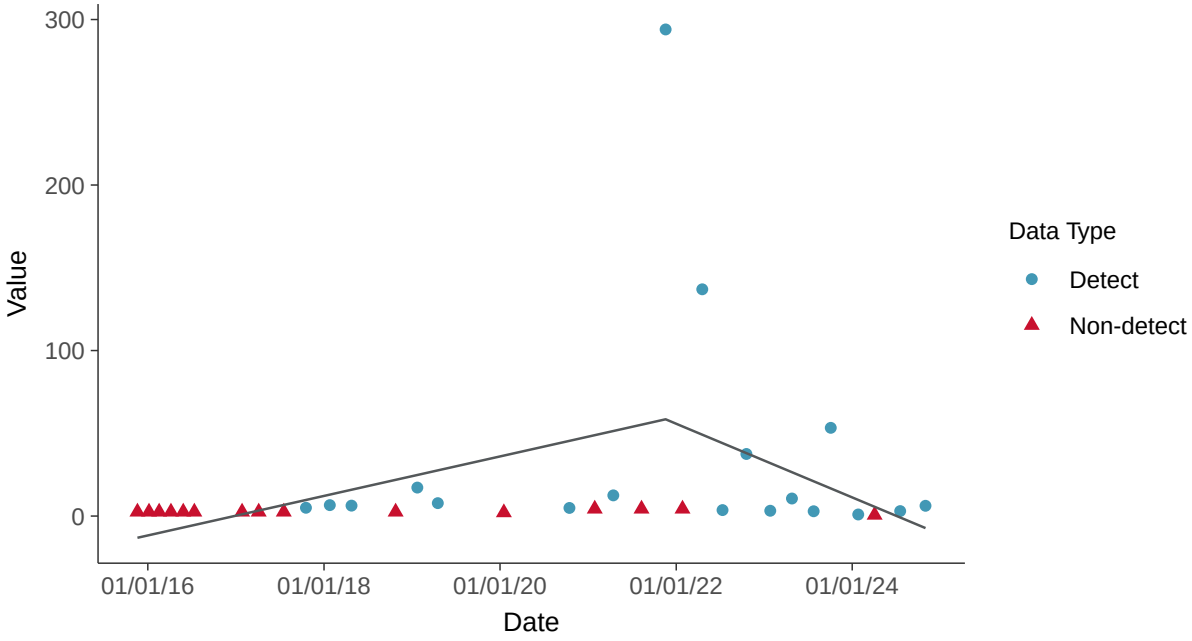
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-2 (ug/L)



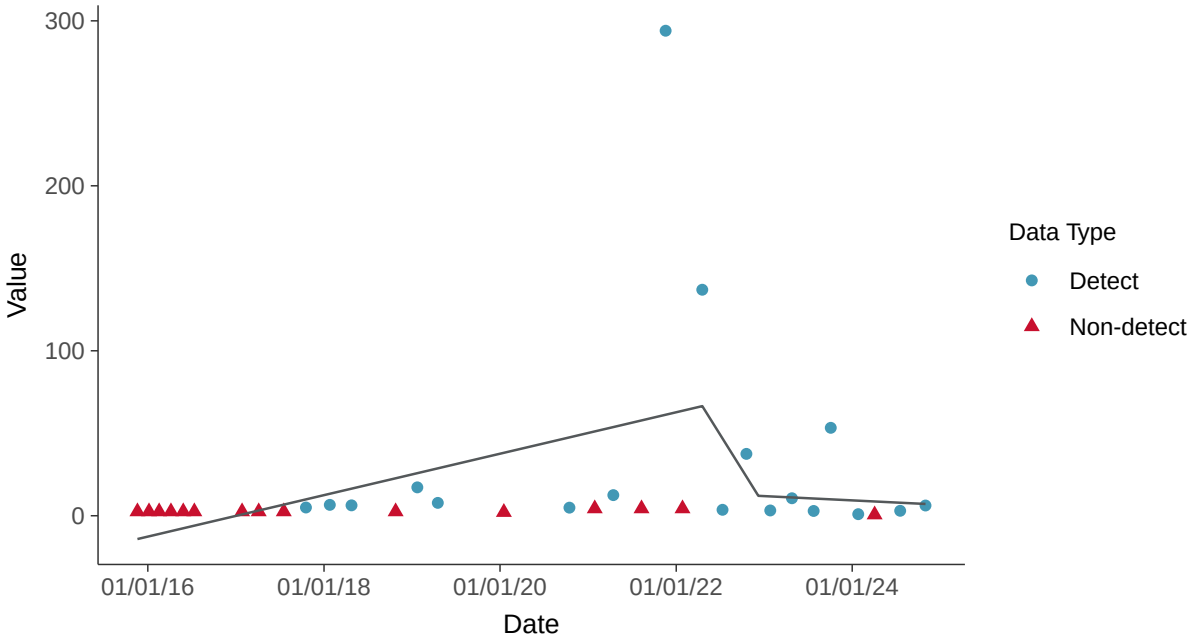
Trend Regression: Piecewise Linear-Linear

Copper, MW-2 (ug/L)



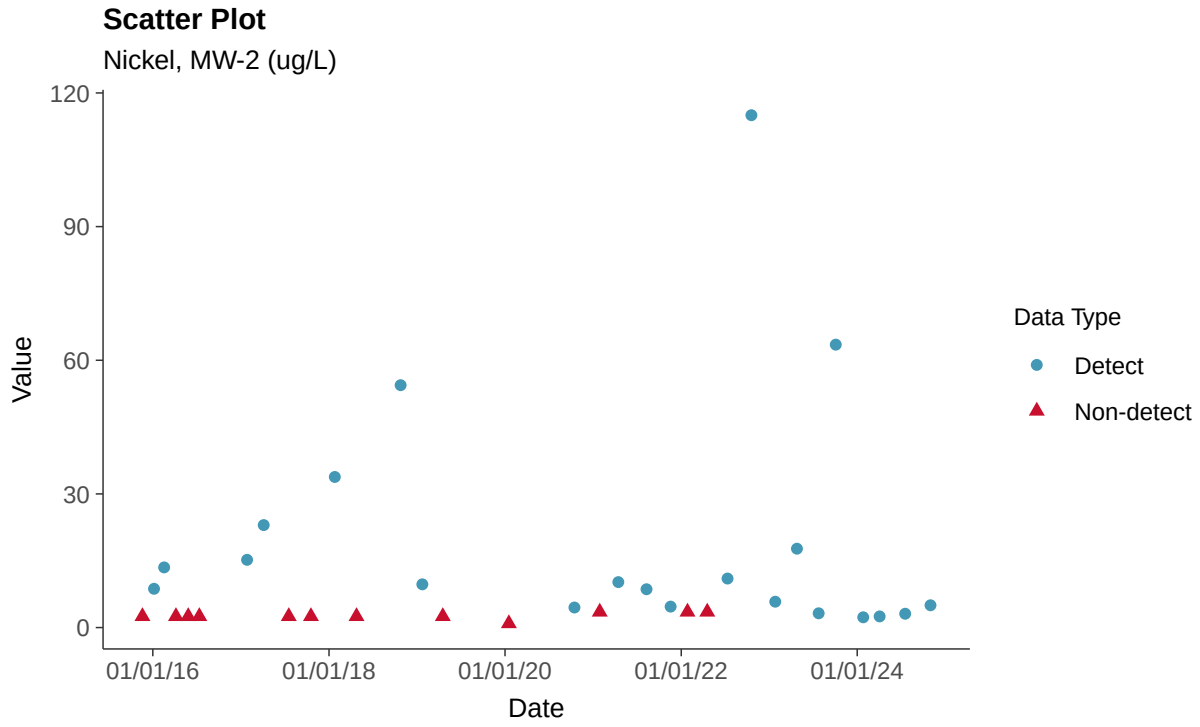
Trend Regression: Piecewise Linear-Linear-Linear

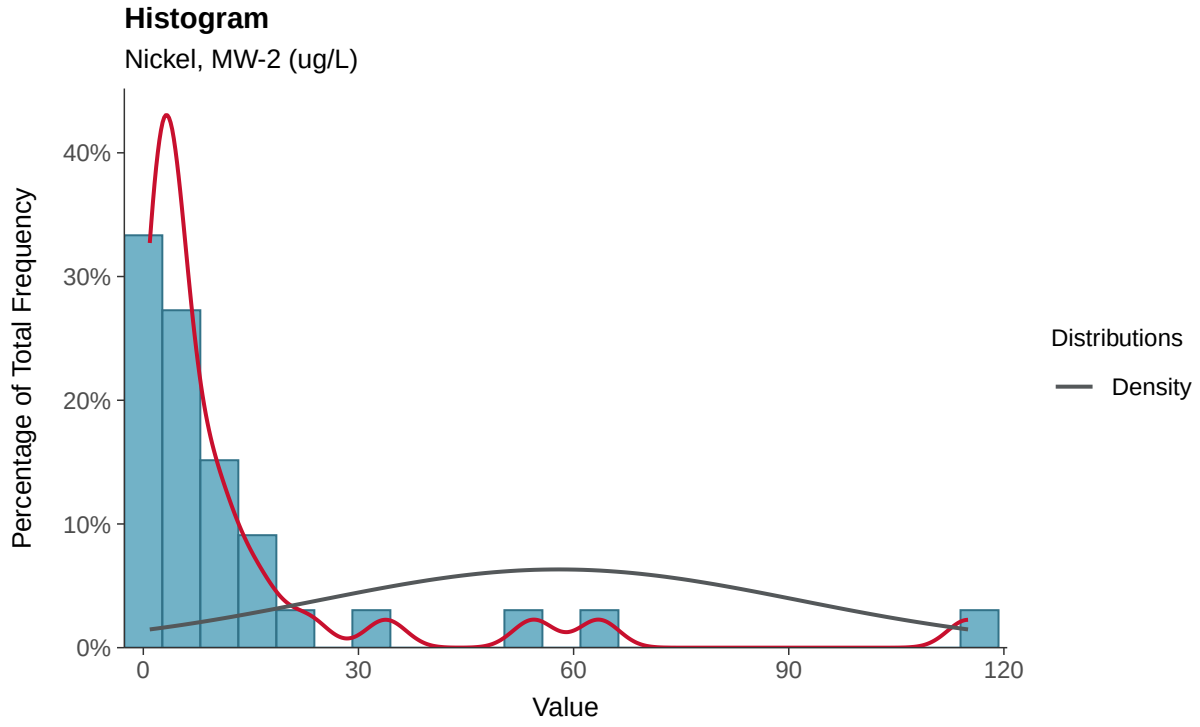
Copper, MW-2 (ug/L)



App. I Metals: Nickel, MW-2

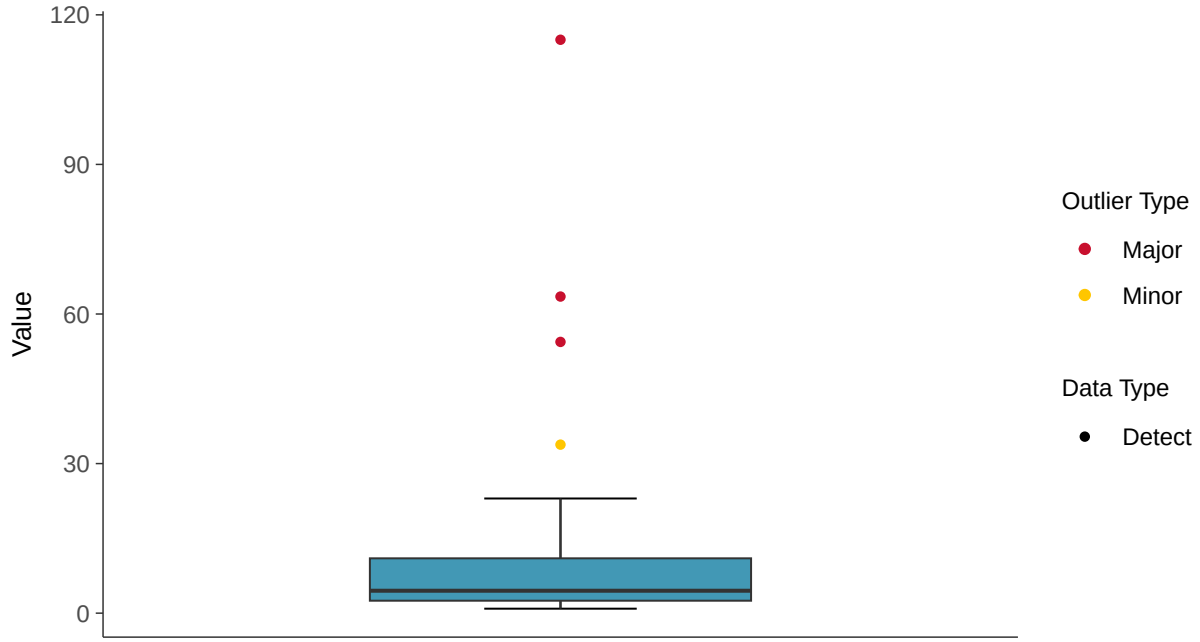
ID: 02_01_117





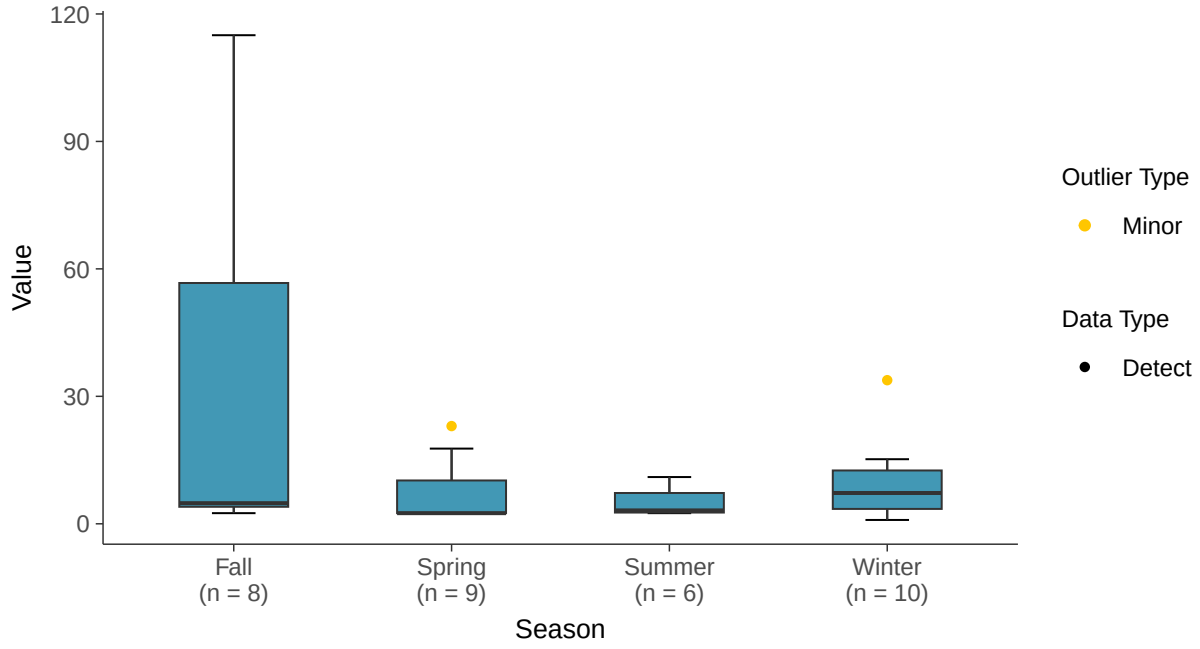
Boxplot

Nickel, MW-2 (ug/L)



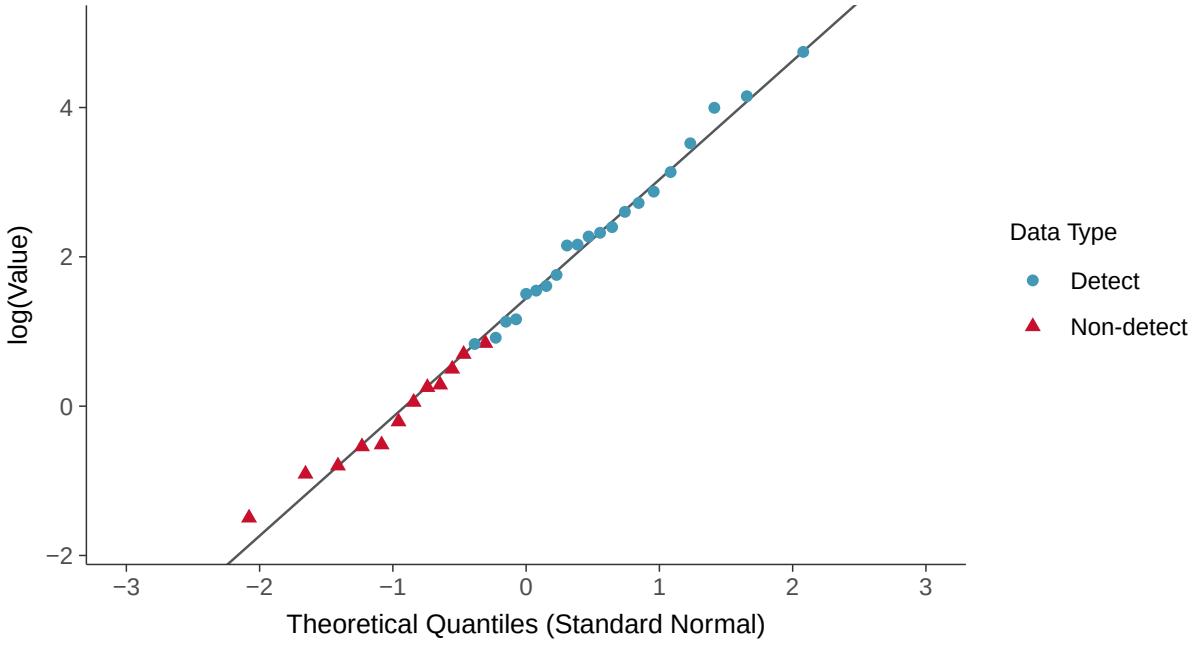
Boxplot by Season

Nickel, MW-2 (ug/L)



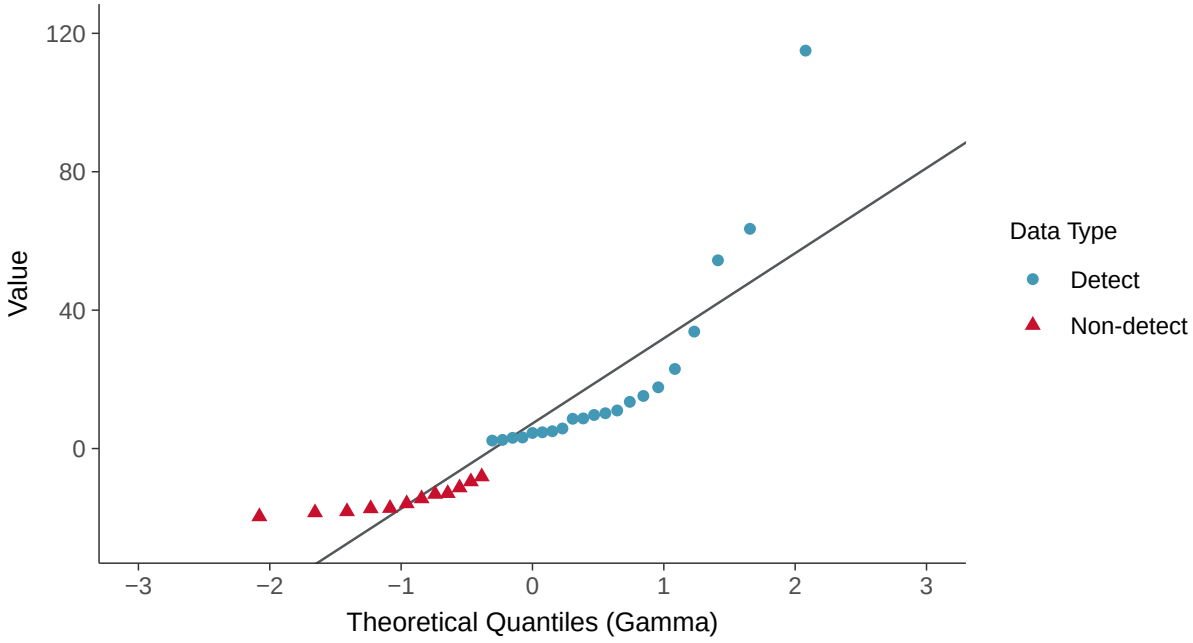
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-2 (ug/L)



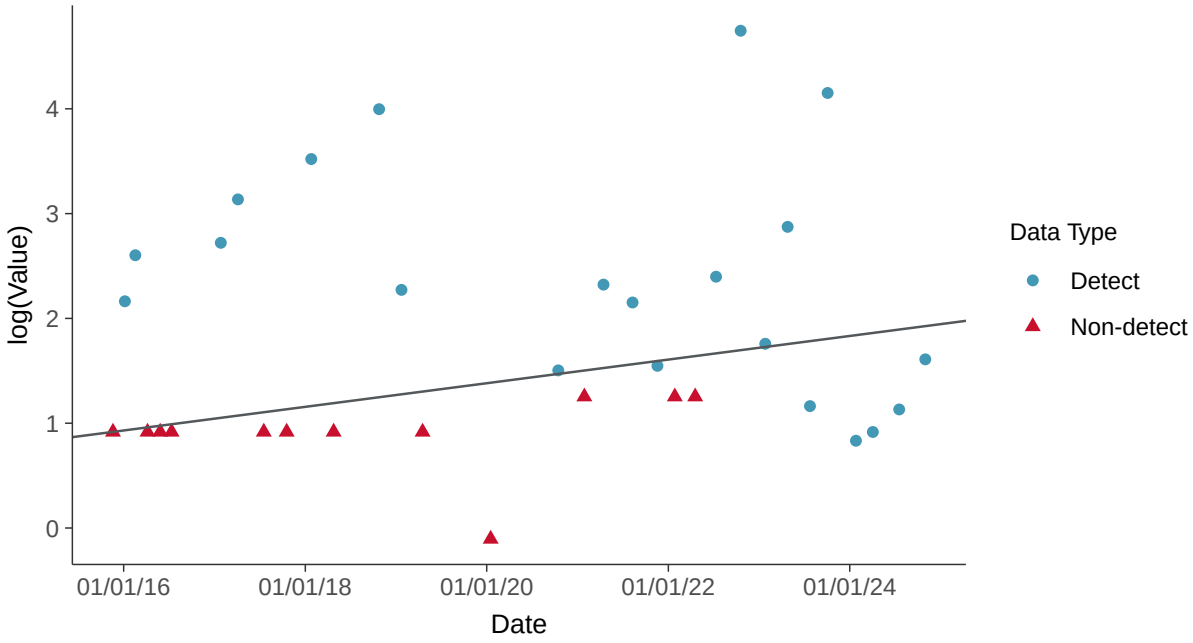
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-2 (ug/L)



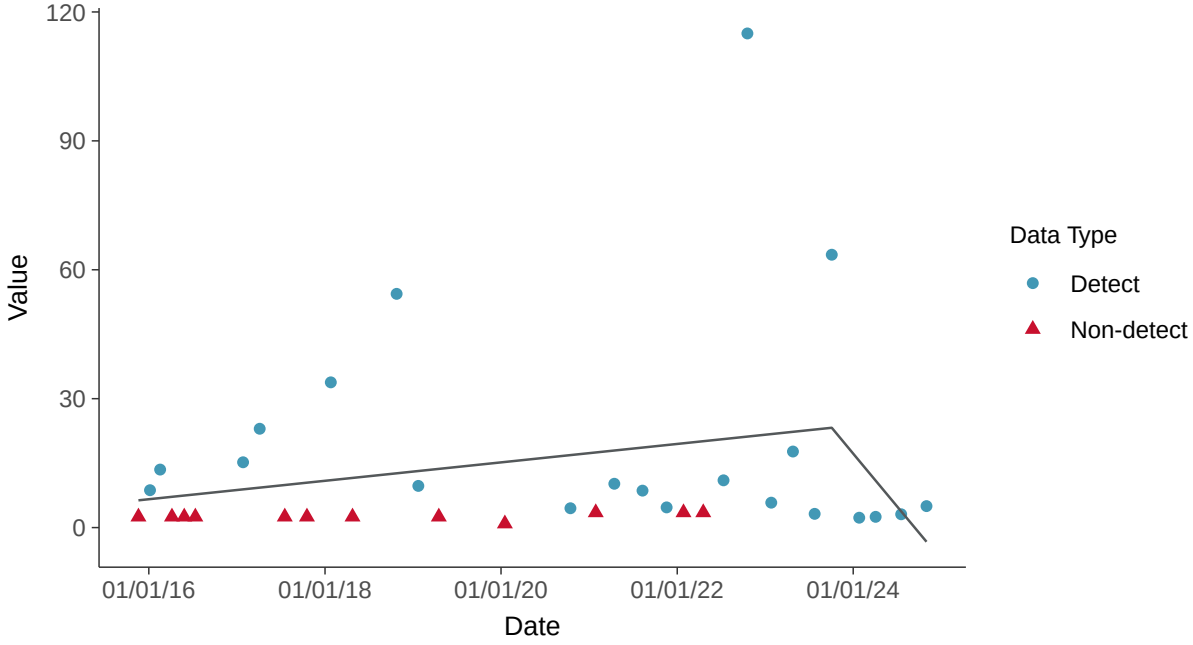
Trend Regression: Lognormal MLE

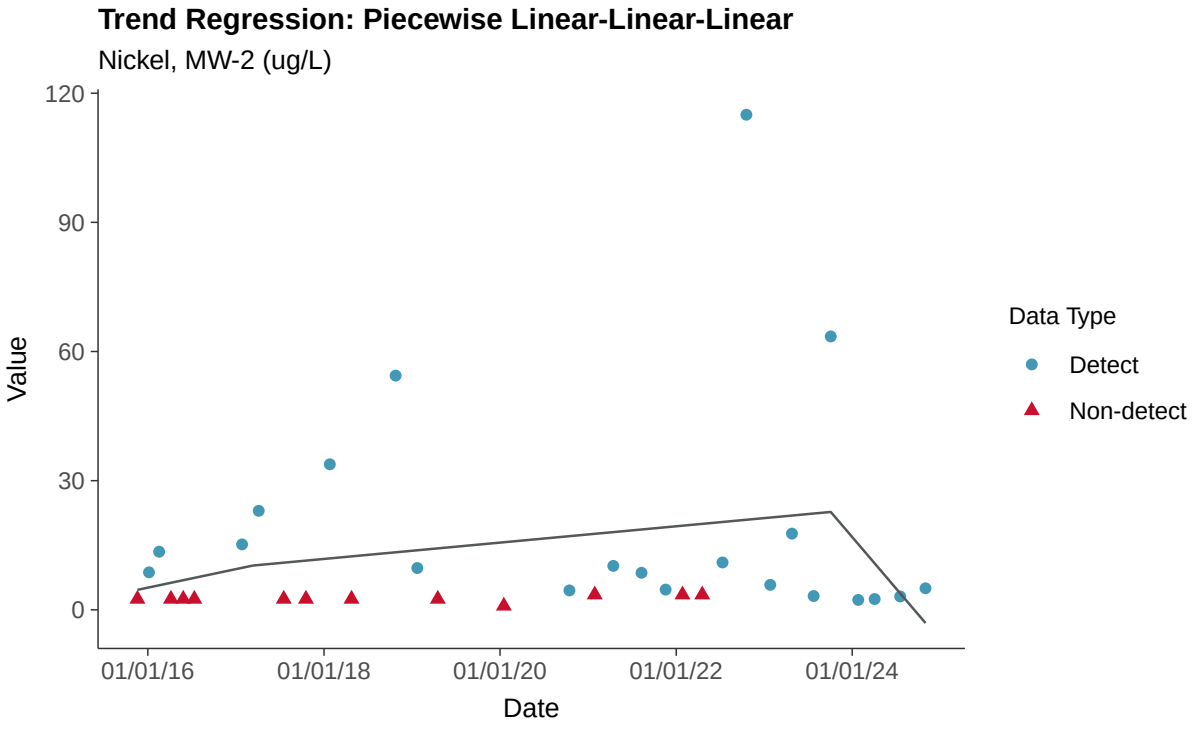
Nickel, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

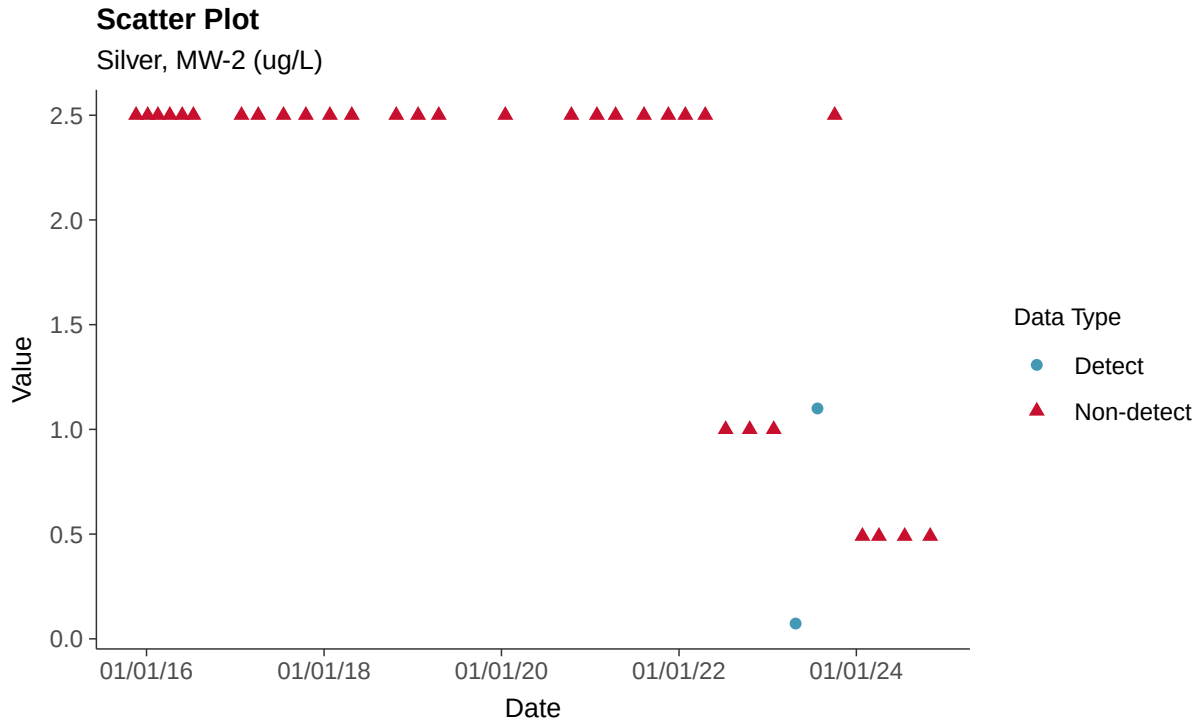
Nickel, MW-2 (ug/L)

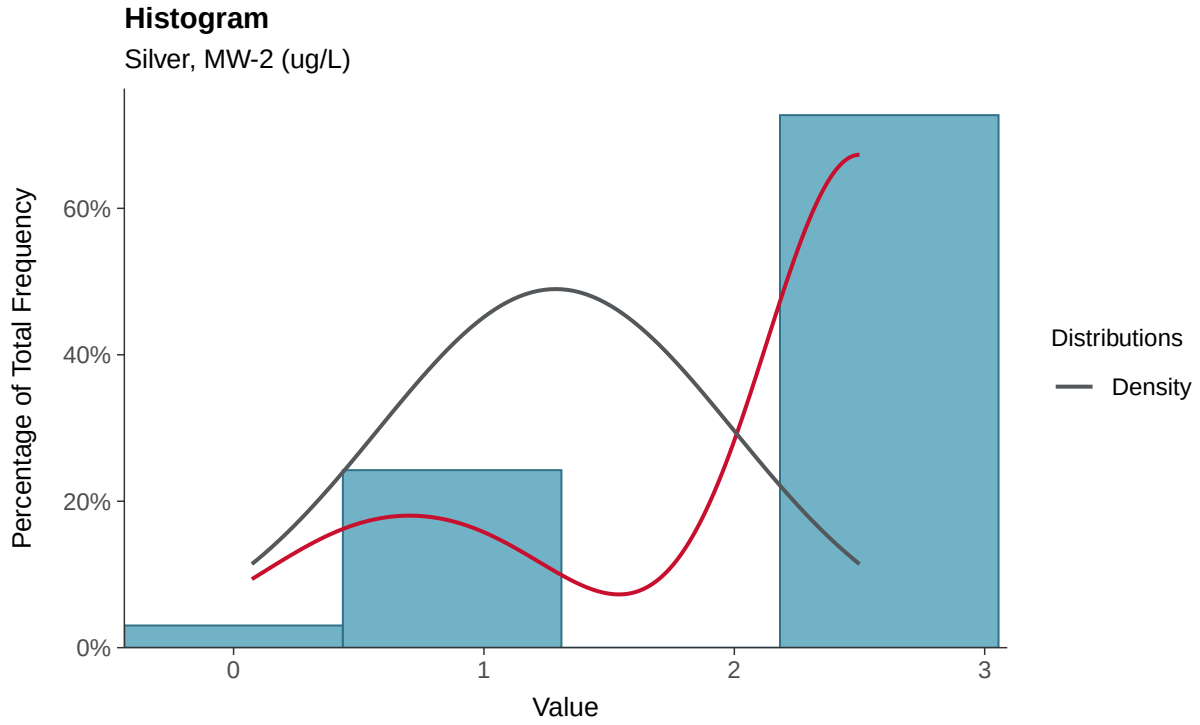



Trend Regression: Piecewise Linear-Linear-Linear
Nickel, MW-2 (ug/L)
Value
120
90
60
30
0
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Silver, MW-2

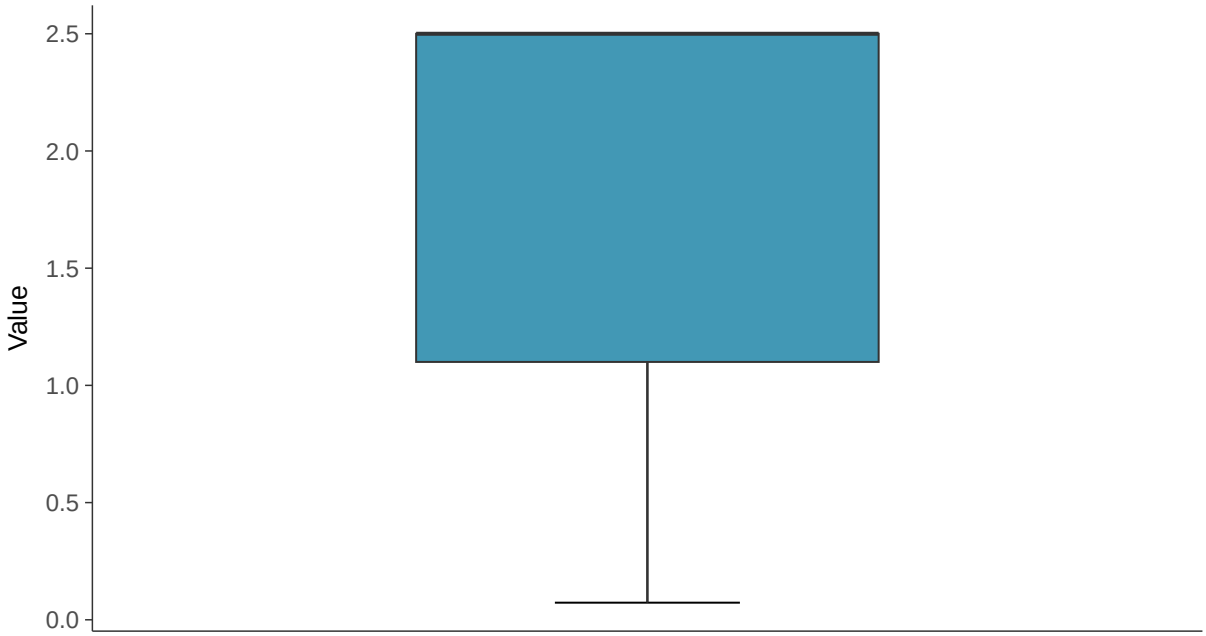
ID: 02_01_122





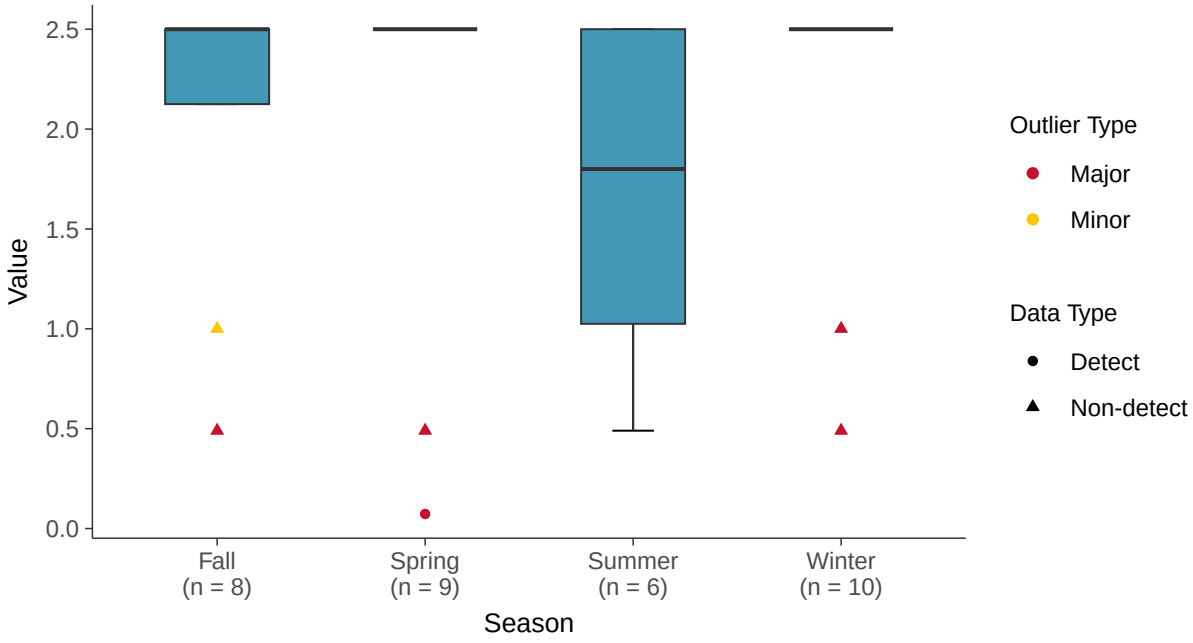
Boxplot

Silver, MW-2 (ug/L)



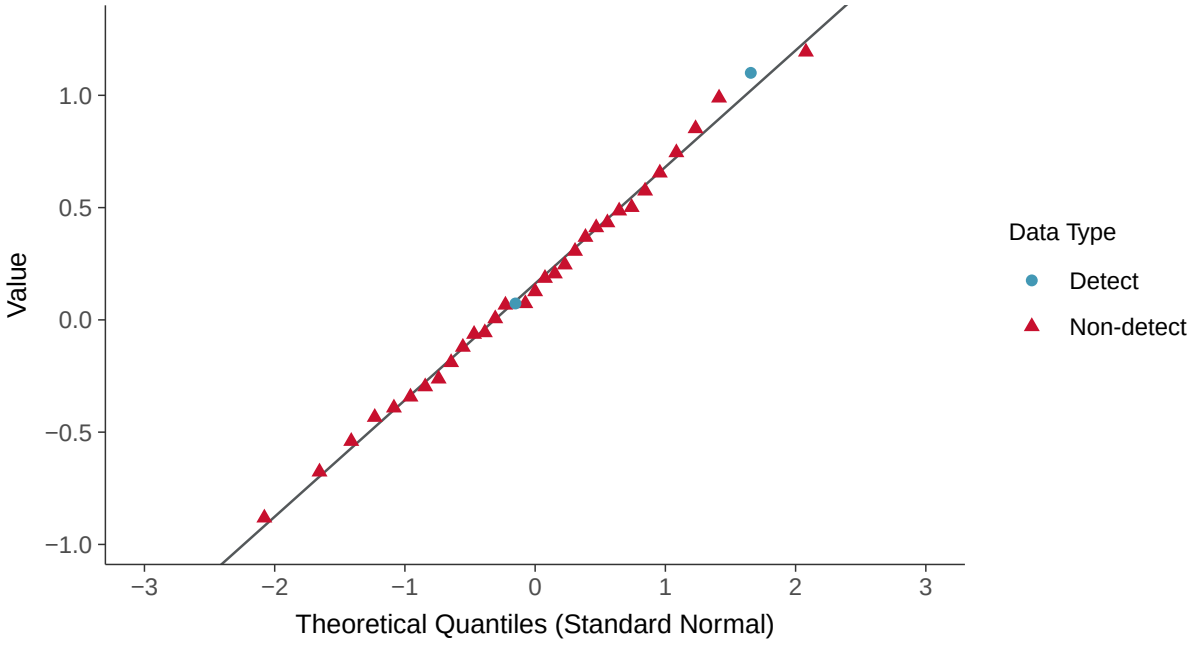
Boxplot by Season

Silver, MW-2 (ug/L)



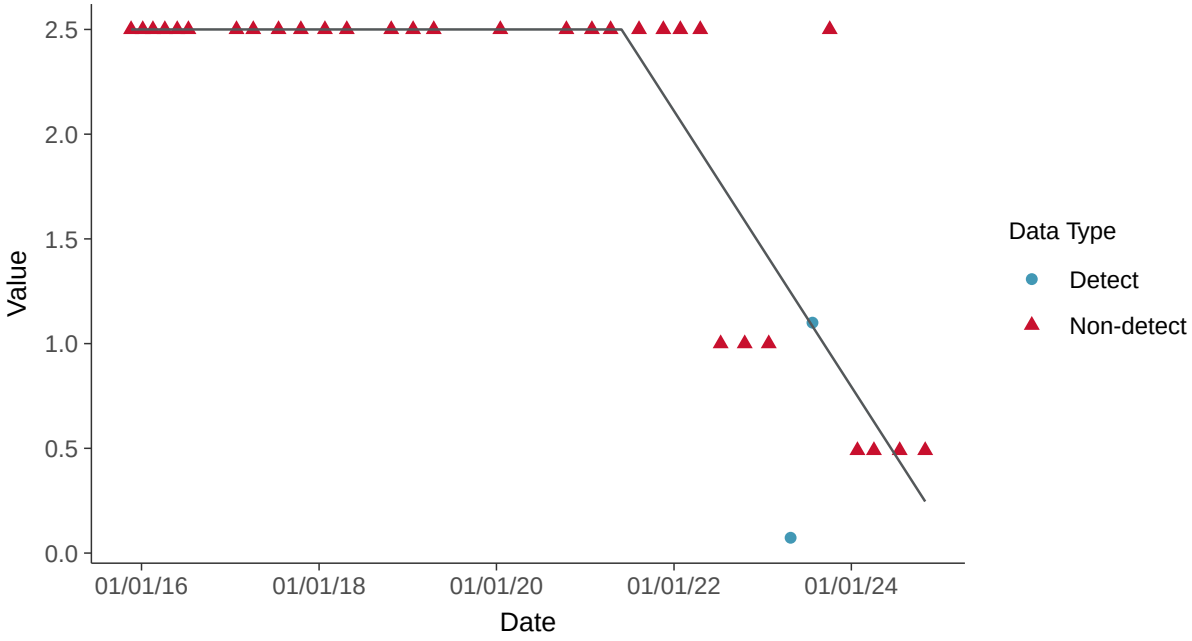
Normal Q-Q plot using ROS Imputed Estimates

Silver, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear

Silver, MW-2 (ug/L)

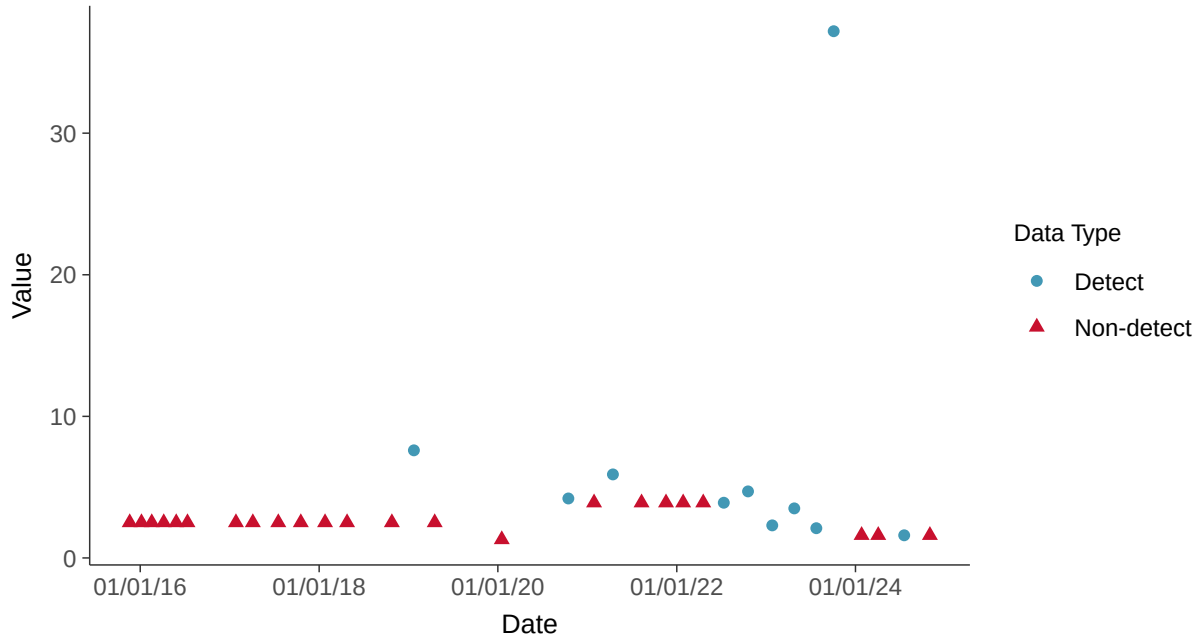


App. I Metals: Vanadium, MW-2

ID: 02_01_127

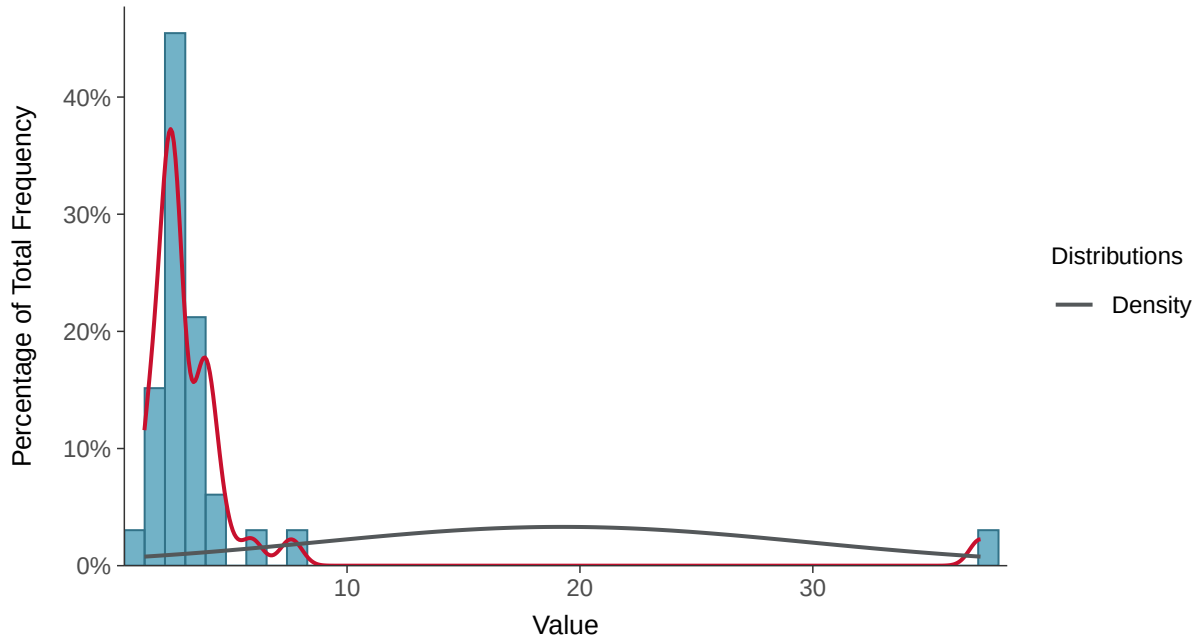
Scatter Plot

Vanadium, MW-2 (ug/L)



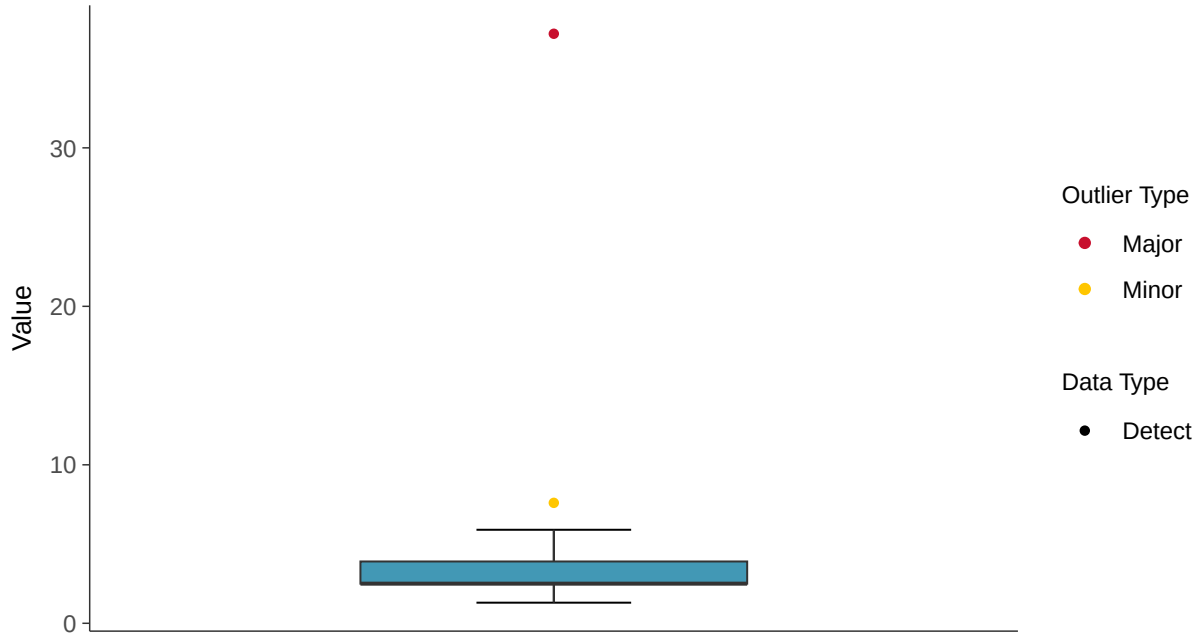
Histogram

Vanadium, MW-2 (ug/L)



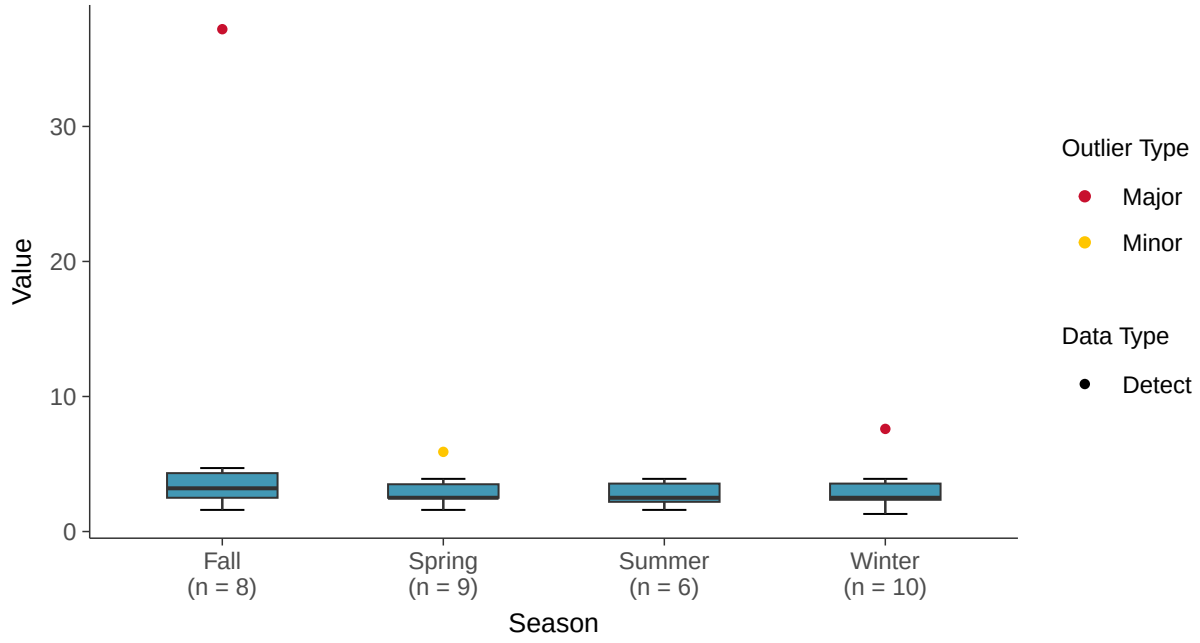
Boxplot

Vanadium, MW-2 (ug/L)



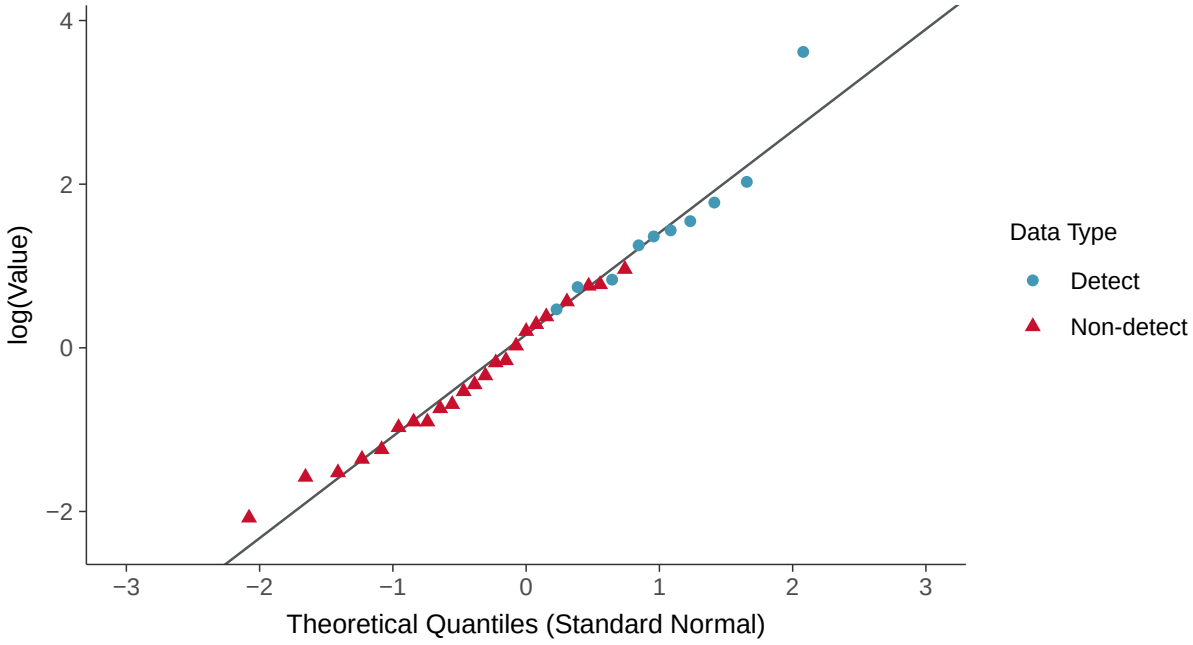
Boxplot by Season

Vanadium, MW-2 (ug/L)



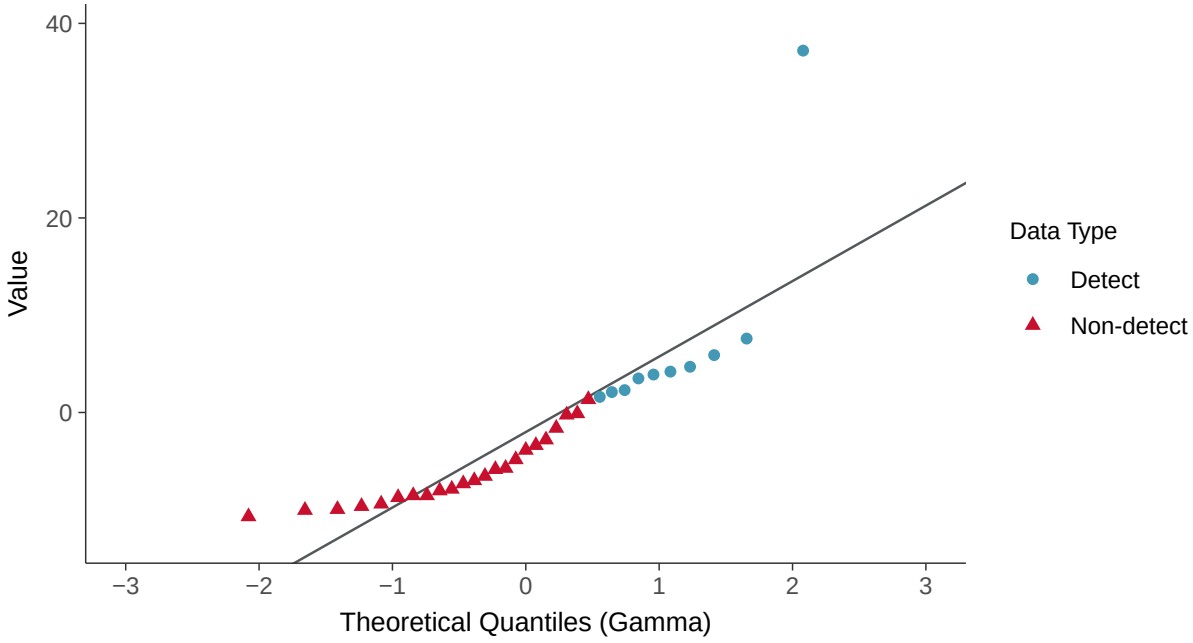
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-2 (ug/L)



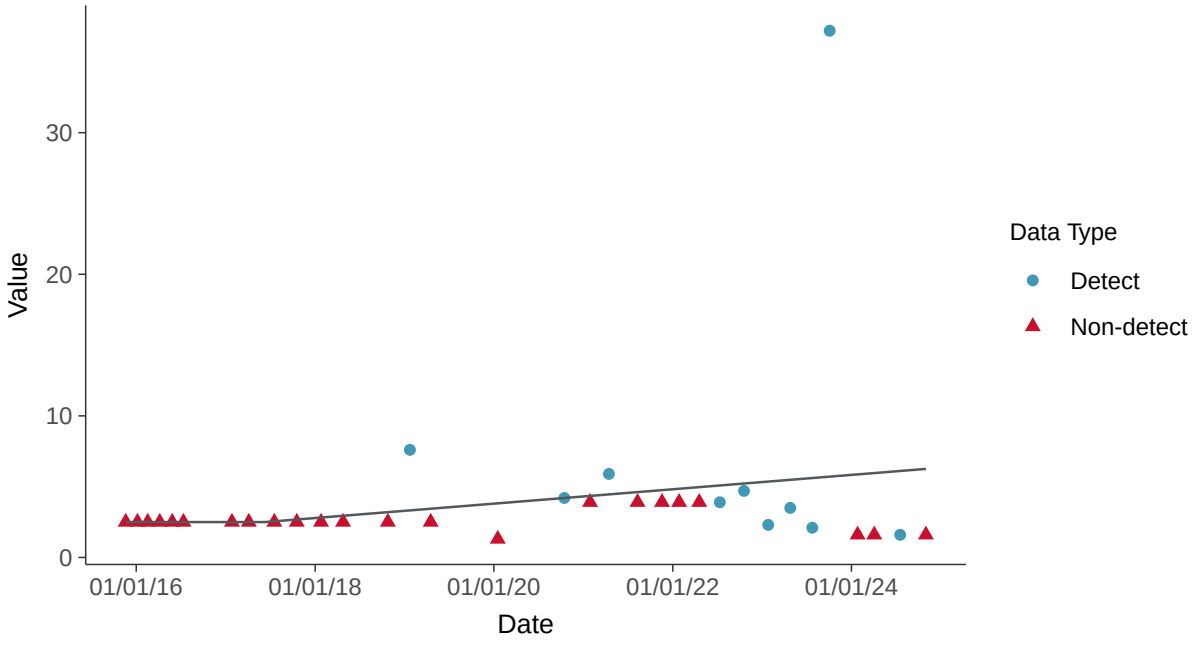
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-2 (ug/L)



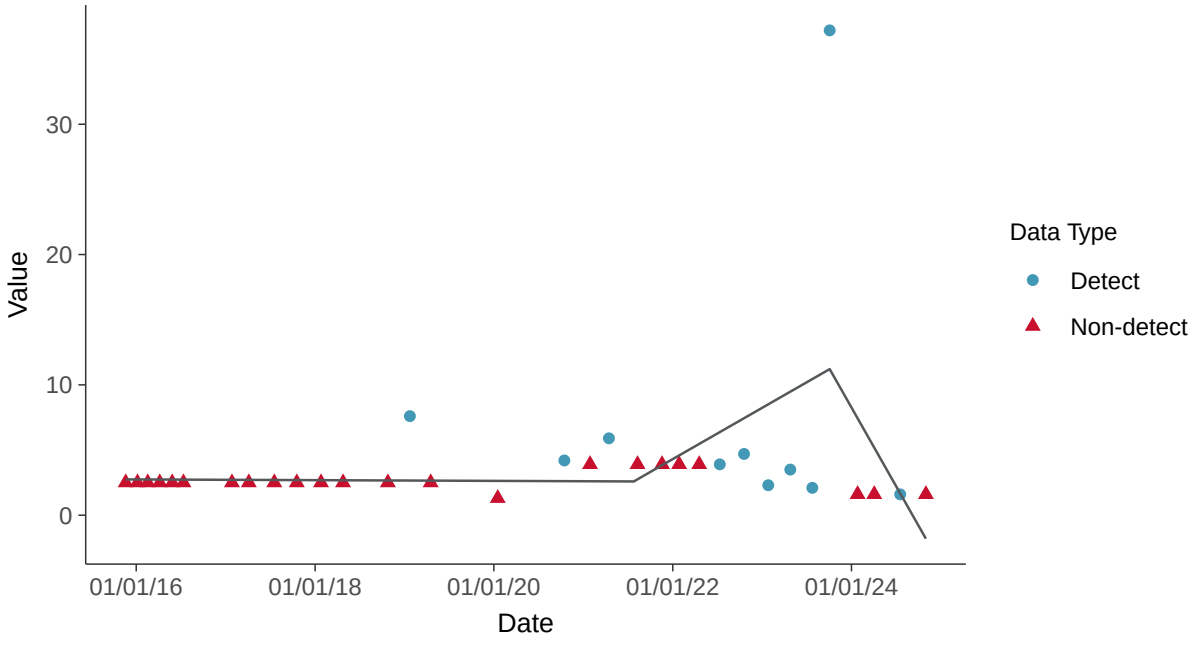
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-2 (ug/L)

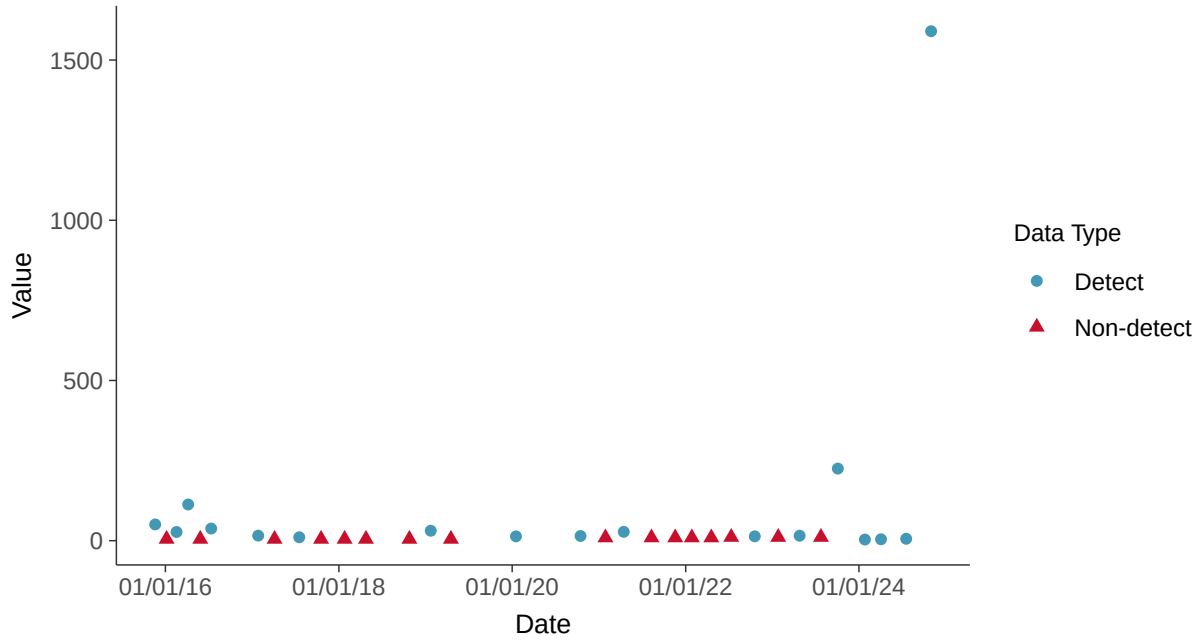


App. I Metals: Zinc, MW-2

ID: 02_01_128

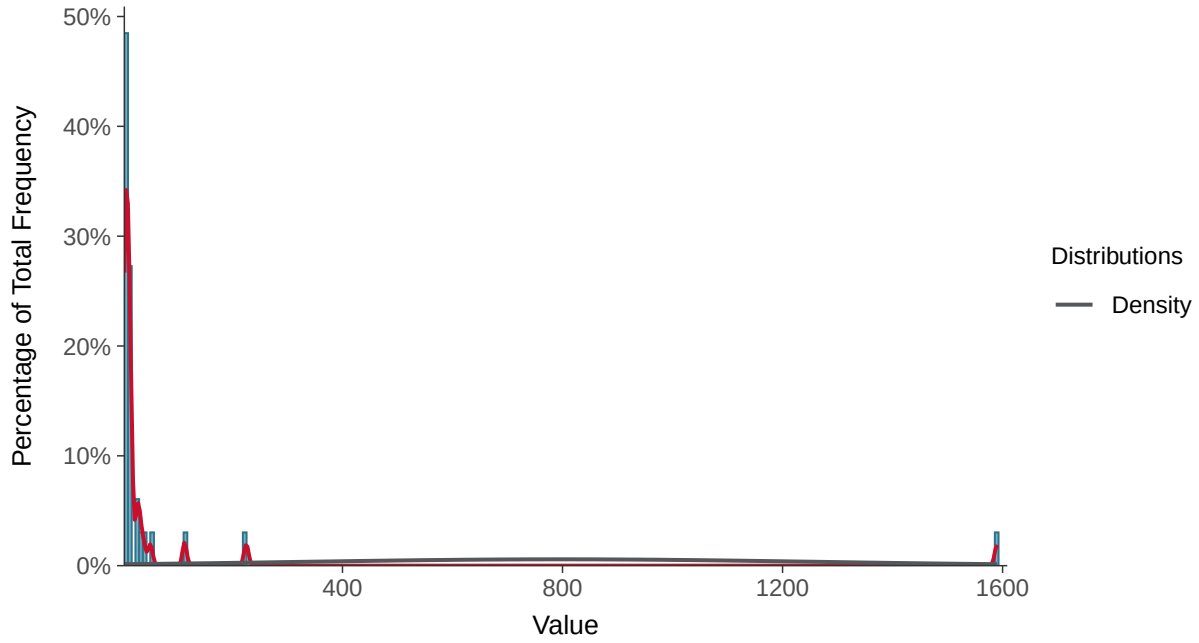
Scatter Plot

Zinc, MW-2 (ug/L)



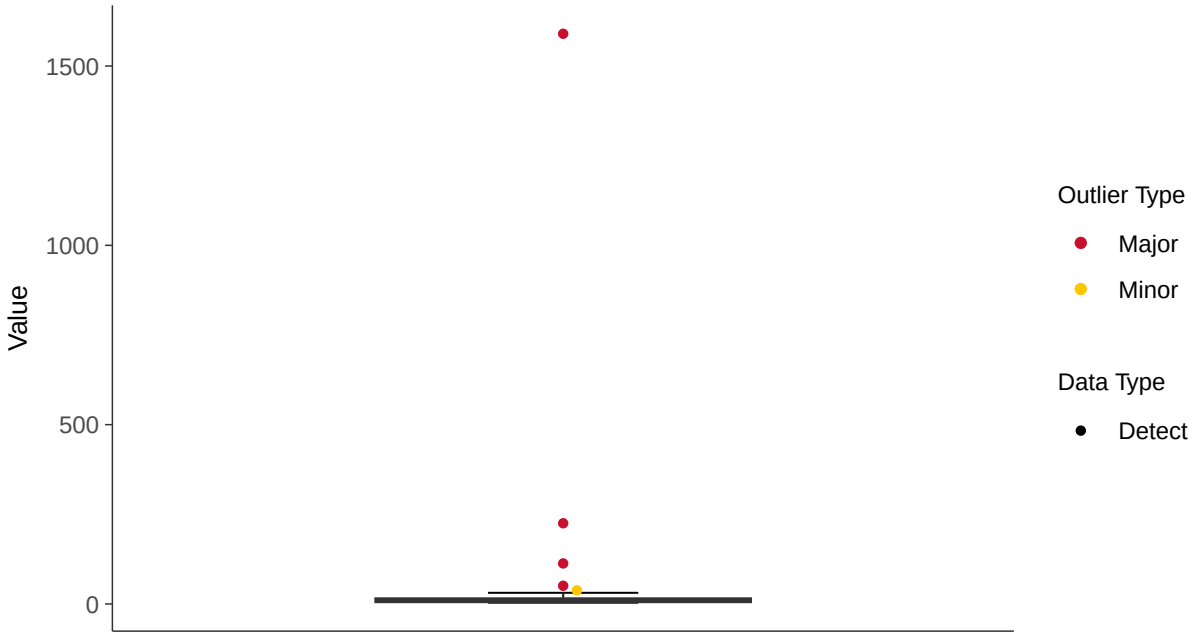
Histogram

Zinc, MW-2 (ug/L)



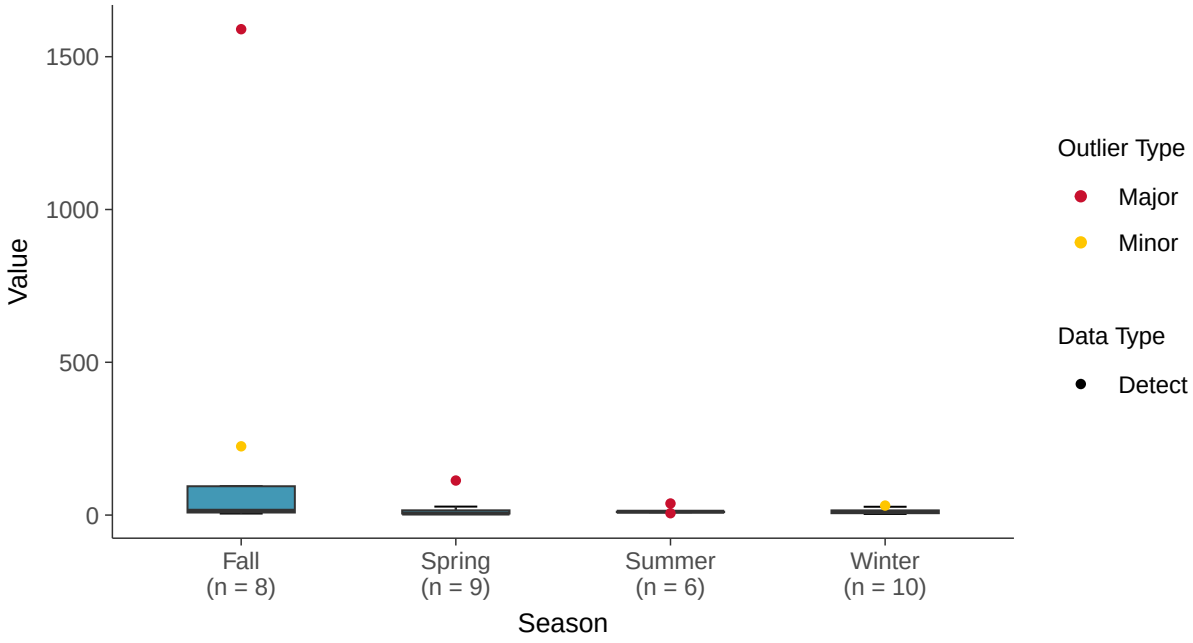
Boxplot

Zinc, MW-2 (ug/L)



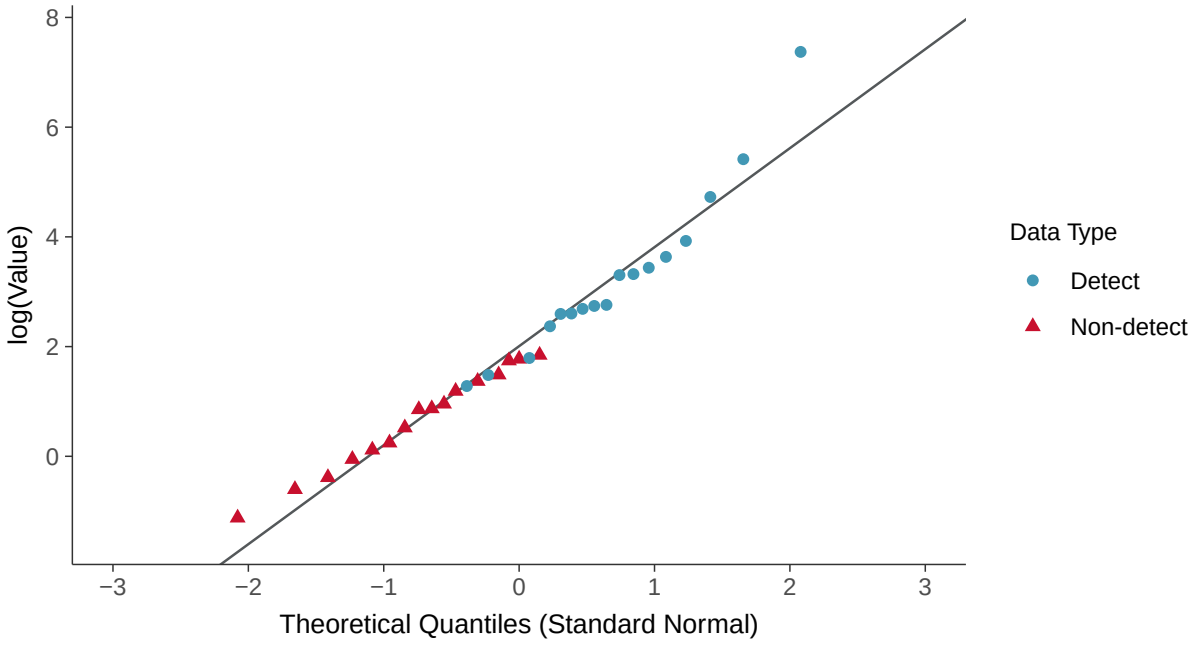
Boxplot by Season

Zinc, MW-2 (ug/L)



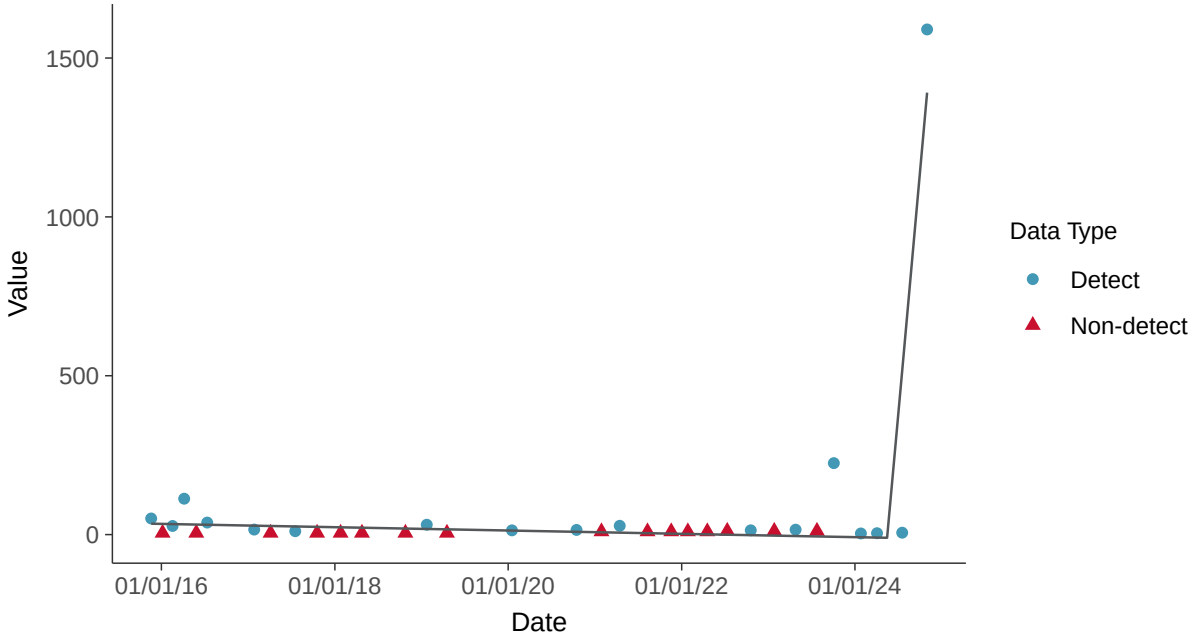
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-2 (ug/L)



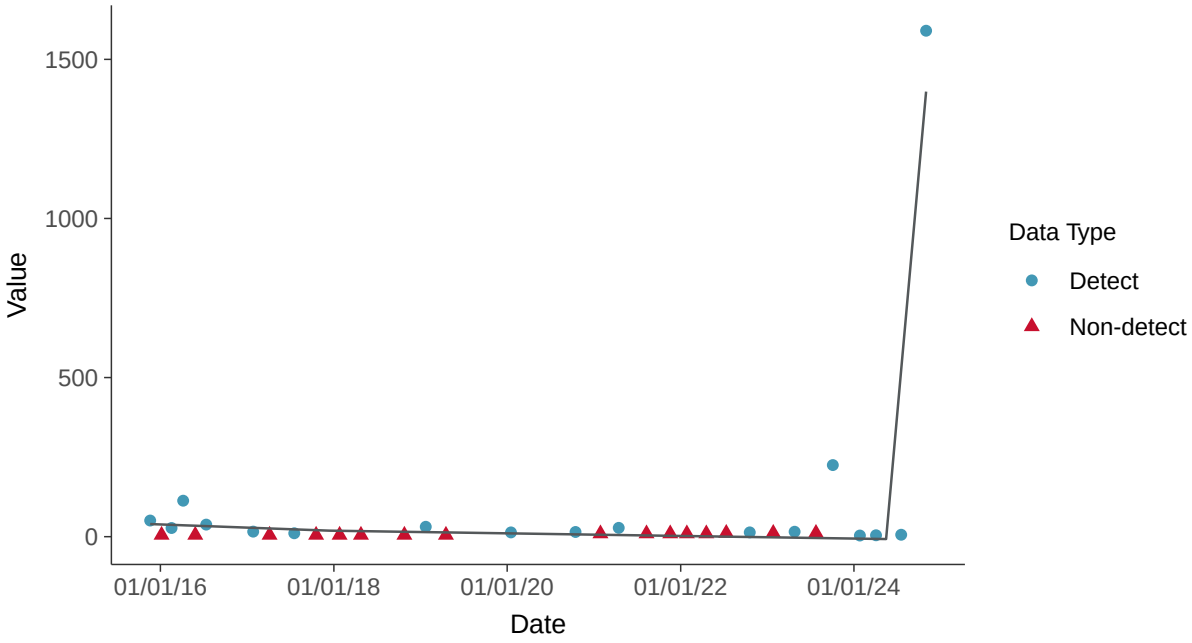
Trend Regression: Piecewise Linear-Linear

Zinc, MW-2 (ug/L)



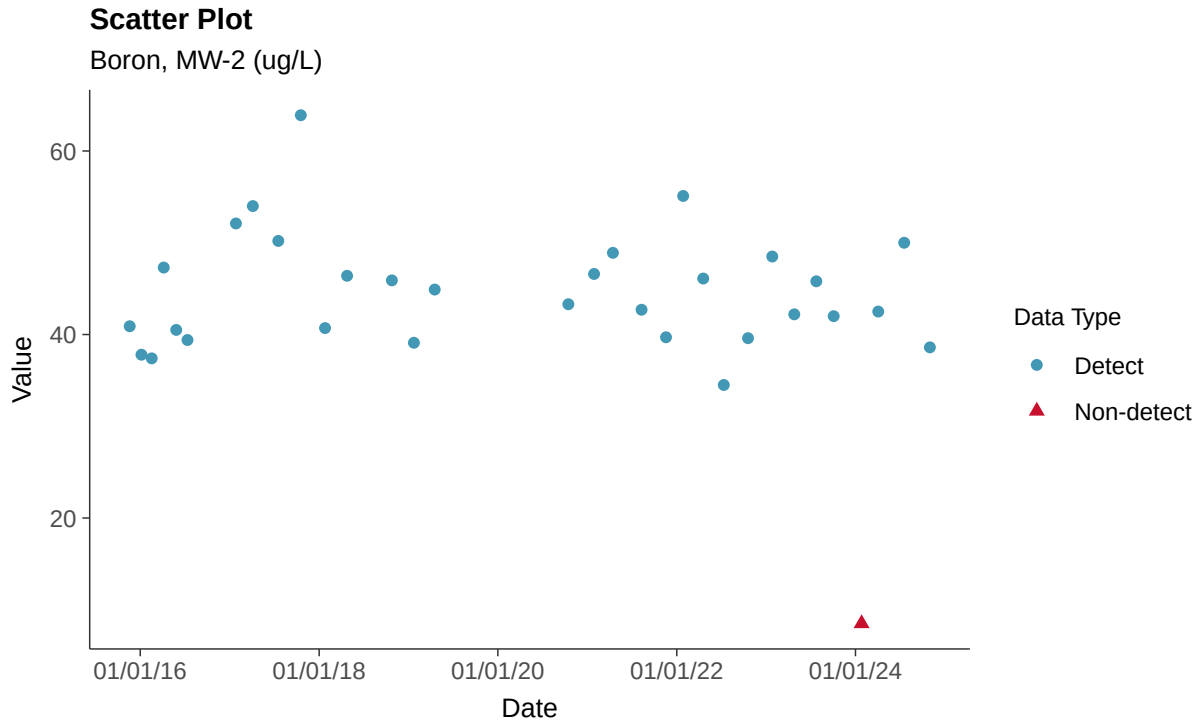
Trend Regression: Piecewise Linear-Linear-Linear

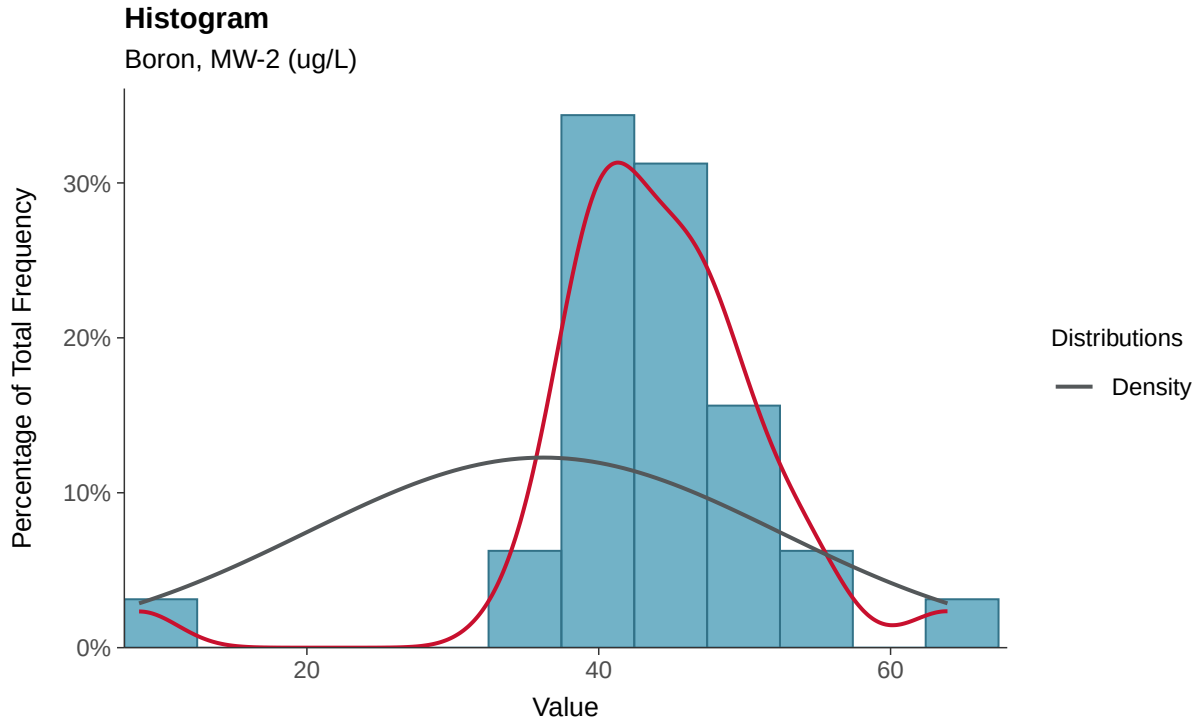
Zinc, MW-2 (ug/L)



App. III: Boron, MW-2

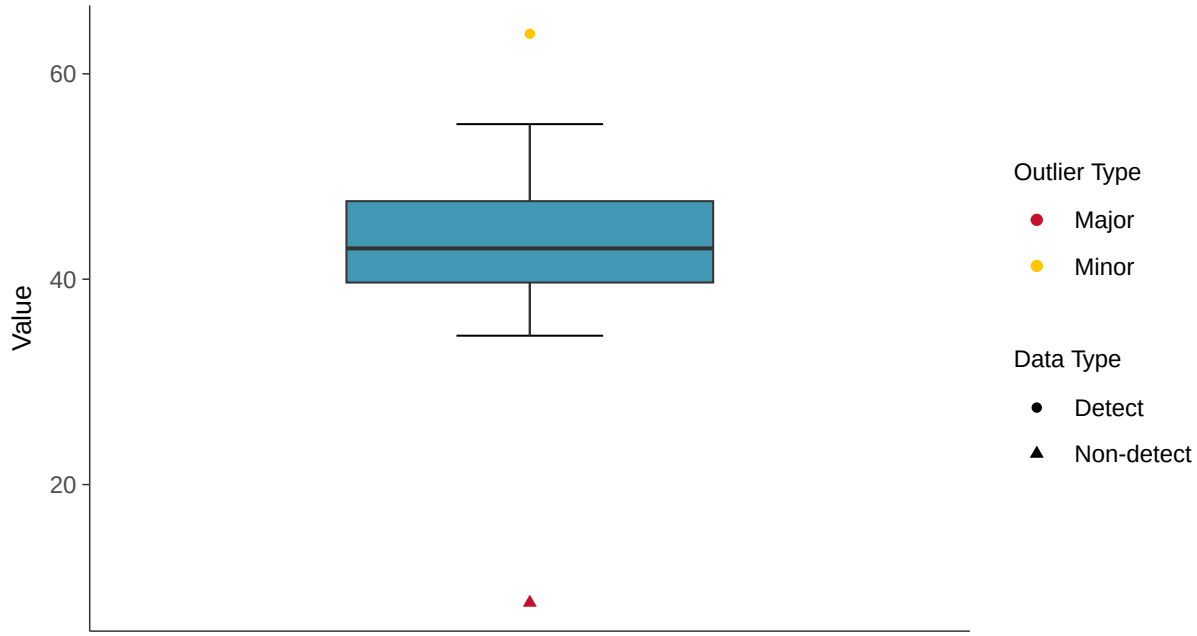
ID: 02_02_105





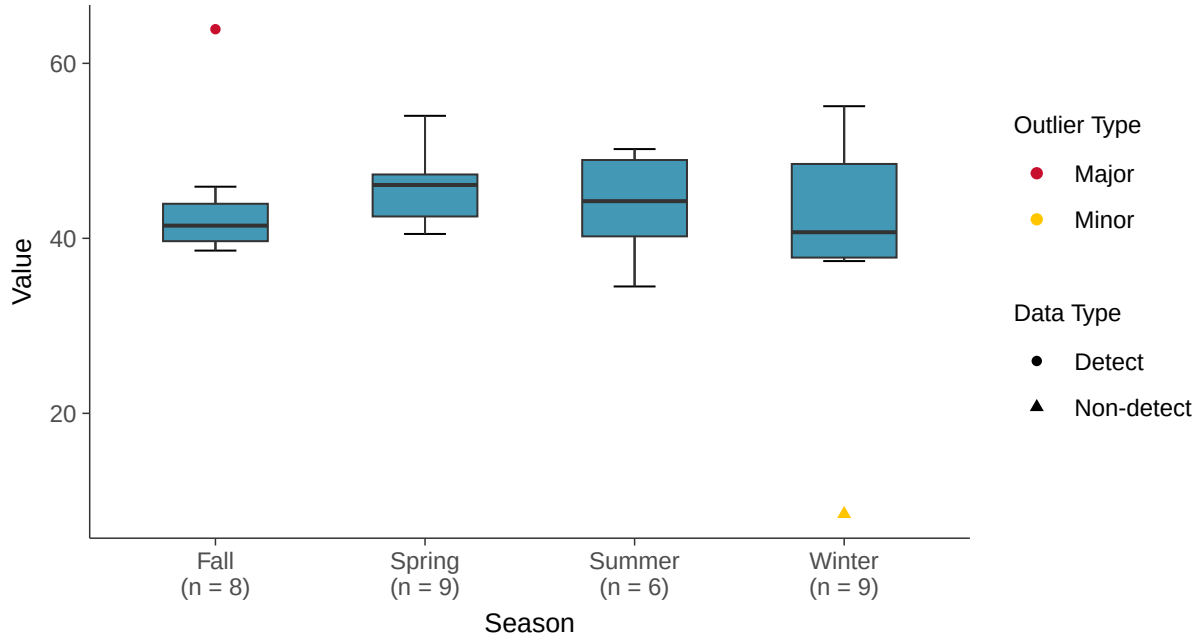
Boxplot

Boron, MW-2 (ug/L)



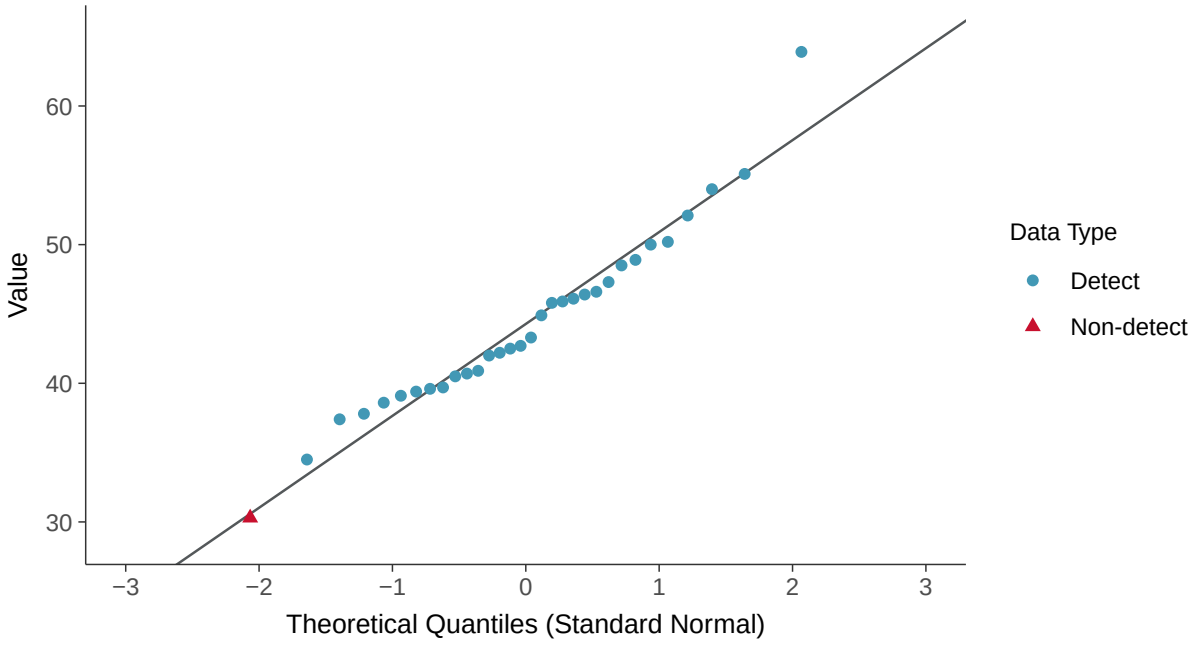
Boxplot by Season

Boron, MW-2 (ug/L)



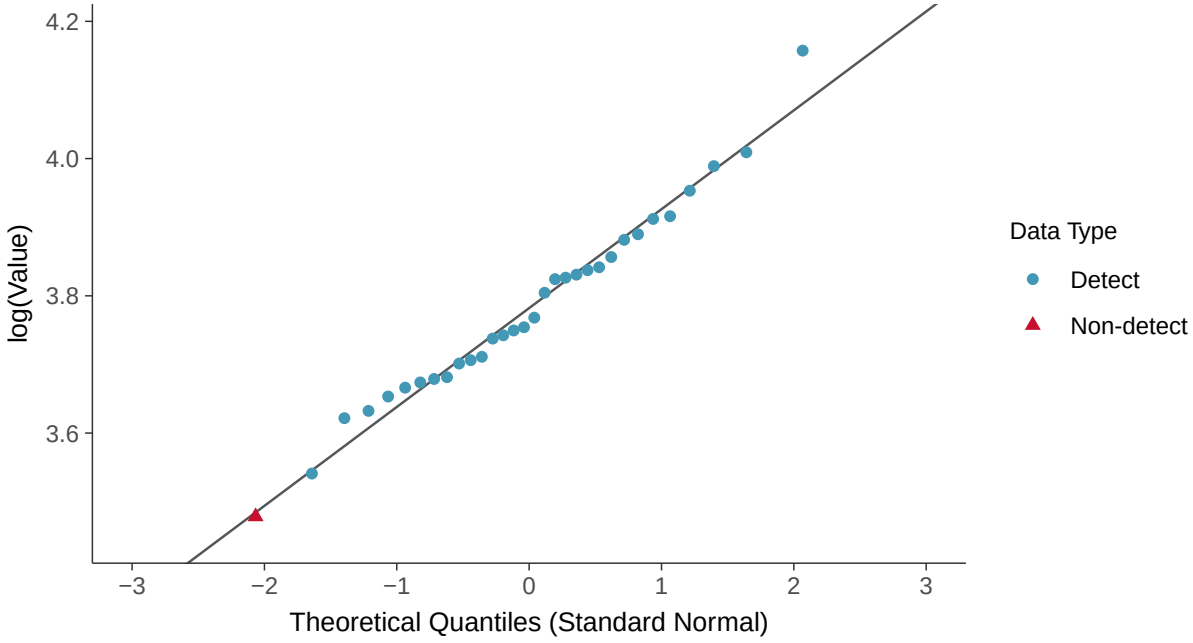
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



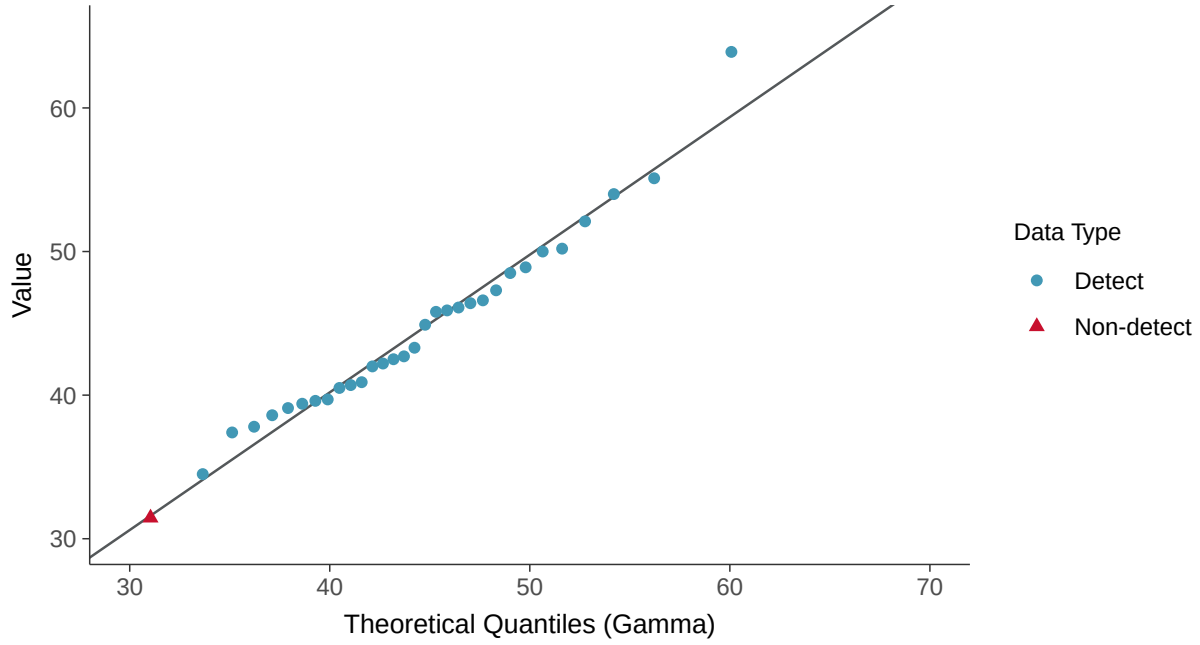
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



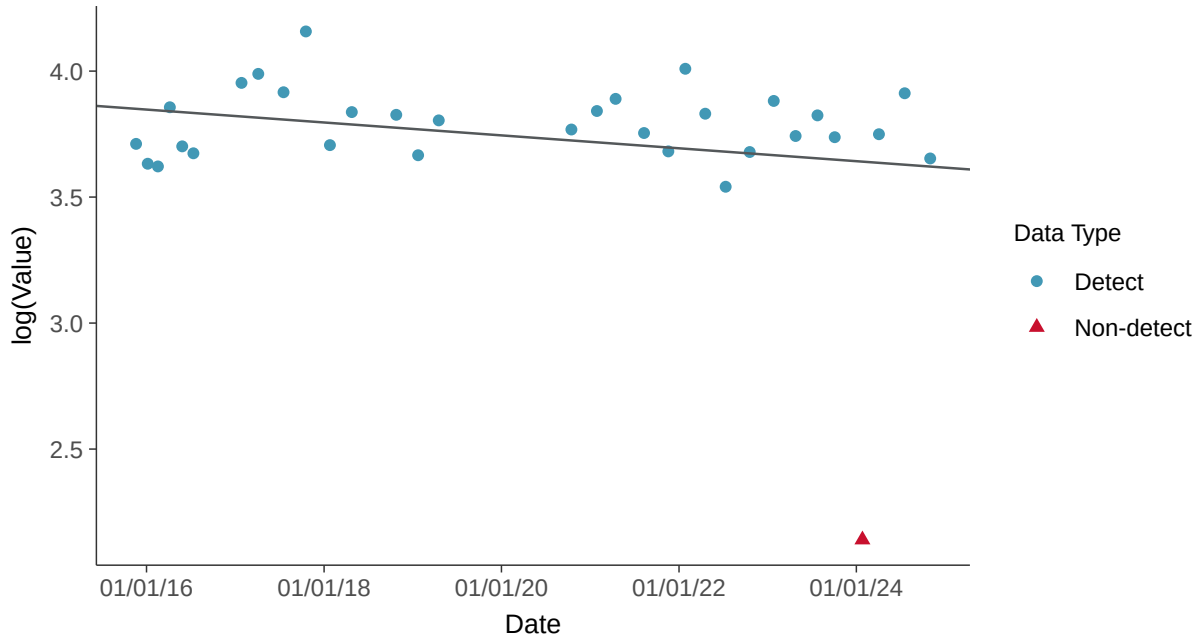
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-2 (ug/L)



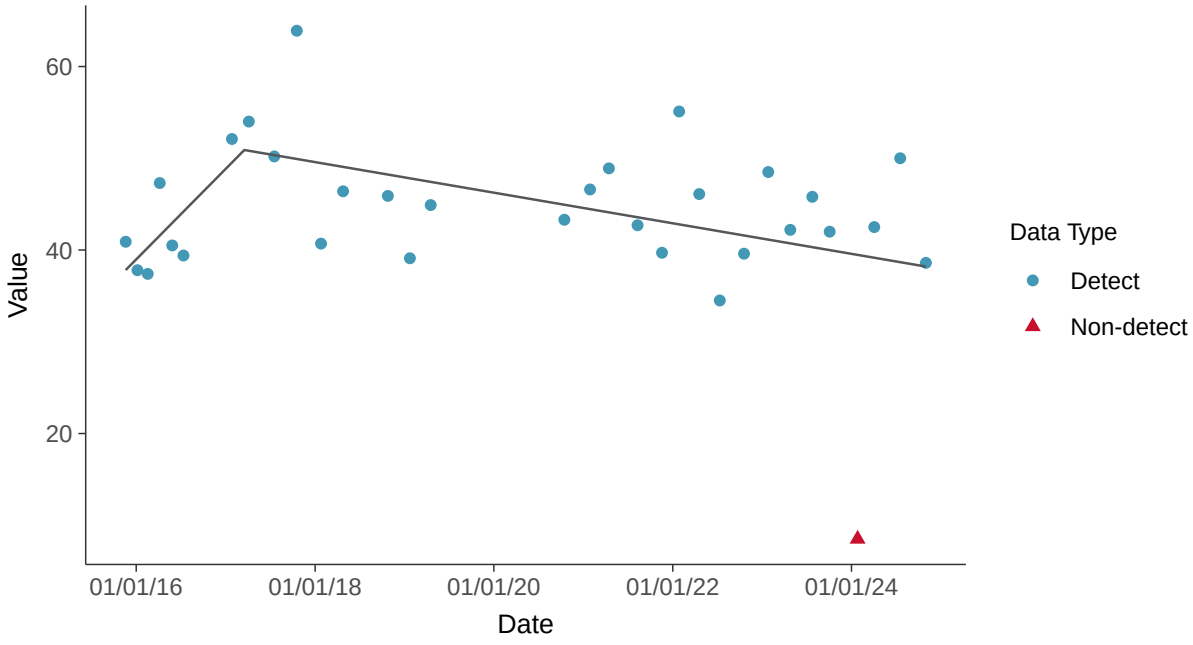
Trend Regression: Lognormal MLE

Boron, MW-2 (ug/L)



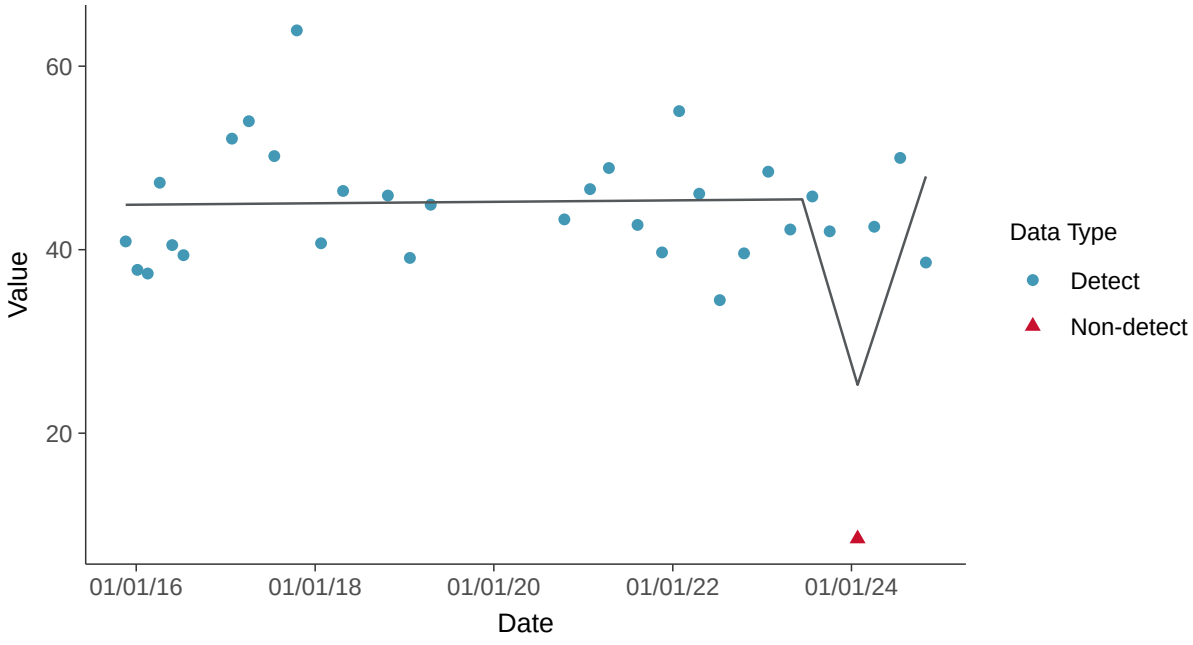
Trend Regression: Piecewise Linear-Linear

Boron, MW-2 (ug/L)



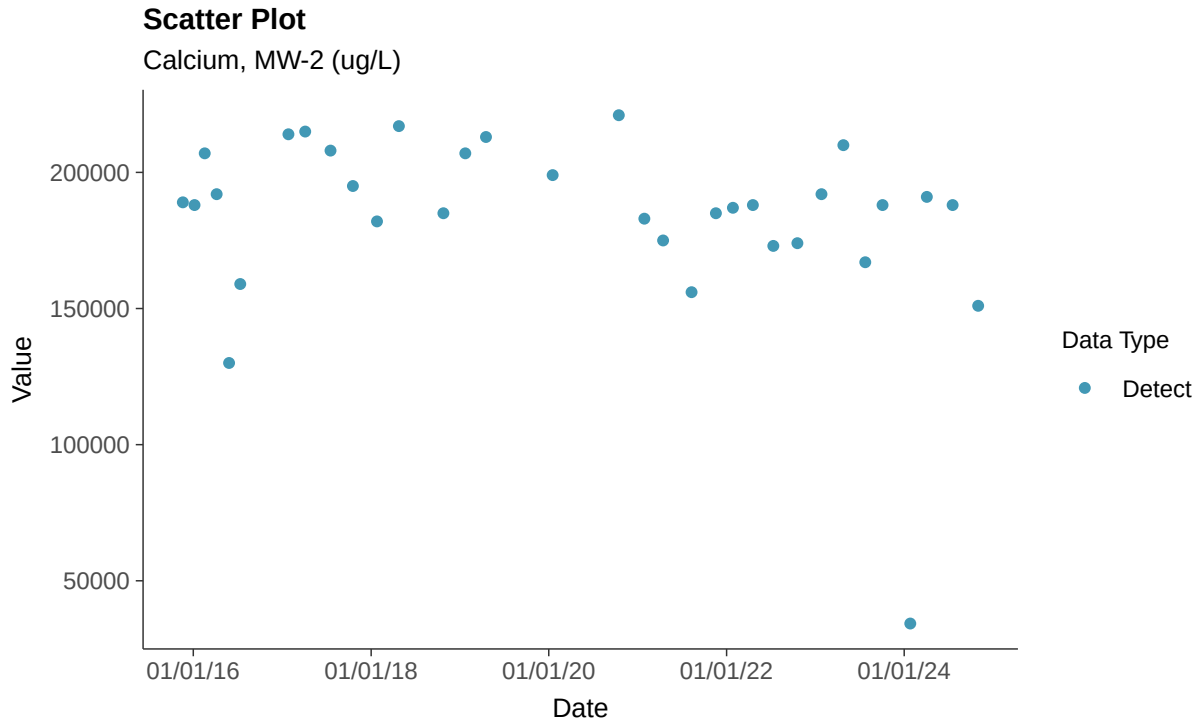
Trend Regression: Piecewise Linear-Linear-Linear

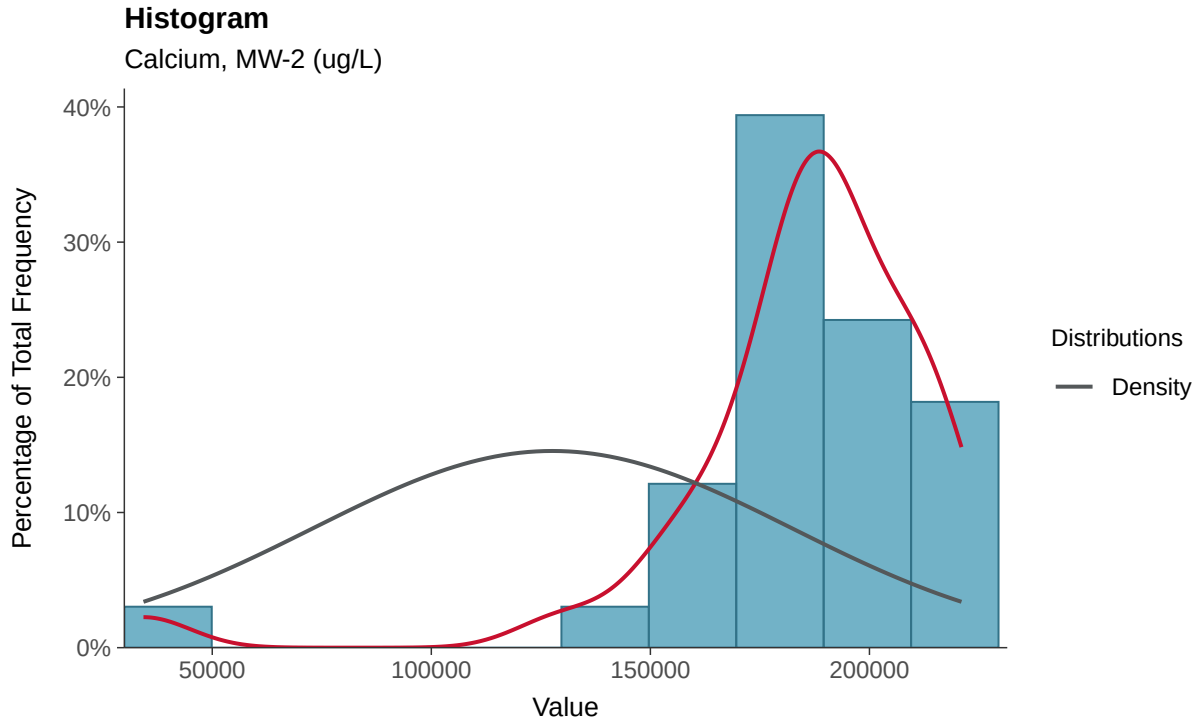
Boron, MW-2 (ug/L)



App. III: Calcium, MW-2

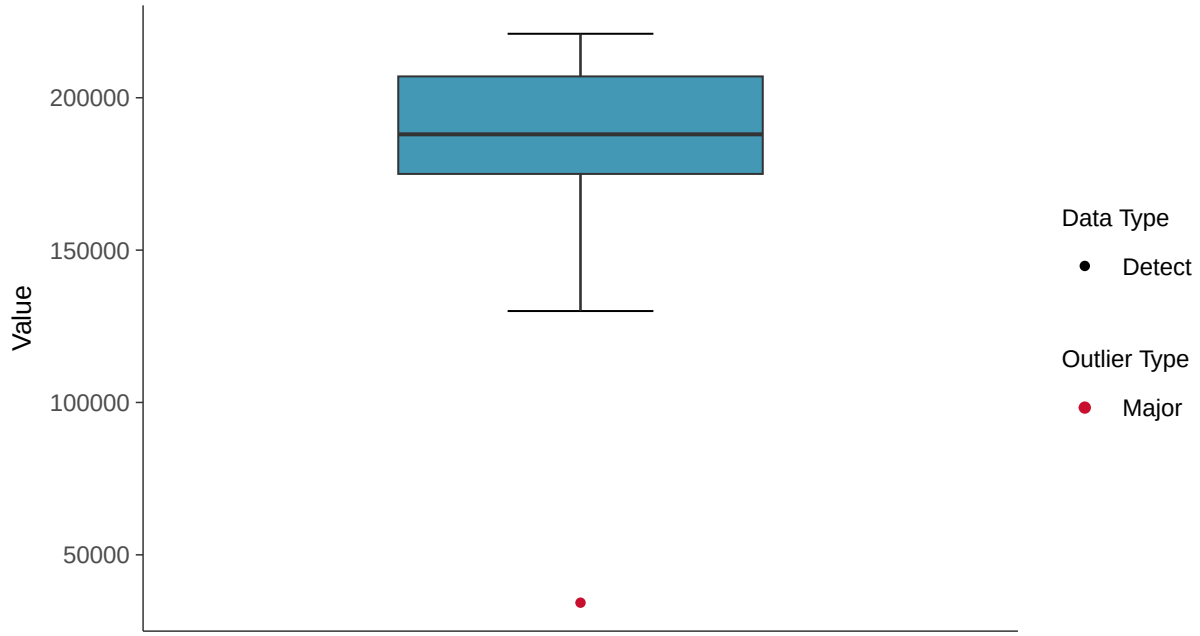
ID: 02_02_107





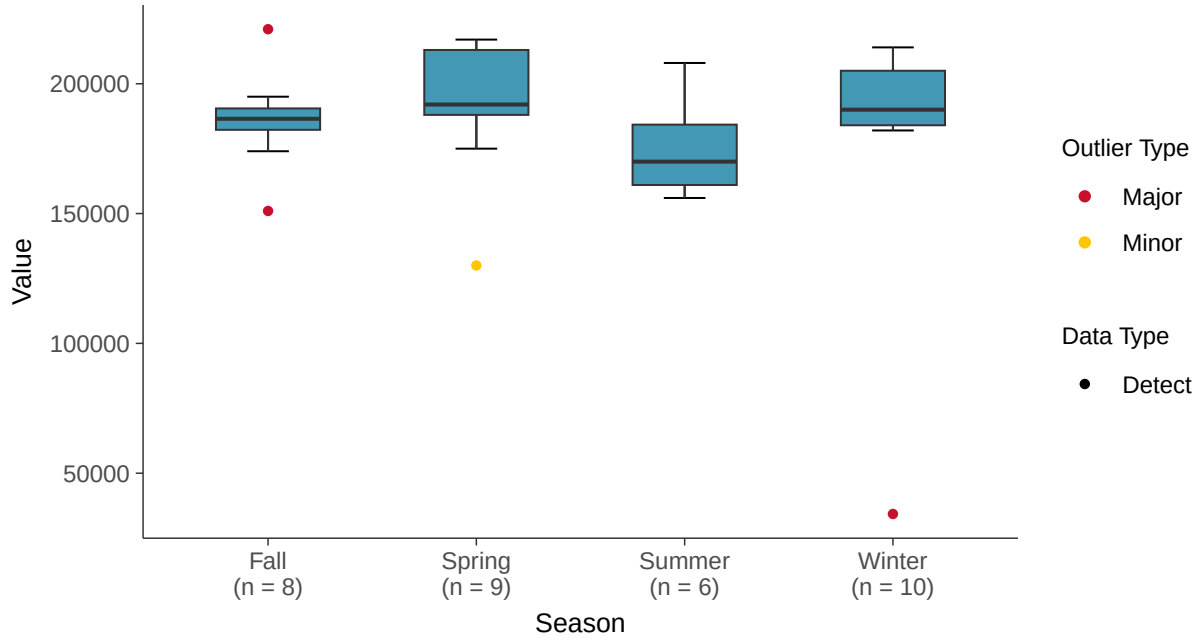
Boxplot

Calcium, MW-2 (ug/L)



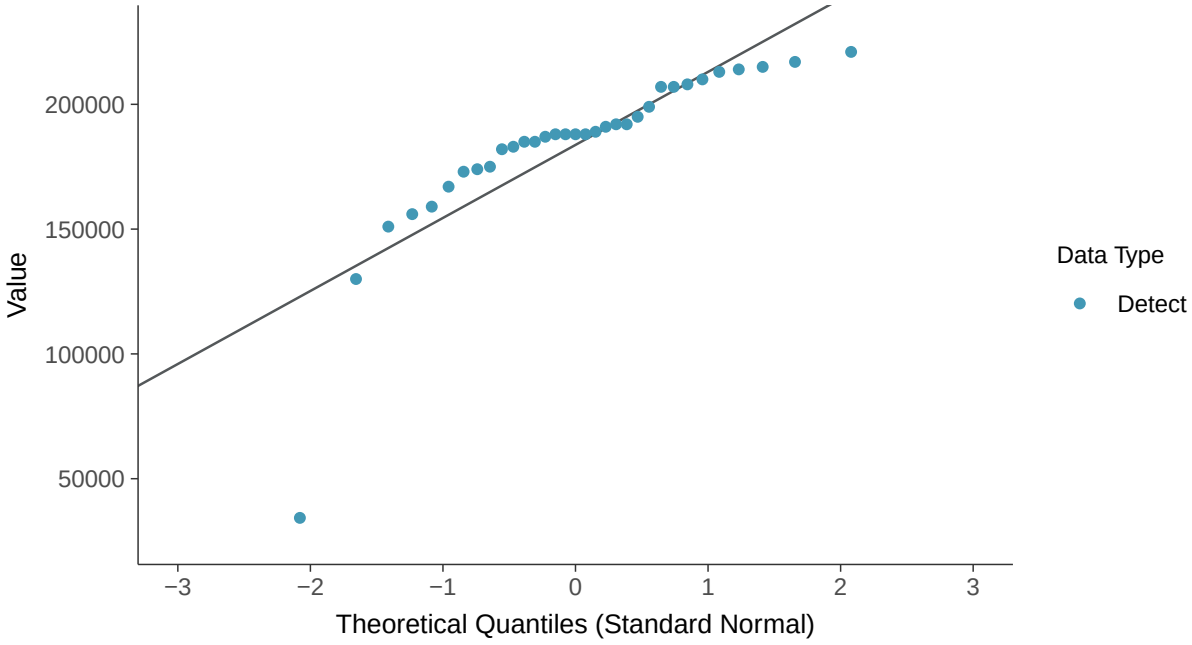
Boxplot by Season

Calcium, MW-2 (ug/L)



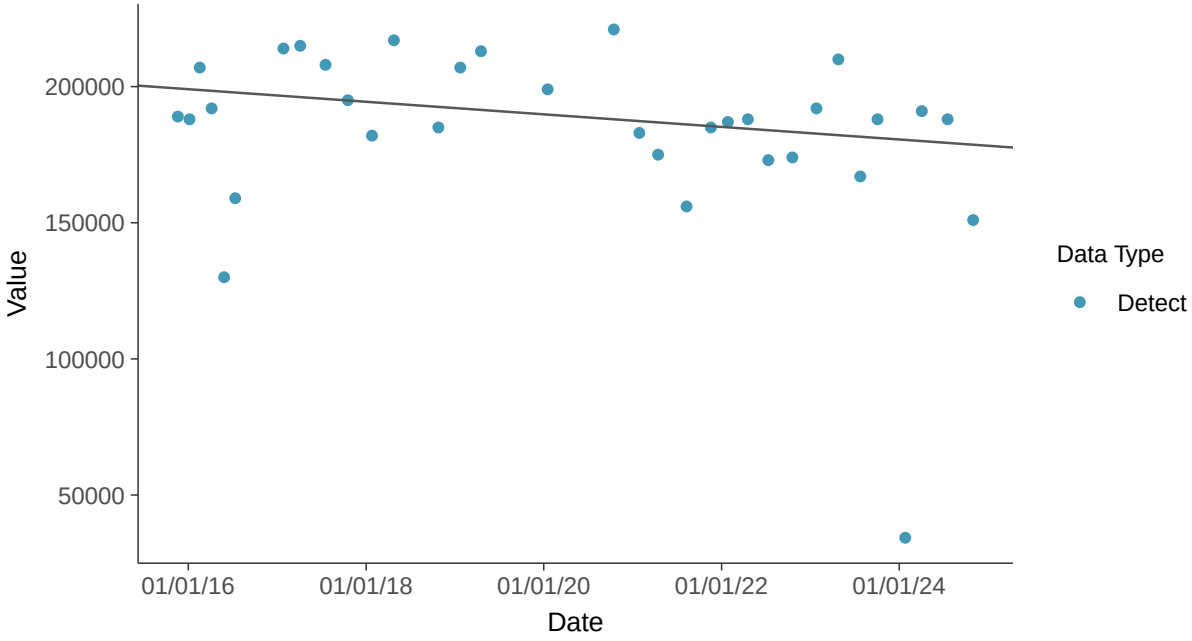
Normal Q-Q plot

Calcium, MW-2 (ug/L)



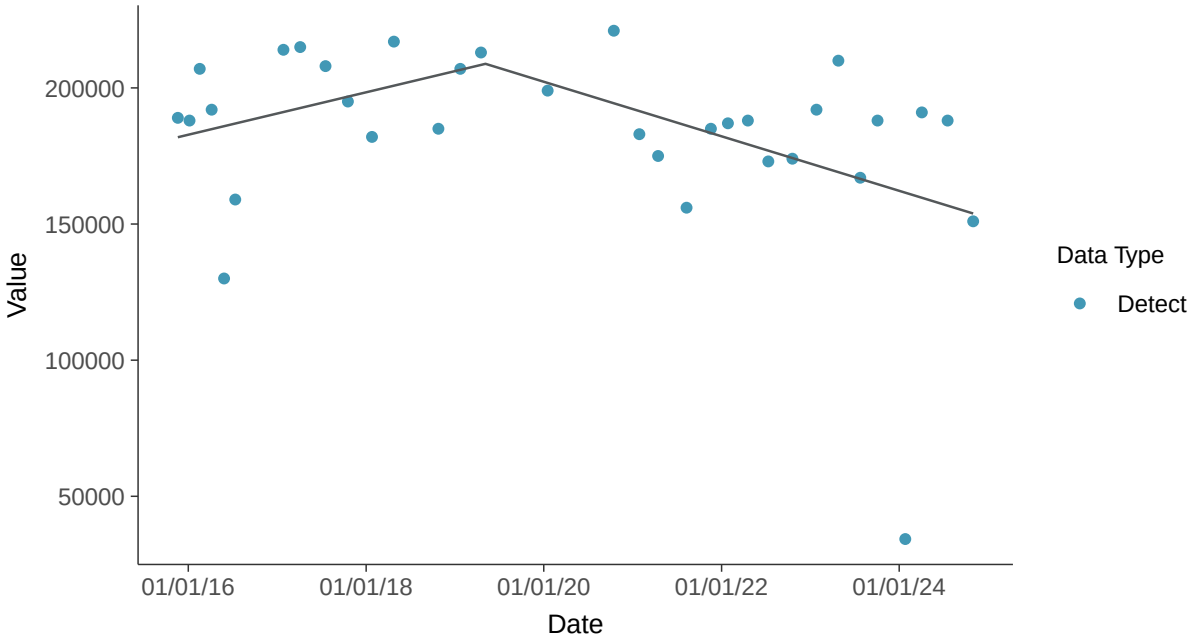
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-2 (ug/L)



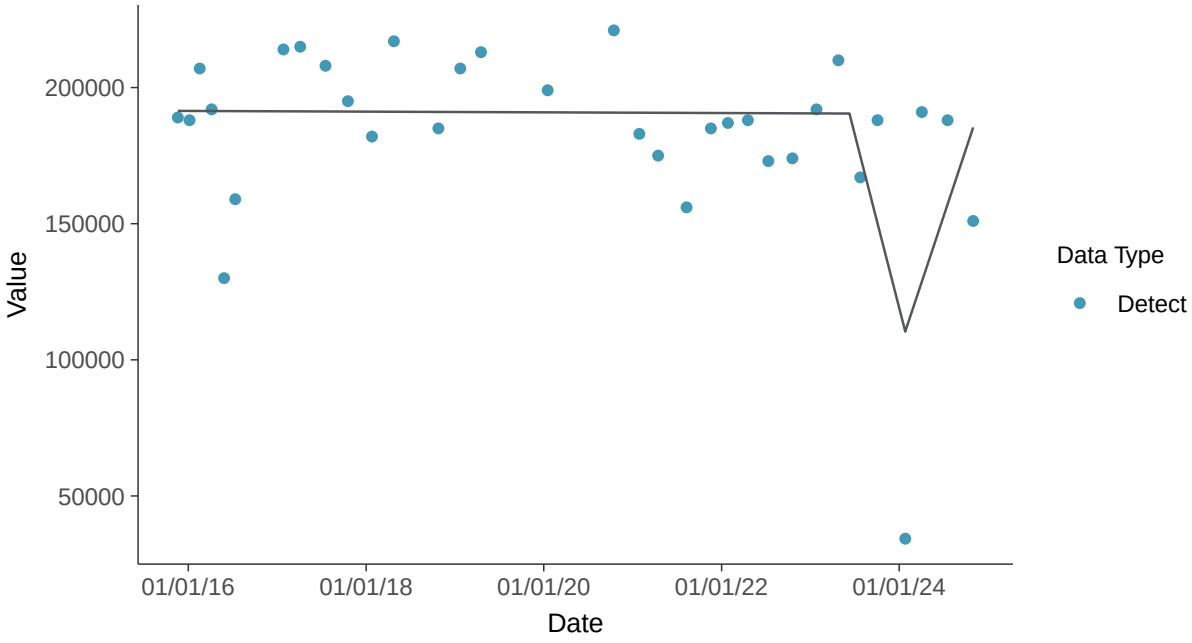
Trend Regression: Piecewise Linear-Linear

Calcium, MW-2 (ug/L)



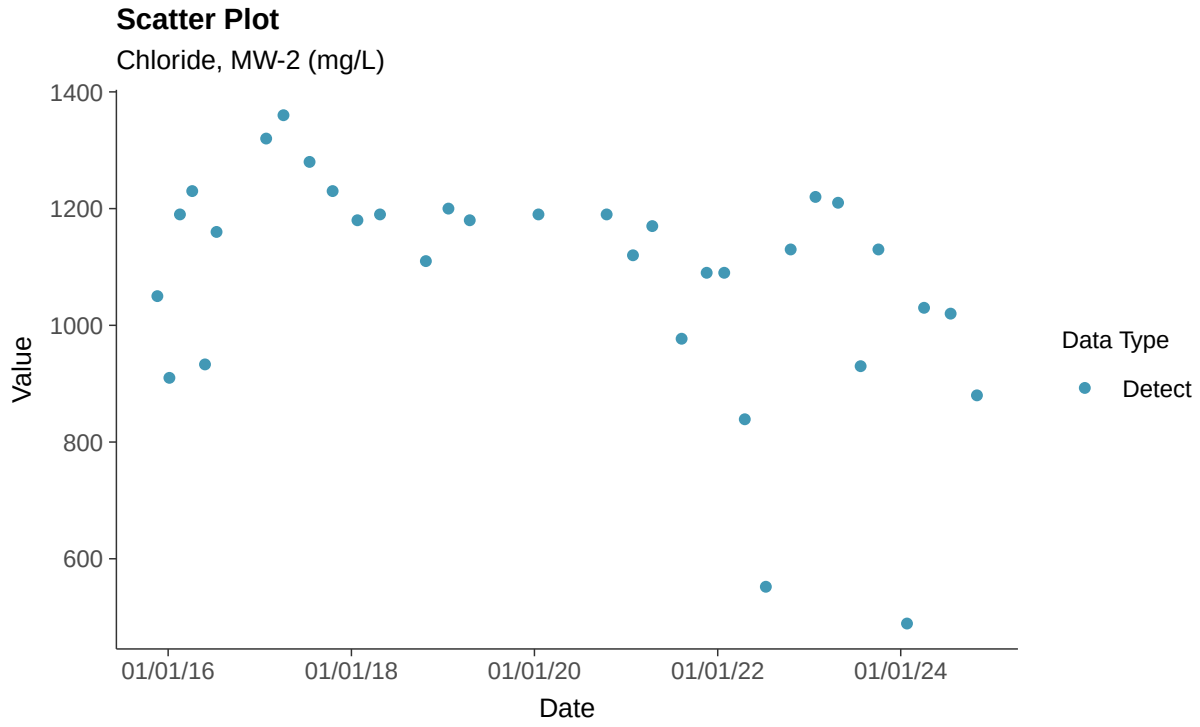
Trend Regression: Piecewise Linear-Linear-Linear

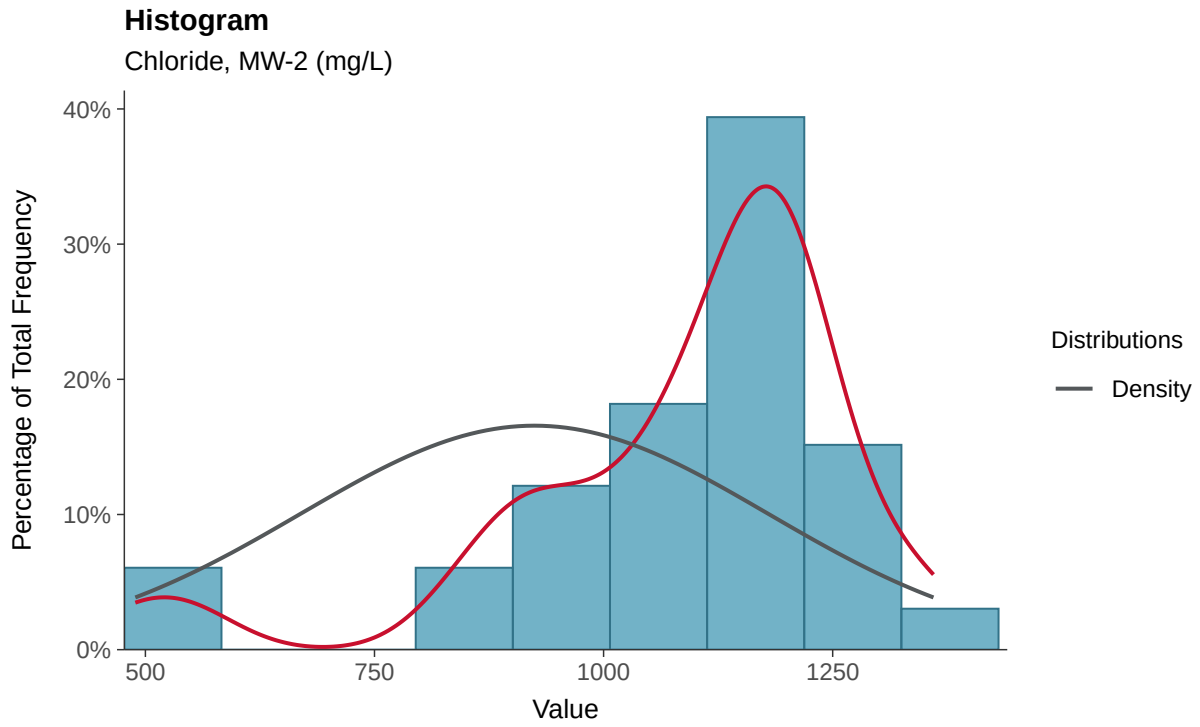
Calcium, MW-2 (ug/L)



App. III: Chloride, MW-2

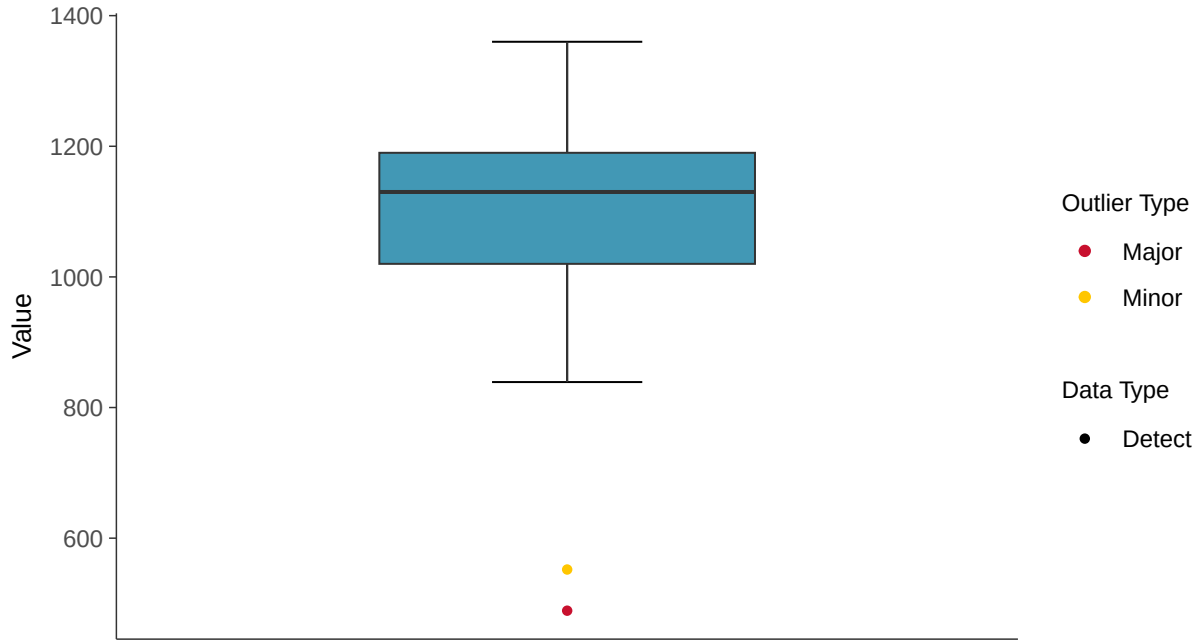
ID: 02_02_108





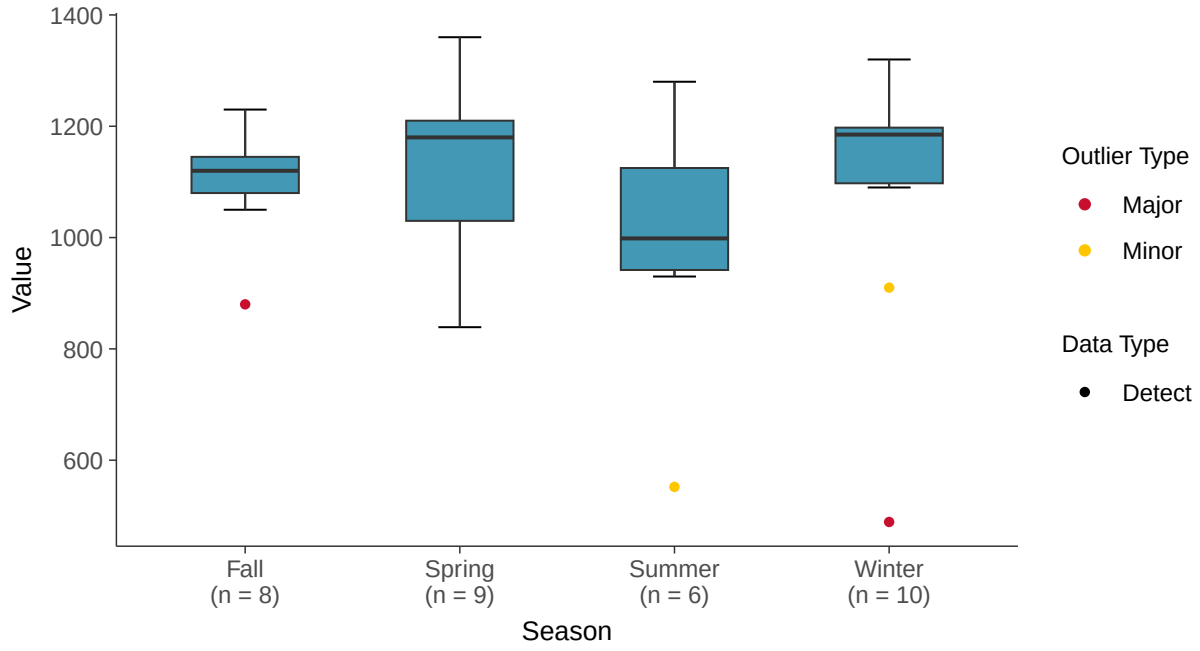
Boxplot

Chloride, MW-2 (mg/L)



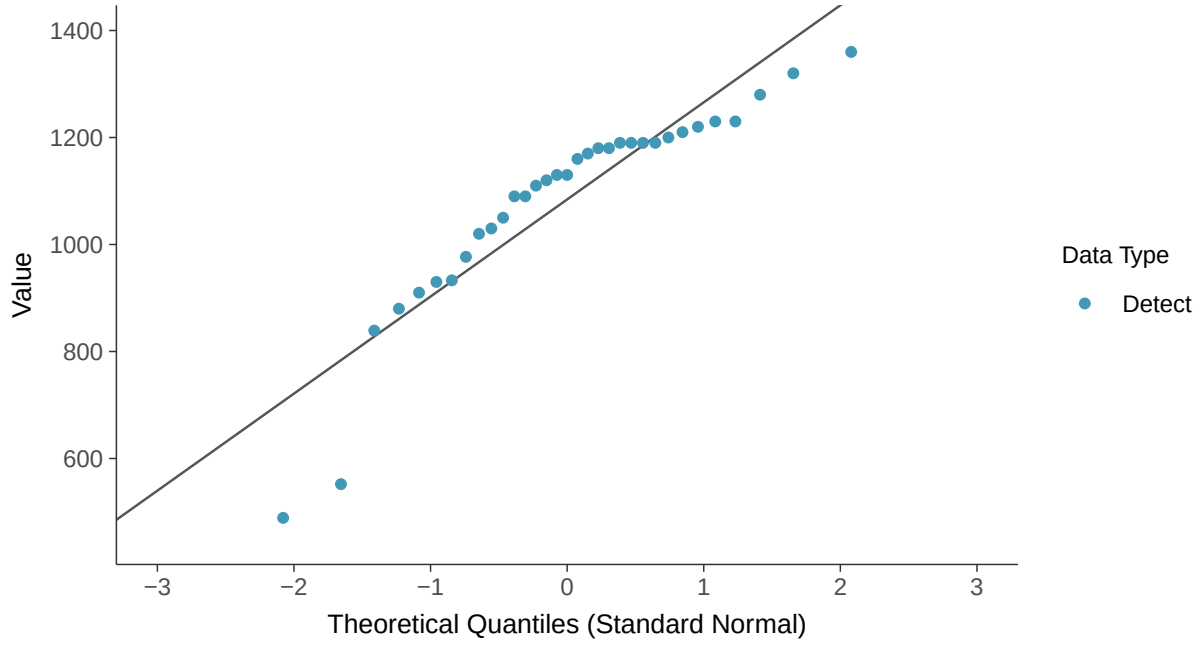
Boxplot by Season

Chloride, MW-2 (mg/L)



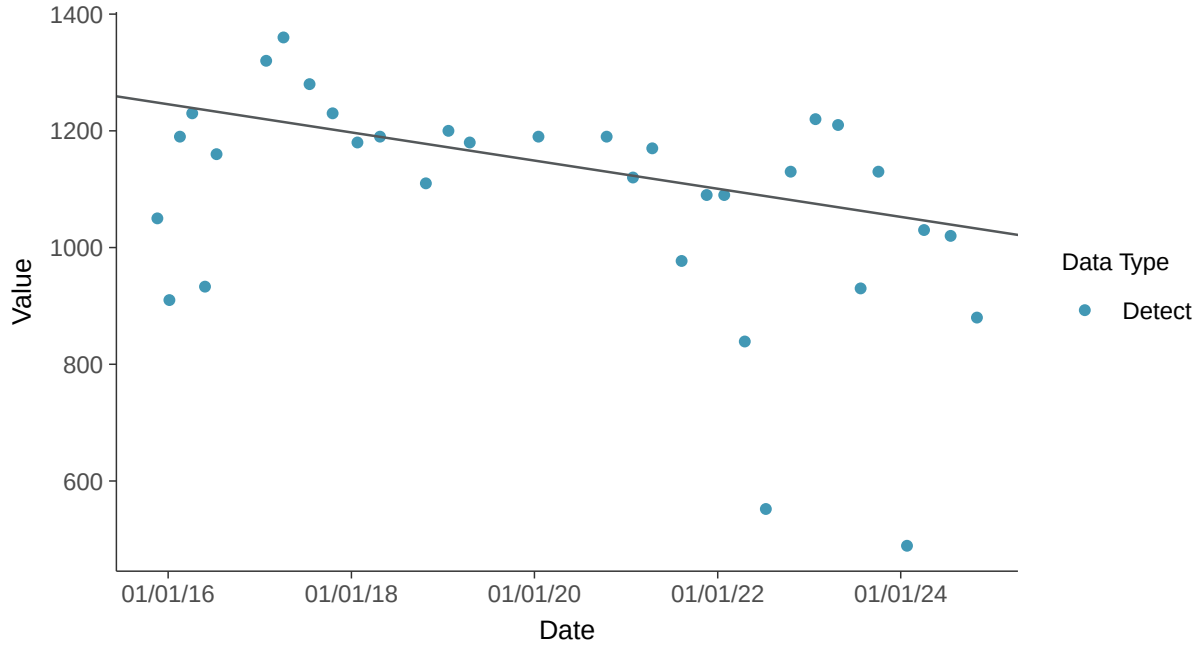
Normal Q-Q plot

Chloride, MW-2 (mg/L)



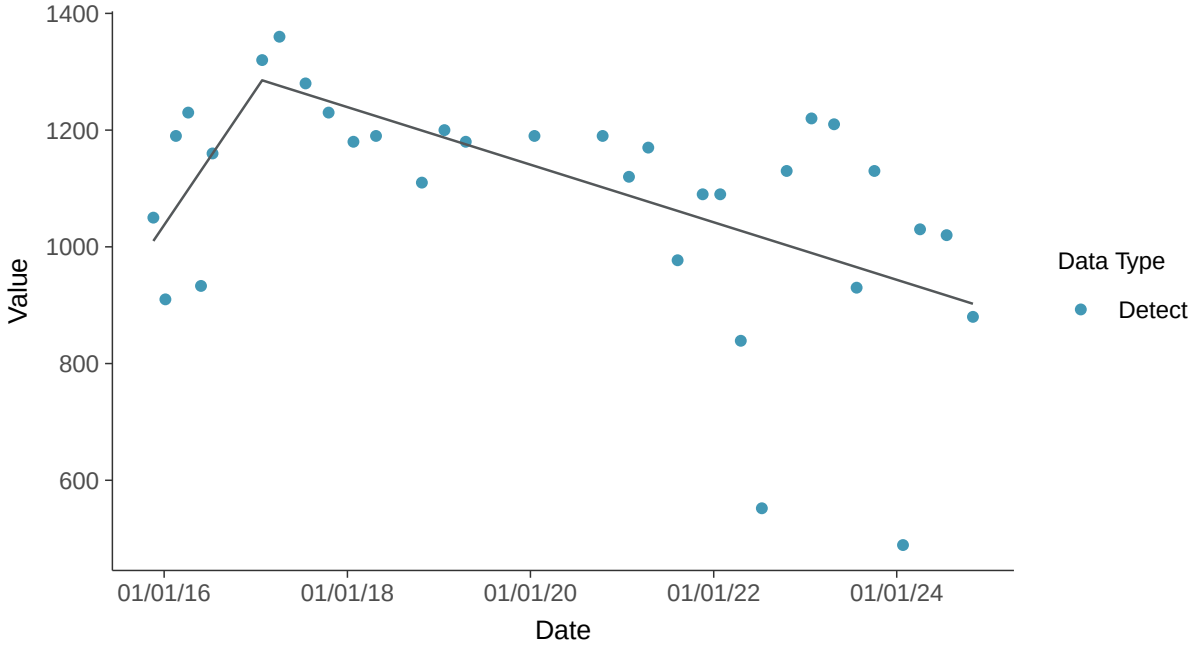
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-2 (mg/L)



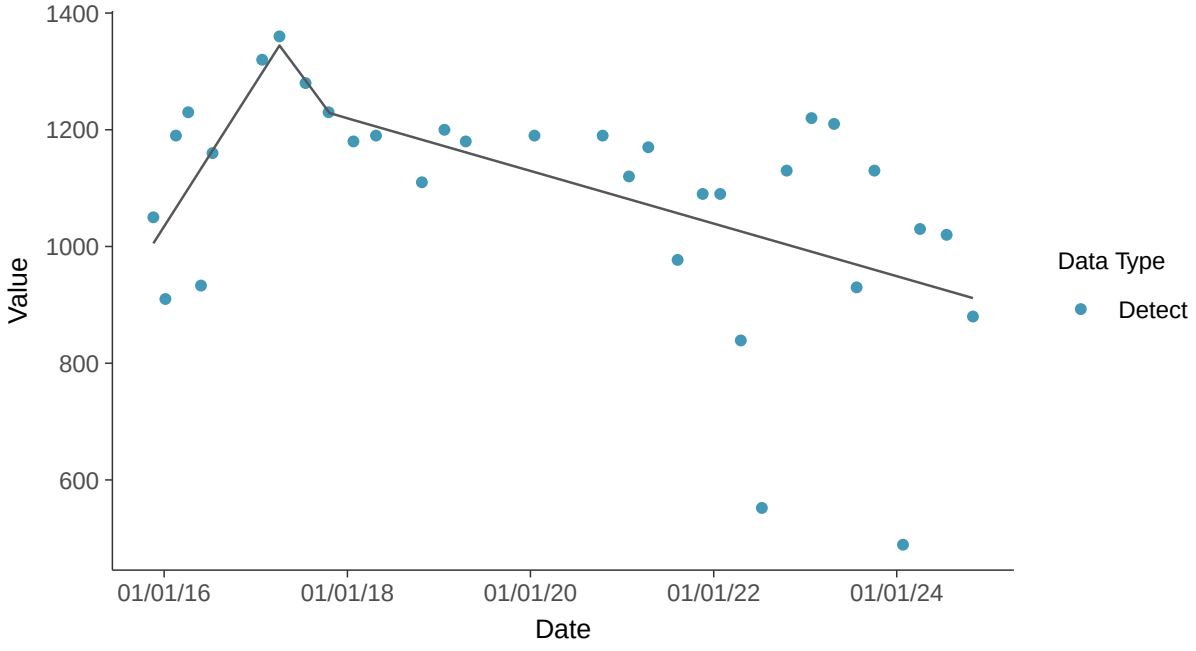
Trend Regression: Piecewise Linear-Linear

Chloride, MW-2 (mg/L)



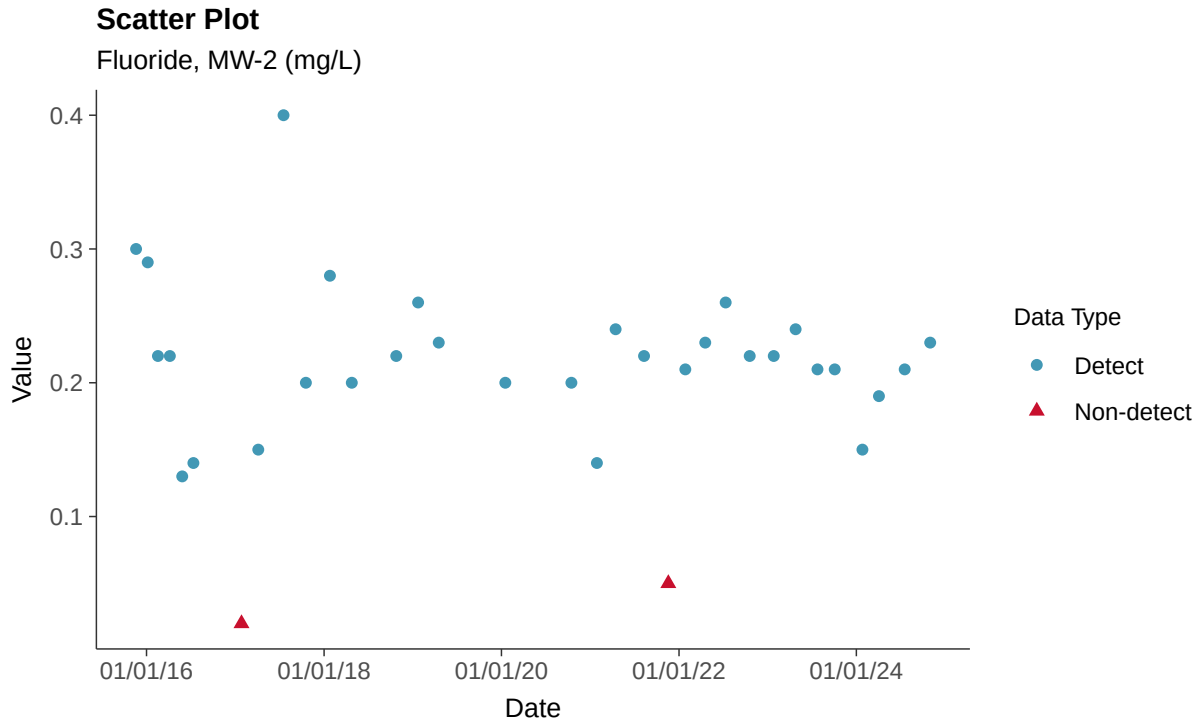
Trend Regression: Piecewise Linear-Linear-Linear

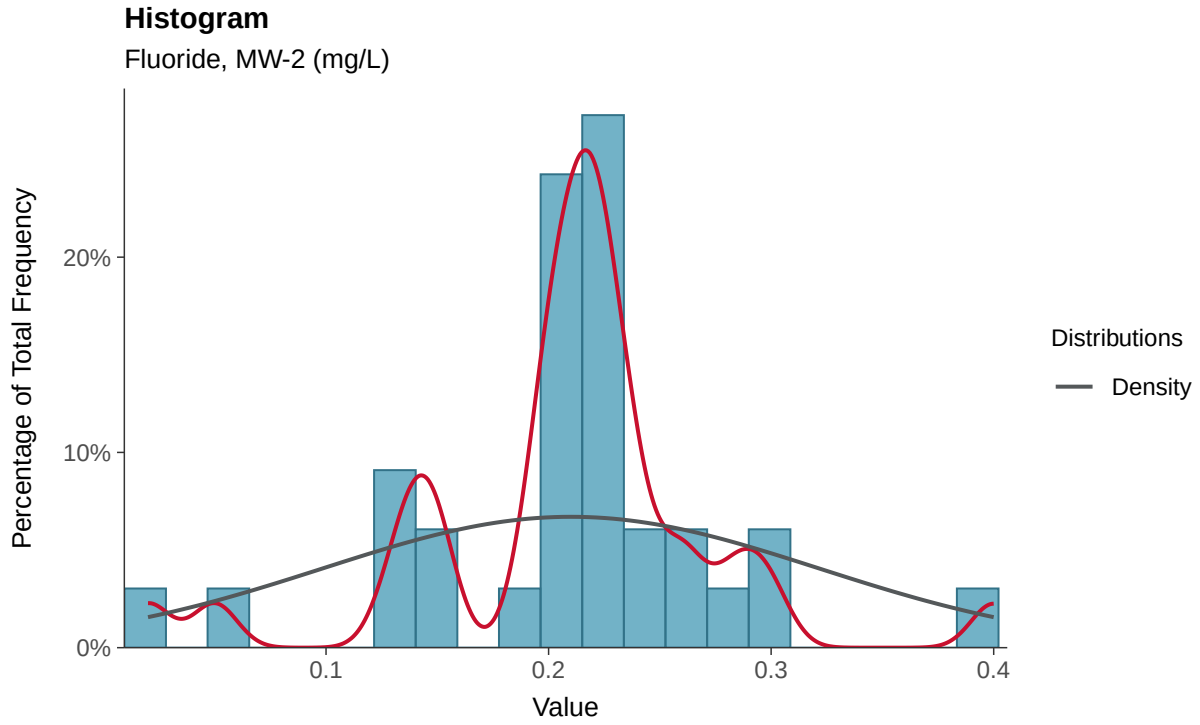
Chloride, MW-2 (mg/L)



App. III: Fluoride, MW-2

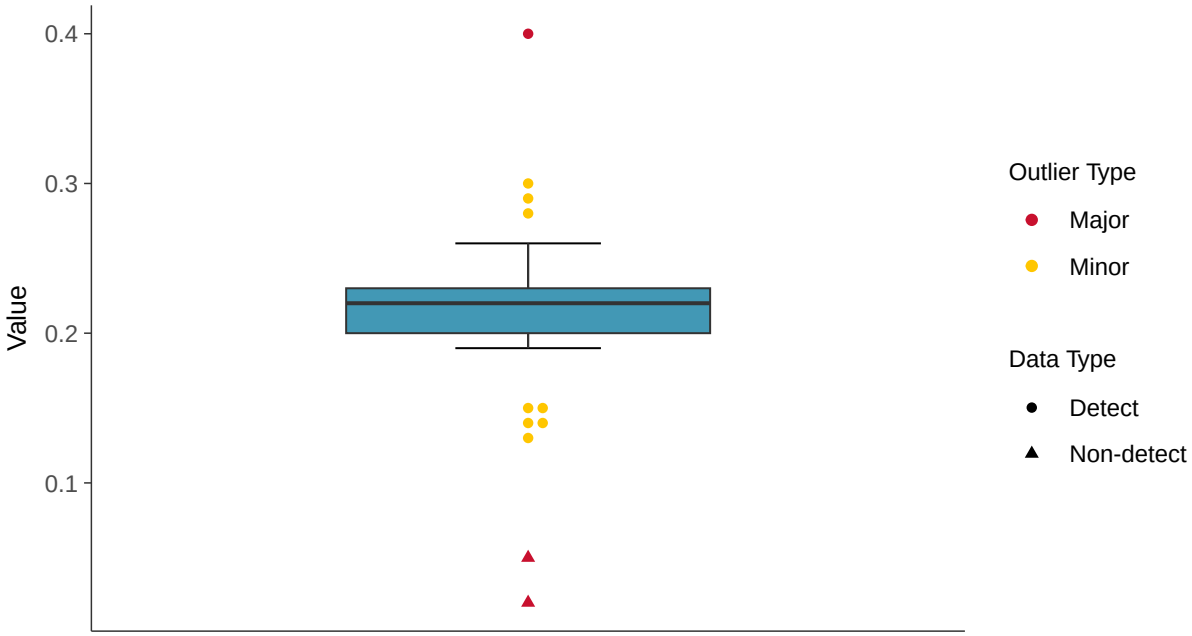
ID: 02_02_112





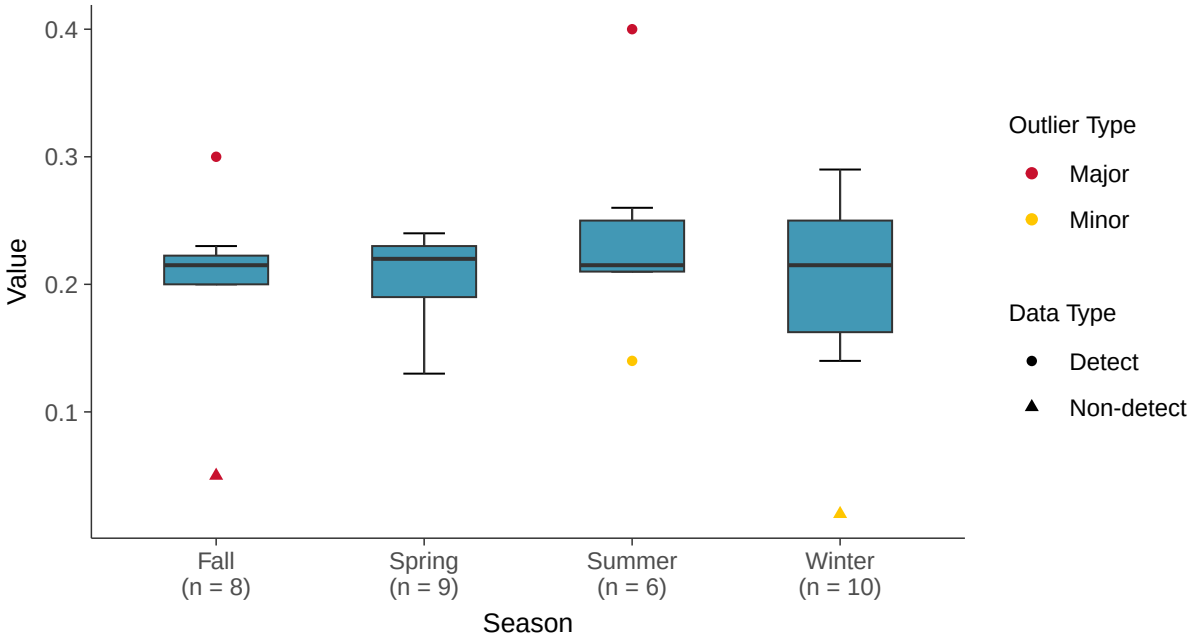
Boxplot

Fluoride, MW-2 (mg/L)



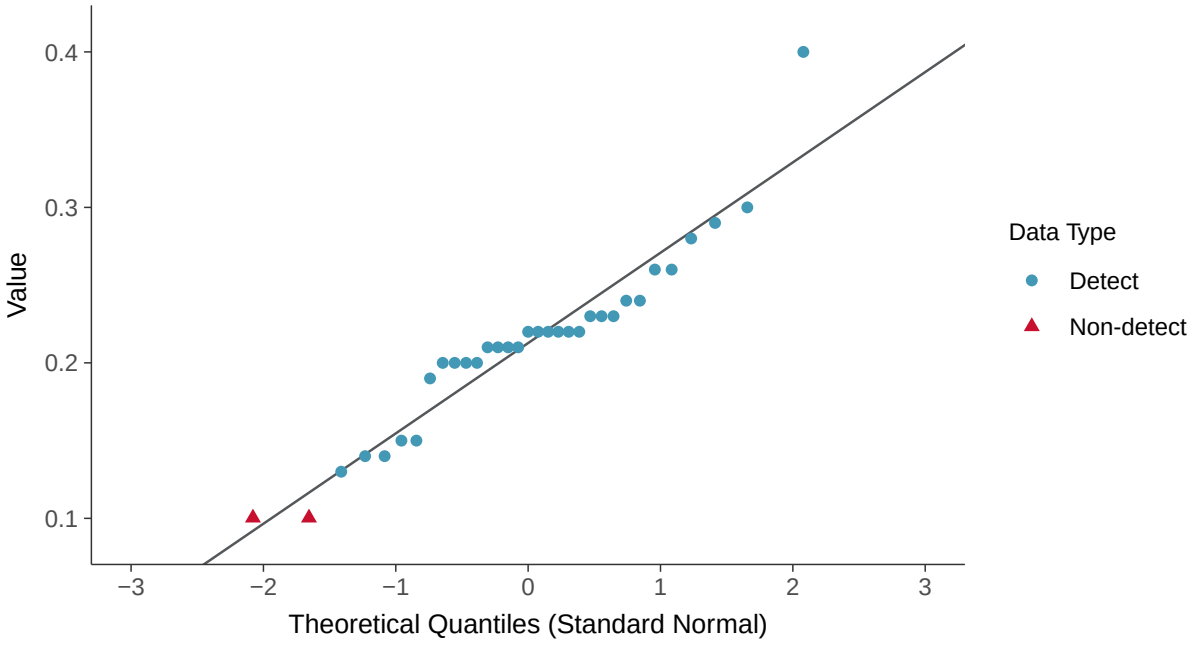
Boxplot by Season

Fluoride, MW-2 (mg/L)



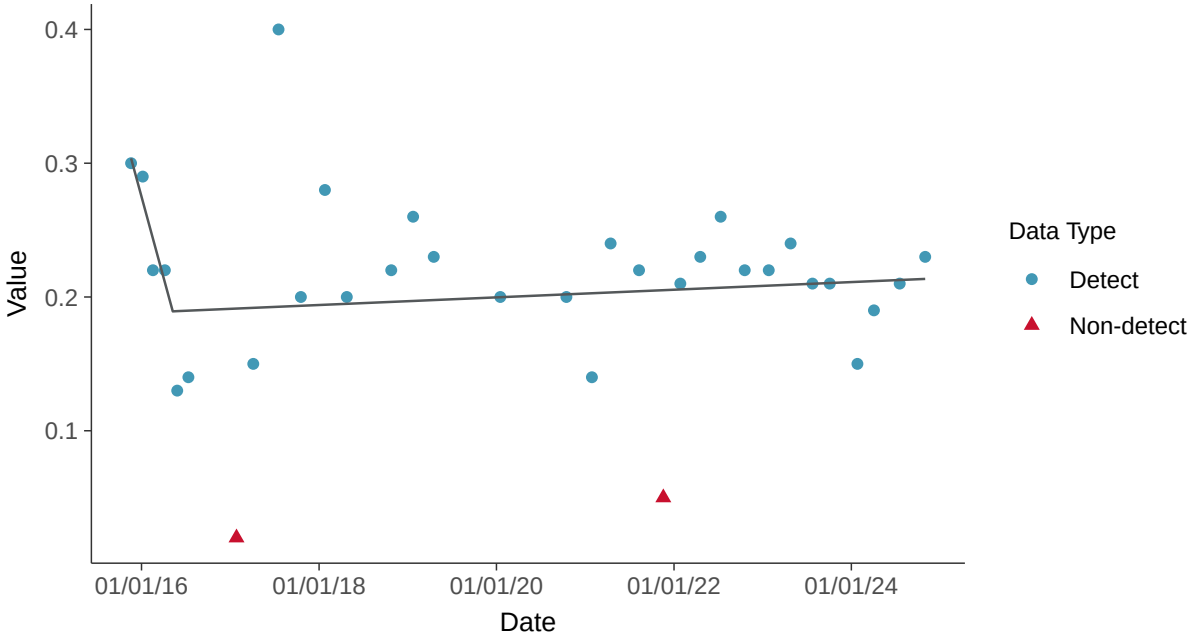
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



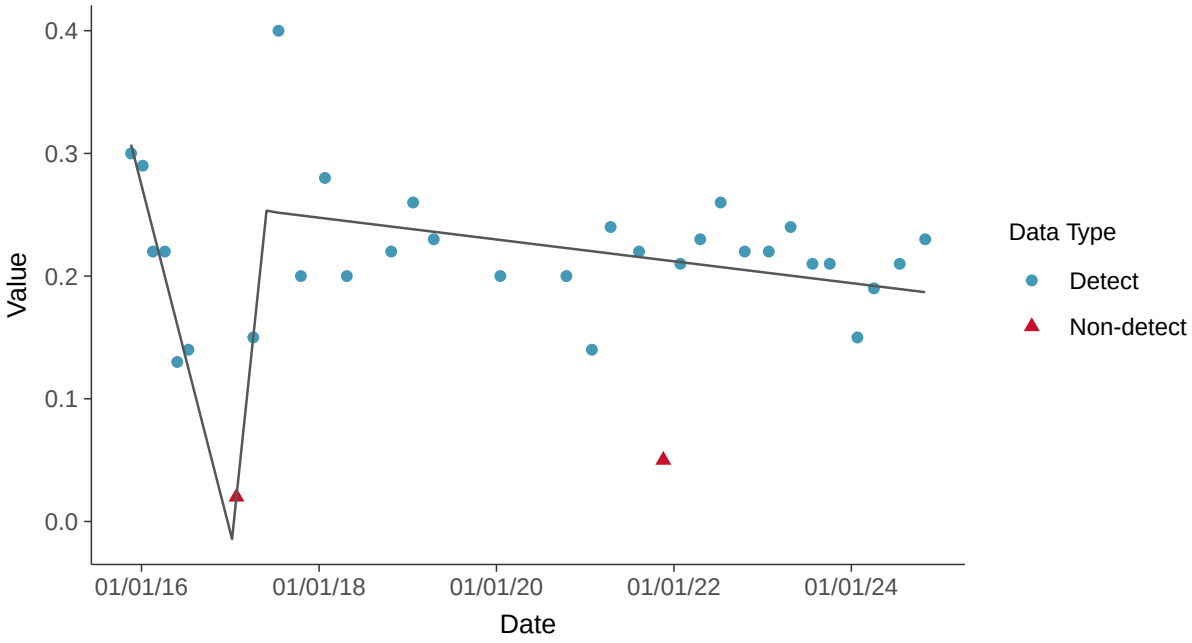
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-2 (mg/L)

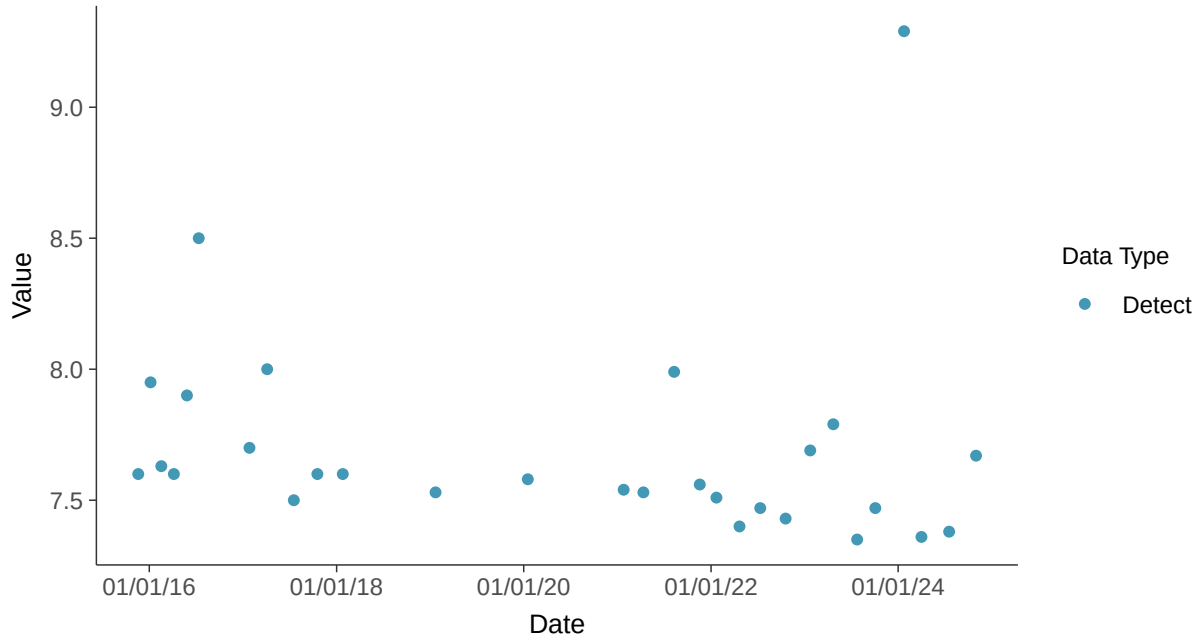


App. III: pH (Field), MW-2

ID: 02_02_118

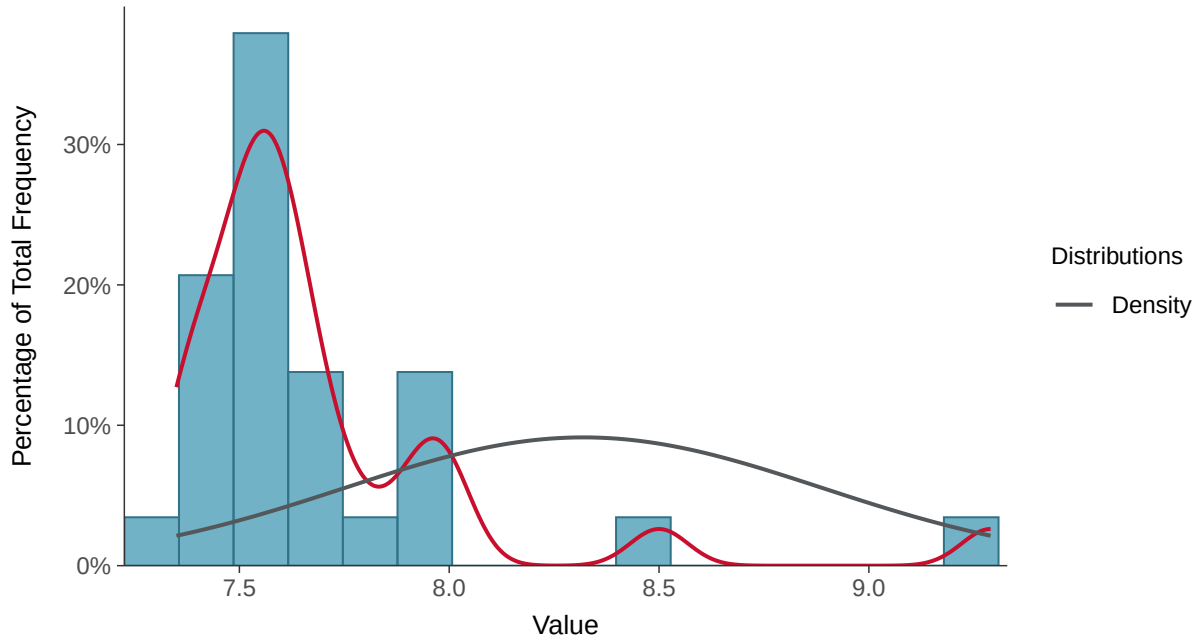
Scatter Plot

pH (Field), MW-2 (S.U.)



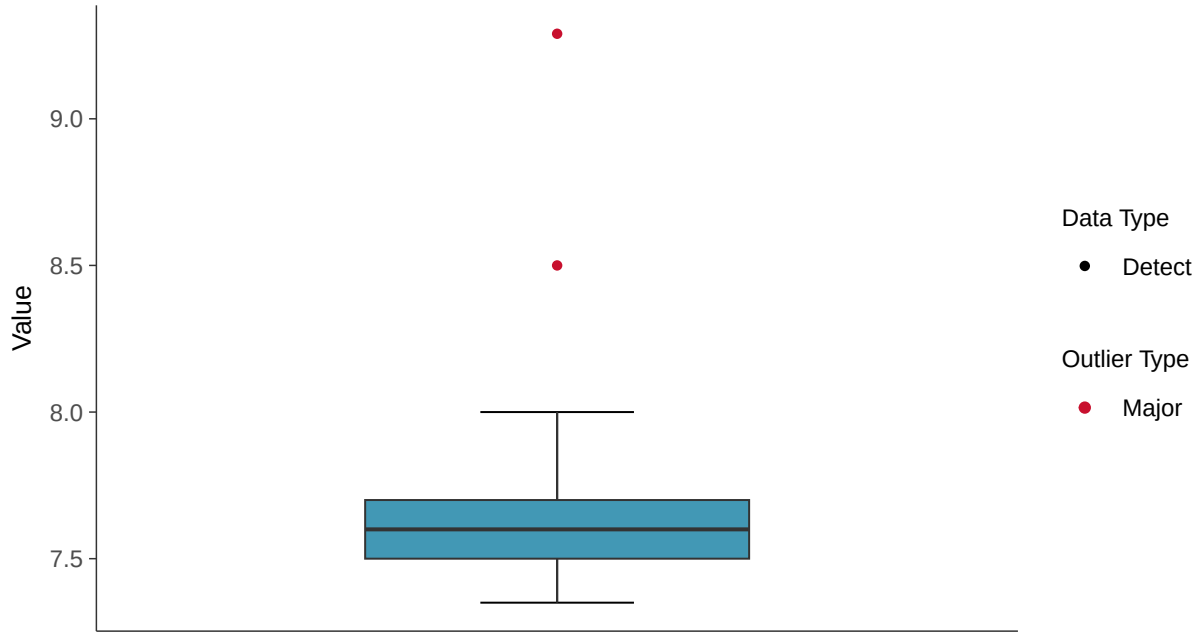
Histogram

pH (Field), MW-2 (S.U.)



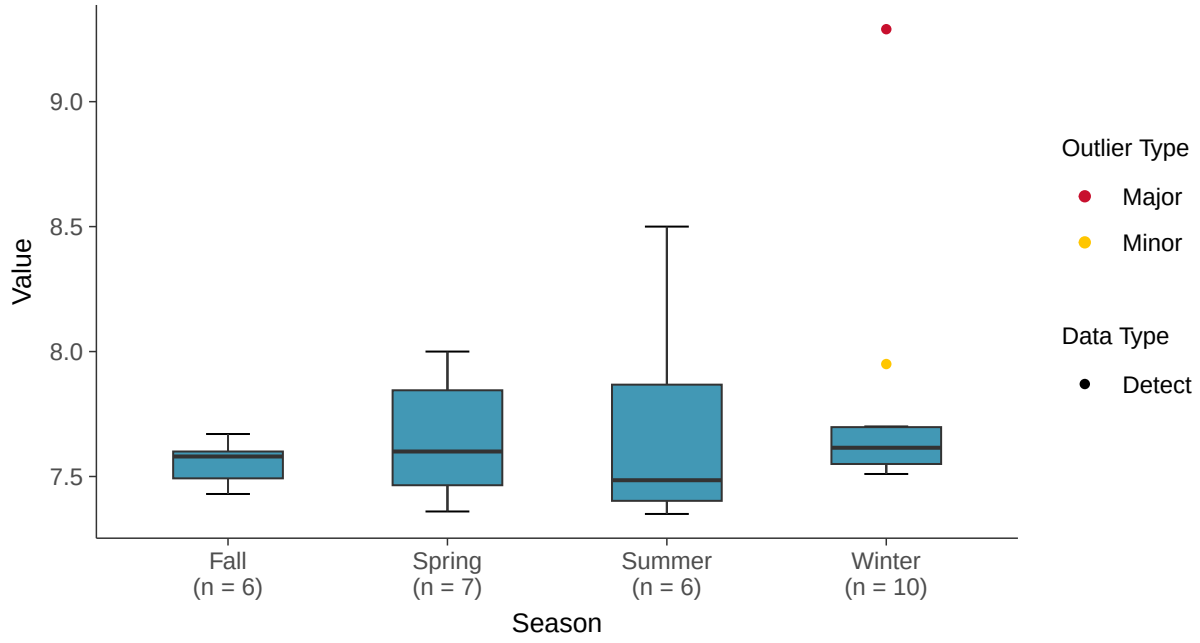
Boxplot

pH (Field), MW-2 (S.U.)



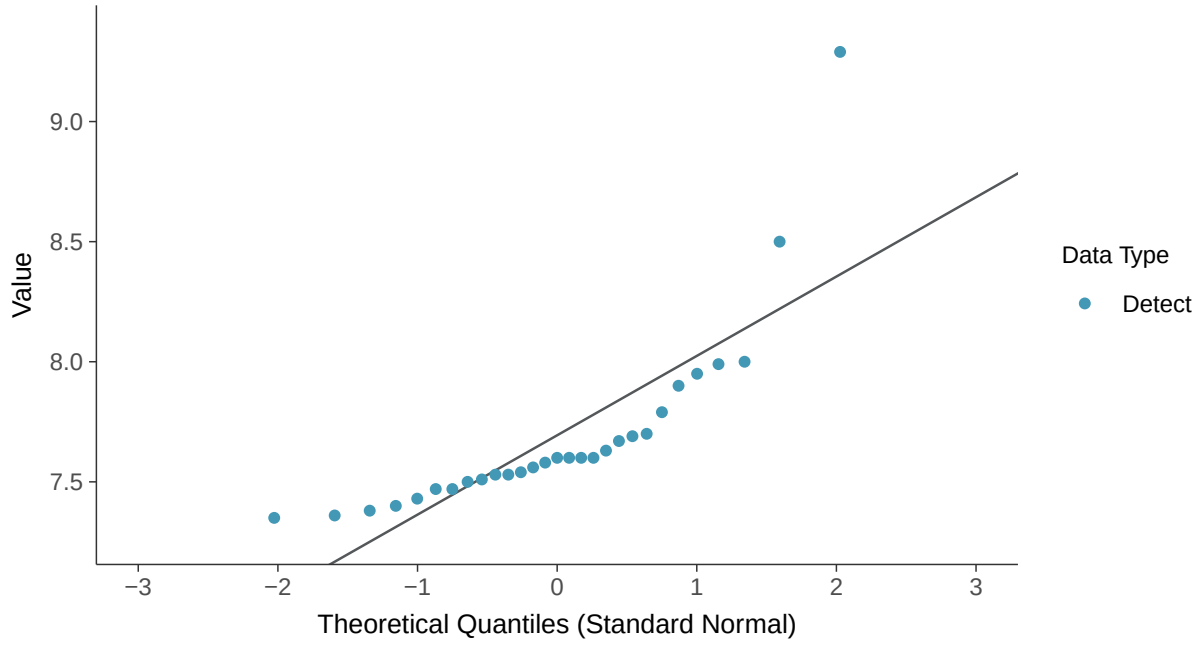
Boxplot by Season

pH (Field), MW-2 (S.U.)



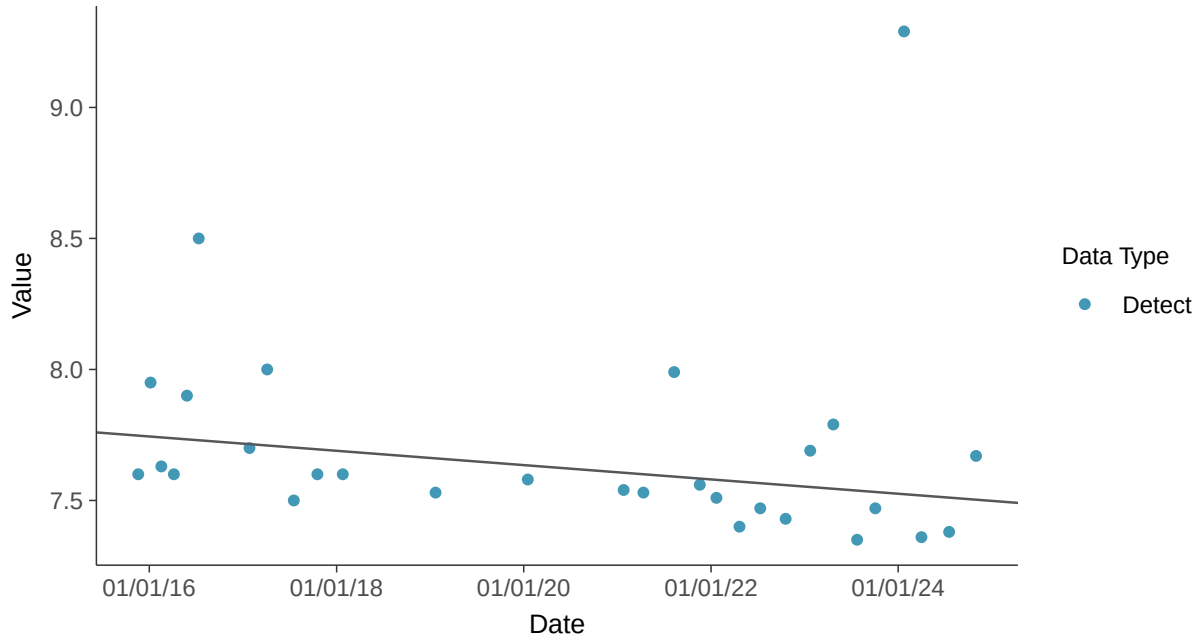
Normal Q-Q plot

pH (Field), MW-2 (S.U.)



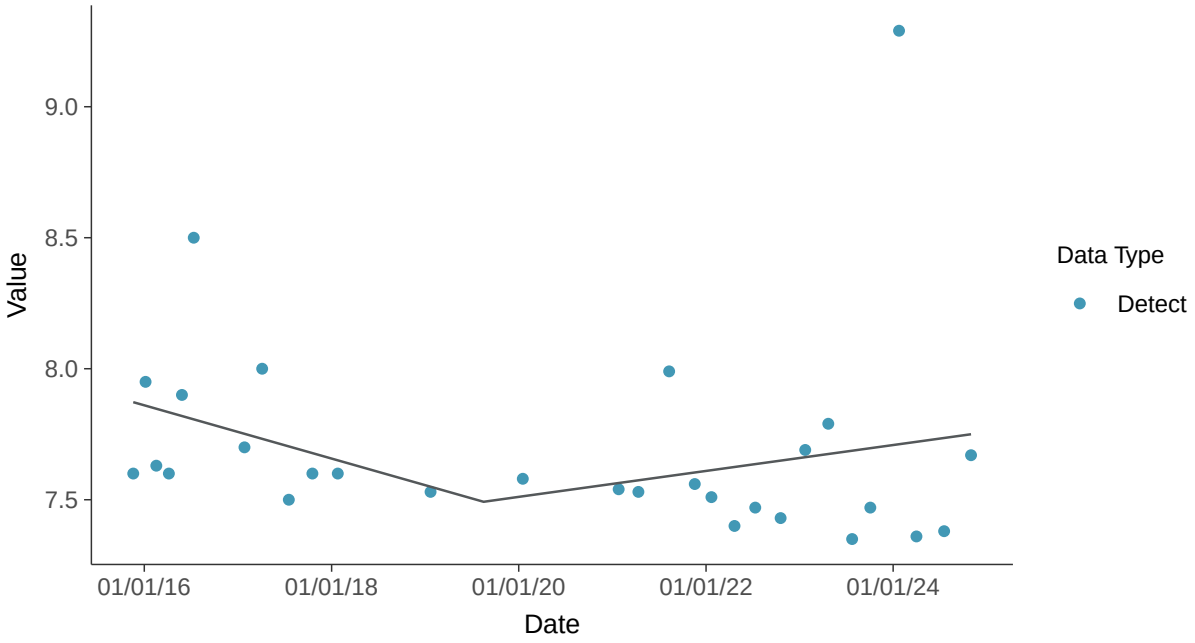
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-2 (S.U.)



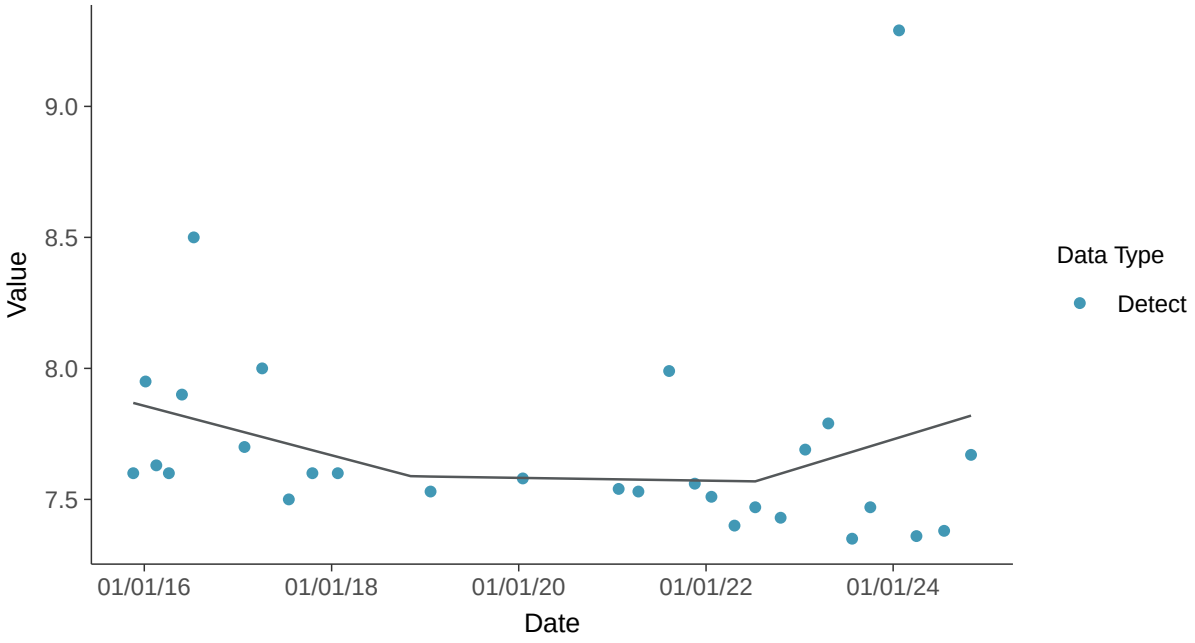
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-2 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-2 (S.U.)

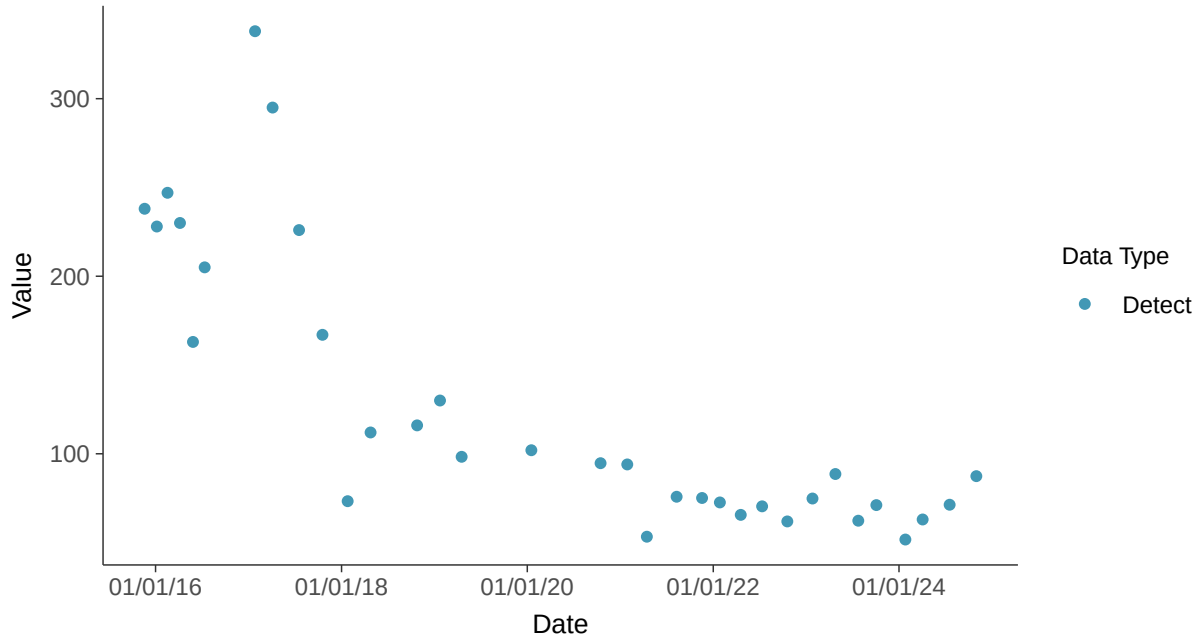


App. III: Sulfate, MW-2

ID: 02_02_123

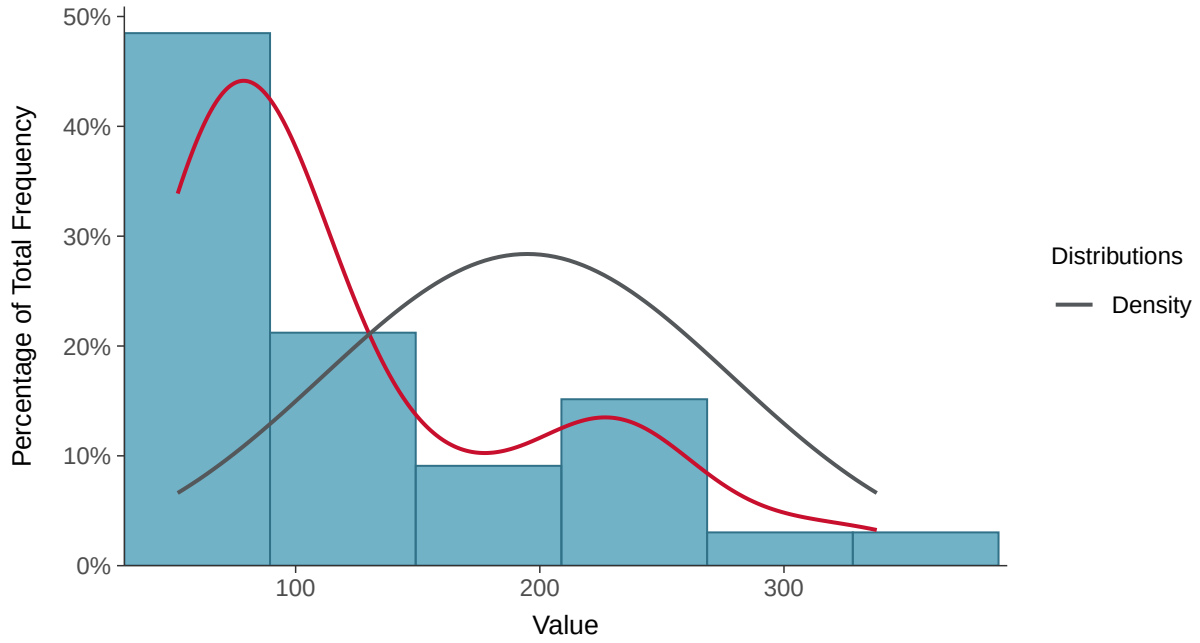
Scatter Plot

Sulfate, MW-2 (mg/L)



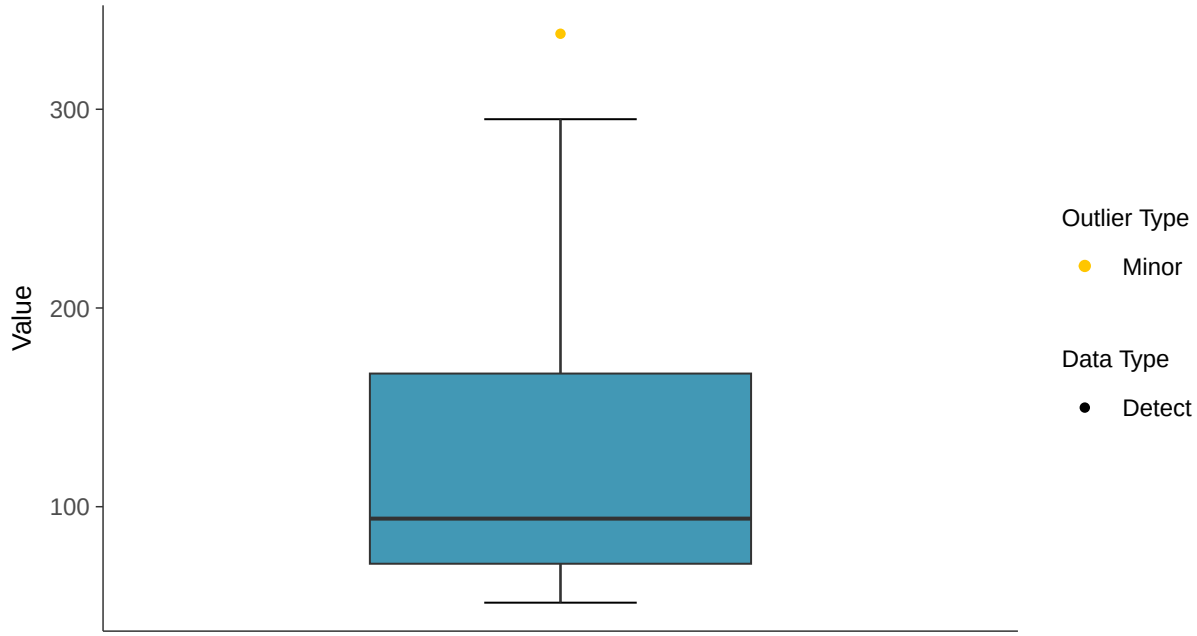
Histogram

Sulfate, MW-2 (mg/L)



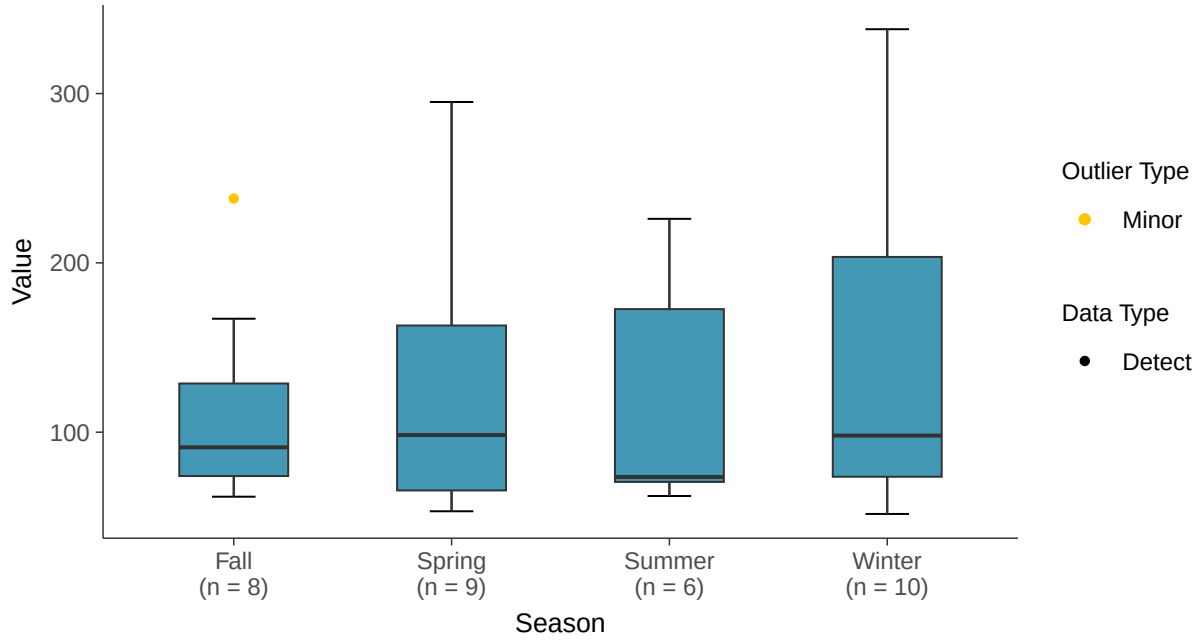
Boxplot

Sulfate, MW-2 (mg/L)



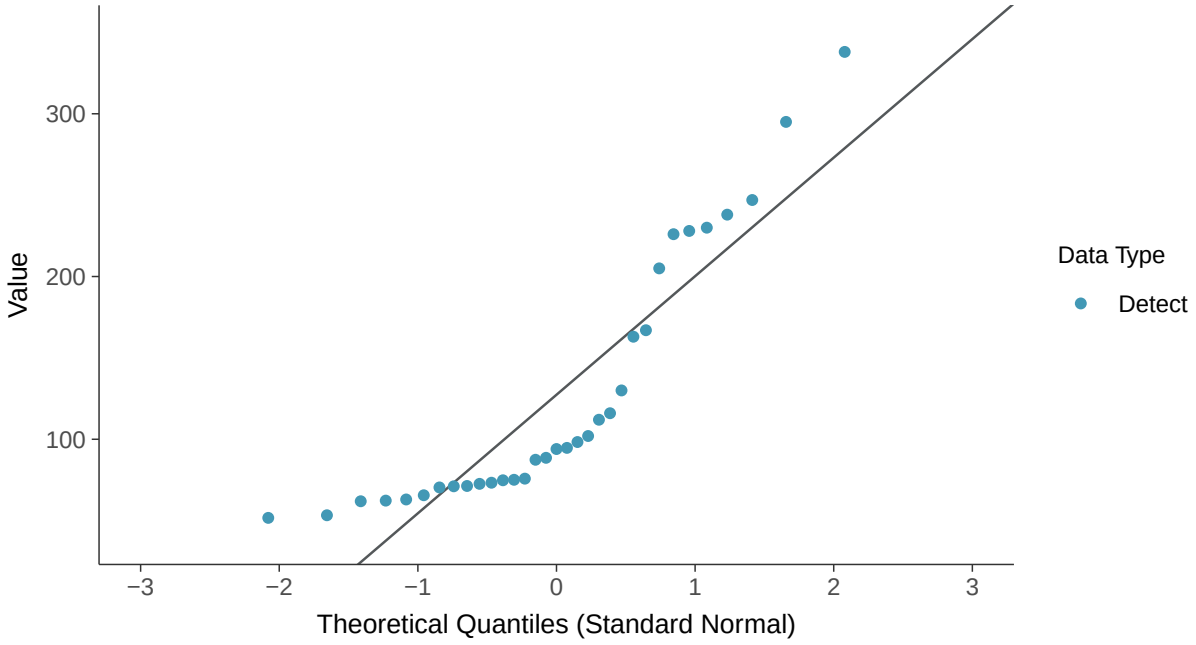
Boxplot by Season

Sulfate, MW-2 (mg/L)



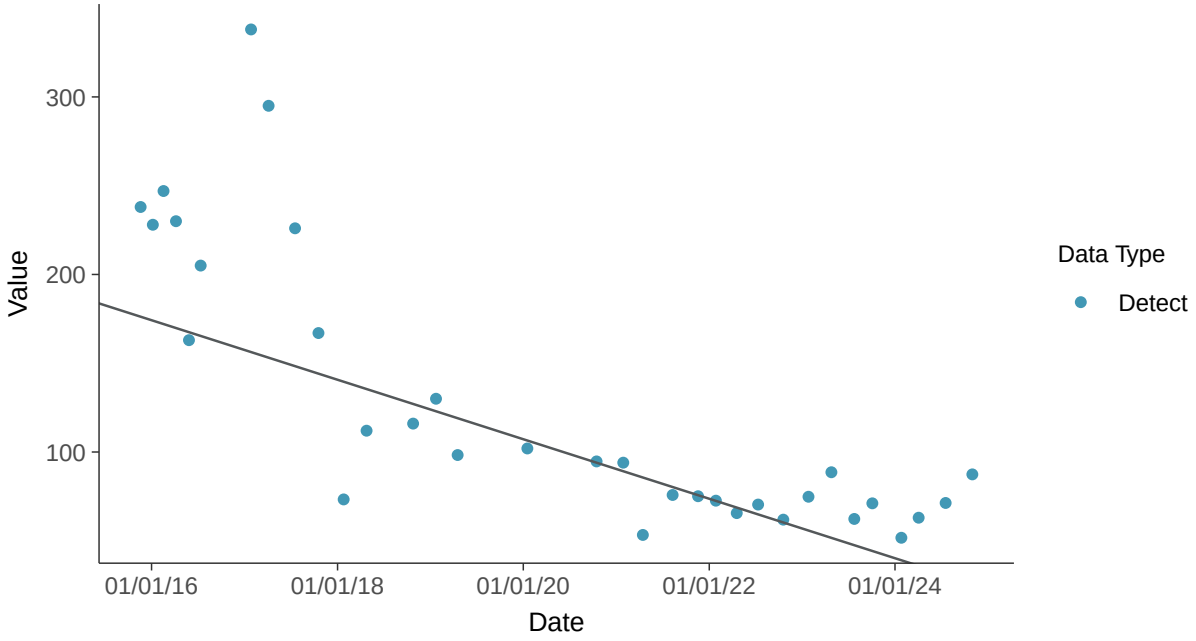
Normal Q-Q plot

Sulfate, MW-2 (mg/L)



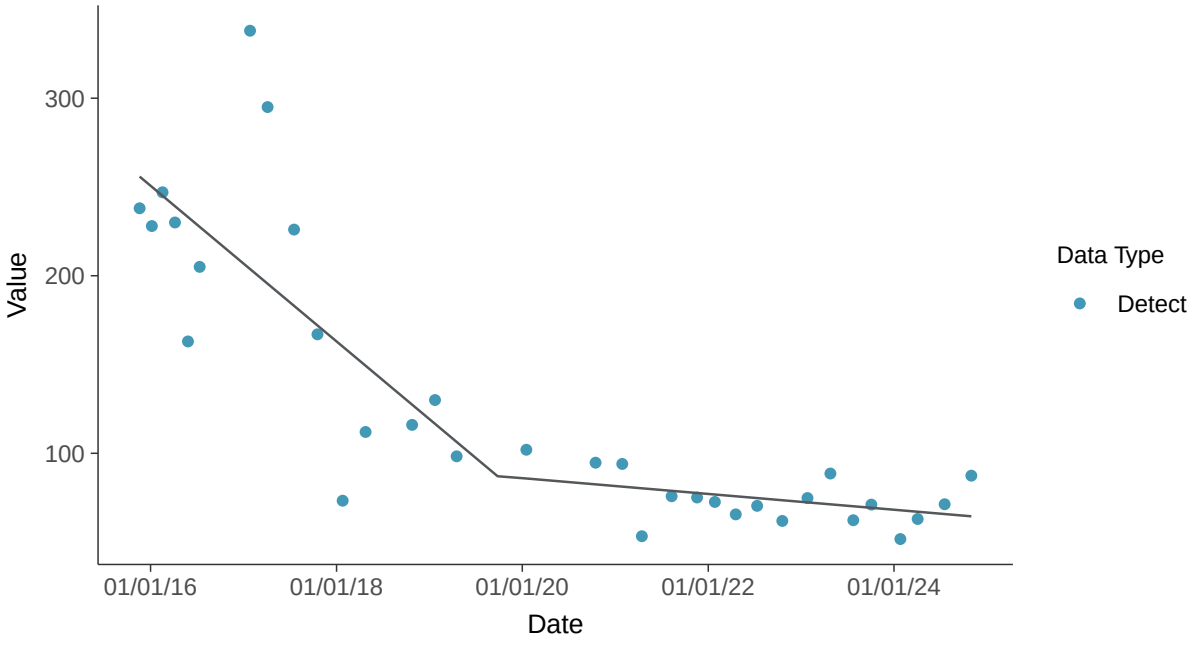
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-2 (mg/L)



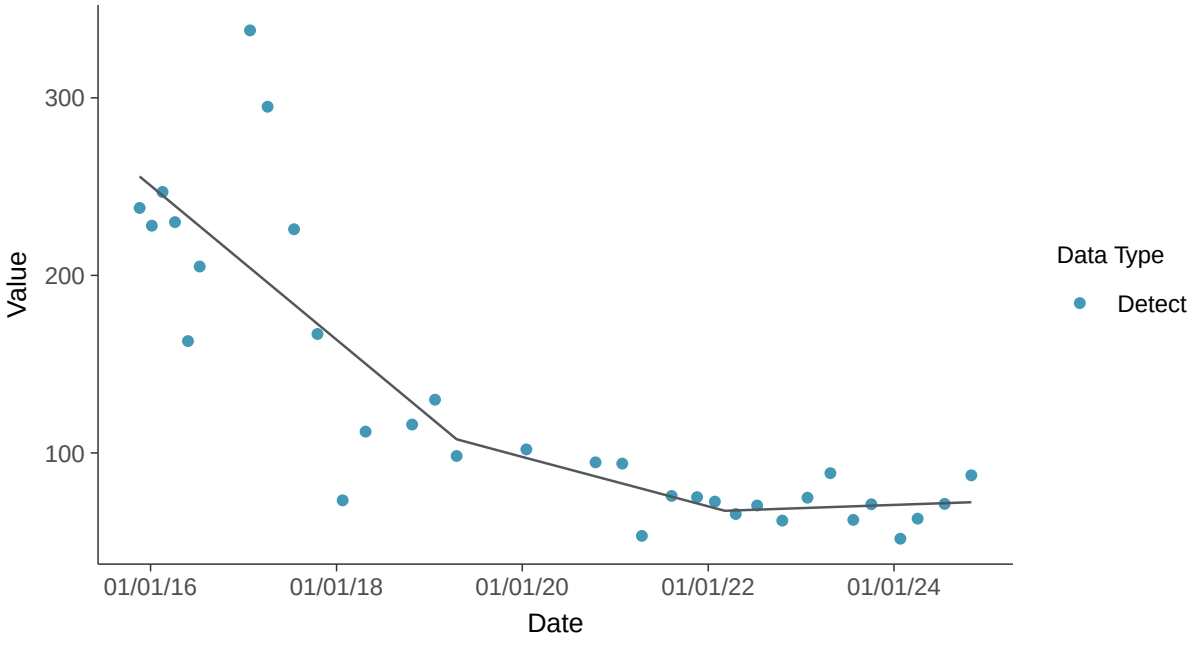
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-2 (mg/L)

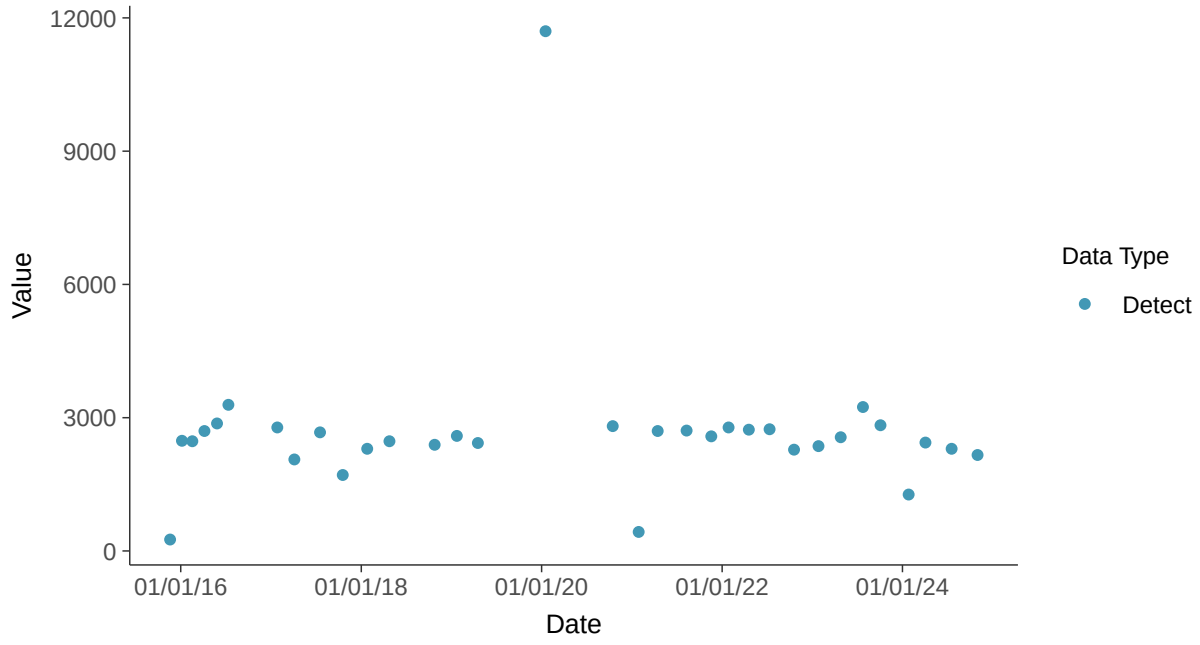


App. III: Total Dissolved Solids, MW-2

ID: 02_02_125

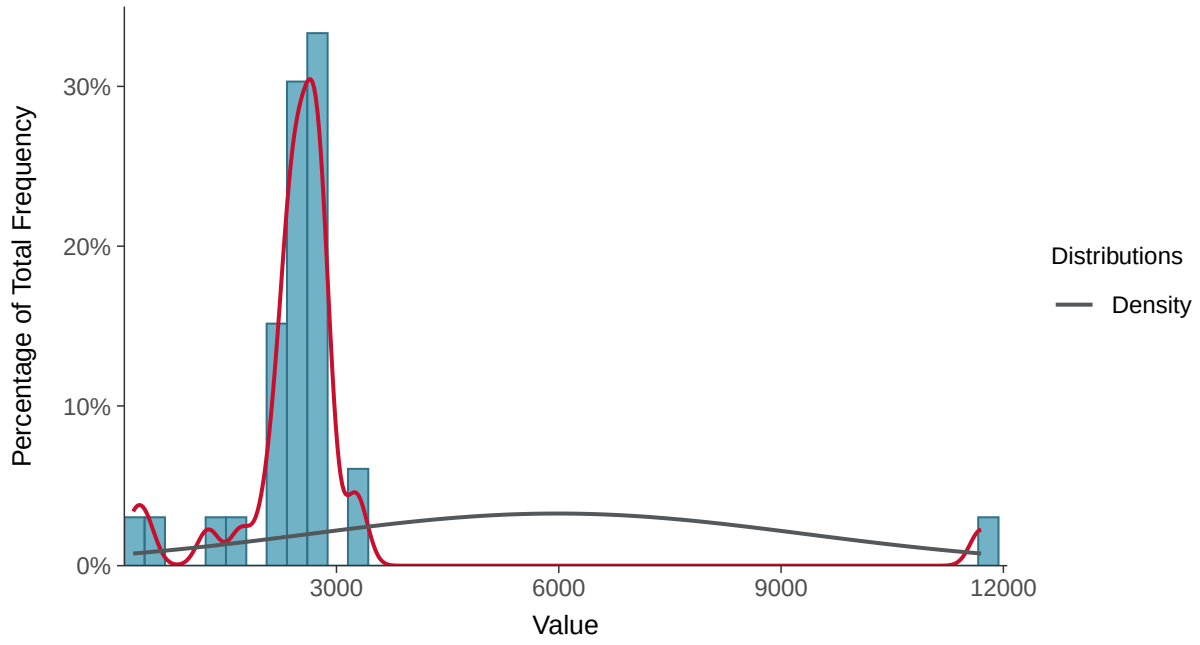
Scatter Plot

Total Dissolved Solids, MW-2 (mg/L)



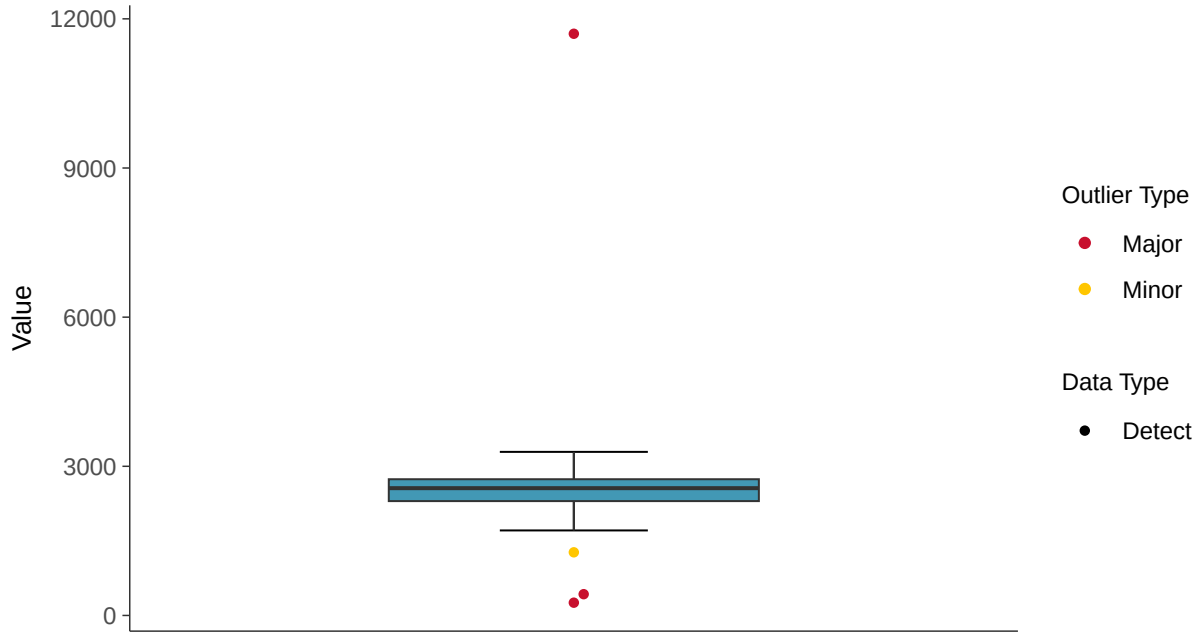
Histogram

Total Dissolved Solids, MW-2 (mg/L)



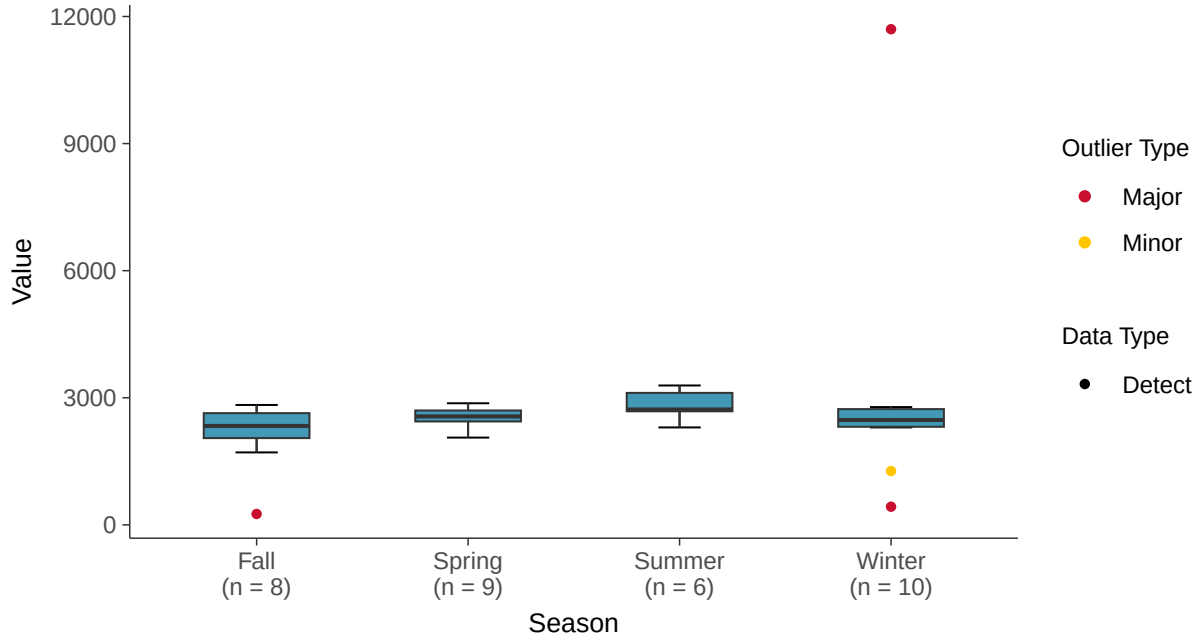
Boxplot

Total Dissolved Solids, MW-2 (mg/L)



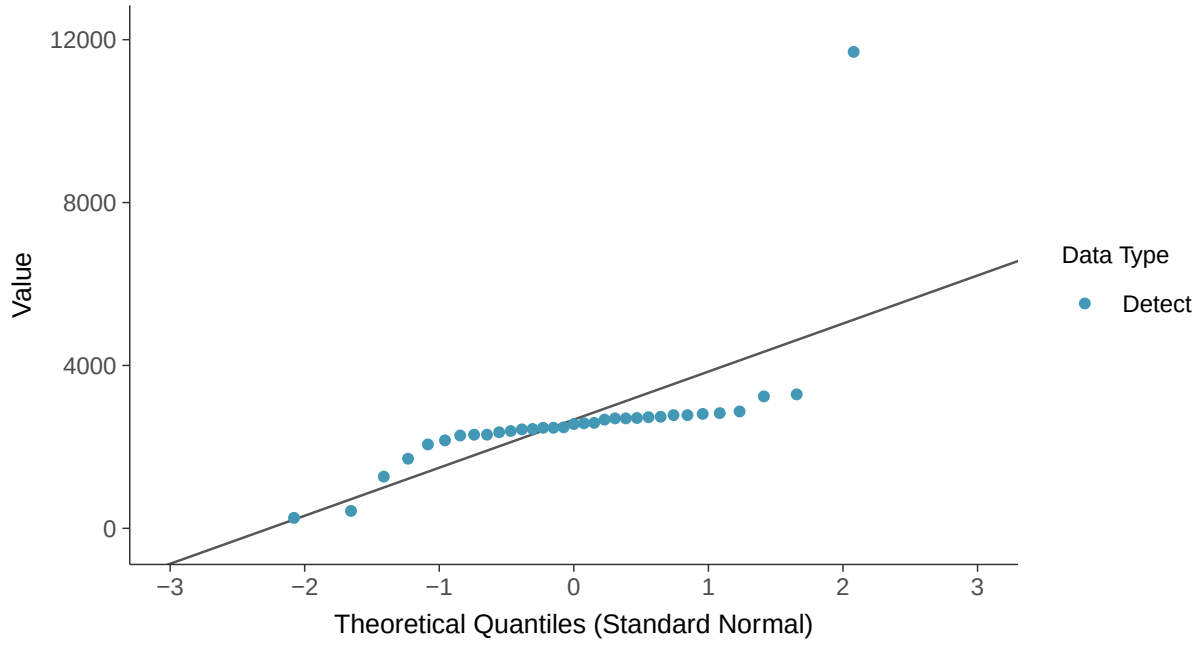
Boxplot by Season

Total Dissolved Solids, MW-2 (mg/L)



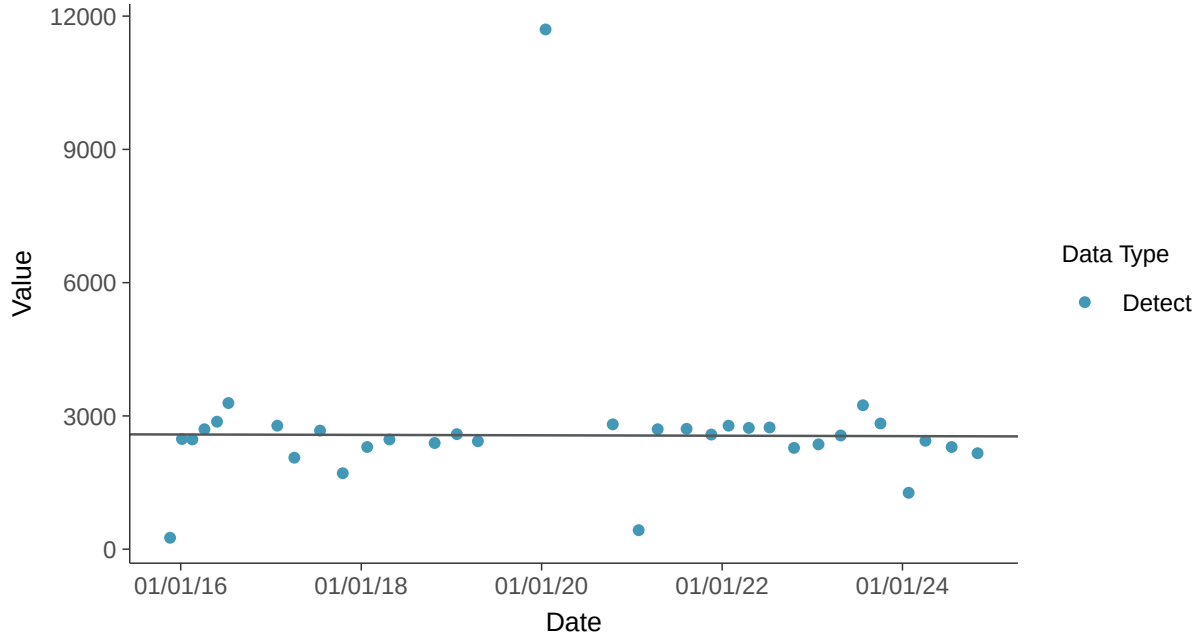
Normal Q-Q plot

Total Dissolved Solids, MW-2 (mg/L)



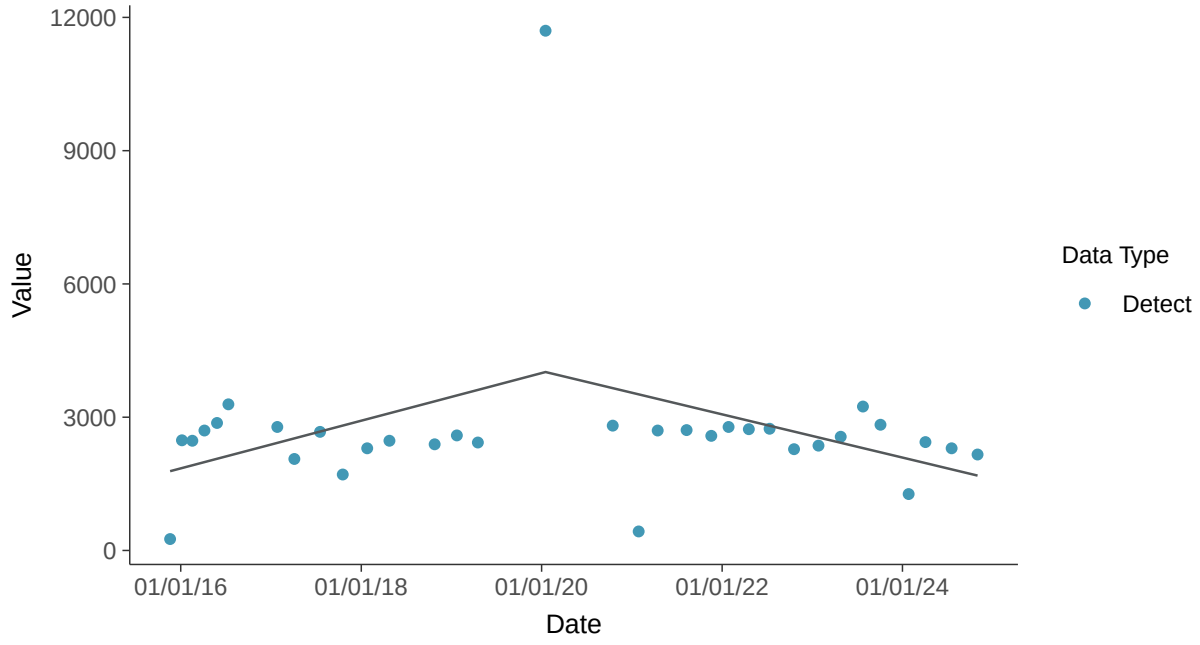
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-2 (mg/L)



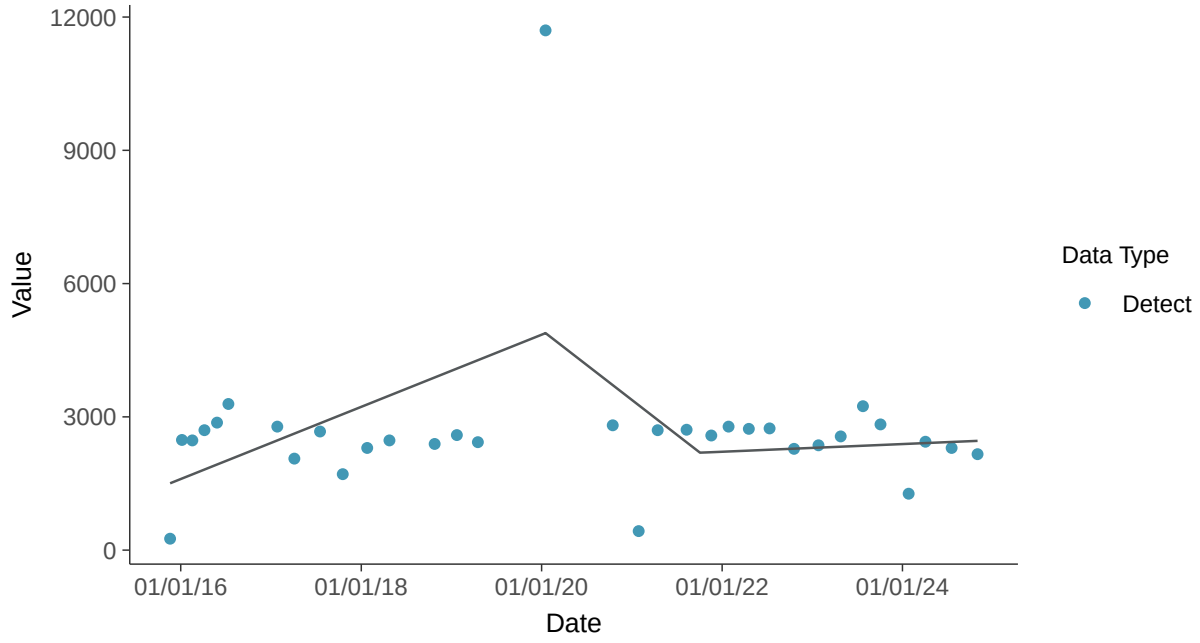
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-2 (mg/L)

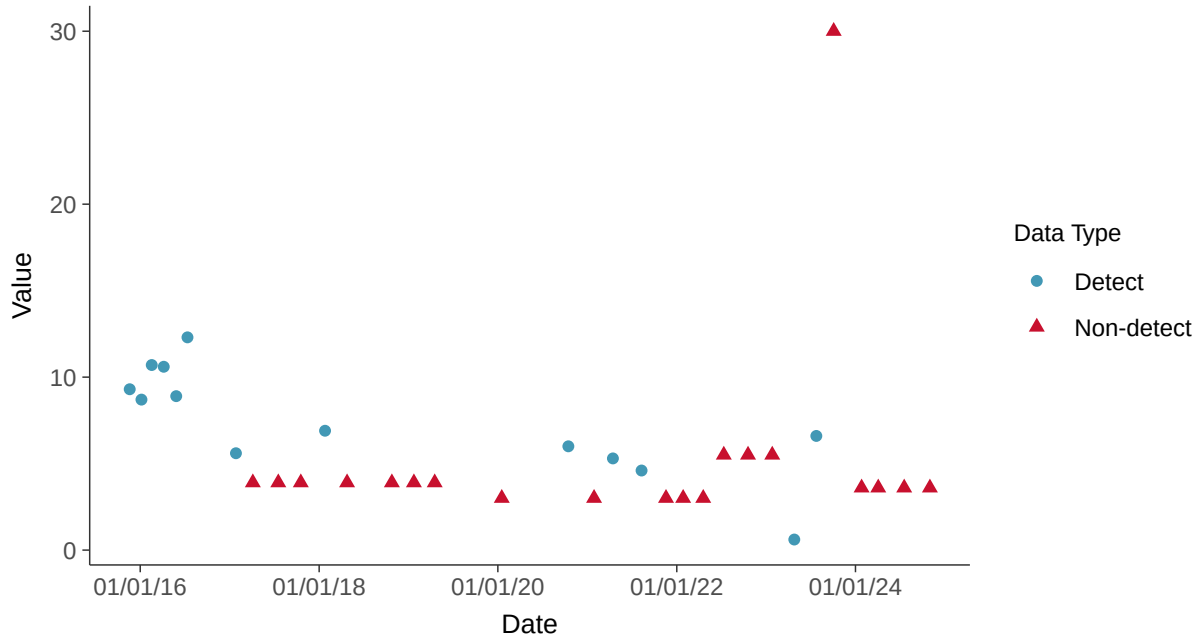


App. IV: Antimony, MW-2

ID: 02_03_101

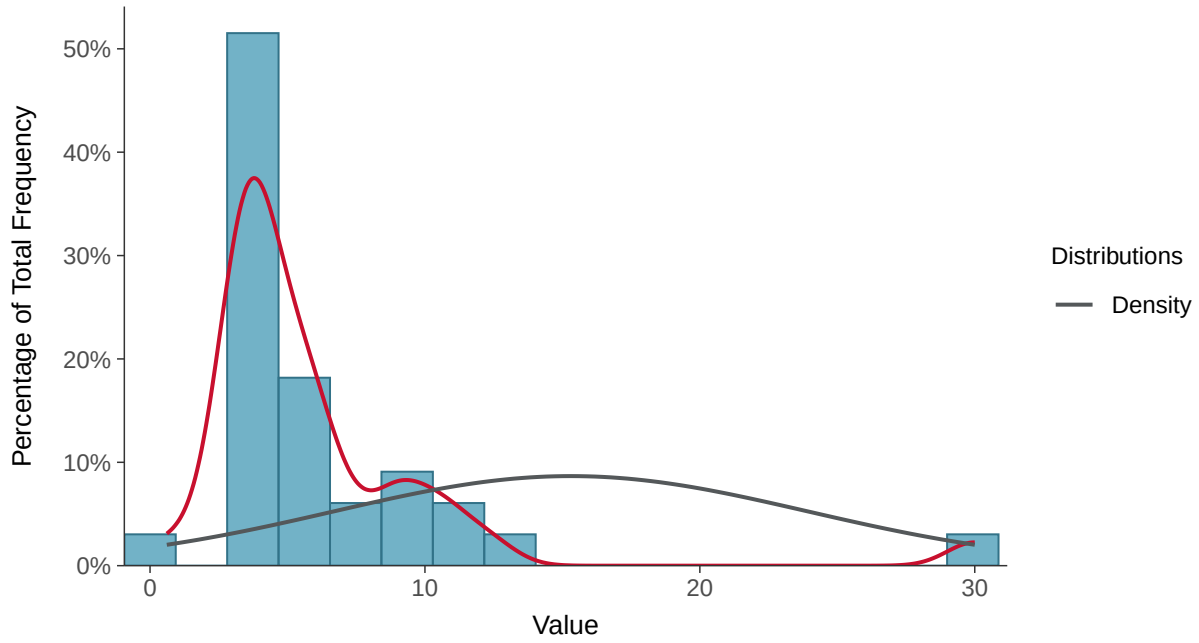
Scatter Plot

Antimony, MW-2 (ug/L)



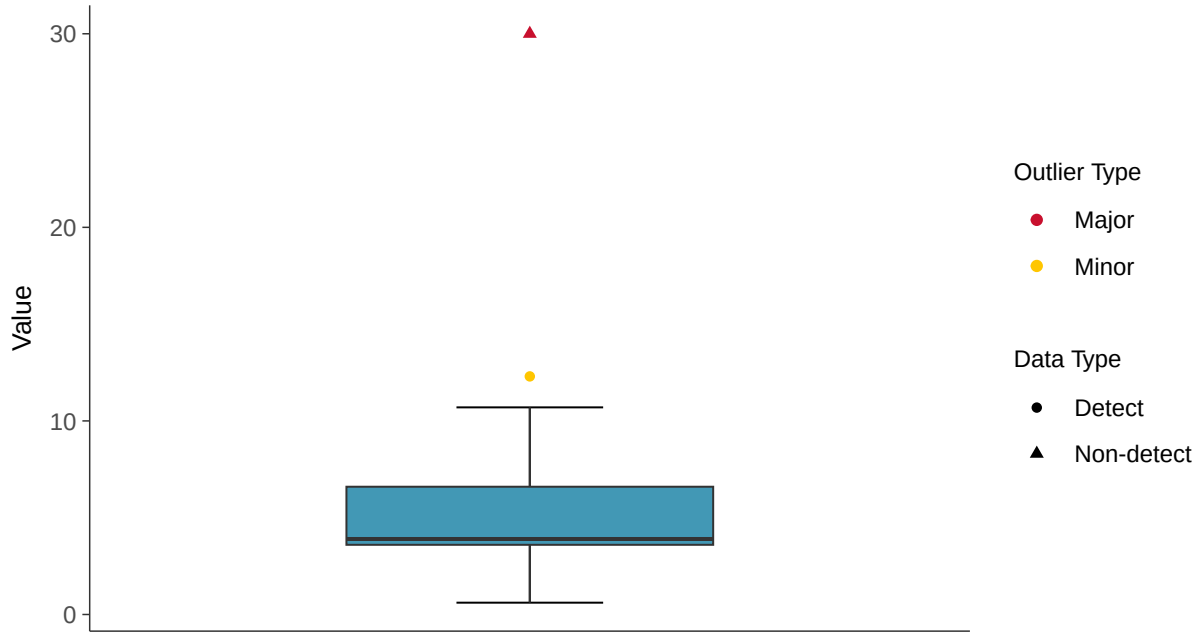
Histogram

Antimony, MW-2 (ug/L)



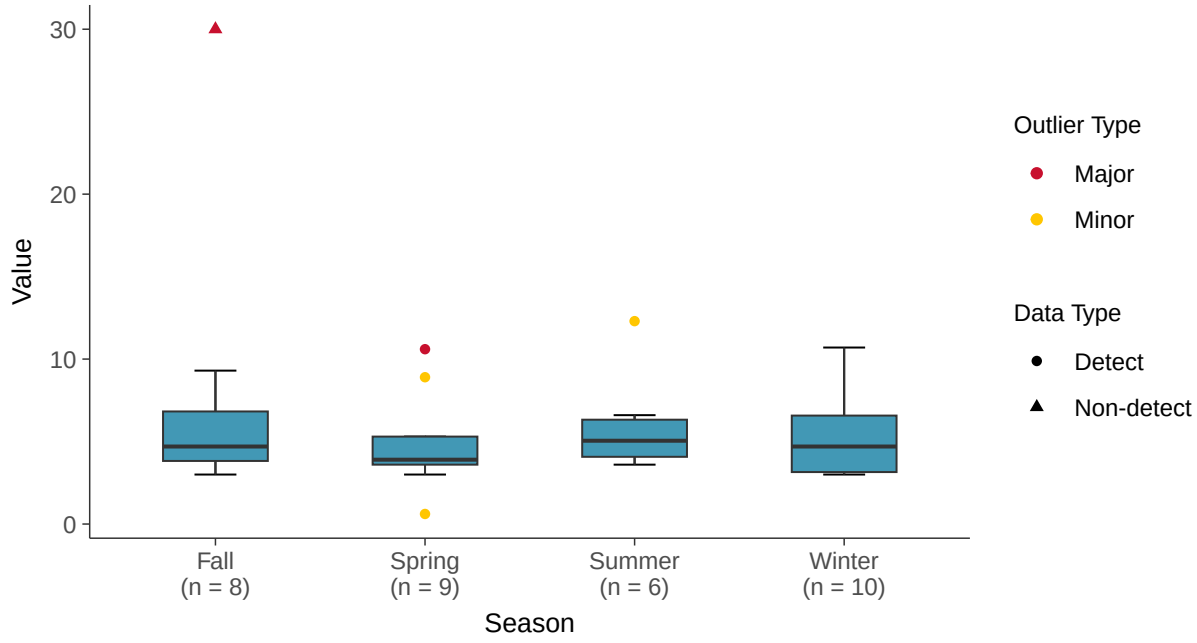
Boxplot

Antimony, MW-2 (ug/L)



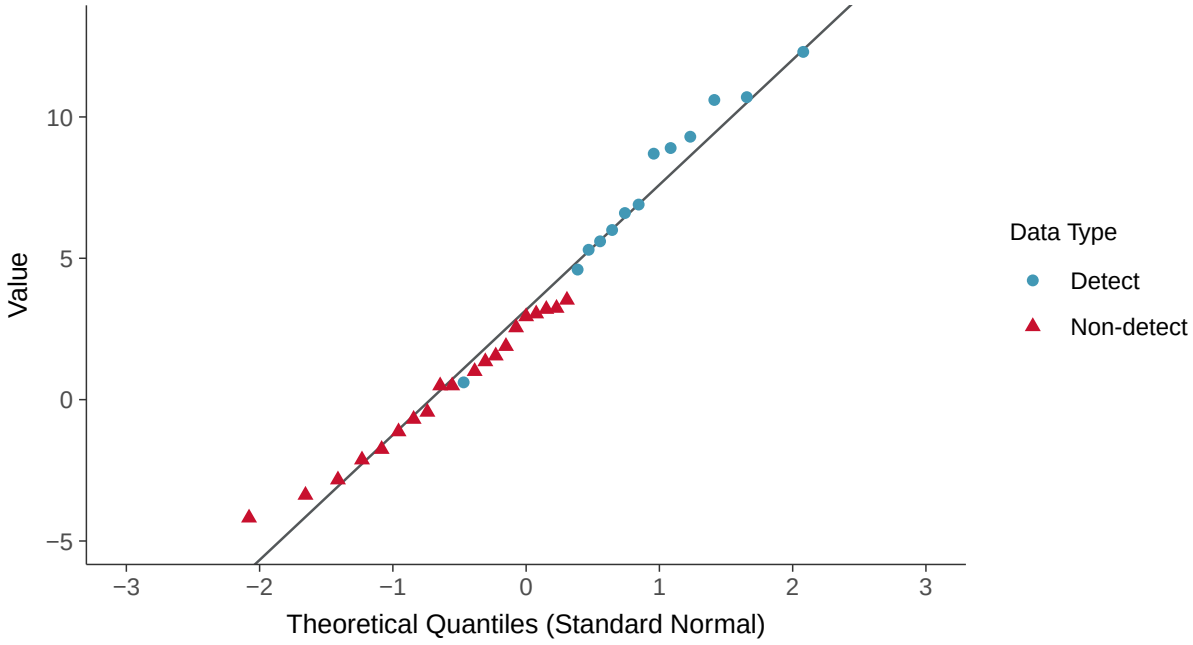
Boxplot by Season

Antimony, MW-2 (ug/L)



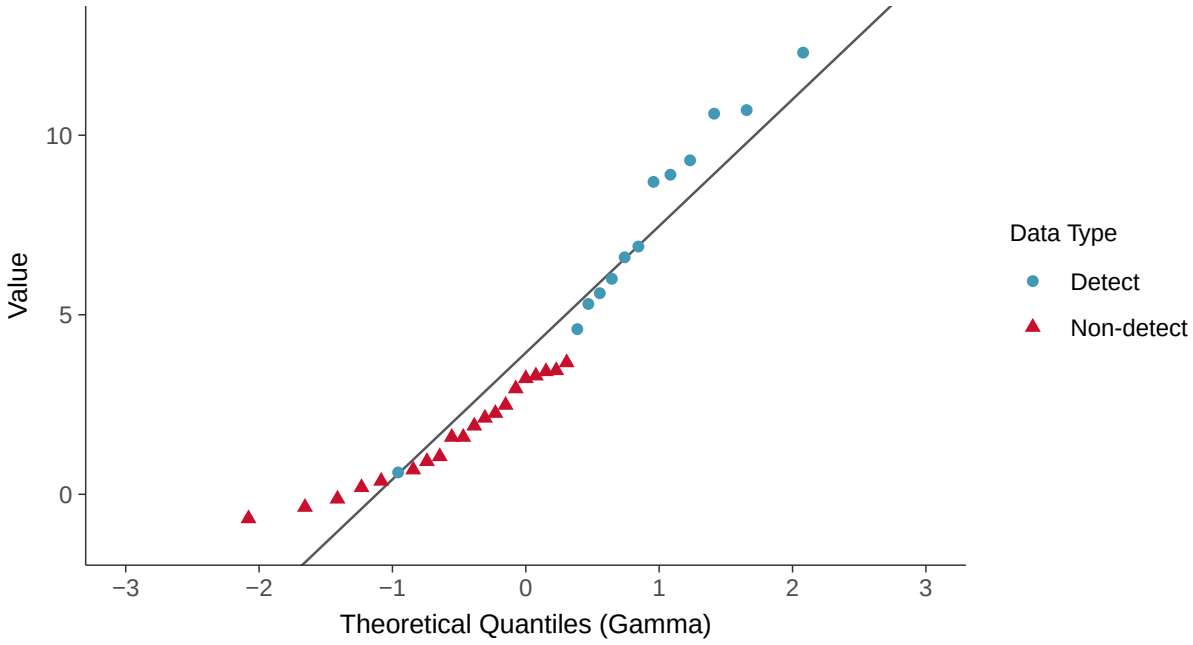
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-2 (ug/L)



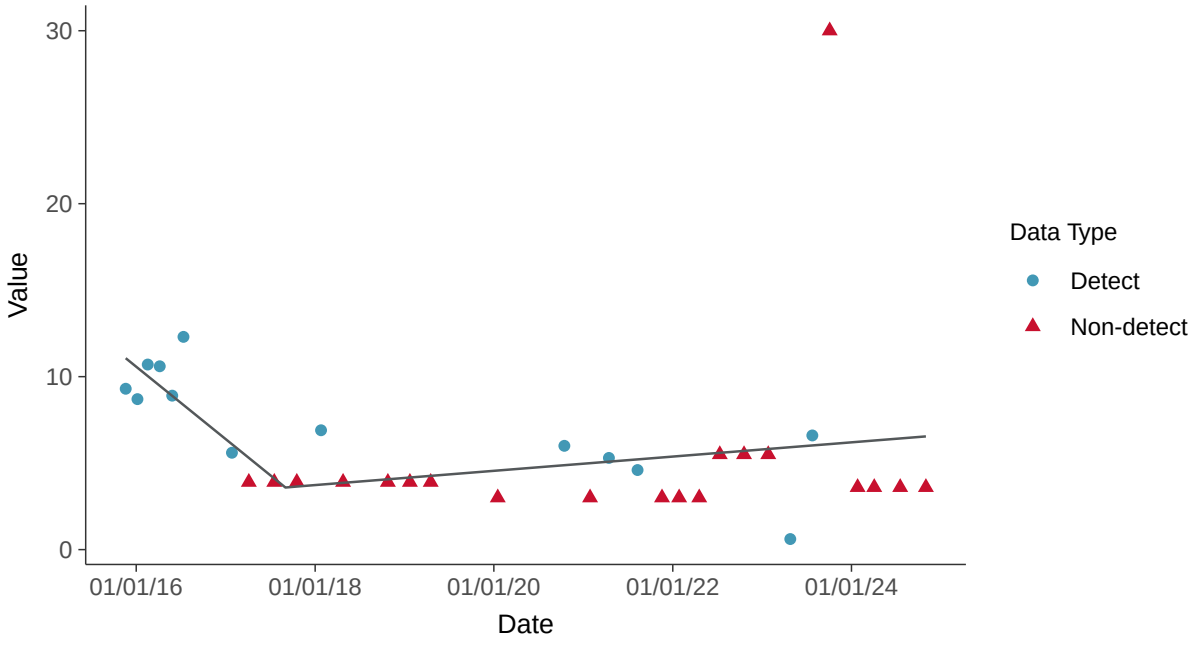
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-2 (ug/L)



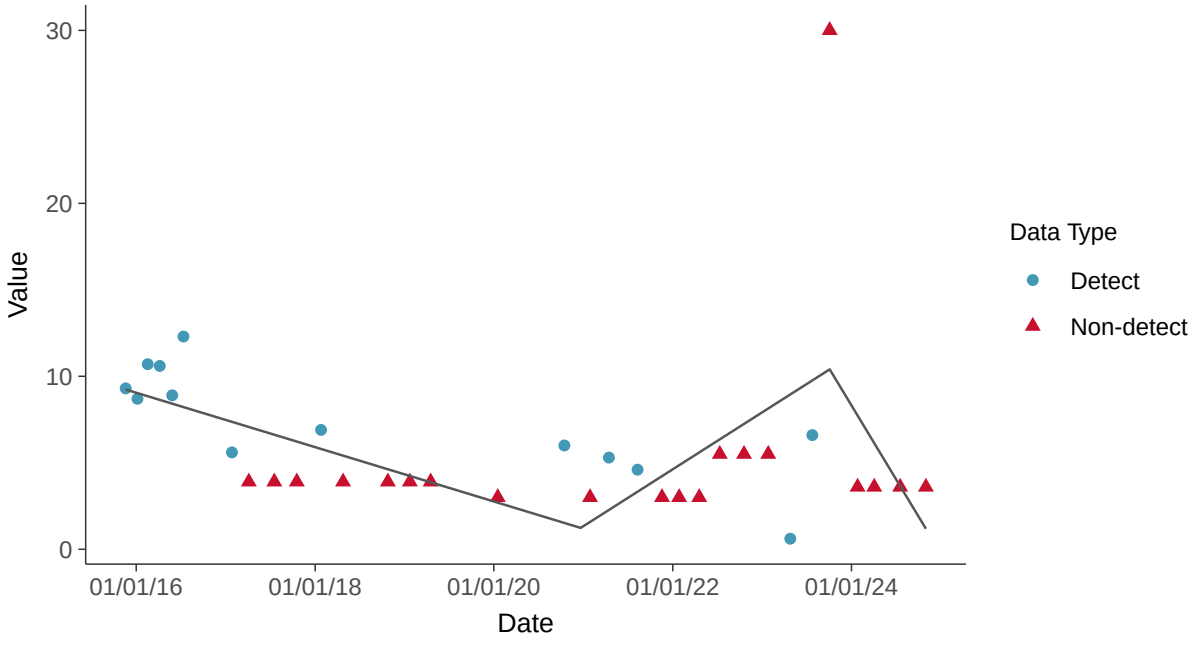
Trend Regression: Piecewise Linear-Linear

Antimony, MW-2 (ug/L)



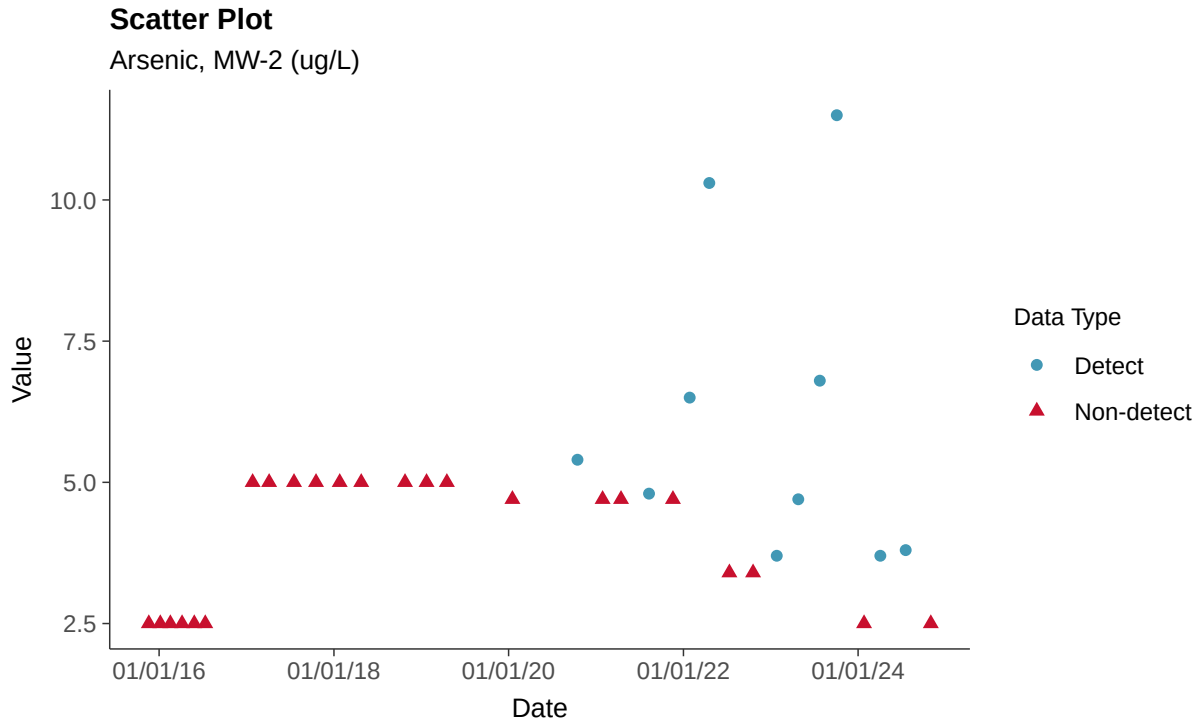
Trend Regression: Piecewise Linear-Linear-Linear

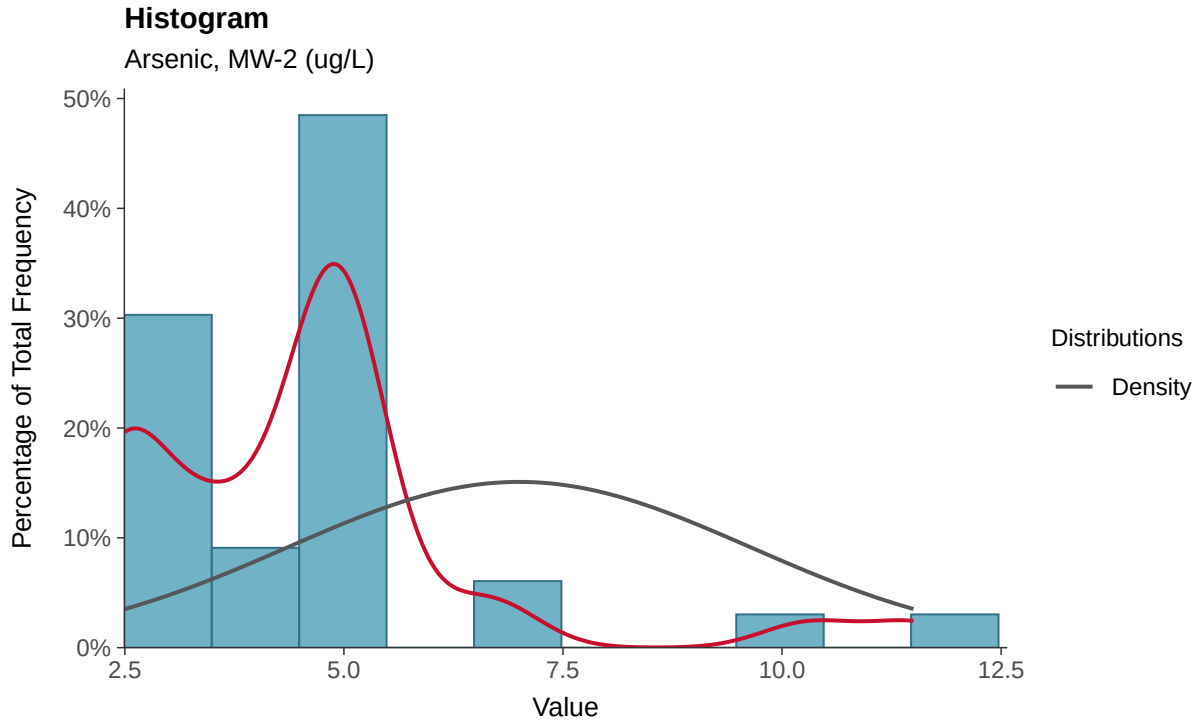
Antimony, MW-2 (ug/L)



App. IV: Arsenic, MW-2

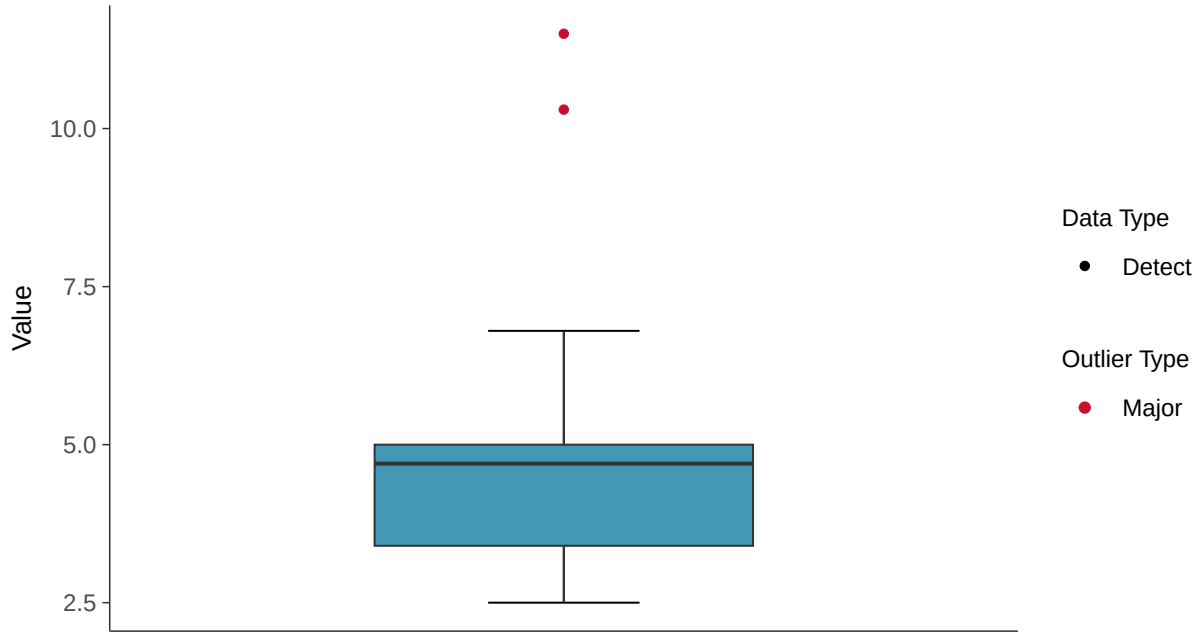
ID: 02_03_102





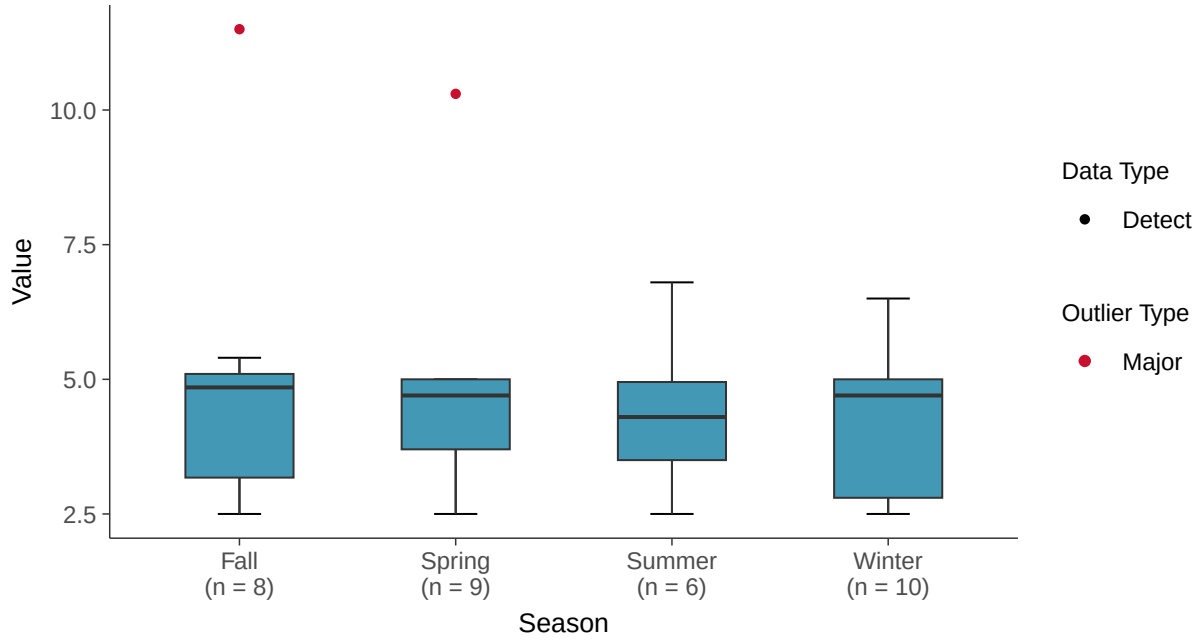
Boxplot

Arsenic, MW-2 (ug/L)



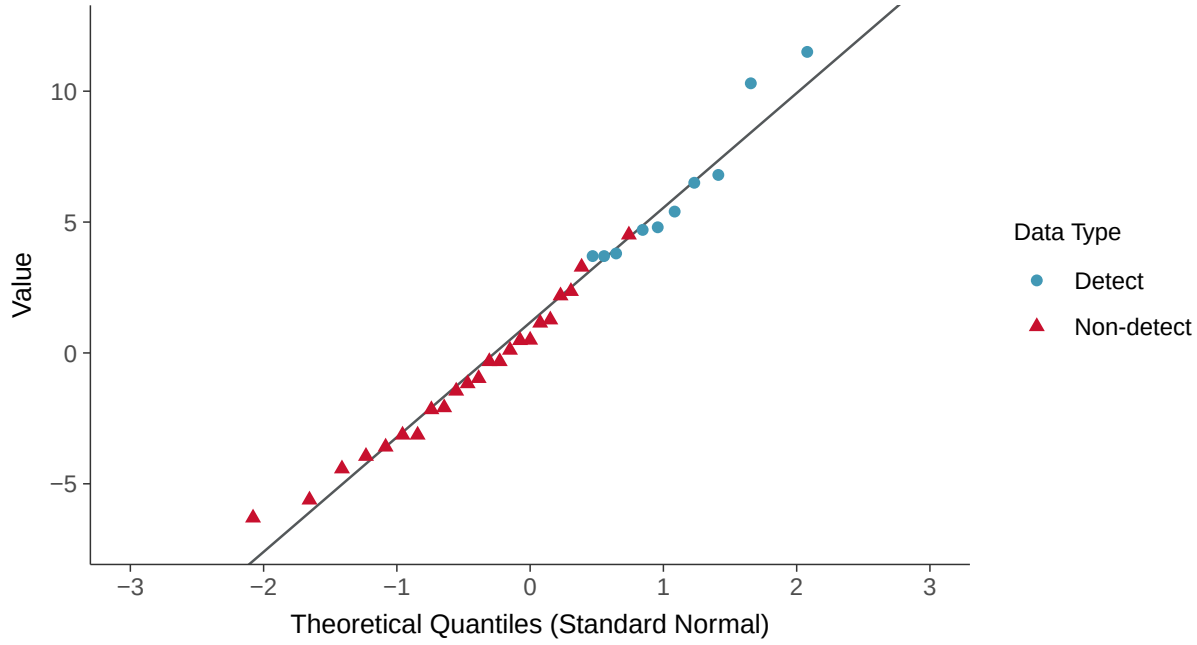
Boxplot by Season

Arsenic, MW-2 (ug/L)



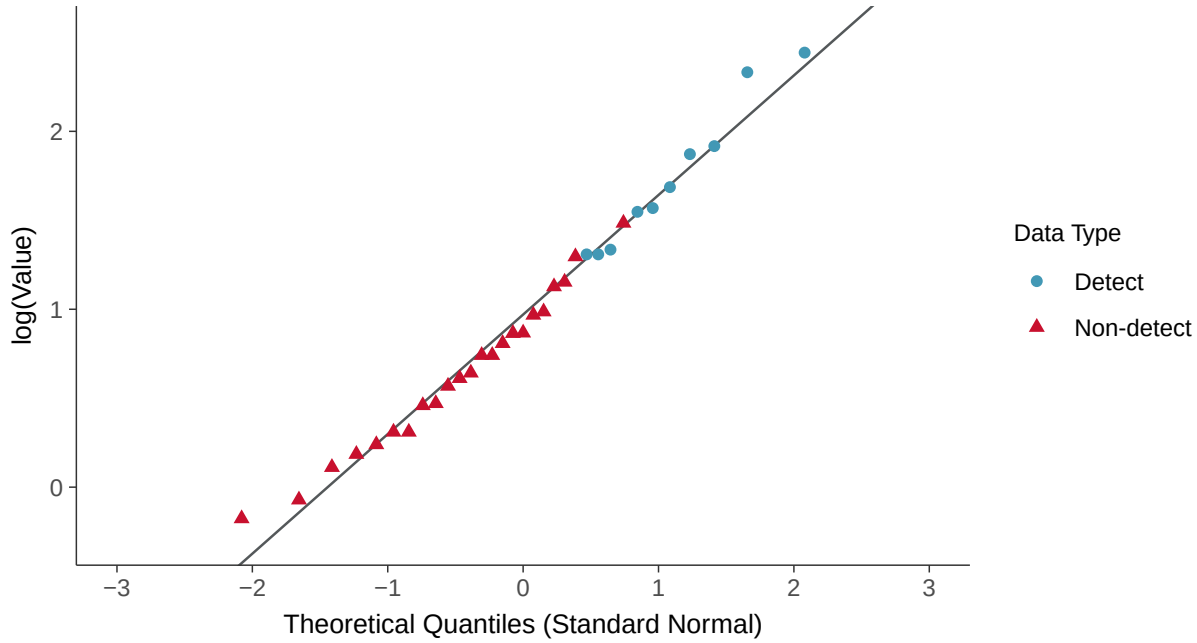
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



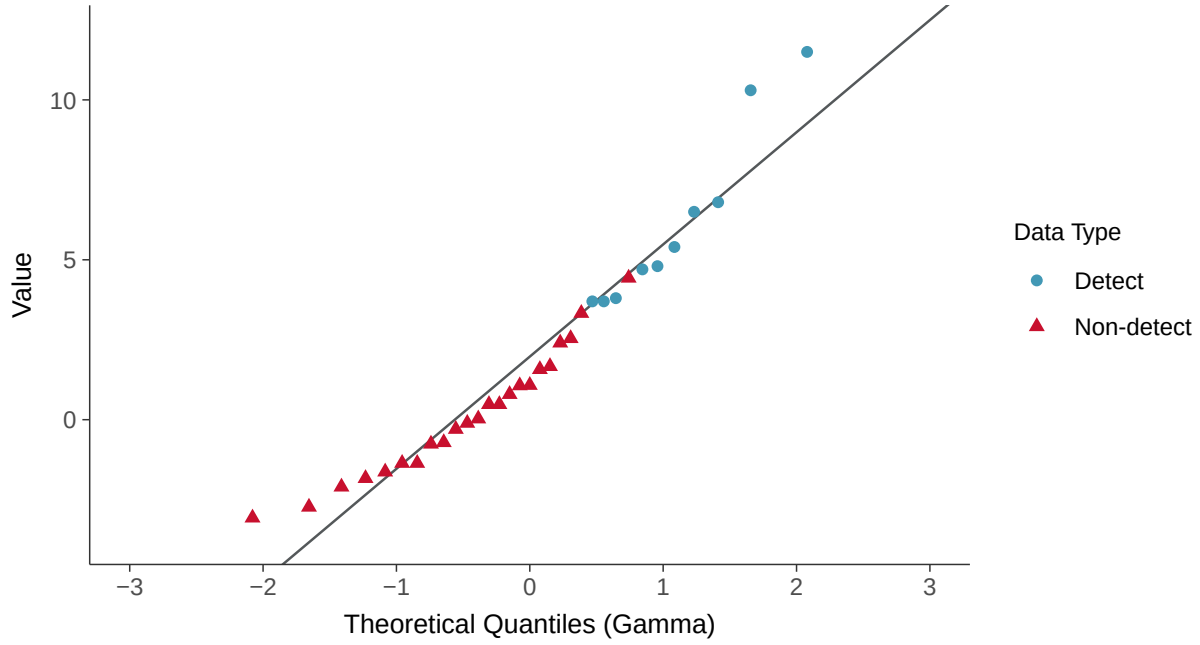
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



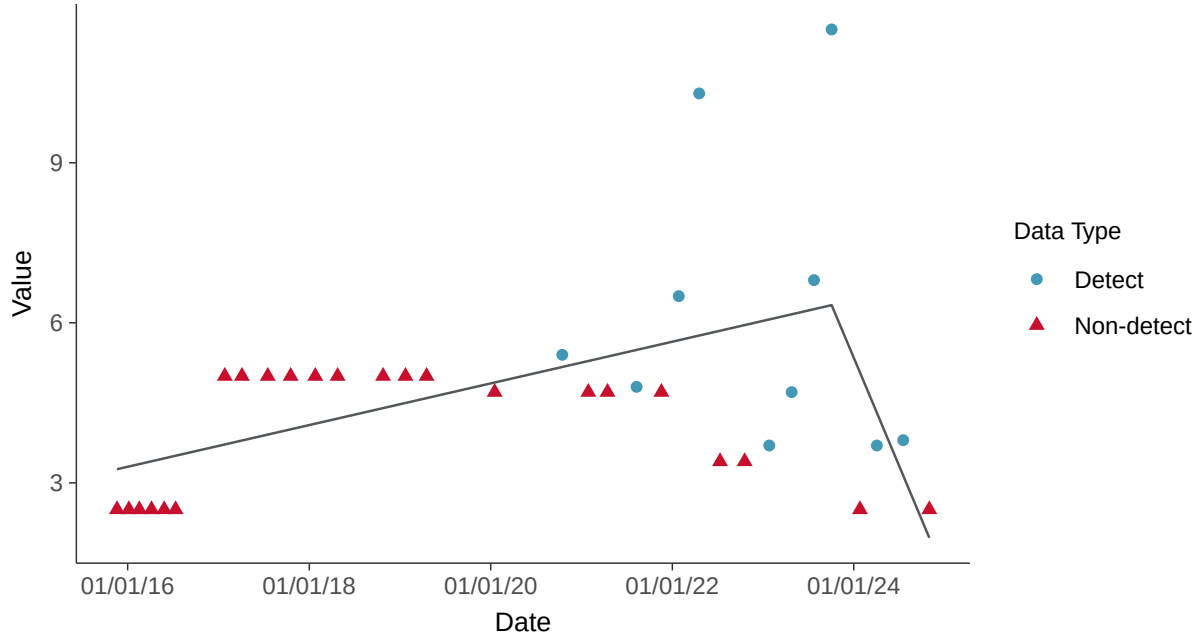
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-2 (ug/L)



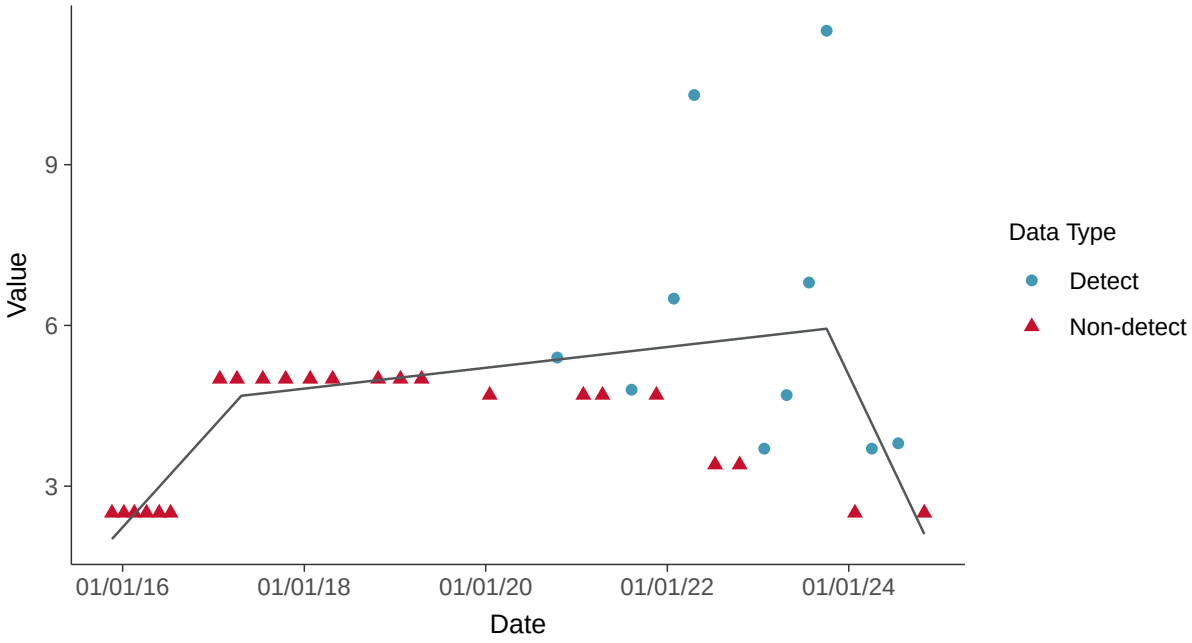
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-2 (ug/L)

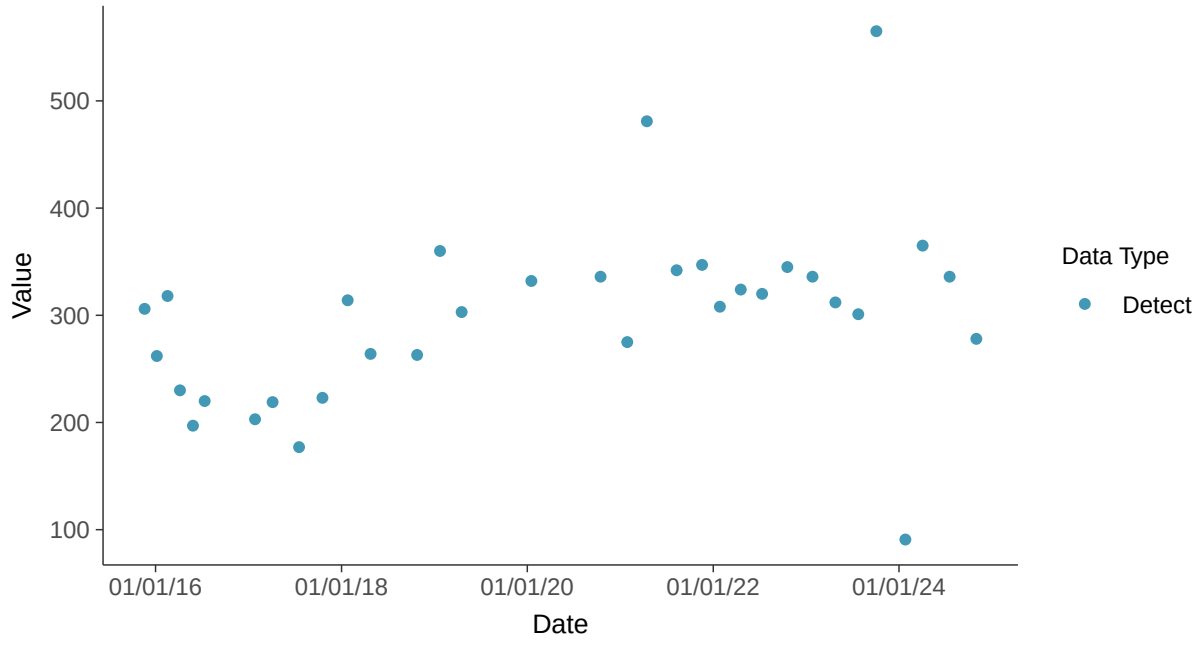


App. IV: Barium, MW-2

ID: 02_03_103

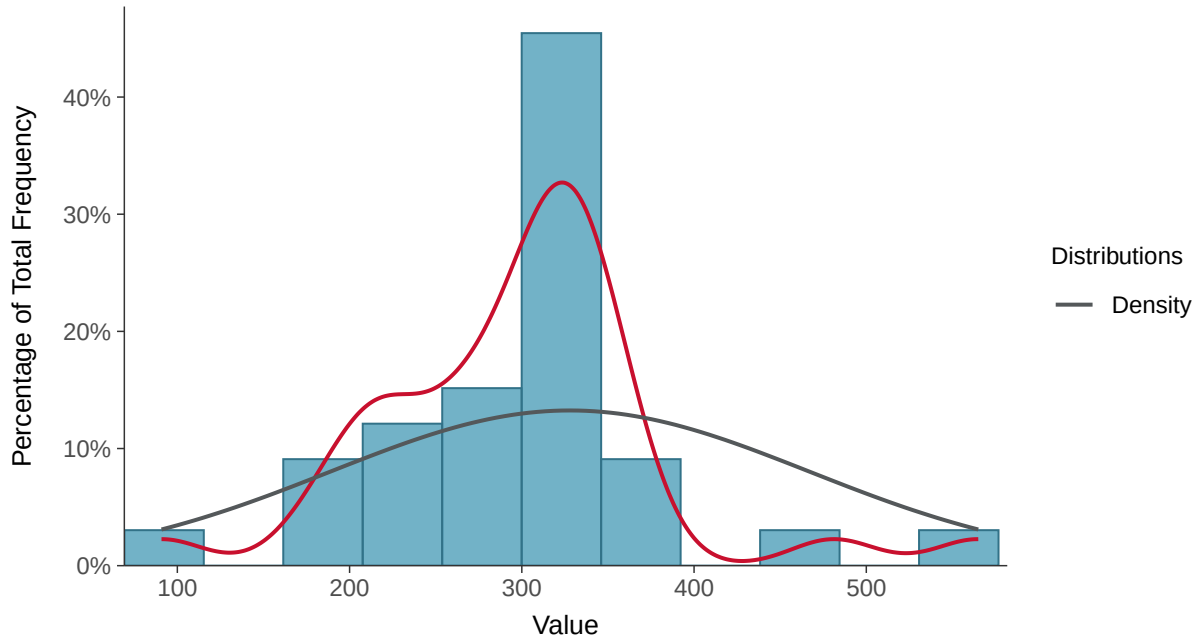
Scatter Plot

Barium, MW-2 (ug/L)



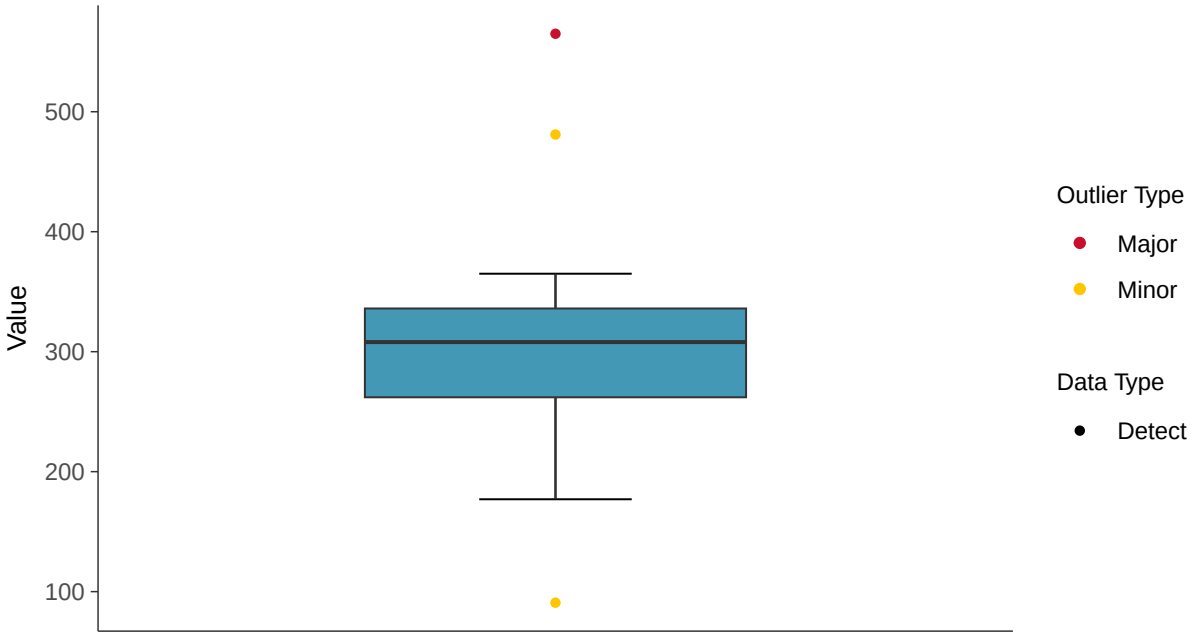
Histogram

Barium, MW-2 (ug/L)



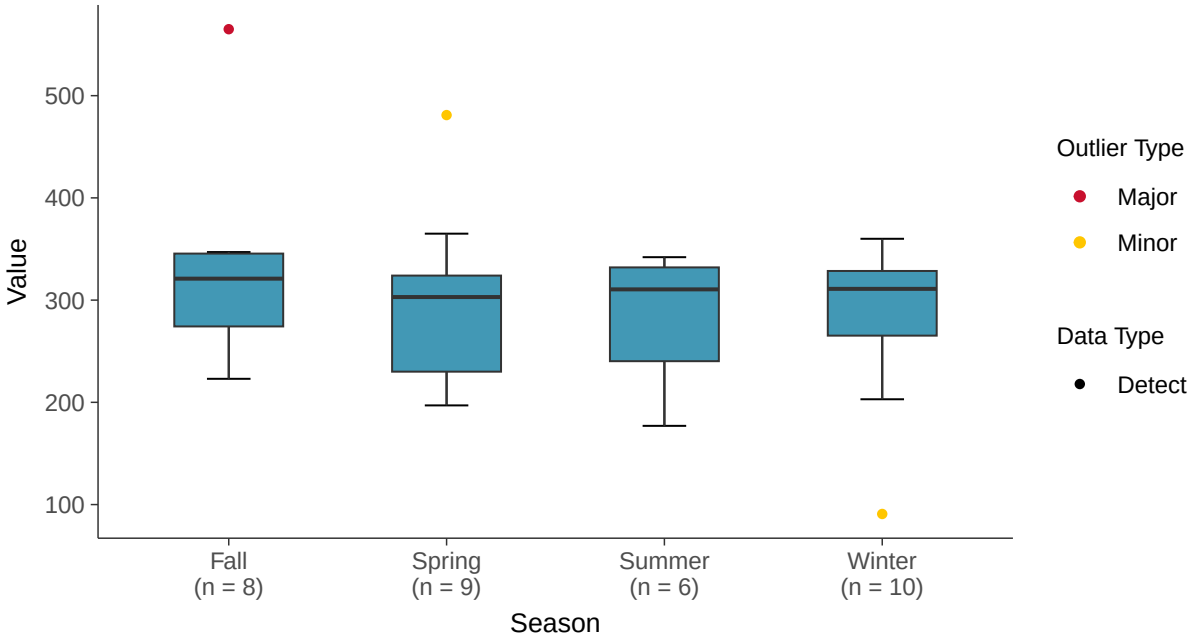
Boxplot

Barium, MW-2 (ug/L)



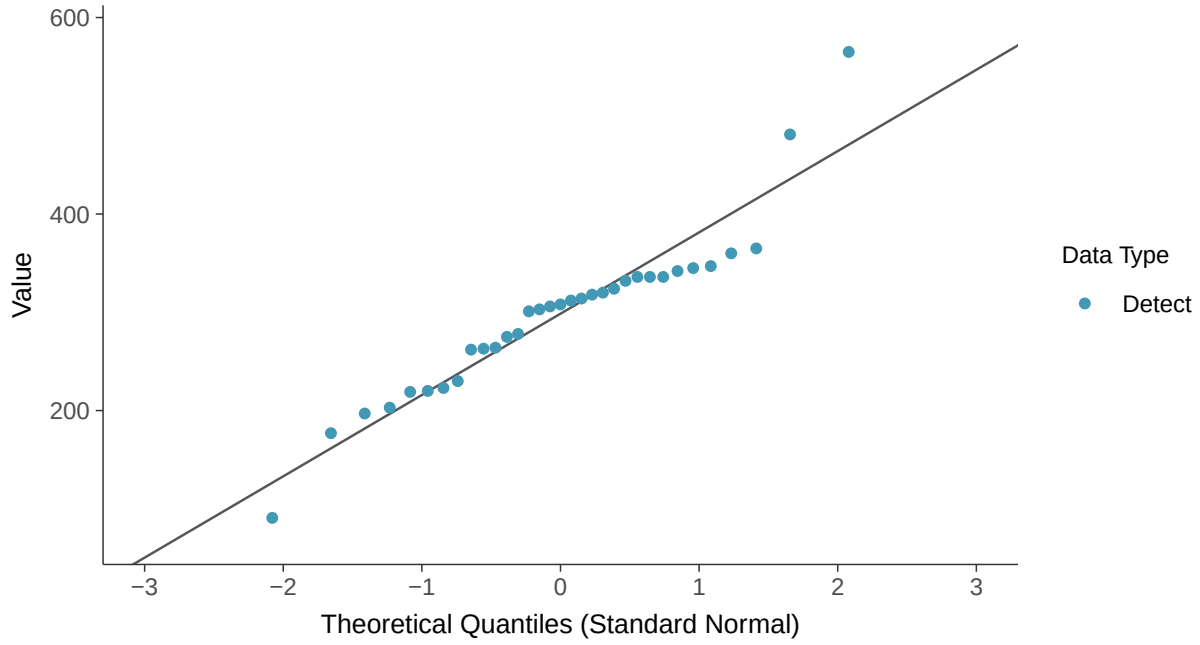
Boxplot by Season

Barium, MW-2 (ug/L)



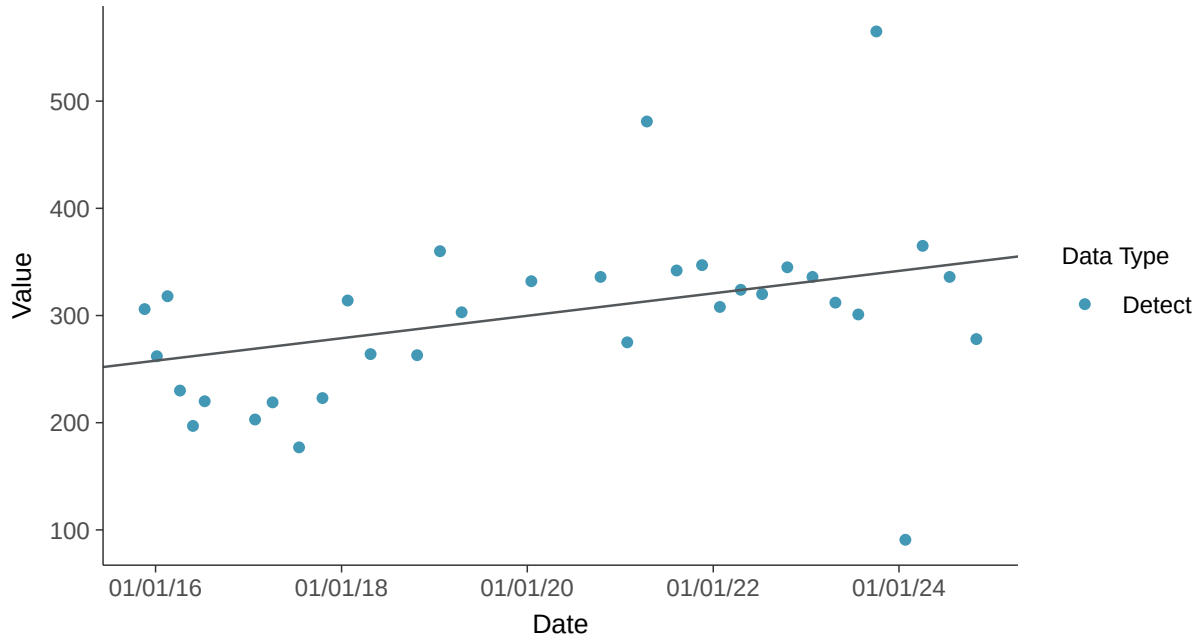
Normal Q-Q plot

Barium, MW-2 (ug/L)



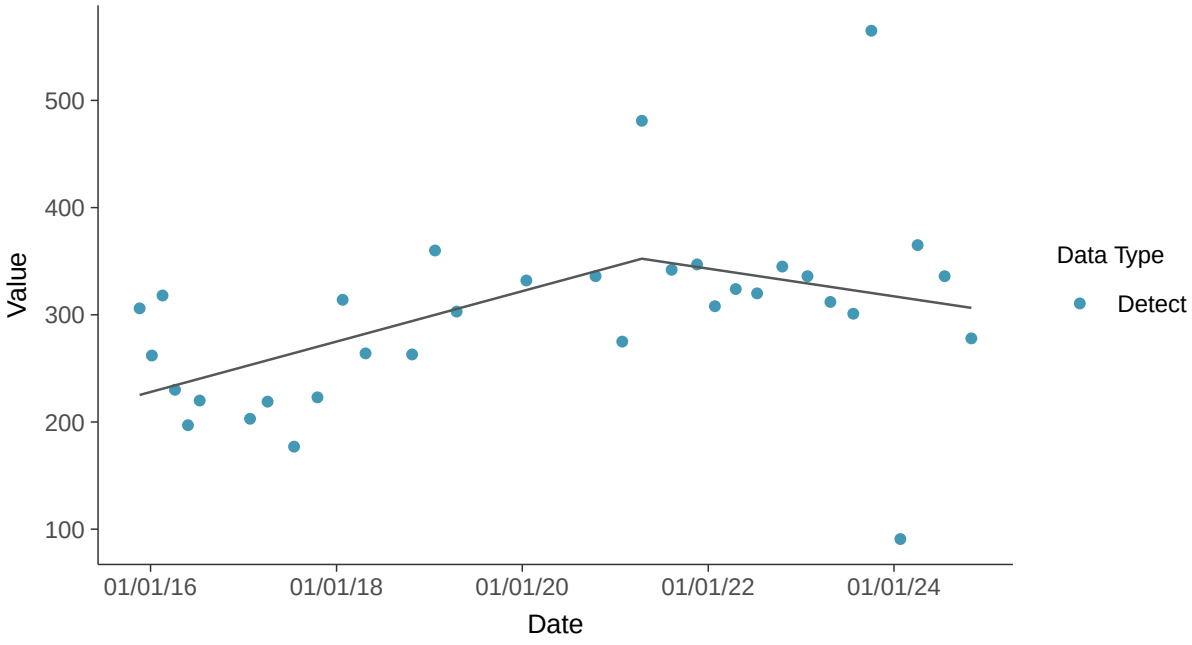
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-2 (ug/L)



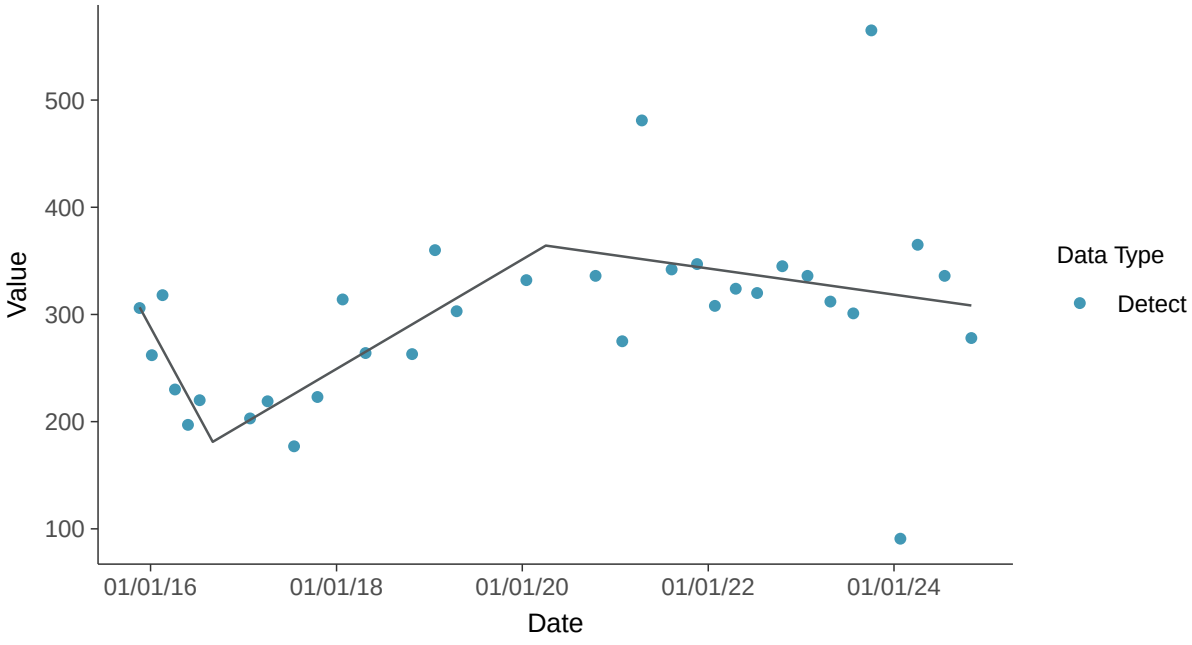
Trend Regression: Piecewise Linear-Linear

Barium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-2 (ug/L)

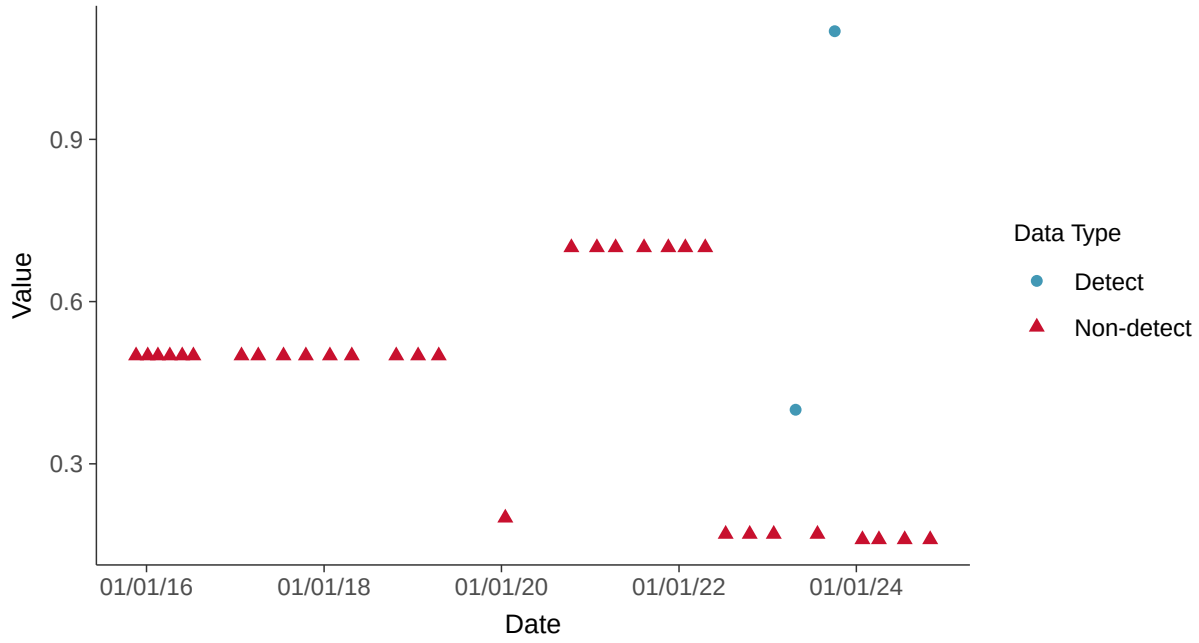


App. IV: Beryllium, MW-2

ID: 02_03_104

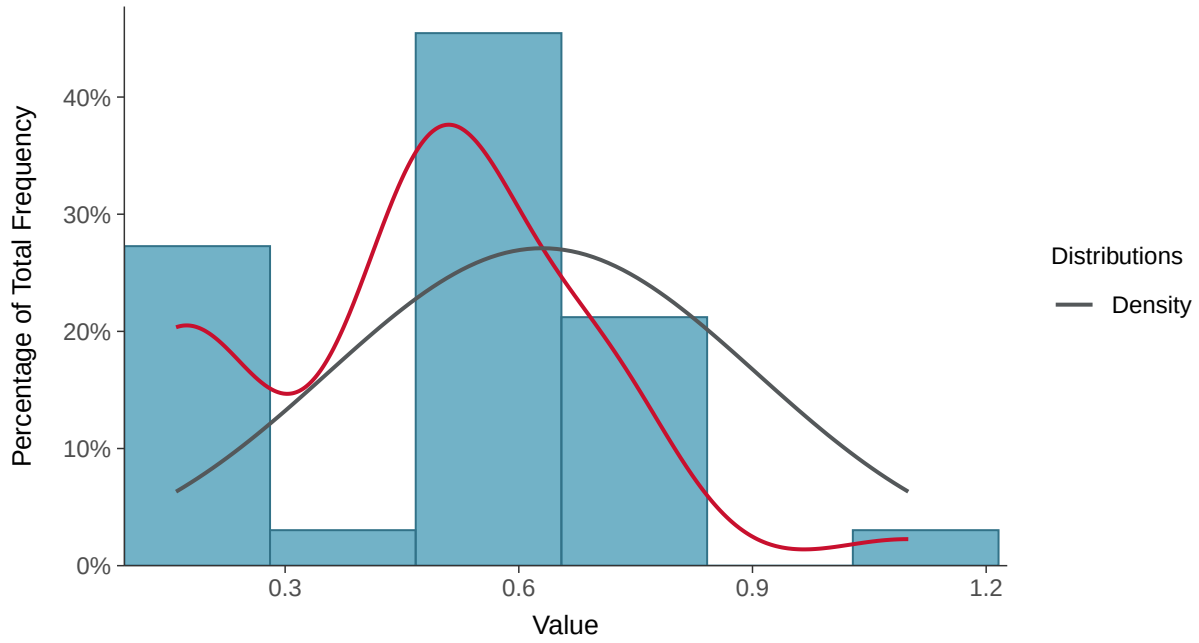
Scatter Plot

Beryllium, MW-2 (ug/L)



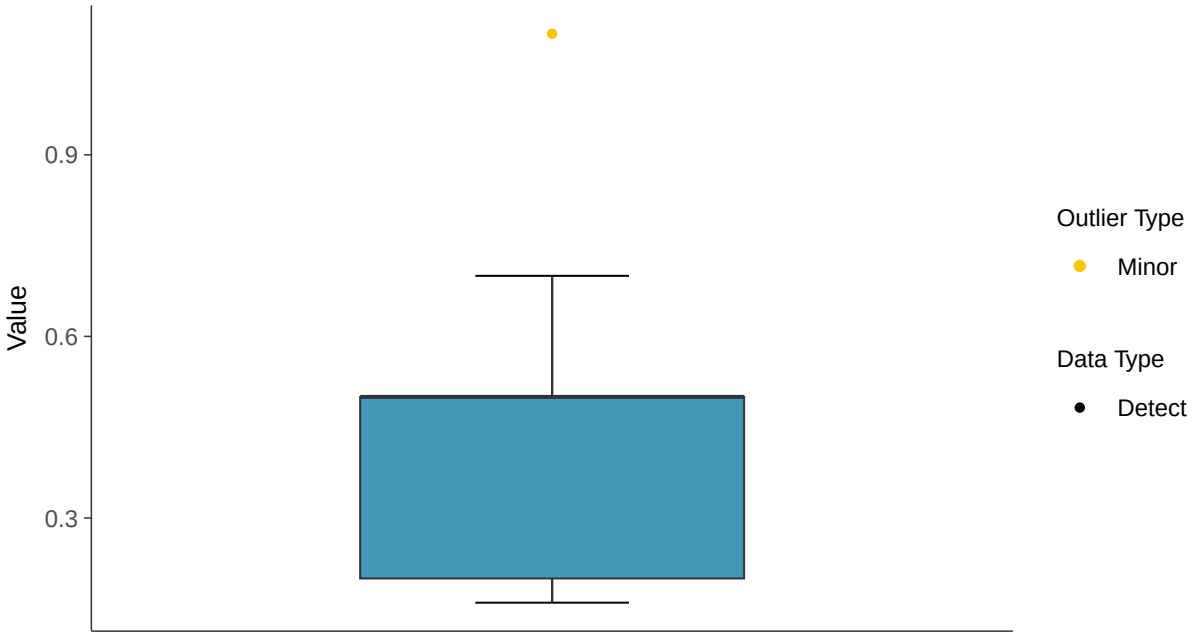
Histogram

Beryllium, MW-2 (ug/L)



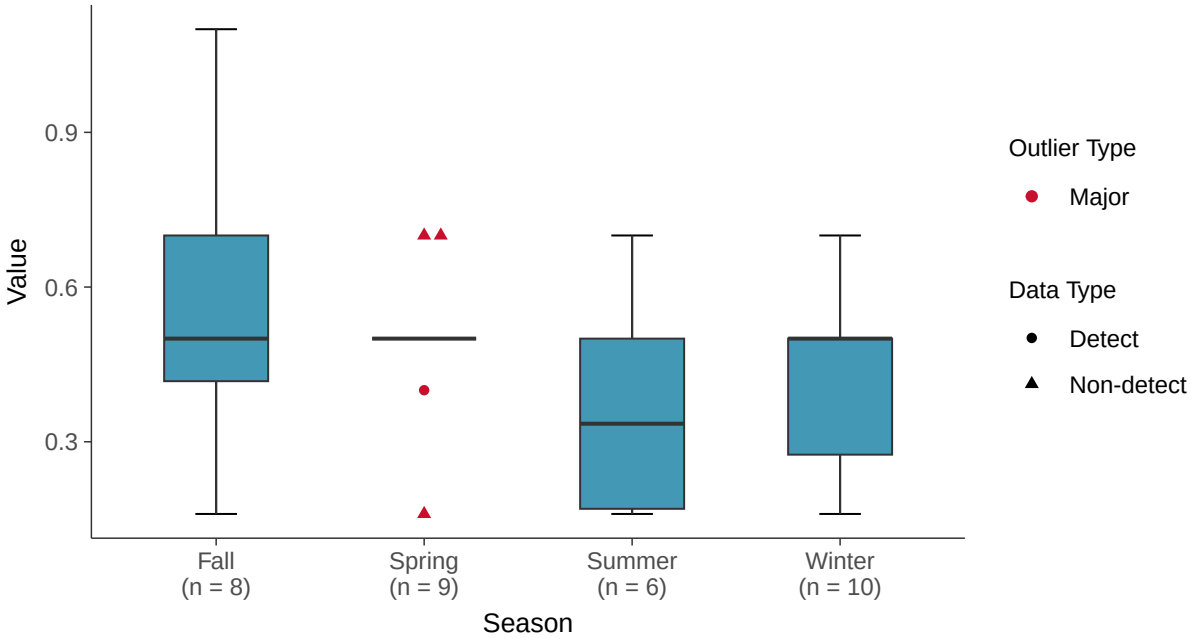
Boxplot

Beryllium, MW-2 (ug/L)



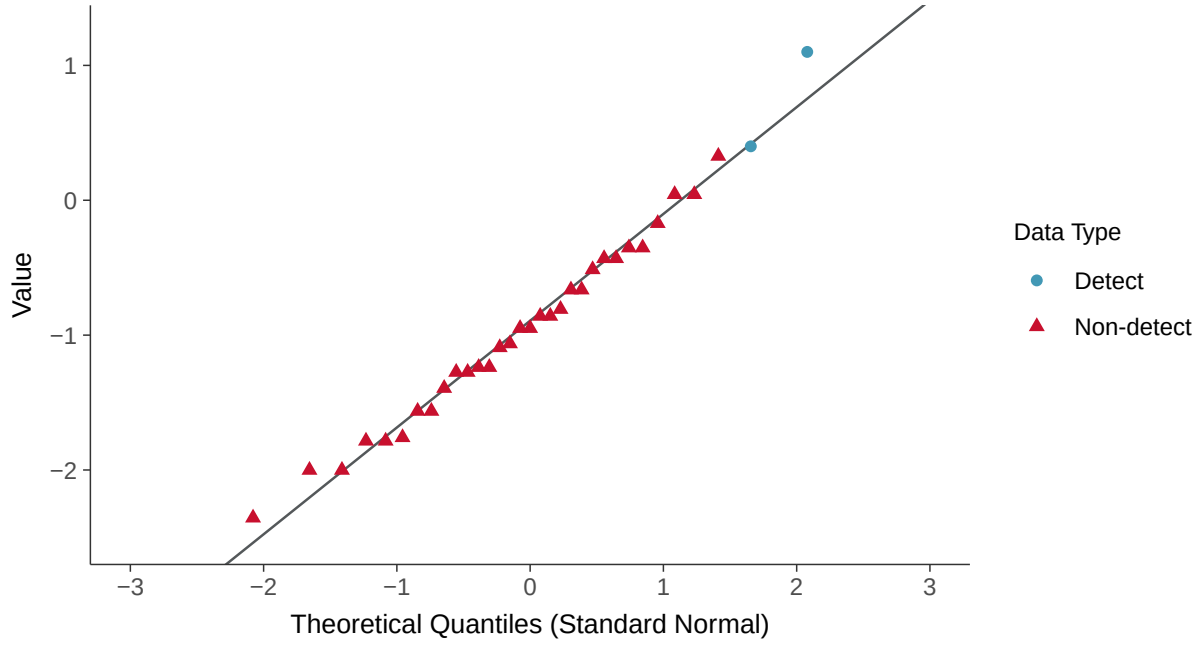
Boxplot by Season

Beryllium, MW-2 (ug/L)



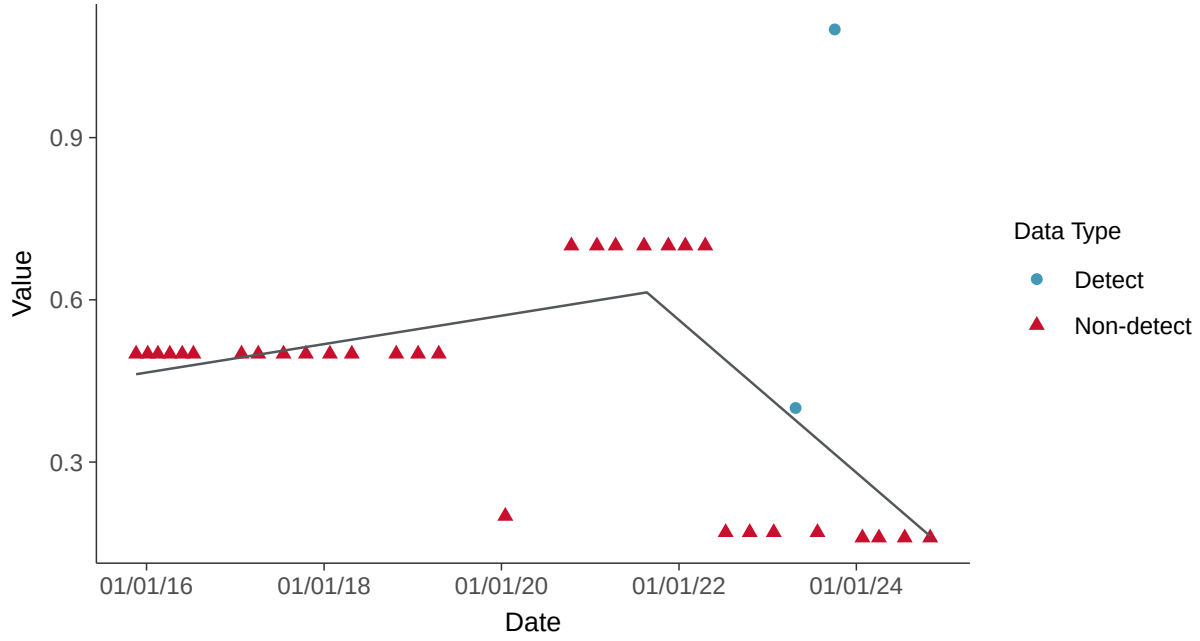
Normal Q-Q plot using ROS Imputed Estimates

Beryllium, MW-2 (ug/L)



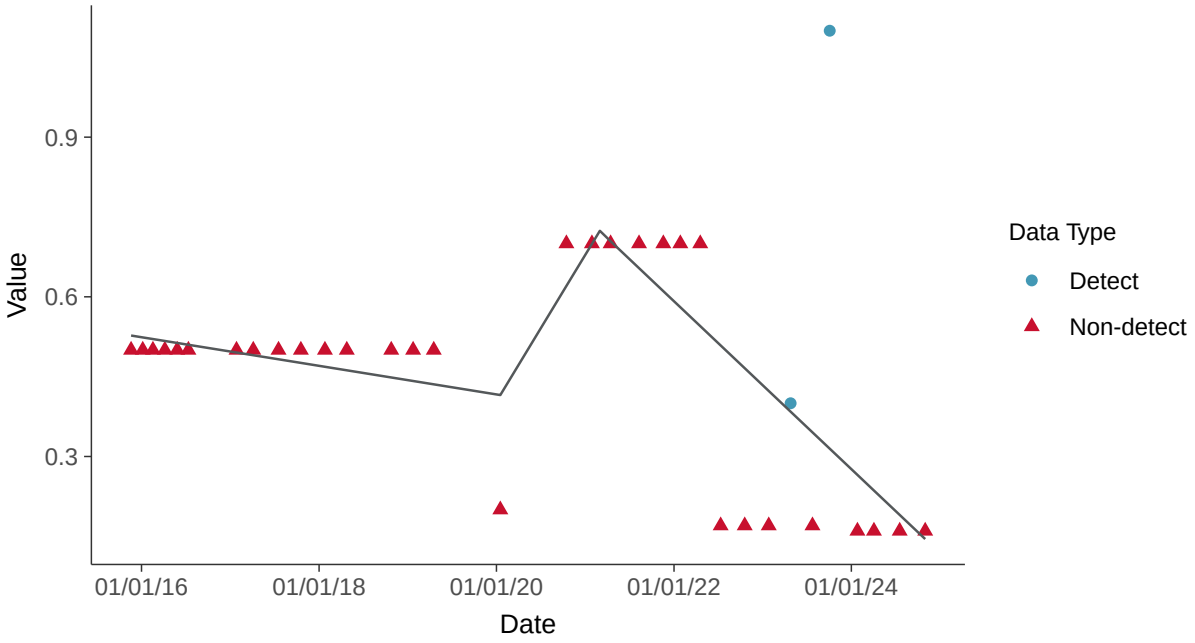
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-2 (ug/L)

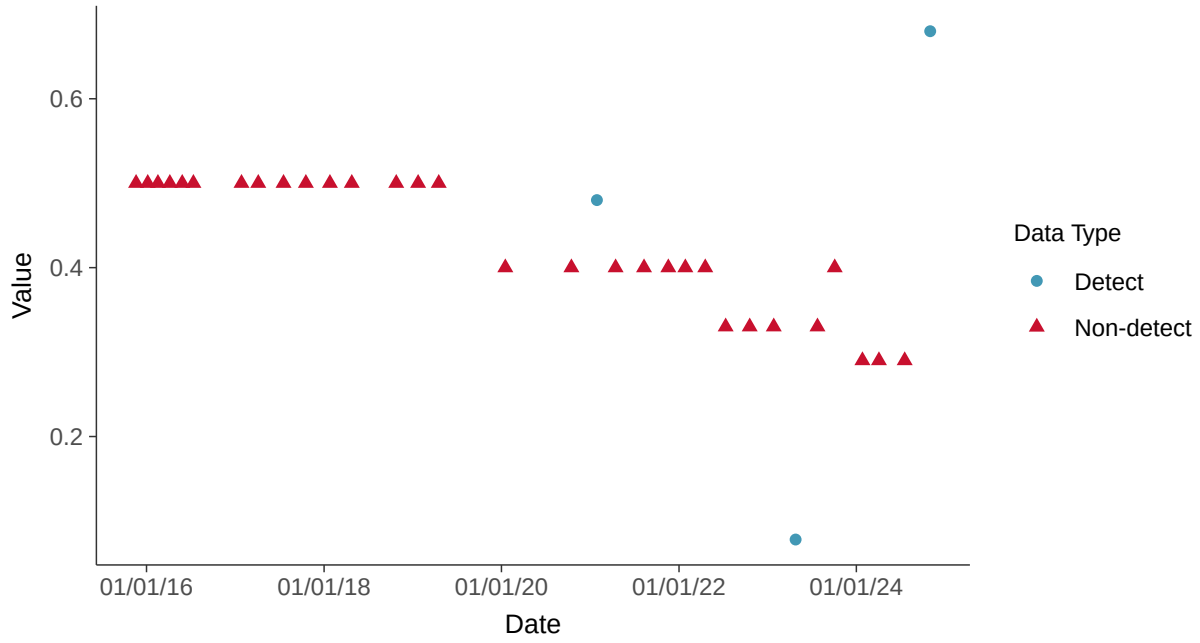


App. IV: Cadmium, MW-2

ID: 02_03_106

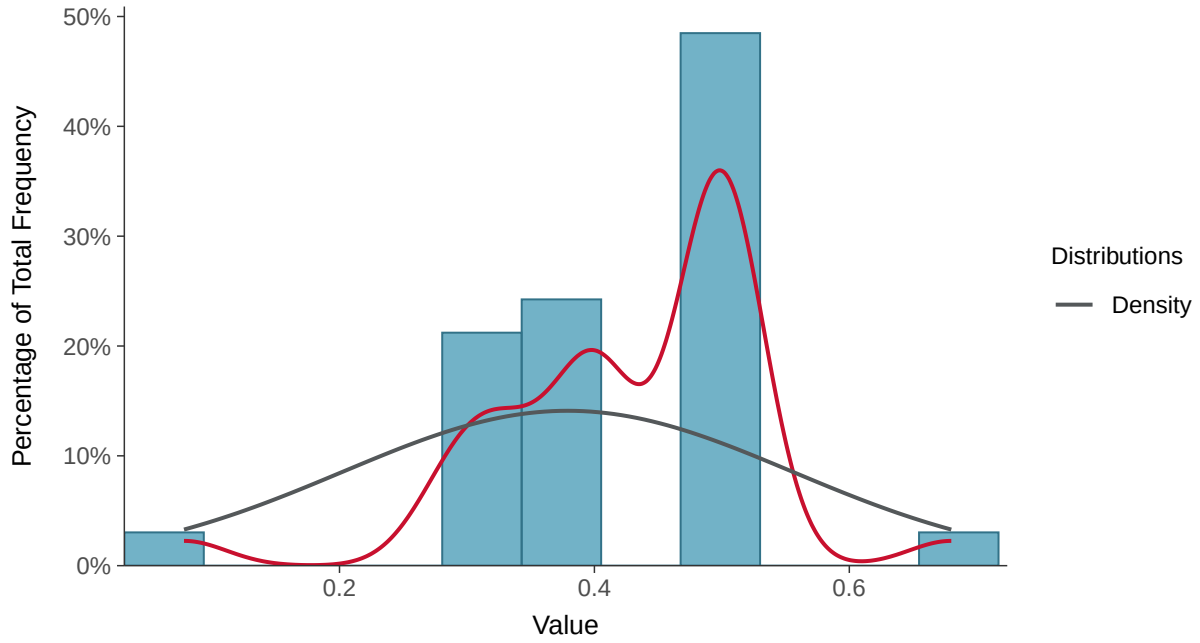
Scatter Plot

Cadmium, MW-2 (ug/L)



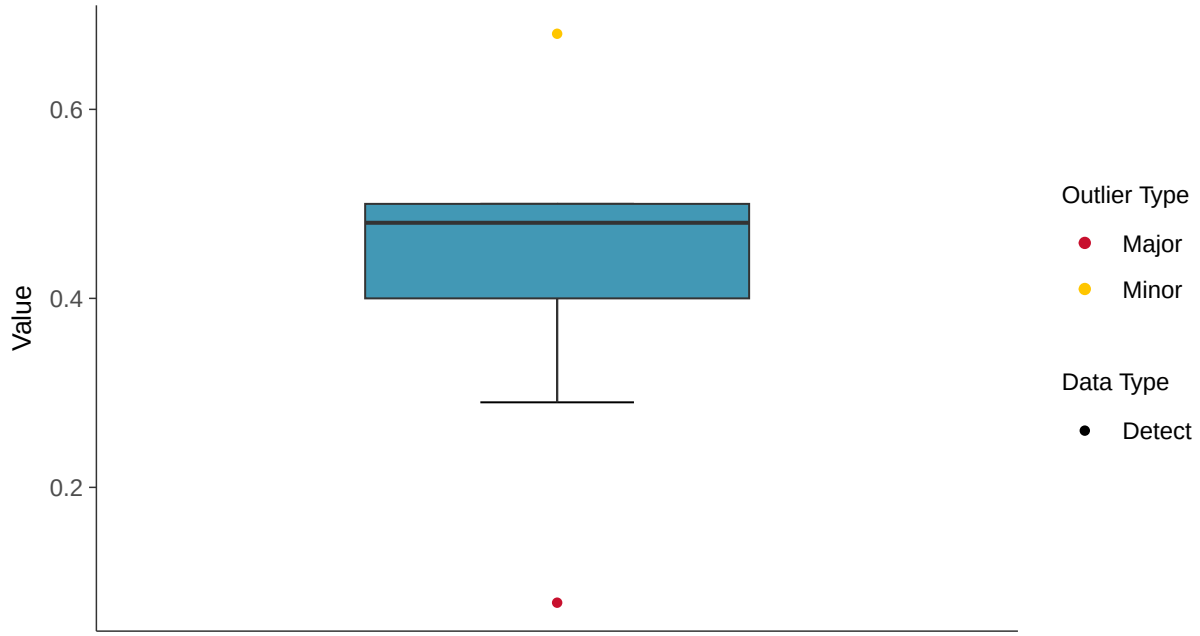
Histogram

Cadmium, MW-2 (ug/L)



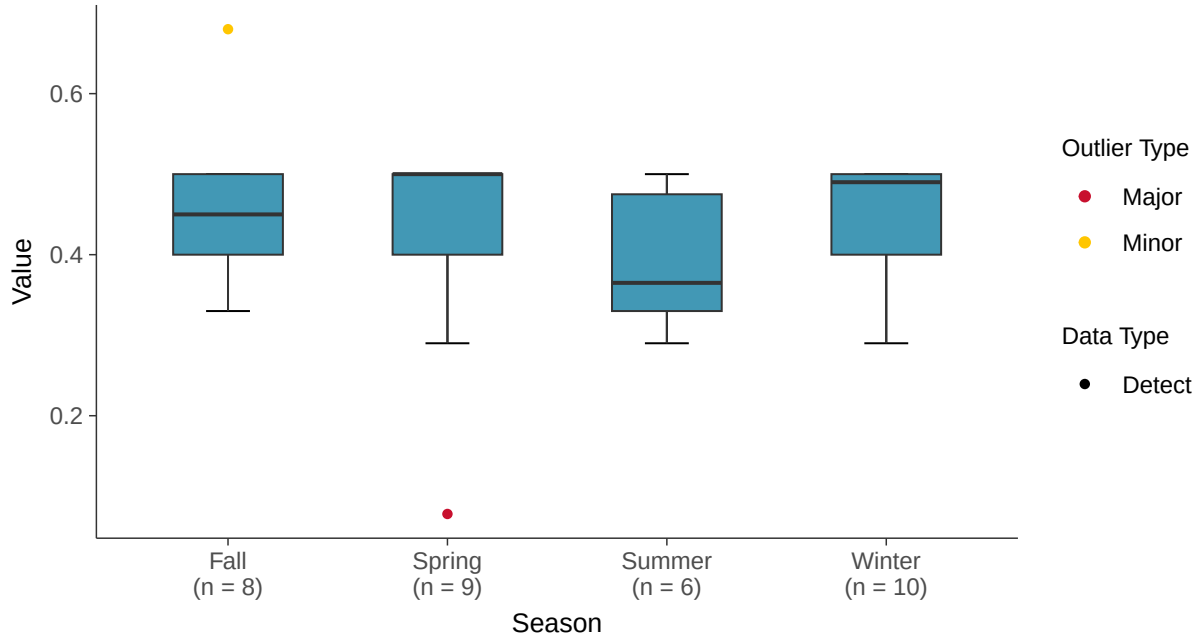
Boxplot

Cadmium, MW-2 (ug/L)



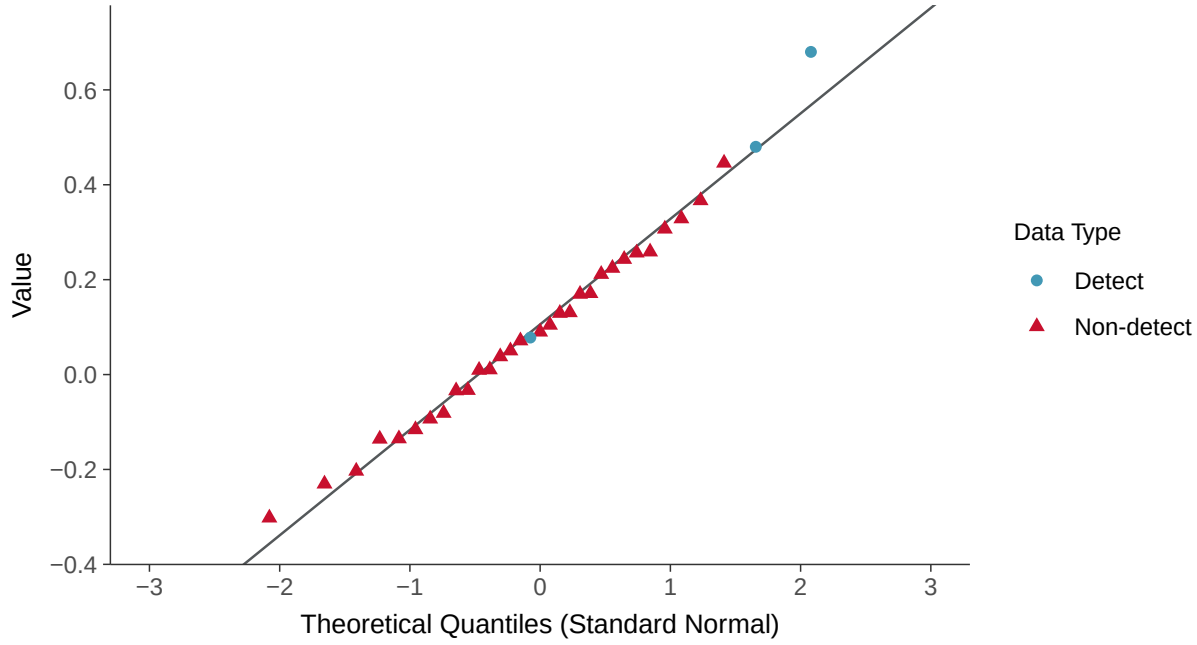
Boxplot by Season

Cadmium, MW-2 (ug/L)



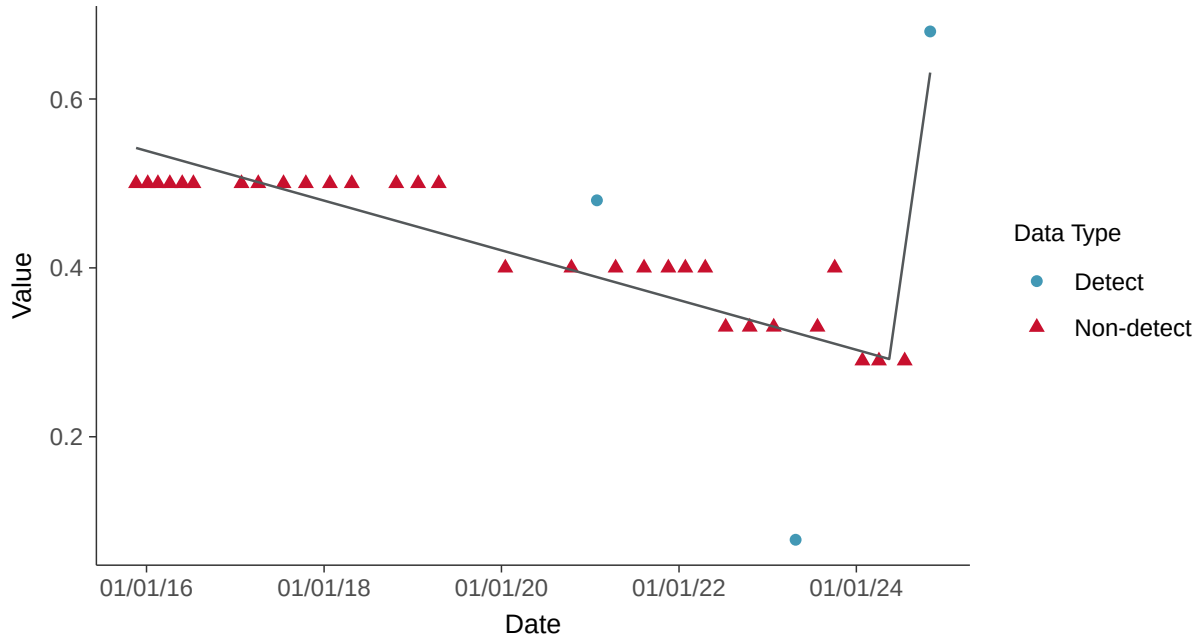
Normal Q-Q plot using ROS Imputed Estimates

Cadmium, MW-2 (ug/L)



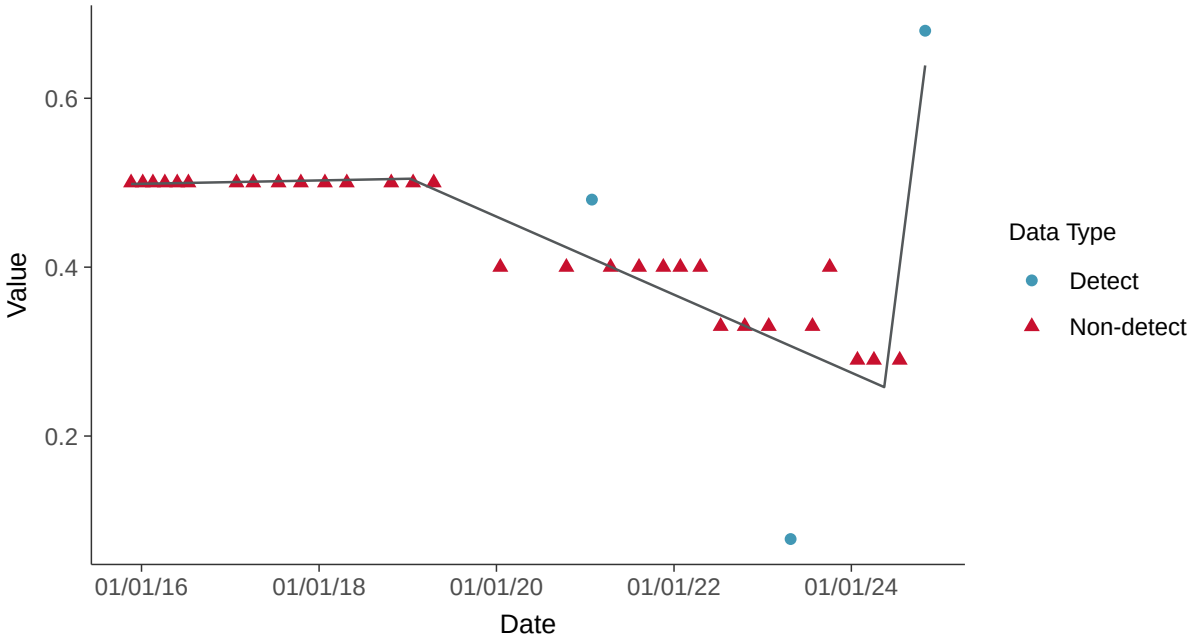
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-2 (ug/L)

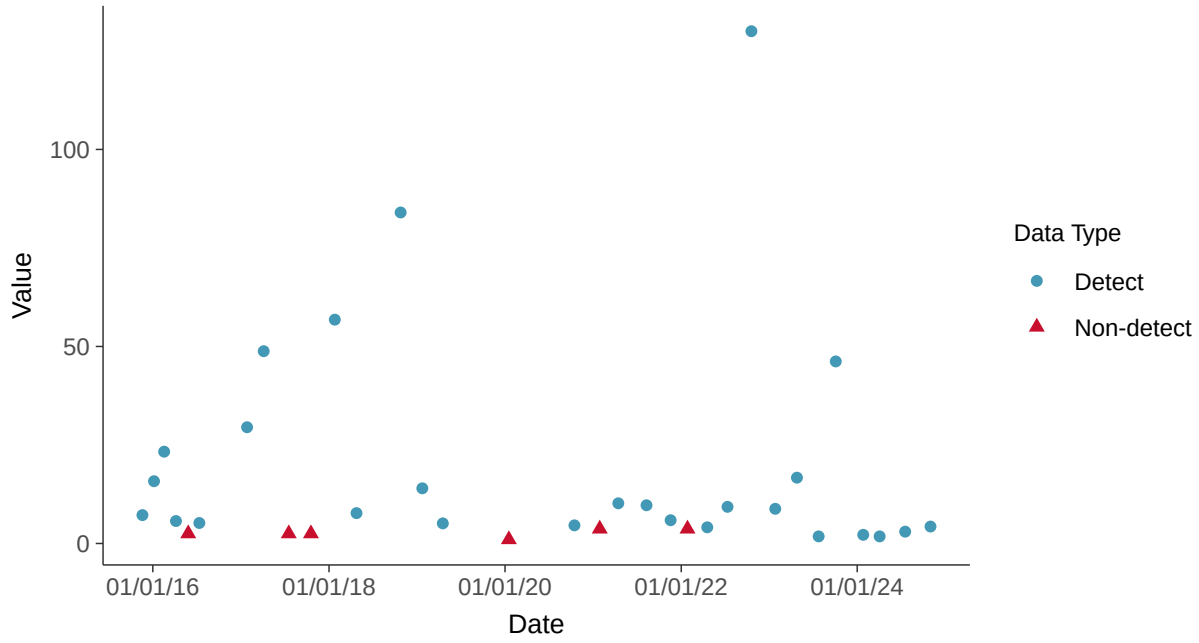


App. IV: Chromium, MW-2

ID: 02_03_109

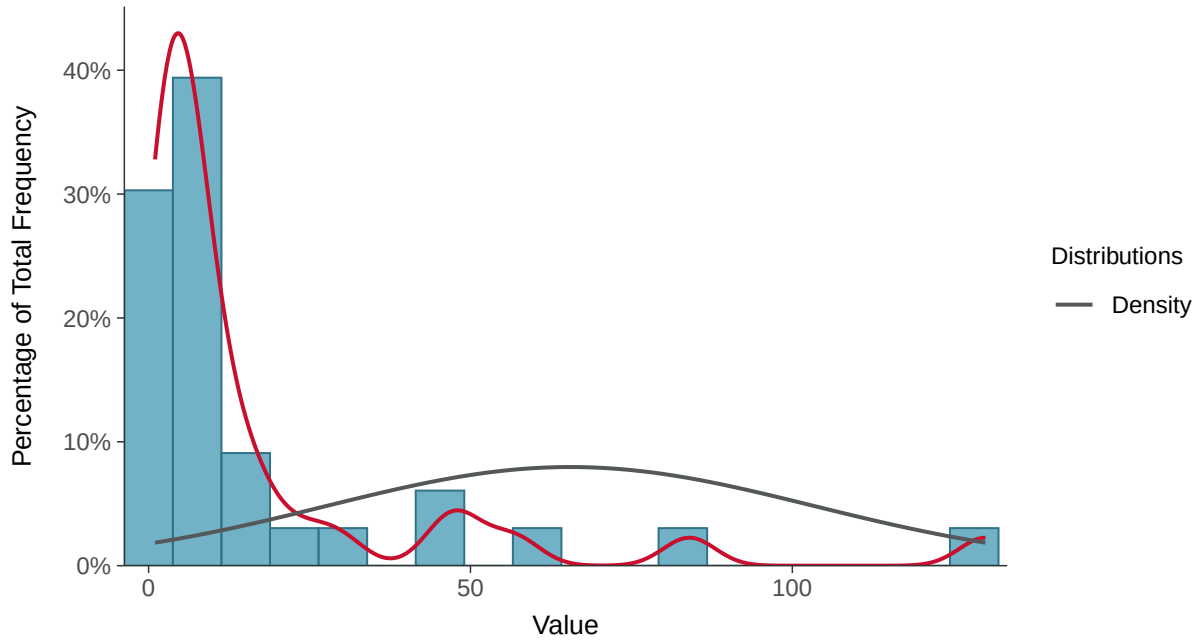
Scatter Plot

Chromium, MW-2 (ug/L)



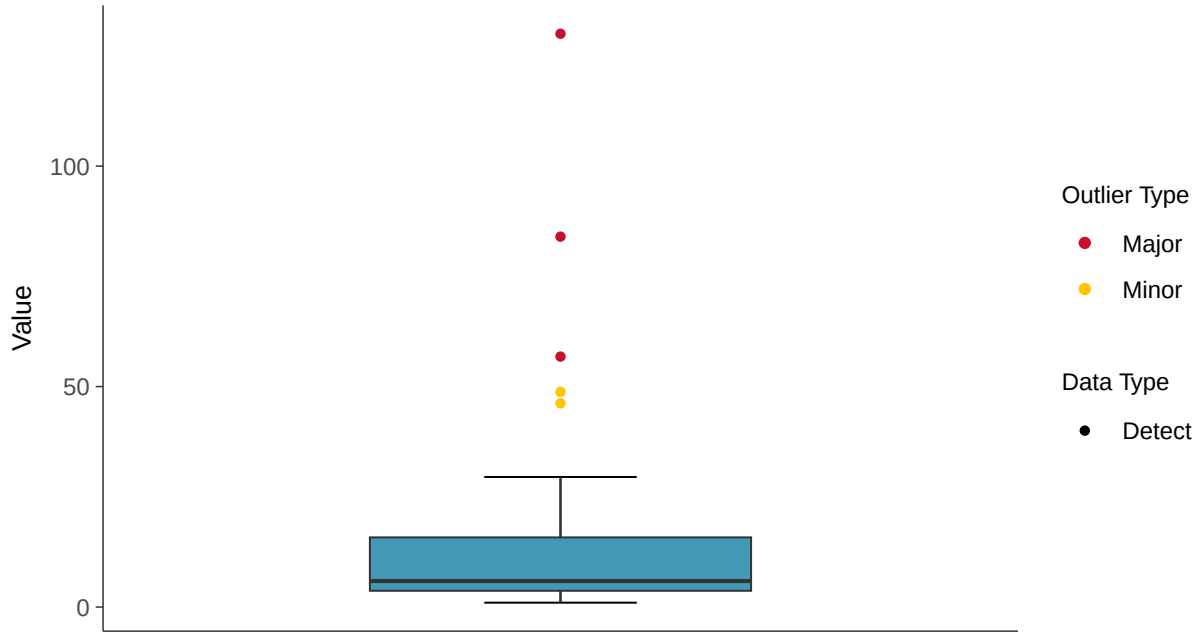
Histogram

Chromium, MW-2 (ug/L)



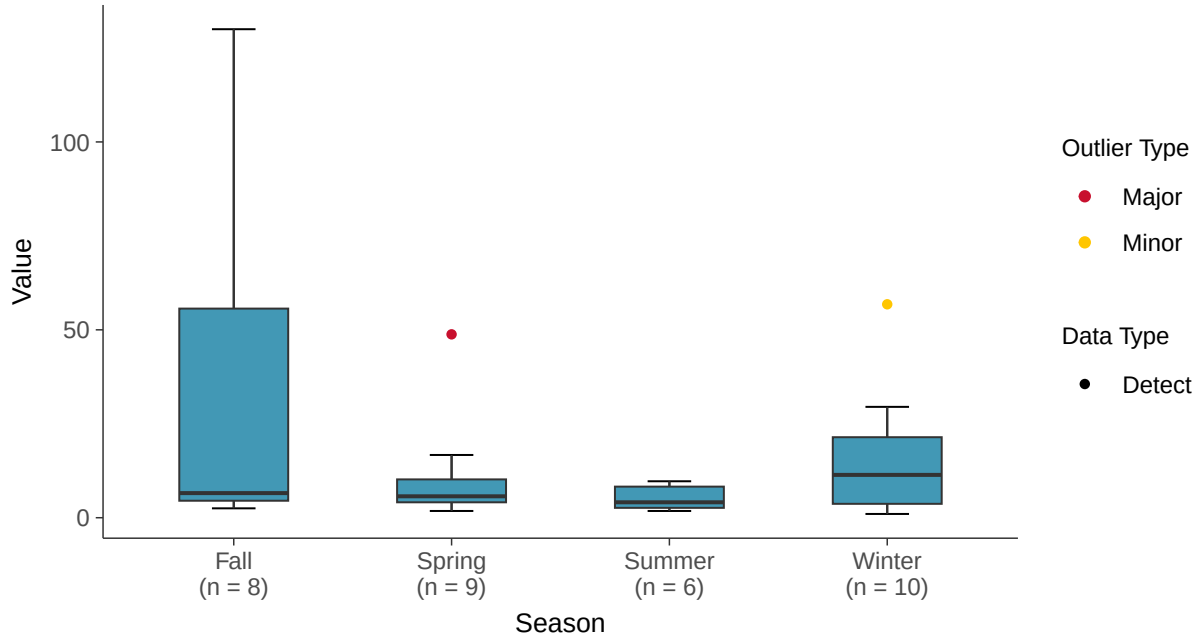
Boxplot

Chromium, MW-2 (ug/L)



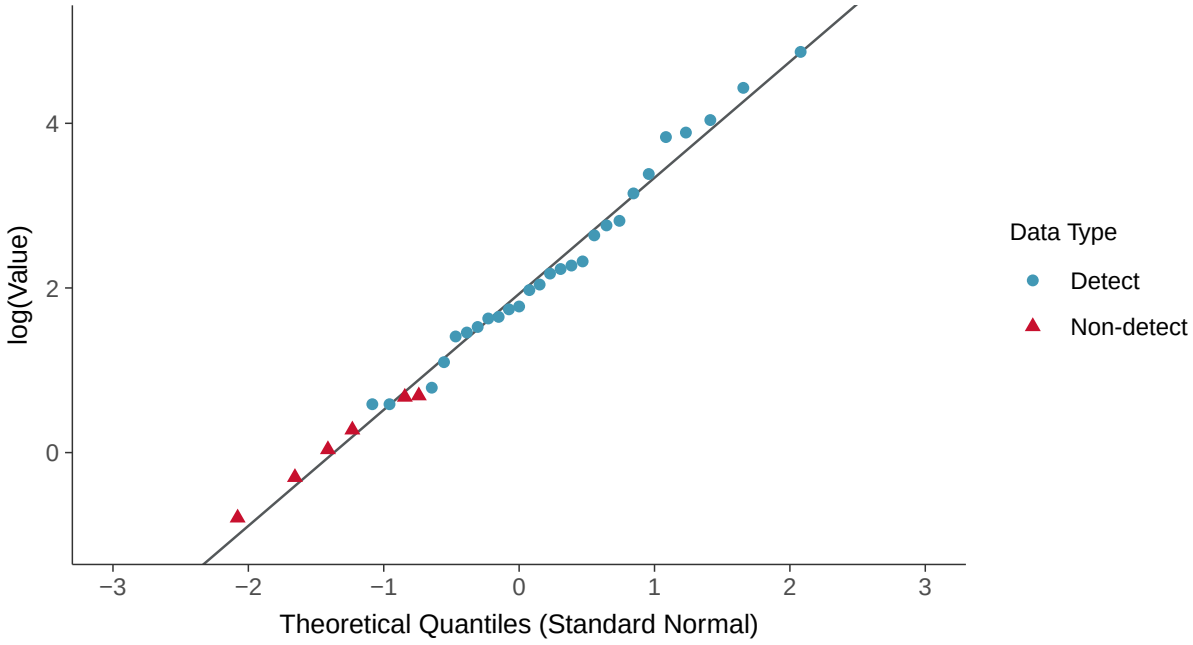
Boxplot by Season

Chromium, MW-2 (ug/L)



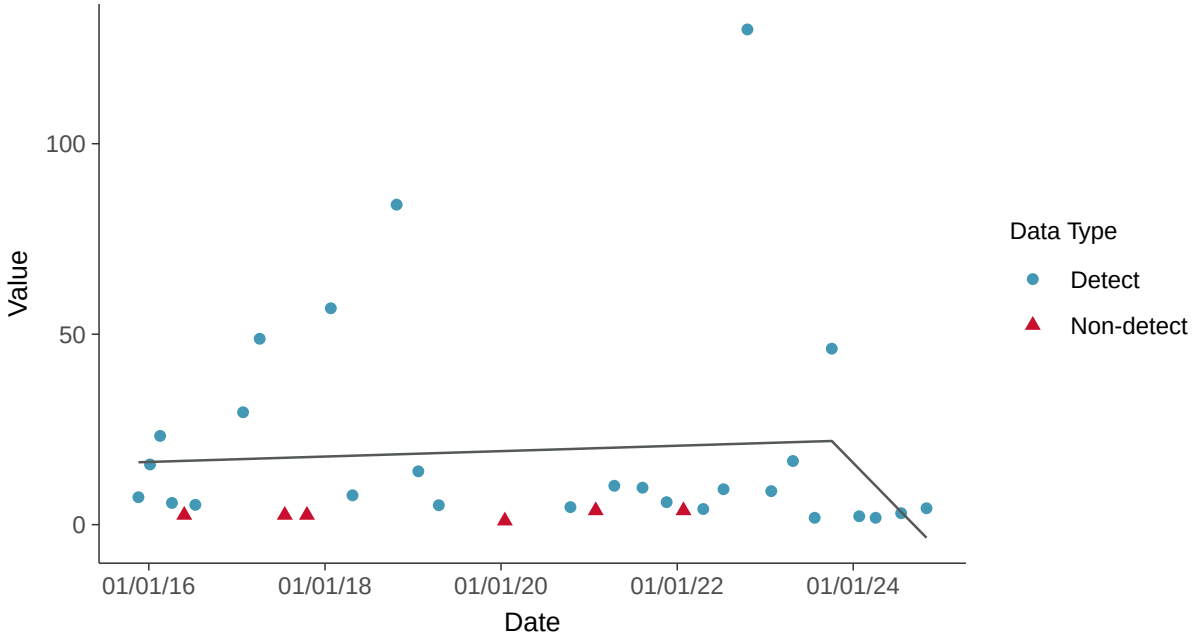
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-2 (ug/L)



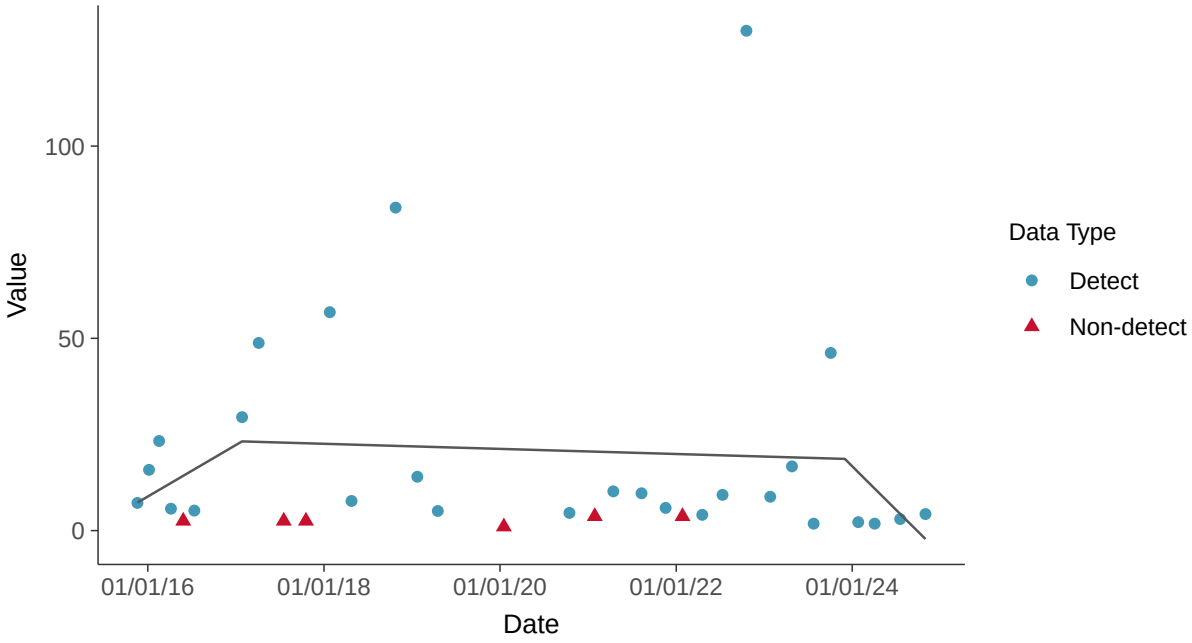
Trend Regression: Piecewise Linear-Linear

Chromium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-2 (ug/L)

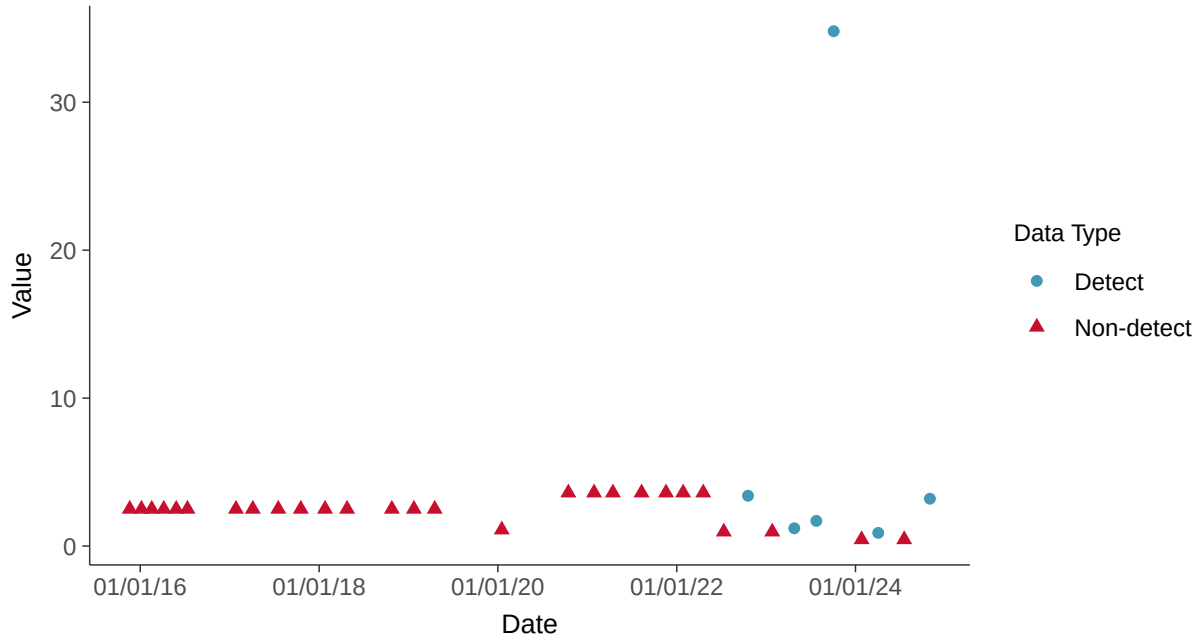


App. IV: Cobalt, MW-2

ID: 02_03_110

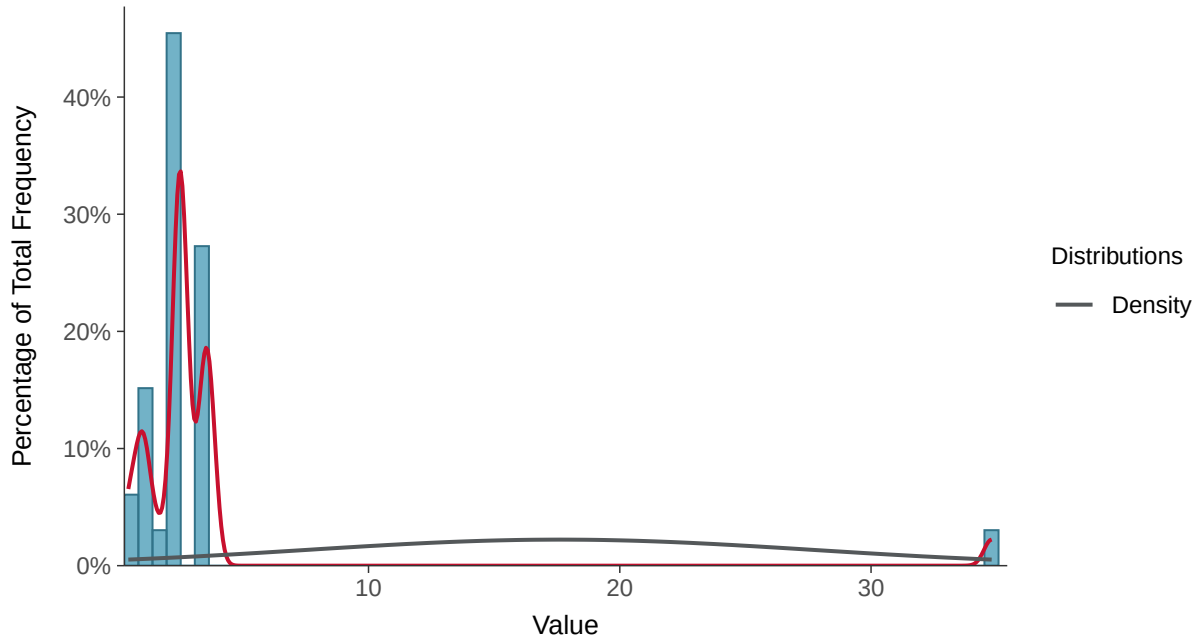
Scatter Plot

Cobalt, MW-2 (ug/L)



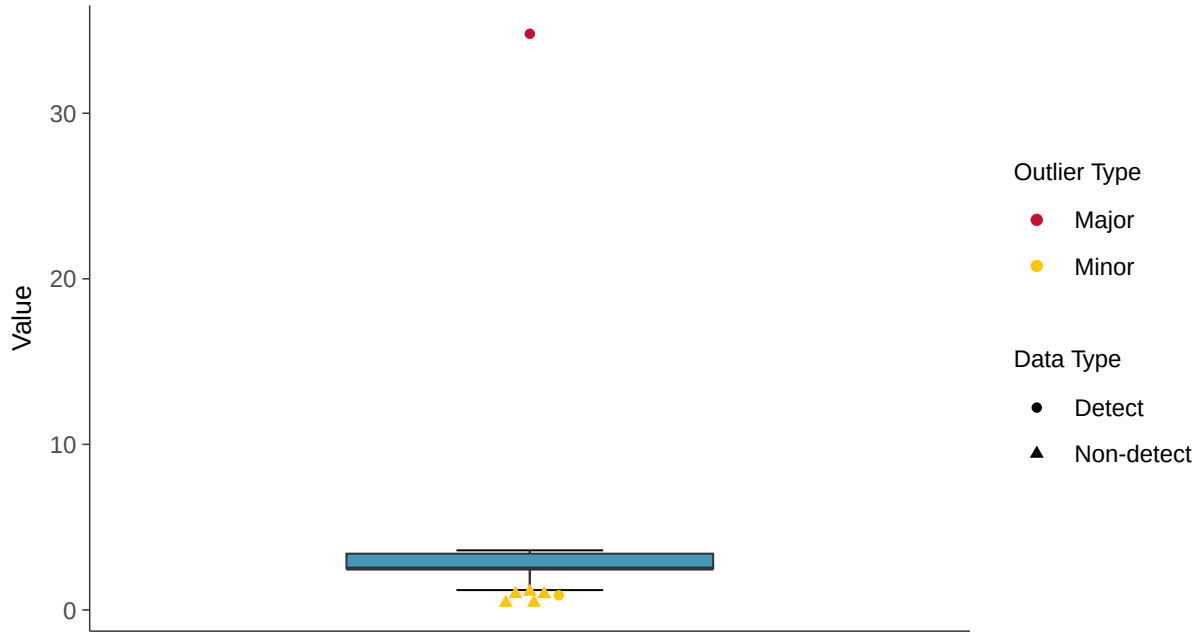
Histogram

Cobalt, MW-2 (ug/L)



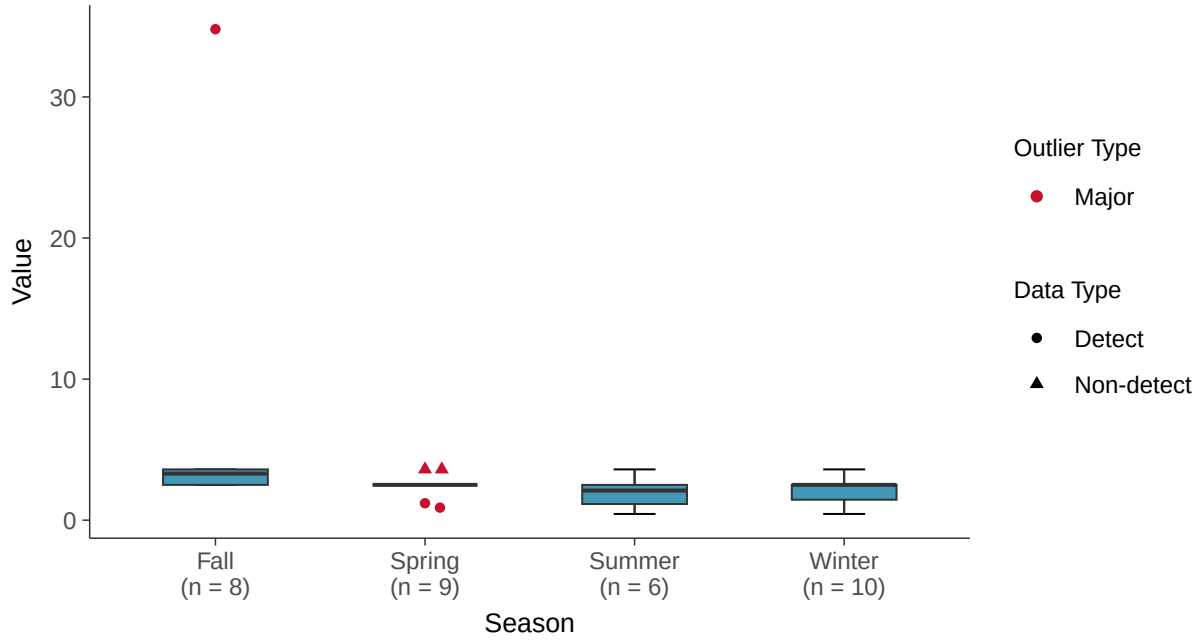
Boxplot

Cobalt, MW-2 (ug/L)



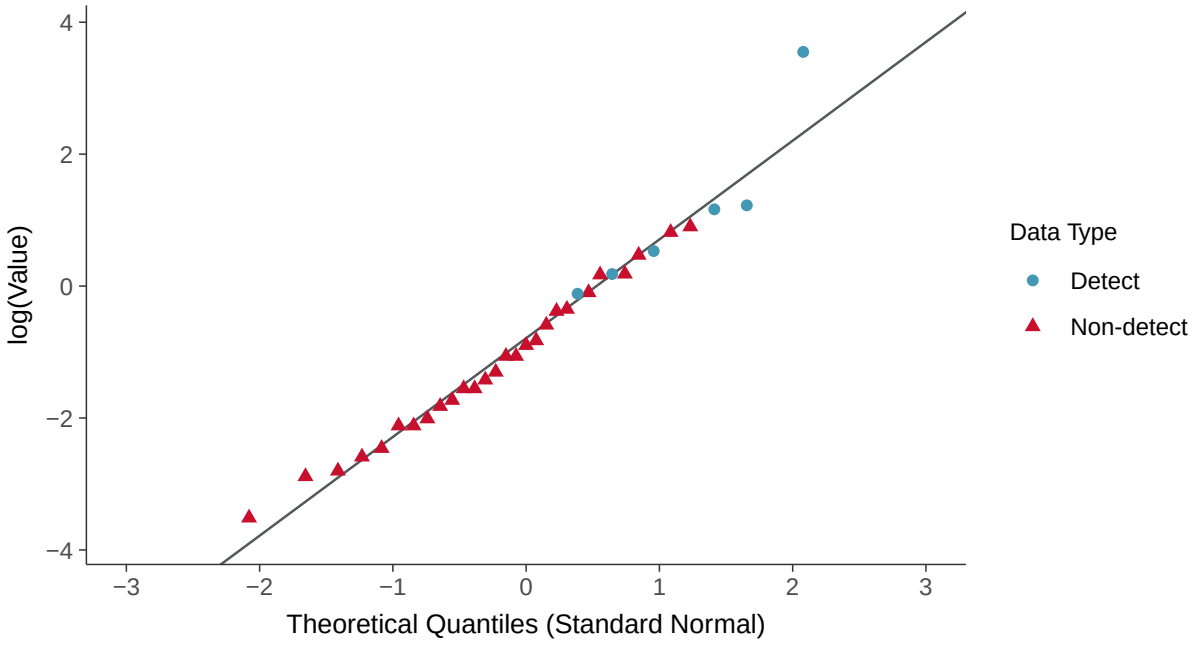
Boxplot by Season

Cobalt, MW-2 (ug/L)



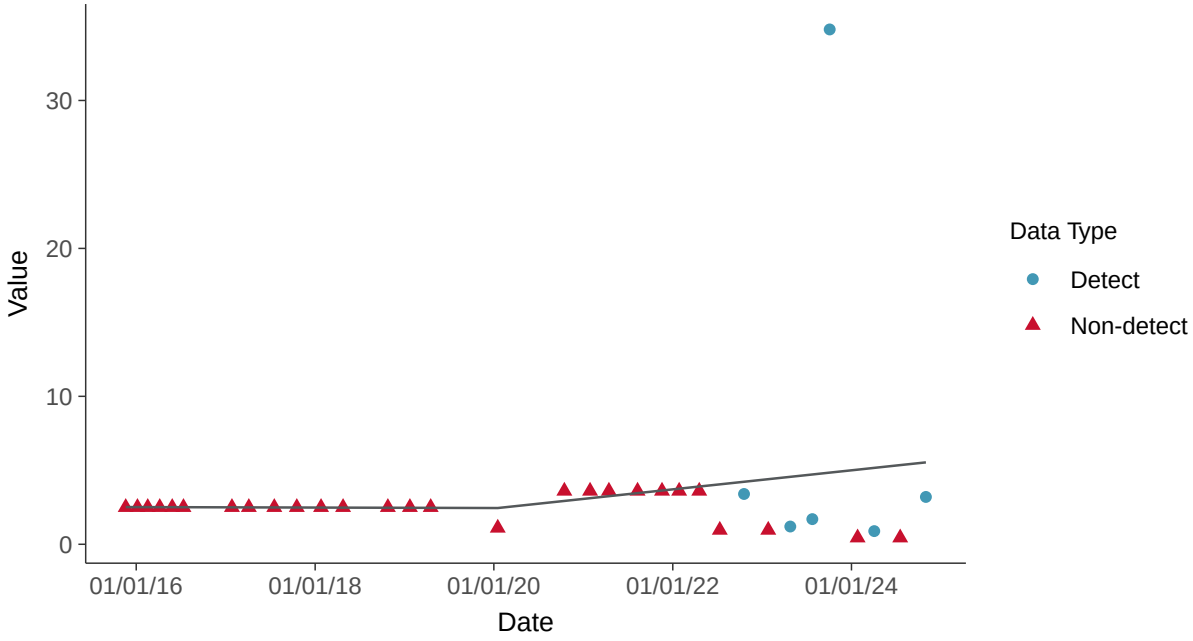
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-2 (ug/L)



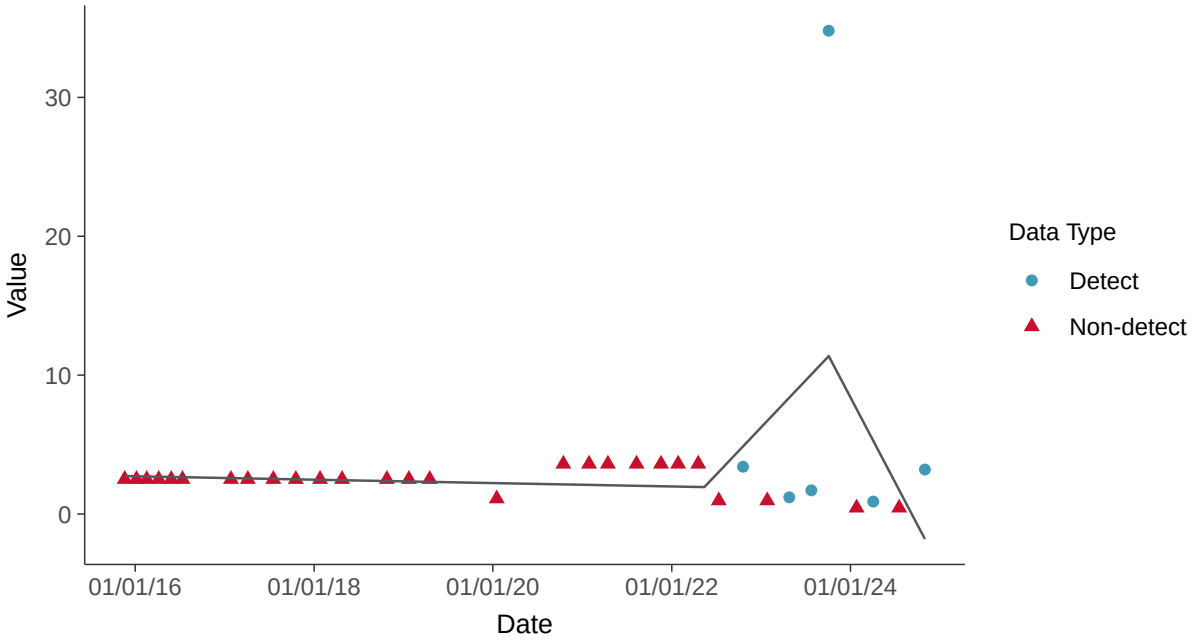
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-2 (ug/L)



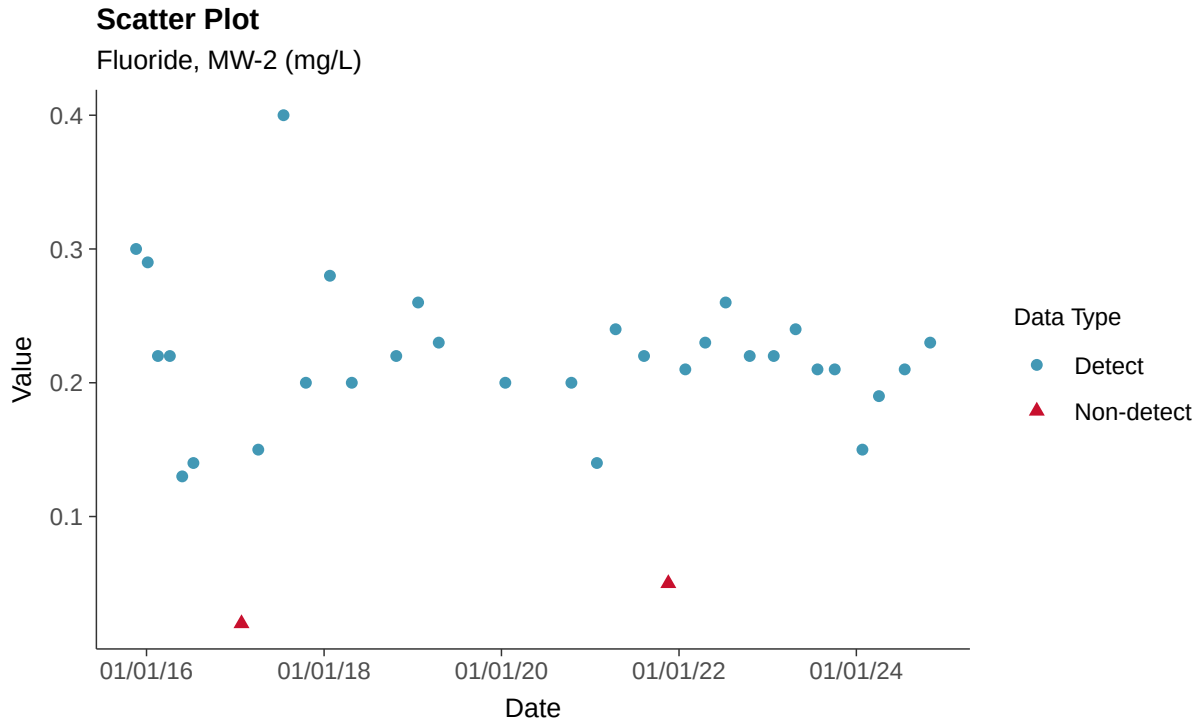
Trend Regression: Piecewise Linear-Linear-Linear

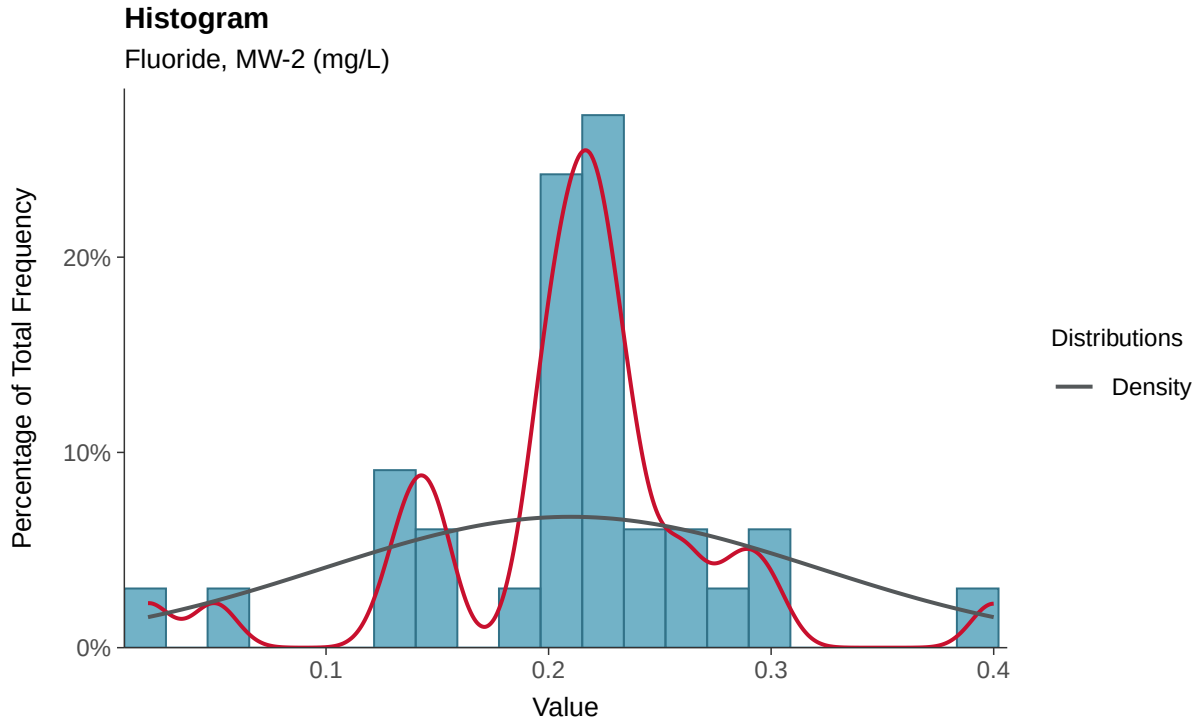
Cobalt, MW-2 (ug/L)



App. IV: Fluoride, MW-2

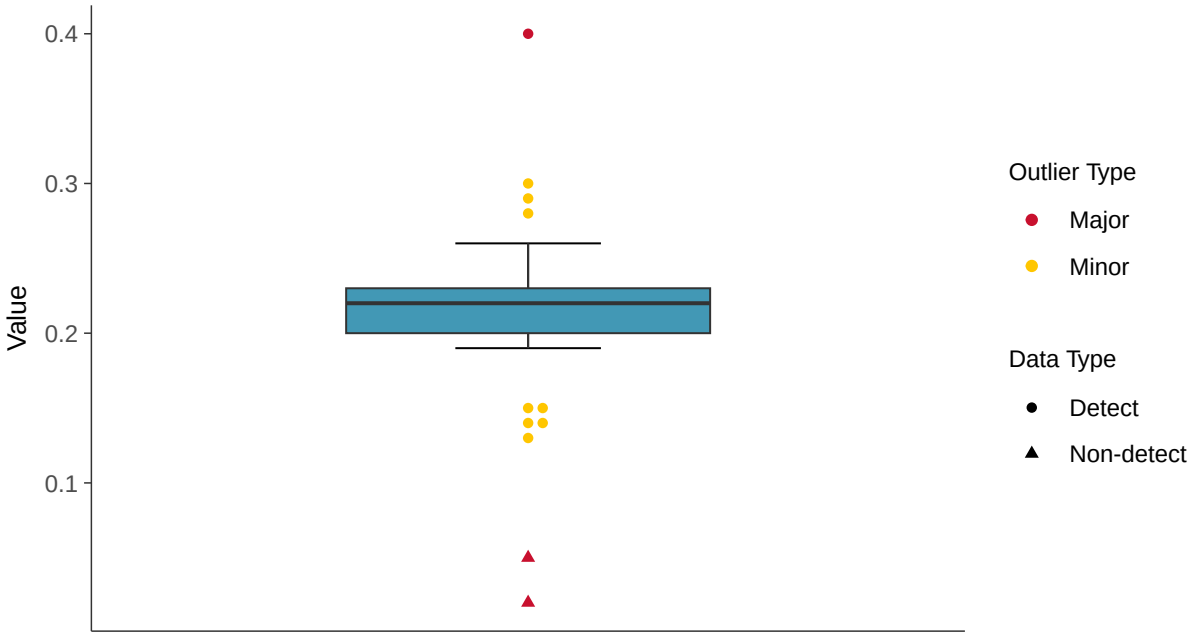
ID: 02_03_112





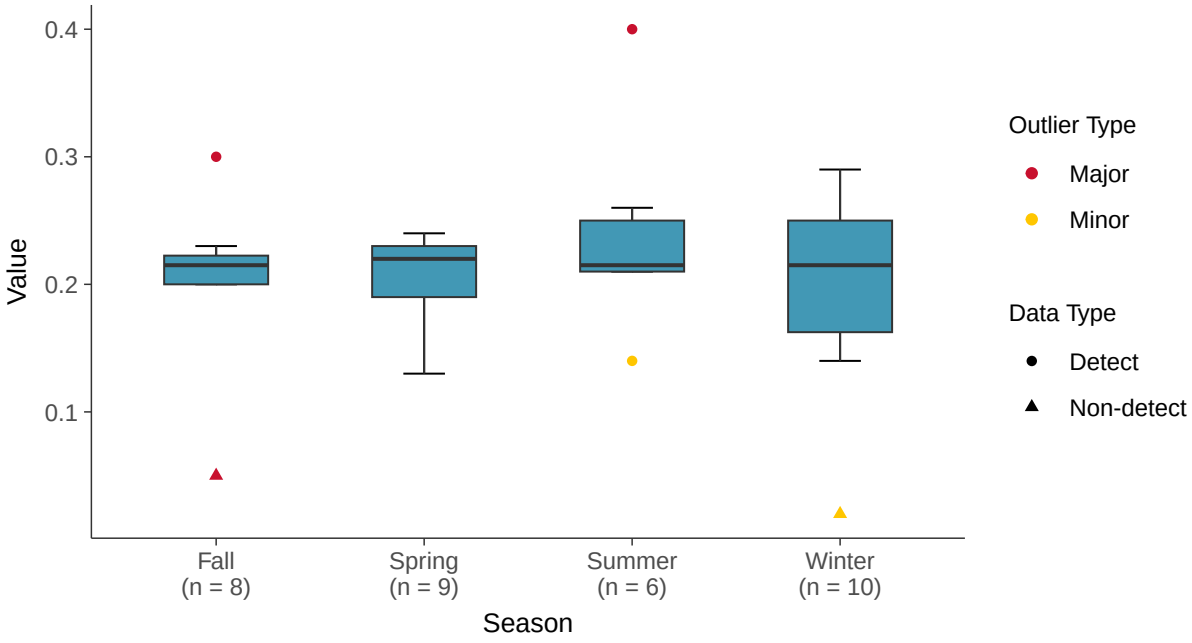
Boxplot

Fluoride, MW-2 (mg/L)



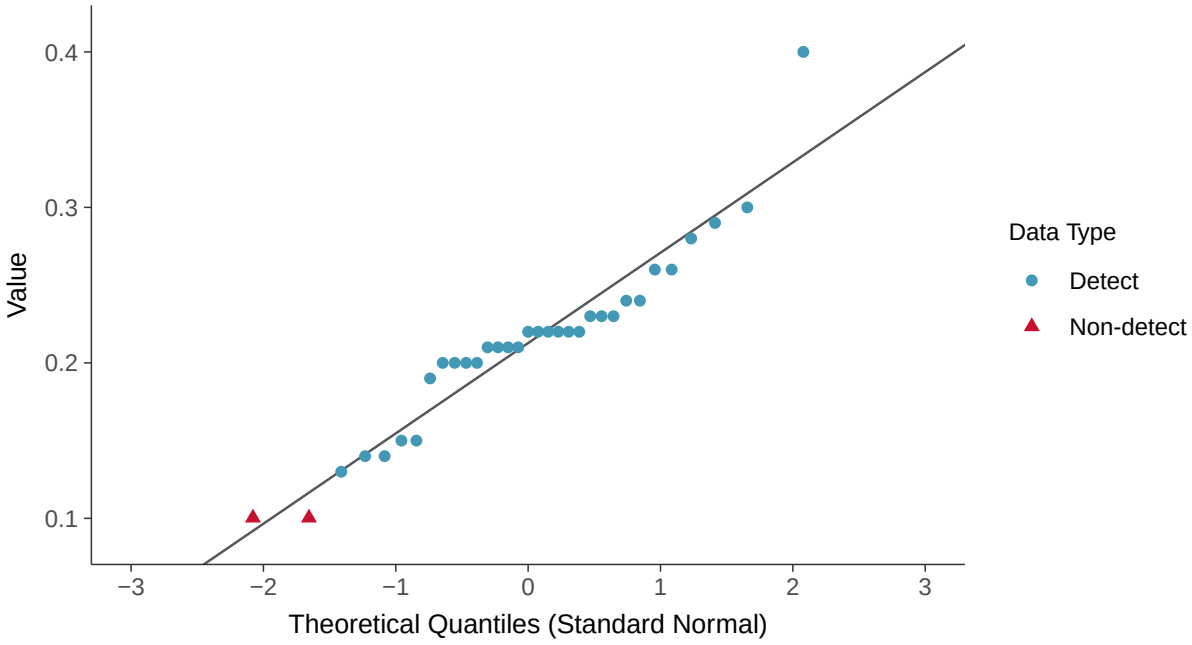
Boxplot by Season

Fluoride, MW-2 (mg/L)



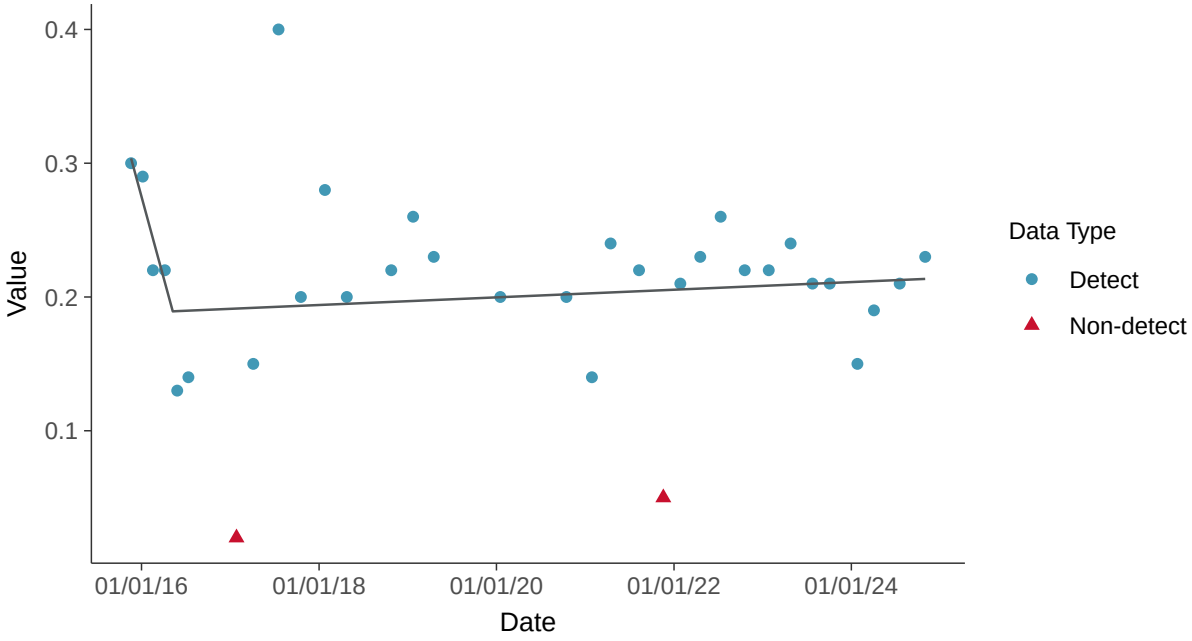
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-2 (mg/L)



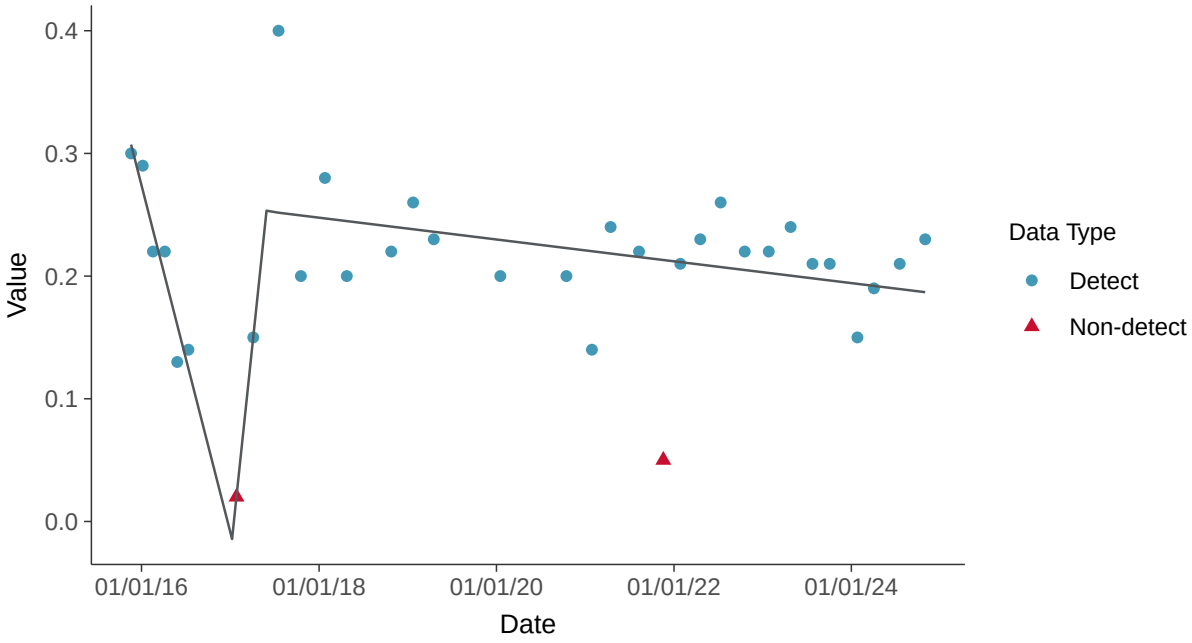
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-2 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-2 (mg/L)

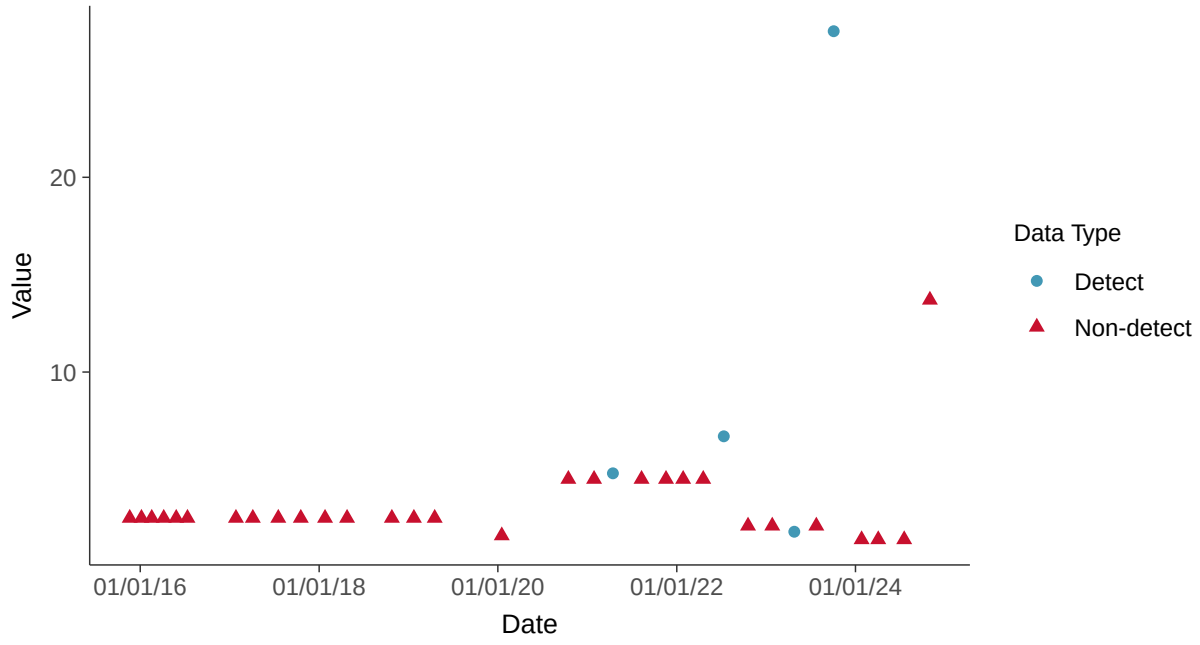


App. IV: Lead, MW-2

ID: 02_03_113

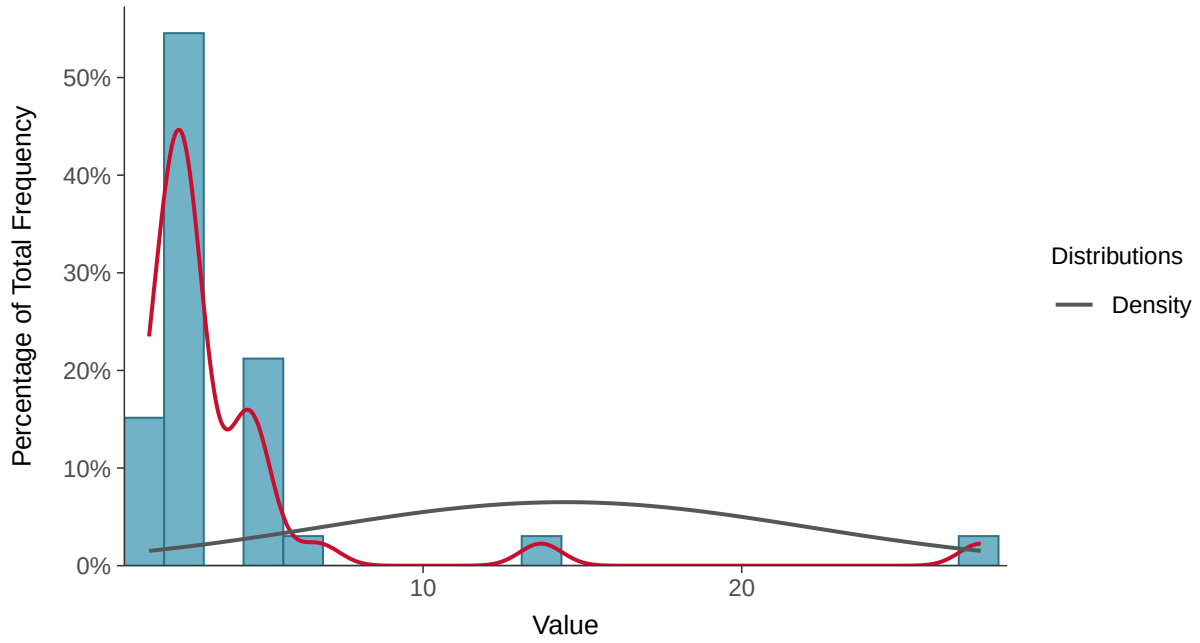
Scatter Plot

Lead, MW-2 (ug/L)



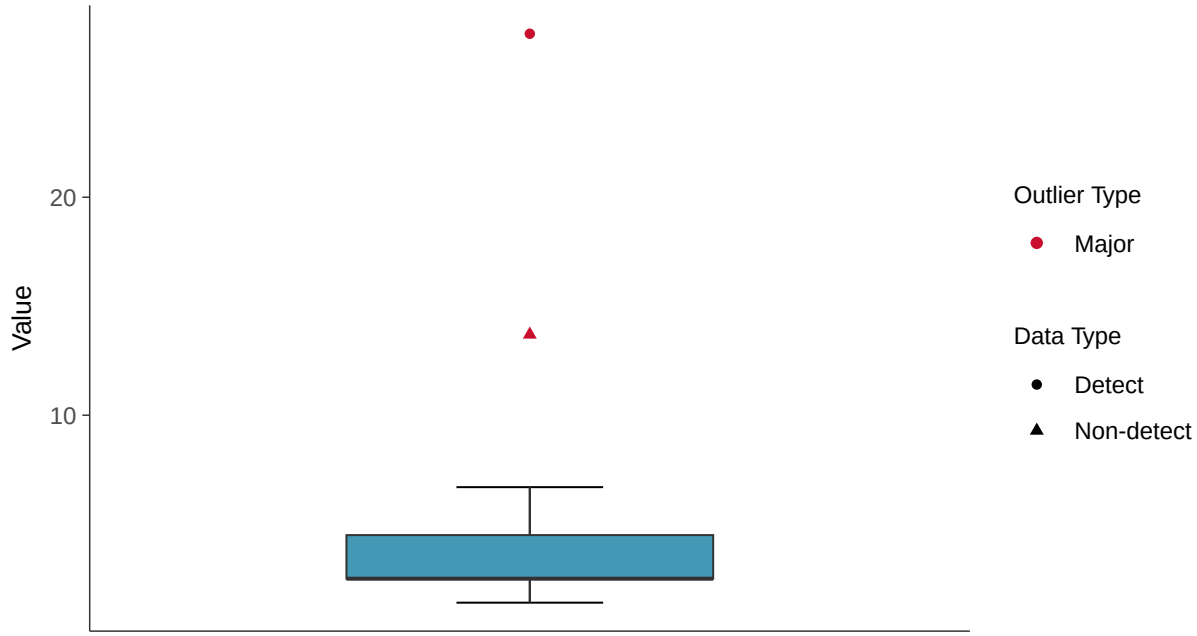
Histogram

Lead, MW-2 (ug/L)



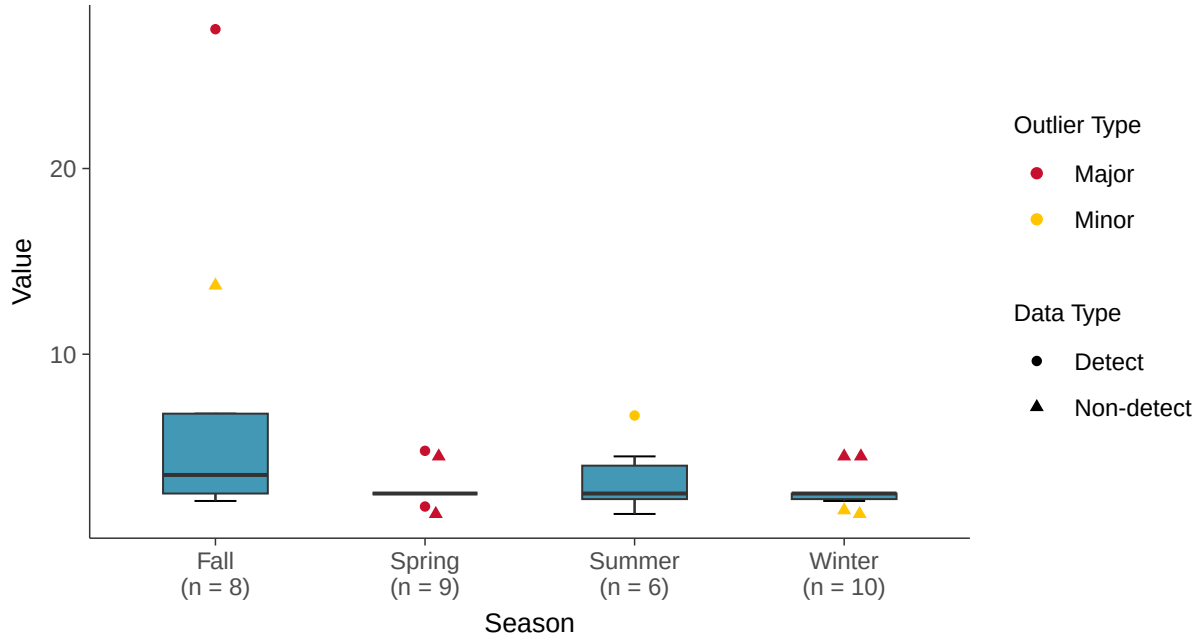
Boxplot

Lead, MW-2 (ug/L)



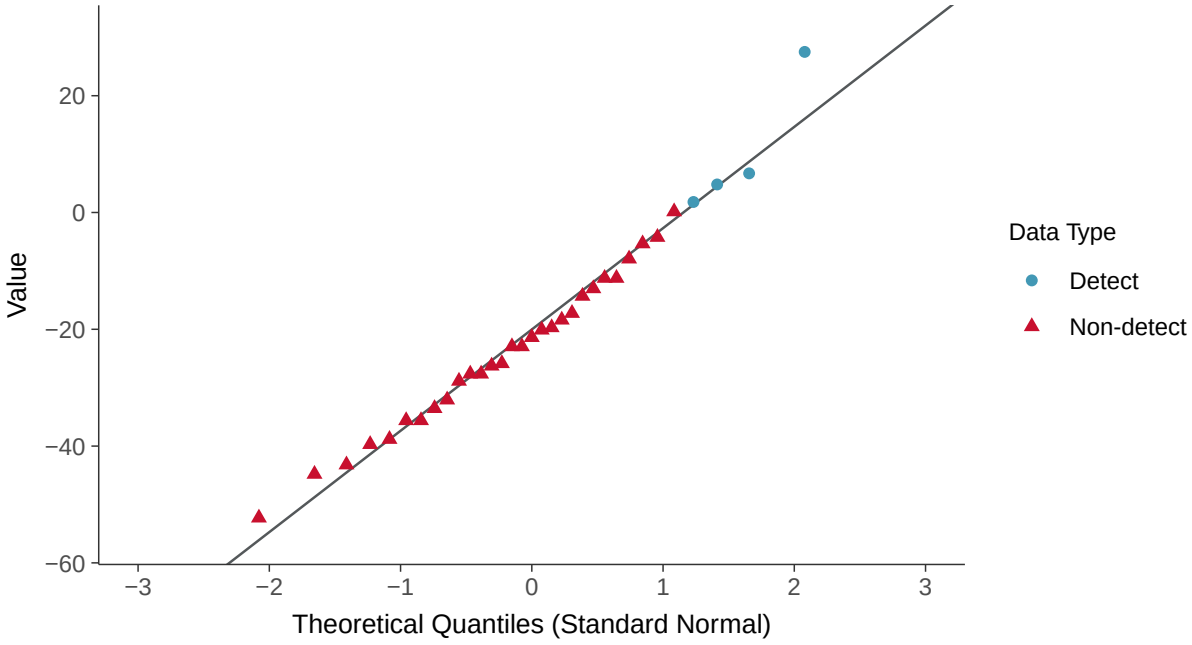
Boxplot by Season

Lead, MW-2 (ug/L)



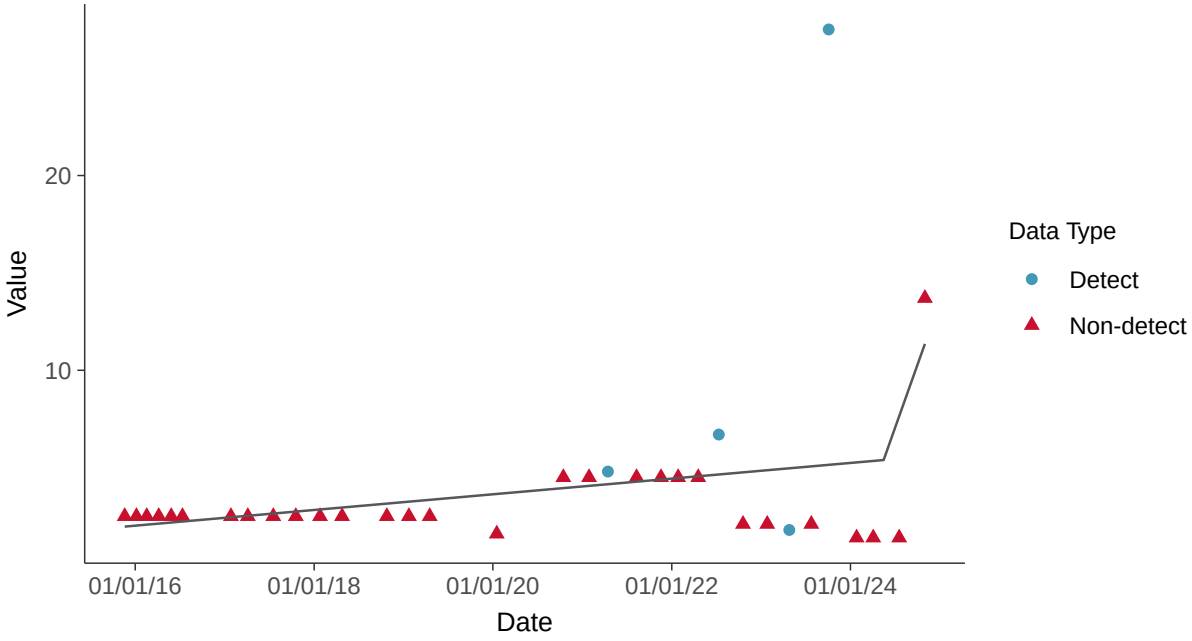
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-2 (ug/L)



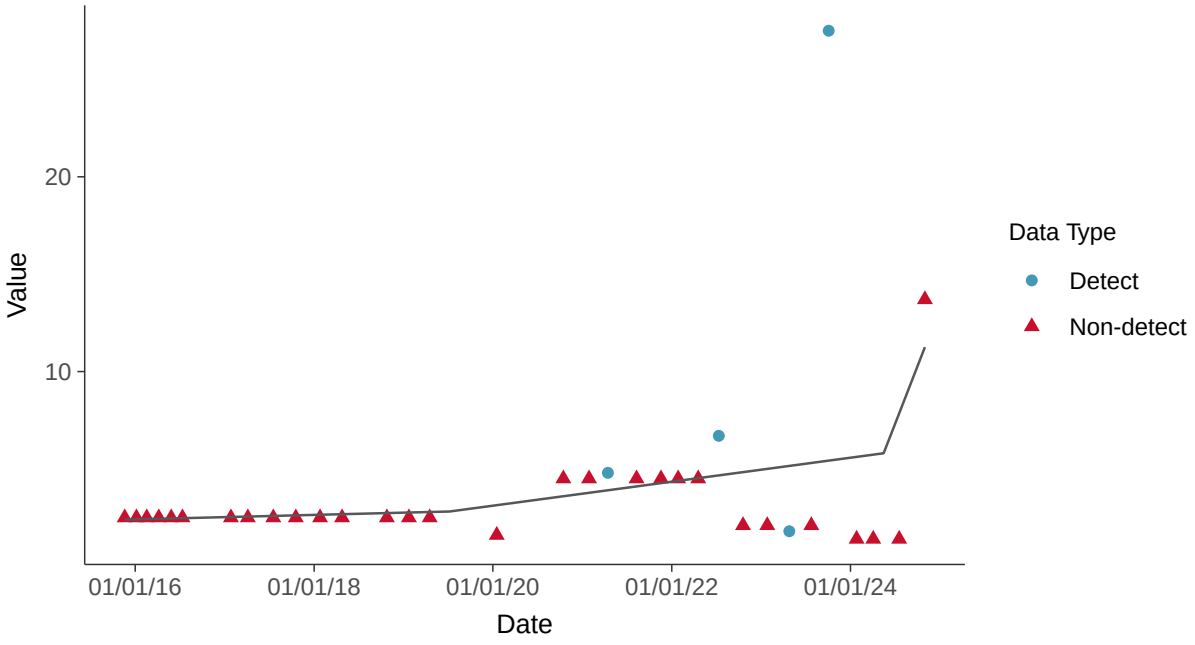
Trend Regression: Piecewise Linear-Linear

Lead, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-2 (ug/L)

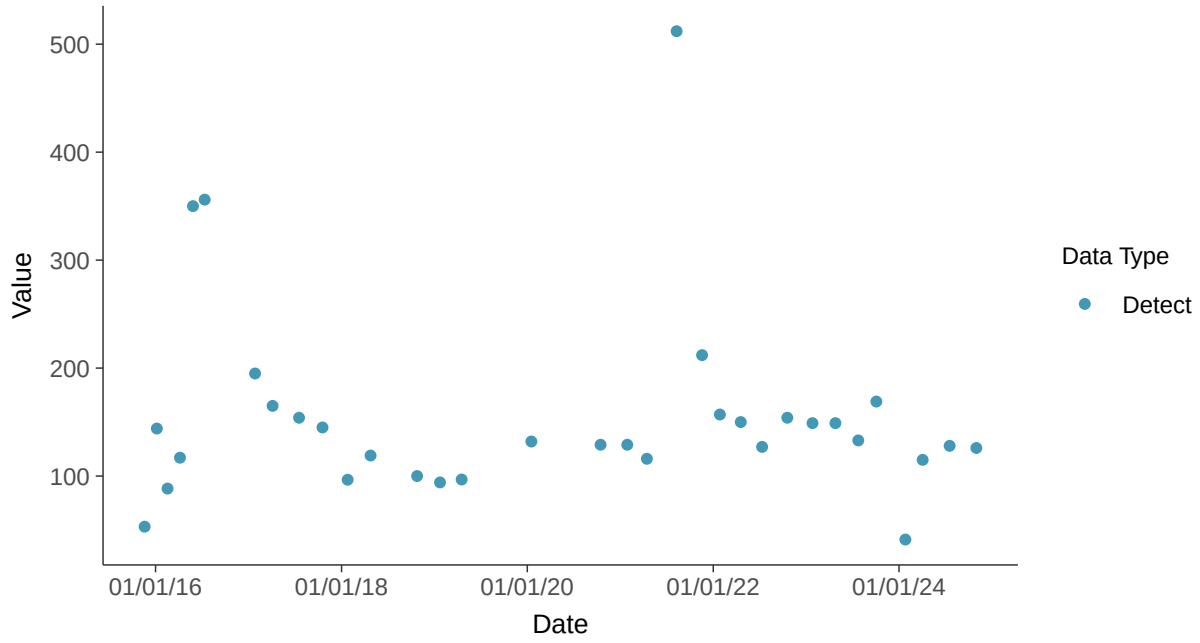


App. IV: Lithium, MW-2

ID: 02_03_114

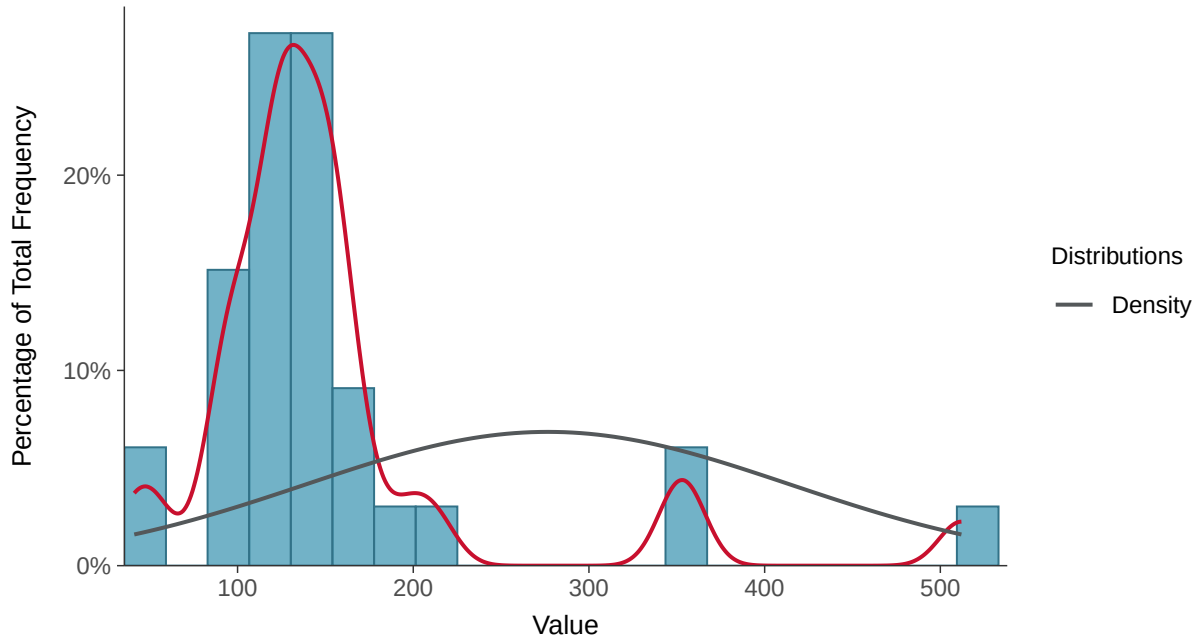
Scatter Plot

Lithium, MW-2 (ug/L)



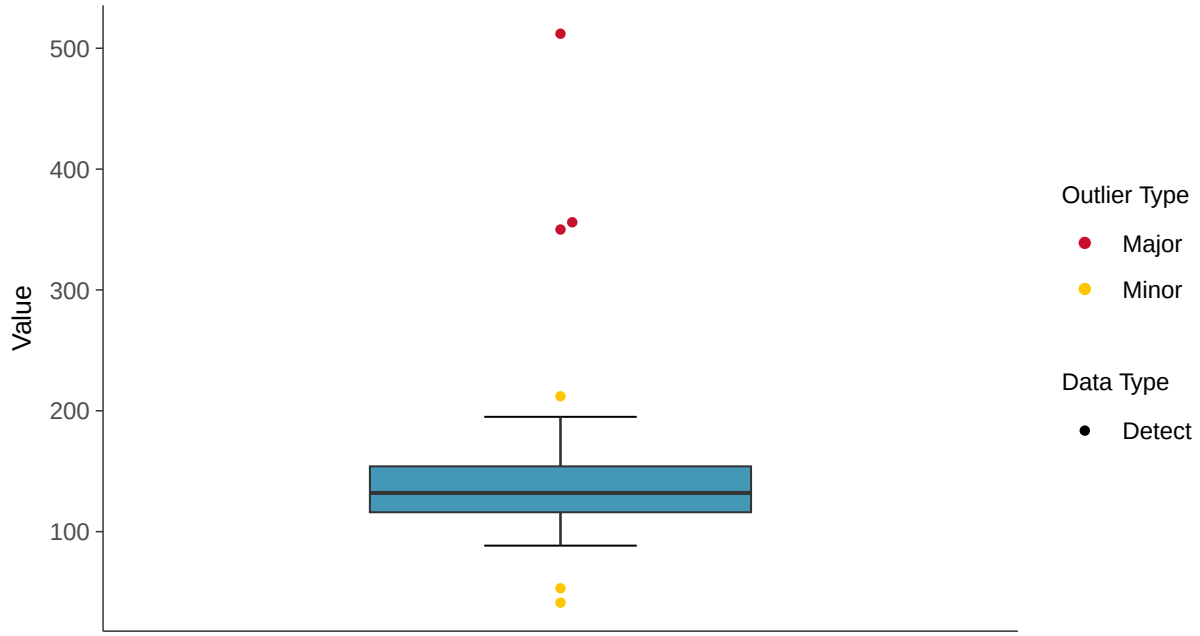
Histogram

Lithium, MW-2 (ug/L)



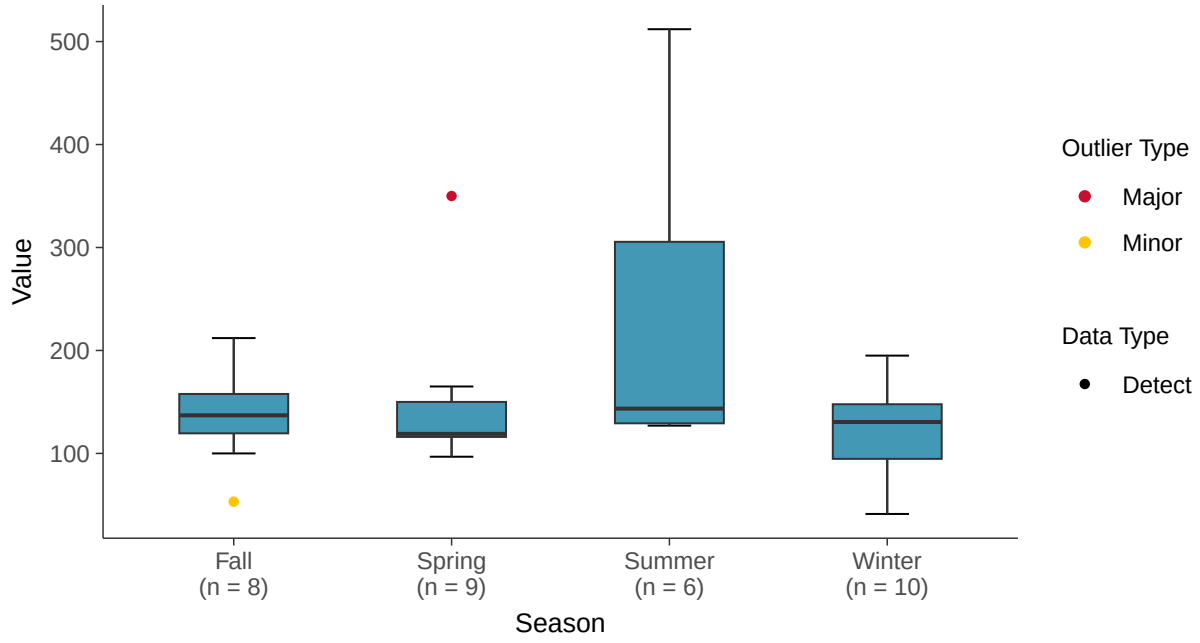
Boxplot

Lithium, MW-2 (ug/L)



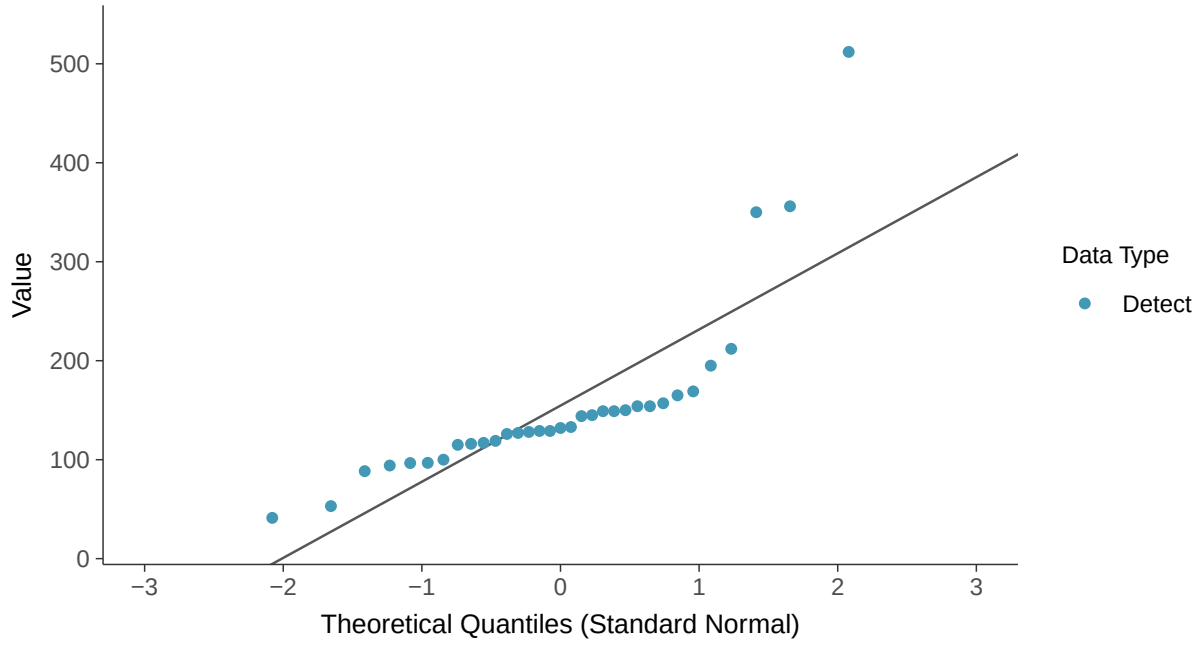
Boxplot by Season

Lithium, MW-2 (ug/L)



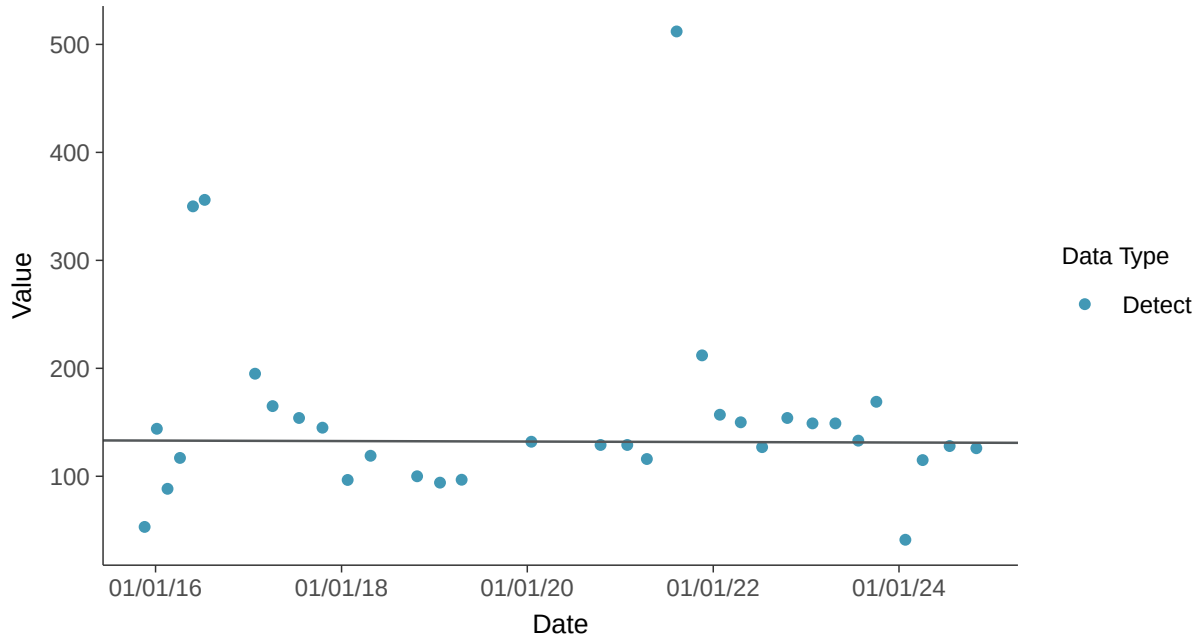
Normal Q-Q plot

Lithium, MW-2 (ug/L)



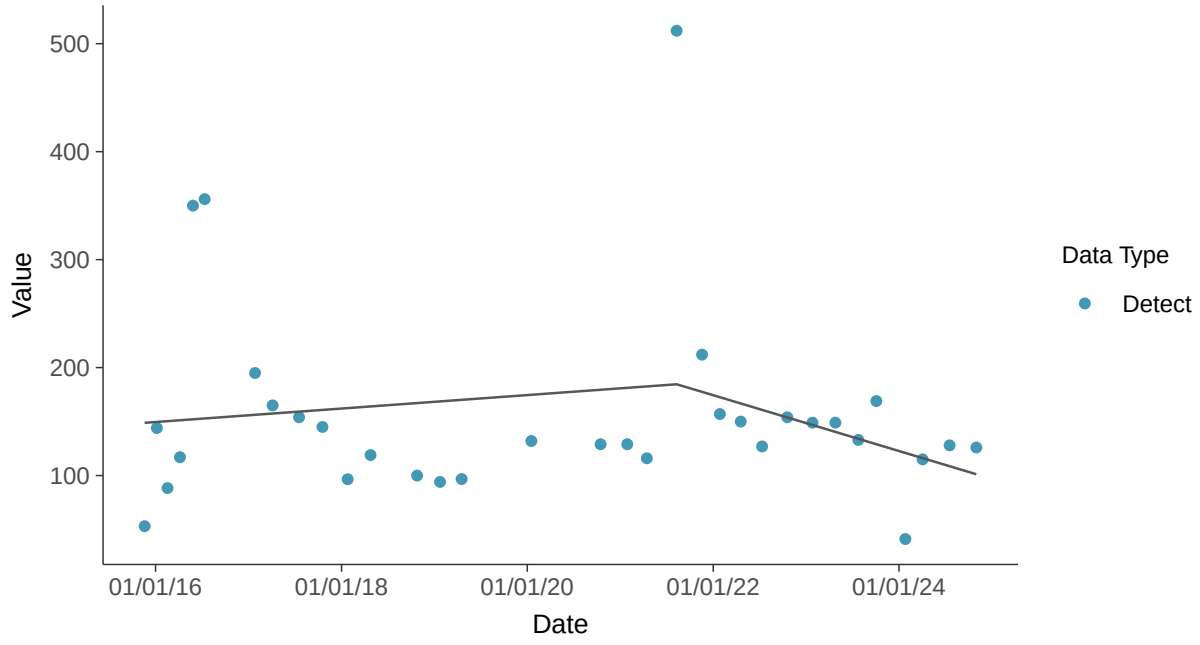
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-2 (ug/L)



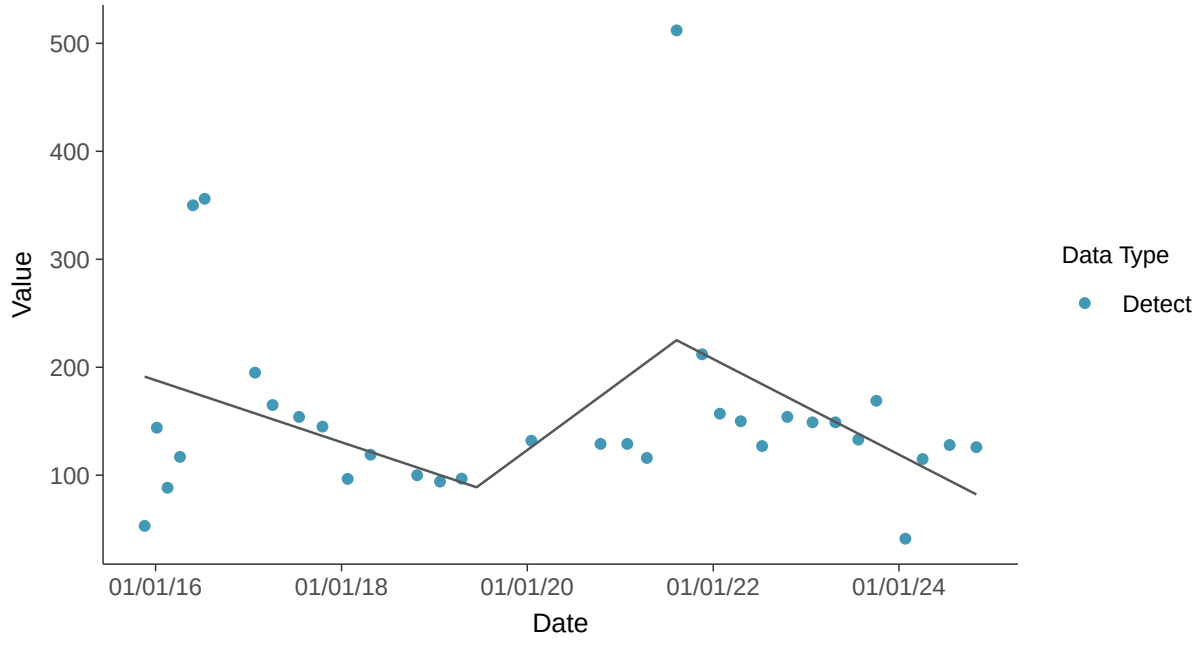
Trend Regression: Piecewise Linear-Linear

Lithium, MW-2 (ug/L)



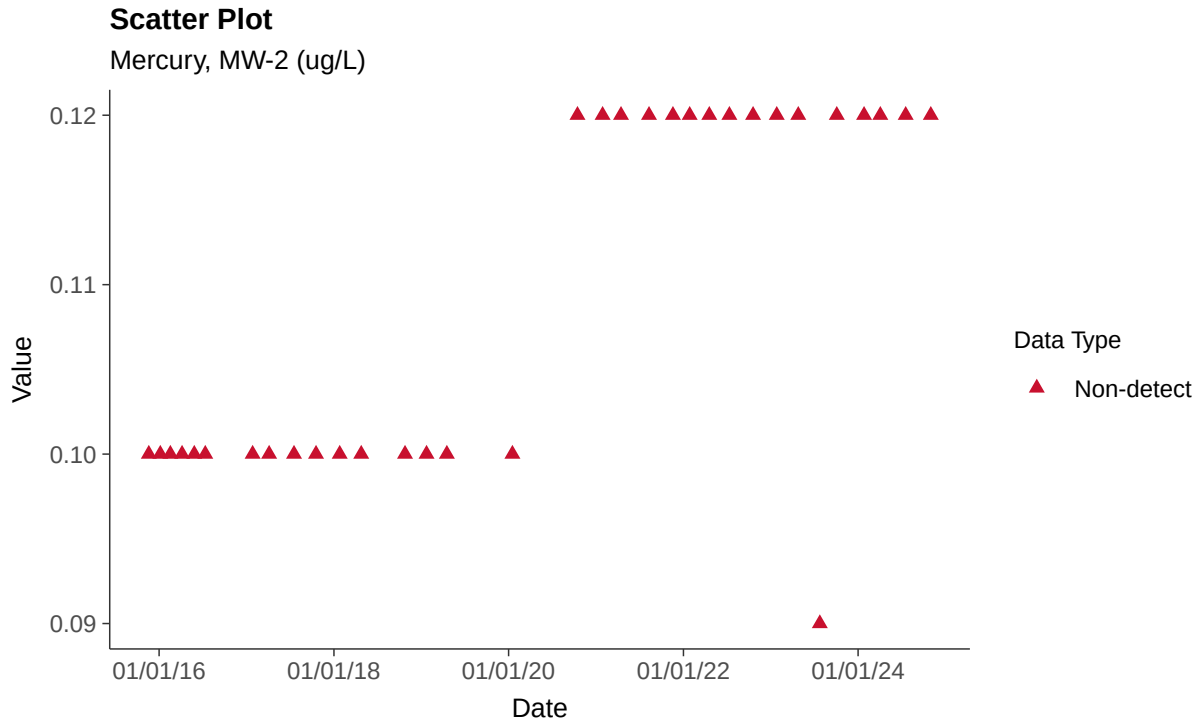
Trend Regression: Piecewise Linear-Linear-Linear

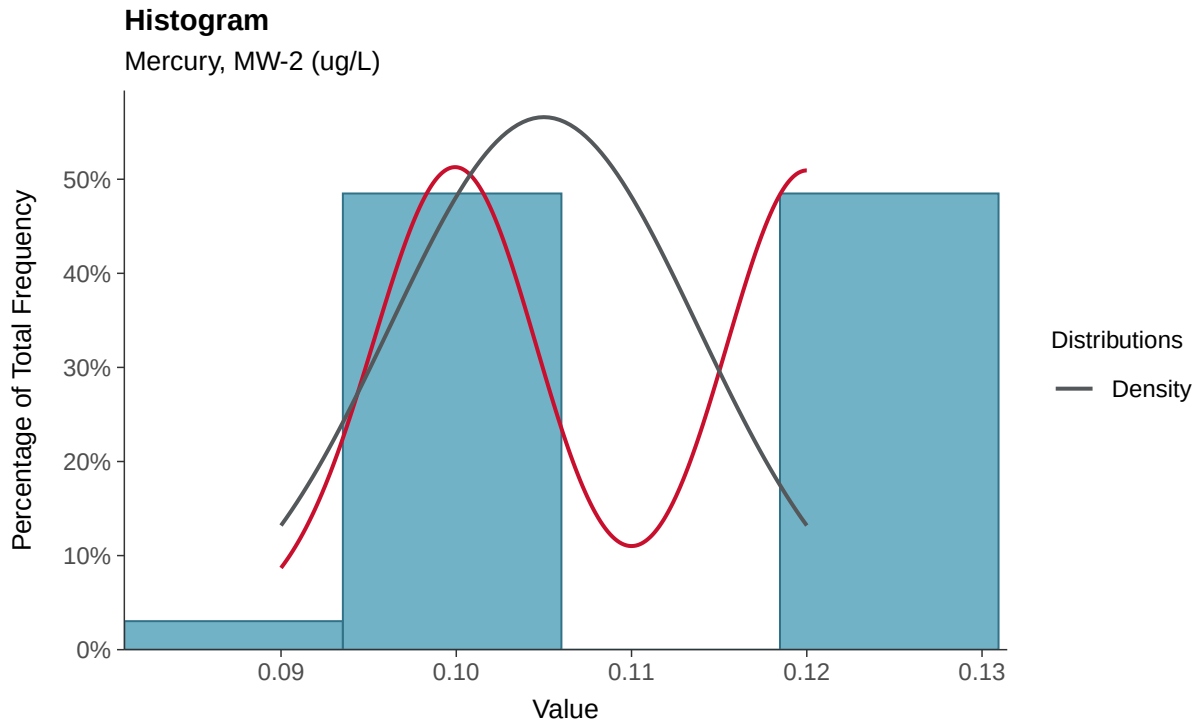
Lithium, MW-2 (ug/L)



App. IV: Mercury, MW-2

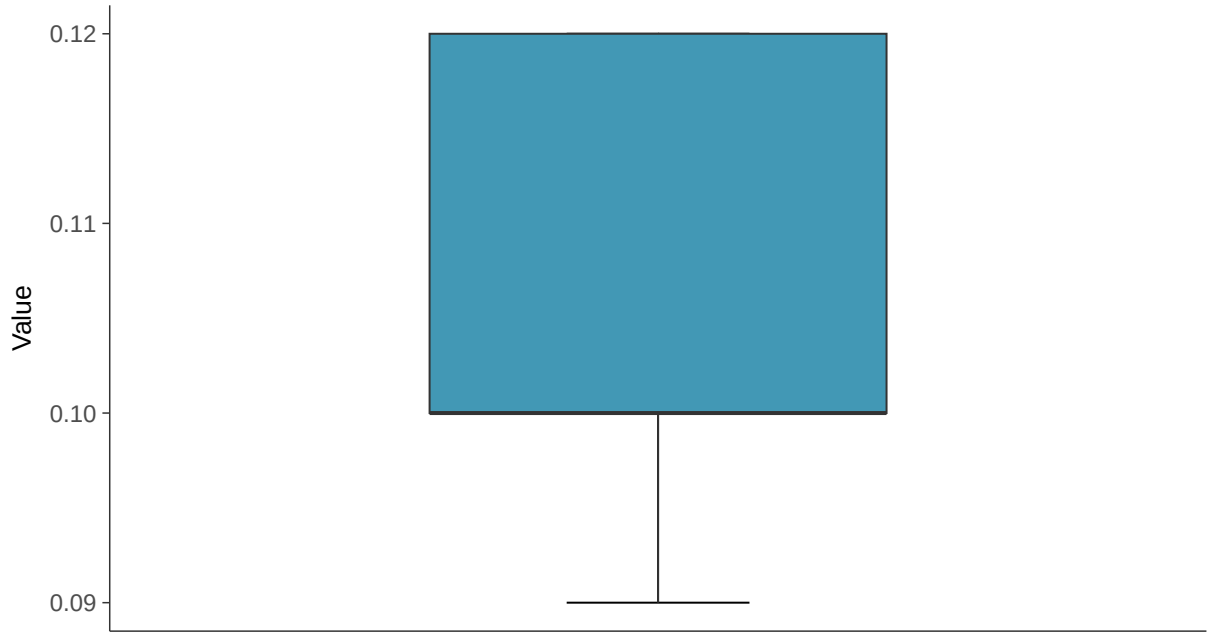
ID: 02_03_115





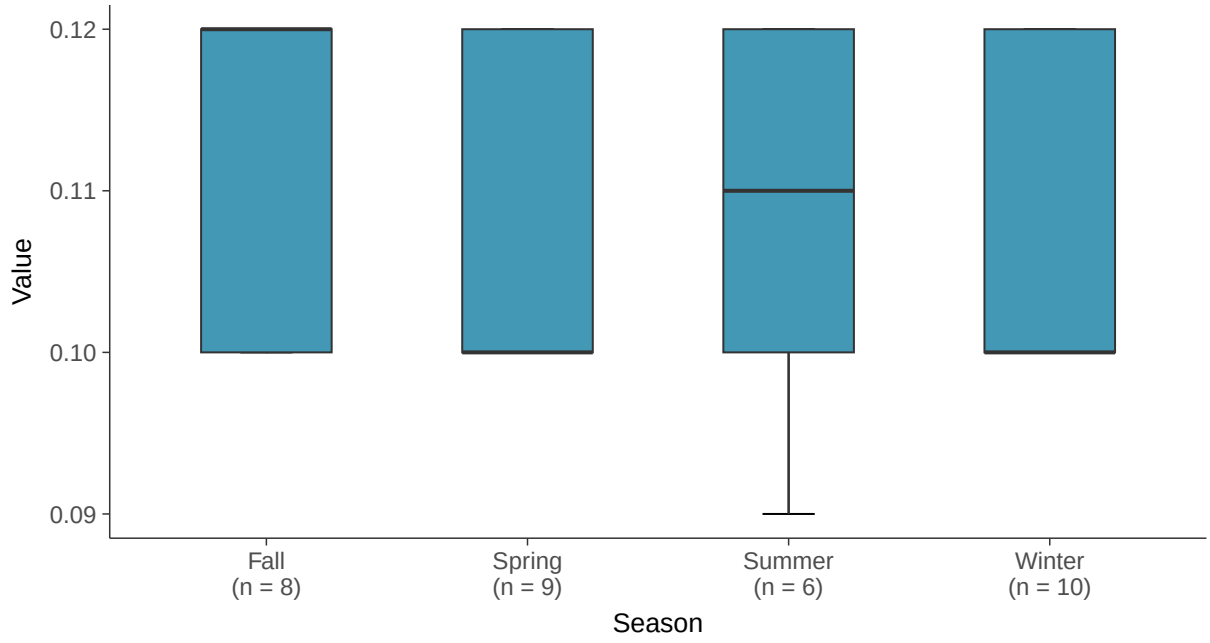
Boxplot

Mercury, MW-2 (ug/L)



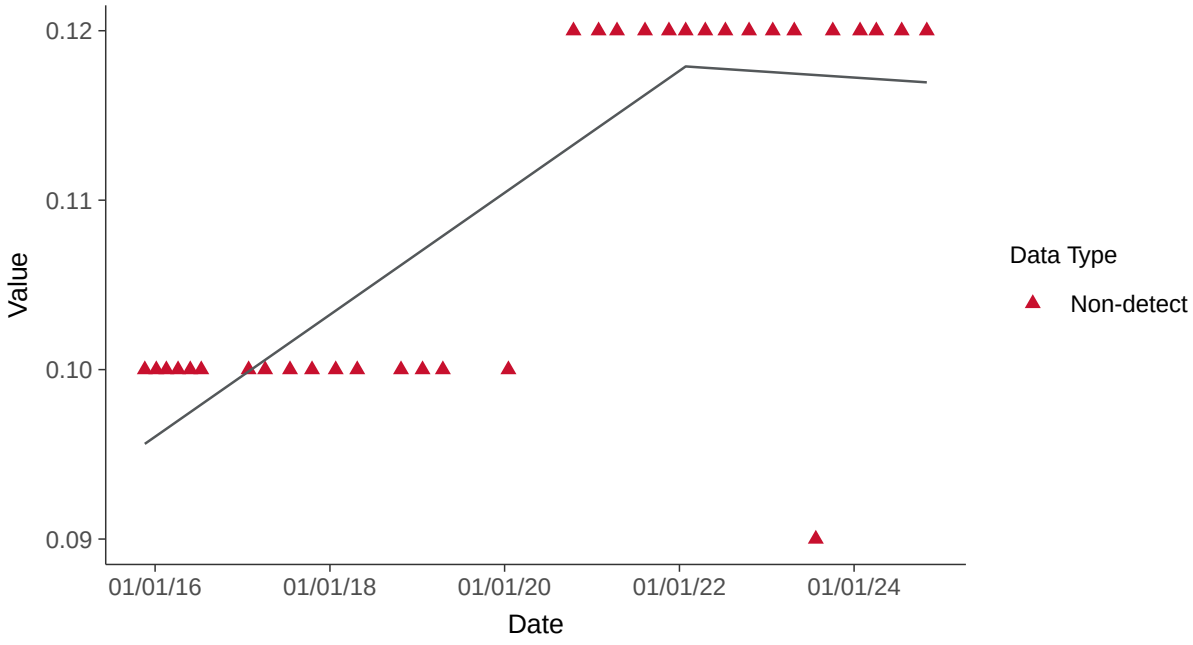
Boxplot by Season

Mercury, MW-2 (ug/L)



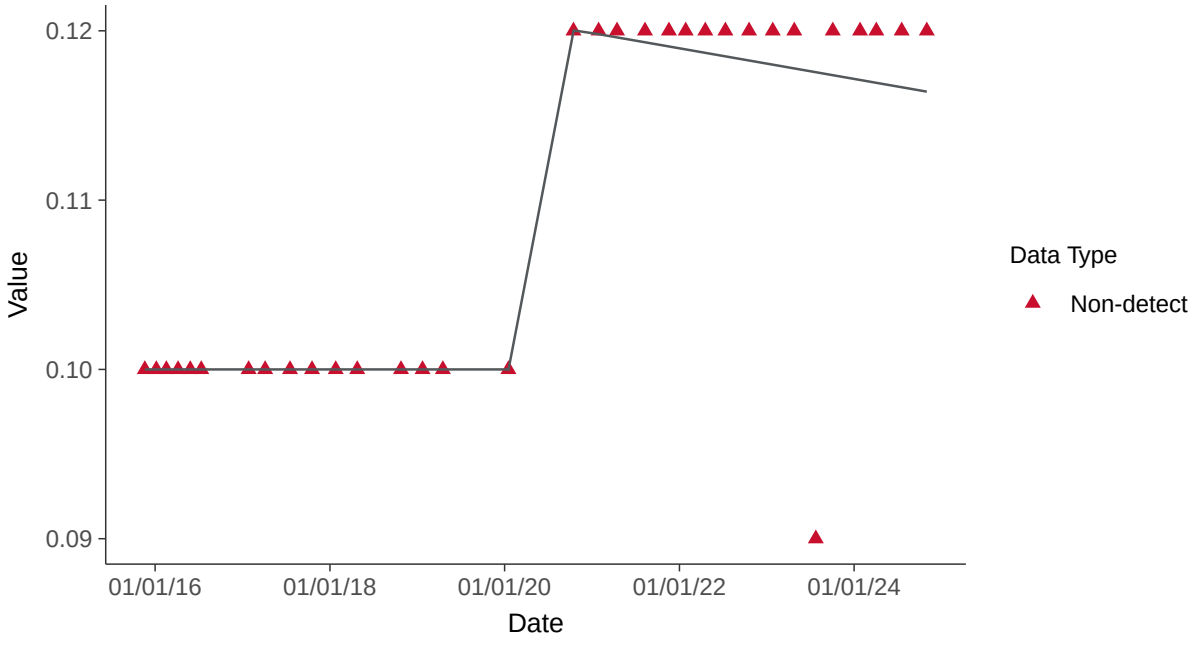
Trend Regression: Piecewise Linear-Linear

Mercury, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-2 (ug/L)

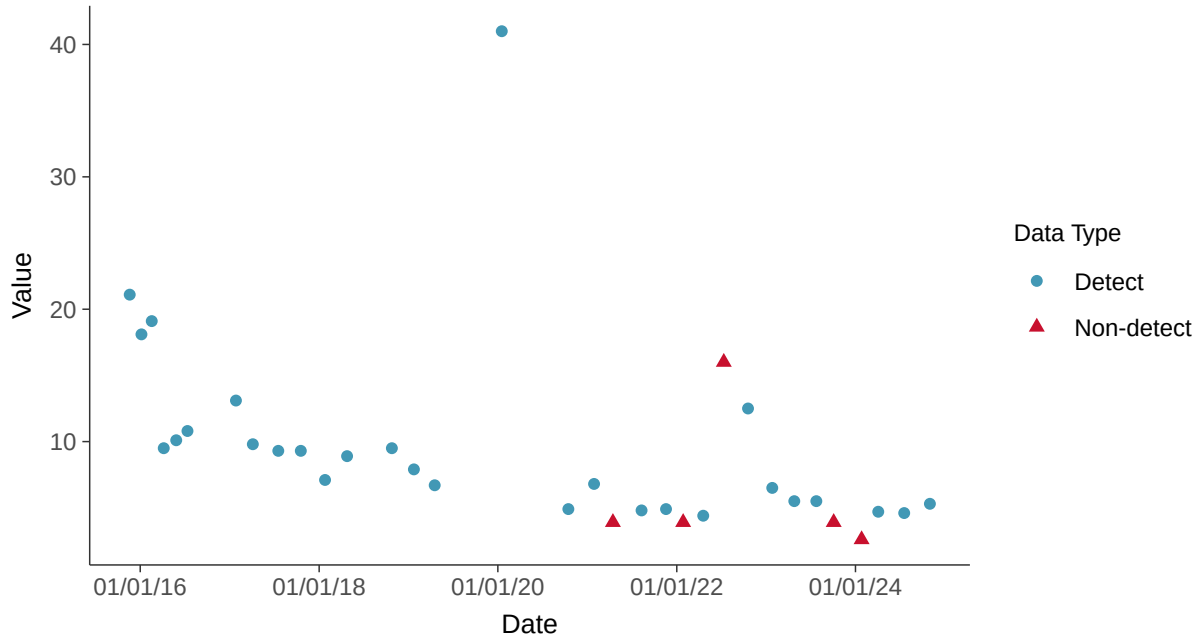


App. IV: Molybdenum, MW-2

ID: 02_03_116

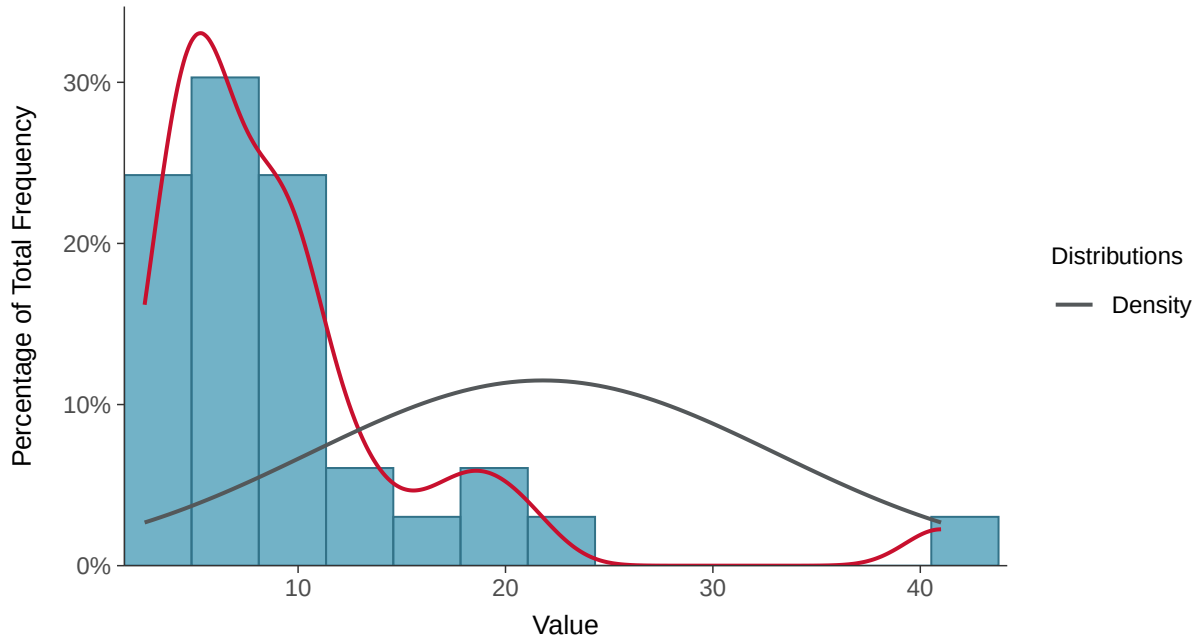
Scatter Plot

Molybdenum, MW-2 (ug/L)



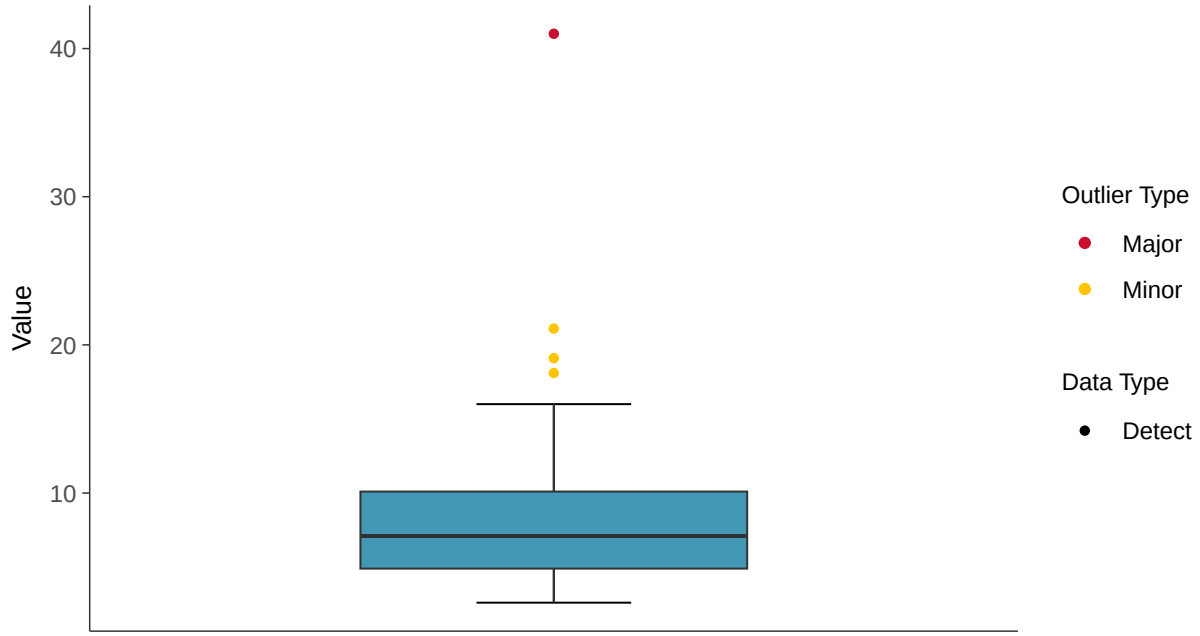
Histogram

Molybdenum, MW-2 (ug/L)



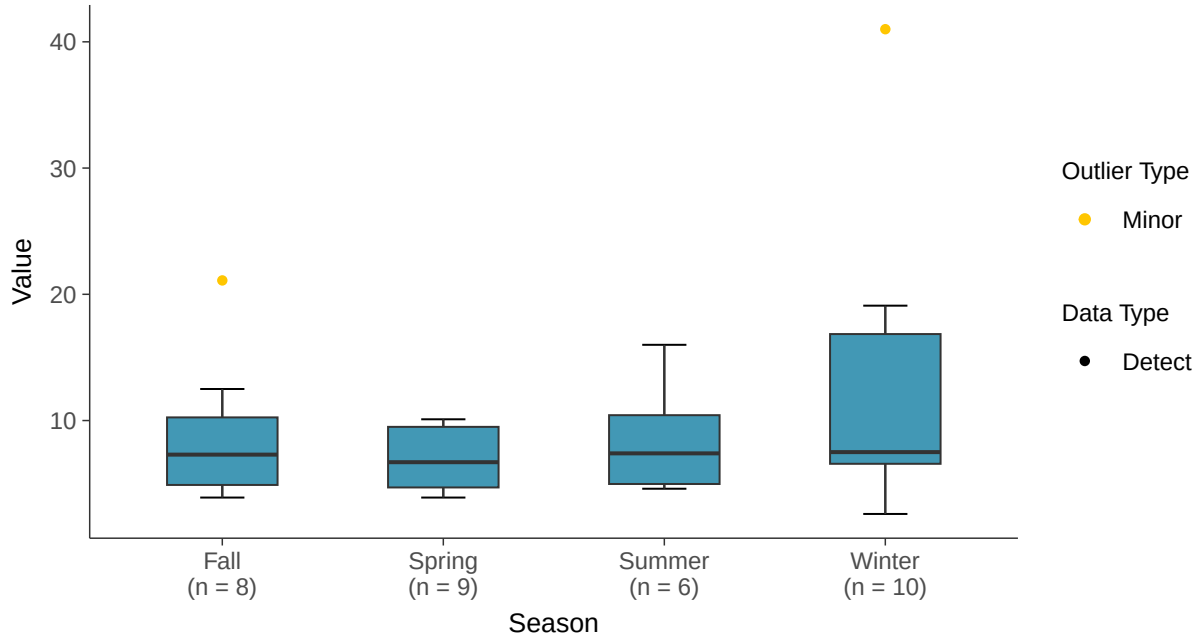
Boxplot

Molybdenum, MW-2 (ug/L)



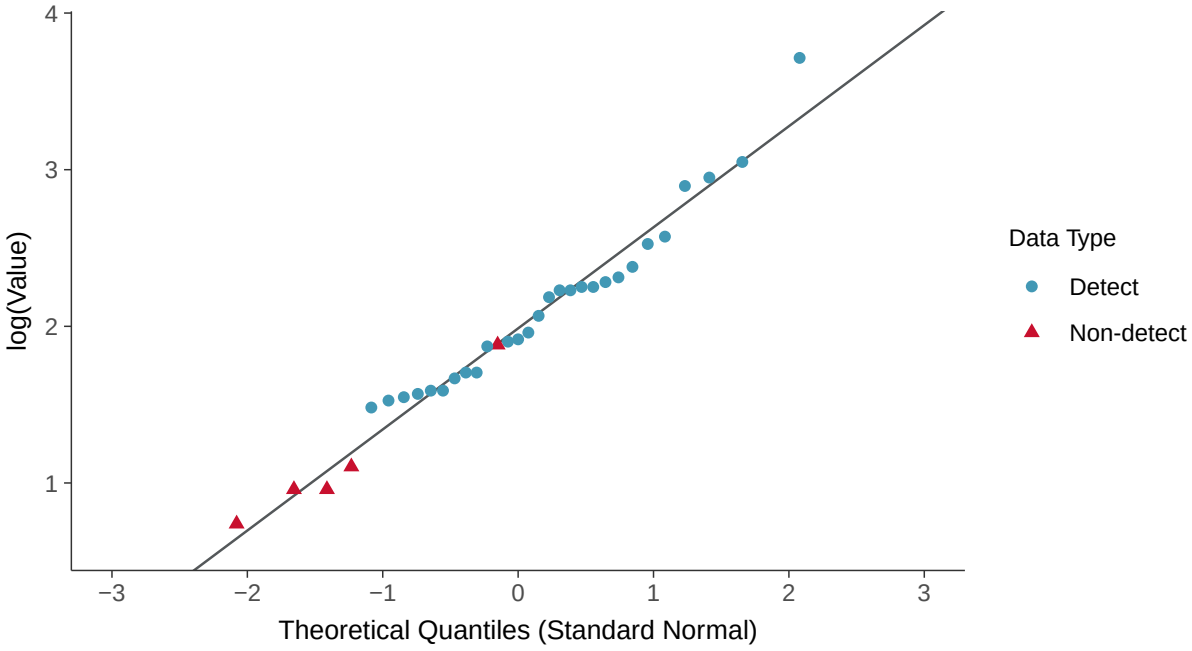
Boxplot by Season

Molybdenum, MW-2 (ug/L)



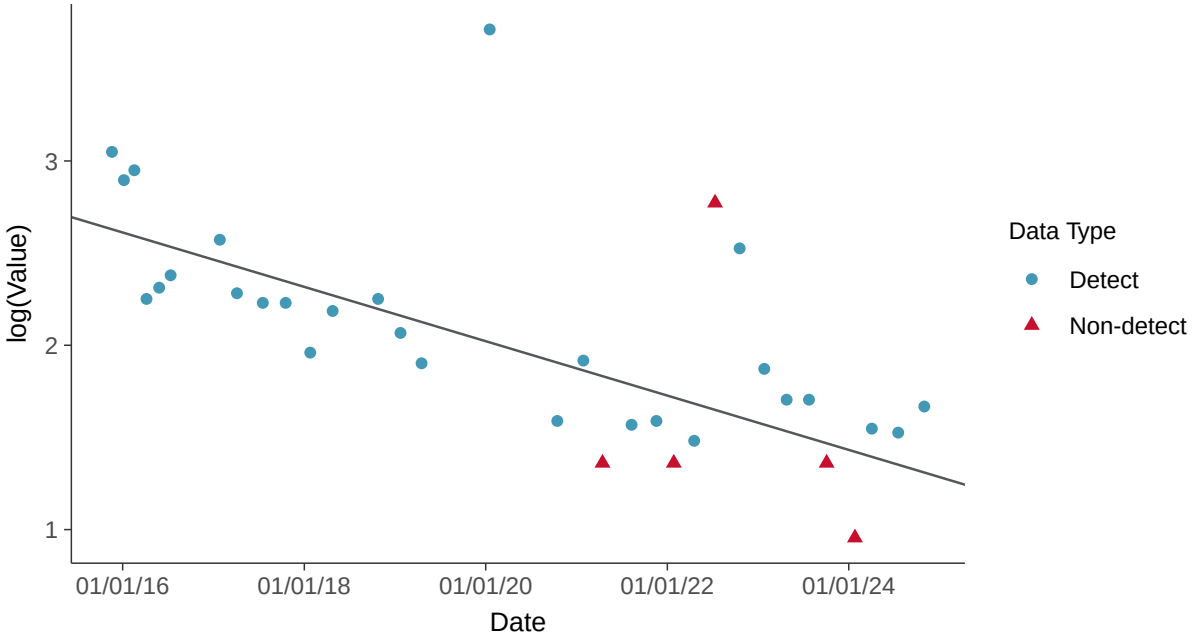
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-2 (ug/L)



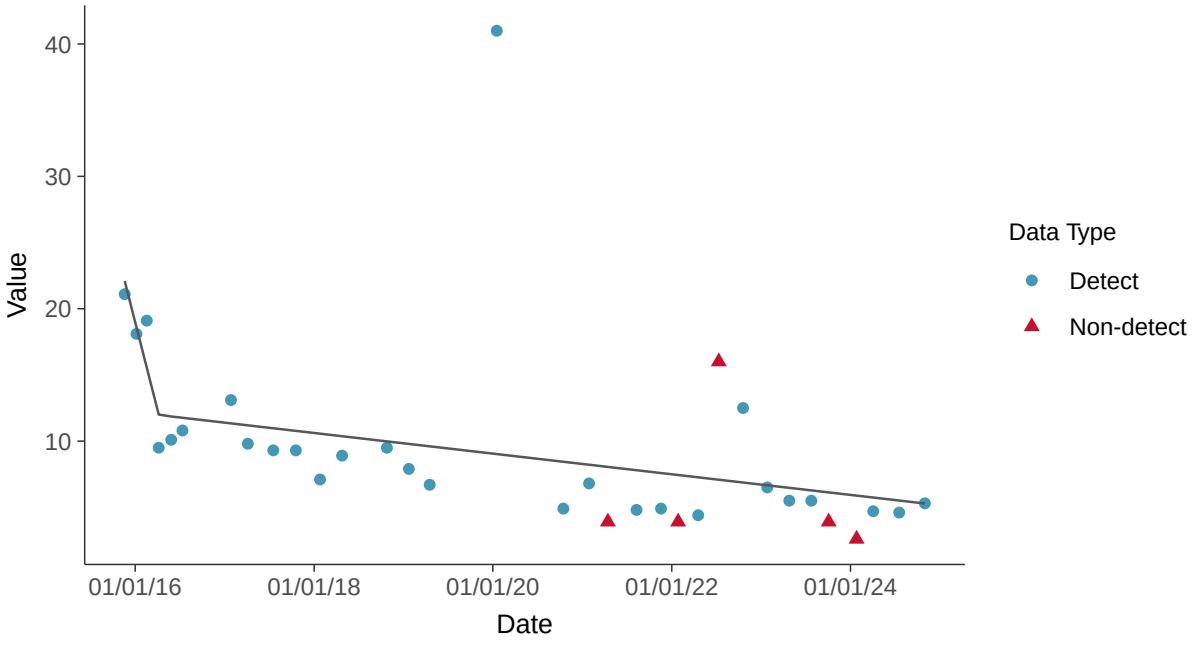
Trend Regression: Lognormal MLE

Molybdenum, MW-2 (ug/L)



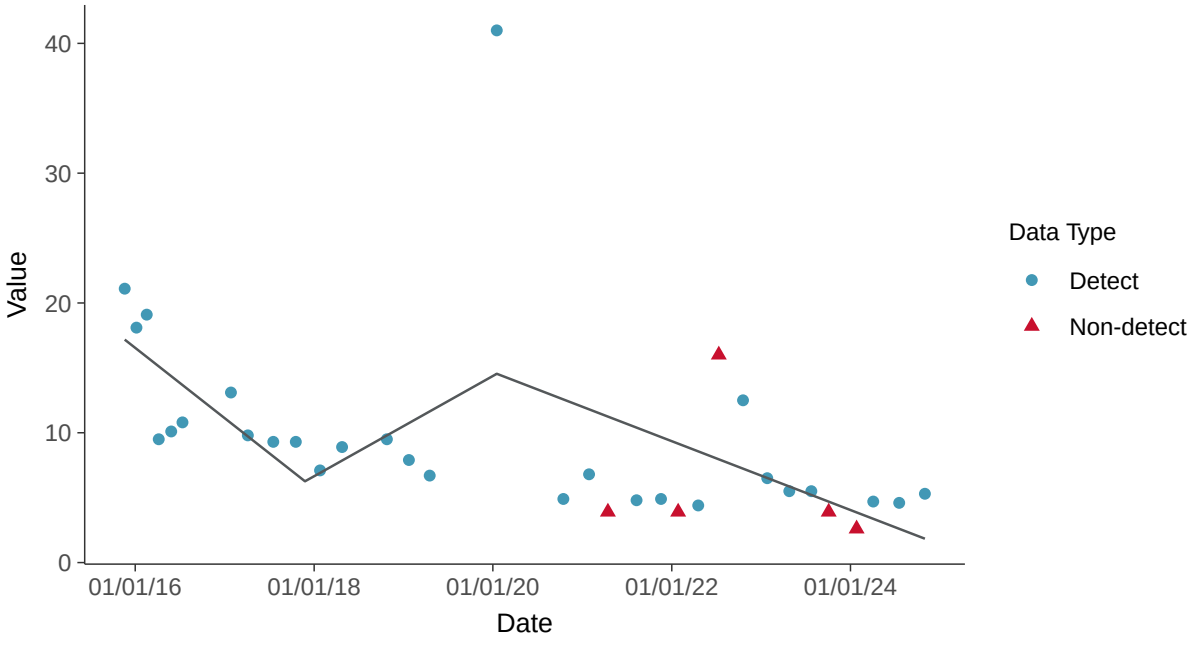
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-2 (ug/L)

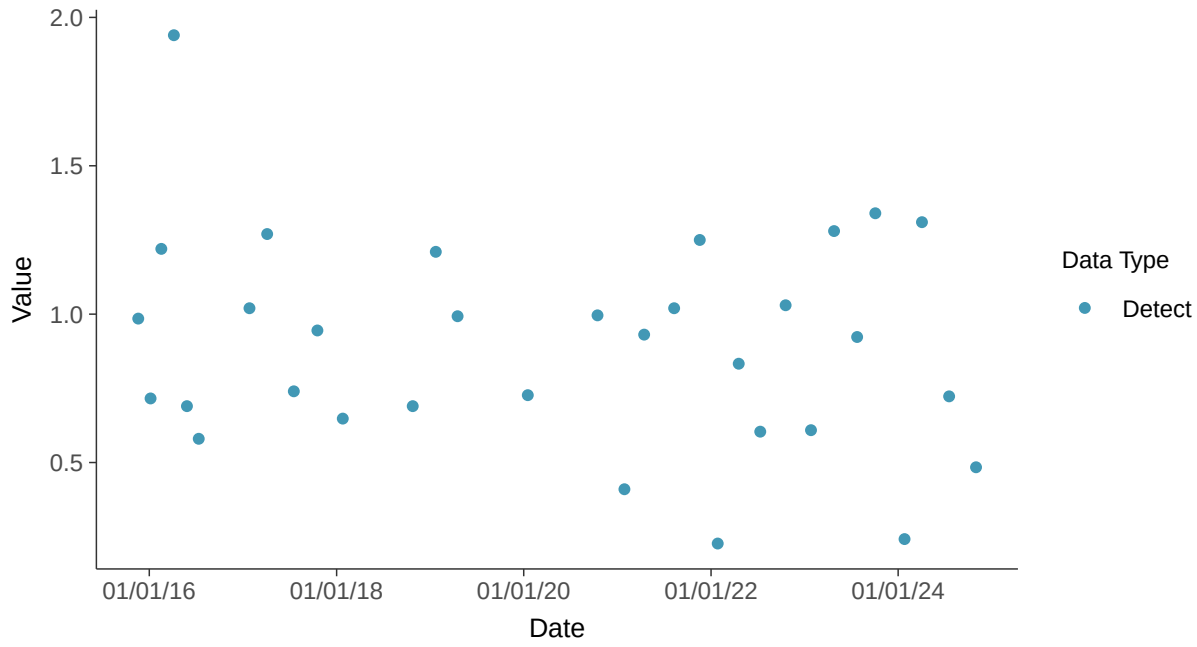


App. IV: Radium-226, MW-2

ID: 02_03_119

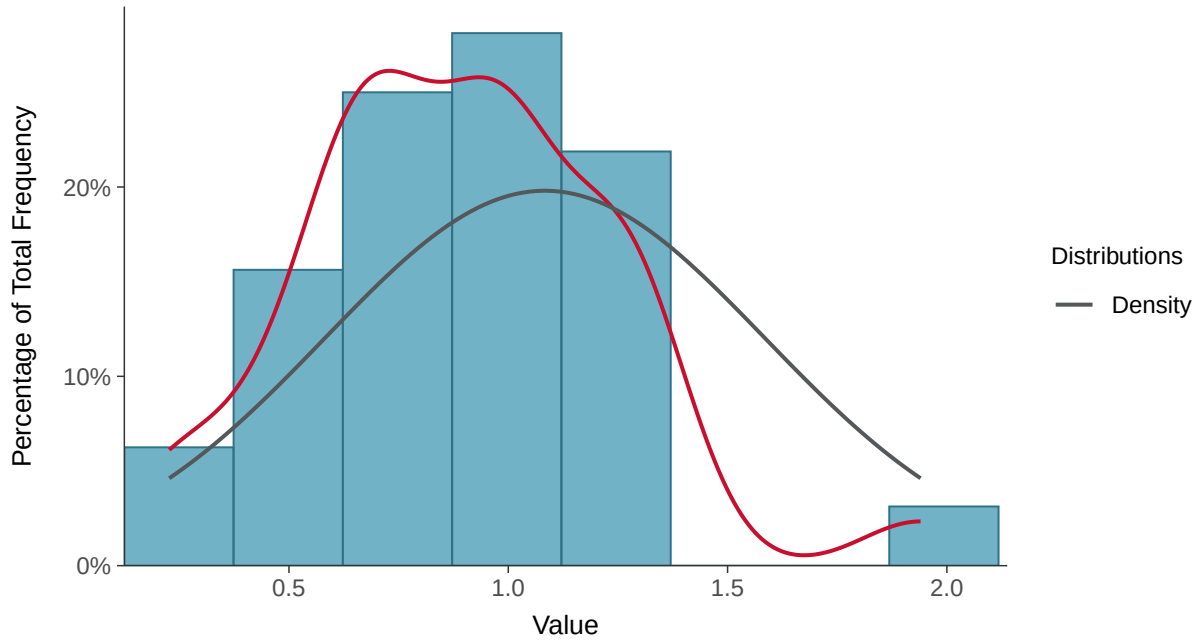
Scatter Plot

Radium-226, MW-2 (pCi/L)



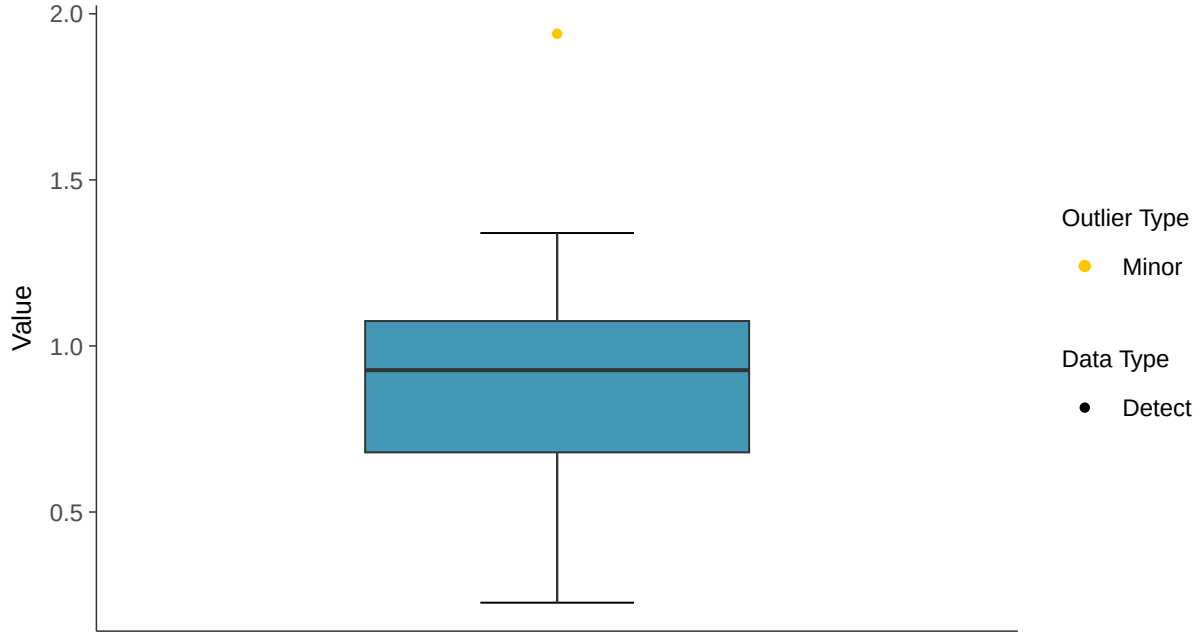
Histogram

Radium-226, MW-2 (pCi/L)



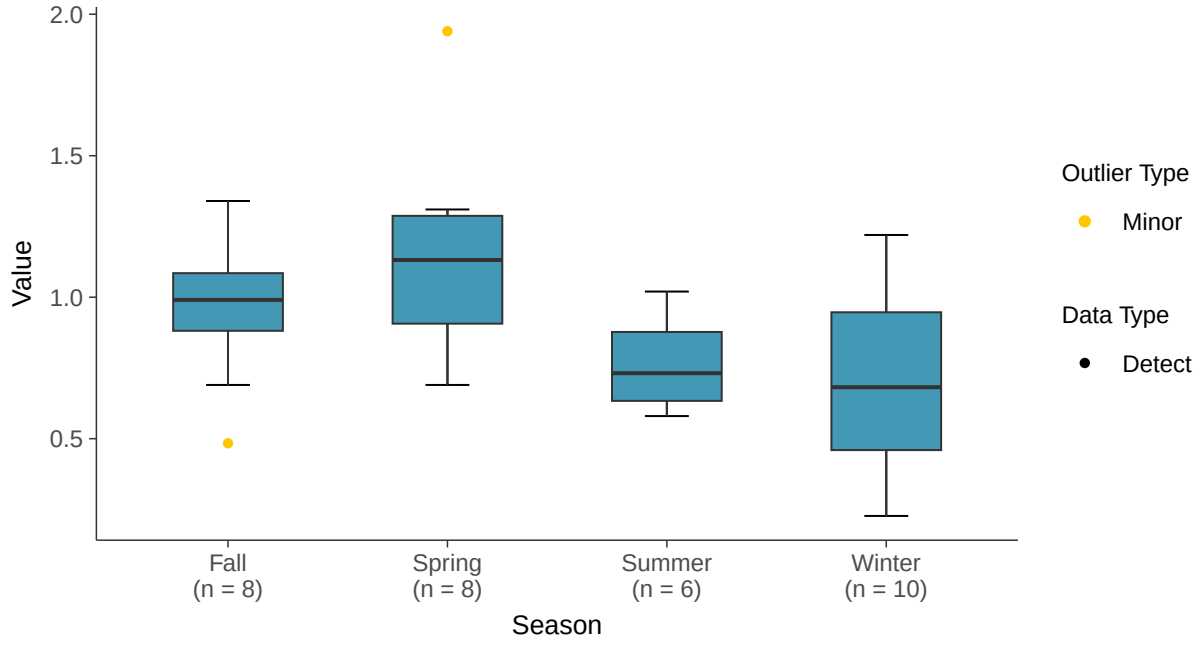
Boxplot

Radium-226, MW-2 (pCi/L)



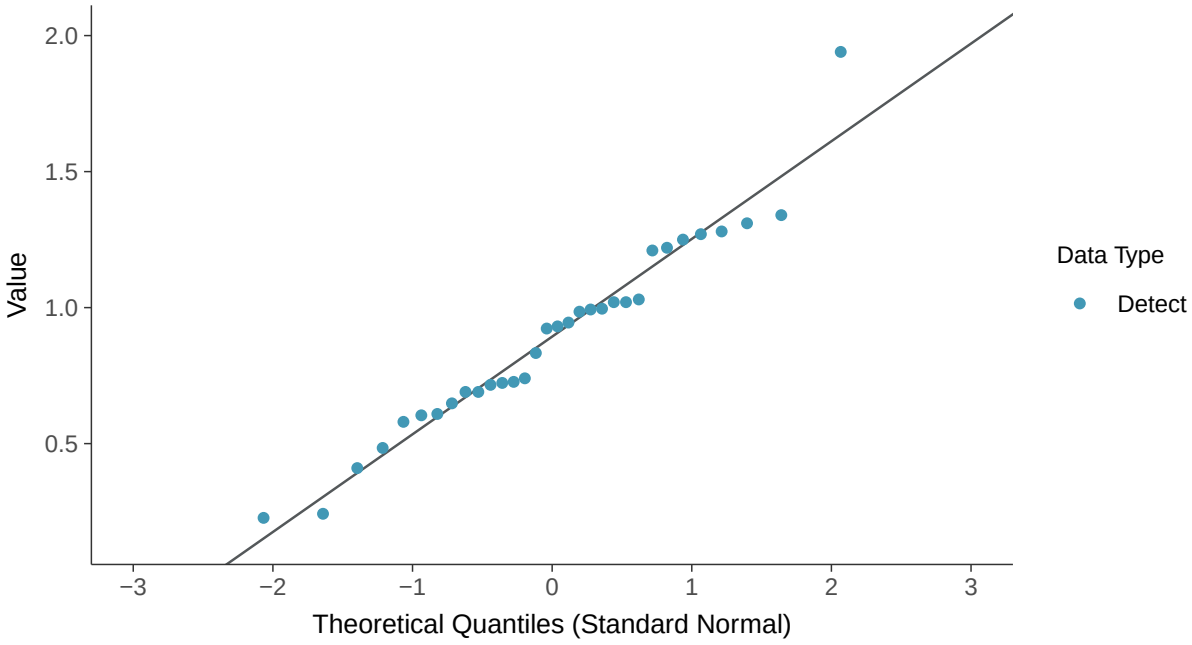
Boxplot by Season

Radium-226, MW-2 (pCi/L)



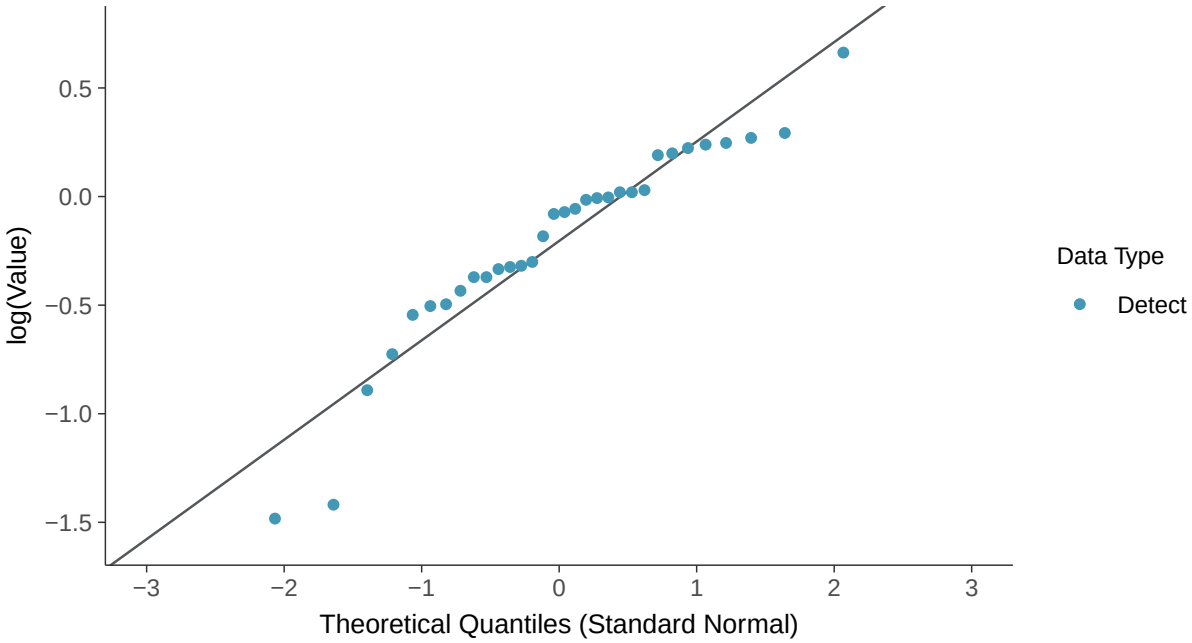
Normal Q-Q plot

Radium-226, MW-2 (pCi/L)



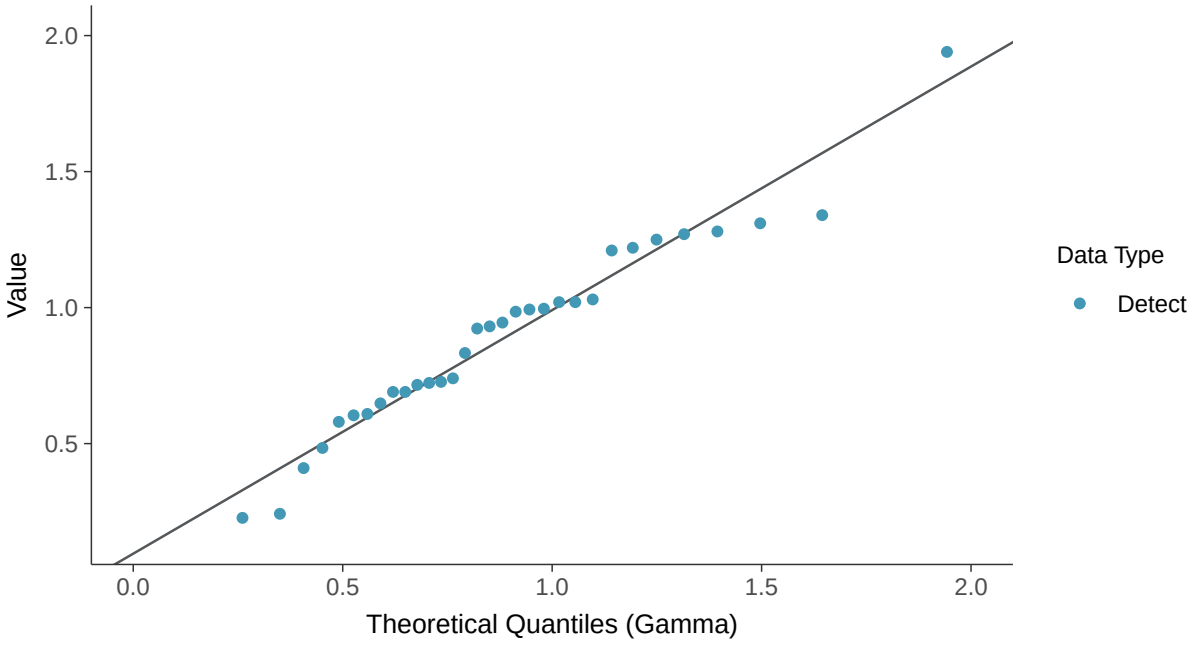
Lognormal Q-Q plot

Radium-226, MW-2 (pCi/L)



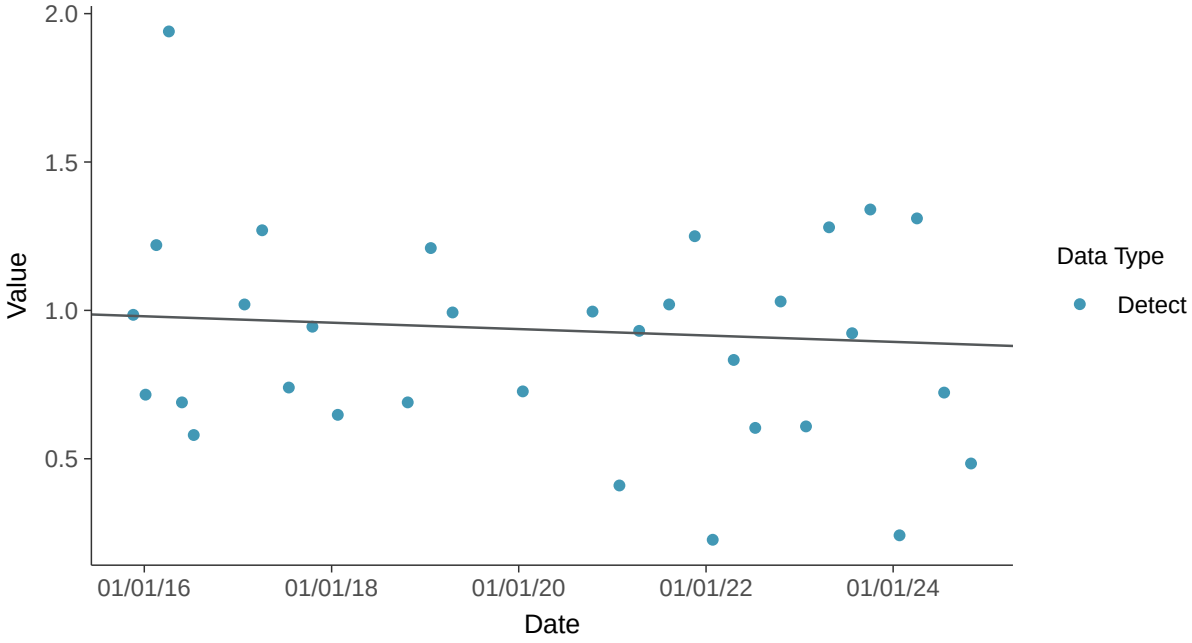
Gamma Q-Q plot

Radium-226, MW-2 (pCi/L)



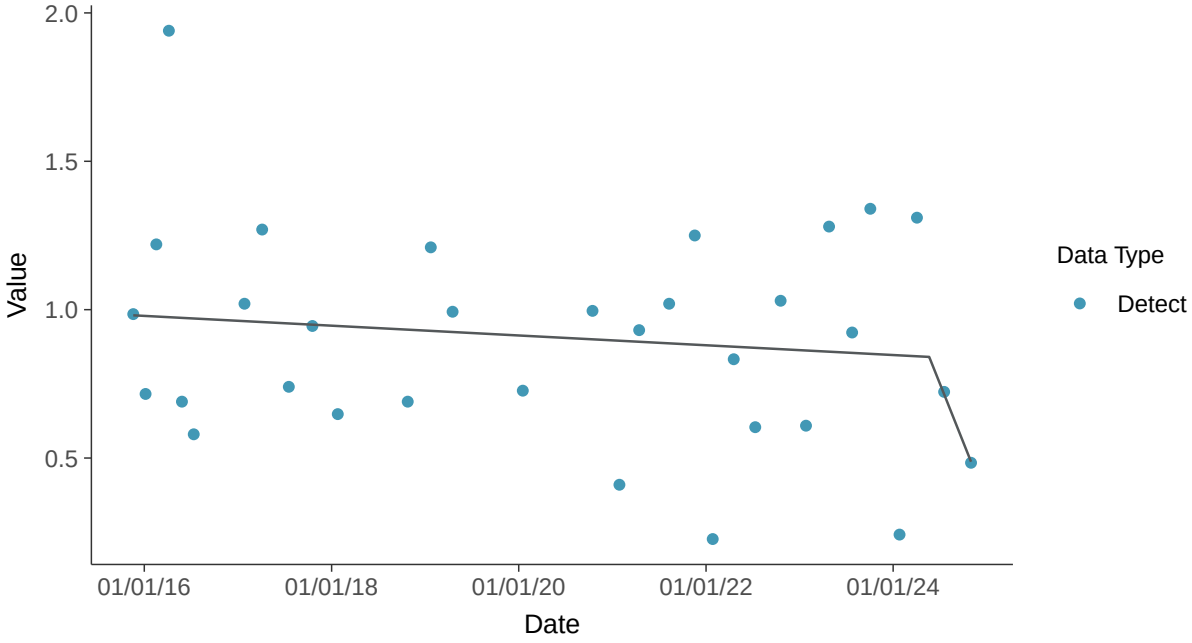
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, MW-2 (pCi/L)

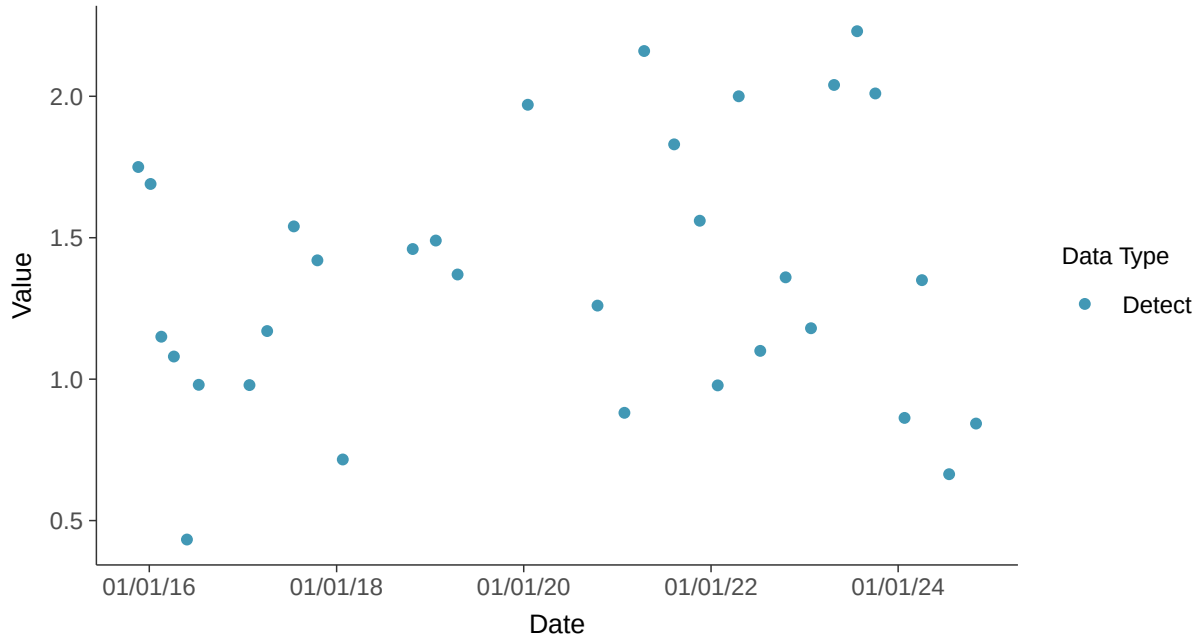


App. IV: Radium-228, MW-2

ID: 02_03_120

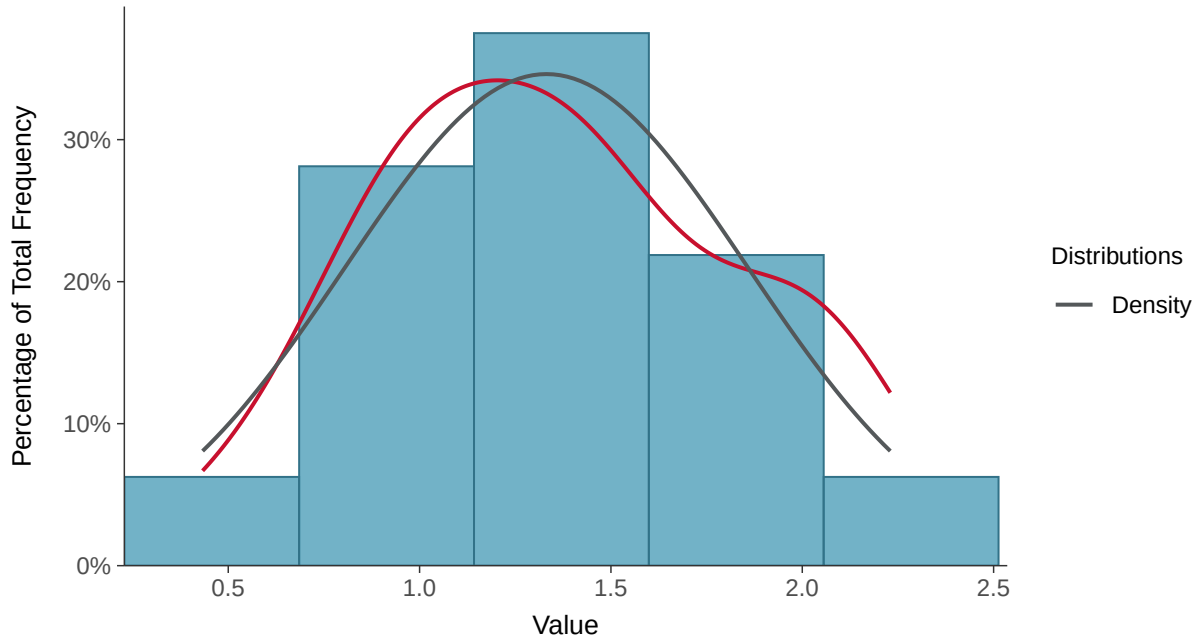
Scatter Plot

Radium-228, MW-2 (pCi/L)



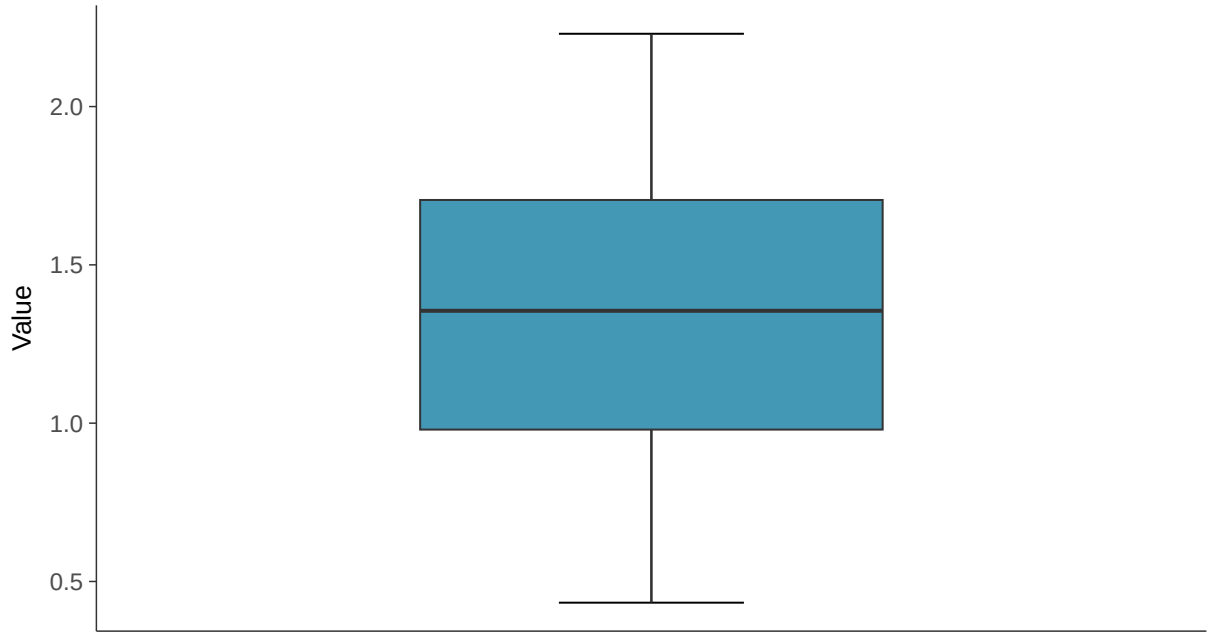
Histogram

Radium-228, MW-2 (pCi/L)



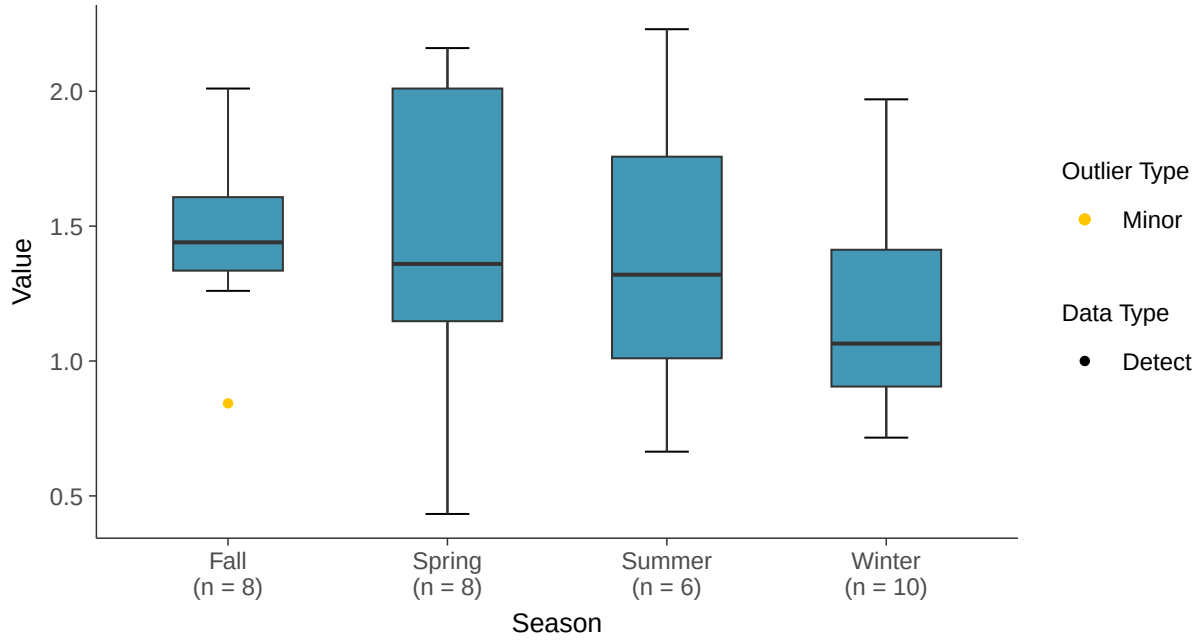
Boxplot

Radium-228, MW-2 (pCi/L)



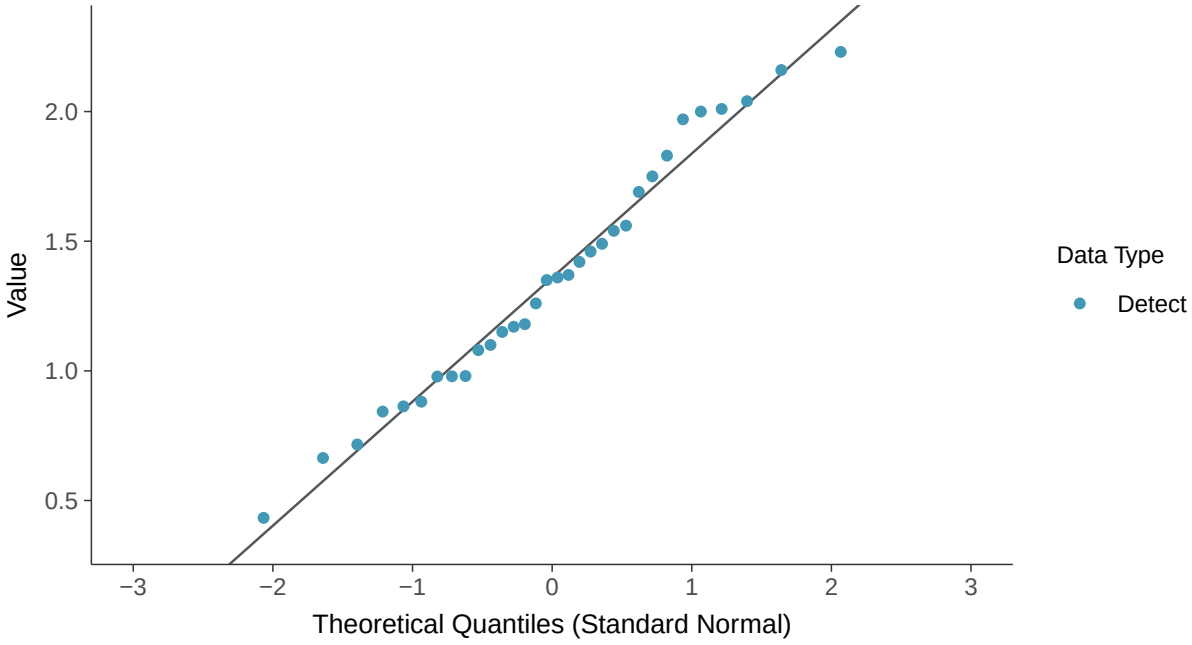
Boxplot by Season

Radium-228, MW-2 (pCi/L)



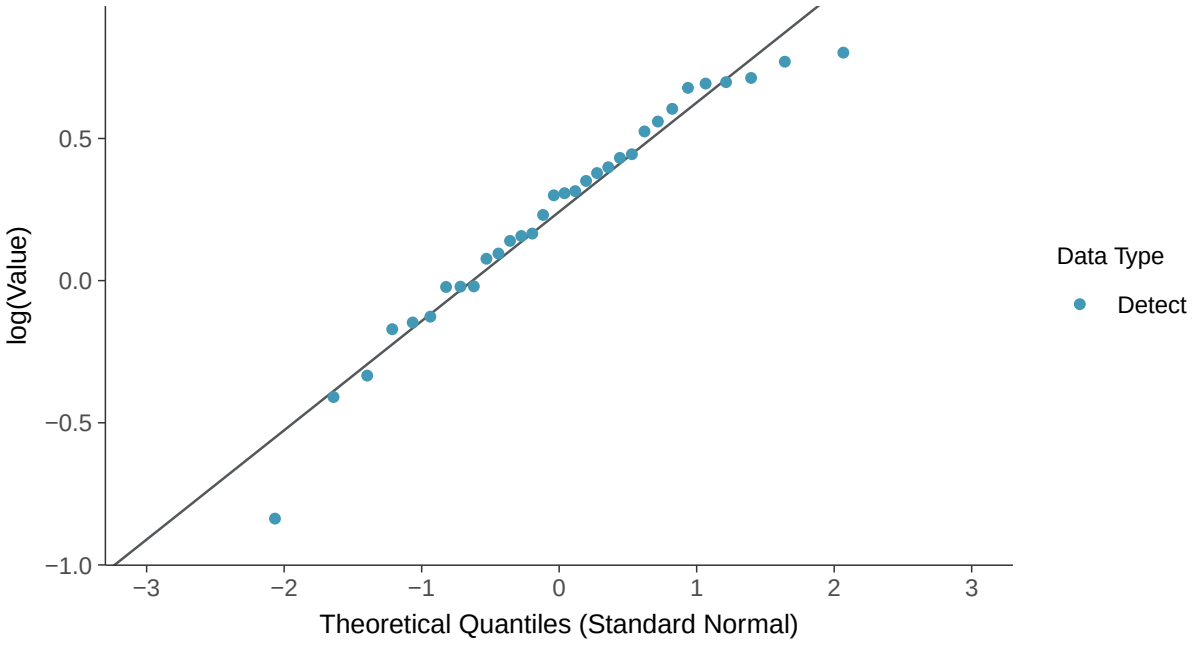
Normal Q-Q plot

Radium-228, MW-2 (pCi/L)



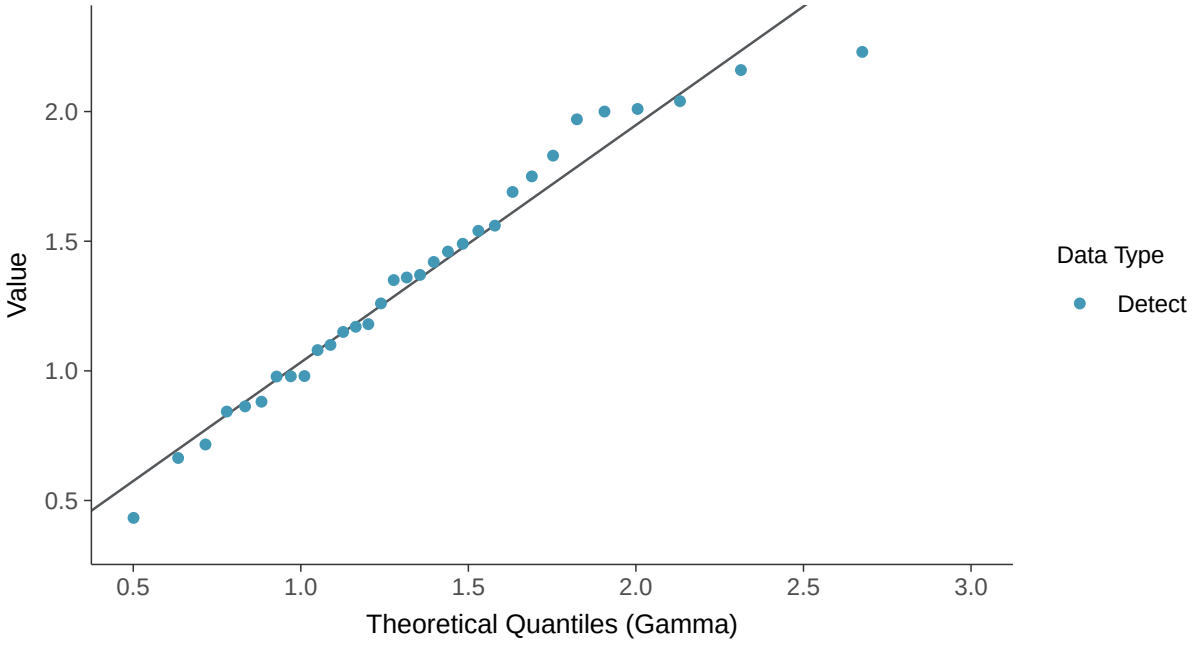
Lognormal Q-Q plot

Radium-228, MW-2 (pCi/L)



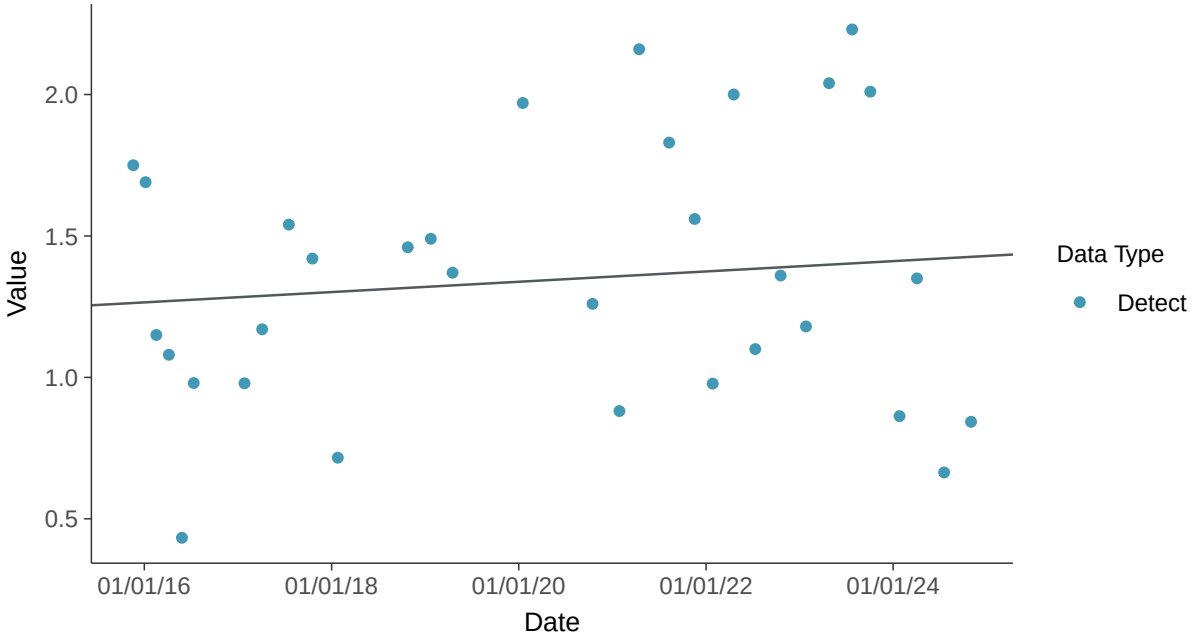
Gamma Q-Q plot

Radium-228, MW-2 (pCi/L)



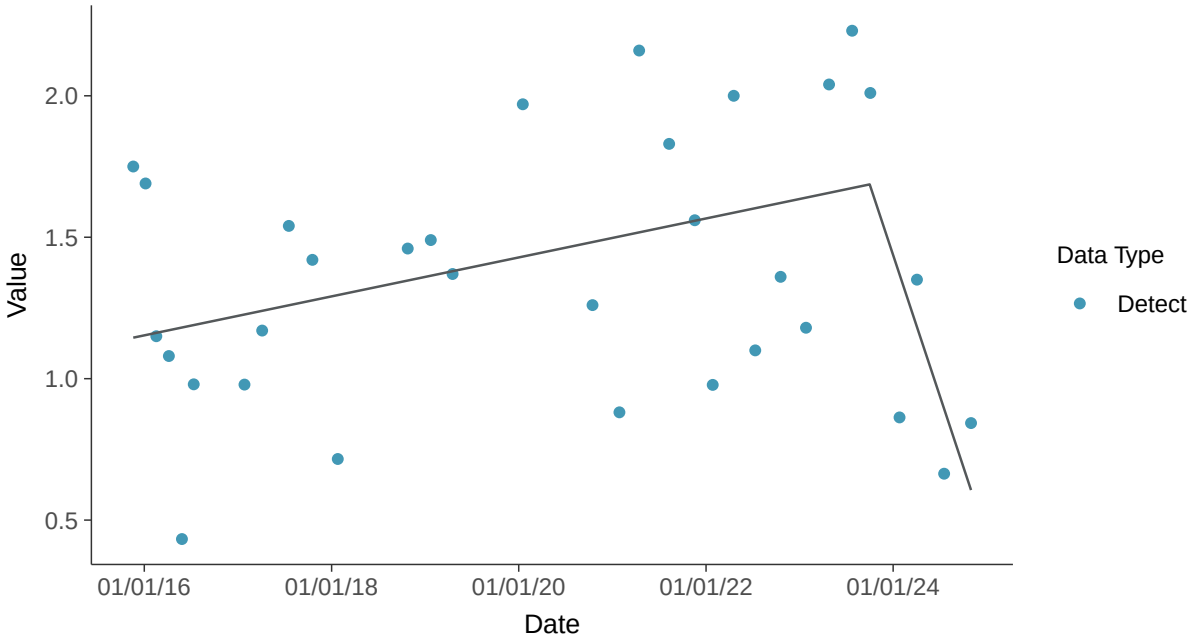
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-2 (pCi/L)



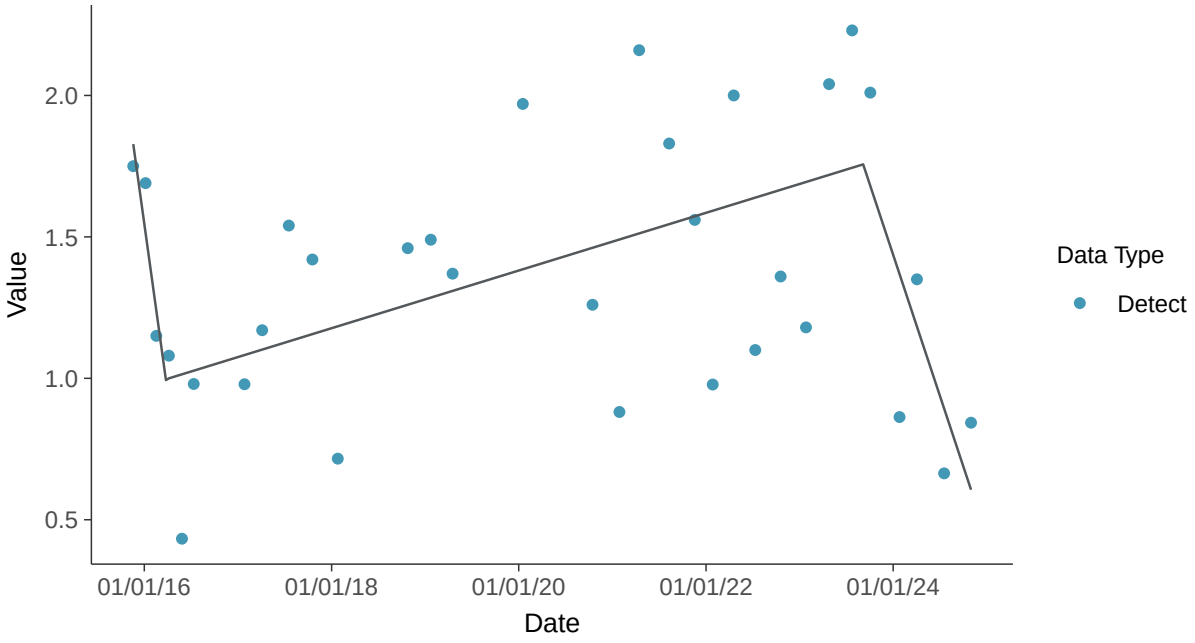
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-2 (pCi/L)



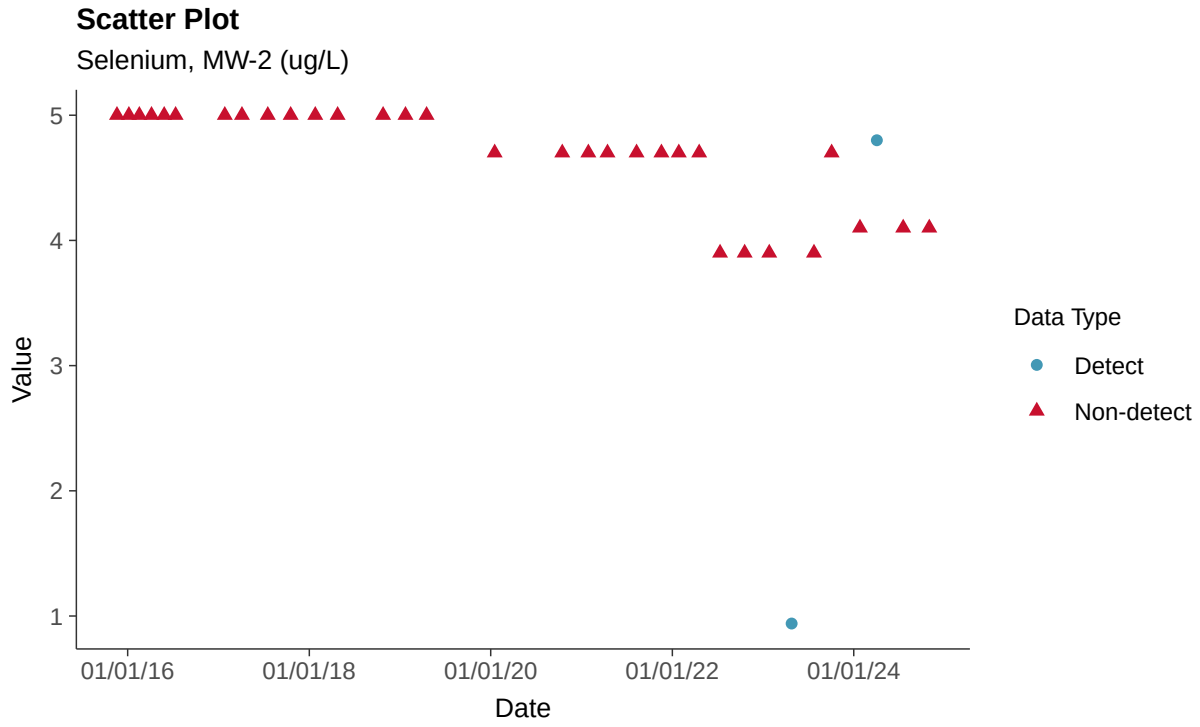
Trend Regression: Piecewise Linear-Linear-Linear

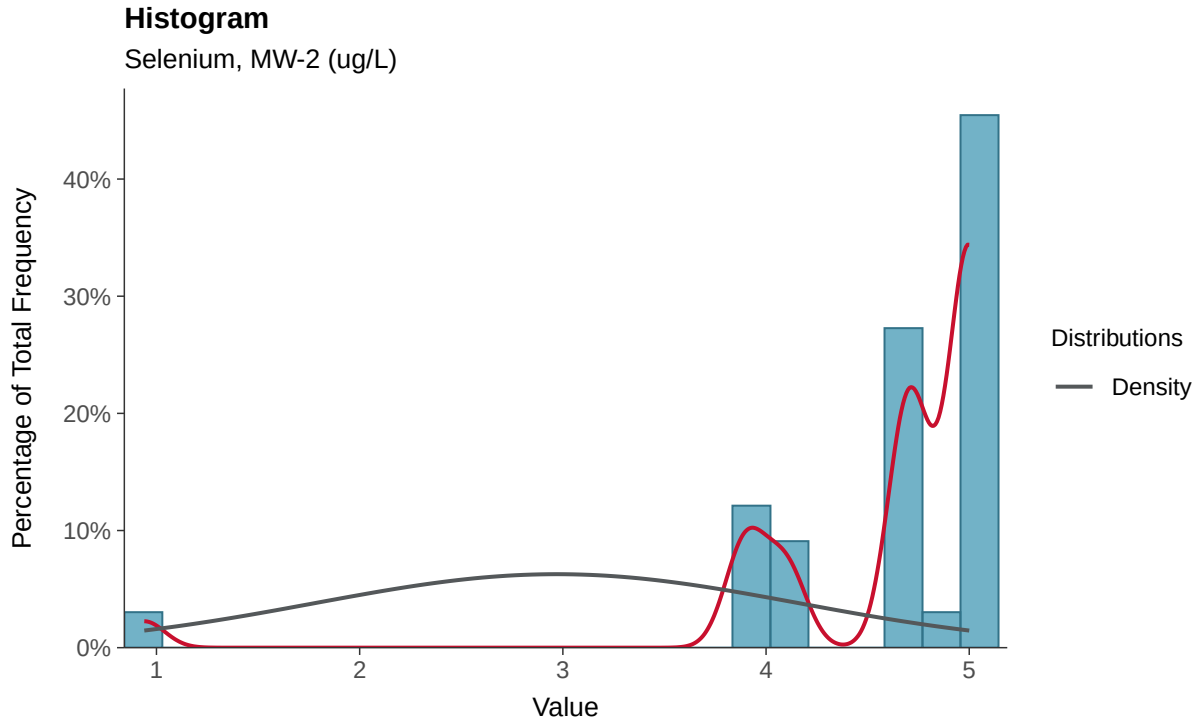
Radium-228, MW-2 (pCi/L)



App. IV: Selenium, MW-2

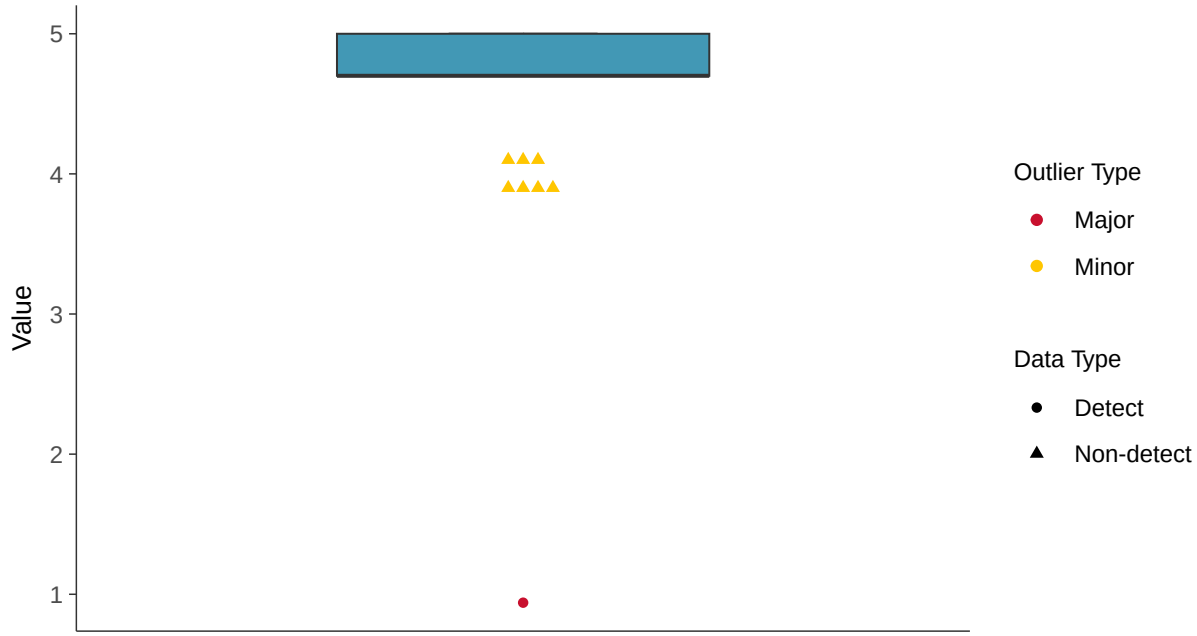
ID: 02_03_121





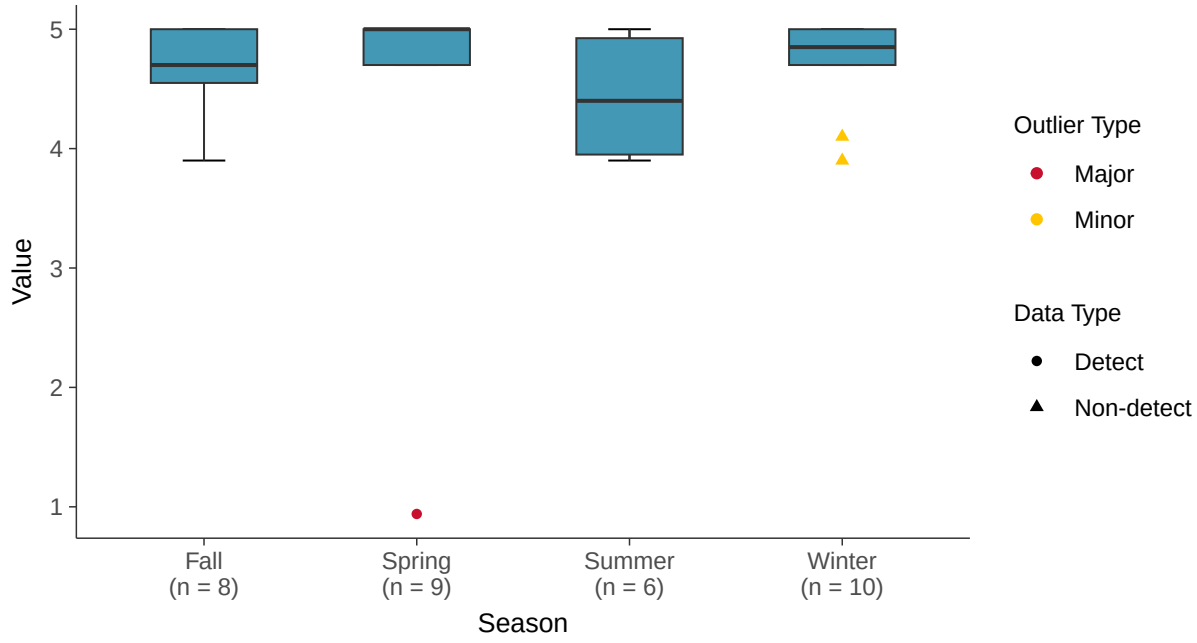
Boxplot

Selenium, MW-2 (ug/L)



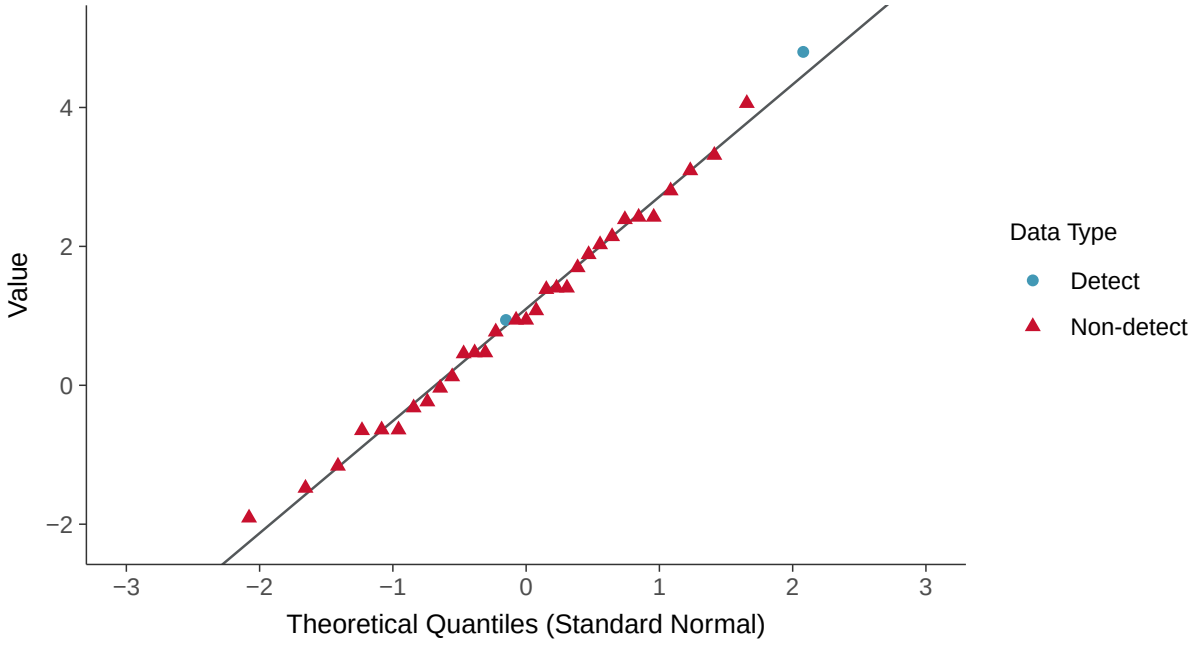
Boxplot by Season

Selenium, MW-2 (ug/L)



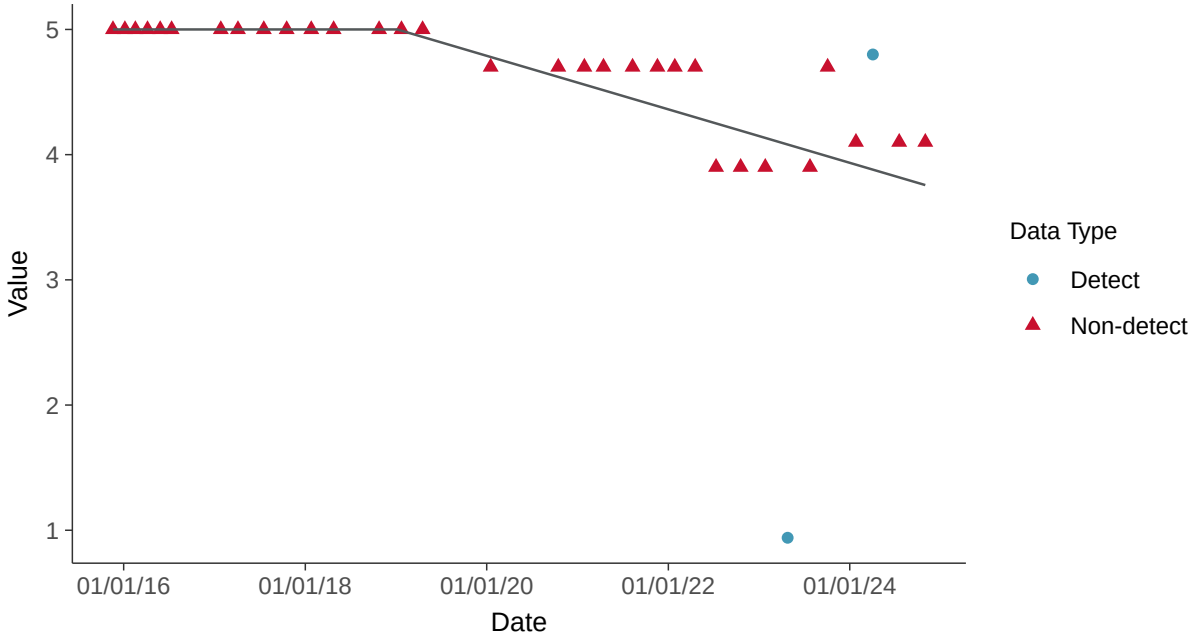
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-2 (ug/L)



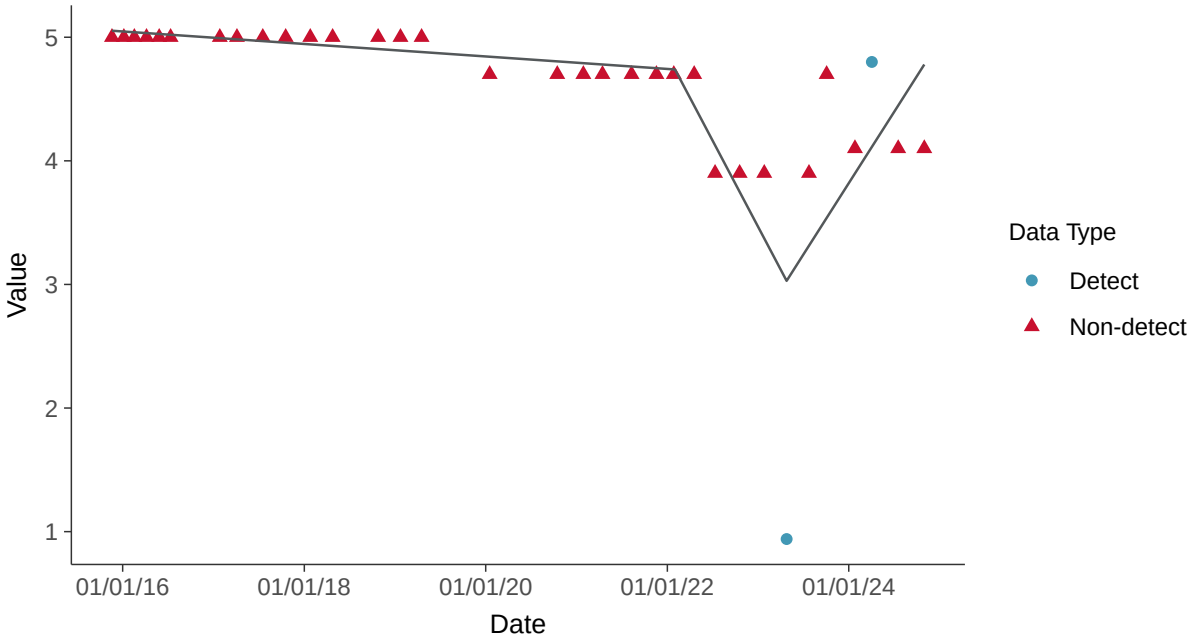
Trend Regression: Piecewise Linear-Linear

Selenium, MW-2 (ug/L)



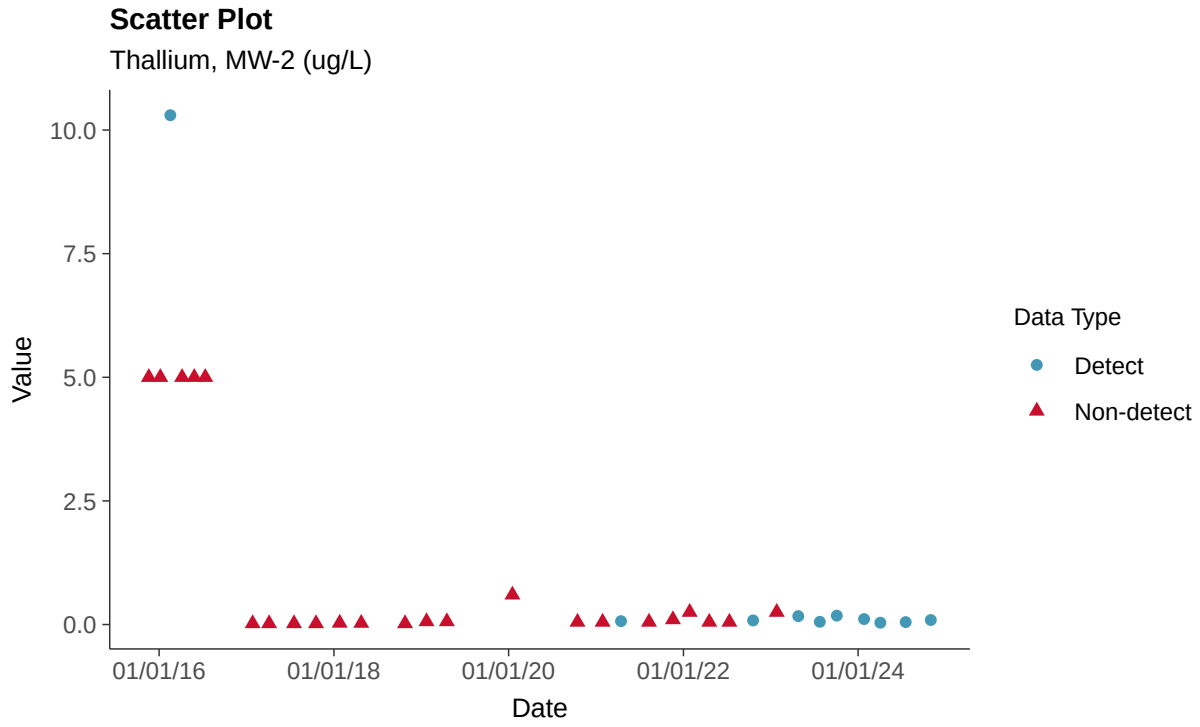
Trend Regression: Piecewise Linear-Linear-Linear

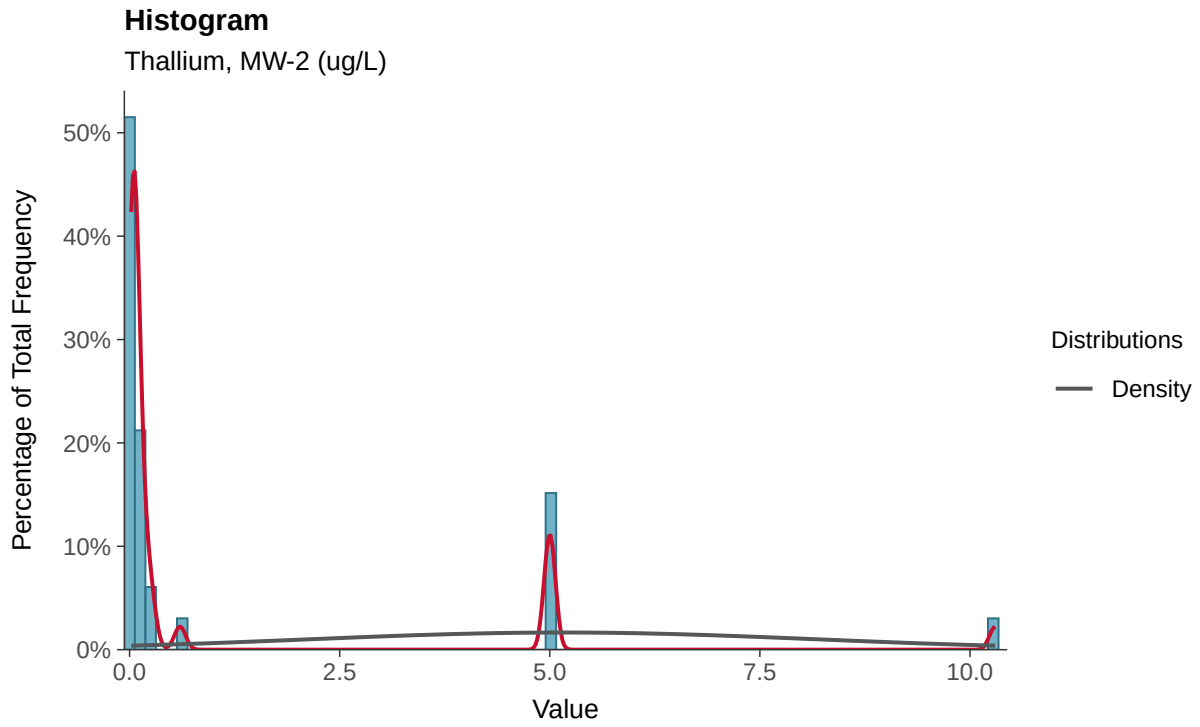
Selenium, MW-2 (ug/L)



App. IV: Thallium, MW-2

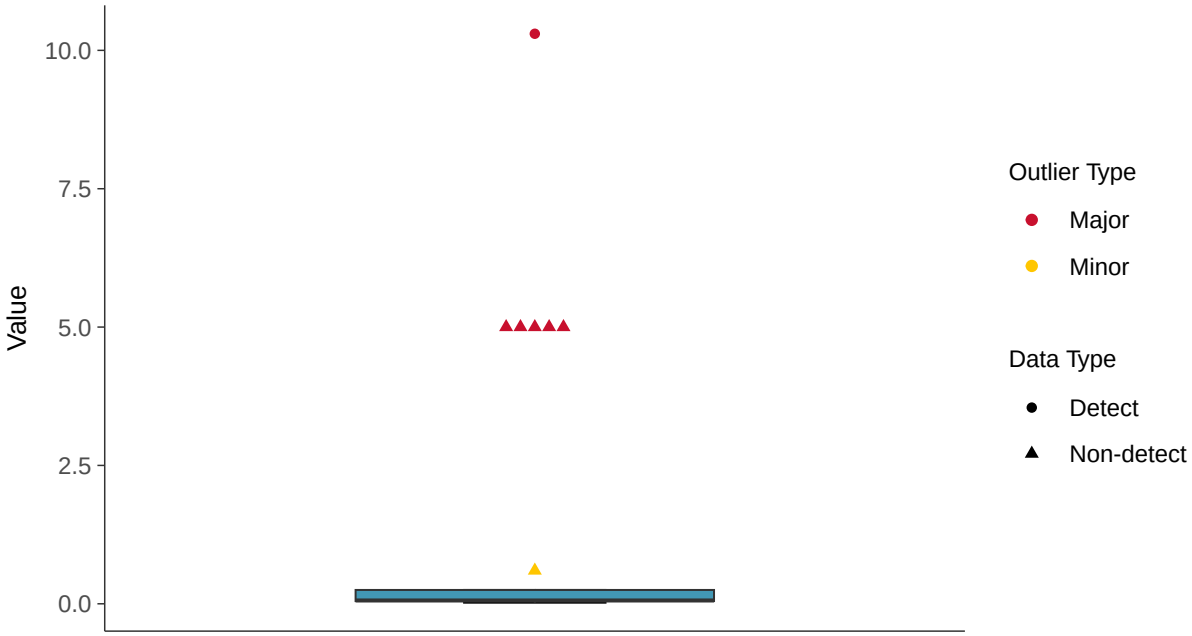
ID: 02_03_124





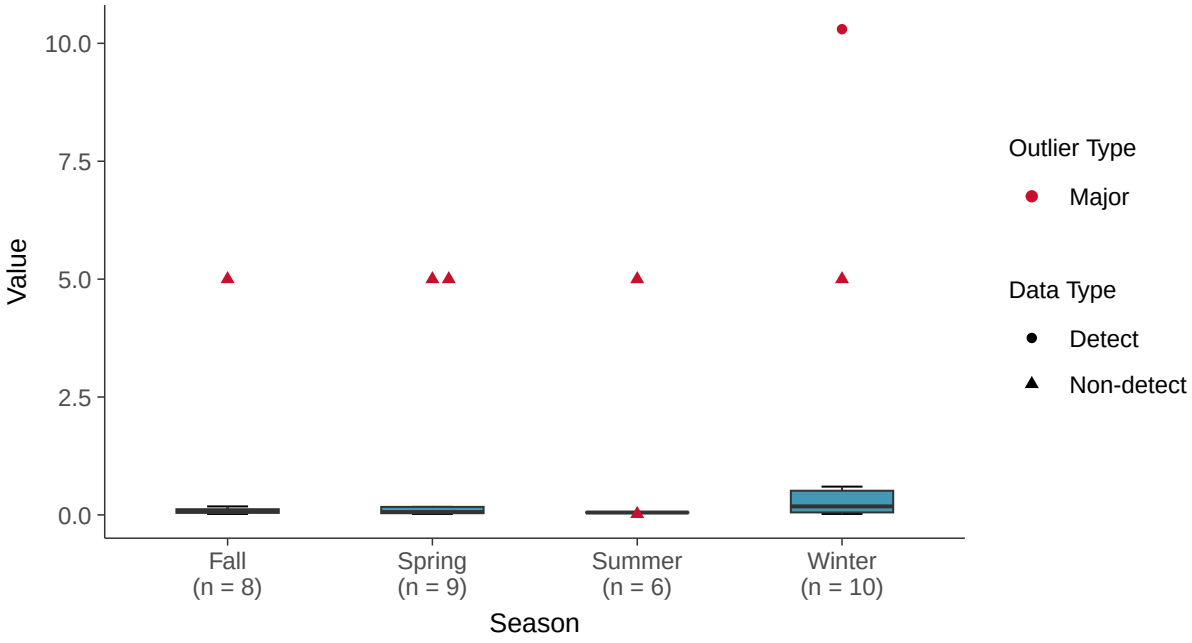
Boxplot

Thallium, MW-2 (ug/L)



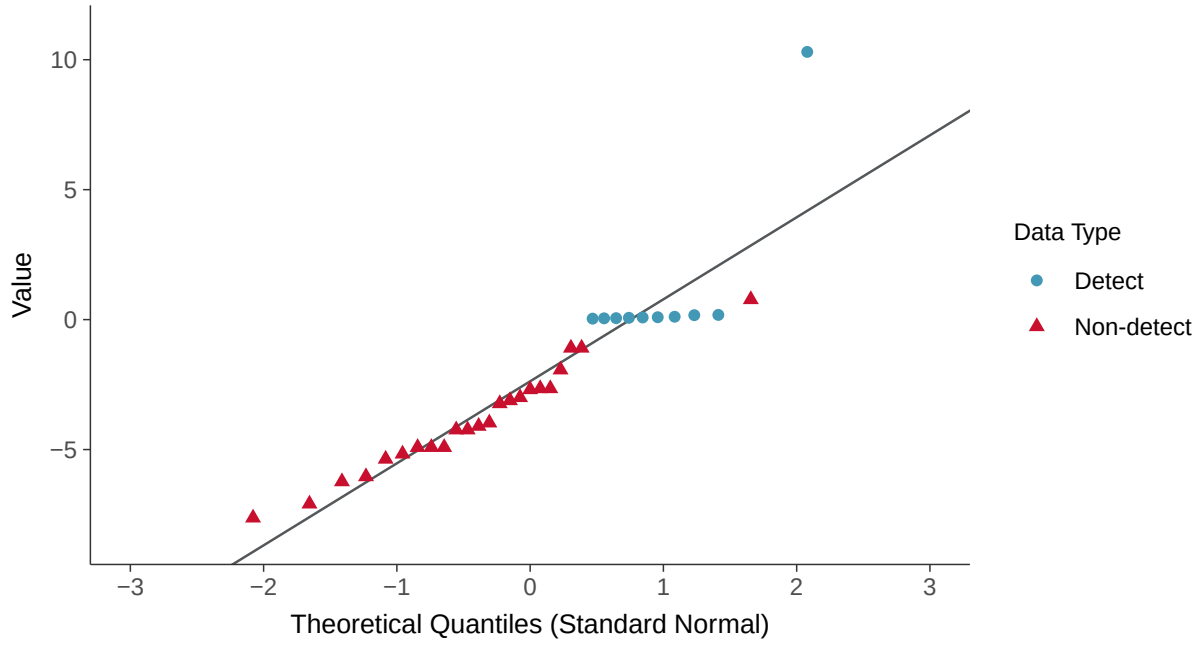
Boxplot by Season

Thallium, MW-2 (ug/L)



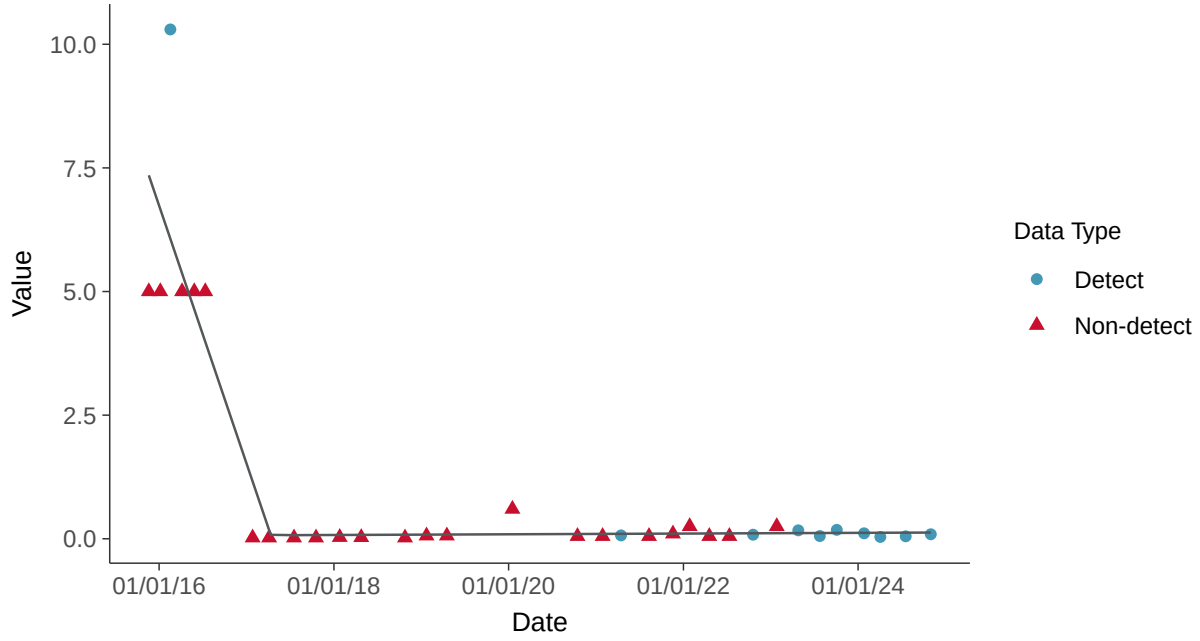
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-2 (ug/L)



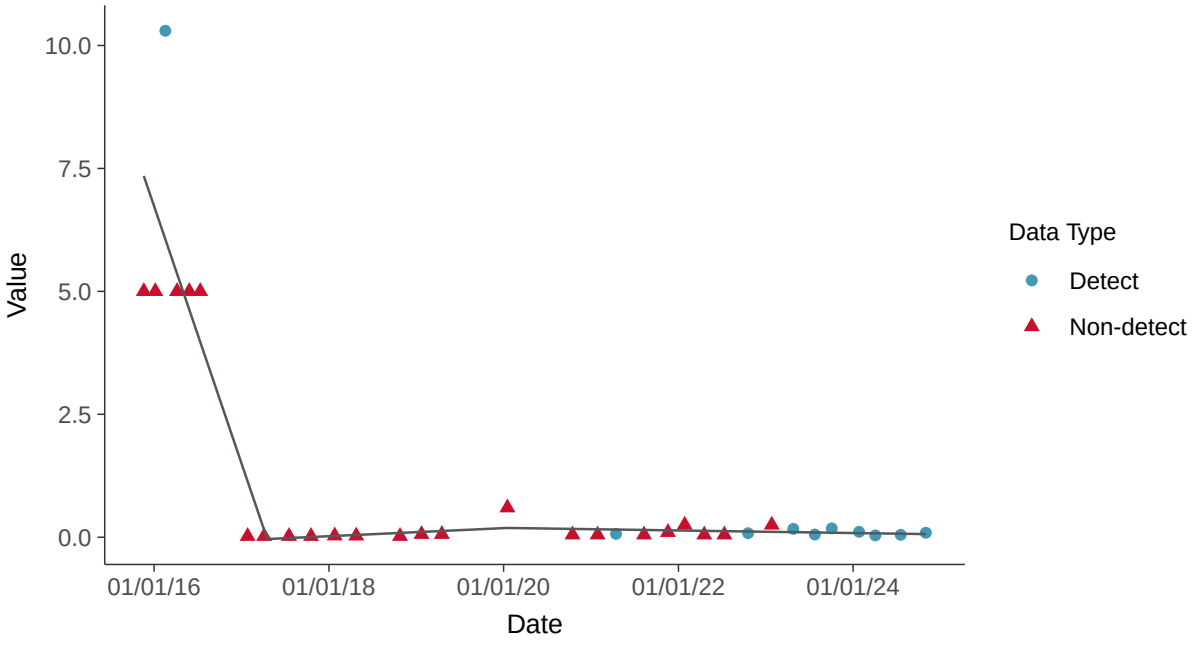
Trend Regression: Piecewise Linear-Linear

Thallium, MW-2 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-2 (ug/L)

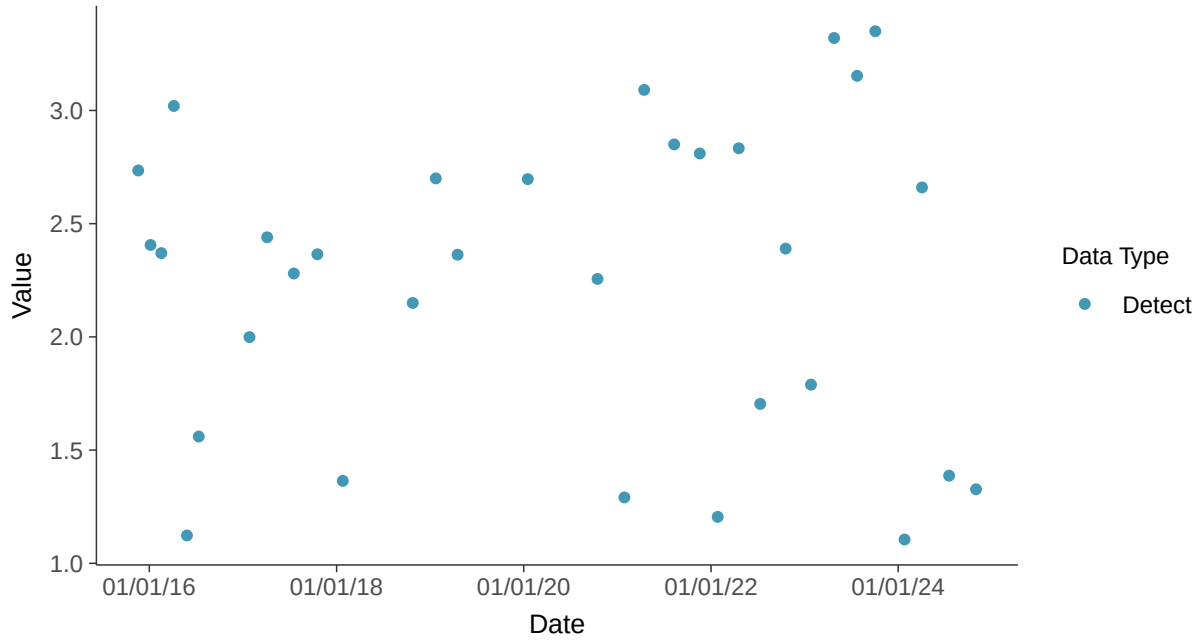


App. IV: Total Radium, MW-2

ID: 02_03_126

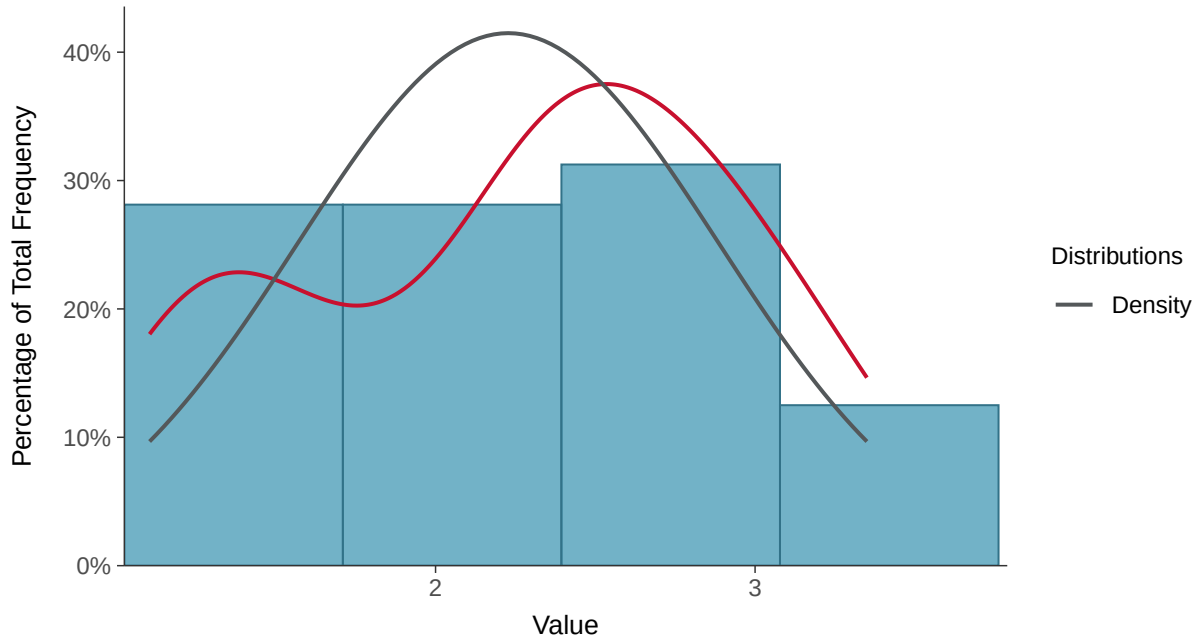
Scatter Plot

Total Radium, MW-2 (pCi/L)



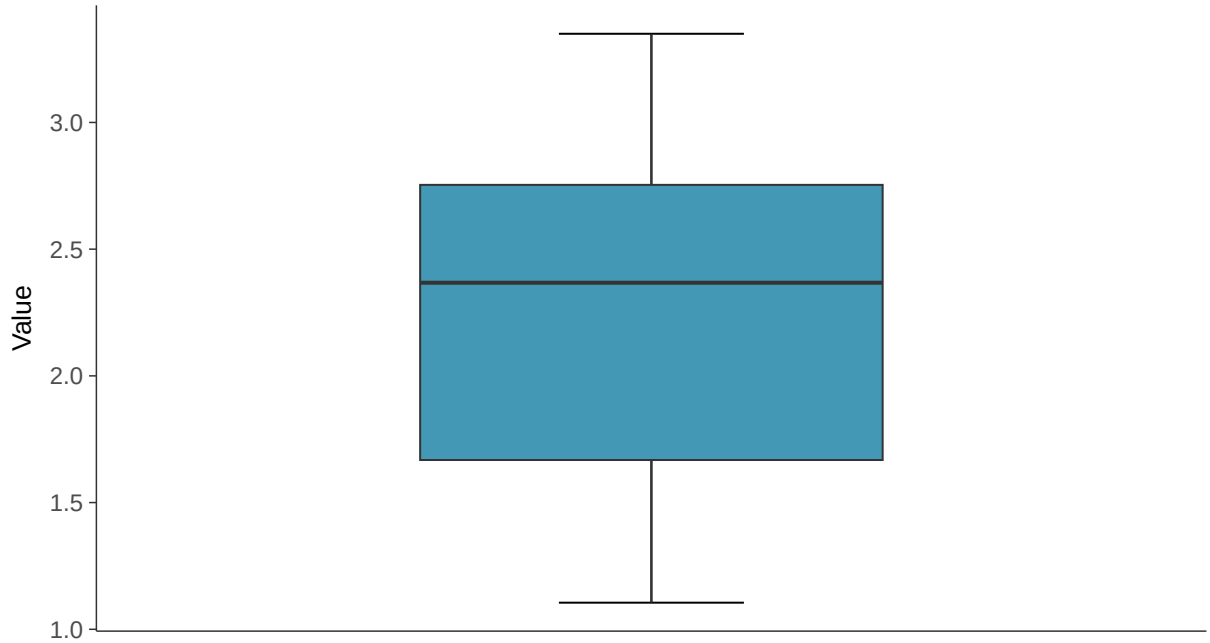
Histogram

Total Radium, MW-2 (pCi/L)



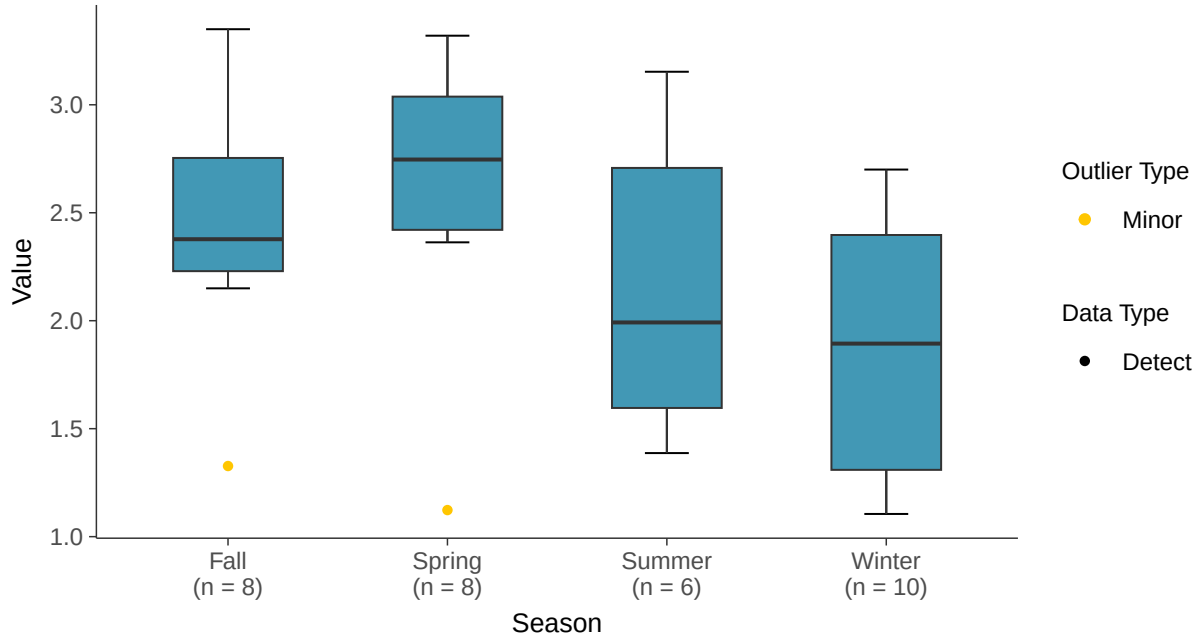
Boxplot

Total Radium, MW-2 (pCi/L)



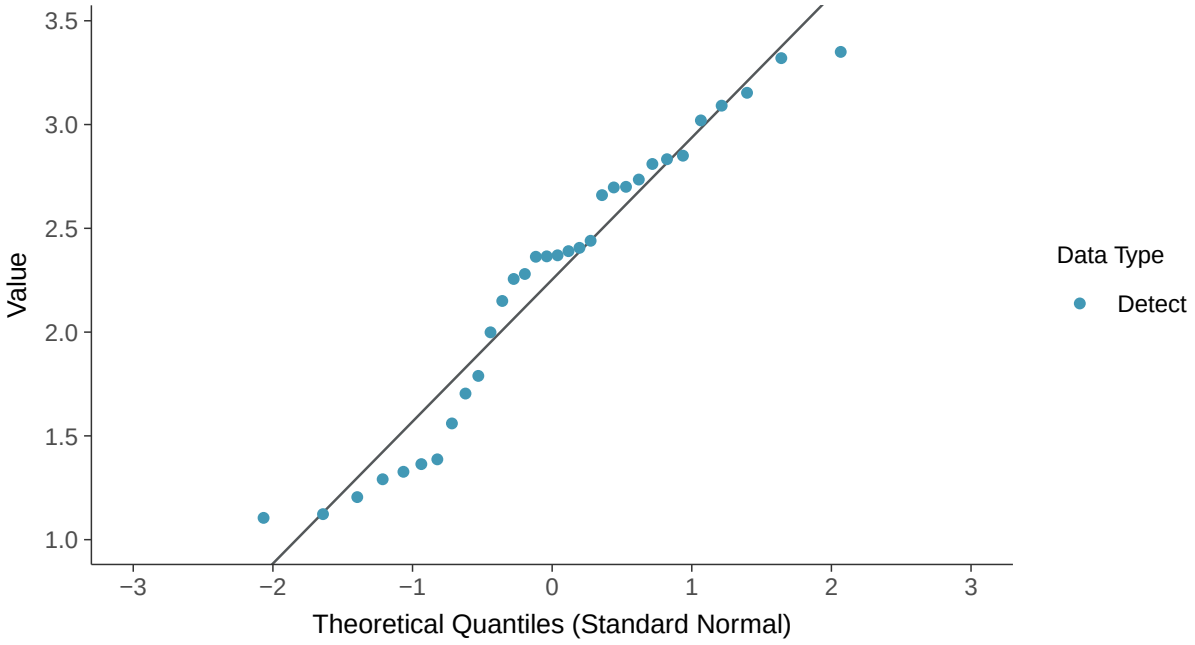
Boxplot by Season

Total Radium, MW-2 (pCi/L)



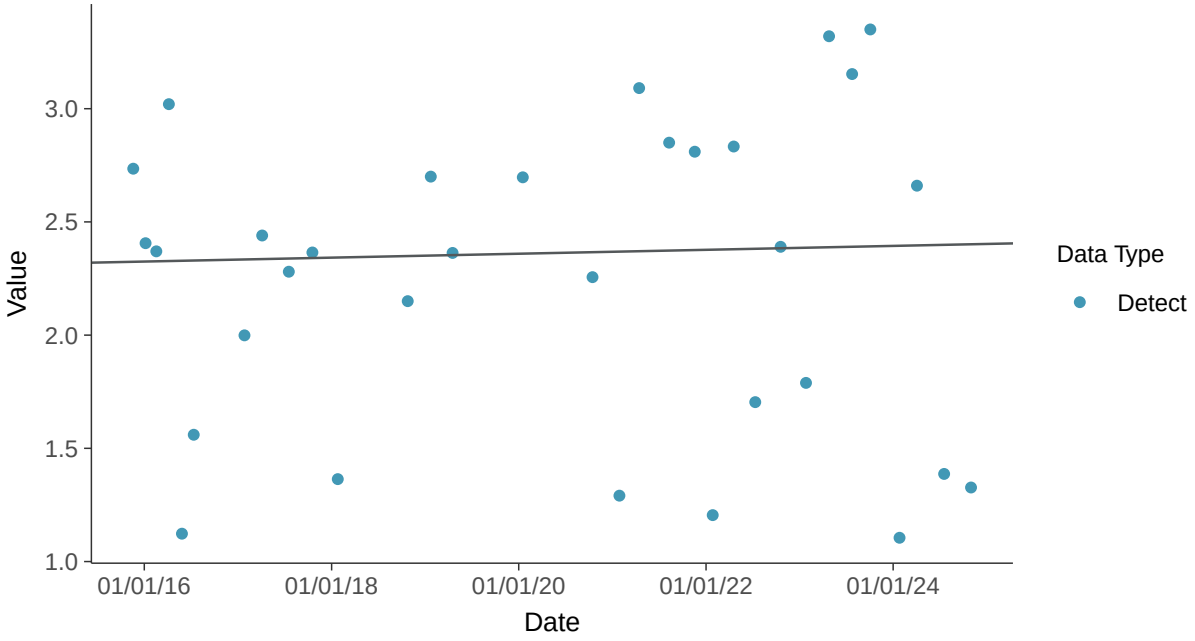
Normal Q-Q plot

Total Radium, MW-2 (pCi/L)



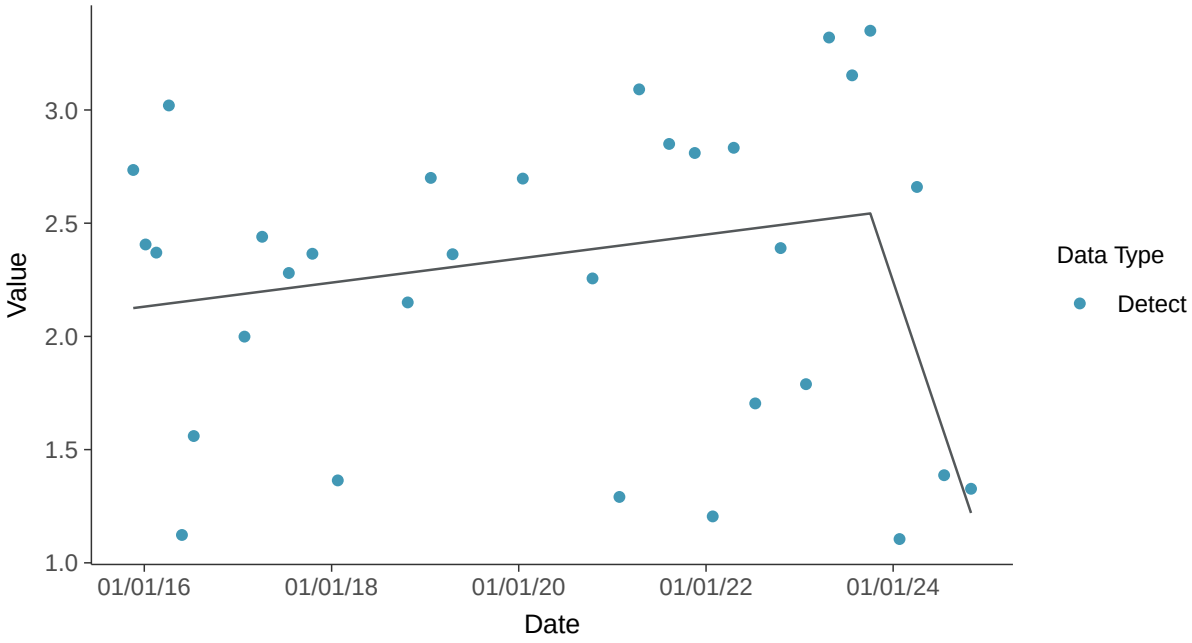
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-2 (pCi/L)



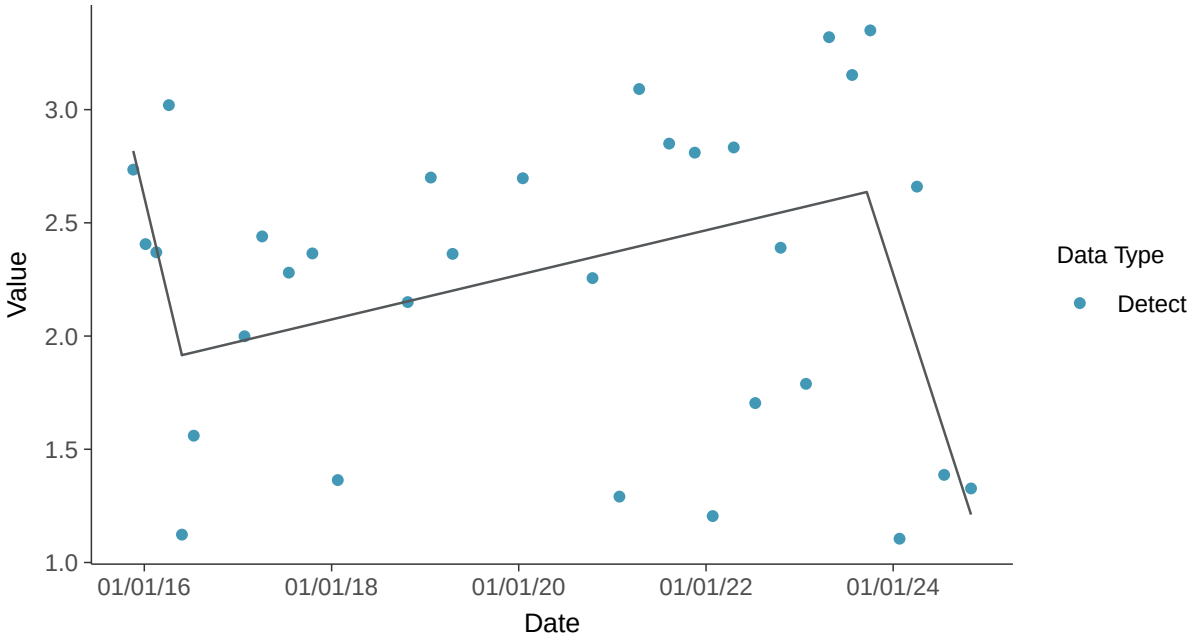
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-2 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, MW-2 (pCi/L)

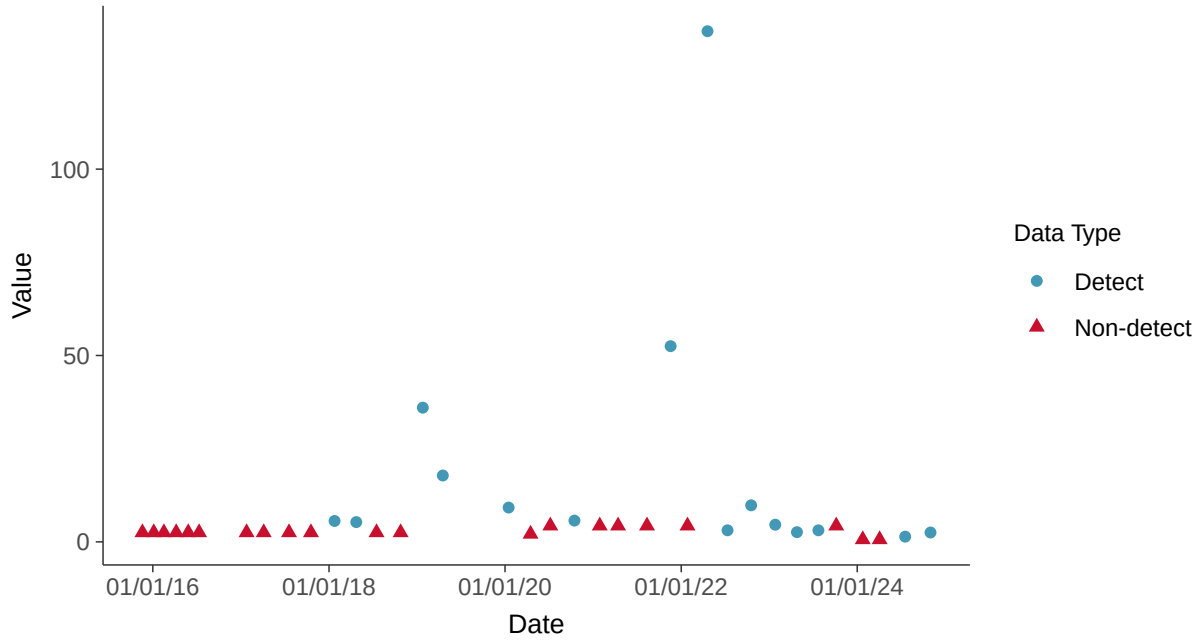


App. I Metals: Copper, MW-3

ID: 03_01_111

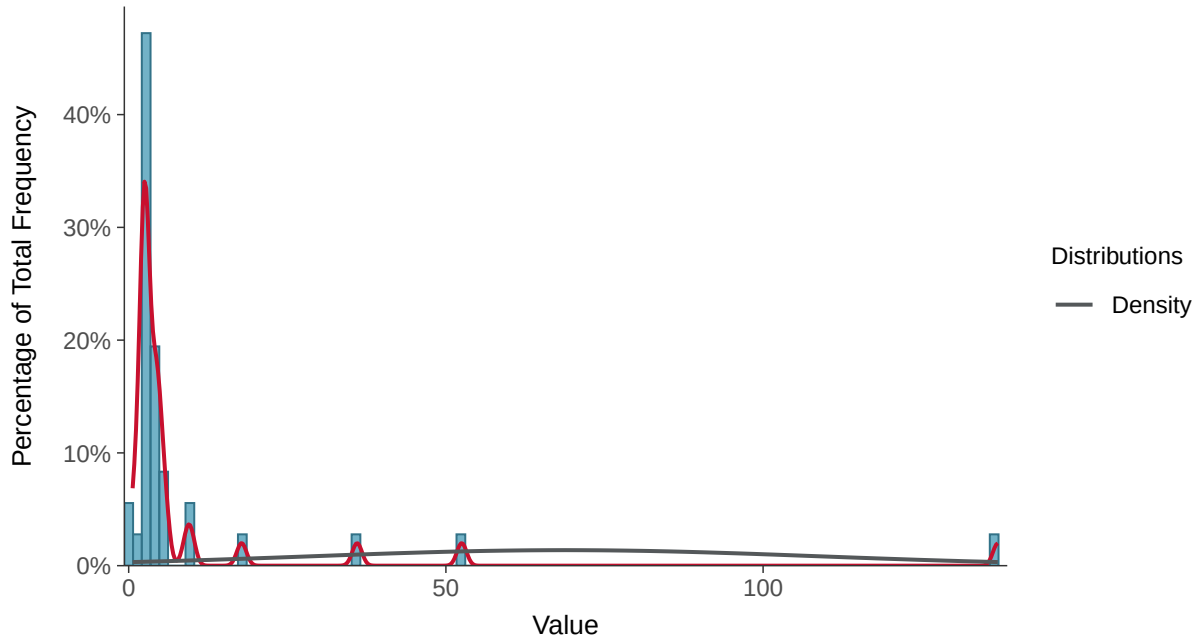
Scatter Plot

Copper, MW-3 (ug/L)



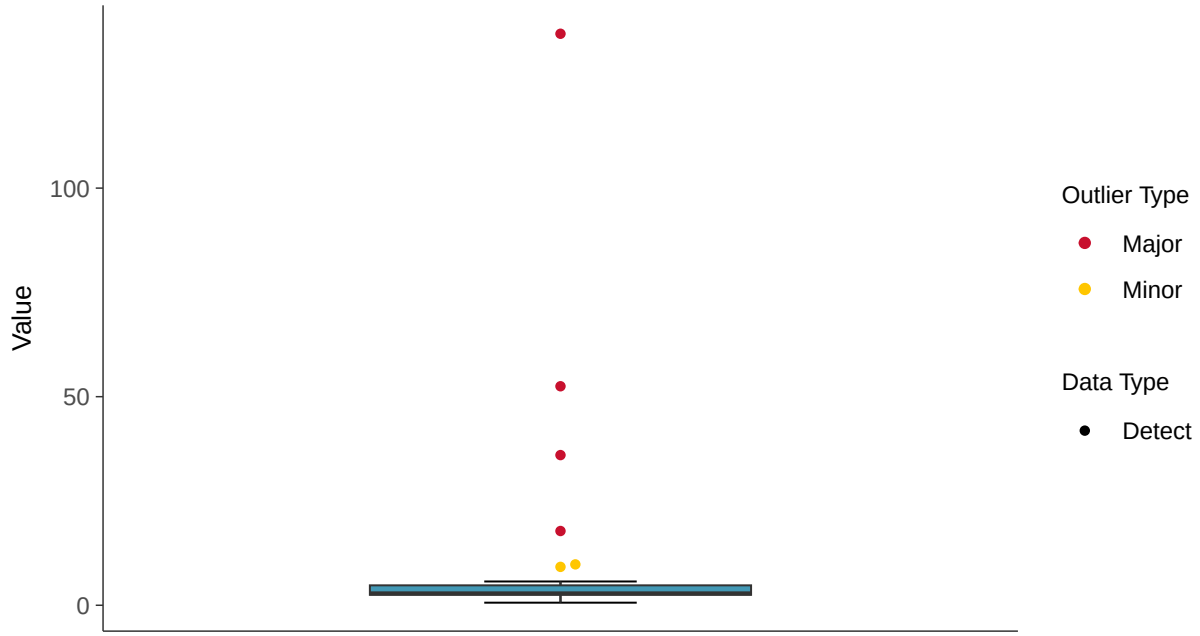
Histogram

Copper, MW-3 (ug/L)



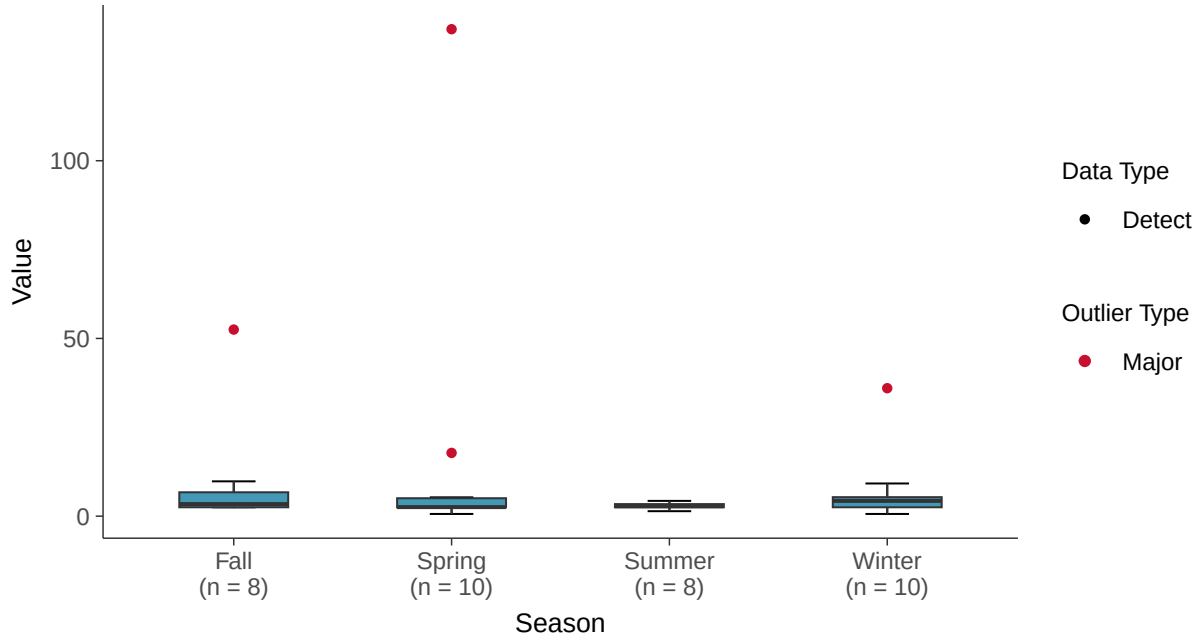
Boxplot

Copper, MW-3 (ug/L)



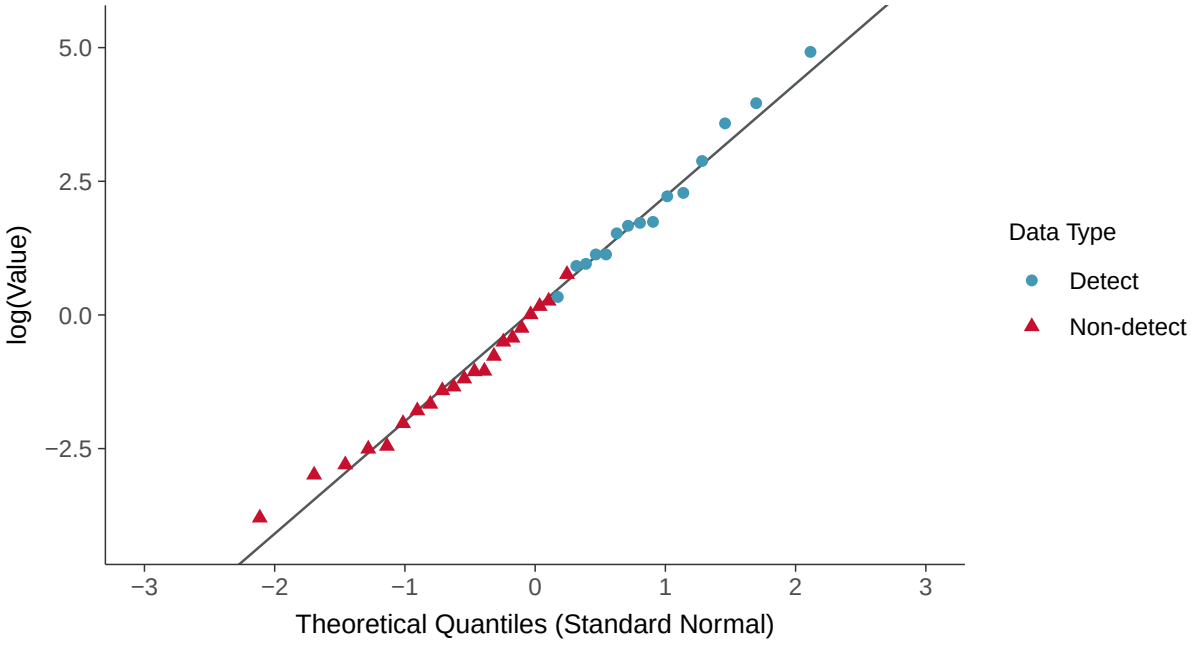
Boxplot by Season

Copper, MW-3 (ug/L)



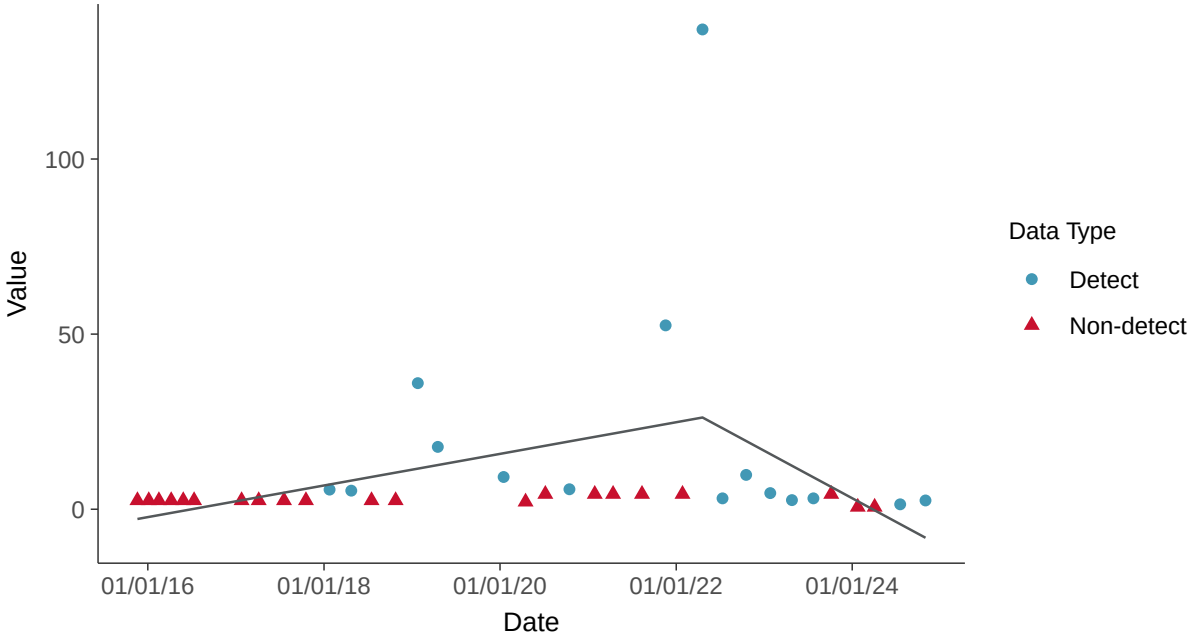
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-3 (ug/L)



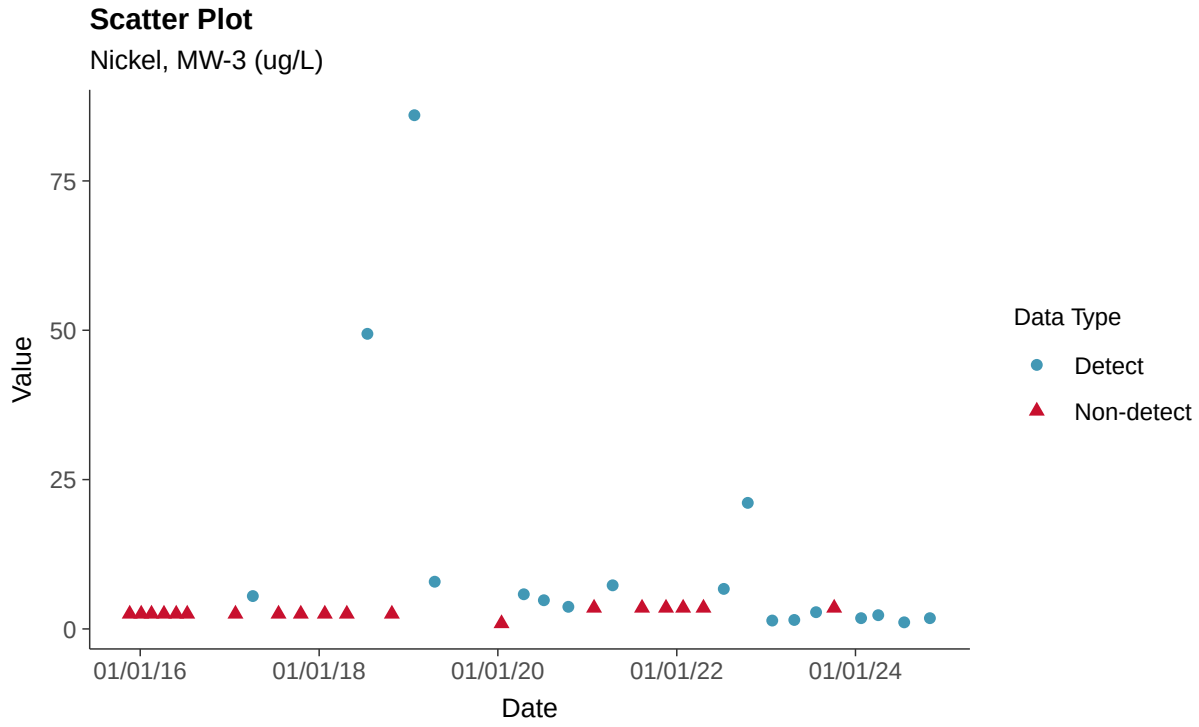
Trend Regression: Piecewise Linear-Linear

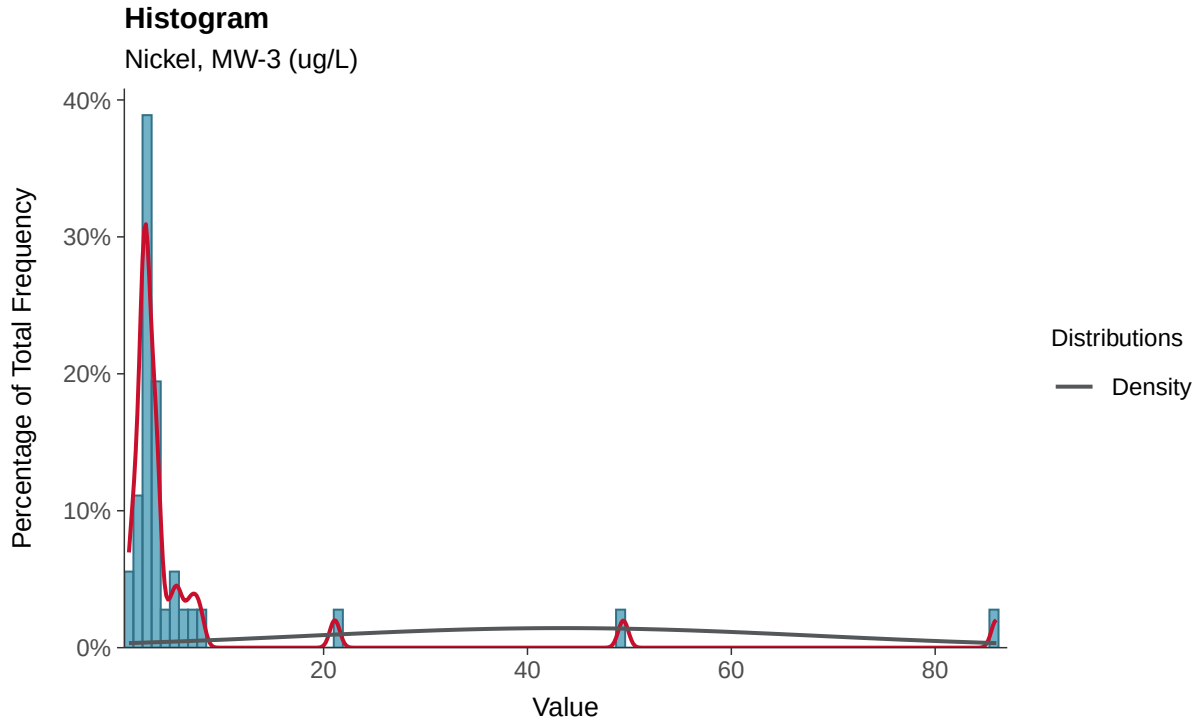
Copper, MW-3 (ug/L)



App. I Metals: Nickel, MW-3

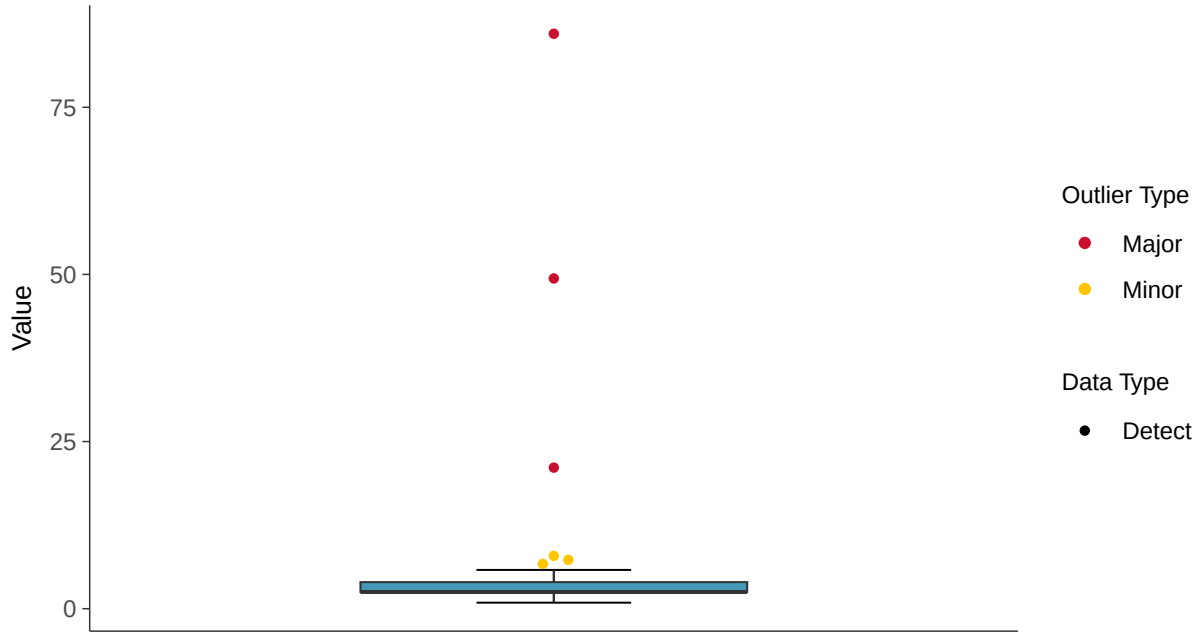
ID: 03_01_117





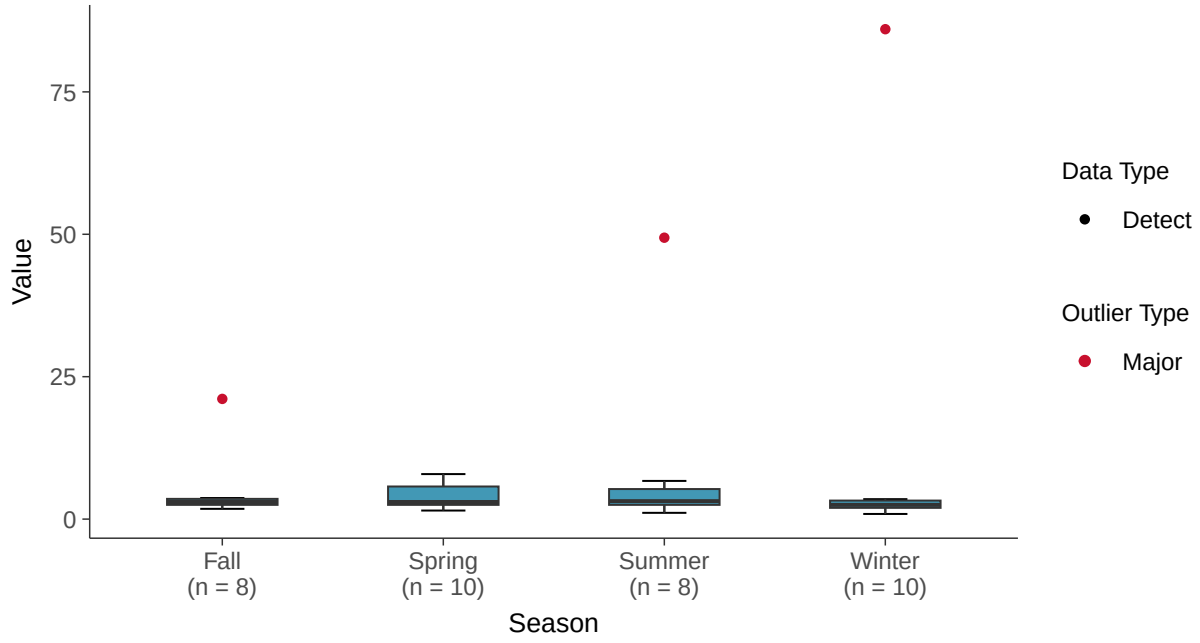
Boxplot

Nickel, MW-3 (ug/L)



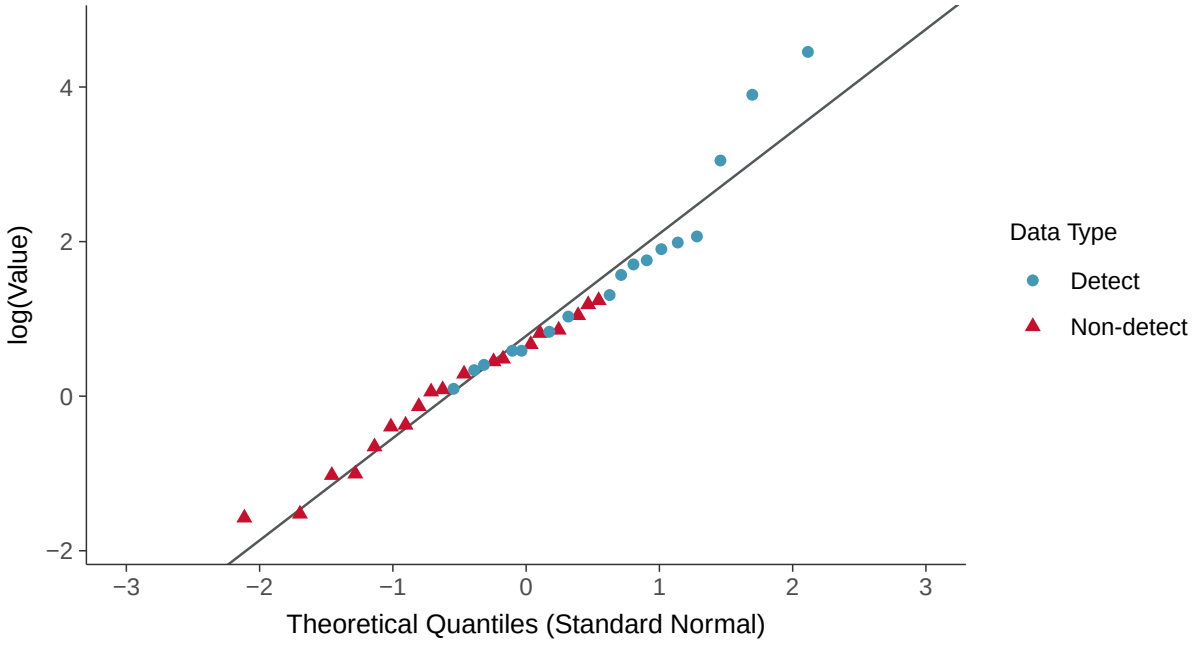
Boxplot by Season

Nickel, MW-3 (ug/L)



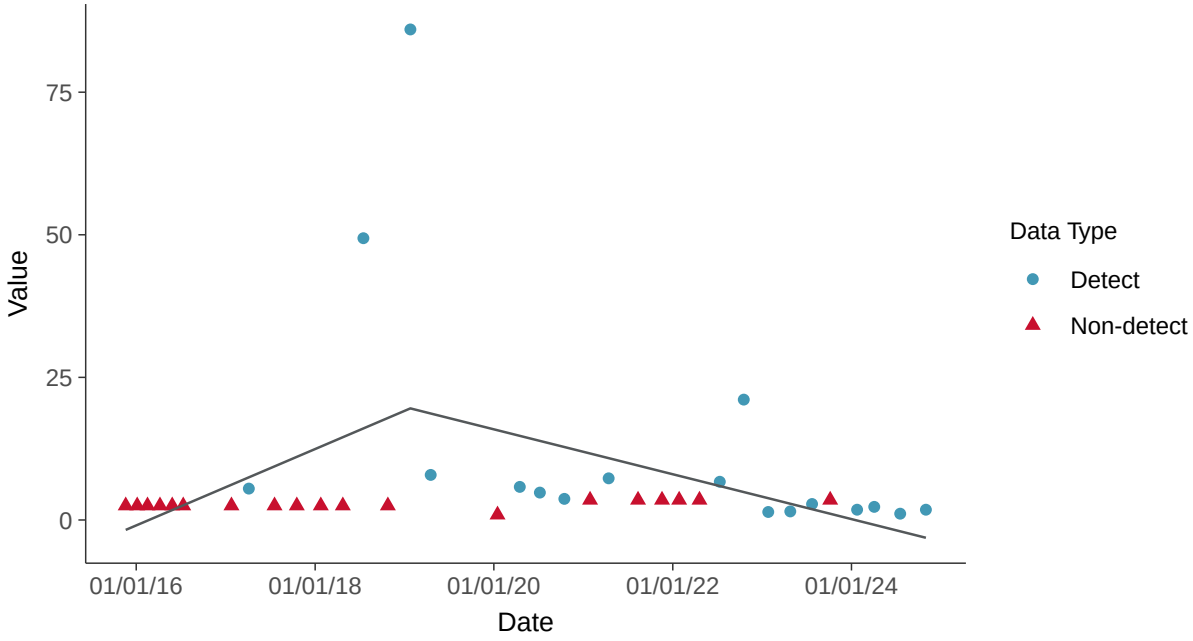
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-3 (ug/L)



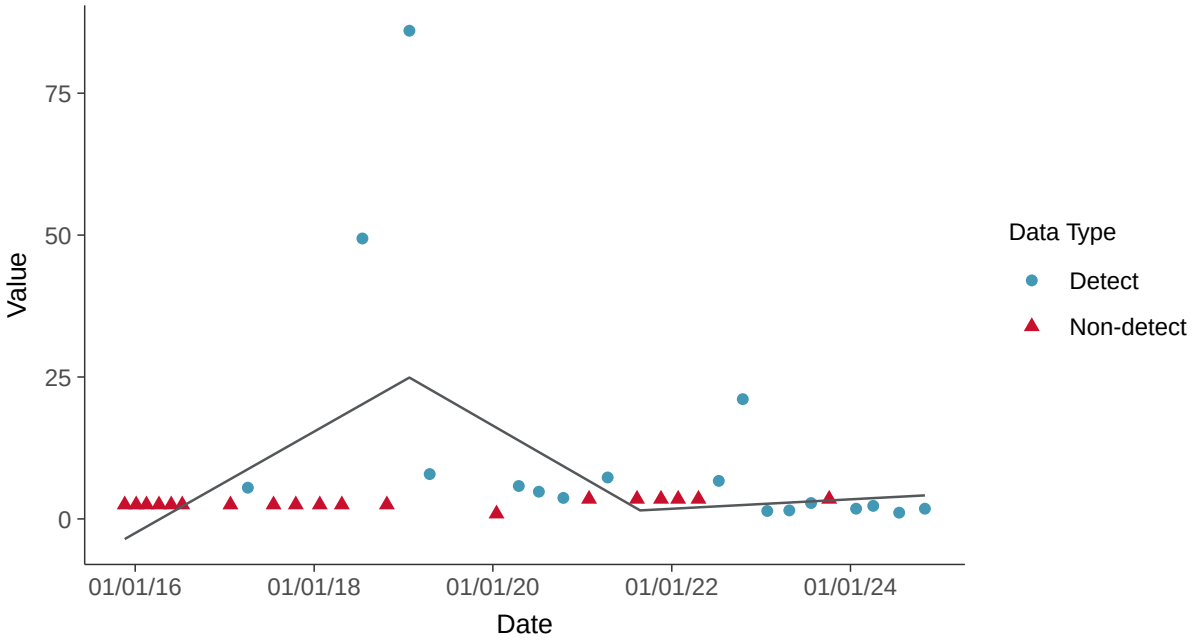
Trend Regression: Piecewise Linear-Linear

Nickel, MW-3 (ug/L)



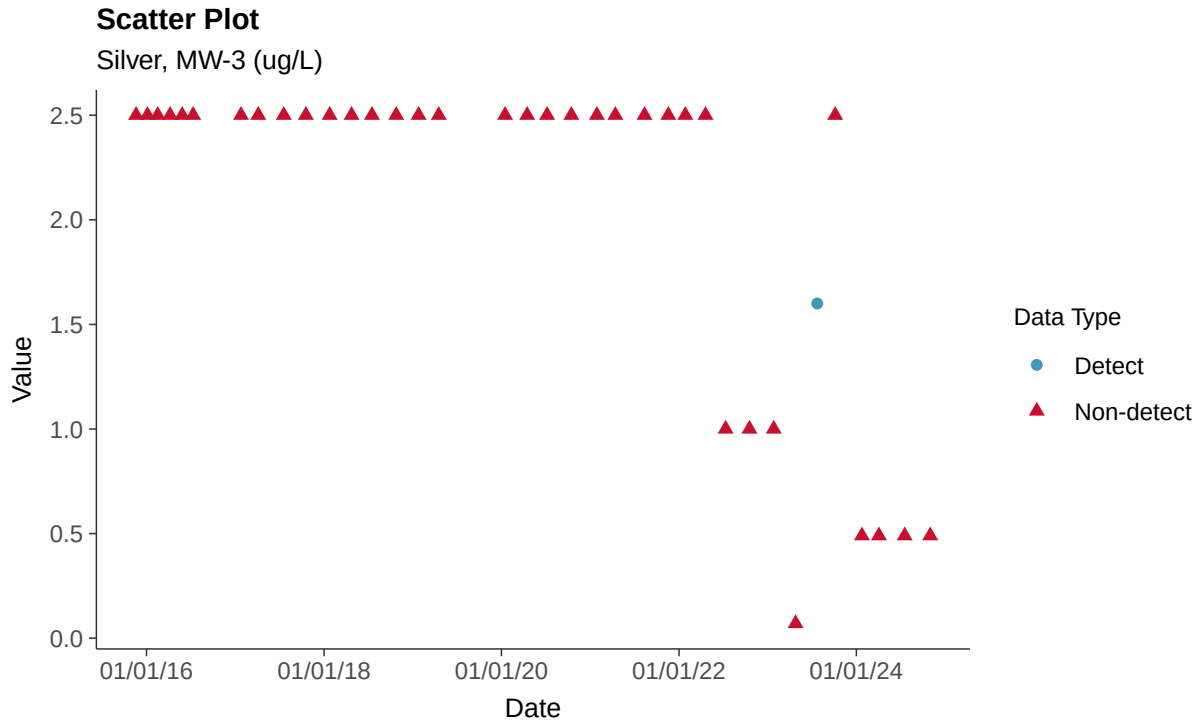
Trend Regression: Piecewise Linear-Linear-Linear

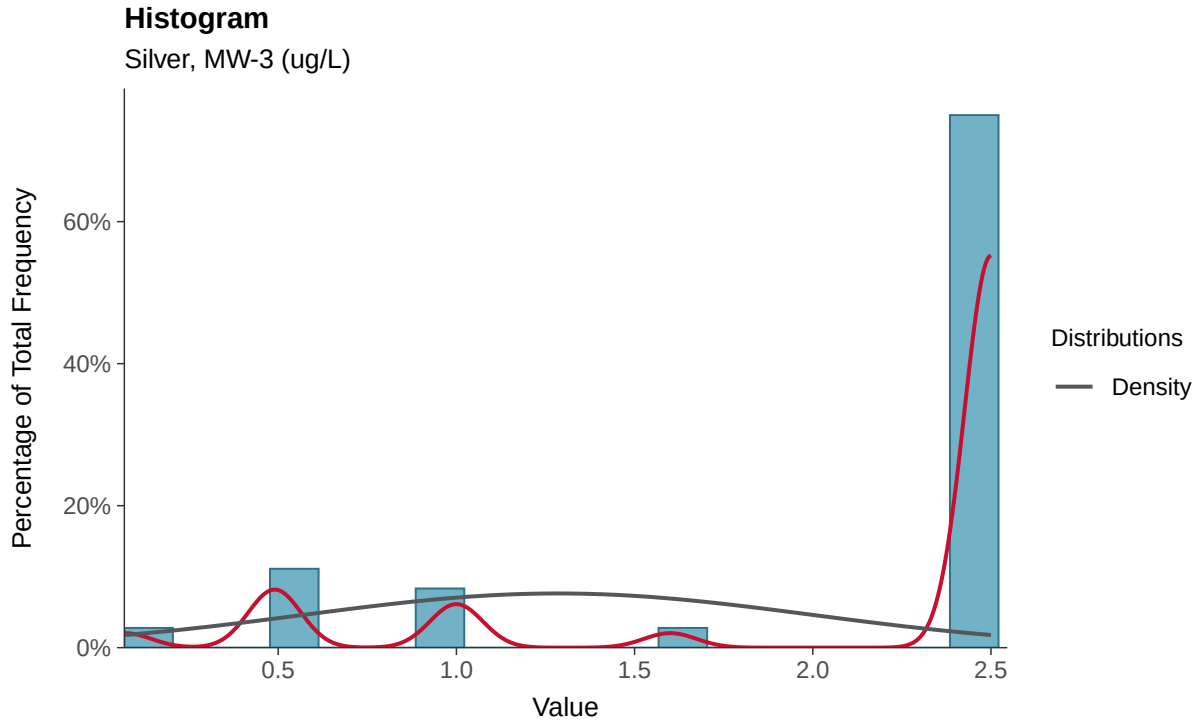
Nickel, MW-3 (ug/L)



App. I Metals: Silver, MW-3

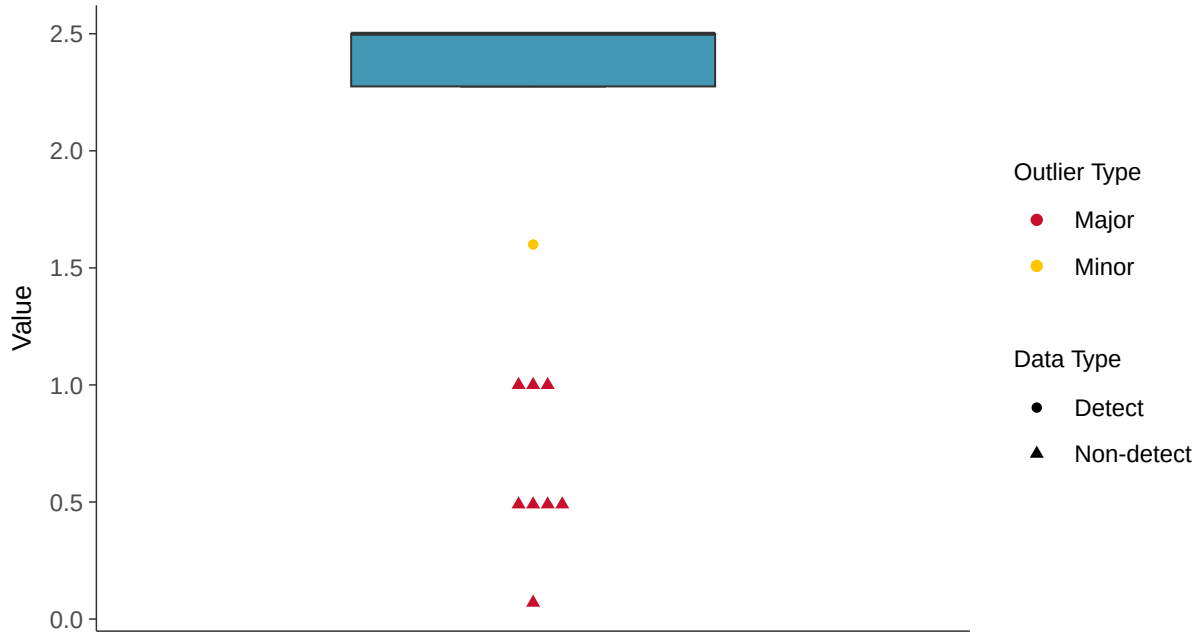
ID: 03_01_122





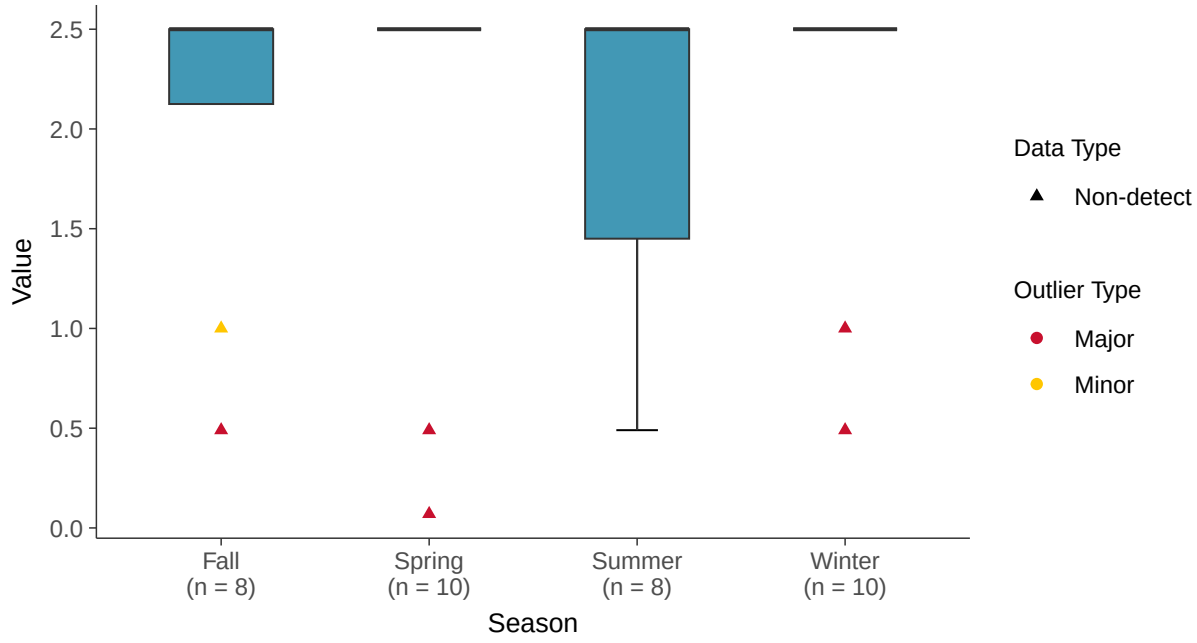
Boxplot

Silver, MW-3 (ug/L)



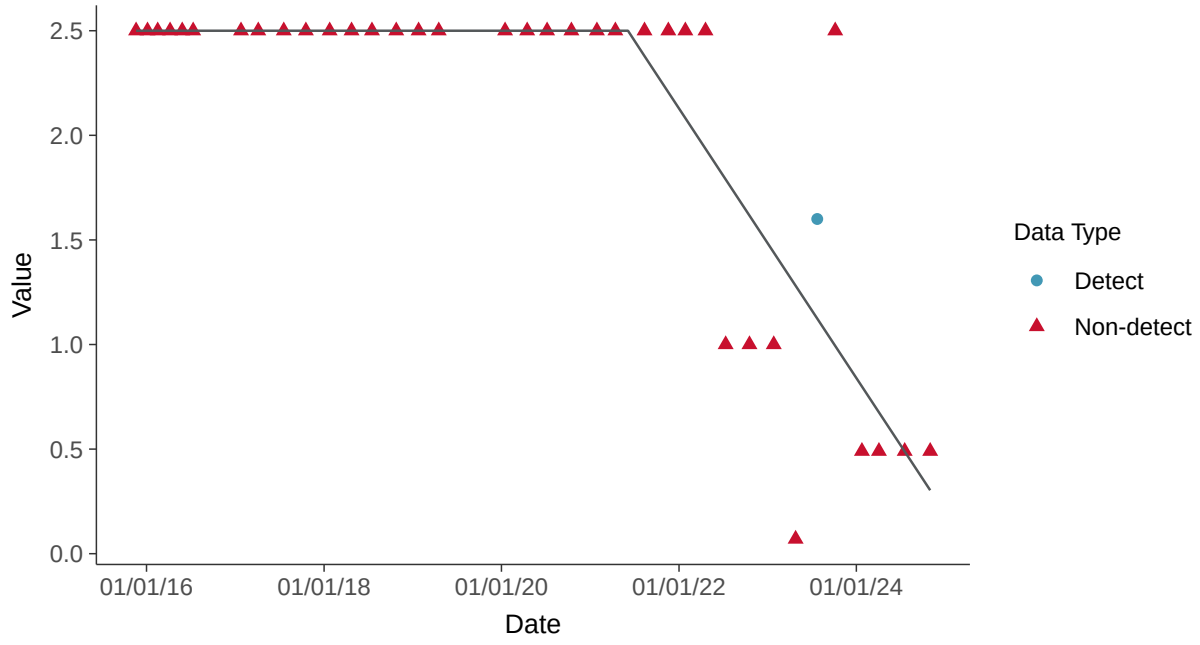
Boxplot by Season

Silver, MW-3 (ug/L)



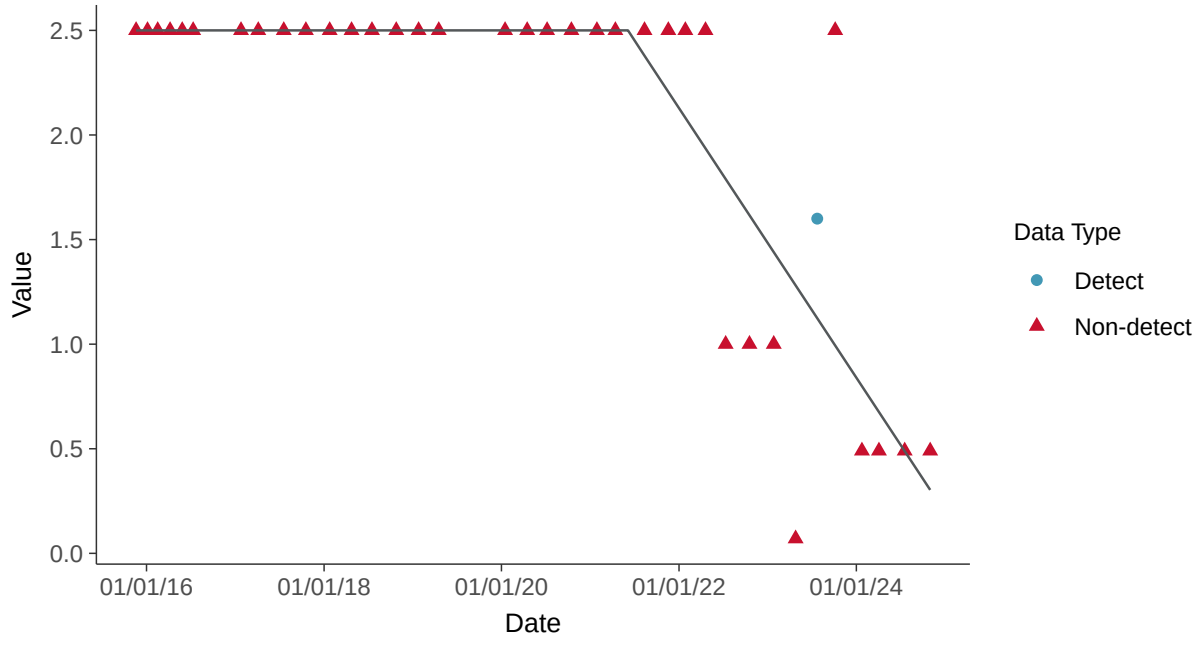
Trend Regression: Piecewise Linear-Linear

Silver, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-3 (ug/L)

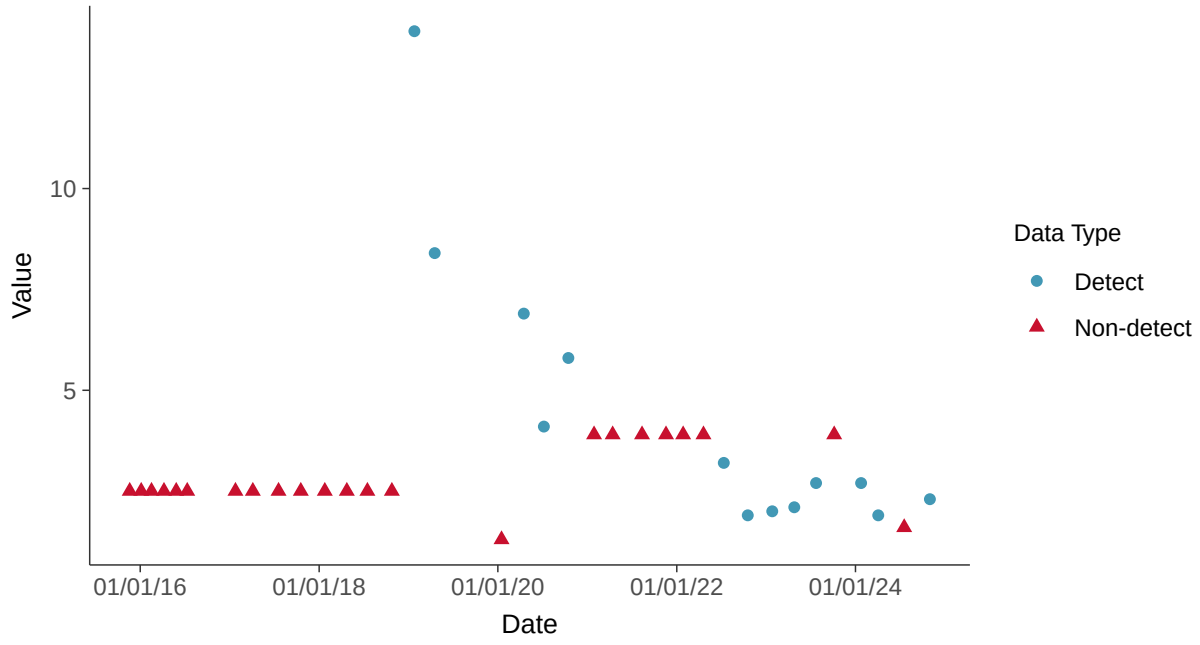


App. I Metals: Vanadium, MW-3

ID: 03_01_127

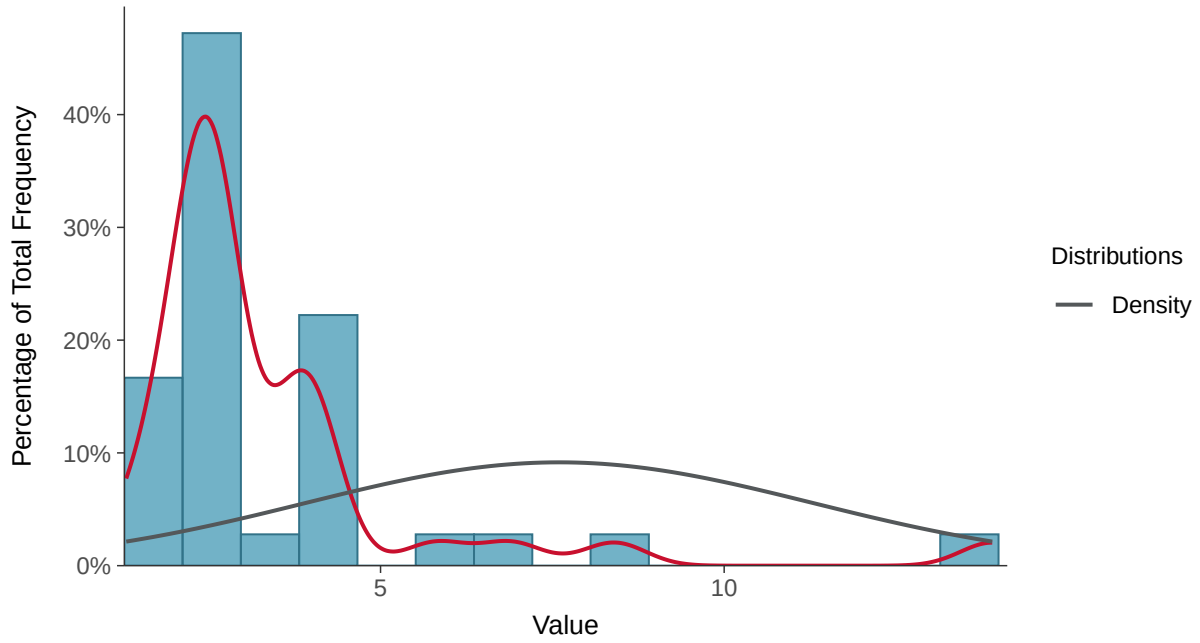
Scatter Plot

Vanadium, MW-3 (ug/L)



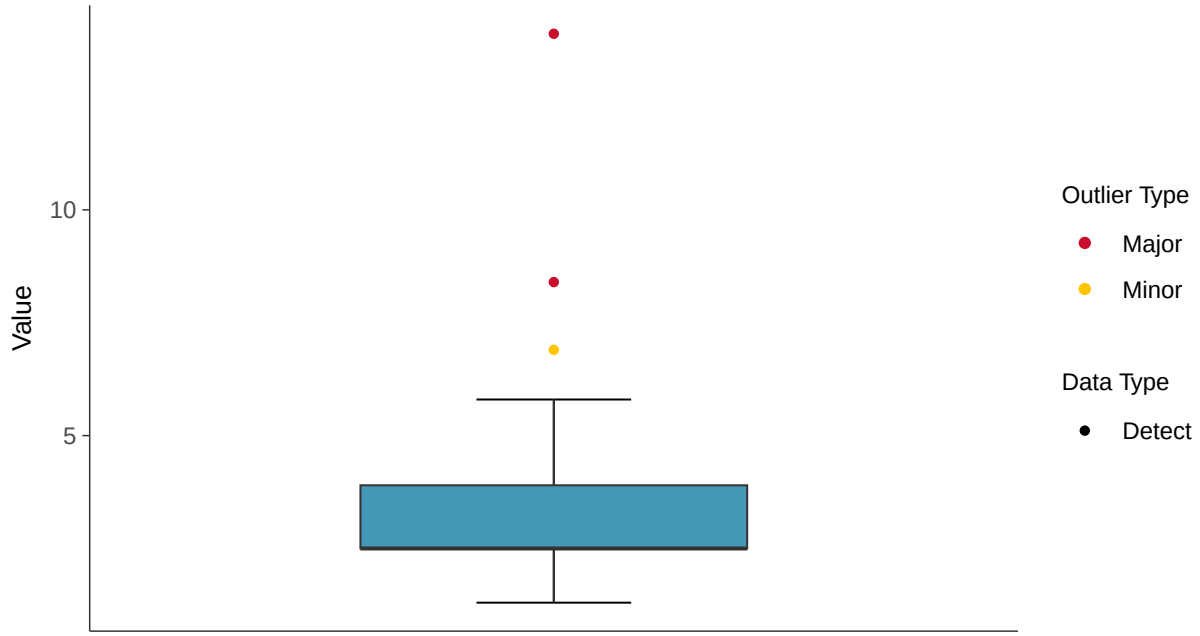
Histogram

Vanadium, MW-3 (ug/L)



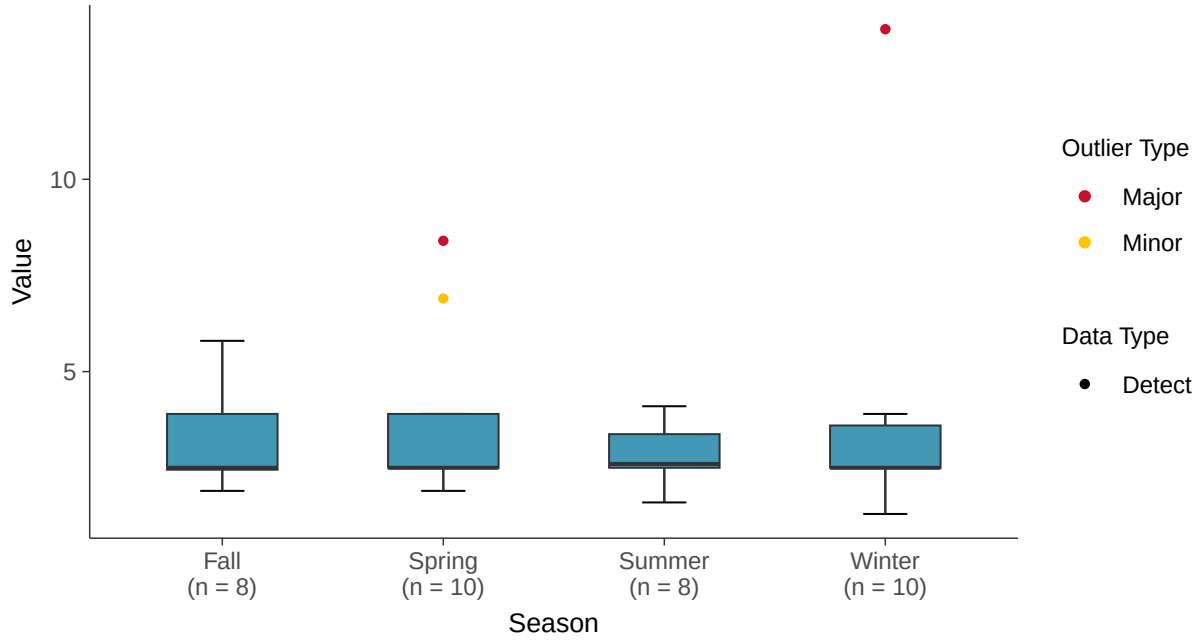
Boxplot

Vanadium, MW-3 (ug/L)



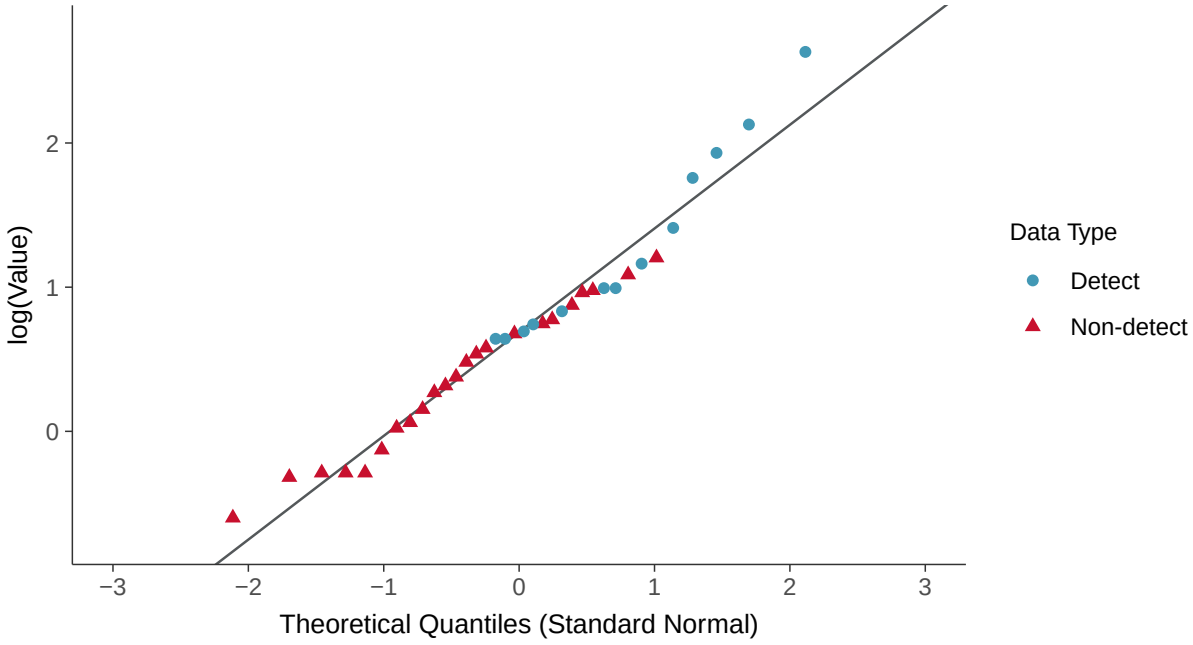
Boxplot by Season

Vanadium, MW-3 (ug/L)



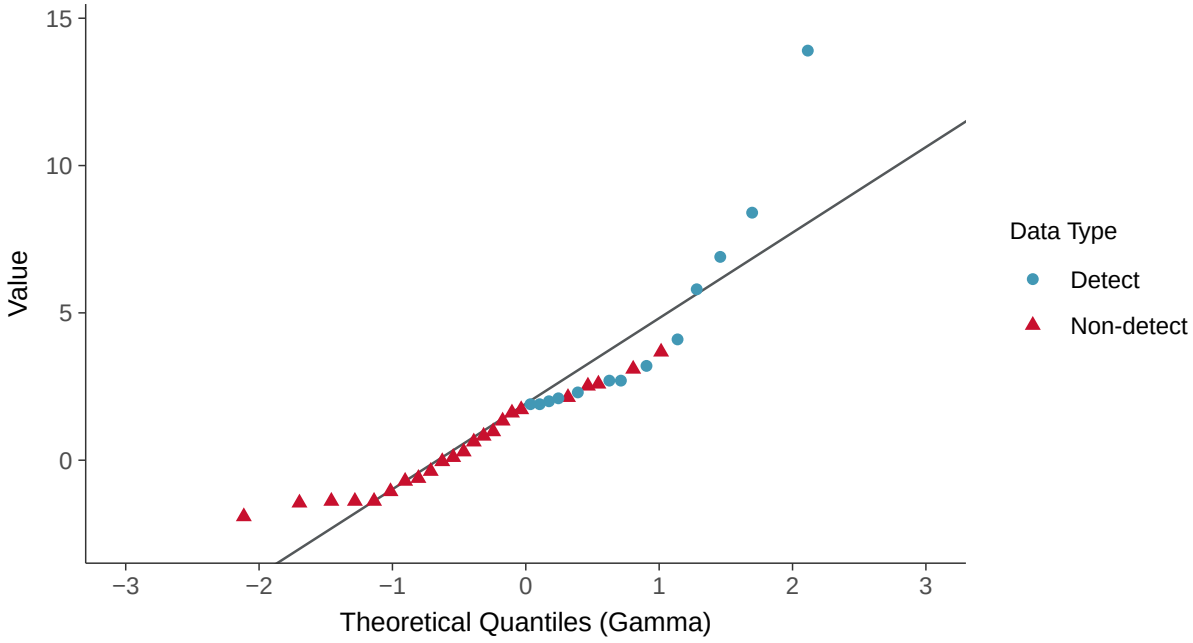
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-3 (ug/L)



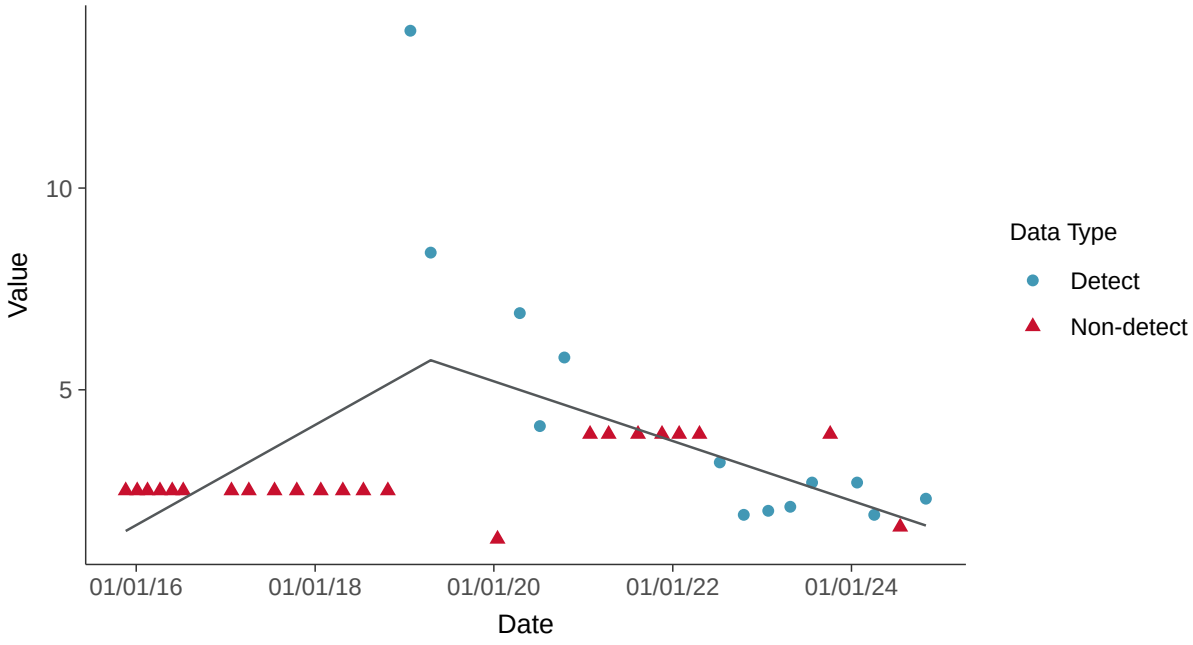
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-3 (ug/L)



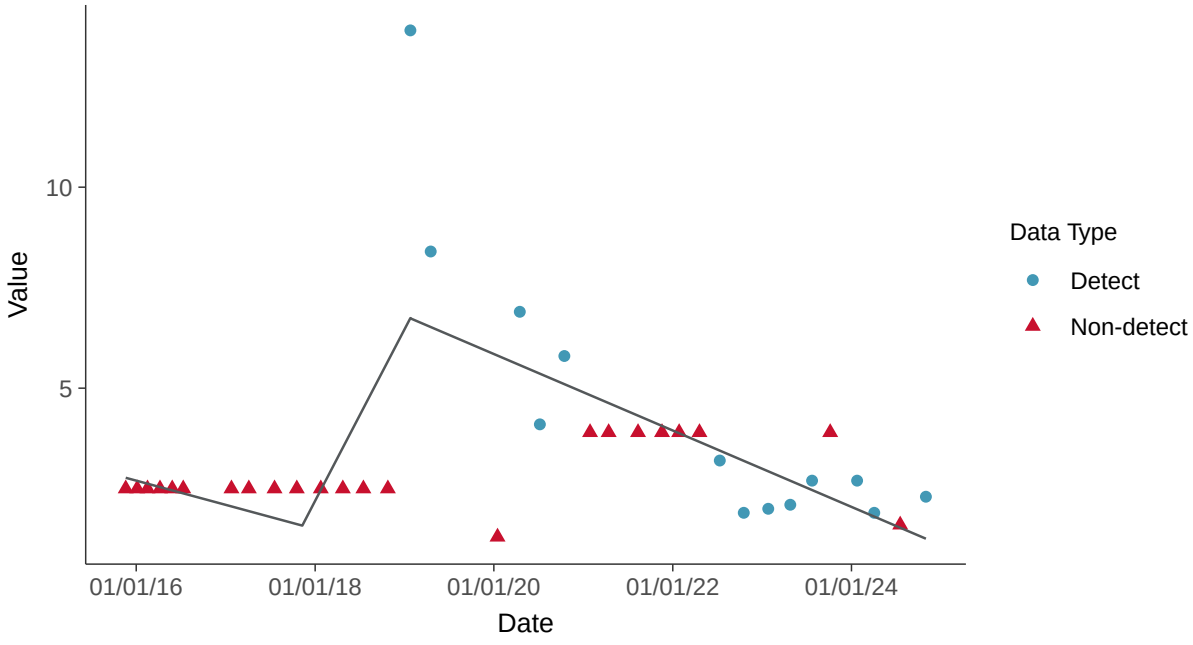
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-3 (ug/L)

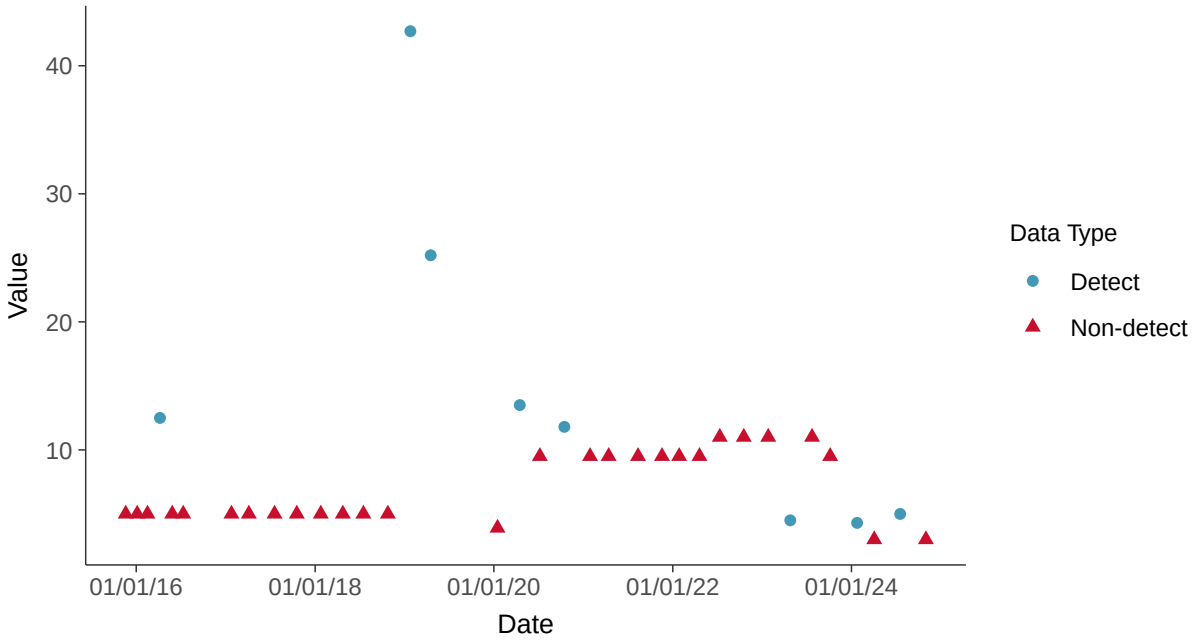


App. I Metals: Zinc, MW-3

ID: 03_01_128

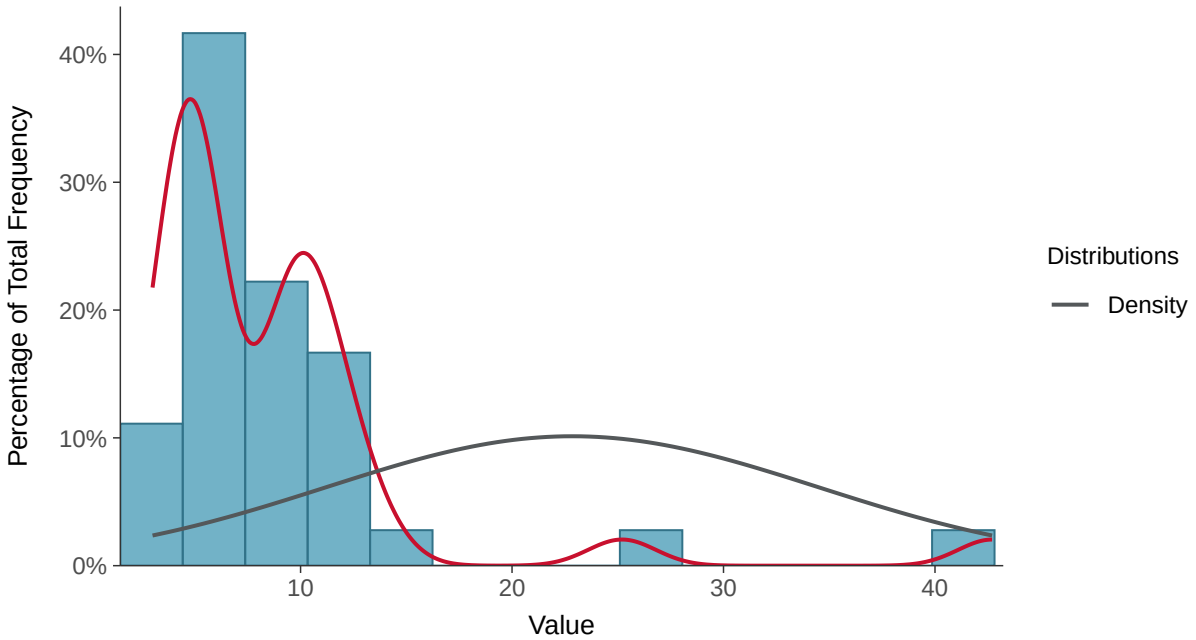
Scatter Plot

Zinc, MW-3 (ug/L)



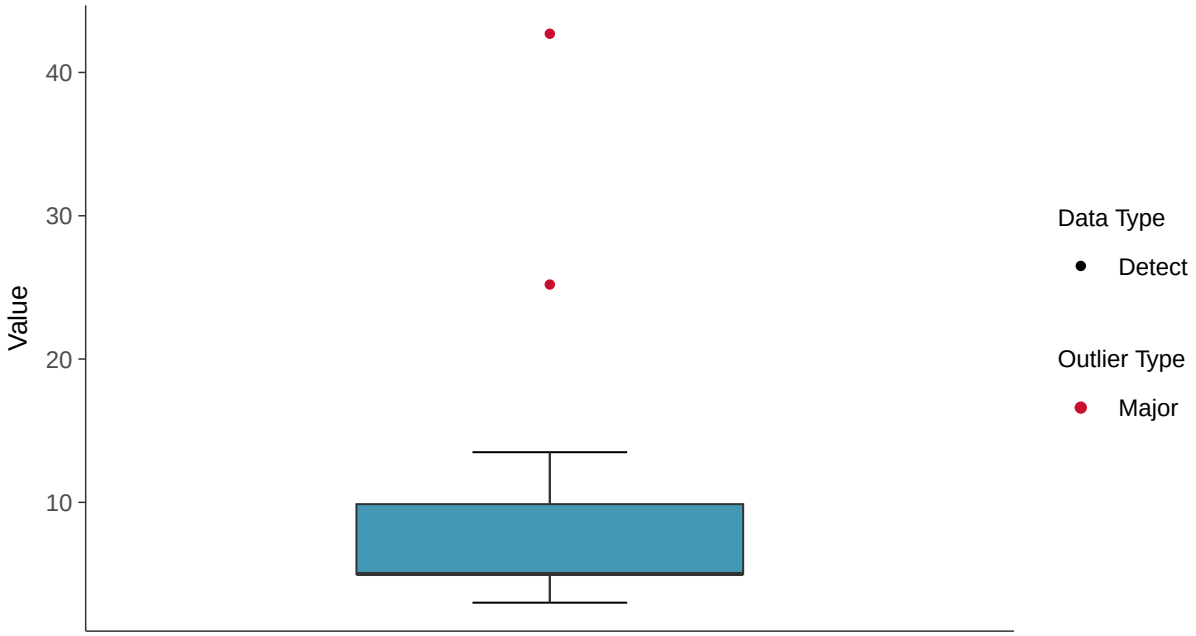
Histogram

Zinc, MW-3 (ug/L)



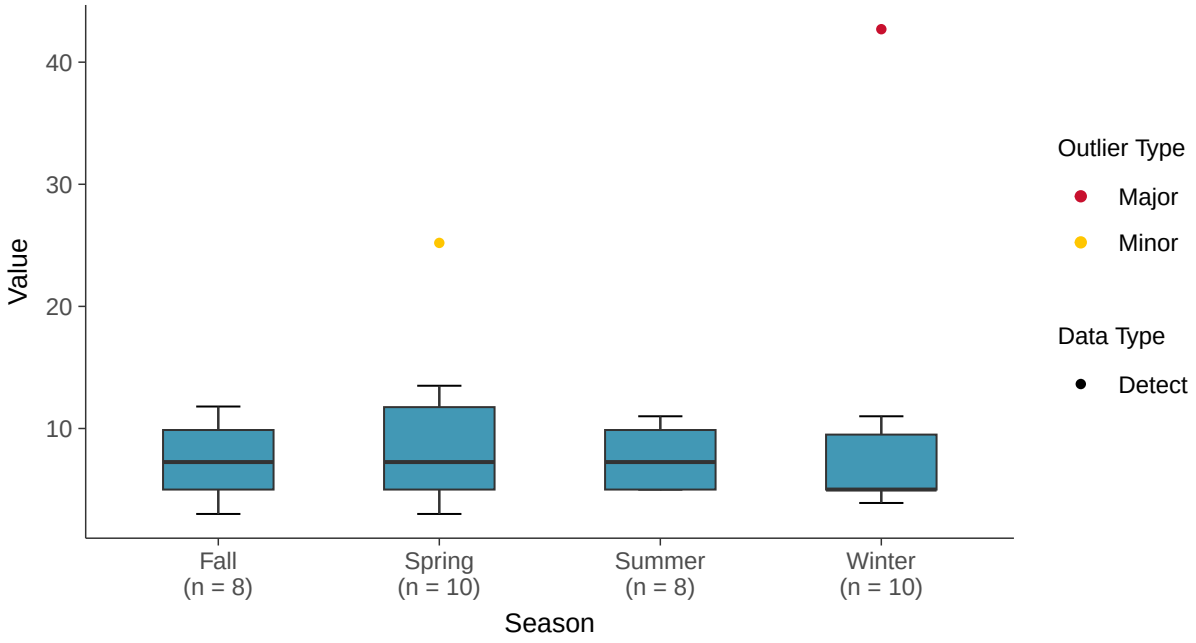
Boxplot

Zinc, MW-3 (ug/L)



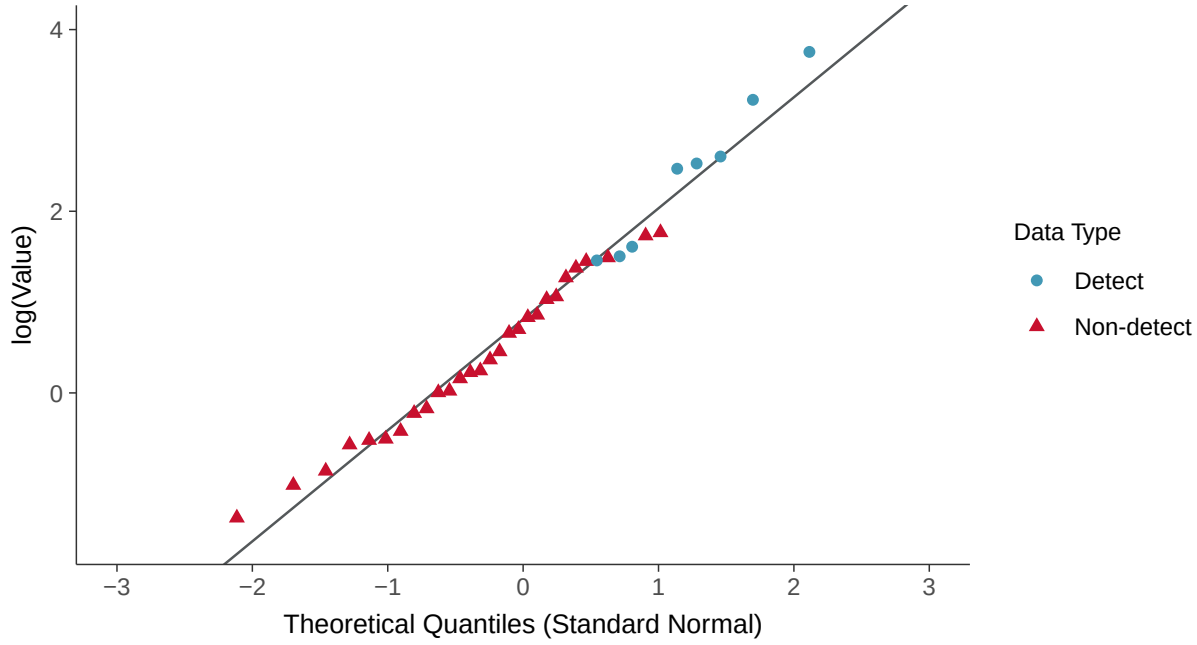
Boxplot by Season

Zinc, MW-3 (ug/L)



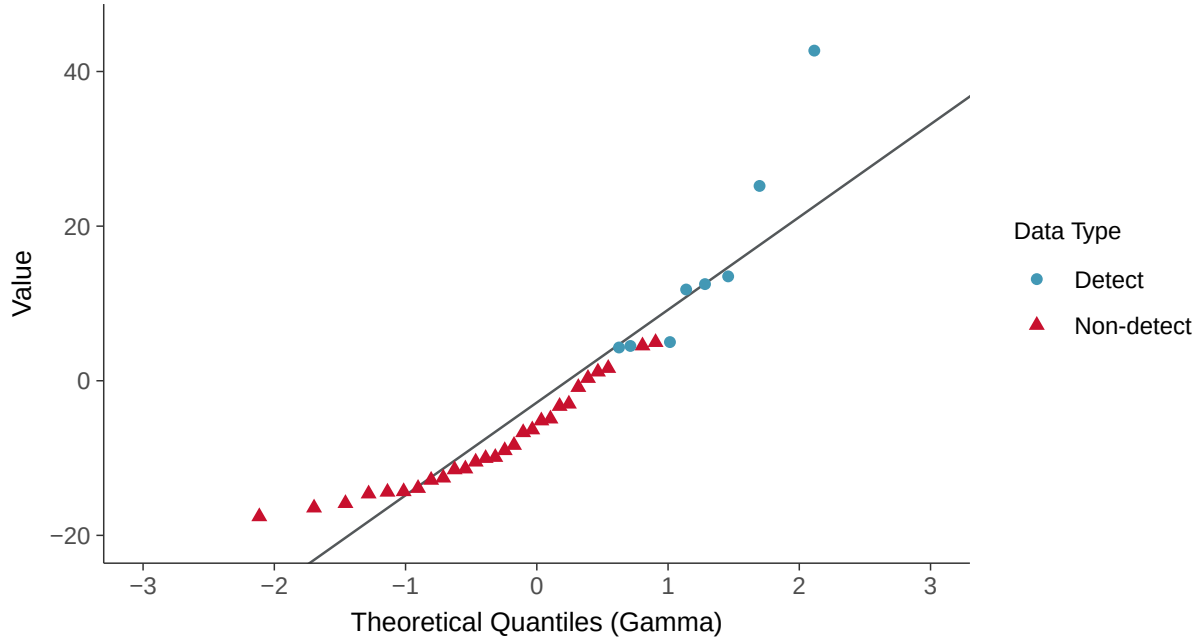
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-3 (ug/L)



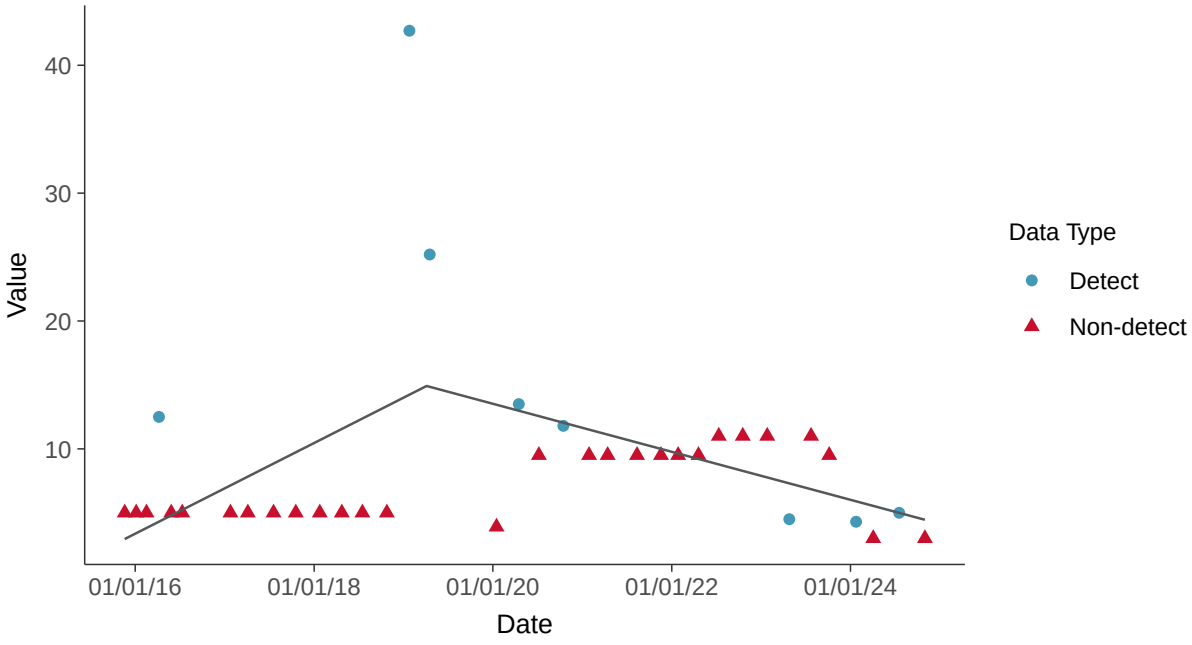
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-3 (ug/L)



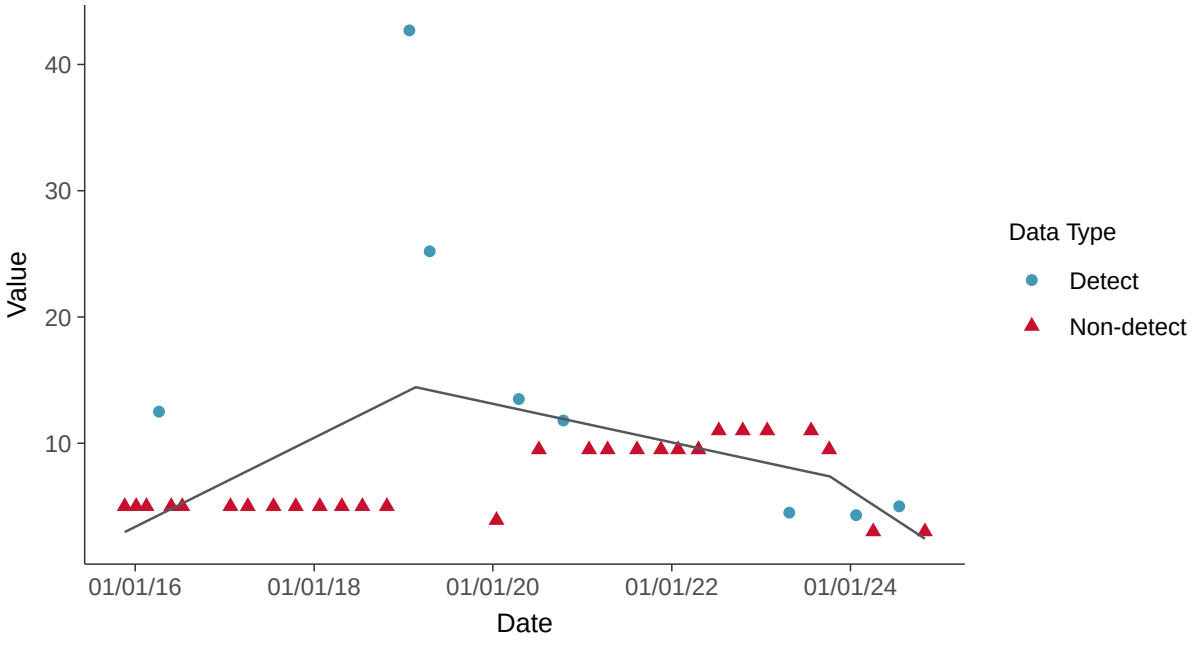
Trend Regression: Piecewise Linear-Linear

Zinc, MW-3 (ug/L)



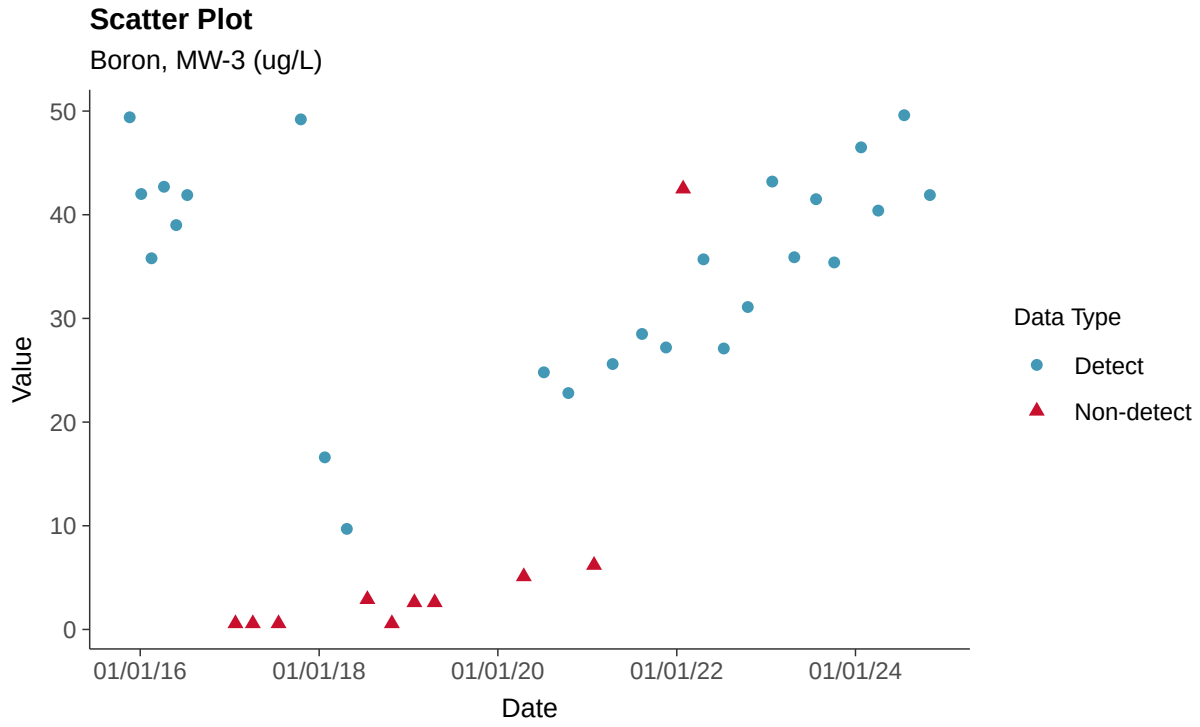
Trend Regression: Piecewise Linear-Linear-Linear

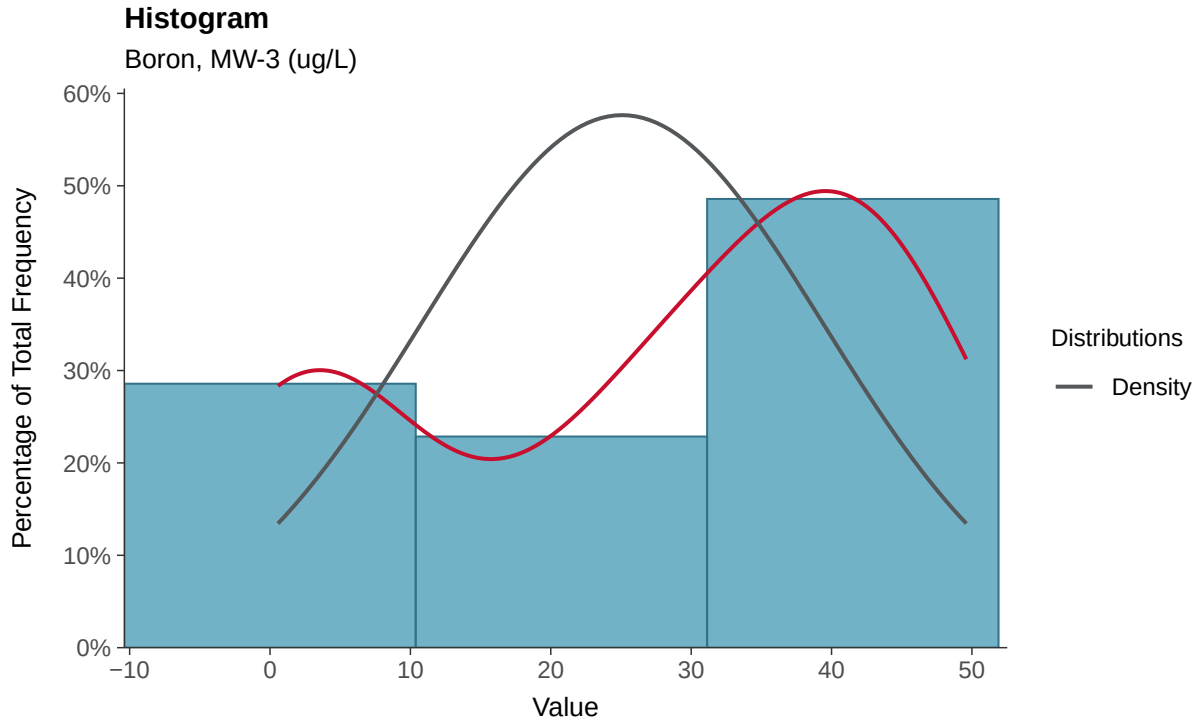
Zinc, MW-3 (ug/L)



App. III: Boron, MW-3

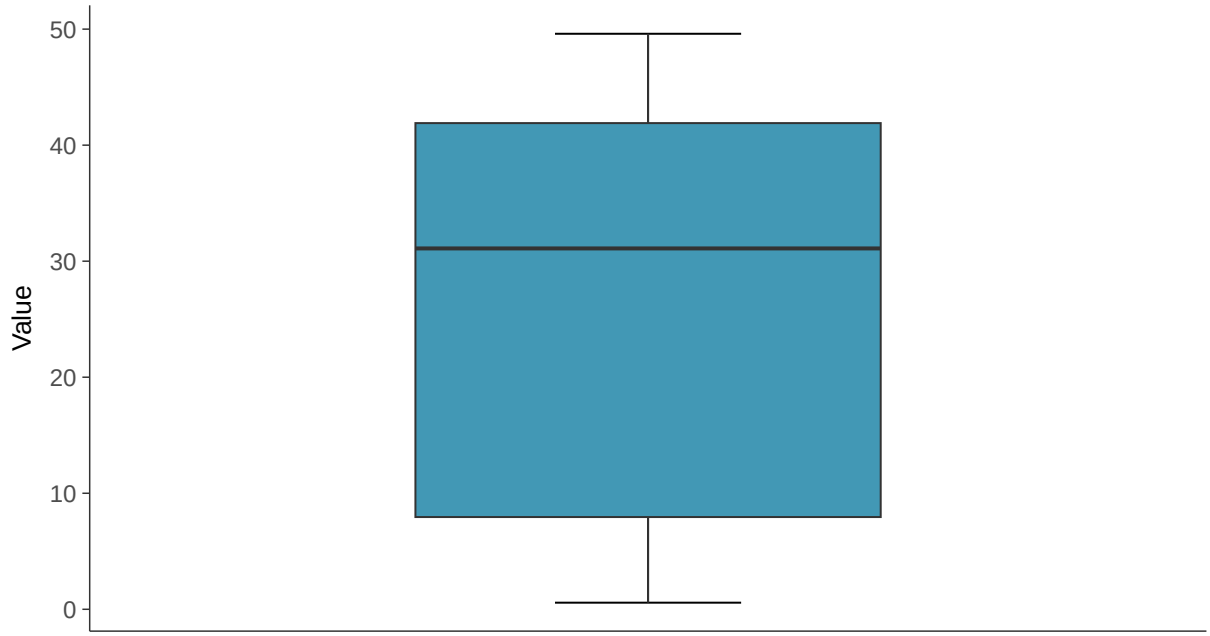
ID: 03_02_105





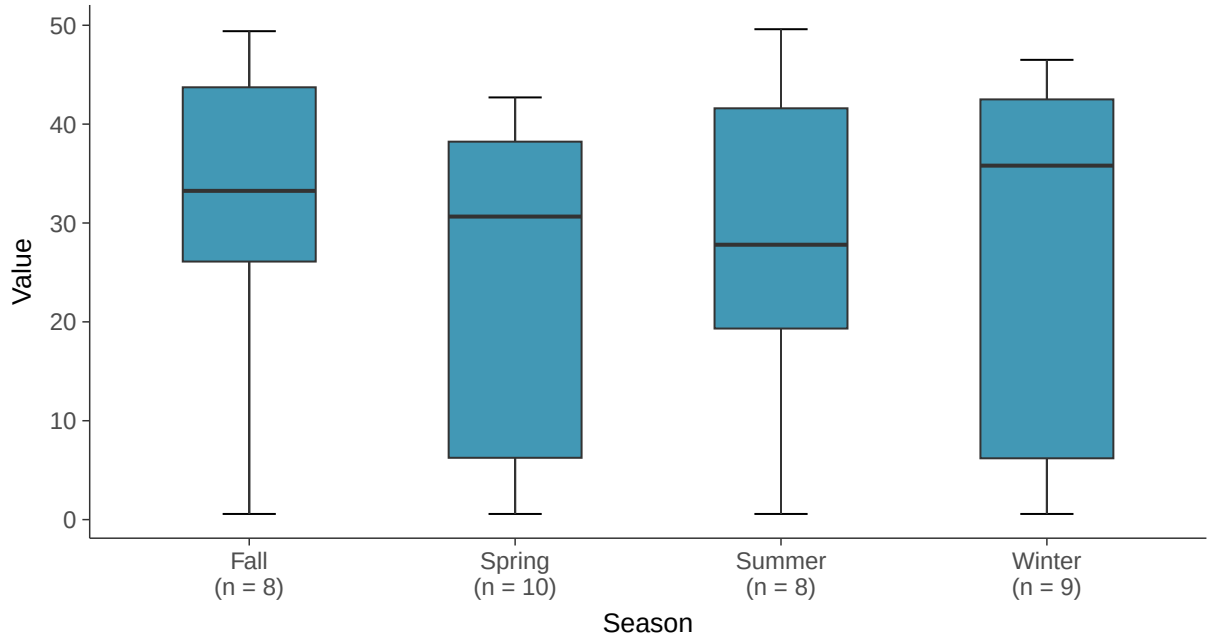
Boxplot

Boron, MW-3 (ug/L)



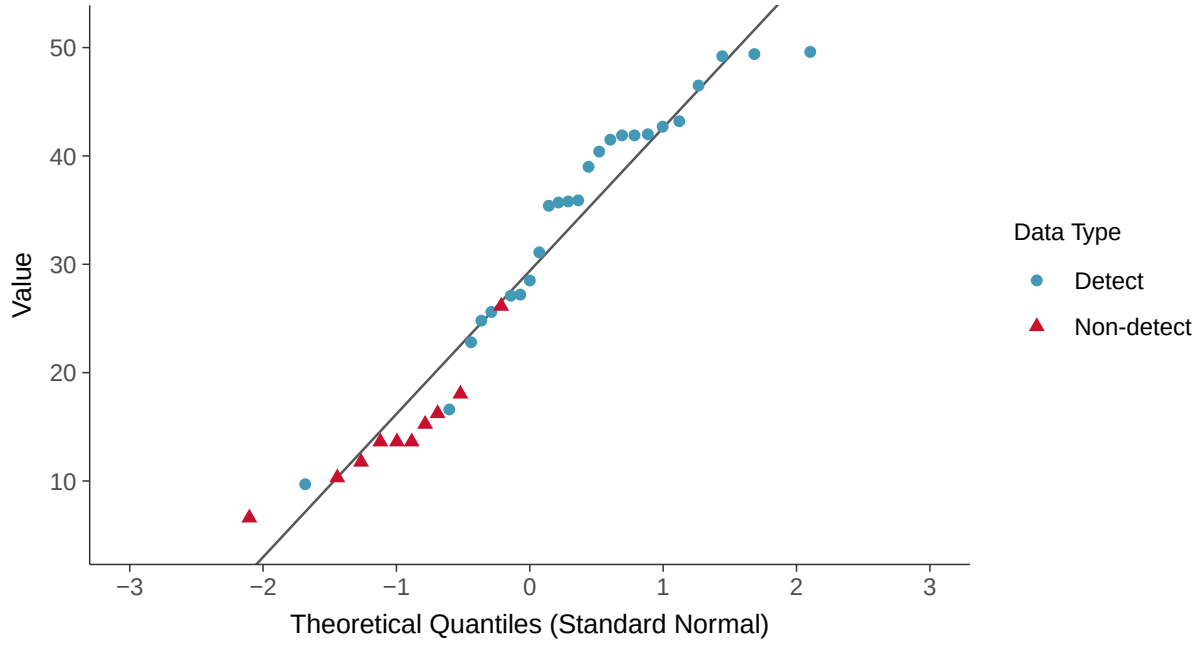
Boxplot by Season

Boron, MW-3 (ug/L)



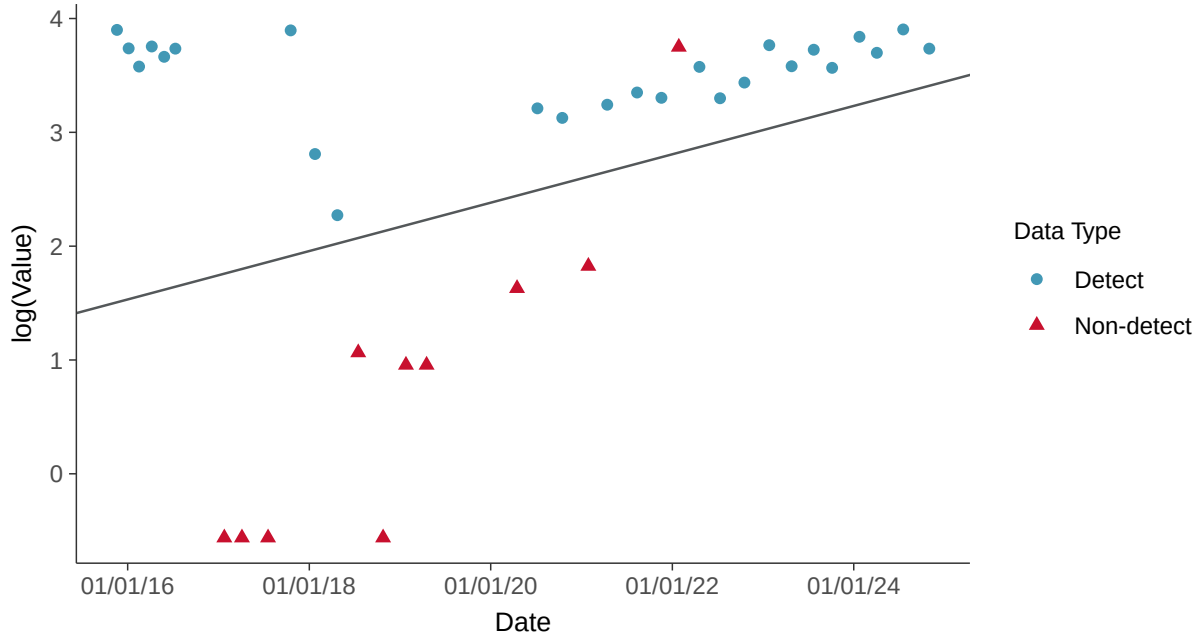
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-3 (ug/L)



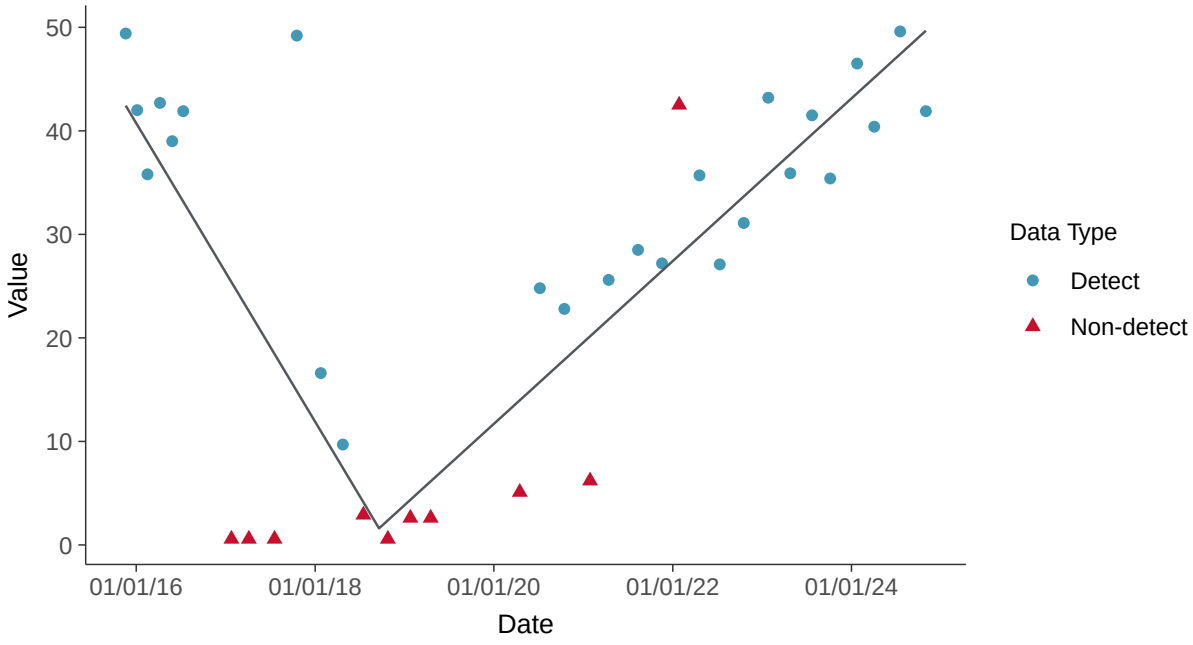
Trend Regression: Lognormal MLE

Boron, MW-3 (ug/L)



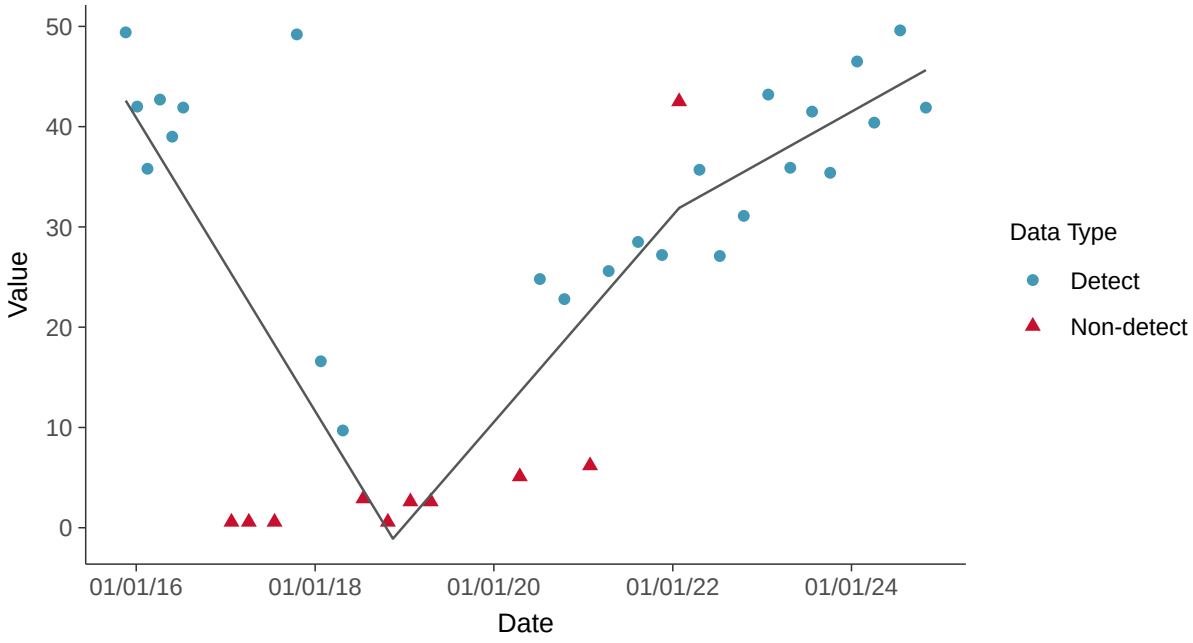
Trend Regression: Piecewise Linear-Linear

Boron, MW-3 (ug/L)



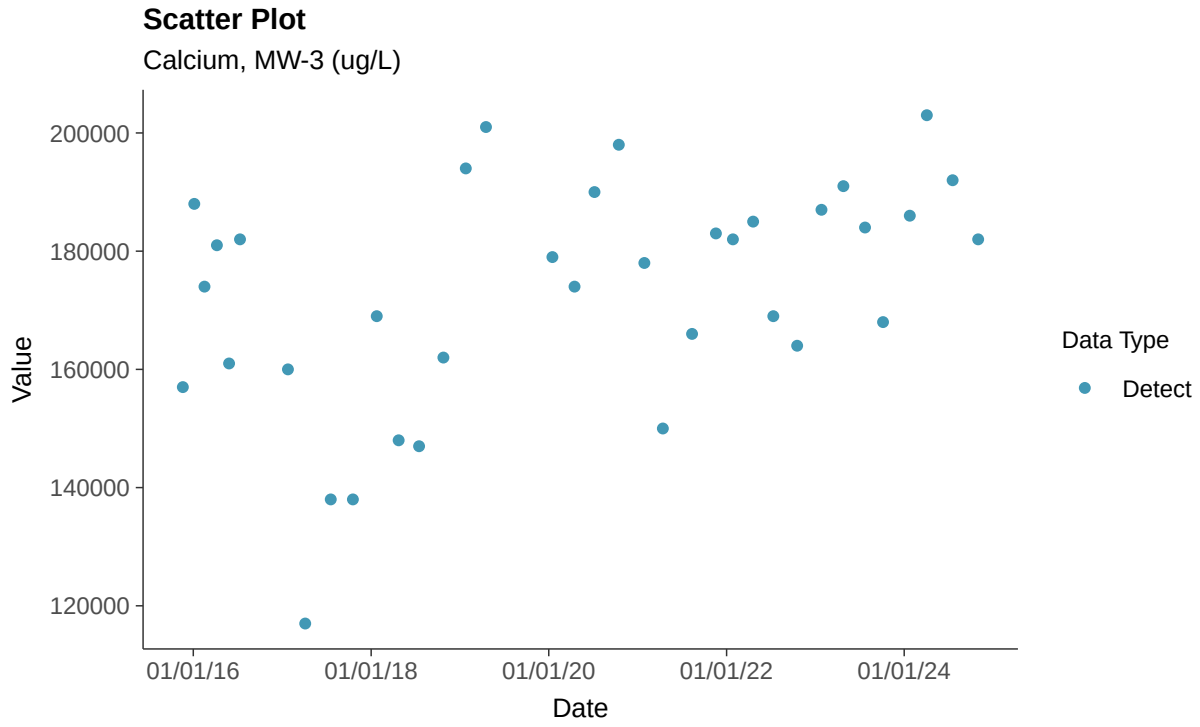
Trend Regression: Piecewise Linear-Linear-Linear

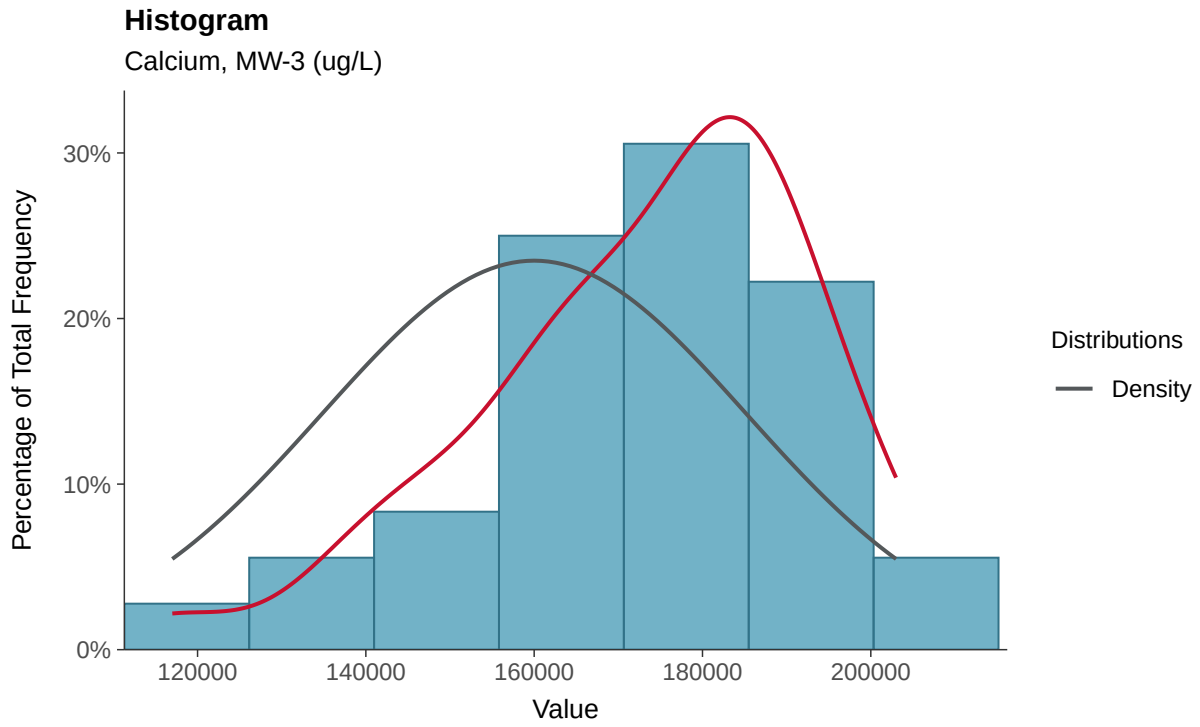
Boron, MW-3 (ug/L)



App. III: Calcium, MW-3

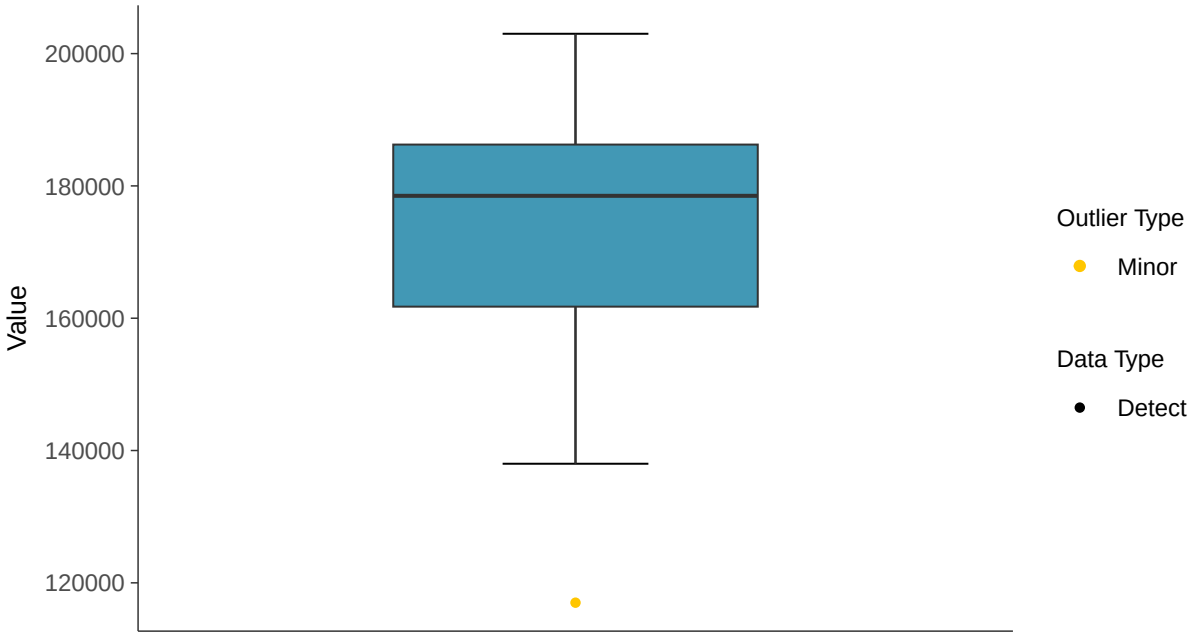
ID: 03_02_107





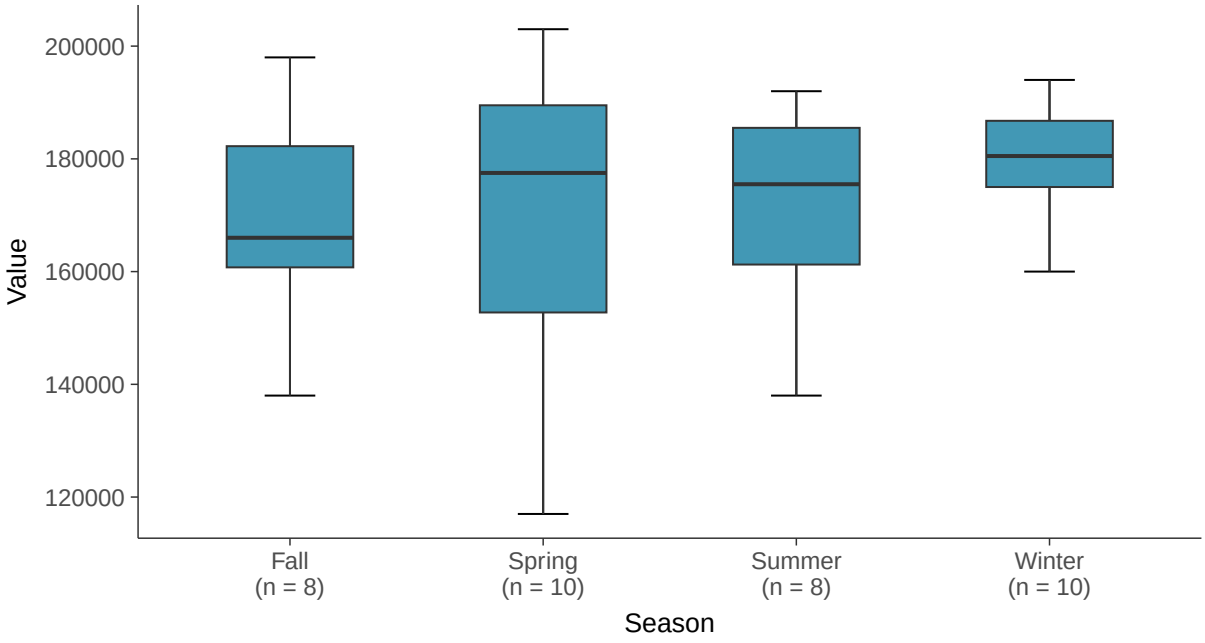
Boxplot

Calcium, MW-3 (ug/L)



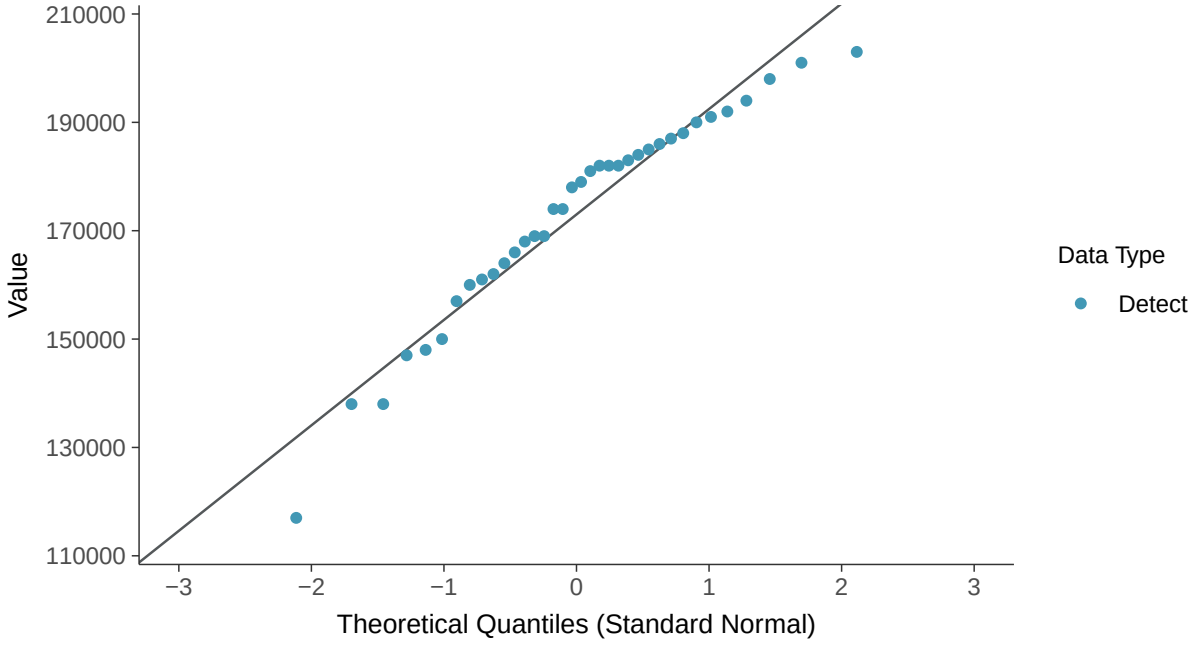
Boxplot by Season

Calcium, MW-3 (ug/L)



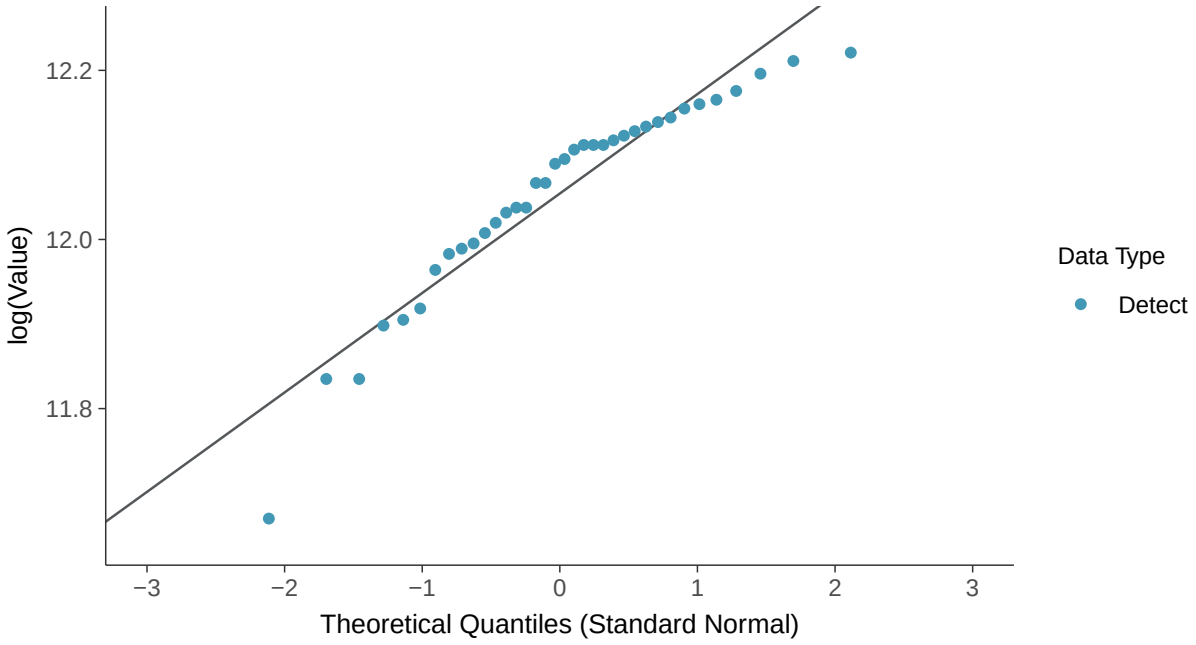
Normal Q-Q plot

Calcium, MW-3 (ug/L)



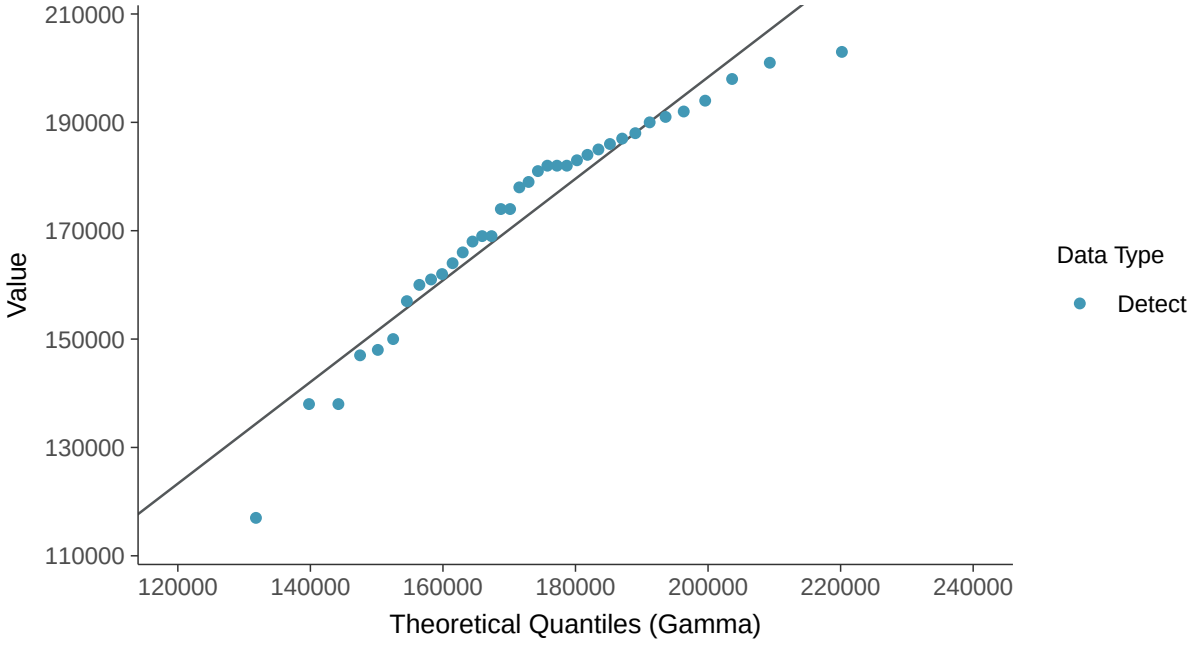
Lognormal Q-Q plot

Calcium, MW-3 (ug/L)



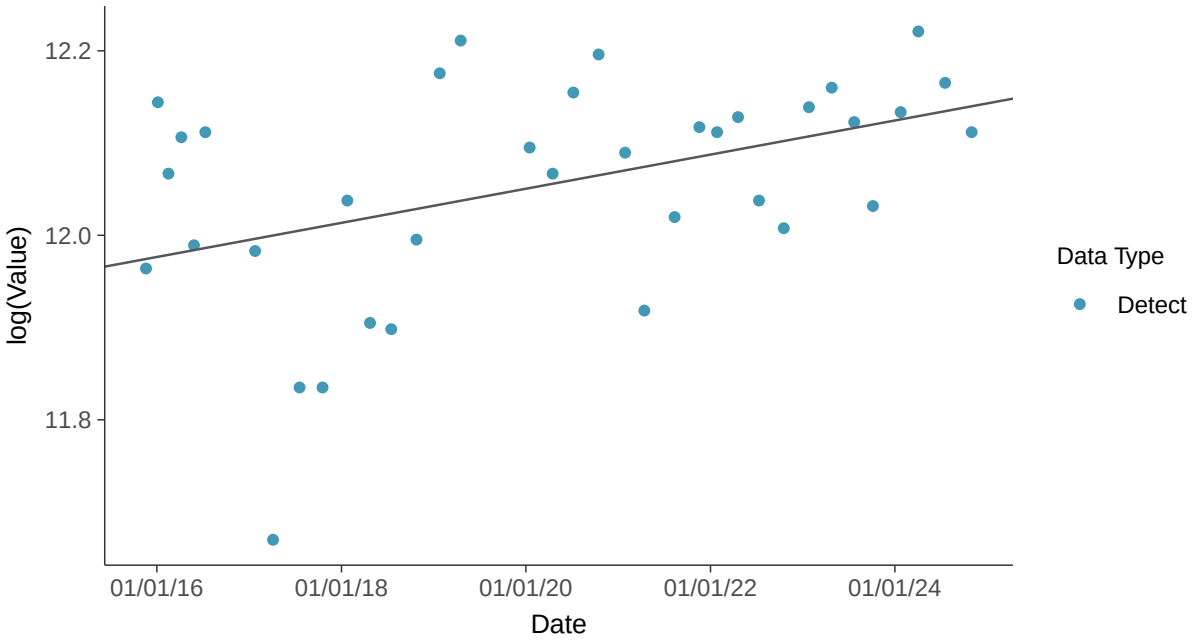
Gamma Q-Q plot

Calcium, MW-3 (ug/L)



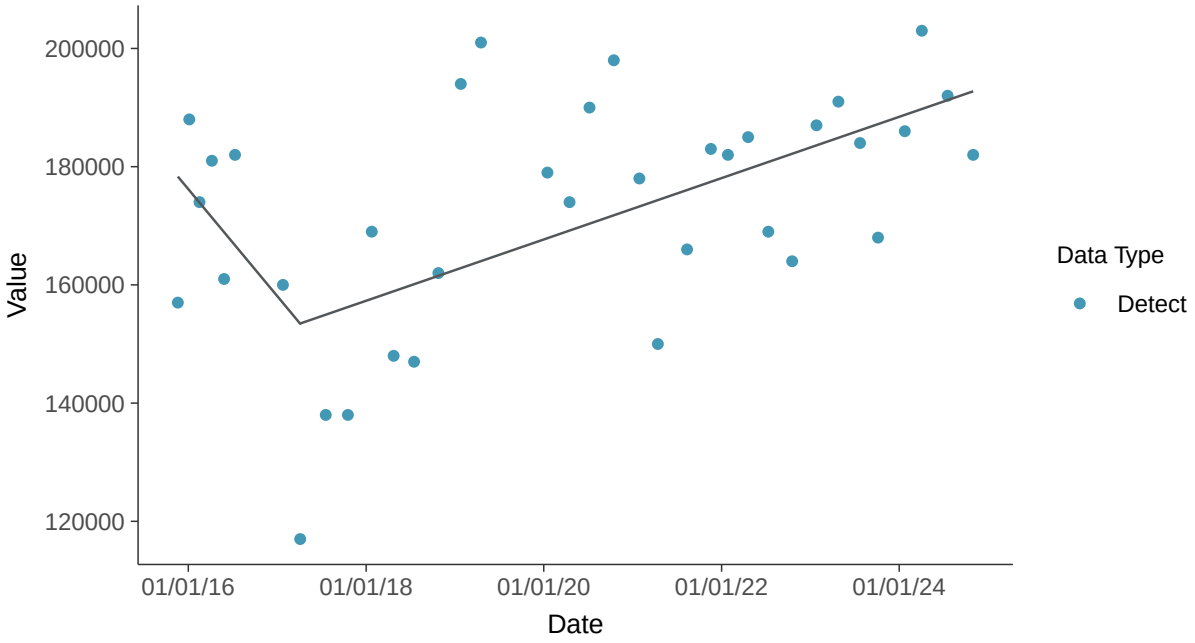
Trend Regression: Lognormal MLE

Calcium, MW-3 (ug/L)



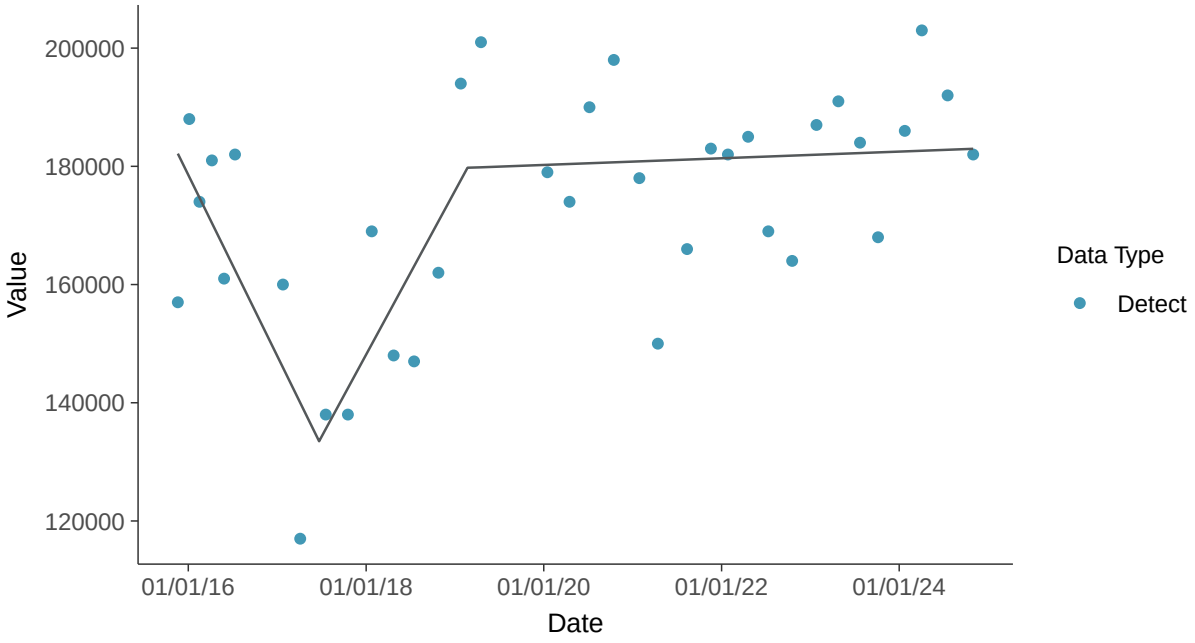
Trend Regression: Piecewise Linear-Linear

Calcium, MW-3 (ug/L)



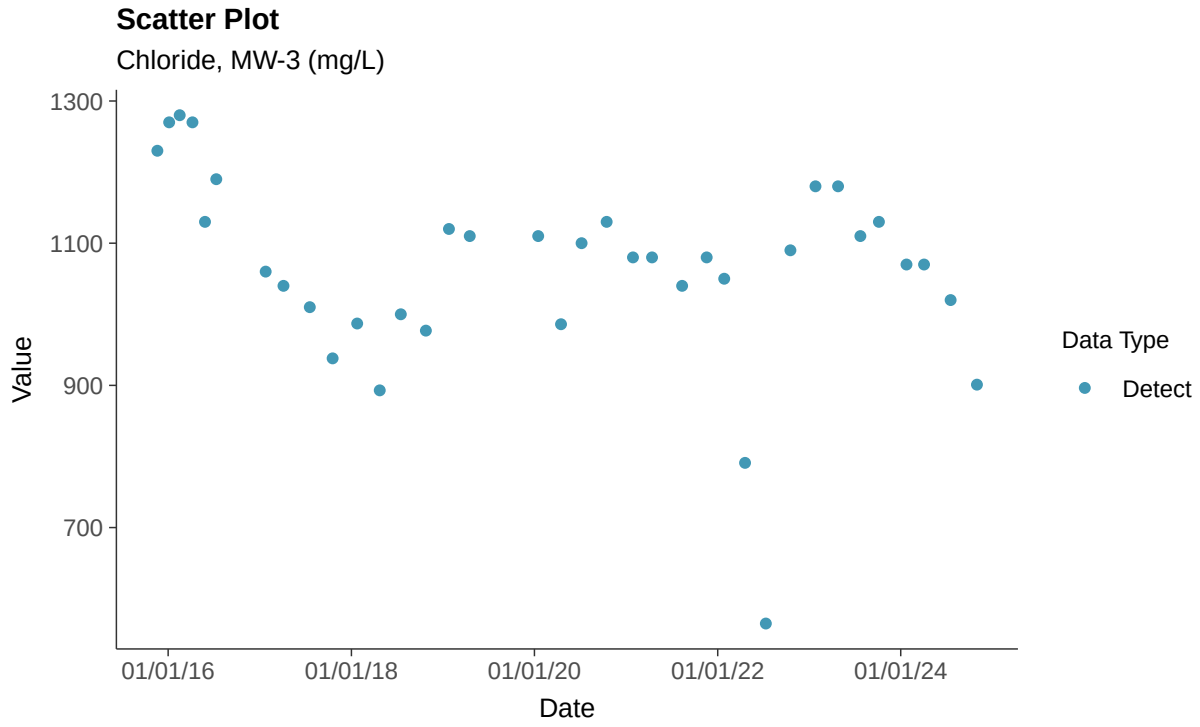
Trend Regression: Piecewise Linear-Linear-Linear

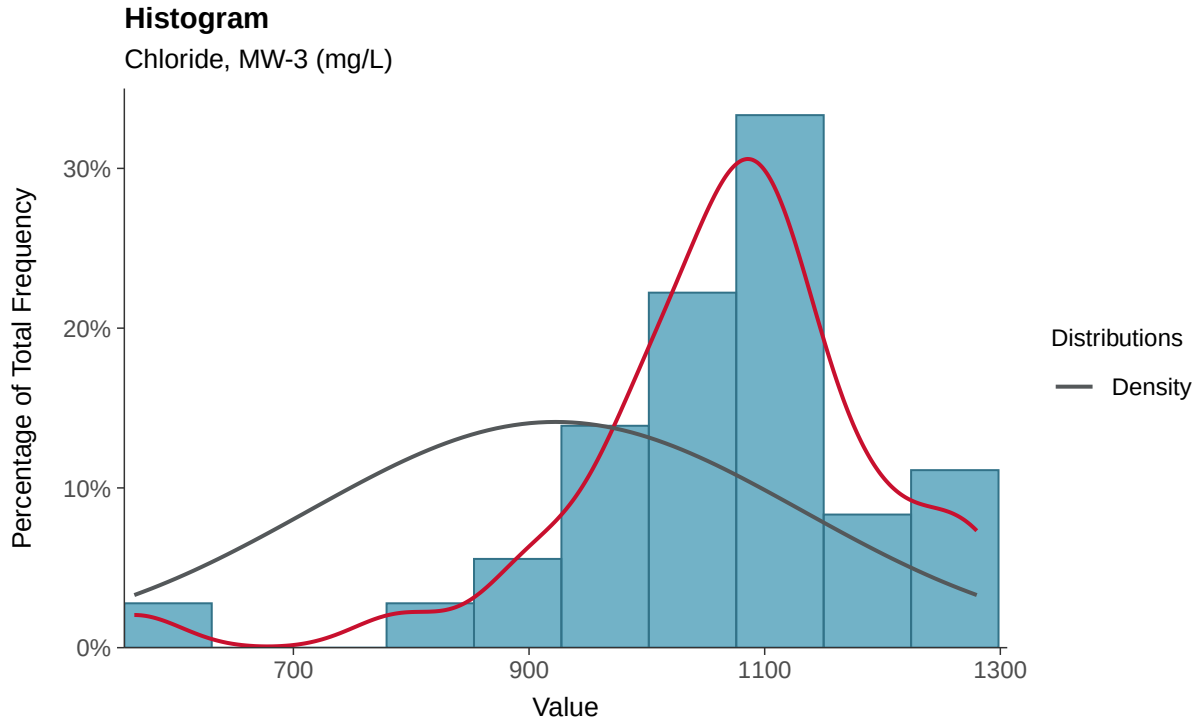
Calcium, MW-3 (ug/L)



App. III: Chloride, MW-3

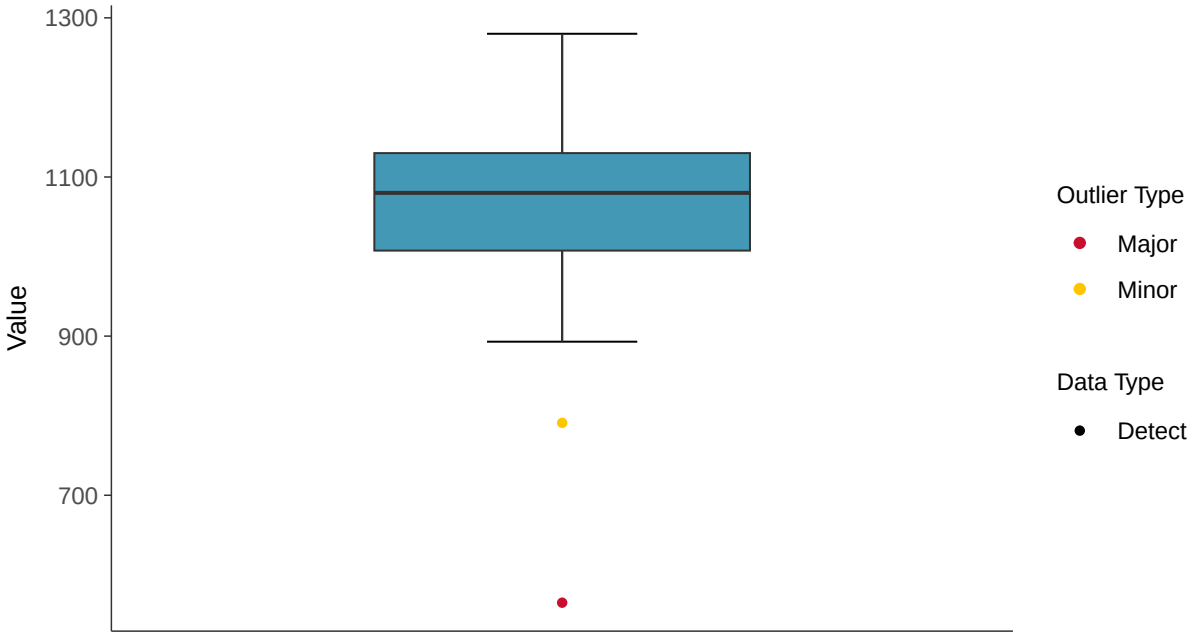
ID: 03_02_108





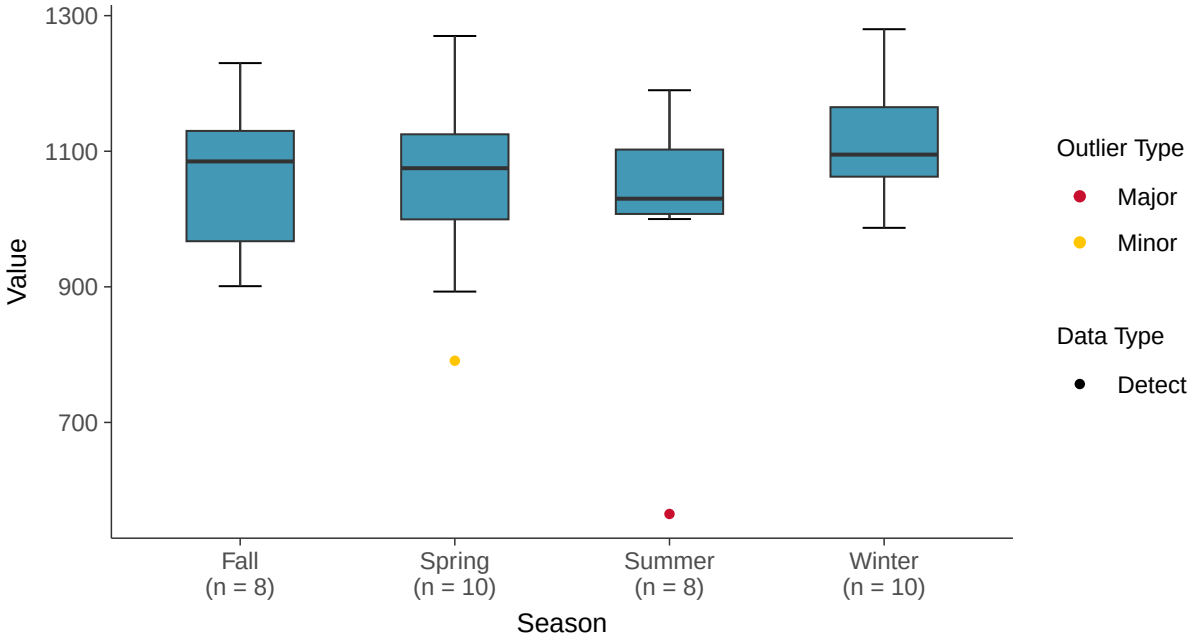
Boxplot

Chloride, MW-3 (mg/L)



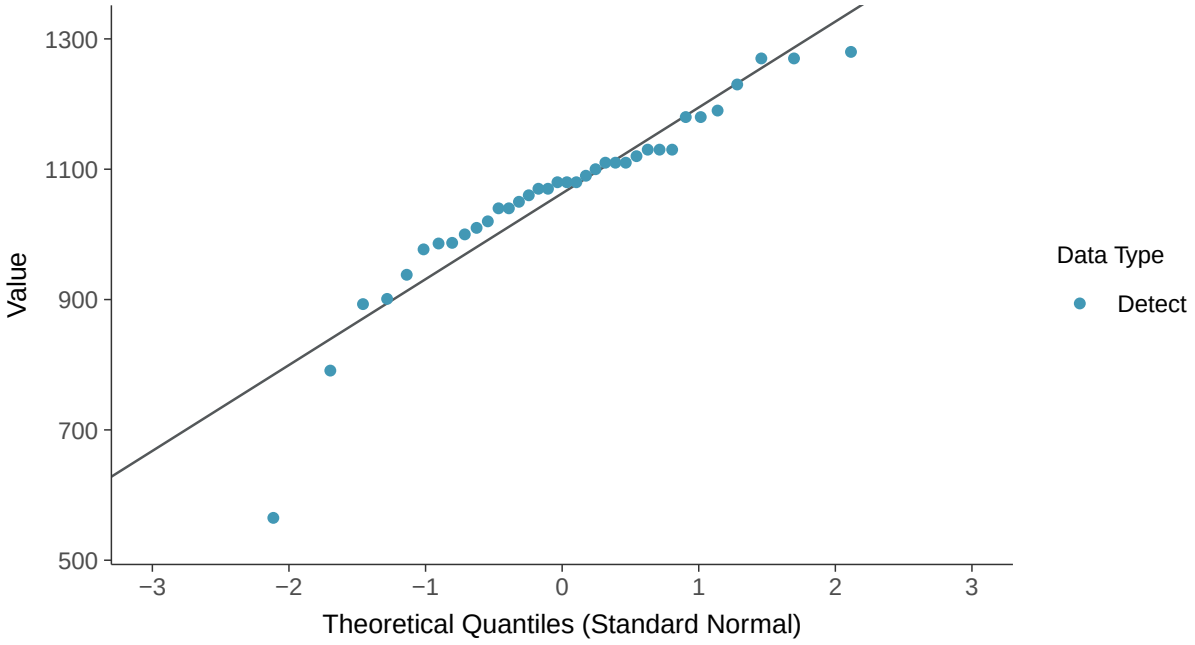
Boxplot by Season

Chloride, MW-3 (mg/L)



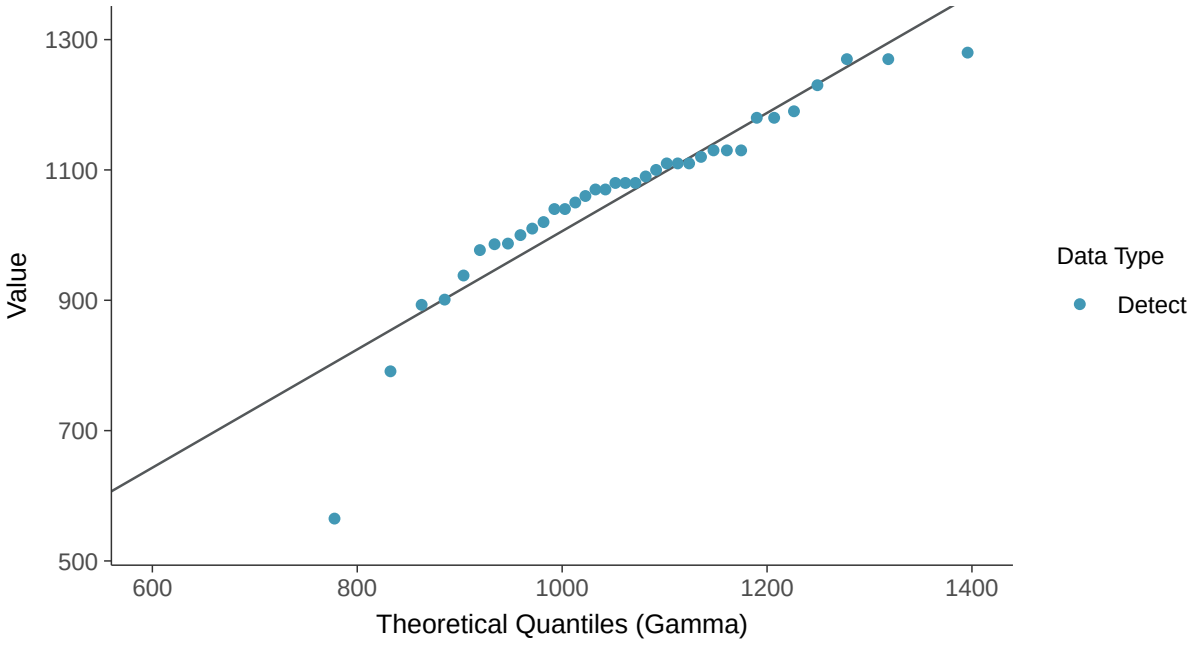
Normal Q-Q plot

Chloride, MW-3 (mg/L)



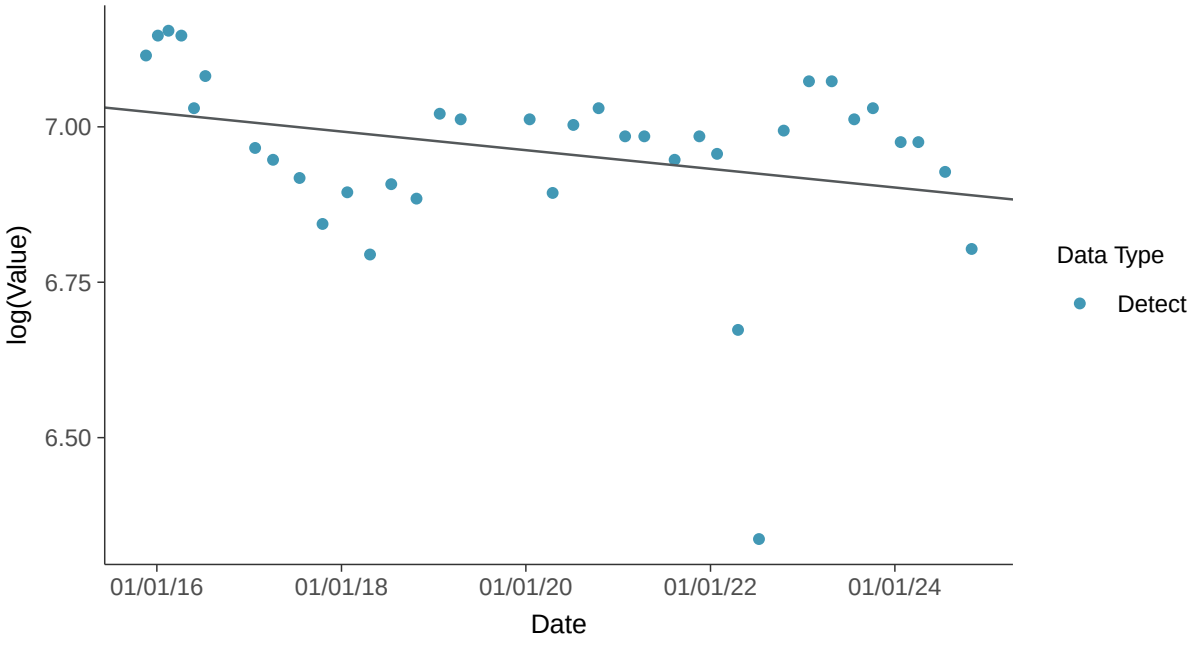
Gamma Q-Q plot

Chloride, MW-3 (mg/L)



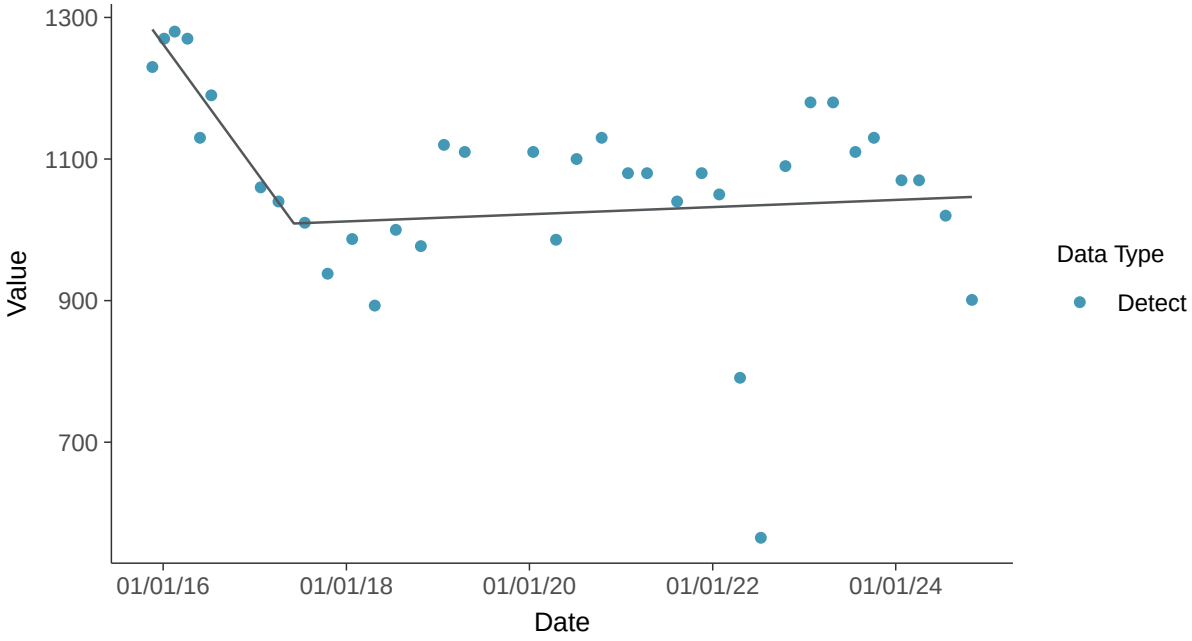
Trend Regression: Lognormal MLE

Chloride, MW-3 (mg/L)



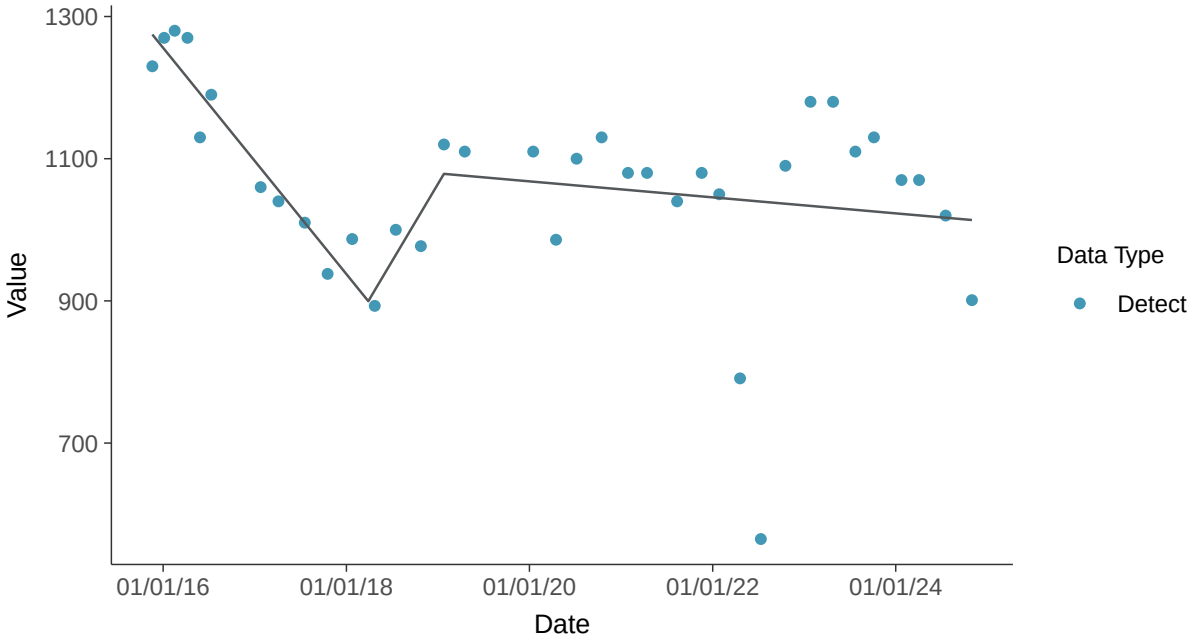
Trend Regression: Piecewise Linear-Linear

Chloride, MW-3 (mg/L)



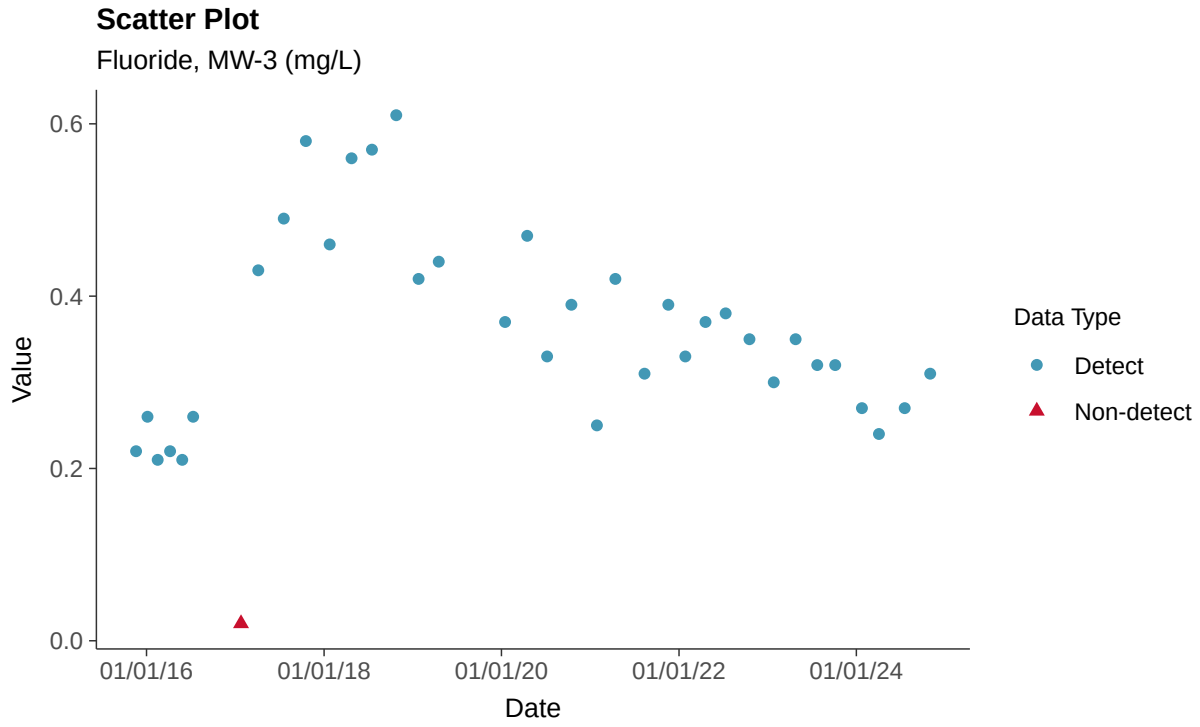
Trend Regression: Piecewise Linear-Linear-Linear

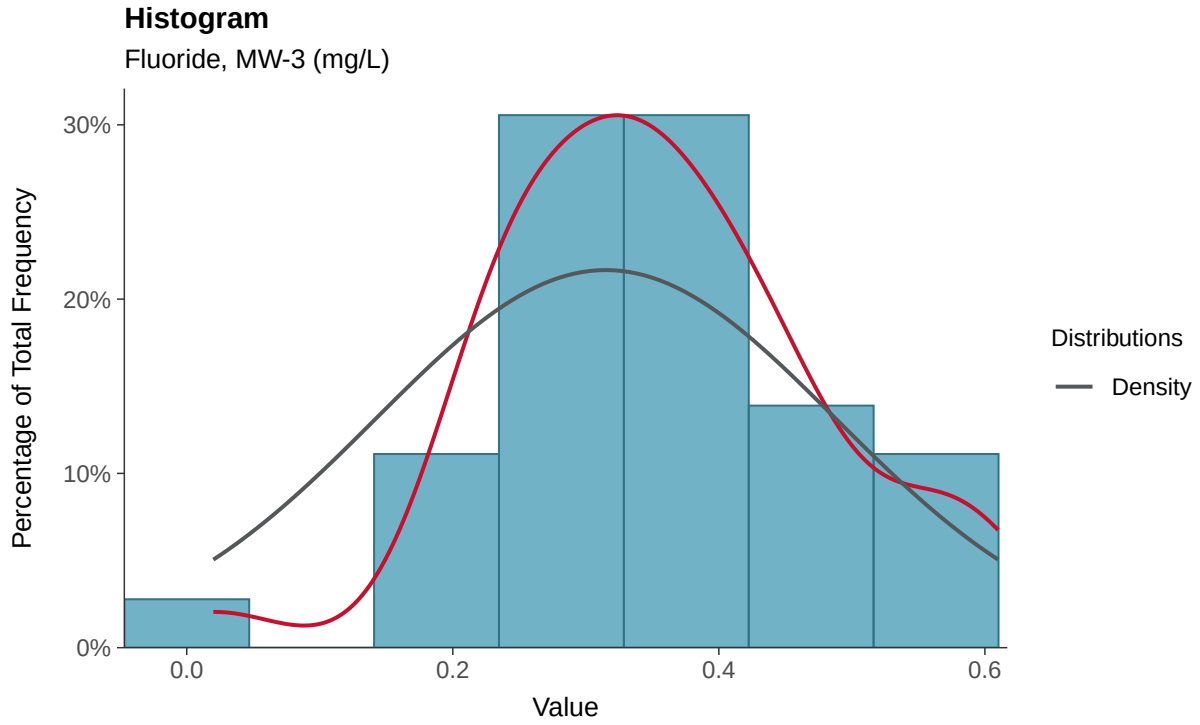
Chloride, MW-3 (mg/L)



App. III: Fluoride, MW-3

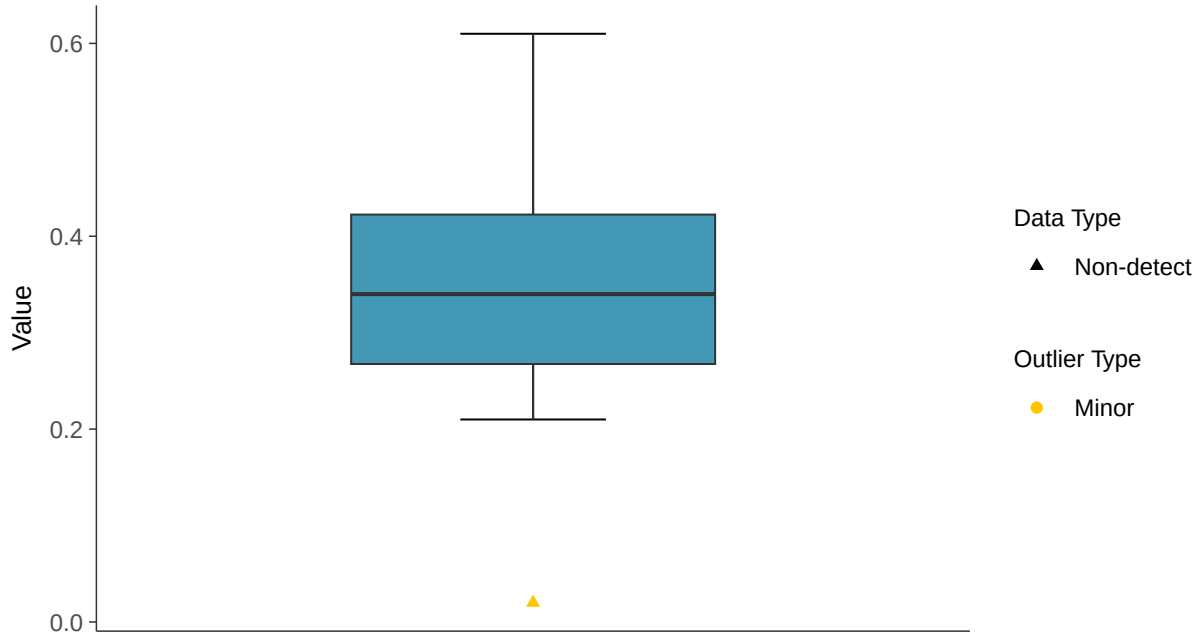
ID: 03_02_112





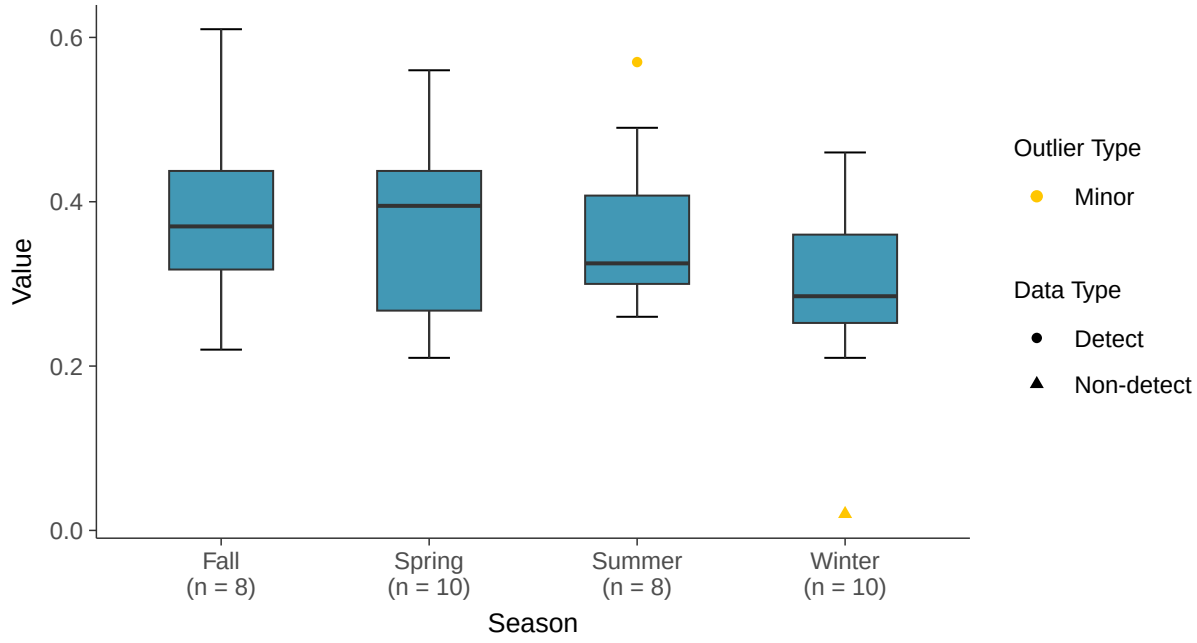
Boxplot

Fluoride, MW-3 (mg/L)



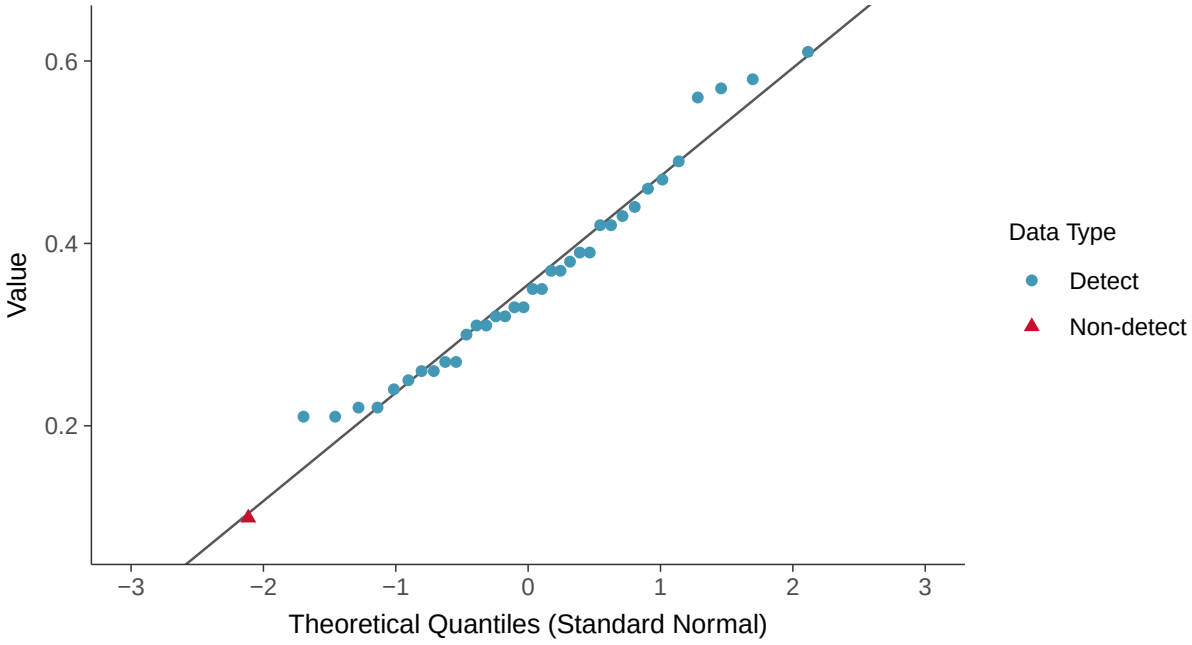
Boxplot by Season

Fluoride, MW-3 (mg/L)



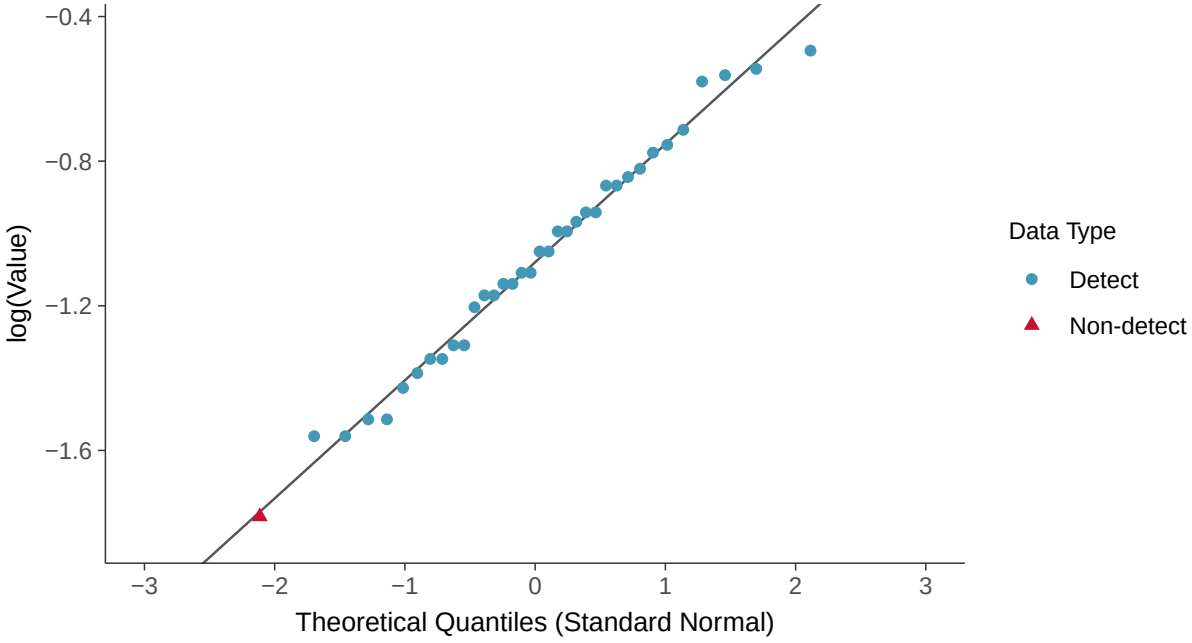
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



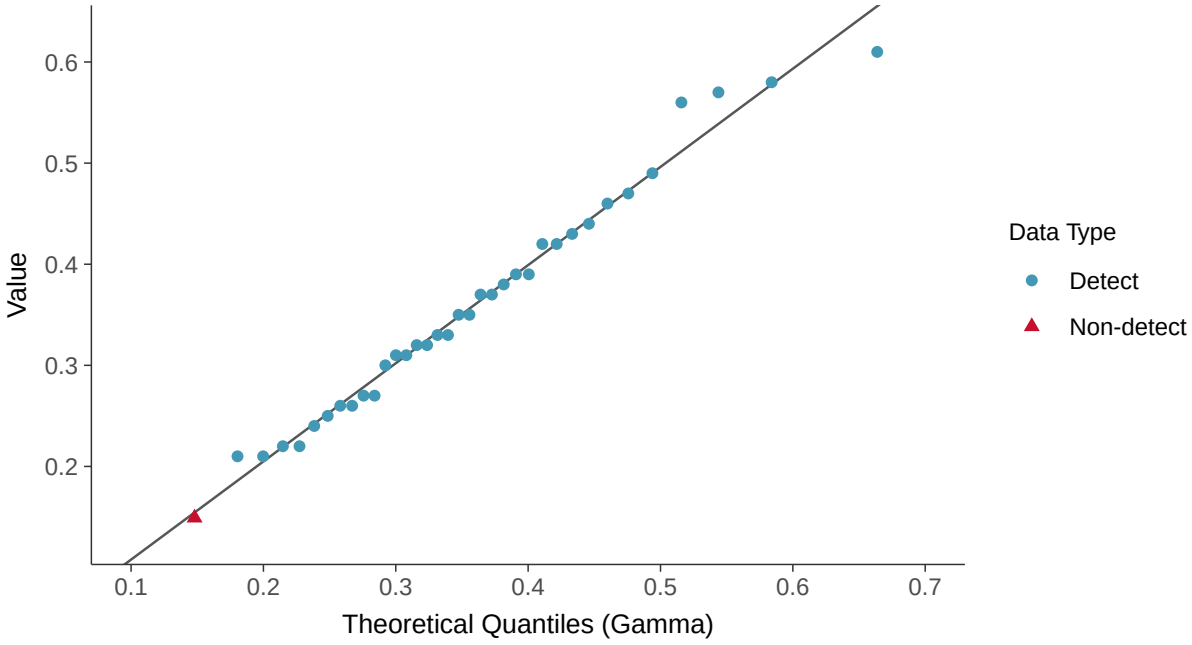
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



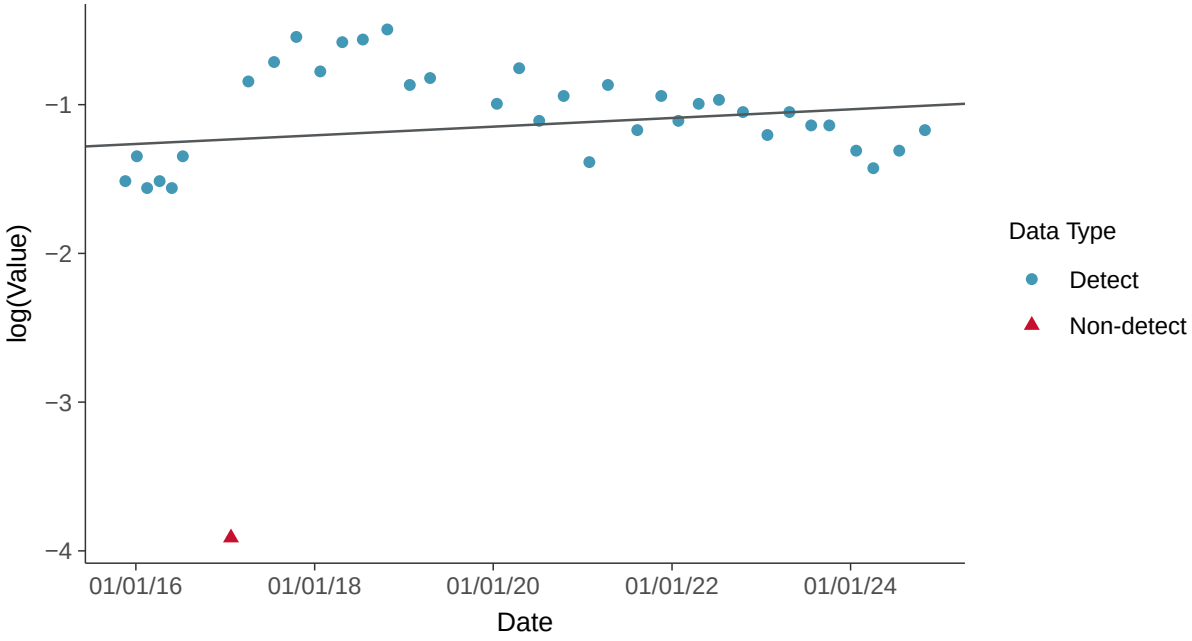
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



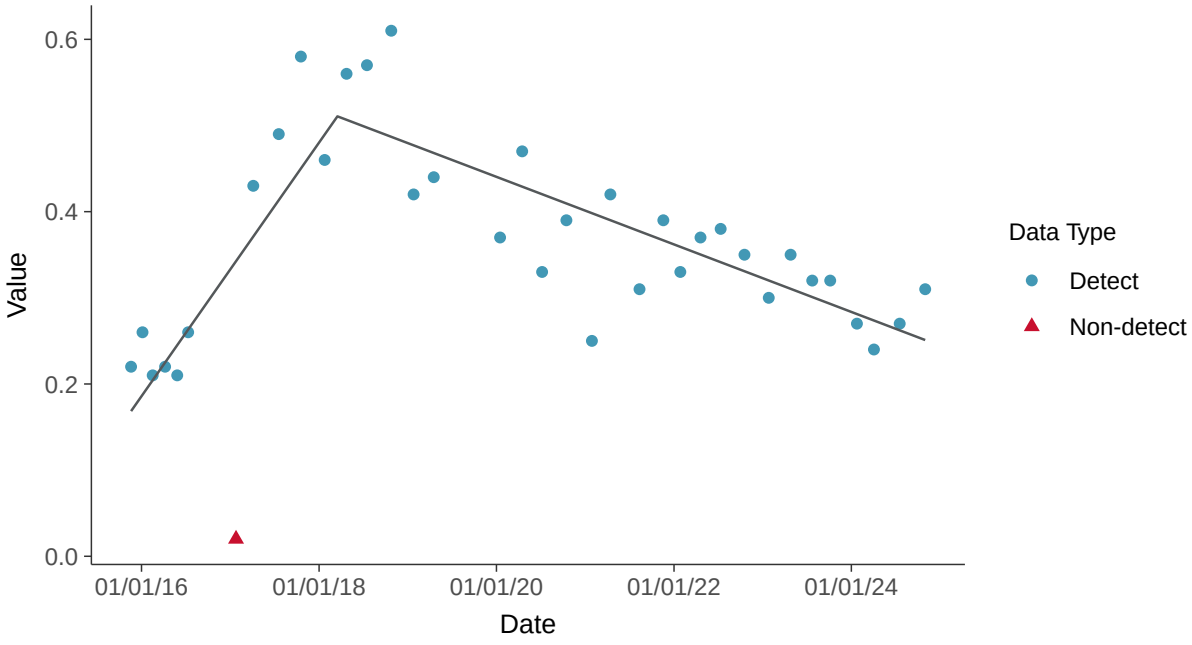
Trend Regression: Lognormal MLE

Fluoride, MW-3 (mg/L)



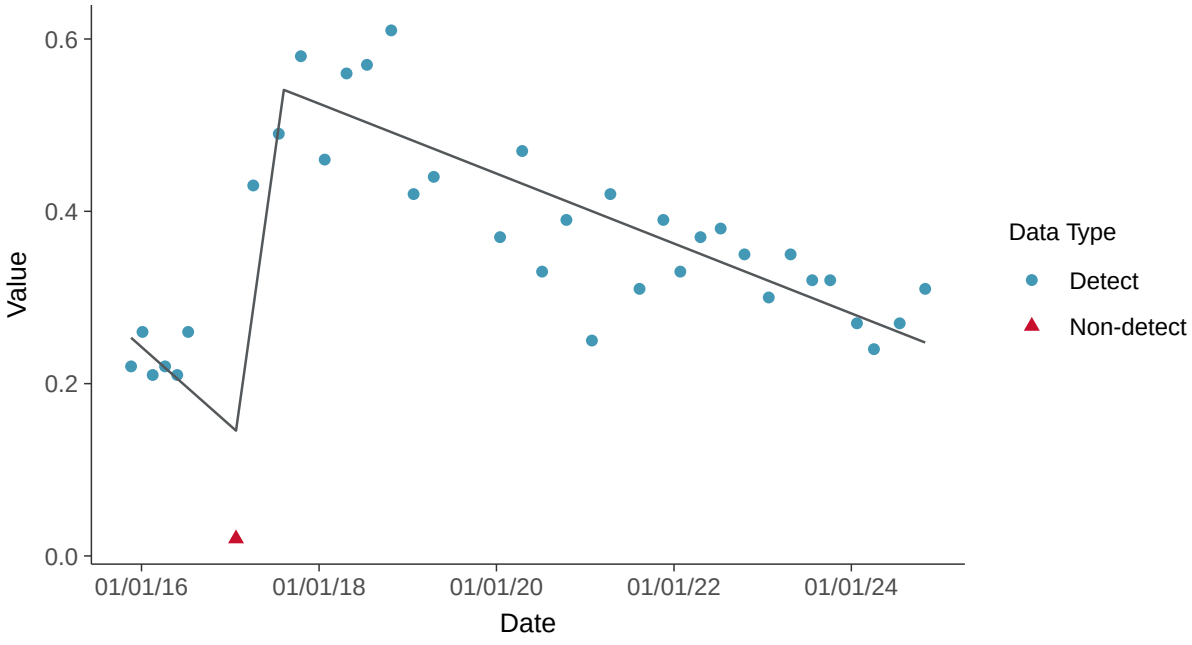
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-3 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-3 (mg/L)

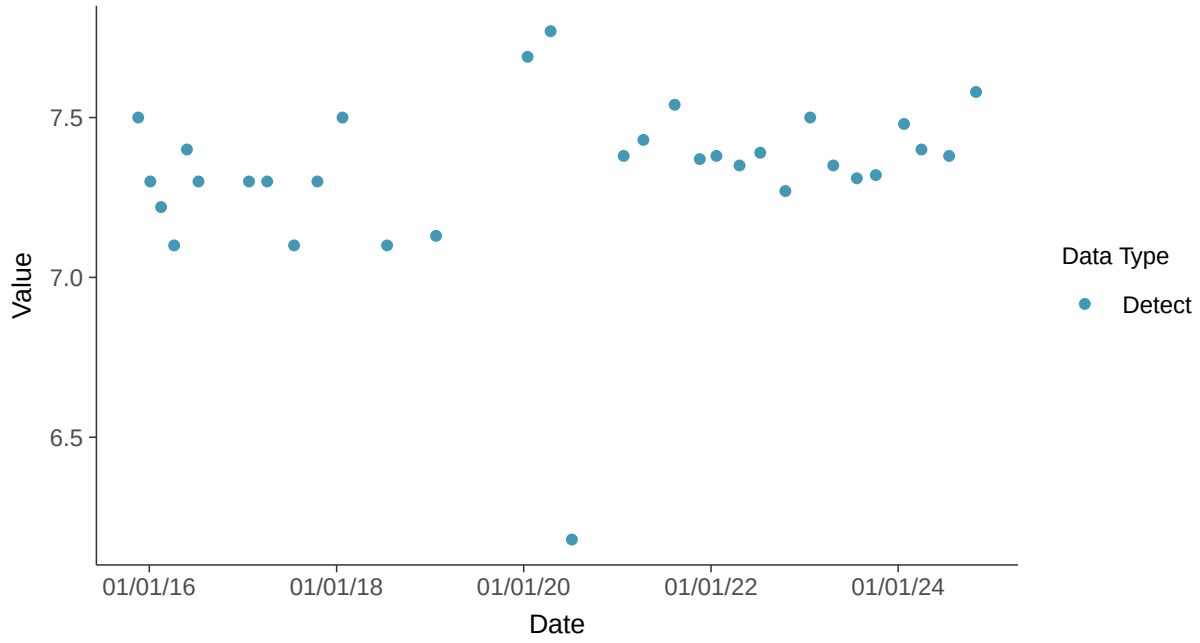


App. III: pH (Field), MW-3

ID: 03_02_118

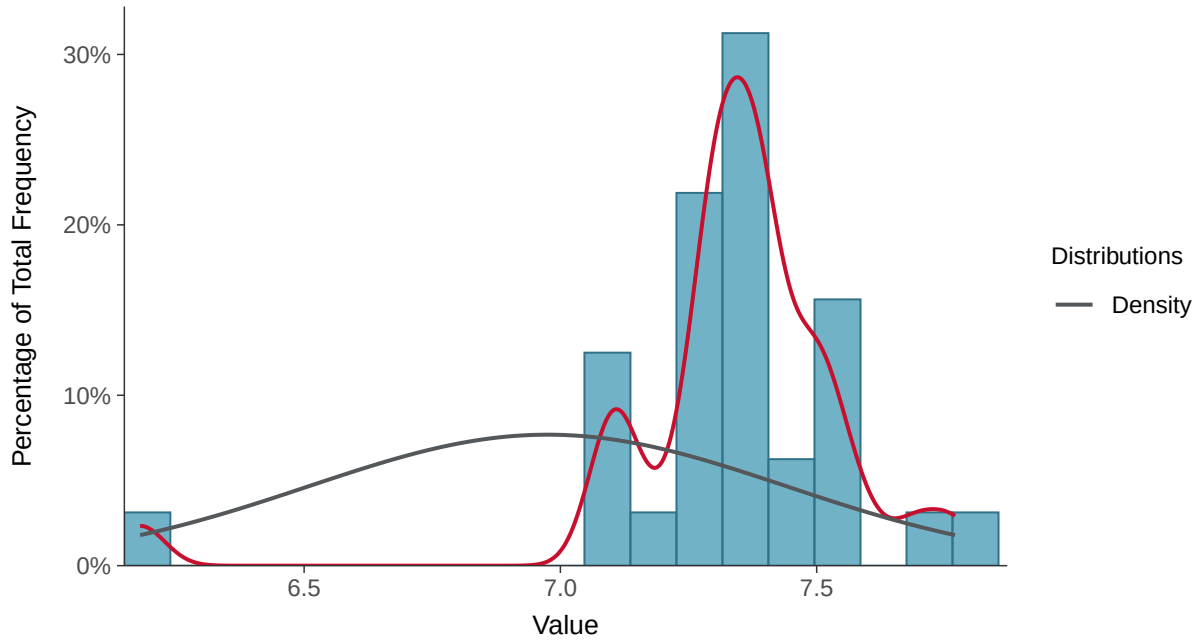
Scatter Plot

pH (Field), MW-3 (S.U.)



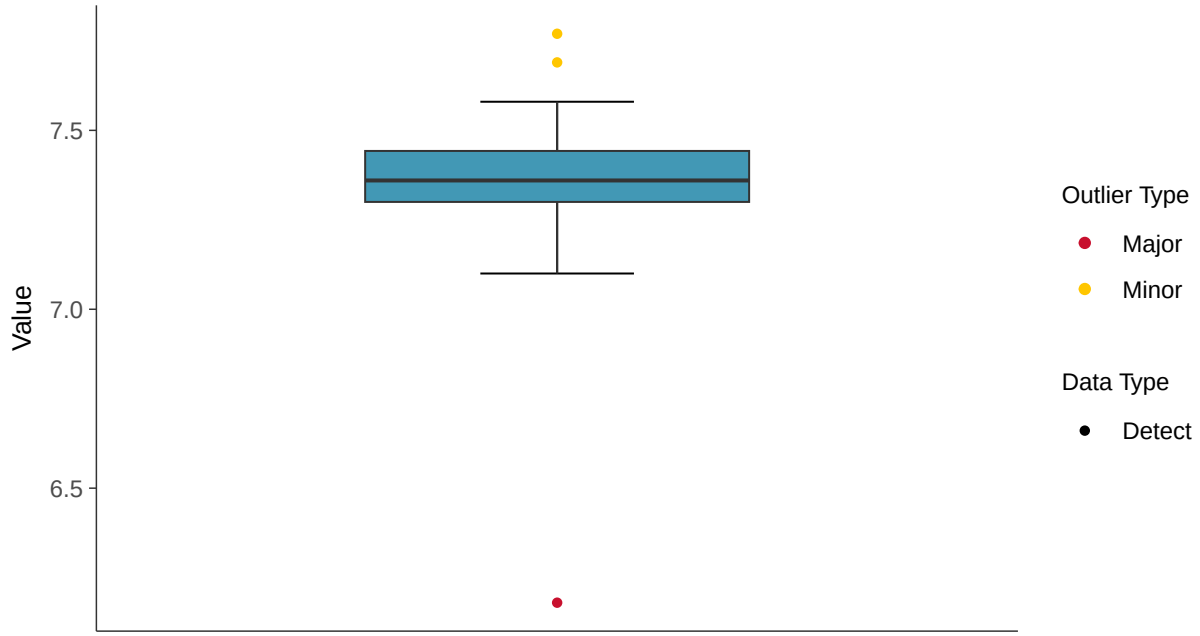
Histogram

pH (Field), MW-3 (S.U.)



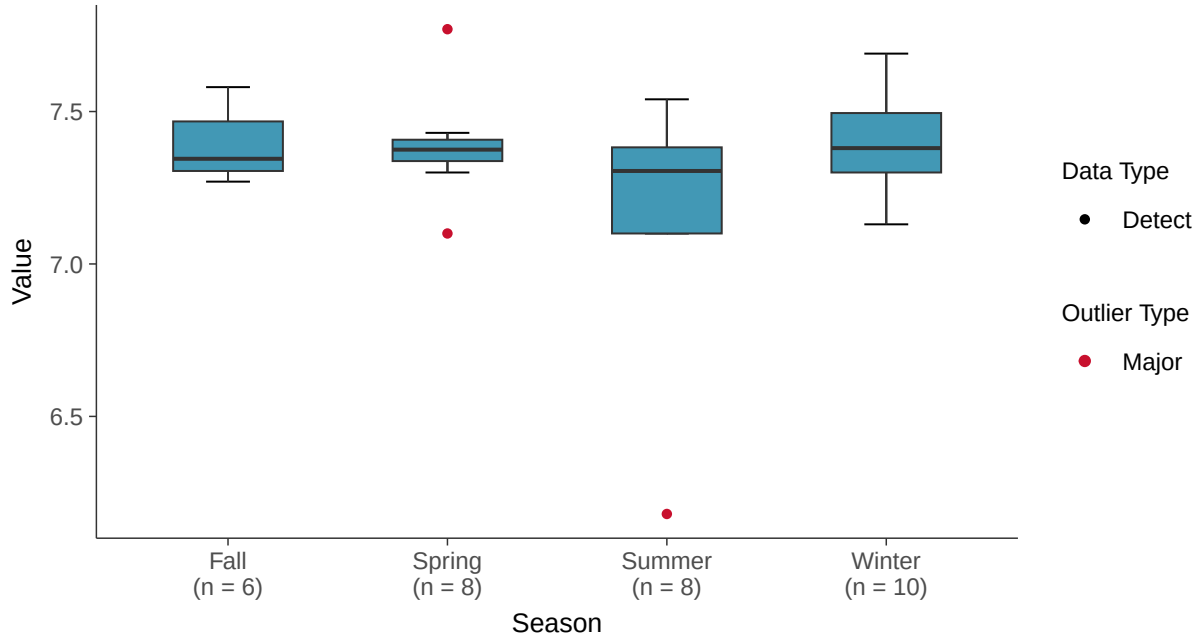
Boxplot

pH (Field), MW-3 (S.U.)



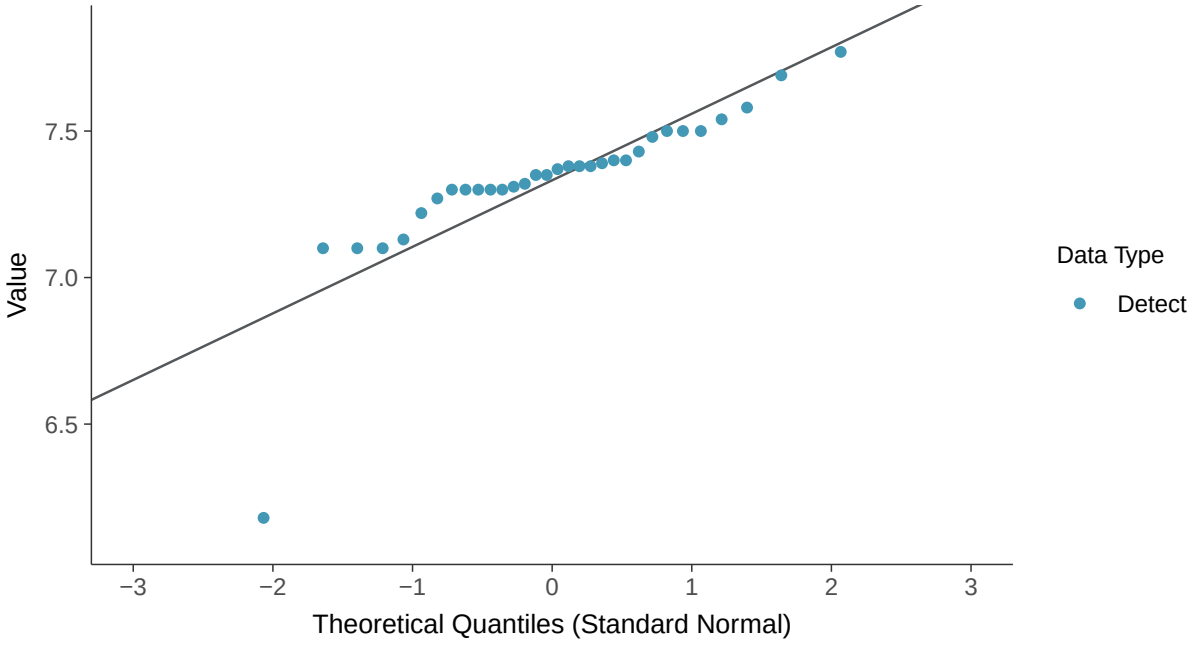
Boxplot by Season

pH (Field), MW-3 (S.U.)



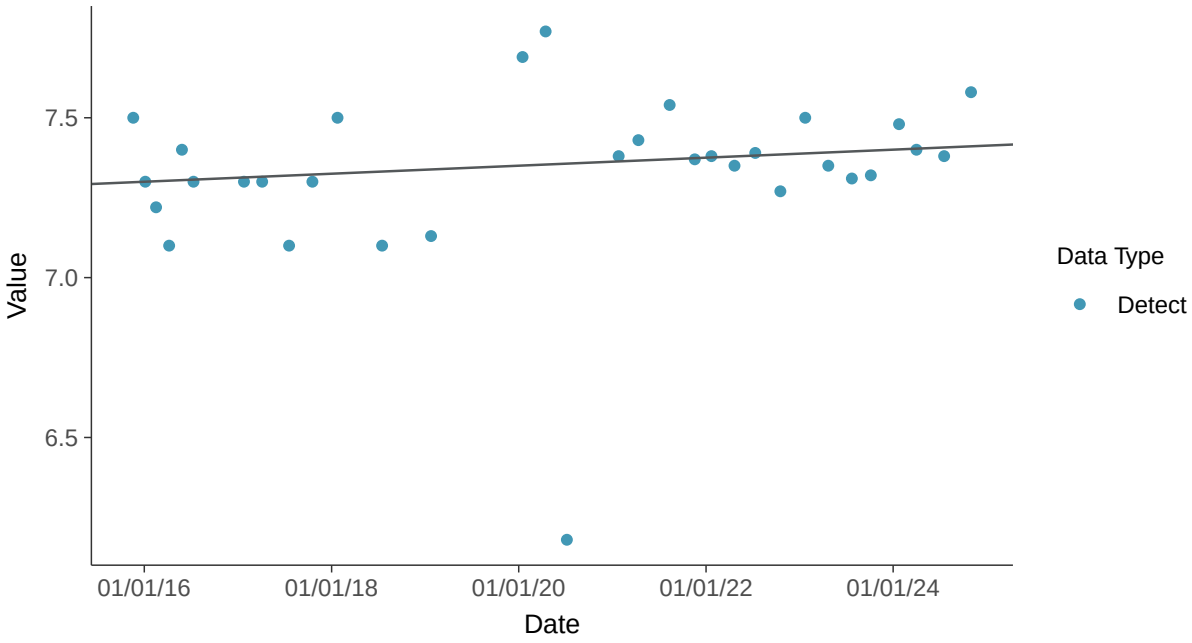
Normal Q-Q plot

pH (Field), MW-3 (S.U.)



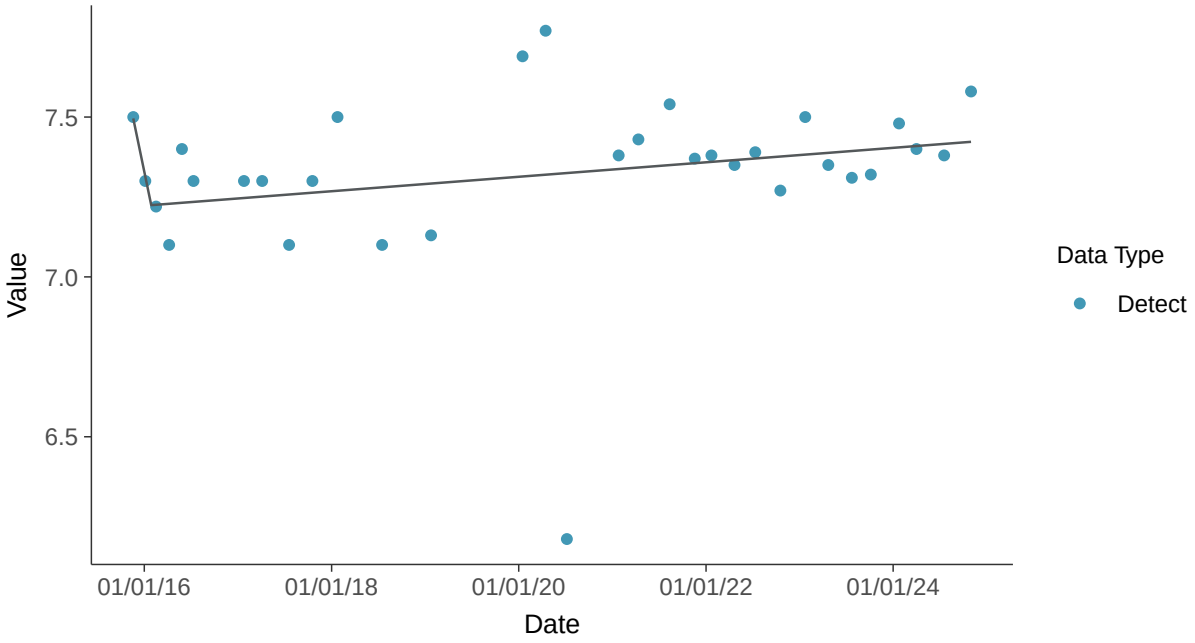
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-3 (S.U.)



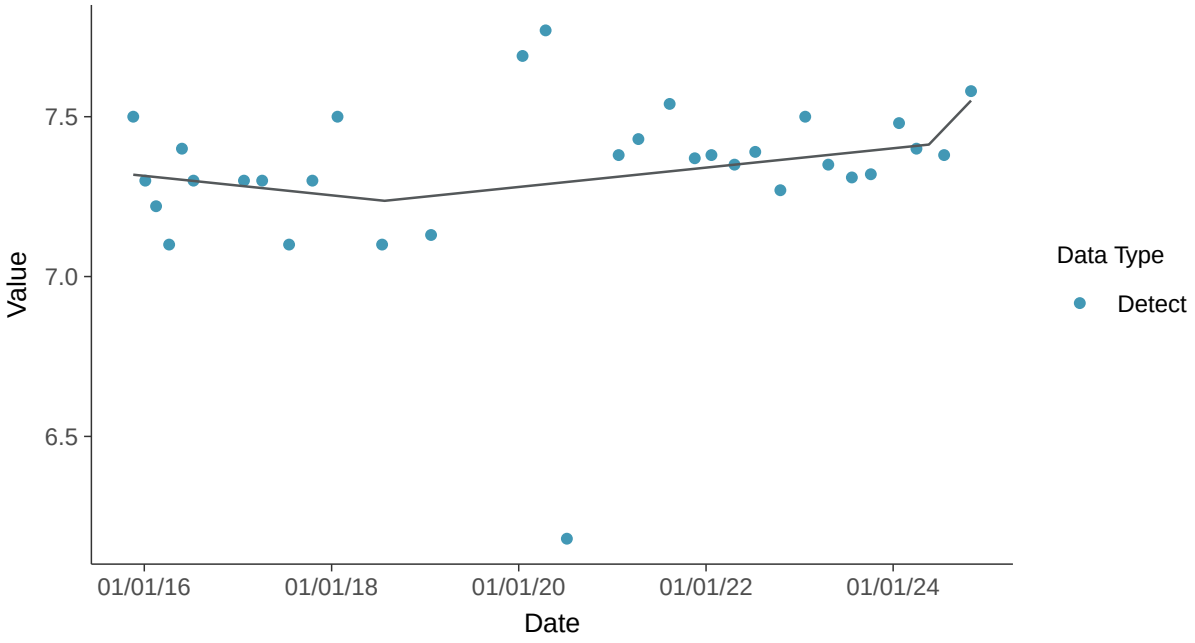
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-3 (S.U.)



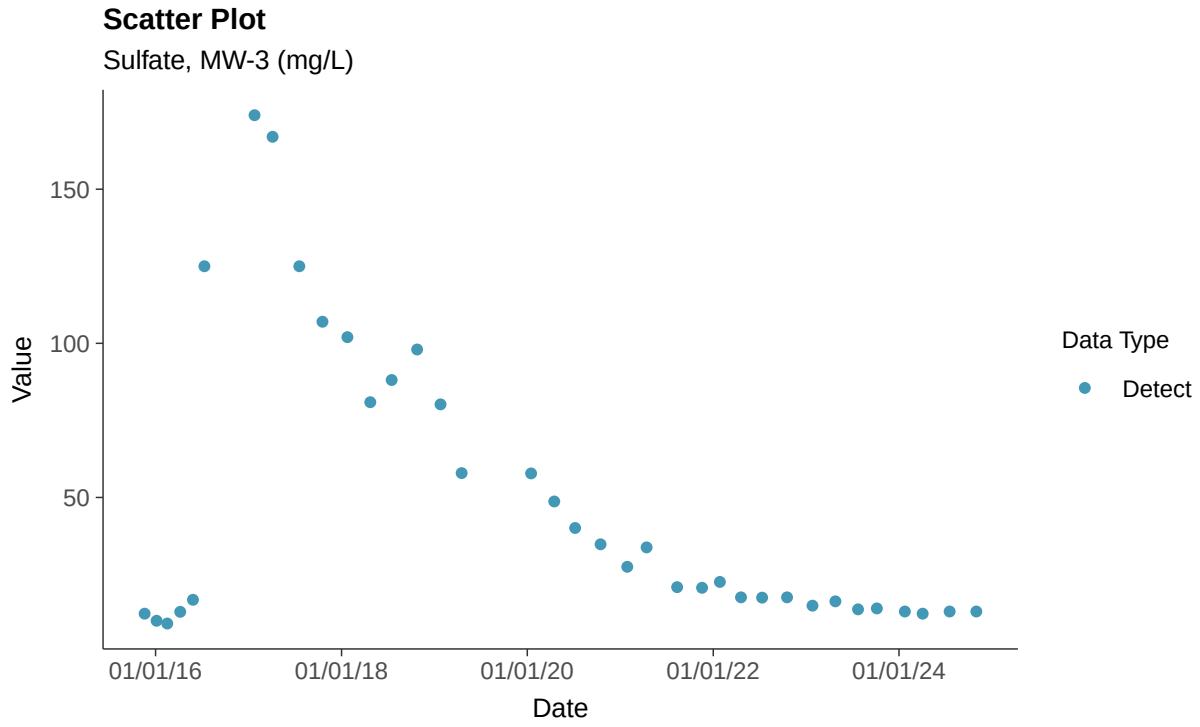
Trend Regression: Piecewise Linear-Linear-Linear

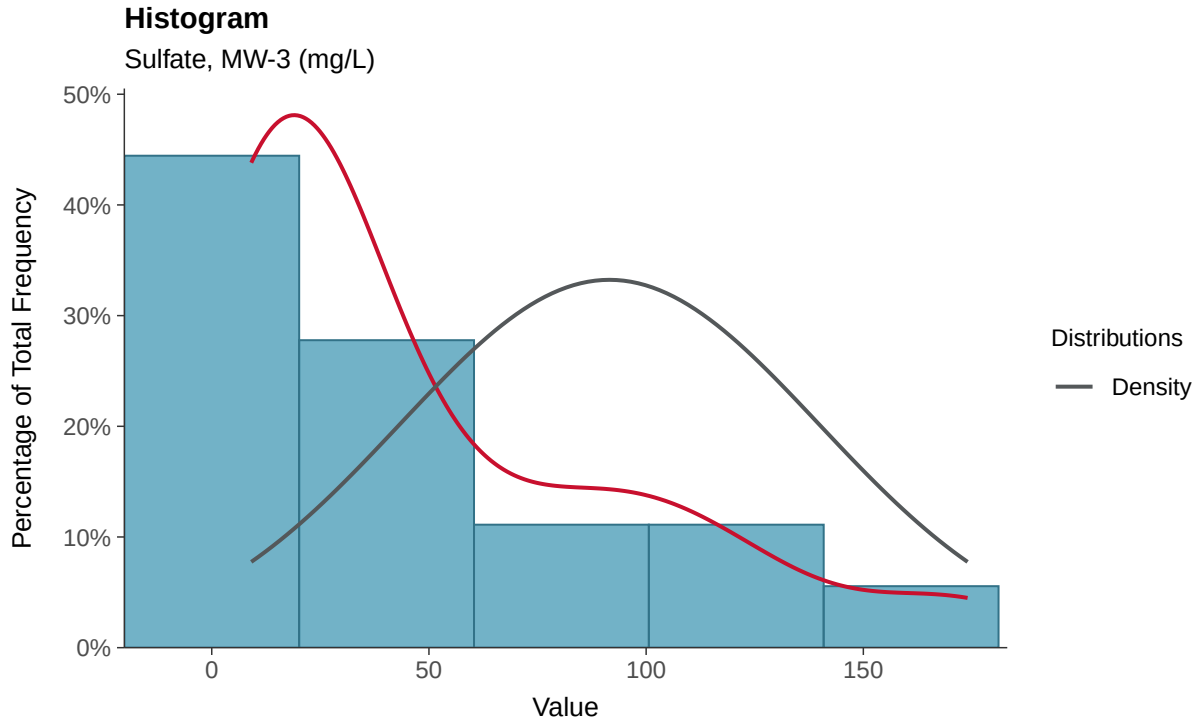
pH (Field), MW-3 (S.U.)



App. III: Sulfate, MW-3

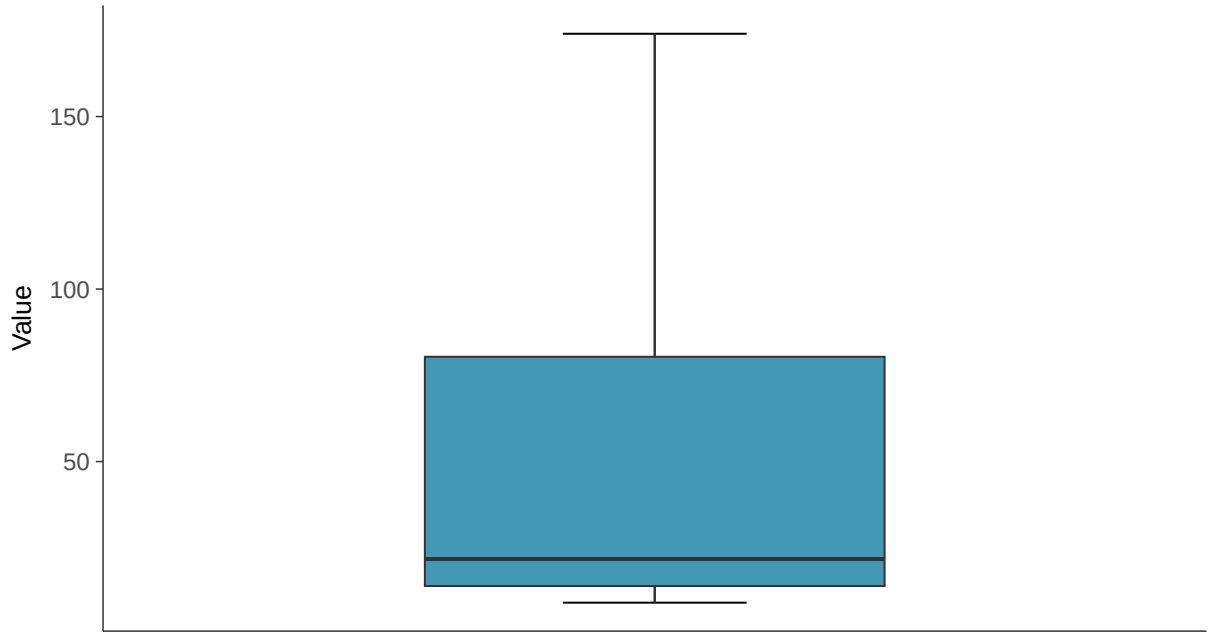
ID: 03_02_123





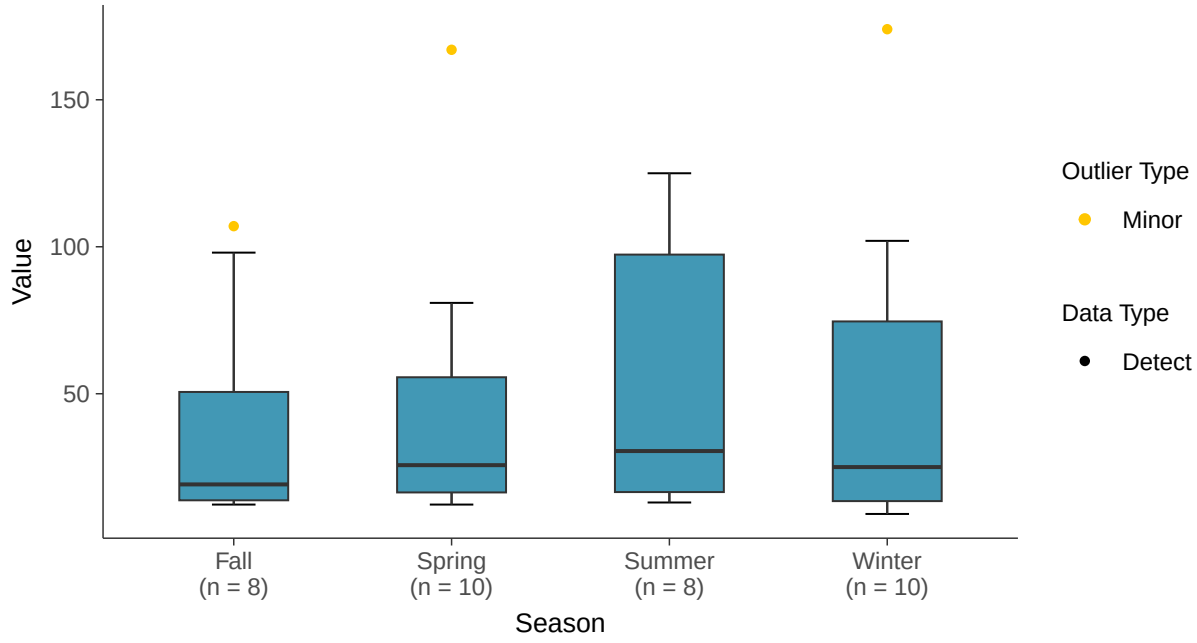
Boxplot

Sulfate, MW-3 (mg/L)



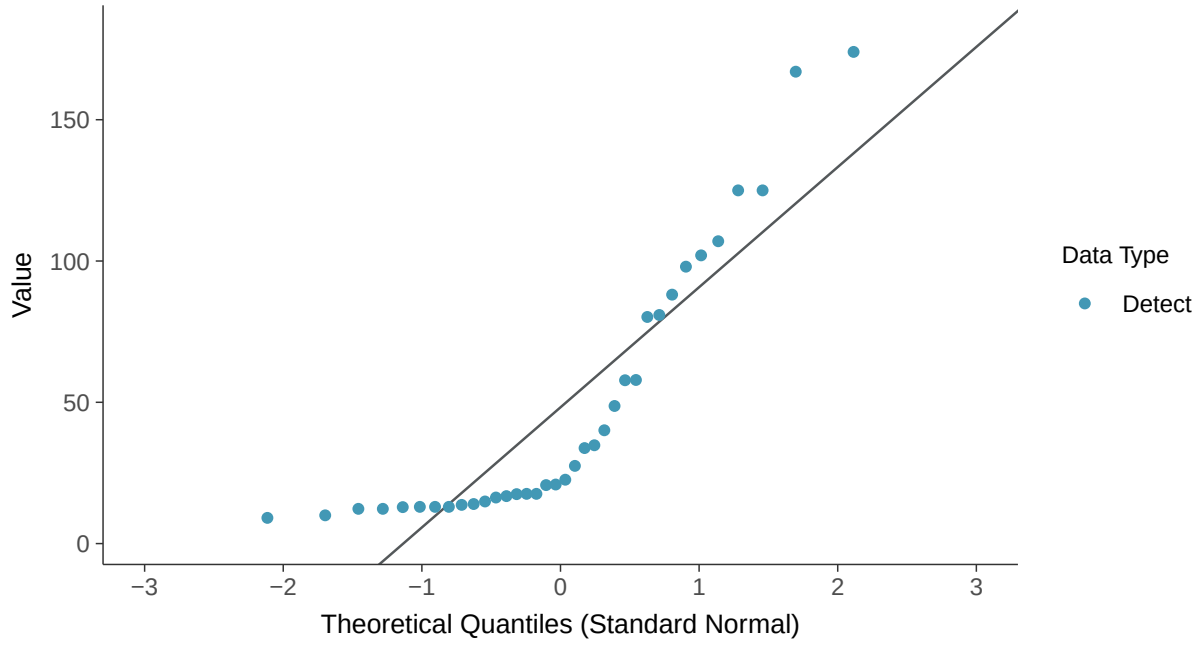
Boxplot by Season

Sulfate, MW-3 (mg/L)



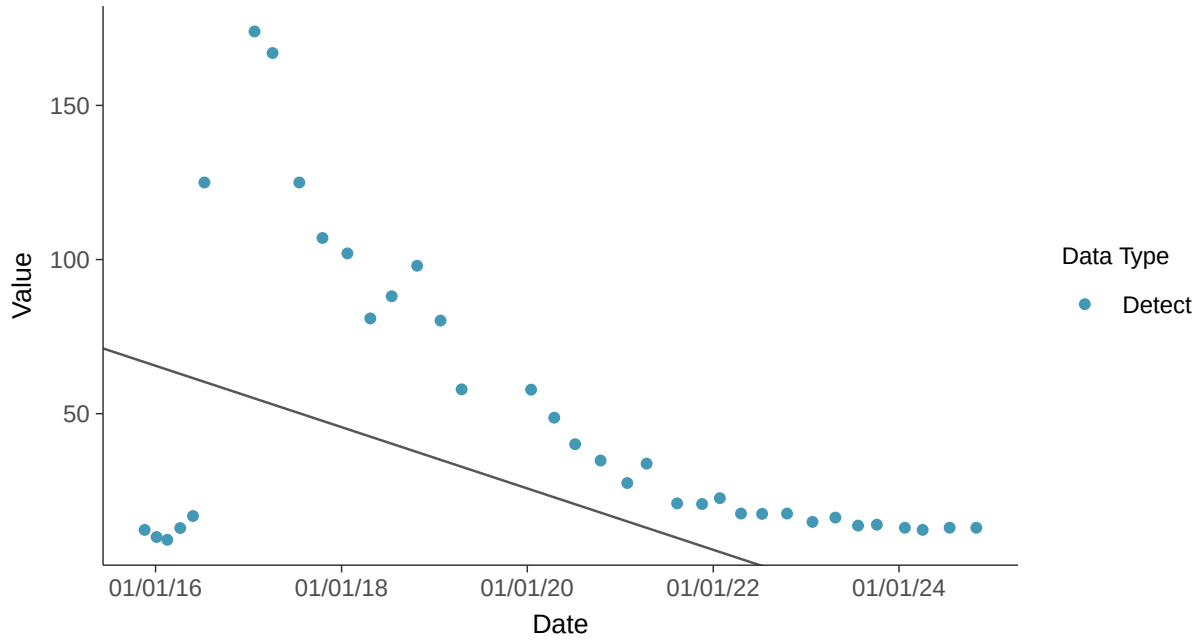
Normal Q-Q plot

Sulfate, MW-3 (mg/L)



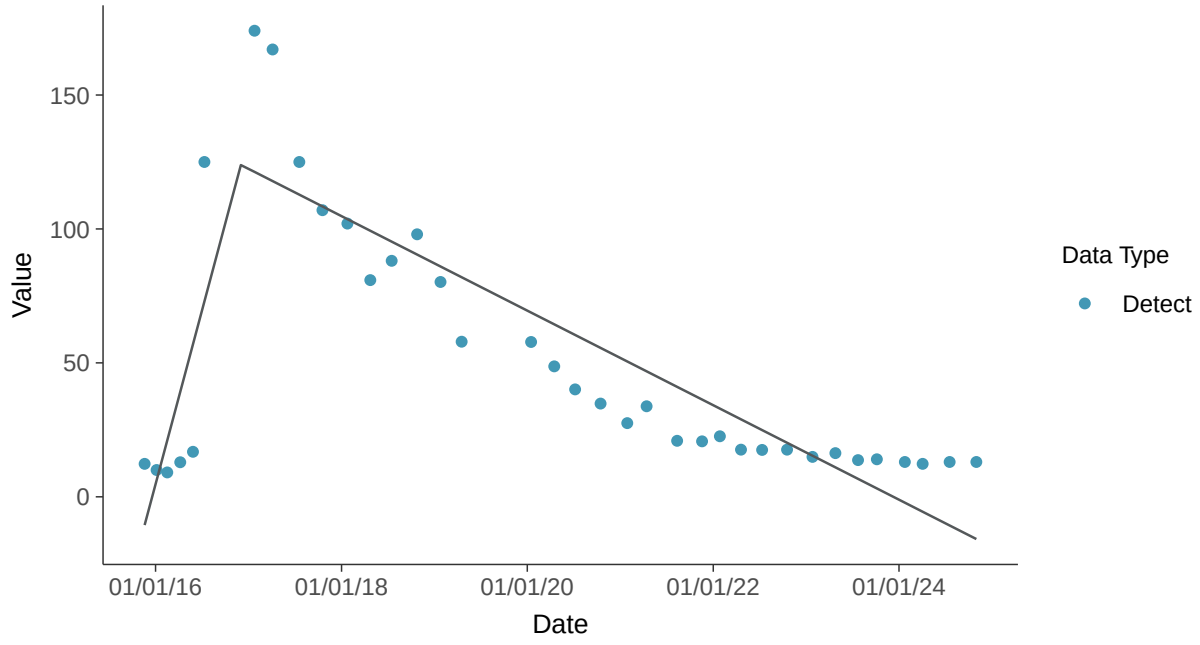
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-3 (mg/L)



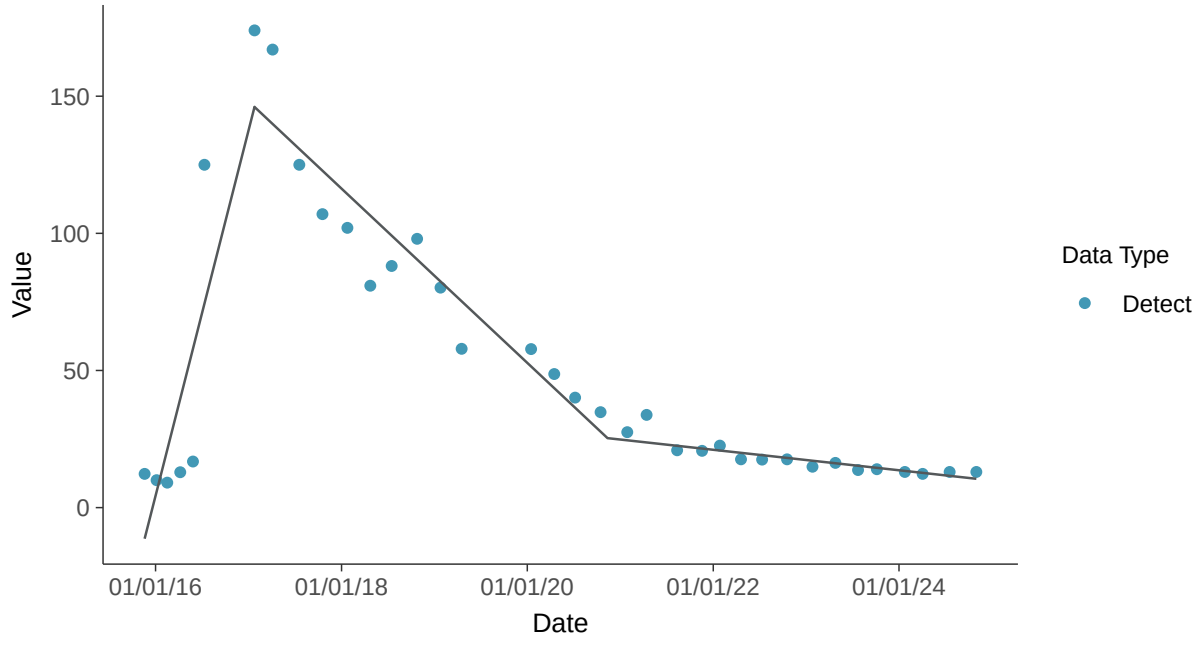
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-3 (mg/L)



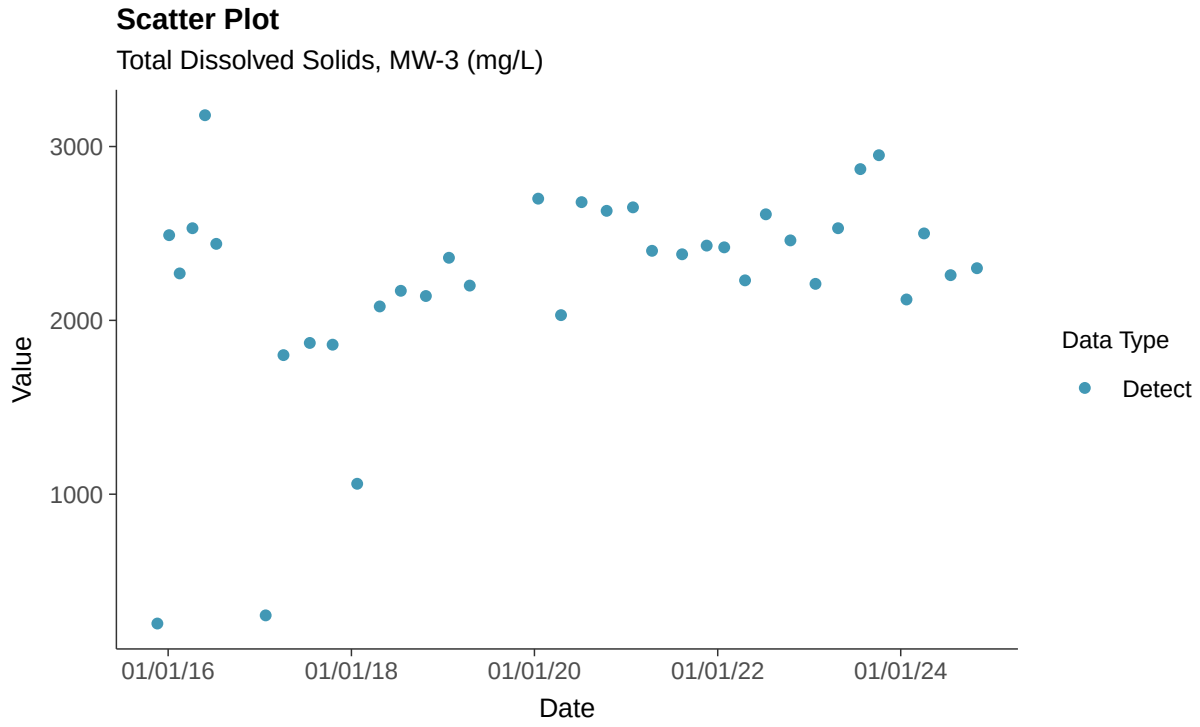
Trend Regression: Piecewise Linear-Linear-Linear

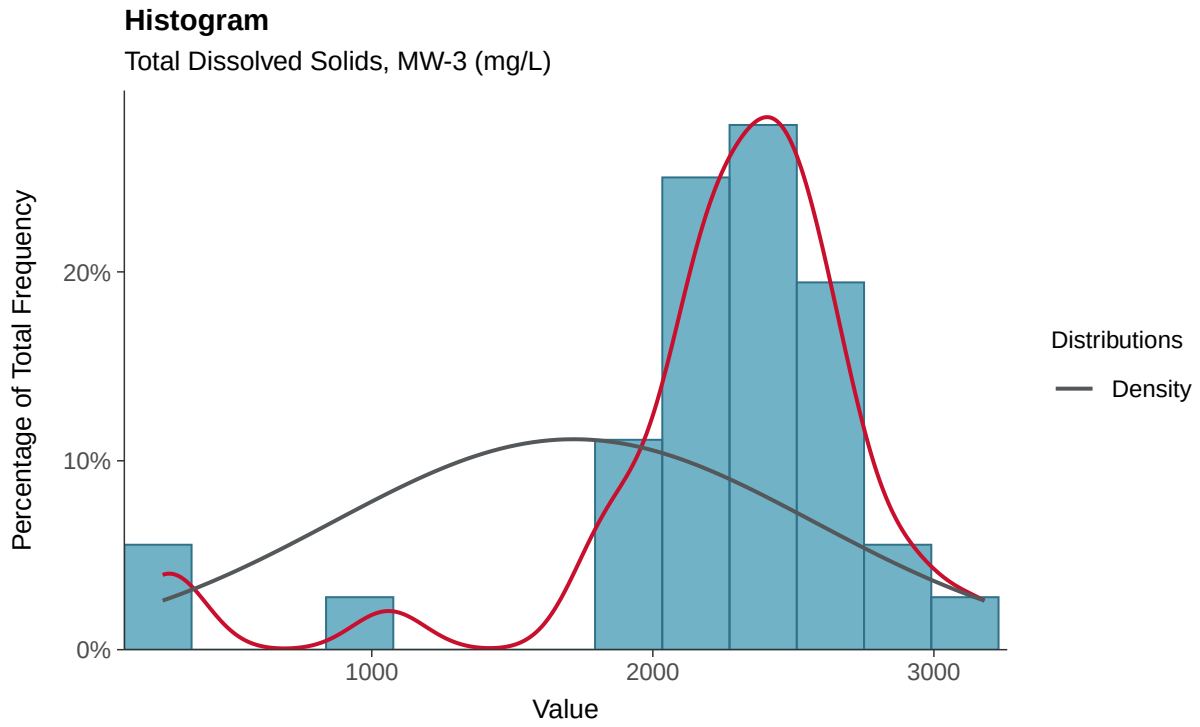
Sulfate, MW-3 (mg/L)



App. III: Total Dissolved Solids, MW-3

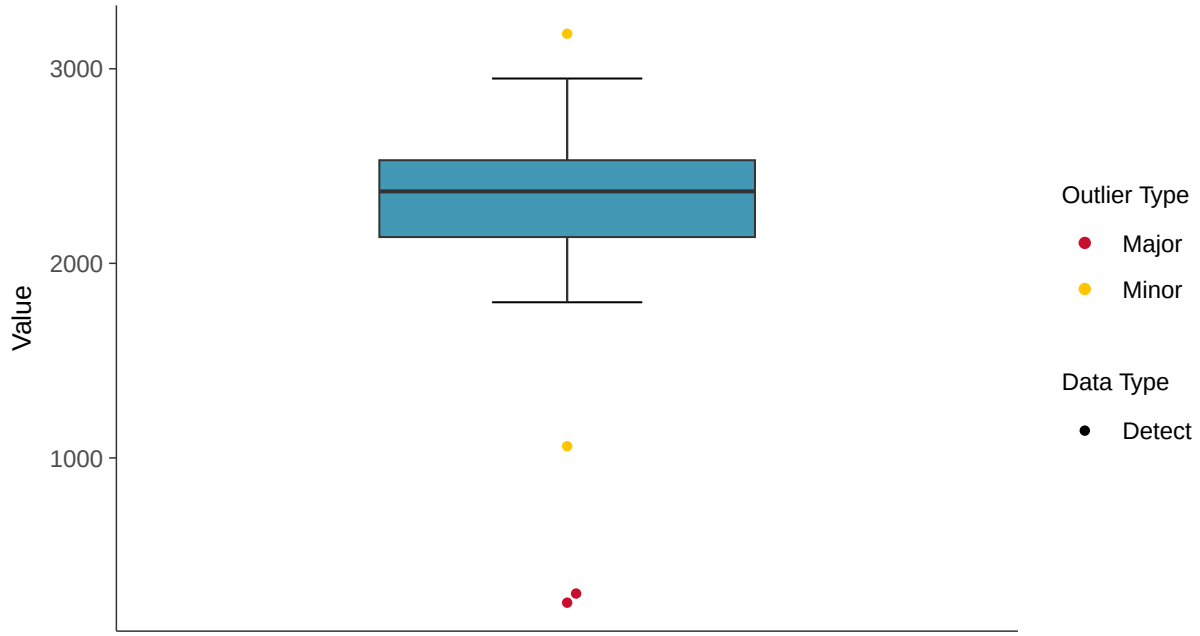
ID: 03_02_125





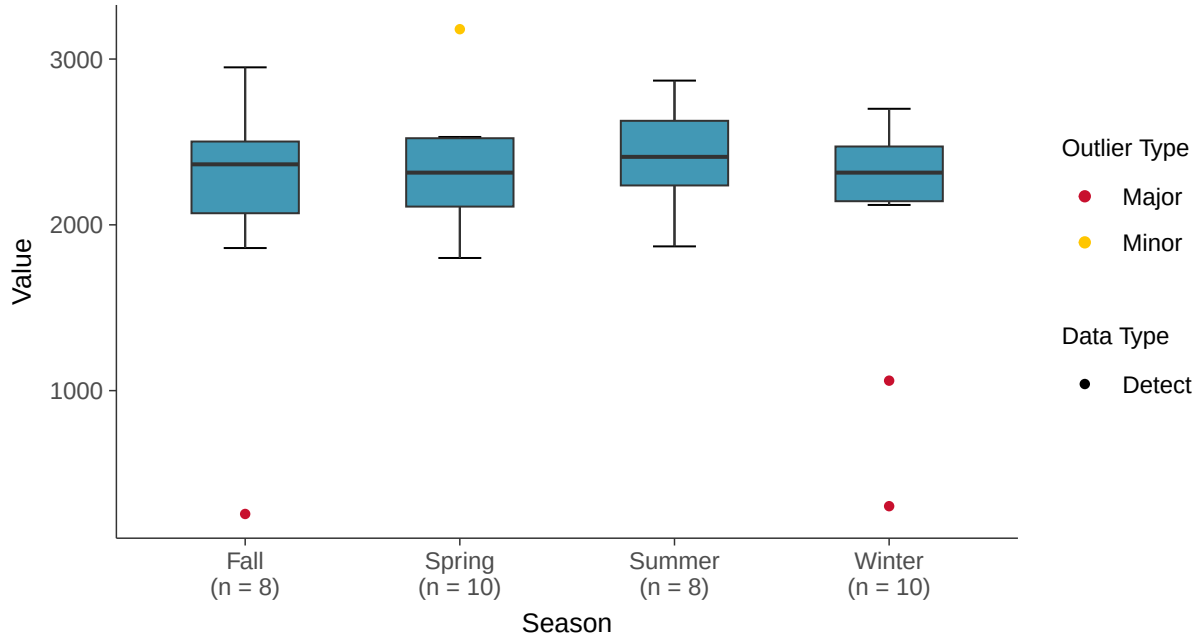
Boxplot

Total Dissolved Solids, MW-3 (mg/L)



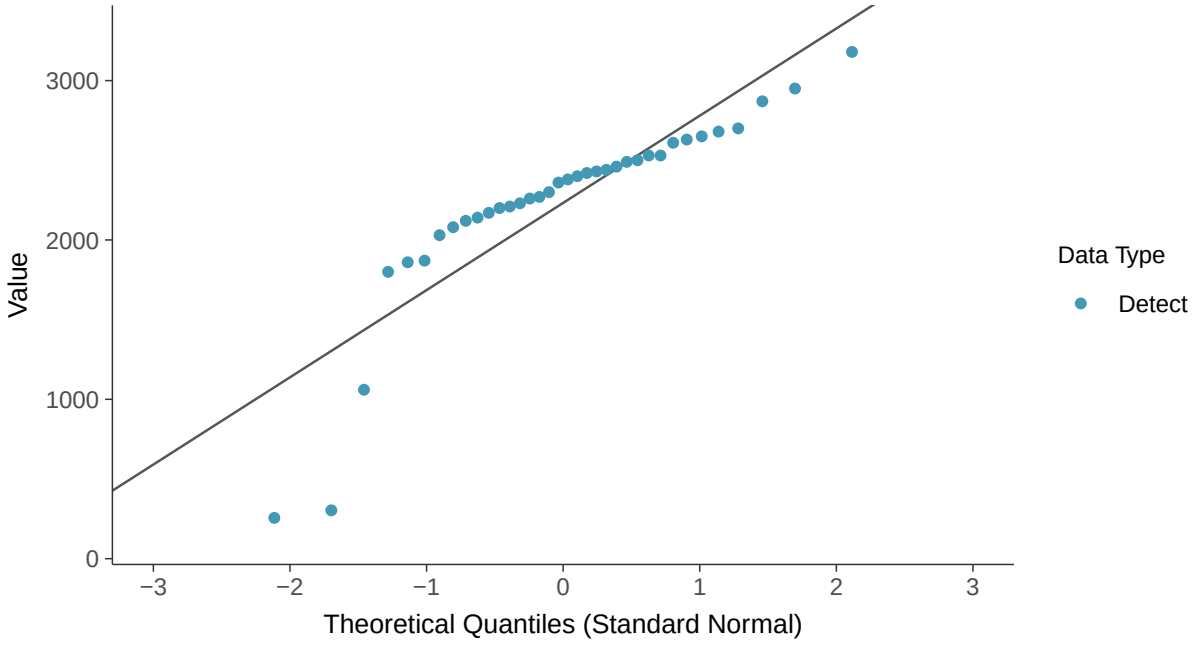
Boxplot by Season

Total Dissolved Solids, MW-3 (mg/L)



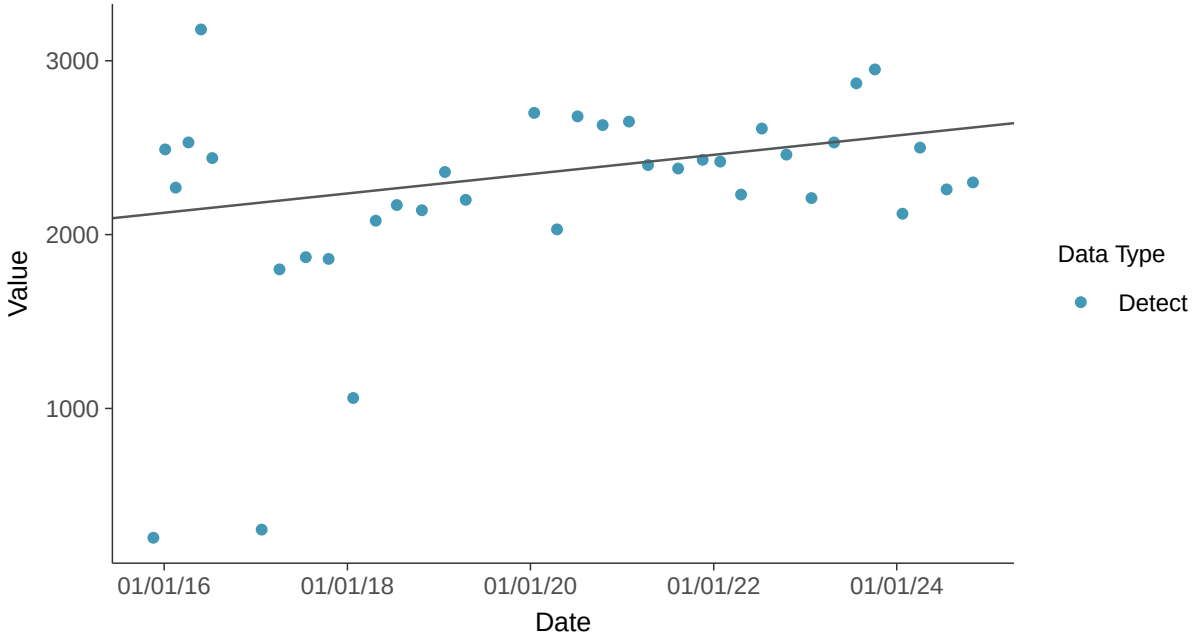
Normal Q-Q plot

Total Dissolved Solids, MW-3 (mg/L)



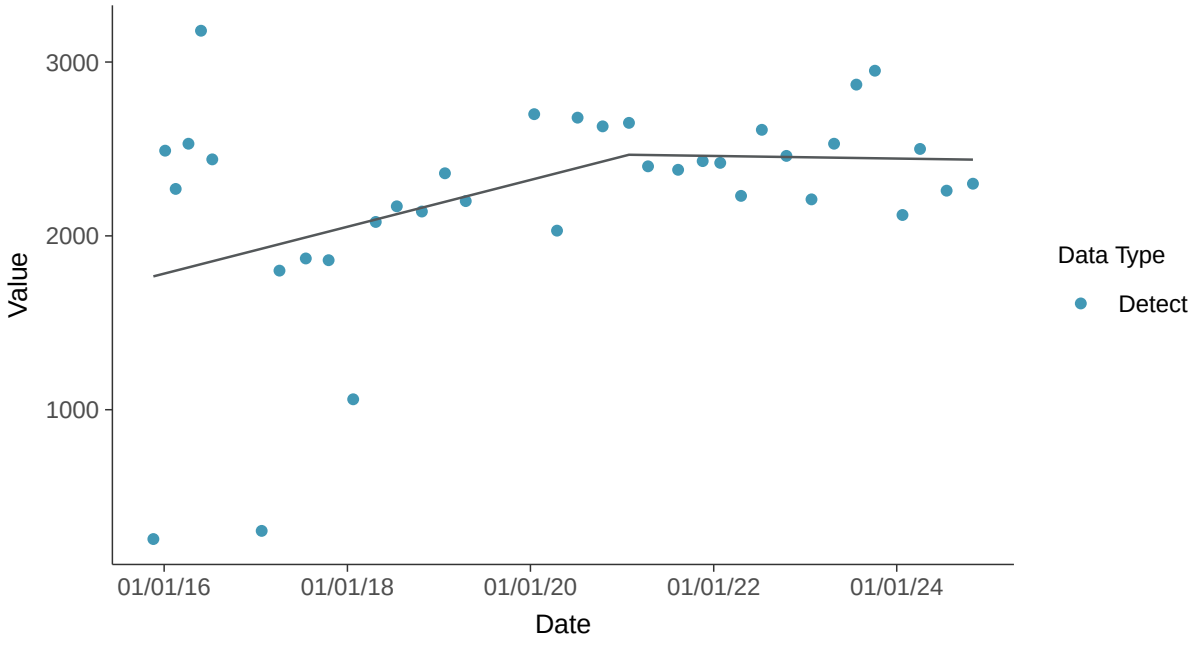
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-3 (mg/L)



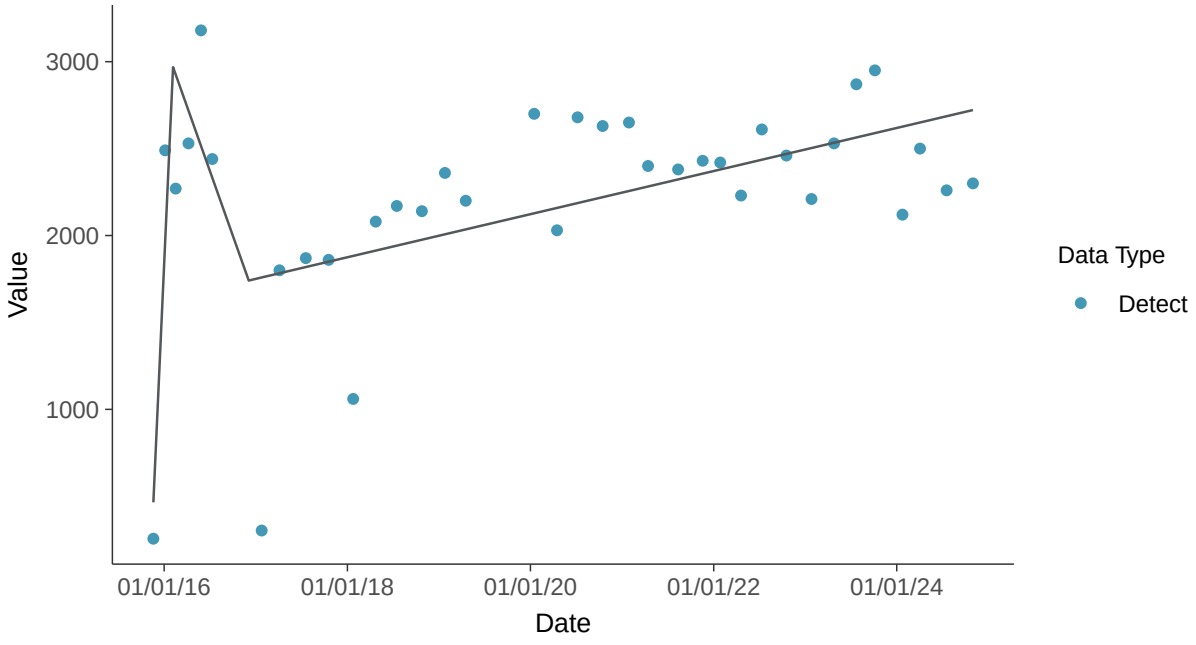
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-3 (mg/L)



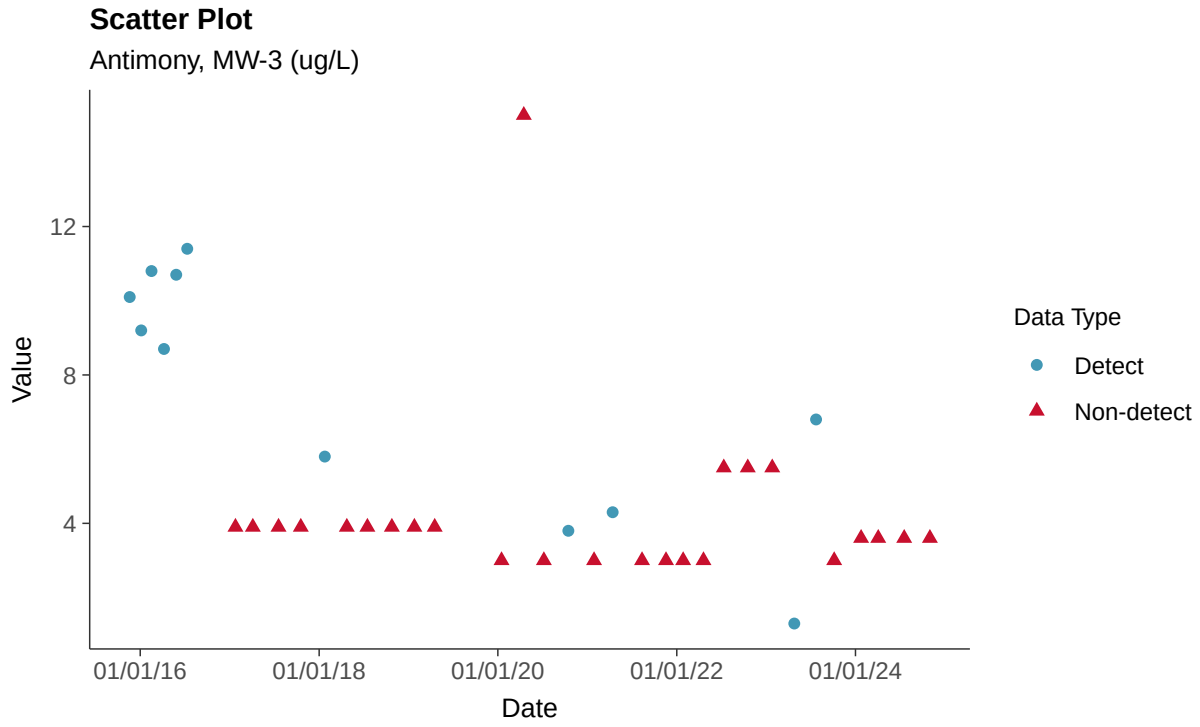
Trend Regression: Piecewise Linear-Linear-Linear

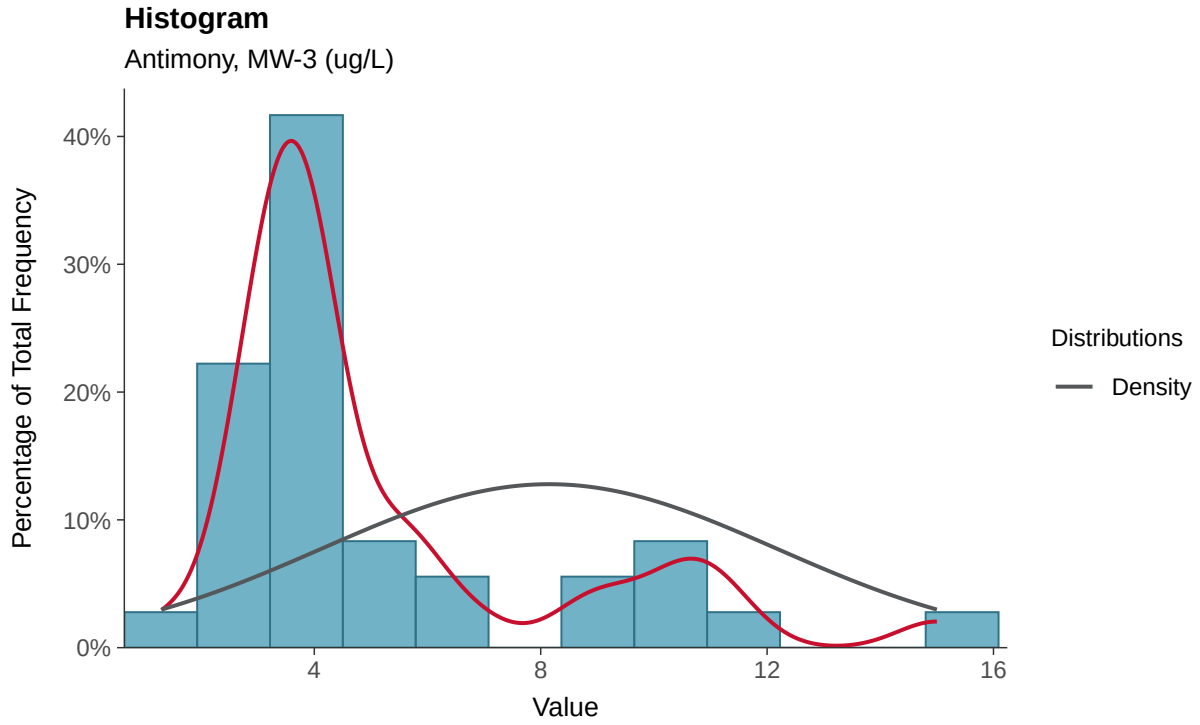
Total Dissolved Solids, MW-3 (mg/L)



App. IV: Antimony, MW-3

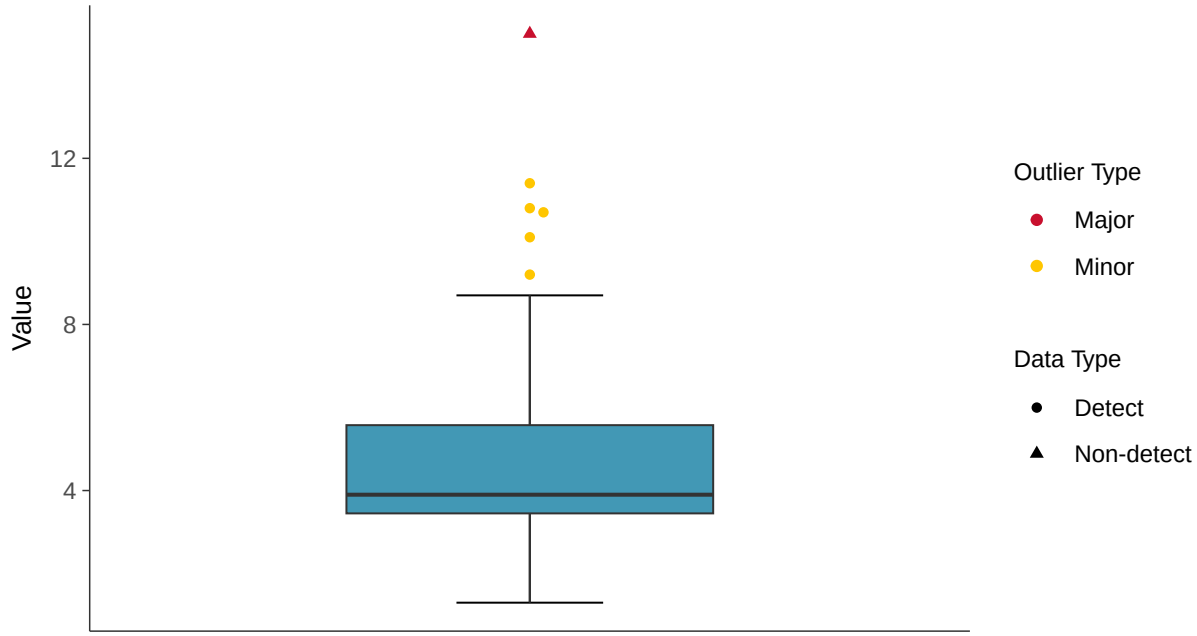
ID: 03_03_101





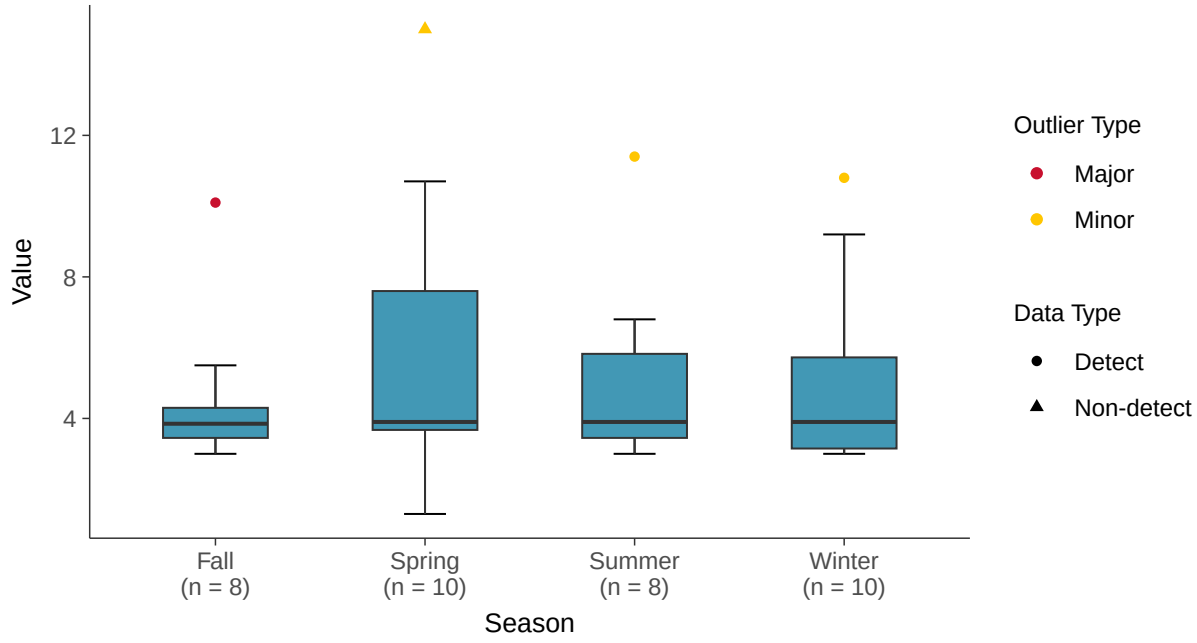
Boxplot

Antimony, MW-3 (ug/L)



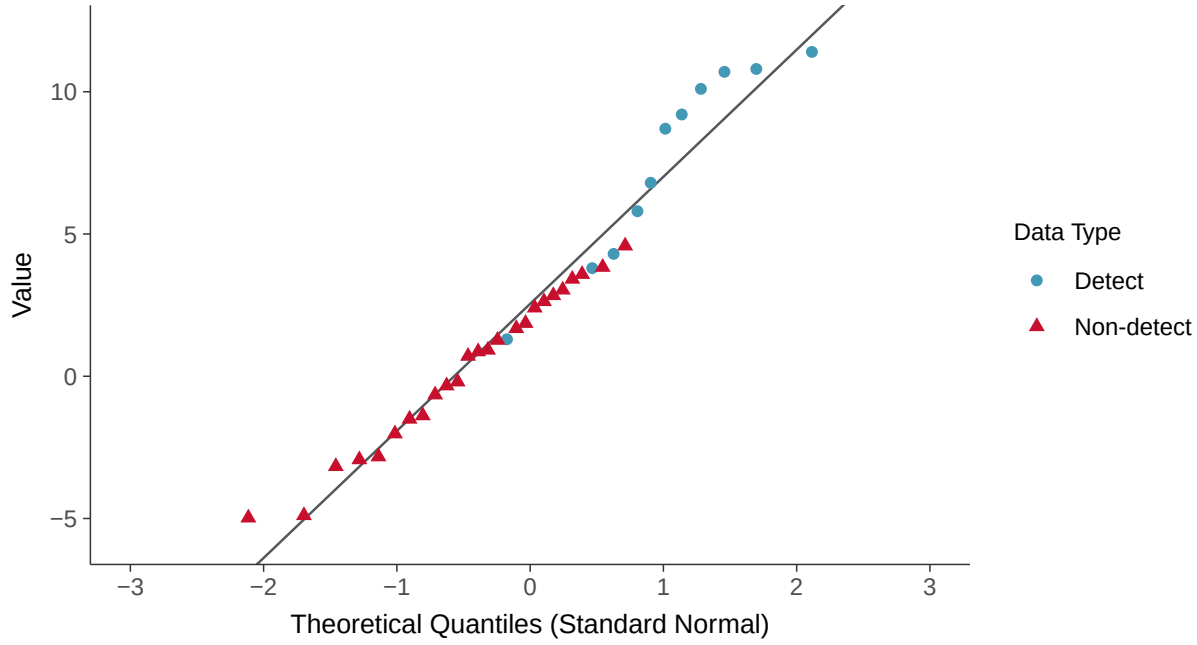
Boxplot by Season

Antimony, MW-3 (ug/L)



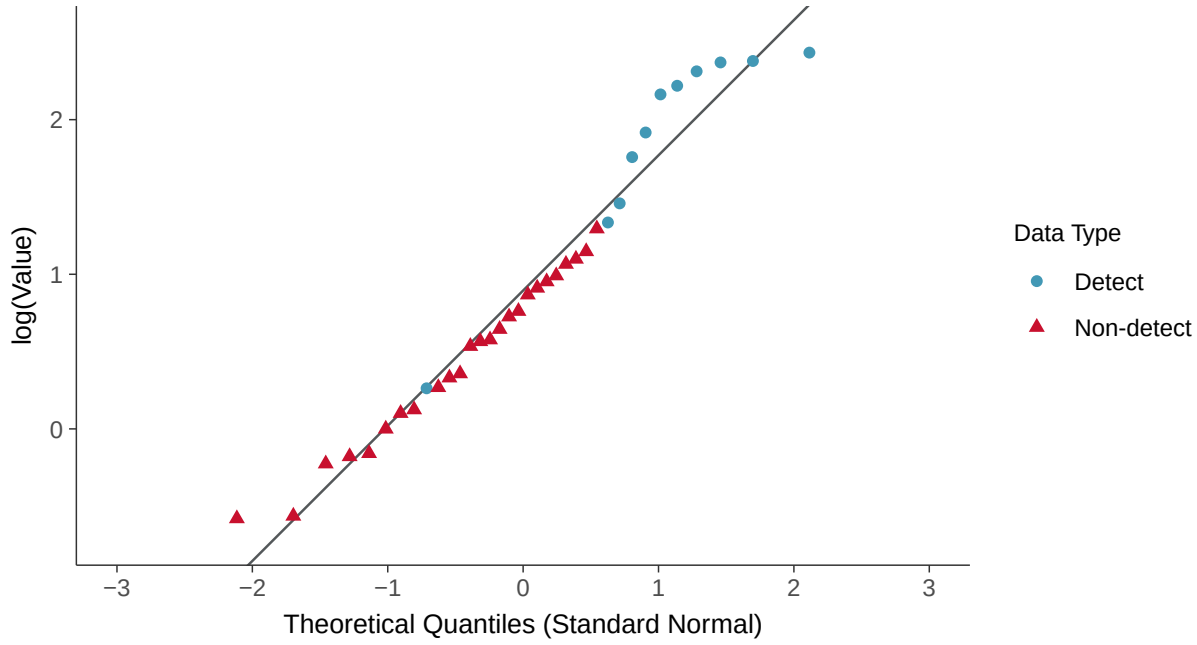
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



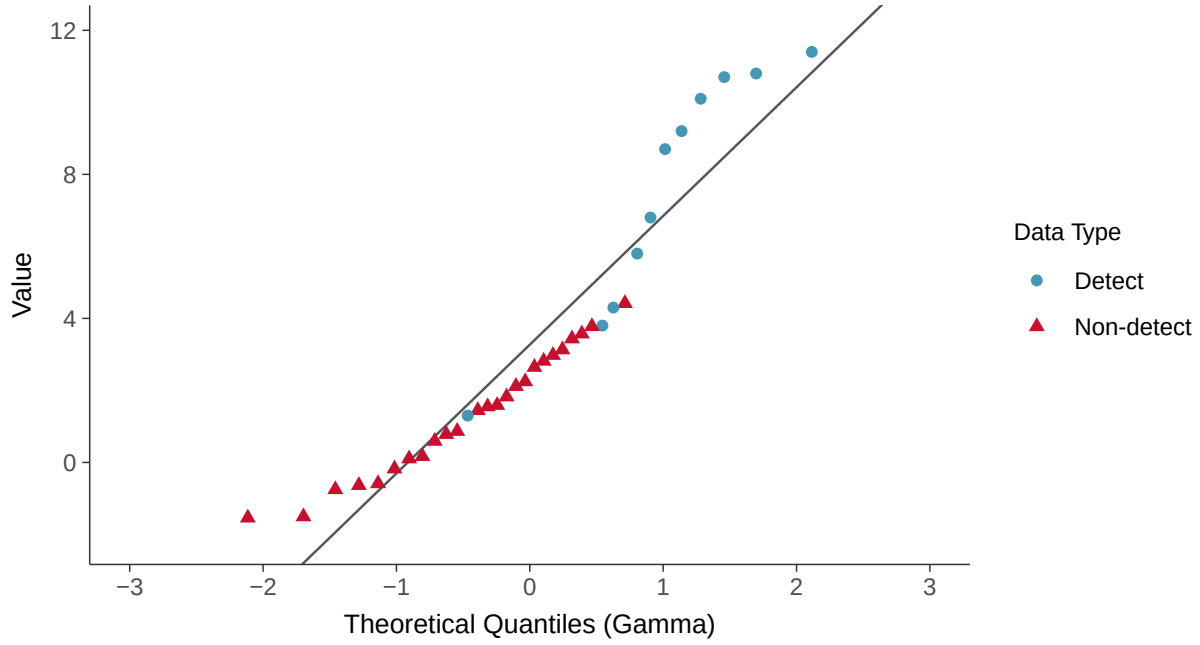
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



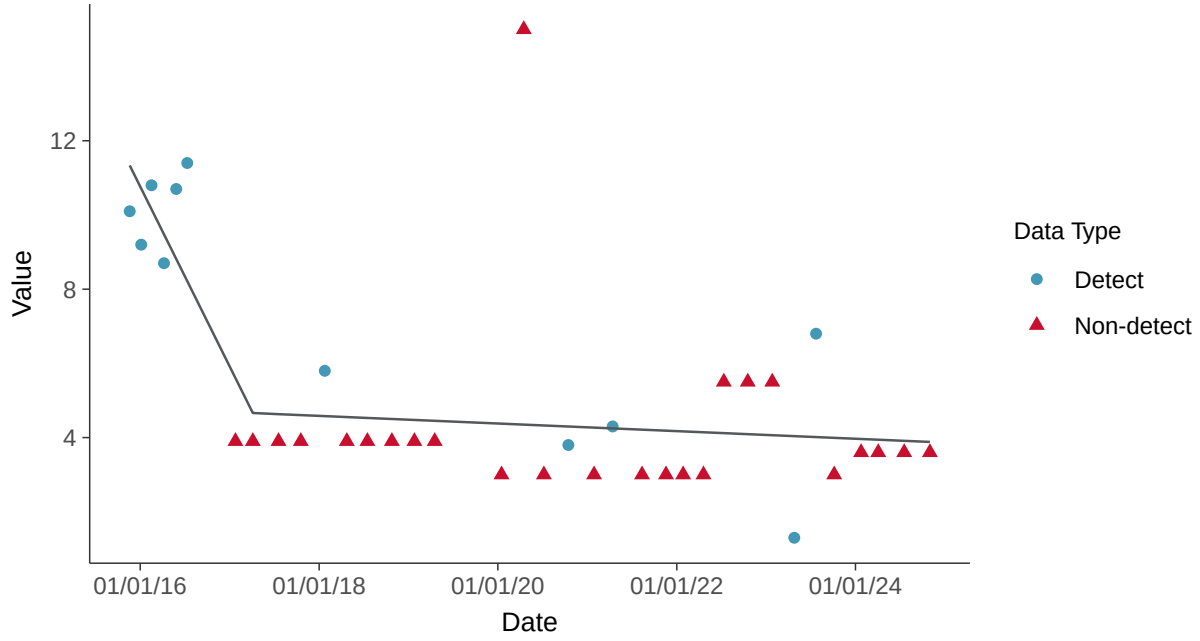
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-3 (ug/L)



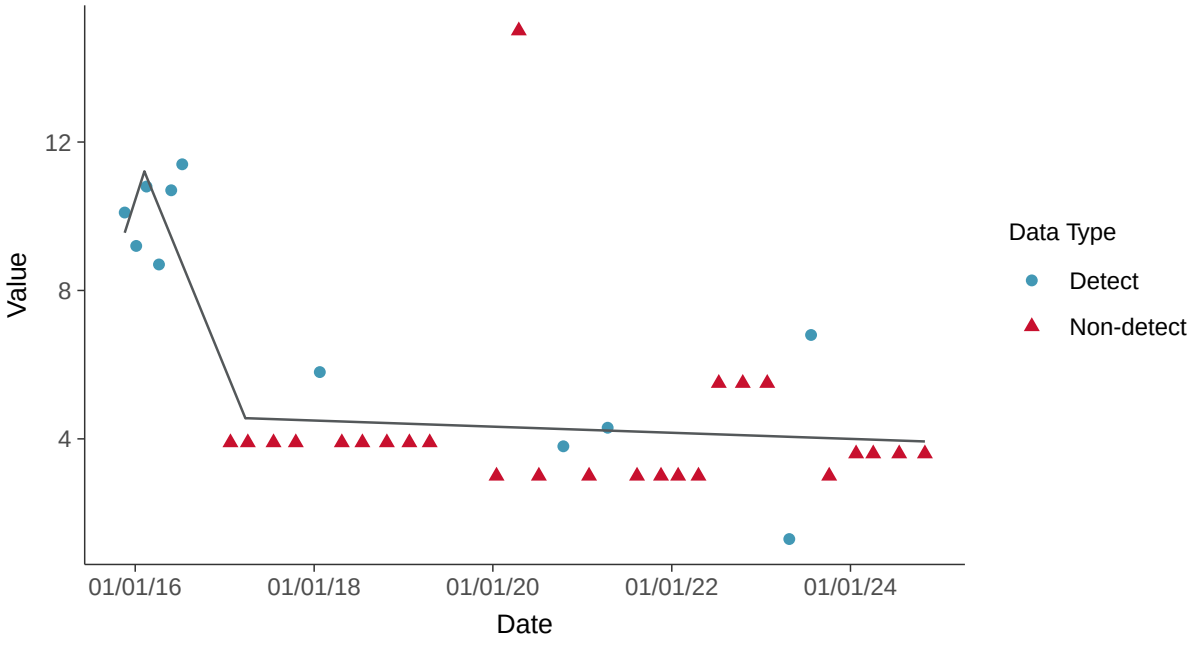
Trend Regression: Piecewise Linear-Linear

Antimony, MW-3 (ug/L)



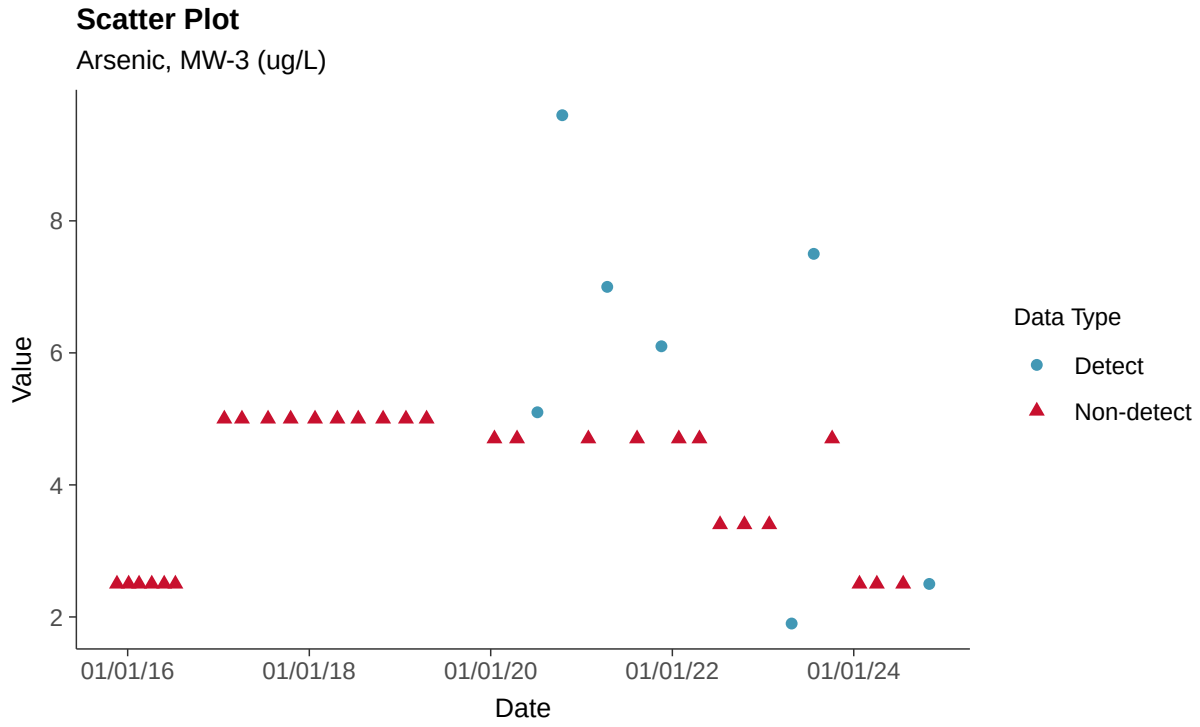
Trend Regression: Piecewise Linear-Linear-Linear

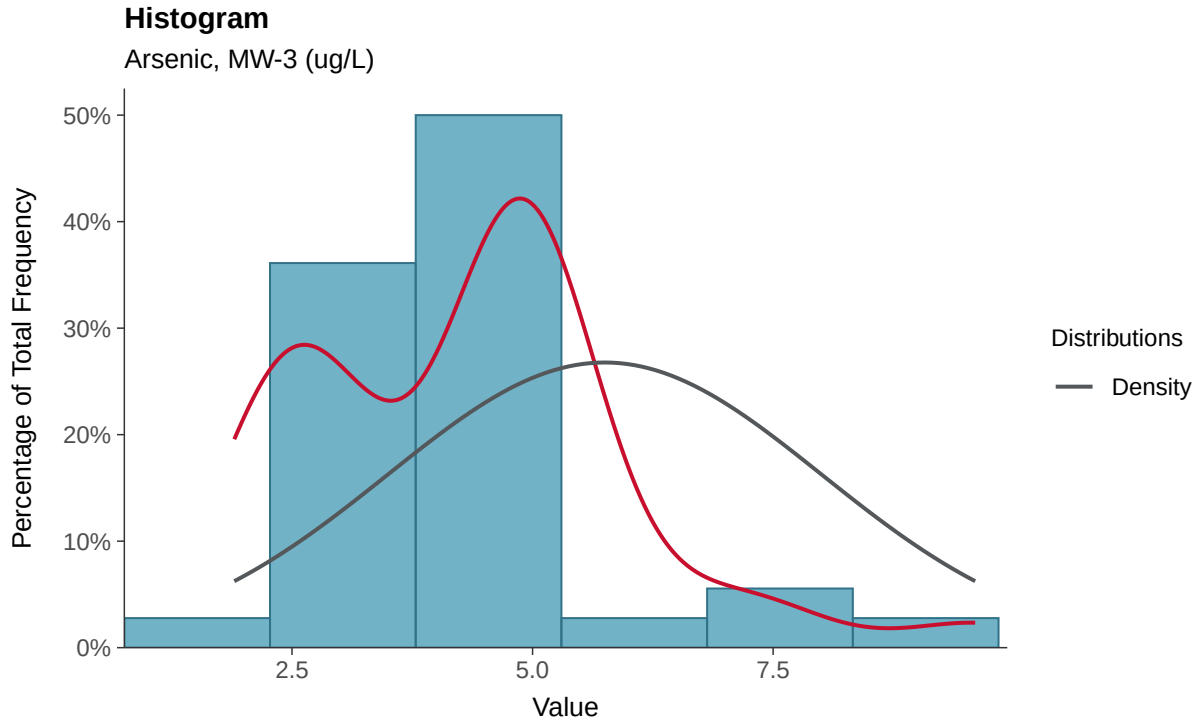
Antimony, MW-3 (ug/L)



App. IV: Arsenic, MW-3

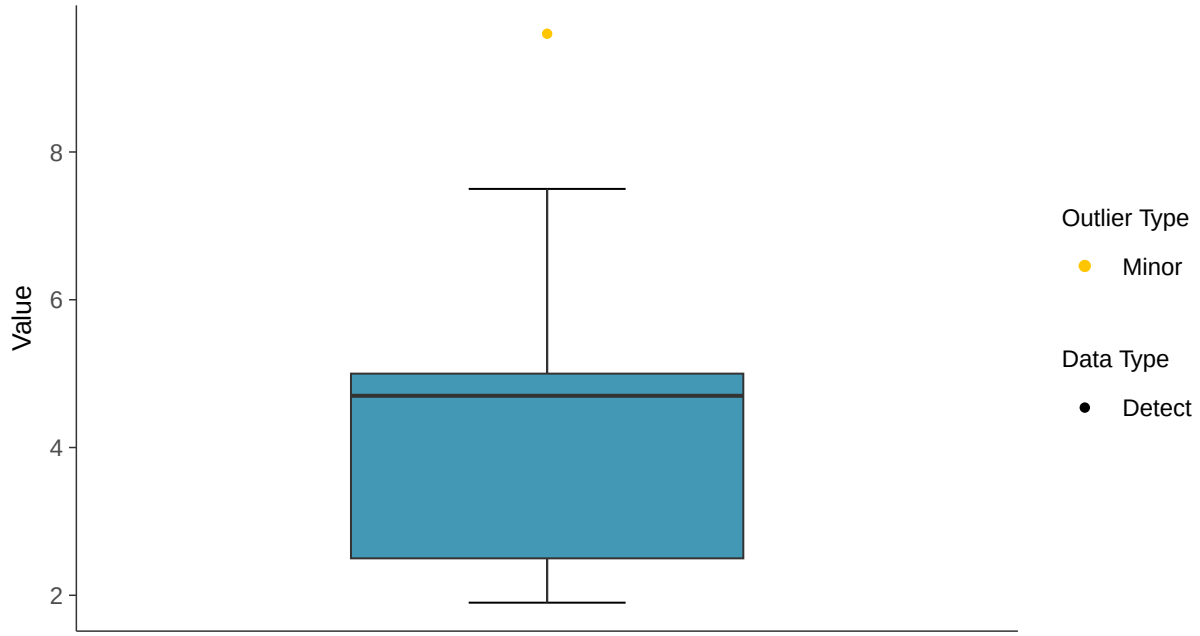
ID: 03_03_102





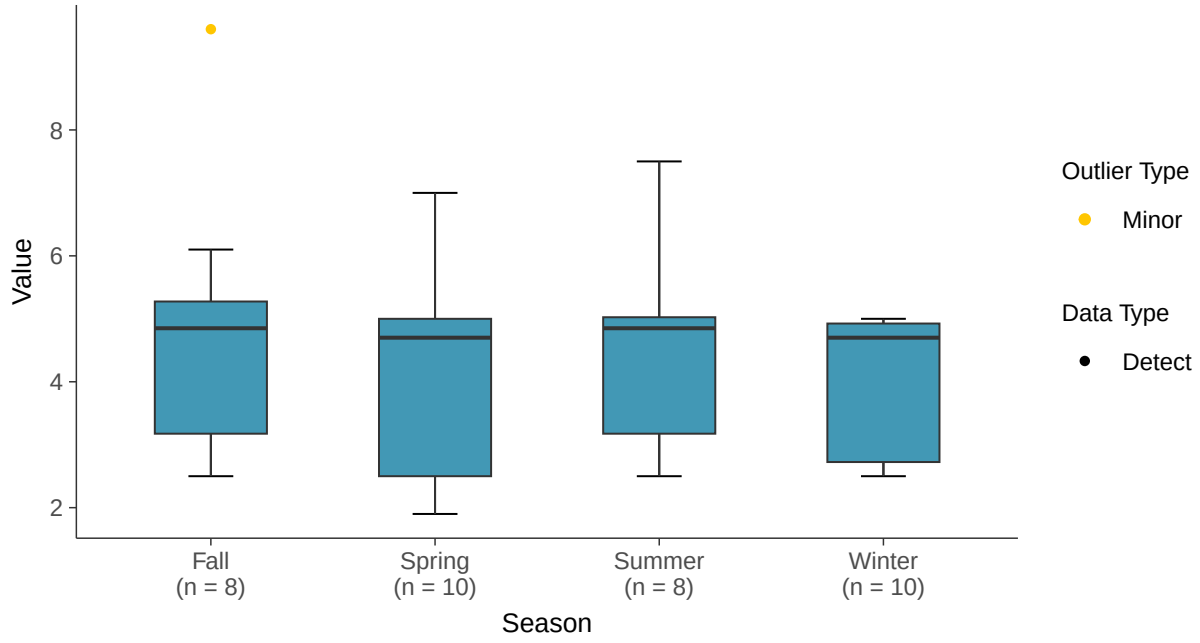
Boxplot

Arsenic, MW-3 (ug/L)



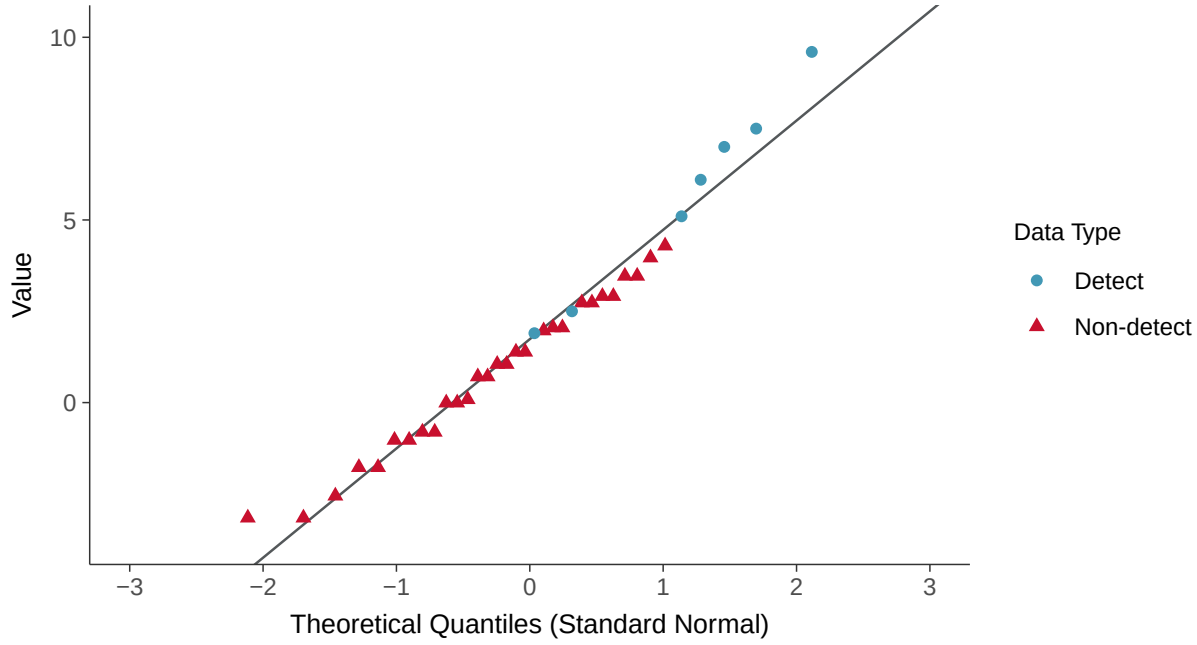
Boxplot by Season

Arsenic, MW-3 (ug/L)



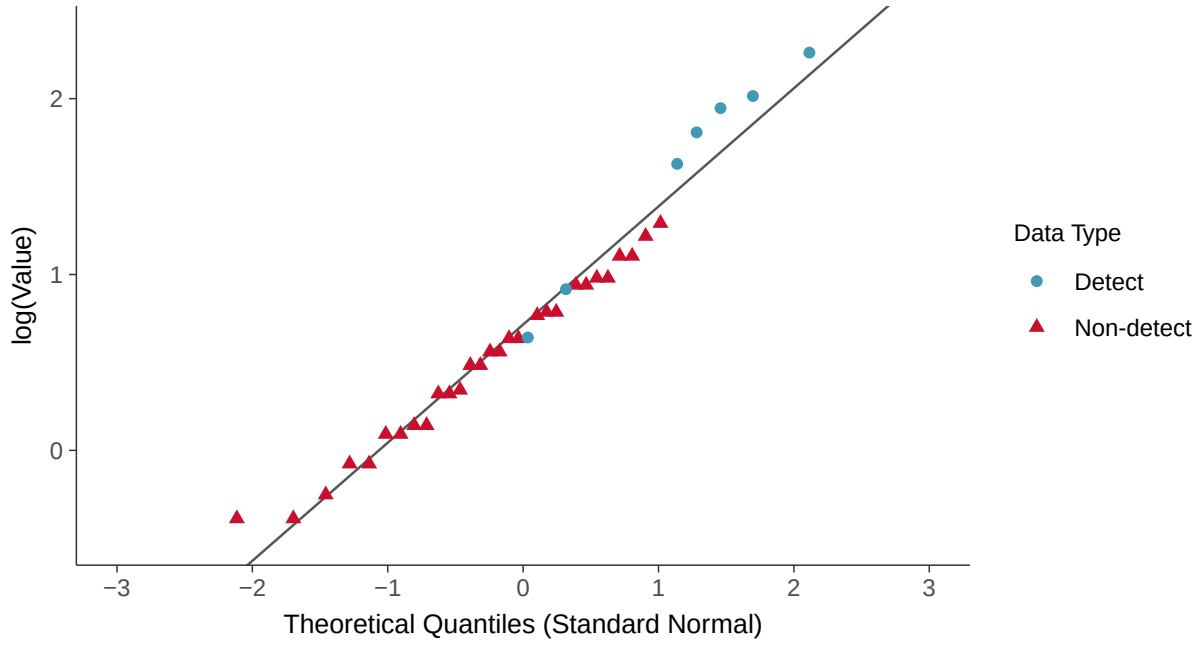
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



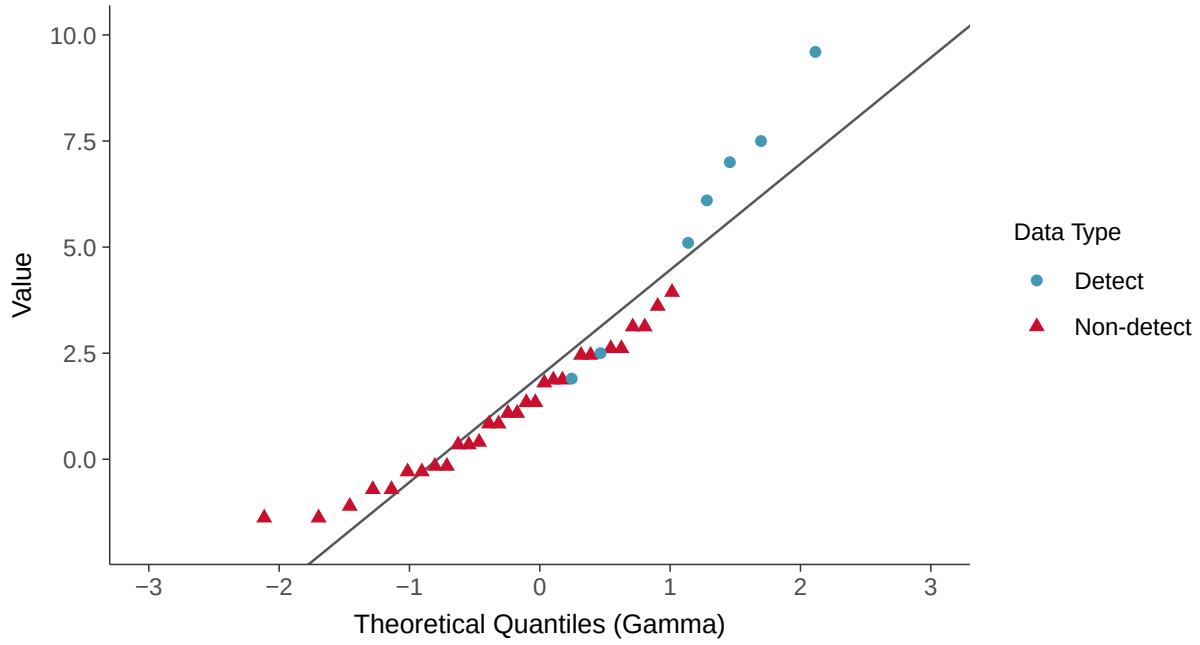
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



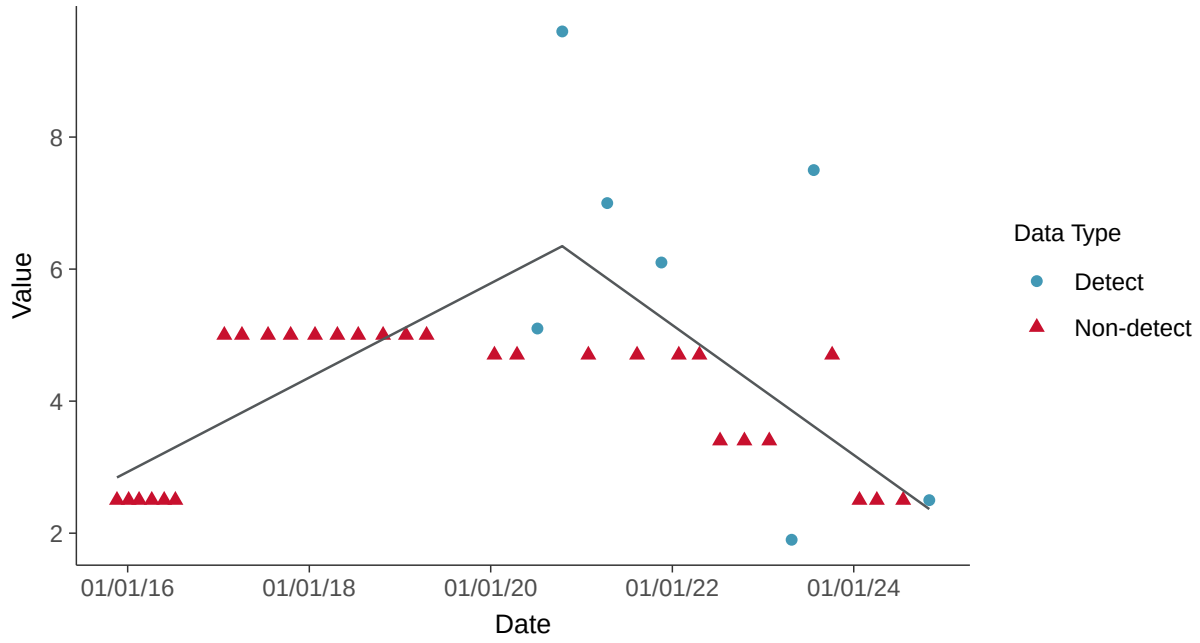
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-3 (ug/L)



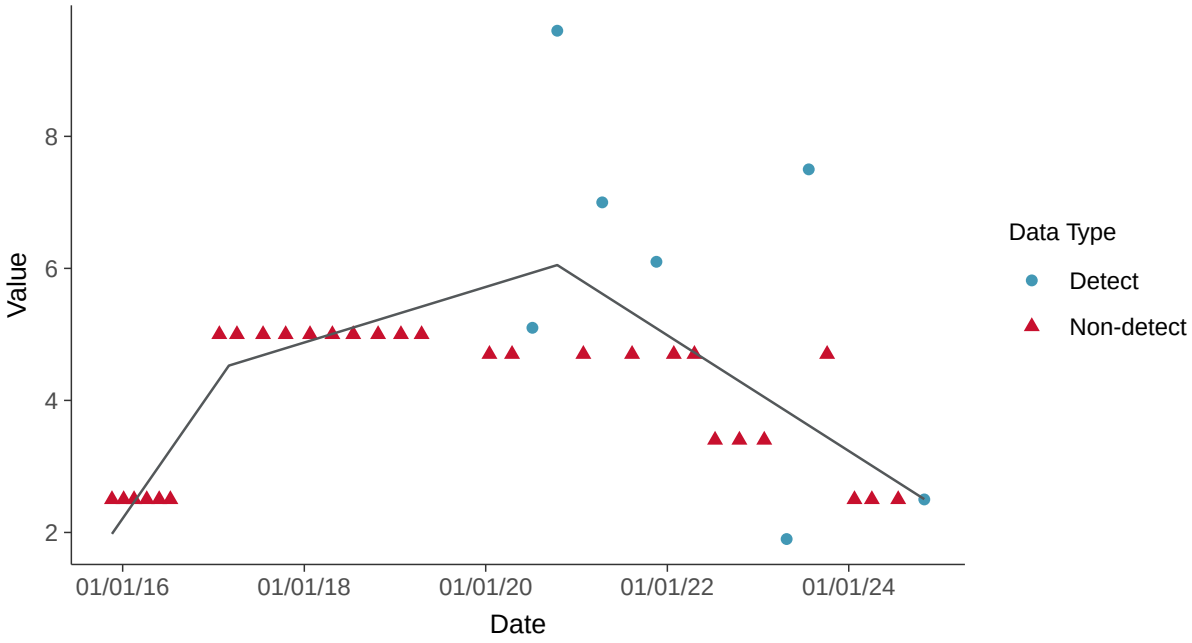
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-3 (ug/L)

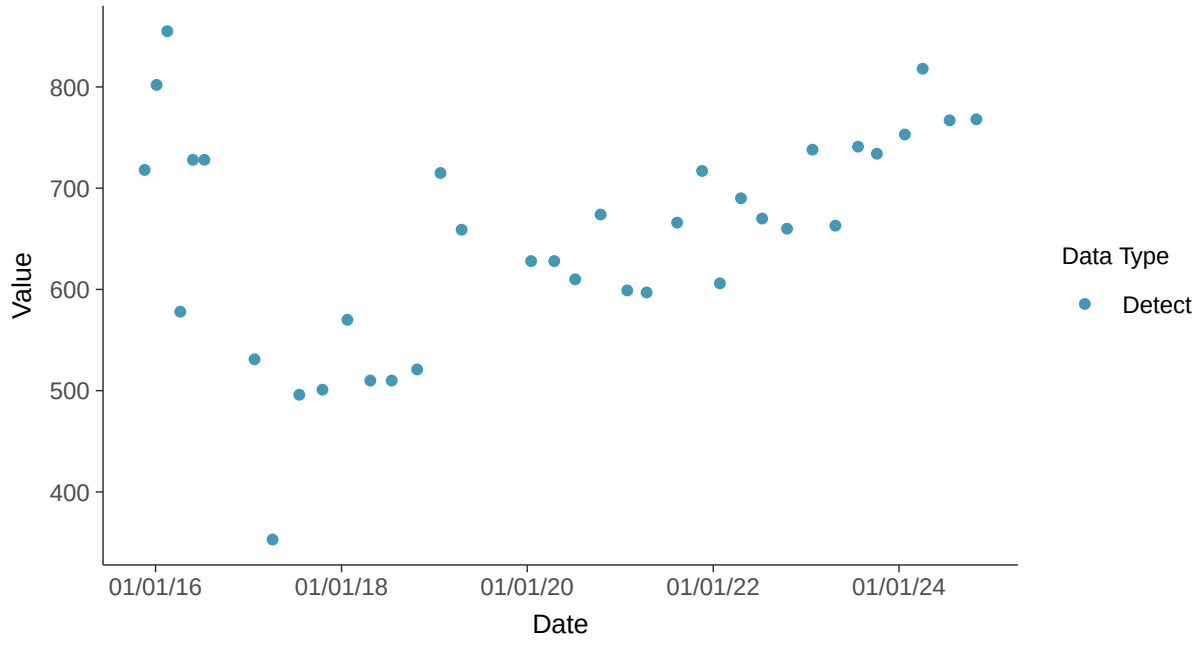


App. IV: Barium, MW-3

ID: 03_03_103

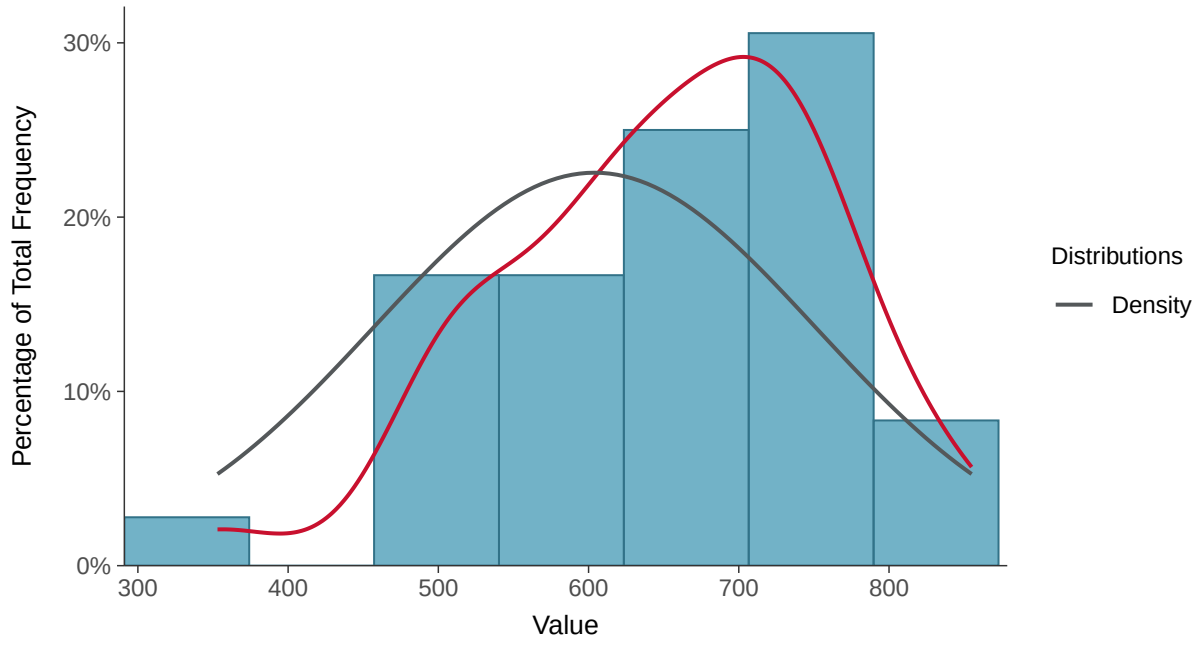
Scatter Plot

Barium, MW-3 (ug/L)



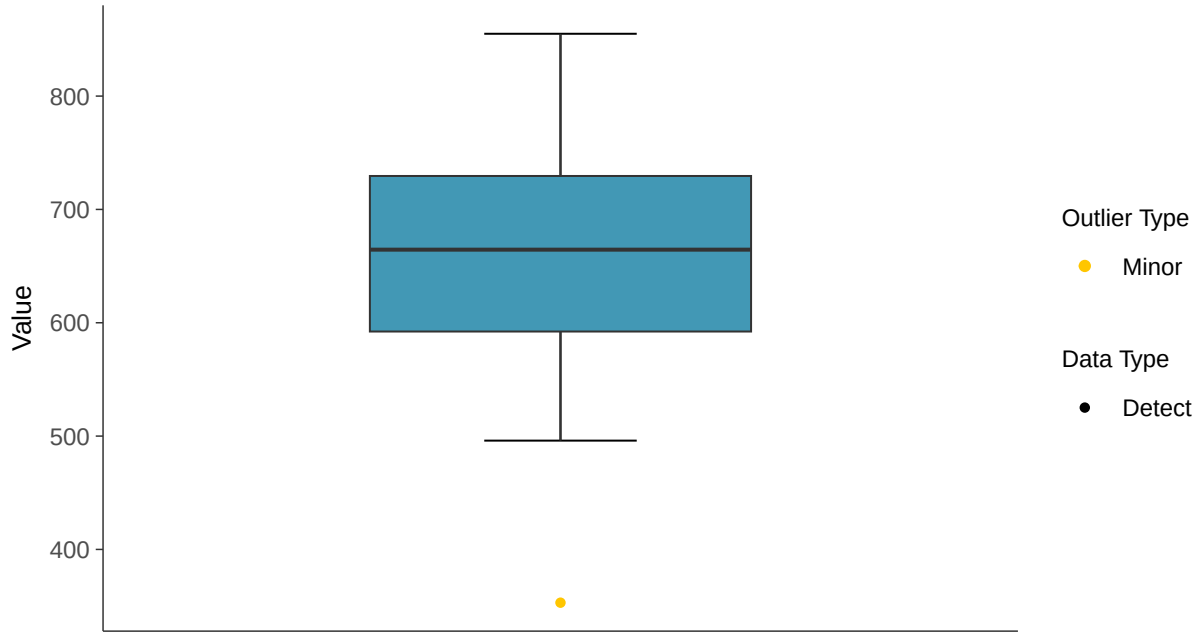
Histogram

Barium, MW-3 (ug/L)



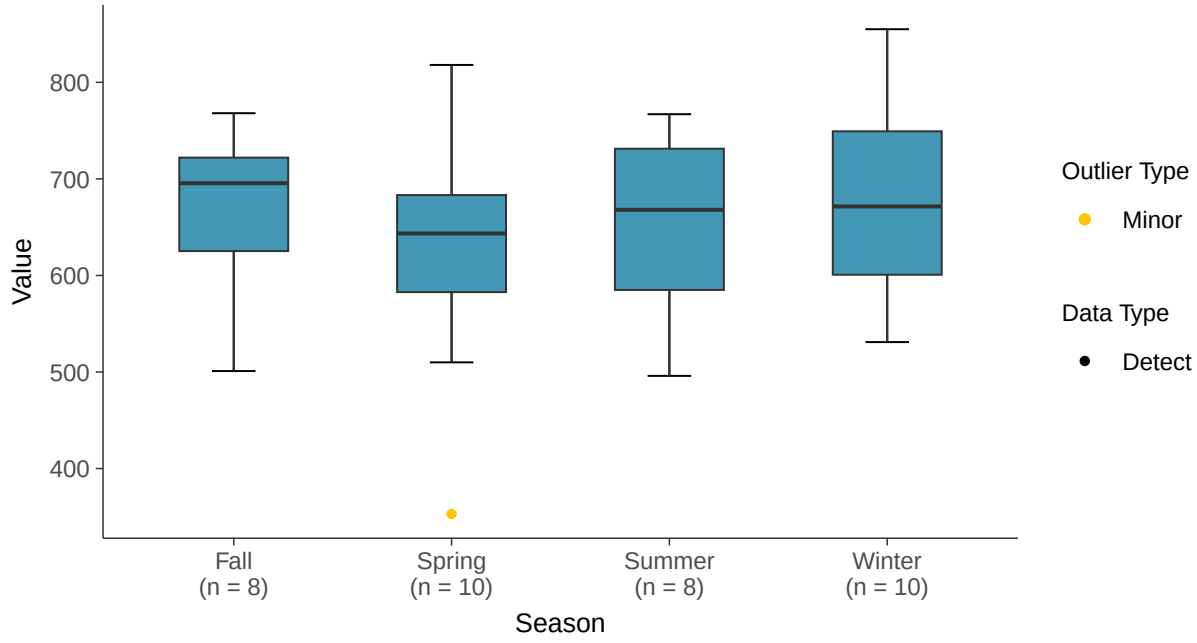
Boxplot

Barium, MW-3 (ug/L)



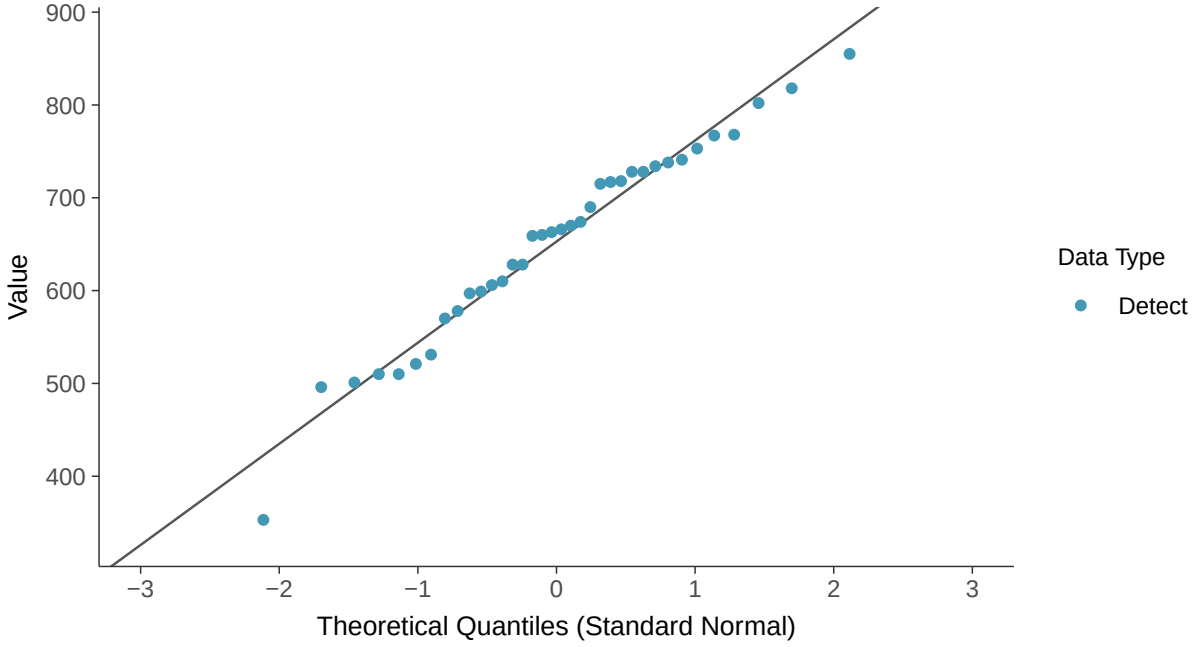
Boxplot by Season

Barium, MW-3 (ug/L)



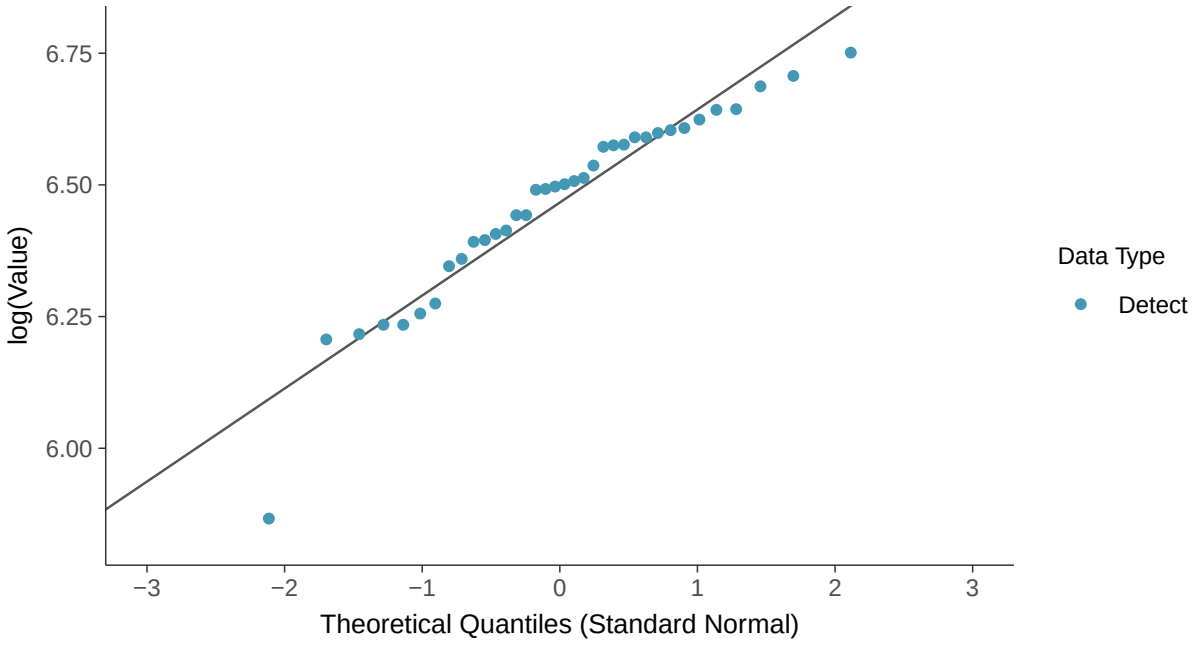
Normal Q-Q plot

Barium, MW-3 (ug/L)



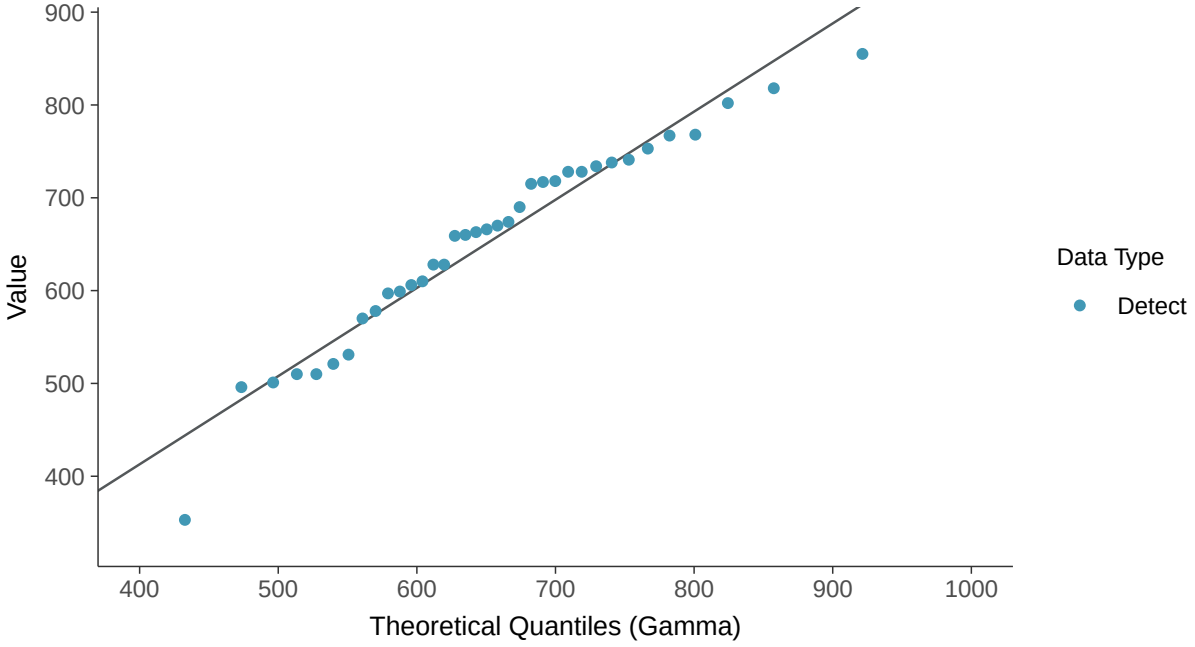
Lognormal Q-Q plot

Barium, MW-3 (ug/L)



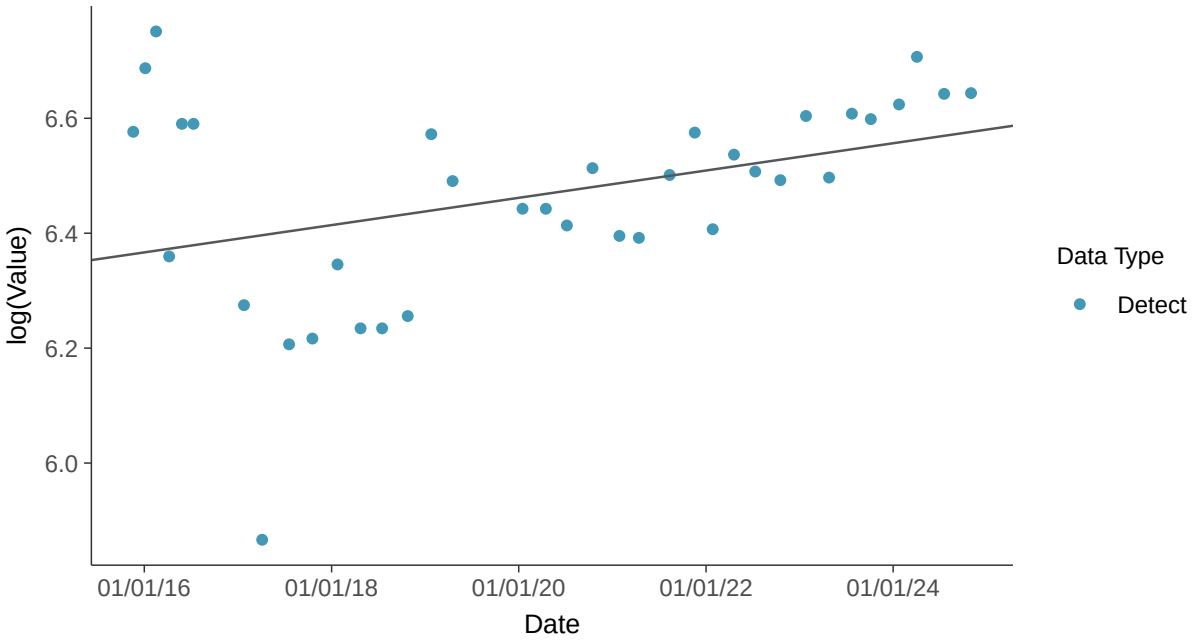
Gamma Q-Q plot

Barium, MW-3 (ug/L)



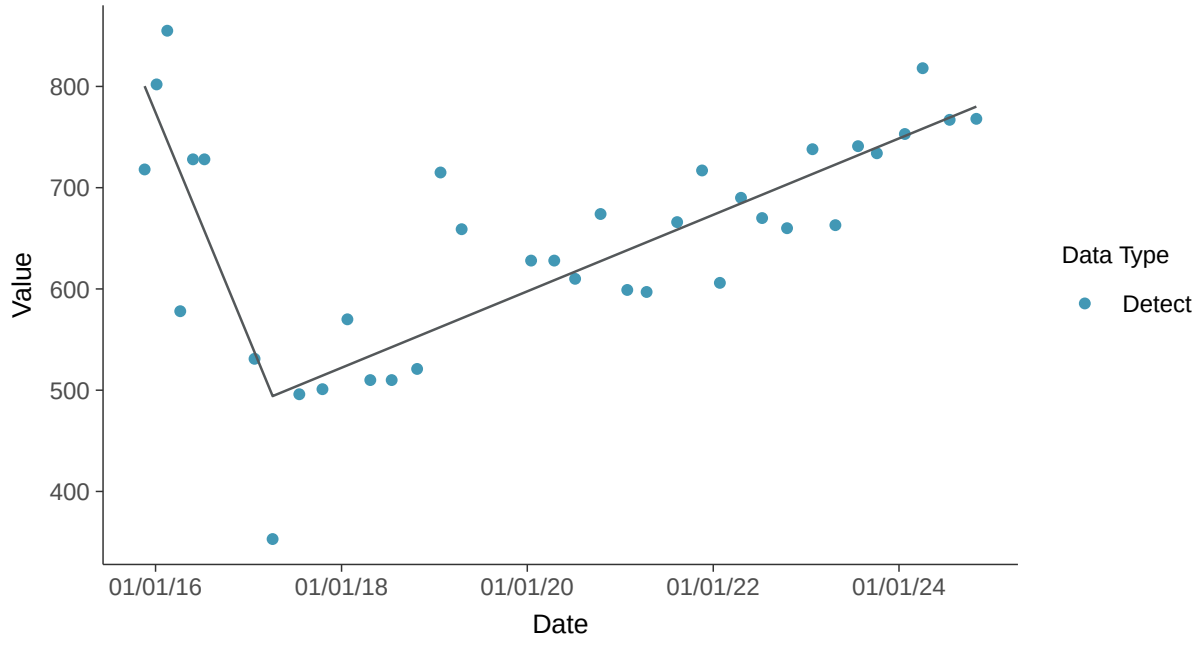
Trend Regression: Lognormal MLE

Barium, MW-3 (ug/L)



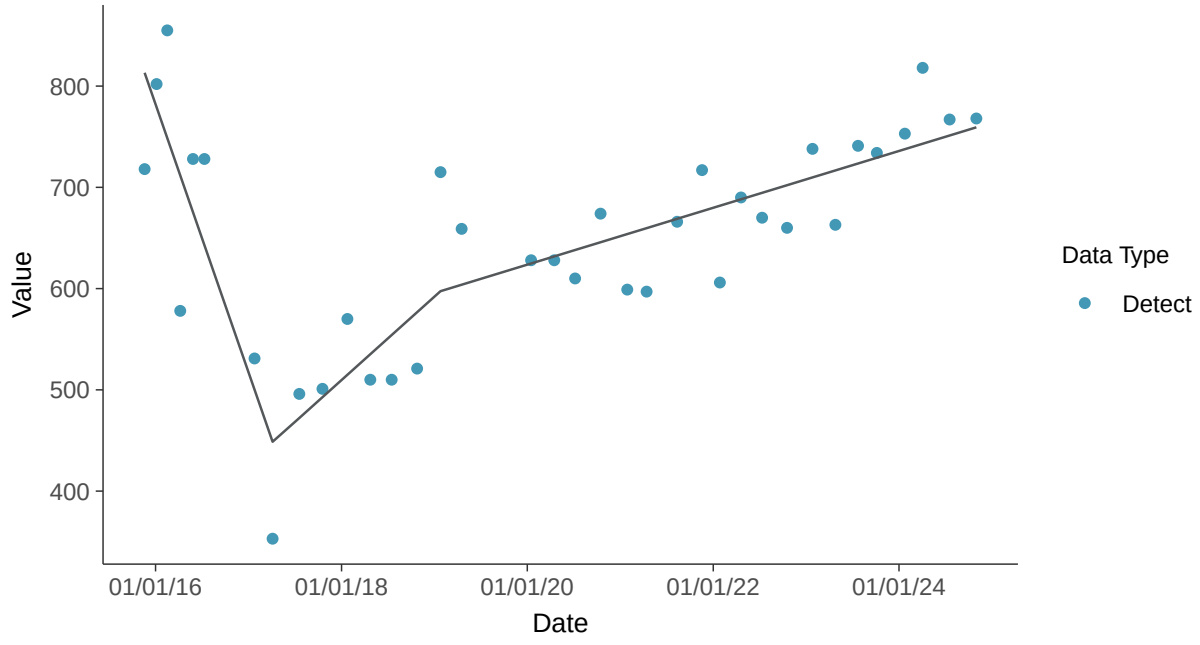
Trend Regression: Piecewise Linear-Linear

Barium, MW-3 (ug/L)



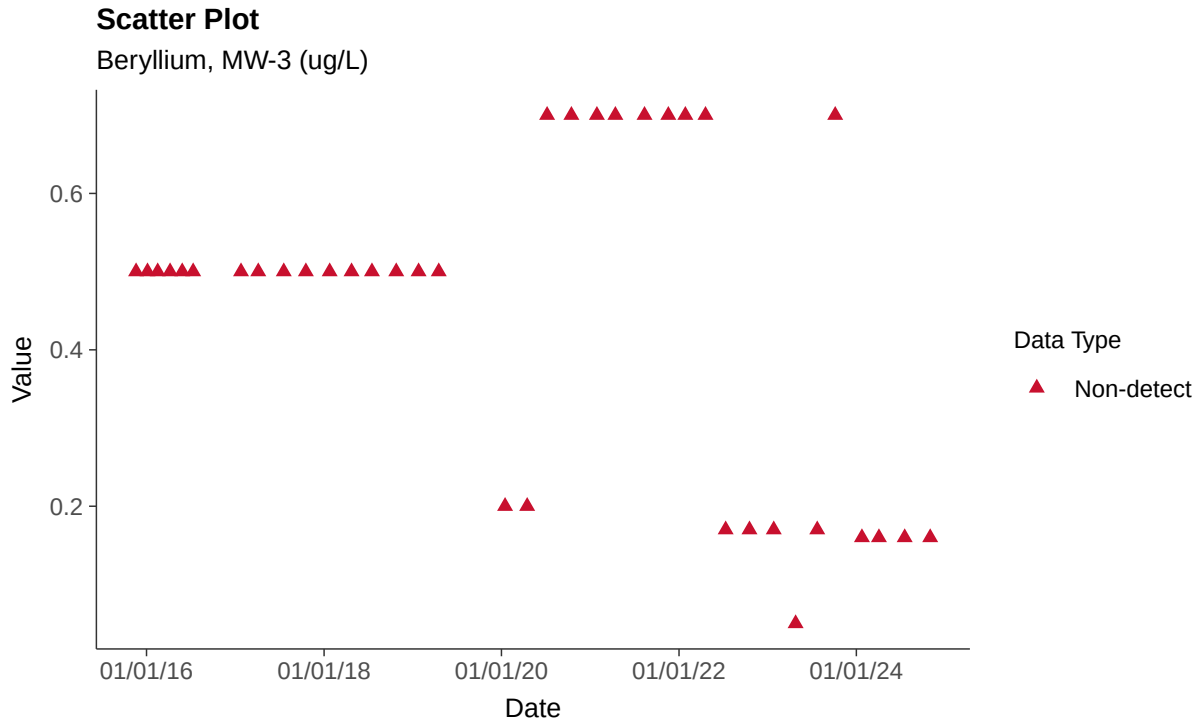
Trend Regression: Piecewise Linear-Linear-Linear

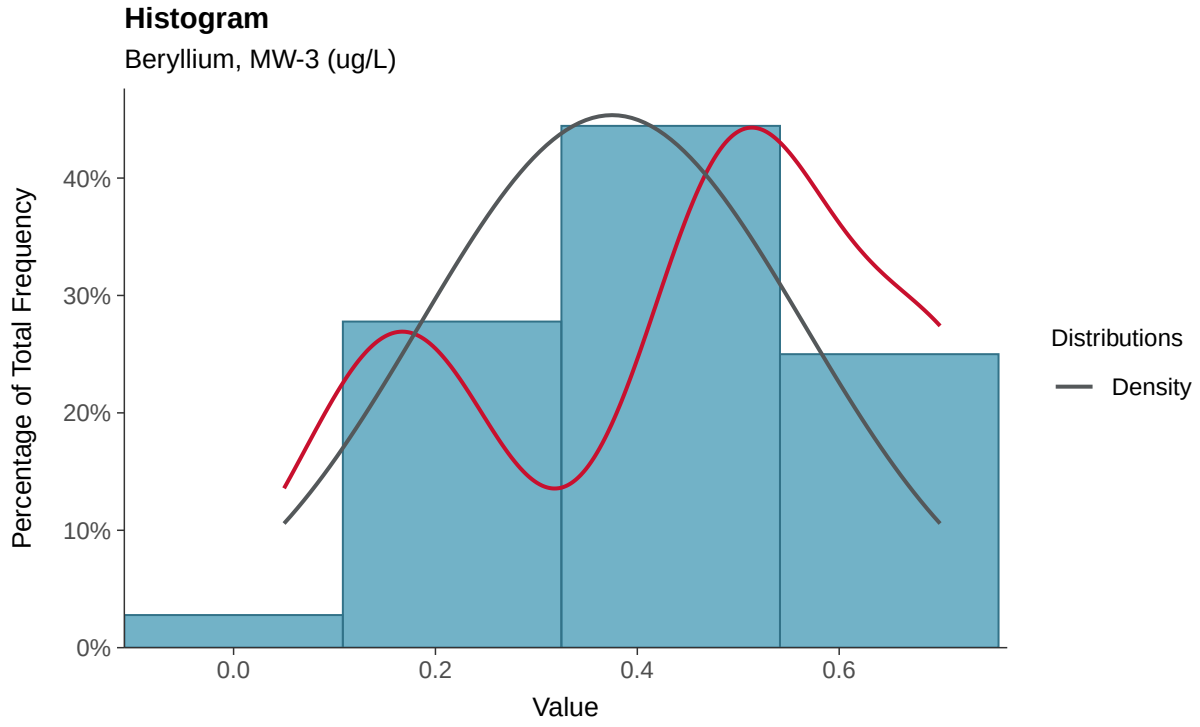
Barium, MW-3 (ug/L)



App. IV: Beryllium, MW-3

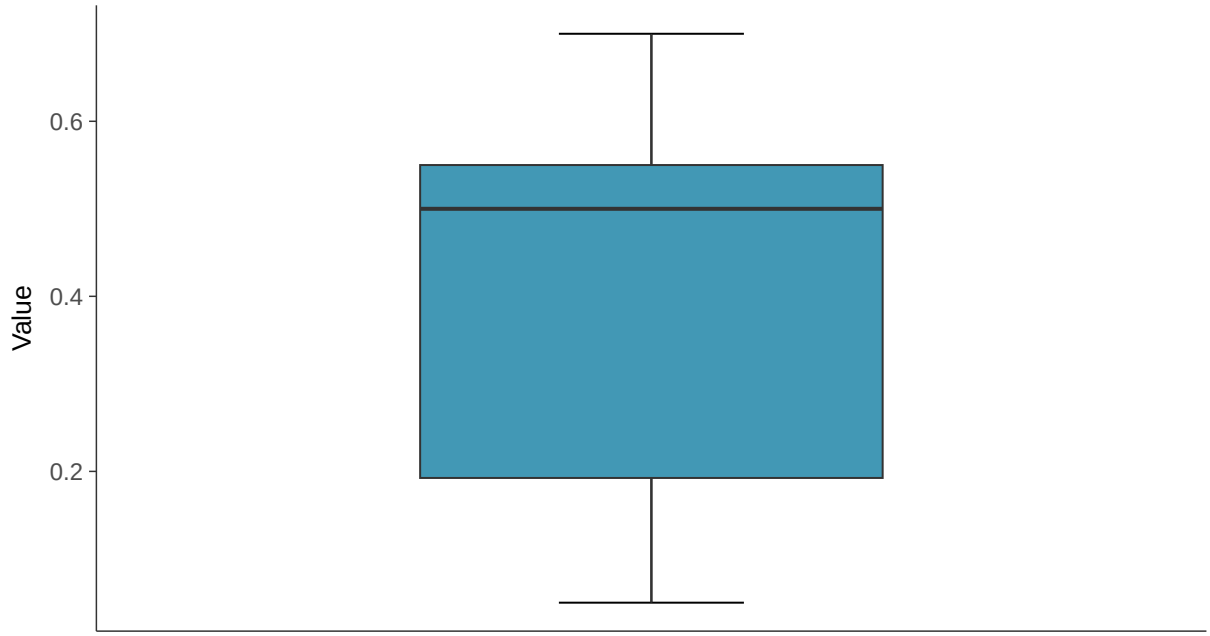
ID: 03_03_104





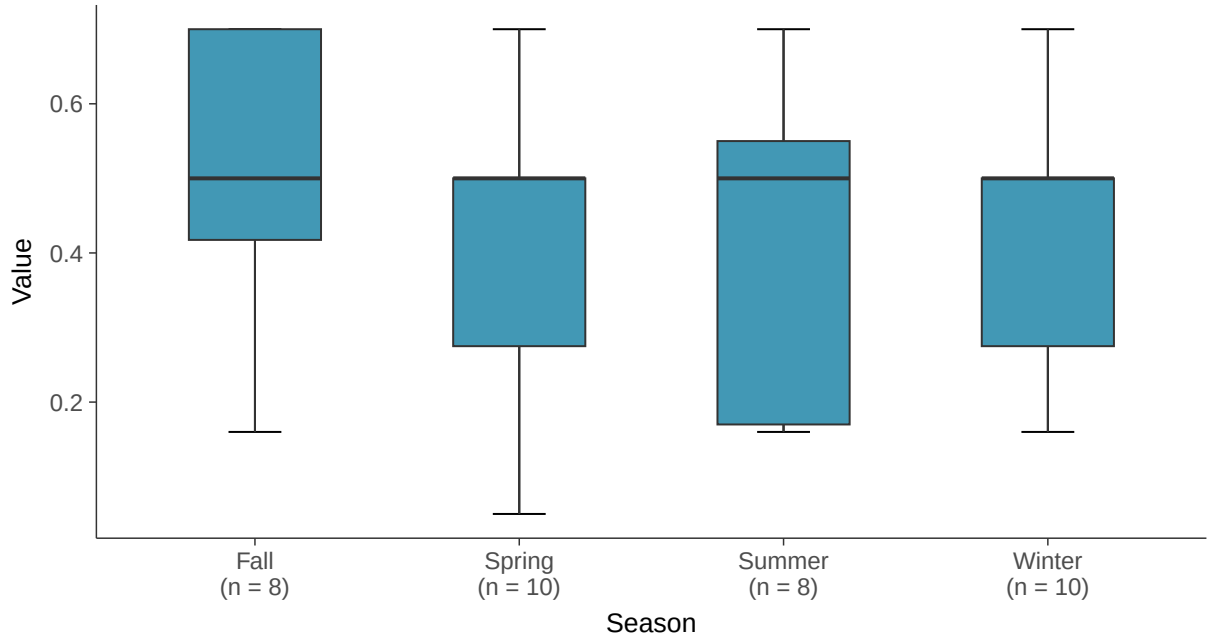
Boxplot

Beryllium, MW-3 (ug/L)



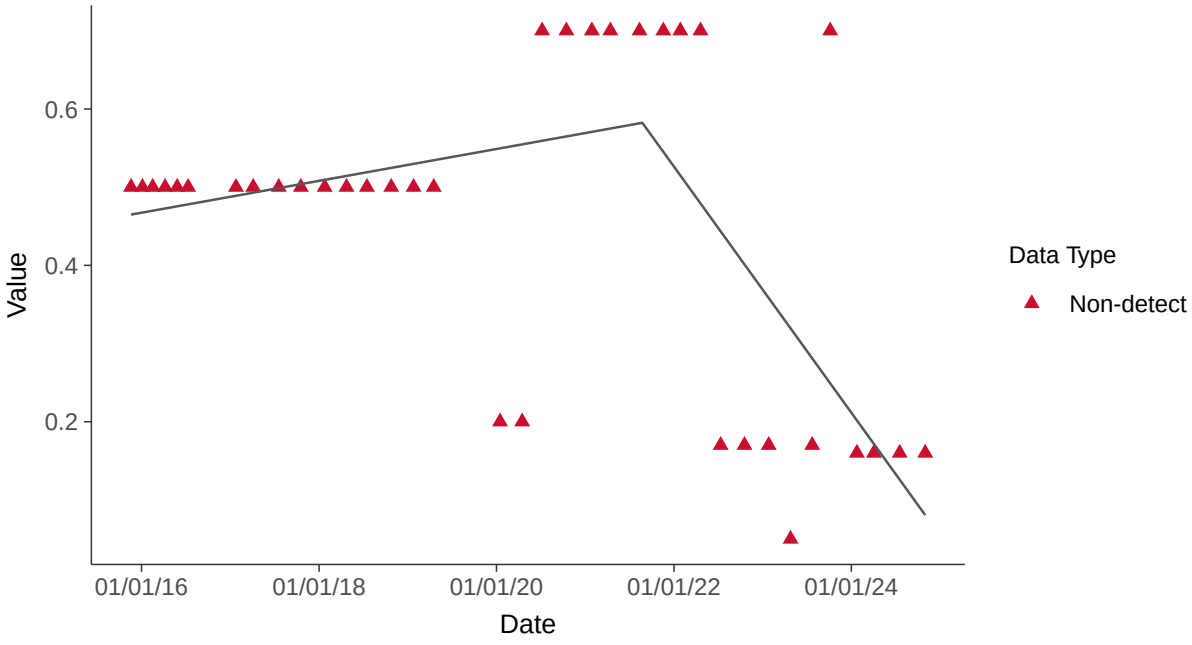
Boxplot by Season

Beryllium, MW-3 (ug/L)



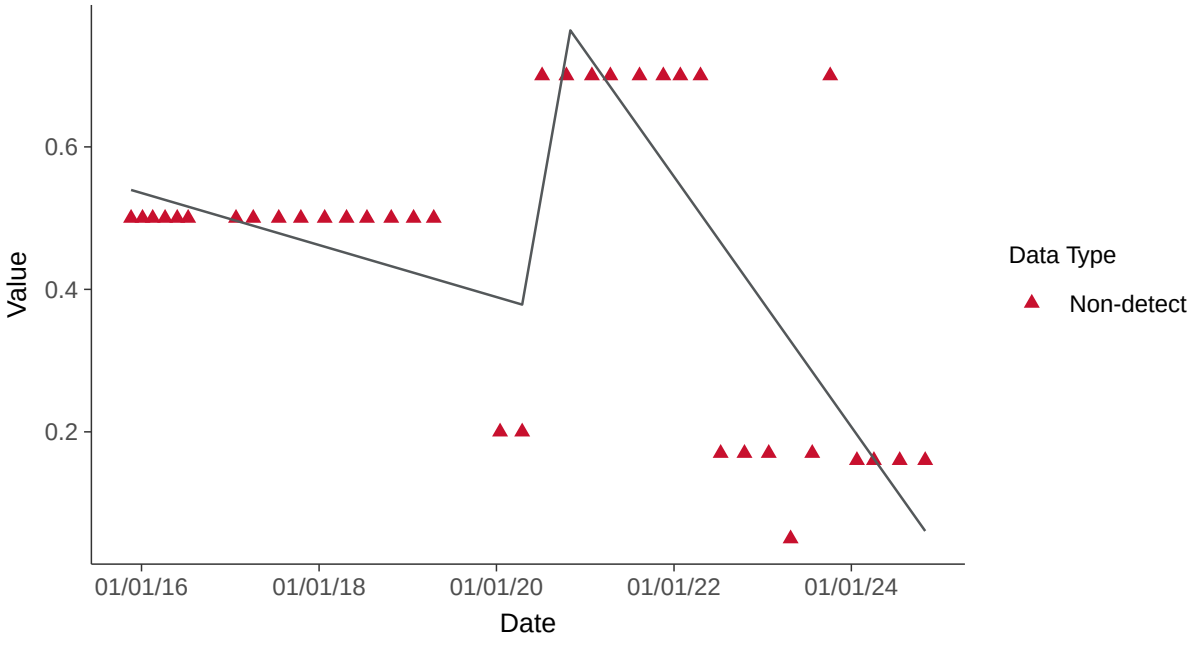
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-3 (ug/L)

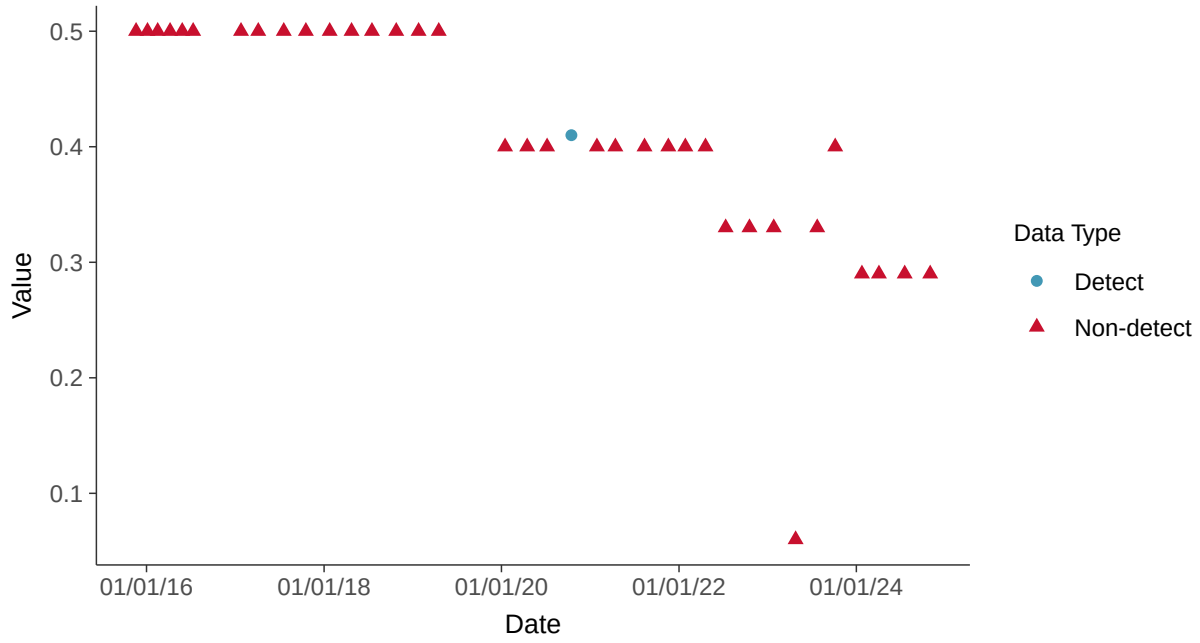


App. IV: Cadmium, MW-3

ID: 03_03_106

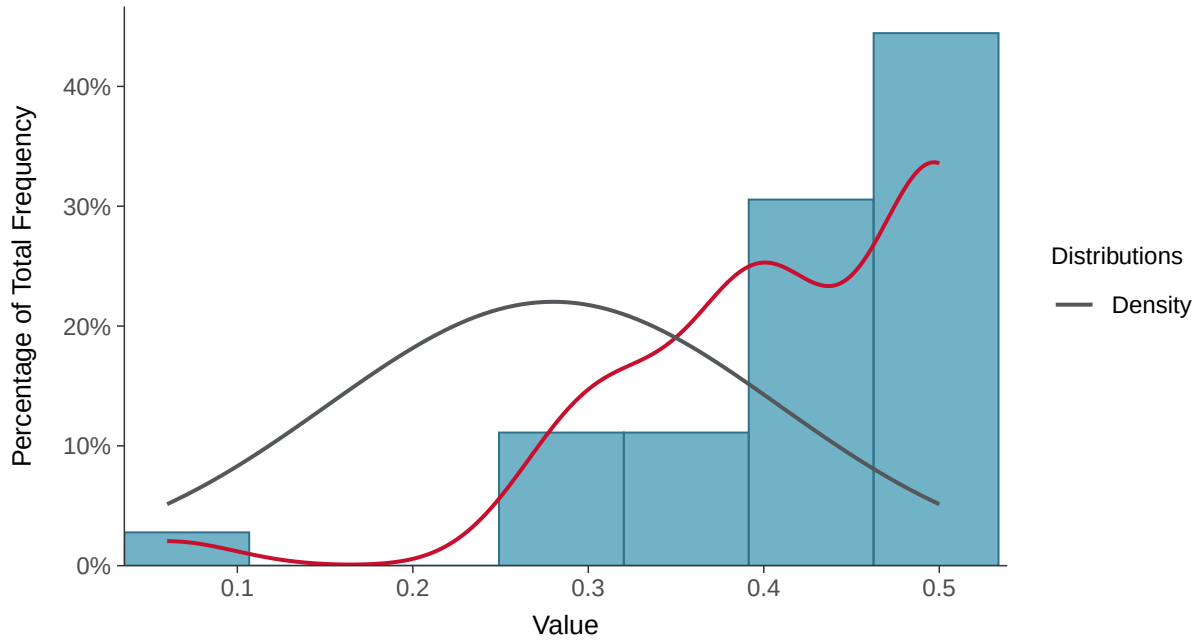
Scatter Plot

Cadmium, MW-3 (ug/L)



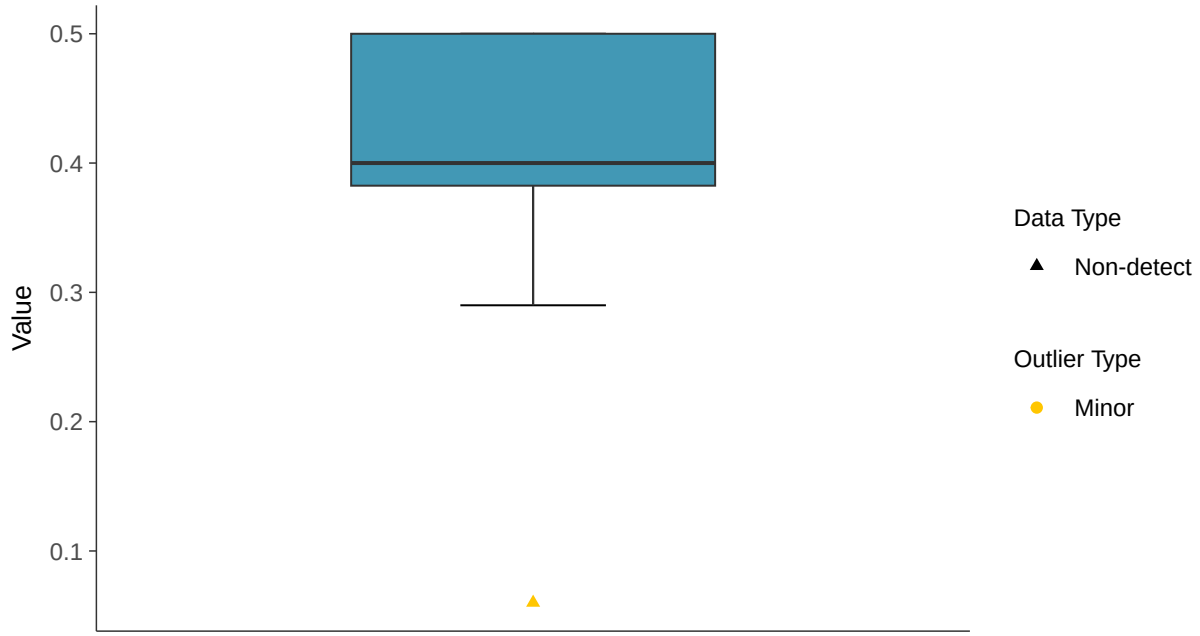
Histogram

Cadmium, MW-3 (ug/L)



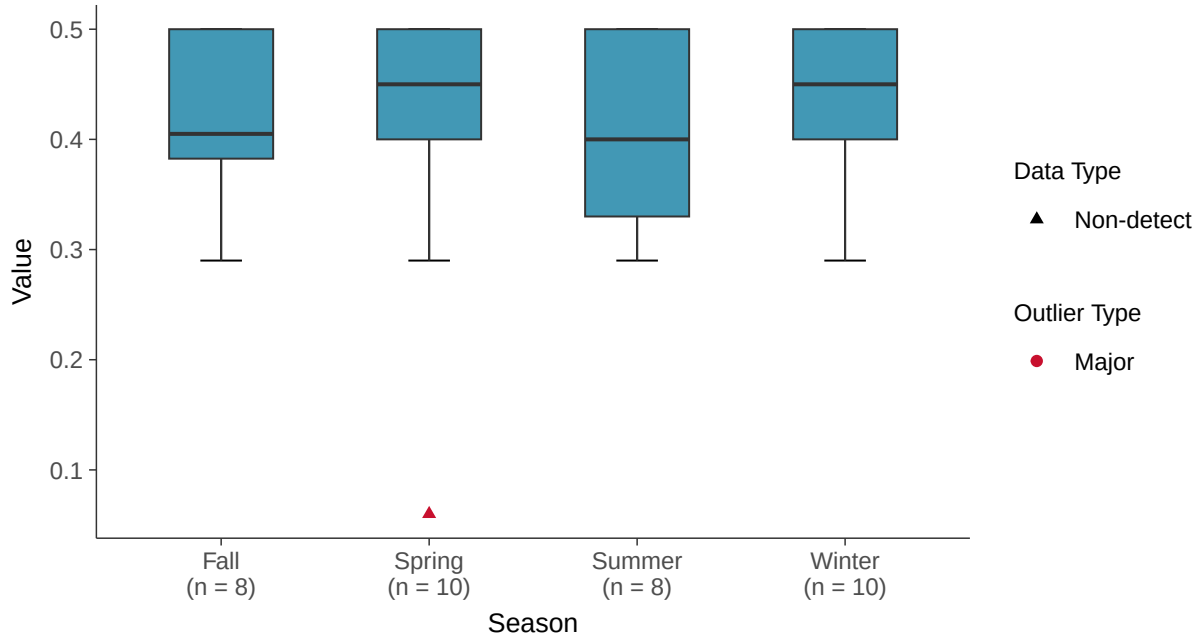
Boxplot

Cadmium, MW-3 (ug/L)



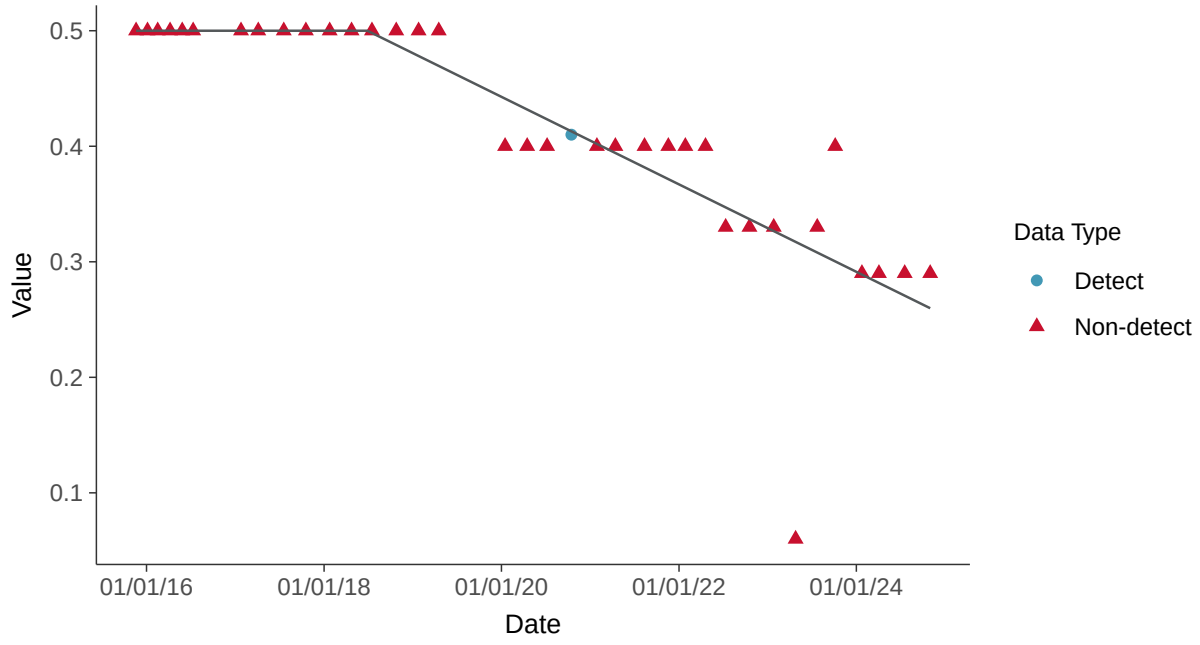
Boxplot by Season

Cadmium, MW-3 (ug/L)



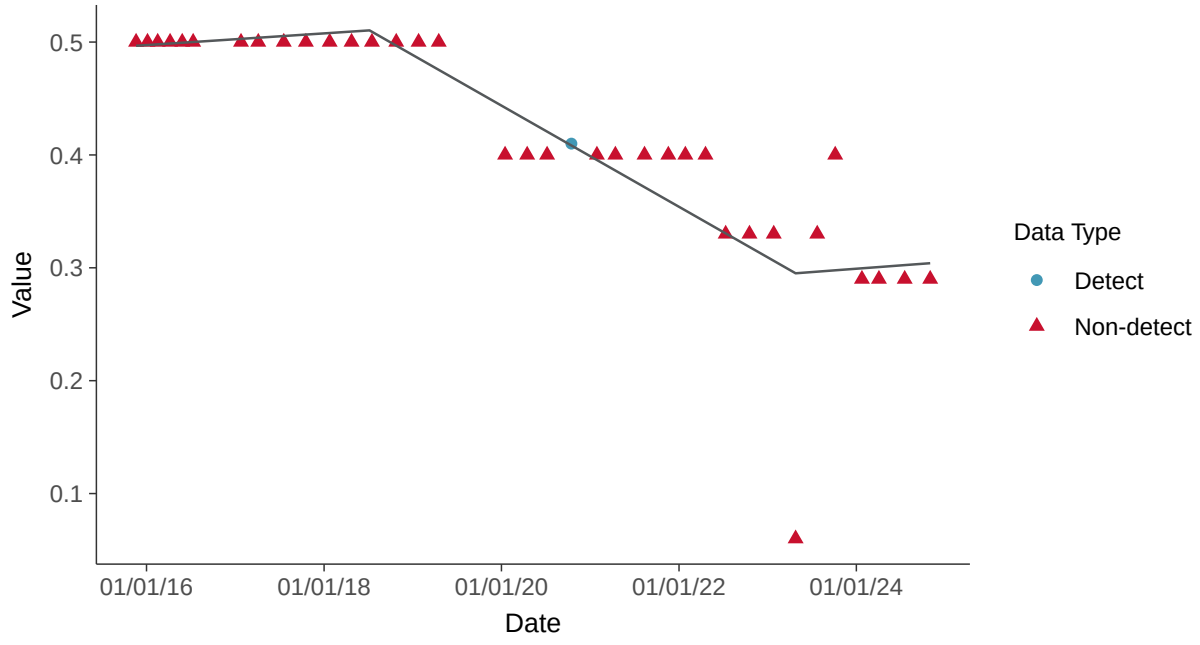
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-3 (ug/L)

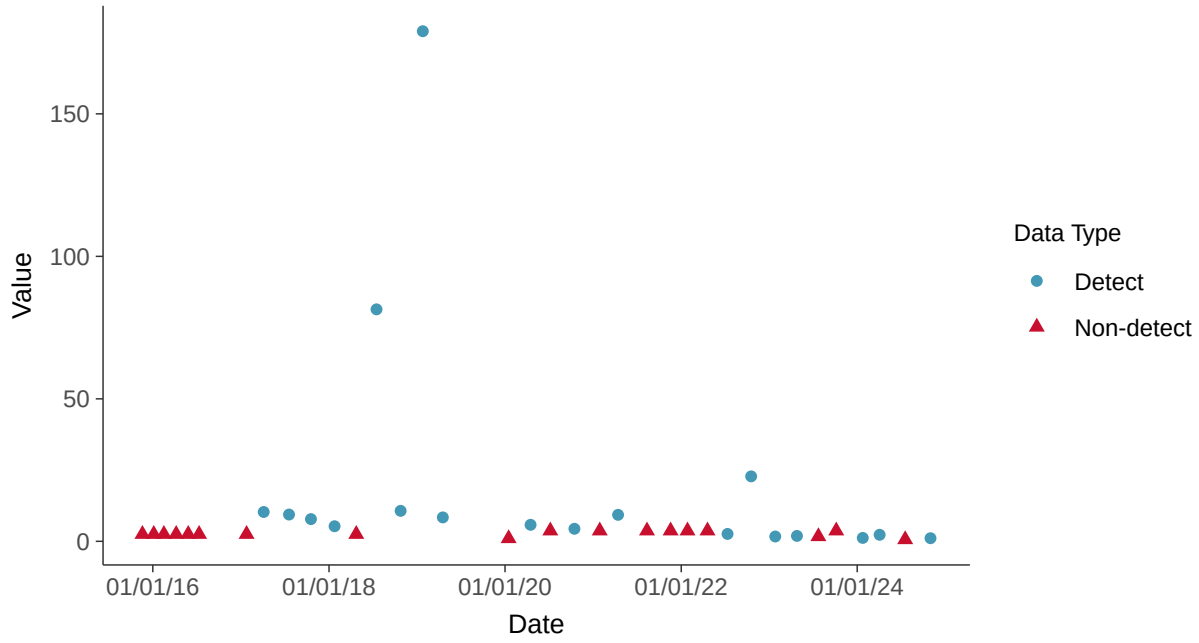


App. IV: Chromium, MW-3

ID: 03_03_109

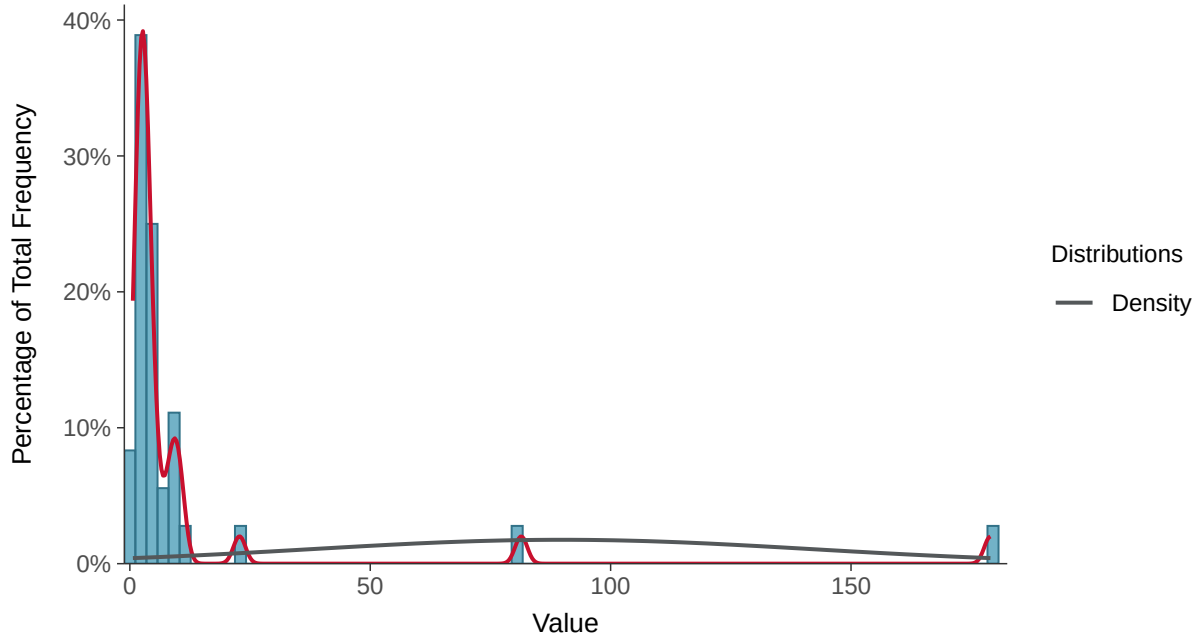
Scatter Plot

Chromium, MW-3 (ug/L)



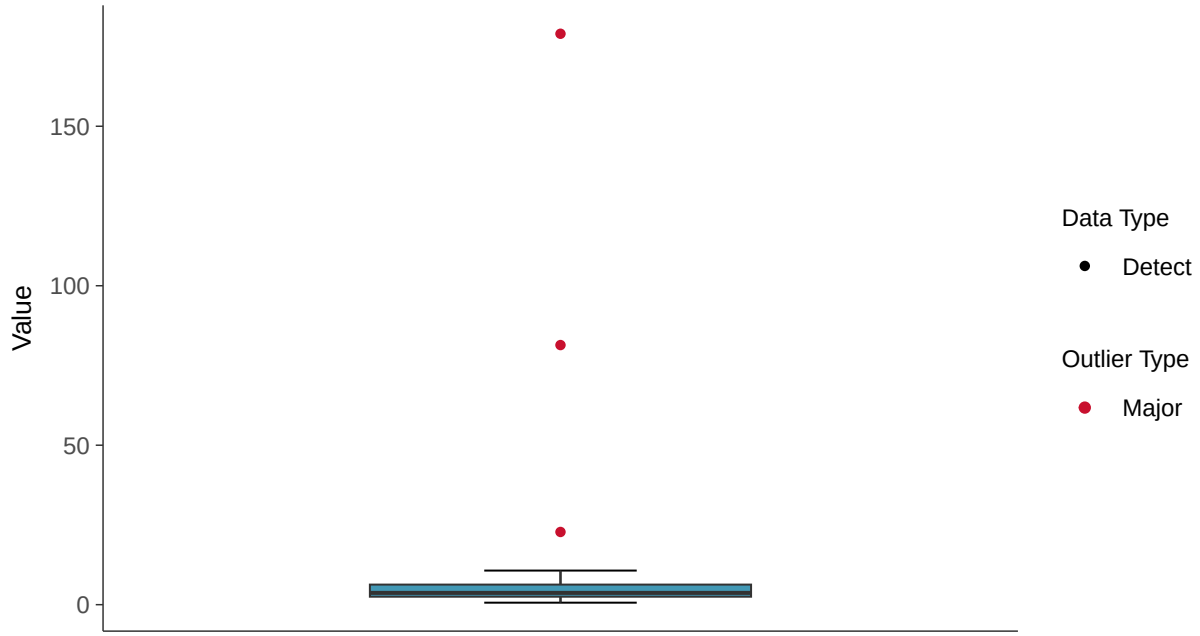
Histogram

Chromium, MW-3 (ug/L)



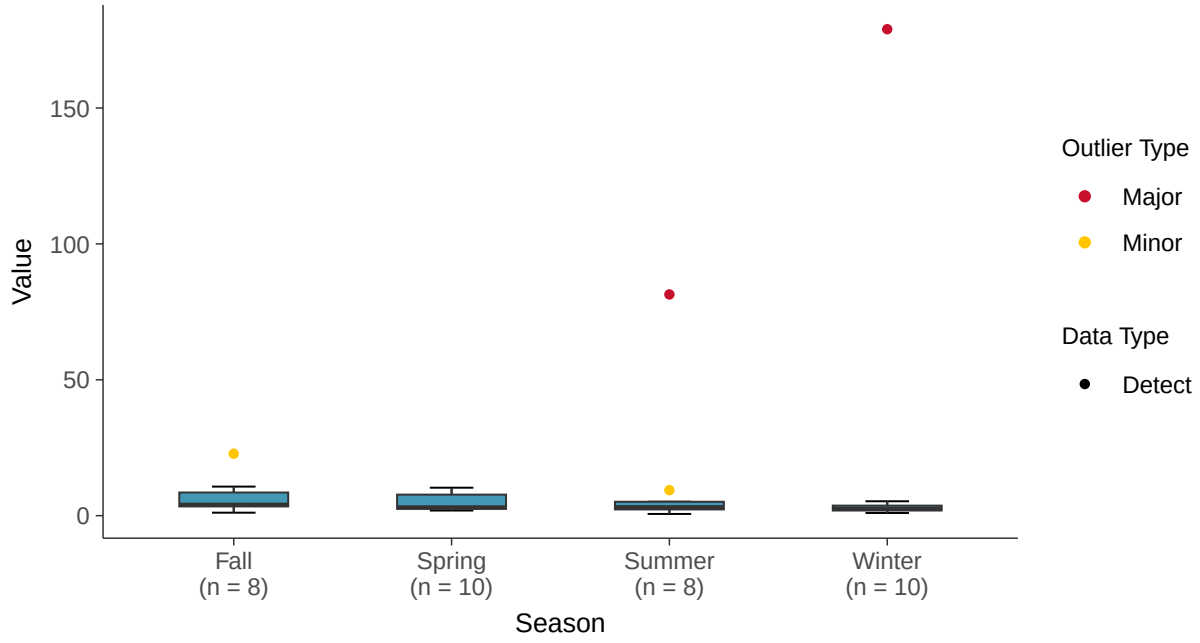
Boxplot

Chromium, MW-3 (ug/L)



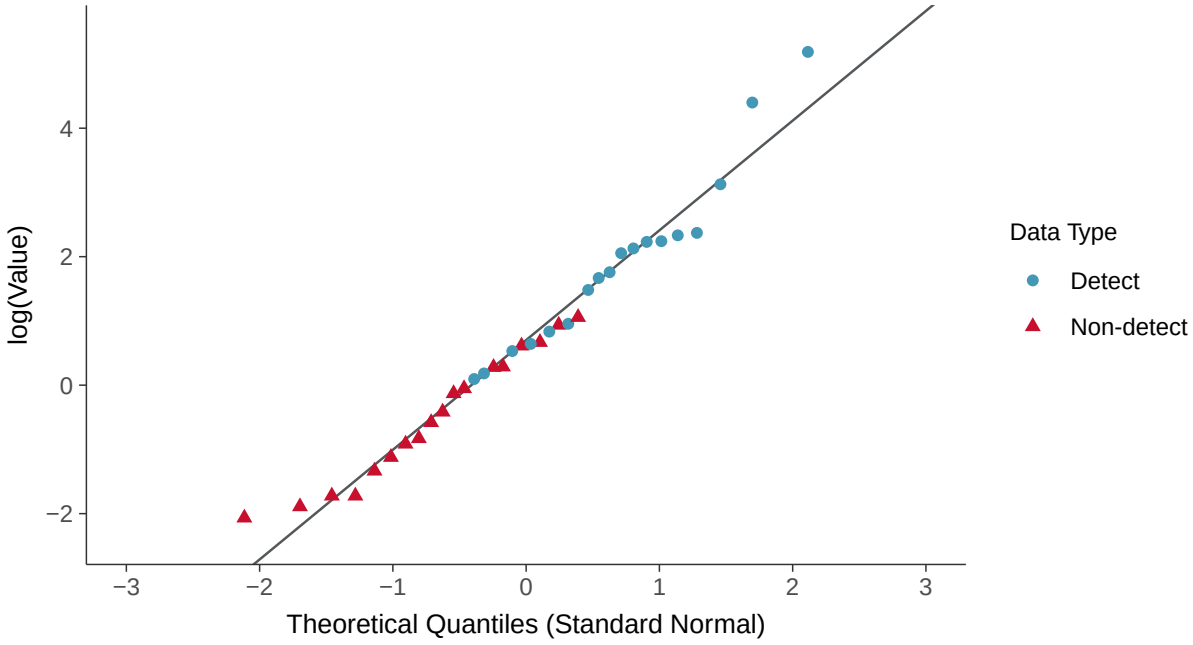
Boxplot by Season

Chromium, MW-3 (ug/L)



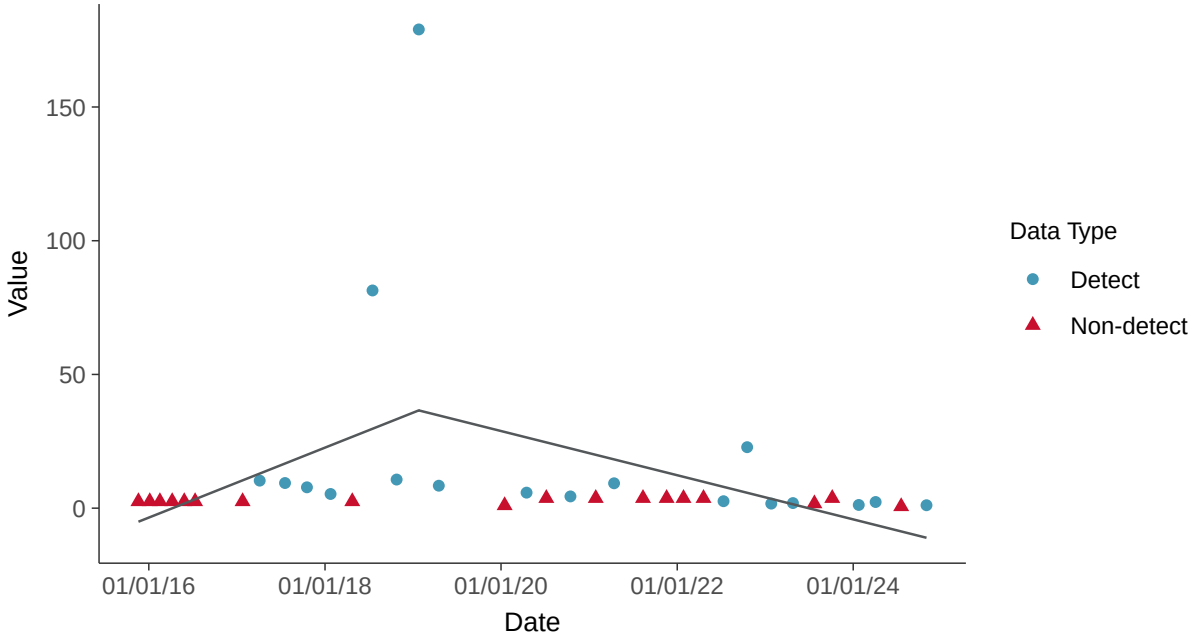
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-3 (ug/L)



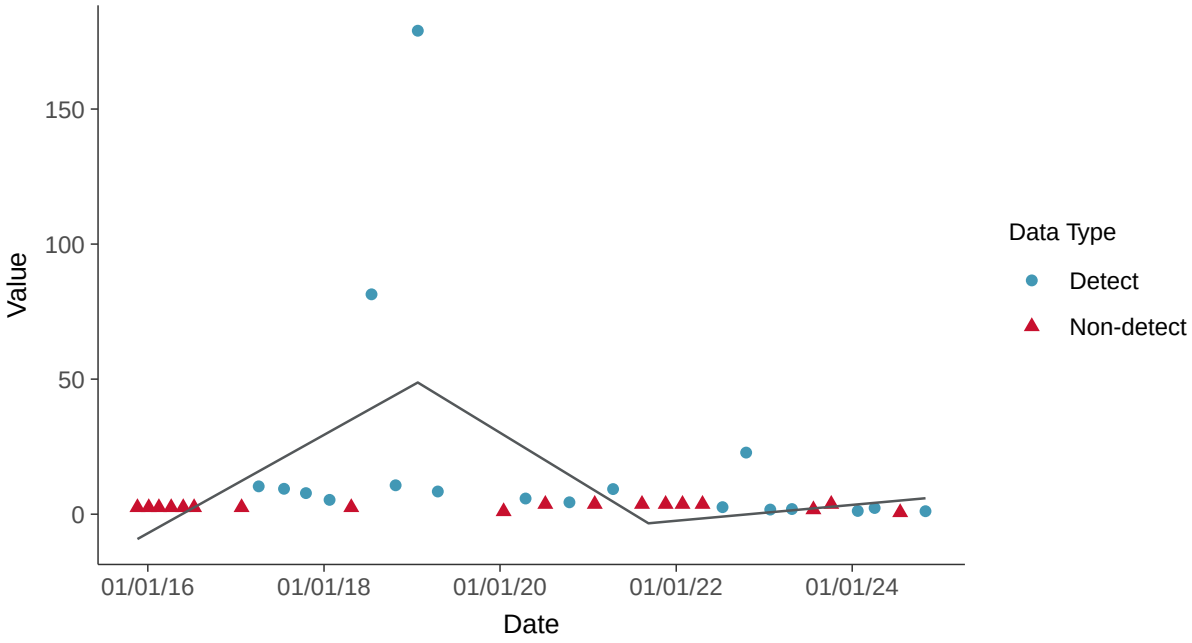
Trend Regression: Piecewise Linear-Linear

Chromium, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-3 (ug/L)

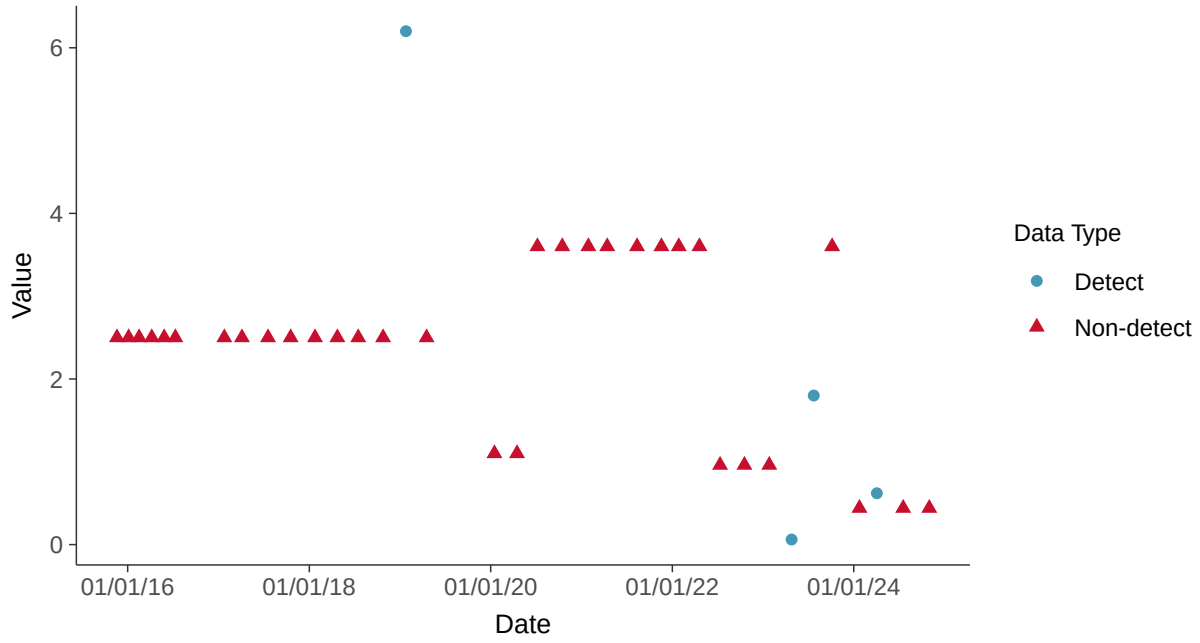


App. IV: Cobalt, MW-3

ID: 03_03_110

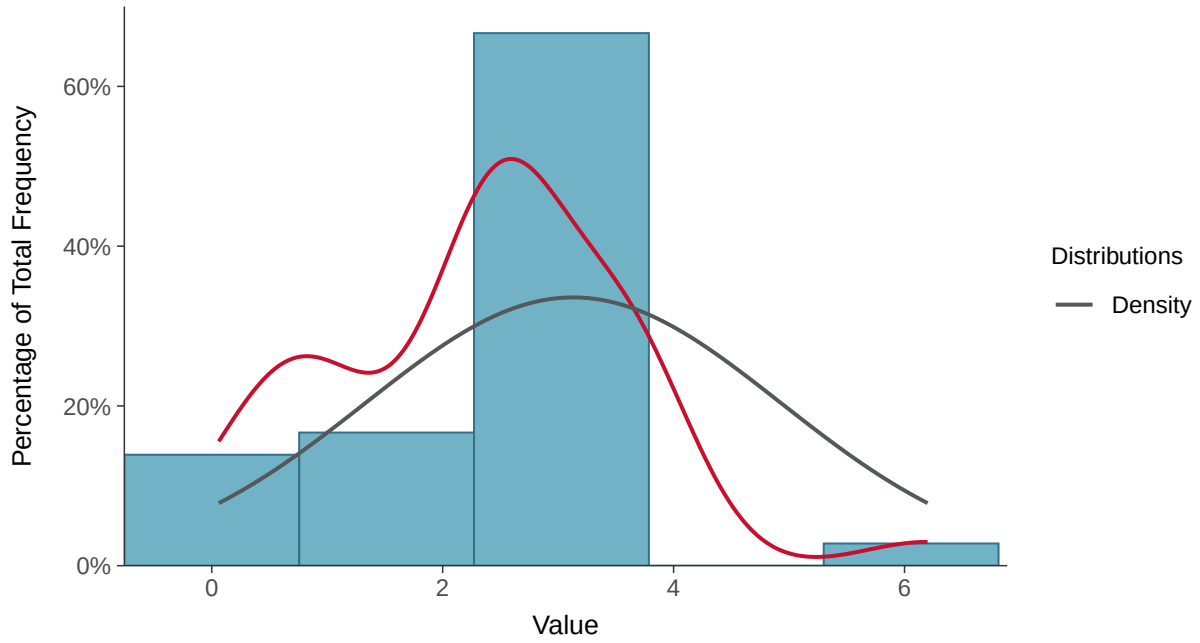
Scatter Plot

Cobalt, MW-3 (ug/L)



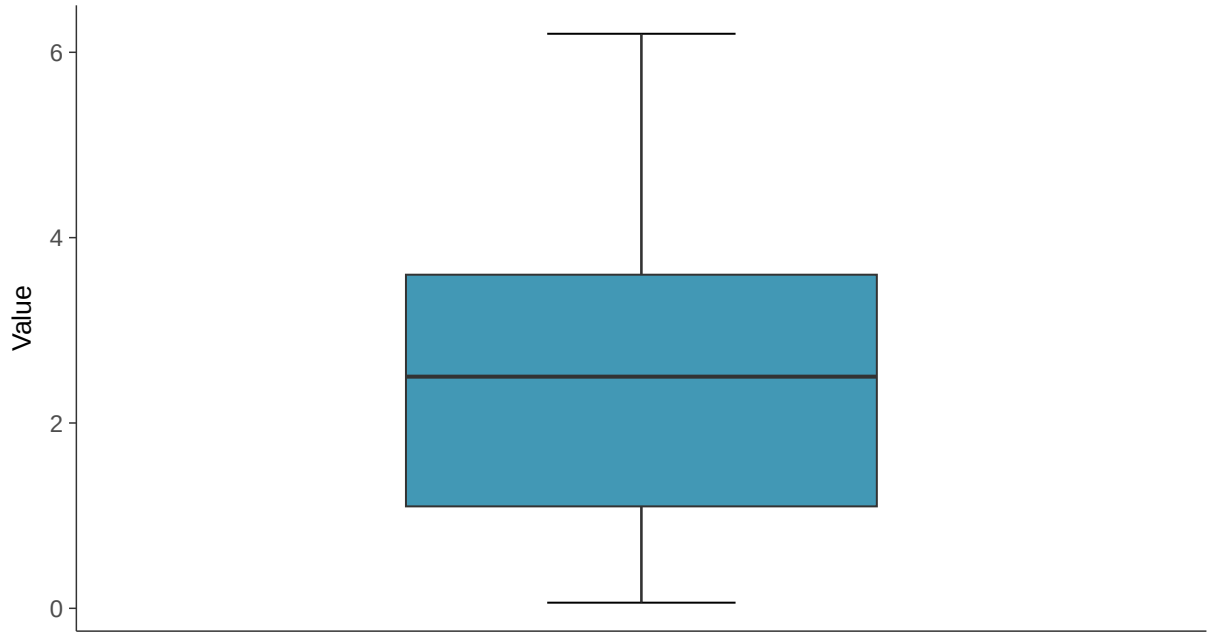
Histogram

Cobalt, MW-3 (ug/L)



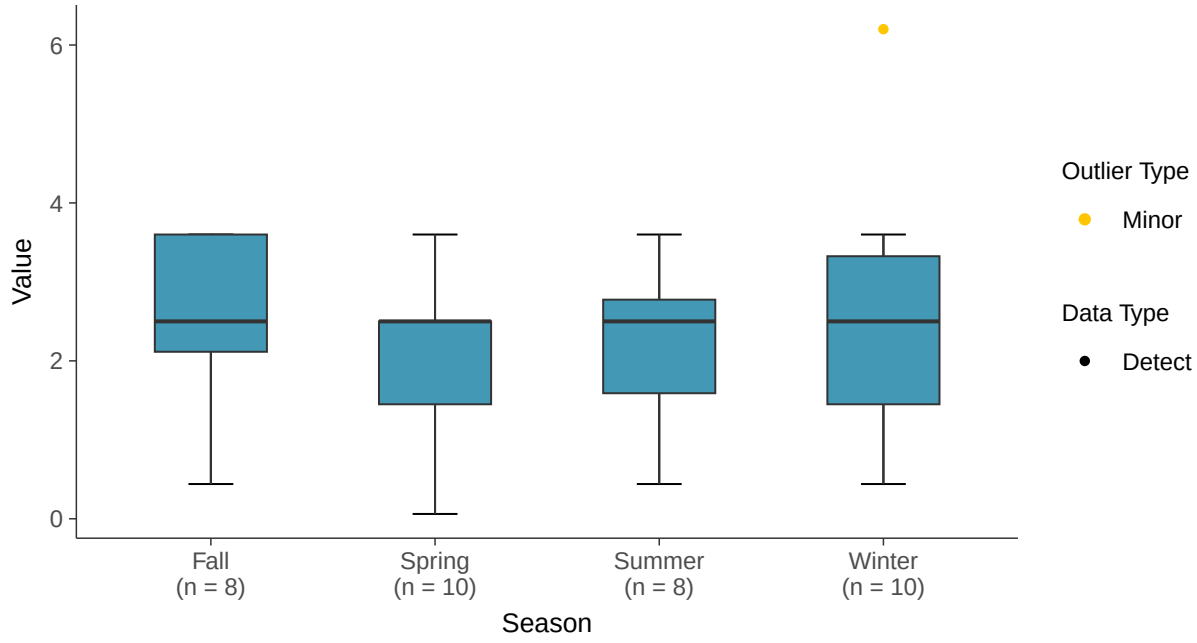
Boxplot

Cobalt, MW-3 (ug/L)



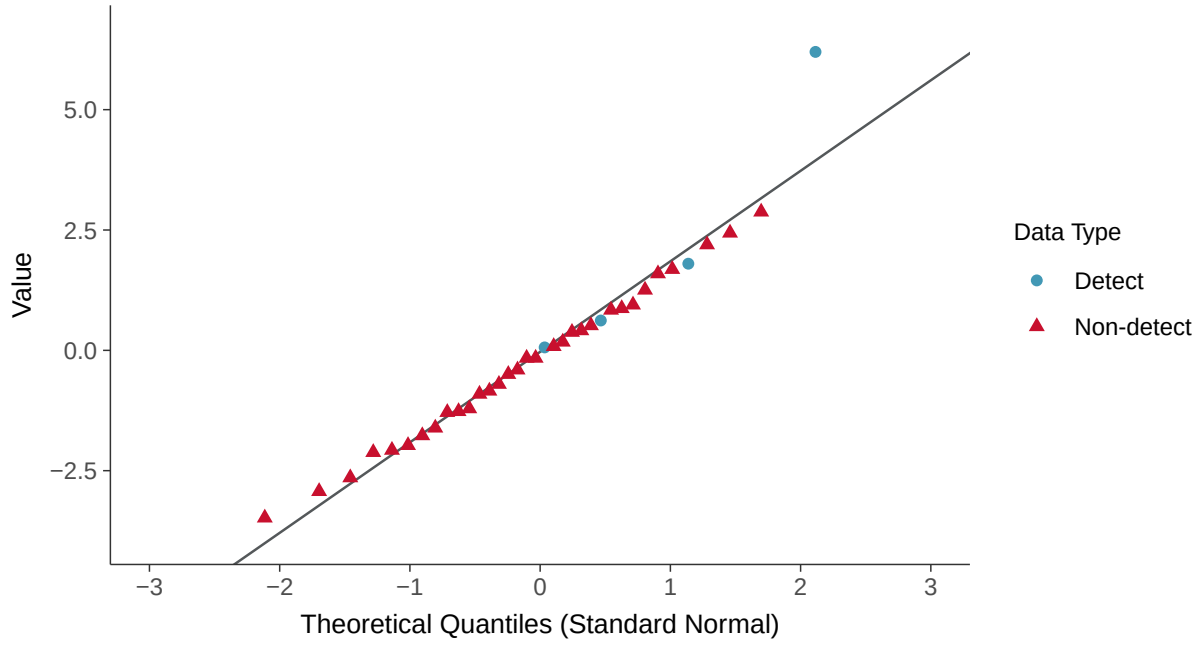
Boxplot by Season

Cobalt, MW-3 (ug/L)



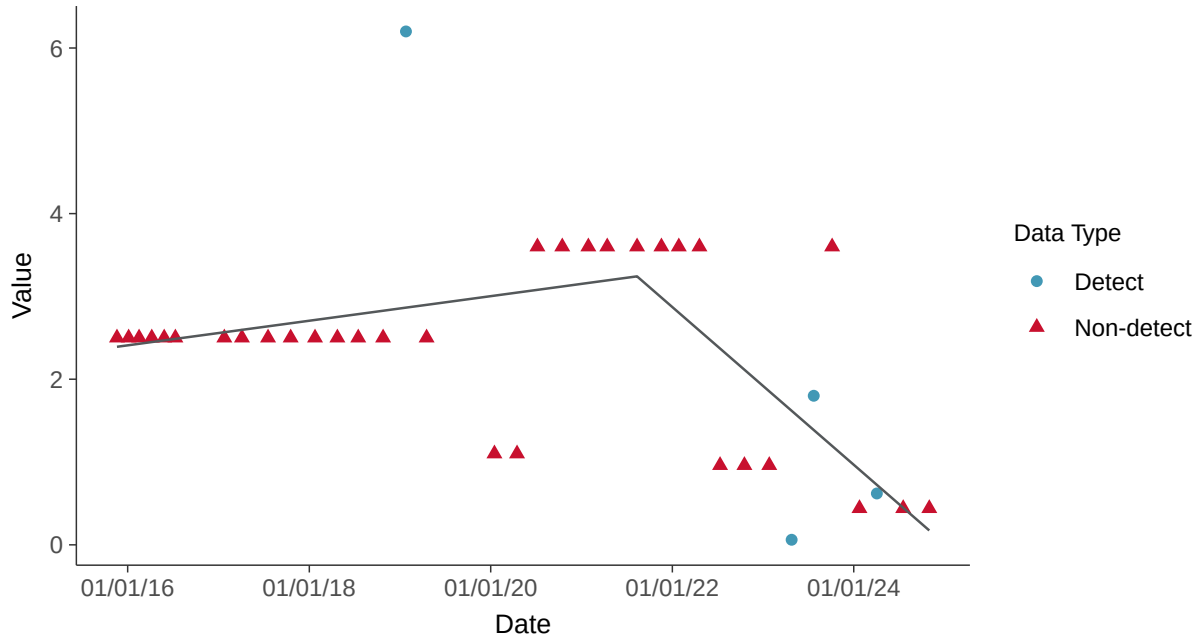
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-3 (ug/L)



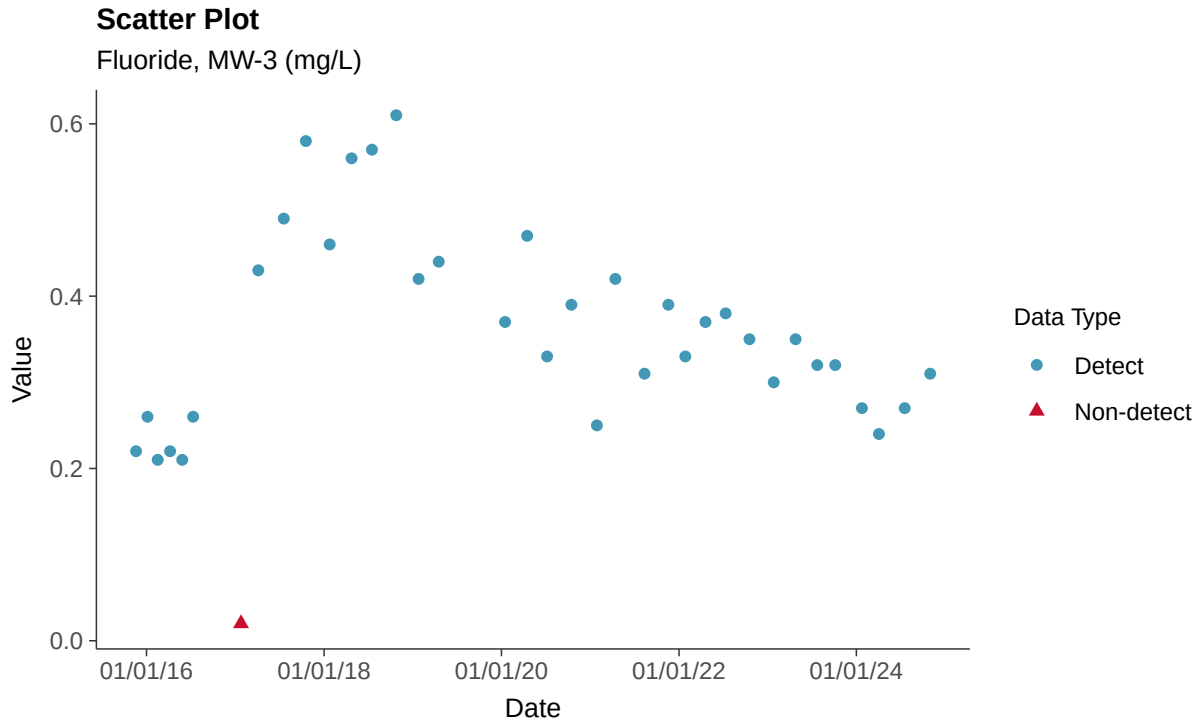
Trend Regression: Piecewise Linear-Linear

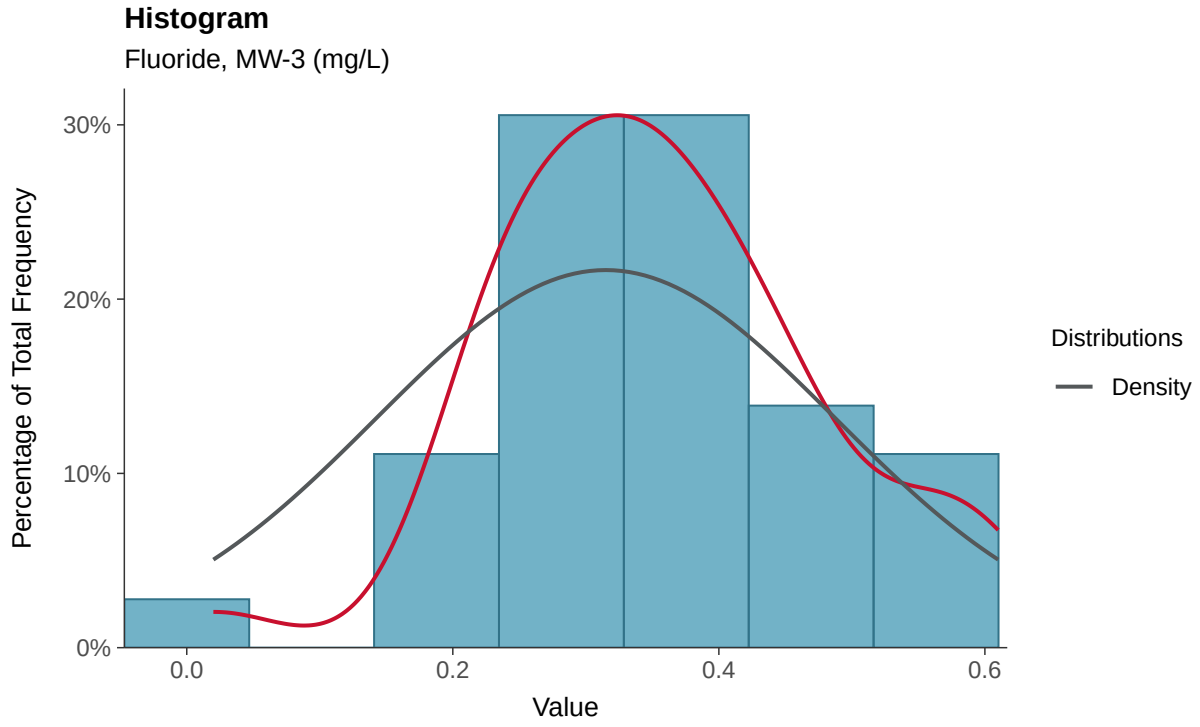
Cobalt, MW-3 (ug/L)



App. IV: Fluoride, MW-3

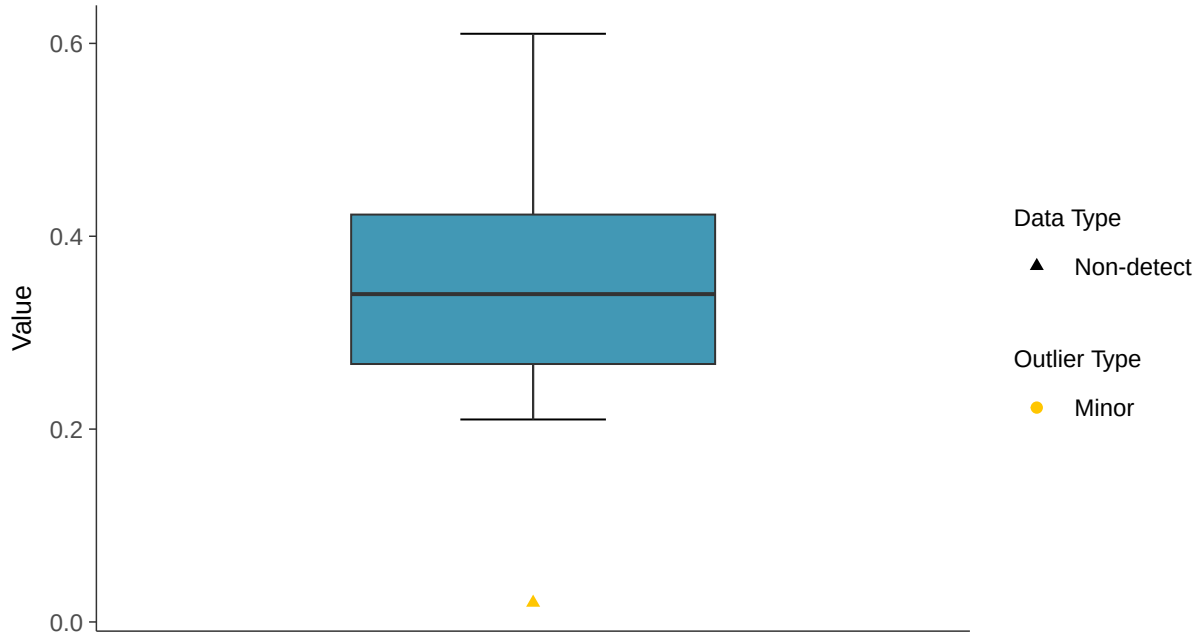
ID: 03_03_112





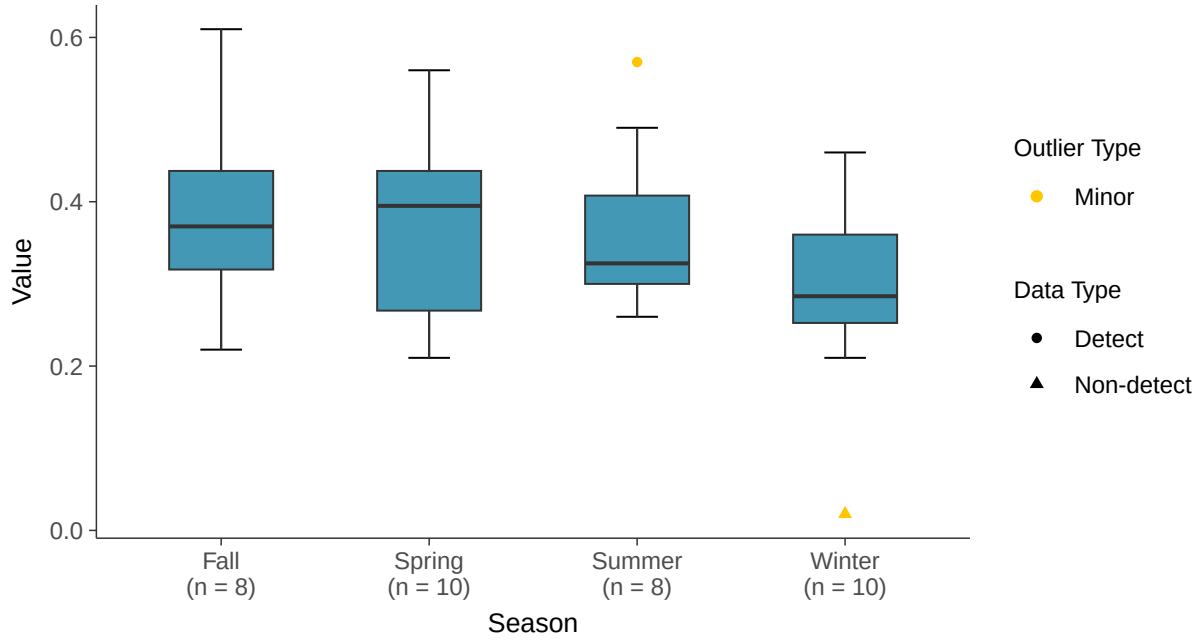
Boxplot

Fluoride, MW-3 (mg/L)



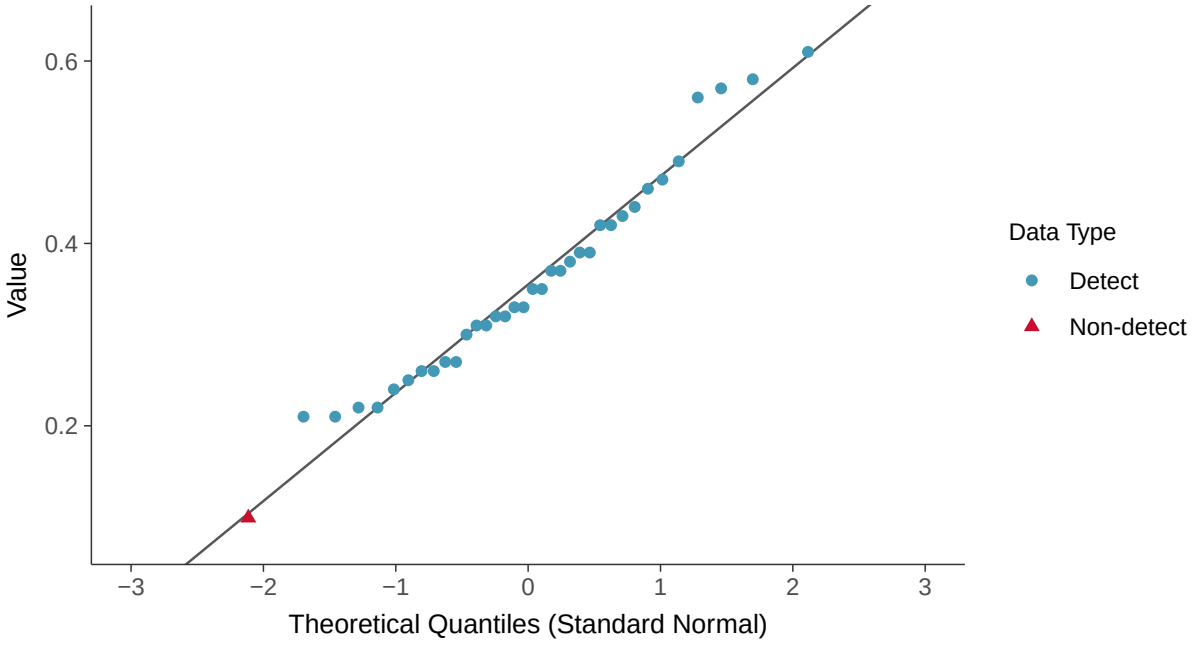
Boxplot by Season

Fluoride, MW-3 (mg/L)



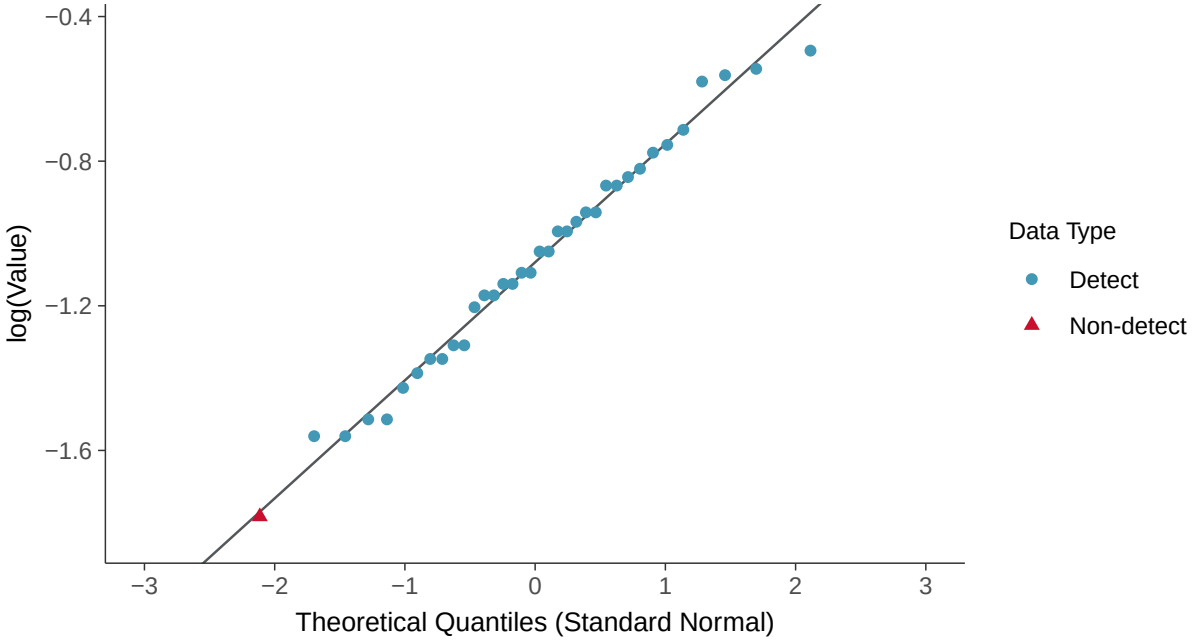
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



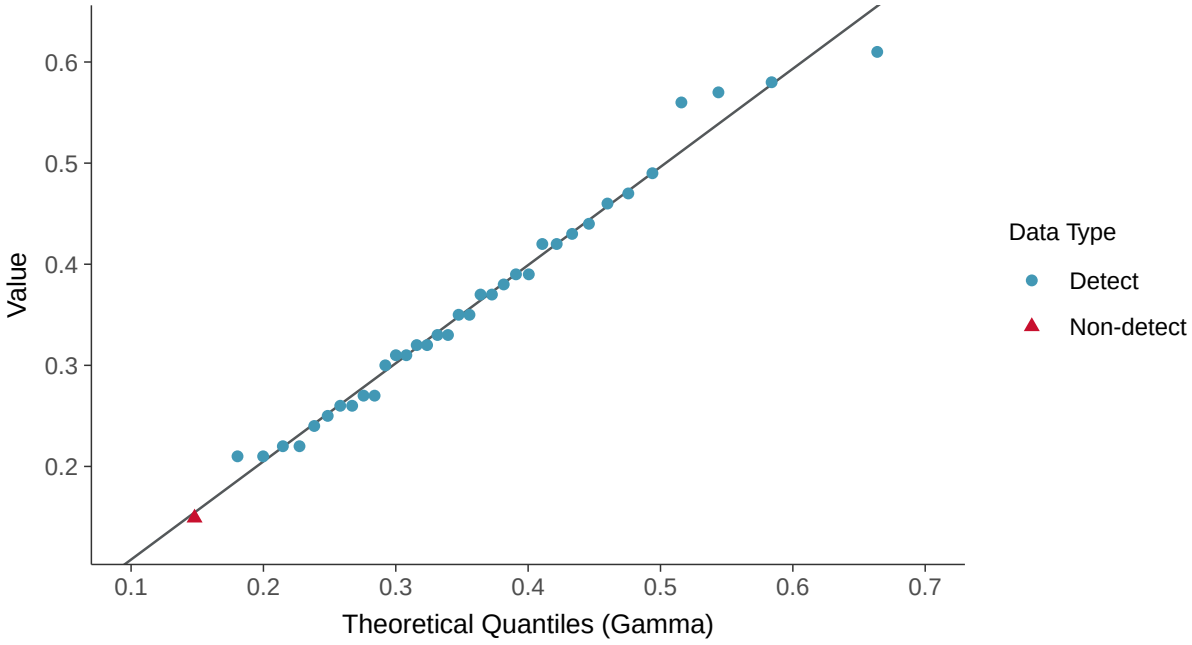
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



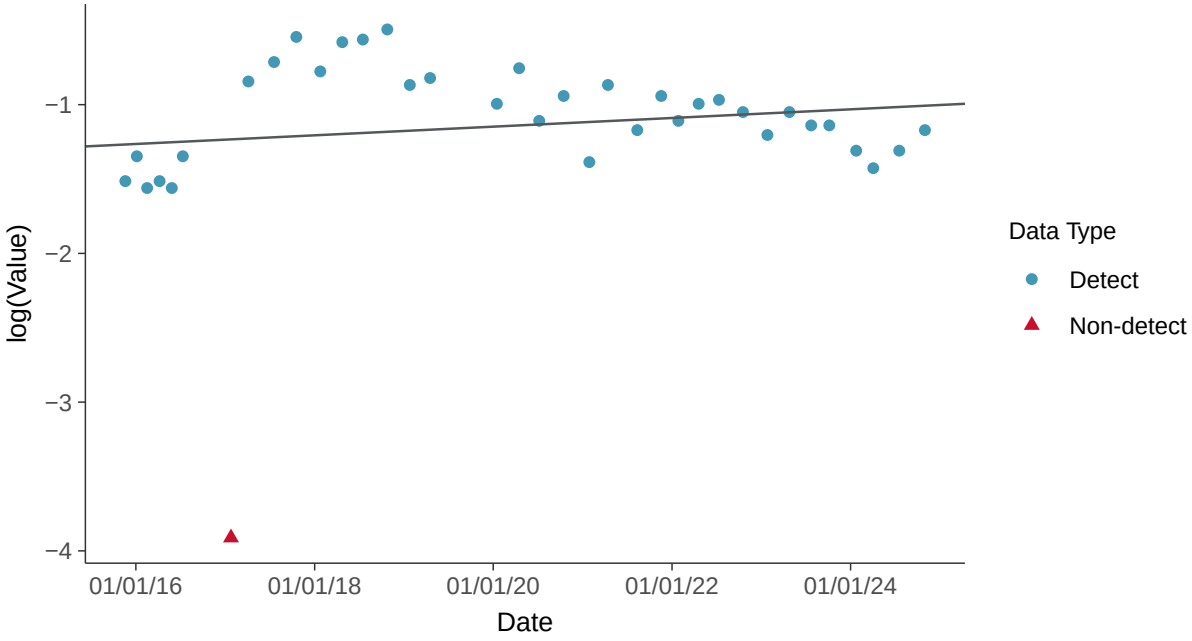
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-3 (mg/L)



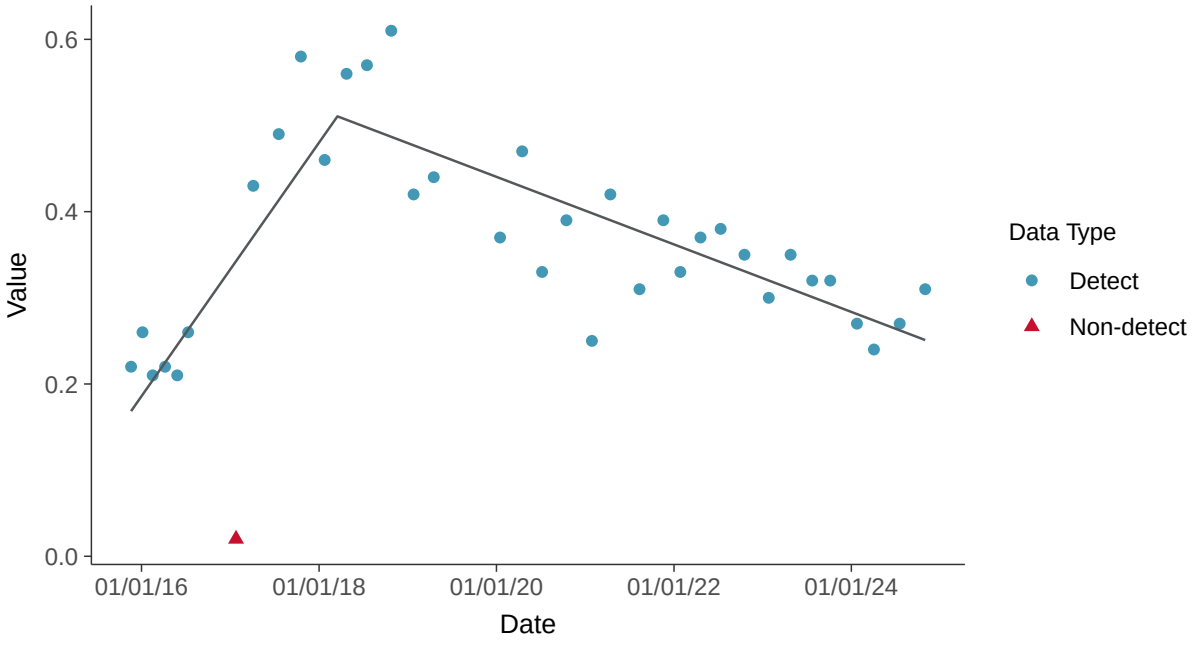
Trend Regression: Lognormal MLE

Fluoride, MW-3 (mg/L)



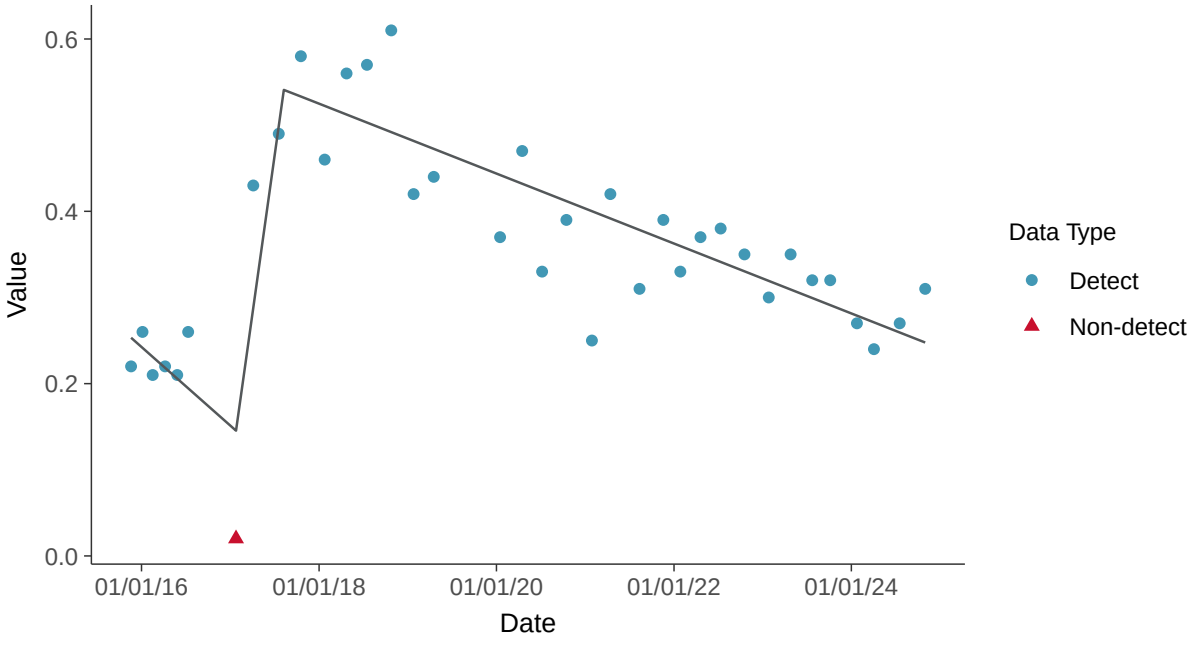
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-3 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-3 (mg/L)

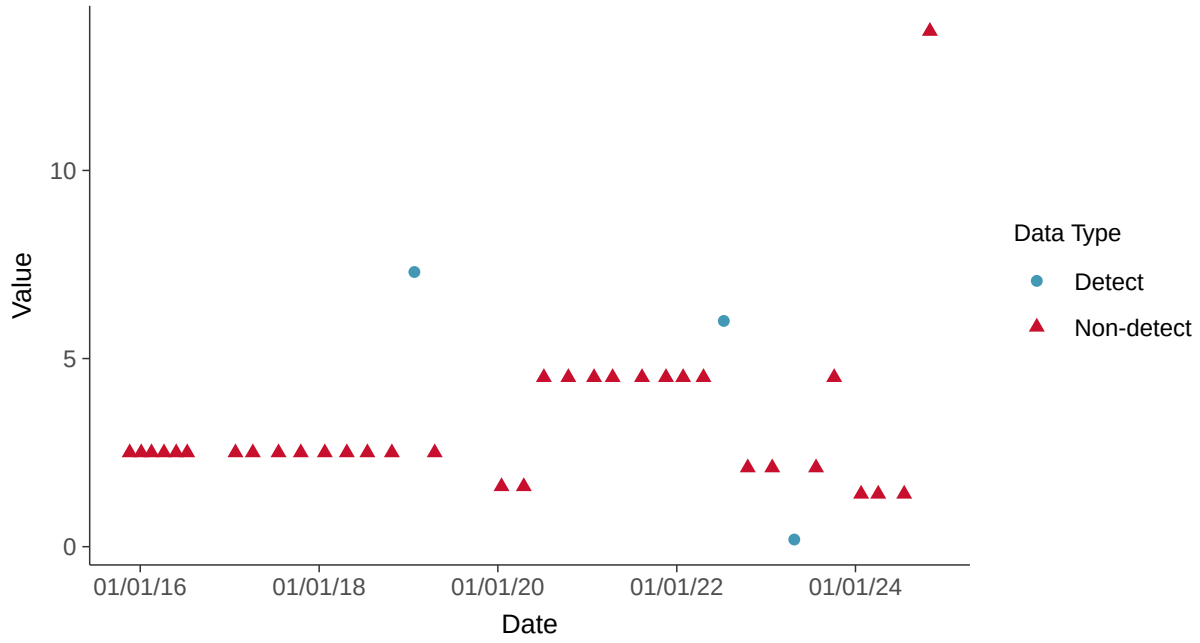


App. IV: Lead, MW-3

ID: 03_03_113

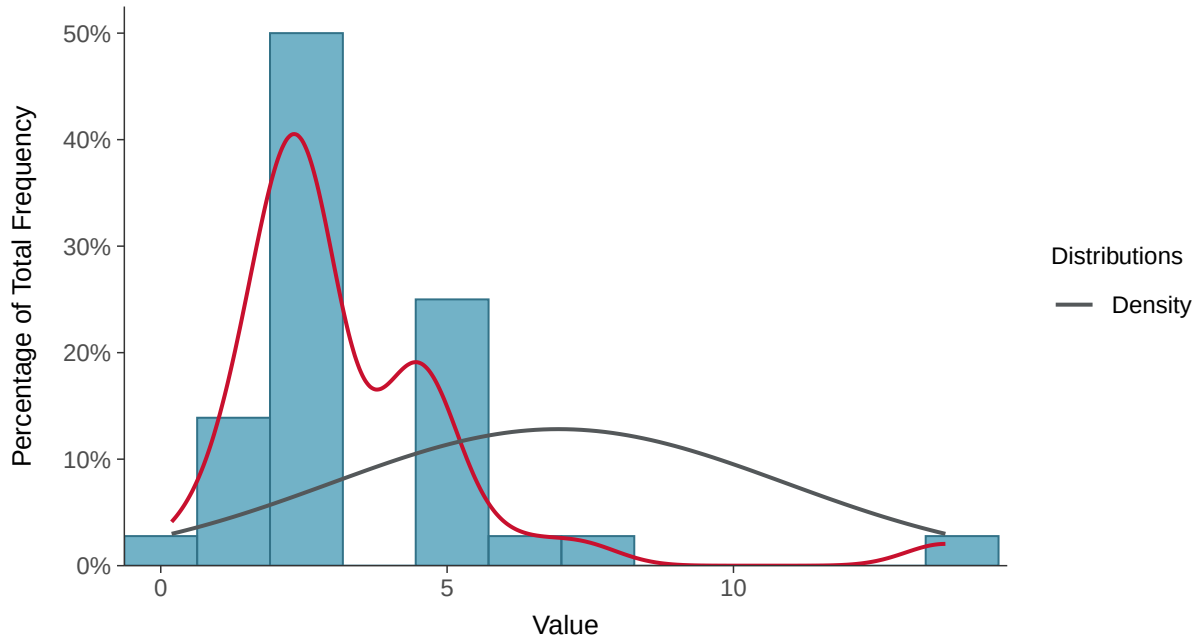
Scatter Plot

Lead, MW-3 (ug/L)



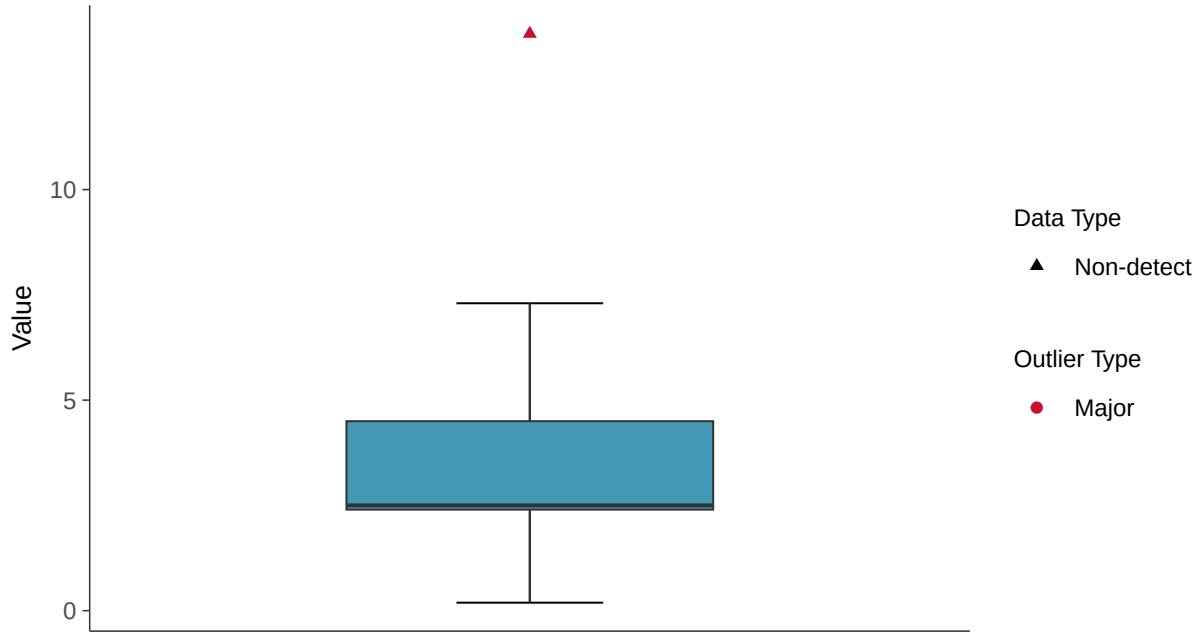
Histogram

Lead, MW-3 (ug/L)



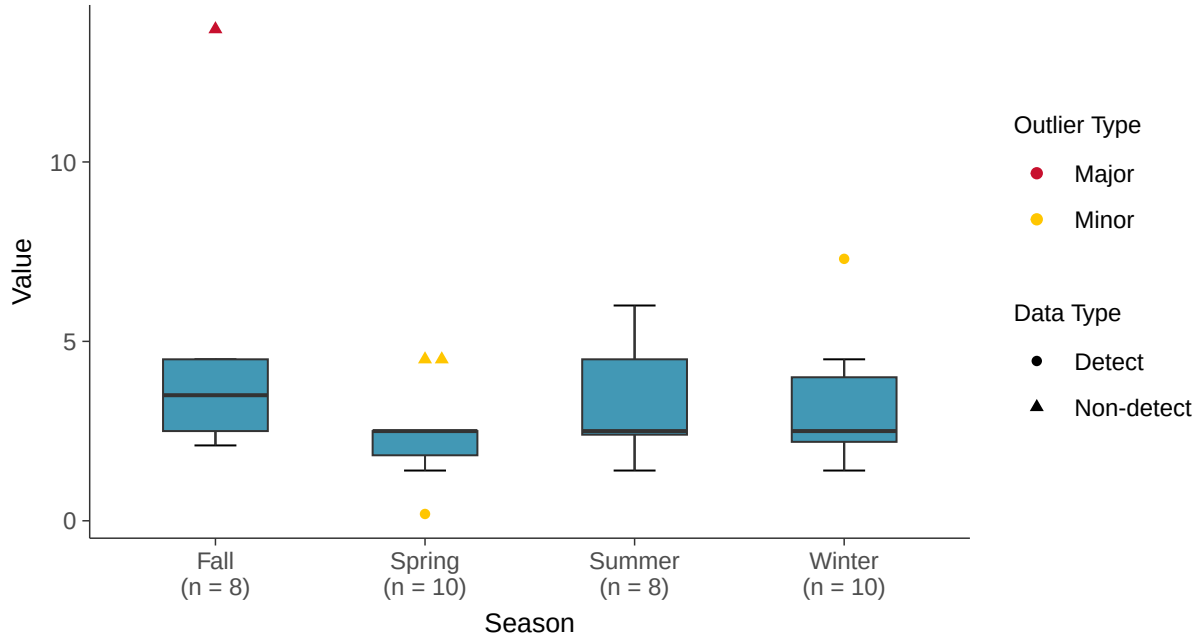
Boxplot

Lead, MW-3 (ug/L)



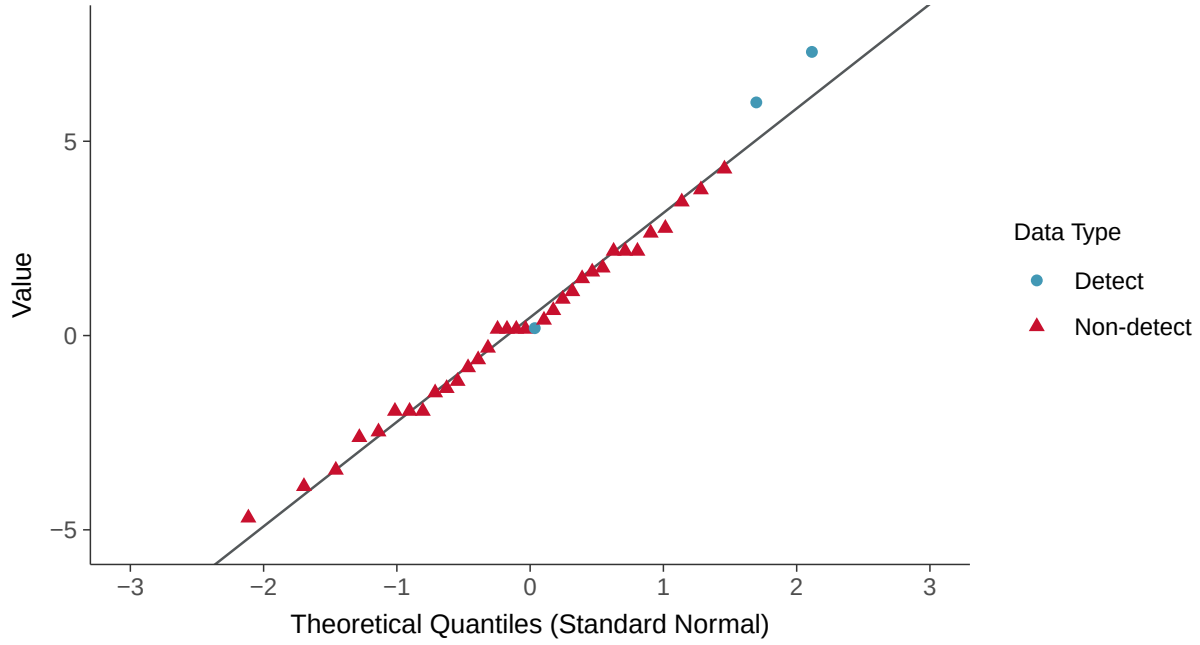
Boxplot by Season

Lead, MW-3 (ug/L)



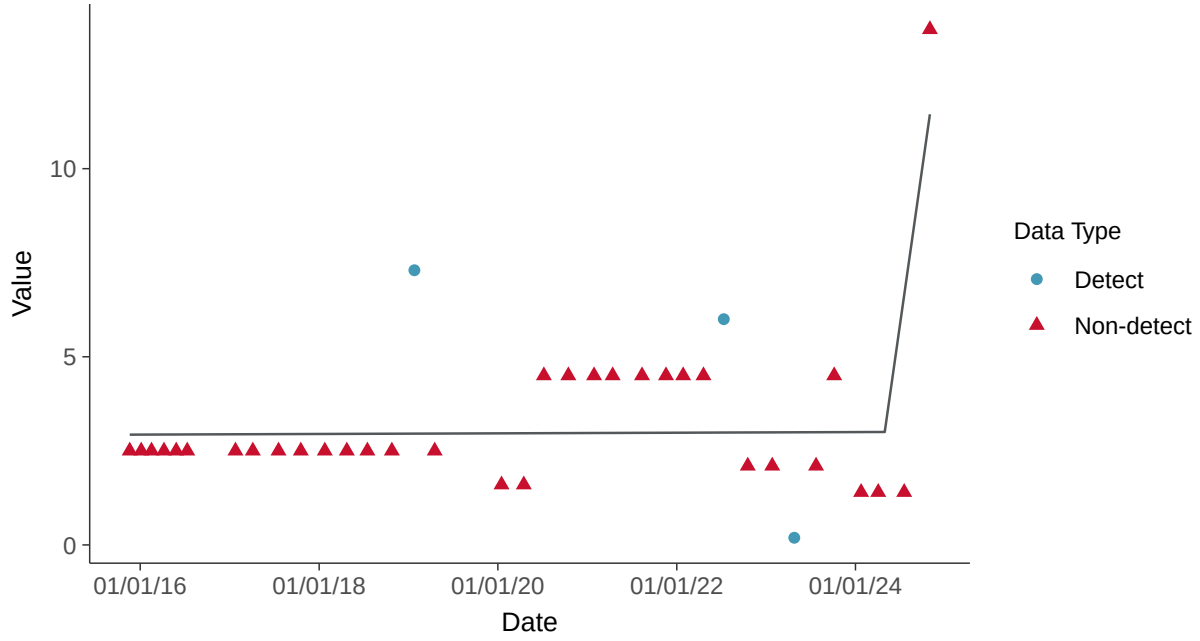
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-3 (ug/L)



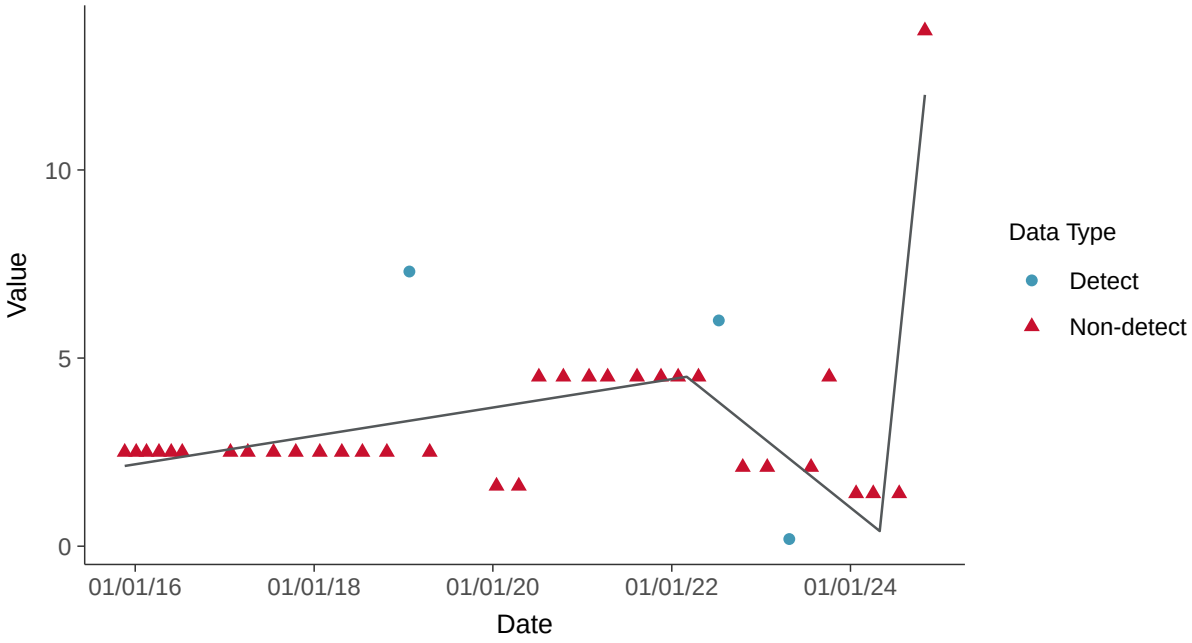
Trend Regression: Piecewise Linear-Linear

Lead, MW-3 (ug/L)



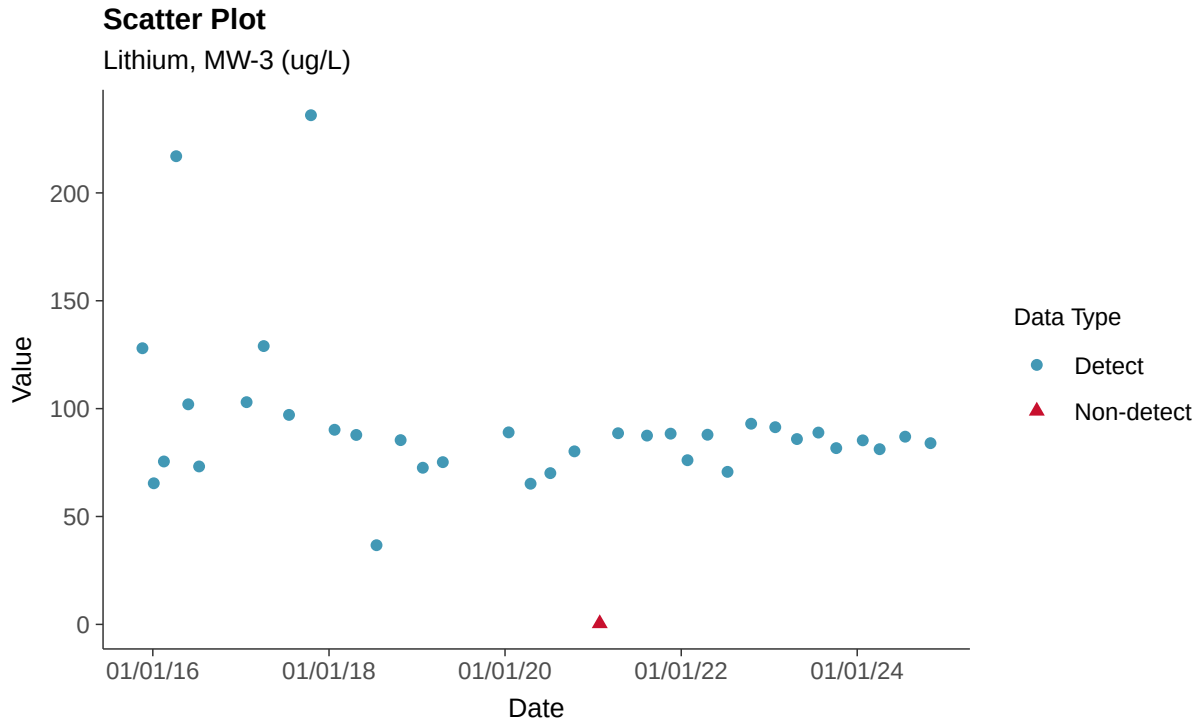
Trend Regression: Piecewise Linear-Linear-Linear

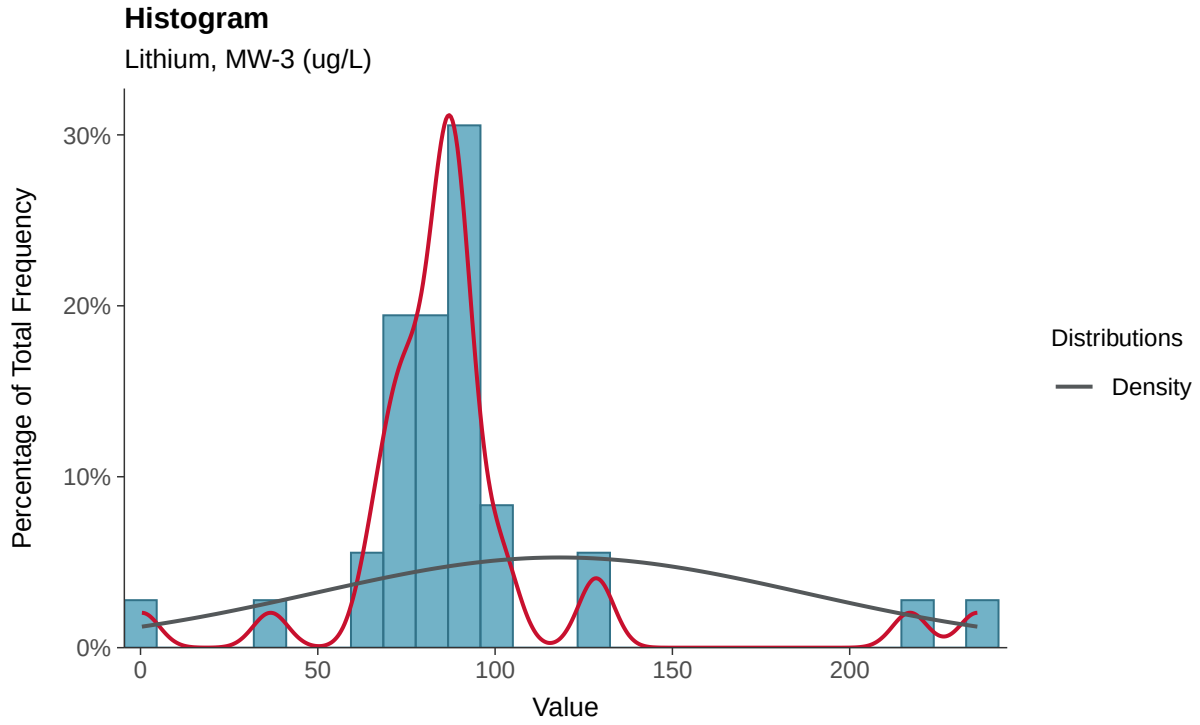
Lead, MW-3 (ug/L)



App. IV: Lithium, MW-3

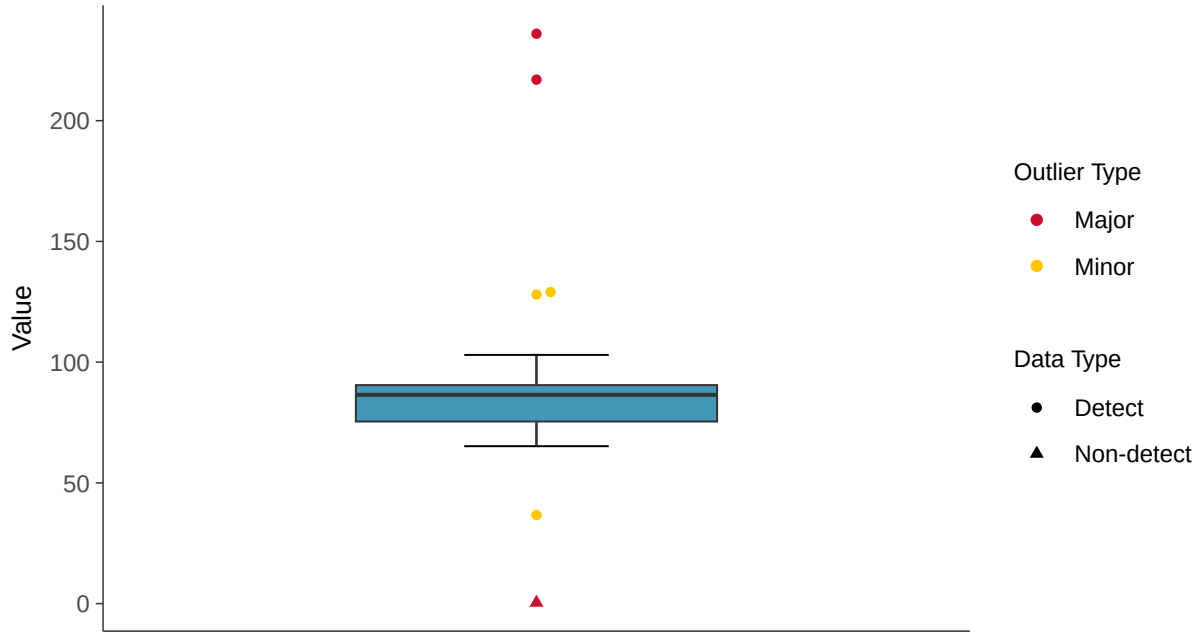
ID: 03_03_114





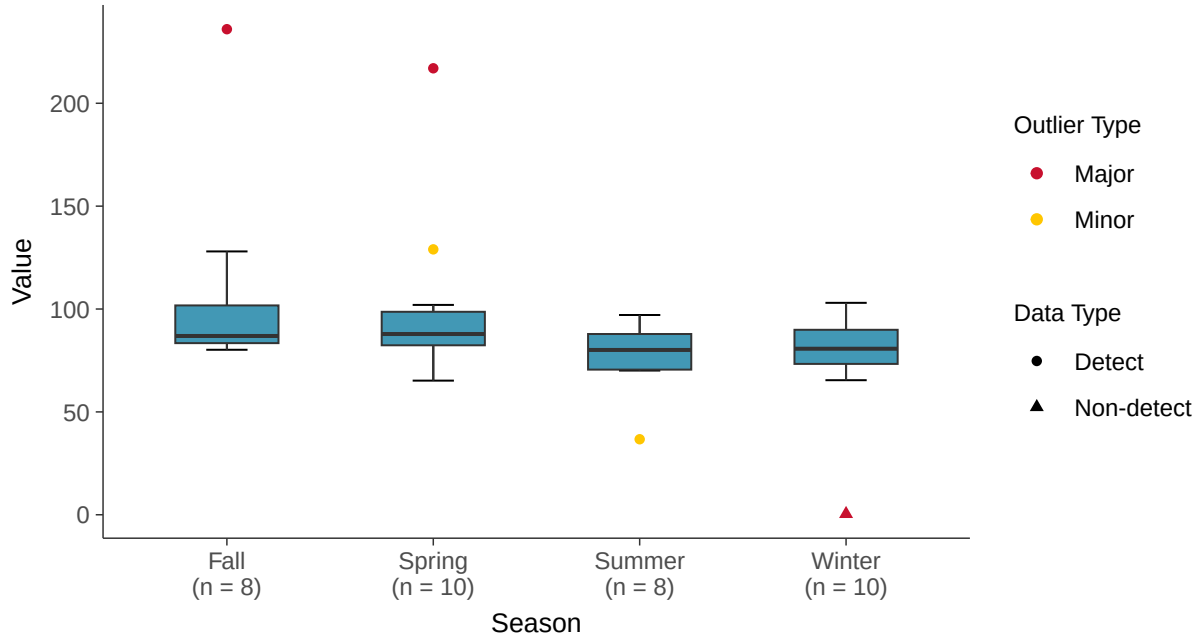
Boxplot

Lithium, MW-3 (ug/L)



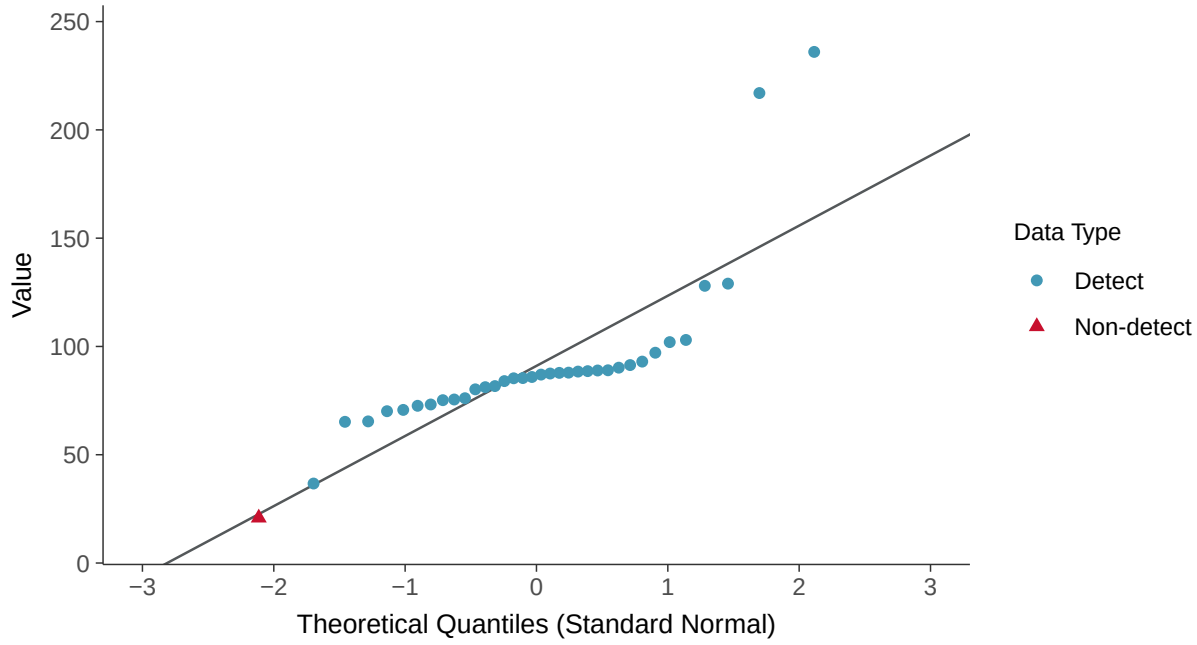
Boxplot by Season

Lithium, MW-3 (ug/L)



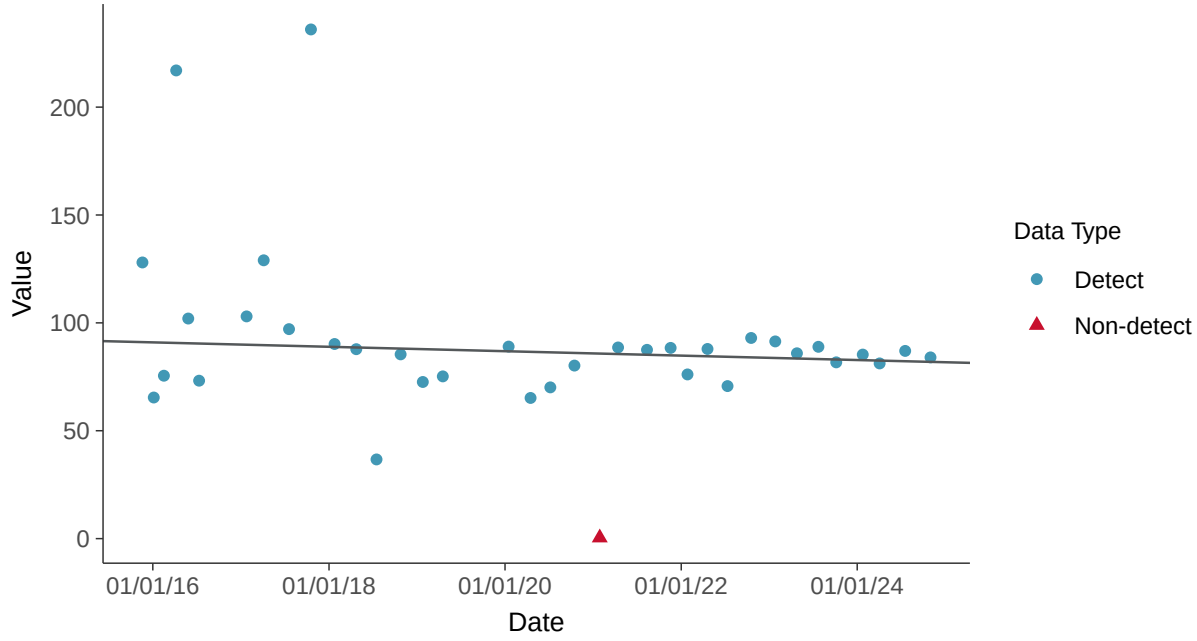
Normal Q-Q plot using ROS Imputed Estimates

Lithium, MW-3 (ug/L)



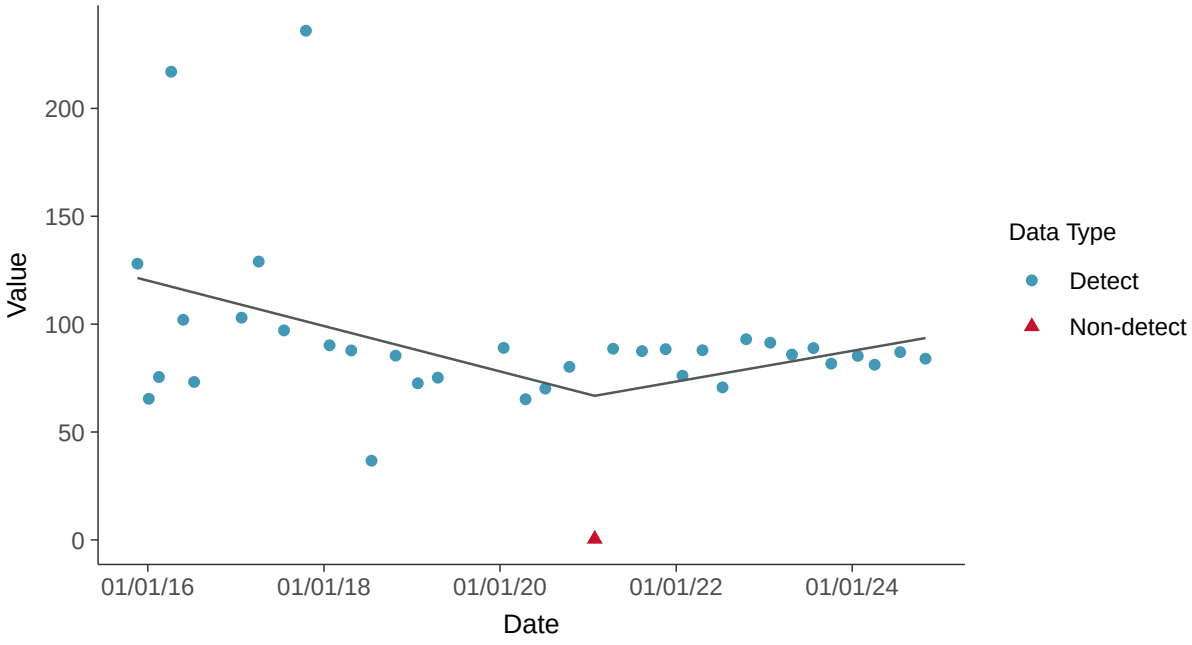
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-3 (ug/L)



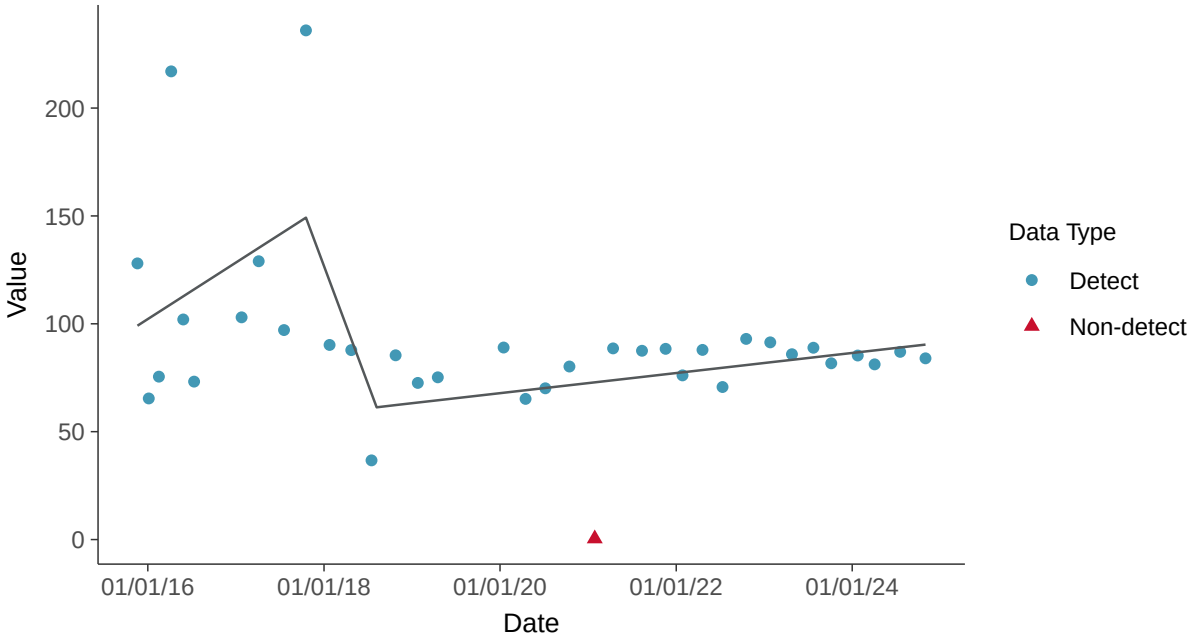
Trend Regression: Piecewise Linear-Linear

Lithium, MW-3 (ug/L)



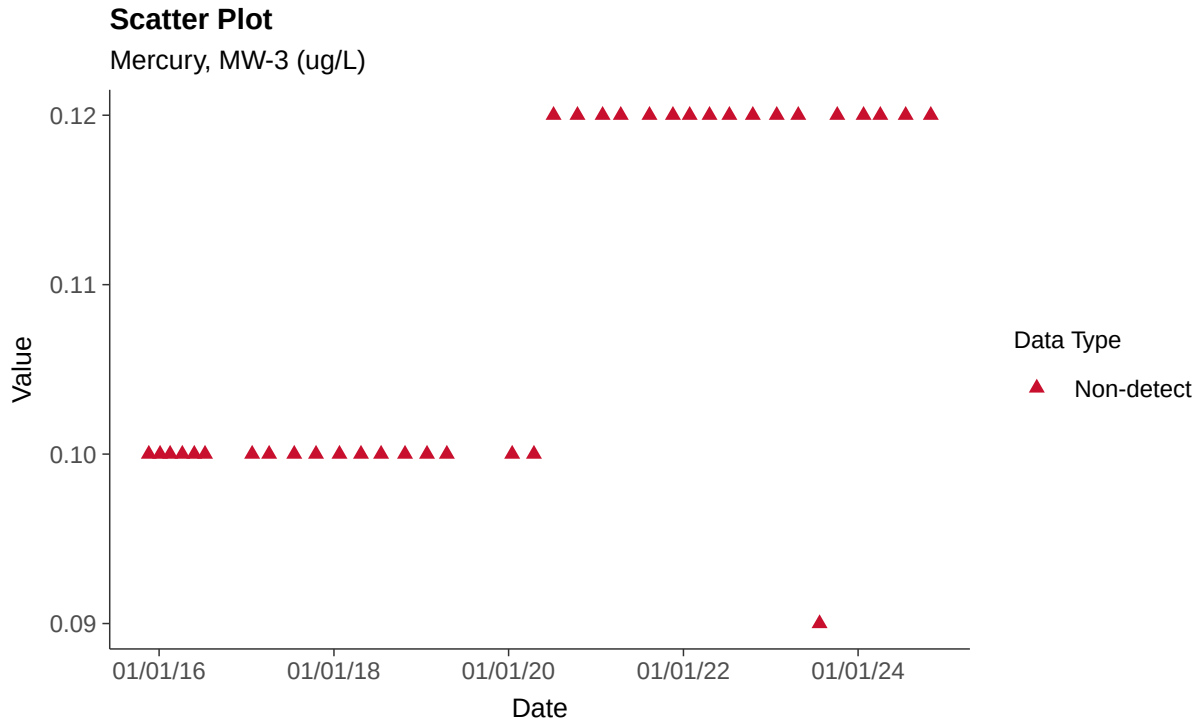
Trend Regression: Piecewise Linear-Linear-Linear

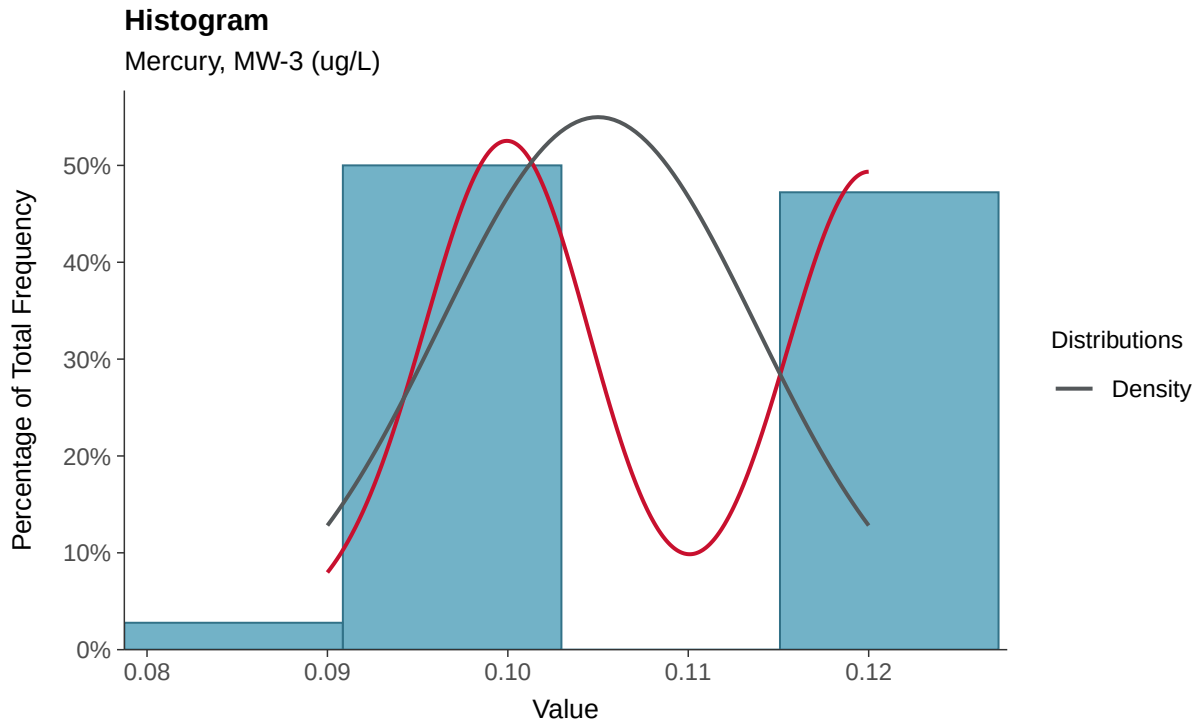
Lithium, MW-3 (ug/L)



App. IV: Mercury, MW-3

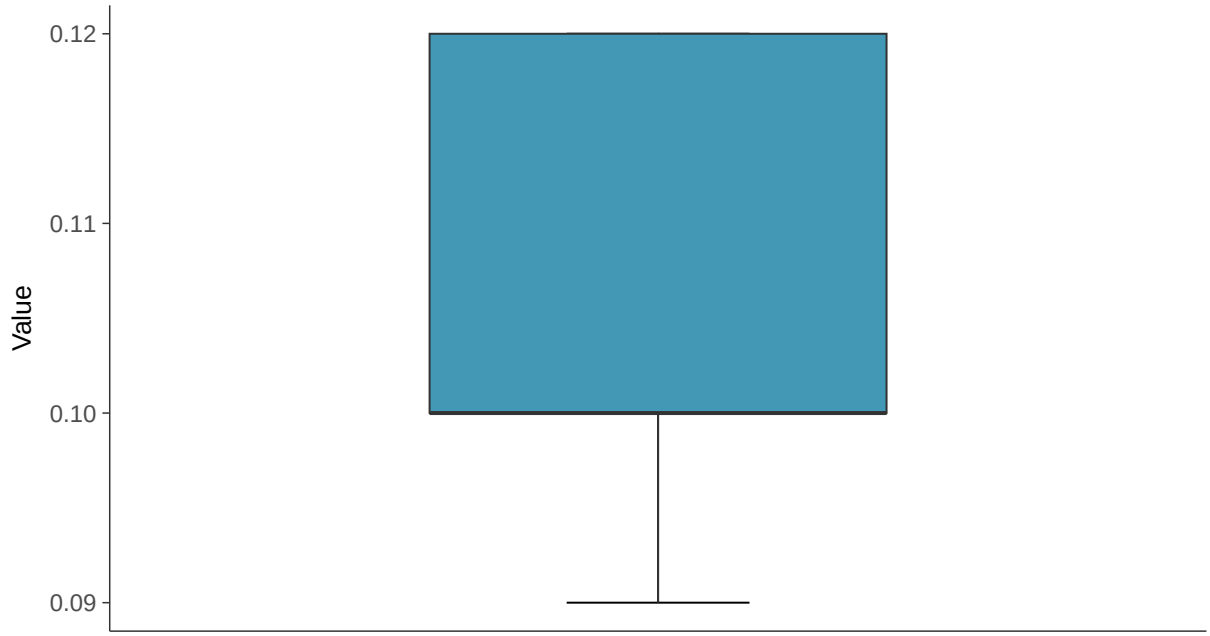
ID: 03_03_115





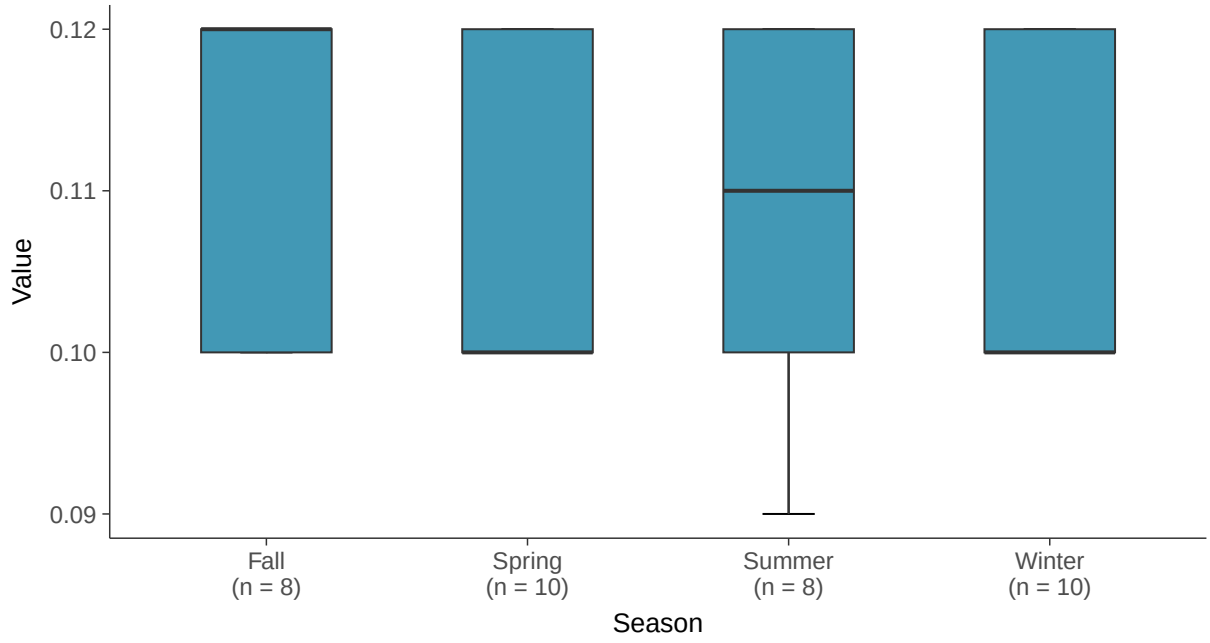
Boxplot

Mercury, MW-3 (ug/L)



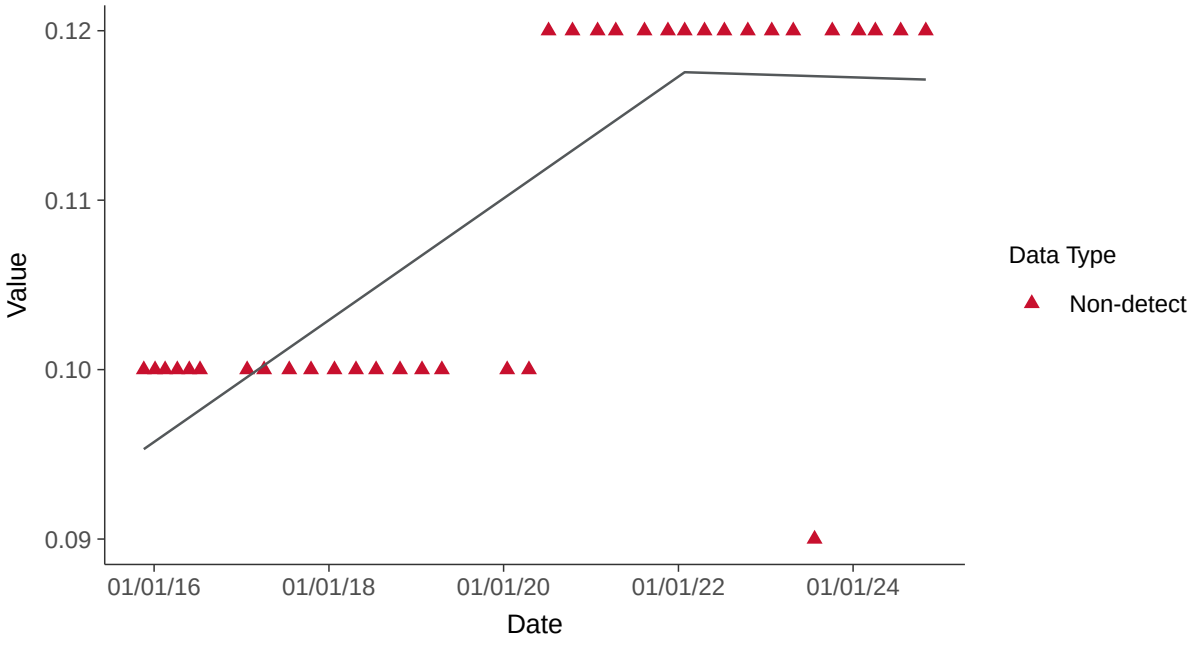
Boxplot by Season

Mercury, MW-3 (ug/L)



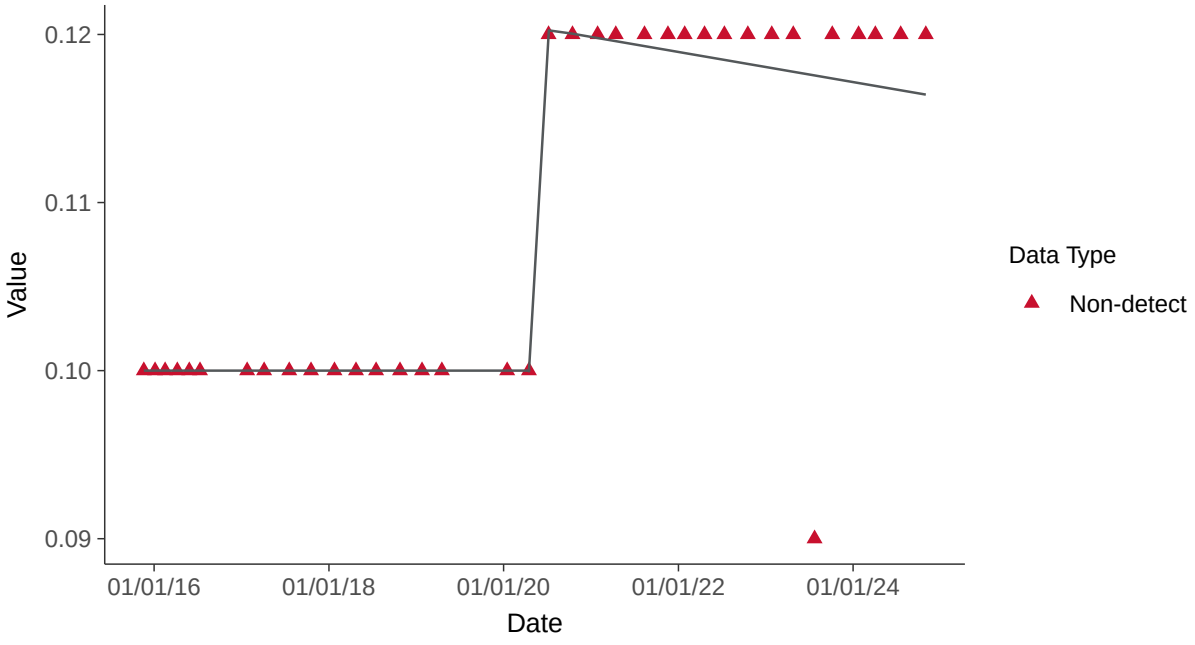
Trend Regression: Piecewise Linear-Linear

Mercury, MW-3 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-3 (ug/L)

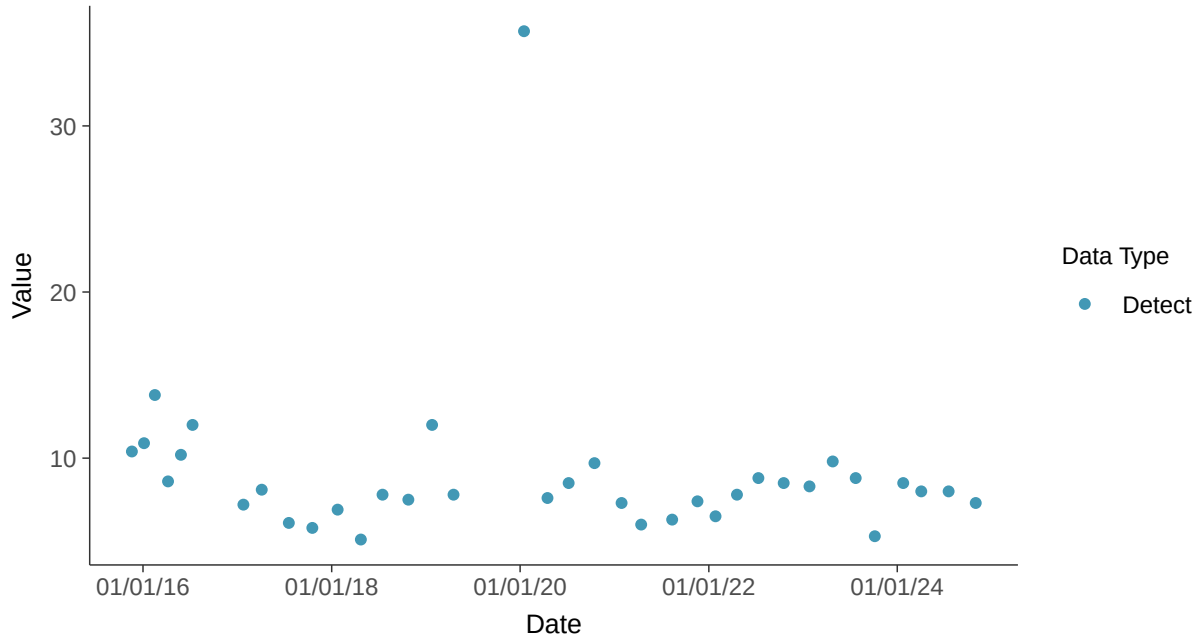


App. IV: Molybdenum, MW-3

ID: 03_03_116

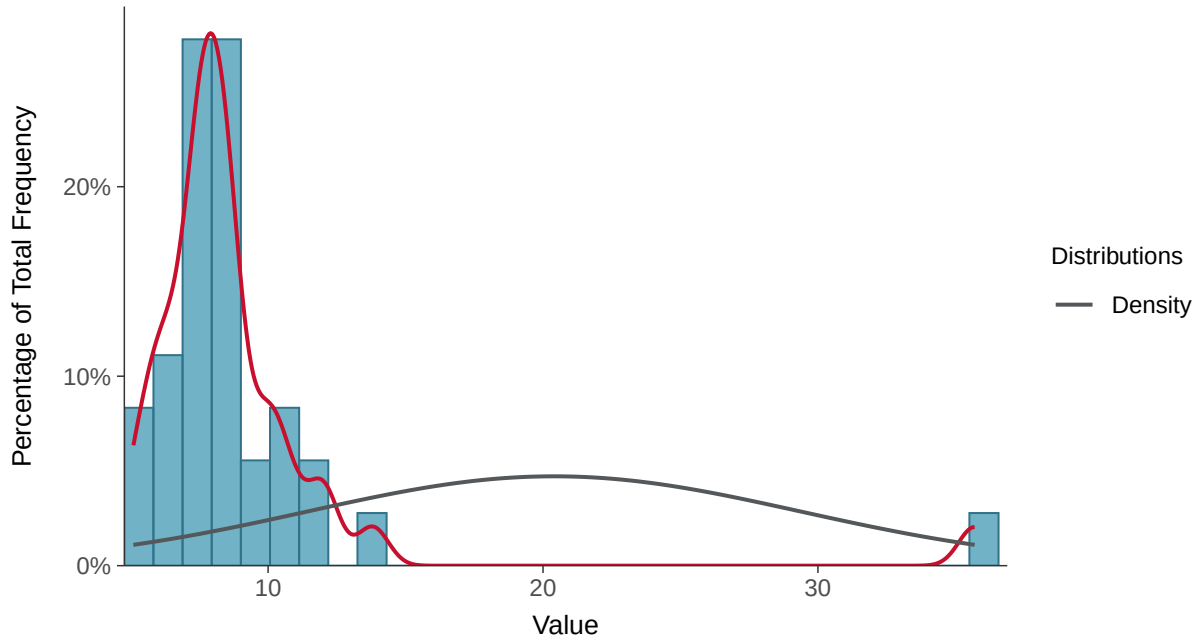
Scatter Plot

Molybdenum, MW-3 (ug/L)



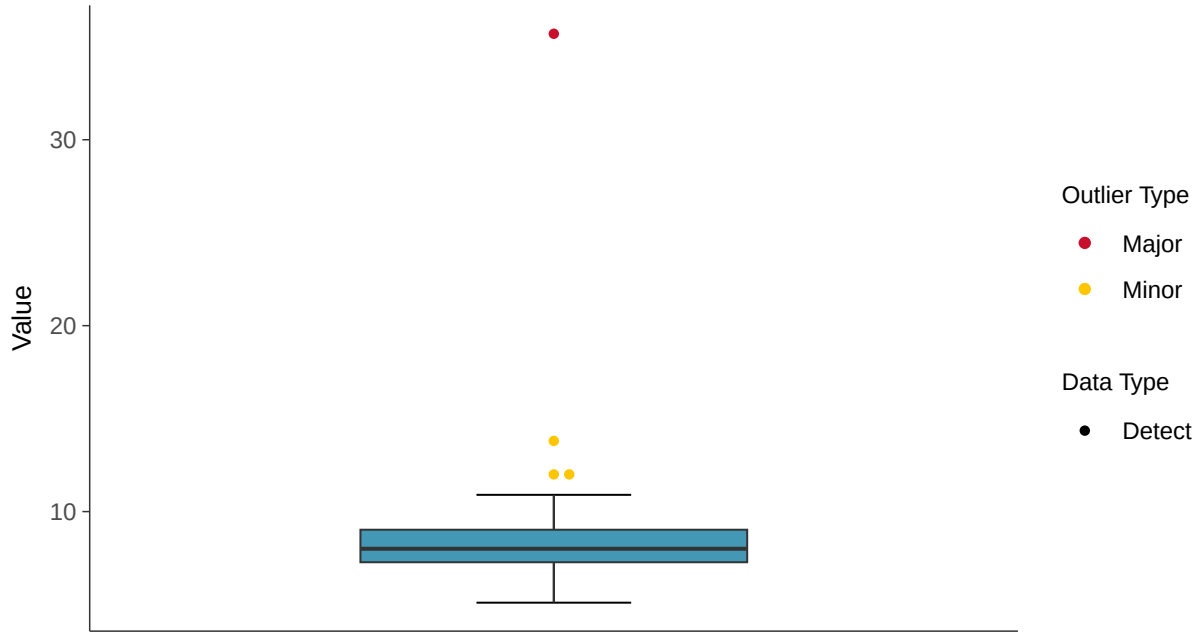
Histogram

Molybdenum, MW-3 (ug/L)



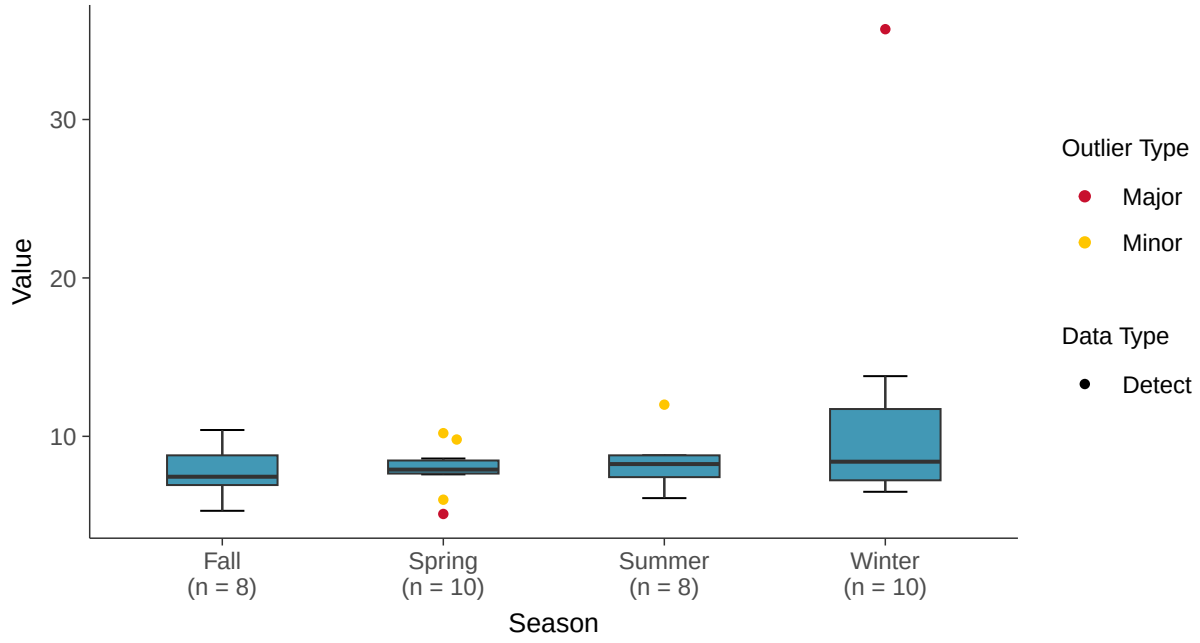
Boxplot

Molybdenum, MW-3 (ug/L)



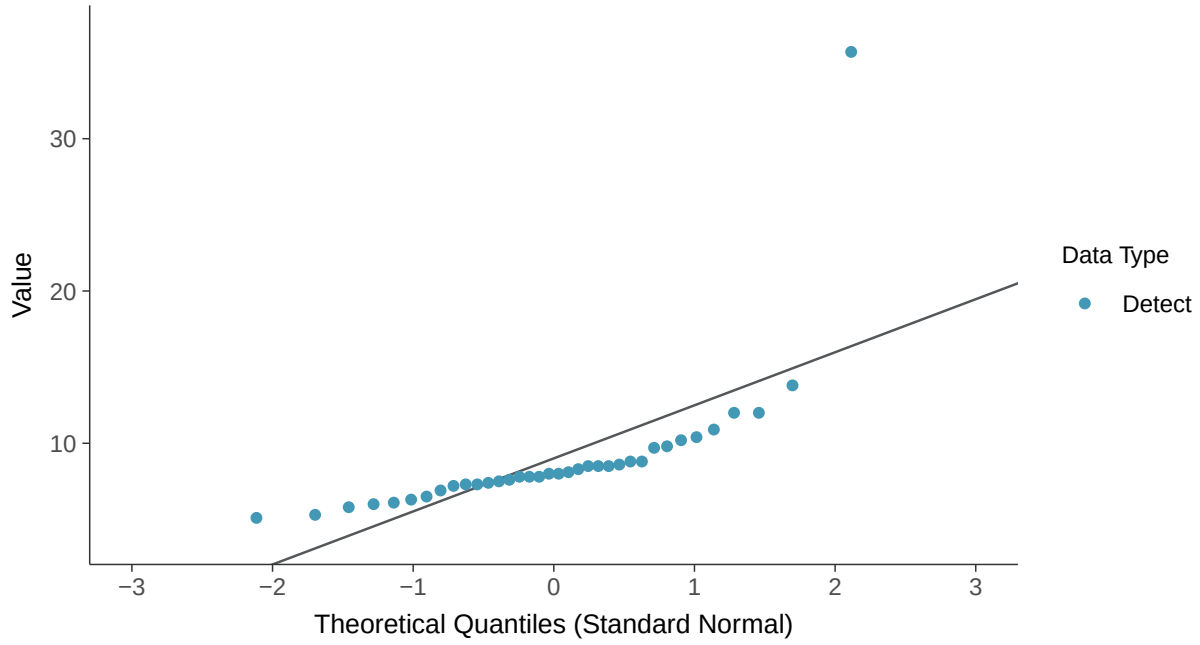
Boxplot by Season

Molybdenum, MW-3 (ug/L)



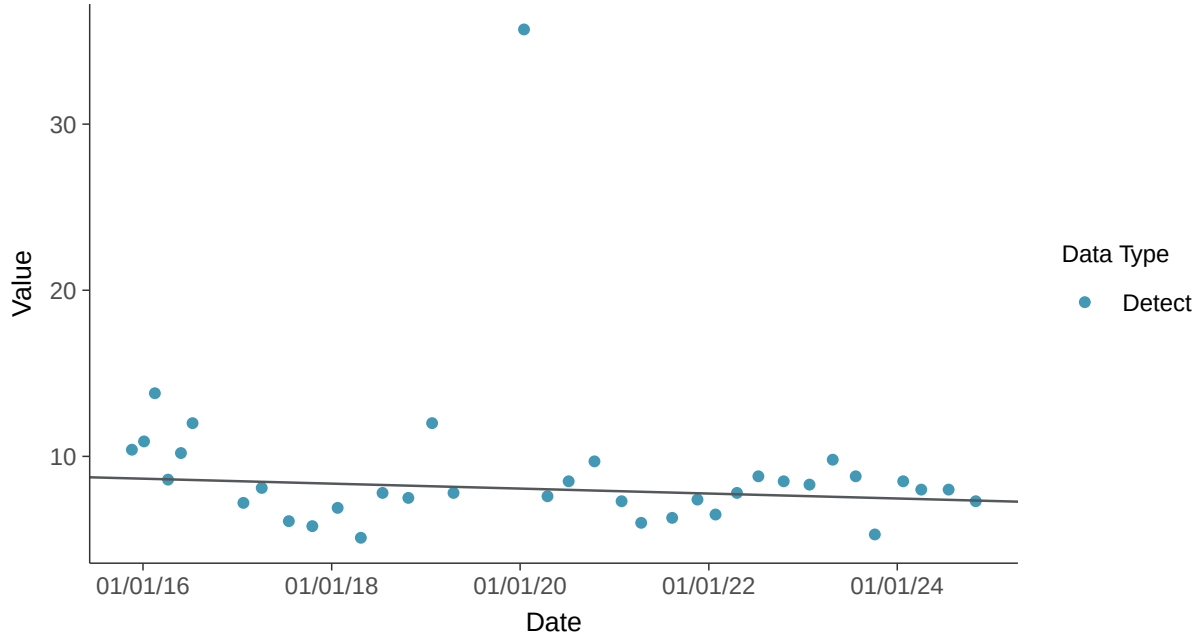
Normal Q-Q plot

Molybdenum, MW-3 (ug/L)



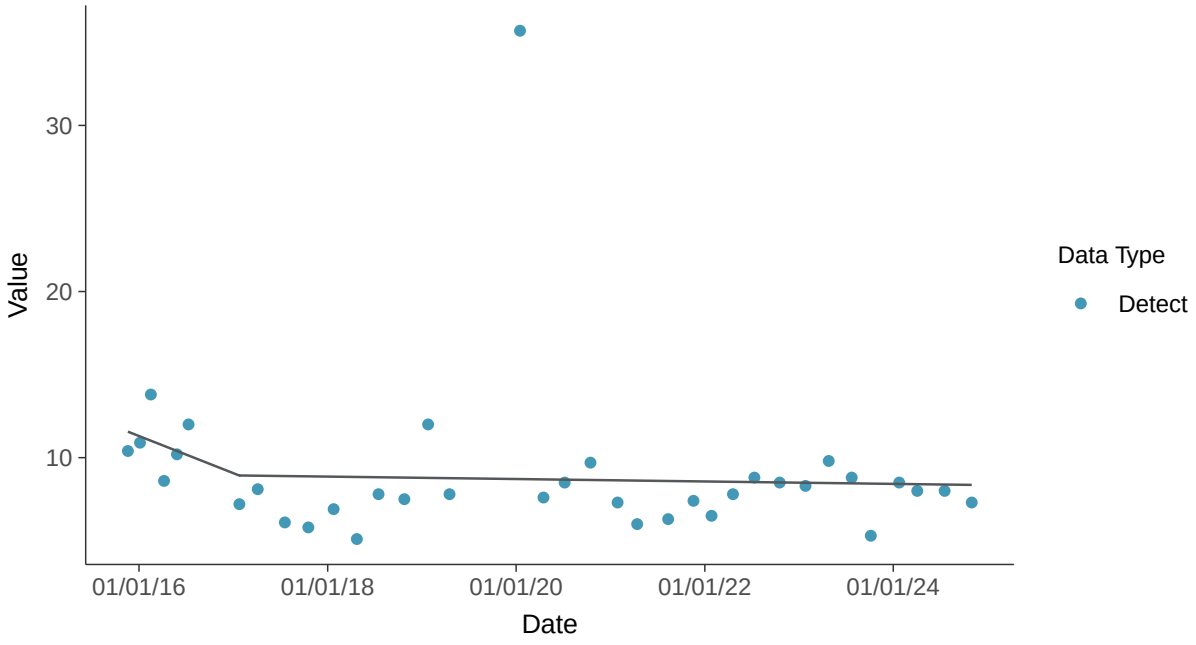
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Molybdenum, MW-3 (ug/L)



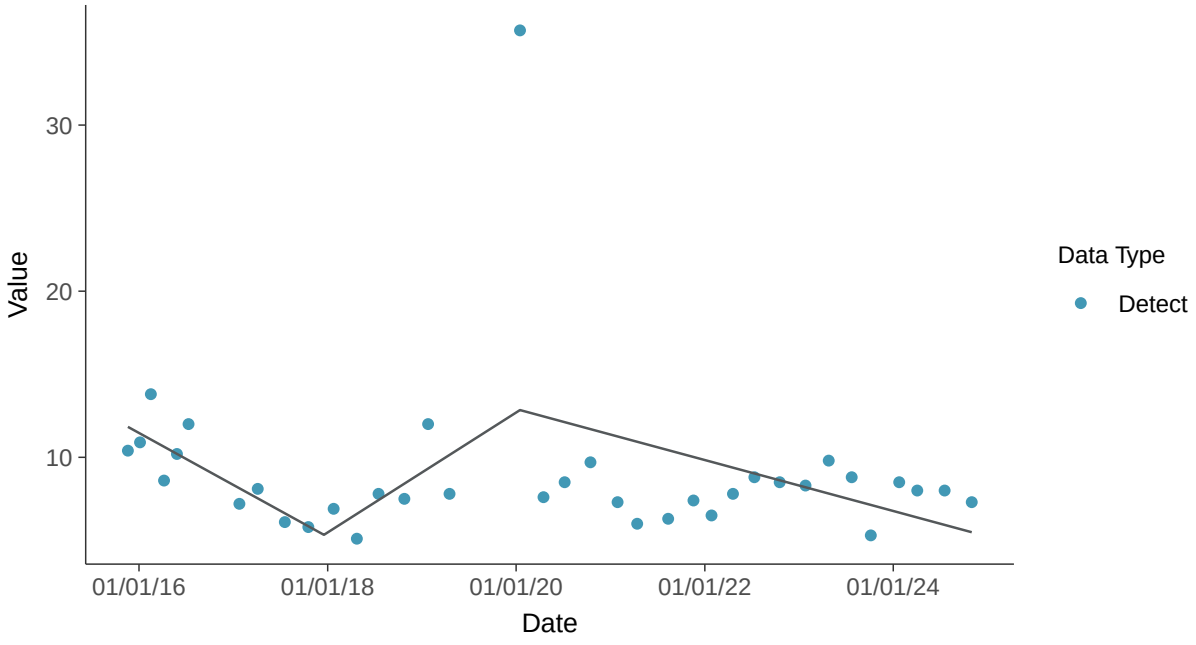
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-3 (ug/L)



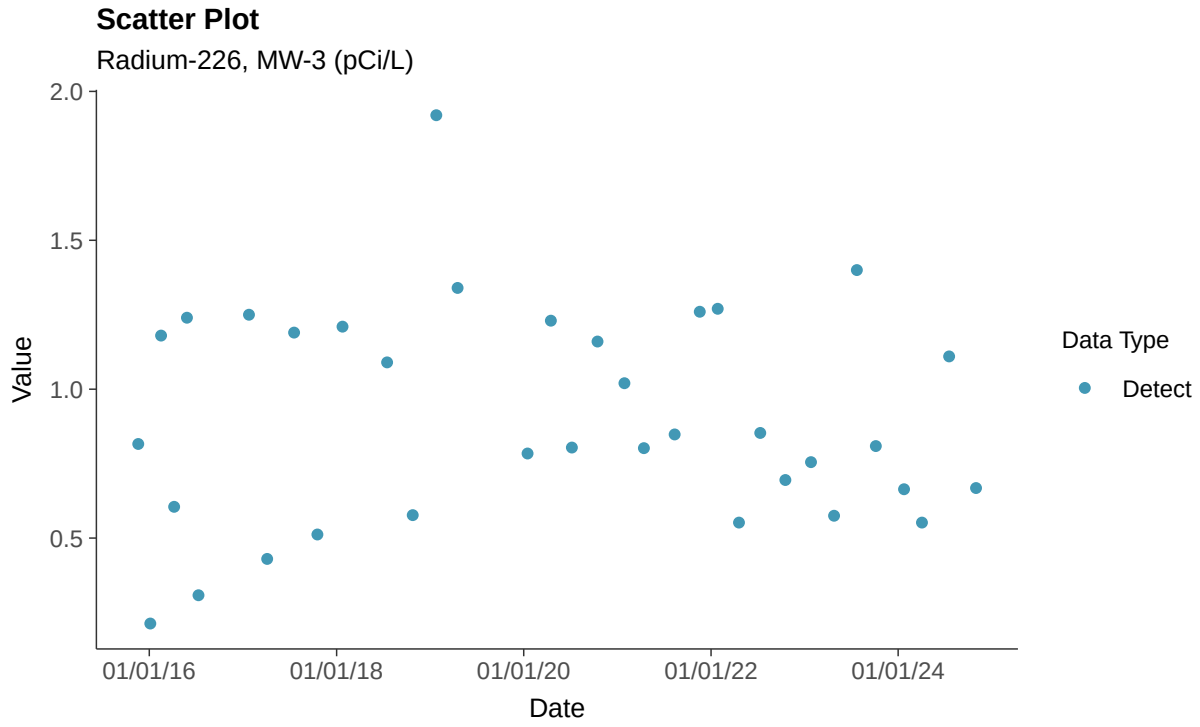
Trend Regression: Piecewise Linear-Linear-Linear

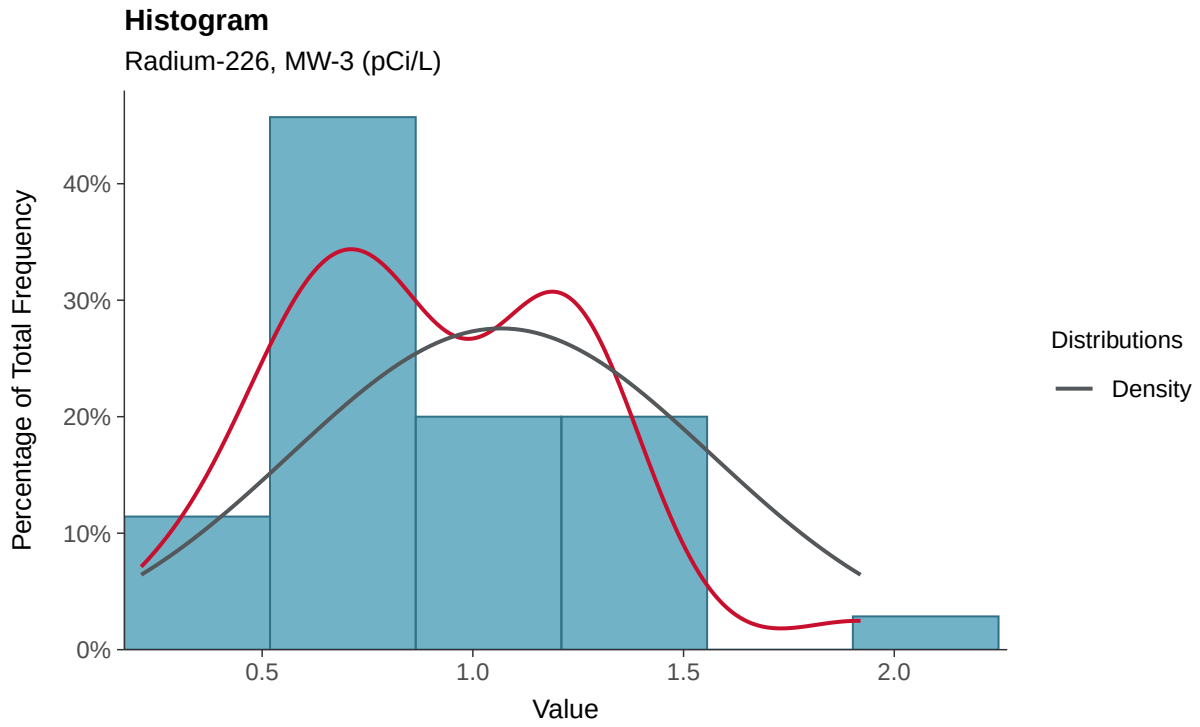
Molybdenum, MW-3 (ug/L)



App. IV: Radium-226, MW-3

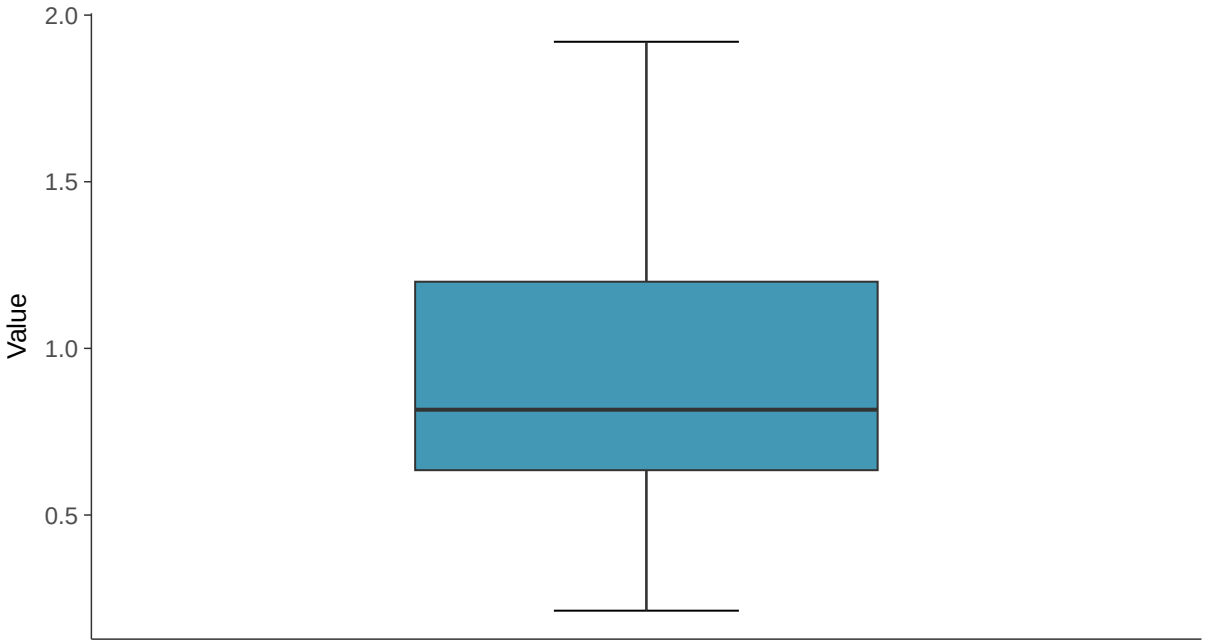
ID: 03_03_119





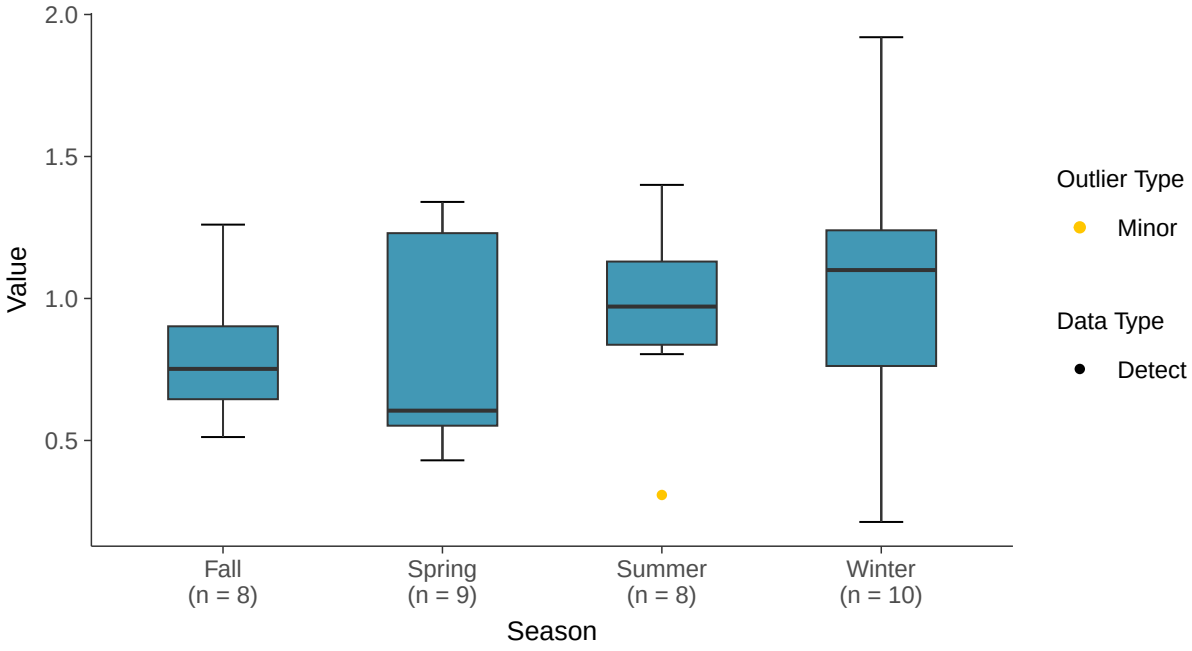
Boxplot

Radium-226, MW-3 (pCi/L)



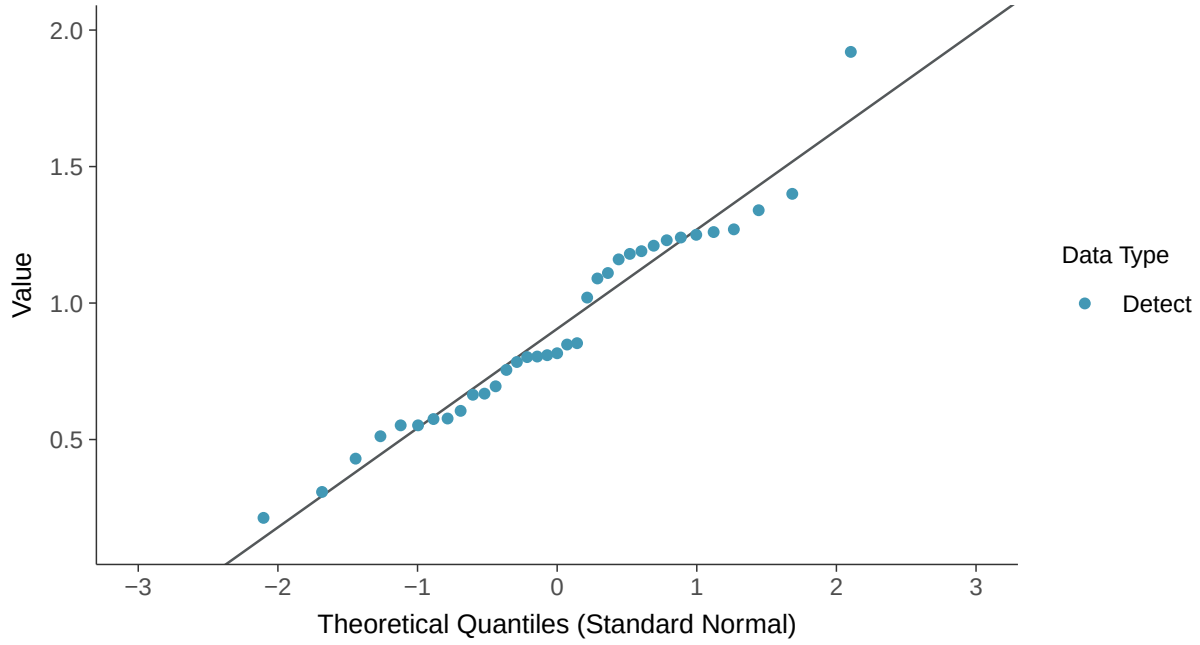
Boxplot by Season

Radium-226, MW-3 (pCi/L)



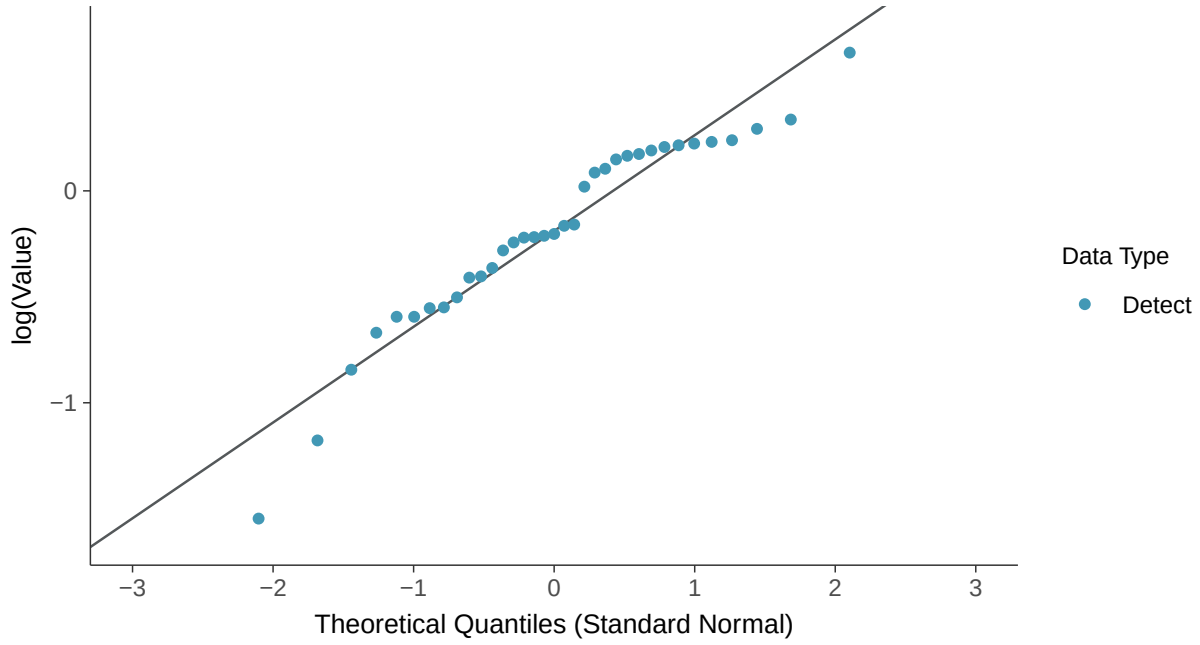
Normal Q-Q plot

Radium-226, MW-3 (pCi/L)



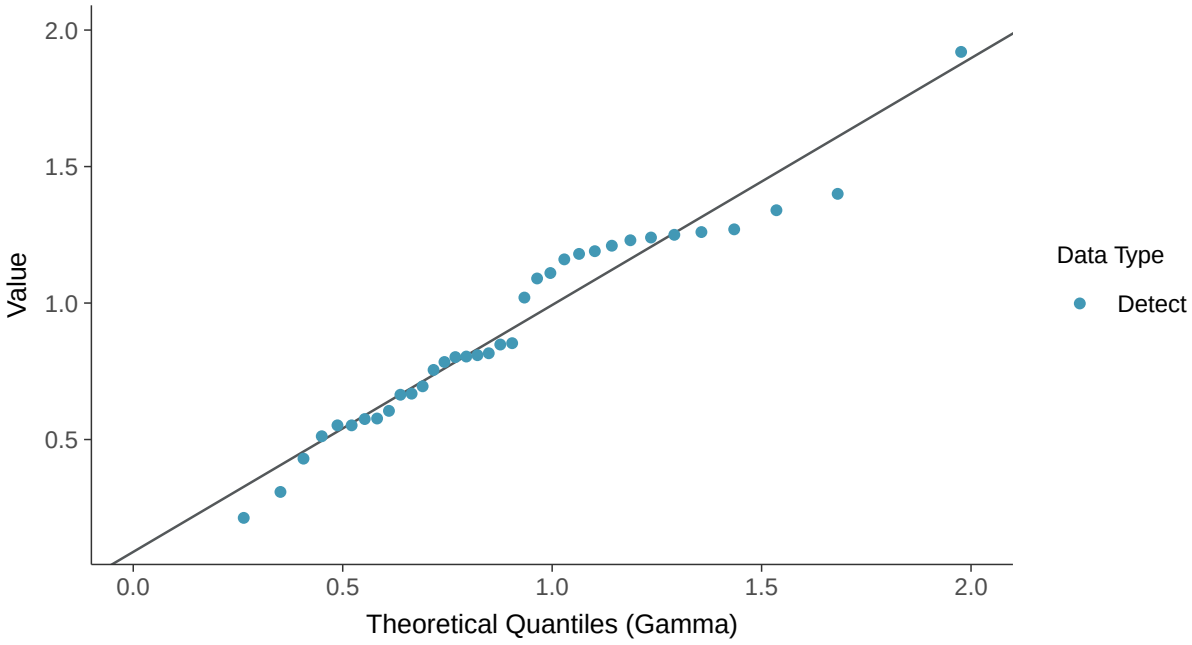
Lognormal Q-Q plot

Radium-226, MW-3 (pCi/L)



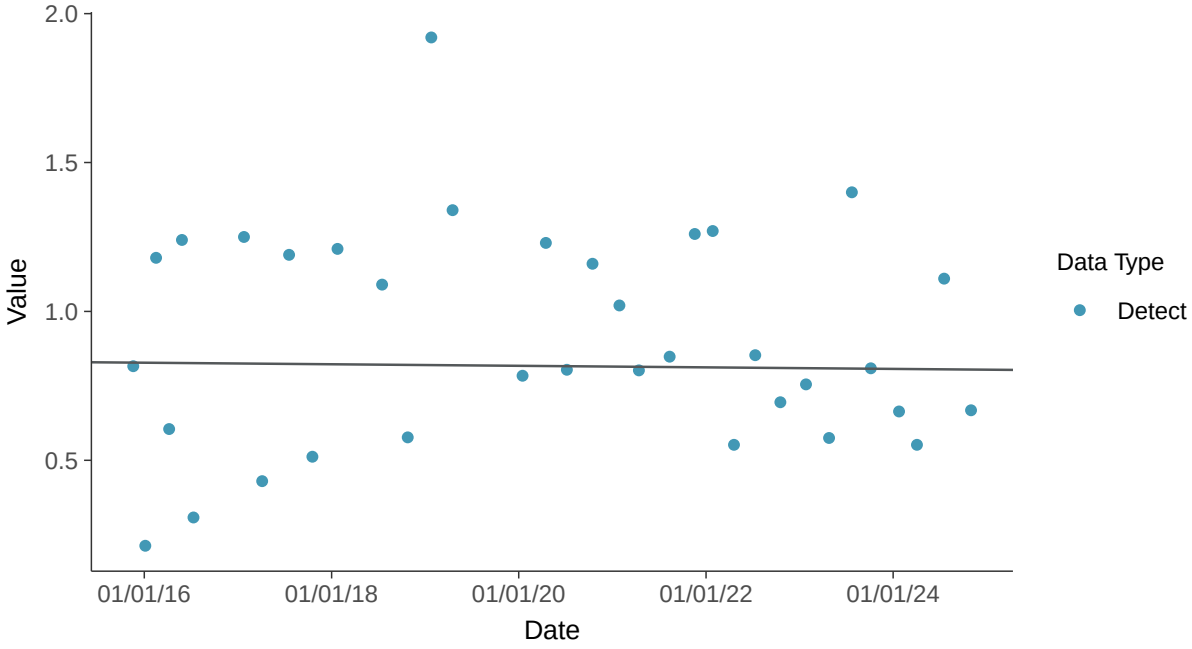
Gamma Q-Q plot

Radium-226, MW-3 (pCi/L)



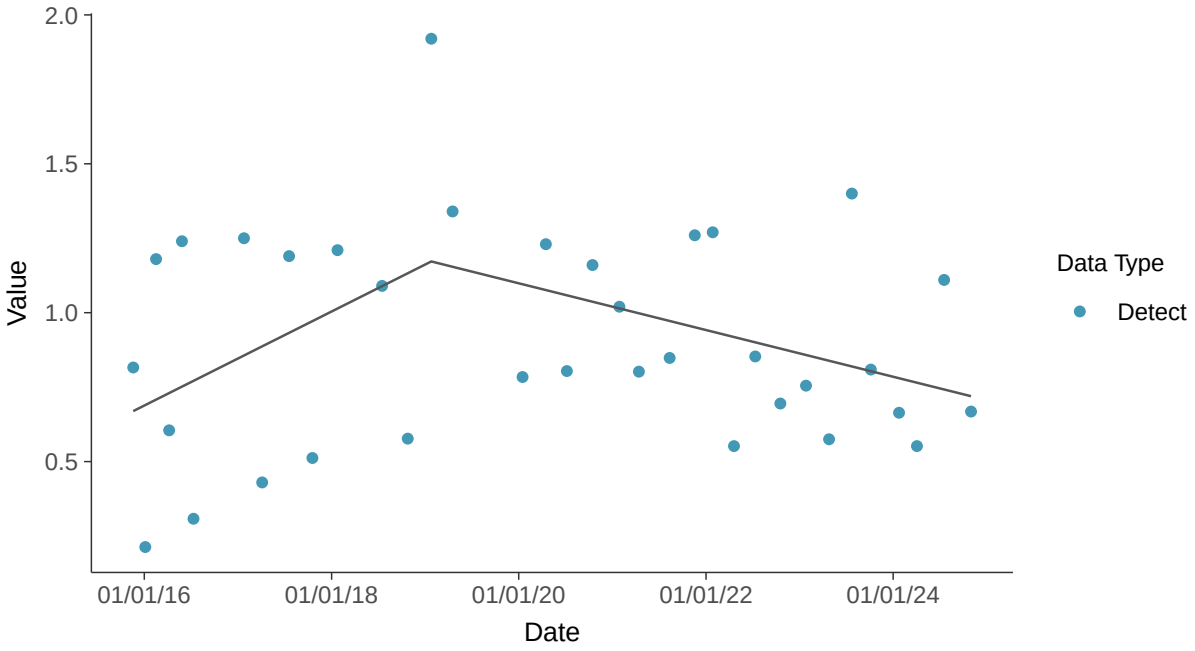
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-3 (pCi/L)



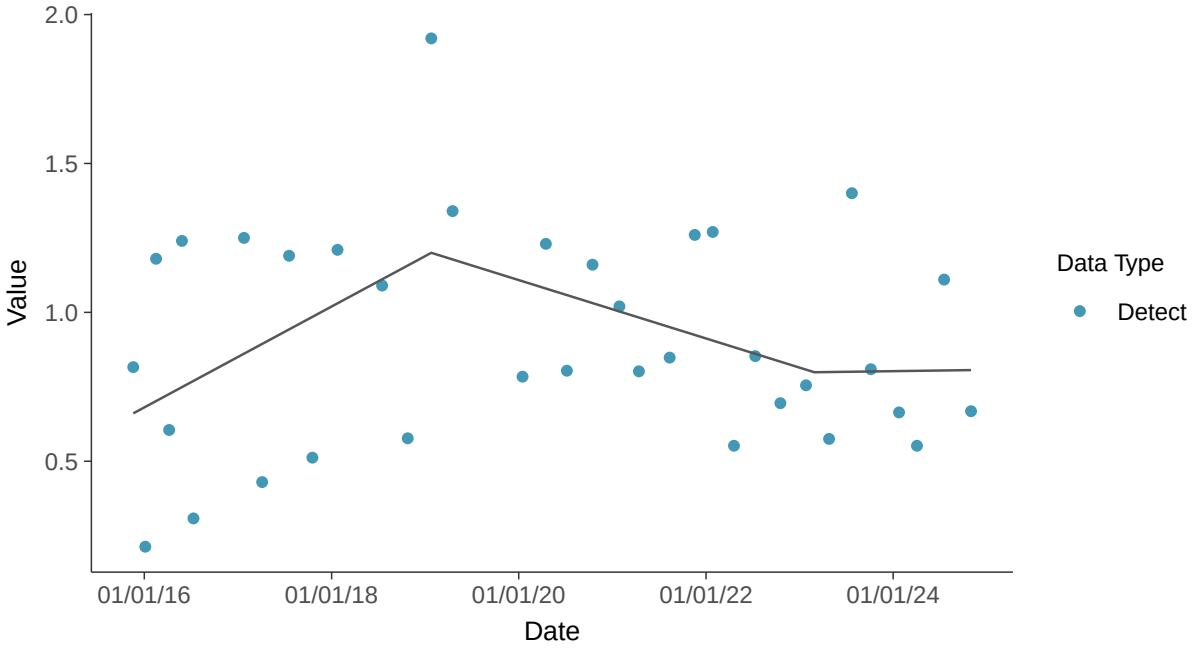
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-3 (pCi/L)



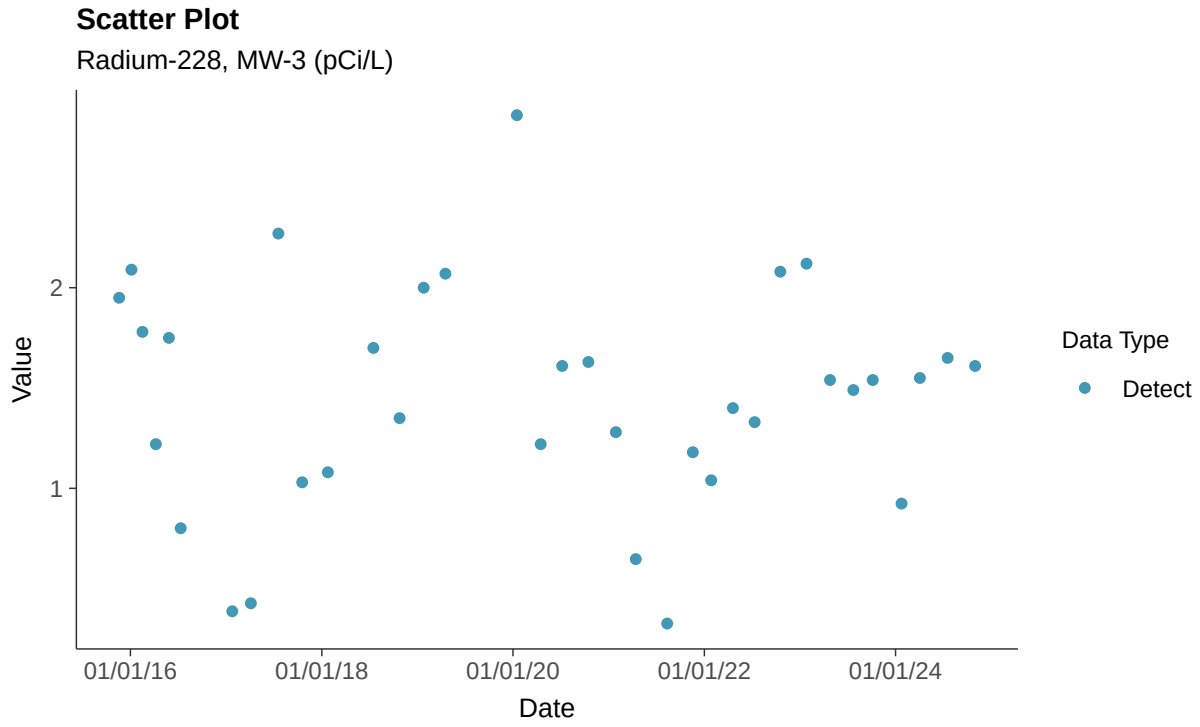
Trend Regression: Piecewise Linear-Linear-Linear

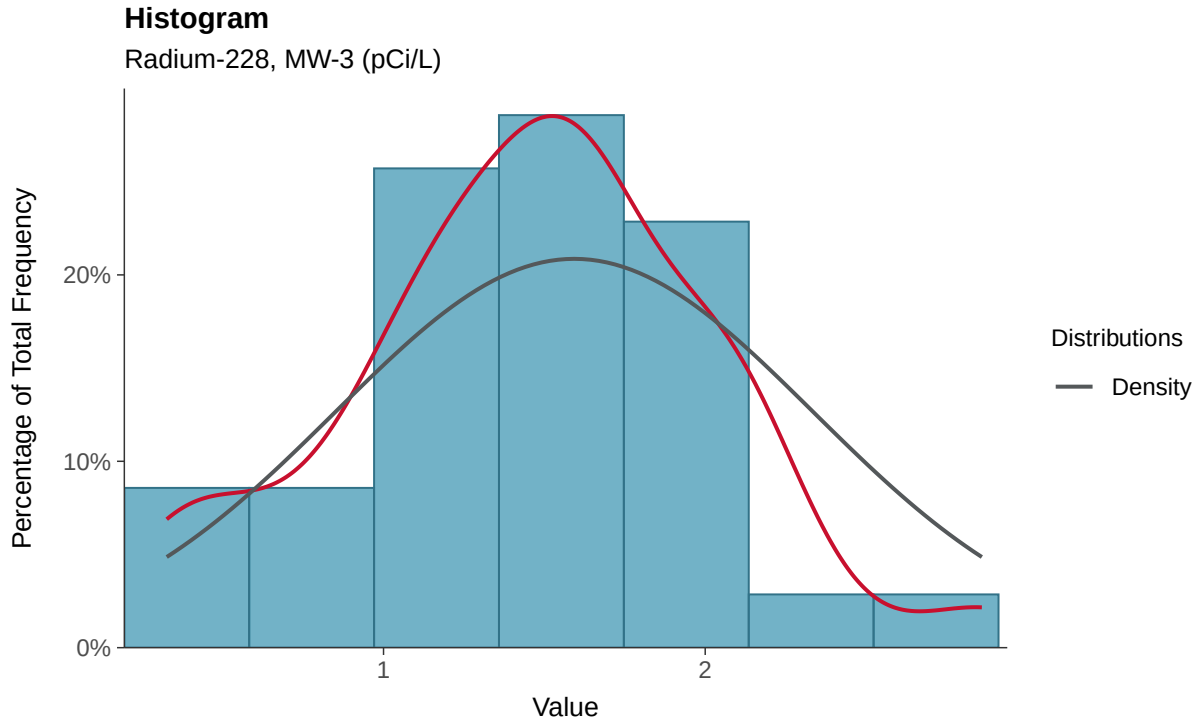
Radium-226, MW-3 (pCi/L)



App. IV: Radium-228, MW-3

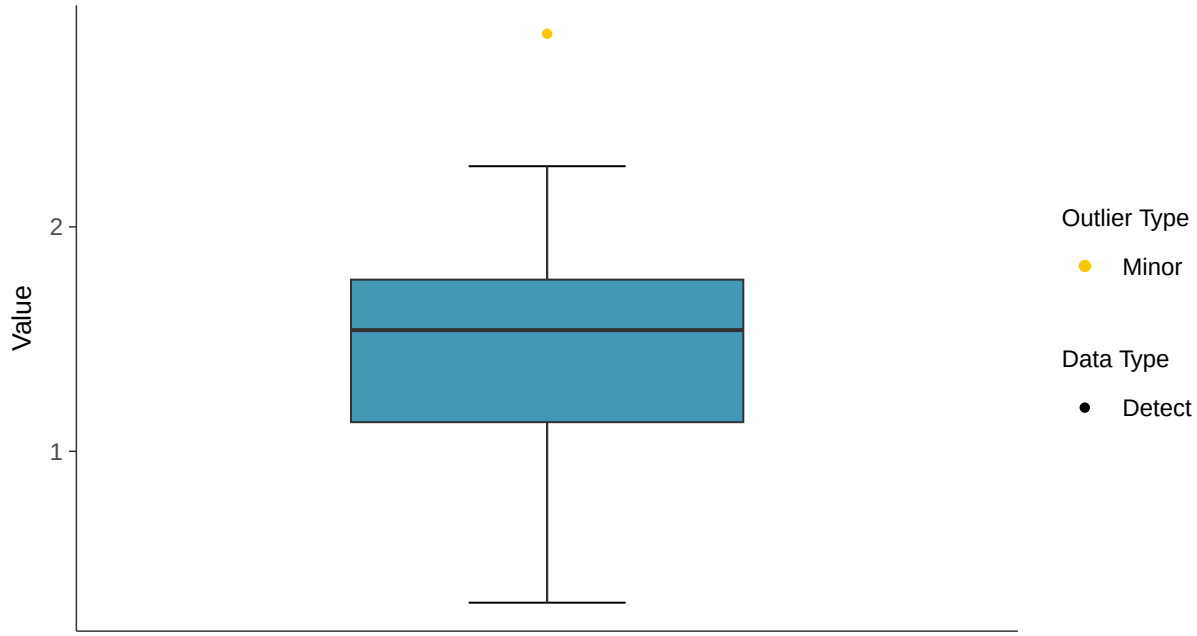
ID: 03_03_120





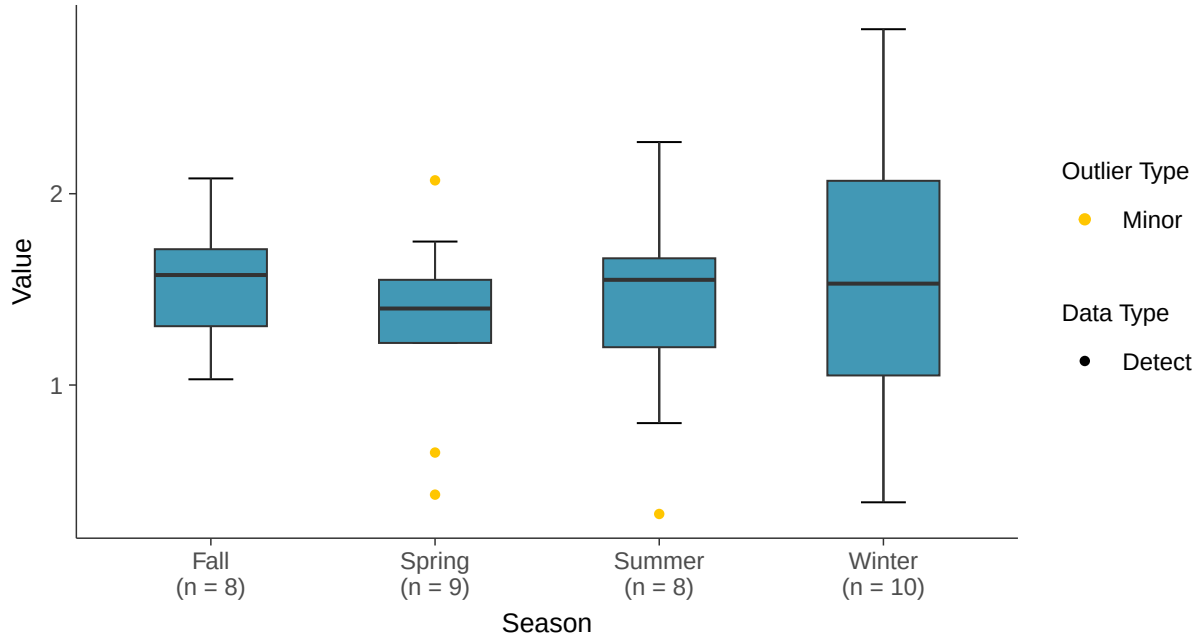
Boxplot

Radium-228, MW-3 (pCi/L)



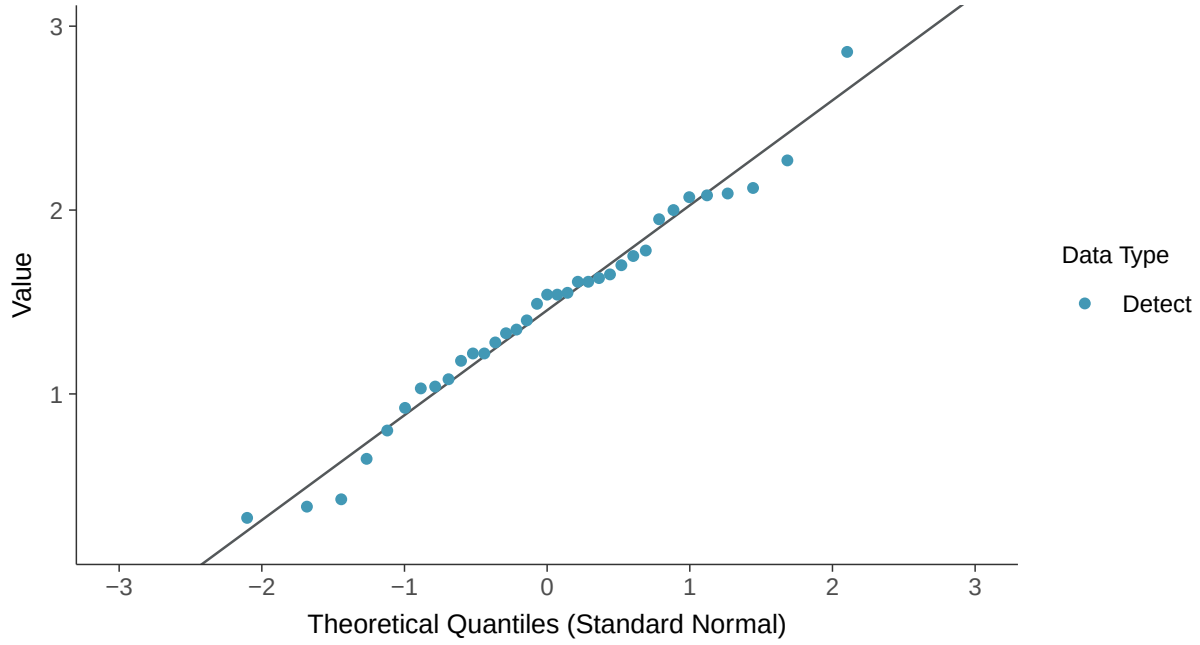
Boxplot by Season

Radium-228, MW-3 (pCi/L)



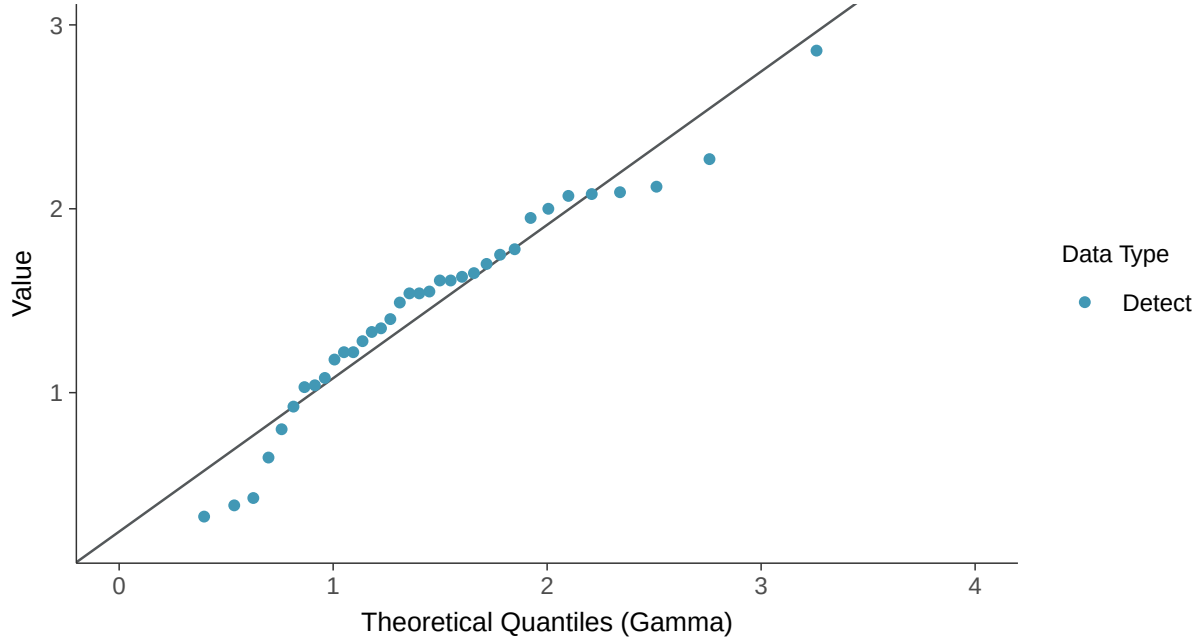
Normal Q-Q plot

Radium-228, MW-3 (pCi/L)



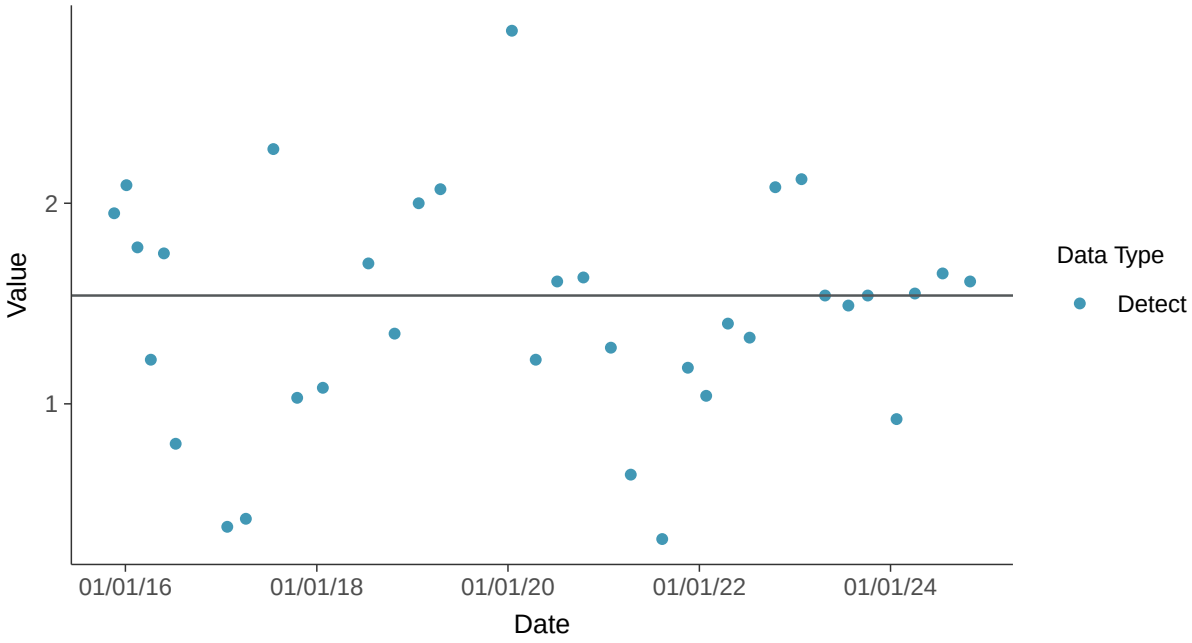
Gamma Q-Q plot

Radium-228, MW-3 (pCi/L)



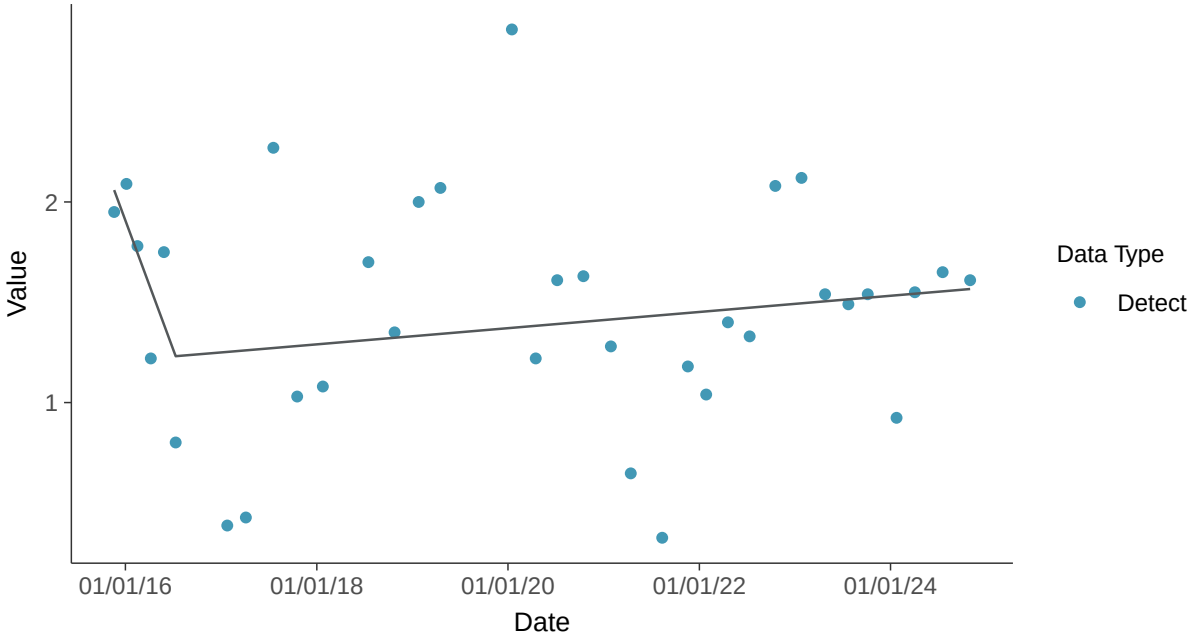
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-3 (pCi/L)



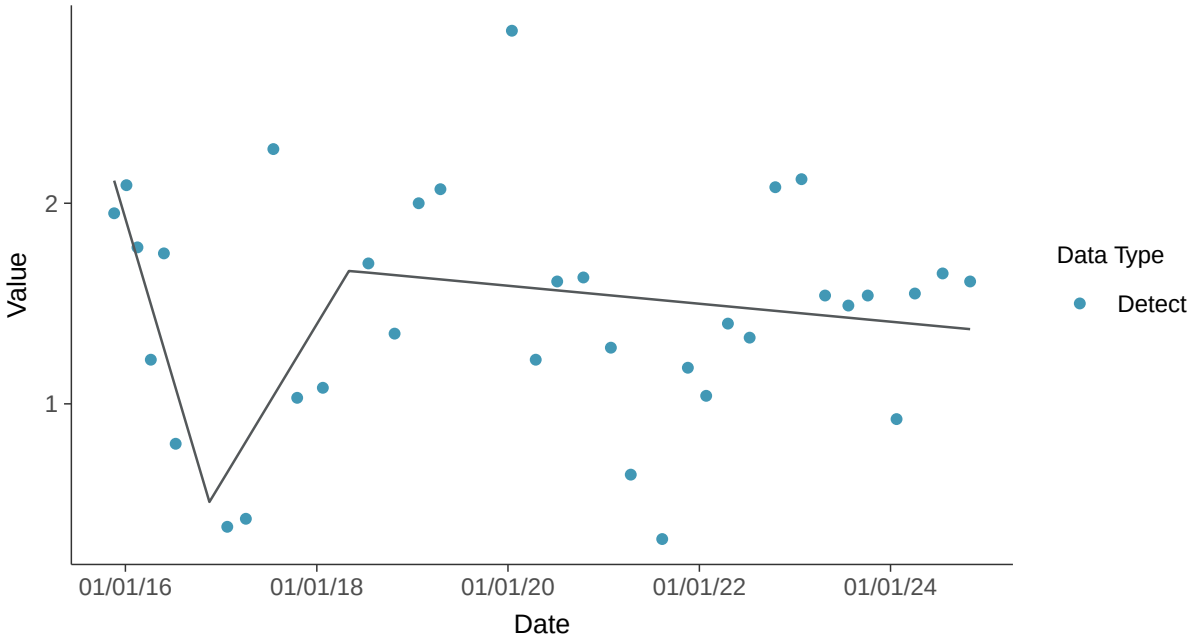
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-3 (pCi/L)



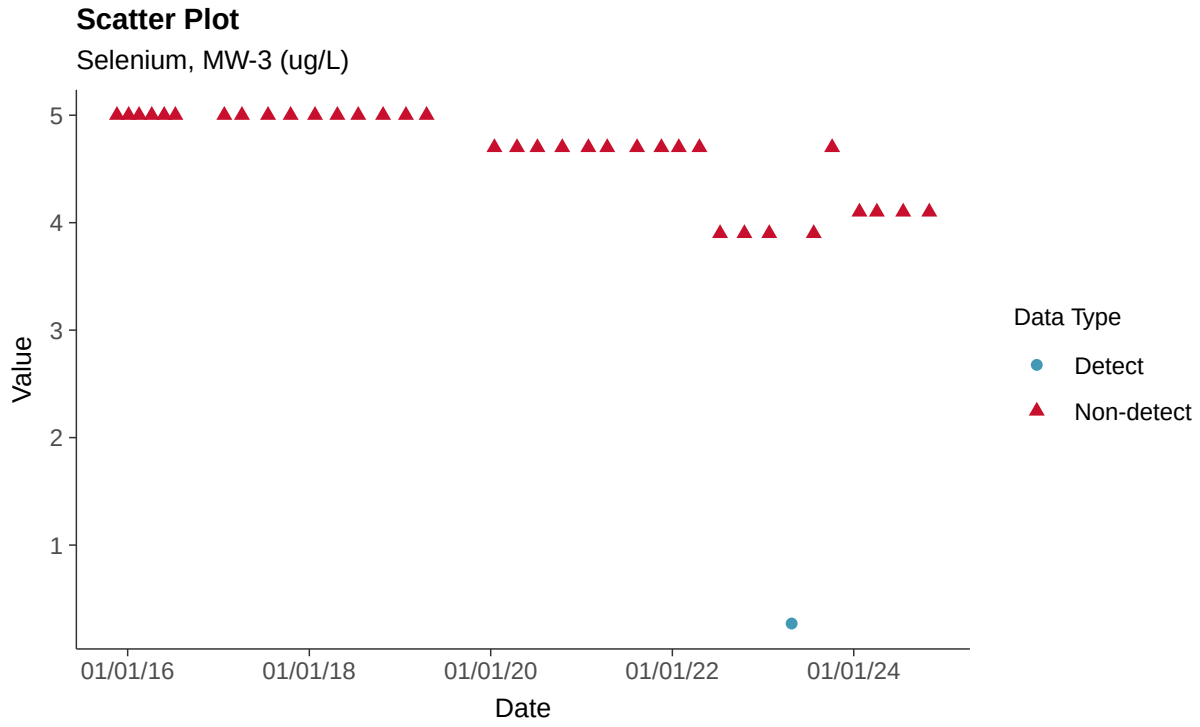
Trend Regression: Piecewise Linear-Linear-Linear

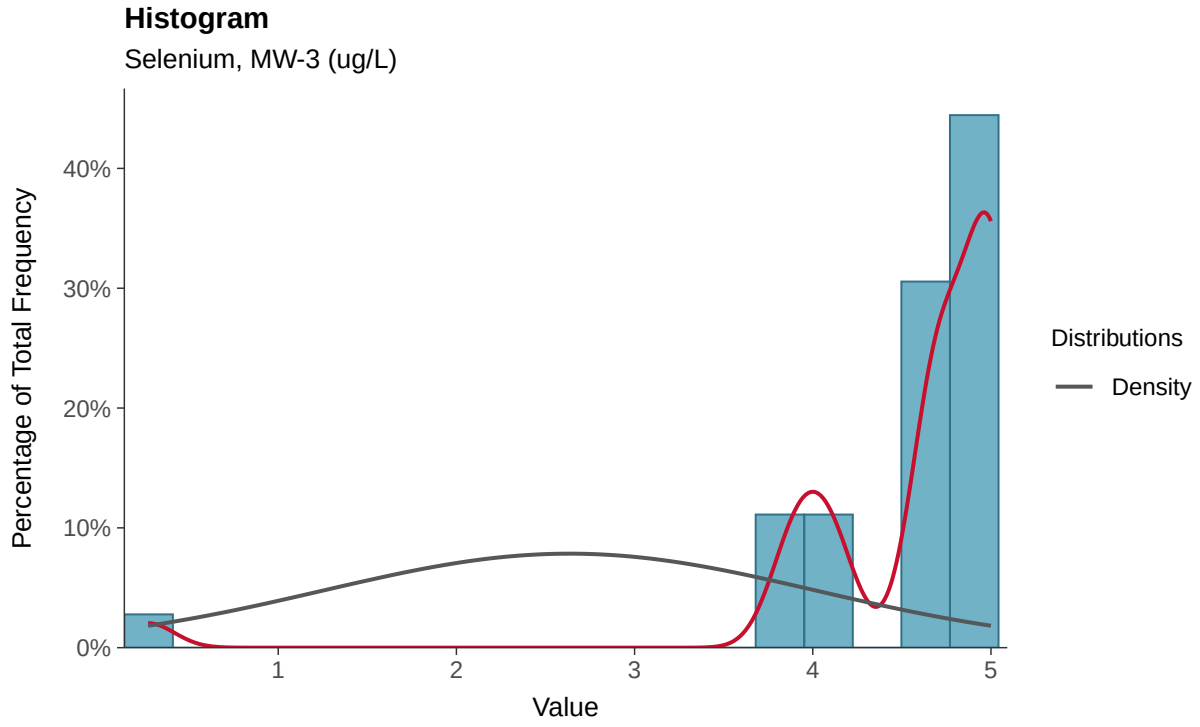
Radium-228, MW-3 (pCi/L)



App. IV: Selenium, MW-3

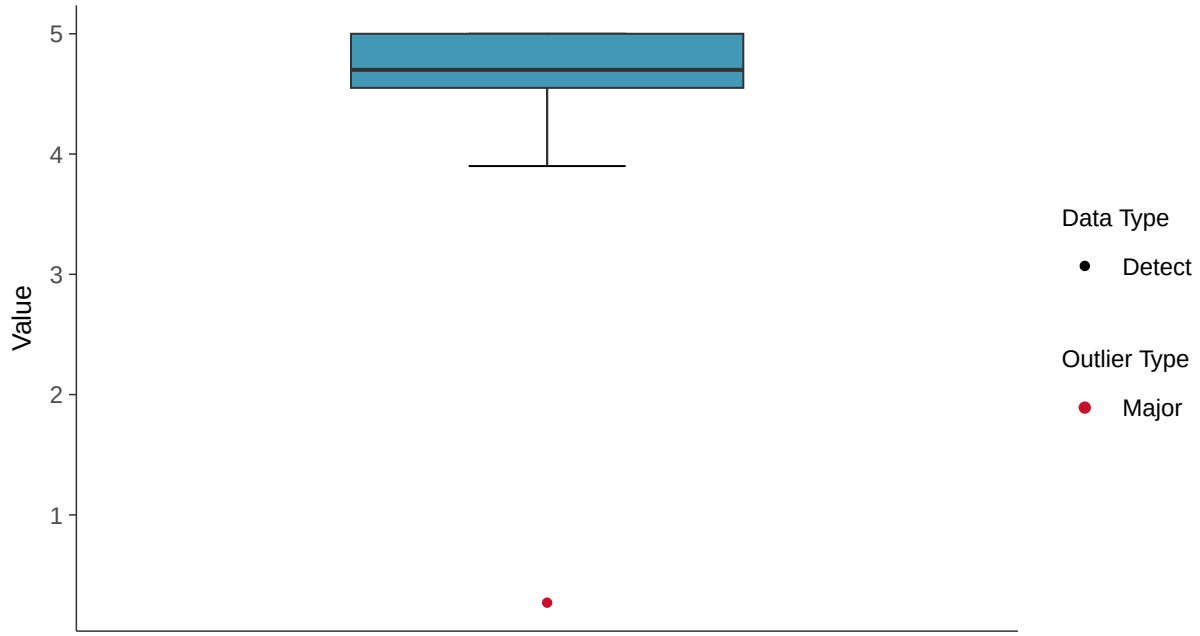
ID: 03_03_121





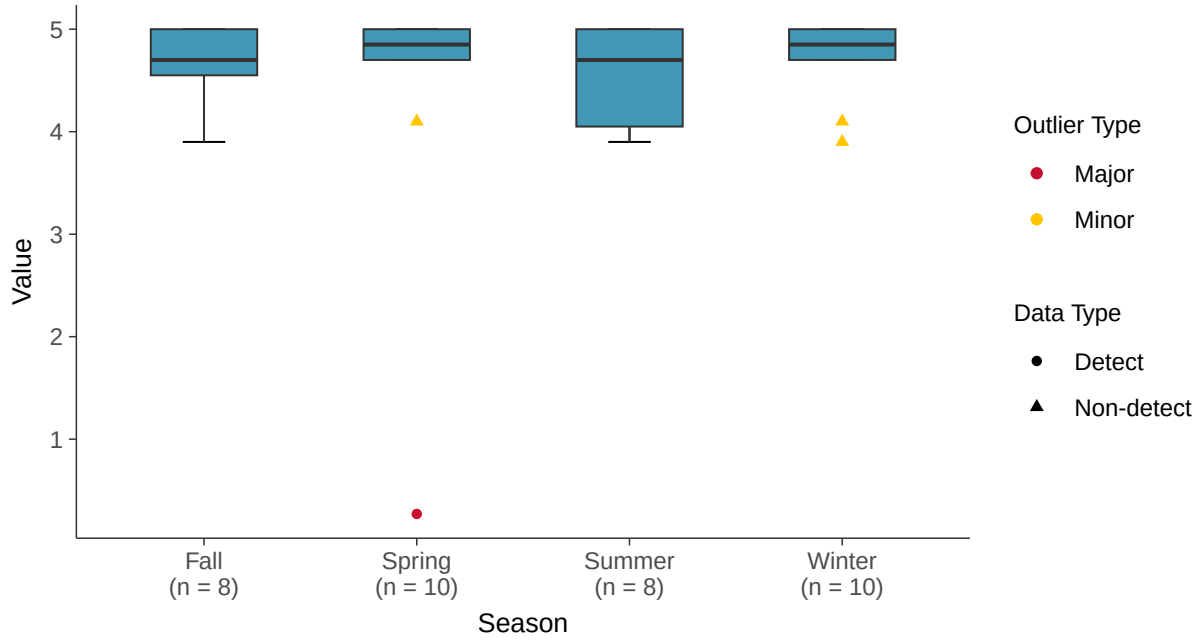
Boxplot

Selenium, MW-3 (ug/L)



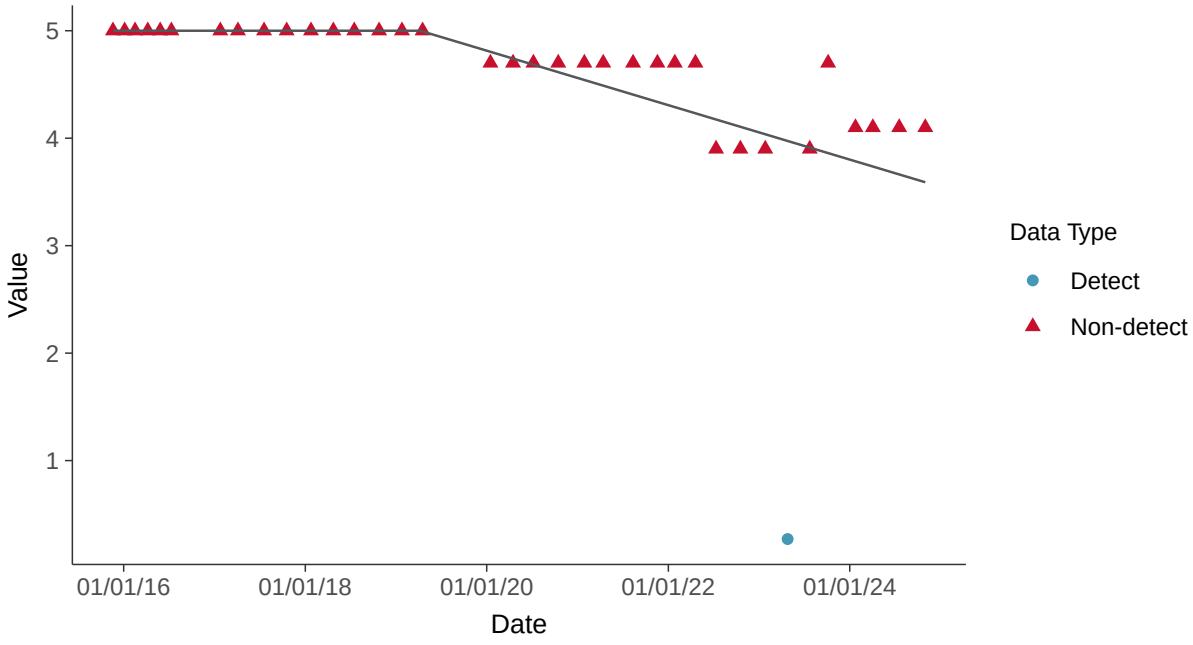
Boxplot by Season

Selenium, MW-3 (ug/L)



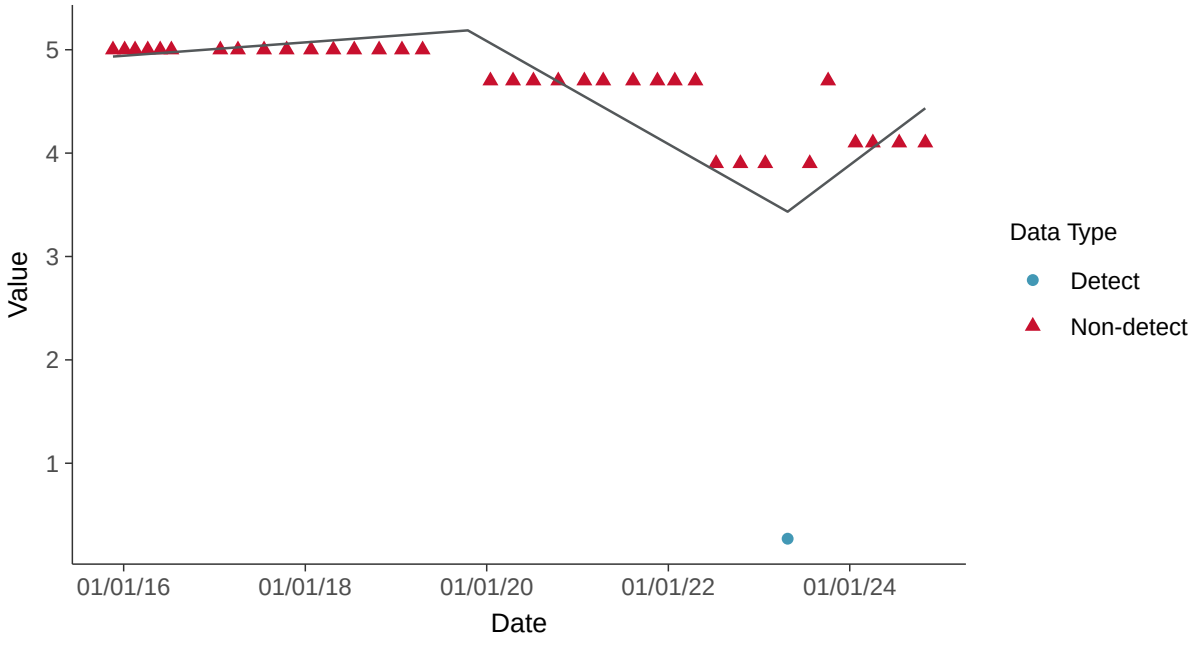
Trend Regression: Piecewise Linear-Linear

Selenium, MW-3 (ug/L)



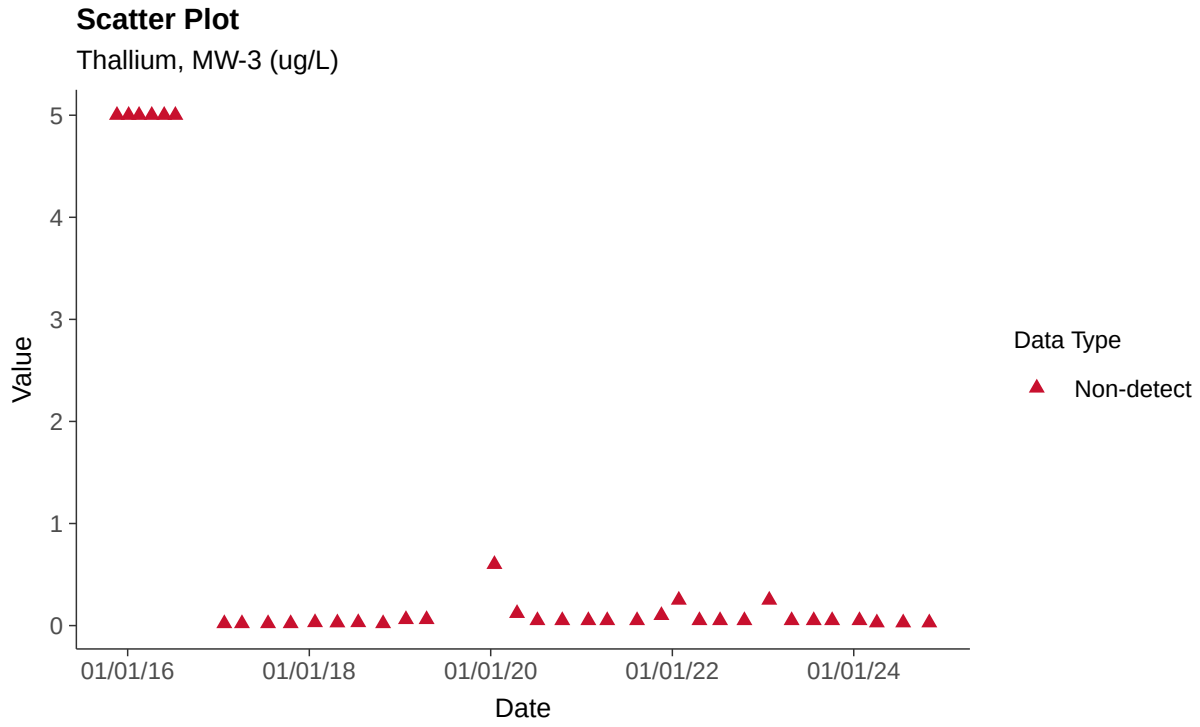
Trend Regression: Piecewise Linear-Linear-Linear

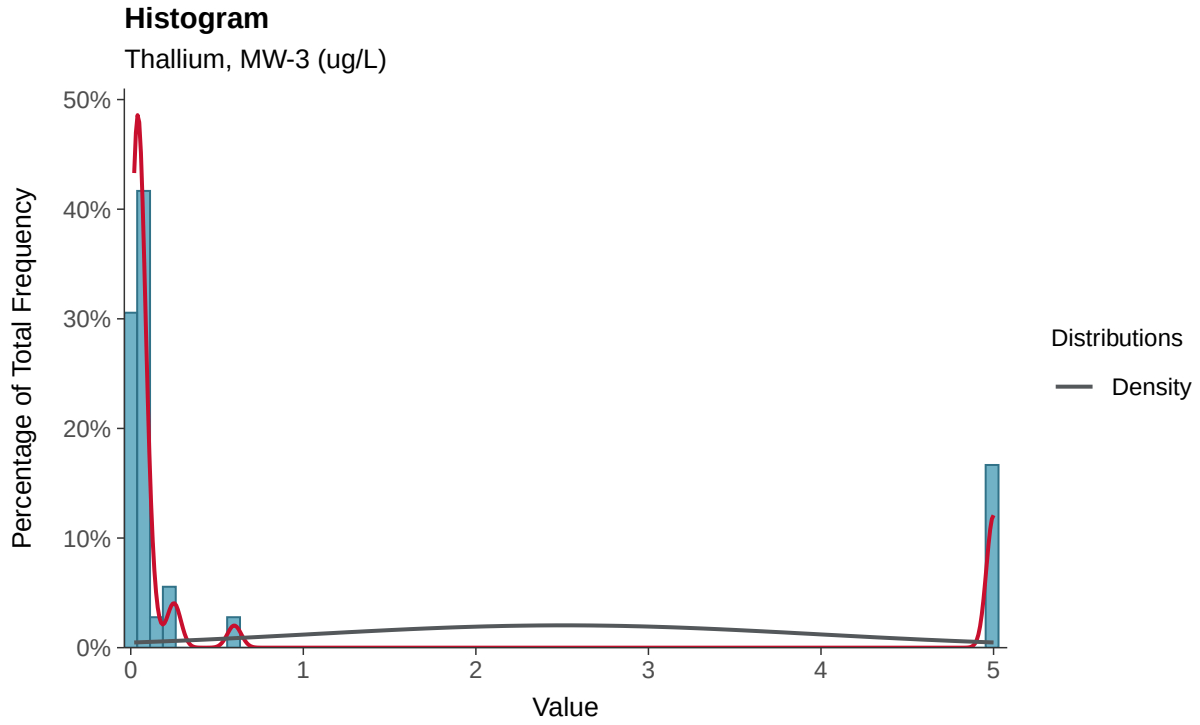
Selenium, MW-3 (ug/L)



App. IV: Thallium, MW-3

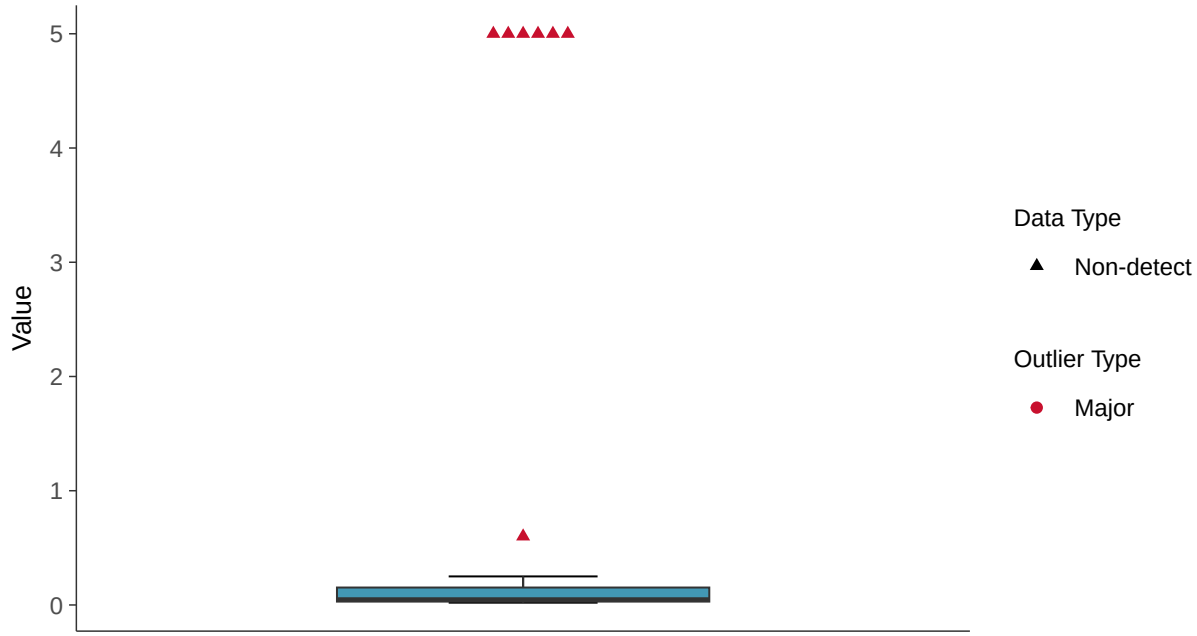
ID: 03_03_124





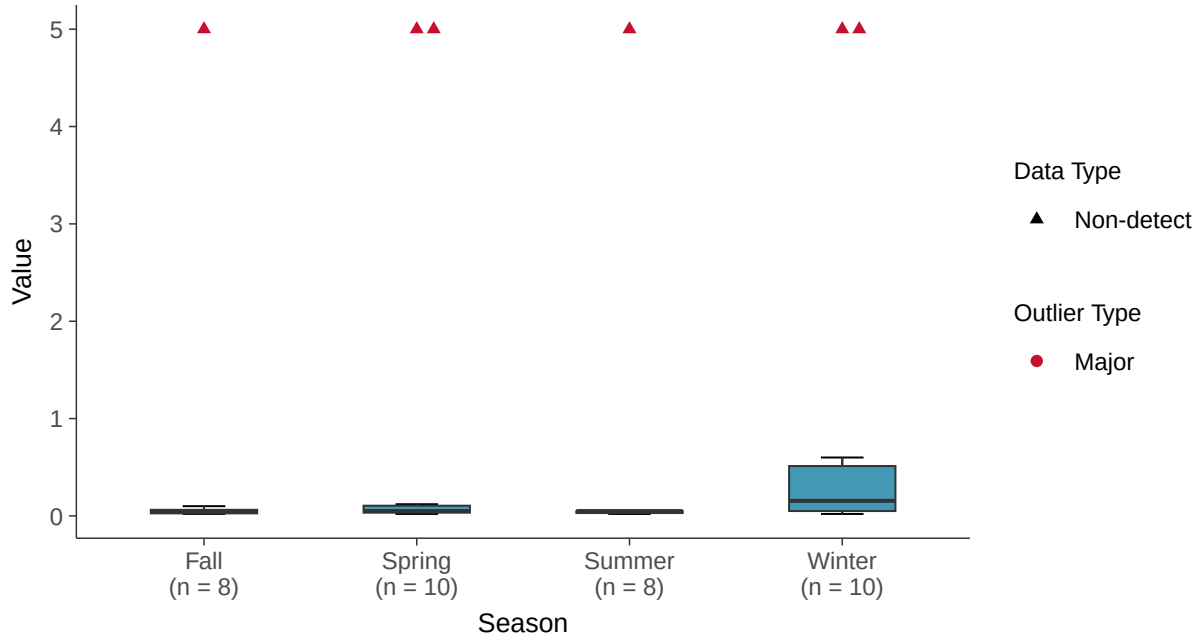
Boxplot

Thallium, MW-3 (ug/L)



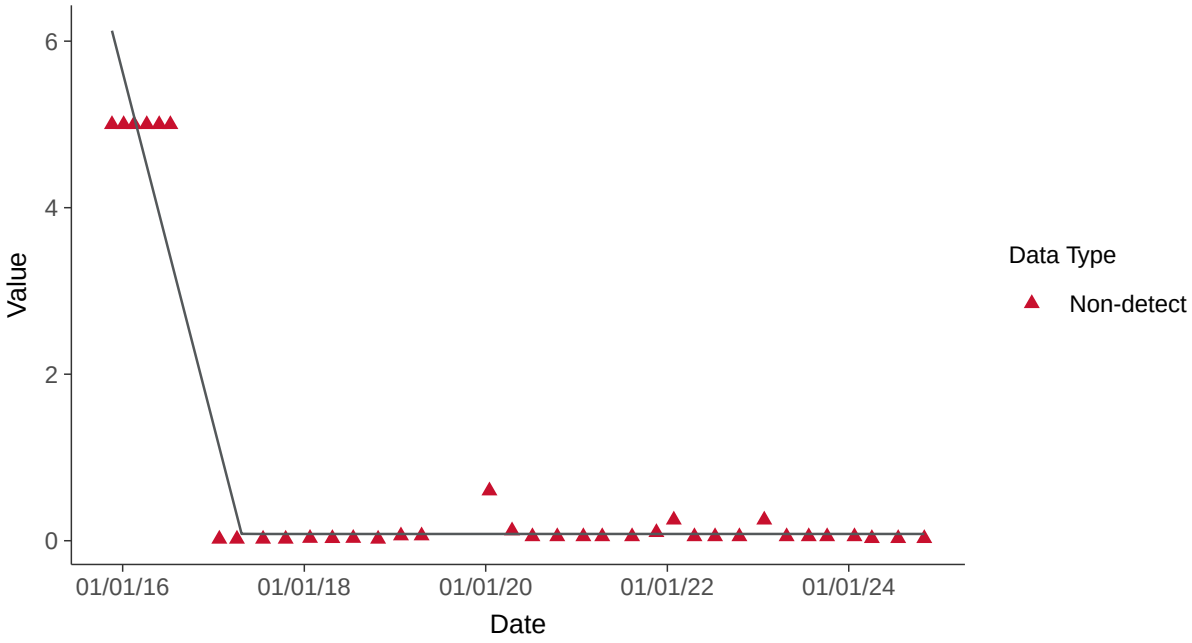
Boxplot by Season

Thallium, MW-3 (ug/L)



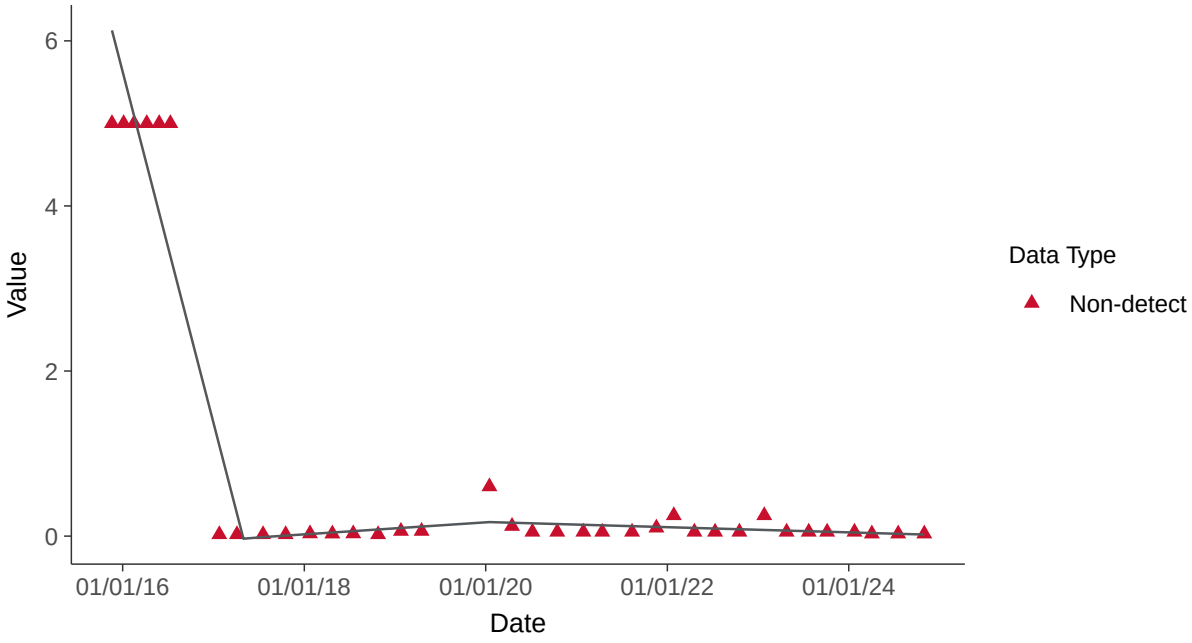
Trend Regression: Piecewise Linear-Linear

Thallium, MW-3 (ug/L)



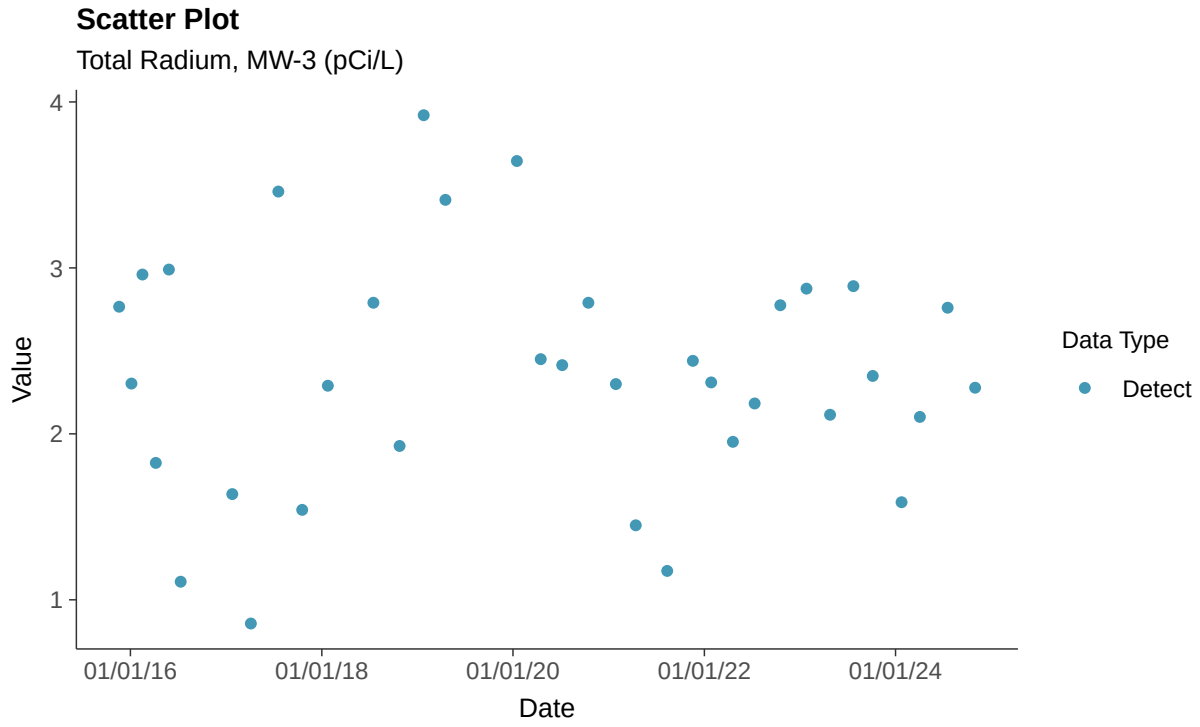
Trend Regression: Piecewise Linear-Linear-Linear

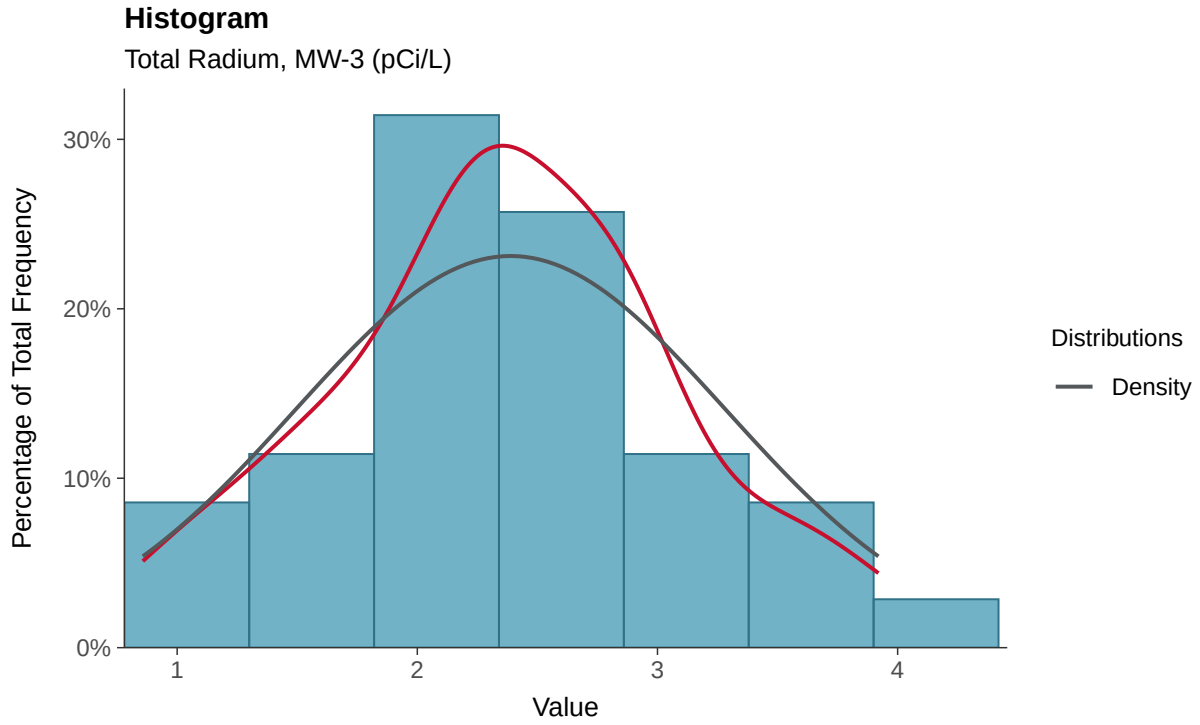
Thallium, MW-3 (ug/L)



App. IV: Total Radium, MW-3

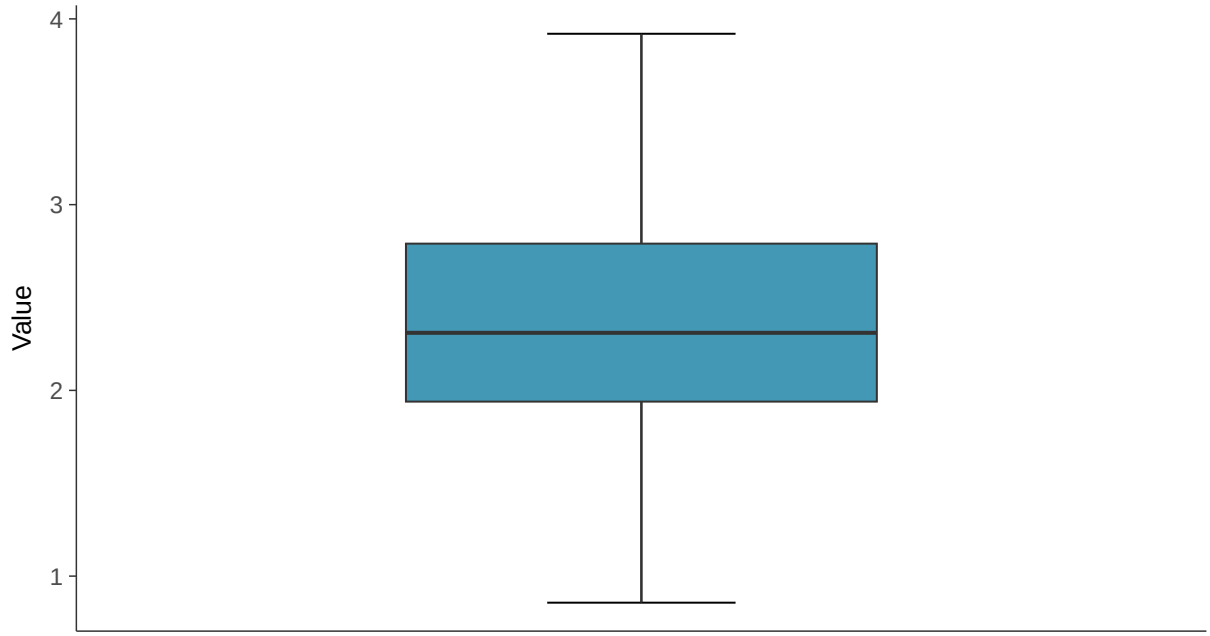
ID: 03_03_126





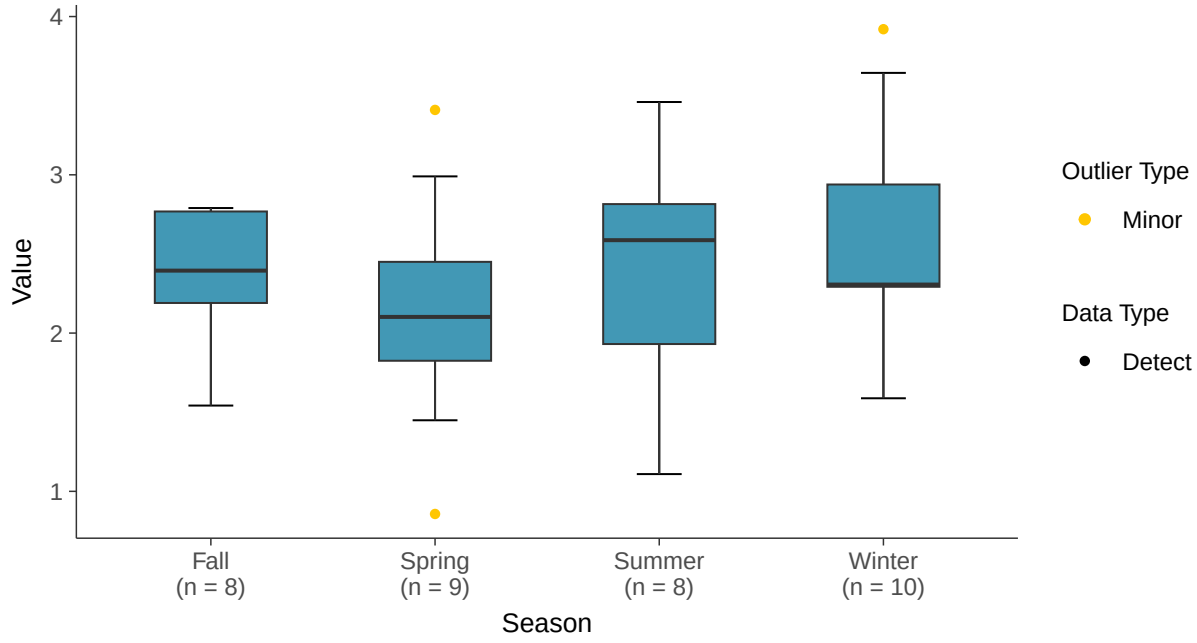
Boxplot

Total Radium, MW-3 (pCi/L)



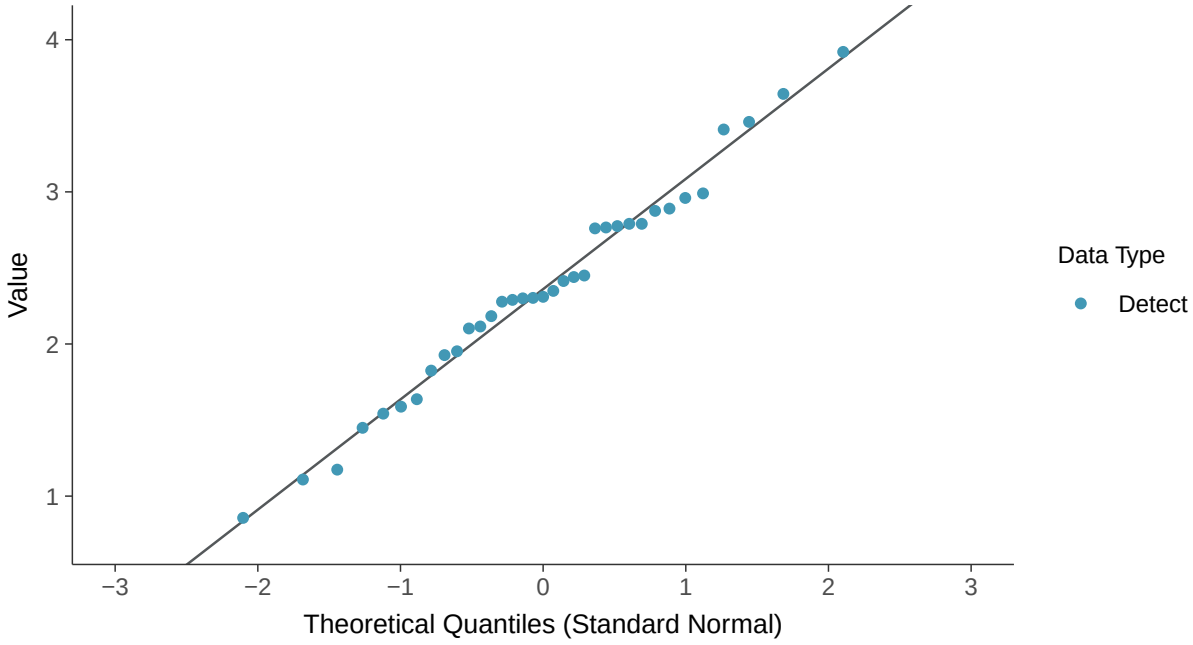
Boxplot by Season

Total Radium, MW-3 (pCi/L)



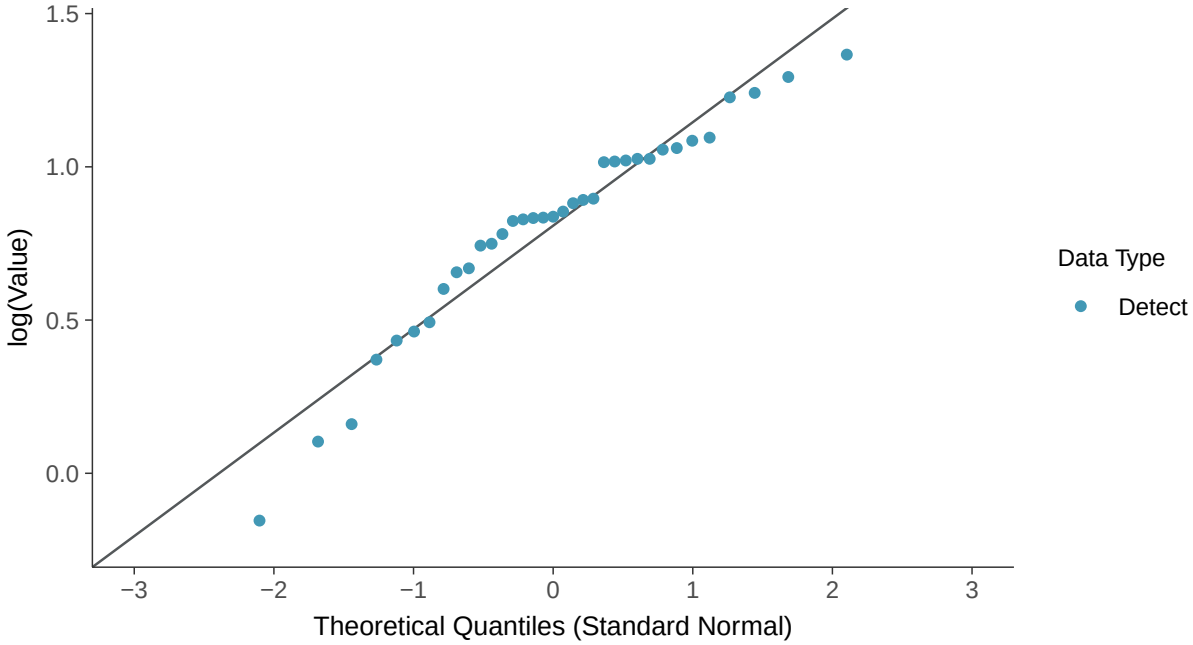
Normal Q-Q plot

Total Radium, MW-3 (pCi/L)



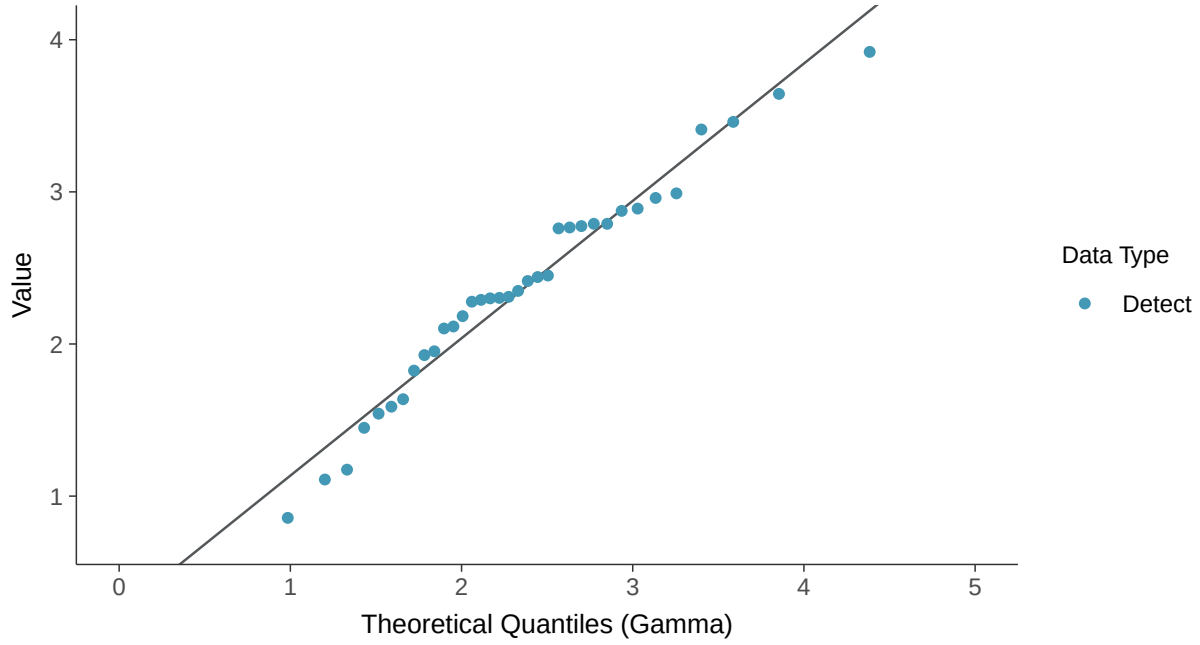
Lognormal Q-Q plot

Total Radium, MW-3 (pCi/L)



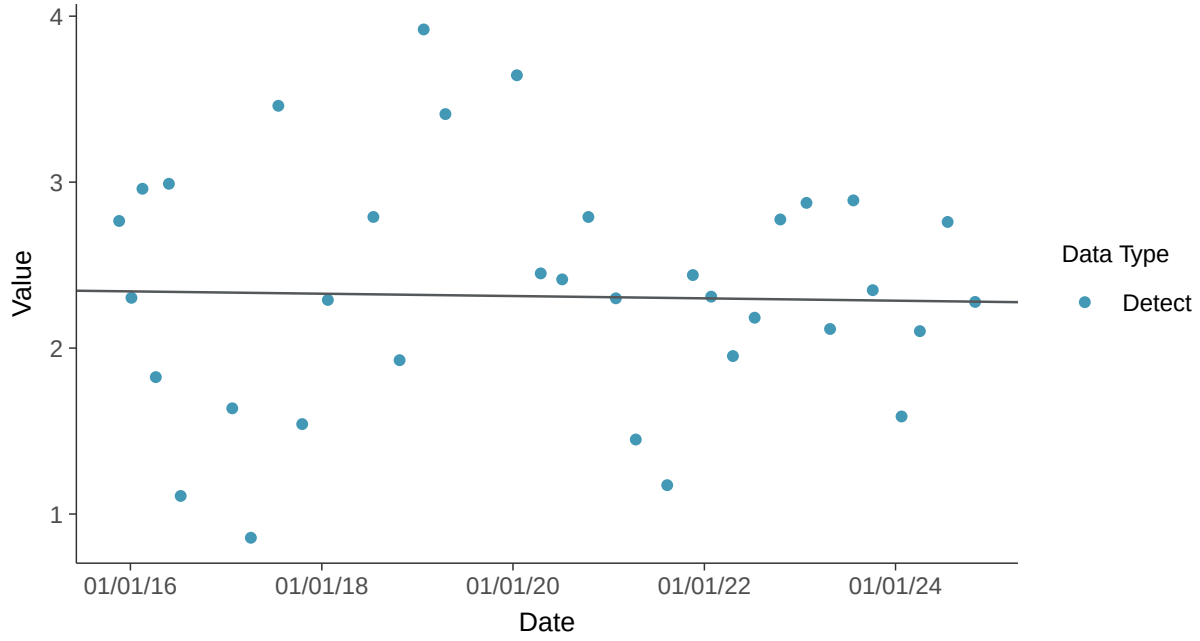
Gamma Q-Q plot

Total Radium, MW-3 (pCi/L)



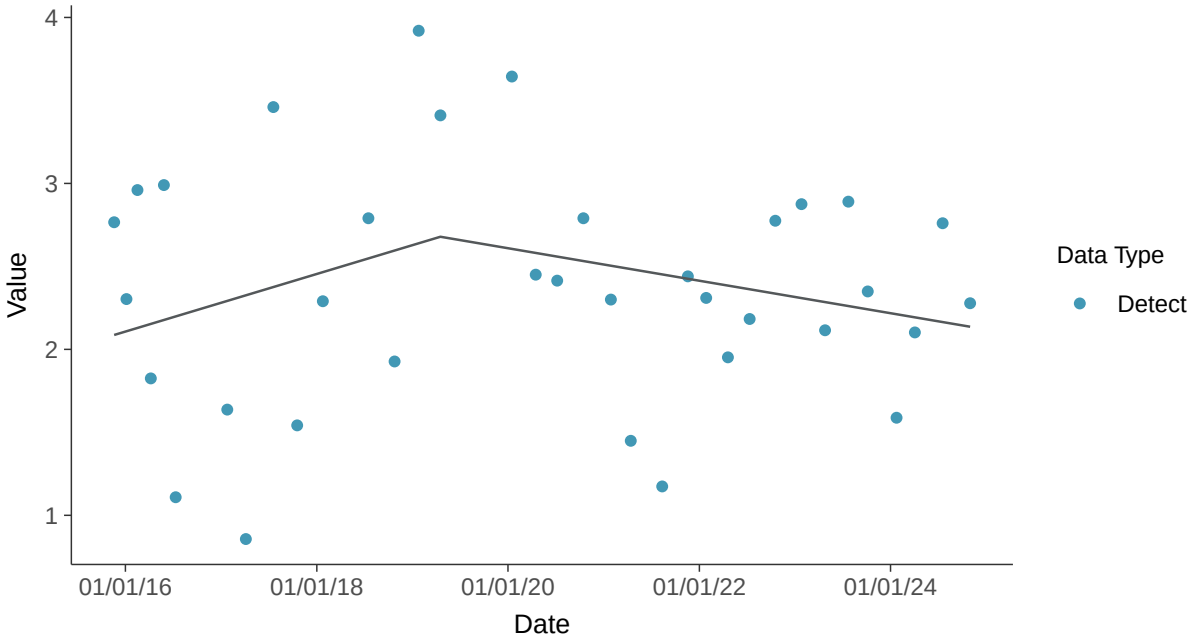
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-3 (pCi/L)



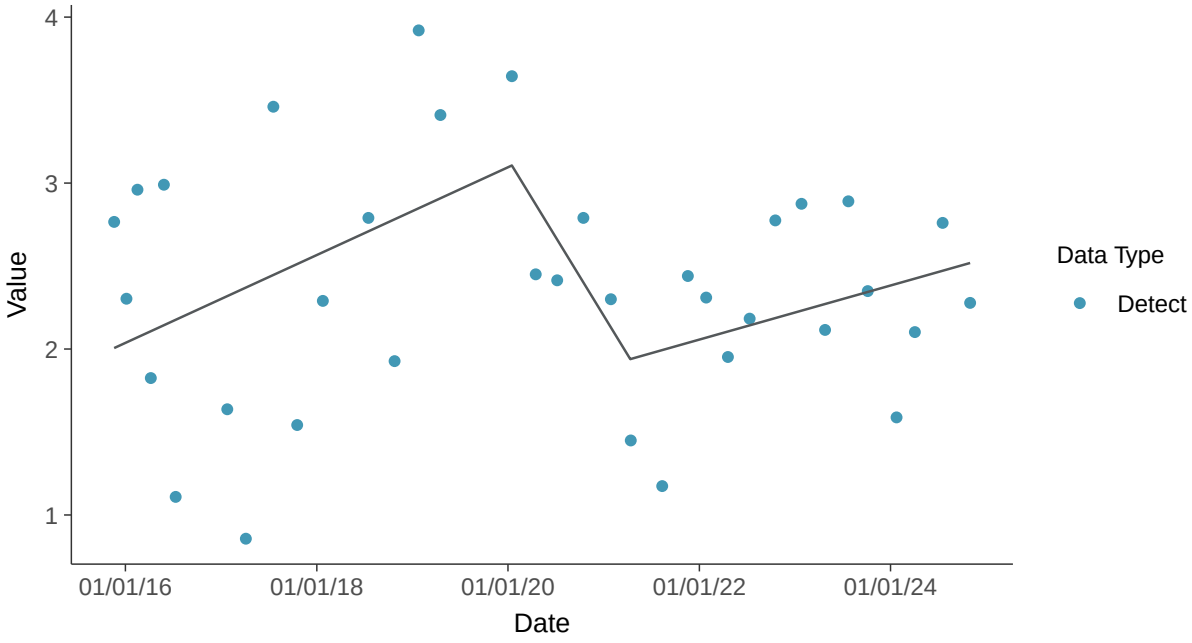
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-3 (pCi/L)



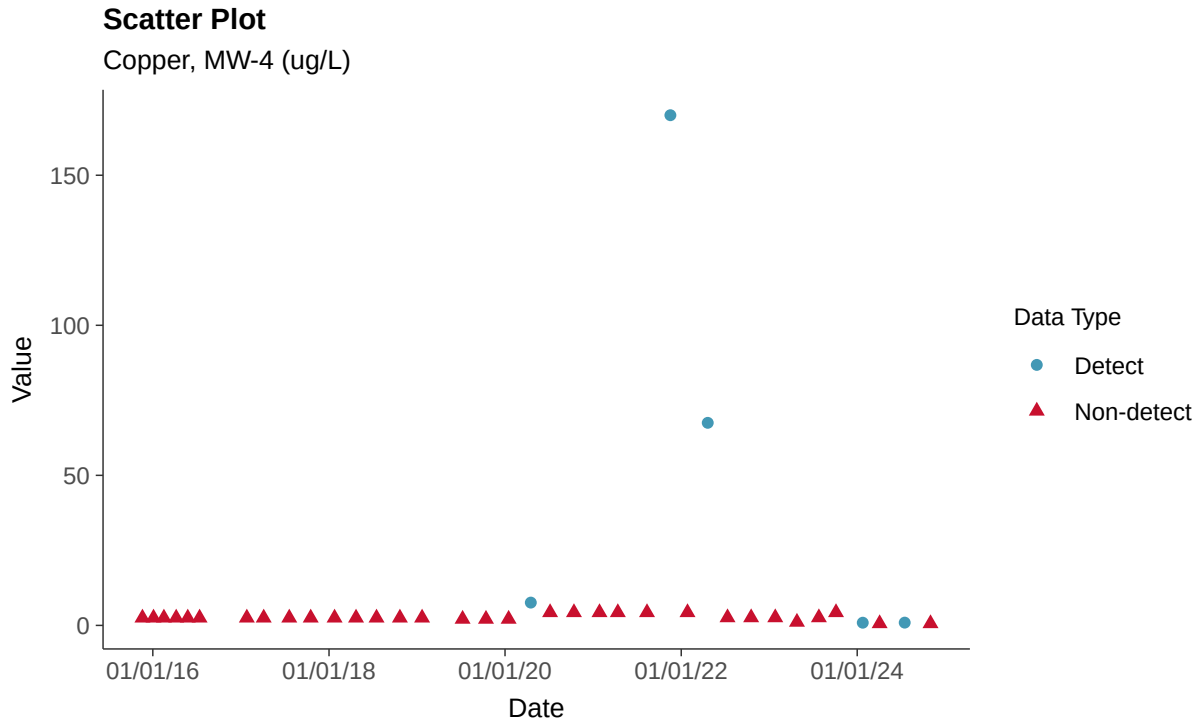
Trend Regression: Piecewise Linear-Linear-Linear

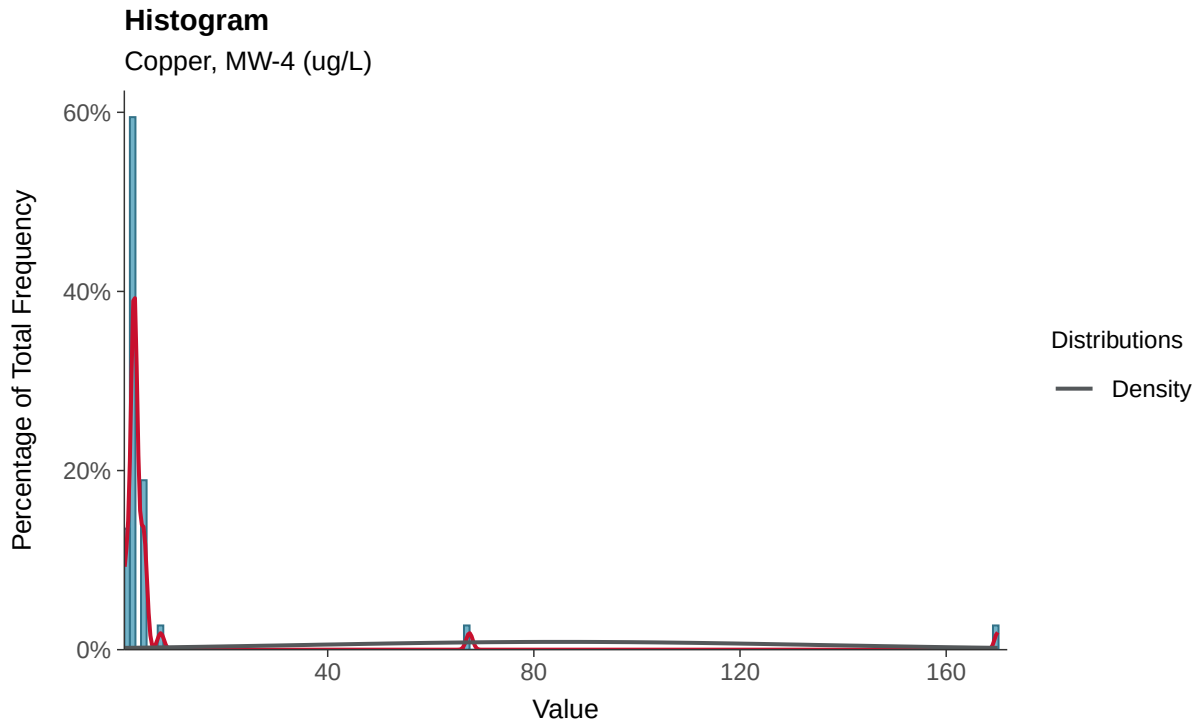
Total Radium, MW-3 (pCi/L)



App. I Metals: Copper, MW-4

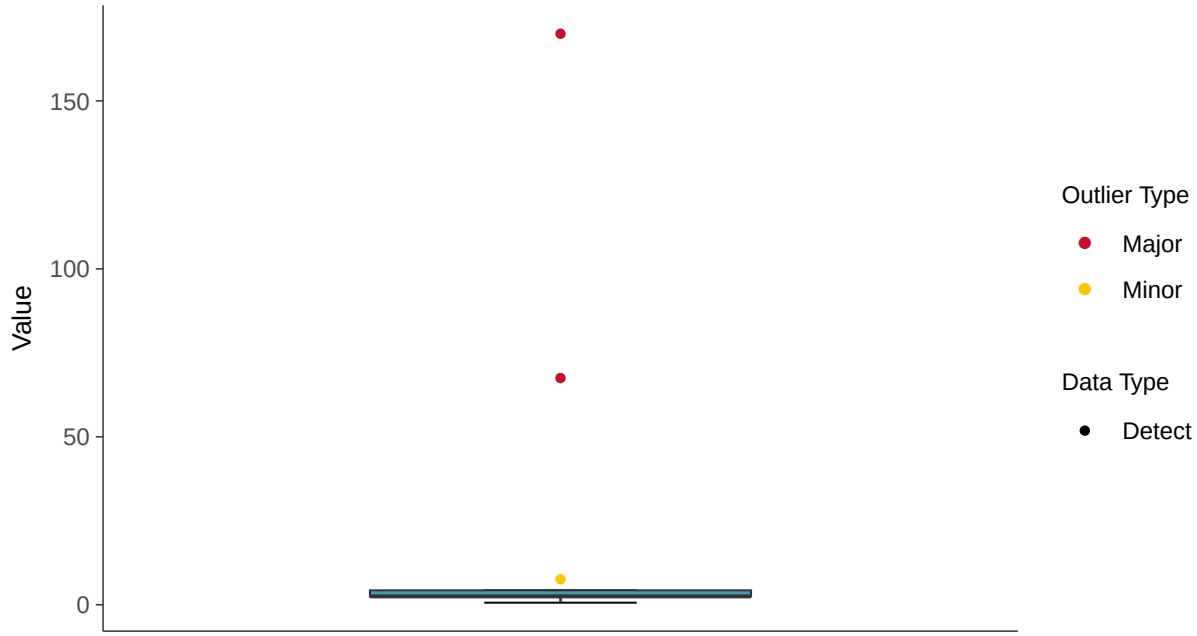
ID: 04_01_111





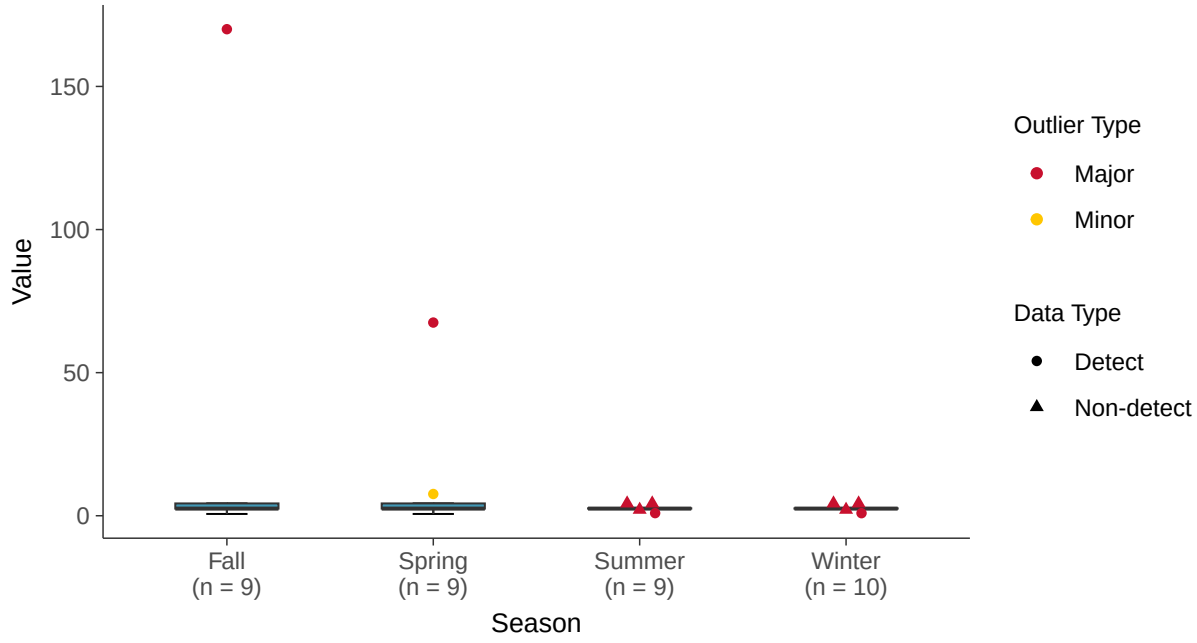
Boxplot

Copper, MW-4 (ug/L)



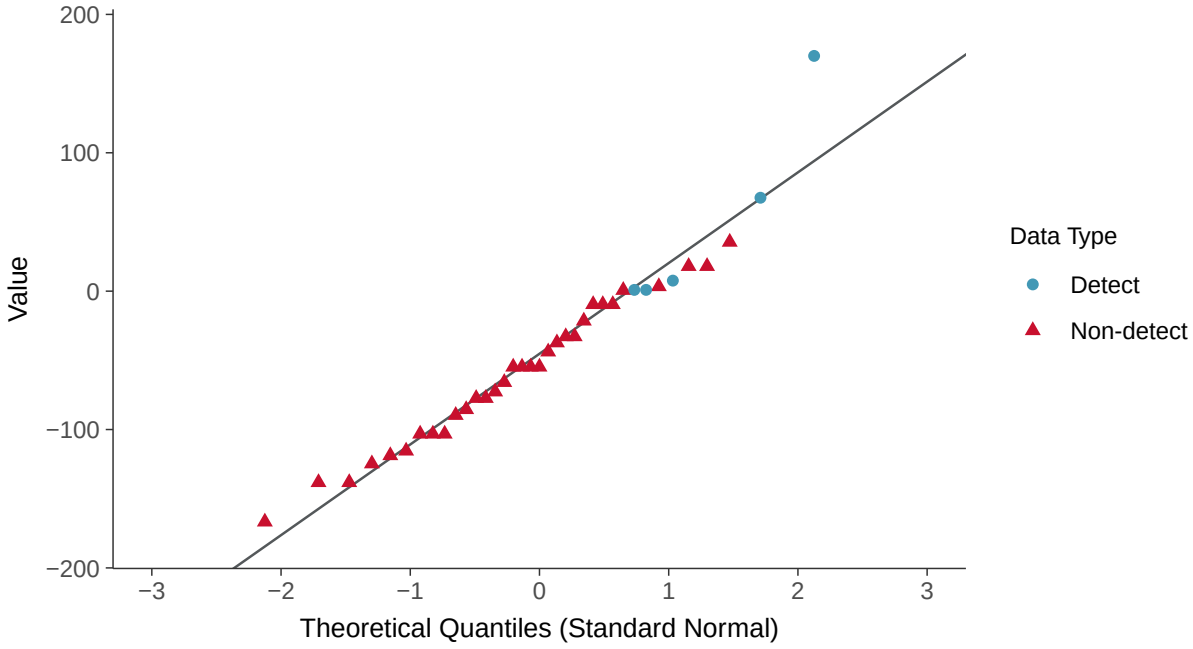
Boxplot by Season

Copper, MW-4 (ug/L)



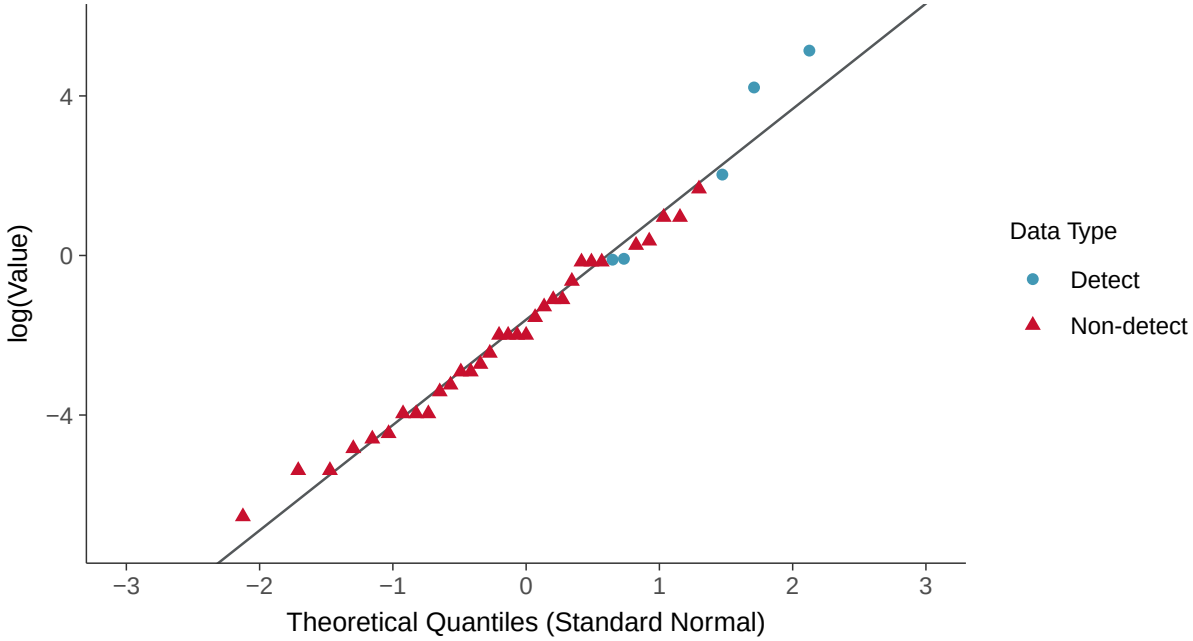
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-4 (ug/L)



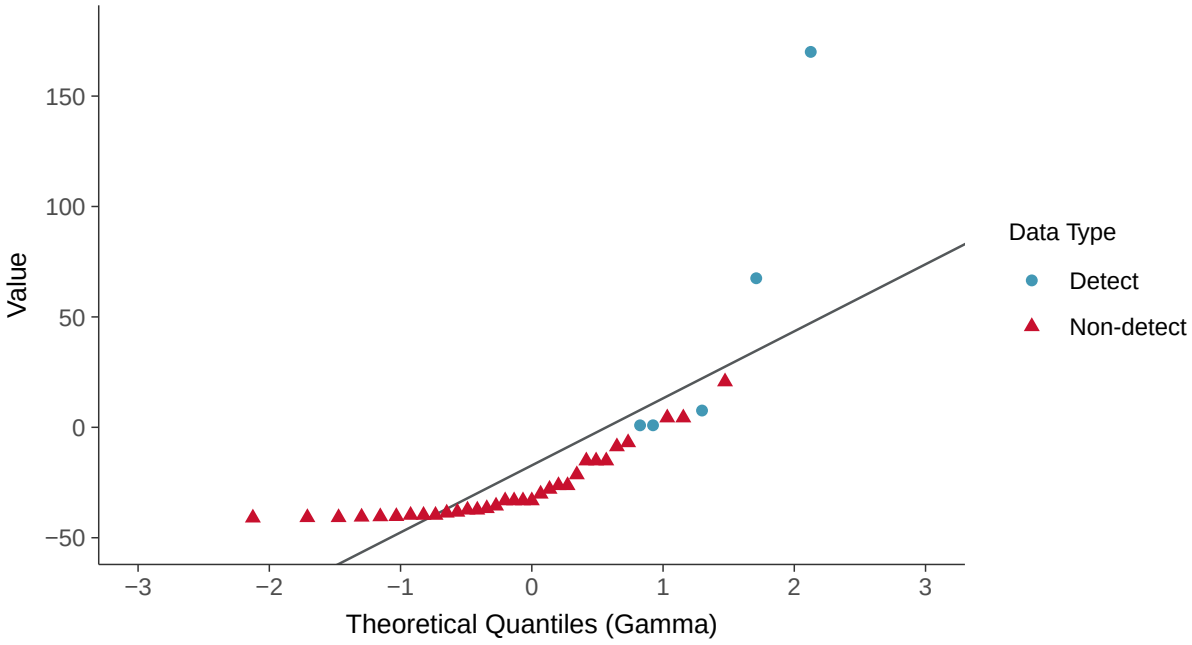
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-4 (ug/L)



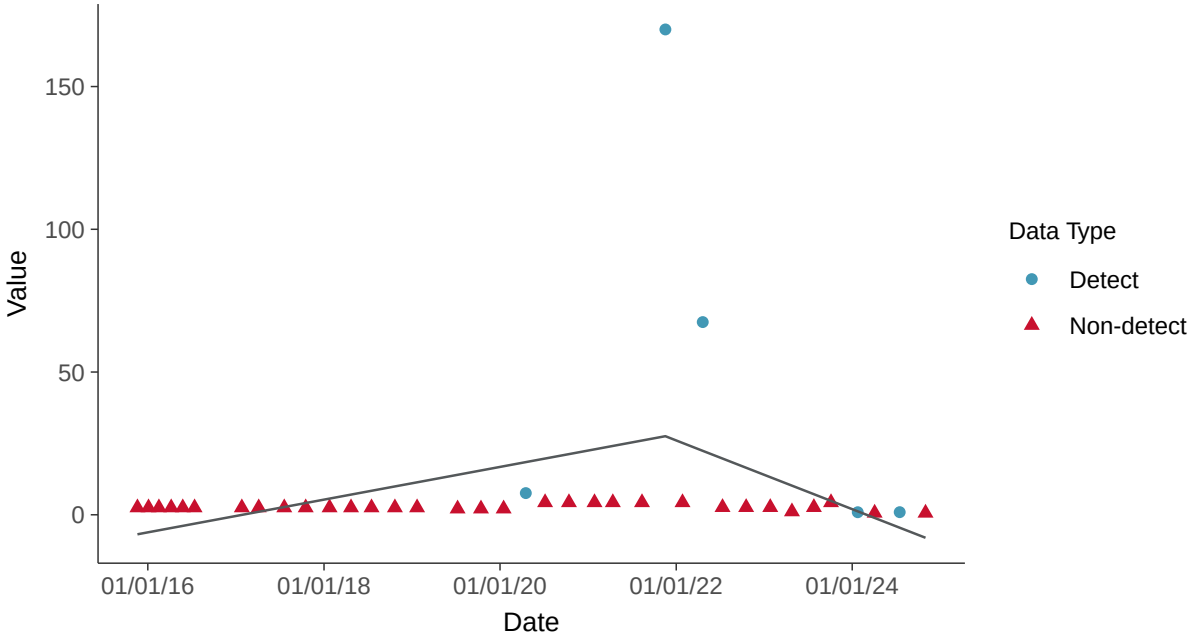
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-4 (ug/L)



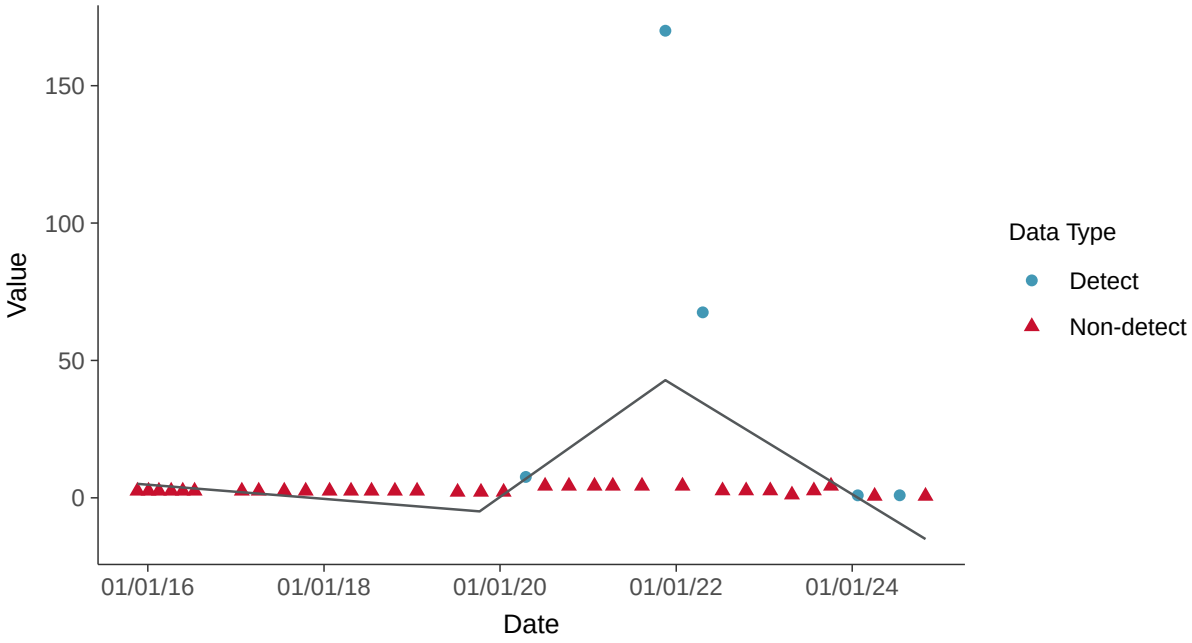
Trend Regression: Piecewise Linear-Linear

Copper, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Copper, MW-4 (ug/L)

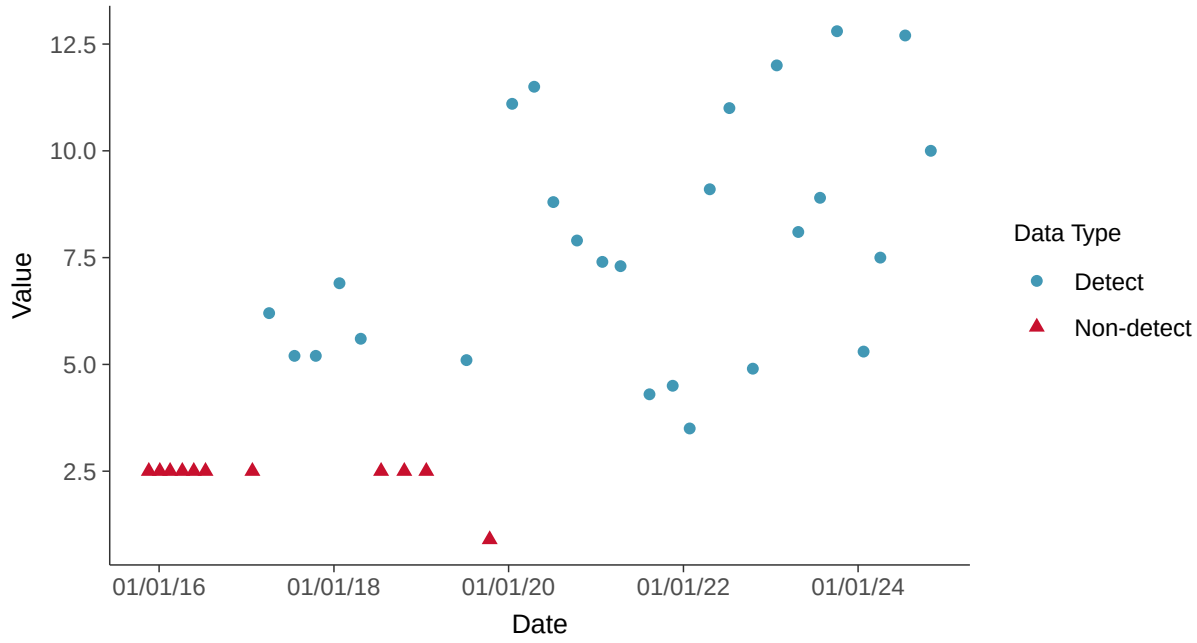


App. I Metals: Nickel, MW-4

ID: 04_01_117

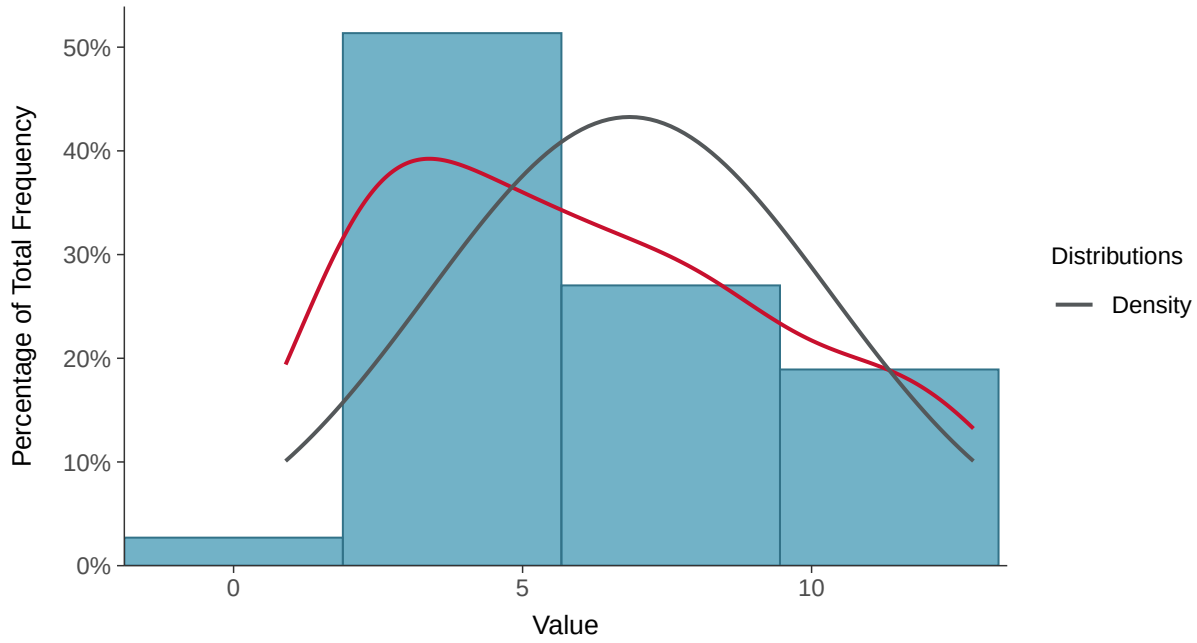
Scatter Plot

Nickel, MW-4 (ug/L)



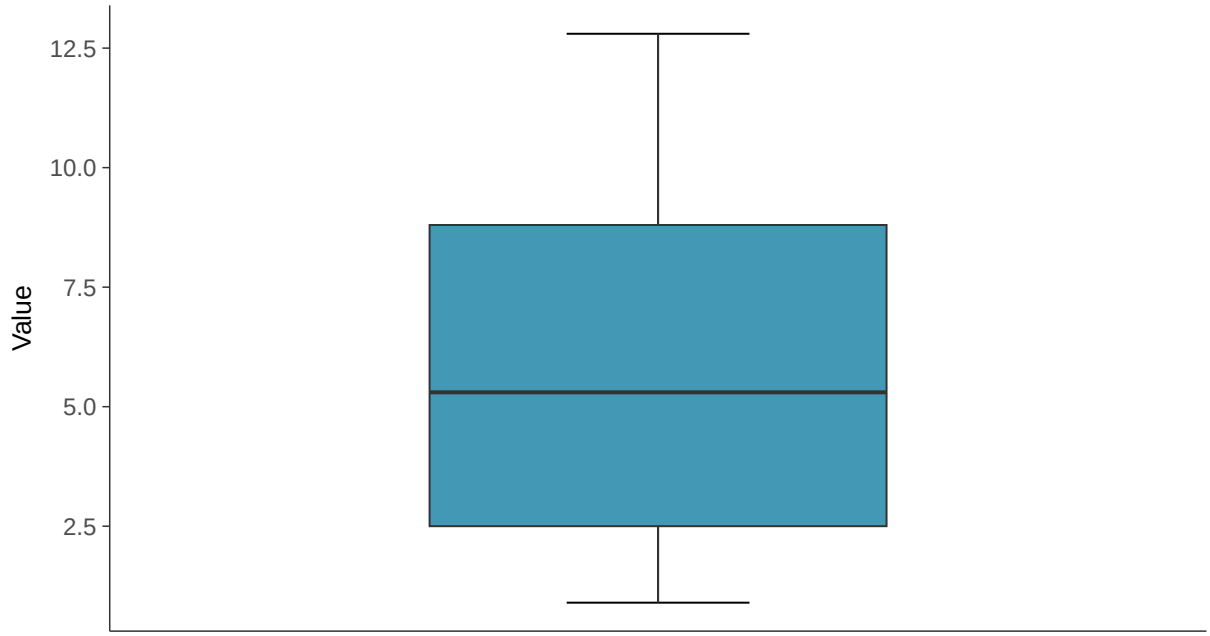
Histogram

Nickel, MW-4 (ug/L)



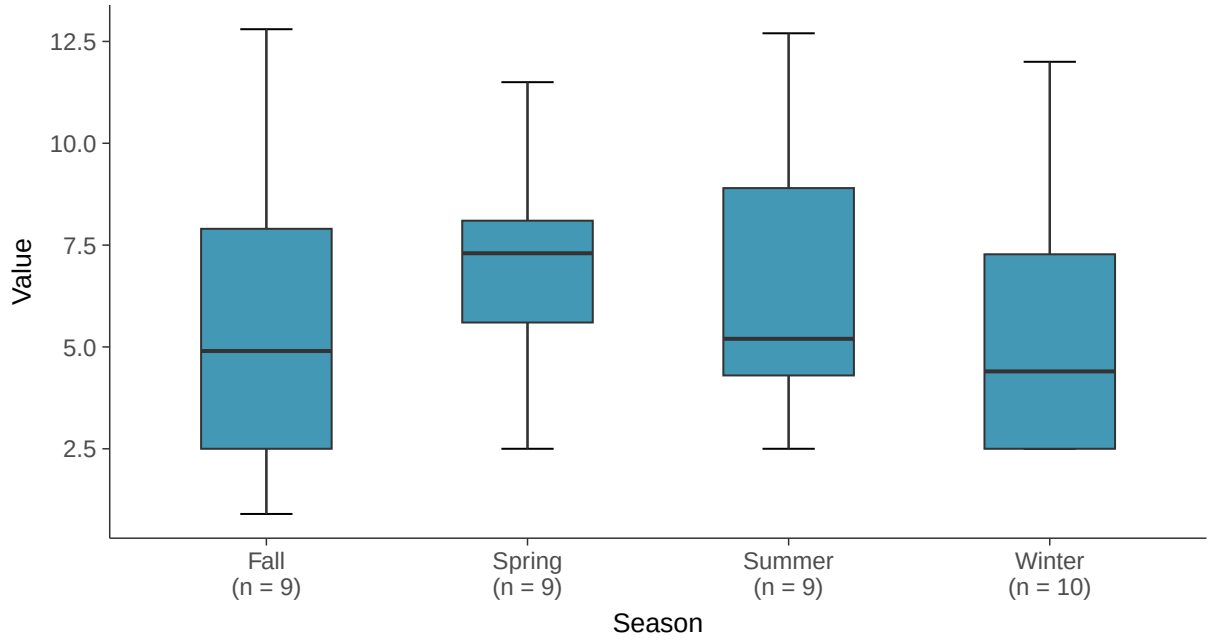
Boxplot

Nickel, MW-4 (ug/L)



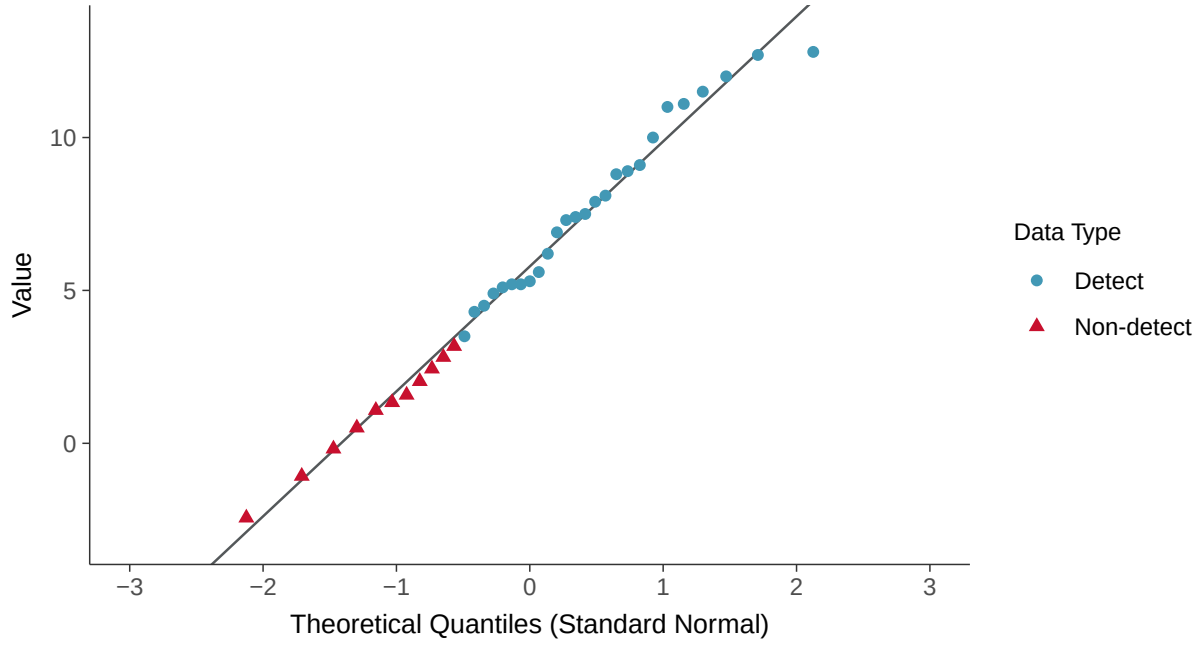
Boxplot by Season

Nickel, MW-4 (ug/L)



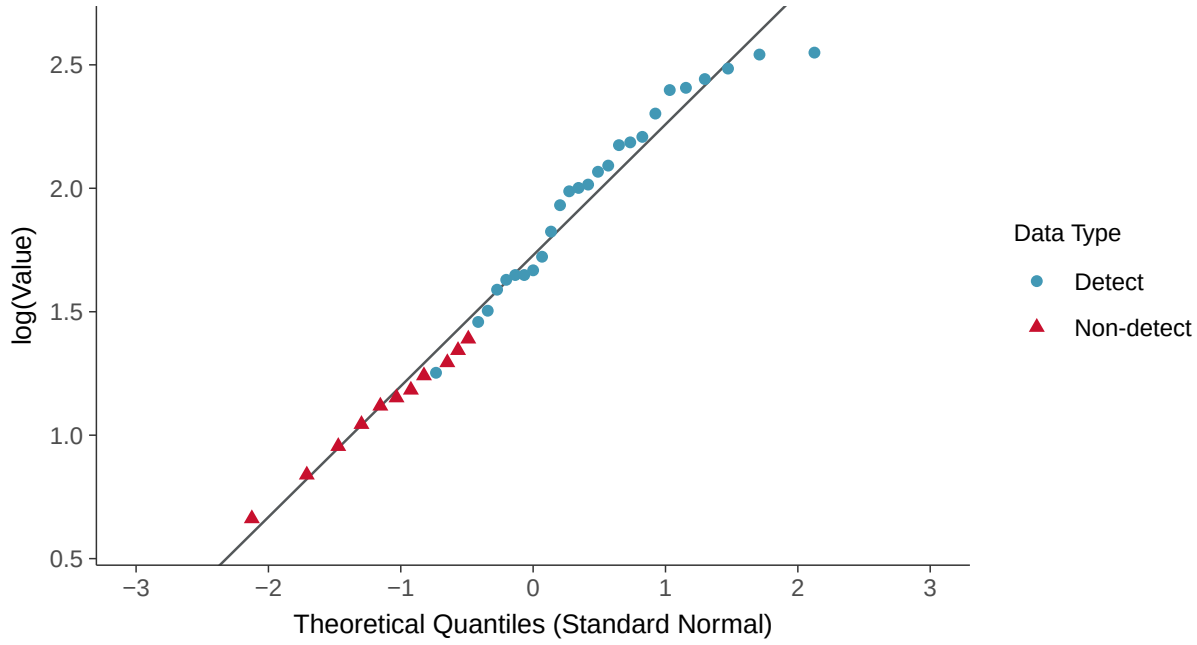
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



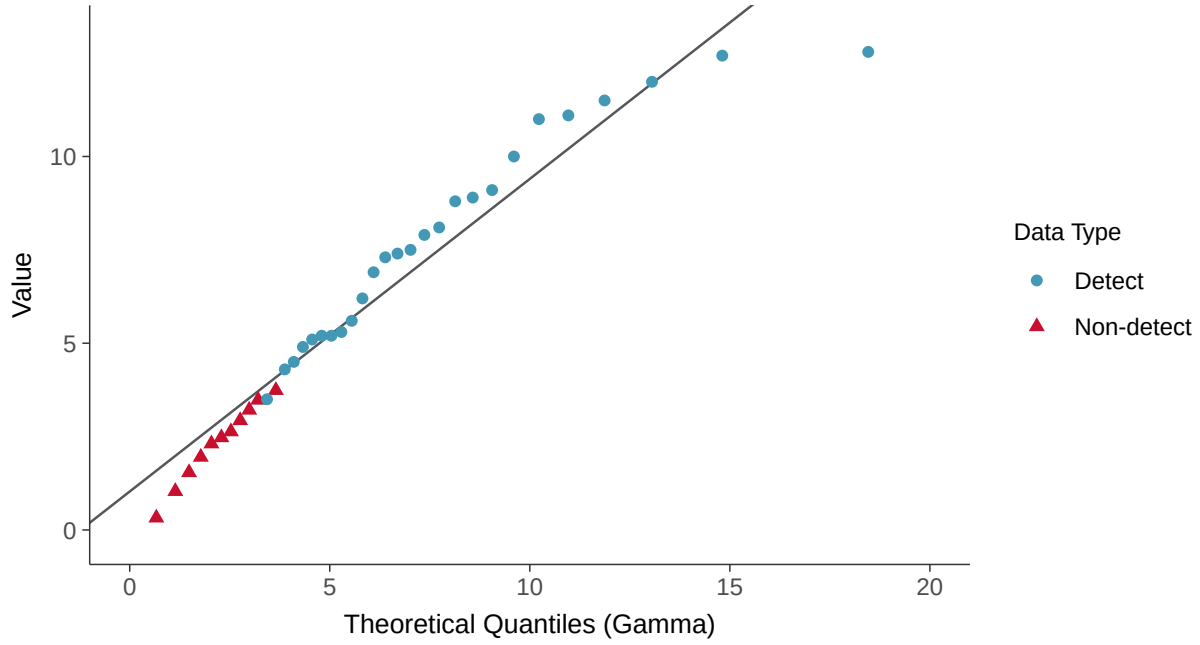
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



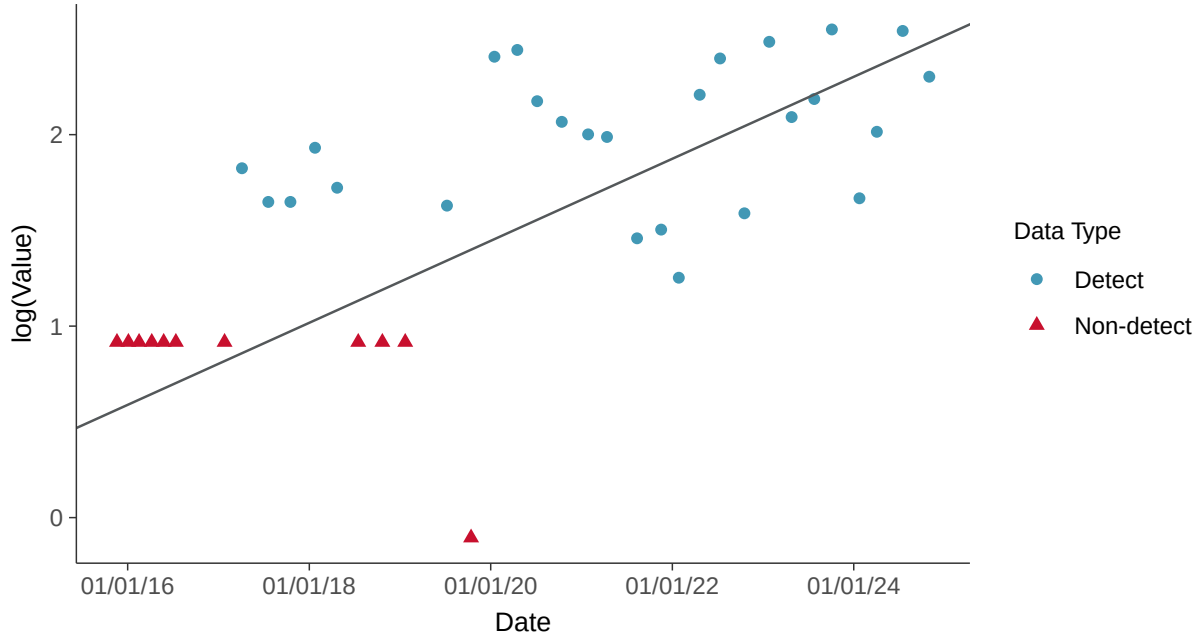
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-4 (ug/L)



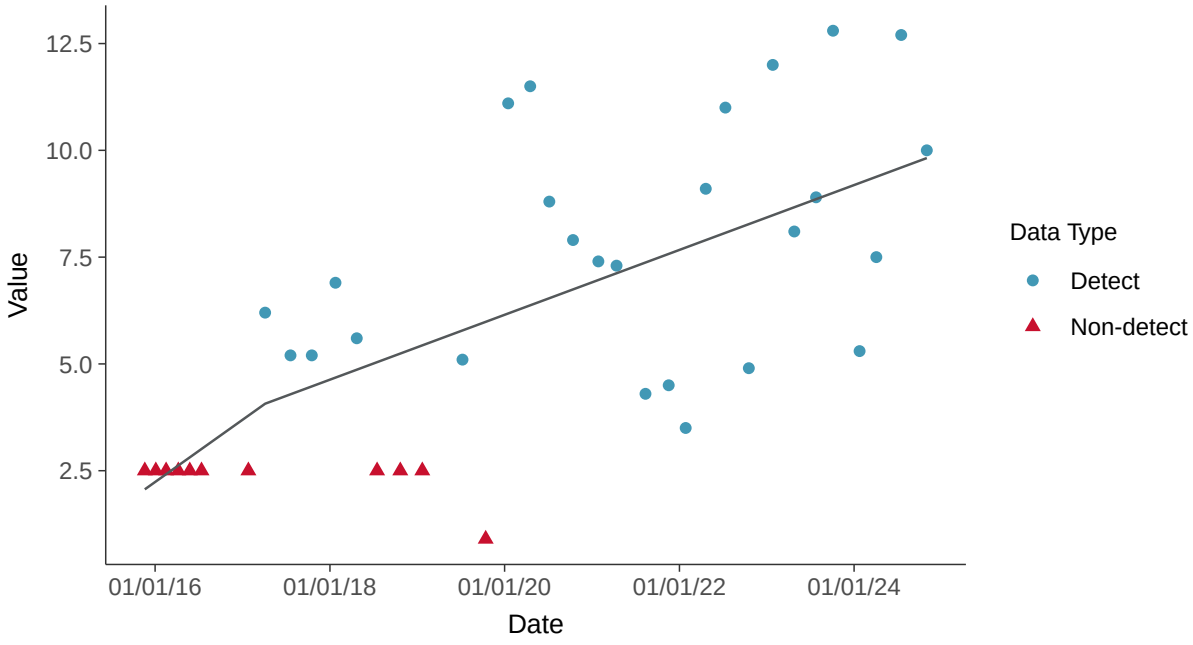
Trend Regression: Lognormal MLE

Nickel, MW-4 (ug/L)



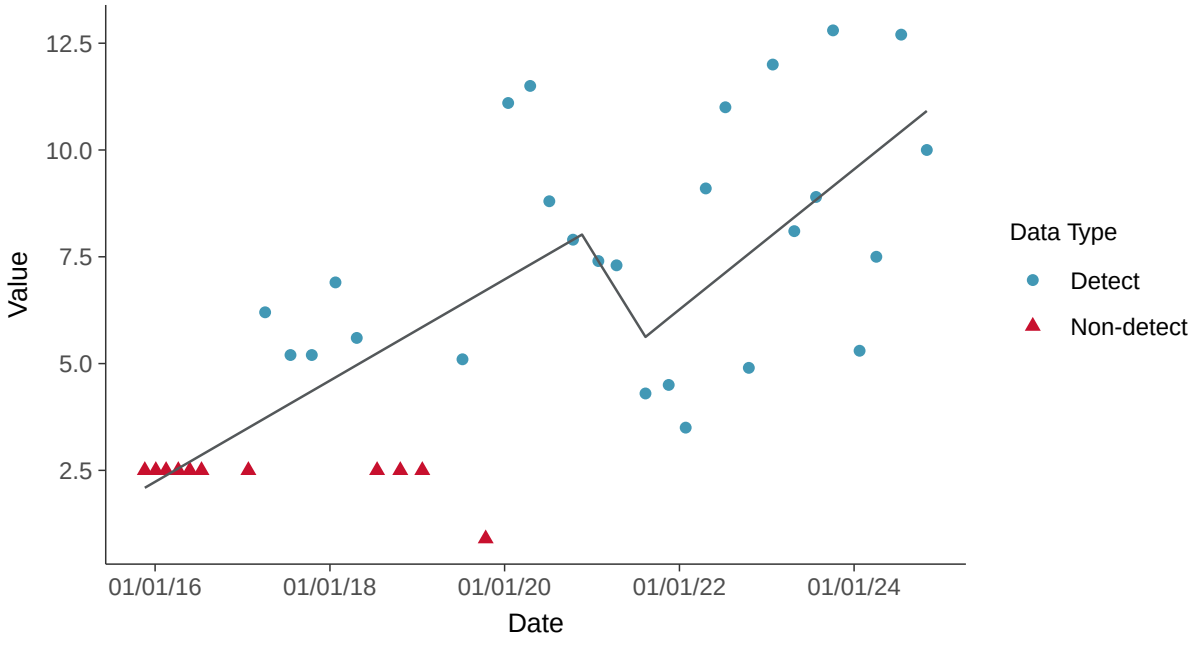
Trend Regression: Piecewise Linear-Linear

Nickel, MW-4 (ug/L)



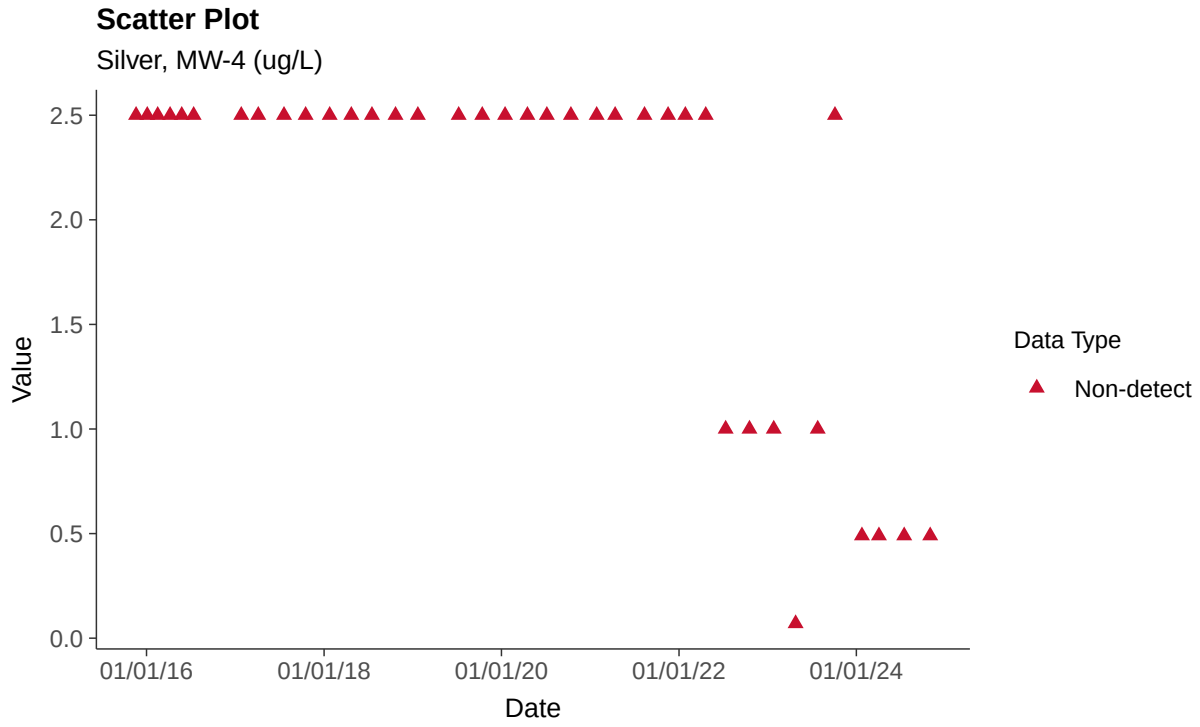
Trend Regression: Piecewise Linear-Linear-Linear

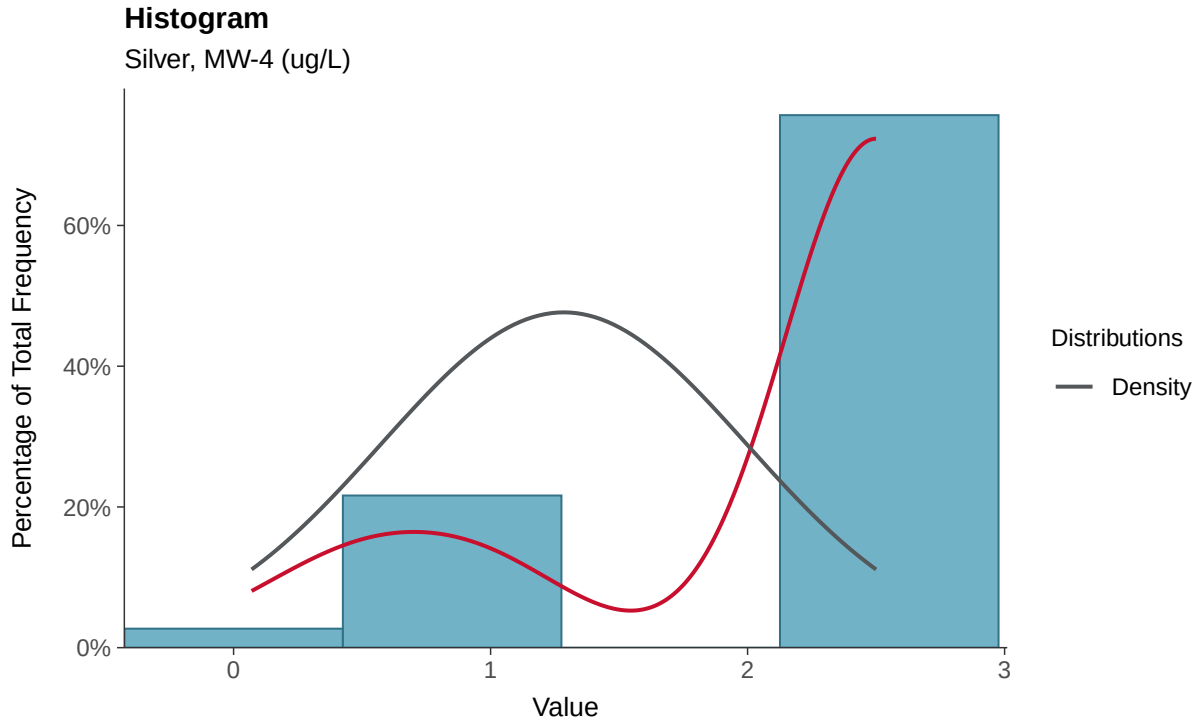
Nickel, MW-4 (ug/L)



App. I Metals: Silver, MW-4

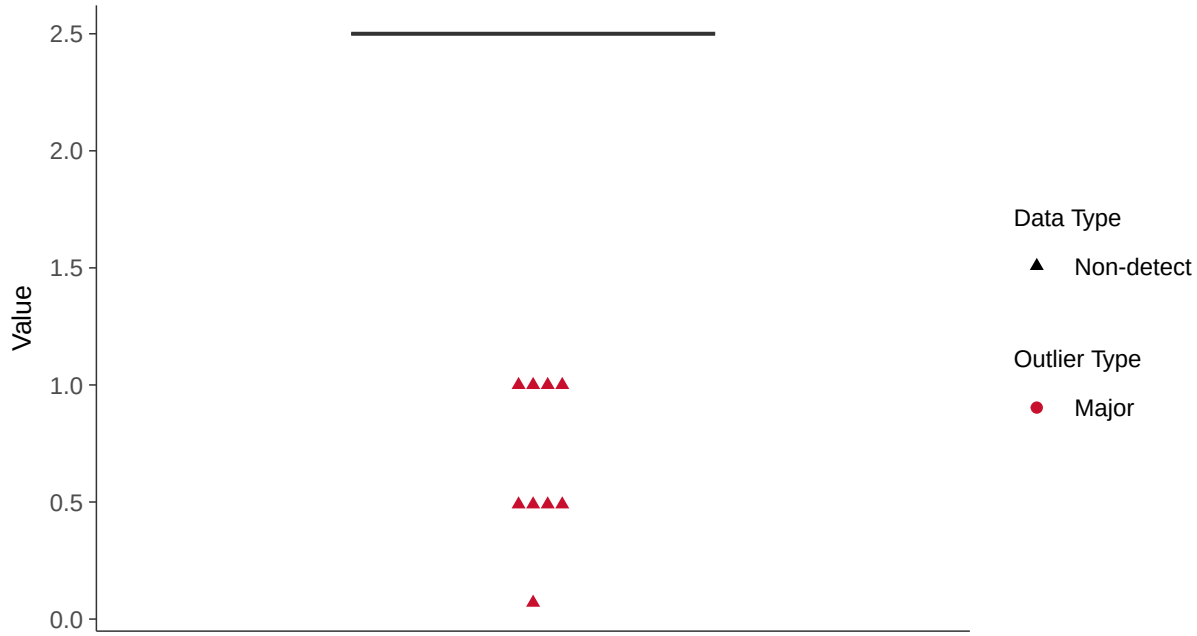
ID: 04_01_122





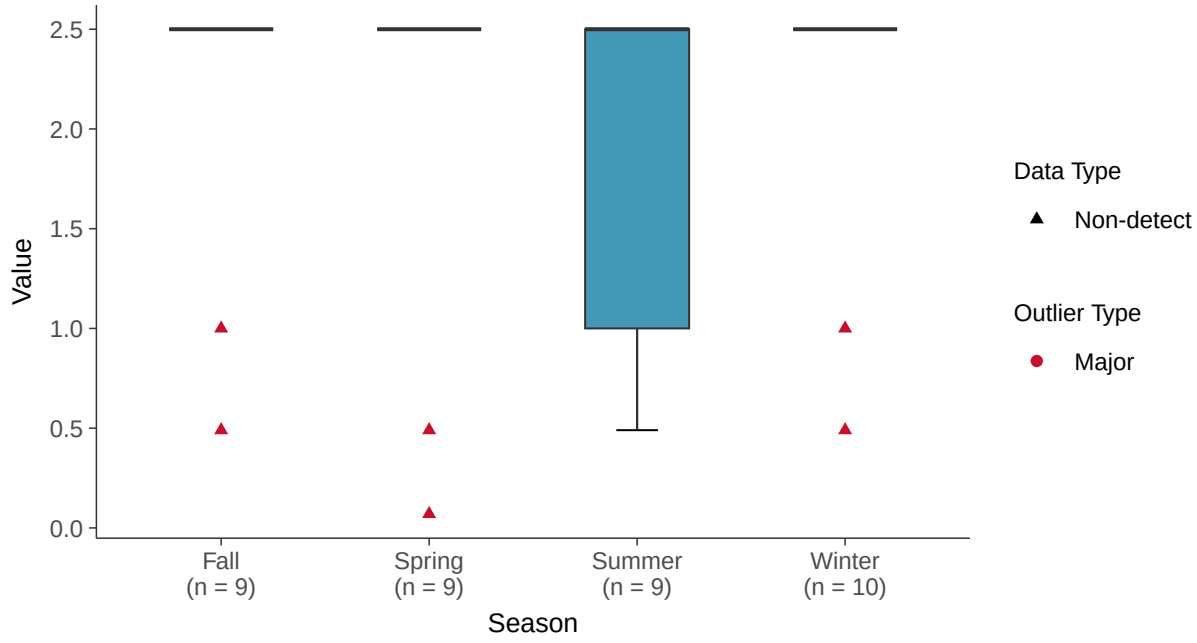
Boxplot

Silver, MW-4 (ug/L)



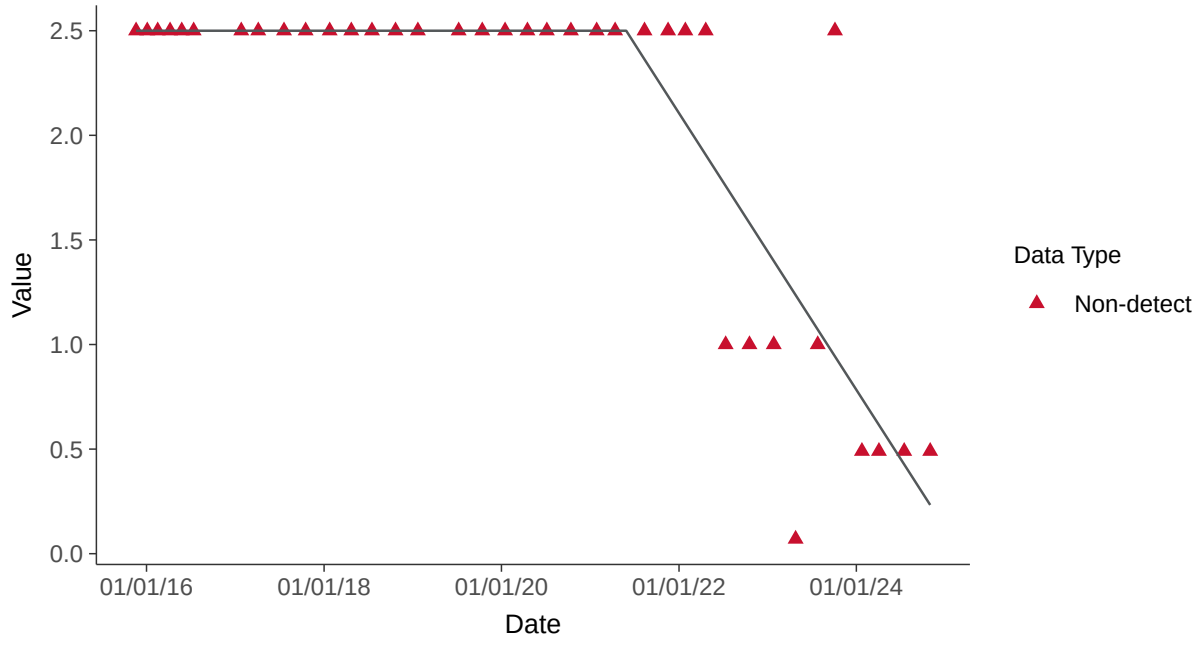
Boxplot by Season

Silver, MW-4 (ug/L)



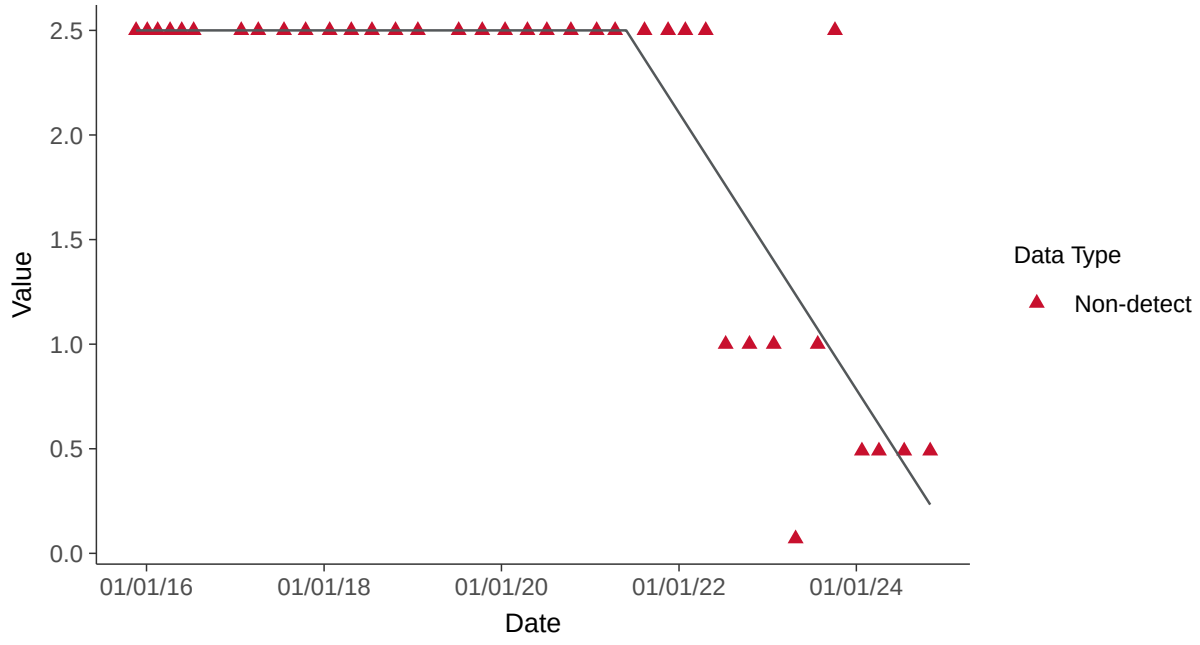
Trend Regression: Piecewise Linear-Linear

Silver, MW-4 (ug/L)



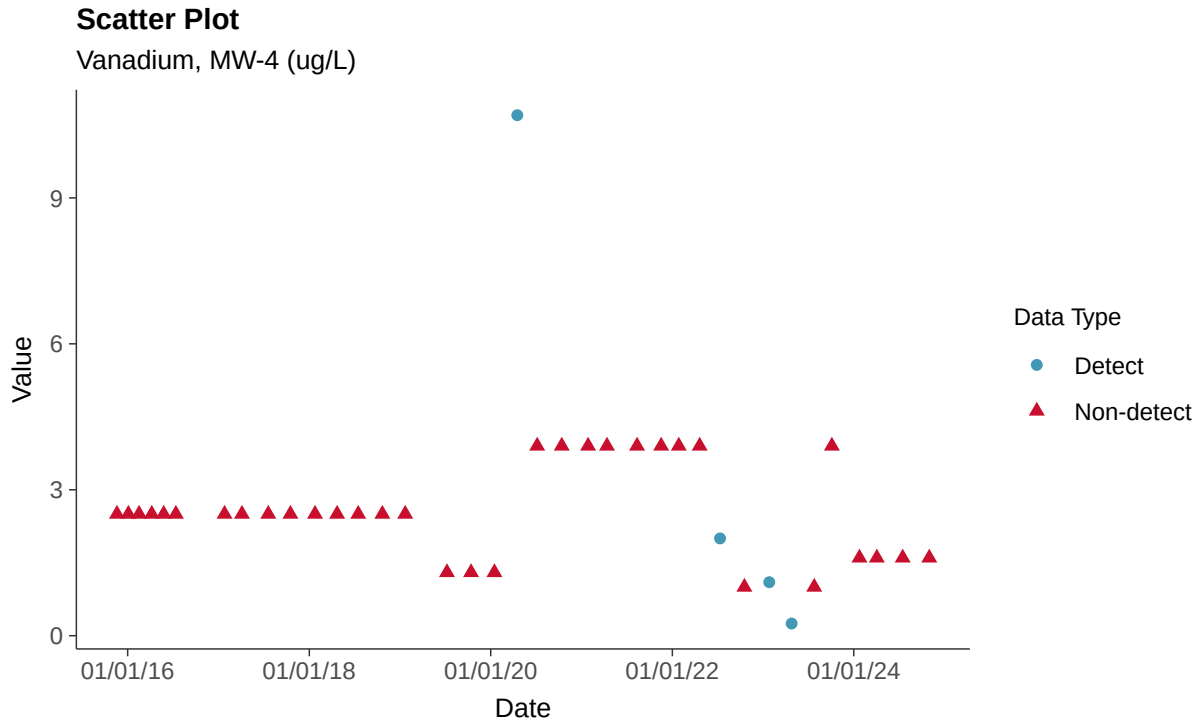
Trend Regression: Piecewise Linear-Linear-Linear

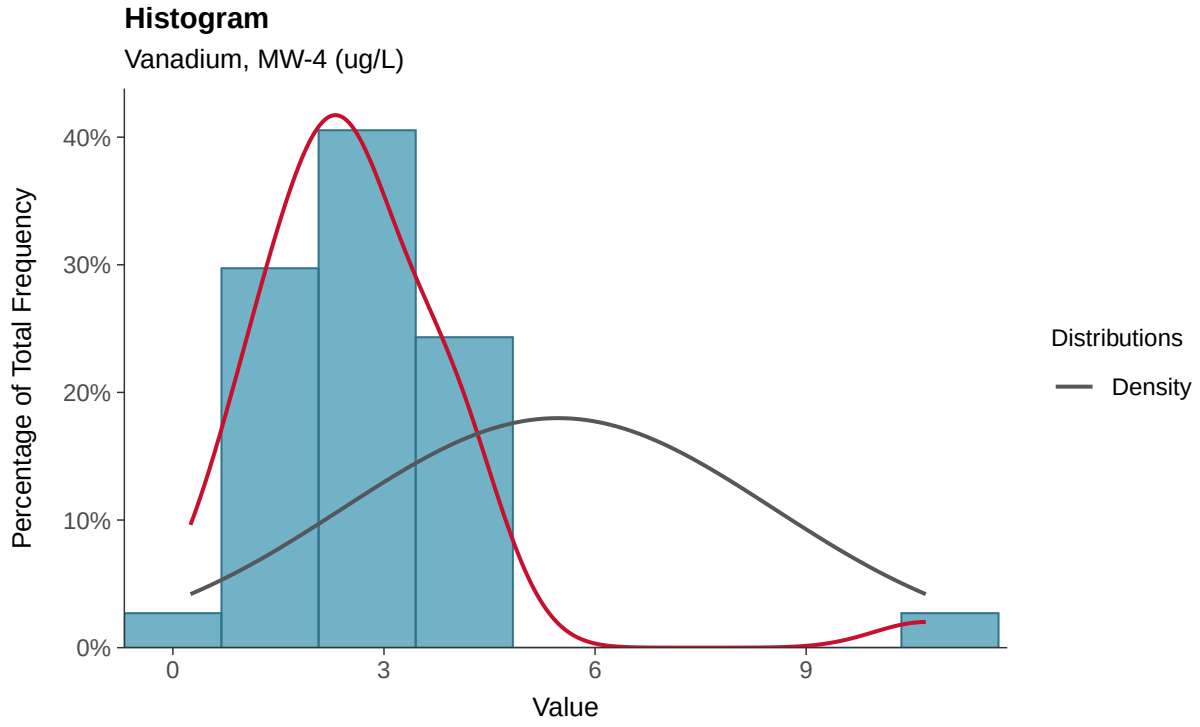
Silver, MW-4 (ug/L)



App. I Metals: Vanadium, MW-4

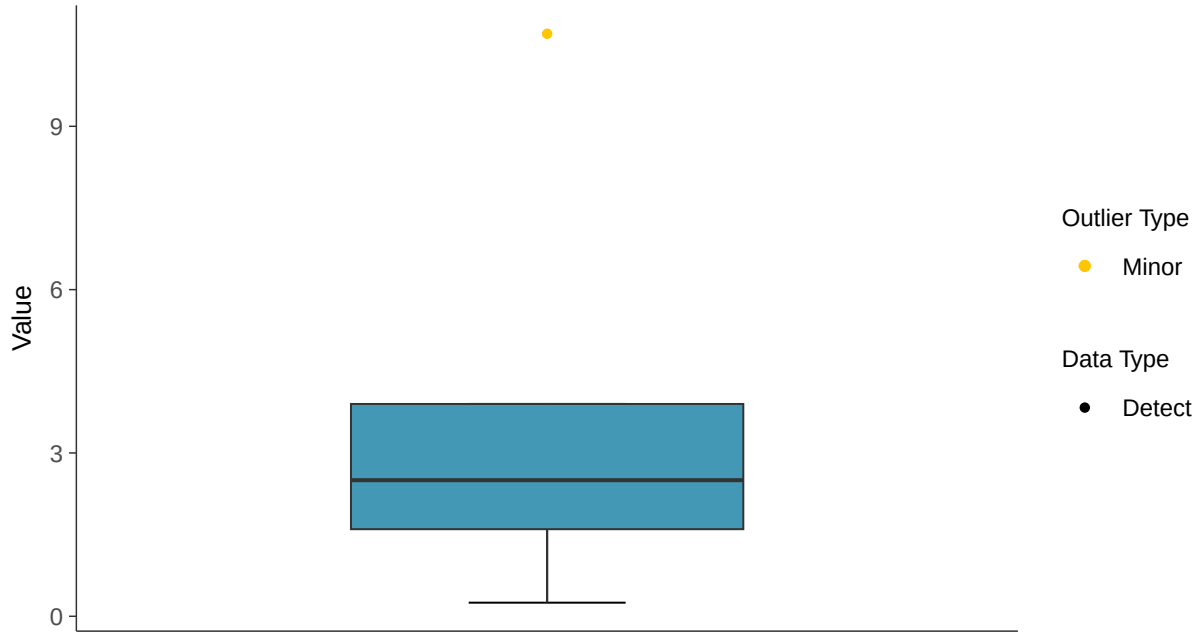
ID: 04_01_127





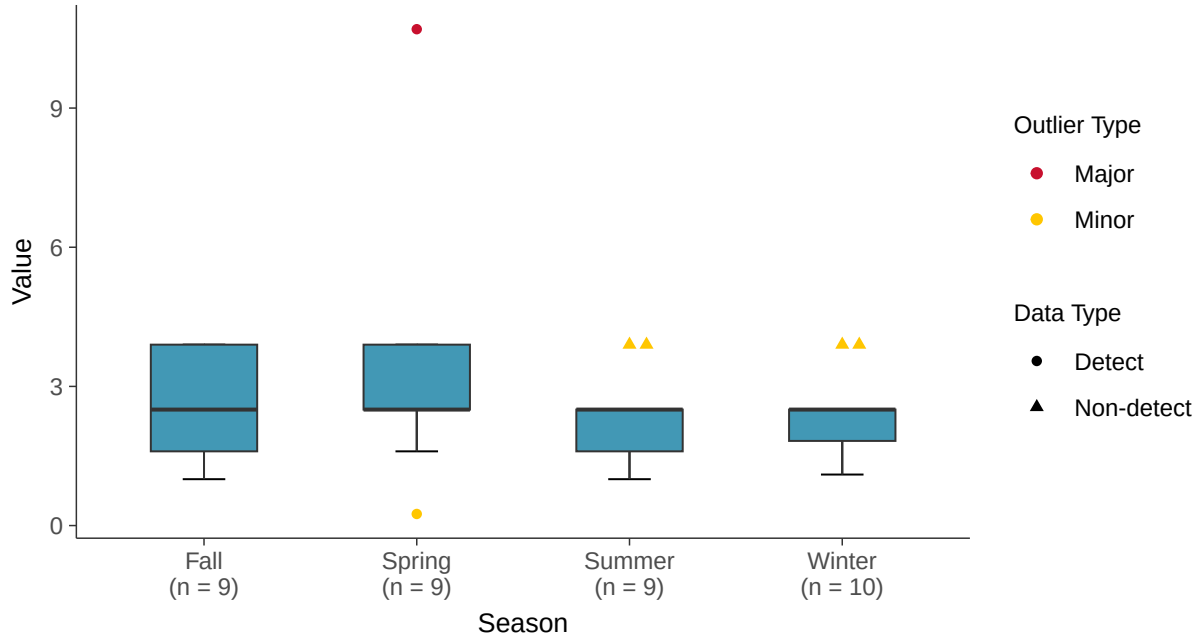
Boxplot

Vanadium, MW-4 (ug/L)



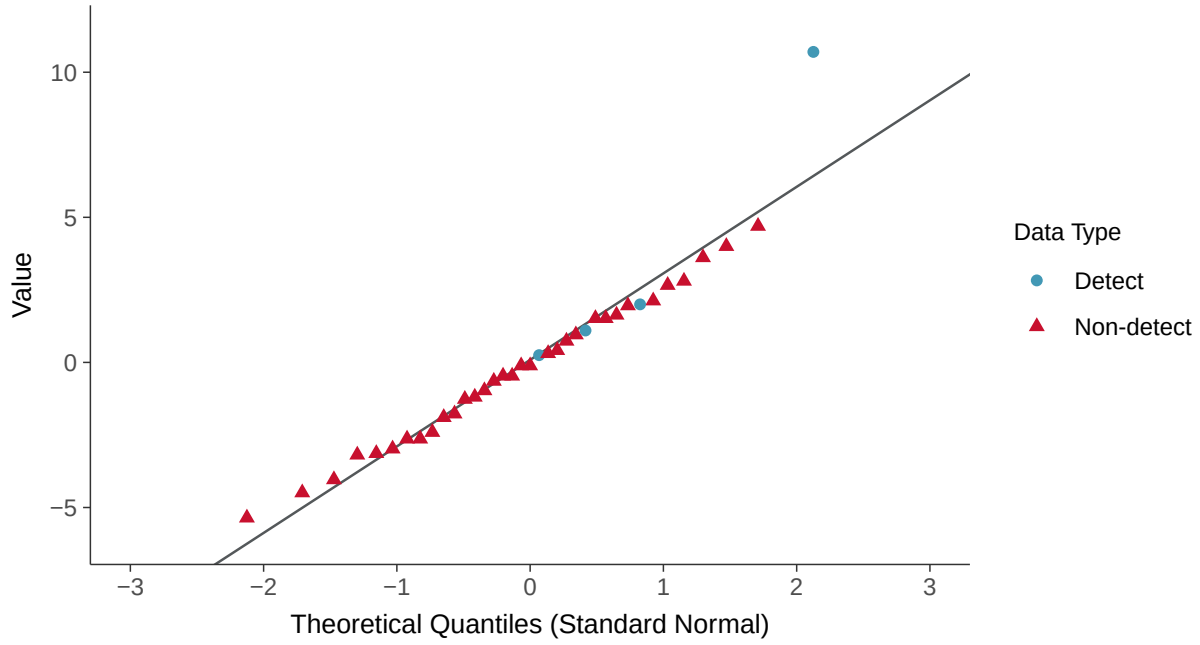
Boxplot by Season

Vanadium, MW-4 (ug/L)



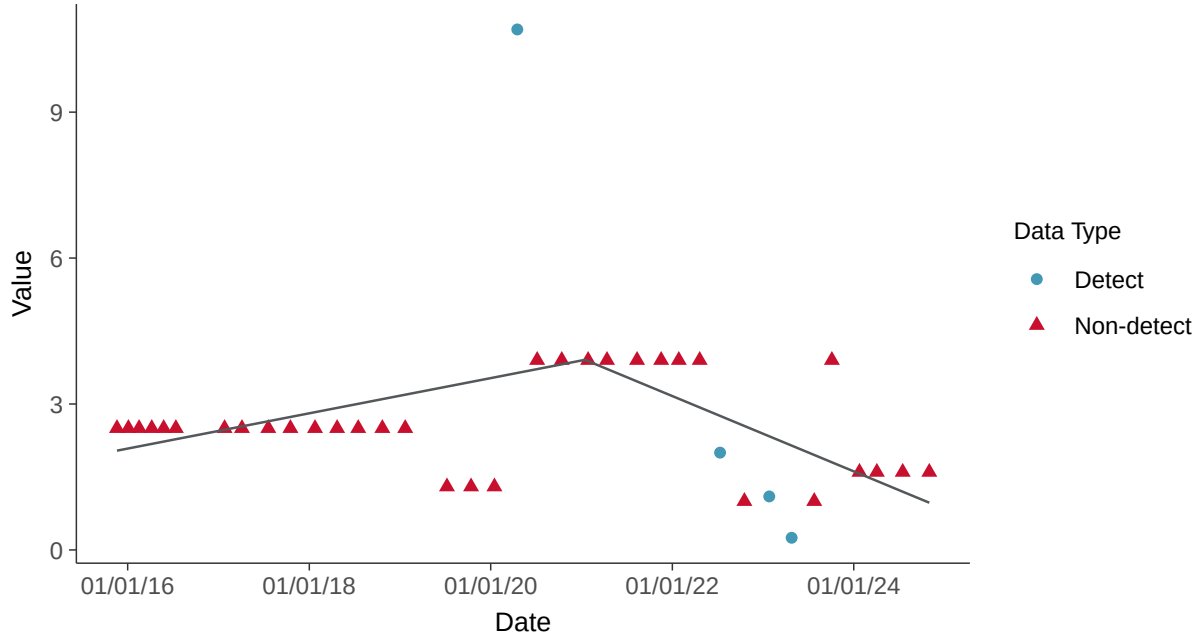
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-4 (ug/L)



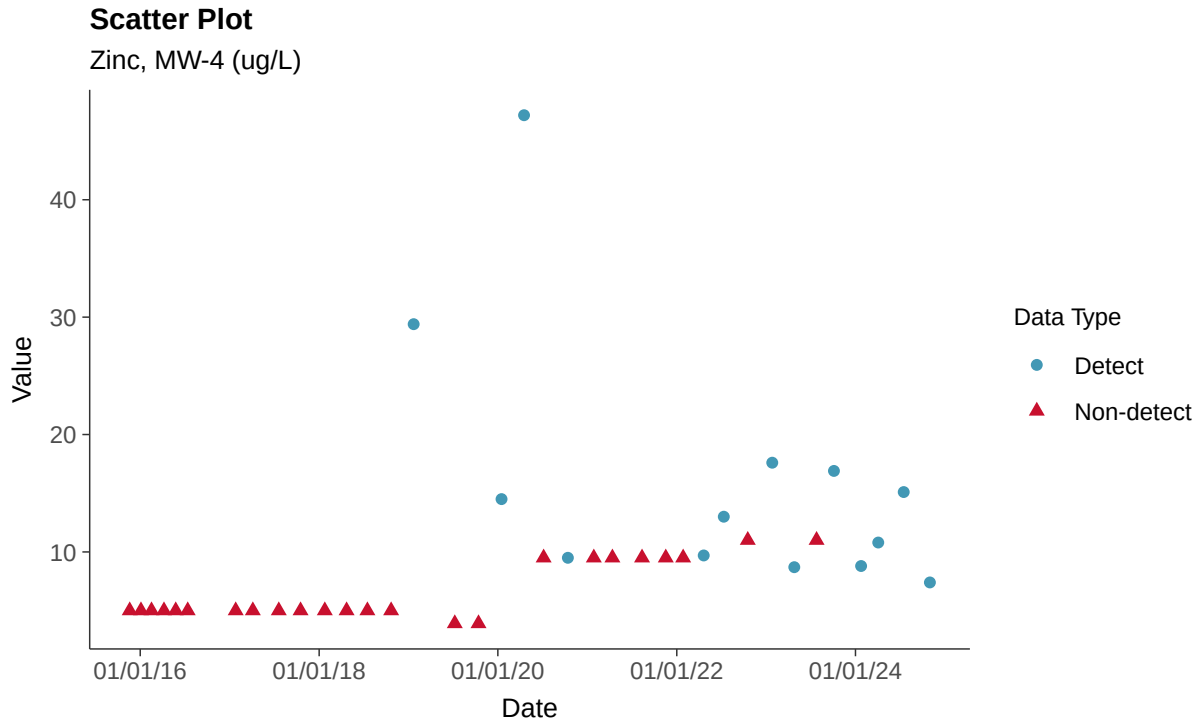
Trend Regression: Piecewise Linear-Linear

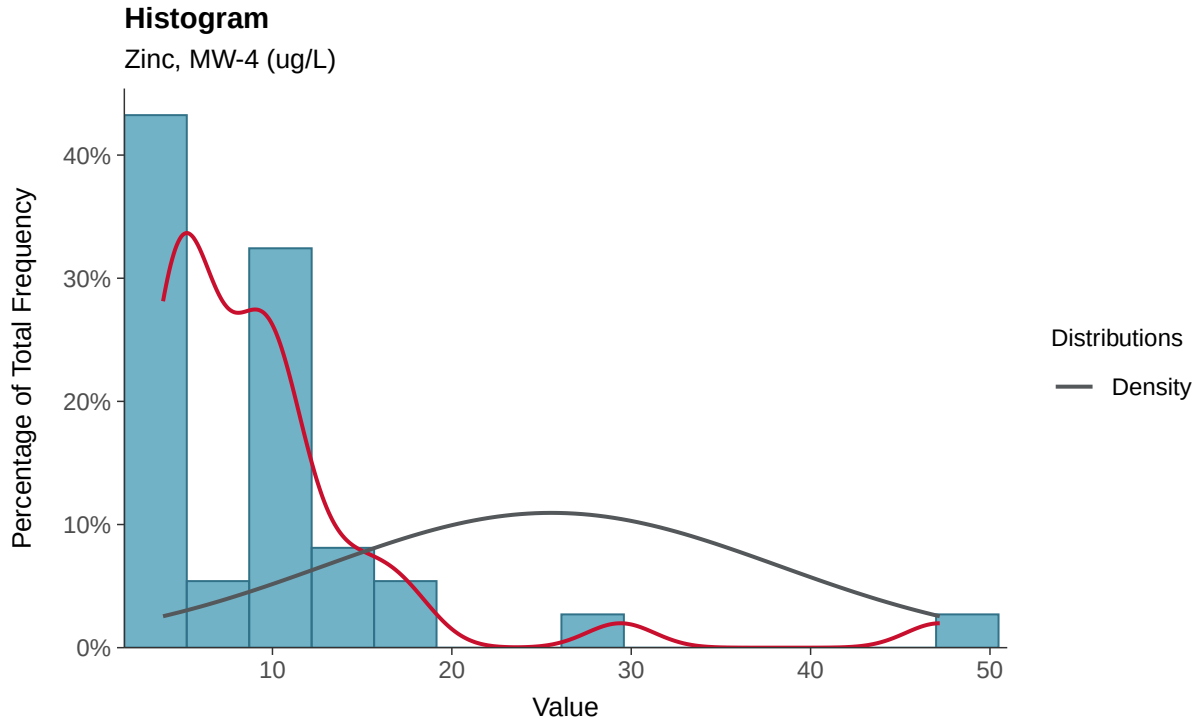
Vanadium, MW-4 (ug/L)



App. I Metals: Zinc, MW-4

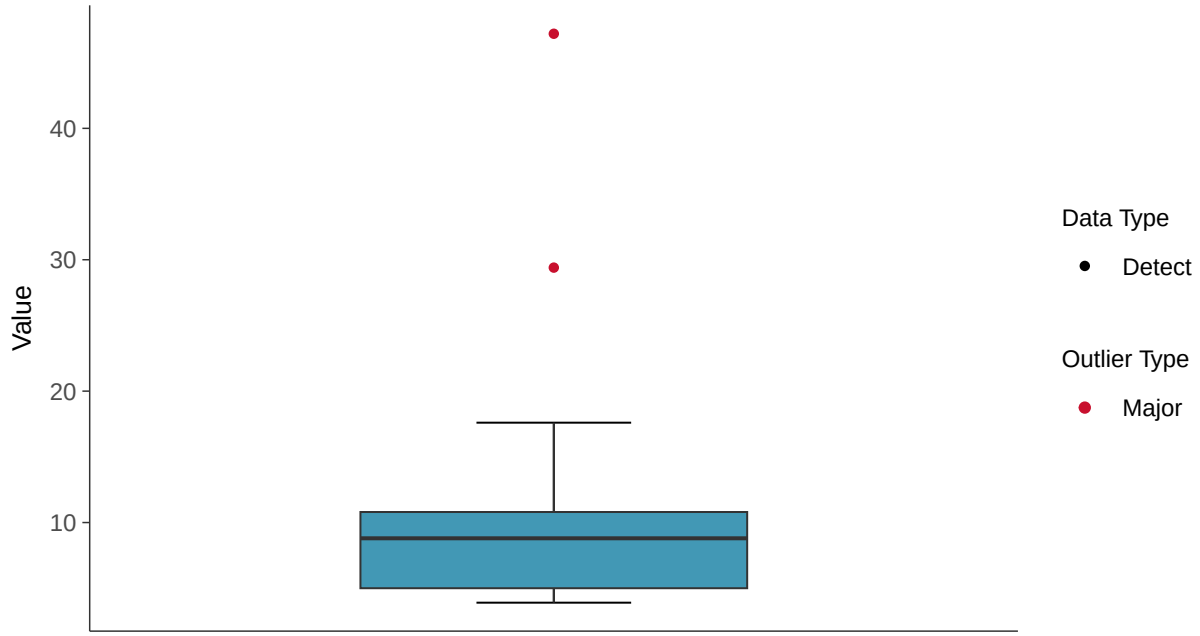
ID: 04_01_128





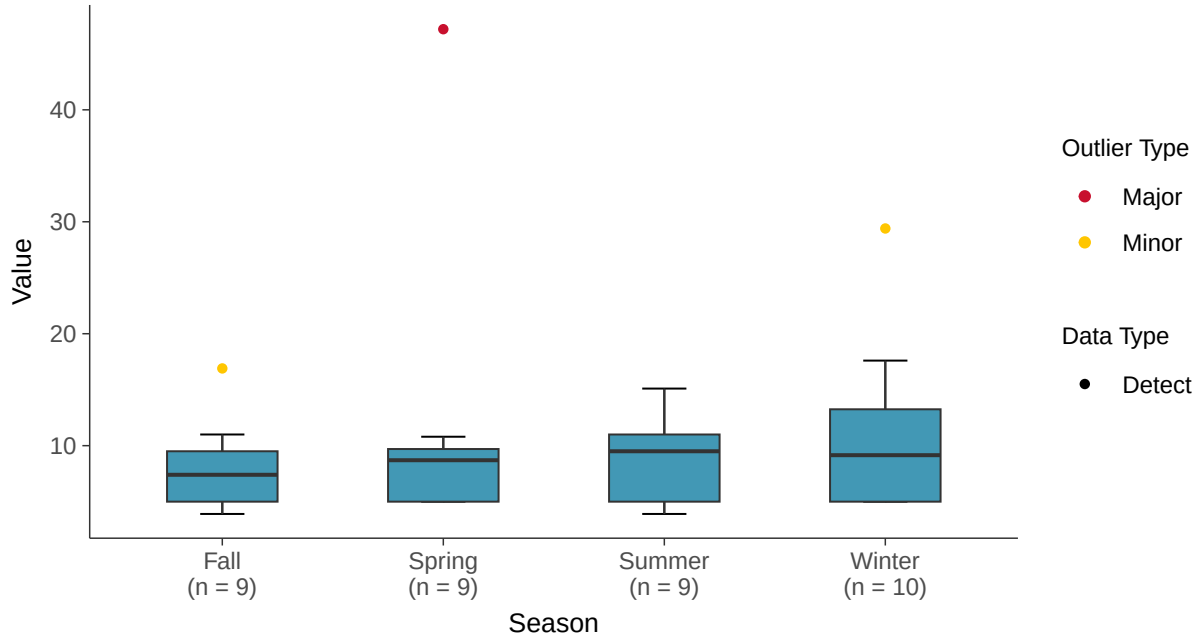
Boxplot

Zinc, MW-4 (ug/L)



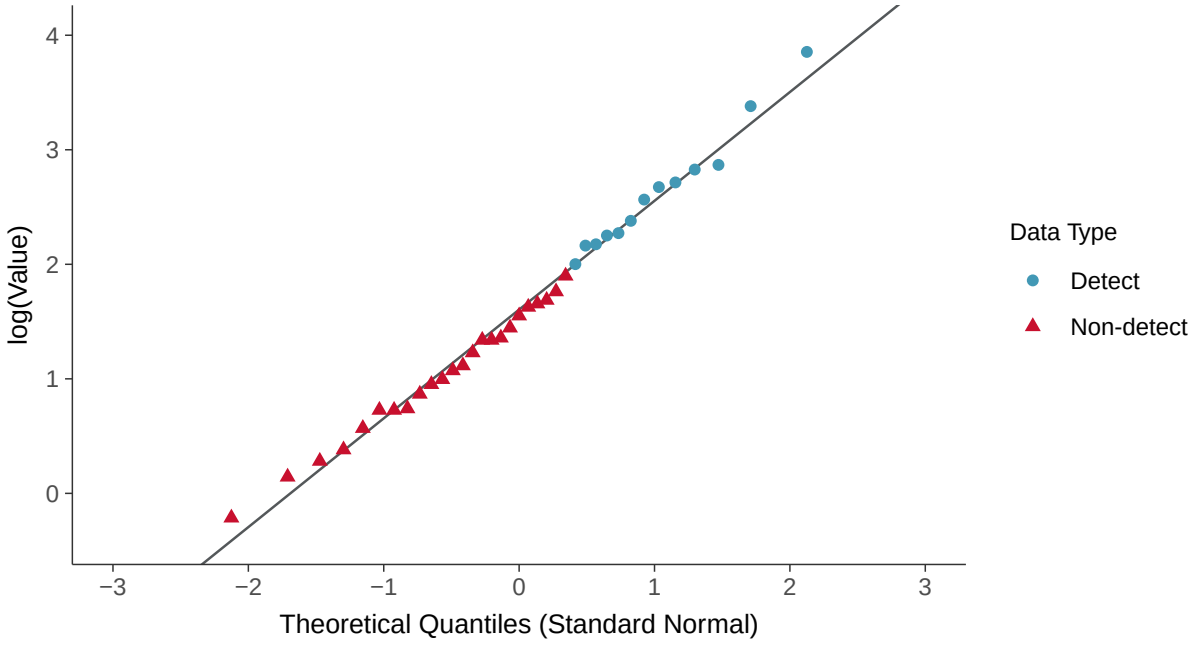
Boxplot by Season

Zinc, MW-4 (ug/L)



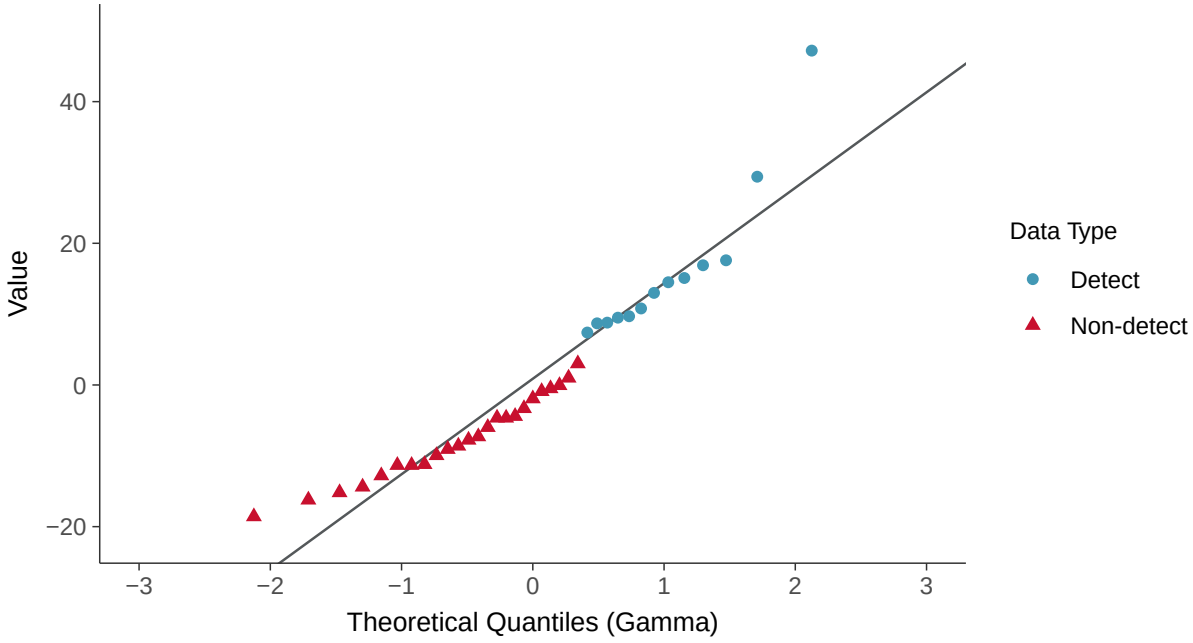
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-4 (ug/L)



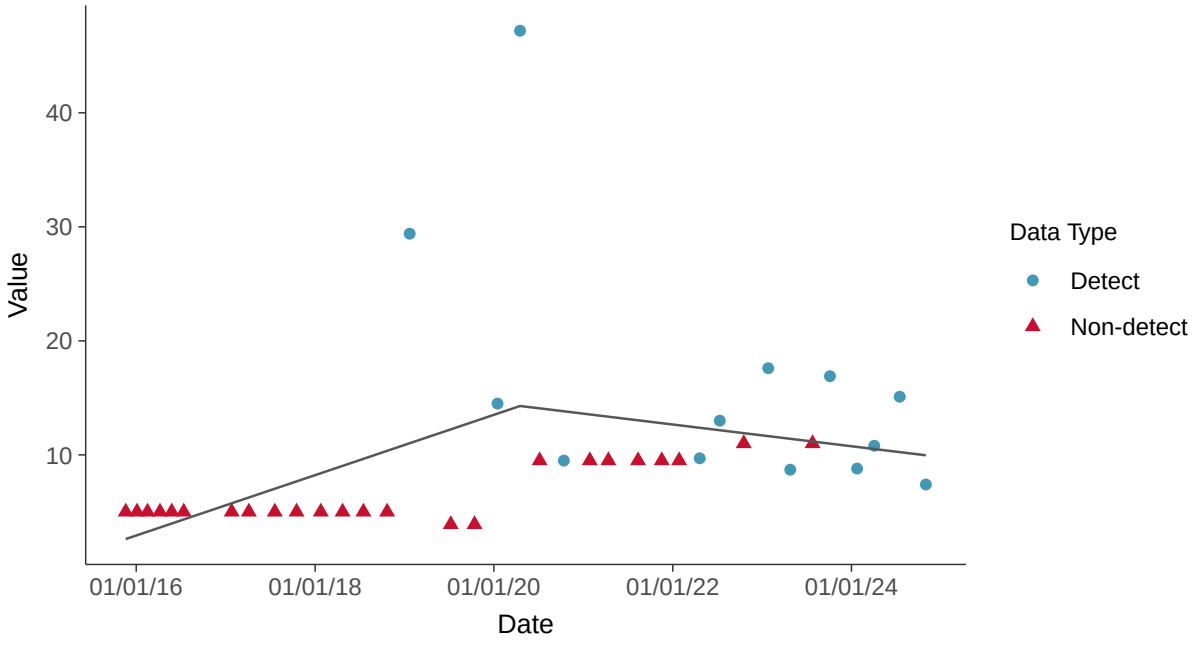
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-4 (ug/L)



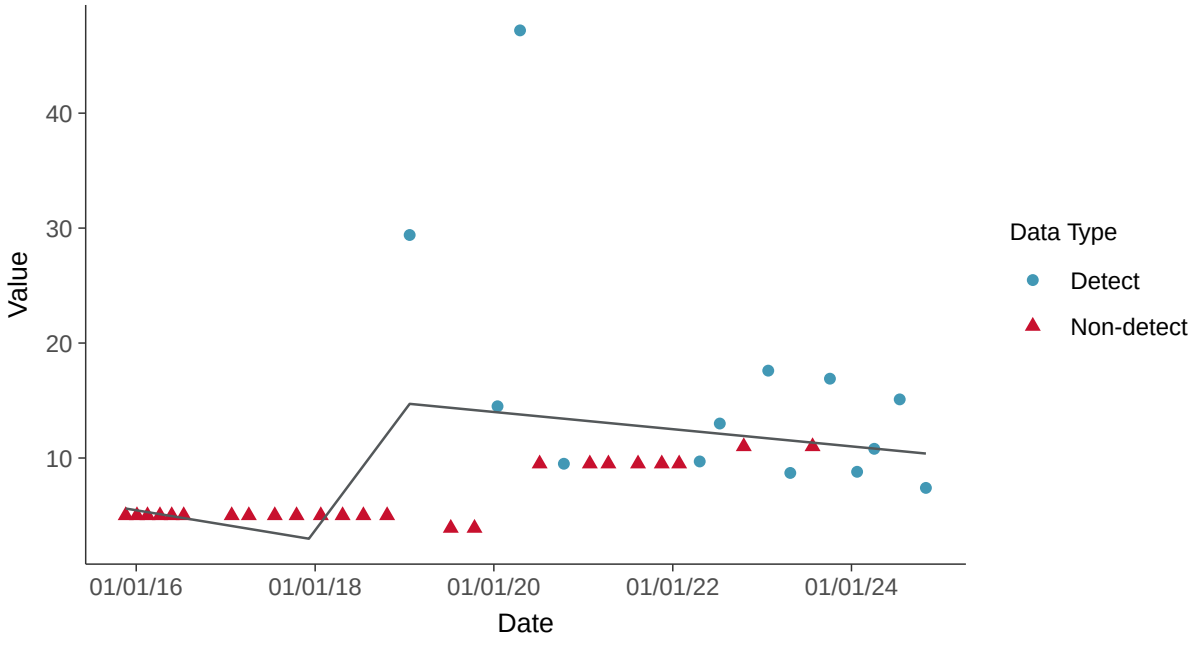
Trend Regression: Piecewise Linear-Linear

Zinc, MW-4 (ug/L)



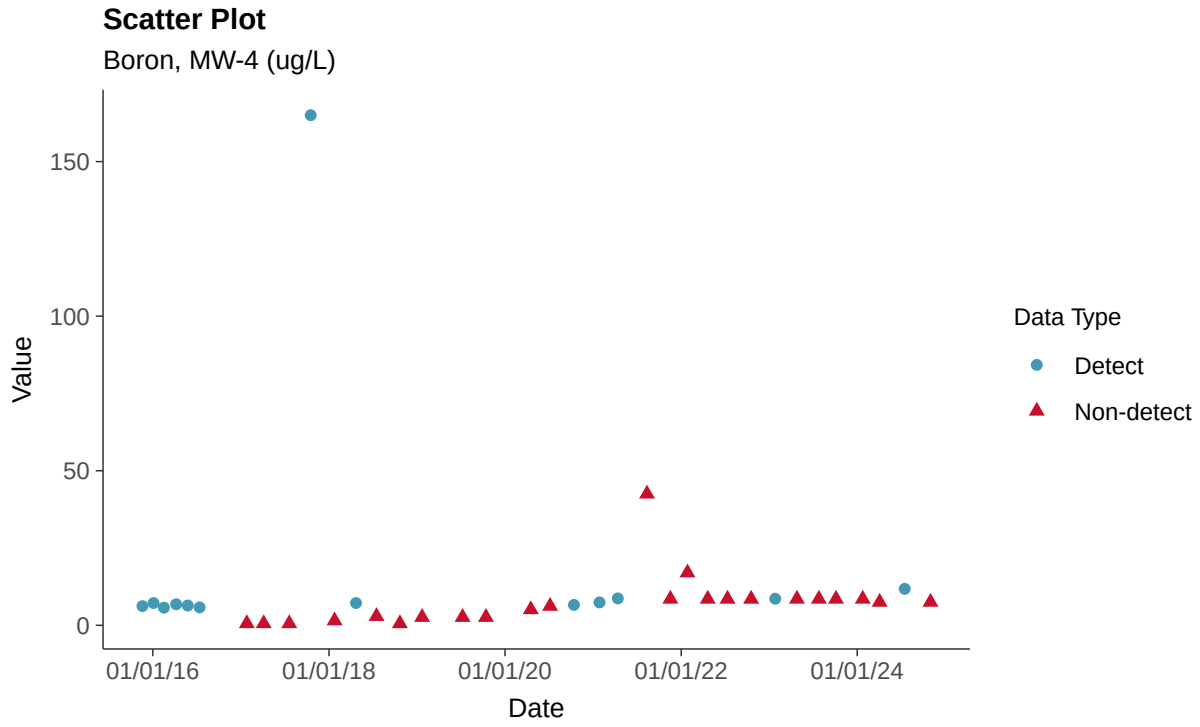
Trend Regression: Piecewise Linear-Linear-Linear

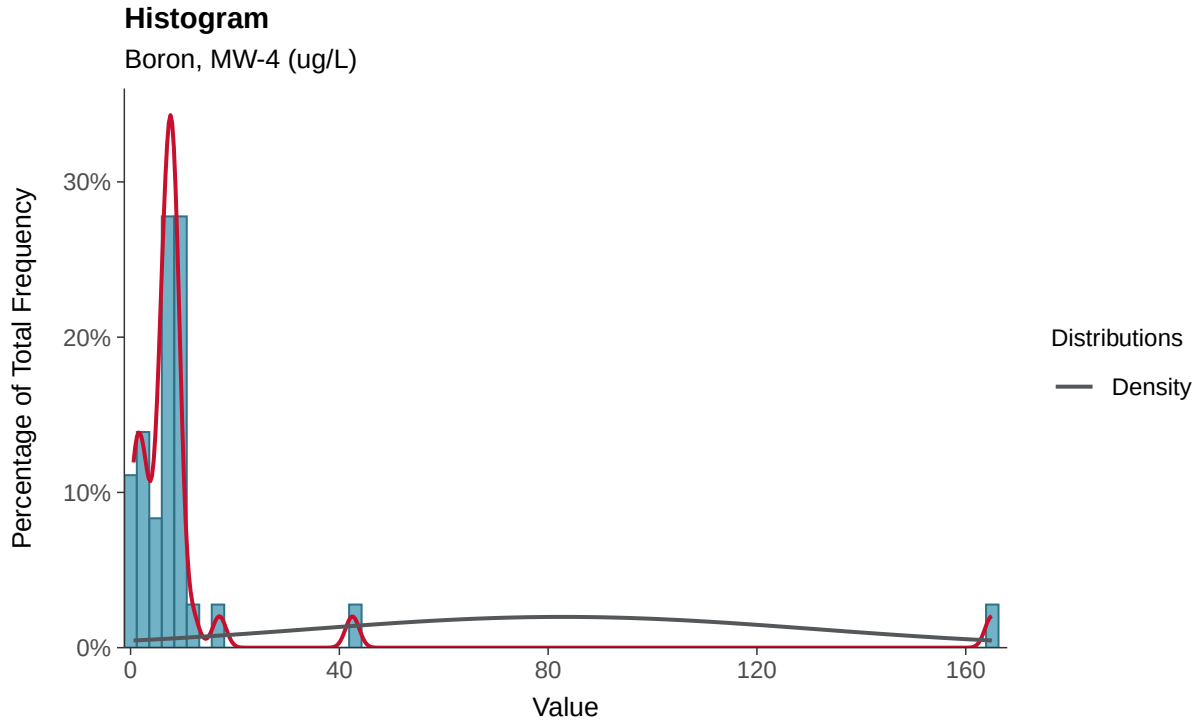
Zinc, MW-4 (ug/L)



App. III: Boron, MW-4

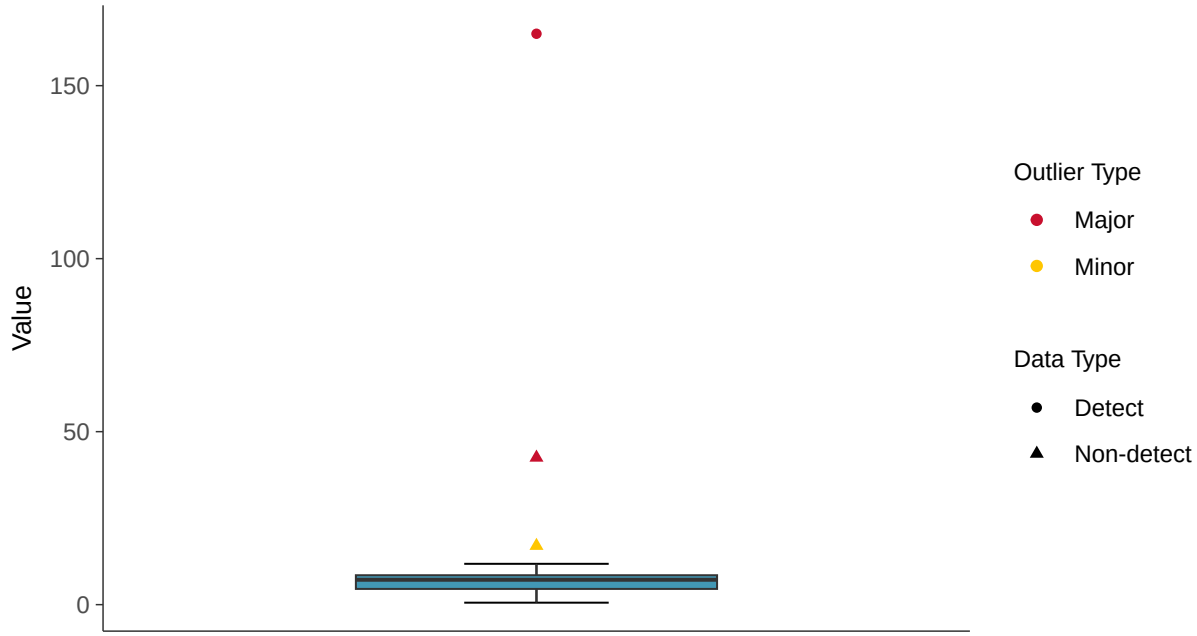
ID: 04_02_105





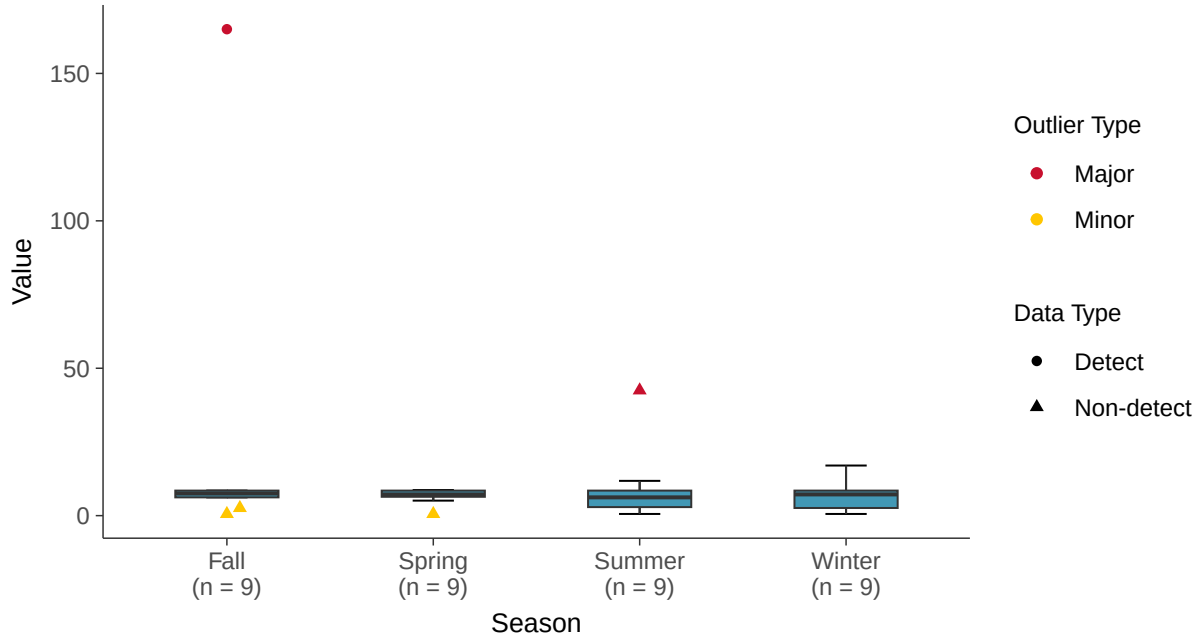
Boxplot

Boron, MW-4 (ug/L)



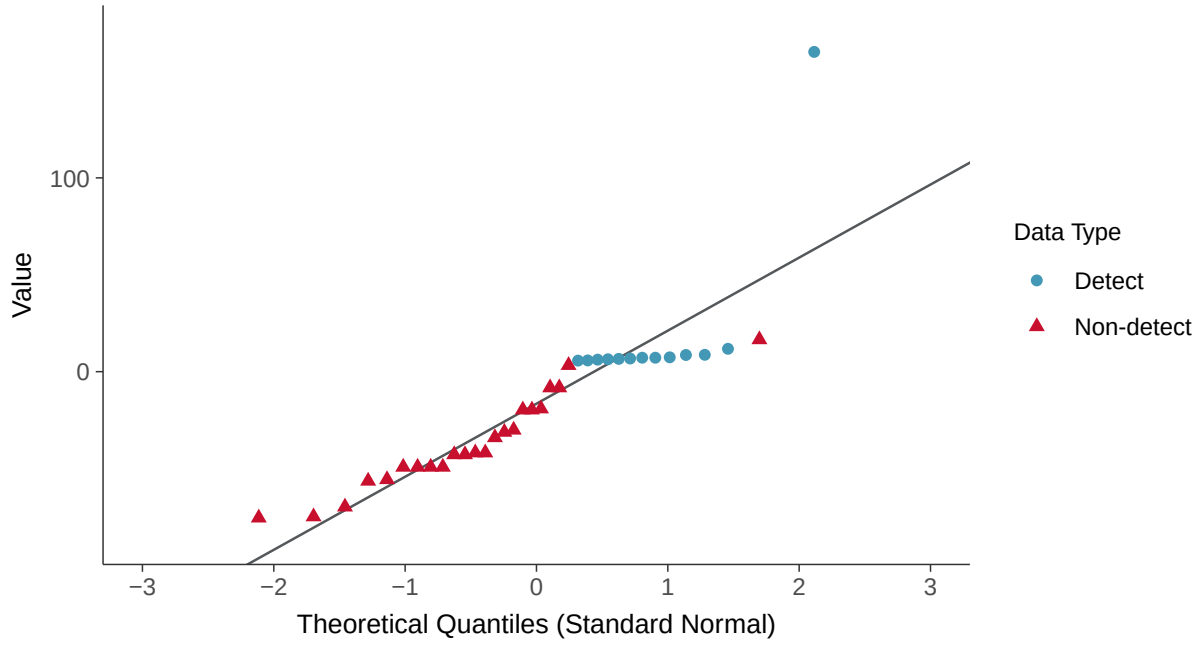
Boxplot by Season

Boron, MW-4 (ug/L)



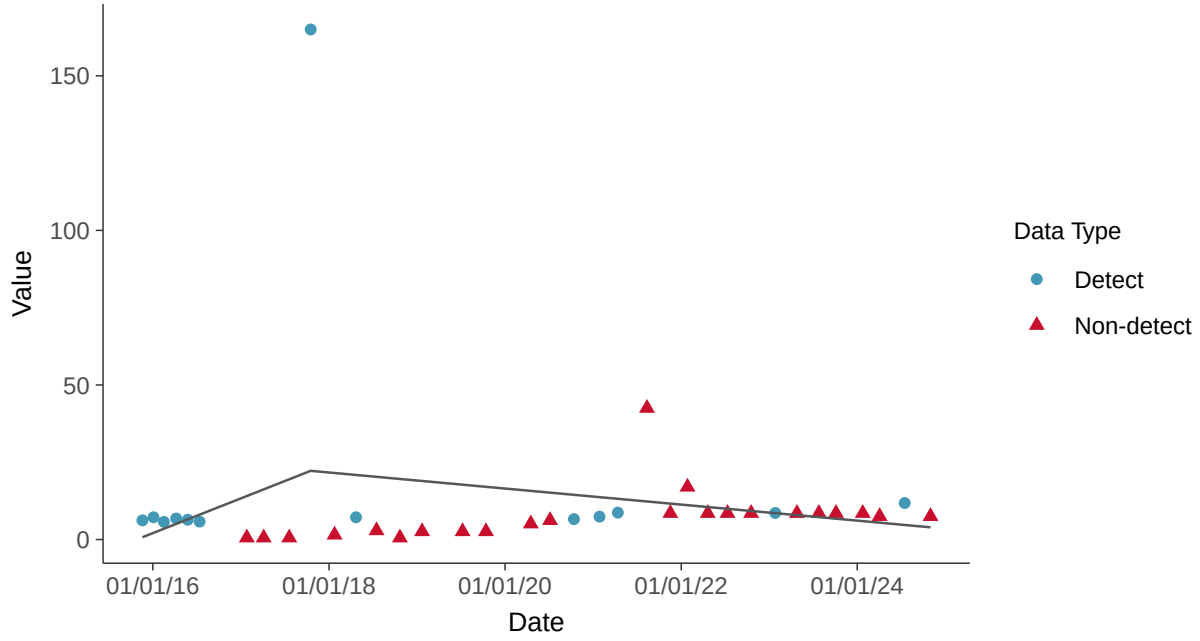
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-4 (ug/L)



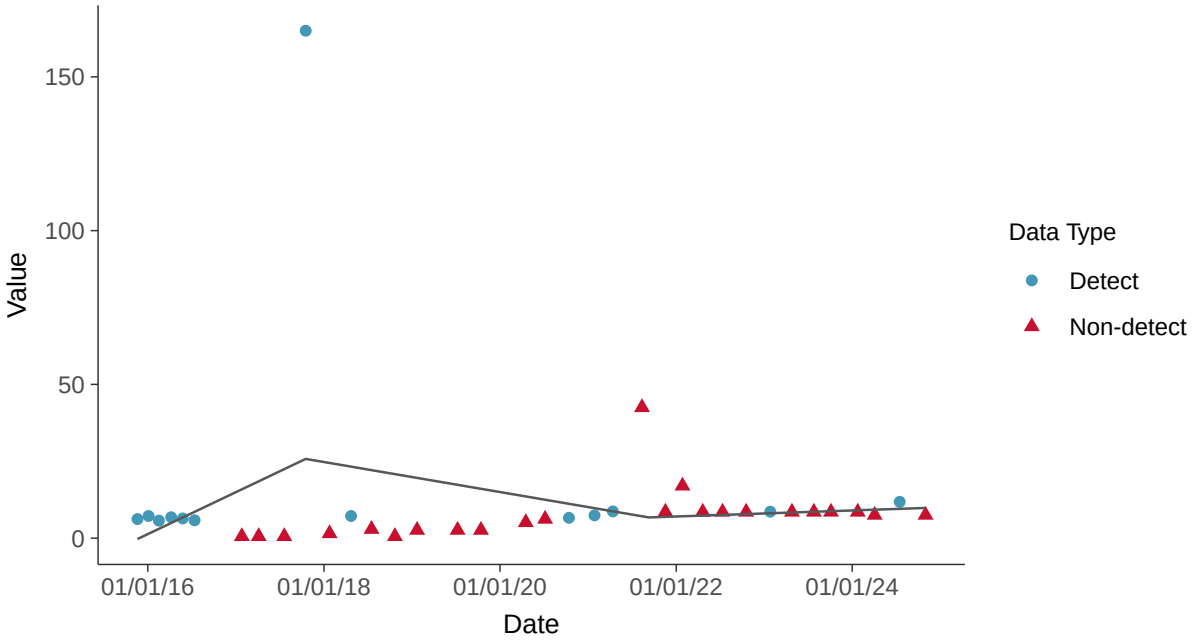
Trend Regression: Piecewise Linear-Linear

Boron, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-4 (ug/L)

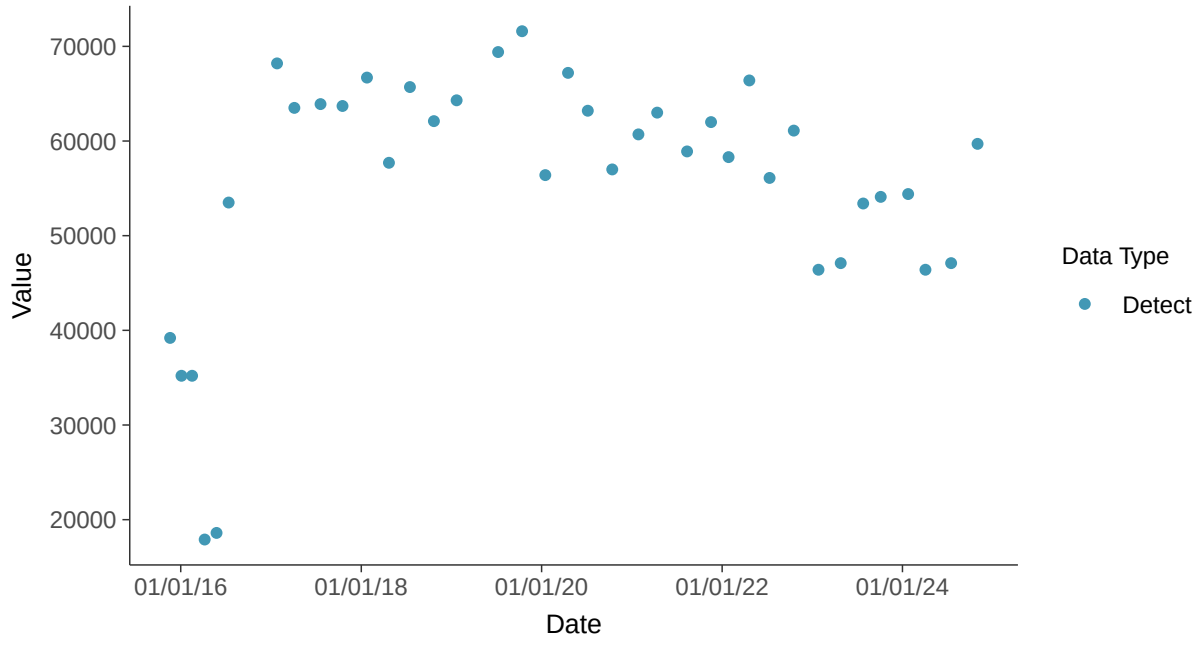


App. III: Calcium, MW-4

ID: 04_02_107

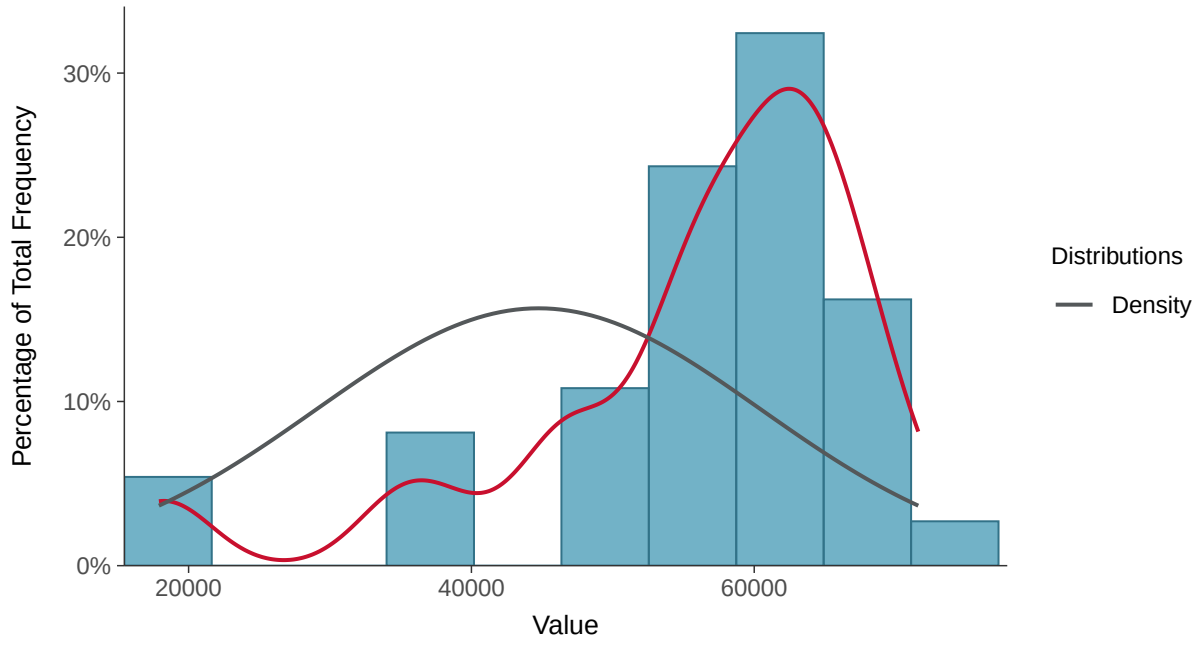
Scatter Plot

Calcium, MW-4 (ug/L)



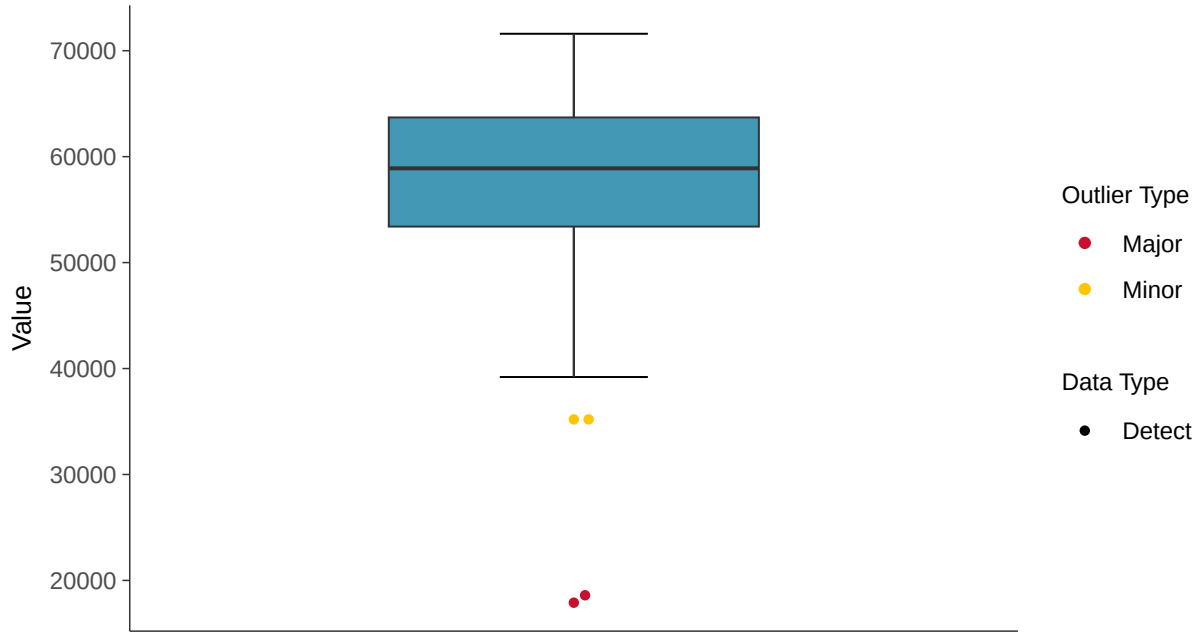
Histogram

Calcium, MW-4 (ug/L)



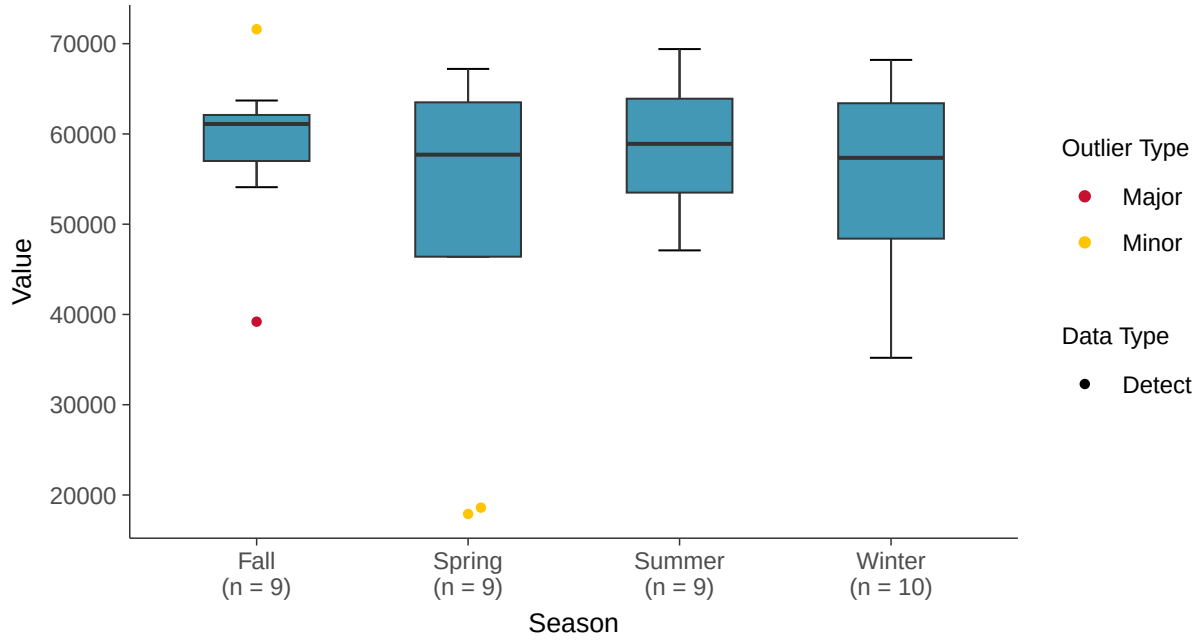
Boxplot

Calcium, MW-4 (ug/L)



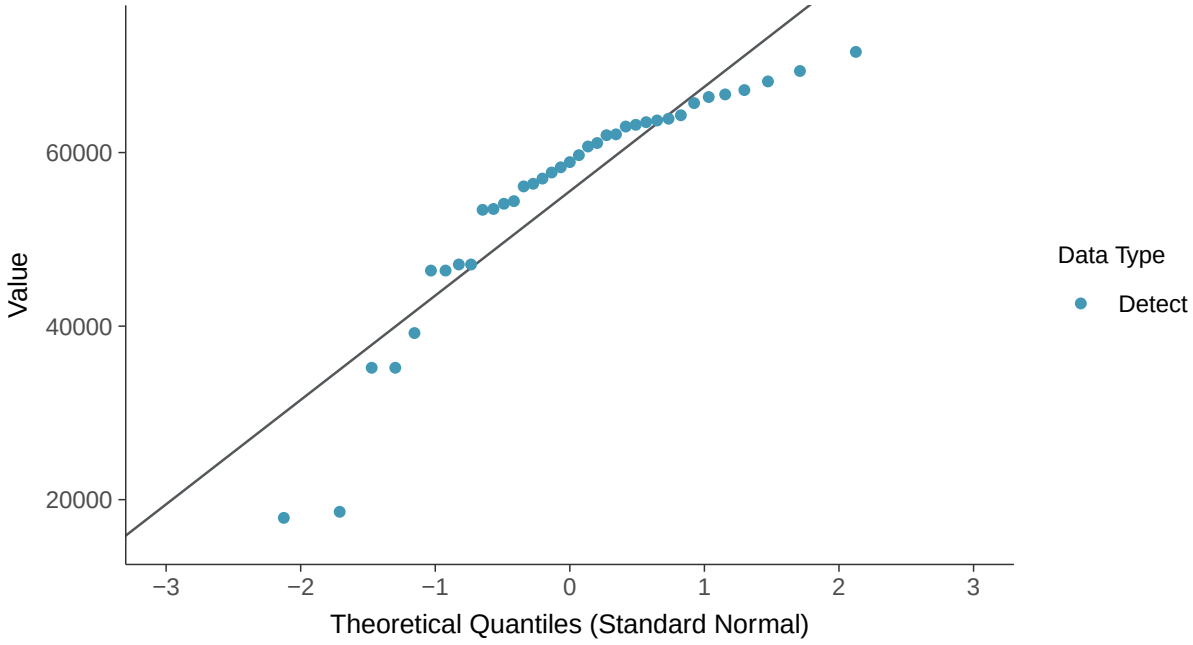
Boxplot by Season

Calcium, MW-4 (ug/L)



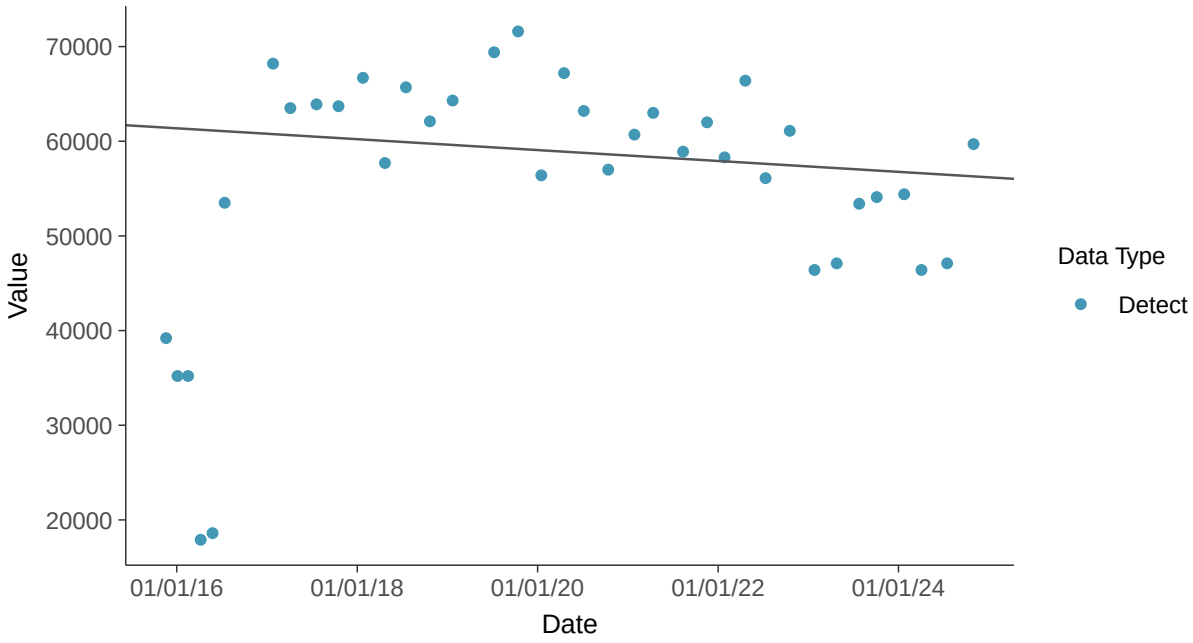
Normal Q-Q plot

Calcium, MW-4 (ug/L)



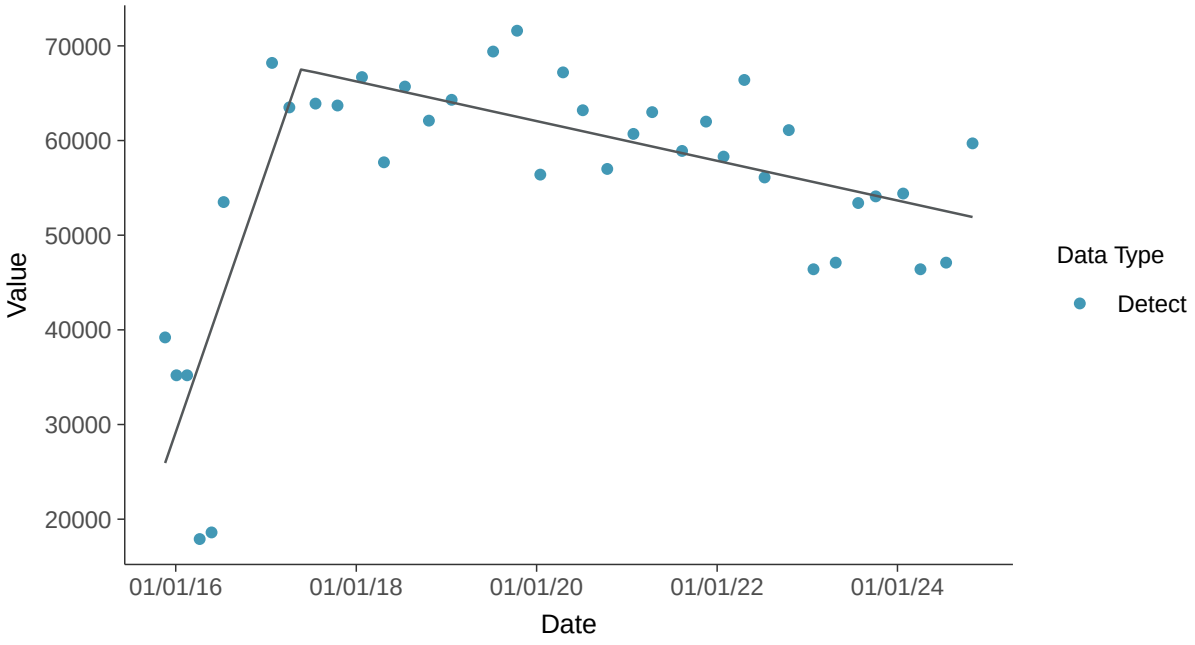
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-4 (ug/L)



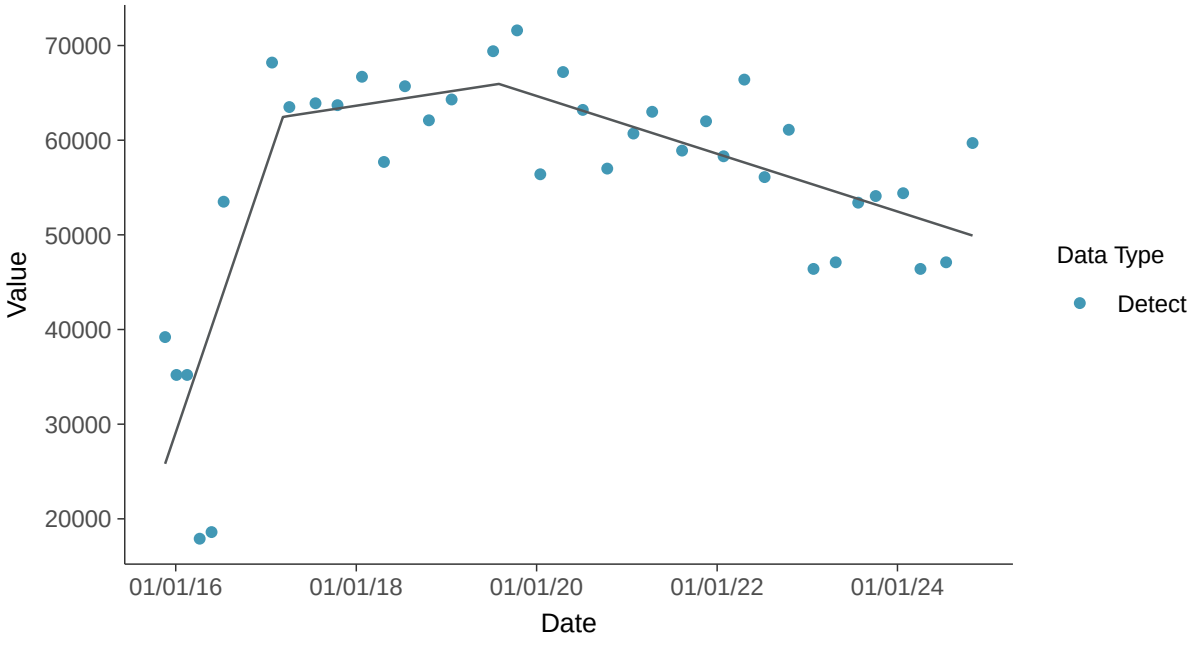
Trend Regression: Piecewise Linear-Linear

Calcium, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-4 (ug/L)

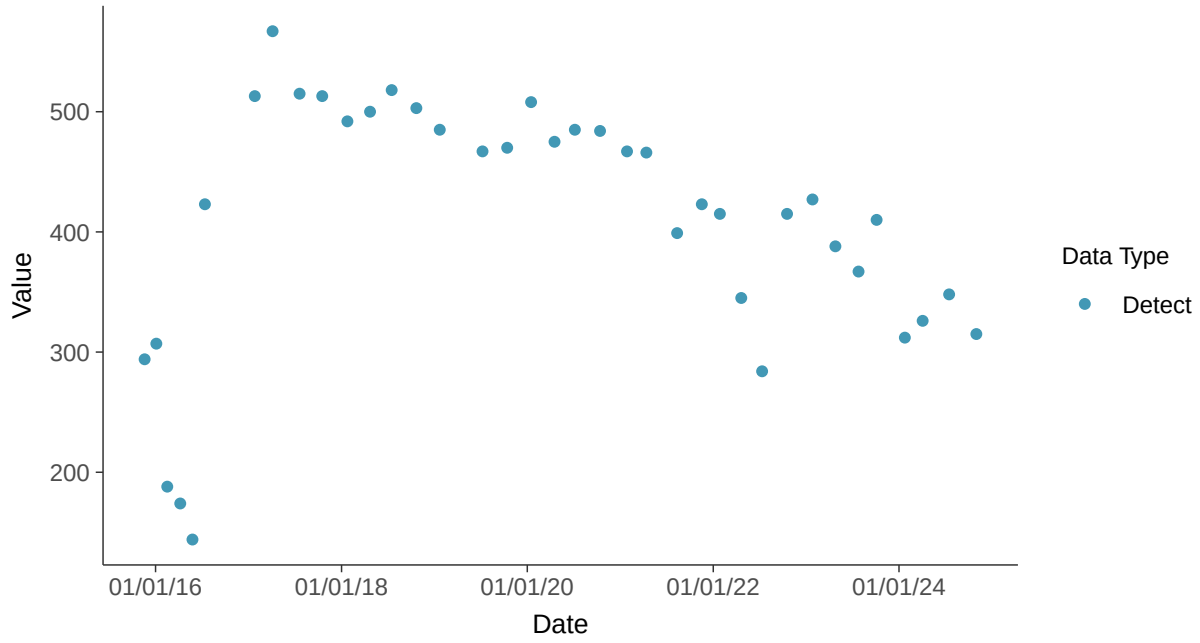


App. III: Chloride, MW-4

ID: 04_02_108

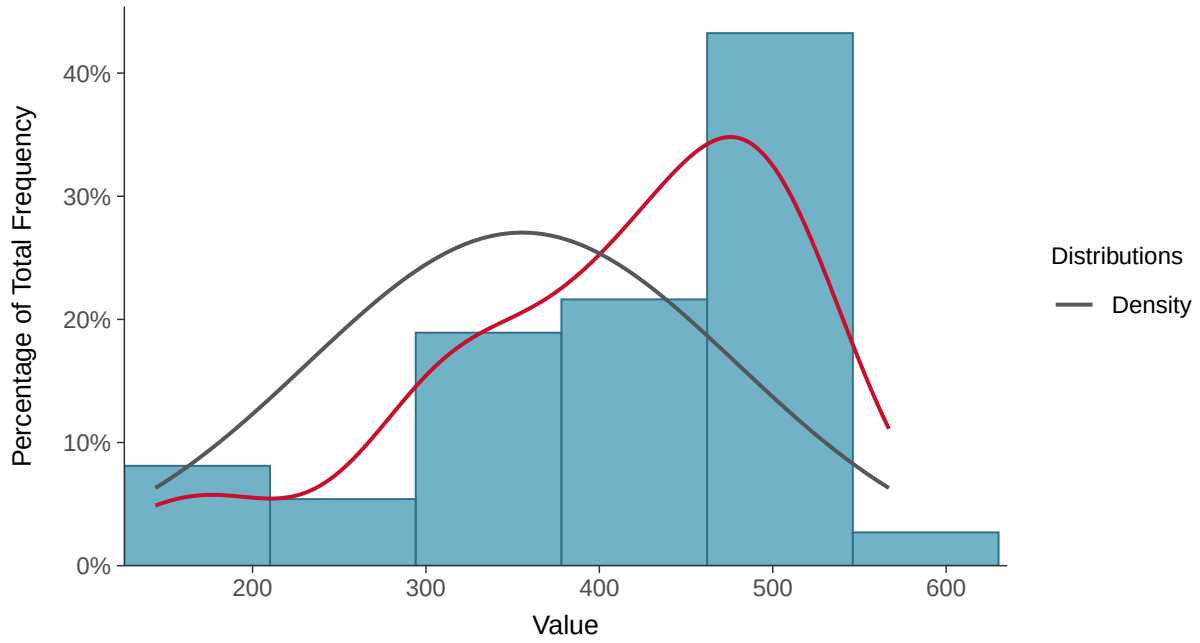
Scatter Plot

Chloride, MW-4 (mg/L)



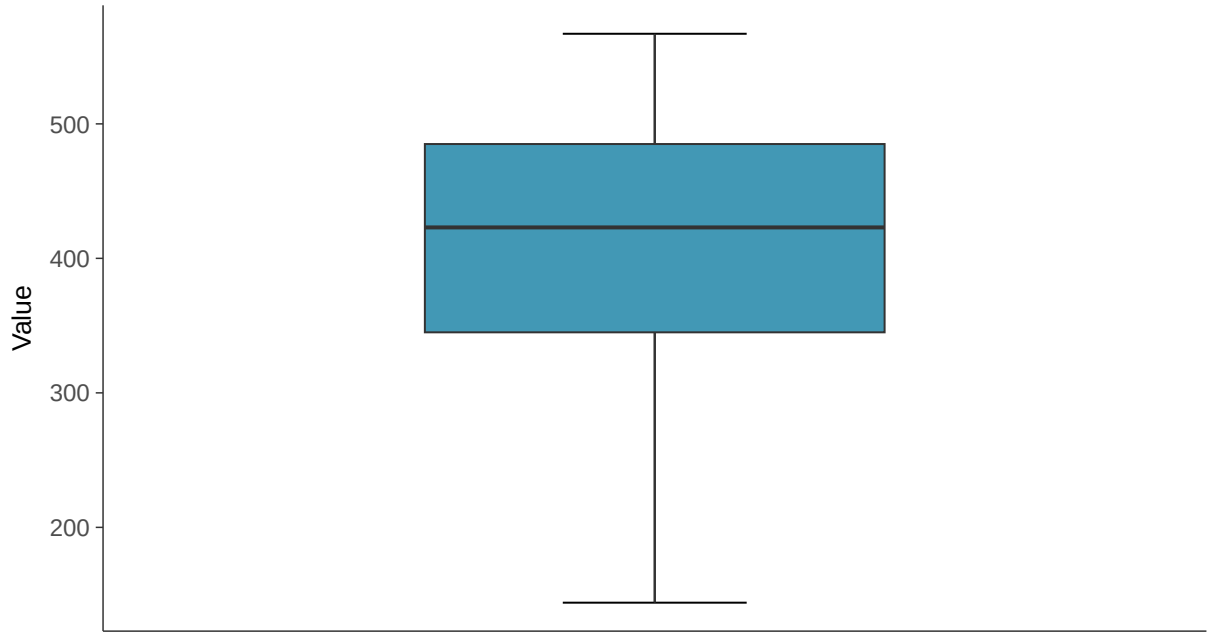
Histogram

Chloride, MW-4 (mg/L)



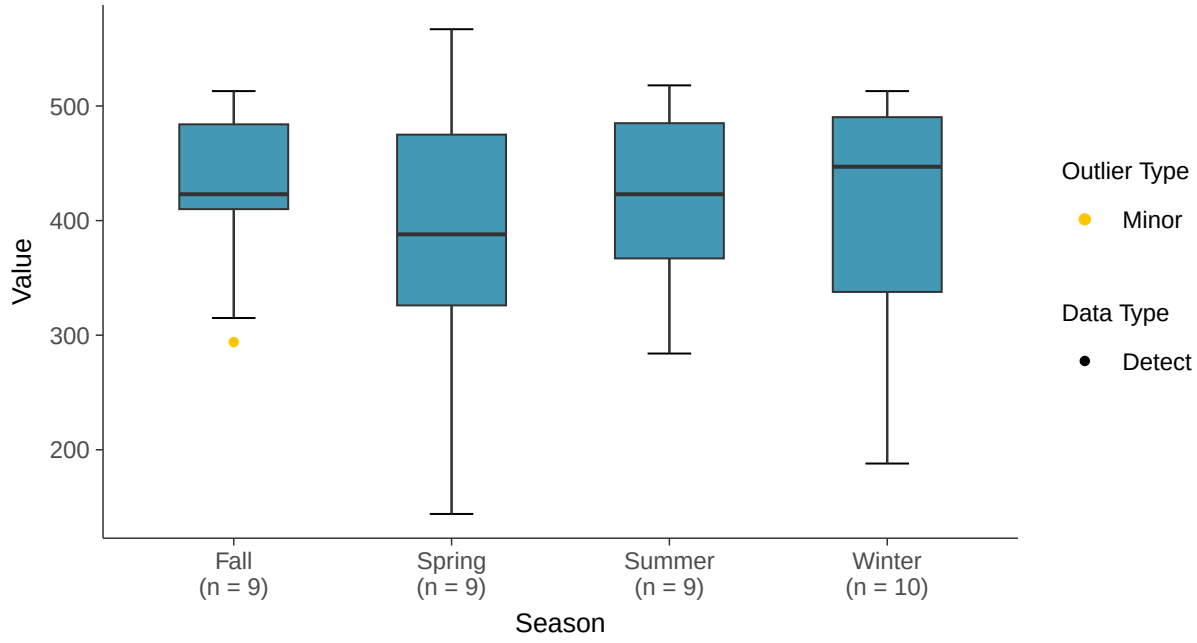
Boxplot

Chloride, MW-4 (mg/L)



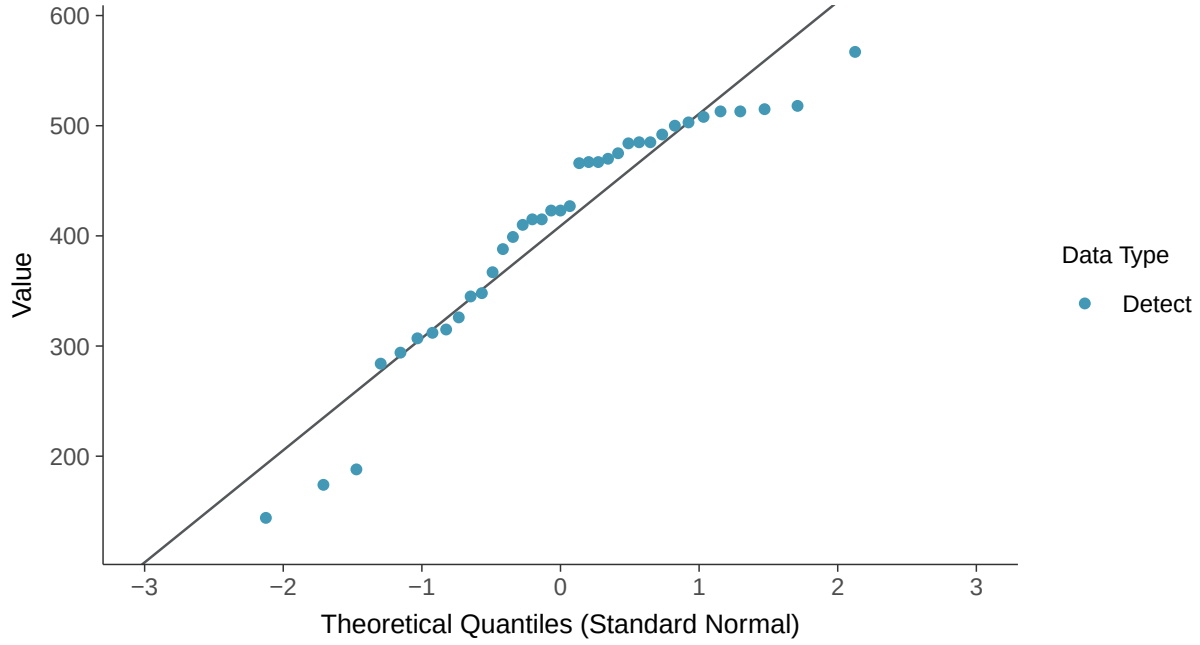
Boxplot by Season

Chloride, MW-4 (mg/L)



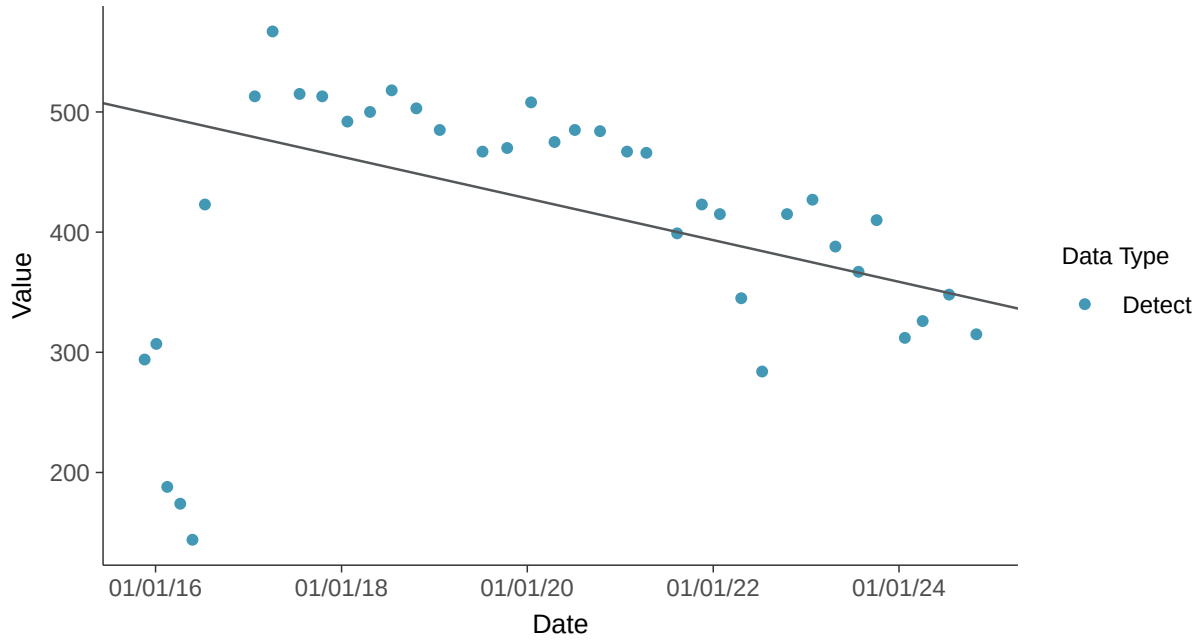
Normal Q-Q plot

Chloride, MW-4 (mg/L)



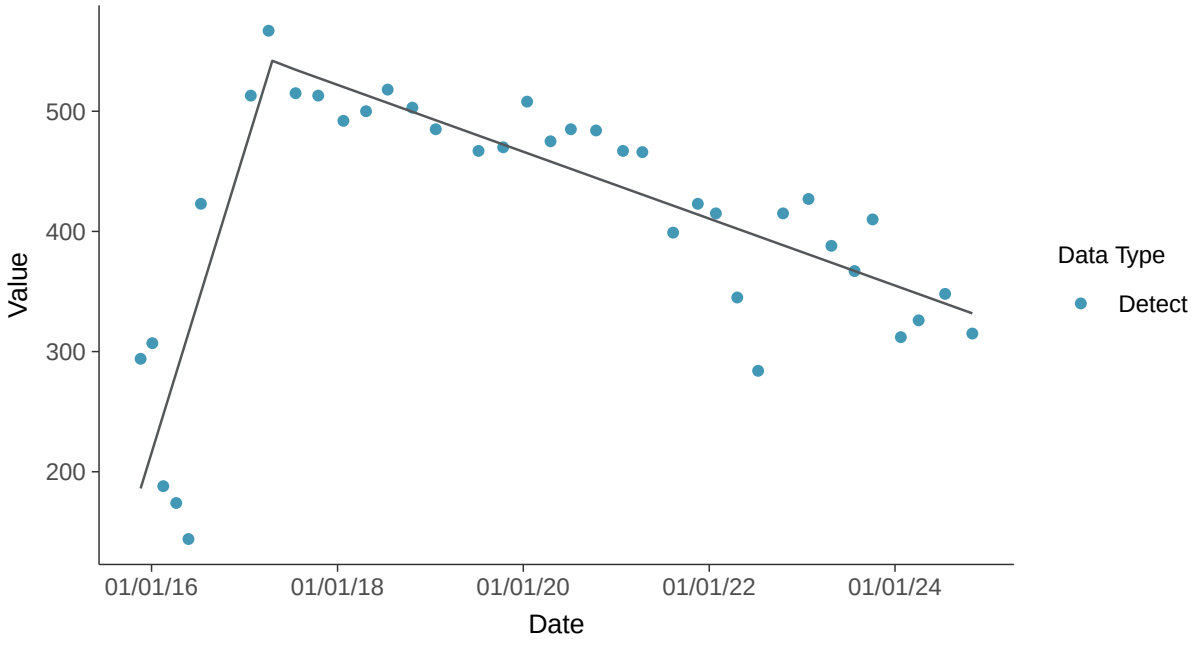
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-4 (mg/L)



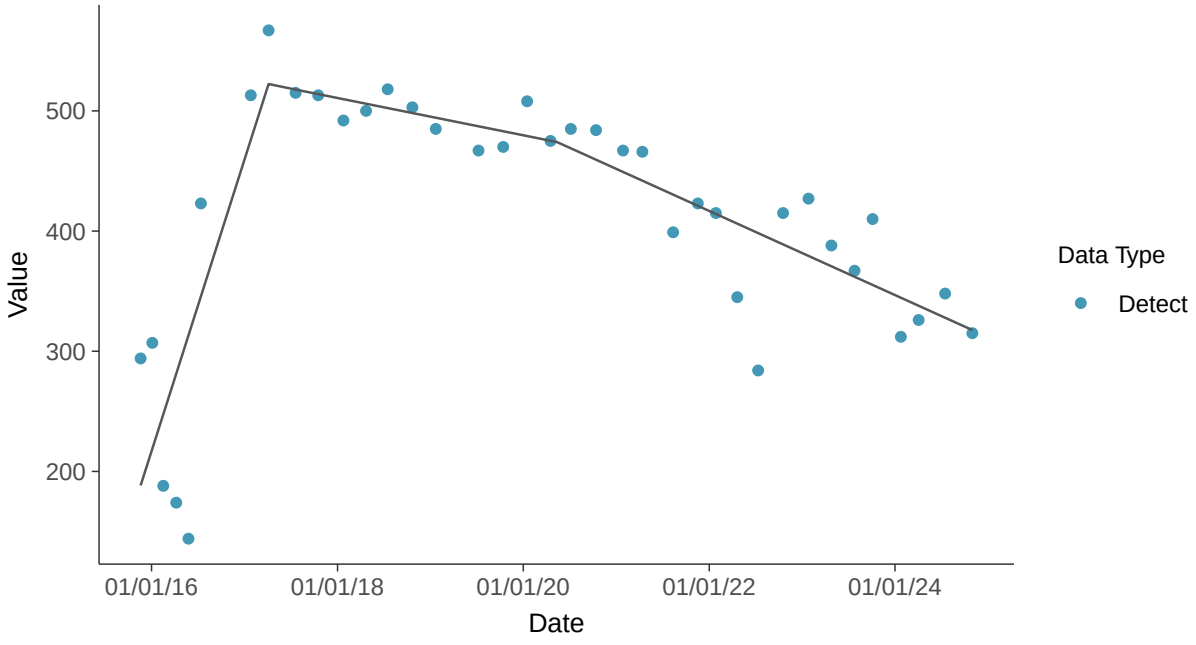
Trend Regression: Piecewise Linear-Linear

Chloride, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride, MW-4 (mg/L)

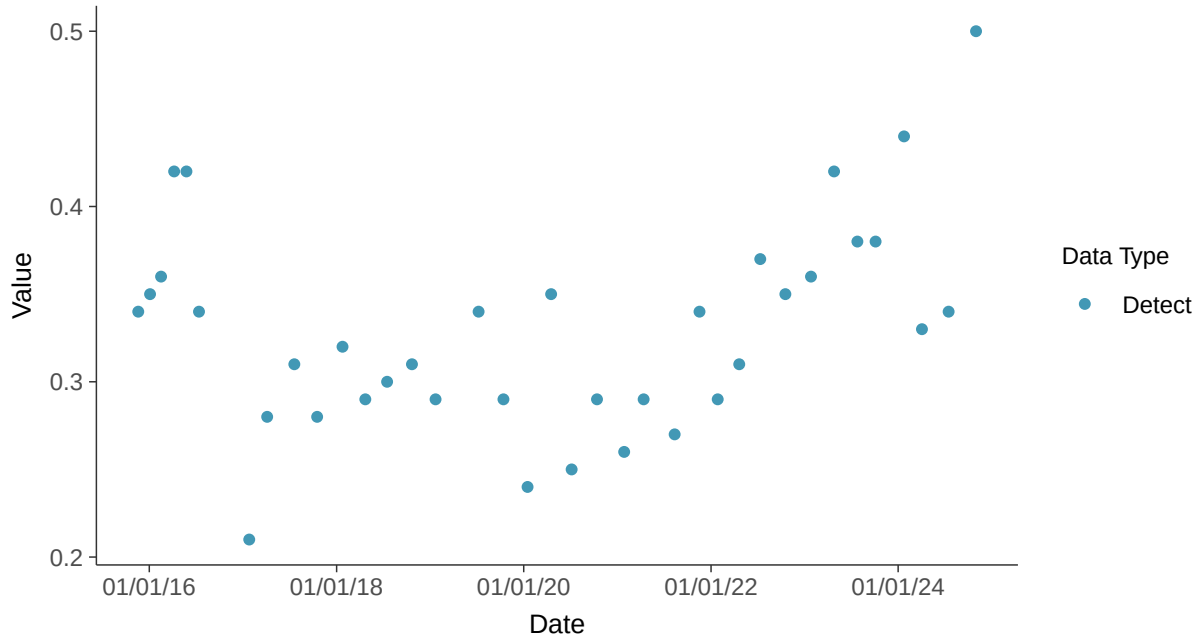


App. III: Fluoride, MW-4

ID: 04_02_112

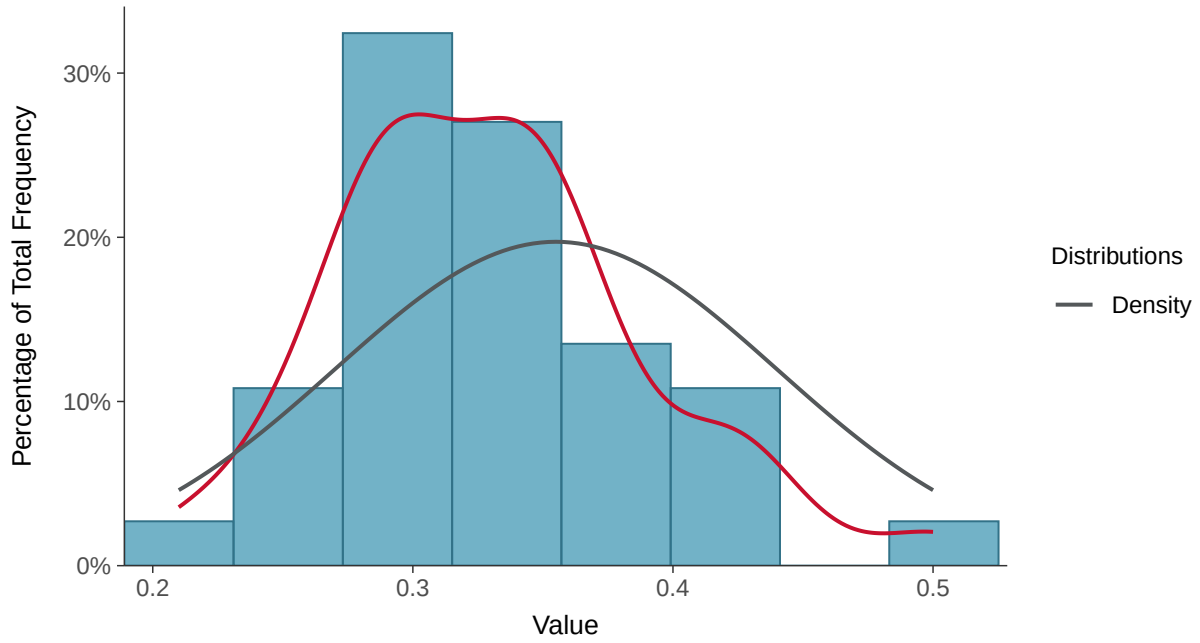
Scatter Plot

Fluoride, MW-4 (mg/L)



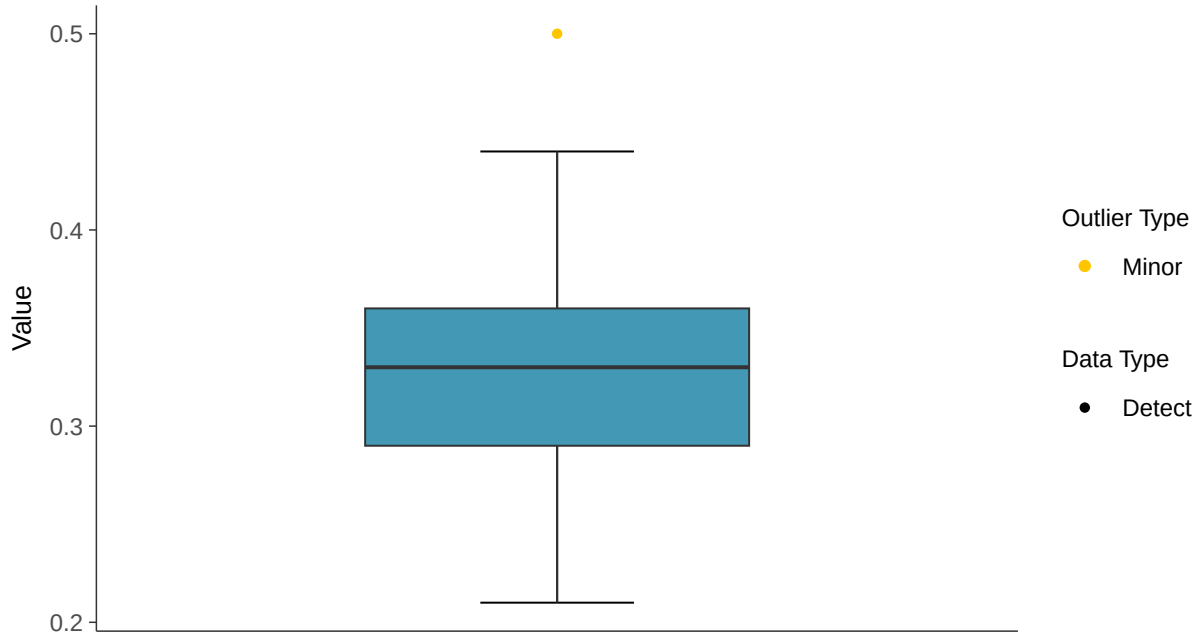
Histogram

Fluoride, MW-4 (mg/L)



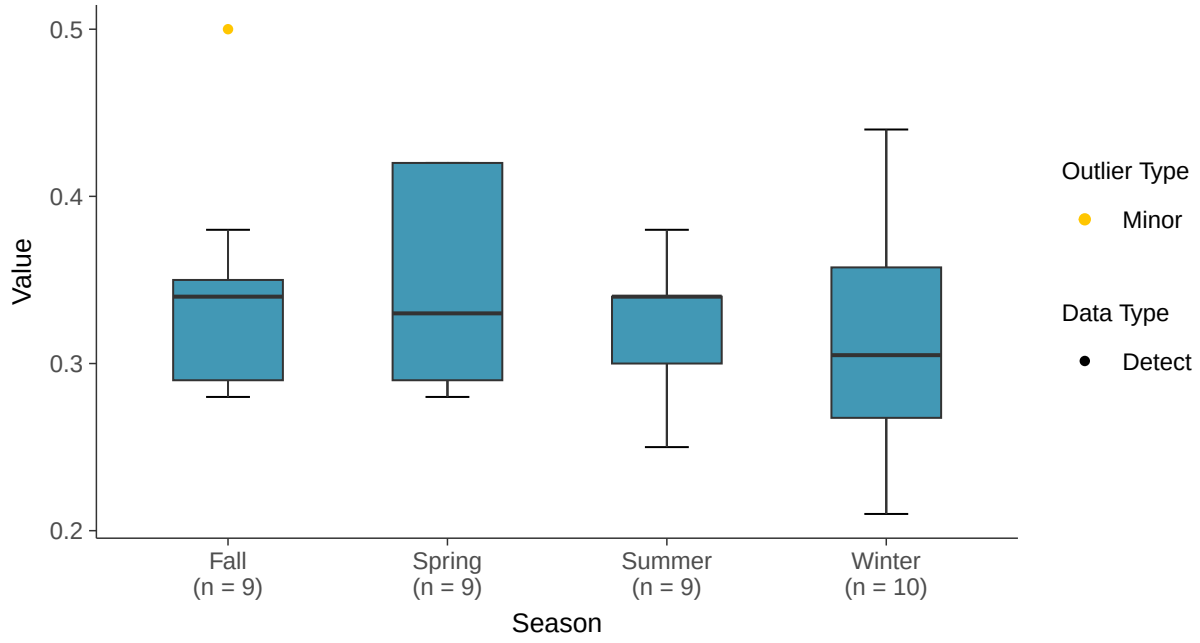
Boxplot

Fluoride, MW-4 (mg/L)



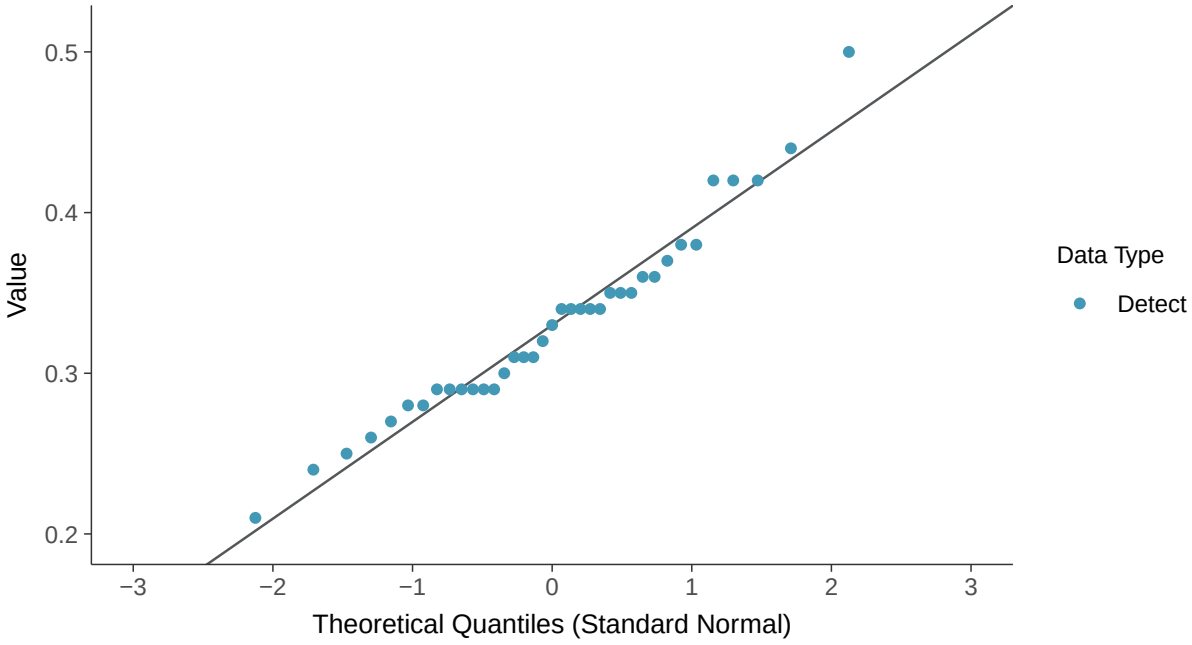
Boxplot by Season

Fluoride, MW-4 (mg/L)



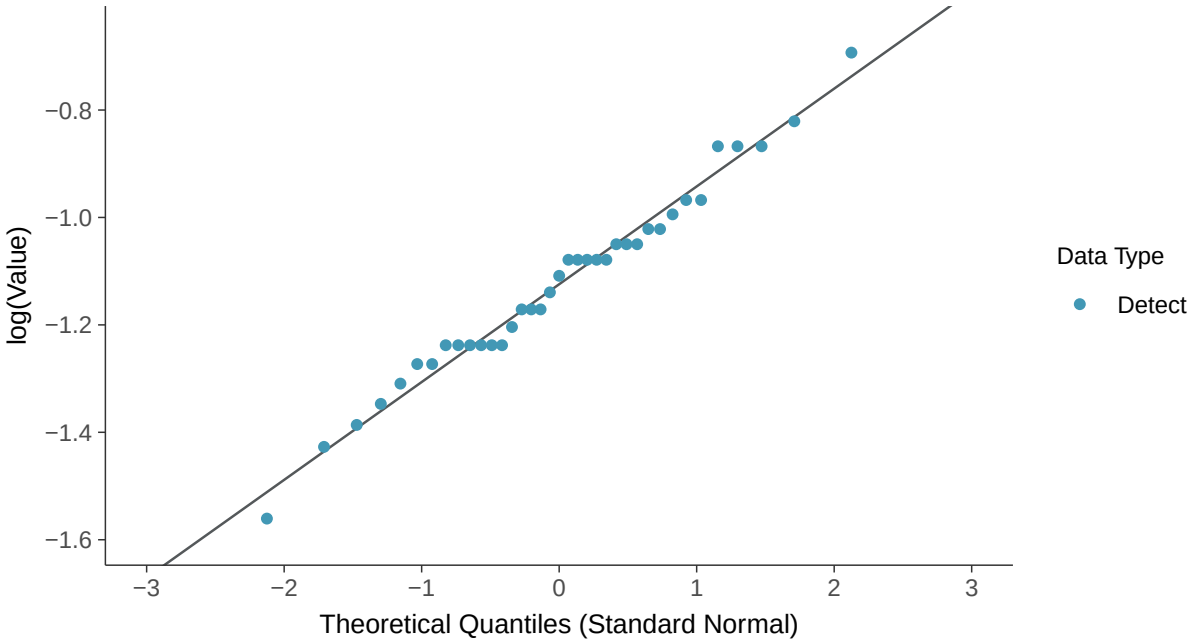
Normal Q-Q plot

Fluoride, MW-4 (mg/L)



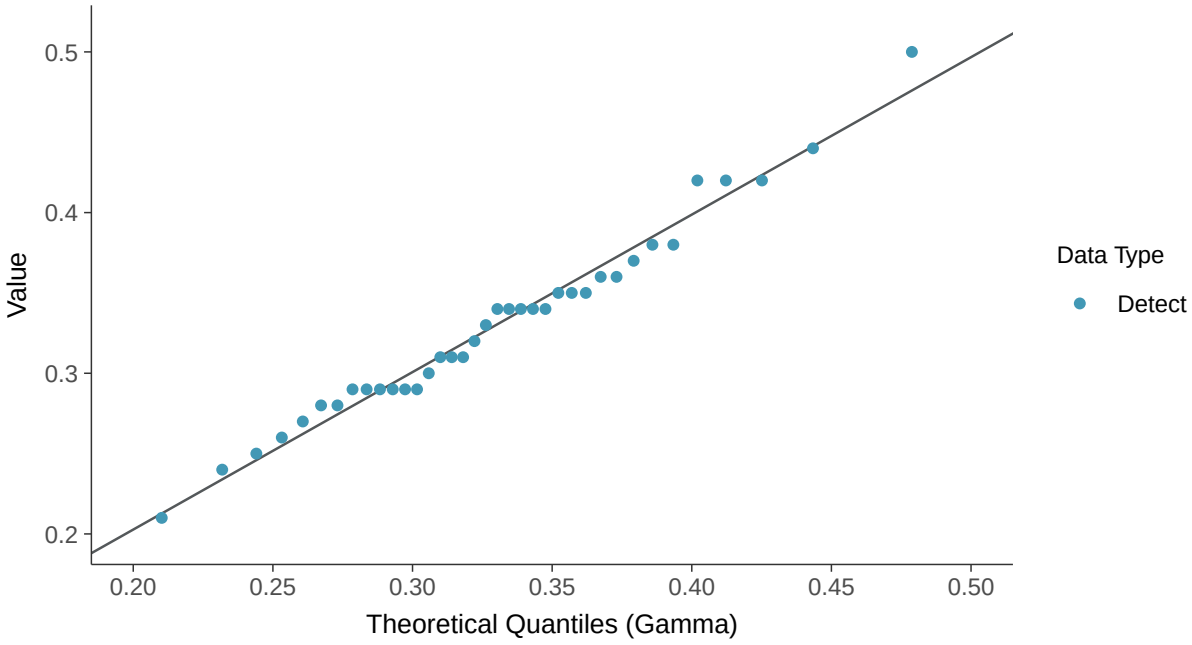
Lognormal Q-Q plot

Fluoride, MW-4 (mg/L)



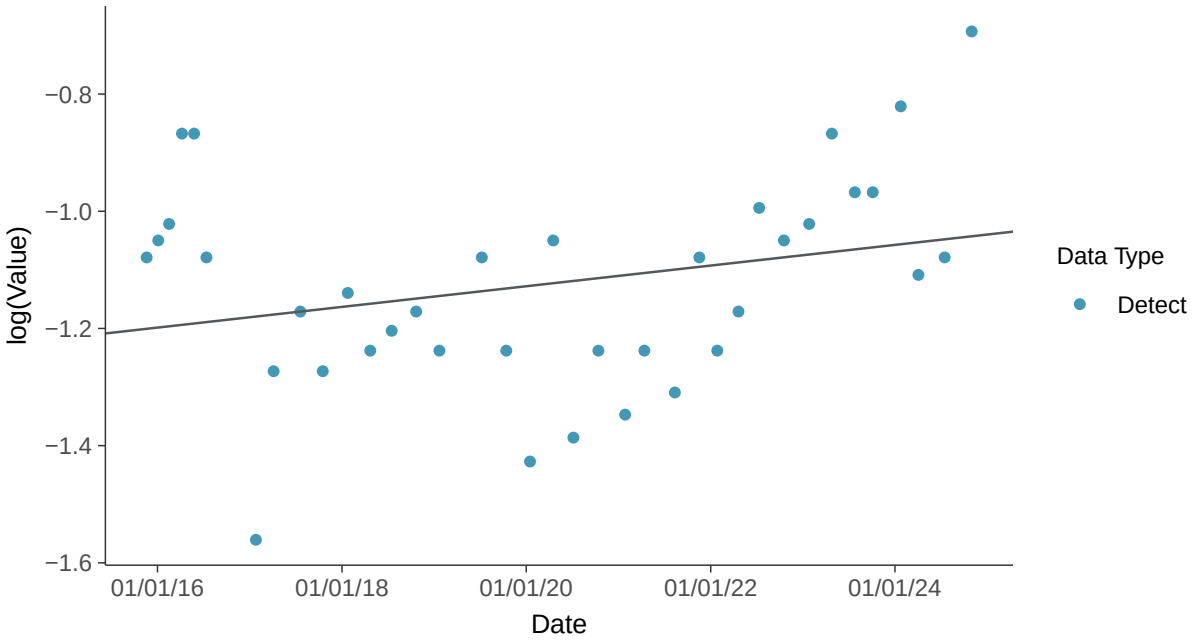
Gamma Q-Q plot

Fluoride, MW-4 (mg/L)



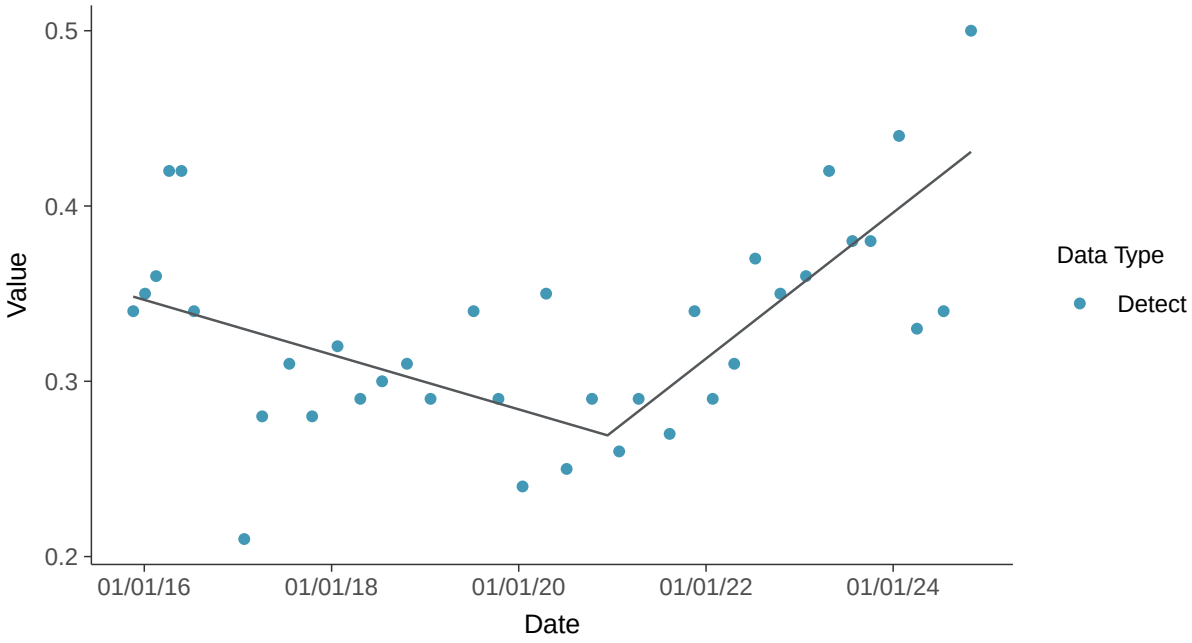
Trend Regression: Lognormal MLE

Fluoride, MW-4 (mg/L)



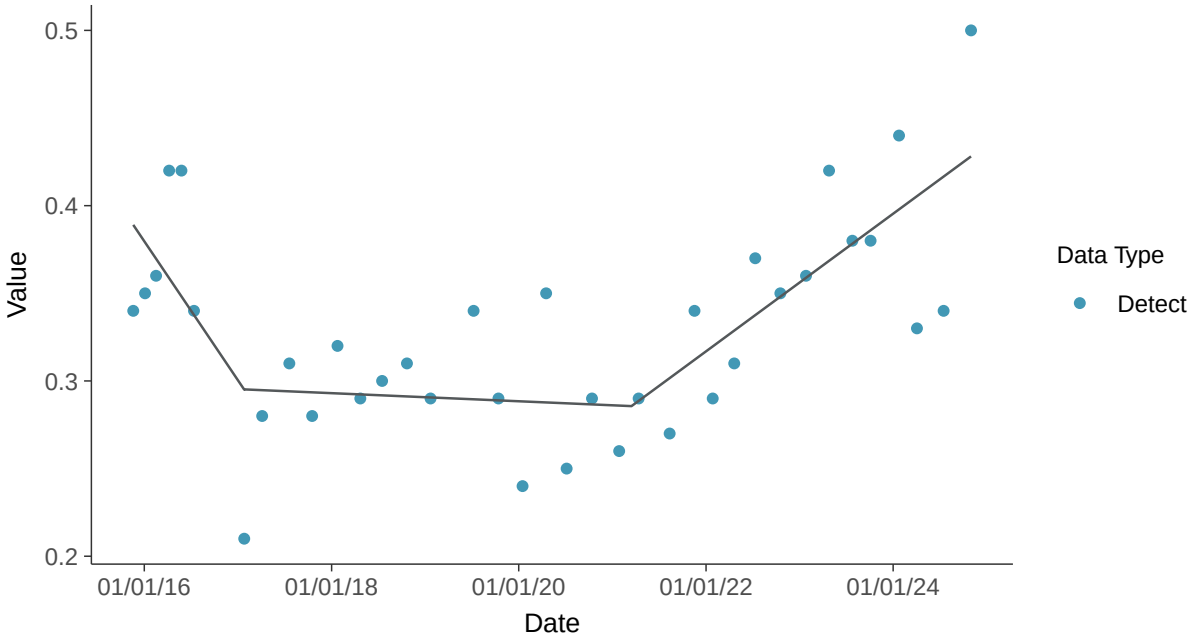
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-4 (mg/L)

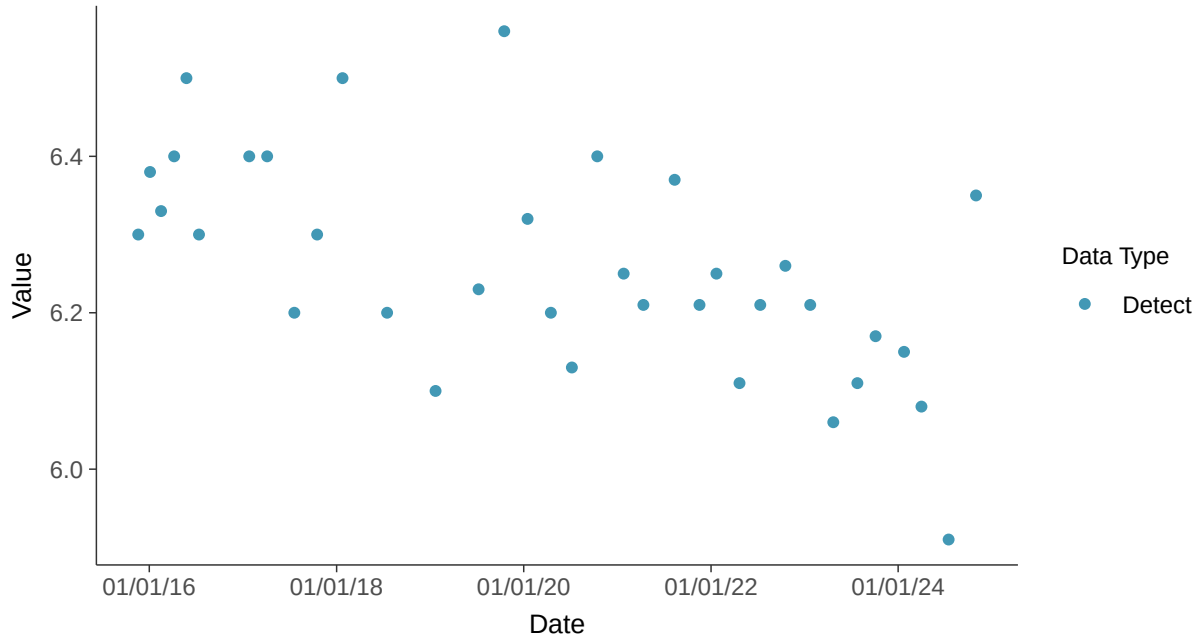


App. III: pH (Field), MW-4

ID: 04_02_118

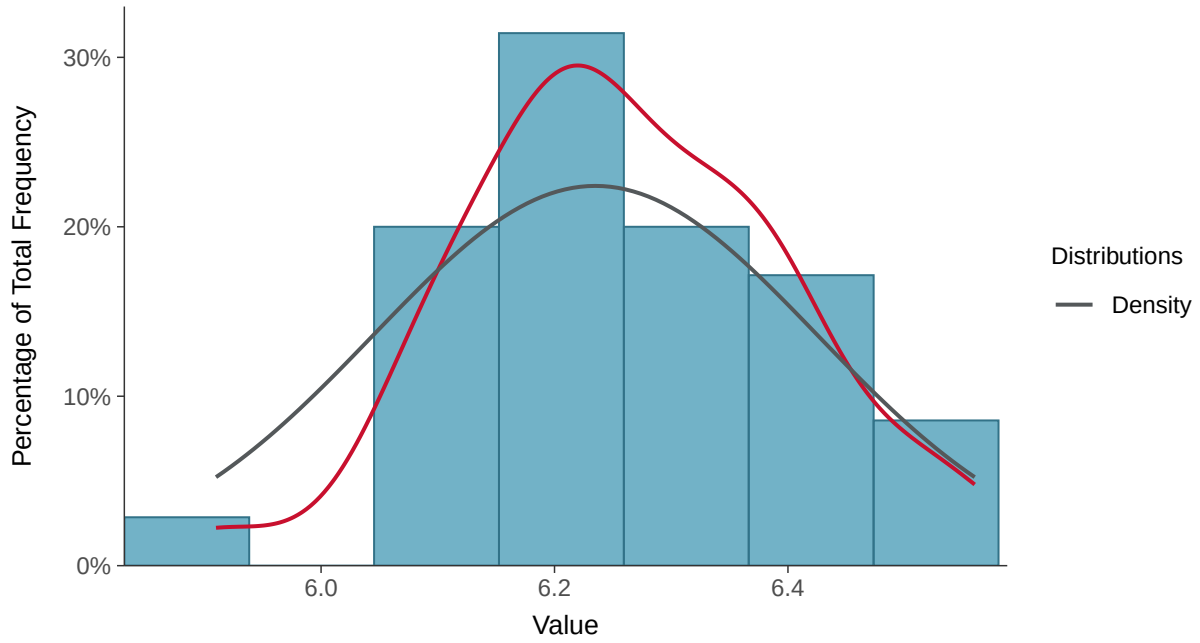
Scatter Plot

pH (Field), MW-4 (S.U.)



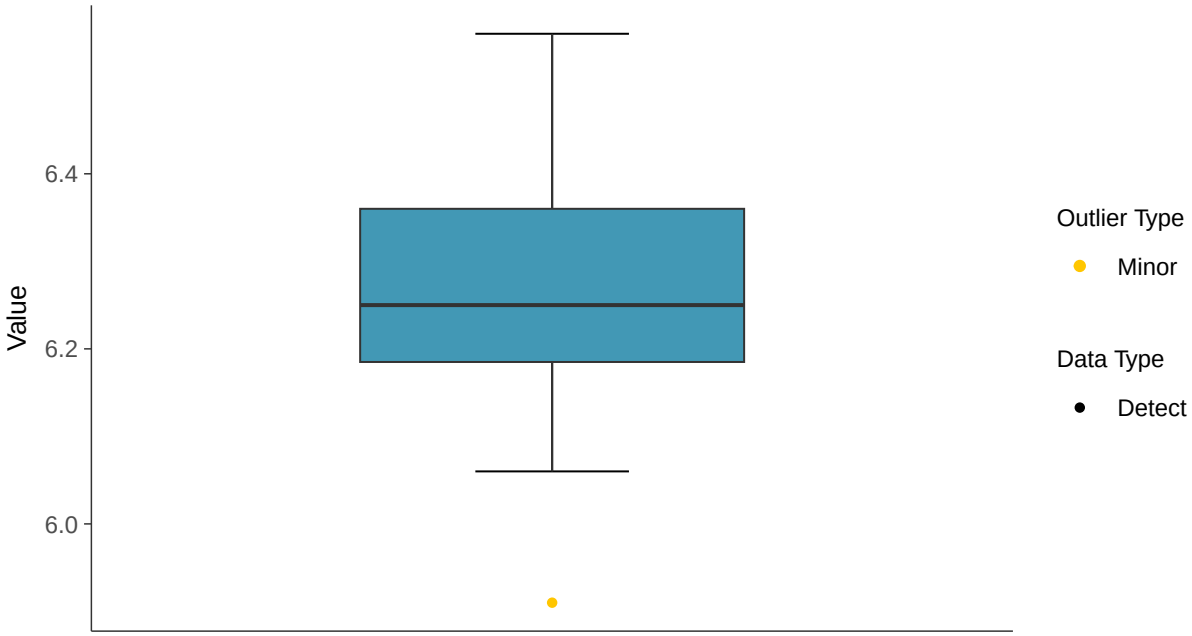
Histogram

pH (Field), MW-4 (S.U.)



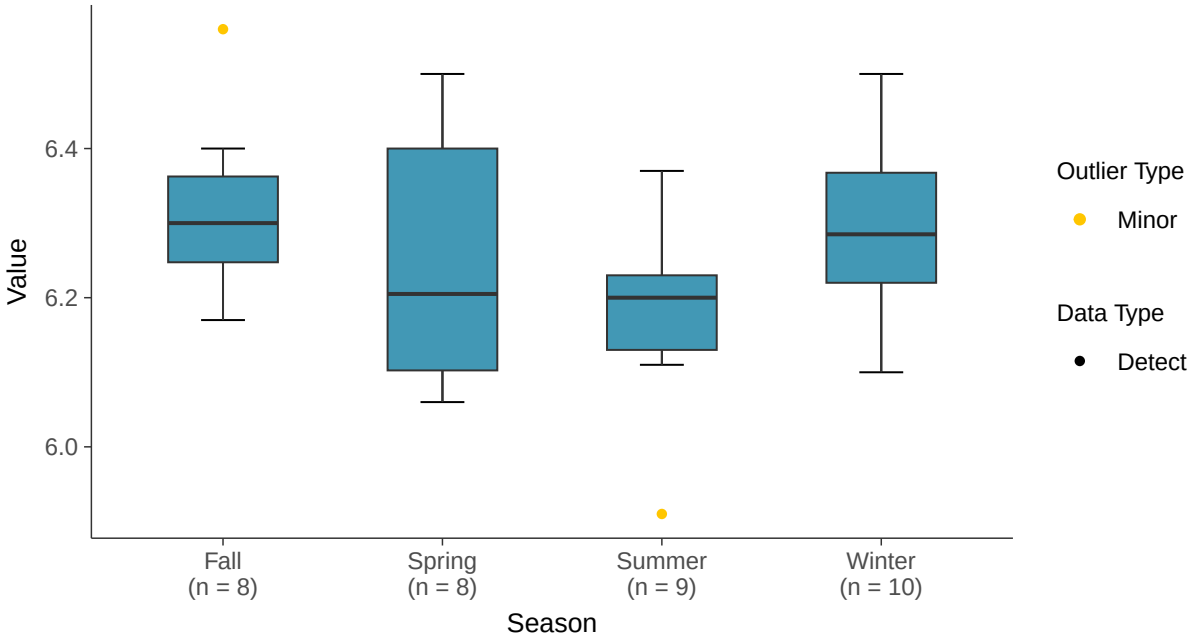
Boxplot

pH (Field), MW-4 (S.U.)



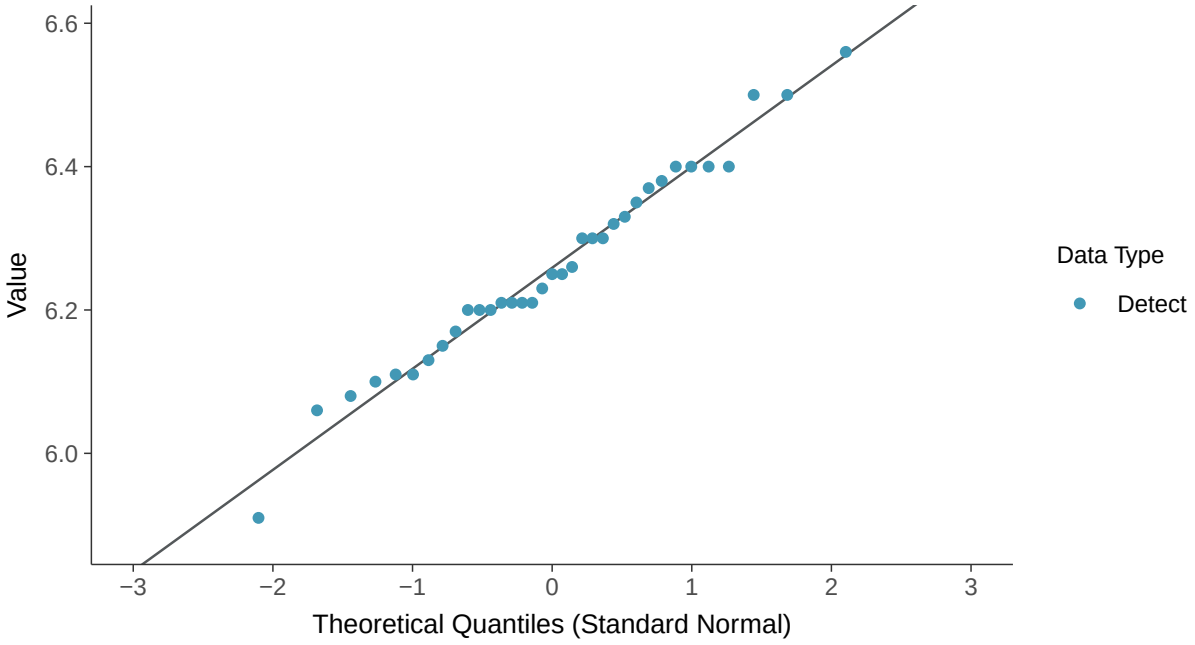
Boxplot by Season

pH (Field), MW-4 (S.U.)



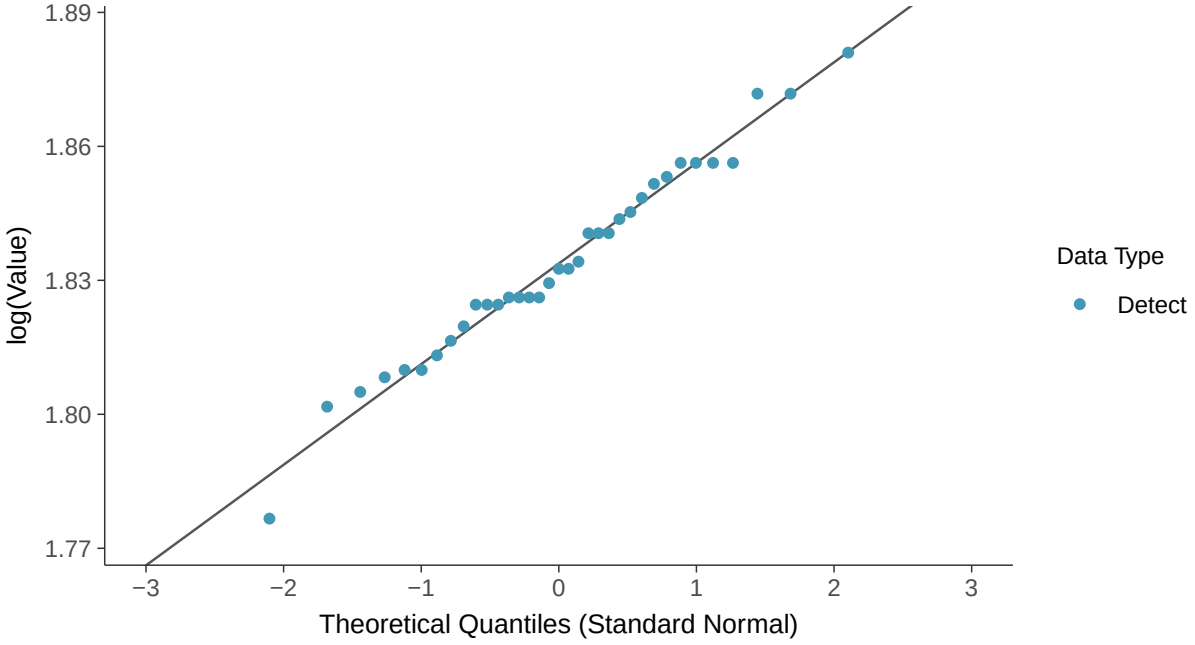
Normal Q-Q plot

pH (Field), MW-4 (S.U.)



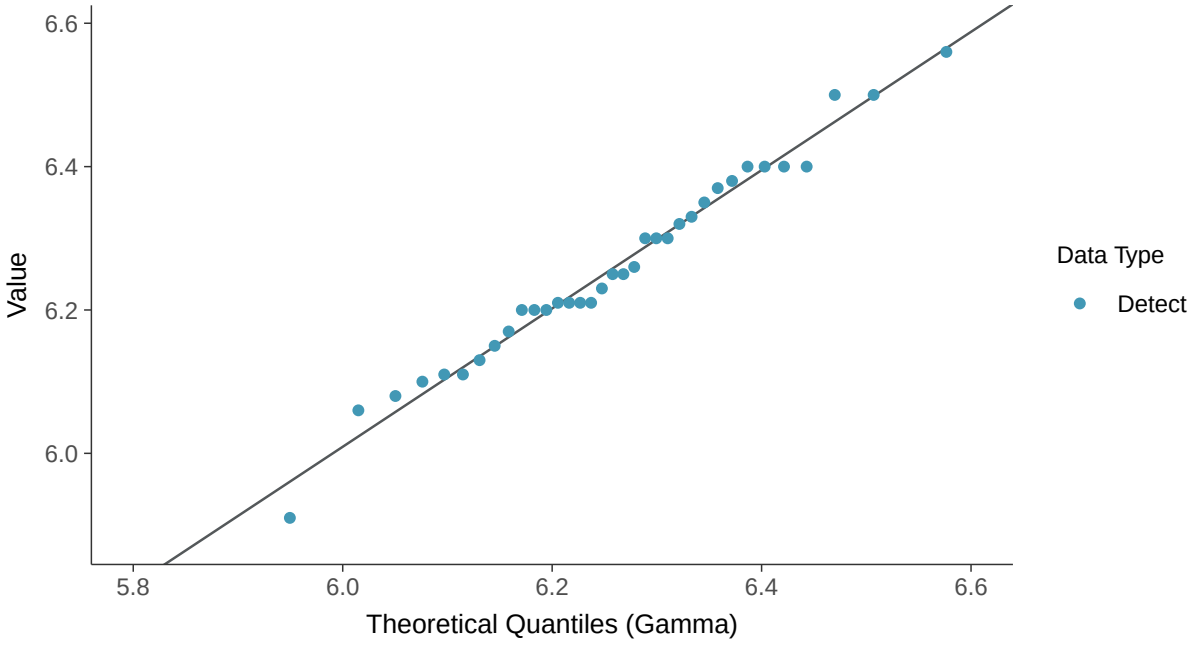
Lognormal Q-Q plot

pH (Field), MW-4 (S.U.)



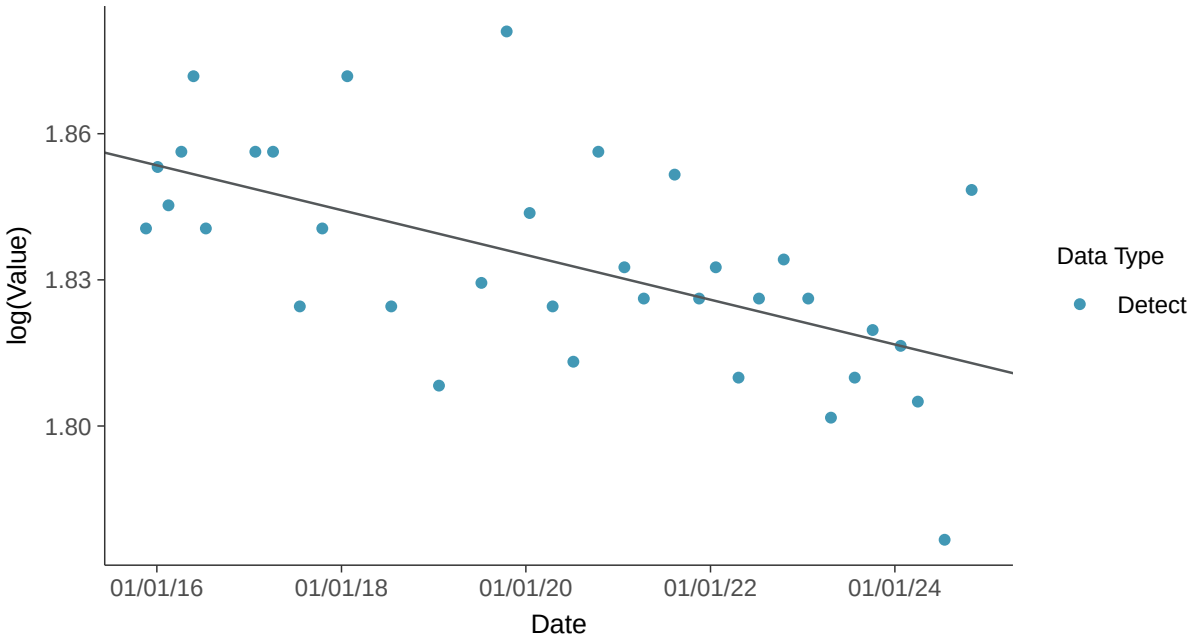
Gamma Q-Q plot

pH (Field), MW-4 (S.U.)



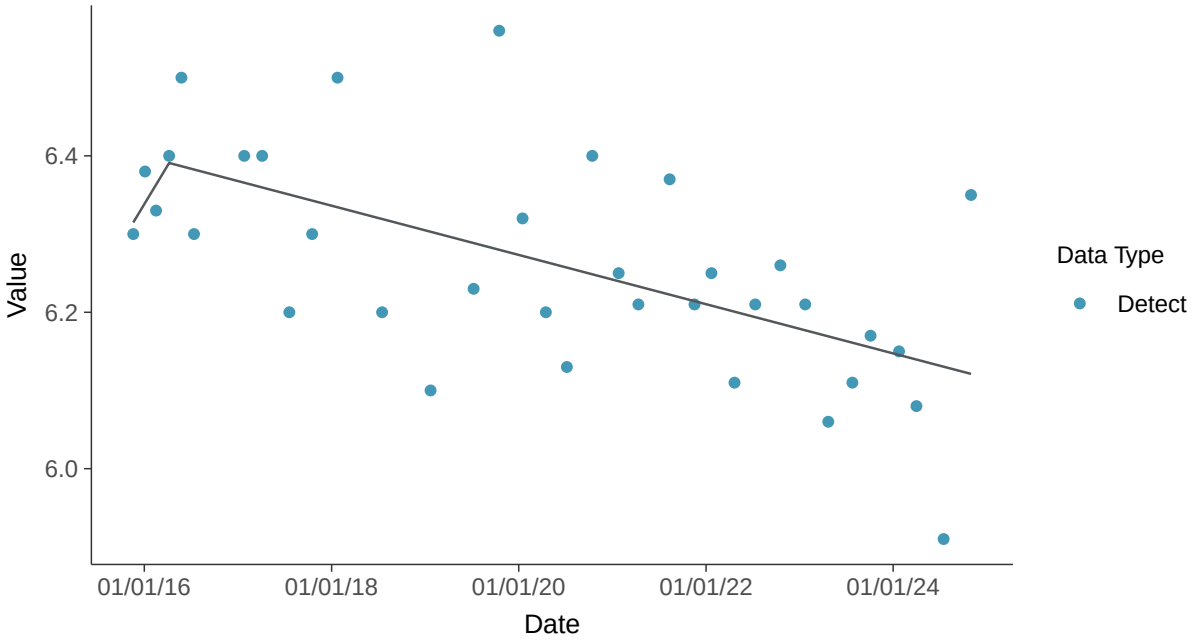
Trend Regression: Lognormal MLE

pH (Field), MW-4 (S.U.)



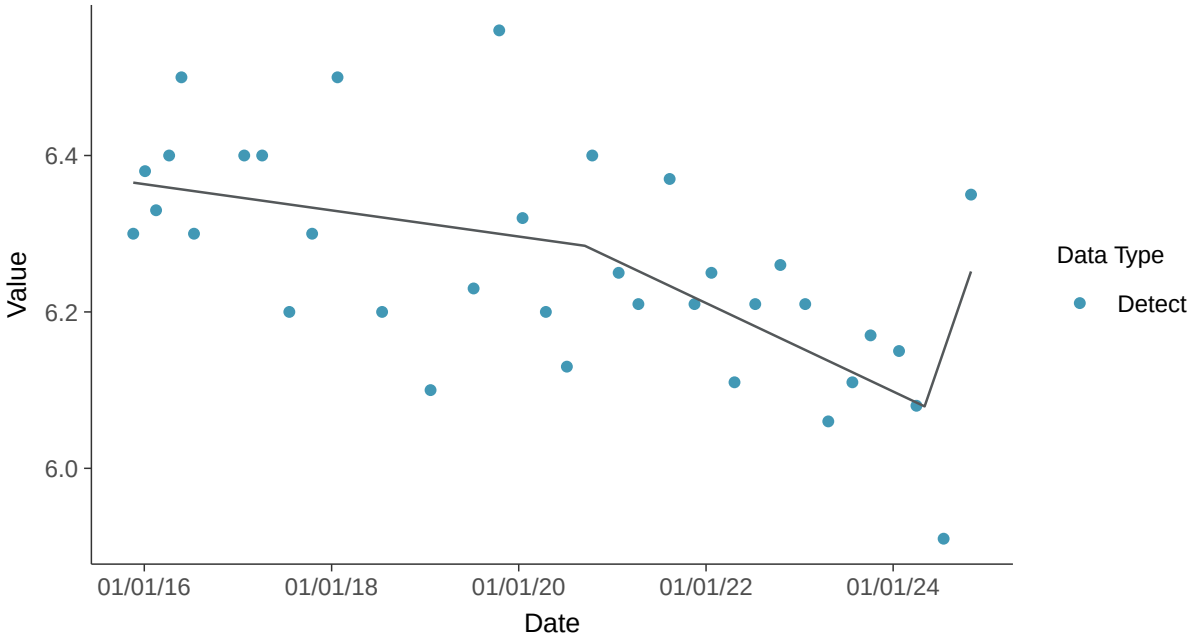
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-4 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-4 (S.U.)

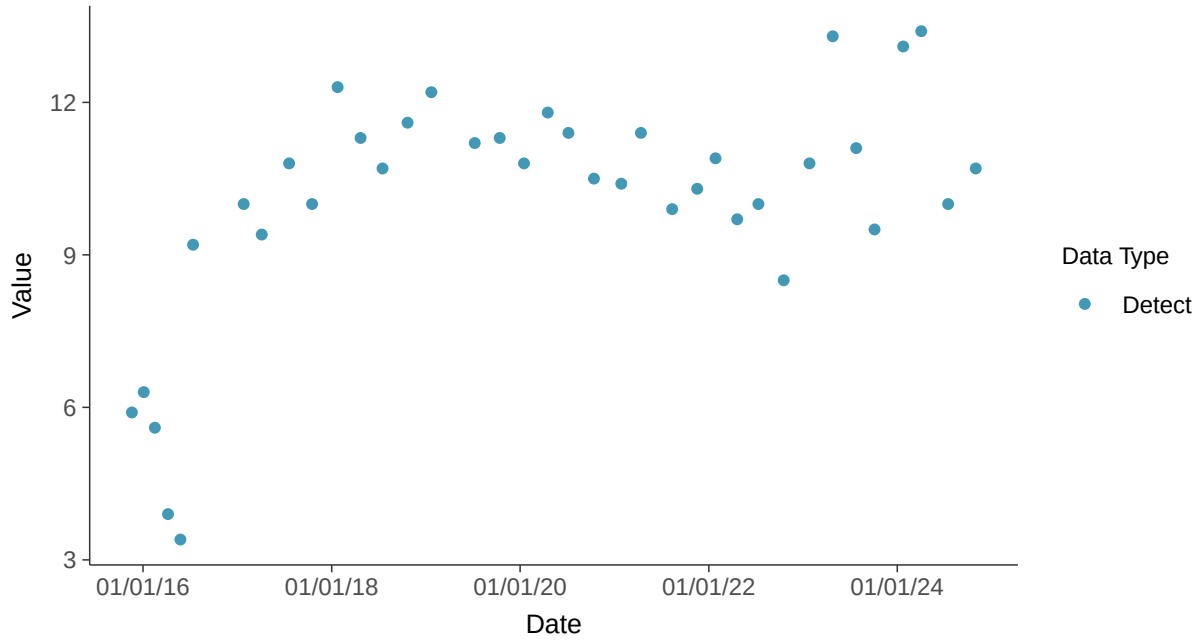


App. III: Sulfate, MW-4

ID: 04_02_123

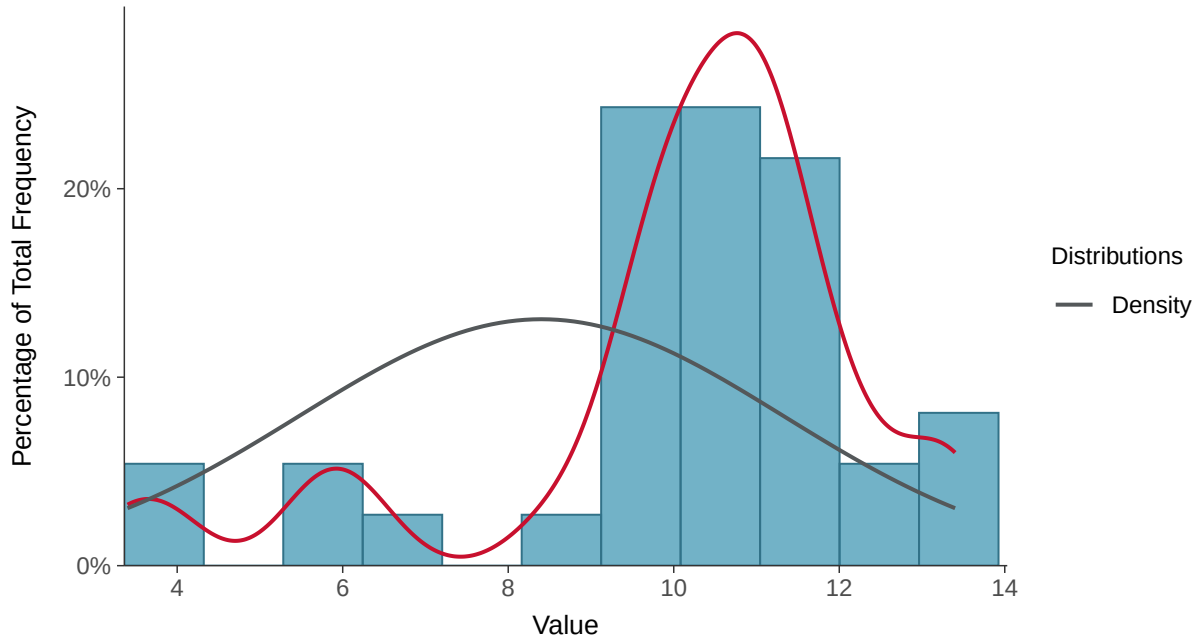
Scatter Plot

Sulfate, MW-4 (mg/L)



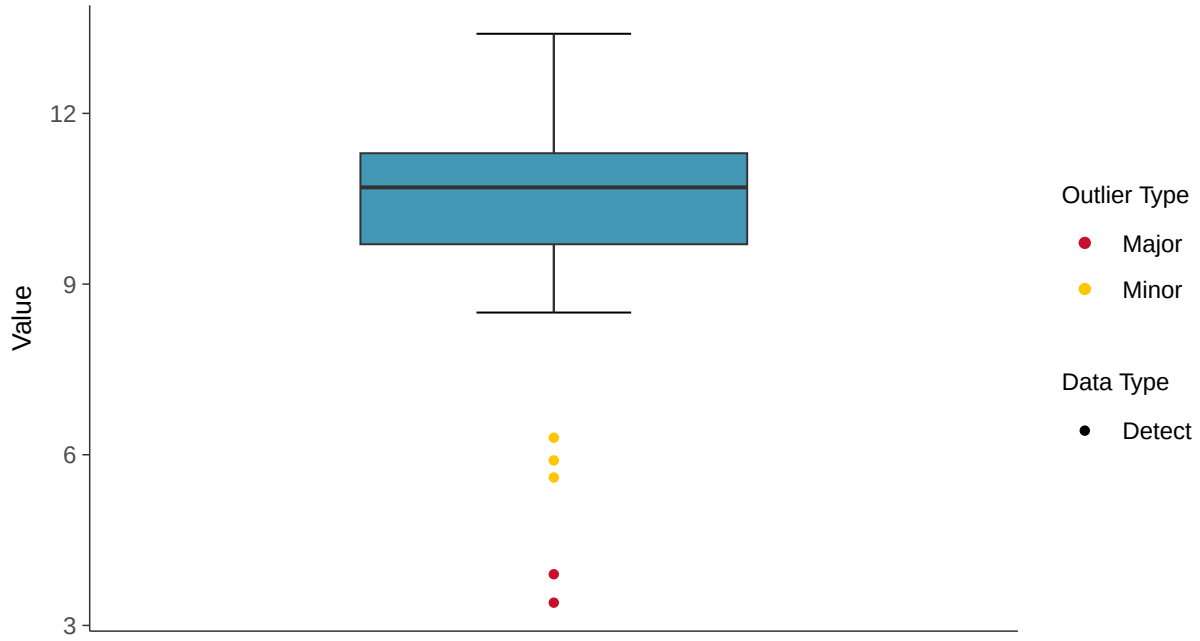
Histogram

Sulfate, MW-4 (mg/L)



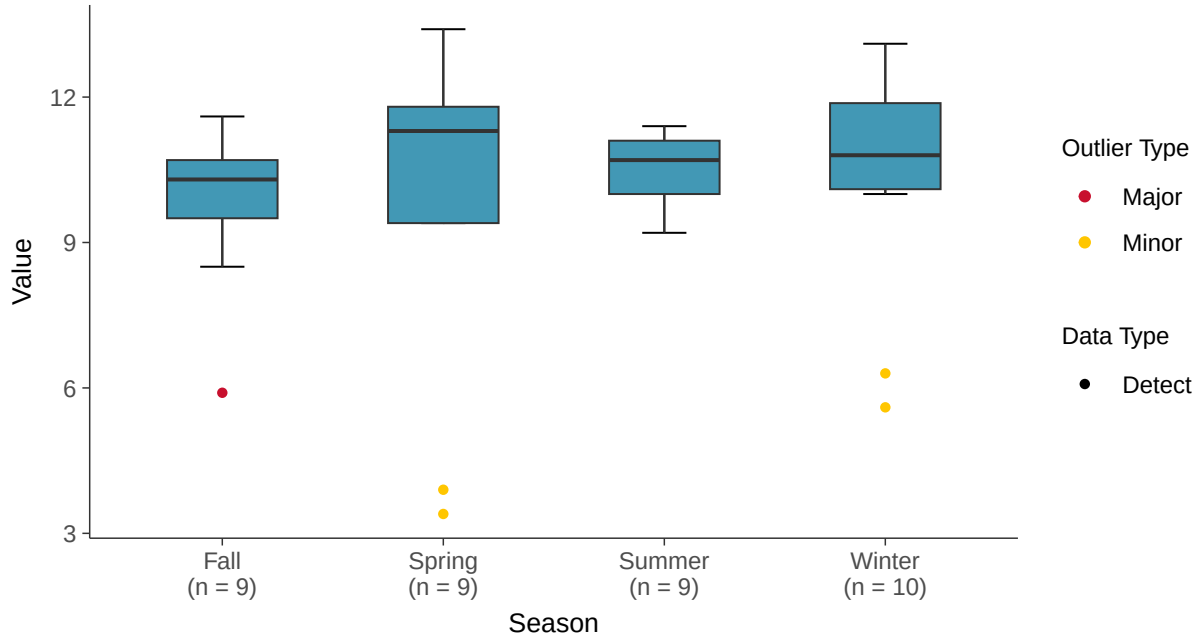
Boxplot

Sulfate, MW-4 (mg/L)



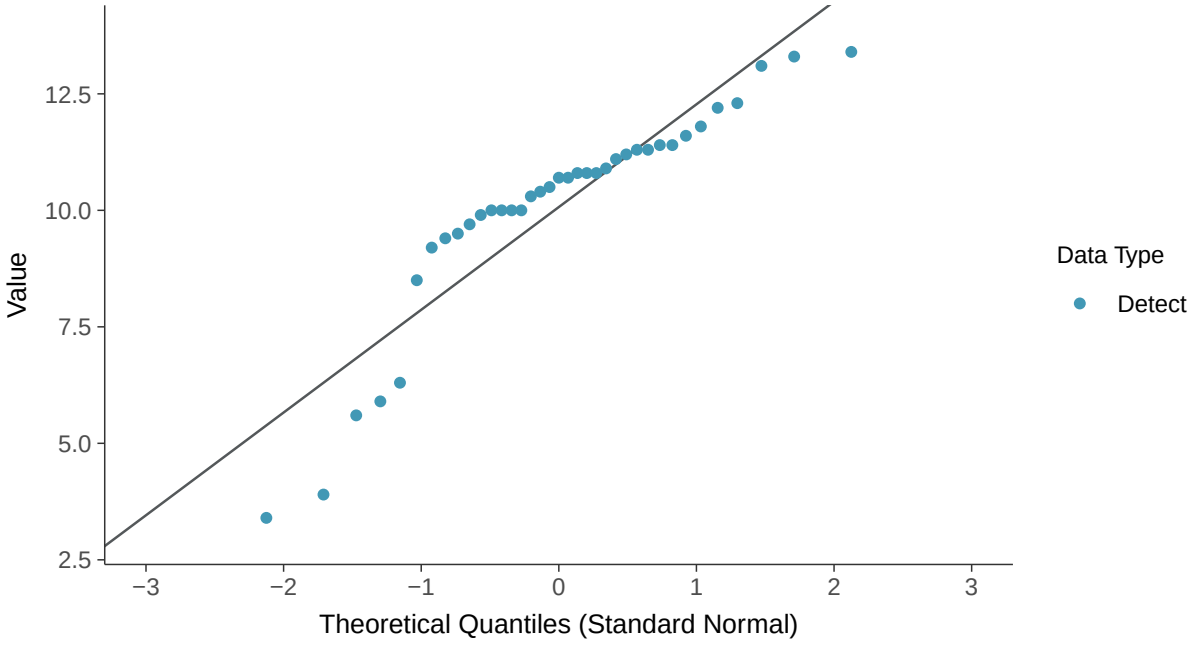
Boxplot by Season

Sulfate, MW-4 (mg/L)



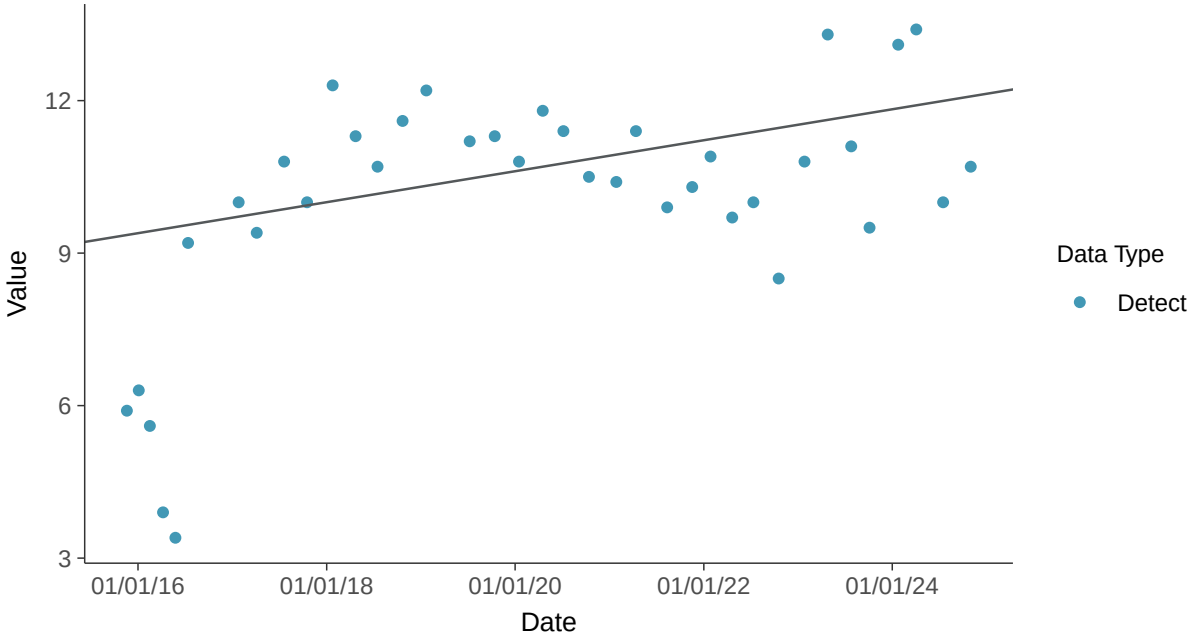
Normal Q-Q plot

Sulfate, MW-4 (mg/L)



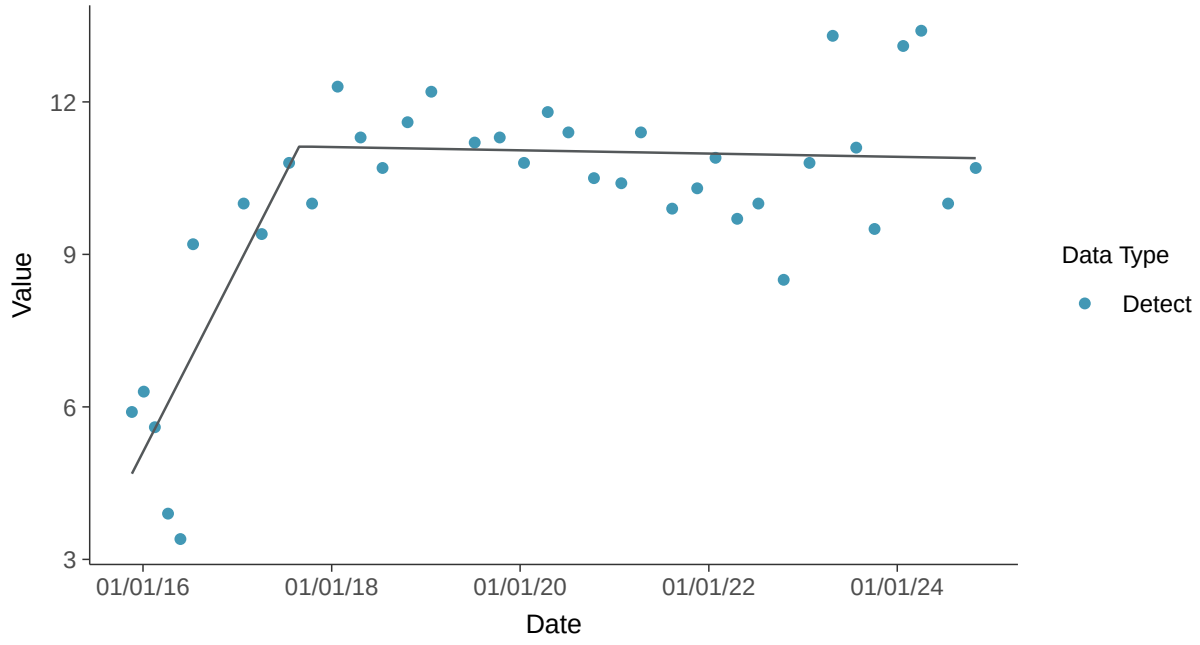
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-4 (mg/L)



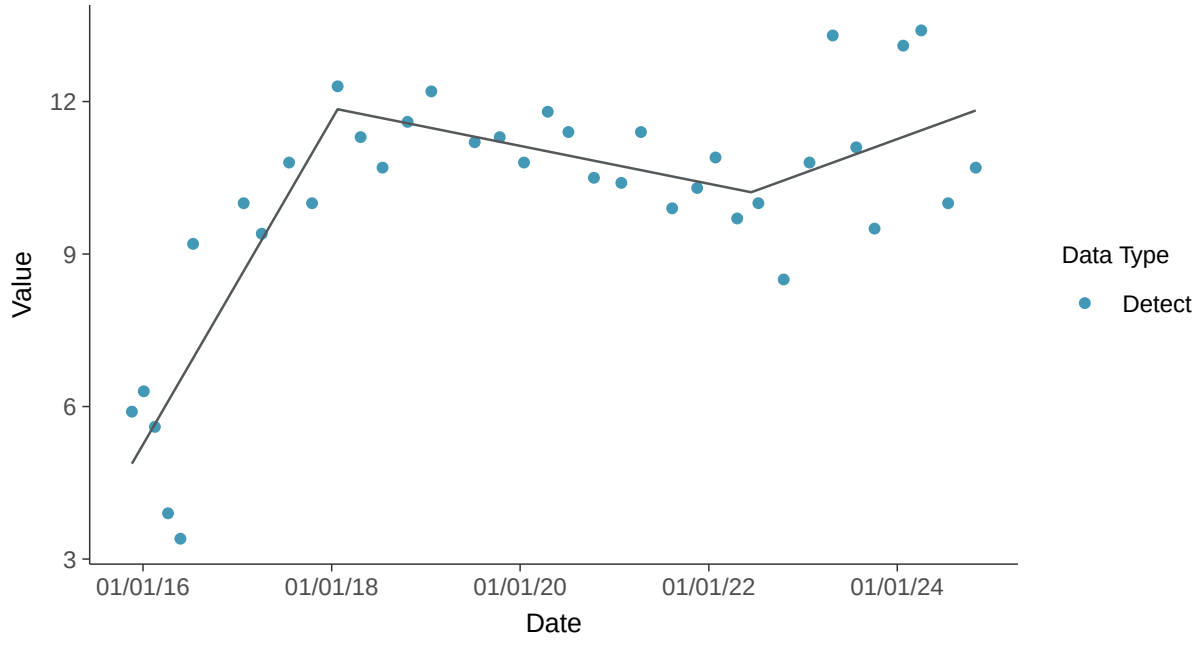
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-4 (mg/L)

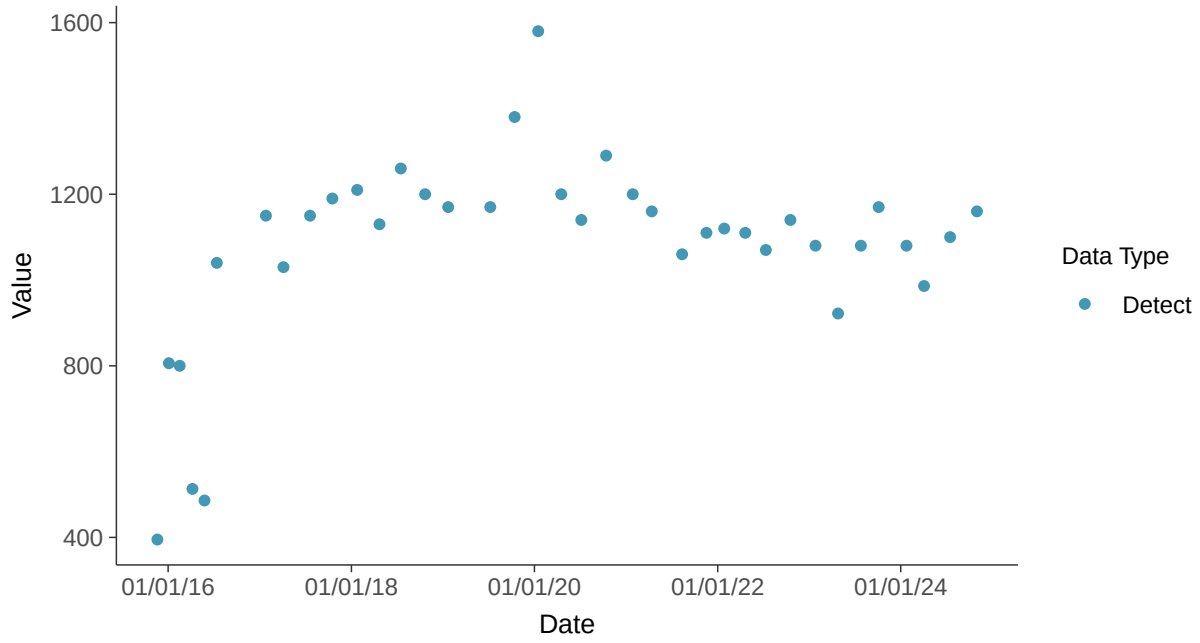


App. III: Total Dissolved Solids, MW-4

ID: 04_02_125

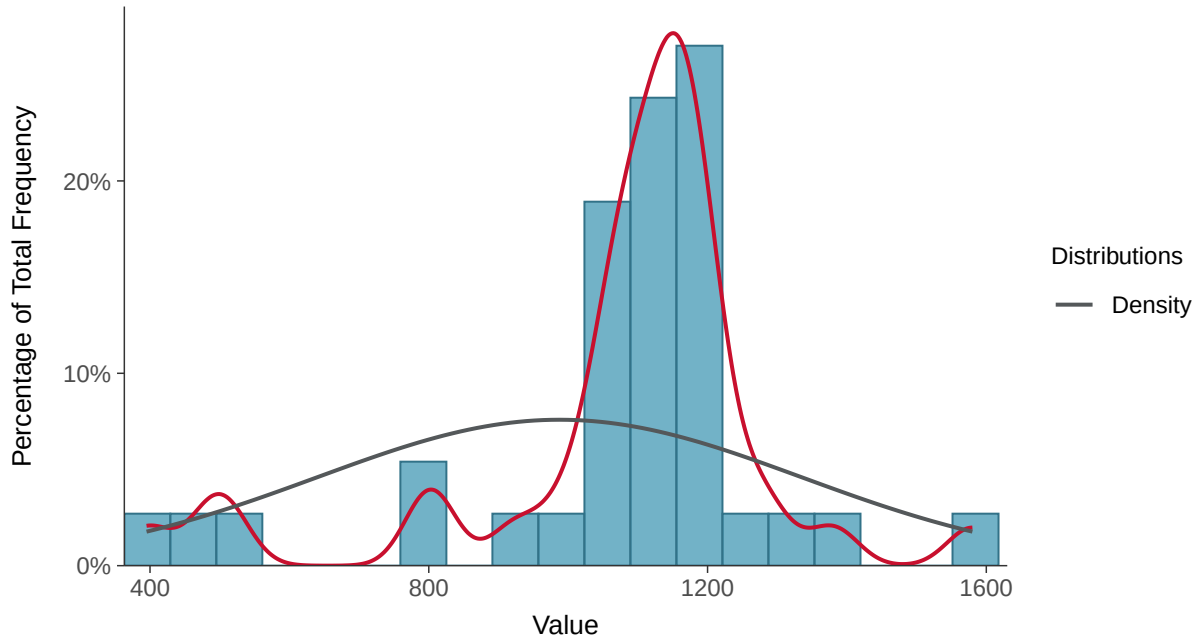
Scatter Plot

Total Dissolved Solids, MW-4 (mg/L)



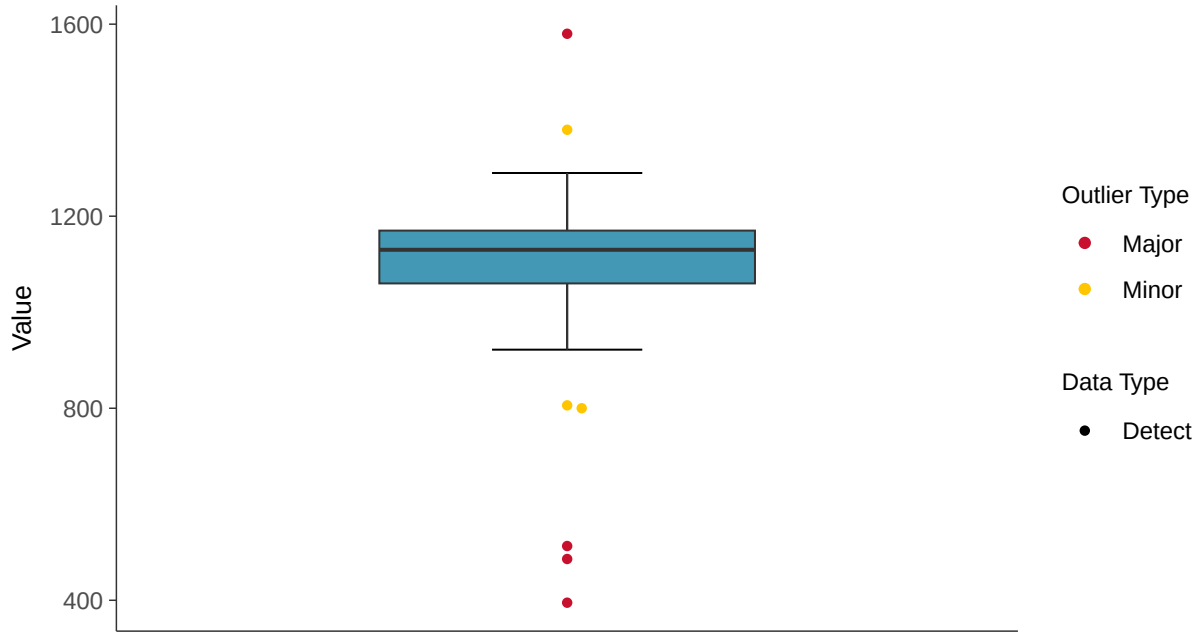
Histogram

Total Dissolved Solids, MW-4 (mg/L)



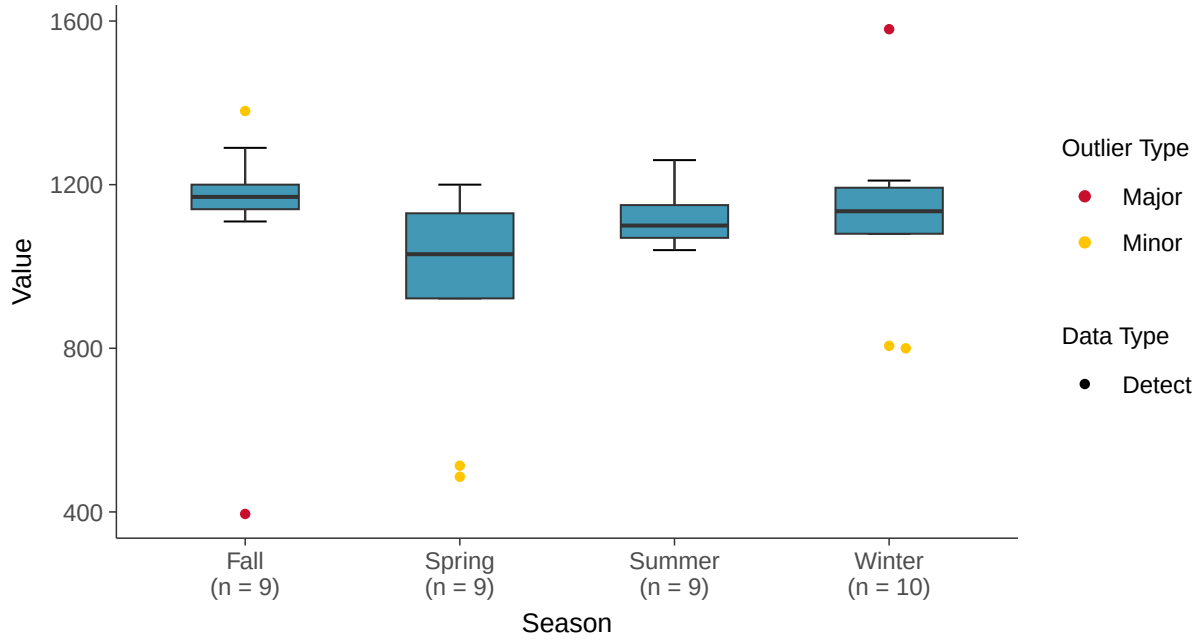
Boxplot

Total Dissolved Solids, MW-4 (mg/L)



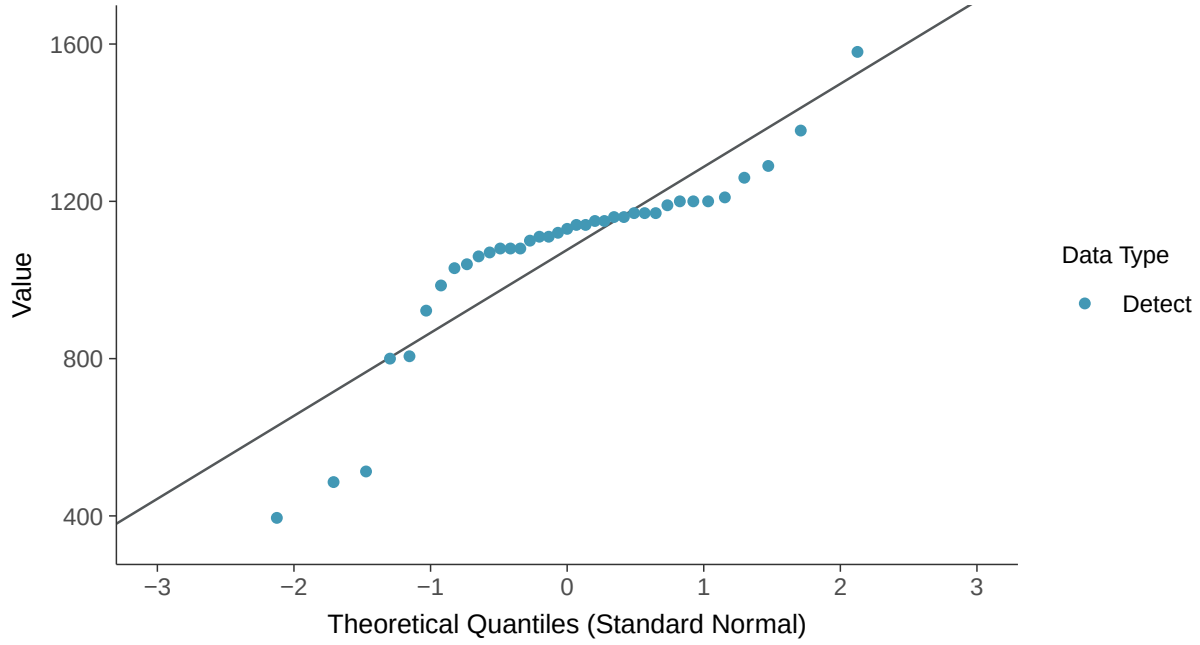
Boxplot by Season

Total Dissolved Solids, MW-4 (mg/L)



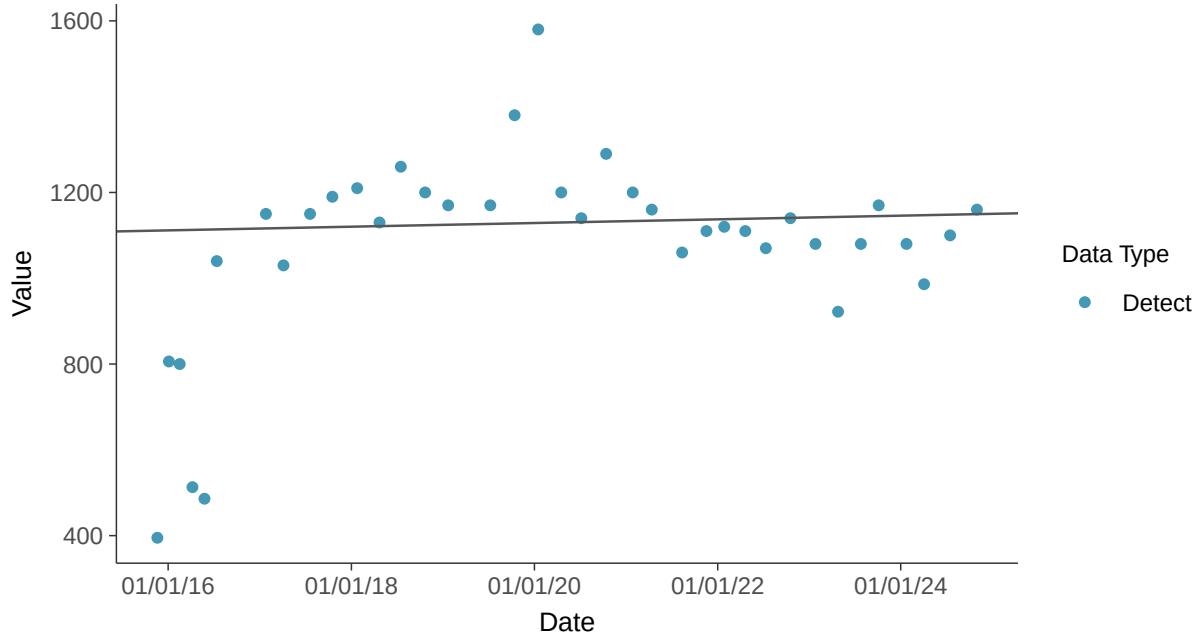
Normal Q-Q plot

Total Dissolved Solids, MW-4 (mg/L)



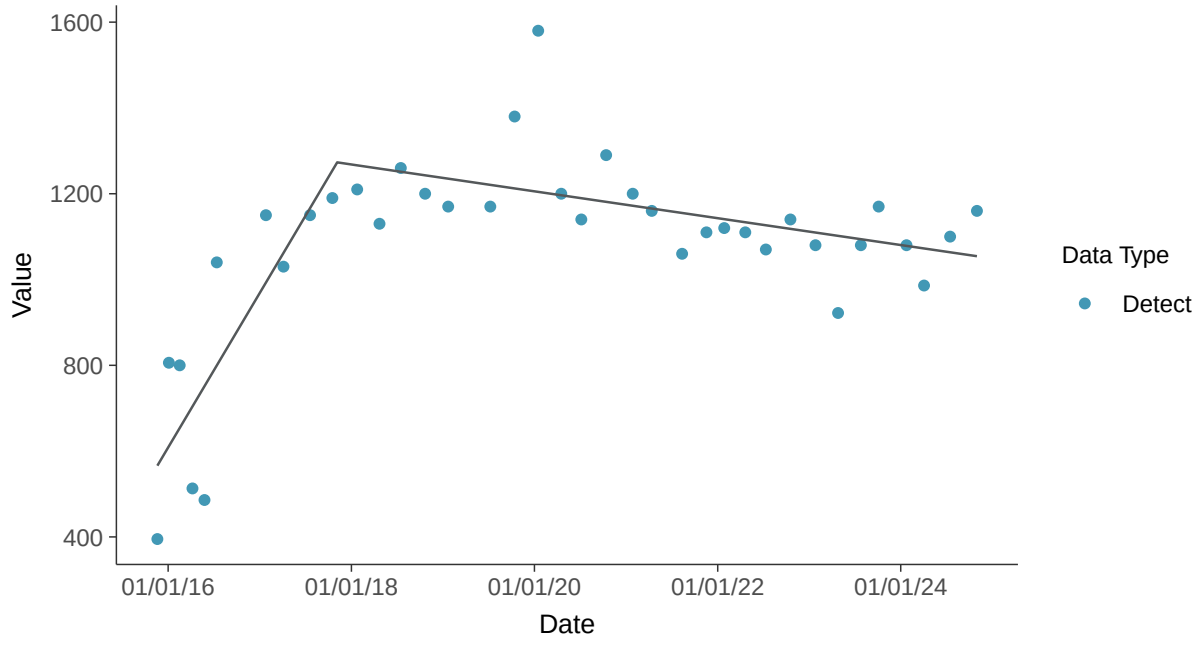
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-4 (mg/L)



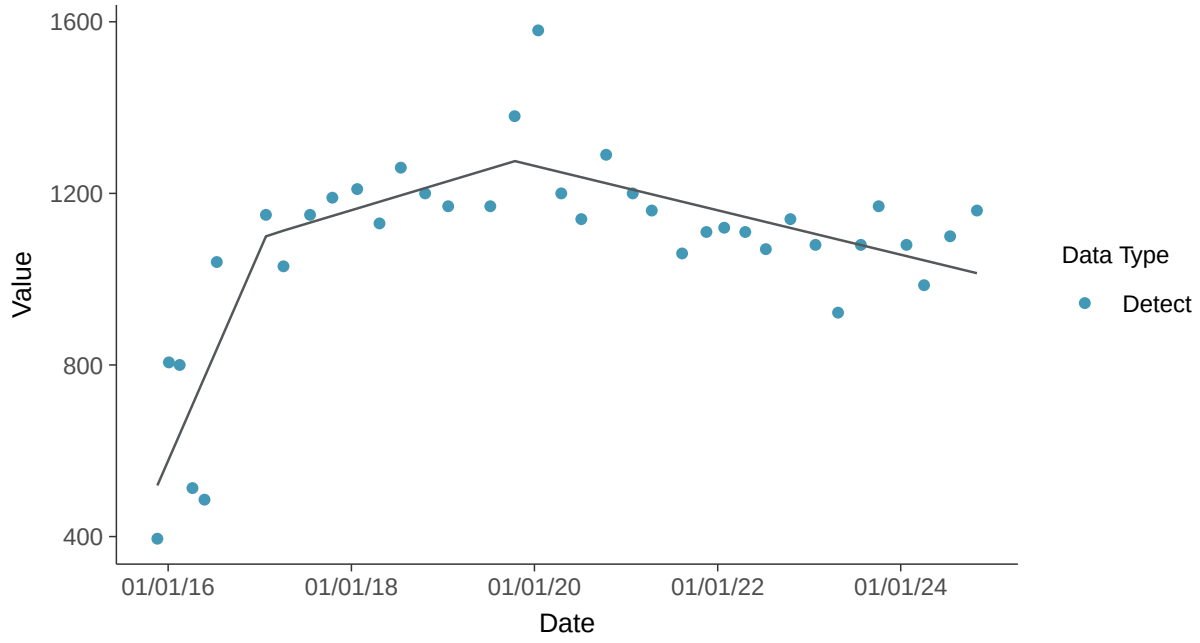
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-4 (mg/L)



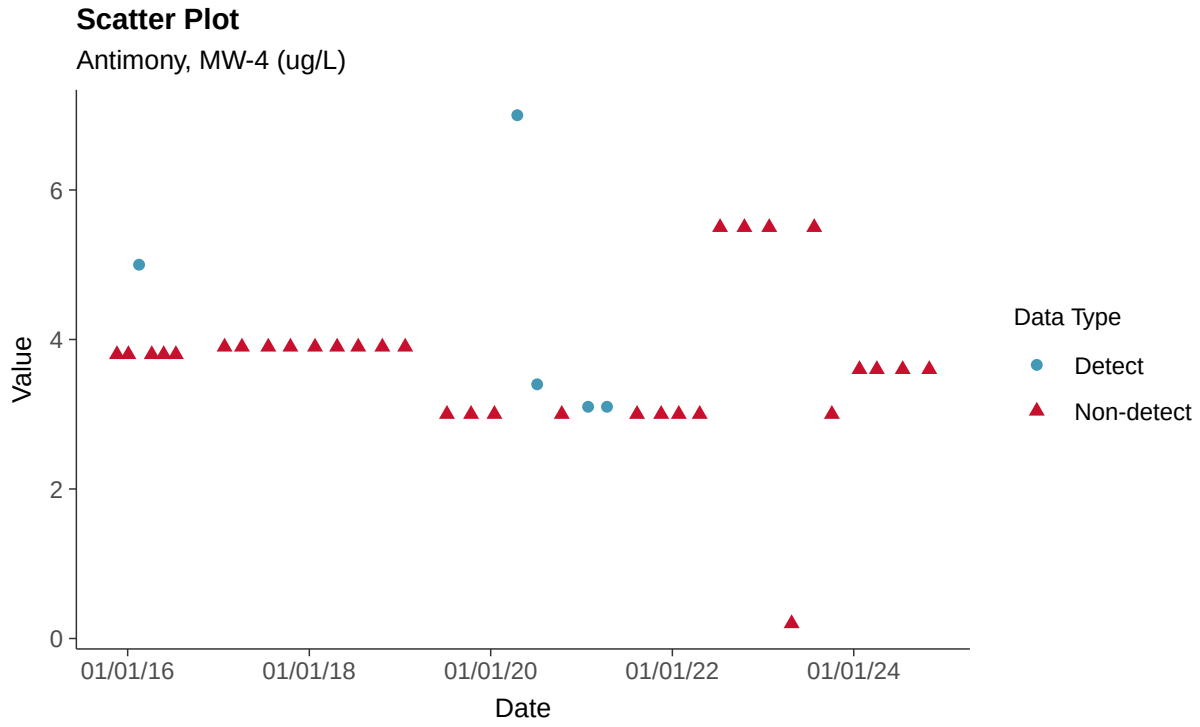
Trend Regression: Piecewise Linear-Linear-Linear

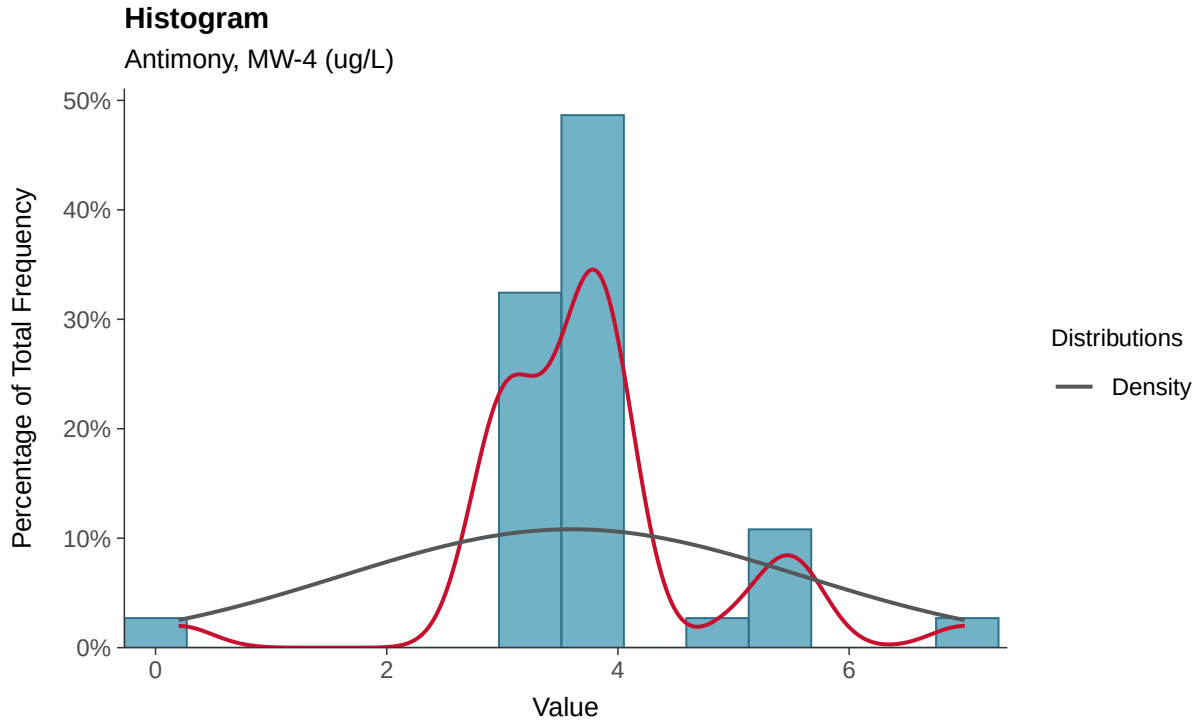
Total Dissolved Solids, MW-4 (mg/L)



App. IV: Antimony, MW-4

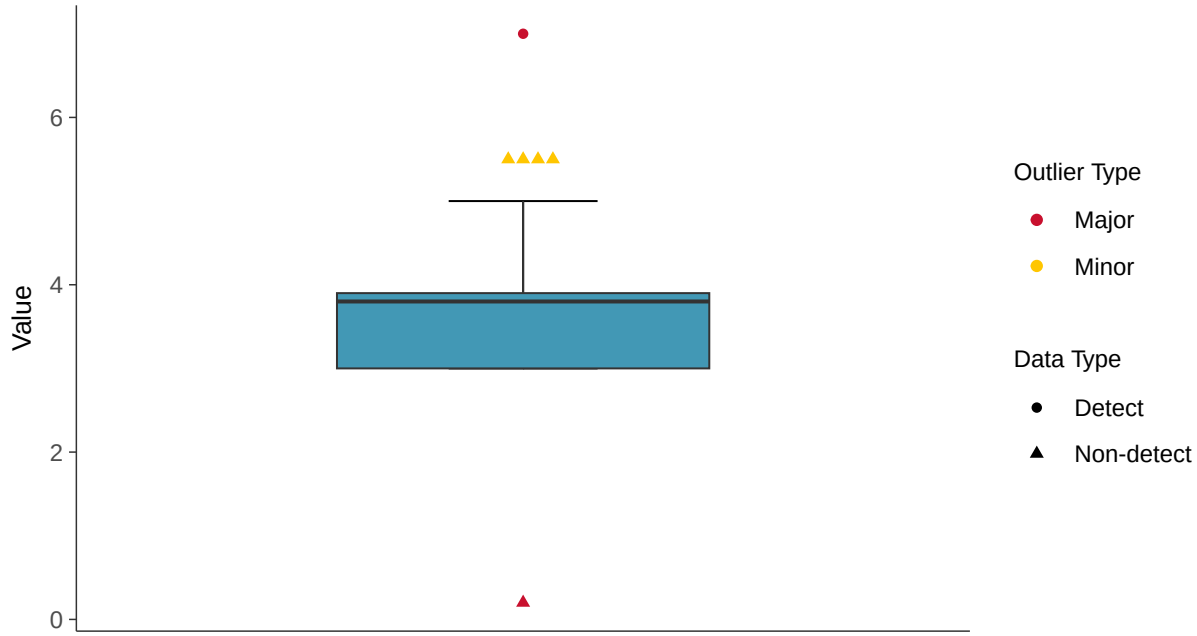
ID: 04_03_101





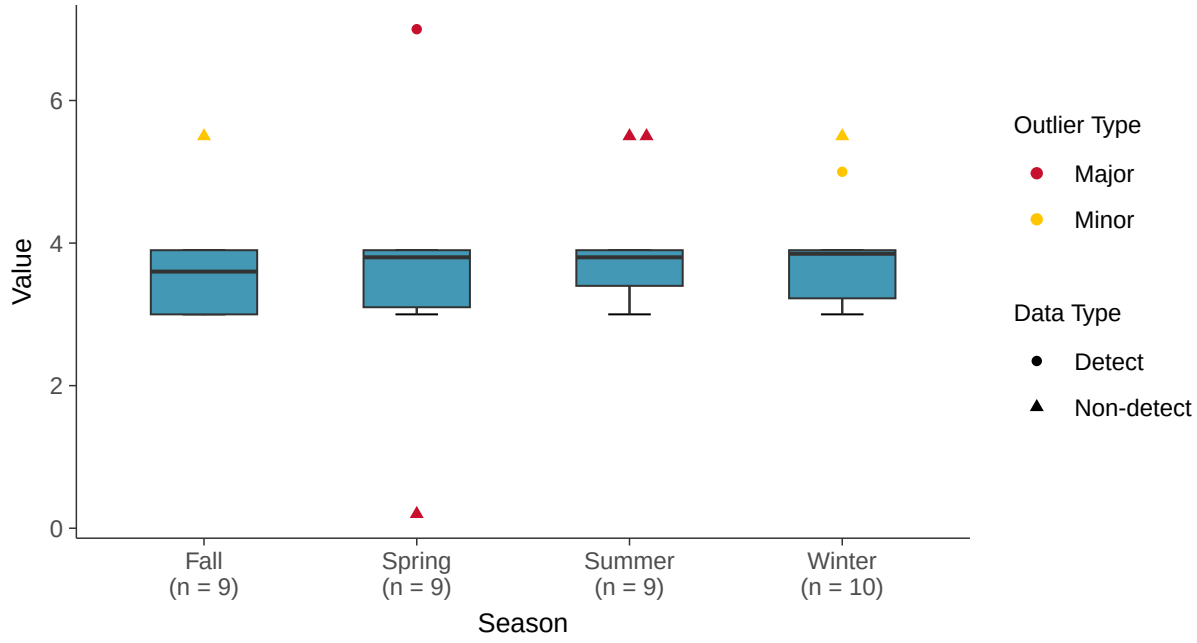
Boxplot

Antimony, MW-4 (ug/L)



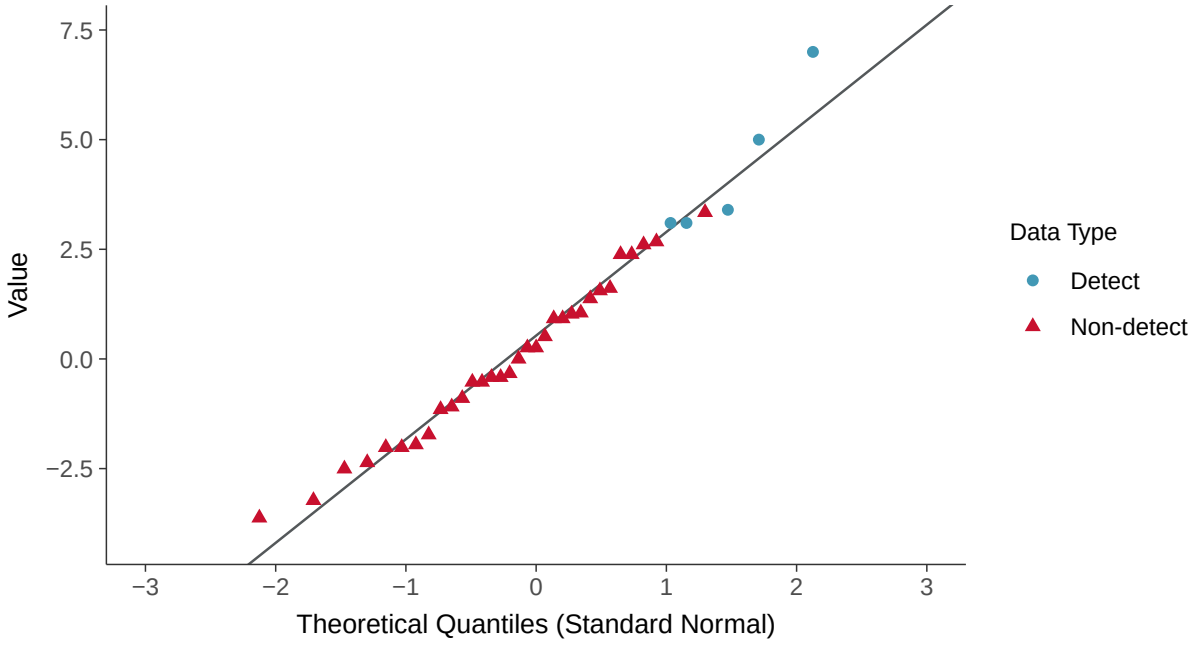
Boxplot by Season

Antimony, MW-4 (ug/L)



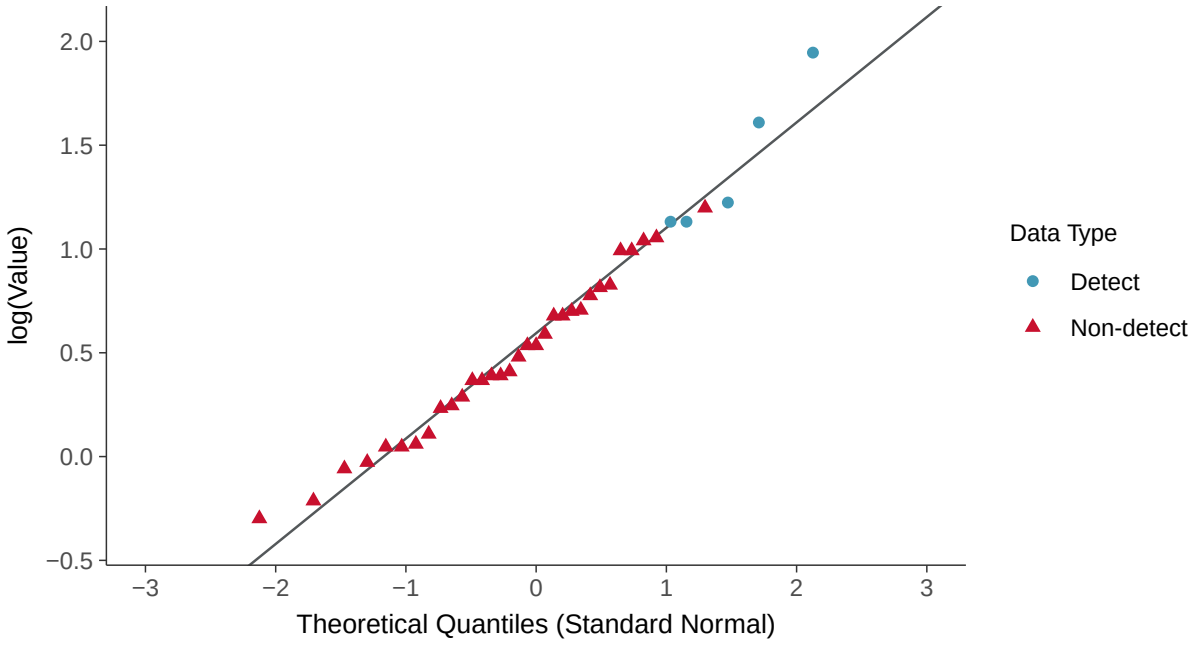
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



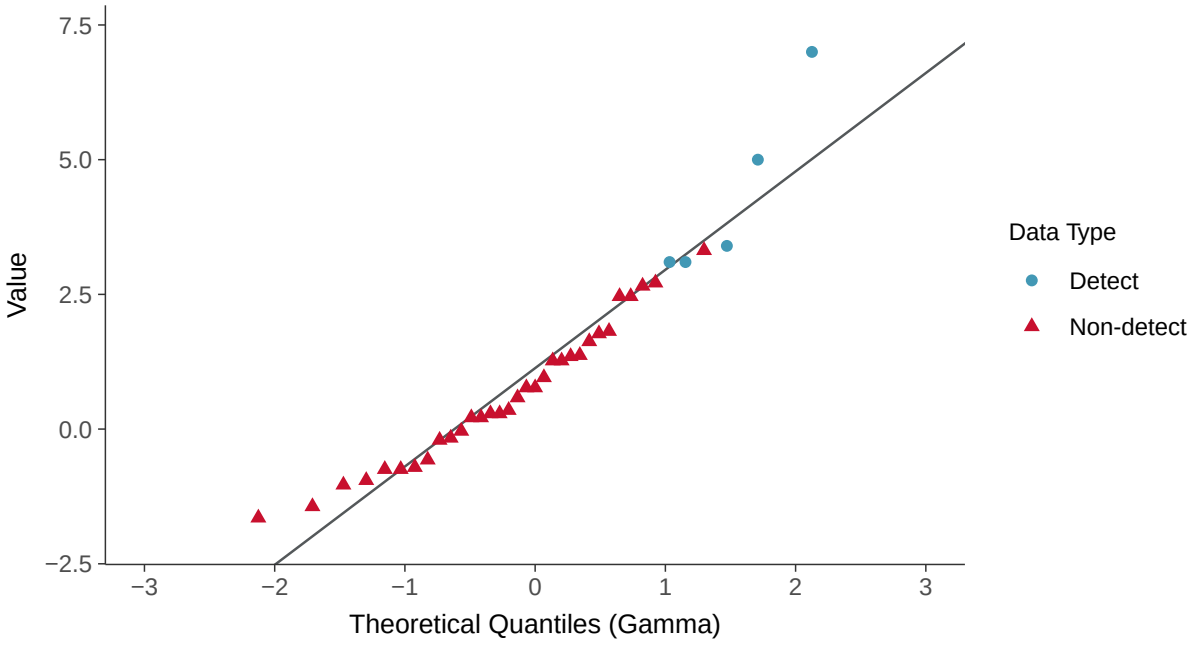
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



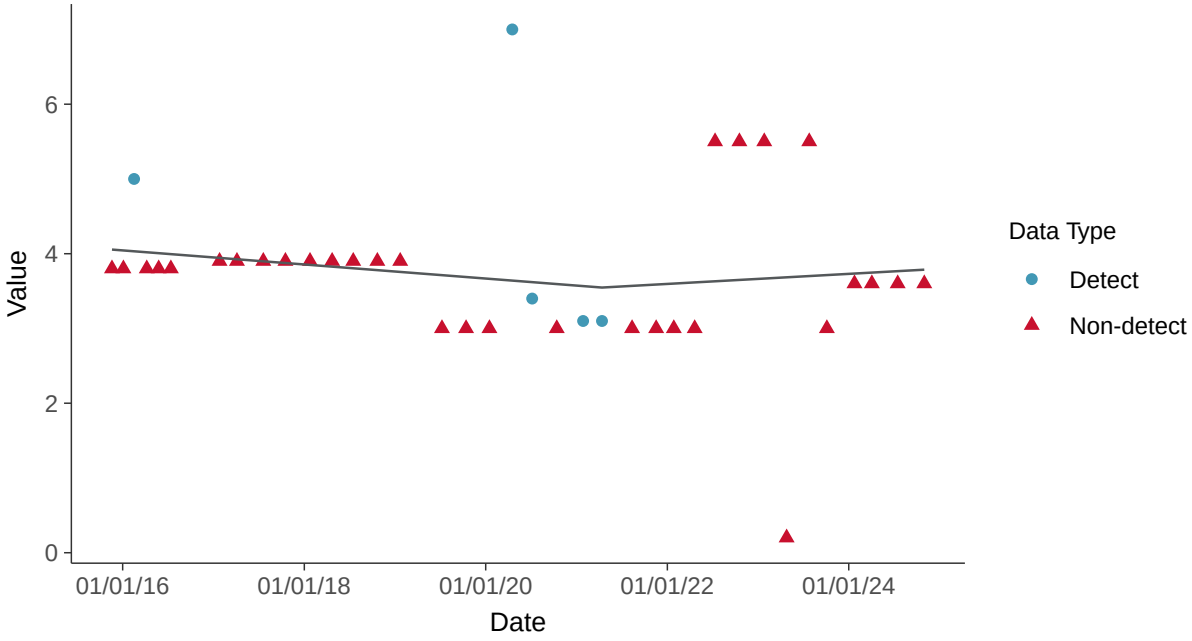
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-4 (ug/L)

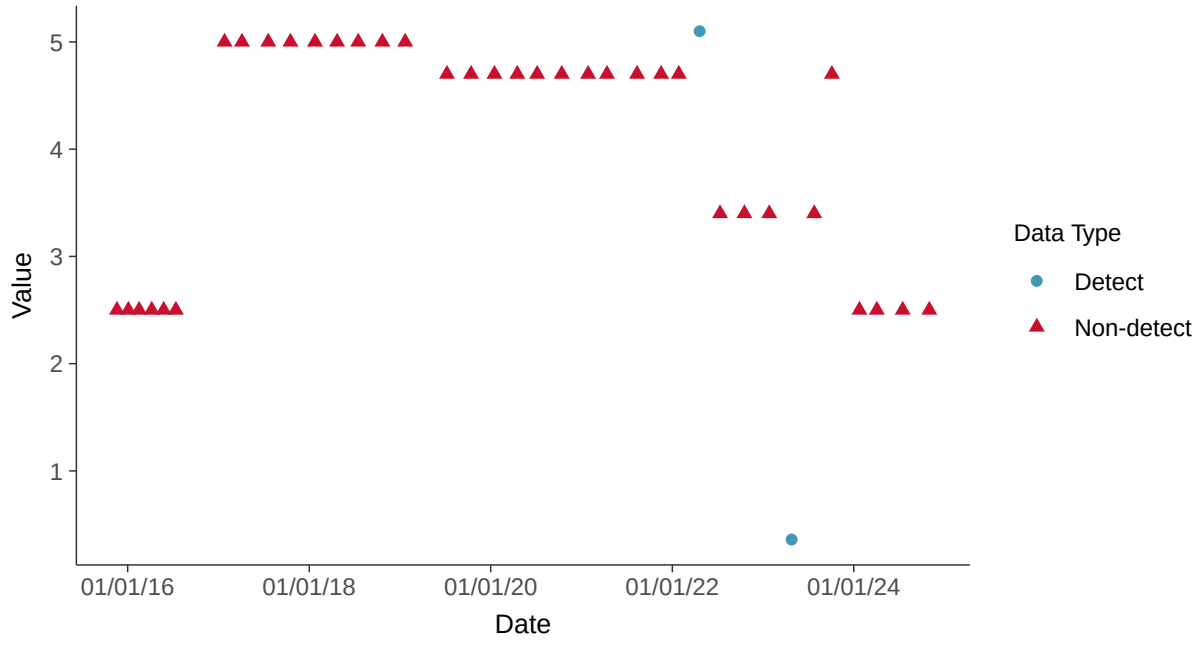


App. IV: Arsenic, MW-4

ID: 04_03_102

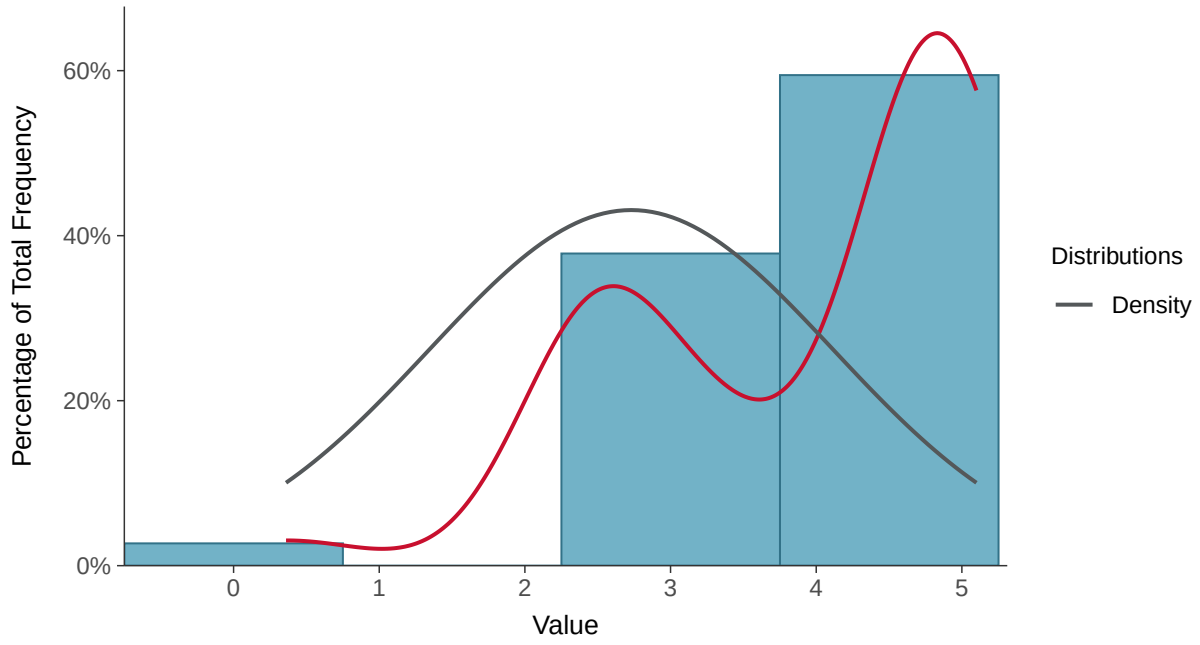
Scatter Plot

Arsenic, MW-4 (ug/L)



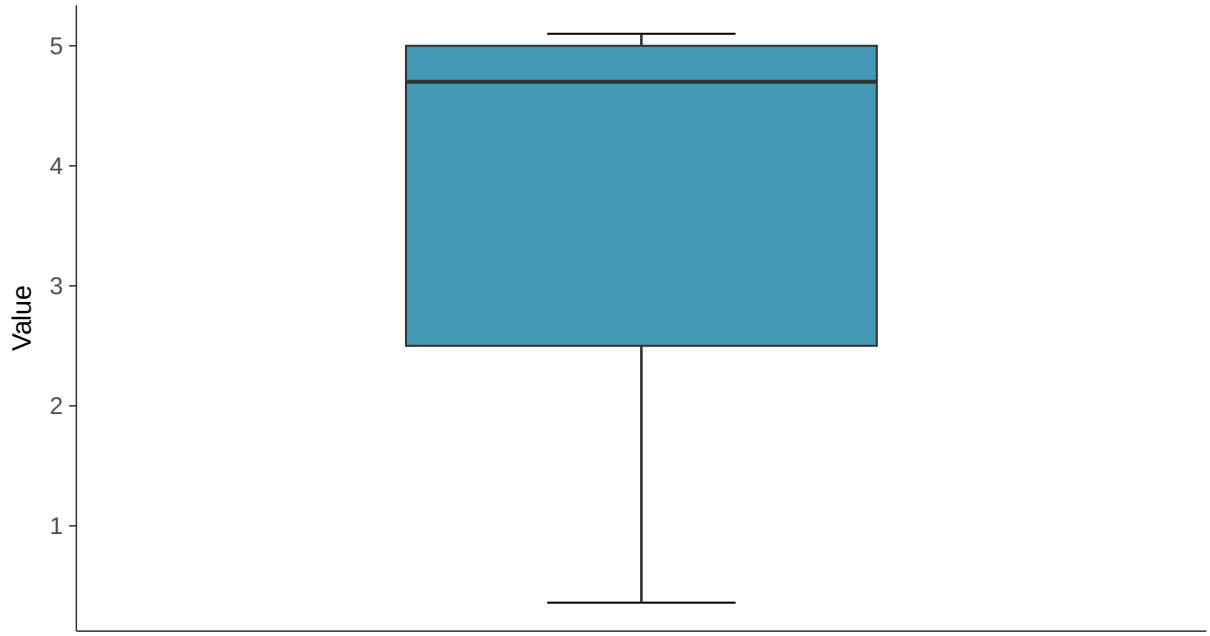
Histogram

Arsenic, MW-4 (ug/L)



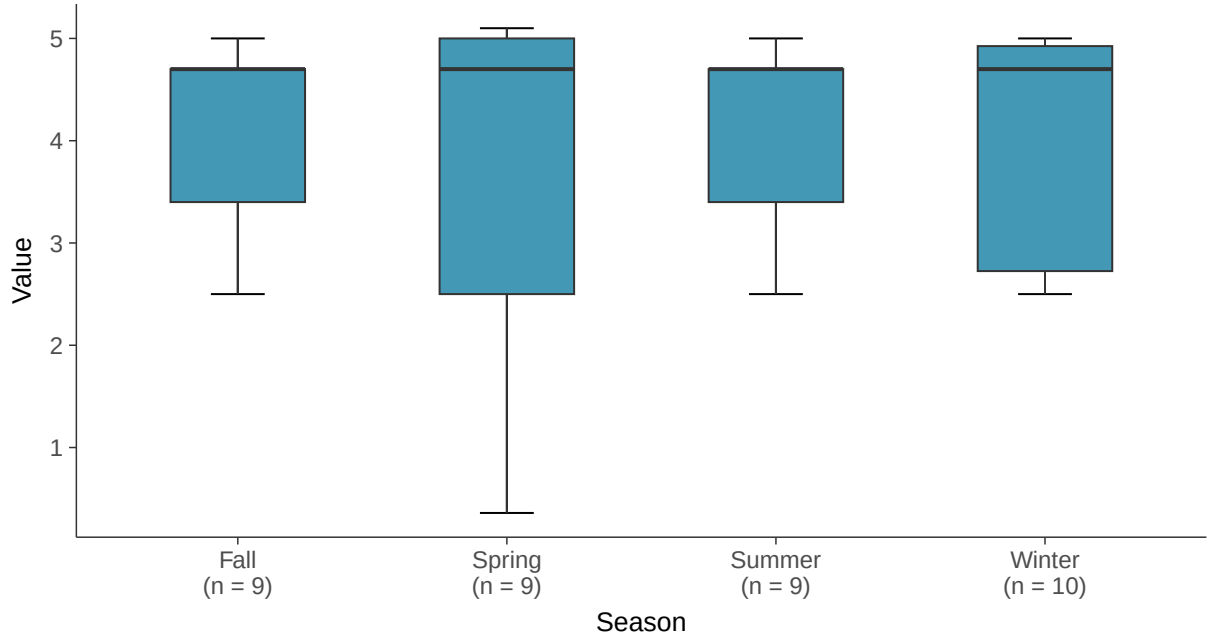
Boxplot

Arsenic, MW-4 (ug/L)



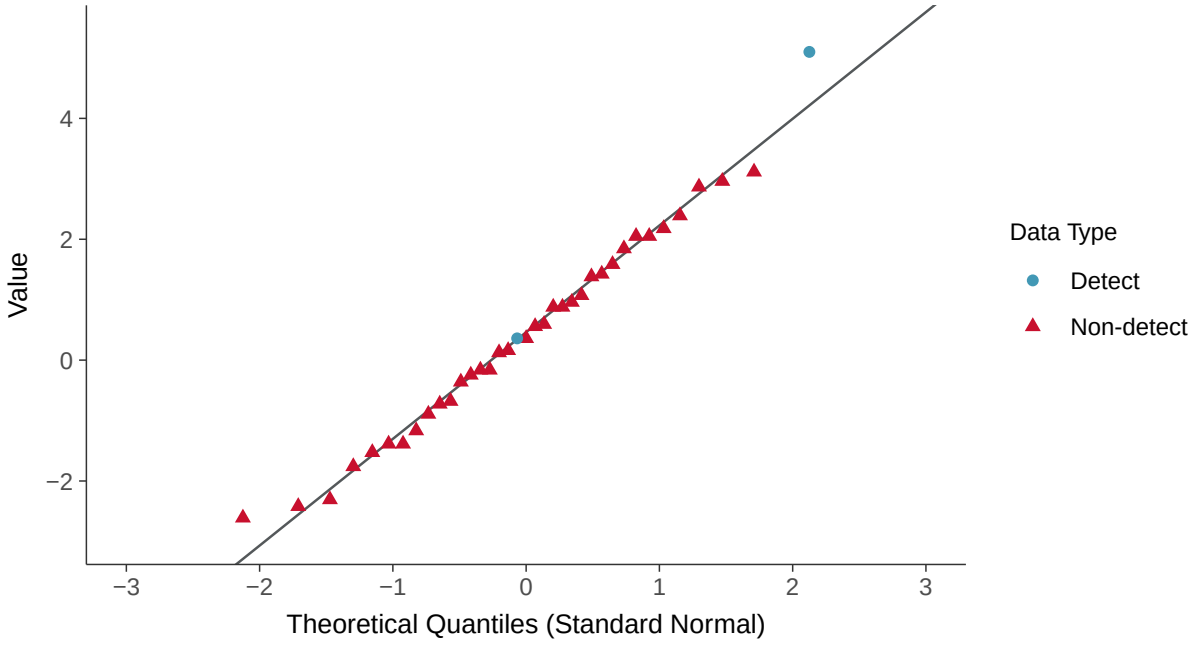
Boxplot by Season

Arsenic, MW-4 (ug/L)



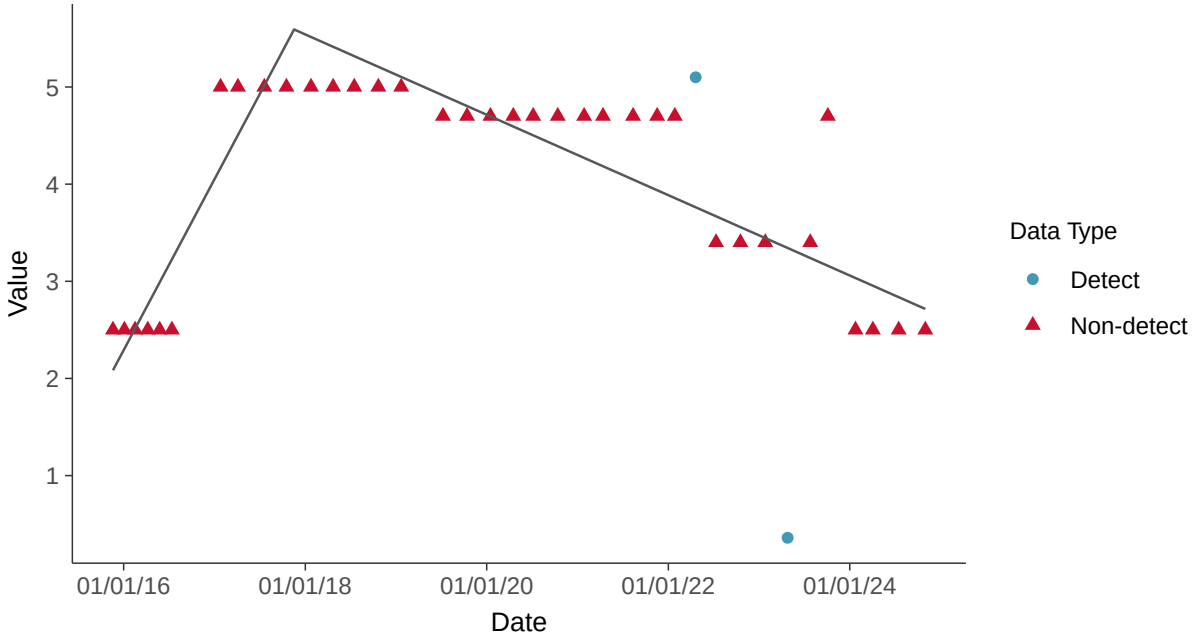
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-4 (ug/L)



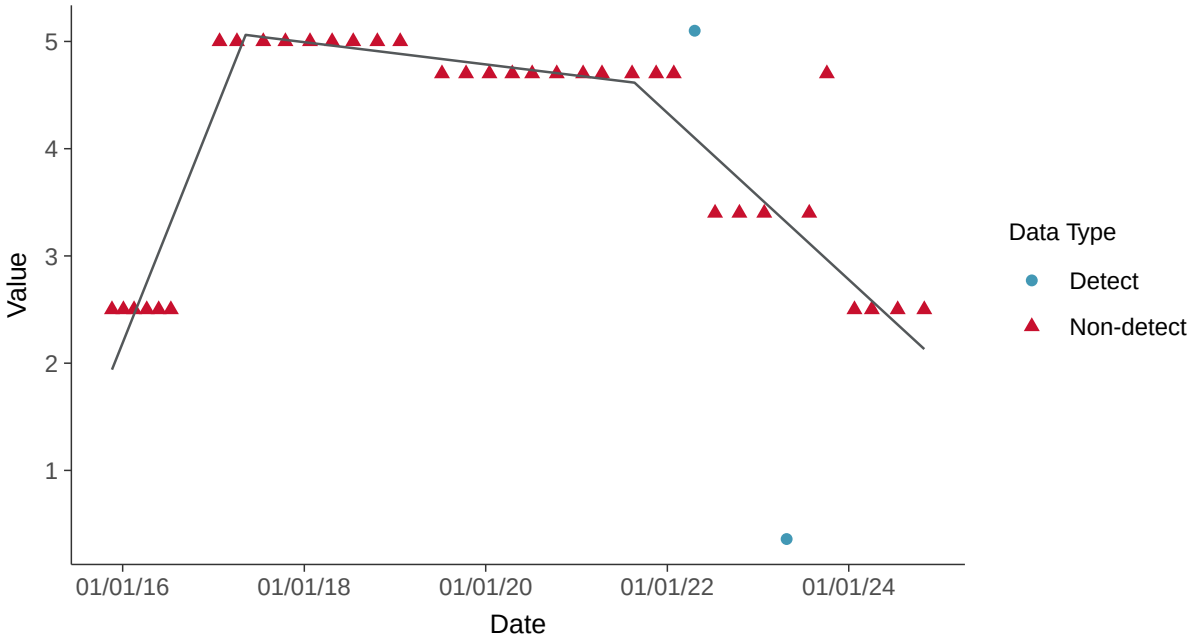
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-4 (ug/L)



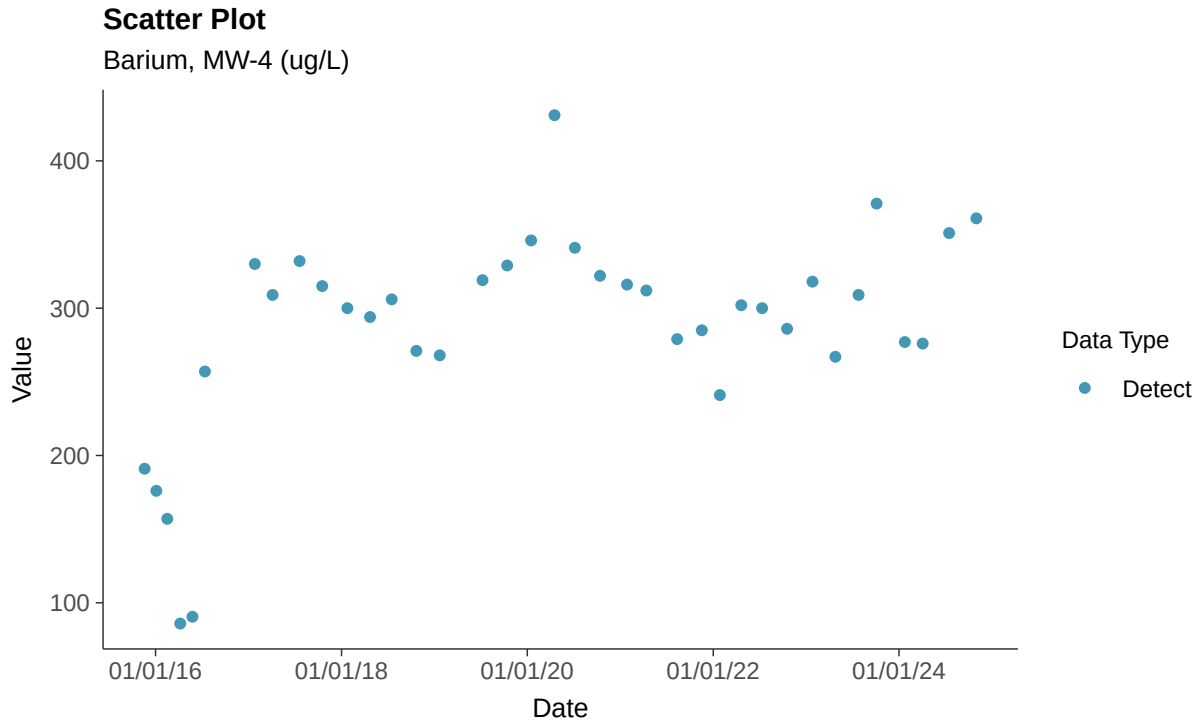
Trend Regression: Piecewise Linear-Linear-Linear

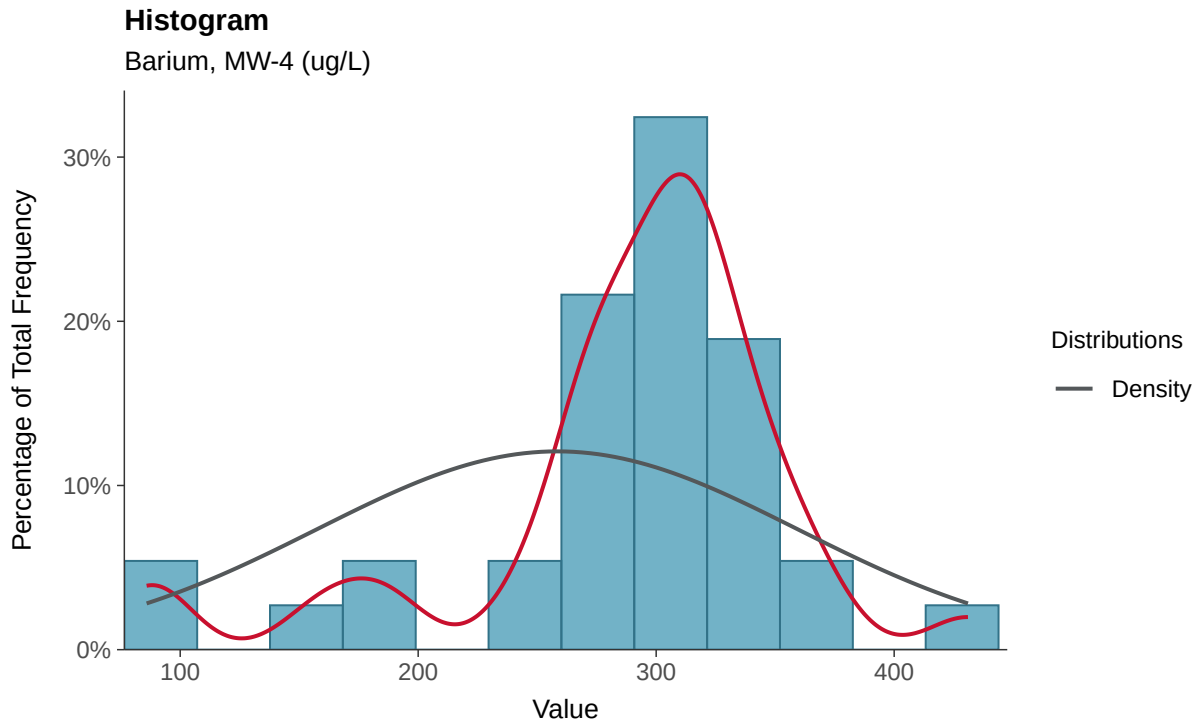
Arsenic, MW-4 (ug/L)



App. IV: Barium, MW-4

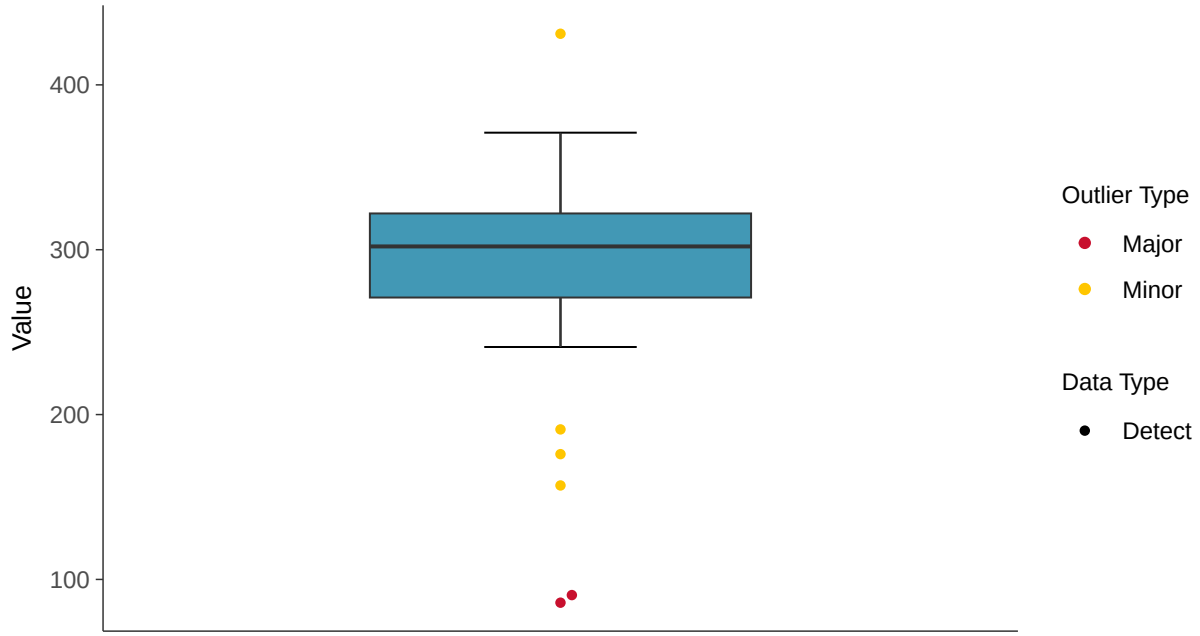
ID: 04_03_103





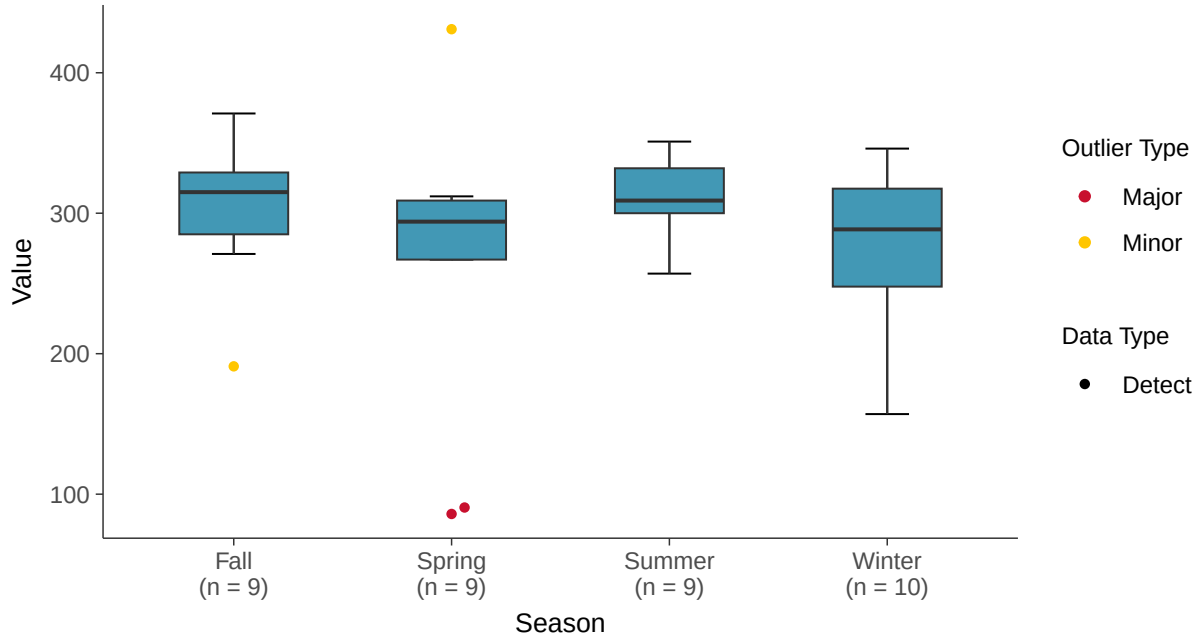
Boxplot

Barium, MW-4 (ug/L)



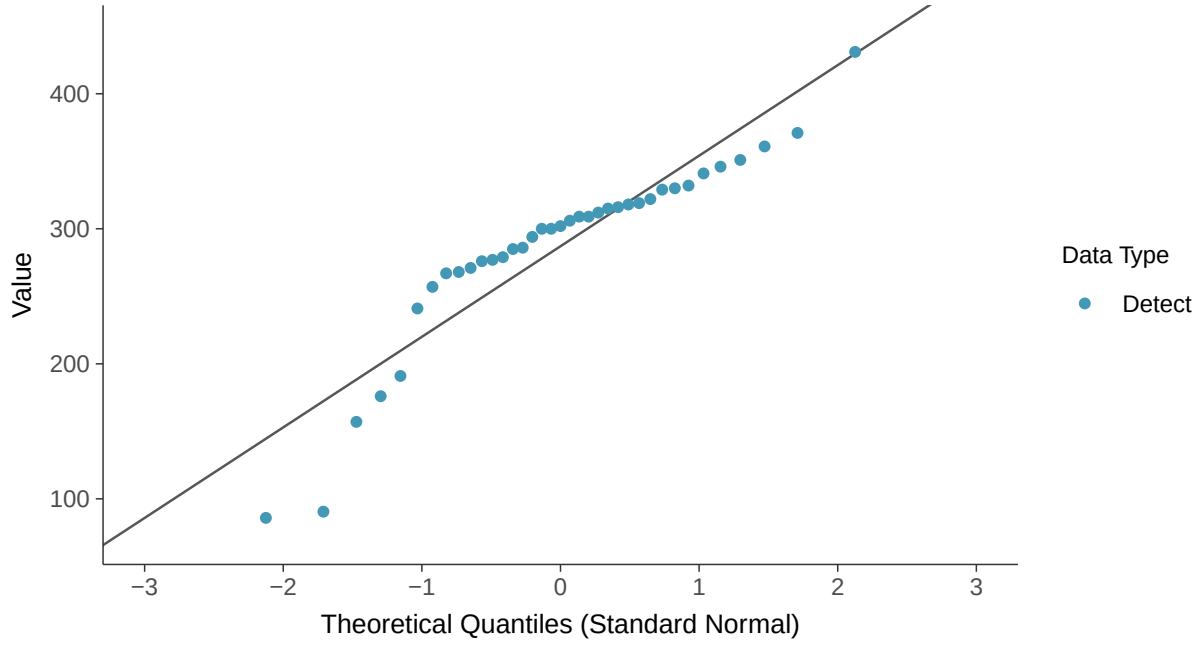
Boxplot by Season

Barium, MW-4 (ug/L)



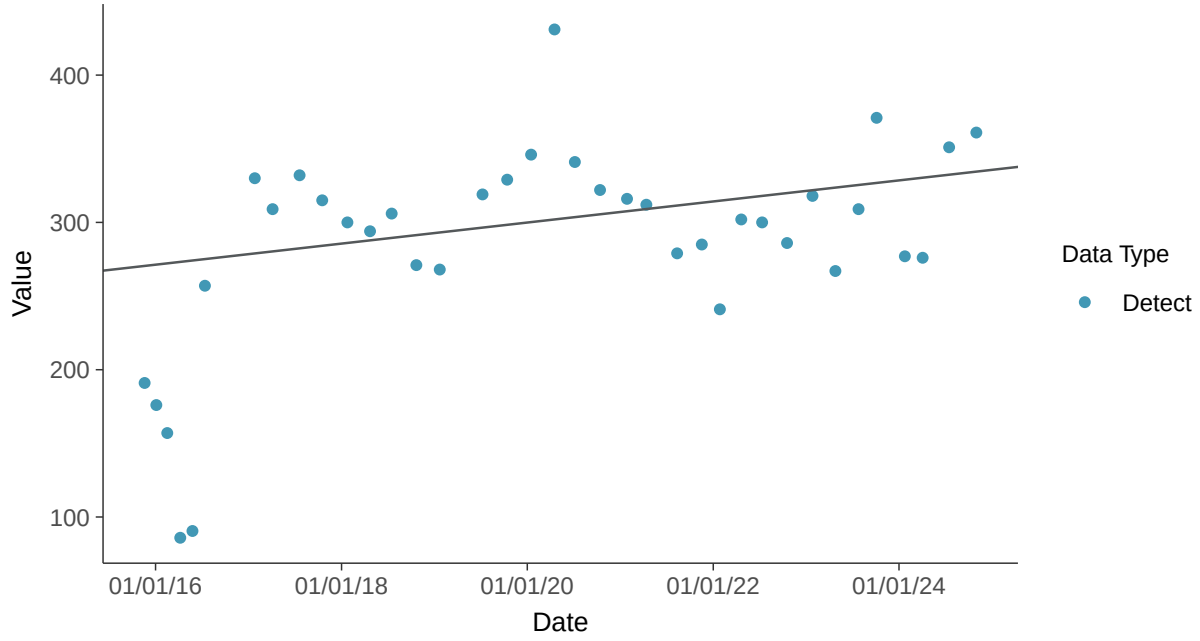
Normal Q-Q plot

Barium, MW-4 (ug/L)



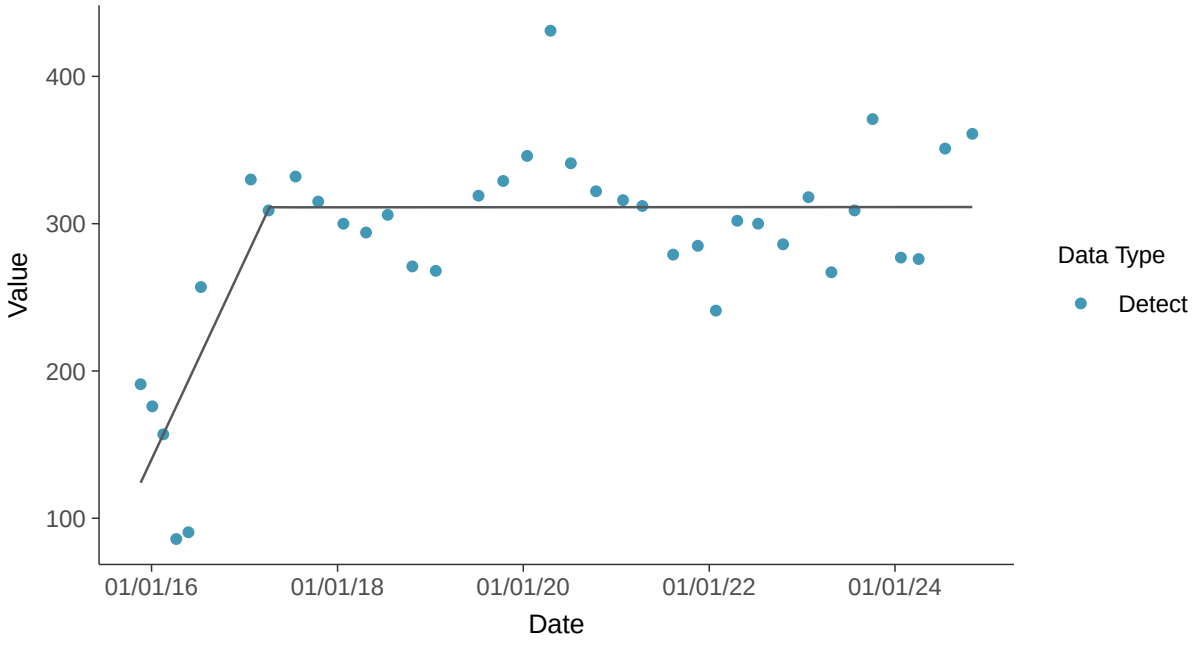
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-4 (ug/L)



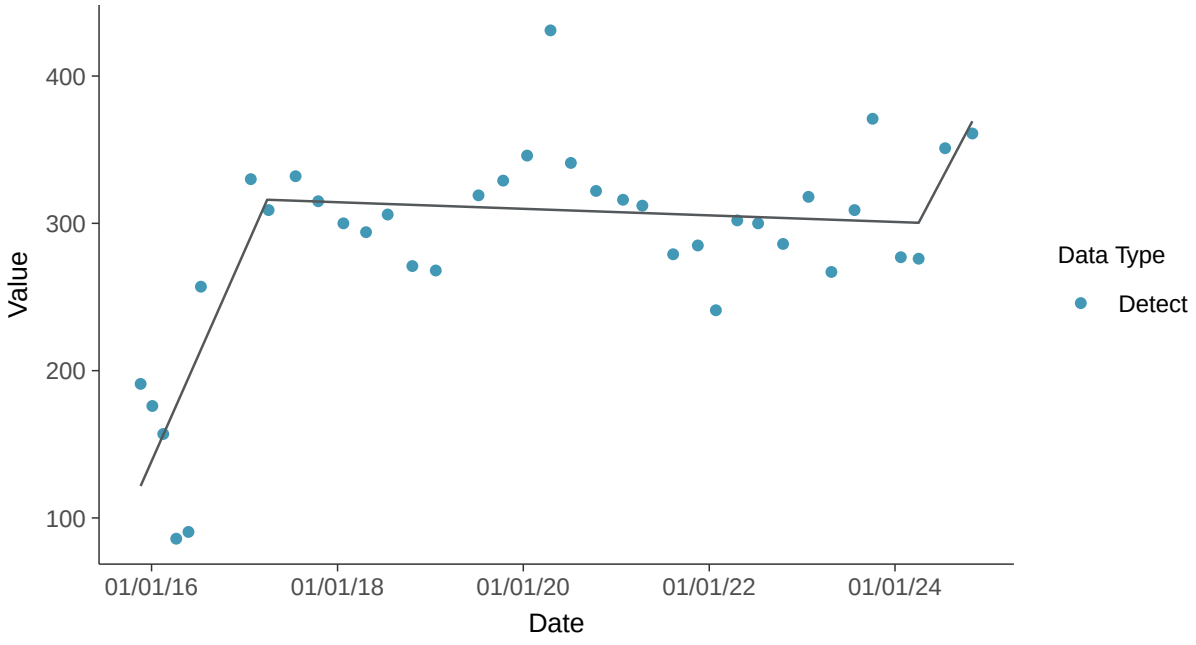
Trend Regression: Piecewise Linear-Linear

Barium, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-4 (ug/L)

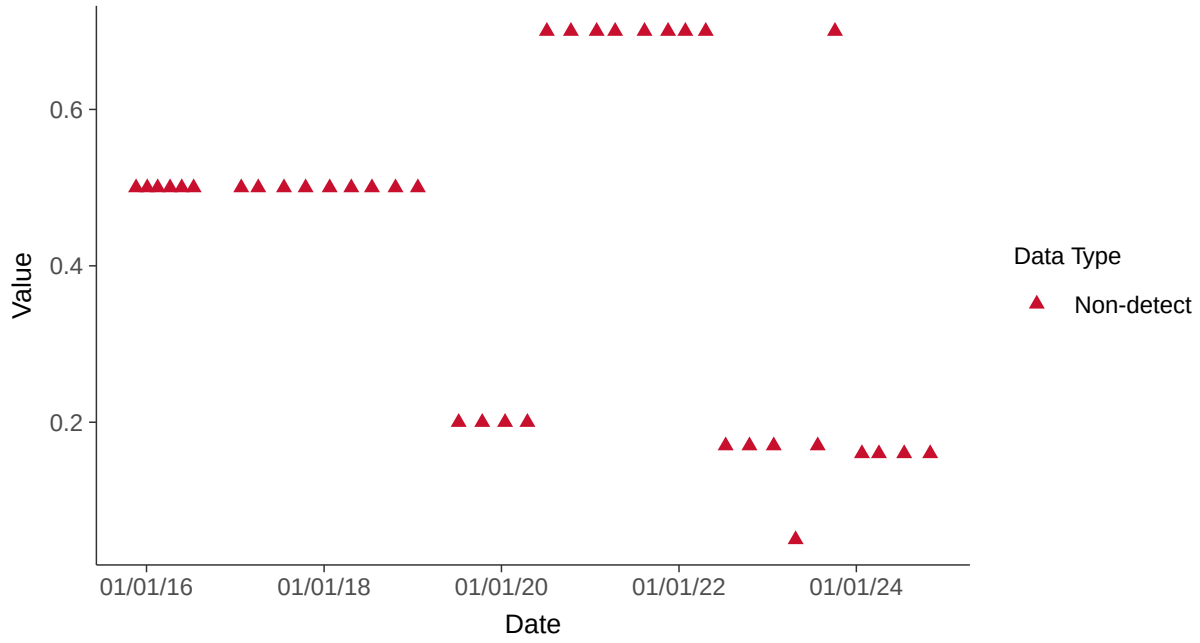


App. IV: Beryllium, MW-4

ID: 04_03_104

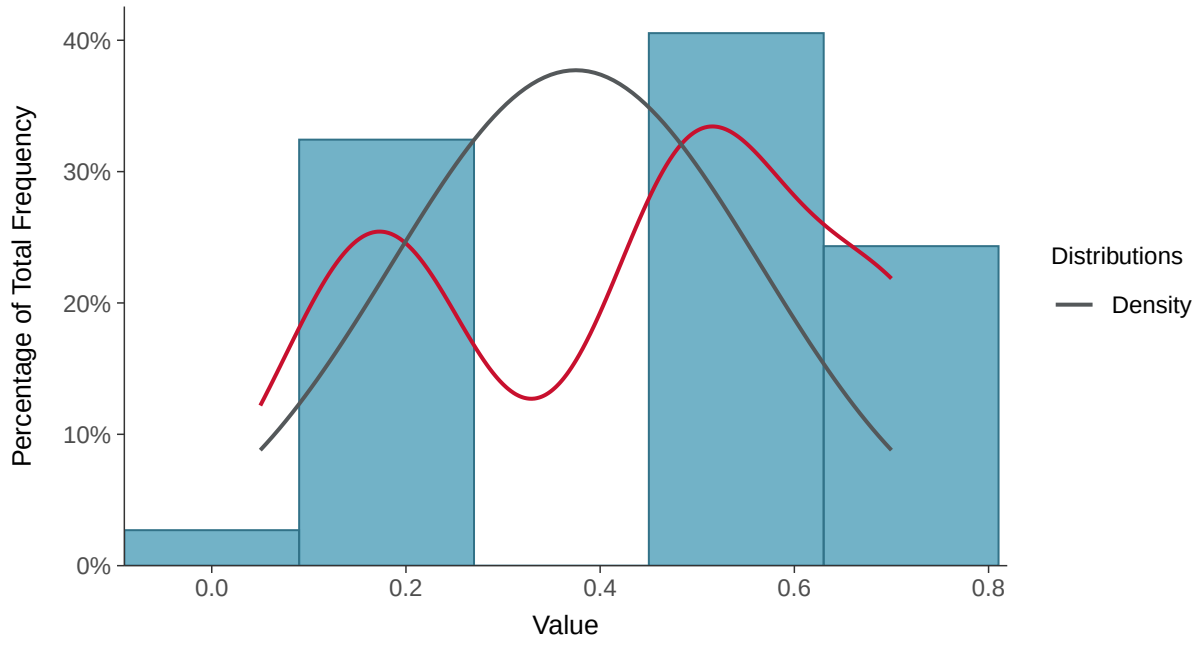
Scatter Plot

Beryllium, MW-4 (ug/L)



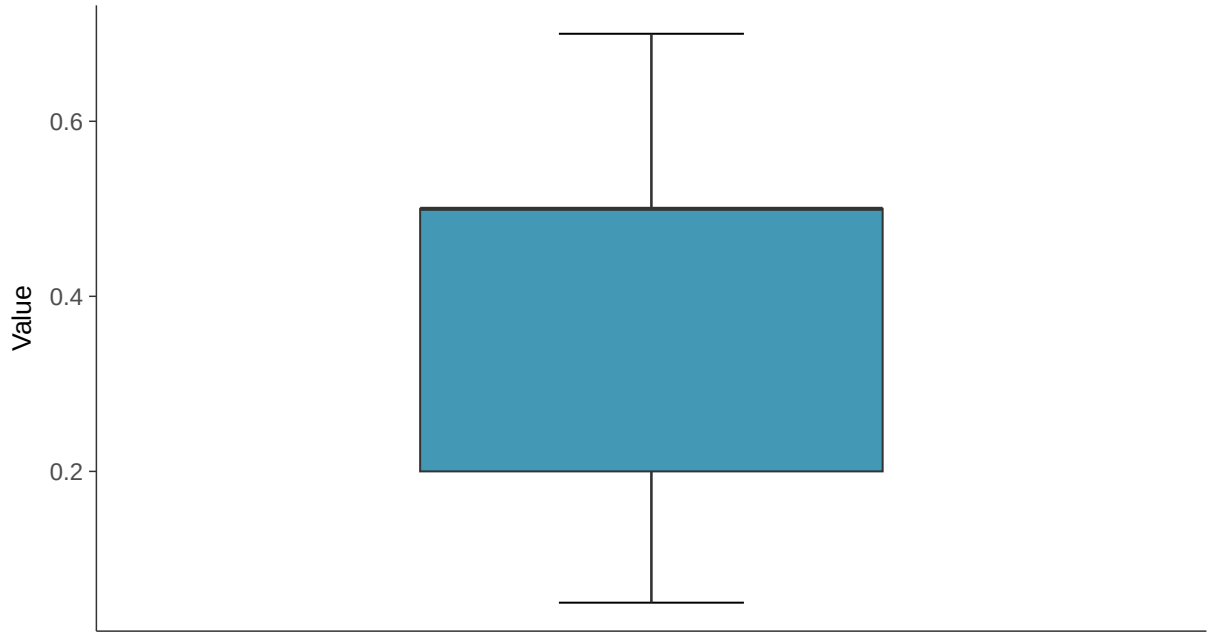
Histogram

Beryllium, MW-4 (ug/L)



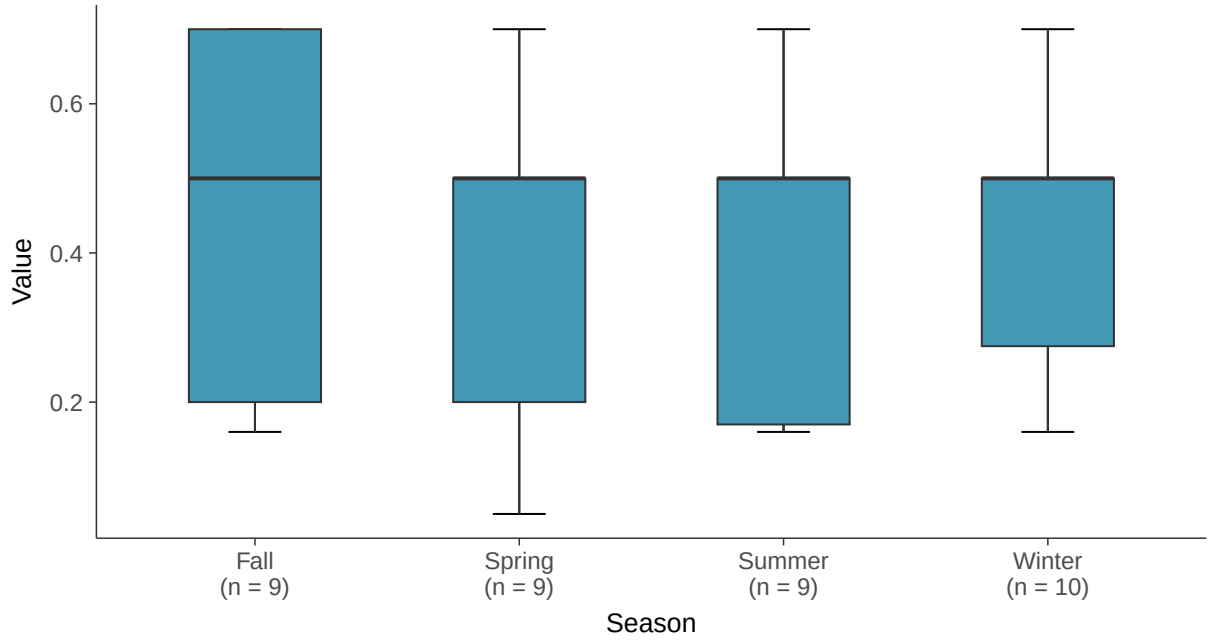
Boxplot

Beryllium, MW-4 (ug/L)



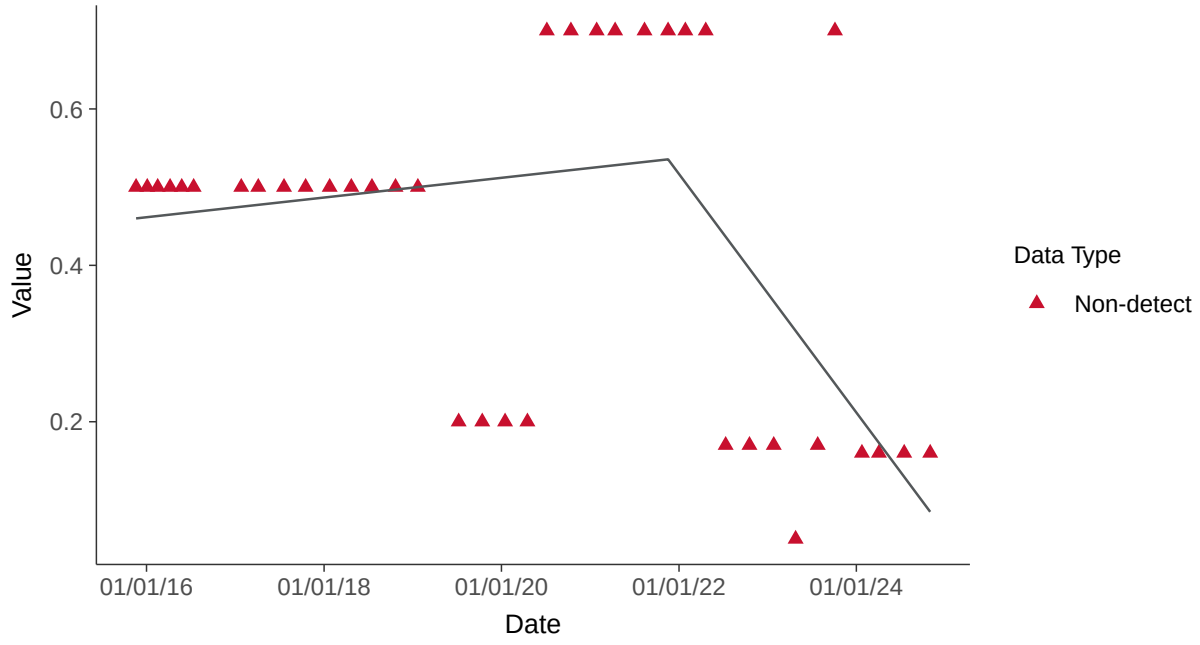
Boxplot by Season

Beryllium, MW-4 (ug/L)



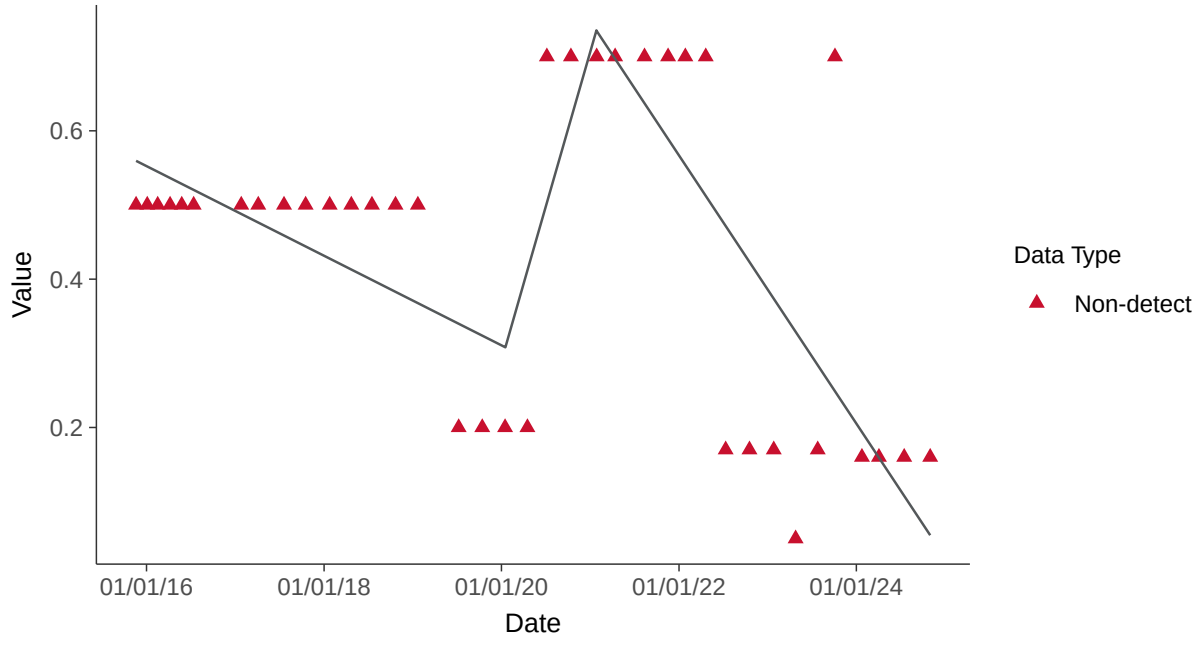
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-4 (ug/L)



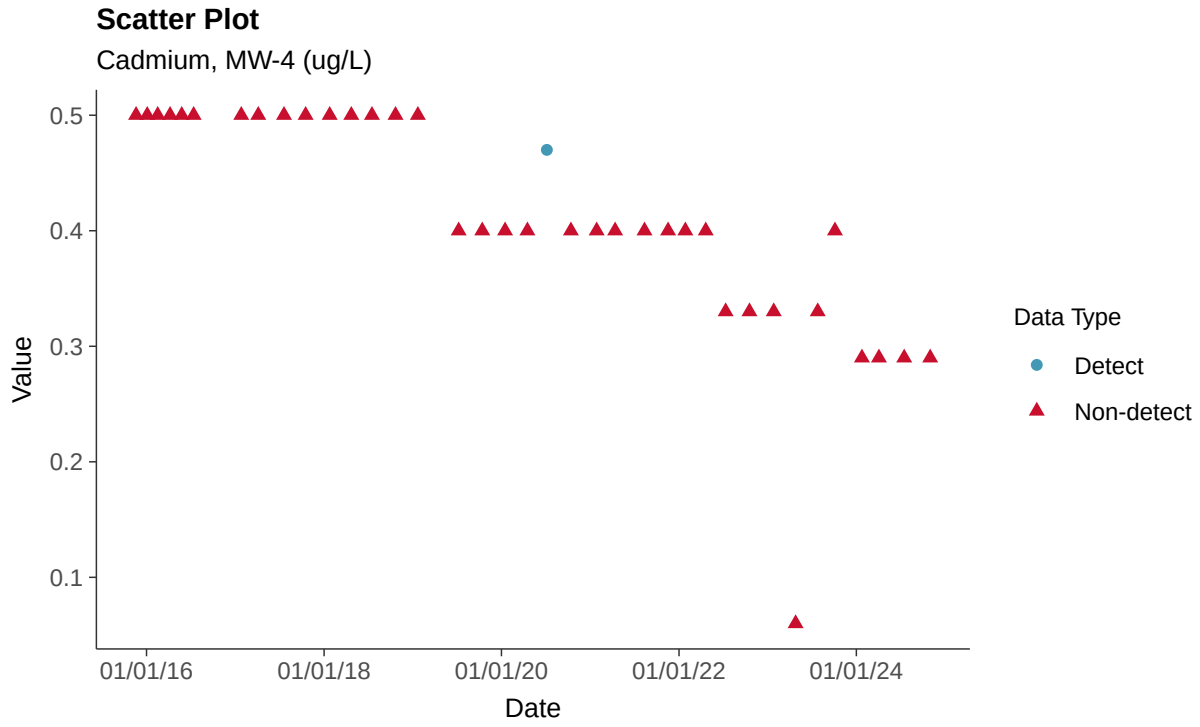
Trend Regression: Piecewise Linear-Linear-Linear

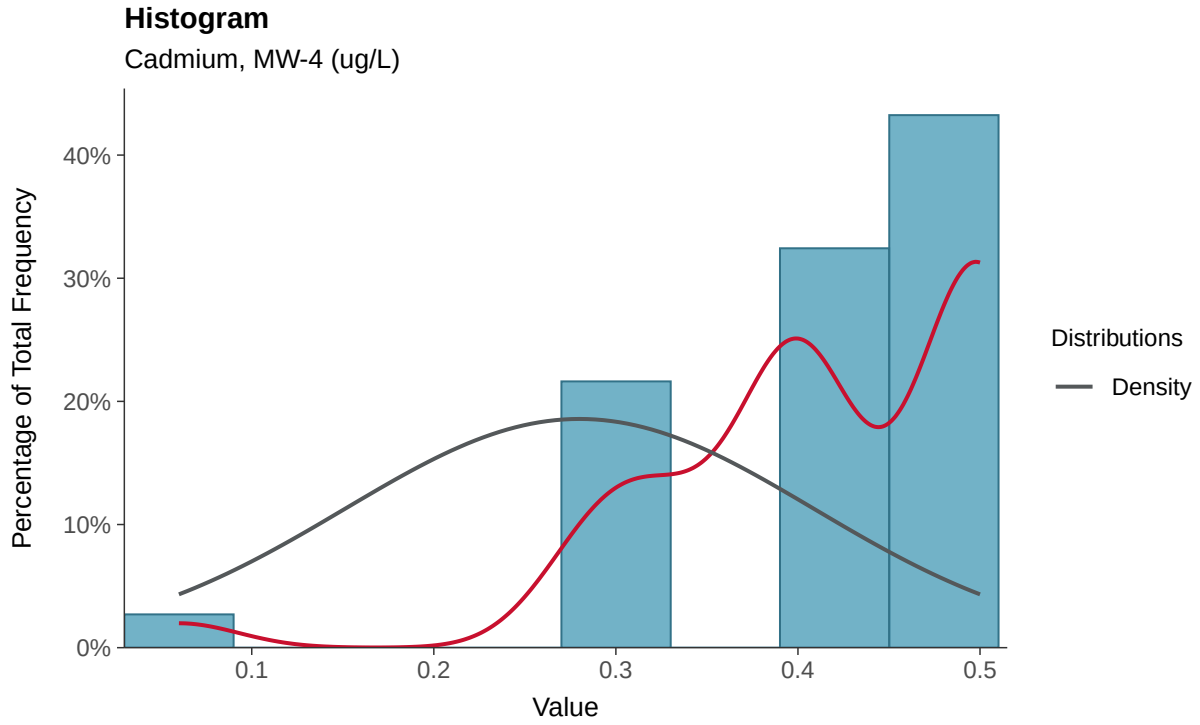
Beryllium, MW-4 (ug/L)



App. IV: Cadmium, MW-4

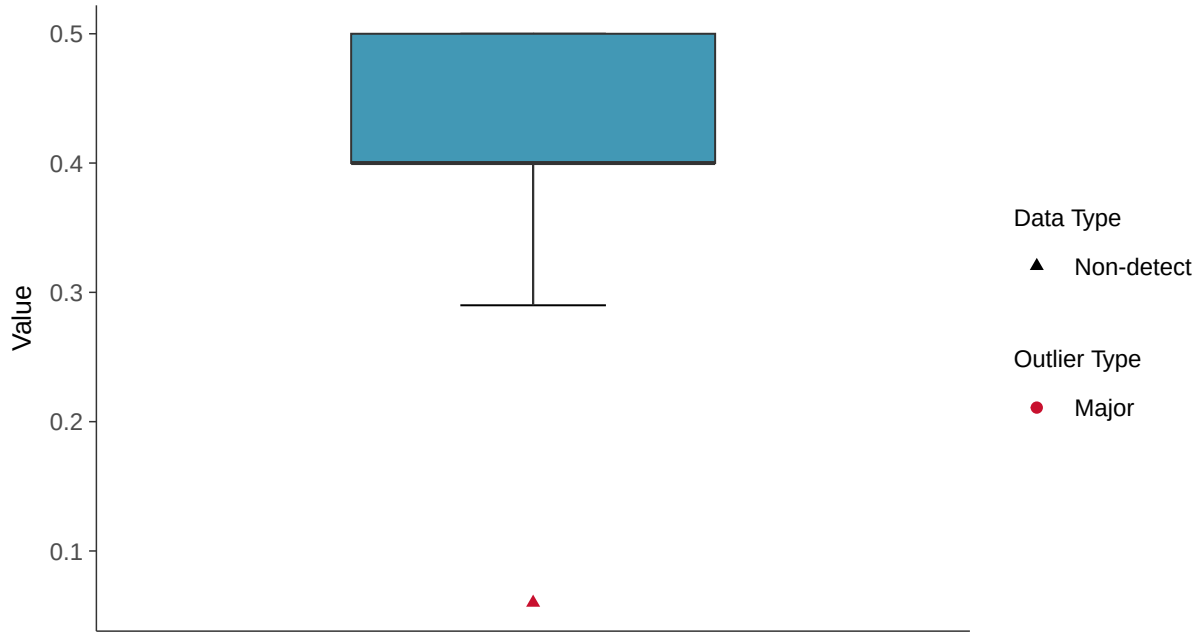
ID: 04_03_106





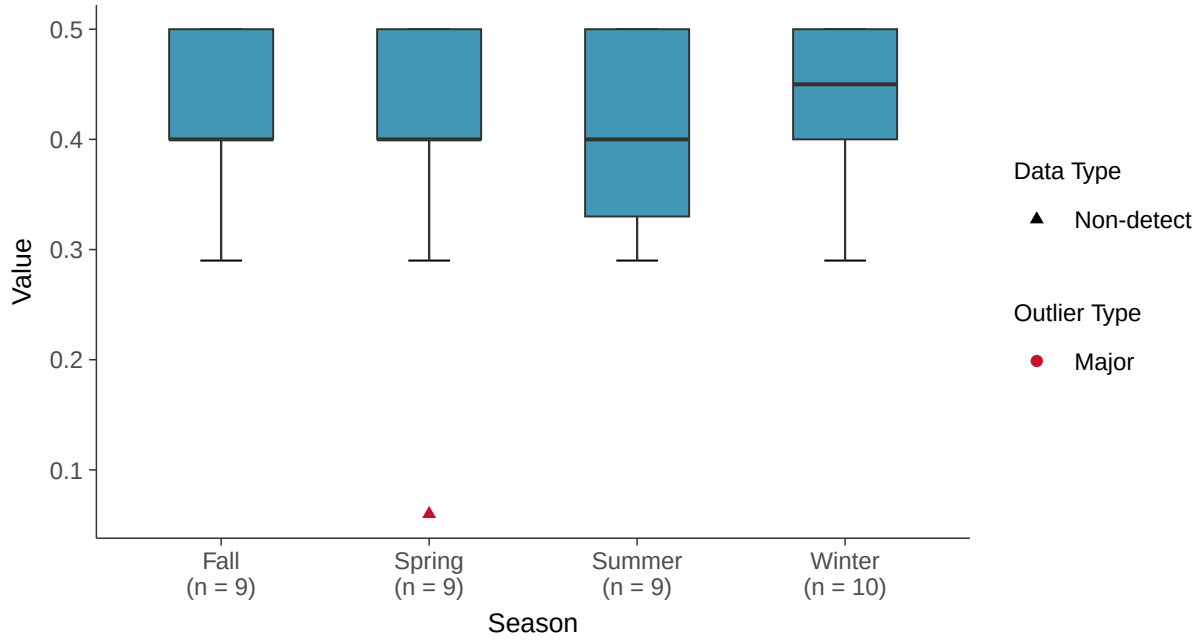
Boxplot

Cadmium, MW-4 (ug/L)



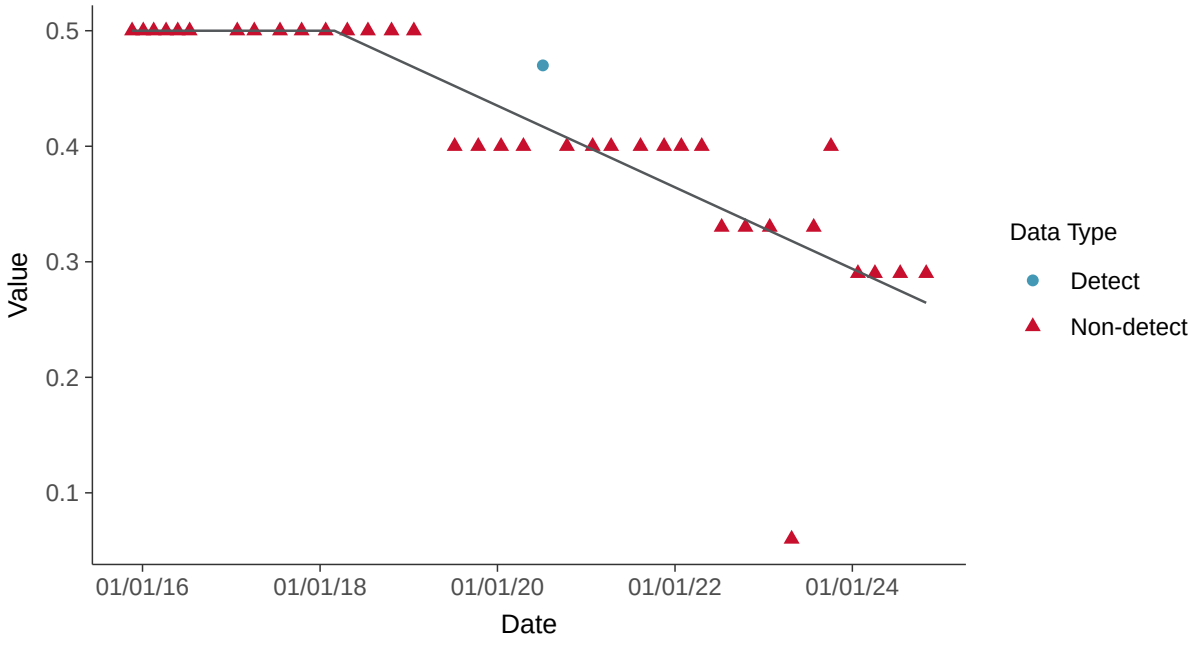
Boxplot by Season

Cadmium, MW-4 (ug/L)



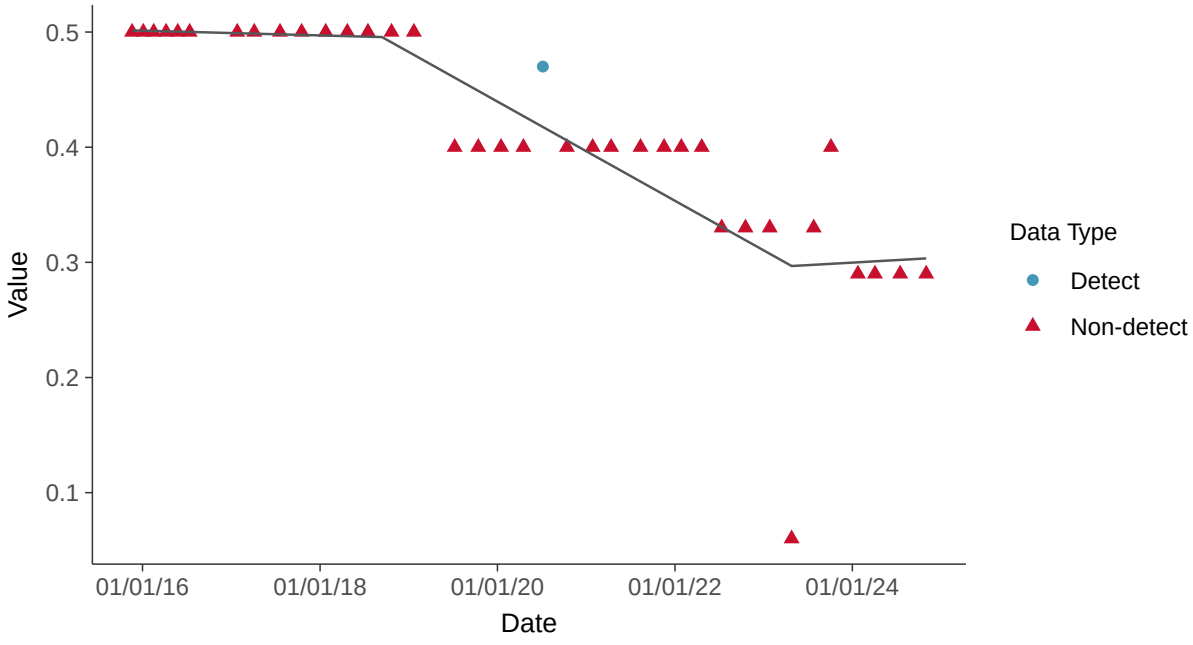
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-4 (ug/L)

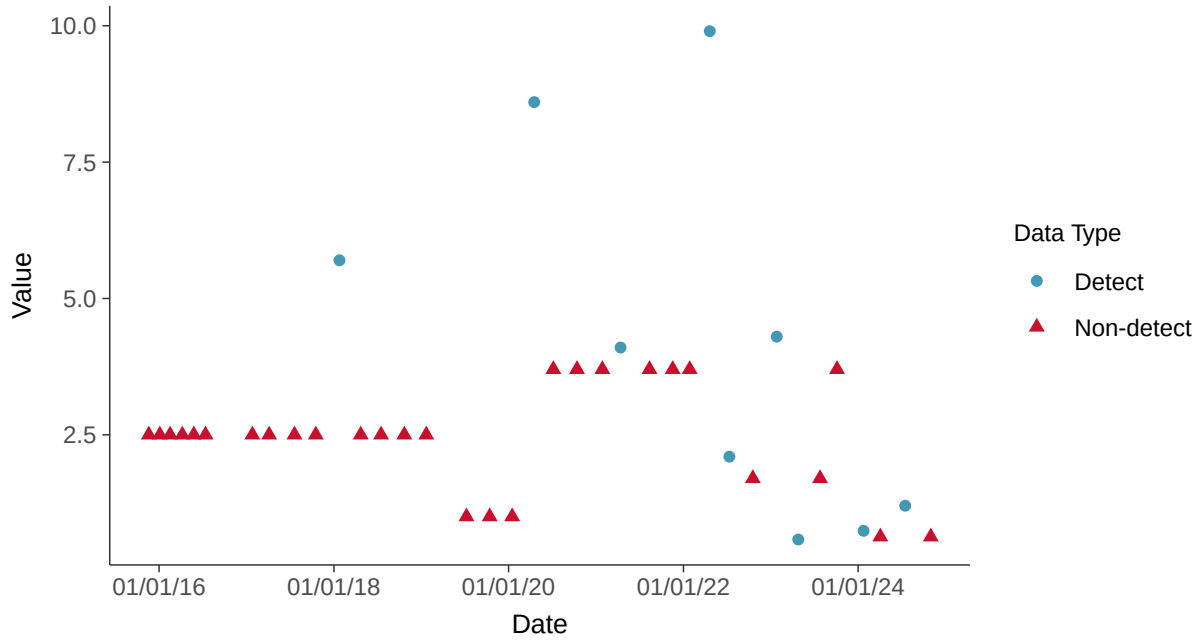


App. IV: Chromium, MW-4

ID: 04_03_109

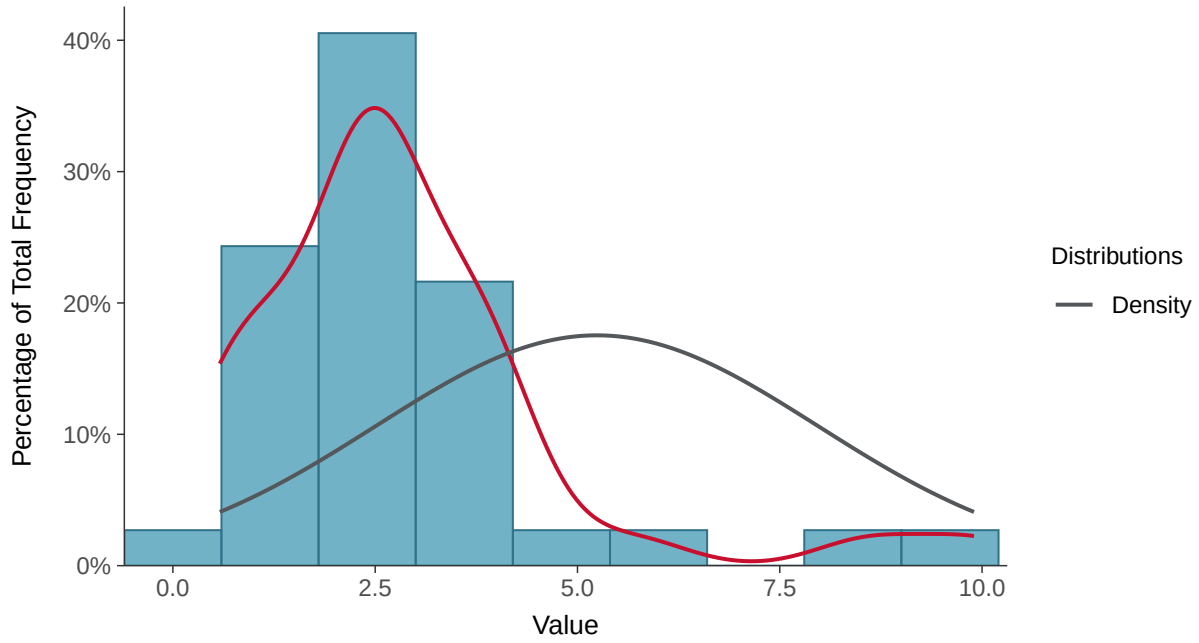
Scatter Plot

Chromium, MW-4 (ug/L)



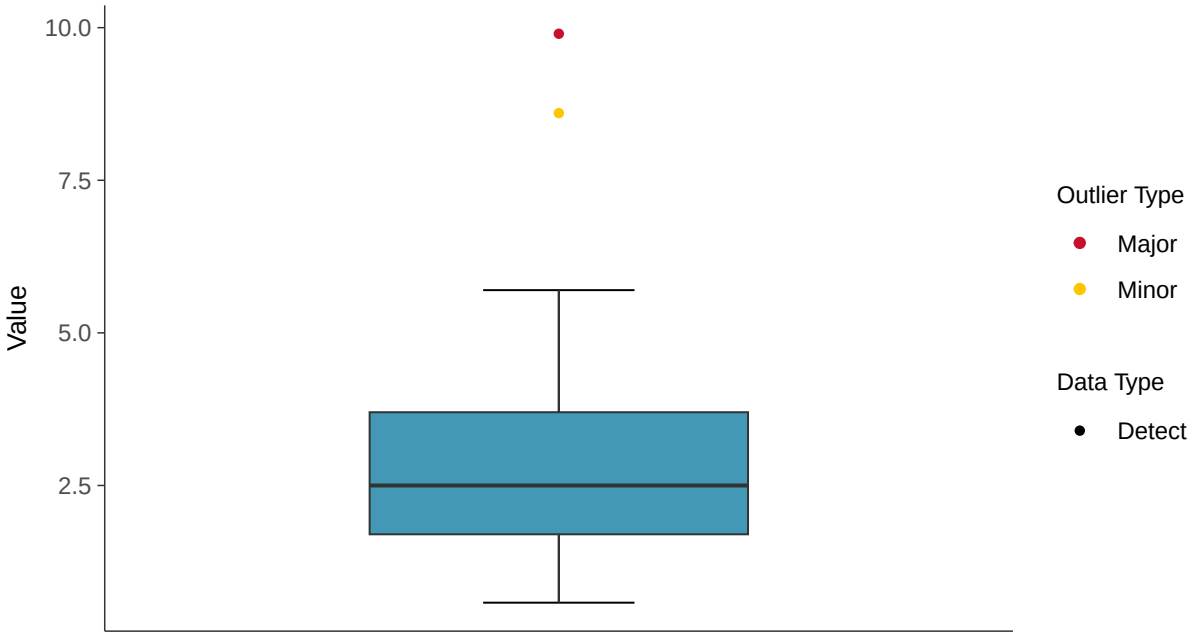
Histogram

Chromium, MW-4 (ug/L)



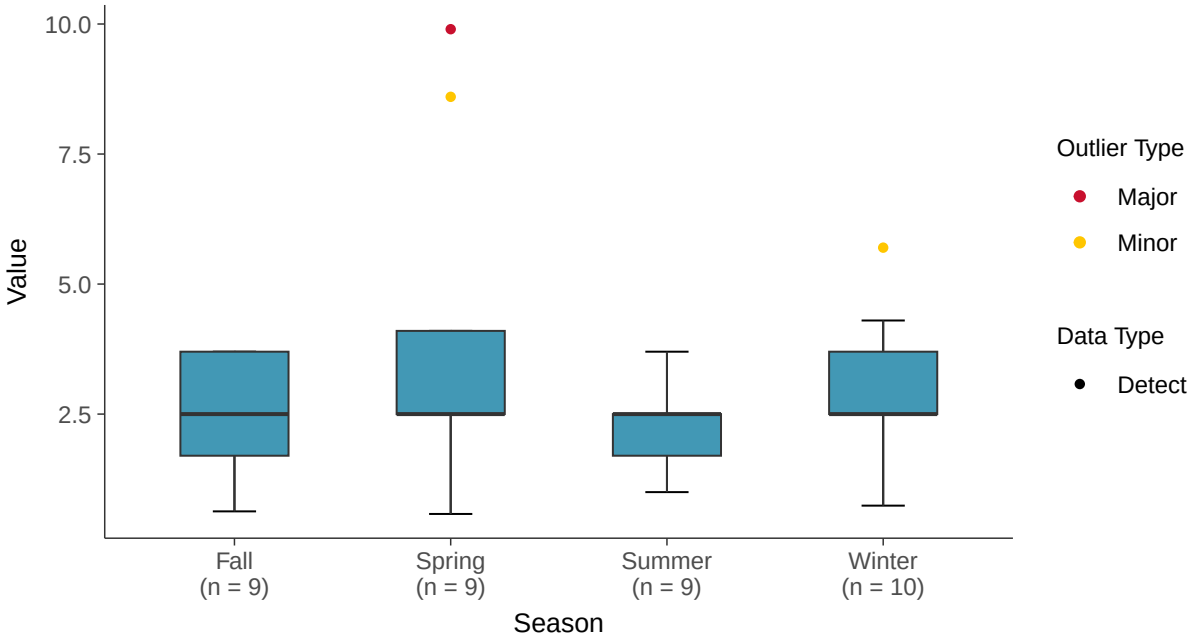
Boxplot

Chromium, MW-4 (ug/L)



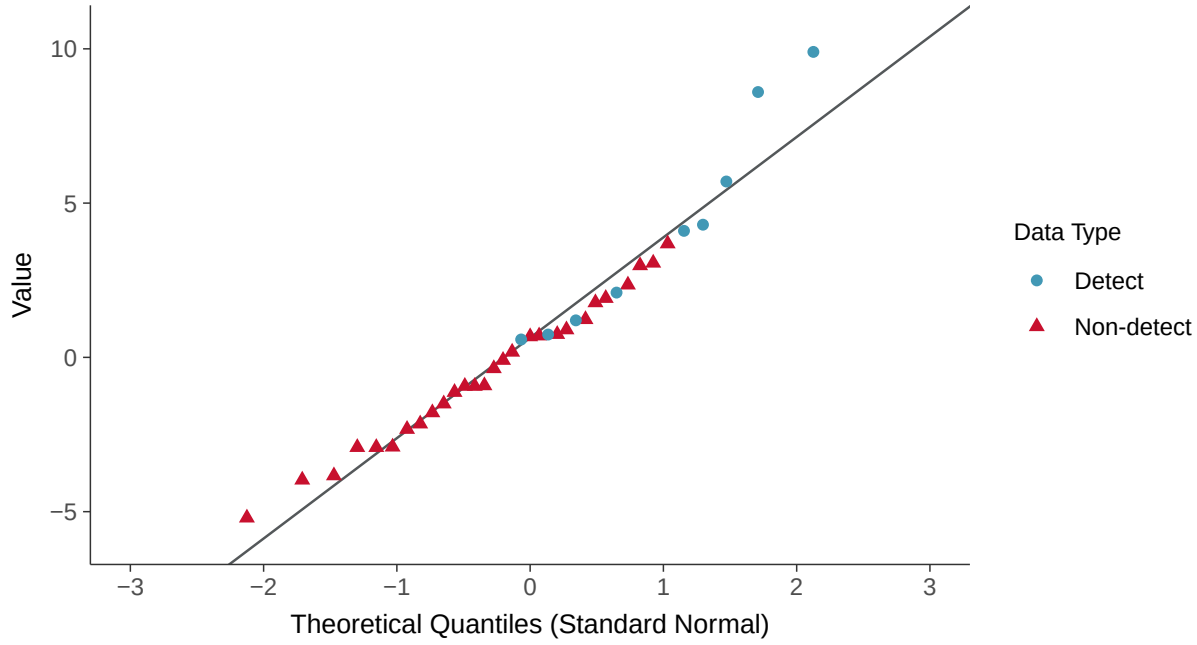
Boxplot by Season

Chromium, MW-4 (ug/L)



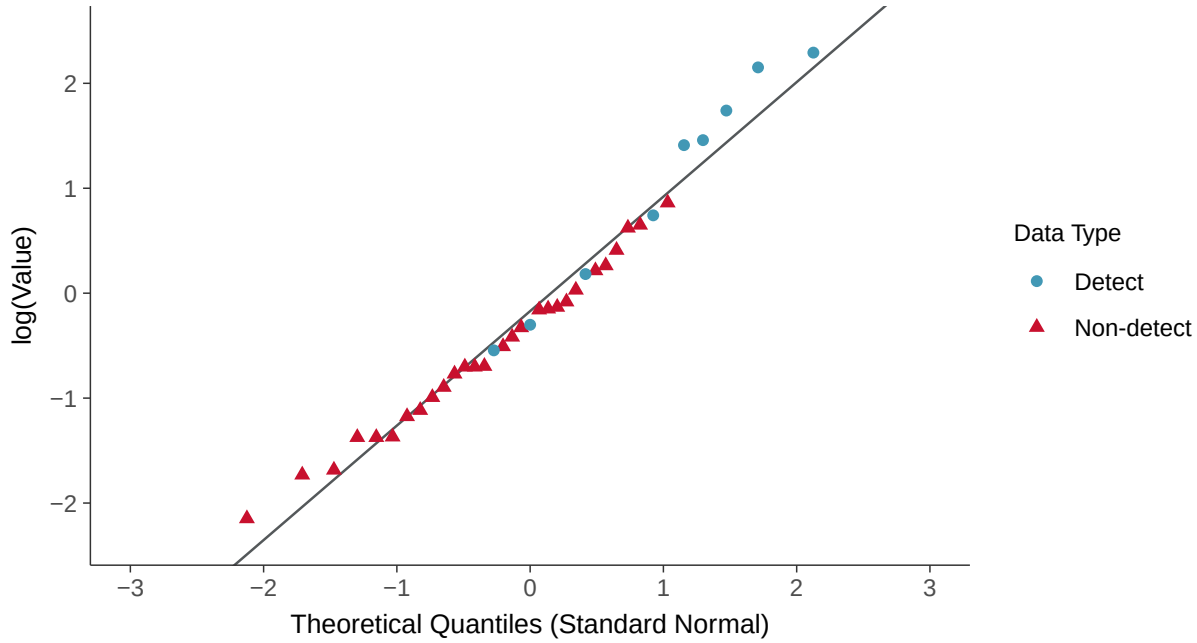
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



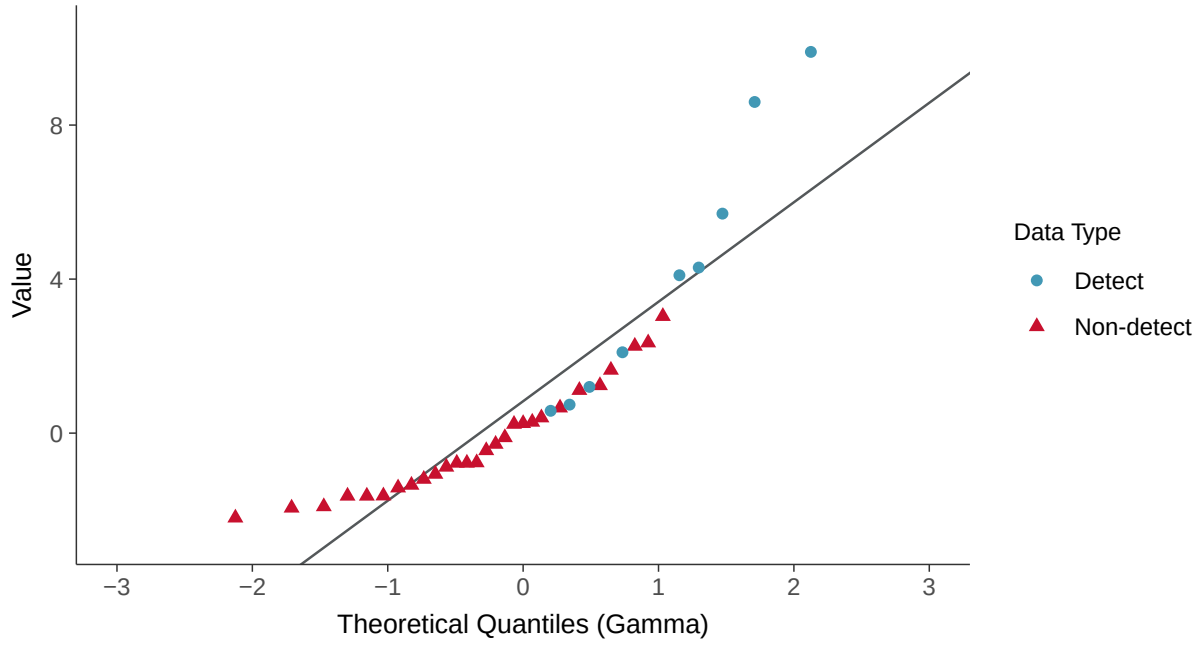
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



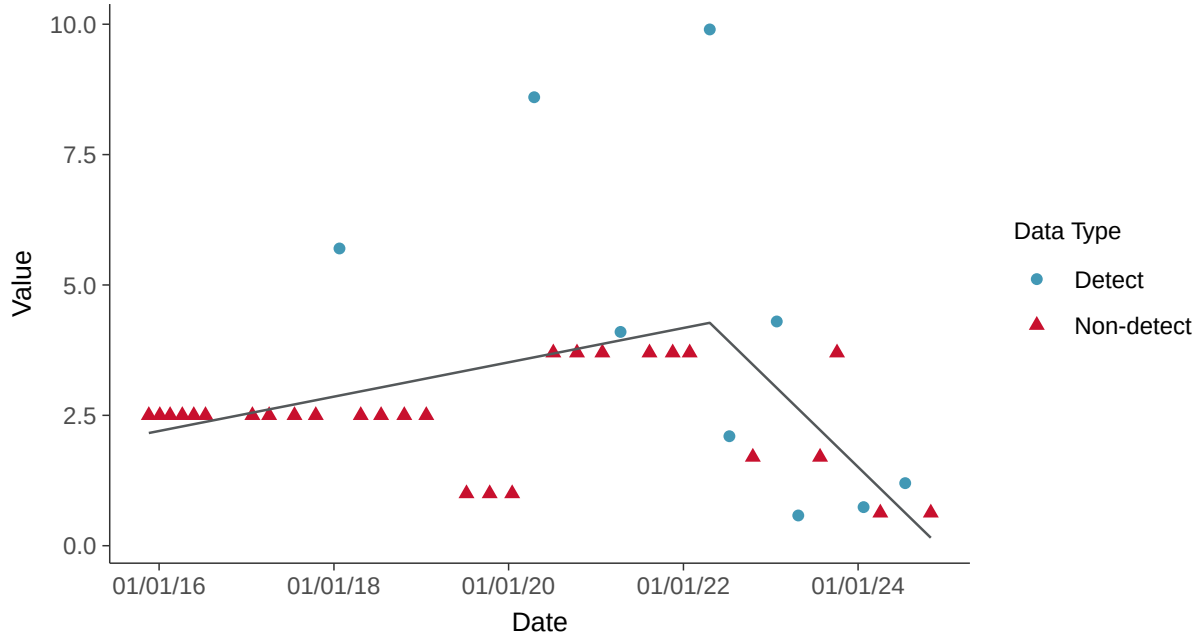
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-4 (ug/L)



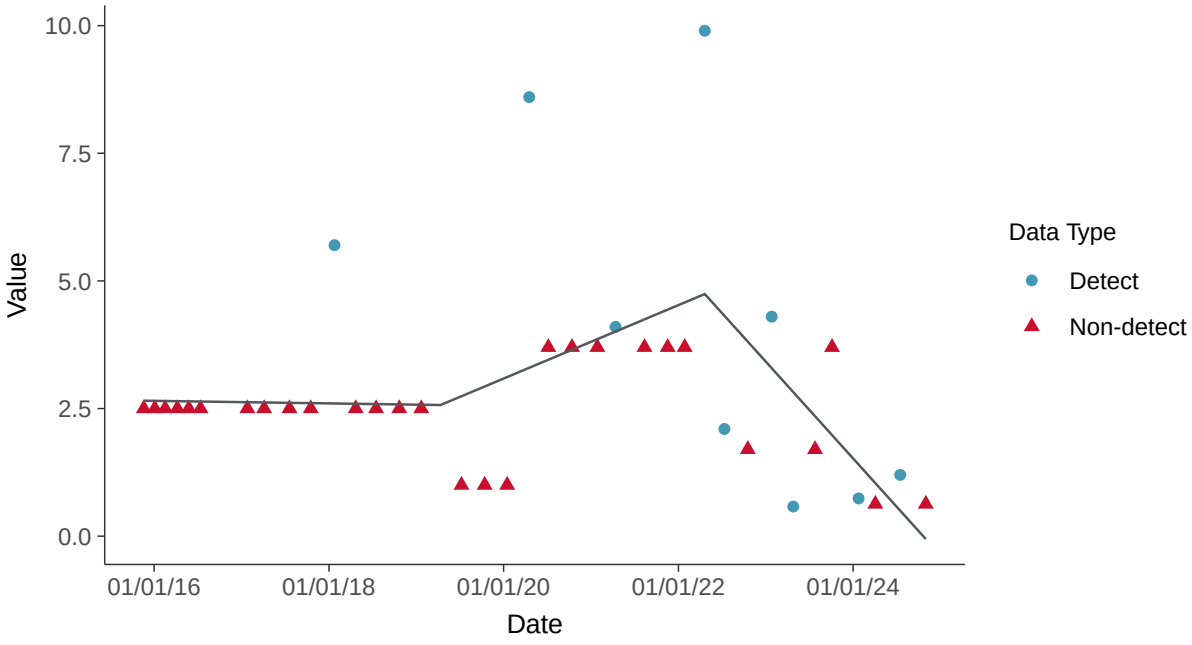
Trend Regression: Piecewise Linear-Linear

Chromium, MW-4 (ug/L)



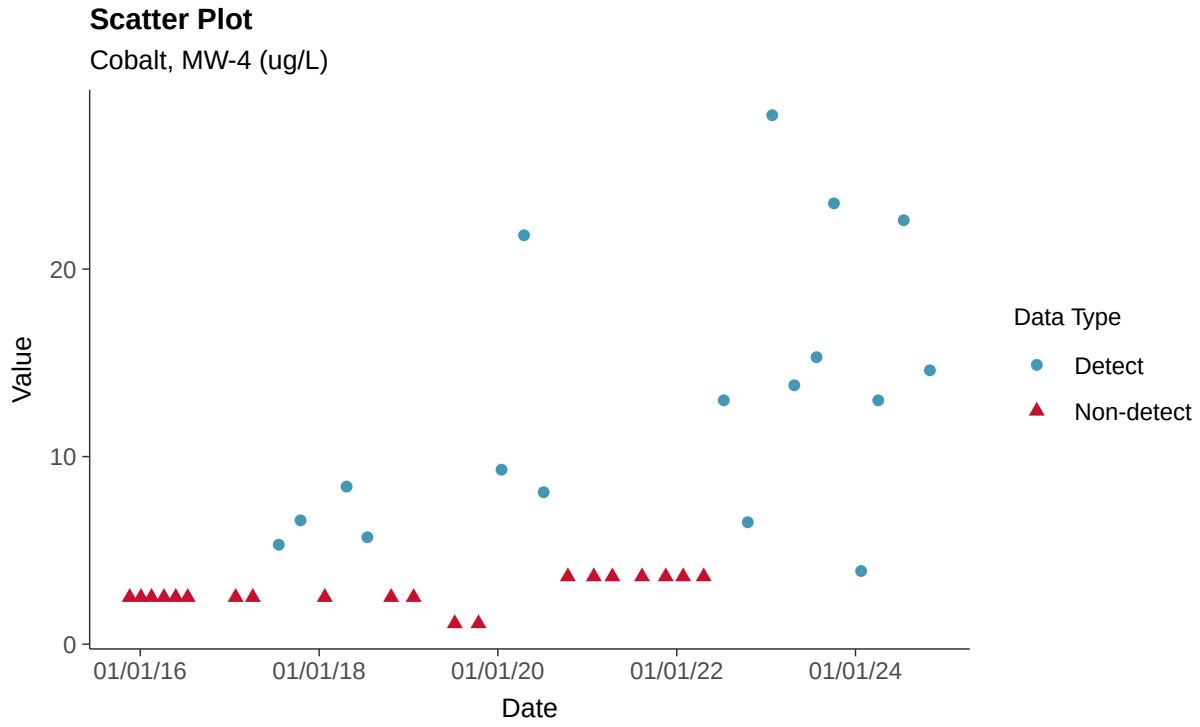
Trend Regression: Piecewise Linear-Linear-Linear

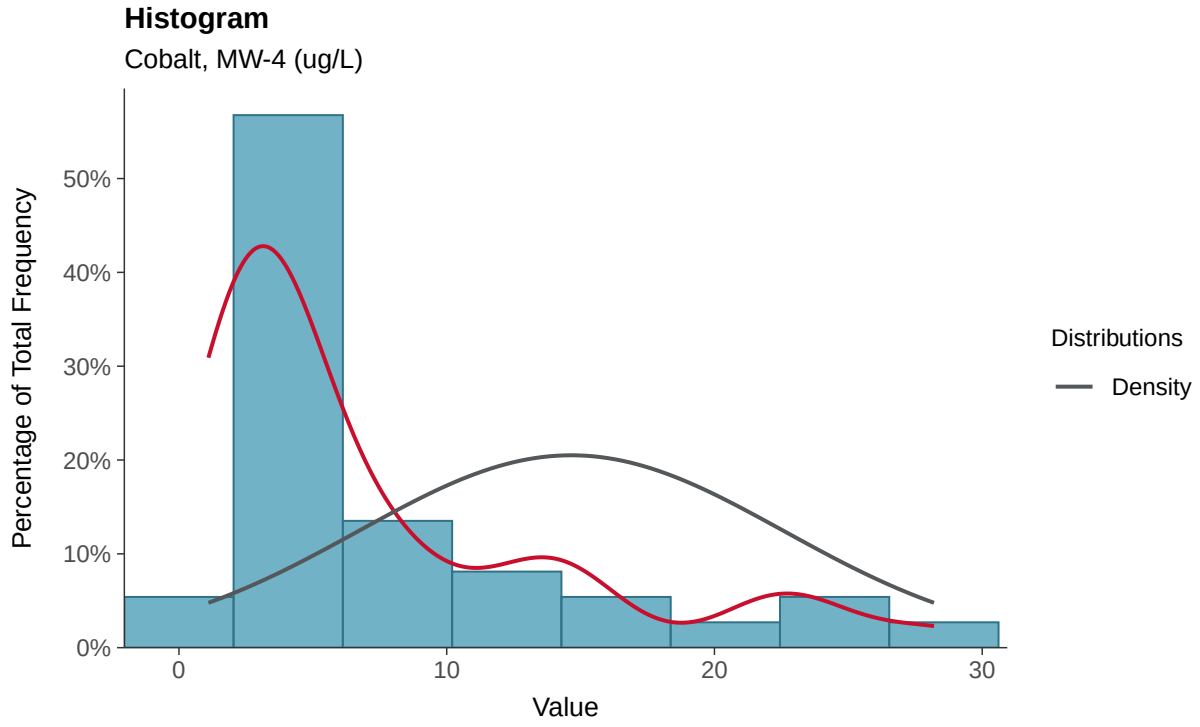
Chromium, MW-4 (ug/L)



App. IV: Cobalt, MW-4

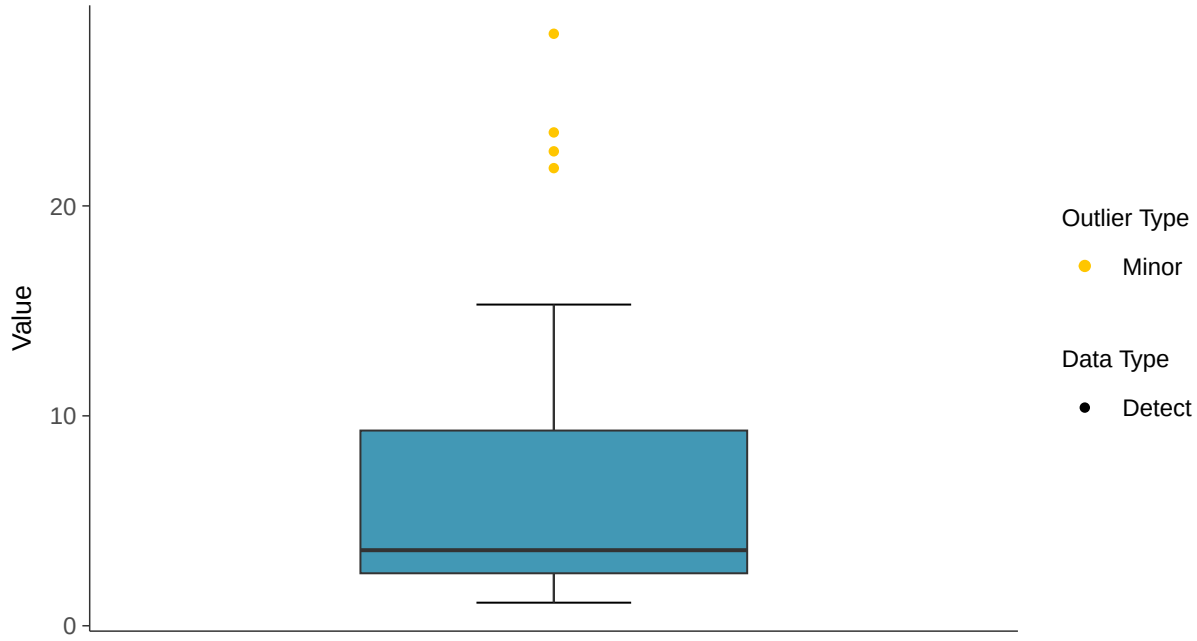
ID: 04_03_110





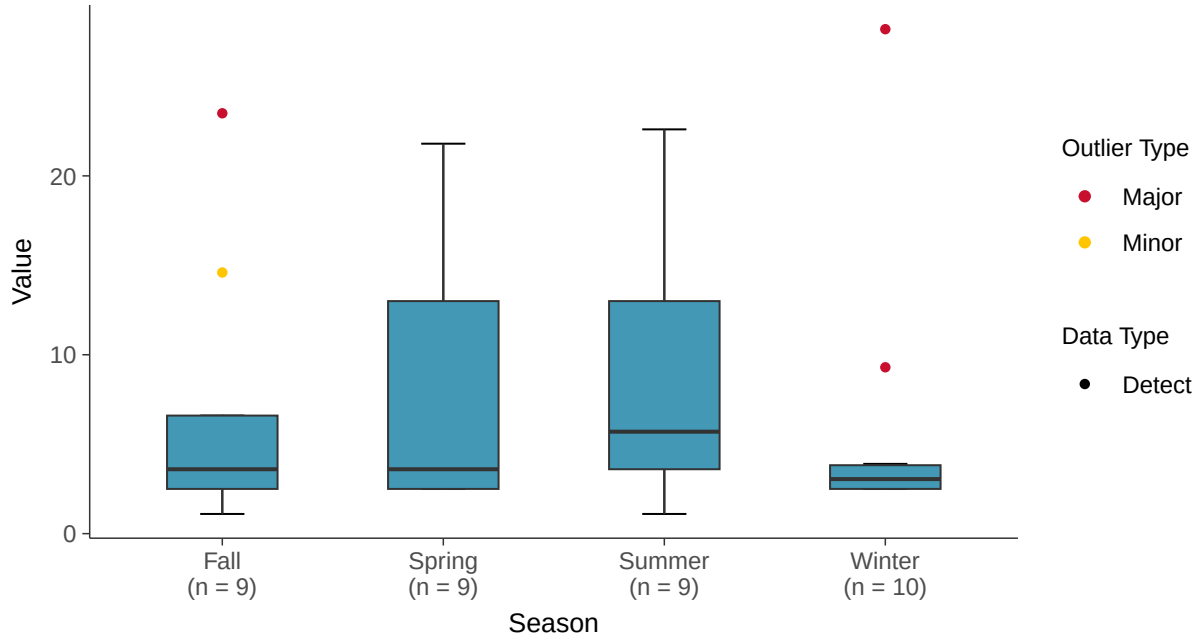
Boxplot

Cobalt, MW-4 (ug/L)



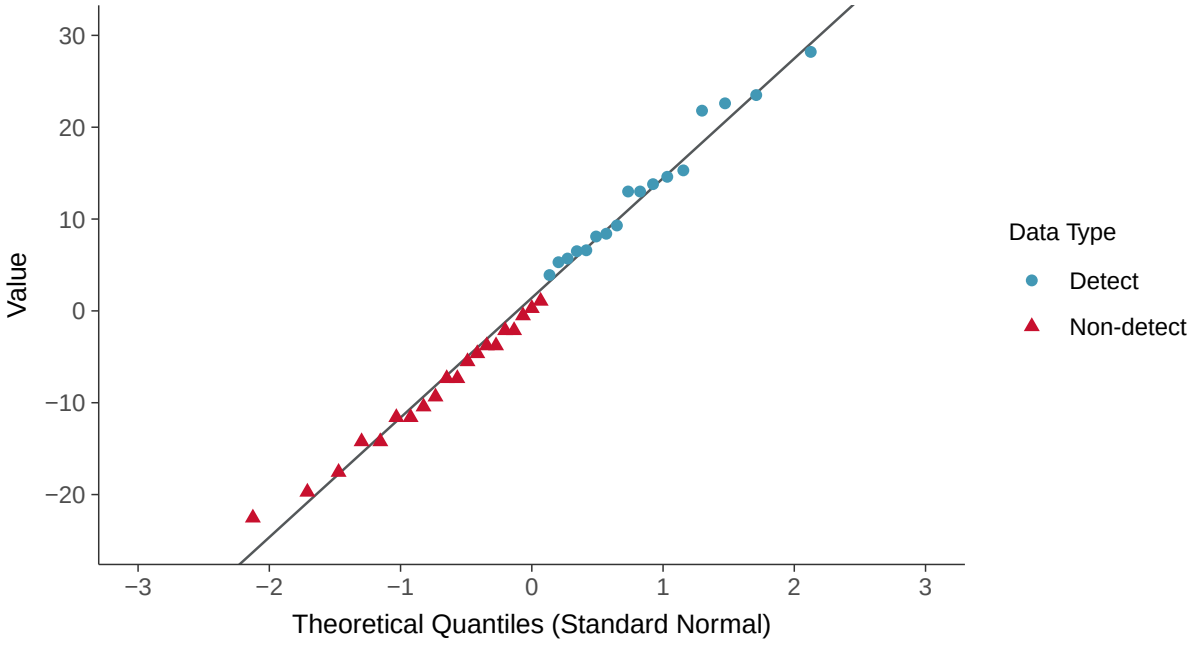
Boxplot by Season

Cobalt, MW-4 (ug/L)



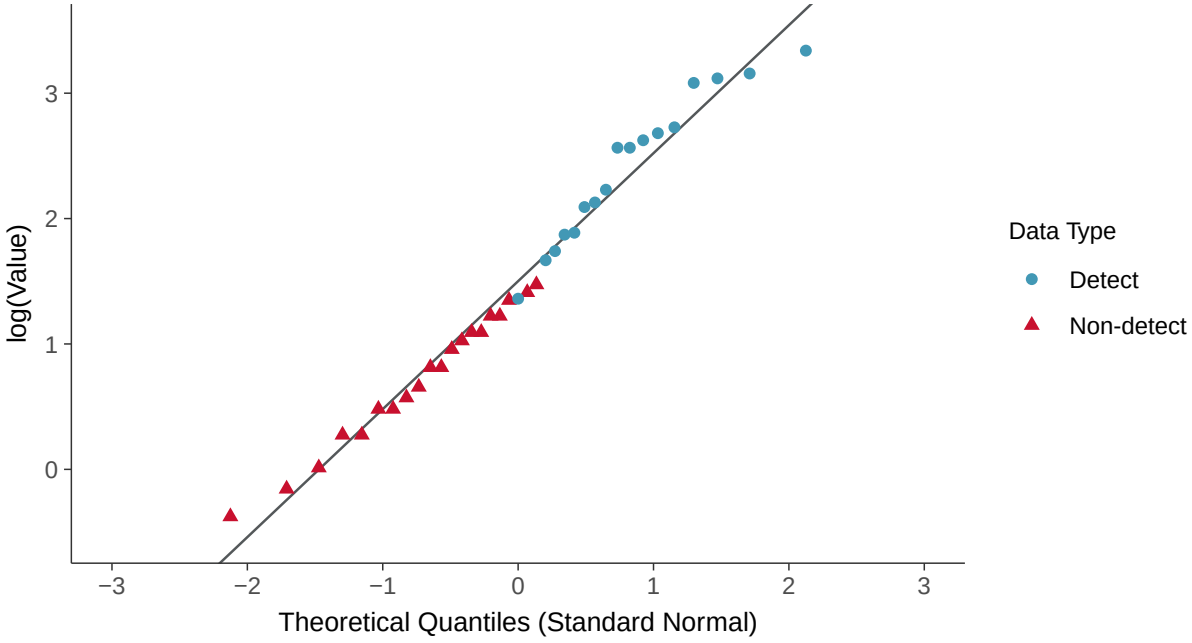
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



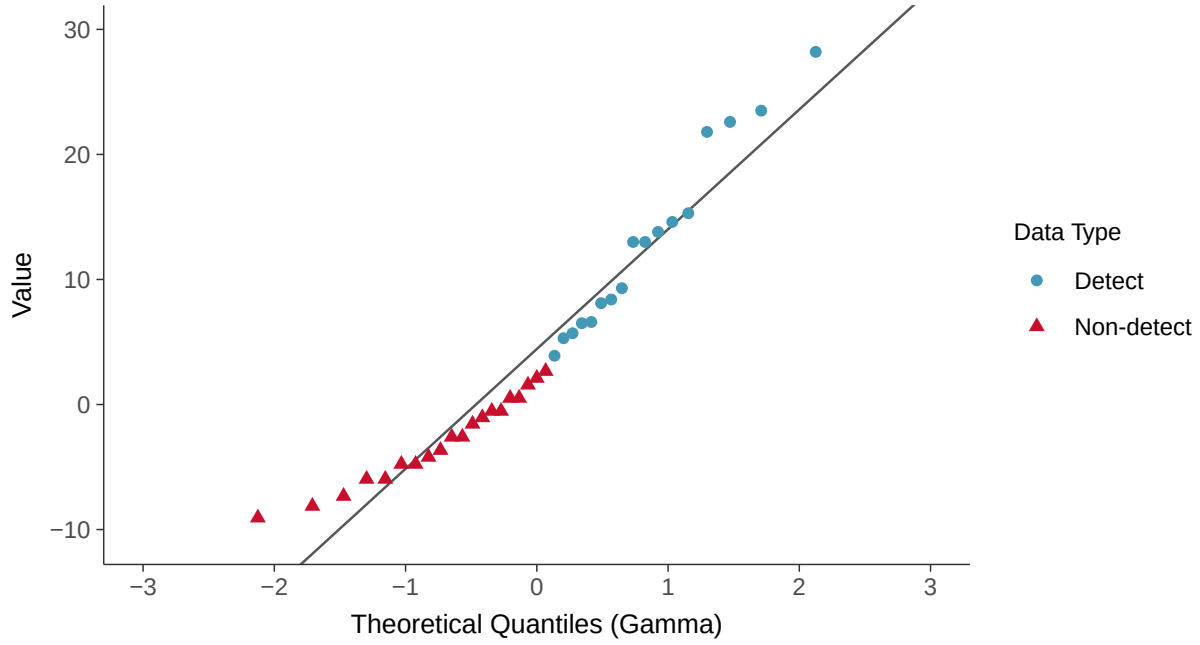
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



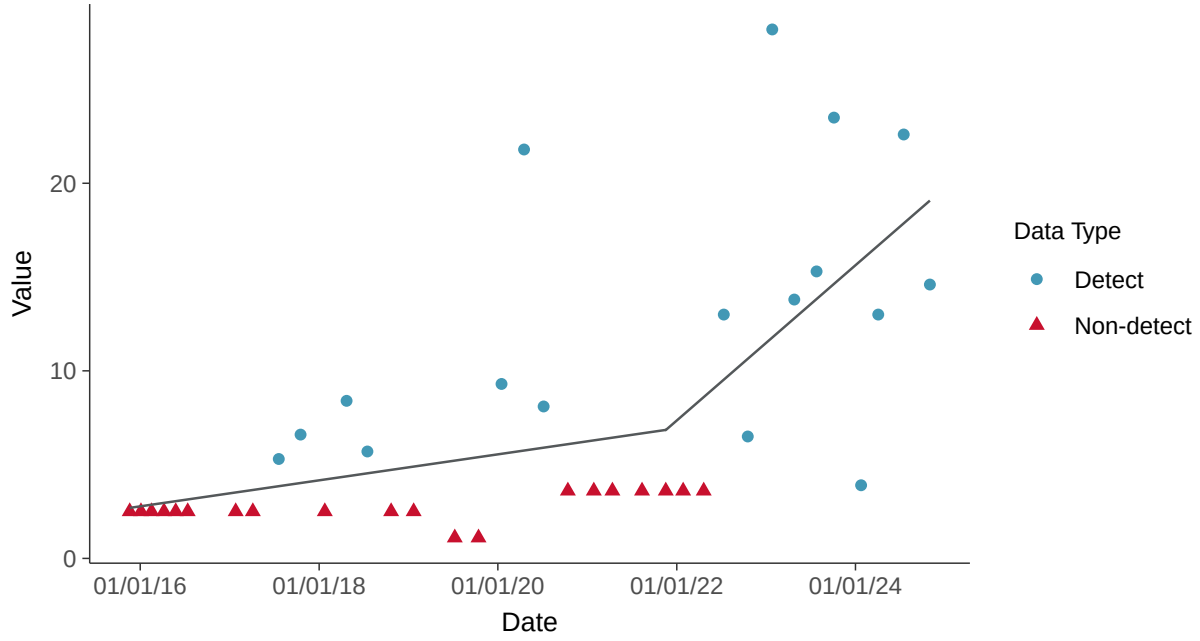
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, MW-4 (ug/L)

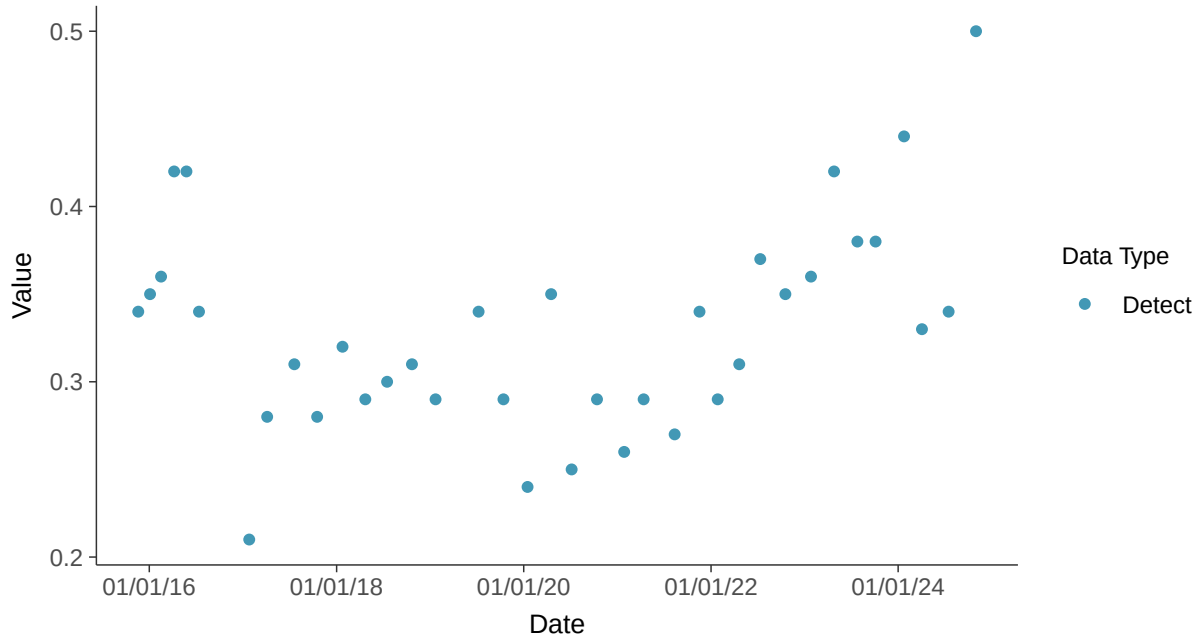


App. IV: Fluoride, MW-4

ID: 04_03_112

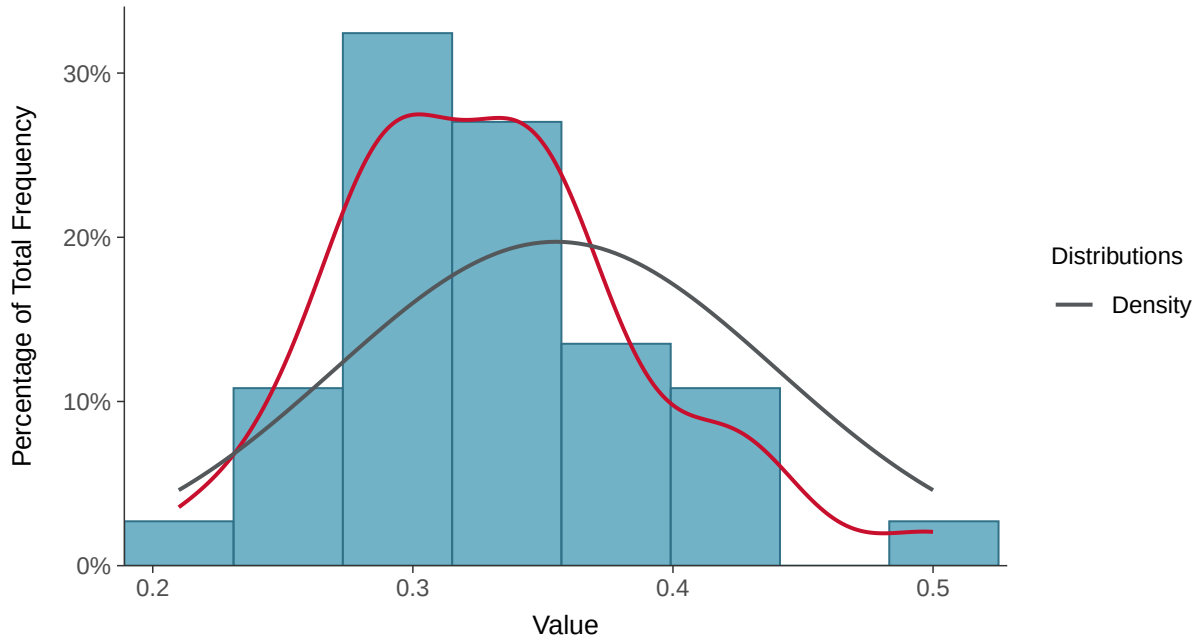
Scatter Plot

Fluoride, MW-4 (mg/L)



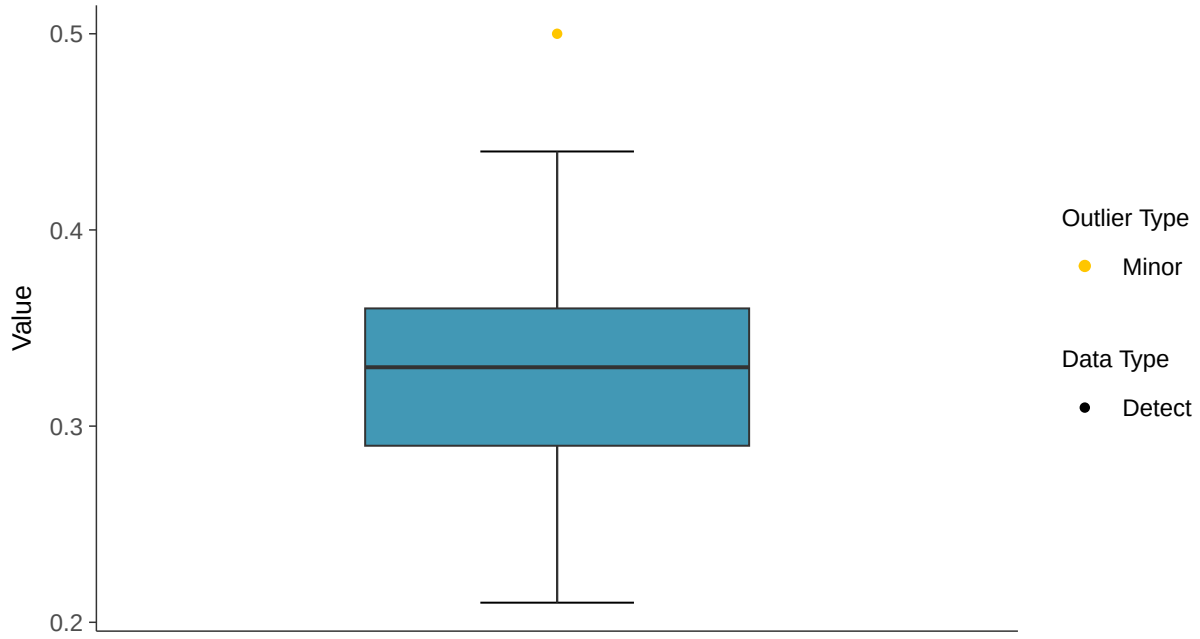
Histogram

Fluoride, MW-4 (mg/L)



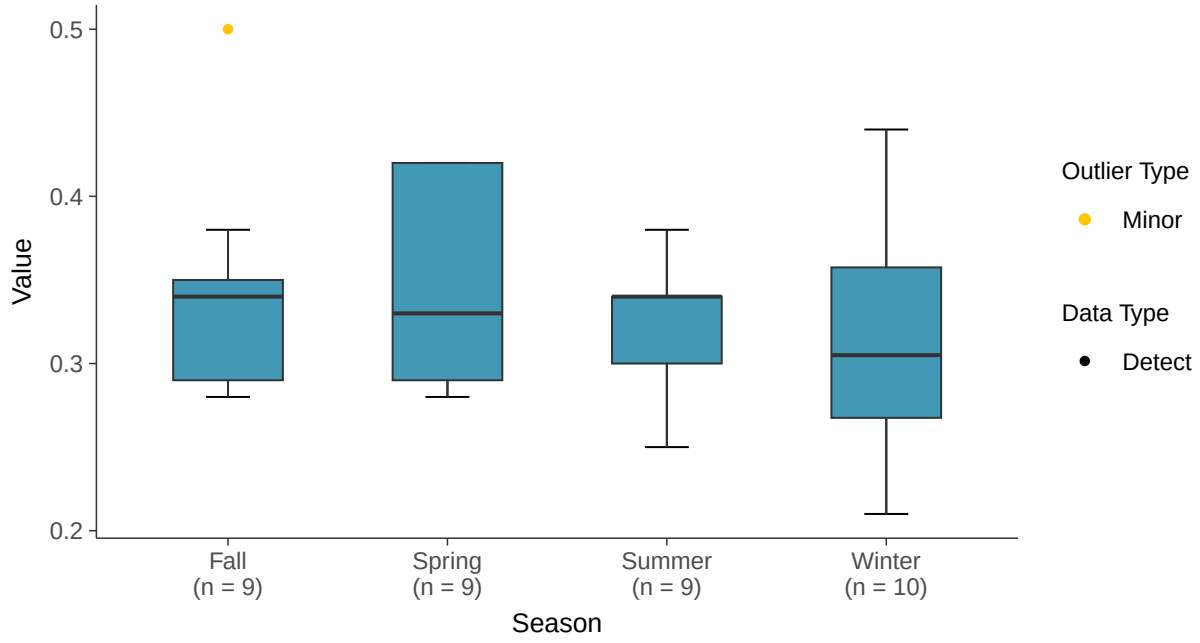
Boxplot

Fluoride, MW-4 (mg/L)



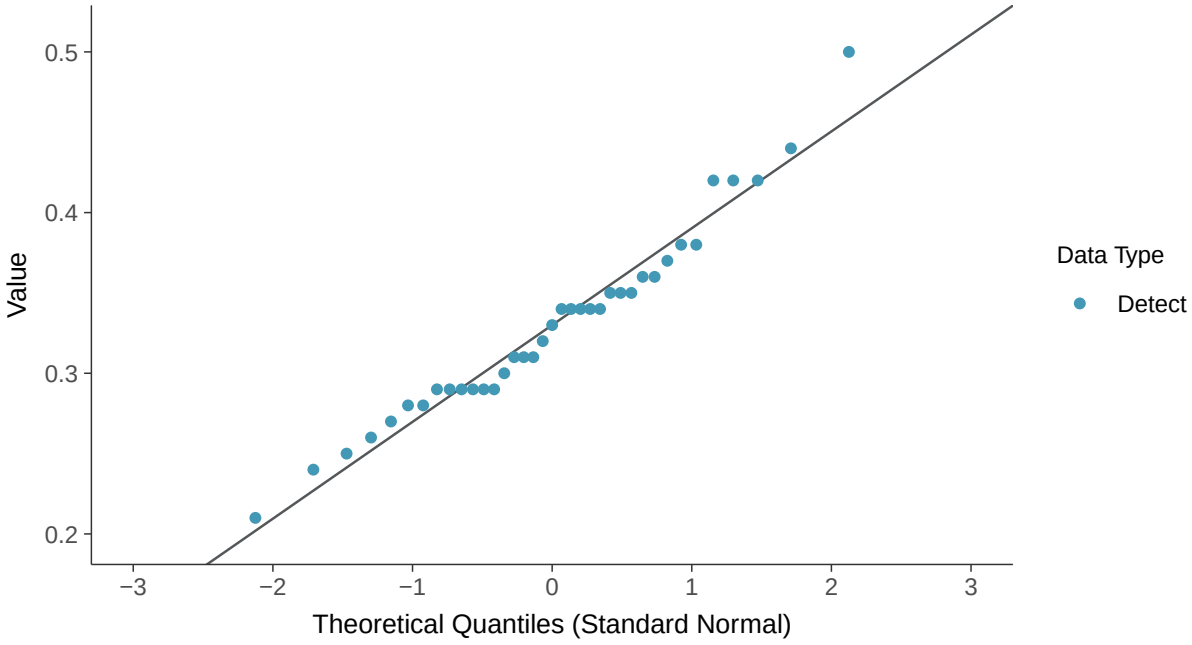
Boxplot by Season

Fluoride, MW-4 (mg/L)



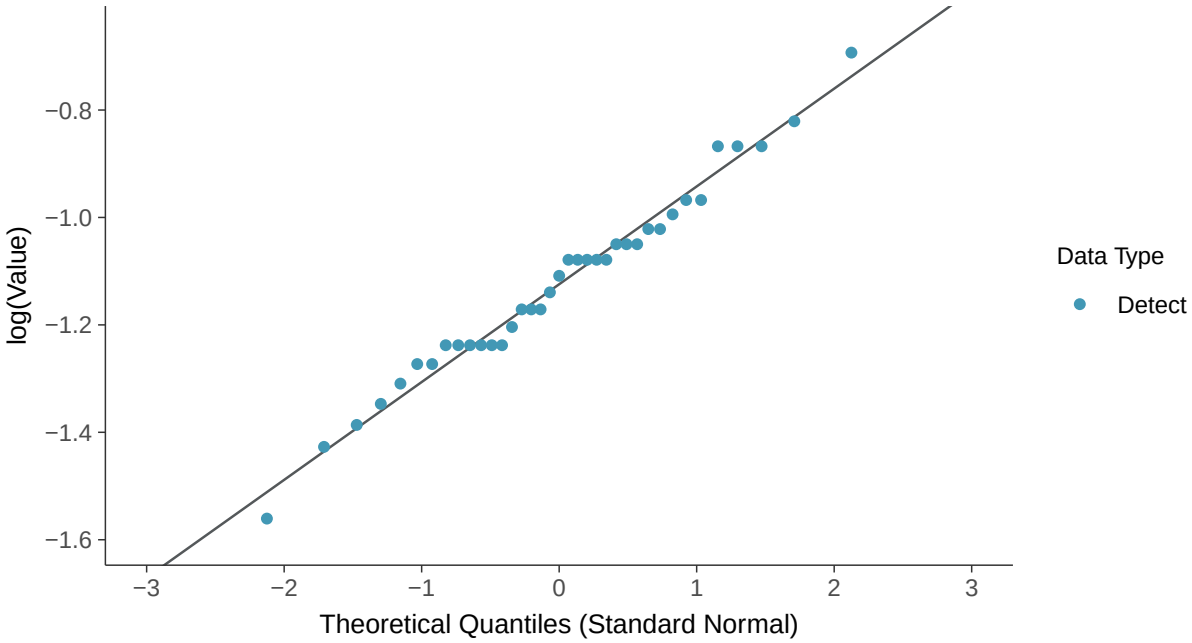
Normal Q-Q plot

Fluoride, MW-4 (mg/L)



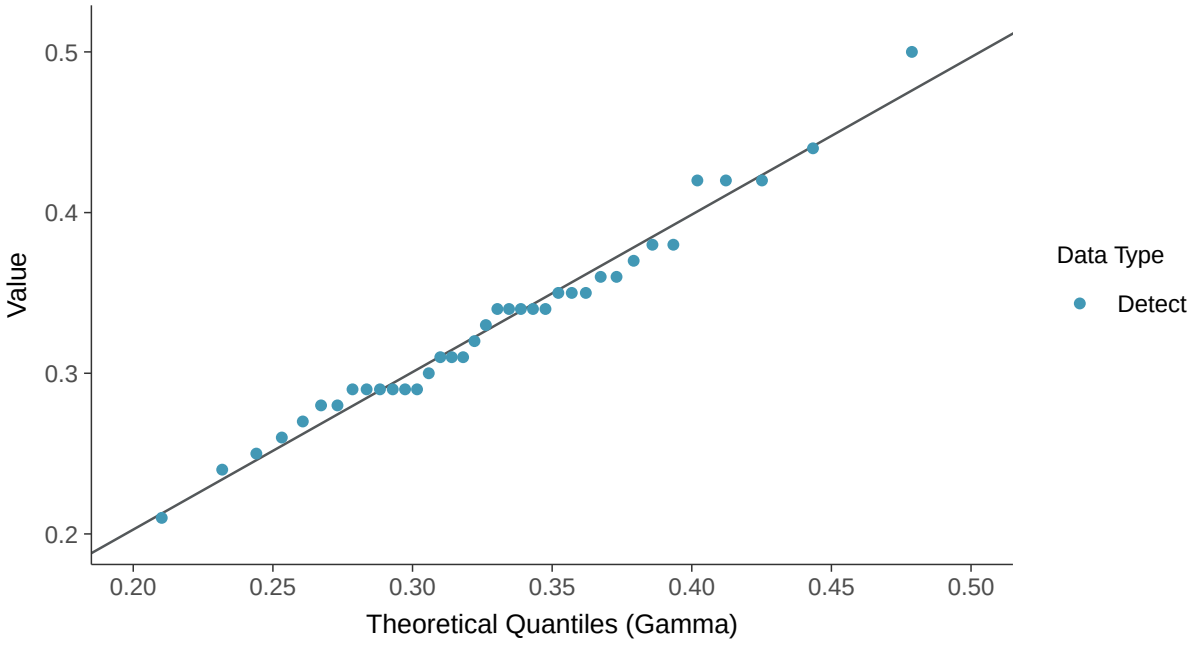
Lognormal Q-Q plot

Fluoride, MW-4 (mg/L)



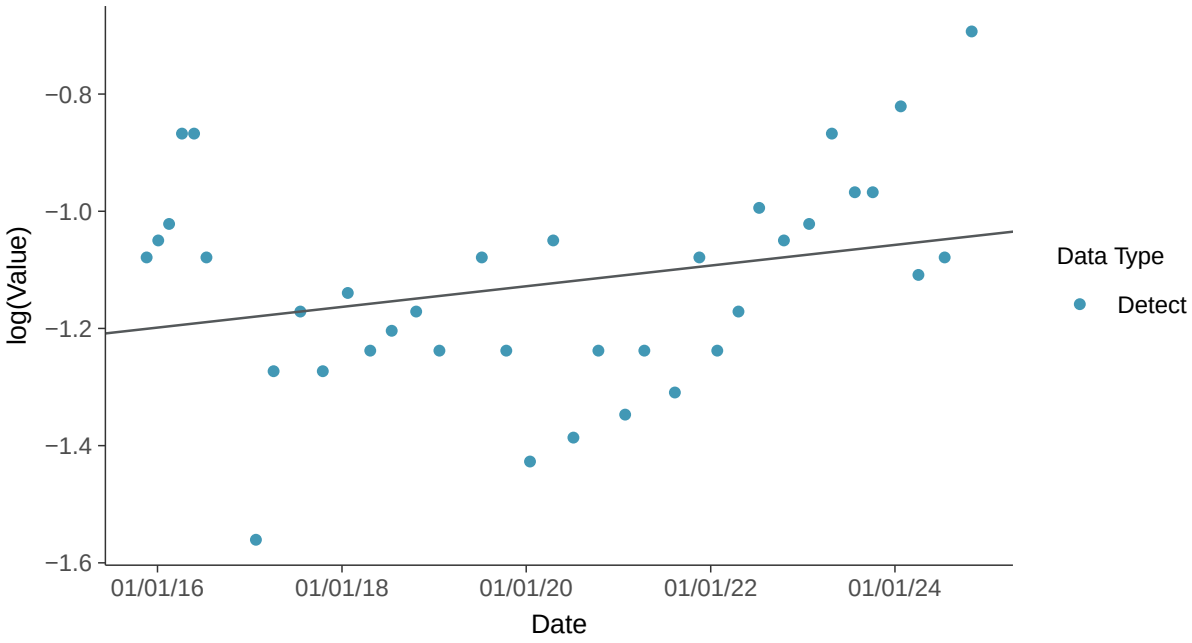
Gamma Q-Q plot

Fluoride, MW-4 (mg/L)



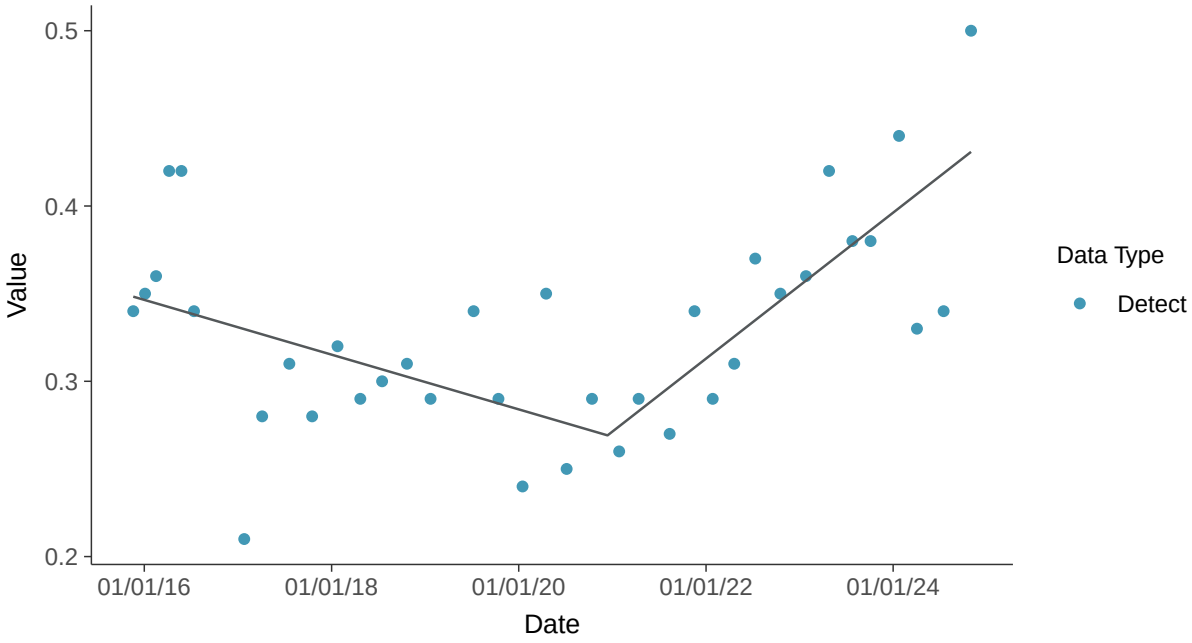
Trend Regression: Lognormal MLE

Fluoride, MW-4 (mg/L)



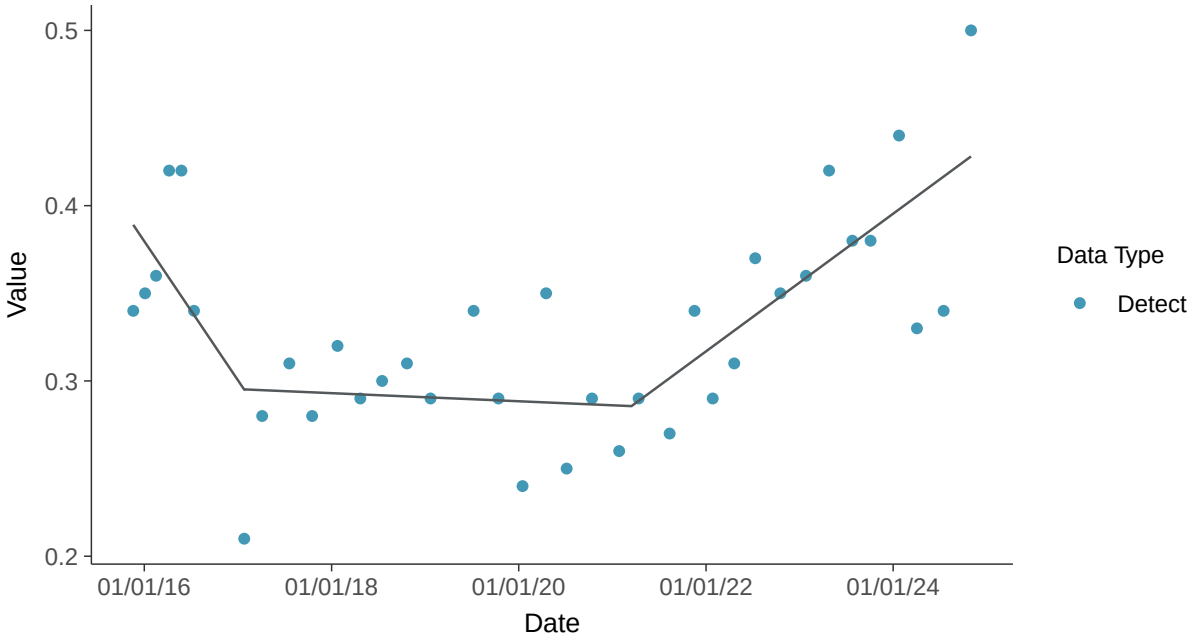
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-4 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-4 (mg/L)

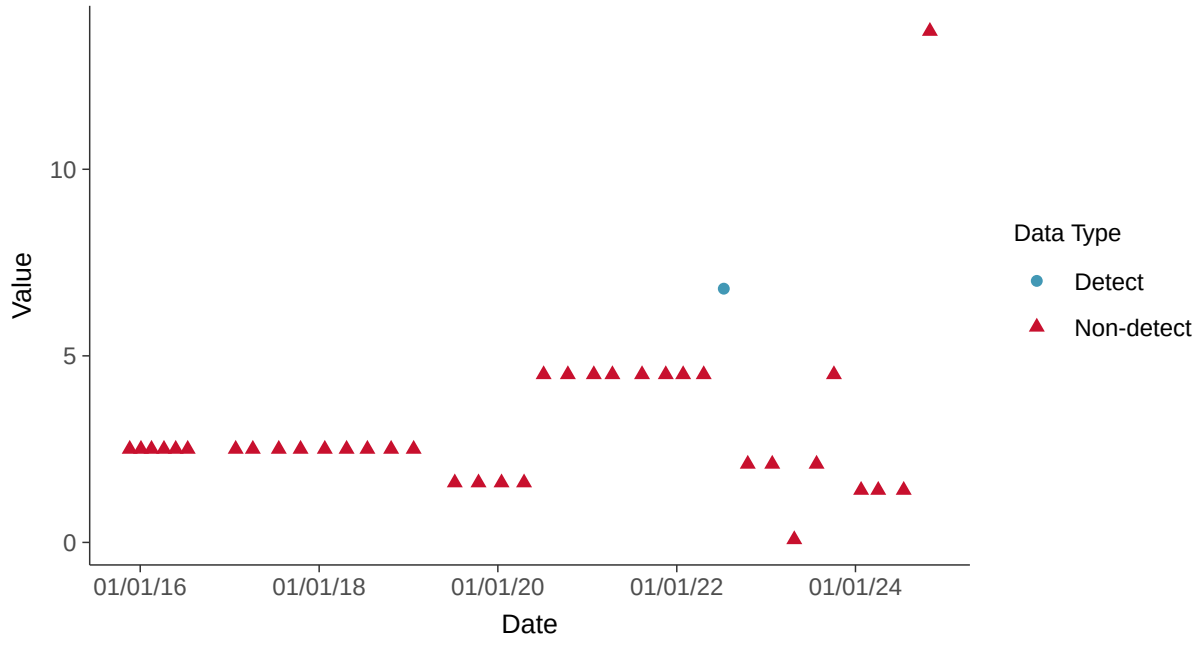


App. IV: Lead, MW-4

ID: 04_03_113

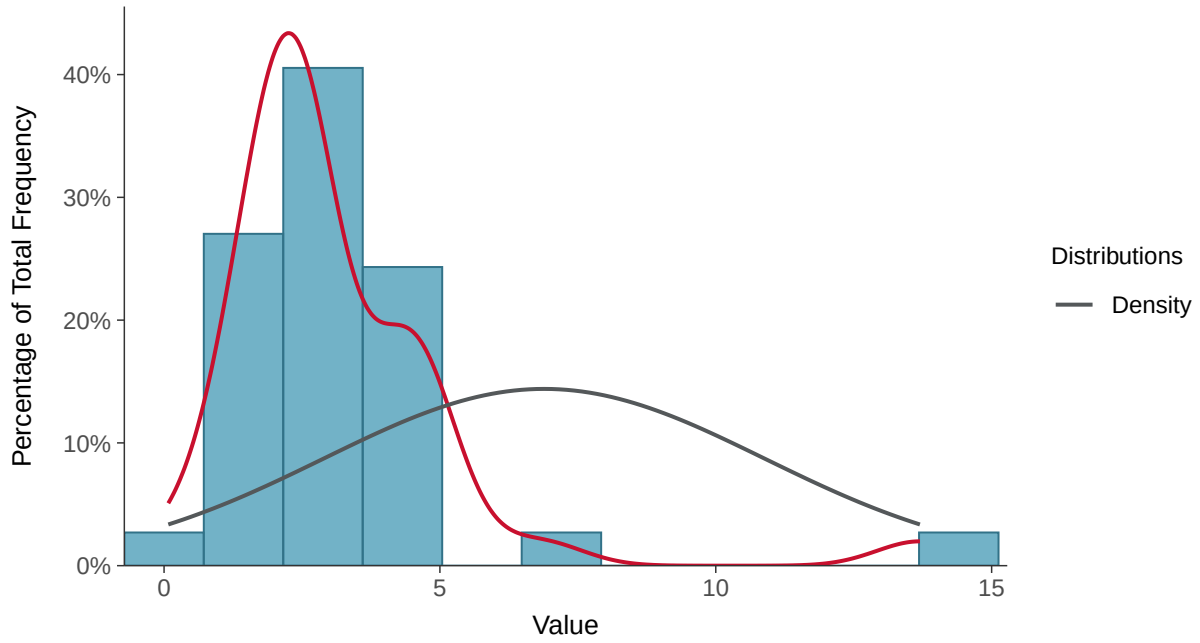
Scatter Plot

Lead, MW-4 (ug/L)



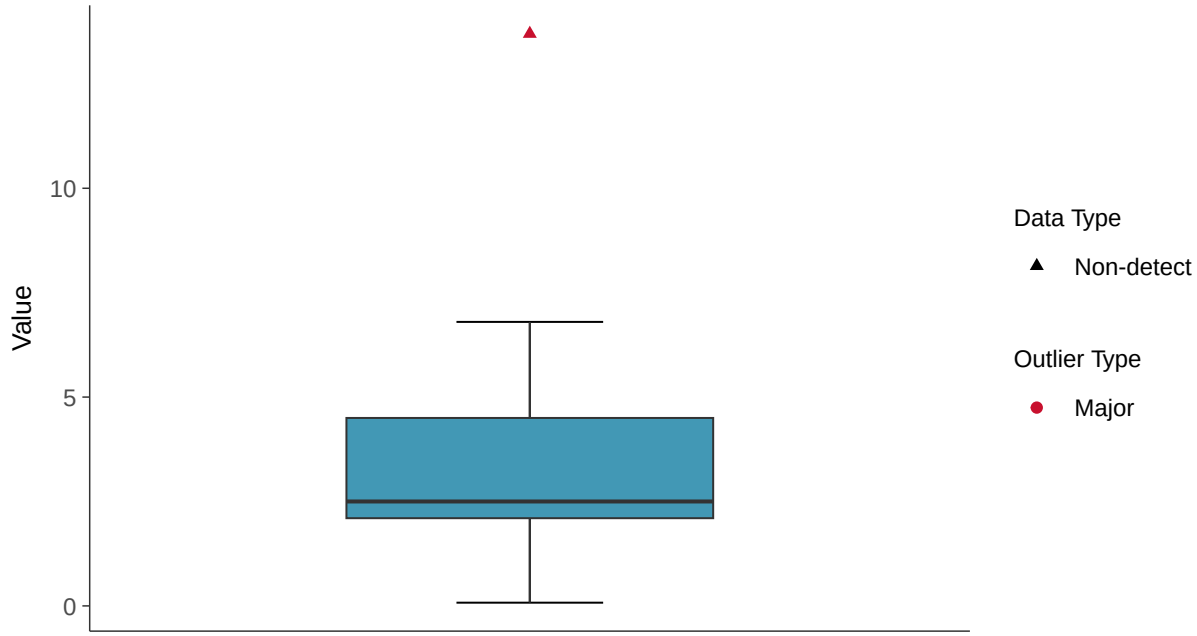
Histogram

Lead, MW-4 (ug/L)



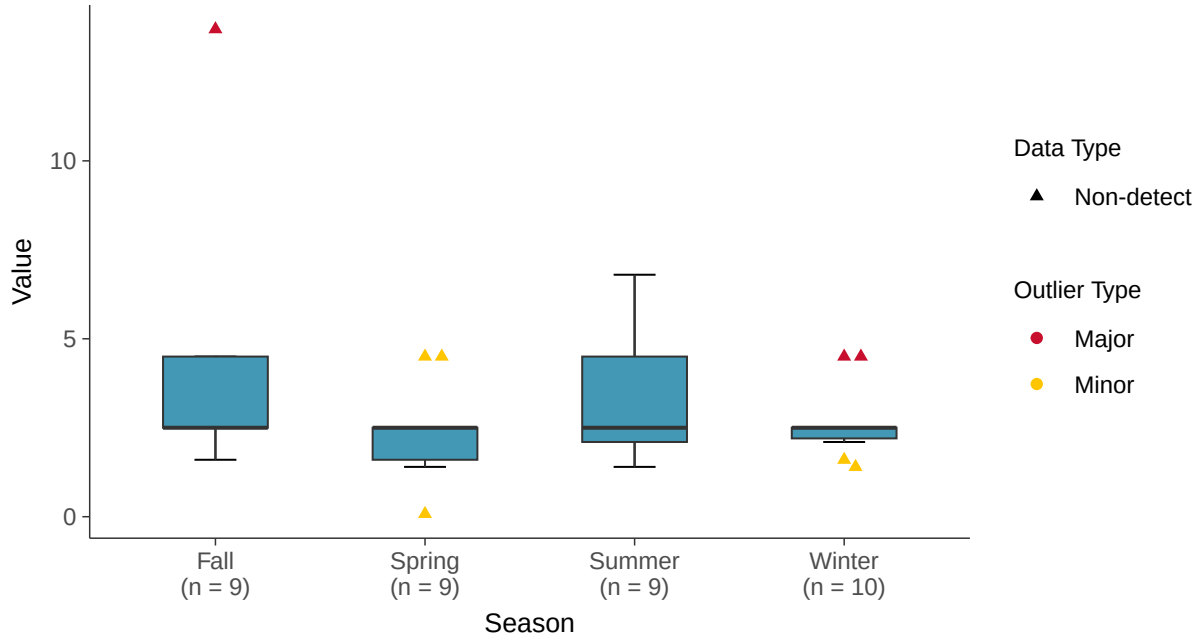
Boxplot

Lead, MW-4 (ug/L)



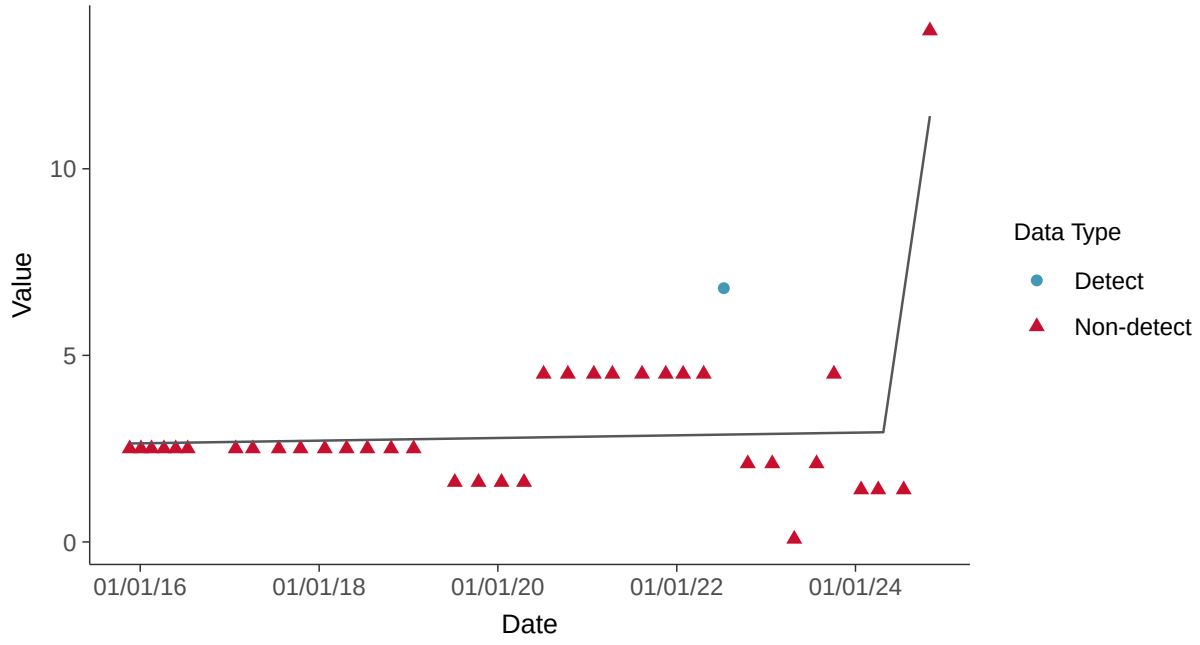
Boxplot by Season

Lead, MW-4 (ug/L)



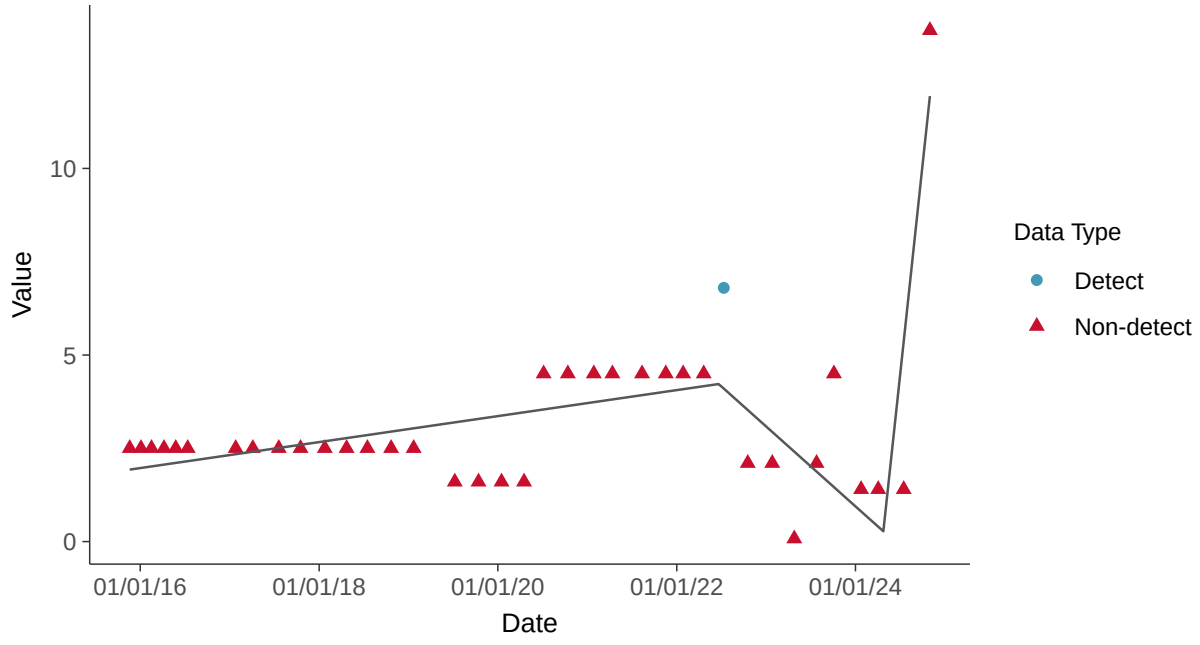
Trend Regression: Piecewise Linear-Linear

Lead, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-4 (ug/L)

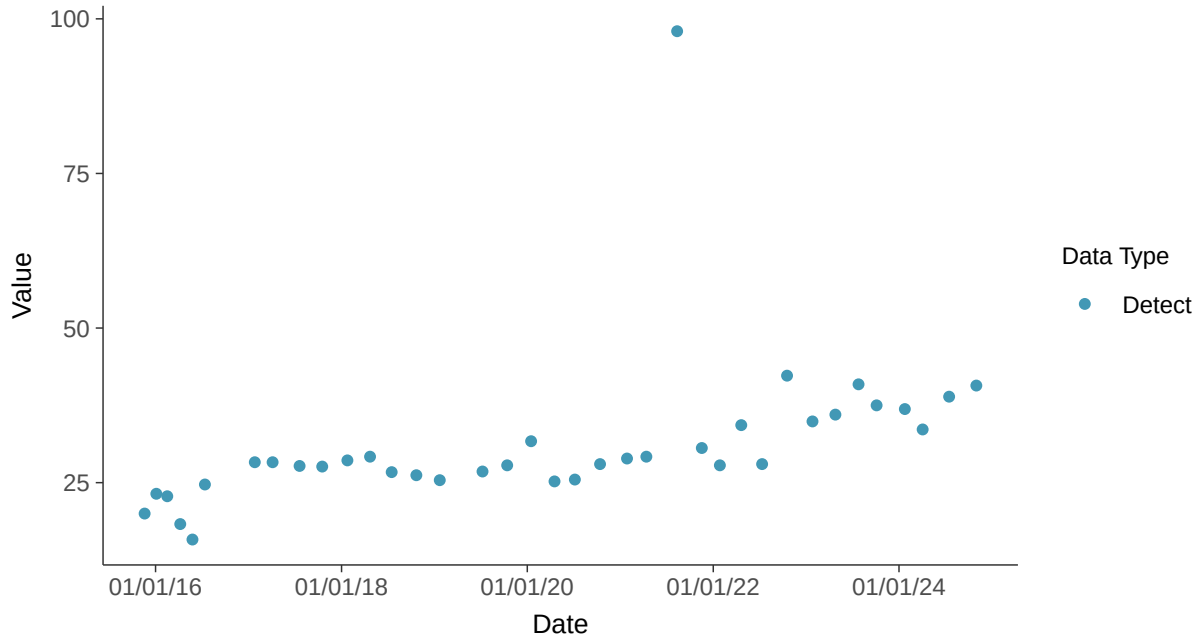


App. IV: Lithium, MW-4

ID: 04_03_114

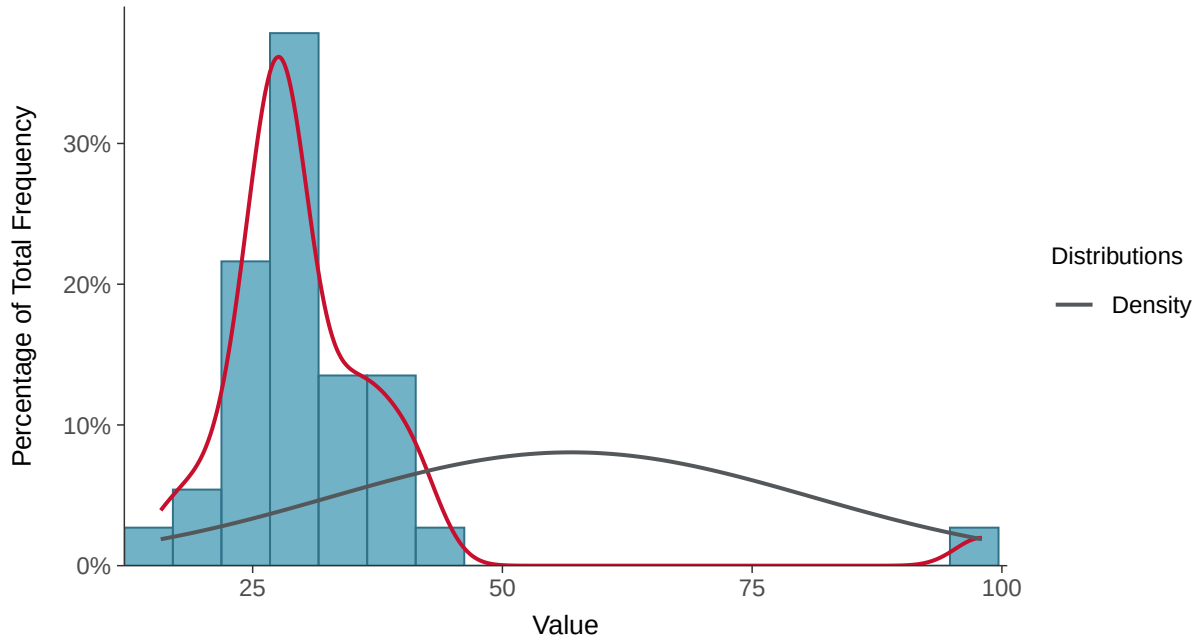
Scatter Plot

Lithium, MW-4 (ug/L)



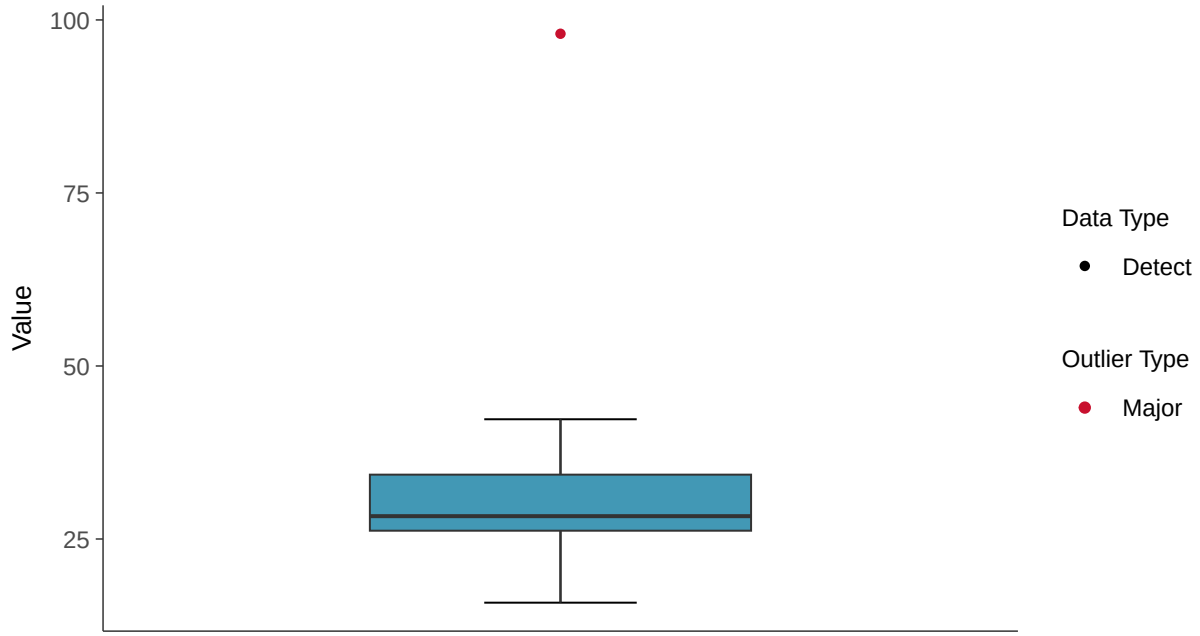
Histogram

Lithium, MW-4 (ug/L)



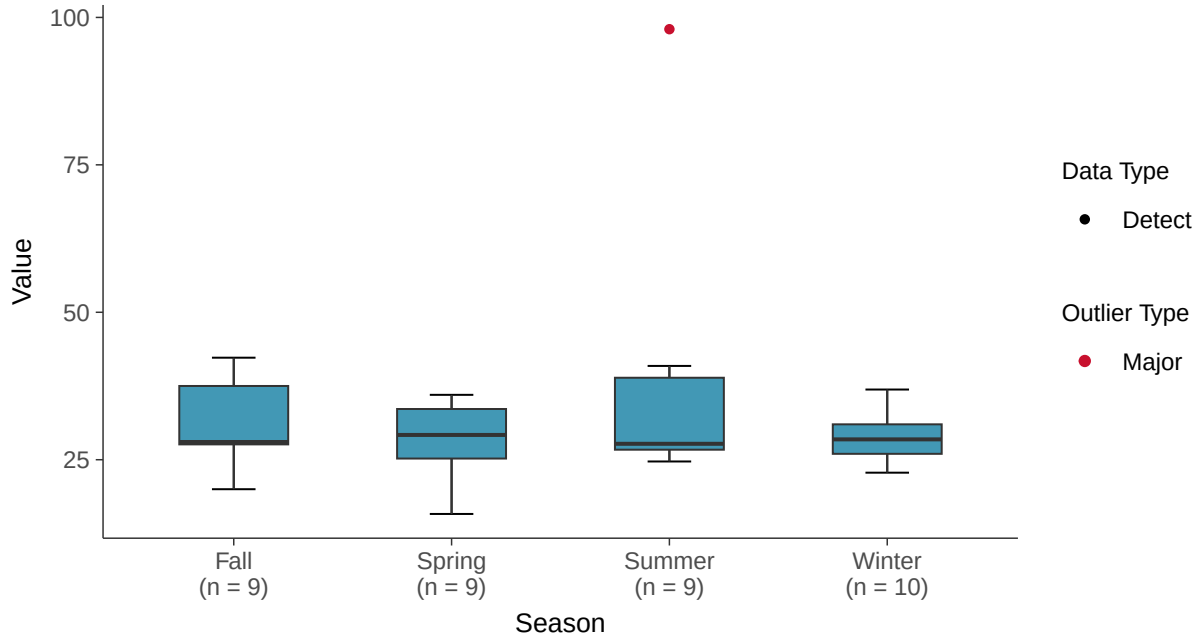
Boxplot

Lithium, MW-4 (ug/L)



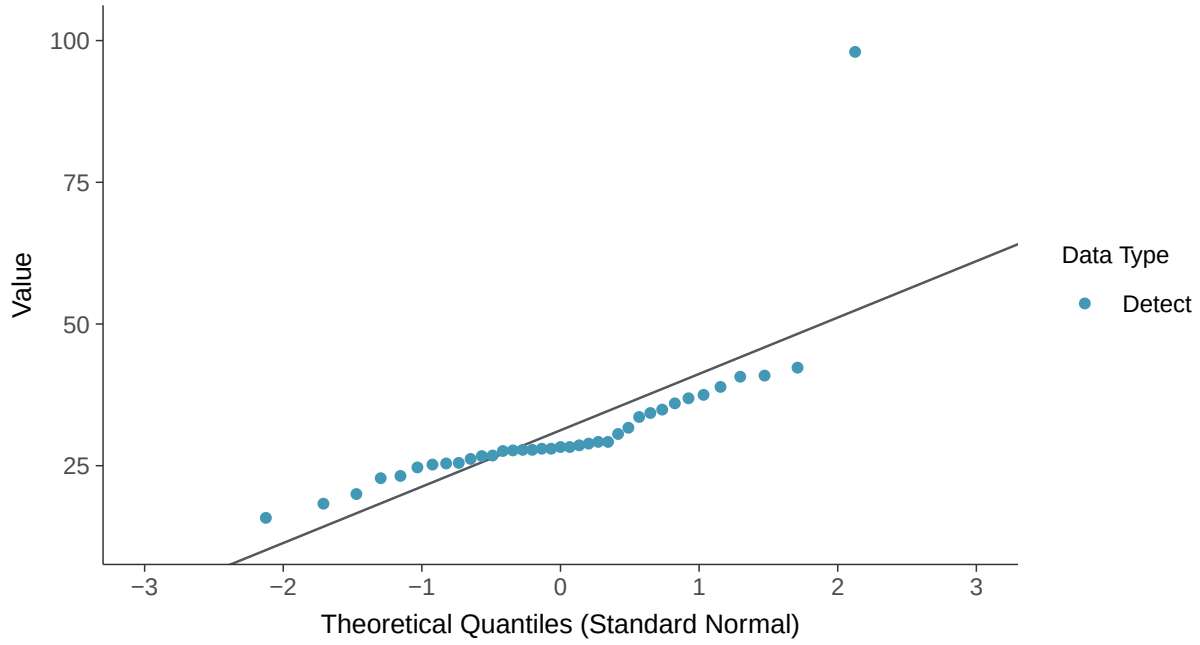
Boxplot by Season

Lithium, MW-4 (ug/L)



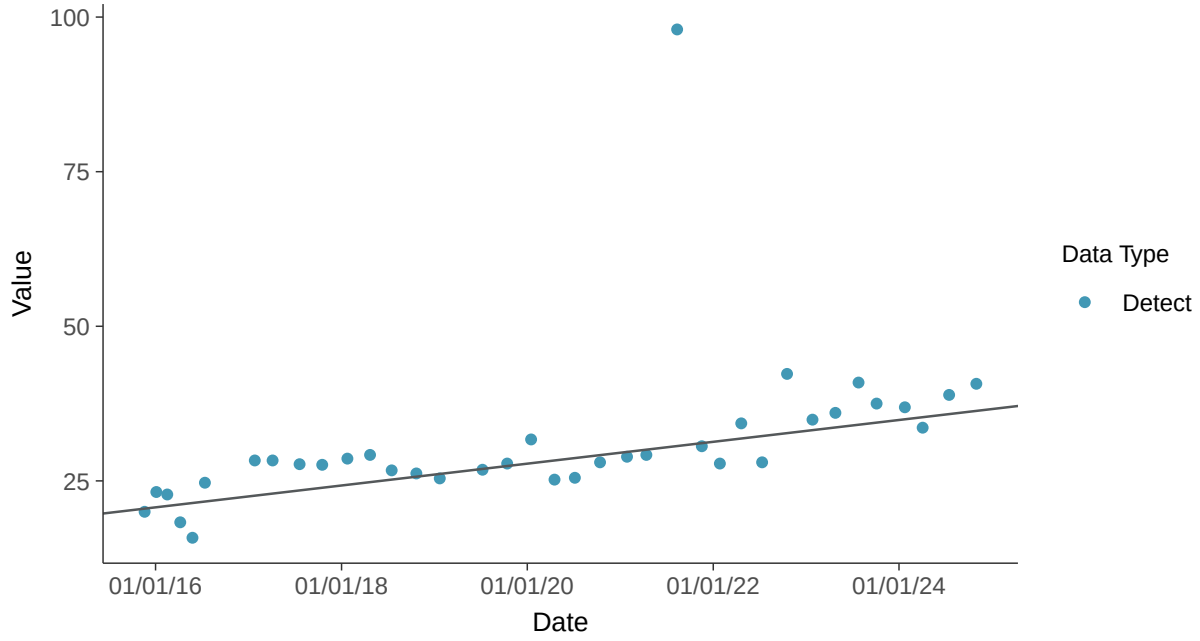
Normal Q-Q plot

Lithium, MW-4 (ug/L)



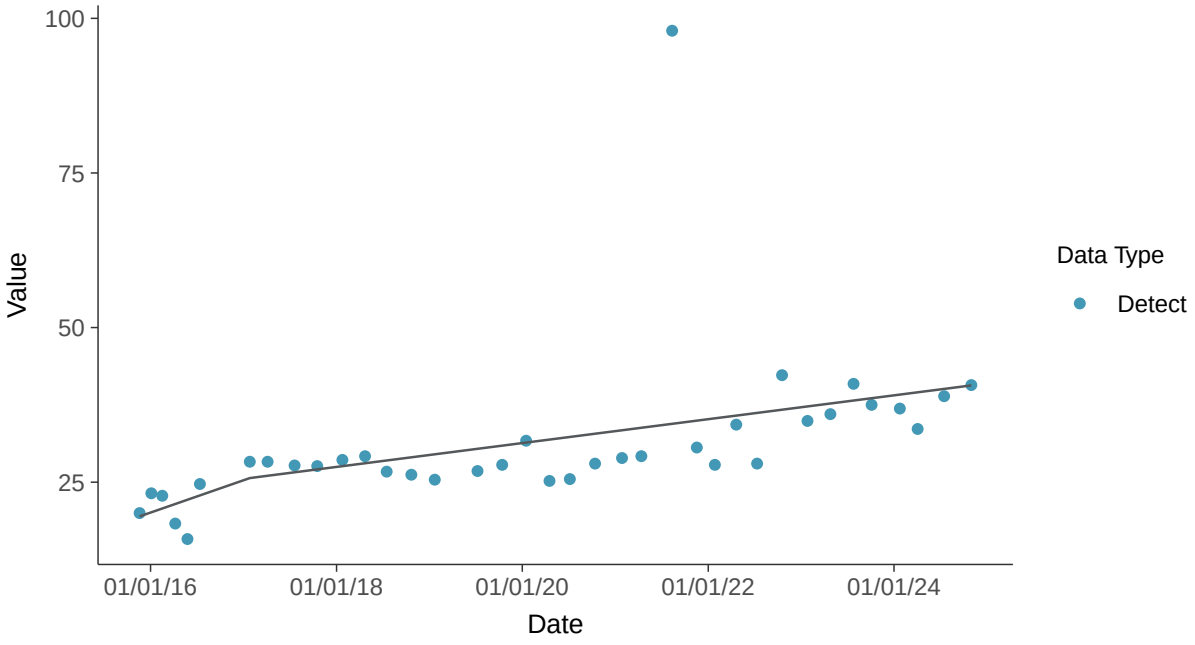
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-4 (ug/L)



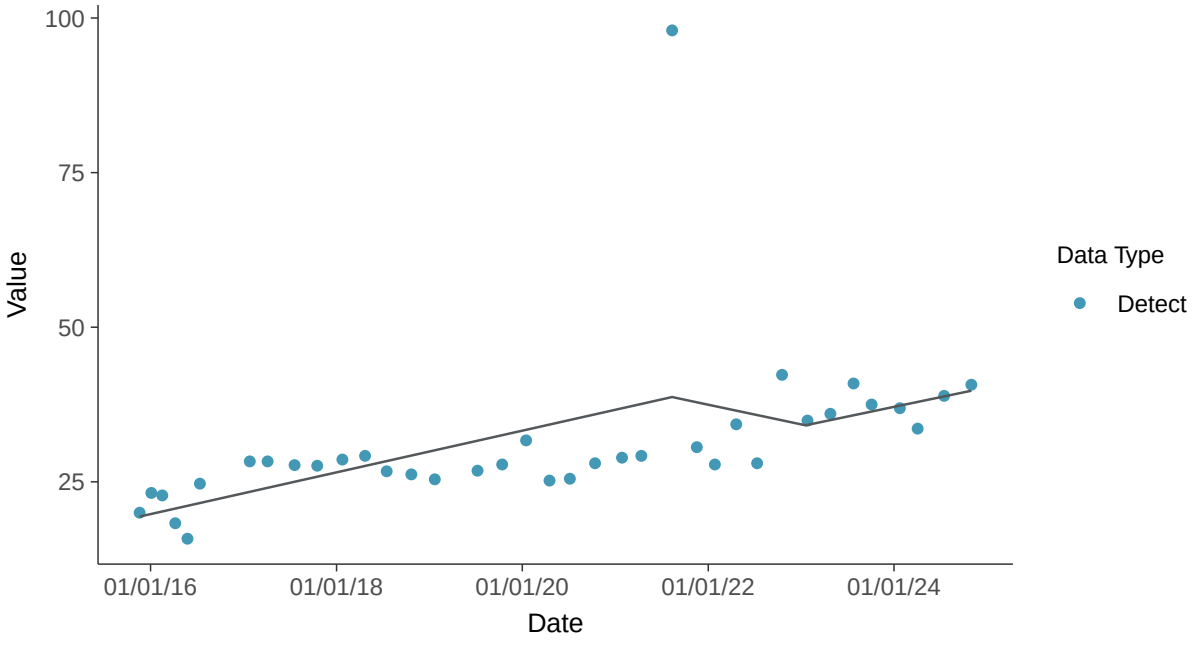
Trend Regression: Piecewise Linear-Linear

Lithium, MW-4 (ug/L)



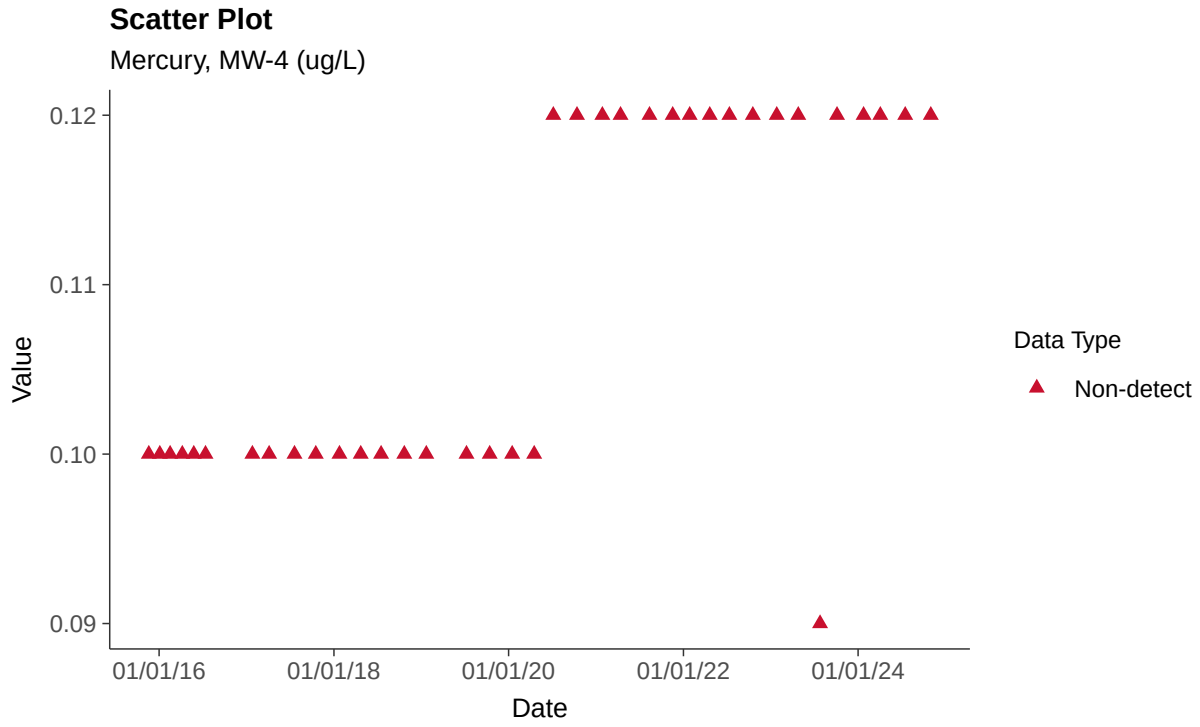
Trend Regression: Piecewise Linear-Linear-Linear

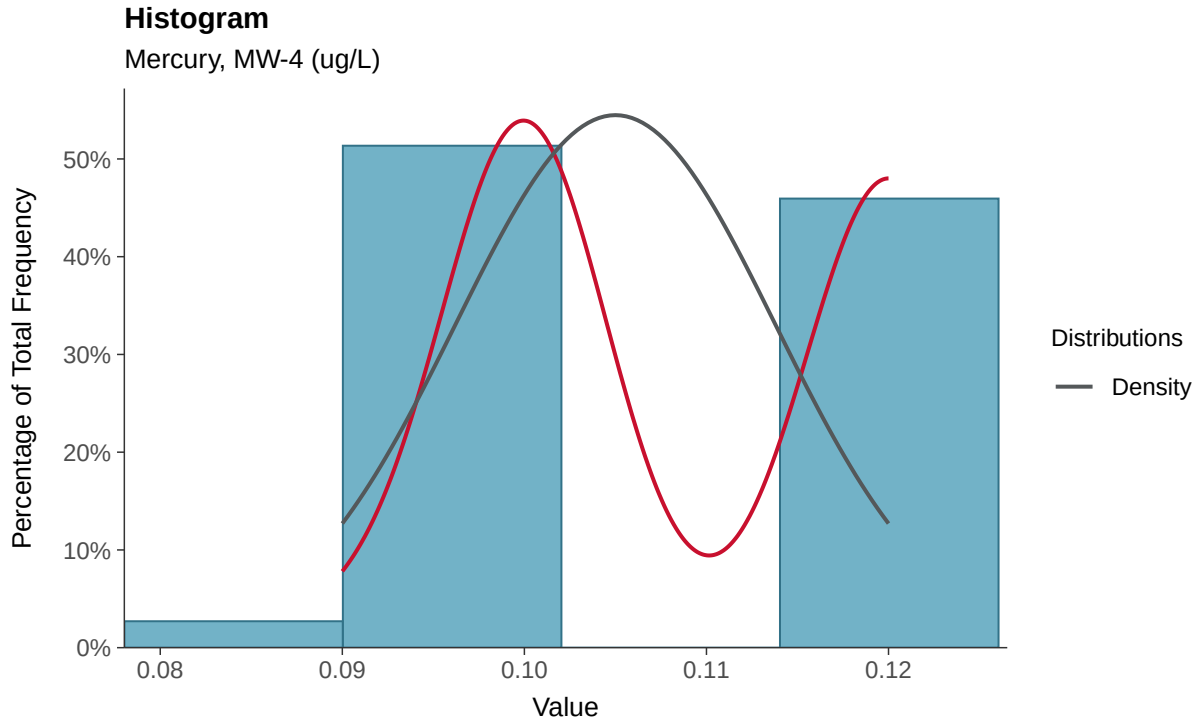
Lithium, MW-4 (ug/L)



App. IV: Mercury, MW-4

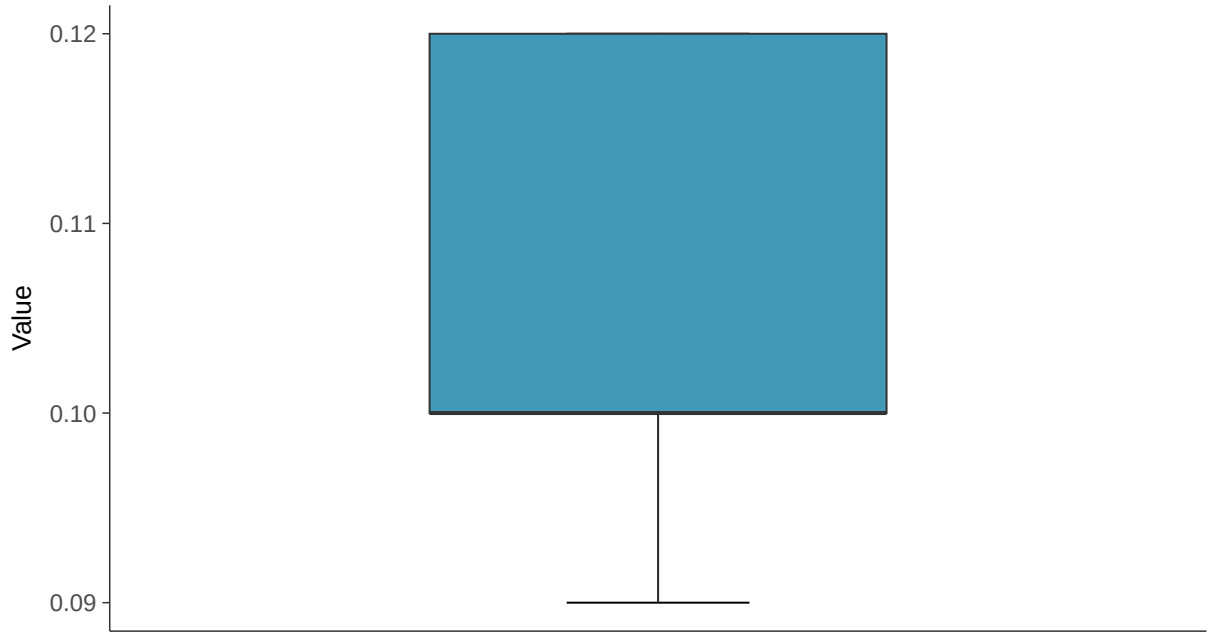
ID: 04_03_115





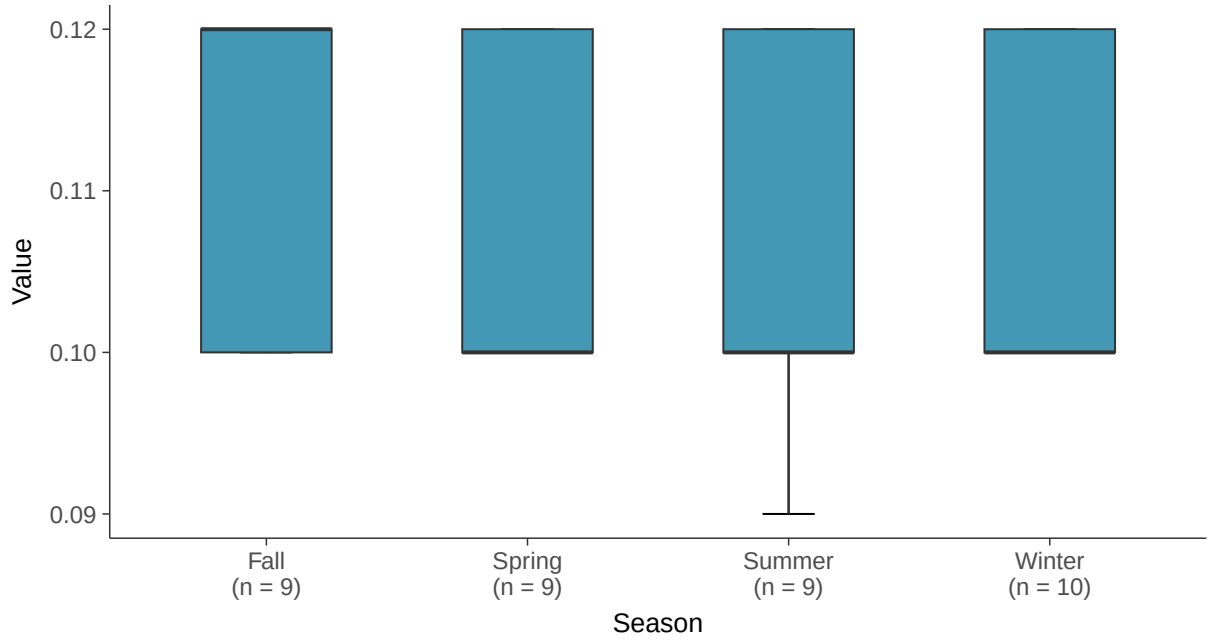
Boxplot

Mercury, MW-4 (ug/L)



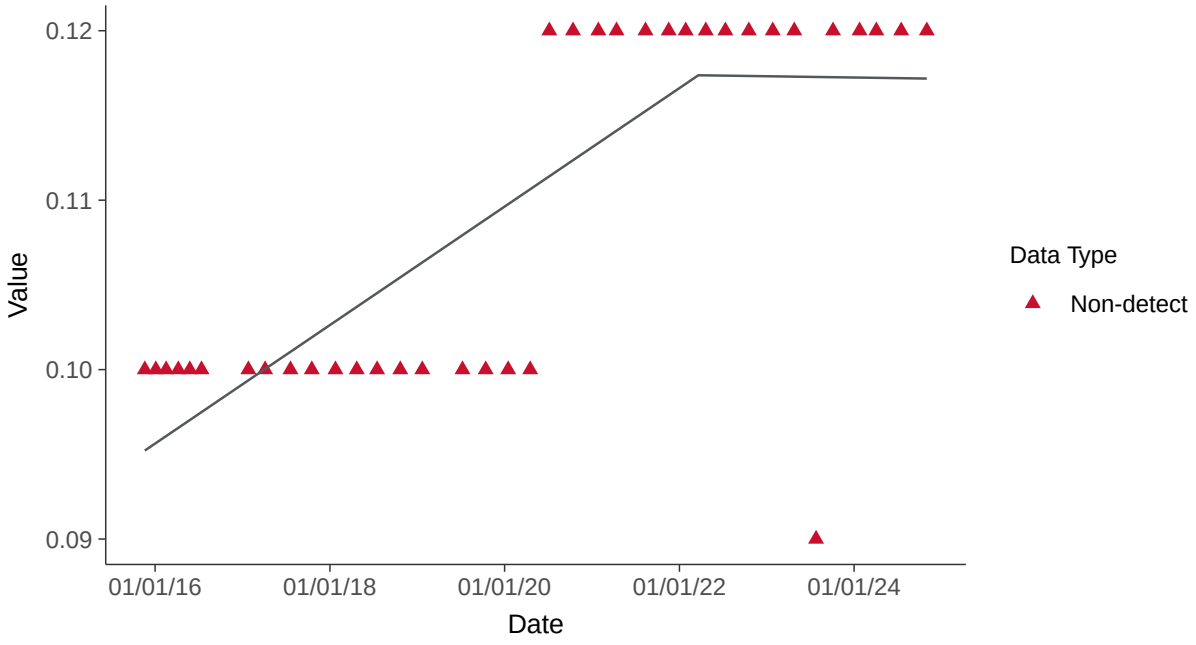
Boxplot by Season

Mercury, MW-4 (ug/L)



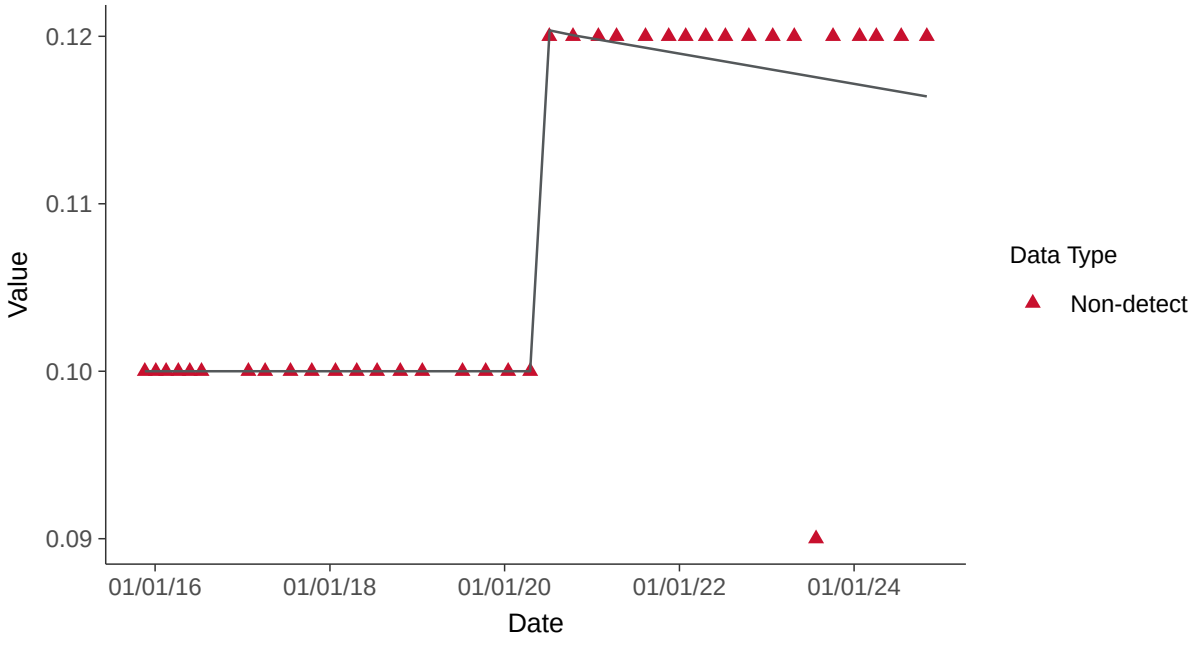
Trend Regression: Piecewise Linear-Linear

Mercury, MW-4 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-4 (ug/L)

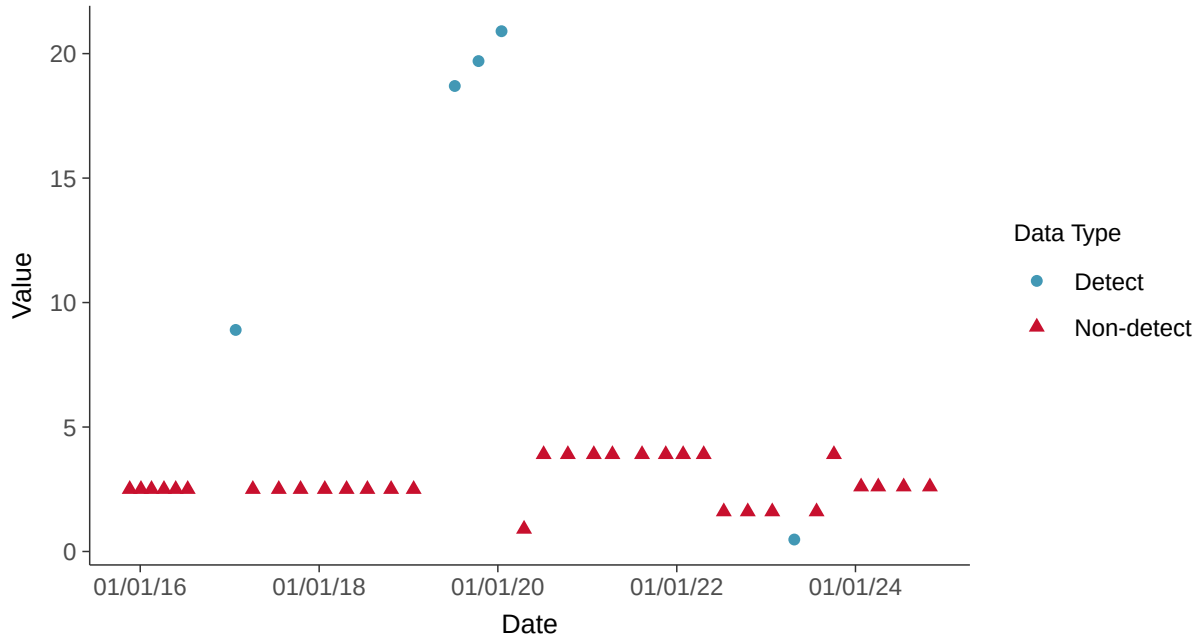


App. IV: Molybdenum, MW-4

ID: 04_03_116

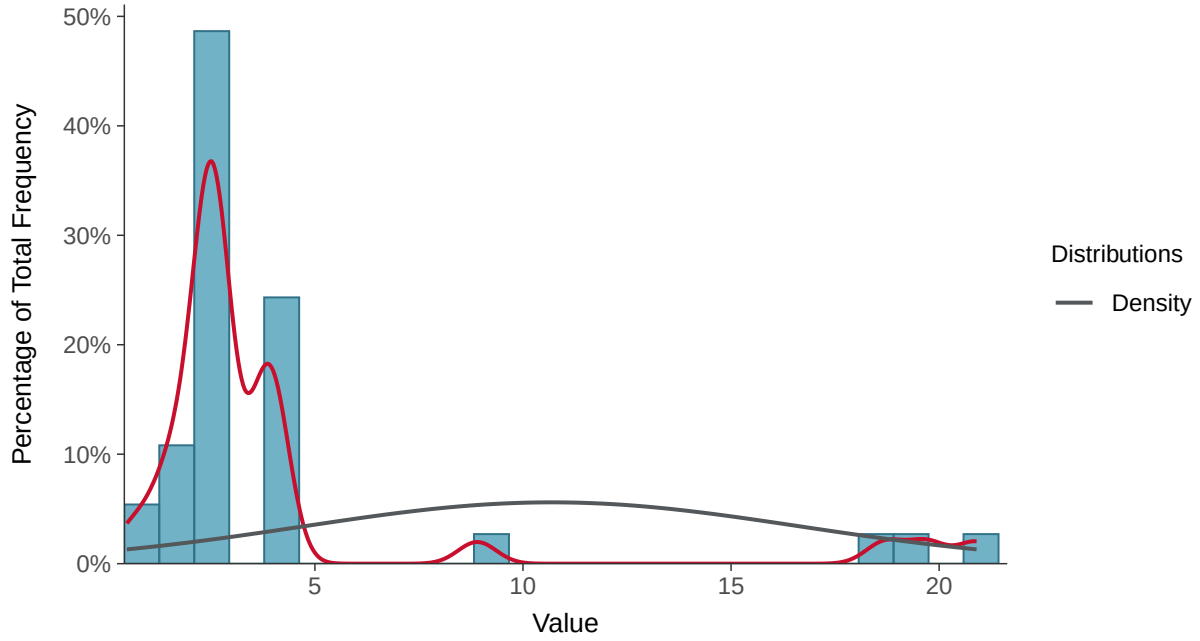
Scatter Plot

Molybdenum, MW-4 (ug/L)



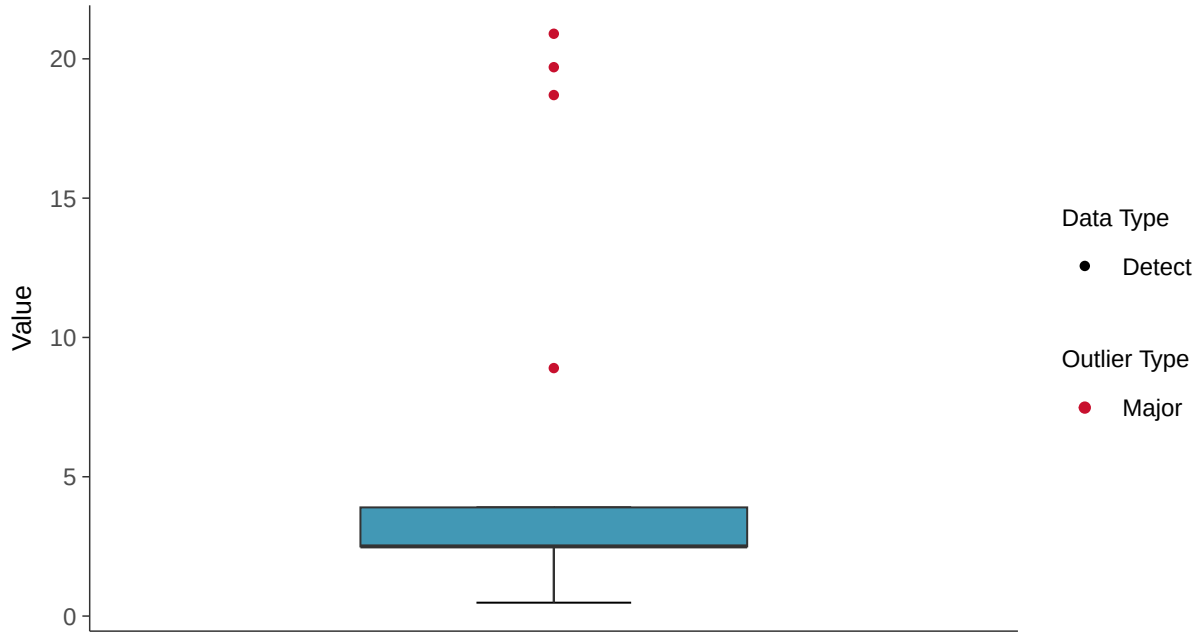
Histogram

Molybdenum, MW-4 (ug/L)



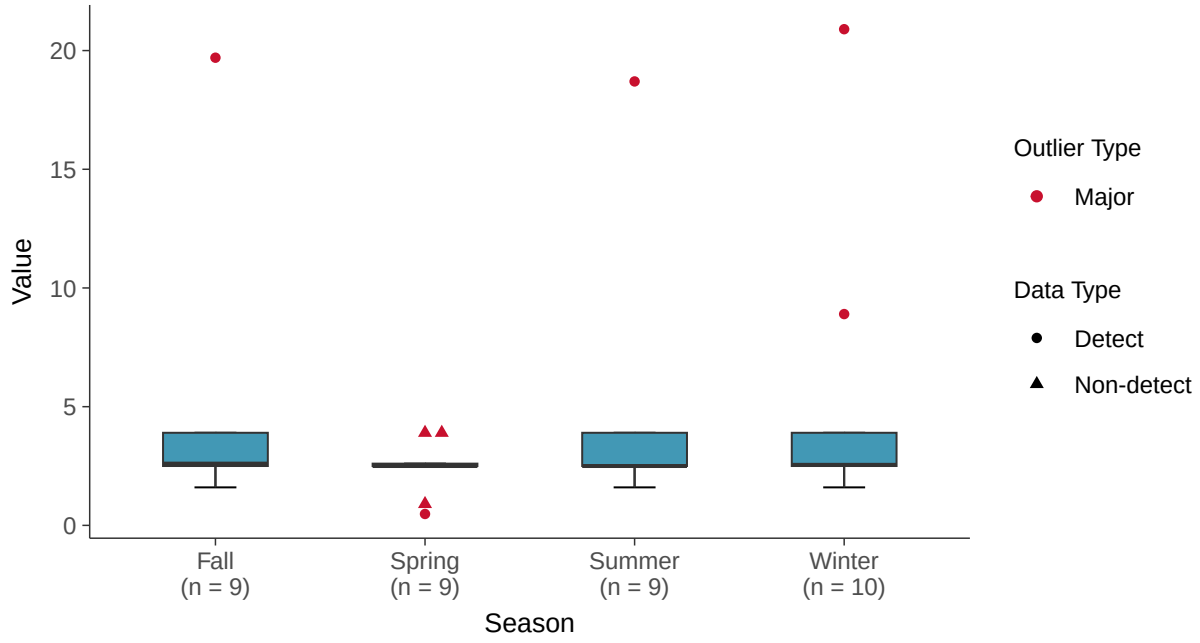
Boxplot

Molybdenum, MW-4 (ug/L)



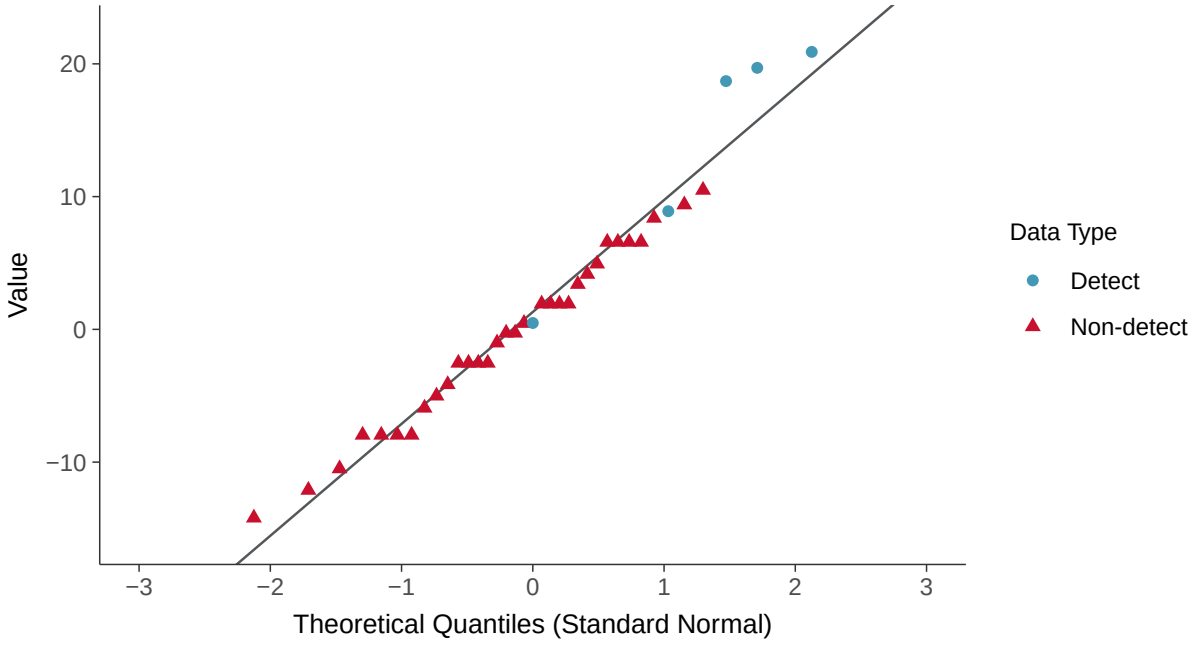
Boxplot by Season

Molybdenum, MW-4 (ug/L)



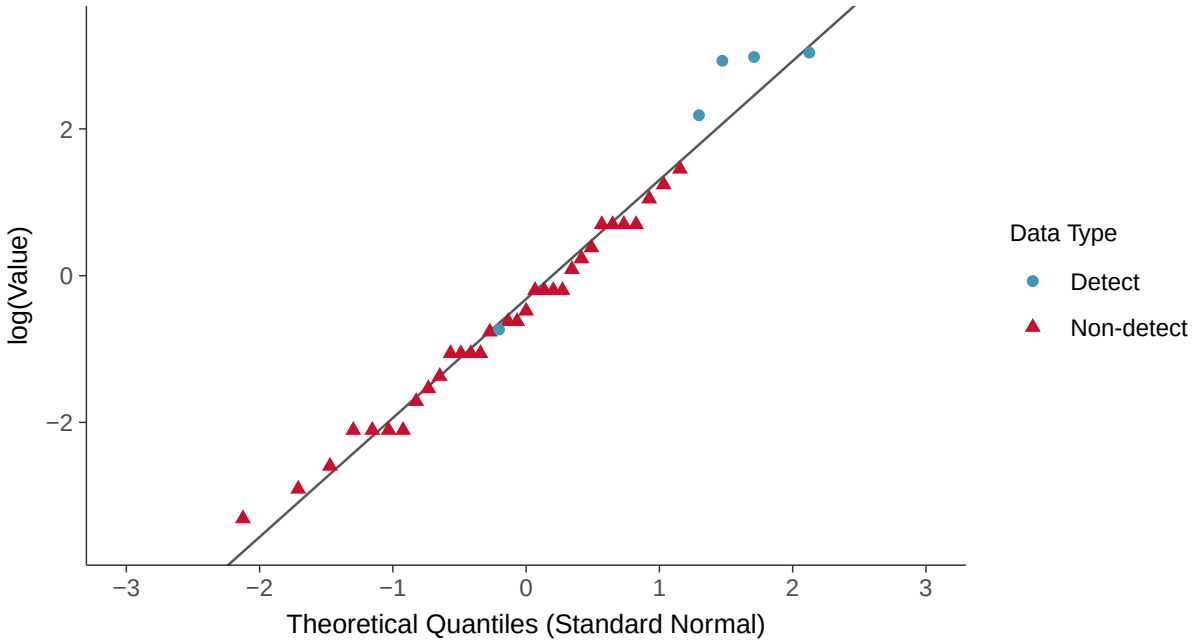
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



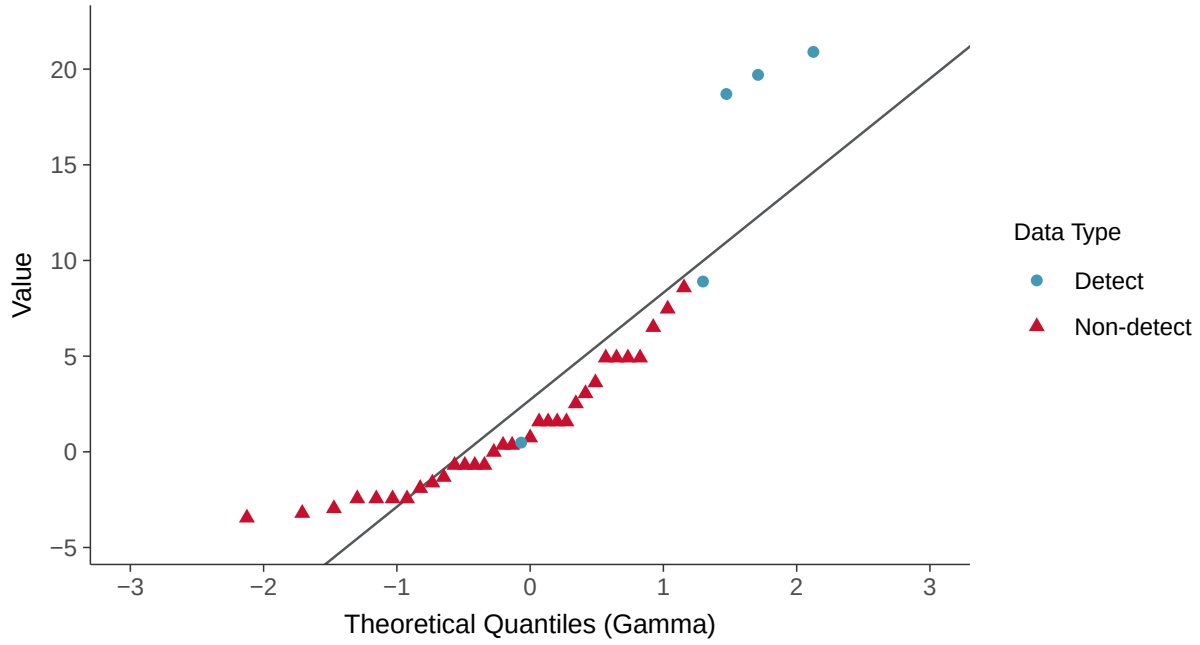
Lognormal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



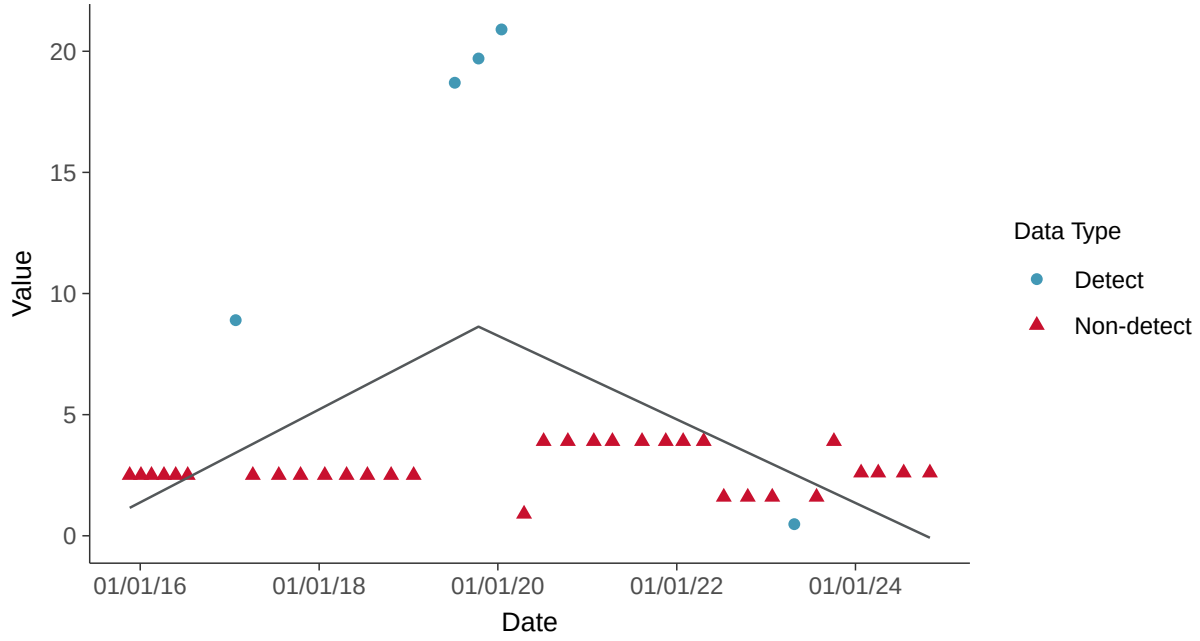
Gamma Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-4 (ug/L)



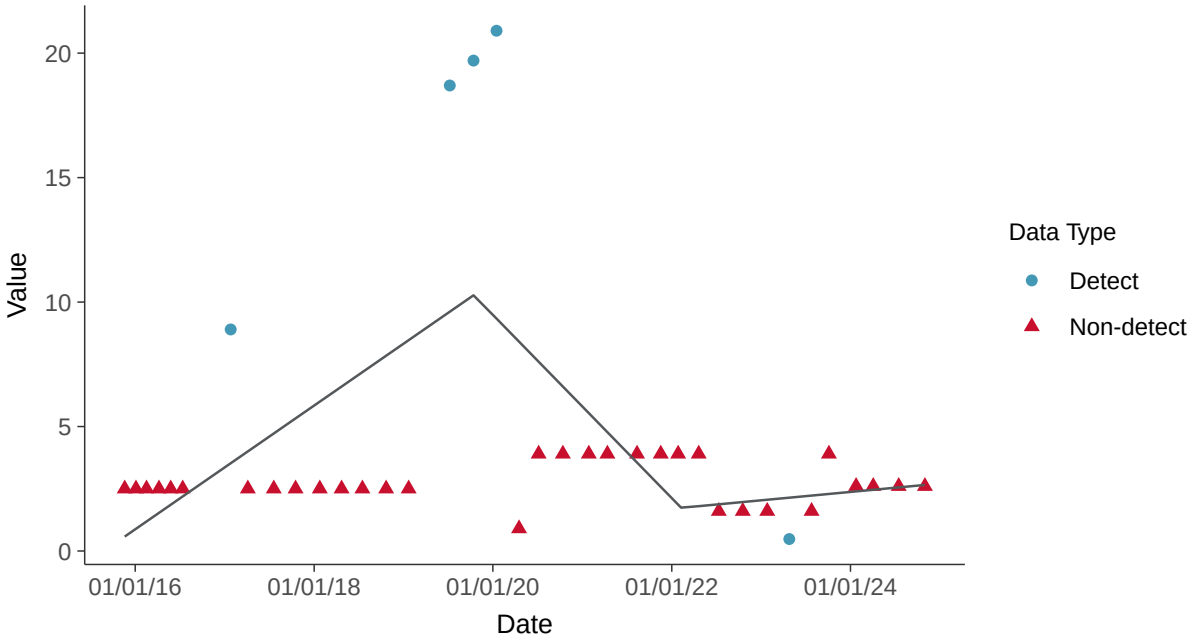
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-4 (ug/L)



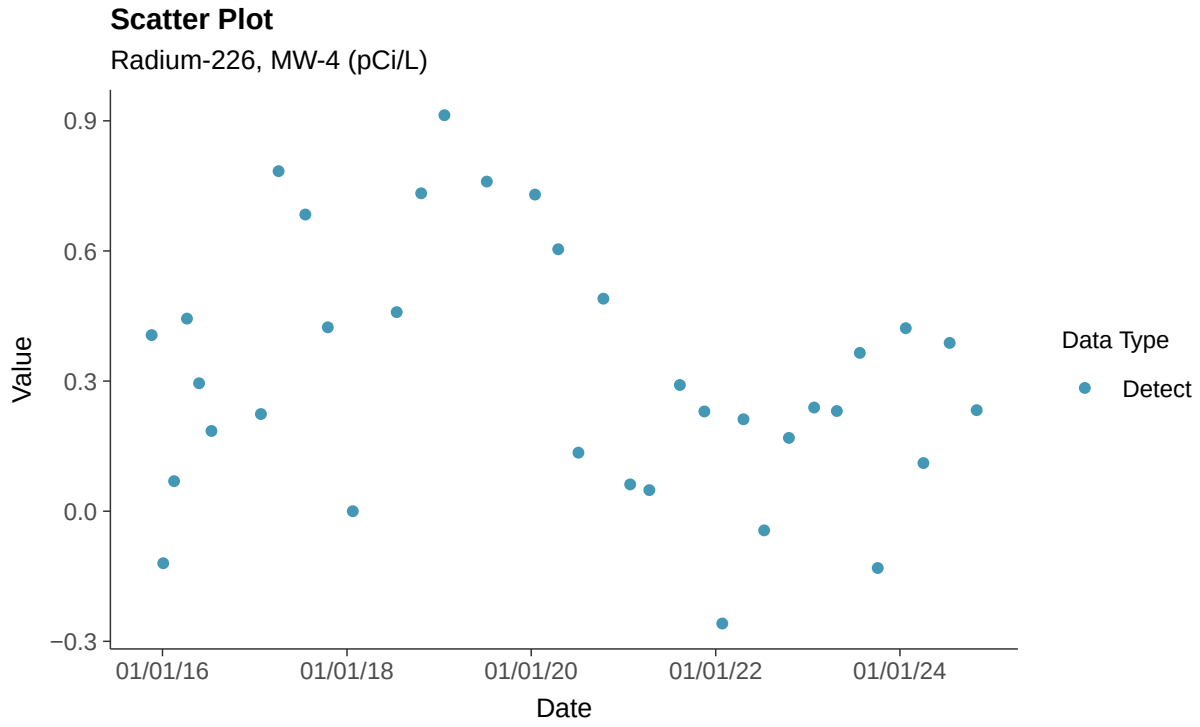
Trend Regression: Piecewise Linear-Linear-Linear

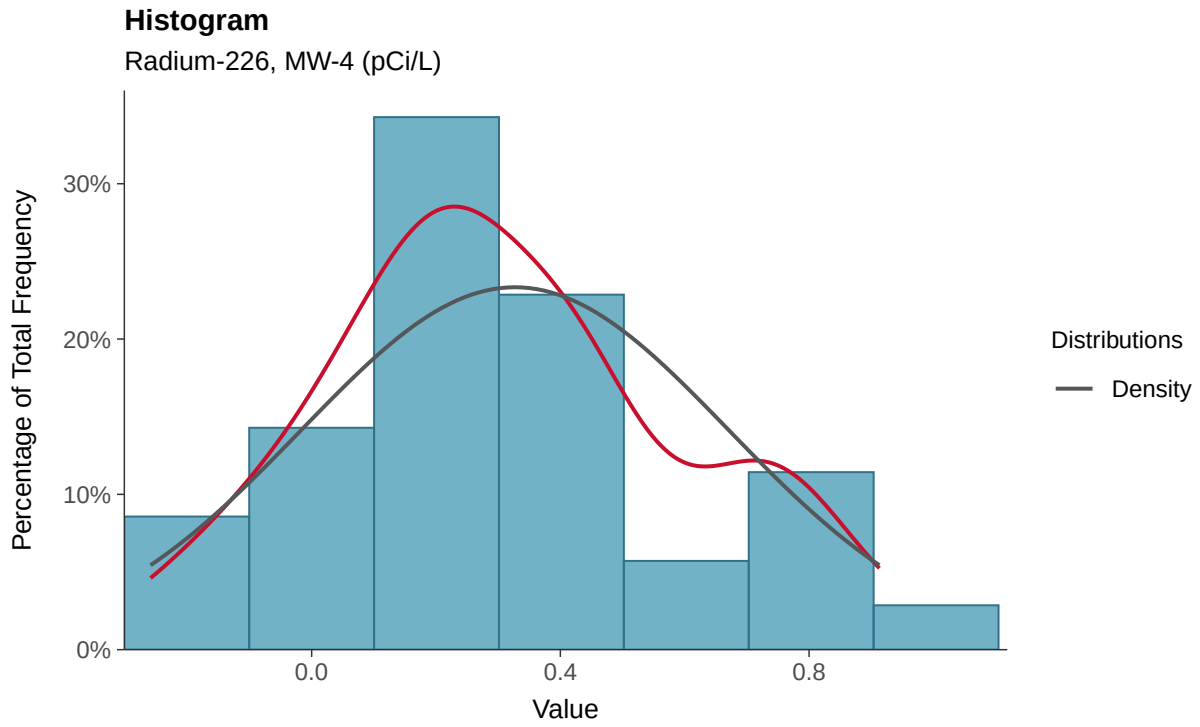
Molybdenum, MW-4 (ug/L)



App. IV: Radium-226, MW-4

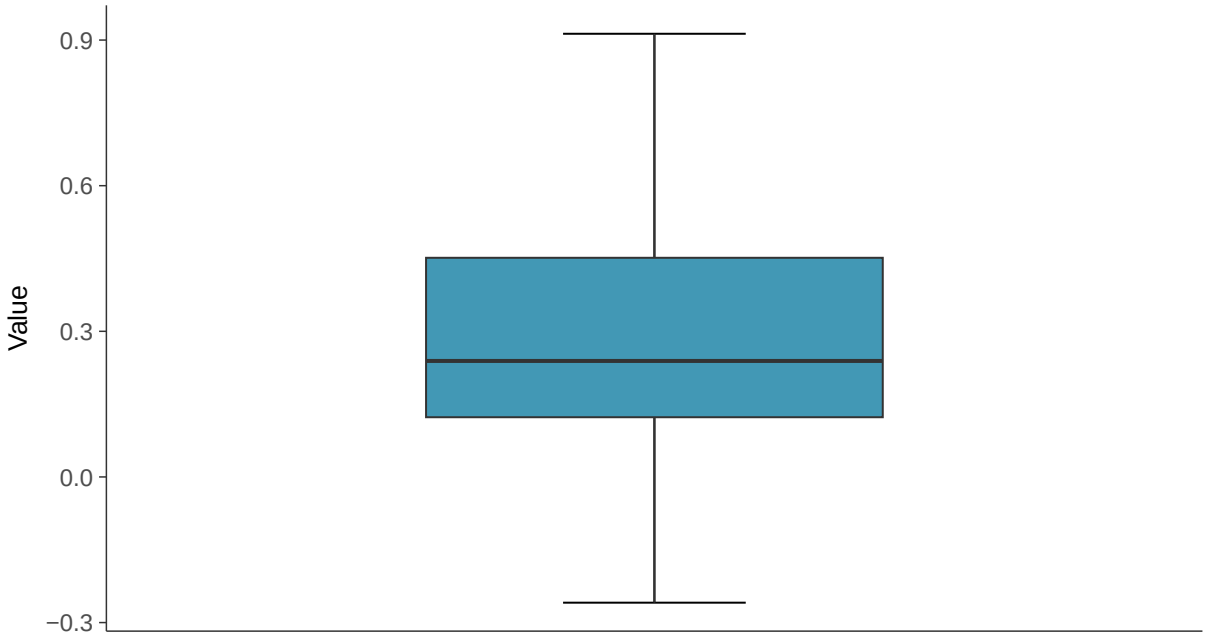
ID: 04_03_119





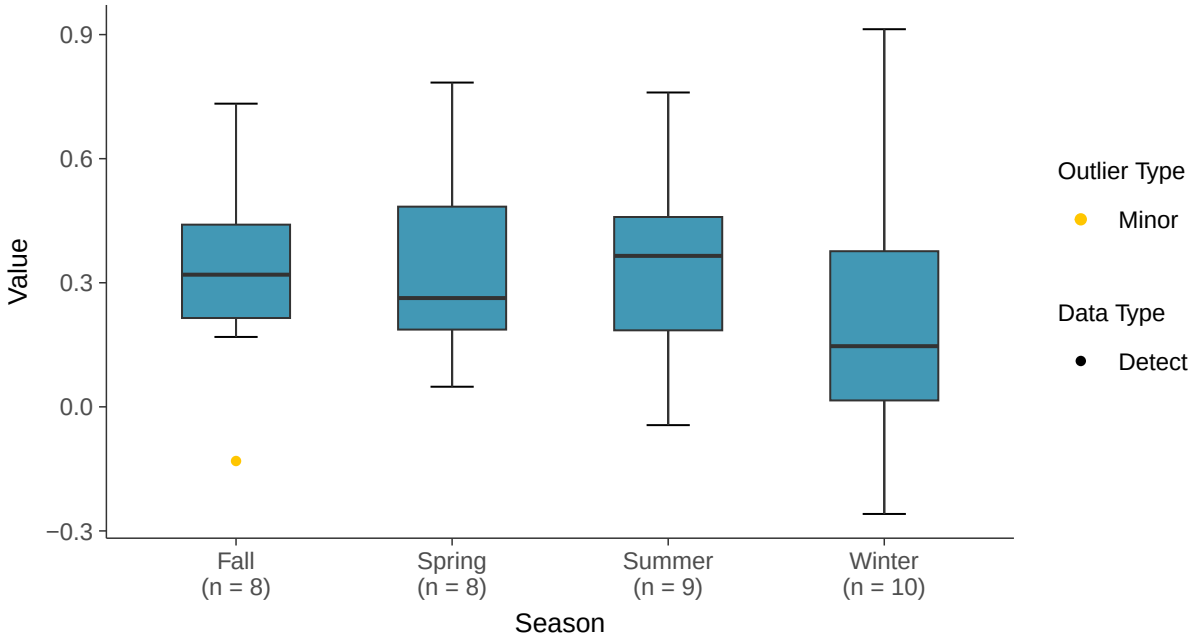
Boxplot

Radium-226, MW-4 (pCi/L)



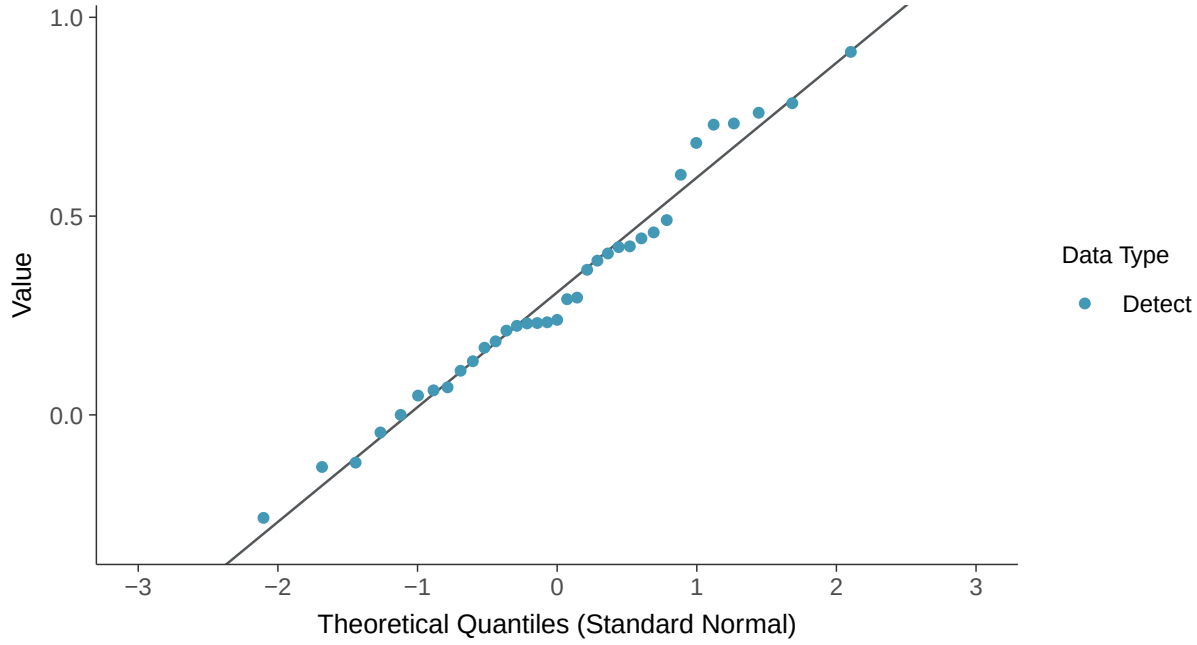
Boxplot by Season

Radium-226, MW-4 (pCi/L)



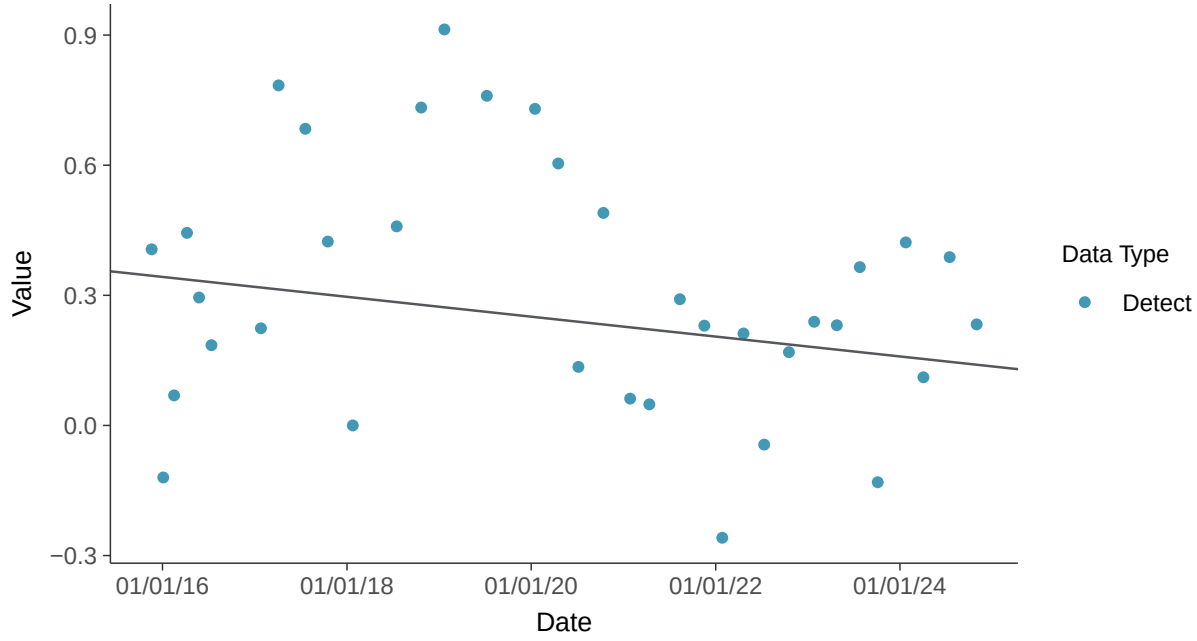
Normal Q-Q plot

Radium-226, MW-4 (pCi/L)



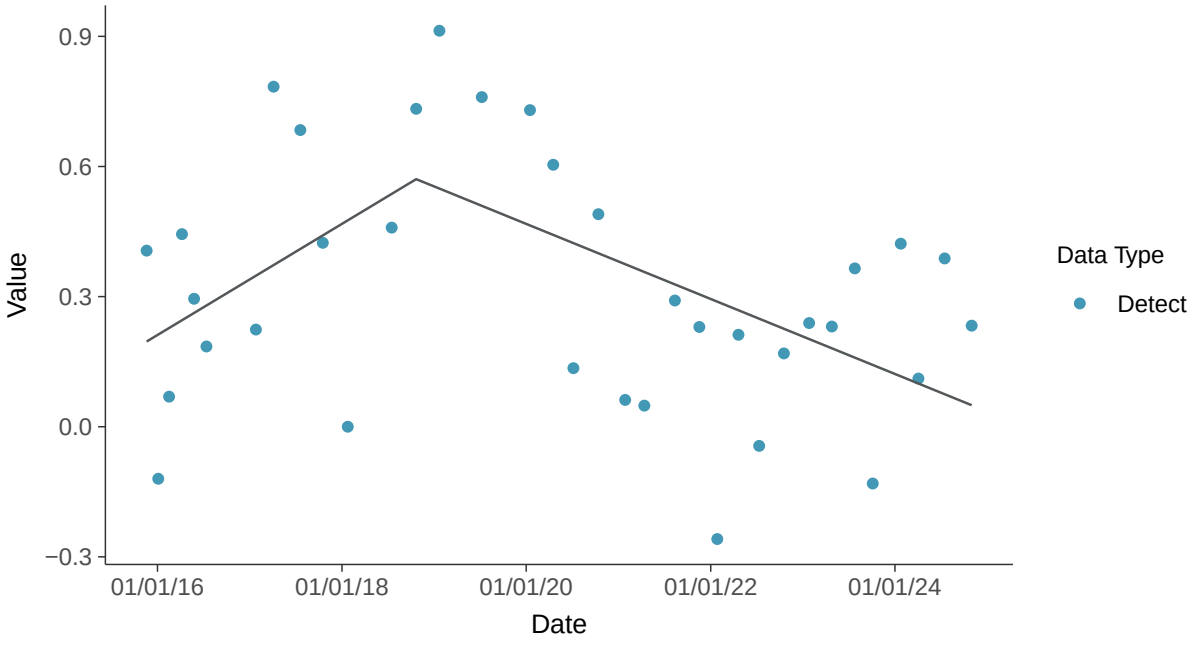
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-4 (pCi/L)



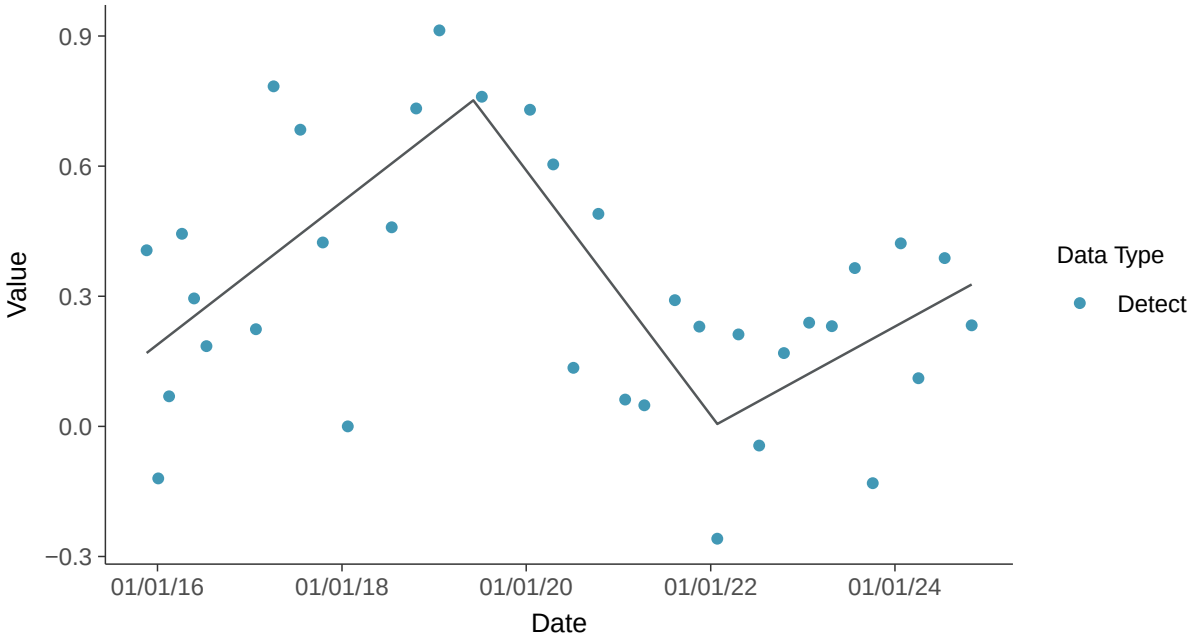
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-4 (pCi/L)



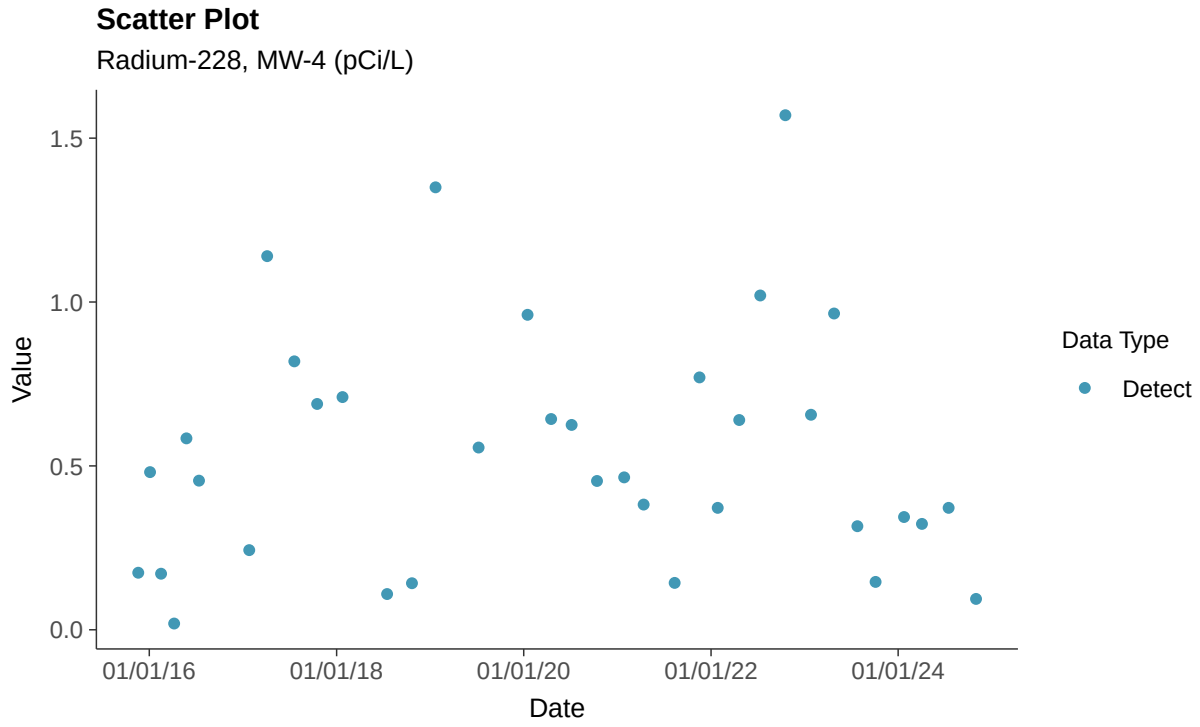
Trend Regression: Piecewise Linear-Linear-Linear

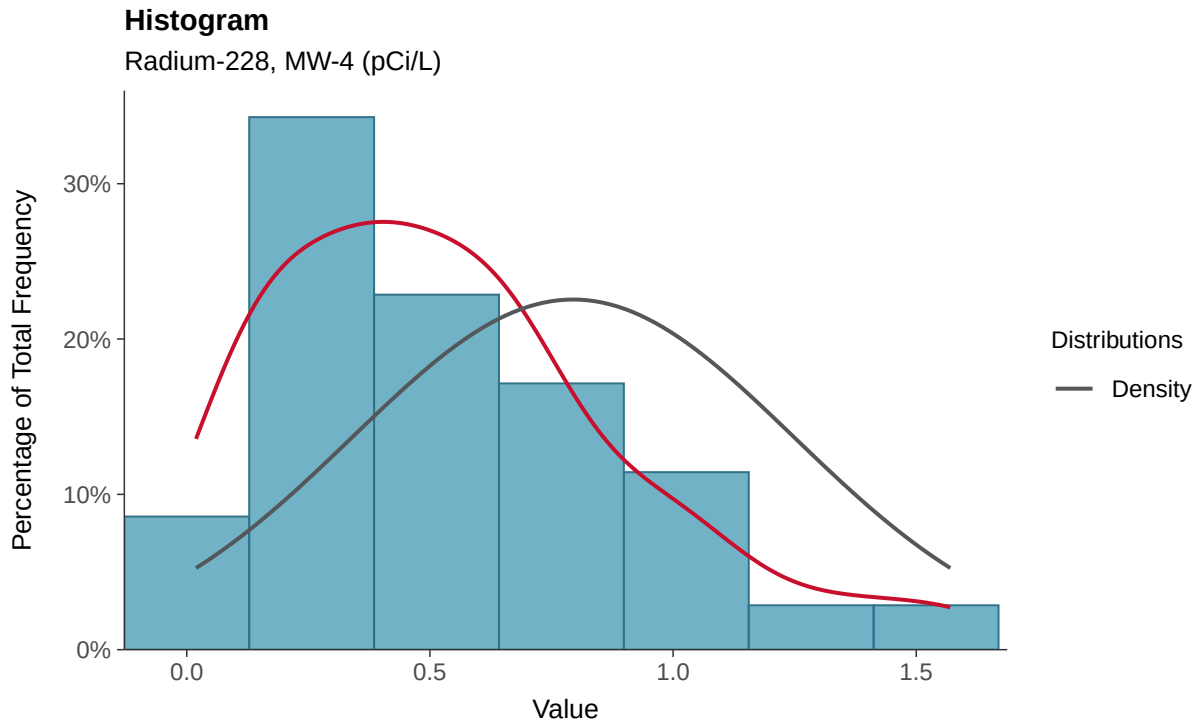
Radium-226, MW-4 (pCi/L)



App. IV: Radium-228, MW-4

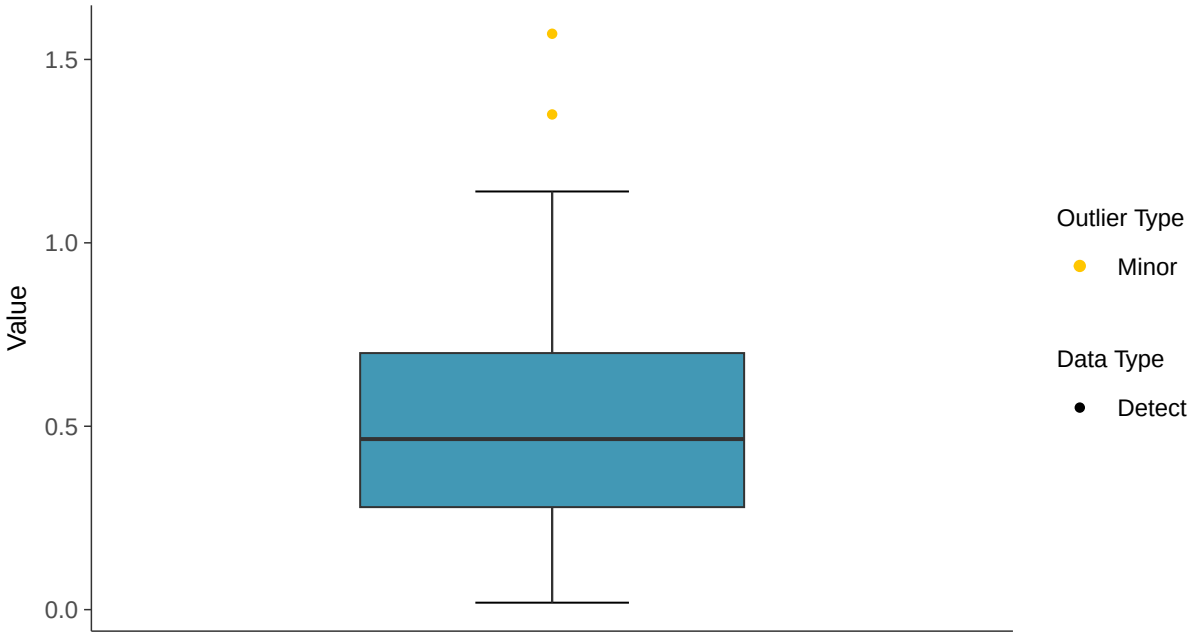
ID: 04_03_120





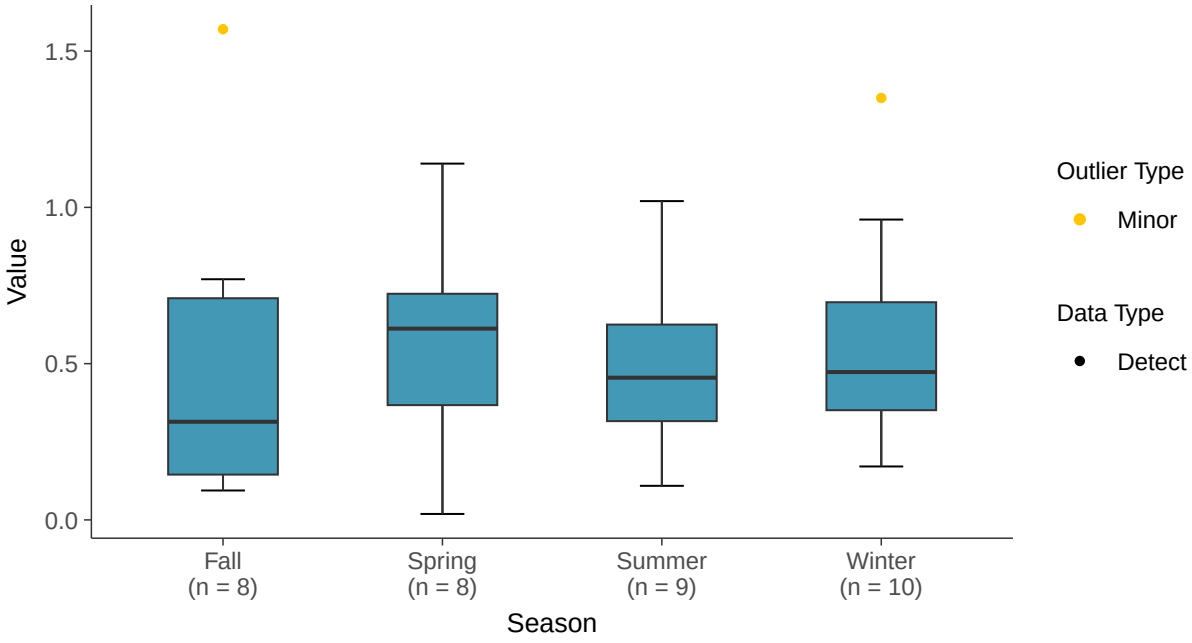
Boxplot

Radium-228, MW-4 (pCi/L)



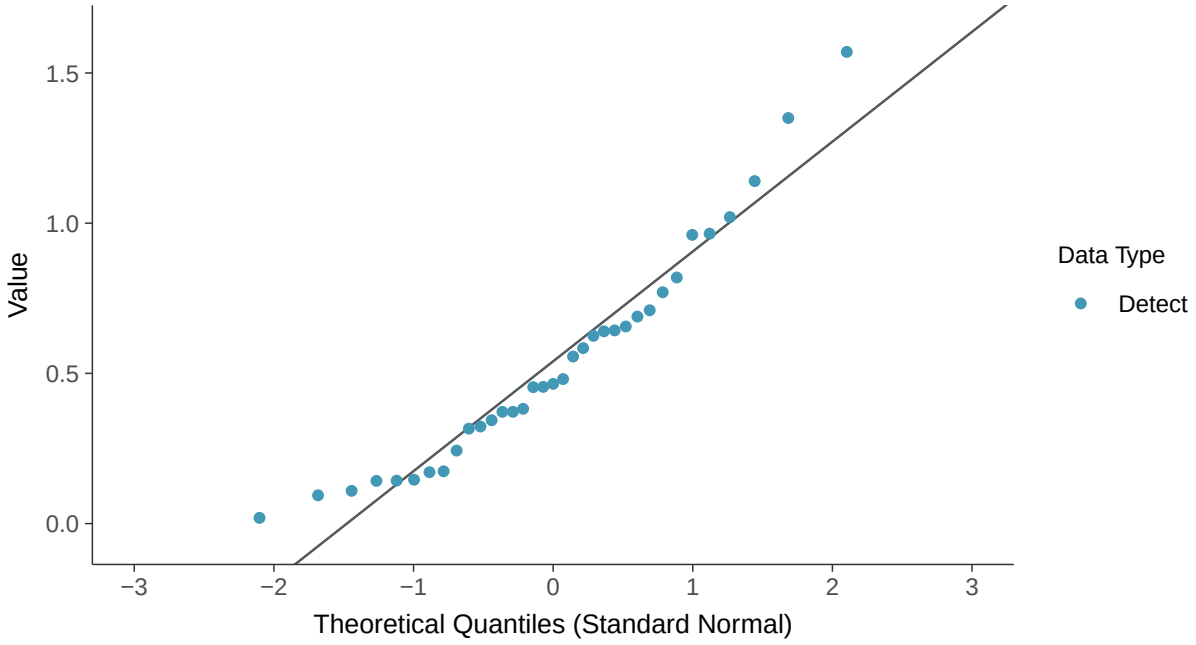
Boxplot by Season

Radium-228, MW-4 (pCi/L)



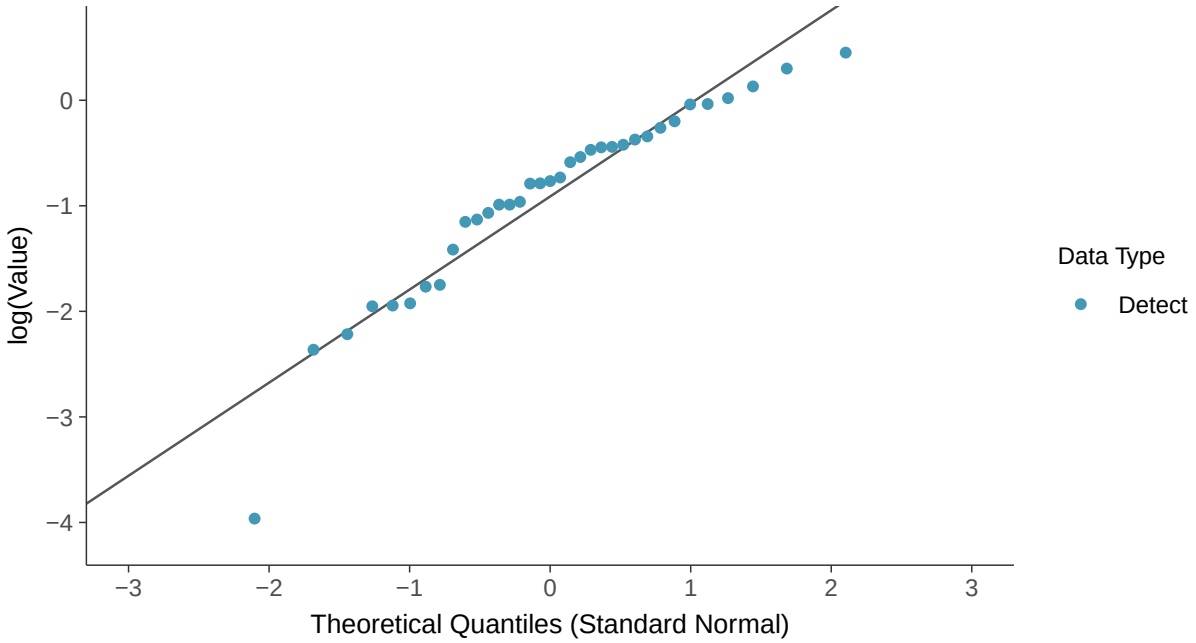
Normal Q-Q plot

Radium-228, MW-4 (pCi/L)



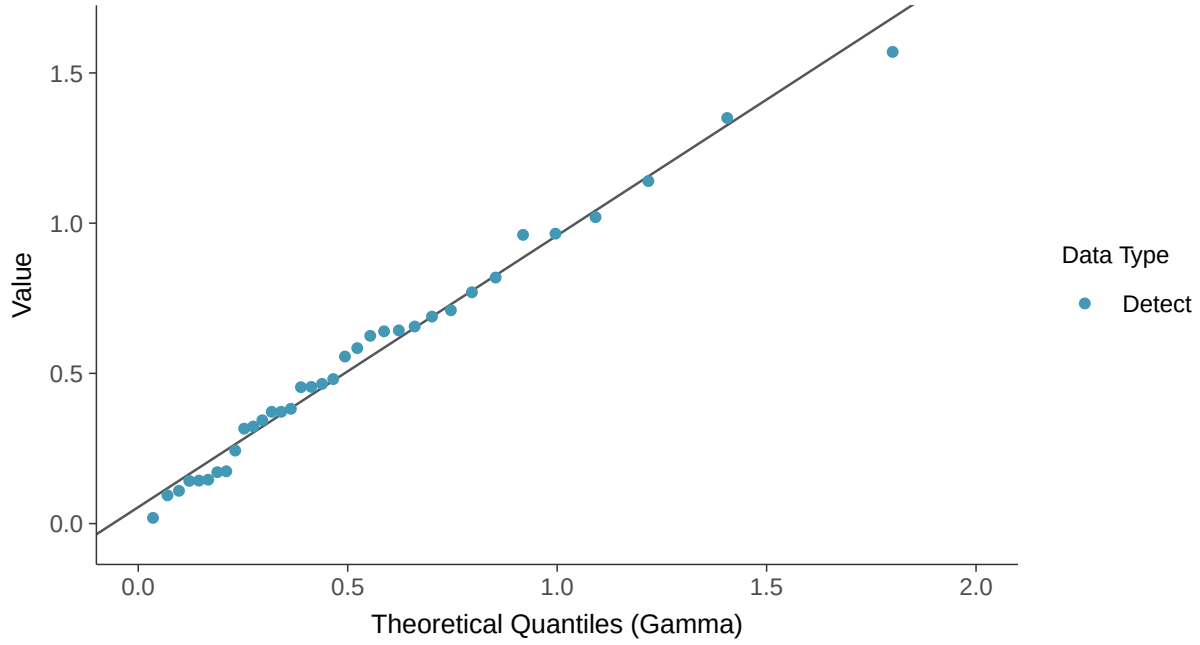
Lognormal Q-Q plot

Radium-228, MW-4 (pCi/L)



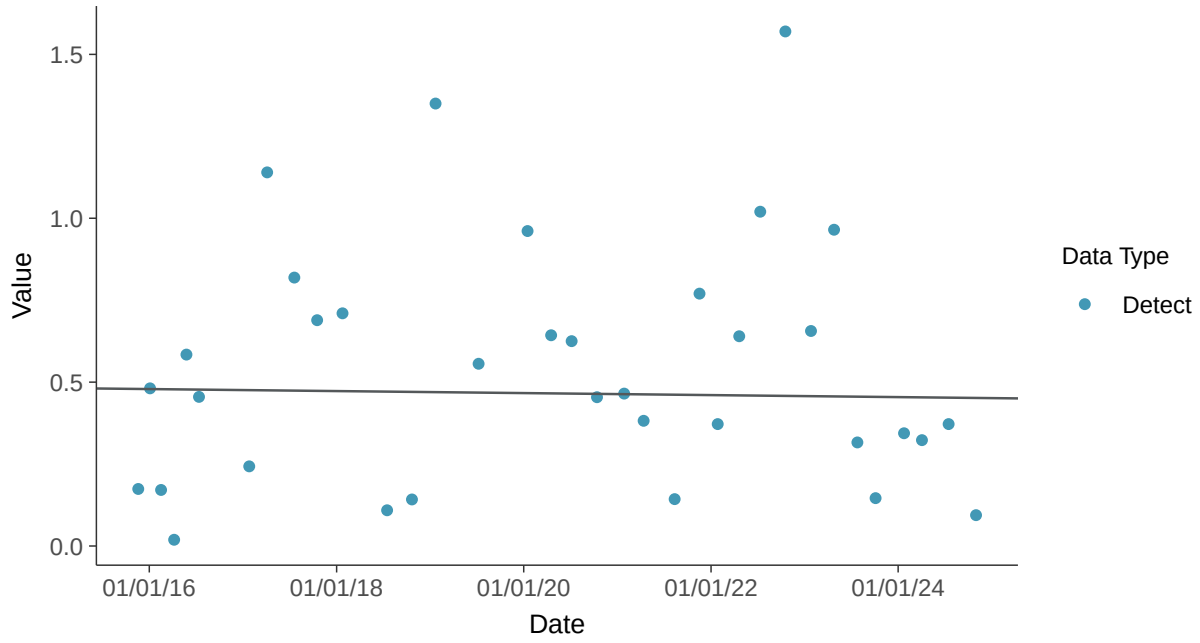
Gamma Q-Q plot

Radium-228, MW-4 (pCi/L)



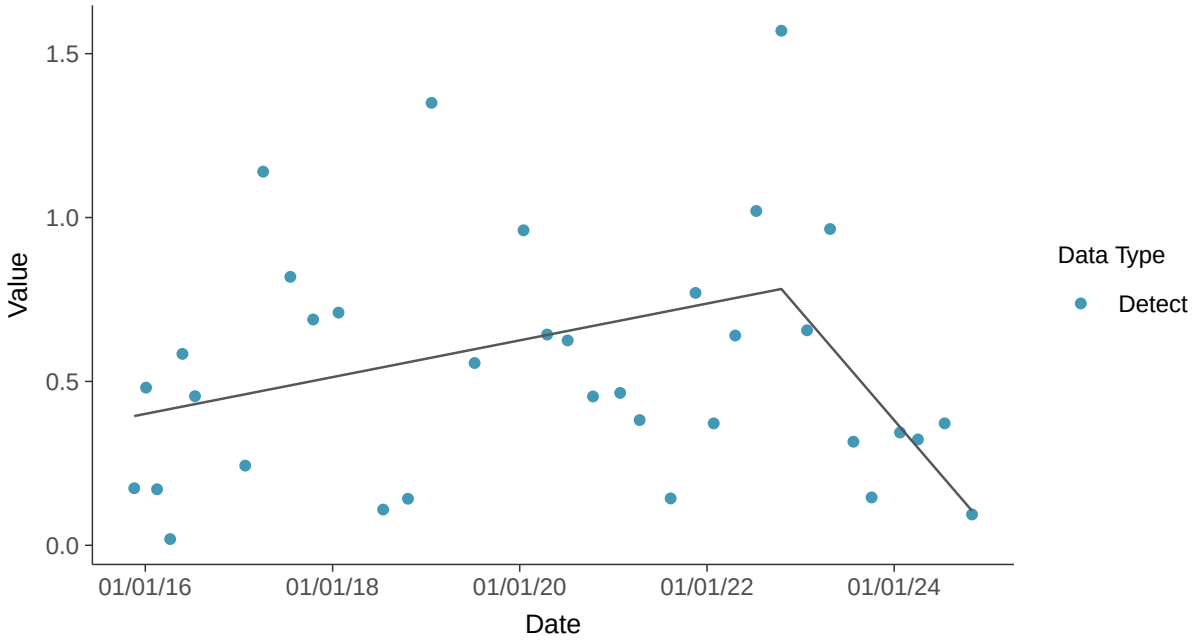
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-4 (pCi/L)



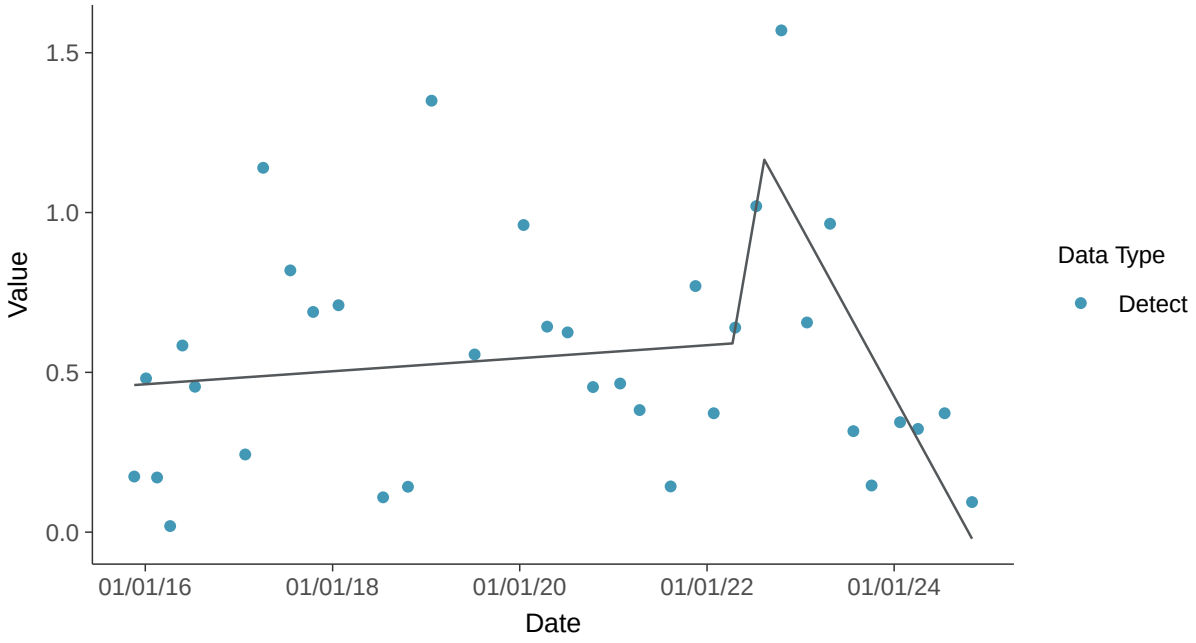
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-4 (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-228, MW-4 (pCi/L)

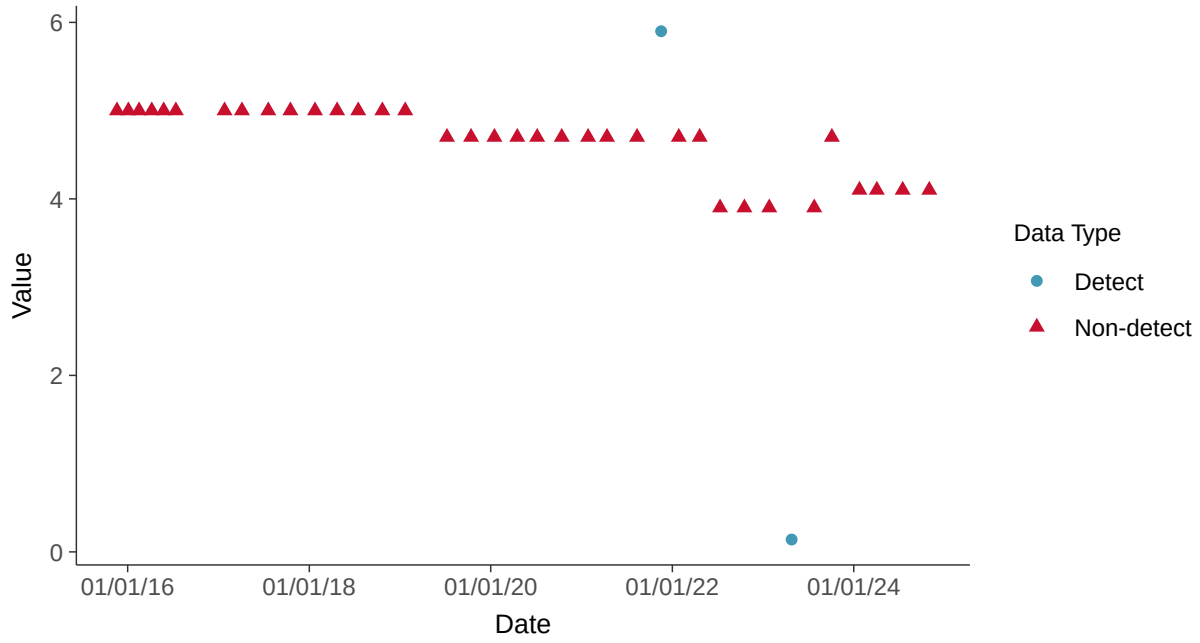


App. IV: Selenium, MW-4

ID: 04_03_121

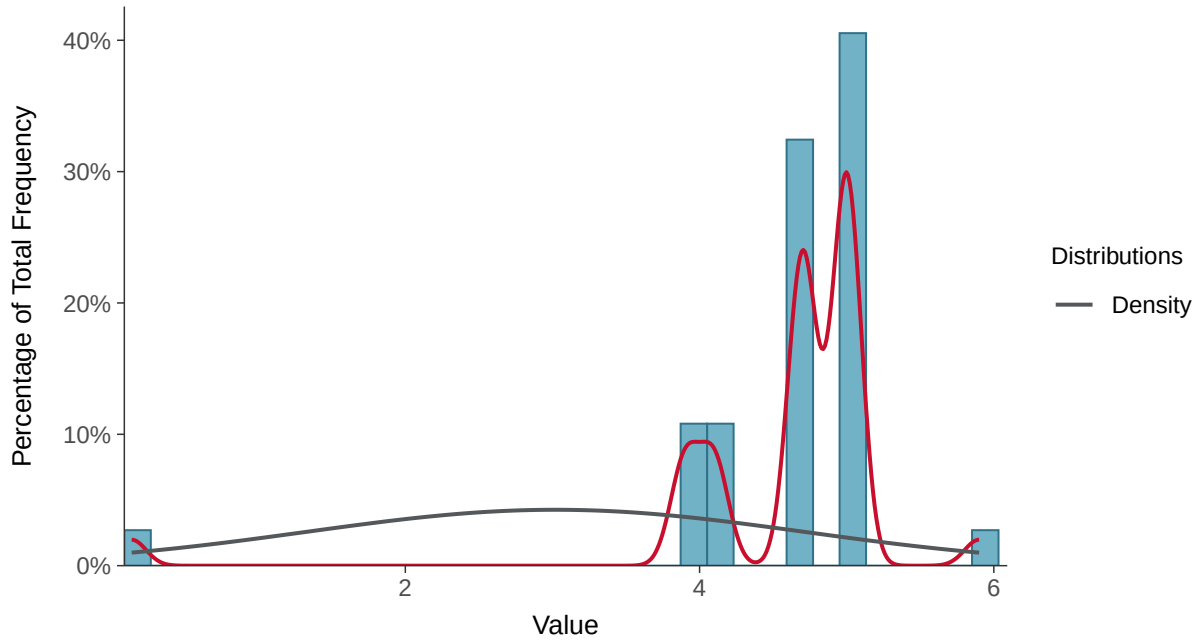
Scatter Plot

Selenium, MW-4 (ug/L)



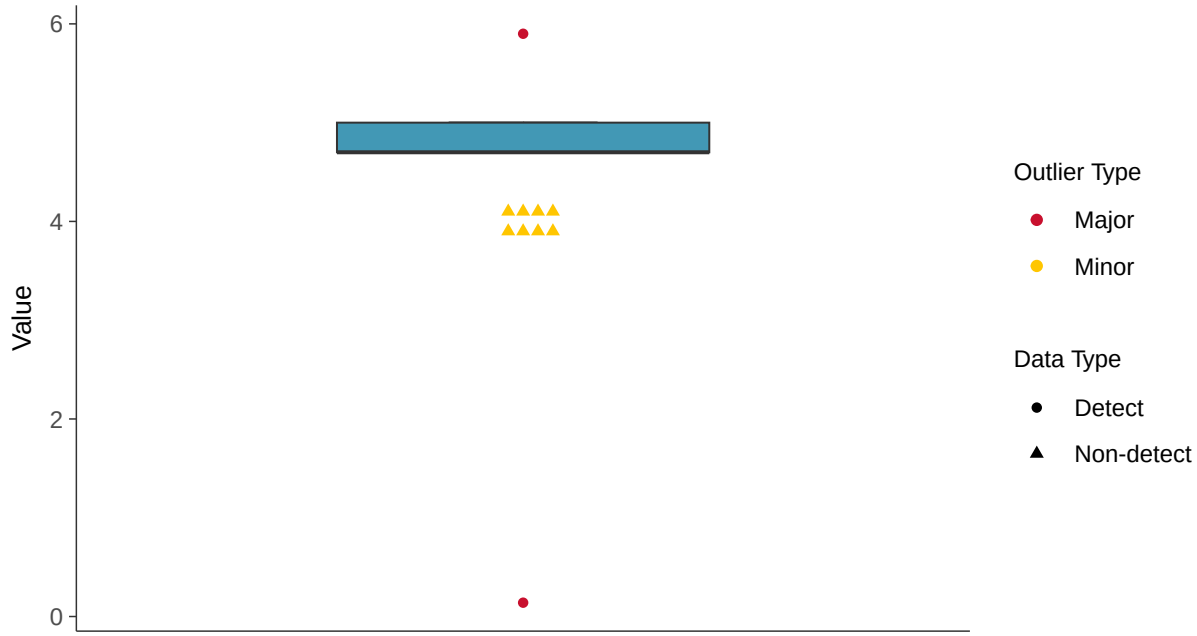
Histogram

Selenium, MW-4 (ug/L)



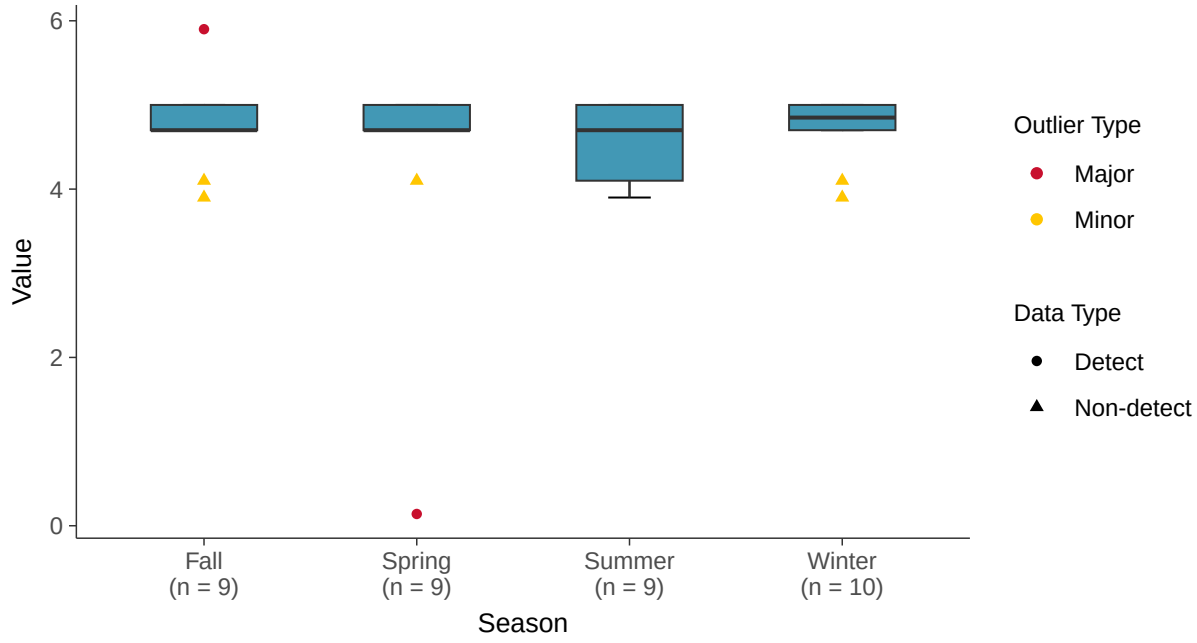
Boxplot

Selenium, MW-4 (ug/L)



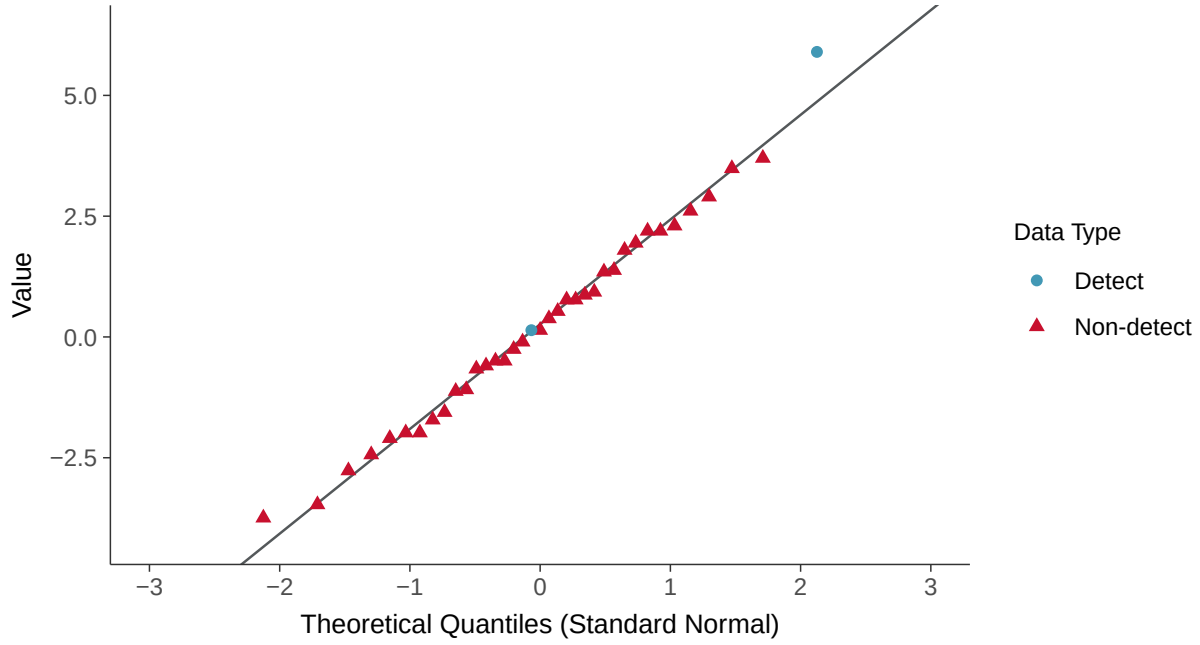
Boxplot by Season

Selenium, MW-4 (ug/L)



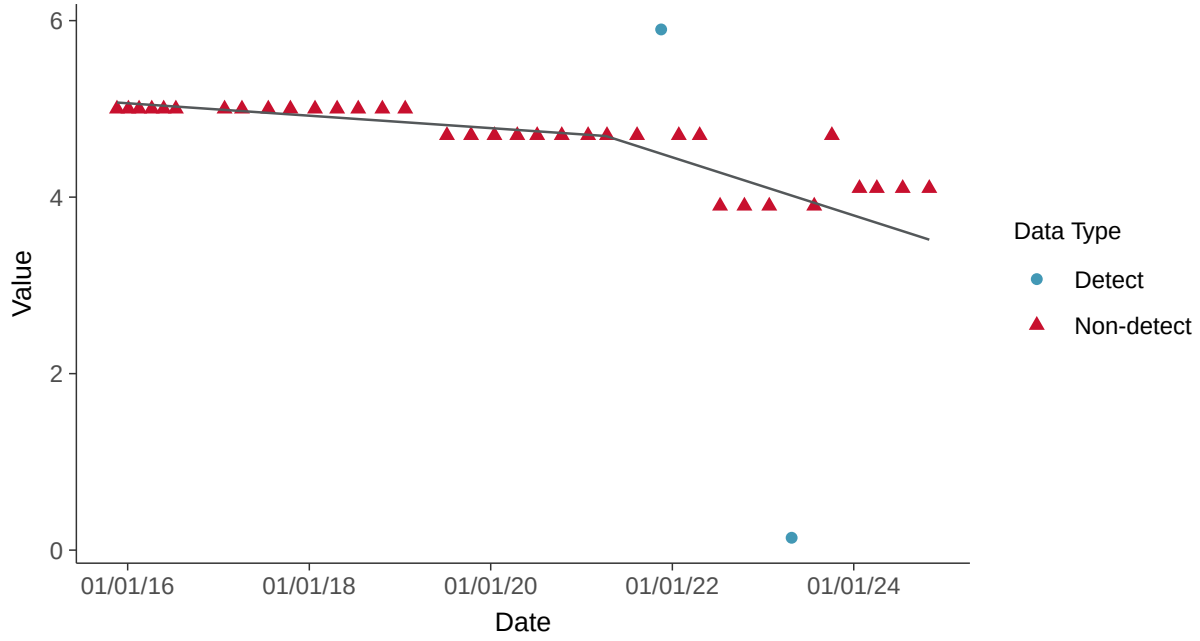
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-4 (ug/L)



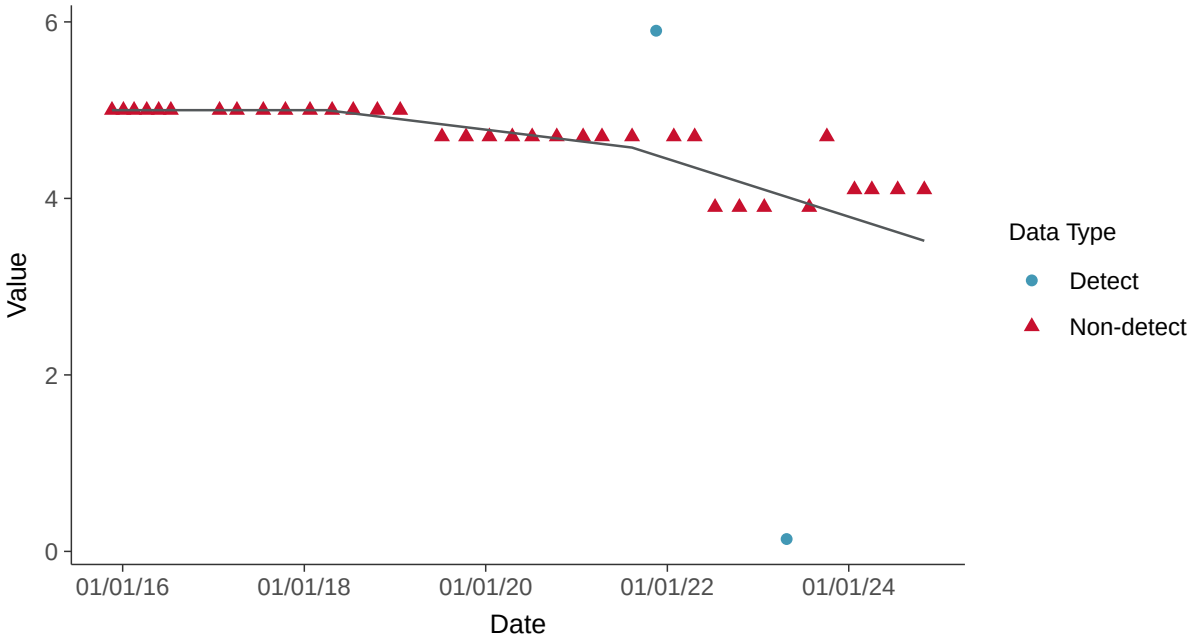
Trend Regression: Piecewise Linear-Linear

Selenium, MW-4 (ug/L)



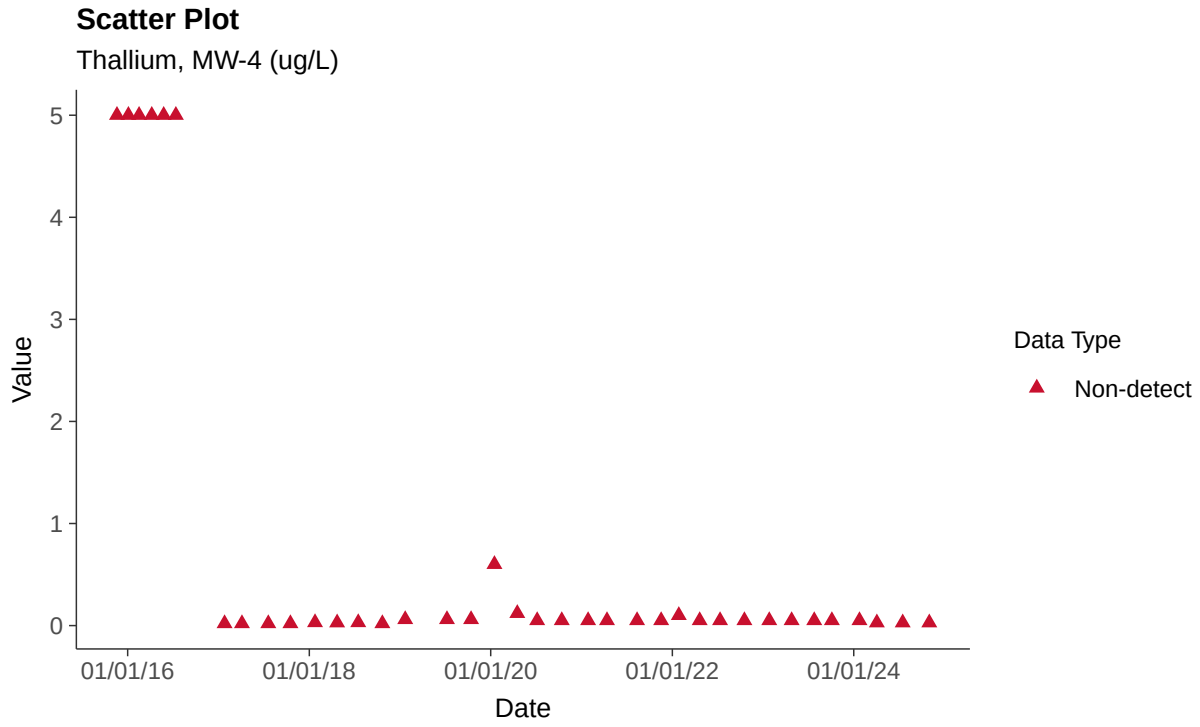
Trend Regression: Piecewise Linear-Linear-Linear

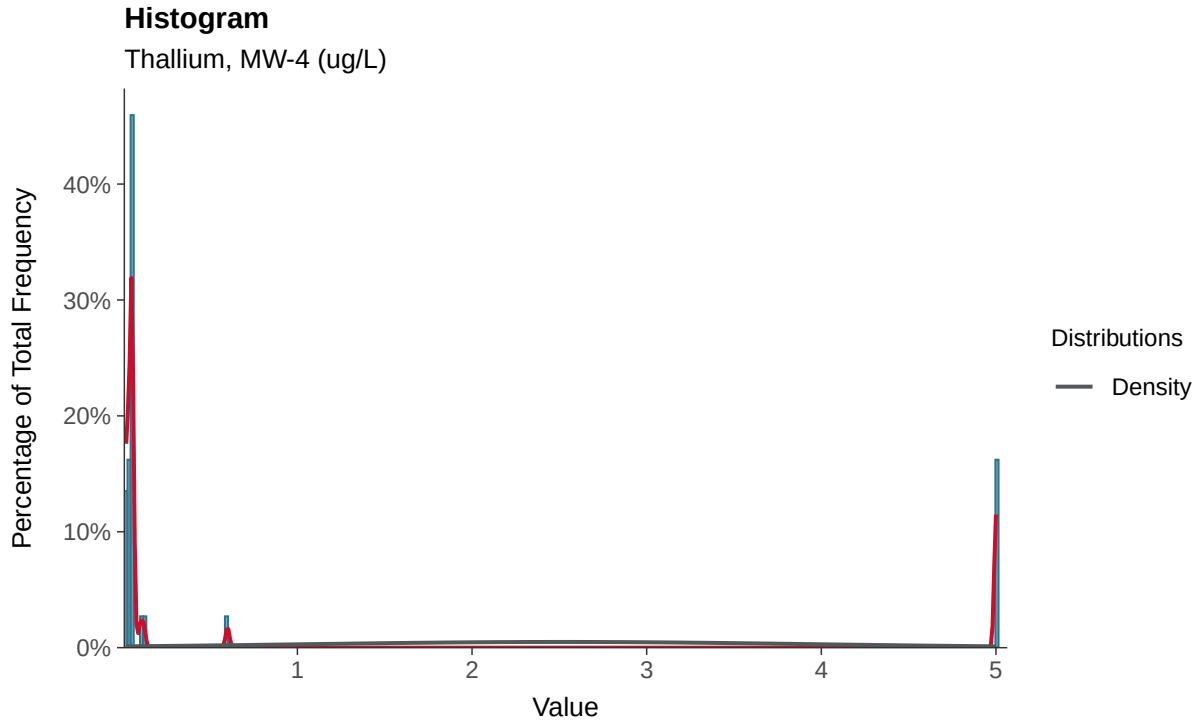
Selenium, MW-4 (ug/L)



App. IV: Thallium, MW-4

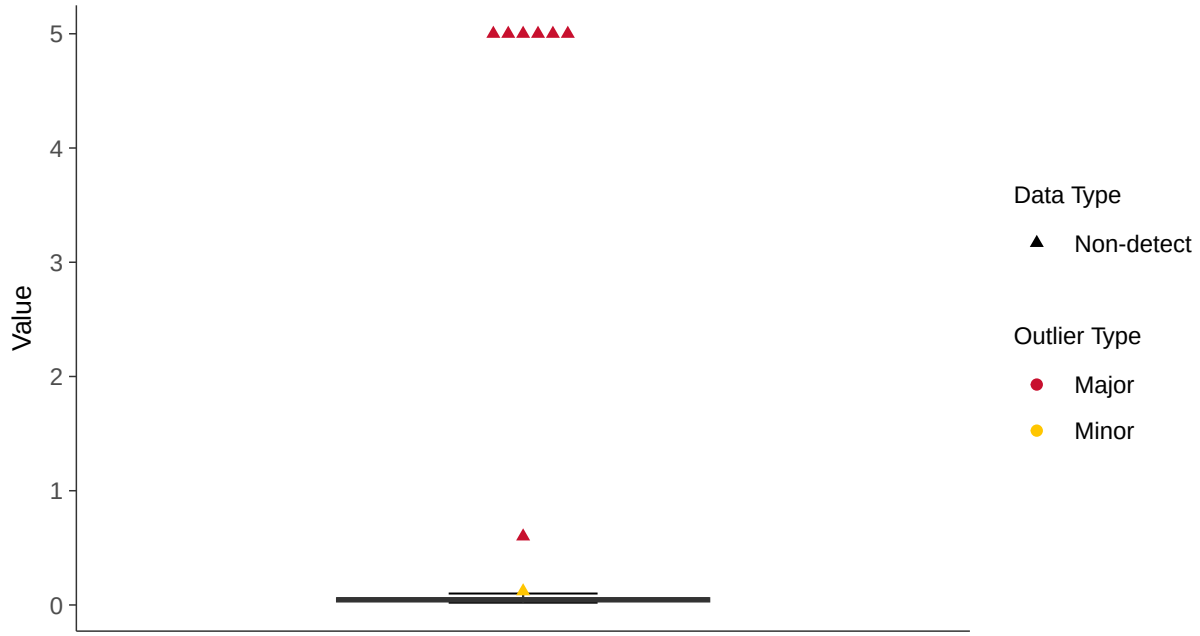
ID: 04_03_124





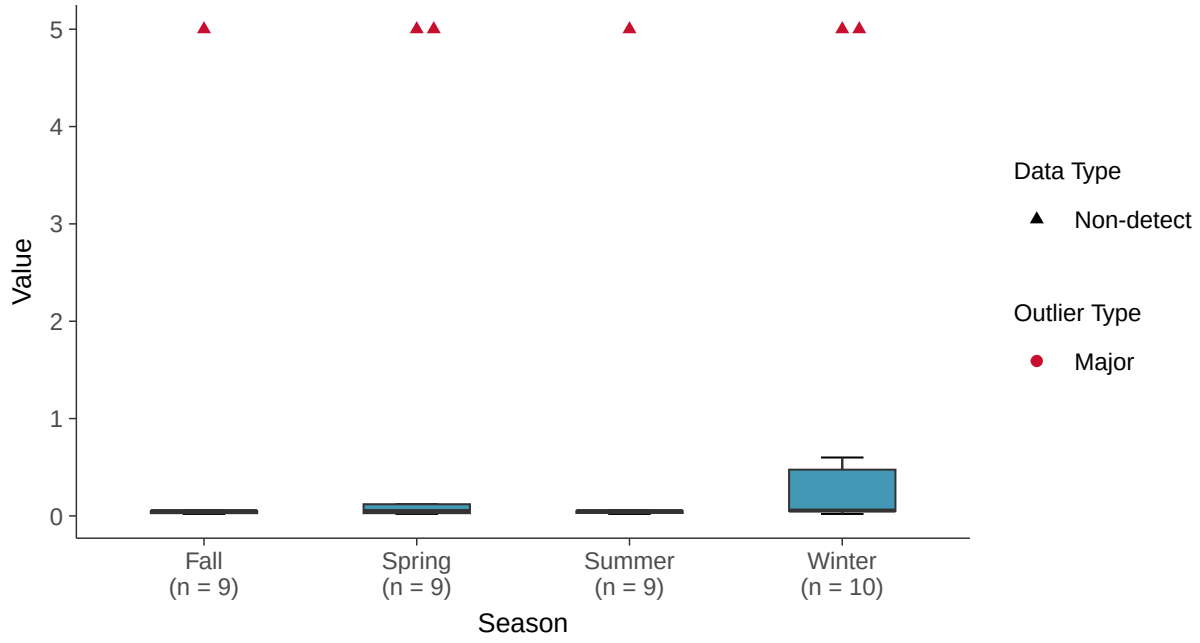
Boxplot

Thallium, MW-4 (ug/L)



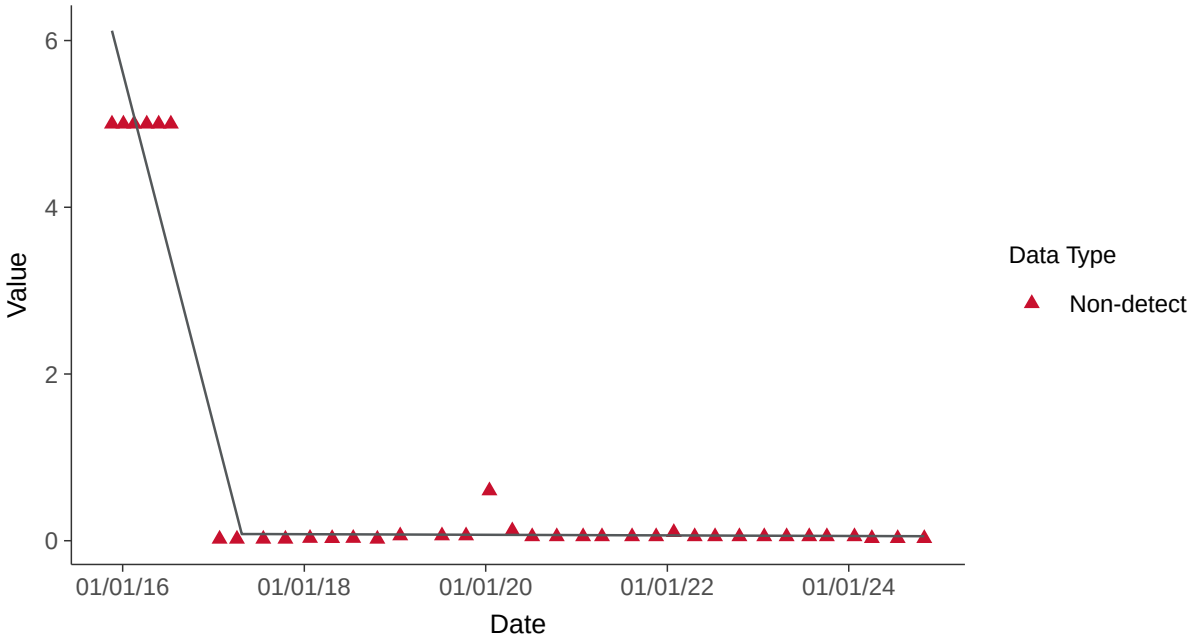
Boxplot by Season

Thallium, MW-4 (ug/L)



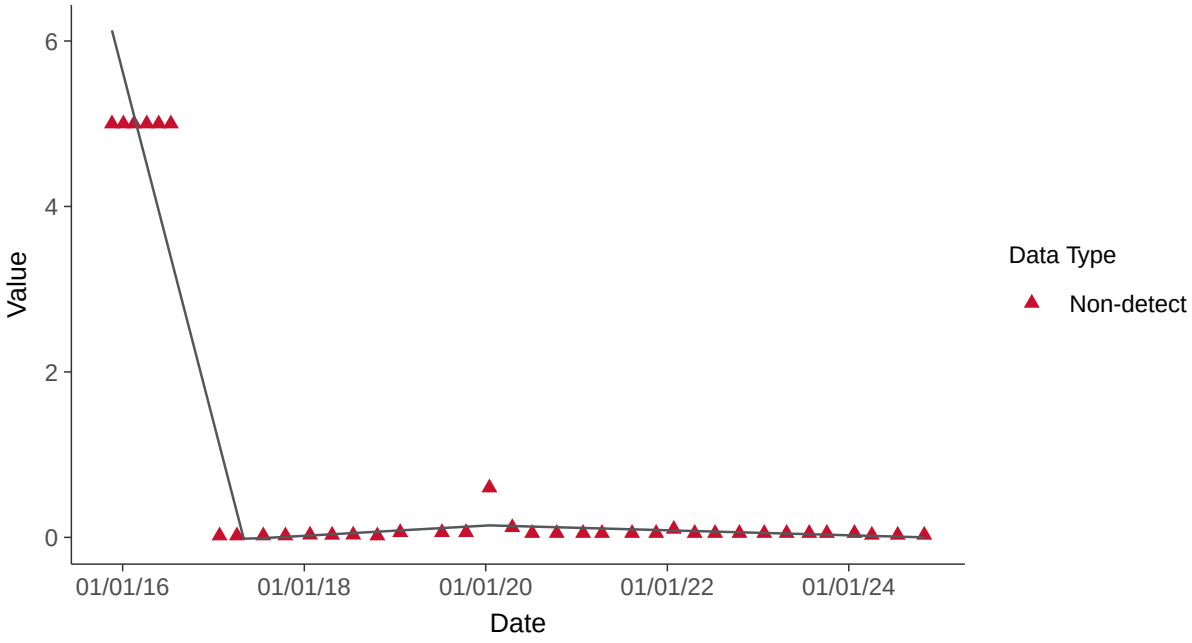
Trend Regression: Piecewise Linear-Linear

Thallium, MW-4 (ug/L)



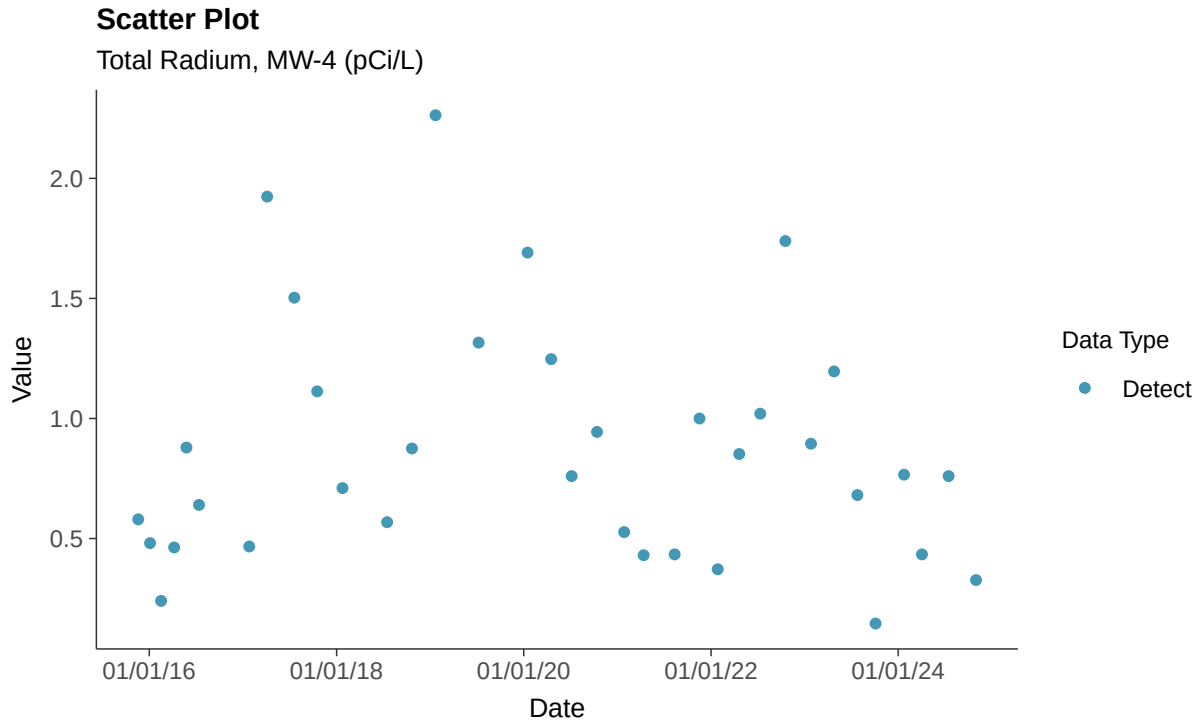
Trend Regression: Piecewise Linear-Linear-Linear

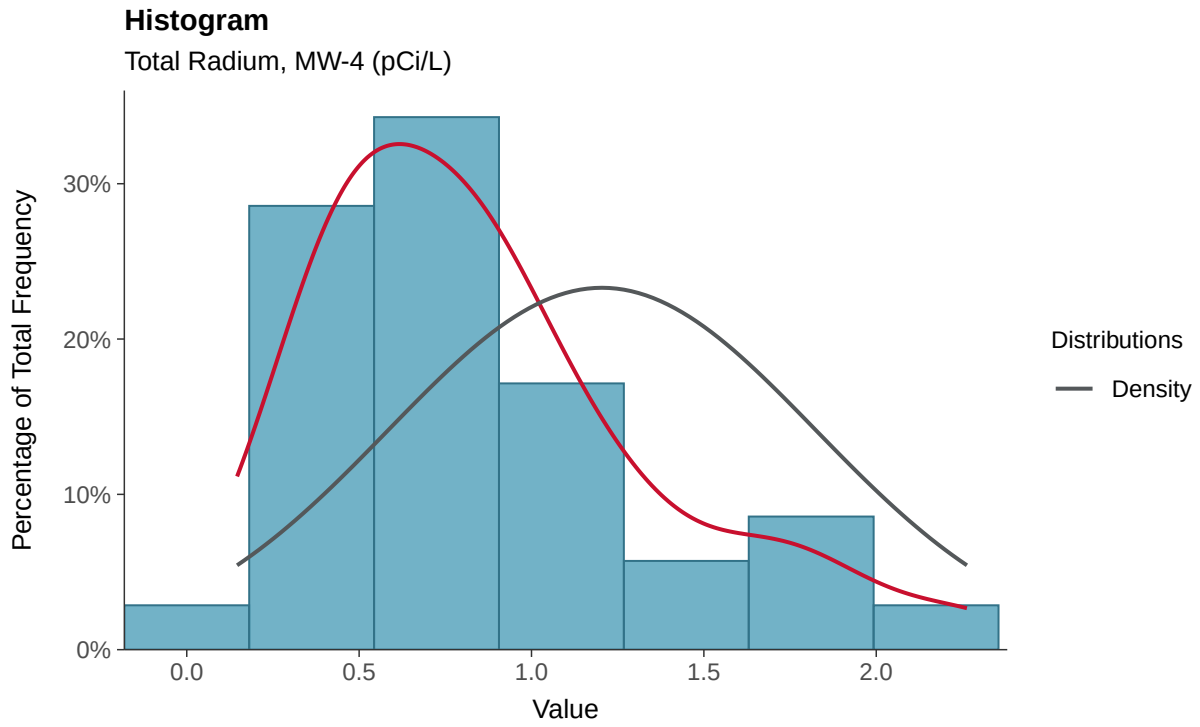
Thallium, MW-4 (ug/L)



App. IV: Total Radium, MW-4

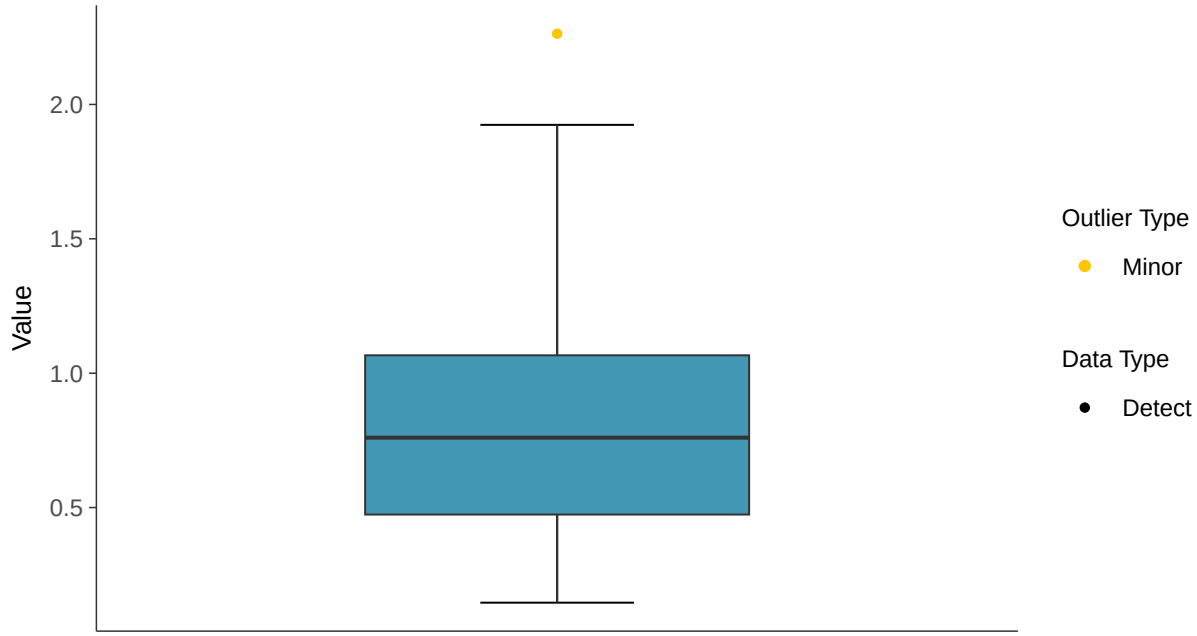
ID: 04_03_126





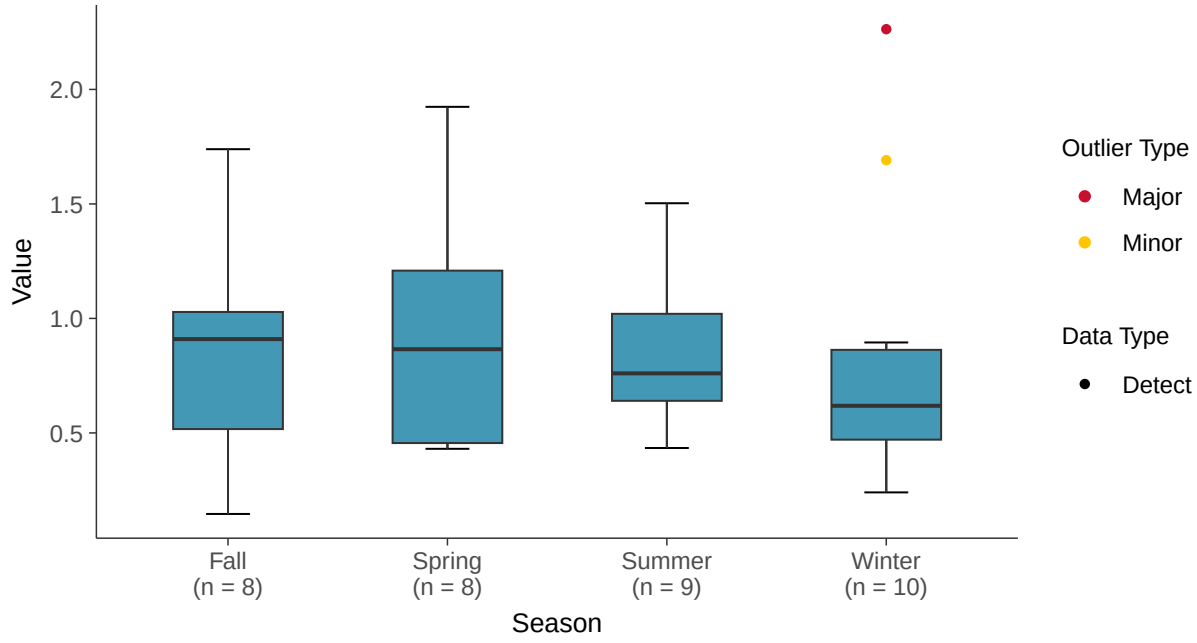
Boxplot

Total Radium, MW-4 (pCi/L)



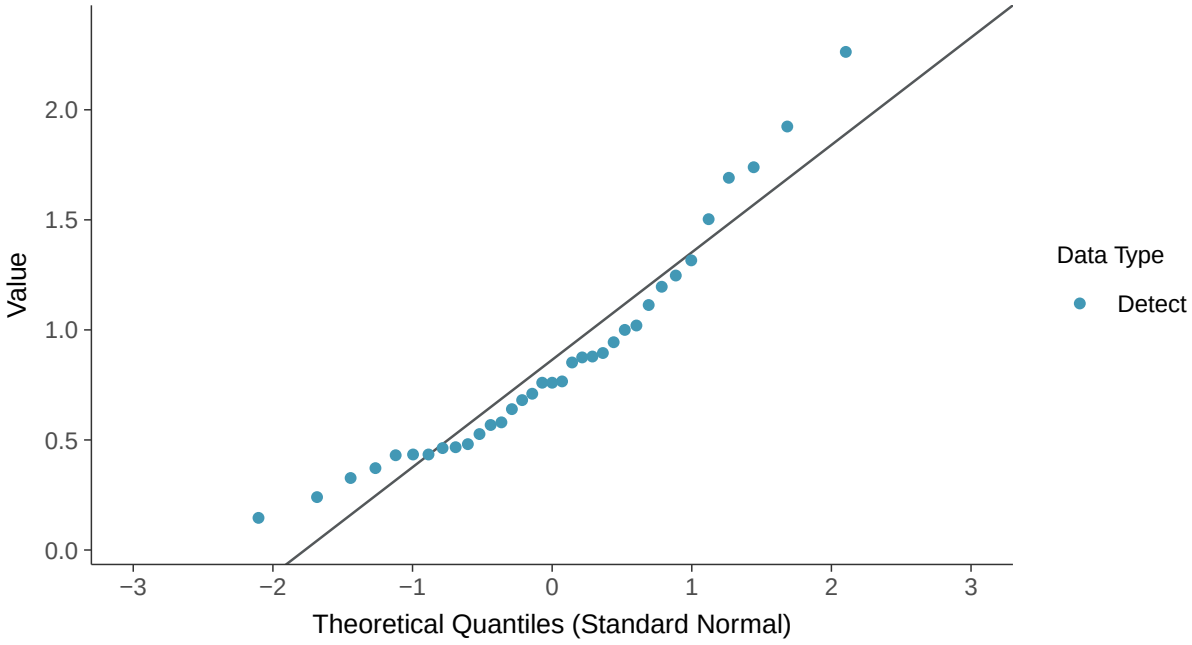
Boxplot by Season

Total Radium, MW-4 (pCi/L)



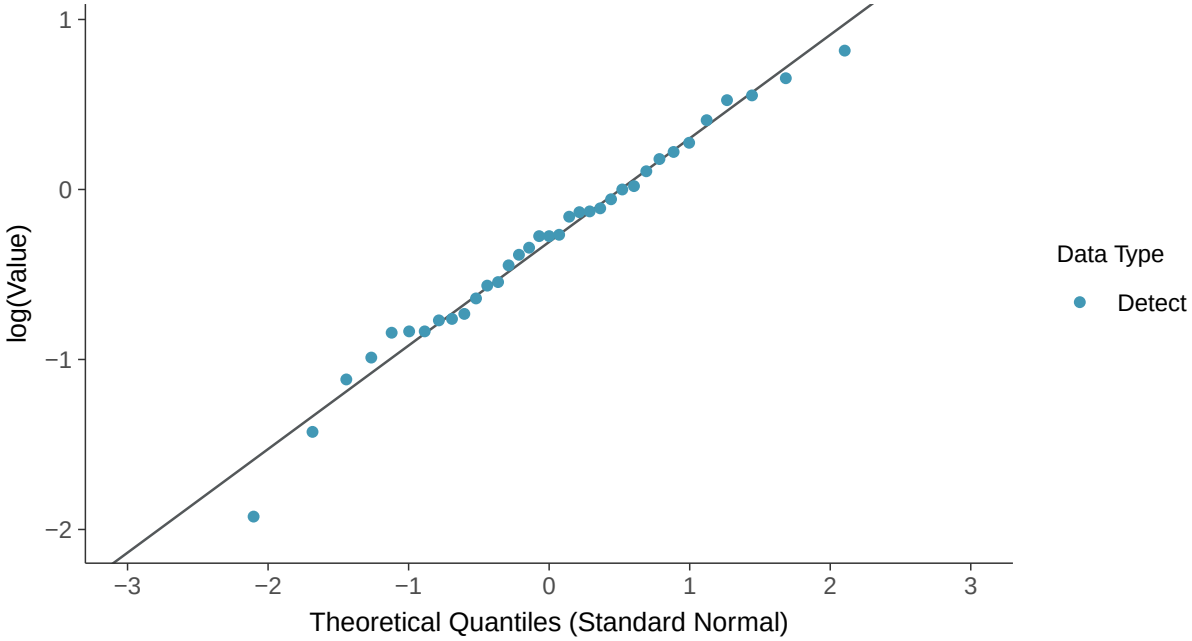
Normal Q-Q plot

Total Radium, MW-4 (pCi/L)



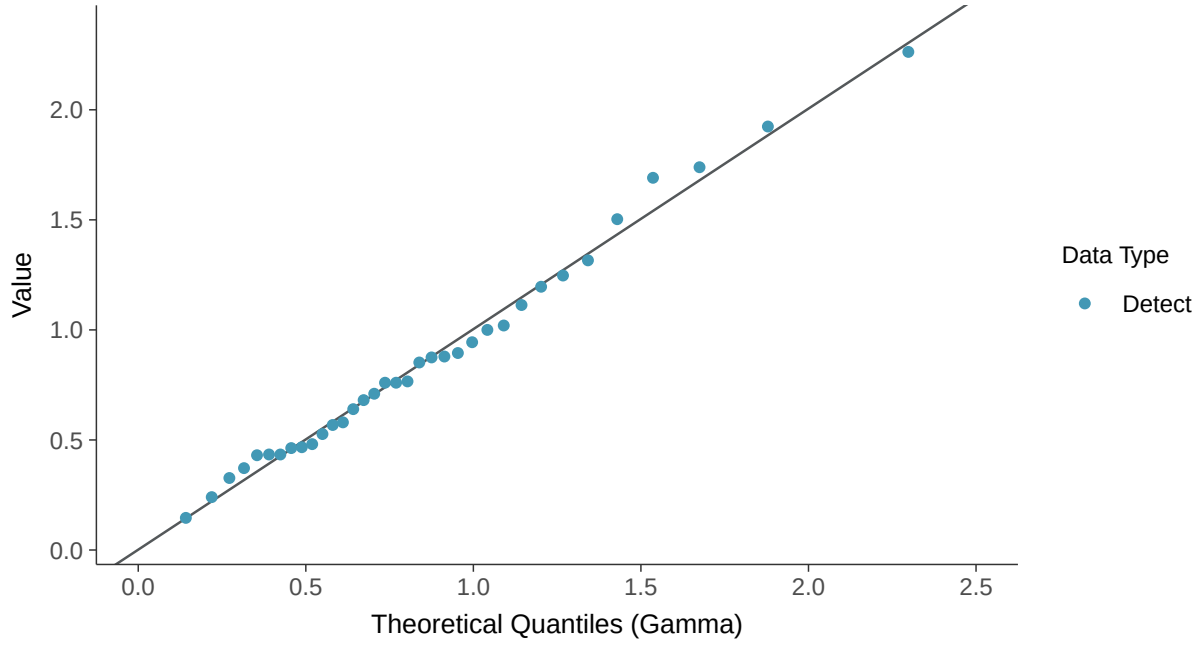
Lognormal Q-Q plot

Total Radium, MW-4 (pCi/L)



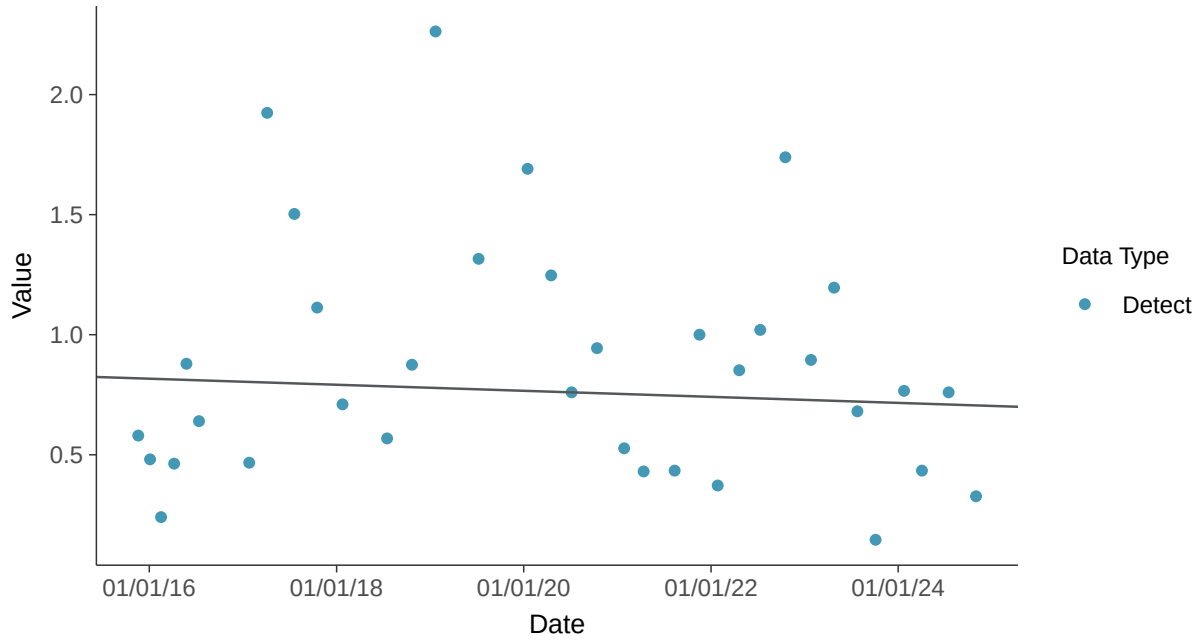
Gamma Q-Q plot

Total Radium, MW-4 (pCi/L)



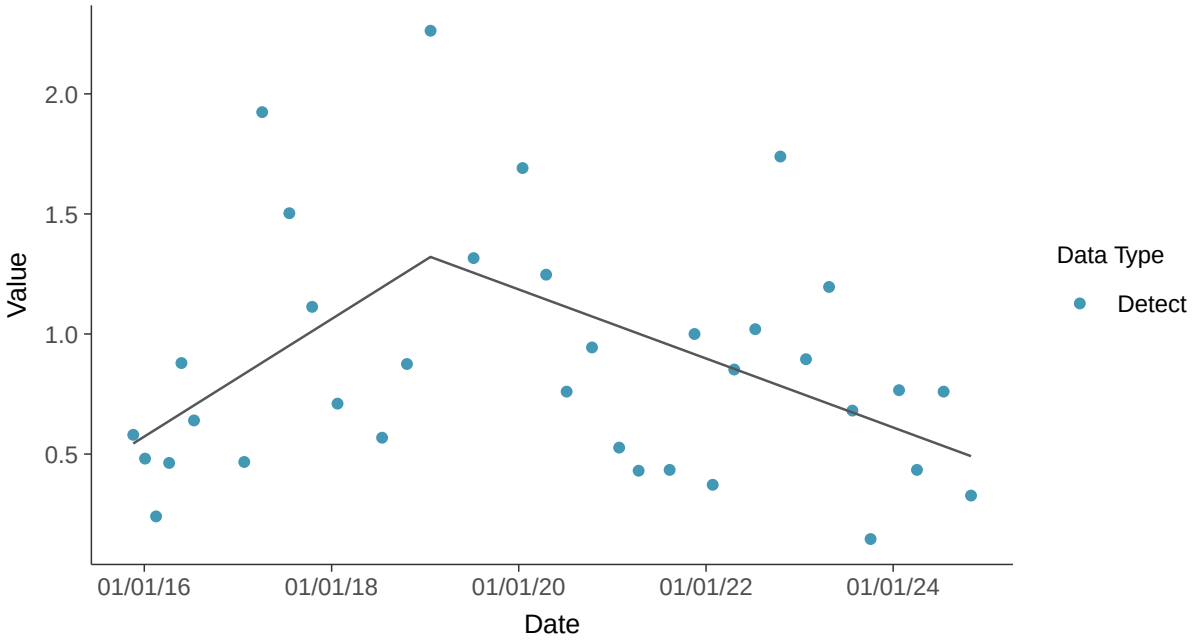
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-4 (pCi/L)



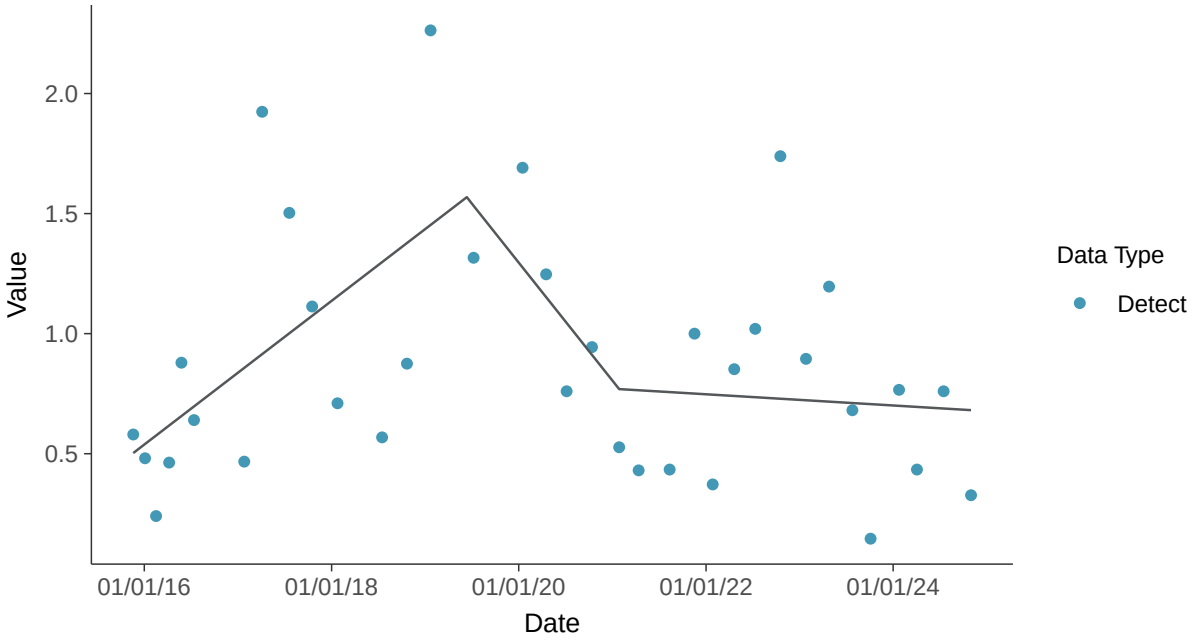
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-4 (pCi/L)



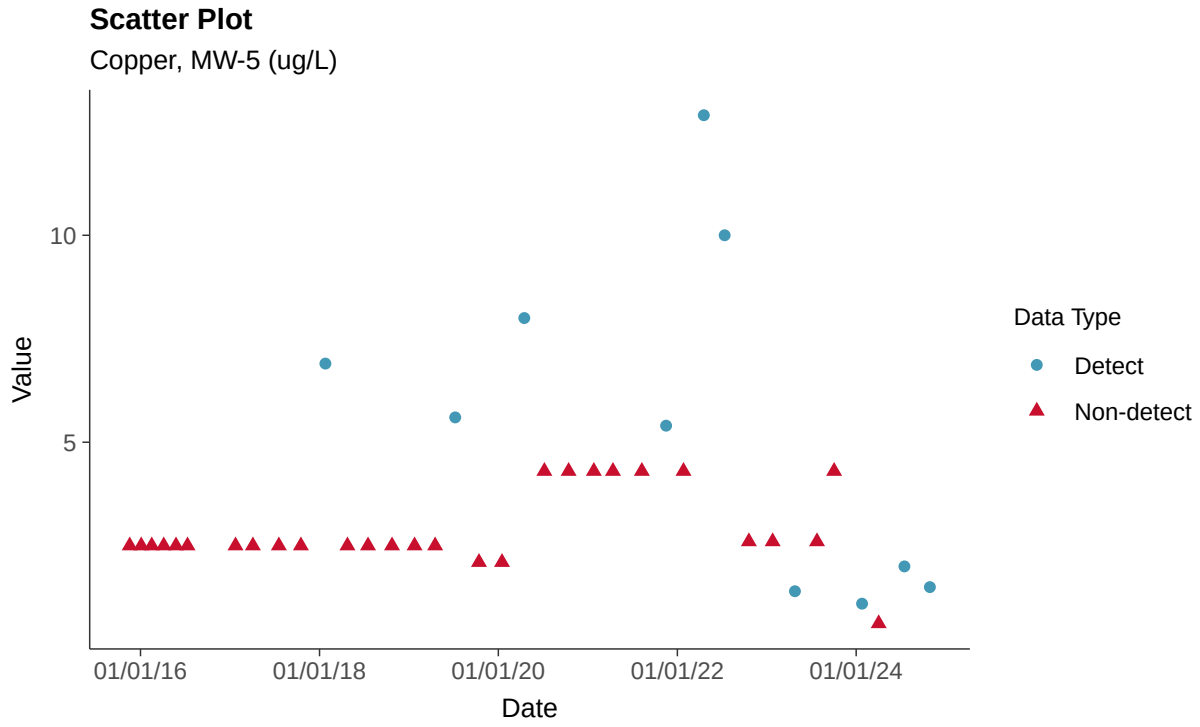
Trend Regression: Piecewise Linear-Linear-Linear

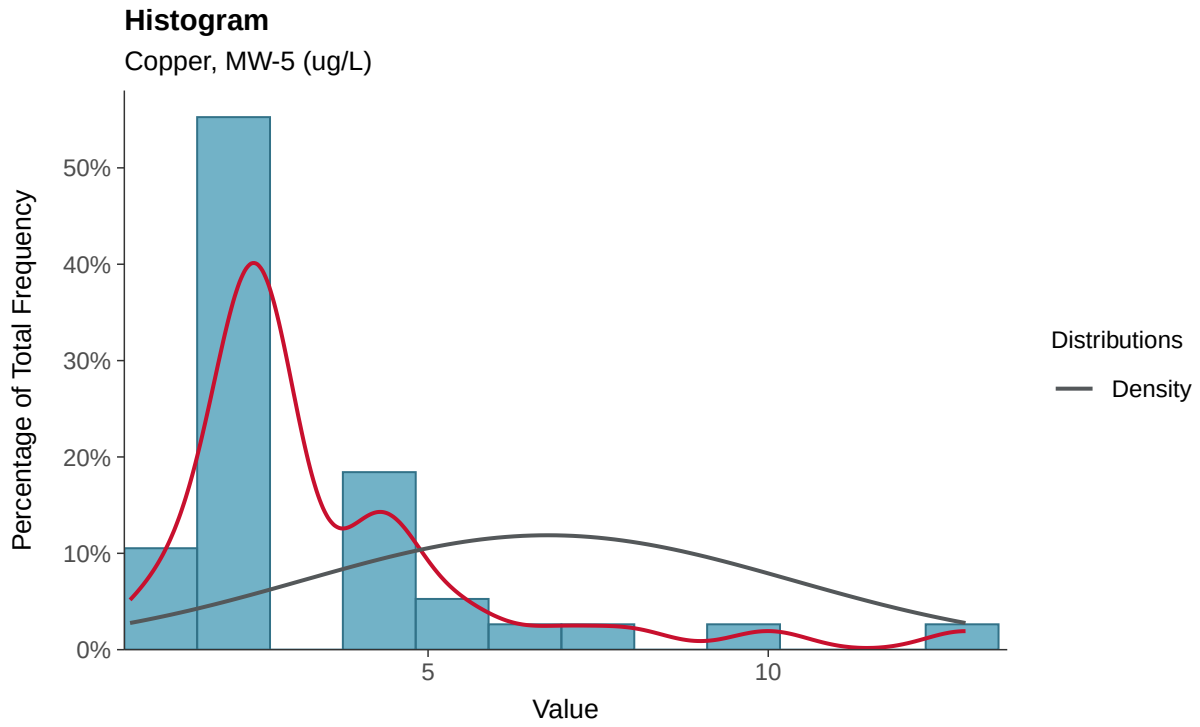
Total Radium, MW-4 (pCi/L)



App. I Metals: Copper, MW-5

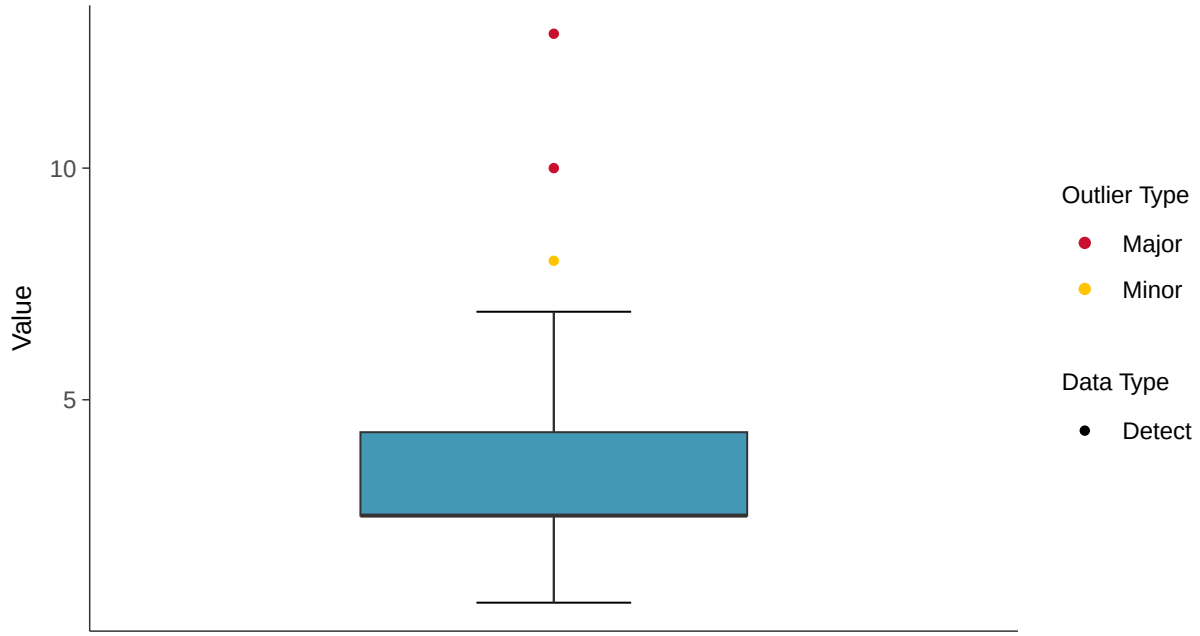
ID: 05_01_111





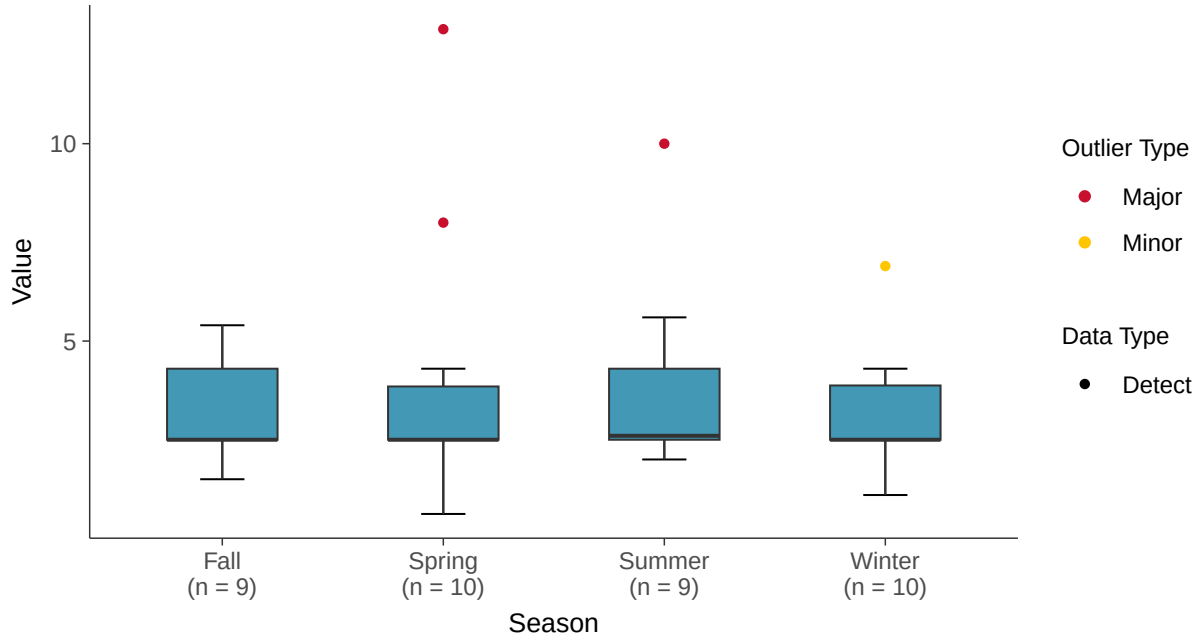
Boxplot

Copper, MW-5 (ug/L)



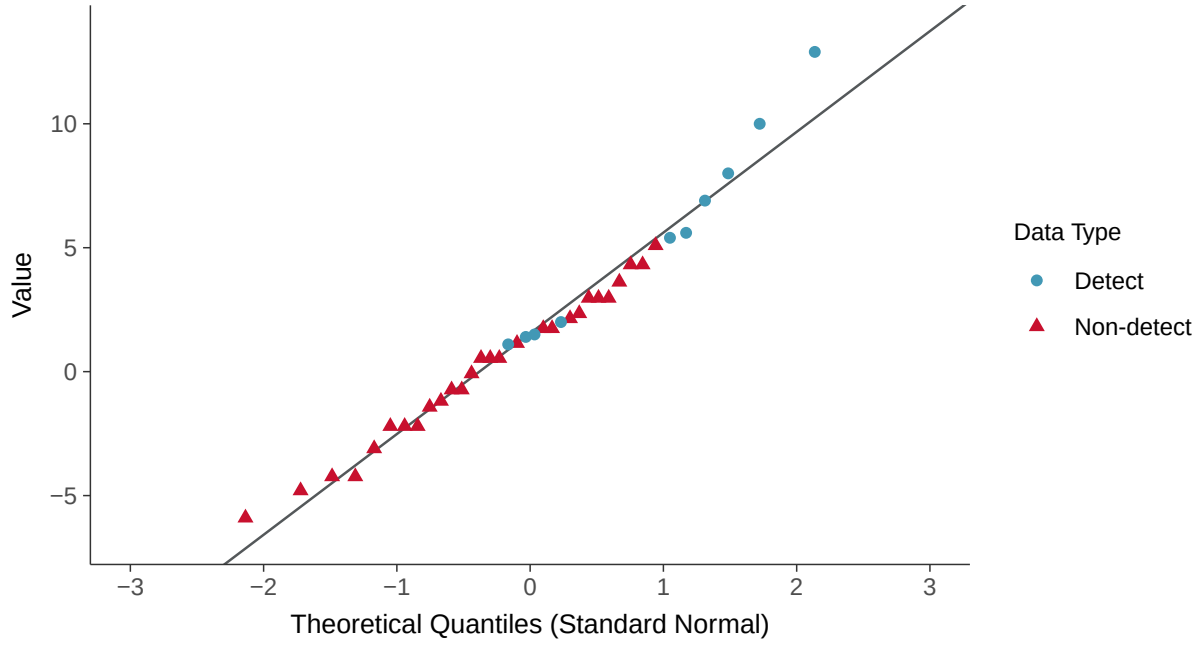
Boxplot by Season

Copper, MW-5 (ug/L)



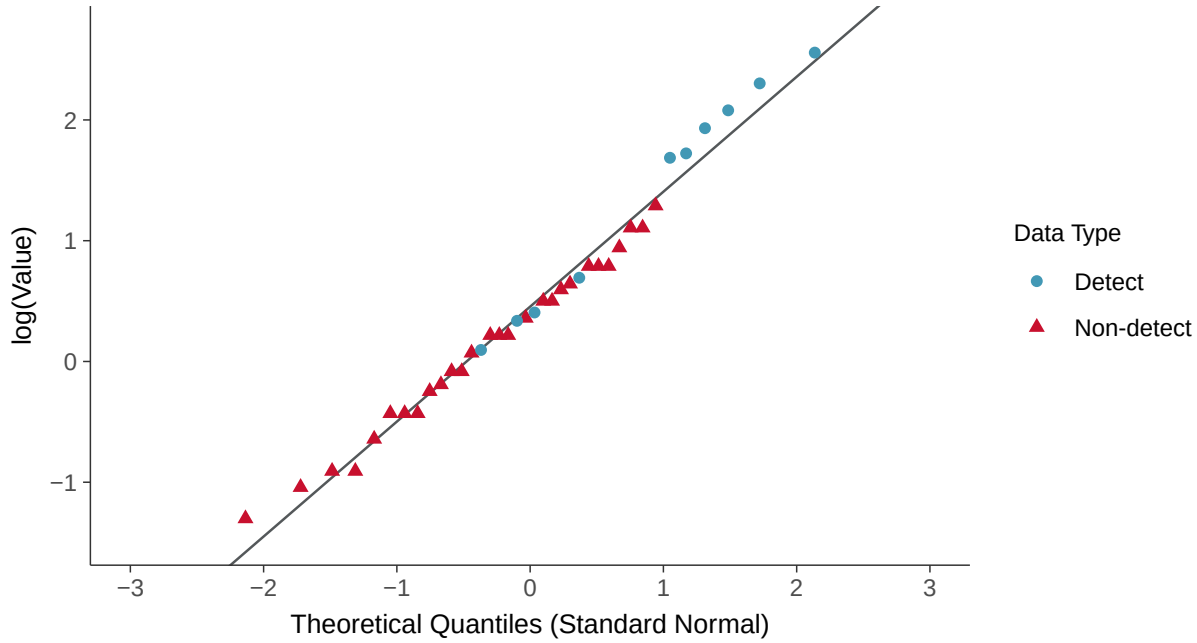
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



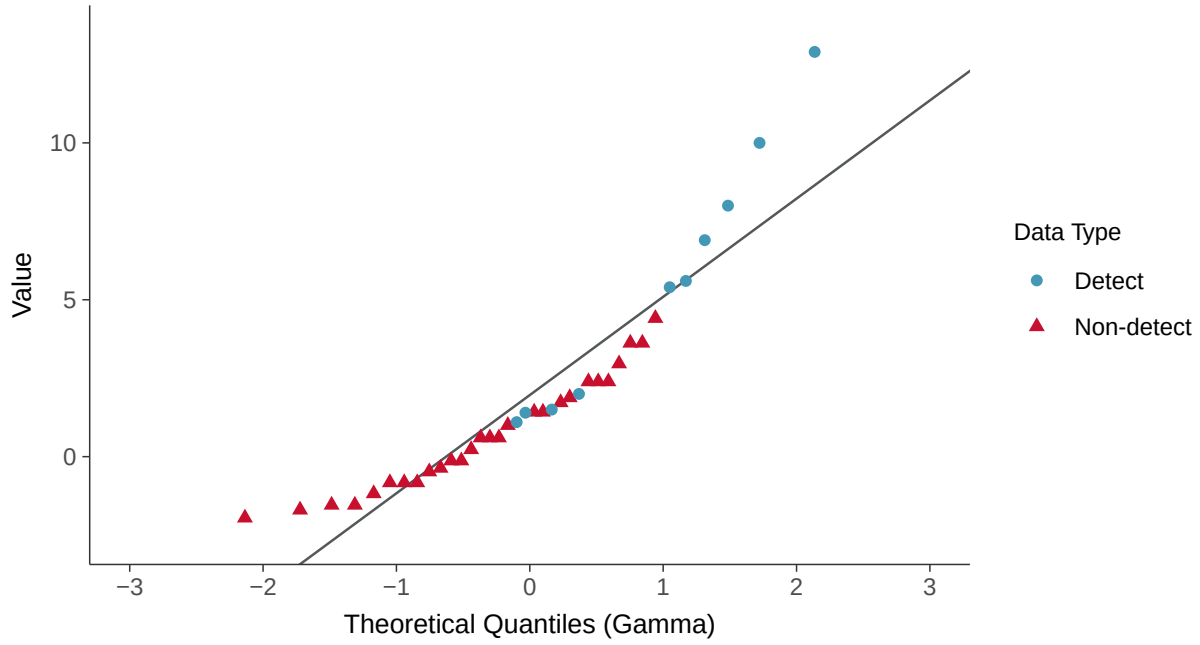
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



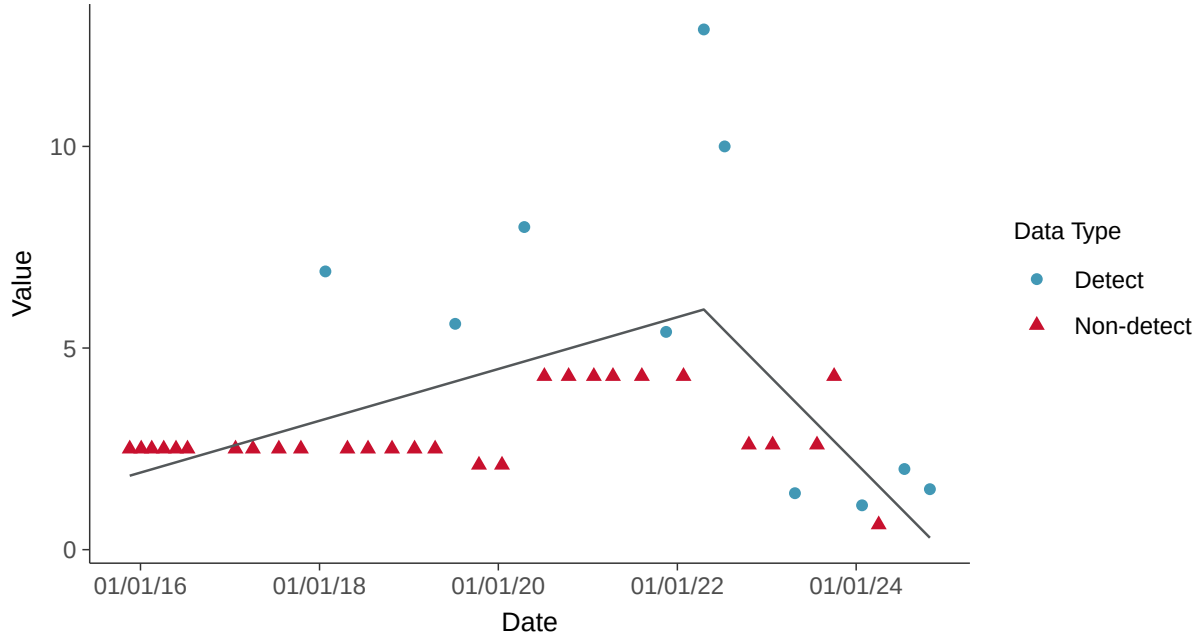
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-5 (ug/L)



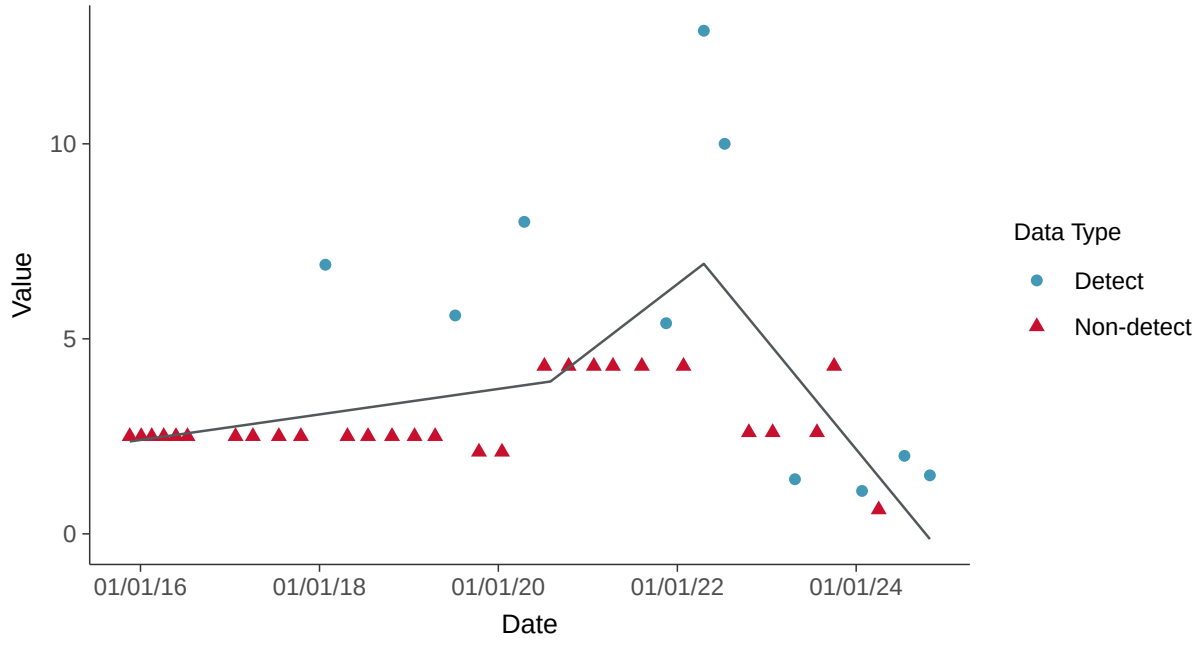
Trend Regression: Piecewise Linear-Linear

Copper, MW-5 (ug/L)



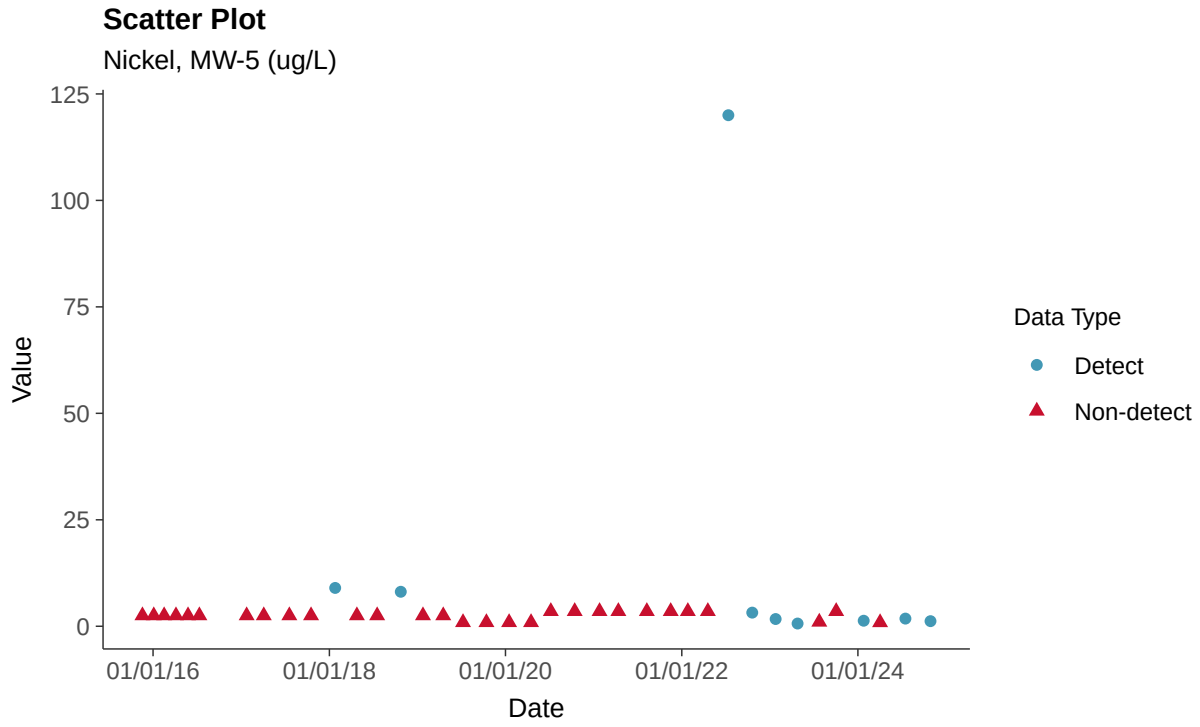
Trend Regression: Piecewise Linear-Linear-Linear

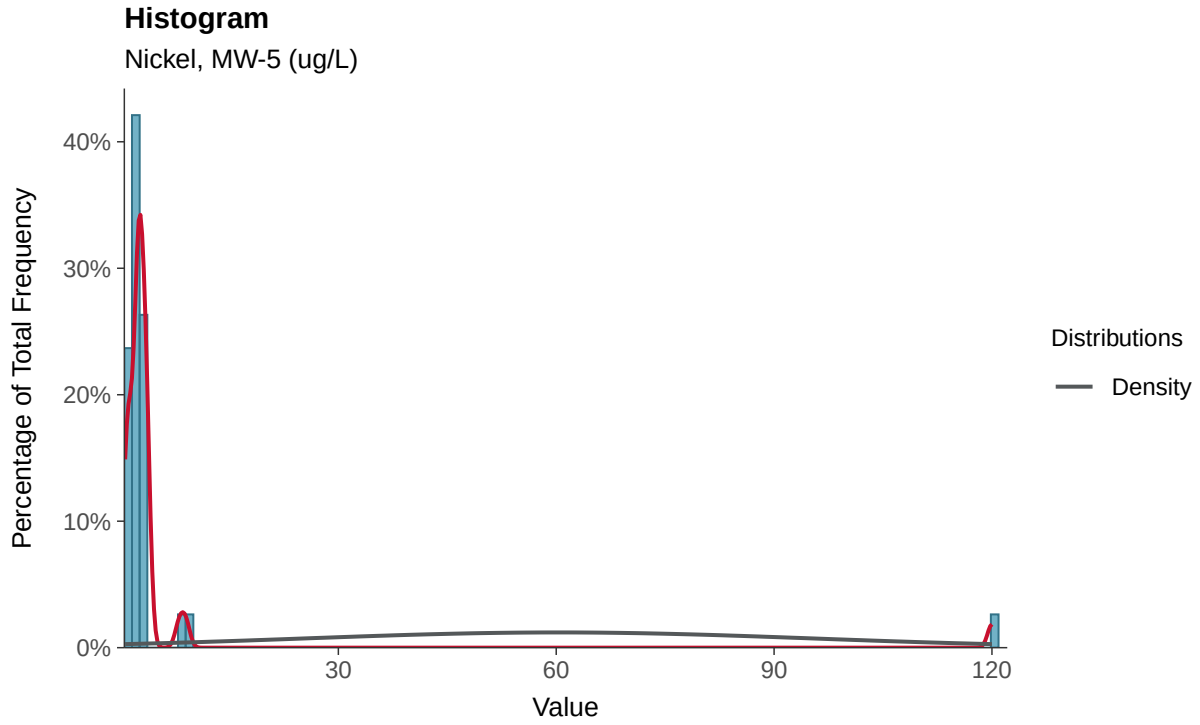
Copper, MW-5 (ug/L)



App. I Metals: Nickel, MW-5

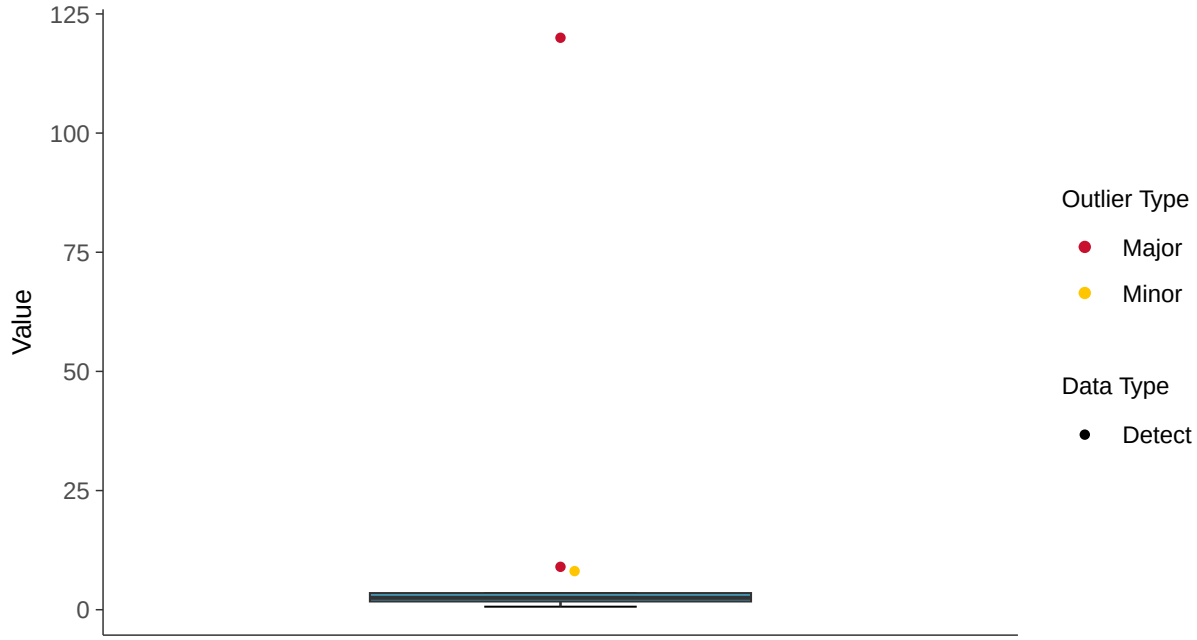
ID: 05_01_117





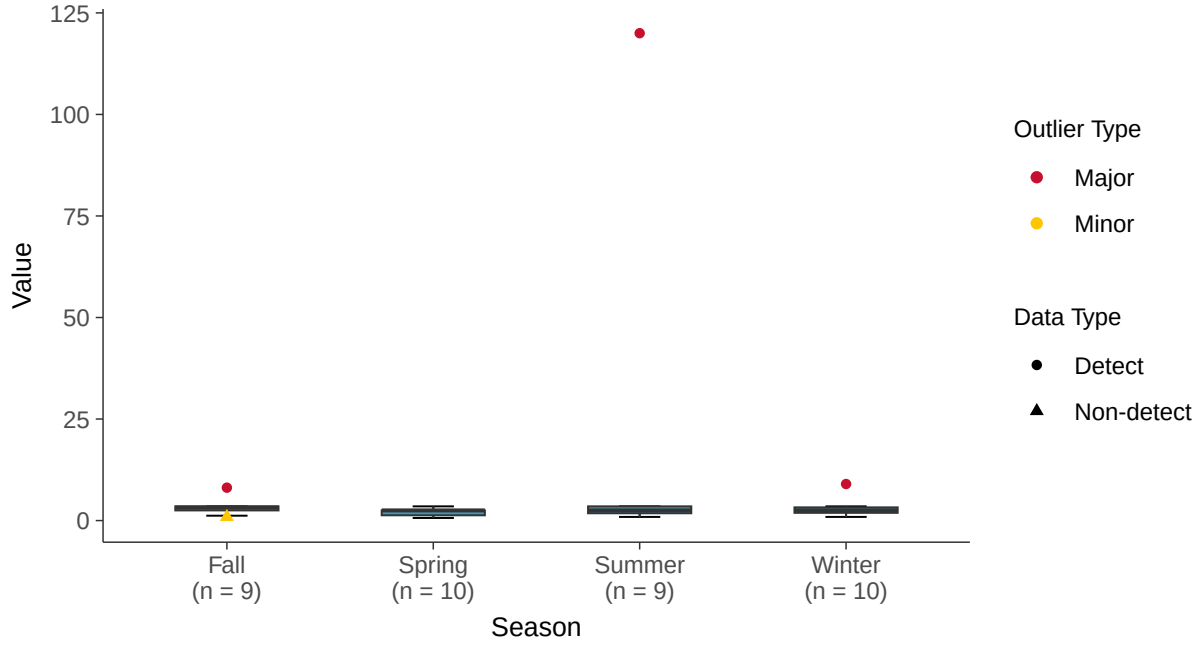
Boxplot

Nickel, MW-5 (ug/L)



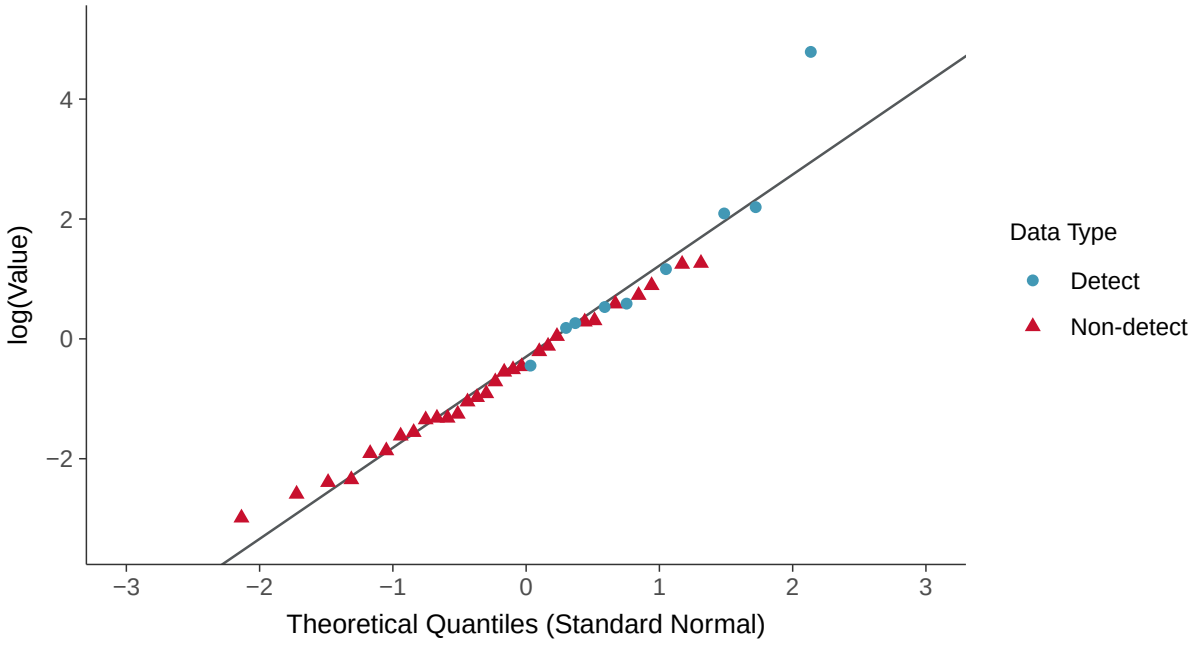
Boxplot by Season

Nickel, MW-5 (ug/L)



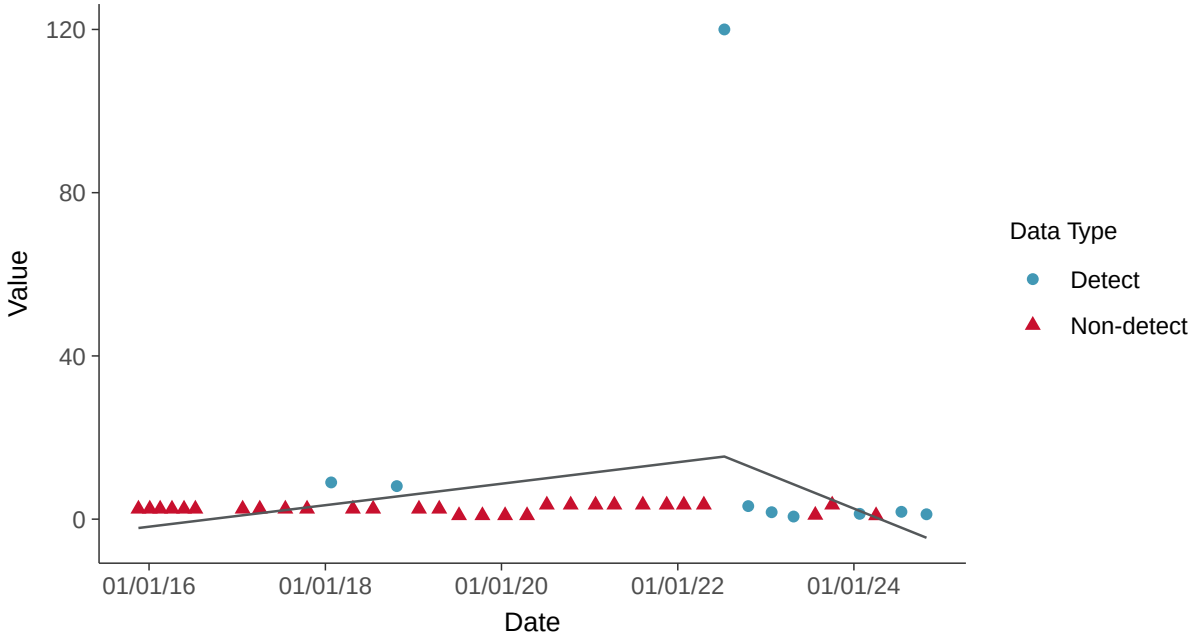
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-5 (ug/L)



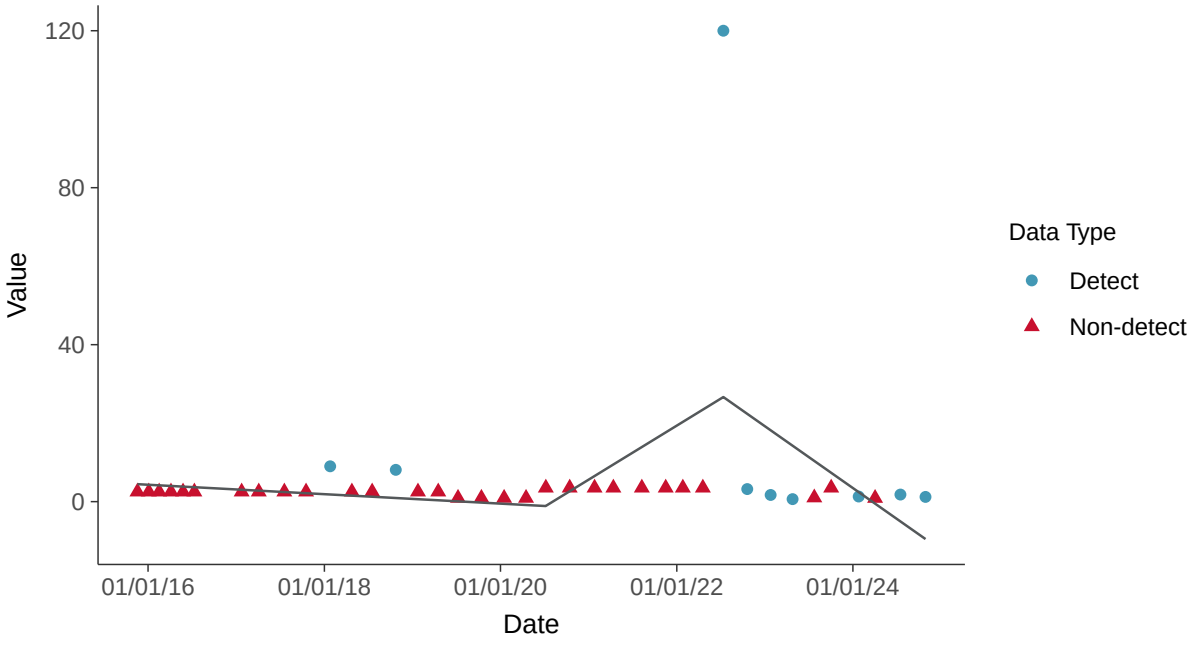
Trend Regression: Piecewise Linear-Linear

Nickel, MW-5 (ug/L)



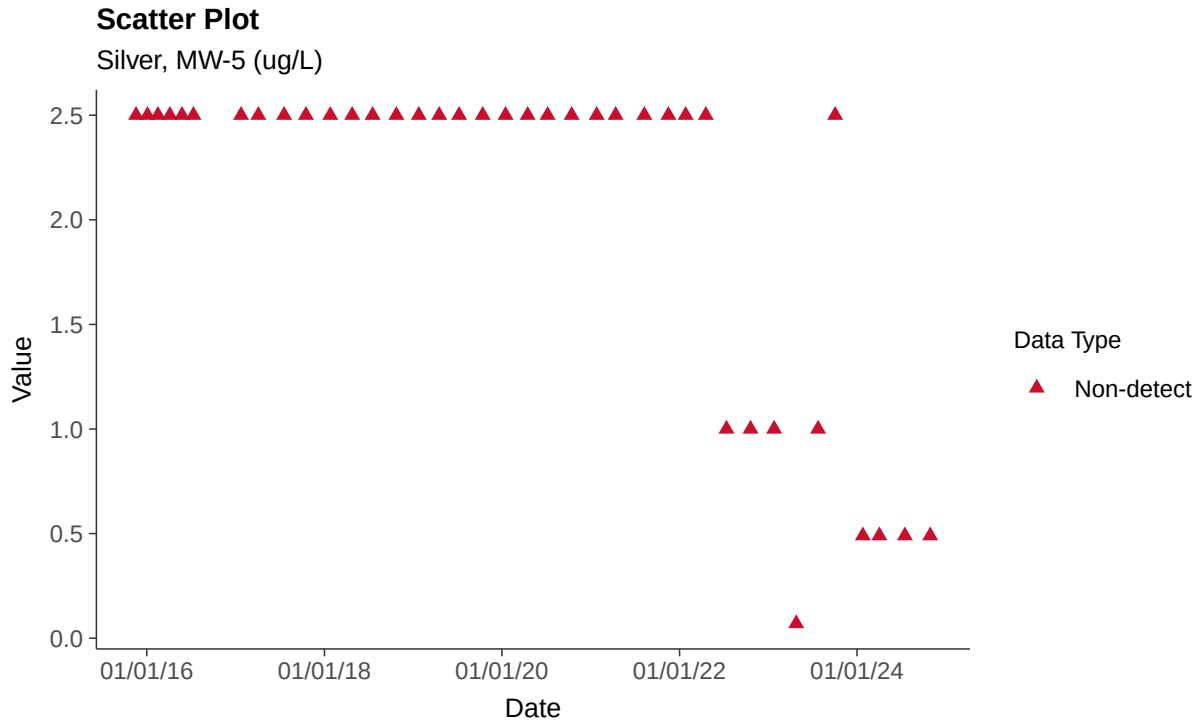
Trend Regression: Piecewise Linear-Linear-Linear

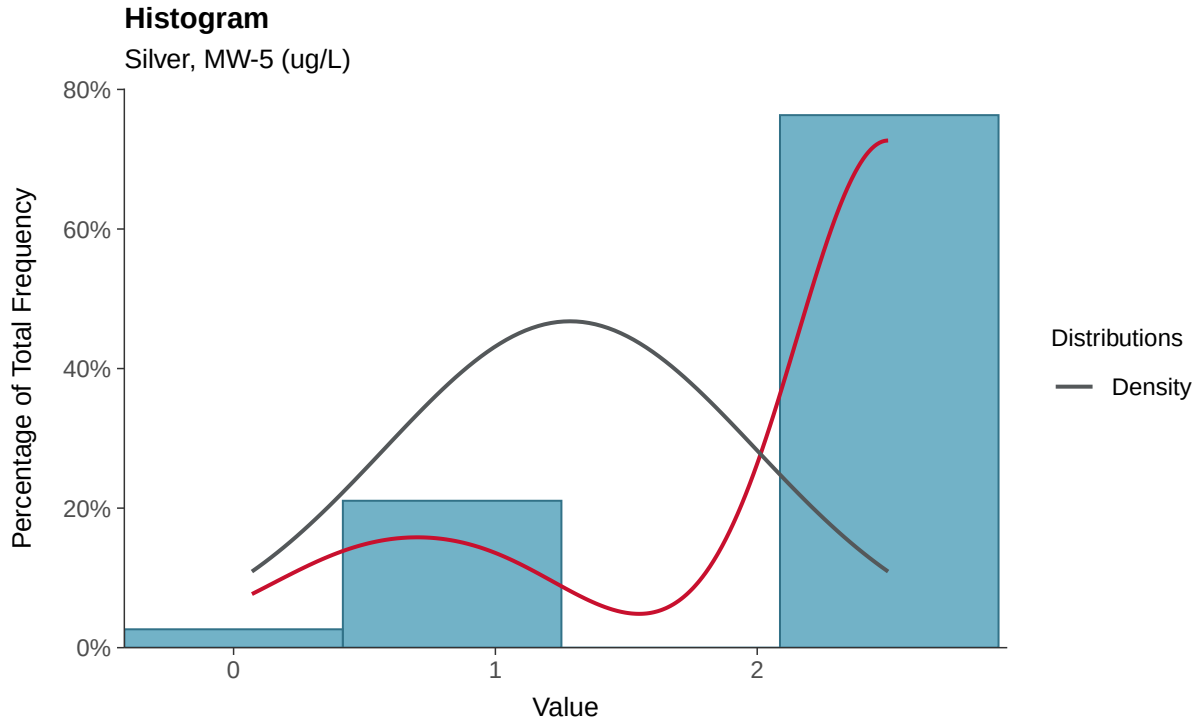
Nickel, MW-5 (ug/L)



App. I Metals: Silver, MW-5

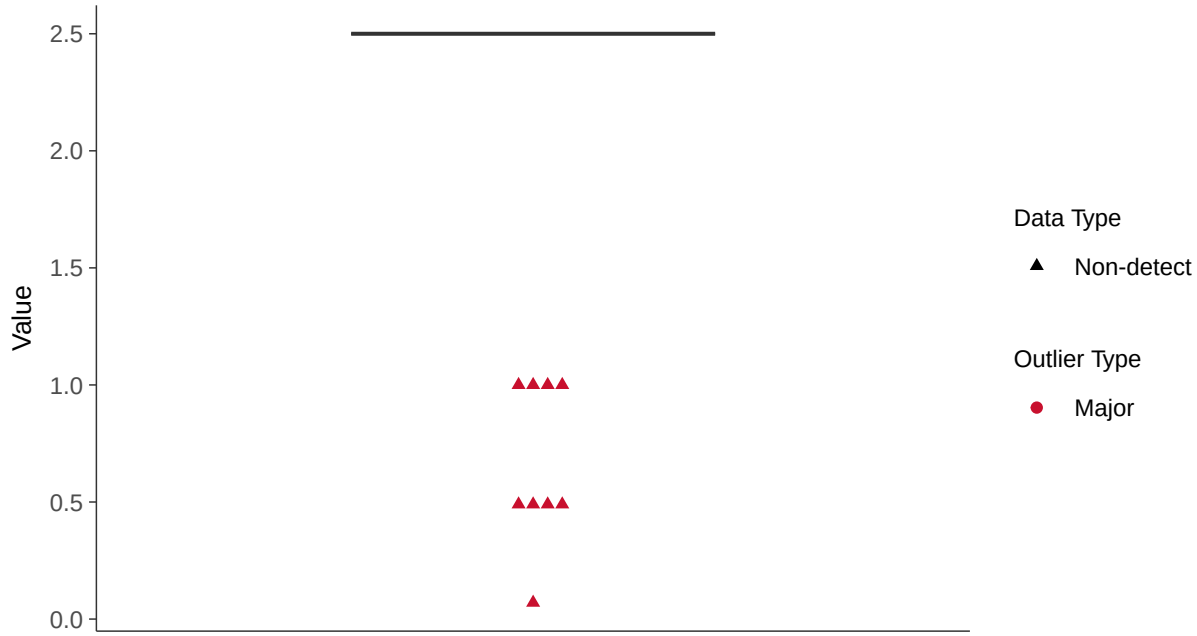
ID: 05_01_122





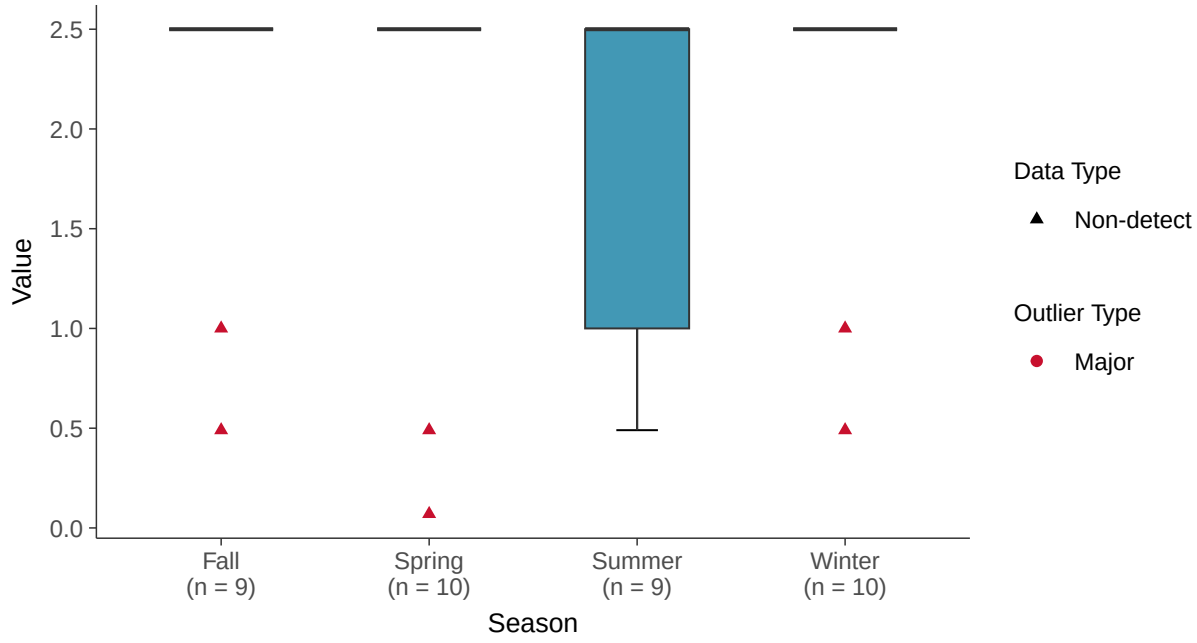
Boxplot

Silver, MW-5 (ug/L)



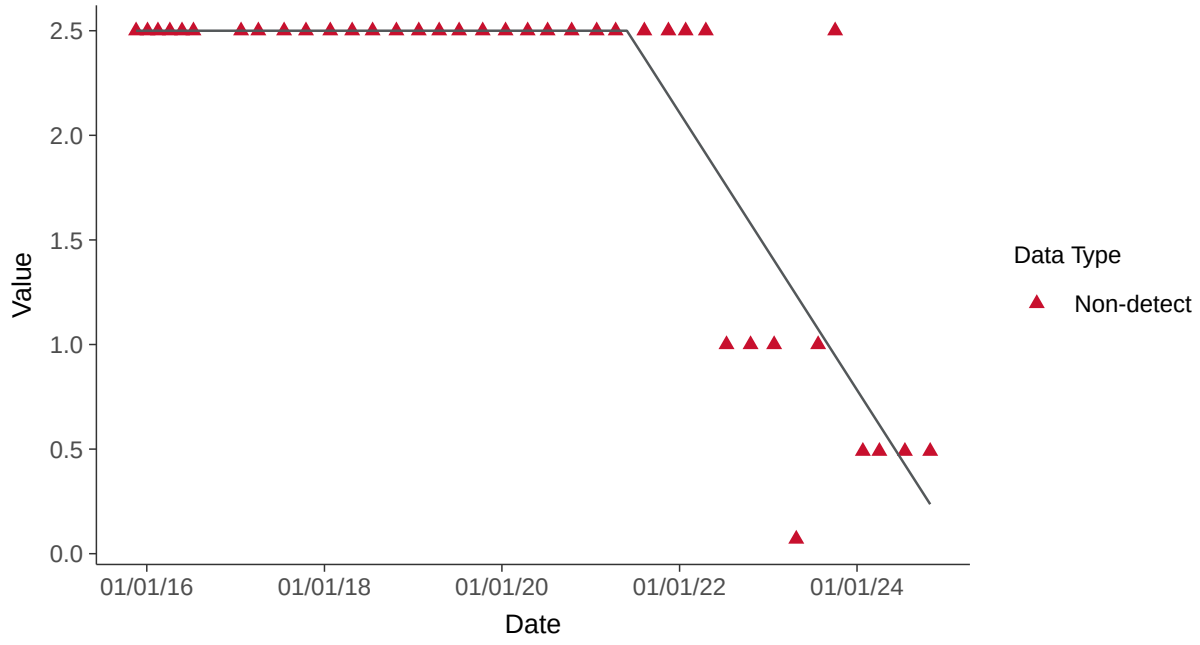
Boxplot by Season

Silver, MW-5 (ug/L)



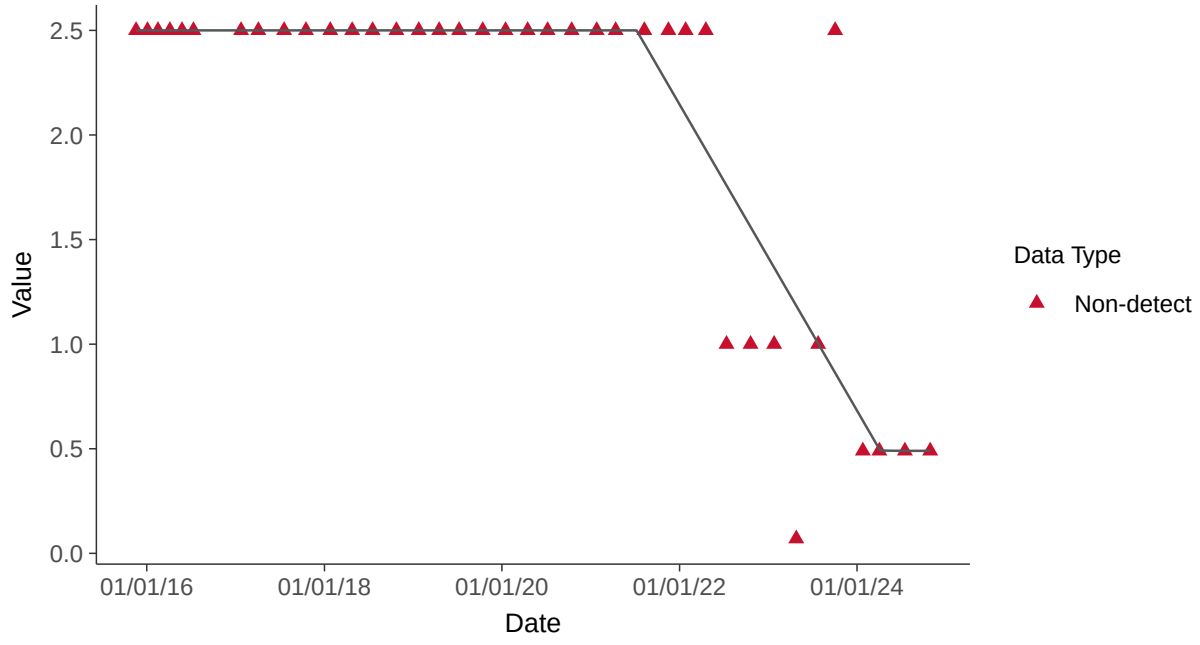
Trend Regression: Piecewise Linear-Linear

Silver, MW-5 (ug/L)



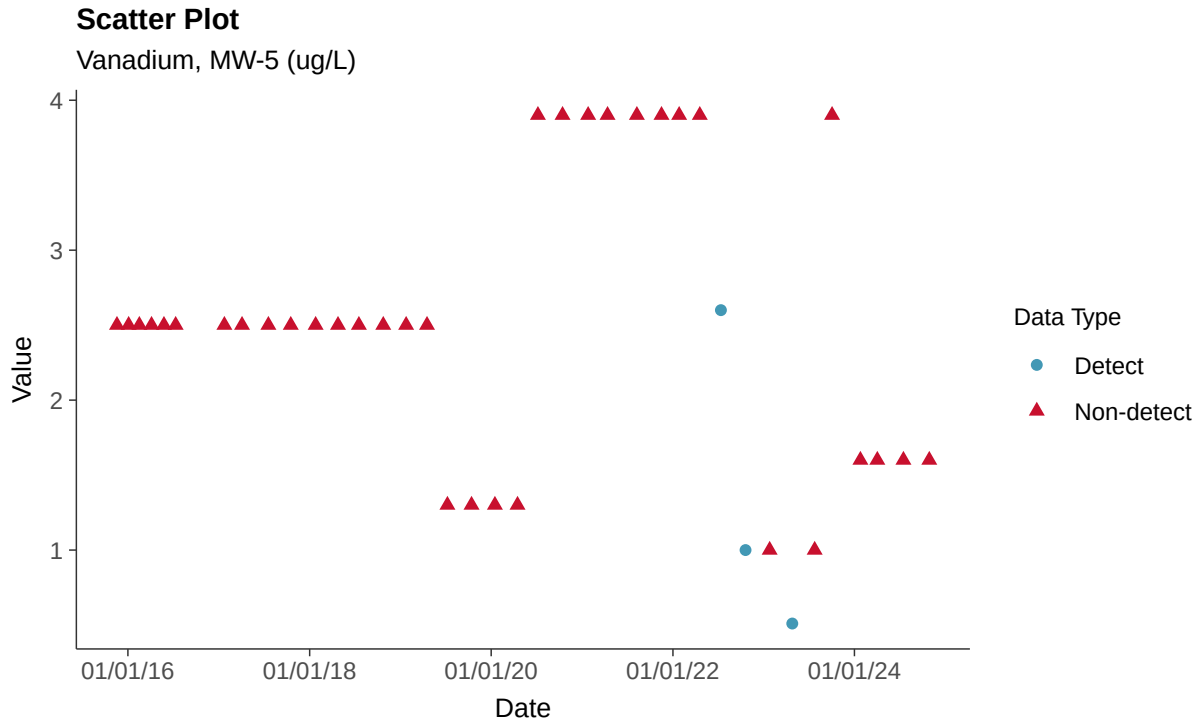
Trend Regression: Piecewise Linear-Linear-Linear

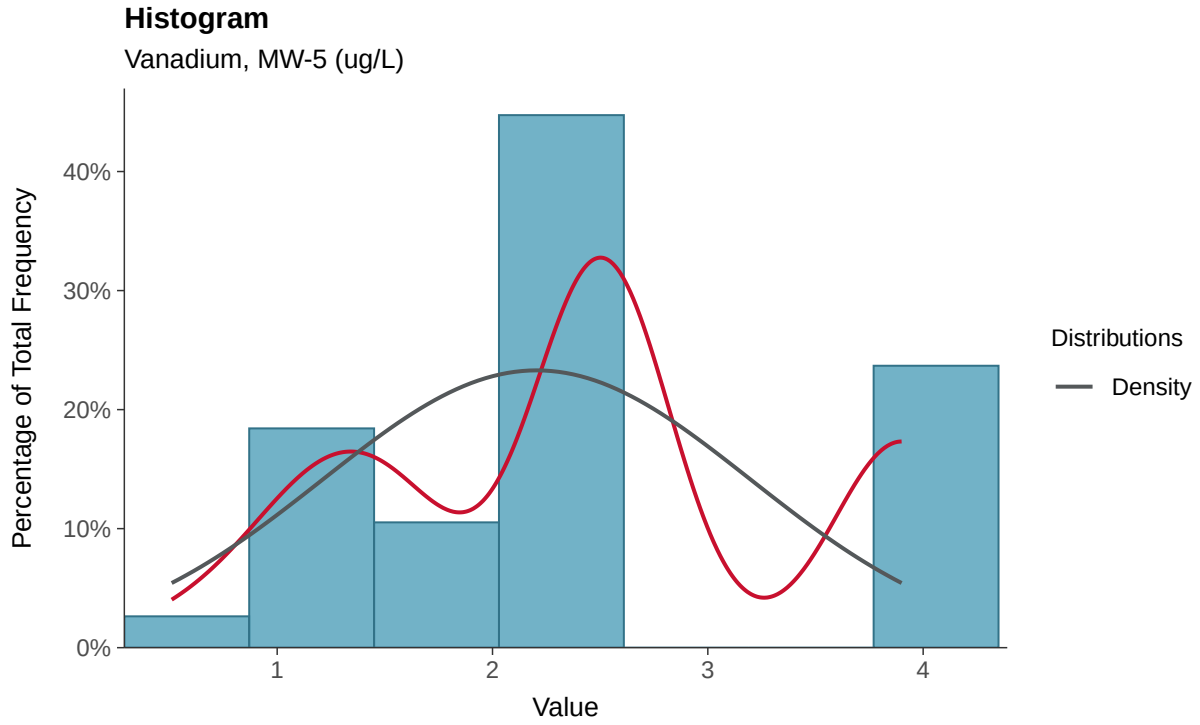
Silver, MW-5 (ug/L)



App. I Metals: Vanadium, MW-5

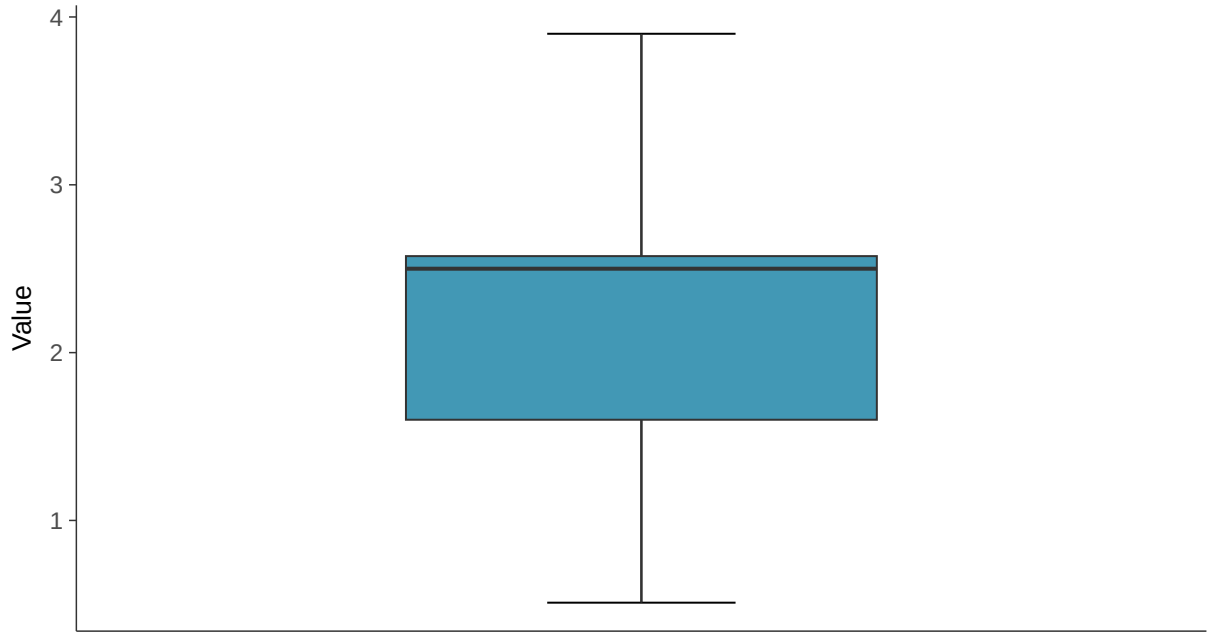
ID: 05_01_127





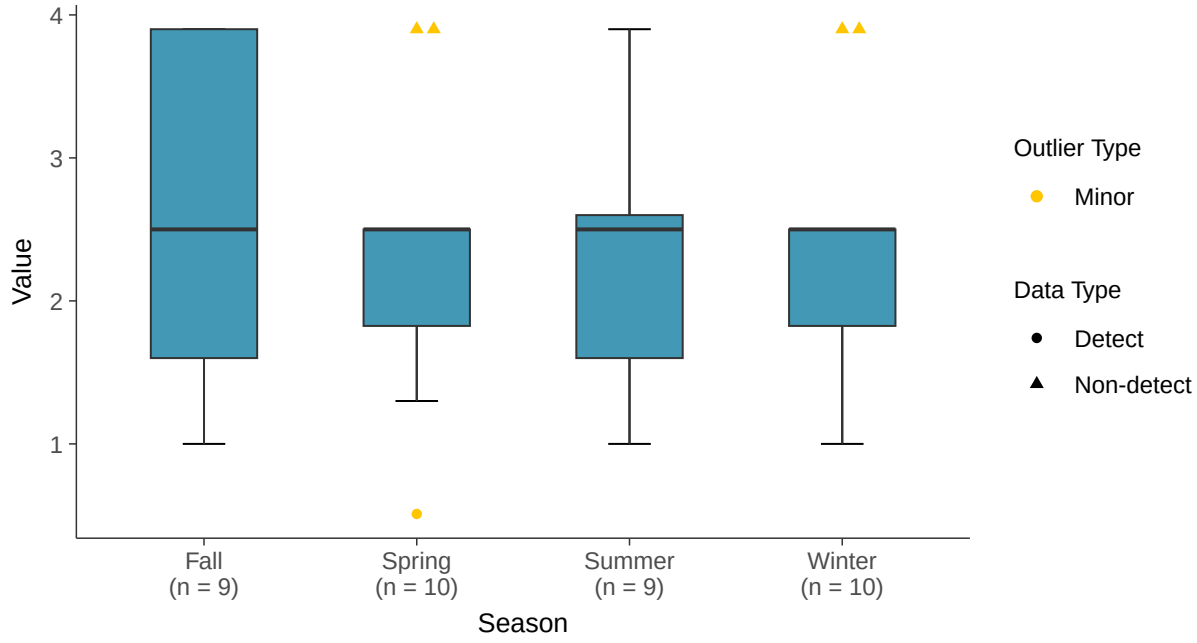
Boxplot

Vanadium, MW-5 (ug/L)



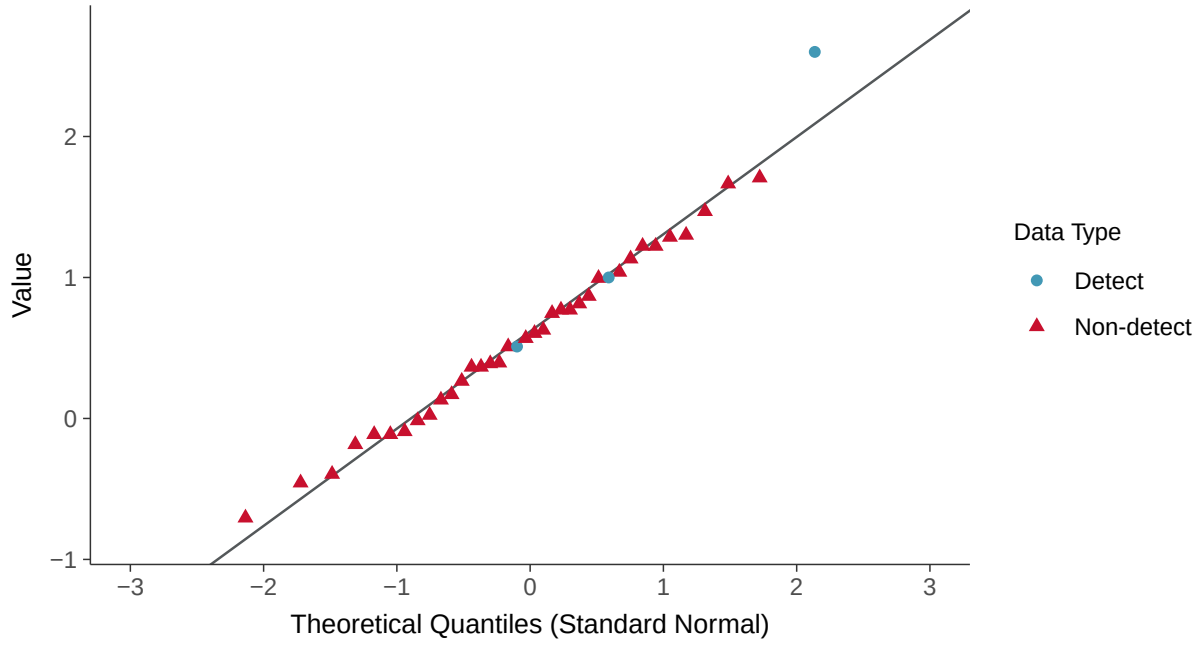
Boxplot by Season

Vanadium, MW-5 (ug/L)



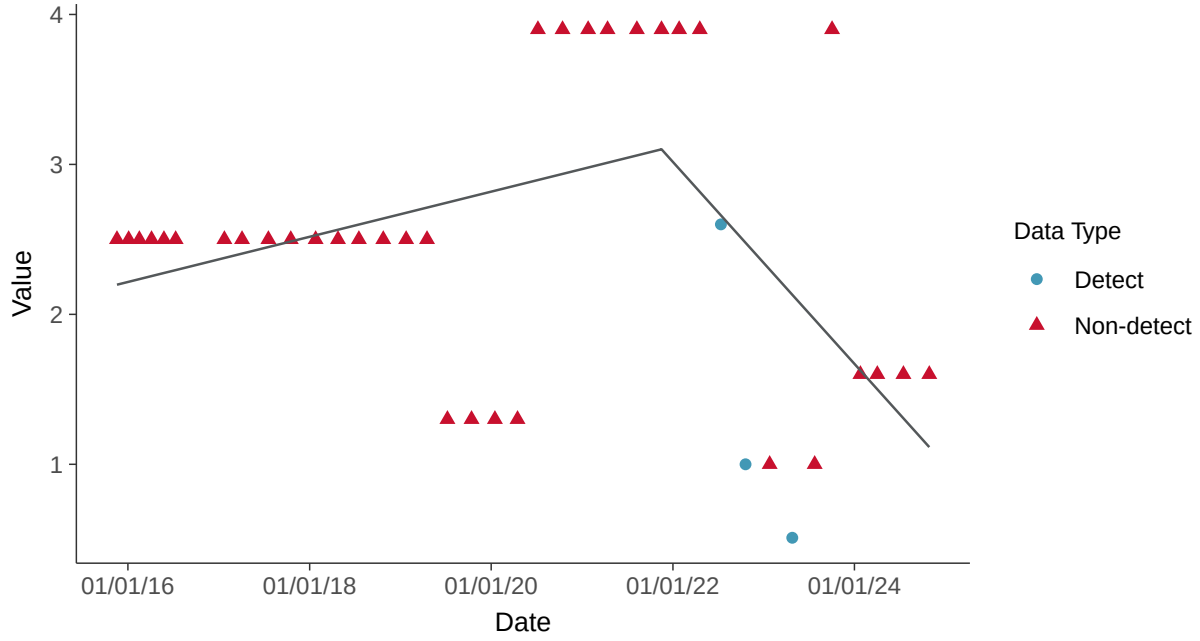
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-5 (ug/L)



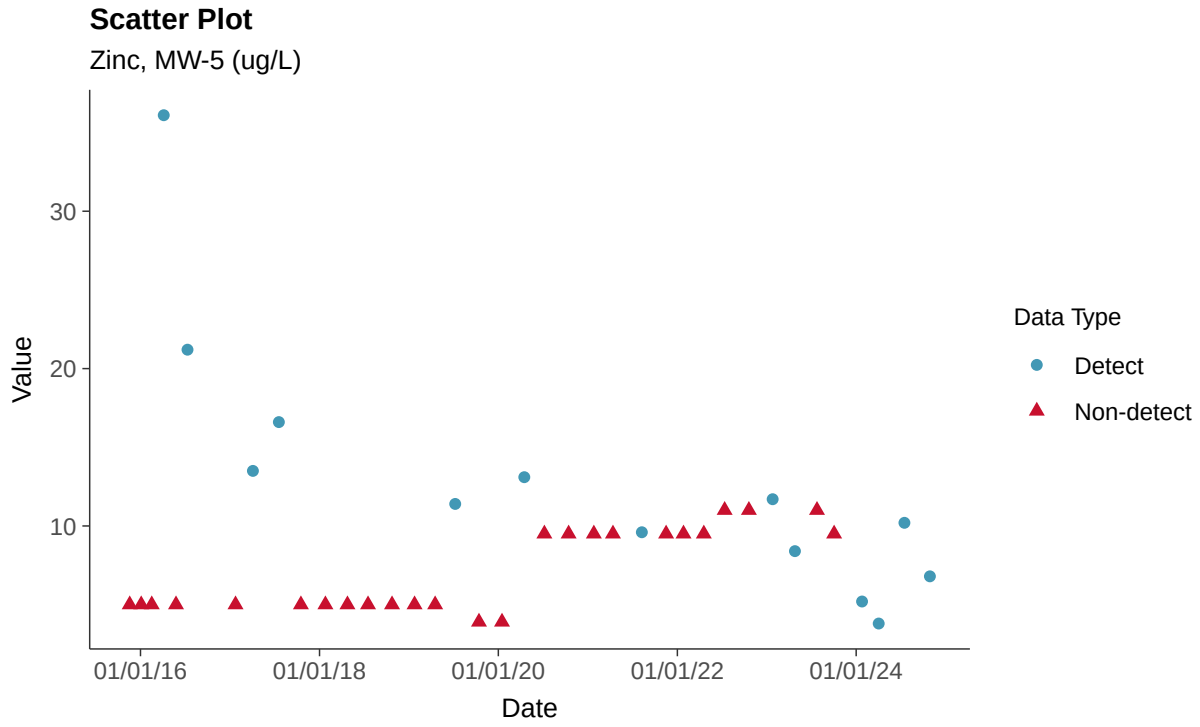
Trend Regression: Piecewise Linear-Linear

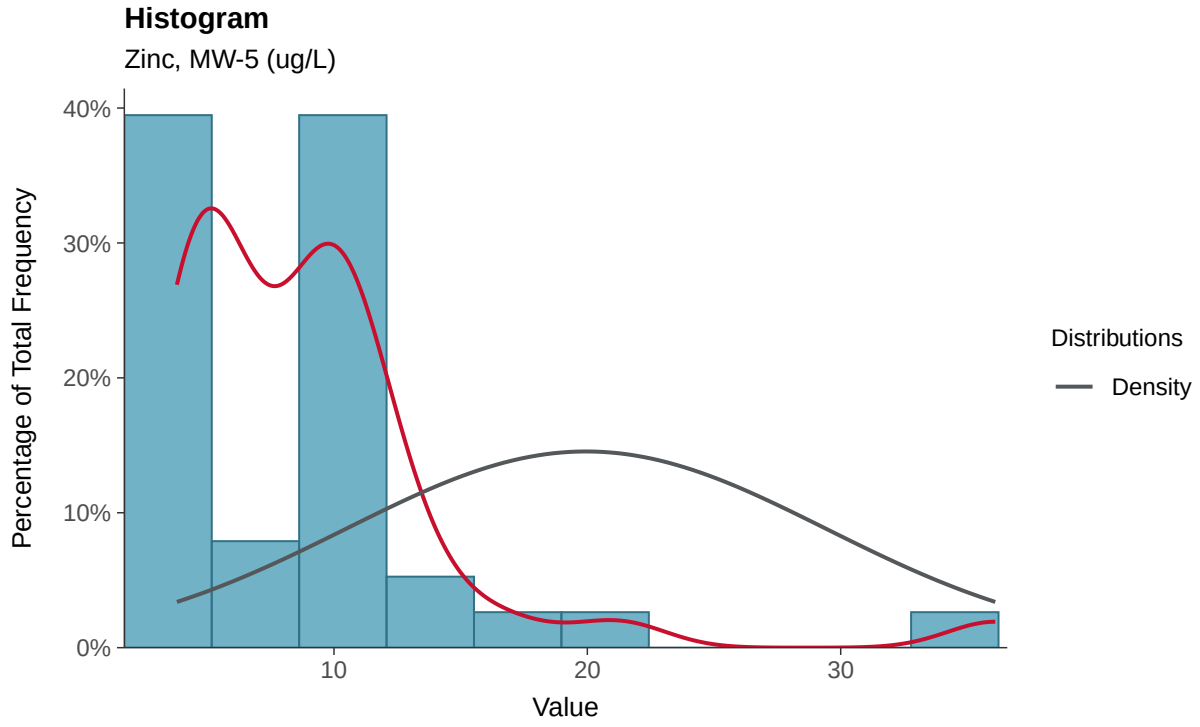
Vanadium, MW-5 (ug/L)



App. I Metals: Zinc, MW-5

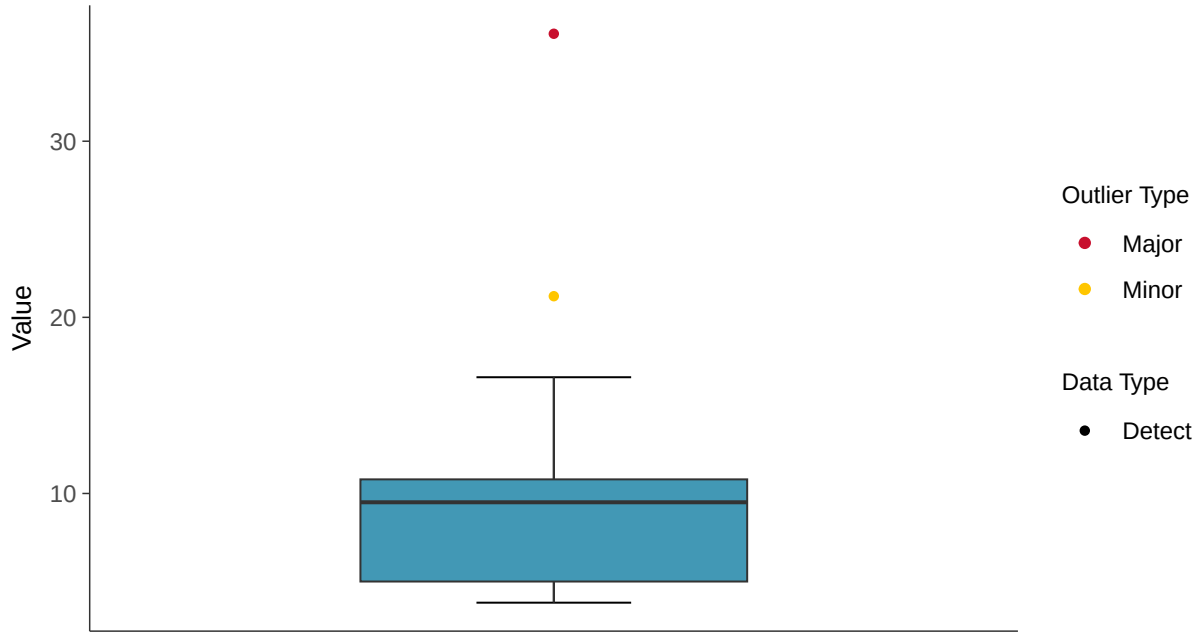
ID: 05_01_128





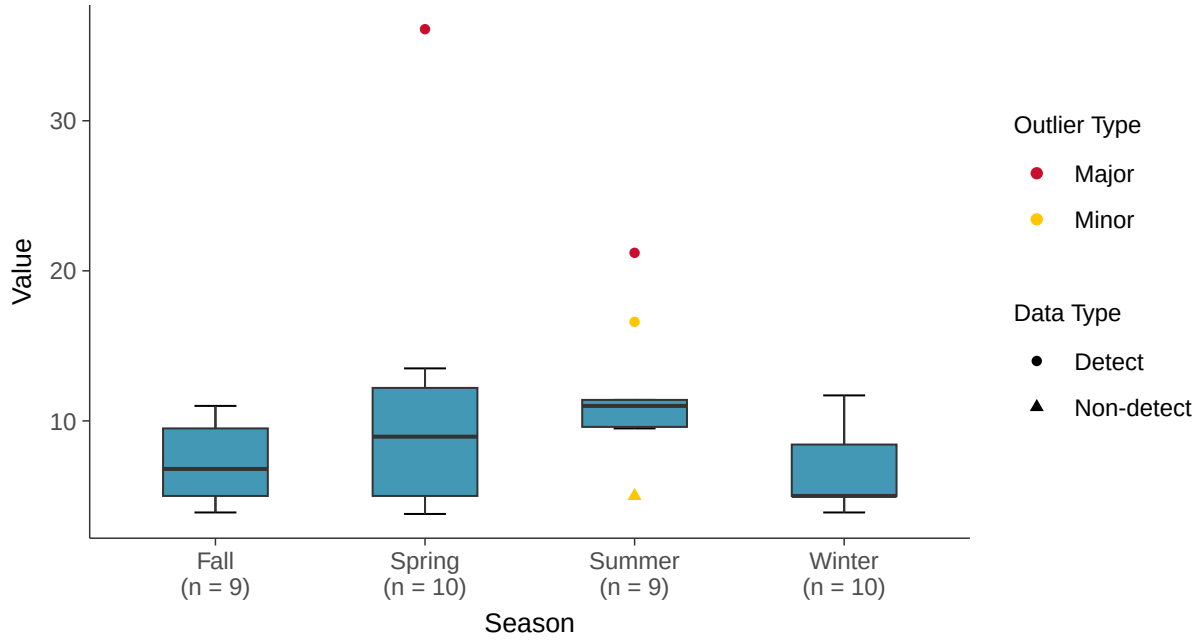
Boxplot

Zinc, MW-5 (ug/L)



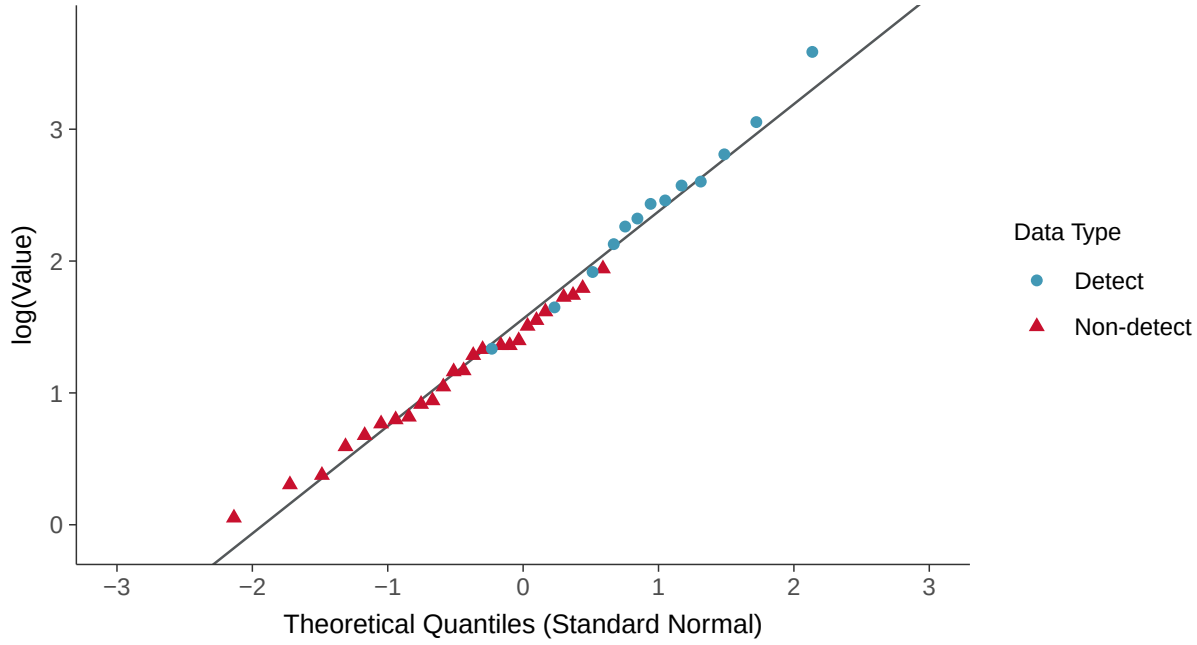
Boxplot by Season

Zinc, MW-5 (ug/L)



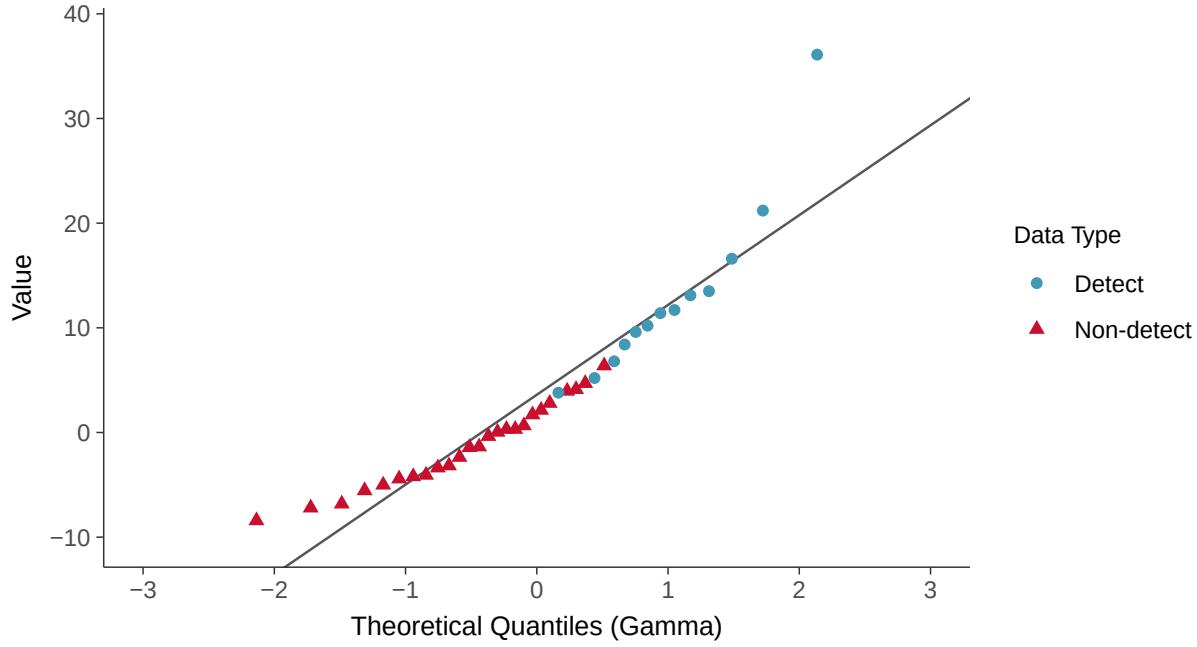
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-5 (ug/L)



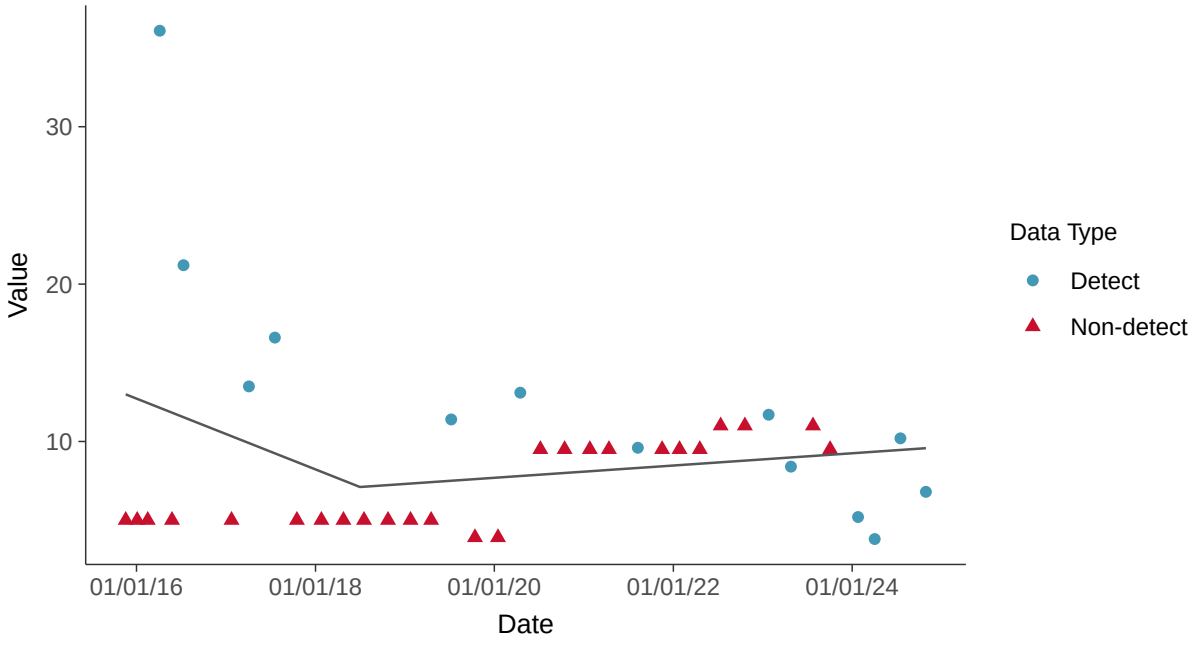
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-5 (ug/L)



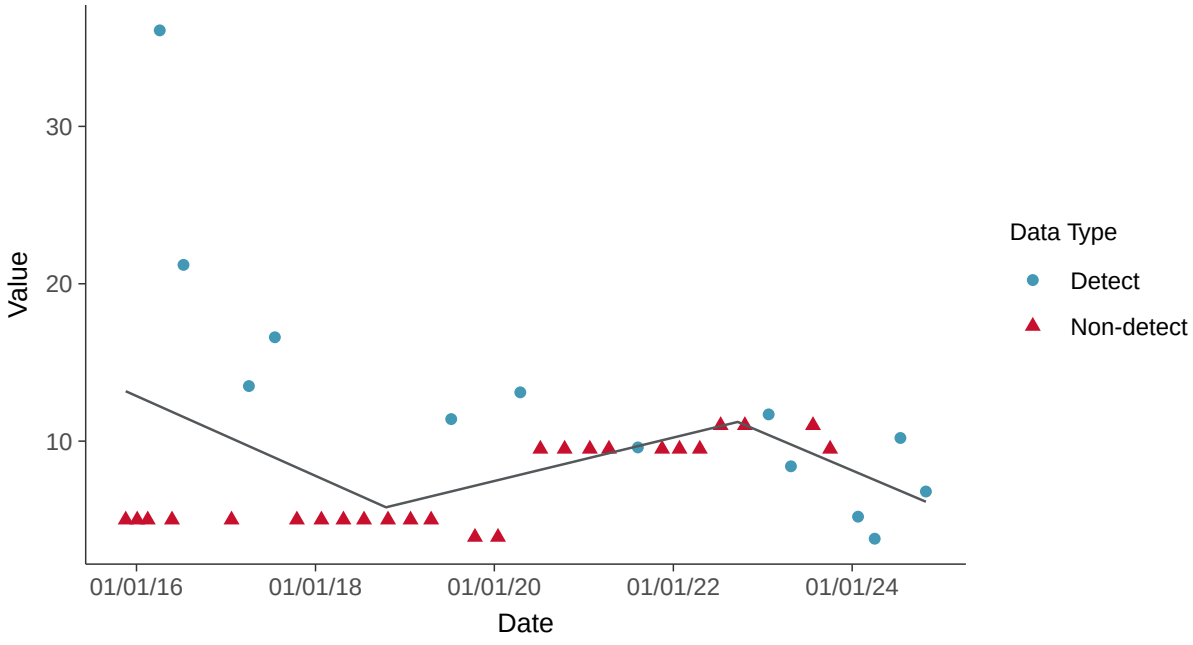
Trend Regression: Piecewise Linear-Linear

Zinc, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Zinc, MW-5 (ug/L)

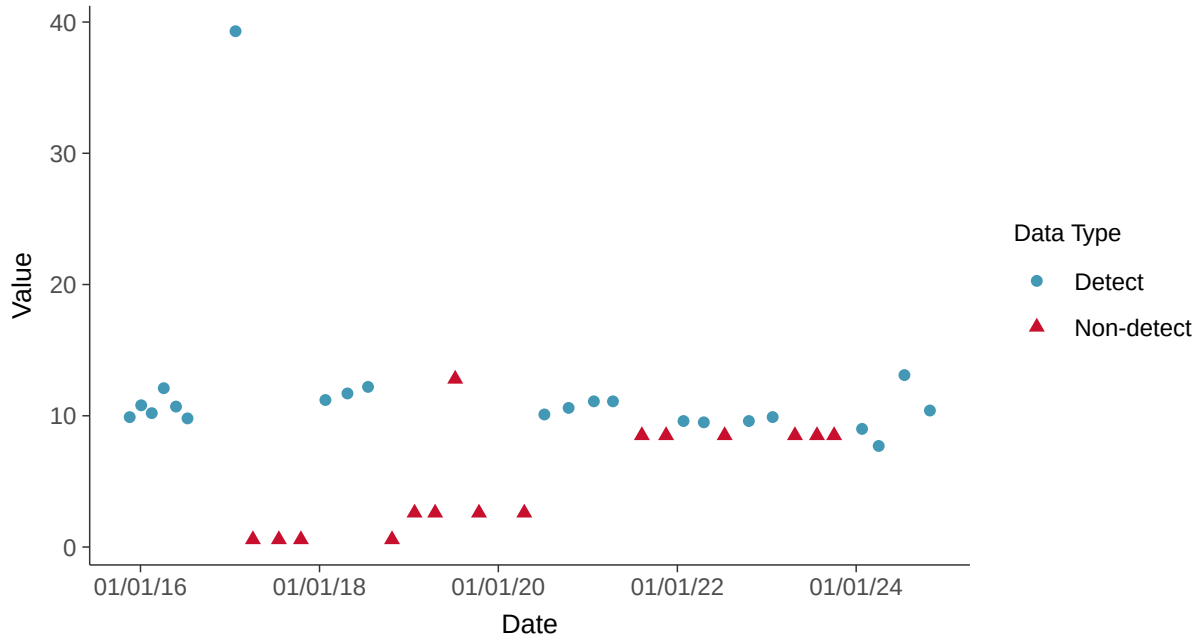


App. III: Boron, MW-5

ID: 05_02_105

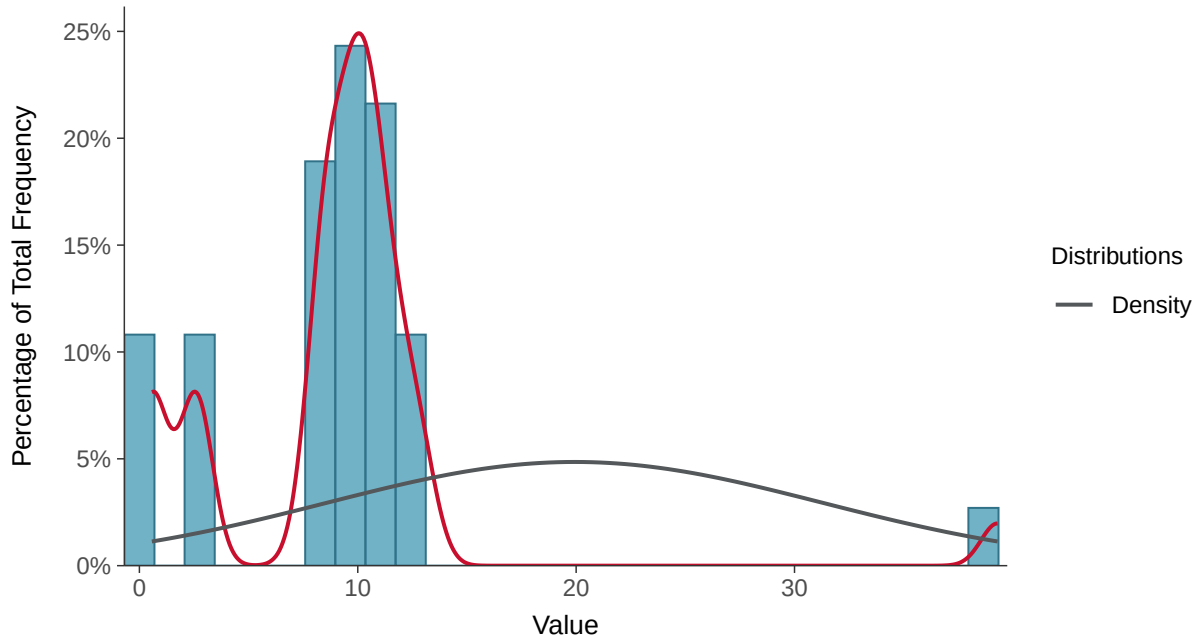
Scatter Plot

Boron, MW-5 (ug/L)



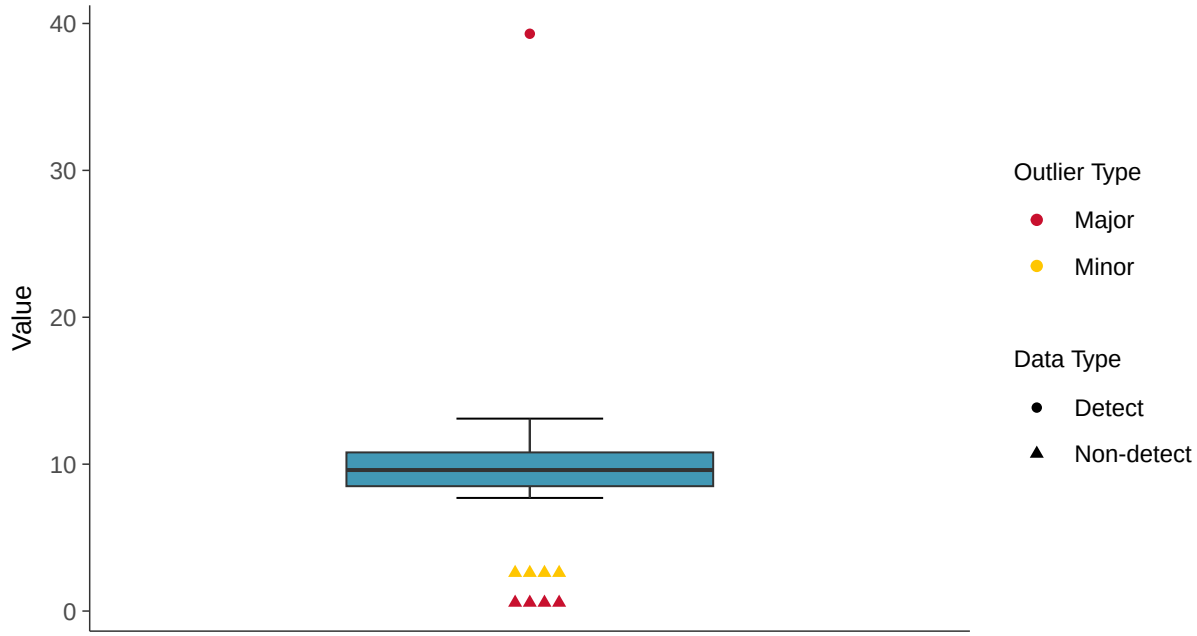
Histogram

Boron, MW-5 (ug/L)



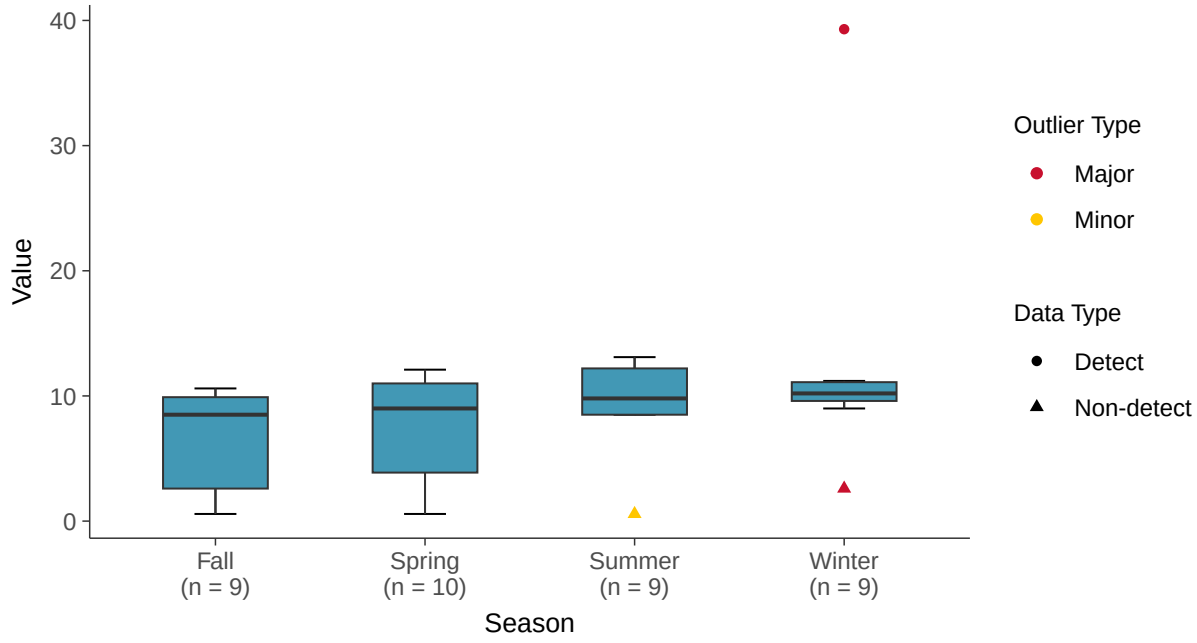
Boxplot

Boron, MW-5 (ug/L)



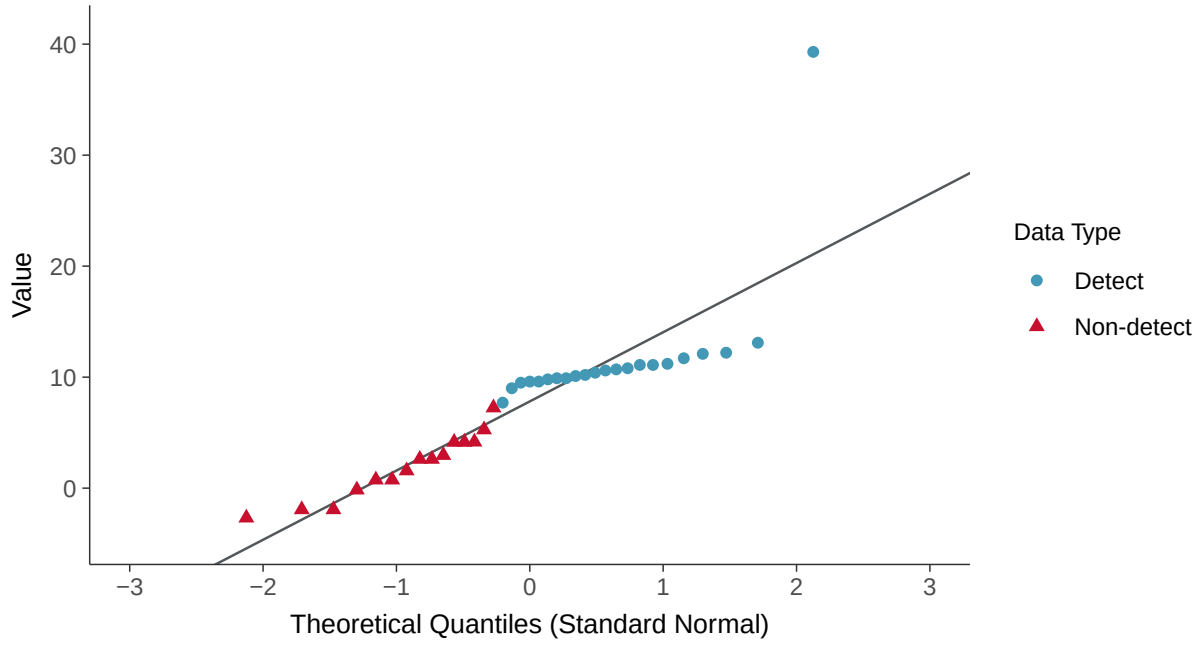
Boxplot by Season

Boron, MW-5 (ug/L)



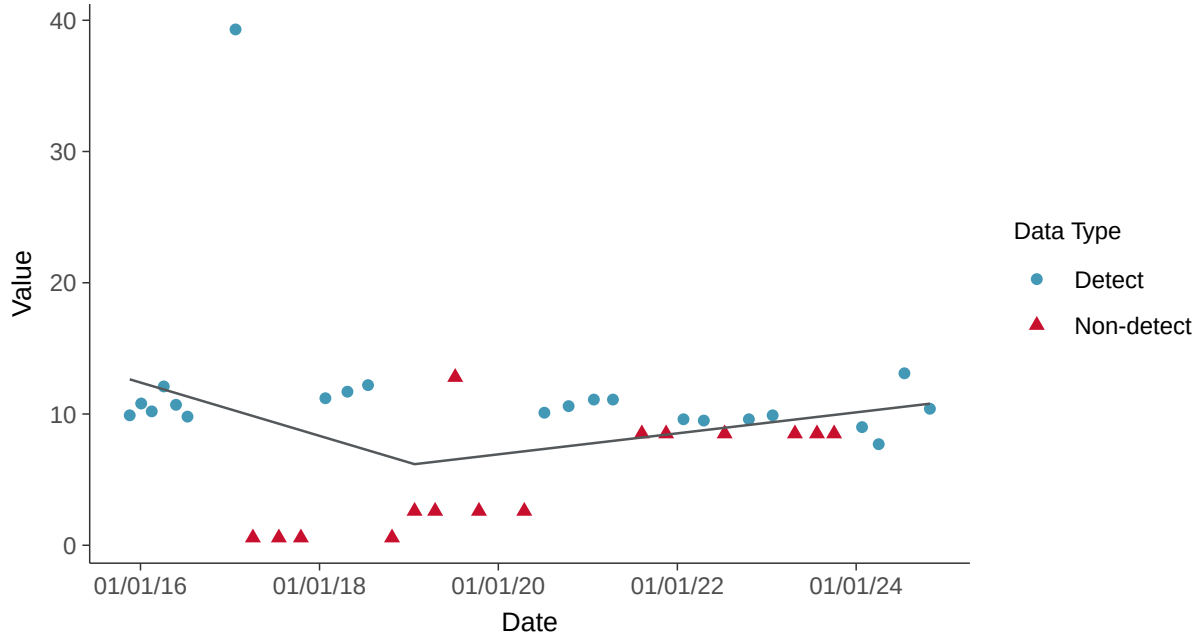
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-5 (ug/L)



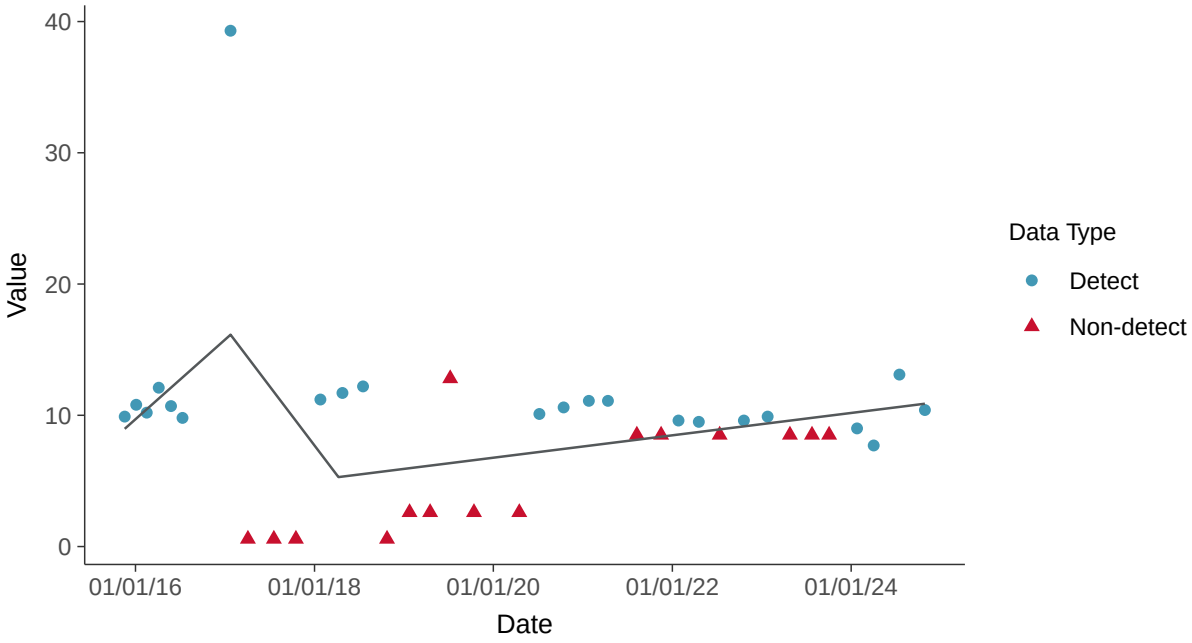
Trend Regression: Piecewise Linear-Linear

Boron, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-5 (ug/L)

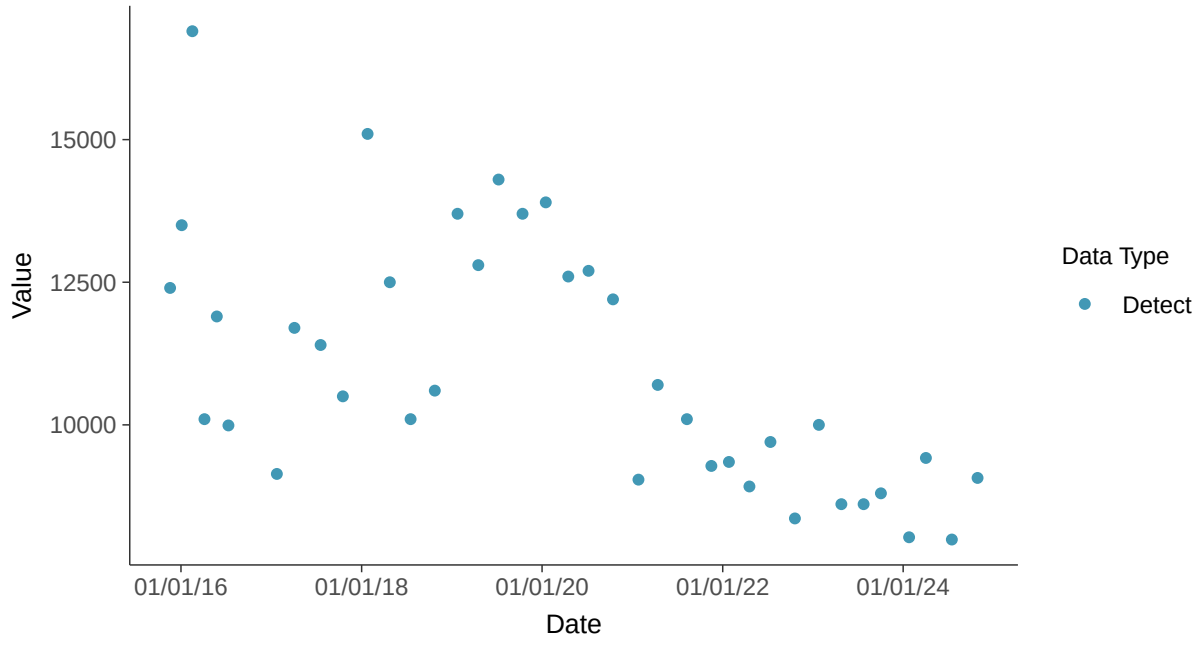


App. III: Calcium, MW-5

ID: 05_02_107

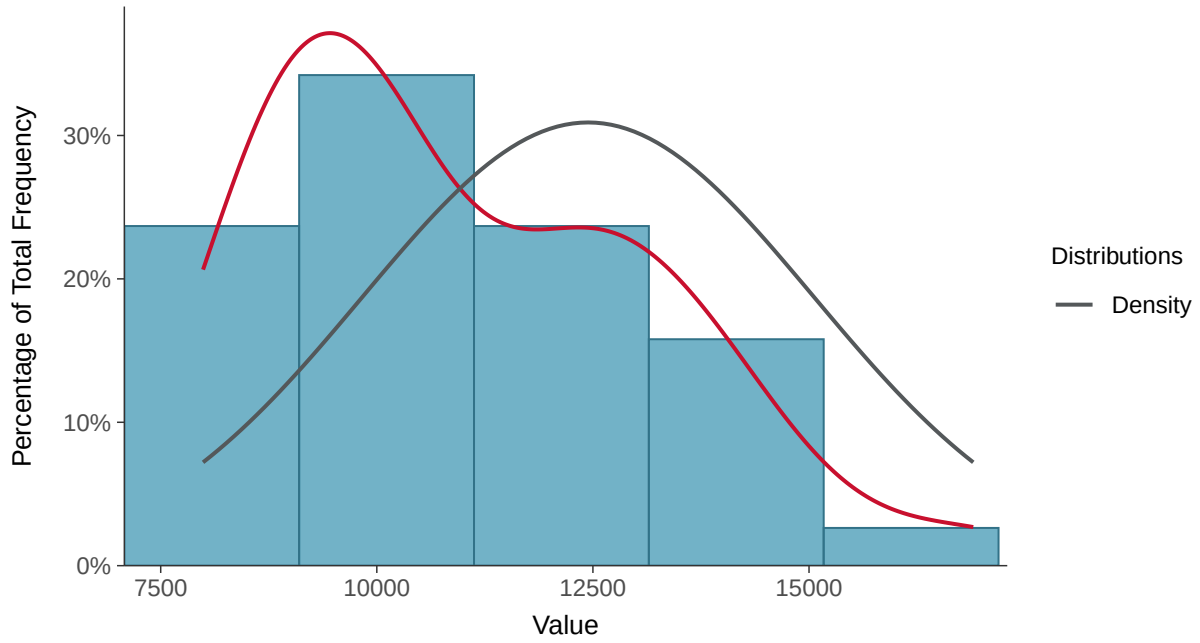
Scatter Plot

Calcium, MW-5 (ug/L)



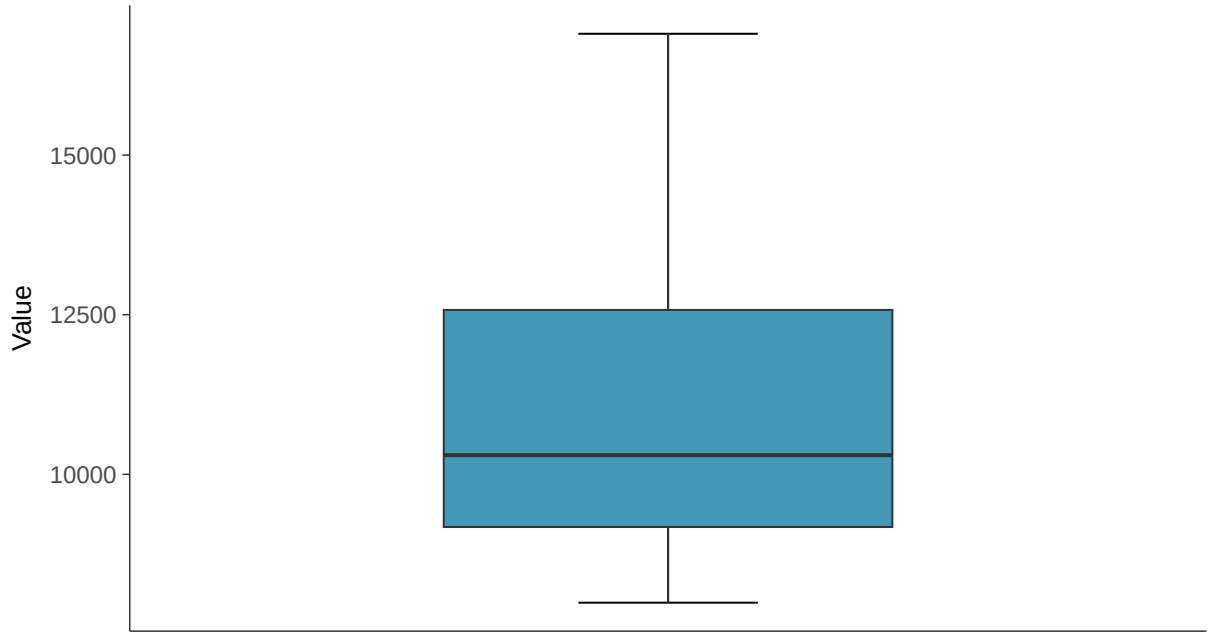
Histogram

Calcium, MW-5 (ug/L)



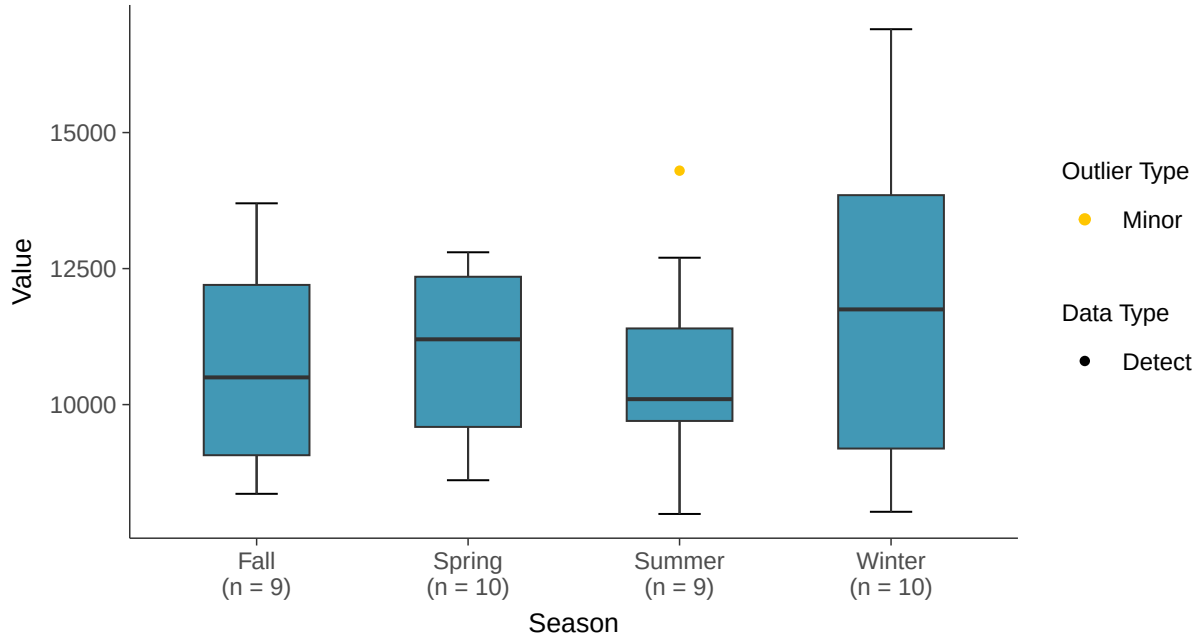
Boxplot

Calcium, MW-5 (ug/L)



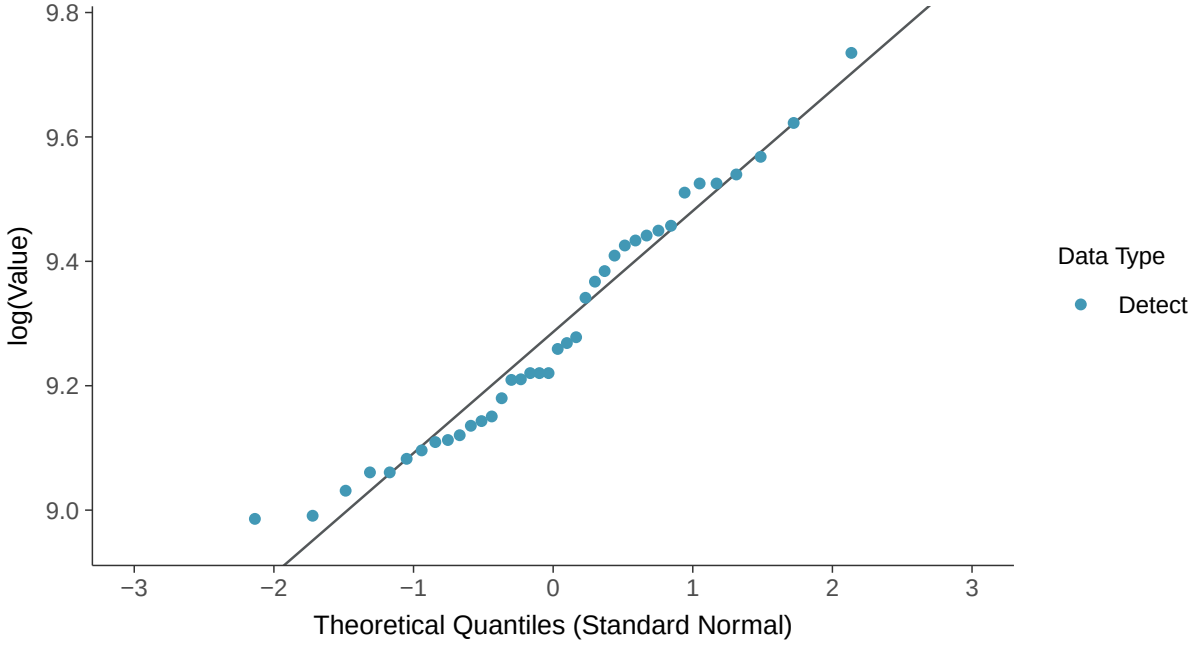
Boxplot by Season

Calcium, MW-5 (ug/L)



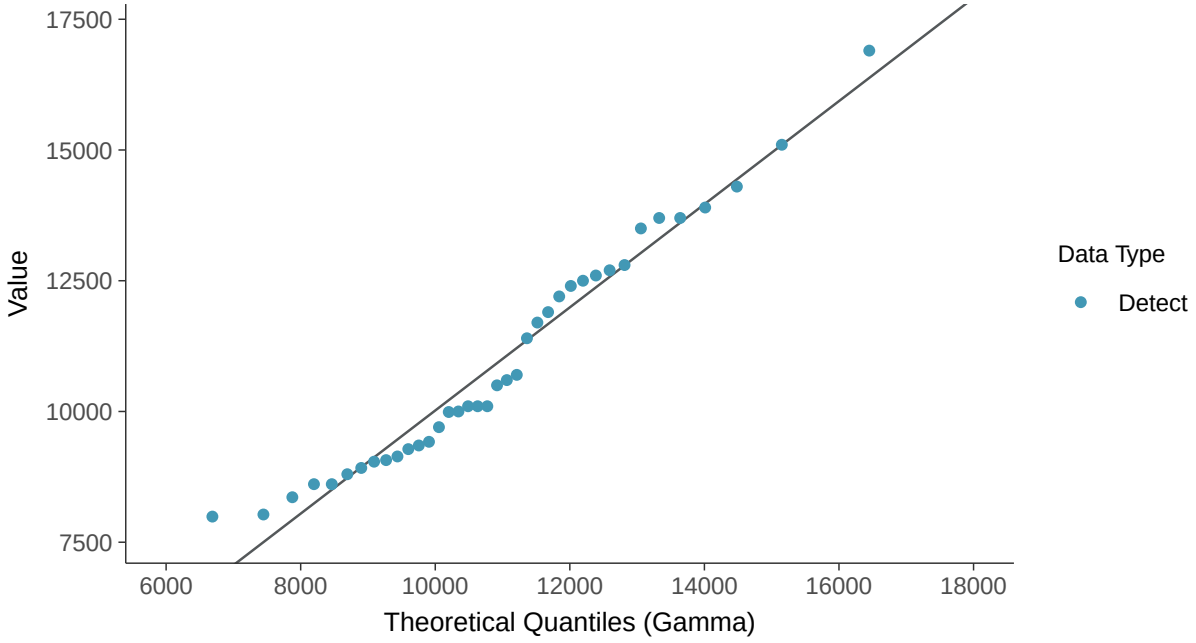
Lognormal Q-Q plot

Calcium, MW-5 (ug/L)



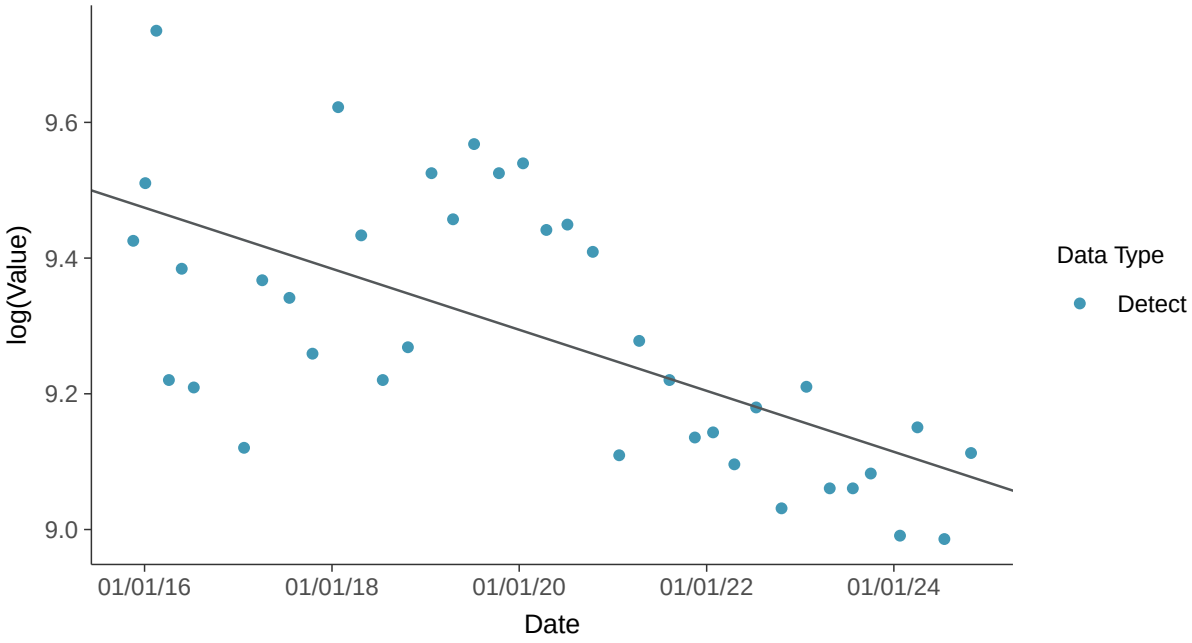
Gamma Q-Q plot

Calcium, MW-5 (ug/L)



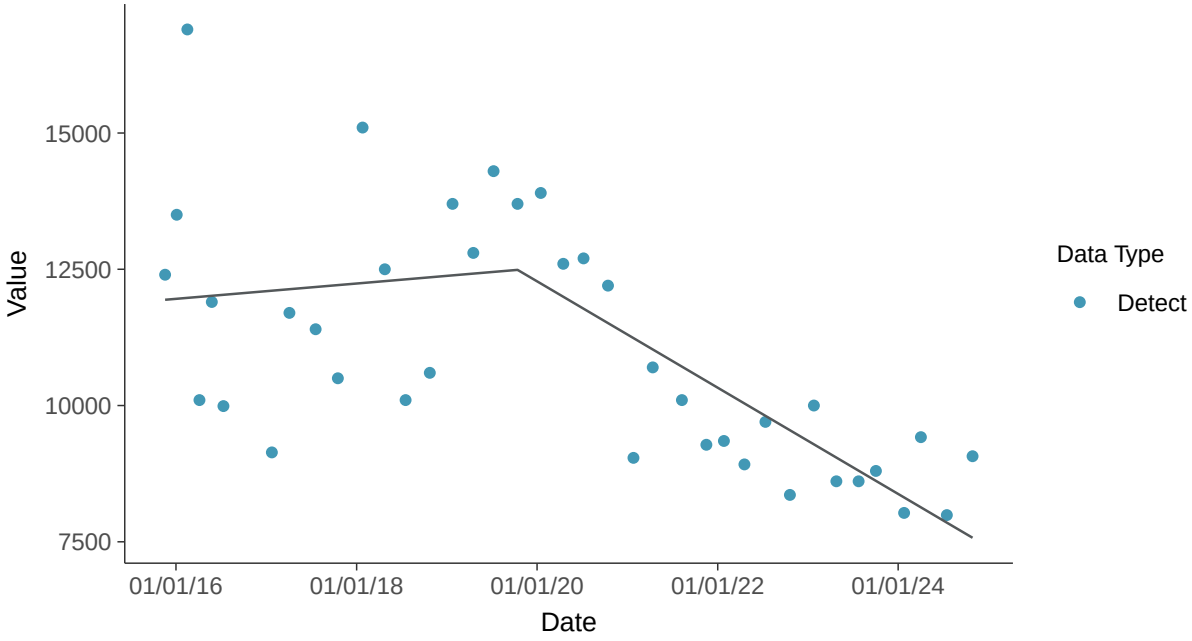
Trend Regression: Lognormal MLE

Calcium, MW-5 (ug/L)



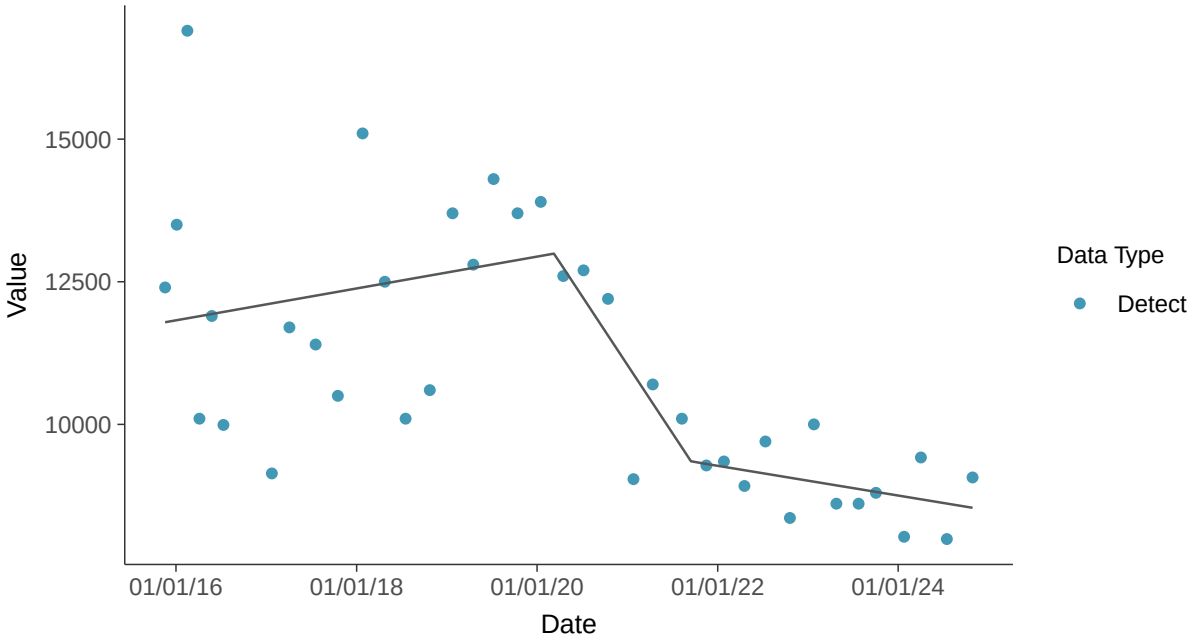
Trend Regression: Piecewise Linear-Linear

Calcium, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-5 (ug/L)

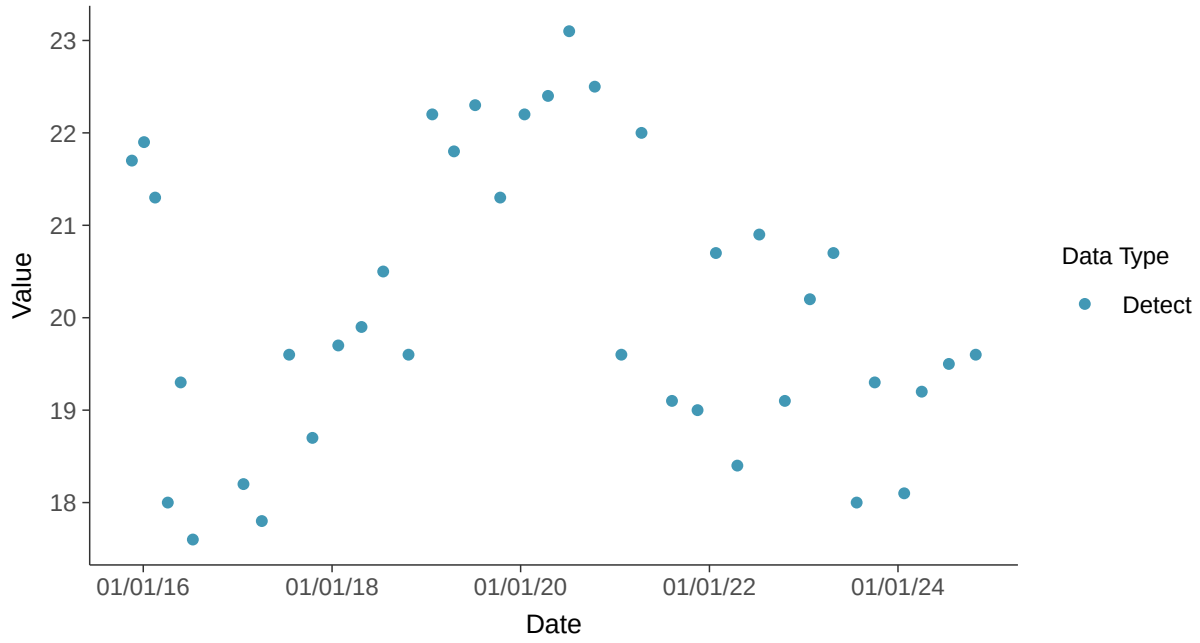


App. III: Chloride, MW-5

ID: 05_02_108

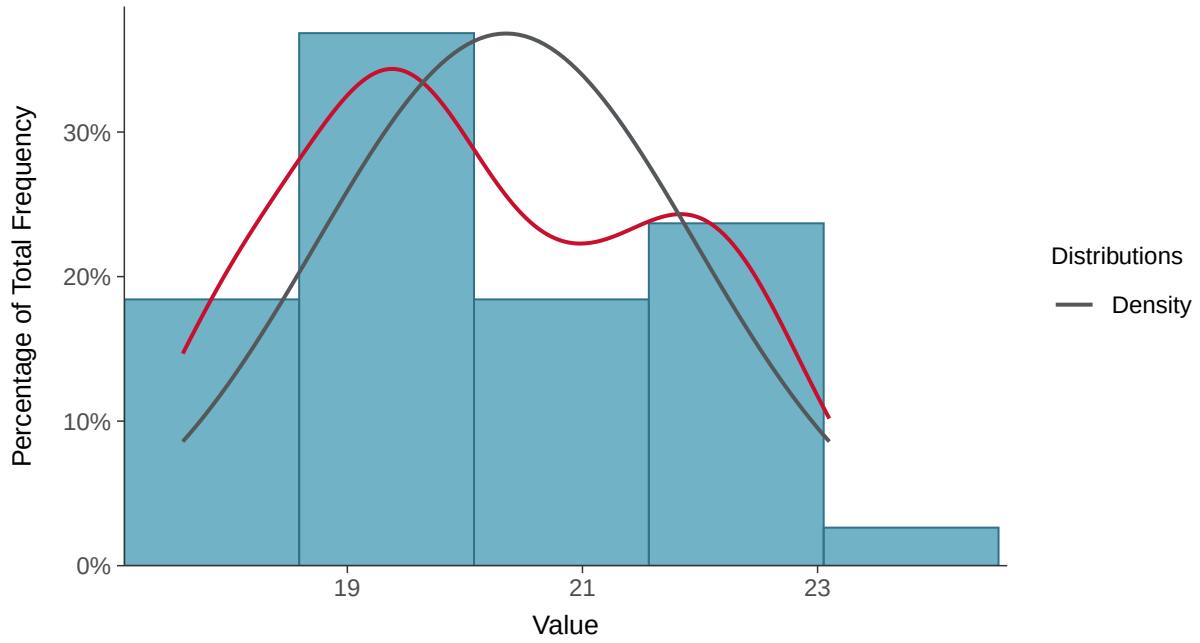
Scatter Plot

Chloride, MW-5 (mg/L)



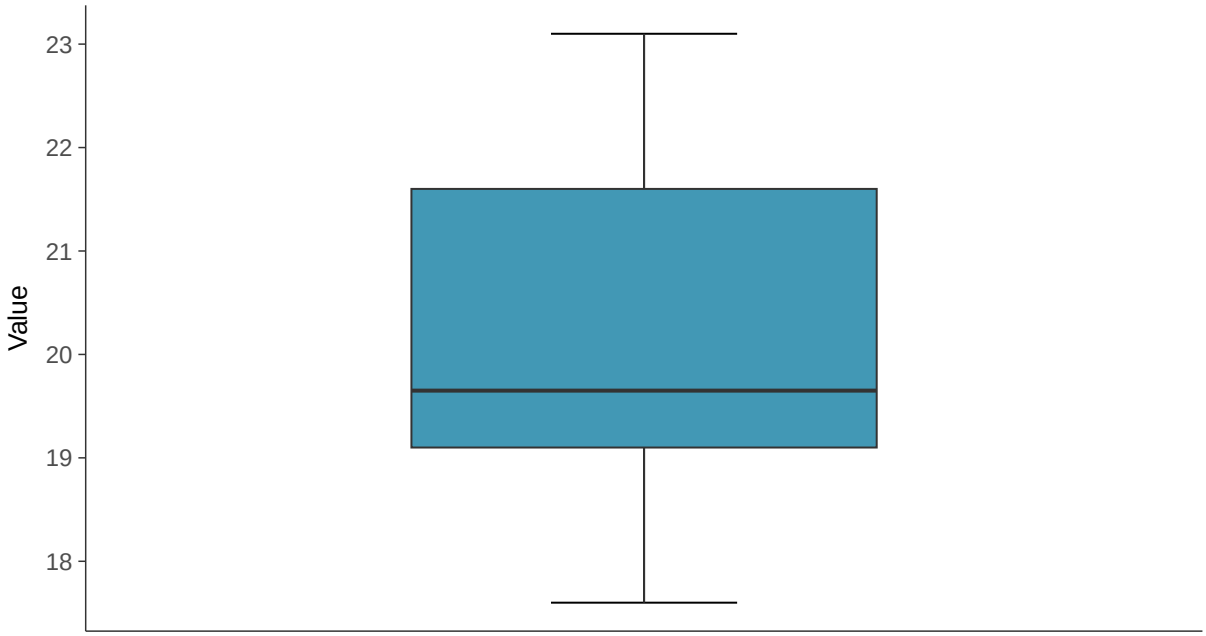
Histogram

Chloride, MW-5 (mg/L)



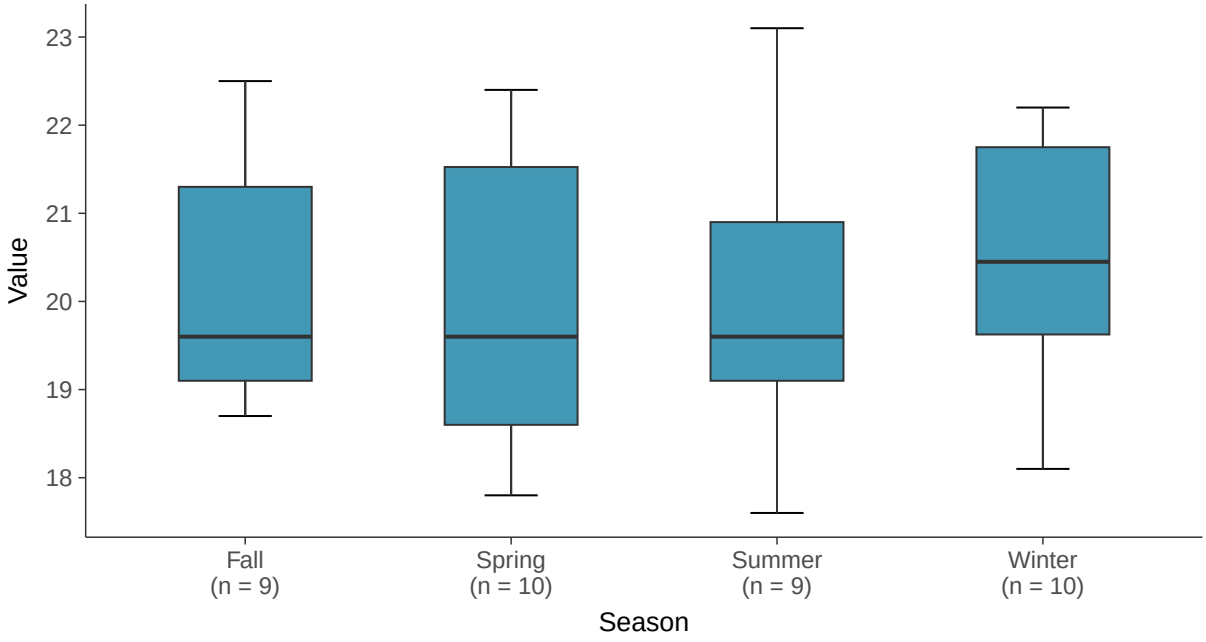
Boxplot

Chloride, MW-5 (mg/L)



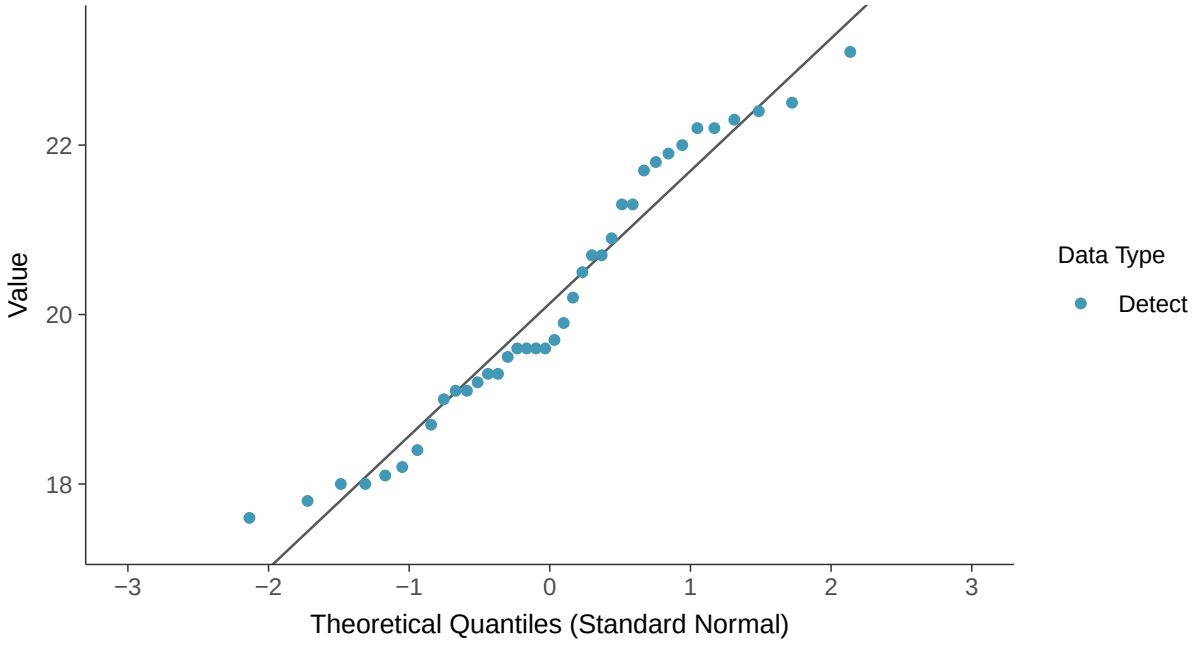
Boxplot by Season

Chloride, MW-5 (mg/L)



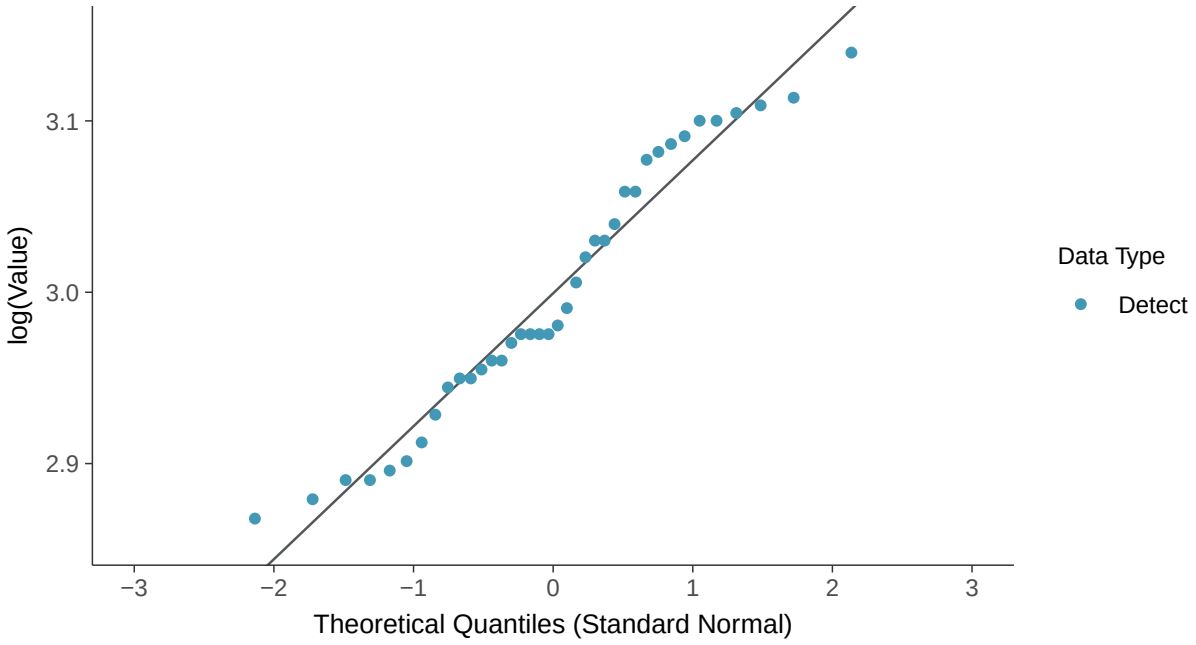
Normal Q-Q plot

Chloride, MW-5 (mg/L)



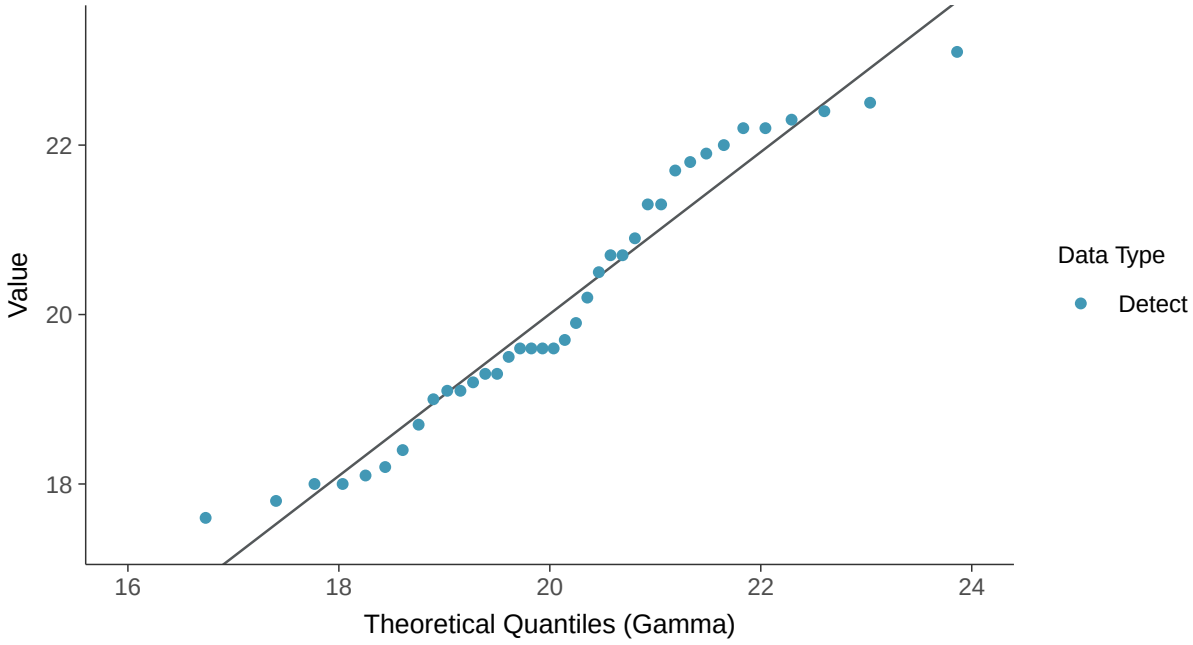
Lognormal Q-Q plot

Chloride, MW-5 (mg/L)



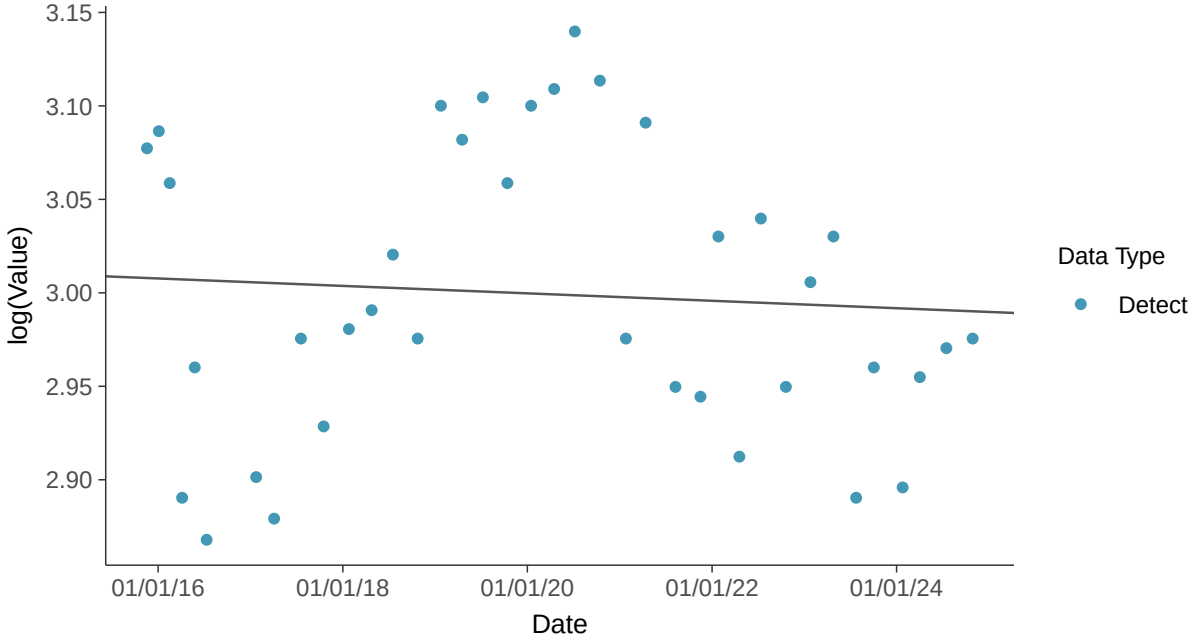
Gamma Q-Q plot

Chloride, MW-5 (mg/L)



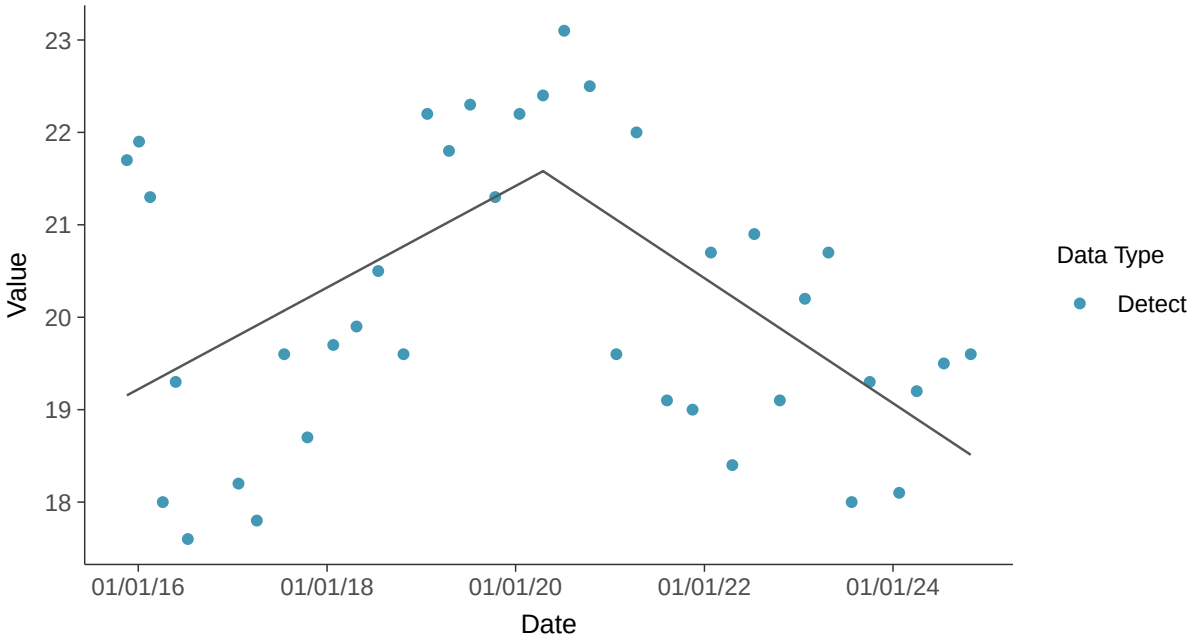
Trend Regression: Lognormal MLE

Chloride, MW-5 (mg/L)



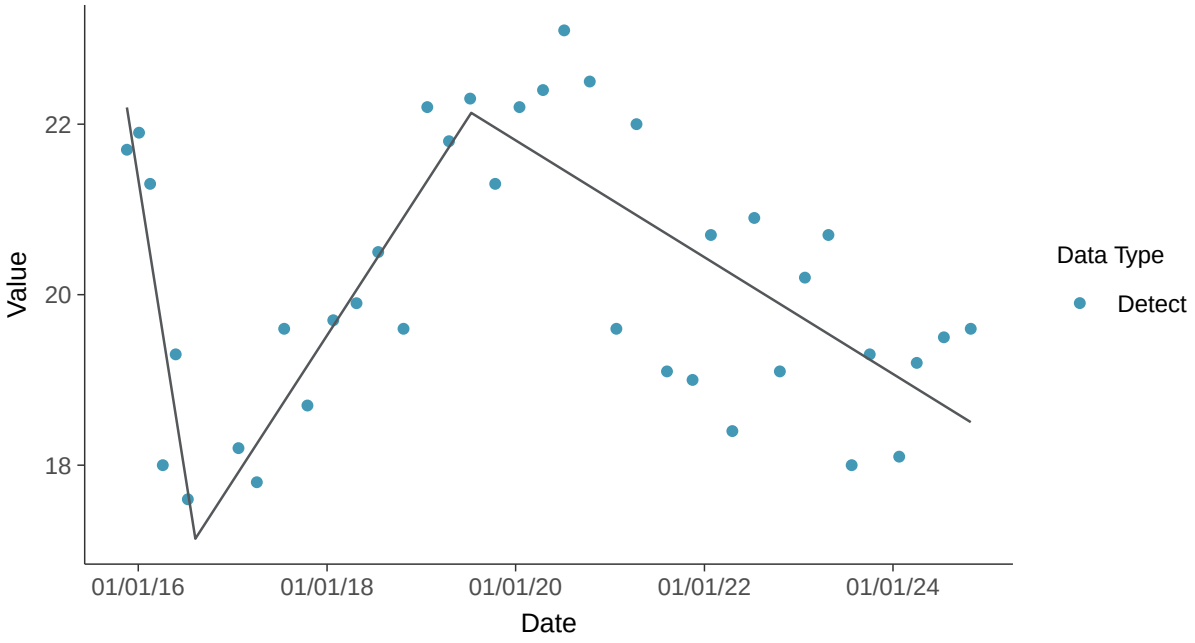
Trend Regression: Piecewise Linear-Linear

Chloride, MW-5 (mg/L)



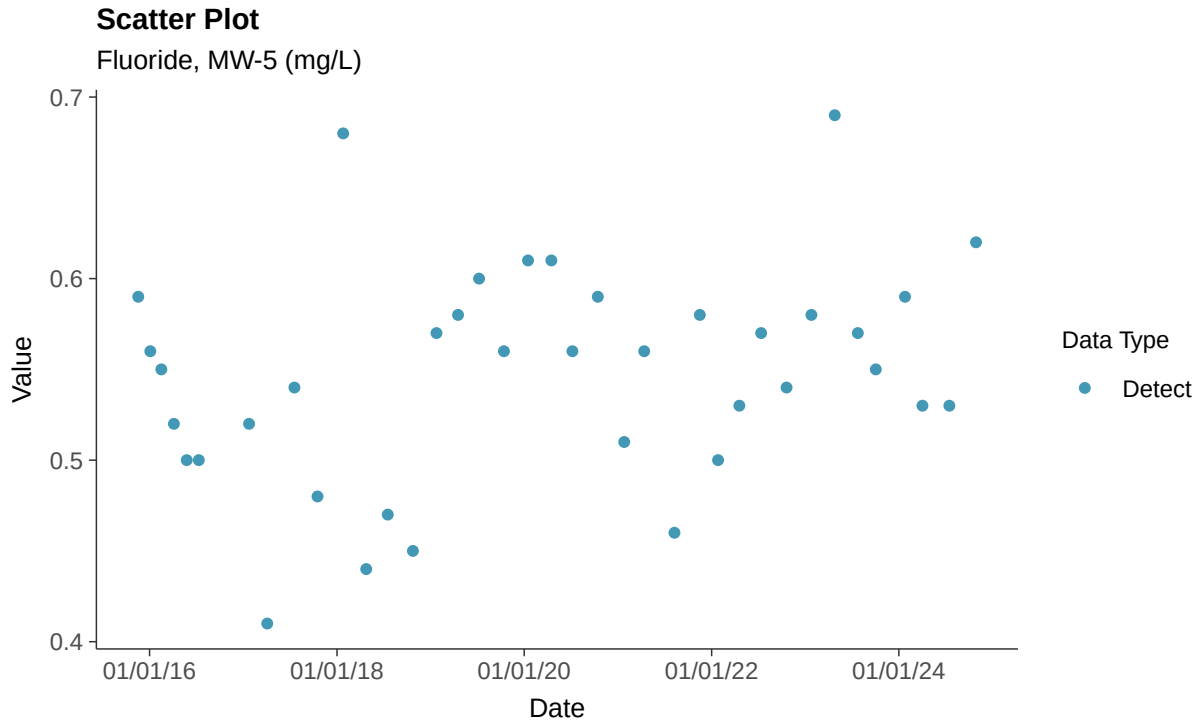
Trend Regression: Piecewise Linear-Linear-Linear

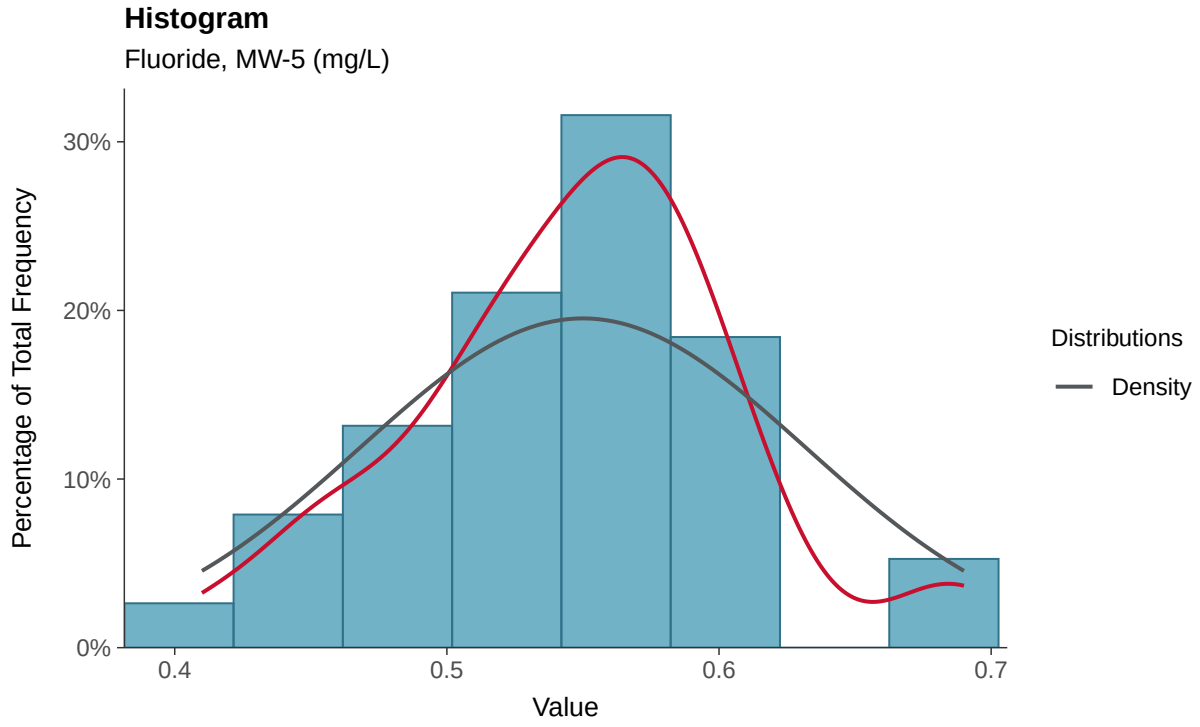
Chloride, MW-5 (mg/L)



App. III: Fluoride, MW-5

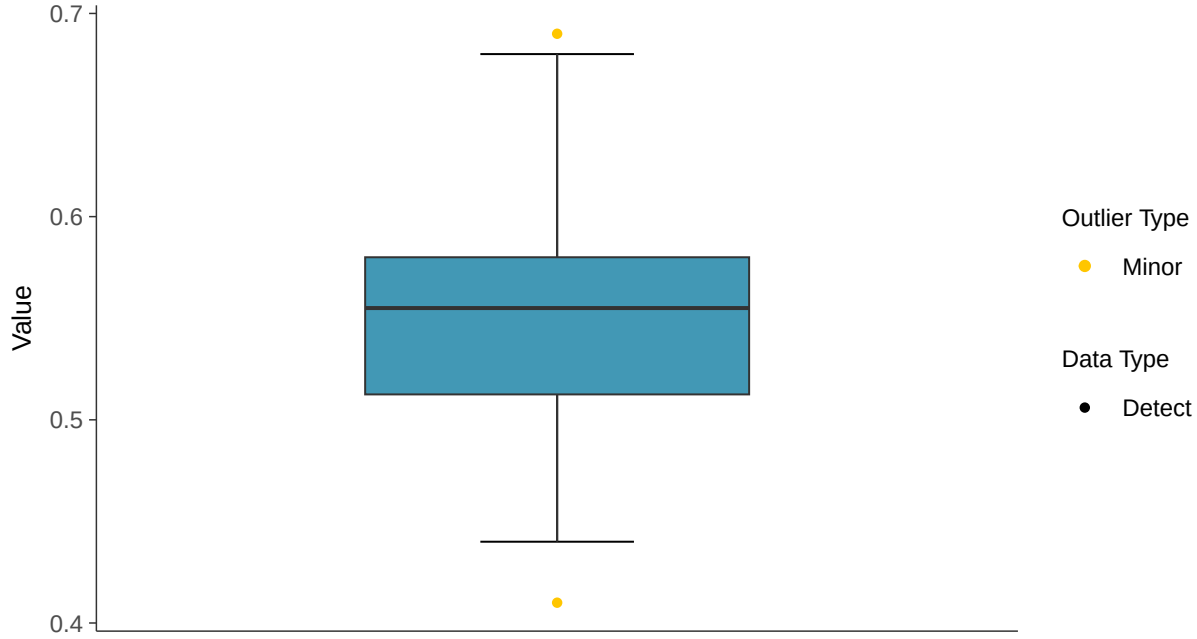
ID: 05_02_112





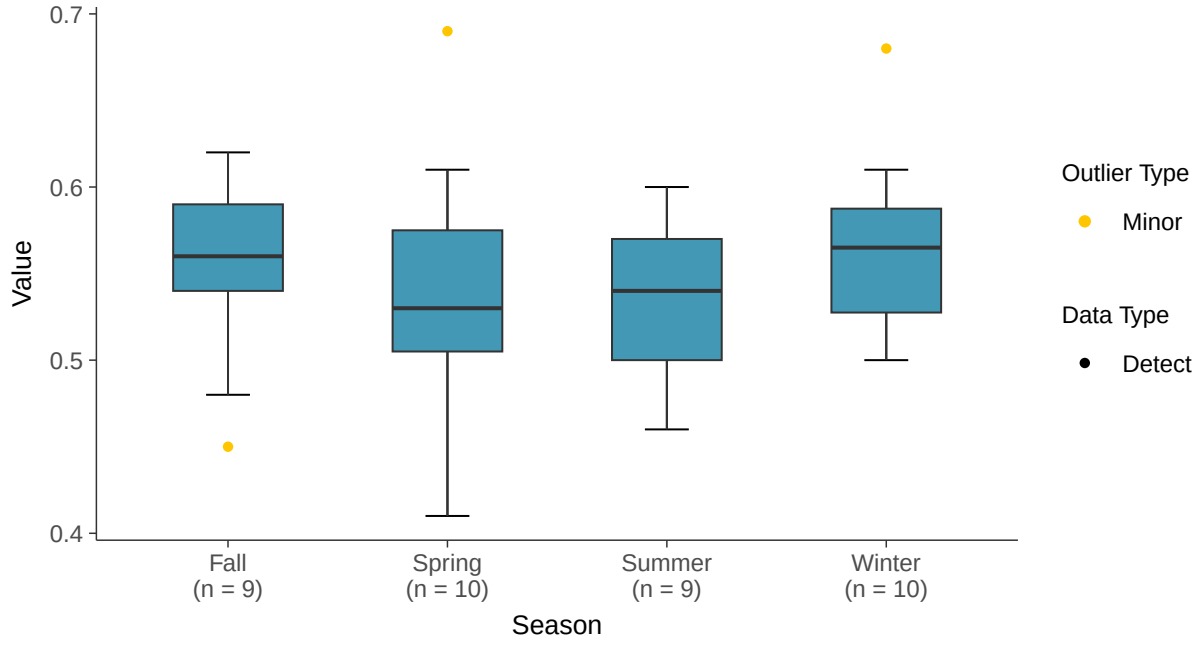
Boxplot

Fluoride, MW-5 (mg/L)



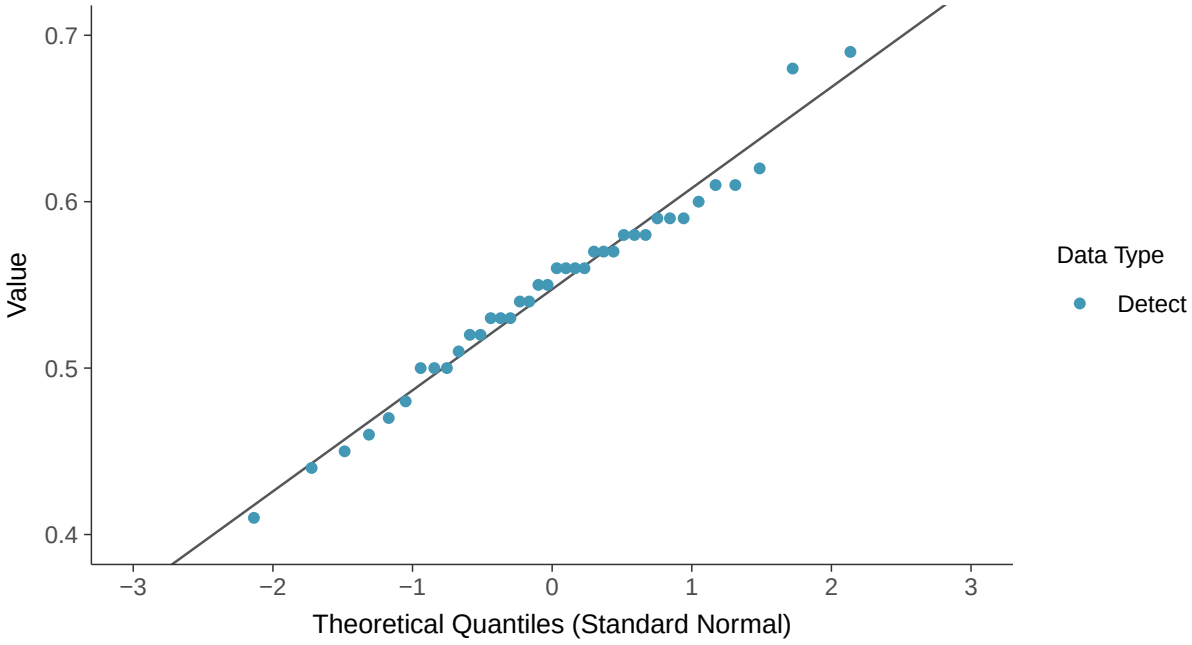
Boxplot by Season

Fluoride, MW-5 (mg/L)



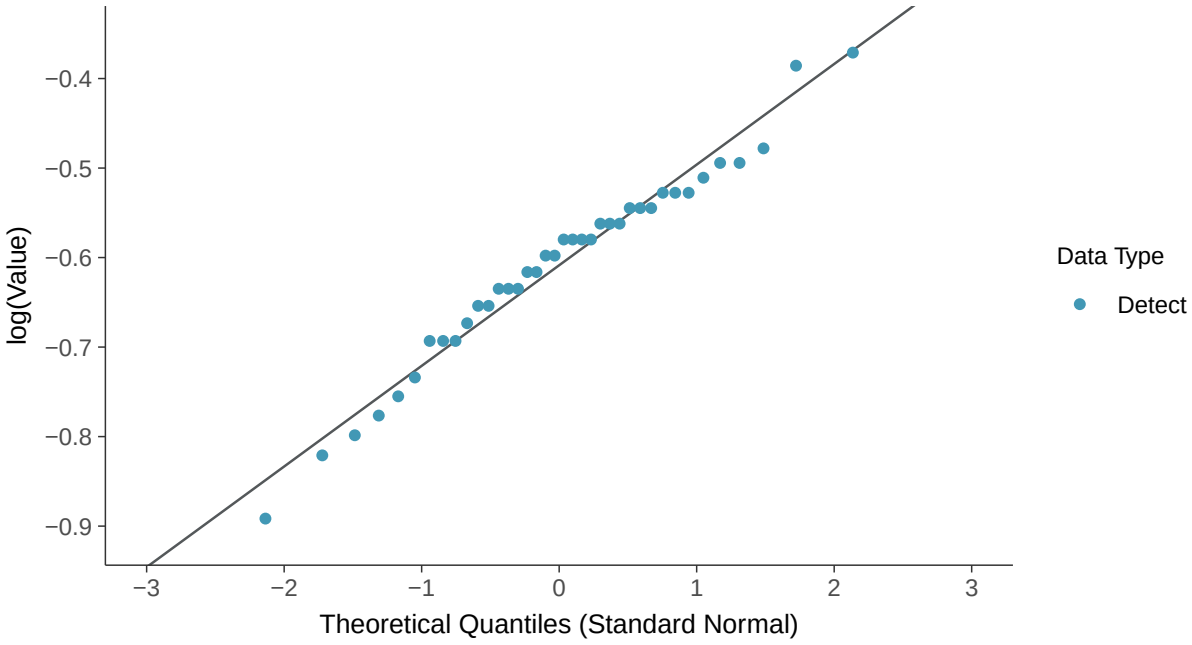
Normal Q-Q plot

Fluoride, MW-5 (mg/L)



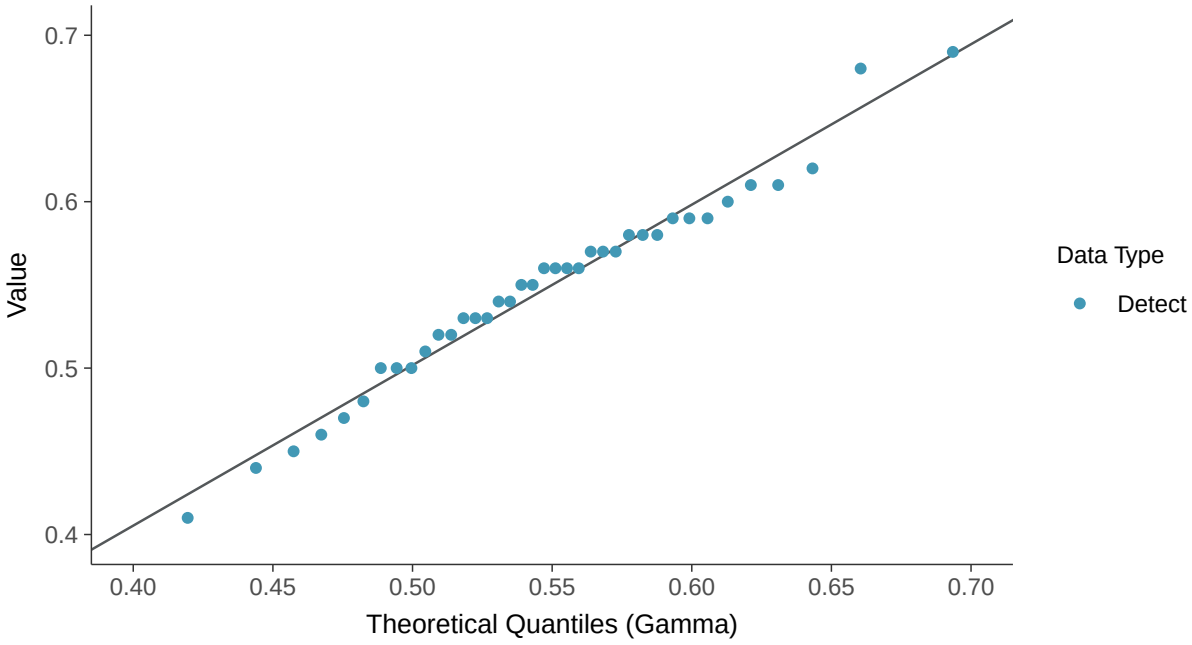
Lognormal Q-Q plot

Fluoride, MW-5 (mg/L)



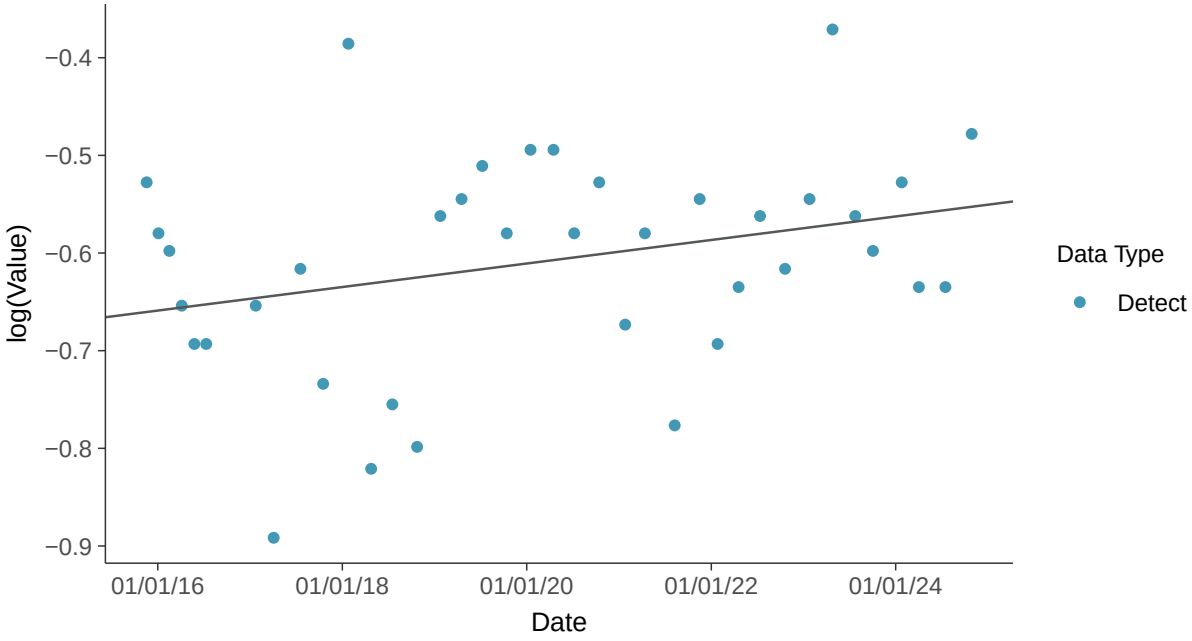
Gamma Q-Q plot

Fluoride, MW-5 (mg/L)



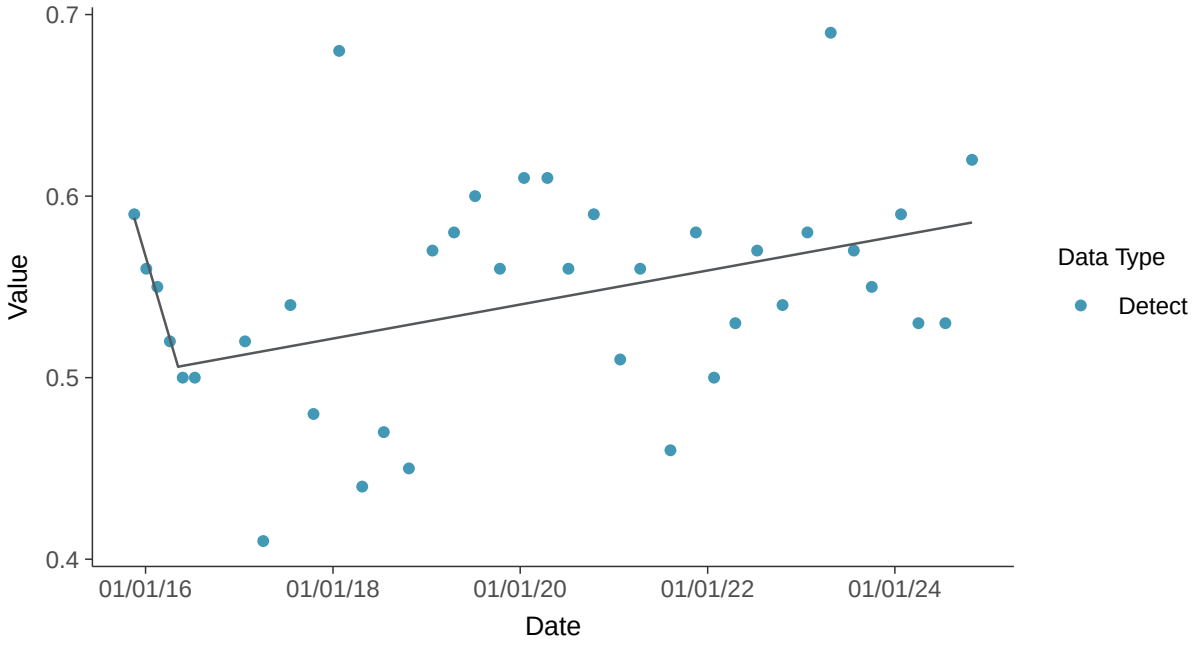
Trend Regression: Lognormal MLE

Fluoride, MW-5 (mg/L)



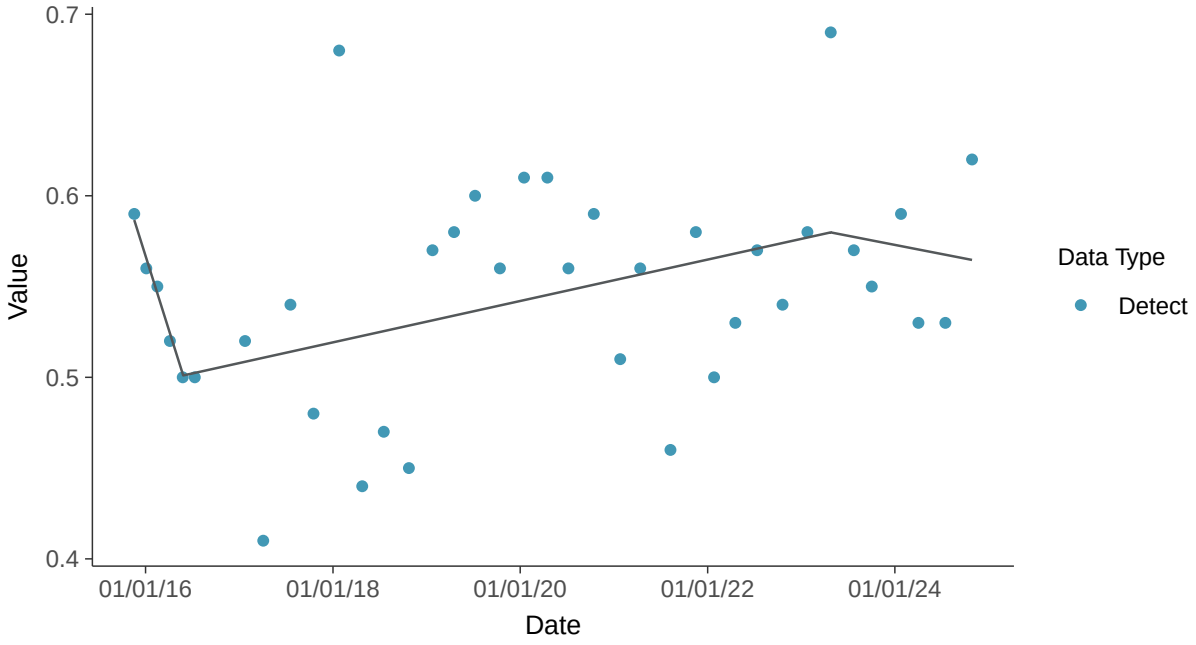
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-5 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-5 (mg/L)

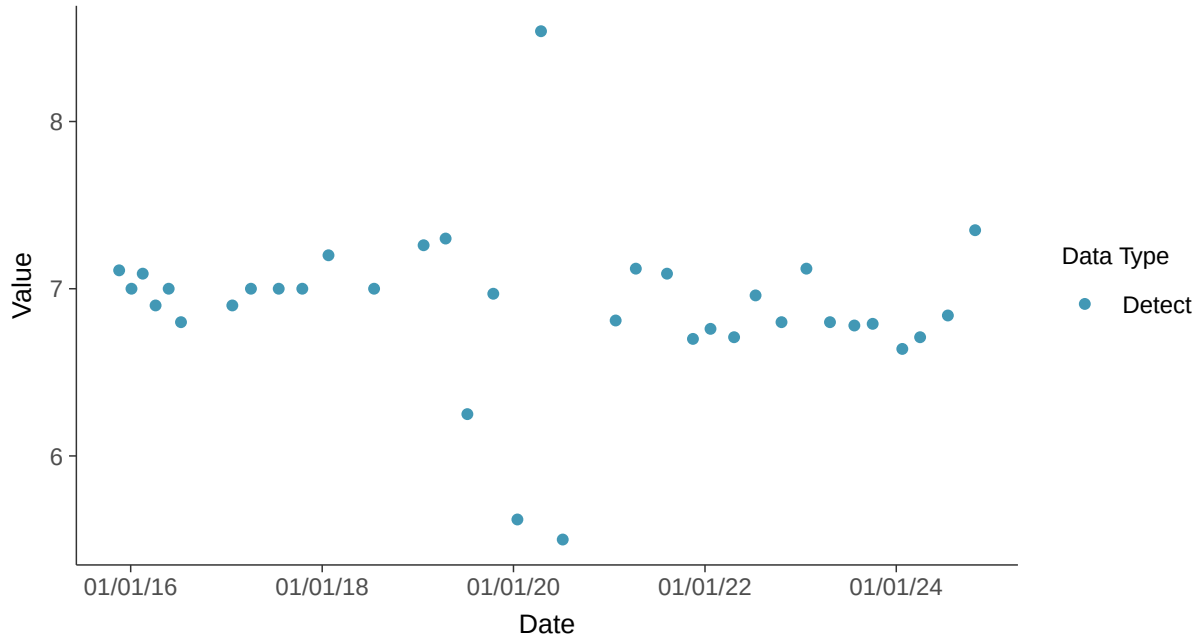


App. III: pH (Field), MW-5

ID: 05_02_118

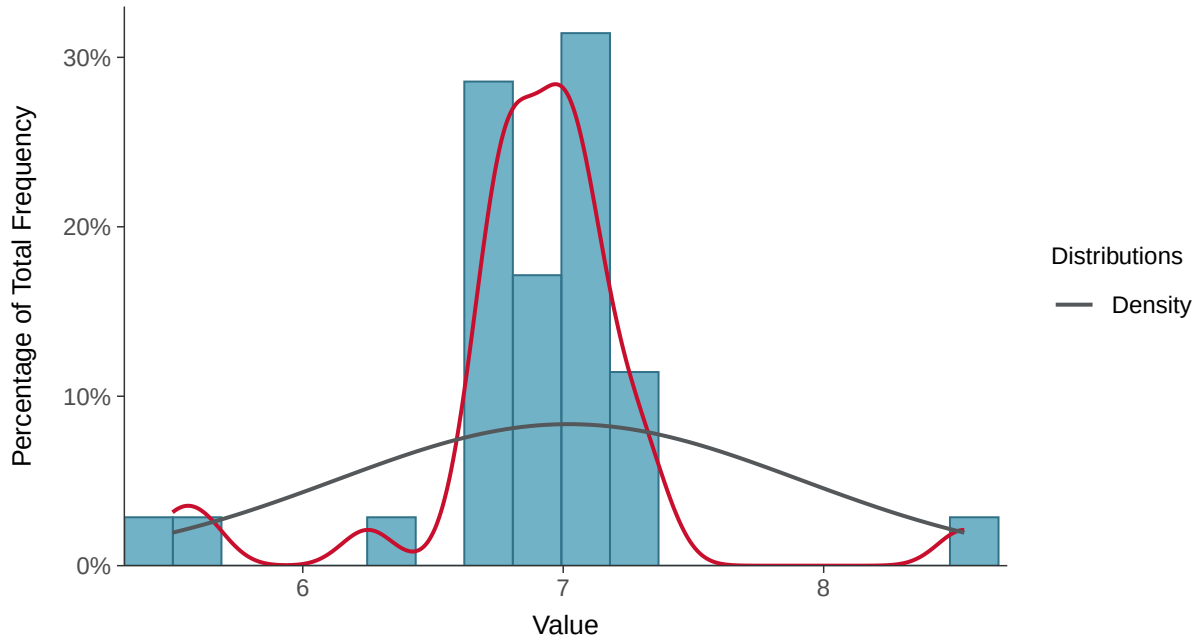
Scatter Plot

pH (Field), MW-5 (S.U.)



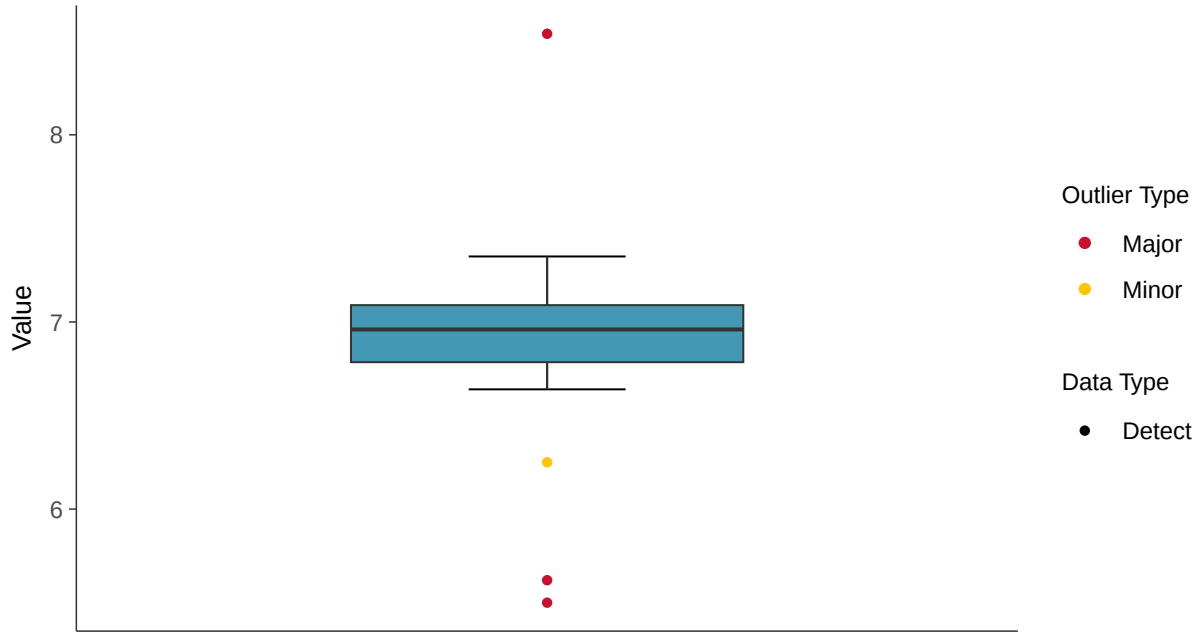
Histogram

pH (Field), MW-5 (S.U.)



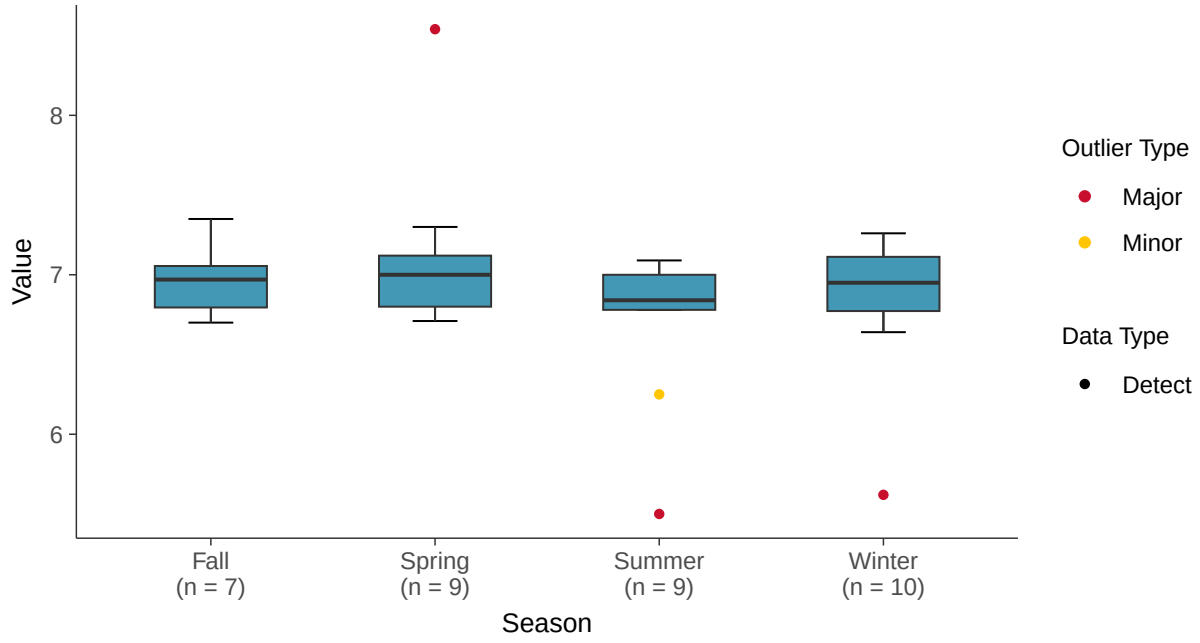
Boxplot

pH (Field), MW-5 (S.U.)



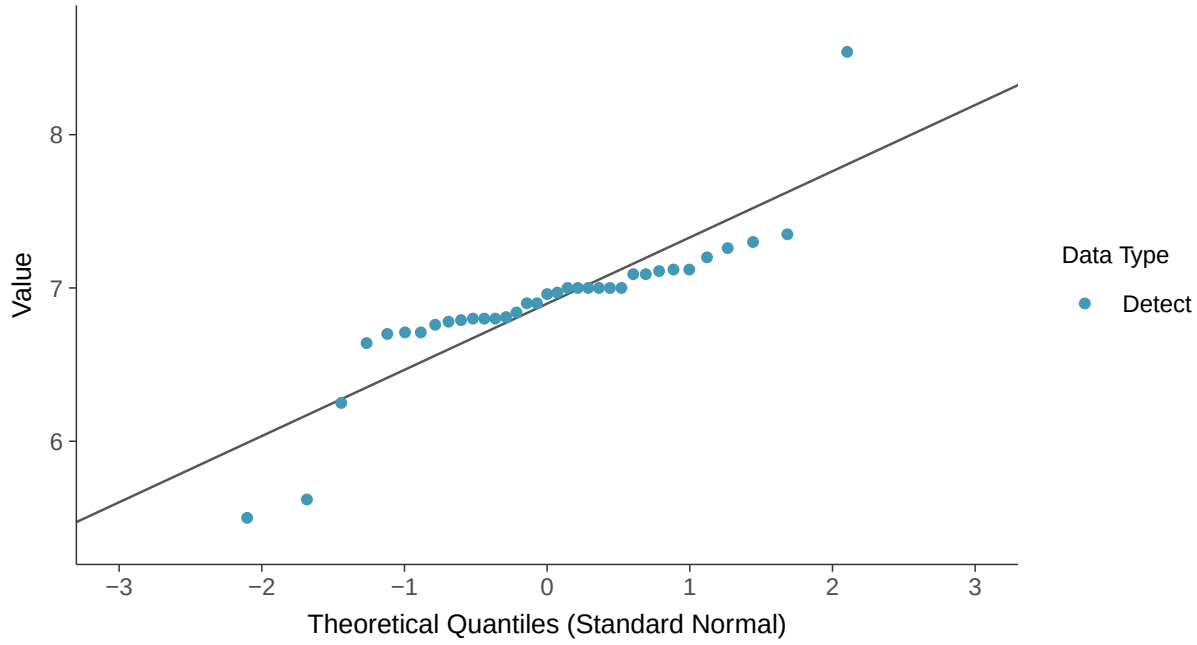
Boxplot by Season

pH (Field), MW-5 (S.U.)



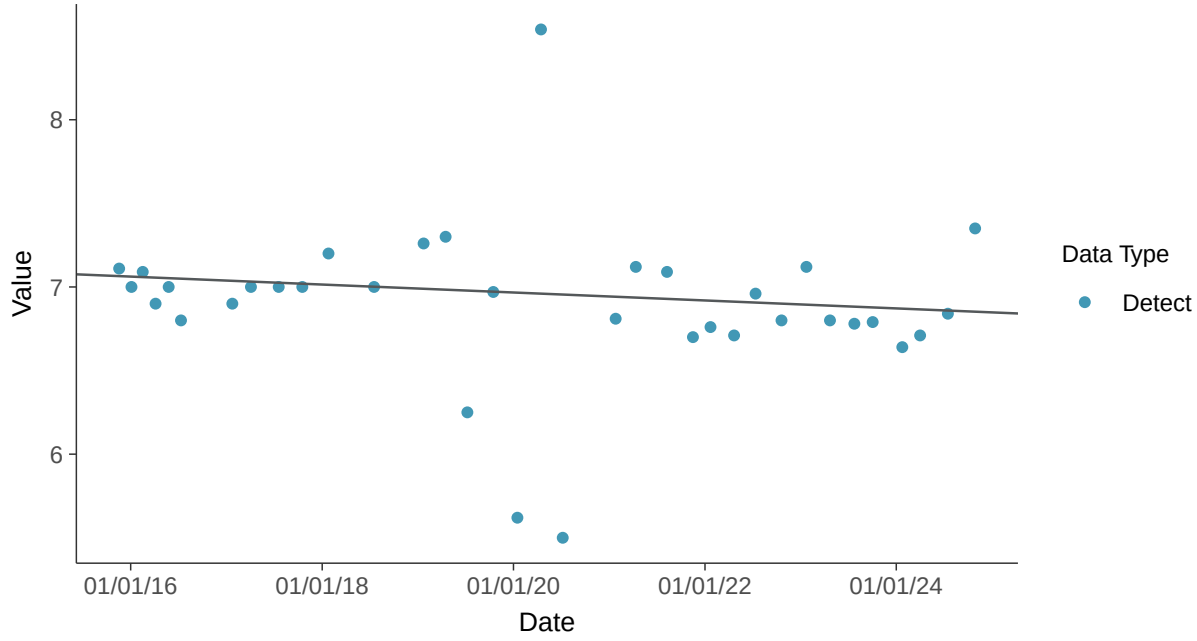
Normal Q-Q plot

pH (Field), MW-5 (S.U.)



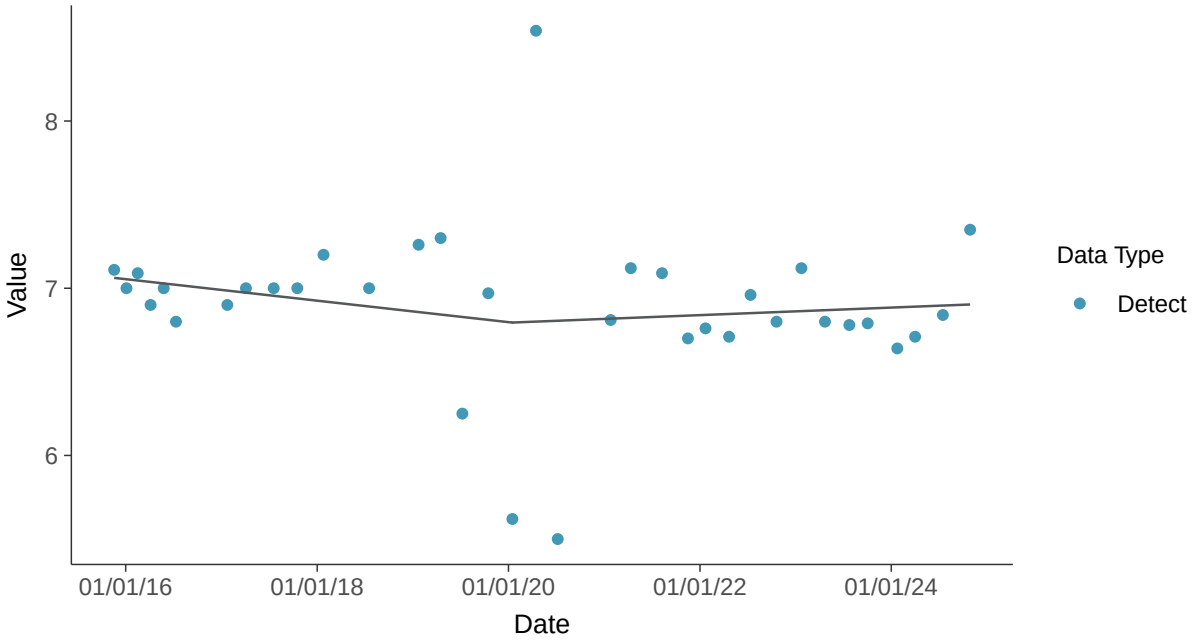
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-5 (S.U.)



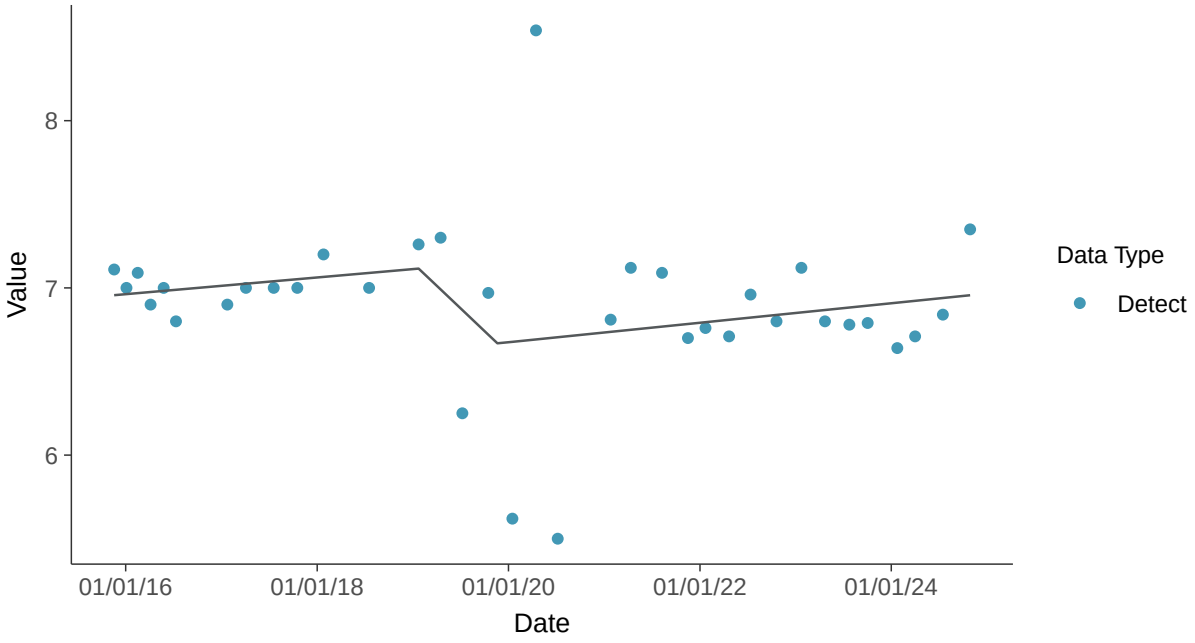
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-5 (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-5 (S.U.)

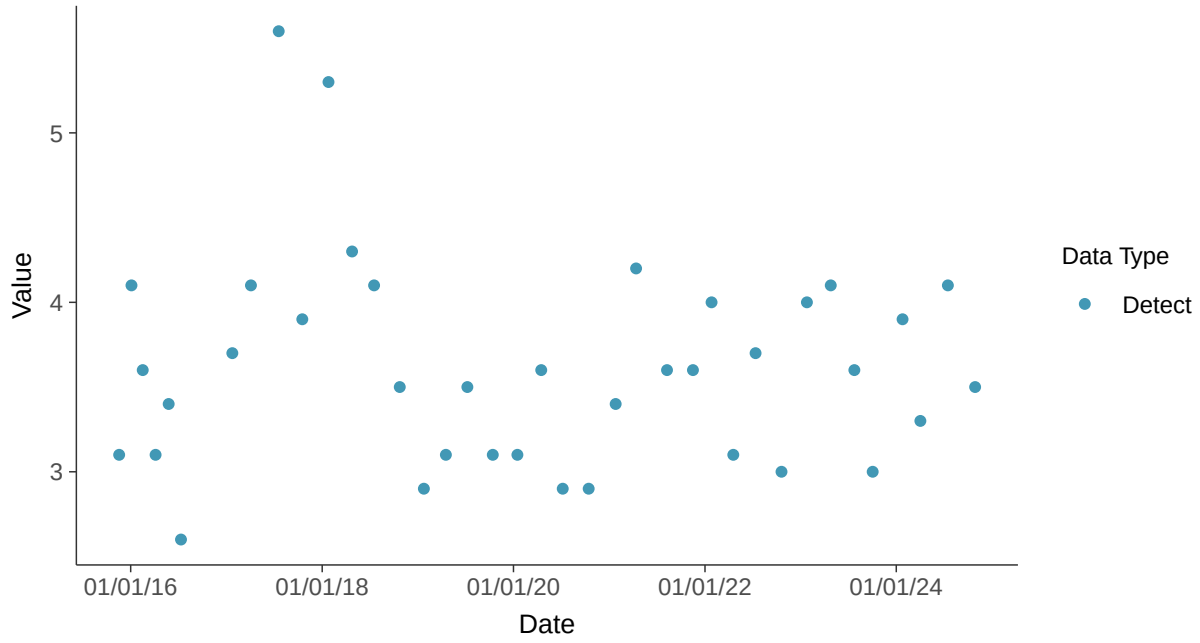


App. III: Sulfate, MW-5

ID: 05_02_123

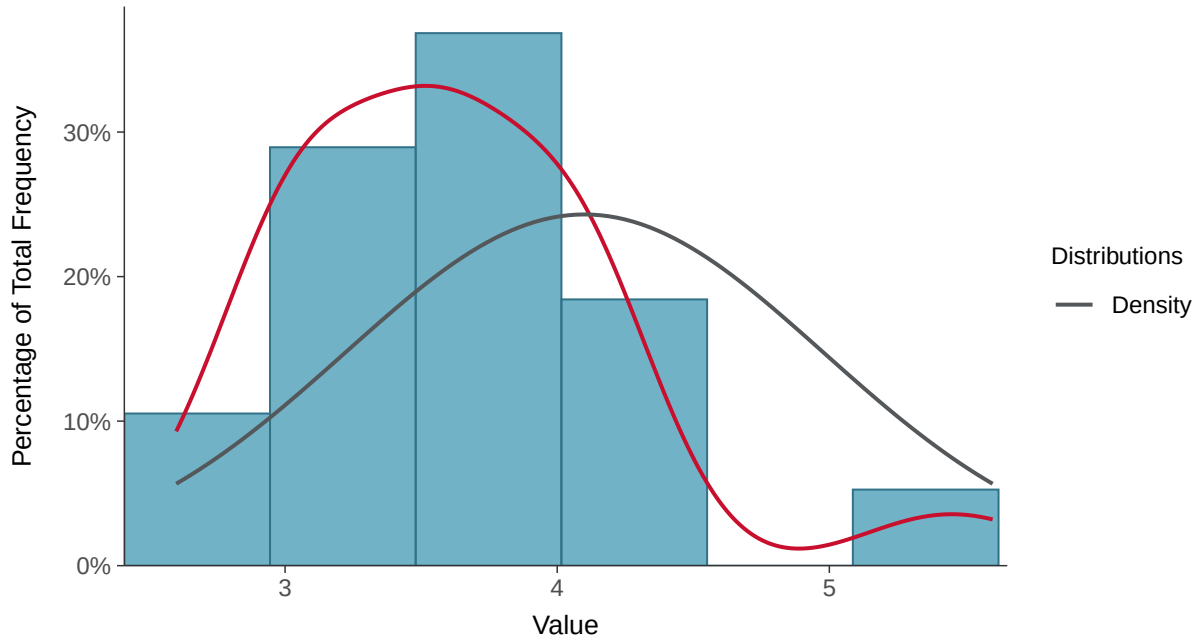
Scatter Plot

Sulfate, MW-5 (mg/L)



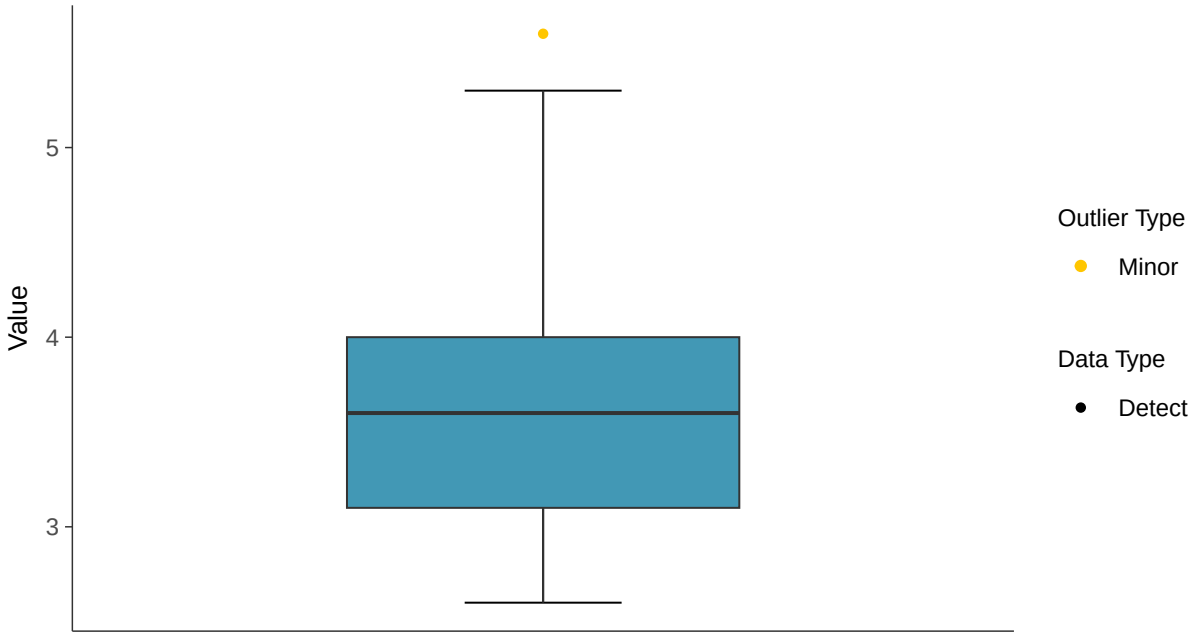
Histogram

Sulfate, MW-5 (mg/L)



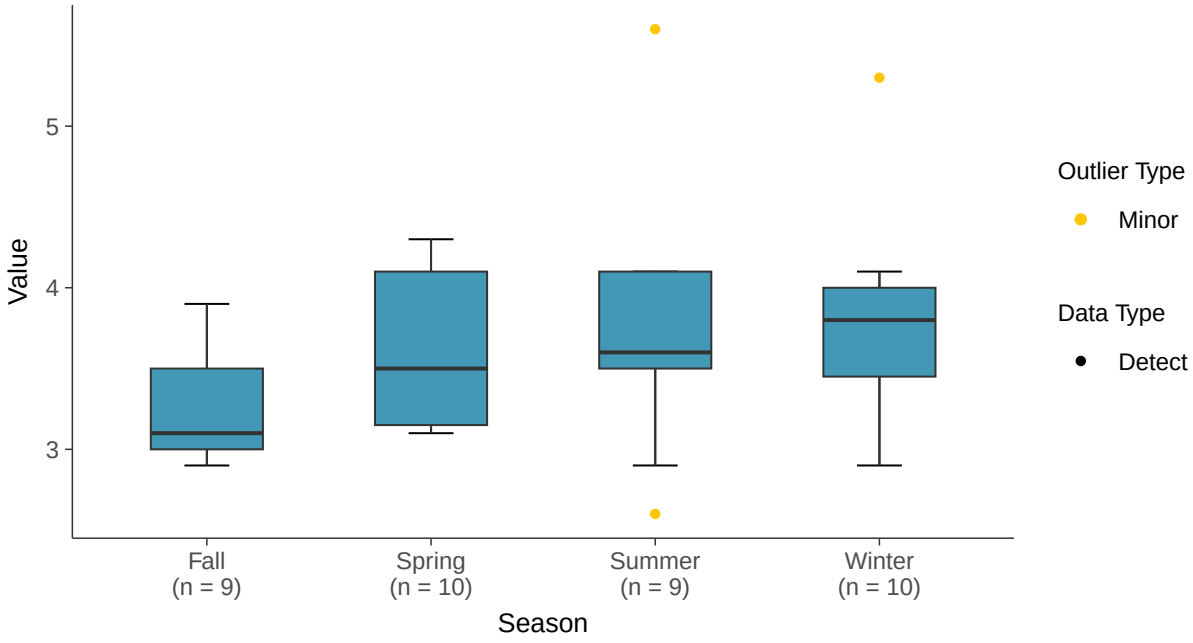
Boxplot

Sulfate, MW-5 (mg/L)



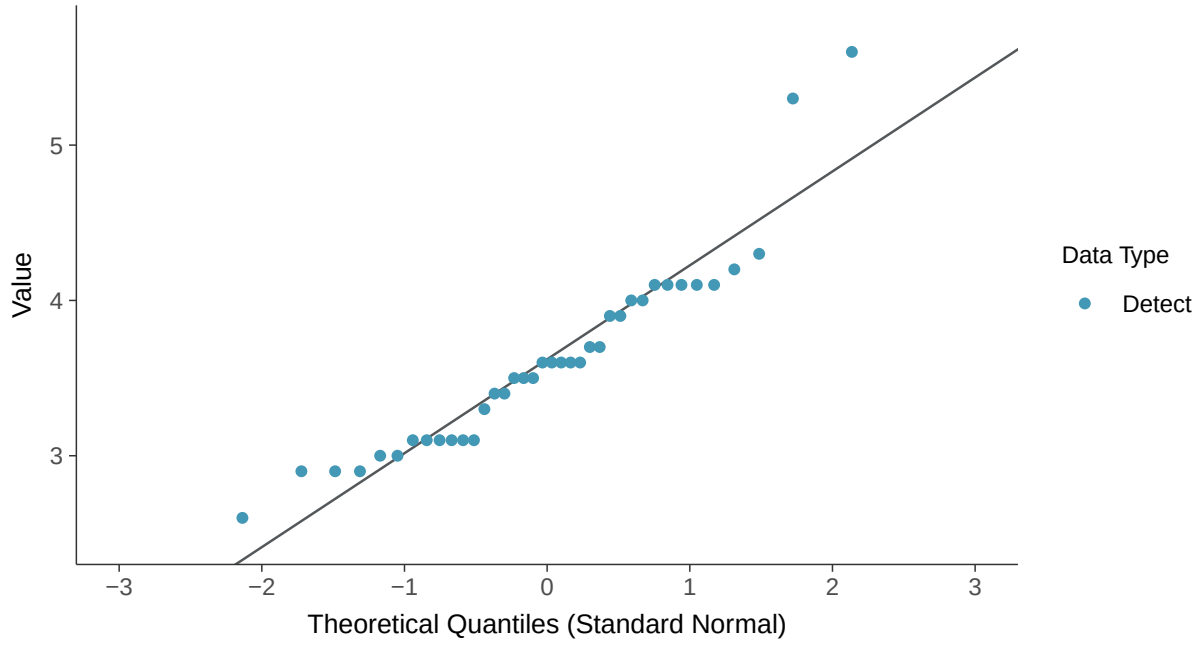
Boxplot by Season

Sulfate, MW-5 (mg/L)



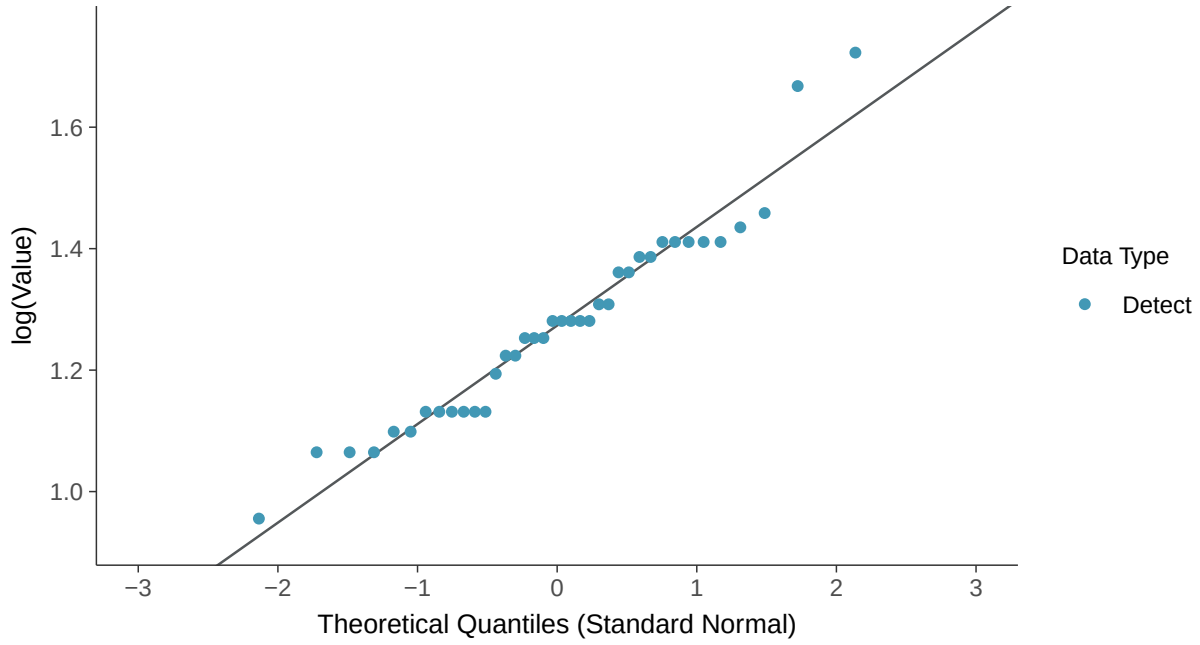
Normal Q-Q plot

Sulfate, MW-5 (mg/L)



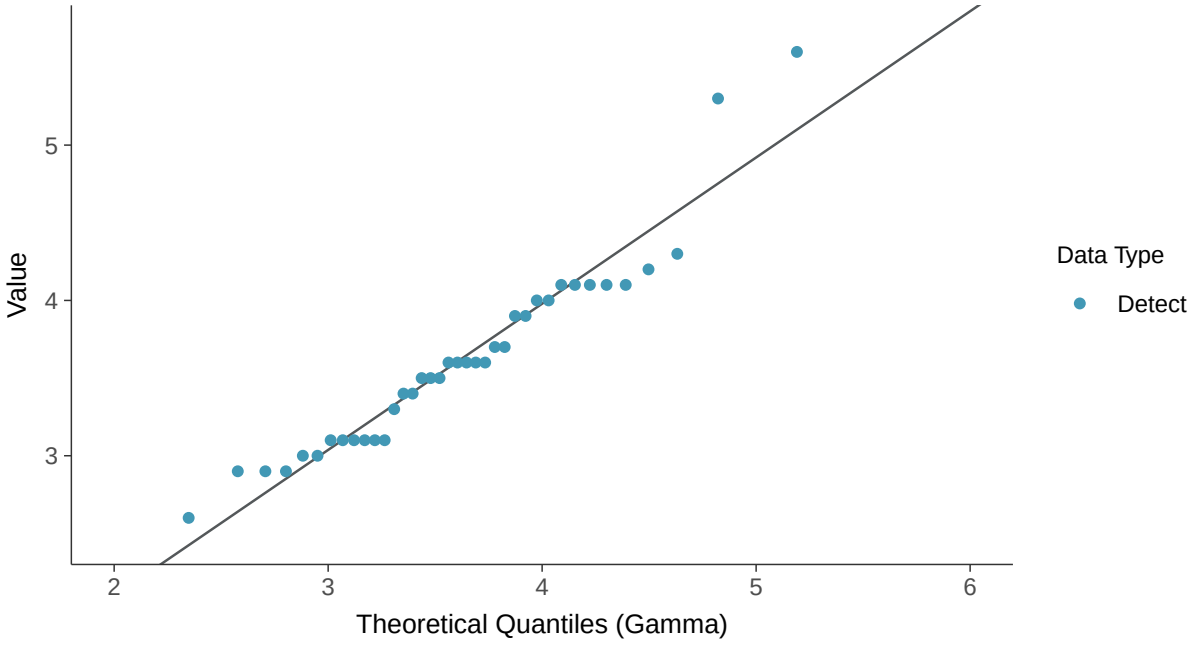
Lognormal Q-Q plot

Sulfate, MW-5 (mg/L)



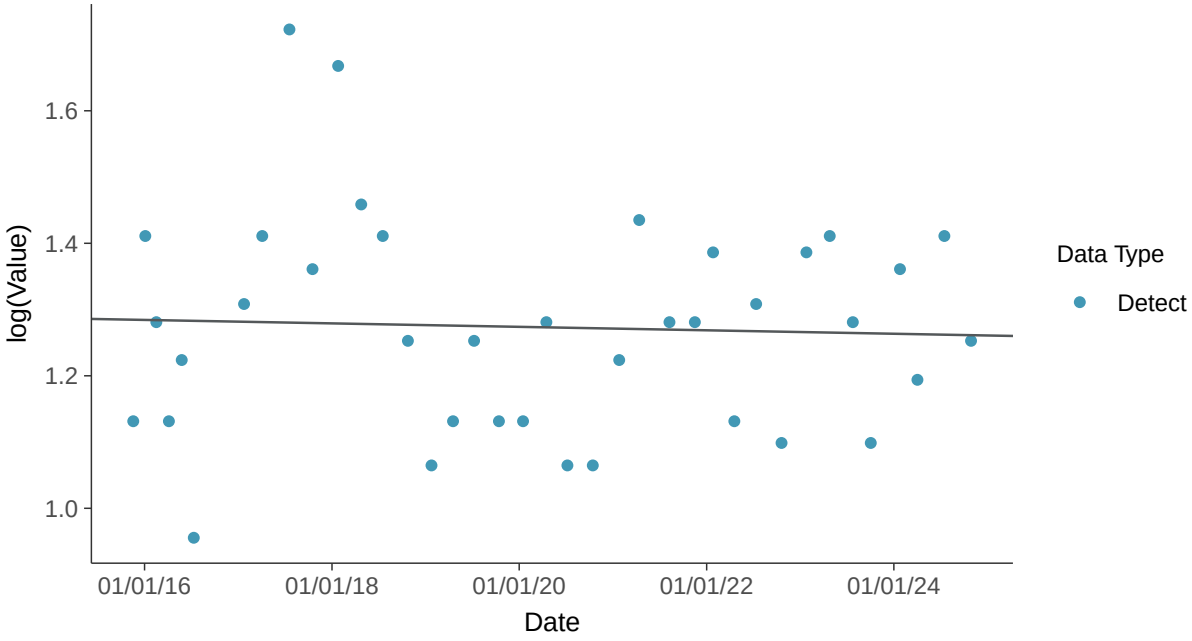
Gamma Q-Q plot

Sulfate, MW-5 (mg/L)



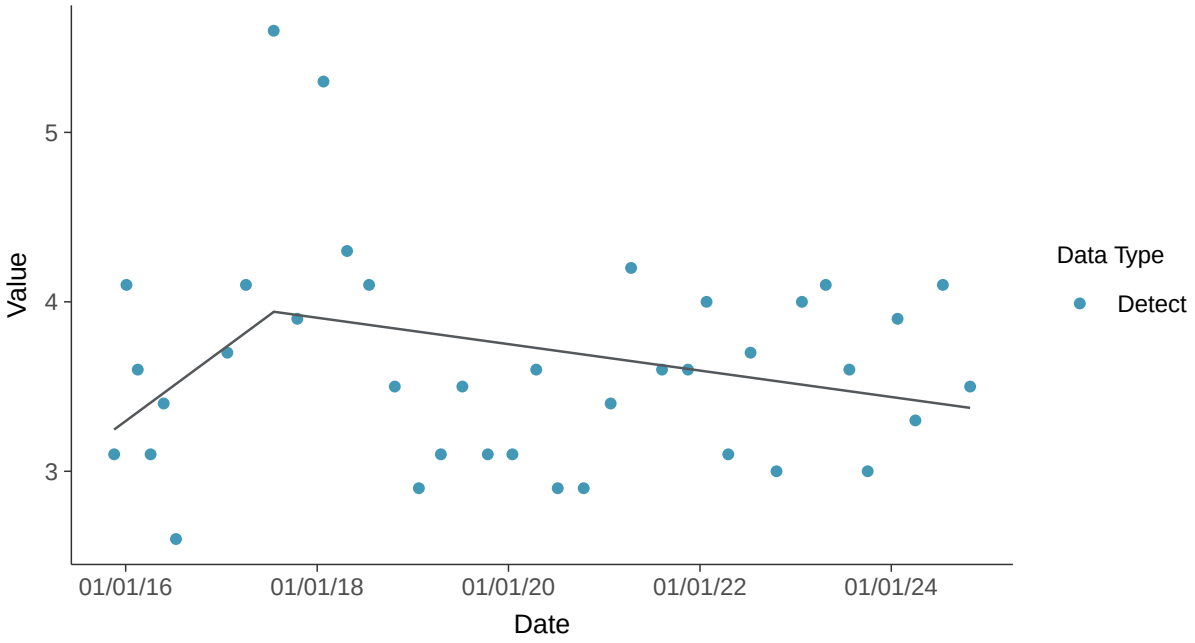
Trend Regression: Lognormal MLE

Sulfate, MW-5 (mg/L)



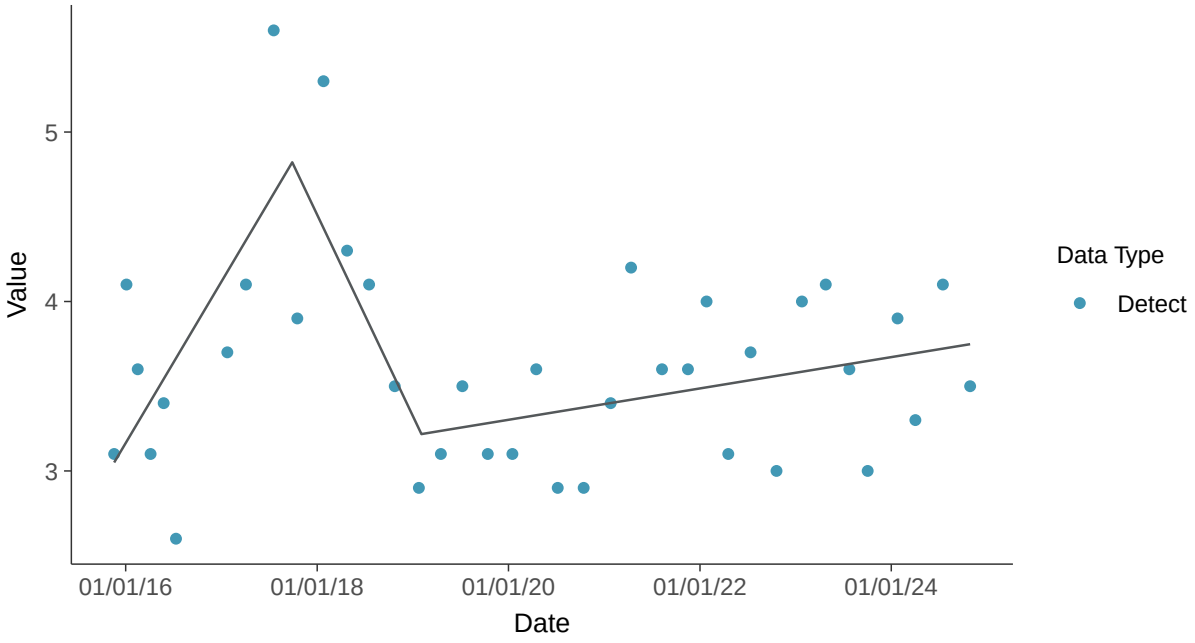
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-5 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-5 (mg/L)

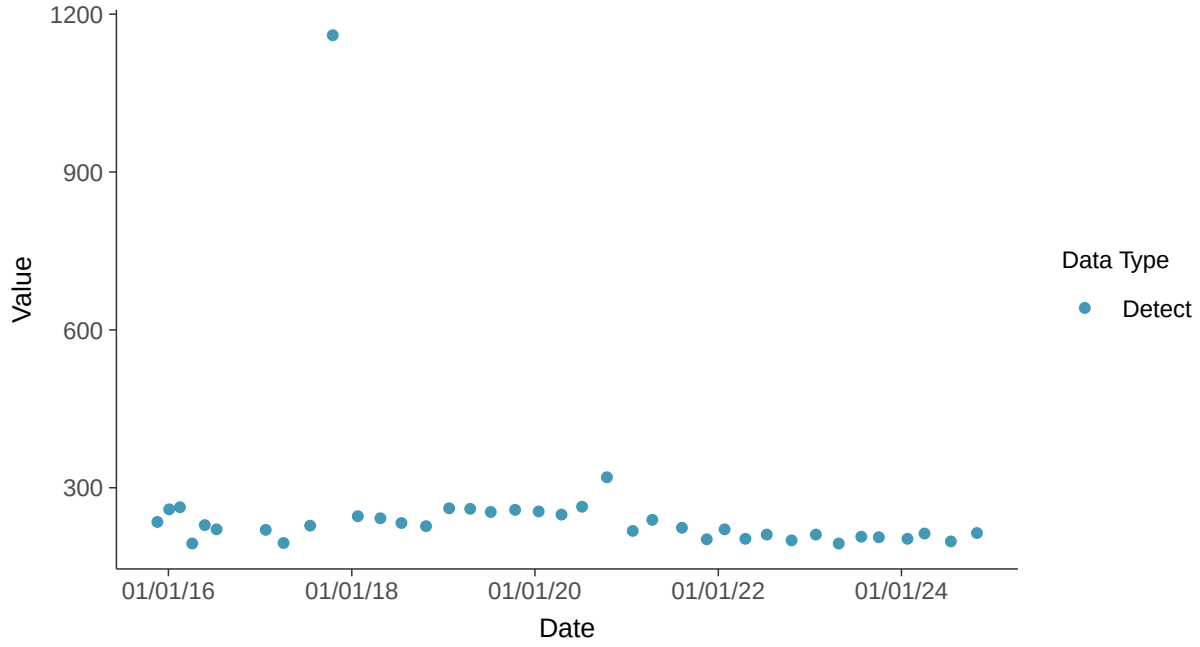


App. III: Total Dissolved Solids, MW-5

ID: 05_02_125

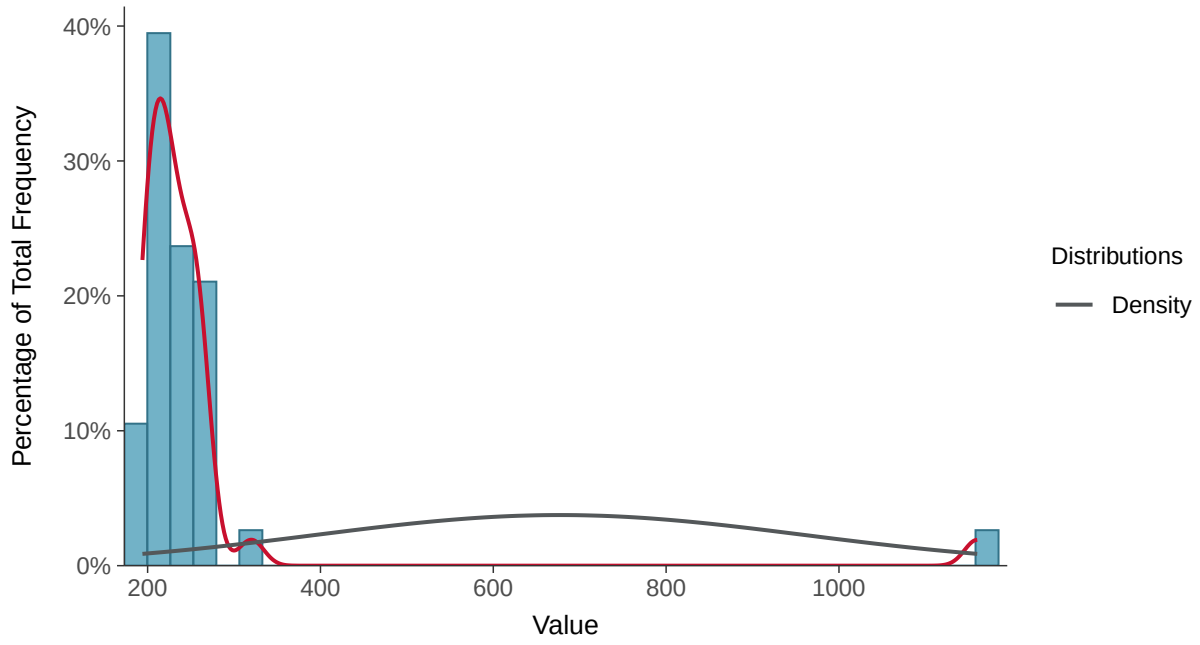
Scatter Plot

Total Dissolved Solids, MW-5 (mg/L)



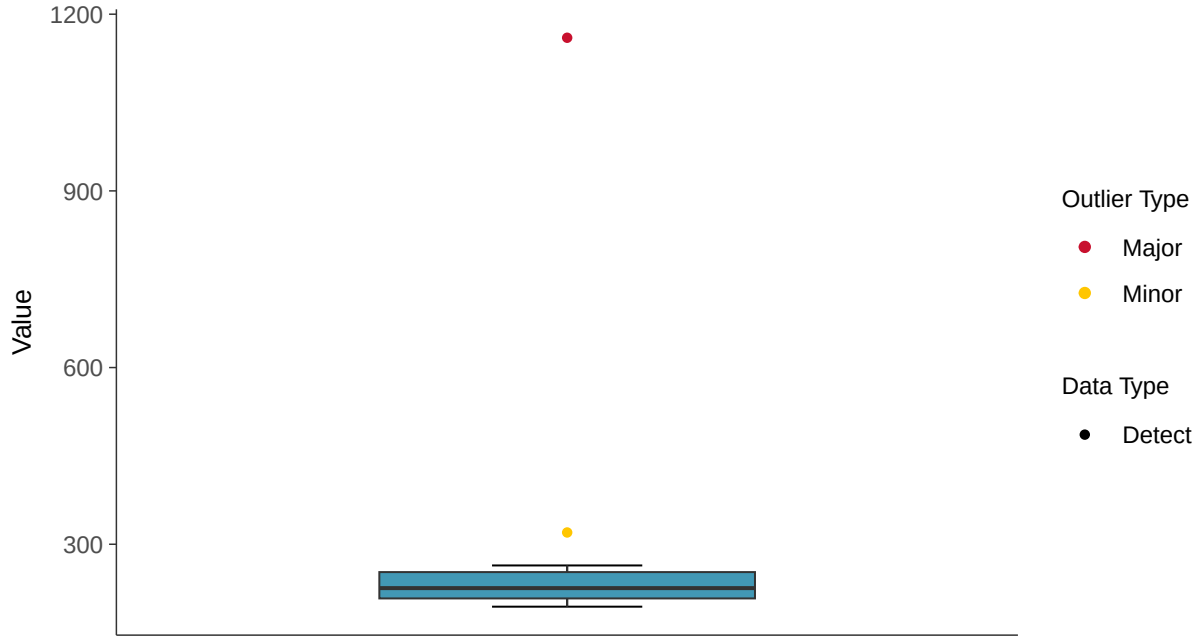
Histogram

Total Dissolved Solids, MW-5 (mg/L)



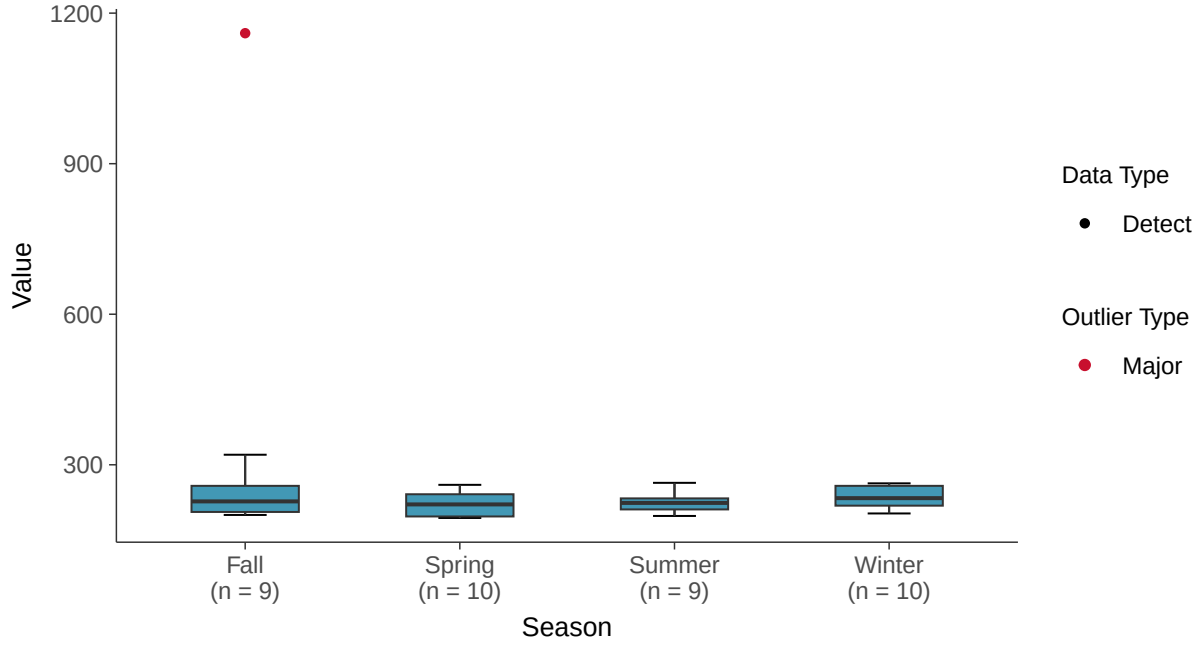
Boxplot

Total Dissolved Solids, MW-5 (mg/L)



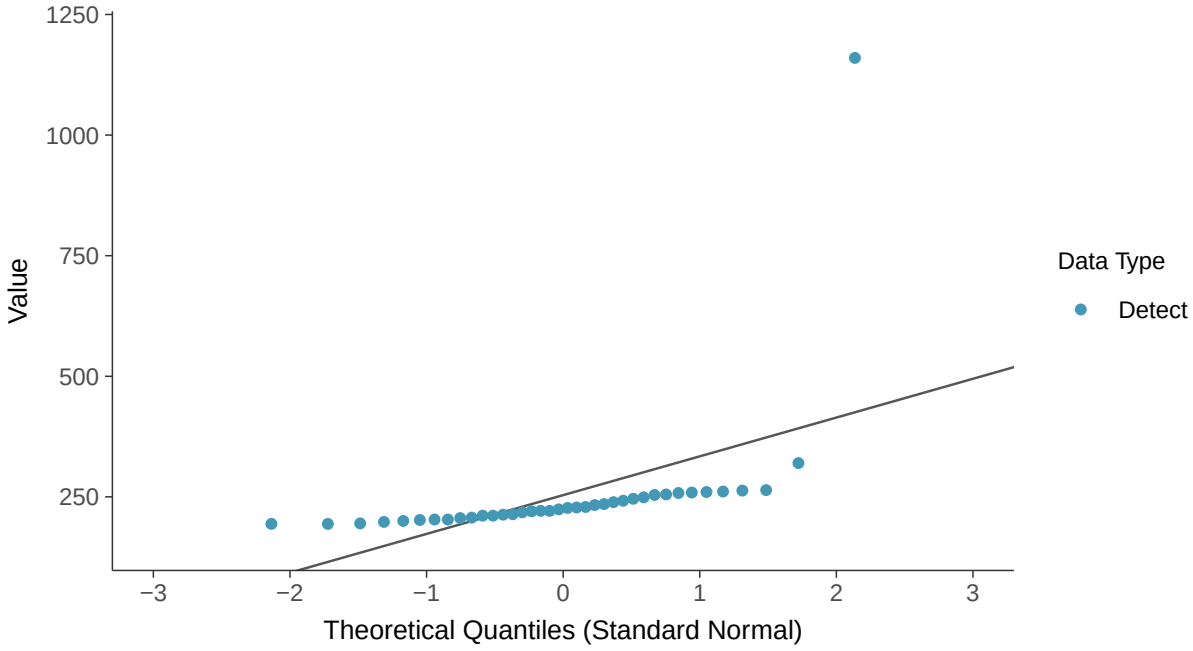
Boxplot by Season

Total Dissolved Solids, MW-5 (mg/L)



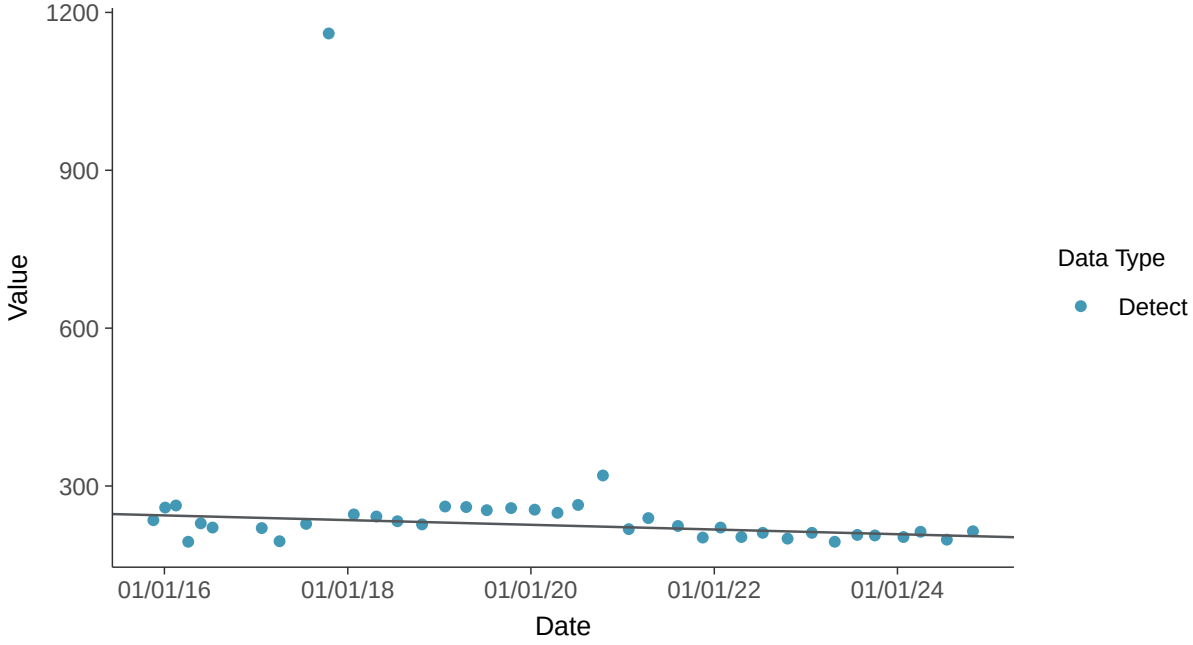
Normal Q-Q plot

Total Dissolved Solids, MW-5 (mg/L)



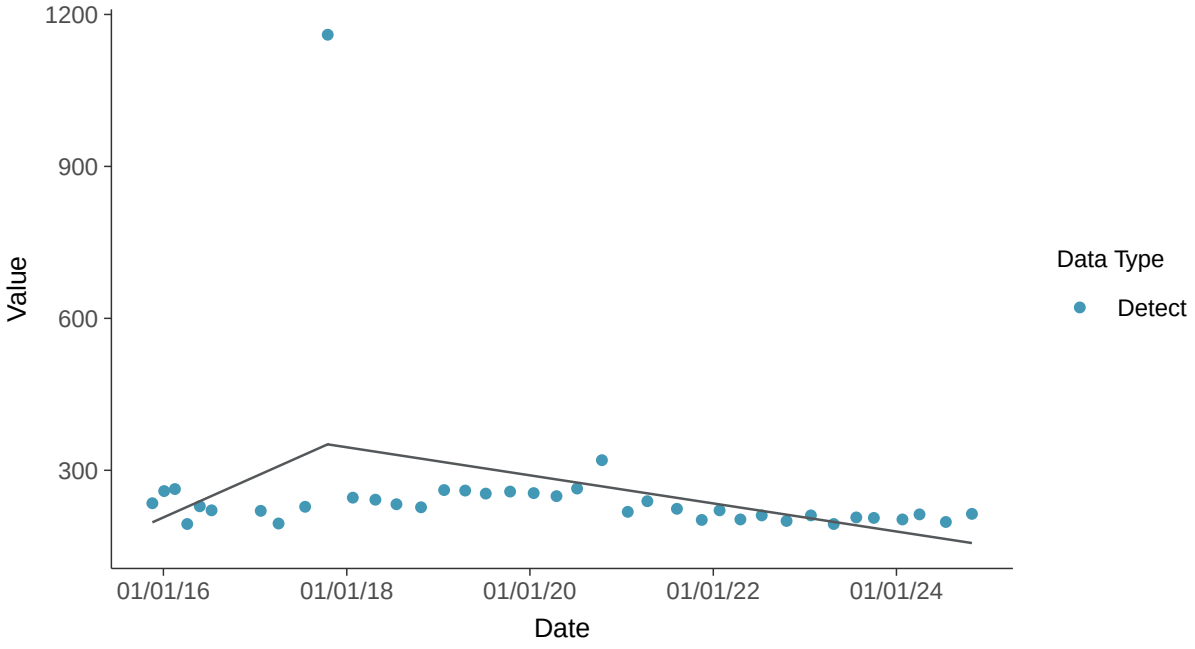
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-5 (mg/L)



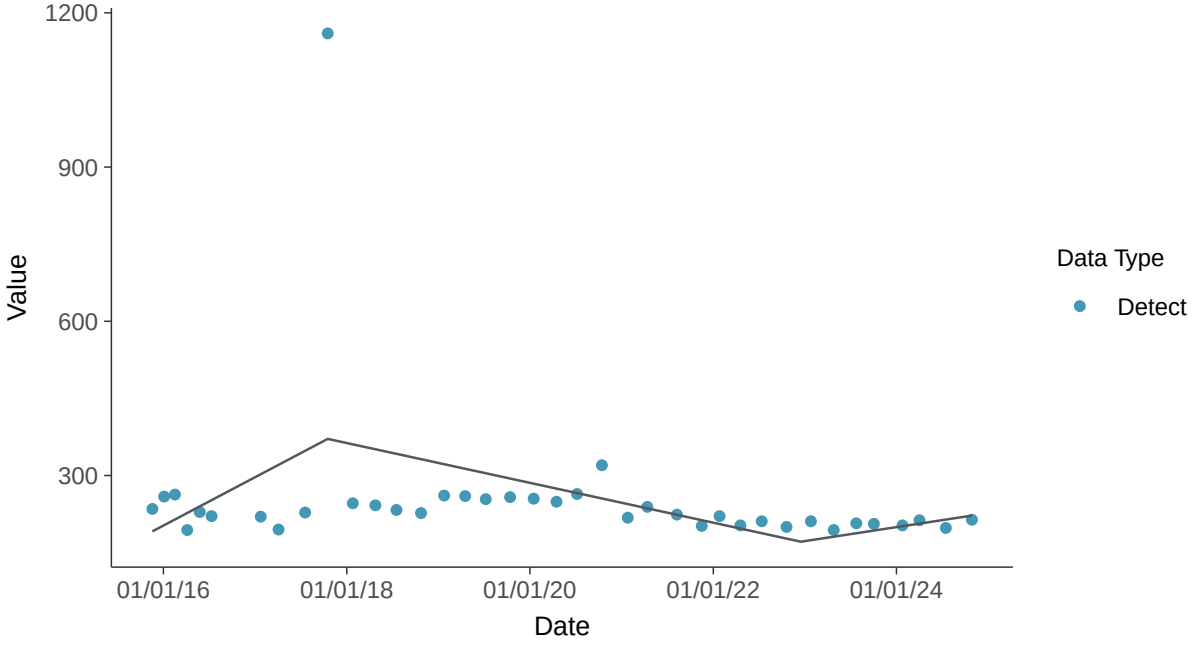
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-5 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-5 (mg/L)

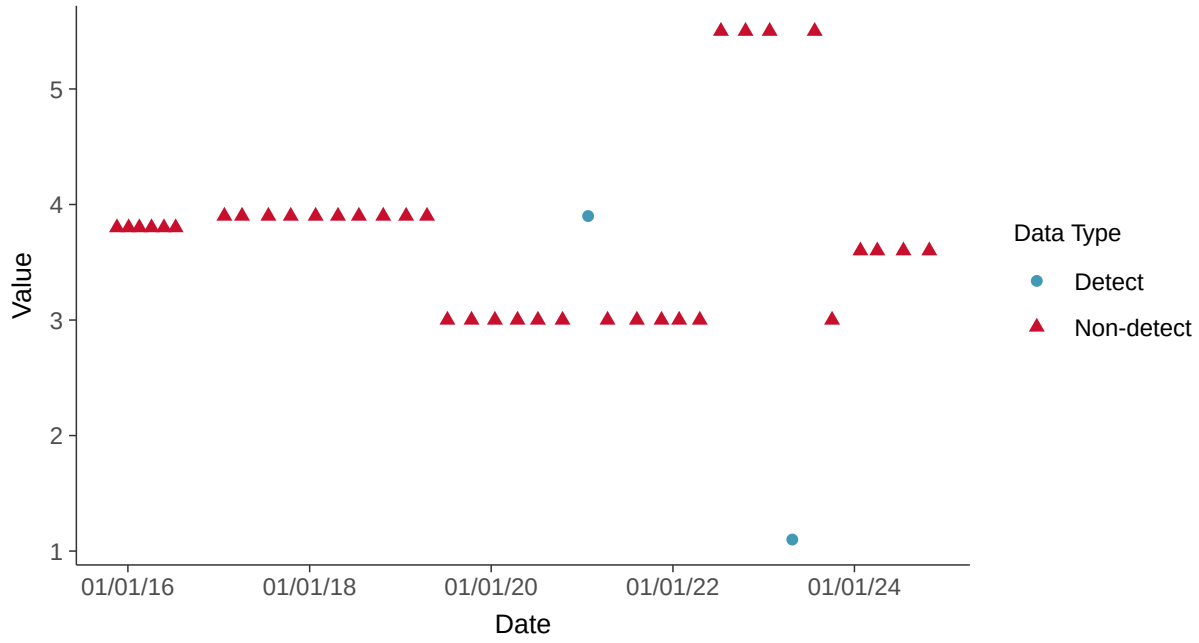


App. IV: Antimony, MW-5

ID: 05_03_101

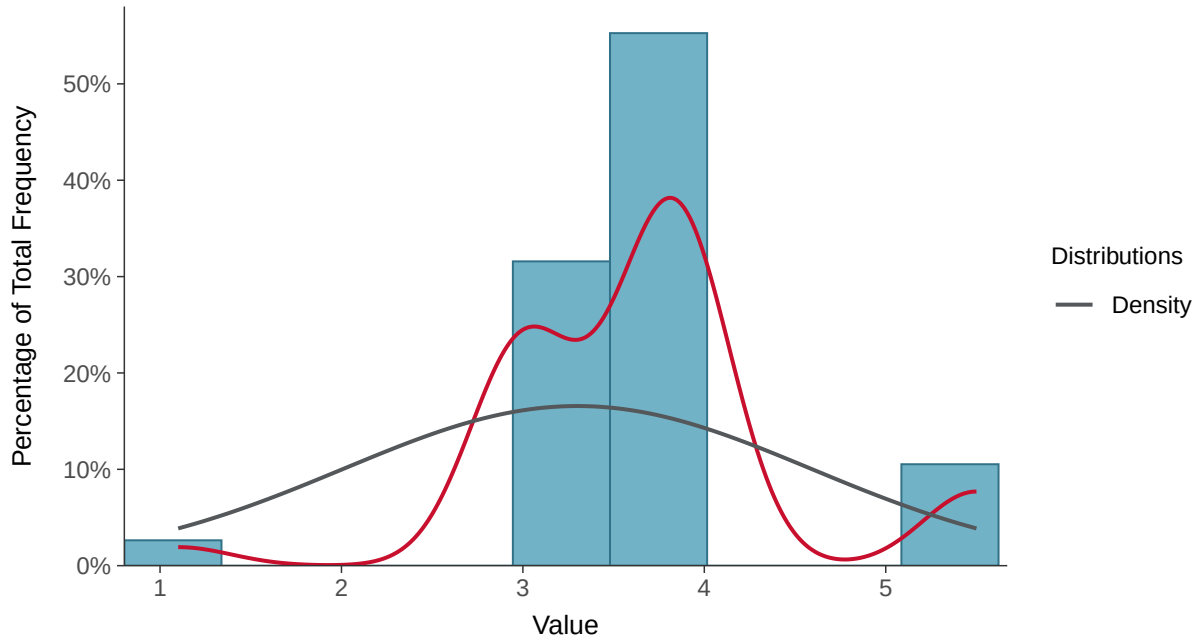
Scatter Plot

Antimony, MW-5 (ug/L)



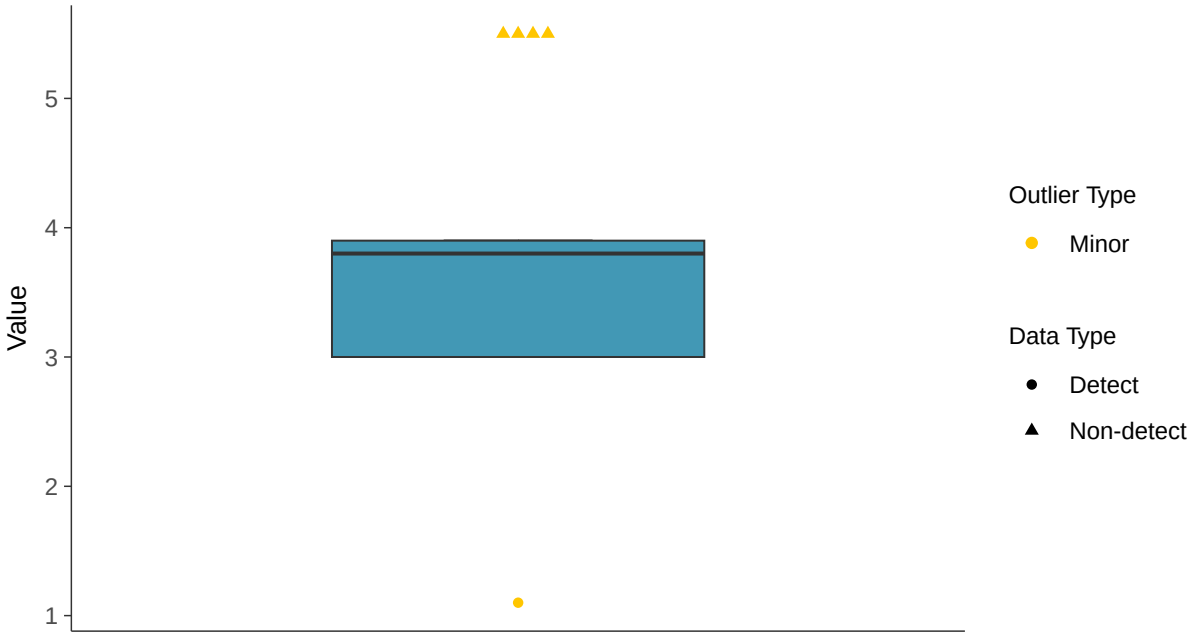
Histogram

Antimony, MW-5 (ug/L)



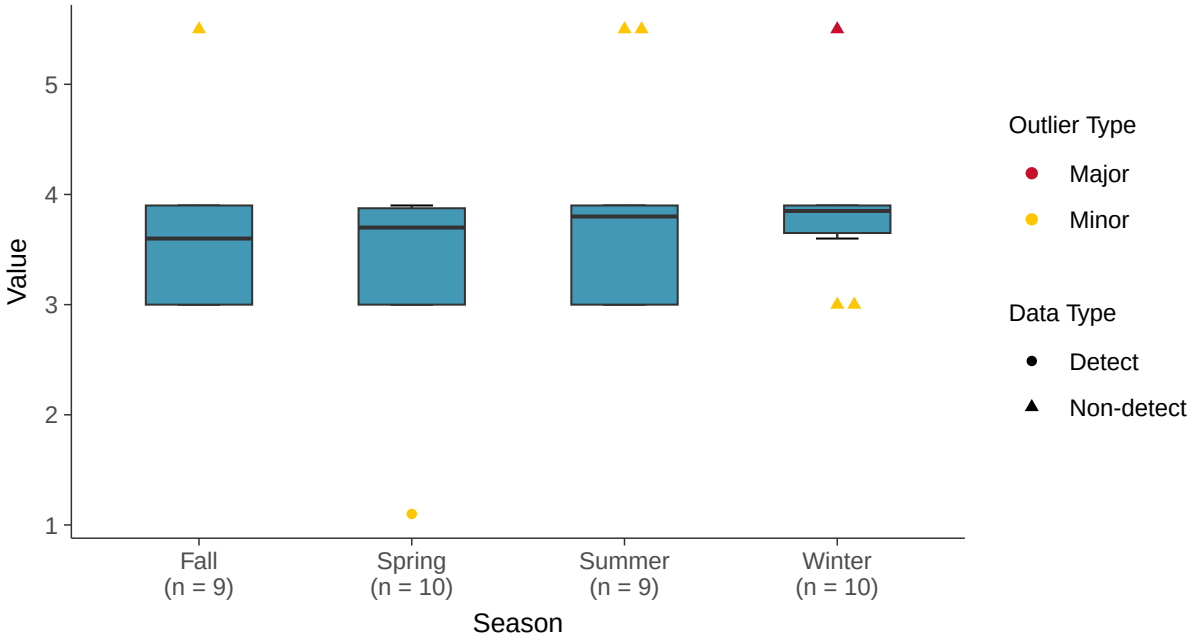
Boxplot

Antimony, MW-5 (ug/L)



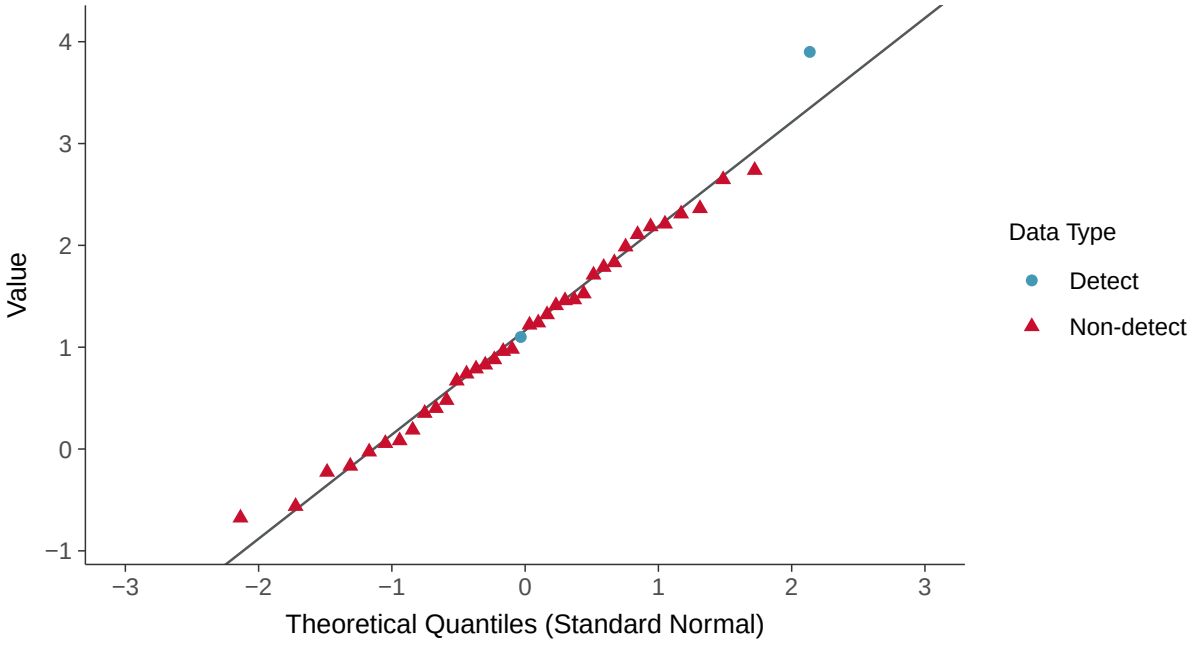
Boxplot by Season

Antimony, MW-5 (ug/L)



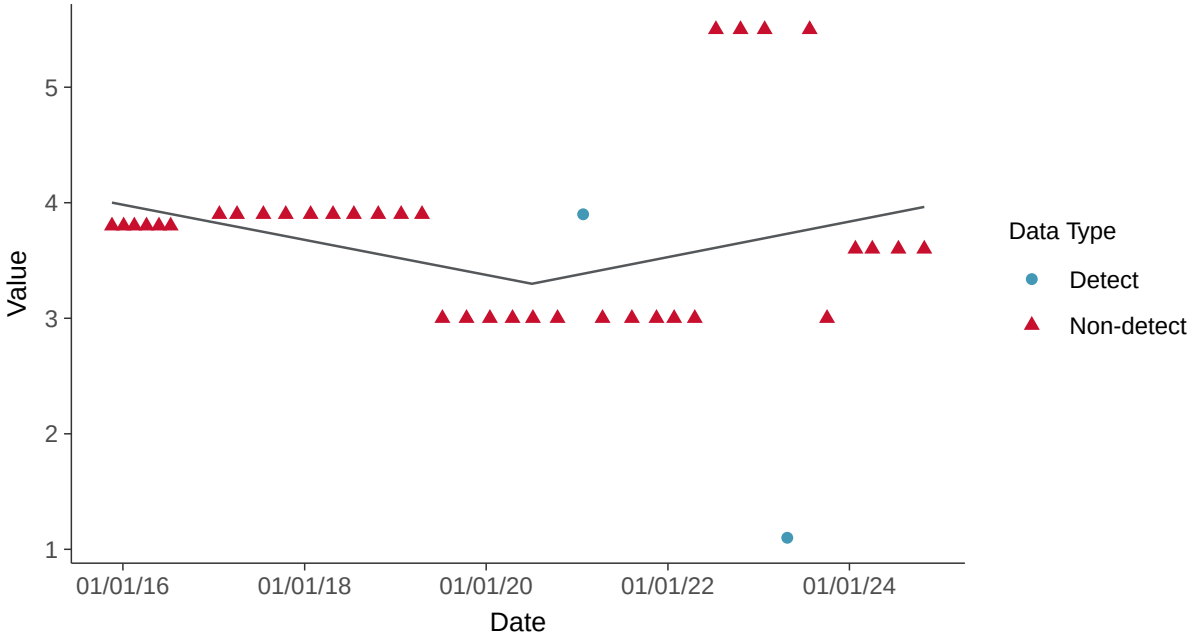
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-5 (ug/L)



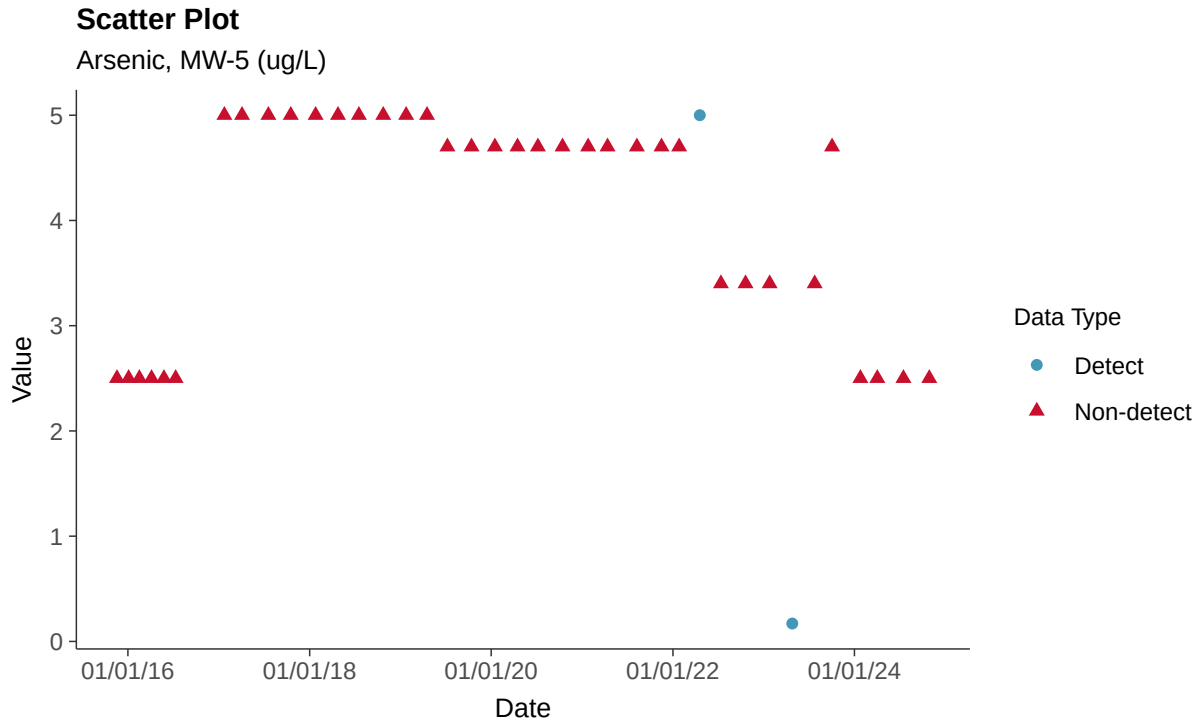
Trend Regression: Piecewise Linear-Linear

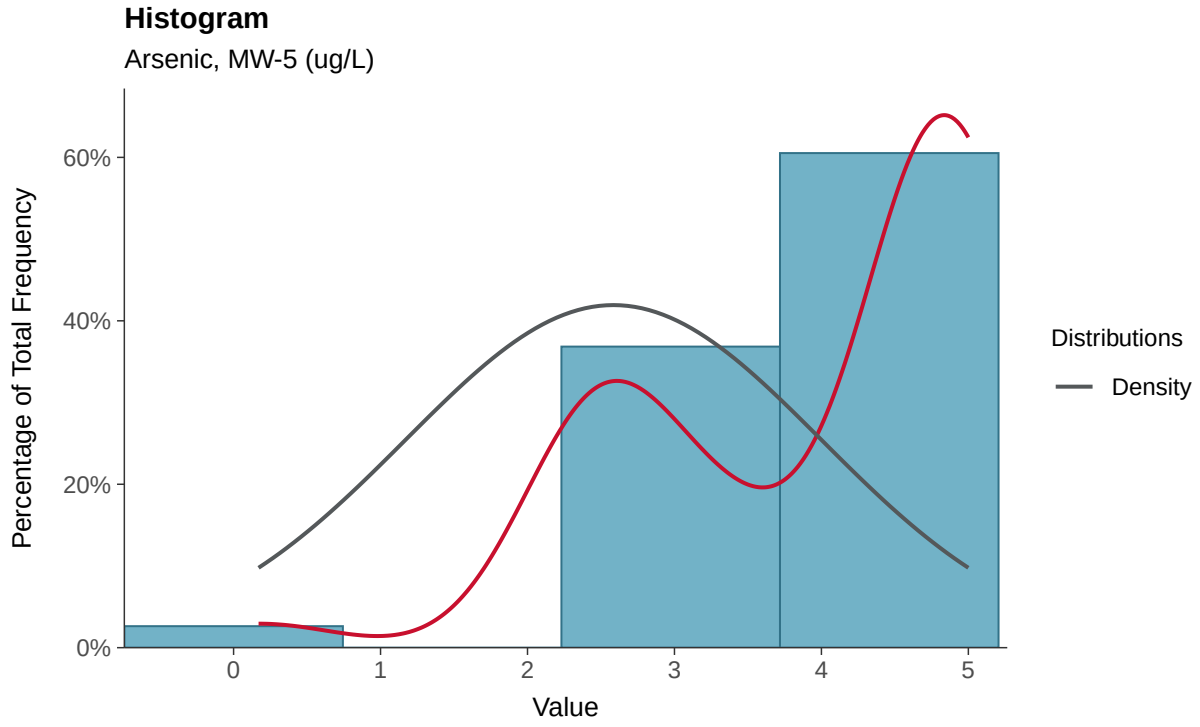
Antimony, MW-5 (ug/L)



App. IV: Arsenic, MW-5

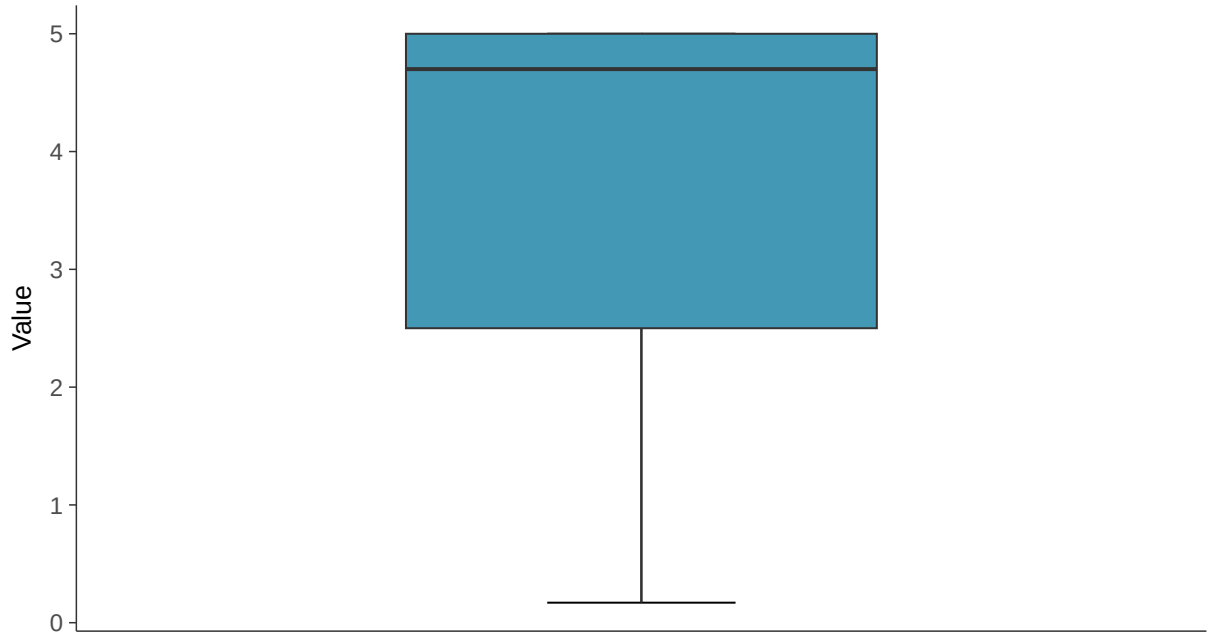
ID: 05_03_102





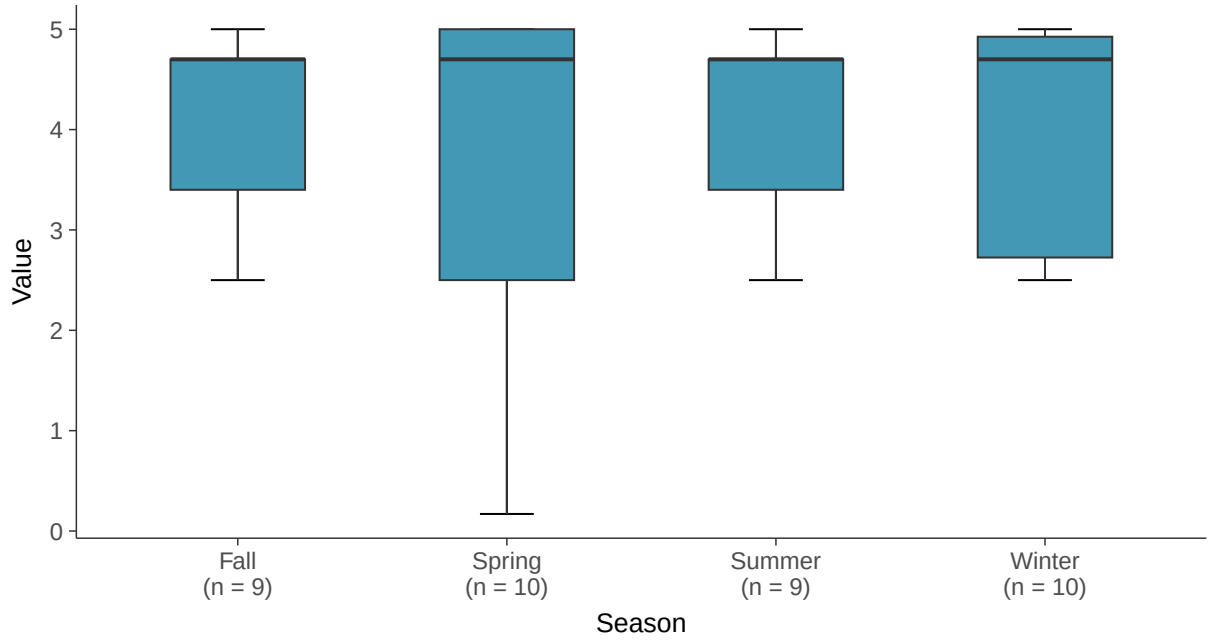
Boxplot

Arsenic, MW-5 (ug/L)



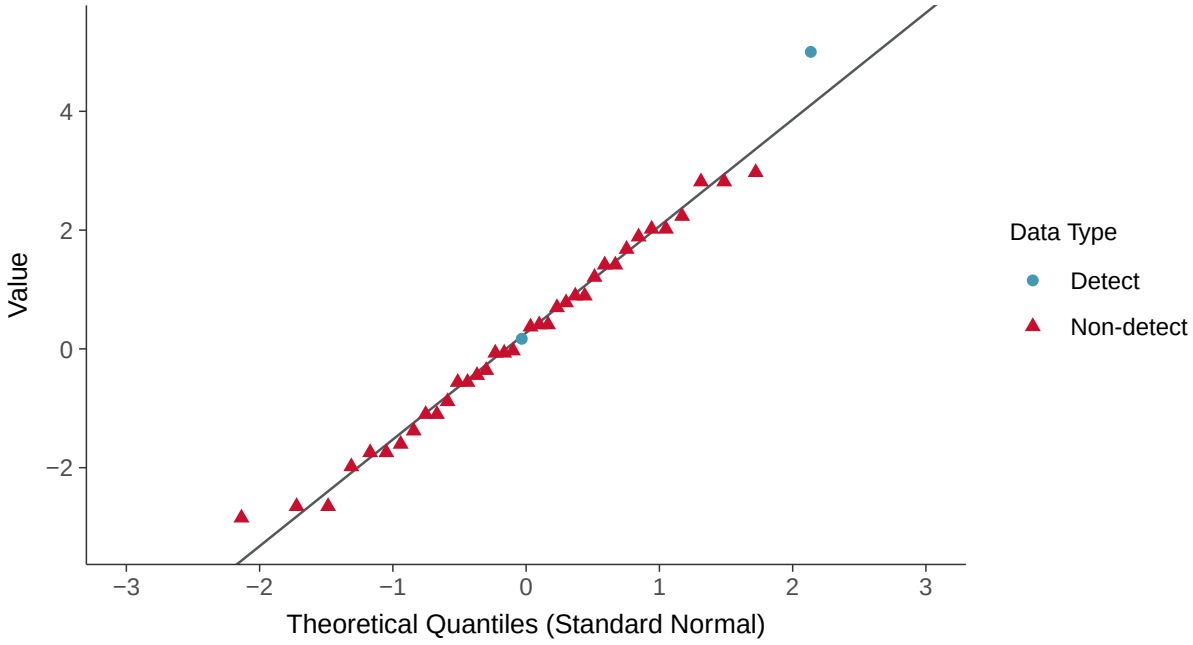
Boxplot by Season

Arsenic, MW-5 (ug/L)



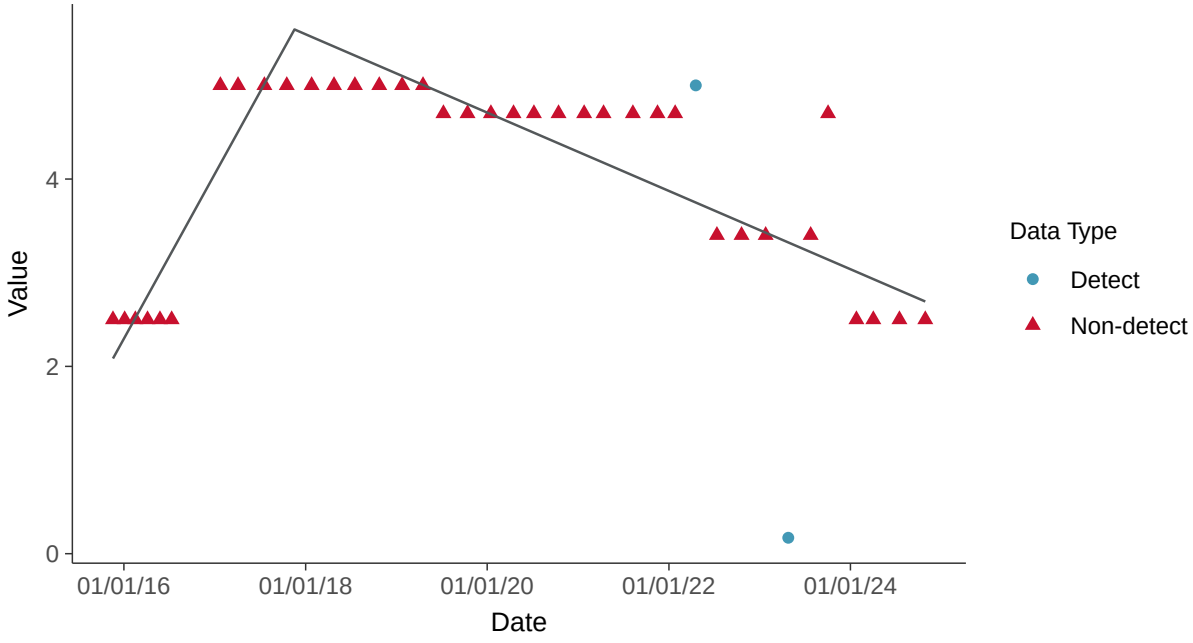
Normal Q-Q plot using ROS Imputed Estimates

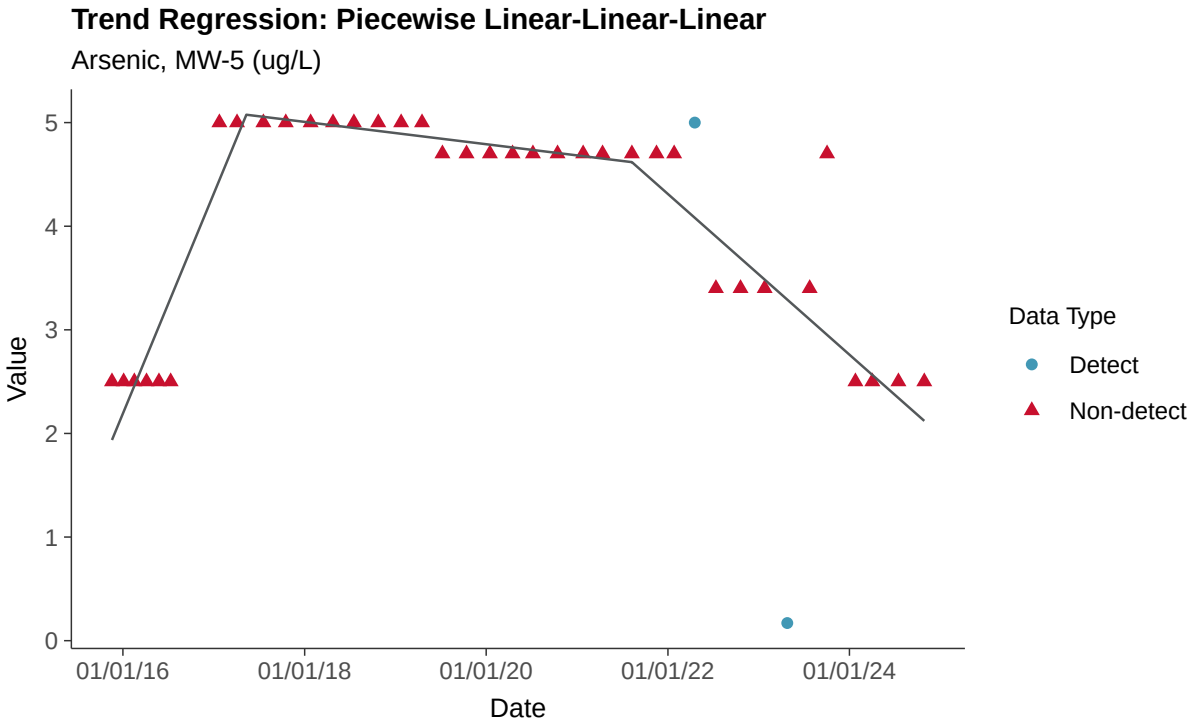
Arsenic, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear

Arsenic, MW-5 (ug/L)



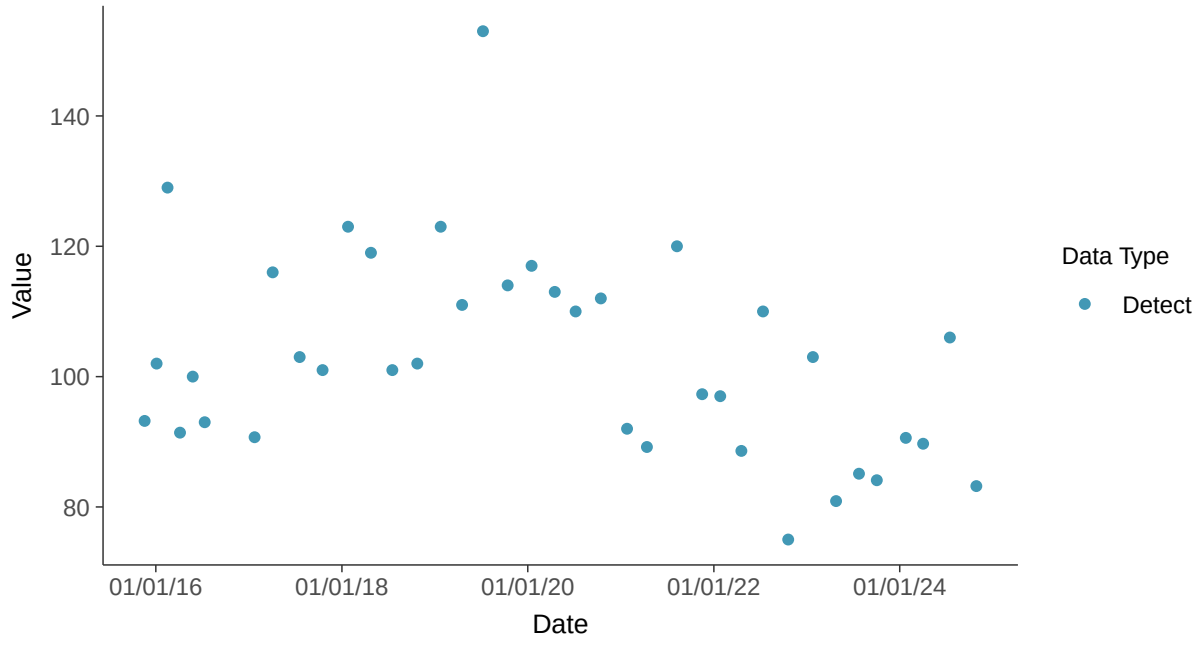

Trend Regression: Piecewise Linear-Linear-Linear
Arsenic, MW-5 (ug/L)
Value
0
1
2
3
4
5
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. IV: Barium, MW-5

ID: 05_03_103

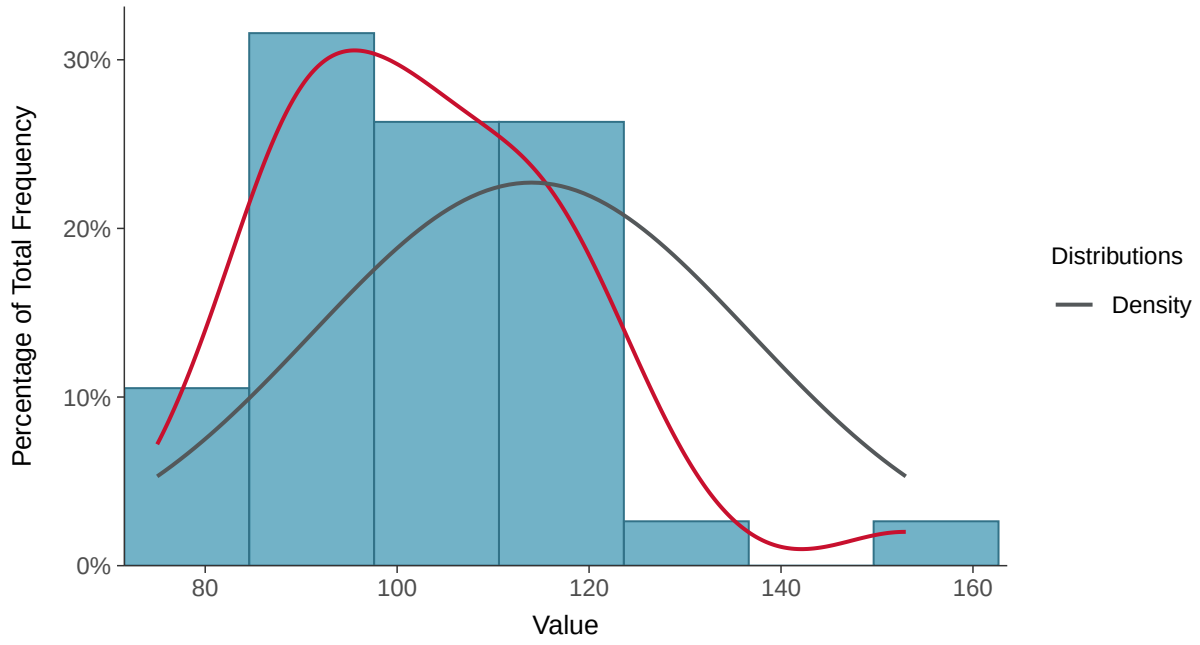
Scatter Plot

Barium, MW-5 (ug/L)



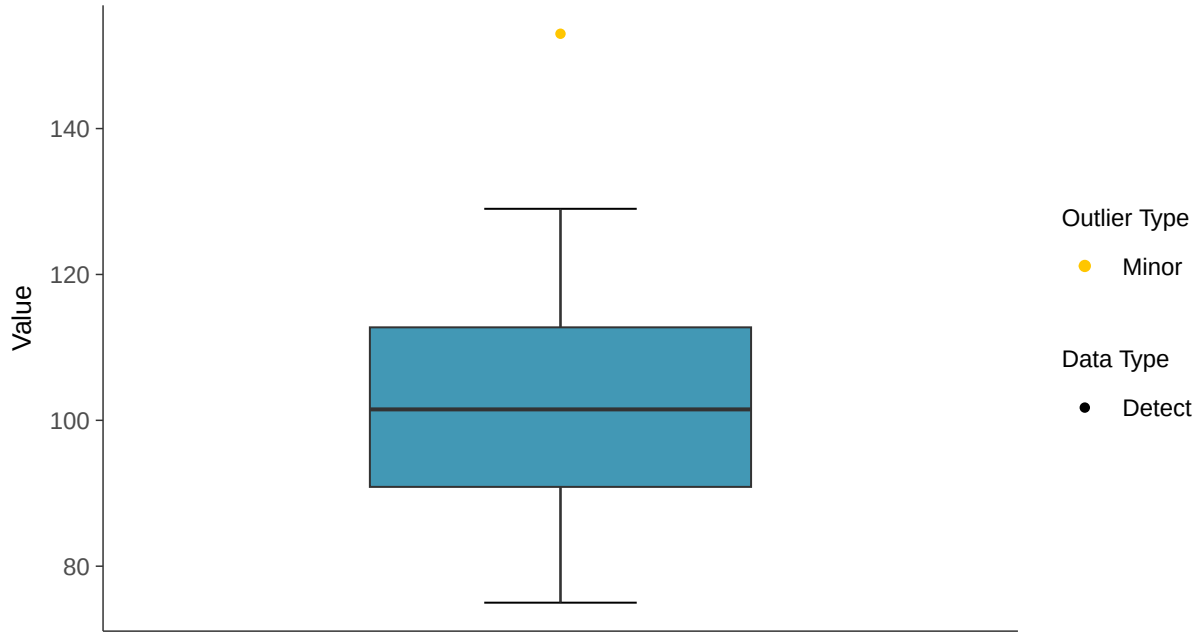
Histogram

Barium, MW-5 (ug/L)



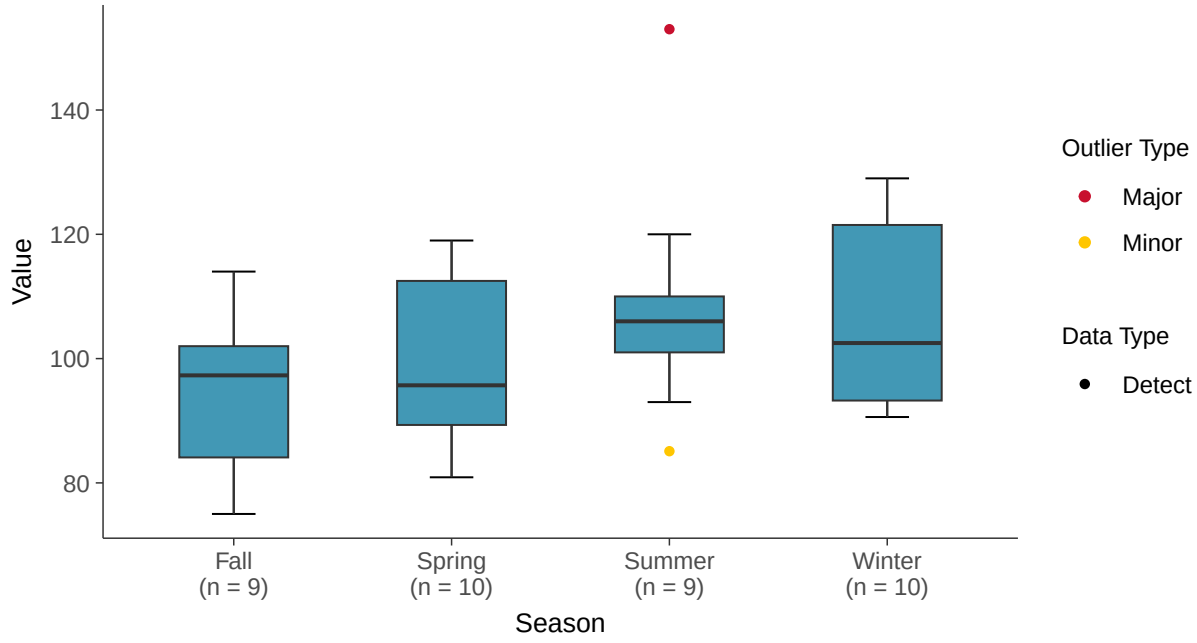
Boxplot

Barium, MW-5 (ug/L)



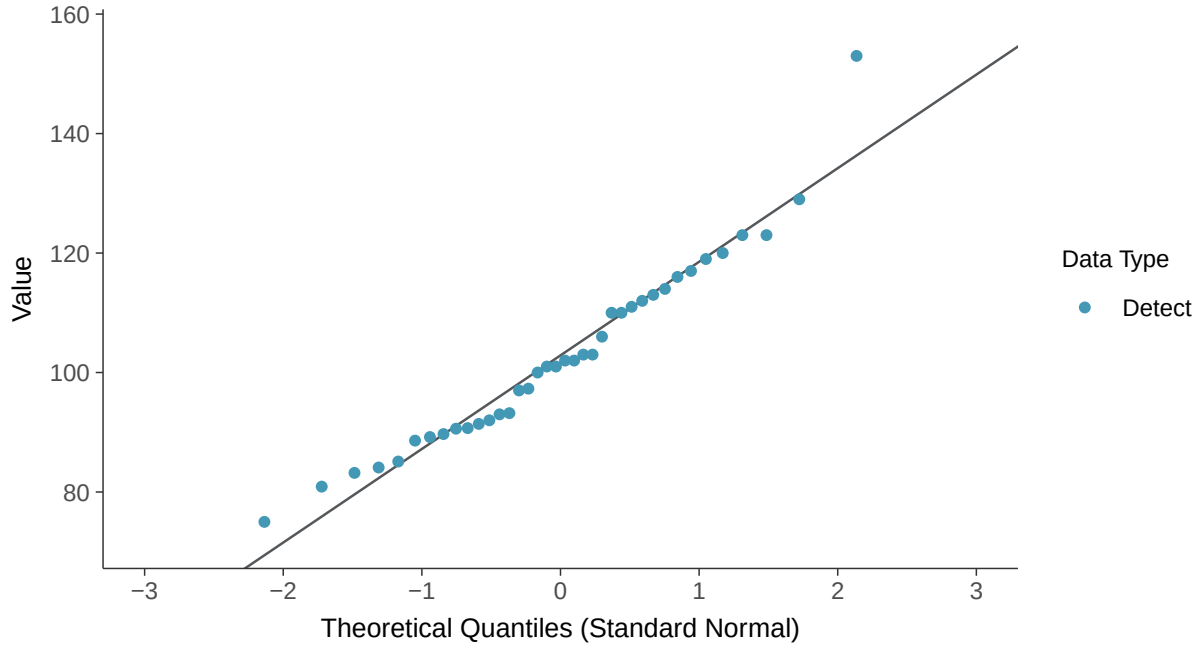
Boxplot by Season

Barium, MW-5 (ug/L)



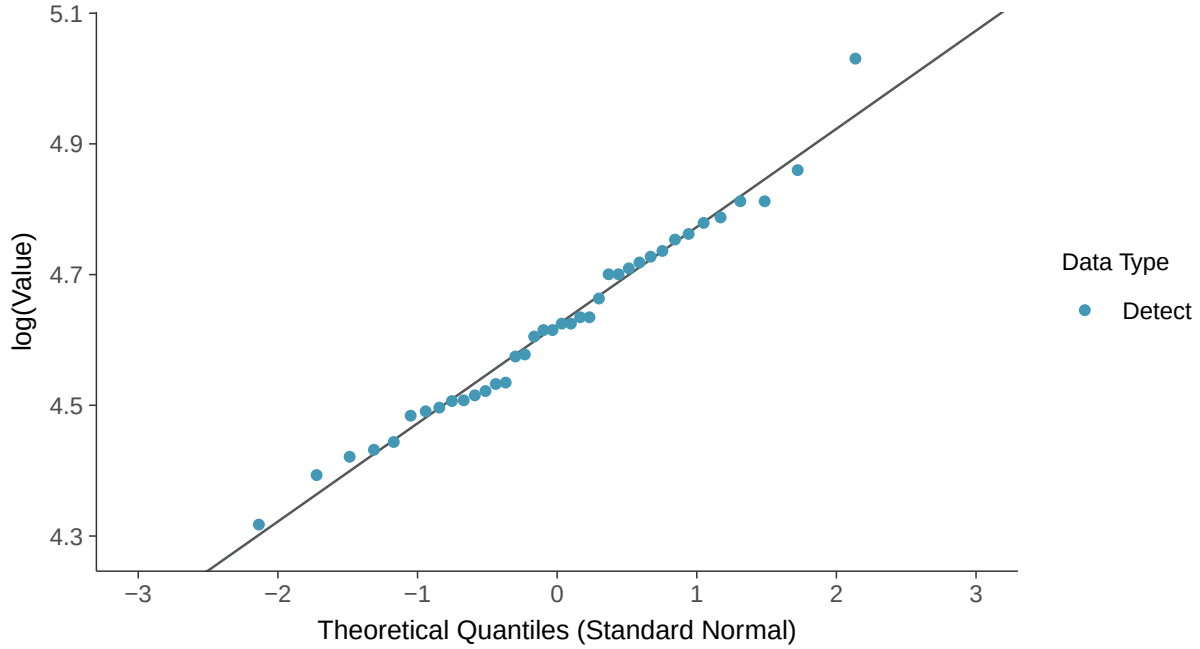
Normal Q-Q plot

Barium, MW-5 (ug/L)



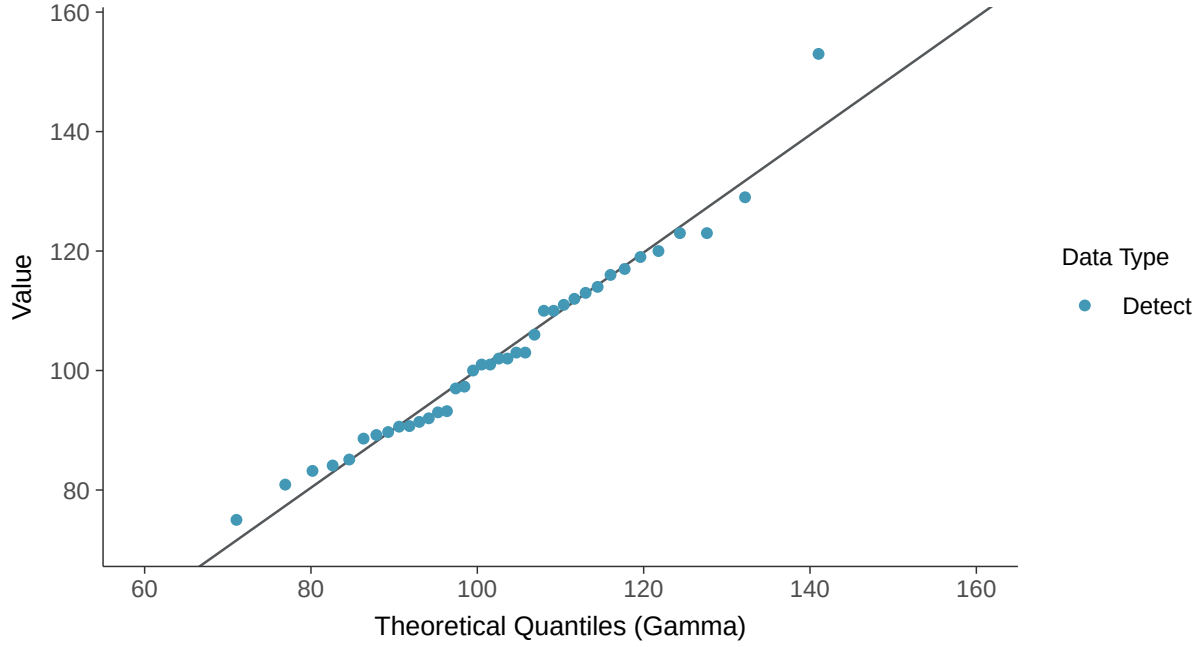
Lognormal Q-Q plot

Barium, MW-5 (ug/L)



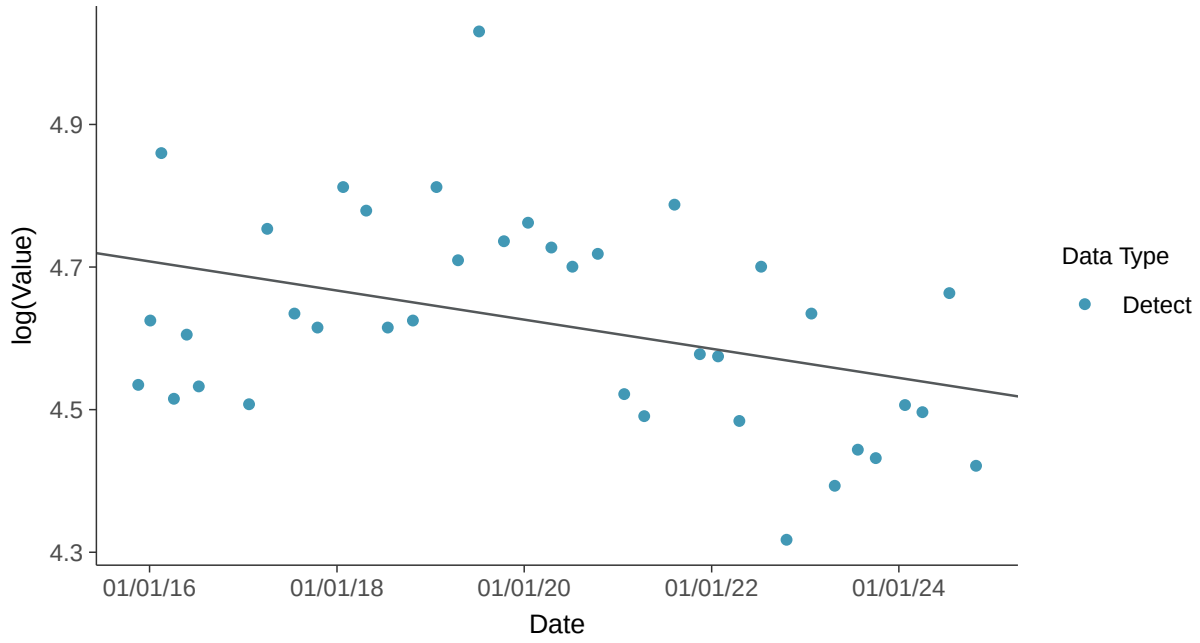
Gamma Q-Q plot

Barium, MW-5 (ug/L)



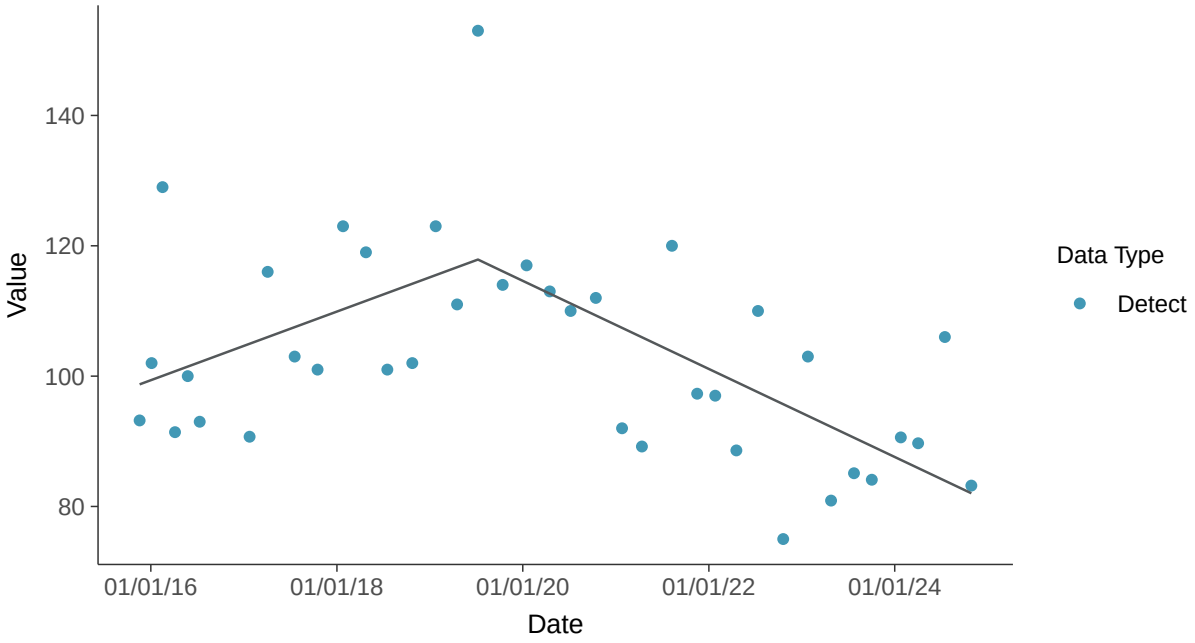
Trend Regression: Lognormal MLE

Barium, MW-5 (ug/L)



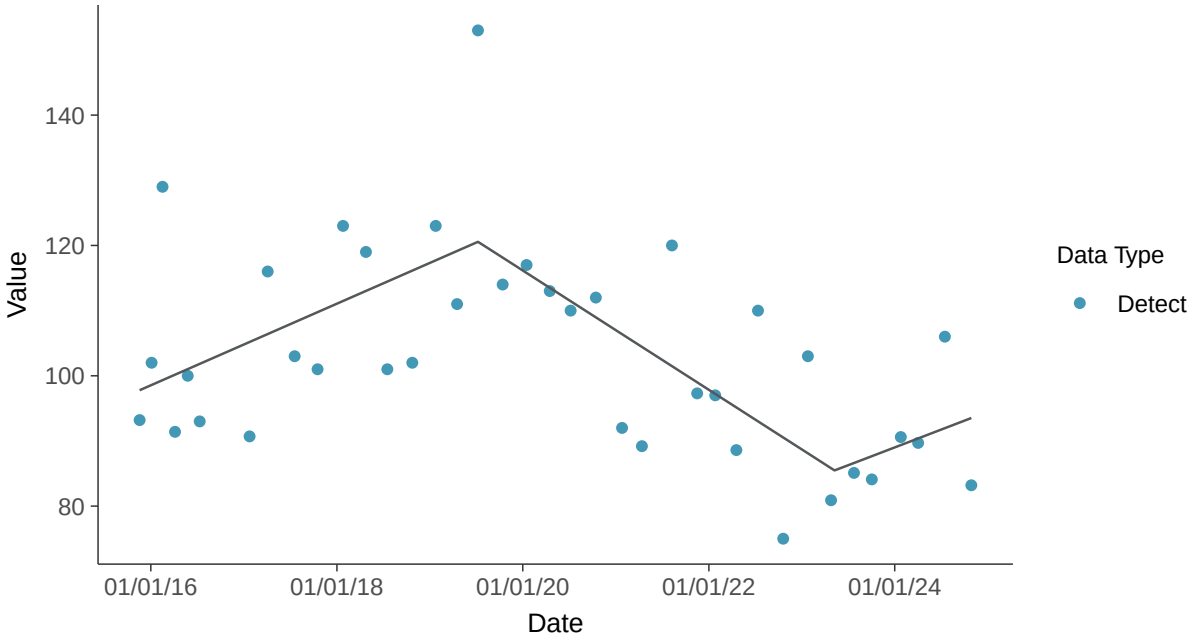
Trend Regression: Piecewise Linear-Linear

Barium, MW-5 (ug/L)



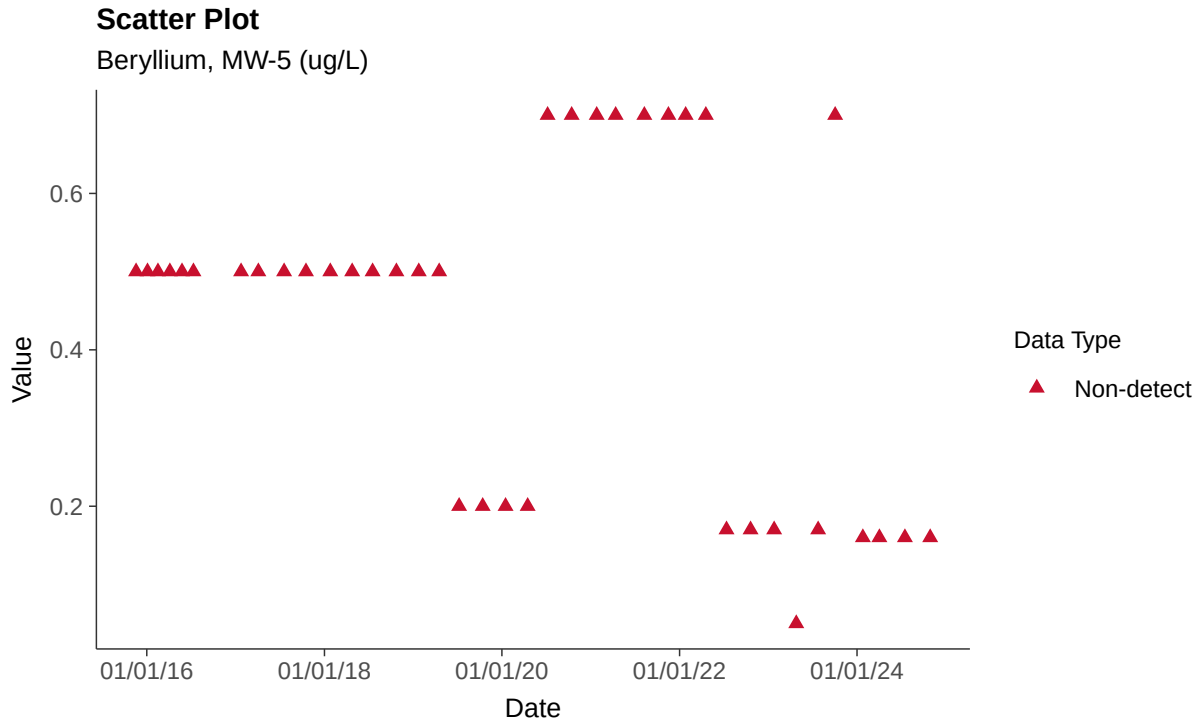
Trend Regression: Piecewise Linear-Linear-Linear

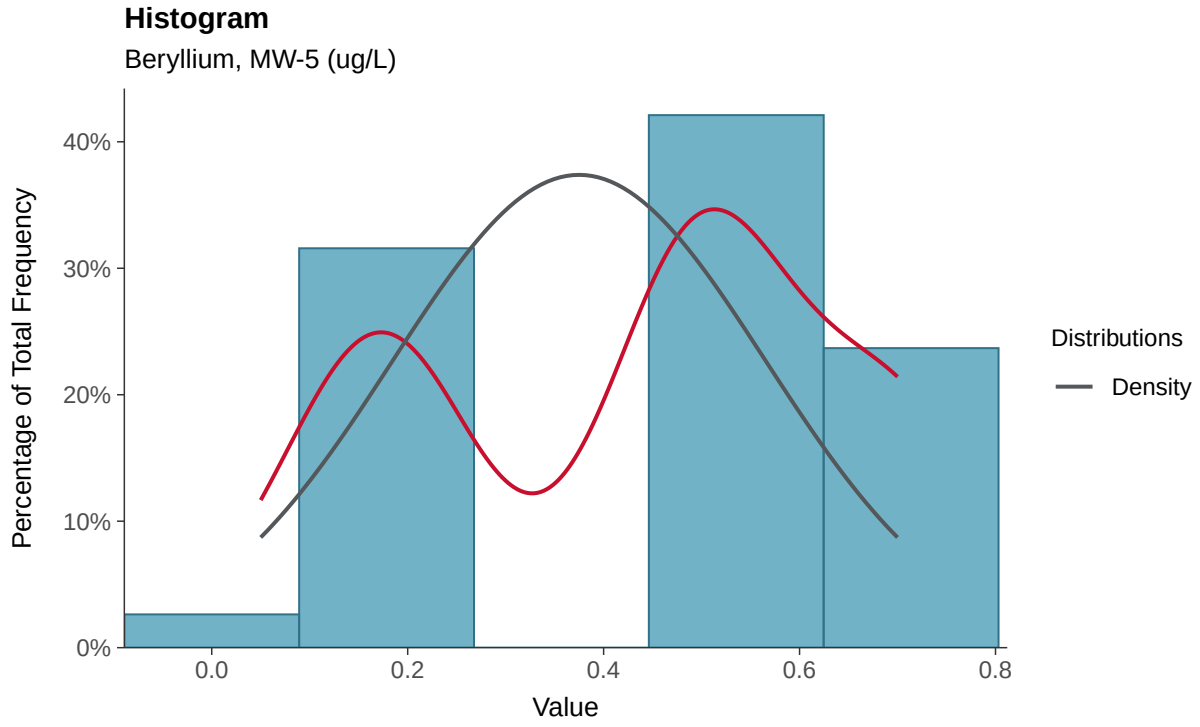
Barium, MW-5 (ug/L)



App. IV: Beryllium, MW-5

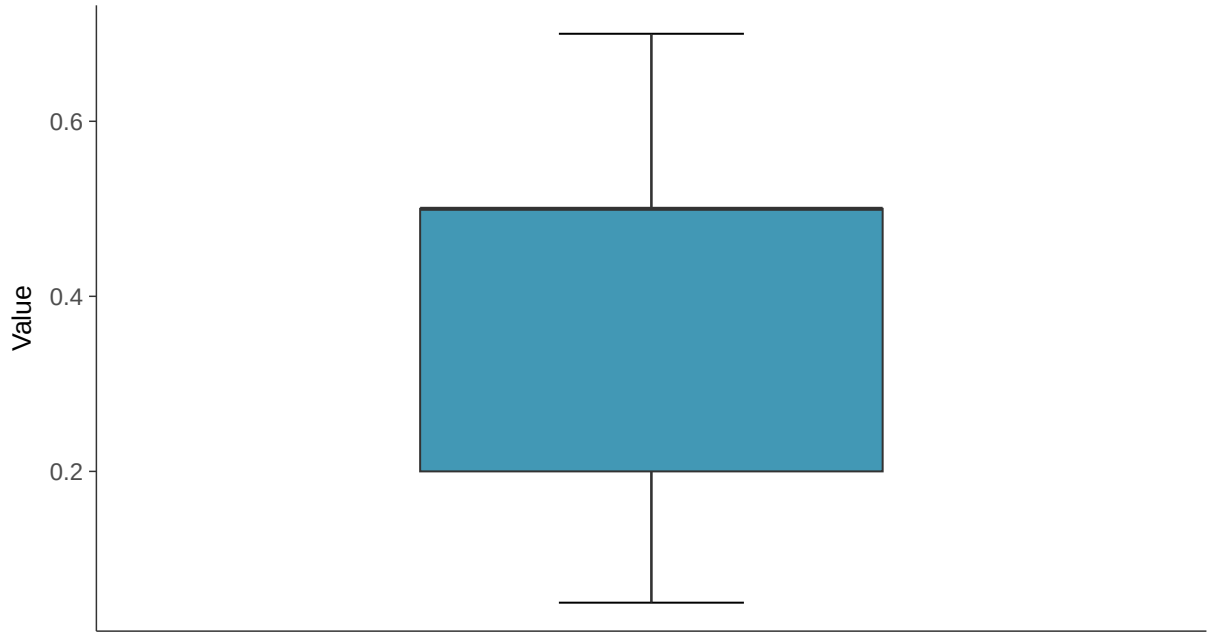
ID: 05_03_104





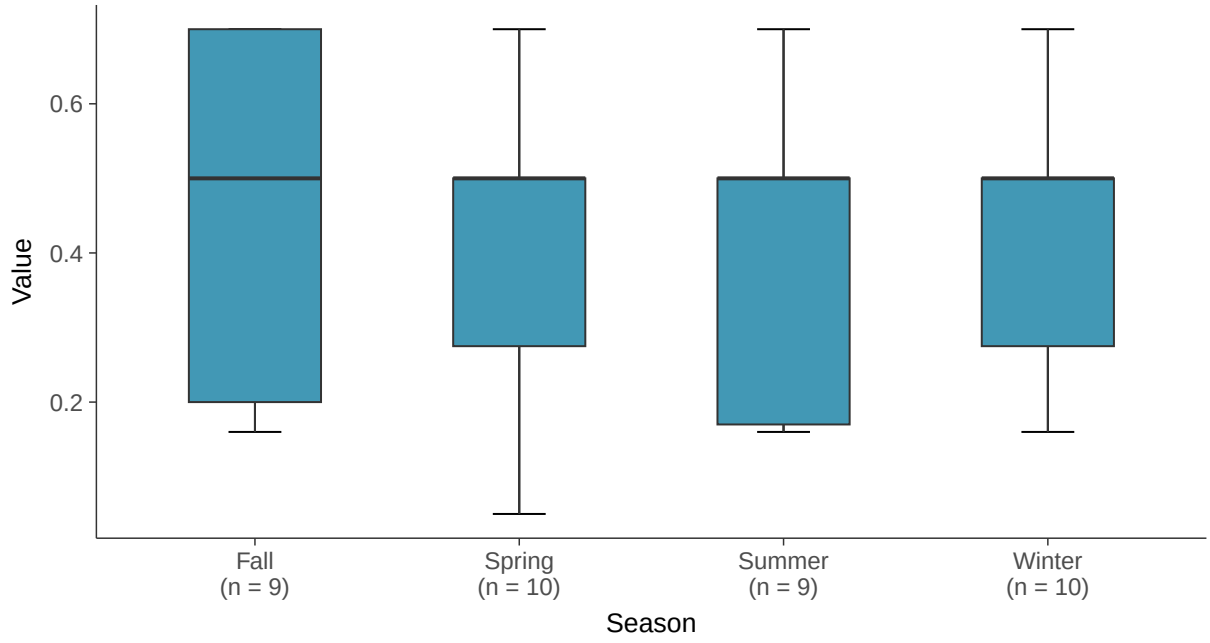
Boxplot

Beryllium, MW-5 (ug/L)



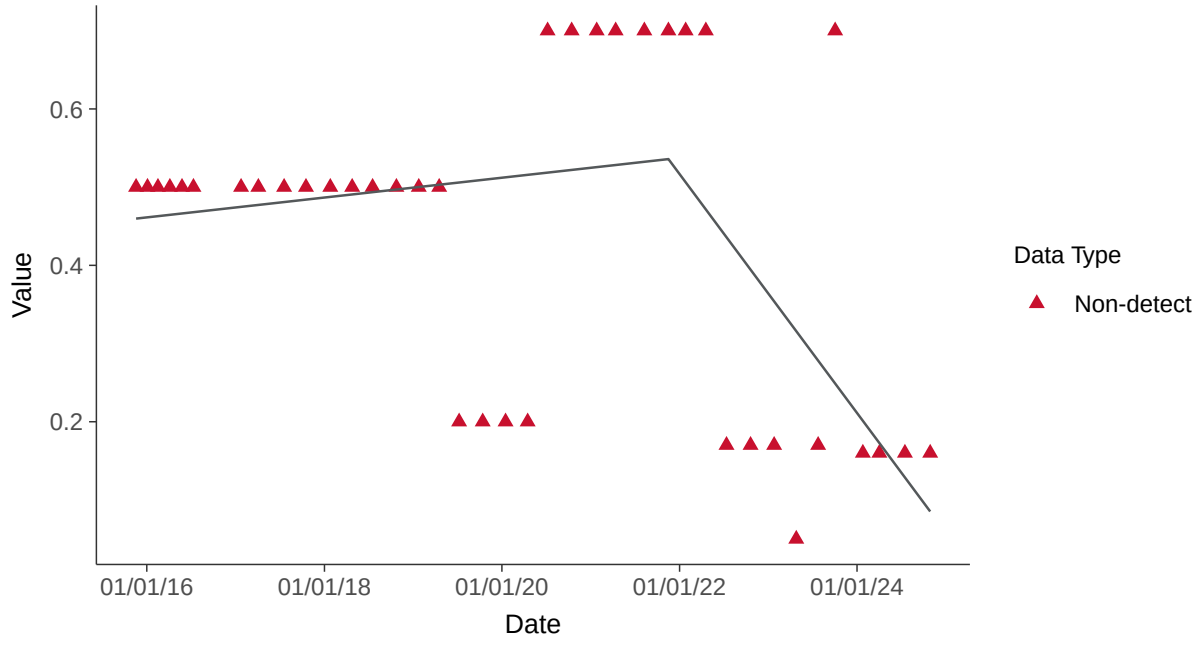
Boxplot by Season

Beryllium, MW-5 (ug/L)



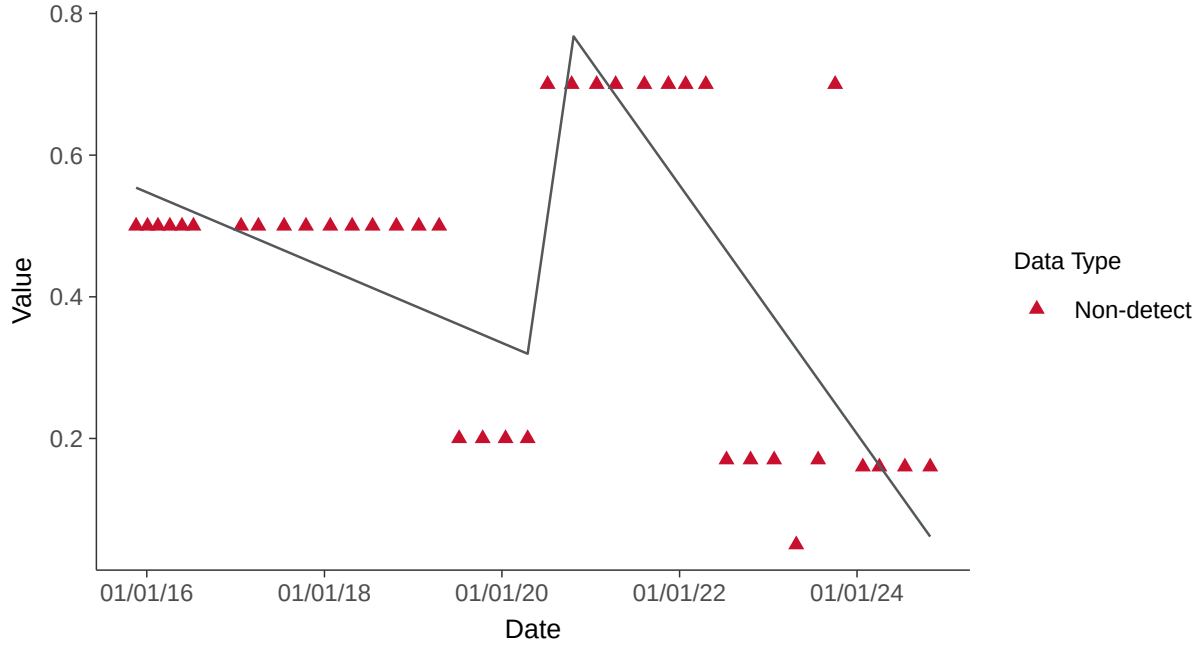
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-5 (ug/L)



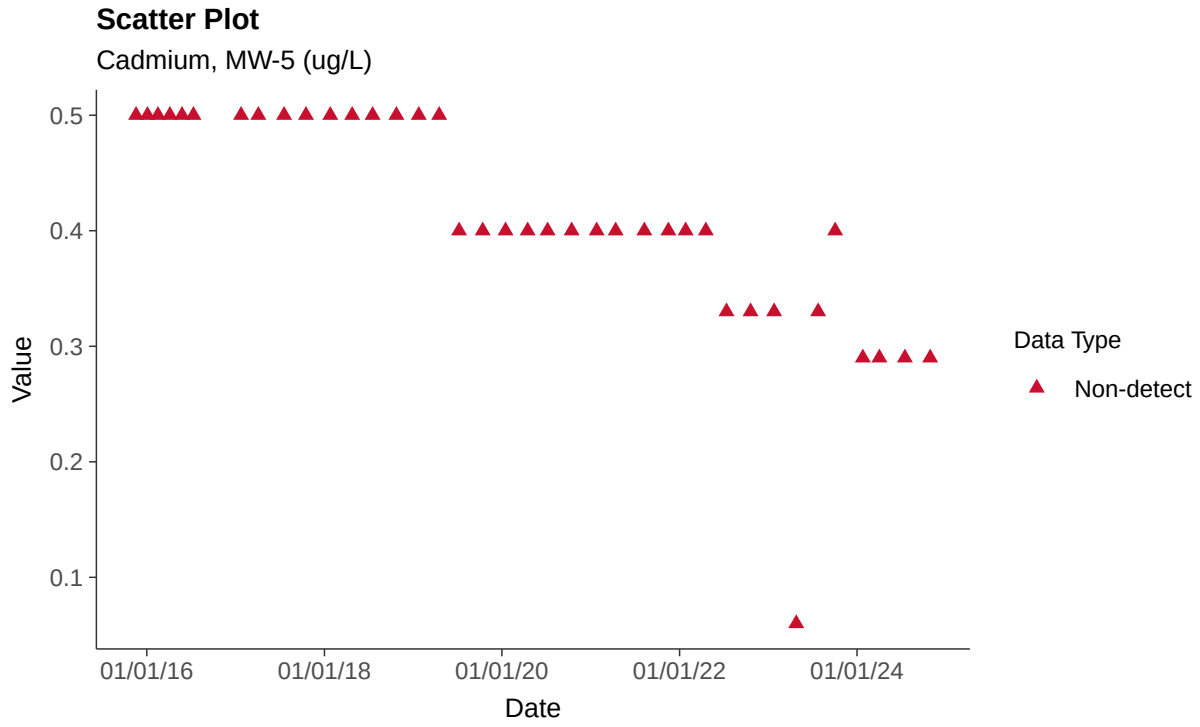
Trend Regression: Piecewise Linear-Linear-Linear

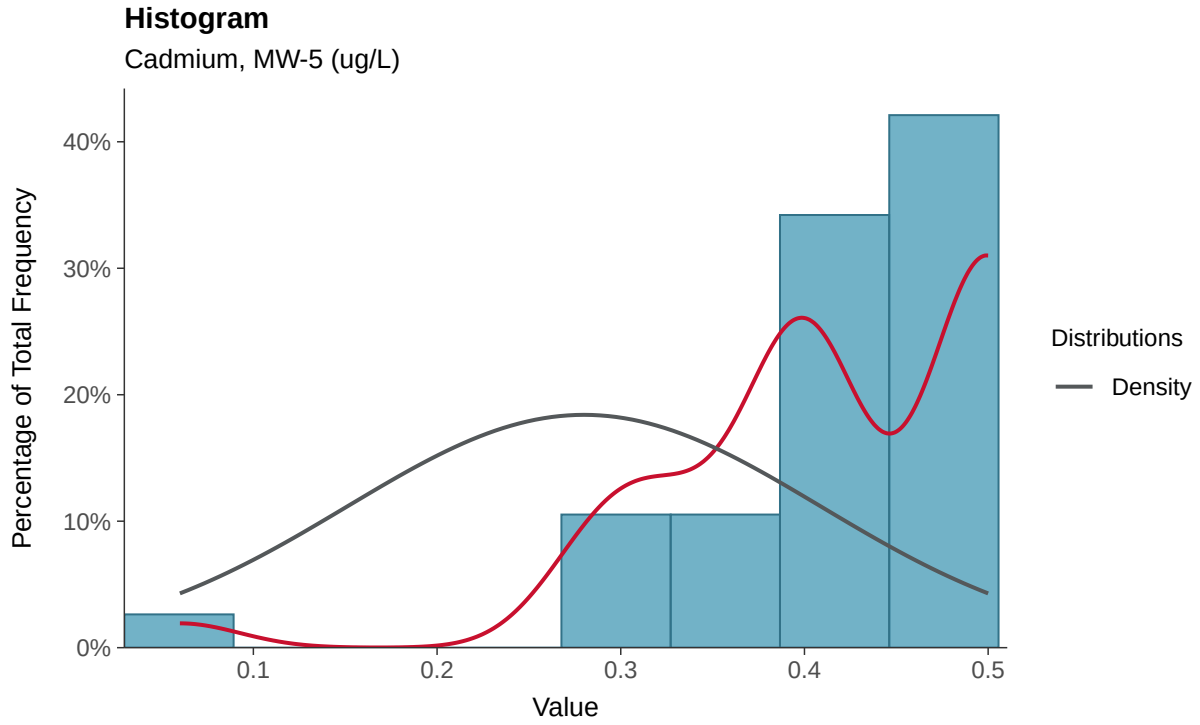
Beryllium, MW-5 (ug/L)



App. IV: Cadmium, MW-5

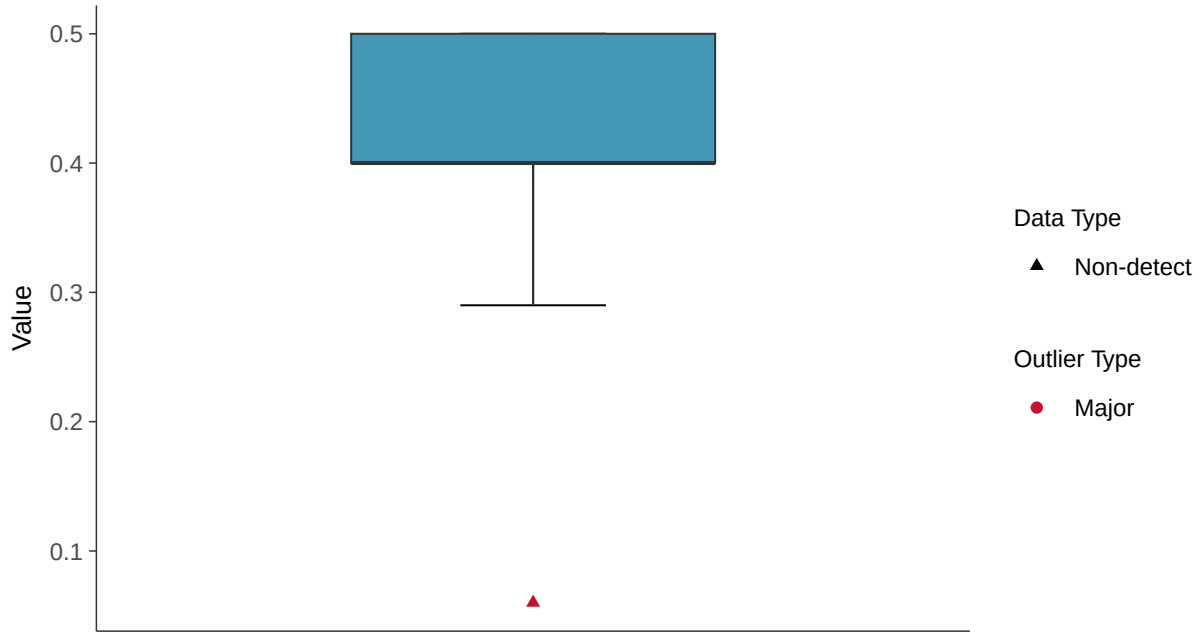
ID: 05_03_106





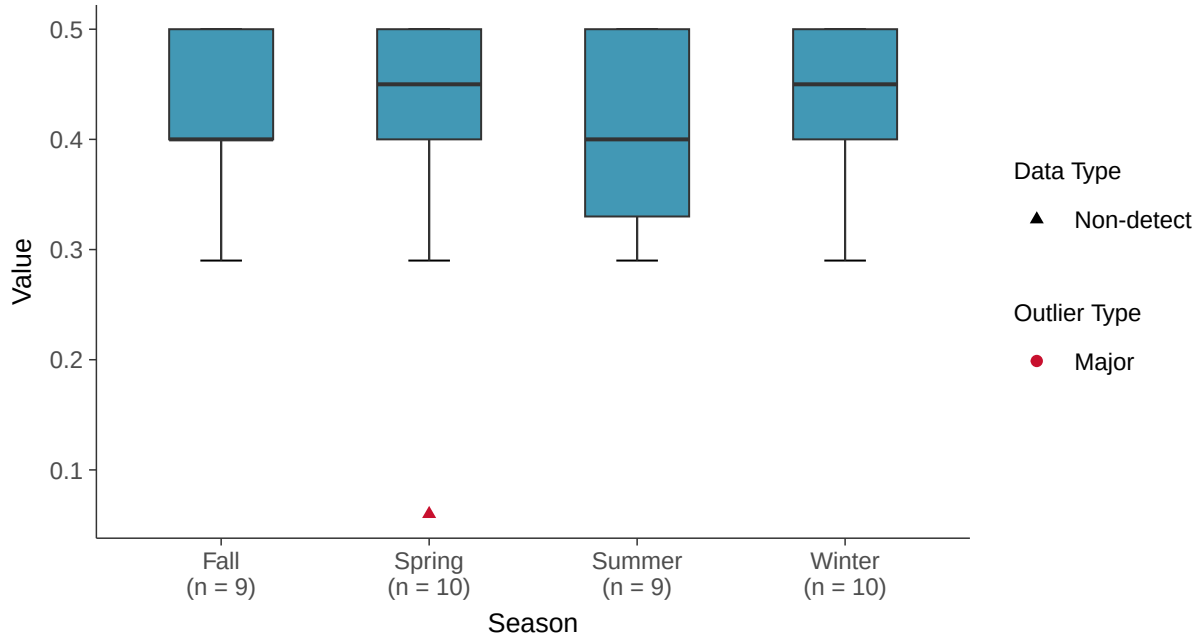
Boxplot

Cadmium, MW-5 (ug/L)



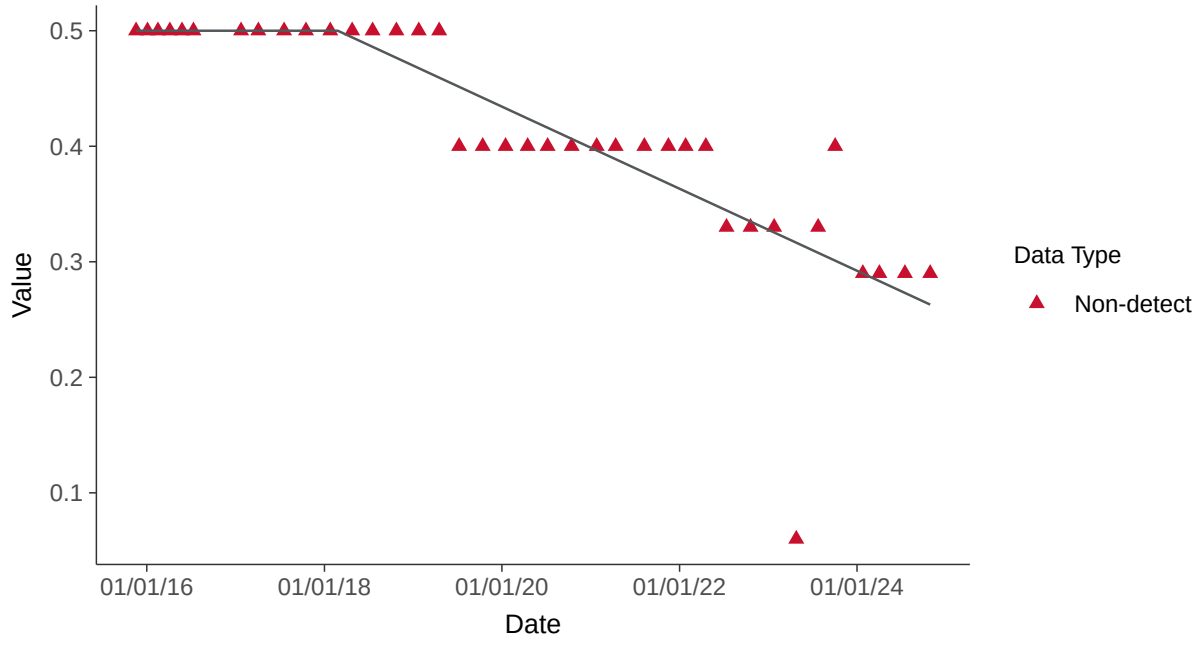
Boxplot by Season

Cadmium, MW-5 (ug/L)



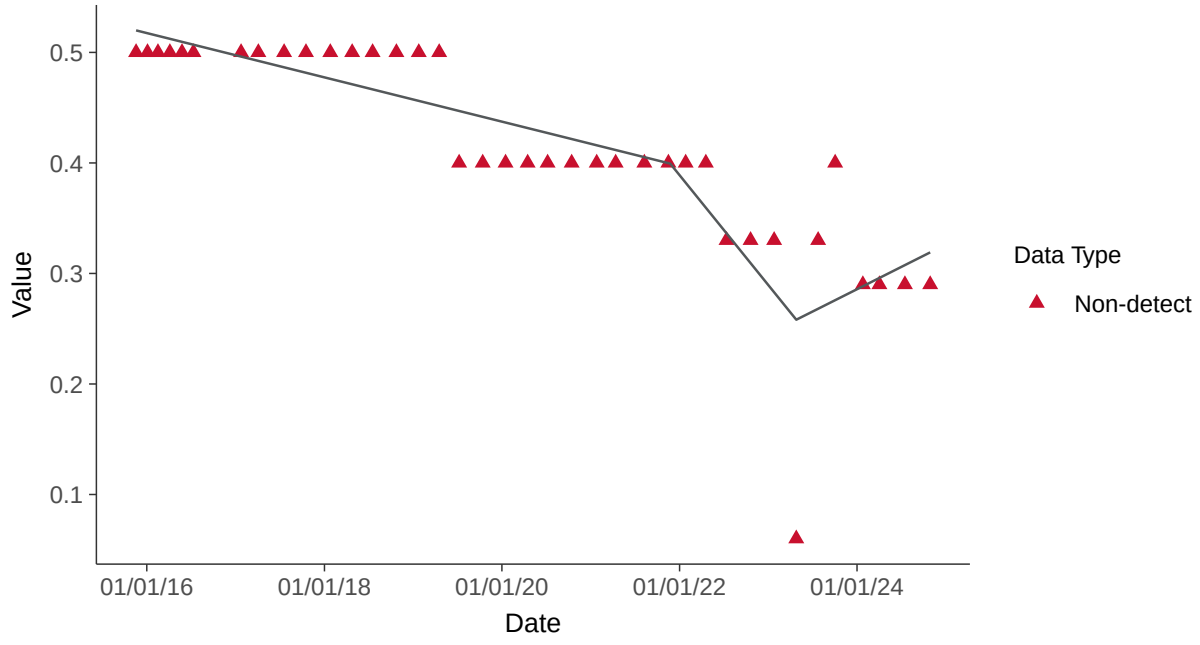
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-5 (ug/L)

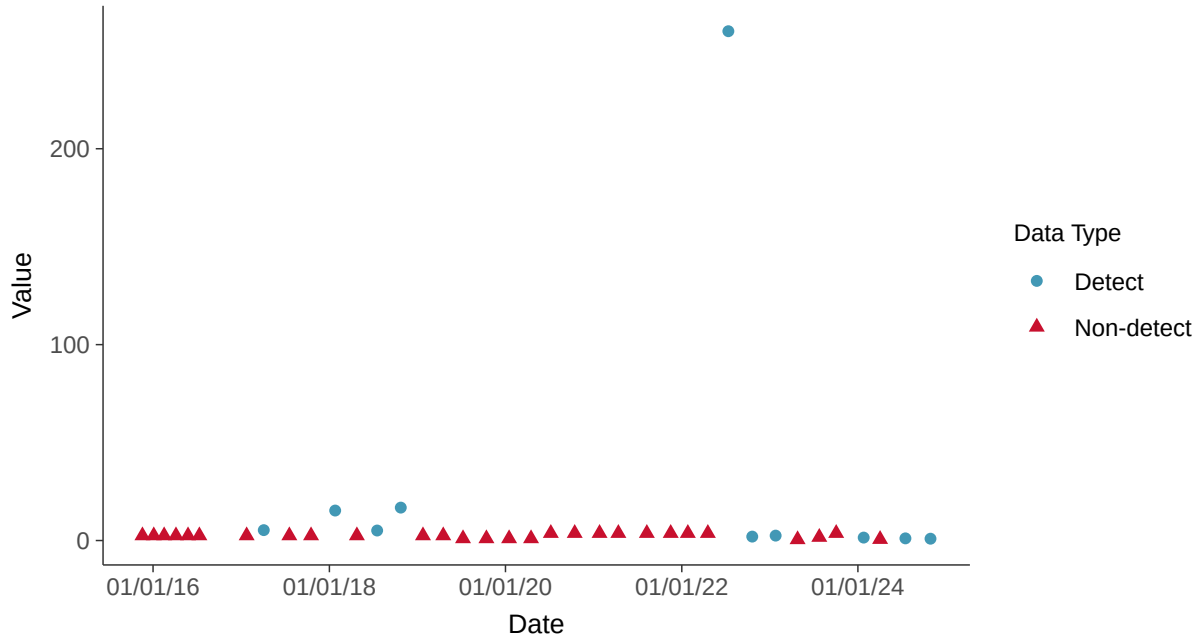


App. IV: Chromium, MW-5

ID: 05_03_109

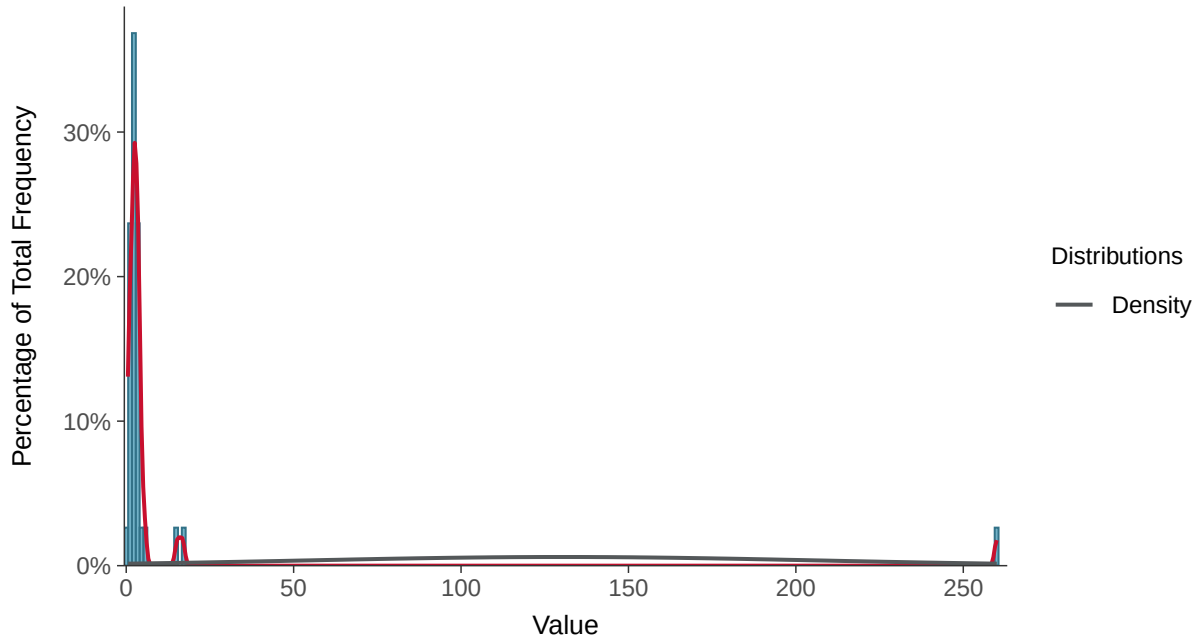
Scatter Plot

Chromium, MW-5 (ug/L)



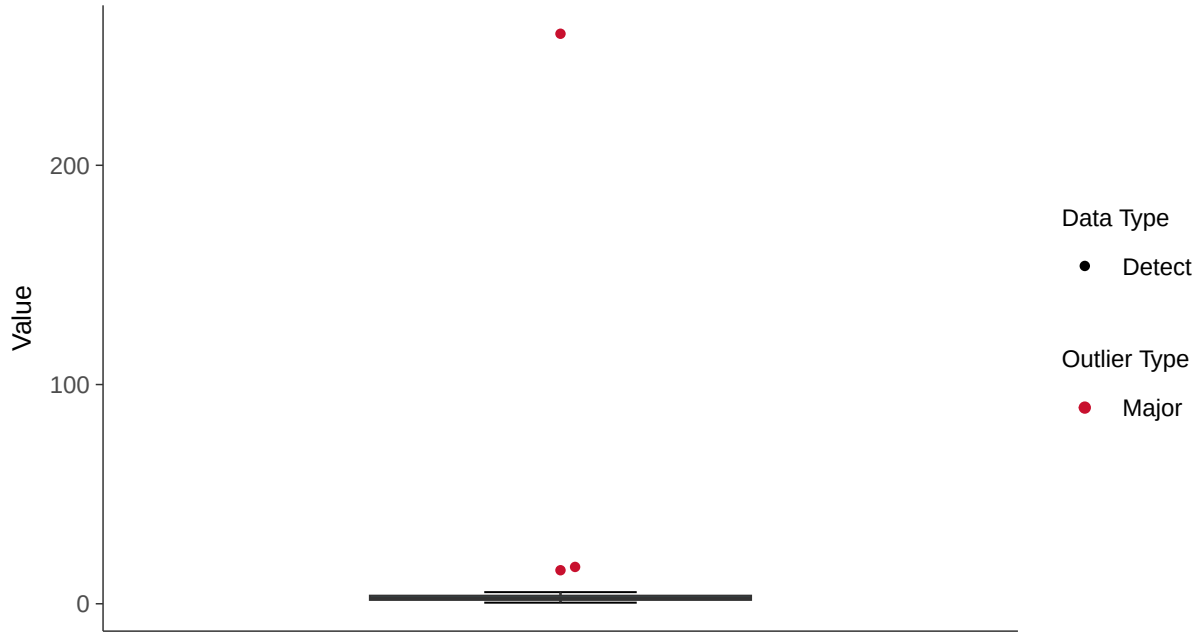
Histogram

Chromium, MW-5 (ug/L)



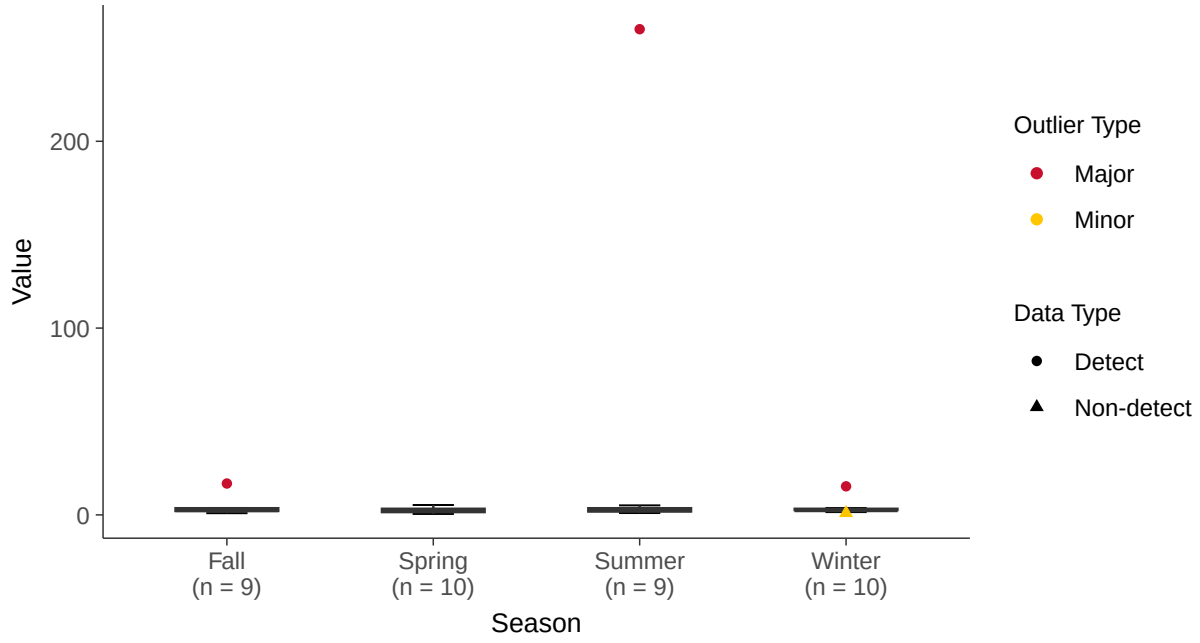
Boxplot

Chromium, MW-5 (ug/L)



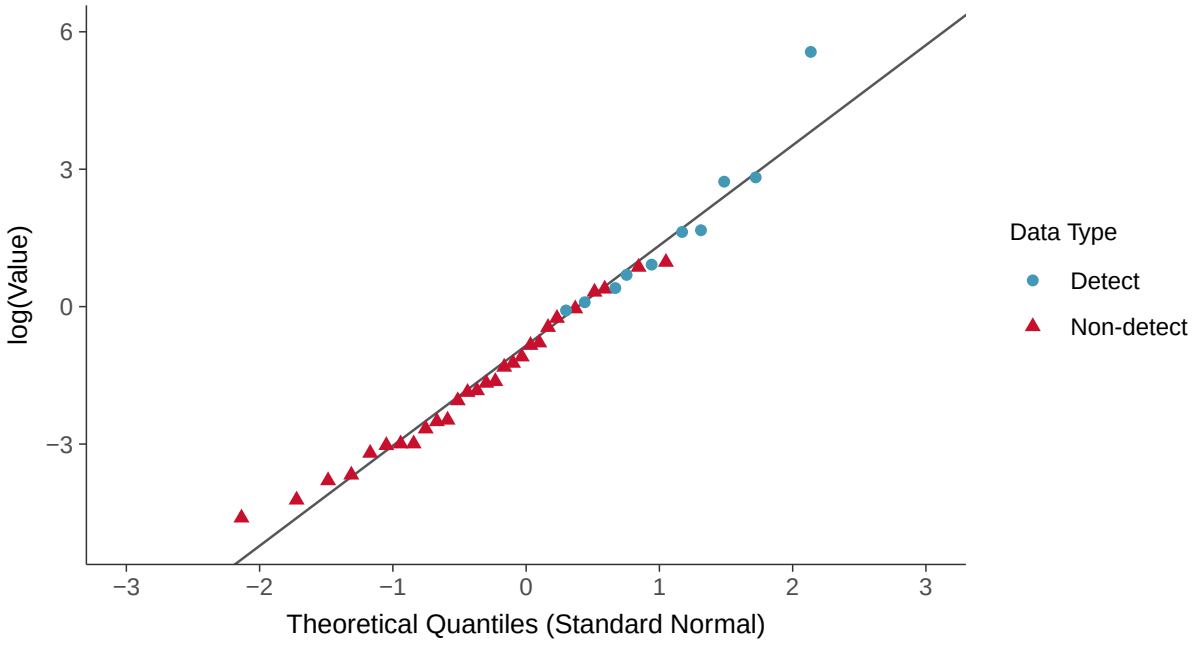
Boxplot by Season

Chromium, MW-5 (ug/L)



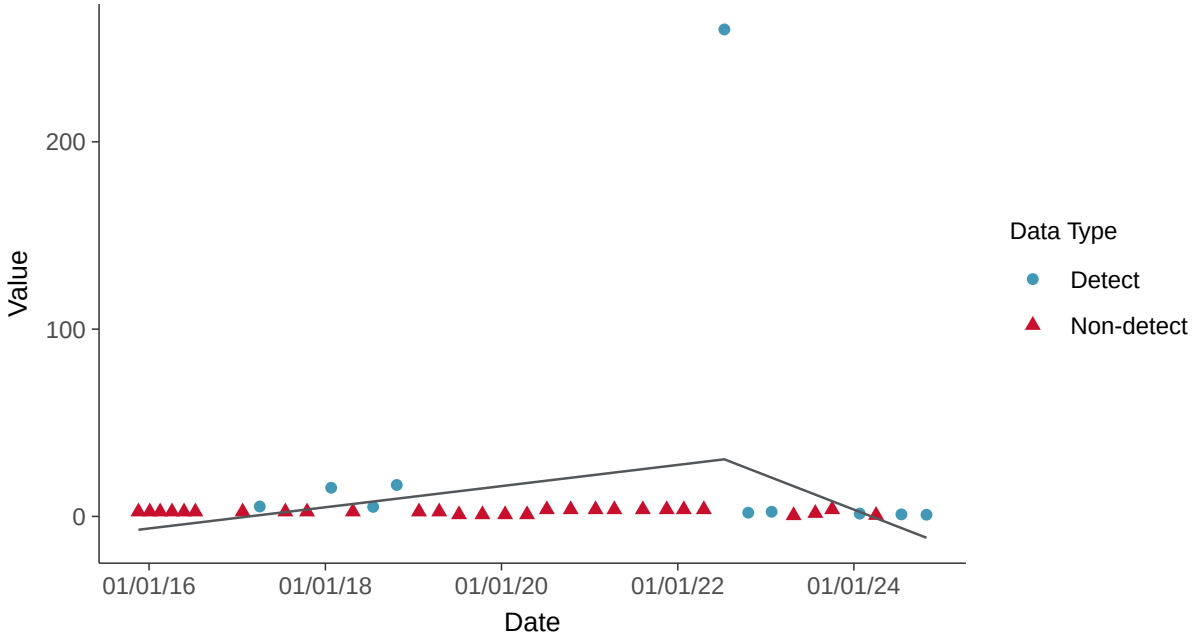
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-5 (ug/L)



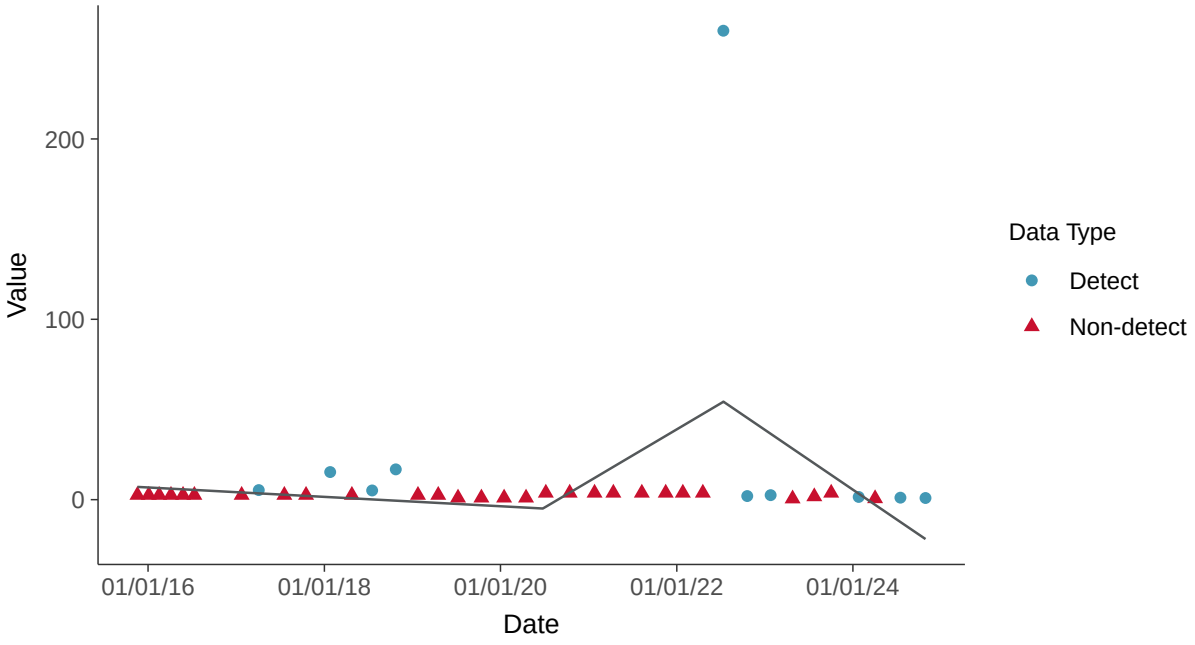
Trend Regression: Piecewise Linear-Linear

Chromium, MW-5 (ug/L)



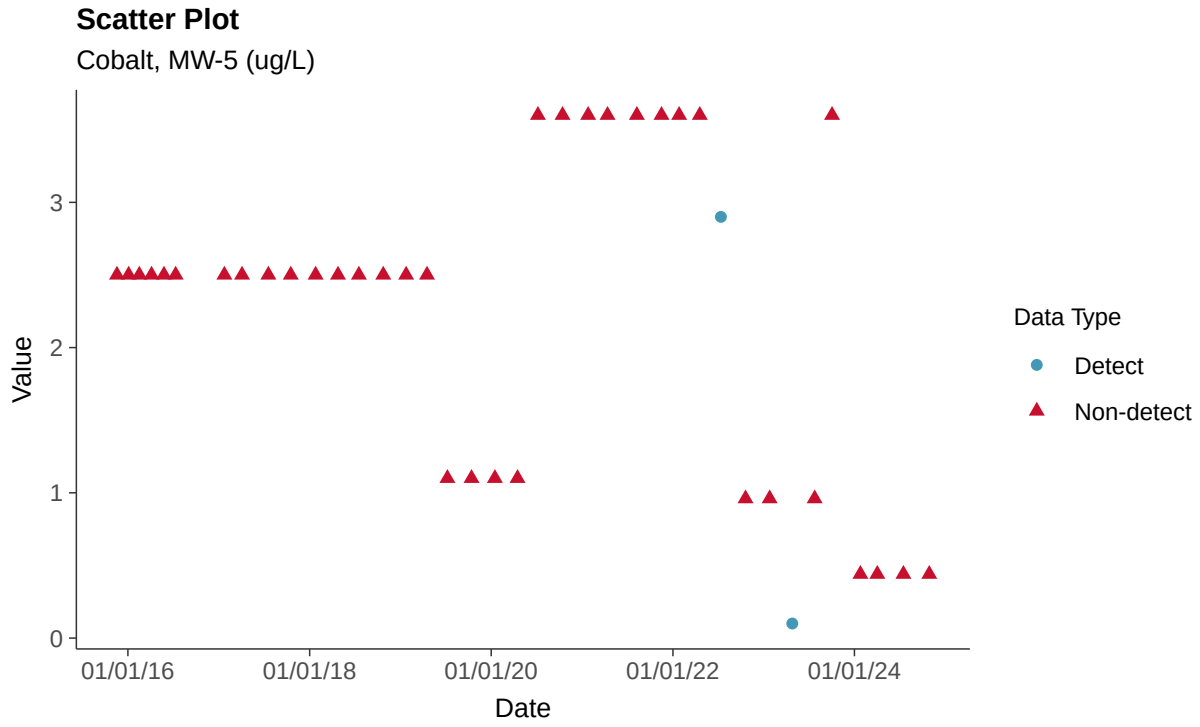
Trend Regression: Piecewise Linear-Linear-Linear

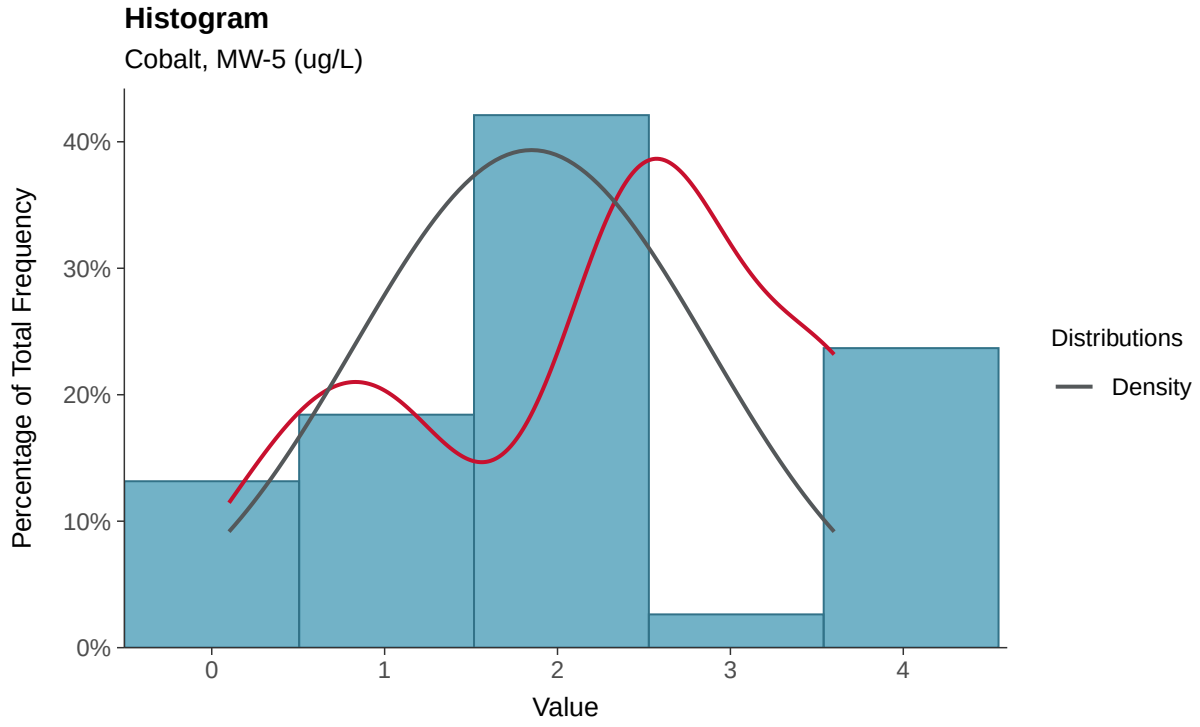
Chromium, MW-5 (ug/L)



App. IV: Cobalt, MW-5

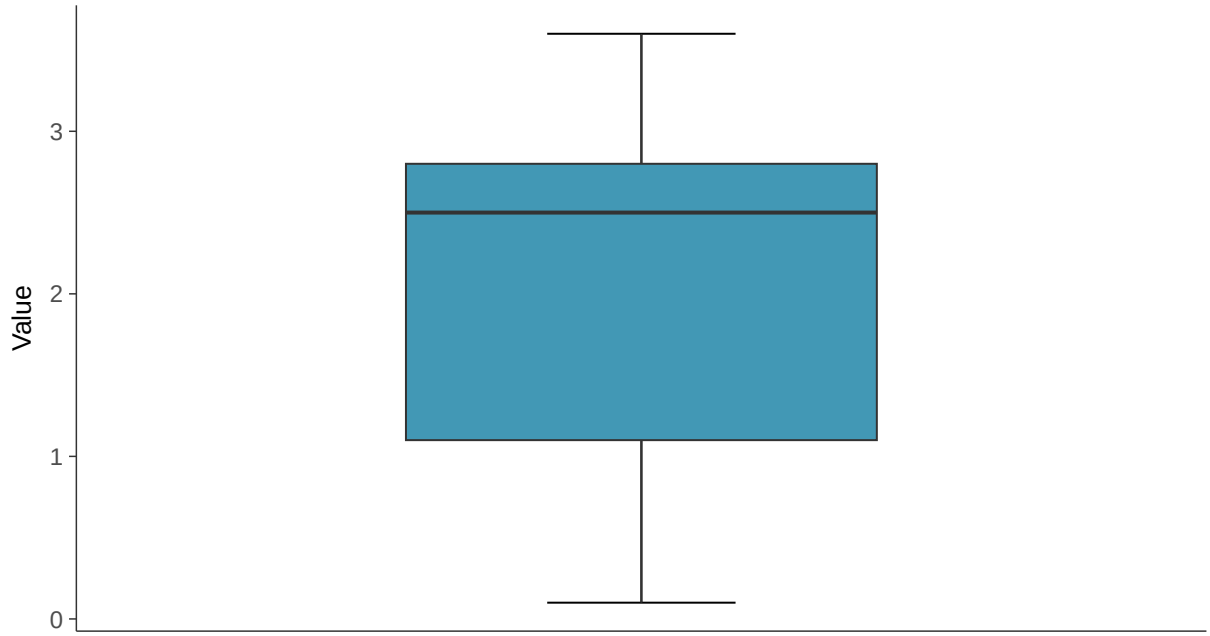
ID: 05_03_110





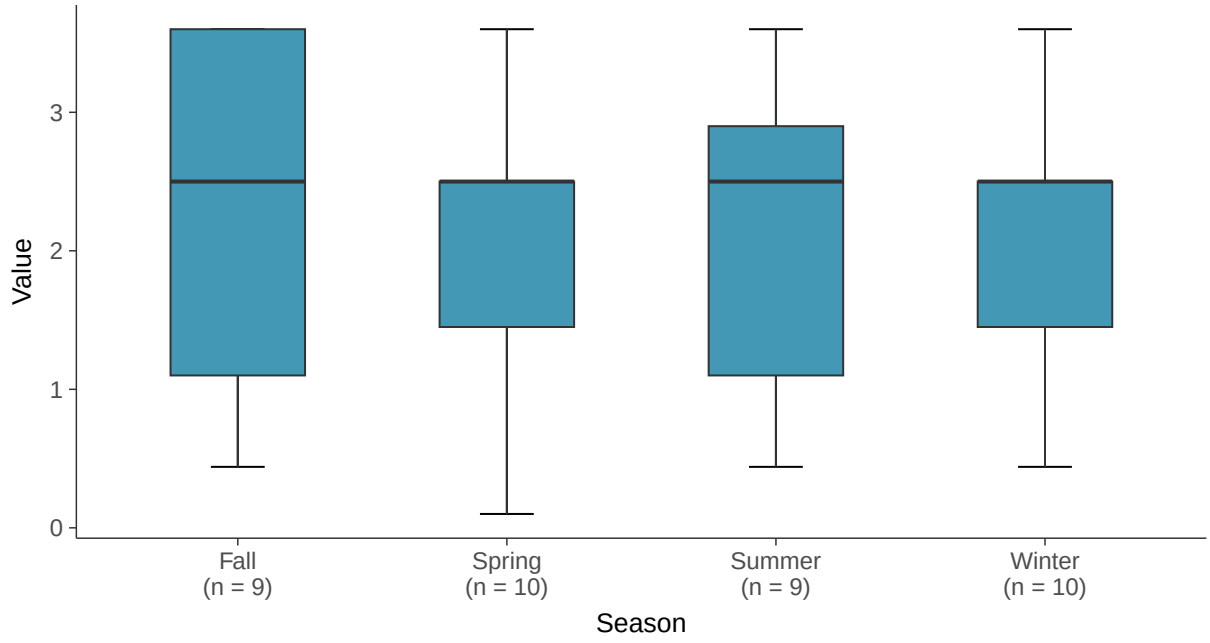
Boxplot

Cobalt, MW-5 (ug/L)



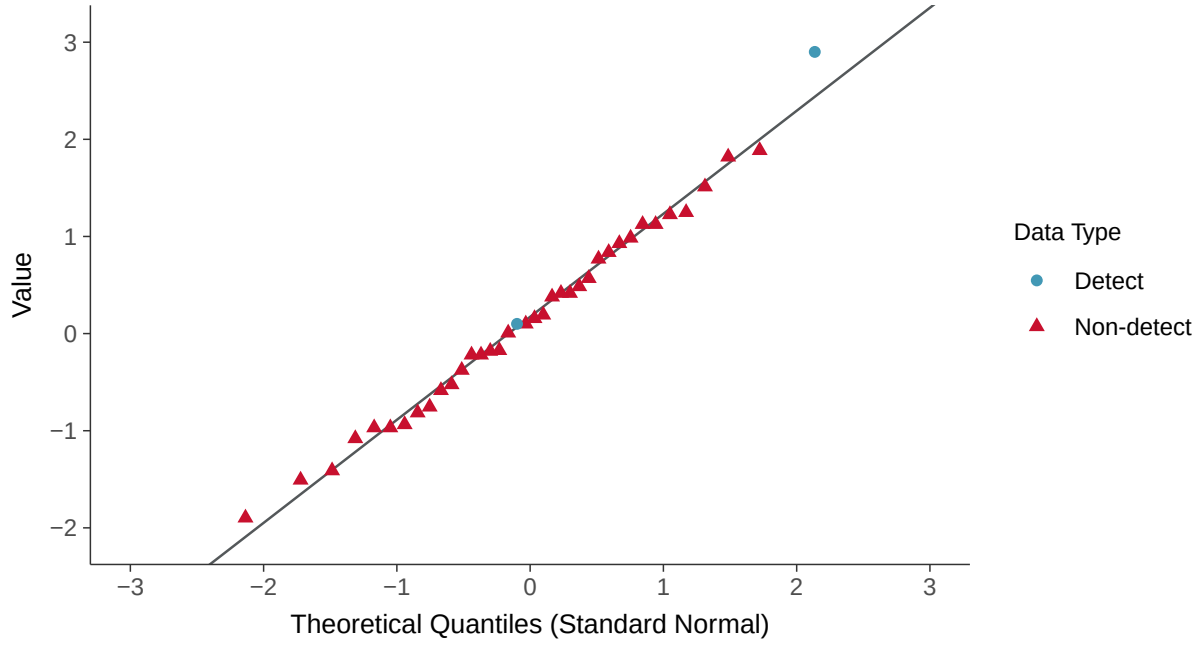
Boxplot by Season

Cobalt, MW-5 (ug/L)



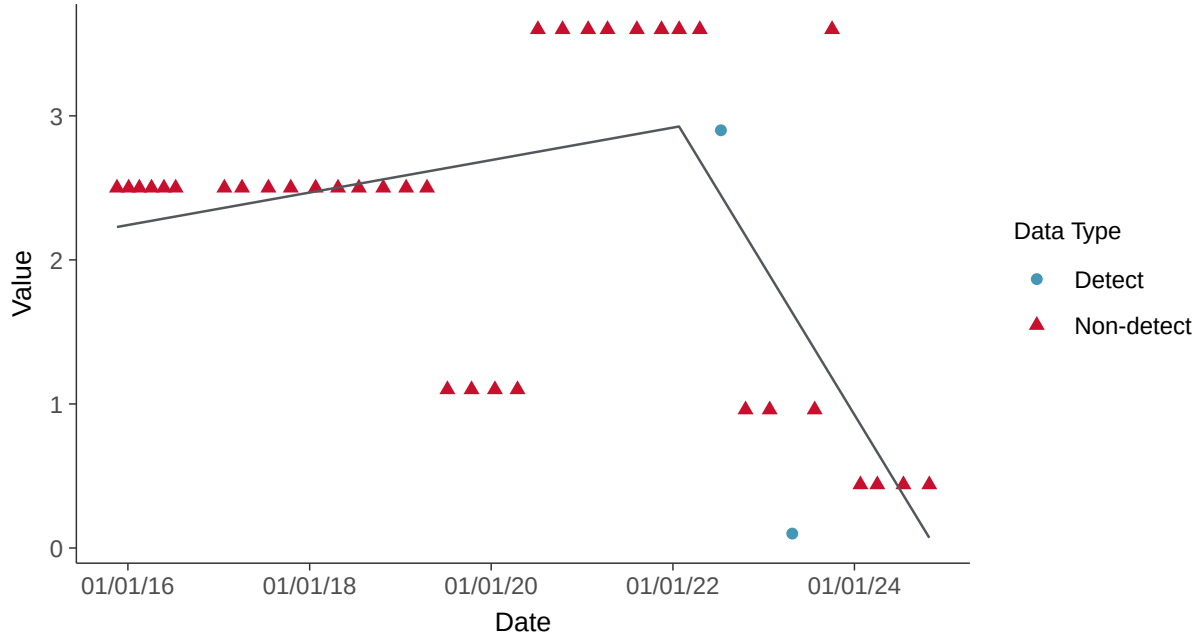
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-5 (ug/L)



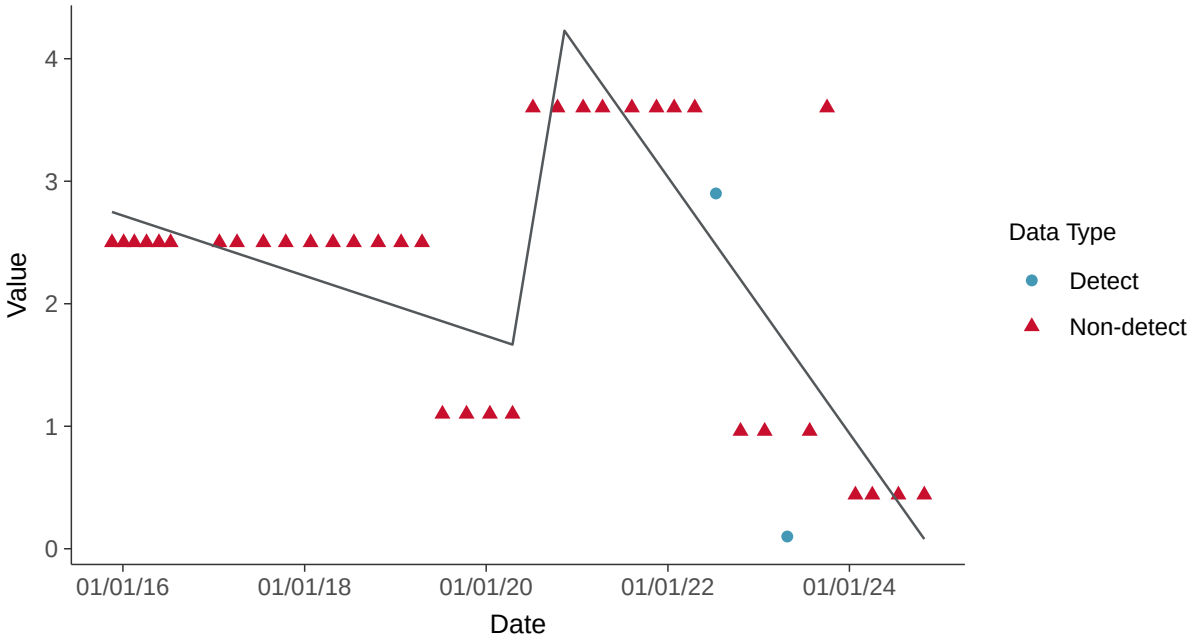
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-5 (ug/L)



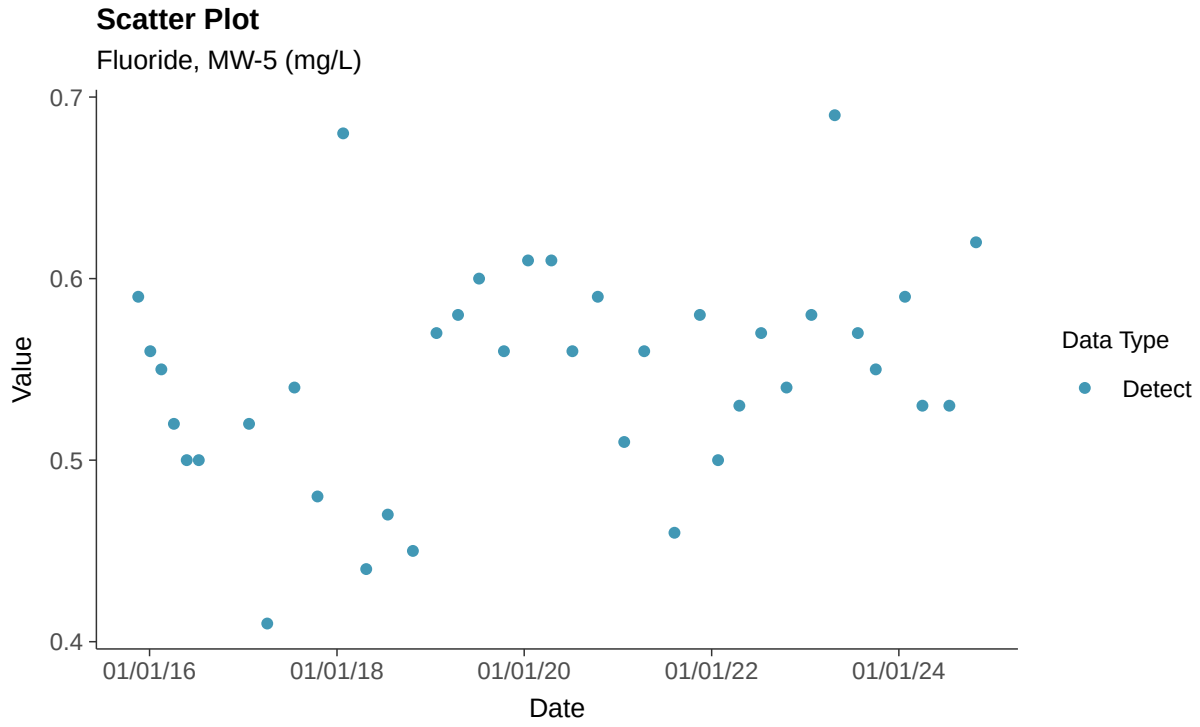
Trend Regression: Piecewise Linear-Linear-Linear

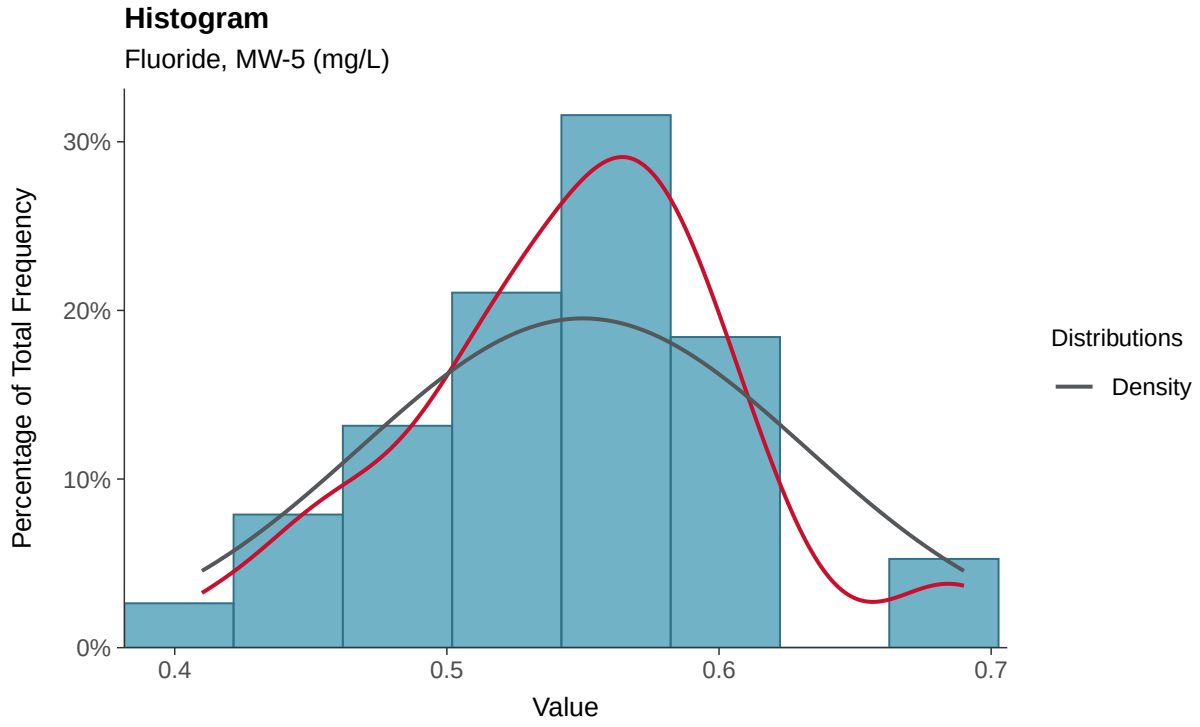
Cobalt, MW-5 (ug/L)



App. IV: Fluoride, MW-5

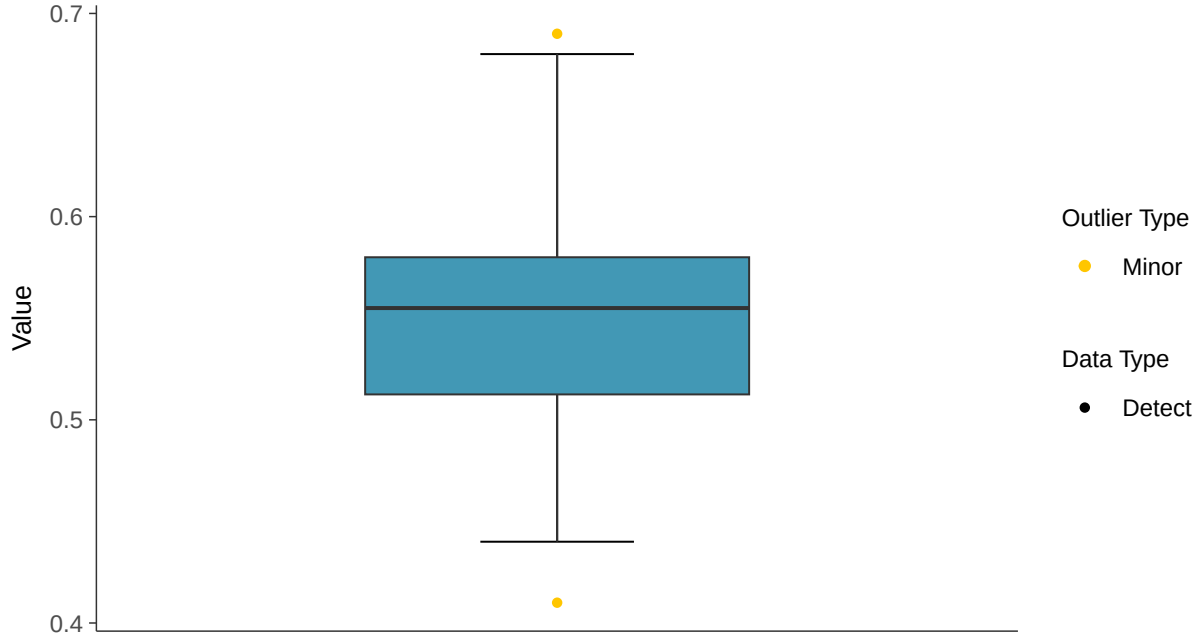
ID: 05_03_112





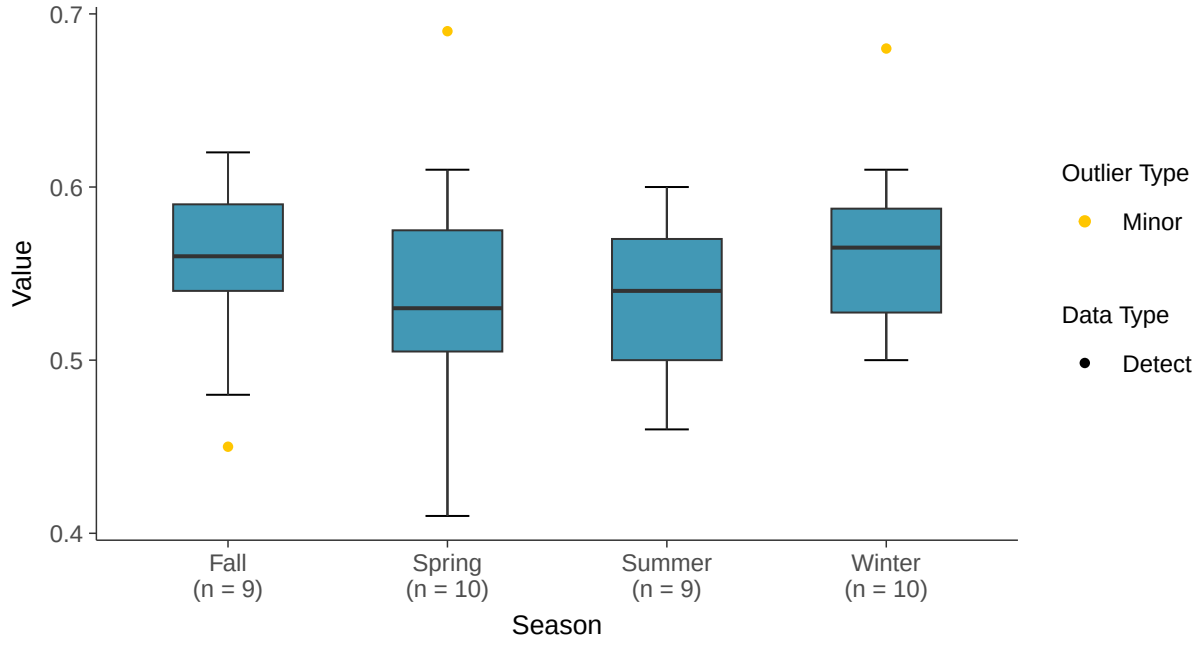
Boxplot

Fluoride, MW-5 (mg/L)



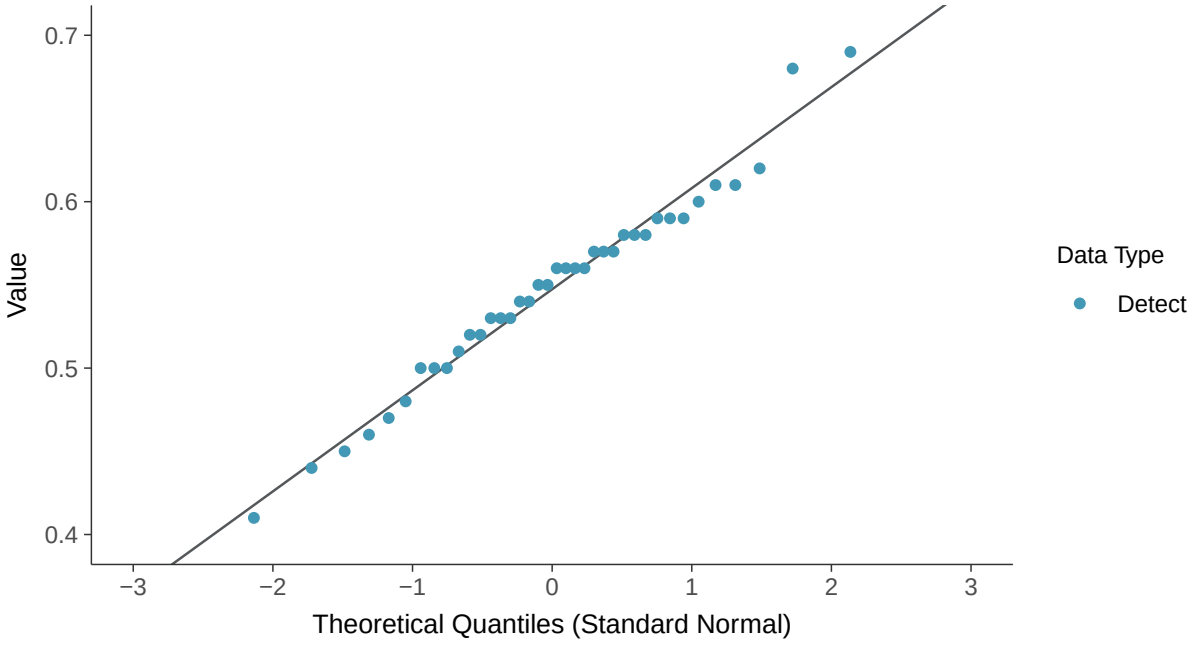
Boxplot by Season

Fluoride, MW-5 (mg/L)



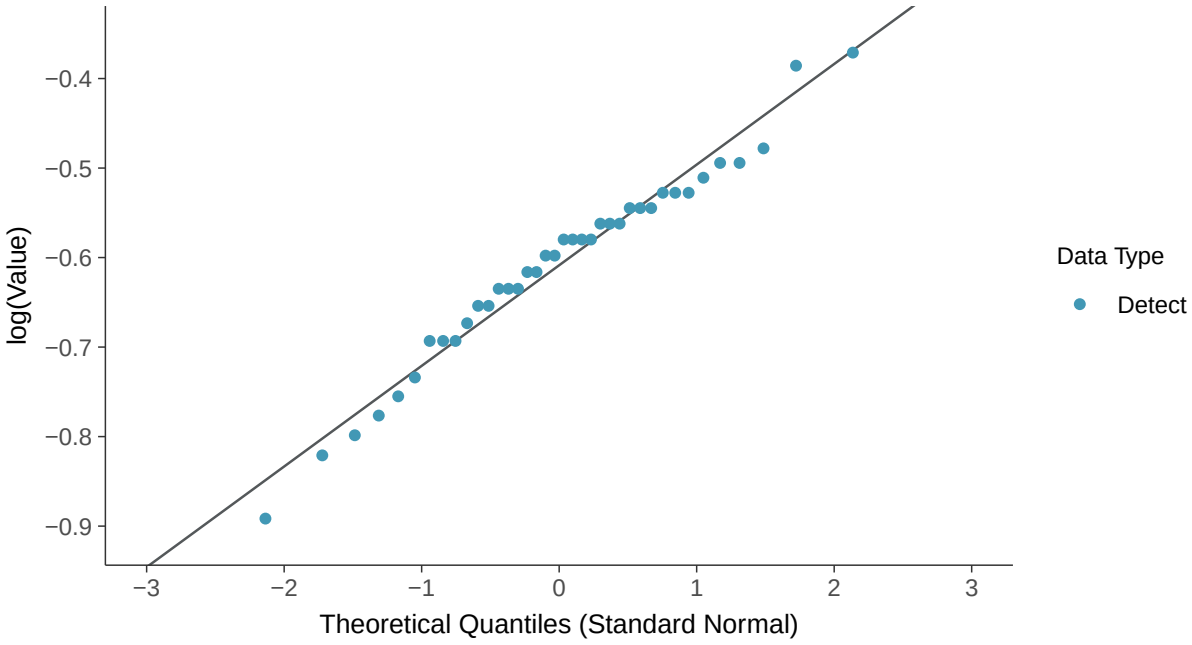
Normal Q-Q plot

Fluoride, MW-5 (mg/L)



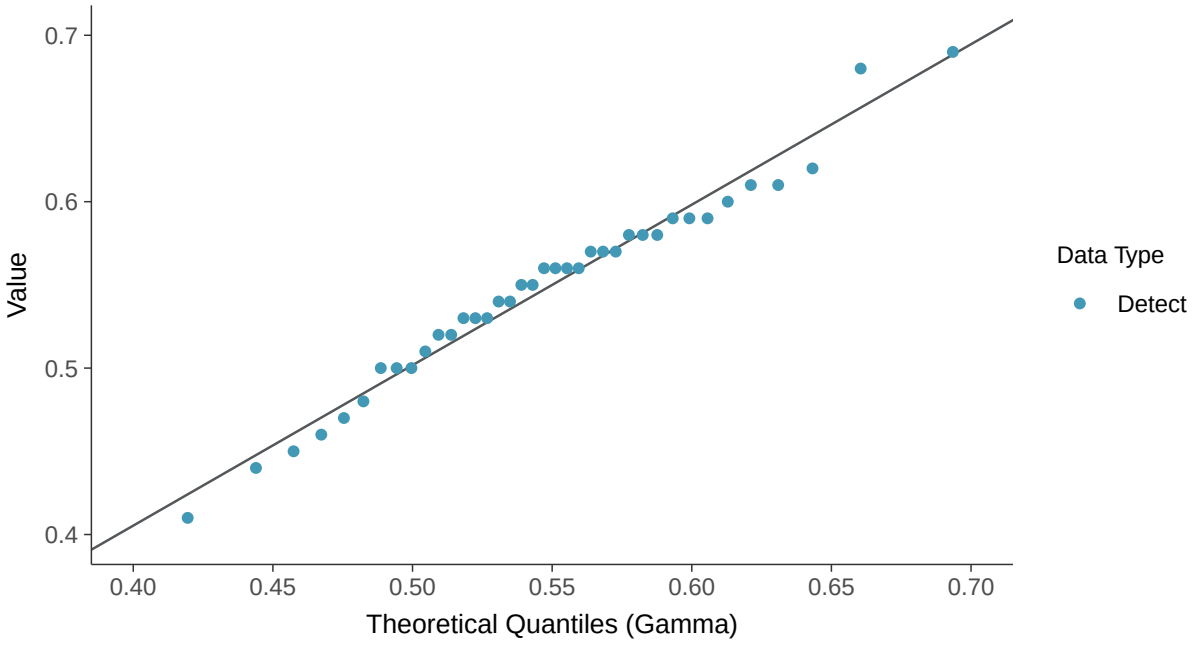
Lognormal Q-Q plot

Fluoride, MW-5 (mg/L)



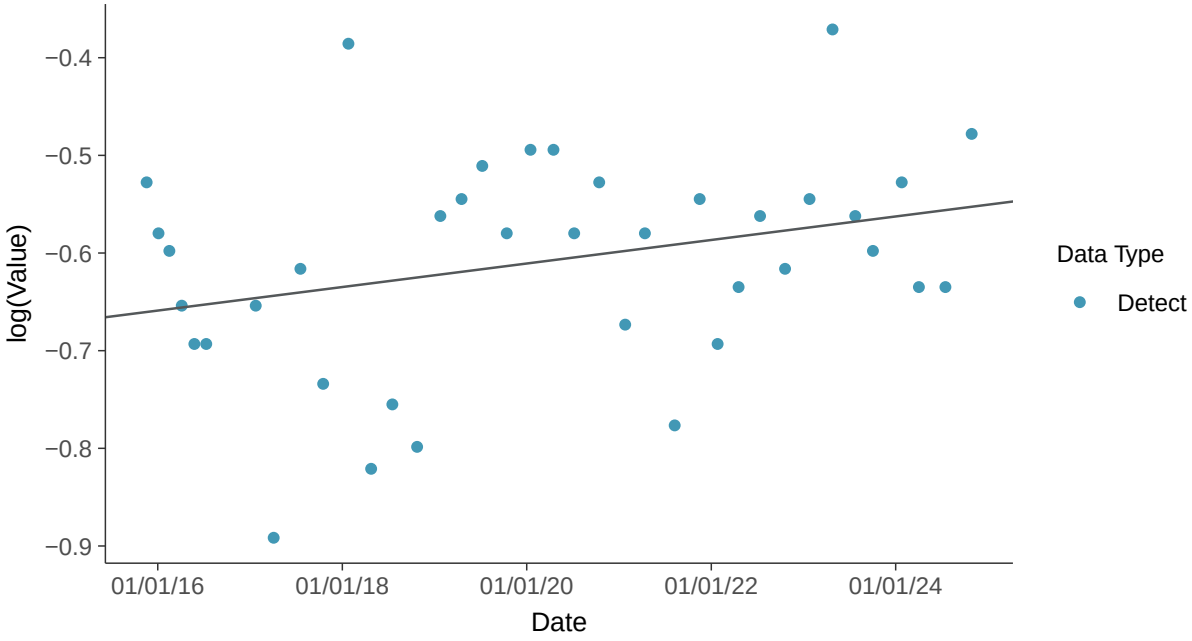
Gamma Q-Q plot

Fluoride, MW-5 (mg/L)



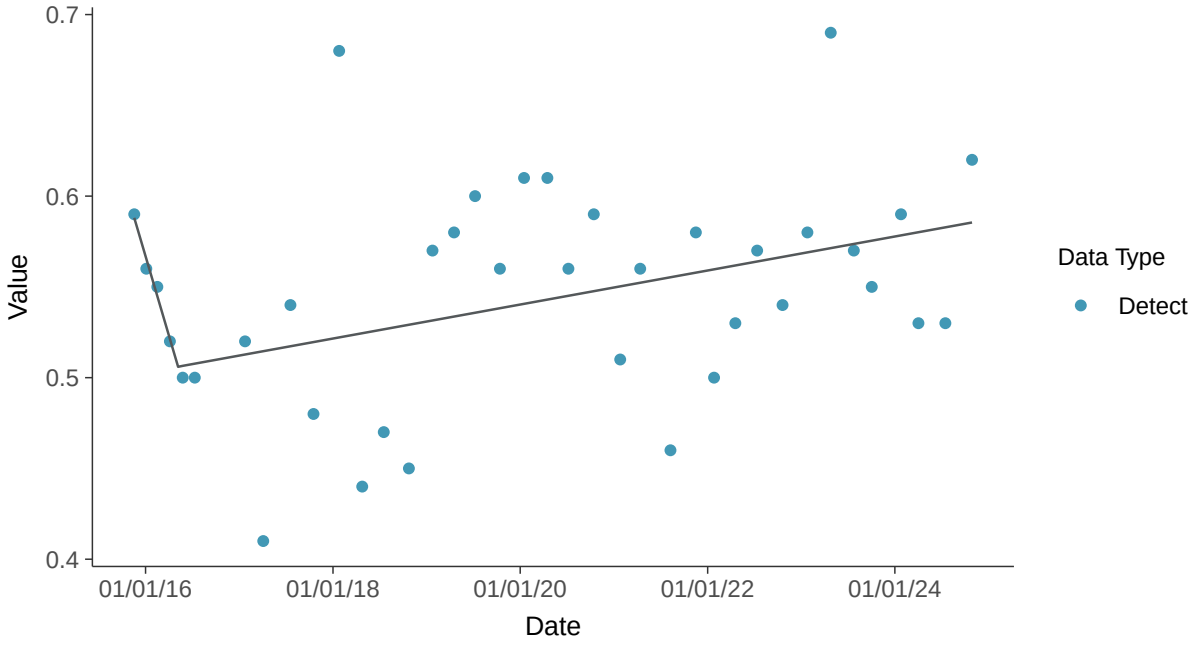
Trend Regression: Lognormal MLE

Fluoride, MW-5 (mg/L)



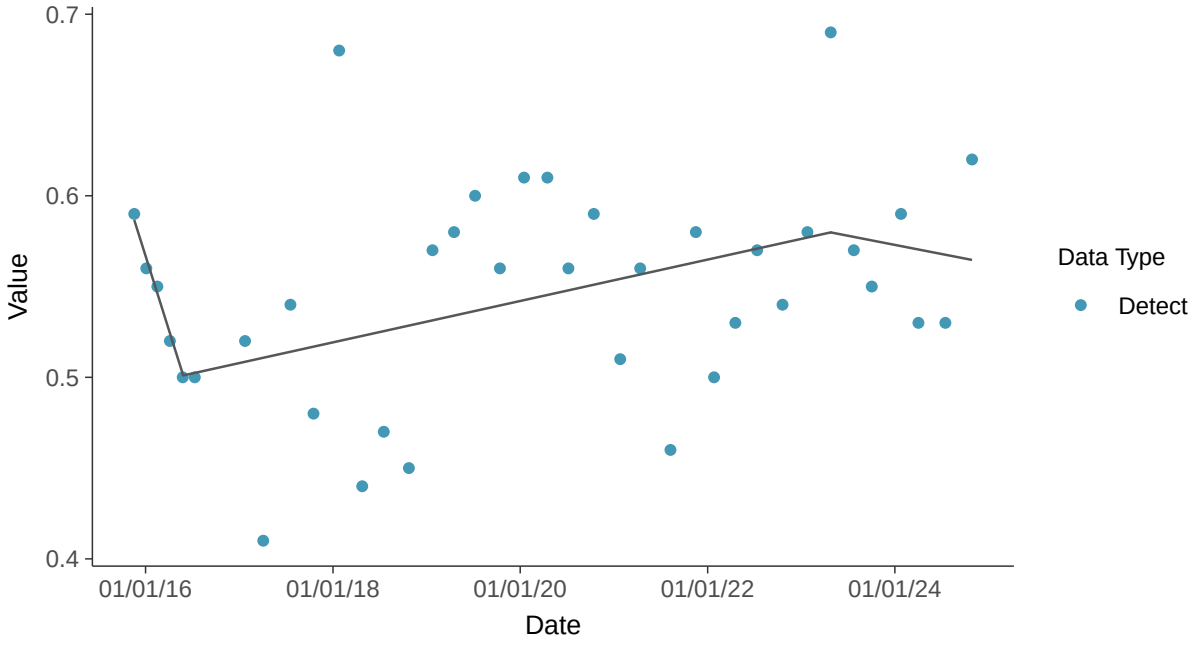
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-5 (mg/L)



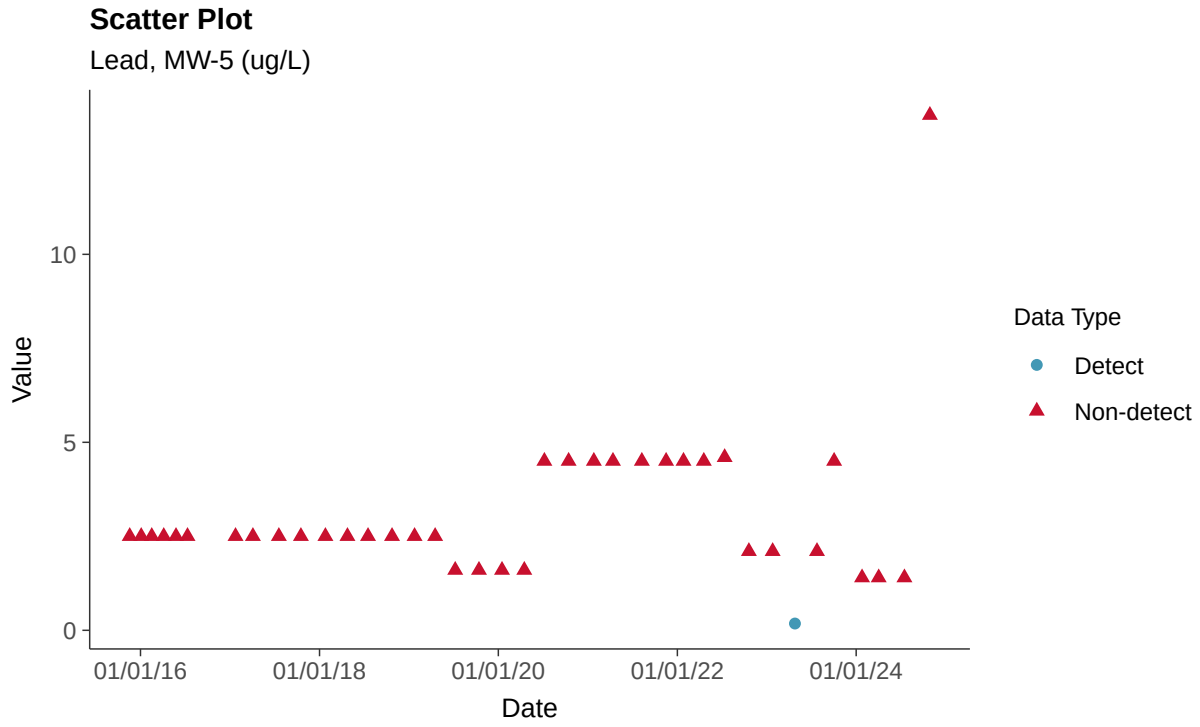
Trend Regression: Piecewise Linear-Linear-Linear

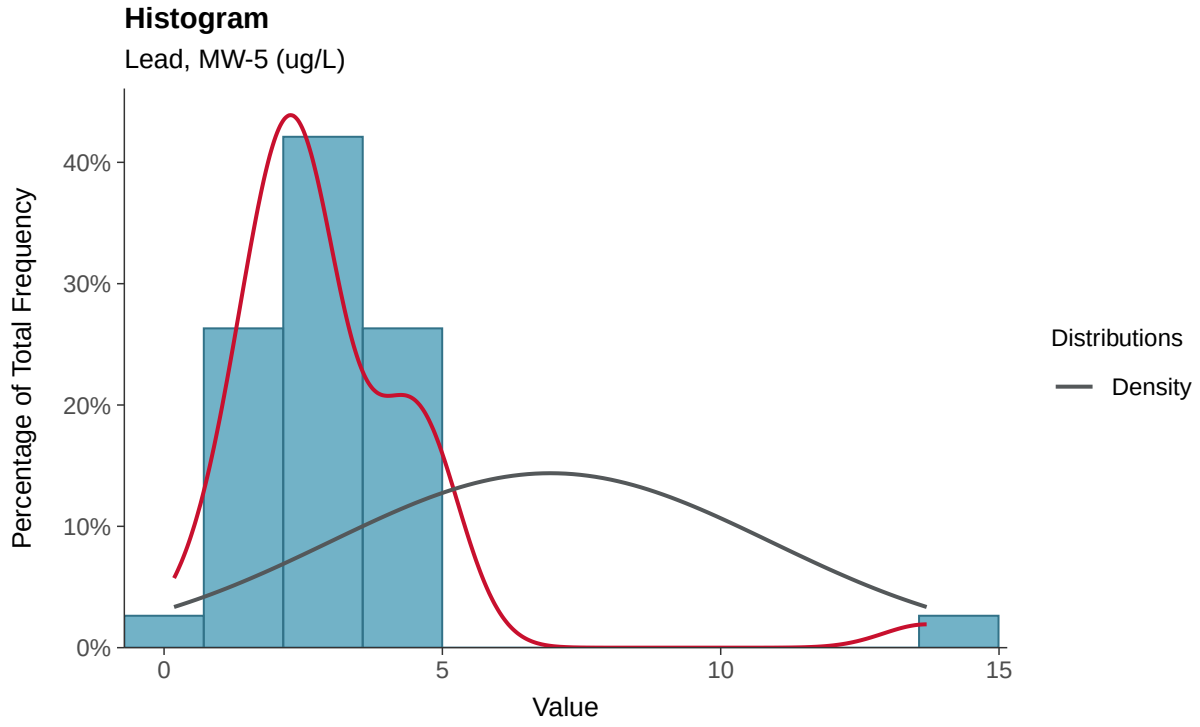
Fluoride, MW-5 (mg/L)



App. IV: Lead, MW-5

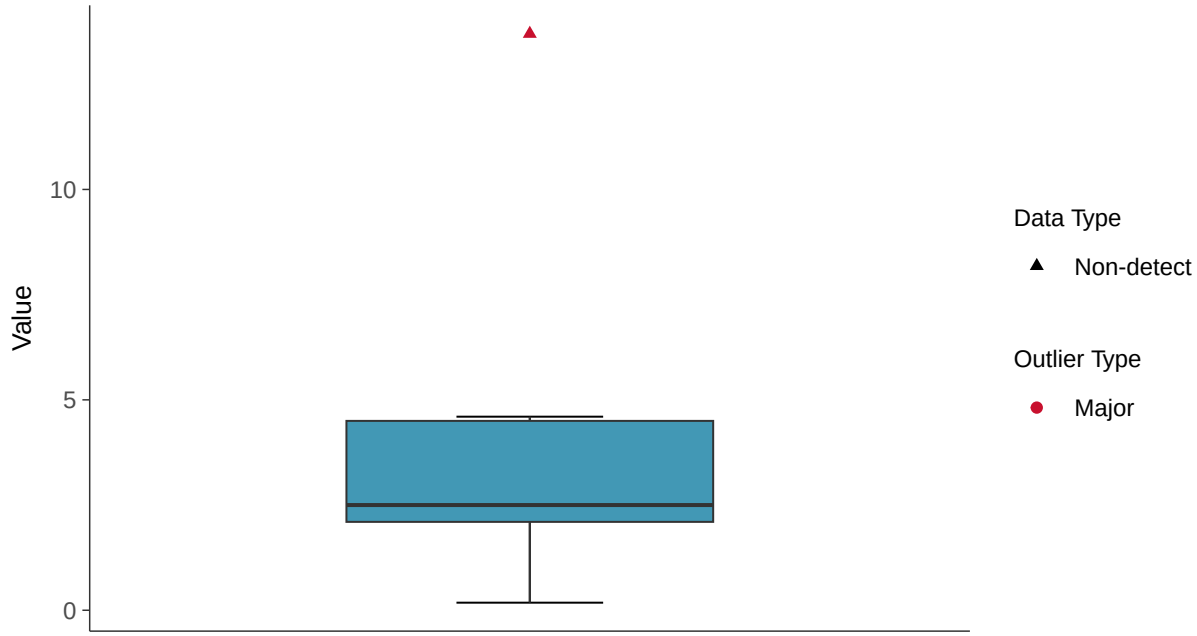
ID: 05_03_113





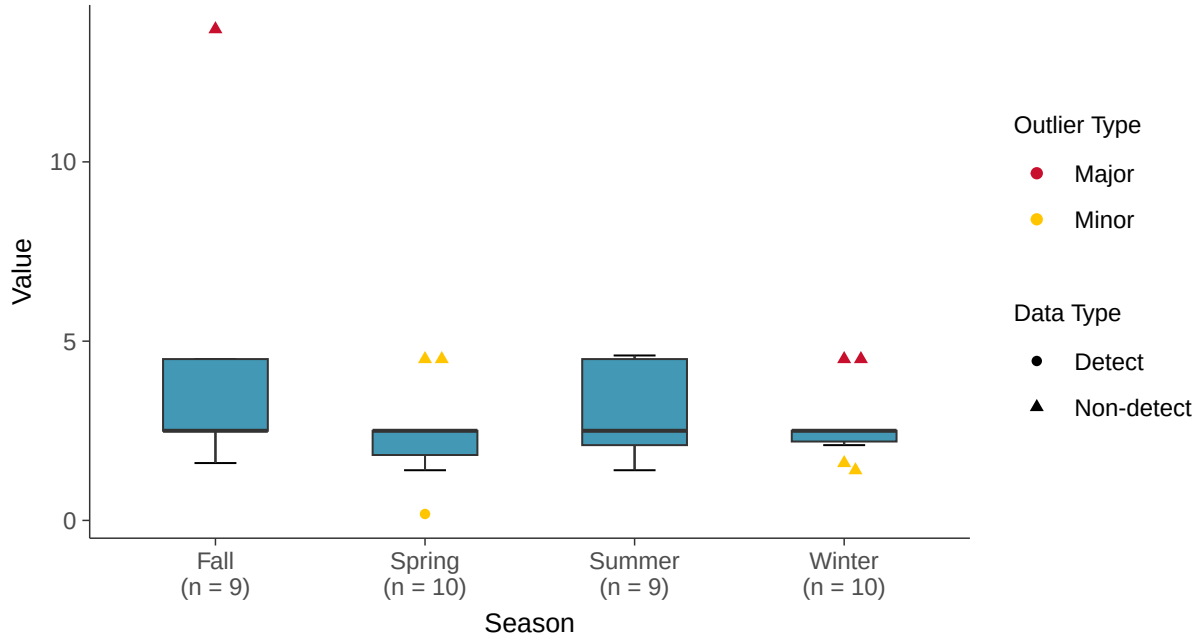
Boxplot

Lead, MW-5 (ug/L)



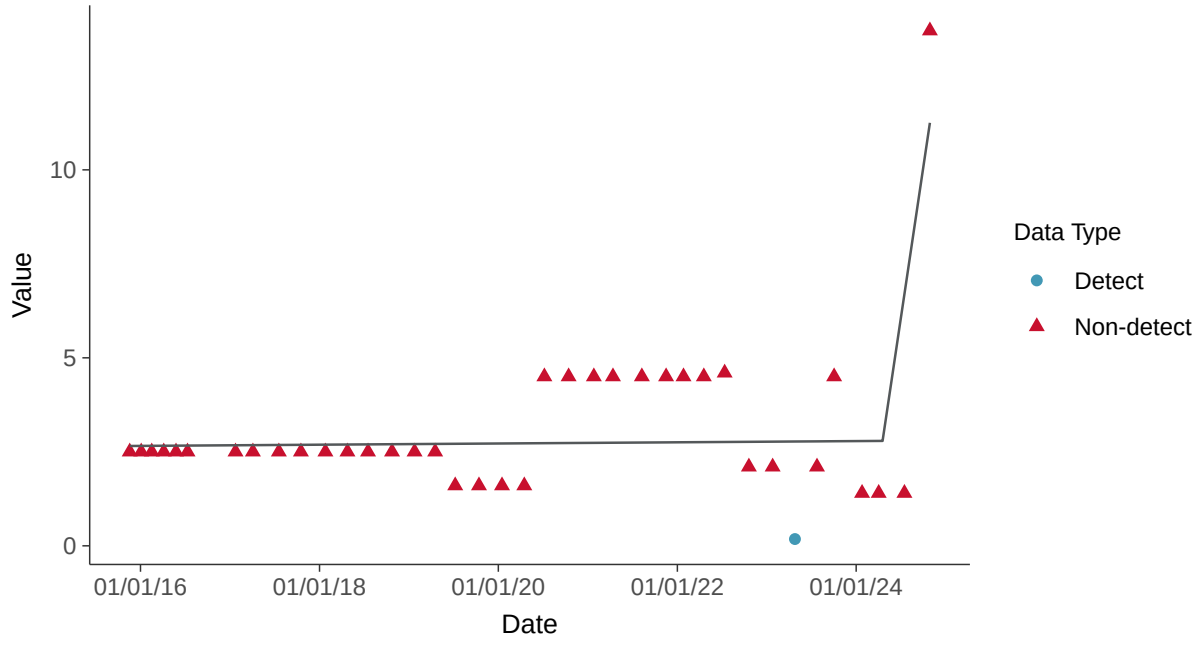
Boxplot by Season

Lead, MW-5 (ug/L)



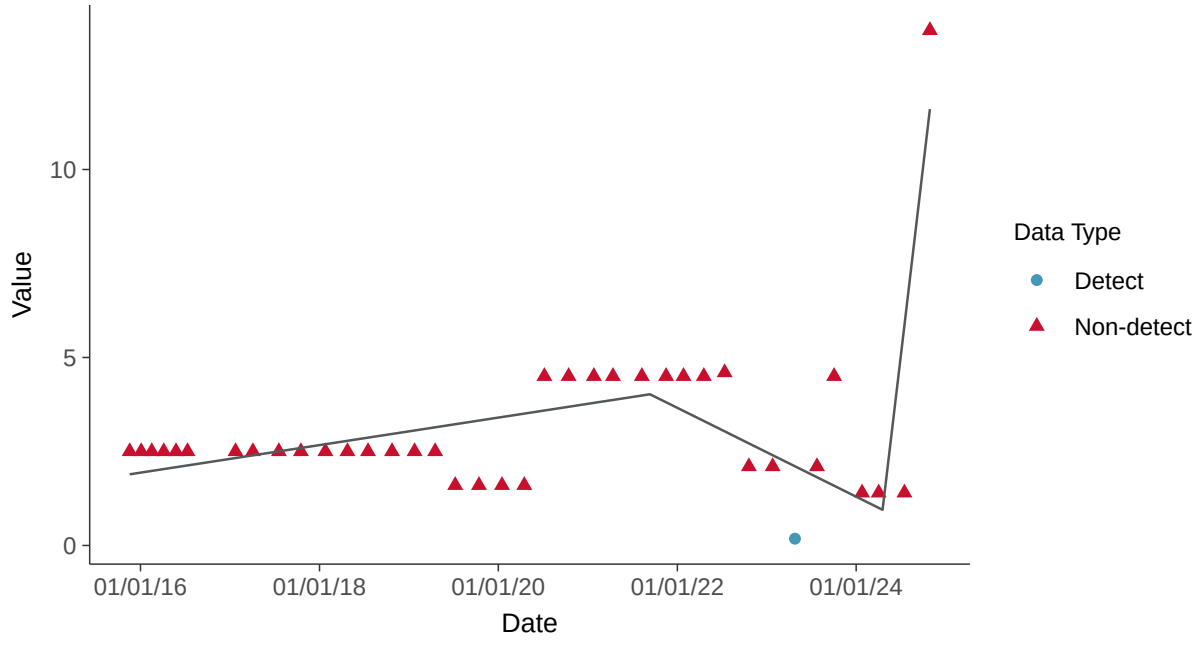
Trend Regression: Piecewise Linear-Linear

Lead, MW-5 (ug/L)



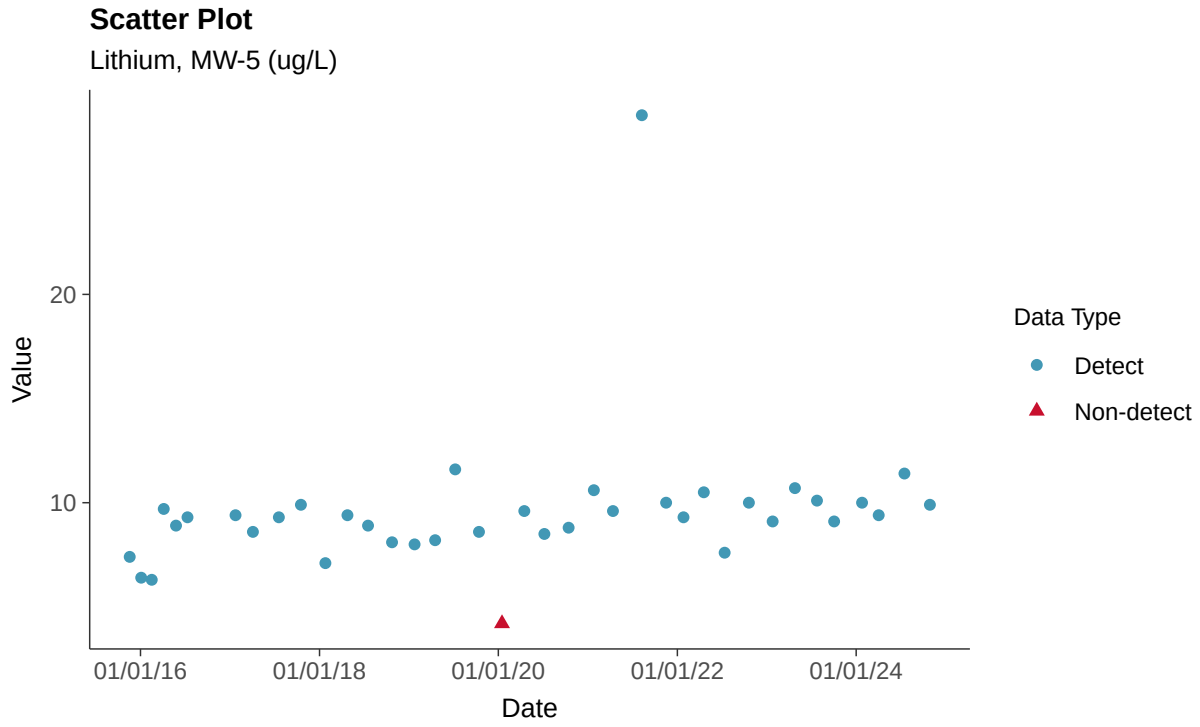
Trend Regression: Piecewise Linear-Linear-Linear

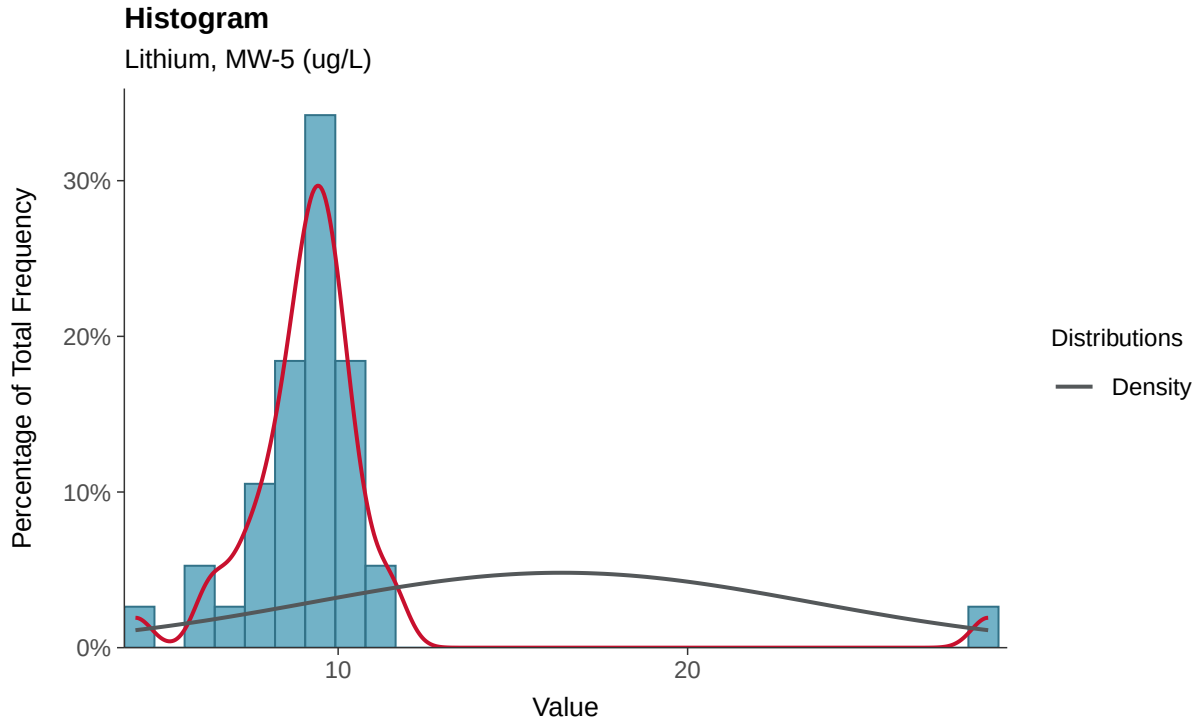
Lead, MW-5 (ug/L)



App. IV: Lithium, MW-5

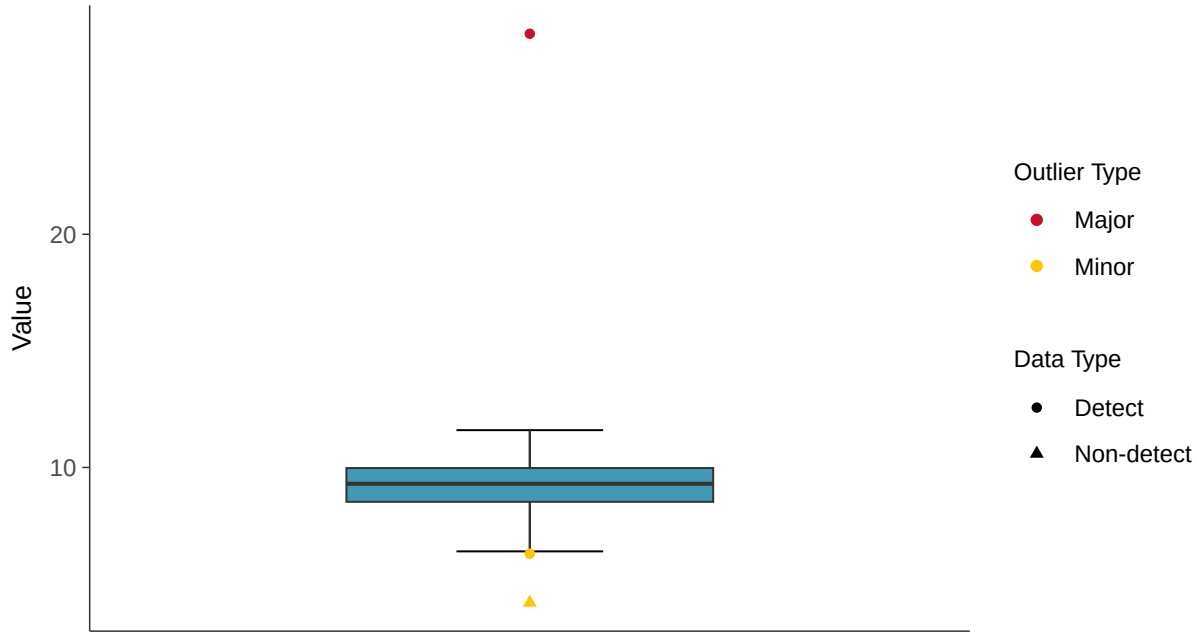
ID: 05_03_114





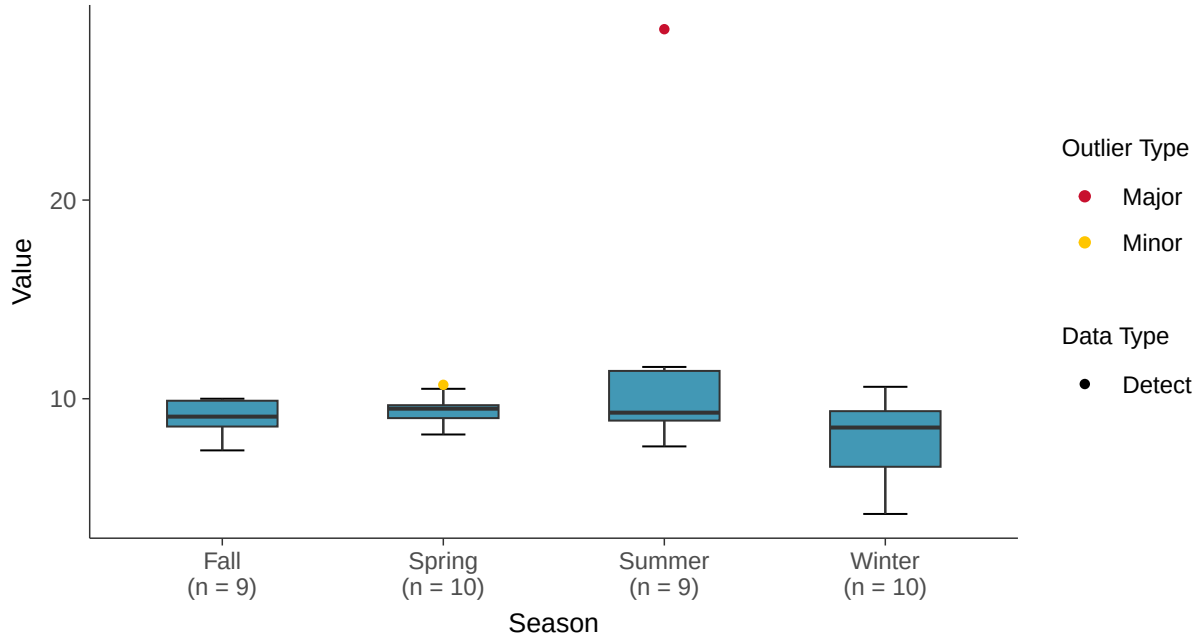
Boxplot

Lithium, MW-5 (ug/L)



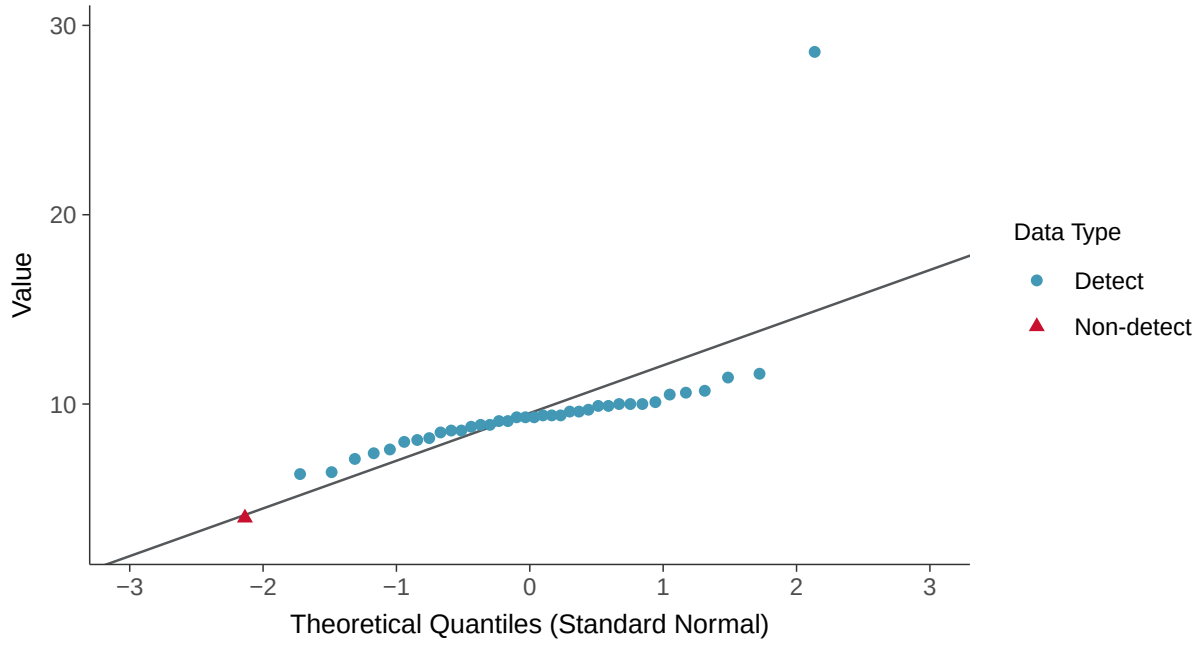
Boxplot by Season

Lithium, MW-5 (ug/L)



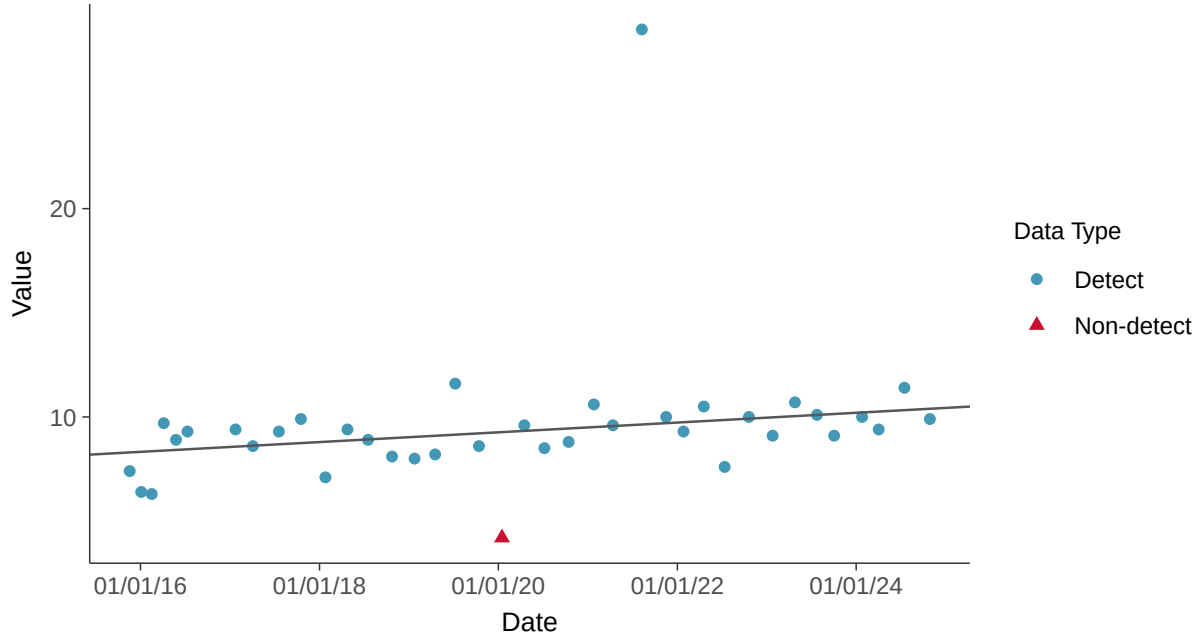
Normal Q-Q plot using ROS Imputed Estimates

Lithium, MW-5 (ug/L)



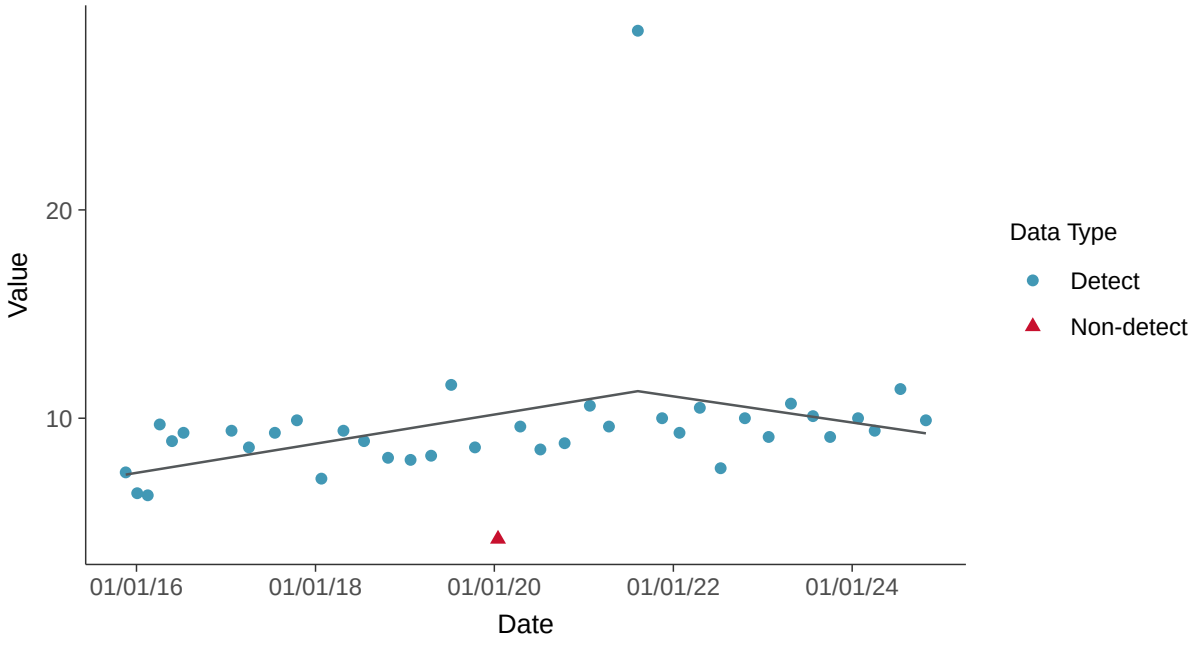
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-5 (ug/L)



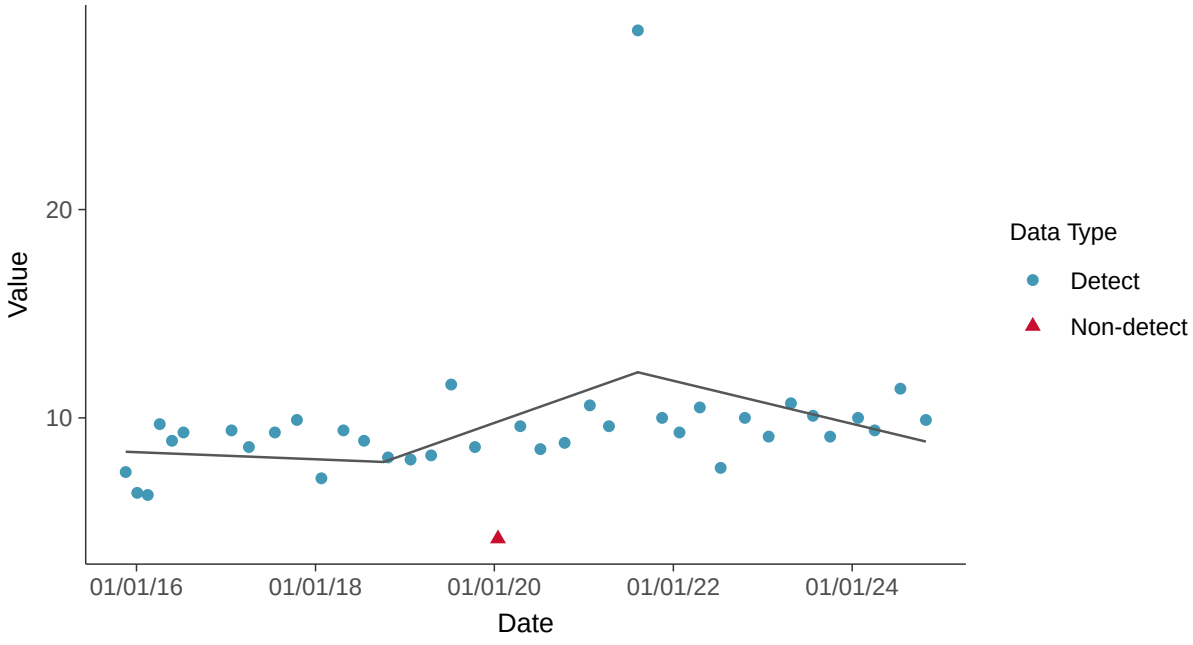
Trend Regression: Piecewise Linear-Linear

Lithium, MW-5 (ug/L)



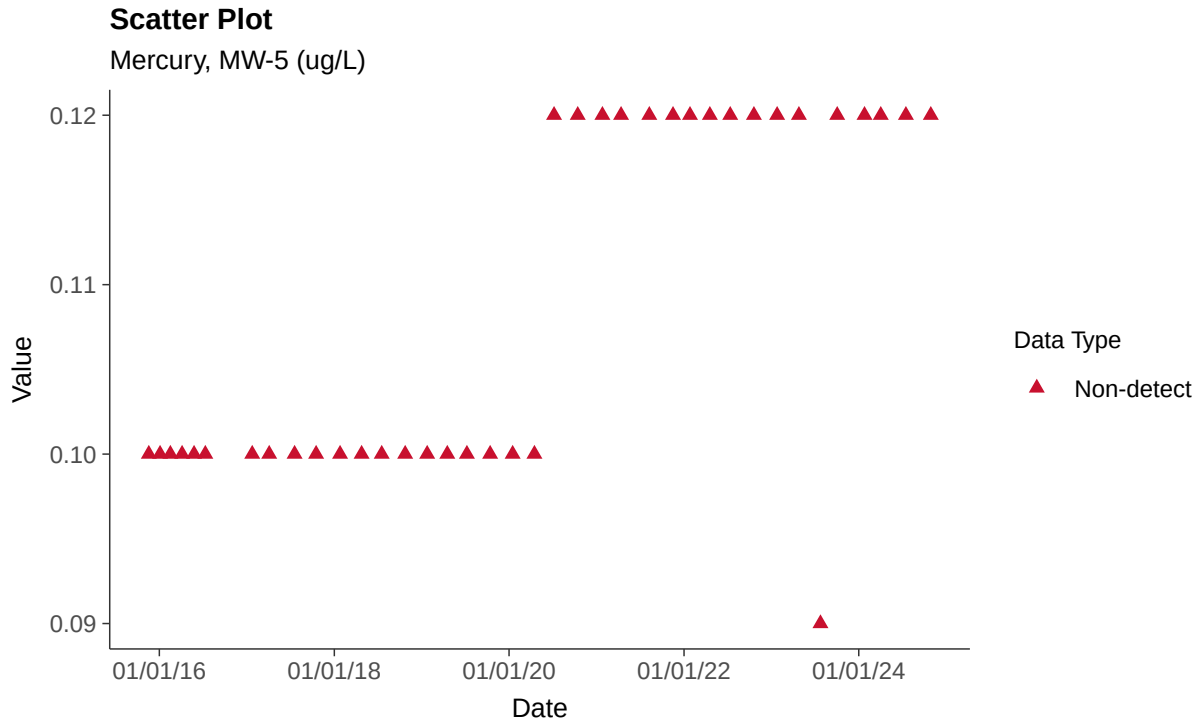
Trend Regression: Piecewise Linear-Linear-Linear

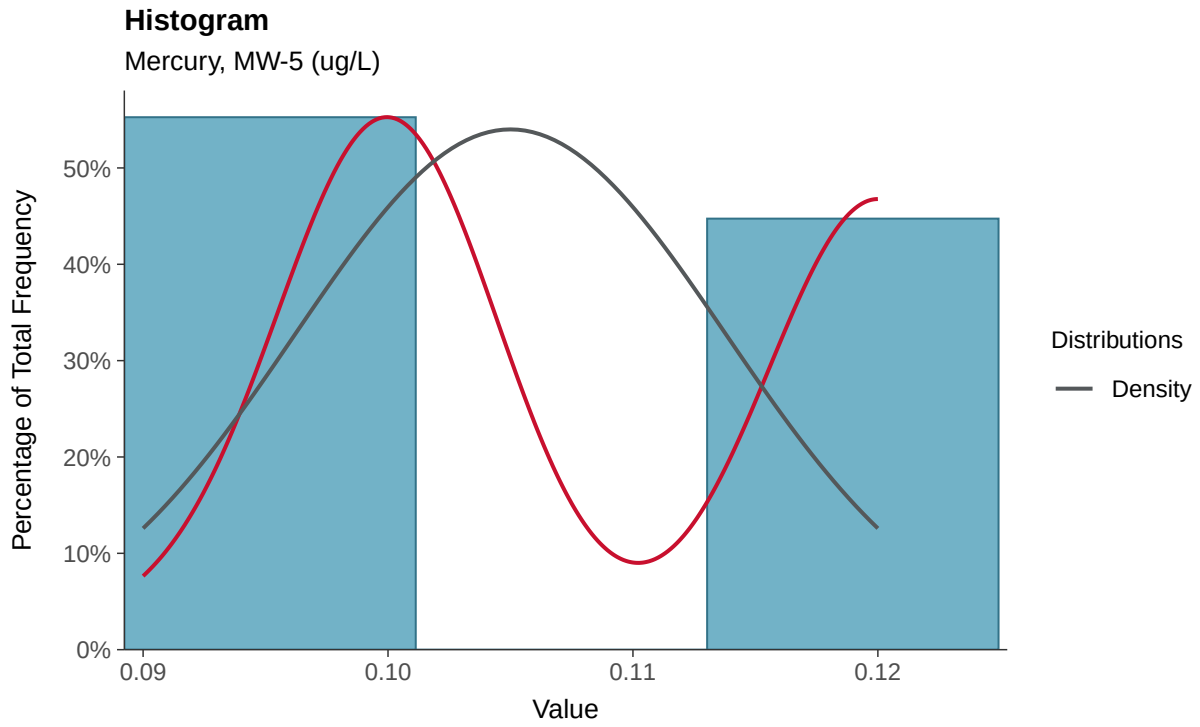
Lithium, MW-5 (ug/L)



App. IV: Mercury, MW-5

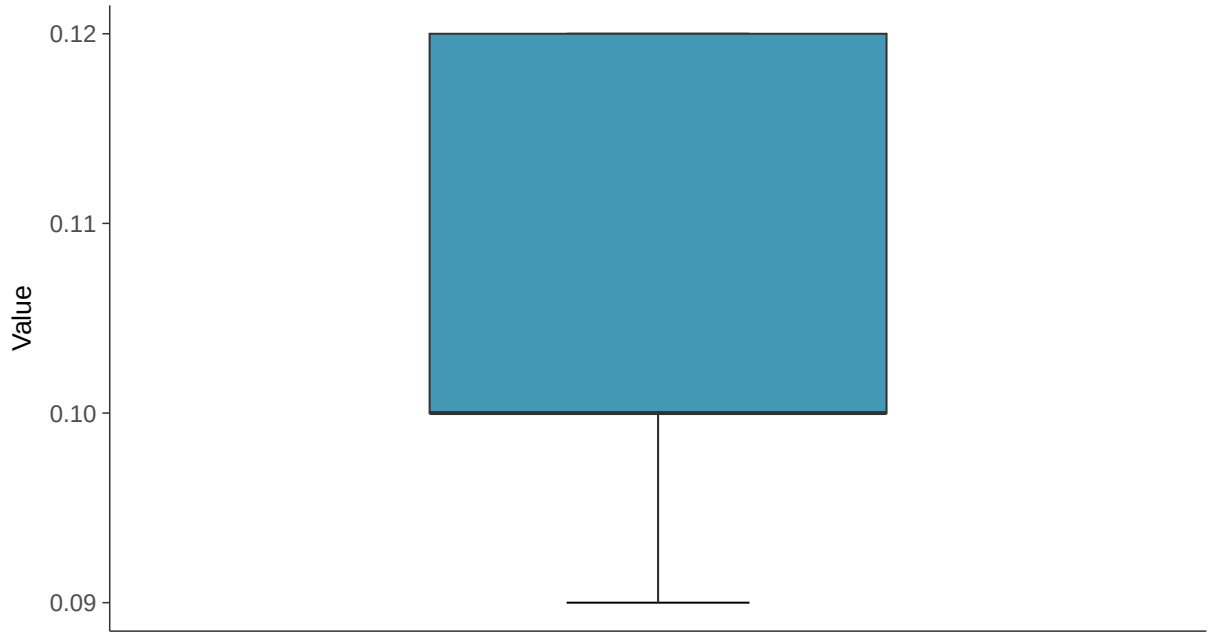
ID: 05_03_115





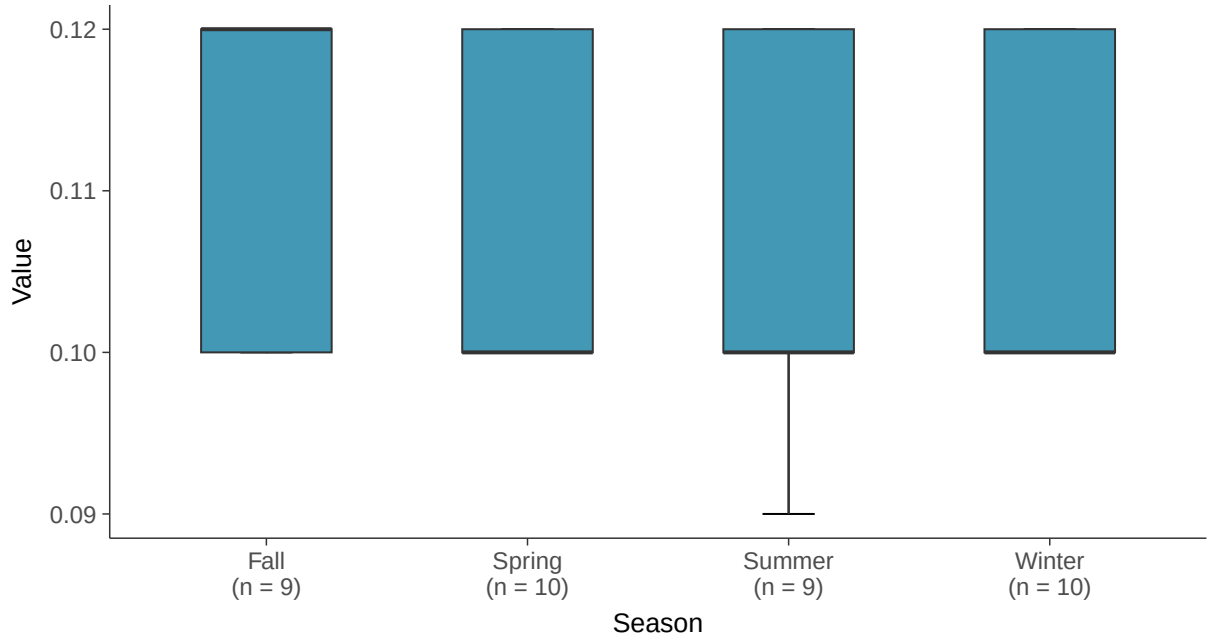
Boxplot

Mercury, MW-5 (ug/L)



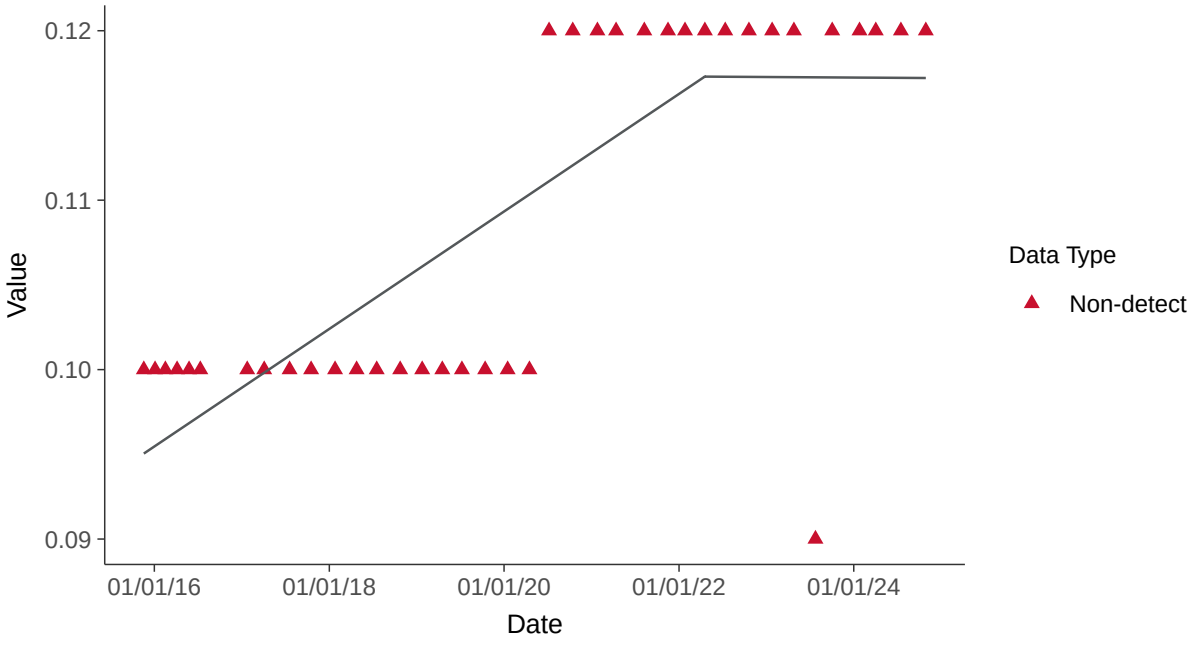
Boxplot by Season

Mercury, MW-5 (ug/L)



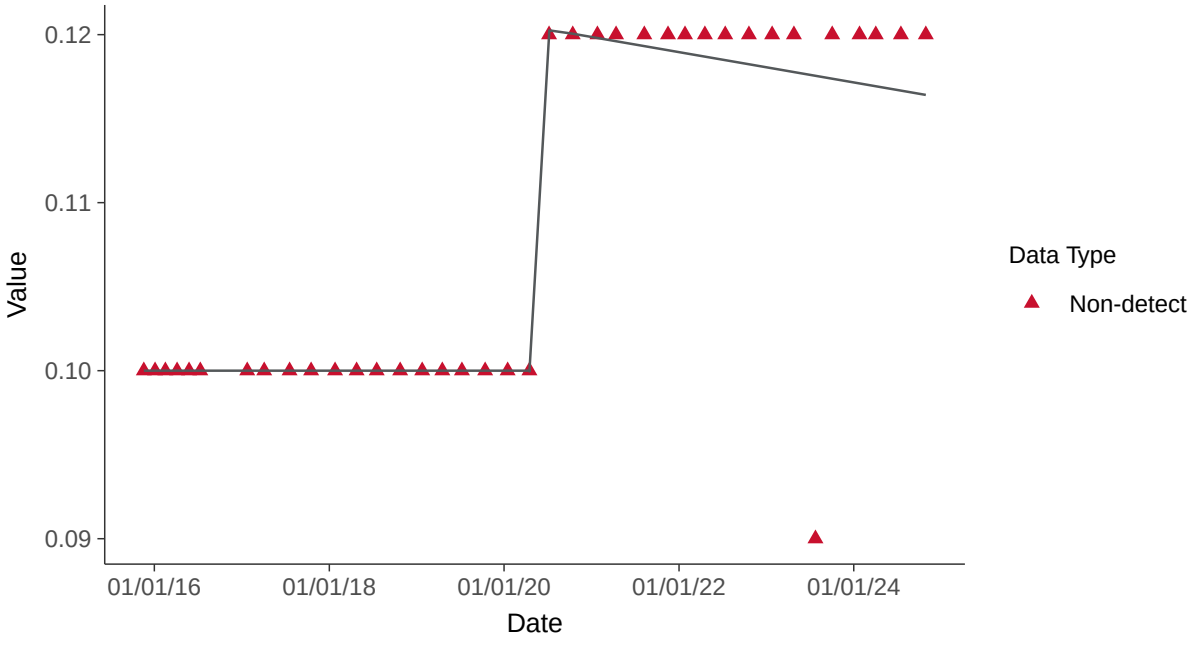
Trend Regression: Piecewise Linear-Linear

Mercury, MW-5 (ug/L)



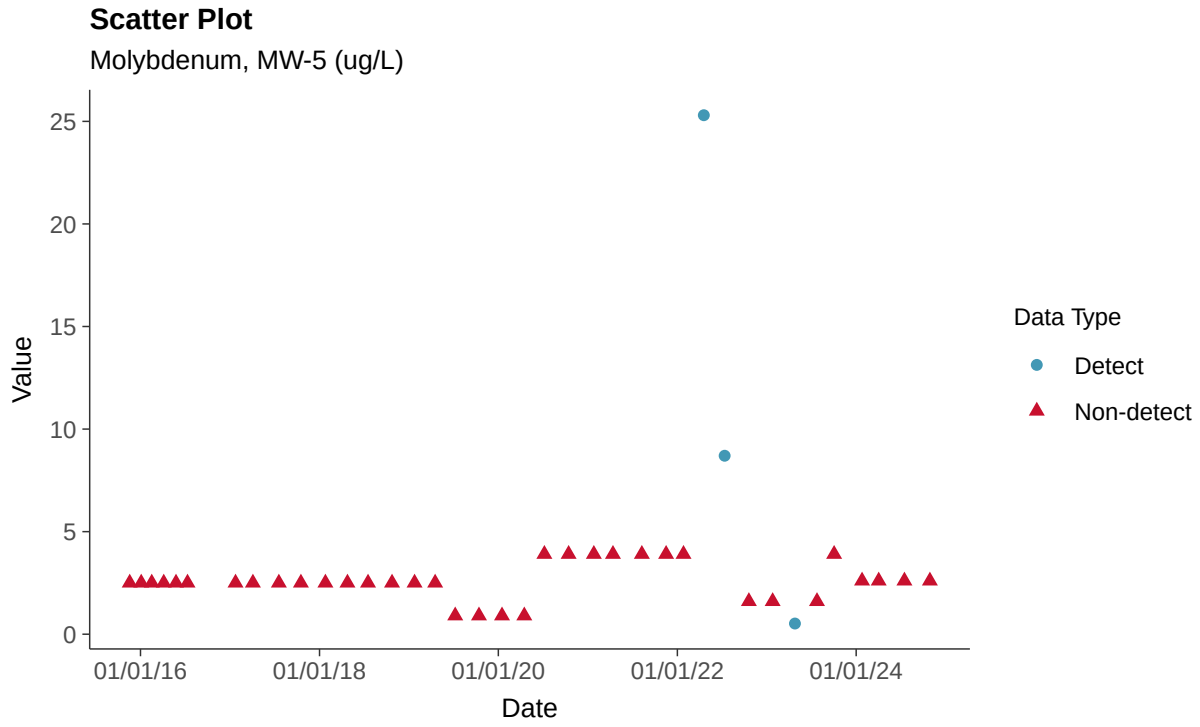
Trend Regression: Piecewise Linear-Linear-Linear

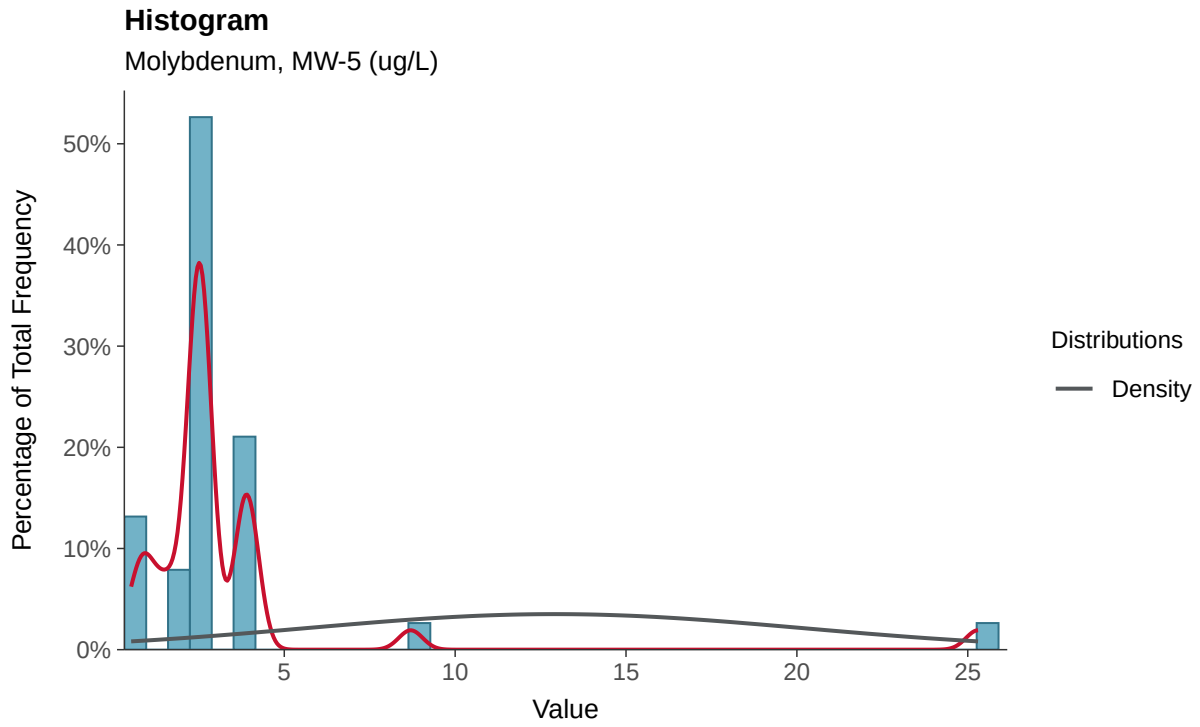
Mercury, MW-5 (ug/L)



App. IV: Molybdenum, MW-5

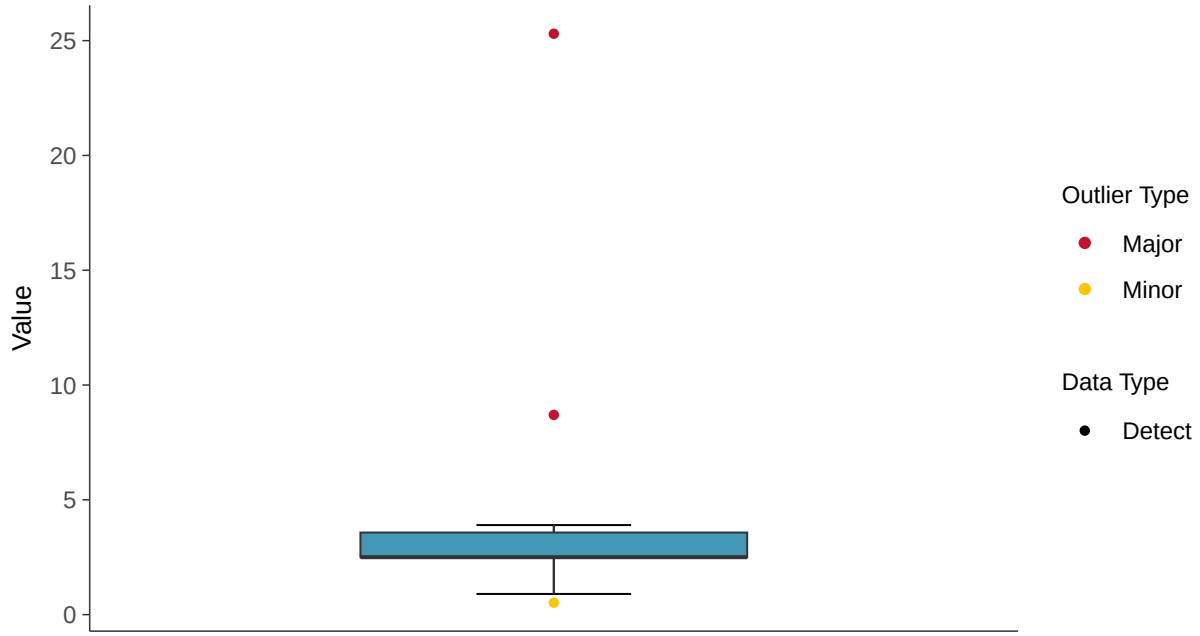
ID: 05_03_116





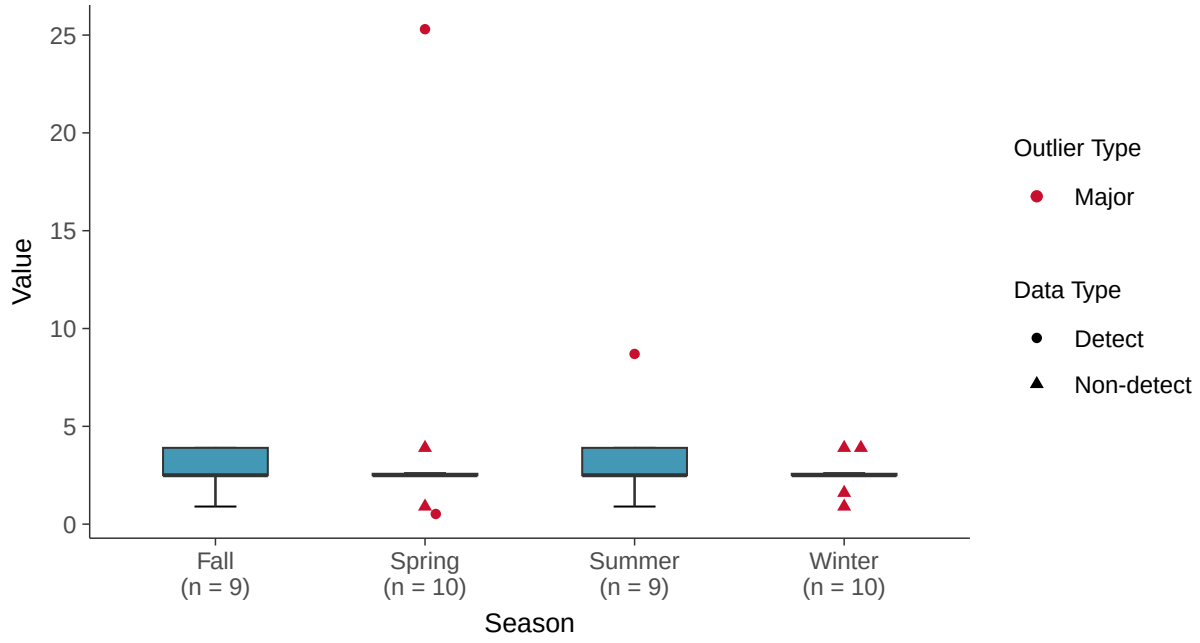
Boxplot

Molybdenum, MW-5 (ug/L)



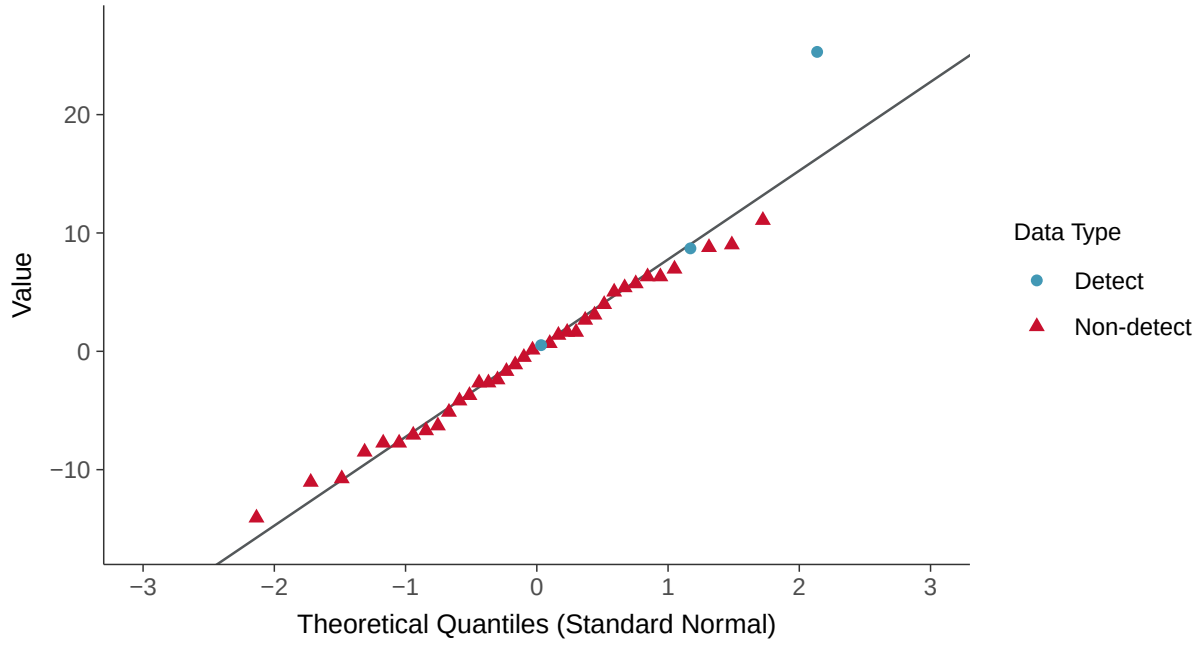
Boxplot by Season

Molybdenum, MW-5 (ug/L)



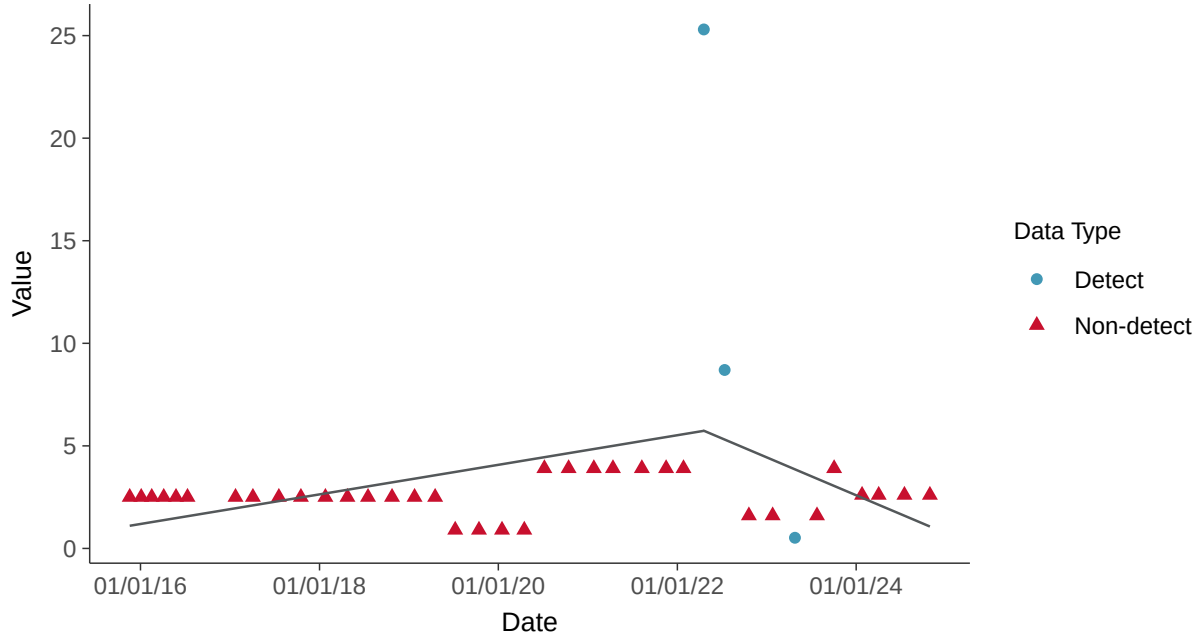
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-5 (ug/L)



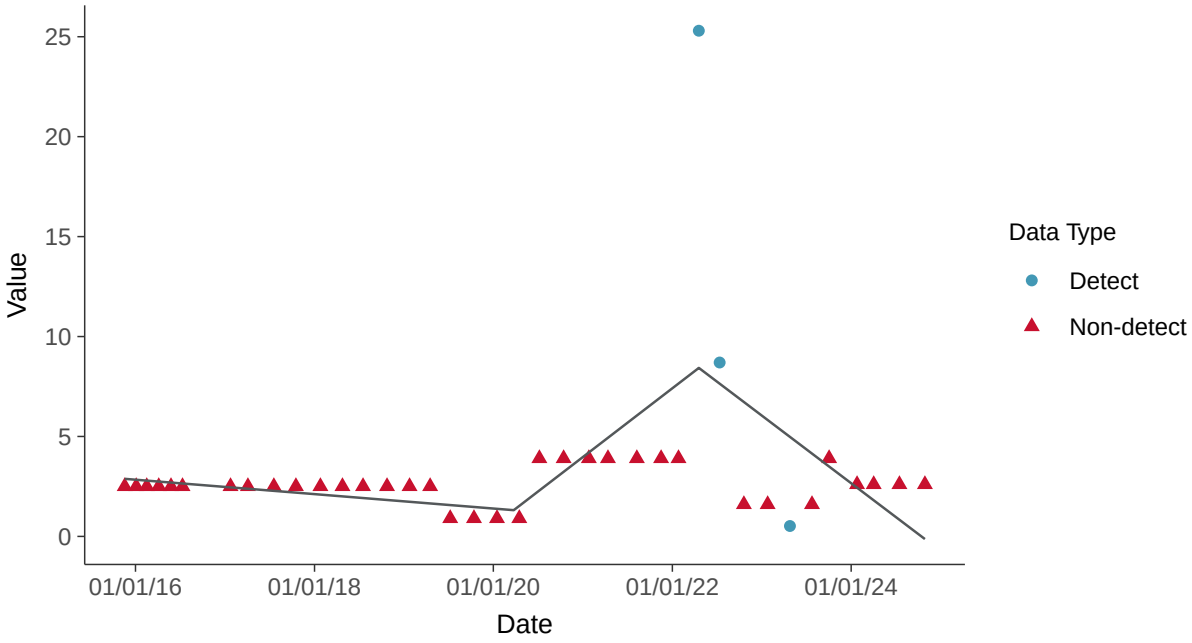
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-5 (ug/L)



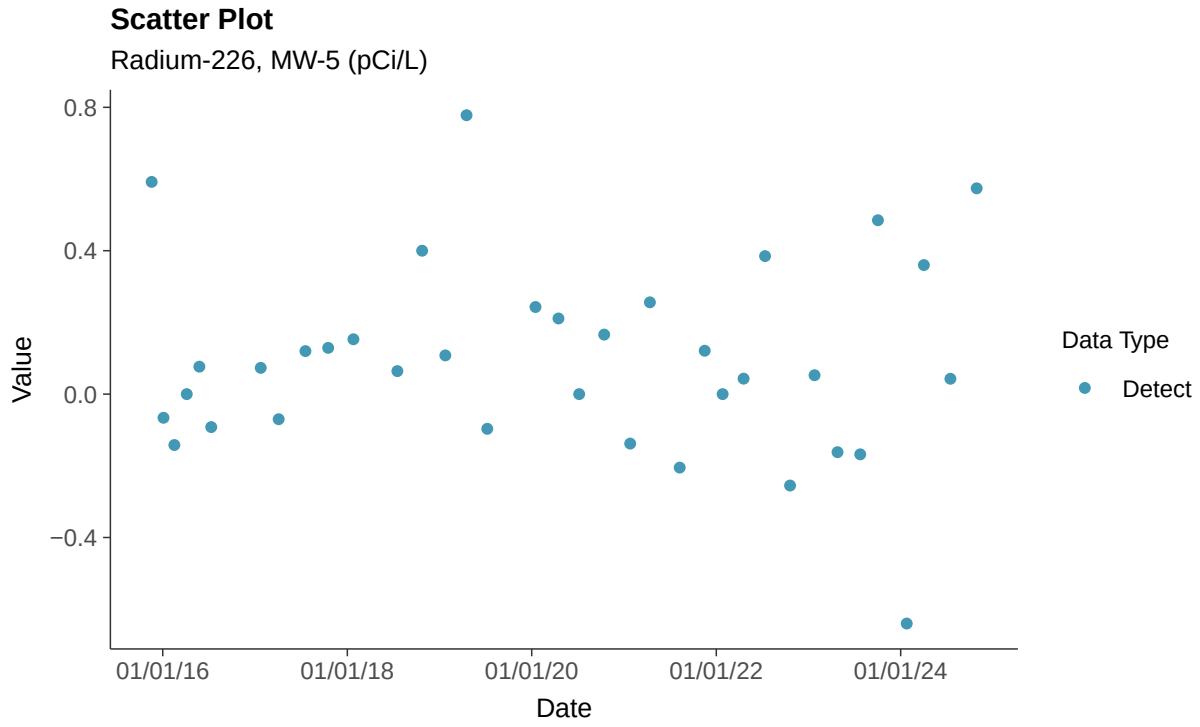
Trend Regression: Piecewise Linear-Linear-Linear

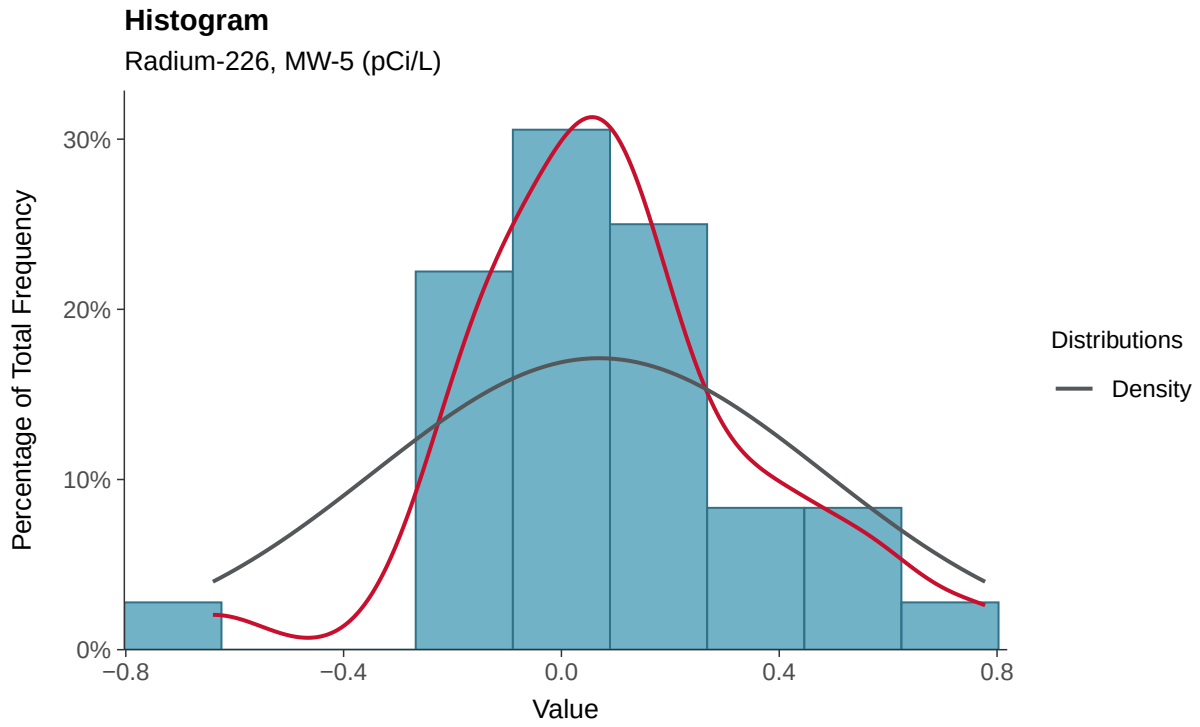
Molybdenum, MW-5 (ug/L)



App. IV: Radium-226, MW-5

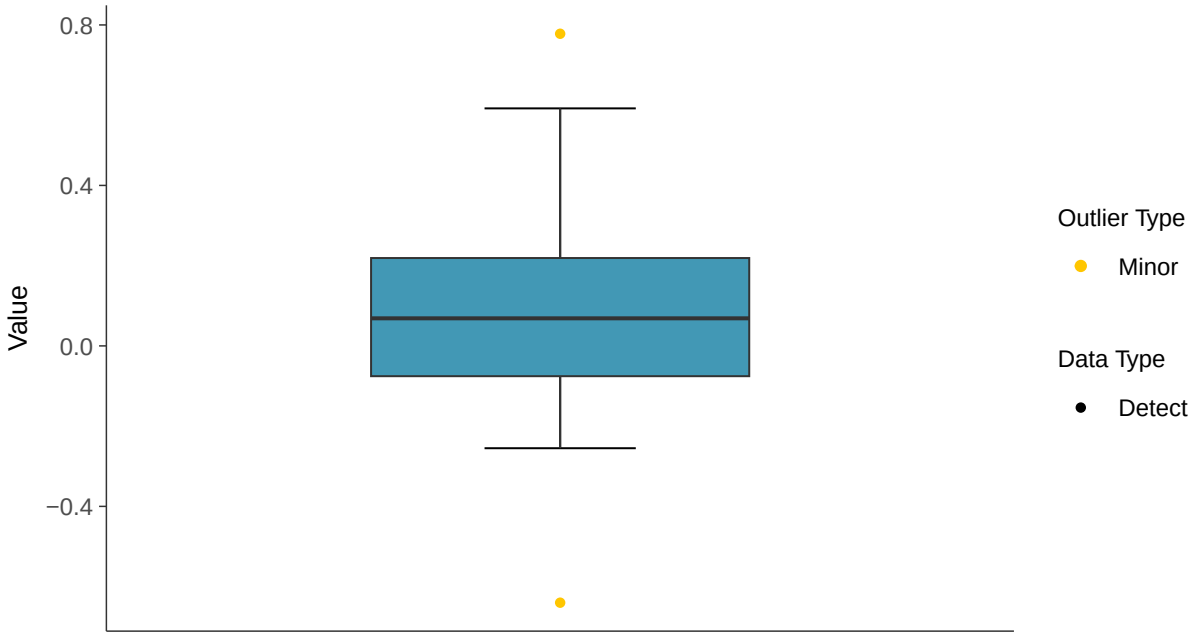
ID: 05_03_119





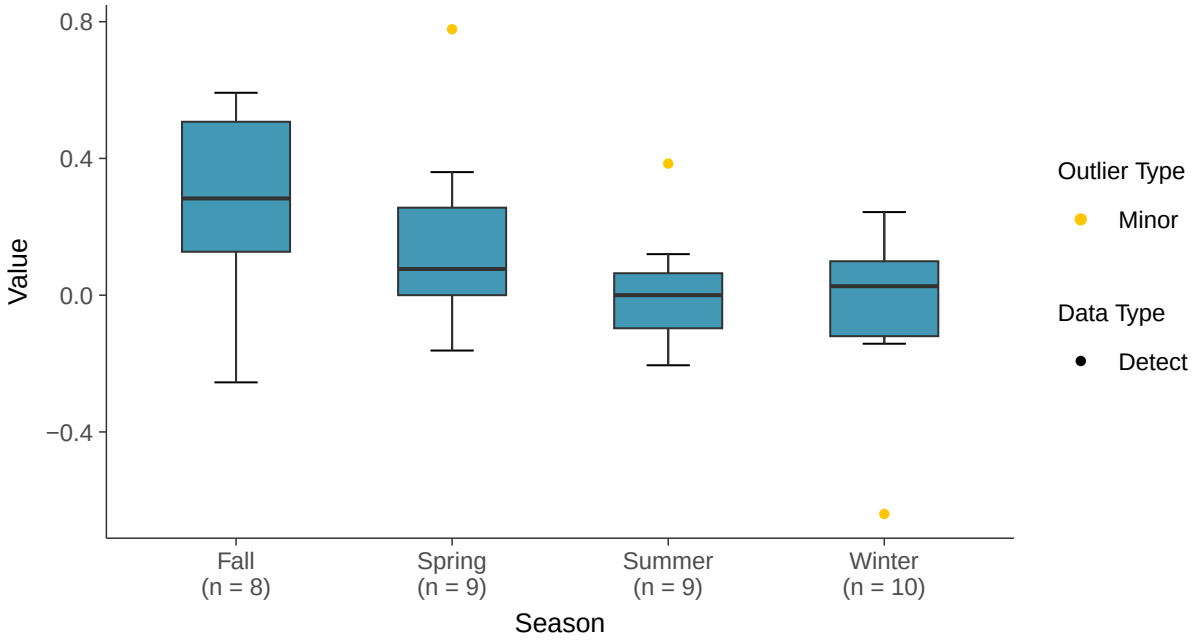
Boxplot

Radium-226, MW-5 (pCi/L)



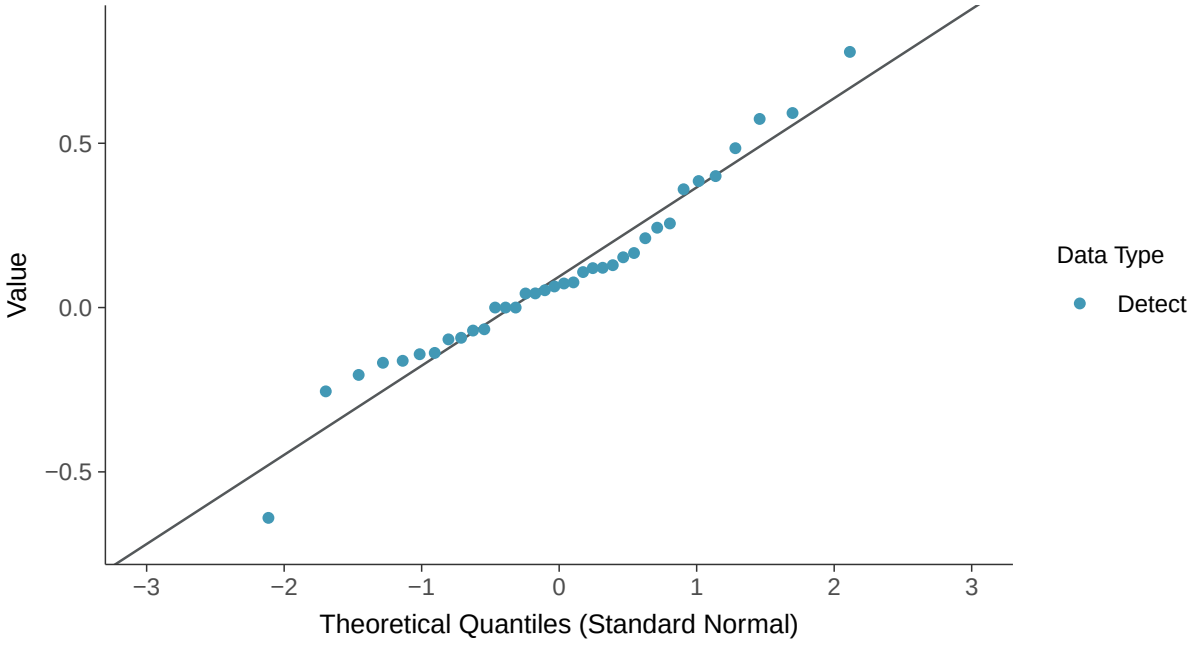
Boxplot by Season

Radium-226, MW-5 (pCi/L)



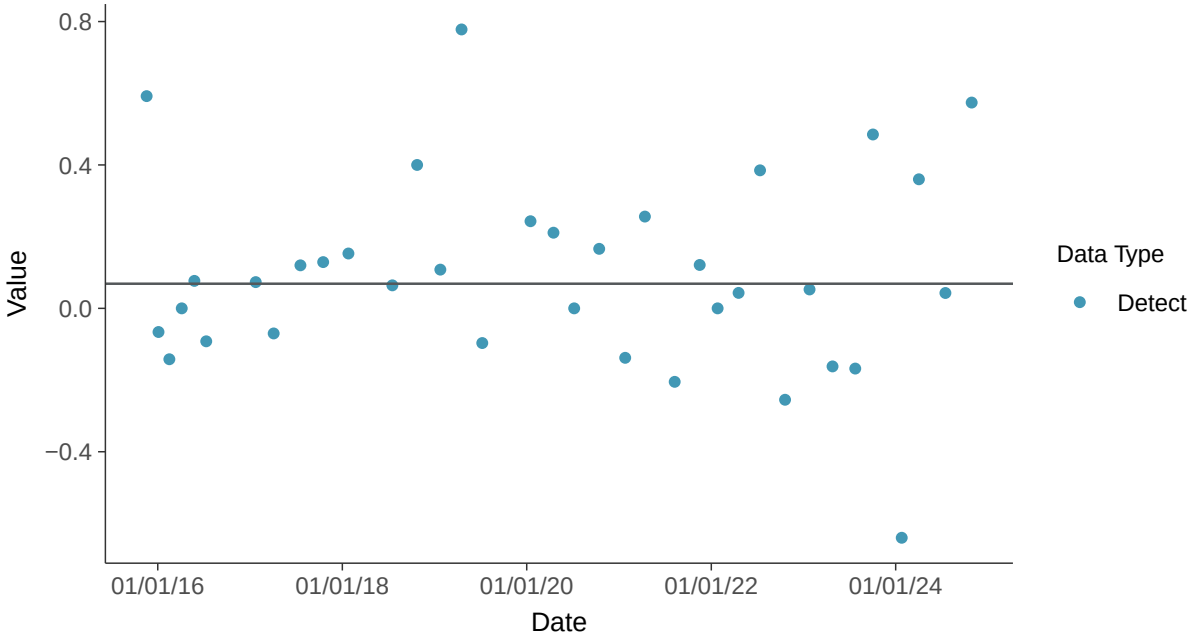
Normal Q-Q plot

Radium-226, MW-5 (pCi/L)



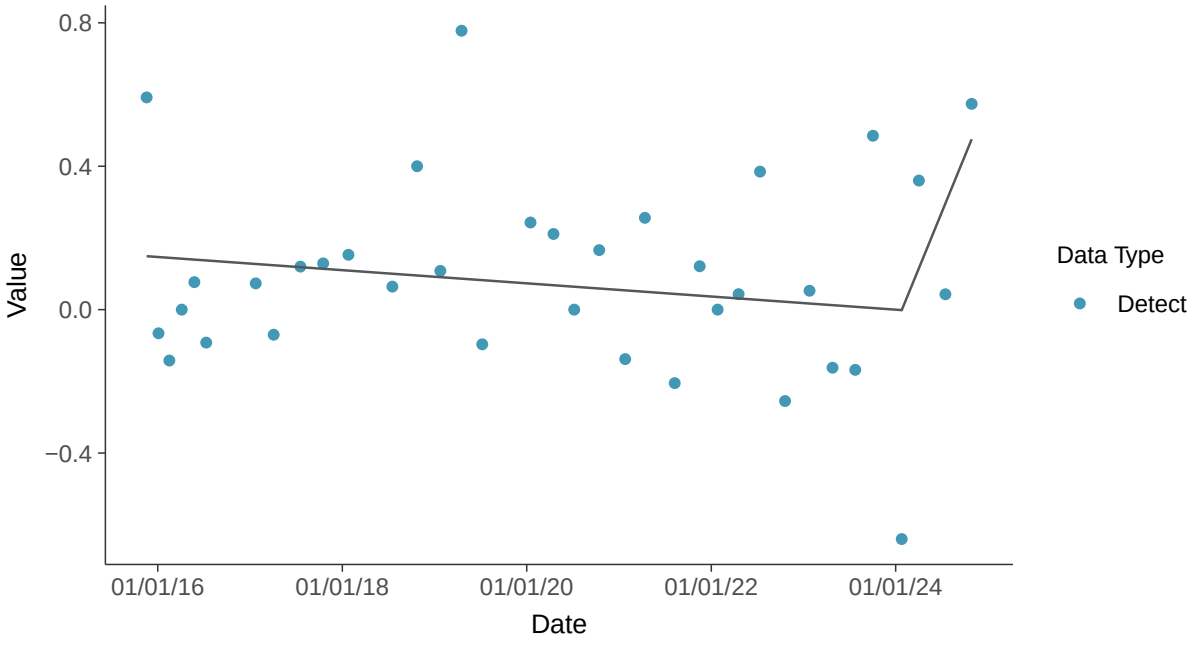
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-5 (pCi/L)



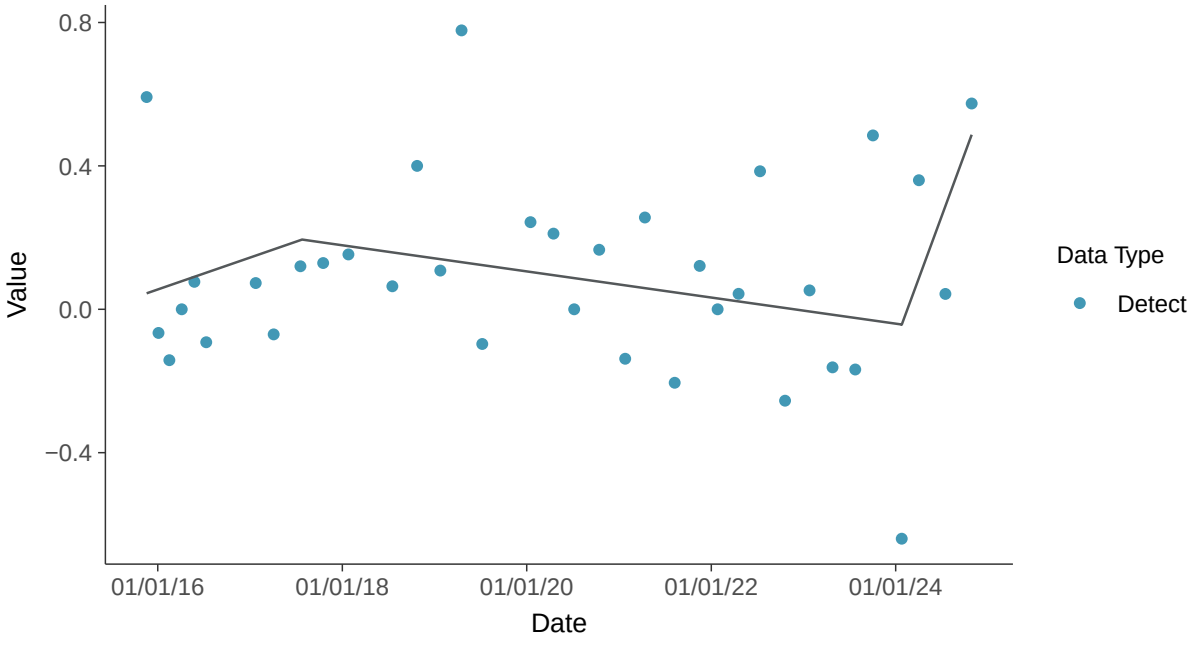
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-5 (pCi/L)



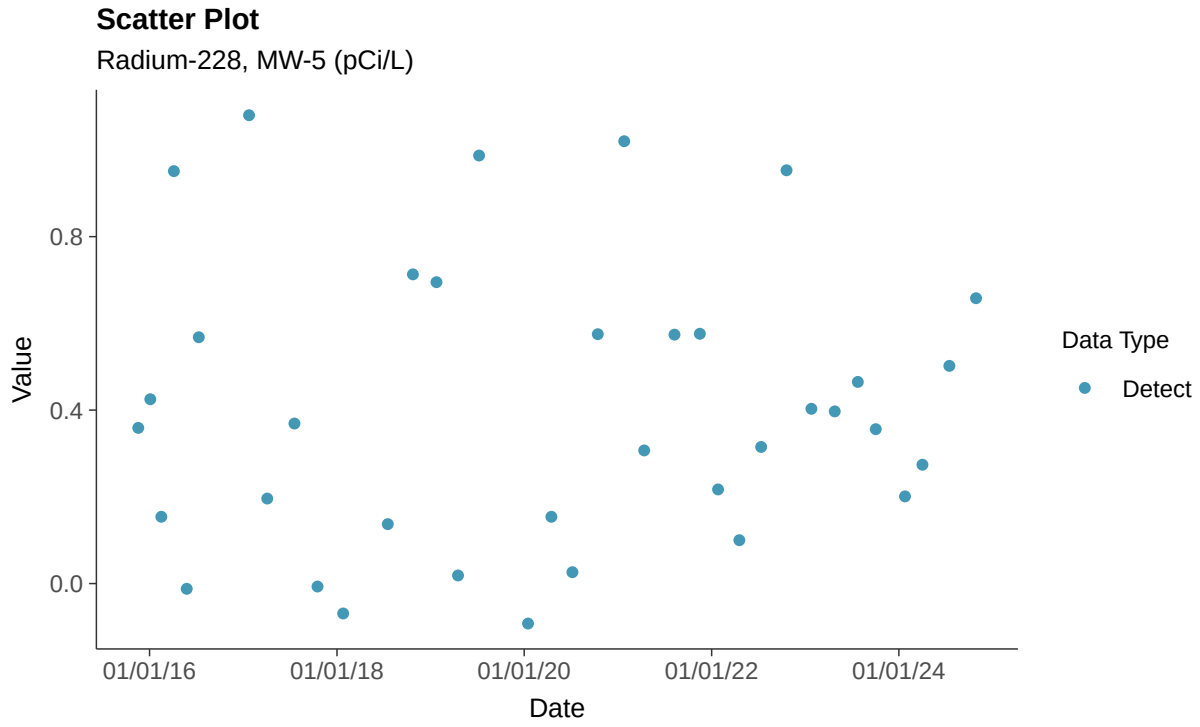
Trend Regression: Piecewise Linear-Linear-Linear

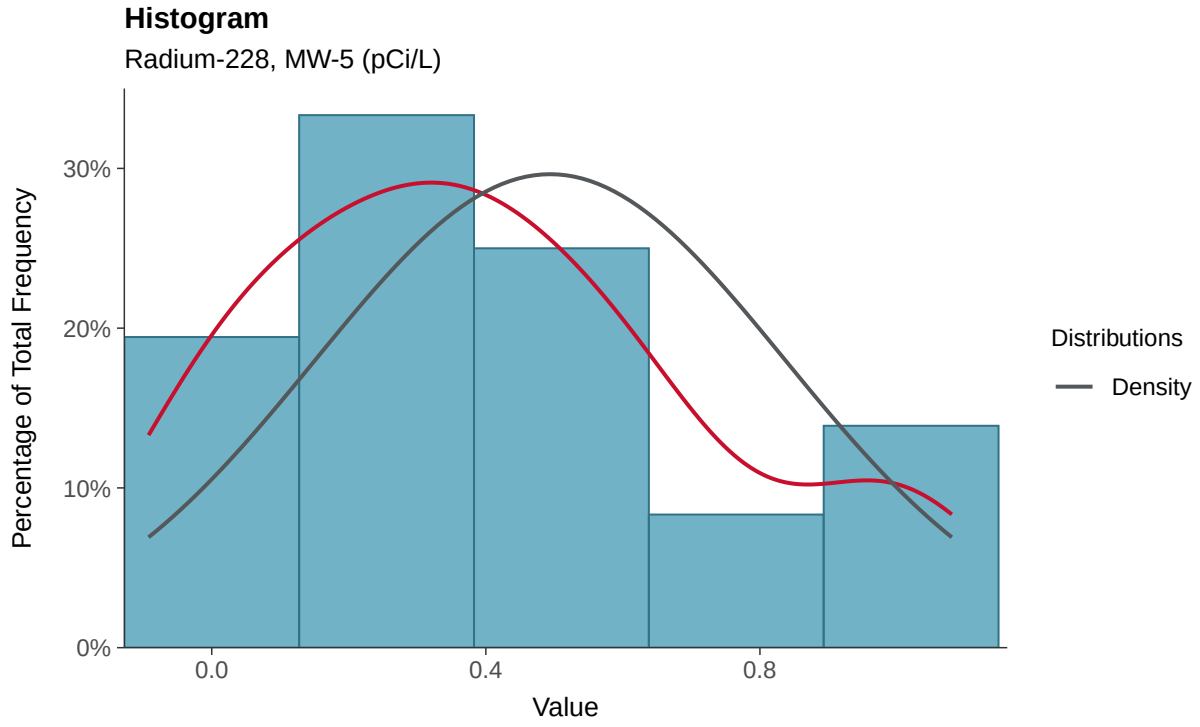
Radium-226, MW-5 (pCi/L)



App. IV: Radium-228, MW-5

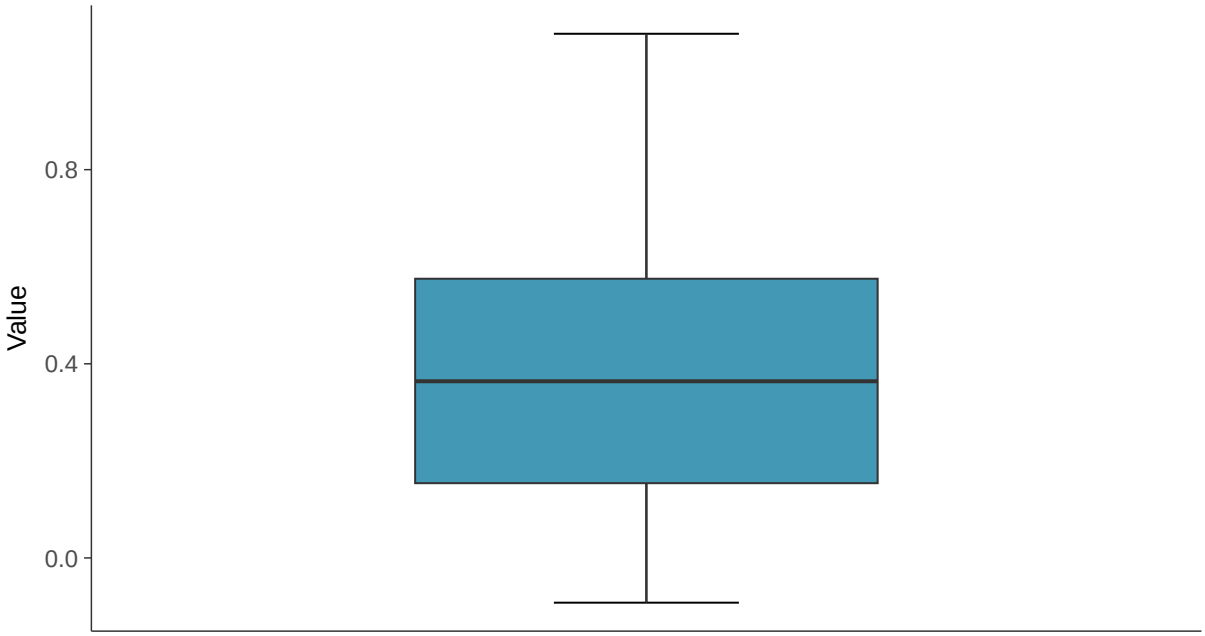
ID: 05_03_120





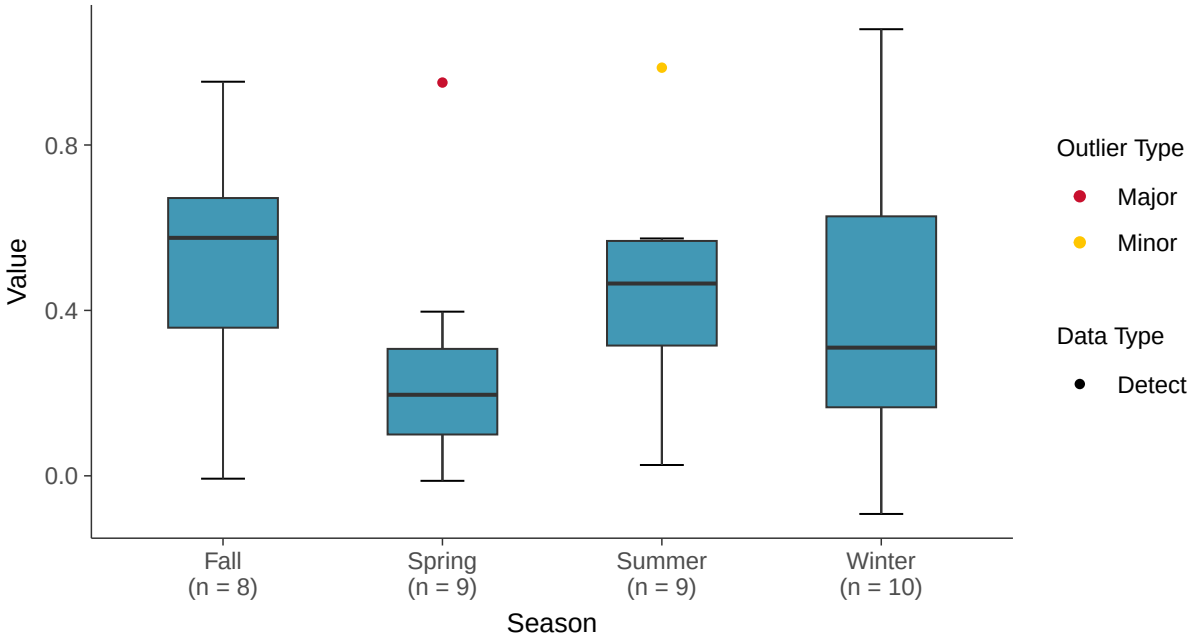
Boxplot

Radium-228, MW-5 (pCi/L)



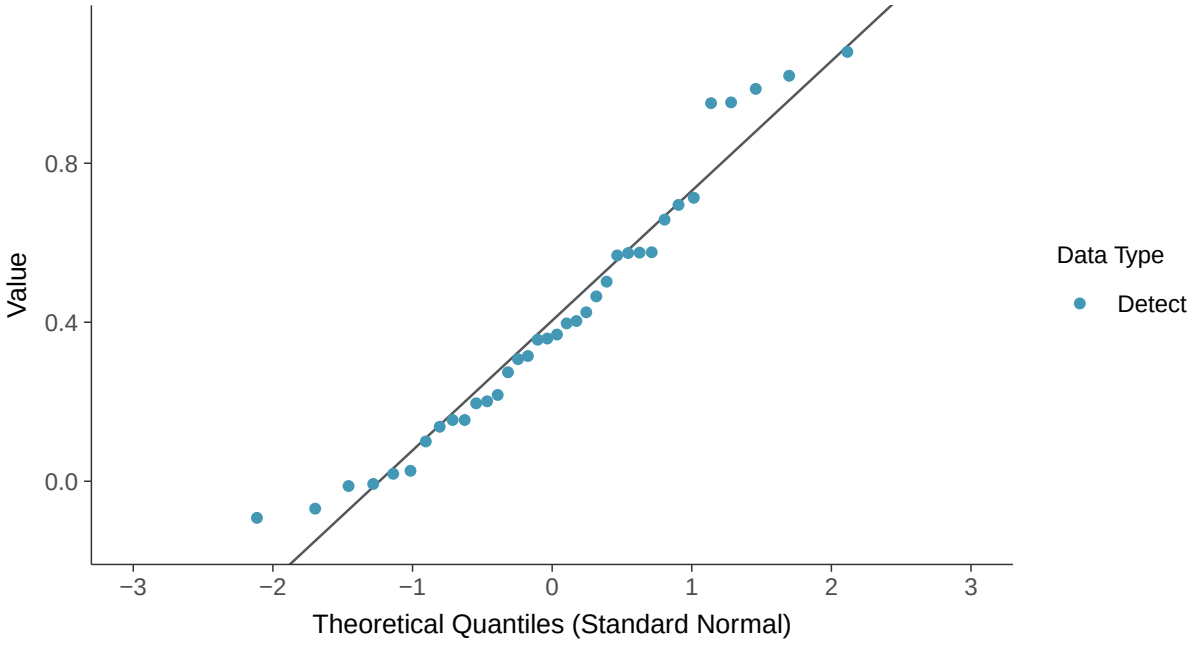
Boxplot by Season

Radium-228, MW-5 (pCi/L)



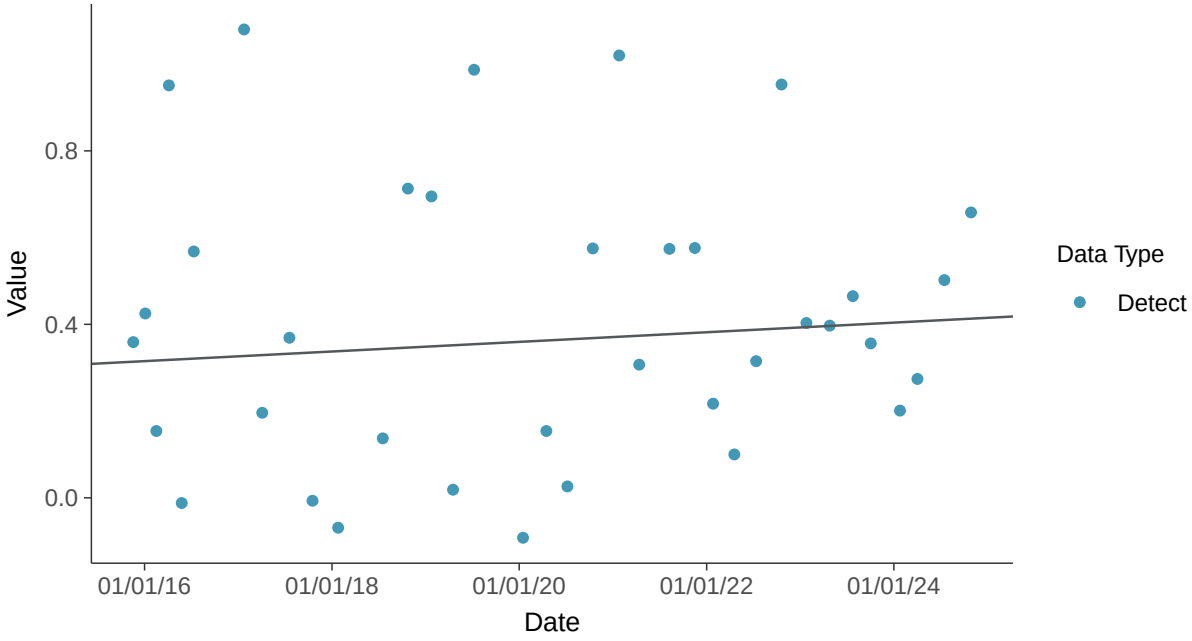
Normal Q-Q plot

Radium-228, MW-5 (pCi/L)



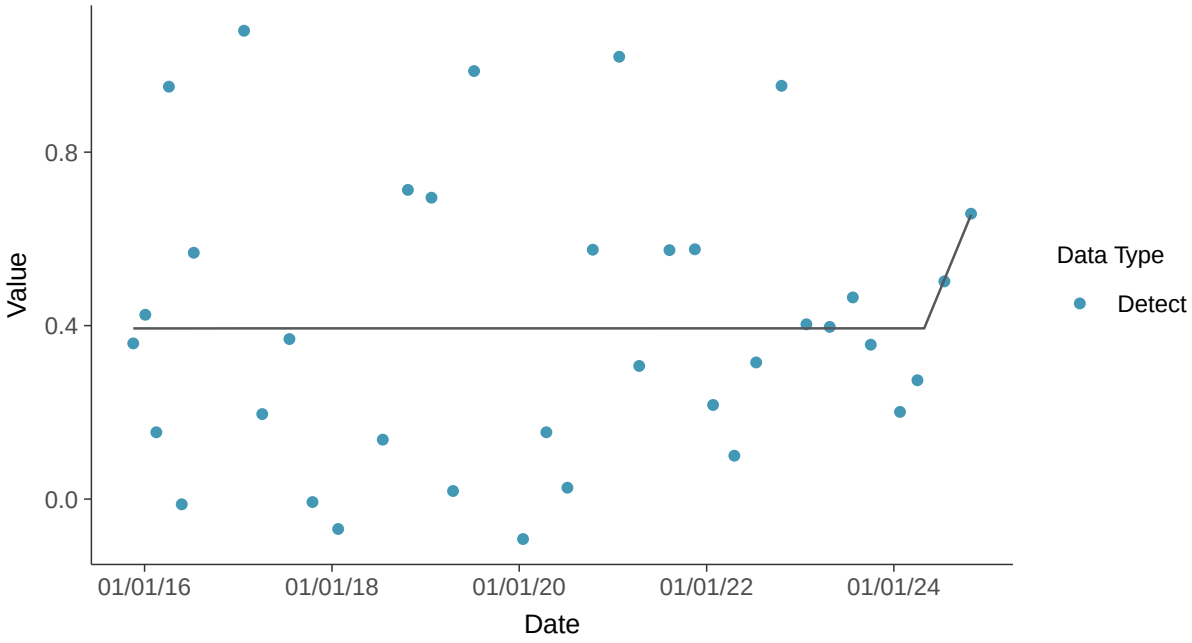
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-5 (pCi/L)



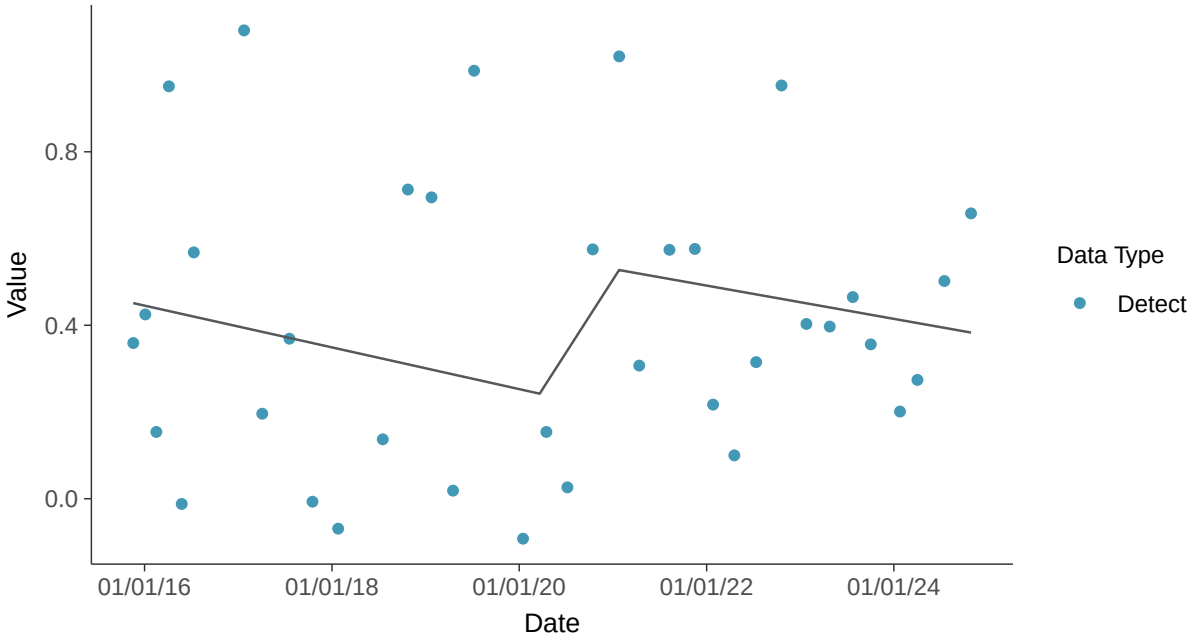
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-5 (pCi/L)



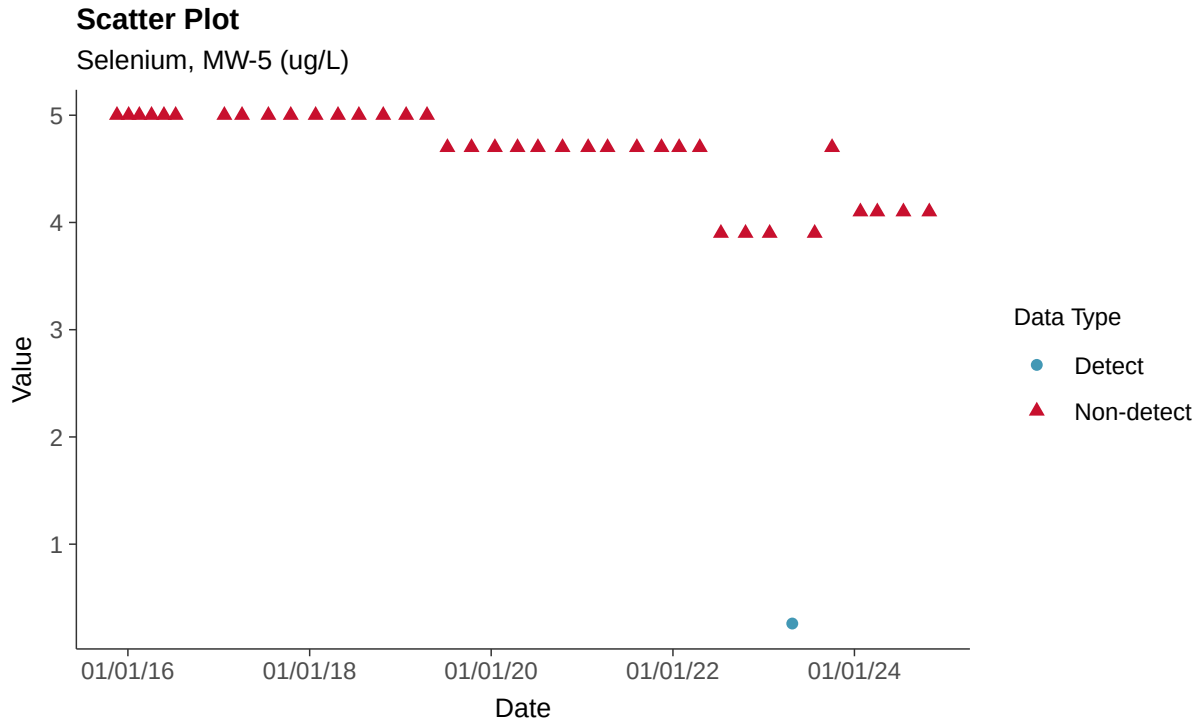
Trend Regression: Piecewise Linear-Linear-Linear

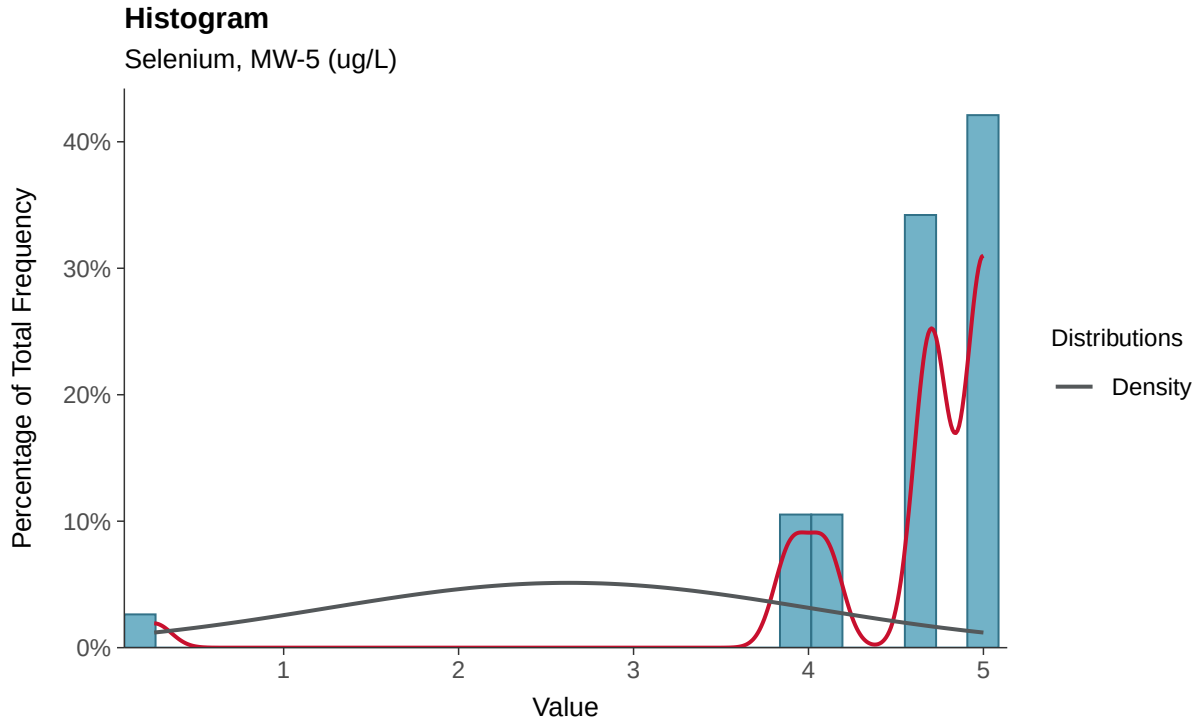
Radium-228, MW-5 (pCi/L)



App. IV: Selenium, MW-5

ID: 05_03_121



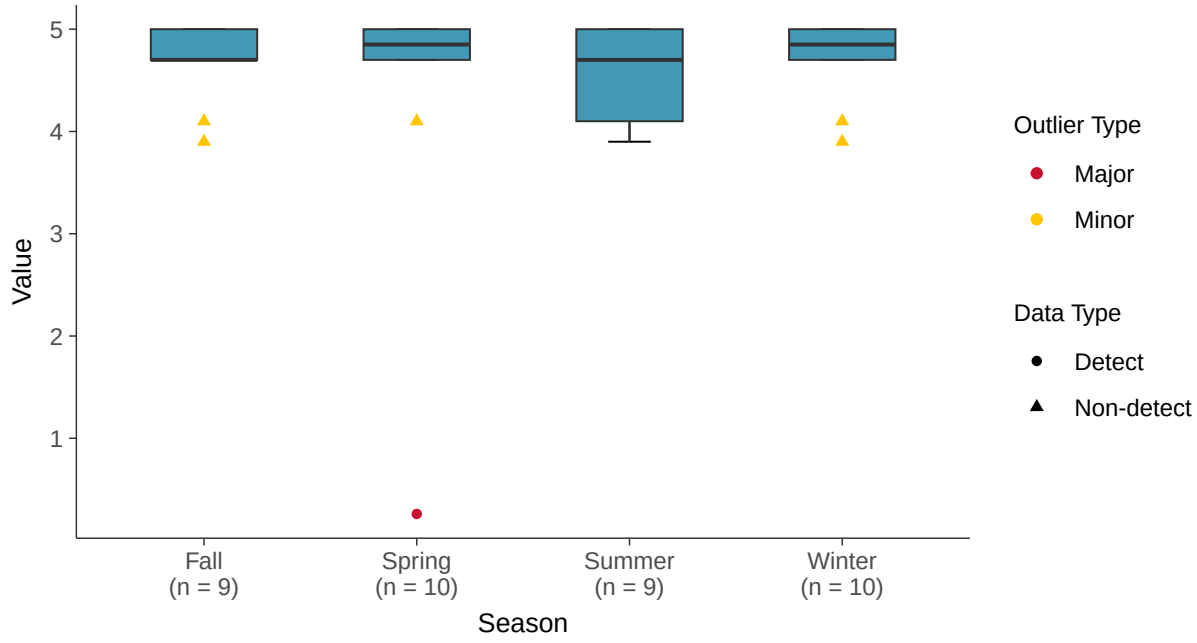


Boxplot

Selenium, MW-5 (ug/L)

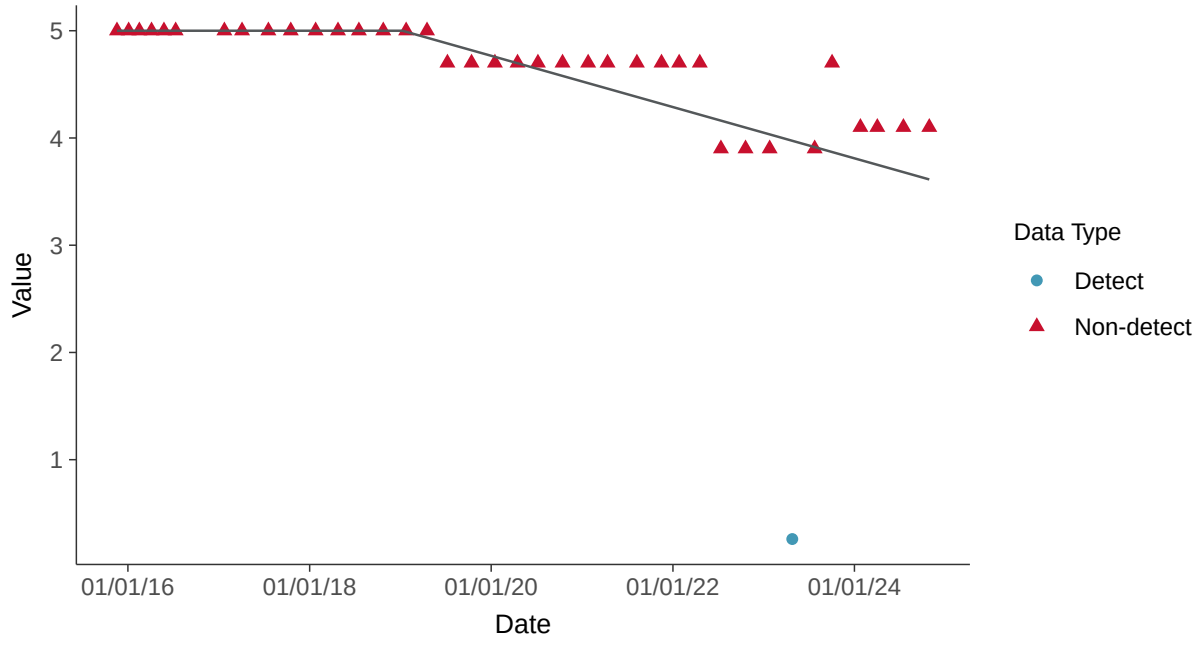
Boxplot by Season

Selenium, MW-5 (ug/L)



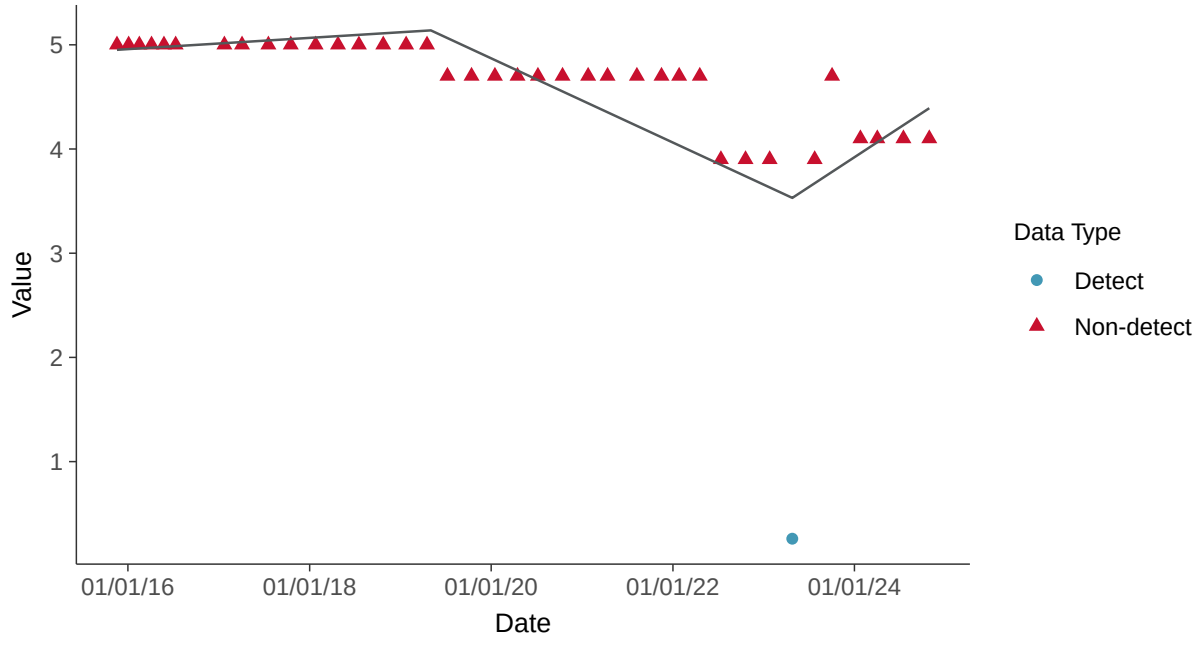
Trend Regression: Piecewise Linear-Linear

Selenium, MW-5 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-5 (ug/L)

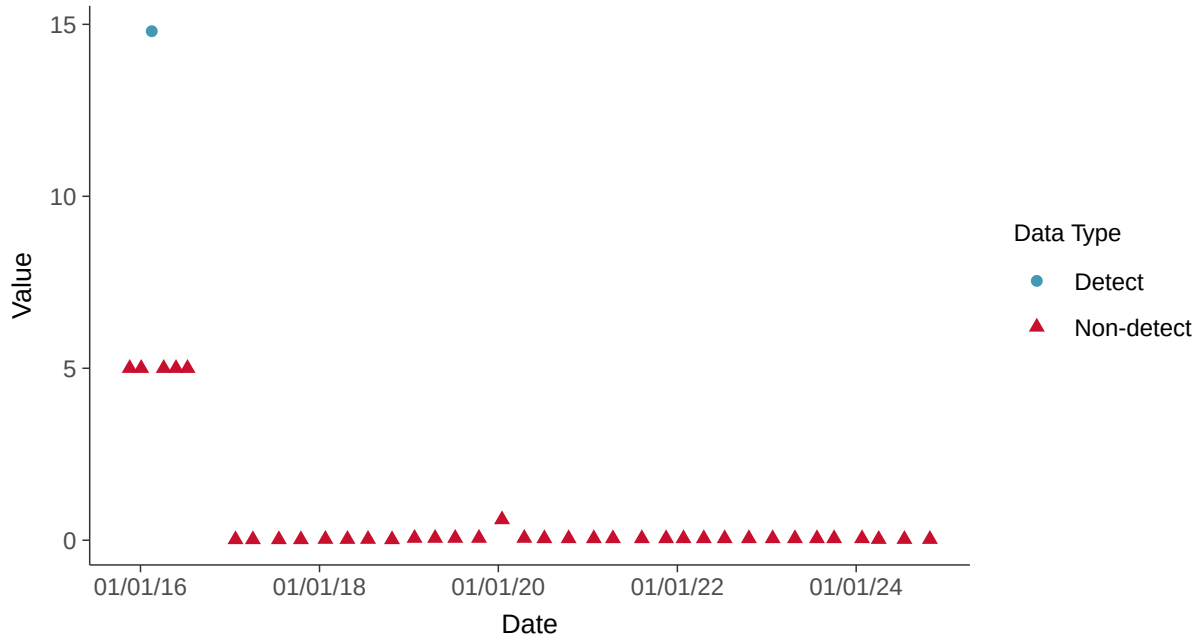


App. IV: Thallium, MW-5

ID: 05_03_124

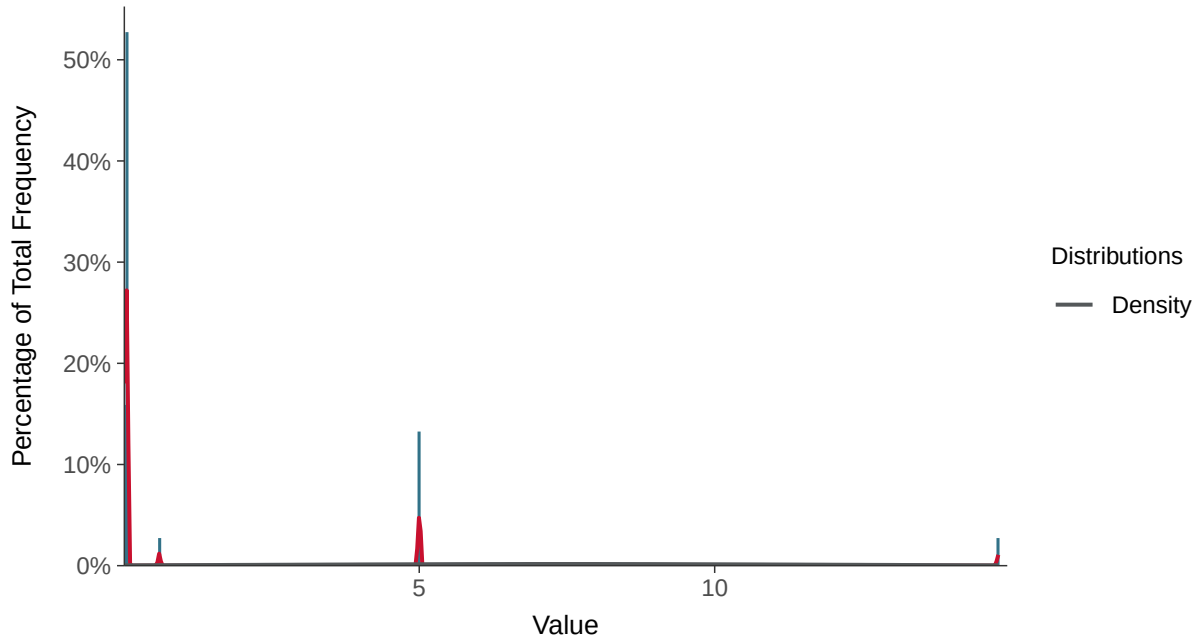
Scatter Plot

Thallium, MW-5 (ug/L)



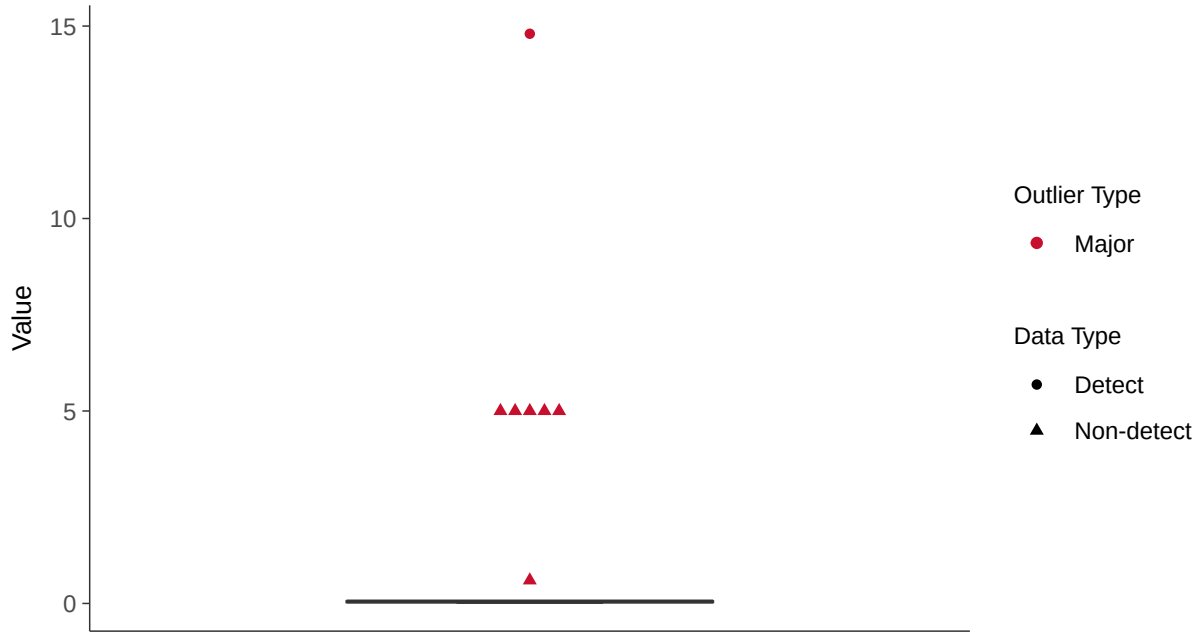
Histogram

Thallium, MW-5 (ug/L)



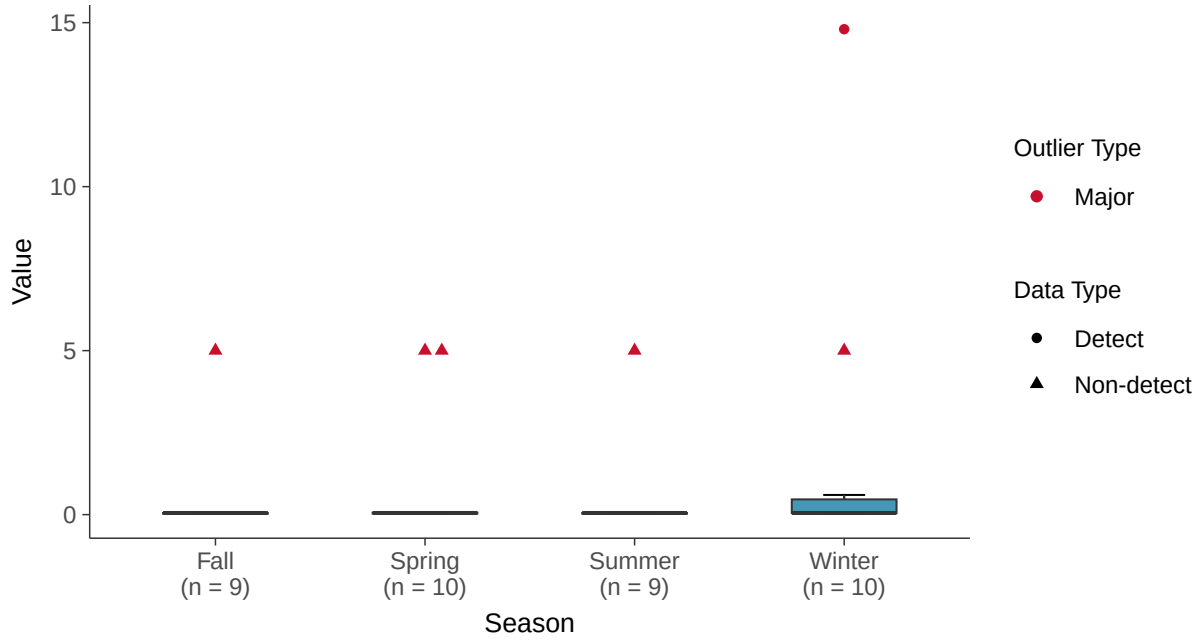
Boxplot

Thallium, MW-5 (ug/L)



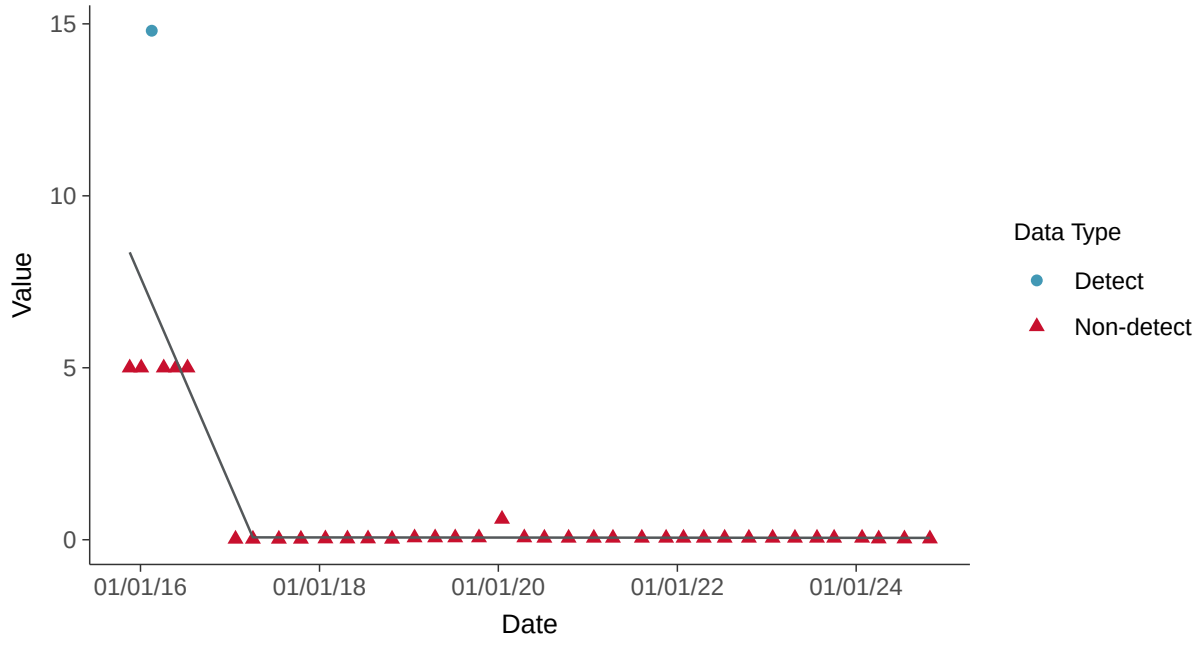
Boxplot by Season

Thallium, MW-5 (ug/L)



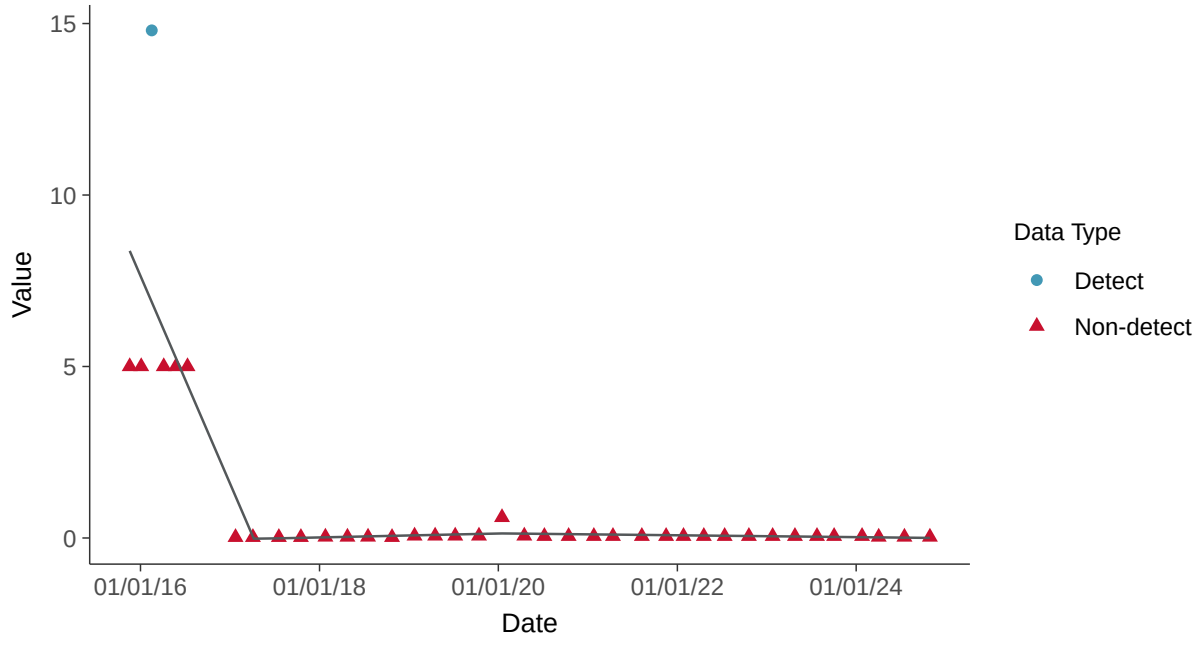
Trend Regression: Piecewise Linear-Linear

Thallium, MW-5 (ug/L)



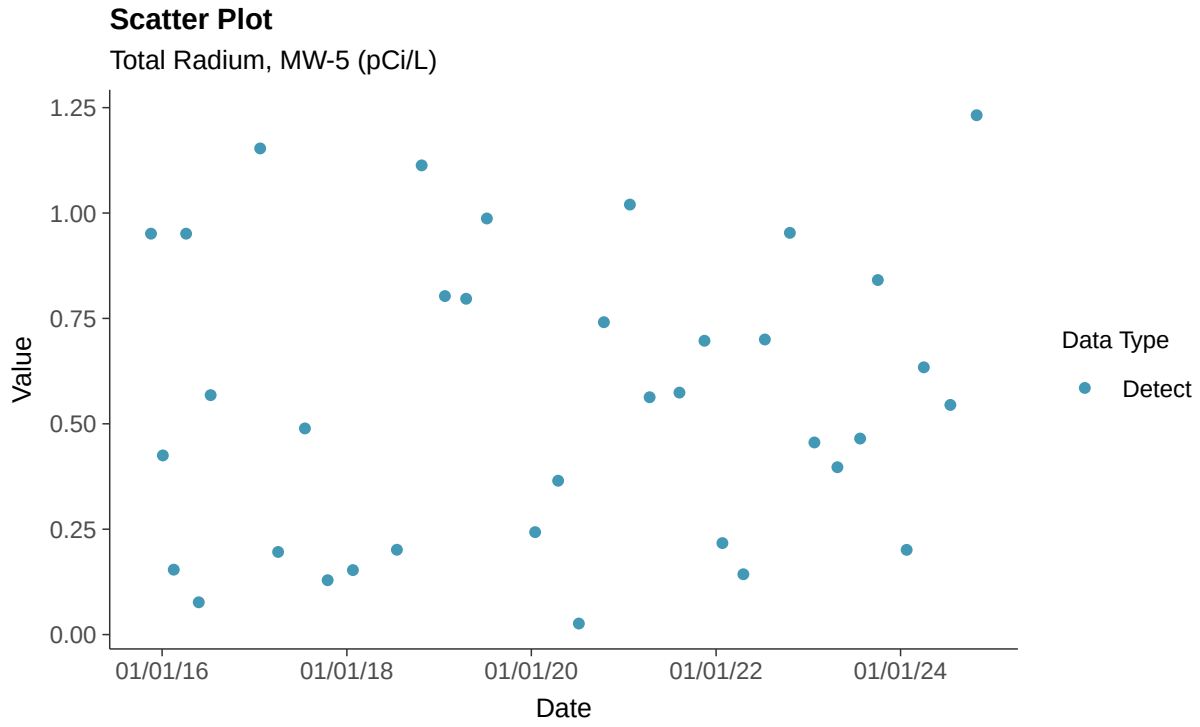
Trend Regression: Piecewise Linear-Linear-Linear

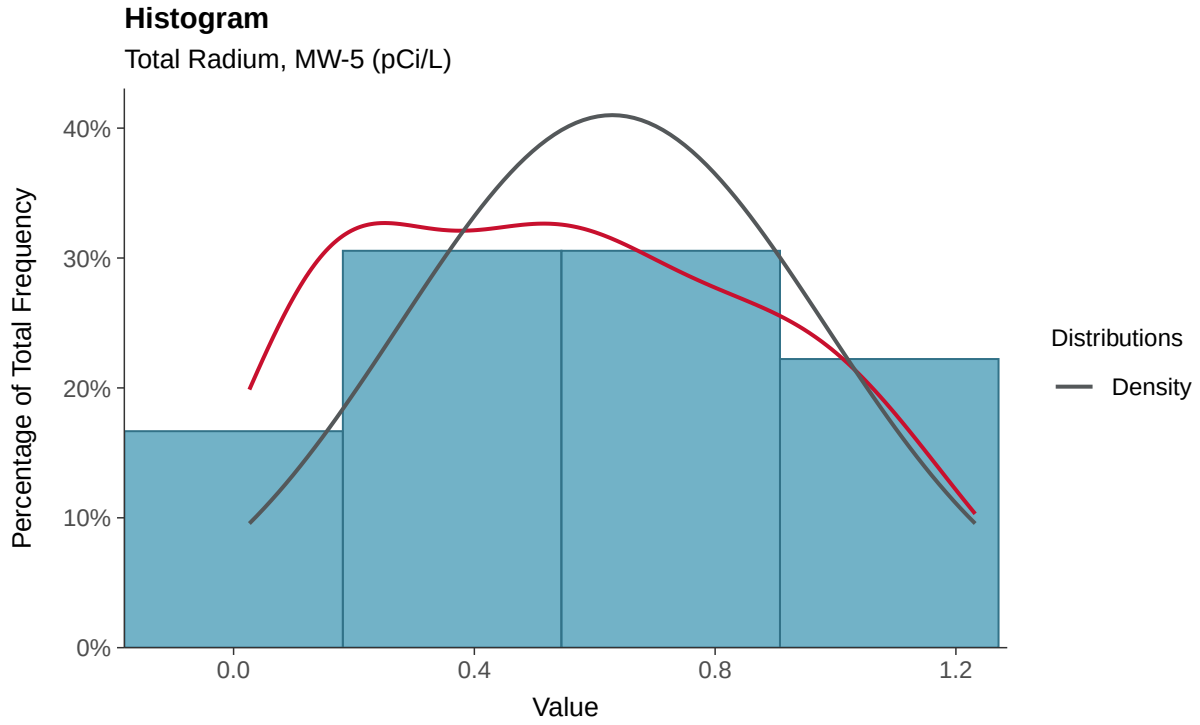
Thallium, MW-5 (ug/L)



App. IV: Total Radium, MW-5

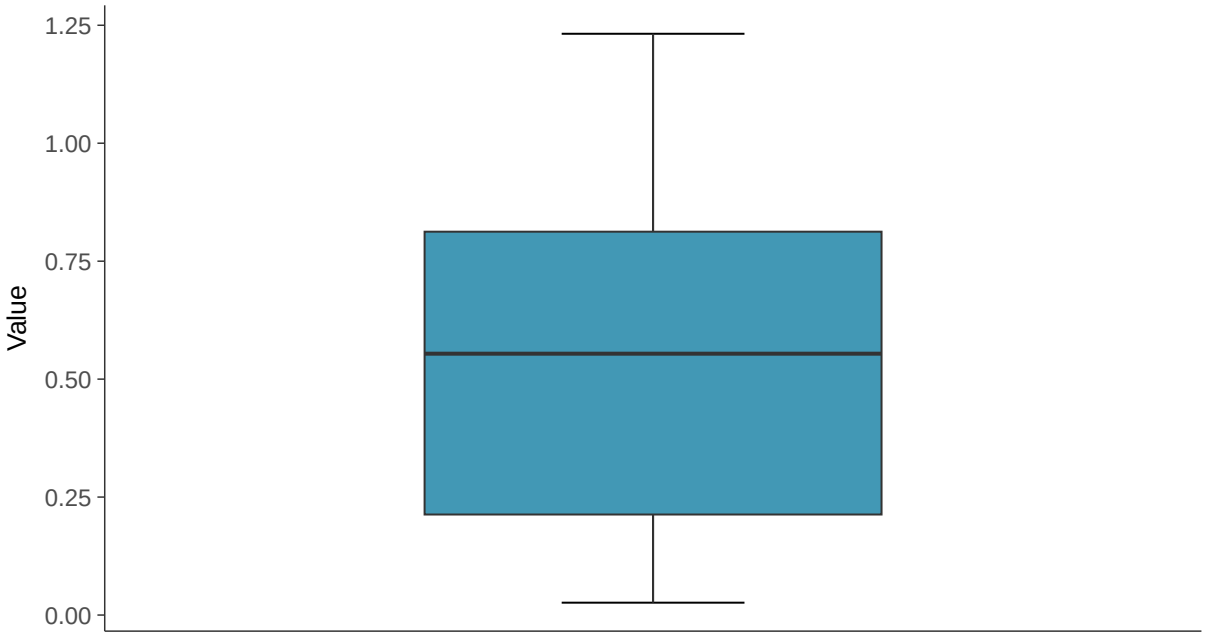
ID: 05_03_126





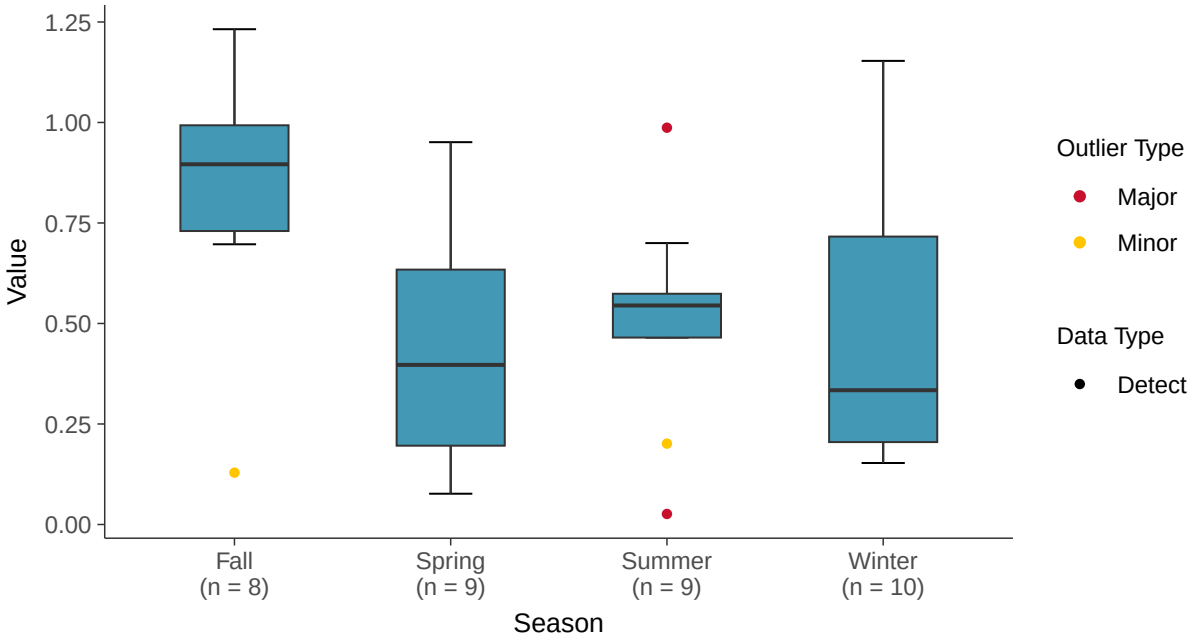
Boxplot

Total Radium, MW-5 (pCi/L)



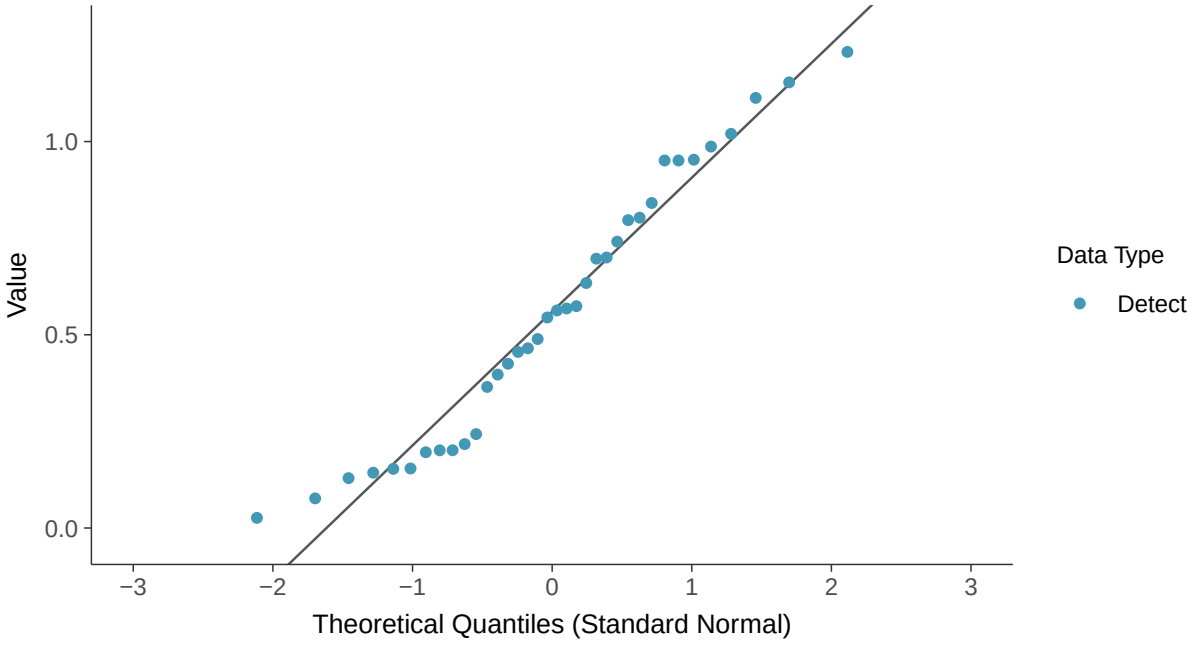
Boxplot by Season

Total Radium, MW-5 (pCi/L)



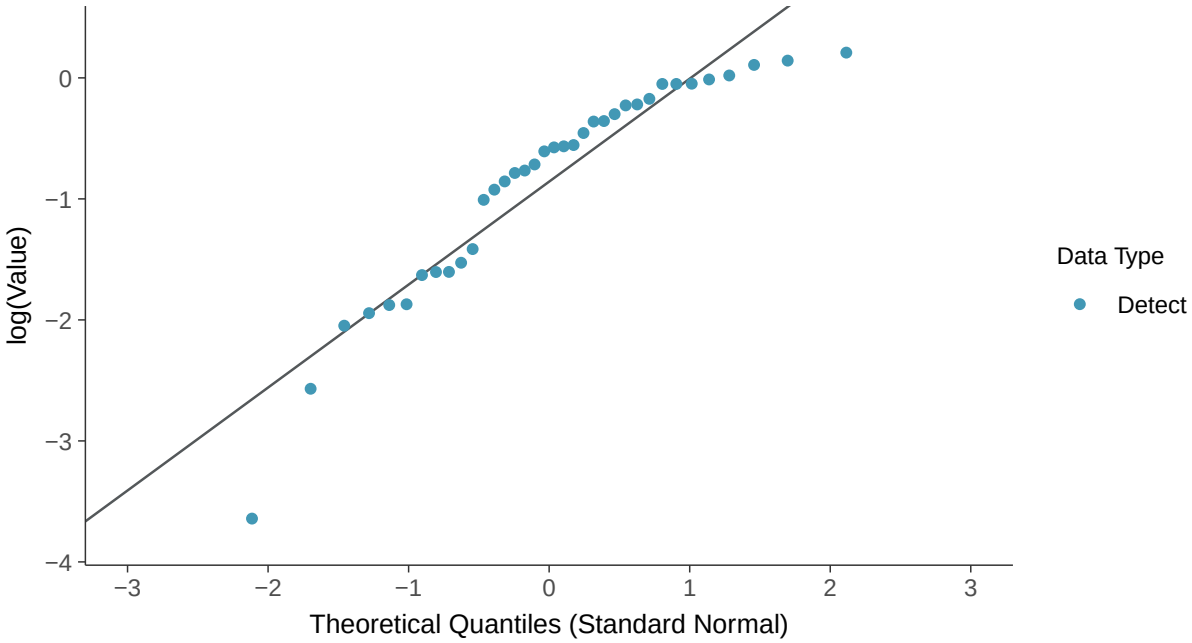
Normal Q-Q plot

Total Radium, MW-5 (pCi/L)



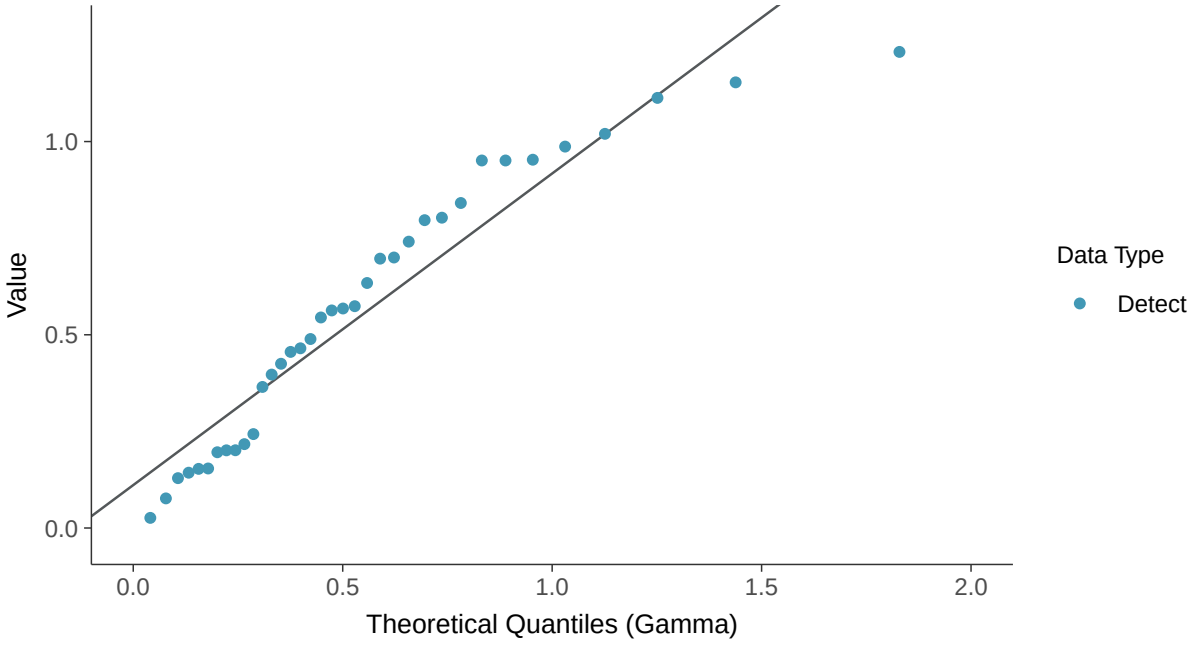
Lognormal Q-Q plot

Total Radium, MW-5 (pCi/L)



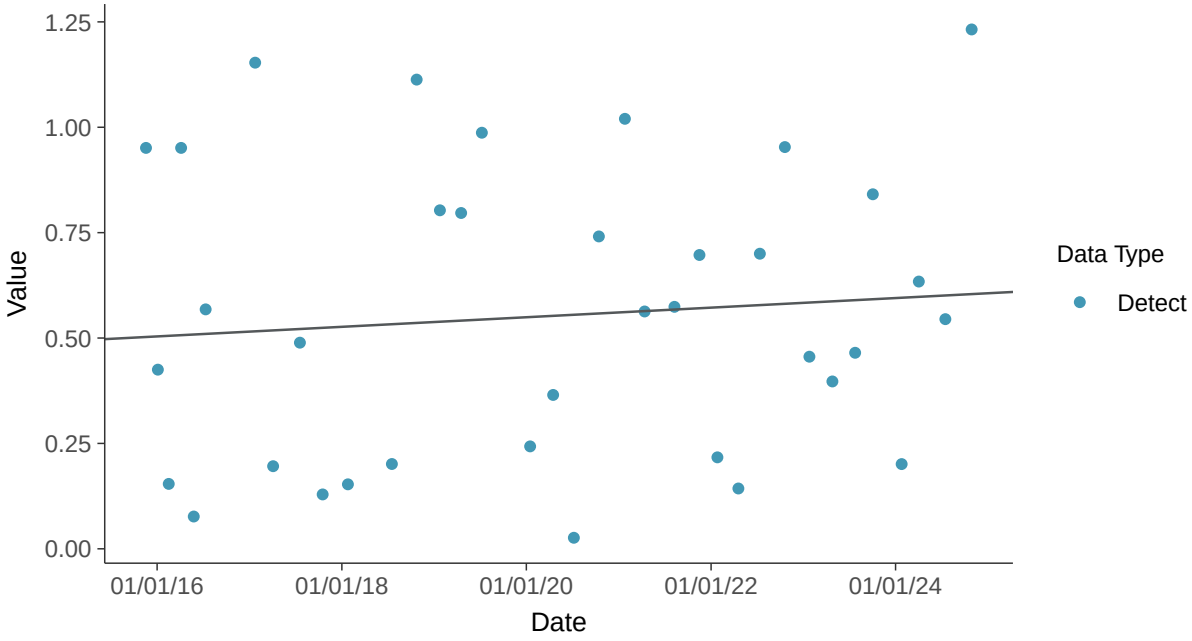
Gamma Q-Q plot

Total Radium, MW-5 (pCi/L)



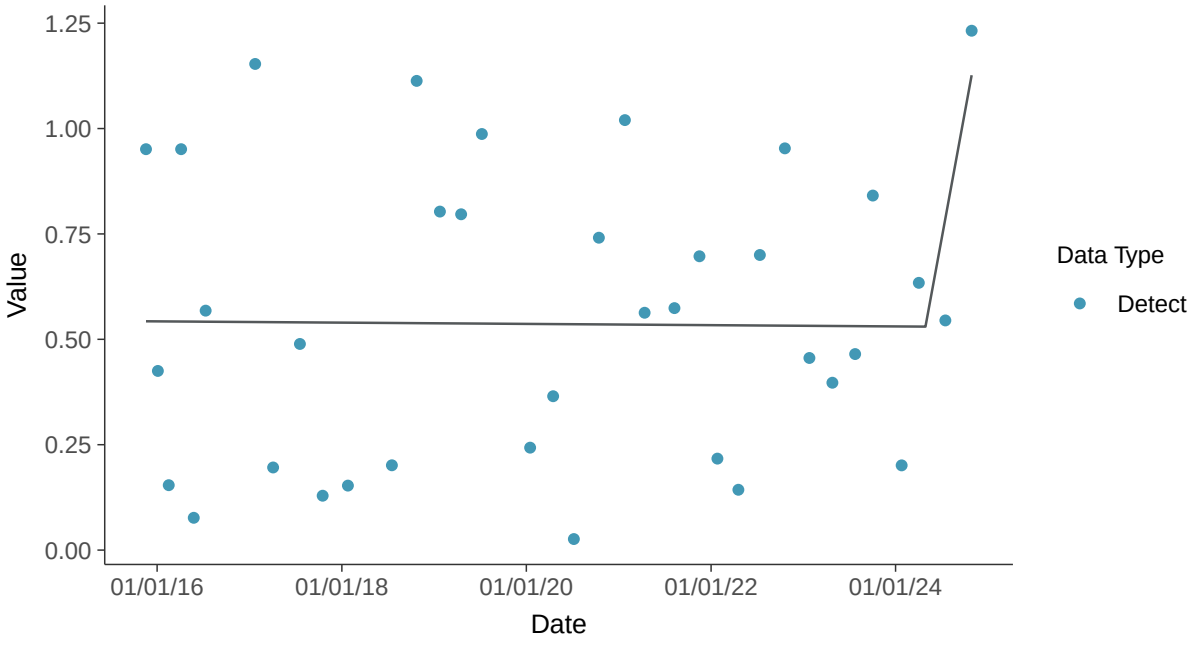
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-5 (pCi/L)



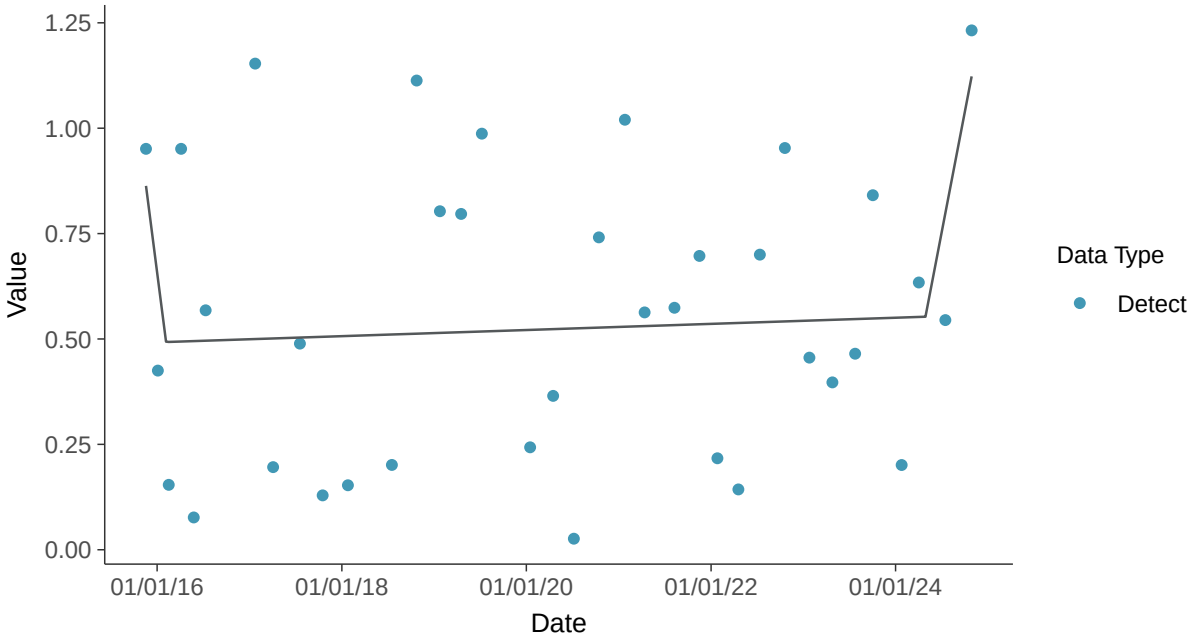
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-5 (pCi/L)



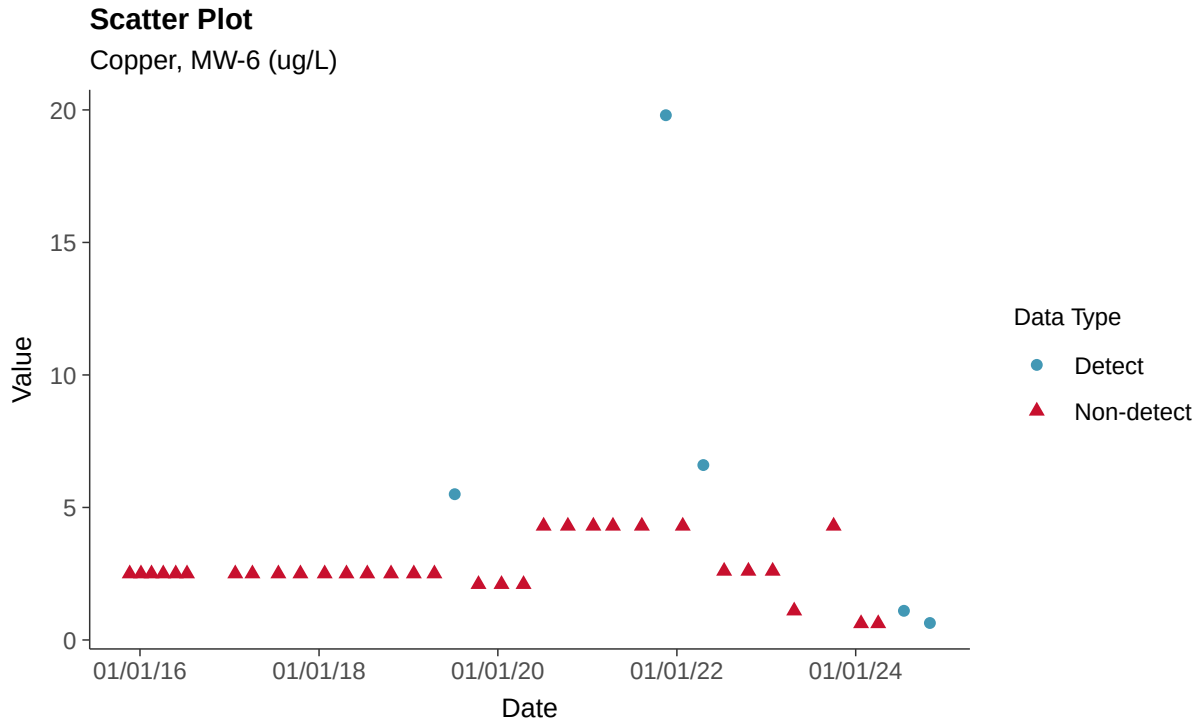
Trend Regression: Piecewise Linear-Linear-Linear

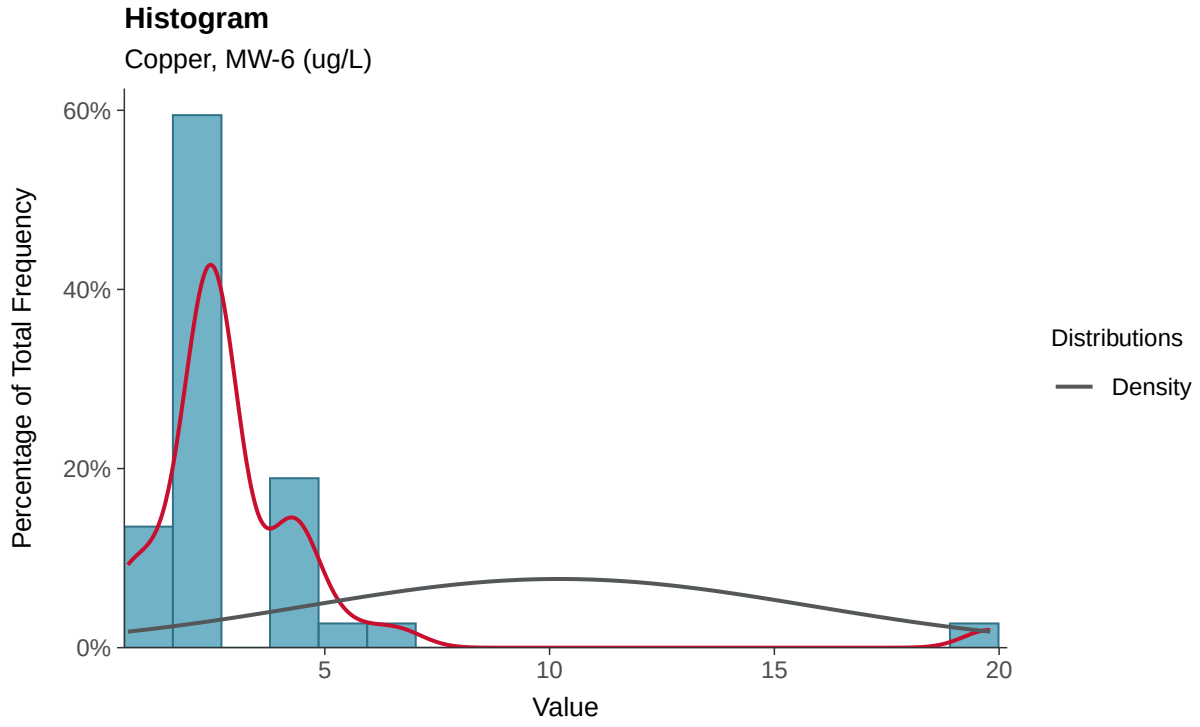
Total Radium, MW-5 (pCi/L)



App. I Metals: Copper, MW-6

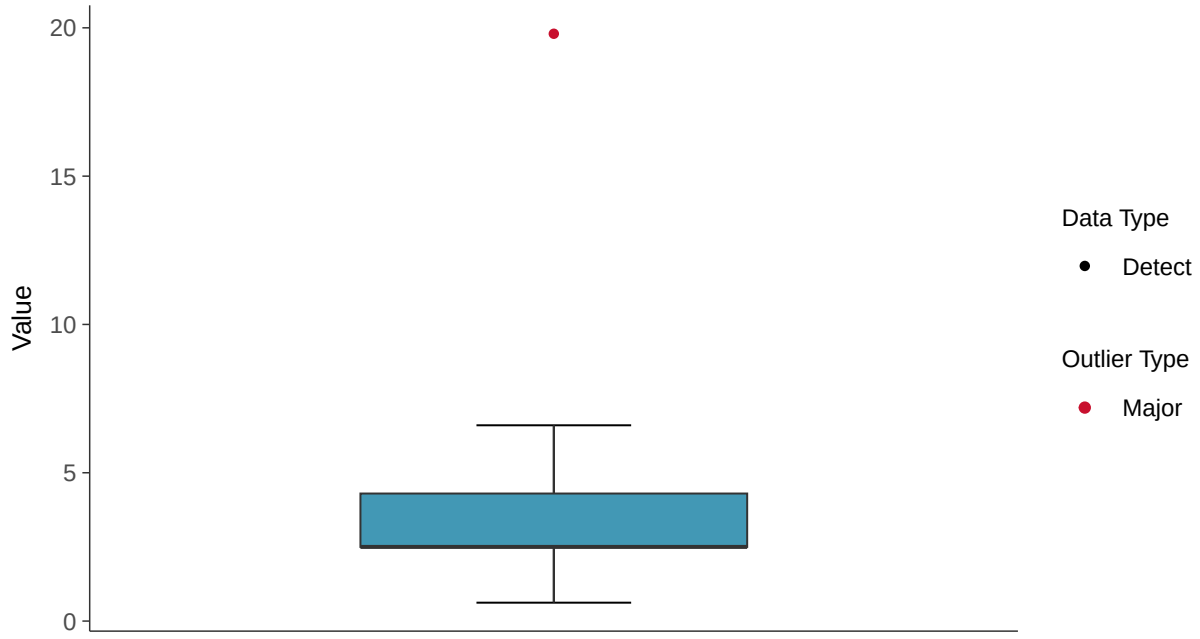
ID: 06_01_111





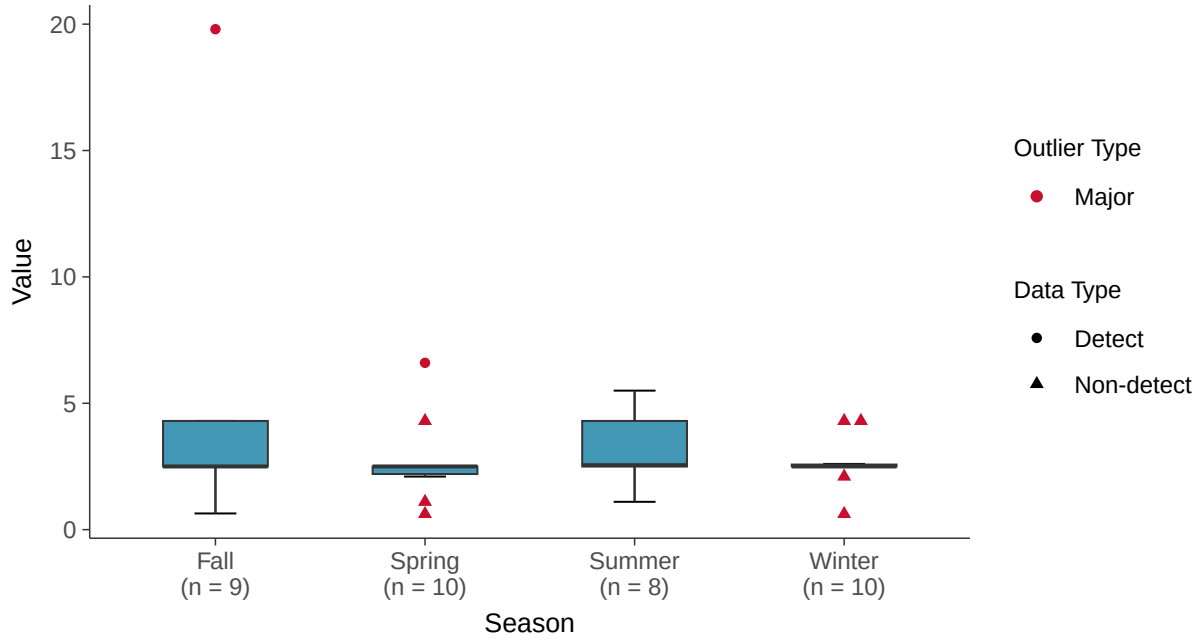
Boxplot

Copper, MW-6 (ug/L)



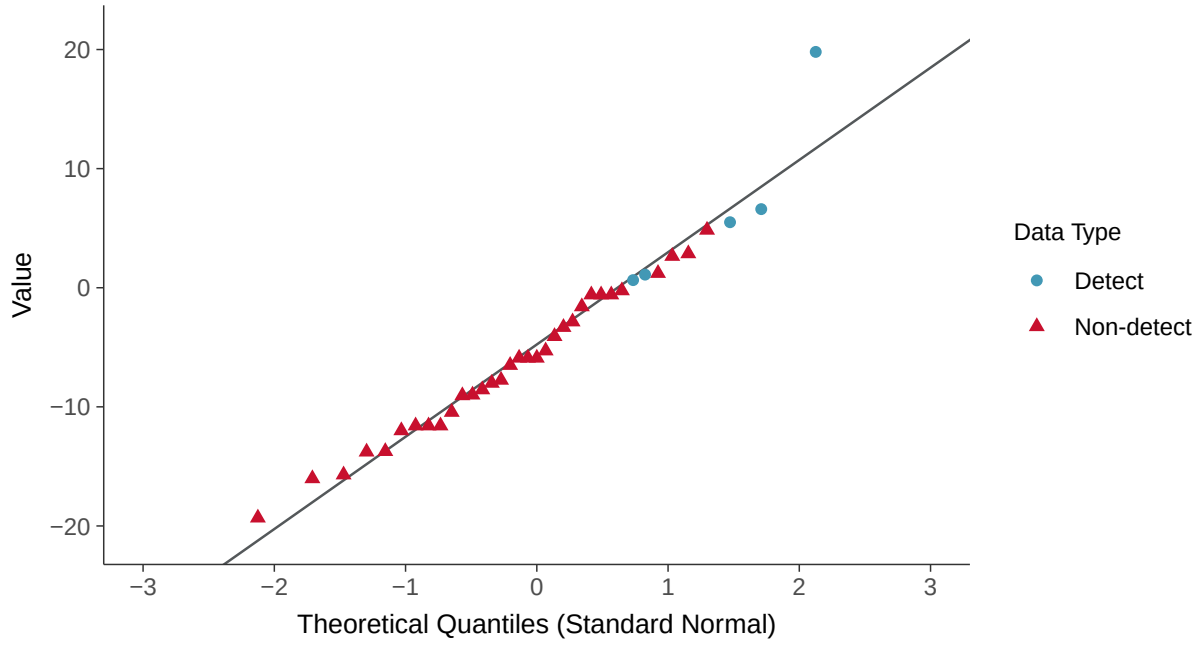
Boxplot by Season

Copper, MW-6 (ug/L)



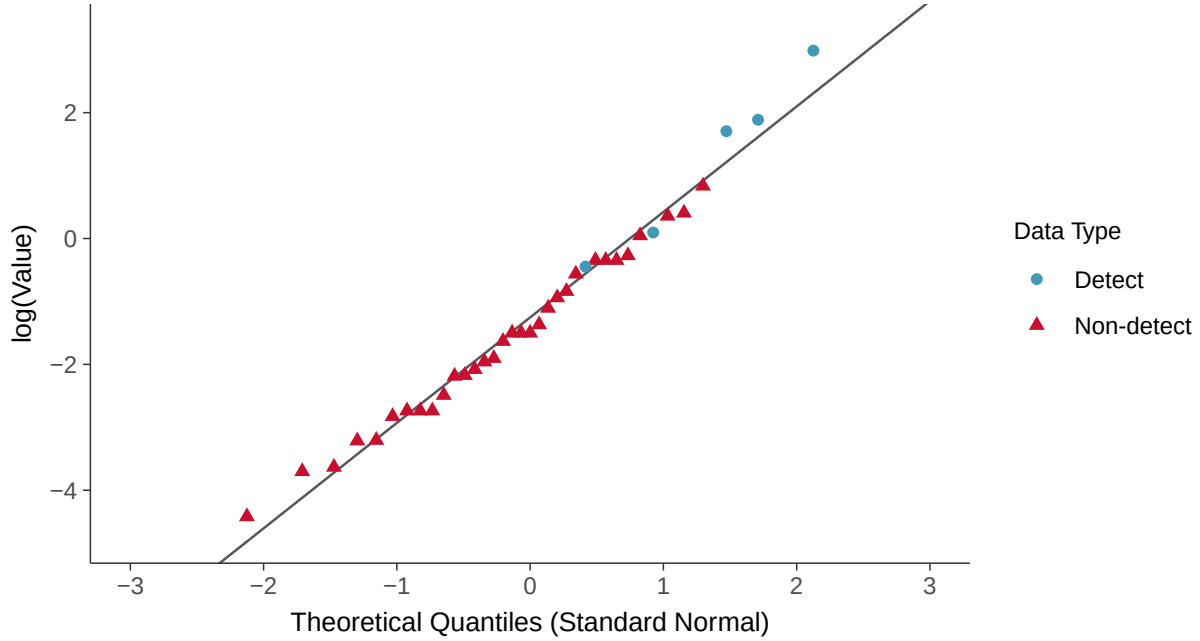
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-6 (ug/L)



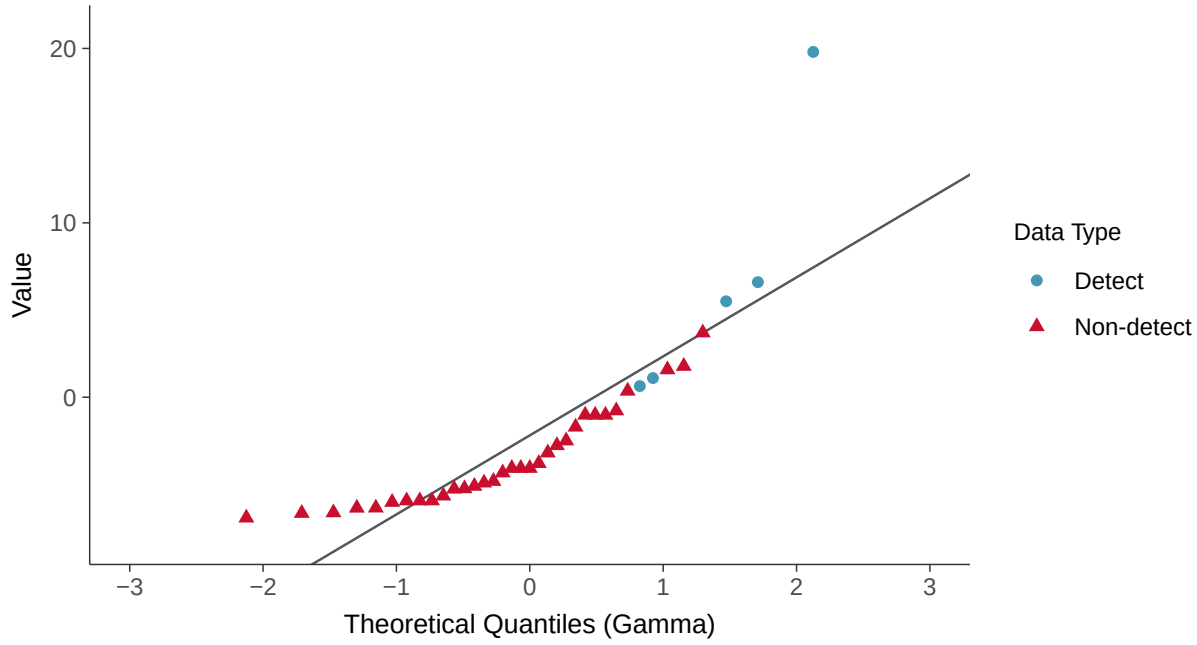
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-6 (ug/L)



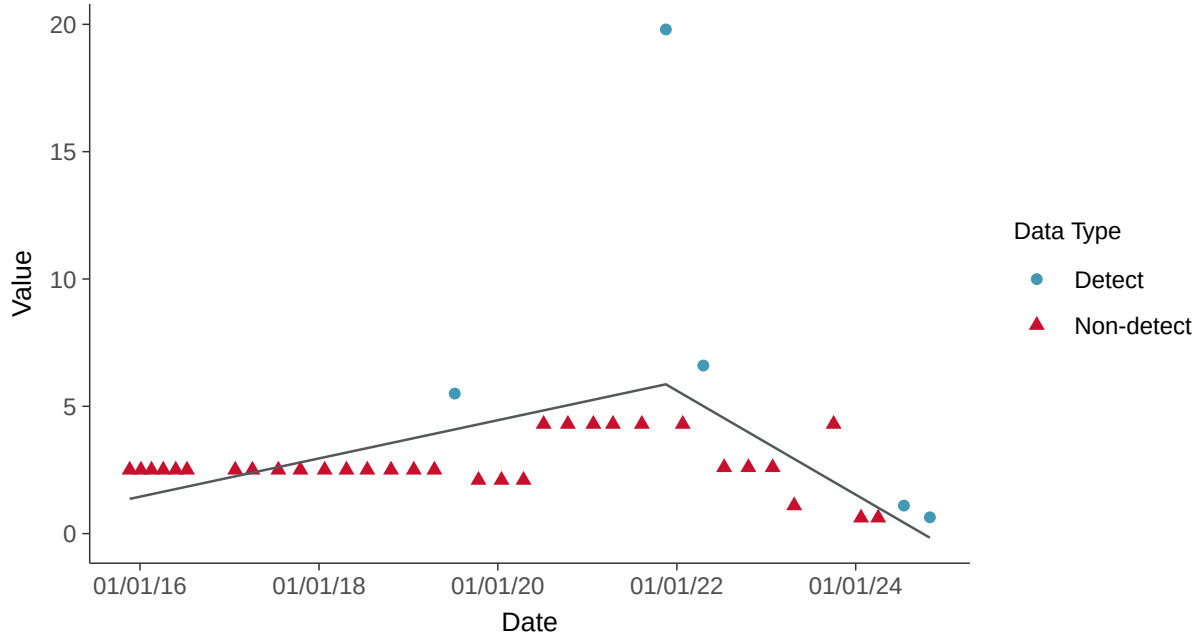
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-6 (ug/L)



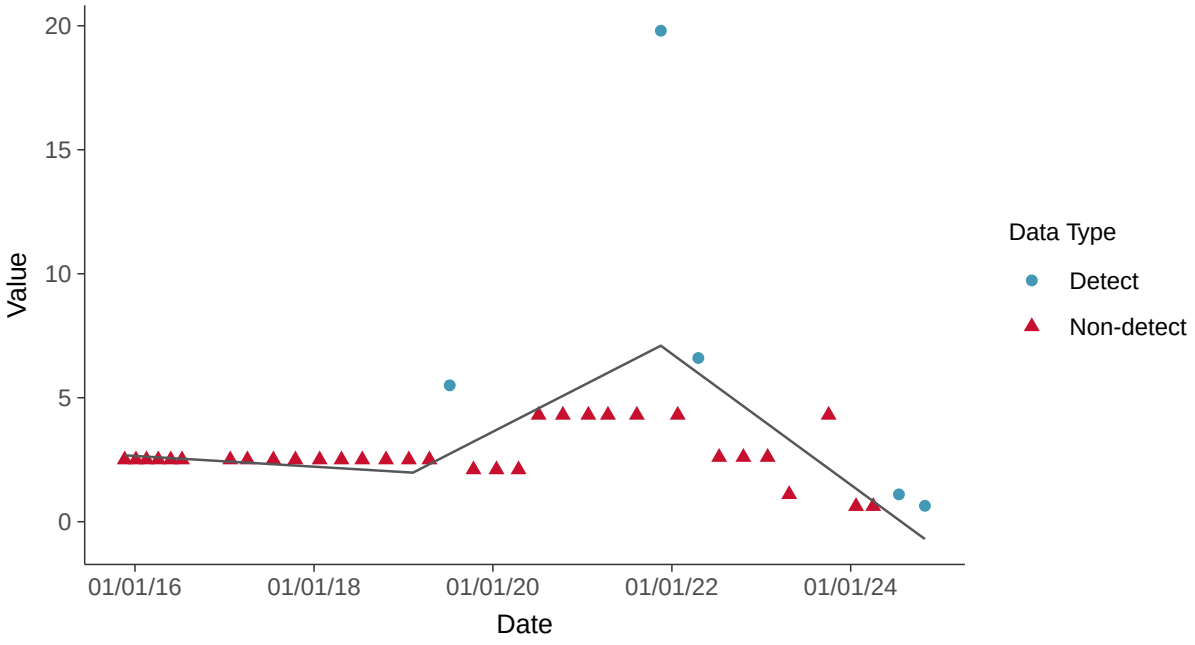
Trend Regression: Piecewise Linear-Linear

Copper, MW-6 (ug/L)



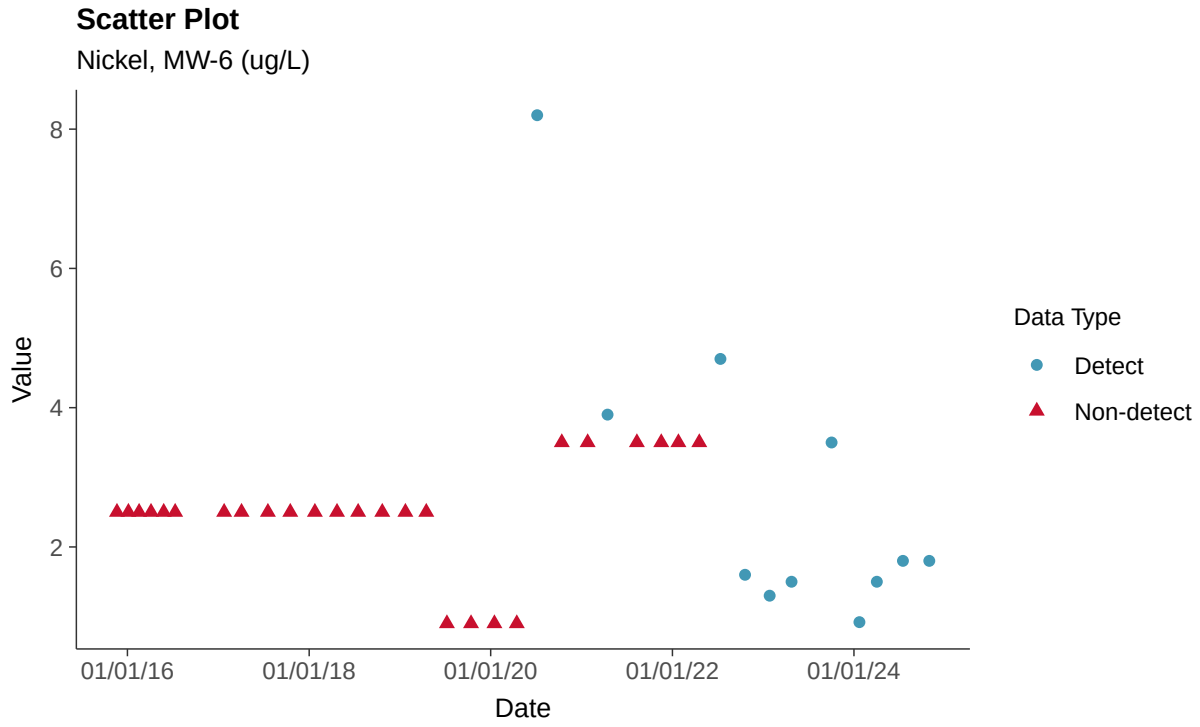
Trend Regression: Piecewise Linear-Linear-Linear

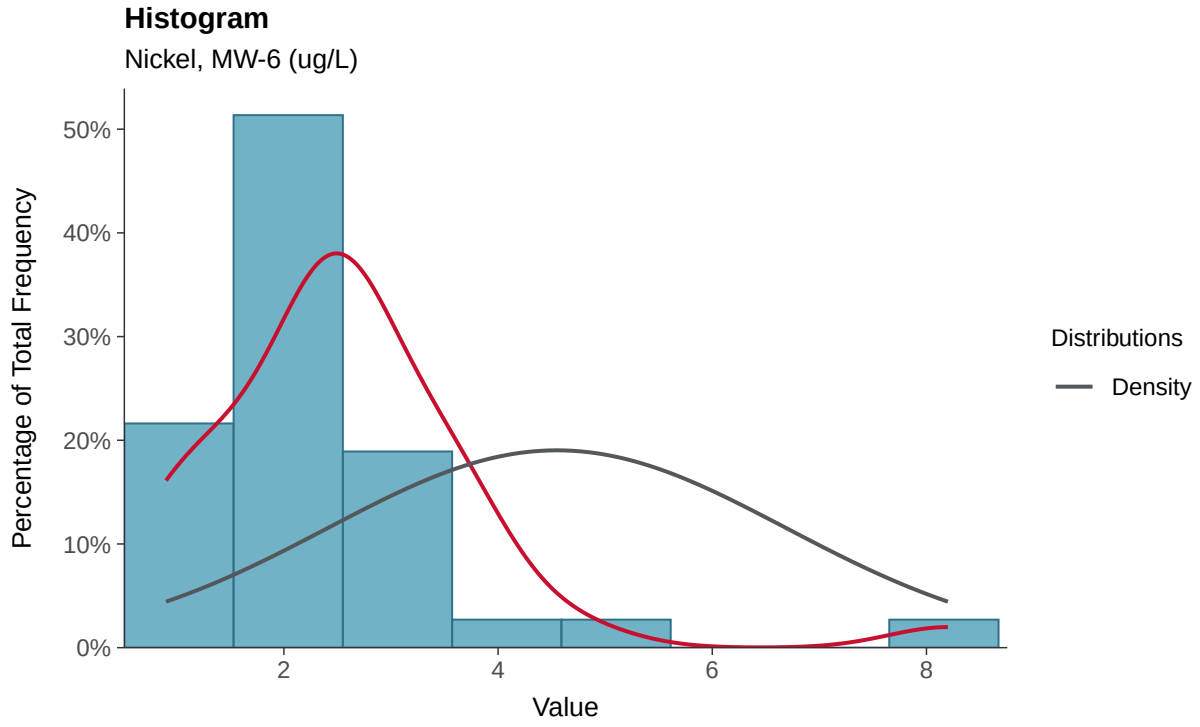
Copper, MW-6 (ug/L)



App. I Metals: Nickel, MW-6

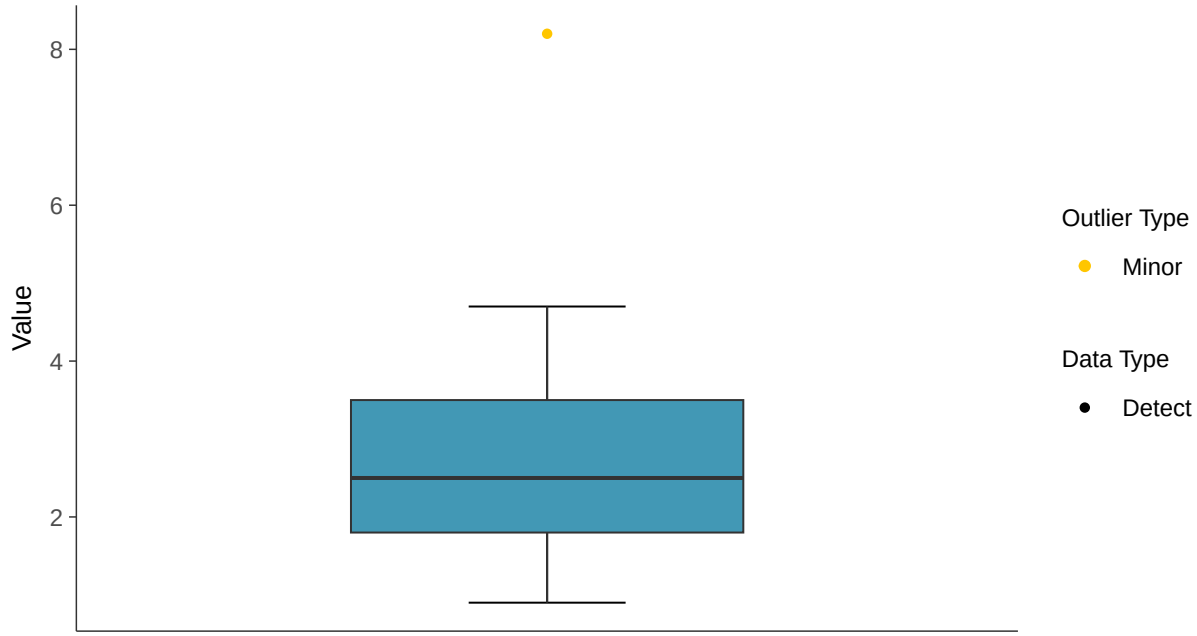
ID: 06_01_117





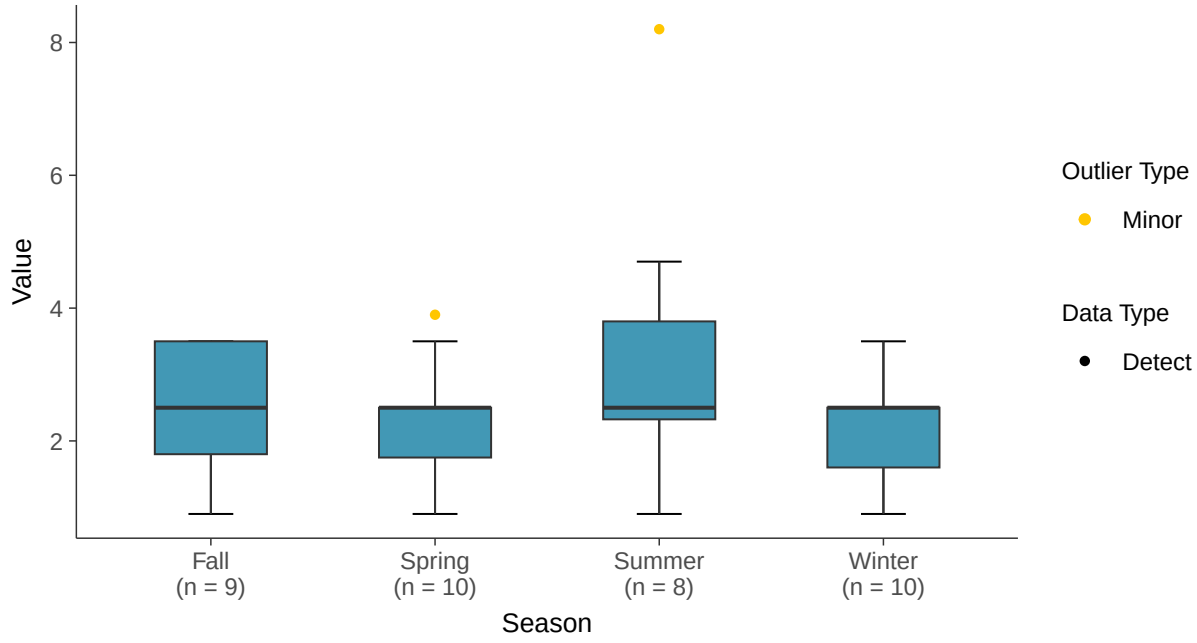
Boxplot

Nickel, MW-6 (ug/L)



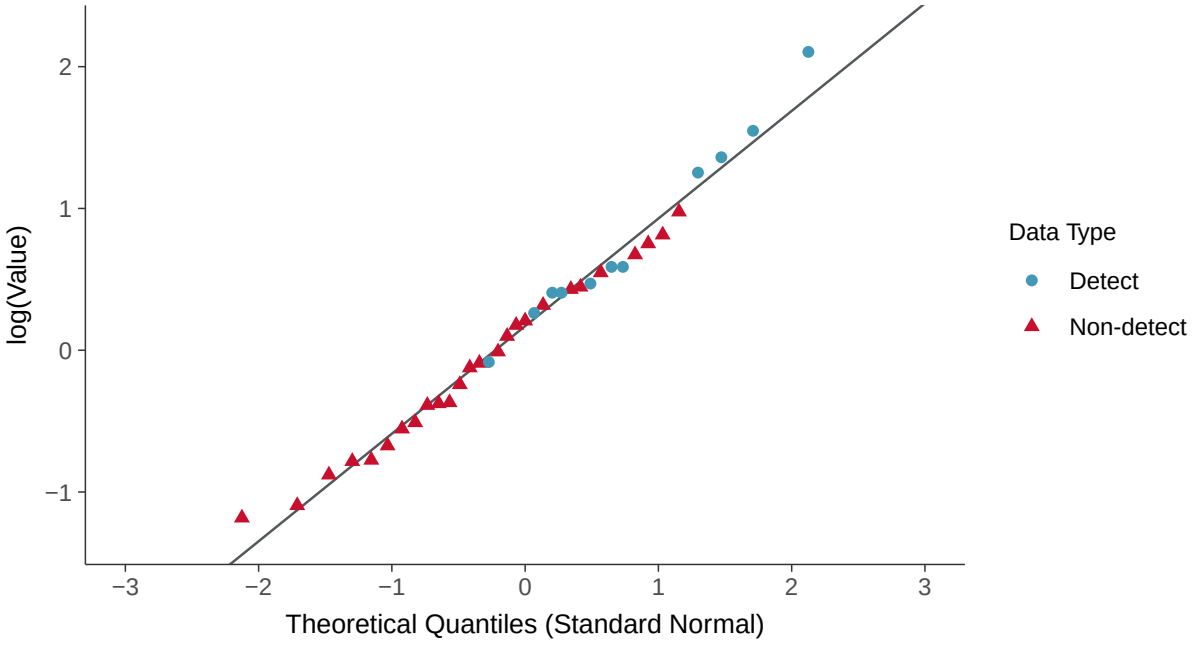
Boxplot by Season

Nickel, MW-6 (ug/L)



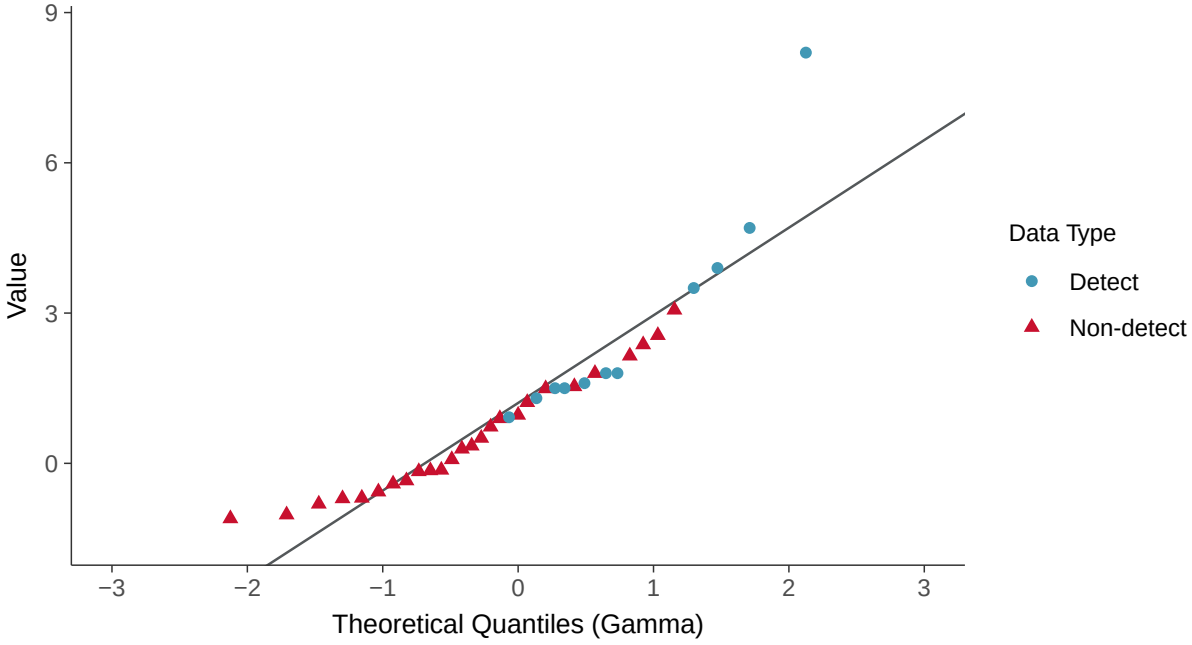
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-6 (ug/L)



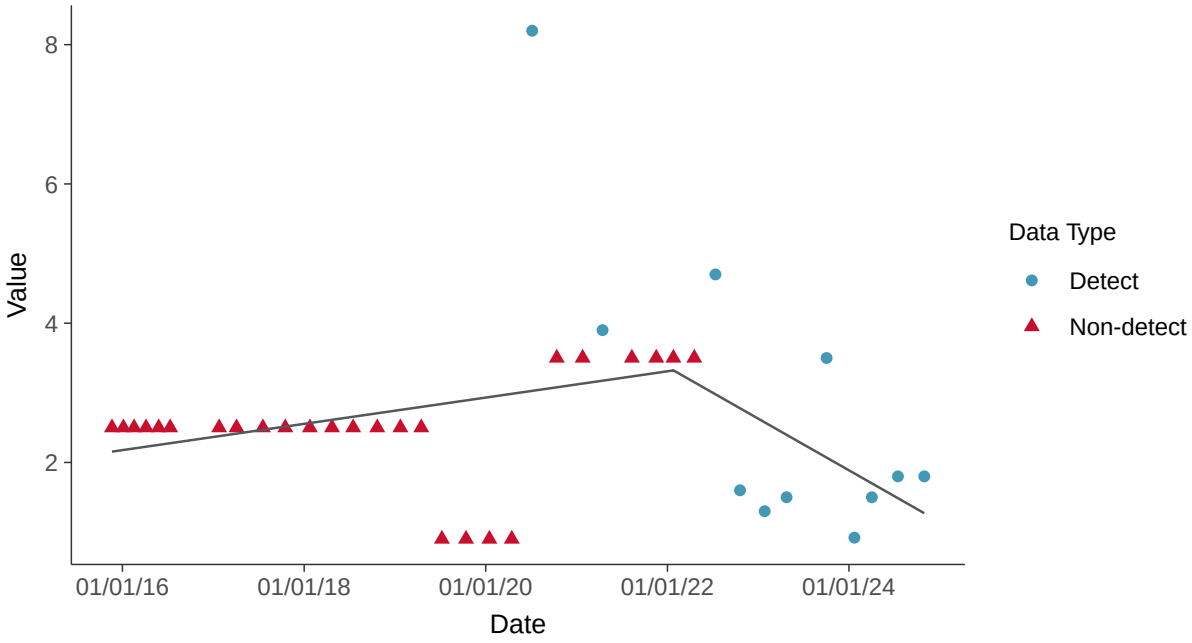
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-6 (ug/L)



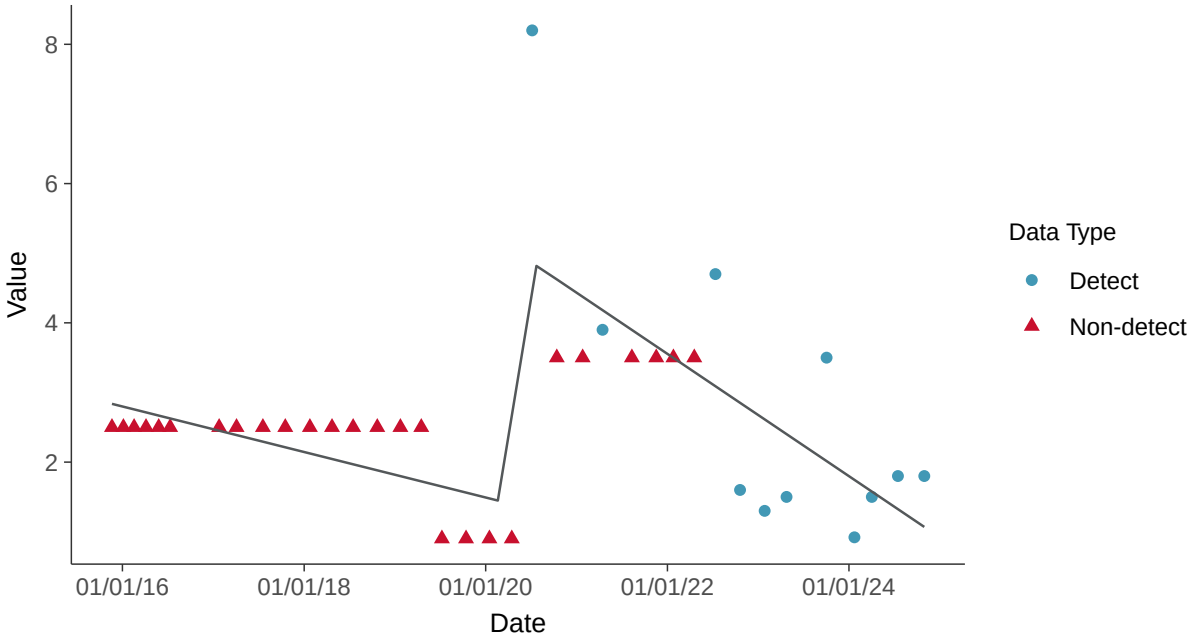
Trend Regression: Piecewise Linear-Linear

Nickel, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Nickel, MW-6 (ug/L)

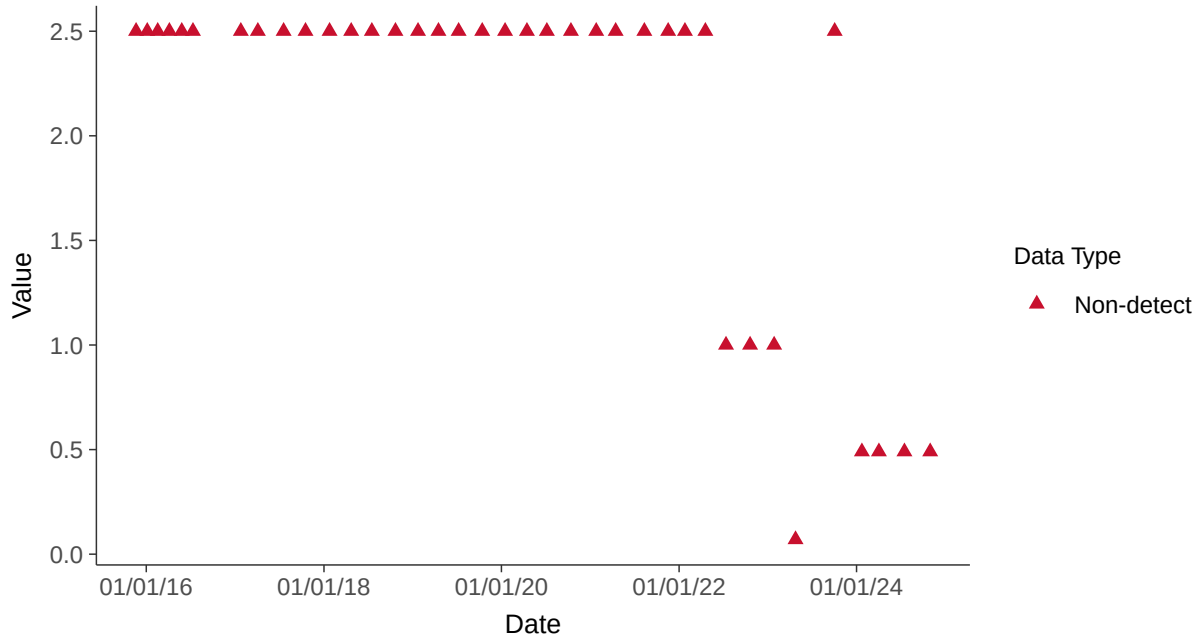


App. I Metals: Silver, MW-6

ID: 06_01_122

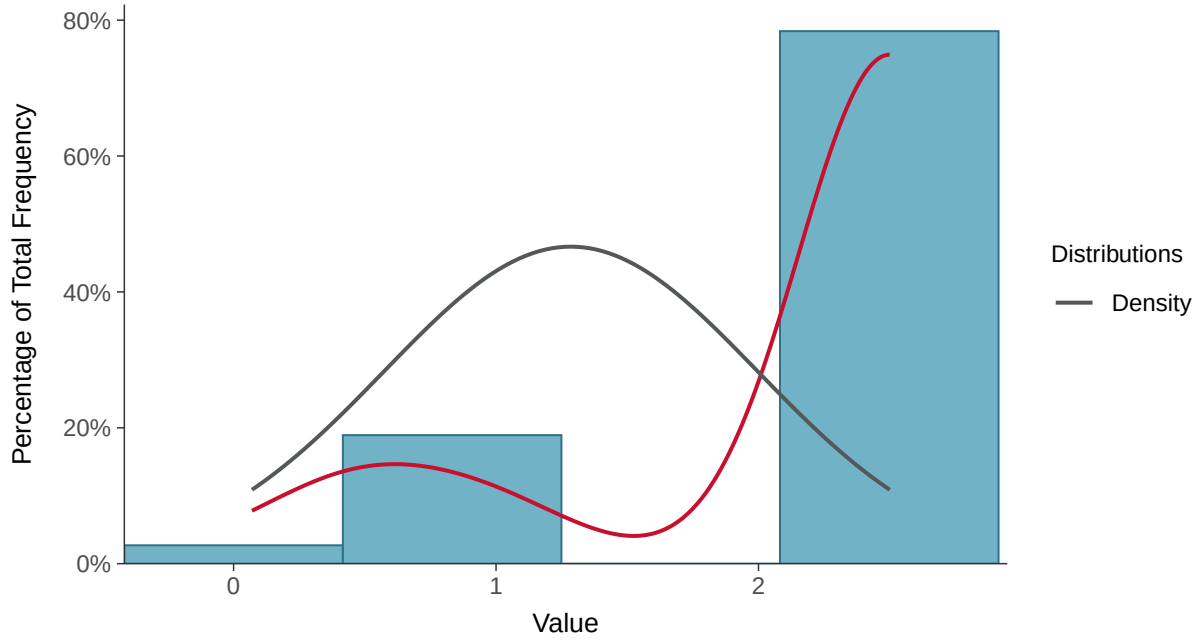
Scatter Plot

Silver, MW-6 (ug/L)



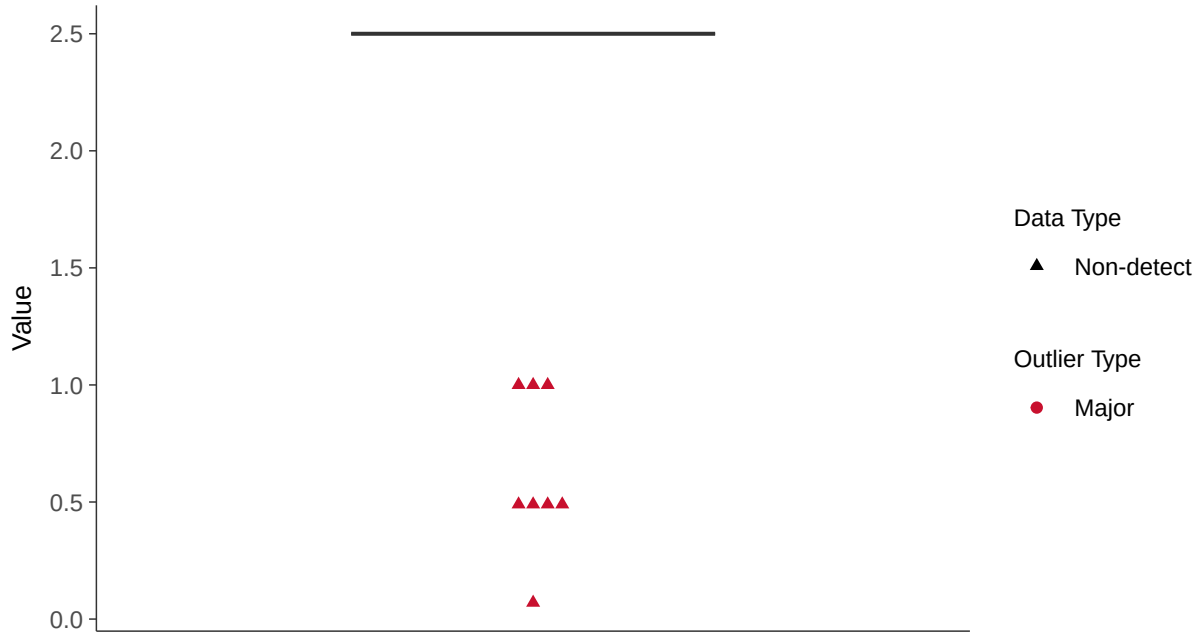
Histogram

Silver, MW-6 (ug/L)



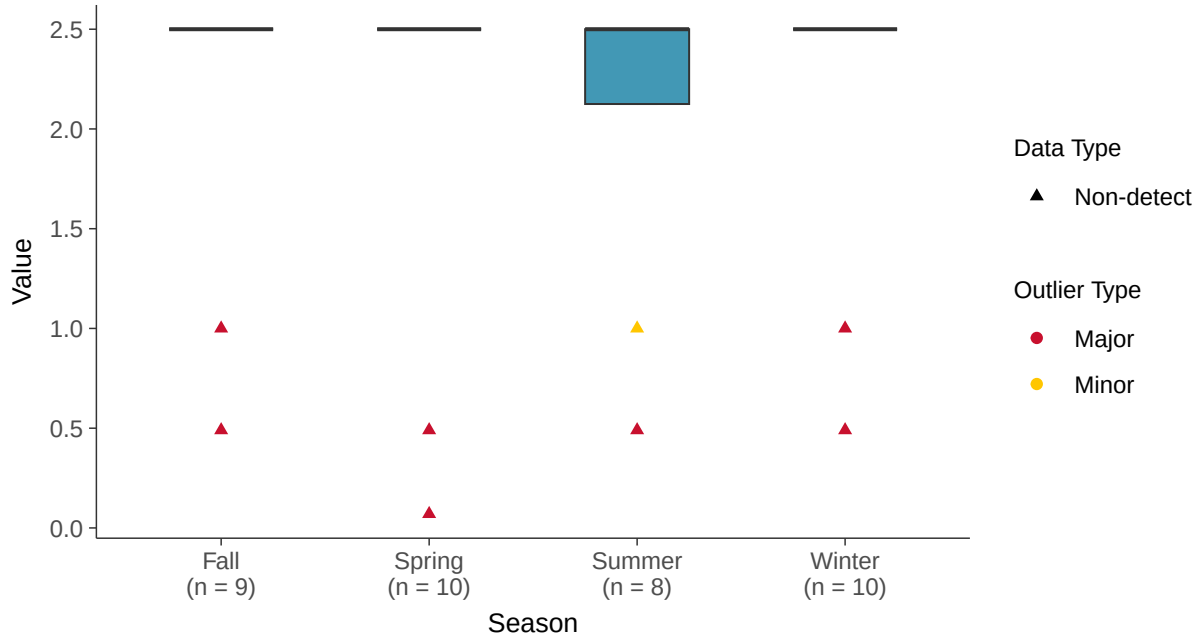
Boxplot

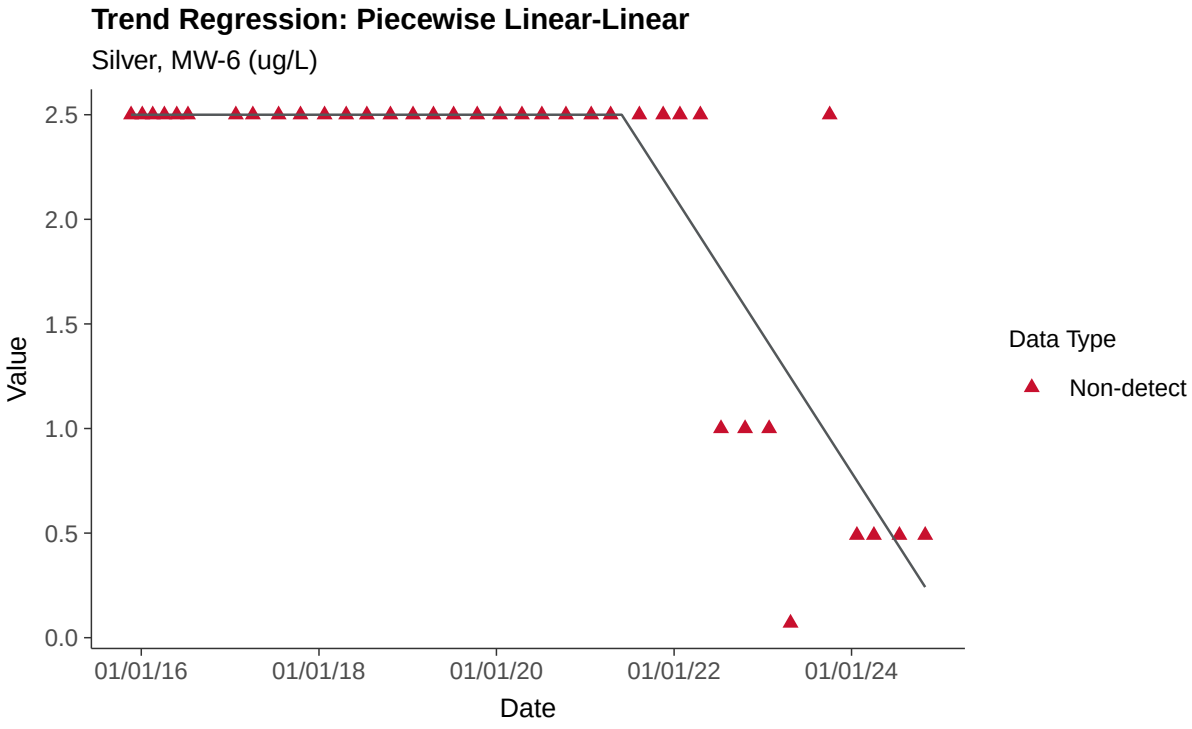
Silver, MW-6 (ug/L)



Boxplot by Season

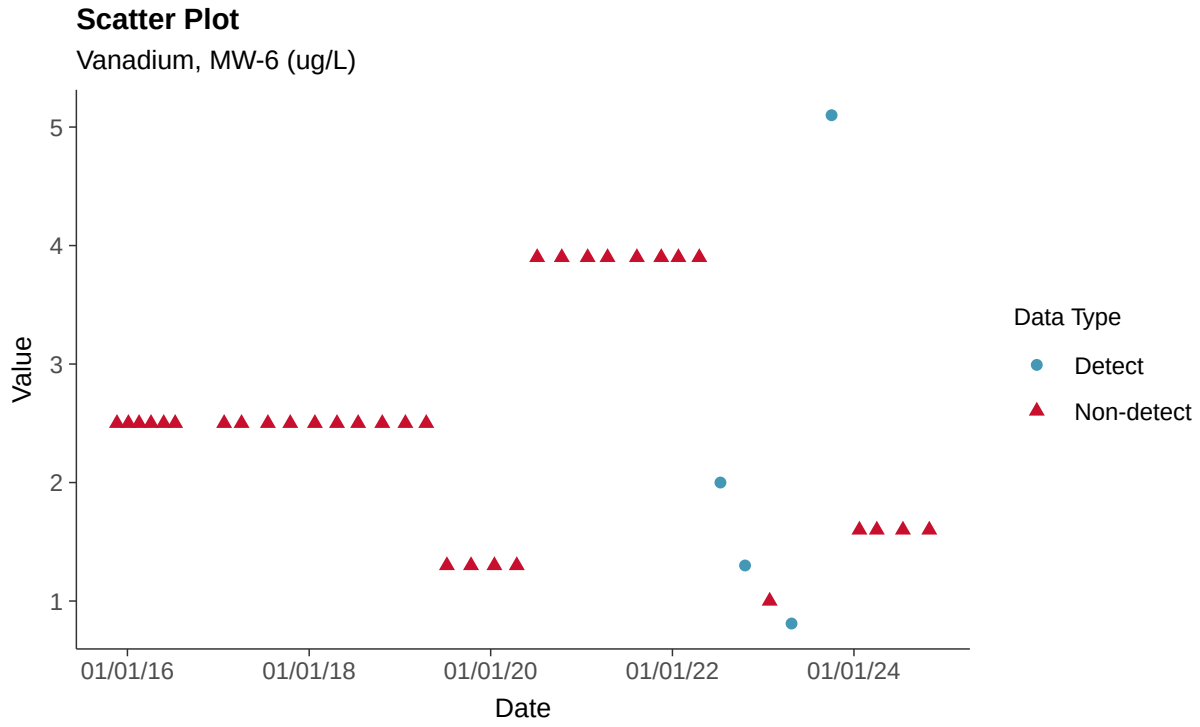
Silver, MW-6 (ug/L)

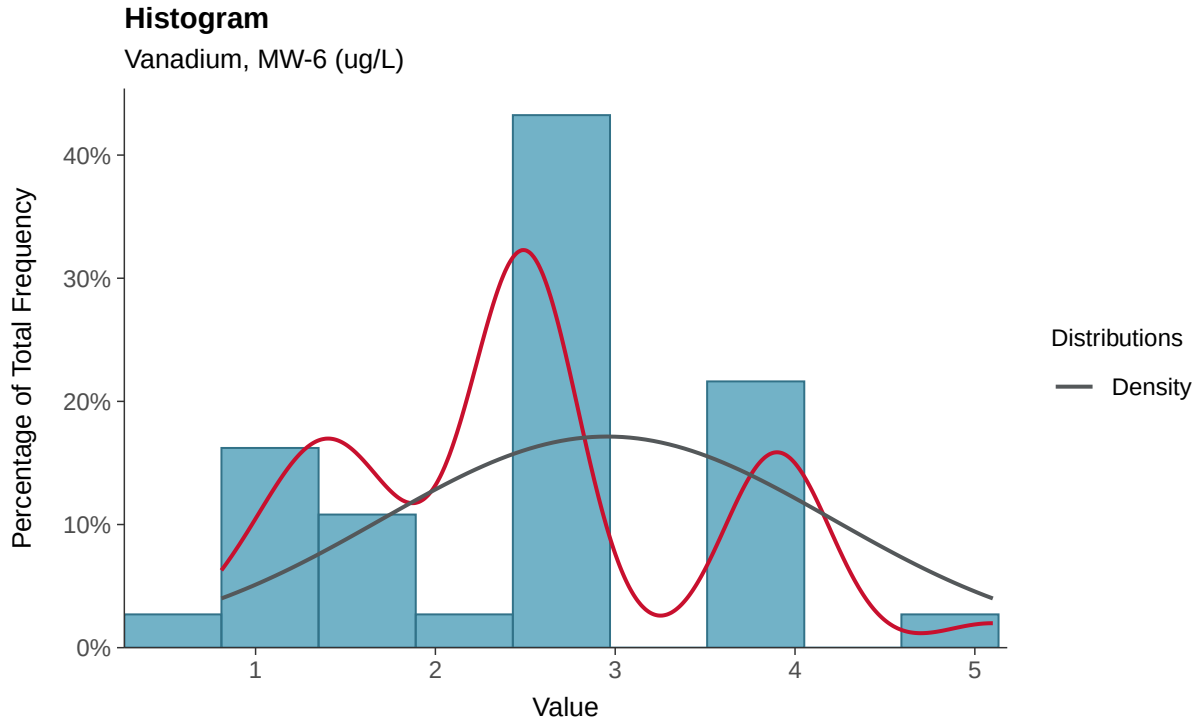



Trend Regression: Piecewise Linear-Linear
Silver, MW-6 (ug/L)
Value
2.5
2.0
1.5
1.0
0.5
0.0
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Non-detect

App. I Metals: Vanadium, MW-6

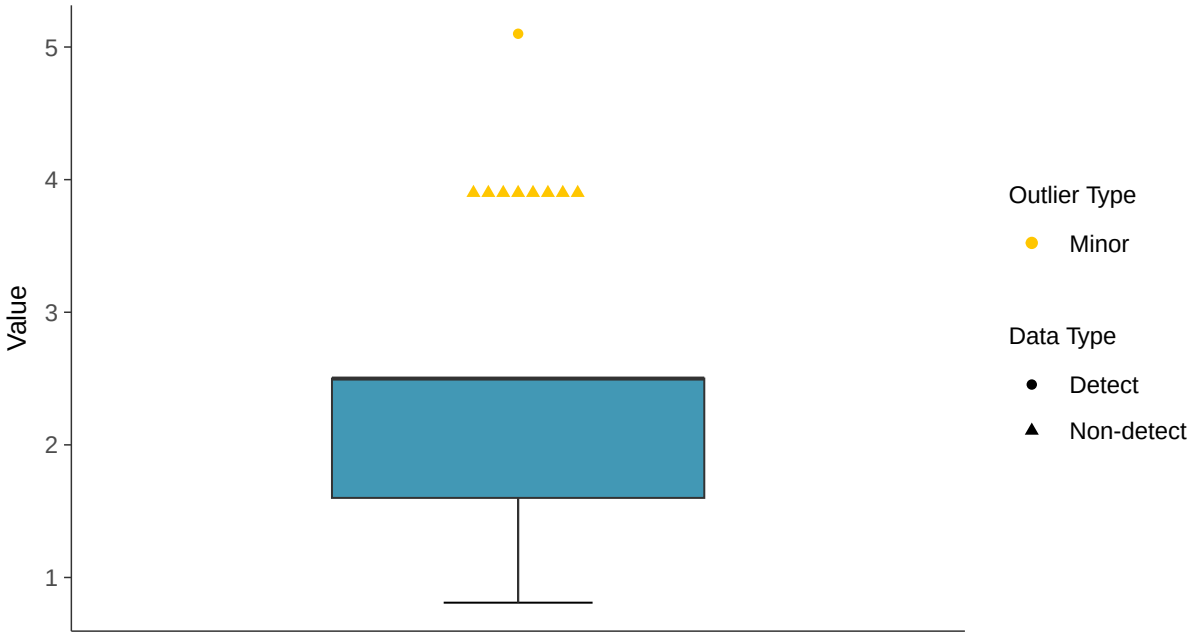
ID: 06_01_127





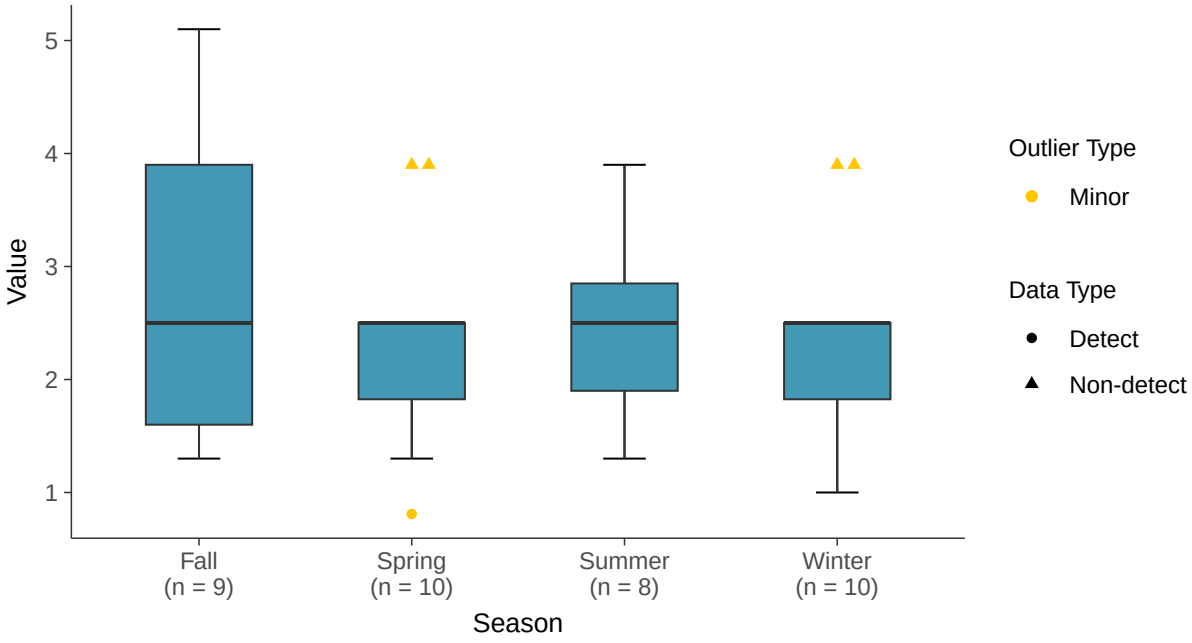
Boxplot

Vanadium, MW-6 (ug/L)



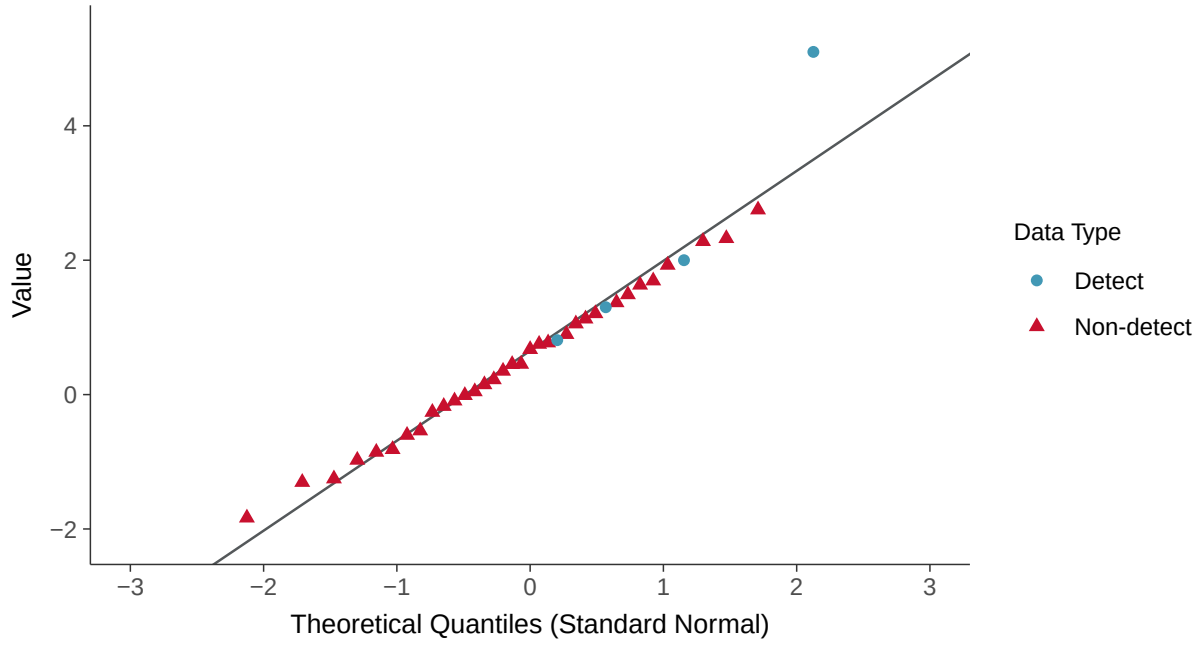
Boxplot by Season

Vanadium, MW-6 (ug/L)



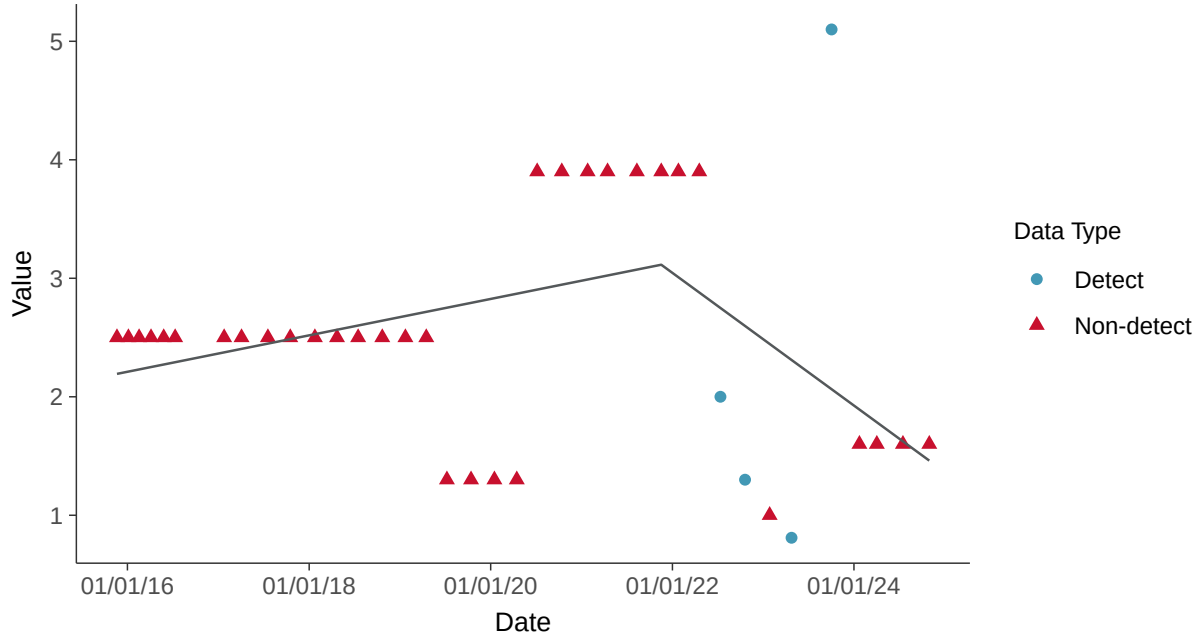
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-6 (ug/L)



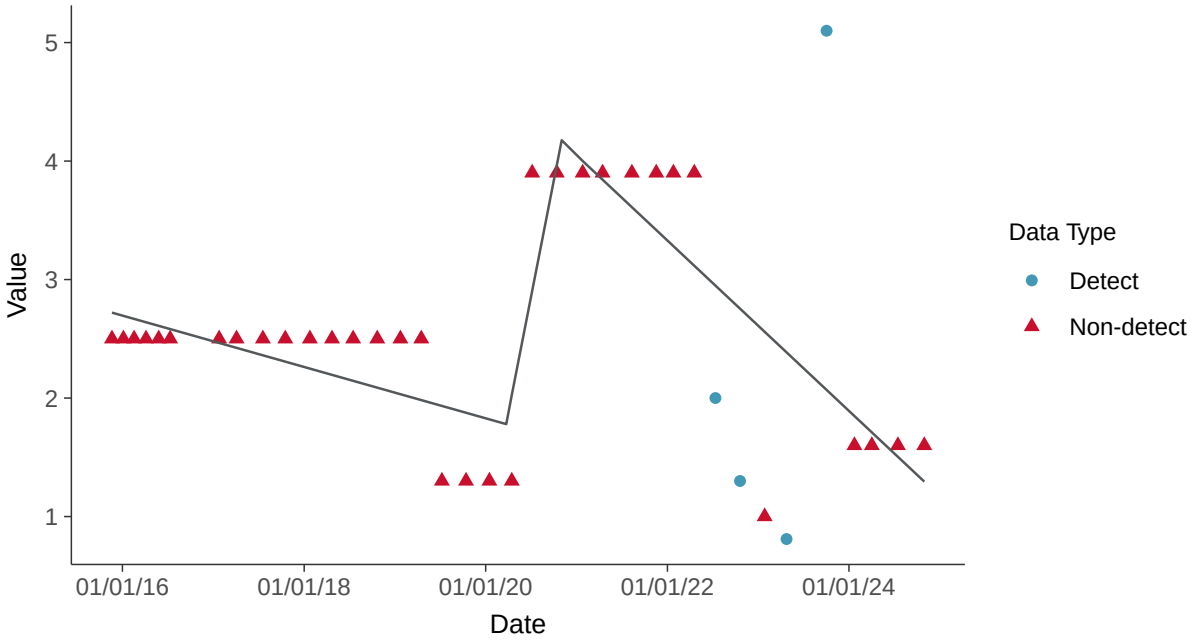
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-6 (ug/L)

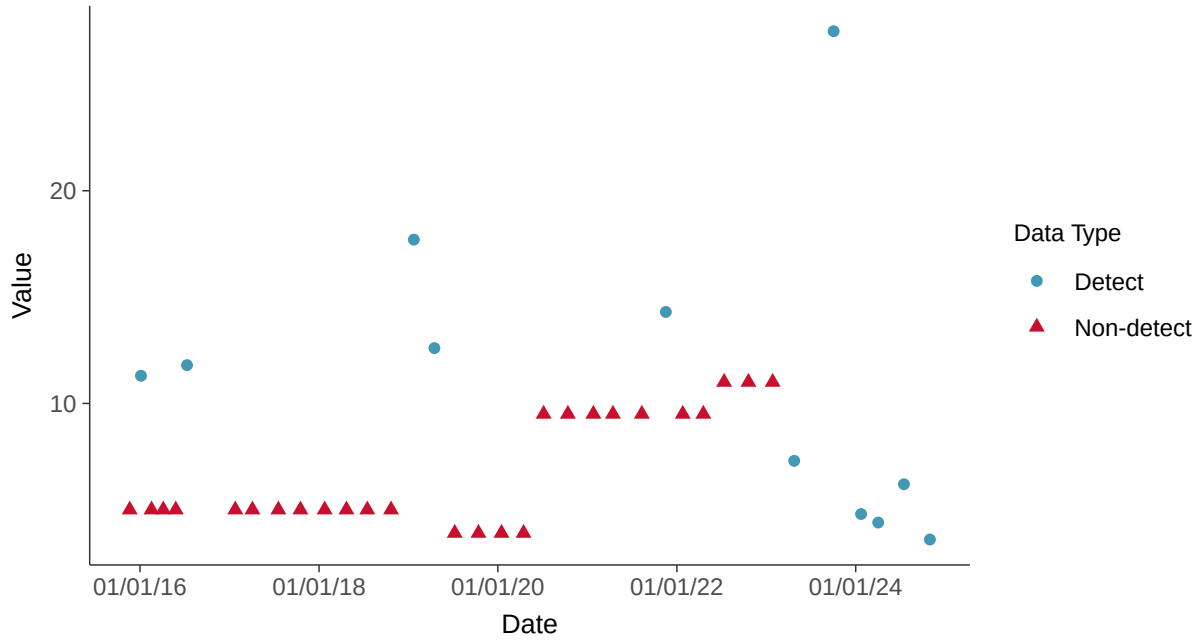


App. I Metals: Zinc, MW-6

ID: 06_01_128

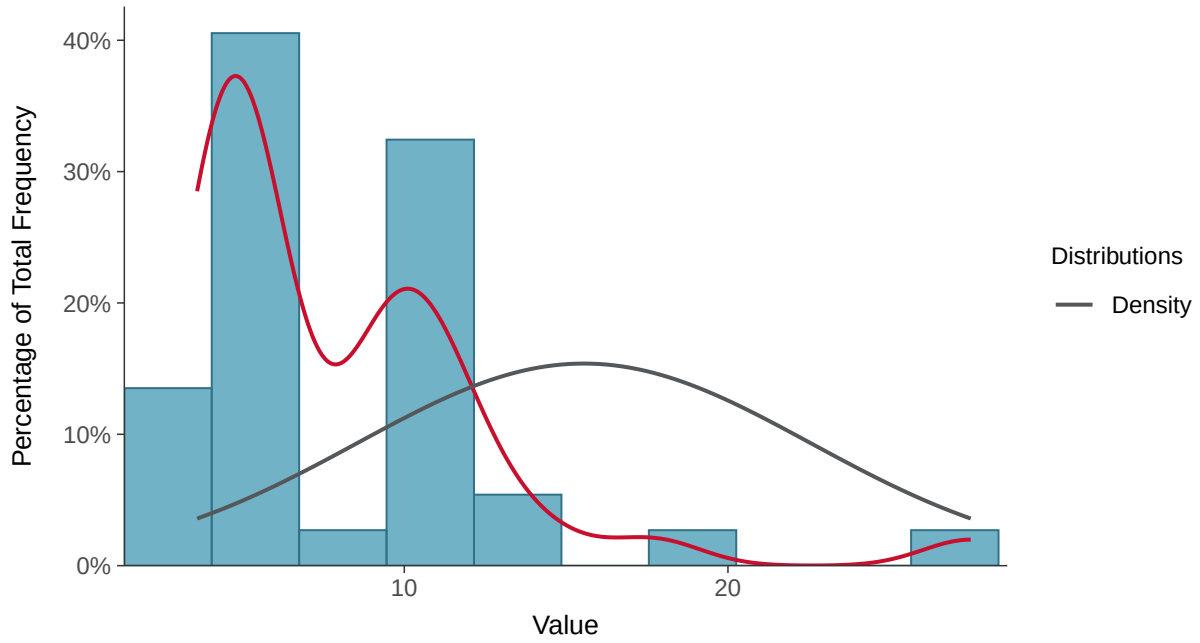
Scatter Plot

Zinc, MW-6 (ug/L)



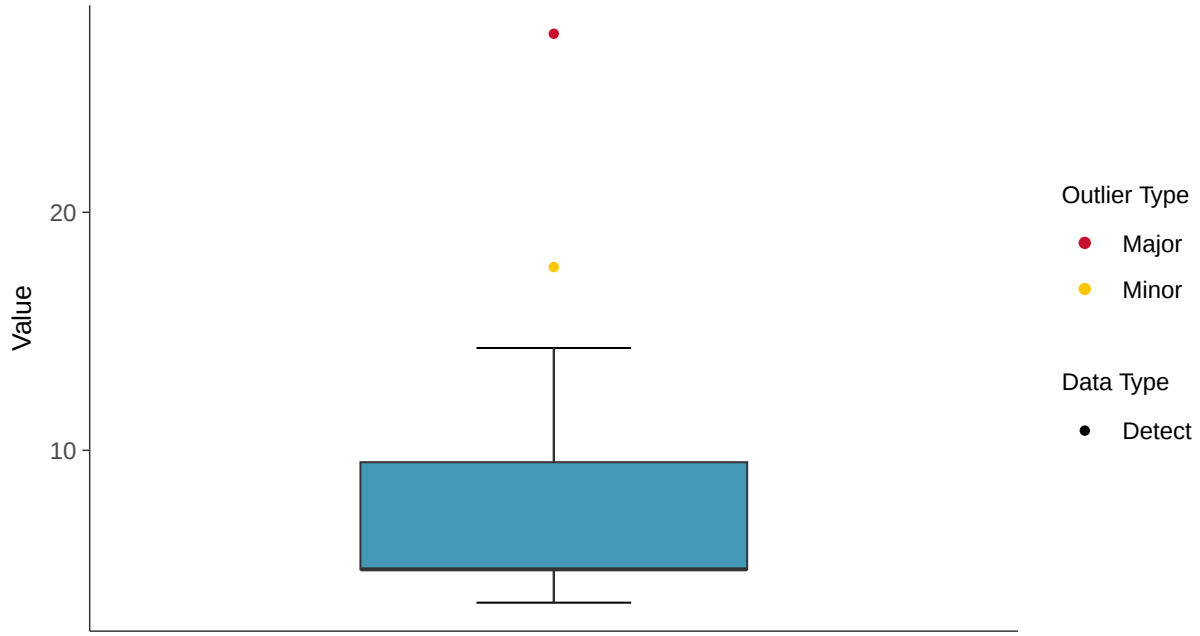
Histogram

Zinc, MW-6 (ug/L)



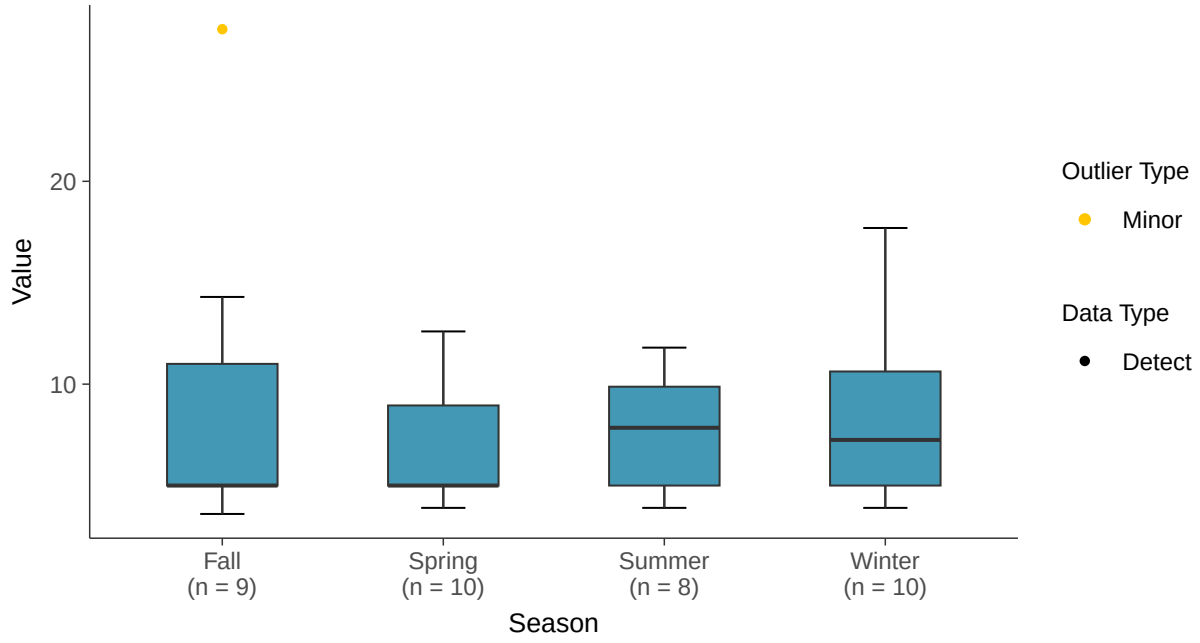
Boxplot

Zinc, MW-6 (ug/L)



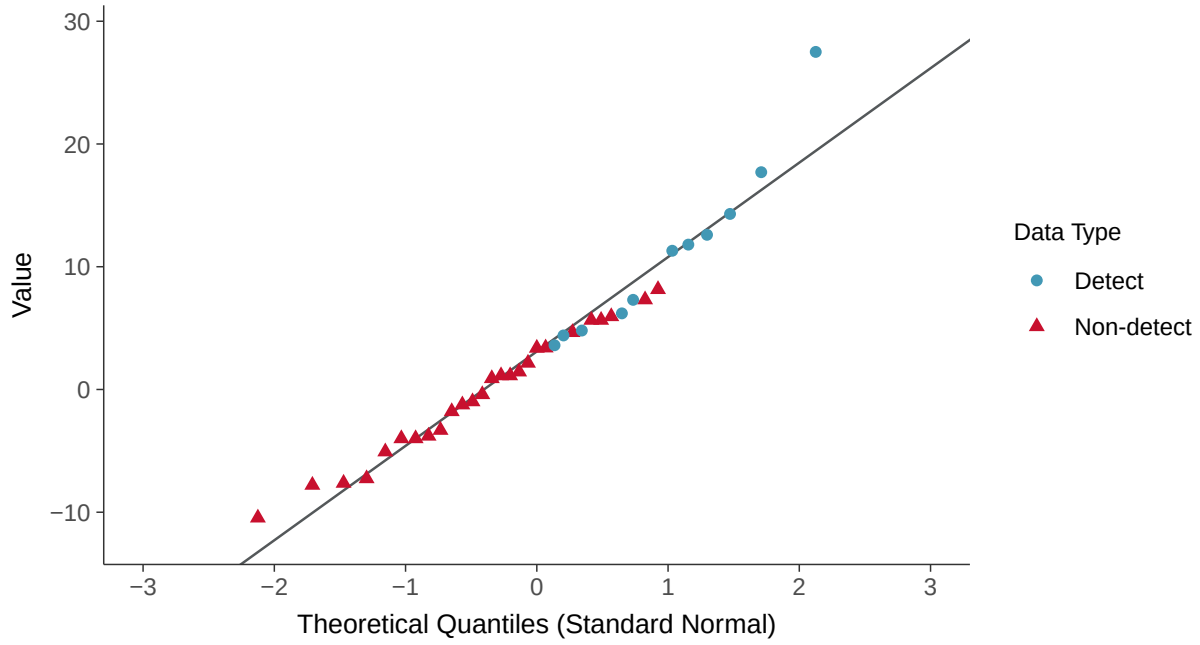
Boxplot by Season

Zinc, MW-6 (ug/L)



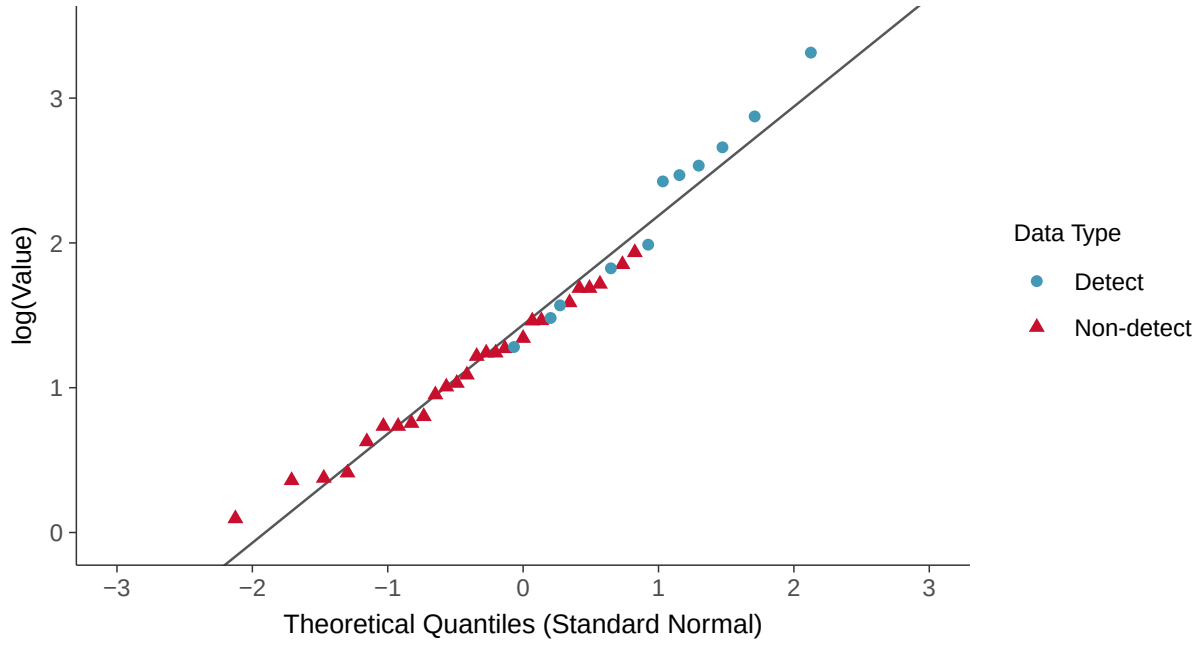
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



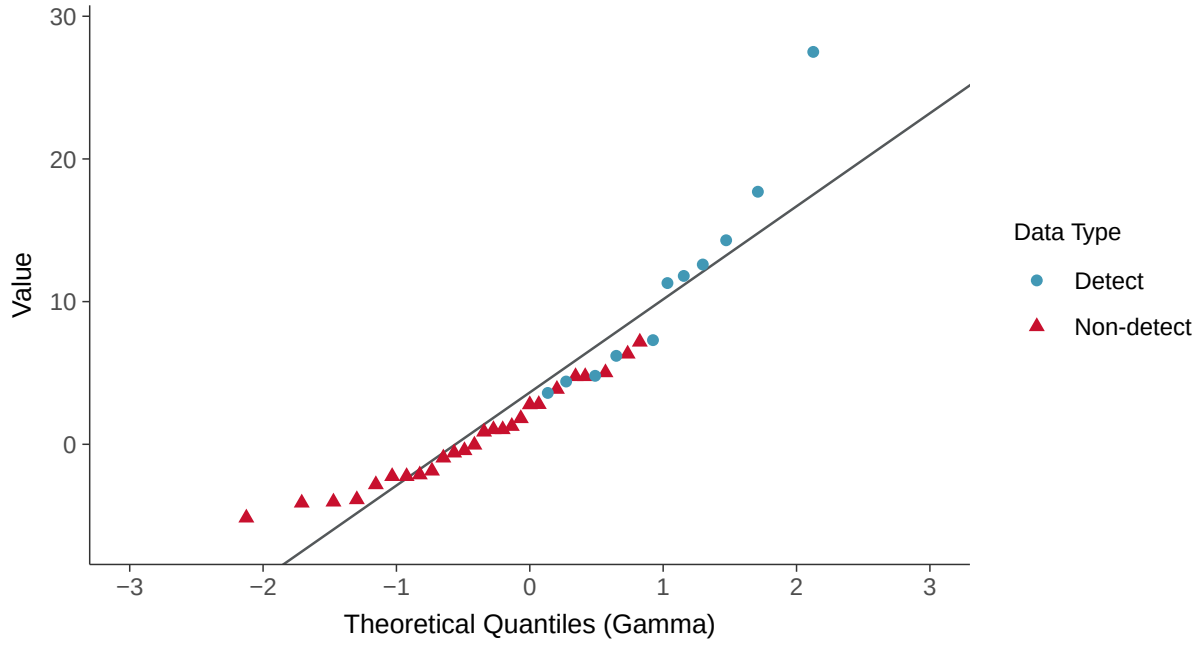
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



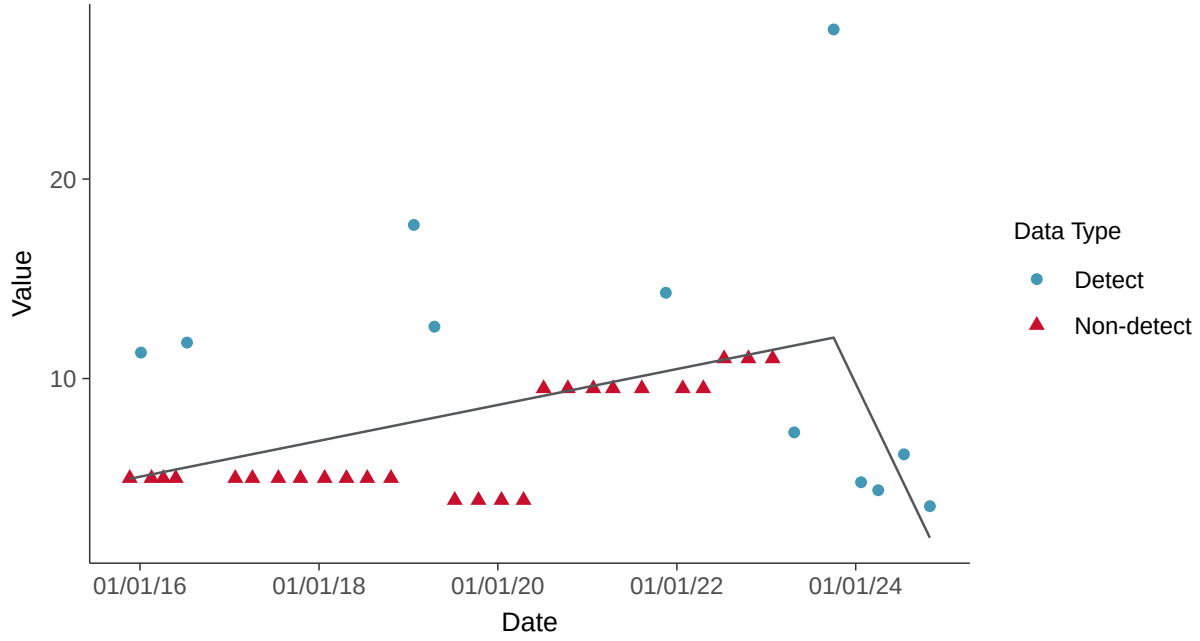
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-6 (ug/L)

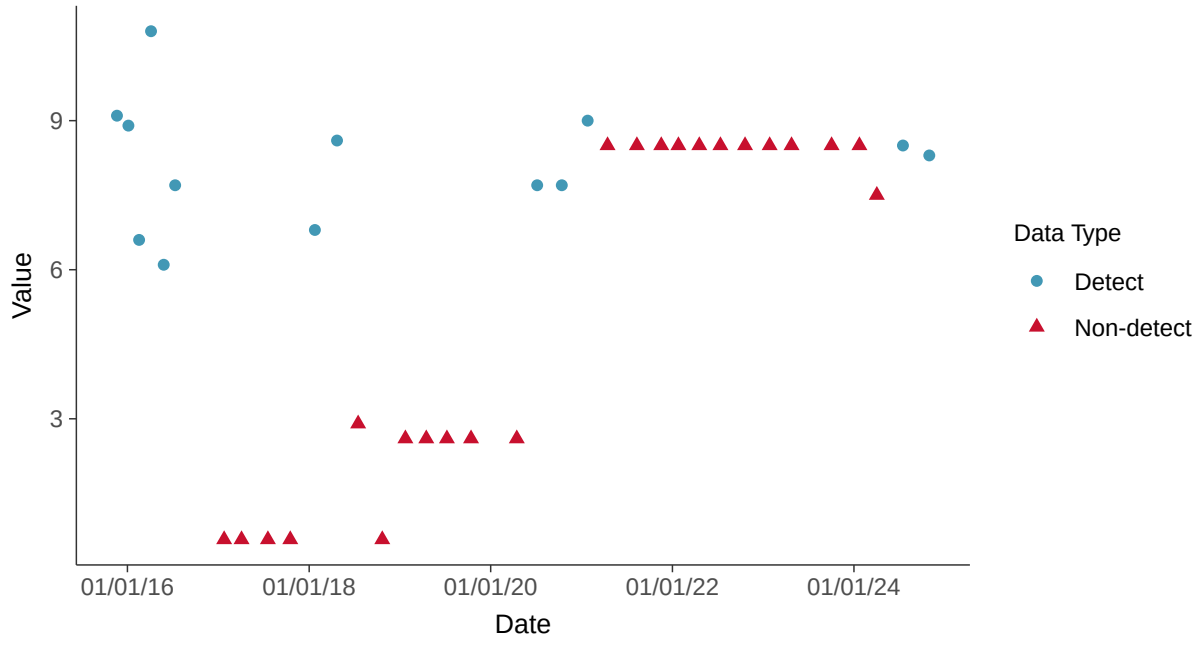


App. III: Boron, MW-6

ID: 06_02_105

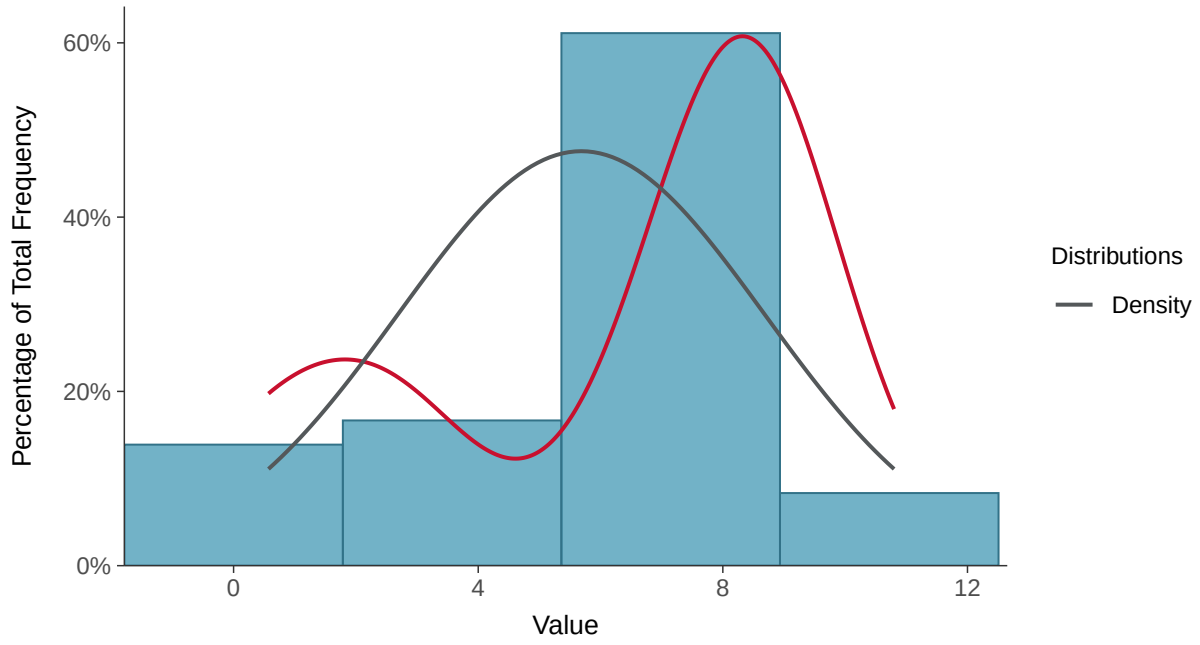
Scatter Plot

Boron, MW-6 (ug/L)



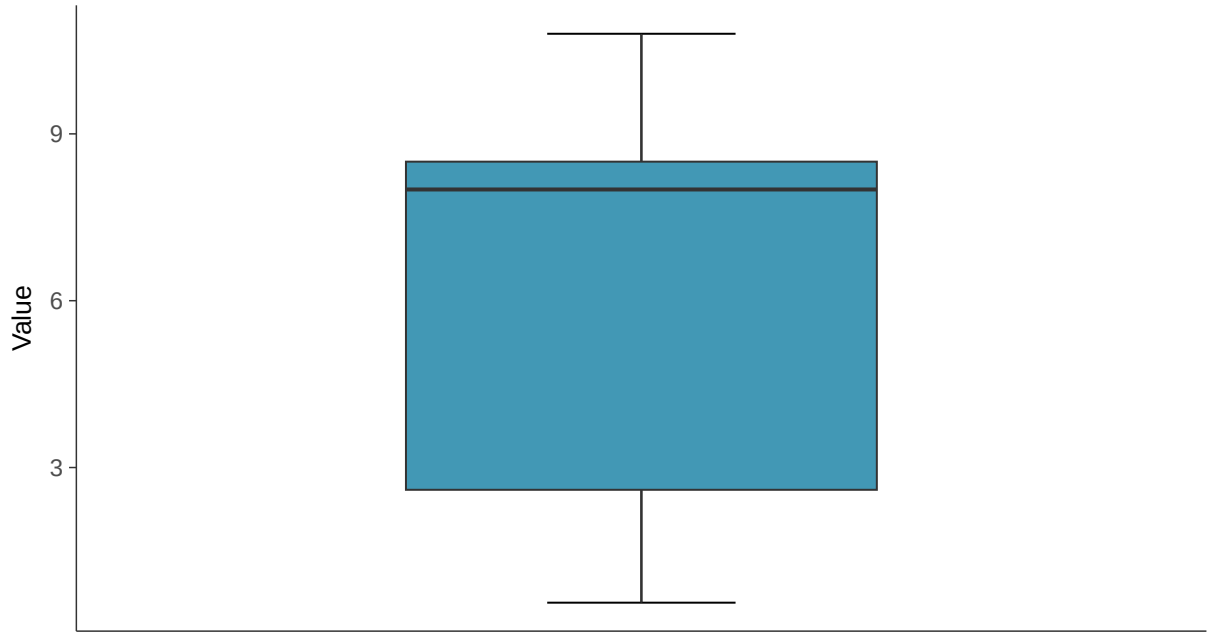
Histogram

Boron, MW-6 (ug/L)



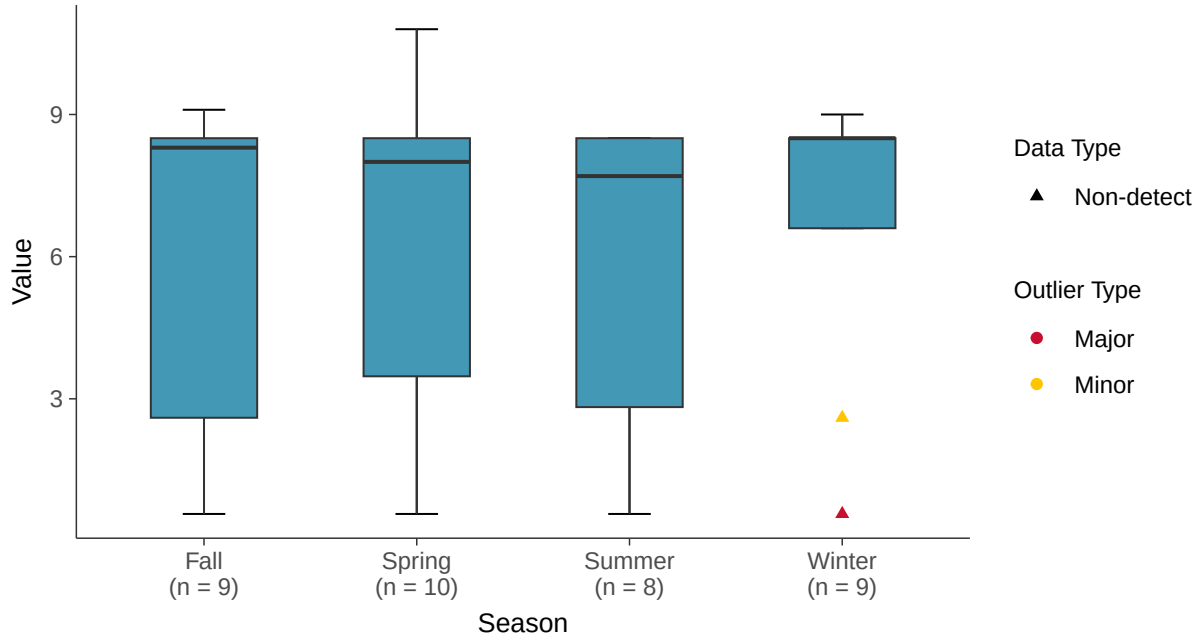
Boxplot

Boron, MW-6 (ug/L)



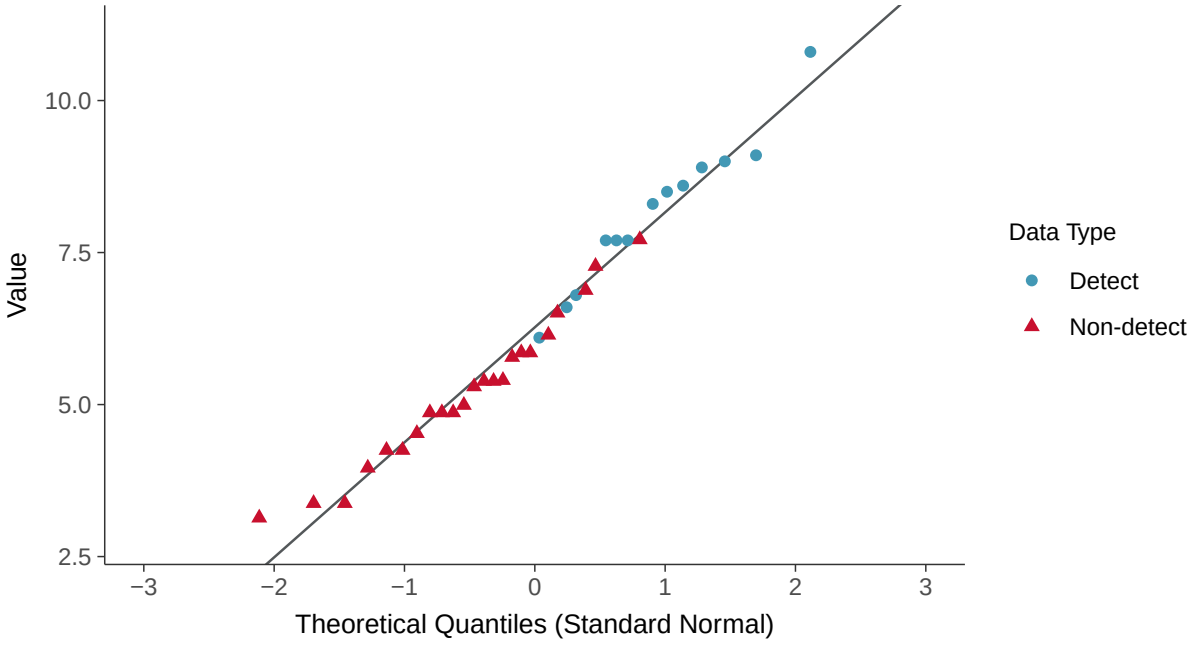
Boxplot by Season

Boron, MW-6 (ug/L)



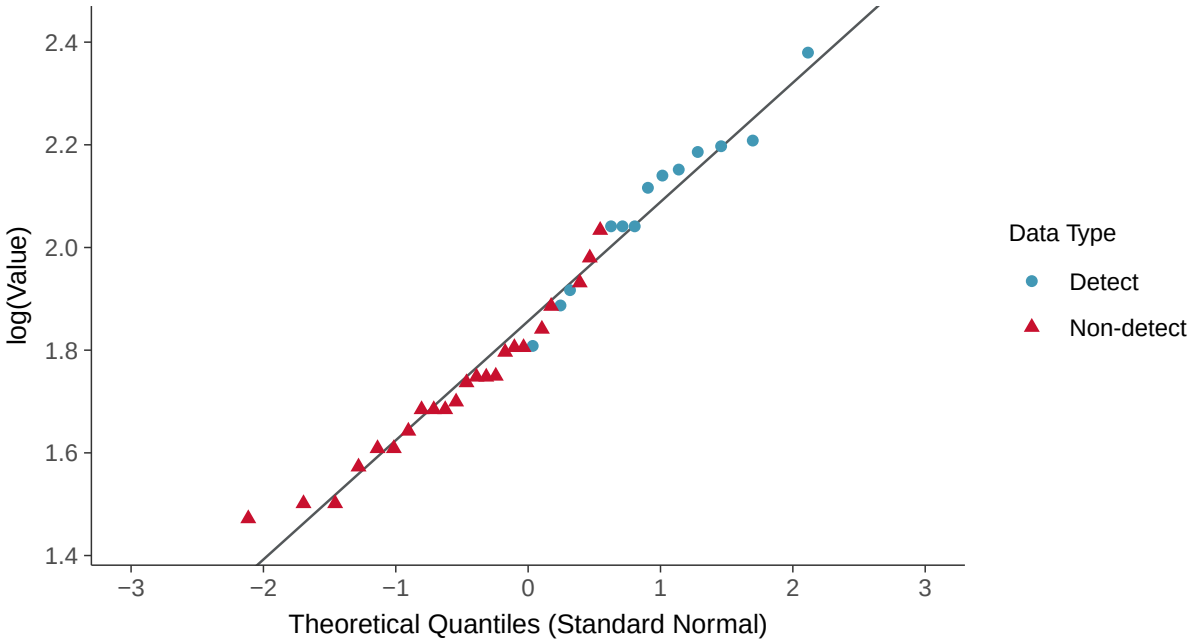
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



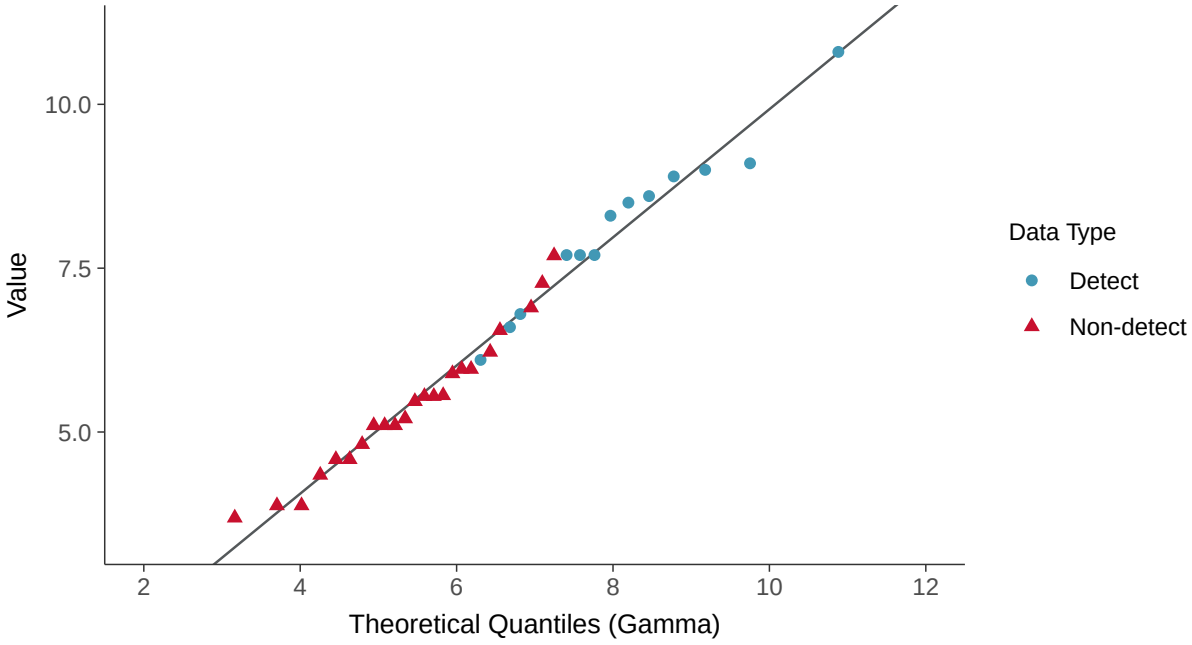
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



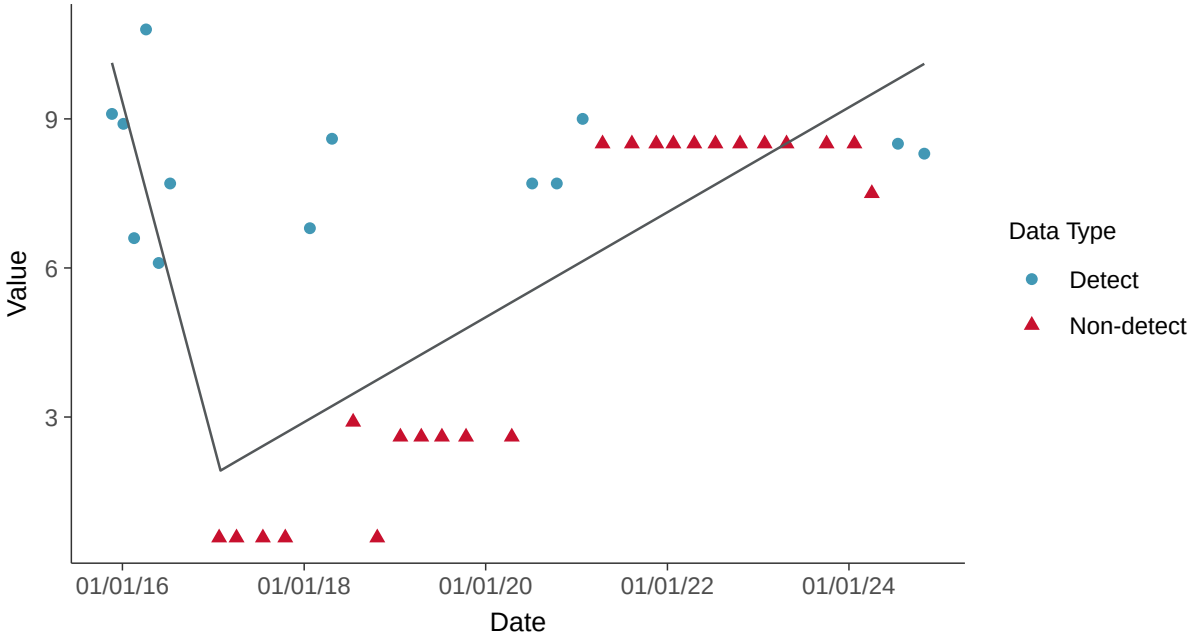
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-6 (ug/L)



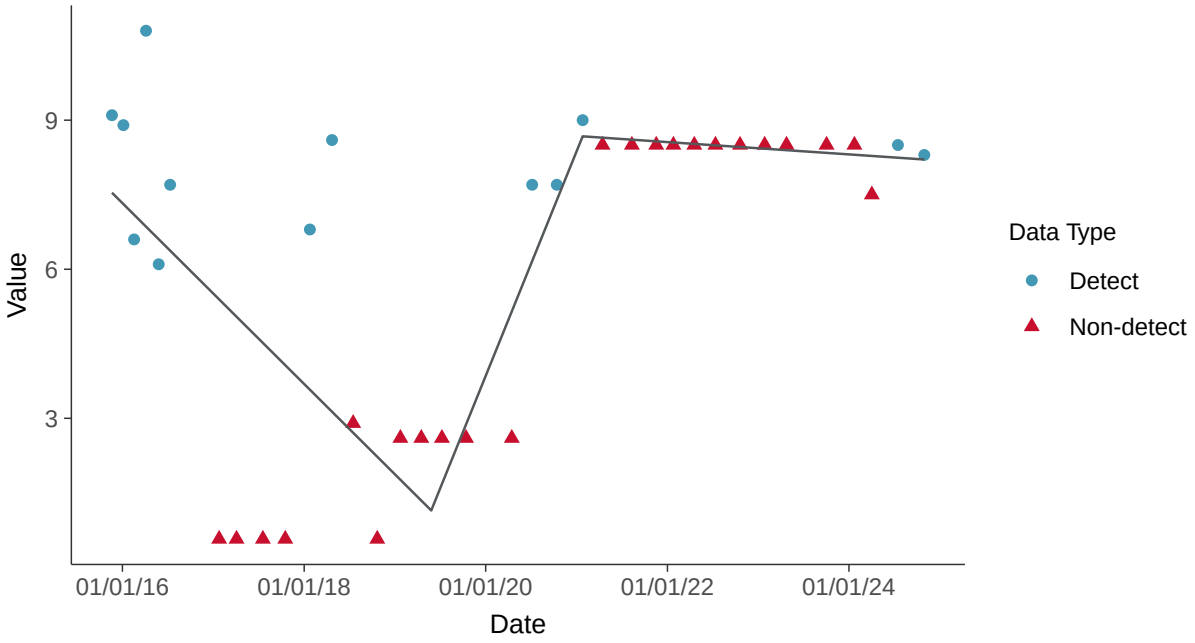
Trend Regression: Piecewise Linear-Linear

Boron, MW-6 (ug/L)



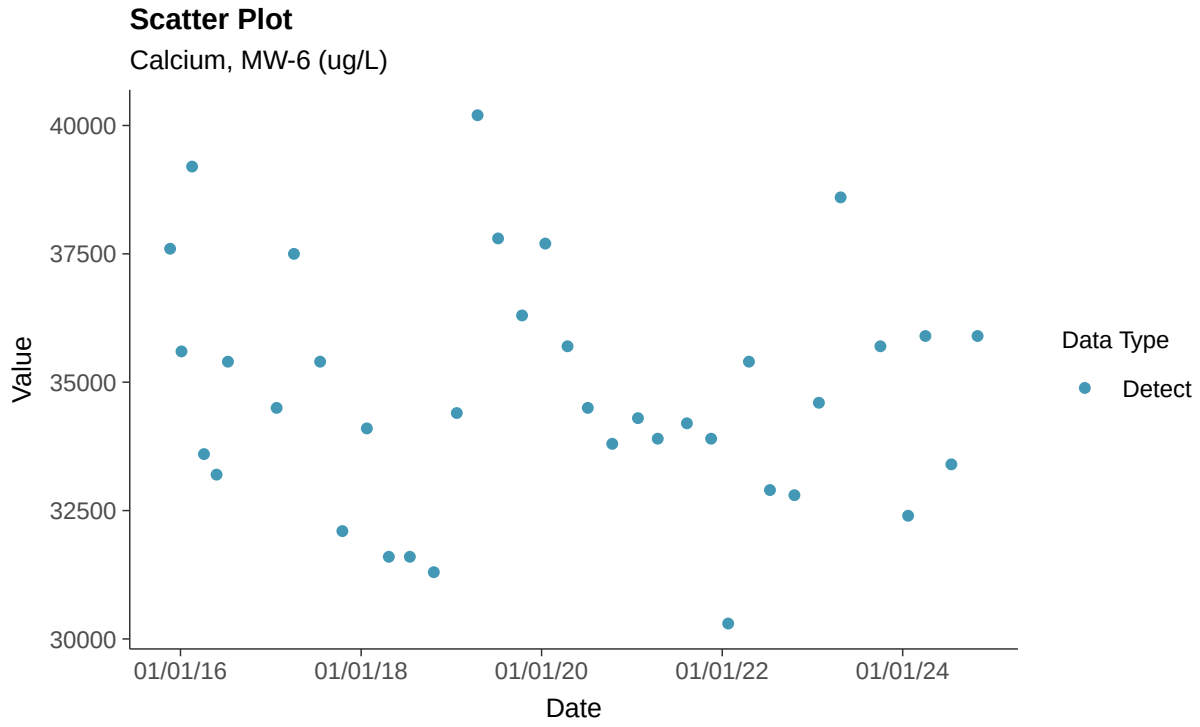
Trend Regression: Piecewise Linear-Linear-Linear

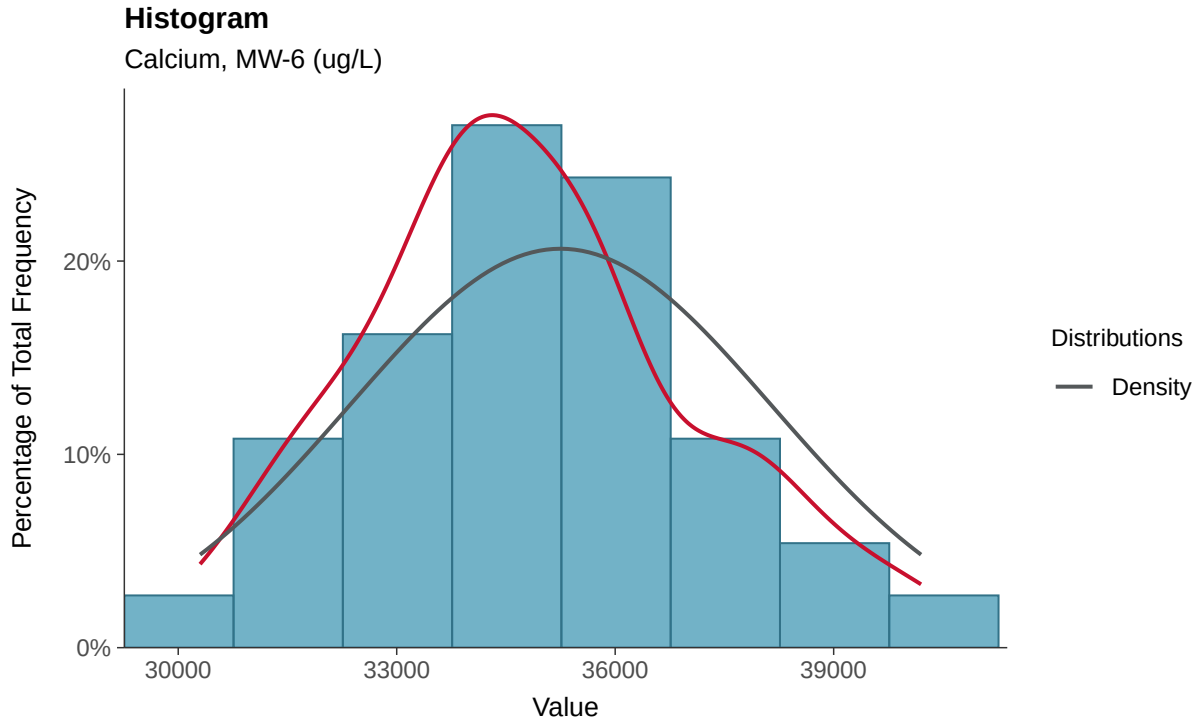
Boron, MW-6 (ug/L)



App. III: Calcium, MW-6

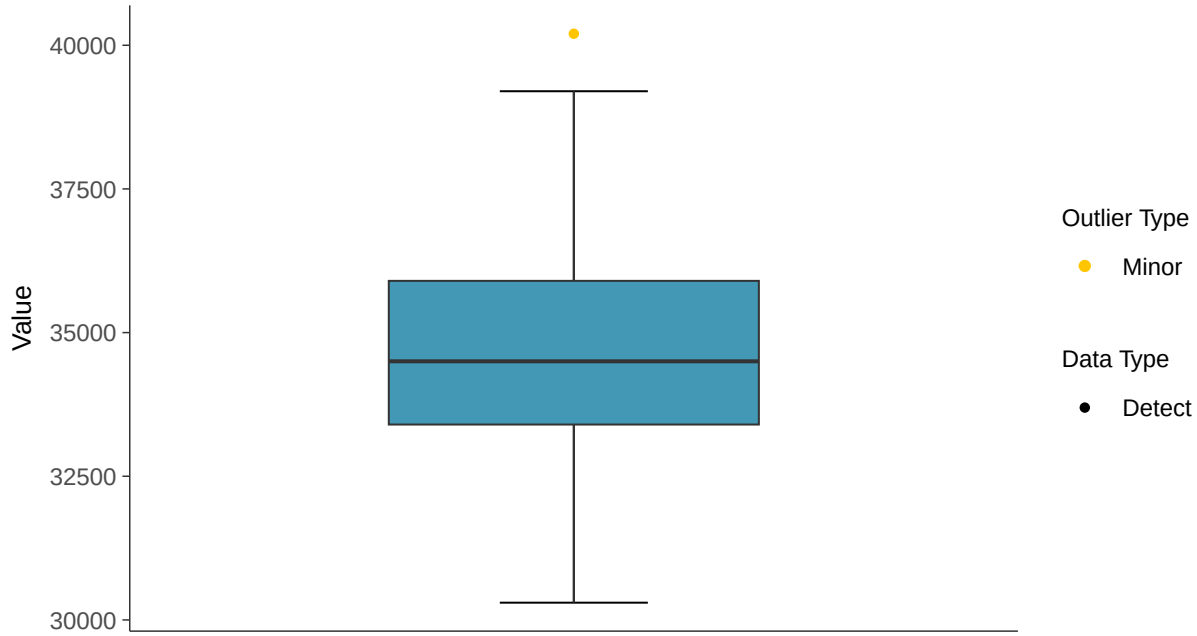
ID: 06_02_107





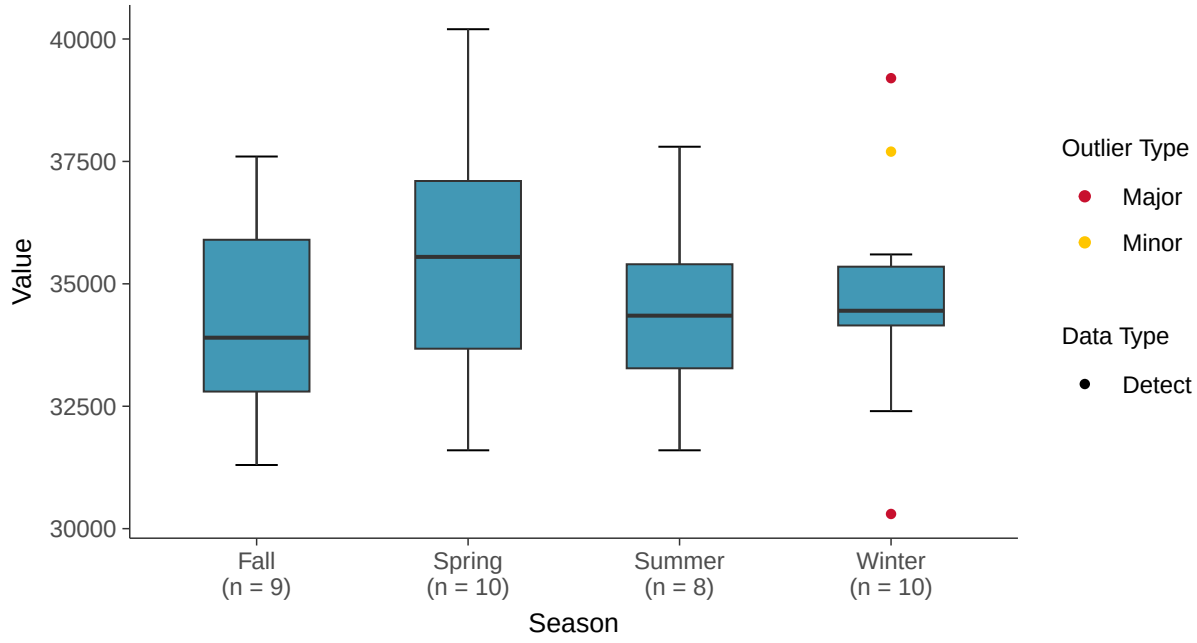
Boxplot

Calcium, MW-6 (ug/L)



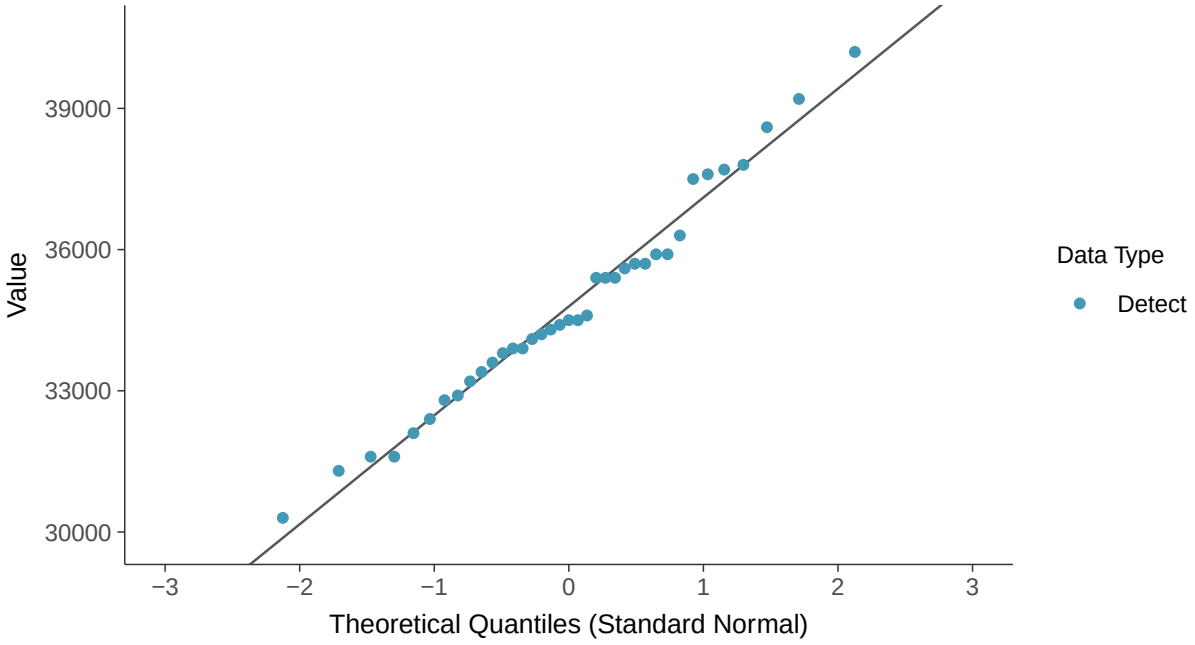
Boxplot by Season

Calcium, MW-6 (ug/L)



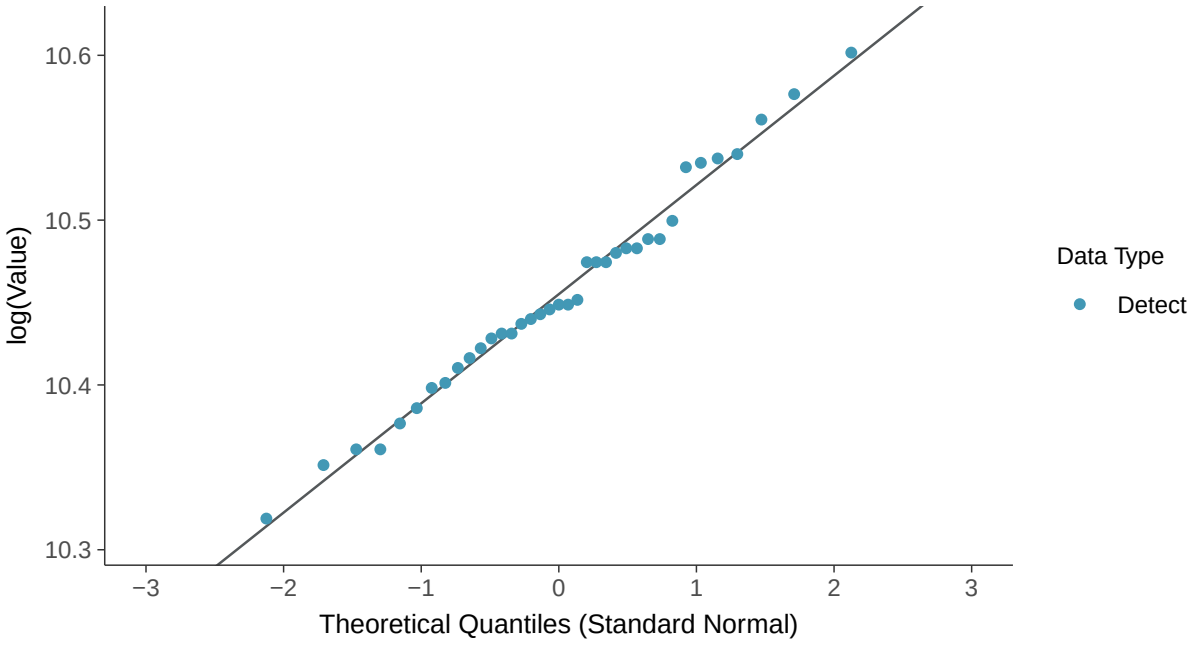
Normal Q-Q plot

Calcium, MW-6 (ug/L)



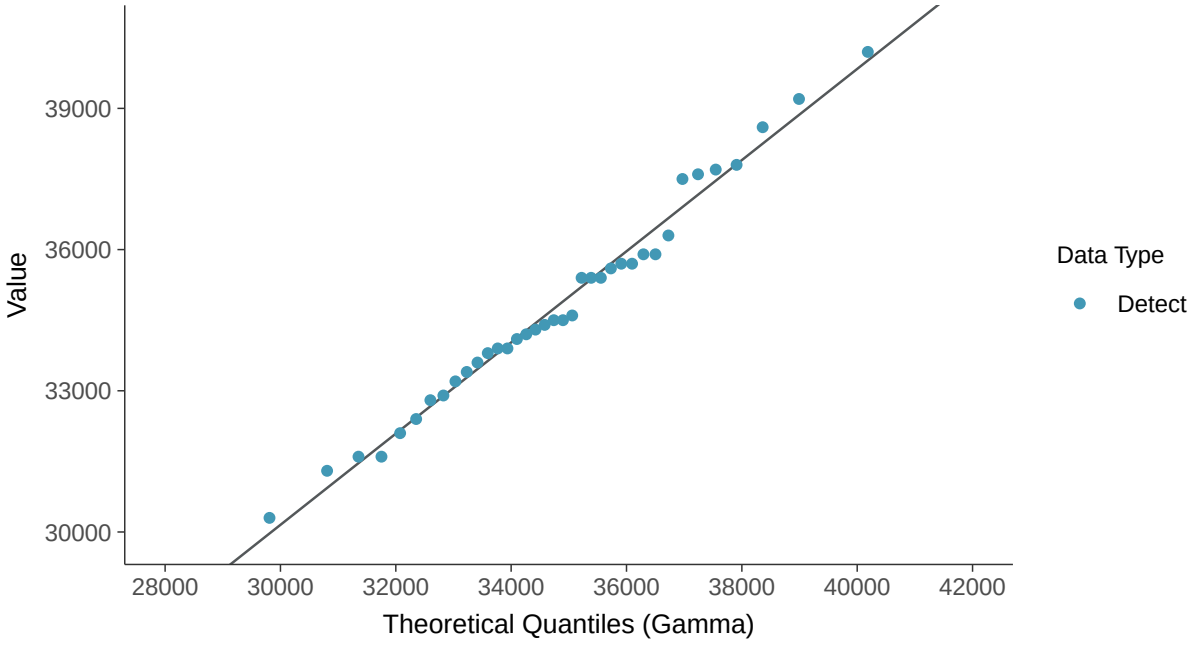
Lognormal Q-Q plot

Calcium, MW-6 (ug/L)



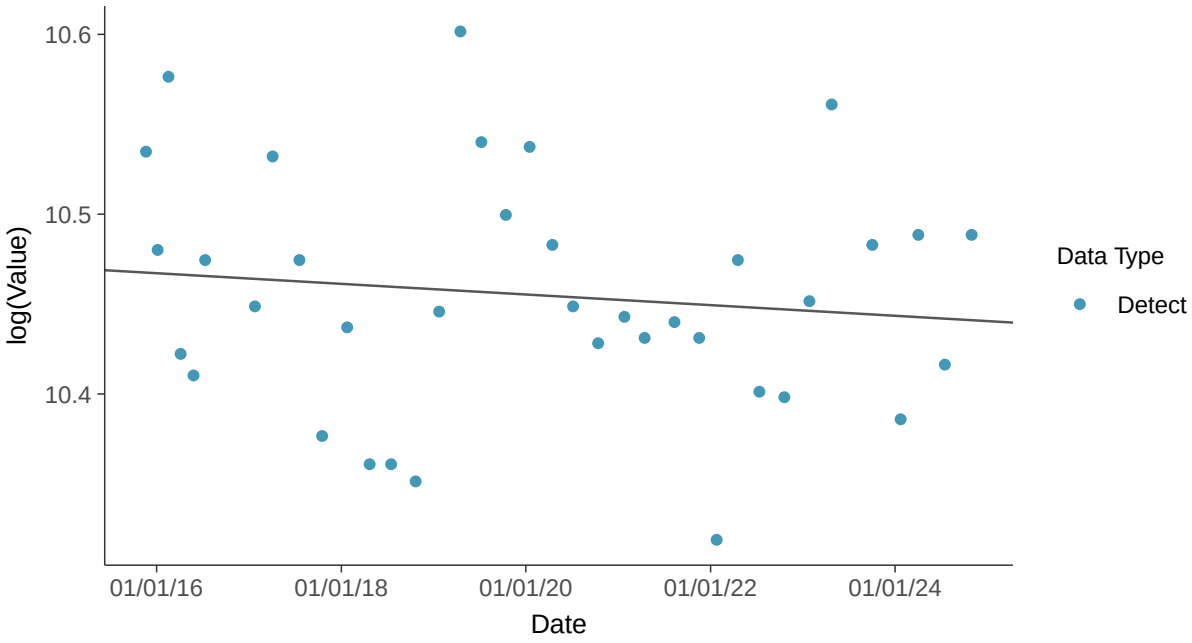
Gamma Q-Q plot

Calcium, MW-6 (ug/L)



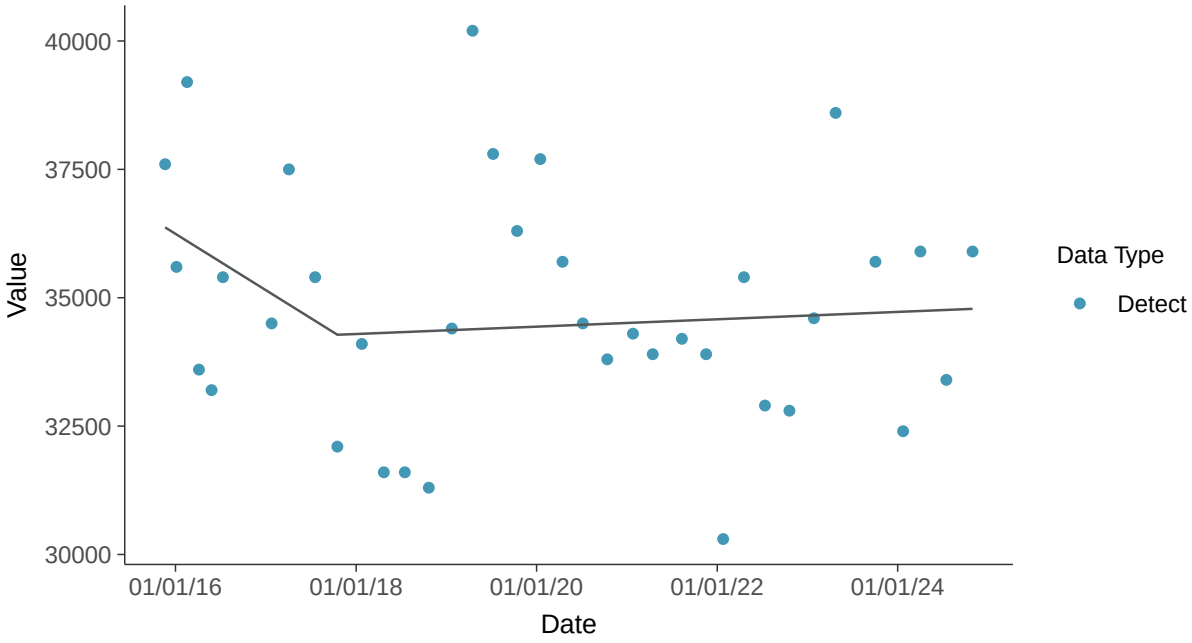
Trend Regression: Lognormal MLE

Calcium, MW-6 (ug/L)



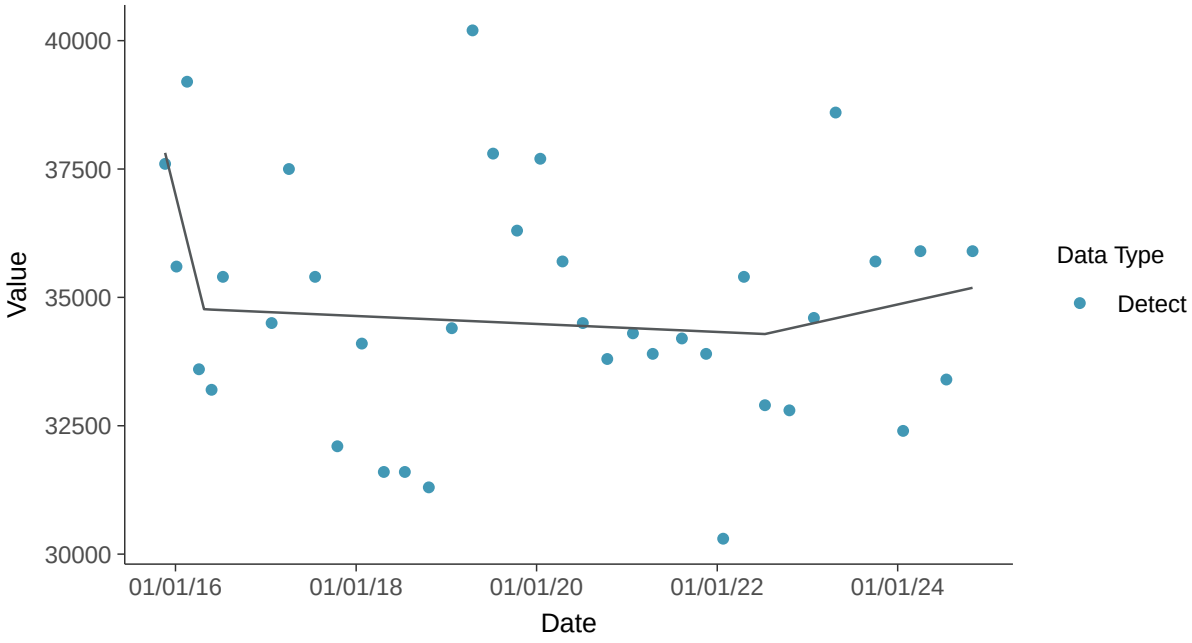
Trend Regression: Piecewise Linear-Linear

Calcium, MW-6 (ug/L)



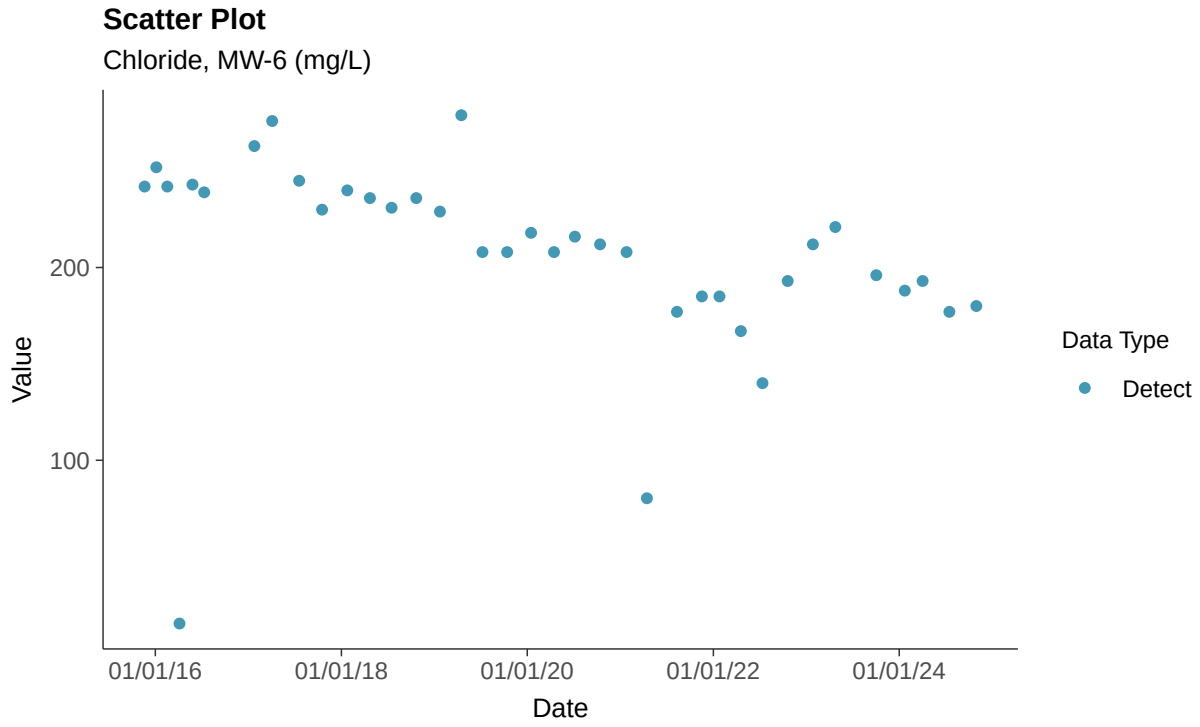
Trend Regression: Piecewise Linear-Linear-Linear

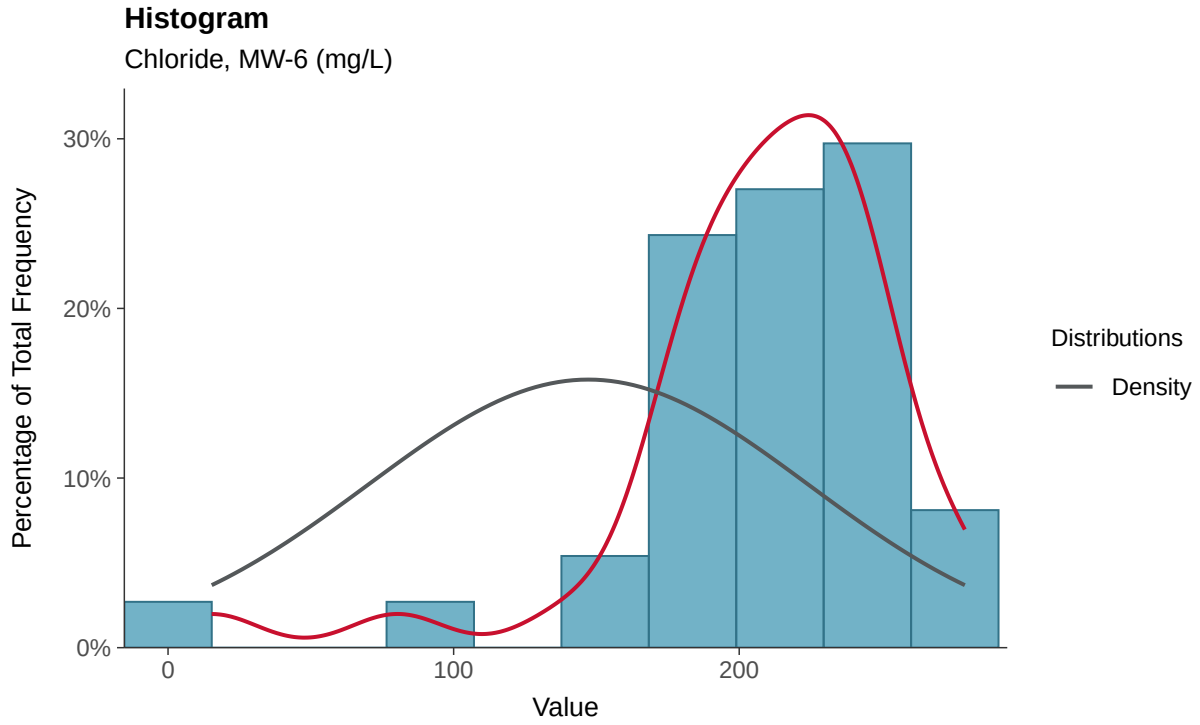
Calcium, MW-6 (ug/L)



App. III: Chloride, MW-6

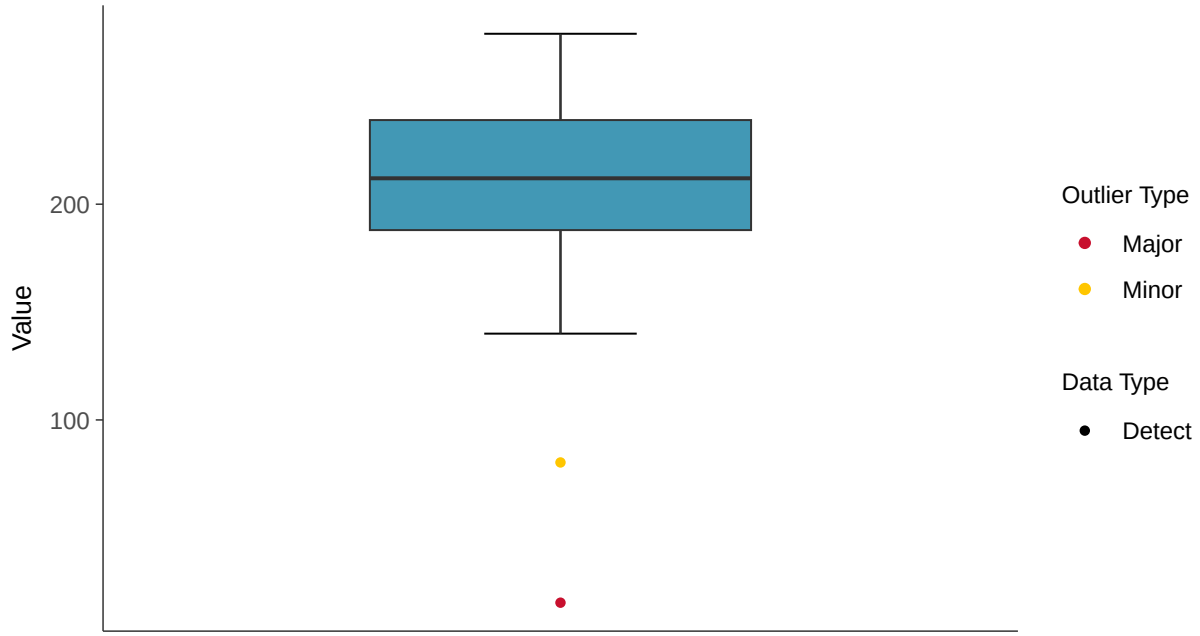
ID: 06_02_108





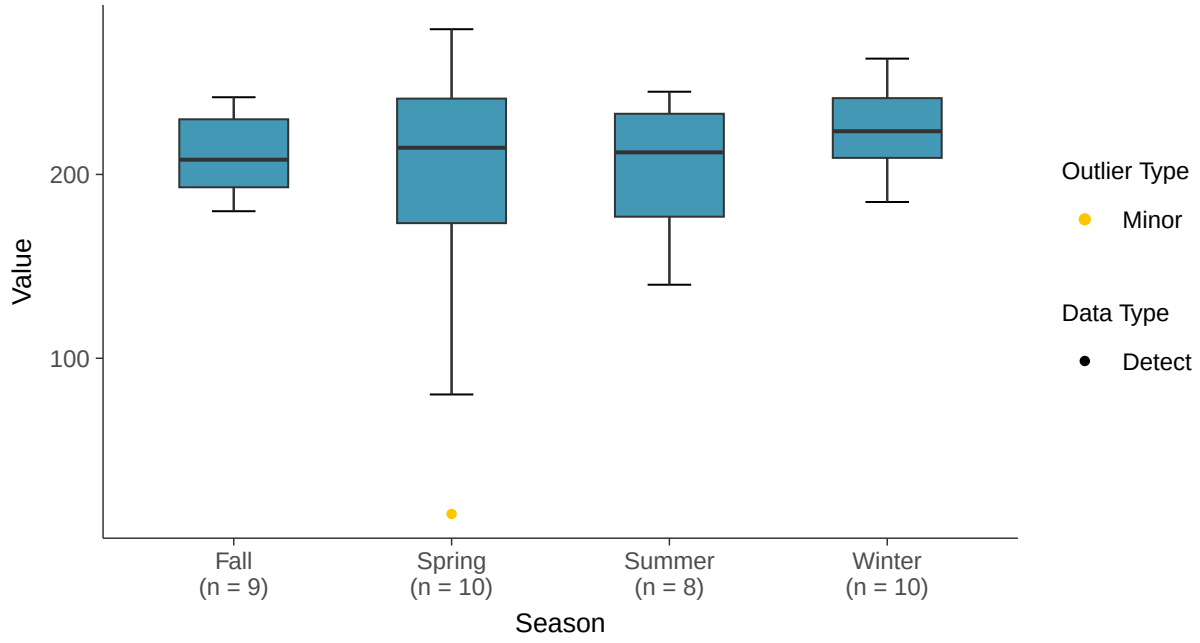
Boxplot

Chloride, MW-6 (mg/L)



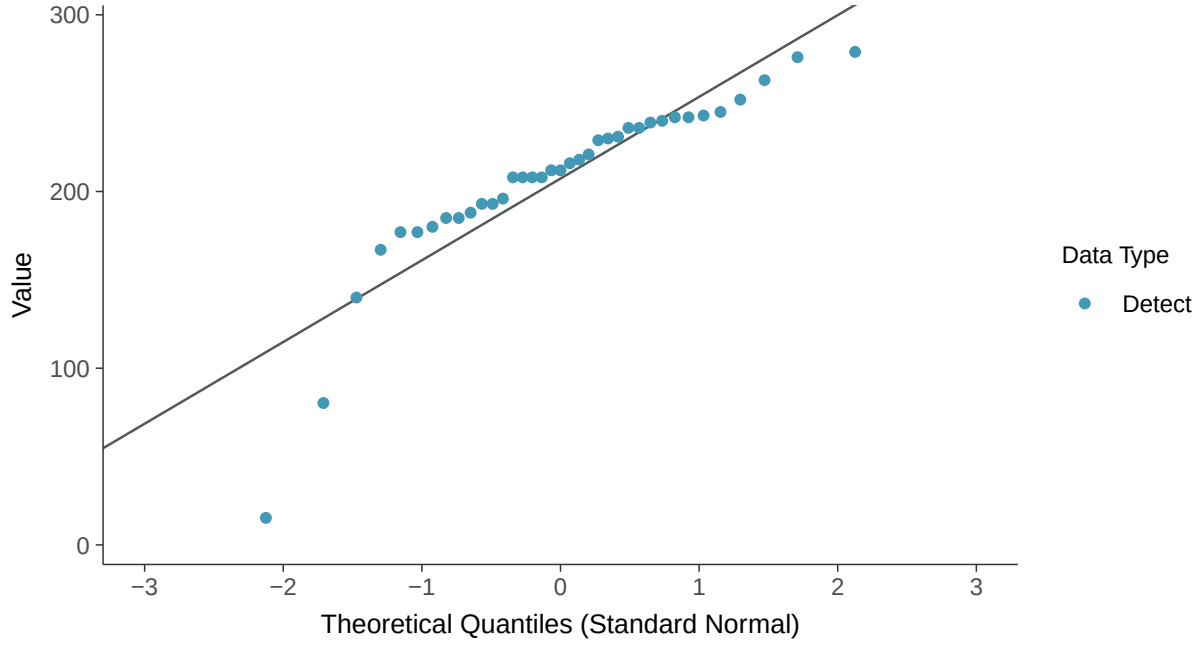
Boxplot by Season

Chloride, MW-6 (mg/L)



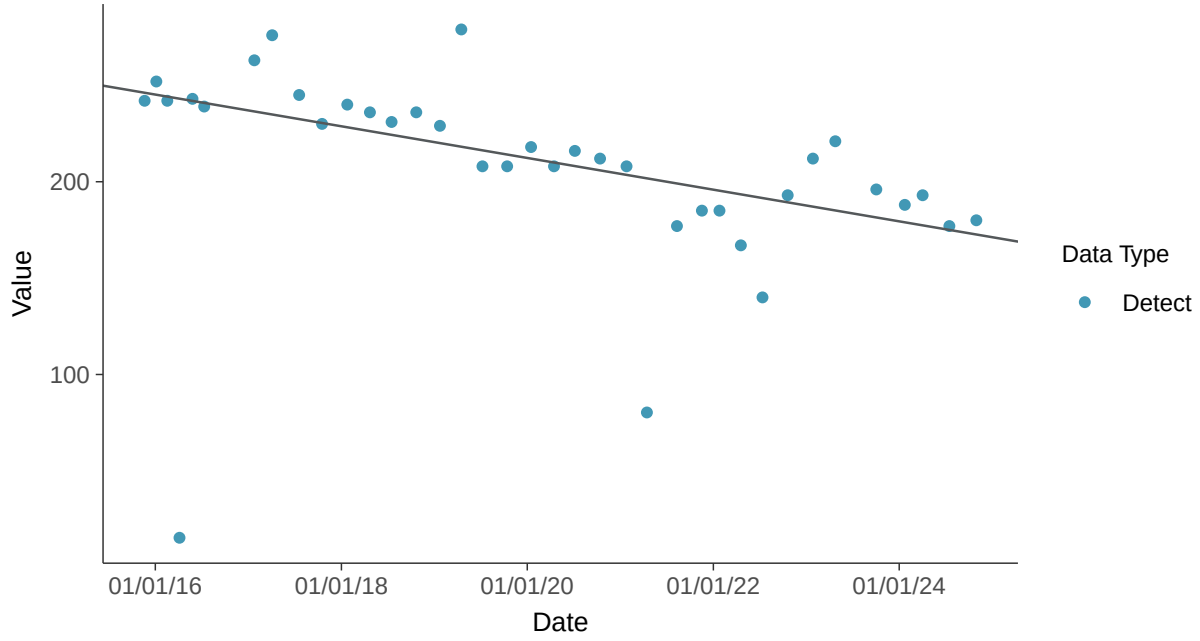
Normal Q-Q plot

Chloride, MW-6 (mg/L)



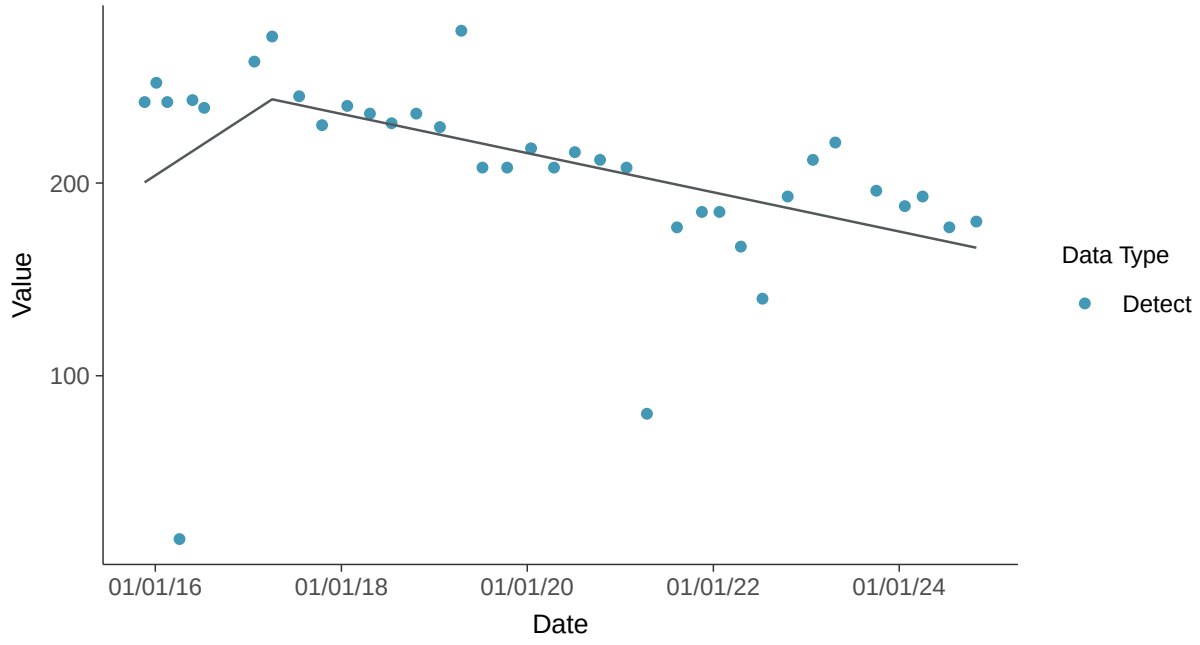
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-6 (mg/L)



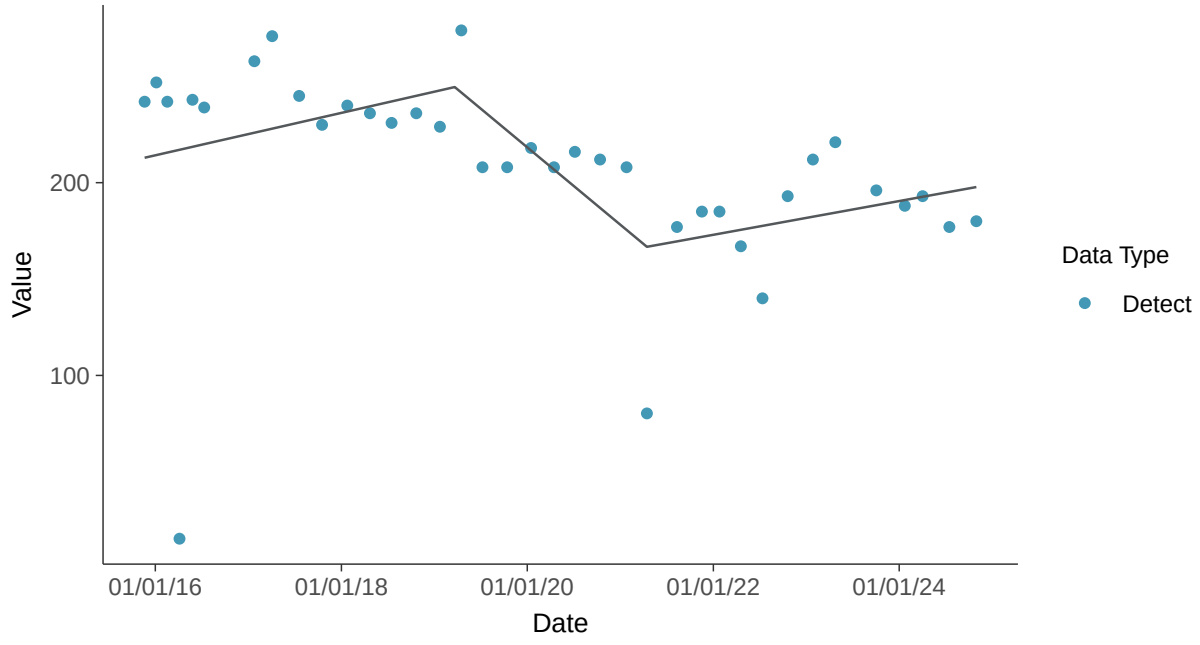
Trend Regression: Piecewise Linear-Linear

Chloride, MW-6 (mg/L)



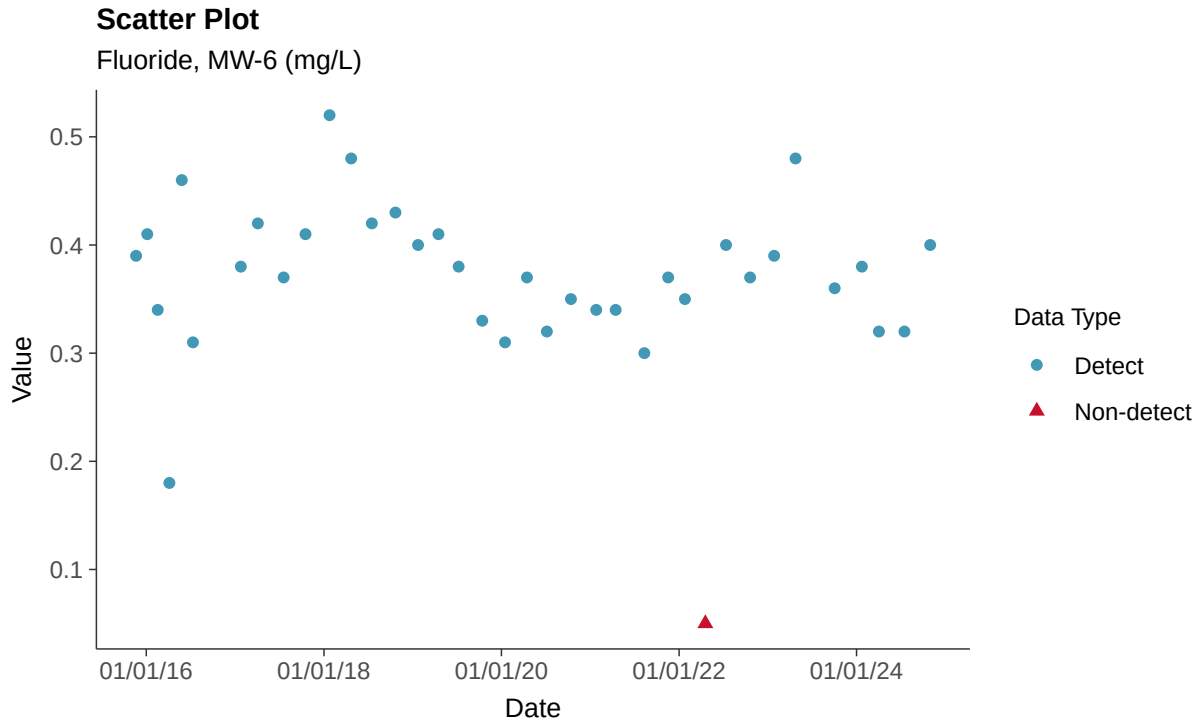
Trend Regression: Piecewise Linear-Linear-Linear

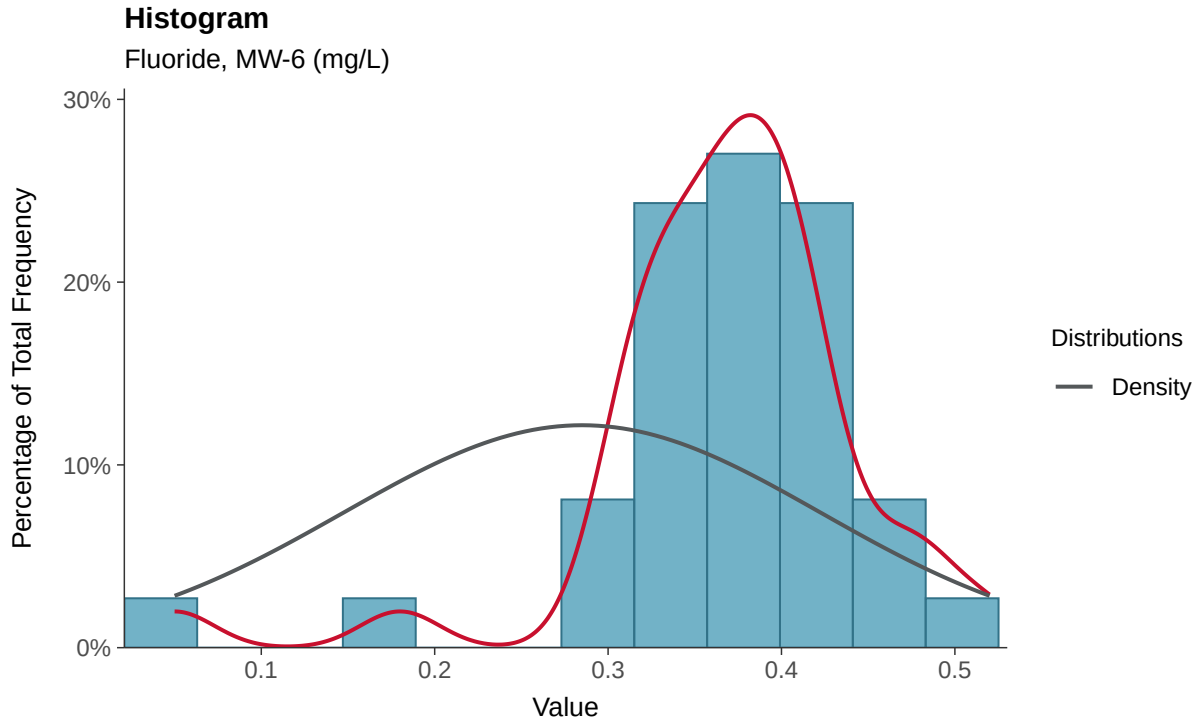
Chloride, MW-6 (mg/L)



App. III: Fluoride, MW-6

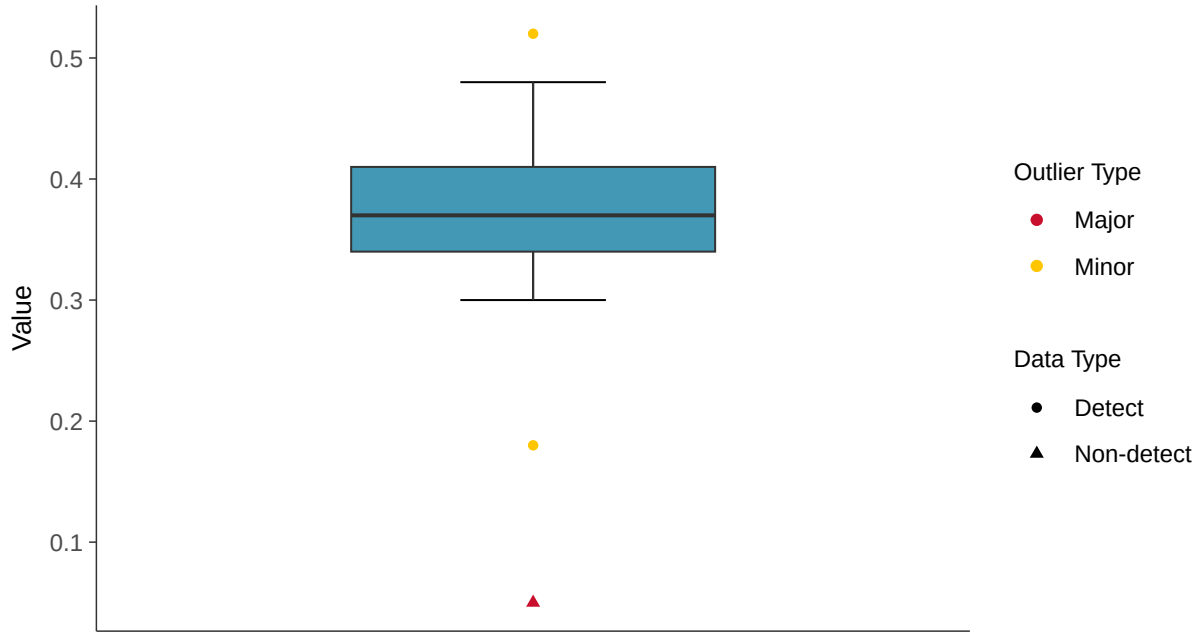
ID: 06_02_112





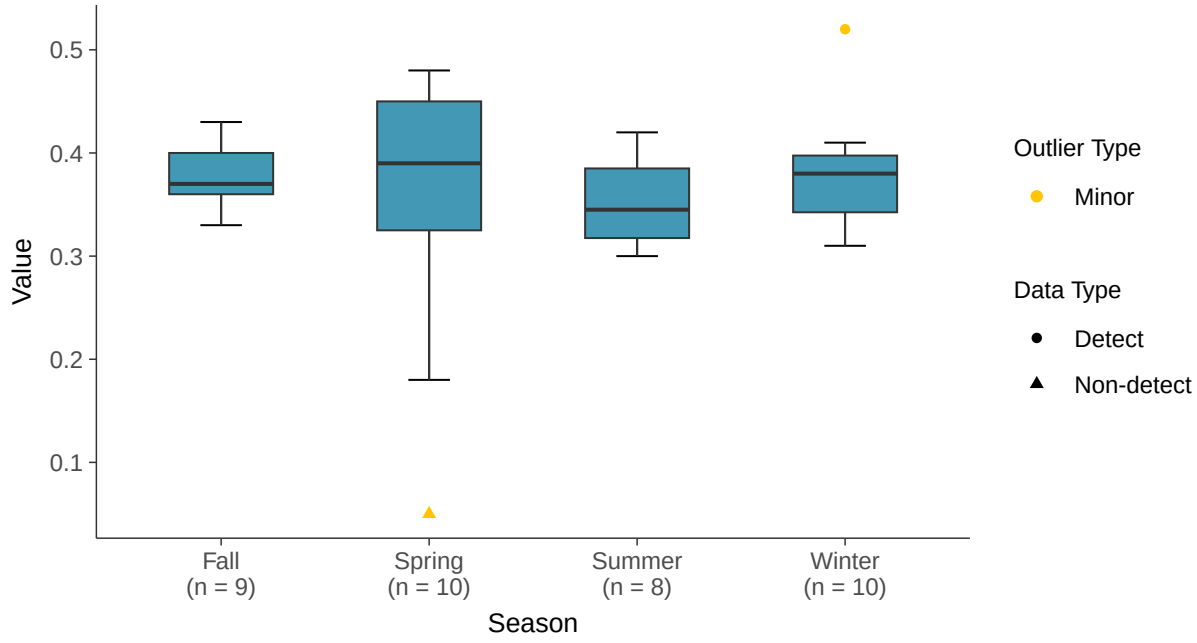
Boxplot

Fluoride, MW-6 (mg/L)



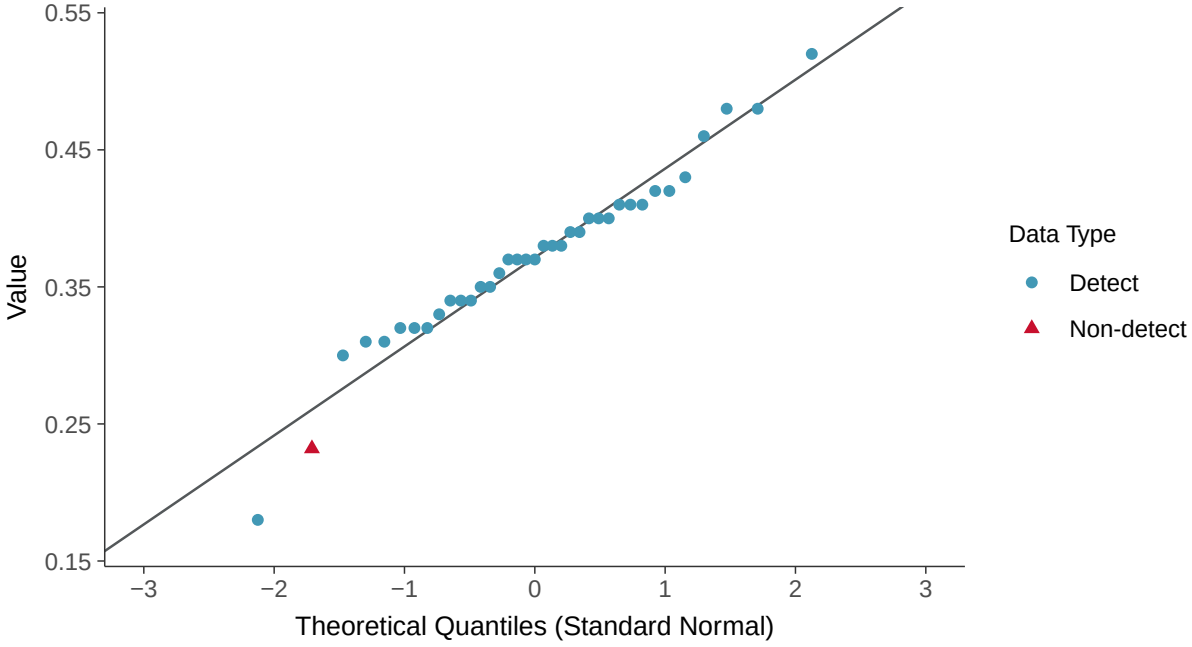
Boxplot by Season

Fluoride, MW-6 (mg/L)



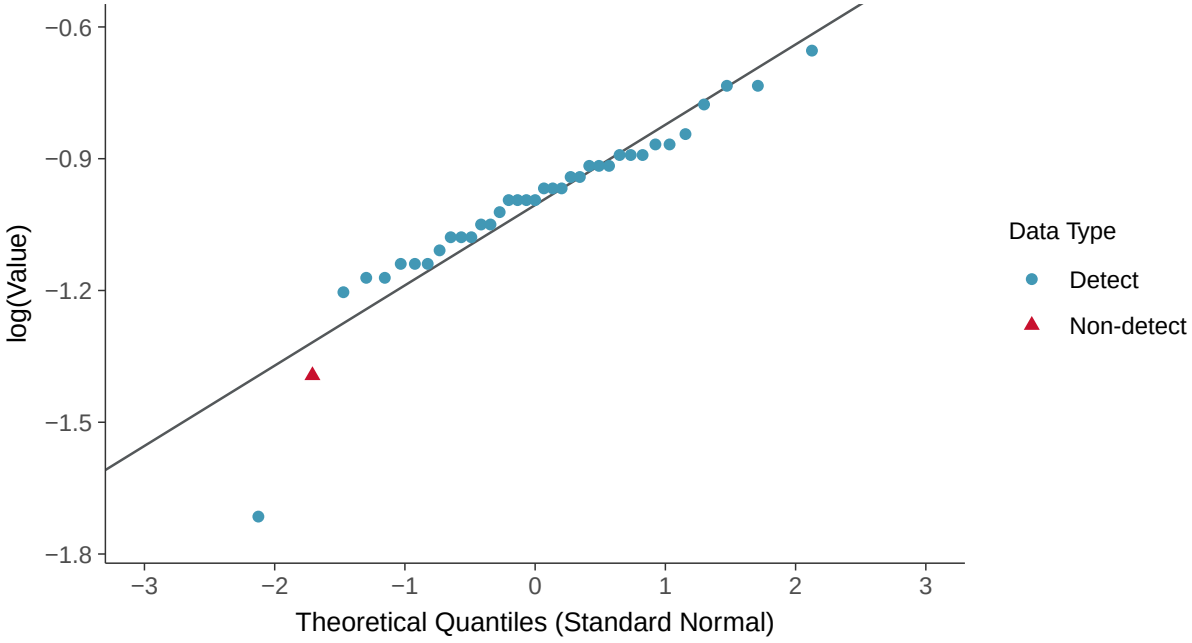
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



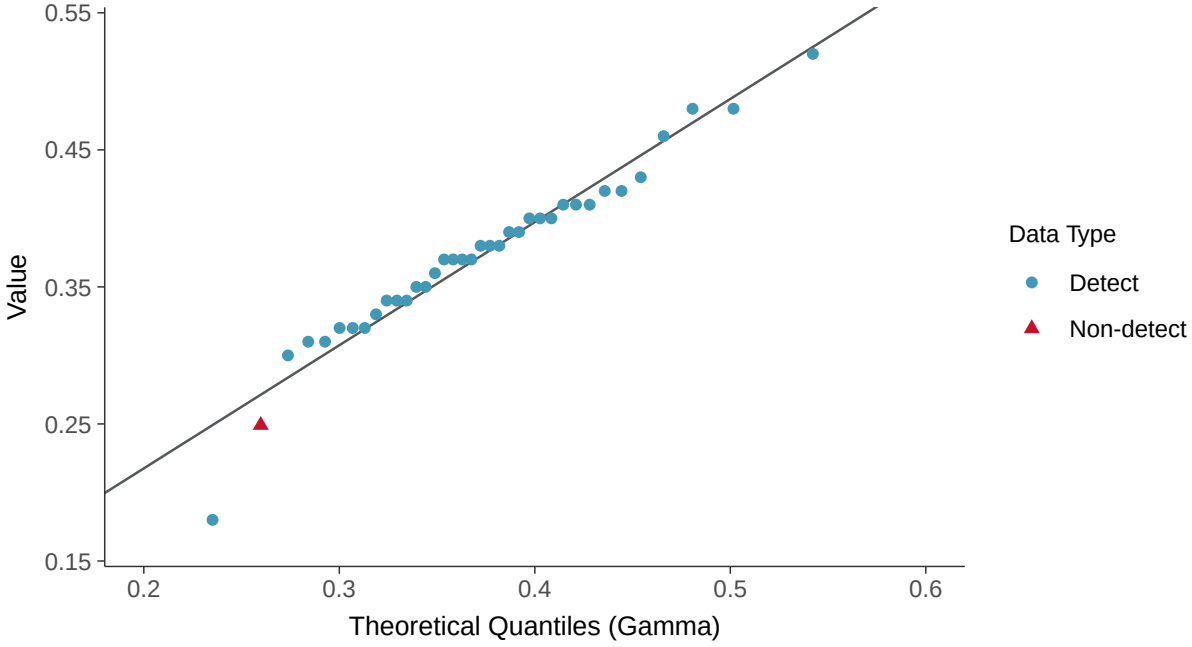
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



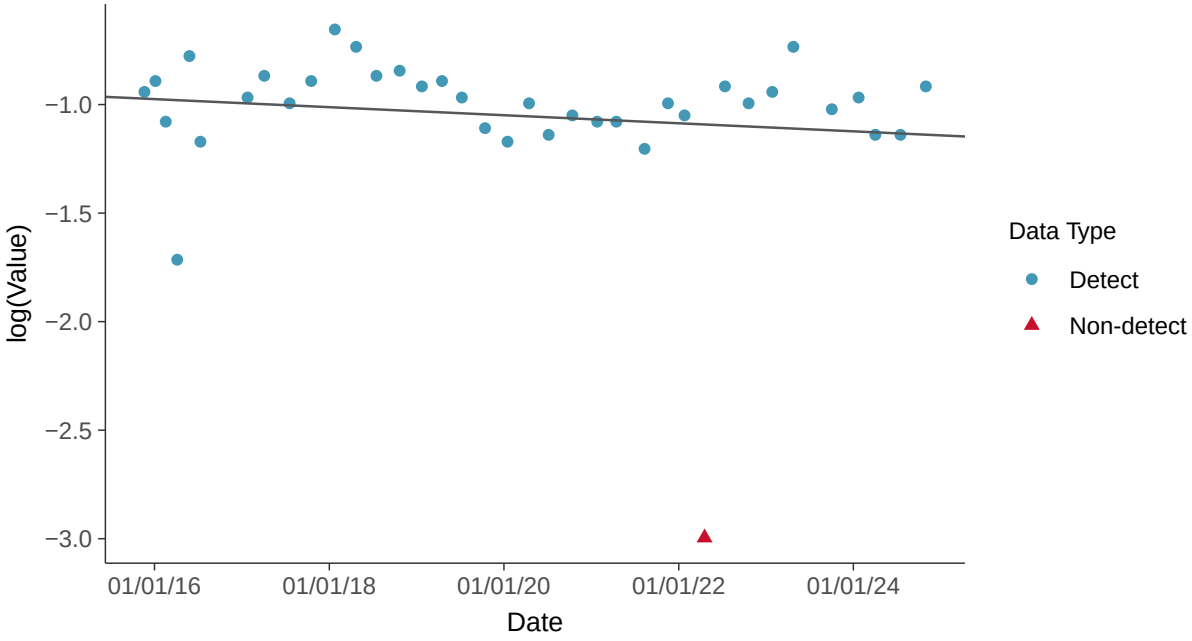
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



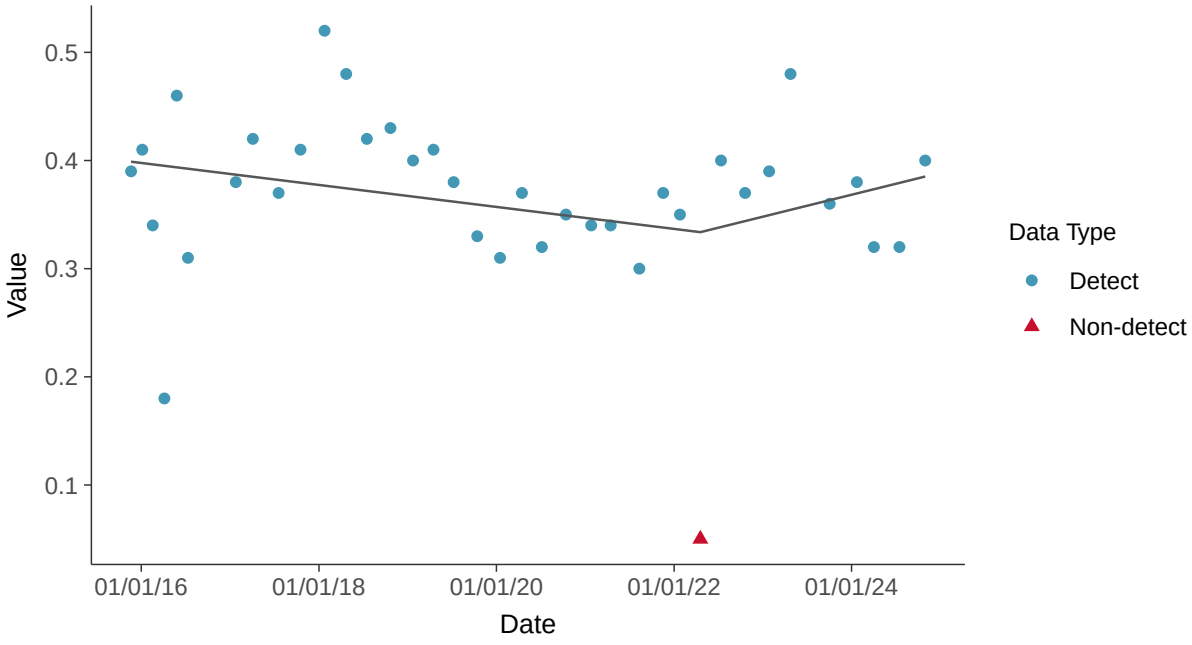
Trend Regression: Lognormal MLE

Fluoride, MW-6 (mg/L)



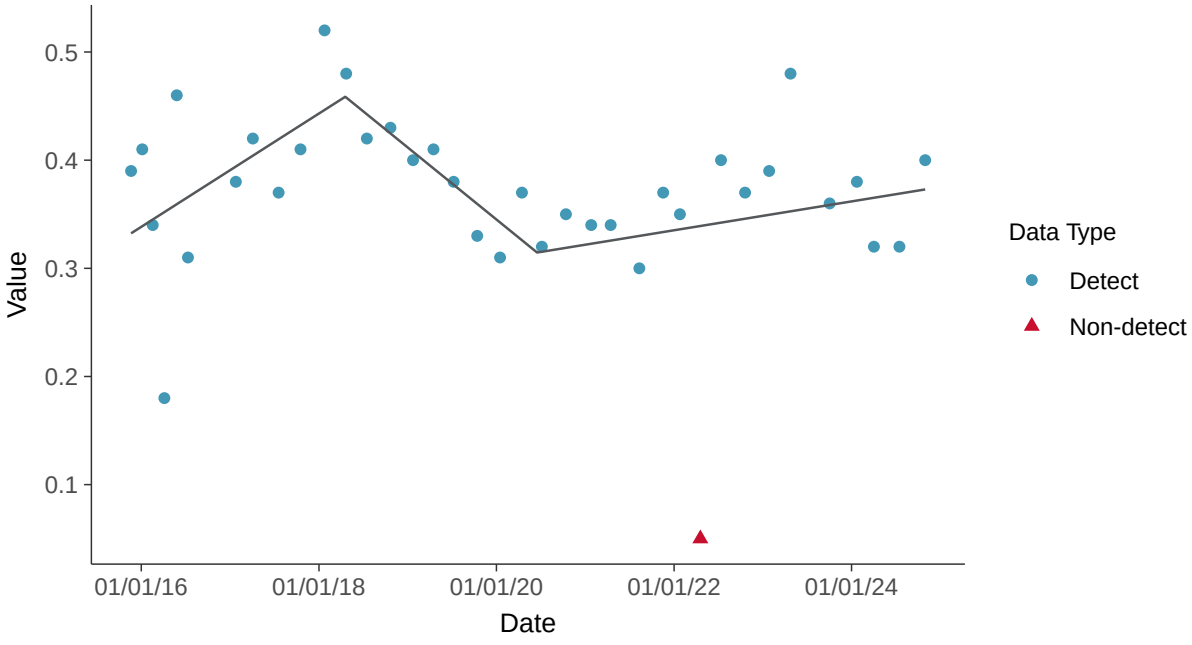
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-6 (mg/L)

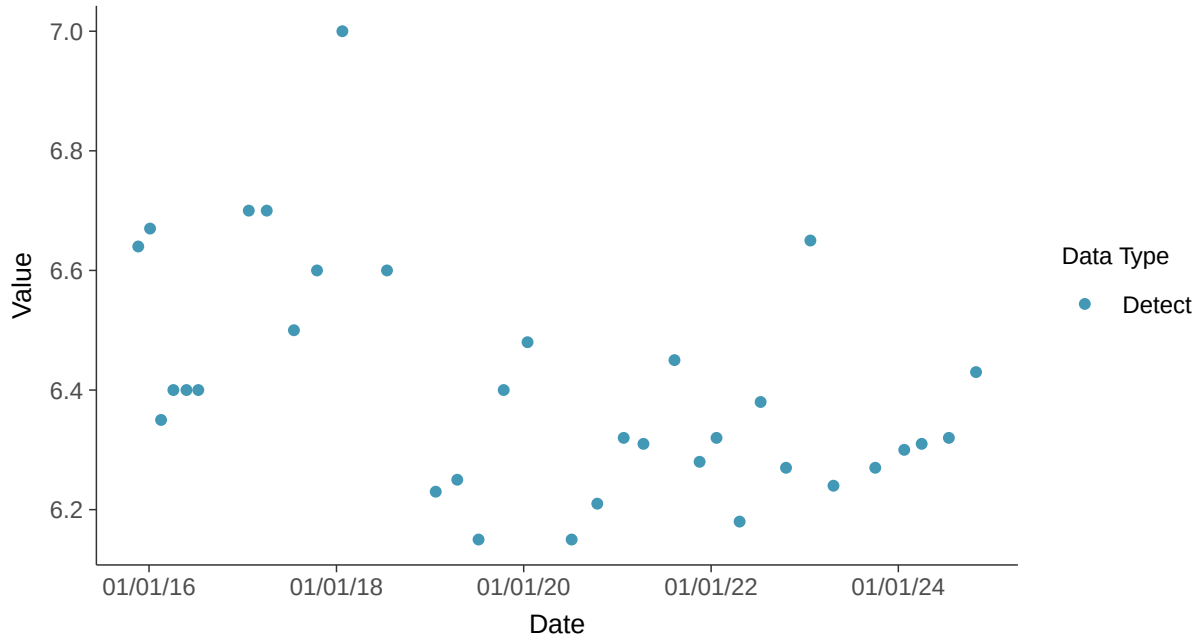


App. III: pH (Field), MW-6

ID: 06_02_118

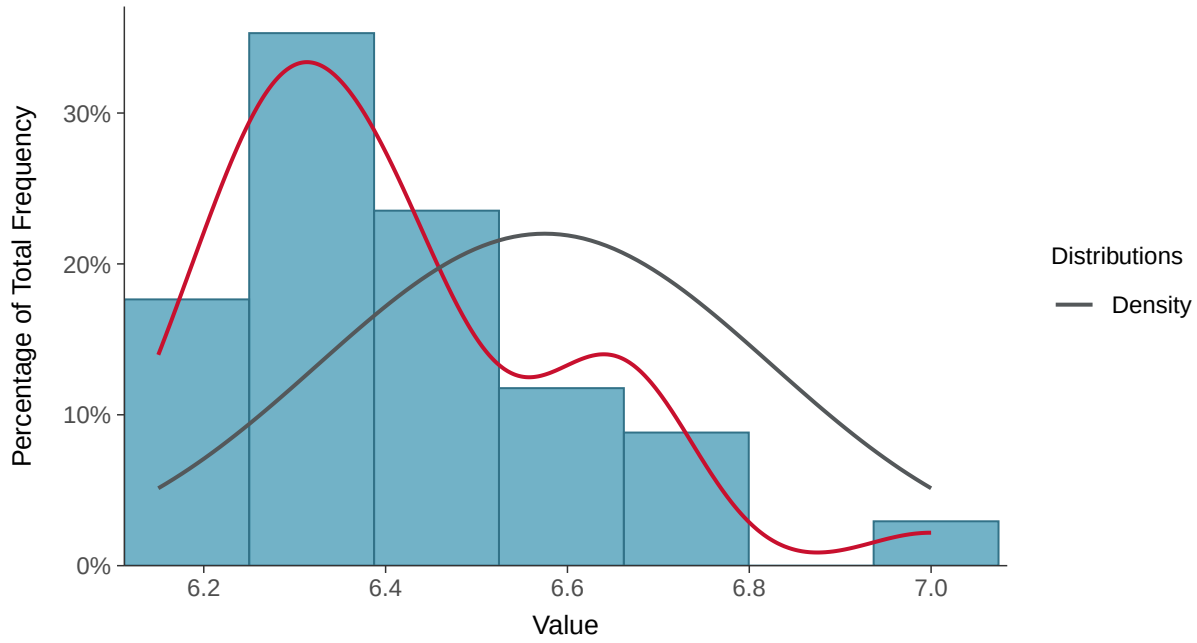
Scatter Plot

pH (Field), MW-6 (S.U.)



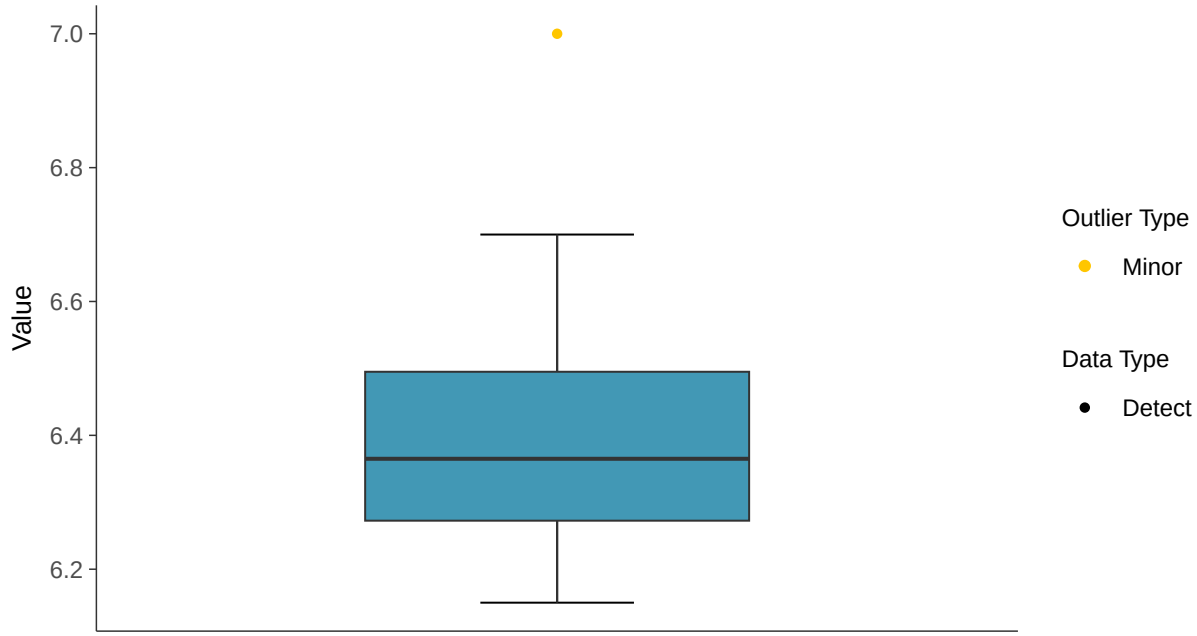
Histogram

pH (Field), MW-6 (S.U.)



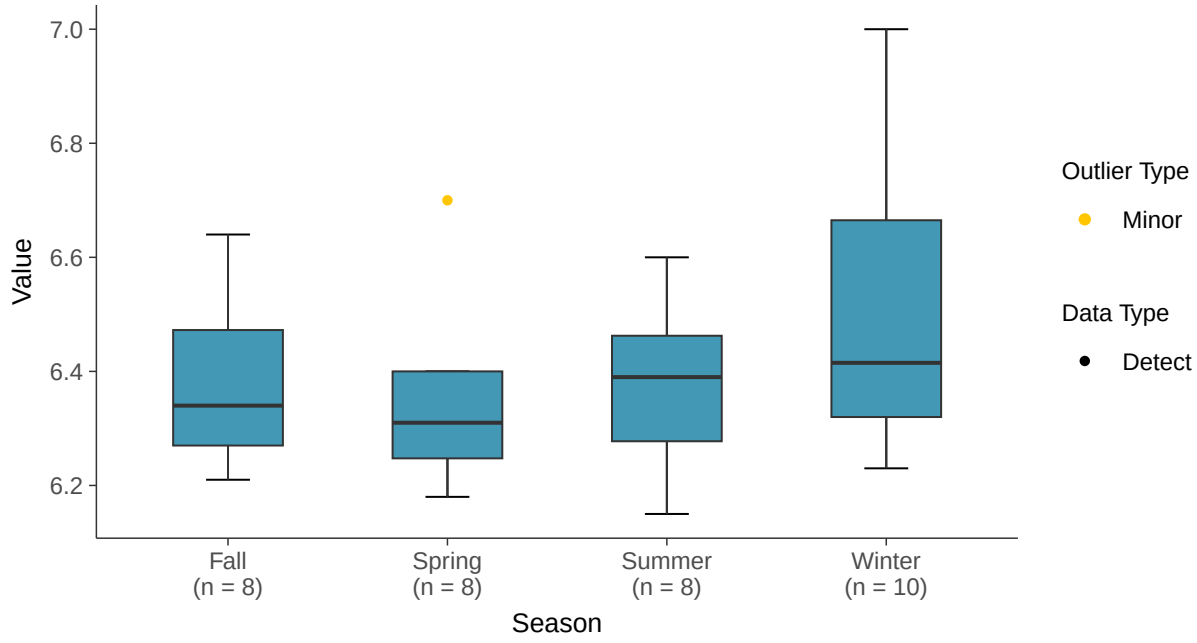
Boxplot

pH (Field), MW-6 (S.U.)



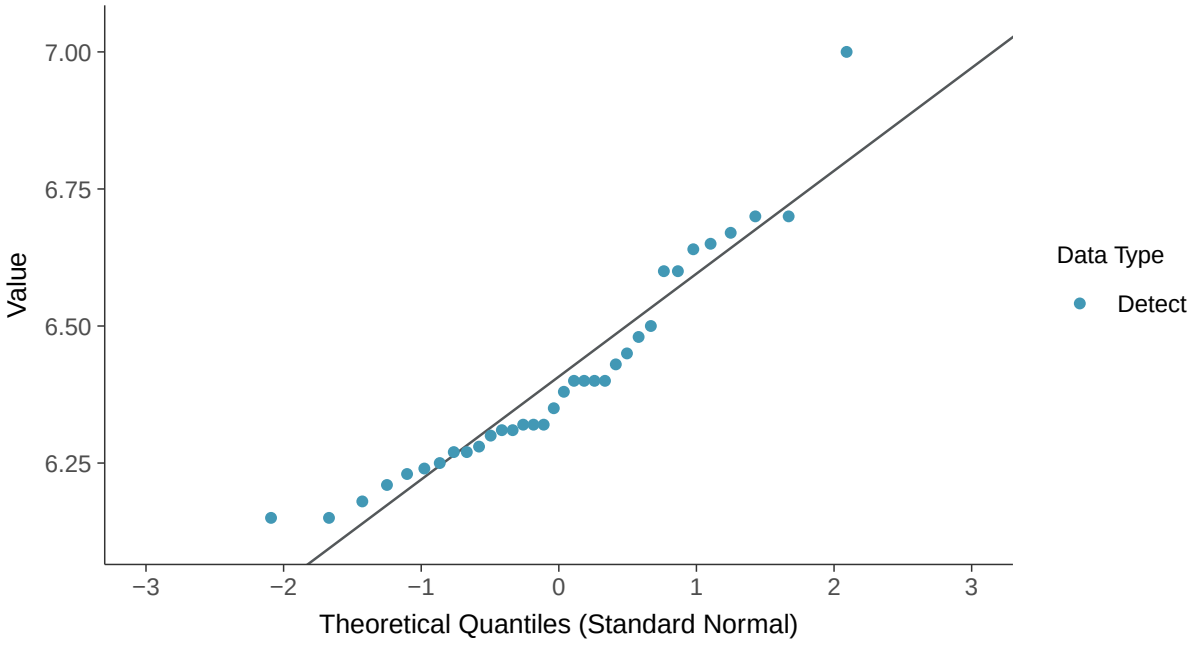
Boxplot by Season

pH (Field), MW-6 (S.U.)



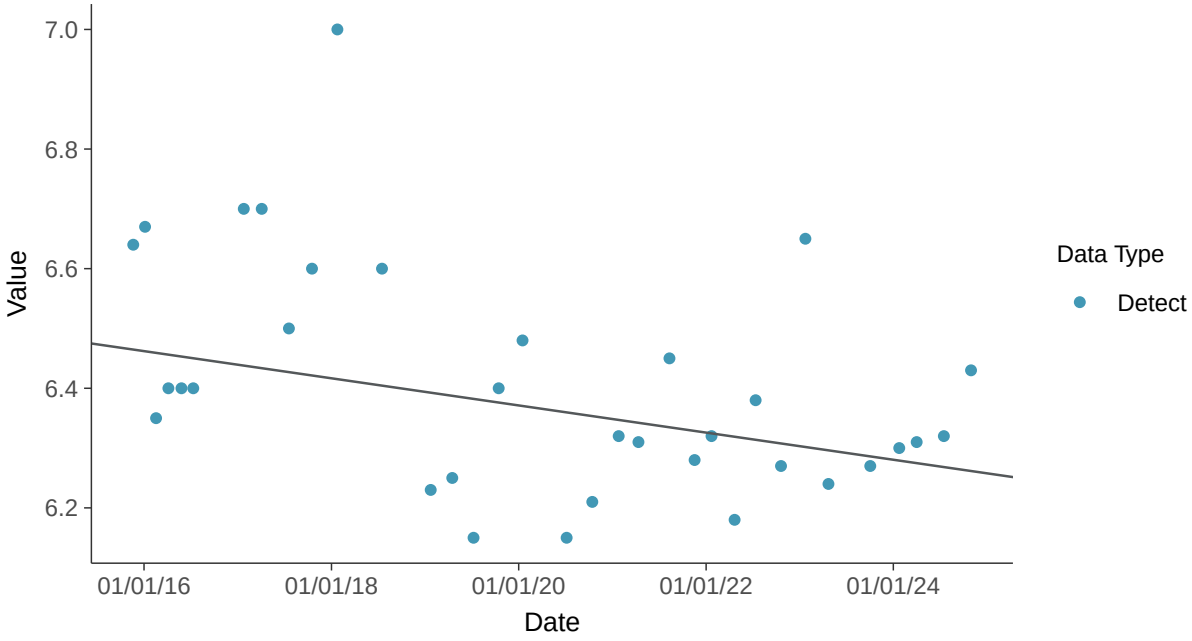
Normal Q-Q plot

pH (Field), MW-6 (S.U.)



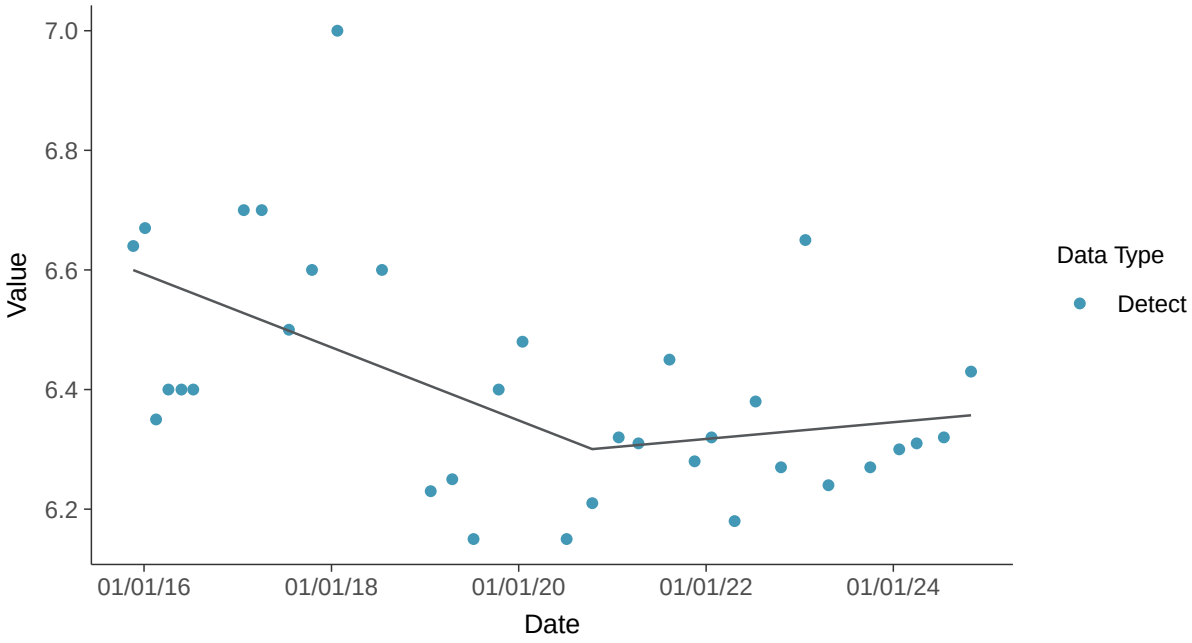
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-6 (S.U.)



Trend Regression: Piecewise Linear-Linear

pH (Field), MW-6 (S.U.)

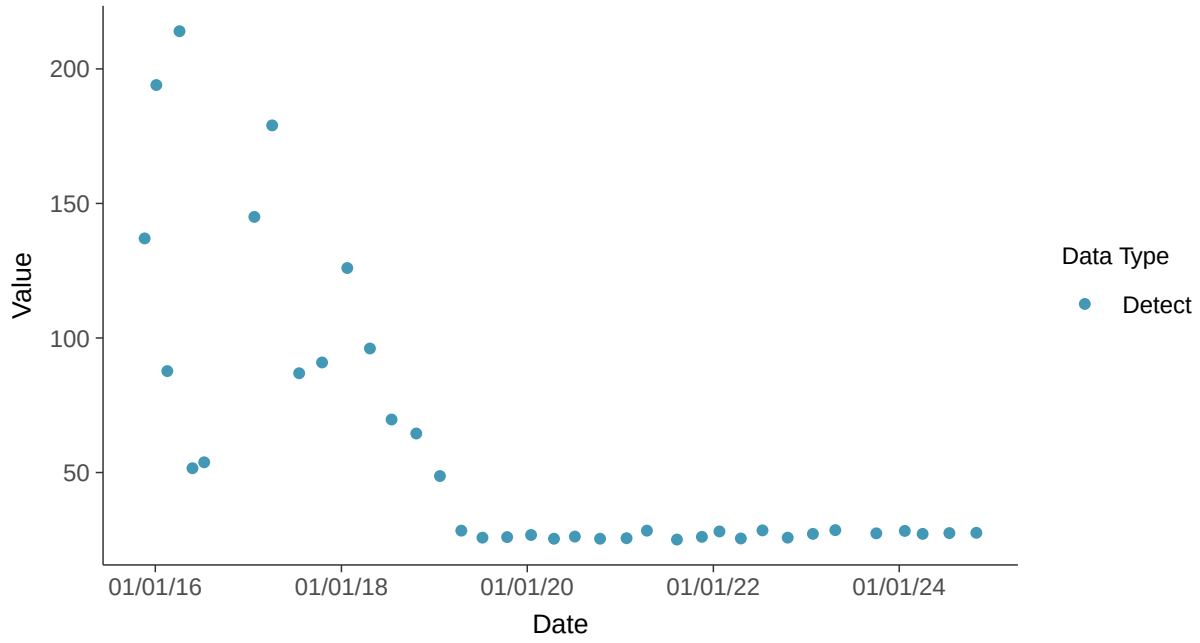


App. III: Sulfate, MW-6

ID: 06_02_123

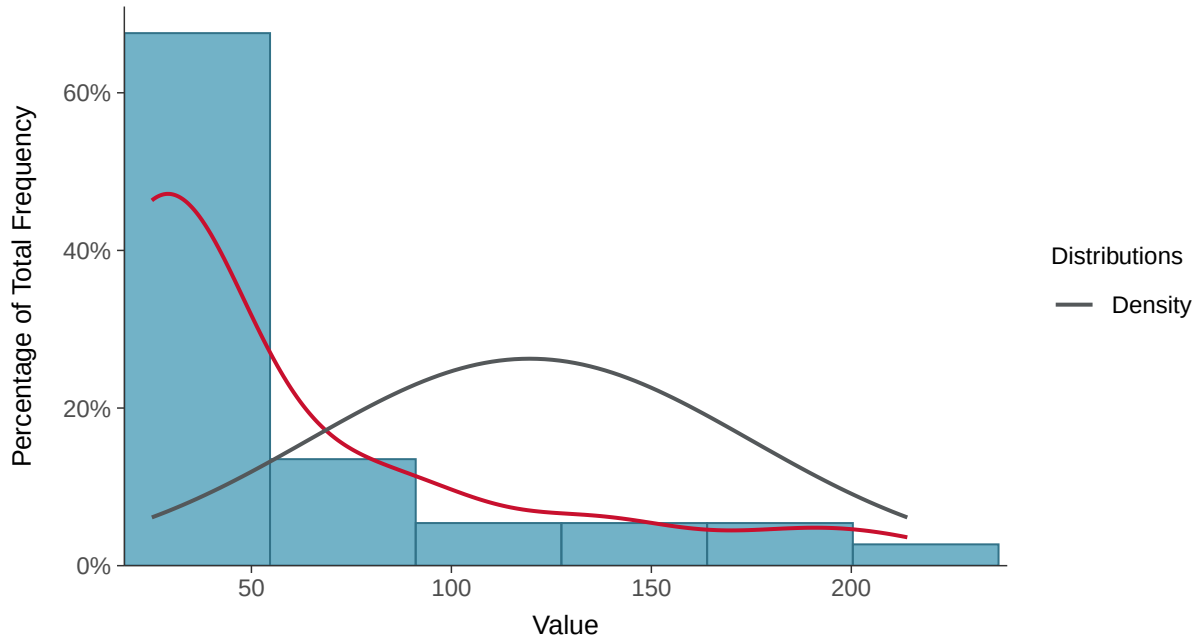
Scatter Plot

Sulfate, MW-6 (mg/L)



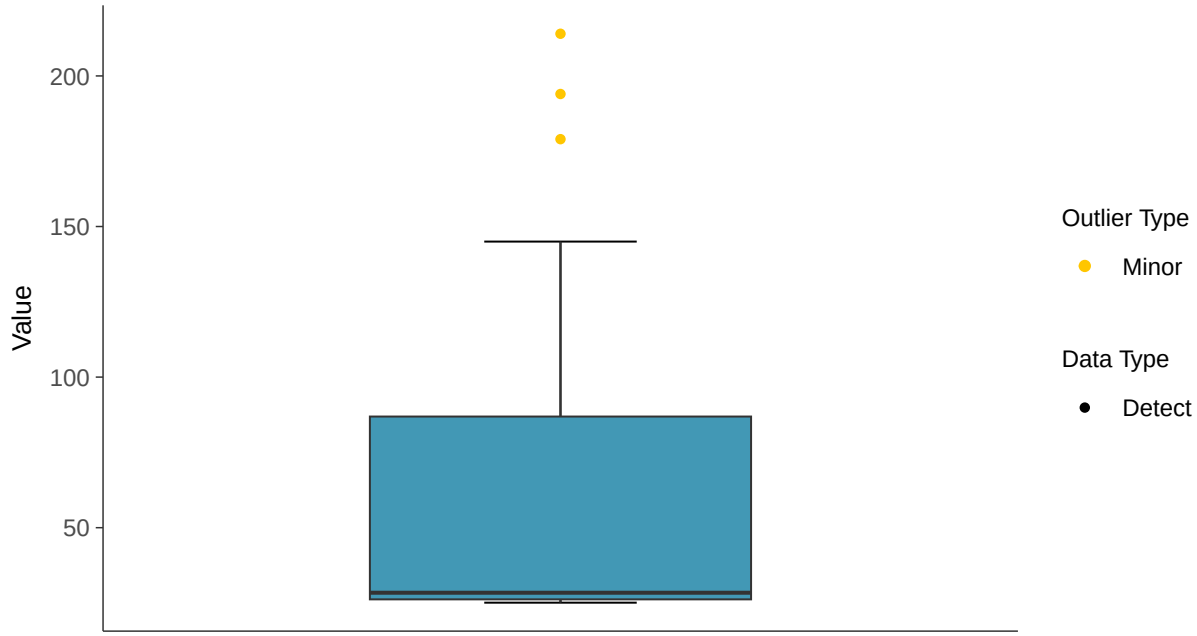
Histogram

Sulfate, MW-6 (mg/L)



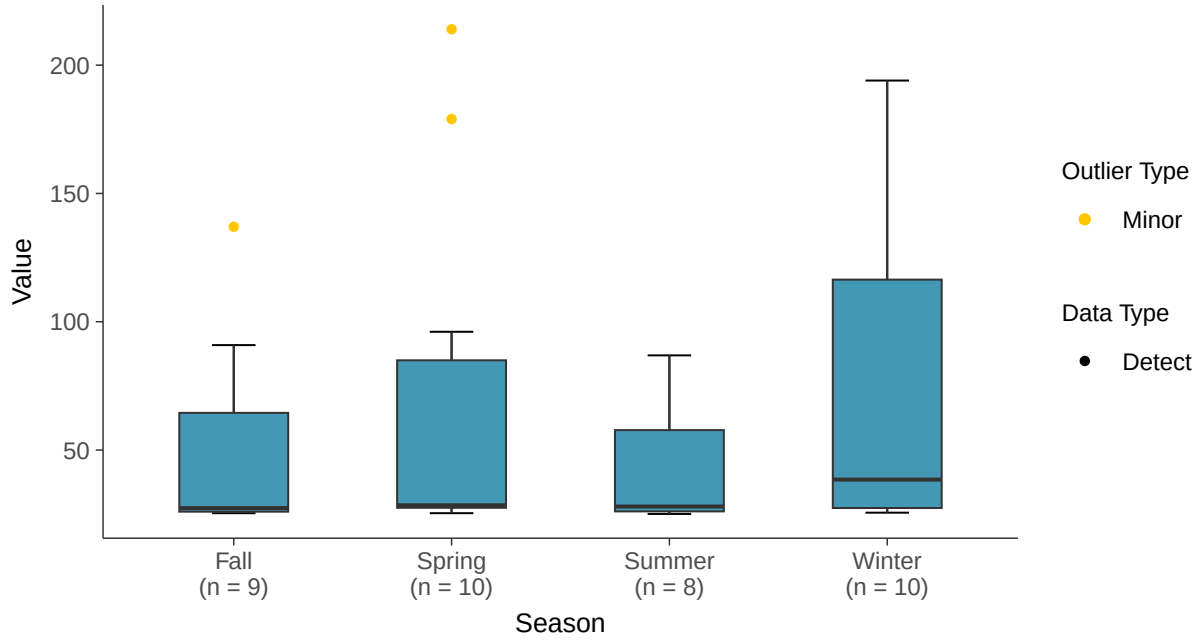
Boxplot

Sulfate, MW-6 (mg/L)



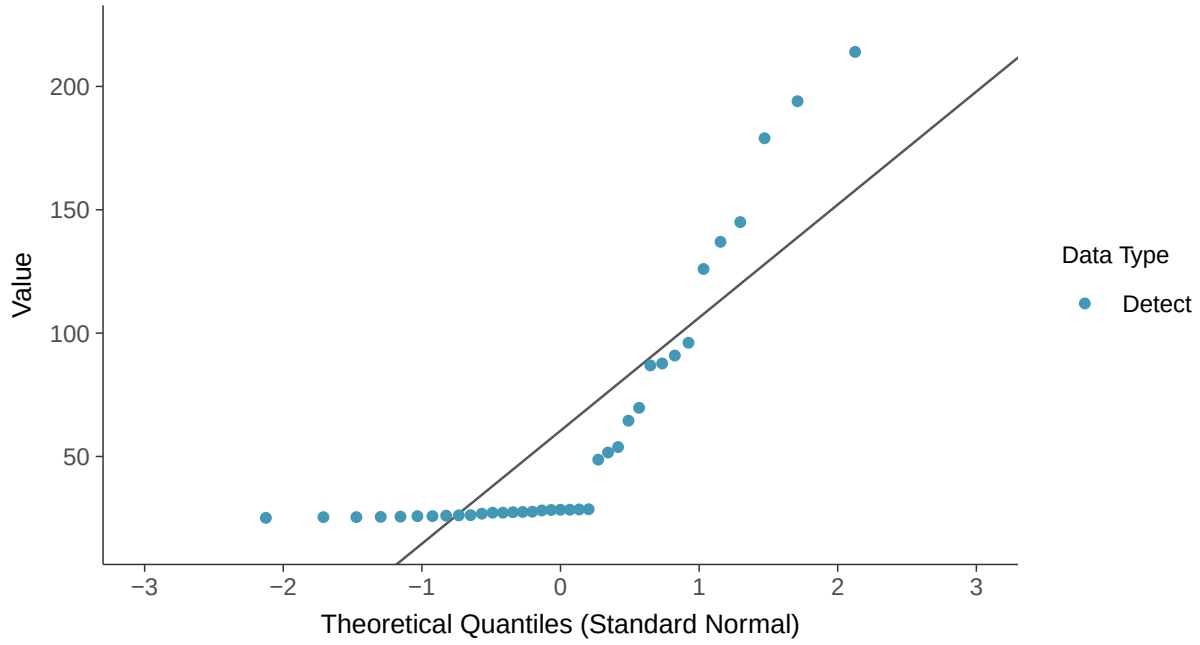
Boxplot by Season

Sulfate, MW-6 (mg/L)



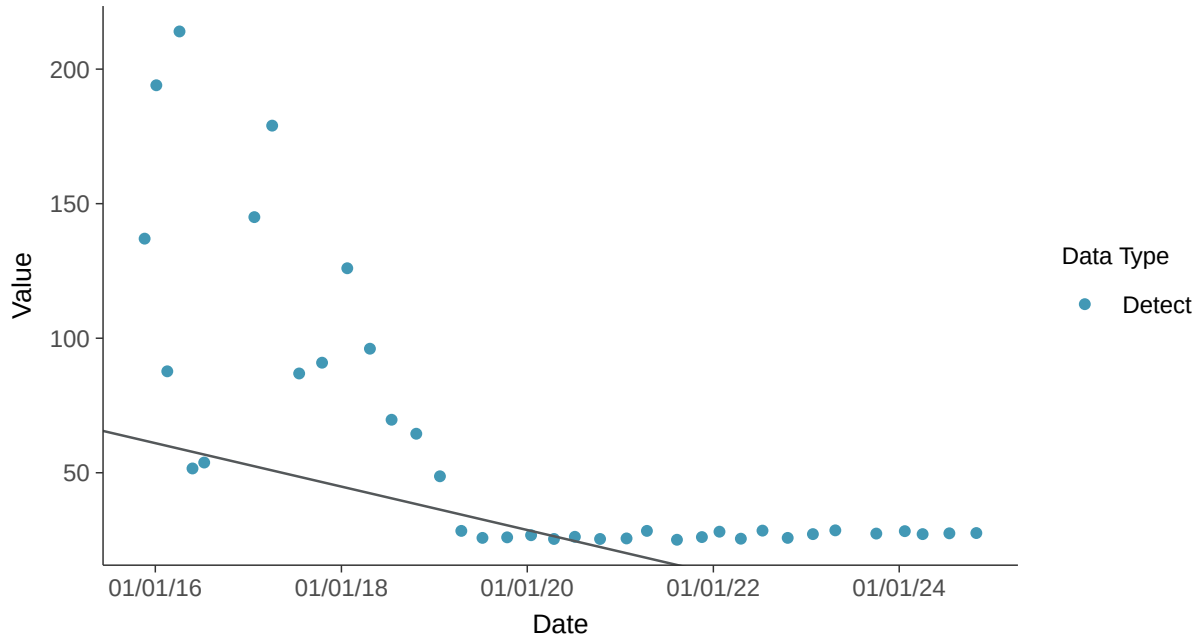
Normal Q-Q plot

Sulfate, MW-6 (mg/L)



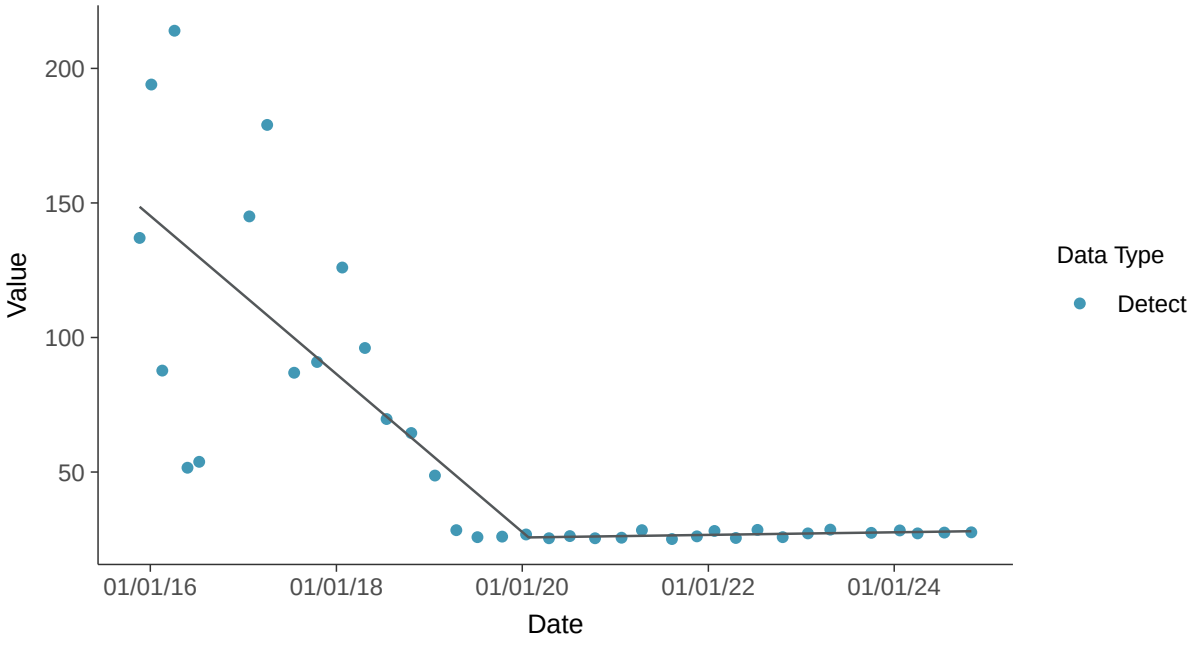
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-6 (mg/L)



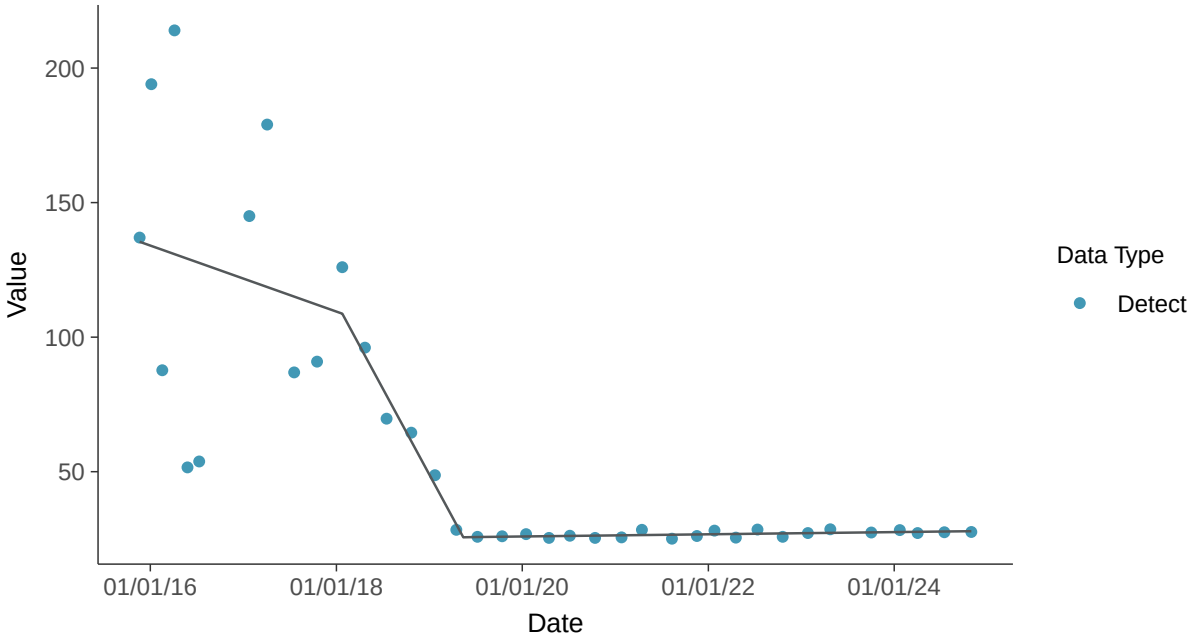
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-6 (mg/L)

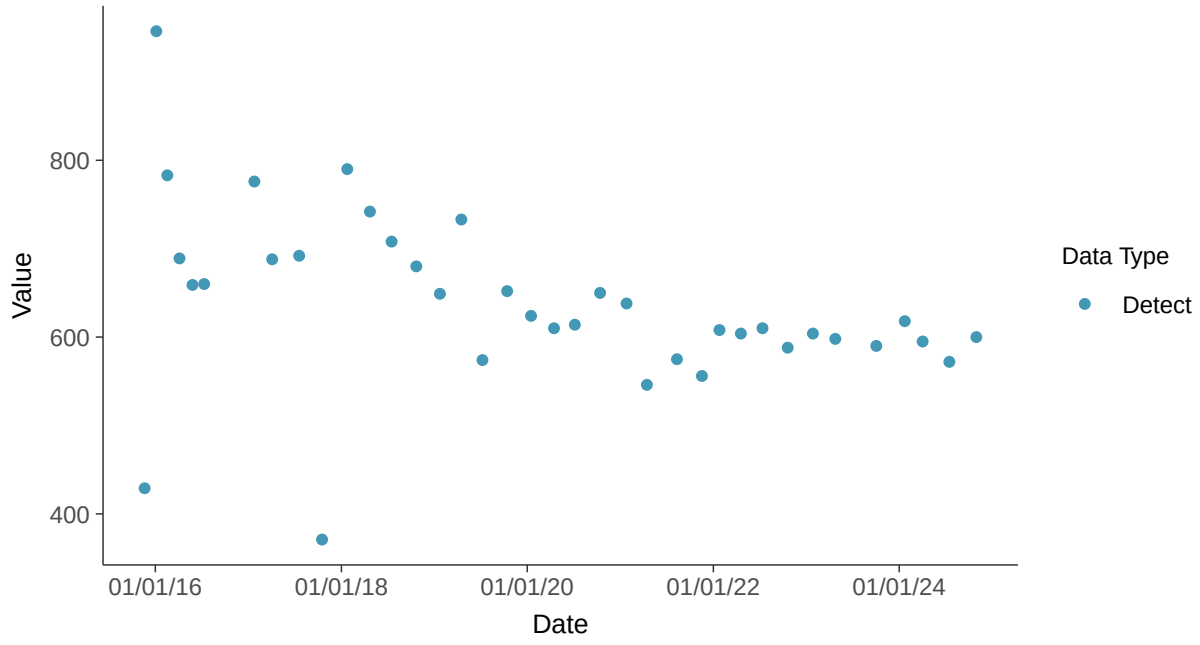


App. III: Total Dissolved Solids, MW-6

ID: 06_02_125

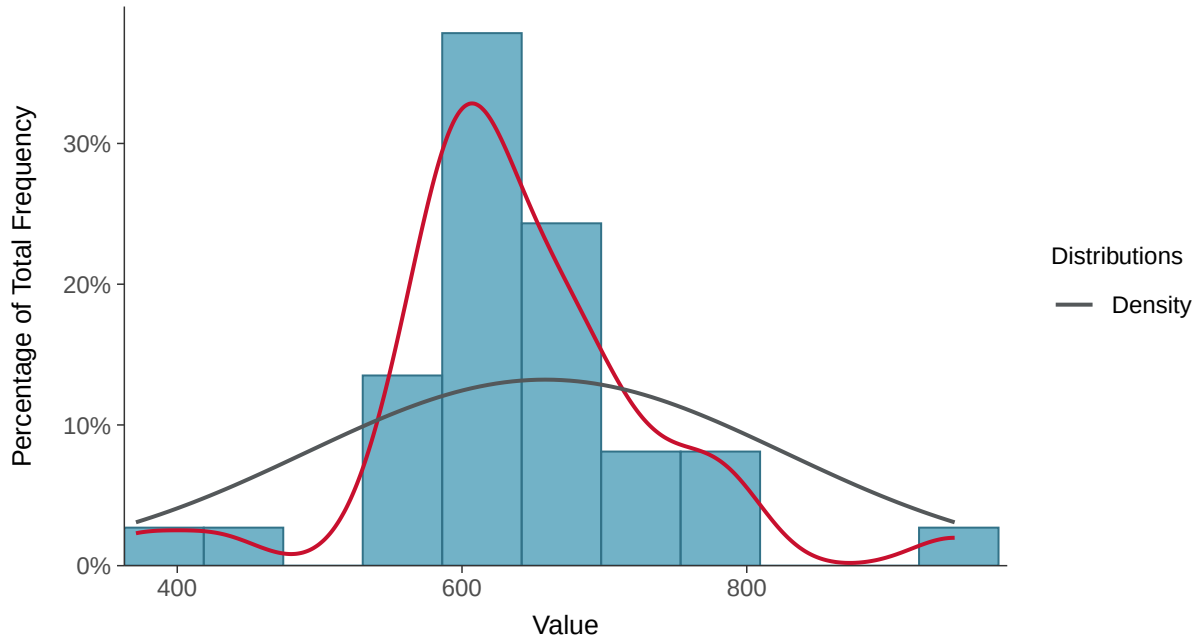
Scatter Plot

Total Dissolved Solids, MW-6 (mg/L)



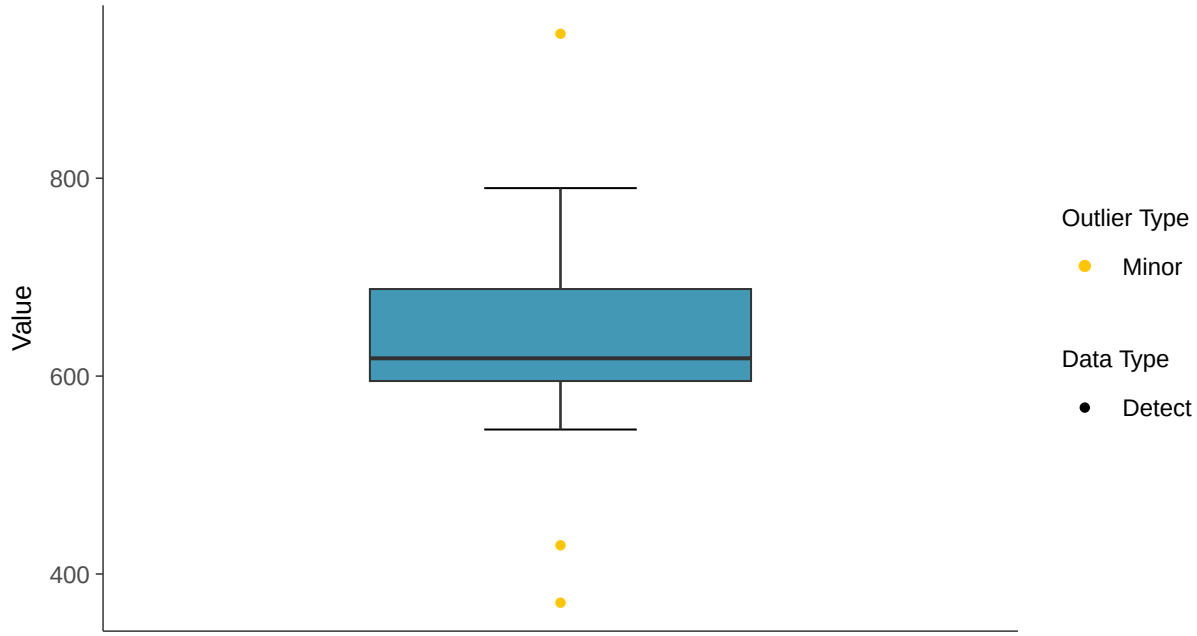
Histogram

Total Dissolved Solids, MW-6 (mg/L)



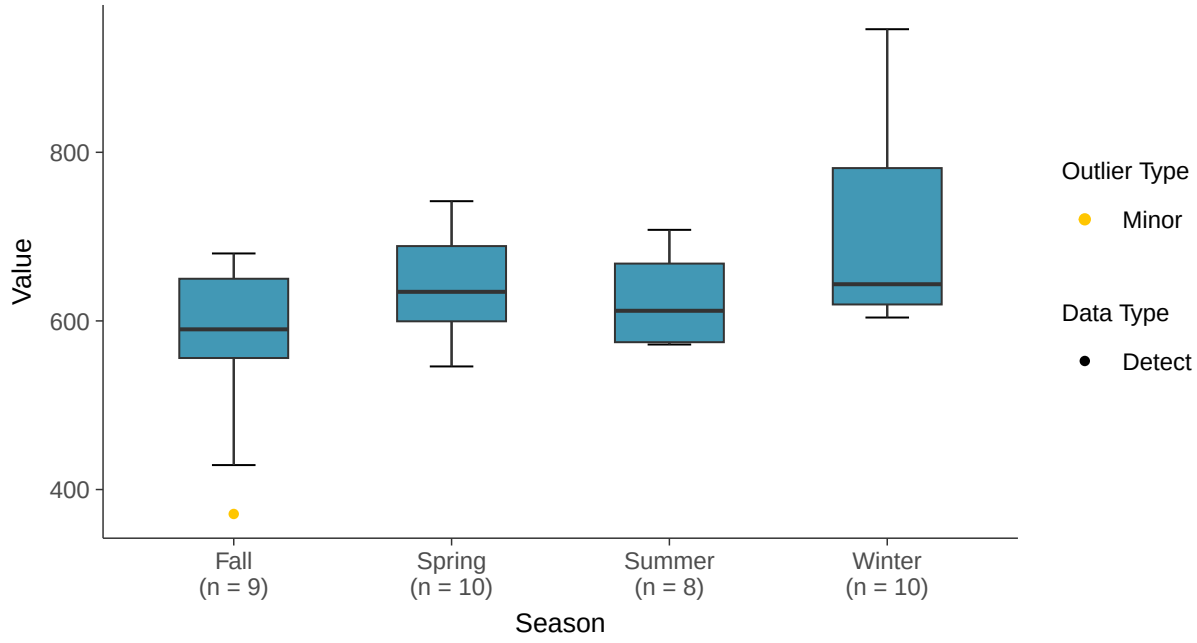
Boxplot

Total Dissolved Solids, MW-6 (mg/L)



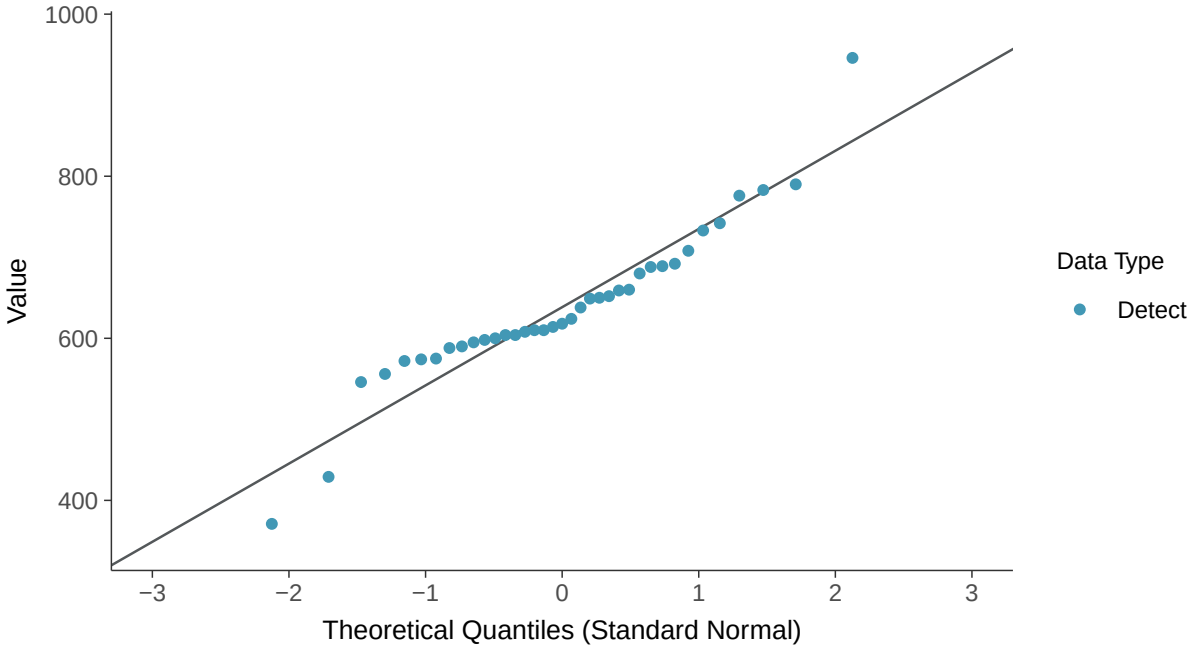
Boxplot by Season

Total Dissolved Solids, MW-6 (mg/L)



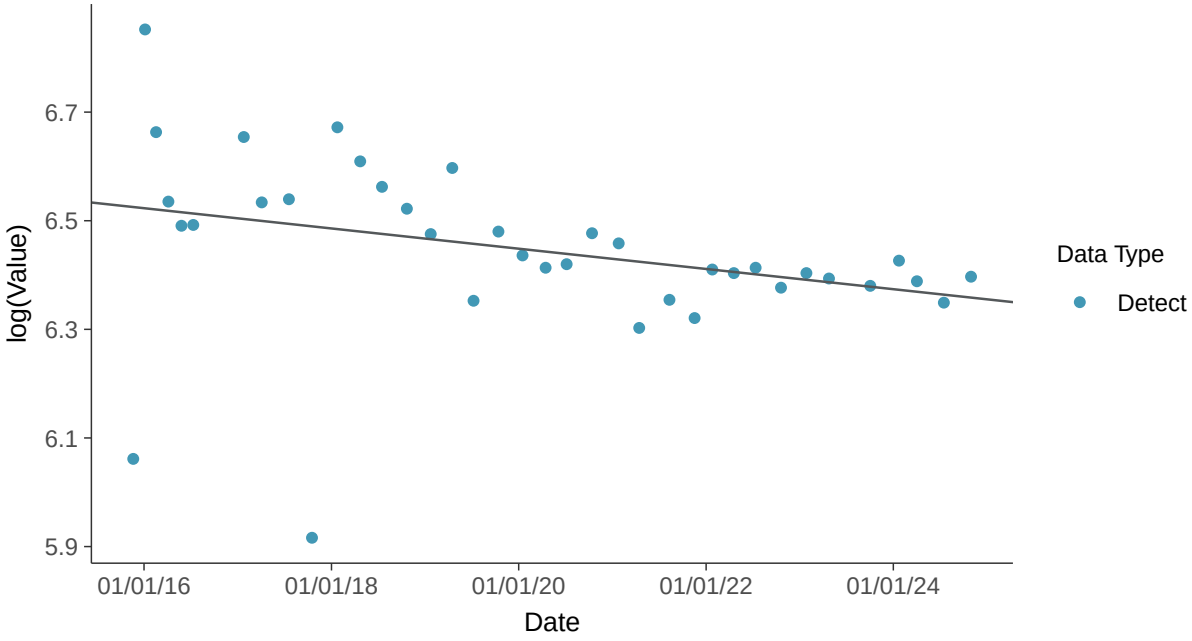
Normal Q-Q plot

Total Dissolved Solids, MW-6 (mg/L)



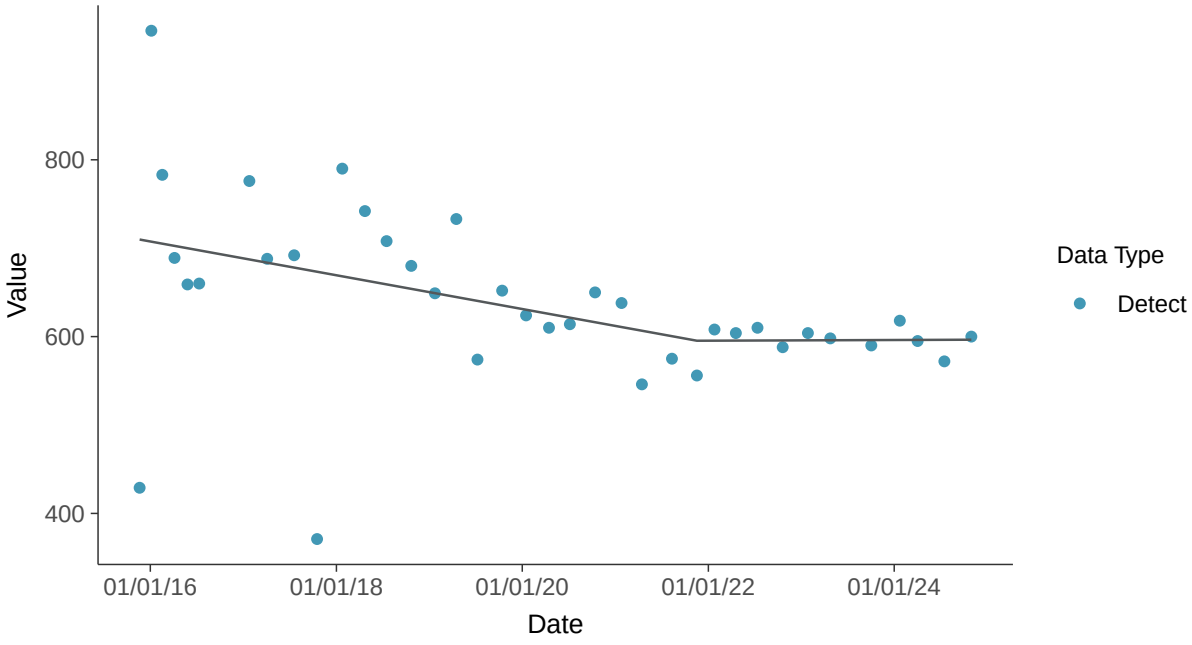
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-6 (mg/L)



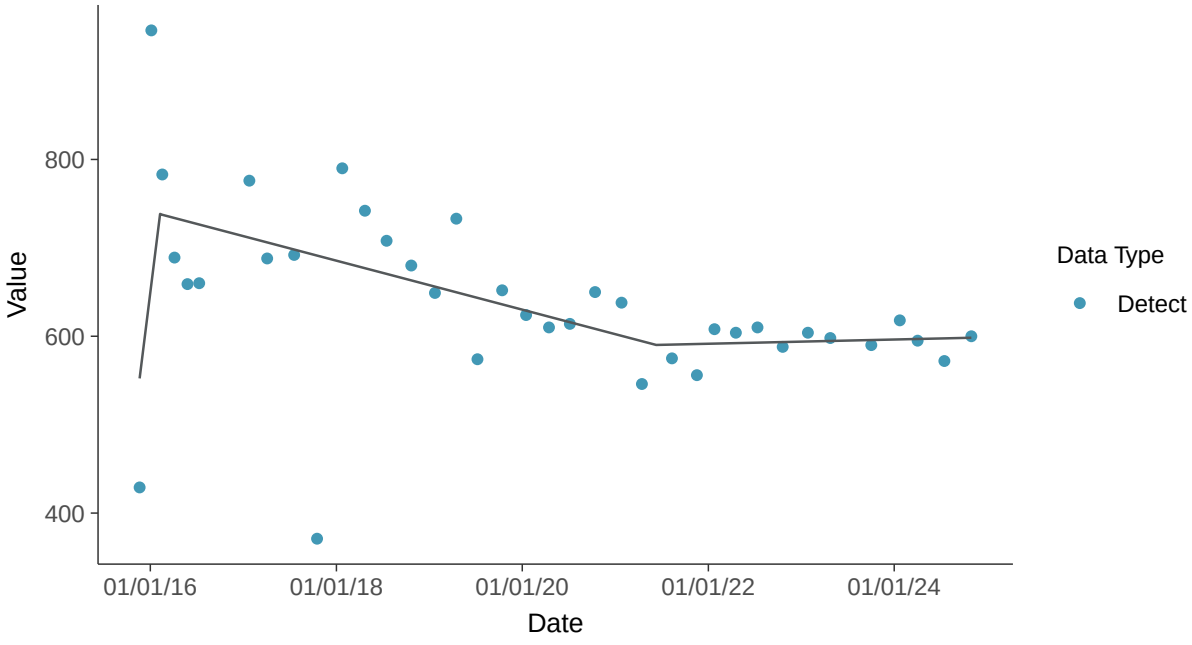
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-6 (mg/L)

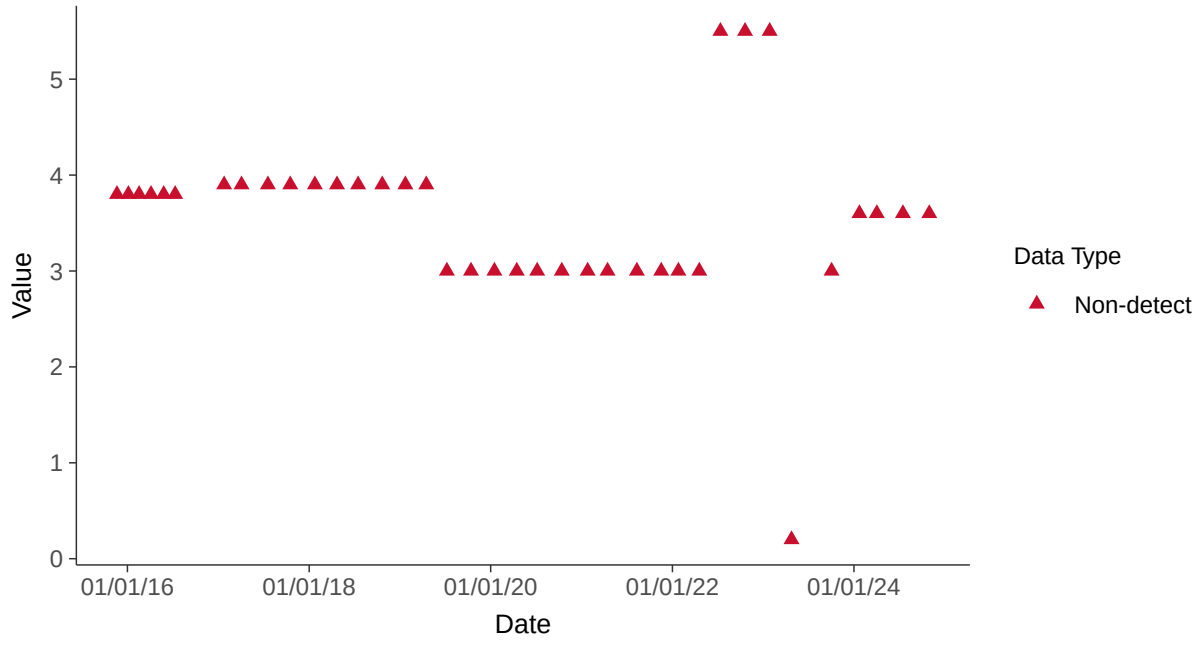


App. IV: Antimony, MW-6

ID: 06_03_101

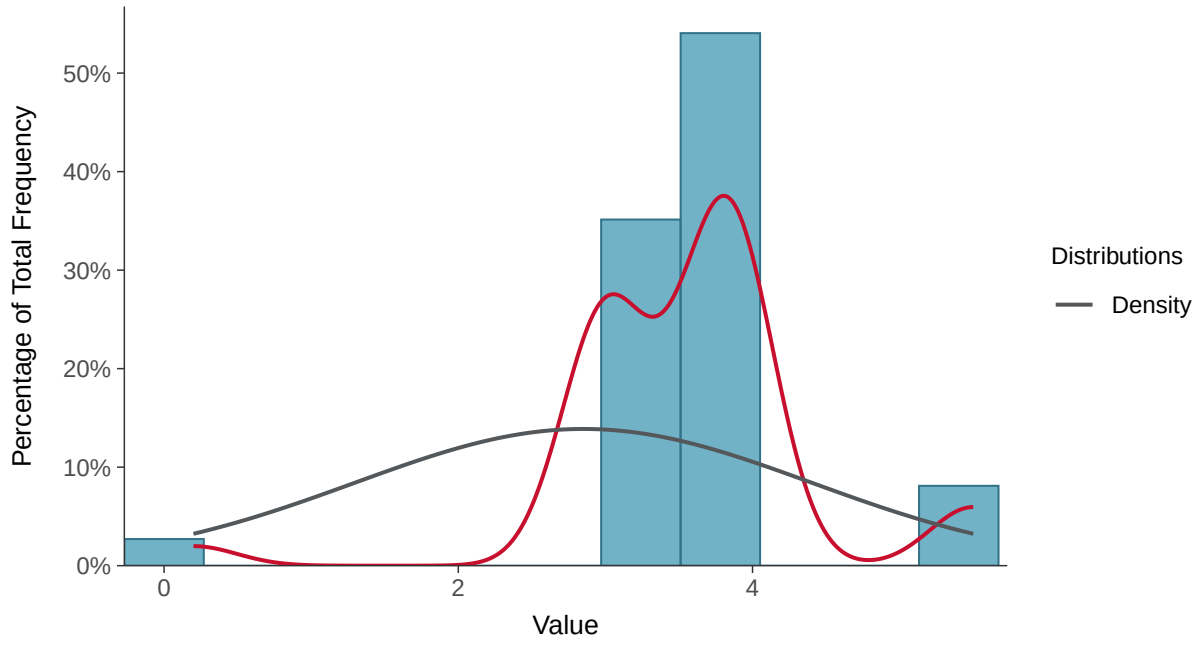
Scatter Plot

Antimony, MW-6 (ug/L)



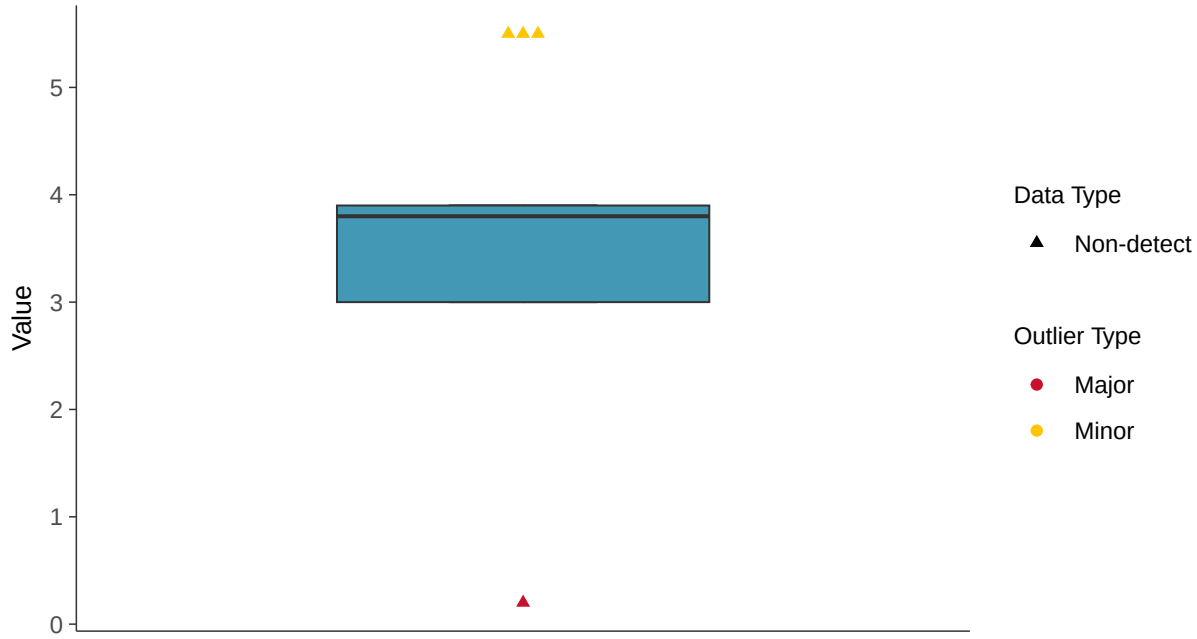
Histogram

Antimony, MW-6 (ug/L)



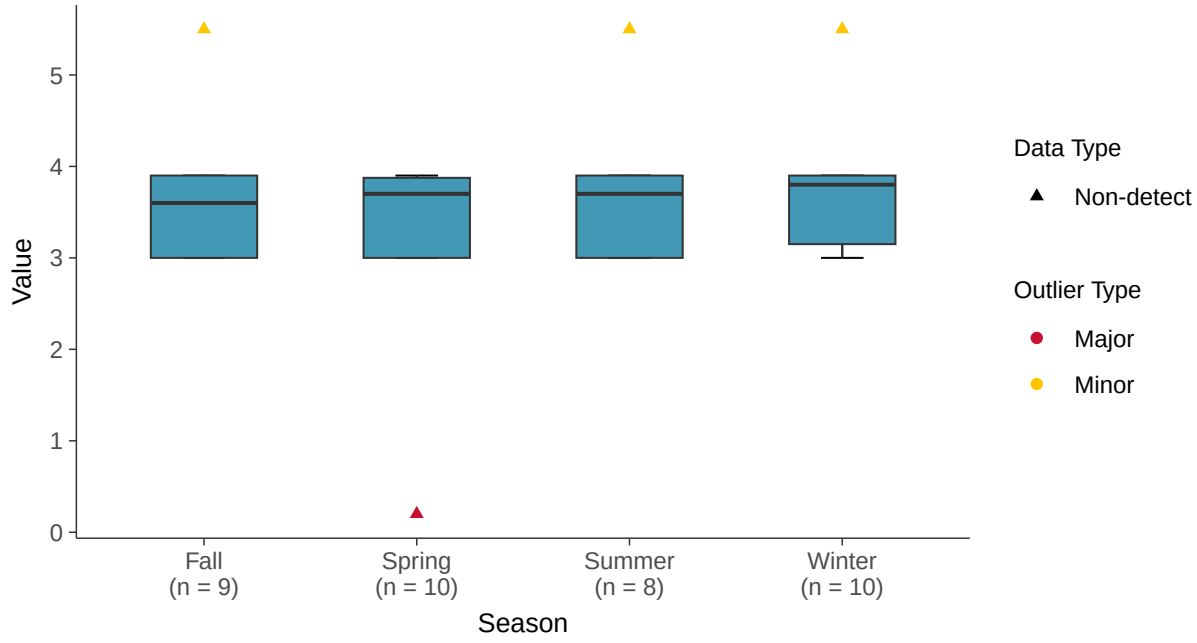
Boxplot

Antimony, MW-6 (ug/L)



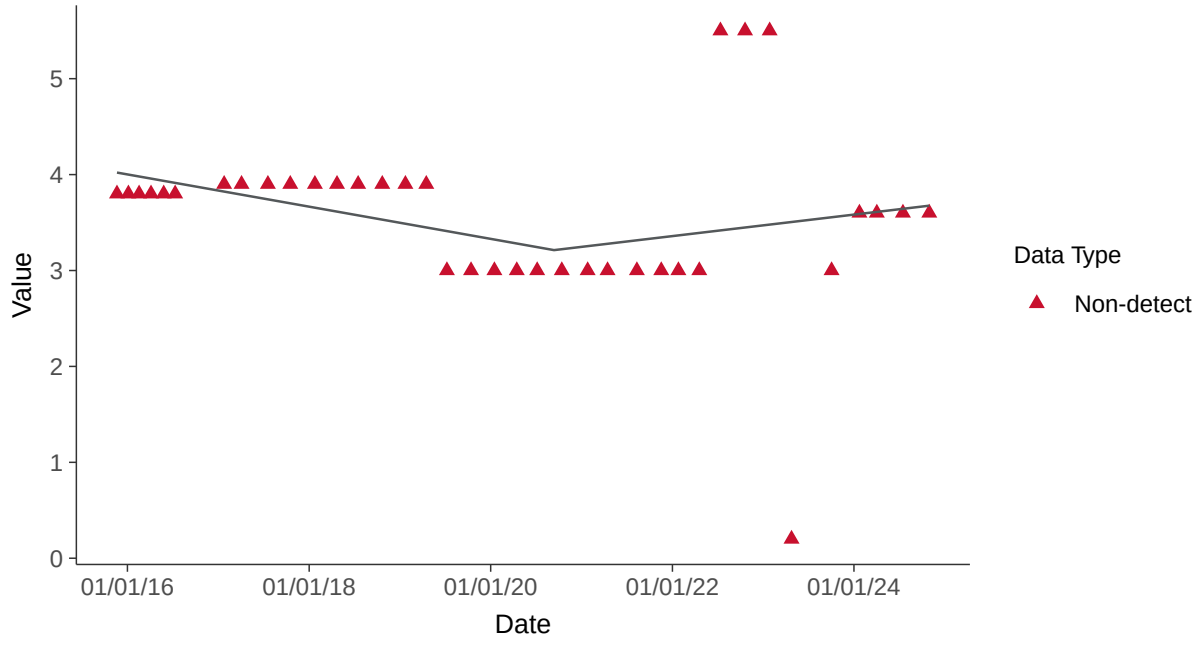
Boxplot by Season

Antimony, MW-6 (ug/L)



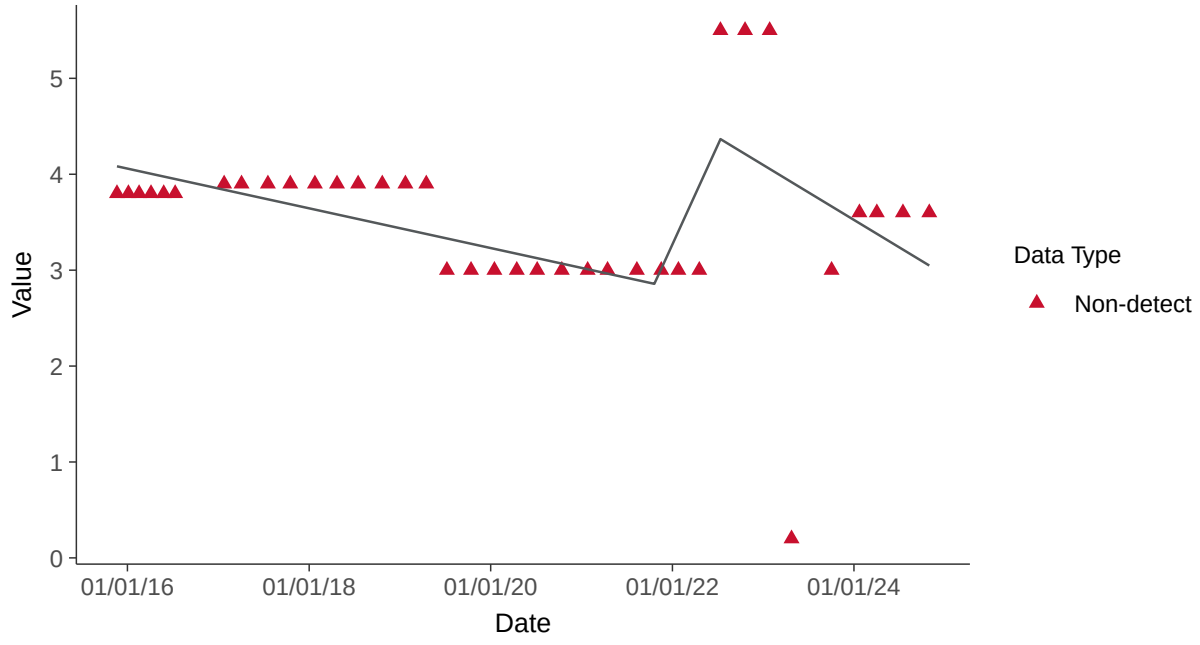
Trend Regression: Piecewise Linear-Linear

Antimony, MW-6 (ug/L)



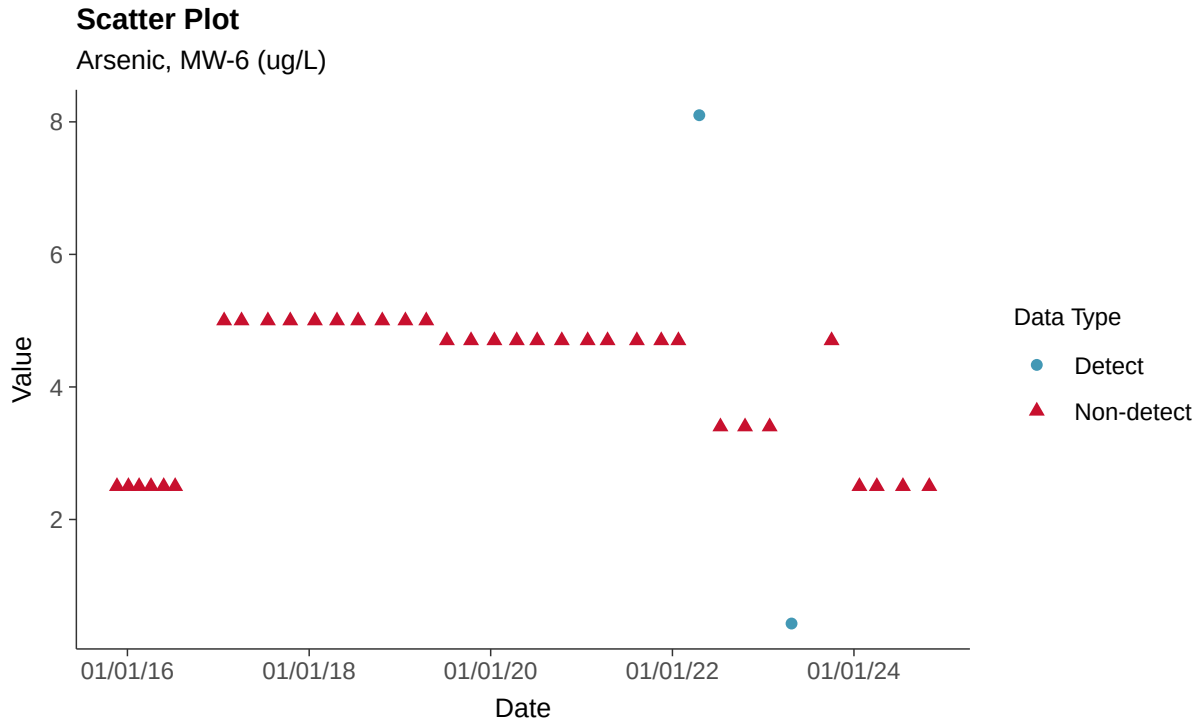
Trend Regression: Piecewise Linear-Linear-Linear

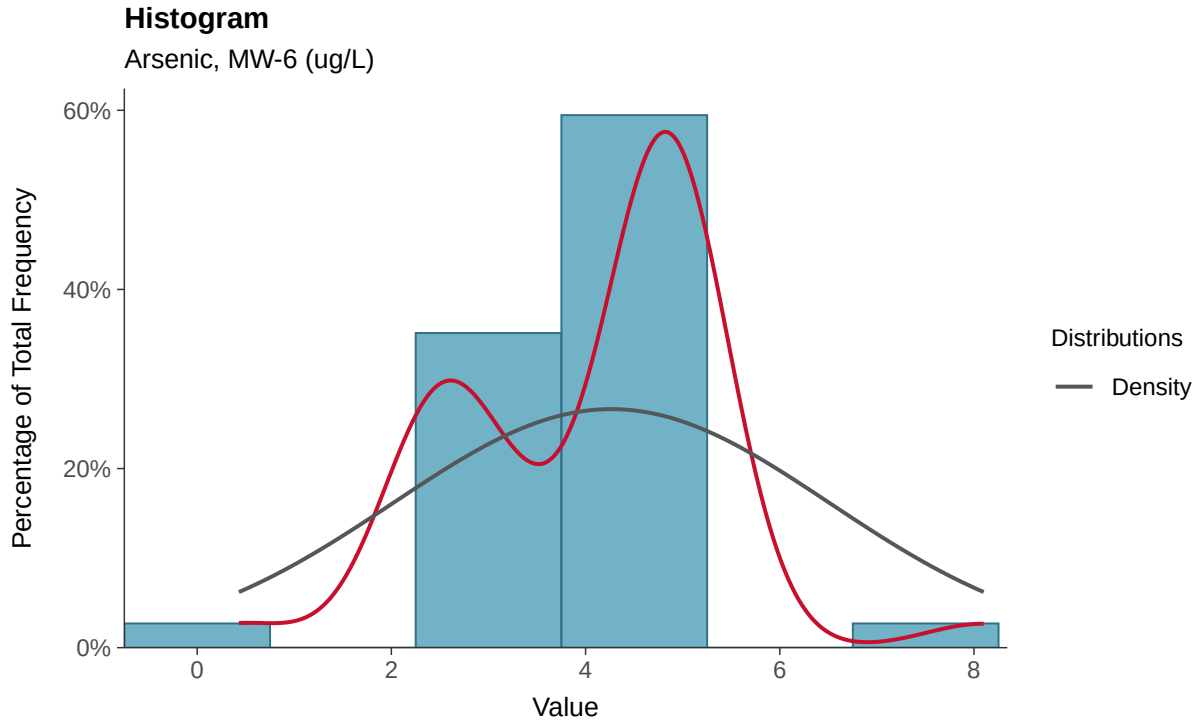
Antimony, MW-6 (ug/L)



App. IV: Arsenic, MW-6

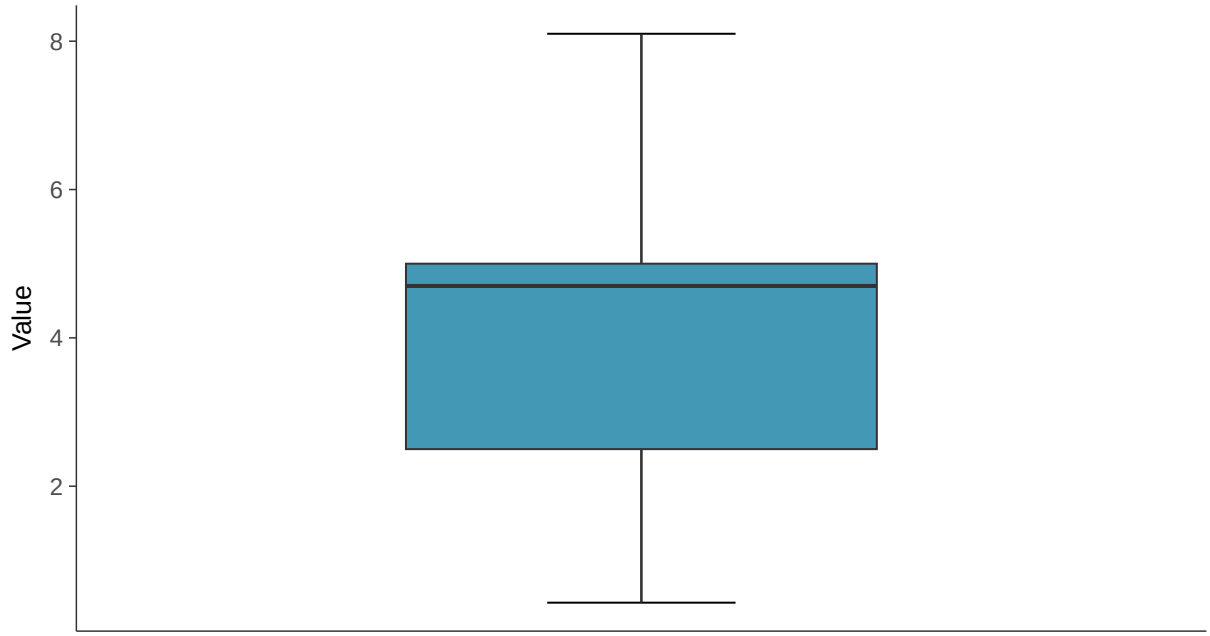
ID: 06_03_102





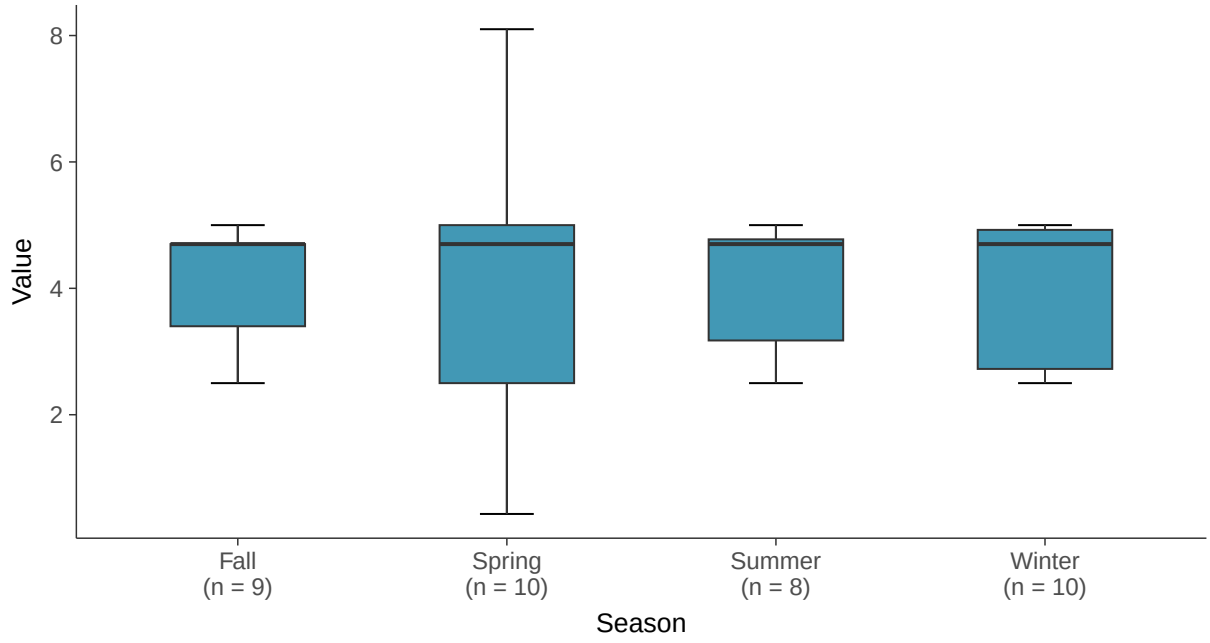
Boxplot

Arsenic, MW-6 (ug/L)



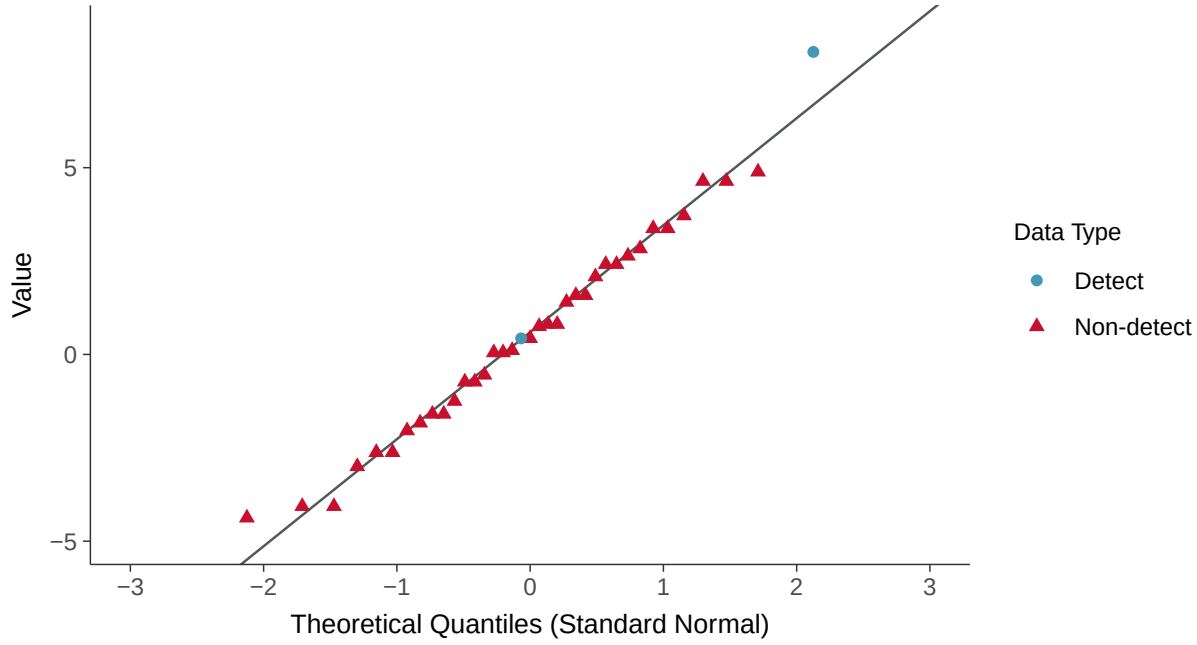
Boxplot by Season

Arsenic, MW-6 (ug/L)



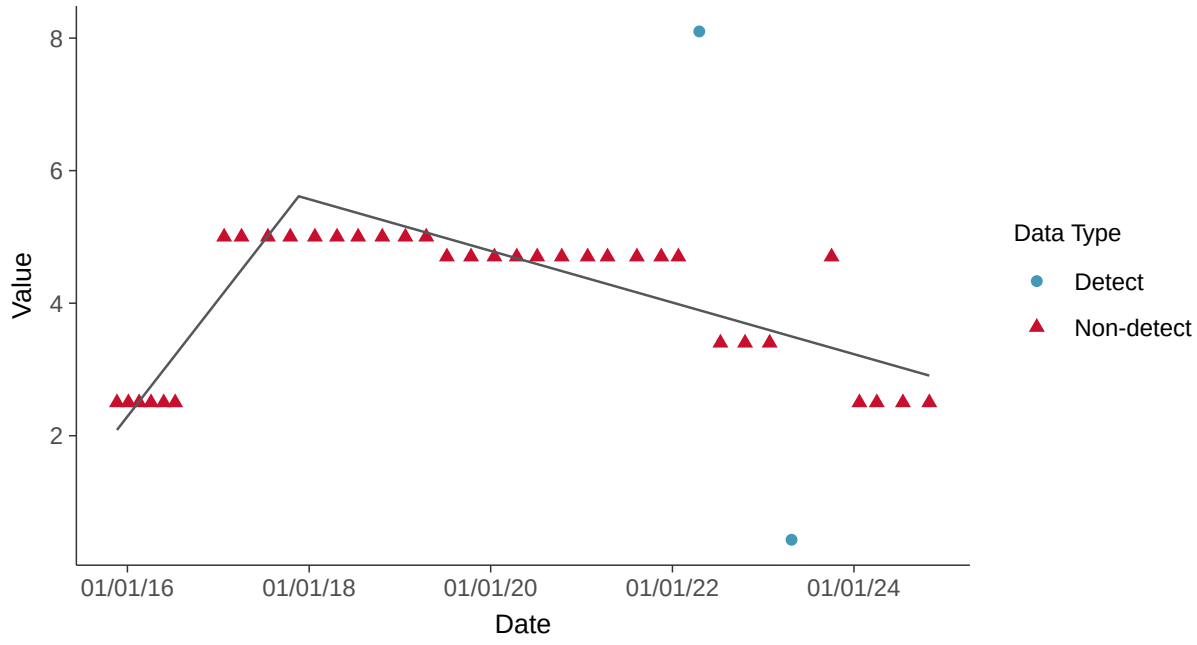
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-6 (ug/L)



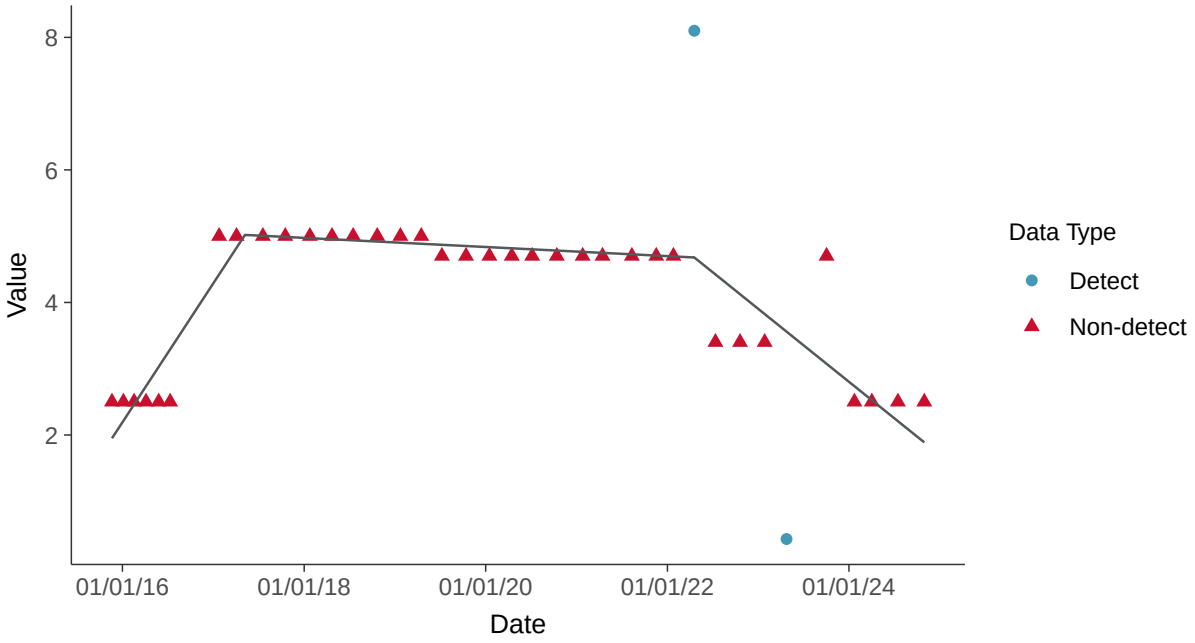
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-6 (ug/L)



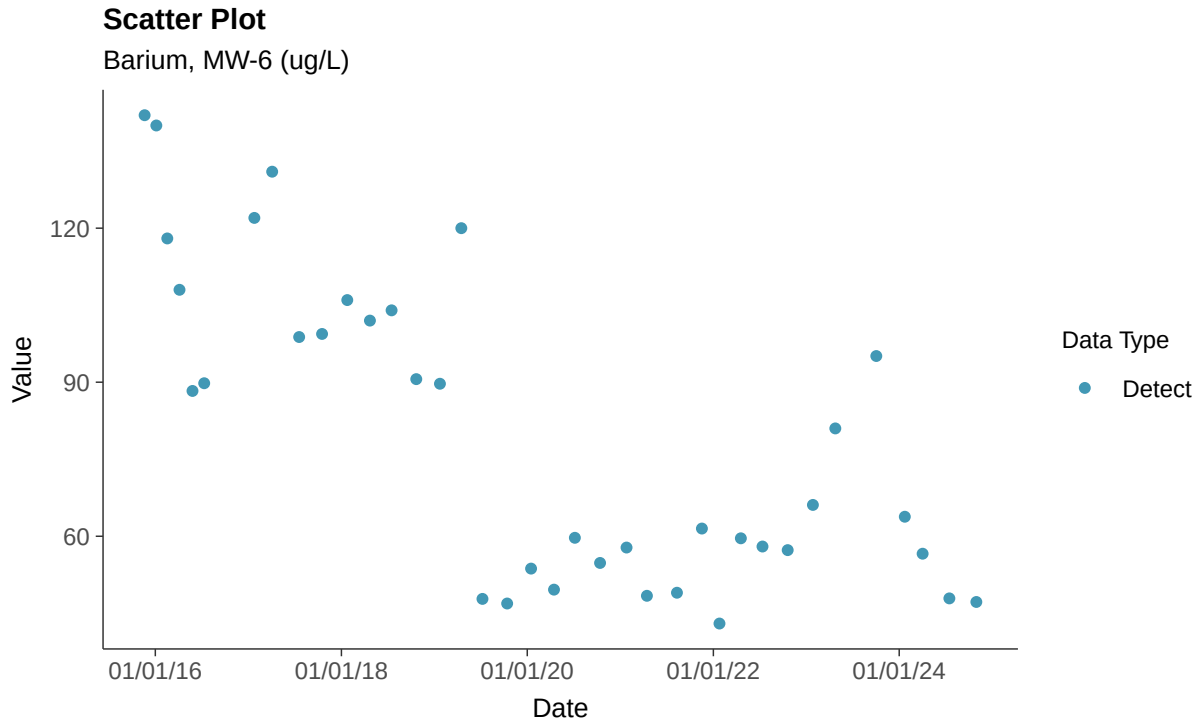
Trend Regression: Piecewise Linear-Linear-Linear

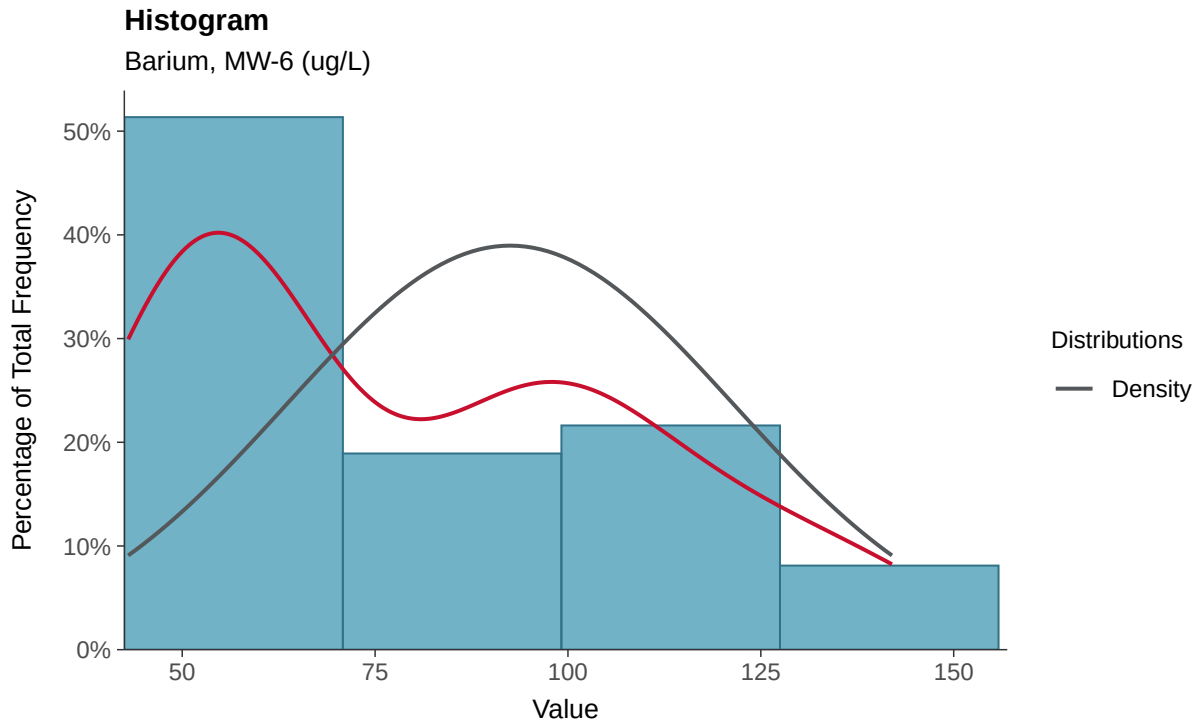
Arsenic, MW-6 (ug/L)



App. IV: Barium, MW-6

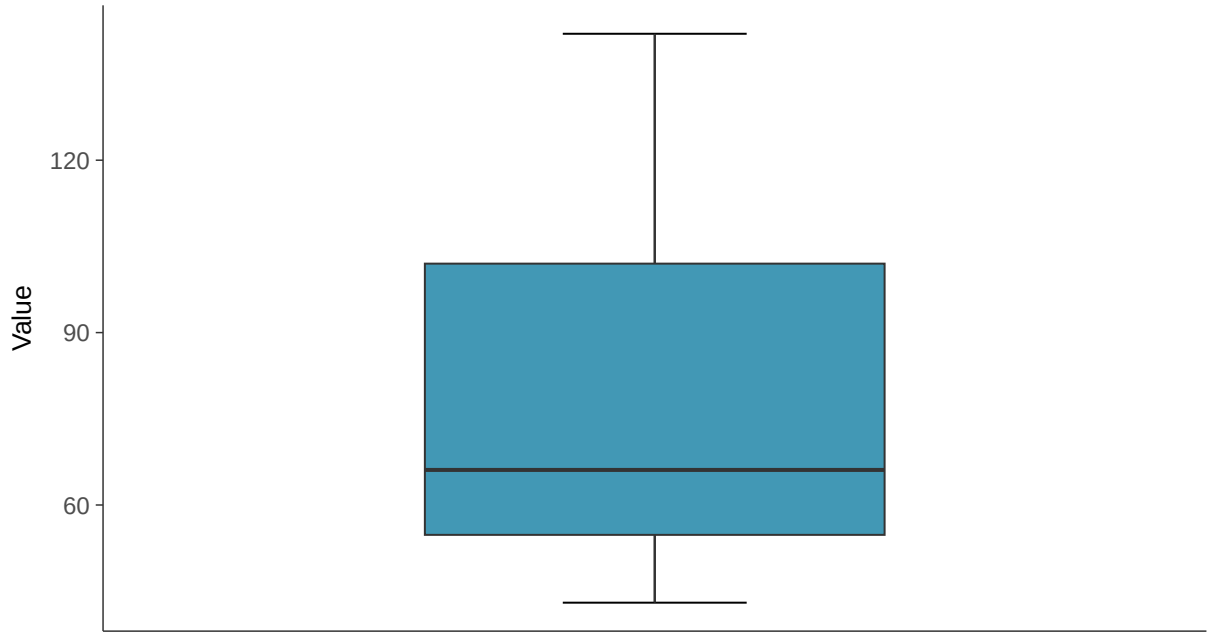
ID: 06_03_103





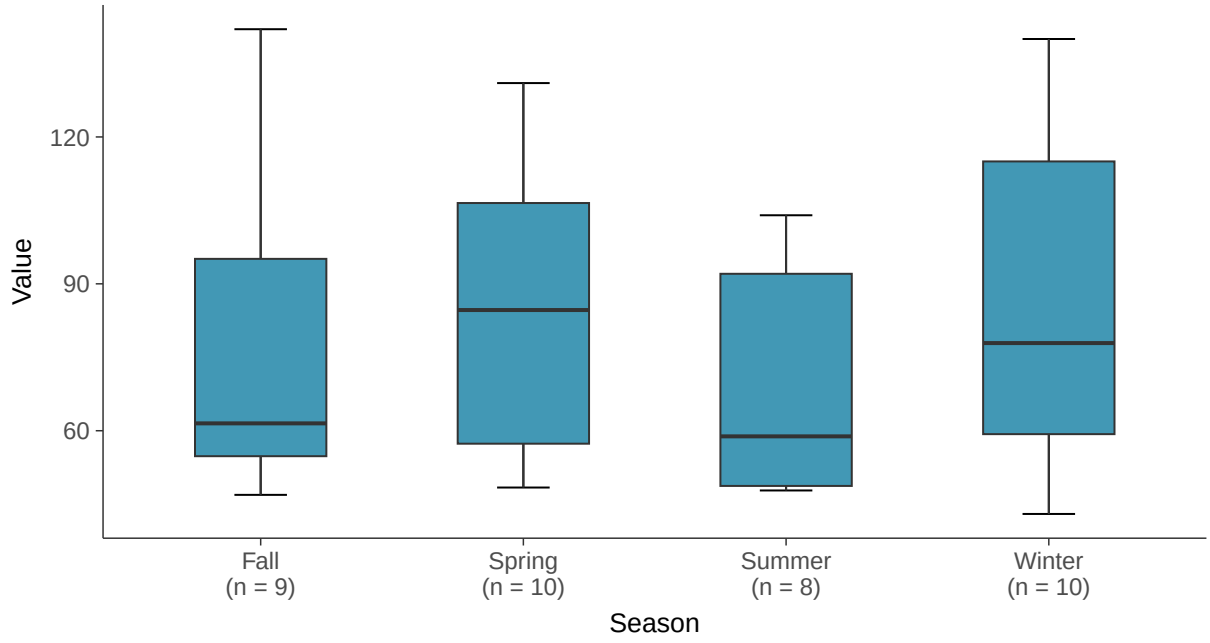
Boxplot

Barium, MW-6 (ug/L)



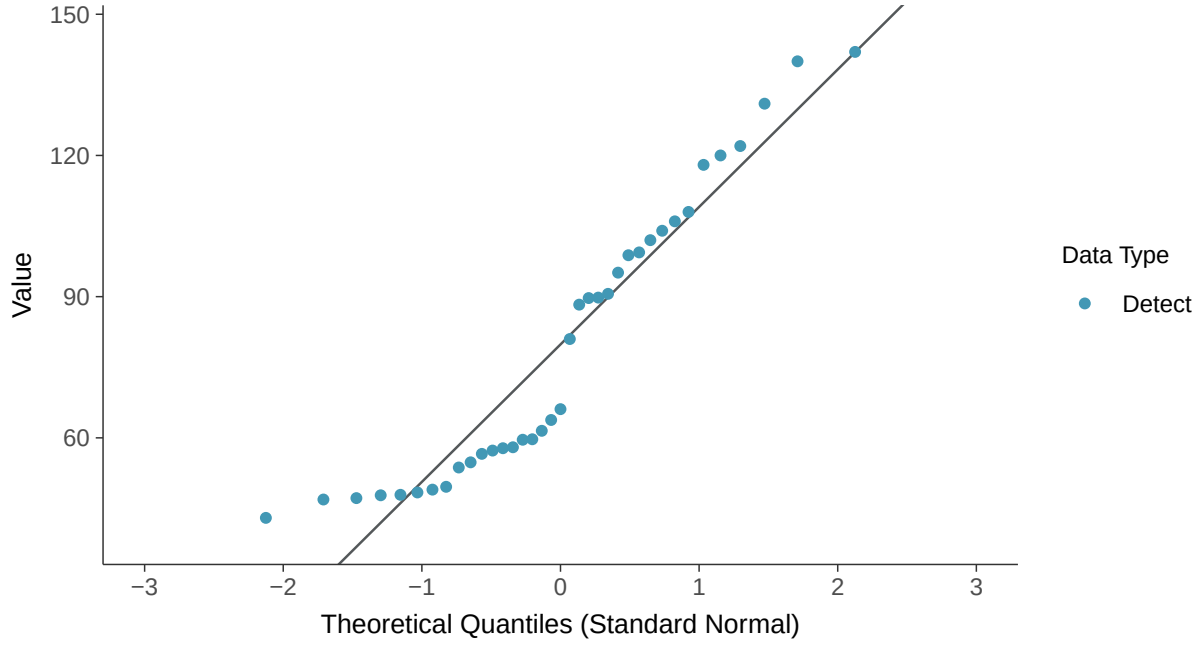
Boxplot by Season

Barium, MW-6 (ug/L)



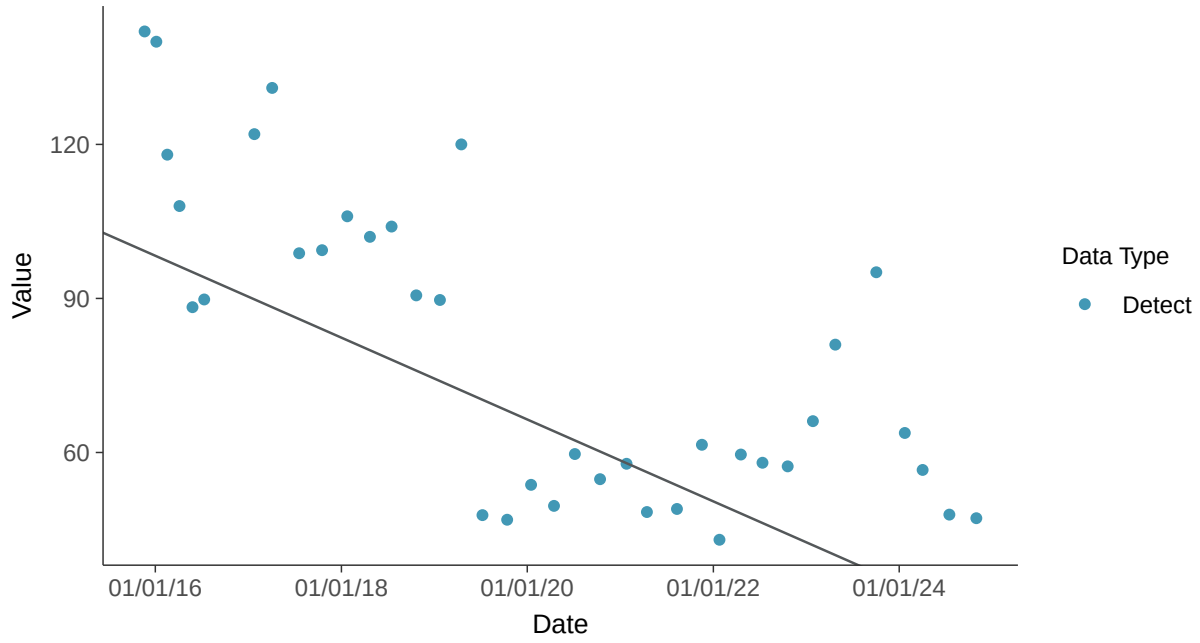
Normal Q-Q plot

Barium, MW-6 (ug/L)



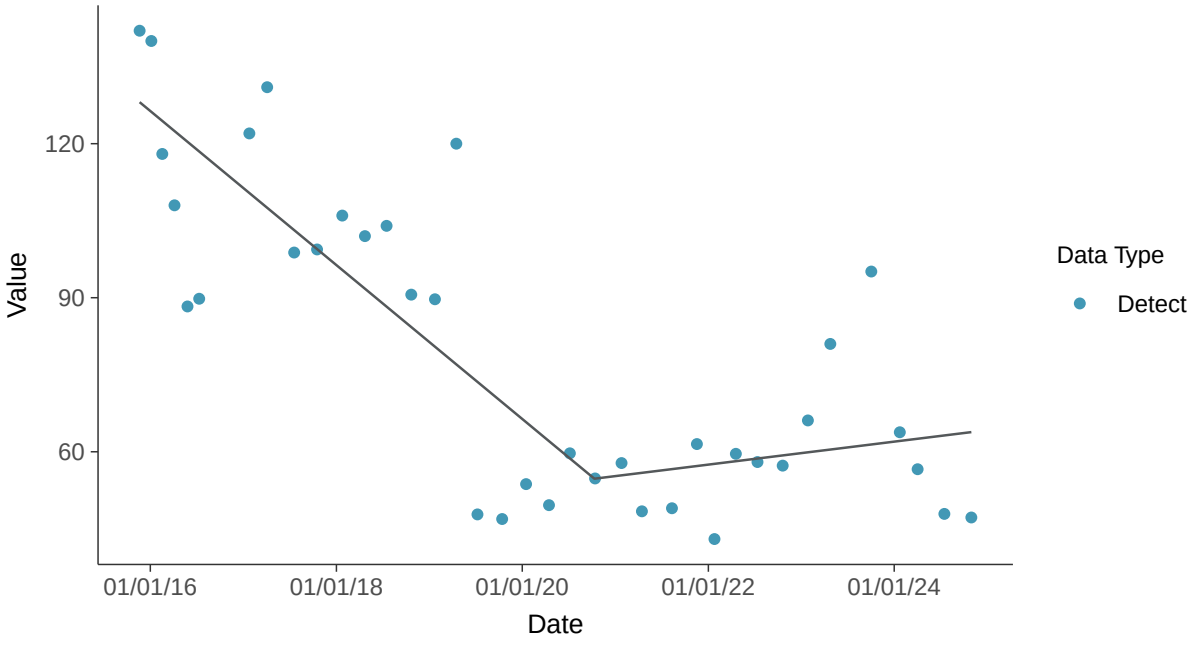
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-6 (ug/L)



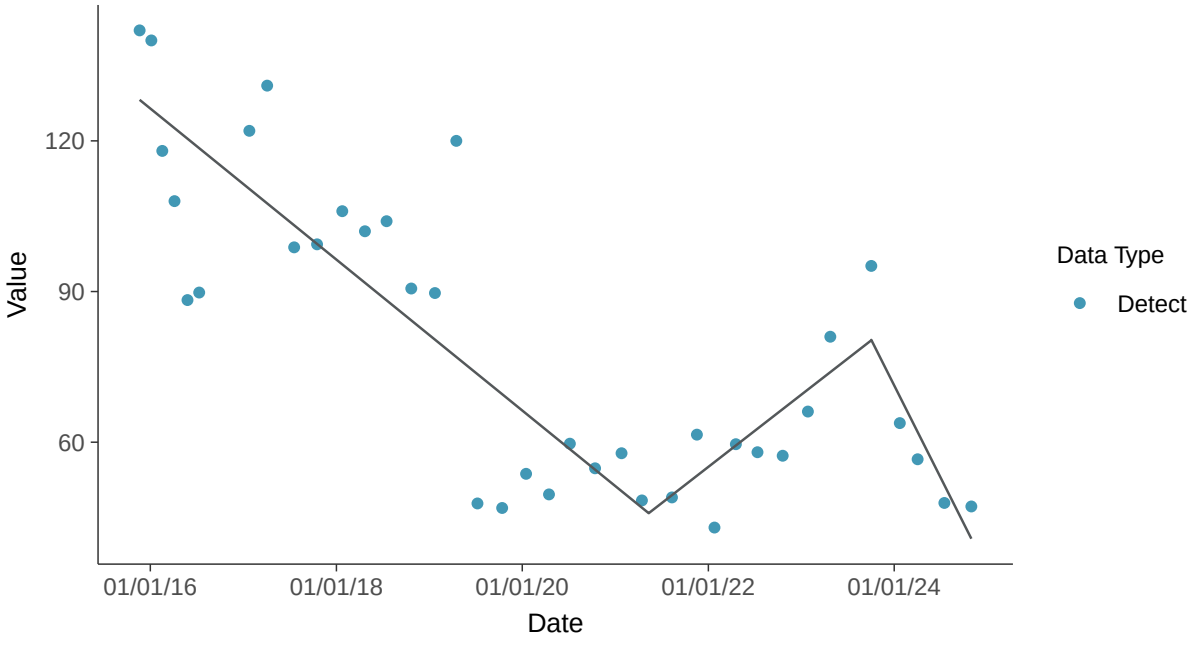
Trend Regression: Piecewise Linear-Linear

Barium, MW-6 (ug/L)



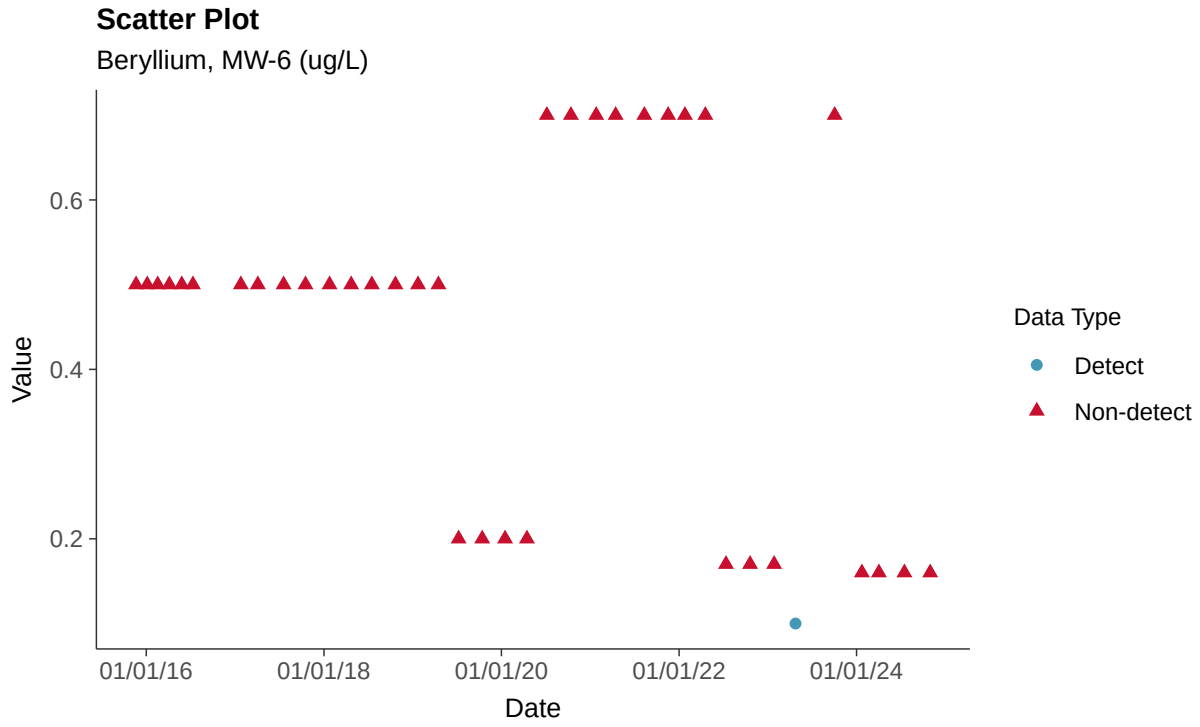
Trend Regression: Piecewise Linear-Linear-Linear

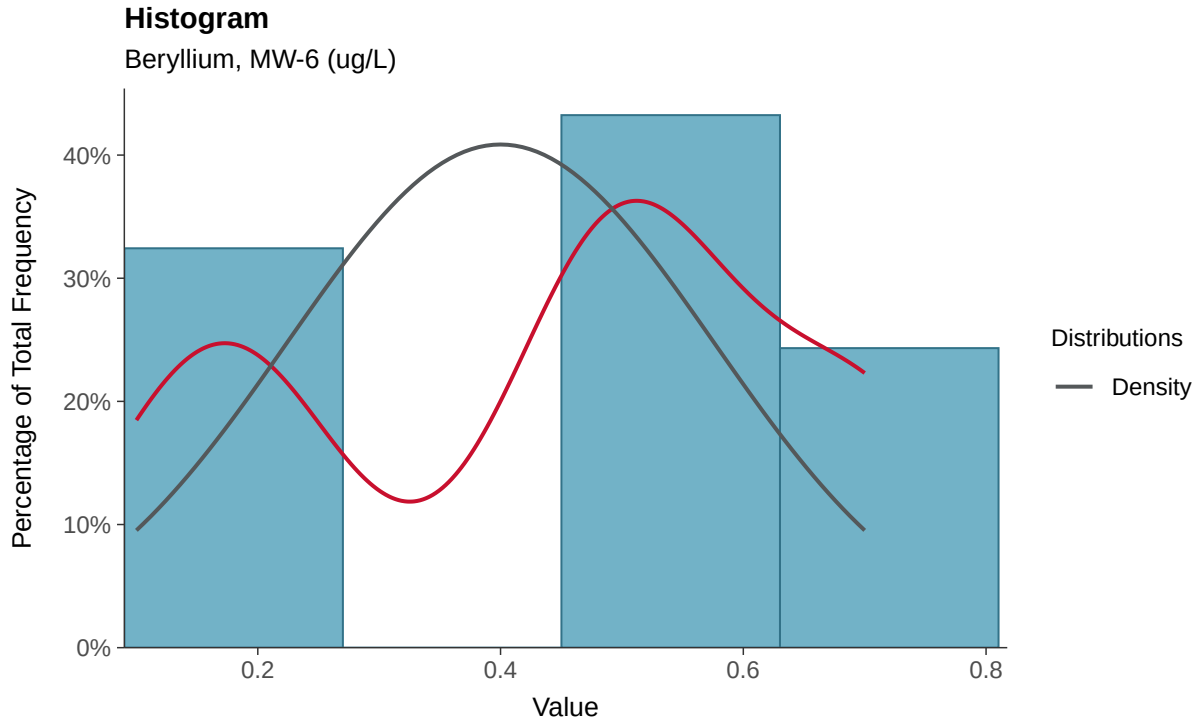
Barium, MW-6 (ug/L)



App. IV: Beryllium, MW-6

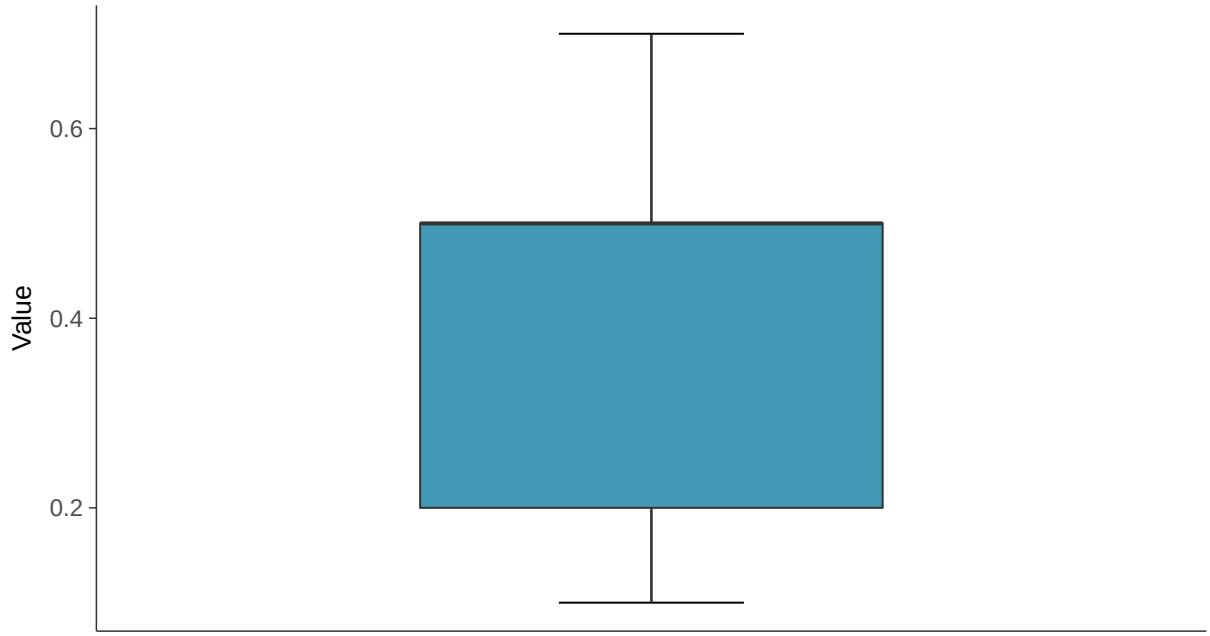
ID: 06_03_104





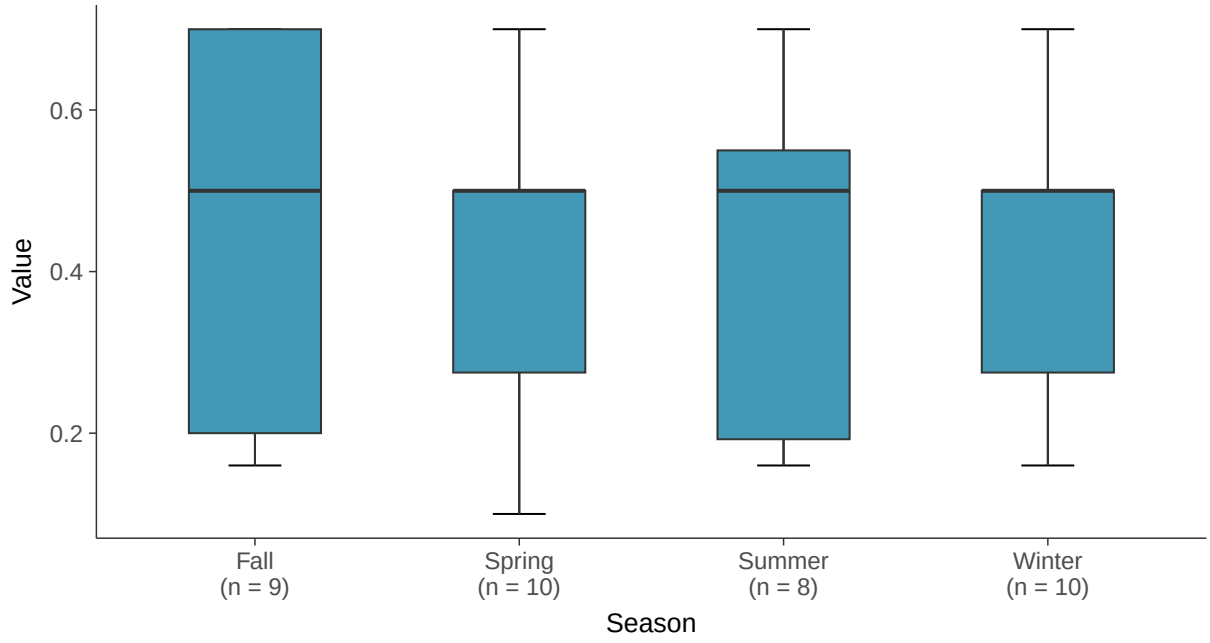
Boxplot

Beryllium, MW-6 (ug/L)



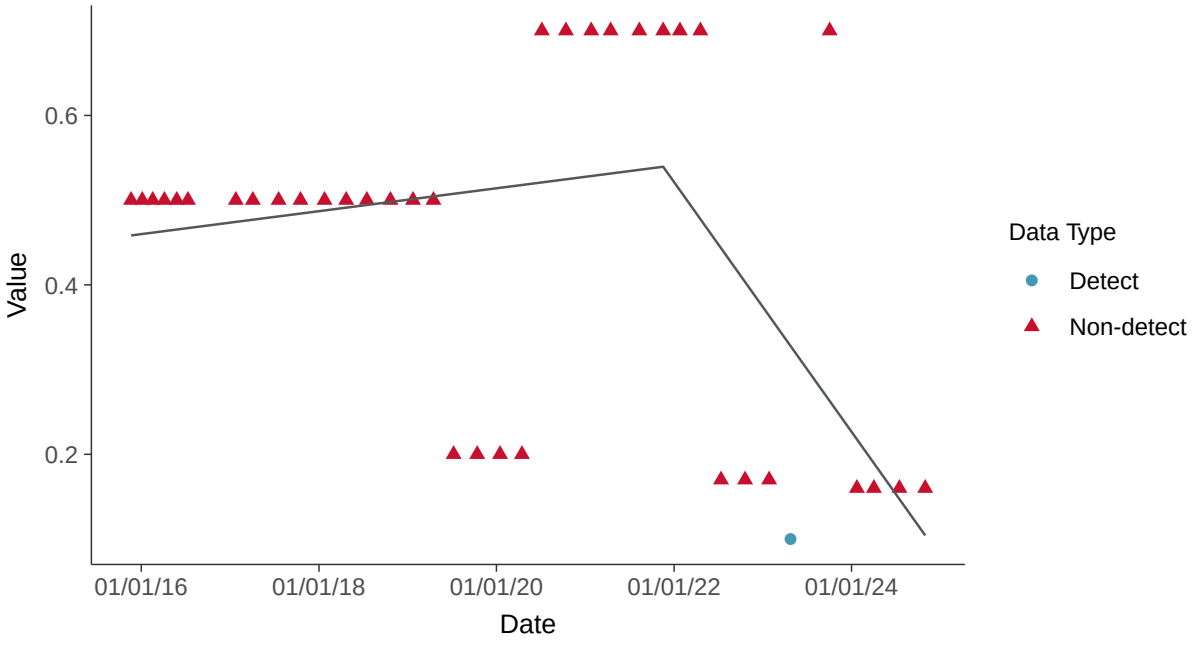
Boxplot by Season

Beryllium, MW-6 (ug/L)



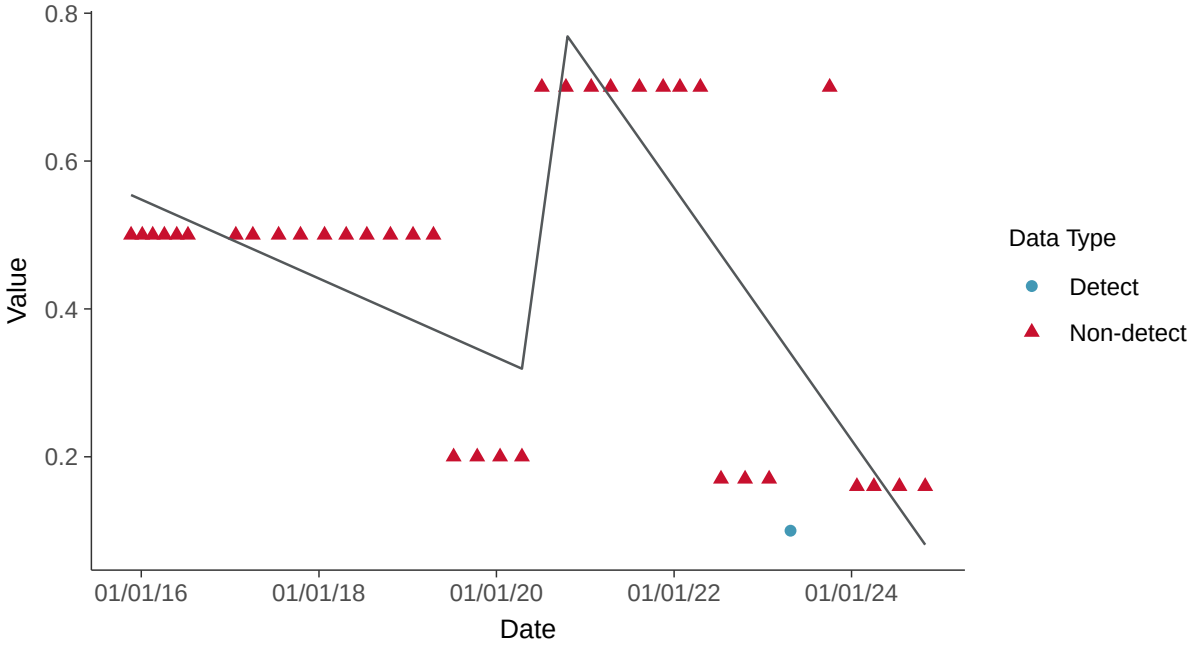
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-6 (ug/L)



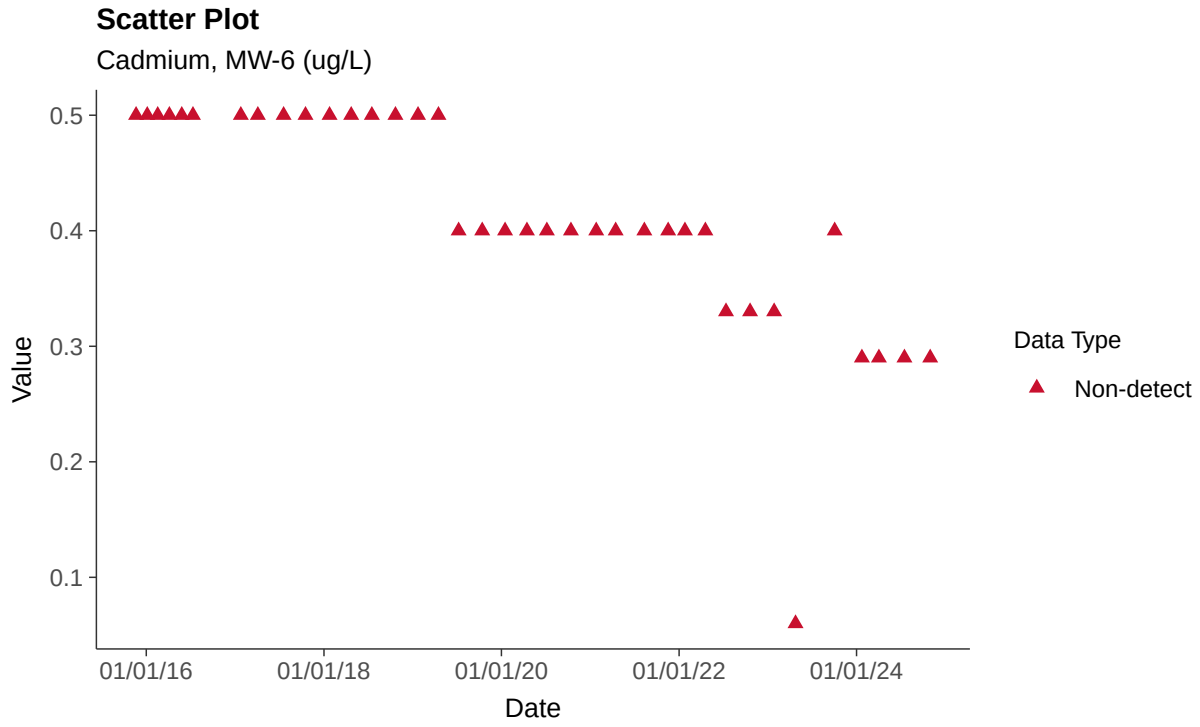
Trend Regression: Piecewise Linear-Linear-Linear

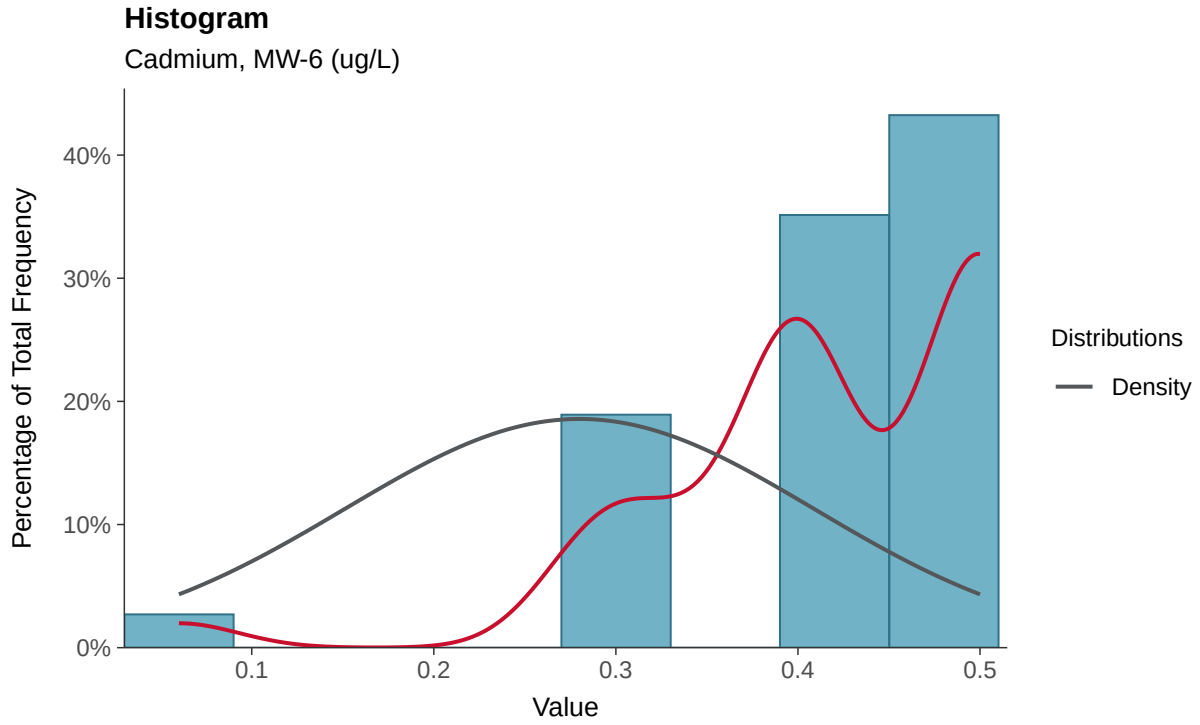
Beryllium, MW-6 (ug/L)



App. IV: Cadmium, MW-6

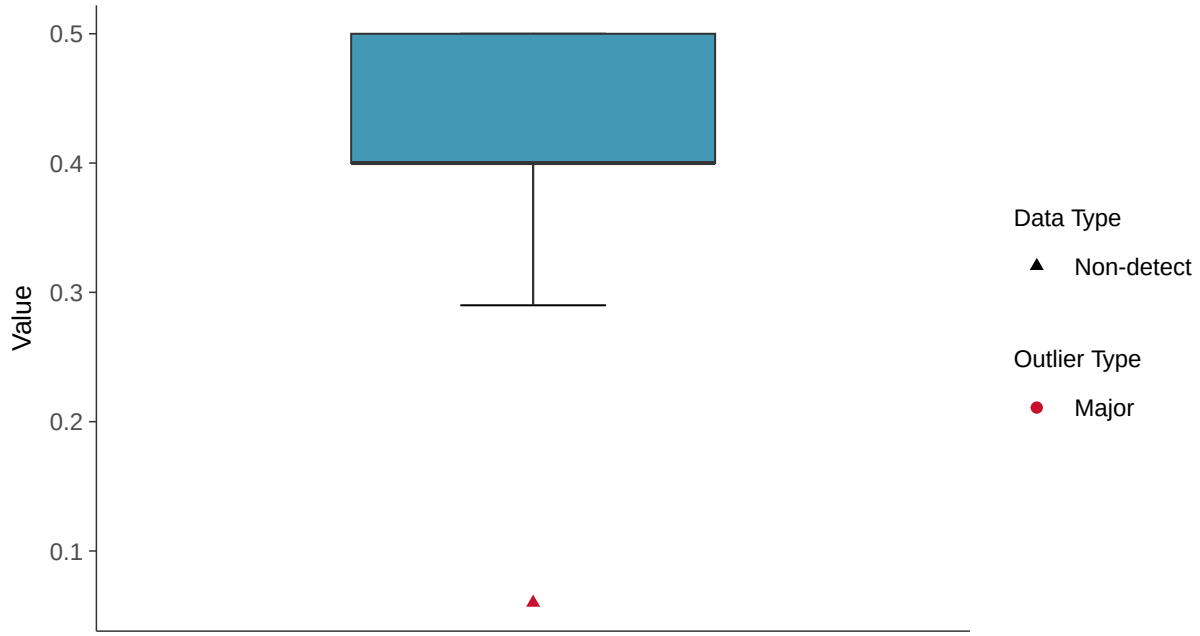
ID: 06_03_106





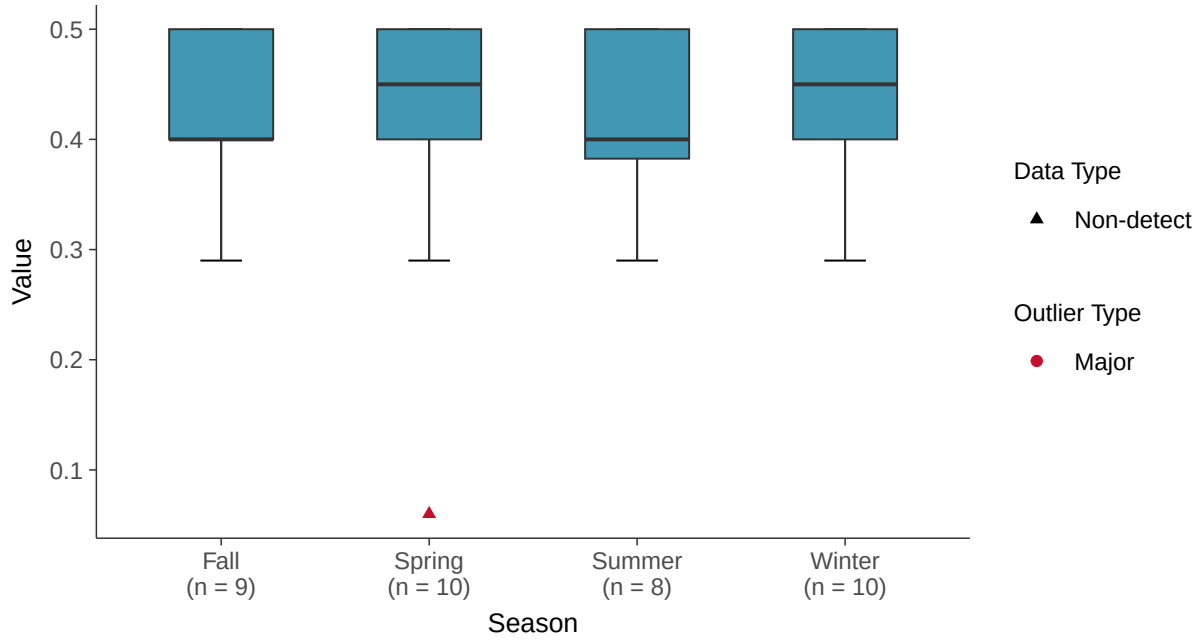
Boxplot

Cadmium, MW-6 (ug/L)



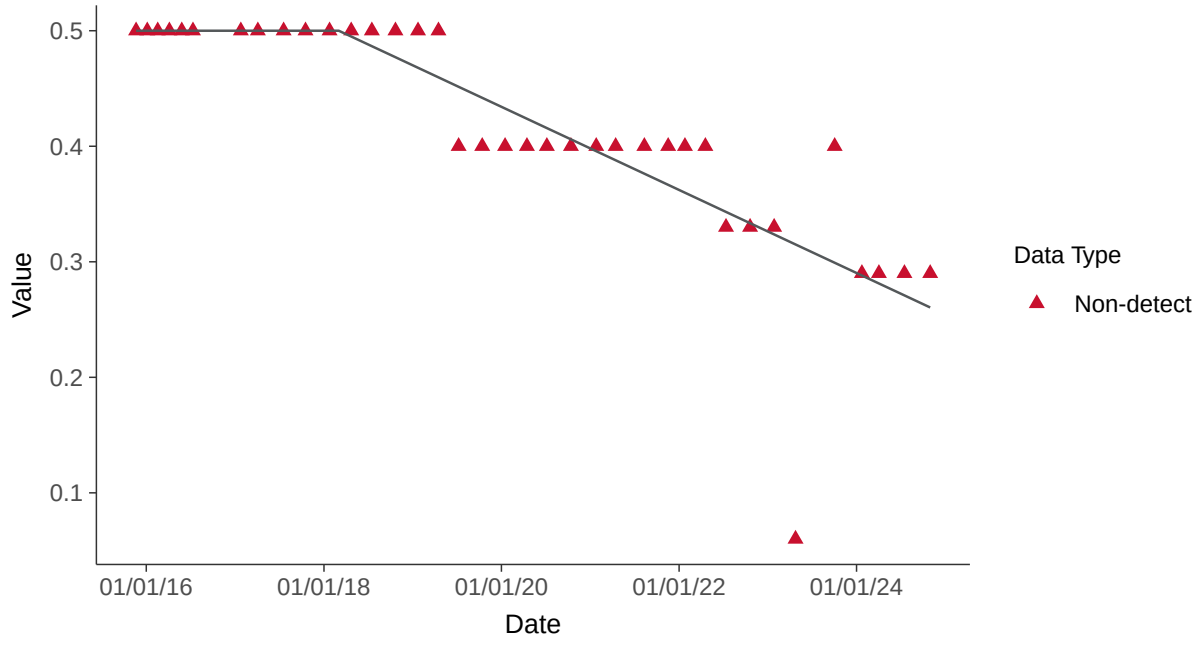
Boxplot by Season

Cadmium, MW-6 (ug/L)



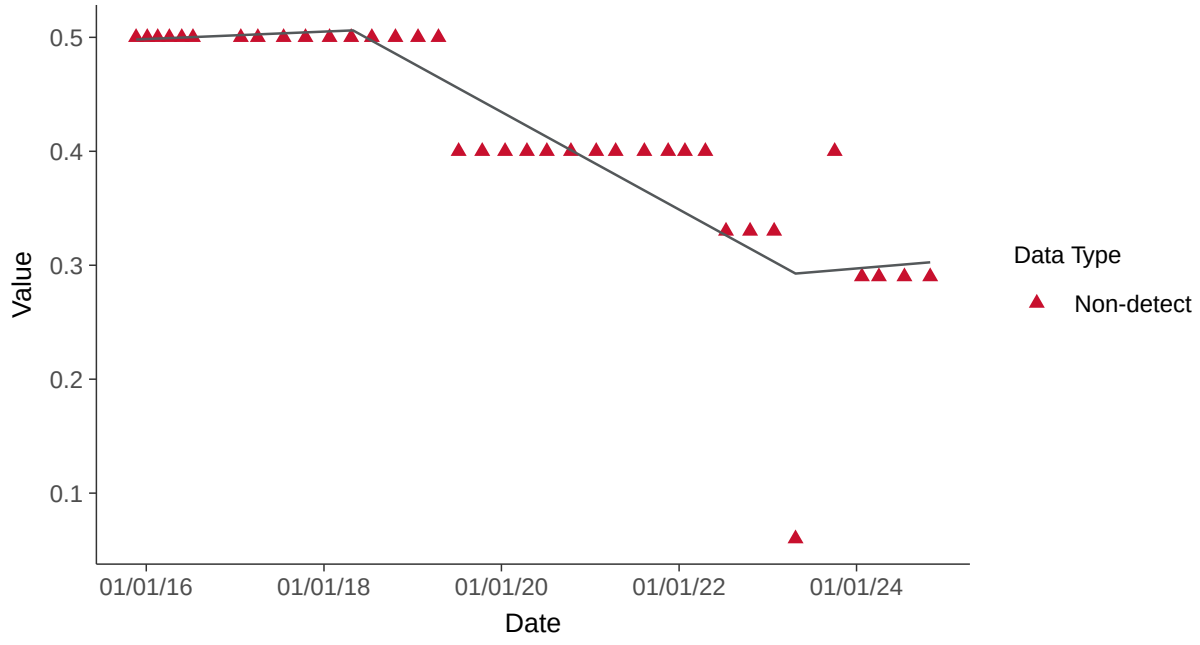
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-6 (ug/L)

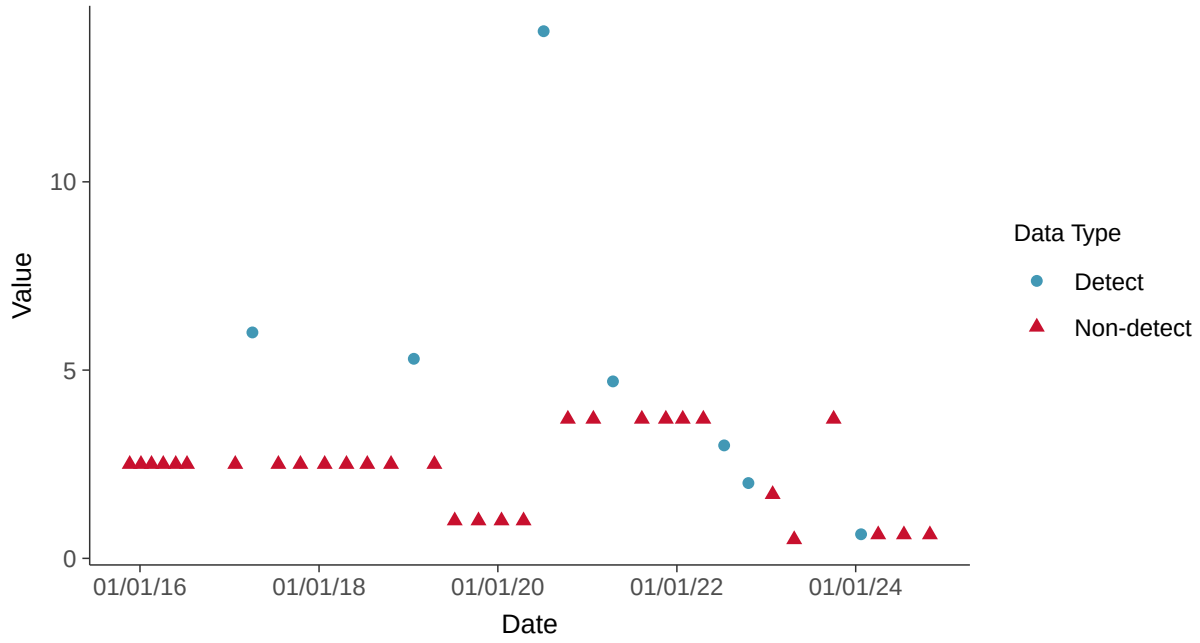


App. IV: Chromium, MW-6

ID: 06_03_109

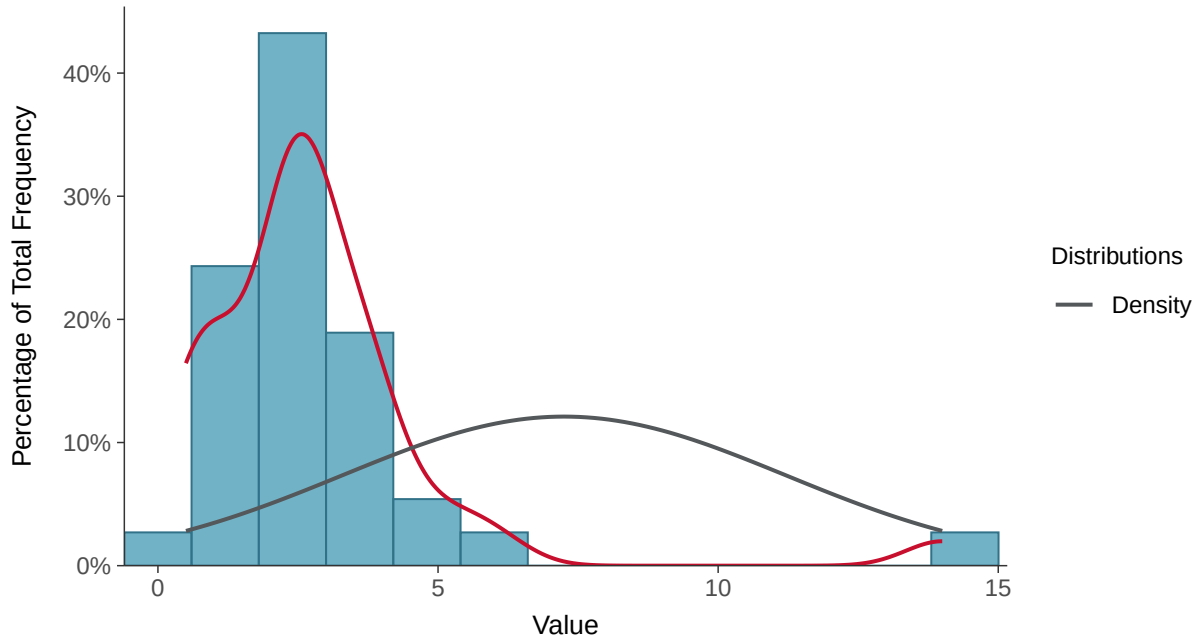
Scatter Plot

Chromium, MW-6 (ug/L)



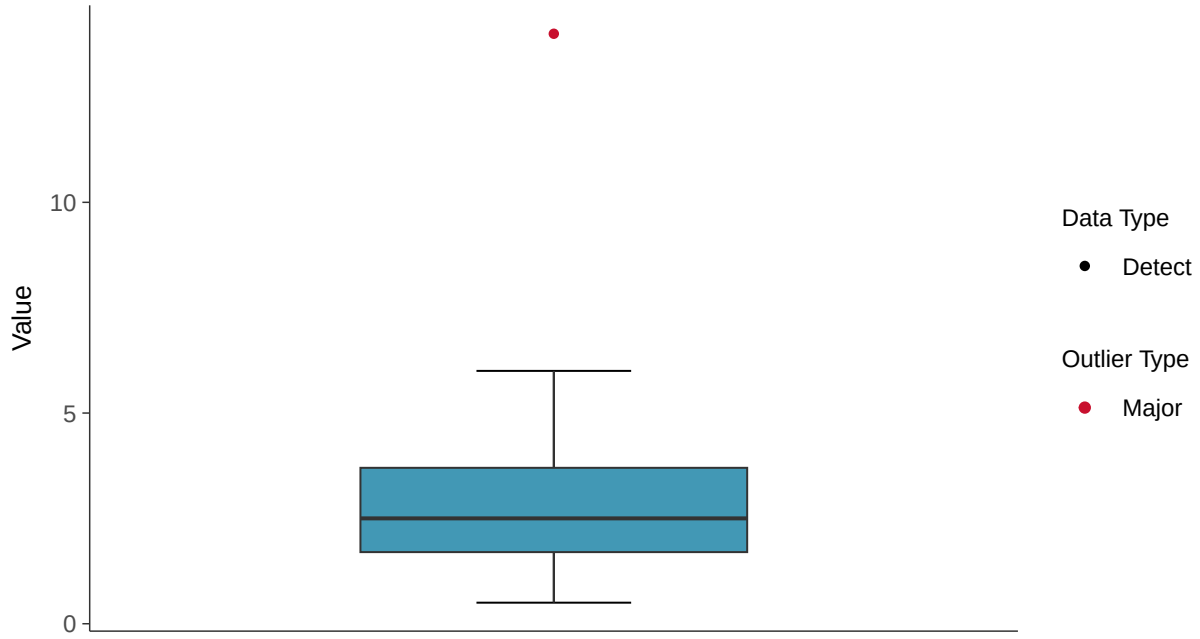
Histogram

Chromium, MW-6 (ug/L)



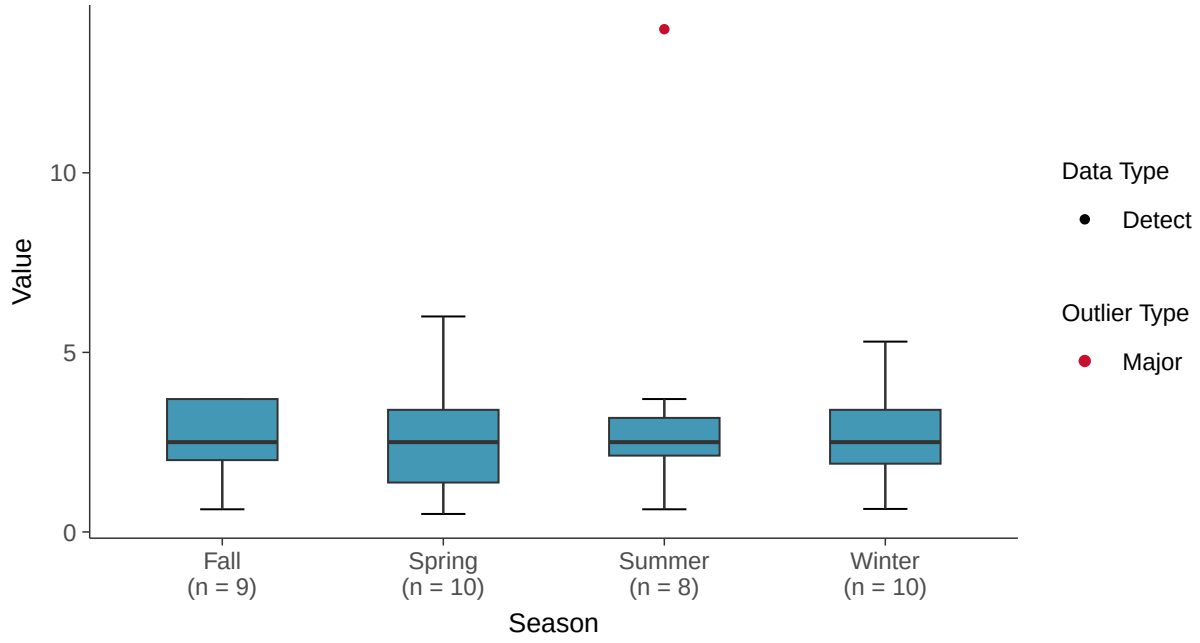
Boxplot

Chromium, MW-6 (ug/L)



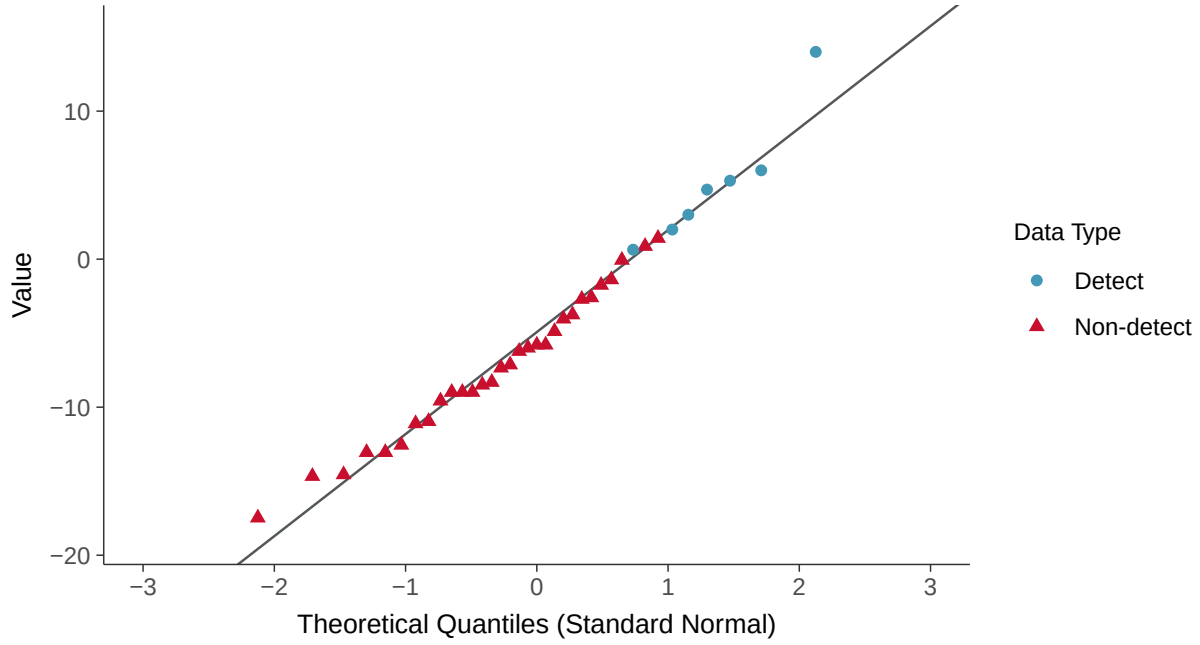
Boxplot by Season

Chromium, MW-6 (ug/L)



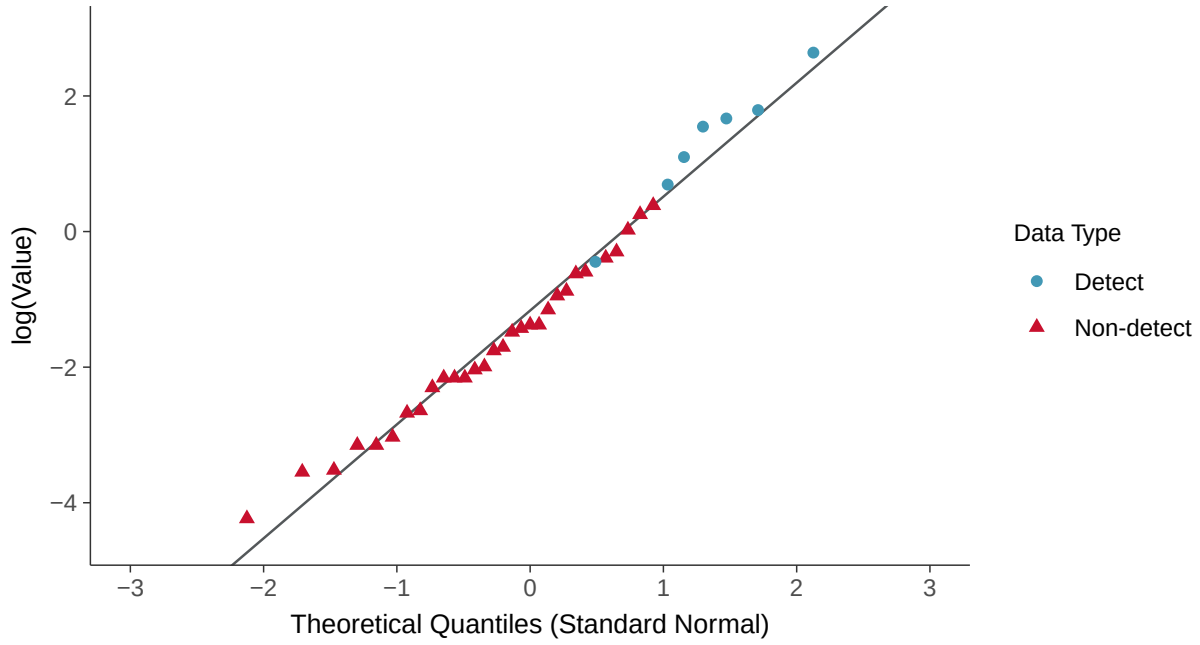
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



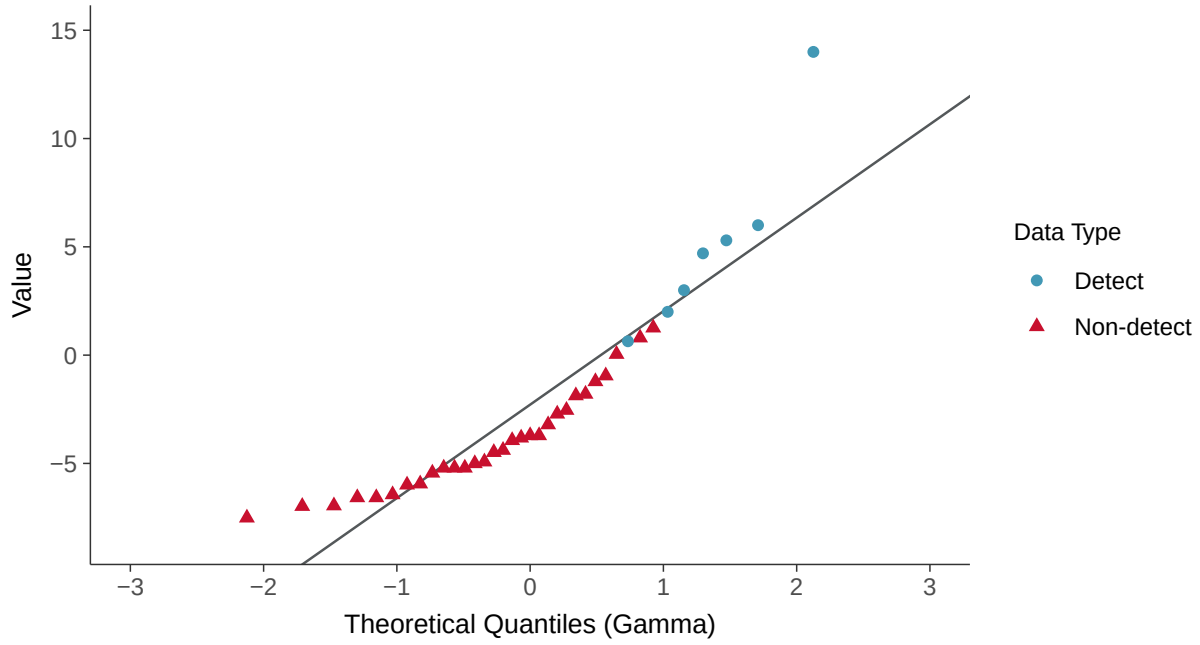
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



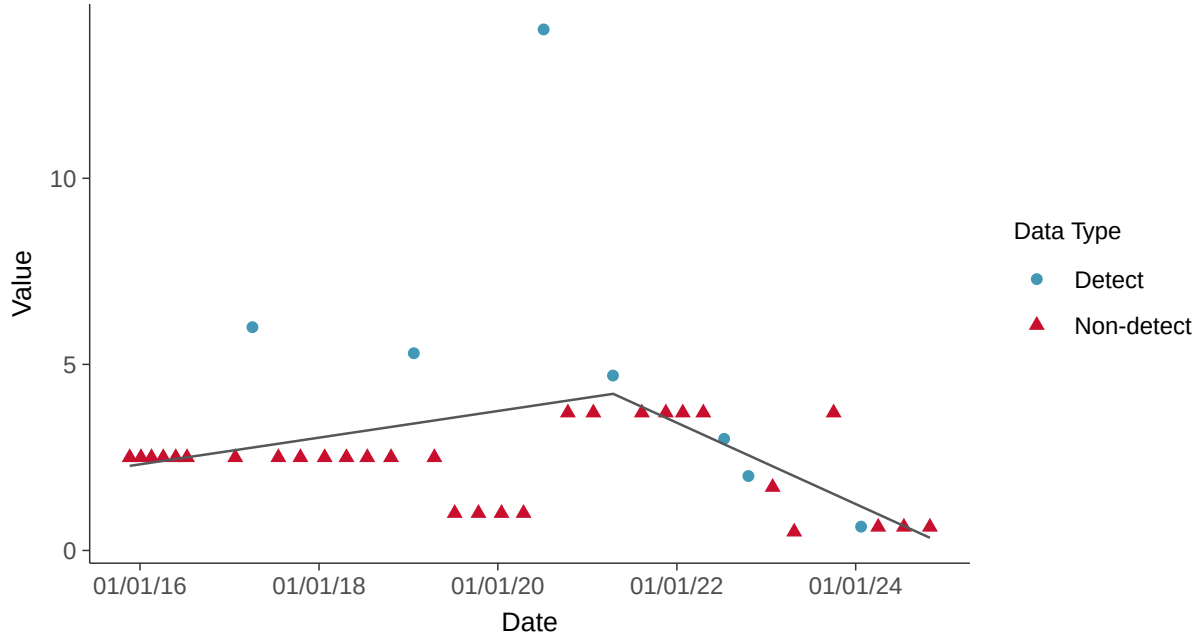
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-6 (ug/L)



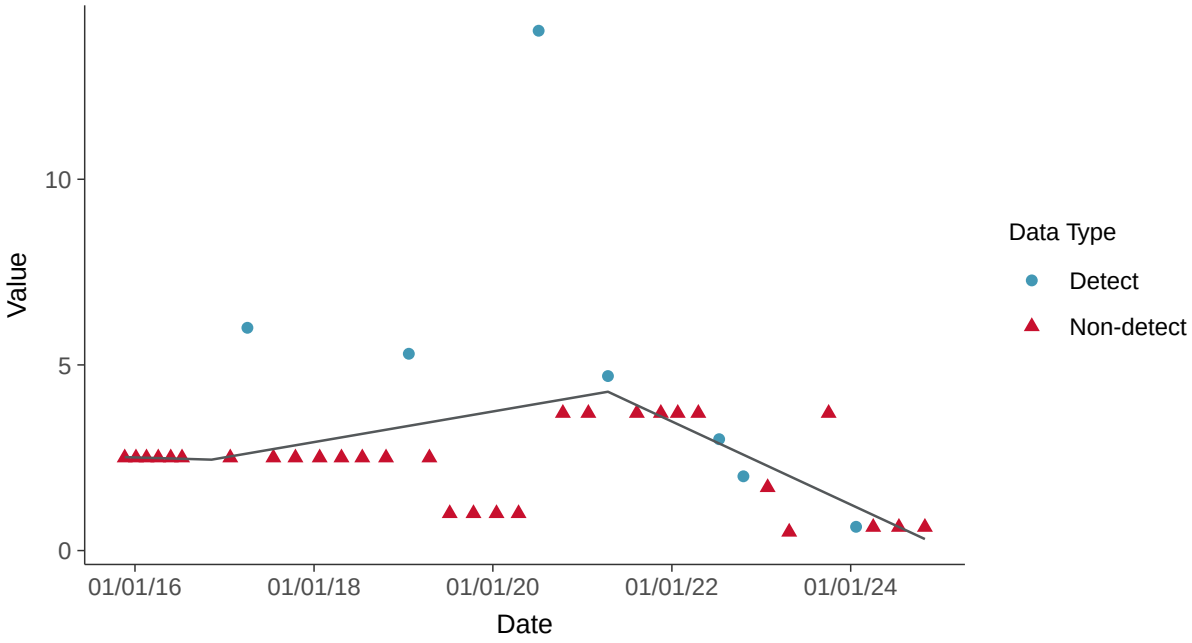
Trend Regression: Piecewise Linear-Linear

Chromium, MW-6 (ug/L)



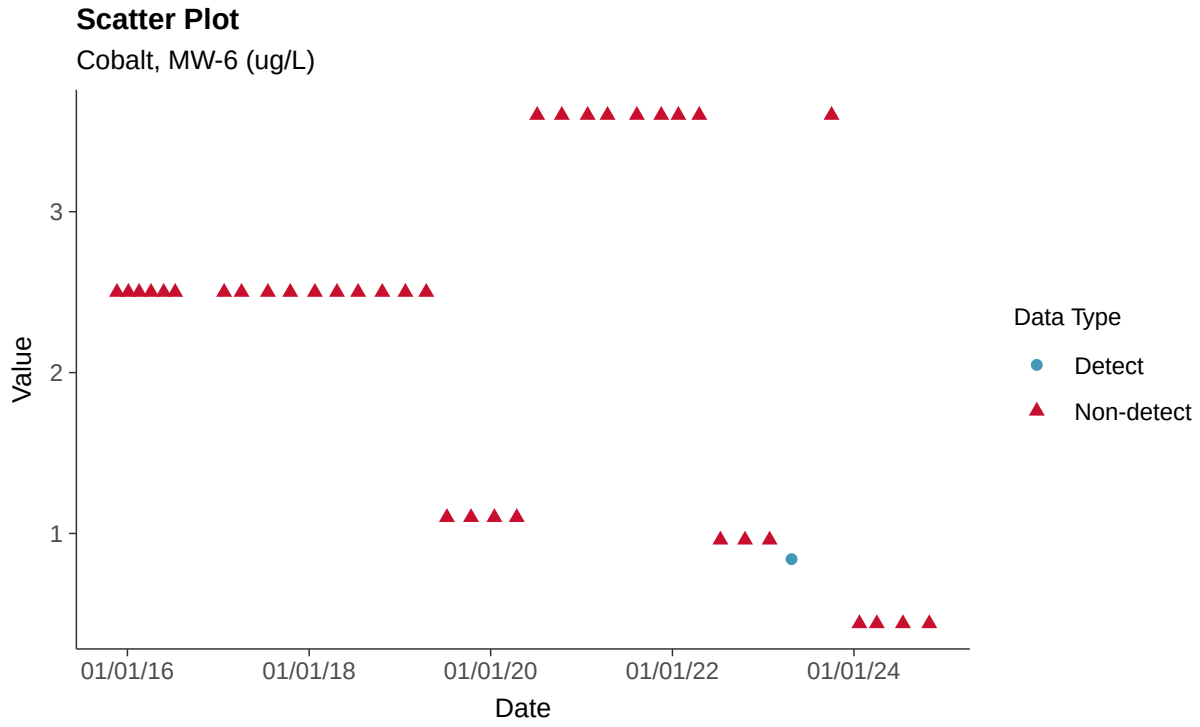
Trend Regression: Piecewise Linear-Linear-Linear

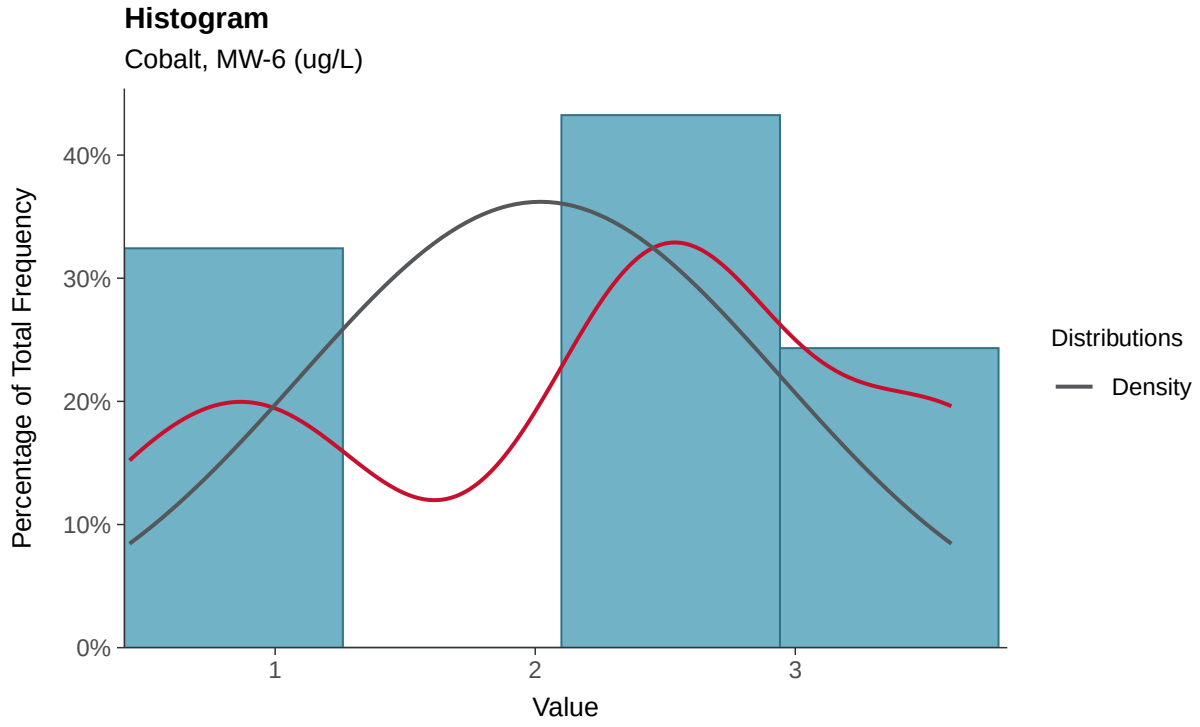
Chromium, MW-6 (ug/L)



App. IV: Cobalt, MW-6

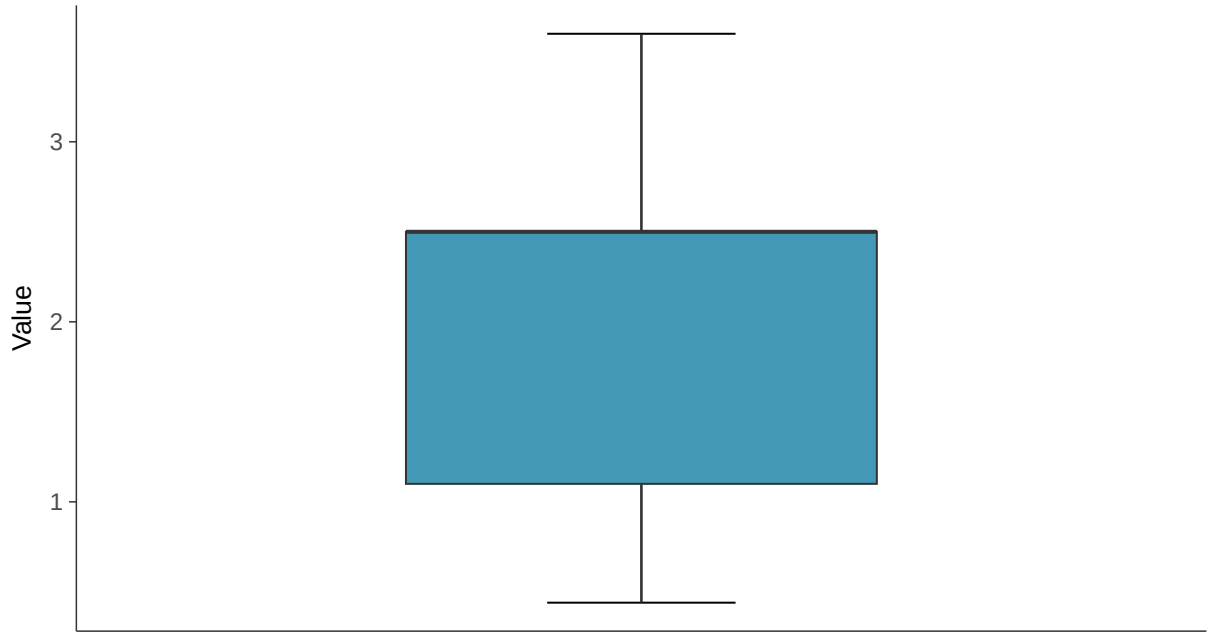
ID: 06_03_110





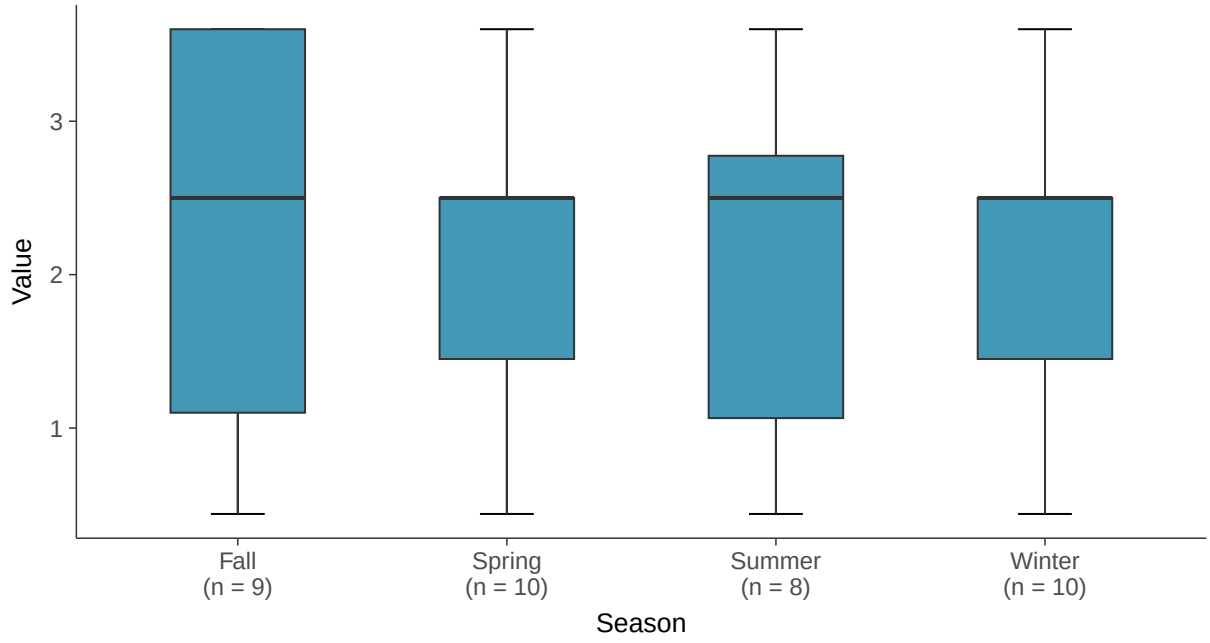
Boxplot

Cobalt, MW-6 (ug/L)



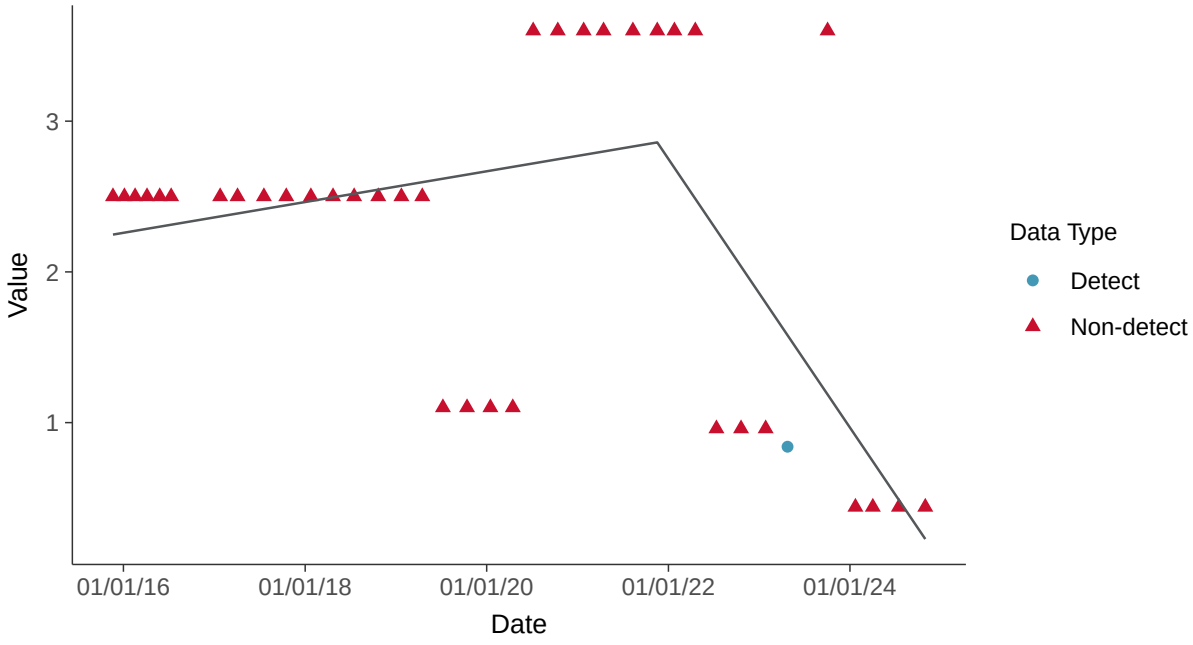
Boxplot by Season

Cobalt, MW-6 (ug/L)



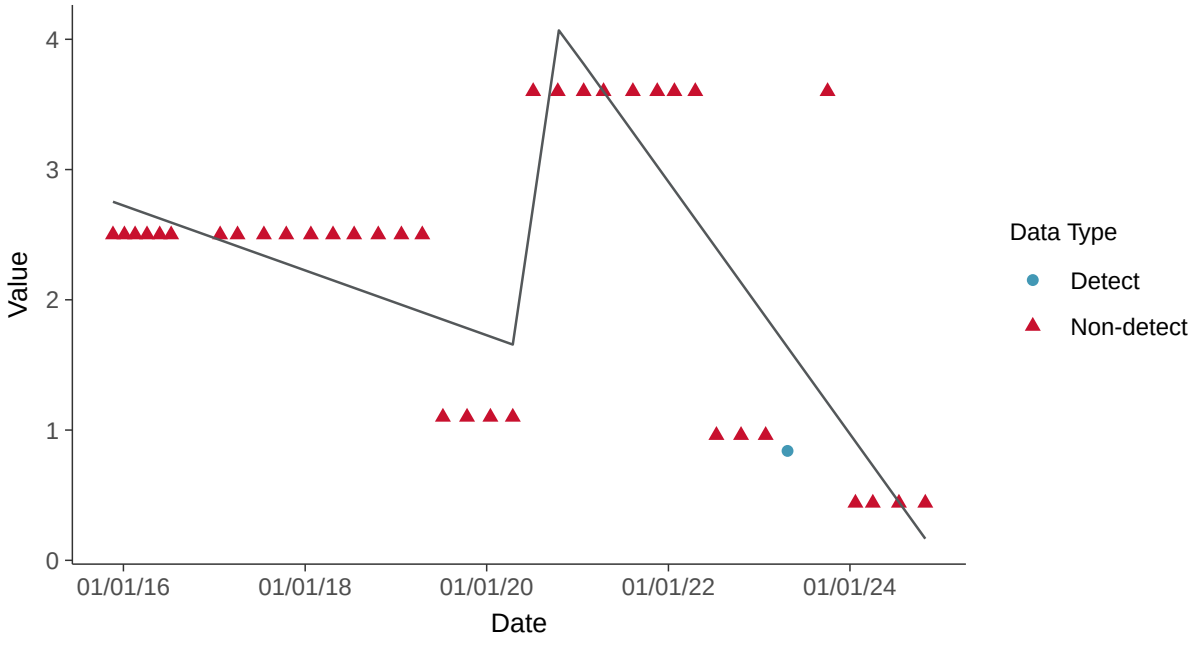
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-6 (ug/L)



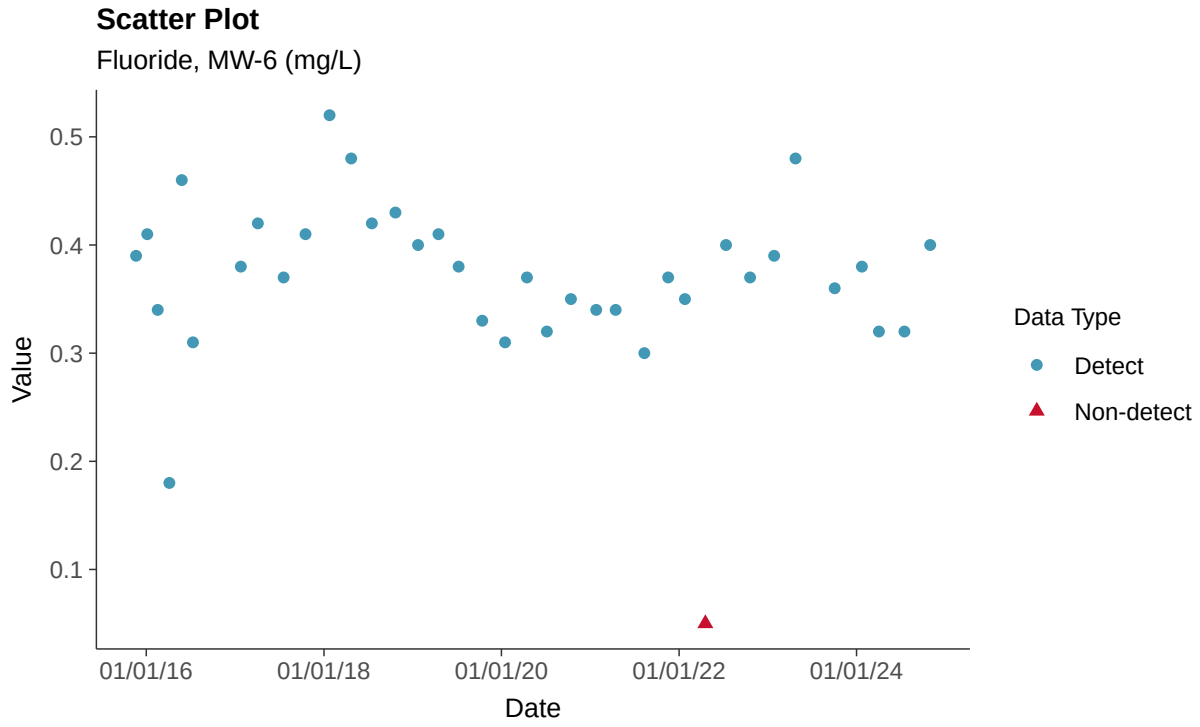
Trend Regression: Piecewise Linear-Linear-Linear

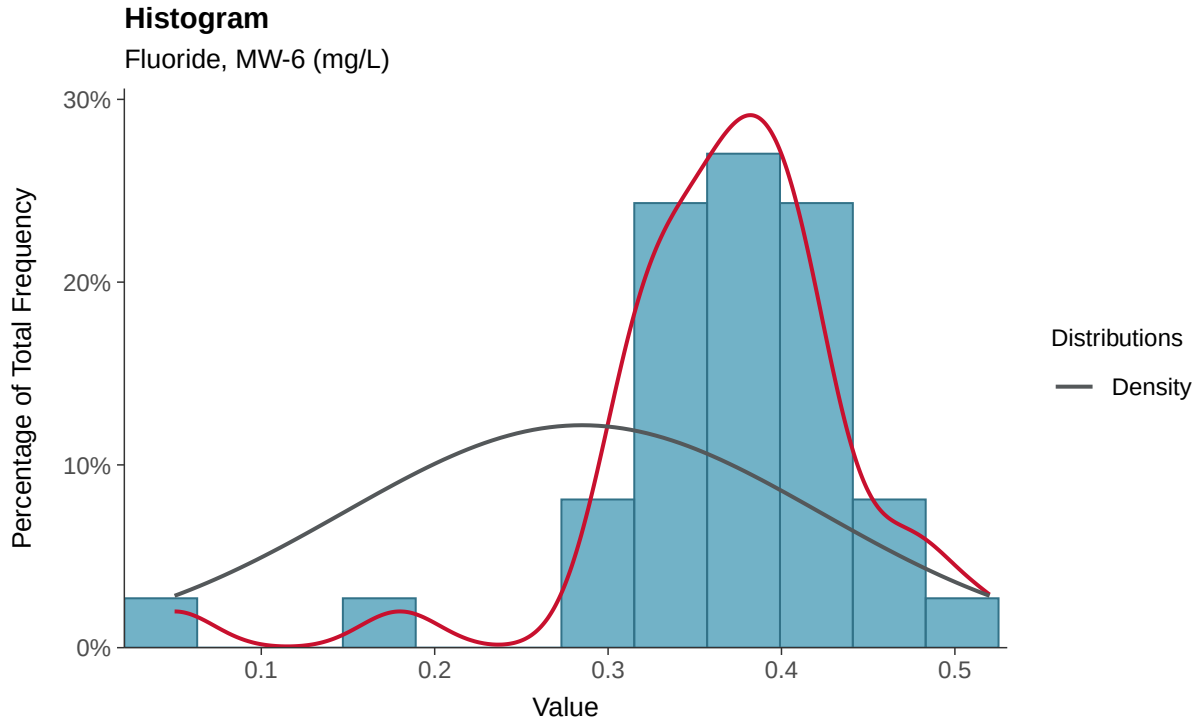
Cobalt, MW-6 (ug/L)



App. IV: Fluoride, MW-6

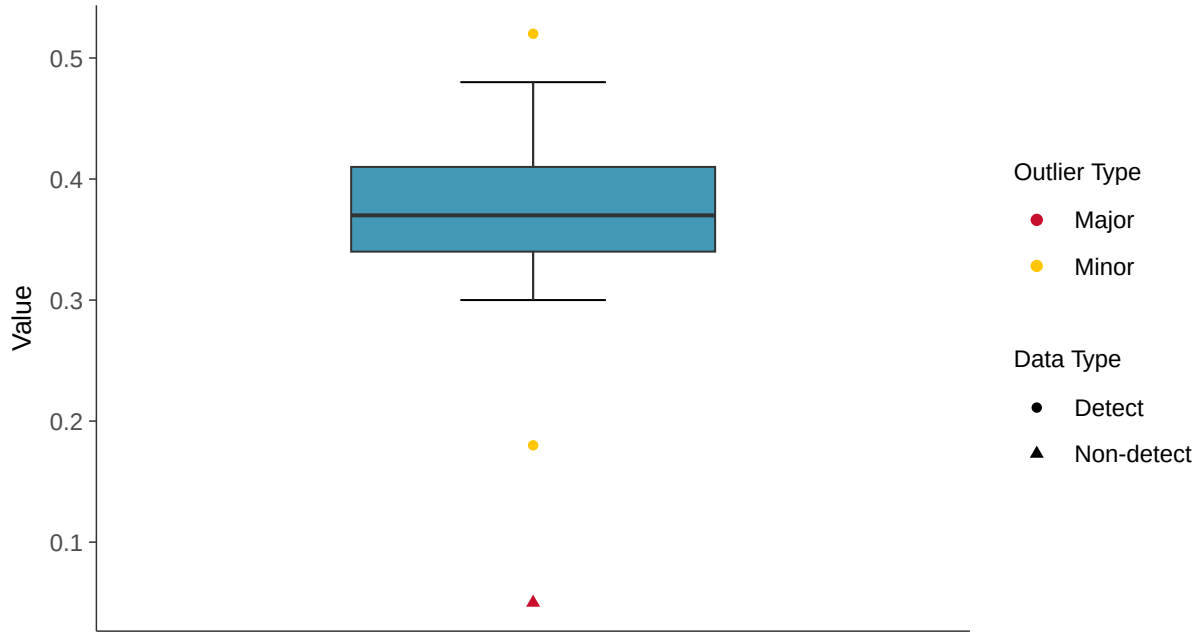
ID: 06_03_112





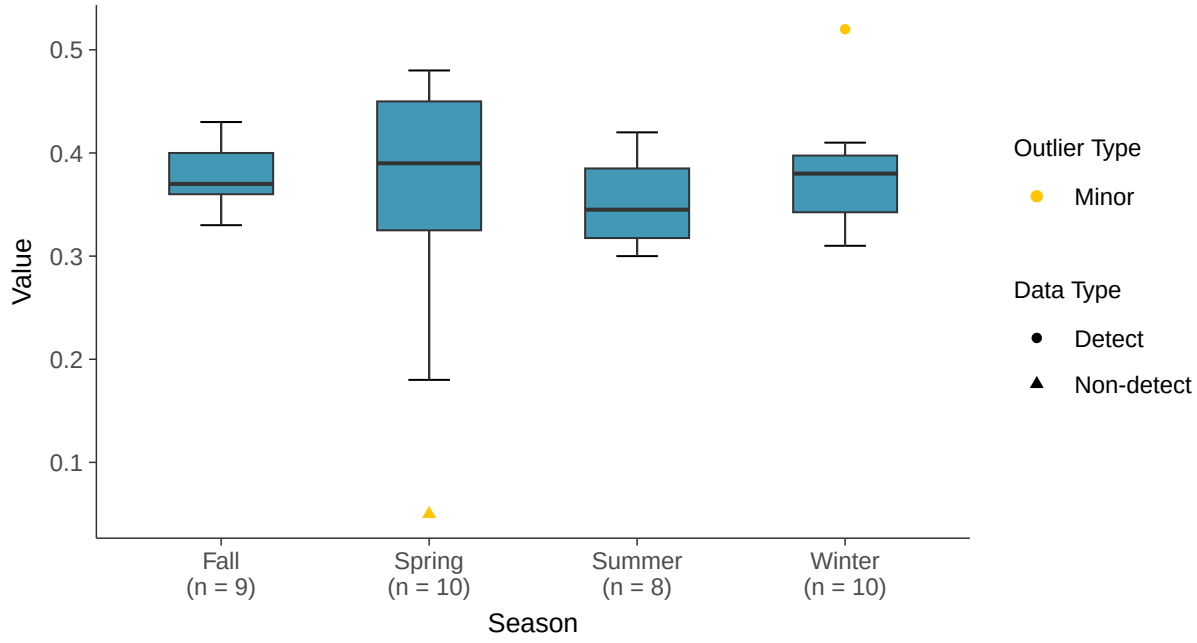
Boxplot

Fluoride, MW-6 (mg/L)



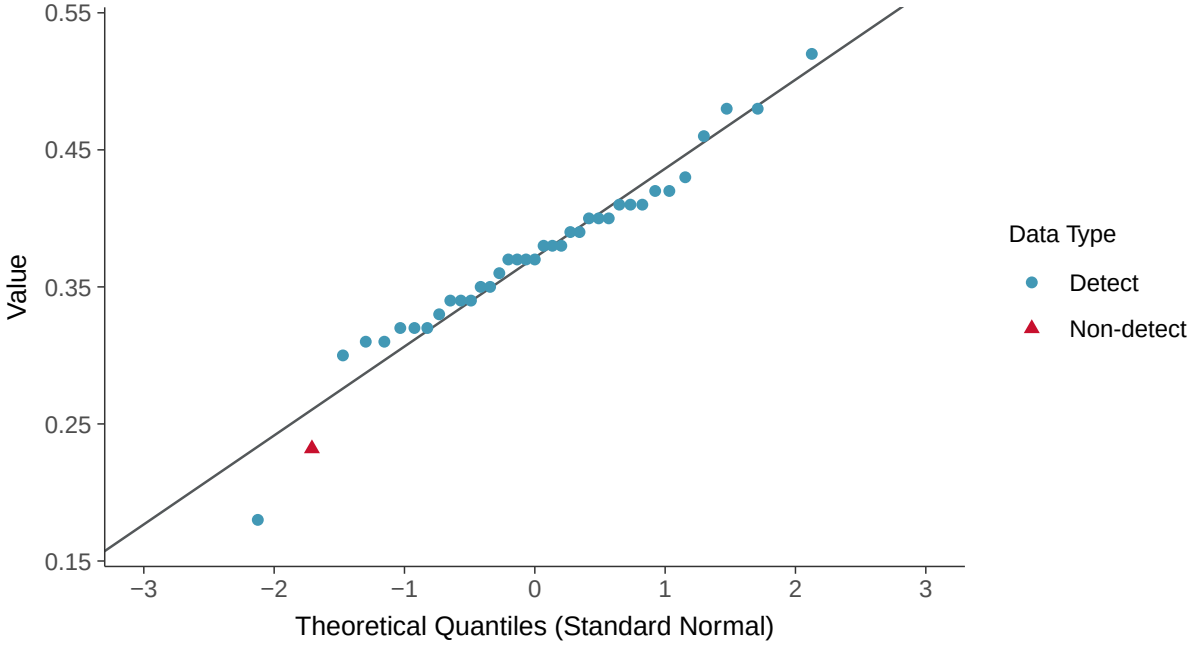
Boxplot by Season

Fluoride, MW-6 (mg/L)



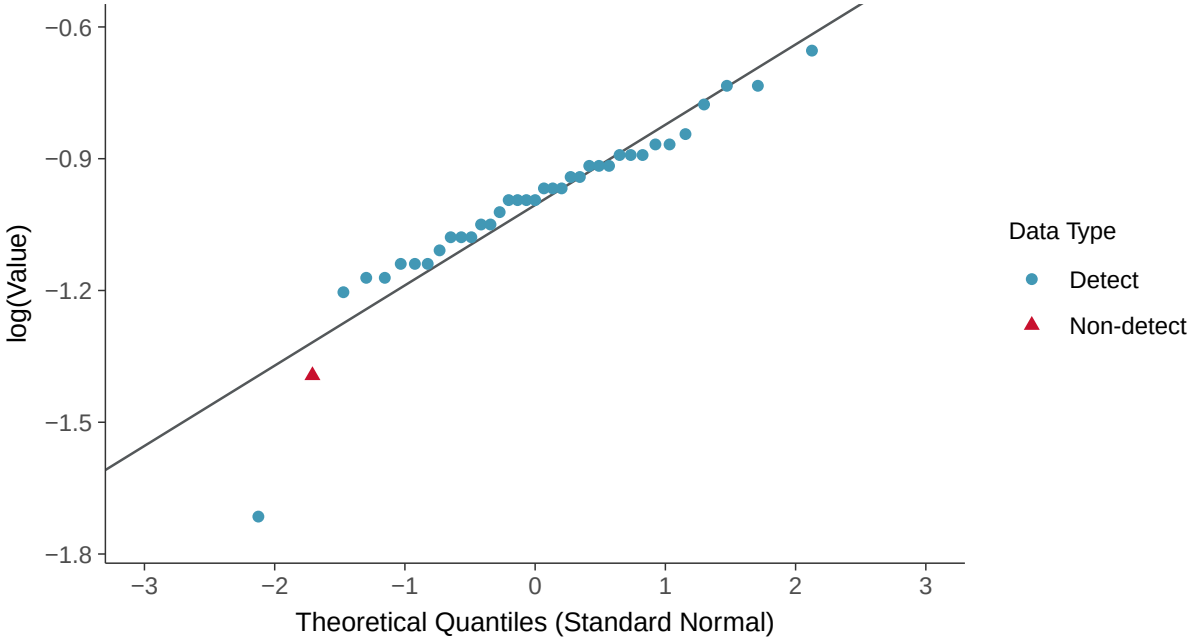
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



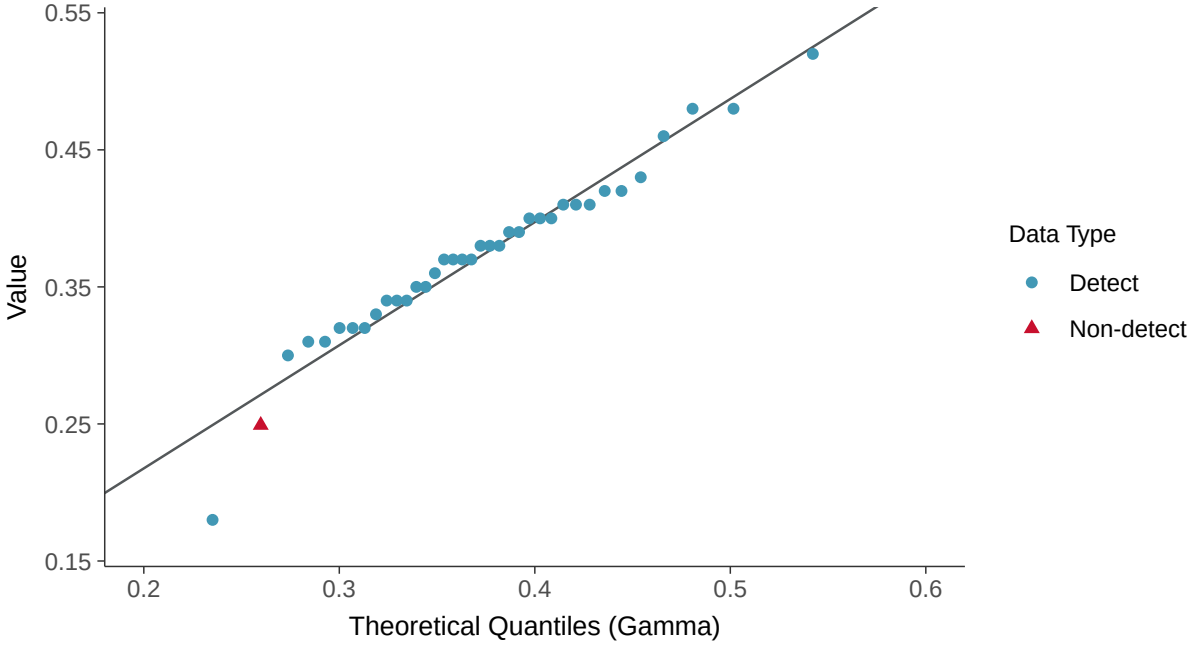
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



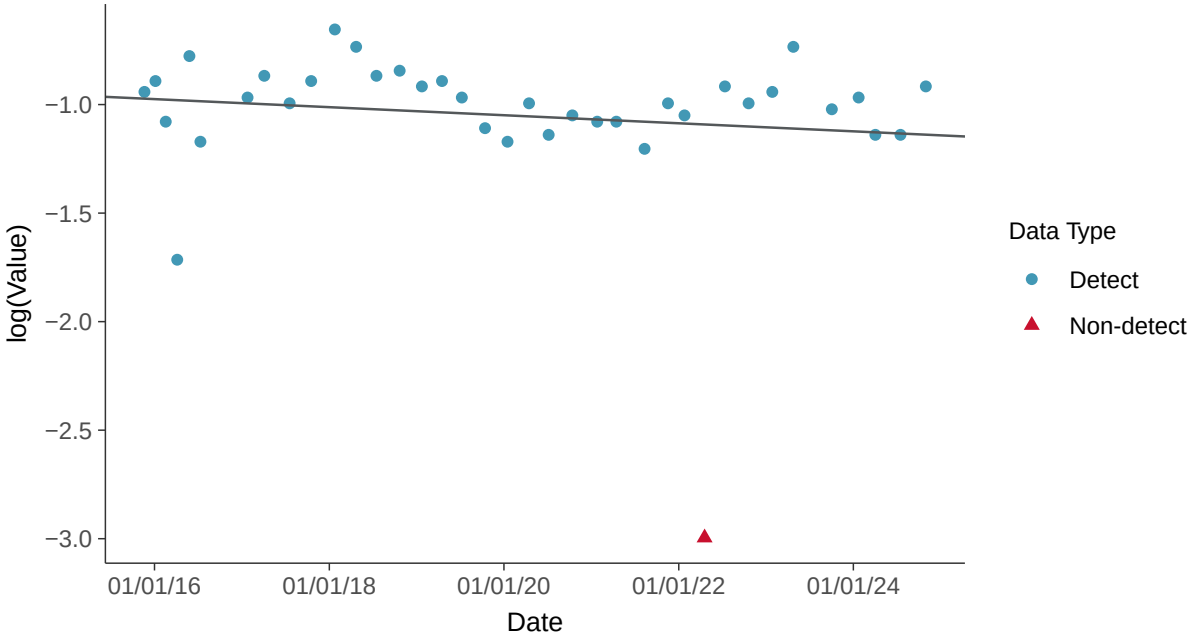
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-6 (mg/L)



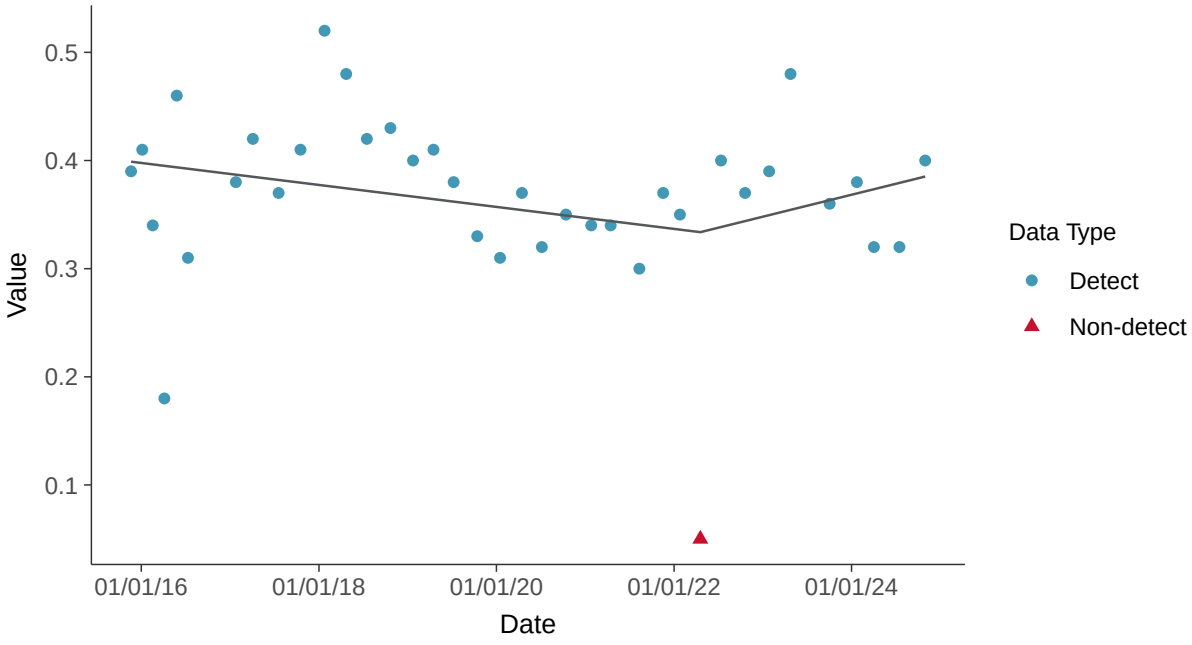
Trend Regression: Lognormal MLE

Fluoride, MW-6 (mg/L)



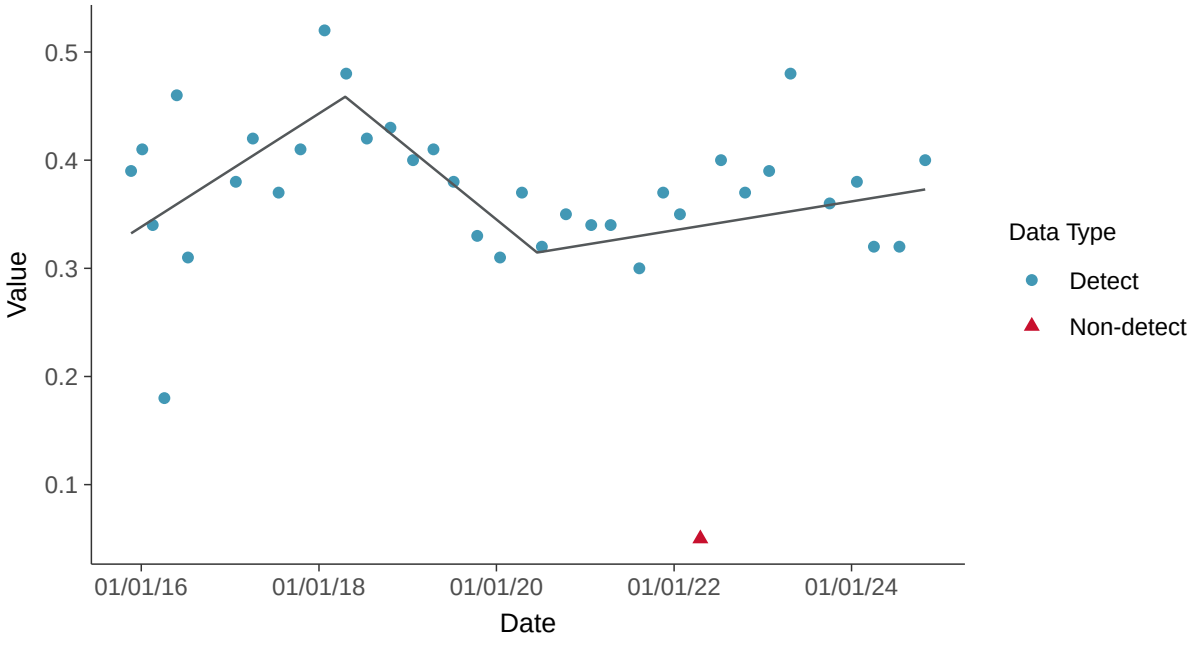
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-6 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-6 (mg/L)

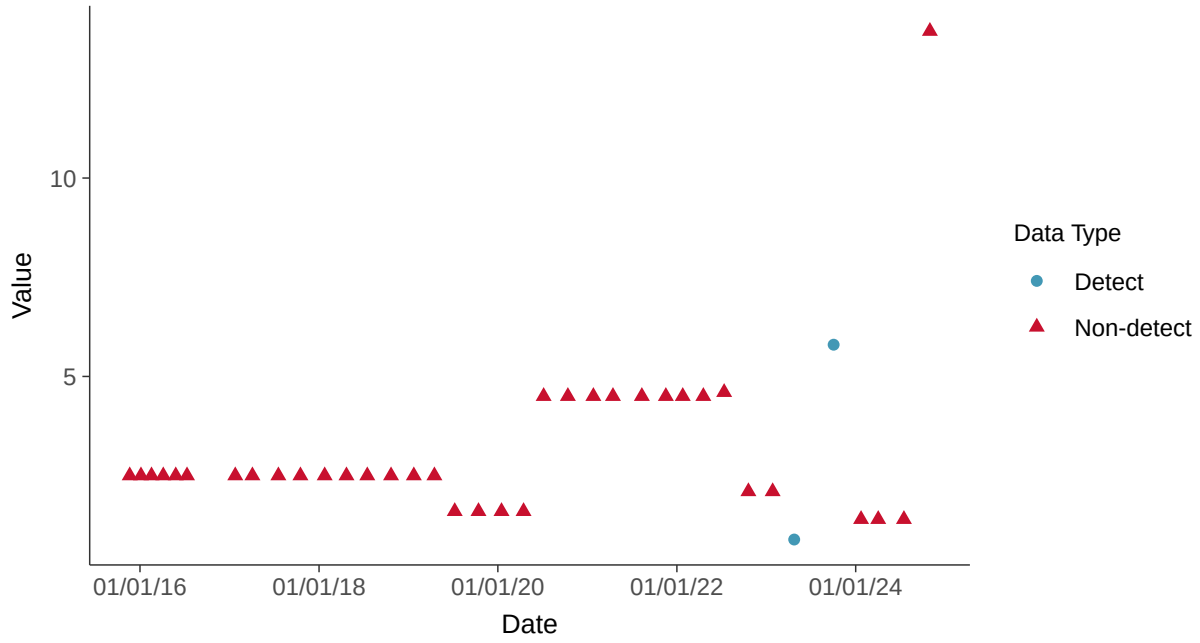


App. IV: Lead, MW-6

ID: 06_03_113

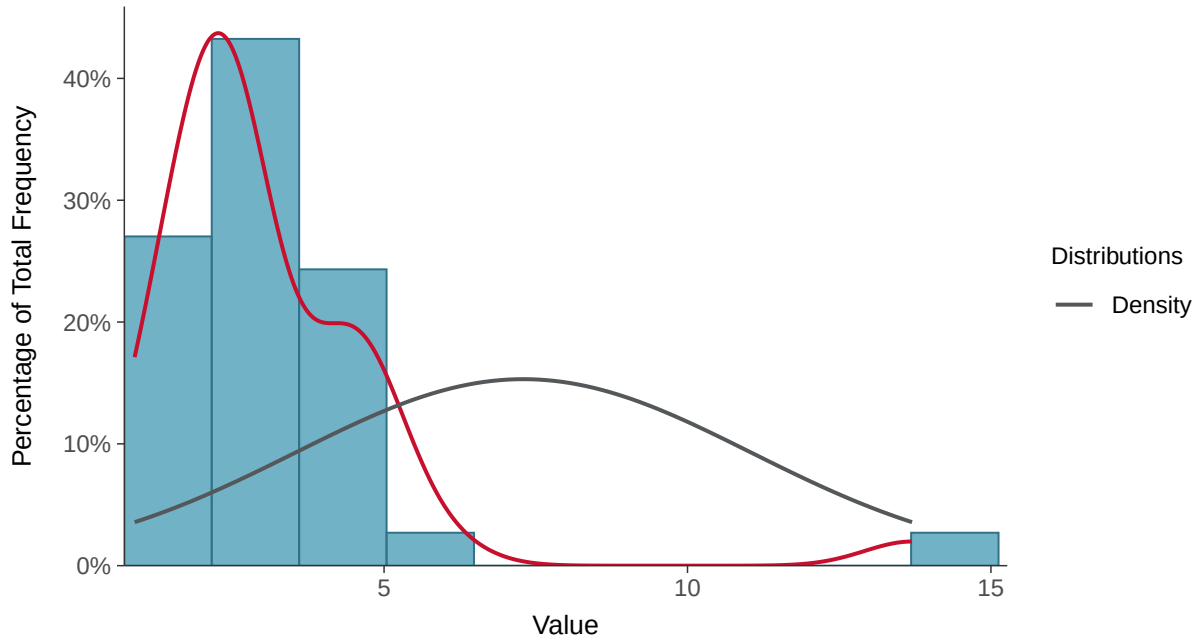
Scatter Plot

Lead, MW-6 (ug/L)



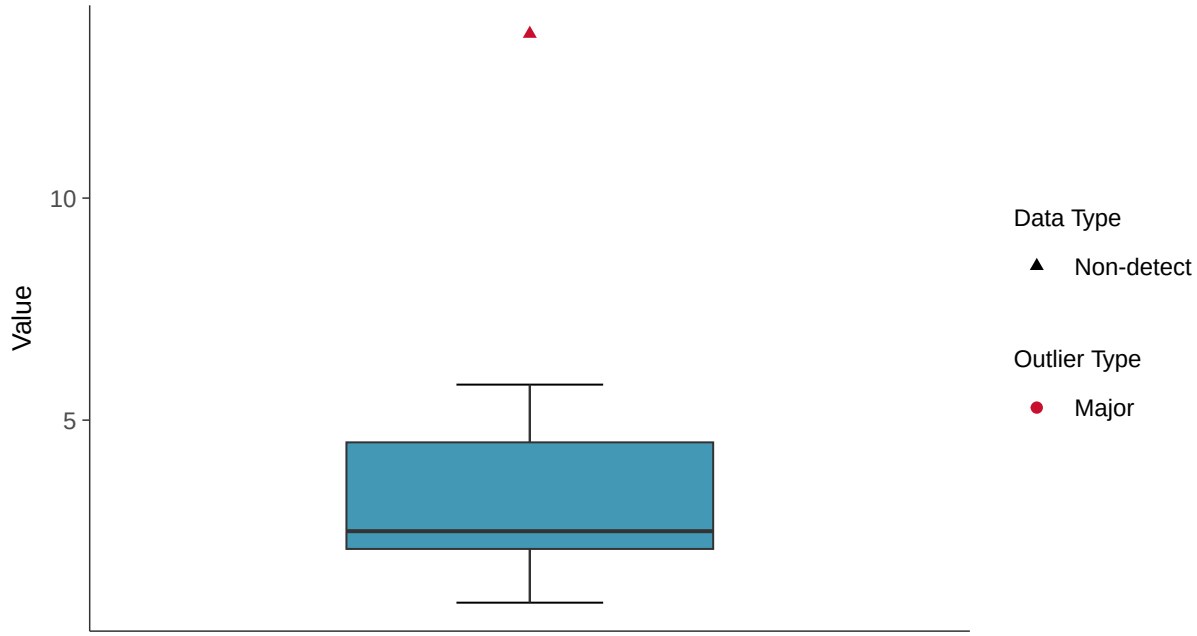
Histogram

Lead, MW-6 (ug/L)



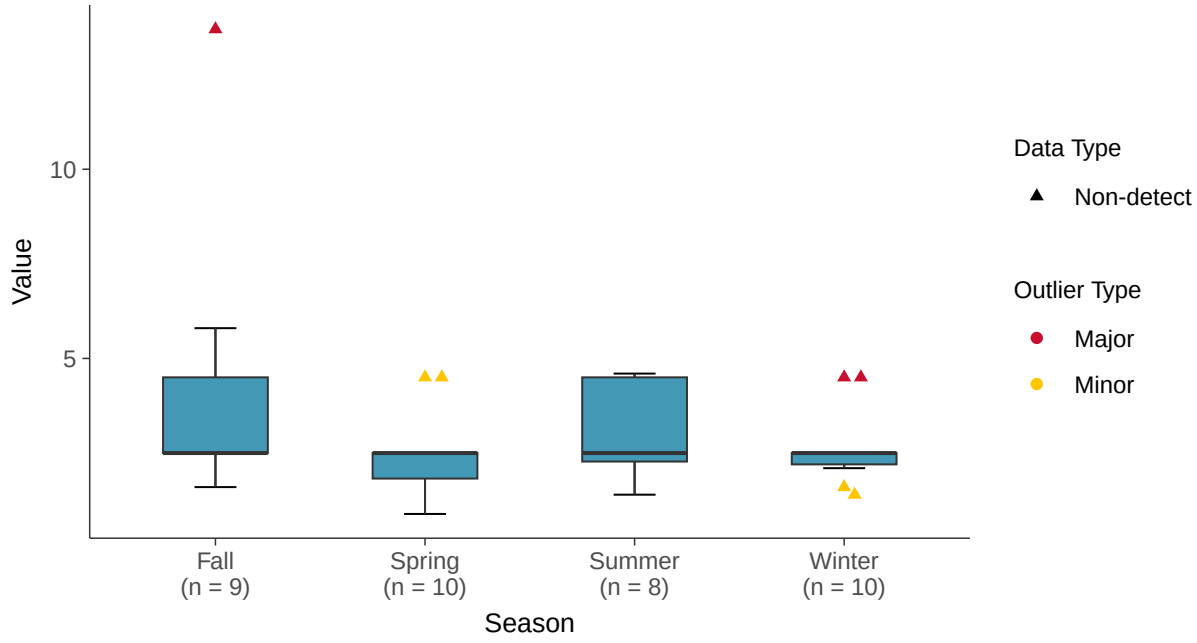
Boxplot

Lead, MW-6 (ug/L)



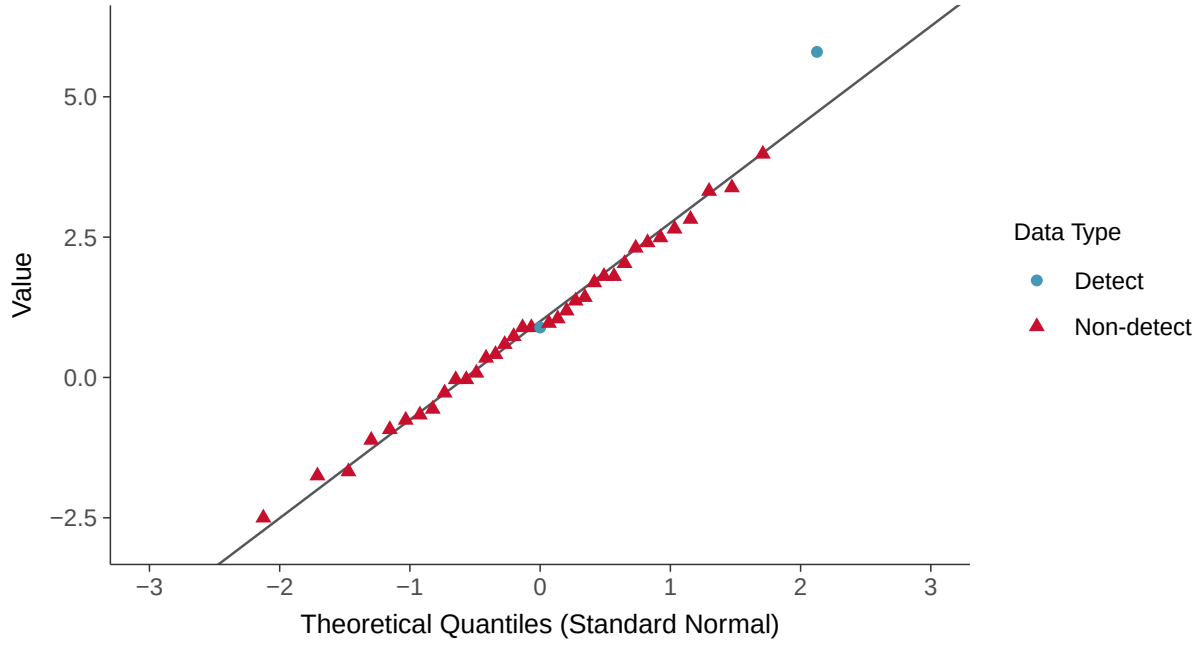
Boxplot by Season

Lead, MW-6 (ug/L)



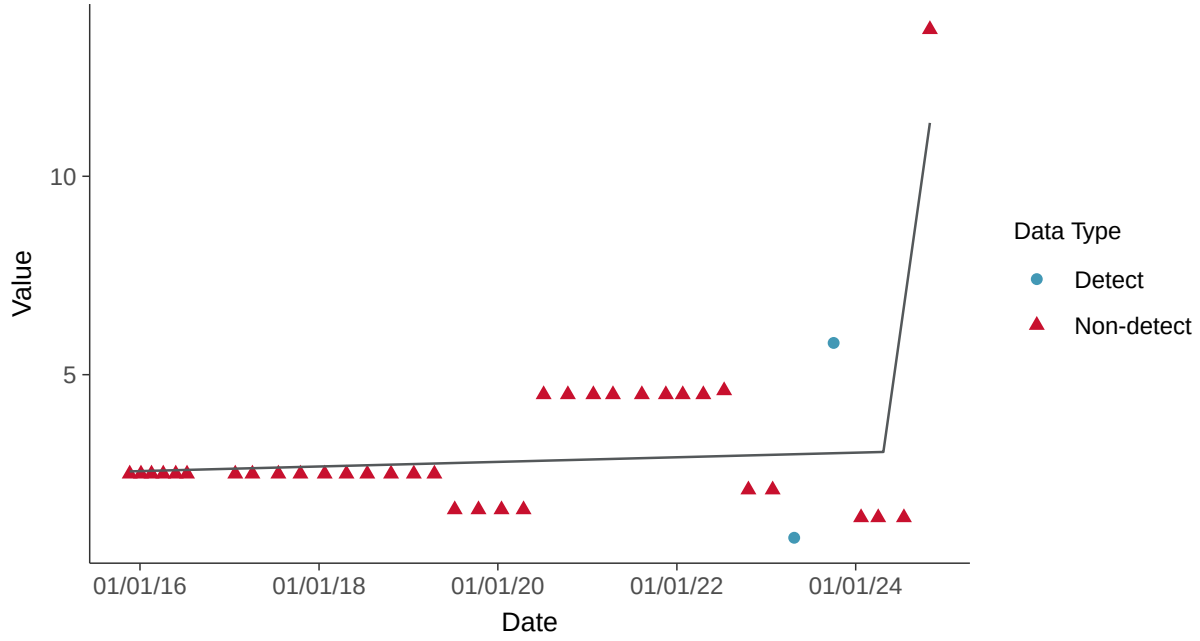
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-6 (ug/L)



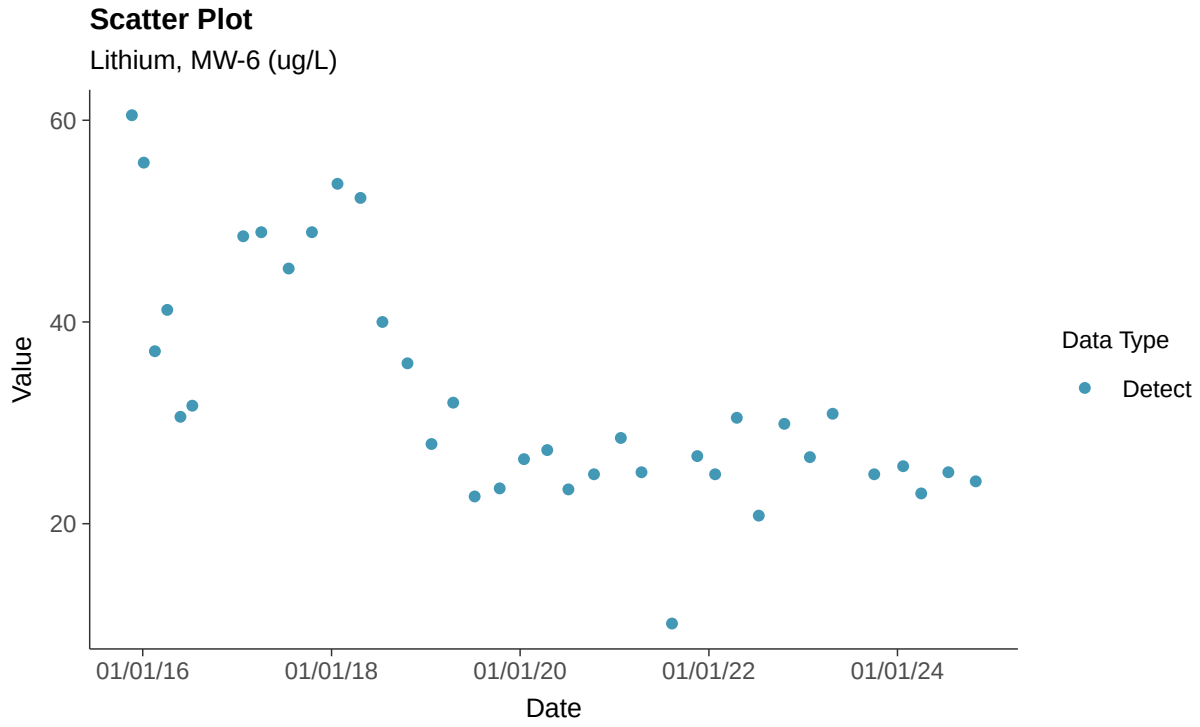
Trend Regression: Piecewise Linear-Linear

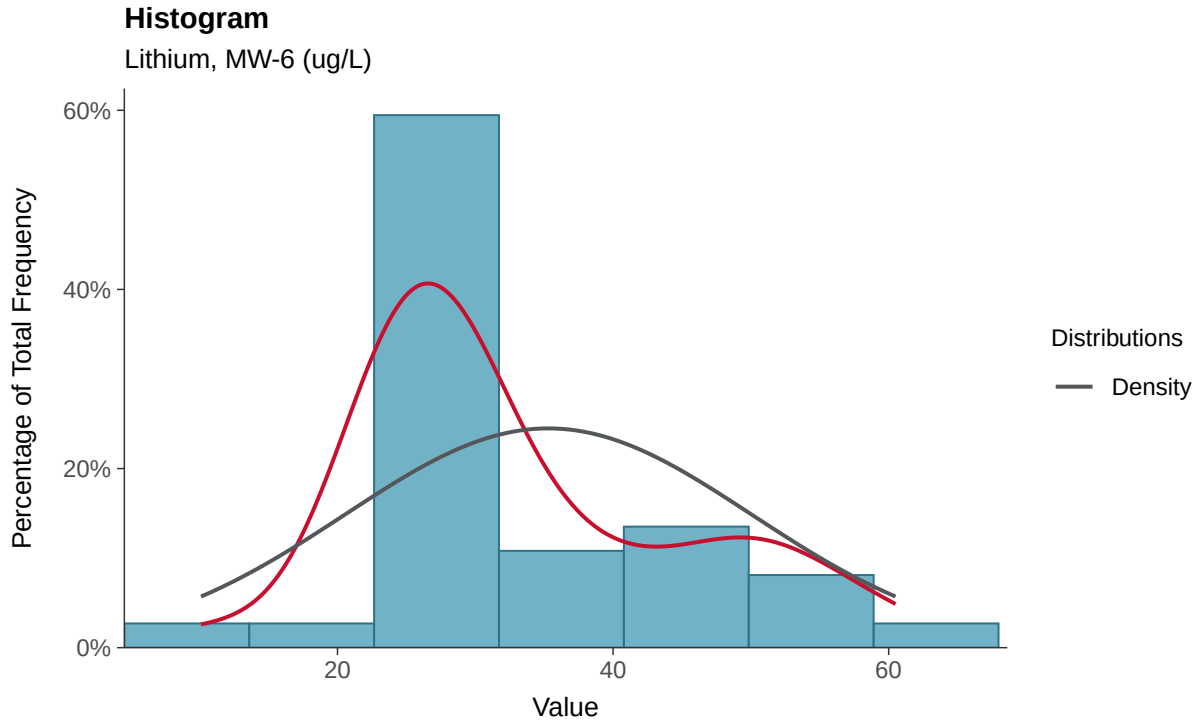
Lead, MW-6 (ug/L)



App. IV: Lithium, MW-6

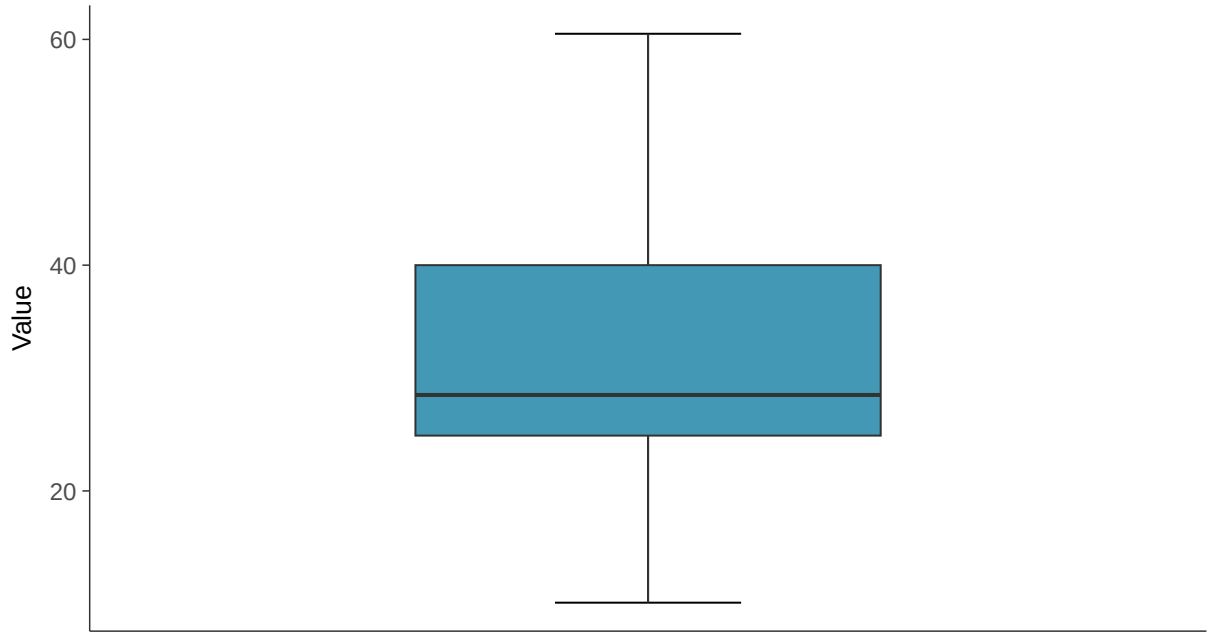
ID: 06_03_114





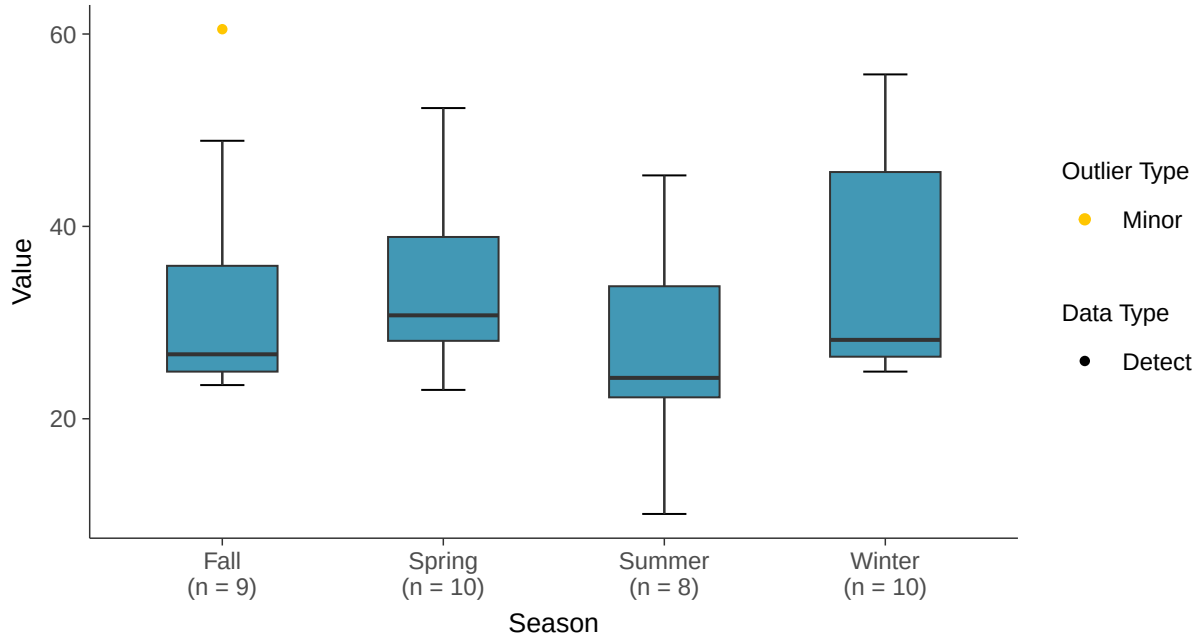
Boxplot

Lithium, MW-6 (ug/L)



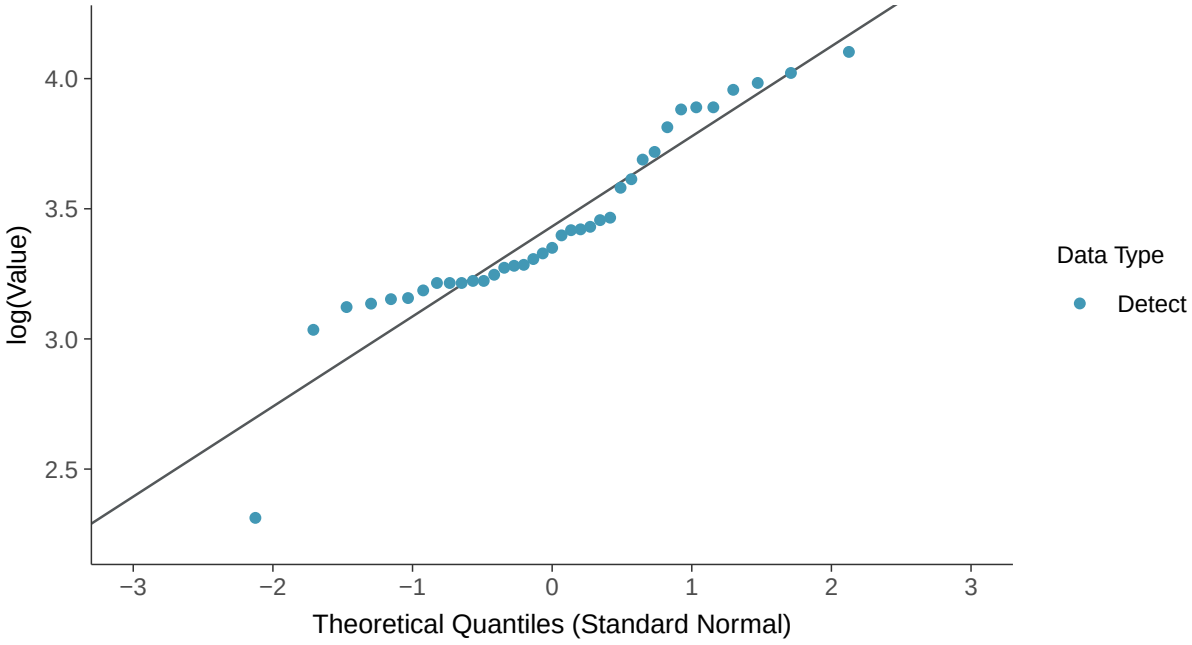
Boxplot by Season

Lithium, MW-6 (ug/L)



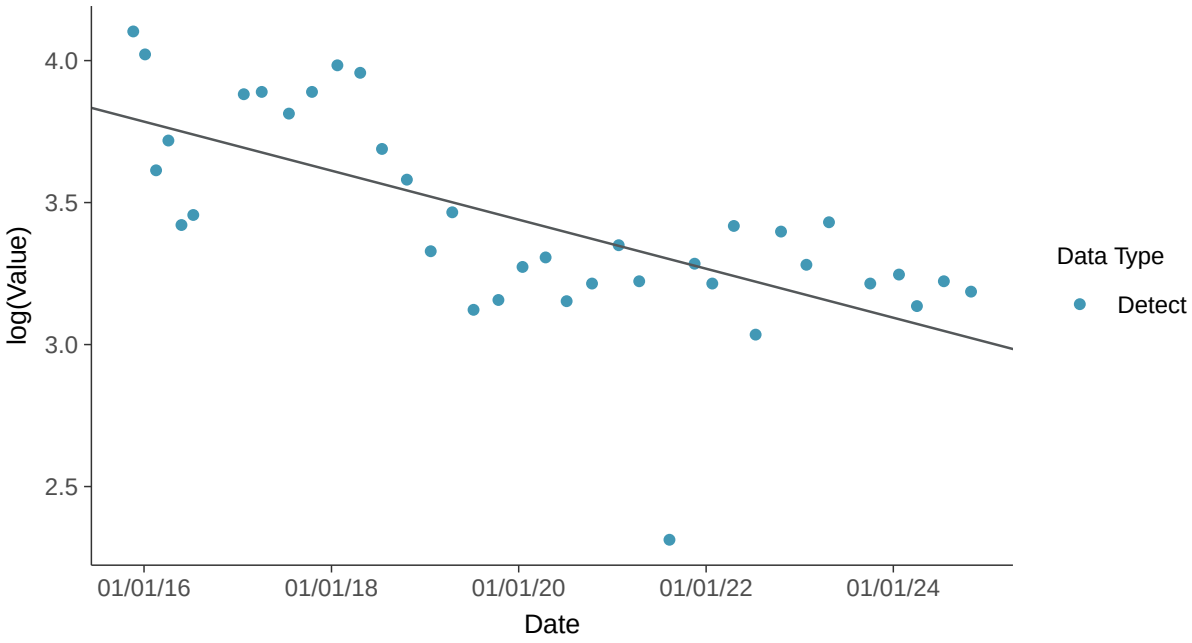
Lognormal Q-Q plot

Lithium, MW-6 (ug/L)



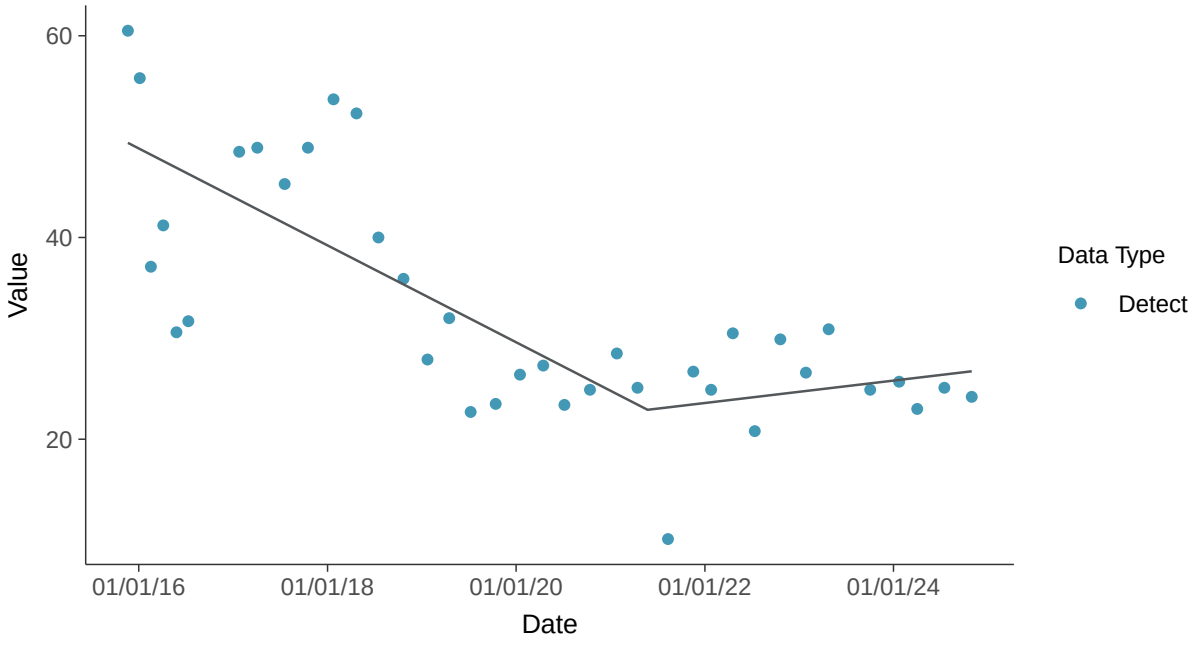
Trend Regression: Lognormal MLE

Lithium, MW-6 (ug/L)



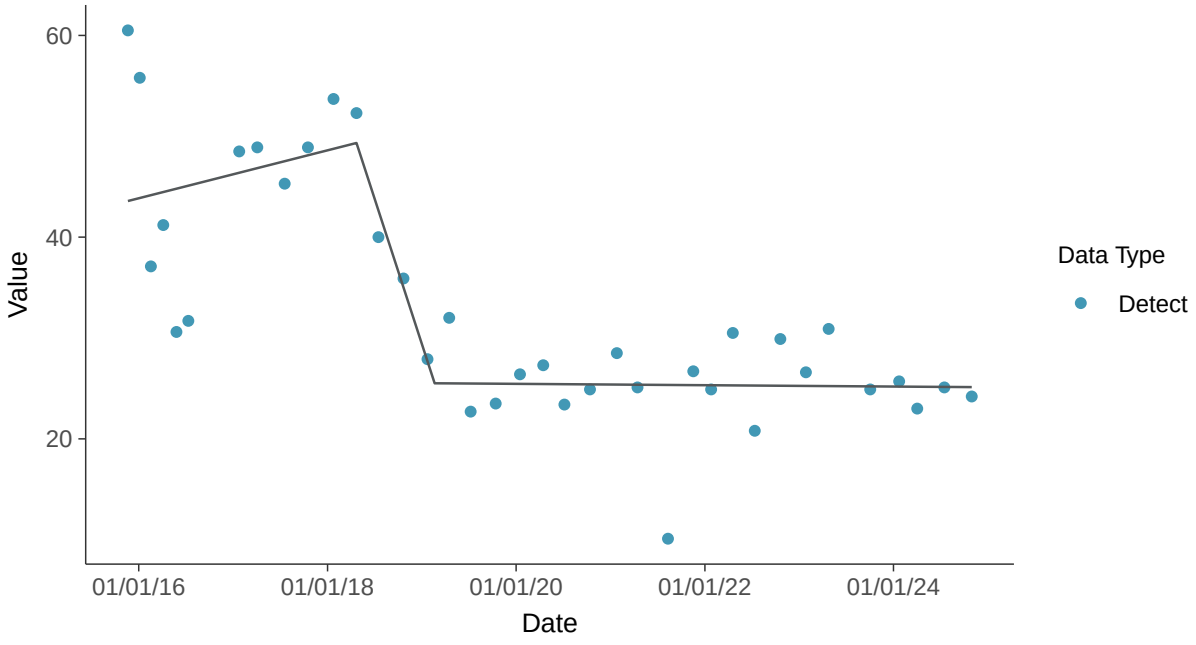
Trend Regression: Piecewise Linear-Linear

Lithium, MW-6 (ug/L)



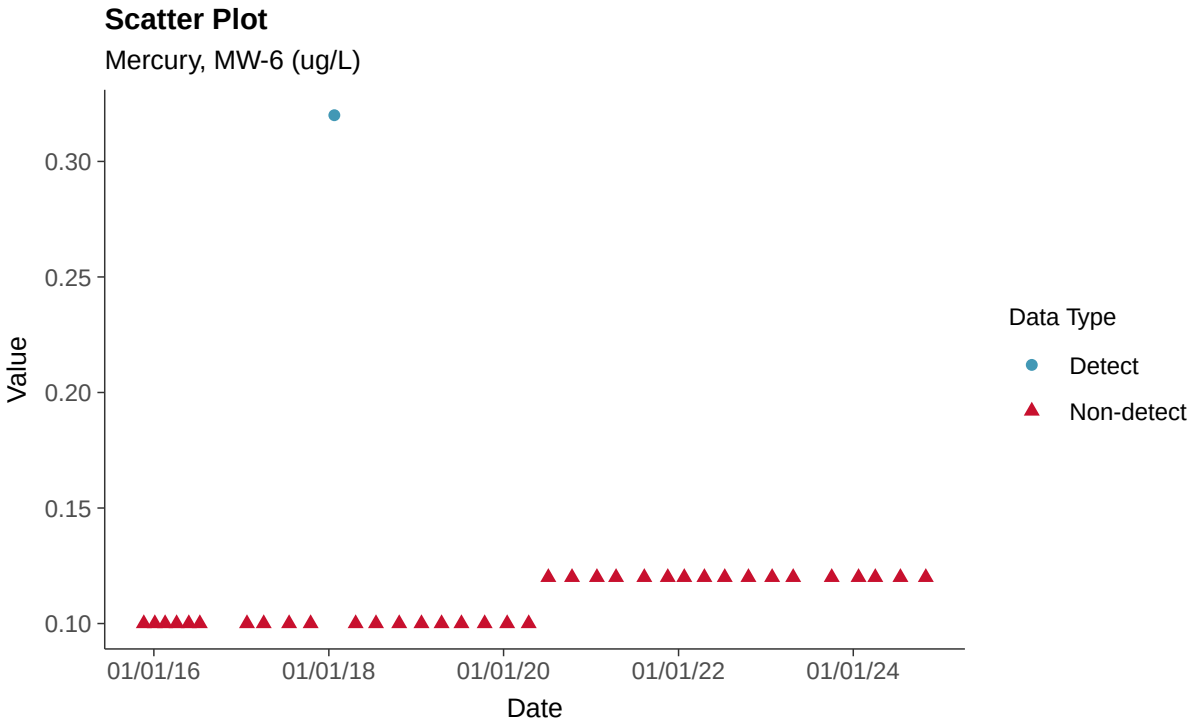
Trend Regression: Piecewise Linear-Linear-Linear

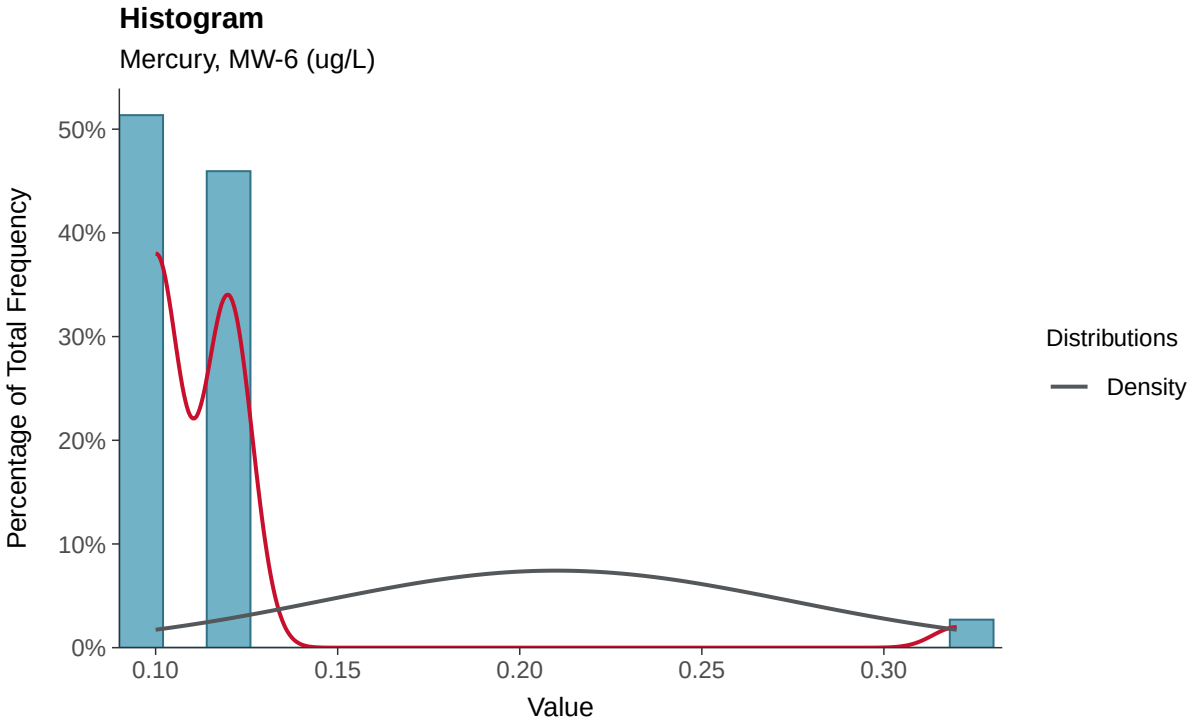
Lithium, MW-6 (ug/L)



App. IV: Mercury, MW-6

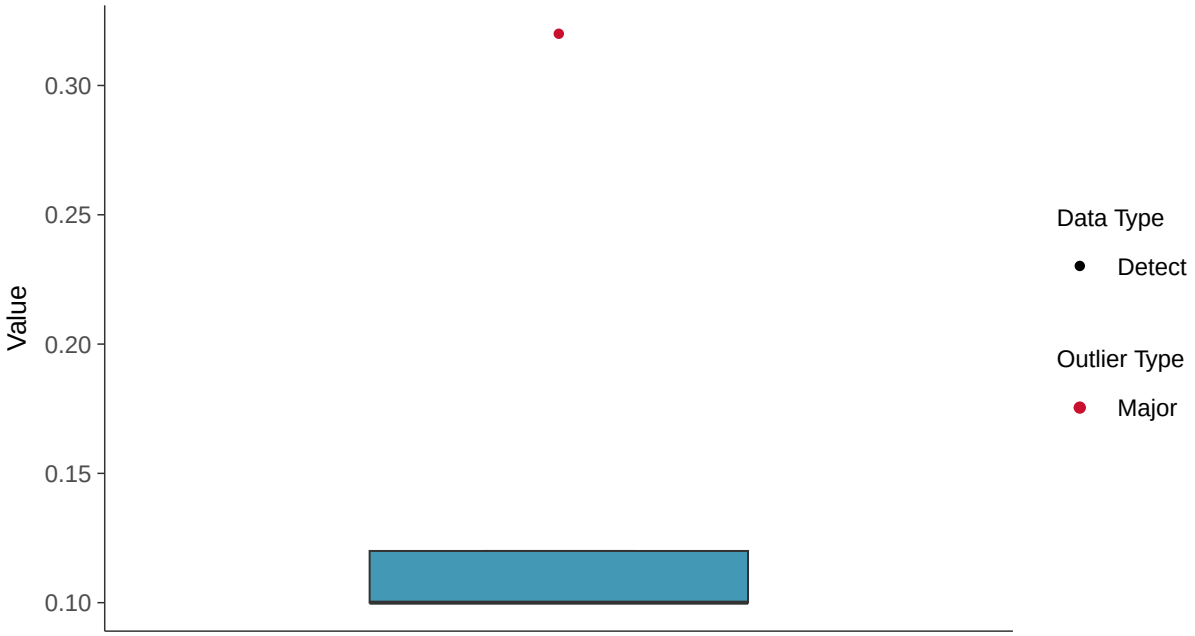
ID: 06_03_115





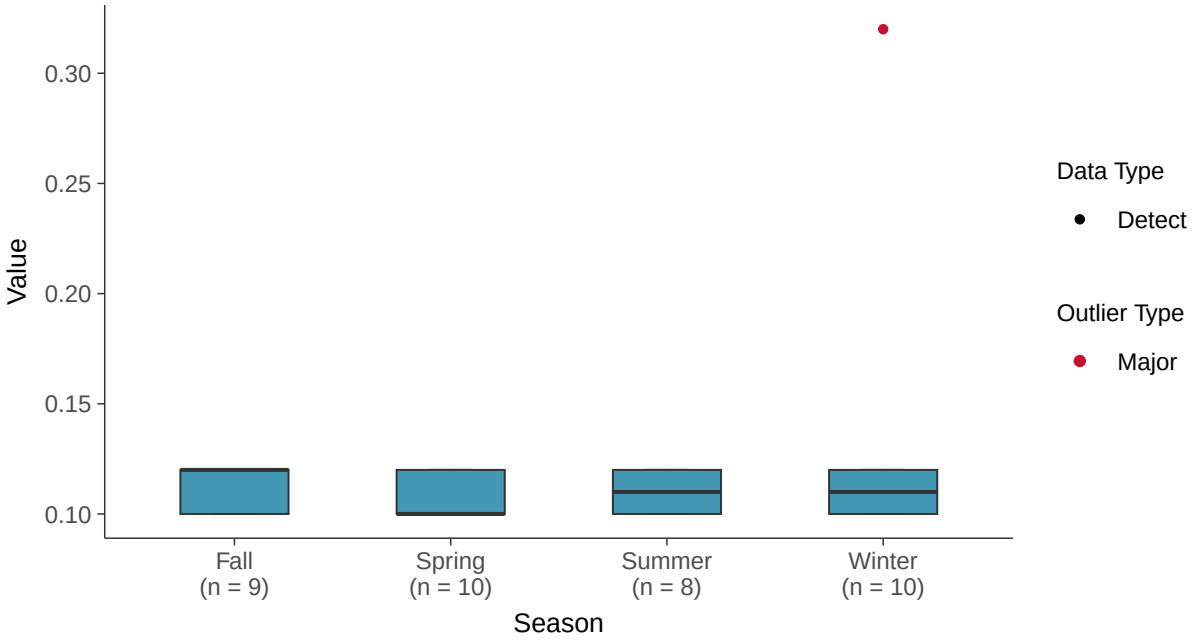
Boxplot

Mercury, MW-6 (ug/L)



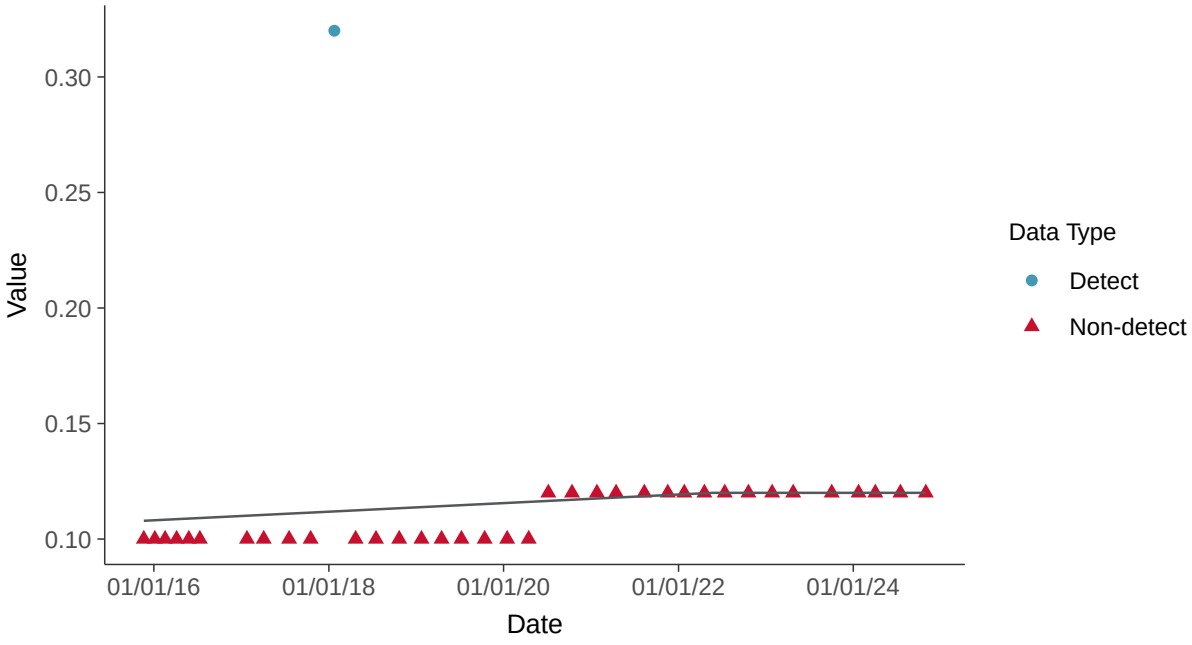
Boxplot by Season

Mercury, MW-6 (ug/L)



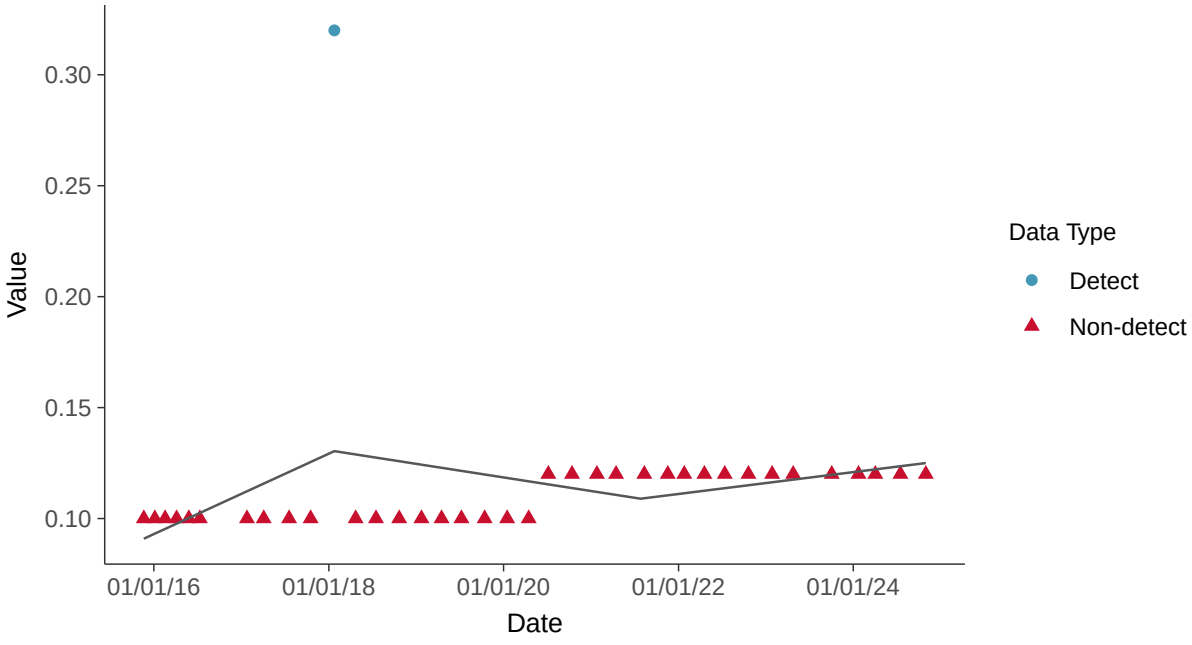
Trend Regression: Piecewise Linear-Linear

Mercury, MW-6 (ug/L)



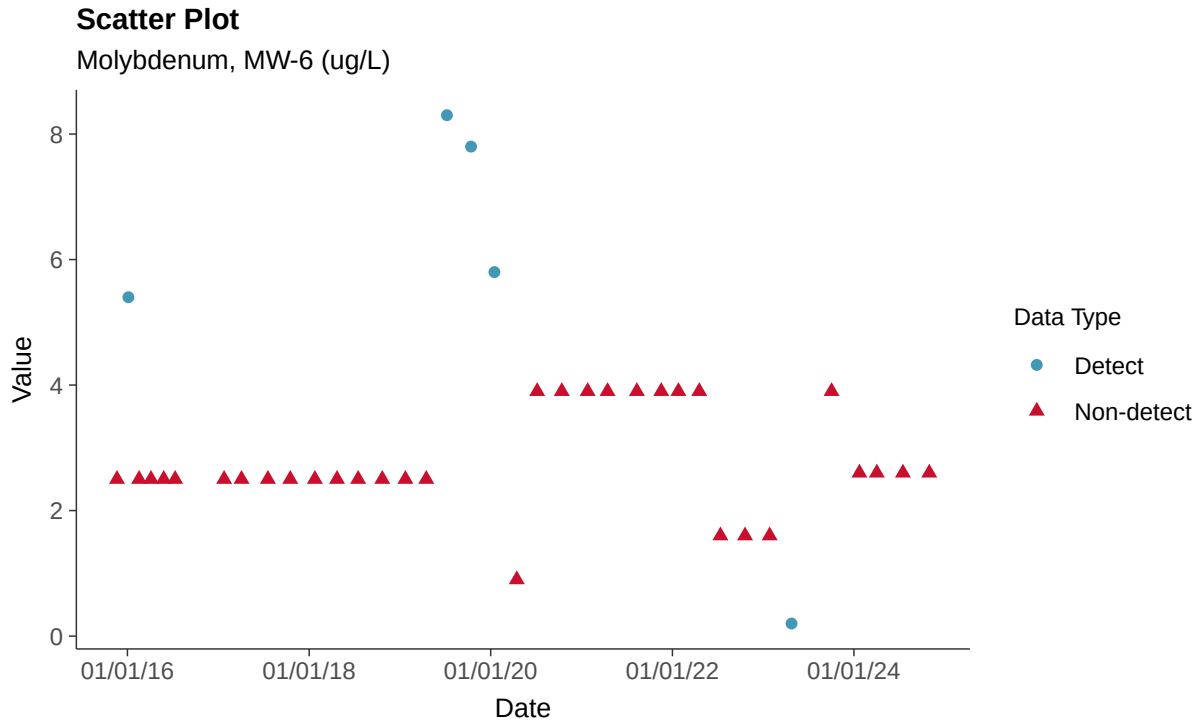
Trend Regression: Piecewise Linear-Linear-Linear

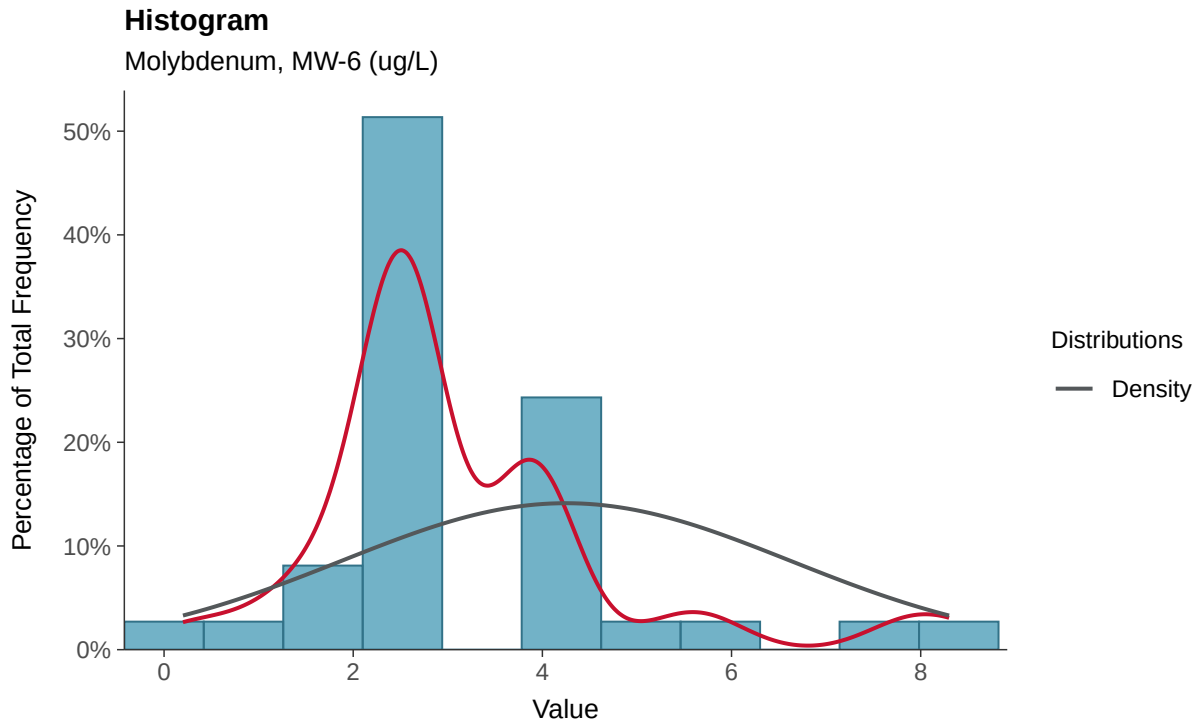
Mercury, MW-6 (ug/L)



App. IV: Molybdenum, MW-6

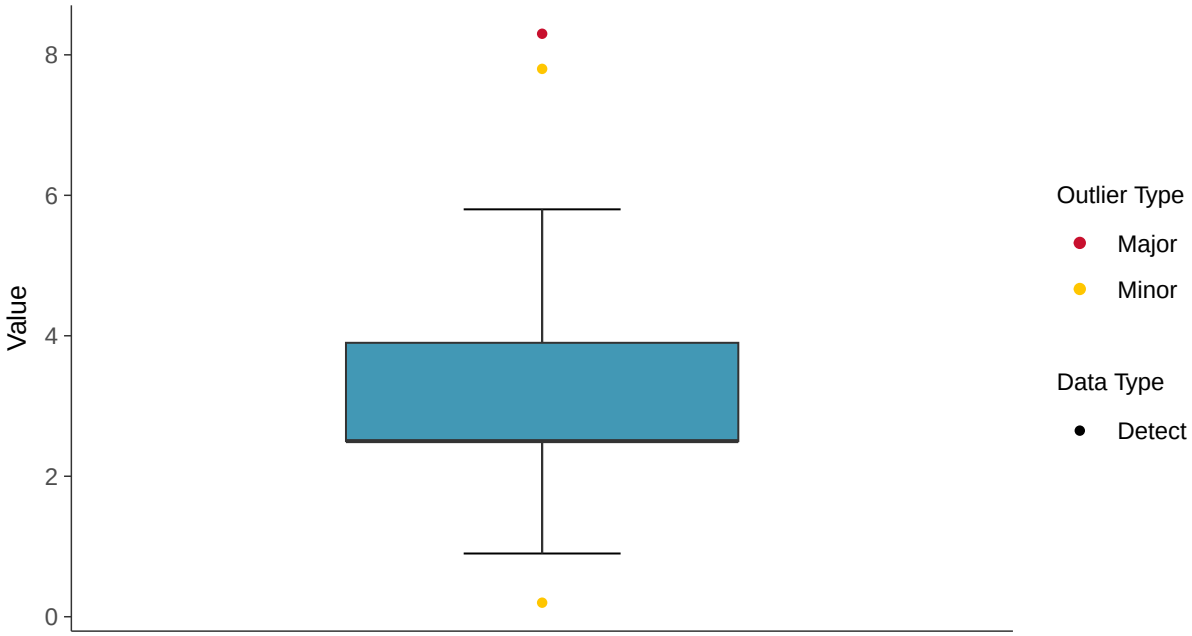
ID: 06_03_116





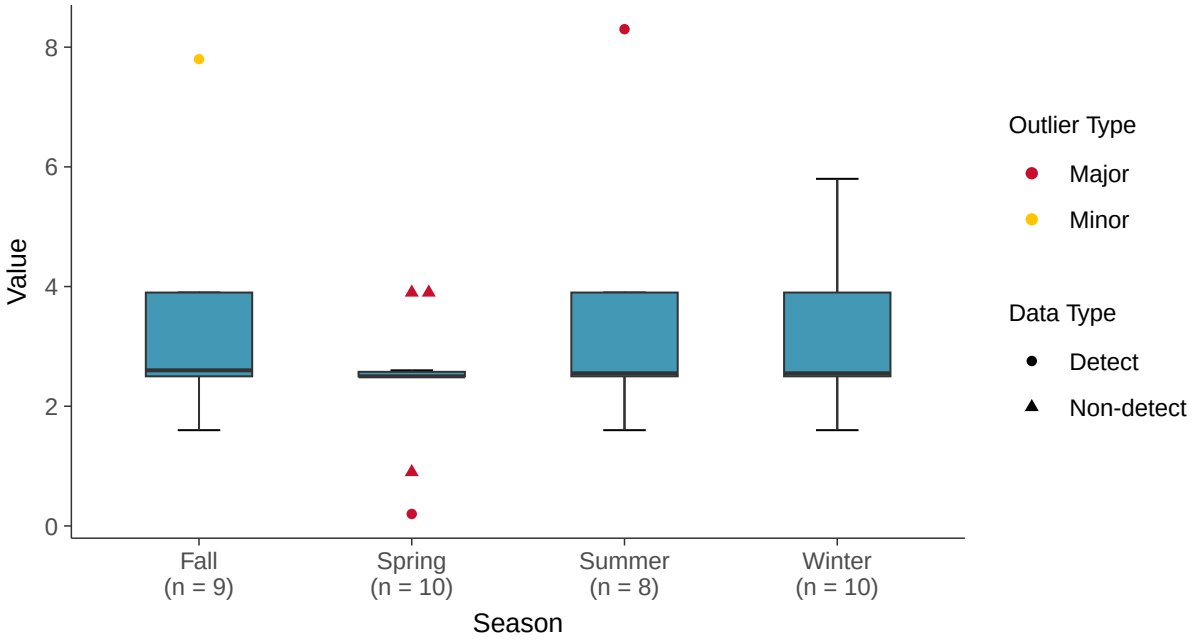
Boxplot

Molybdenum, MW-6 (ug/L)



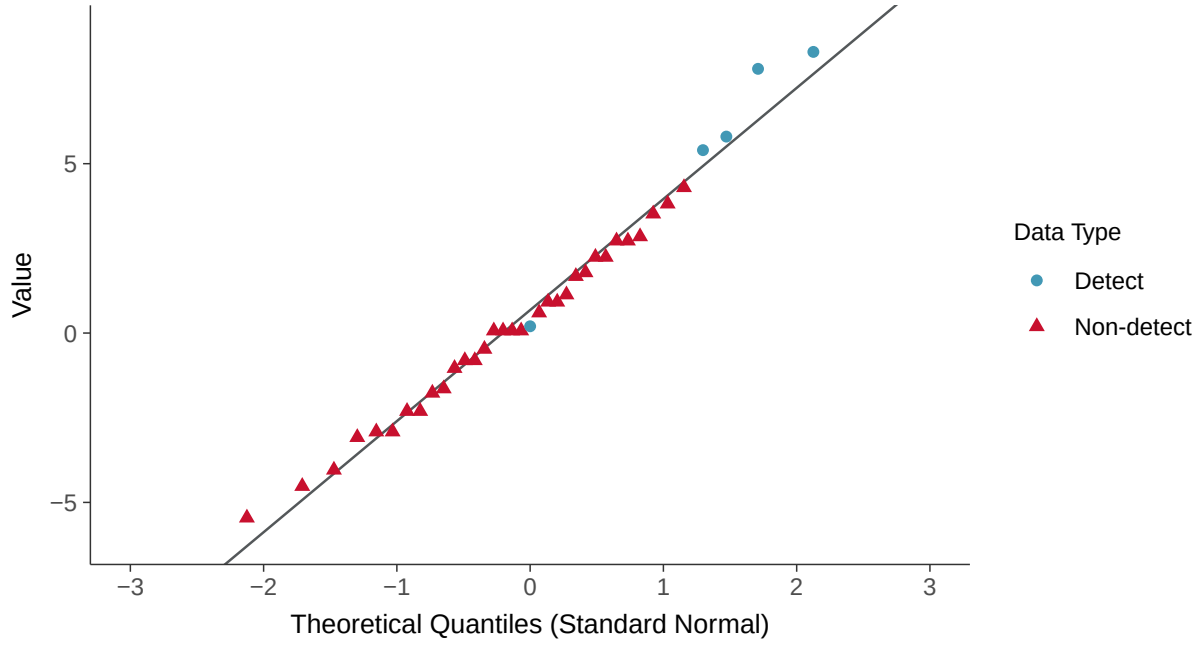
Boxplot by Season

Molybdenum, MW-6 (ug/L)



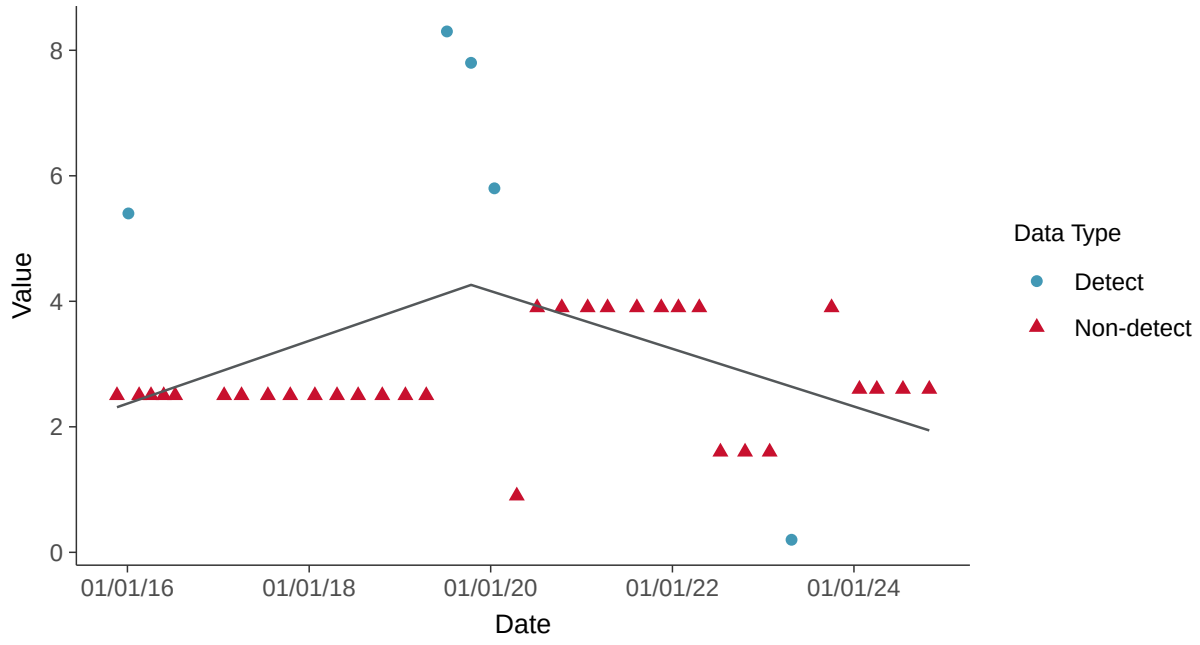
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-6 (ug/L)



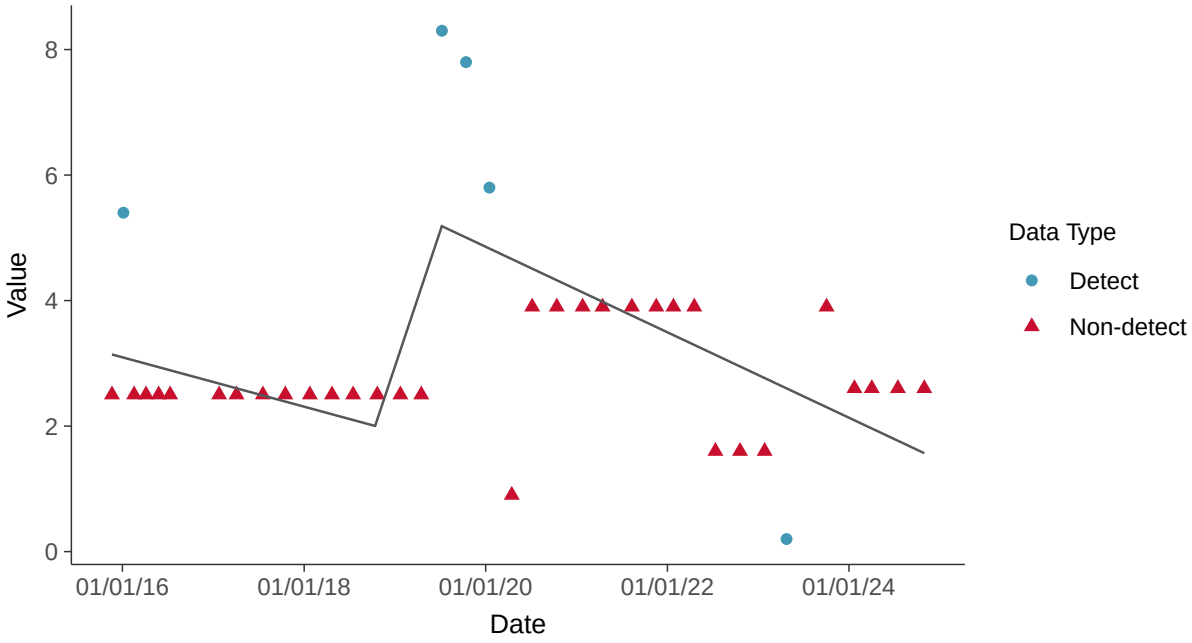
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-6 (ug/L)



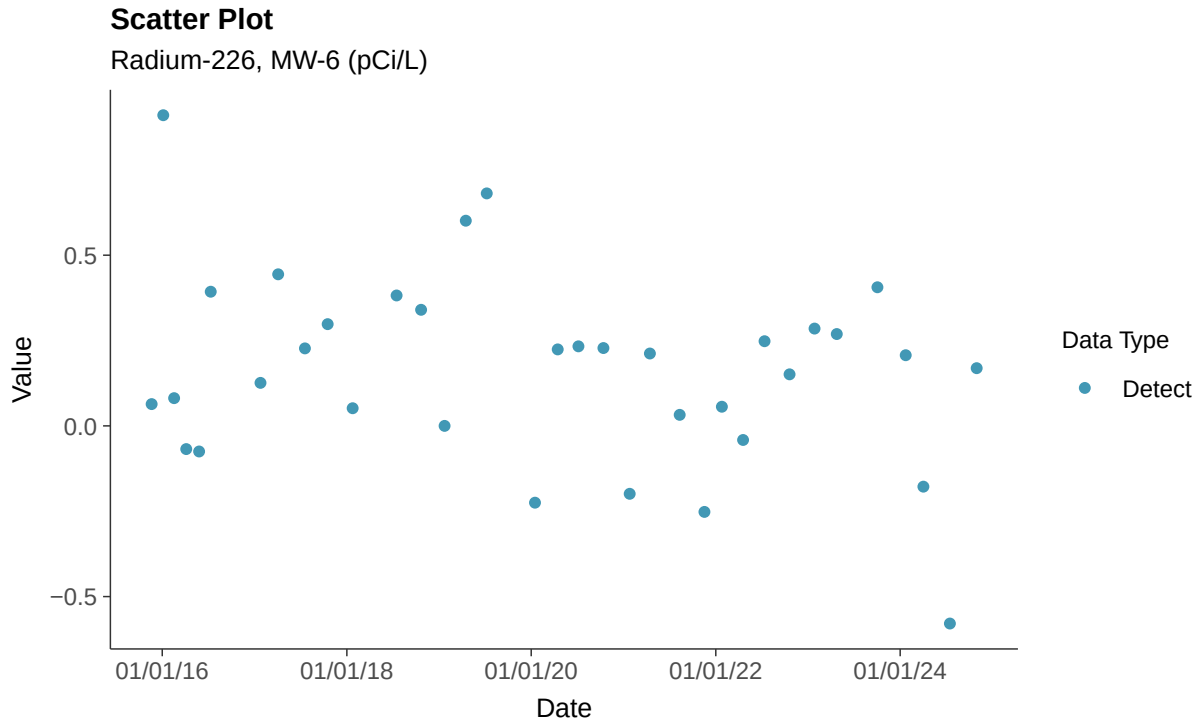
Trend Regression: Piecewise Linear-Linear-Linear

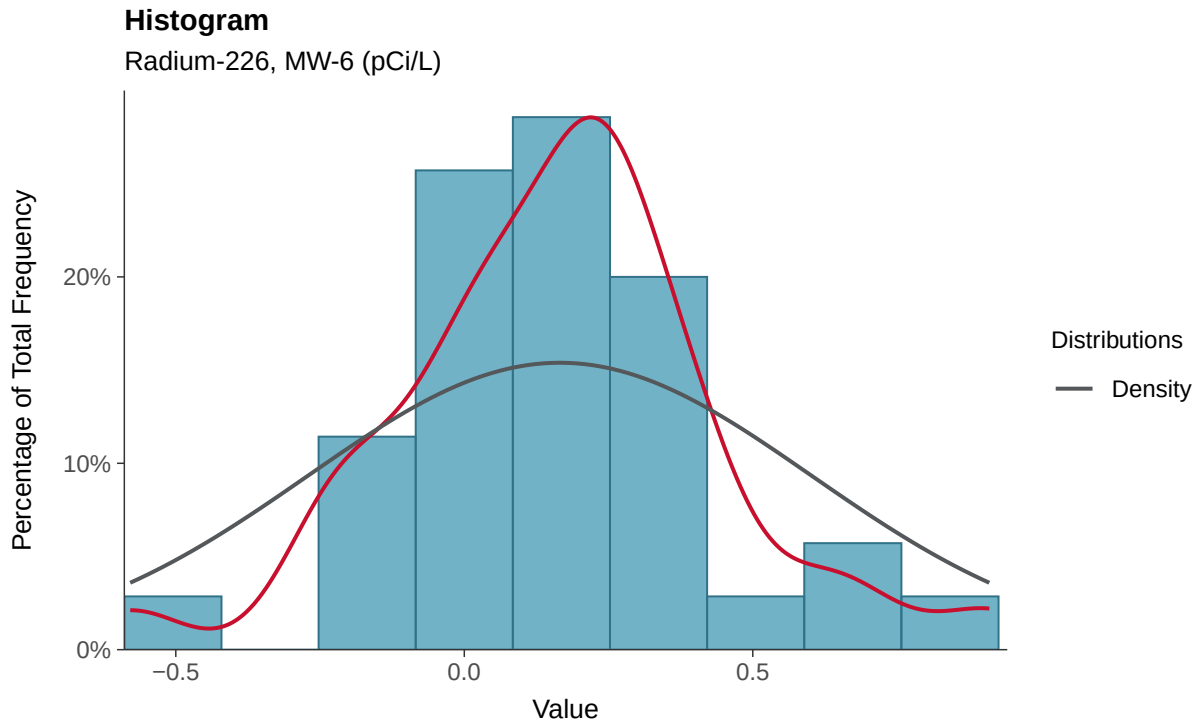
Molybdenum, MW-6 (ug/L)



App. IV: Radium-226, MW-6

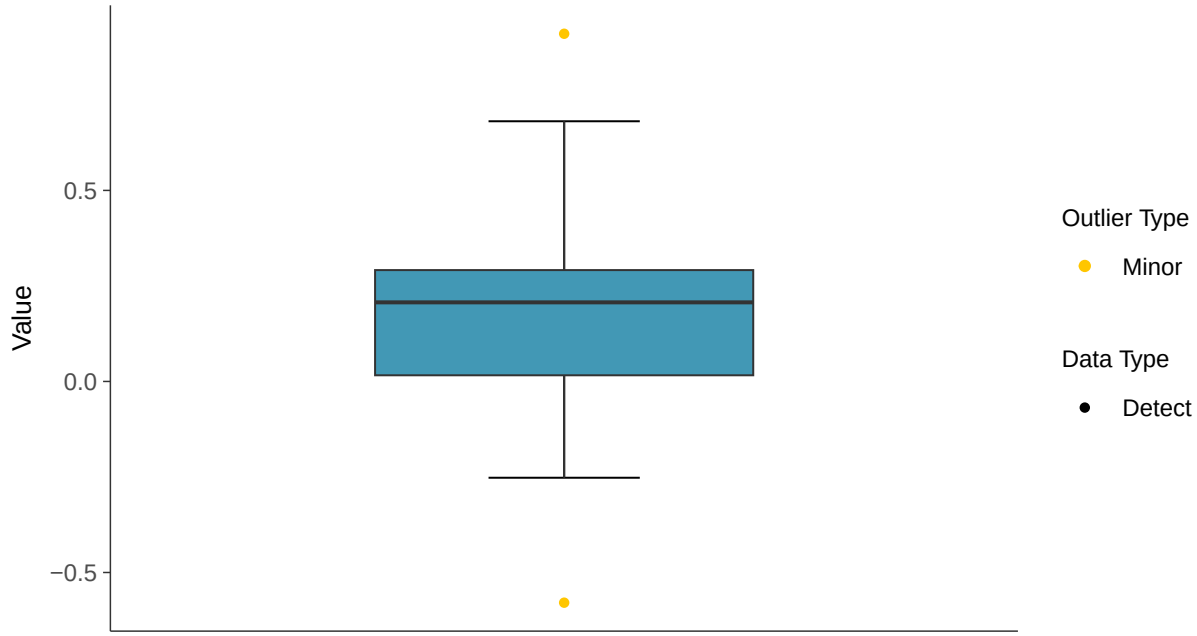
ID: 06_03_119





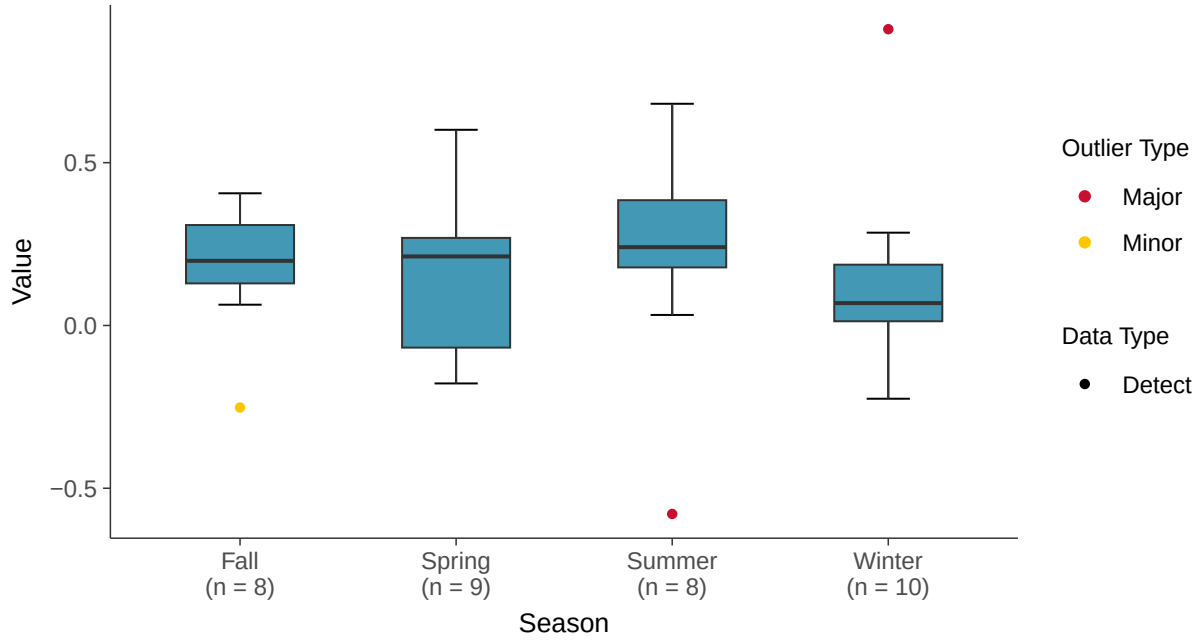
Boxplot

Radium-226, MW-6 (pCi/L)



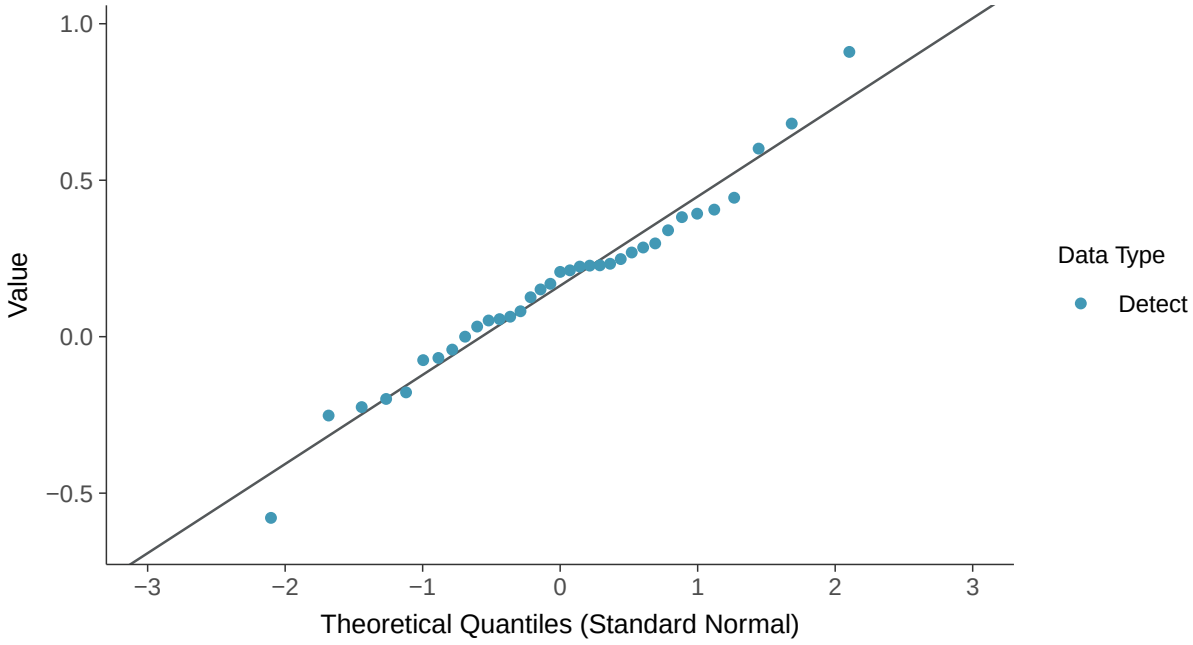
Boxplot by Season

Radium-226, MW-6 (pCi/L)



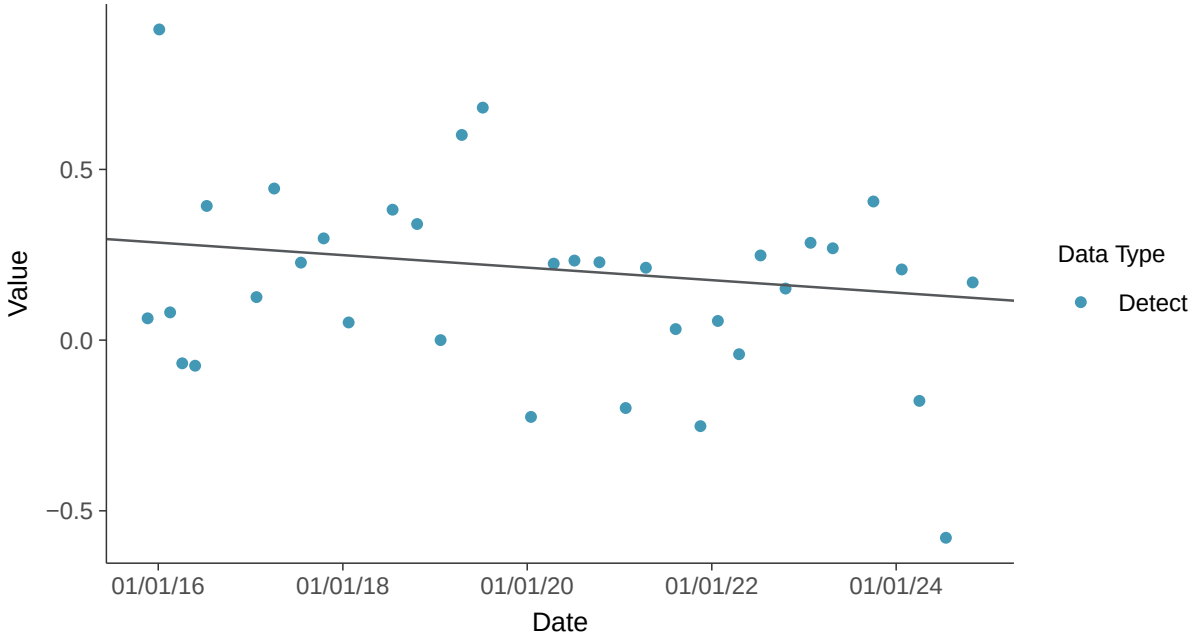
Normal Q-Q plot

Radium-226, MW-6 (pCi/L)



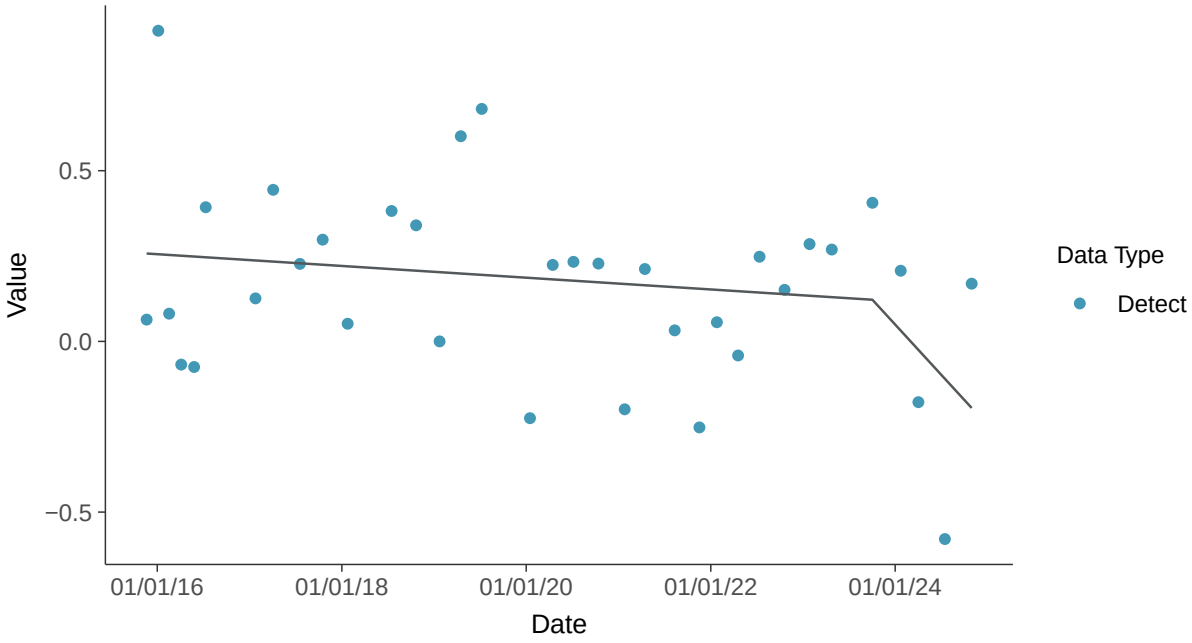
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-6 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, MW-6 (pCi/L)

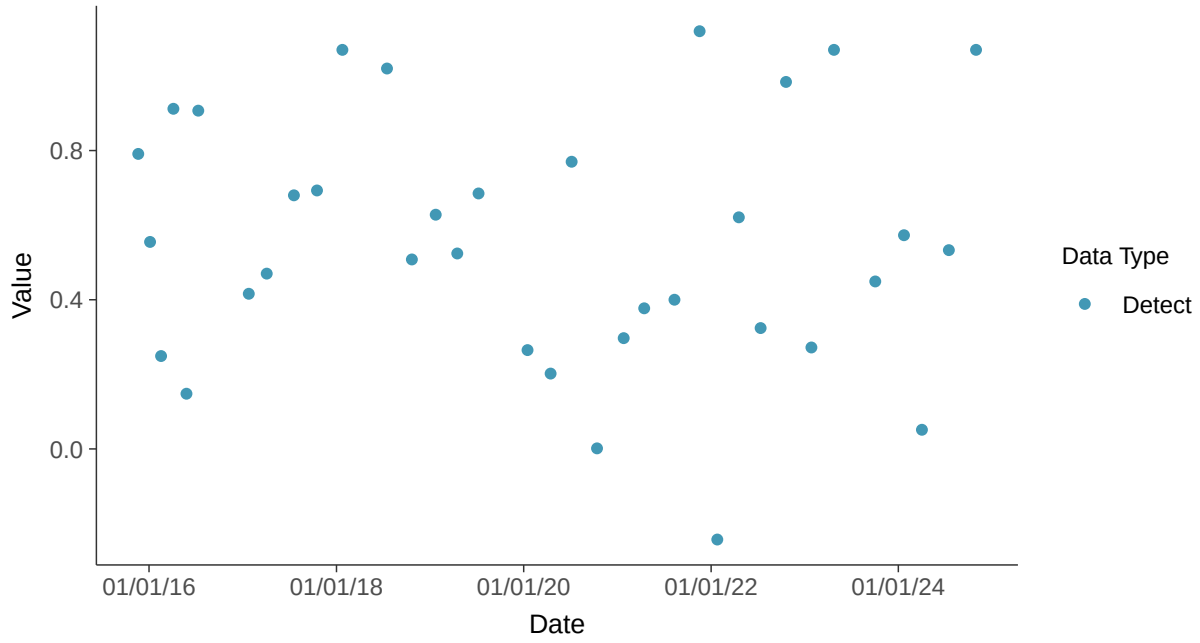


App. IV: Radium-228, MW-6

ID: 06_03_120

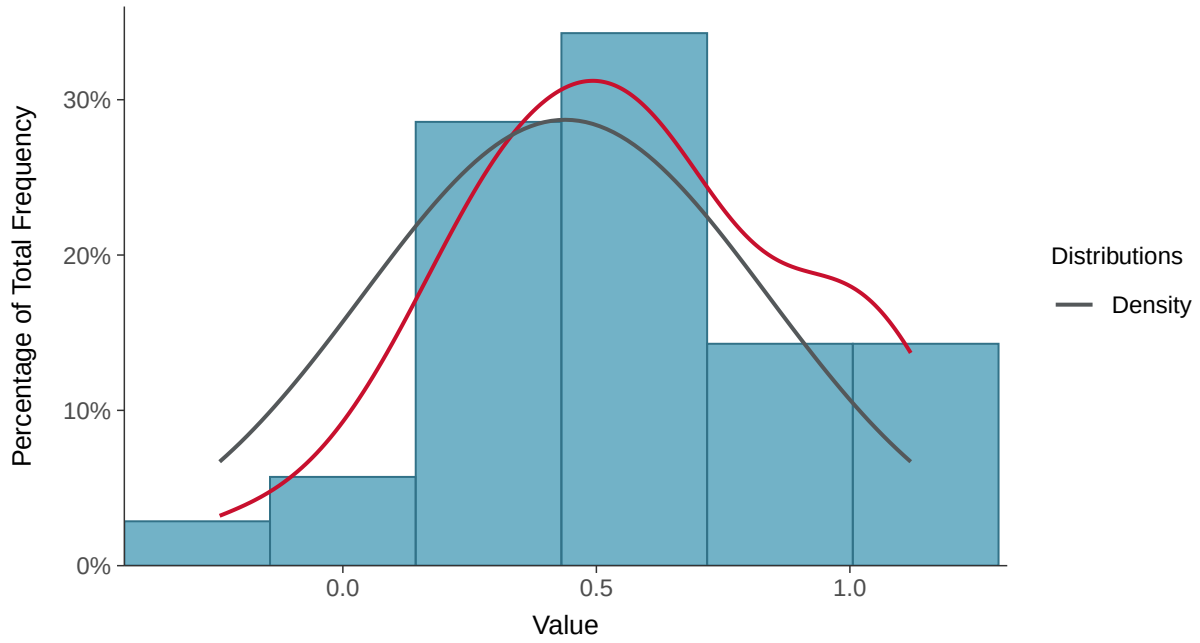
Scatter Plot

Radium-228, MW-6 (pCi/L)



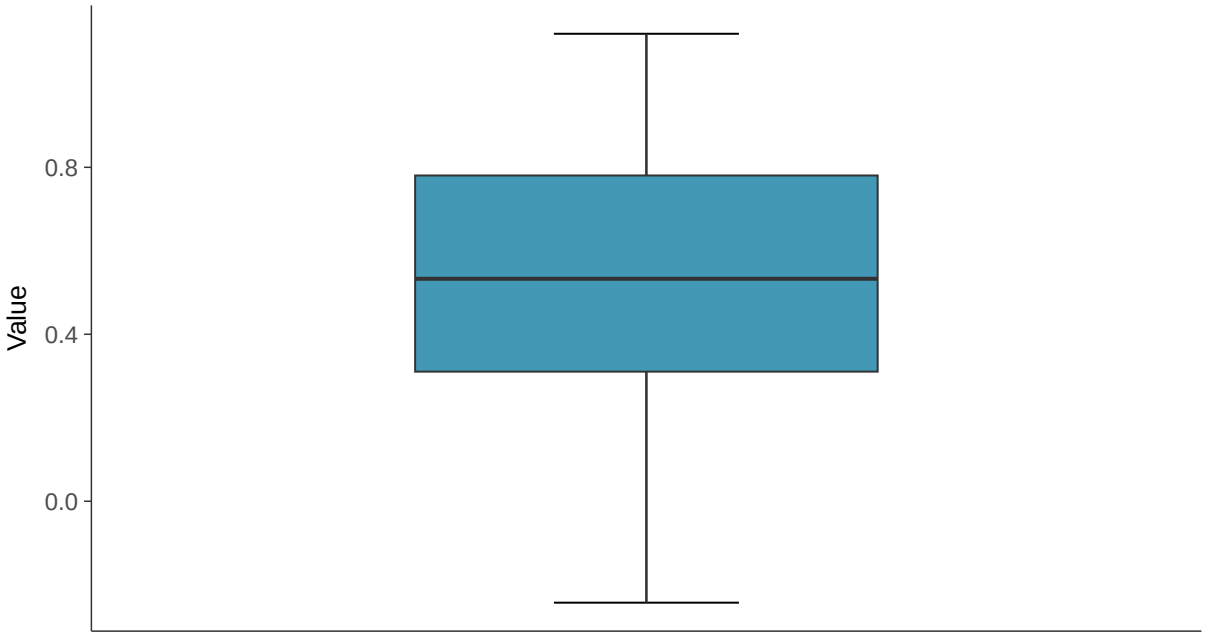
Histogram

Radium-228, MW-6 (pCi/L)



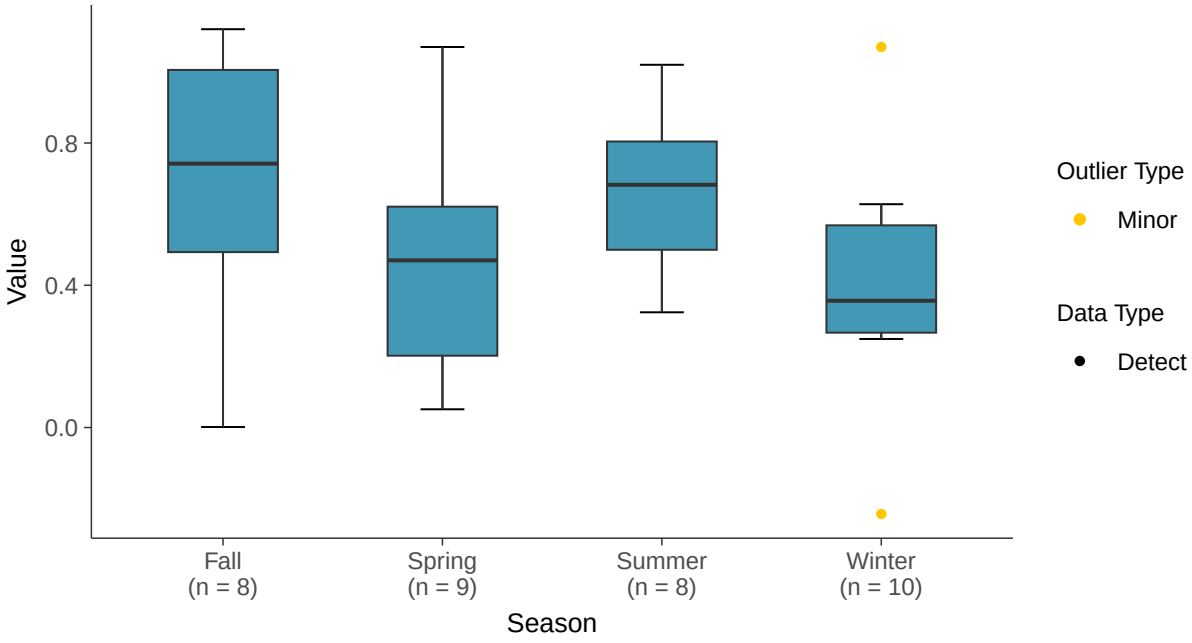
Boxplot

Radium-228, MW-6 (pCi/L)



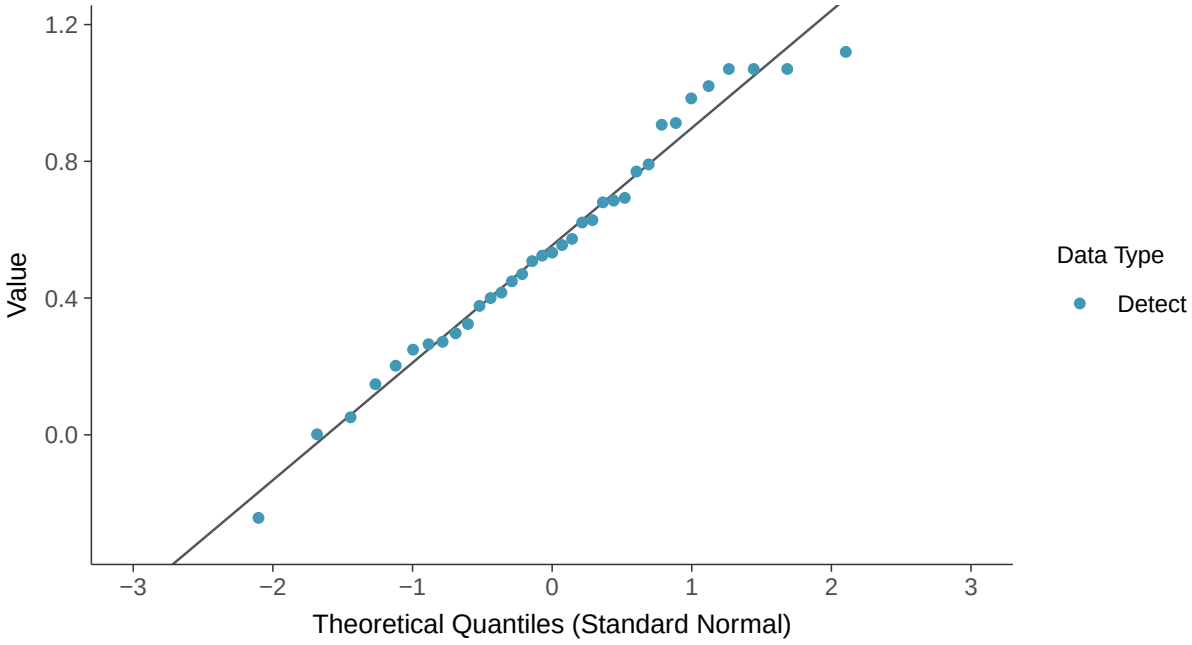
Boxplot by Season

Radium-228, MW-6 (pCi/L)



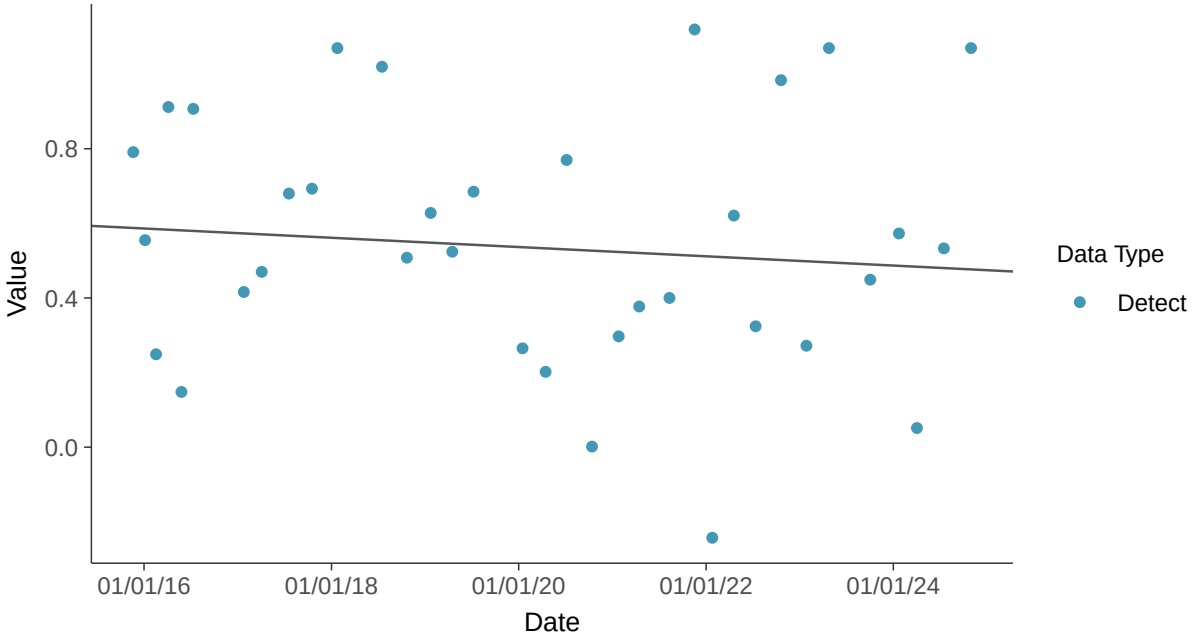
Normal Q-Q plot

Radium-228, MW-6 (pCi/L)



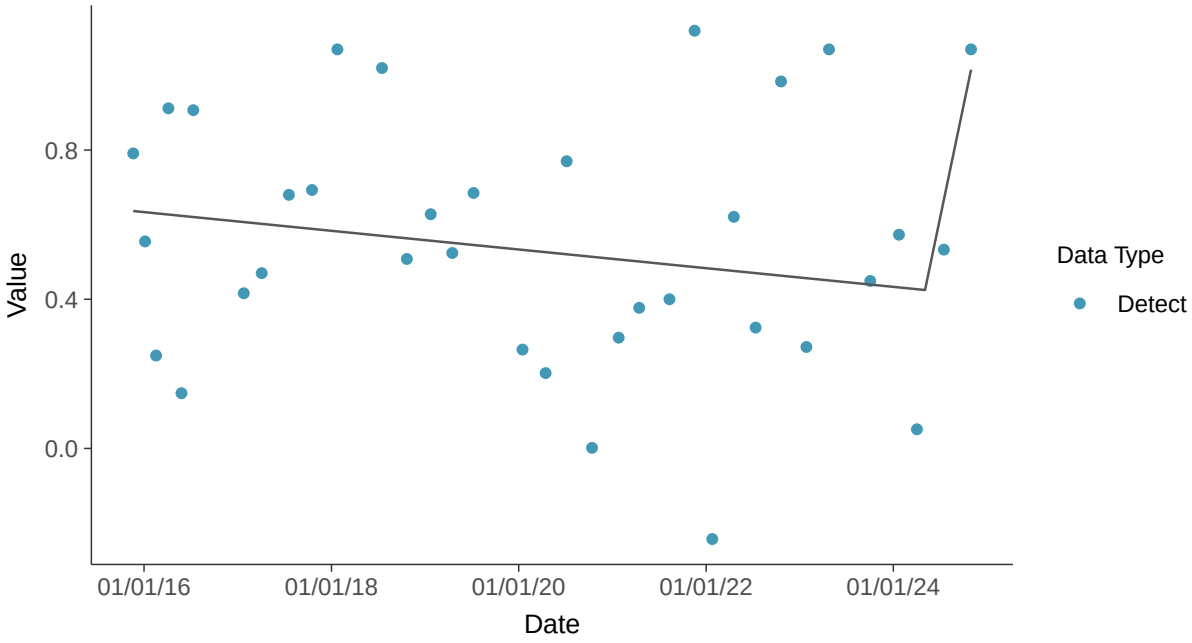
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-6 (pCi/L)



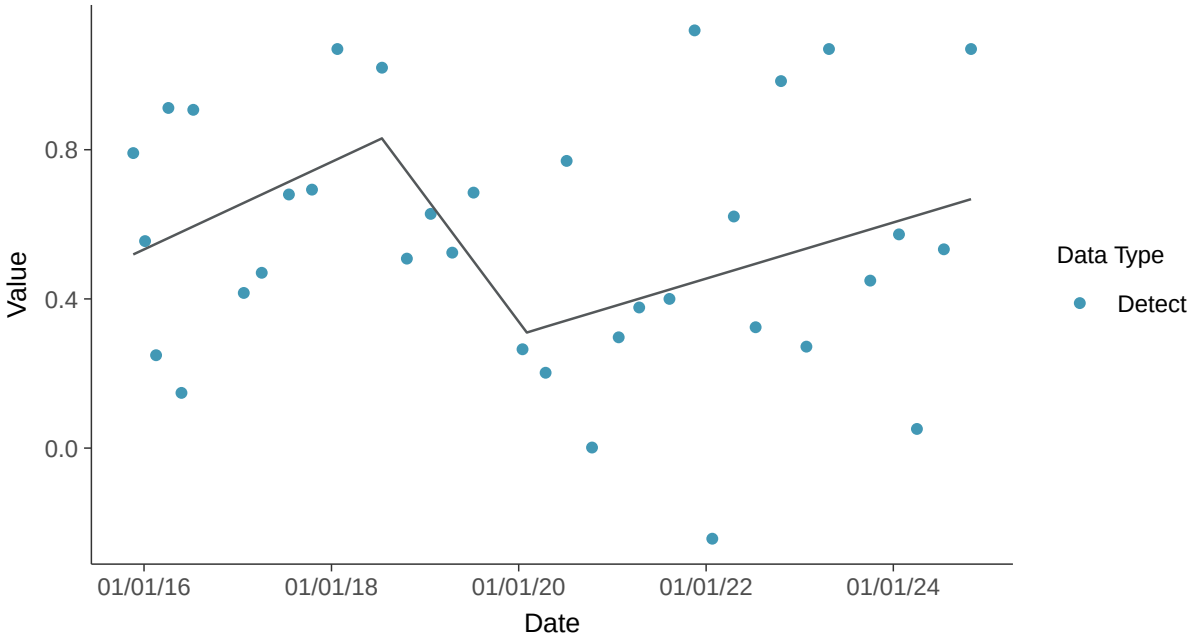
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-6 (pCi/L)



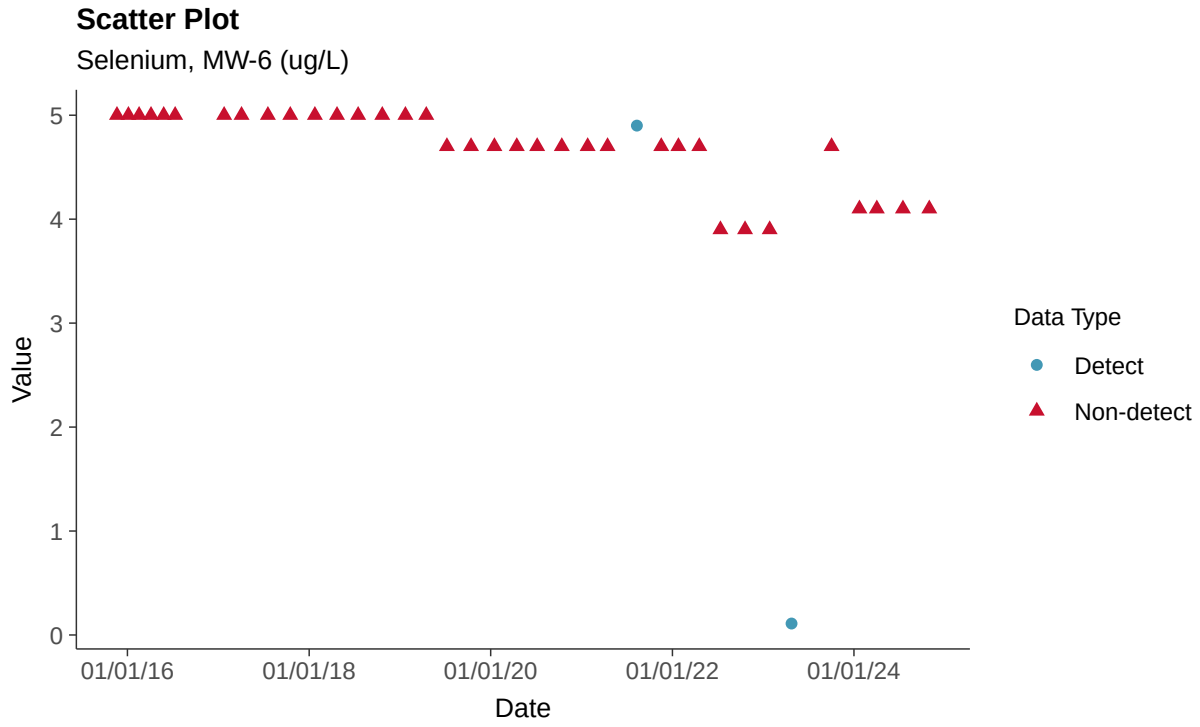
Trend Regression: Piecewise Linear-Linear-Linear

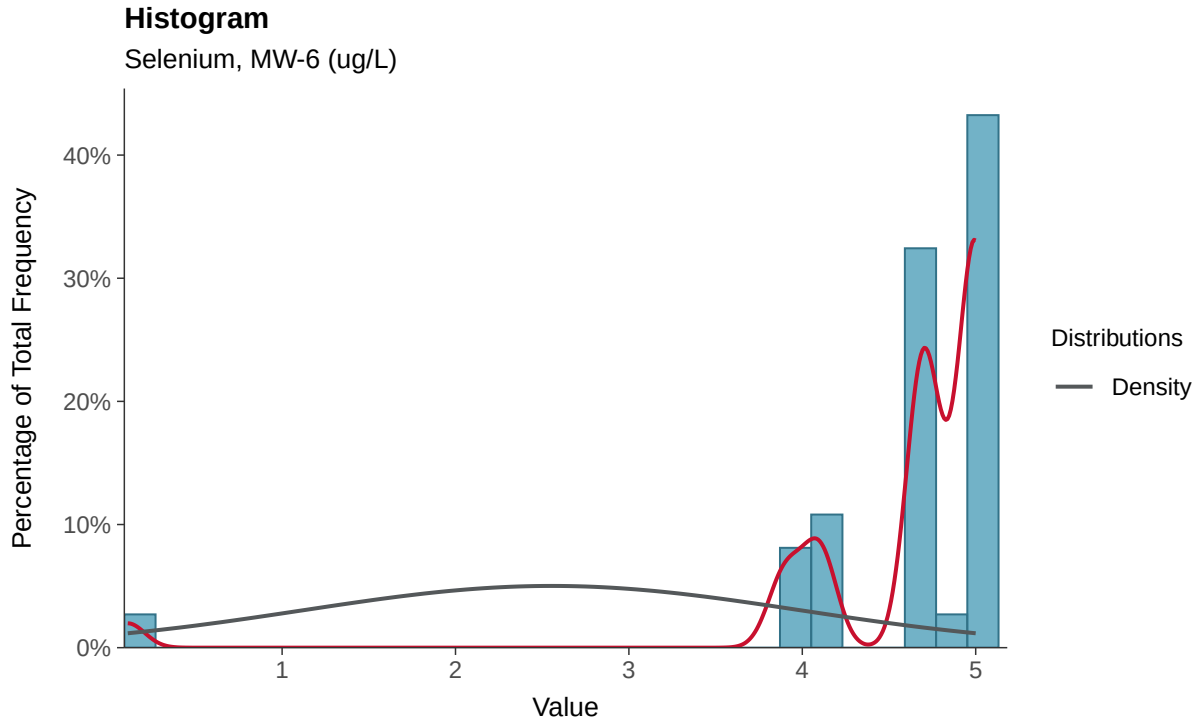
Radium-228, MW-6 (pCi/L)



App. IV: Selenium, MW-6

ID: 06_03_121



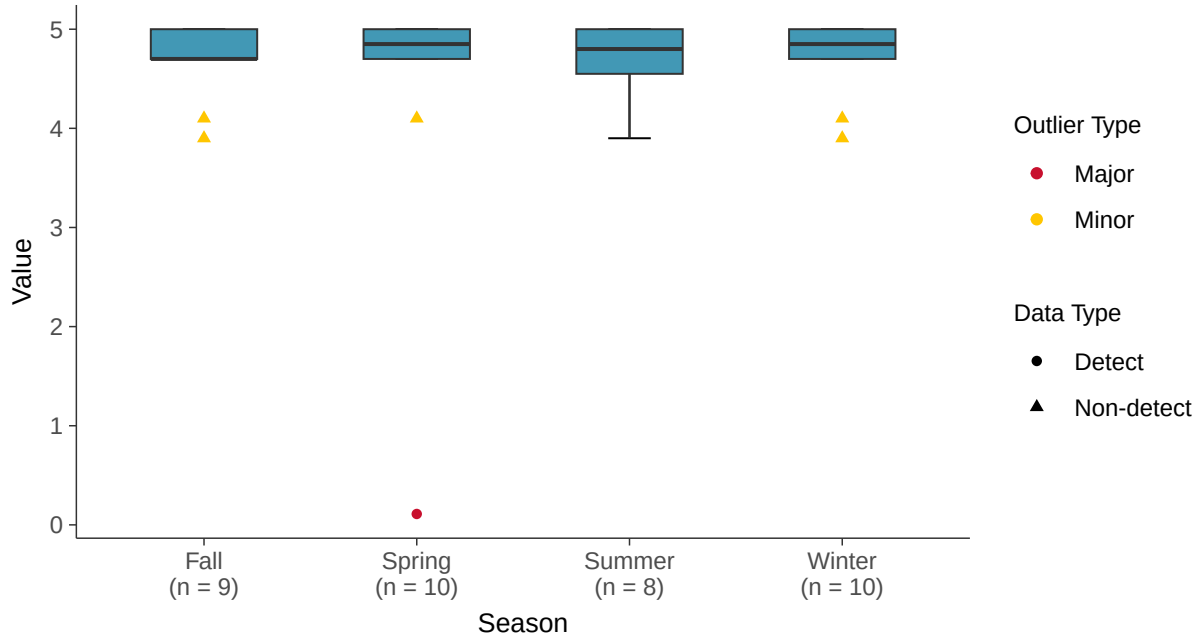


Boxplot

Selenium, MW-6 (ug/L)

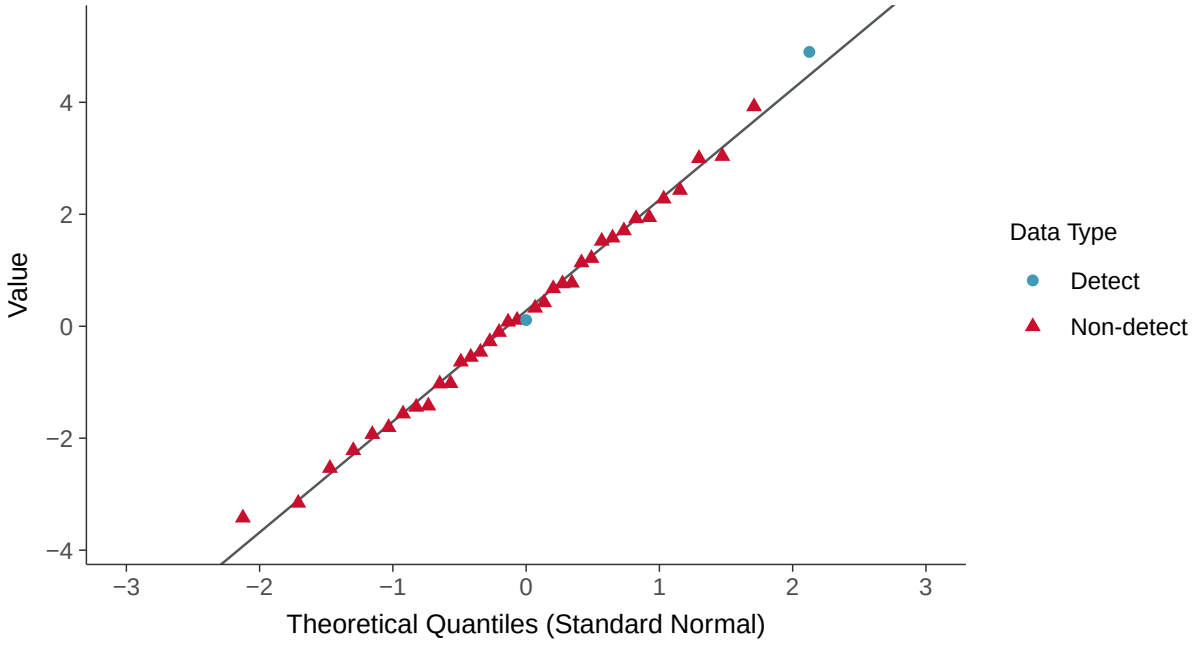
Boxplot by Season

Selenium, MW-6 (ug/L)



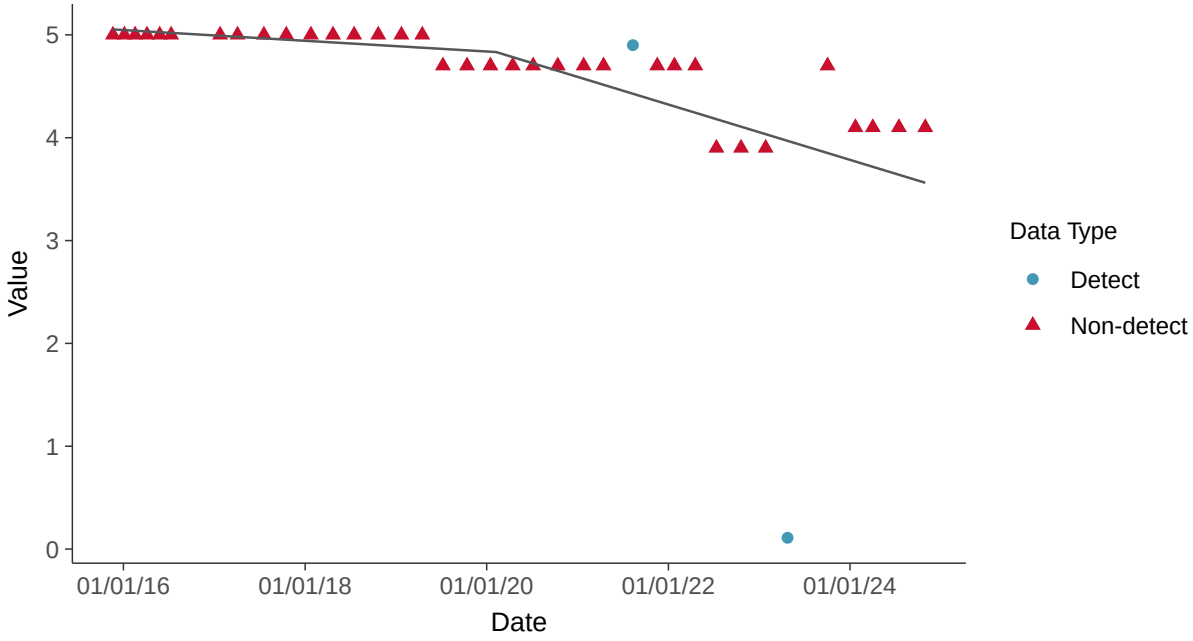
Normal Q-Q plot using ROS Imputed Estimates

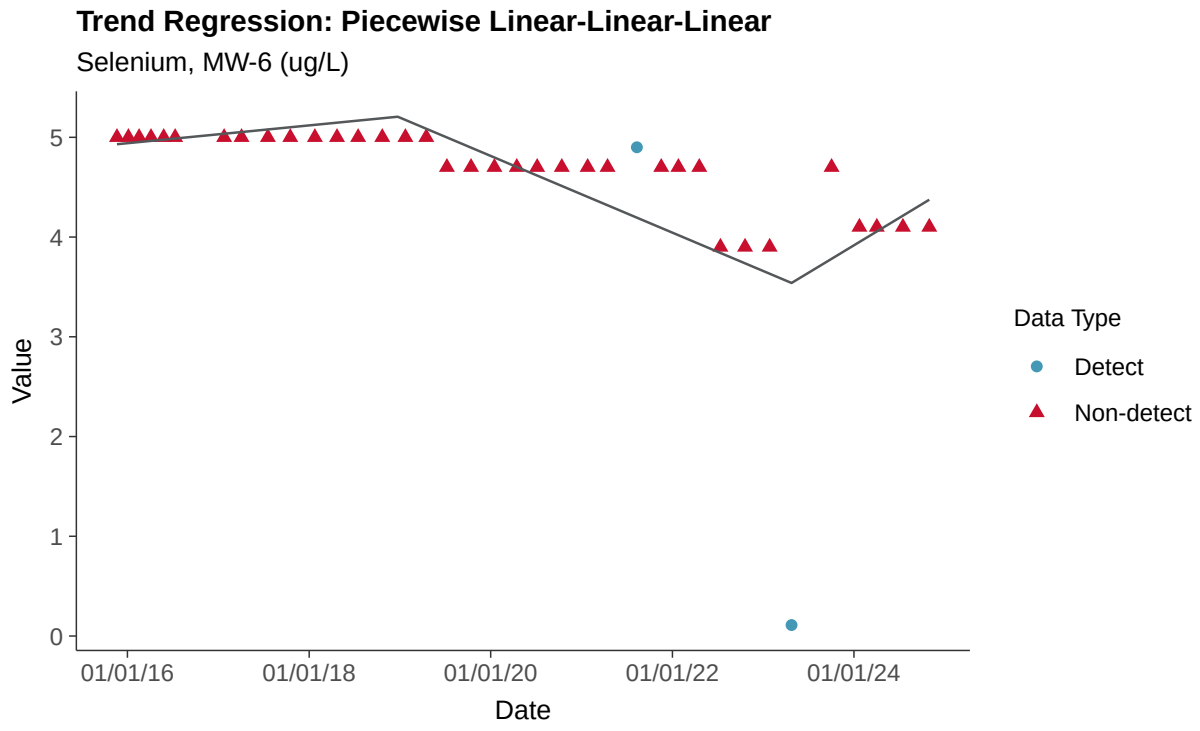
Selenium, MW-6 (ug/L)



Trend Regression: Piecewise Linear-Linear

Selenium, MW-6 (ug/L)



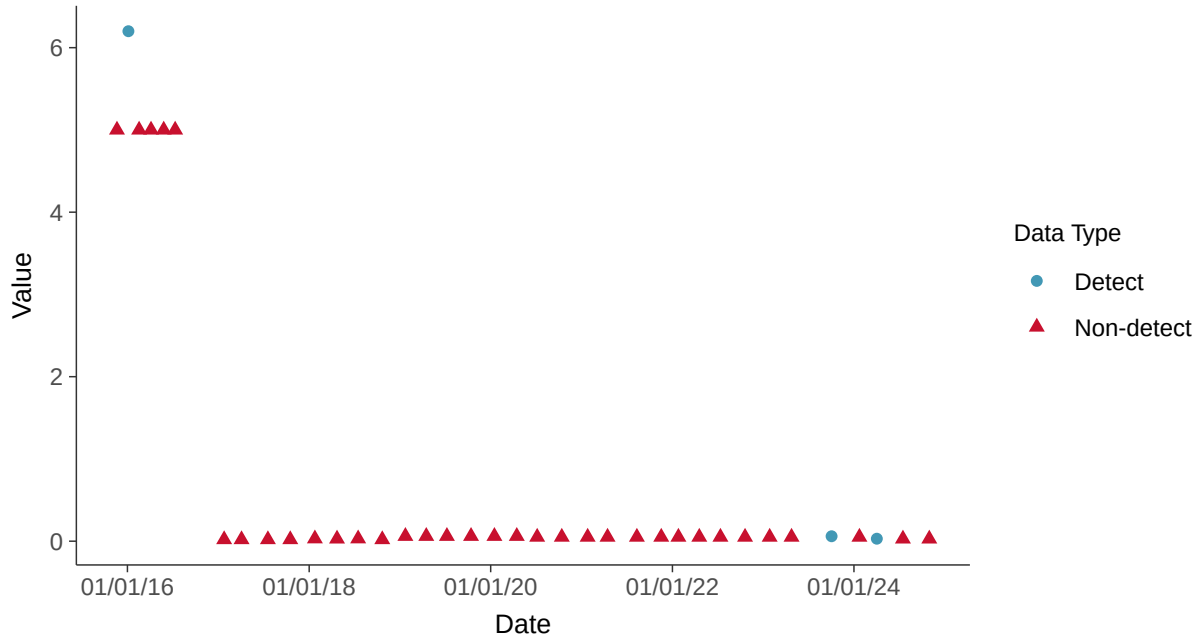

Trend Regression: Piecewise Linear-Linear-Linear
Selenium, MW-6 (ug/L)
Value
5
4
3
2
1
0
01/01/16
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. IV: Thallium, MW-6

ID: 06_03_124

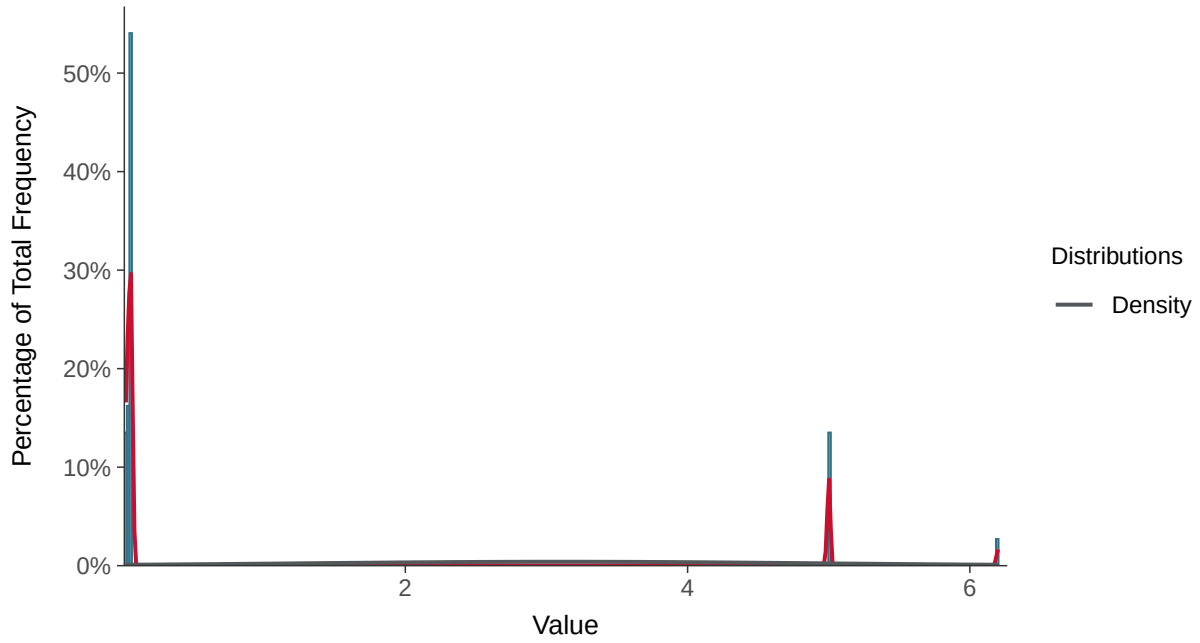
Scatter Plot

Thallium, MW-6 (ug/L)



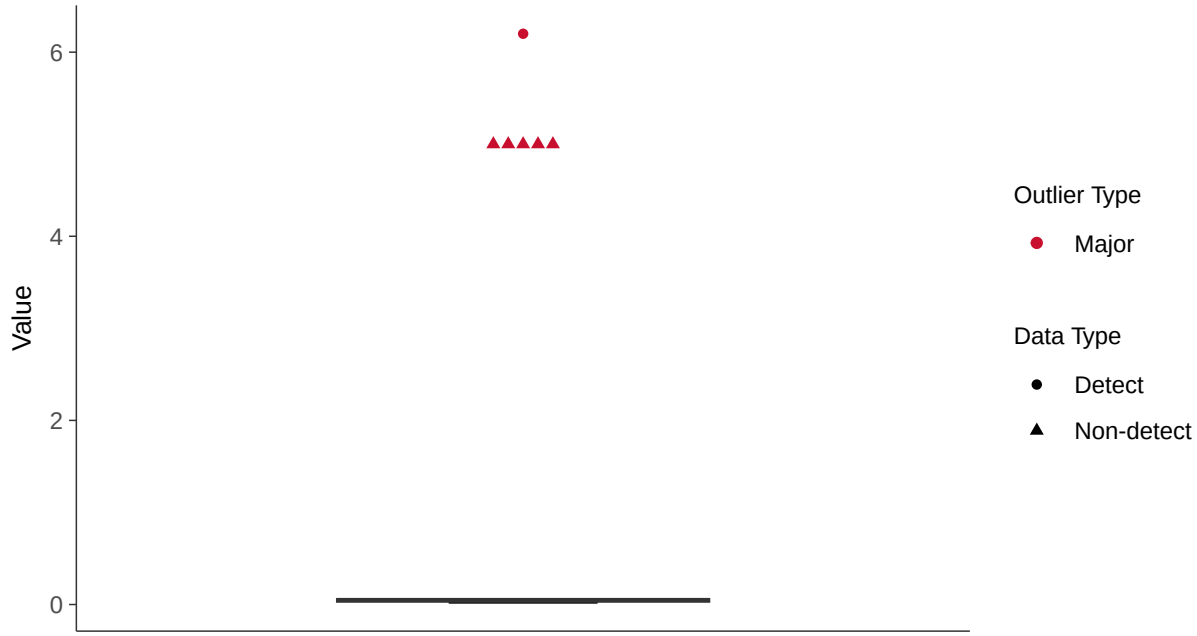
Histogram

Thallium, MW-6 (ug/L)



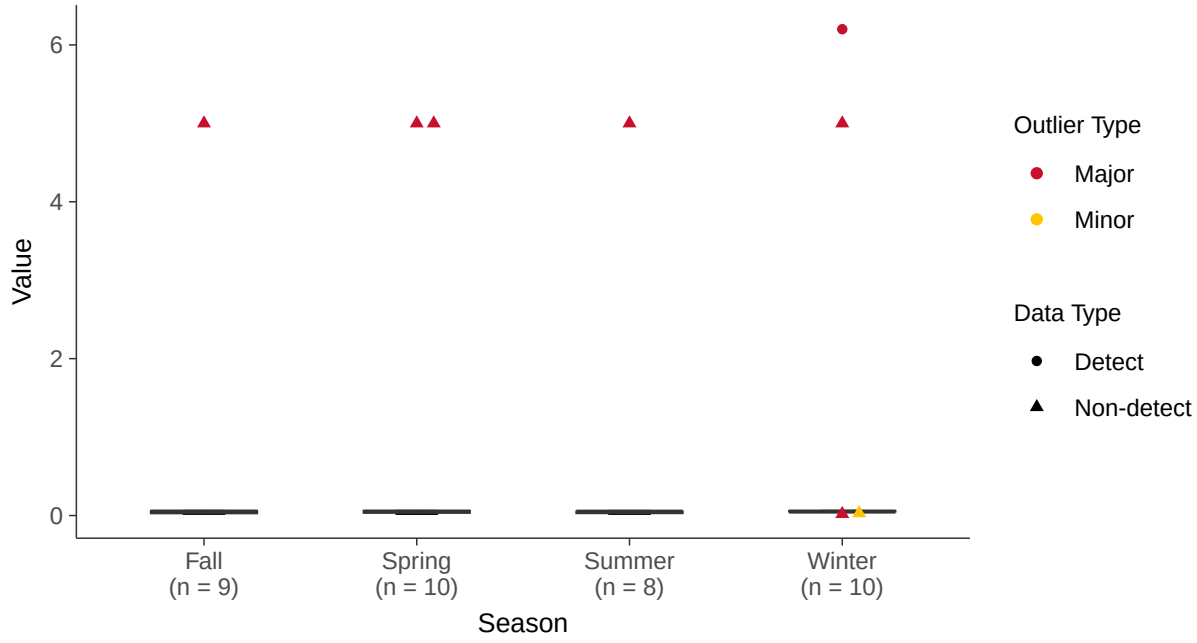
Boxplot

Thallium, MW-6 (ug/L)



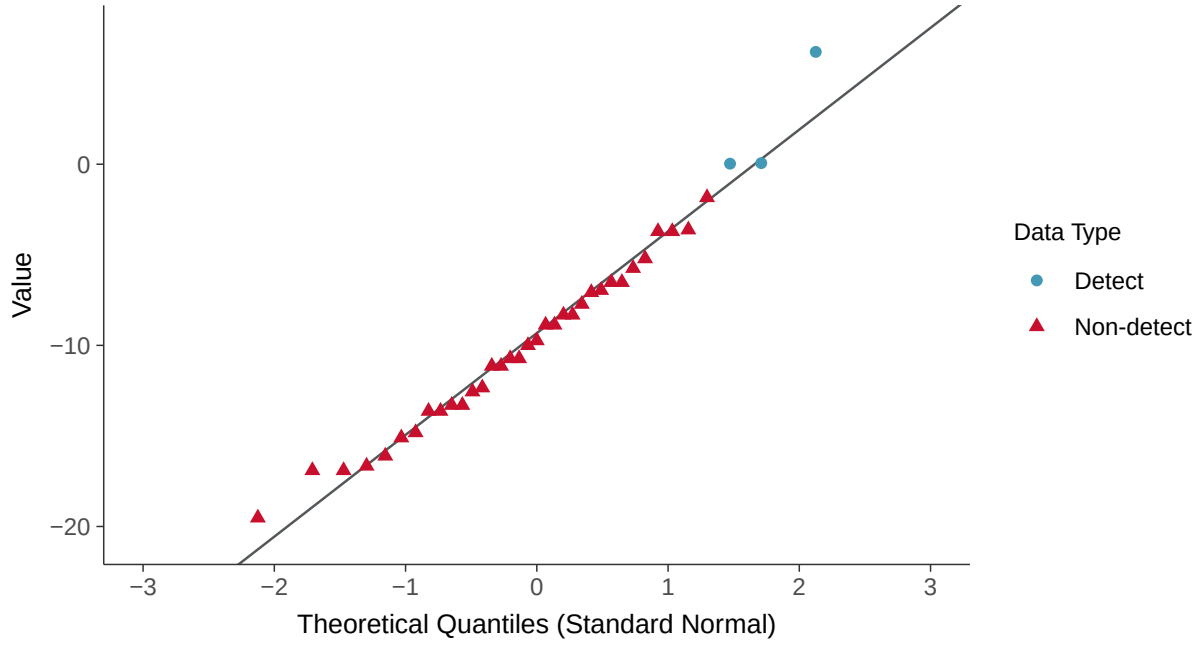
Boxplot by Season

Thallium, MW-6 (ug/L)



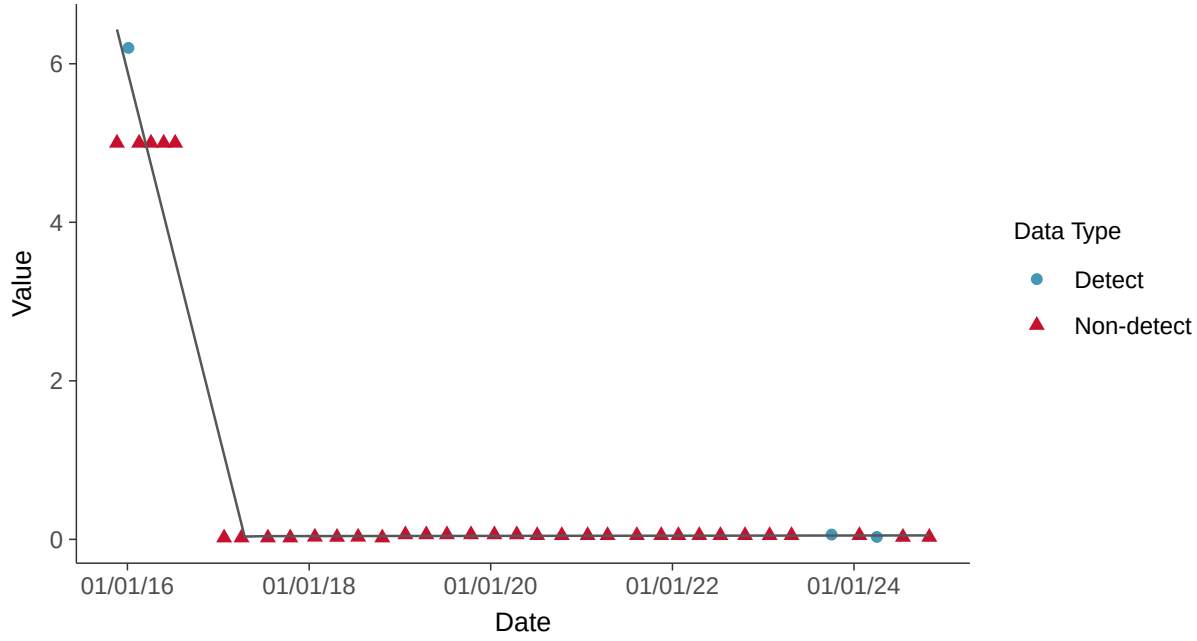
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-6 (ug/L)



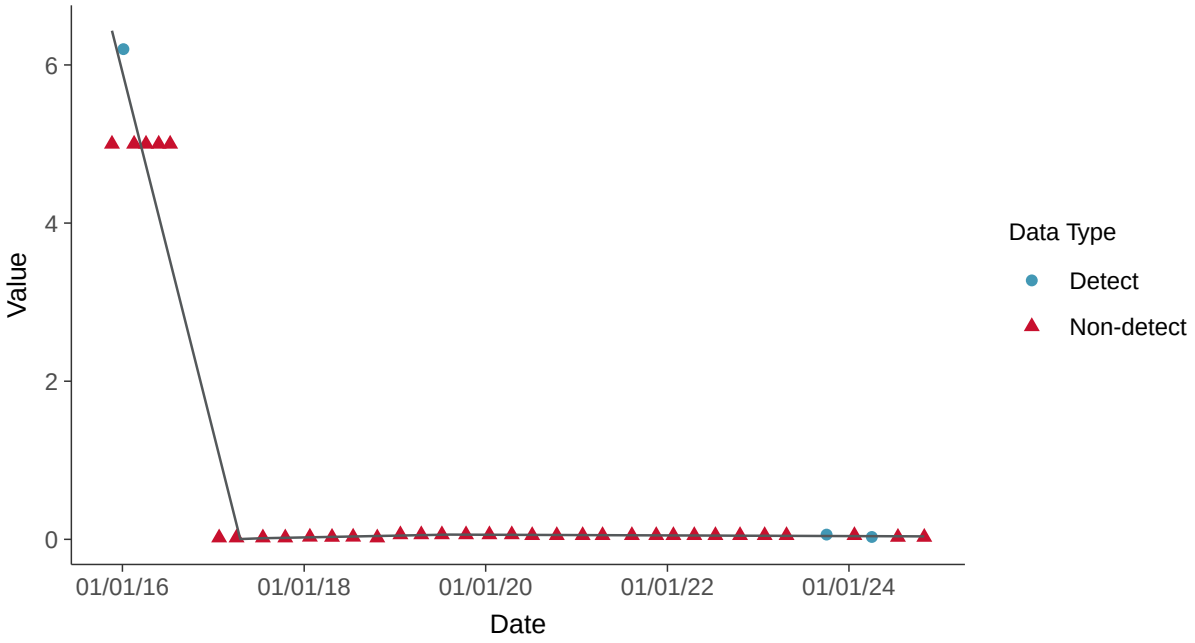
Trend Regression: Piecewise Linear-Linear

Thallium, MW-6 (ug/L)



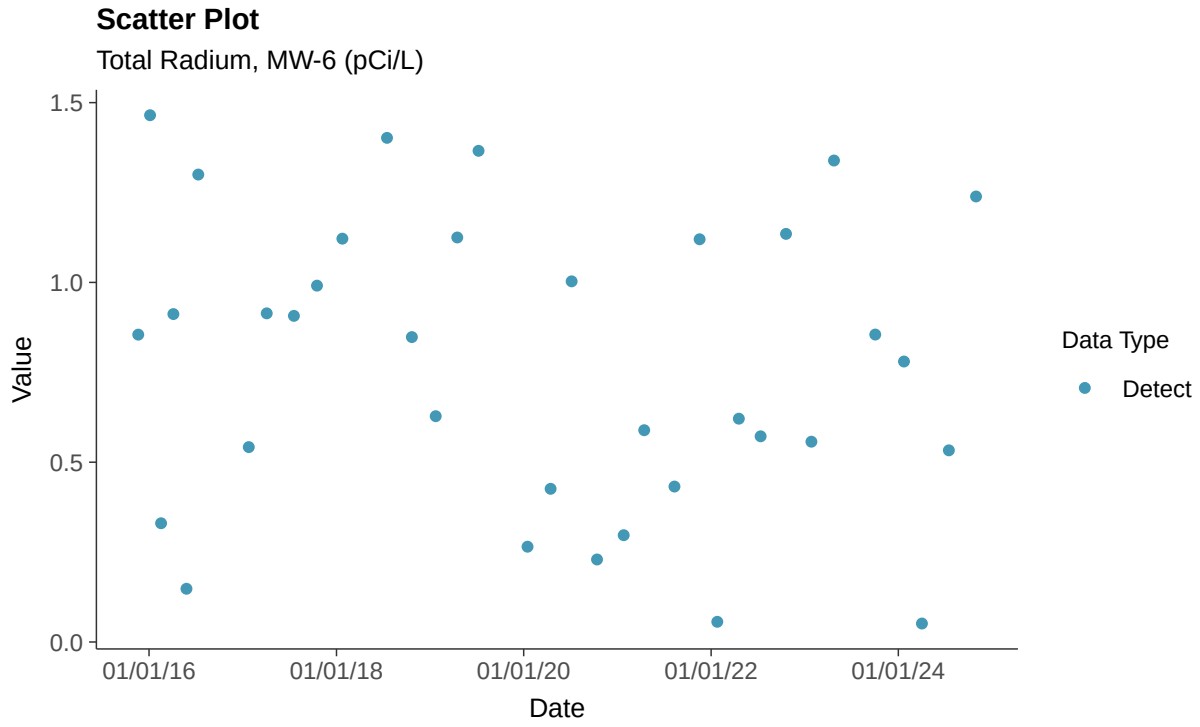
Trend Regression: Piecewise Linear-Linear-Linear

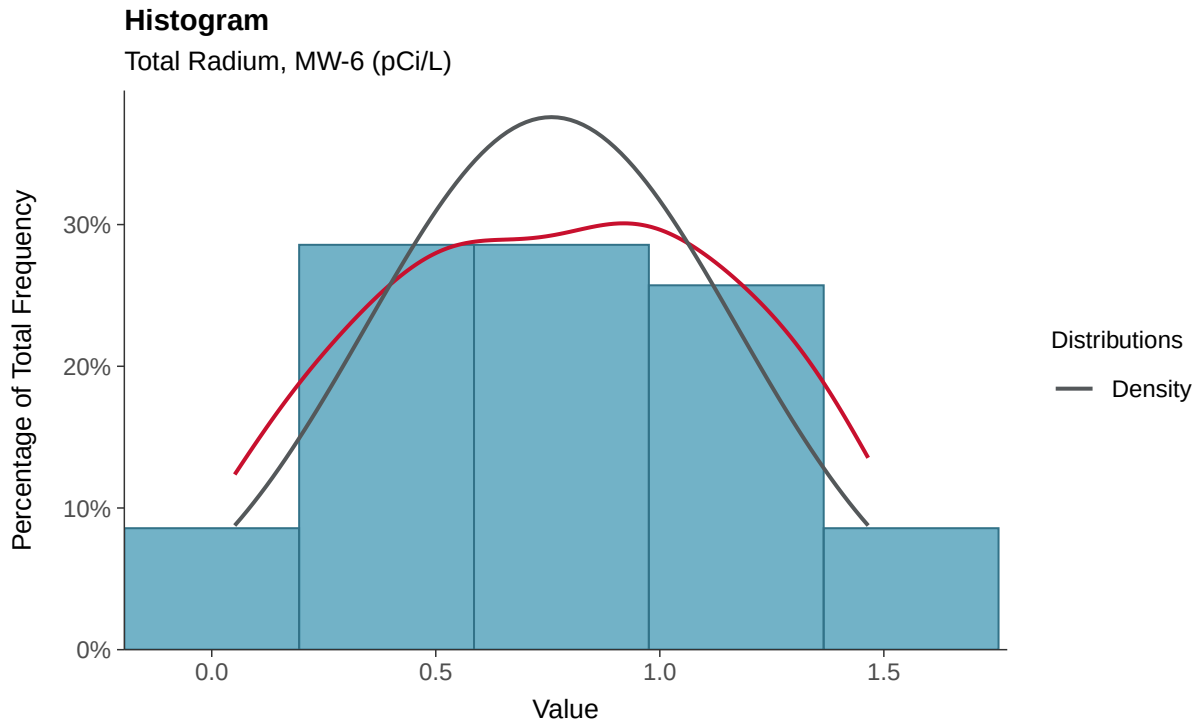
Thallium, MW-6 (ug/L)



App. IV: Total Radium, MW-6

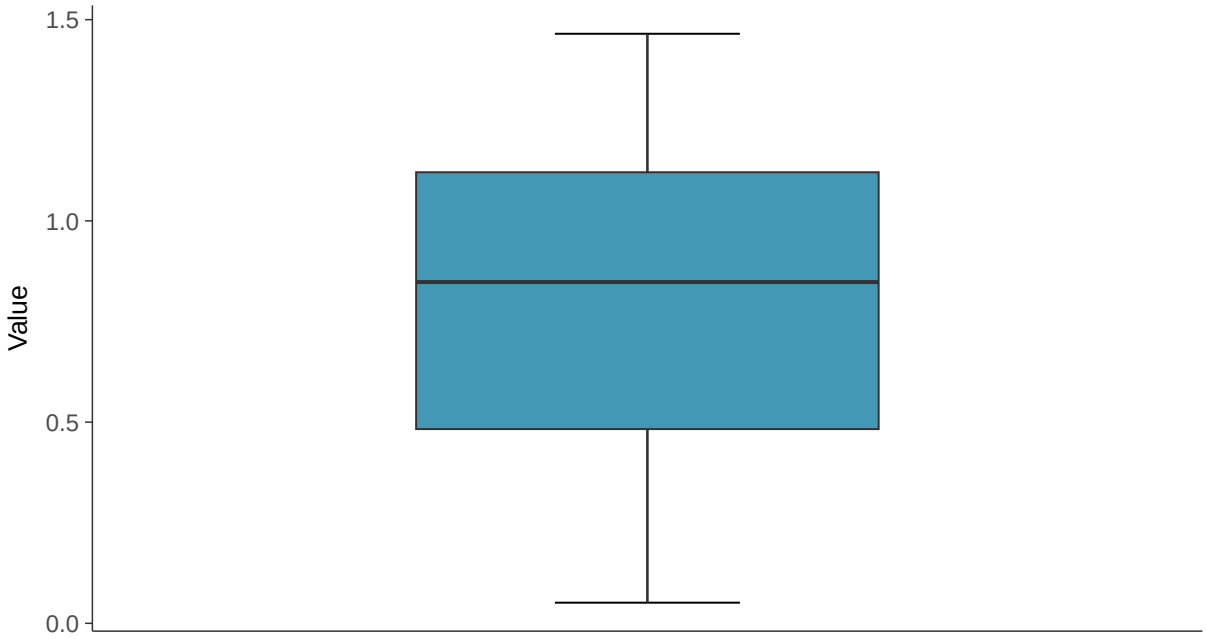
ID: 06_03_126





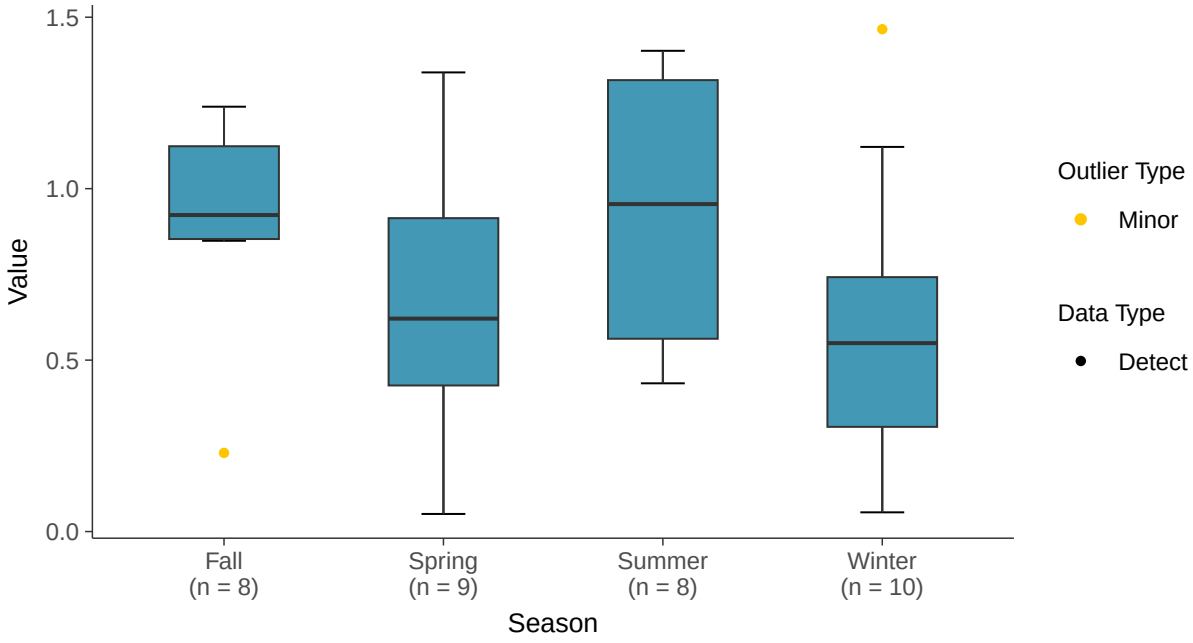
Boxplot

Total Radium, MW-6 (pCi/L)



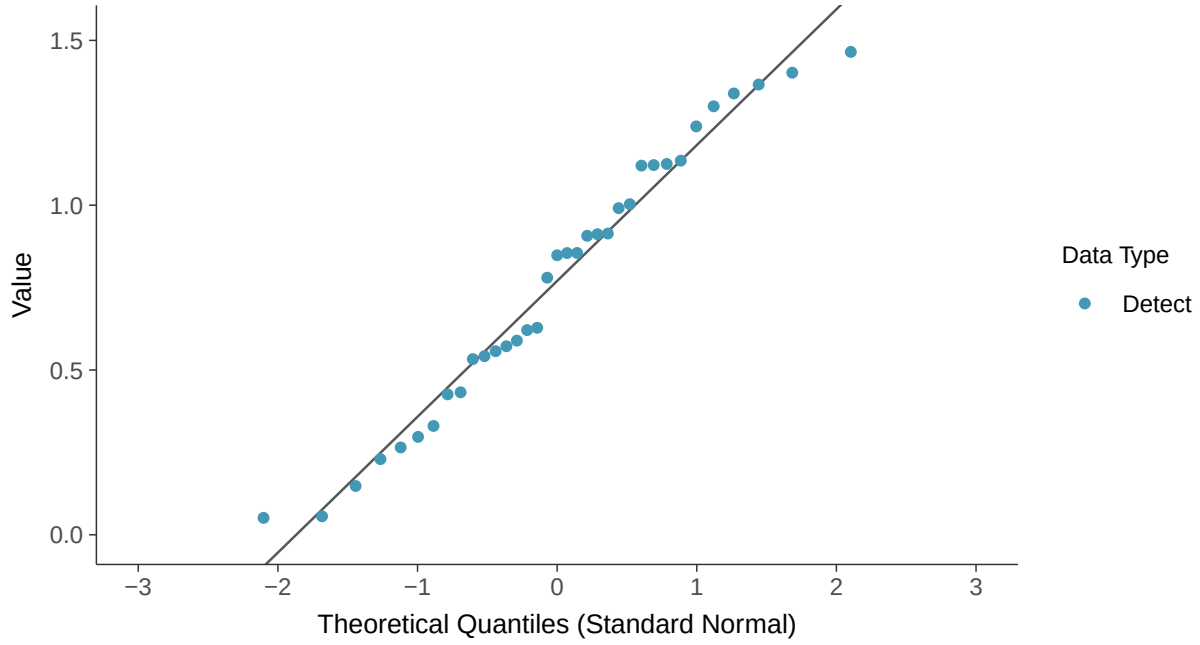
Boxplot by Season

Total Radium, MW-6 (pCi/L)



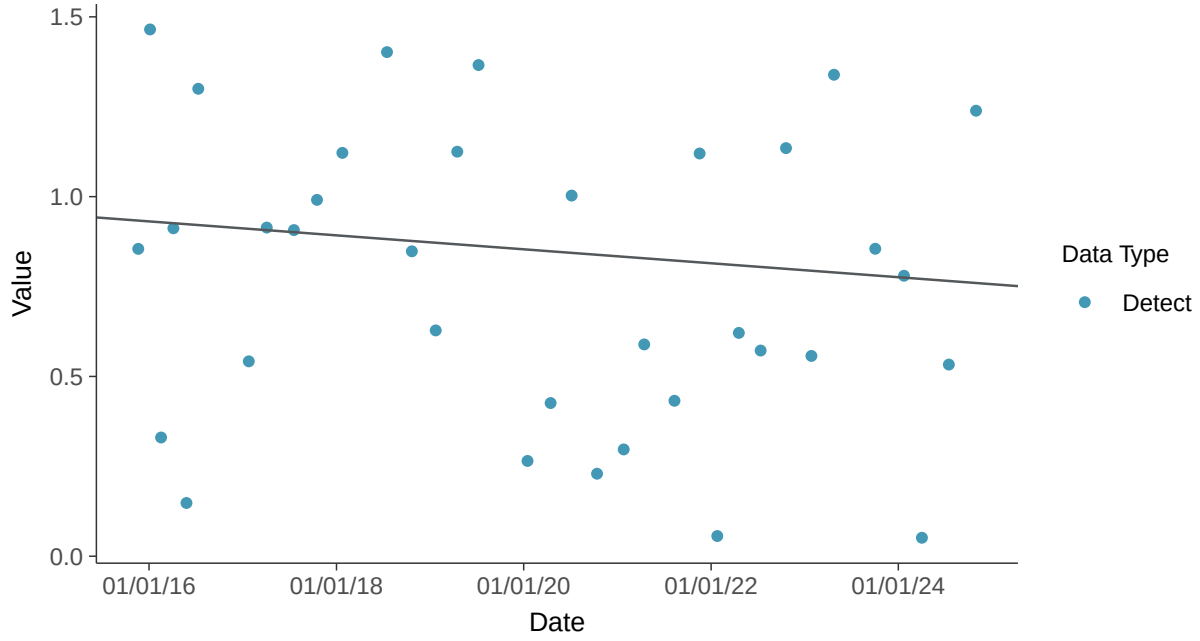
Normal Q-Q plot

Total Radium, MW-6 (pCi/L)



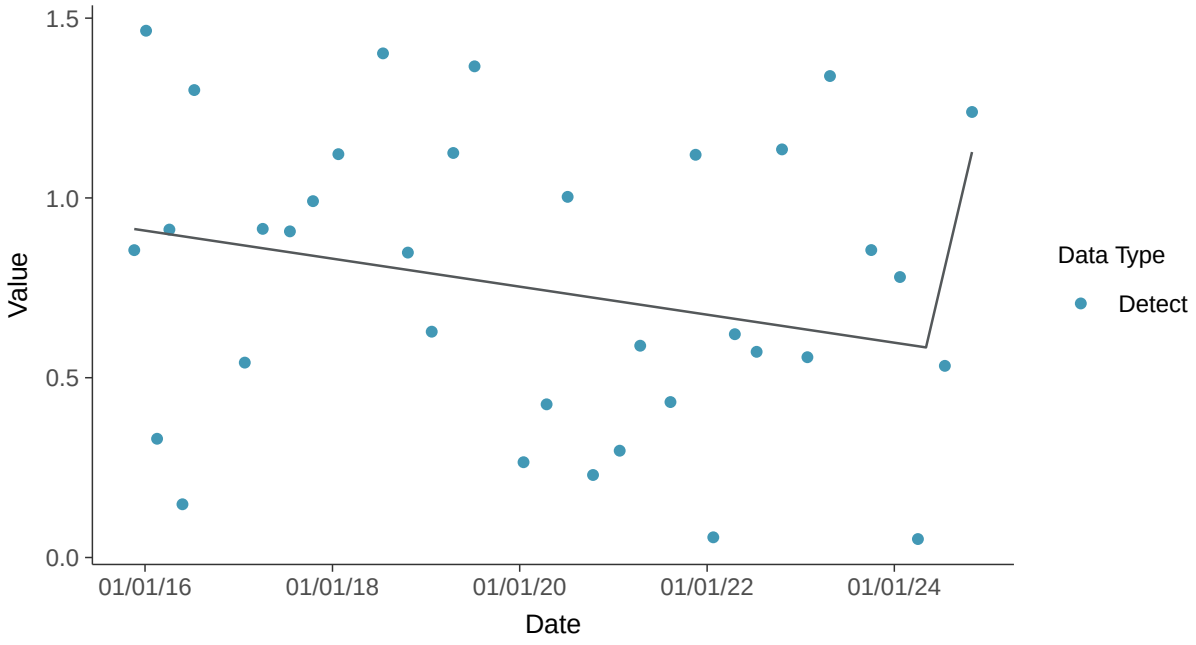
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-6 (pCi/L)



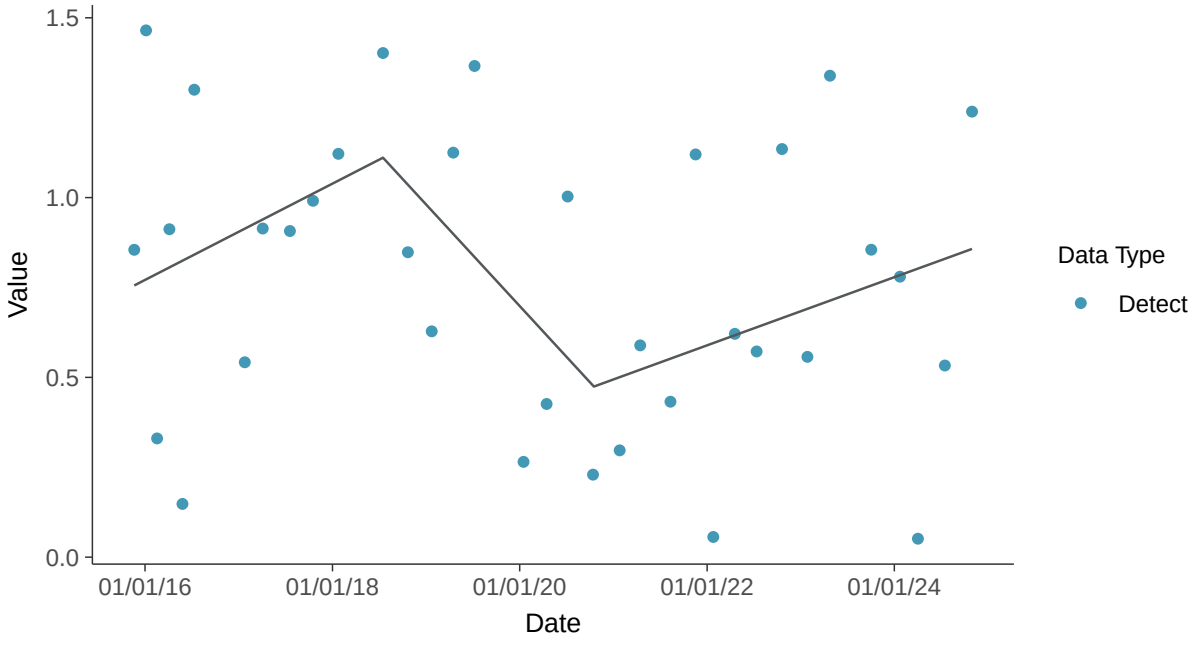
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-6 (pCi/L)



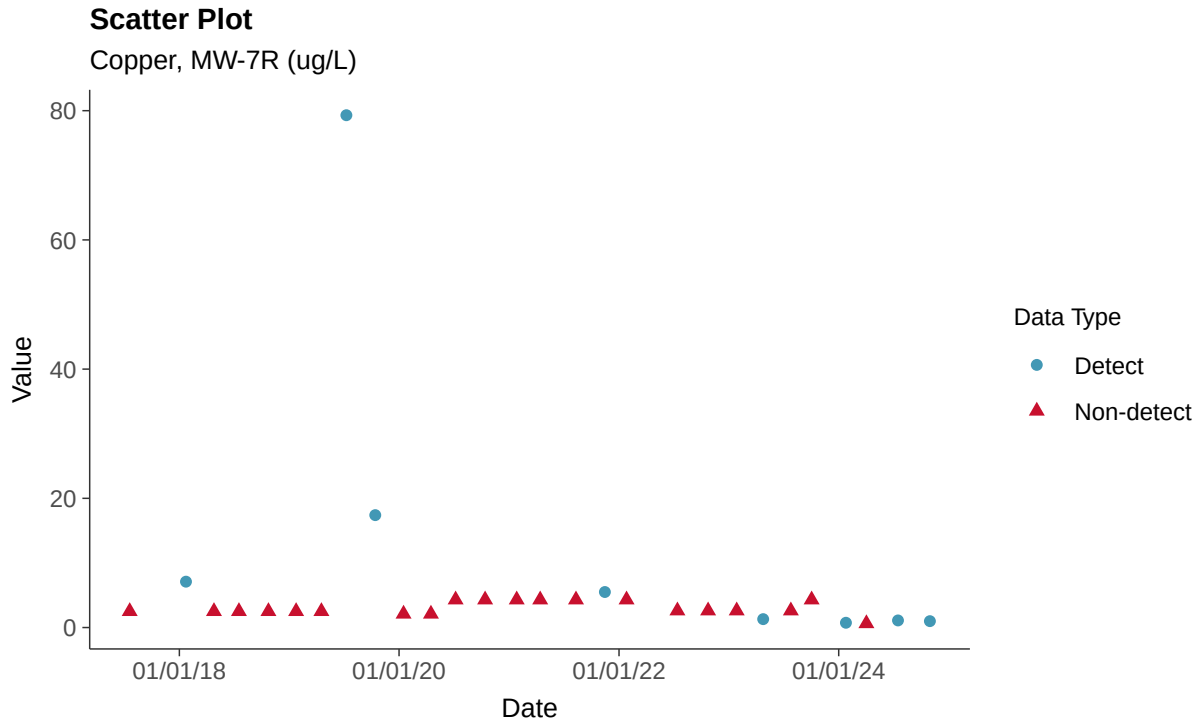
Trend Regression: Piecewise Linear-Linear-Linear

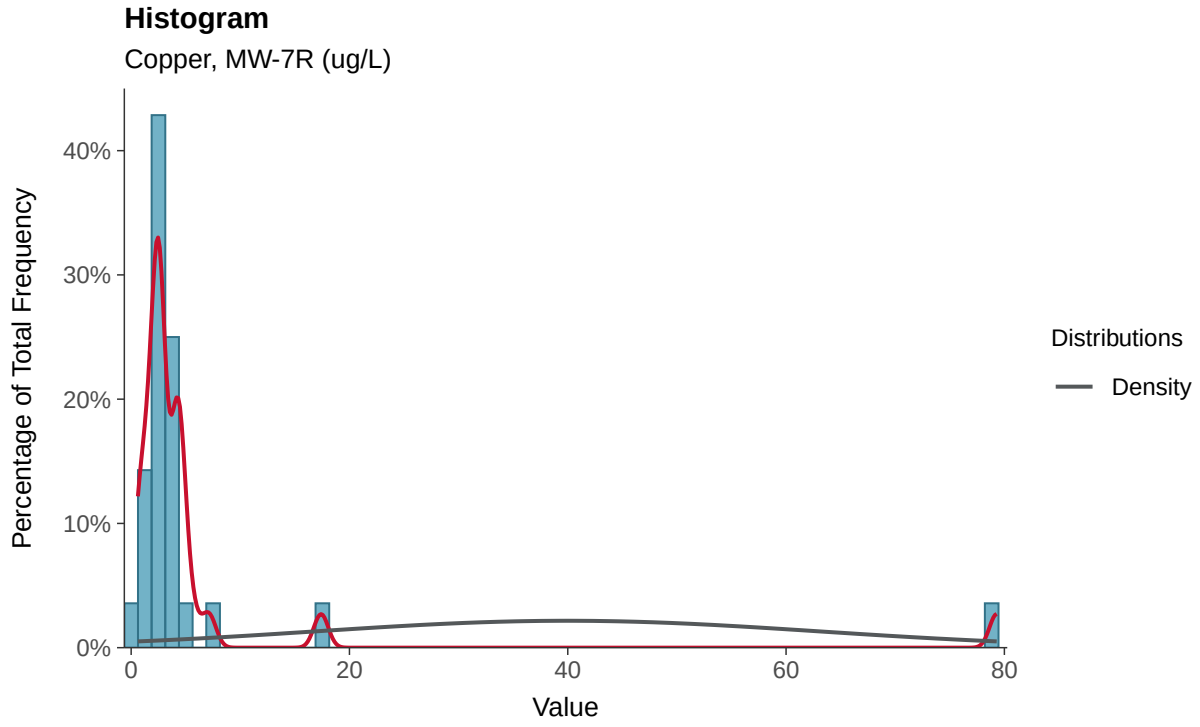
Total Radium, MW-6 (pCi/L)



App. I Metals: Copper, MW-7R

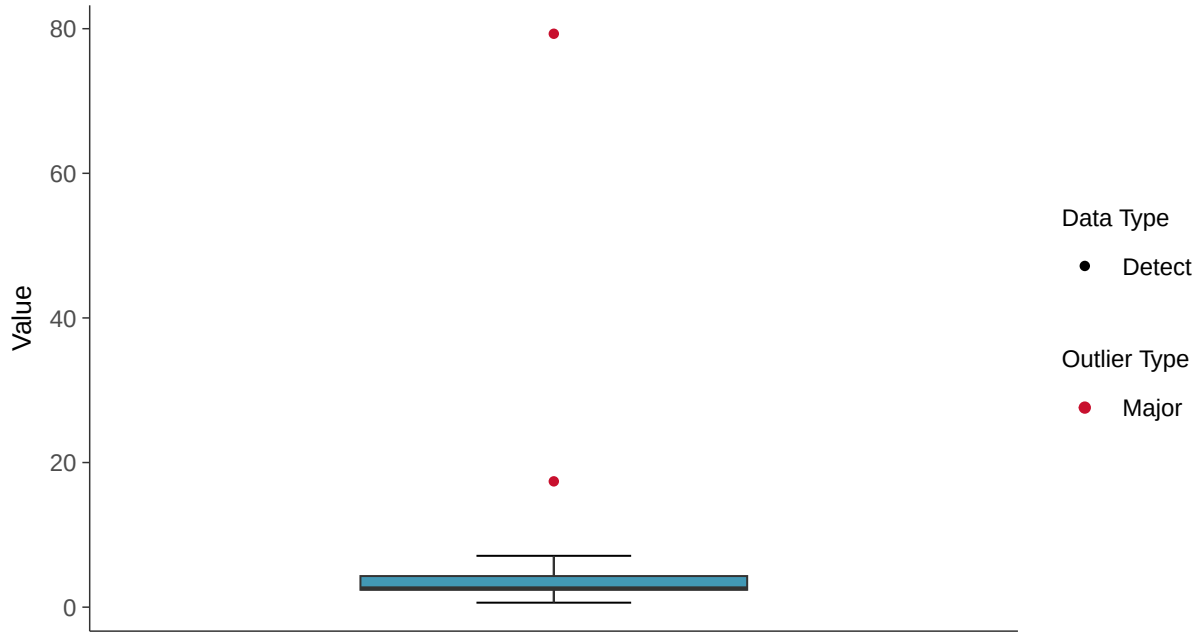
ID: 07_01_111





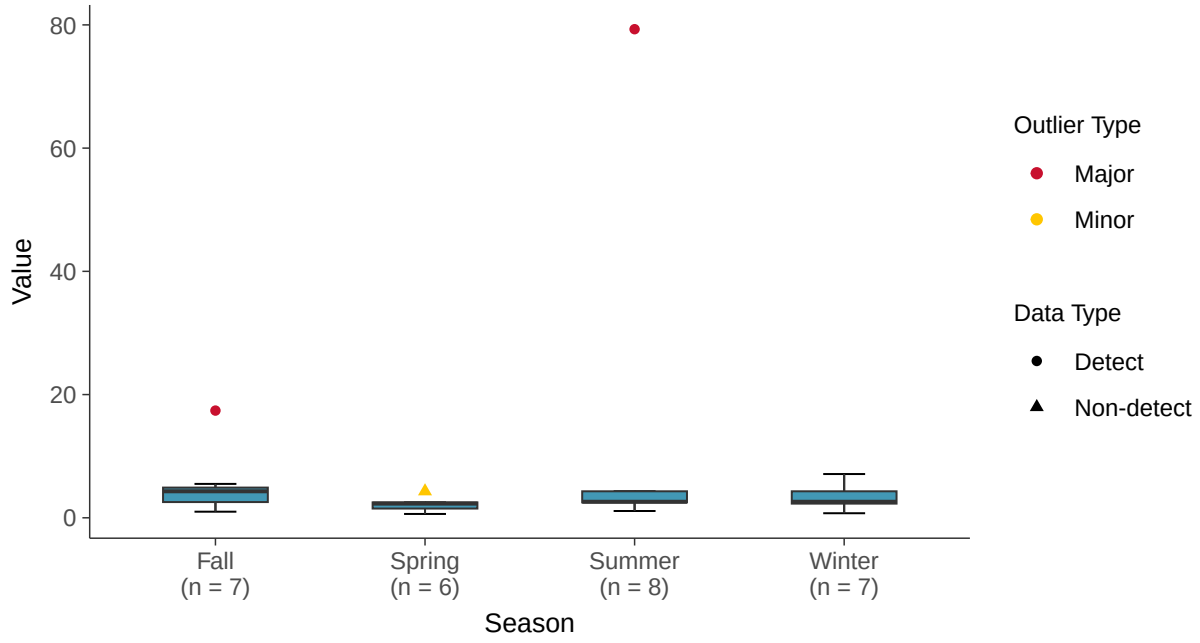
Boxplot

Copper, MW-7R (ug/L)



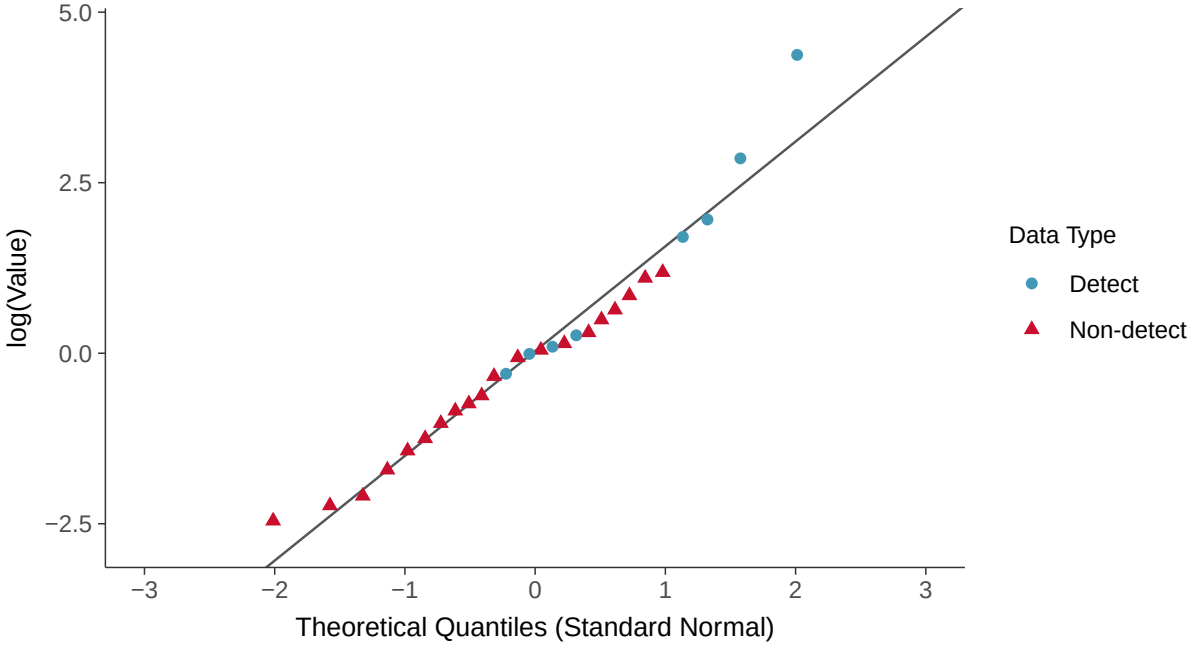
Boxplot by Season

Copper, MW-7R (ug/L)



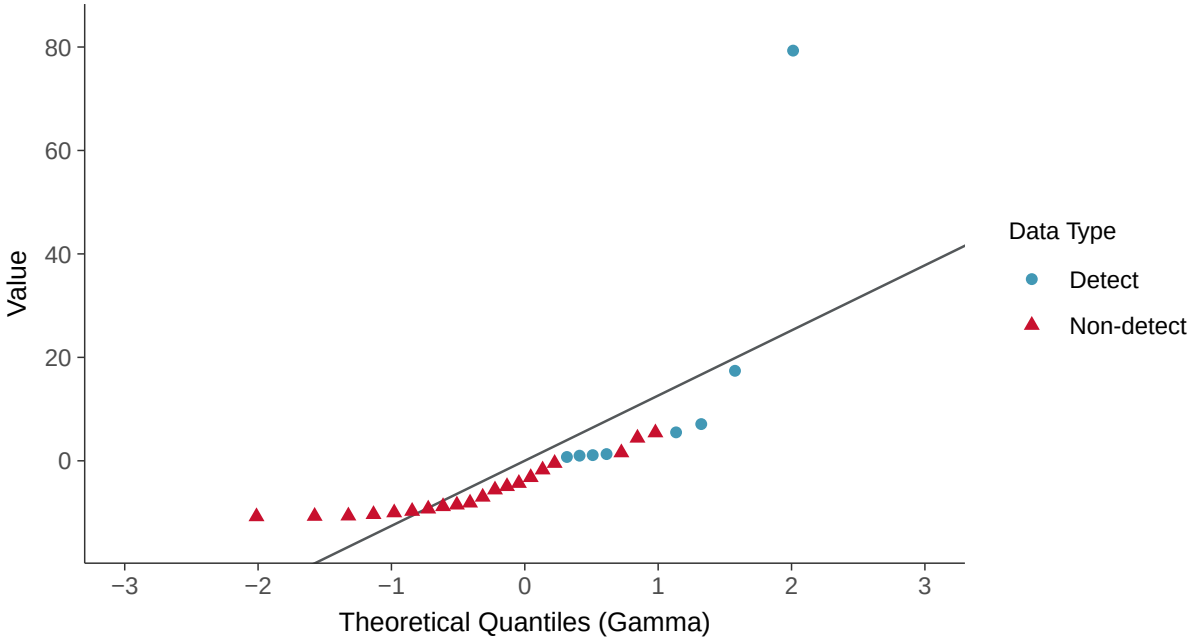
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-7R (ug/L)



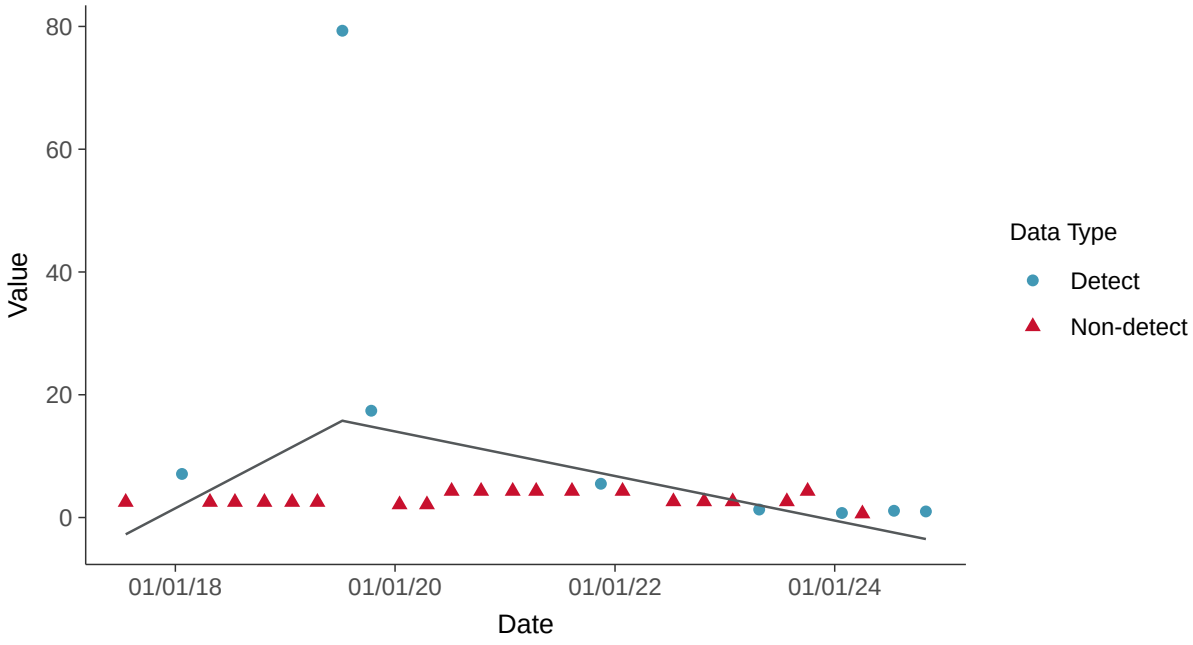
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-7R (ug/L)



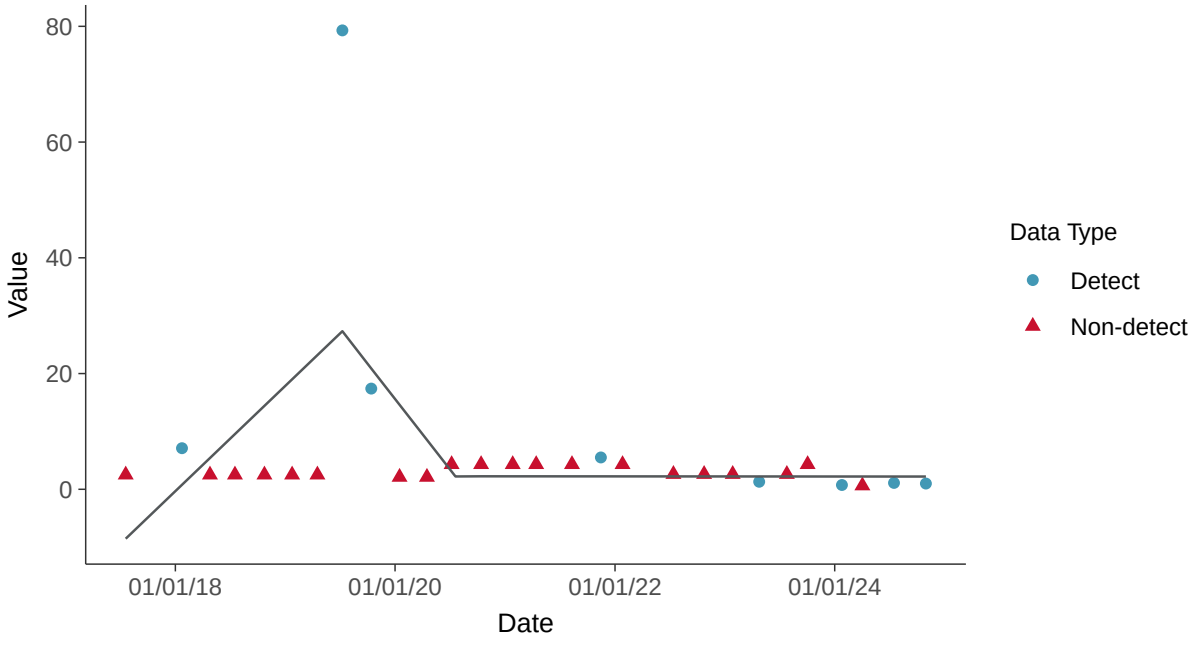
Trend Regression: Piecewise Linear-Linear

Copper, MW-7R (ug/L)



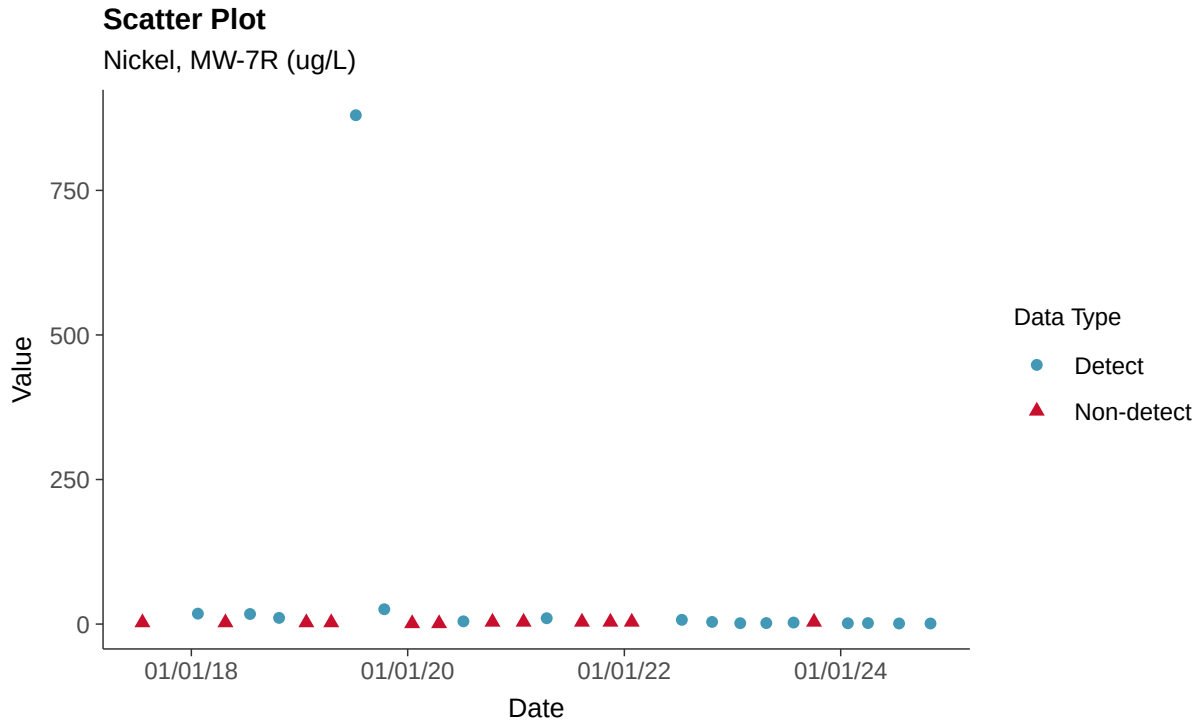
Trend Regression: Piecewise Linear-Linear-Linear

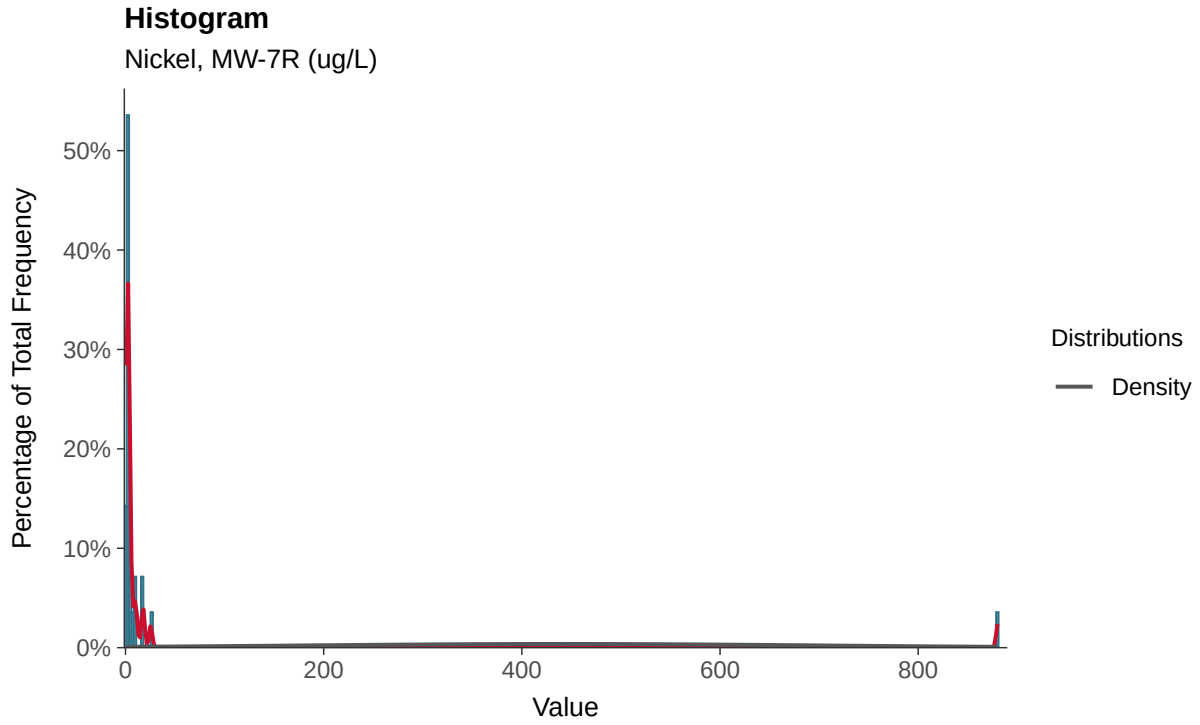
Copper, MW-7R (ug/L)



App. I Metals: Nickel, MW-7R

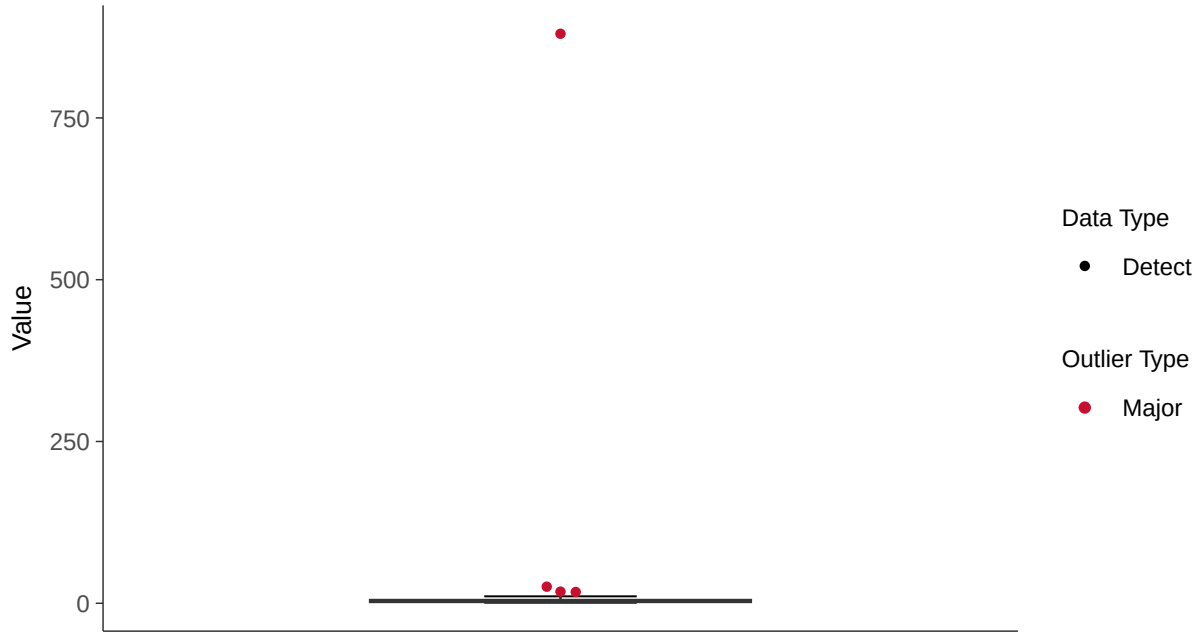
ID: 07_01_117





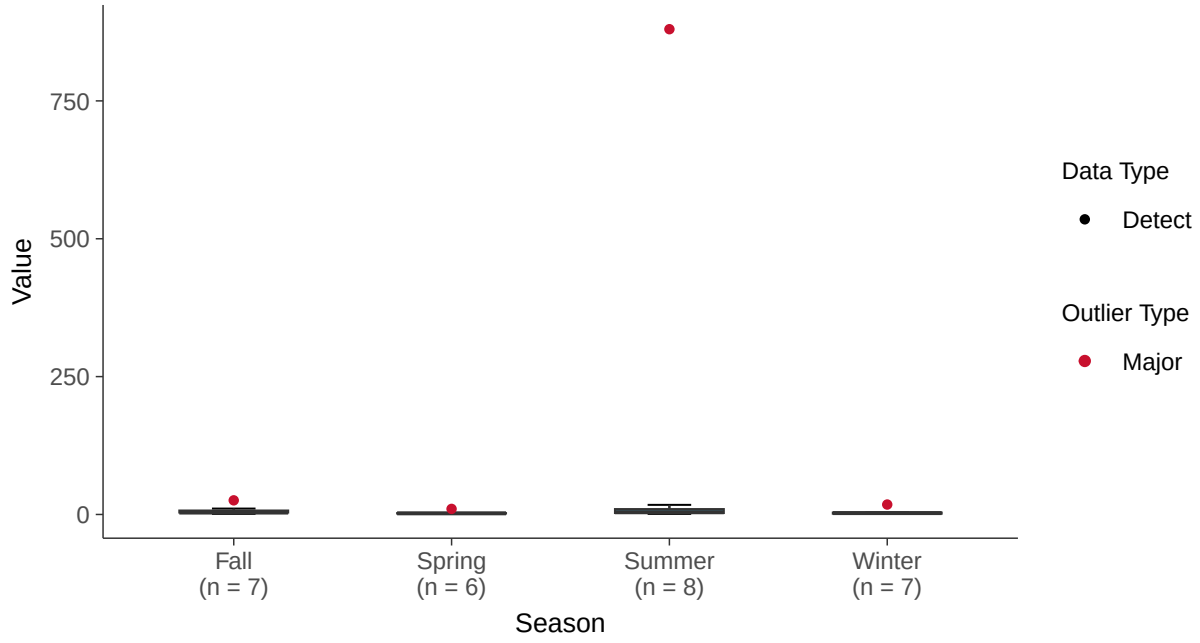
Boxplot

Nickel, MW-7R (ug/L)



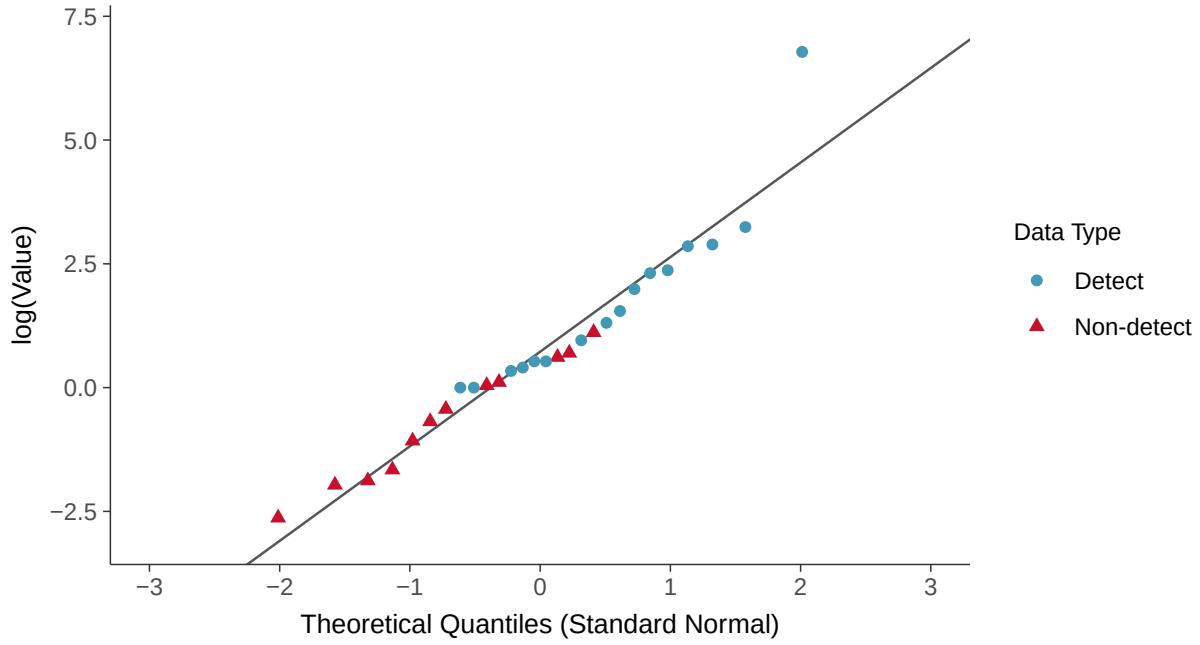
Boxplot by Season

Nickel, MW-7R (ug/L)



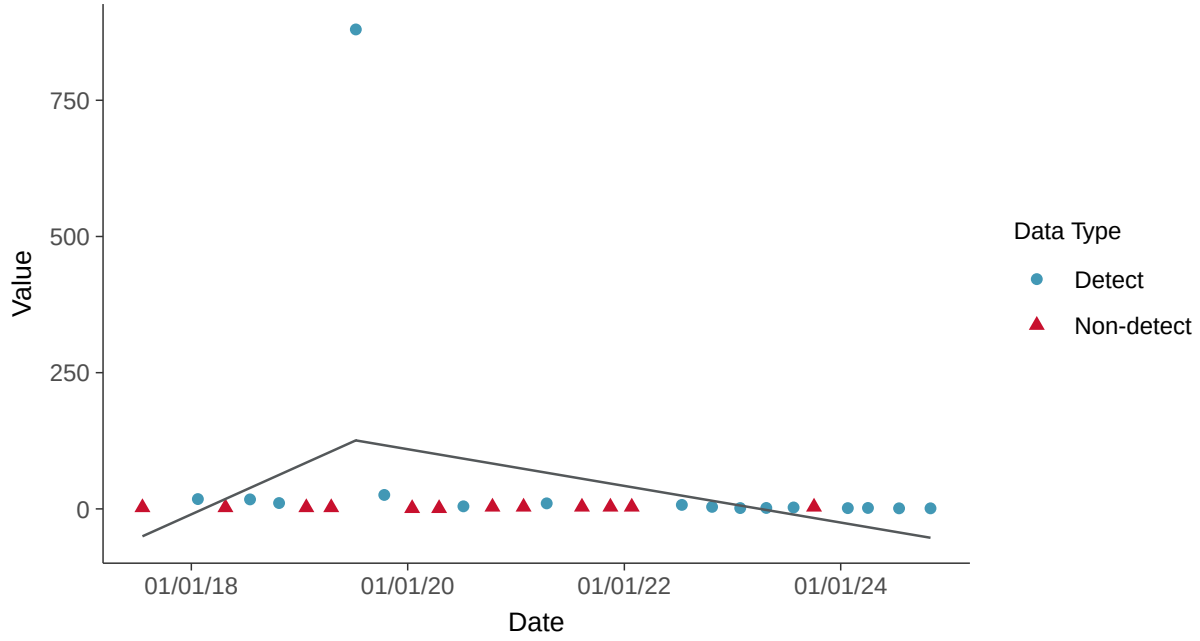
Lognormal Q-Q plot using ROS Imputed Estimates

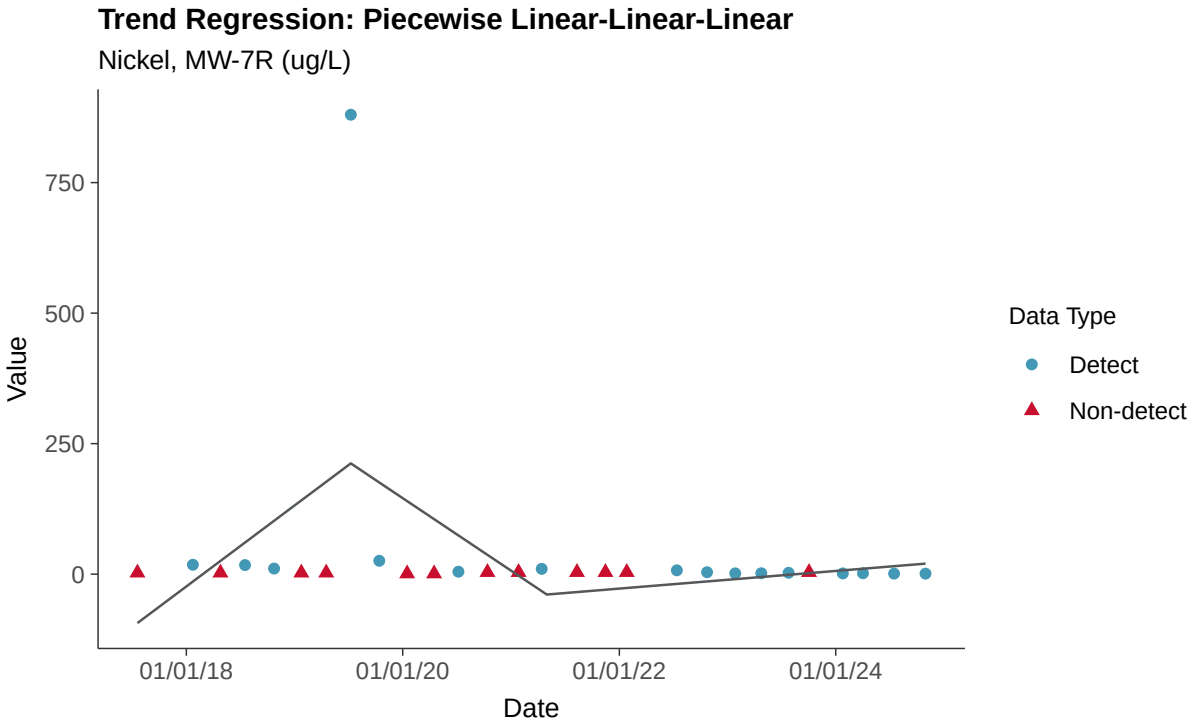
Nickel, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

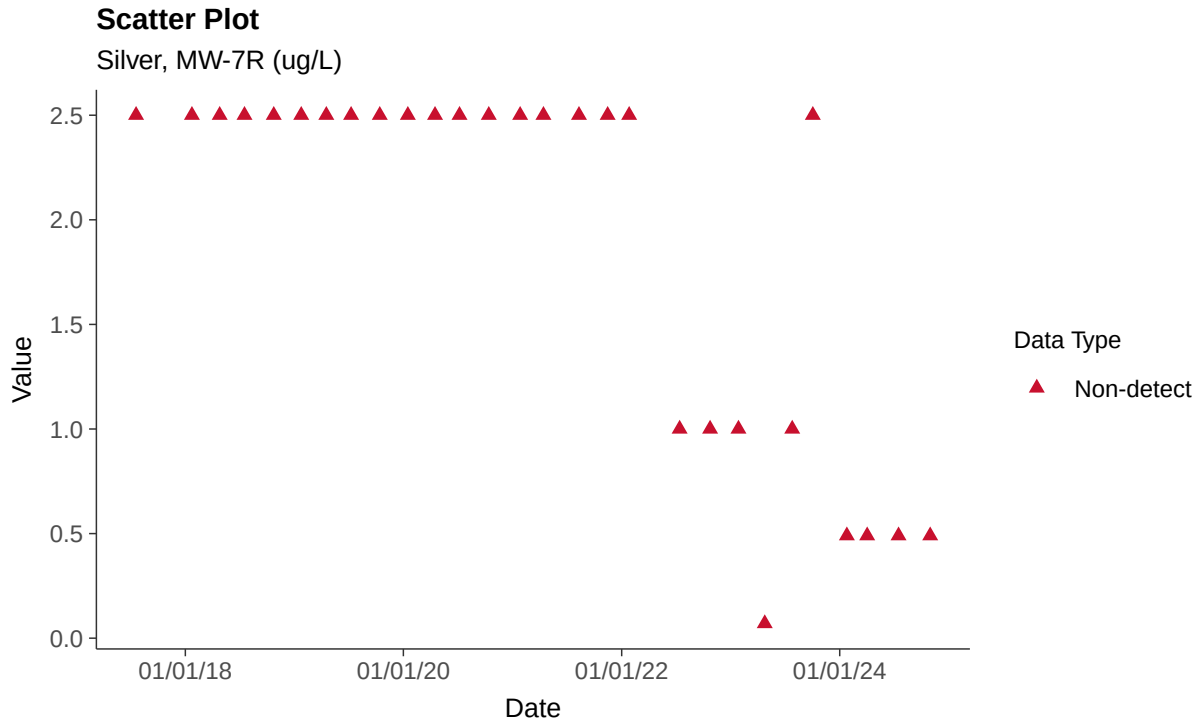
Nickel, MW-7R (ug/L)

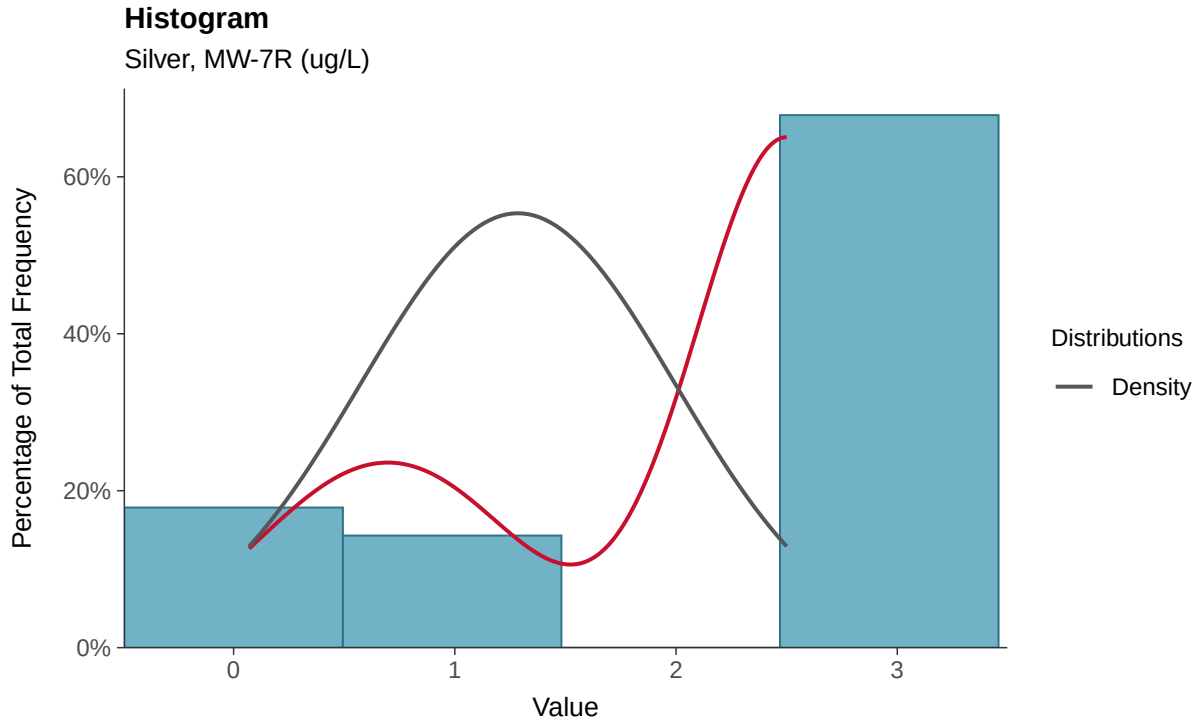



Trend Regression: Piecewise Linear-Linear-Linear
Nickel, MW-7R (ug/L)
Value
750
500
250
0
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Detect
Non-detect

App. I Metals: Silver, MW-7R

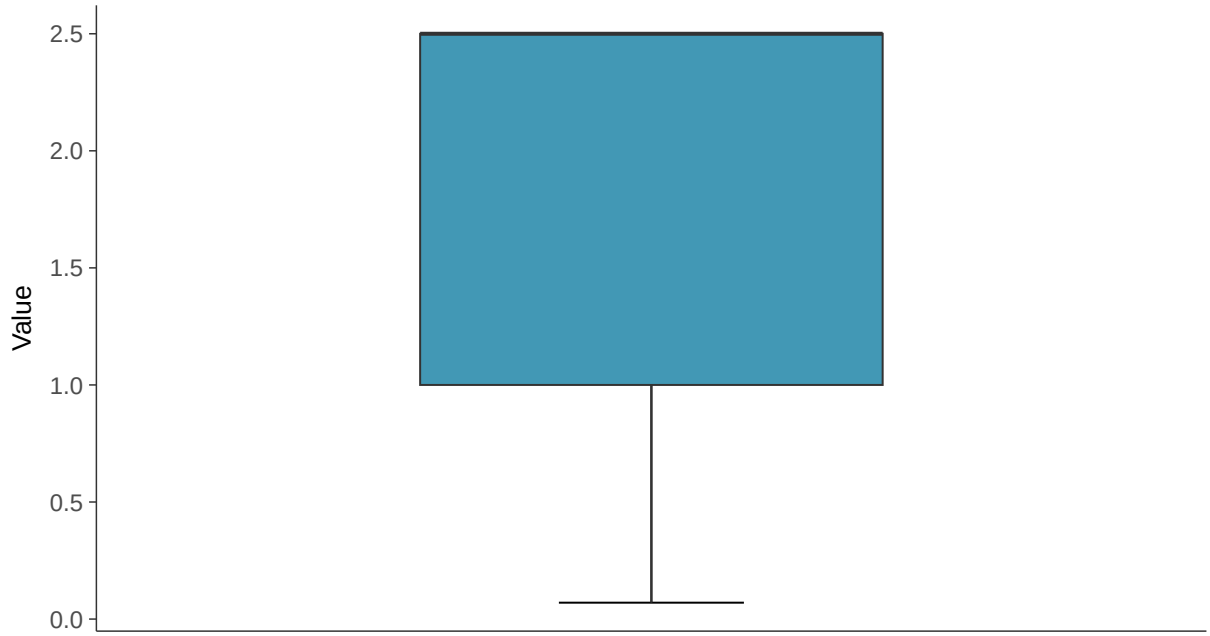
ID: 07_01_122





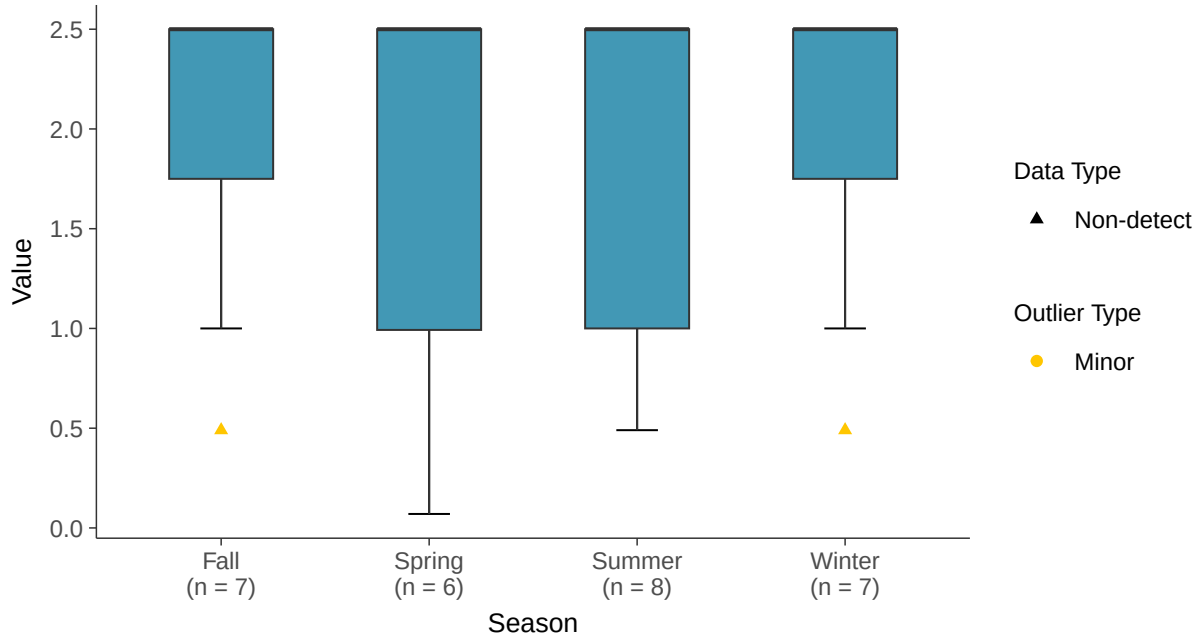
Boxplot

Silver, MW-7R (ug/L)



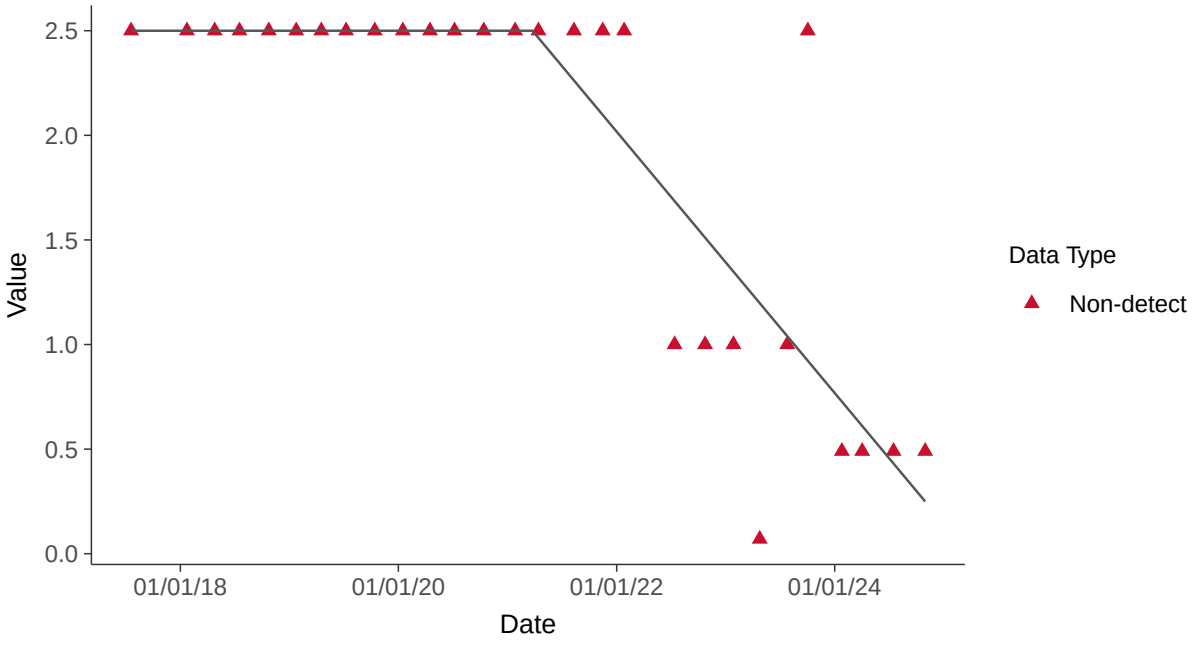
Boxplot by Season

Silver, MW-7R (ug/L)



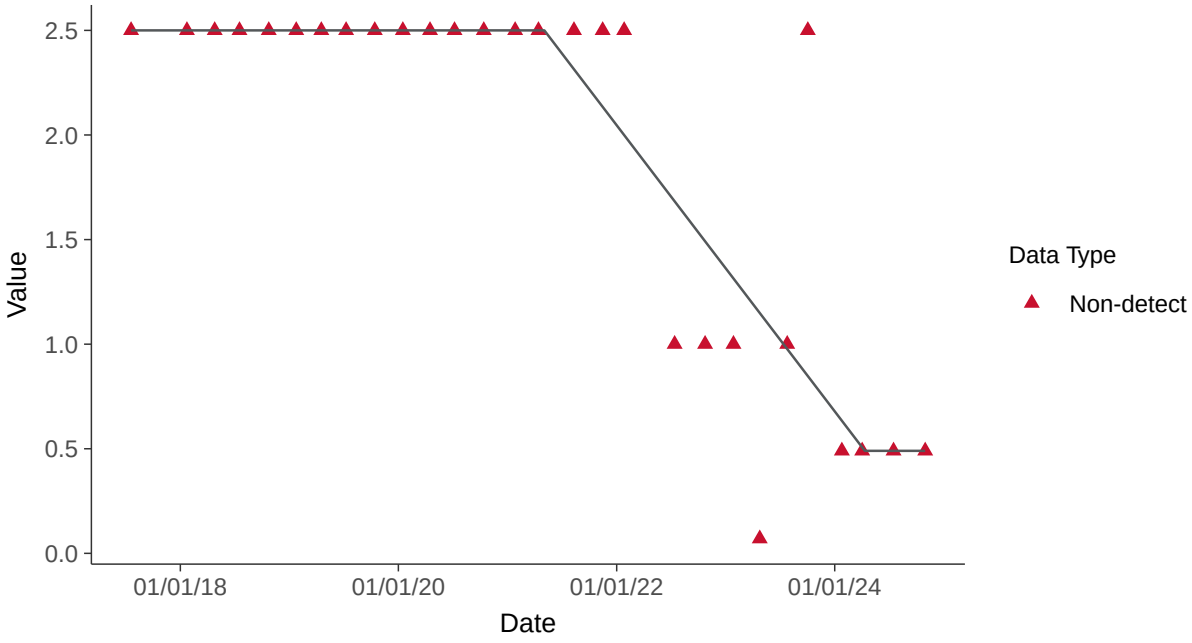
Trend Regression: Piecewise Linear-Linear

Silver, MW-7R (ug/L)



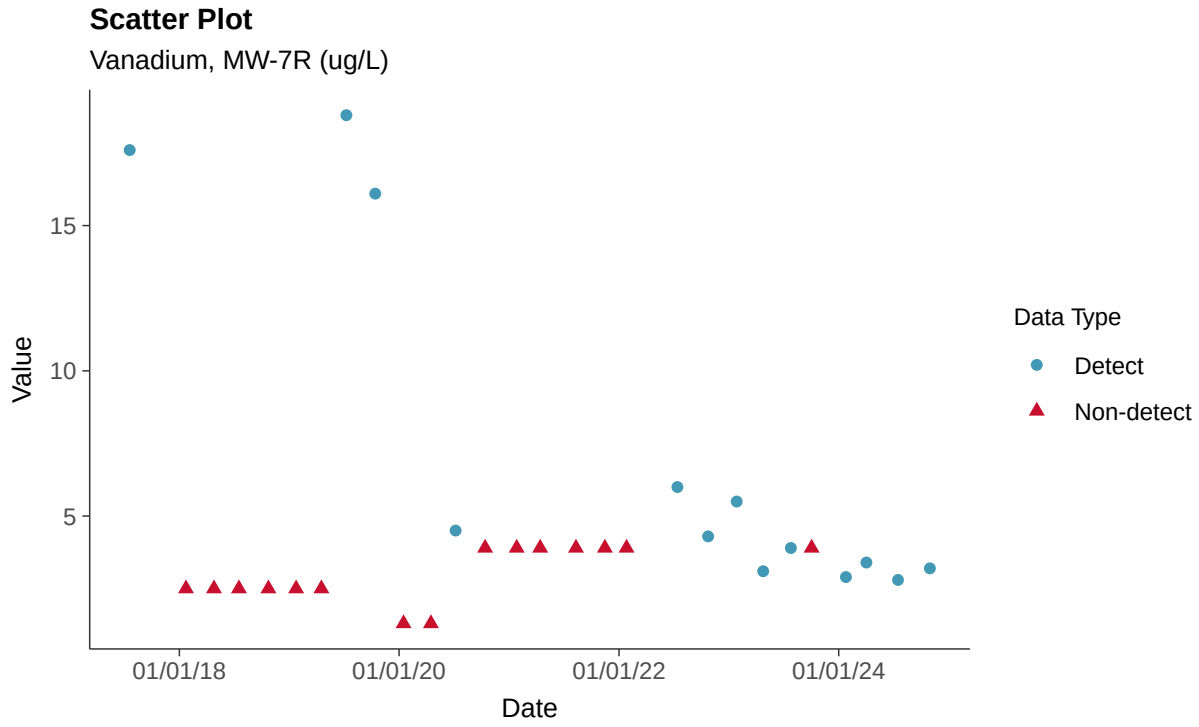
Trend Regression: Piecewise Linear-Linear-Linear

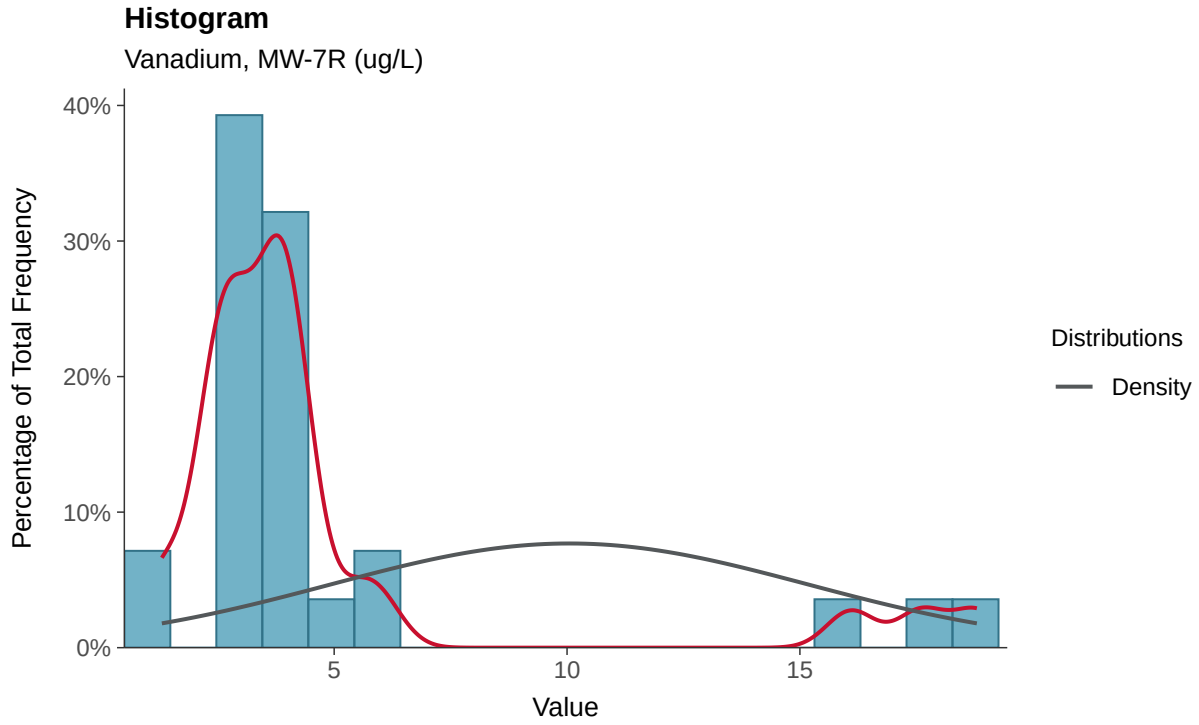
Silver, MW-7R (ug/L)



App. I Metals: Vanadium, MW-7R

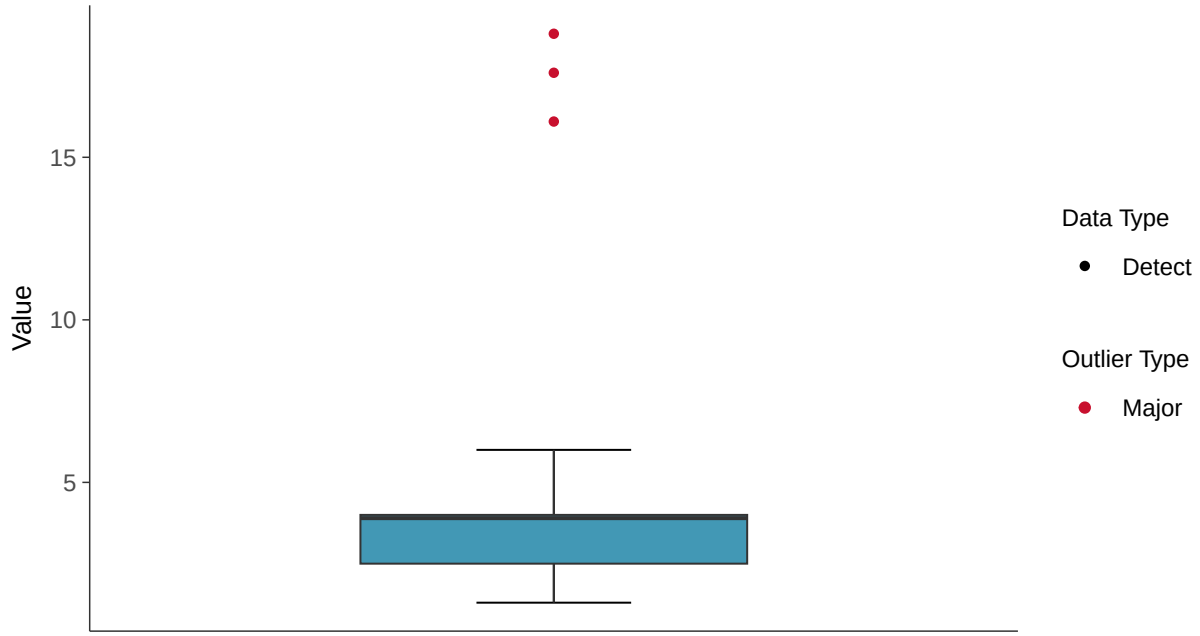
ID: 07_01_127





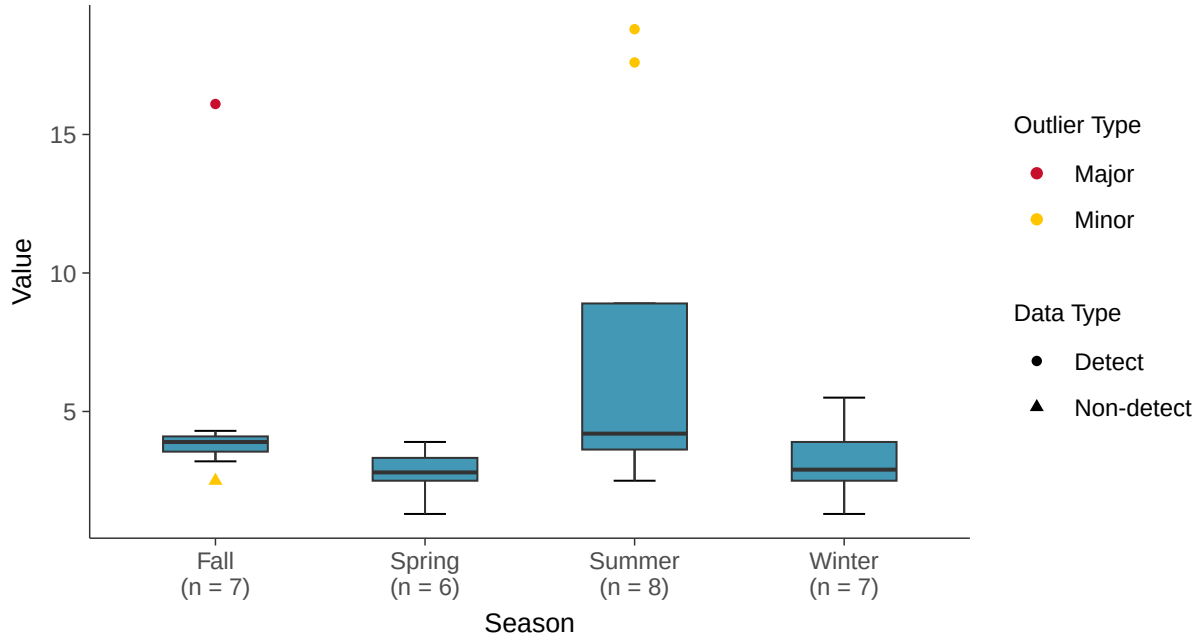
Boxplot

Vanadium, MW-7R (ug/L)



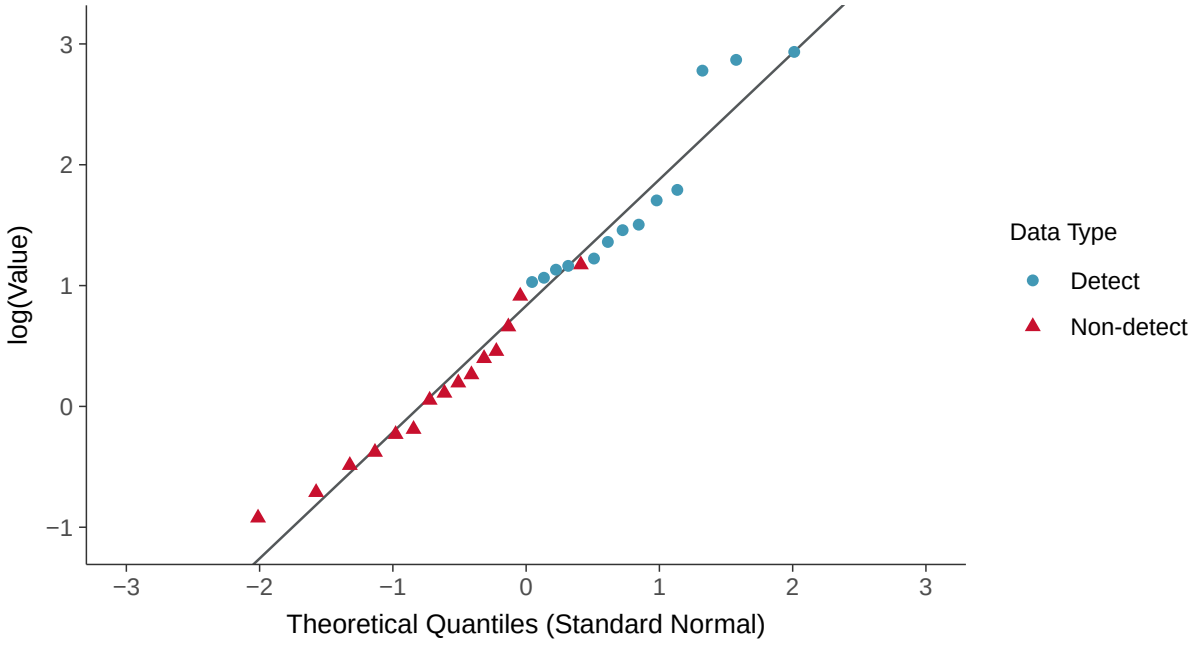
Boxplot by Season

Vanadium, MW-7R (ug/L)



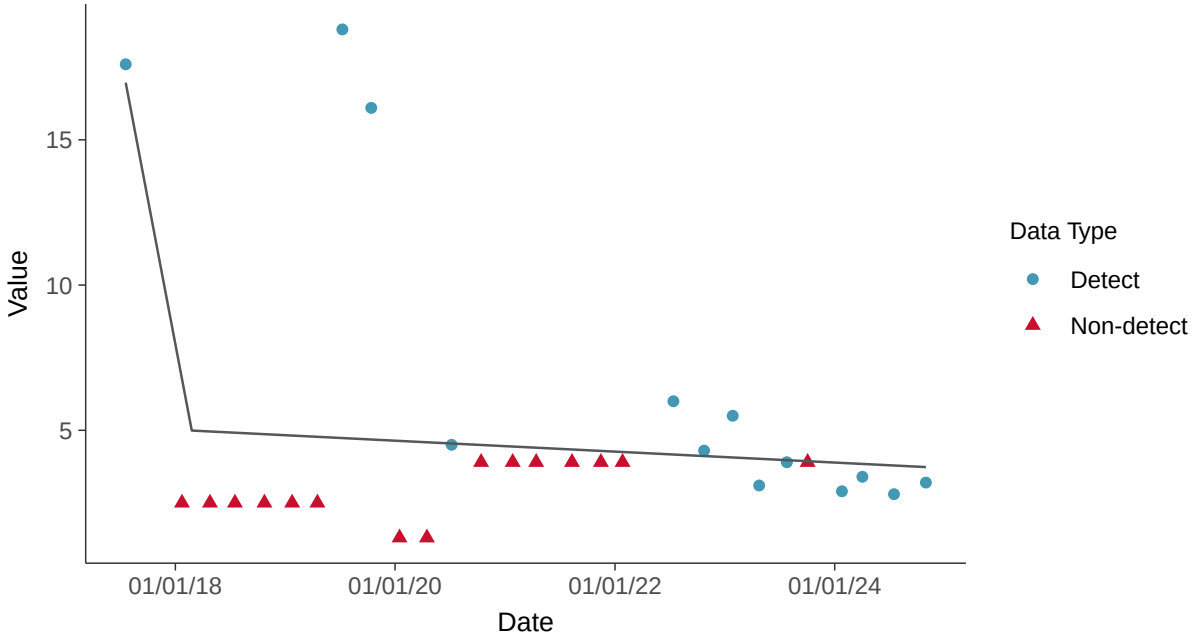
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-7R (ug/L)



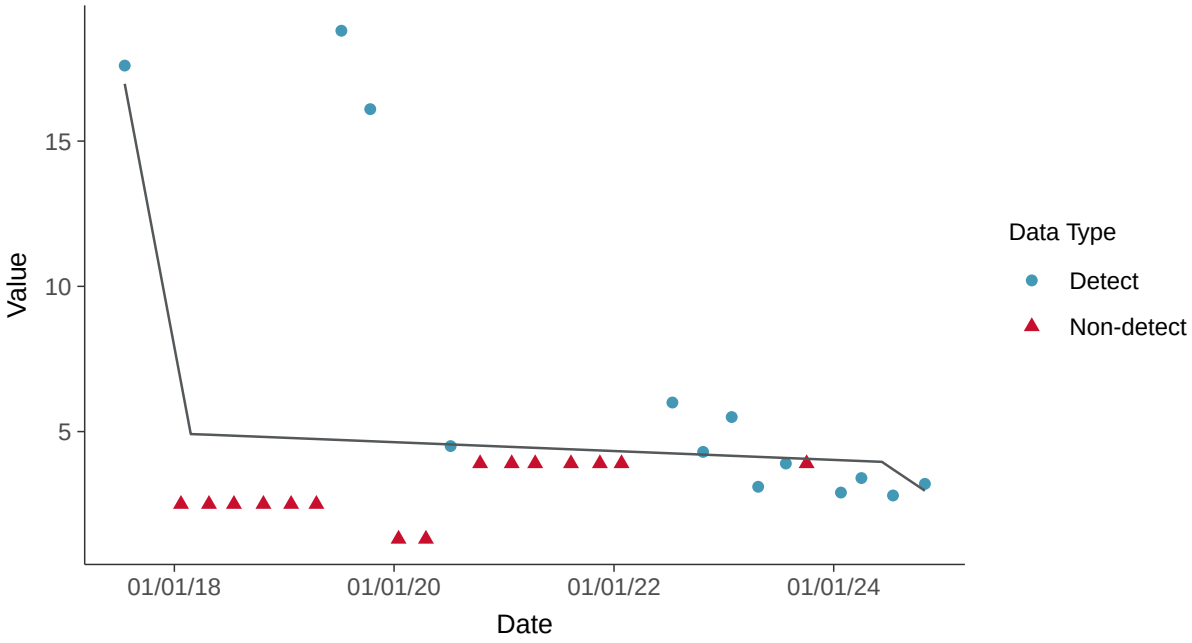
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Vanadium, MW-7R (ug/L)

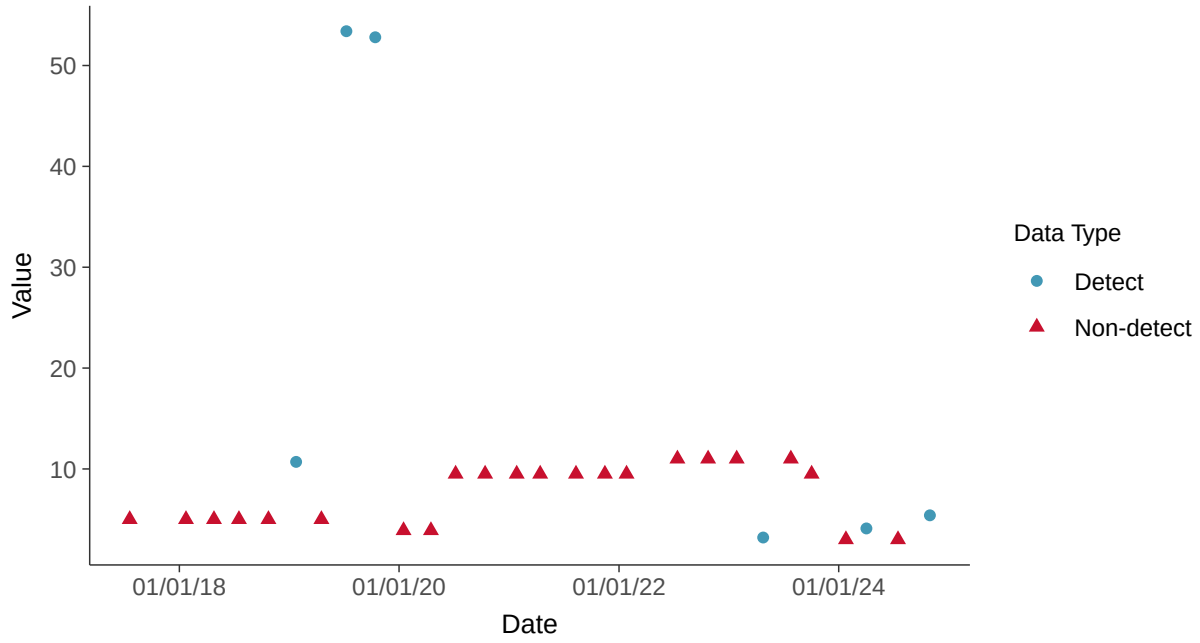


App. I Metals: Zinc, MW-7R

ID: 07_01_128

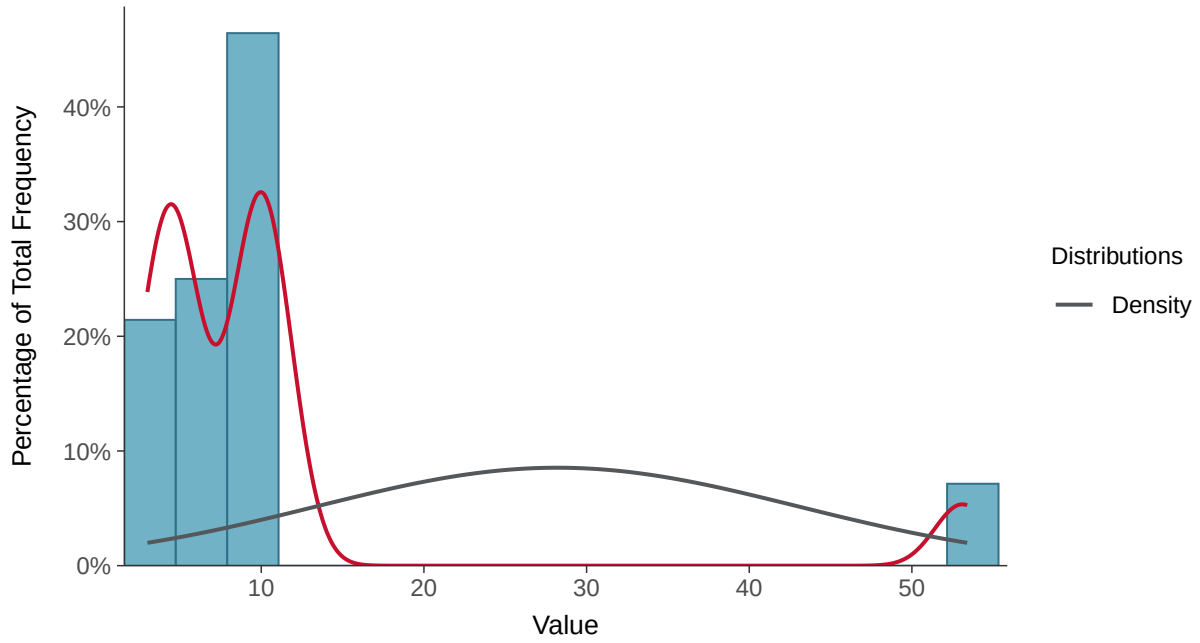
Scatter Plot

Zinc, MW-7R (ug/L)



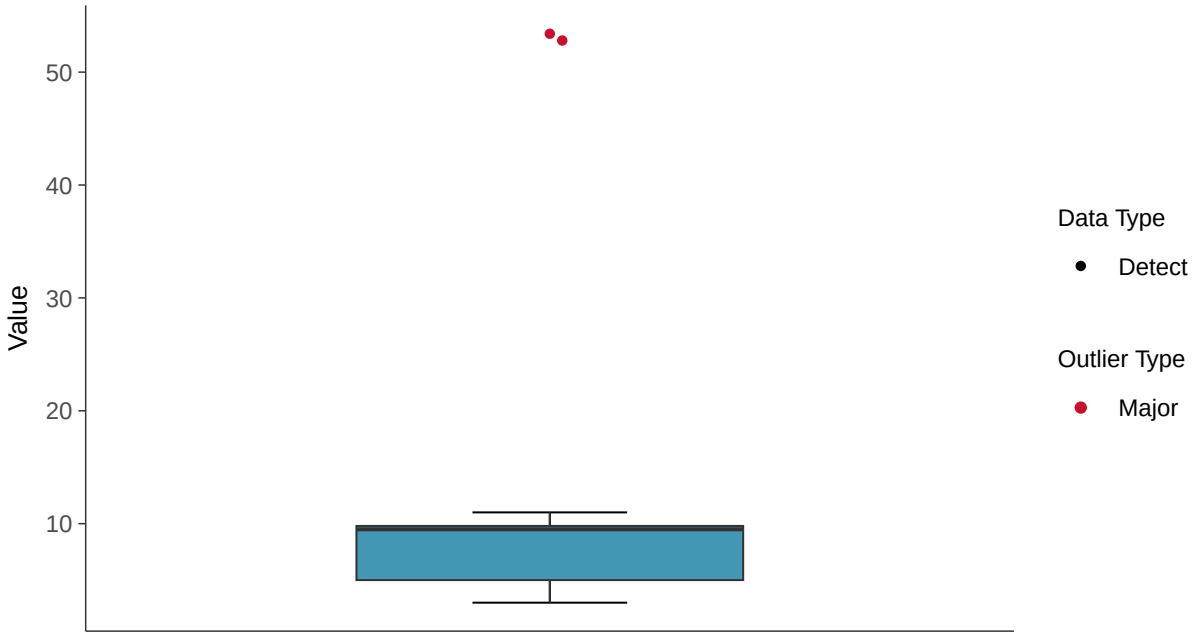
Histogram

Zinc, MW-7R (ug/L)



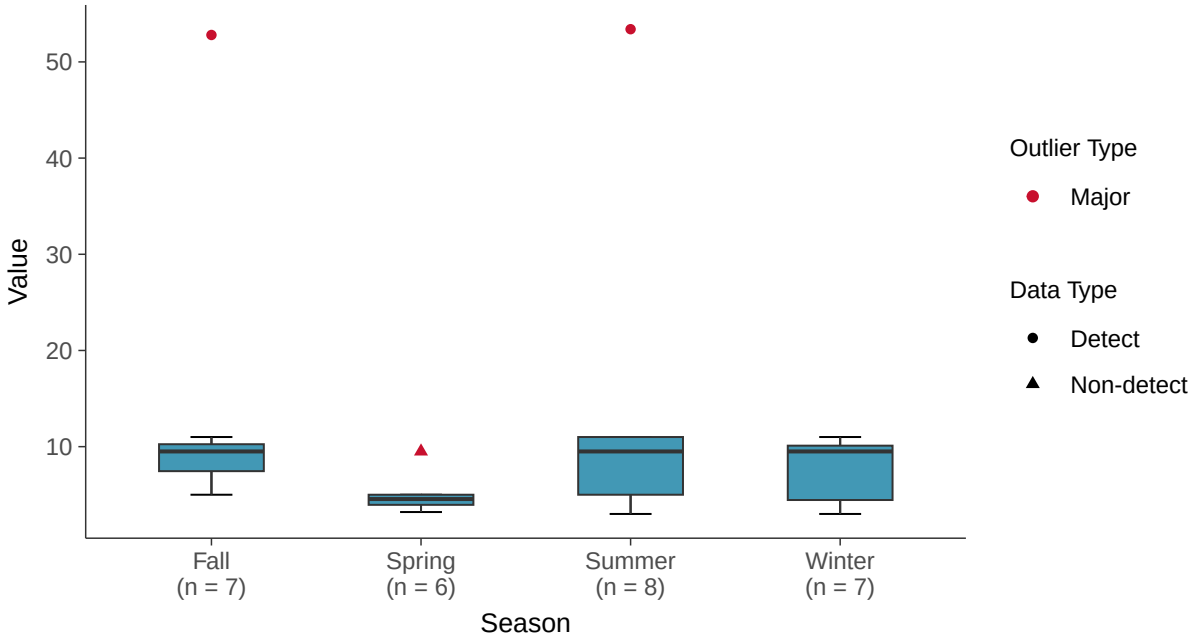
Boxplot

Zinc, MW-7R (ug/L)



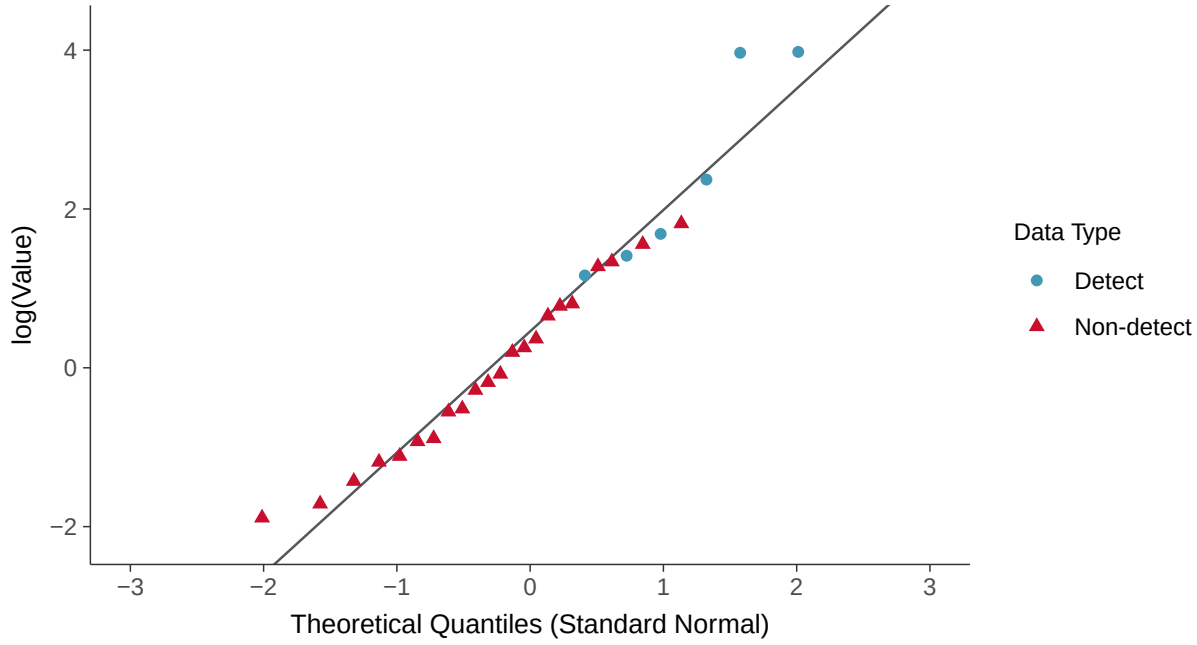
Boxplot by Season

Zinc, MW-7R (ug/L)



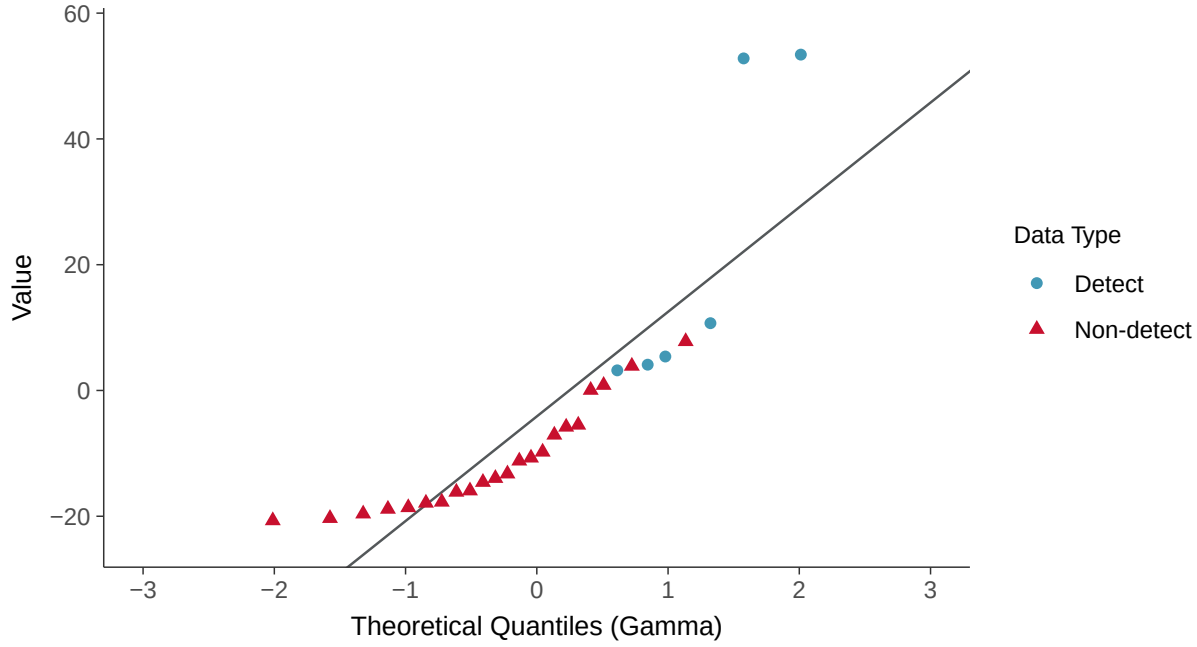
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-7R (ug/L)



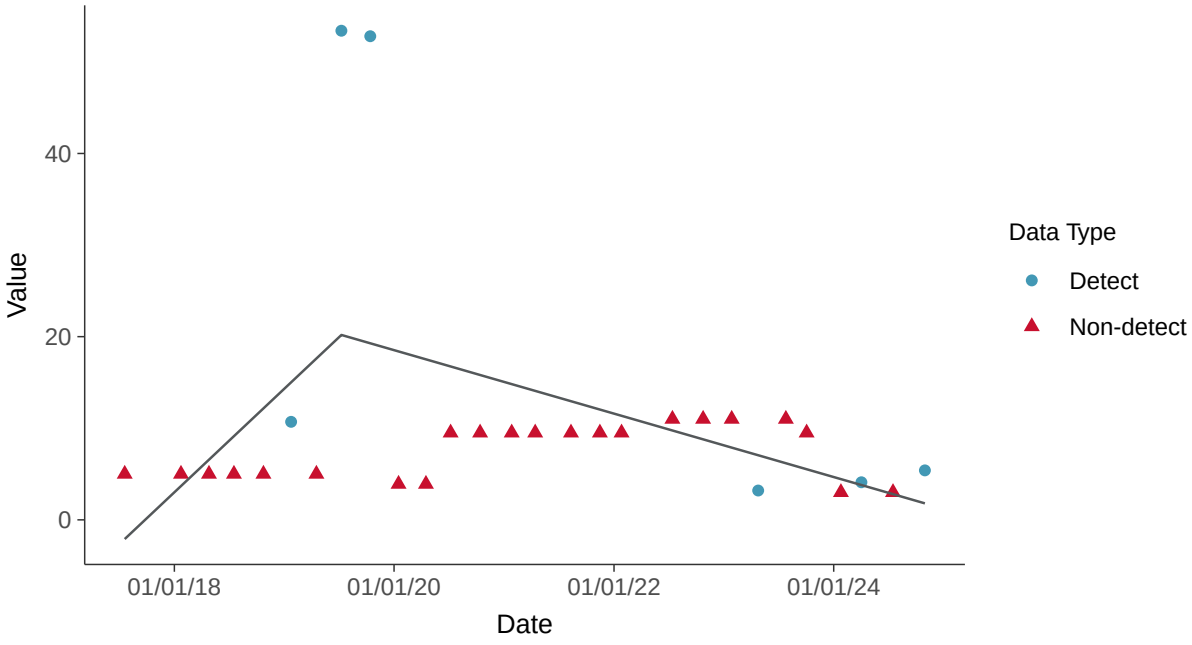
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-7R (ug/L)

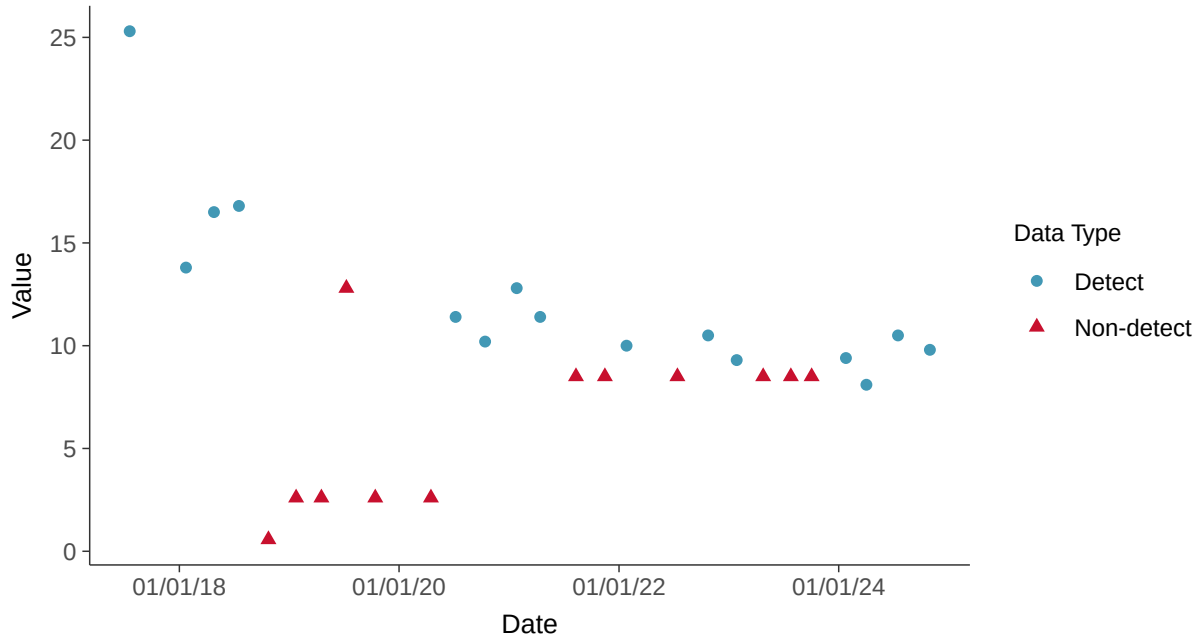


App. III: Boron, MW-7R

ID: 07_02_105

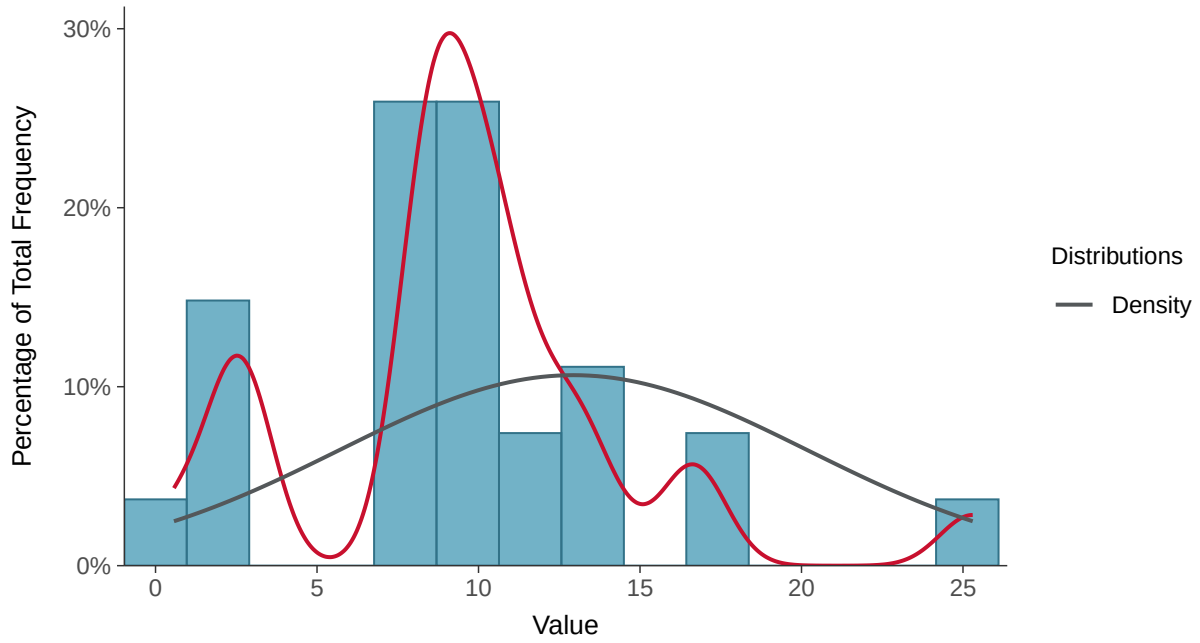
Scatter Plot

Boron, MW-7R (ug/L)



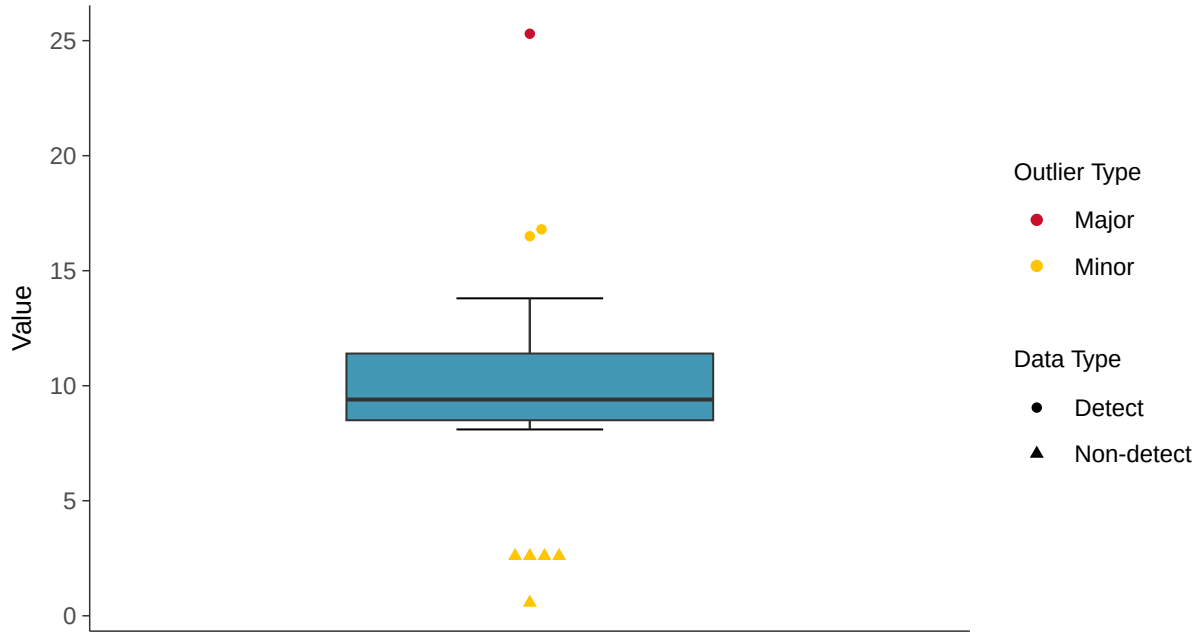
Histogram

Boron, MW-7R (ug/L)



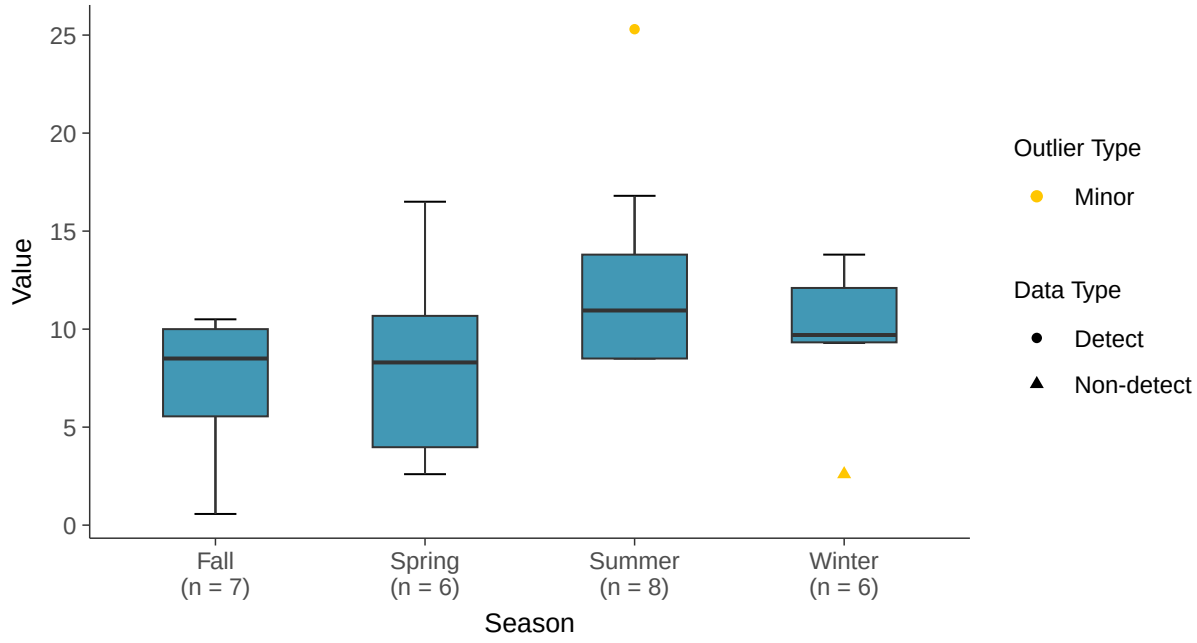
Boxplot

Boron, MW-7R (ug/L)



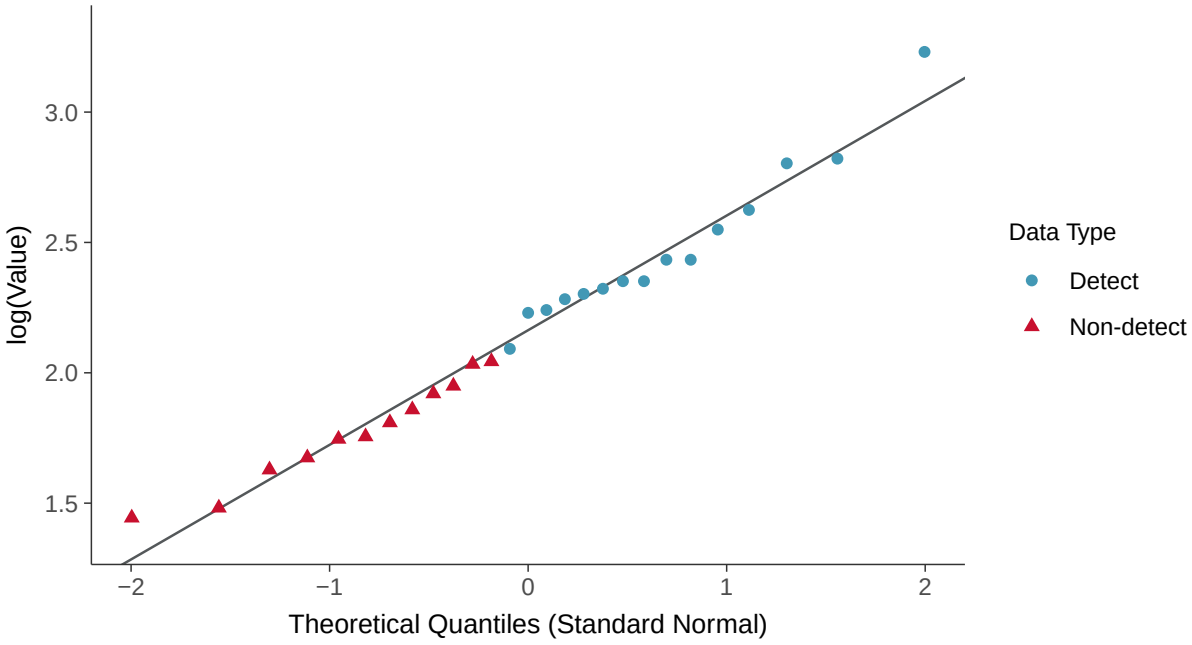
Boxplot by Season

Boron, MW-7R (ug/L)



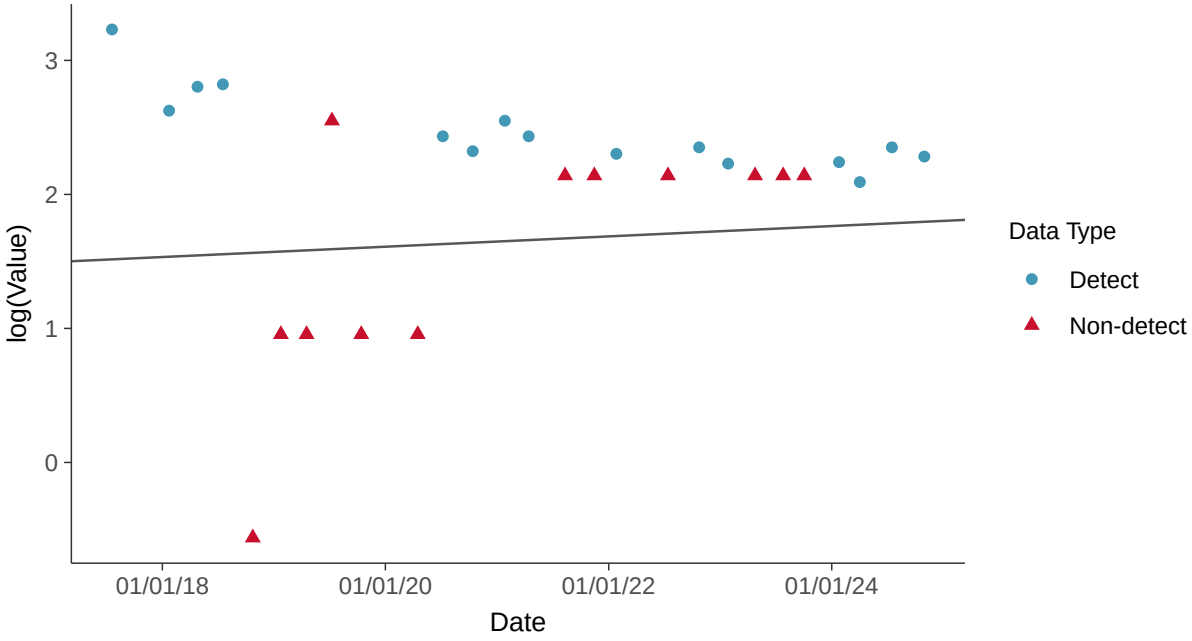
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-7R (ug/L)



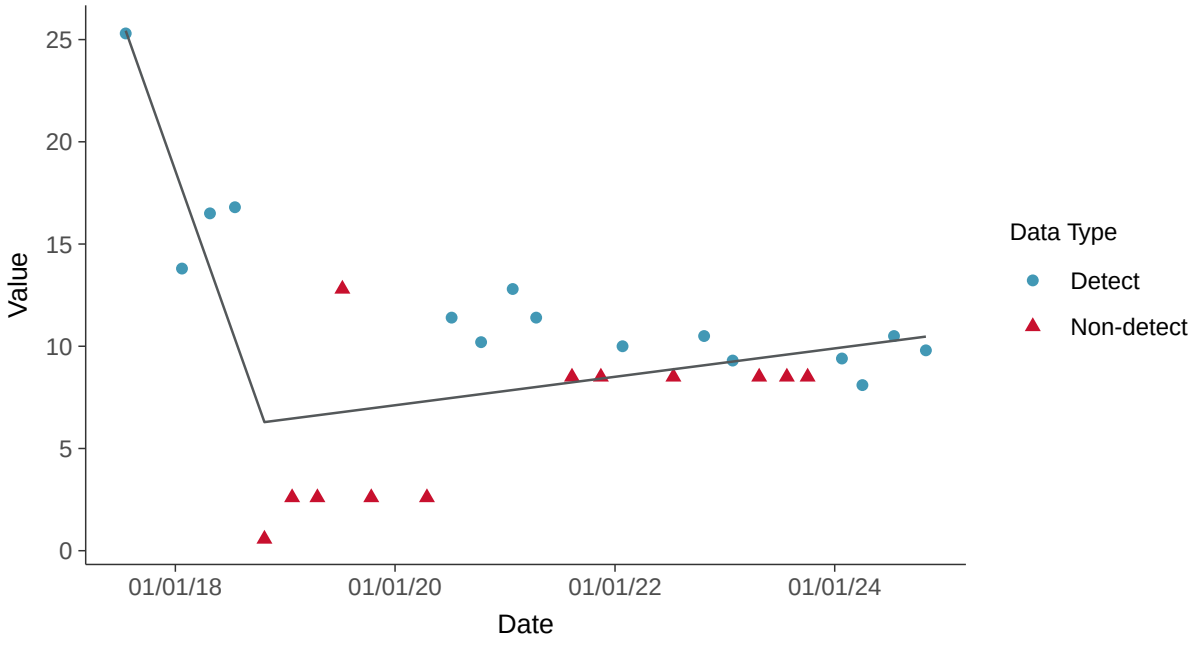
Trend Regression: Lognormal MLE

Boron, MW-7R (ug/L)



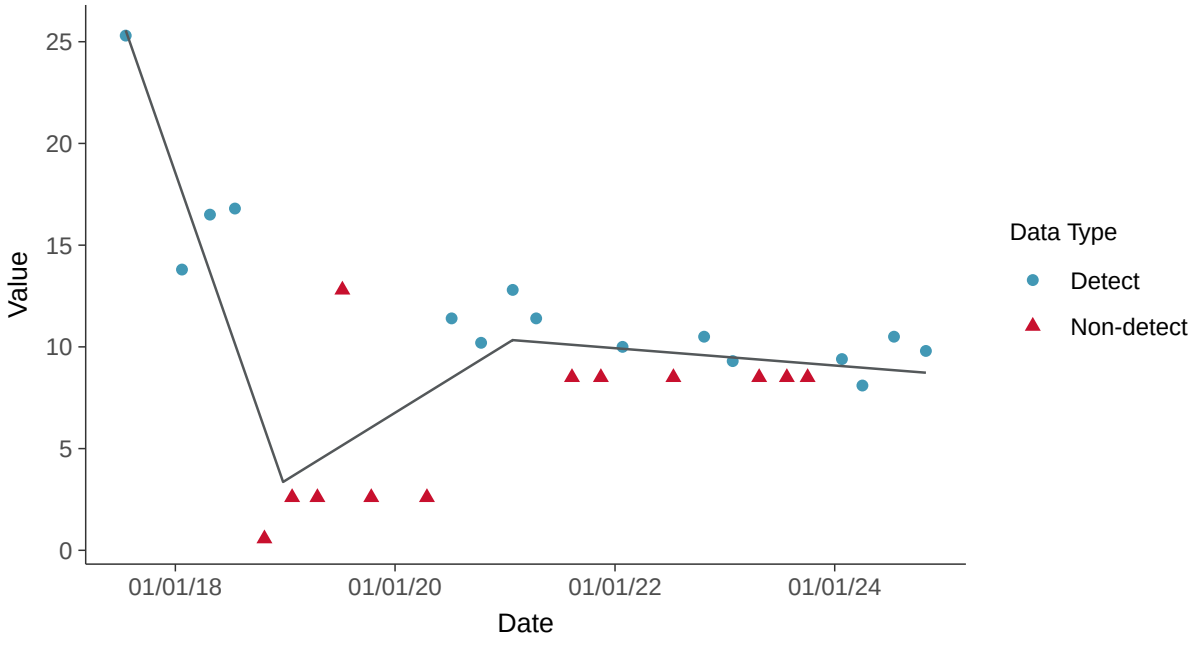
Trend Regression: Piecewise Linear-Linear

Boron, MW-7R (ug/L)



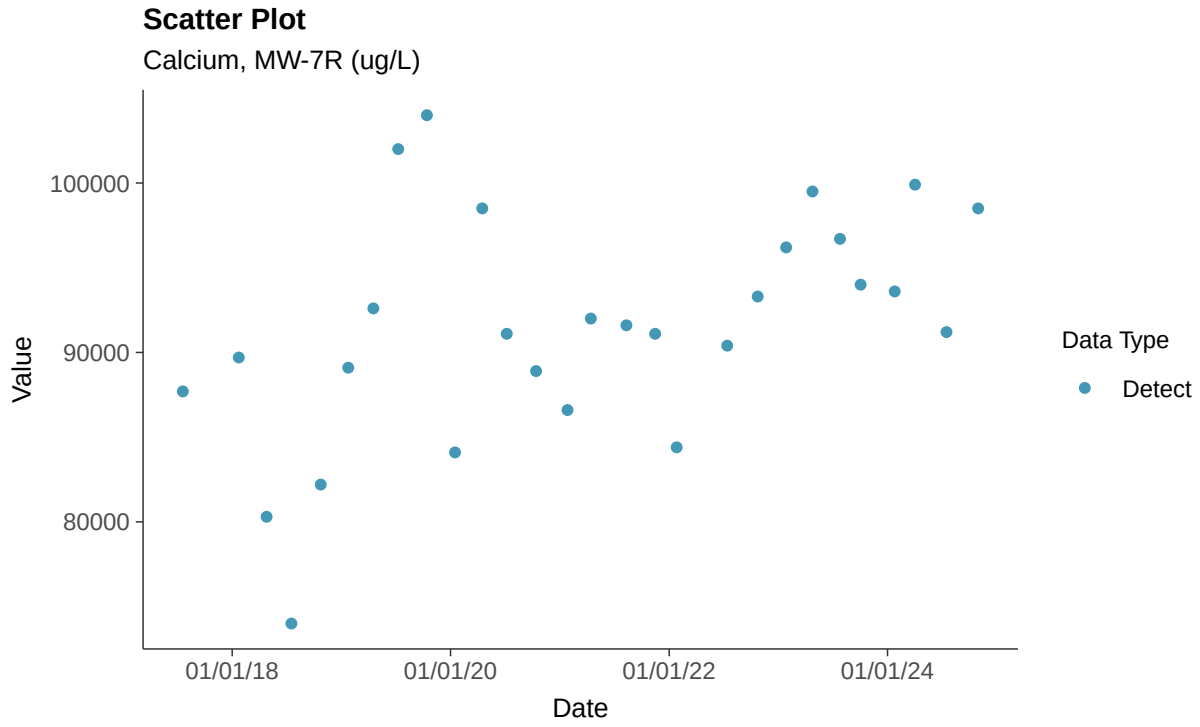
Trend Regression: Piecewise Linear-Linear-Linear

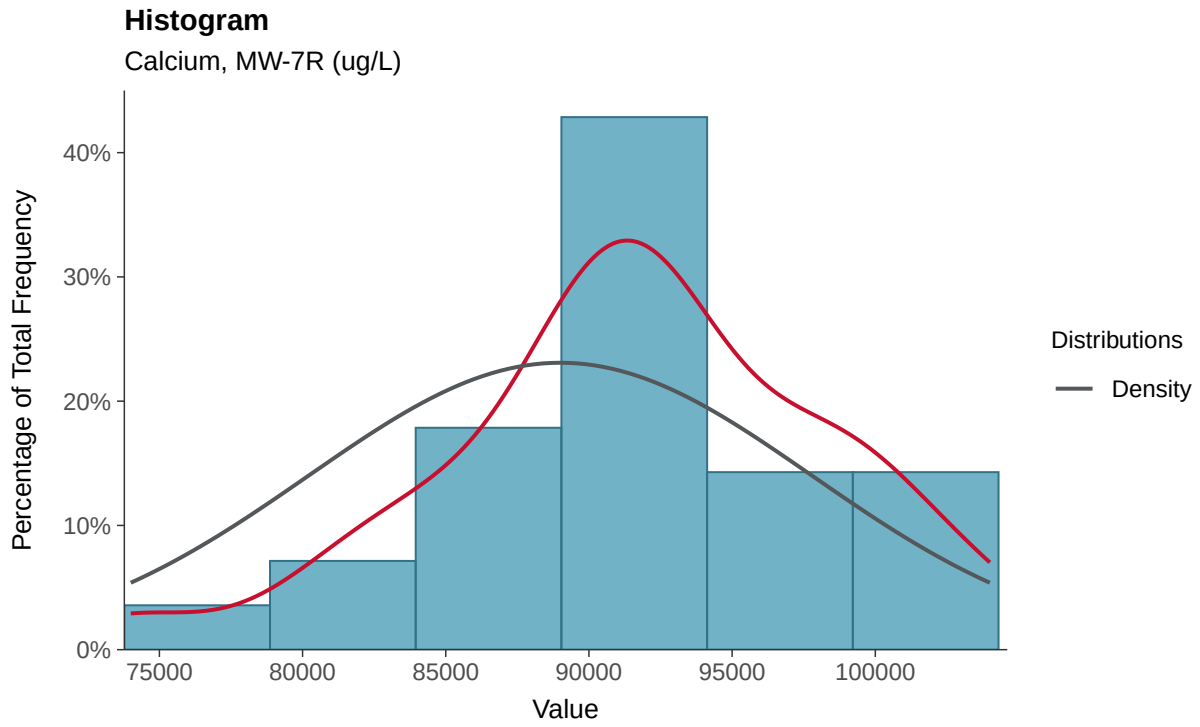
Boron, MW-7R (ug/L)



App. III: Calcium, MW-7R

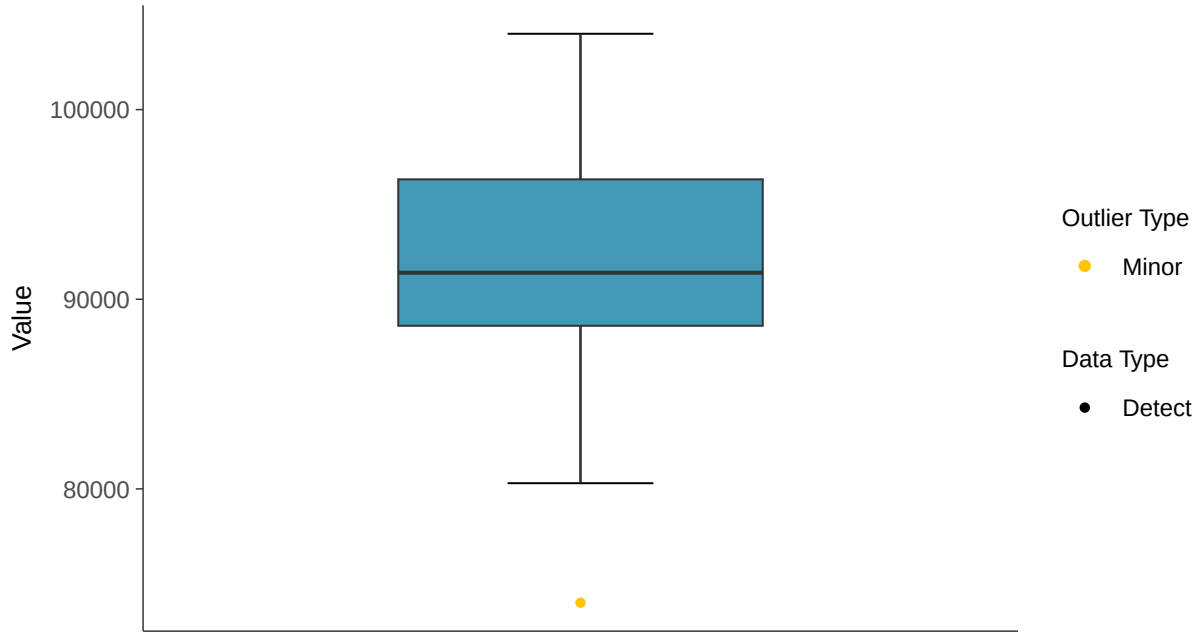
ID: 07_02_107





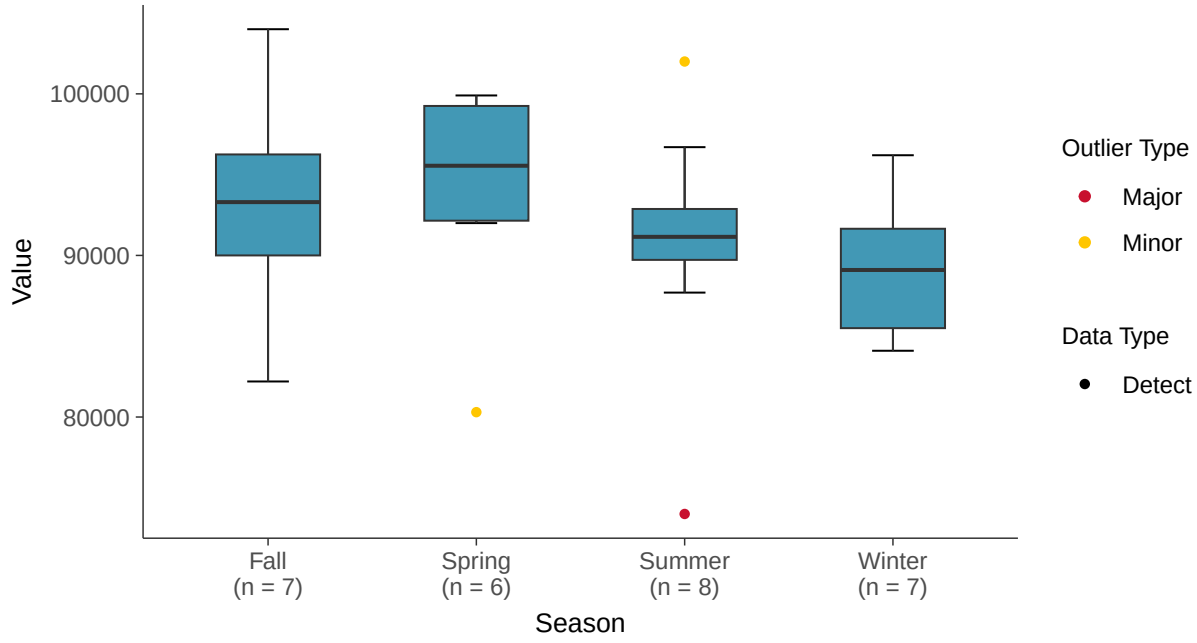
Boxplot

Calcium, MW-7R (ug/L)



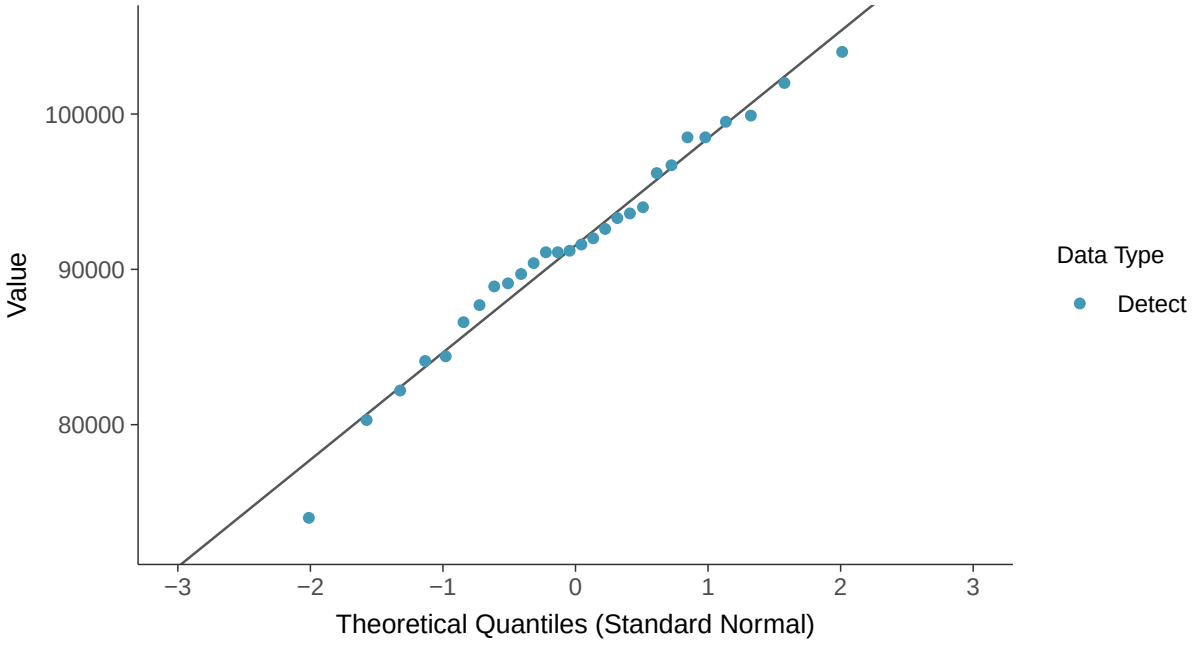
Boxplot by Season

Calcium, MW-7R (ug/L)



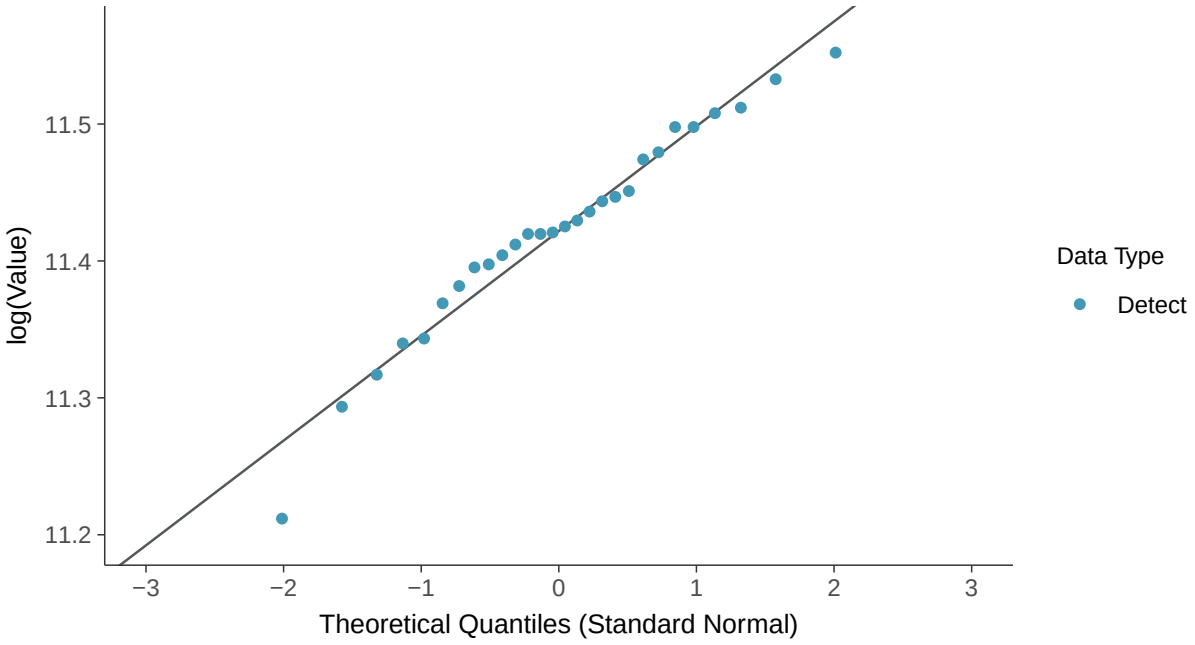
Normal Q-Q plot

Calcium, MW-7R (ug/L)



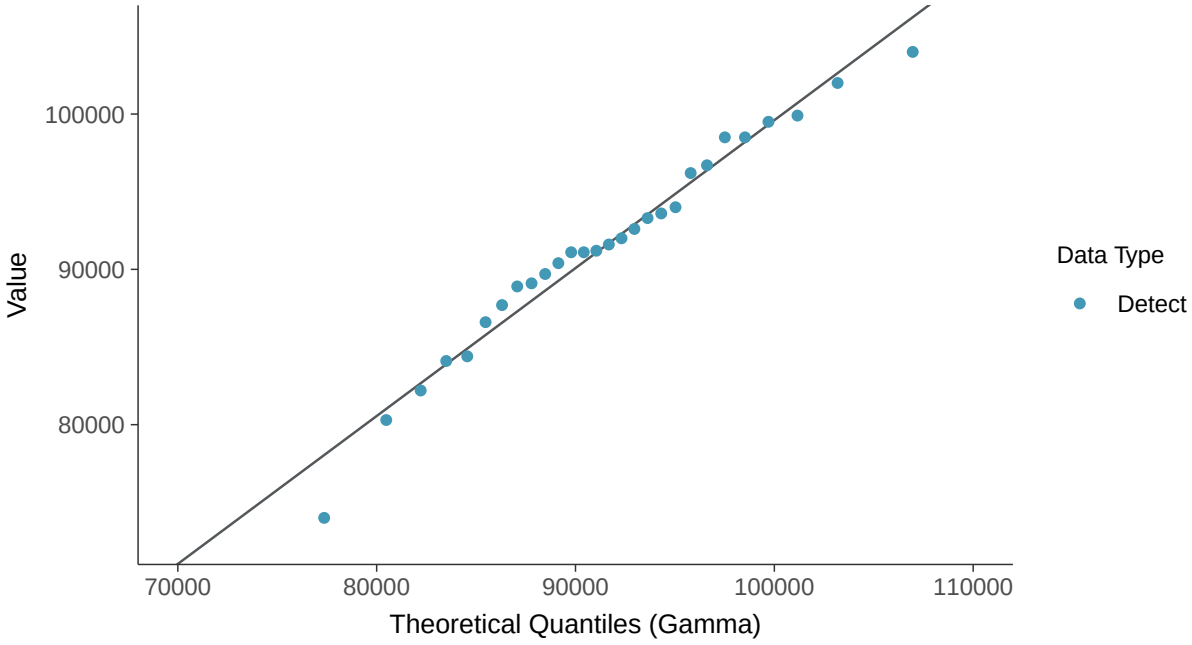
Lognormal Q-Q plot

Calcium, MW-7R (ug/L)



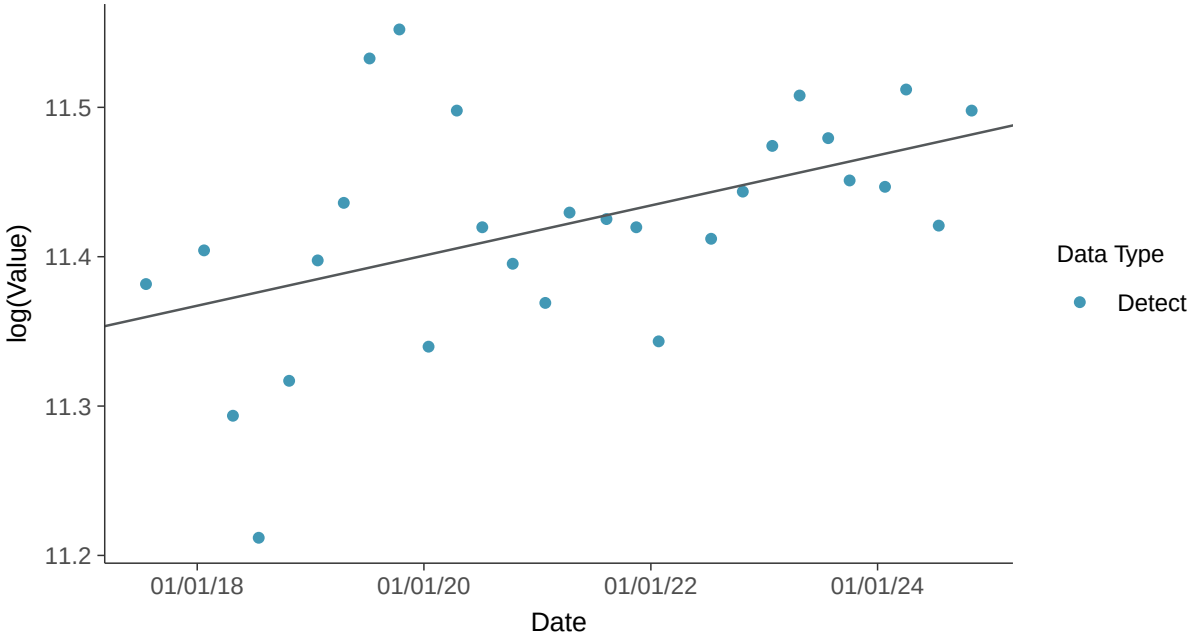
Gamma Q-Q plot

Calcium, MW-7R (ug/L)



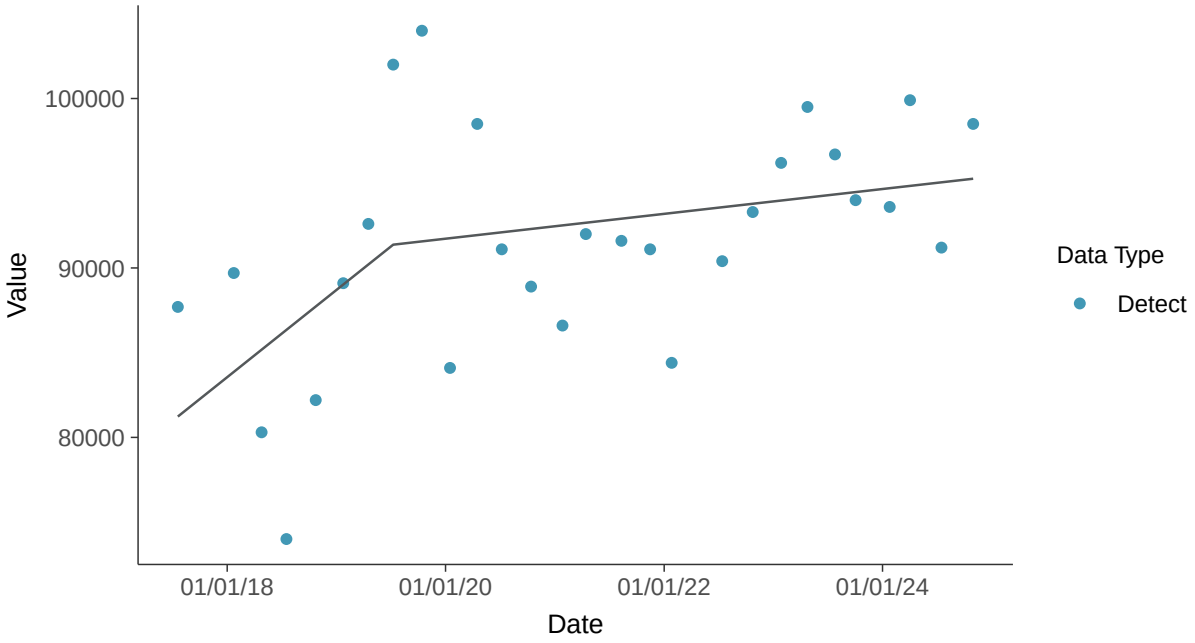
Trend Regression: Lognormal MLE

Calcium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, MW-7R (ug/L)

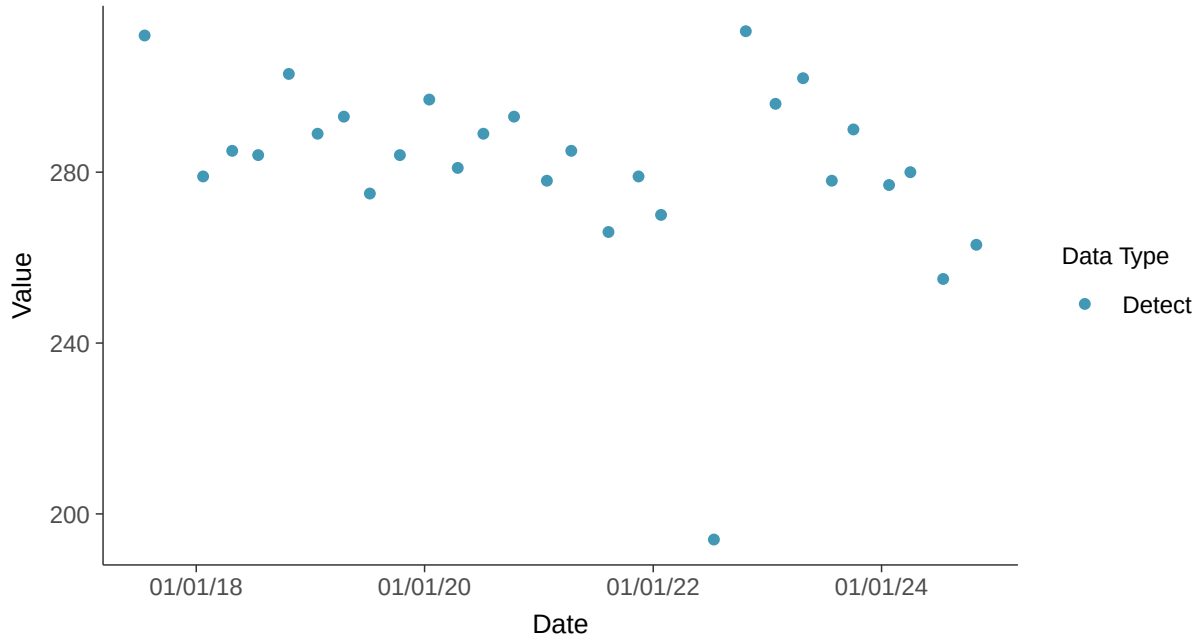


App. III: Chloride, MW-7R

ID: 07_02_108

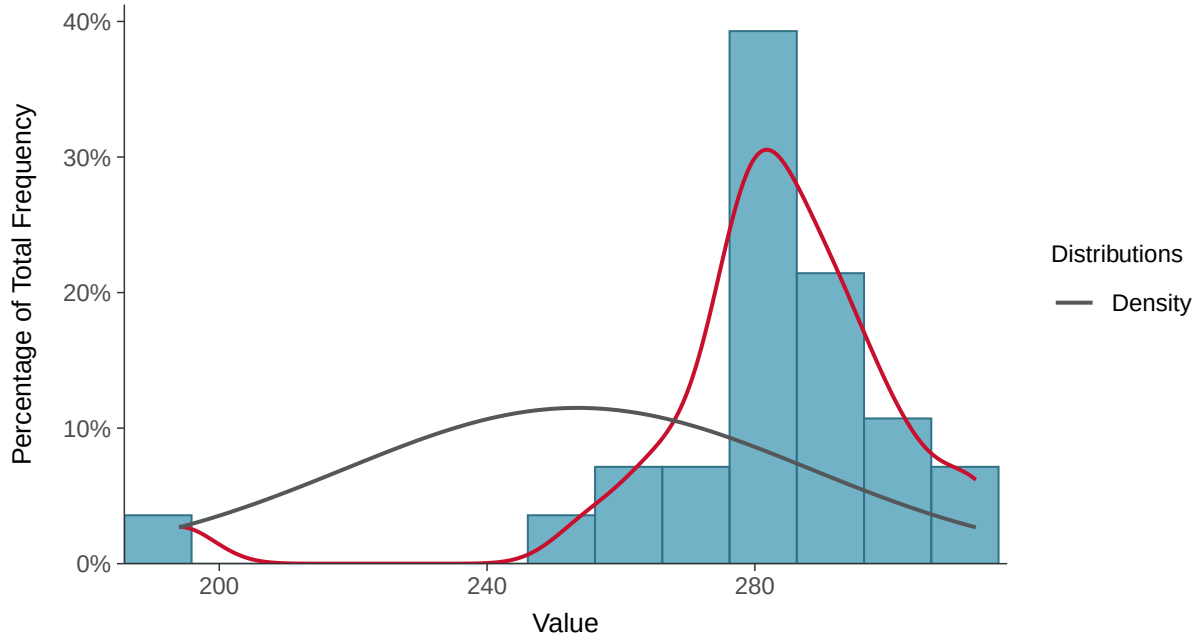
Scatter Plot

Chloride, MW-7R (mg/L)



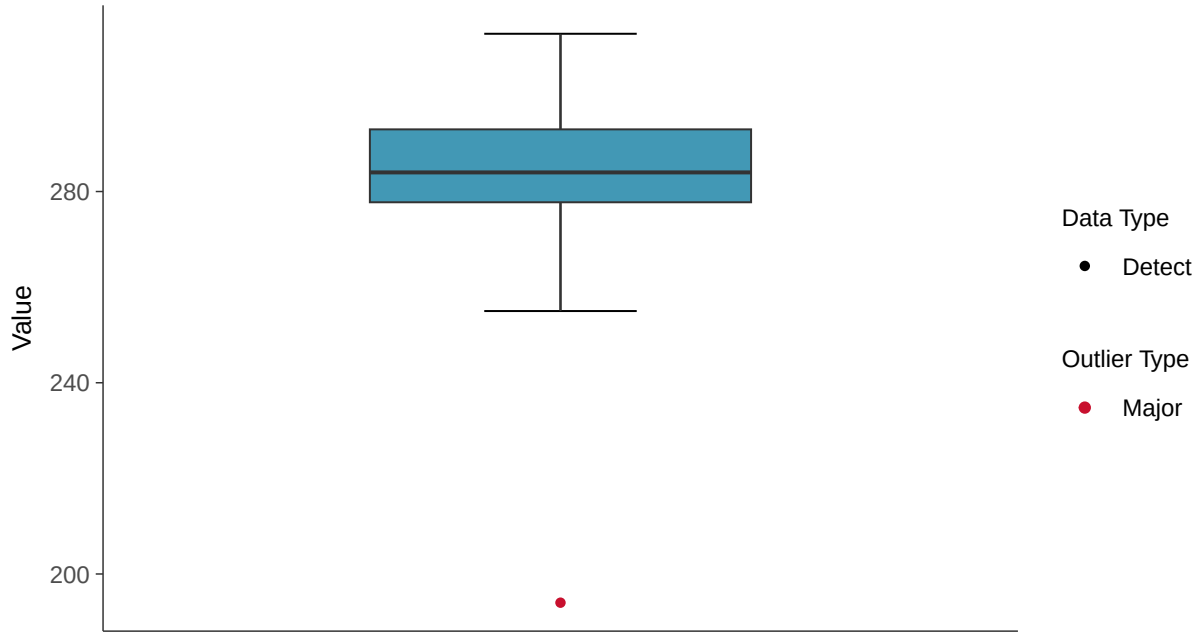
Histogram

Chloride, MW-7R (mg/L)



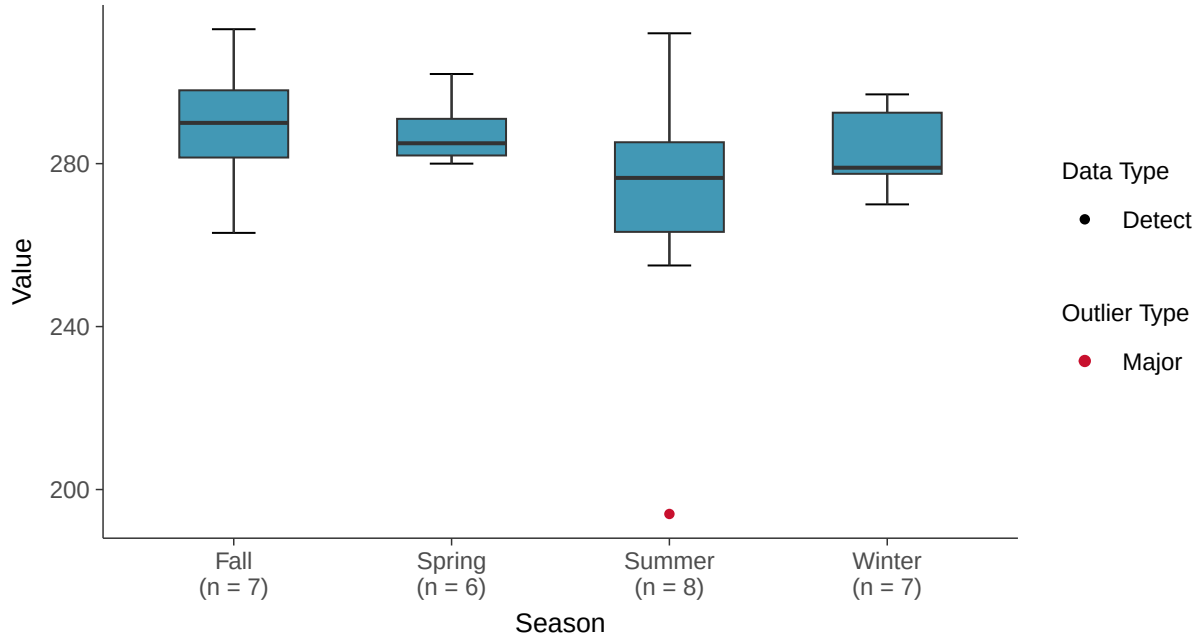
Boxplot

Chloride, MW-7R (mg/L)



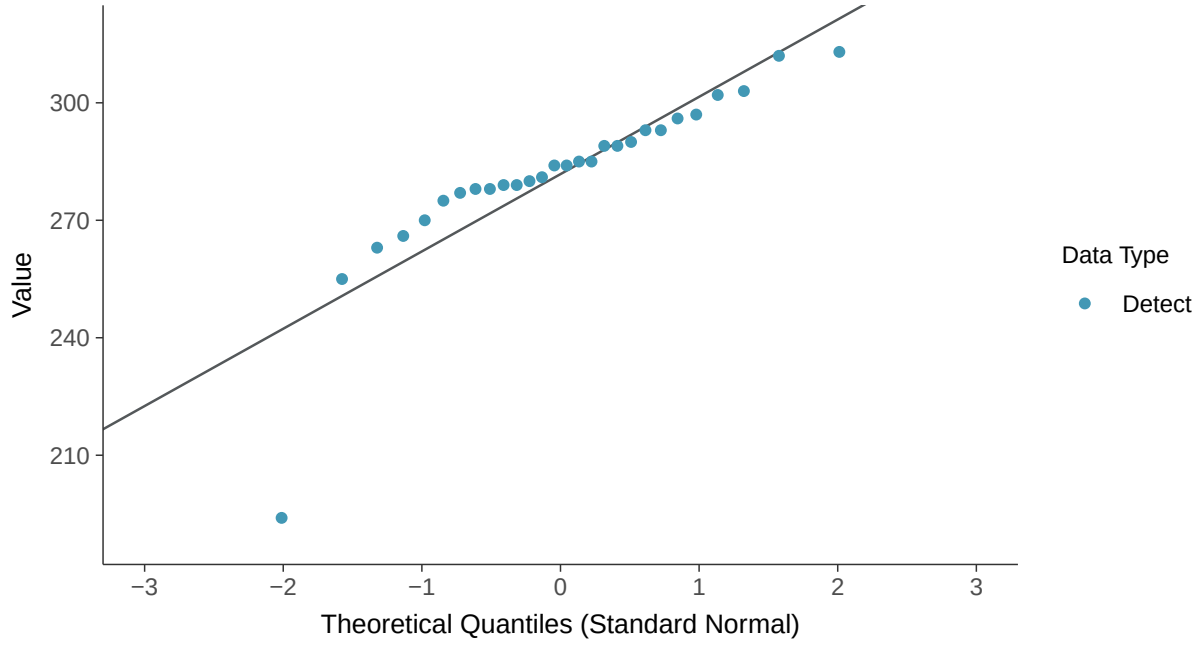
Boxplot by Season

Chloride, MW-7R (mg/L)



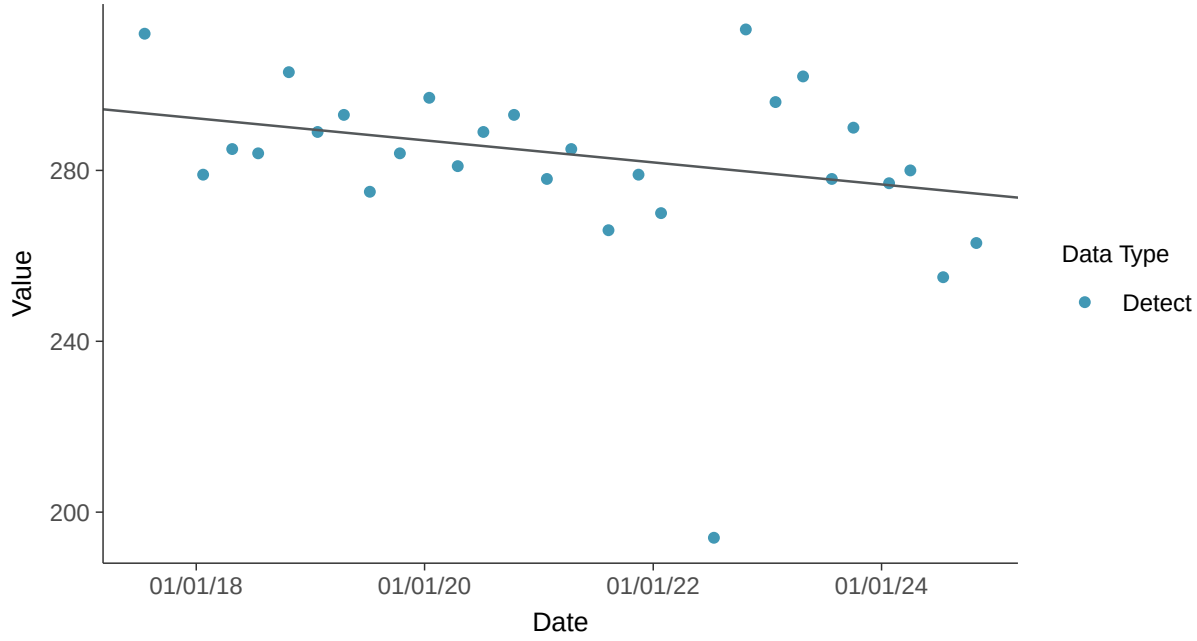
Normal Q-Q plot

Chloride, MW-7R (mg/L)



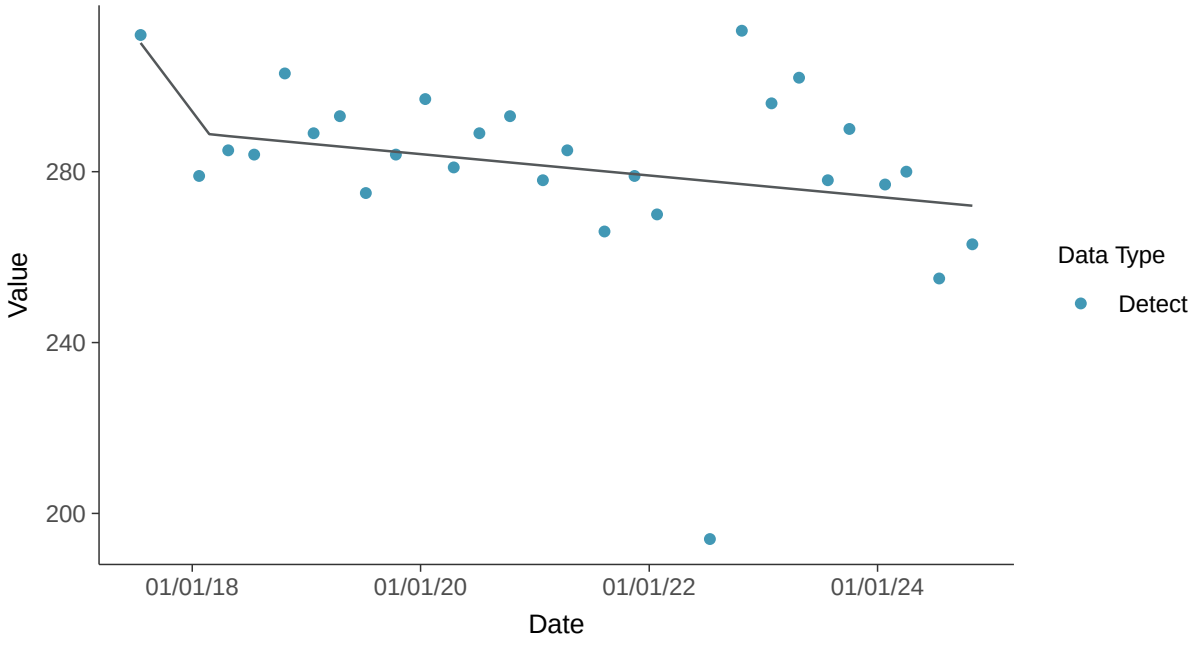
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-7R (mg/L)



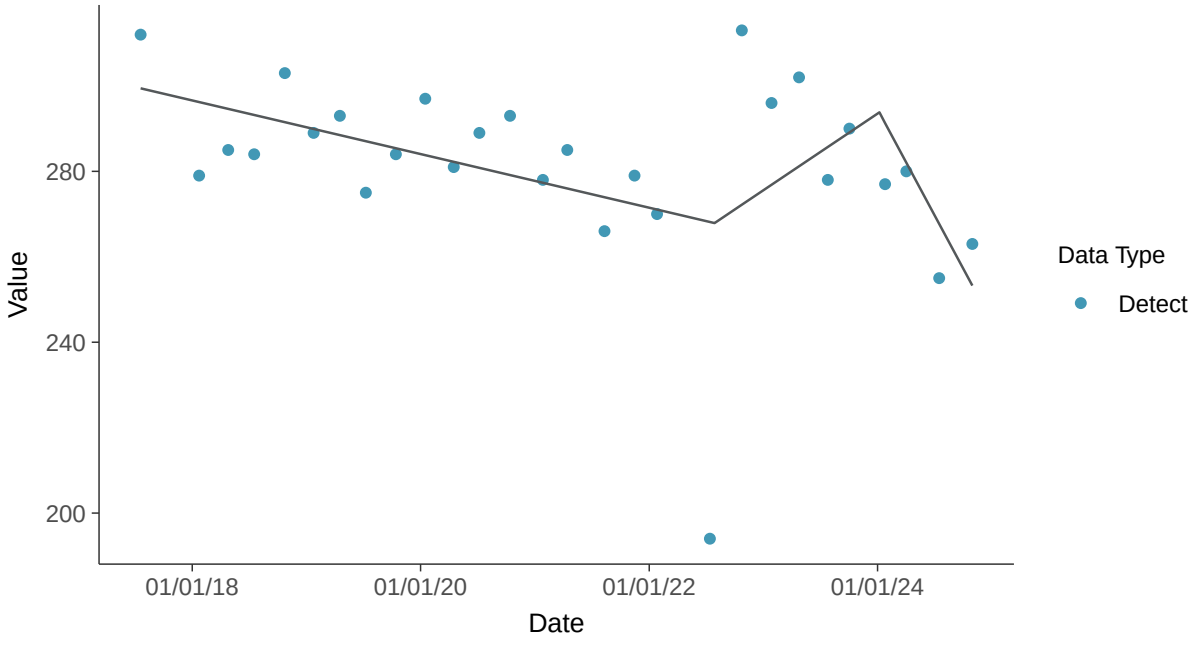
Trend Regression: Piecewise Linear-Linear

Chloride, MW-7R (mg/L)



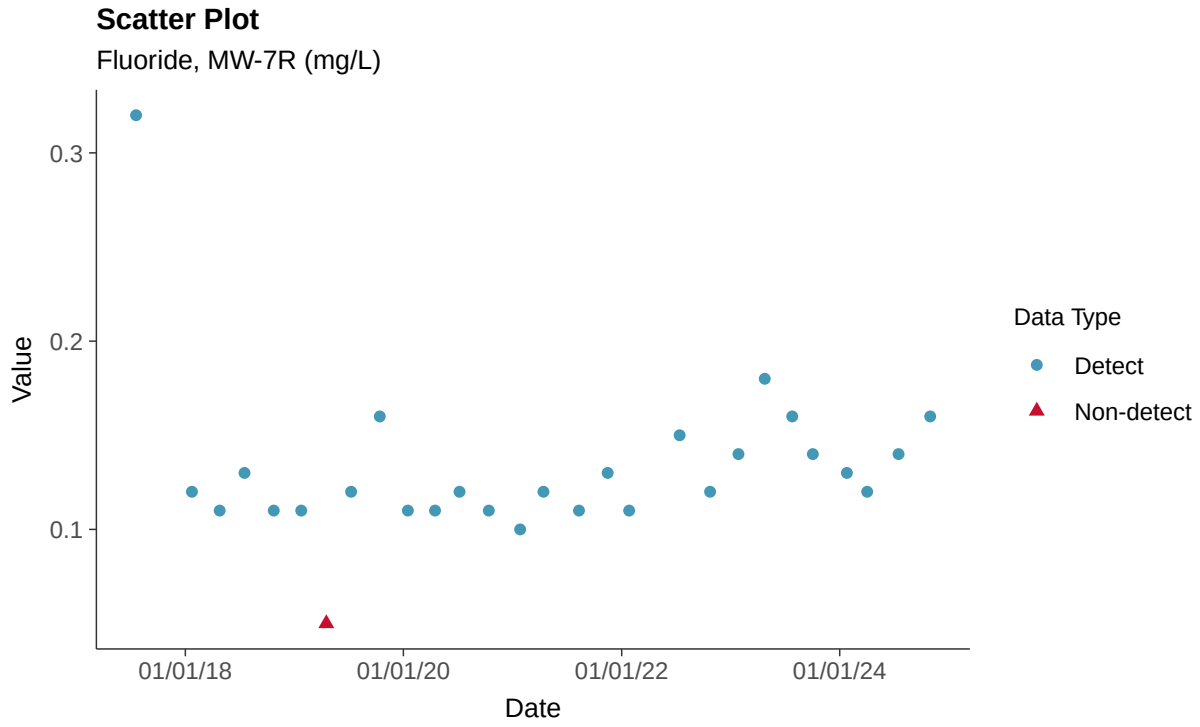
Trend Regression: Piecewise Linear-Linear-Linear

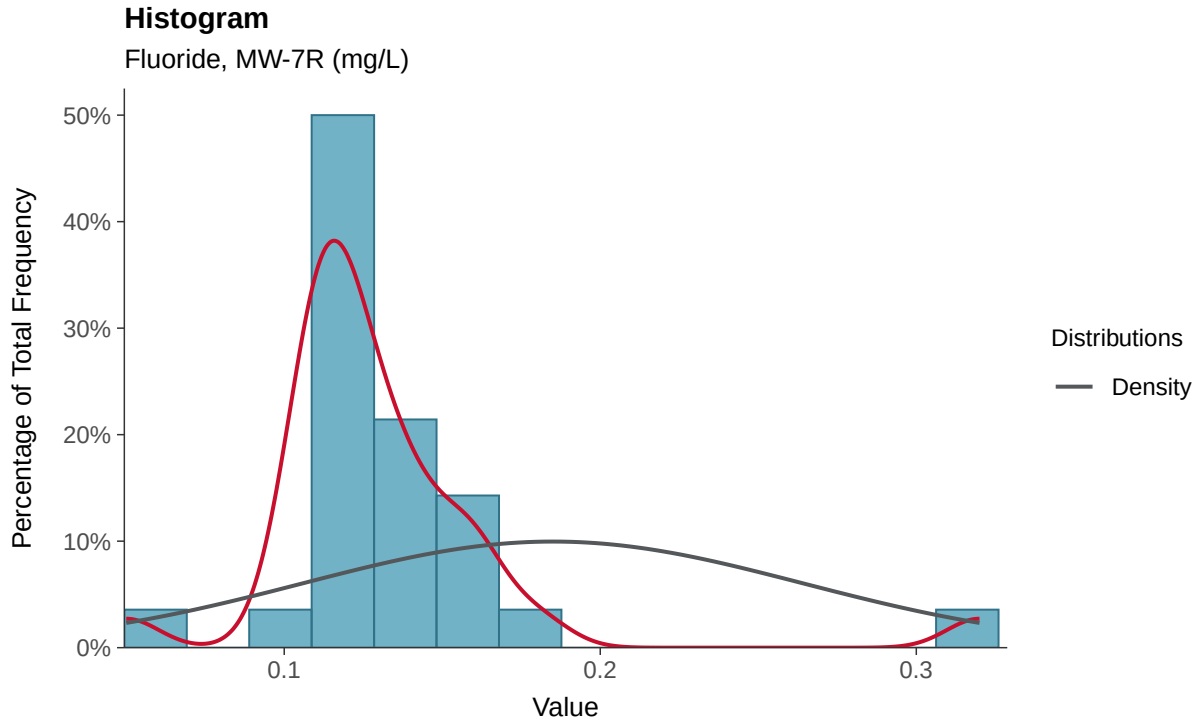
Chloride, MW-7R (mg/L)



App. III: Fluoride, MW-7R

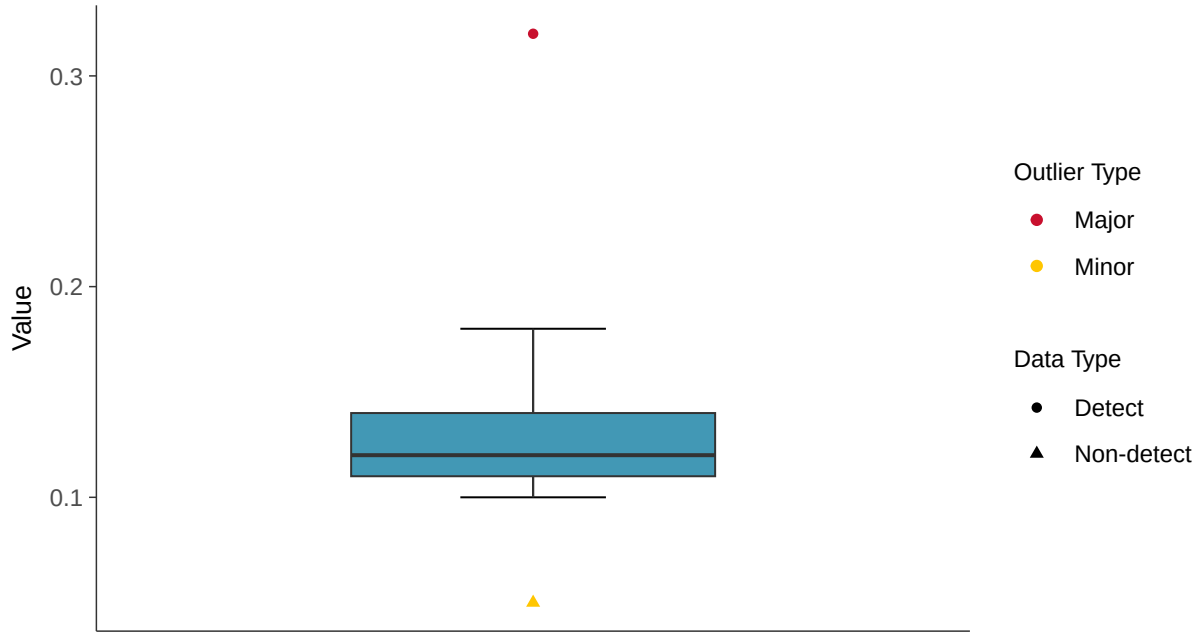
ID: 07_02_112





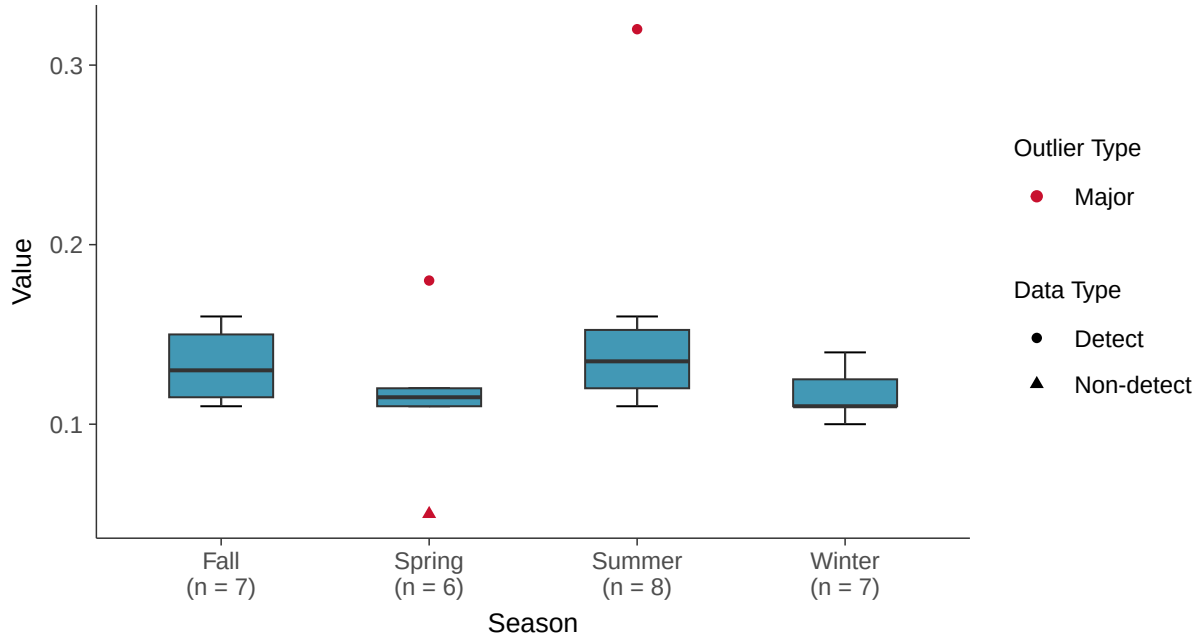
Boxplot

Fluoride, MW-7R (mg/L)



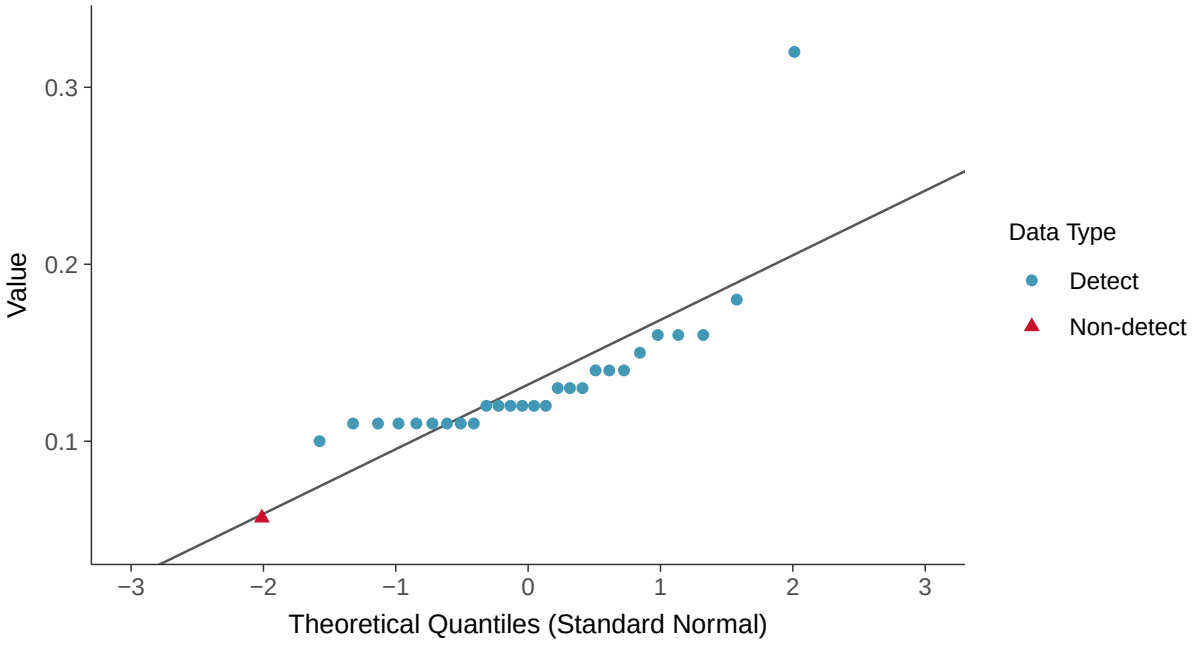
Boxplot by Season

Fluoride, MW-7R (mg/L)



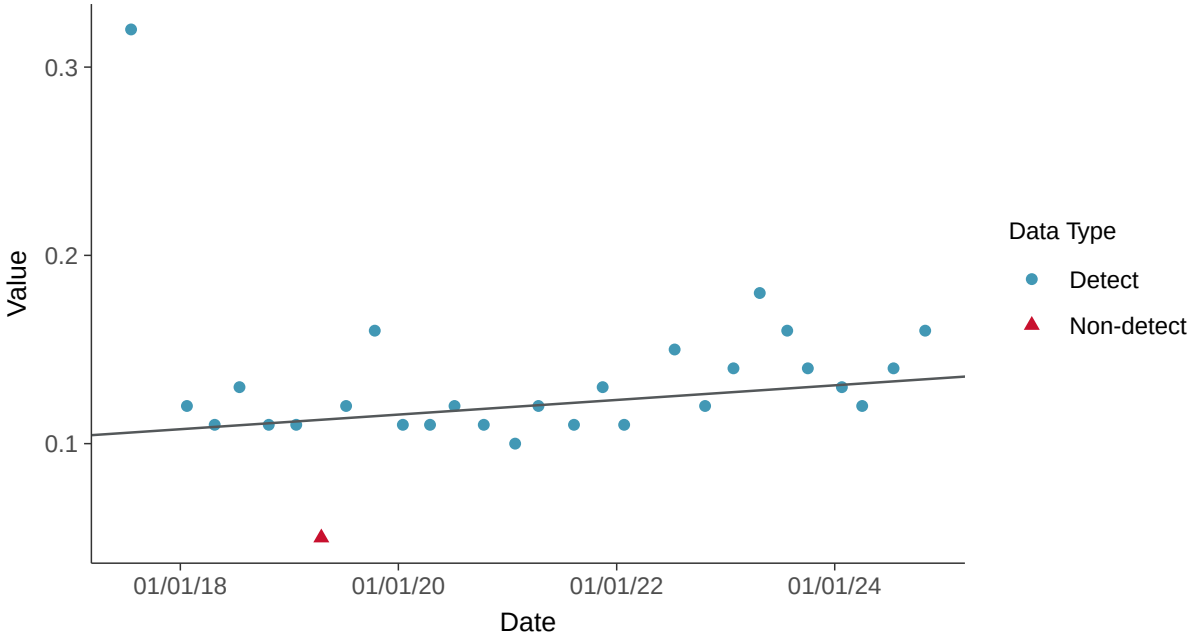
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-7R (mg/L)



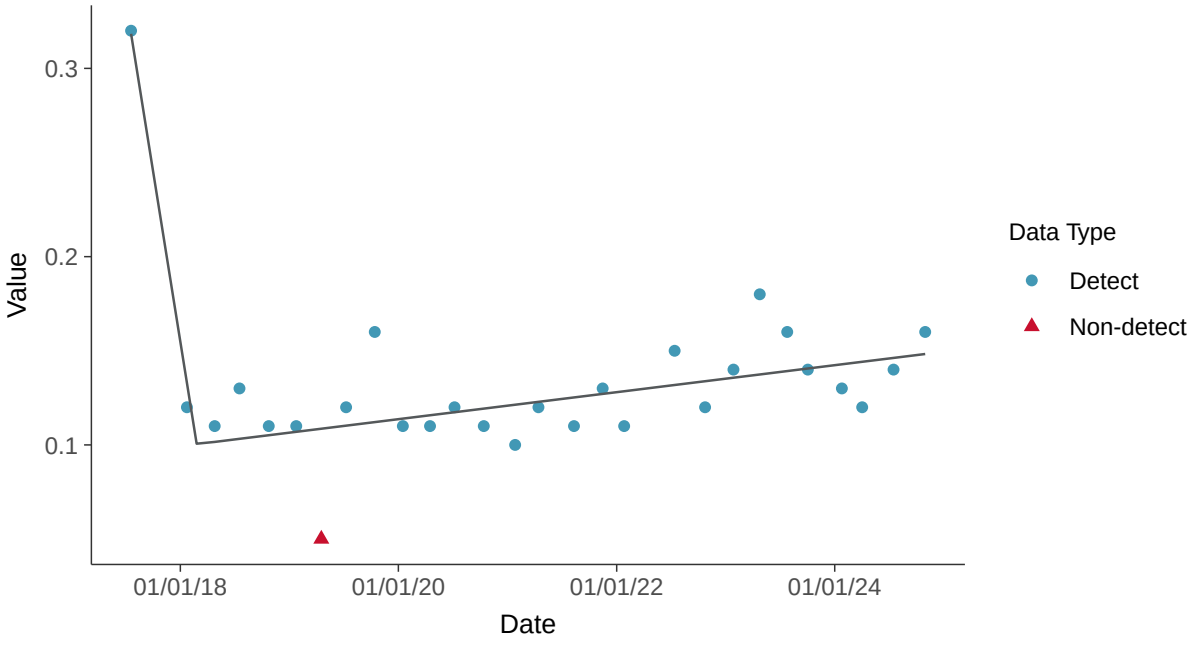
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-7R (mg/L)



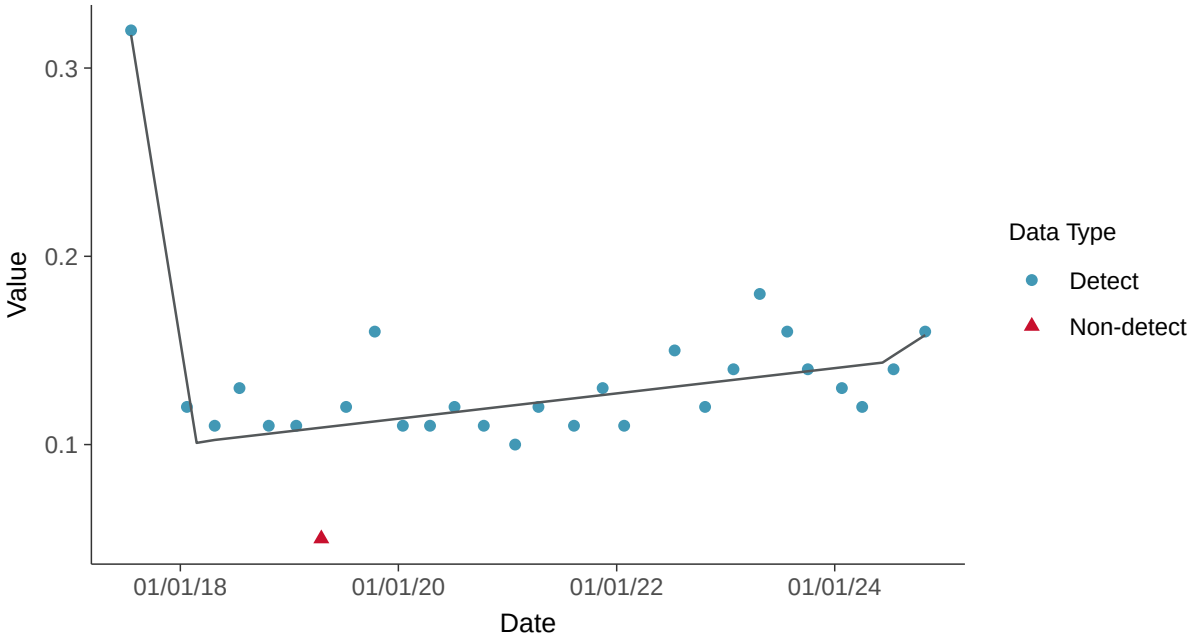
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-7R (mg/L)

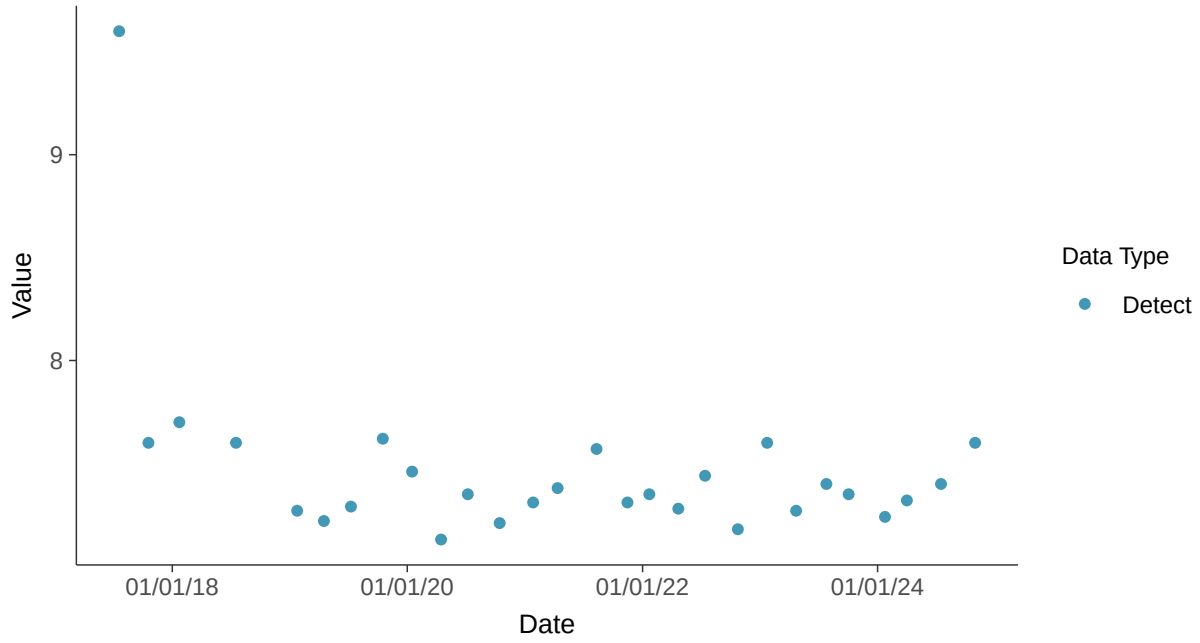


App. III: pH (Field), MW-7R

ID: 07_02_118

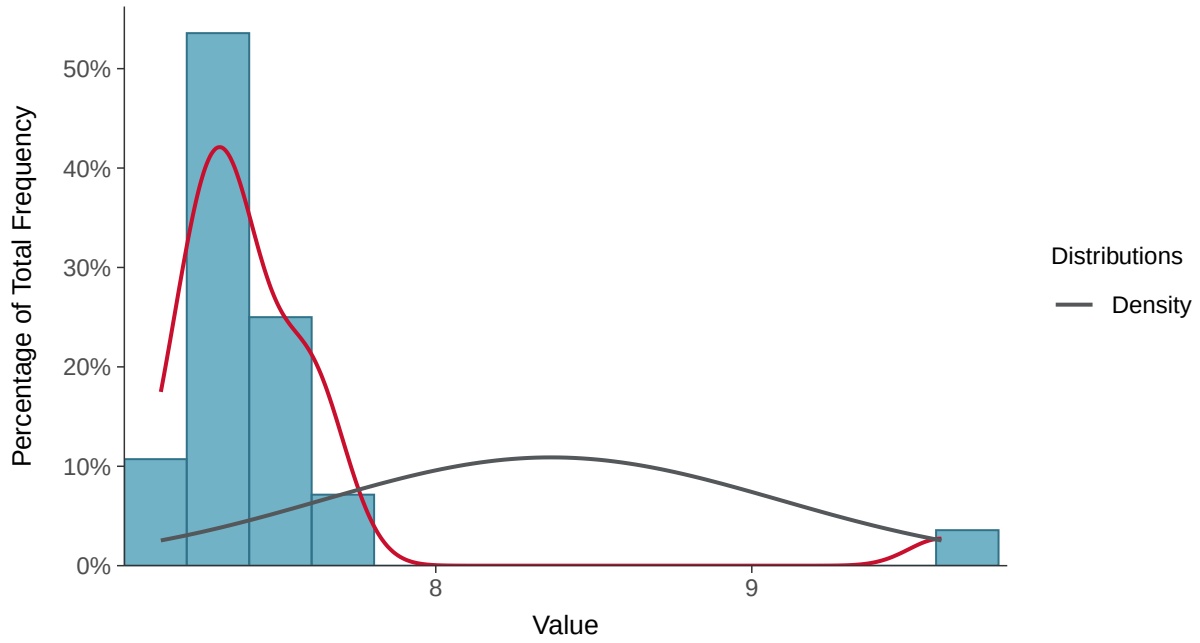
Scatter Plot

pH (Field), MW-7R (S.U.)



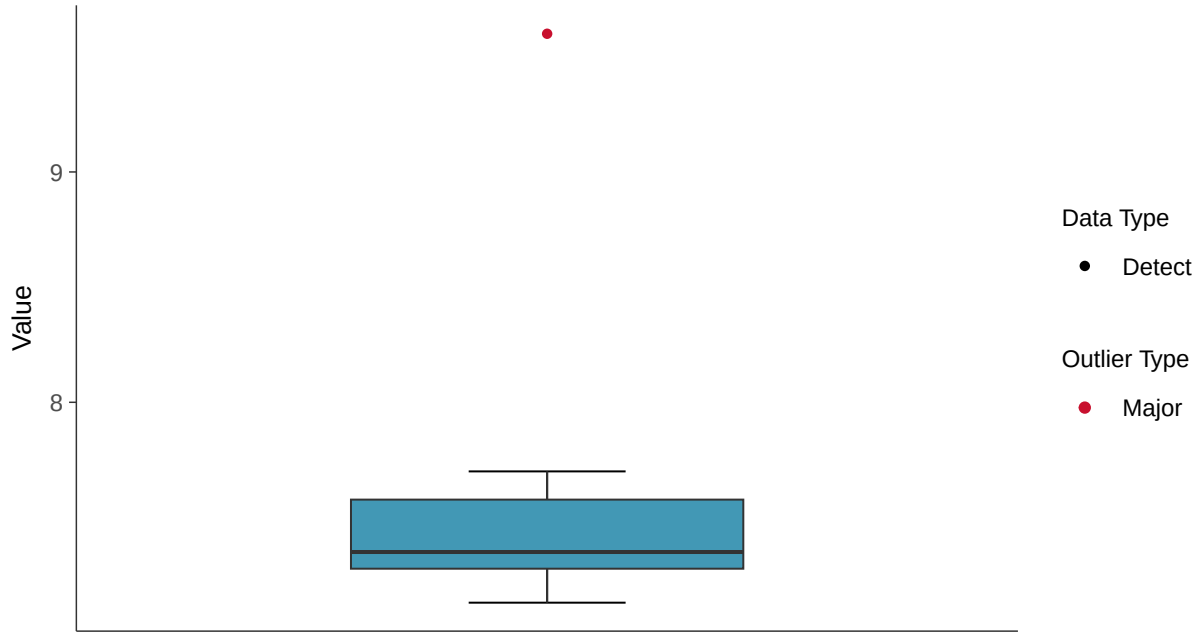
Histogram

pH (Field), MW-7R (S.U.)



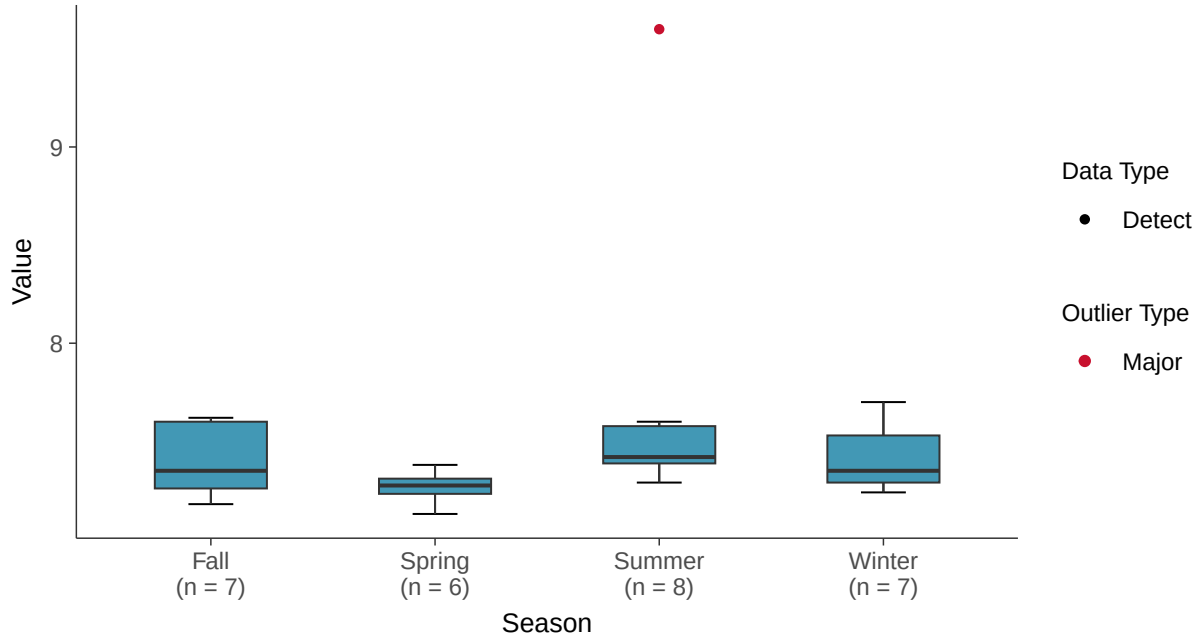
Boxplot

pH (Field), MW-7R (S.U.)



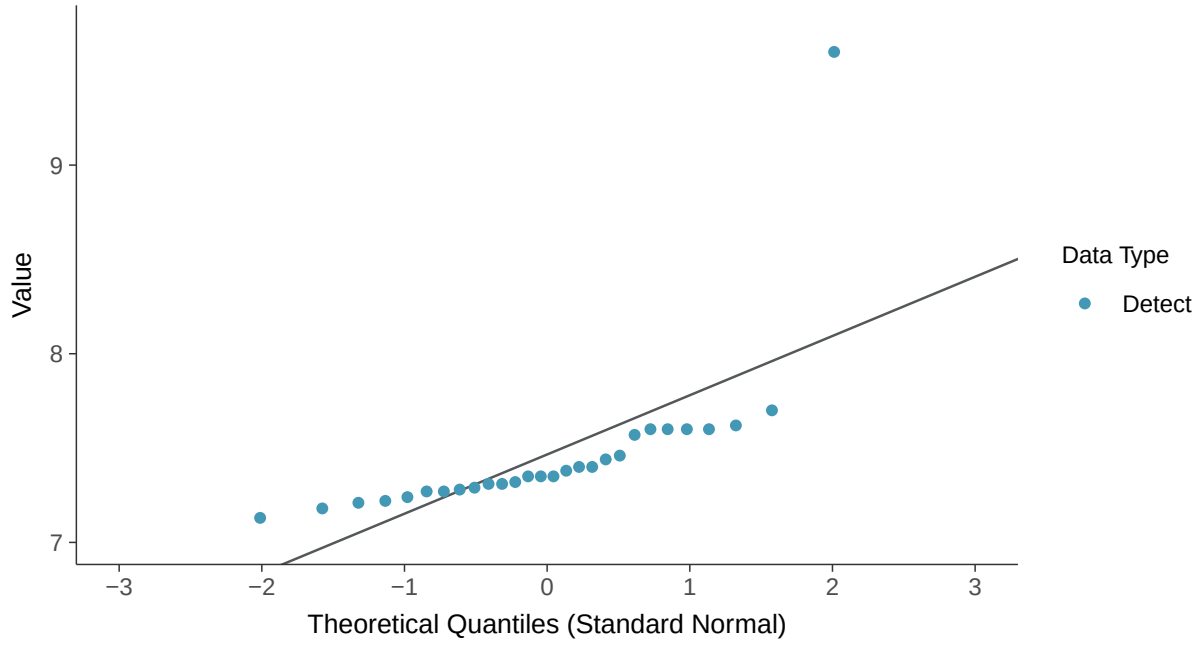
Boxplot by Season

pH (Field), MW-7R (S.U.)



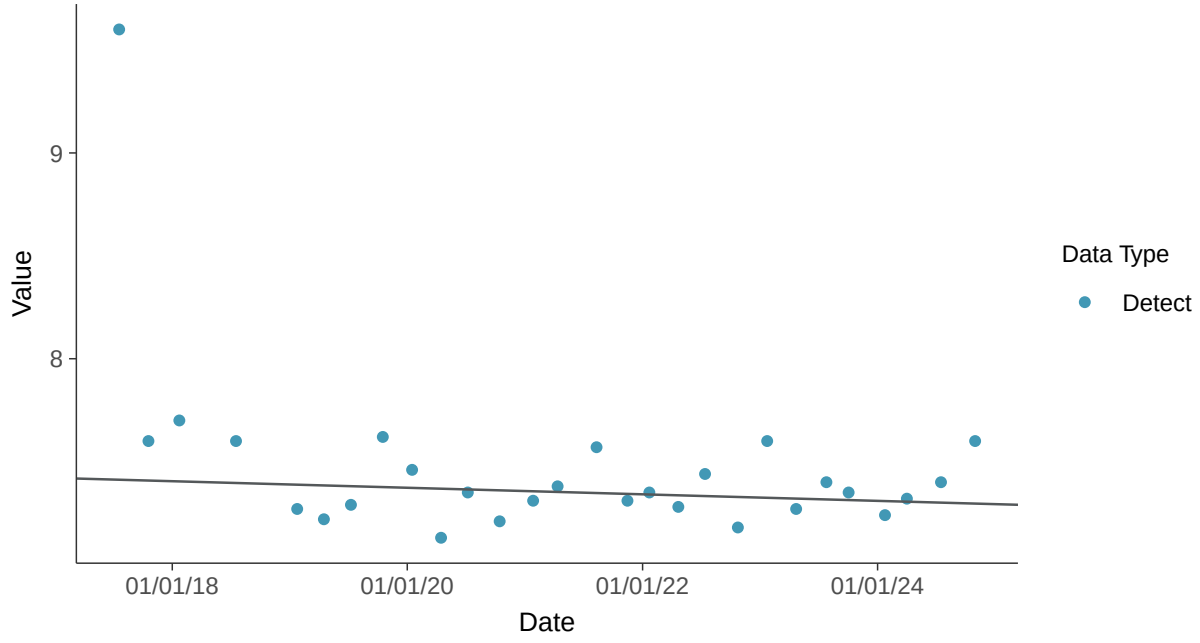
Normal Q-Q plot

pH (Field), MW-7R (S.U.)



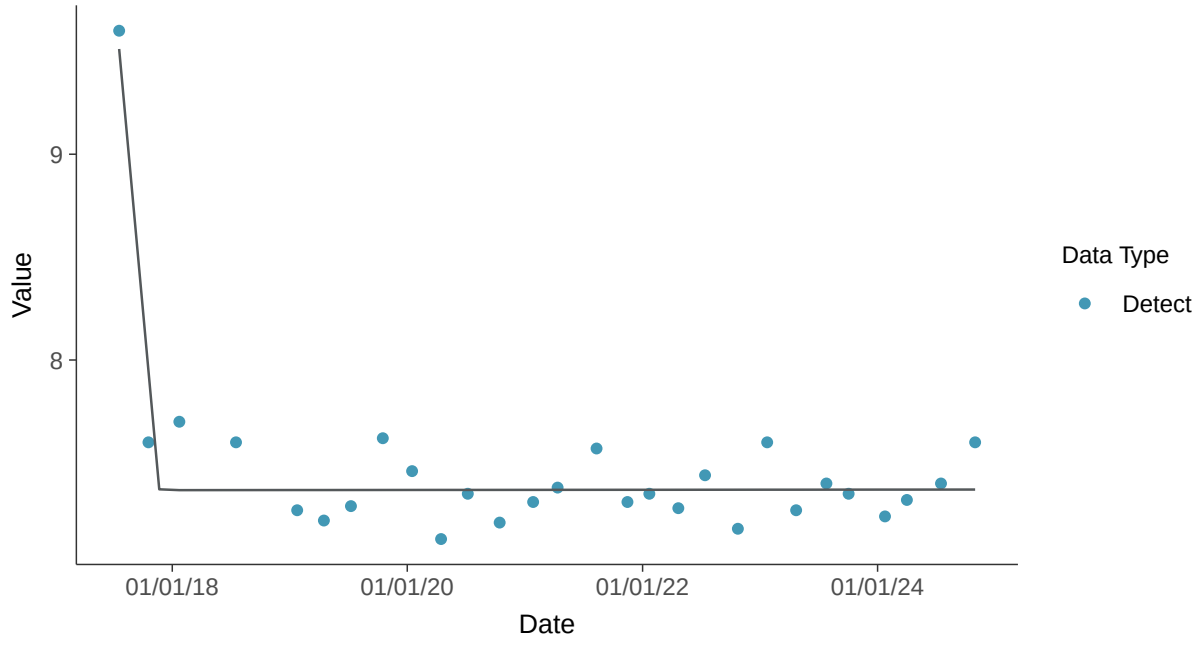
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-7R (S.U.)



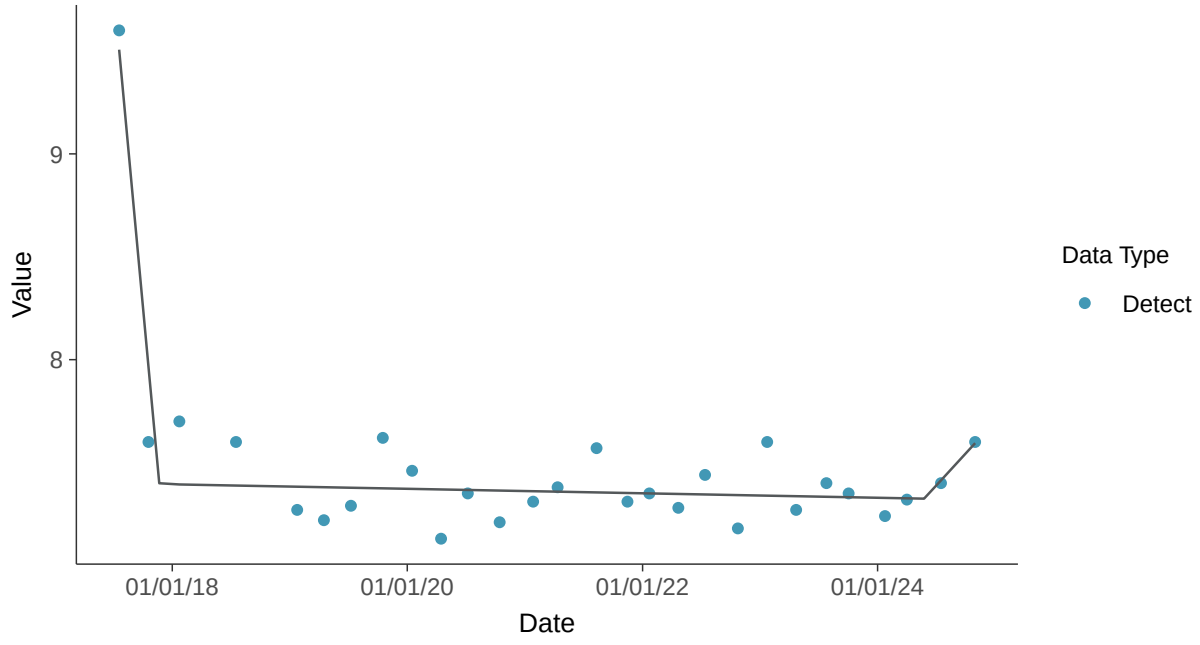
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-7R (S.U.)



Trend Regression: Piecewise Linear-Linear-Linear

pH (Field), MW-7R (S.U.)

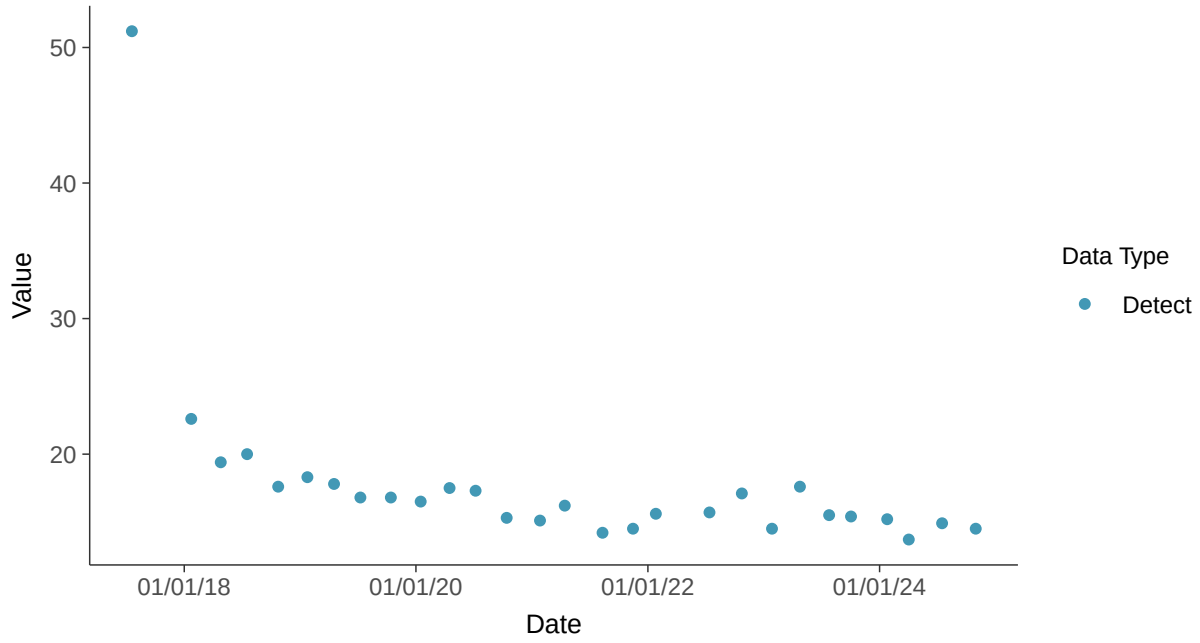


App. III: Sulfate, MW-7R

ID: 07_02_123

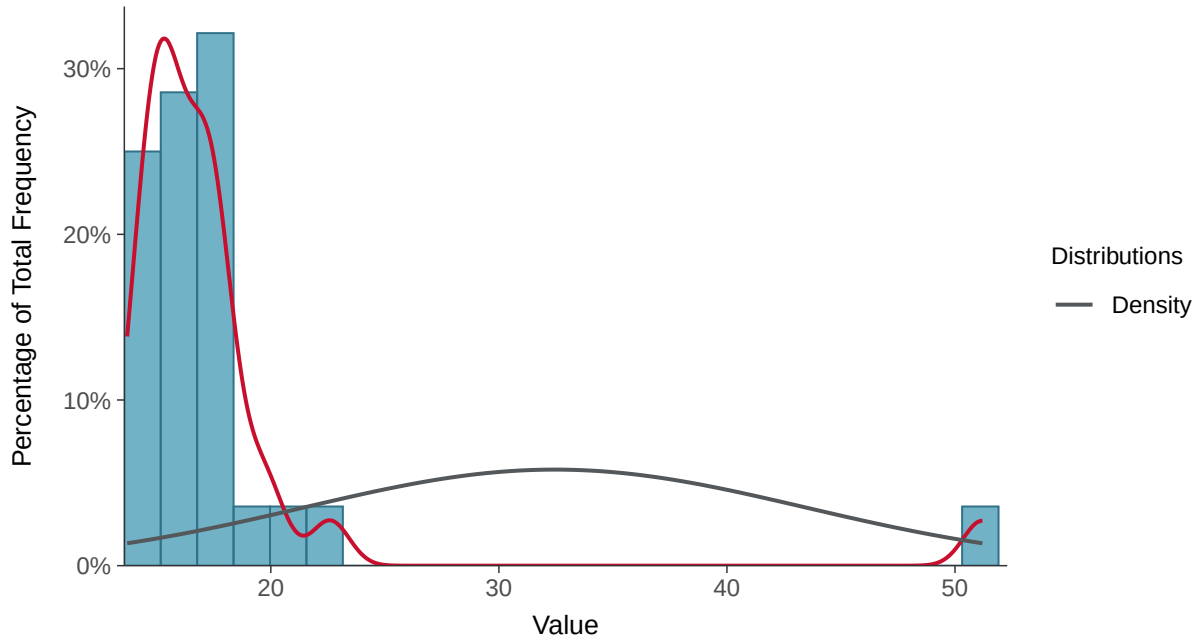
Scatter Plot

Sulfate, MW-7R (mg/L)



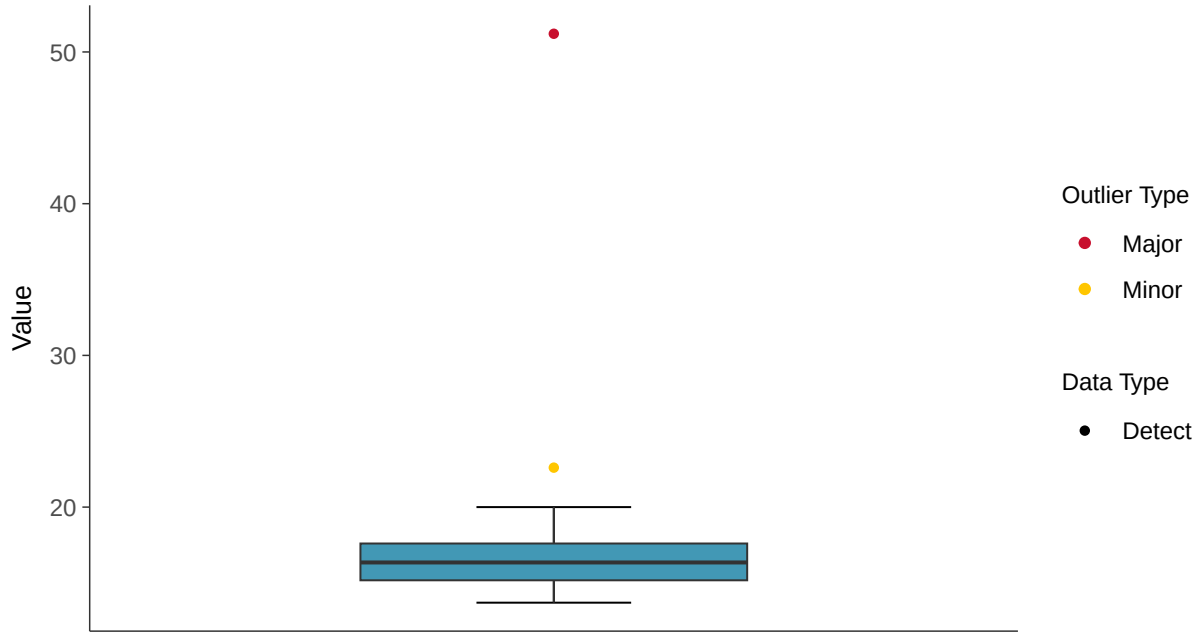
Histogram

Sulfate, MW-7R (mg/L)



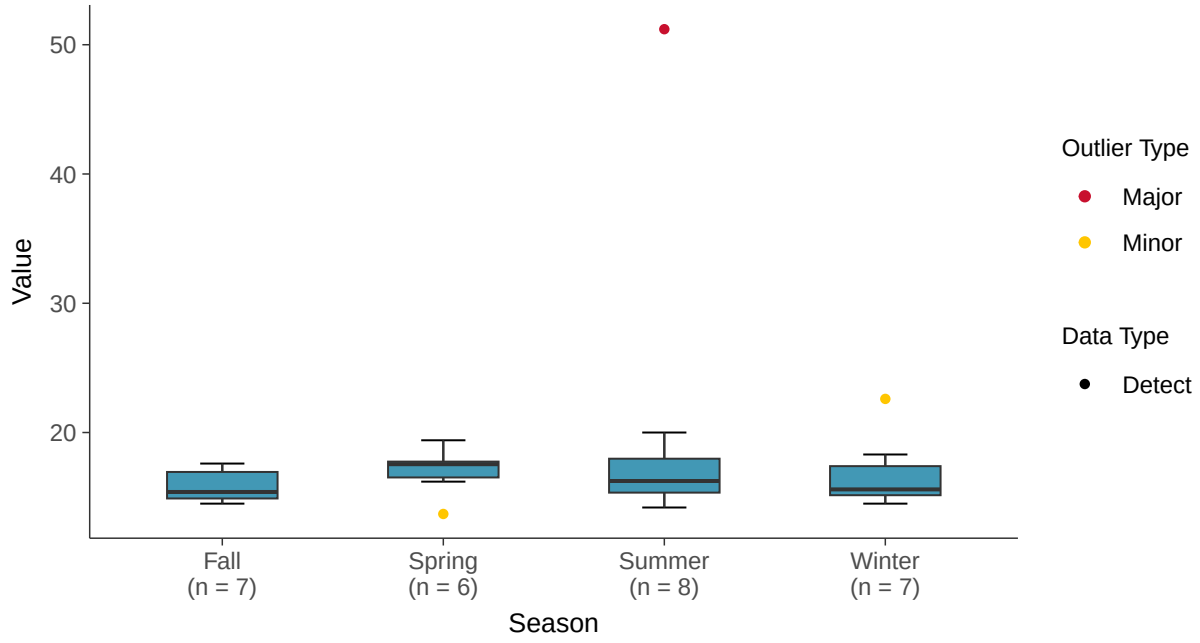
Boxplot

Sulfate, MW-7R (mg/L)



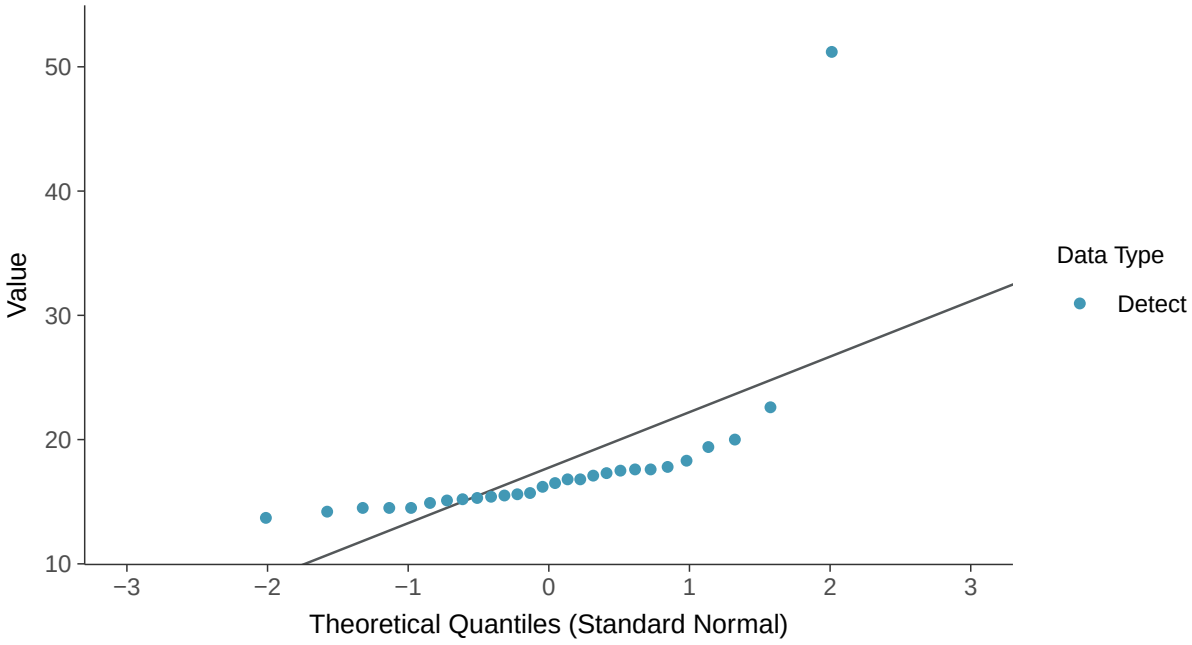
Boxplot by Season

Sulfate, MW-7R (mg/L)



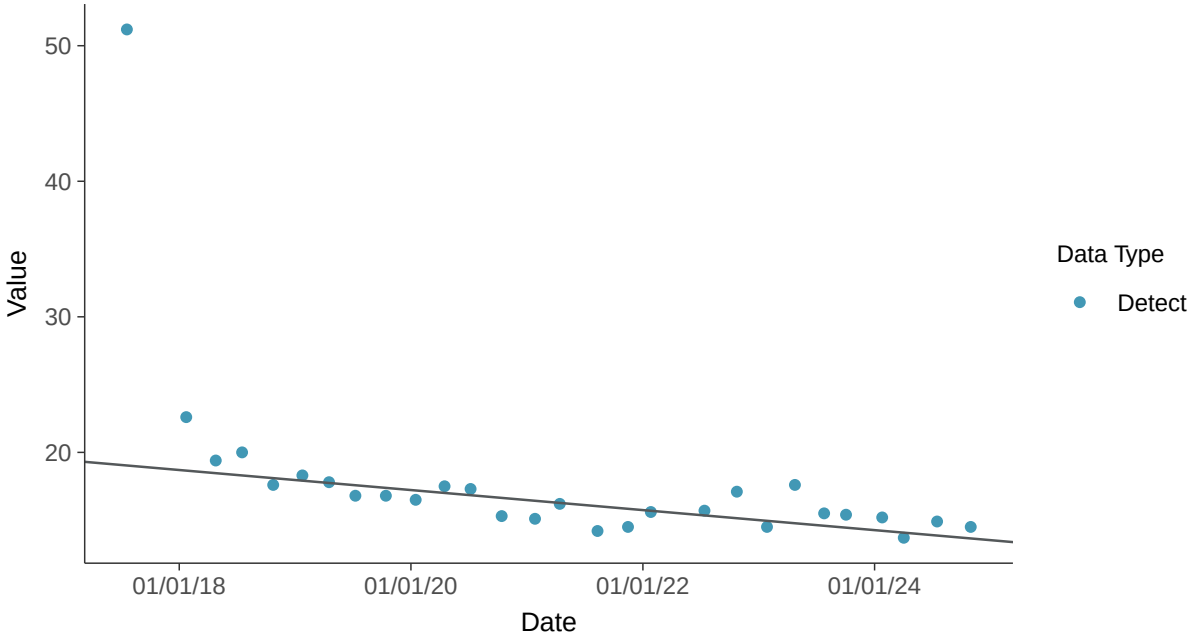
Normal Q-Q plot

Sulfate, MW-7R (mg/L)



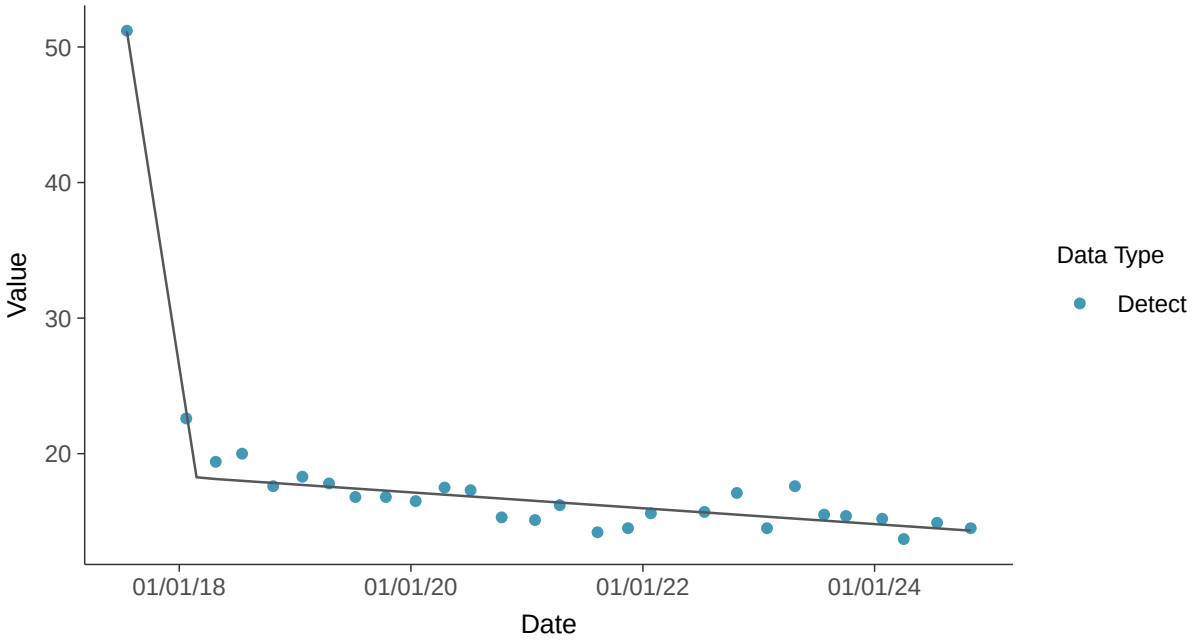
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Sulfate, MW-7R (mg/L)



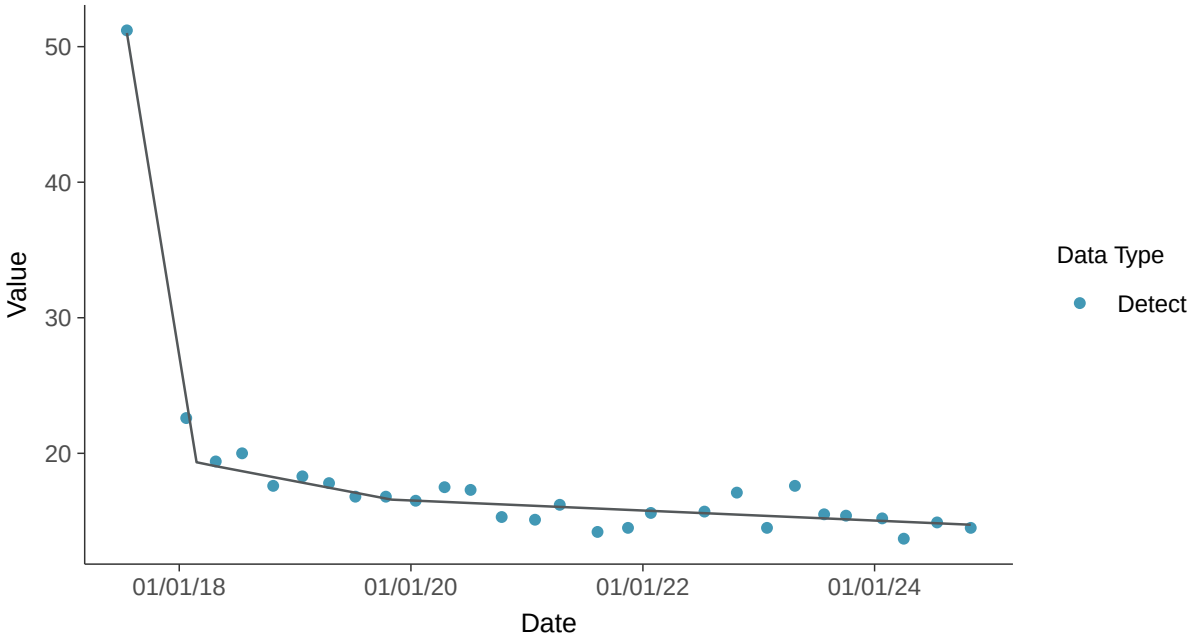
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-7R (mg/L)

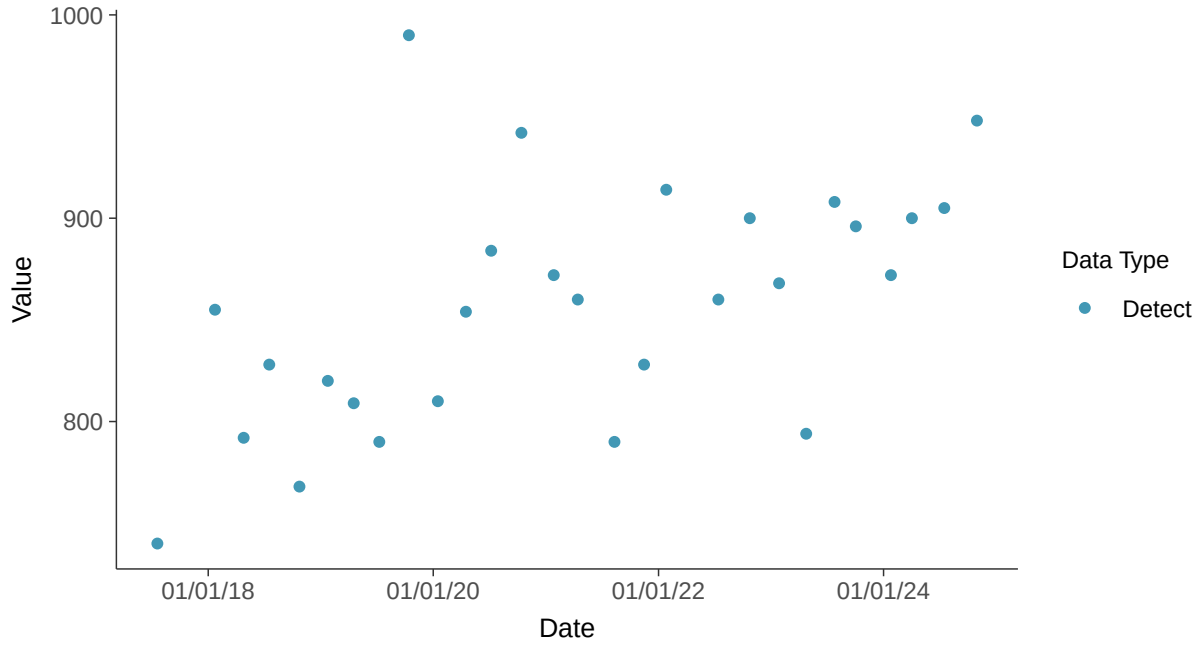


App. III: Total Dissolved Solids, MW-7R

ID: 07_02_125

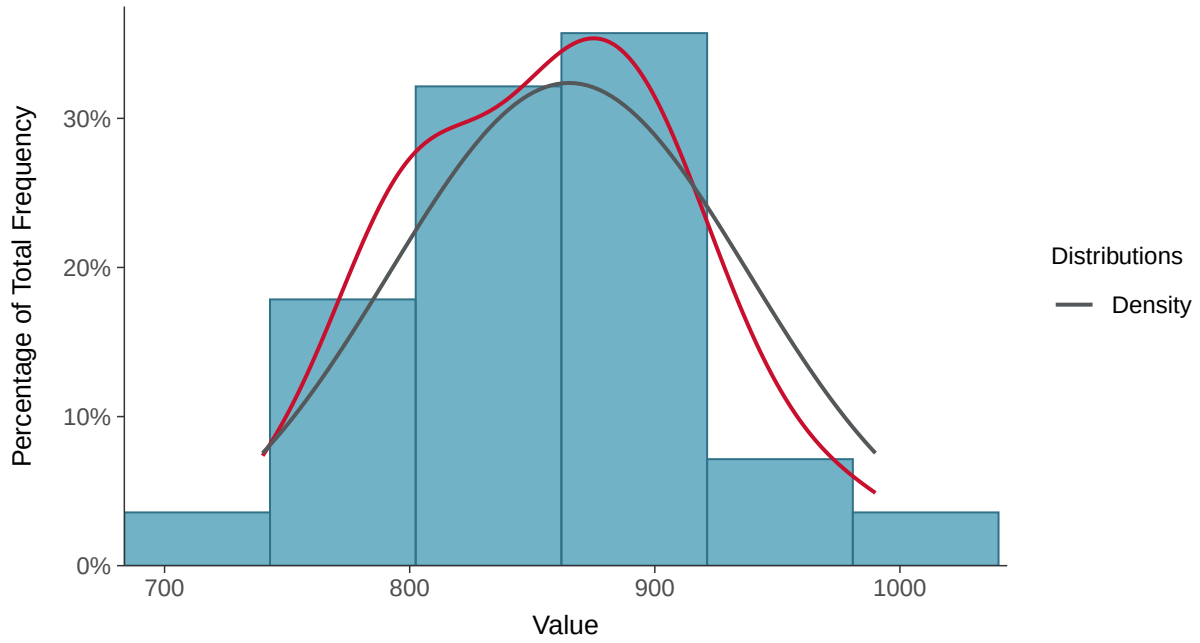
Scatter Plot

Total Dissolved Solids, MW-7R (mg/L)



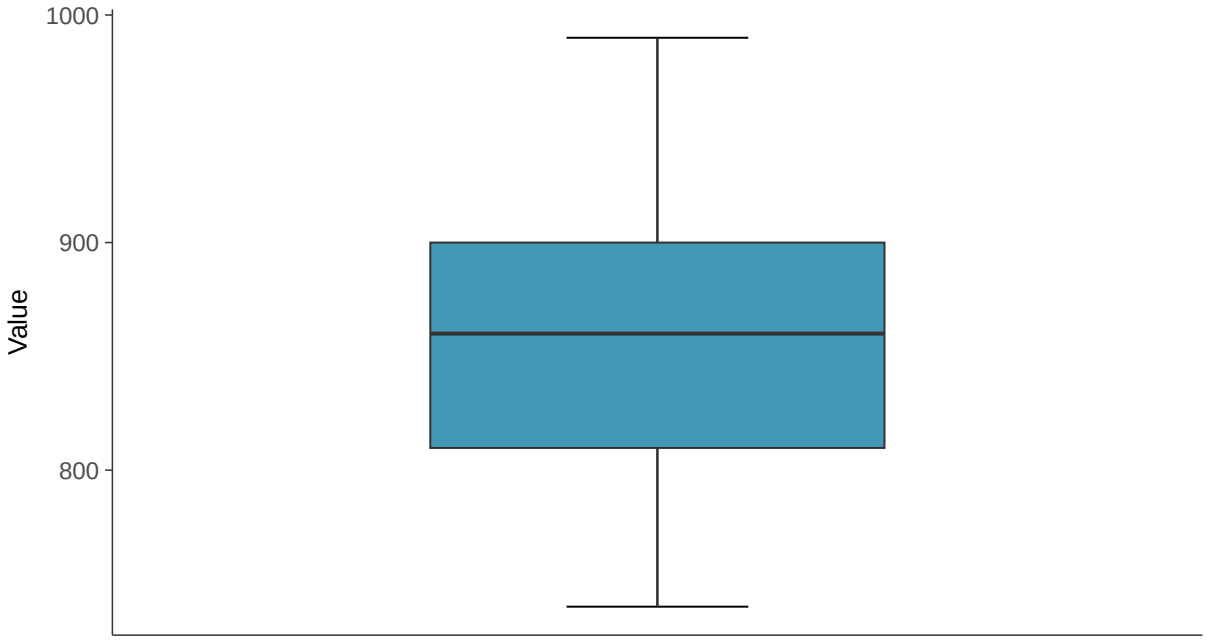
Histogram

Total Dissolved Solids, MW-7R (mg/L)



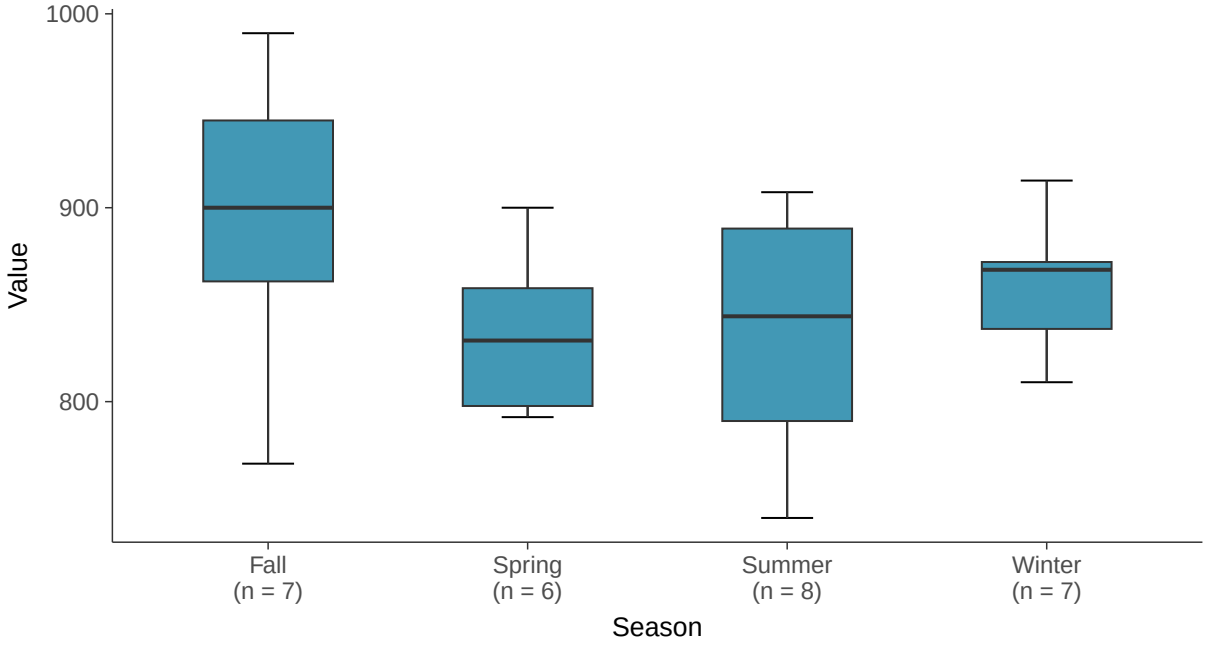
Boxplot

Total Dissolved Solids, MW-7R (mg/L)



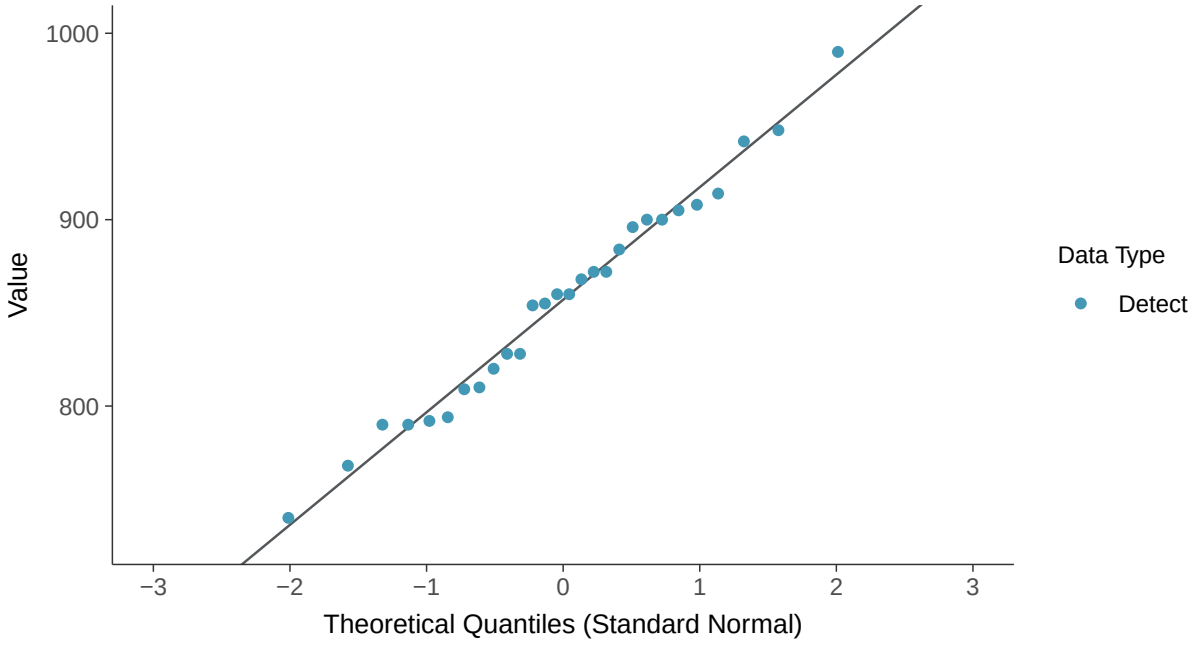
Boxplot by Season

Total Dissolved Solids, MW-7R (mg/L)



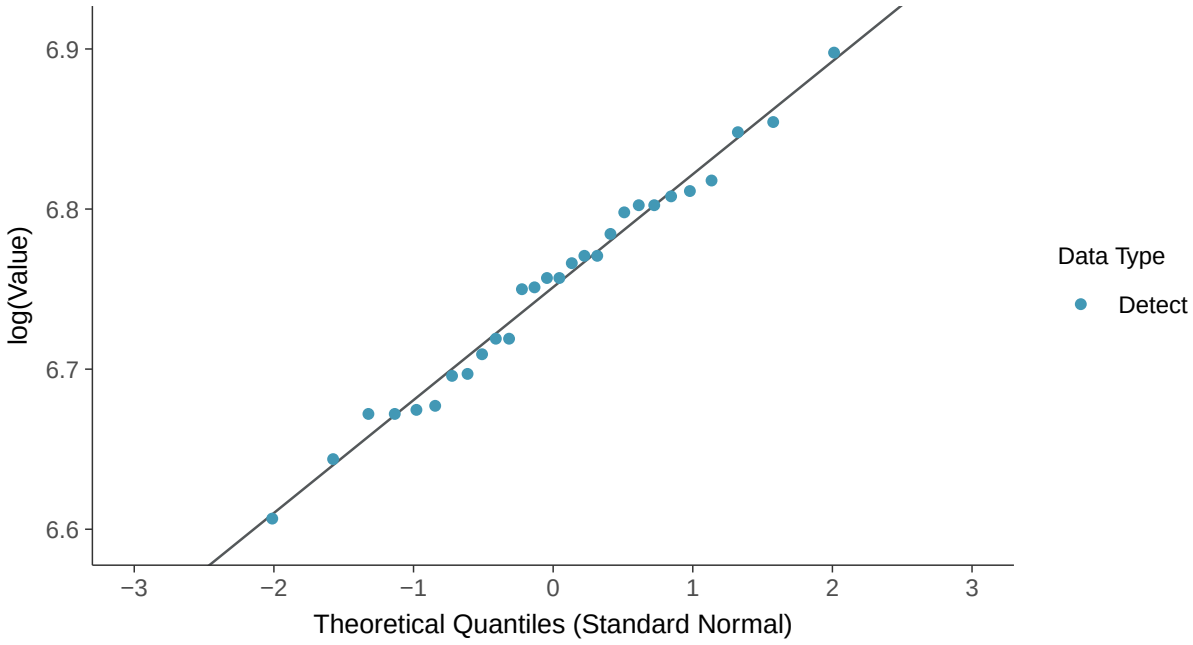
Normal Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



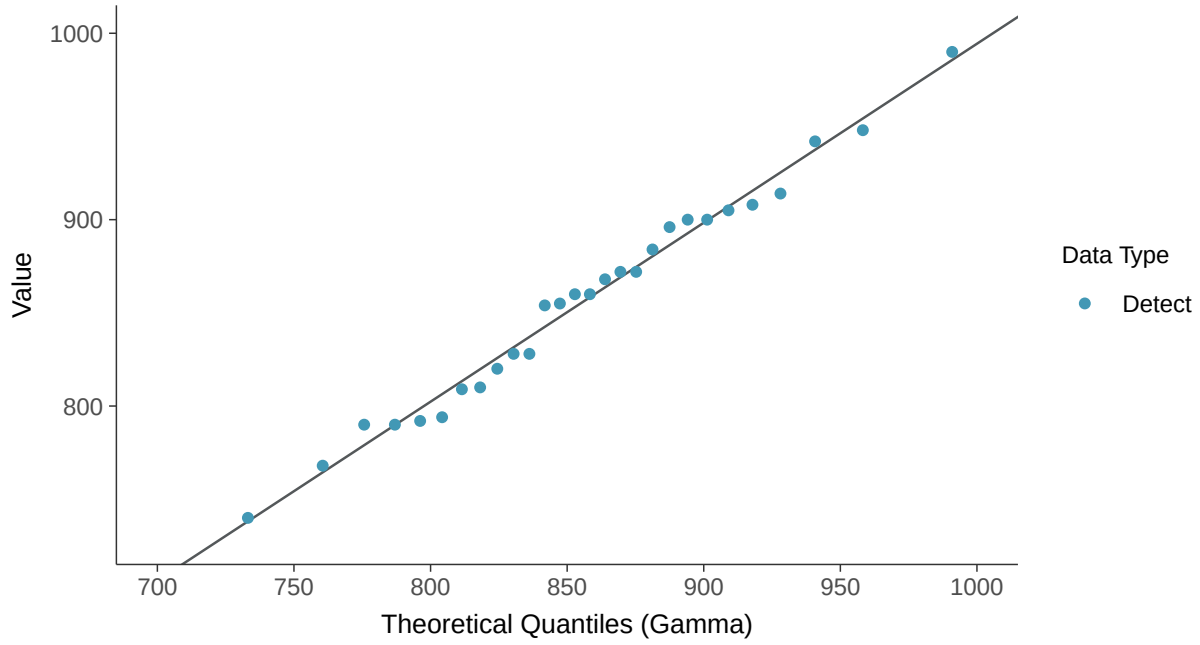
Lognormal Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



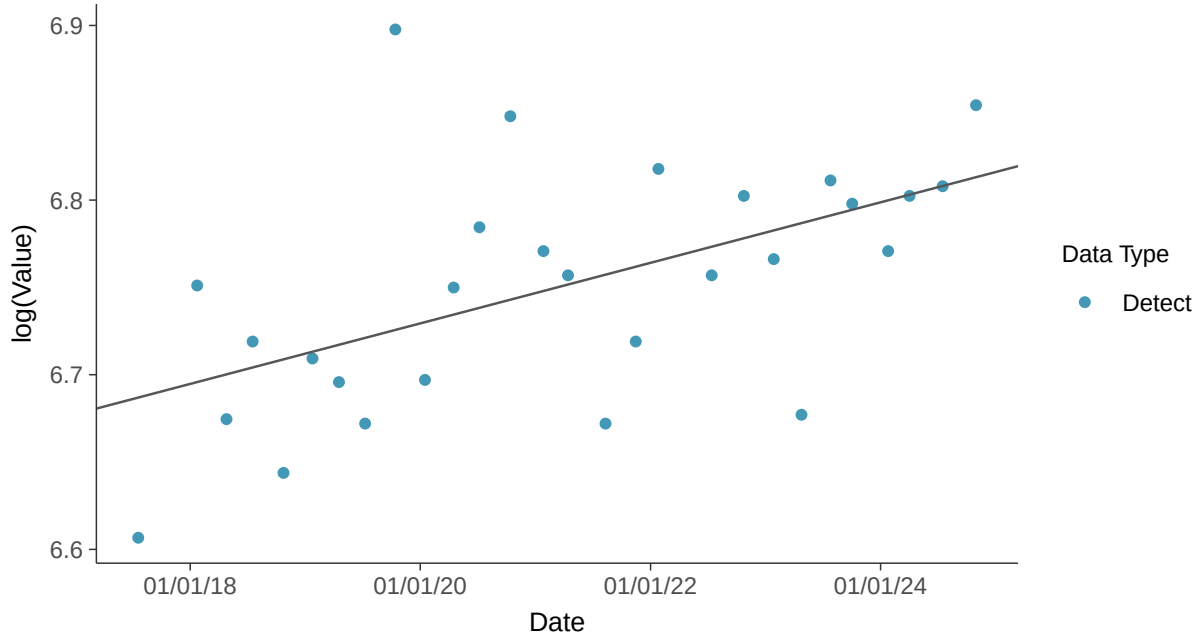
Gamma Q-Q plot

Total Dissolved Solids, MW-7R (mg/L)



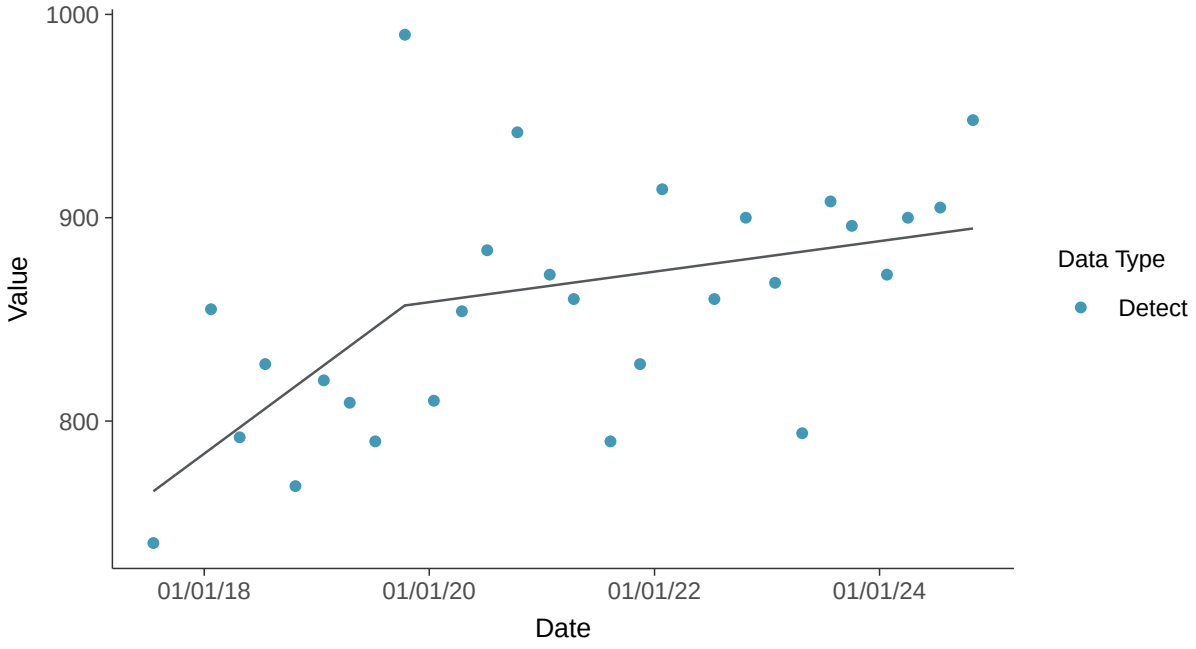
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-7R (mg/L)



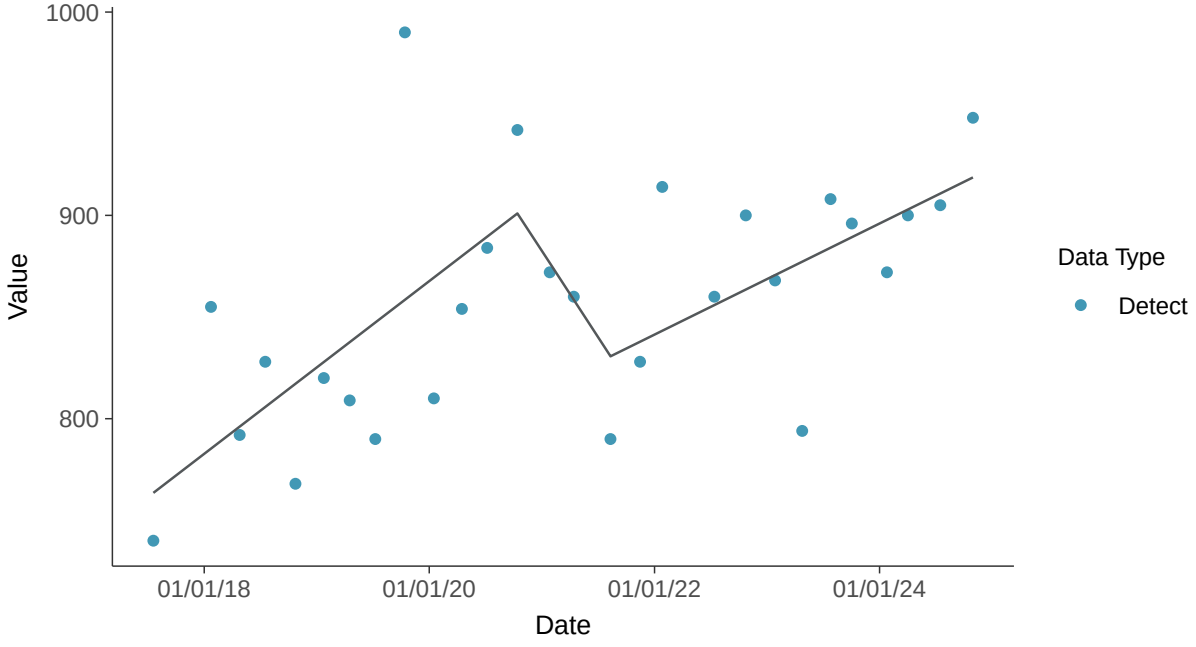
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-7R (mg/L)

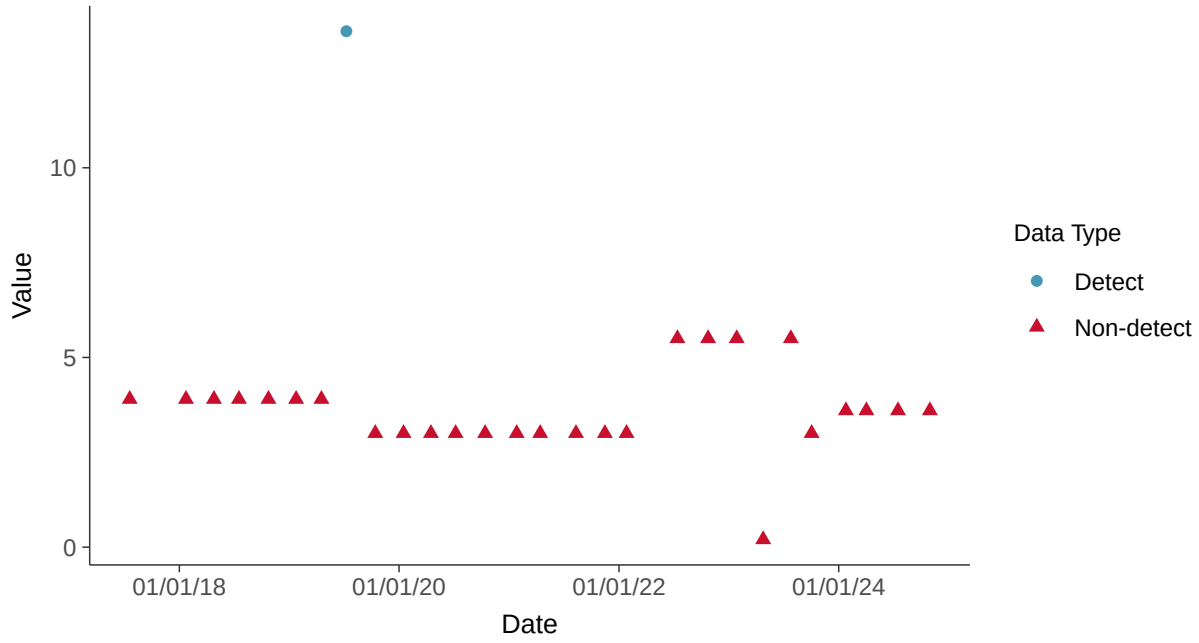


App. IV: Antimony, MW-7R

ID: 07_03_101

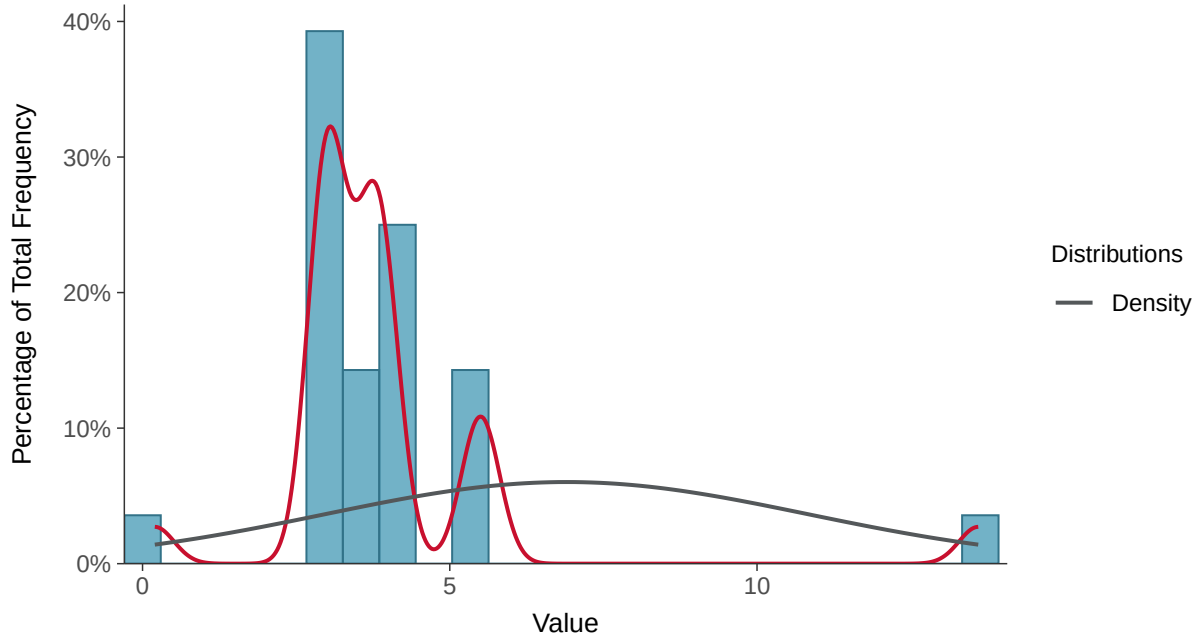
Scatter Plot

Antimony, MW-7R (ug/L)



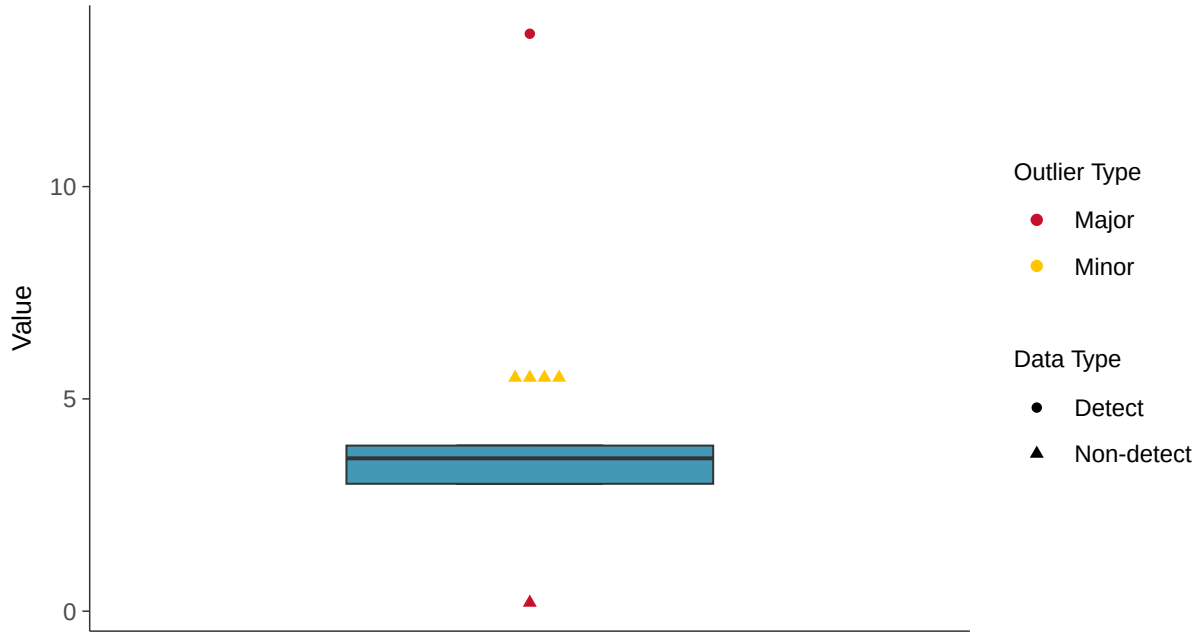
Histogram

Antimony, MW-7R (ug/L)



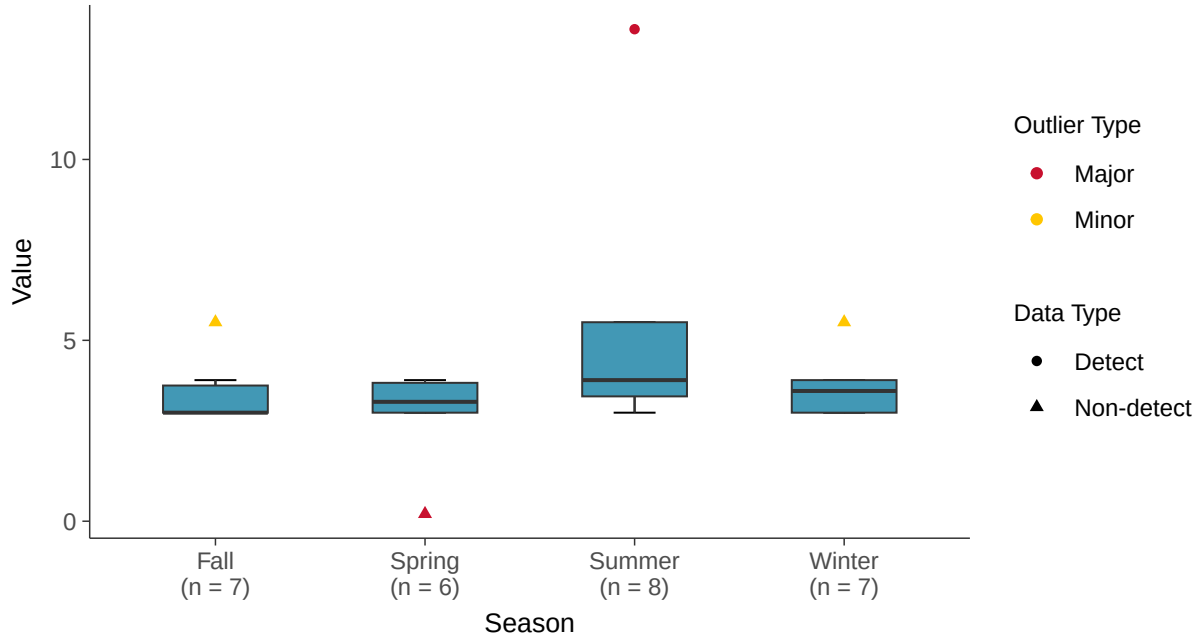
Boxplot

Antimony, MW-7R (ug/L)



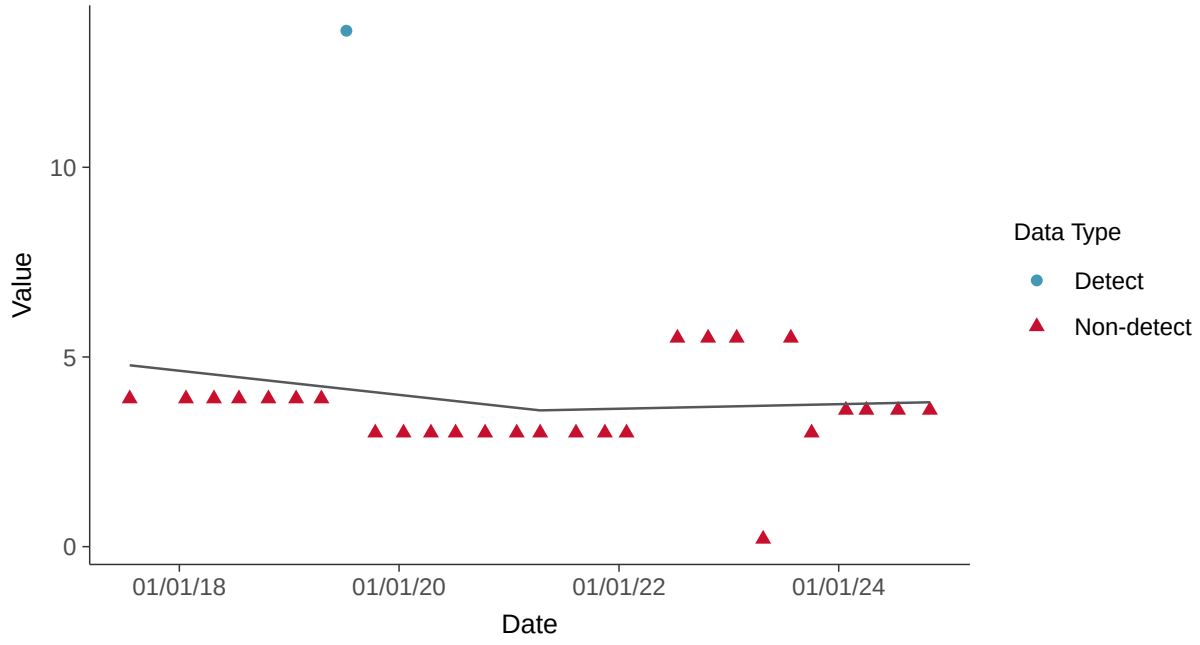
Boxplot by Season

Antimony, MW-7R (ug/L)



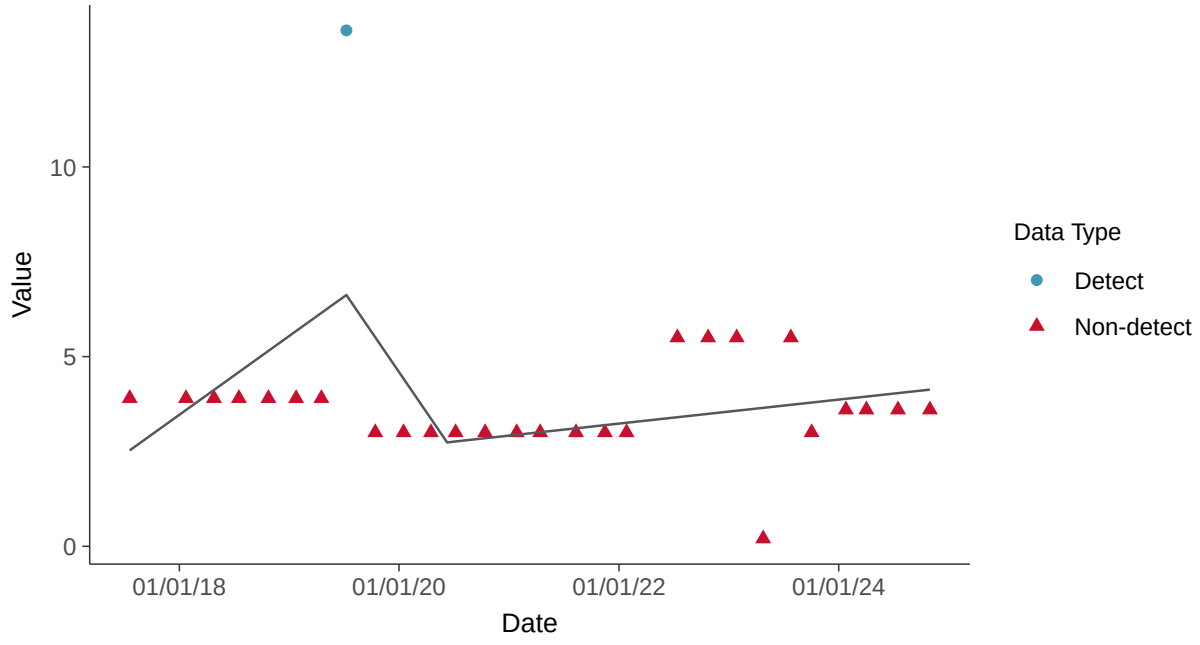
Trend Regression: Piecewise Linear-Linear

Antimony, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Antimony, MW-7R (ug/L)

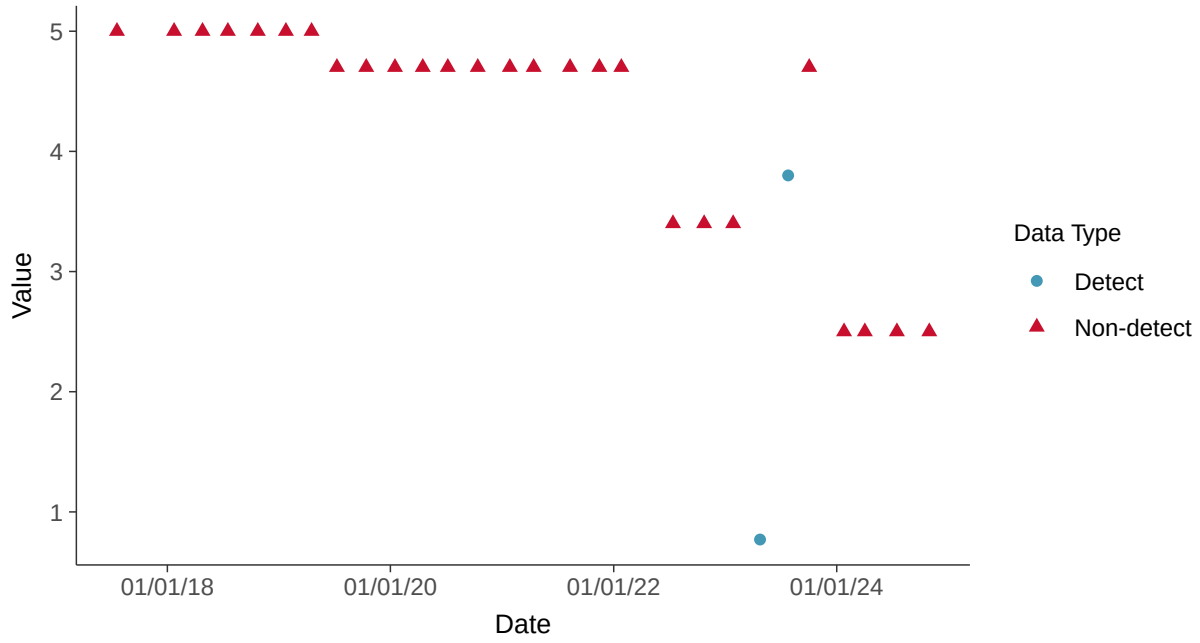


App. IV: Arsenic, MW-7R

ID: 07_03_102

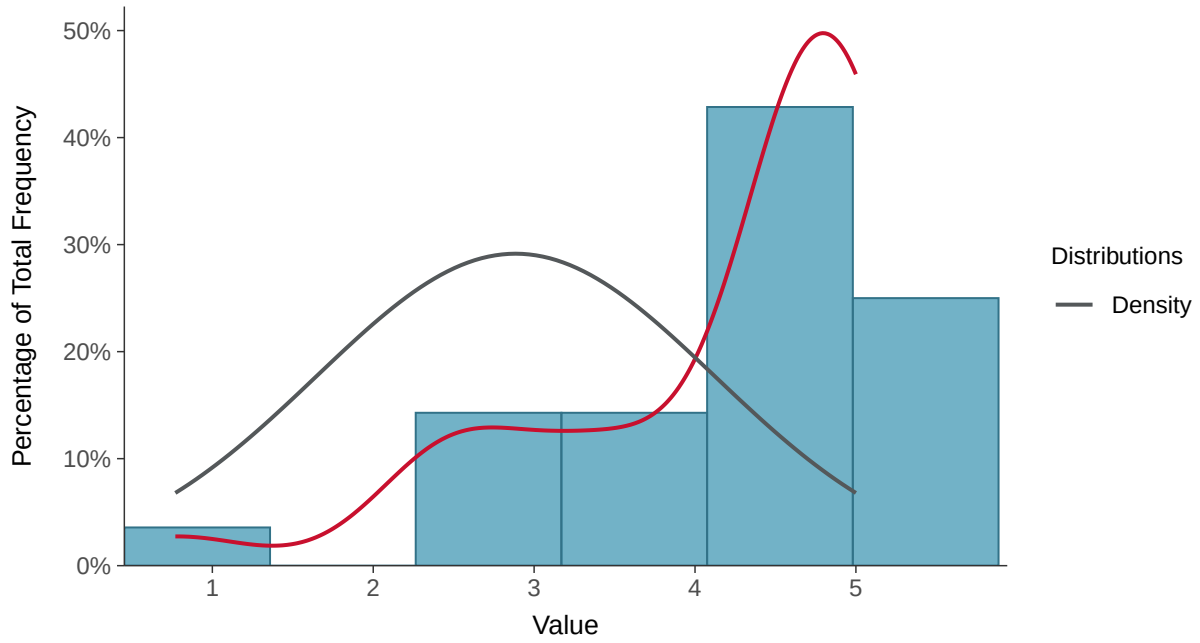
Scatter Plot

Arsenic, MW-7R (ug/L)



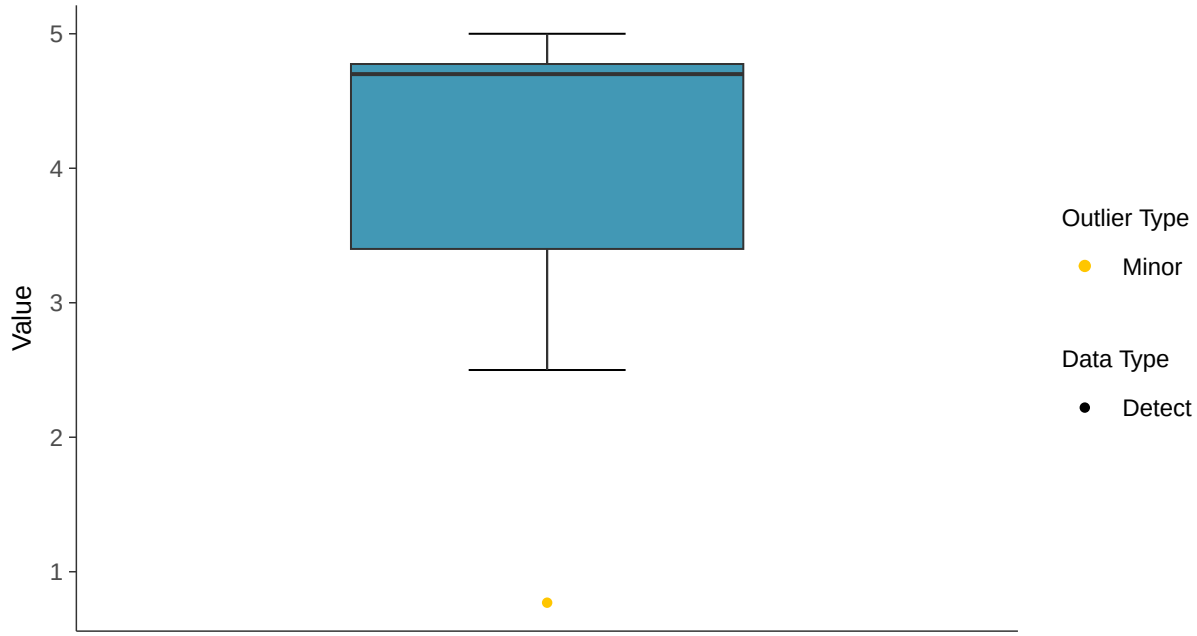
Histogram

Arsenic, MW-7R (ug/L)



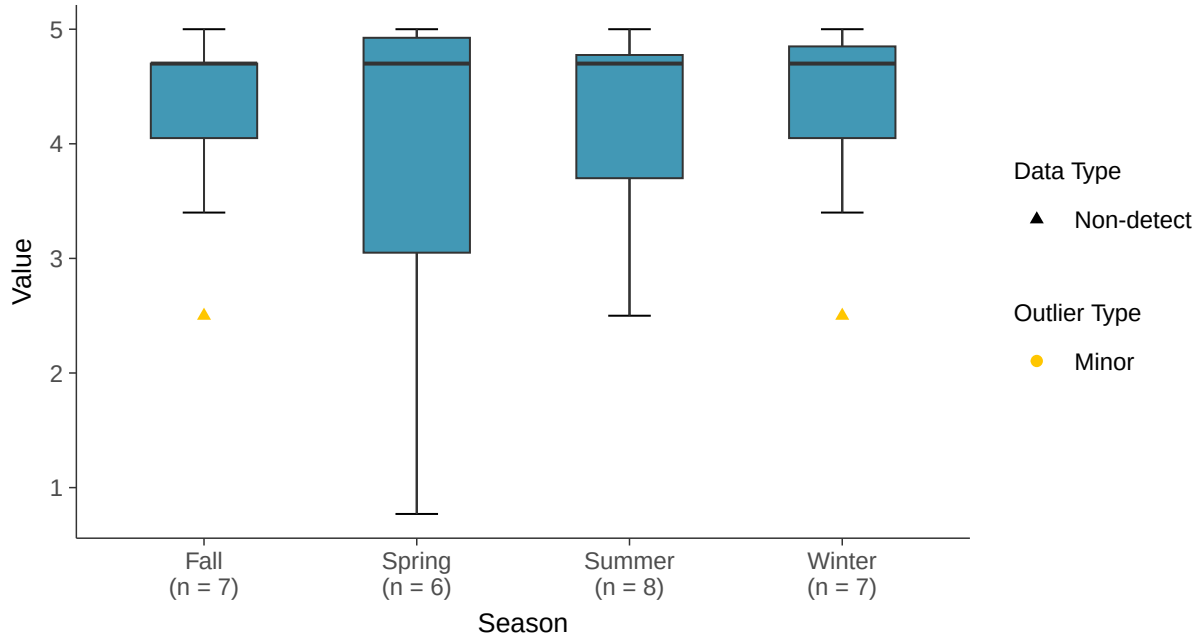
Boxplot

Arsenic, MW-7R (ug/L)



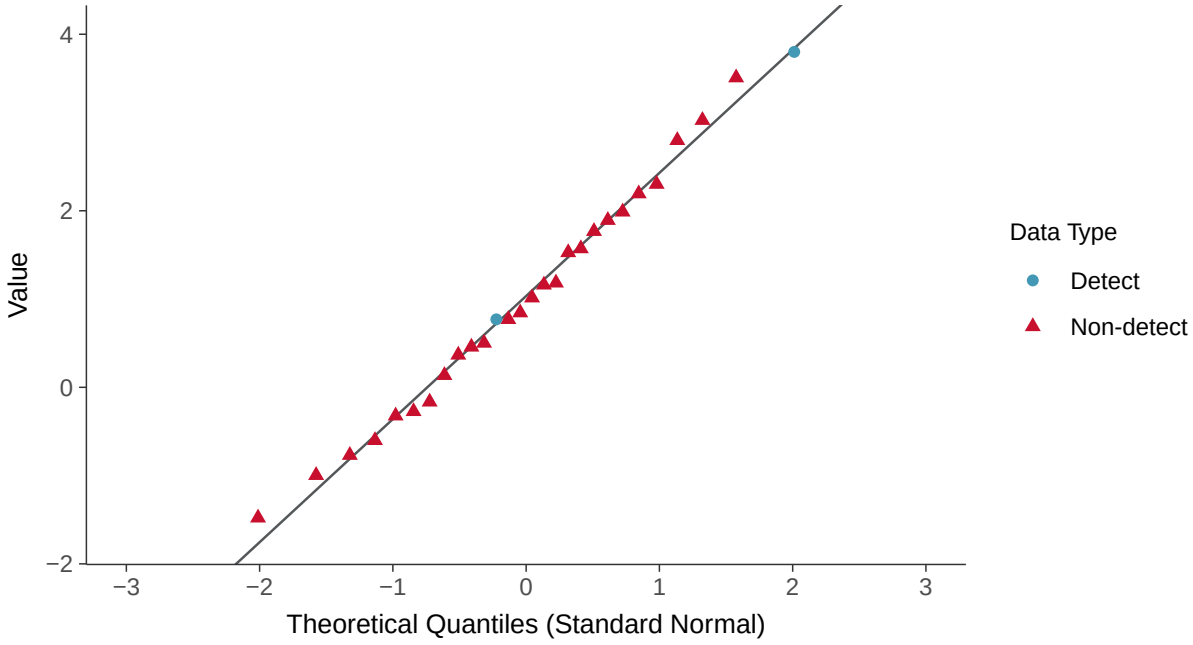
Boxplot by Season

Arsenic, MW-7R (ug/L)



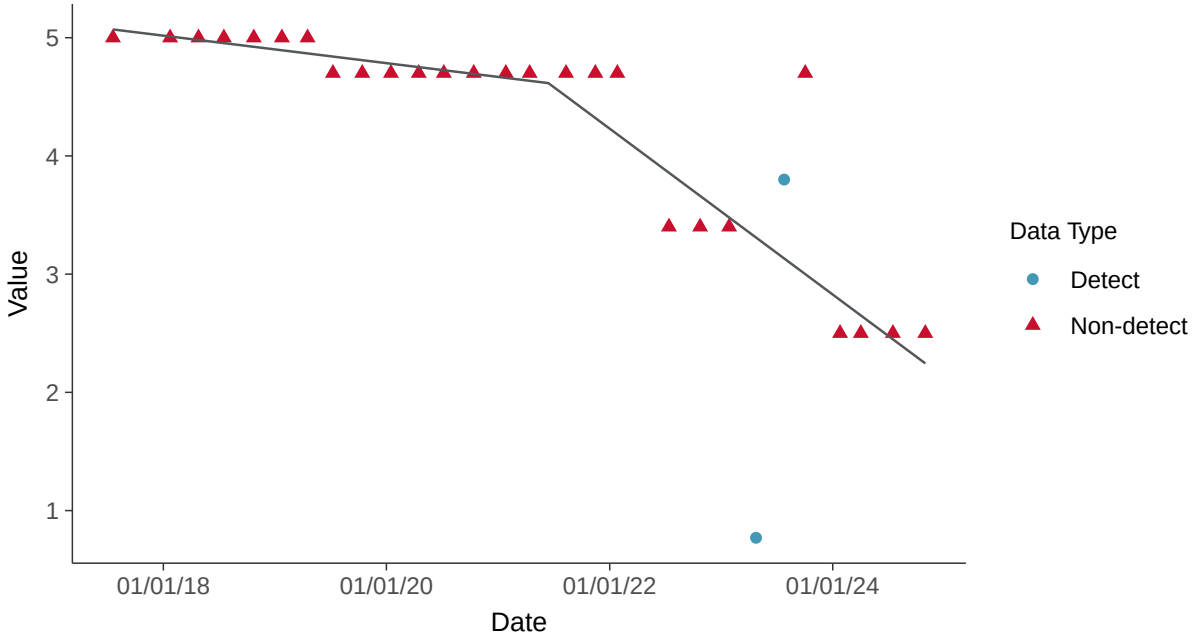
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-7R (ug/L)



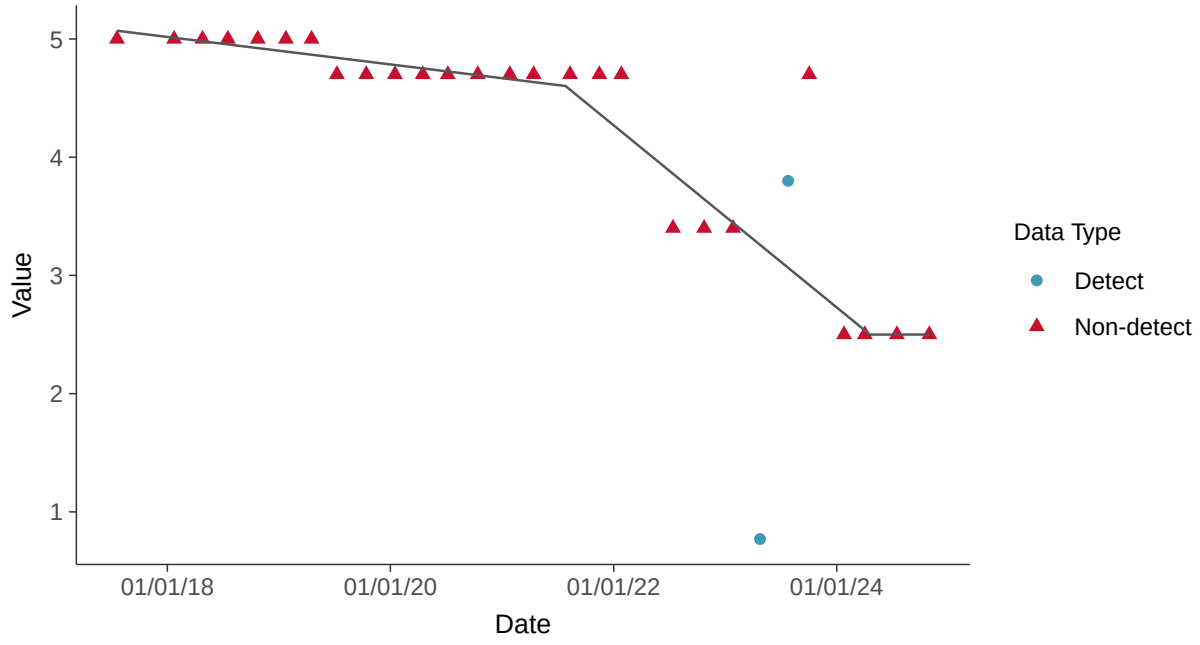
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-7R (ug/L)

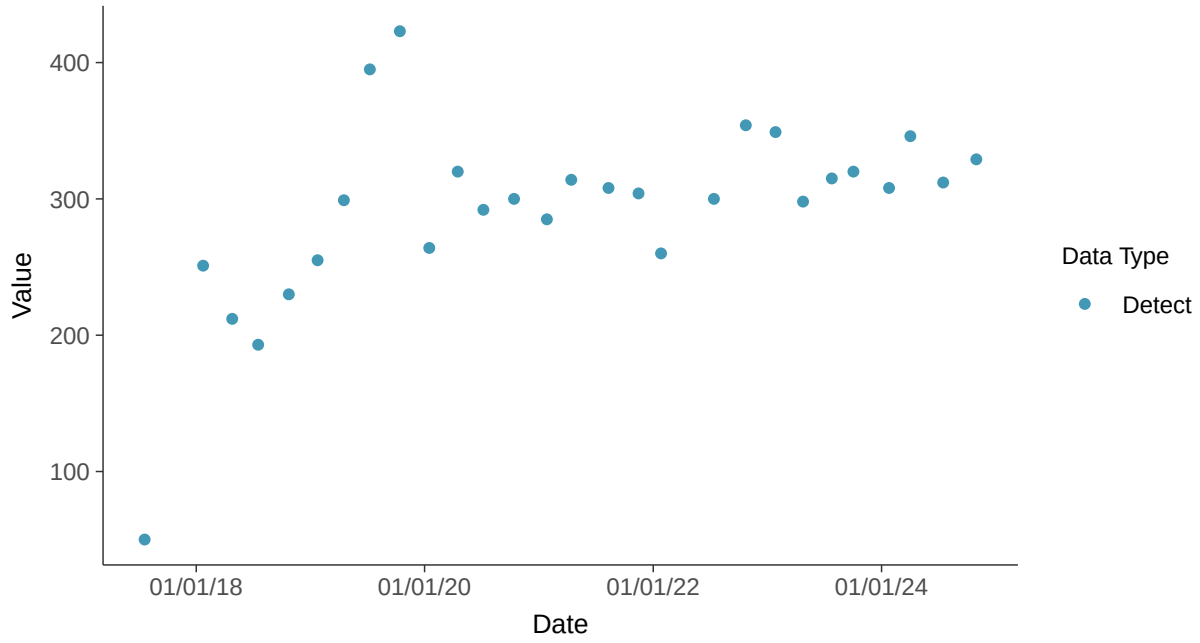


App. IV: Barium, MW-7R

ID: 07_03_103

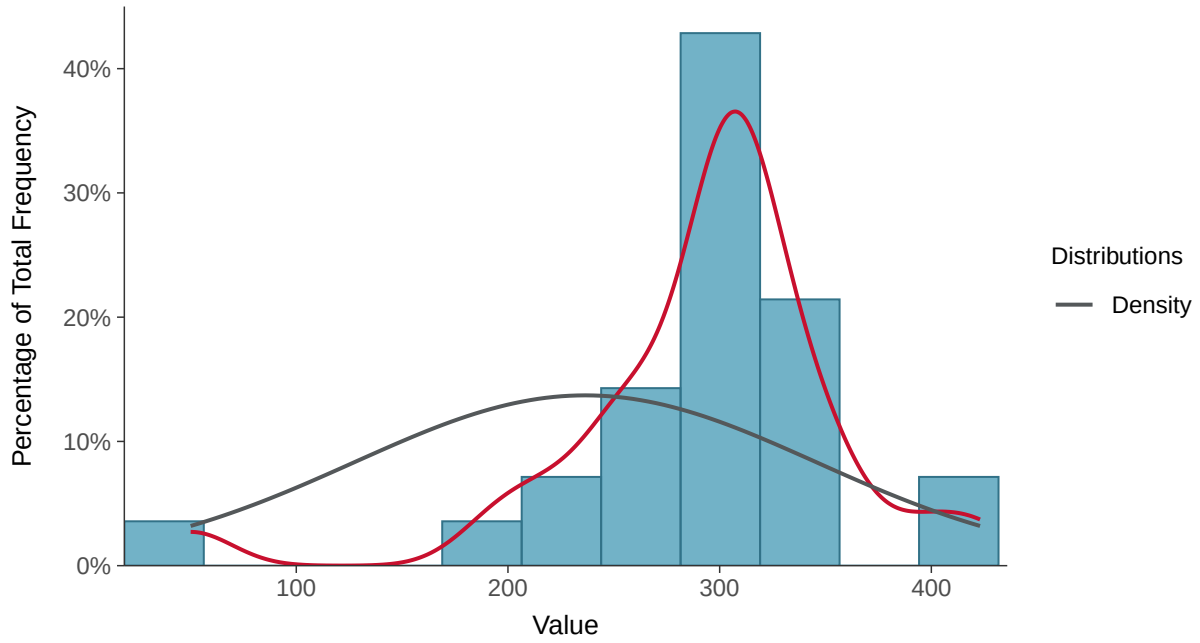
Scatter Plot

Barium, MW-7R (ug/L)



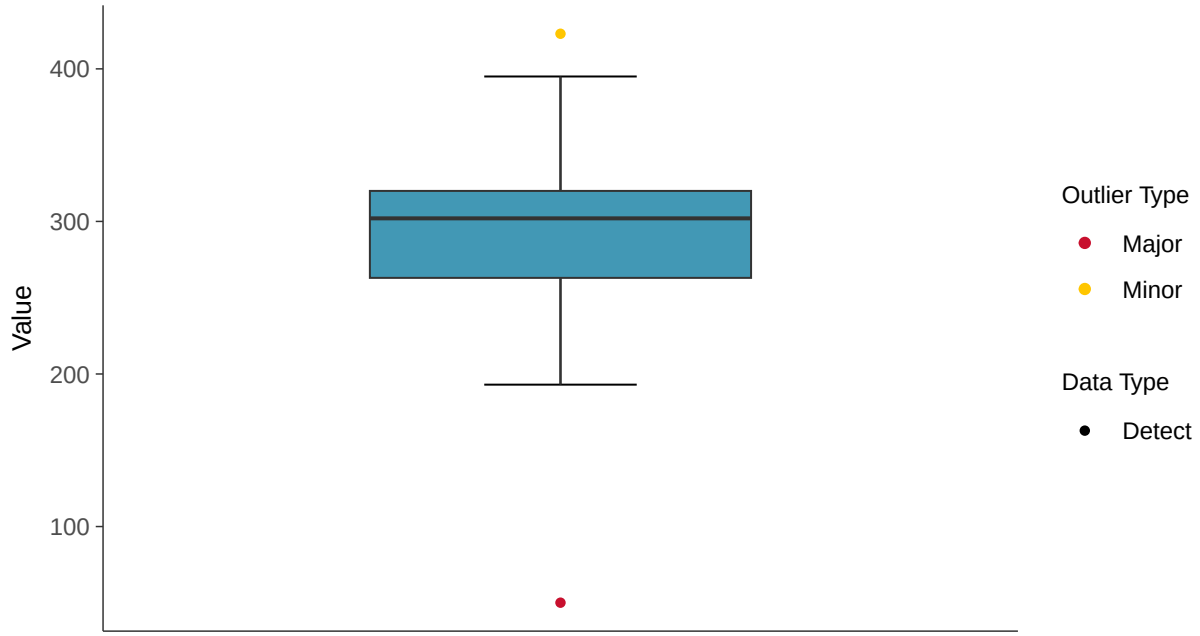
Histogram

Barium, MW-7R (ug/L)



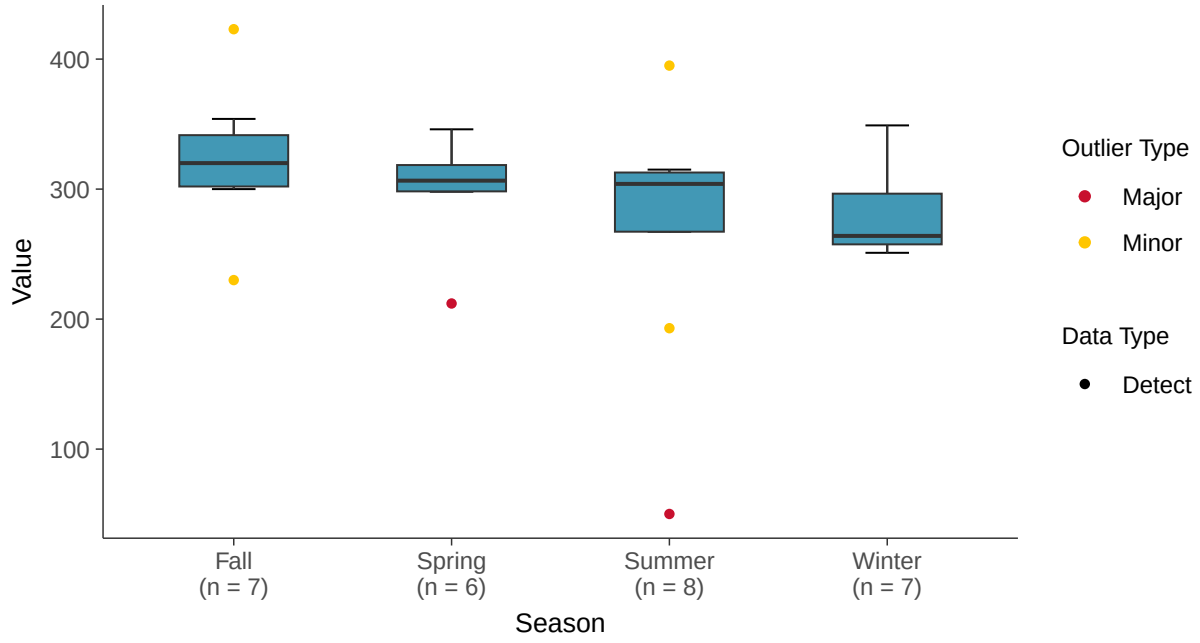
Boxplot

Barium, MW-7R (ug/L)



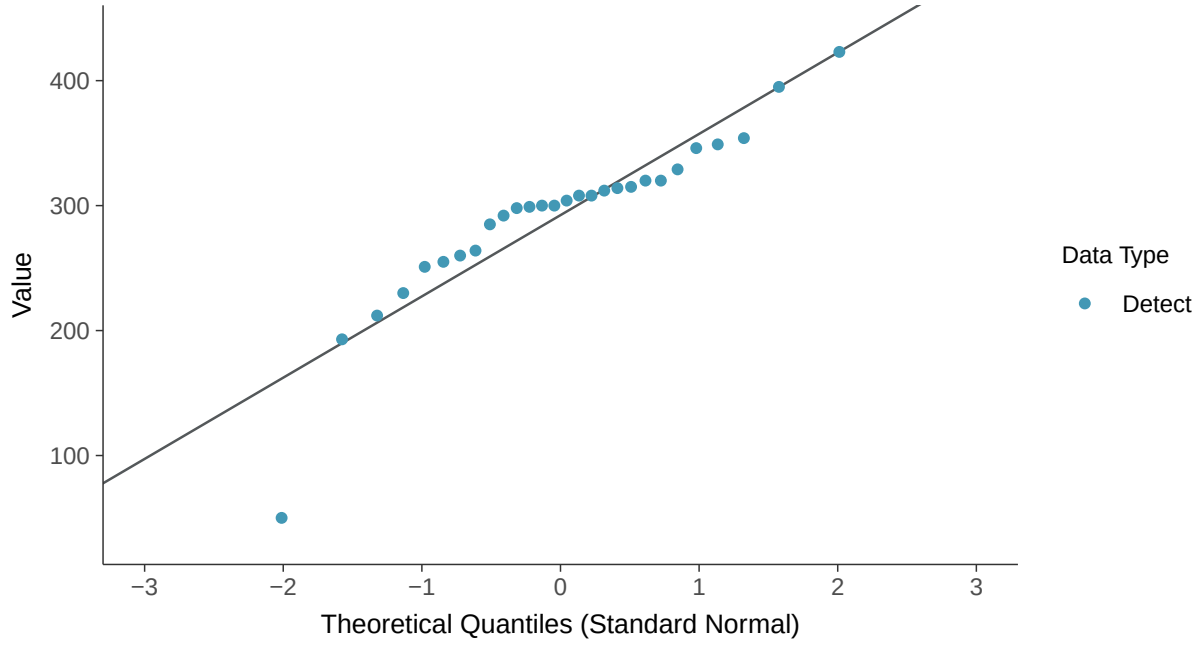
Boxplot by Season

Barium, MW-7R (ug/L)



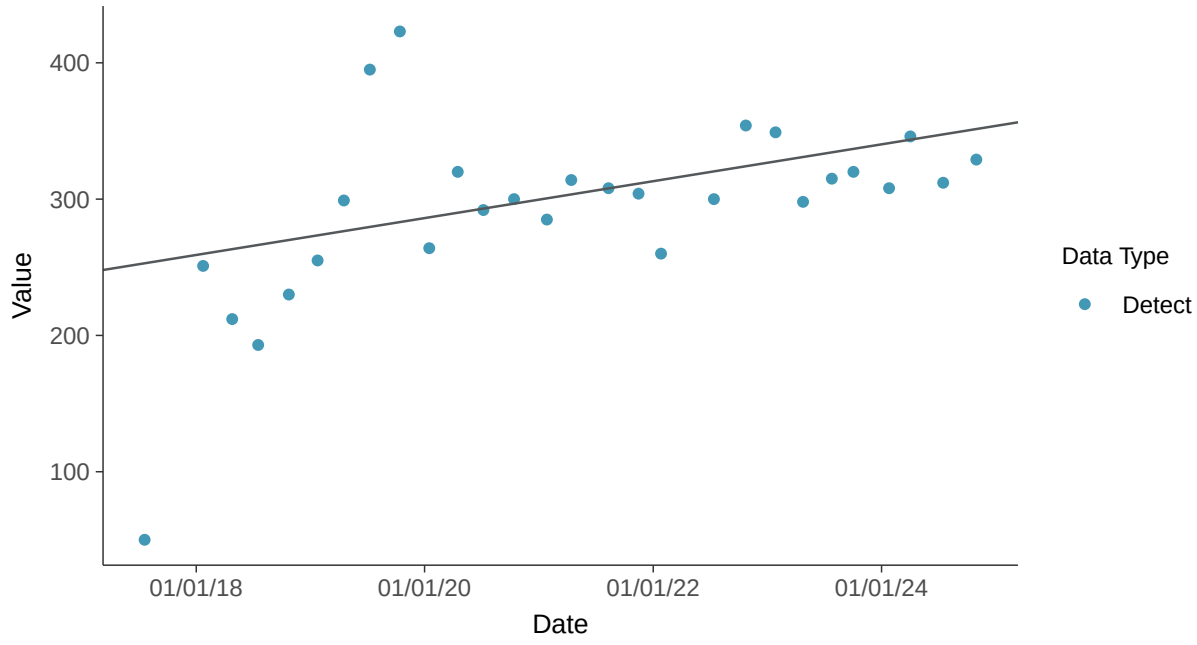
Normal Q-Q plot

Barium, MW-7R (ug/L)



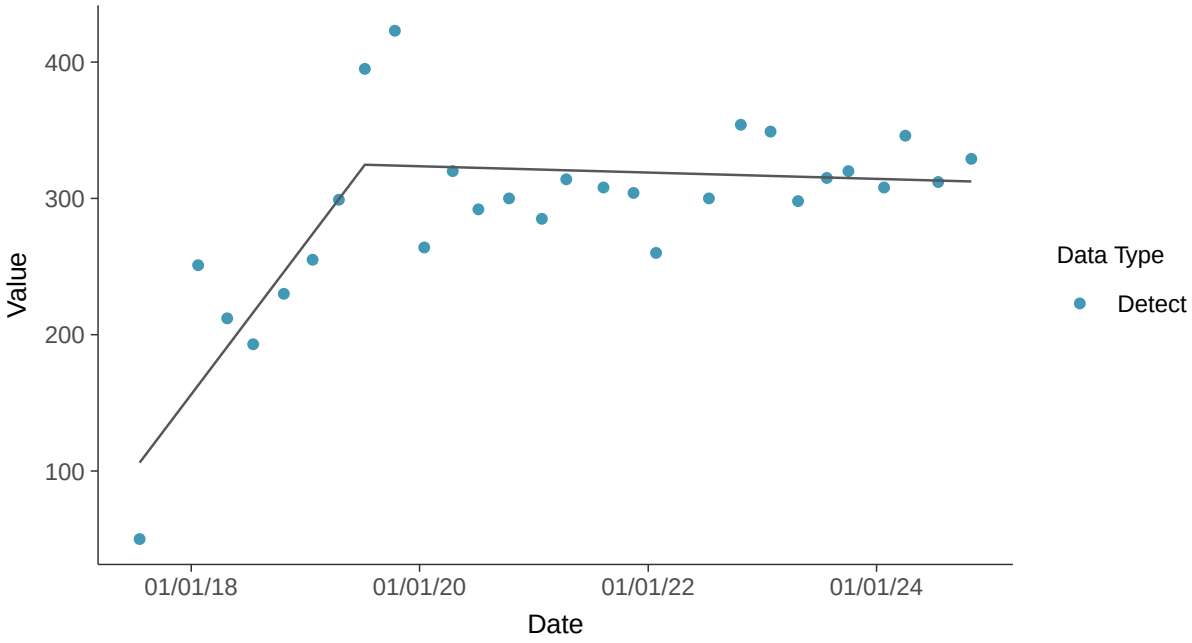
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-7R (ug/L)



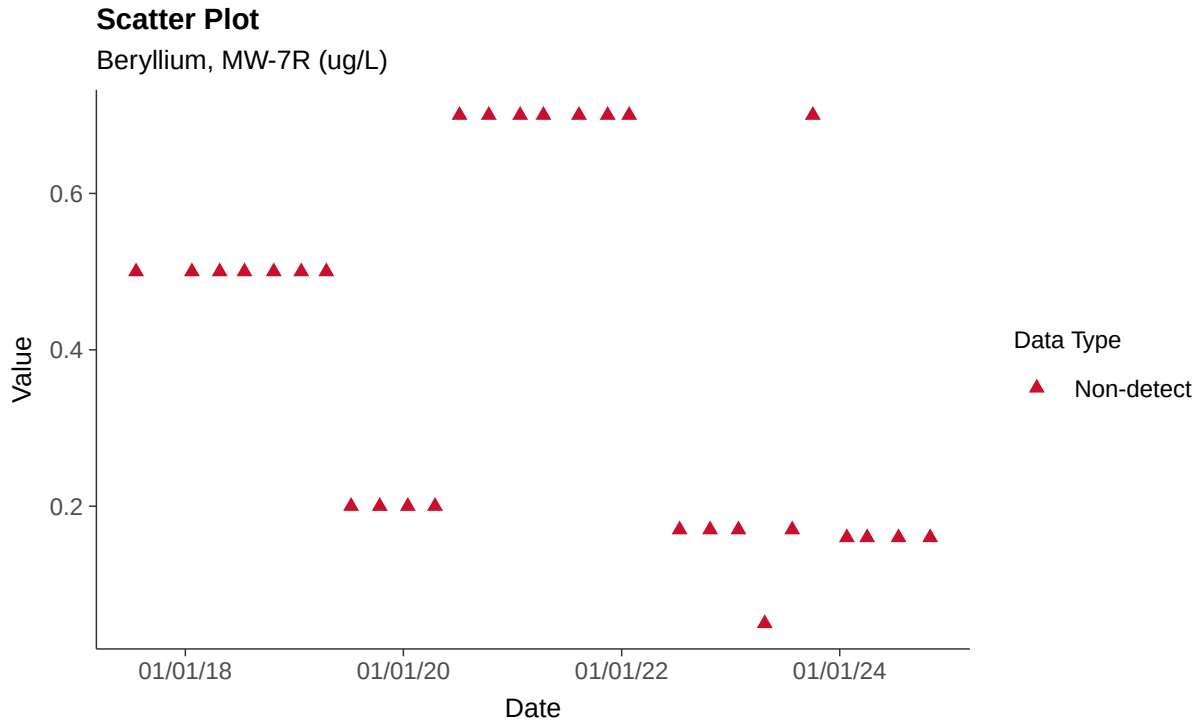
Trend Regression: Piecewise Linear-Linear

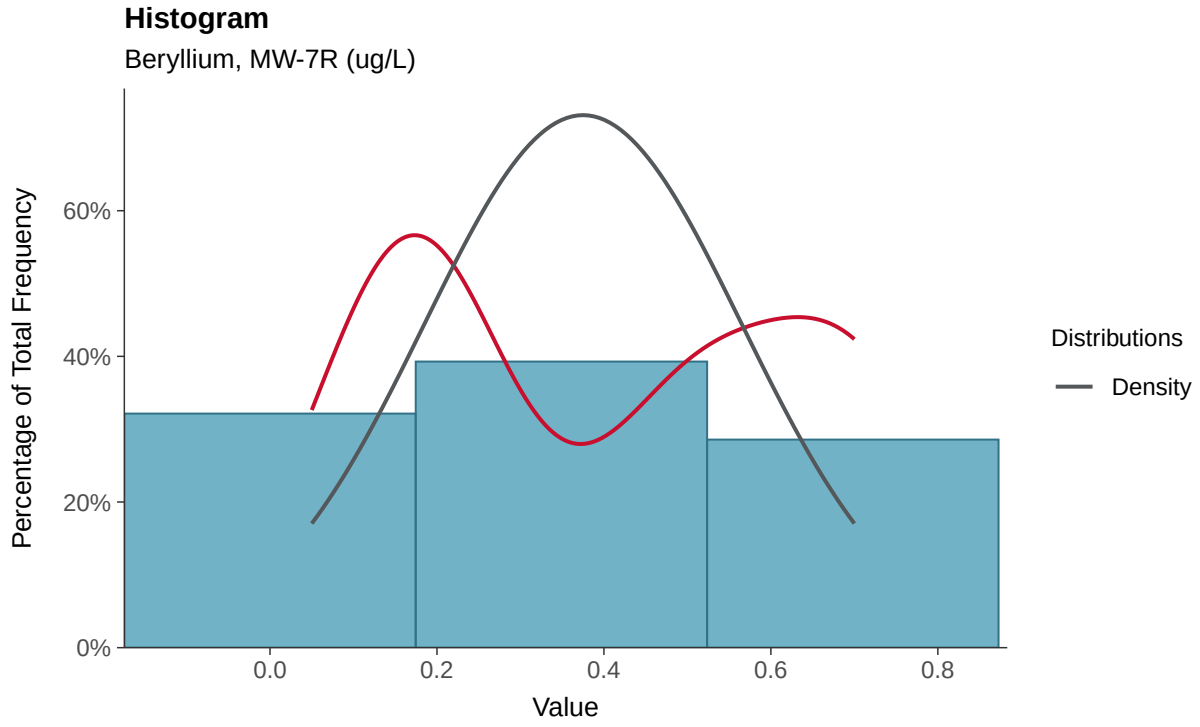
Barium, MW-7R (ug/L)



App. IV: Beryllium, MW-7R

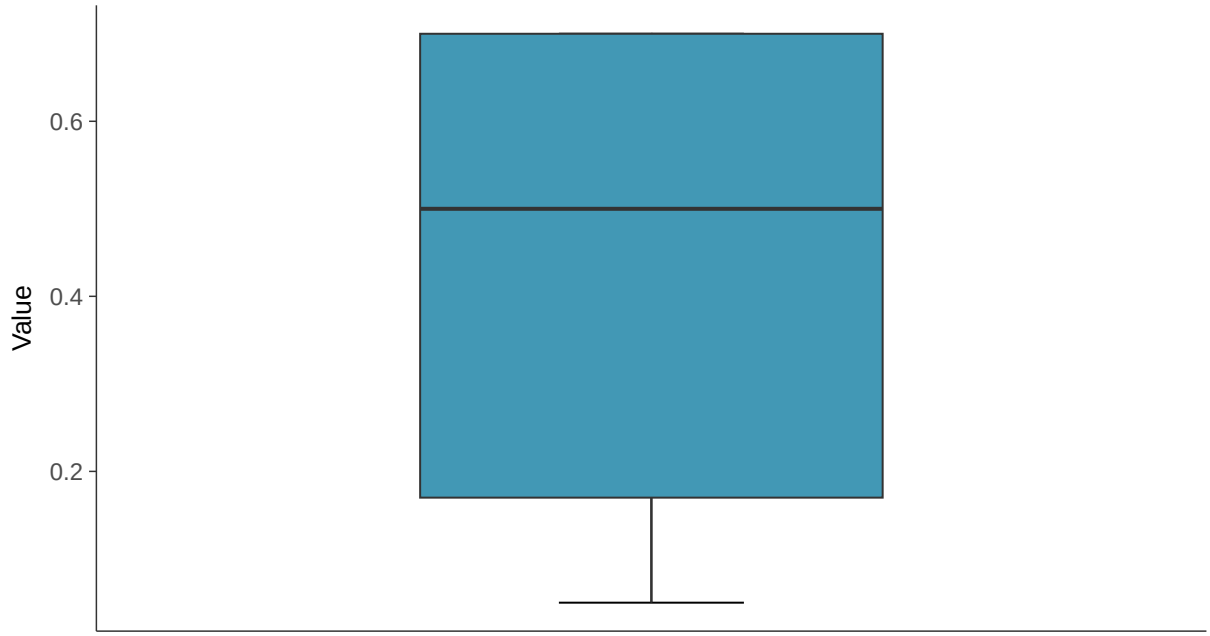
ID: 07_03_104





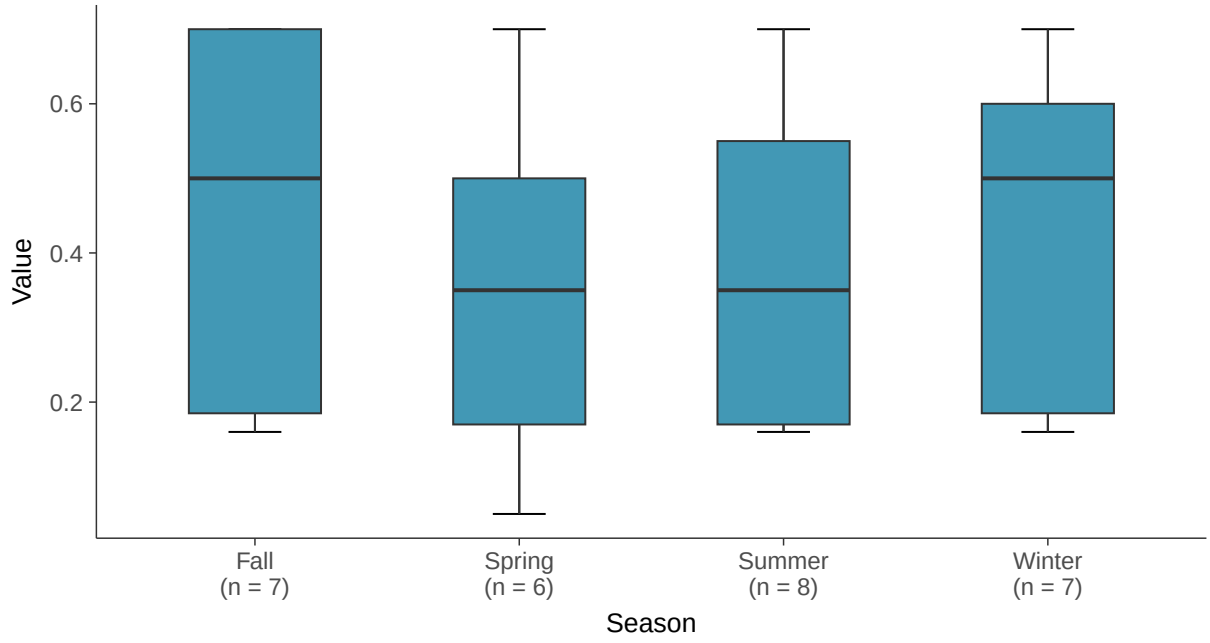
Boxplot

Beryllium, MW-7R (ug/L)



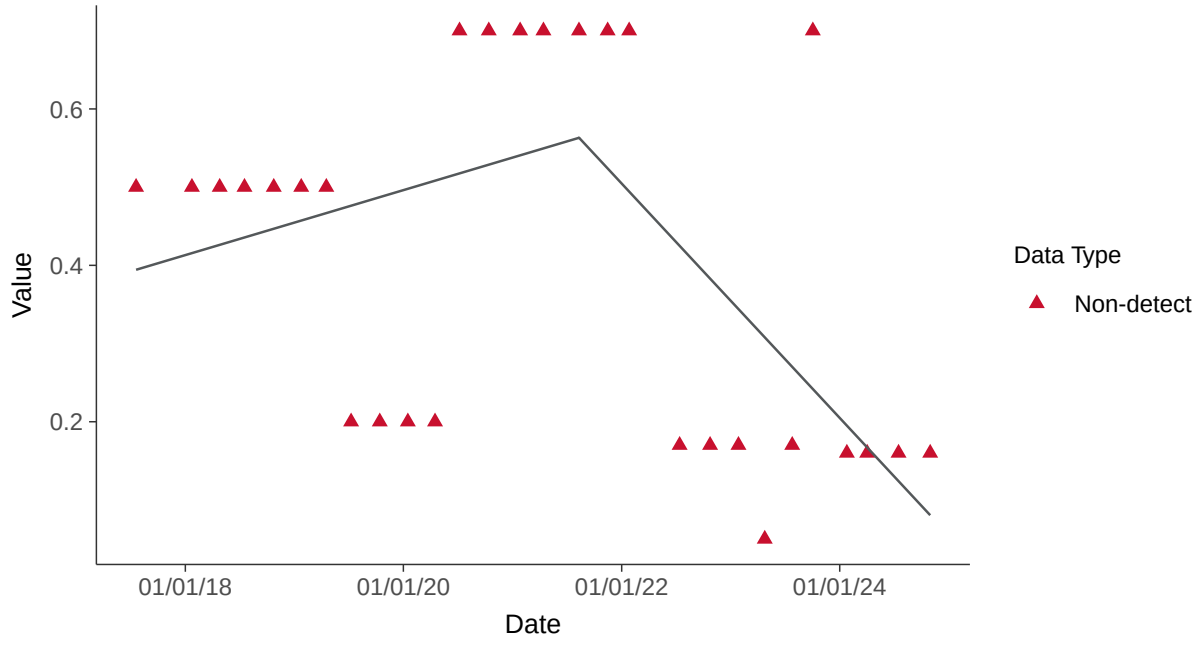
Boxplot by Season

Beryllium, MW-7R (ug/L)



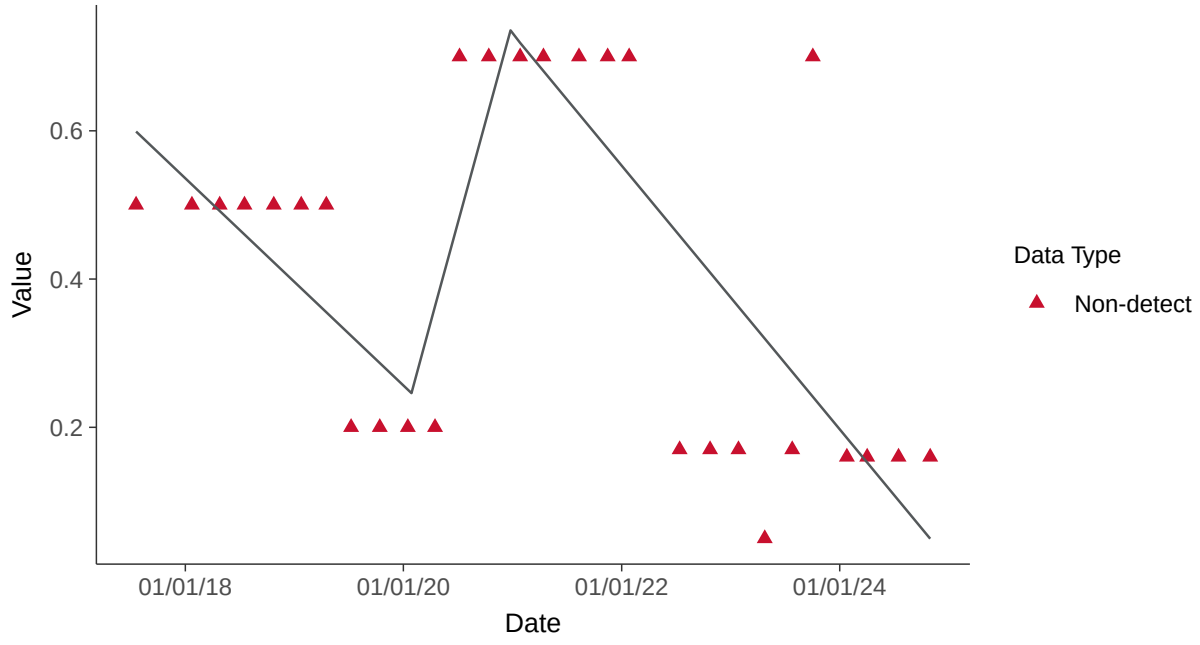
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-7R (ug/L)



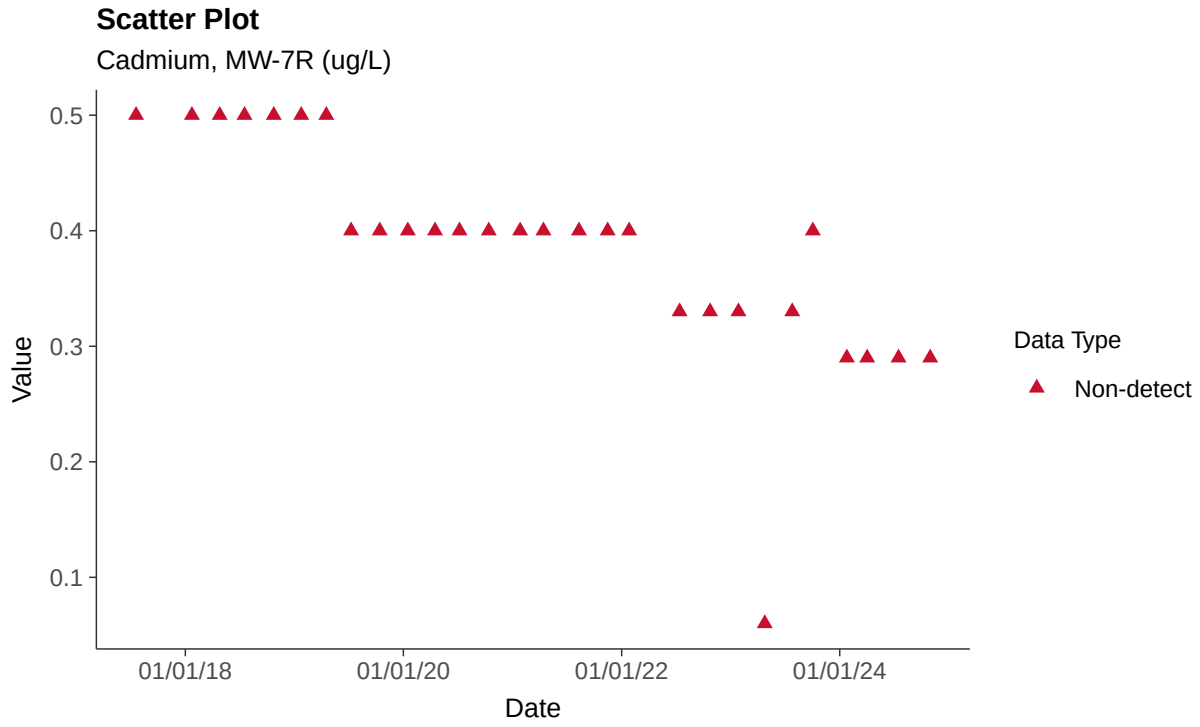
Trend Regression: Piecewise Linear-Linear-Linear

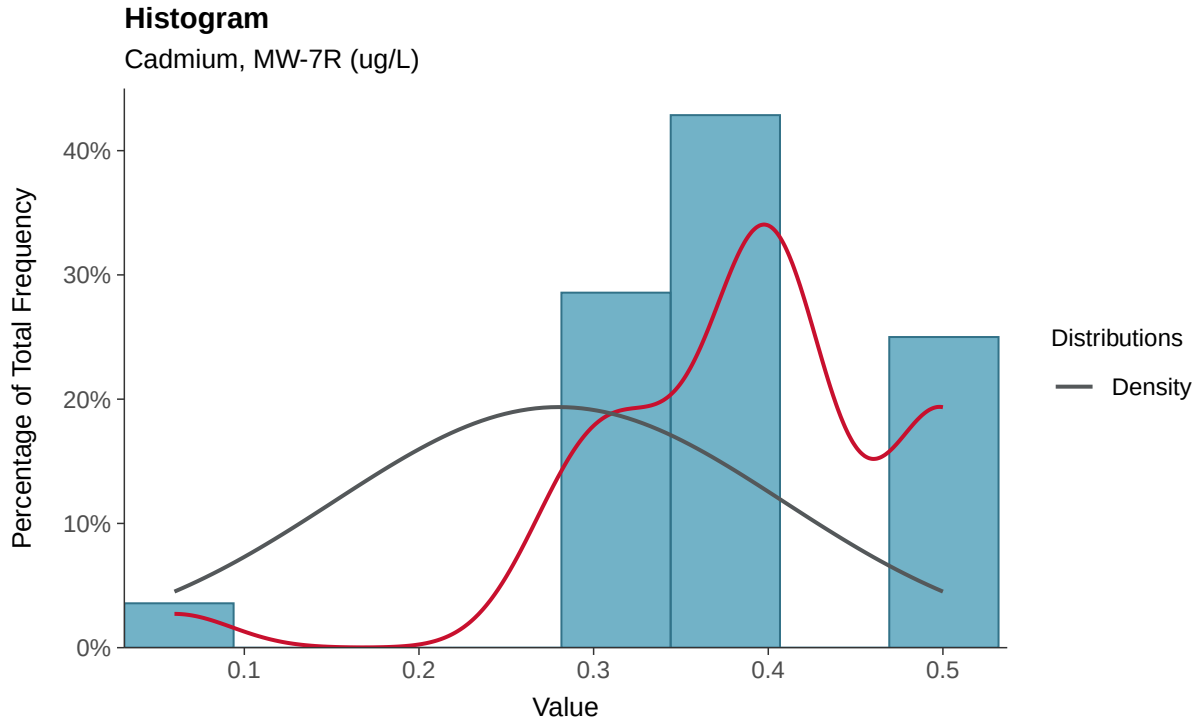
Beryllium, MW-7R (ug/L)



App. IV: Cadmium, MW-7R

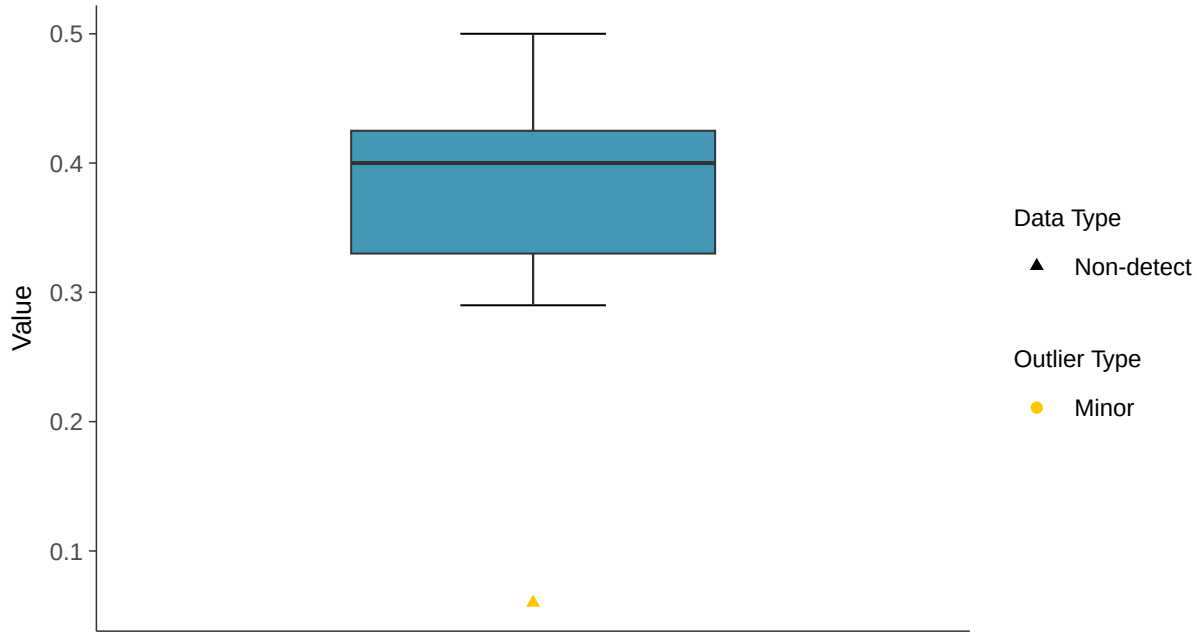
ID: 07_03_106





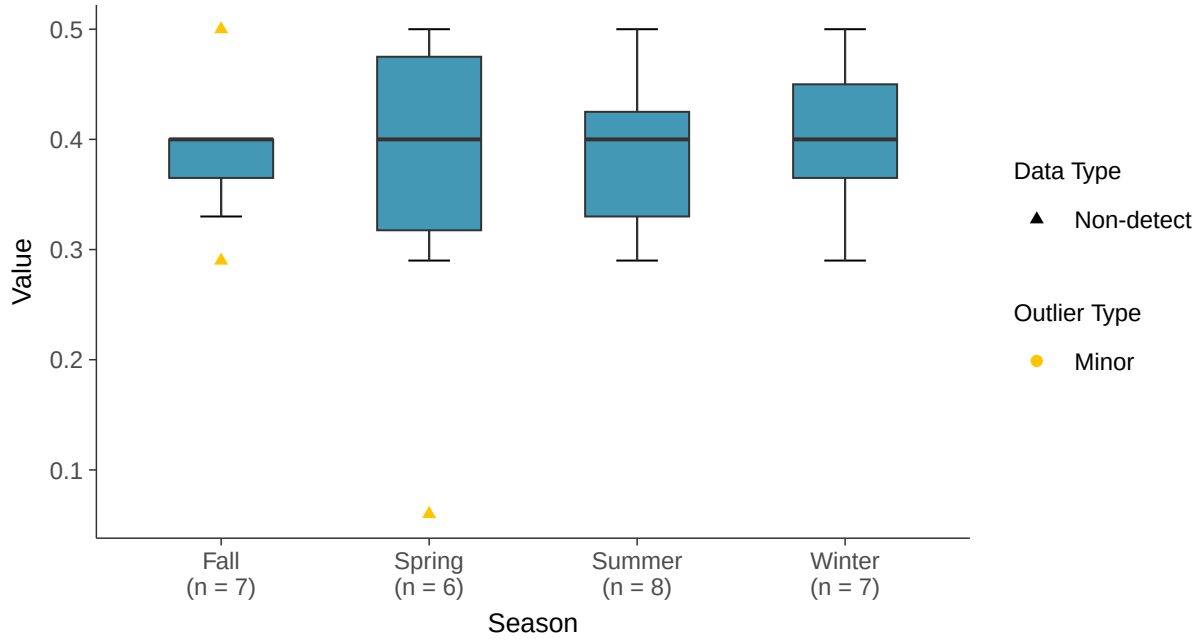
Boxplot

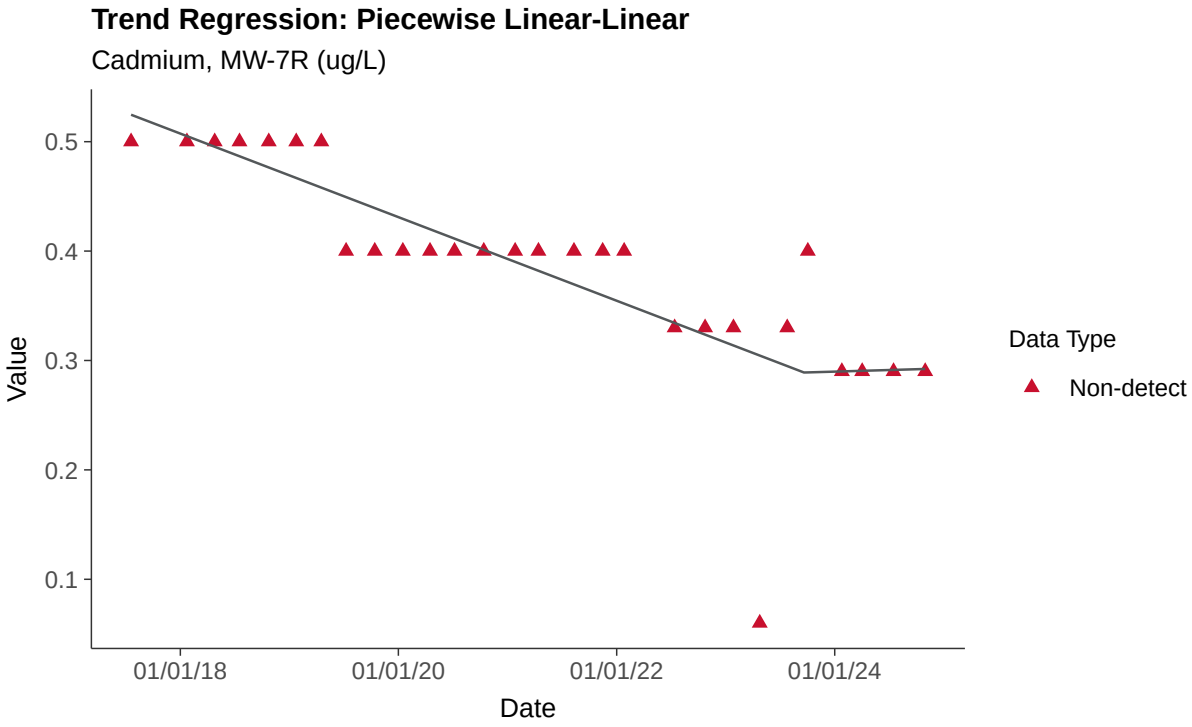
Cadmium, MW-7R (ug/L)



Boxplot by Season

Cadmium, MW-7R (ug/L)



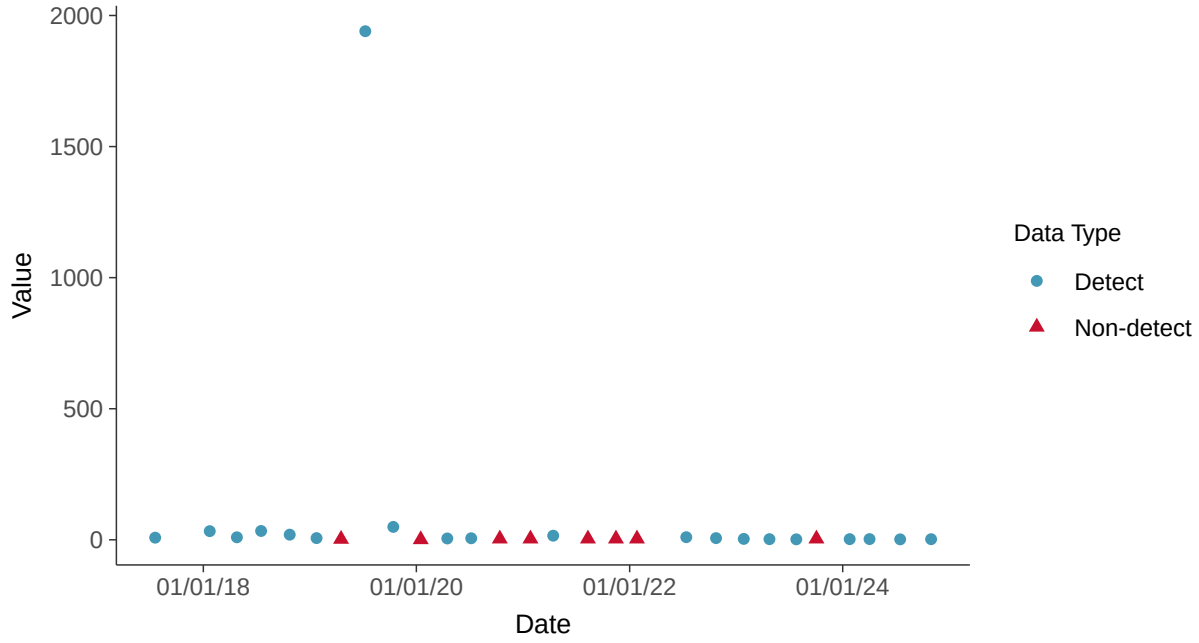

Trend Regression: Piecewise Linear-Linear
Cadmium, MW-7R (ug/L)
Value
0.5
0.4
0.3
0.2
0.1
01/01/18
01/01/20
01/01/22
01/01/24
Date
Data Type
Non-detect

App. IV: Chromium, MW-7R

ID: 07_03_109

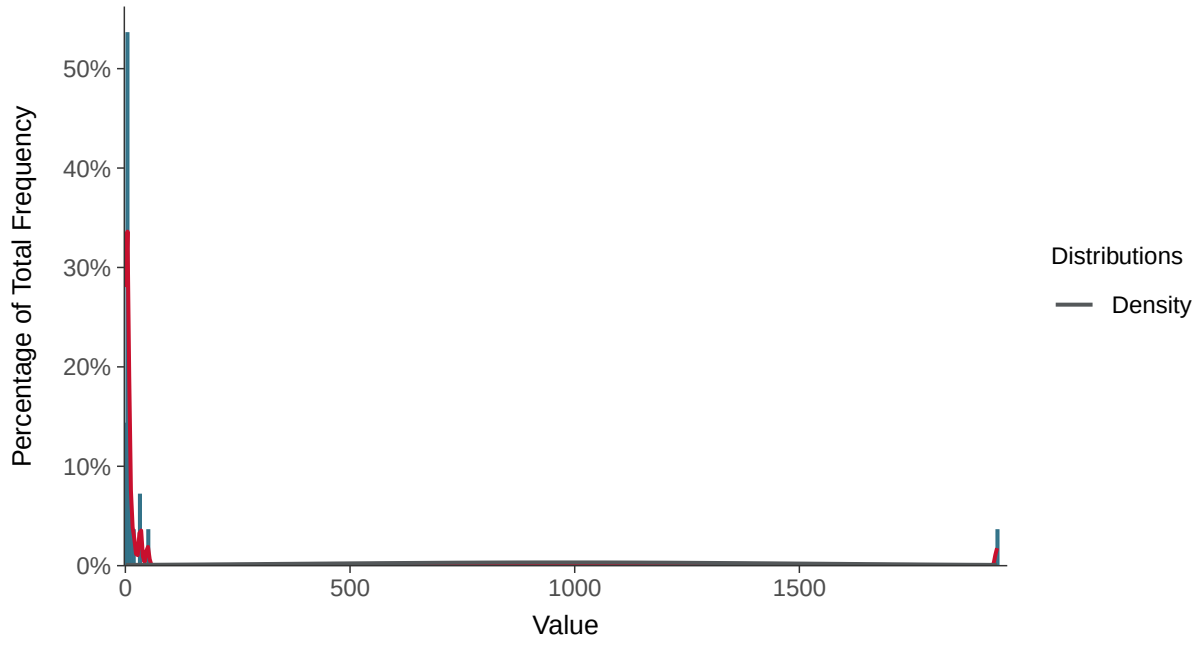
Scatter Plot

Chromium, MW-7R (ug/L)



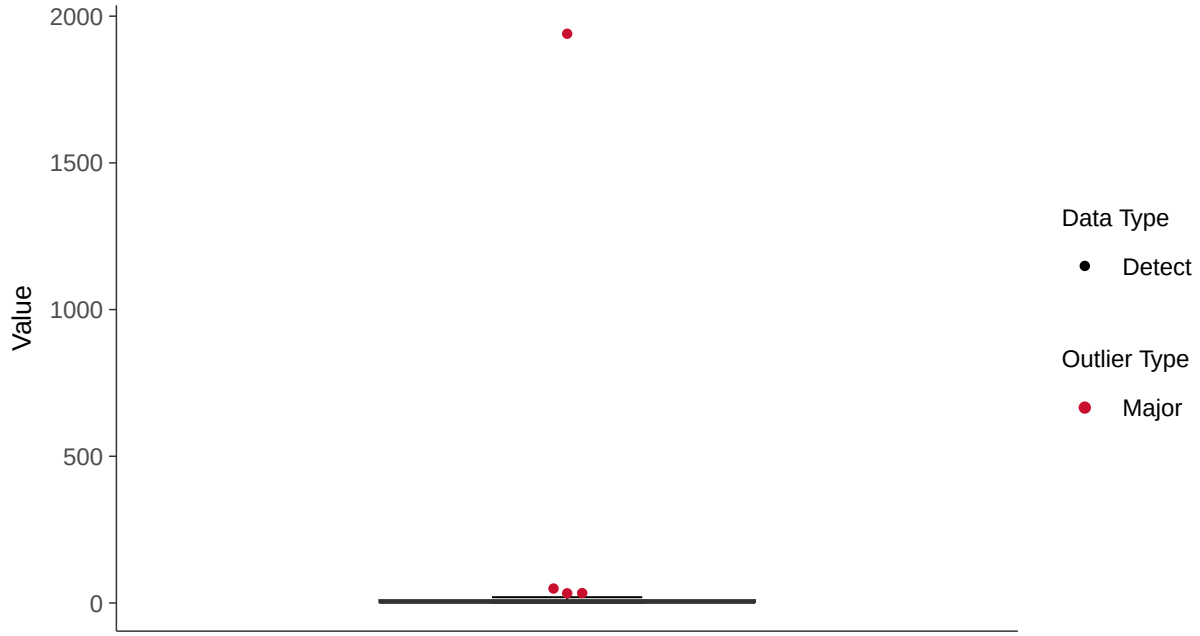
Histogram

Chromium, MW-7R (ug/L)



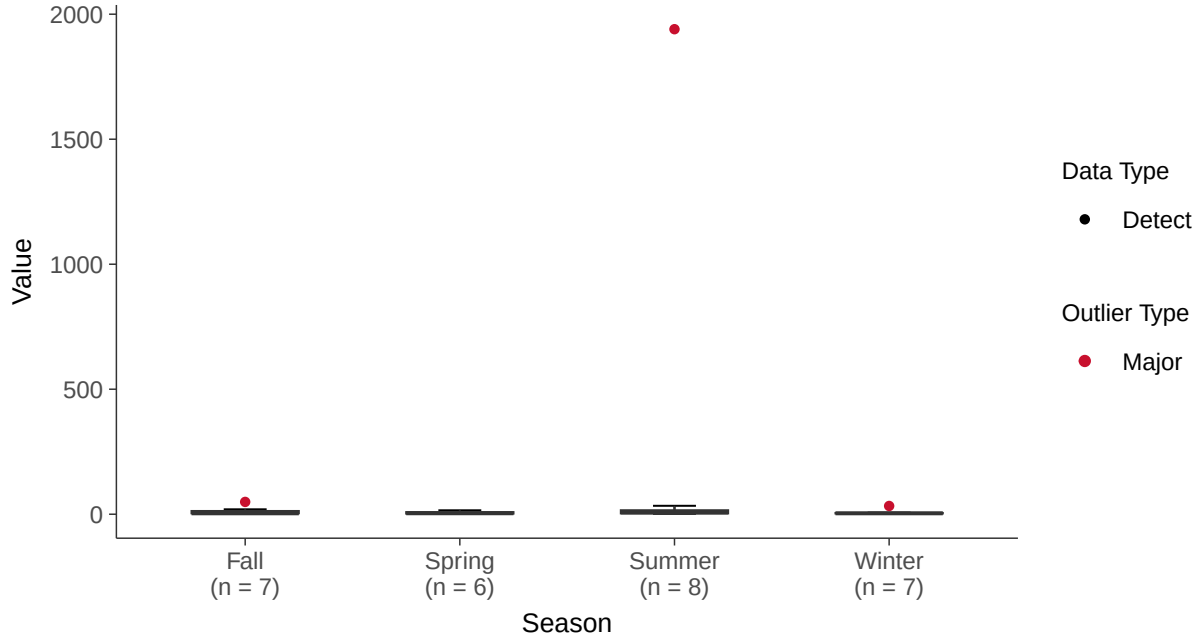
Boxplot

Chromium, MW-7R (ug/L)



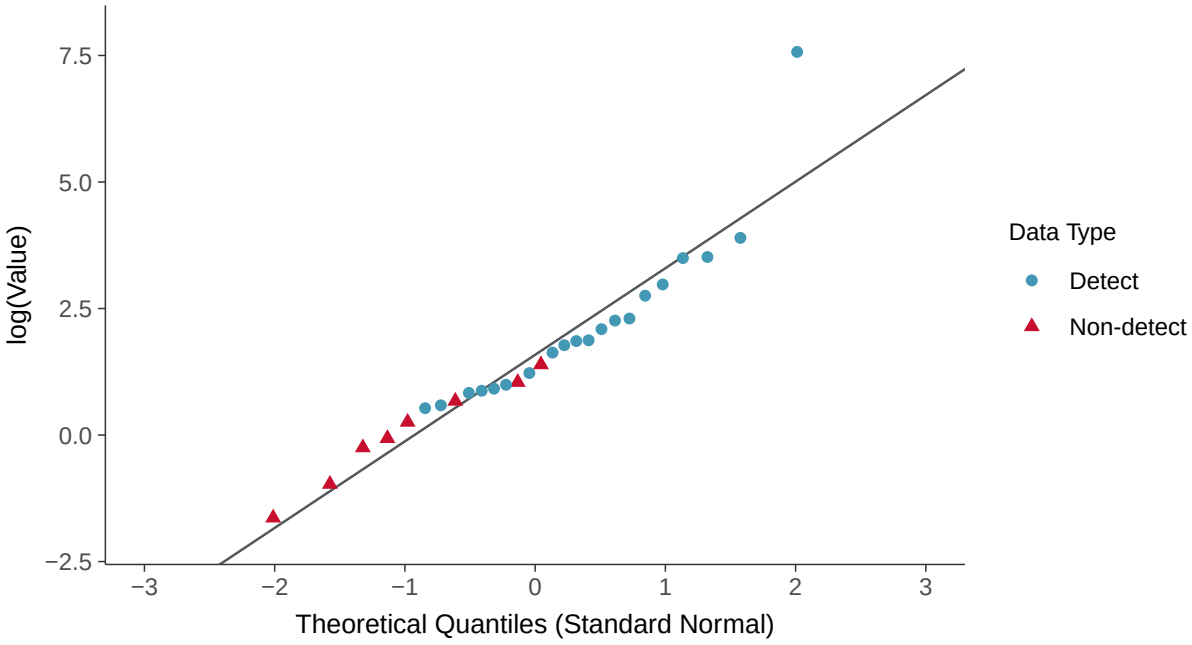
Boxplot by Season

Chromium, MW-7R (ug/L)



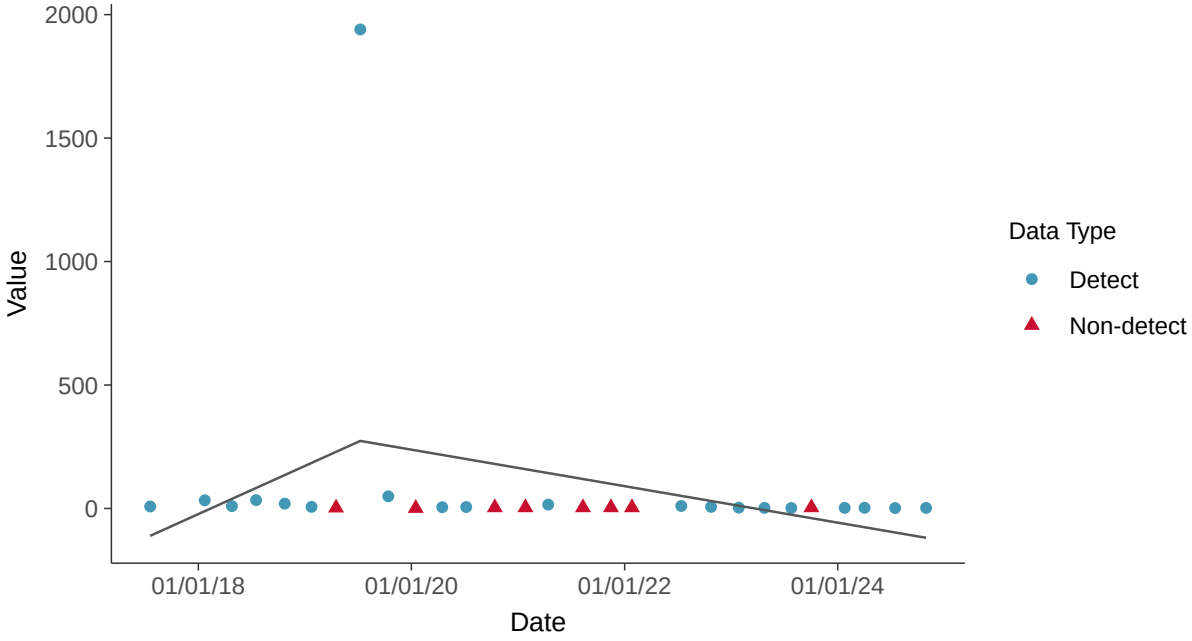
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear

Chromium, MW-7R (ug/L)

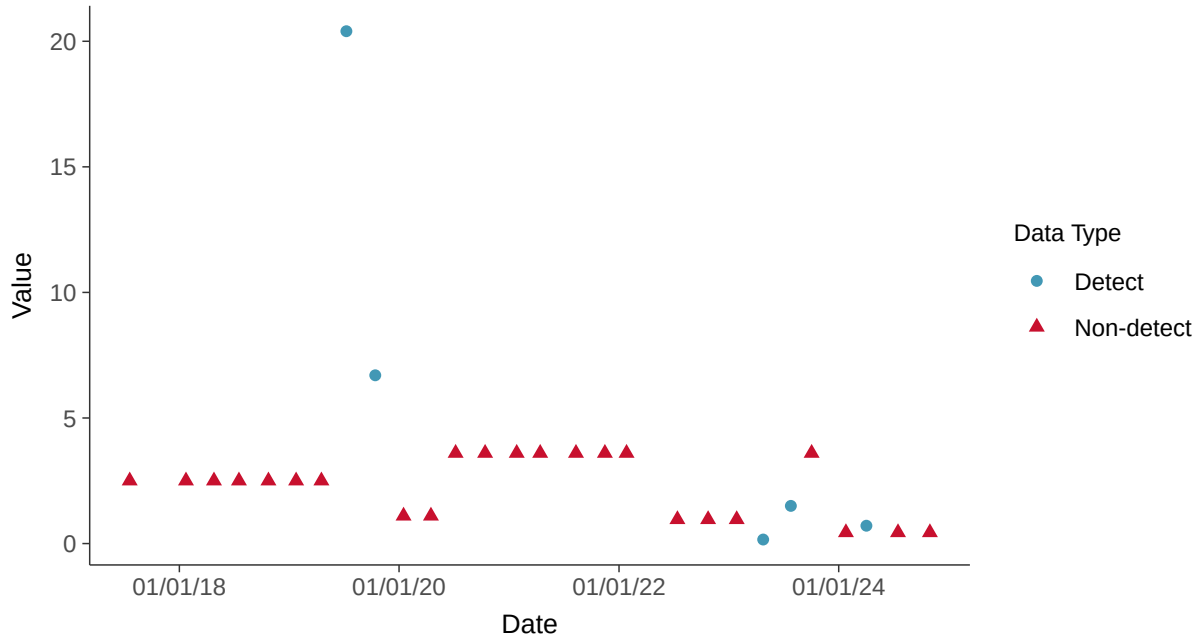


App. IV: Cobalt, MW-7R

ID: 07_03_110

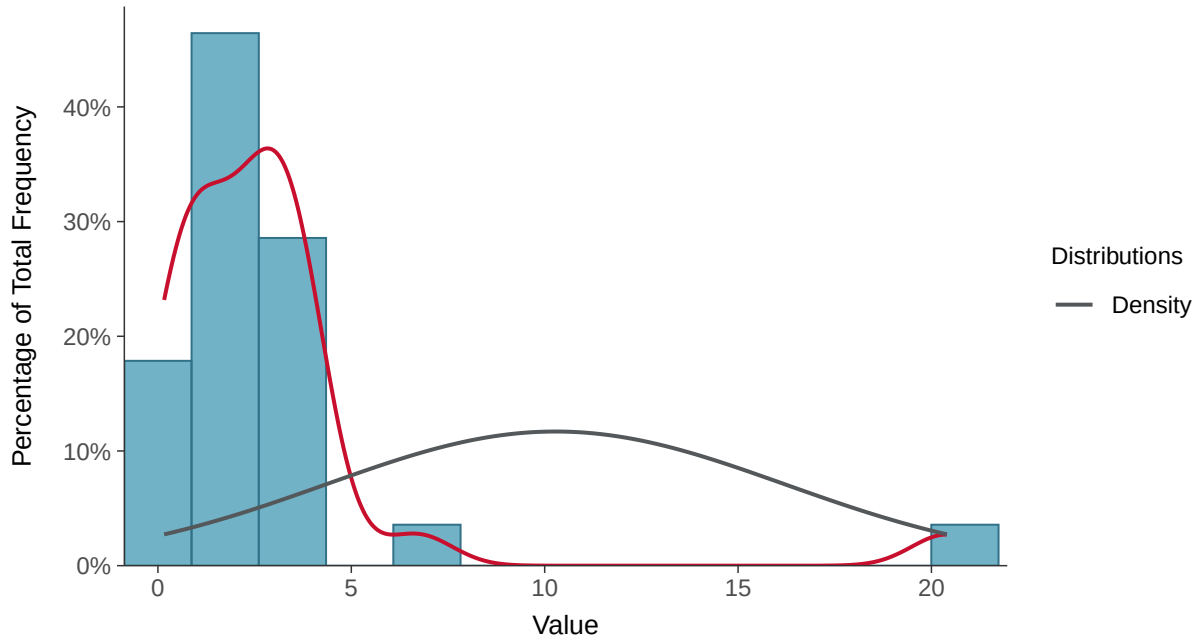
Scatter Plot

Cobalt, MW-7R (ug/L)



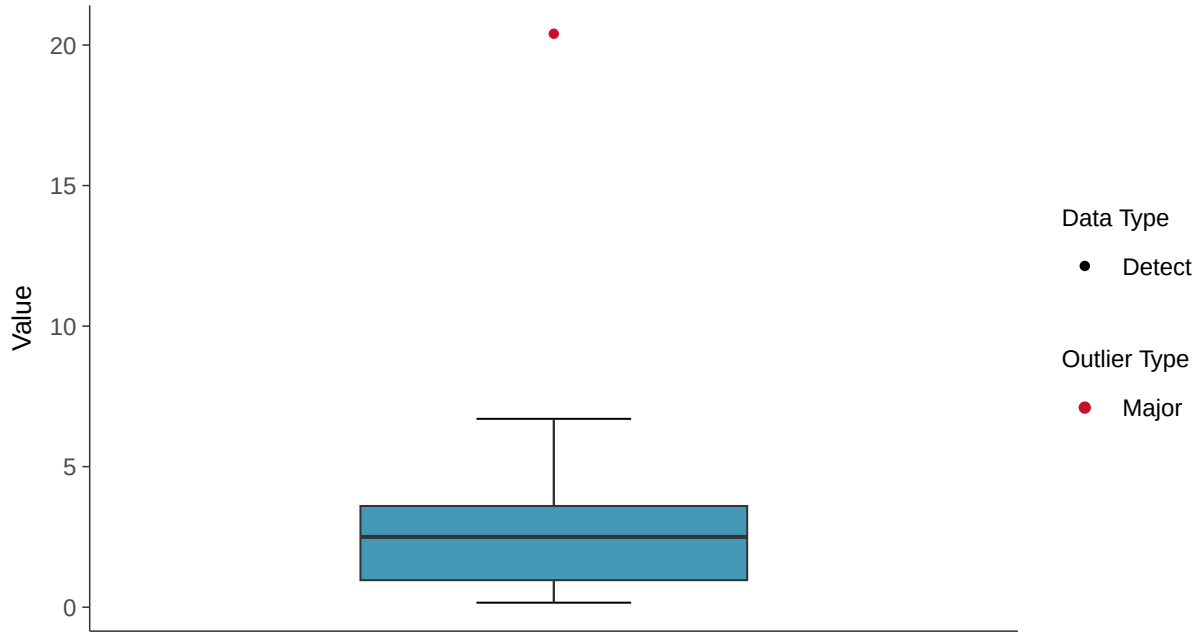
Histogram

Cobalt, MW-7R (ug/L)



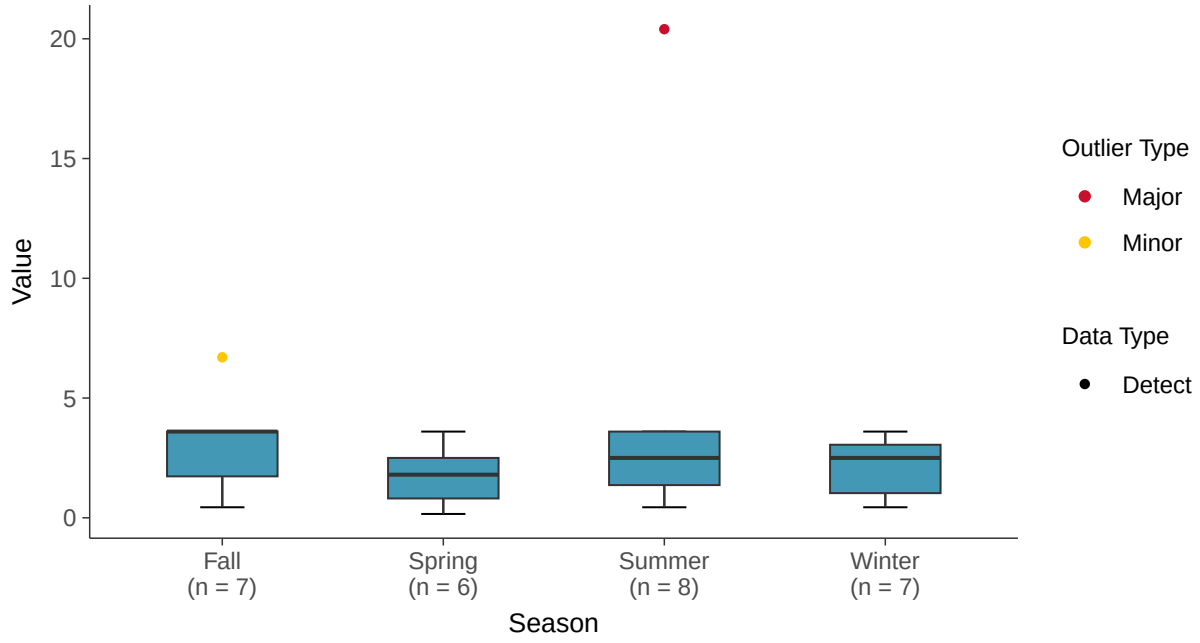
Boxplot

Cobalt, MW-7R (ug/L)



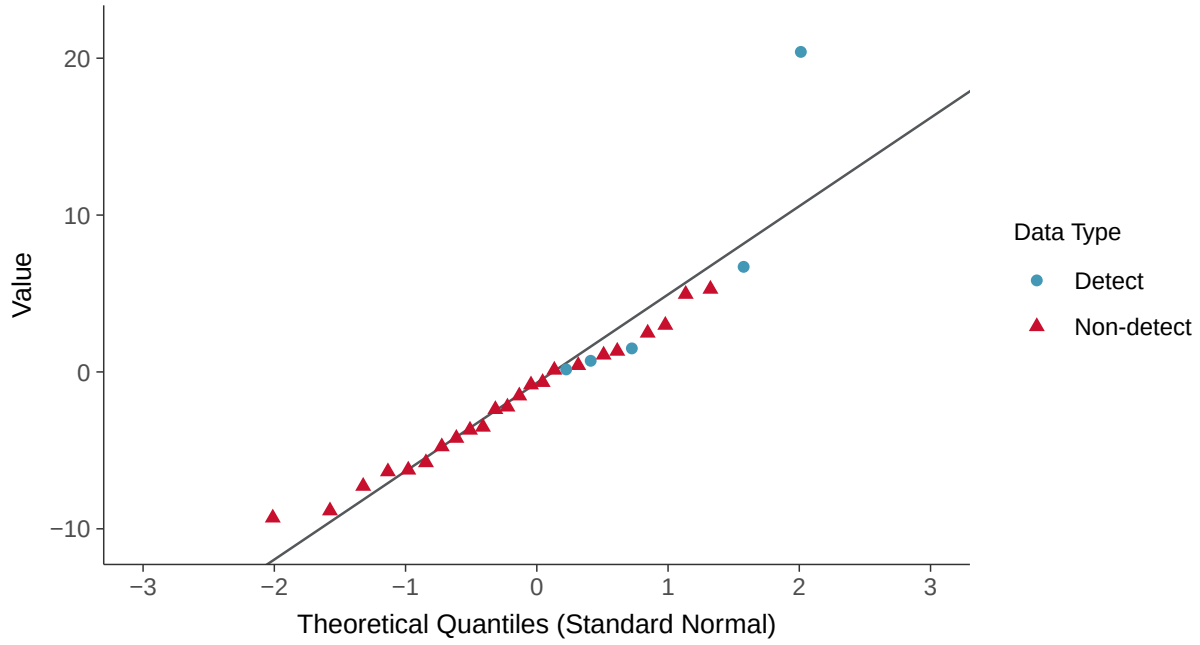
Boxplot by Season

Cobalt, MW-7R (ug/L)



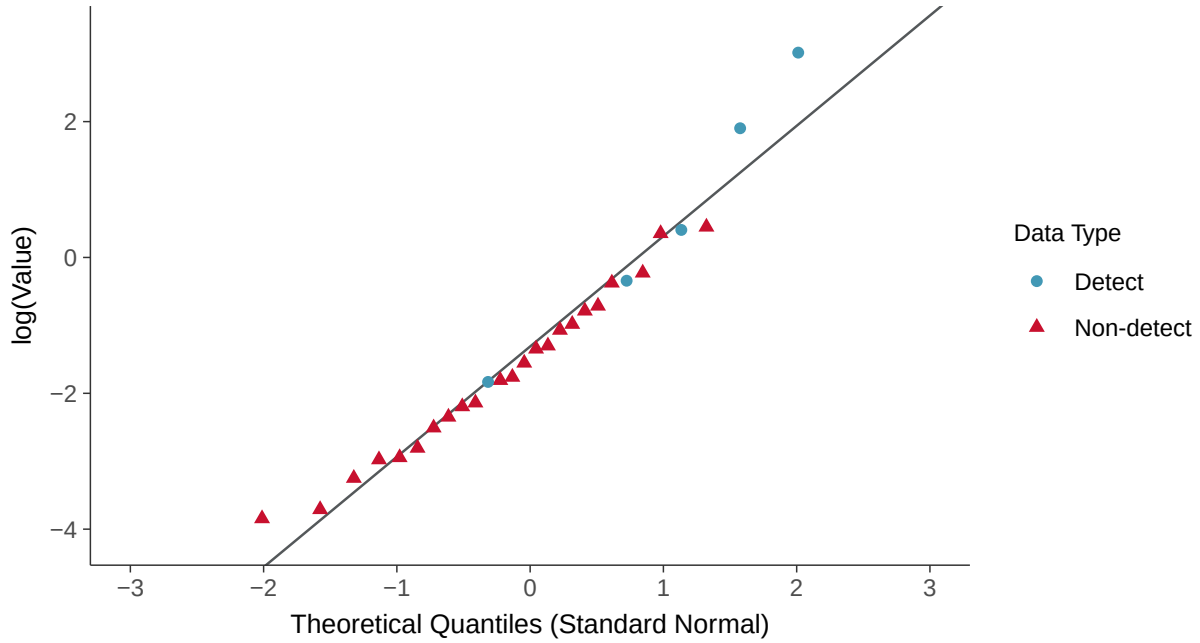
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



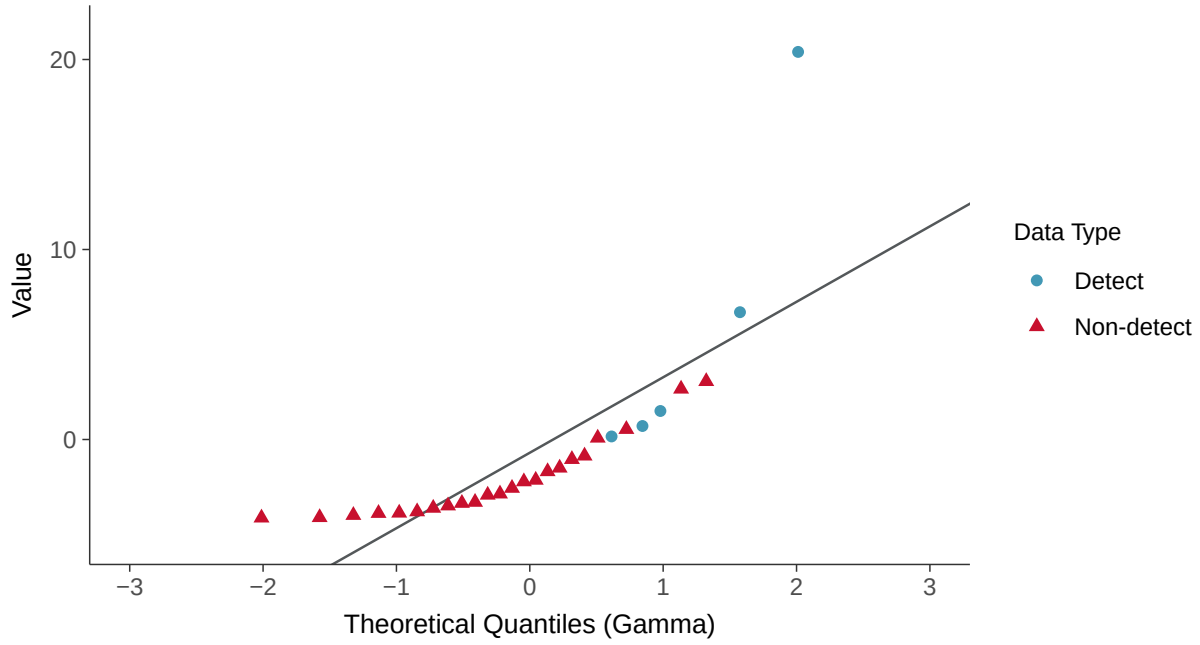
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



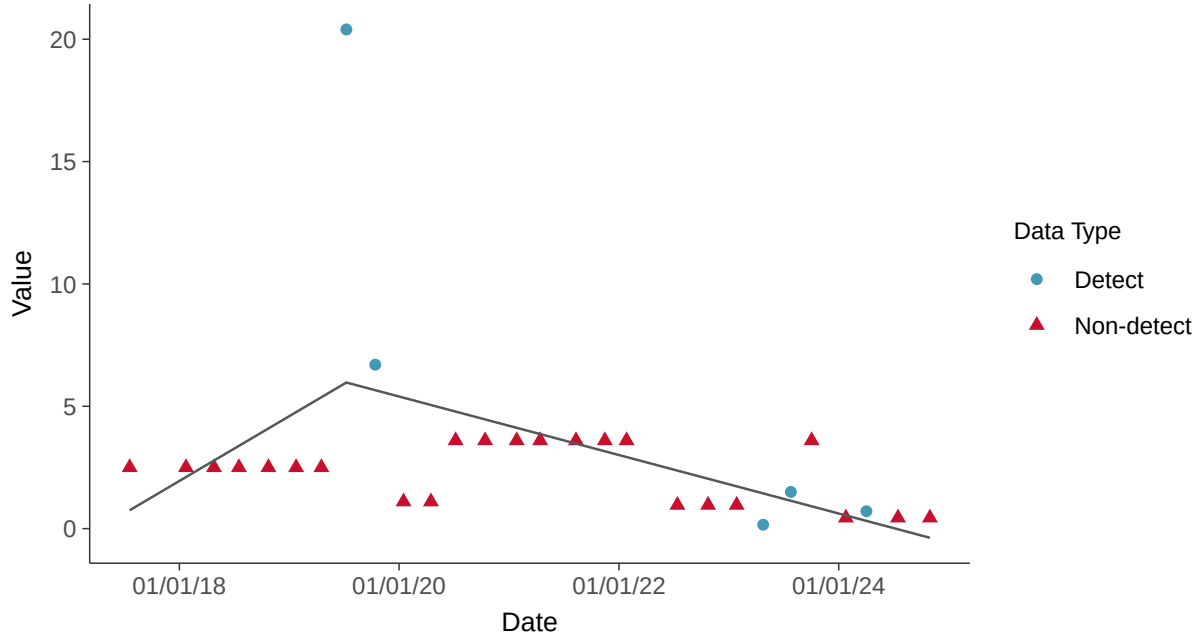
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-7R (ug/L)



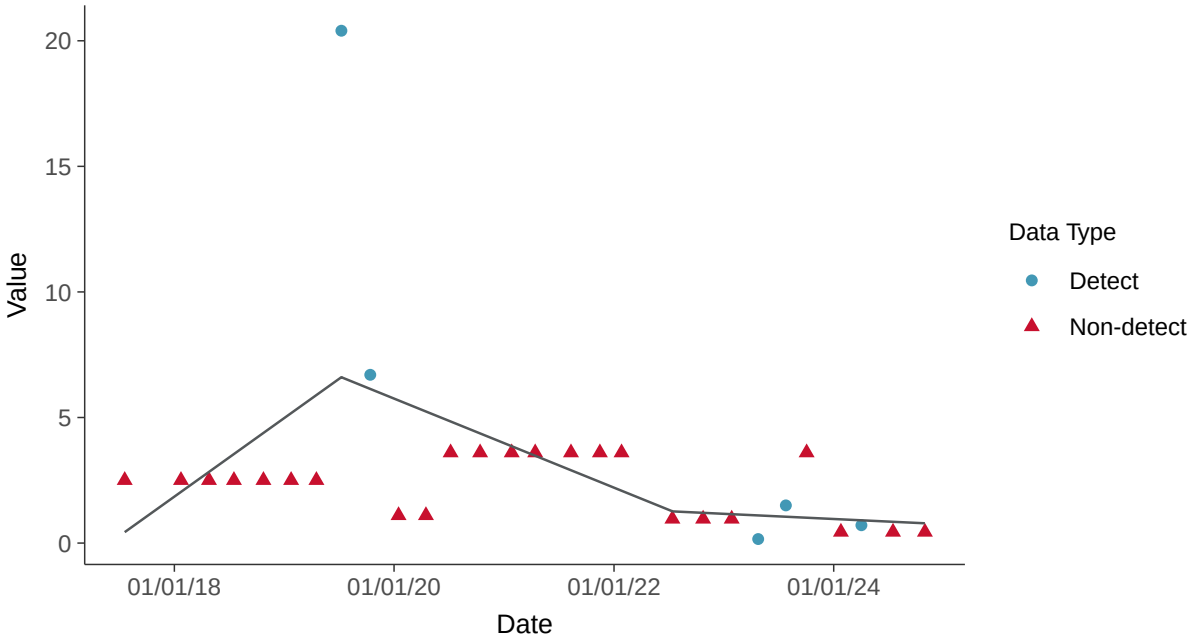
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-7R (ug/L)

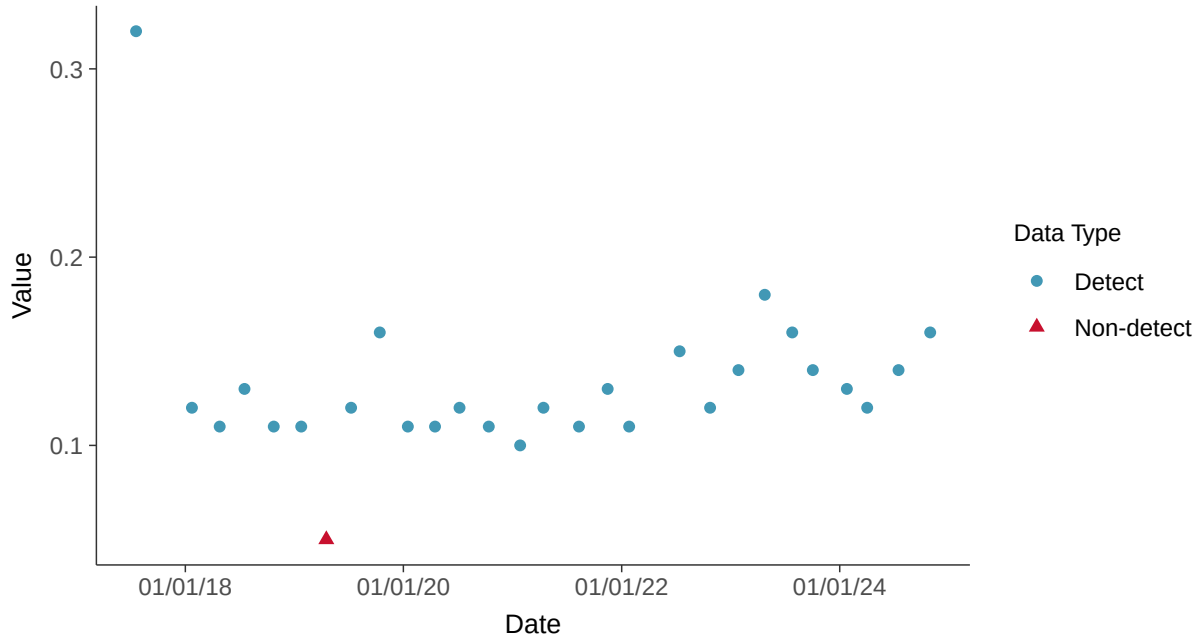


App. IV: Fluoride, MW-7R

ID: 07_03_112

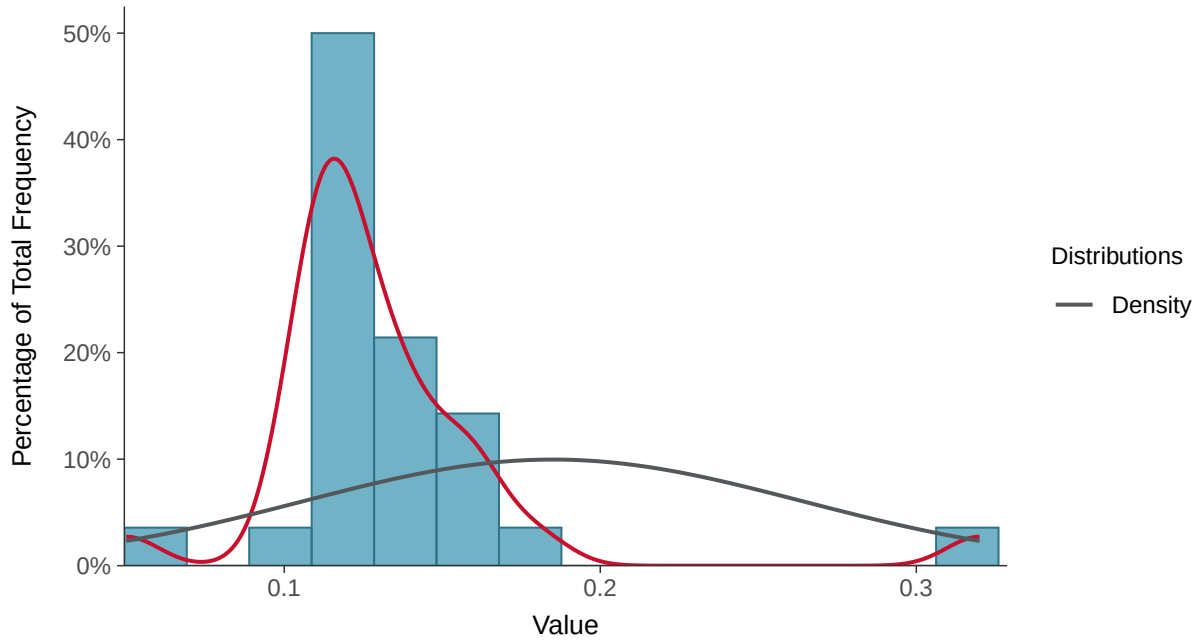
Scatter Plot

Fluoride, MW-7R (mg/L)



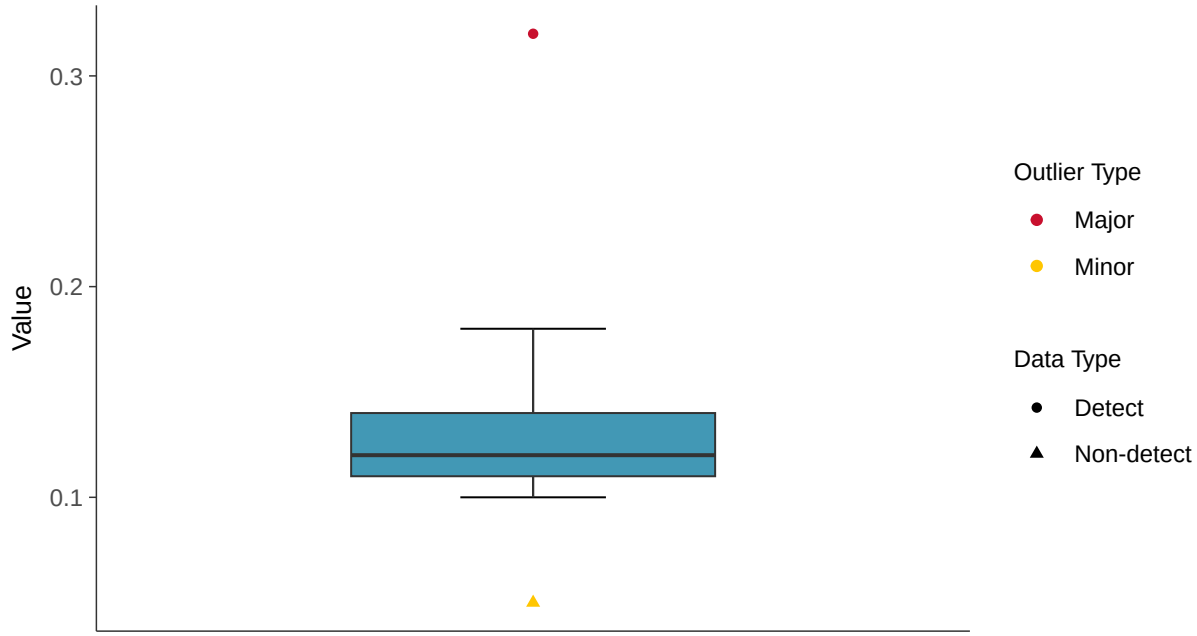
Histogram

Fluoride, MW-7R (mg/L)



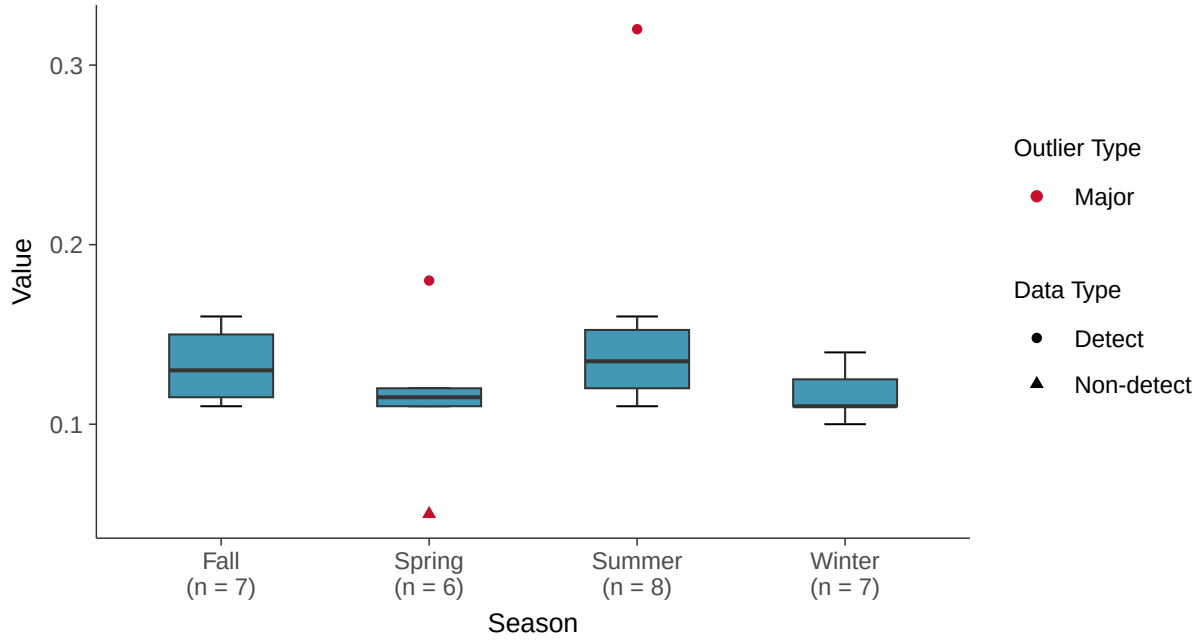
Boxplot

Fluoride, MW-7R (mg/L)



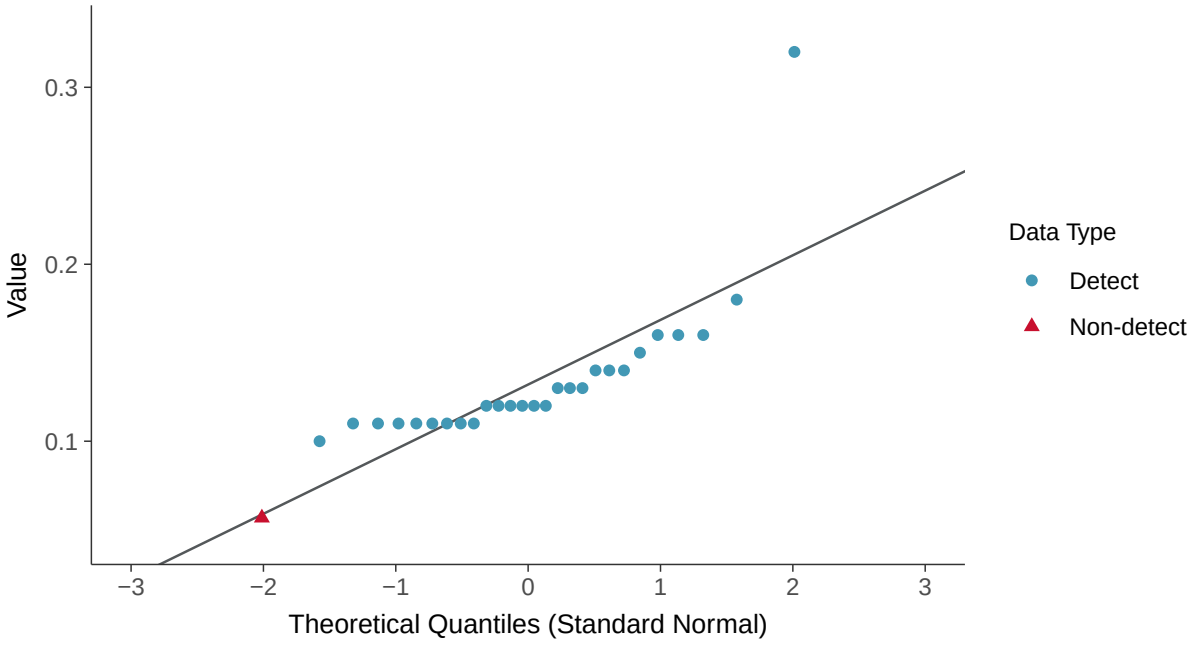
Boxplot by Season

Fluoride, MW-7R (mg/L)



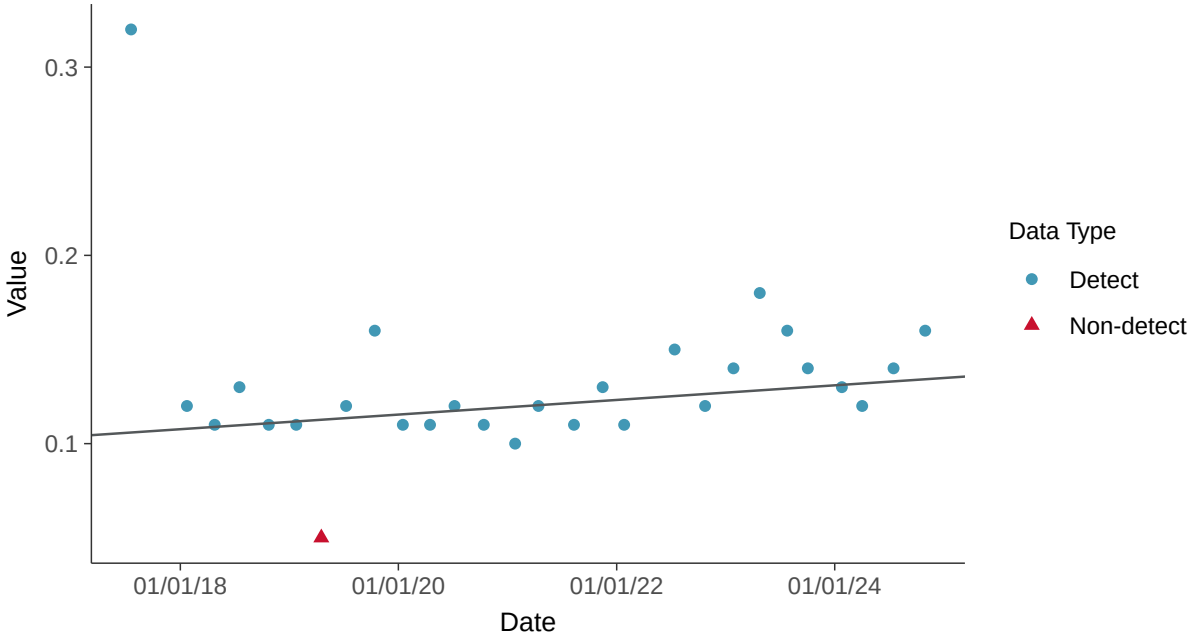
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-7R (mg/L)



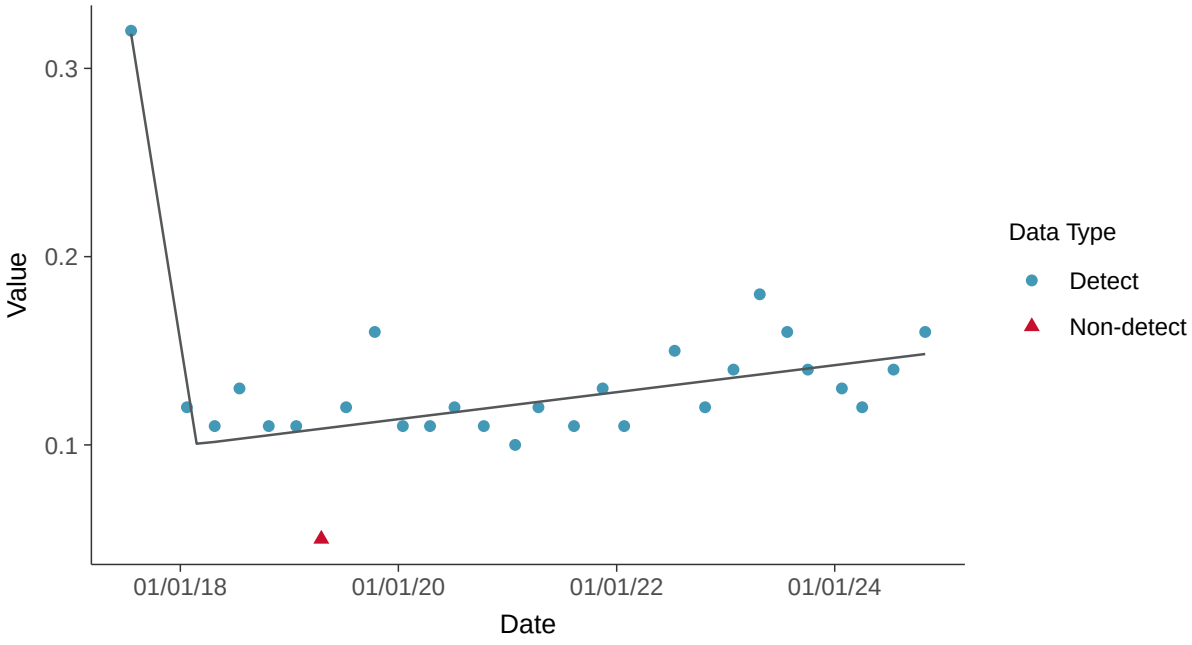
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Fluoride, MW-7R (mg/L)



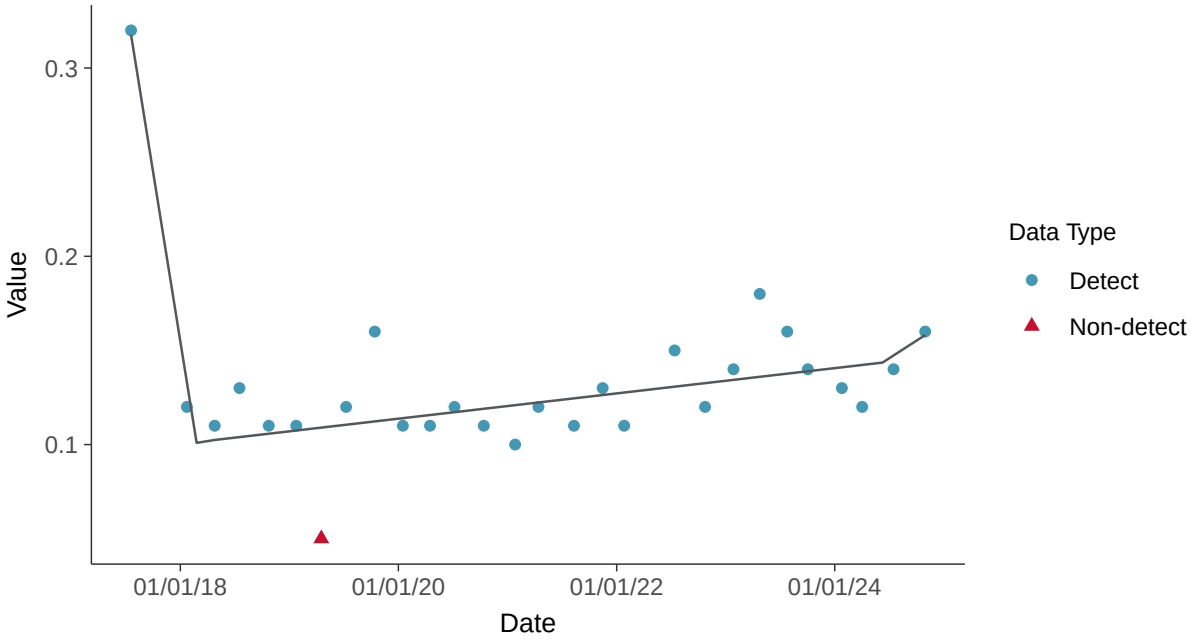
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-7R (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-7R (mg/L)

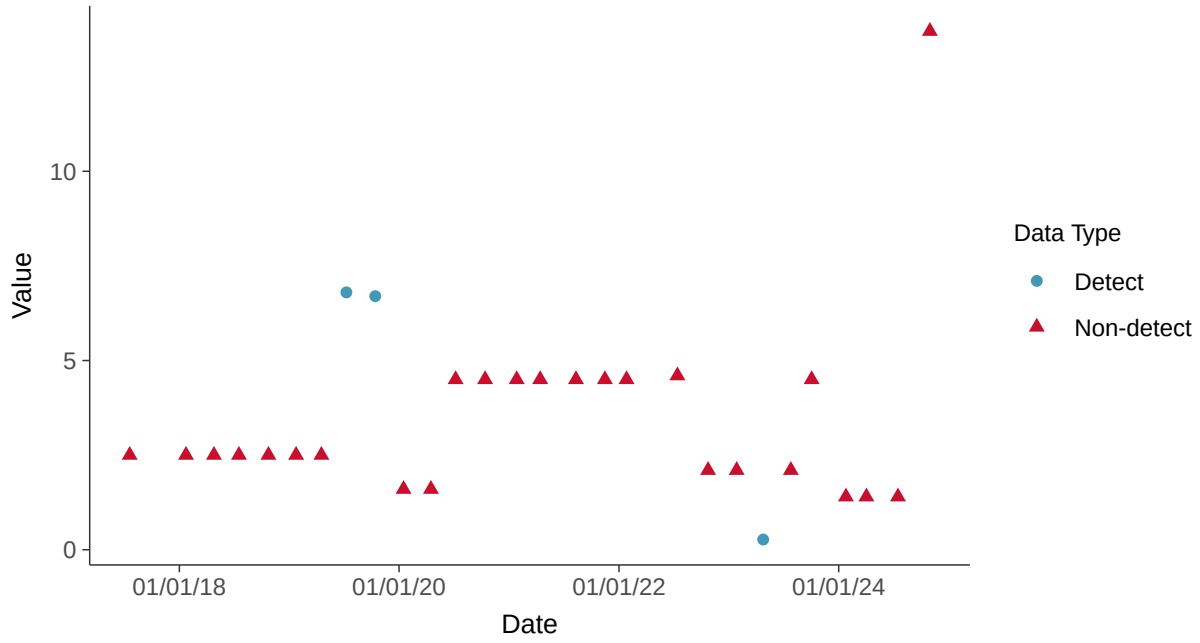


App. IV: Lead, MW-7R

ID: 07_03_113

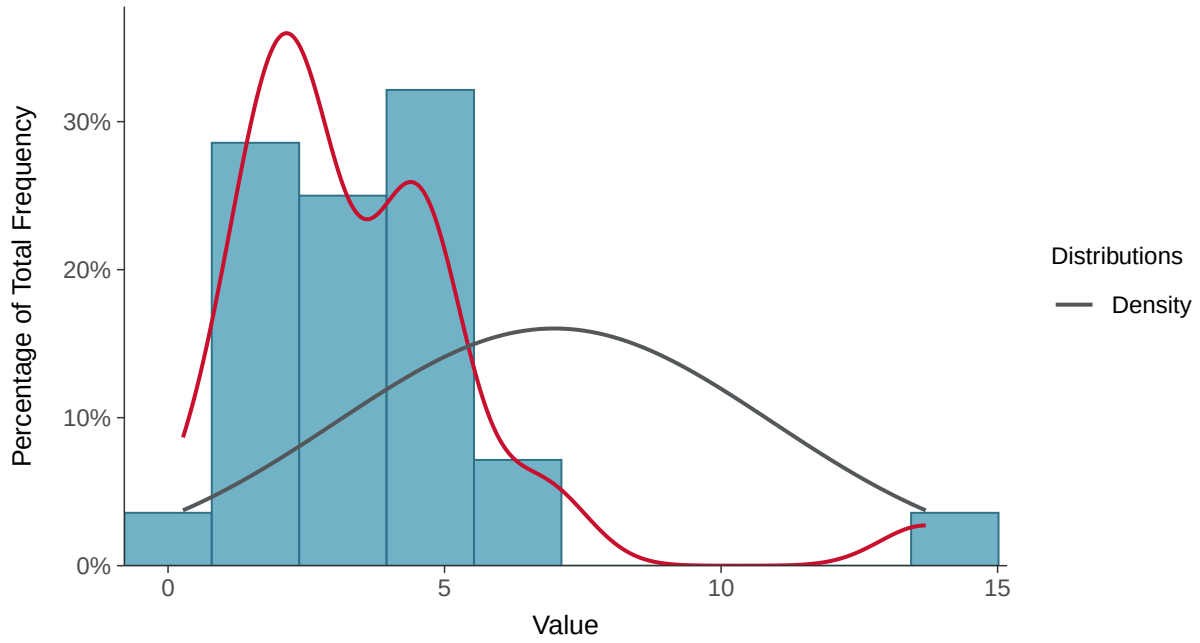
Scatter Plot

Lead, MW-7R (ug/L)



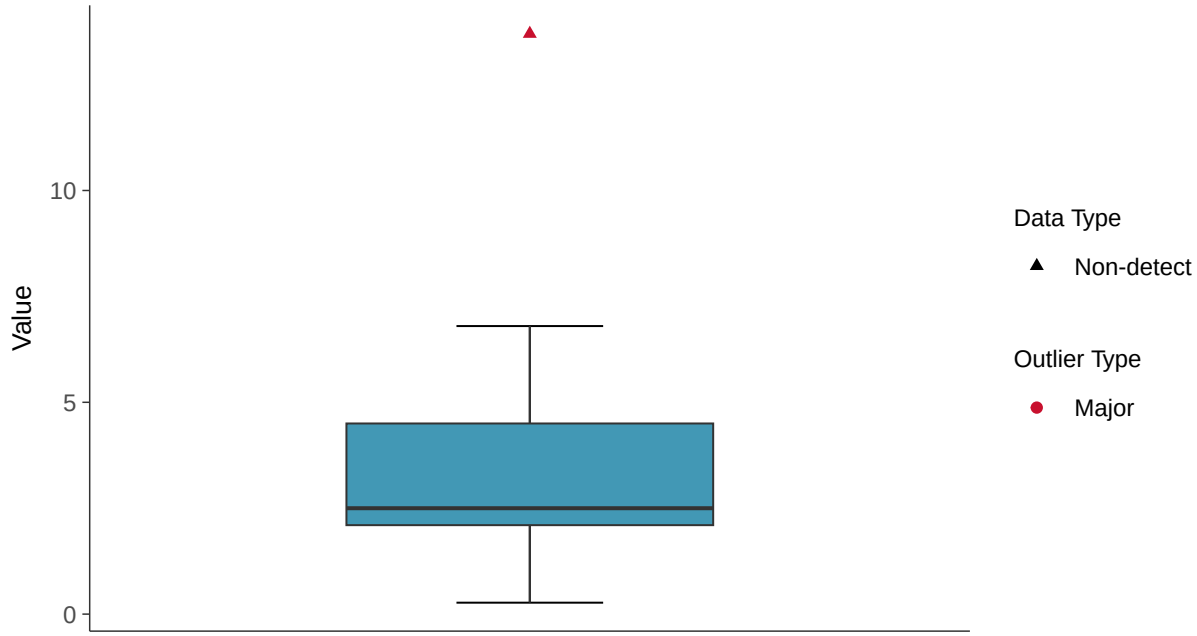
Histogram

Lead, MW-7R (ug/L)



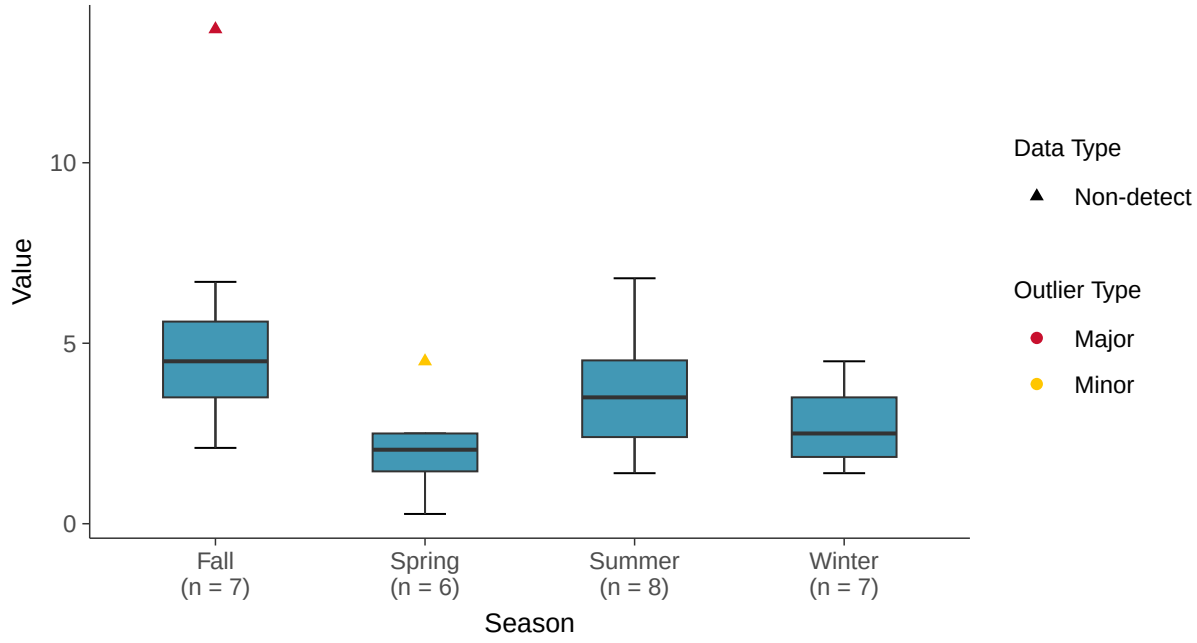
Boxplot

Lead, MW-7R (ug/L)



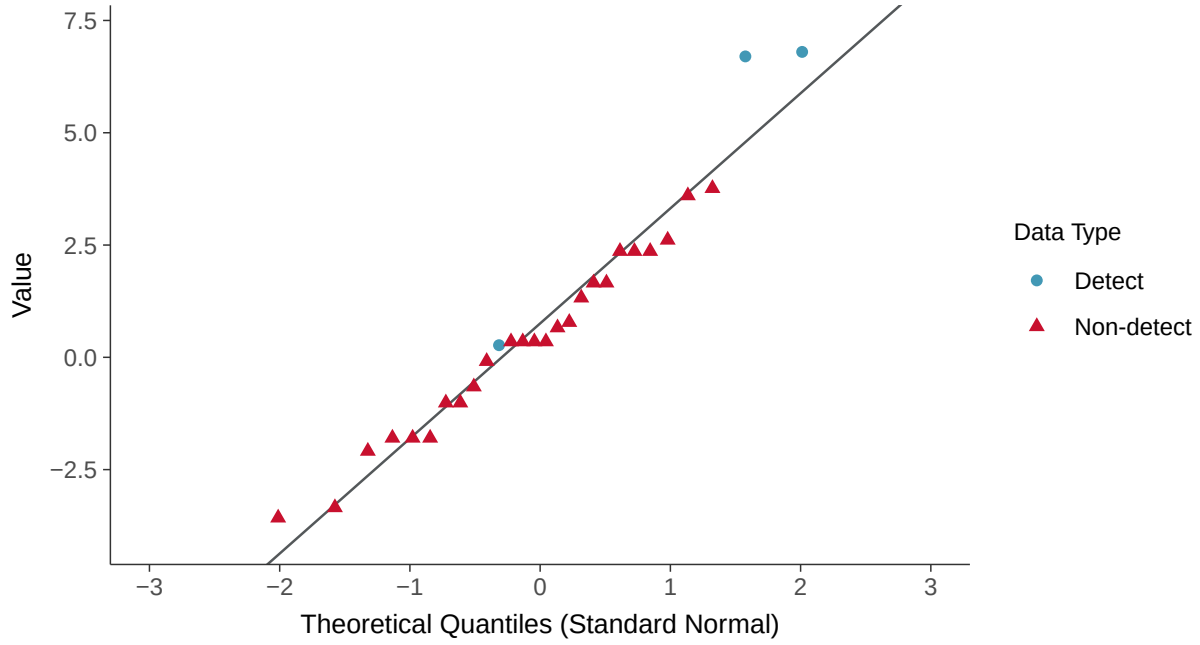
Boxplot by Season

Lead, MW-7R (ug/L)



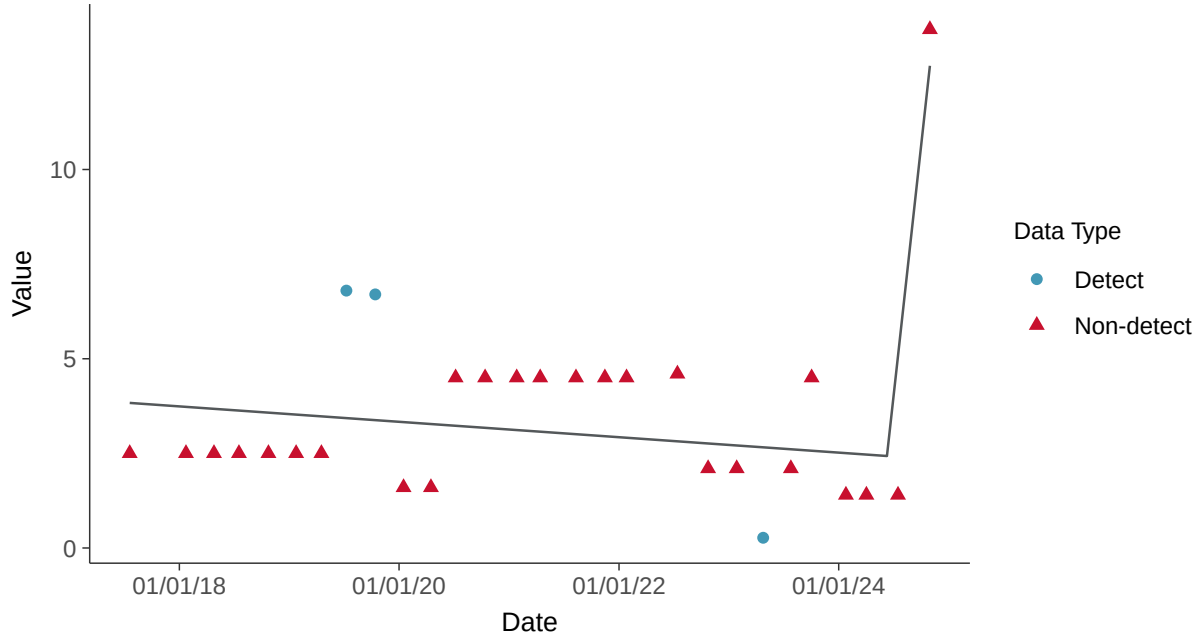
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-7R (ug/L)



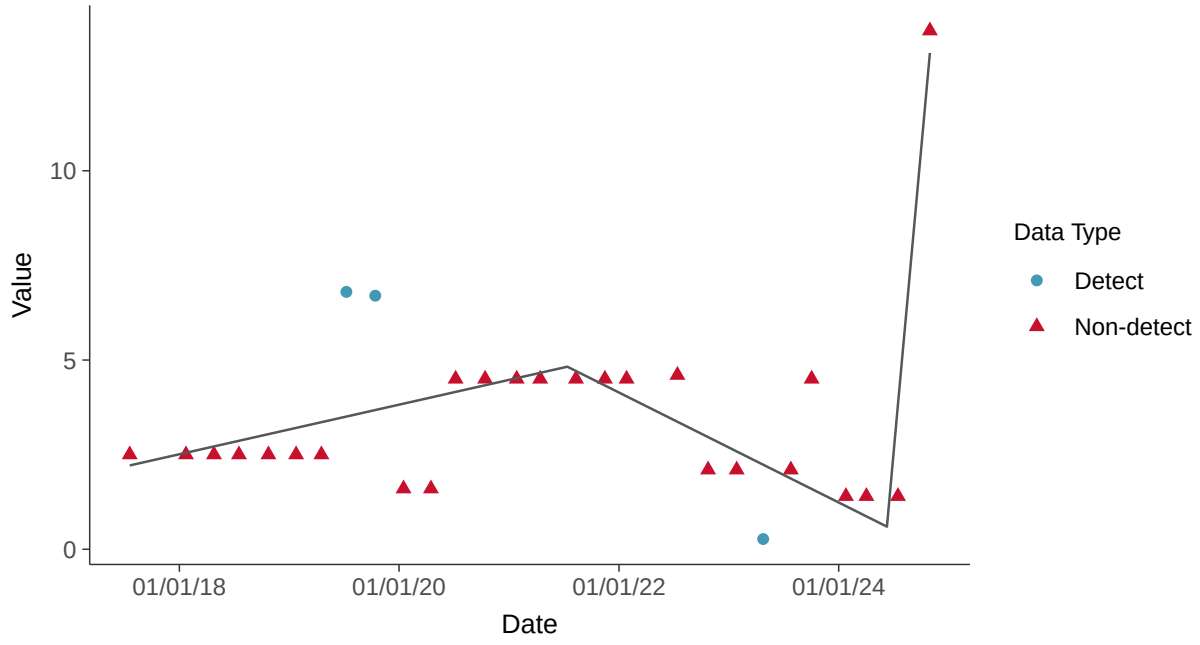
Trend Regression: Piecewise Linear-Linear

Lead, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Lead, MW-7R (ug/L)

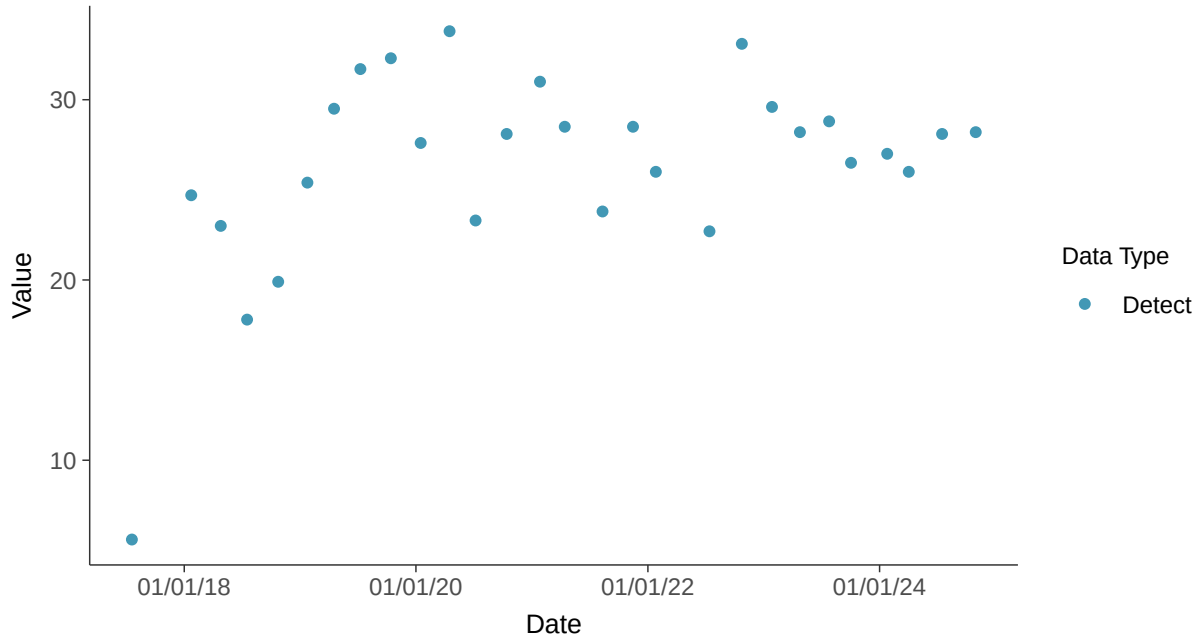


App. IV: Lithium, MW-7R

ID: 07_03_114

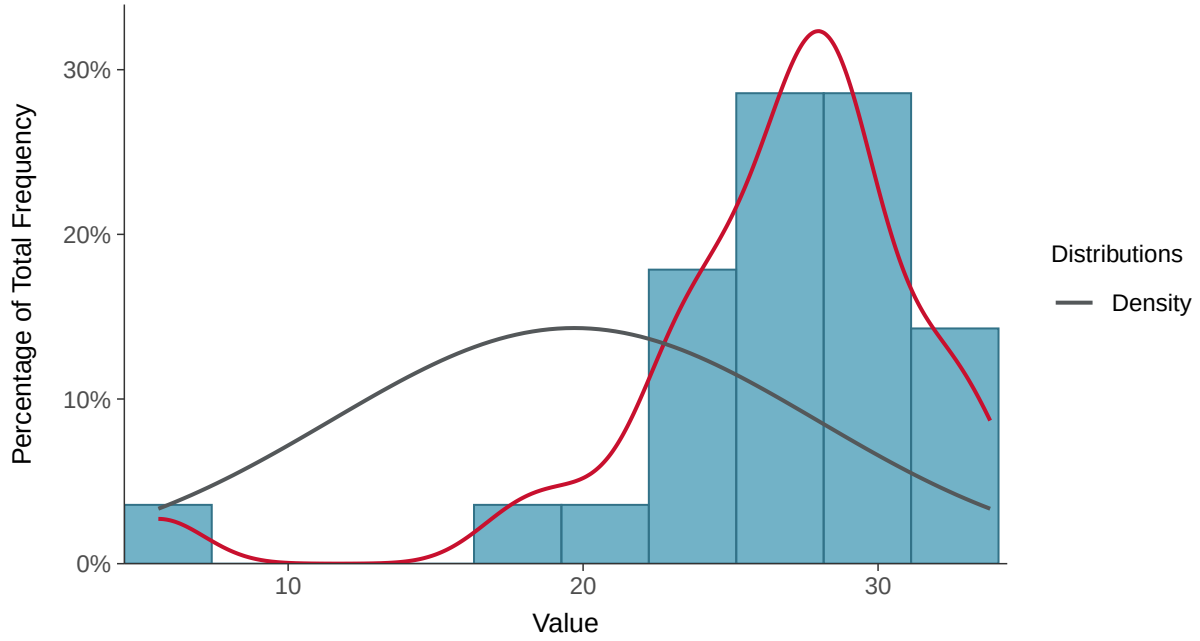
Scatter Plot

Lithium, MW-7R (ug/L)



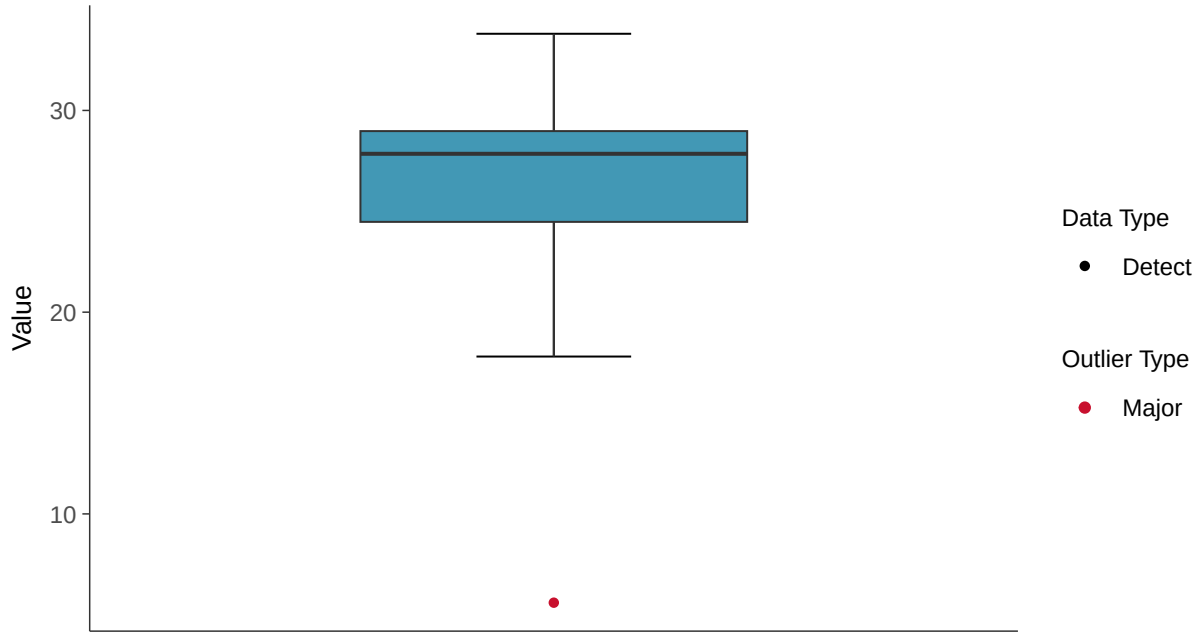
Histogram

Lithium, MW-7R (ug/L)



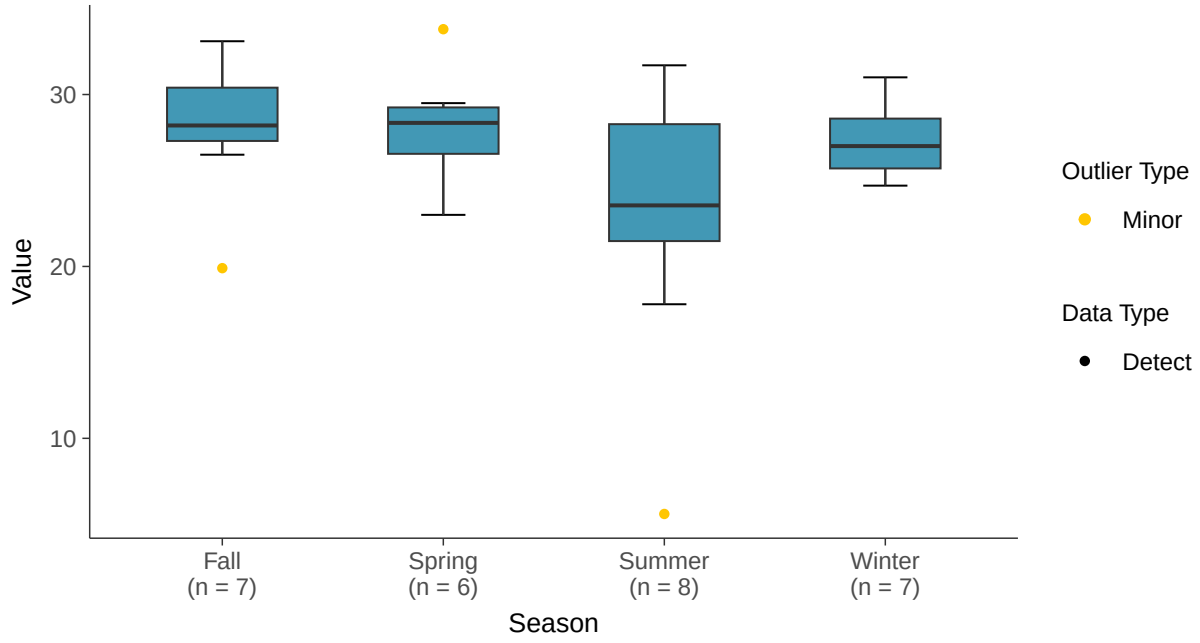
Boxplot

Lithium, MW-7R (ug/L)



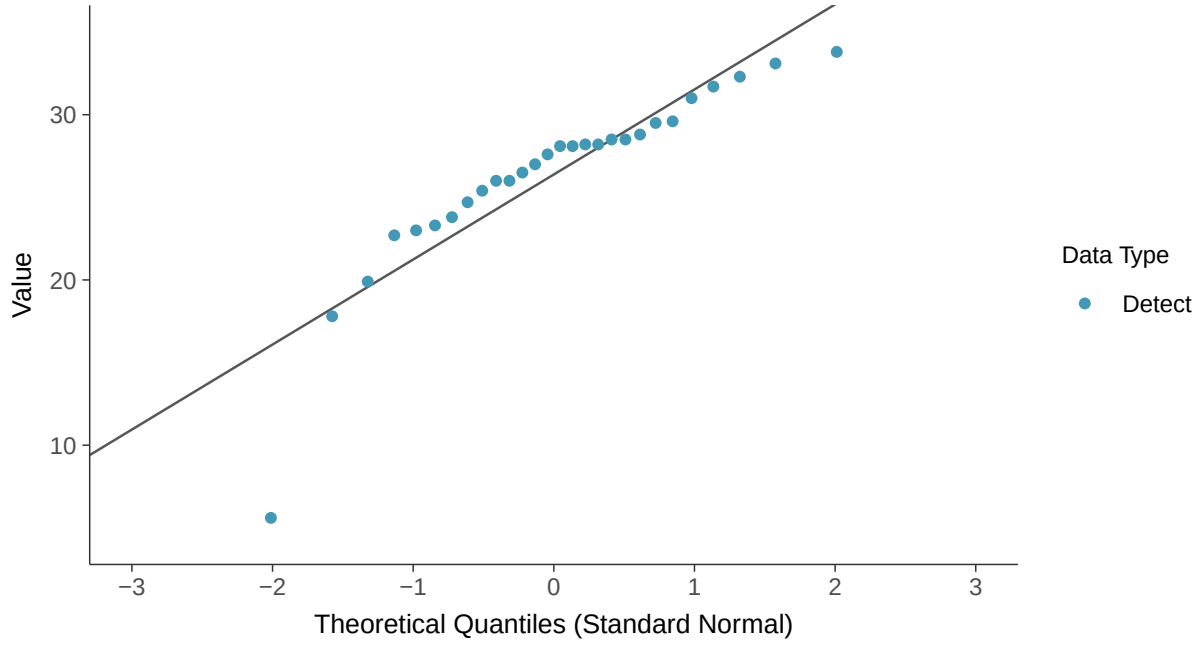
Boxplot by Season

Lithium, MW-7R (ug/L)



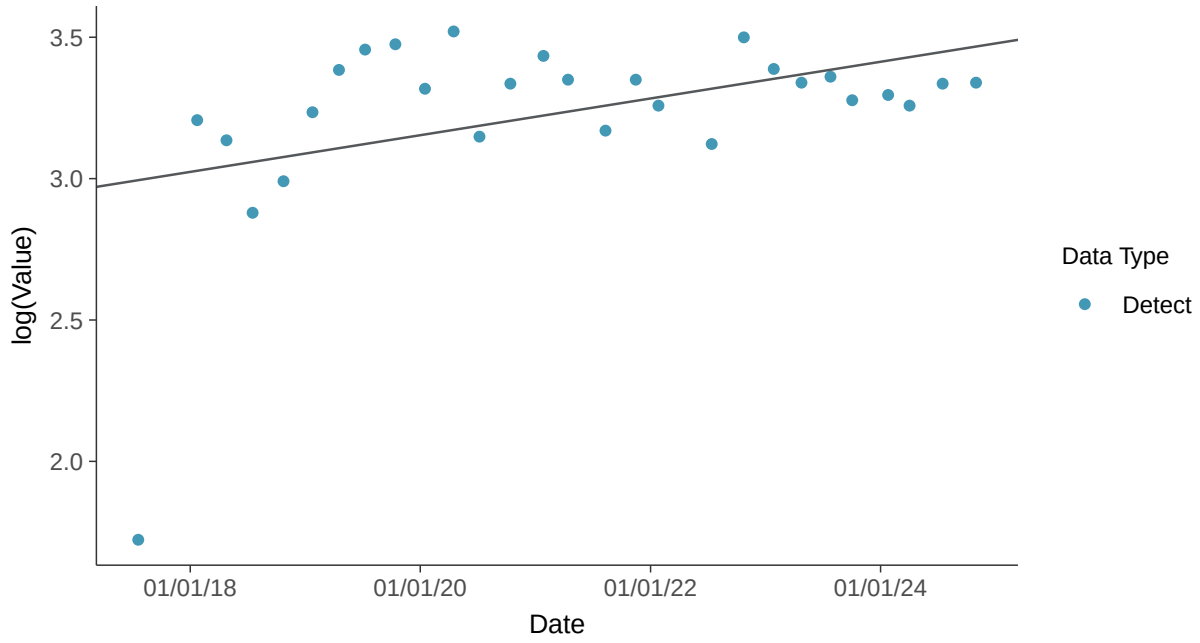
Normal Q-Q plot

Lithium, MW-7R (ug/L)



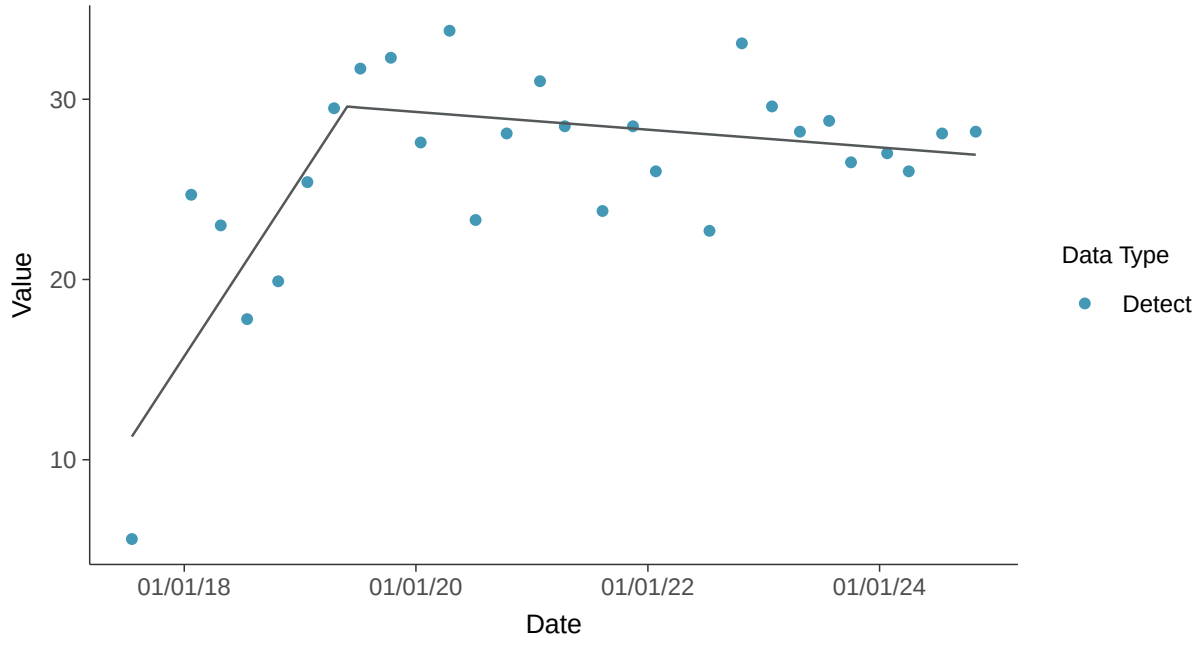
Trend Regression: Lognormal MLE

Lithium, MW-7R (ug/L)



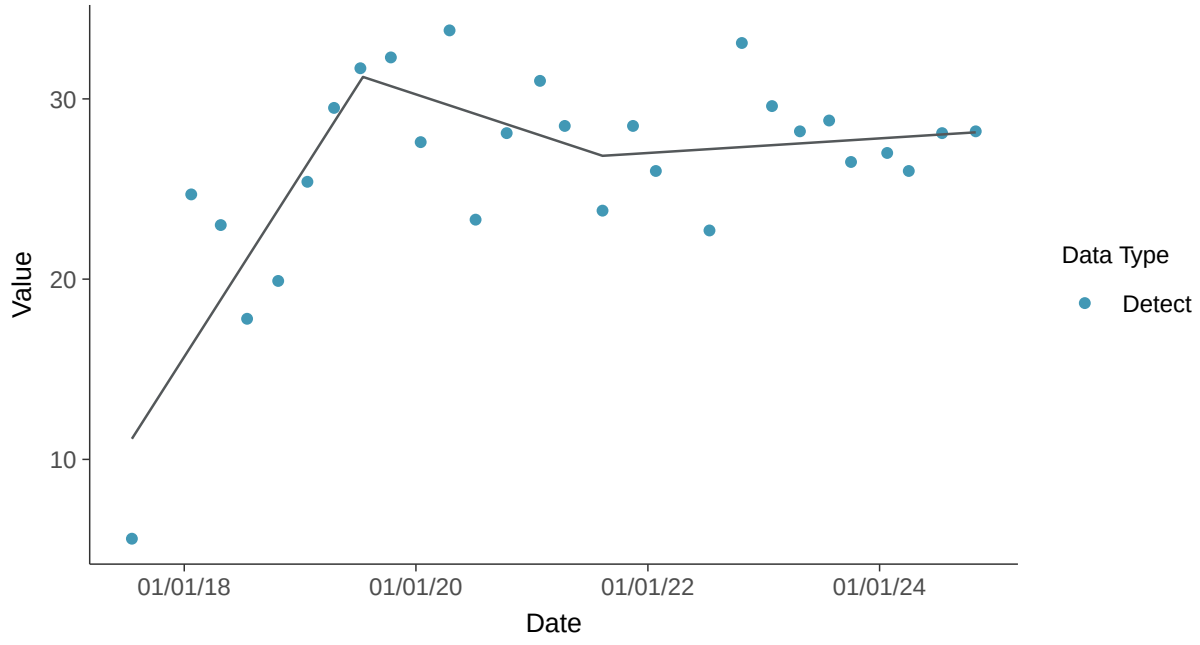
Trend Regression: Piecewise Linear-Linear

Lithium, MW-7R (ug/L)



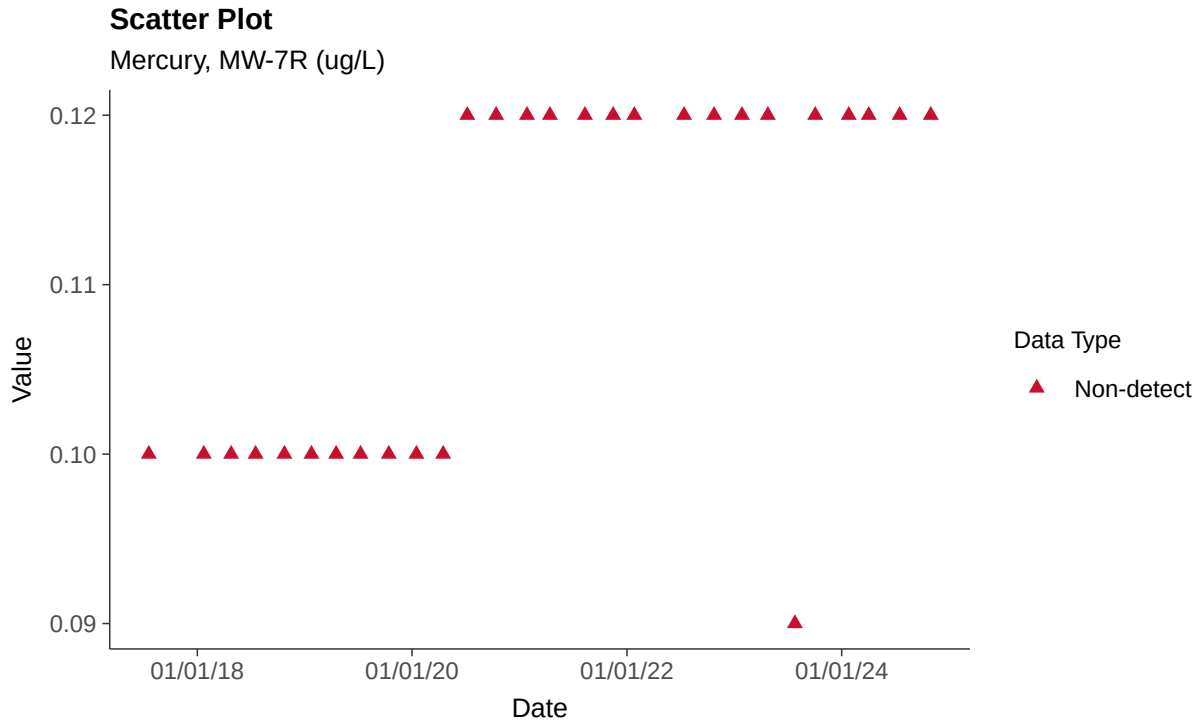
Trend Regression: Piecewise Linear-Linear-Linear

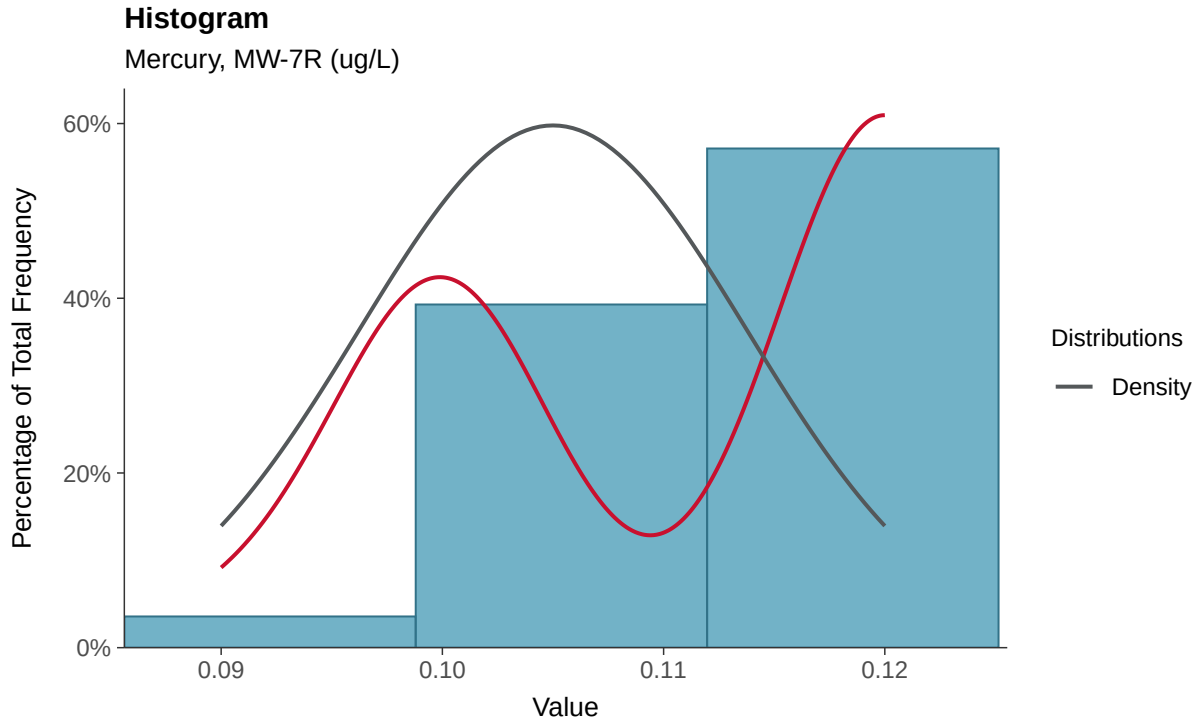
Lithium, MW-7R (ug/L)



App. IV: Mercury, MW-7R

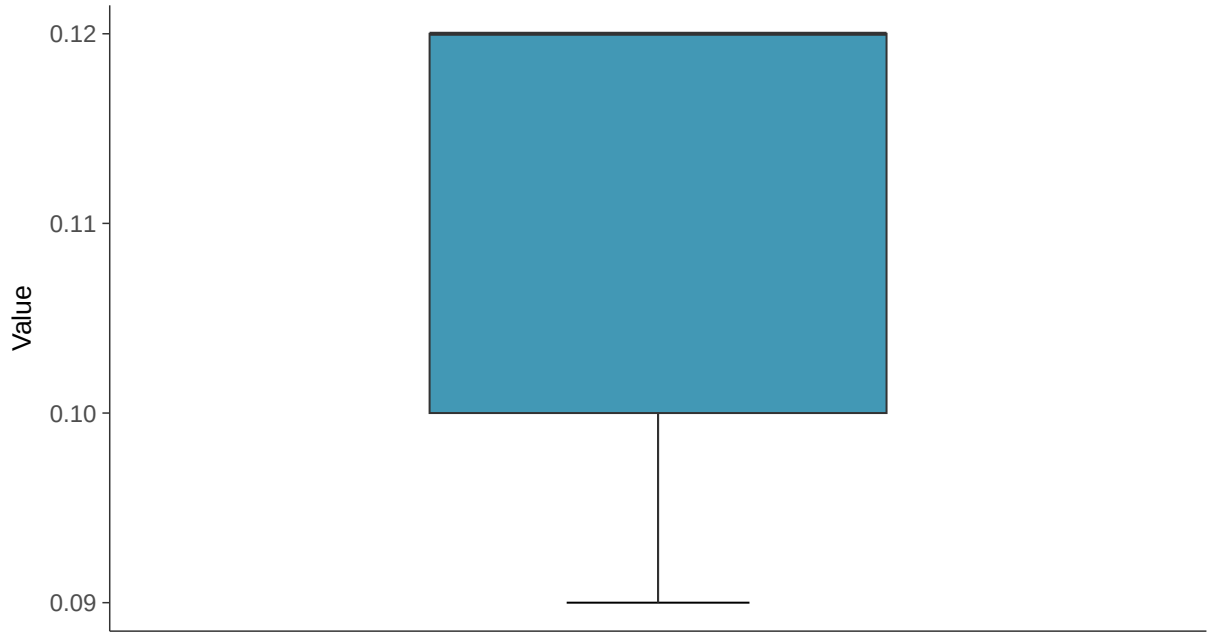
ID: 07_03_115





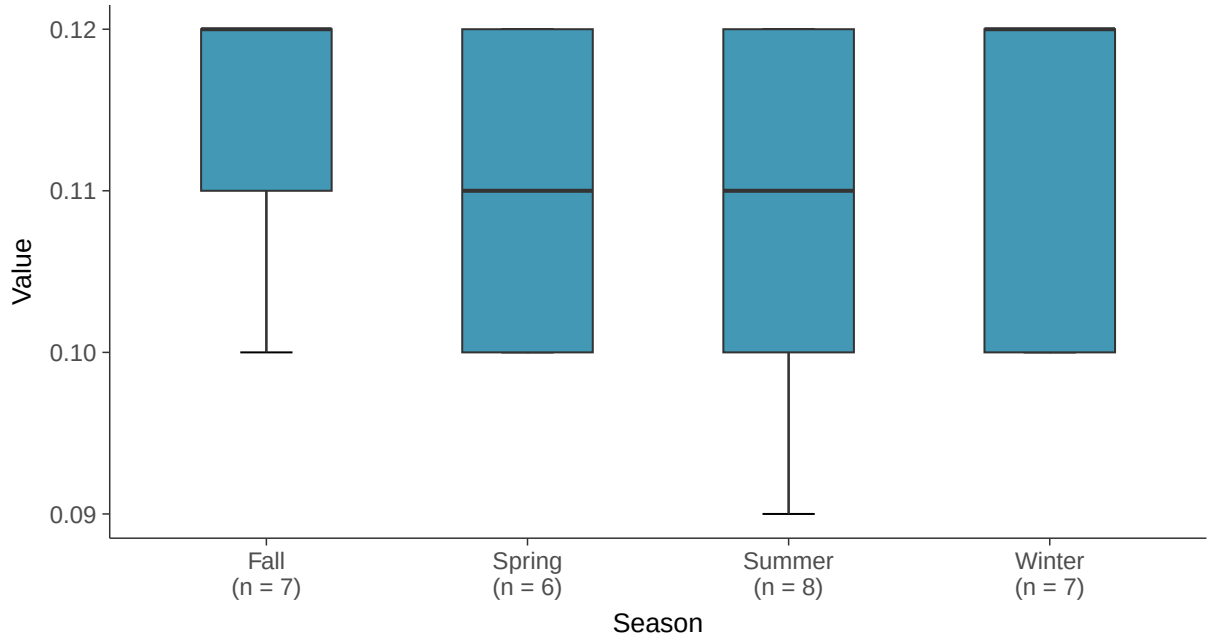
Boxplot

Mercury, MW-7R (ug/L)



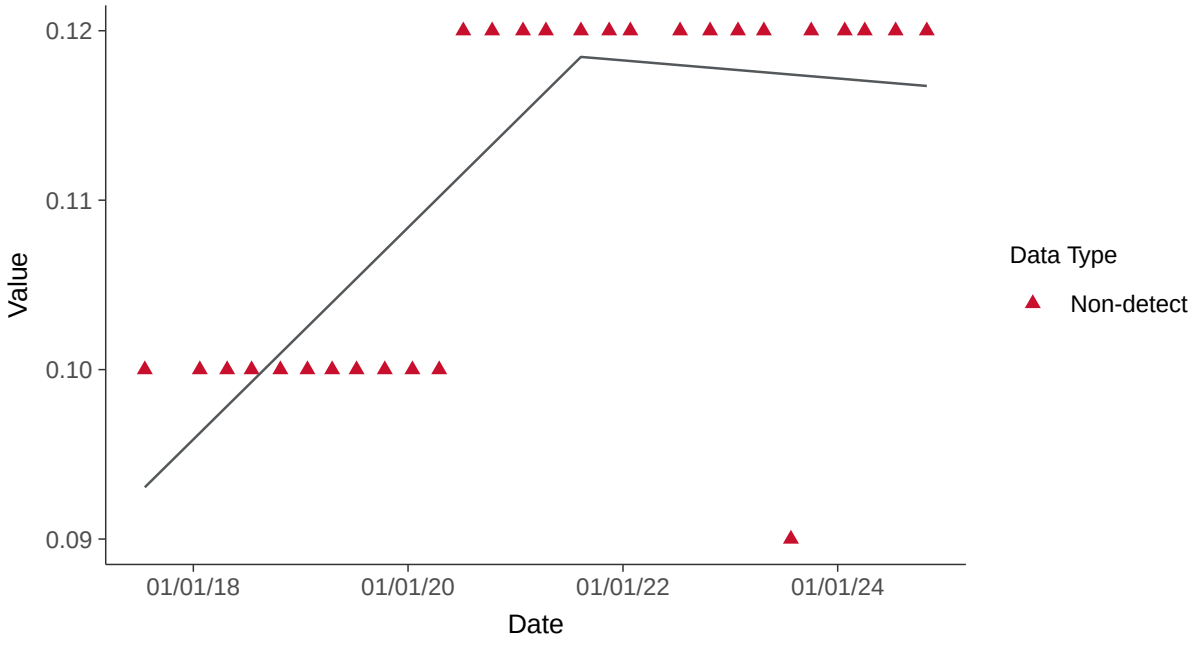
Boxplot by Season

Mercury, MW-7R (ug/L)



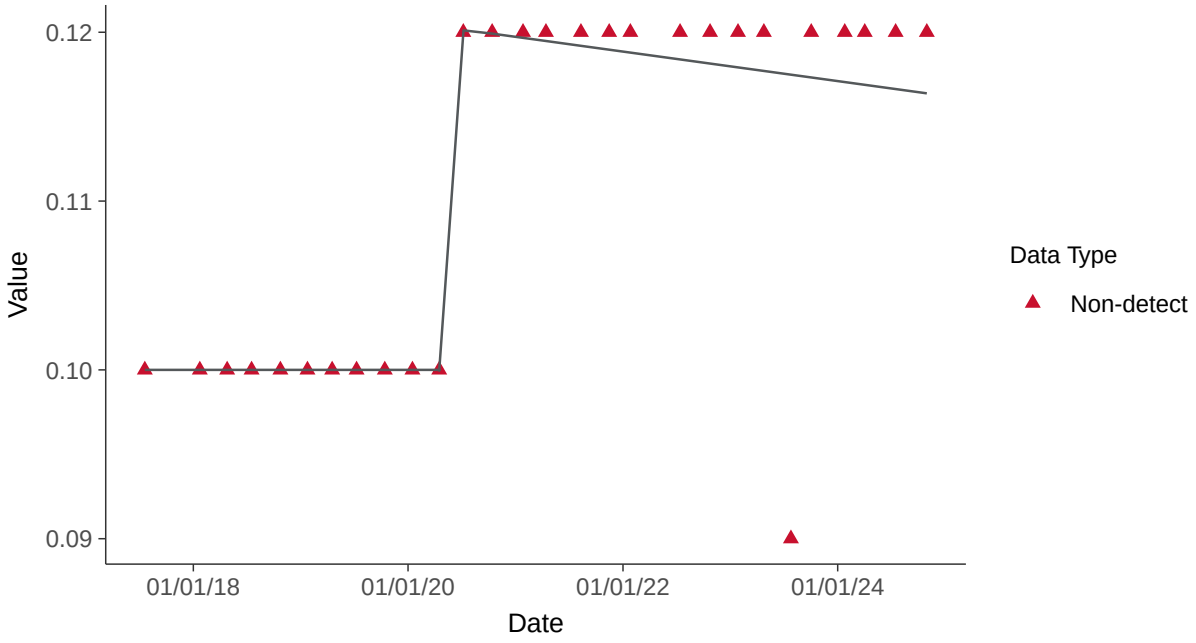
Trend Regression: Piecewise Linear-Linear

Mercury, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-7R (ug/L)

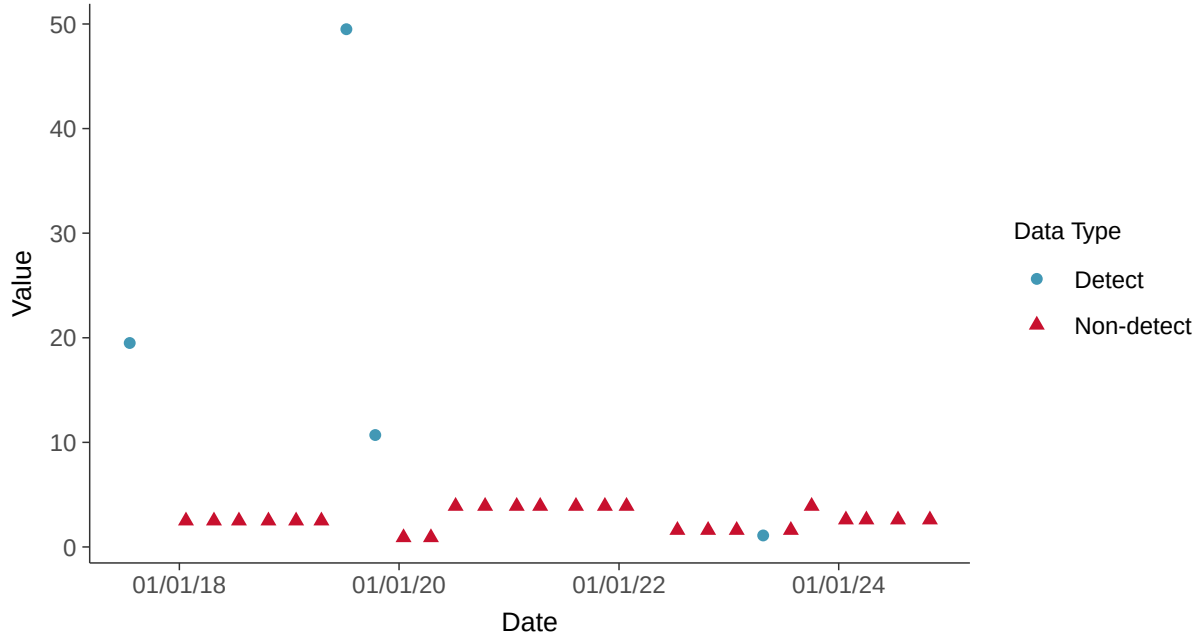


App. IV: Molybdenum, MW-7R

ID: 07_03_116

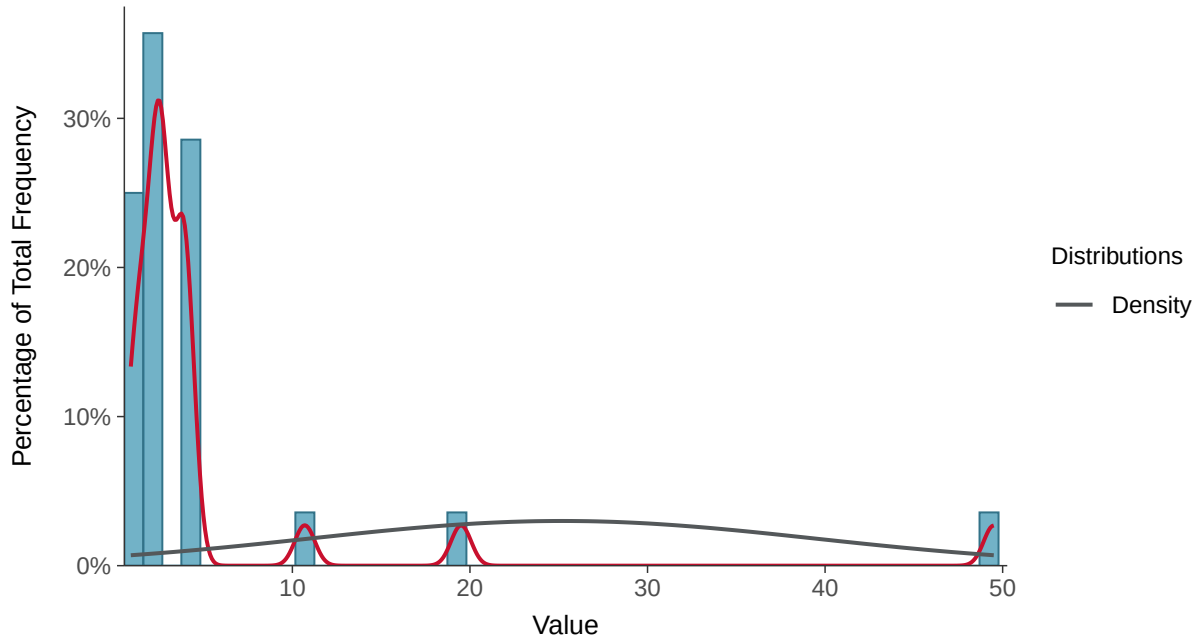
Scatter Plot

Molybdenum, MW-7R (ug/L)



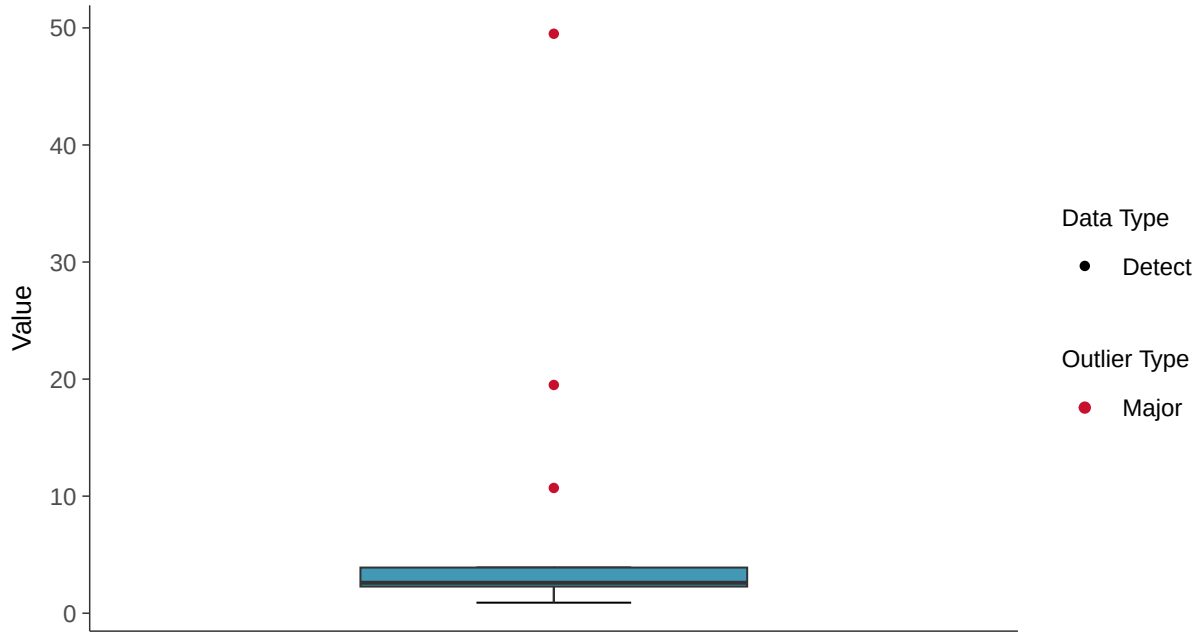
Histogram

Molybdenum, MW-7R (ug/L)



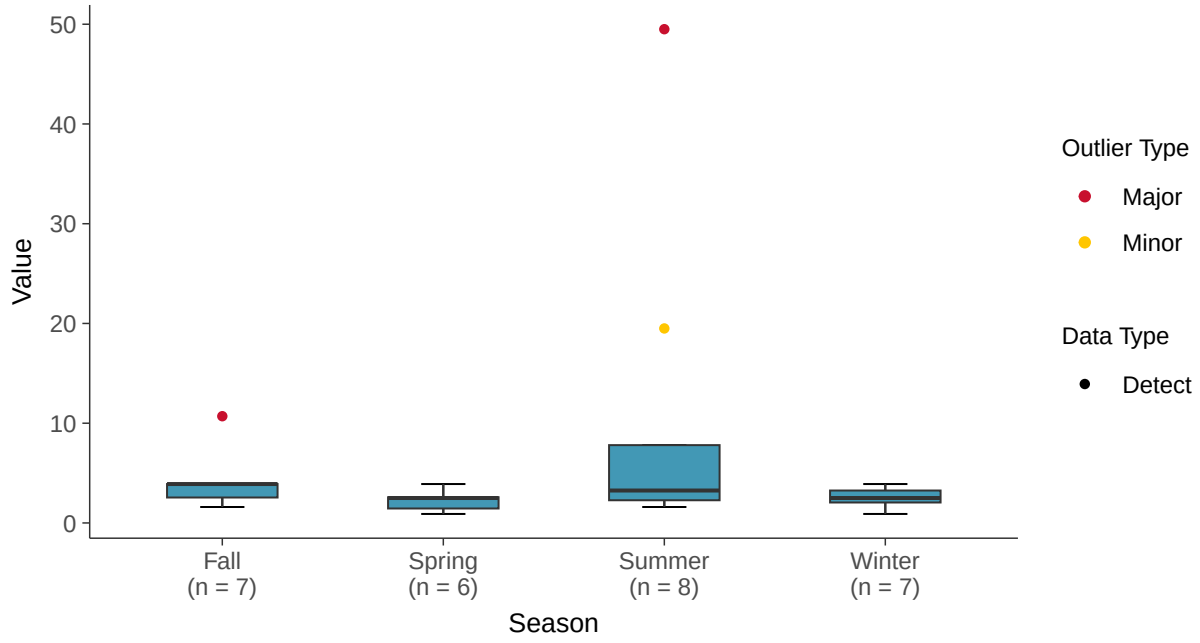
Boxplot

Molybdenum, MW-7R (ug/L)



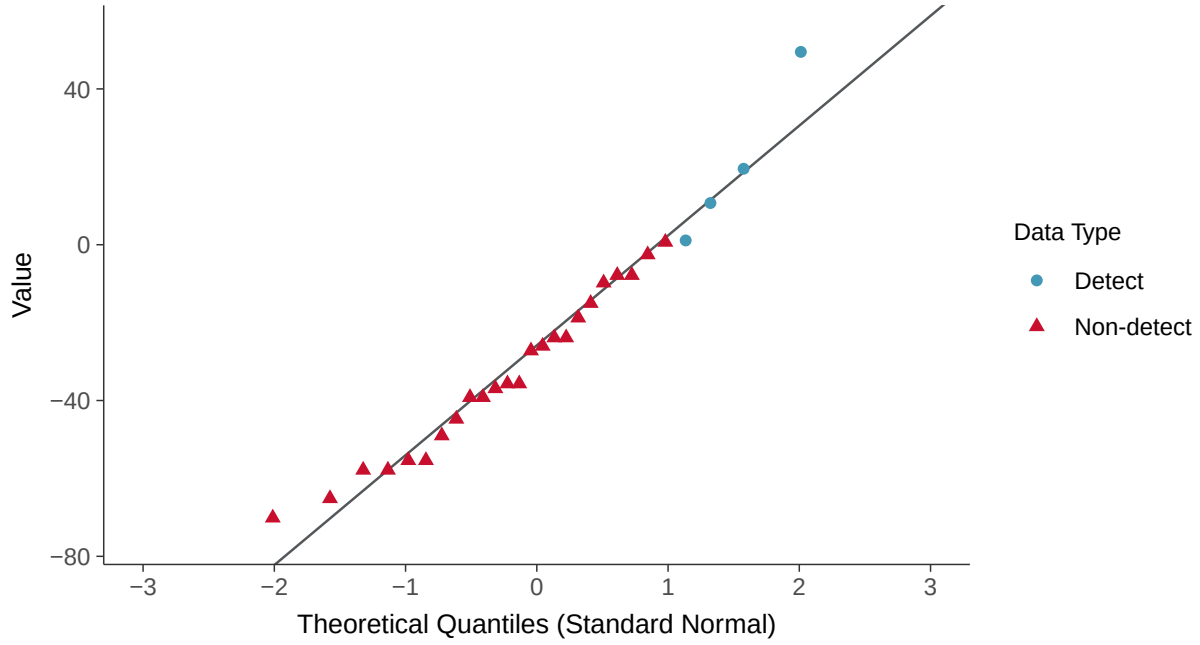
Boxplot by Season

Molybdenum, MW-7R (ug/L)



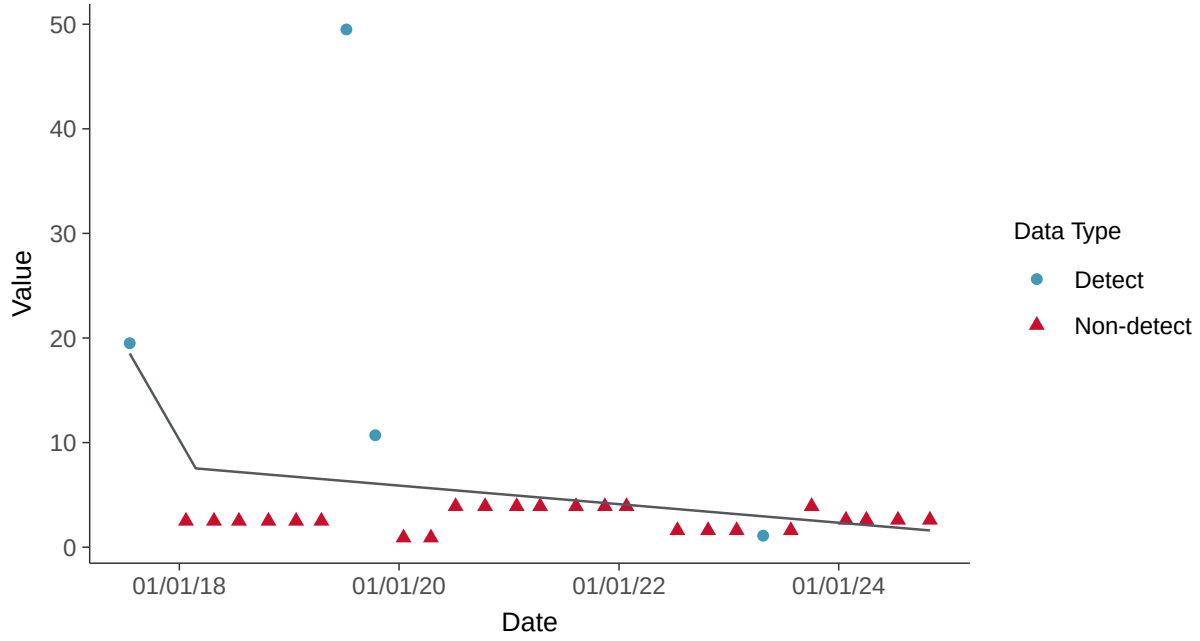
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-7R (ug/L)



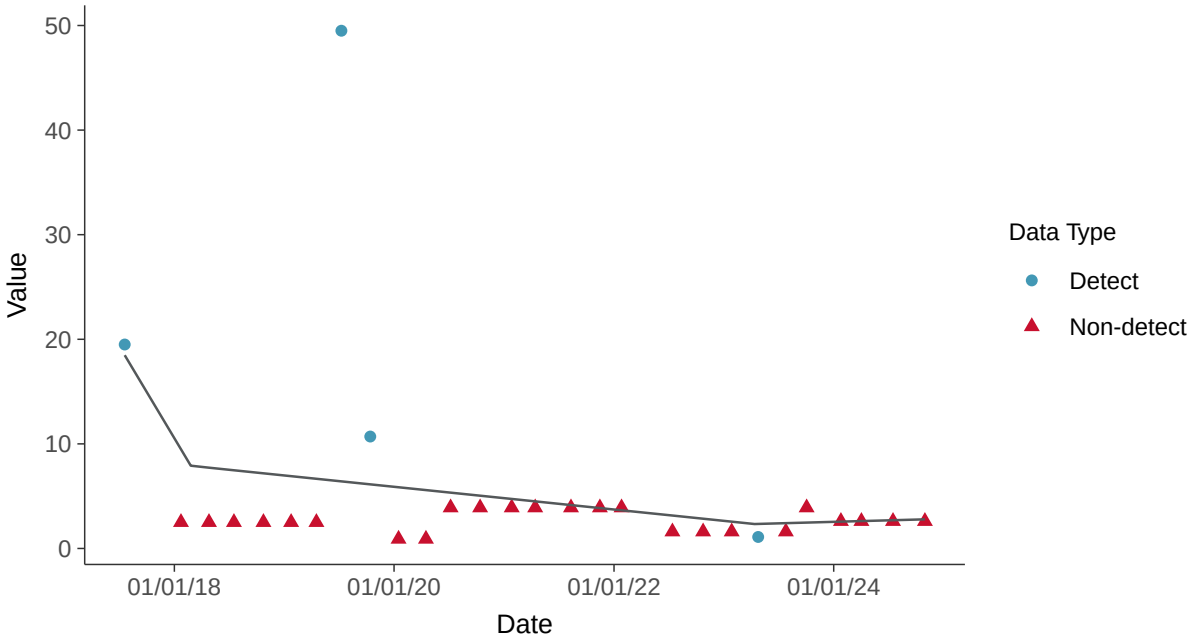
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-7R (ug/L)

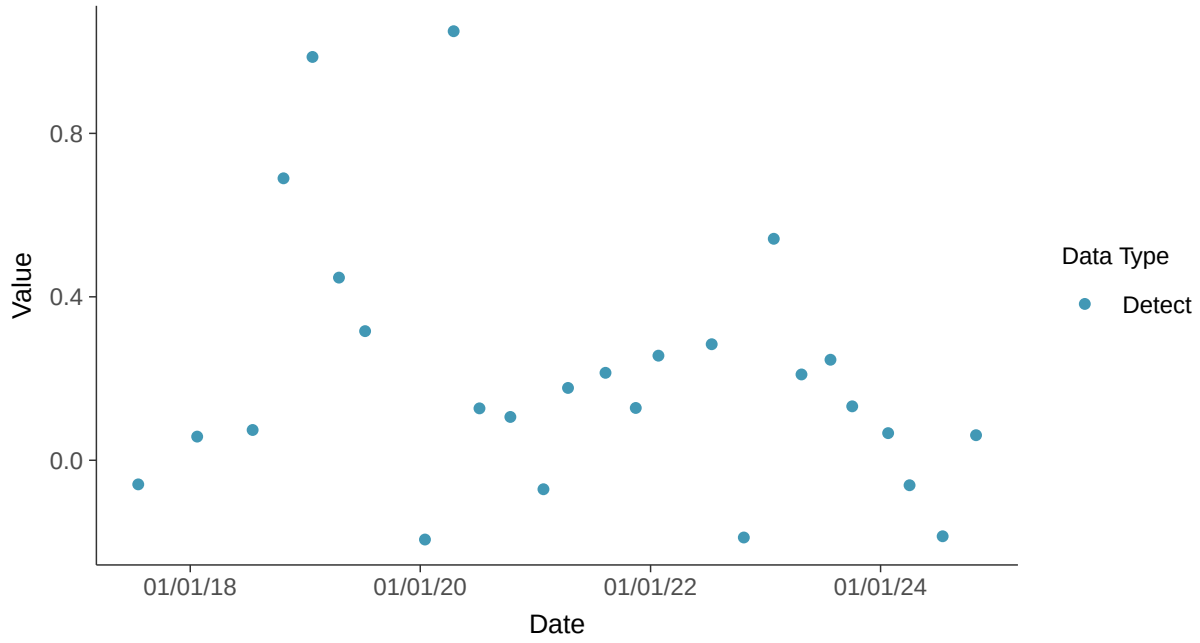


App. IV: Radium-226, MW-7R

ID: 07_03_119

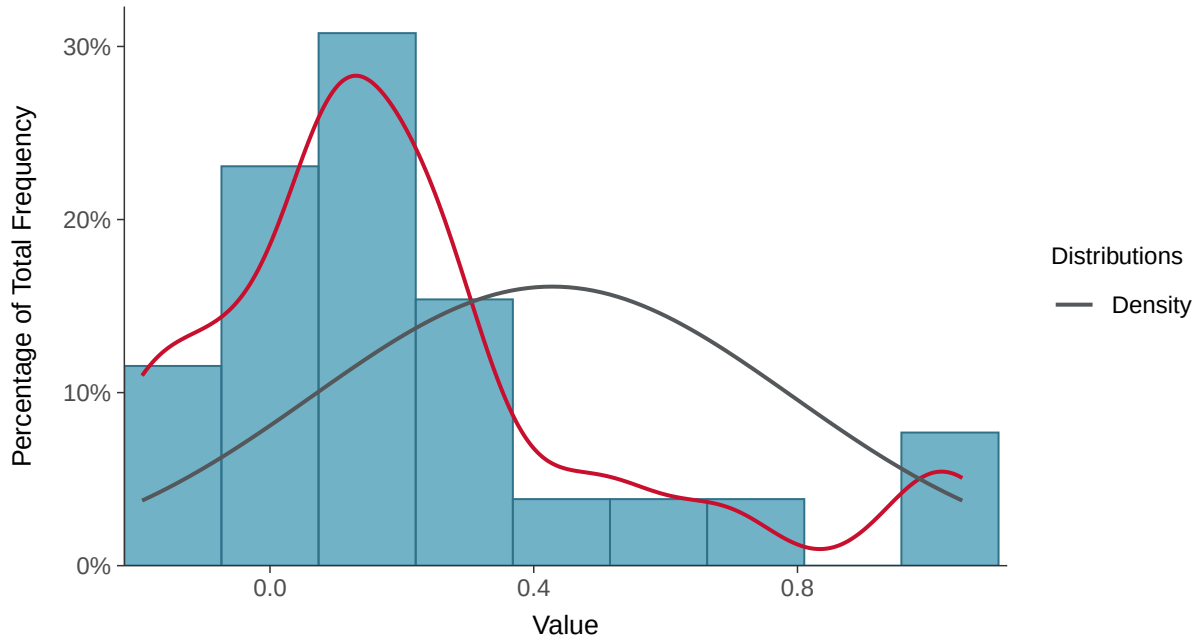
Scatter Plot

Radium-226, MW-7R (pCi/L)



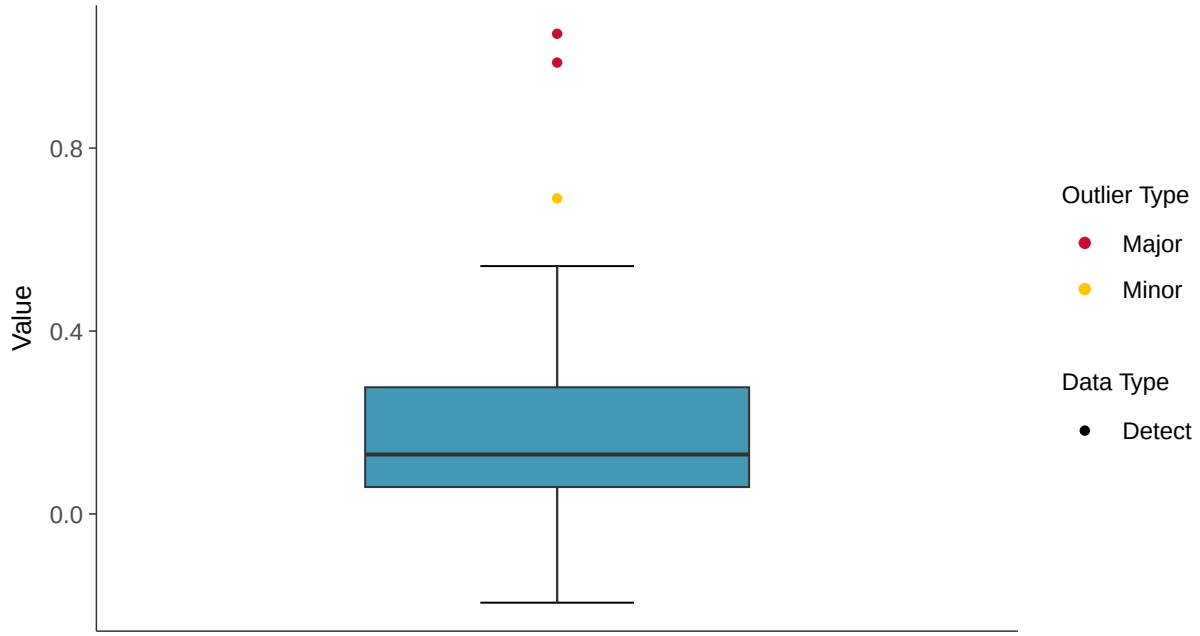
Histogram

Radium-226, MW-7R (pCi/L)



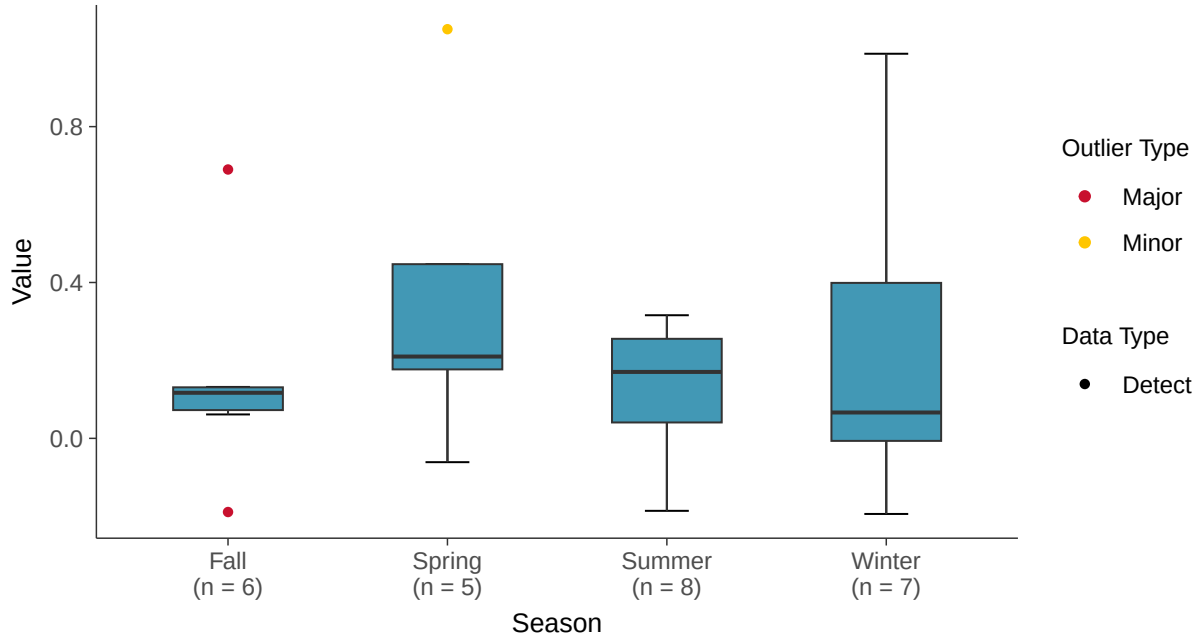
Boxplot

Radium-226, MW-7R (pCi/L)



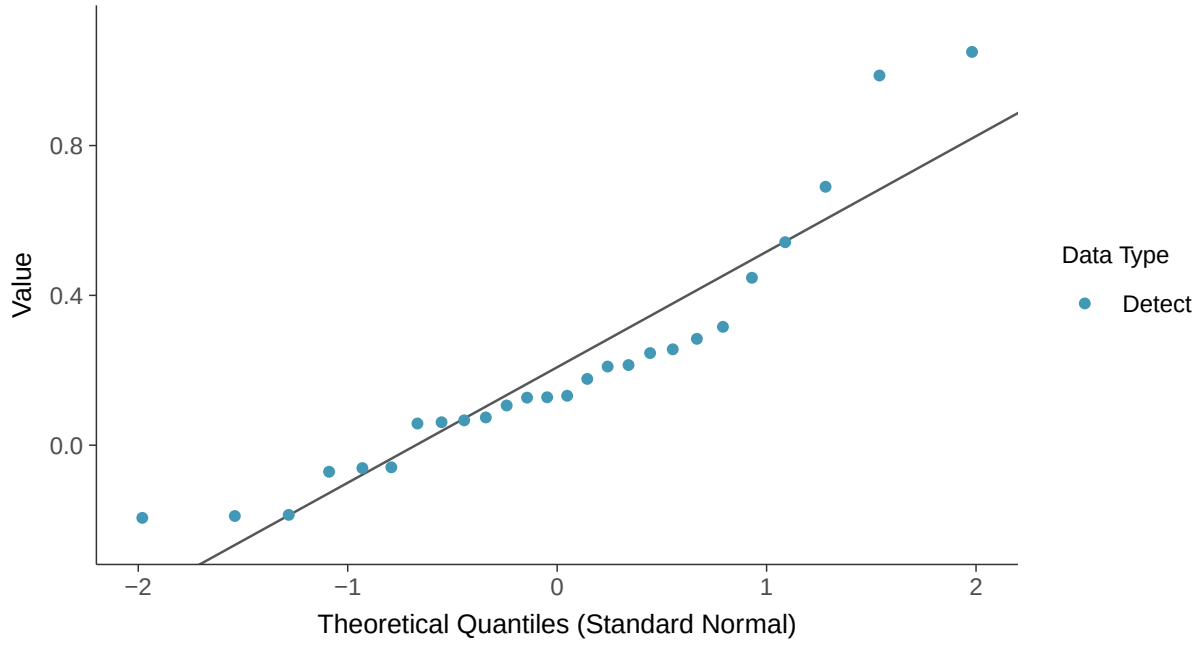
Boxplot by Season

Radium-226, MW-7R (pCi/L)



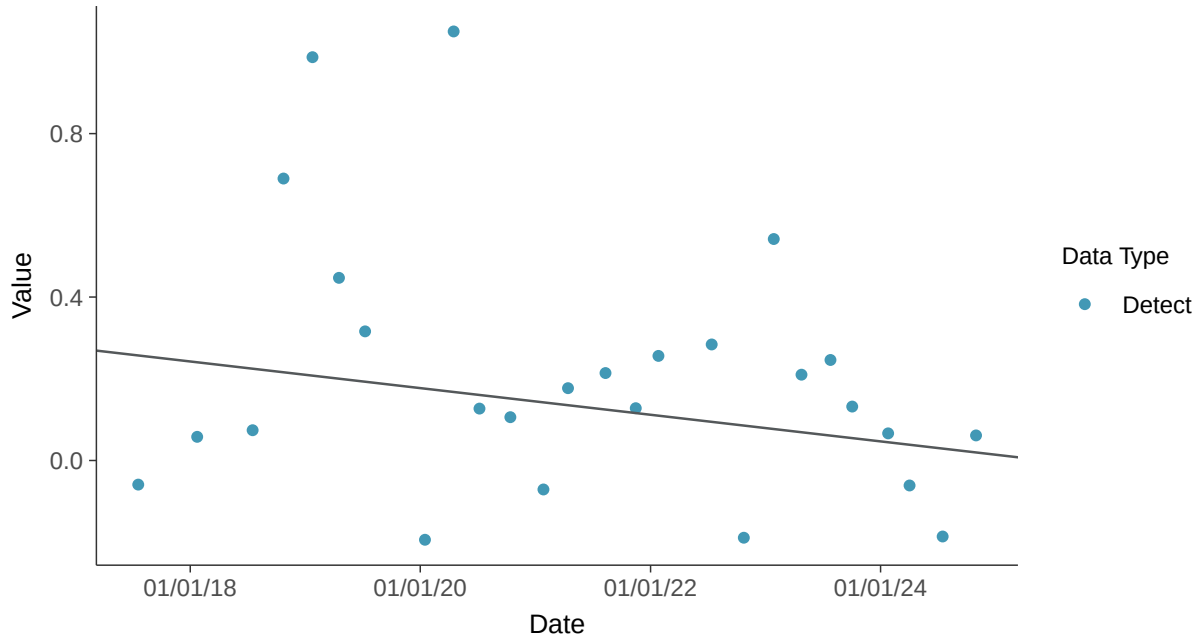
Normal Q-Q plot

Radium-226, MW-7R (pCi/L)



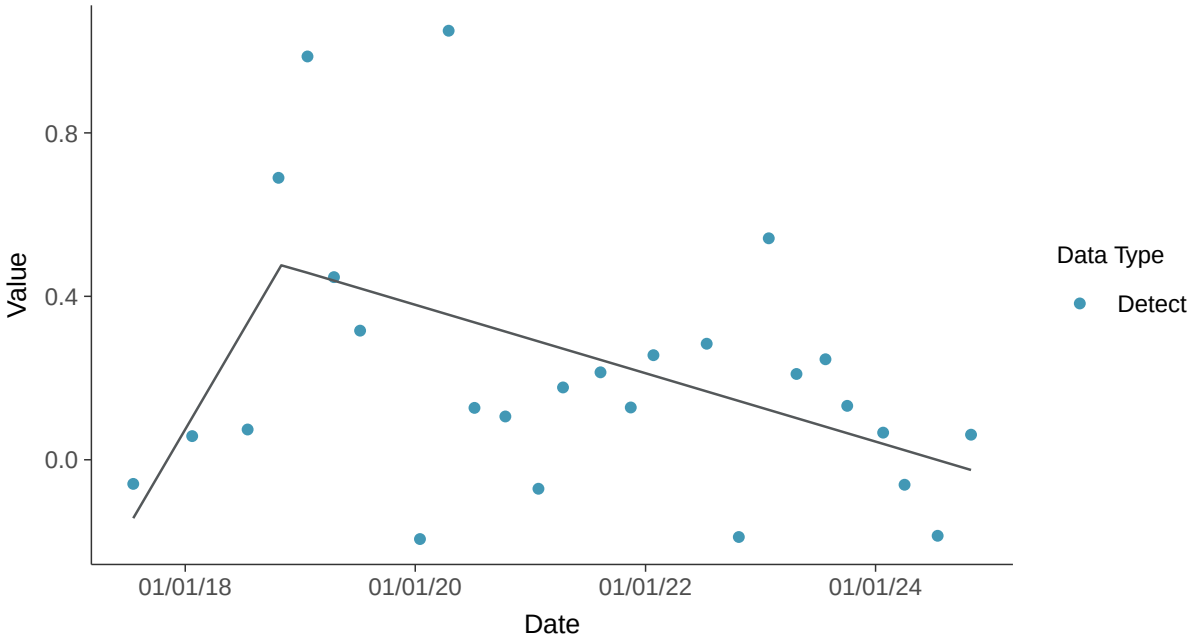
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-7R (pCi/L)



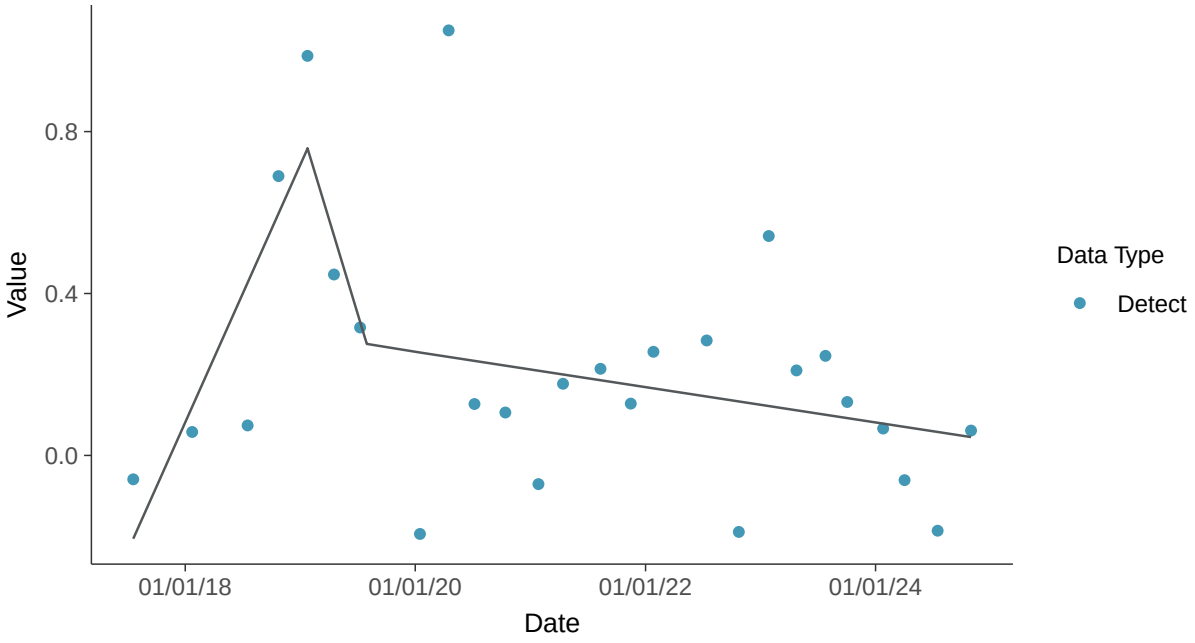
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-7R (pCi/L)



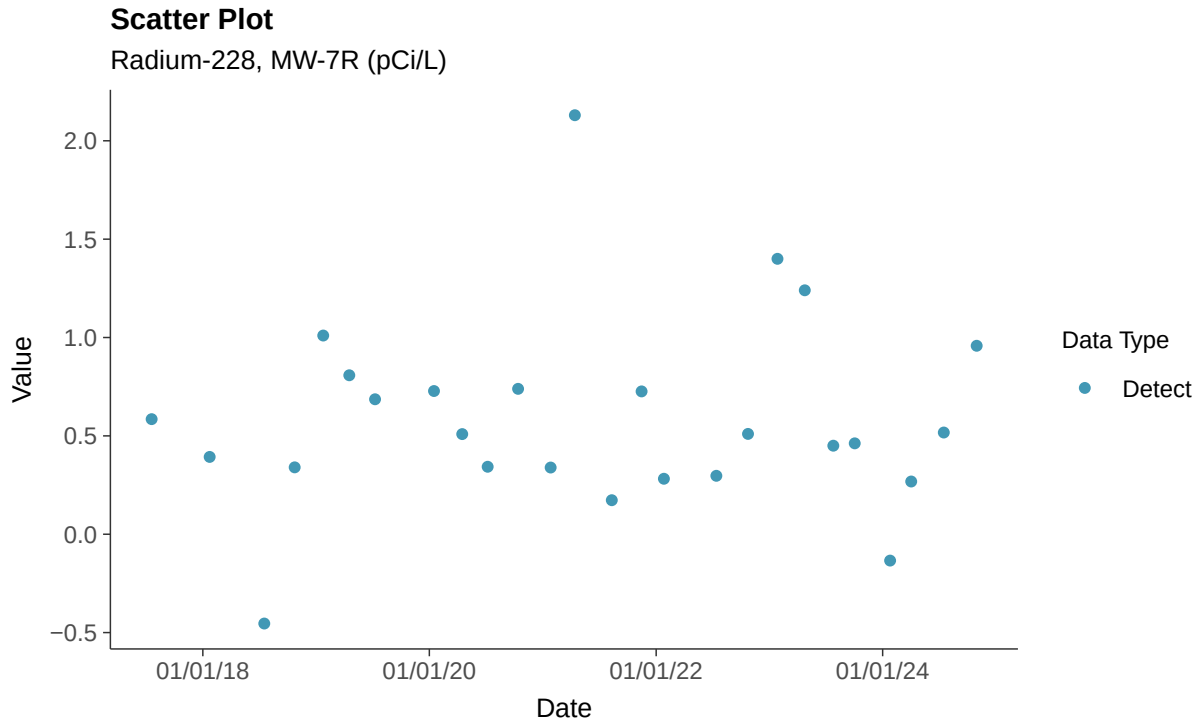
Trend Regression: Piecewise Linear-Linear-Linear

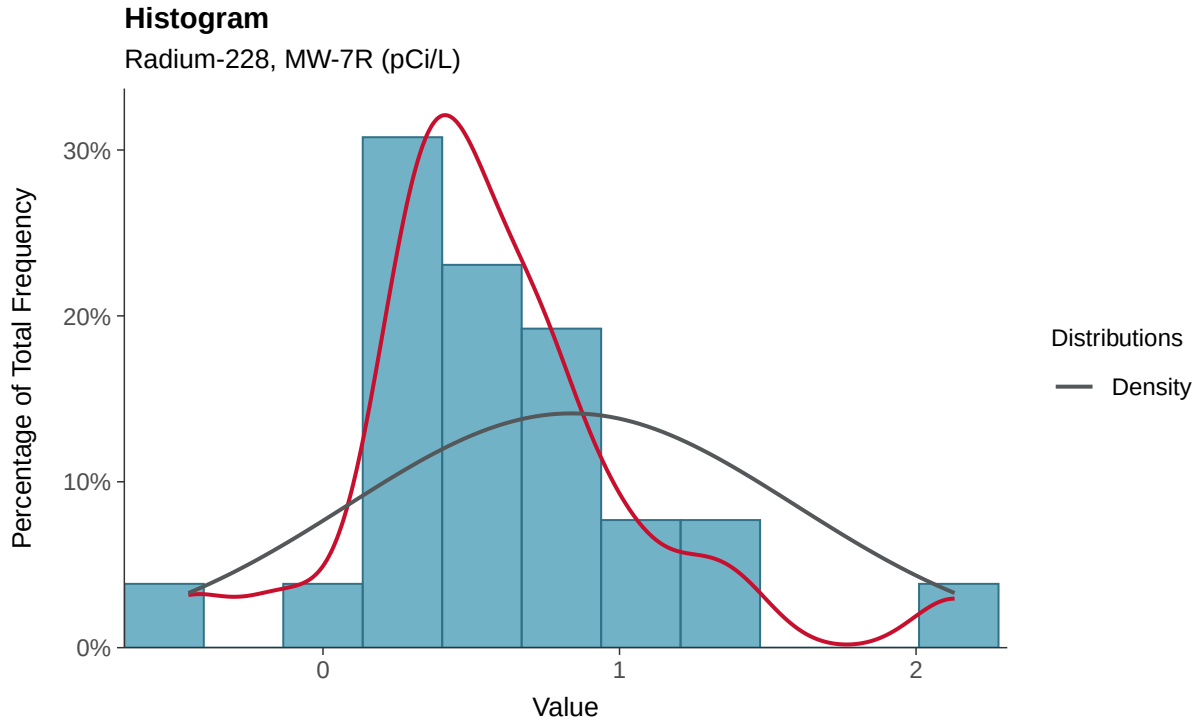
Radium-226, MW-7R (pCi/L)



App. IV: Radium-228, MW-7R

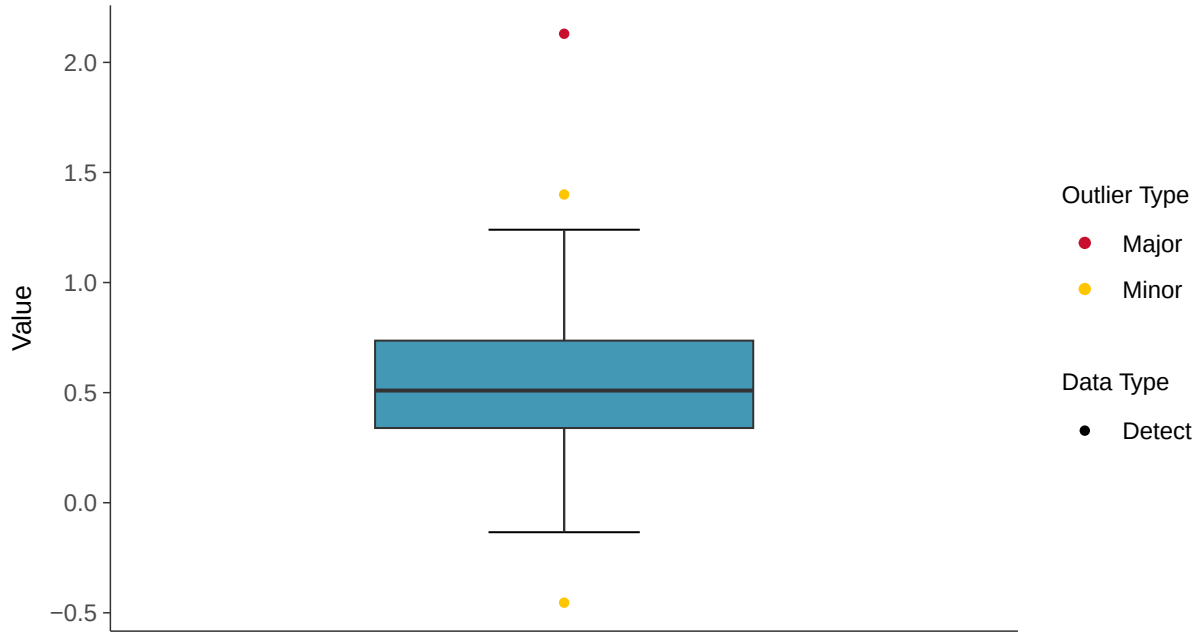
ID: 07_03_120





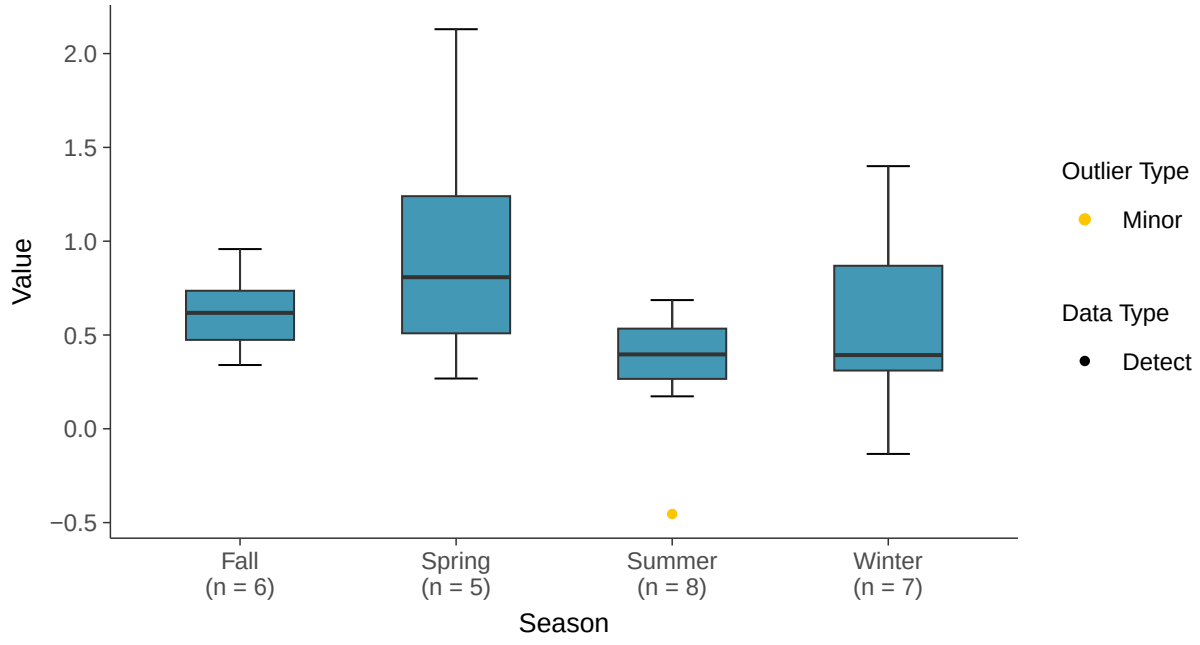
Boxplot

Radium-228, MW-7R (pCi/L)



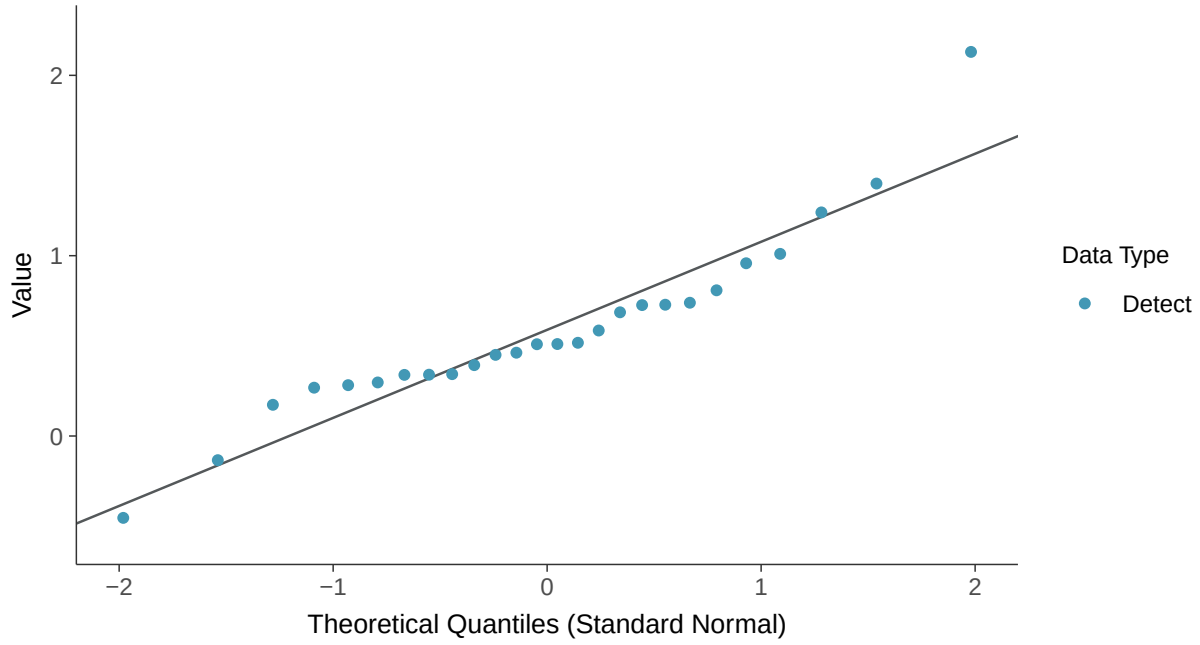
Boxplot by Season

Radium-228, MW-7R (pCi/L)



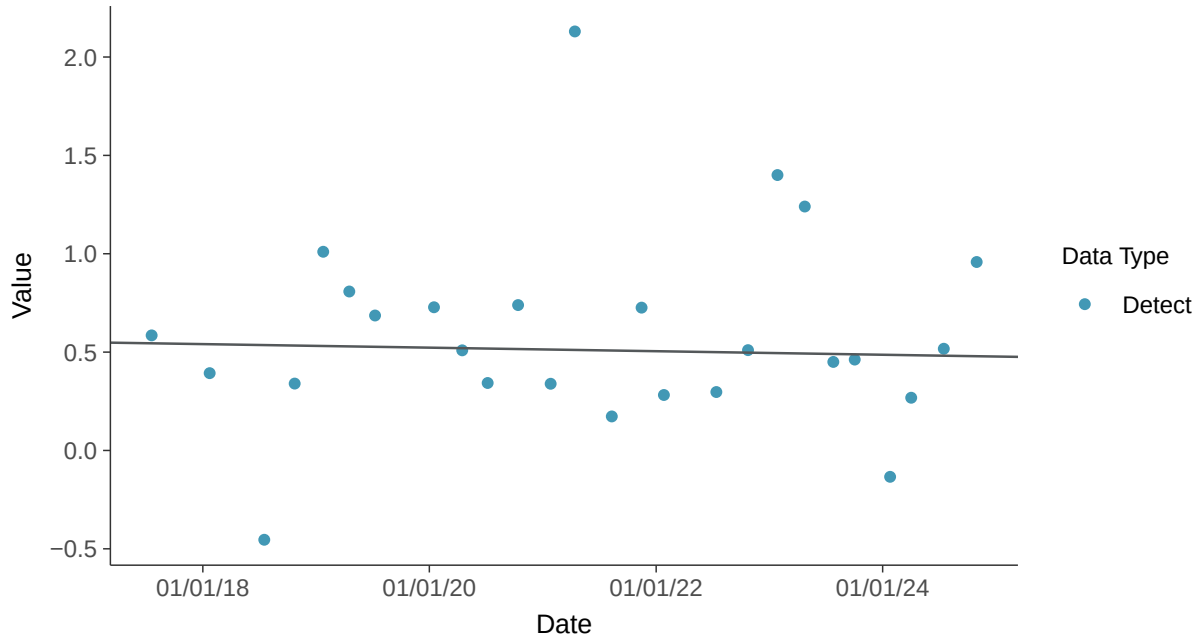
Normal Q-Q plot

Radium-228, MW-7R (pCi/L)



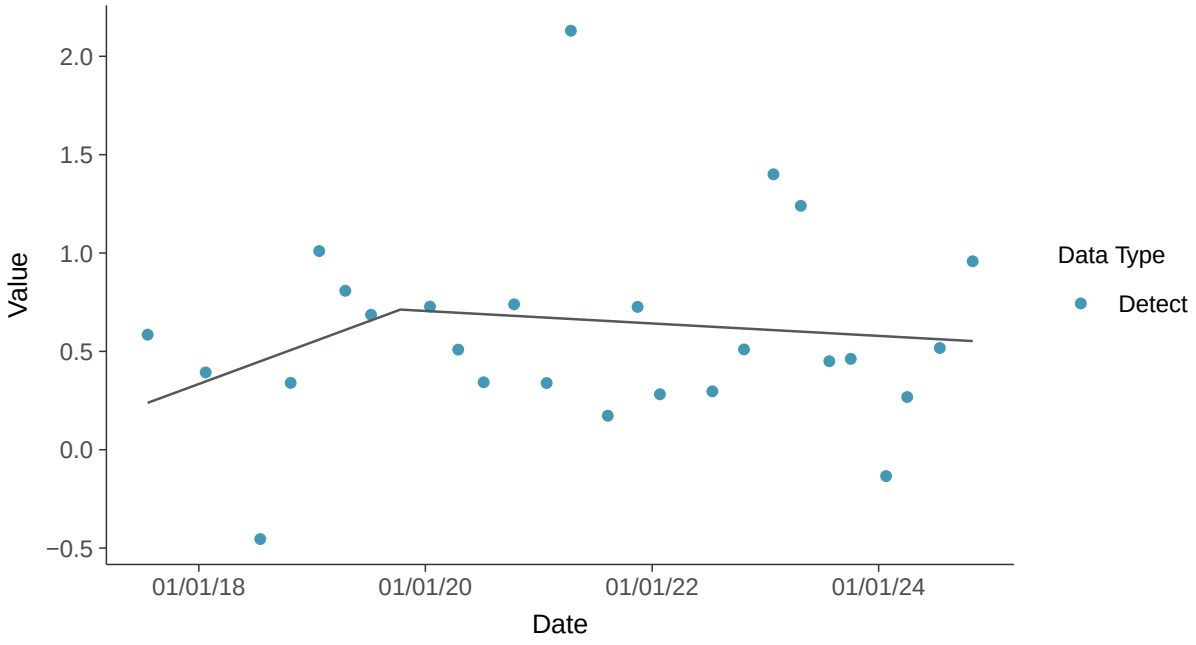
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-7R (pCi/L)



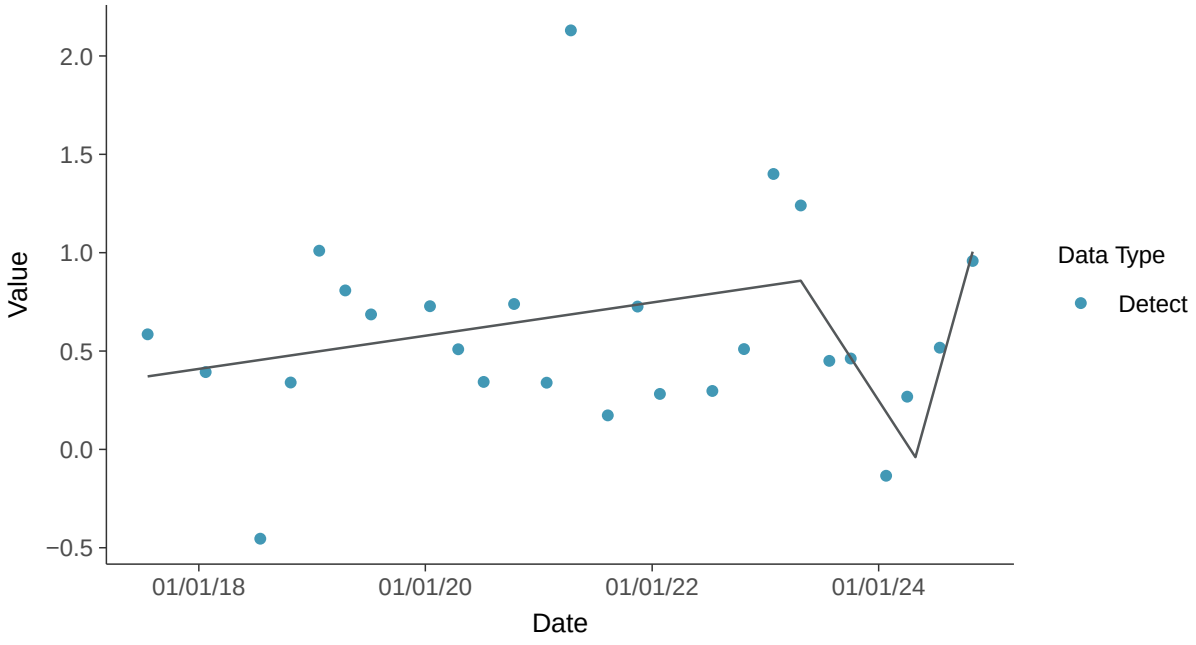
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-7R (pCi/L)



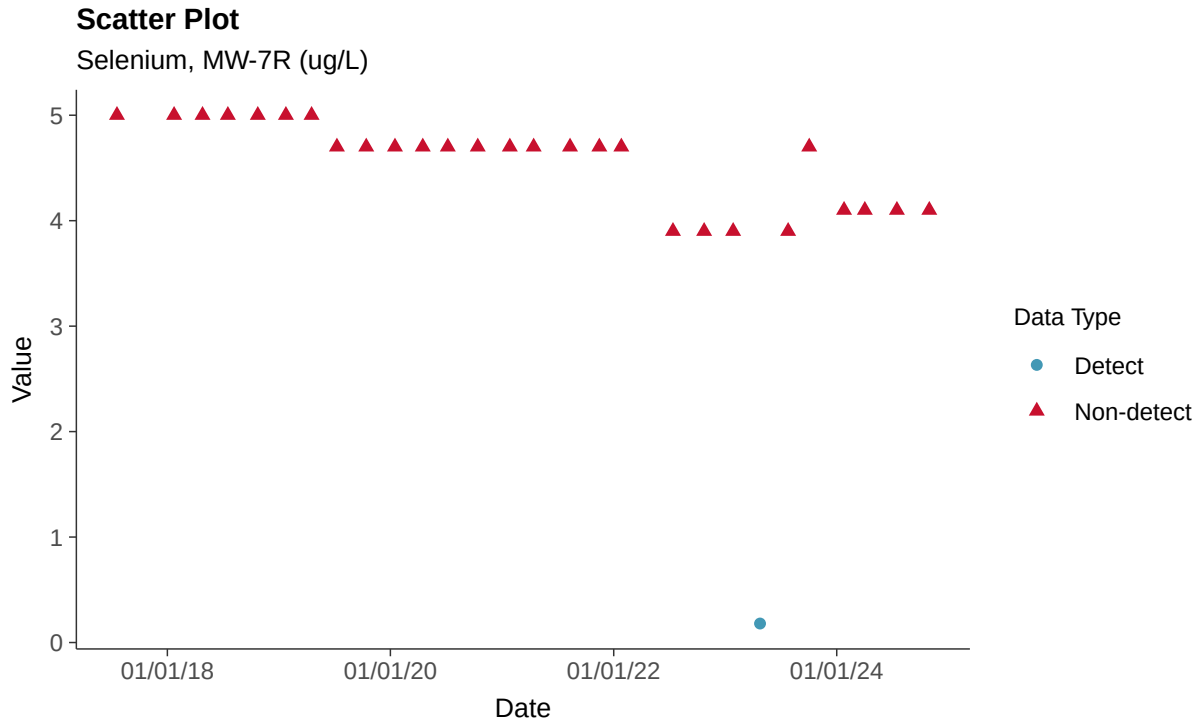
Trend Regression: Piecewise Linear-Linear-Linear

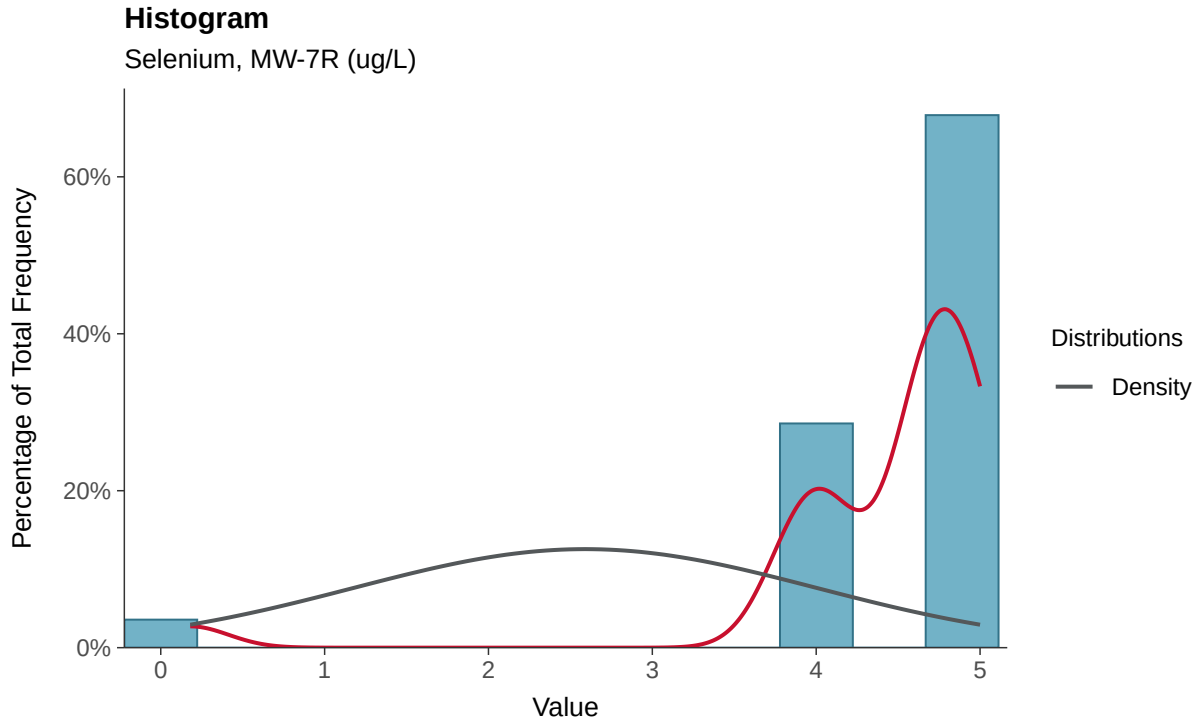
Radium-228, MW-7R (pCi/L)



App. IV: Selenium, MW-7R

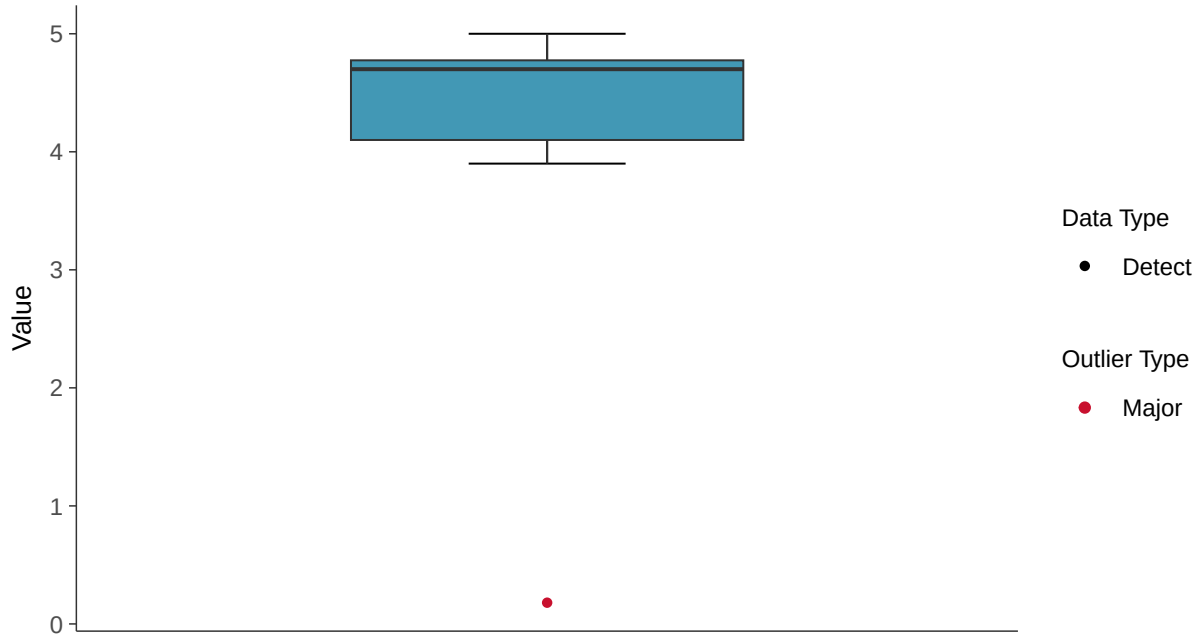
ID: 07_03_121





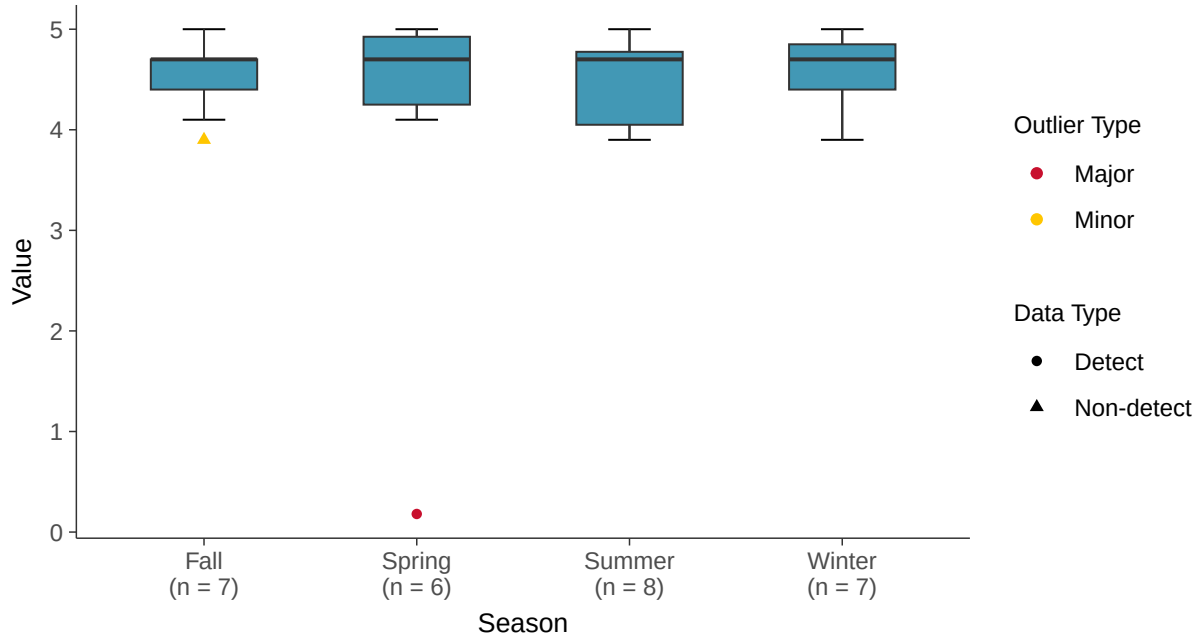
Boxplot

Selenium, MW-7R (ug/L)



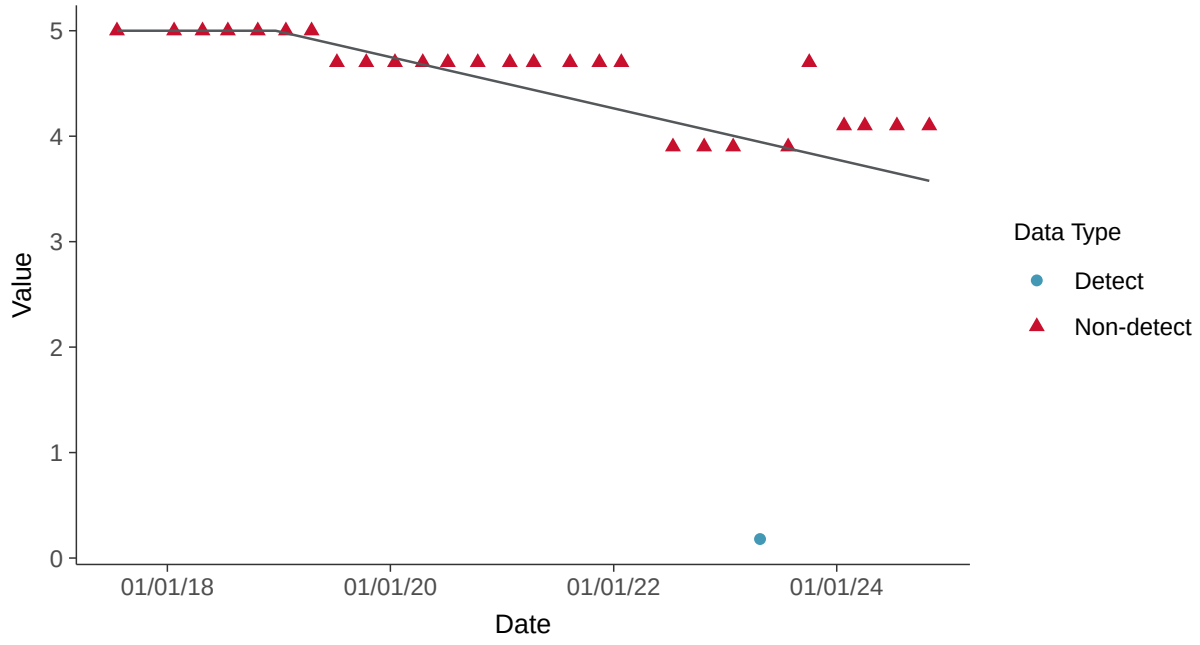
Boxplot by Season

Selenium, MW-7R (ug/L)



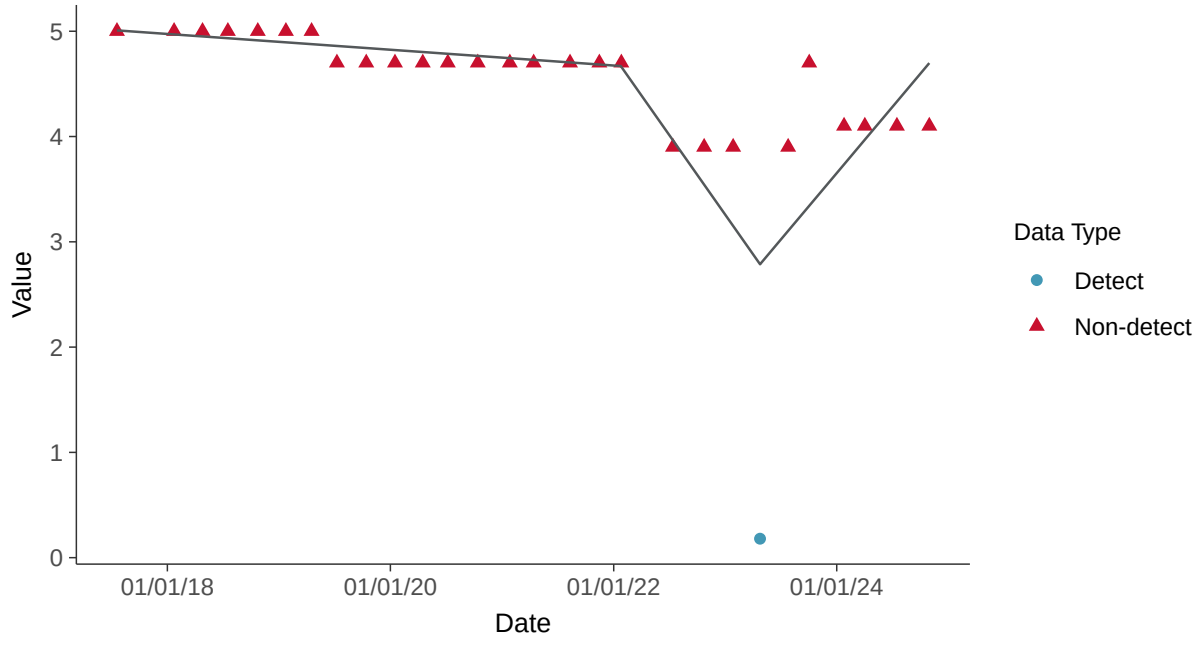
Trend Regression: Piecewise Linear-Linear

Selenium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-7R (ug/L)

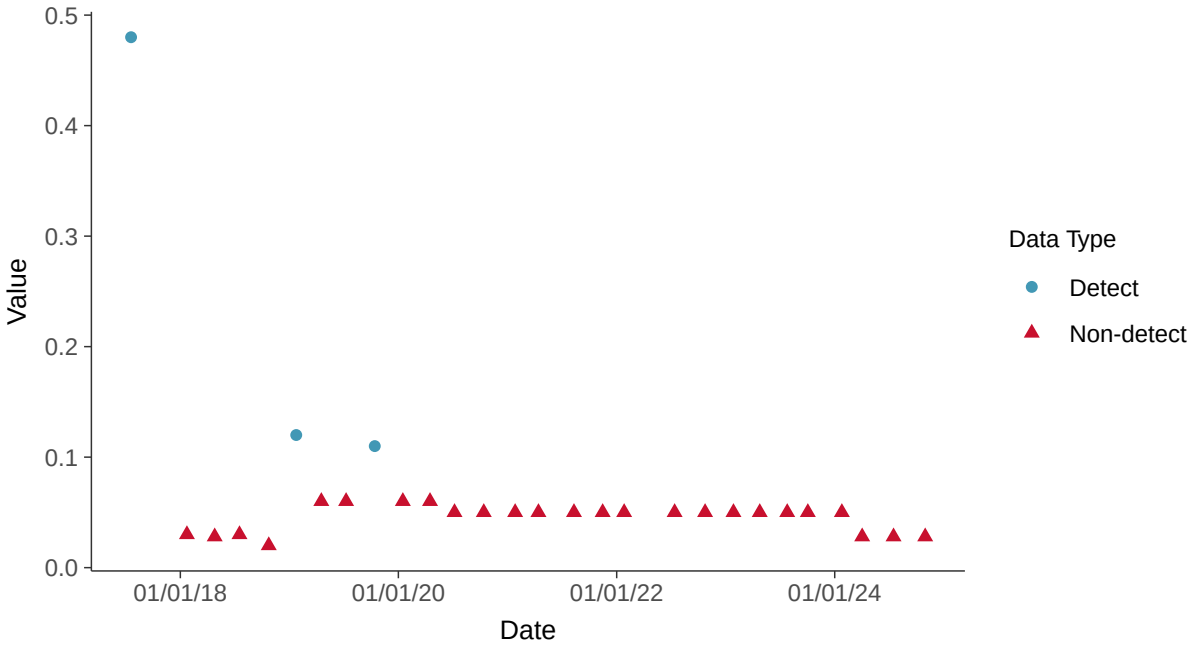


App. IV: Thallium, MW-7R

ID: 07_03_124

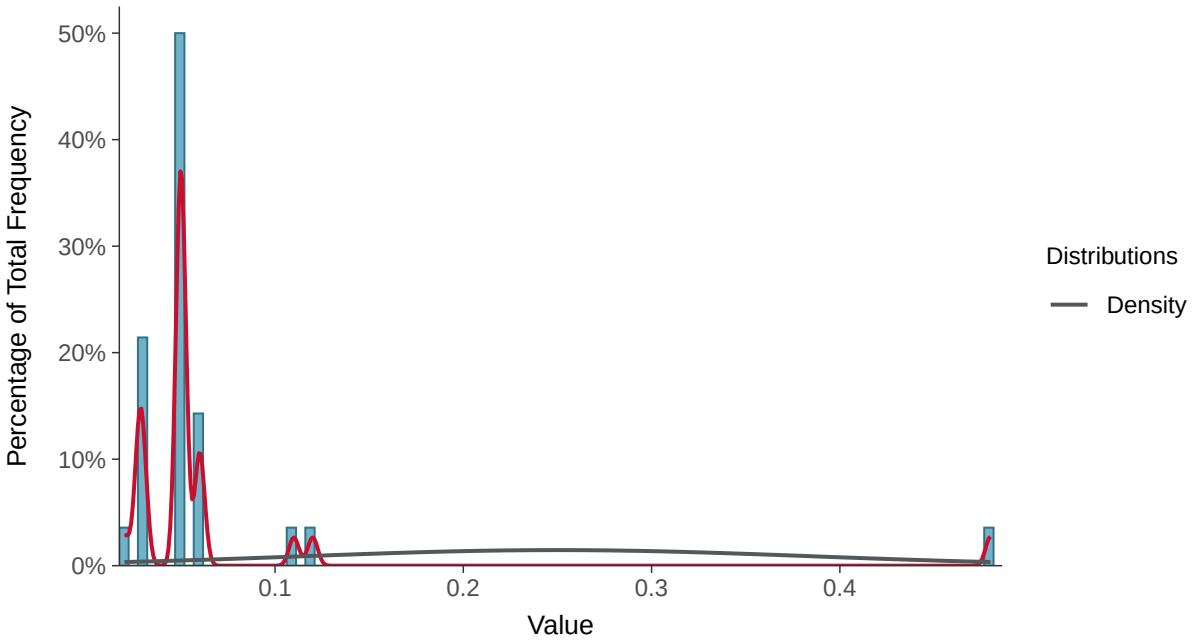
Scatter Plot

Thallium, MW-7R (ug/L)



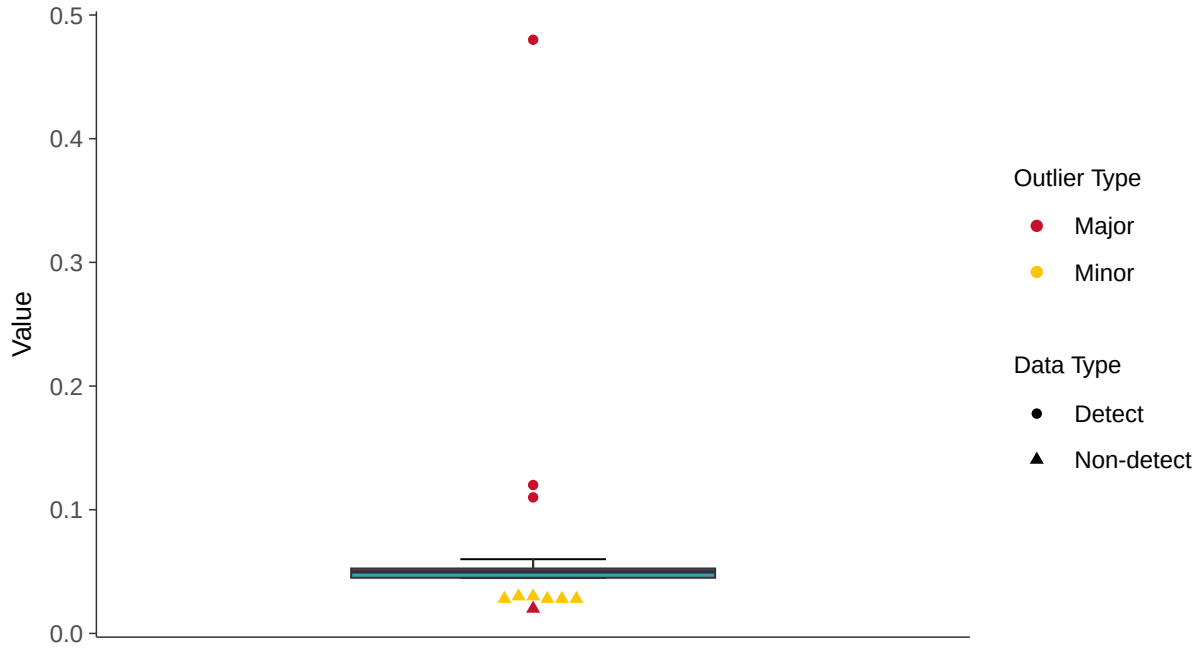
Histogram

Thallium, MW-7R (ug/L)



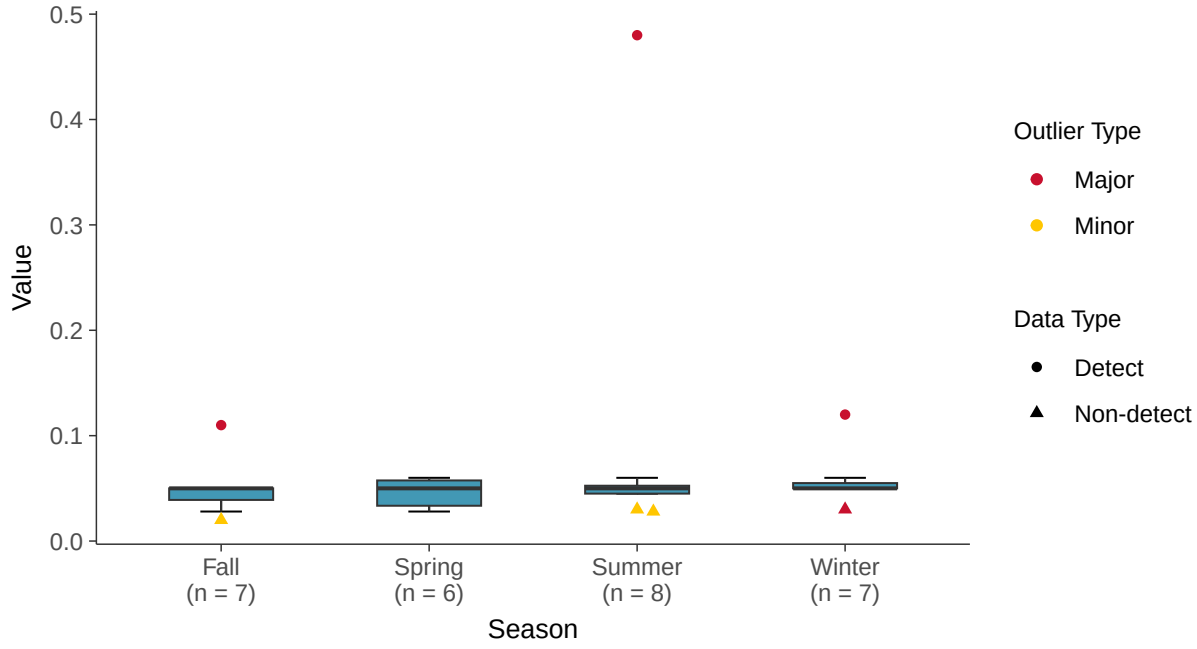
Boxplot

Thallium, MW-7R (ug/L)



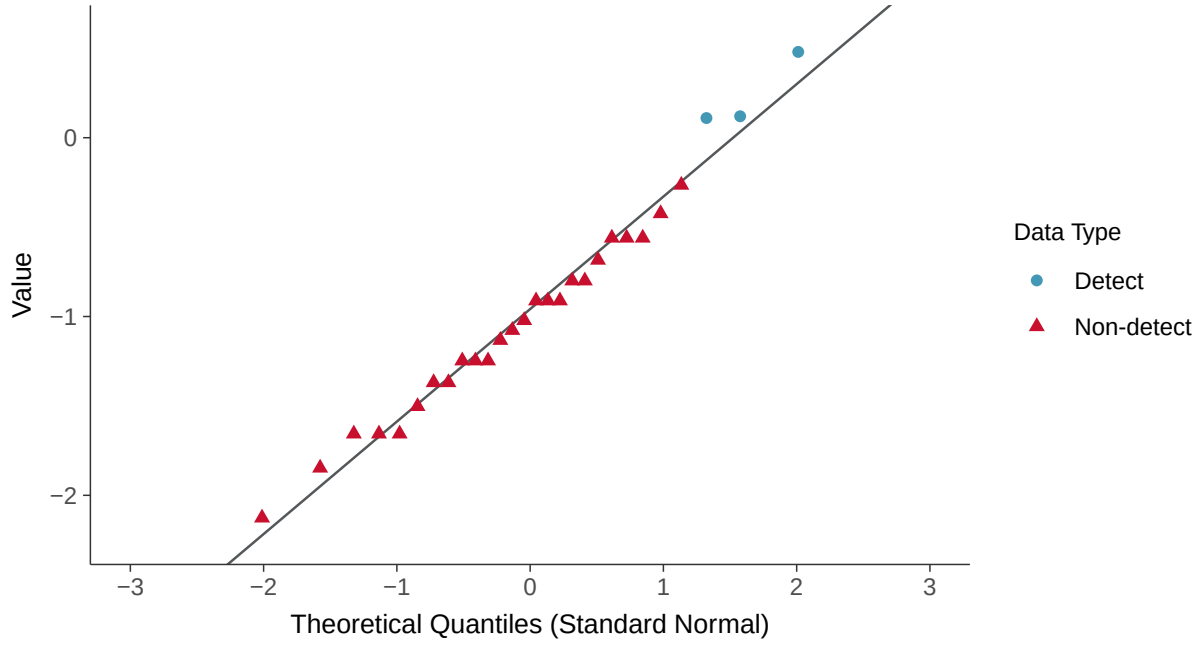
Boxplot by Season

Thallium, MW-7R (ug/L)



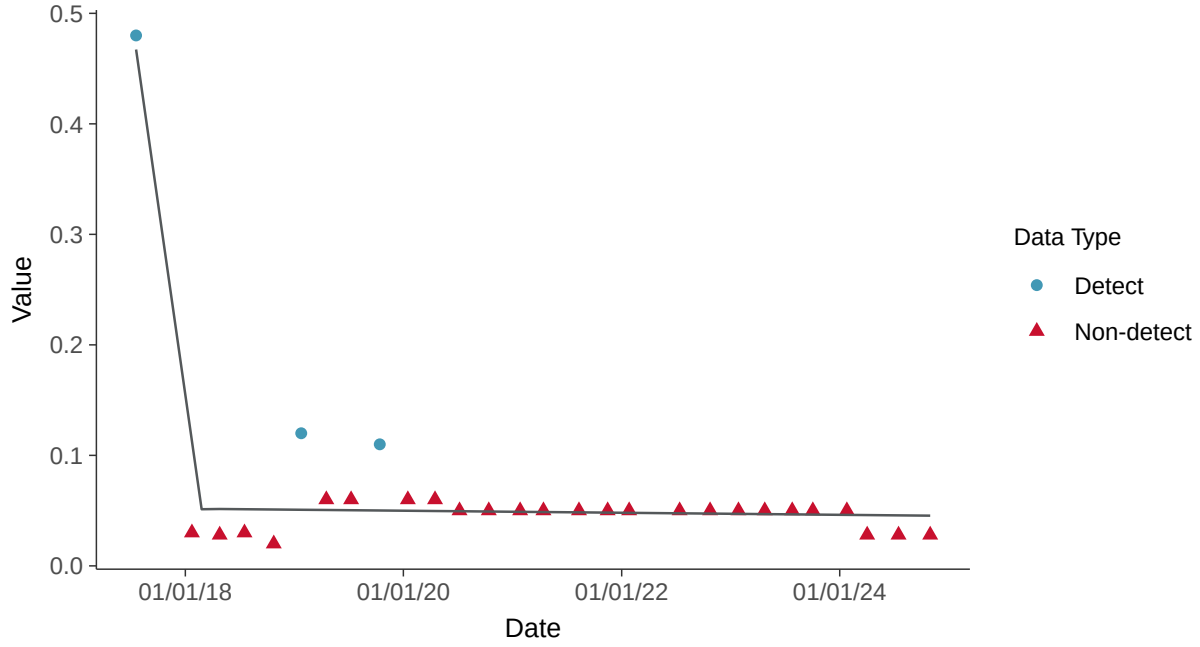
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-7R (ug/L)



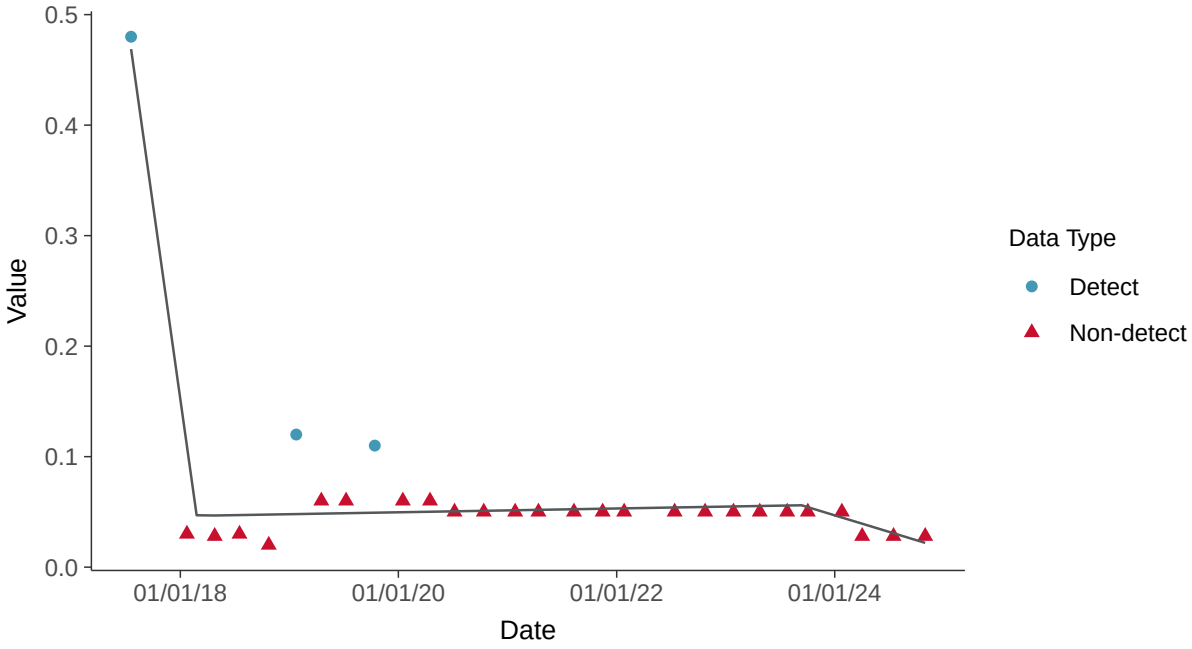
Trend Regression: Piecewise Linear-Linear

Thallium, MW-7R (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-7R (ug/L)

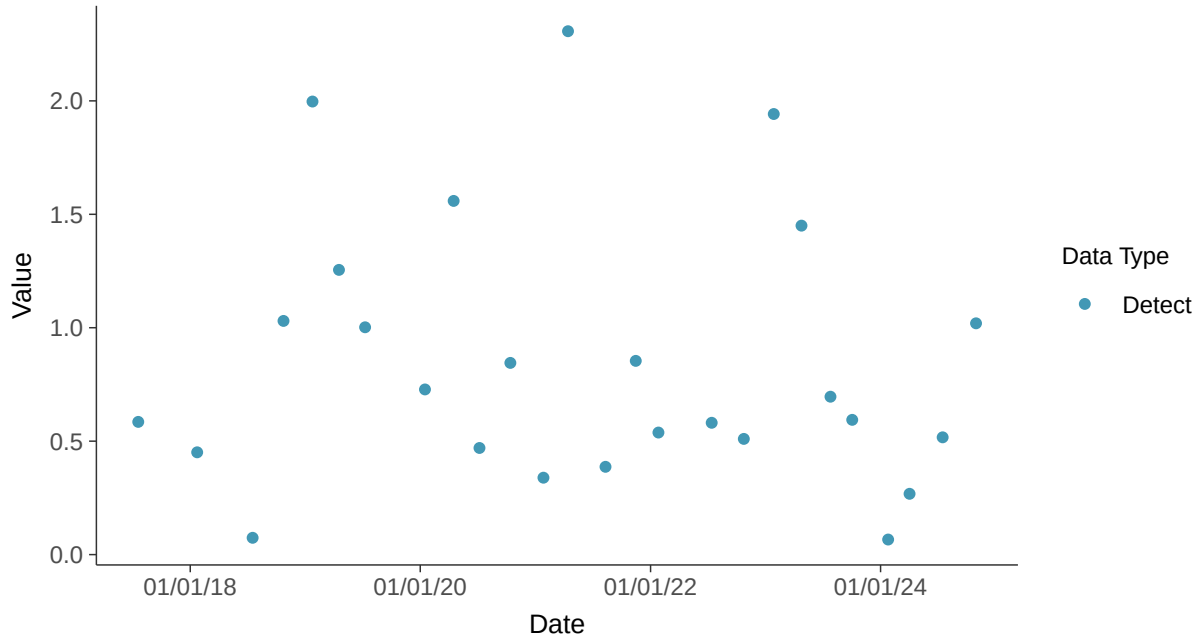


App. IV: Total Radium, MW-7R

ID: 07_03_126

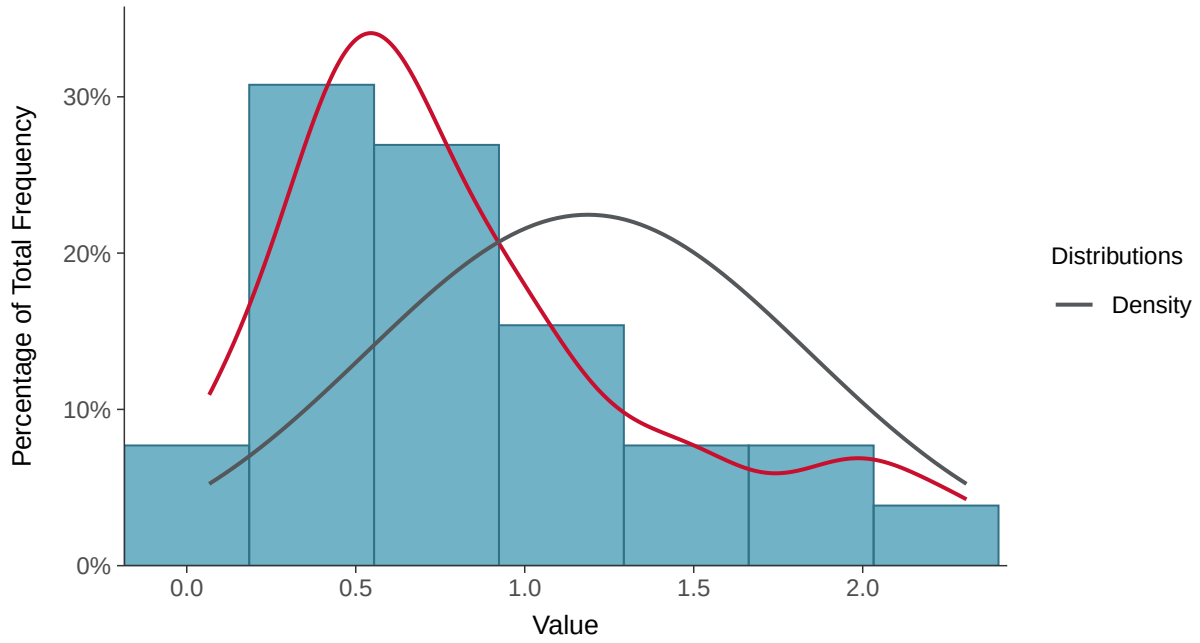
Scatter Plot

Total Radium, MW-7R (pCi/L)



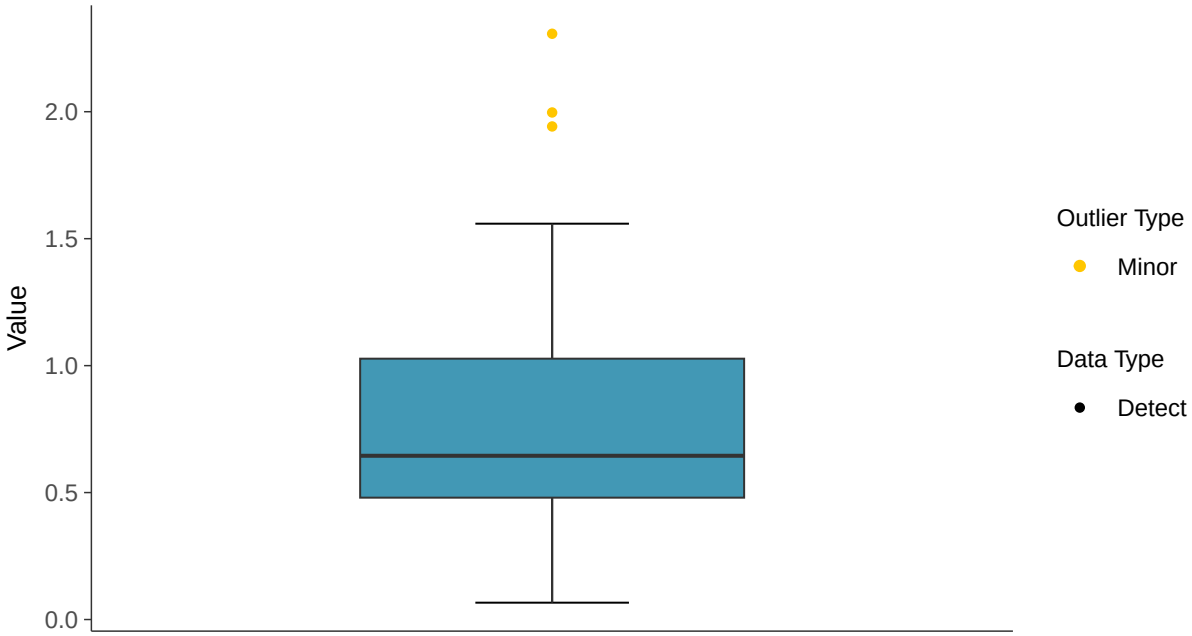
Histogram

Total Radium, MW-7R (pCi/L)



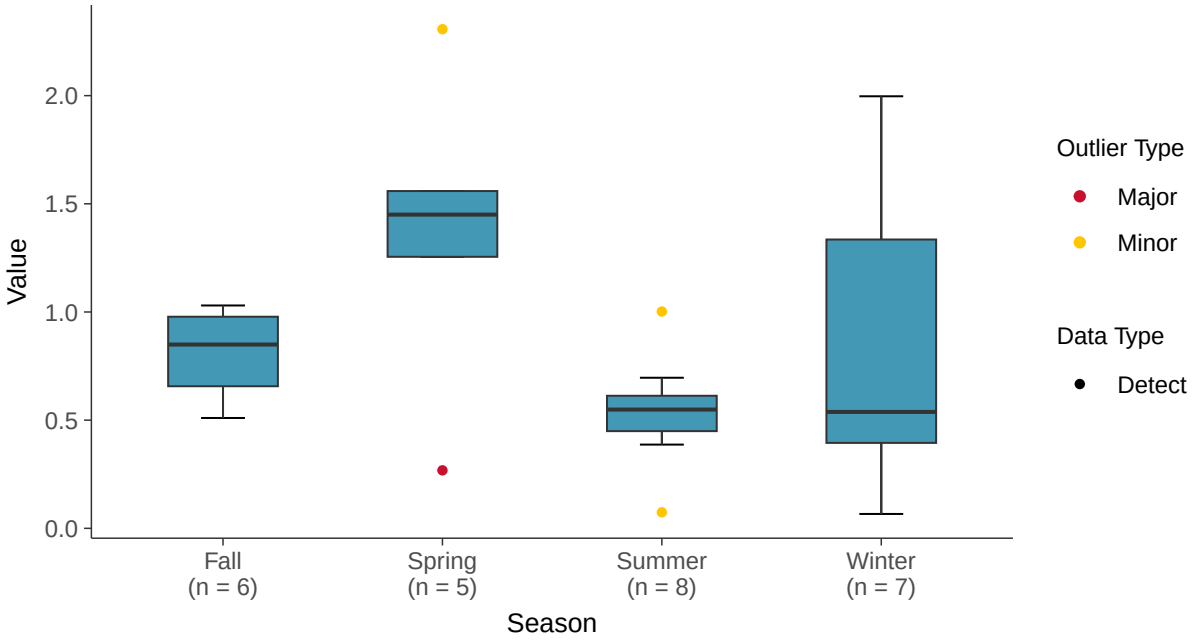
Boxplot

Total Radium, MW-7R (pCi/L)



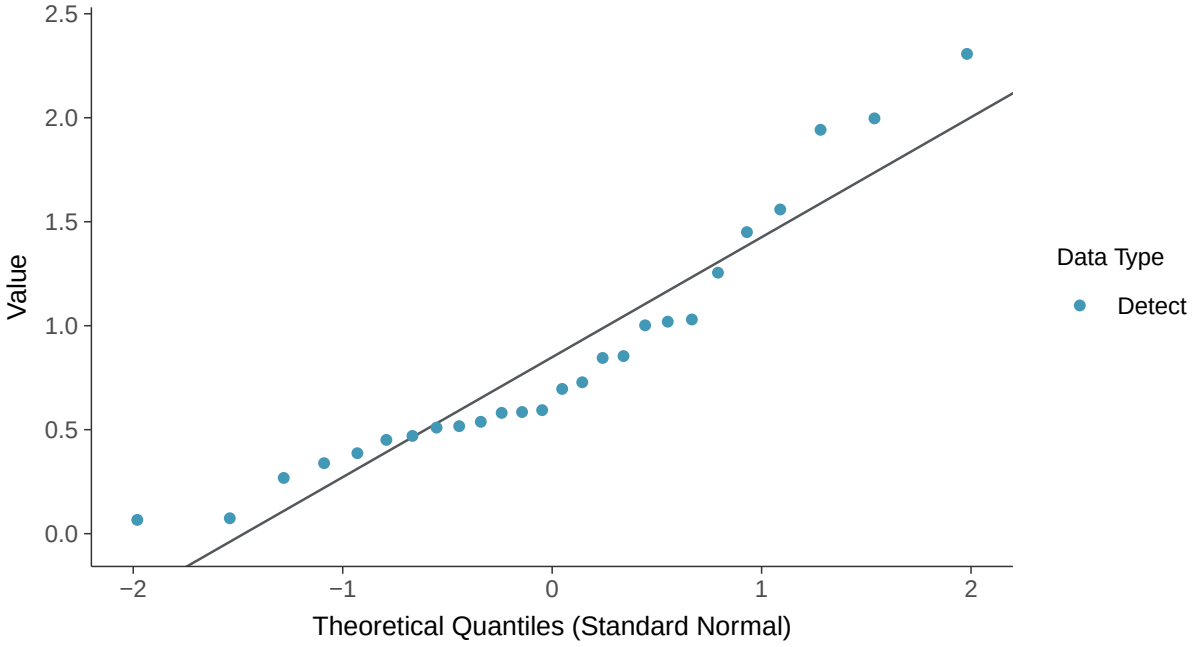
Boxplot by Season

Total Radium, MW-7R (pCi/L)



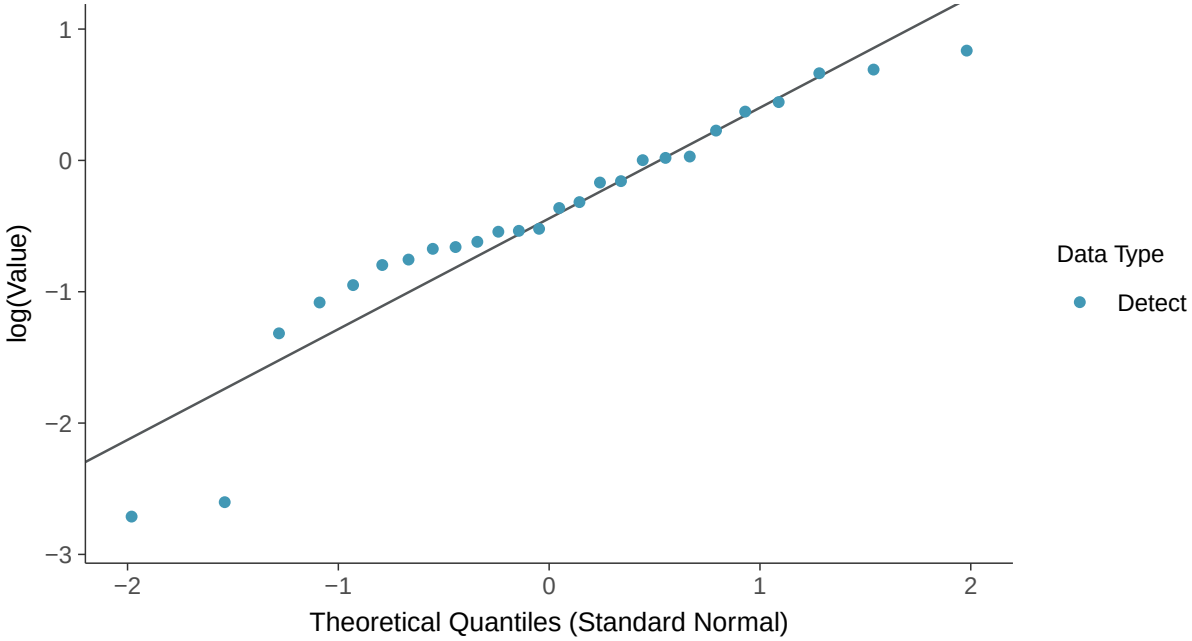
Normal Q-Q plot

Total Radium, MW-7R (pCi/L)



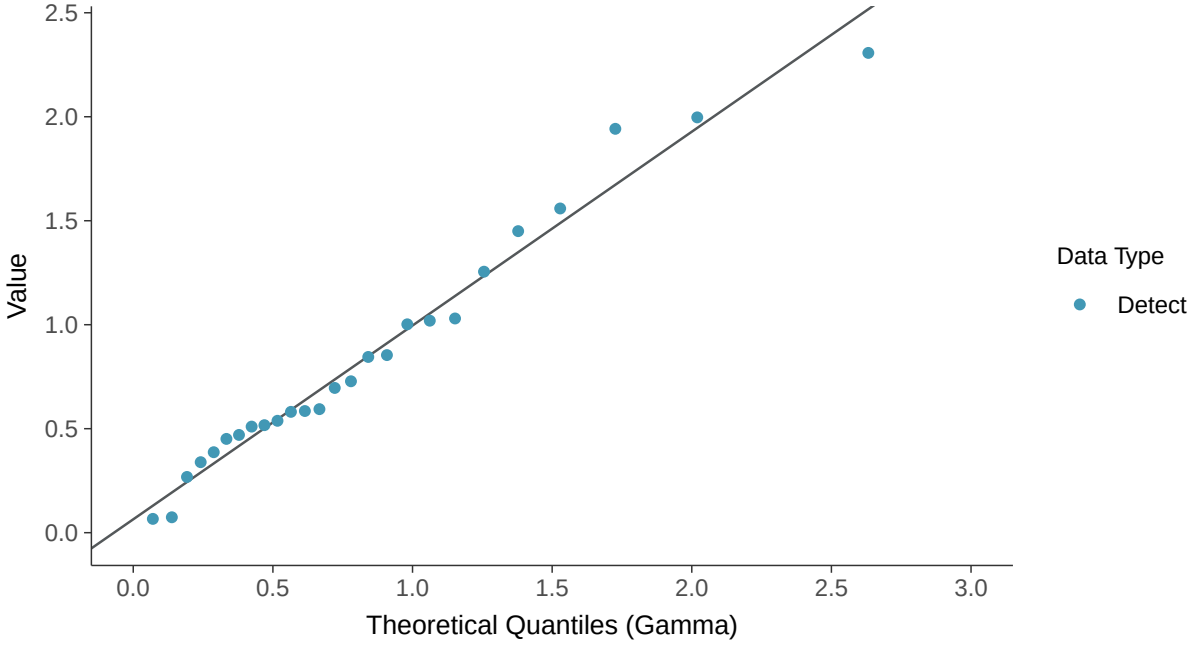
Lognormal Q-Q plot

Total Radium, MW-7R (pCi/L)



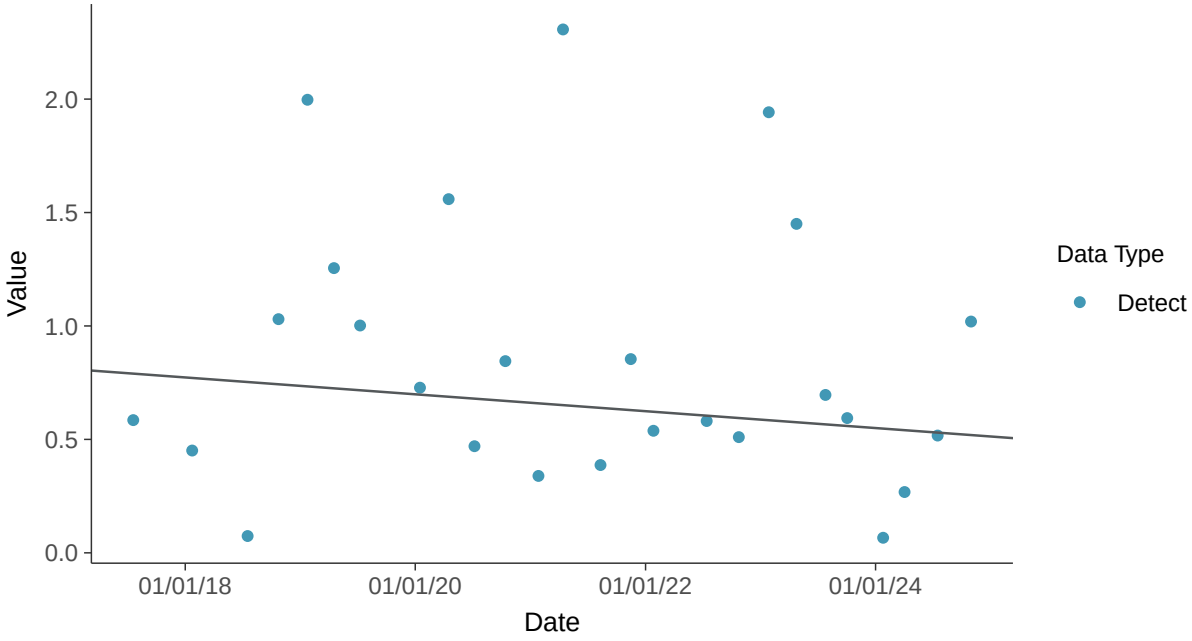
Gamma Q-Q plot

Total Radium, MW-7R (pCi/L)



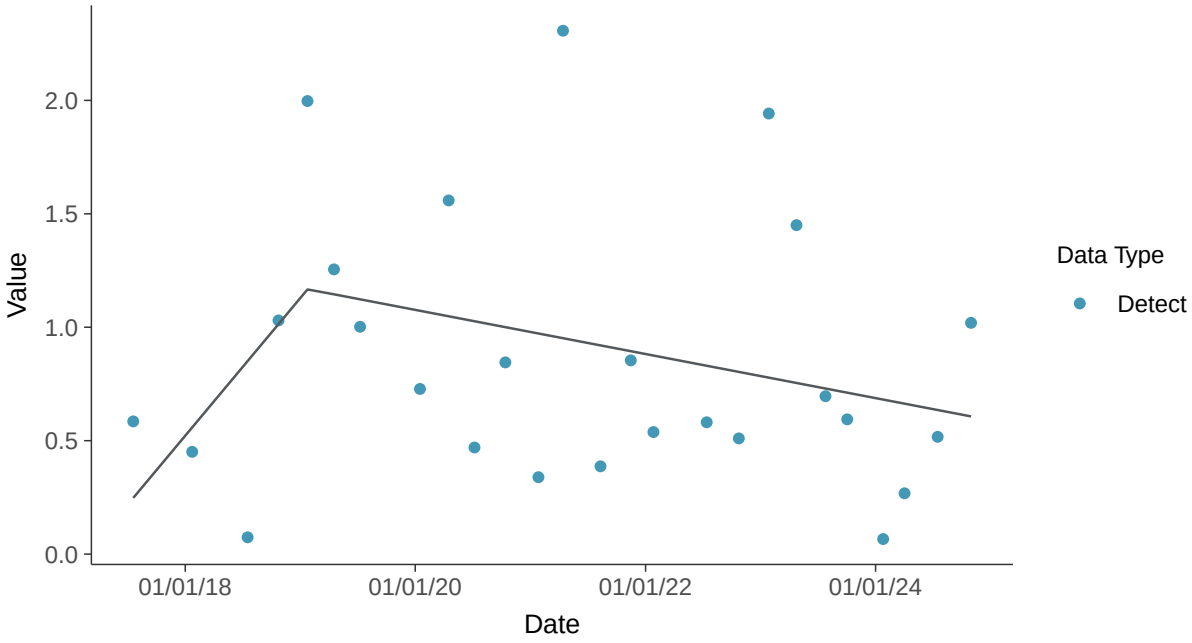
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-7R (pCi/L)



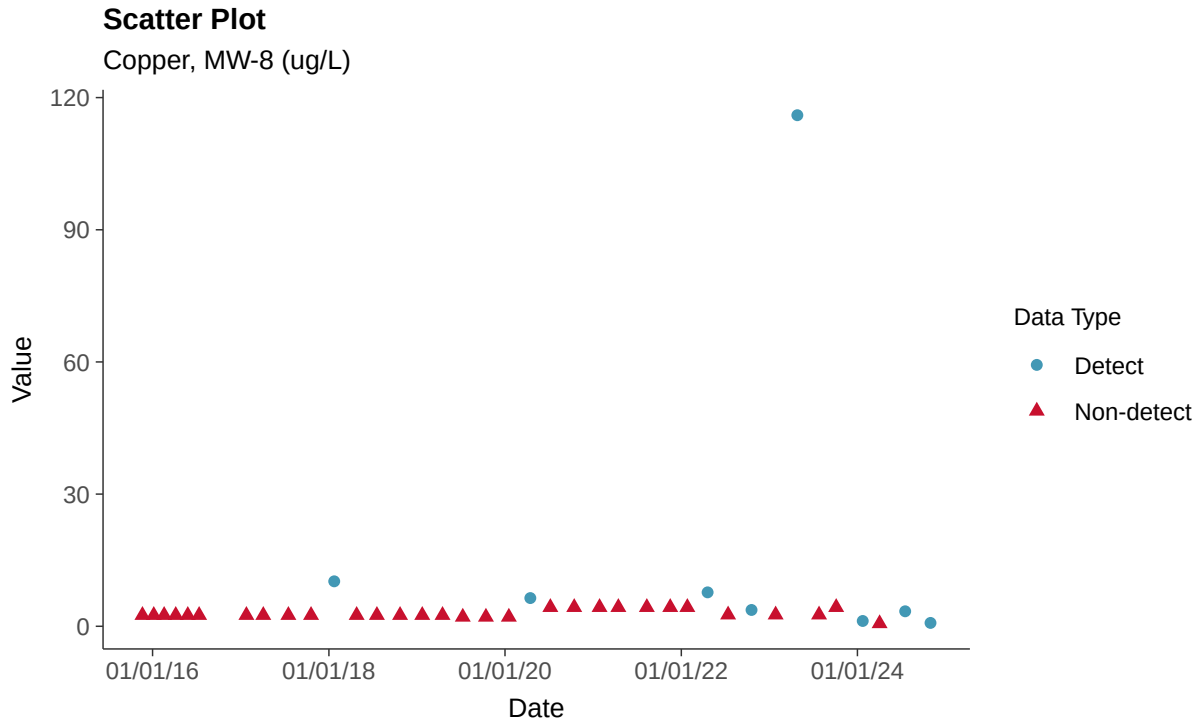
Trend Regression: Piecewise Linear-Linear

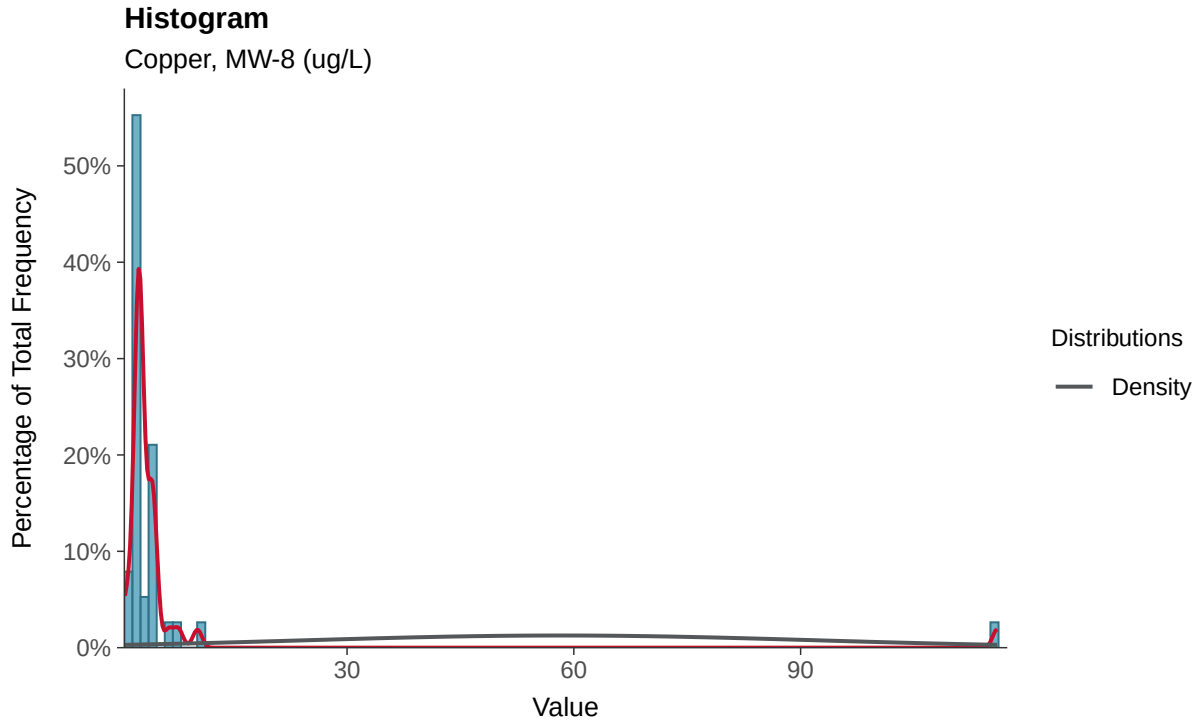
Total Radium, MW-7R (pCi/L)



App. I Metals: Copper, MW-8

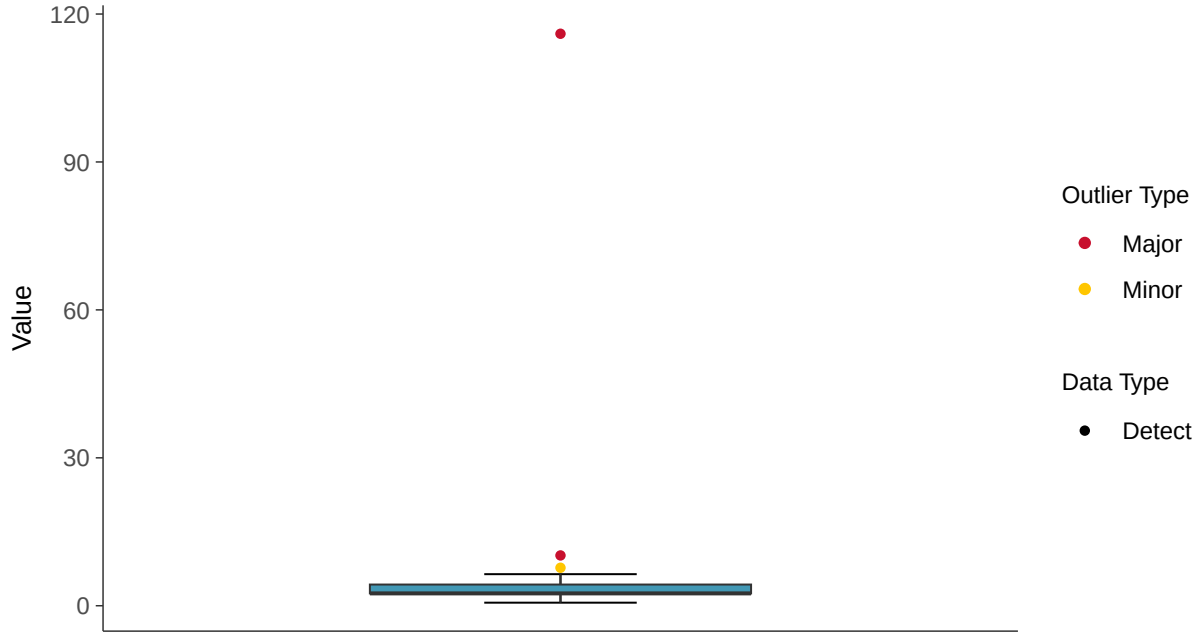
ID: 08_01_111





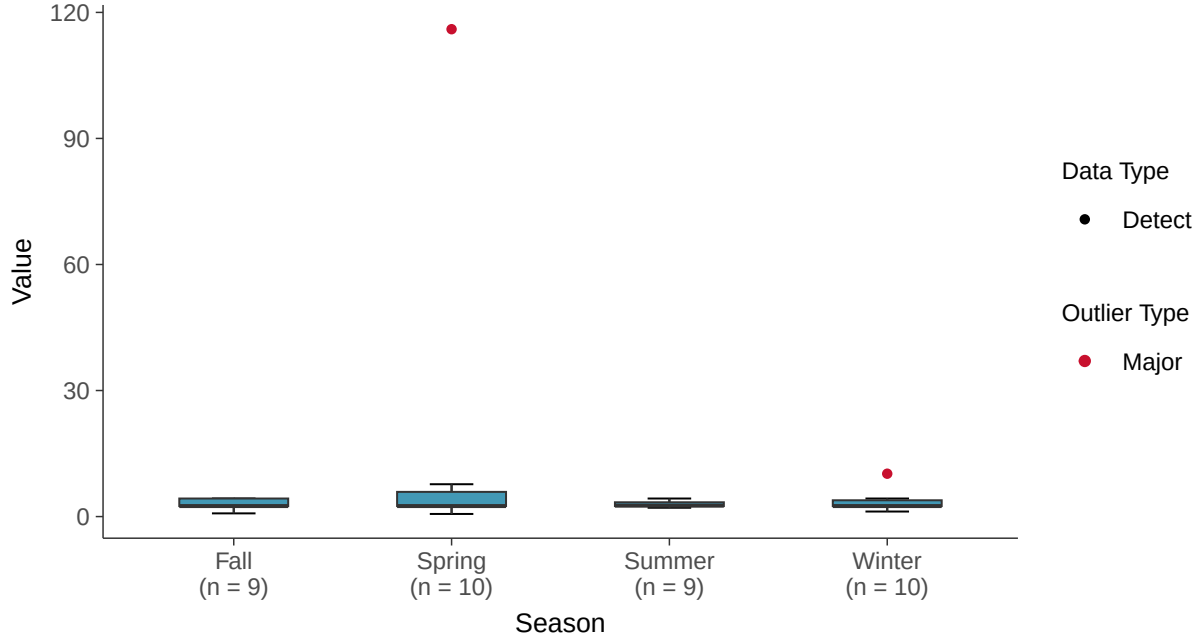
Boxplot

Copper, MW-8 (ug/L)



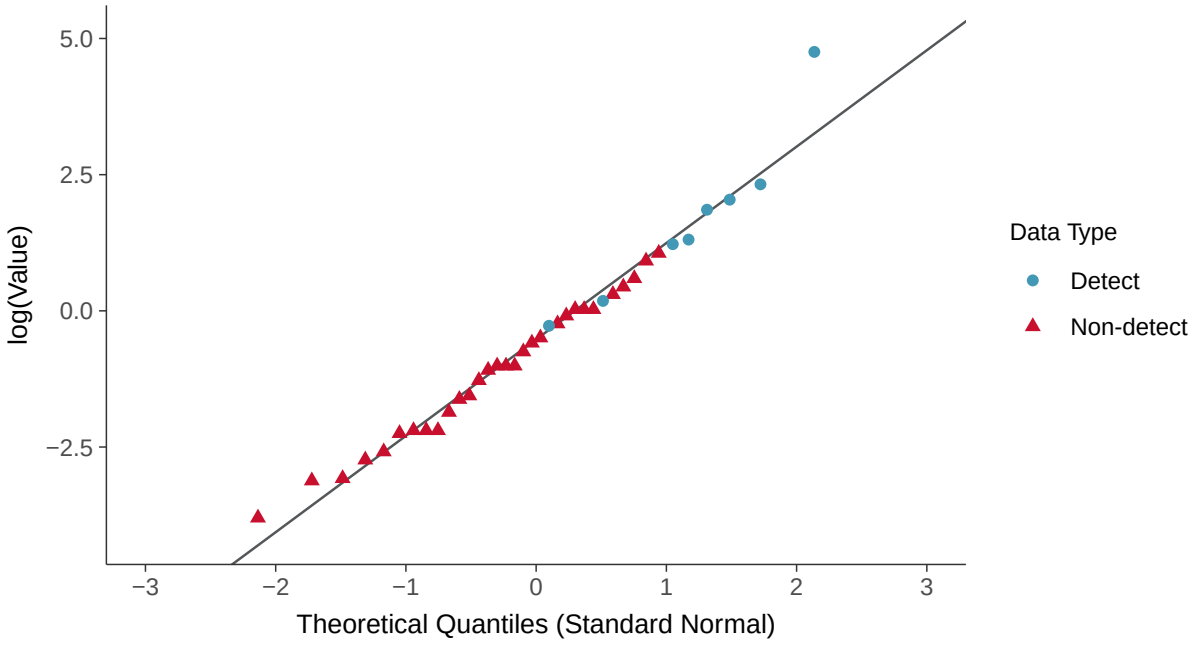
Boxplot by Season

Copper, MW-8 (ug/L)



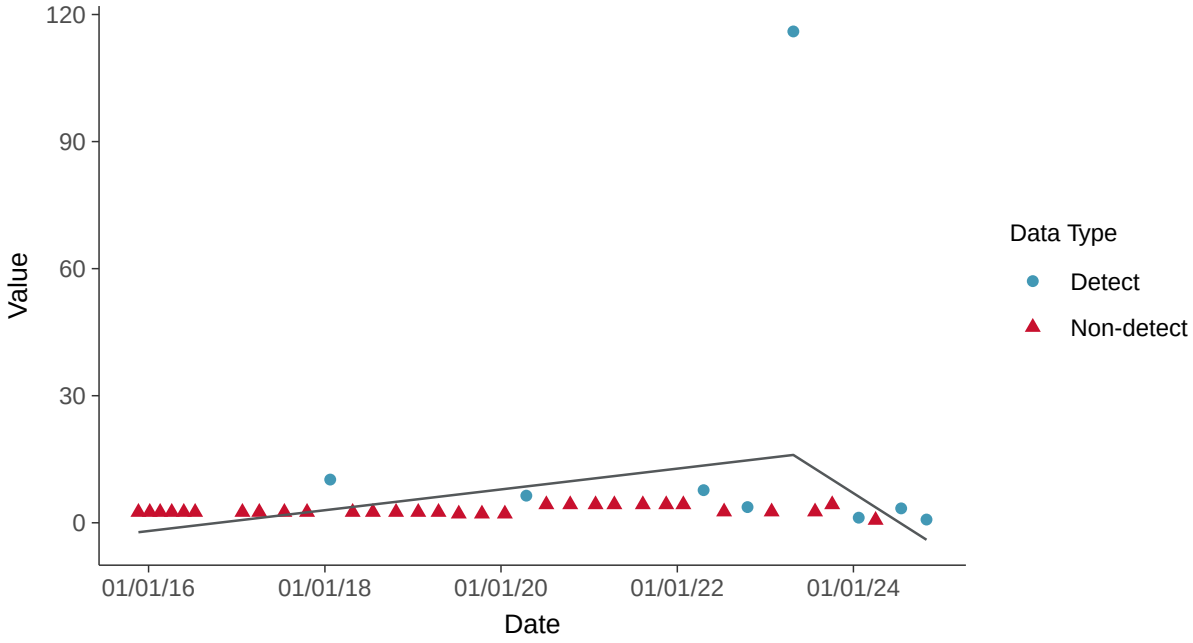
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-8 (ug/L)



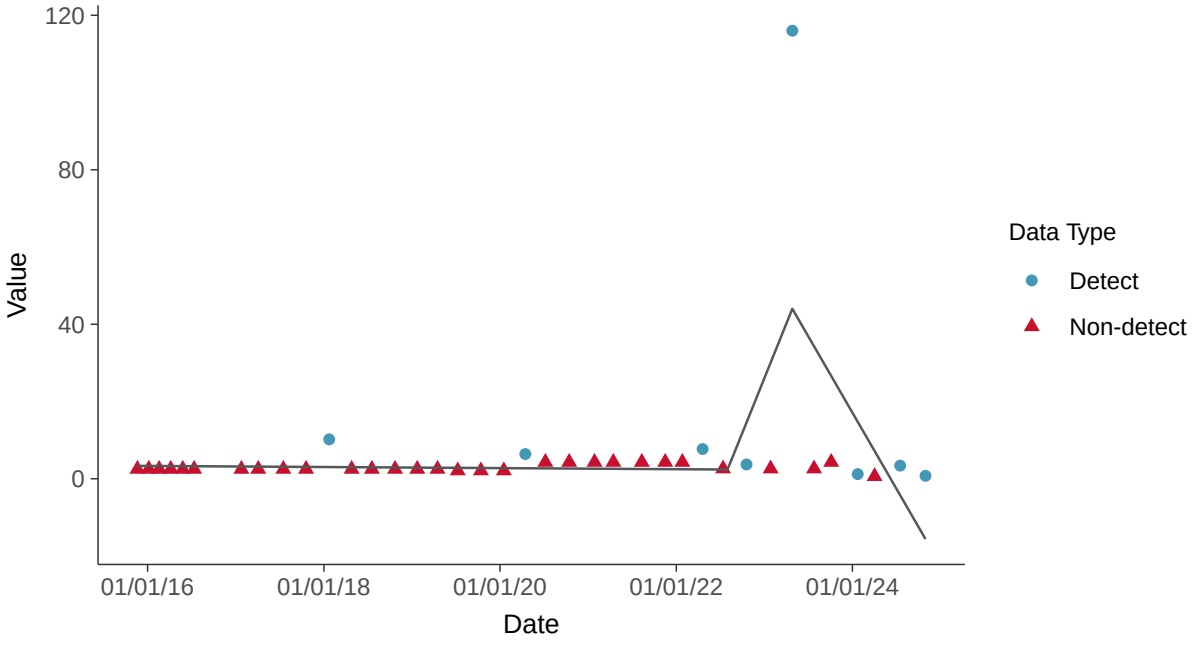
Trend Regression: Piecewise Linear-Linear

Copper, MW-8 (ug/L)



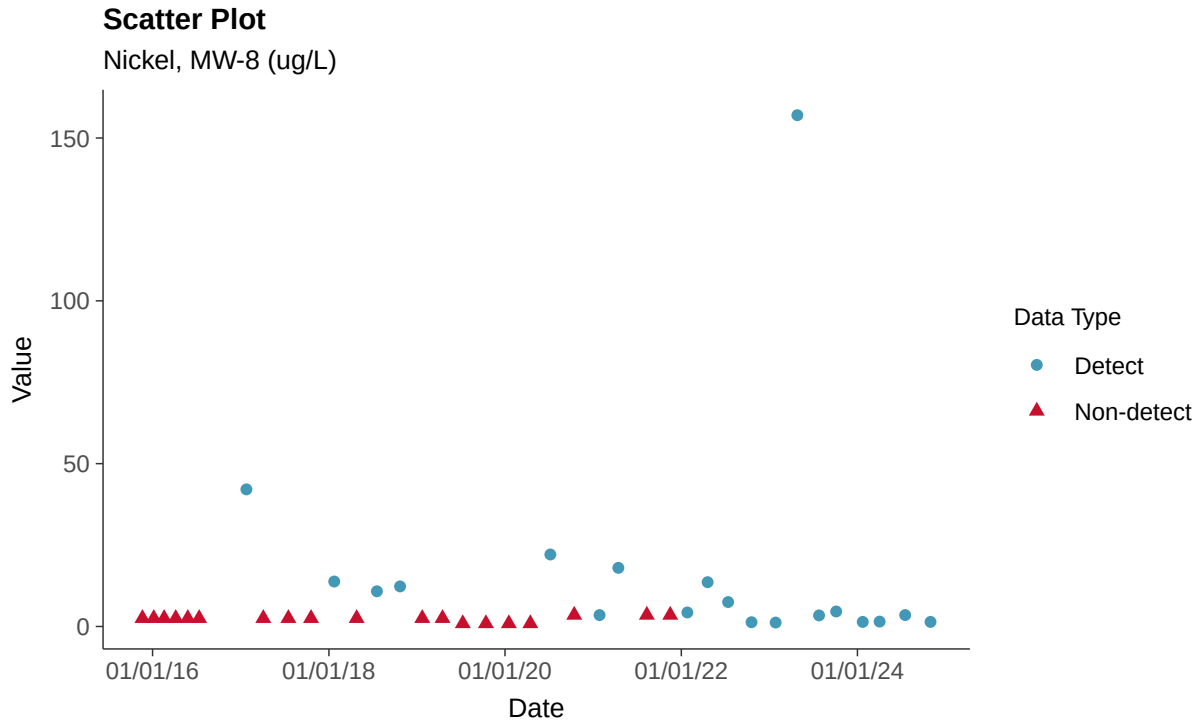
Trend Regression: Piecewise Linear-Linear-Linear

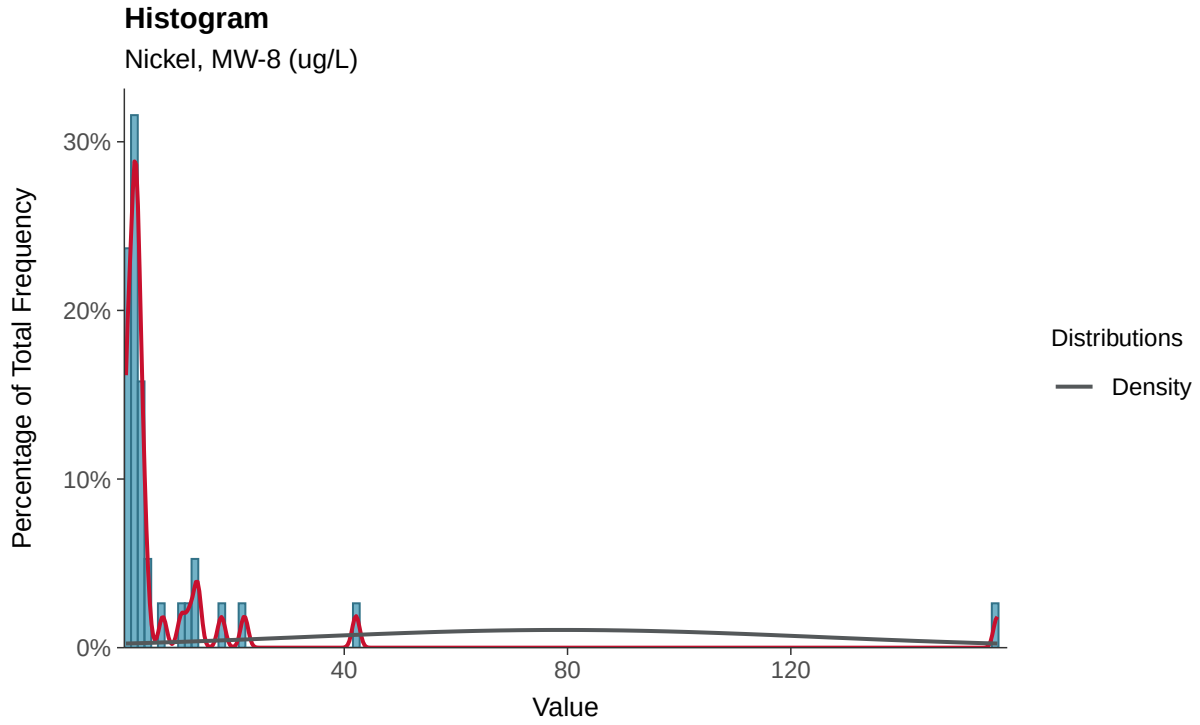
Copper, MW-8 (ug/L)



App. I Metals: Nickel, MW-8

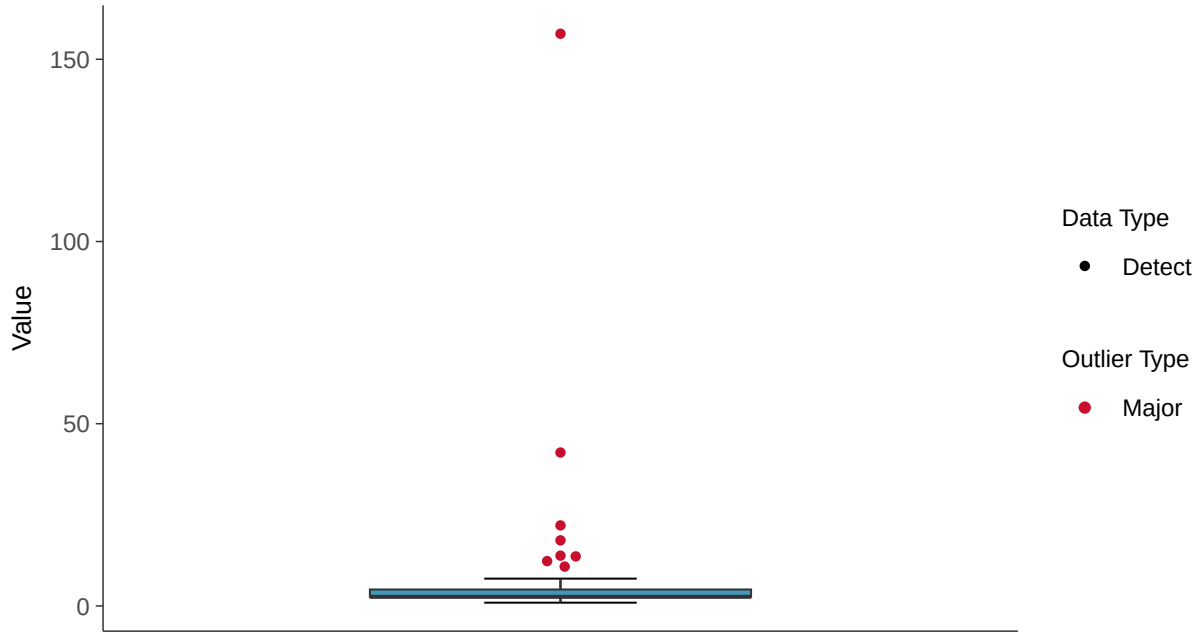
ID: 08_01_117





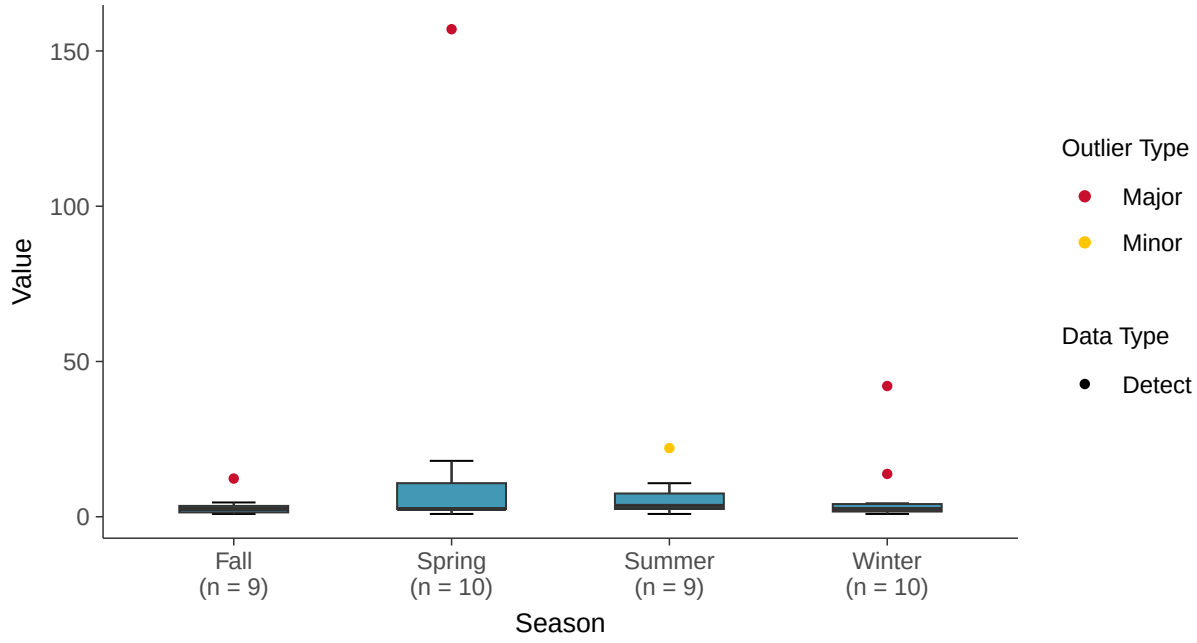
Boxplot

Nickel, MW-8 (ug/L)



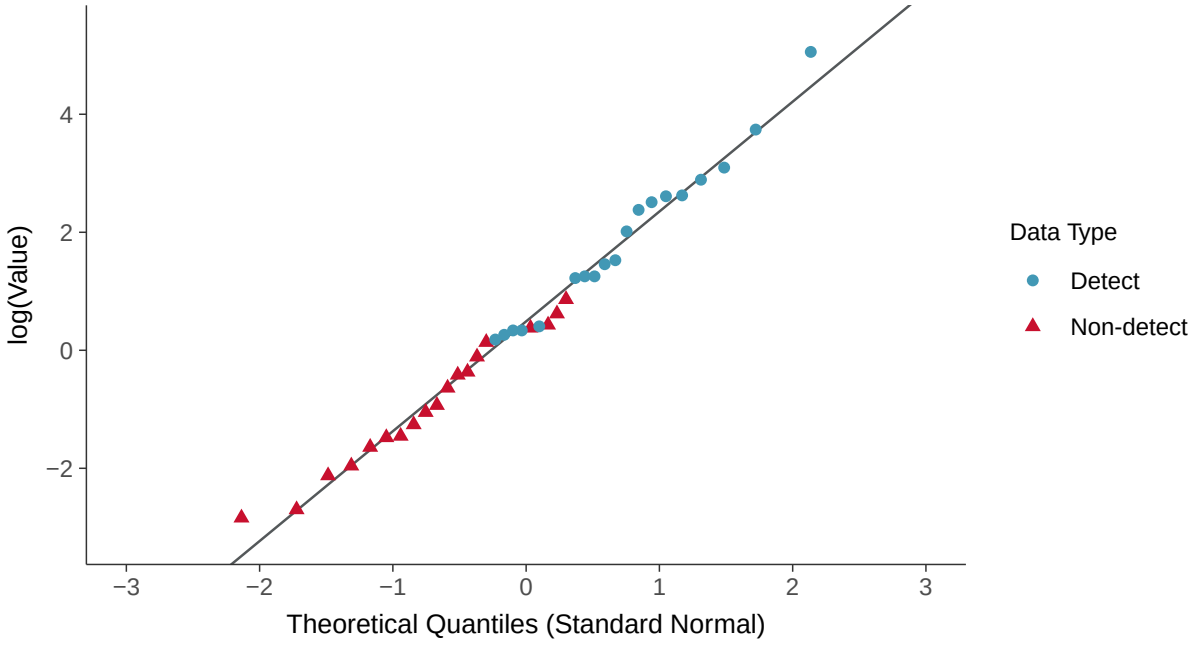
Boxplot by Season

Nickel, MW-8 (ug/L)



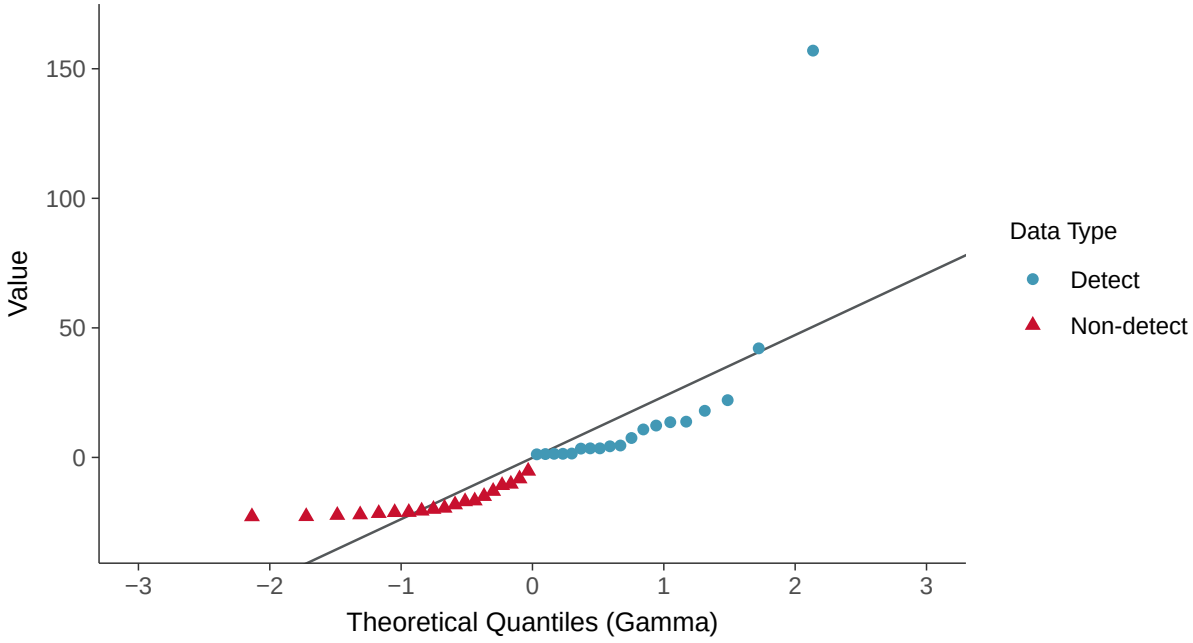
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-8 (ug/L)



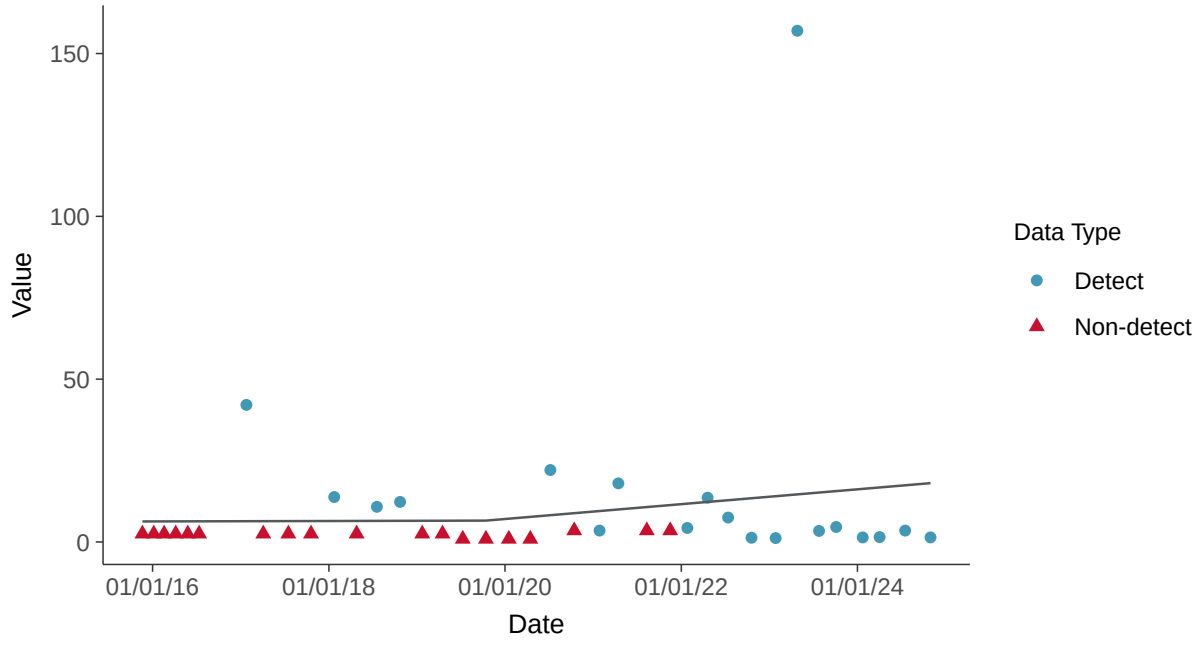
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-8 (ug/L)



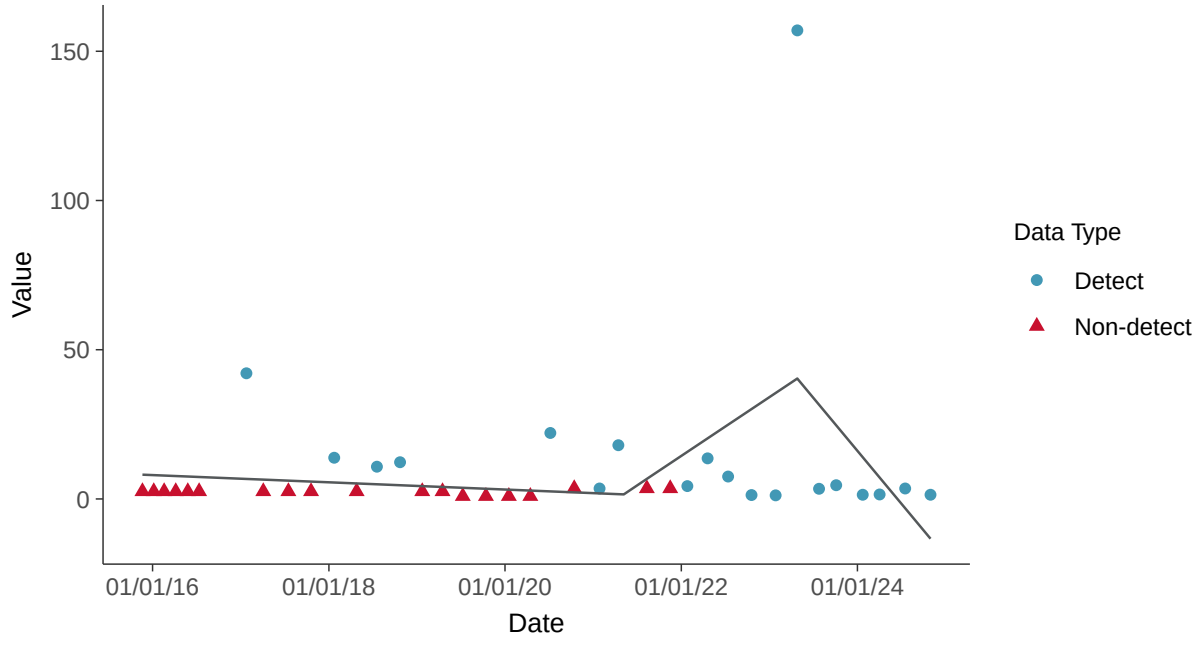
Trend Regression: Piecewise Linear-Linear

Nickel, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Nickel, MW-8 (ug/L)

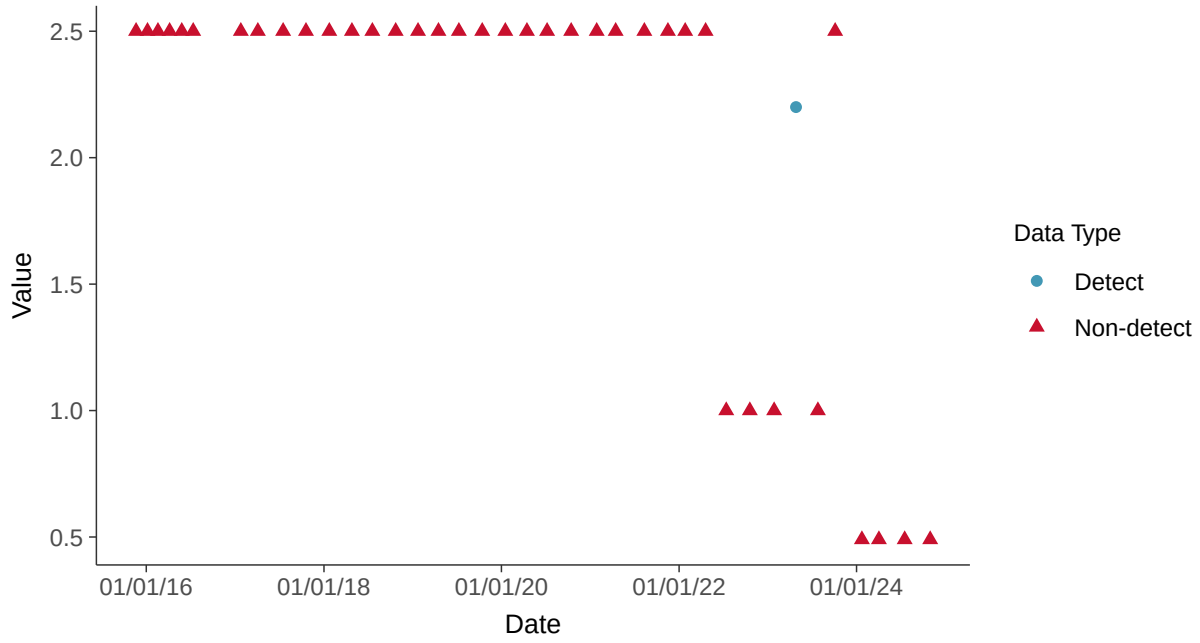


App. I Metals: Silver, MW-8

ID: 08_01_122

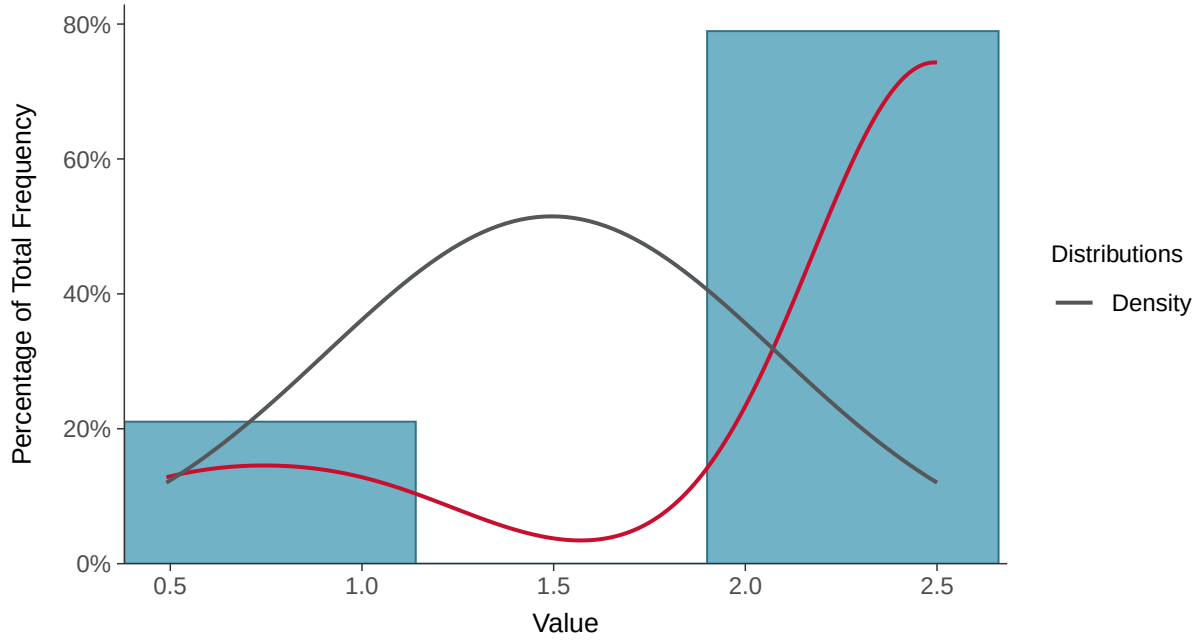
Scatter Plot

Silver, MW-8 (ug/L)



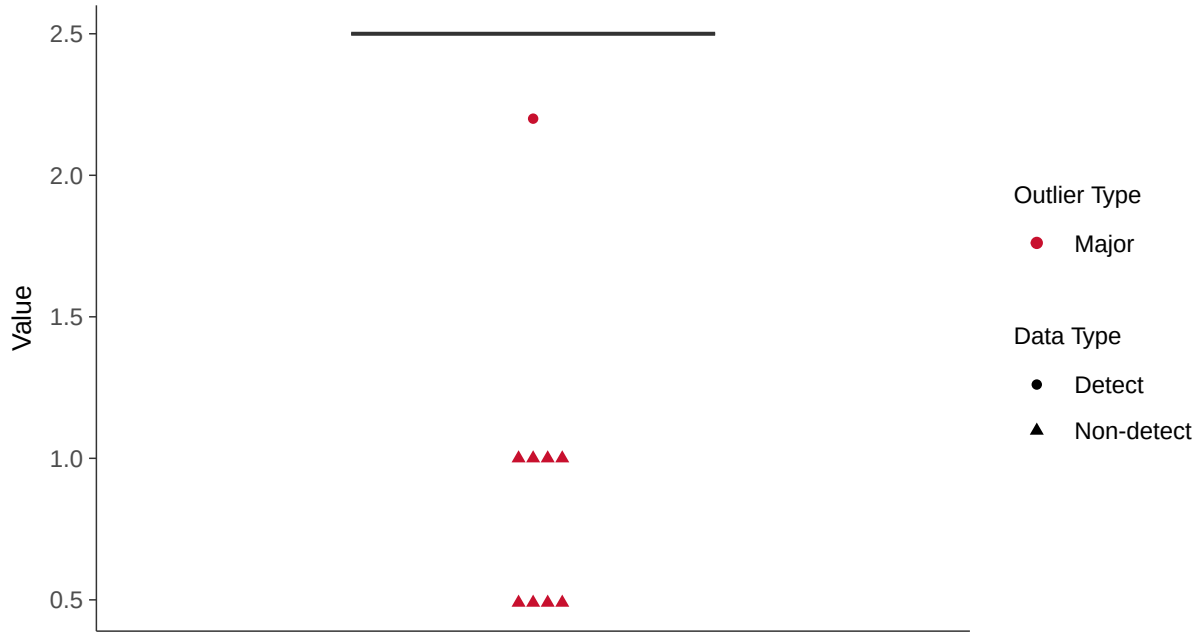
Histogram

Silver, MW-8 (ug/L)



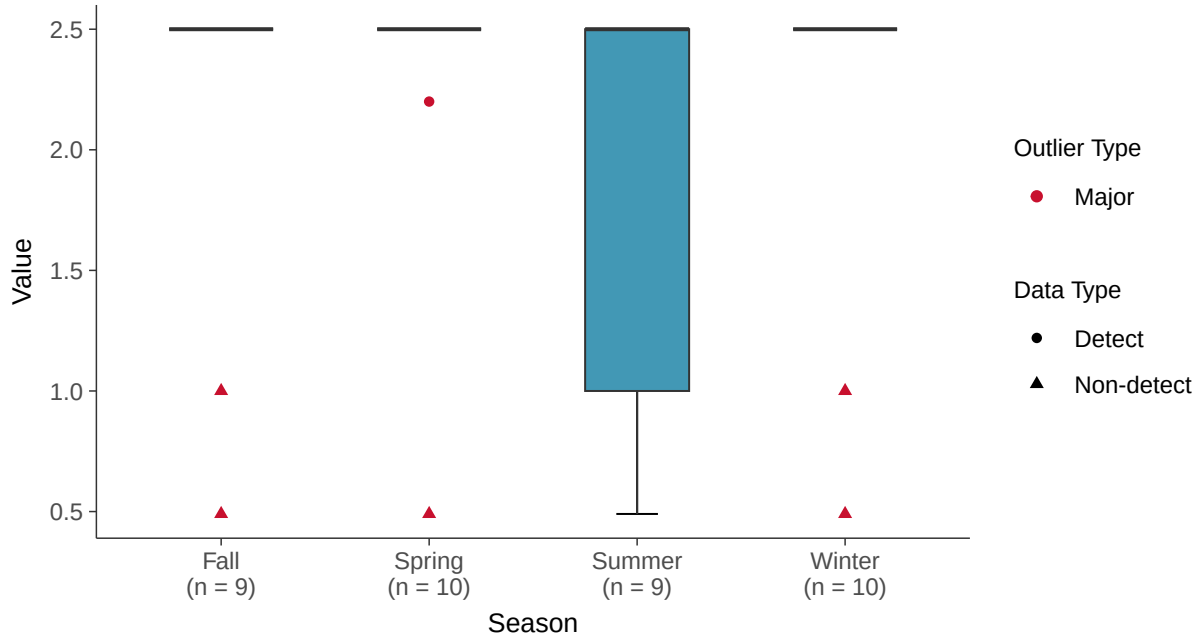
Boxplot

Silver, MW-8 (ug/L)



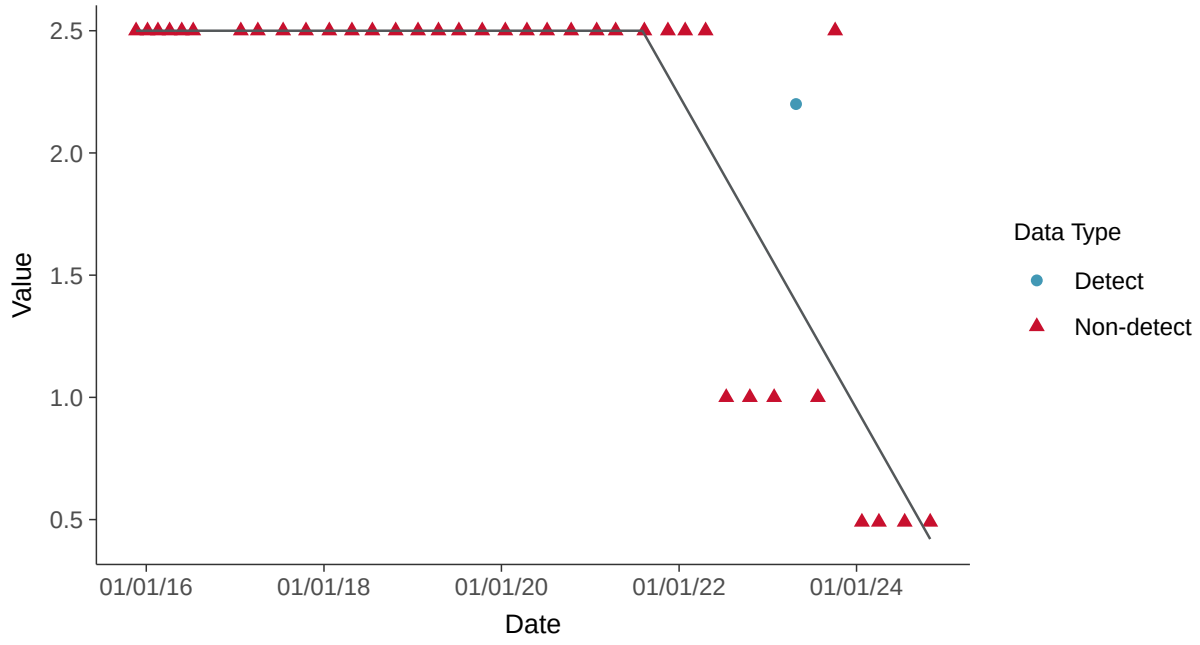
Boxplot by Season

Silver, MW-8 (ug/L)



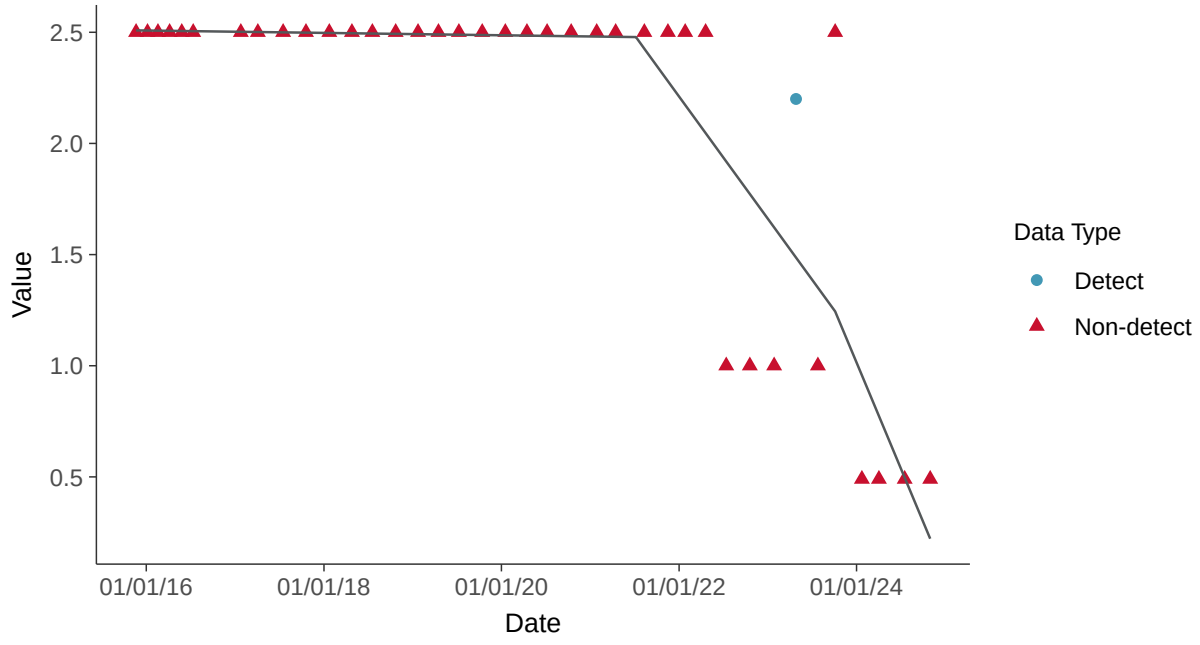
Trend Regression: Piecewise Linear-Linear

Silver, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Silver, MW-8 (ug/L)

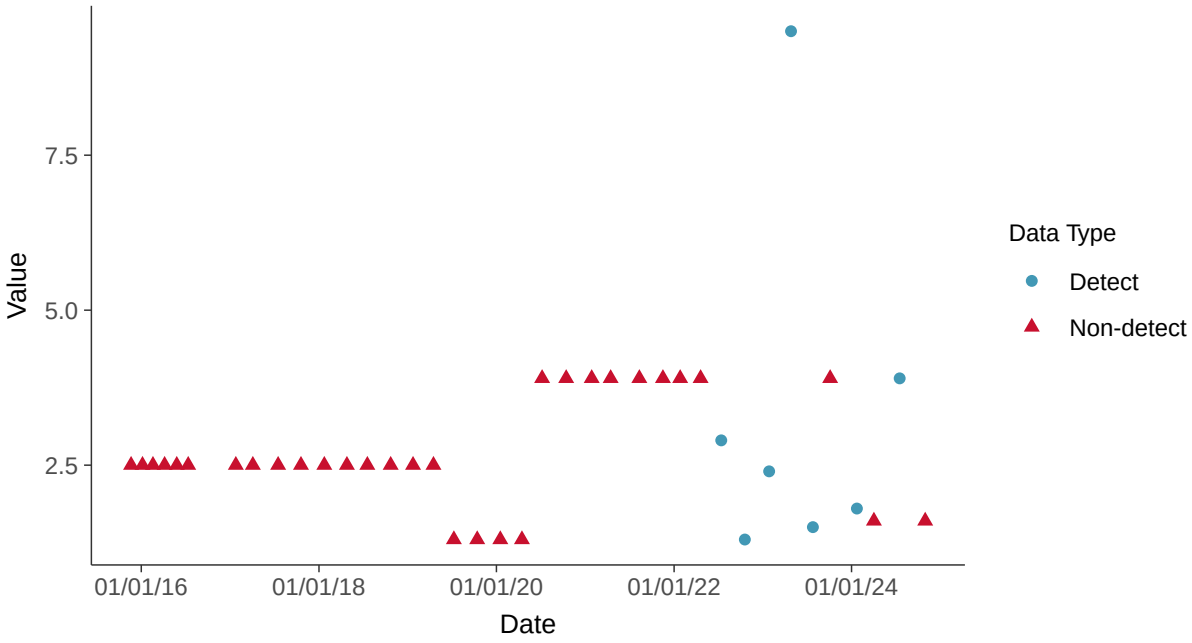


App. I Metals: Vanadium, MW-8

ID: 08_01_127

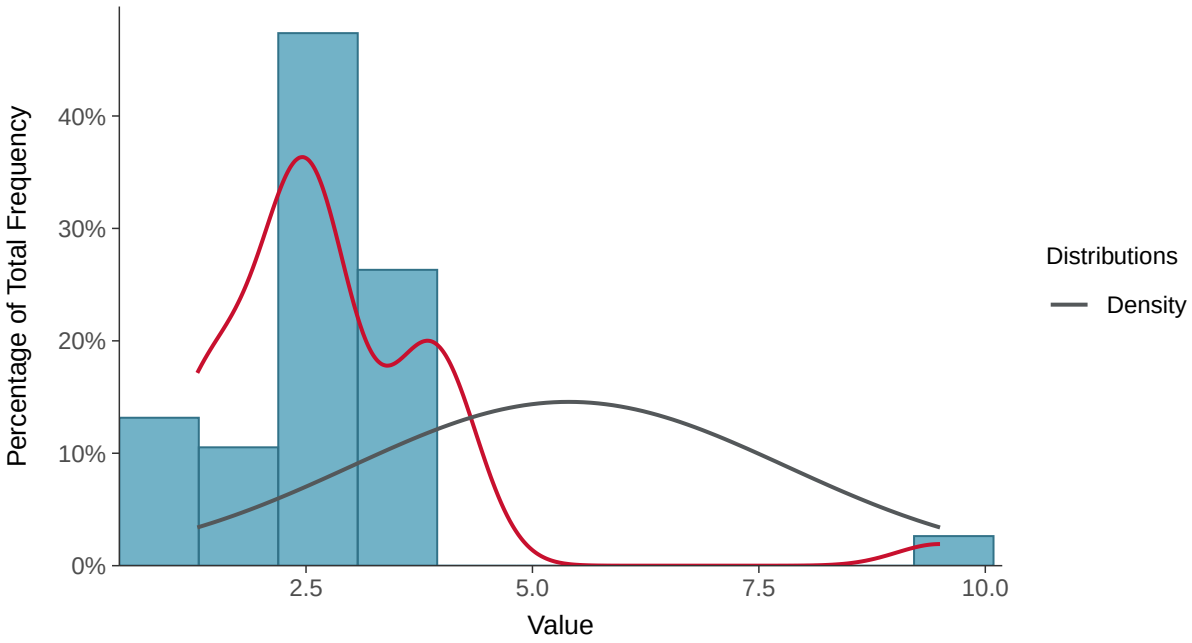
Scatter Plot

Vanadium, MW-8 (ug/L)



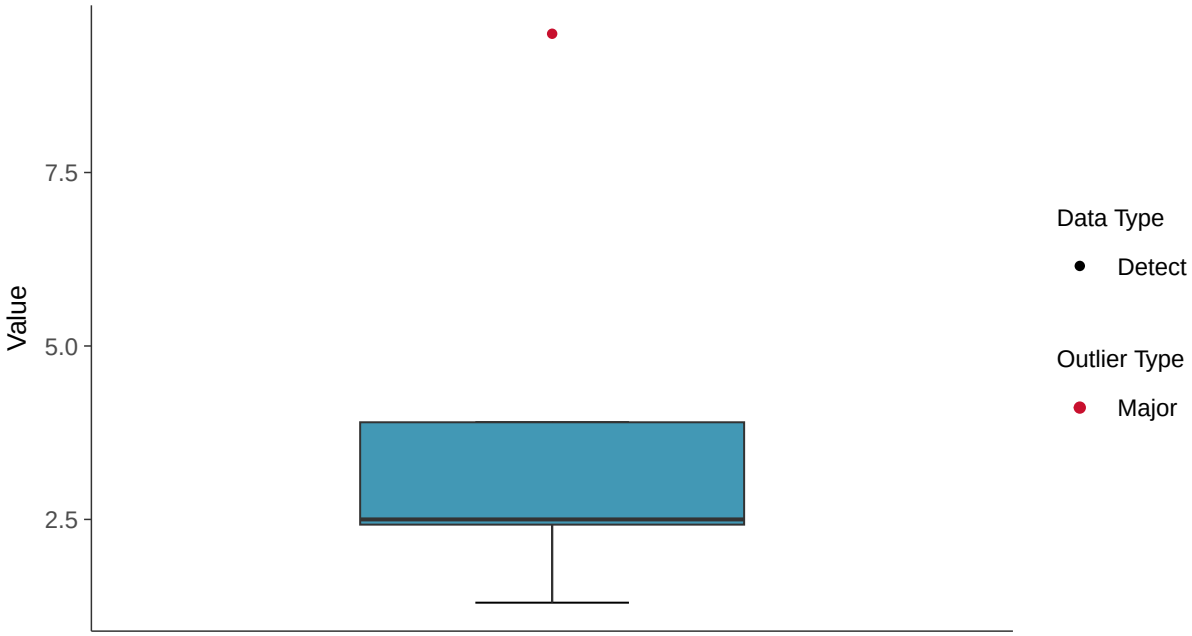
Histogram

Vanadium, MW-8 (ug/L)



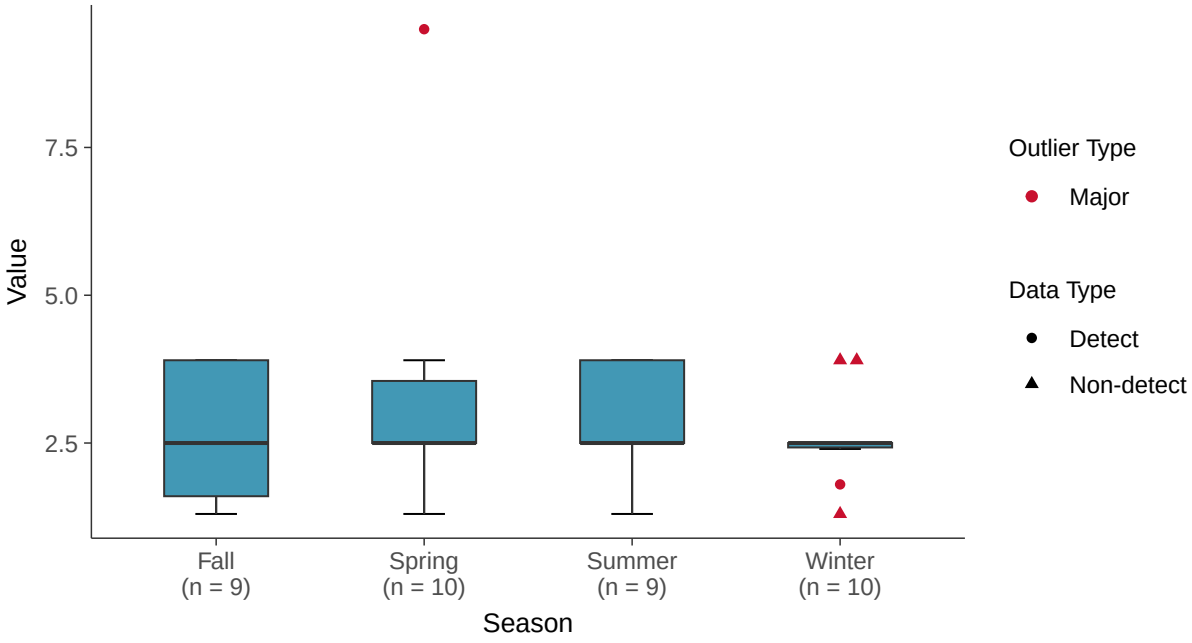
Boxplot

Vanadium, MW-8 (ug/L)



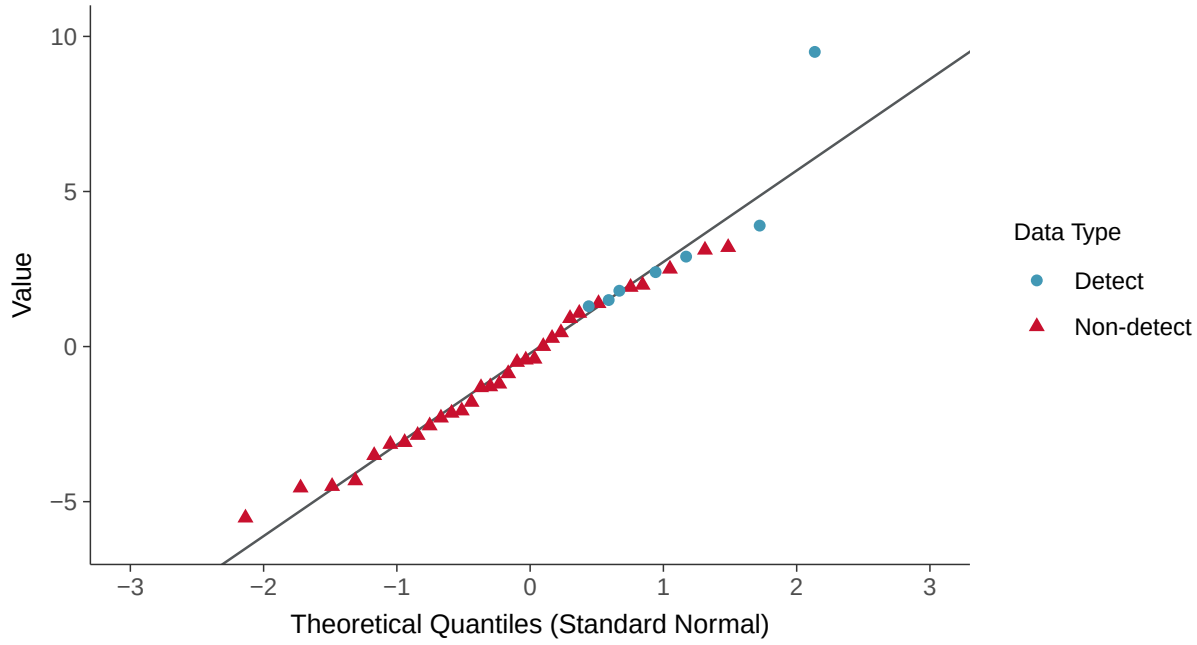
Boxplot by Season

Vanadium, MW-8 (ug/L)



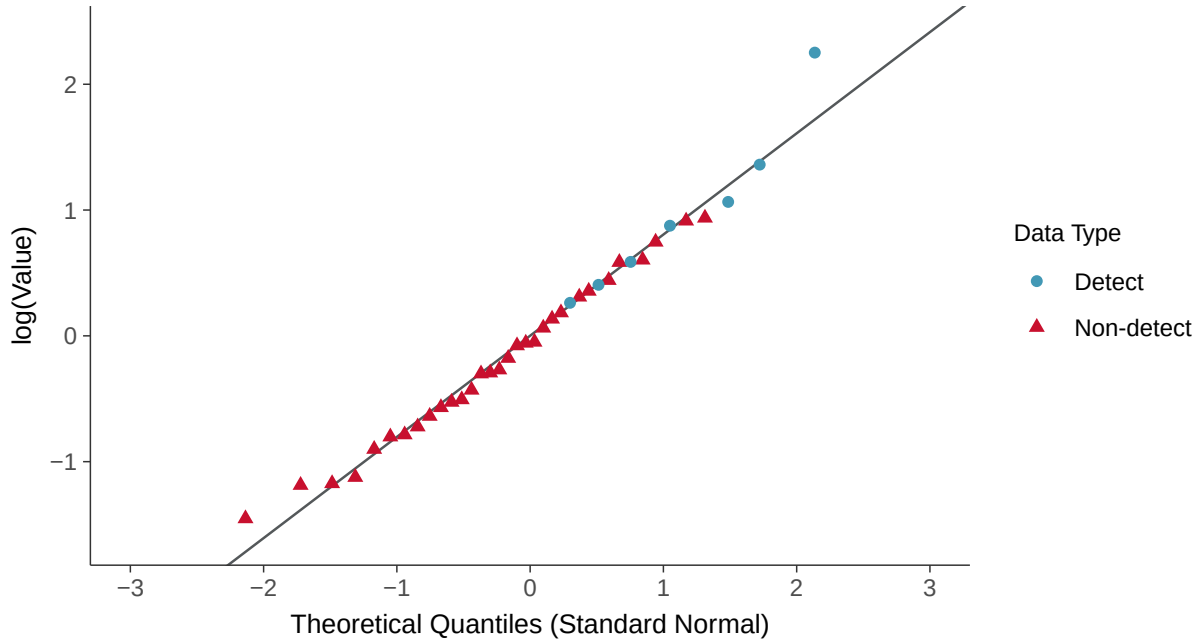
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



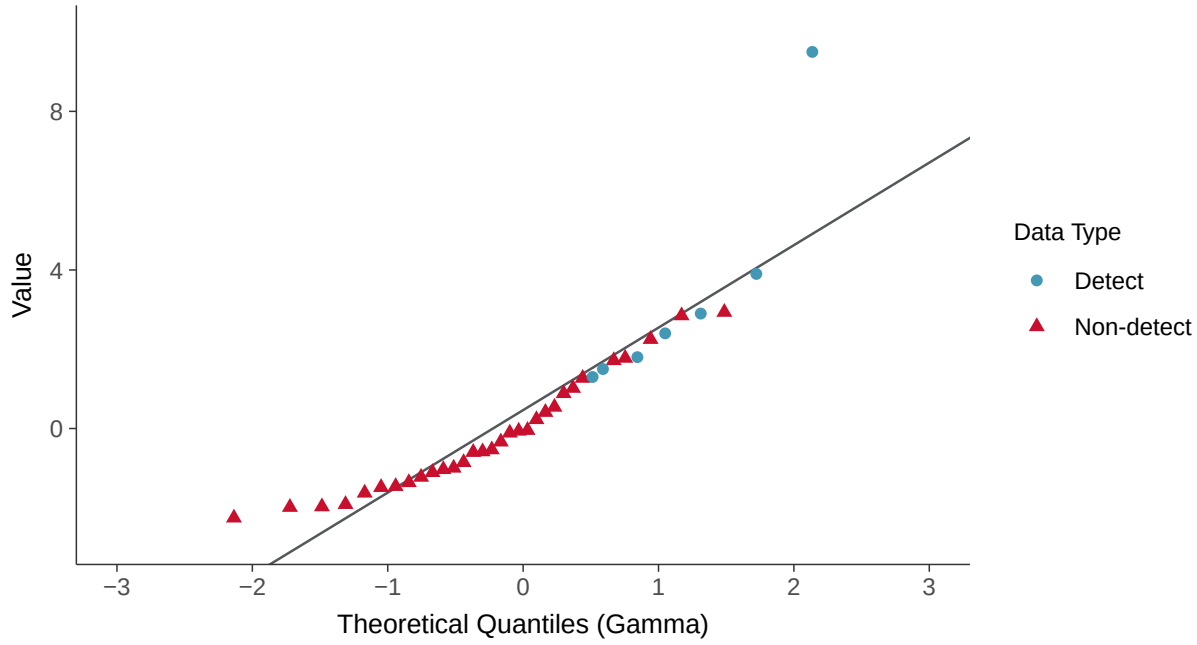
Lognormal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



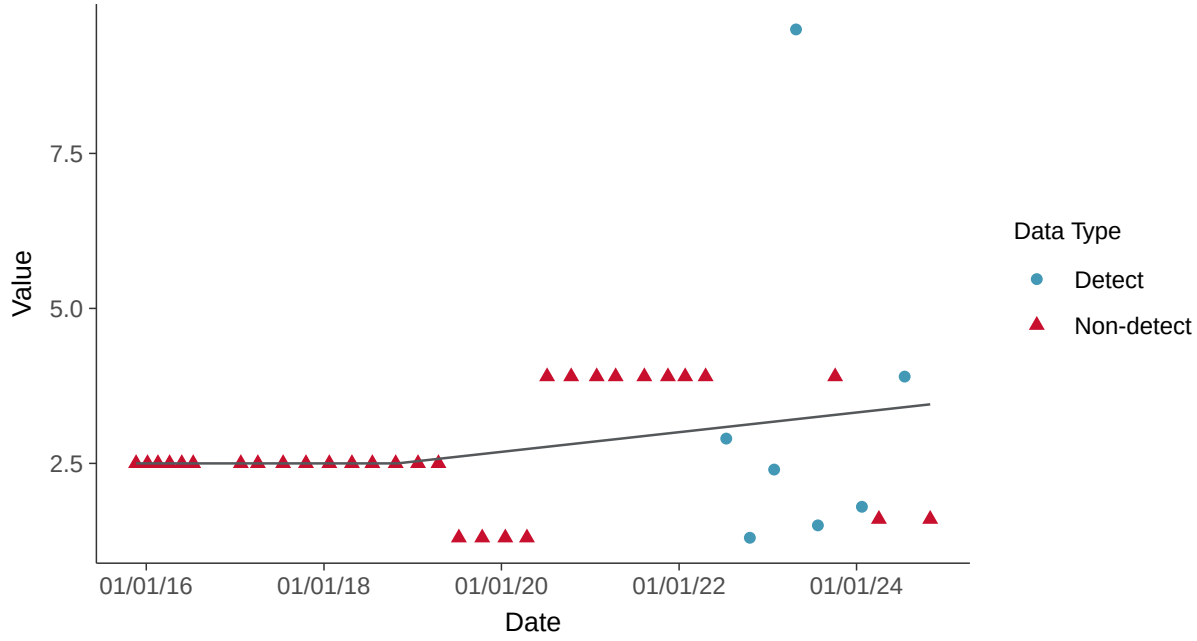
Gamma Q-Q plot using ROS Imputed Estimates

Vanadium, MW-8 (ug/L)



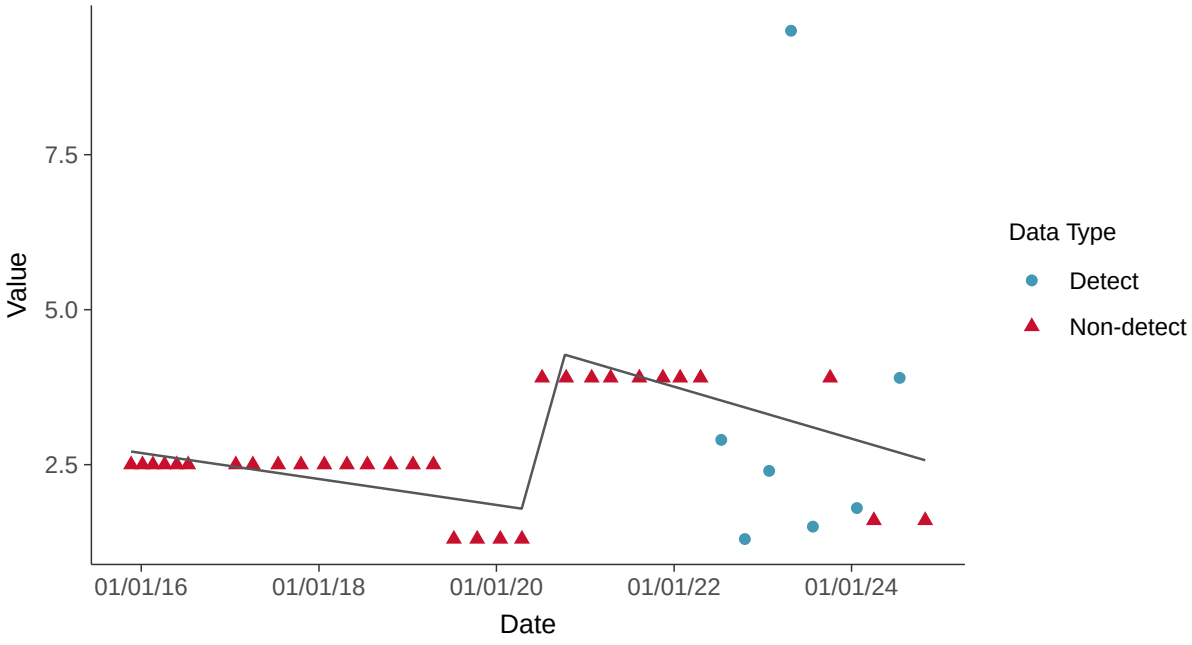
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-8 (ug/L)



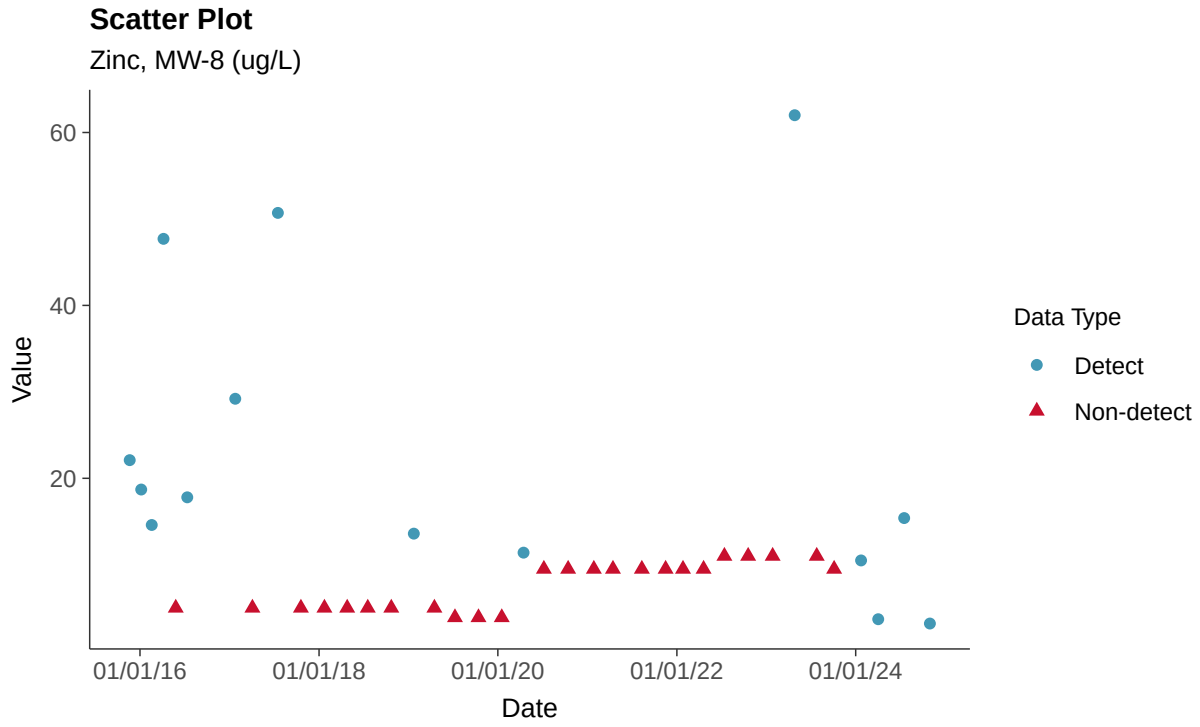
Trend Regression: Piecewise Linear-Linear-Linear

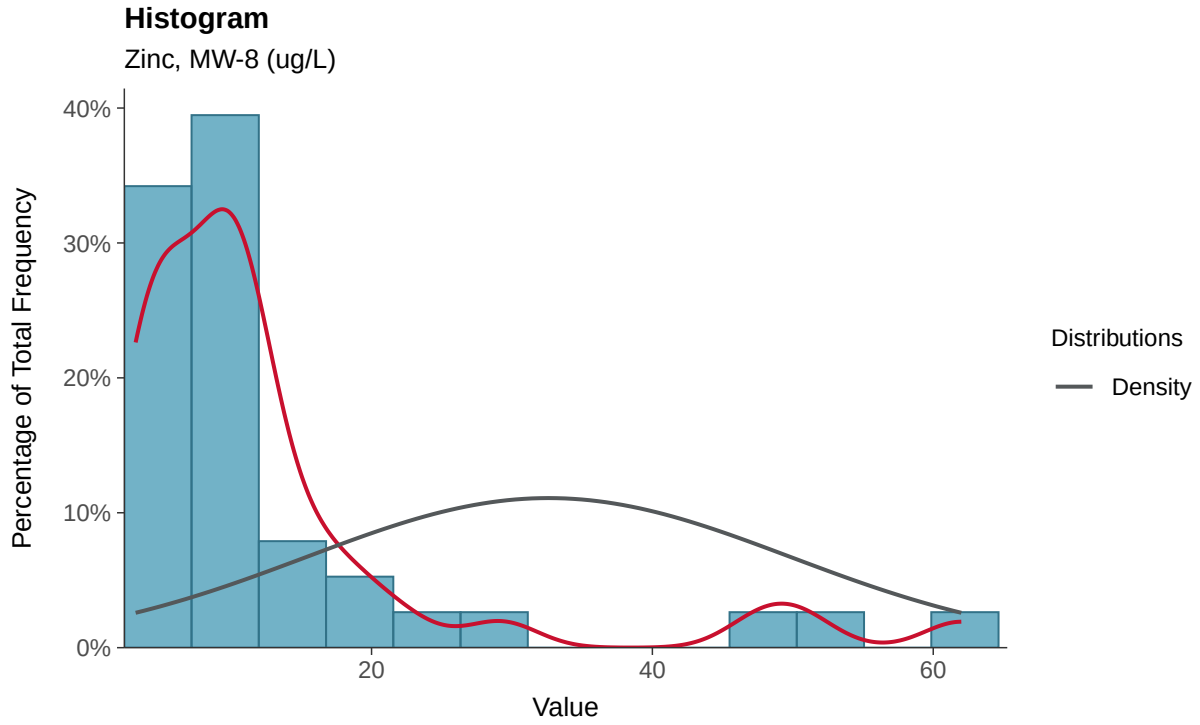
Vanadium, MW-8 (ug/L)



App. I Metals: Zinc, MW-8

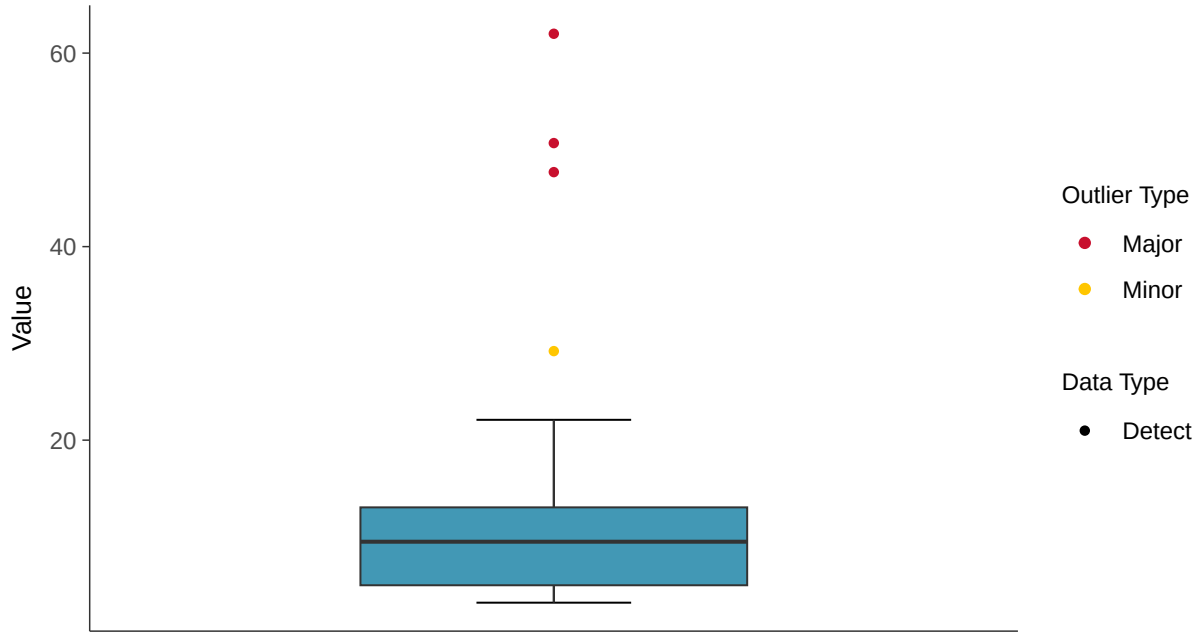
ID: 08_01_128





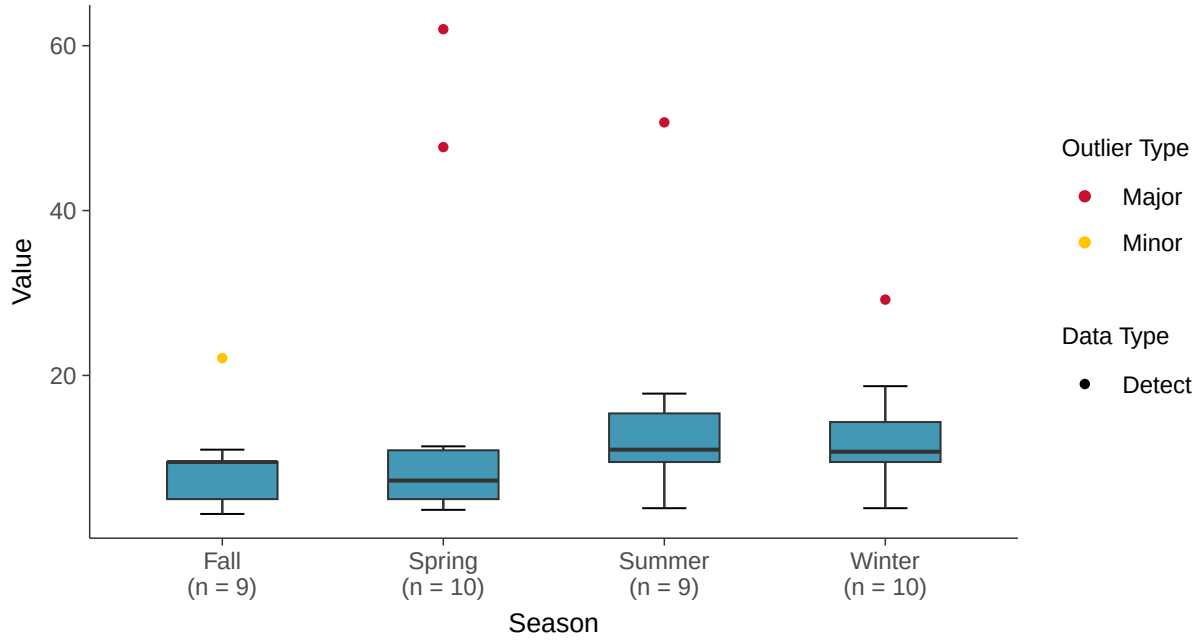
Boxplot

Zinc, MW-8 (ug/L)



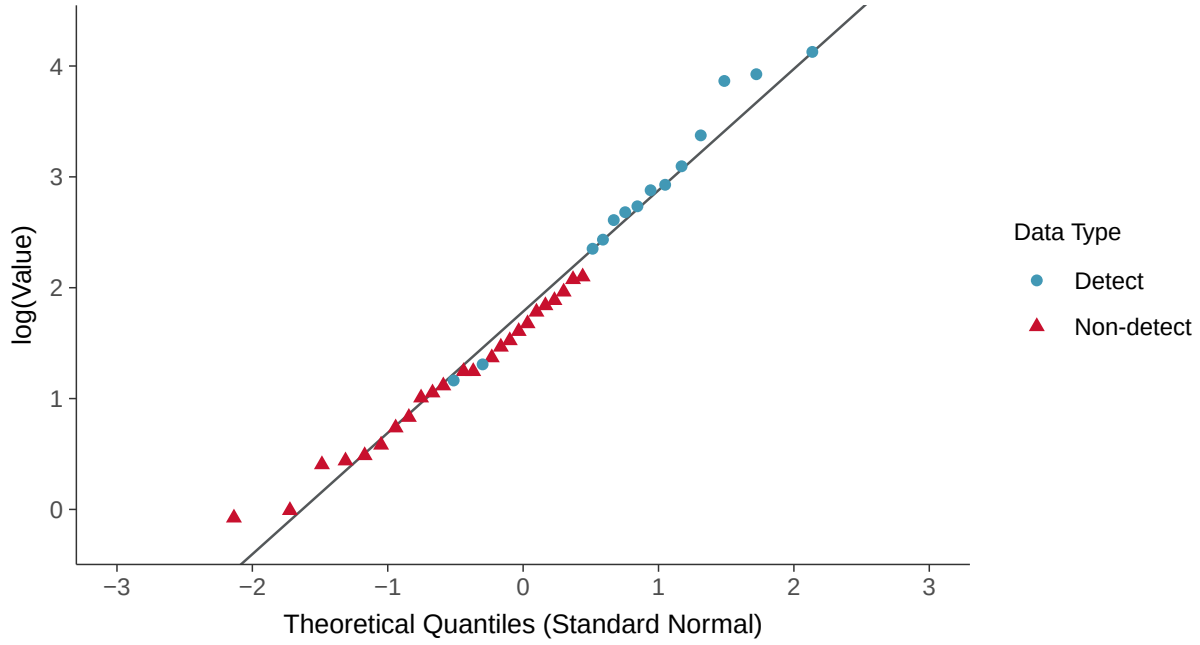
Boxplot by Season

Zinc, MW-8 (ug/L)



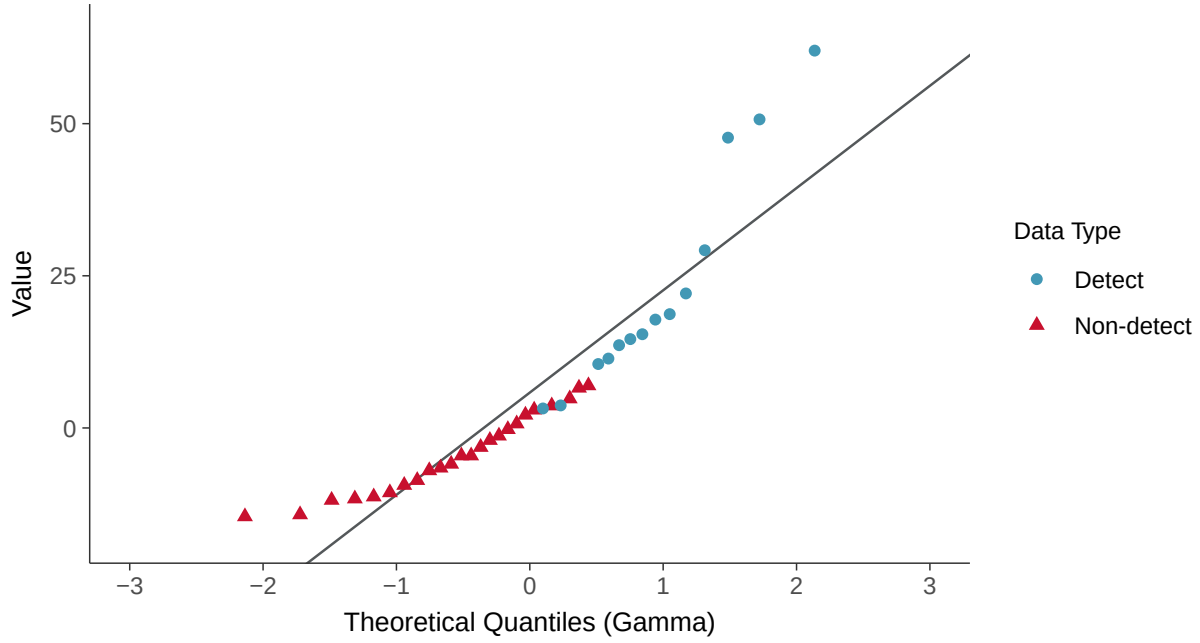
Lognormal Q-Q plot using ROS Imputed Estimates

Zinc, MW-8 (ug/L)



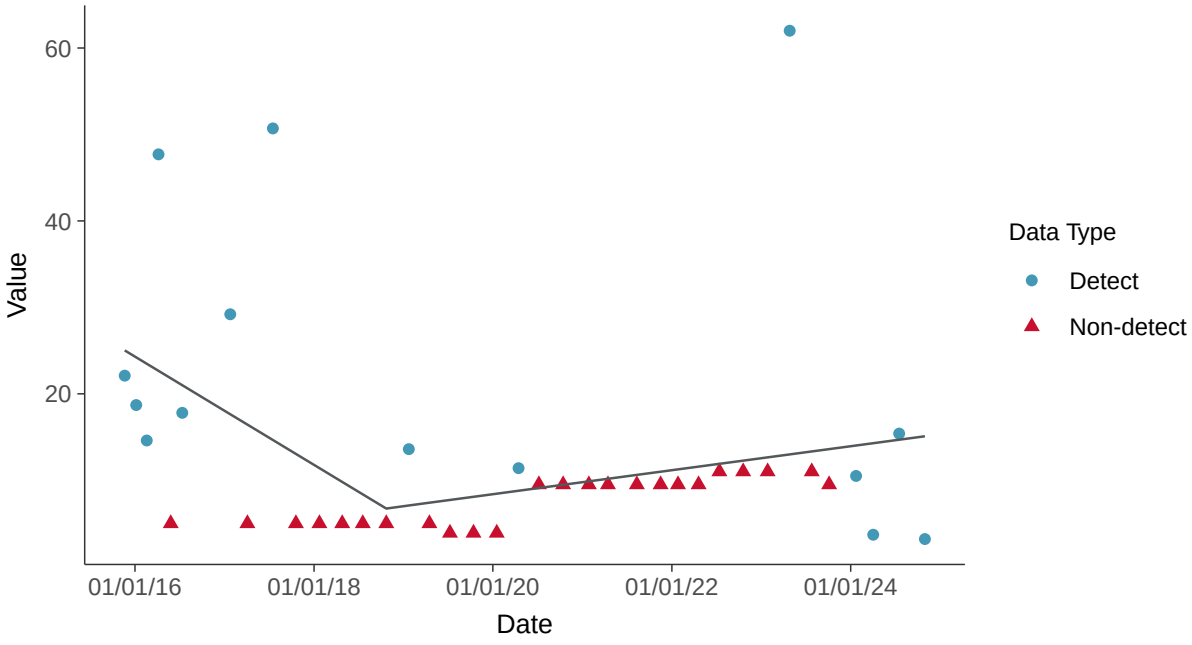
Gamma Q-Q plot using ROS Imputed Estimates

Zinc, MW-8 (ug/L)



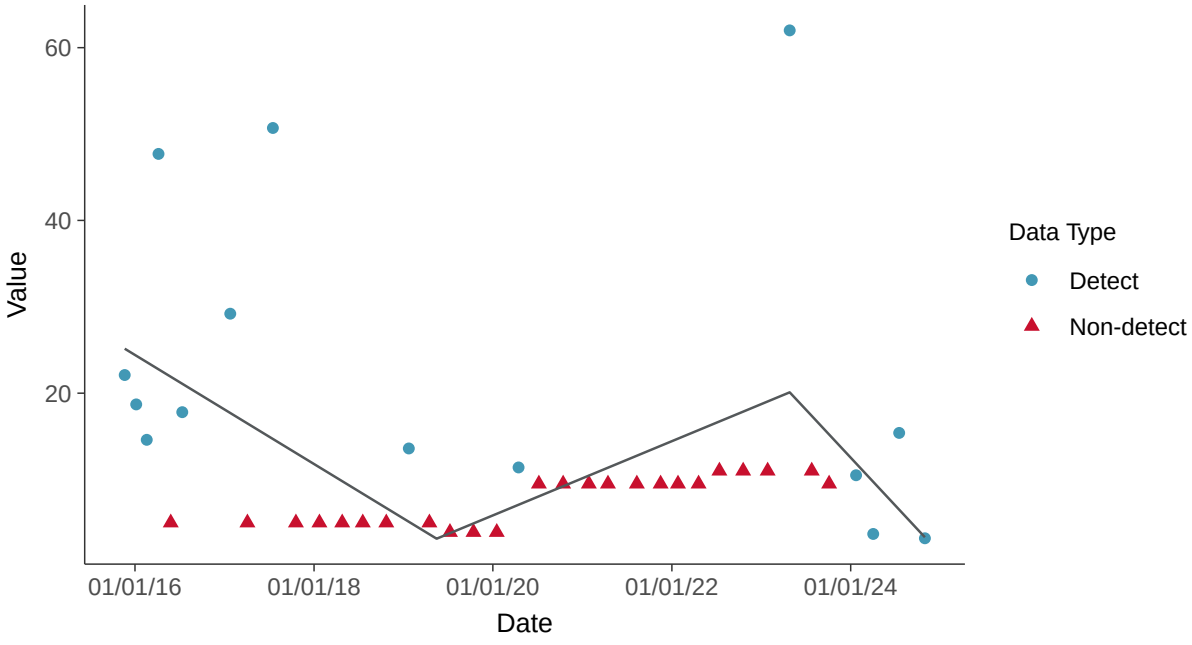
Trend Regression: Piecewise Linear-Linear

Zinc, MW-8 (ug/L)



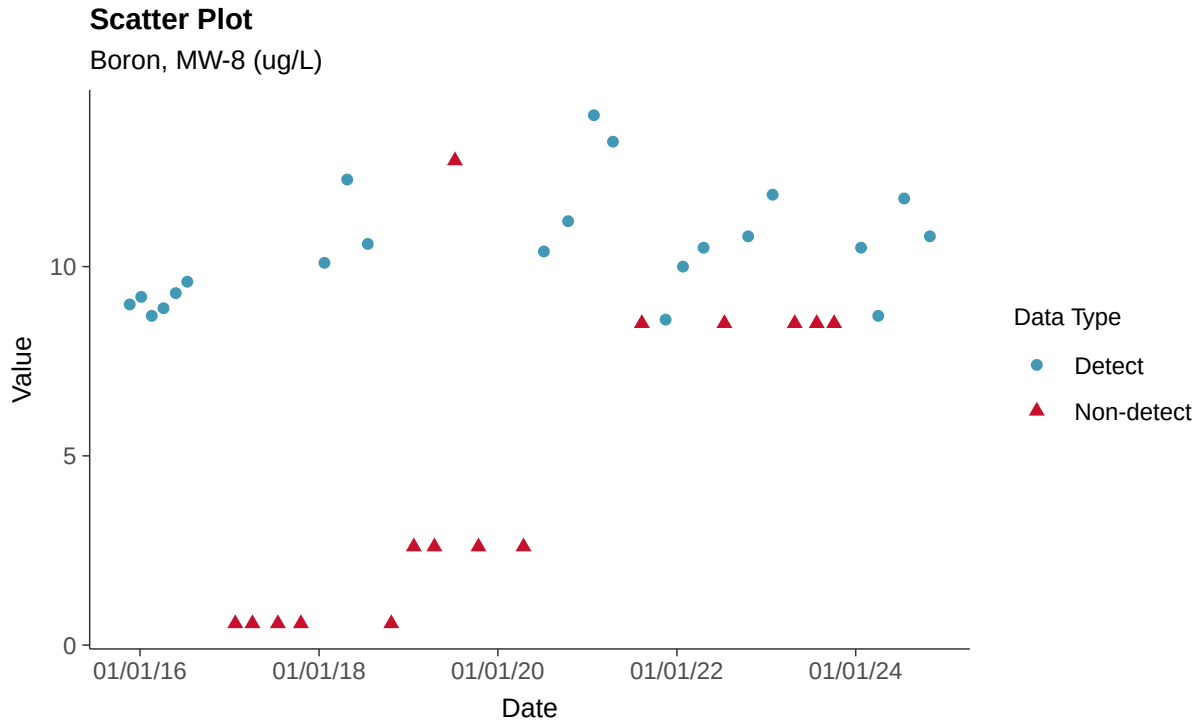
Trend Regression: Piecewise Linear-Linear-Linear

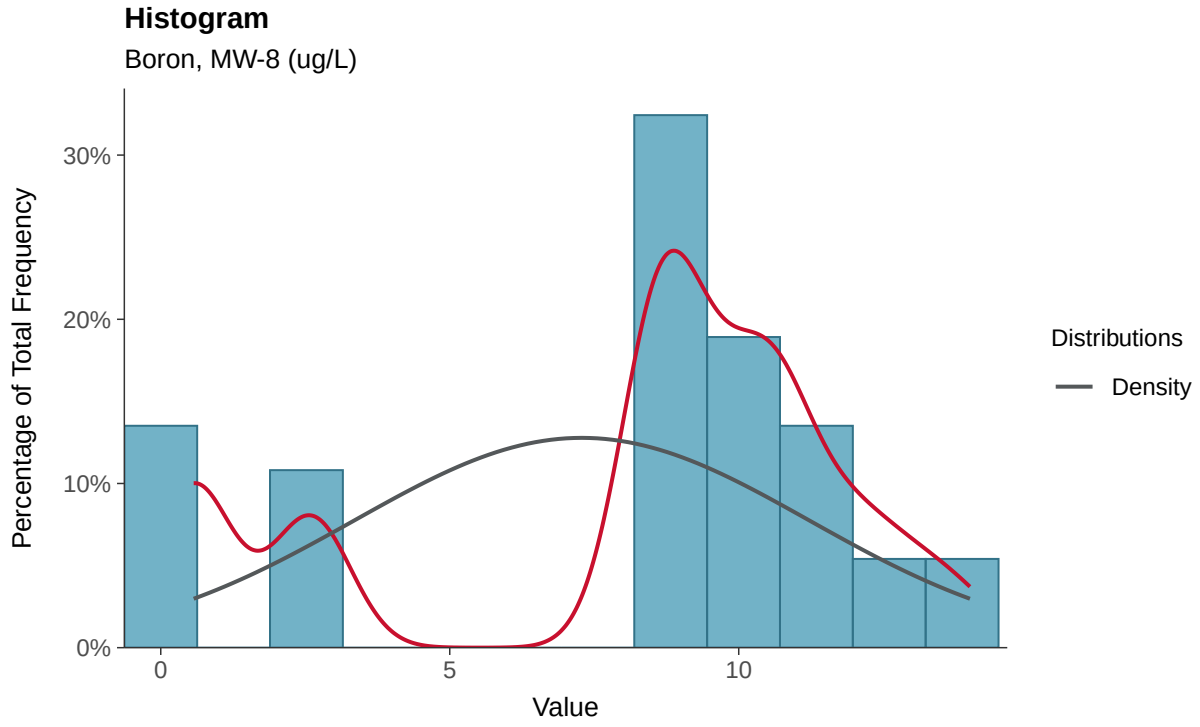
Zinc, MW-8 (ug/L)



App. III: Boron, MW-8

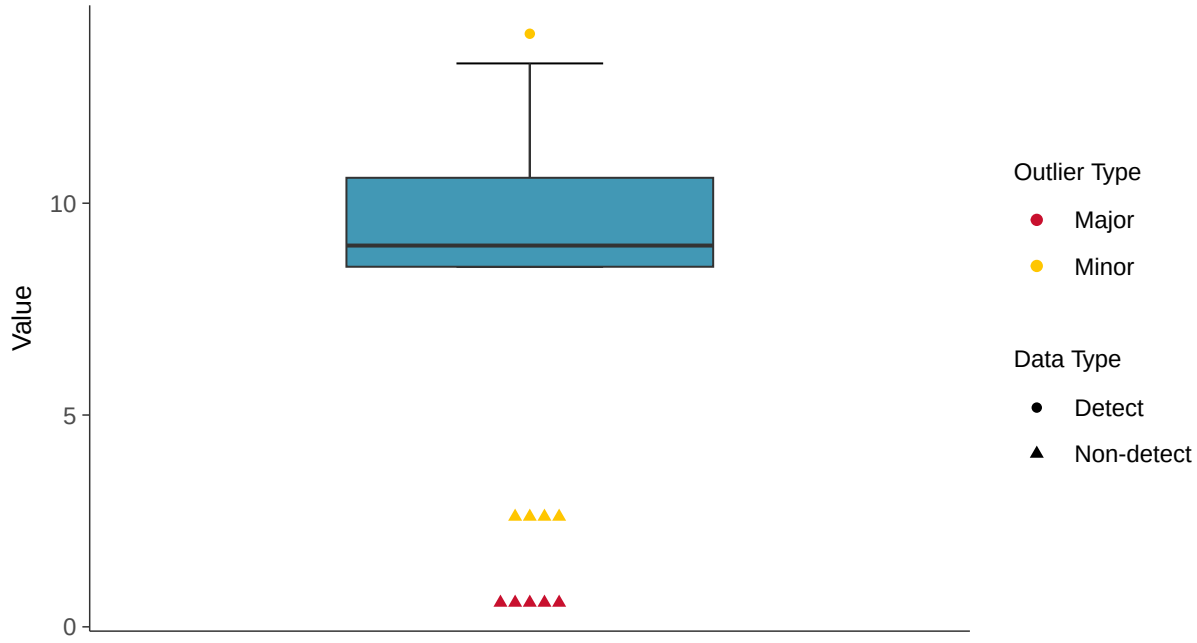
ID: 08_02_105





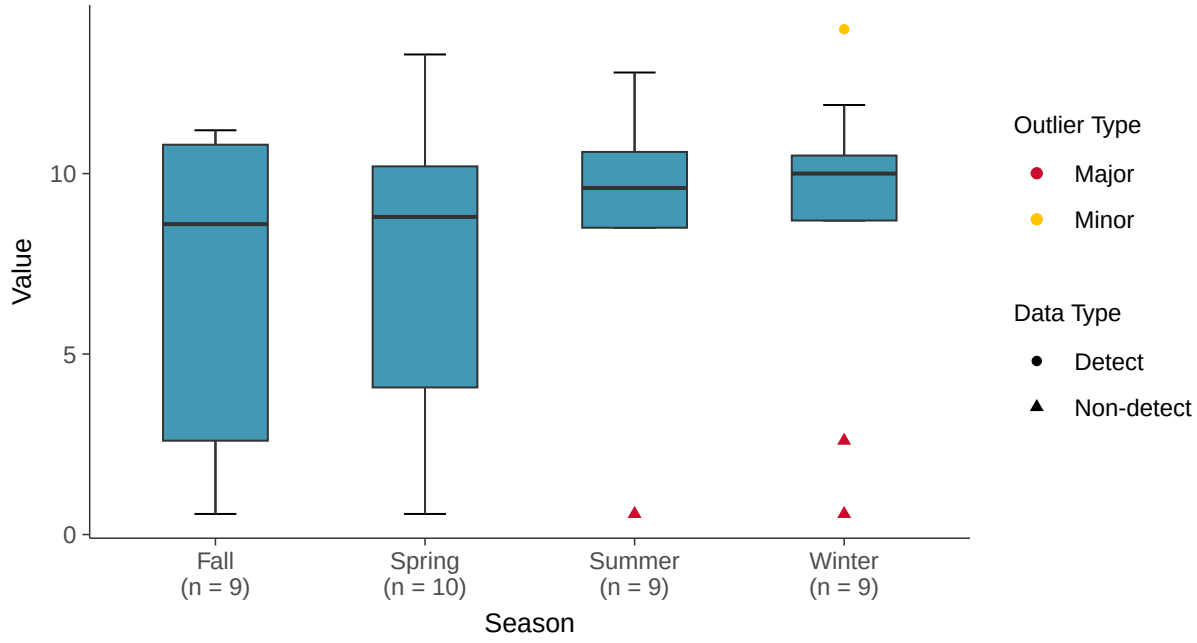
Boxplot

Boron, MW-8 (ug/L)



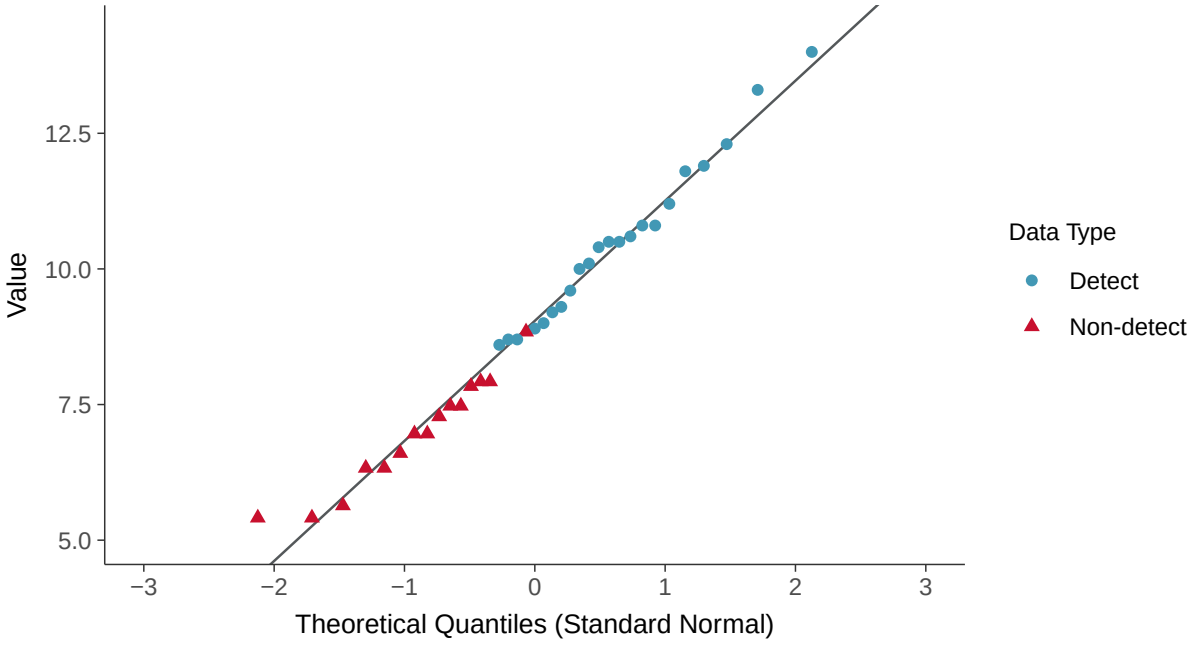
Boxplot by Season

Boron, MW-8 (ug/L)



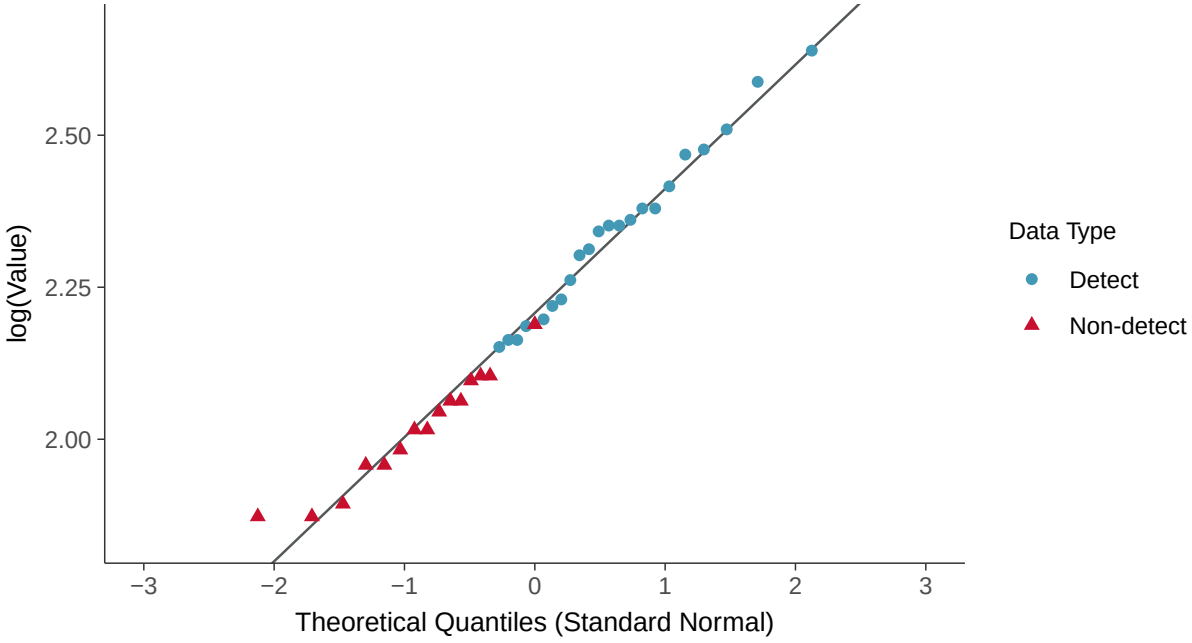
Normal Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



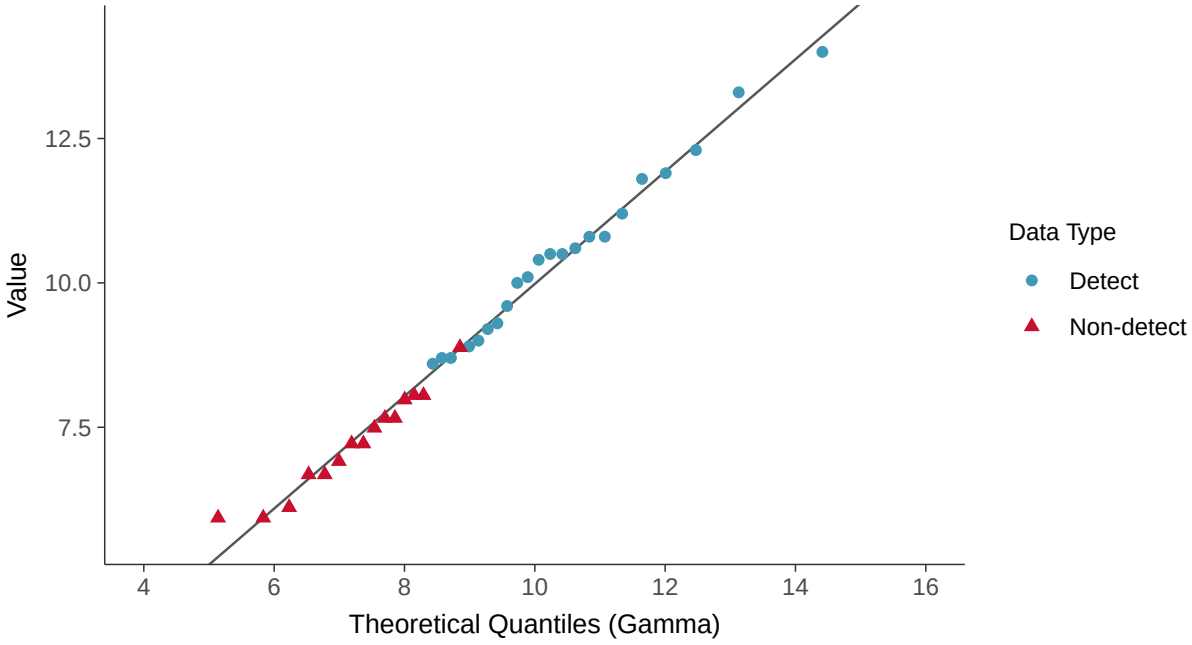
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



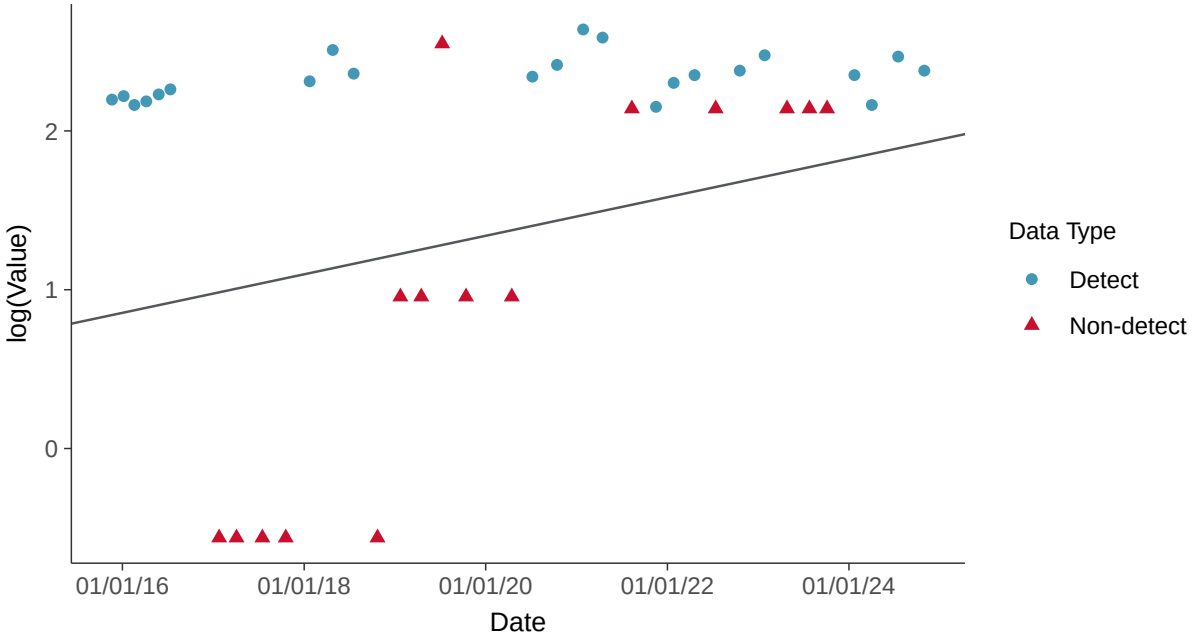
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-8 (ug/L)



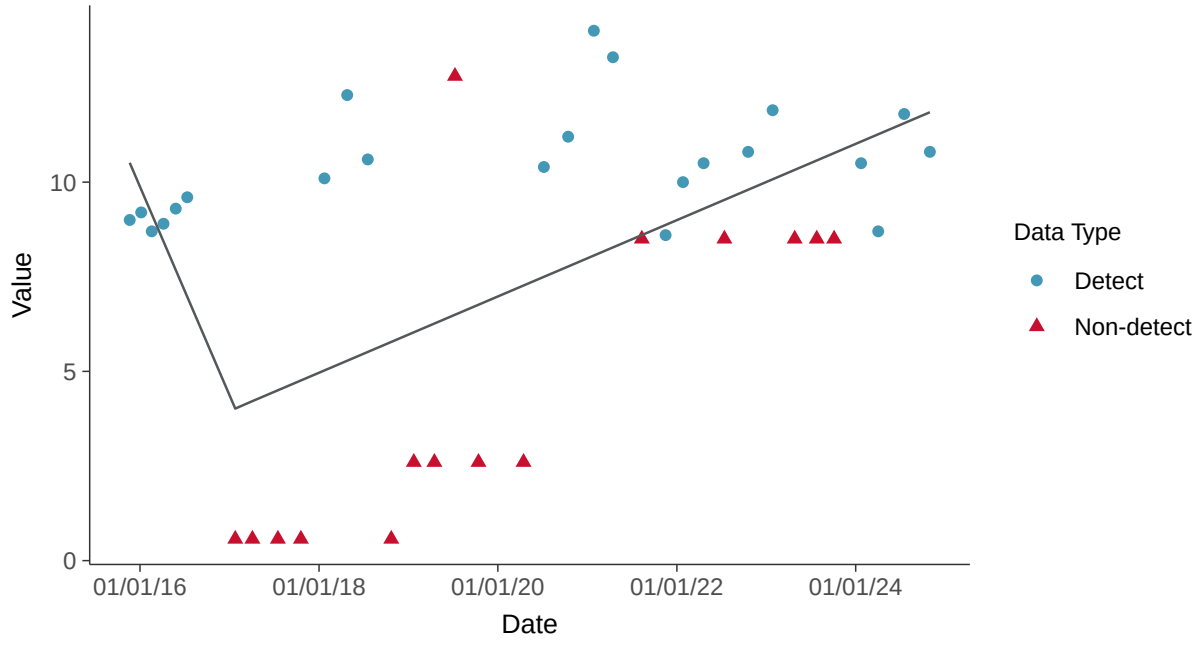
Trend Regression: Lognormal MLE

Boron, MW-8 (ug/L)



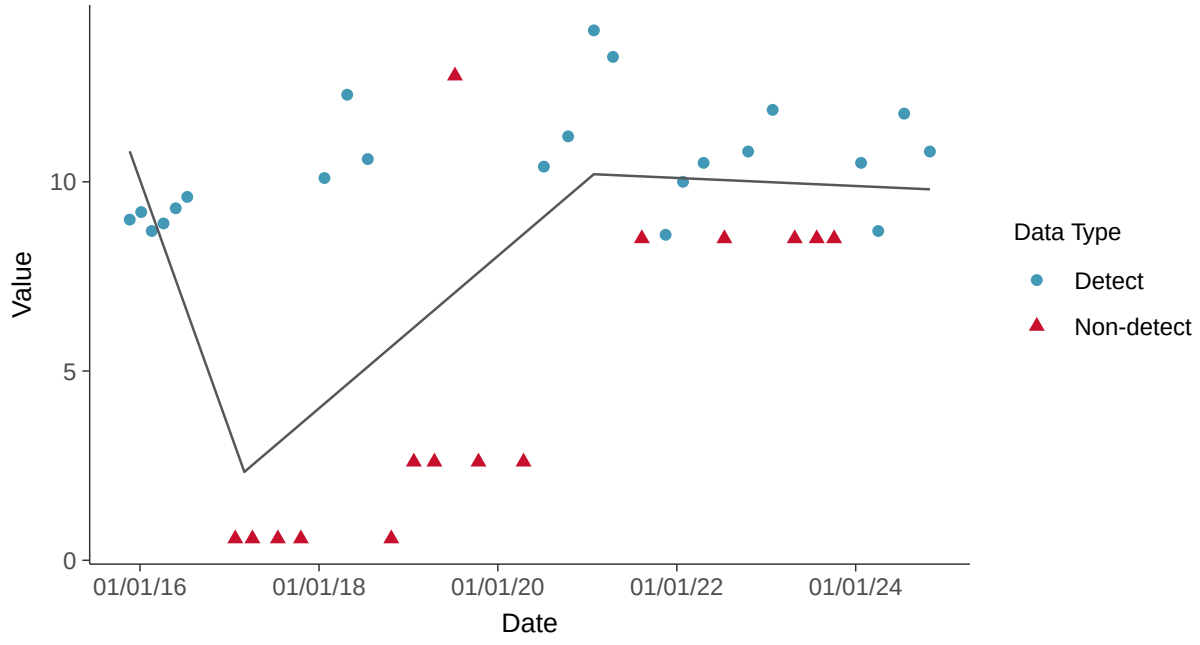
Trend Regression: Piecewise Linear-Linear

Boron, MW-8 (ug/L)



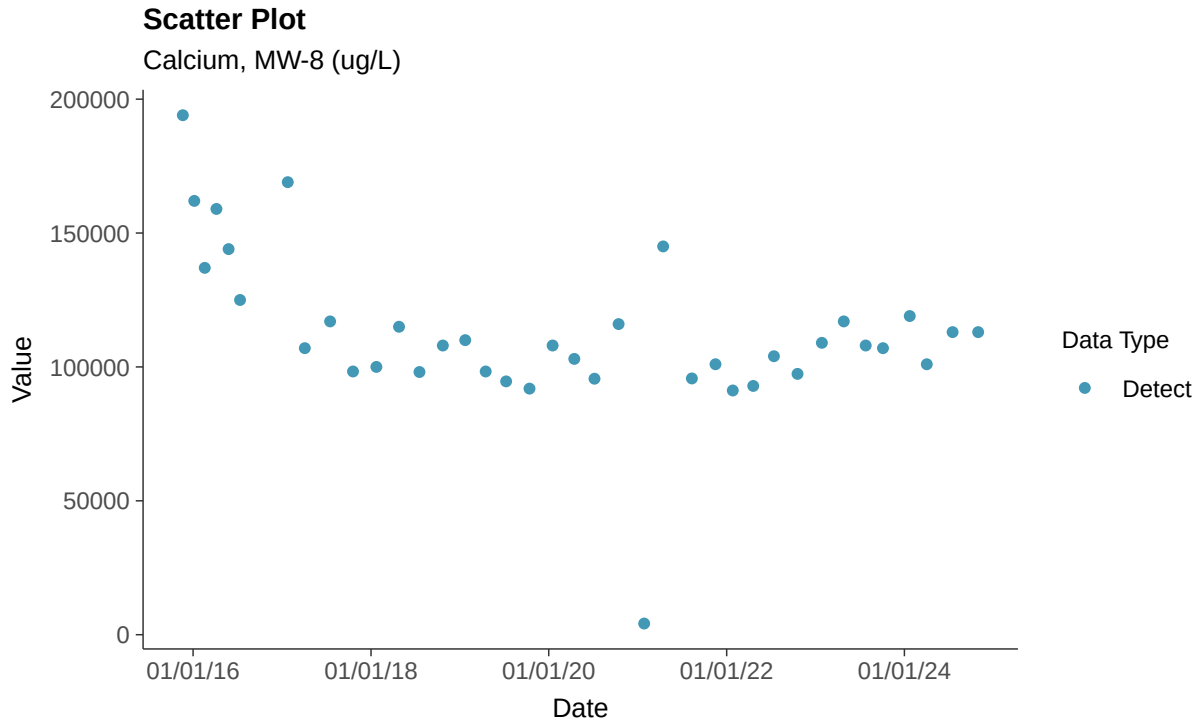
Trend Regression: Piecewise Linear-Linear-Linear

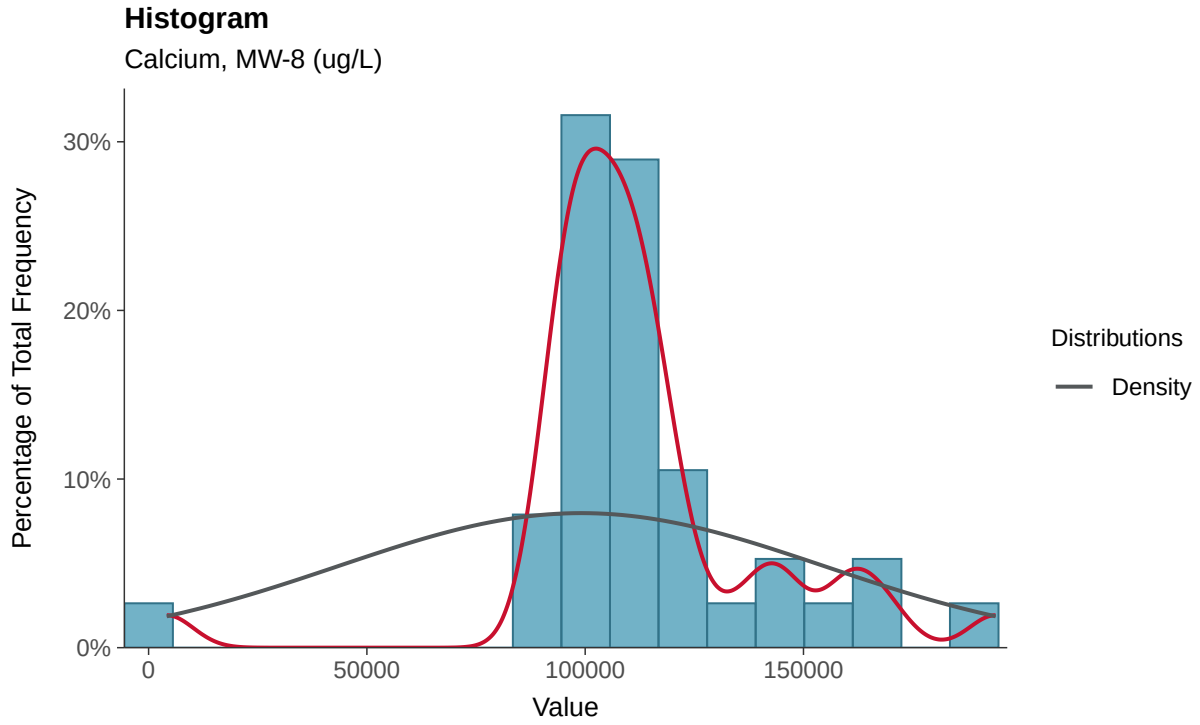
Boron, MW-8 (ug/L)

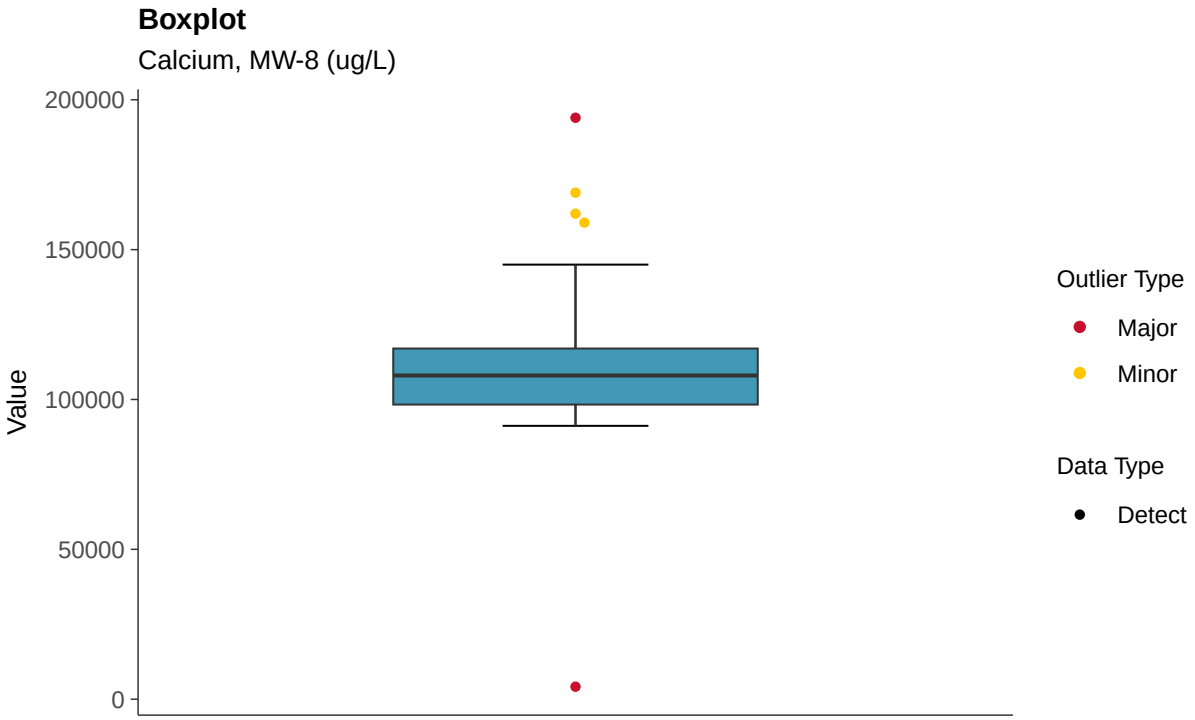


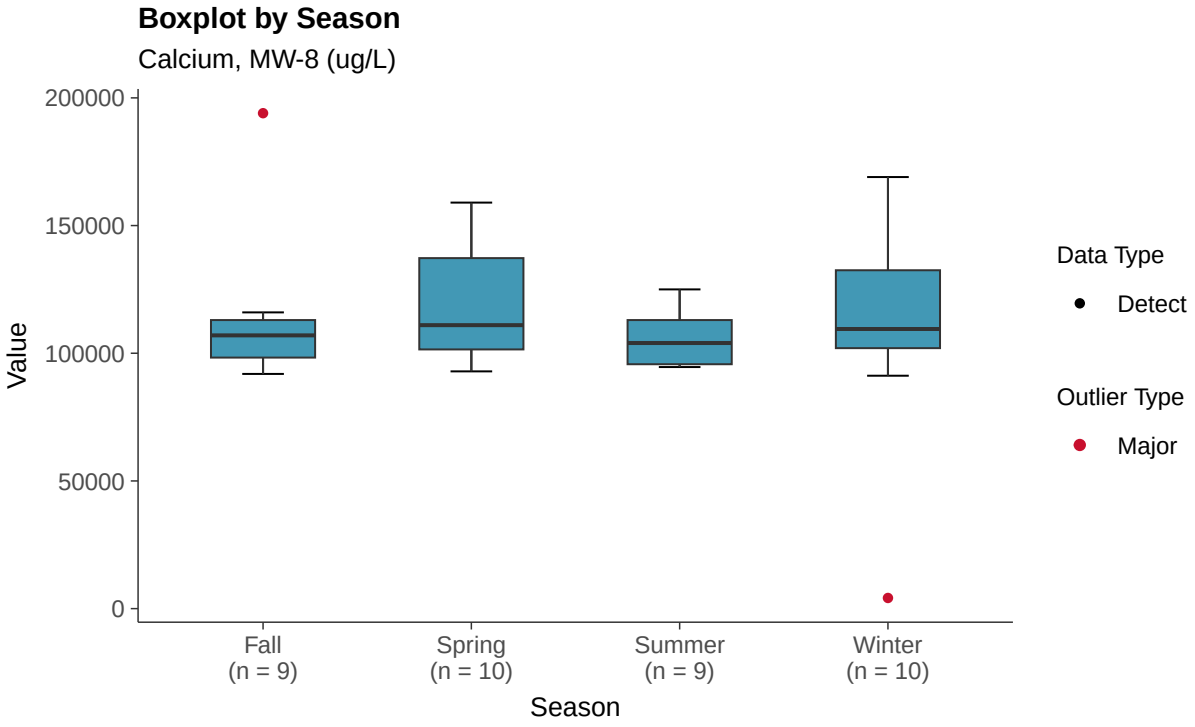
App. III: Calcium, MW-8

ID: 08_02_107



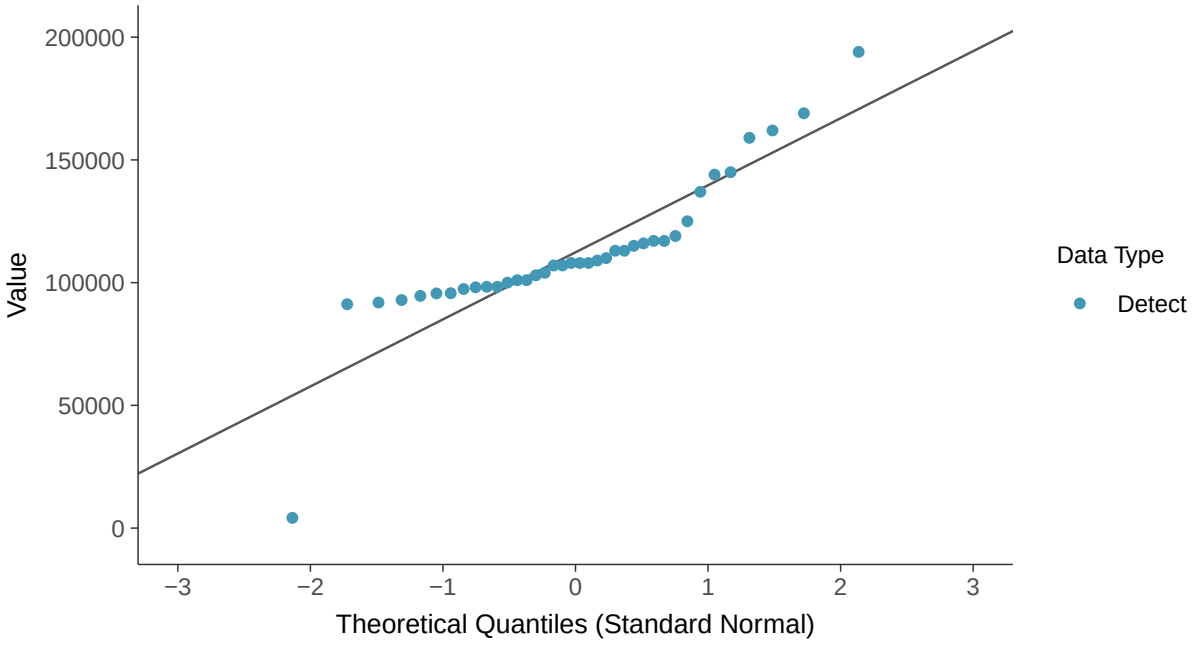



Boxplot
Calcium, MW-8 (ug/L)
200000
150000
100000
50000
0
Value
Outlier Type
Major
Minor
Data Type
Detect


Boxplot by Season
Calcium, MW-8 (ug/L)
200000
150000
100000
50000
0
Value
Fall
(n = 9)
Spring
(n = 10)
Summer
(n = 9)
Winter
(n = 10)
Season
Data Type
Detect
Outlier Type
Major

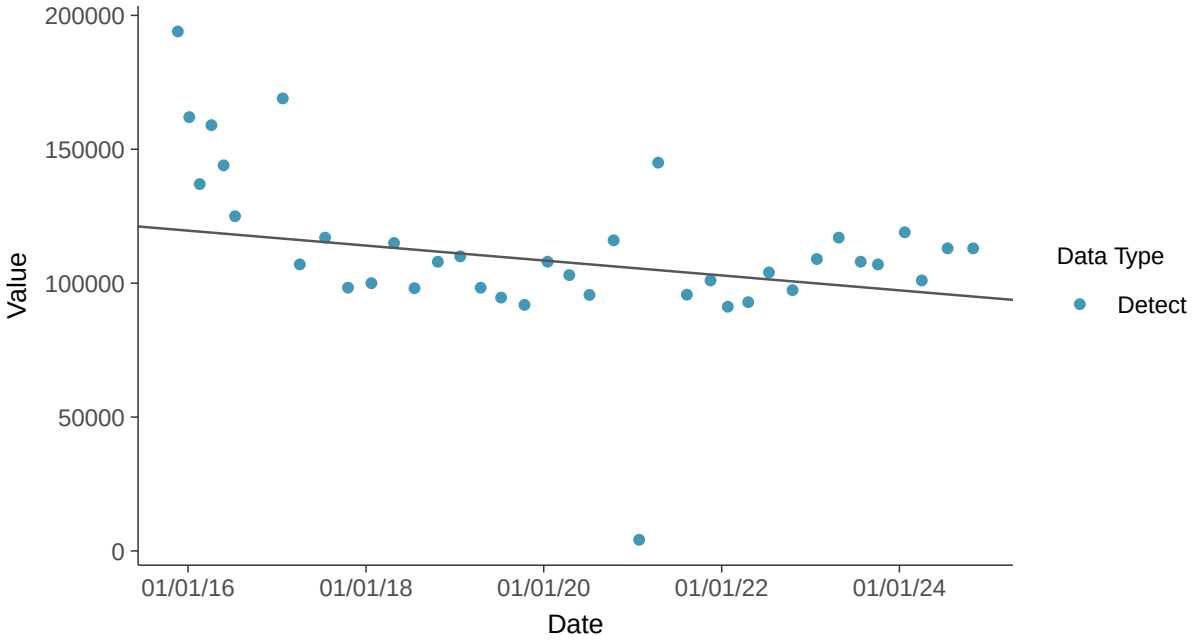
Normal Q-Q plot

Calcium, MW-8 (ug/L)



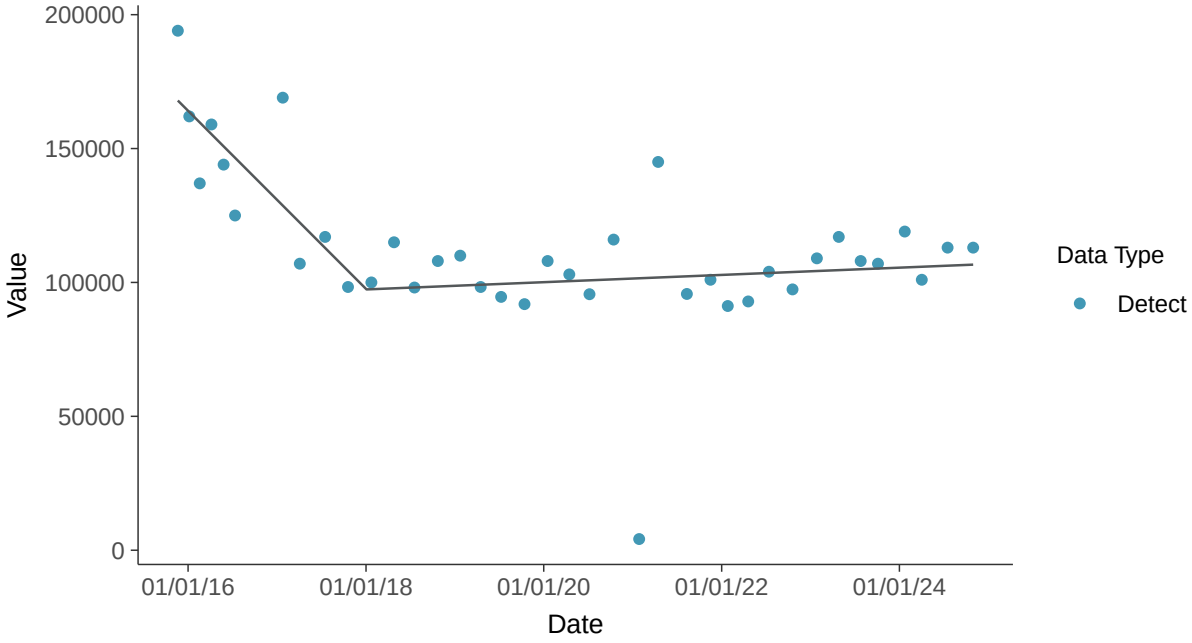
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-8 (ug/L)



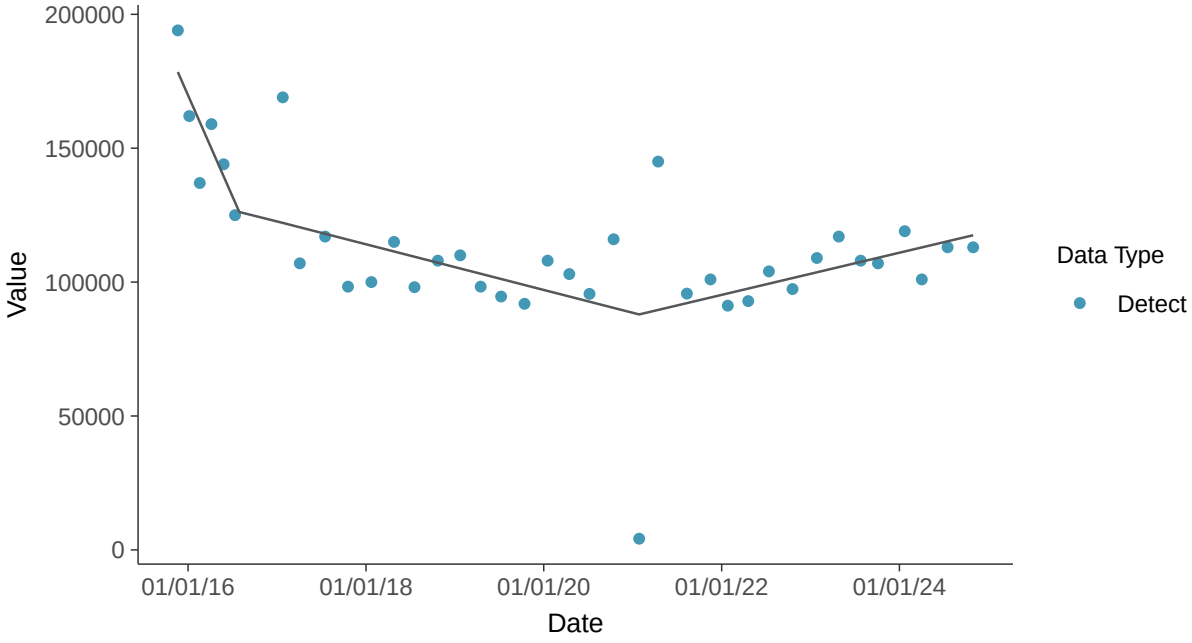
Trend Regression: Piecewise Linear-Linear

Calcium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Calcium, MW-8 (ug/L)

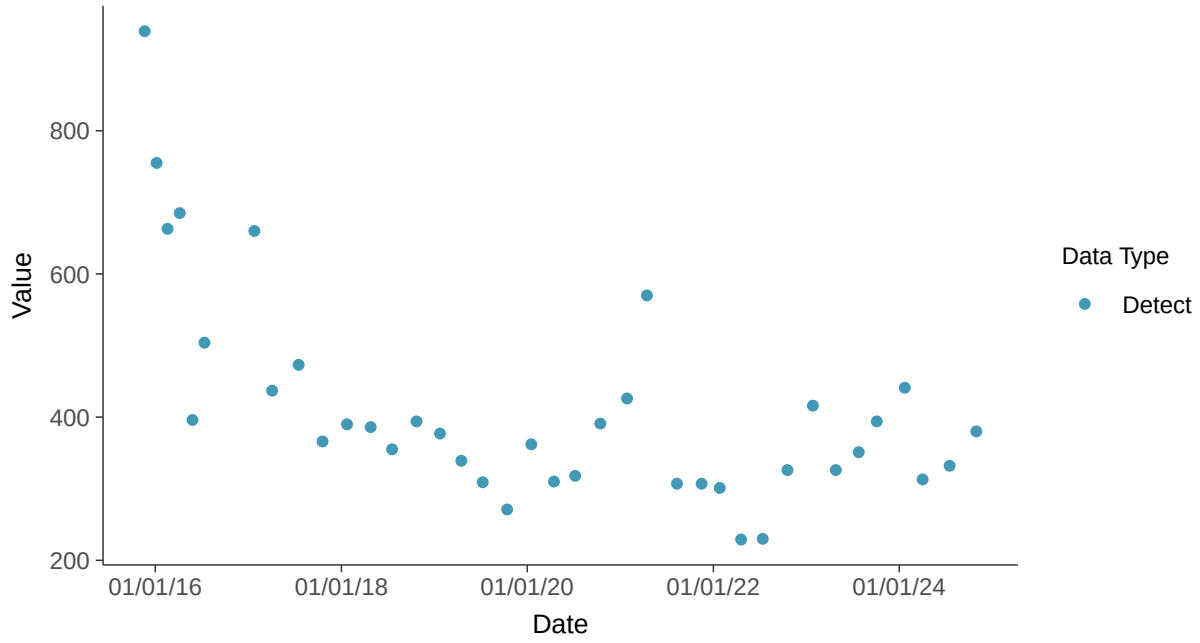


App. III: Chloride, MW-8

ID: 08_02_108

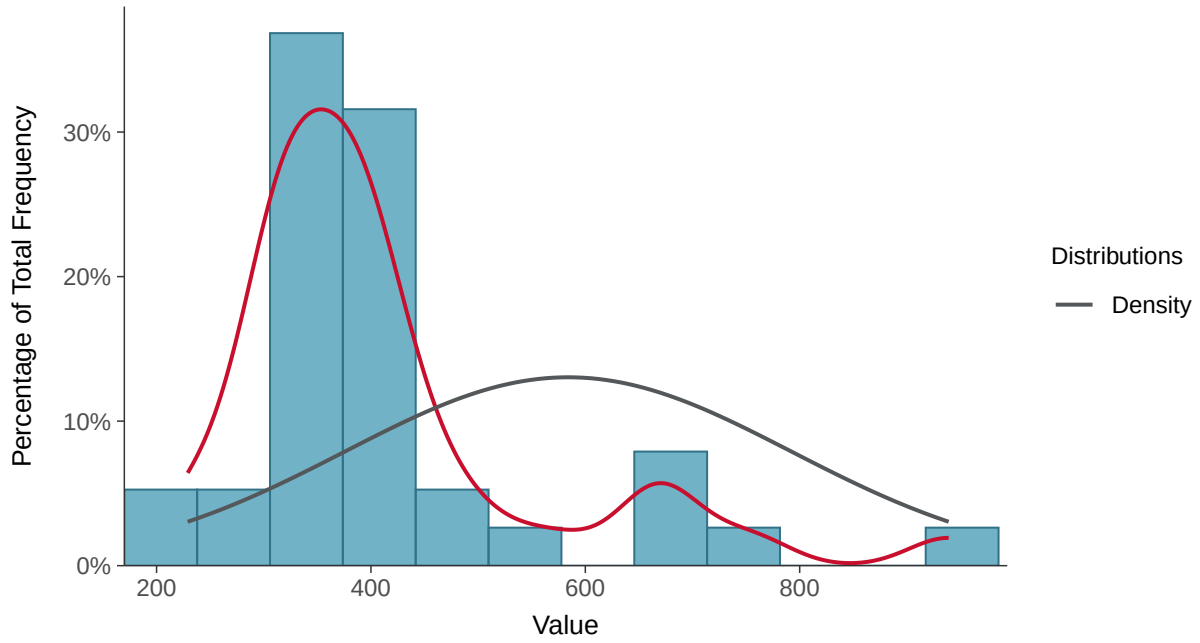
Scatter Plot

Chloride, MW-8 (mg/L)



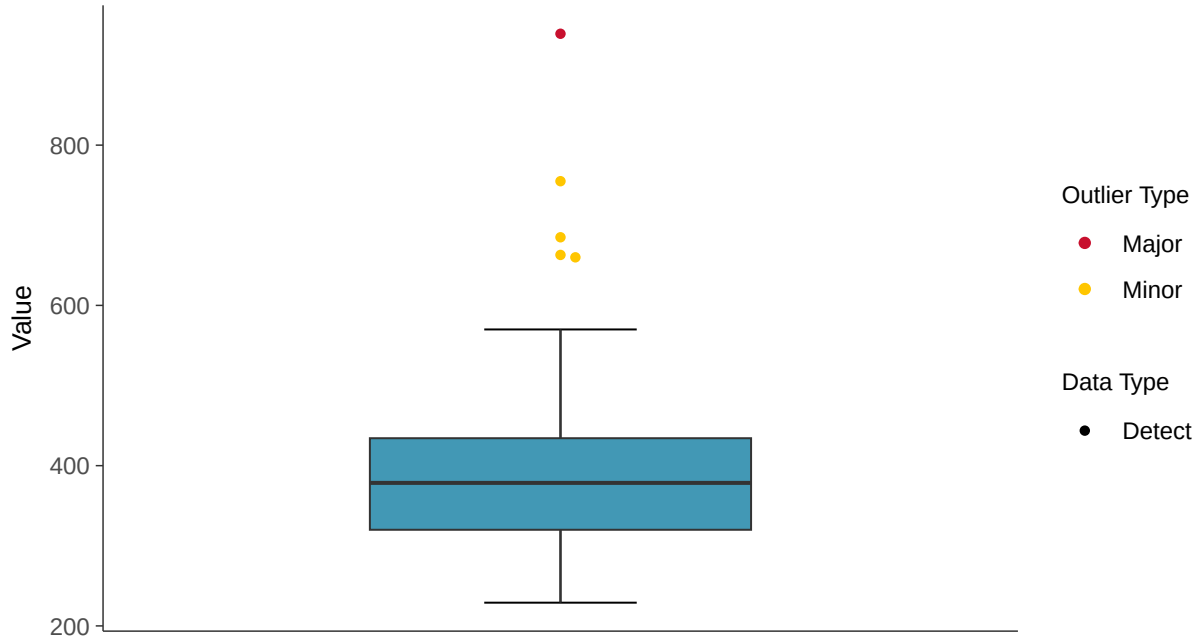
Histogram

Chloride, MW-8 (mg/L)



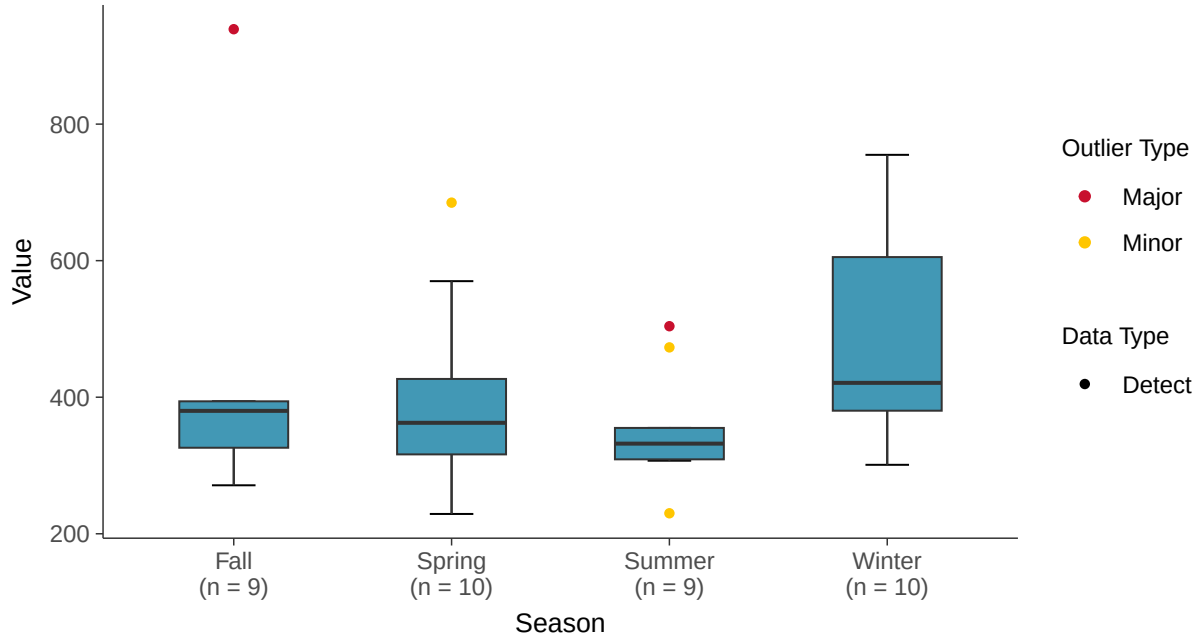
Boxplot

Chloride, MW-8 (mg/L)



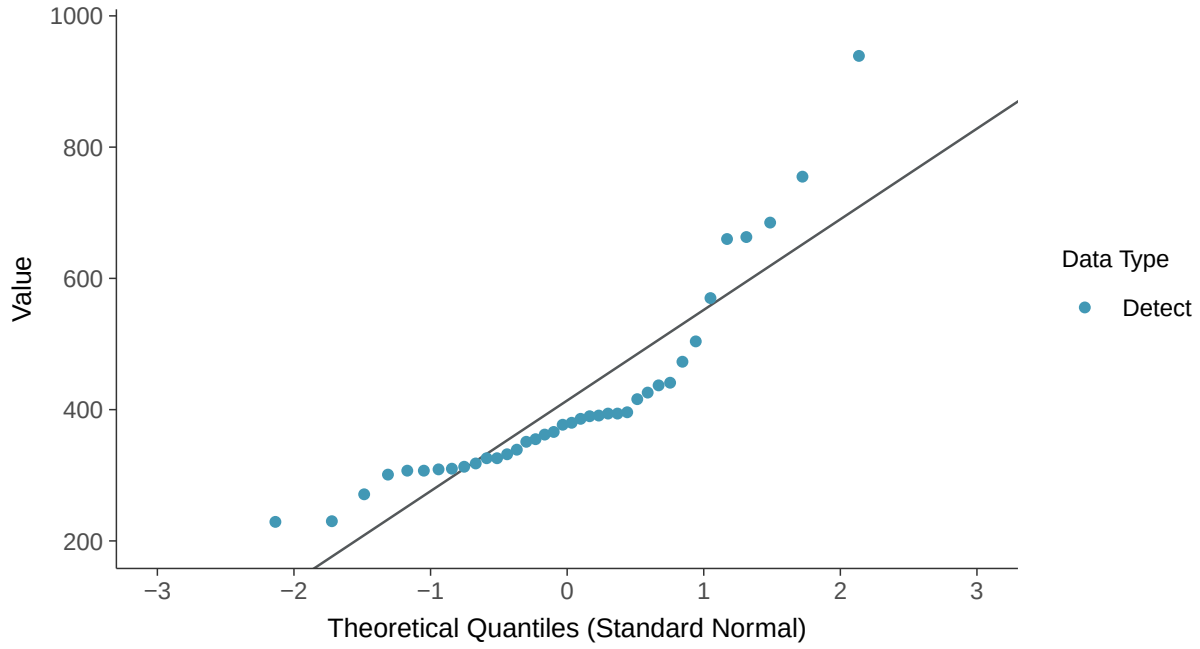
Boxplot by Season

Chloride, MW-8 (mg/L)



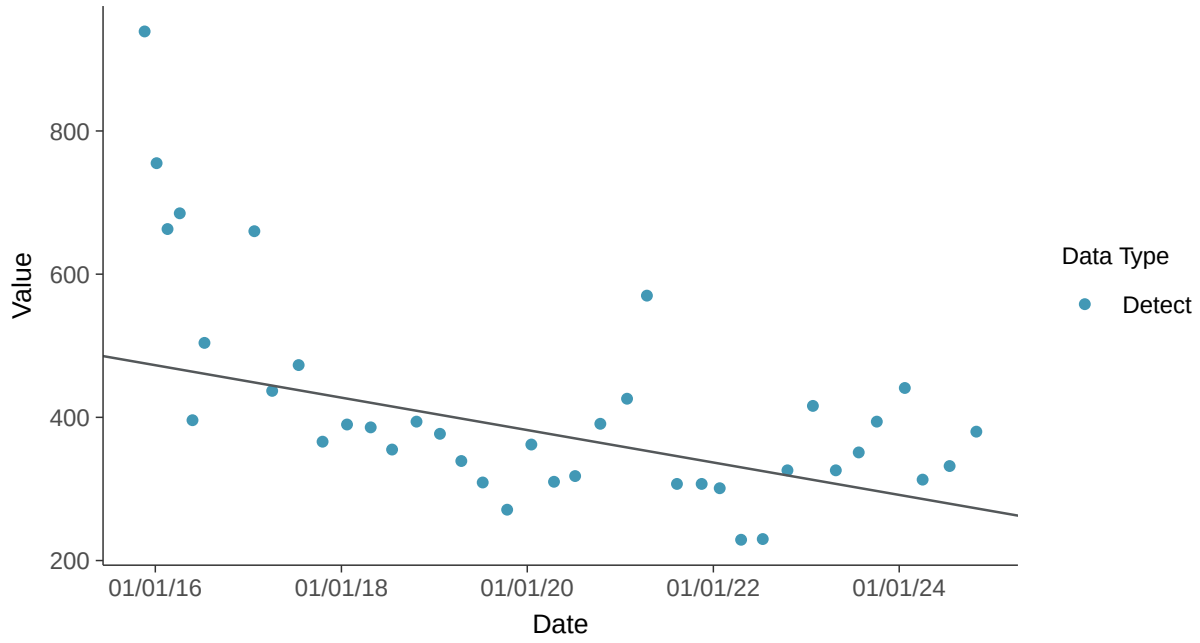
Normal Q-Q plot

Chloride, MW-8 (mg/L)



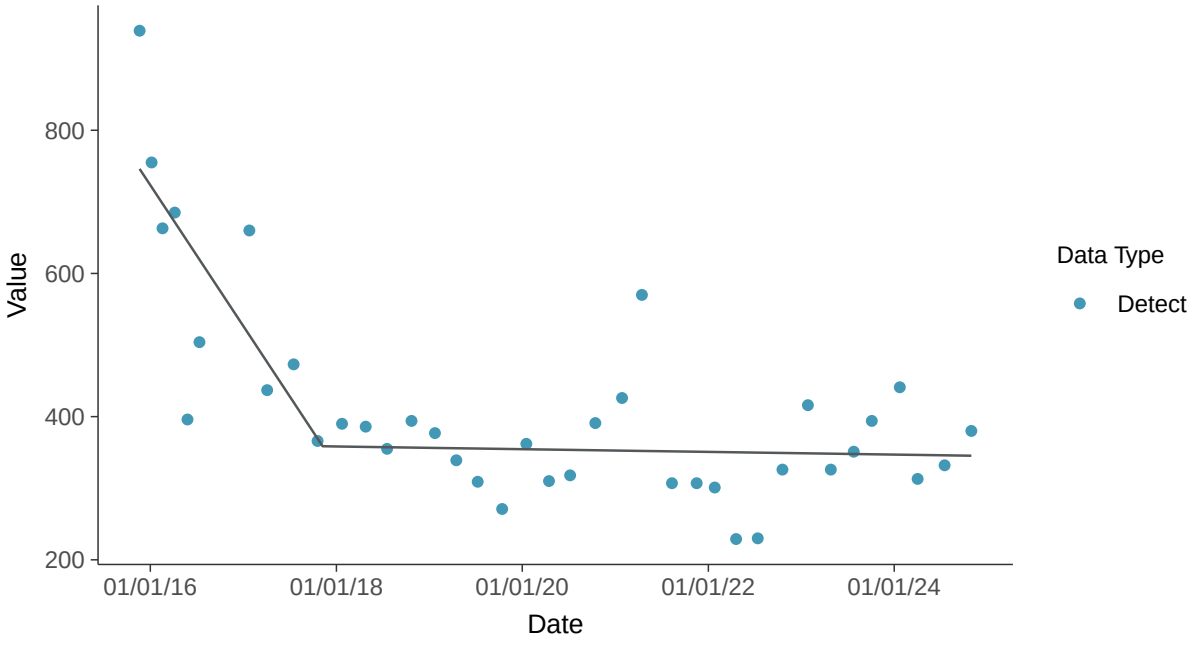
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Chloride, MW-8 (mg/L)



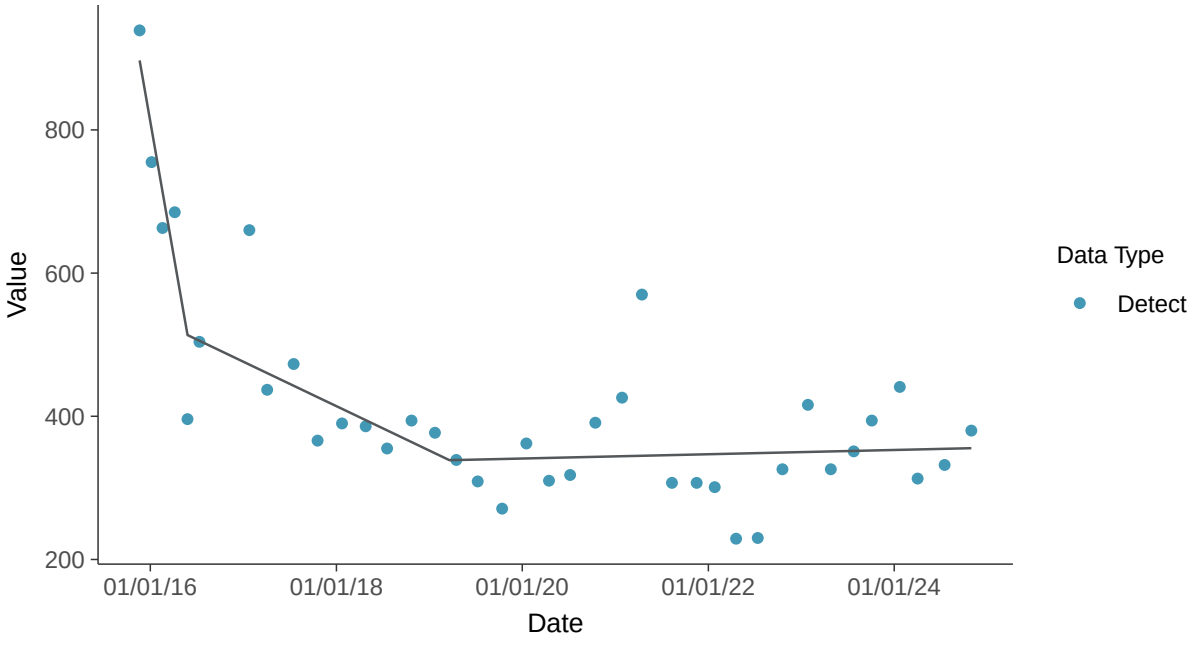
Trend Regression: Piecewise Linear-Linear

Chloride, MW-8 (mg/L)



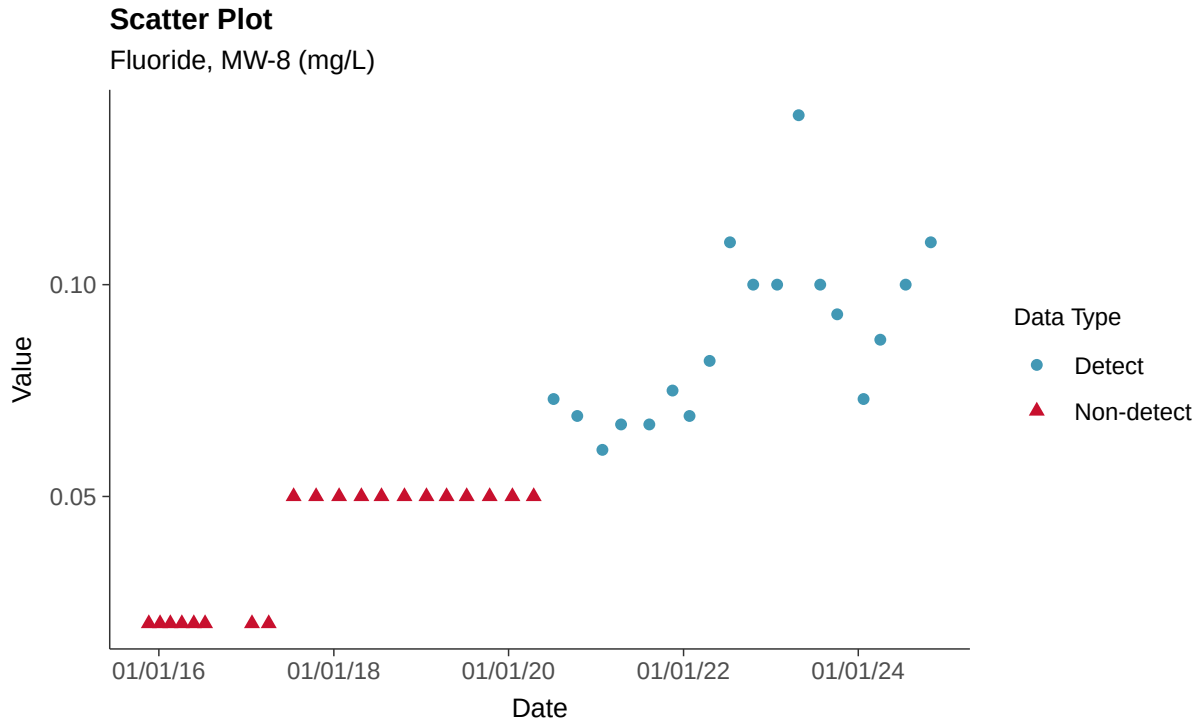
Trend Regression: Piecewise Linear-Linear-Linear

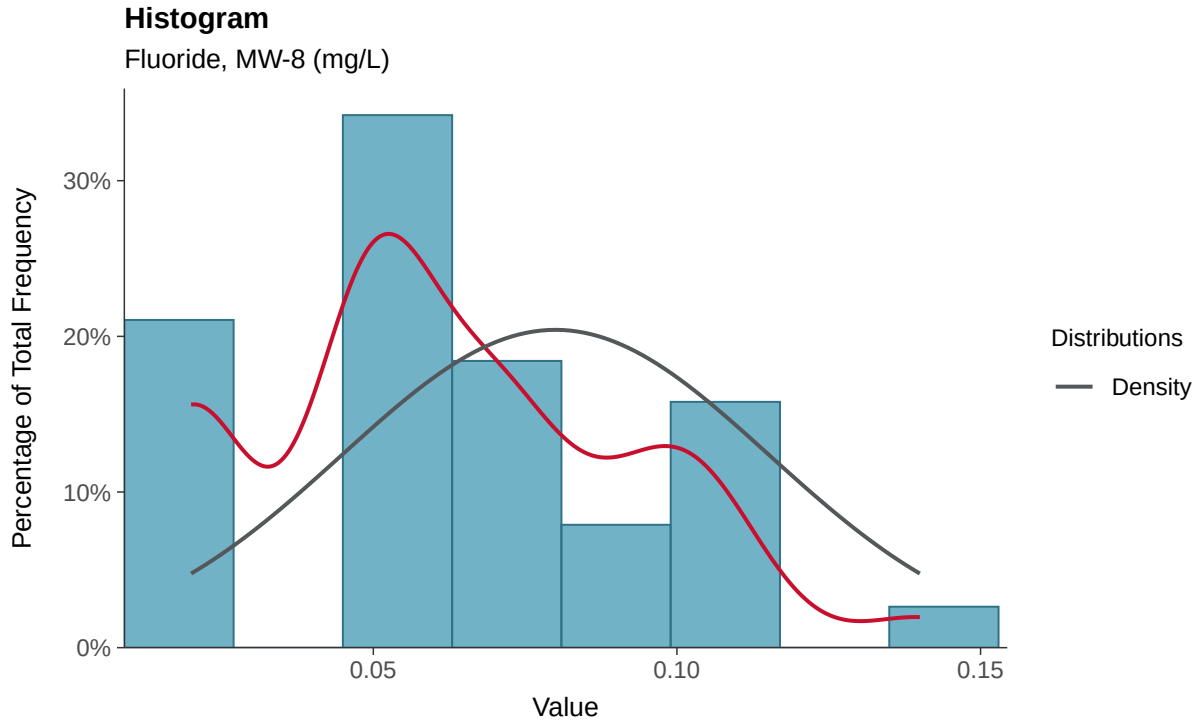
Chloride, MW-8 (mg/L)



App. III: Fluoride, MW-8

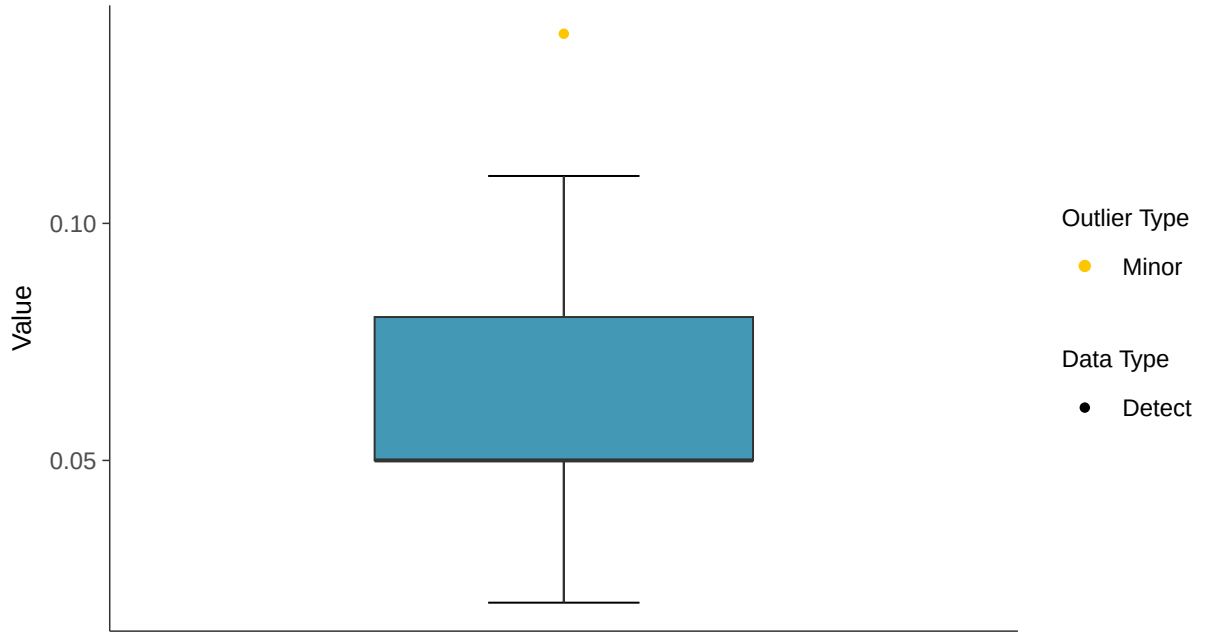
ID: 08_02_112





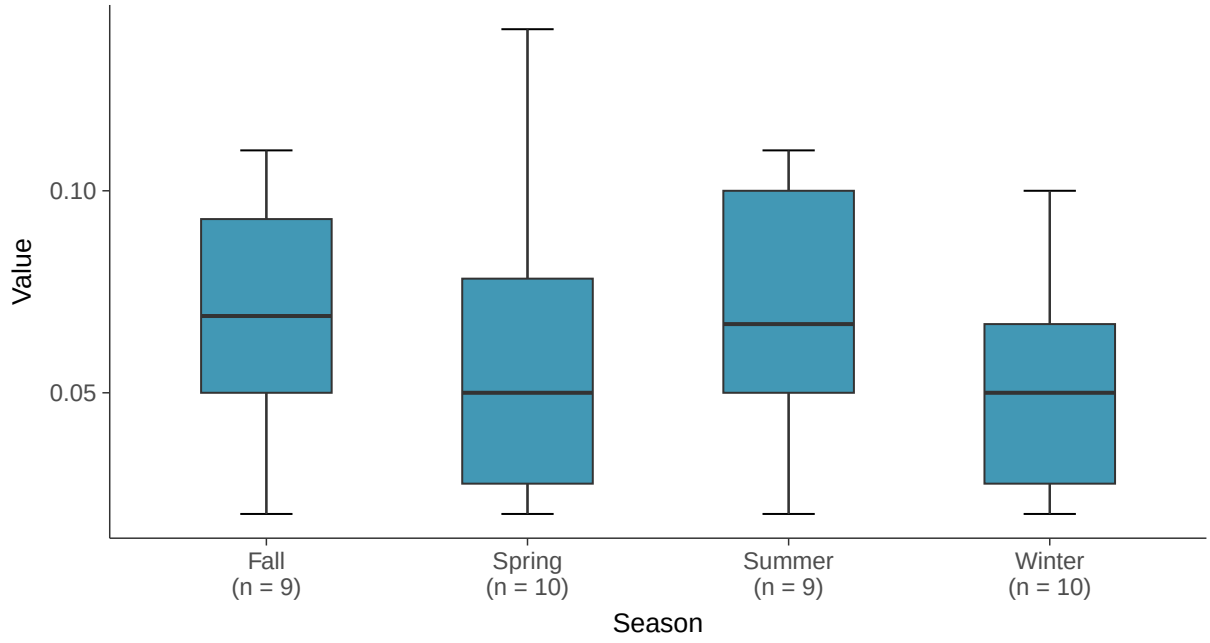
Boxplot

Fluoride, MW-8 (mg/L)



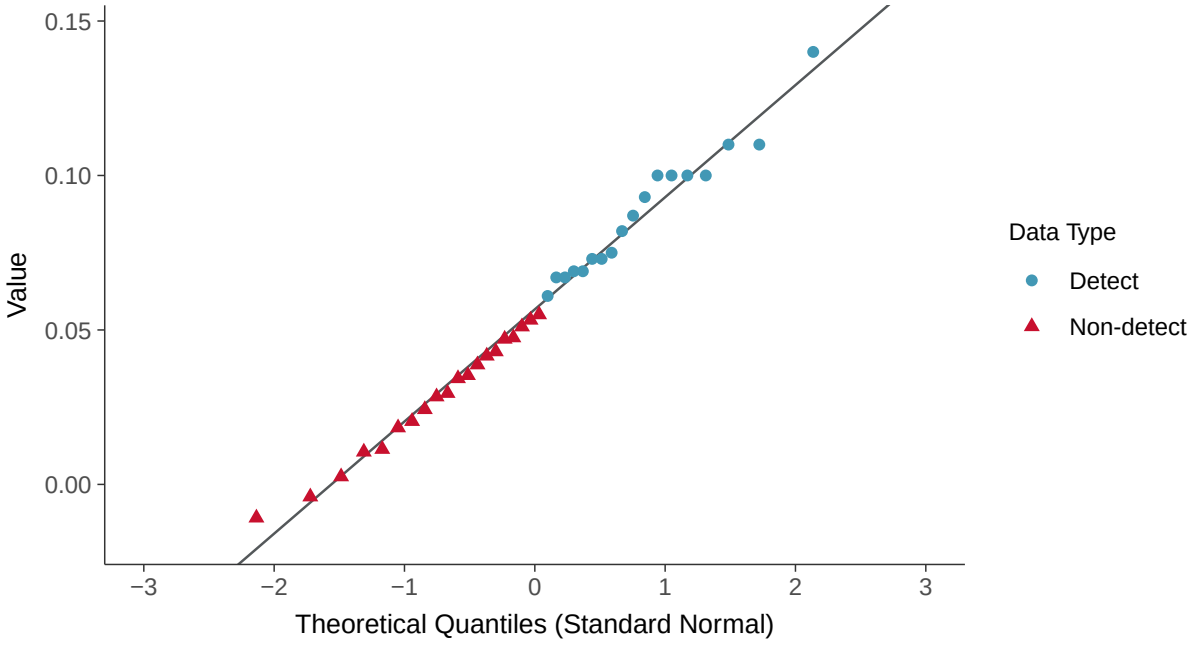
Boxplot by Season

Fluoride, MW-8 (mg/L)



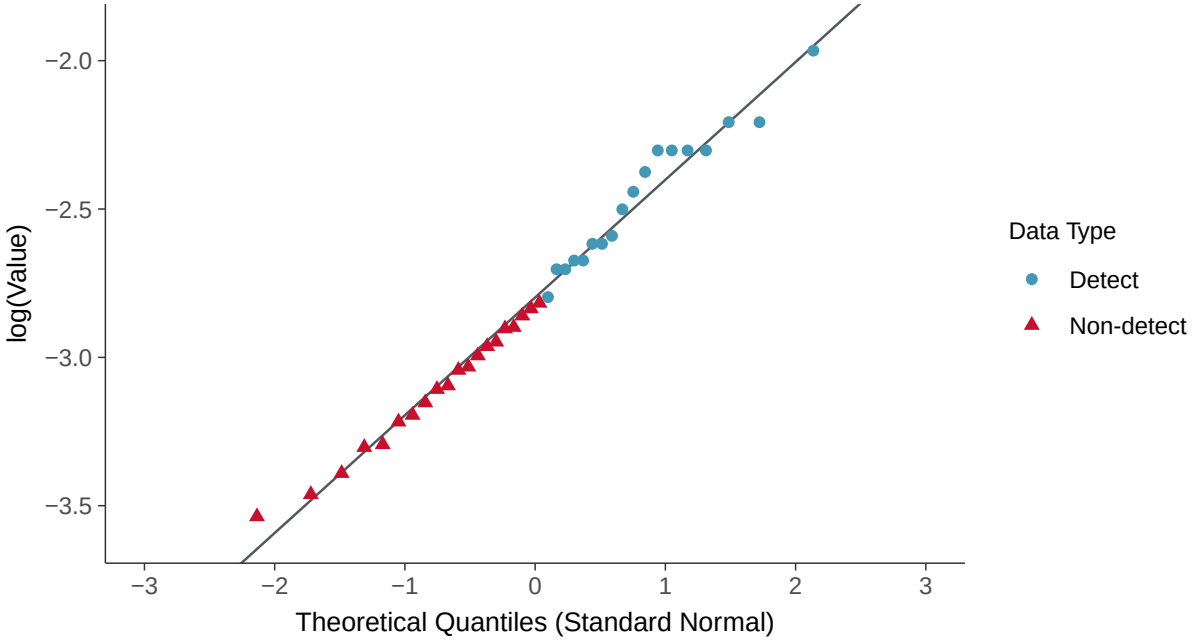
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



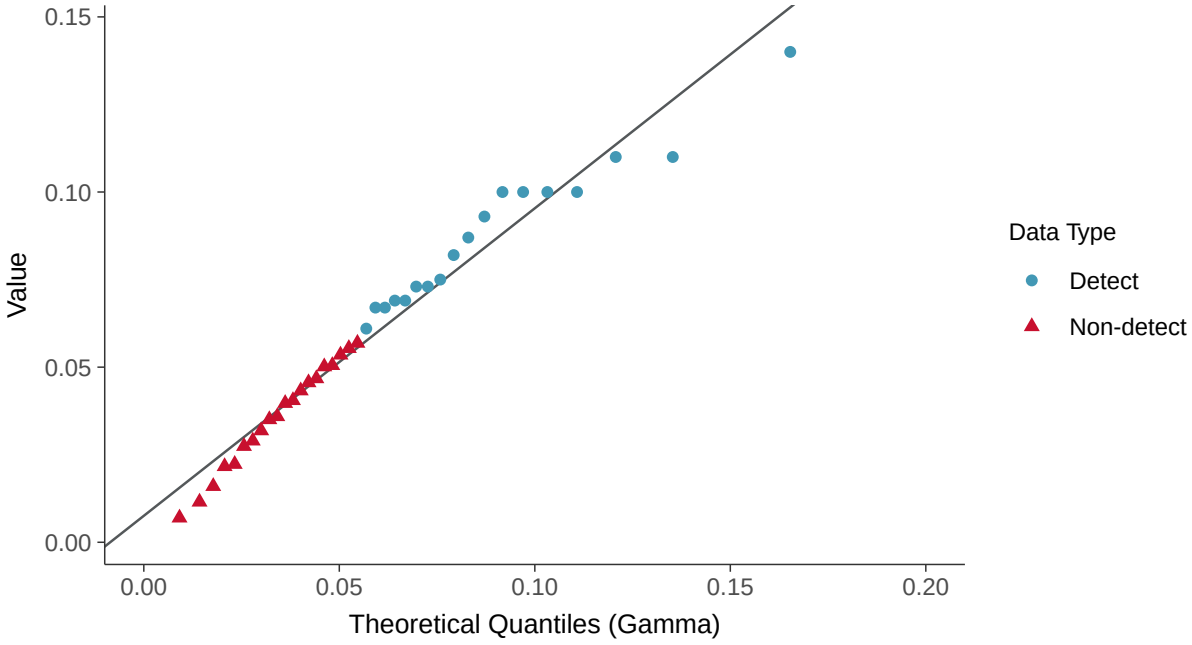
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



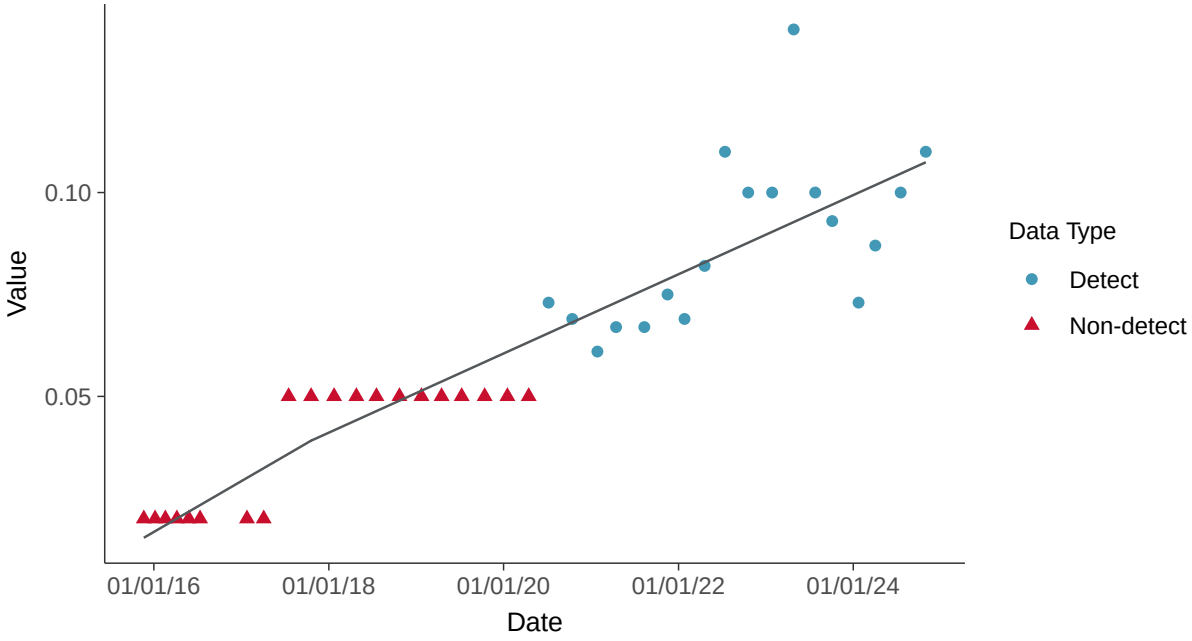
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



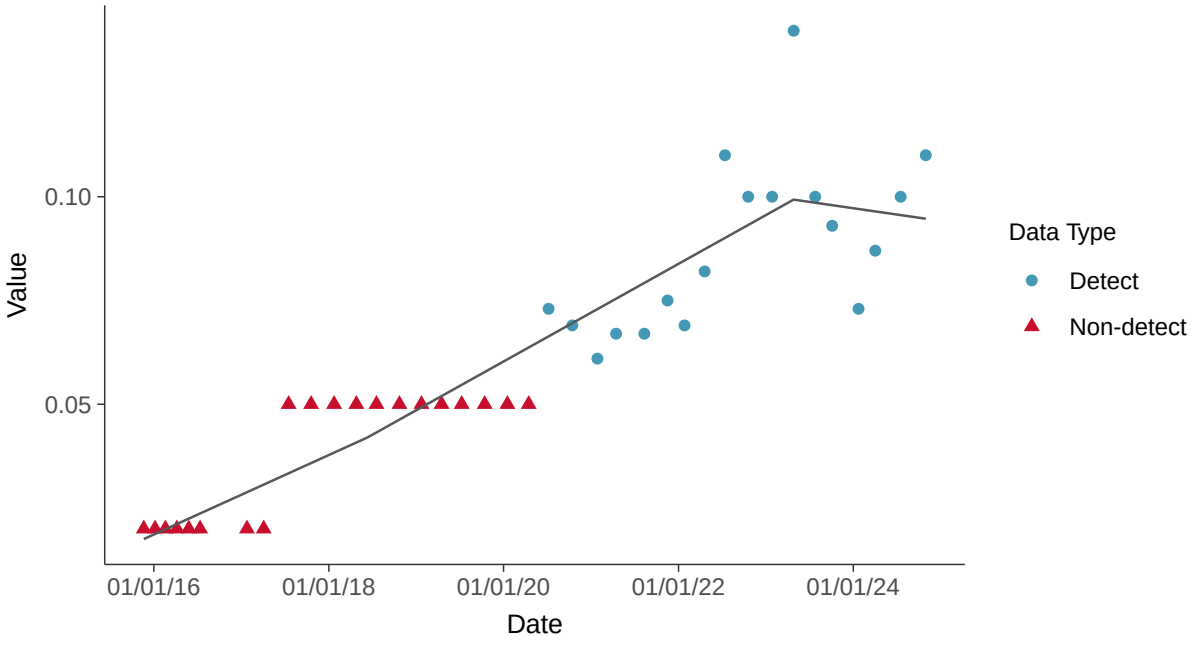
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-8 (mg/L)

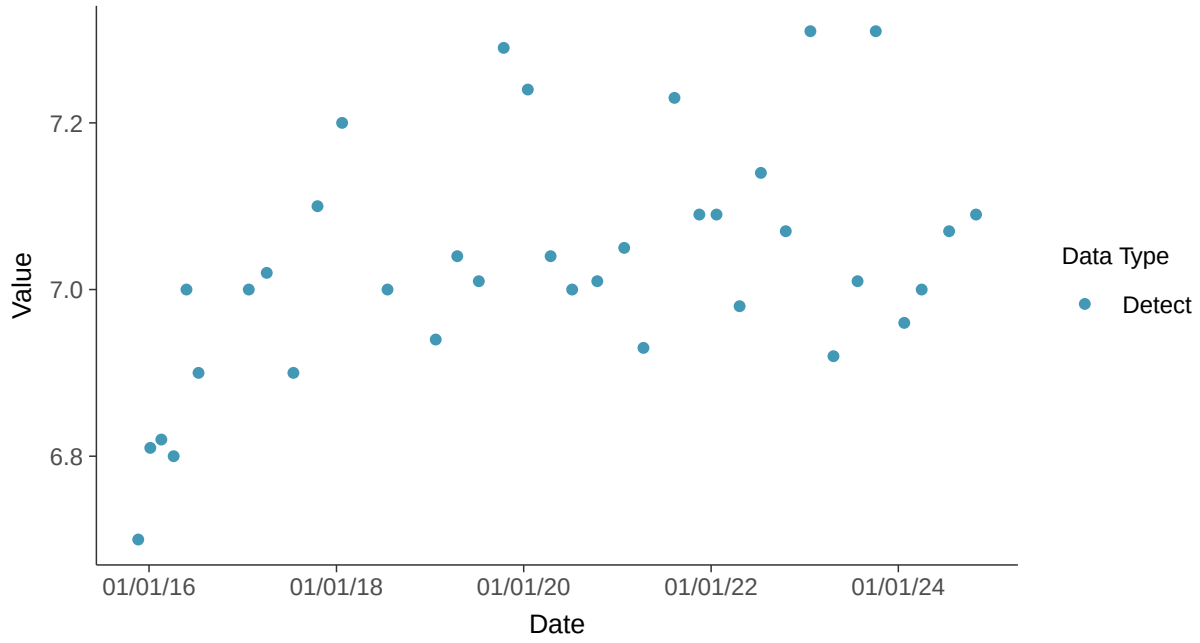


App. III: pH (Field), MW-8

ID: 08_02_118

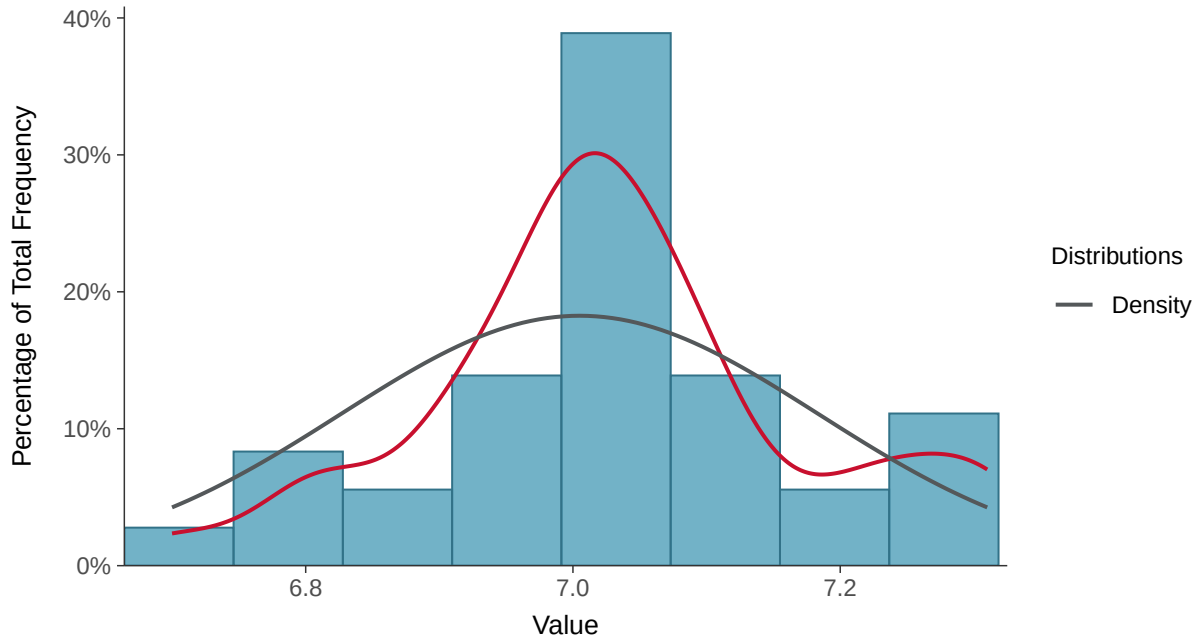
Scatter Plot

pH (Field), MW-8 (S.U.)



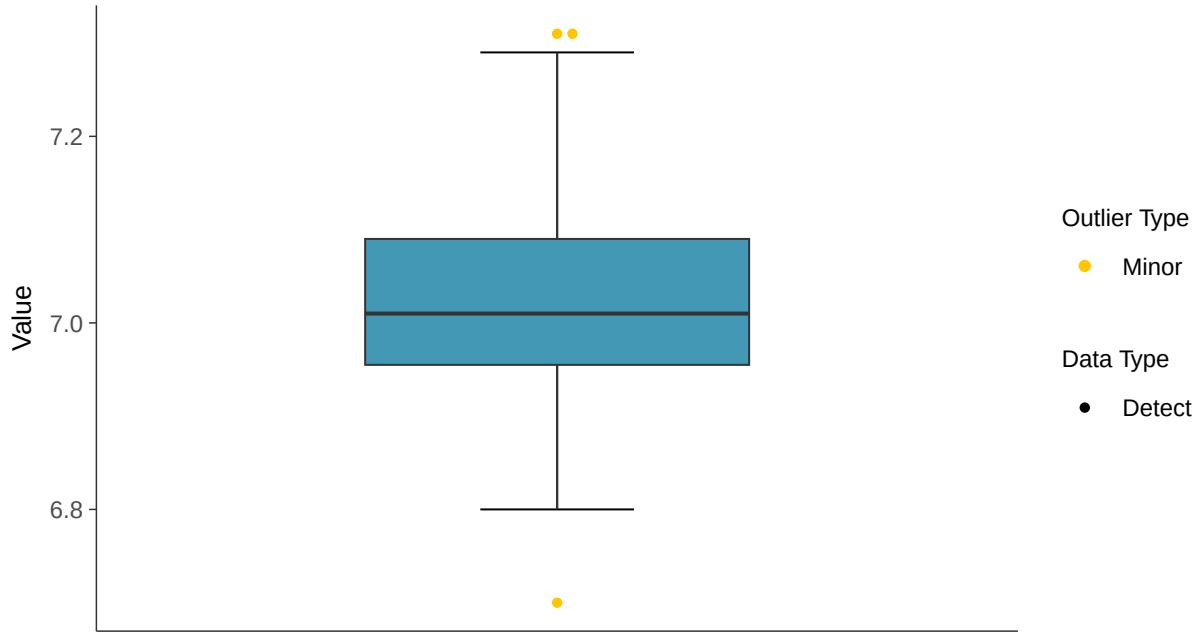
Histogram

pH (Field), MW-8 (S.U.)



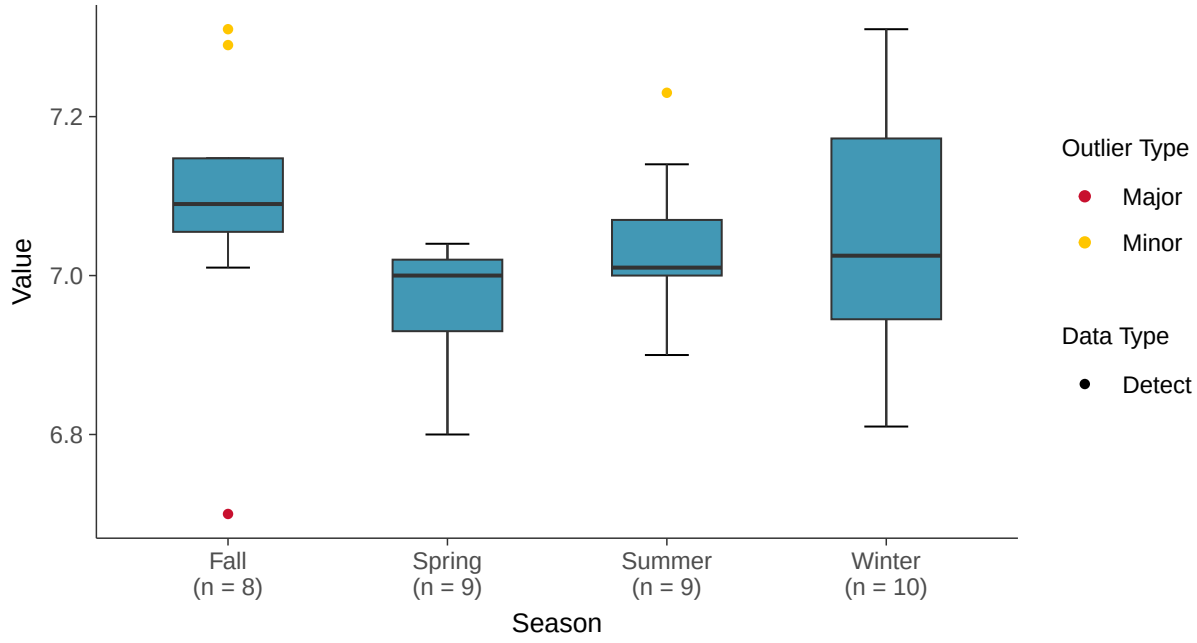
Boxplot

pH (Field), MW-8 (S.U.)



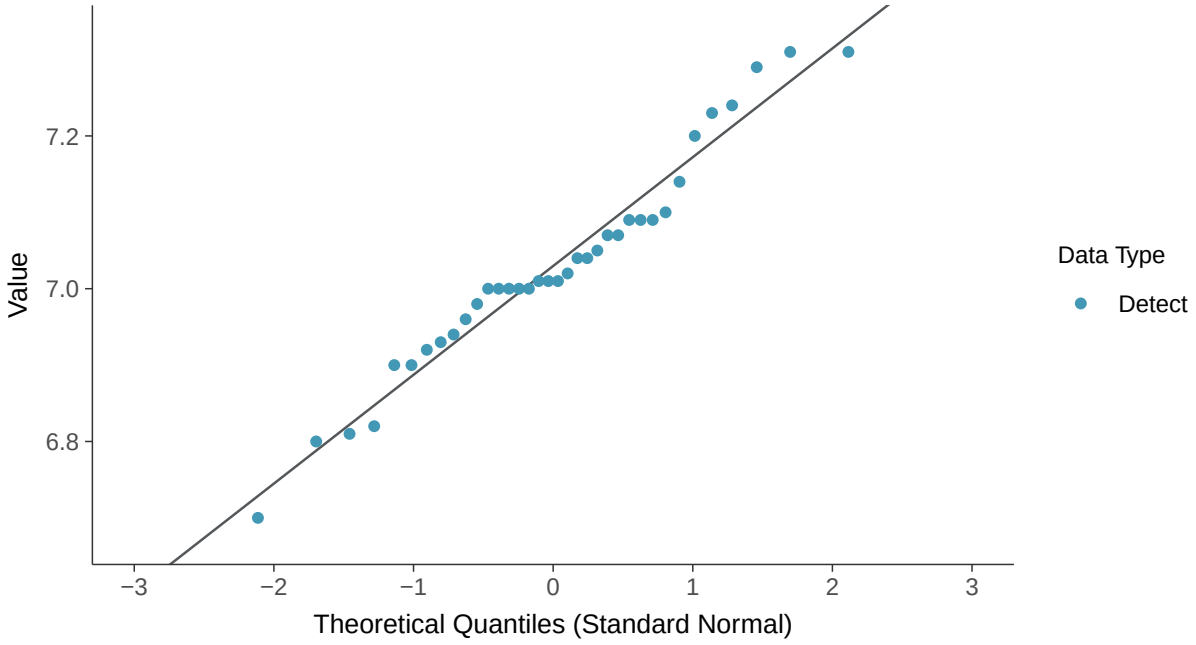
Boxplot by Season

pH (Field), MW-8 (S.U.)



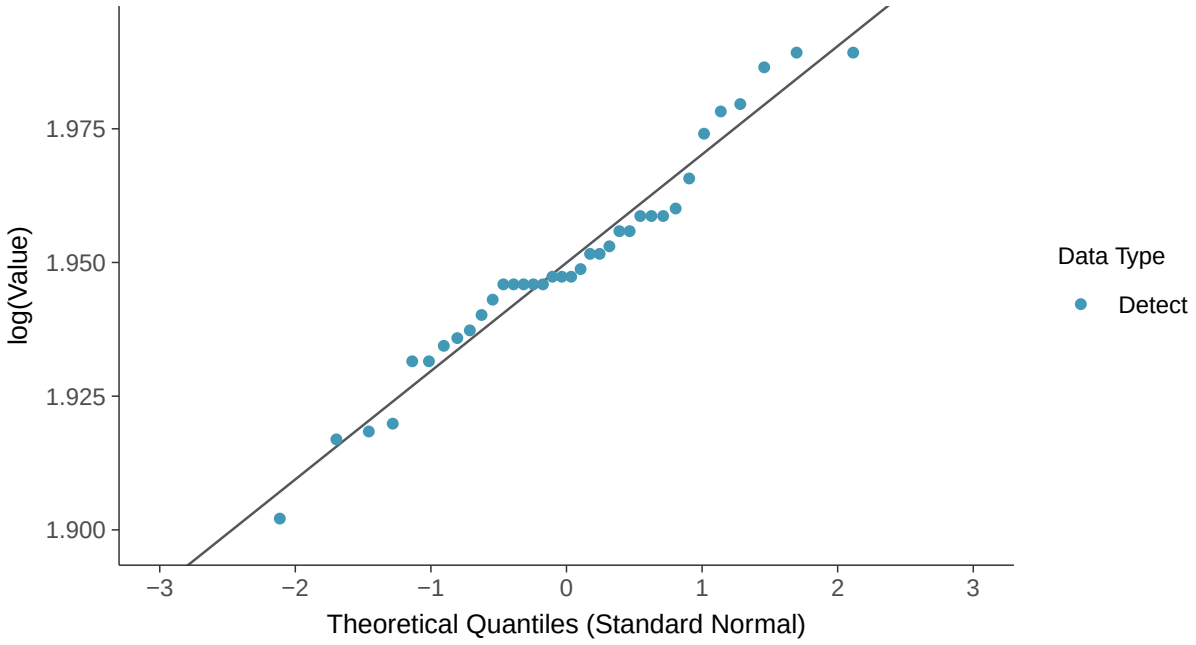
Normal Q-Q plot

pH (Field), MW-8 (S.U.)



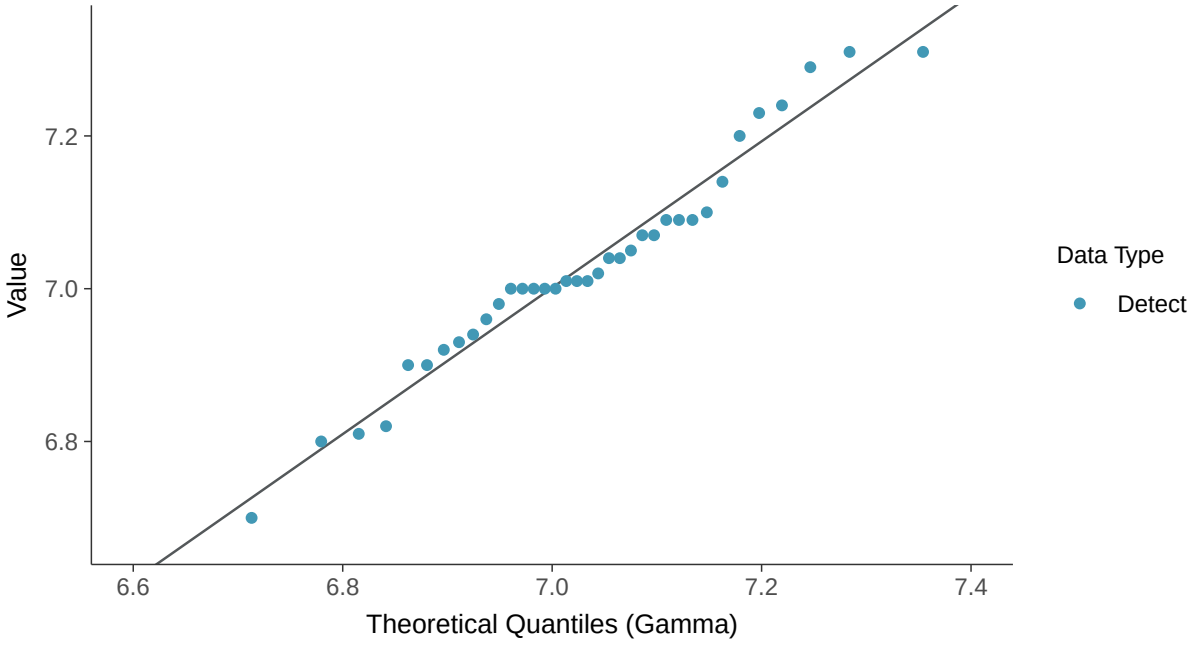
Lognormal Q-Q plot

pH (Field), MW-8 (S.U.)



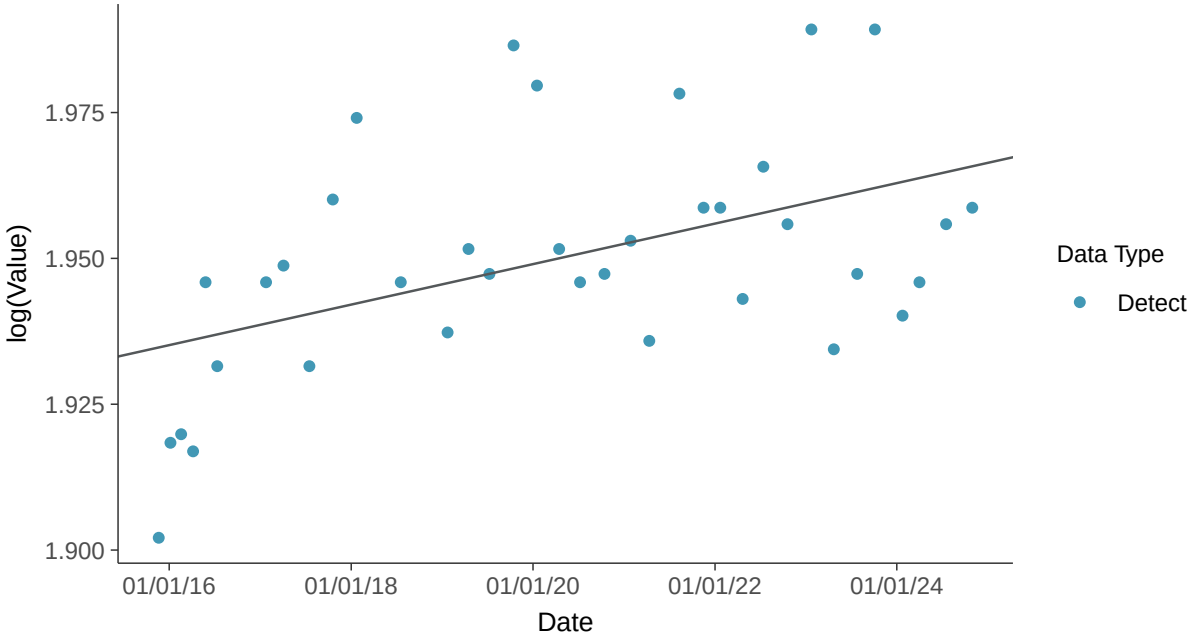
Gamma Q-Q plot

pH (Field), MW-8 (S.U.)



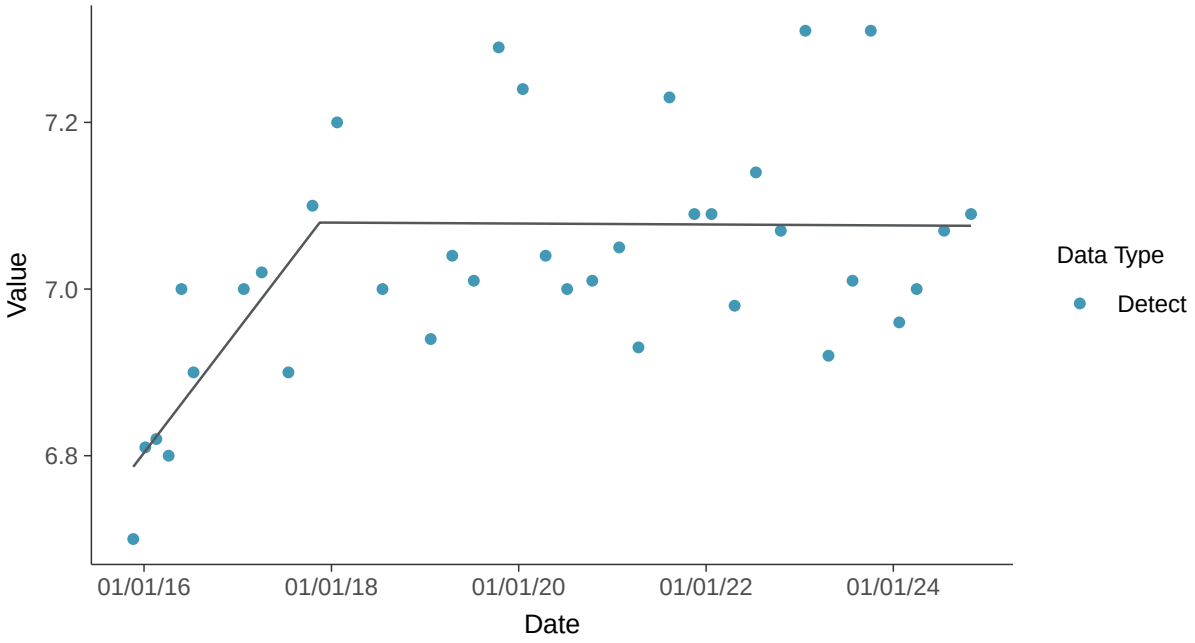
Trend Regression: Lognormal MLE

pH (Field), MW-8 (S.U.)



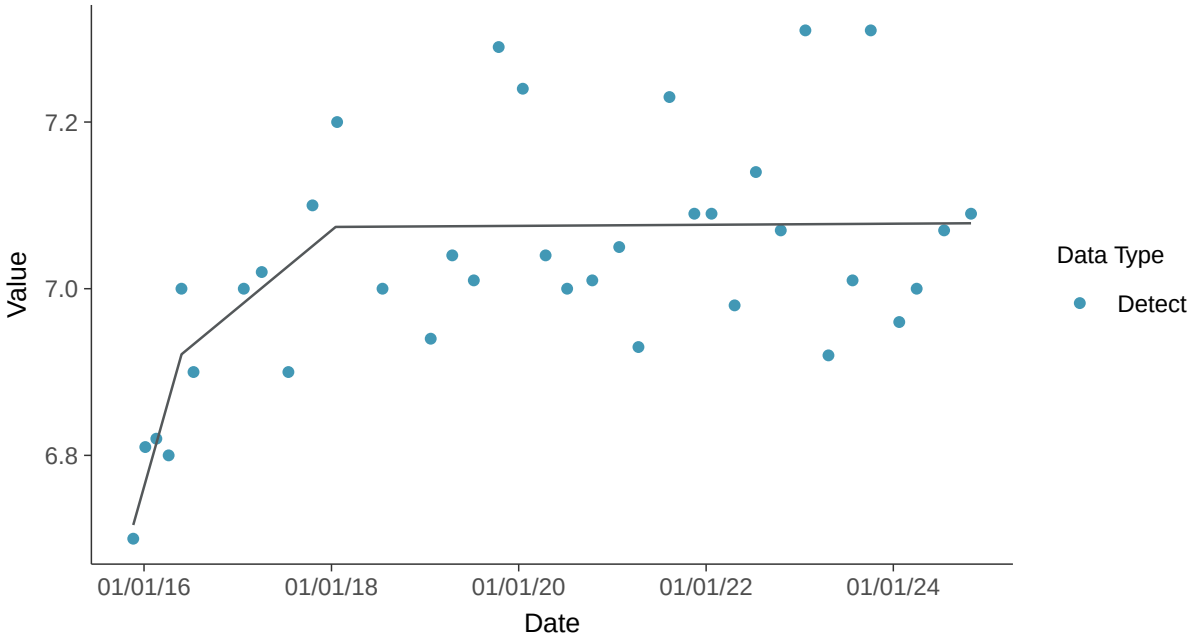
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-8 (S.U.)



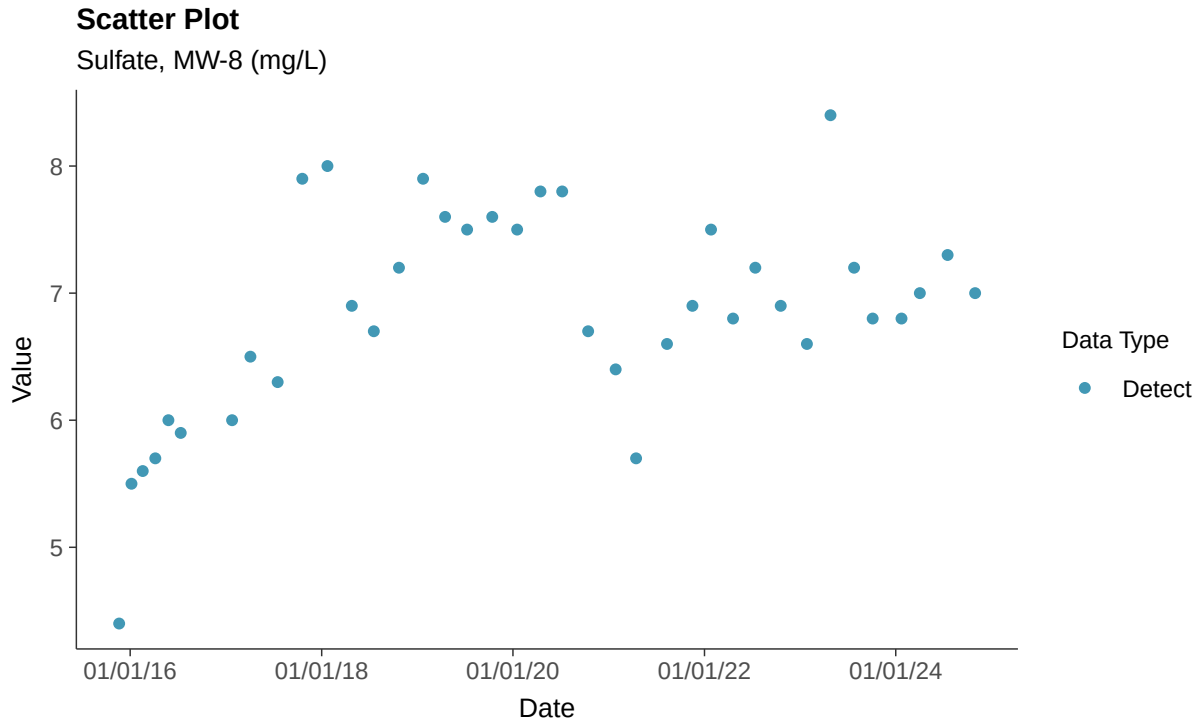
Trend Regression: Piecewise Linear-Linear-Linear

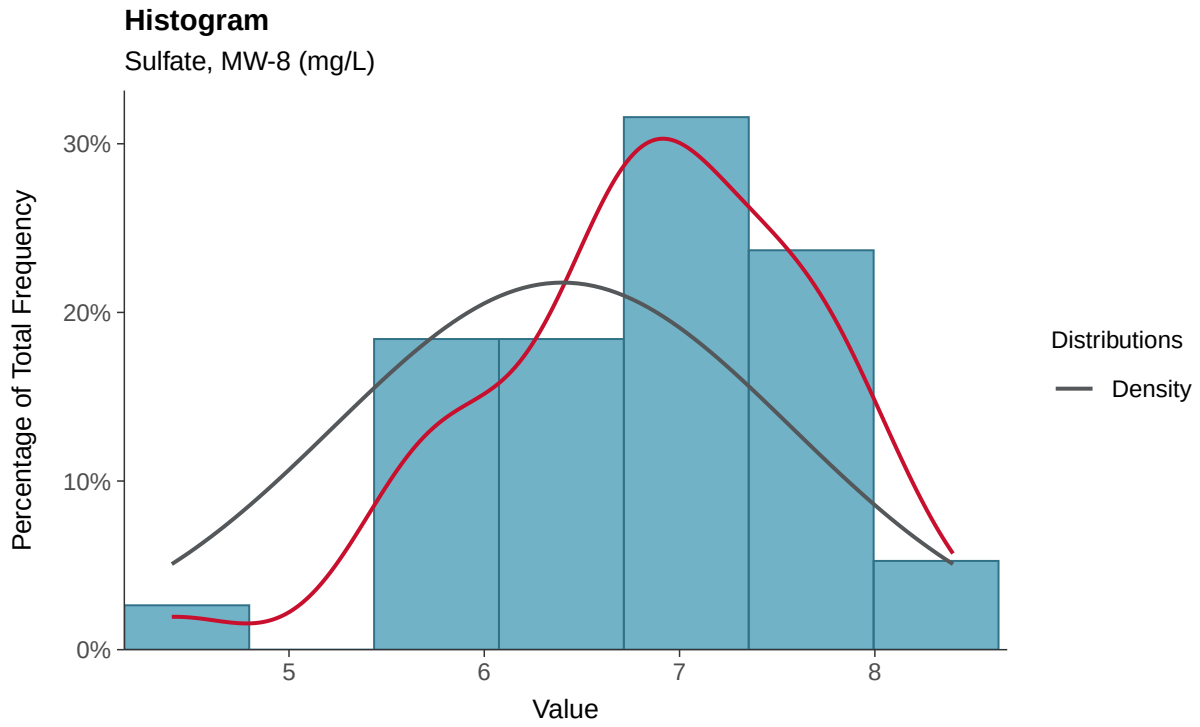
pH (Field), MW-8 (S.U.)



App. III: Sulfate, MW-8

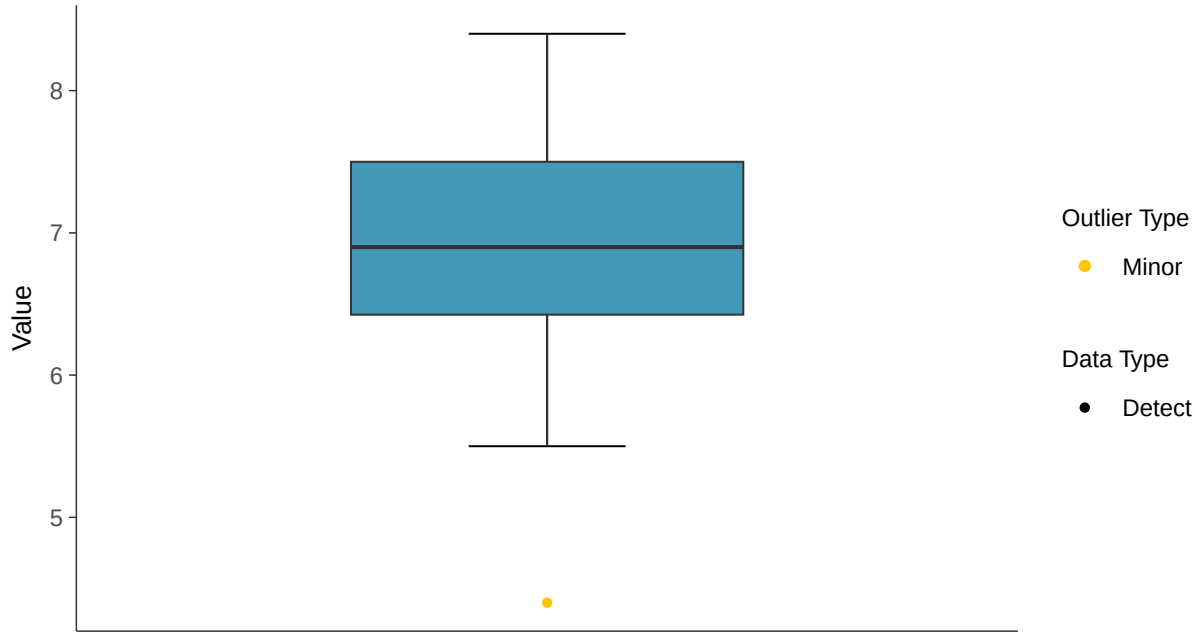
ID: 08_02_123





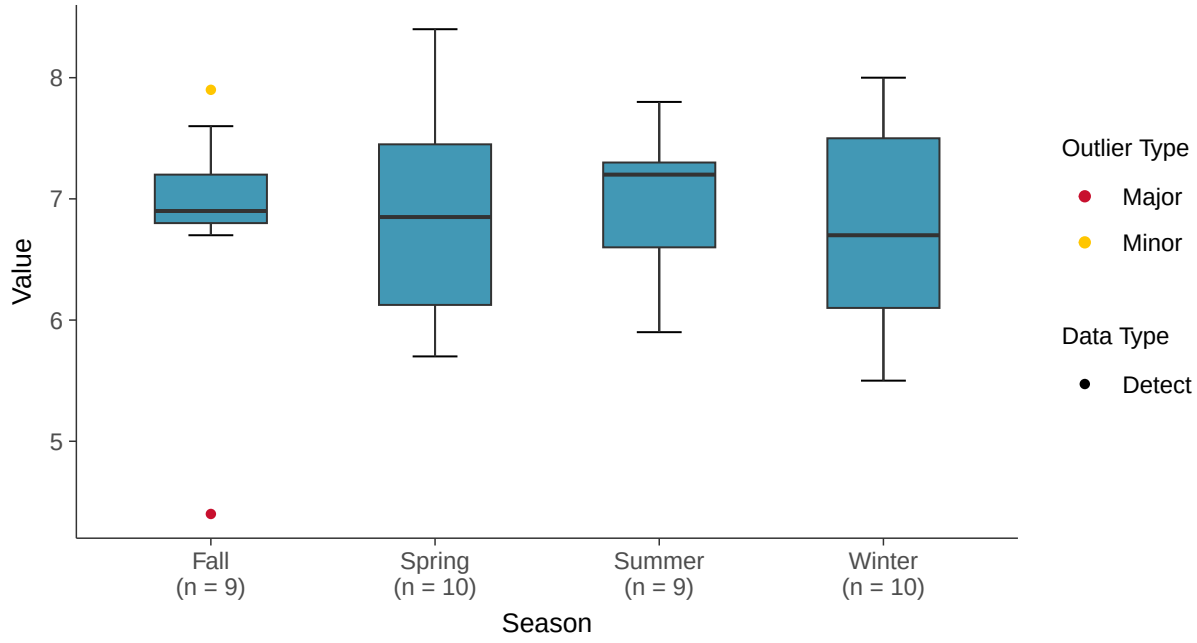
Boxplot

Sulfate, MW-8 (mg/L)



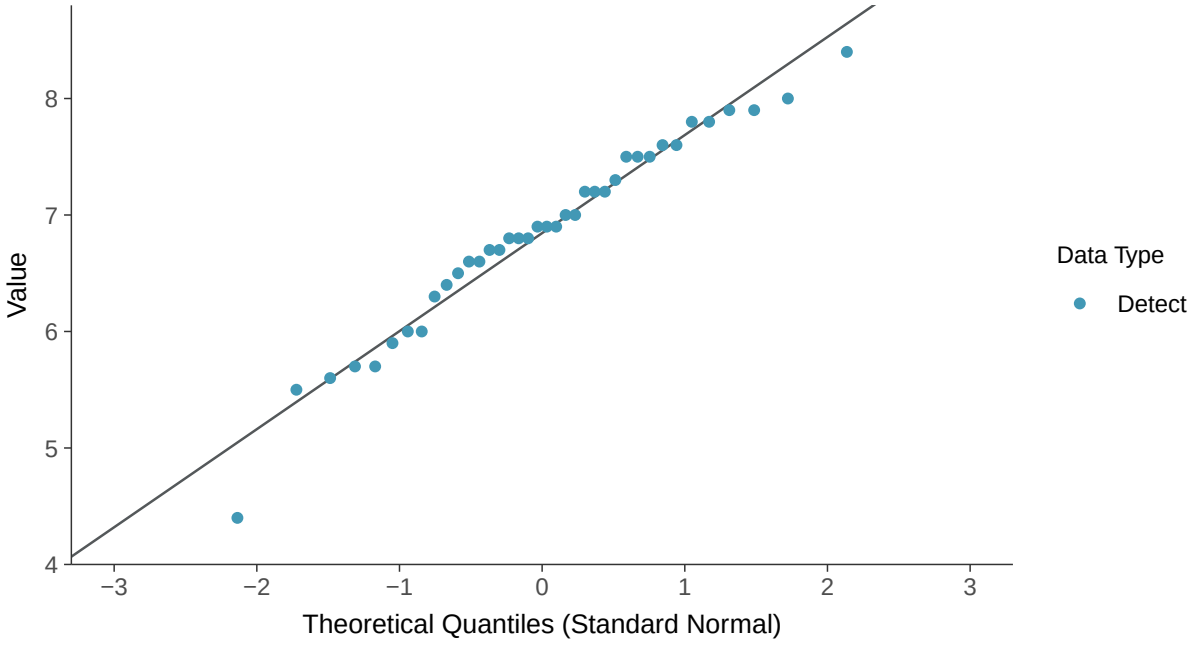
Boxplot by Season

Sulfate, MW-8 (mg/L)



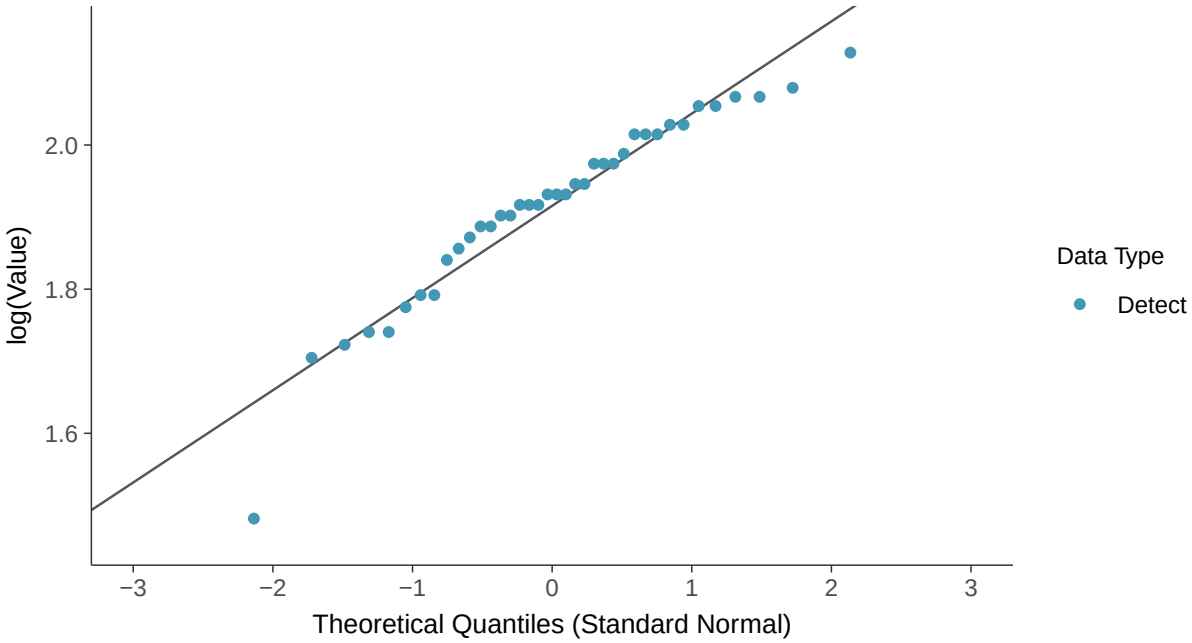
Normal Q-Q plot

Sulfate, MW-8 (mg/L)



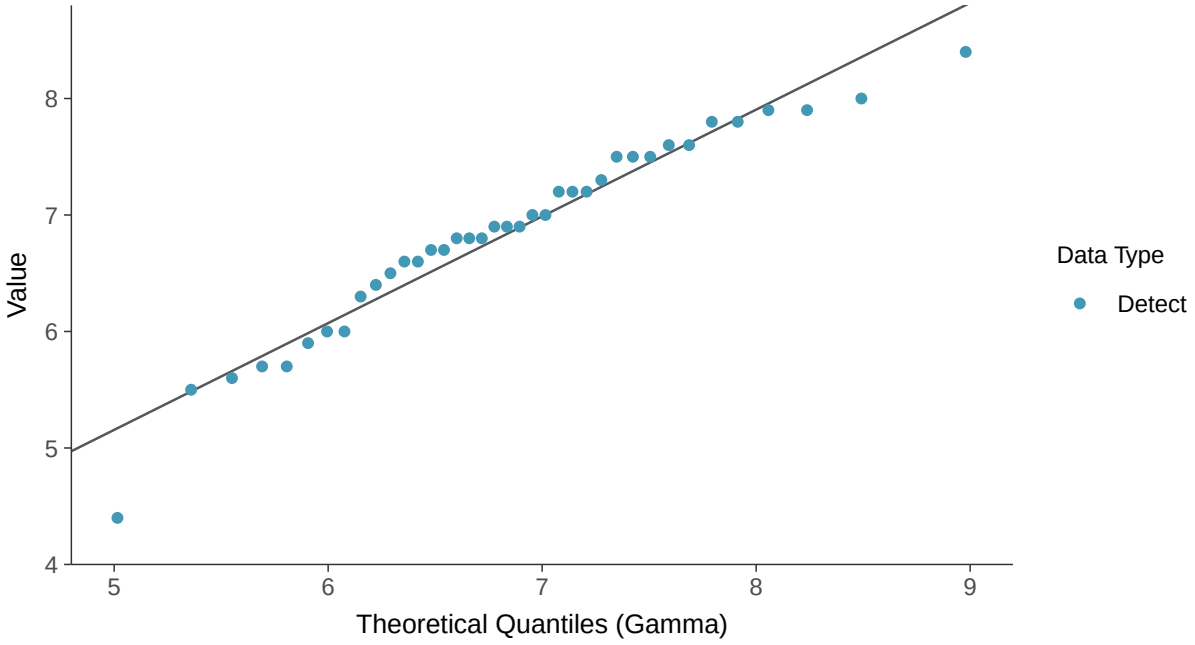
Lognormal Q-Q plot

Sulfate, MW-8 (mg/L)



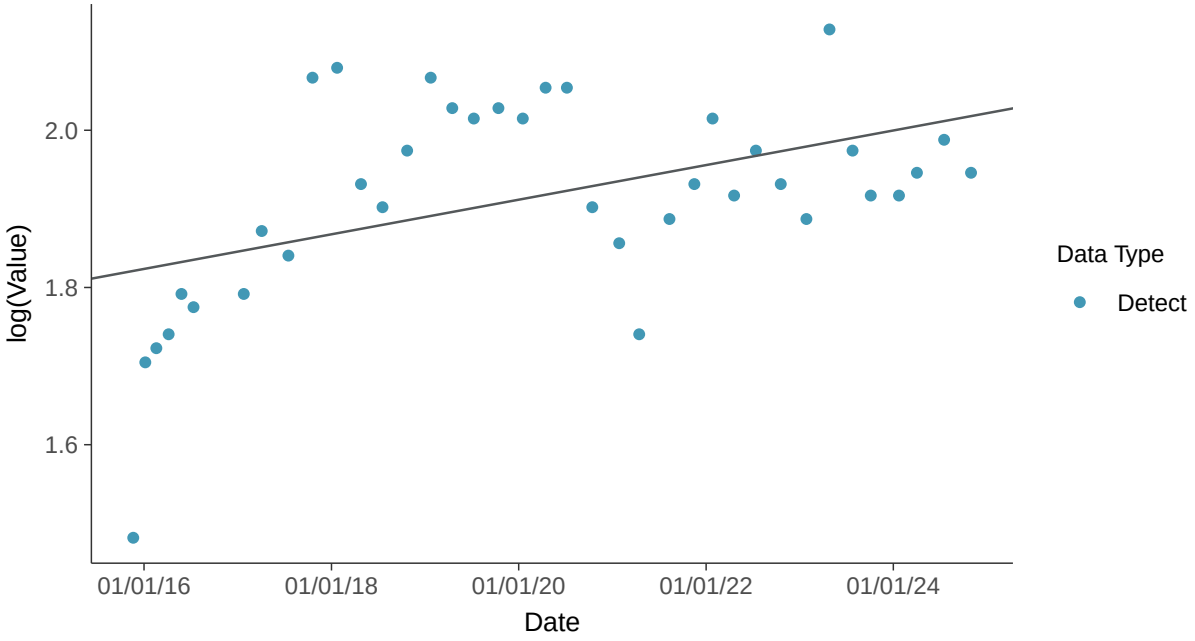
Gamma Q-Q plot

Sulfate, MW-8 (mg/L)



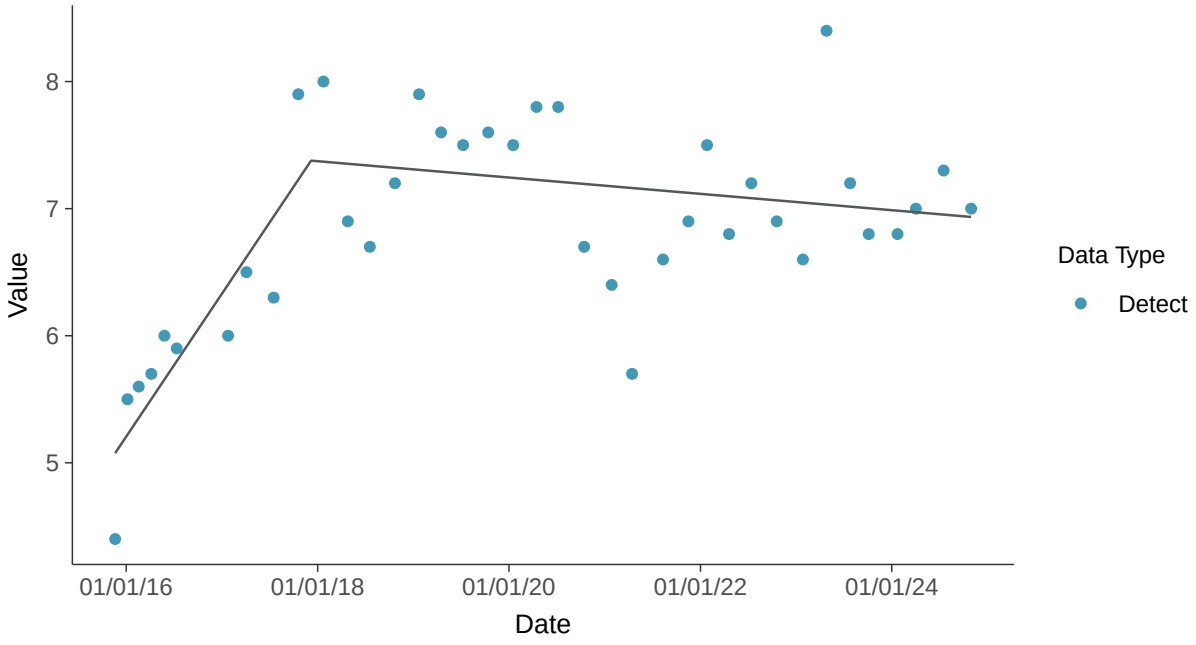
Trend Regression: Lognormal MLE

Sulfate, MW-8 (mg/L)



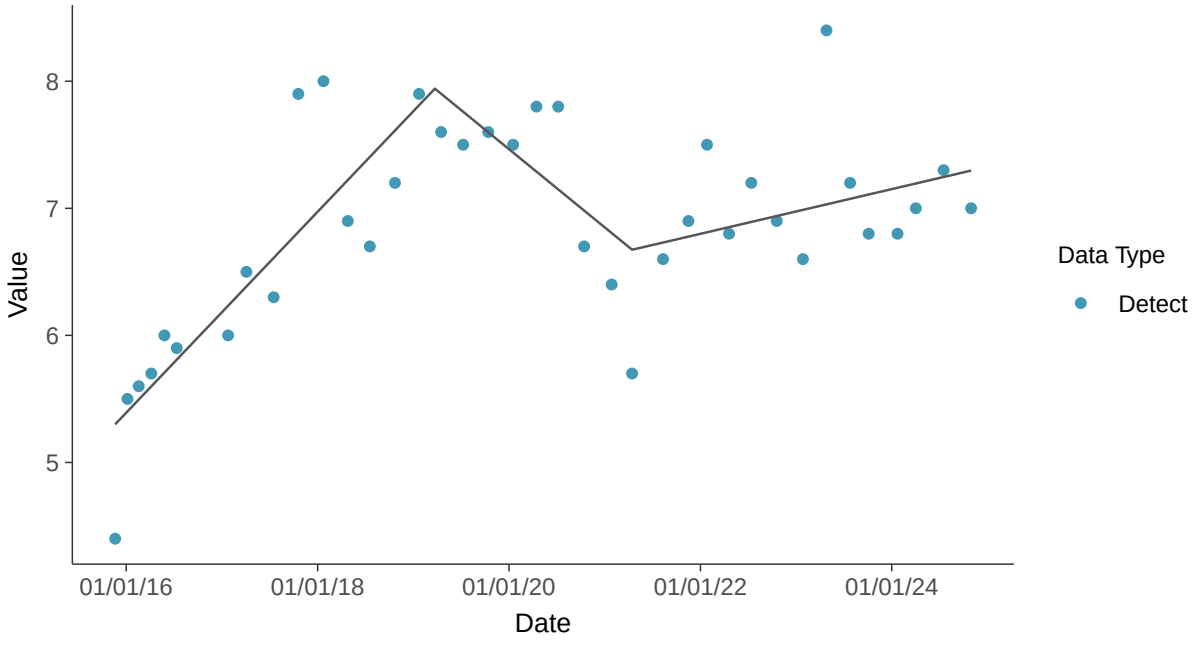
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-8 (mg/L)



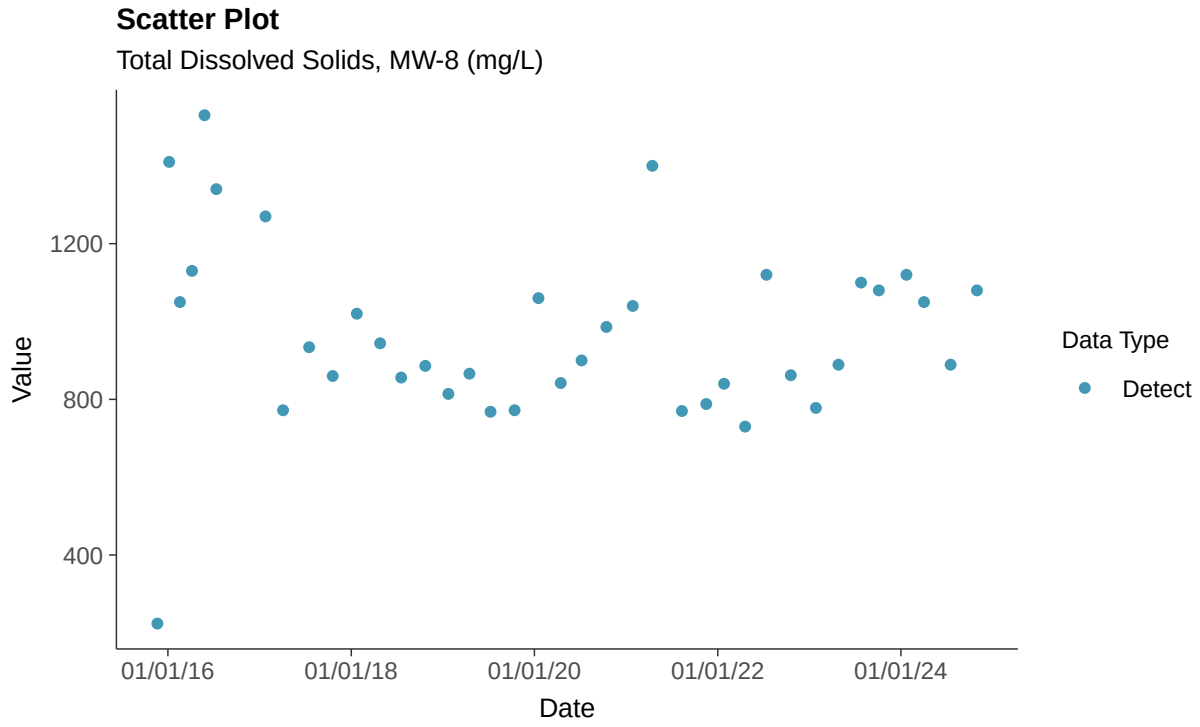
Trend Regression: Piecewise Linear-Linear-Linear

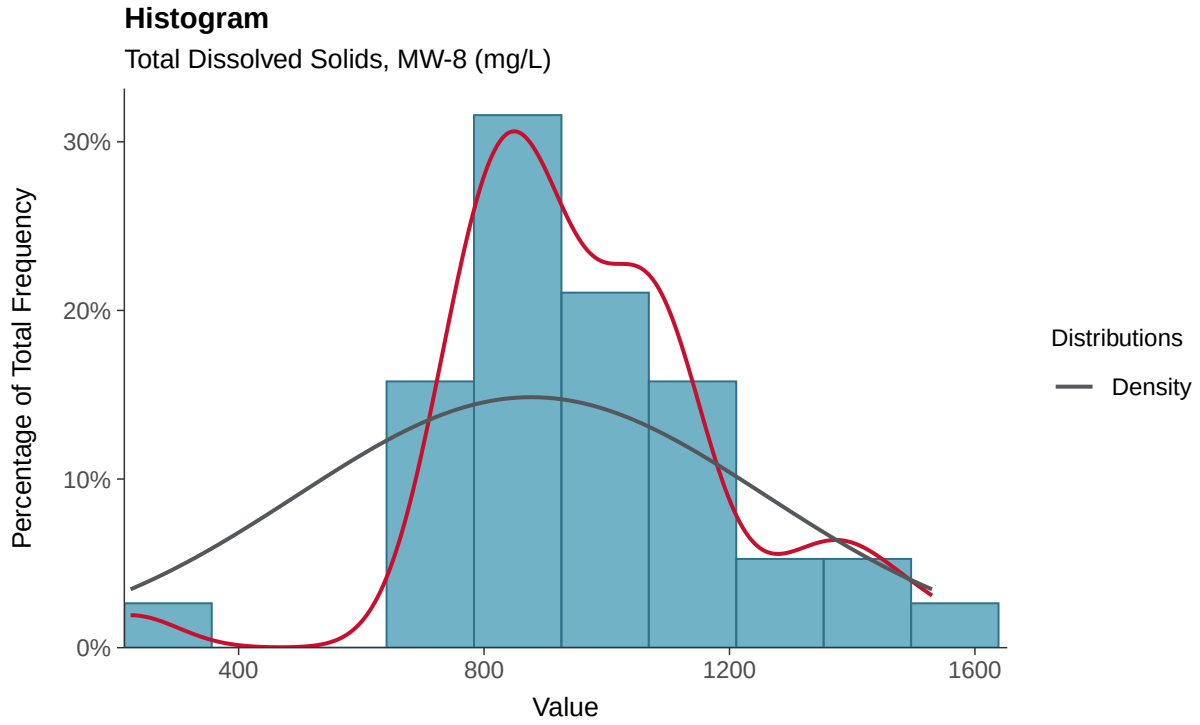
Sulfate, MW-8 (mg/L)



App. III: Total Dissolved Solids, MW-8

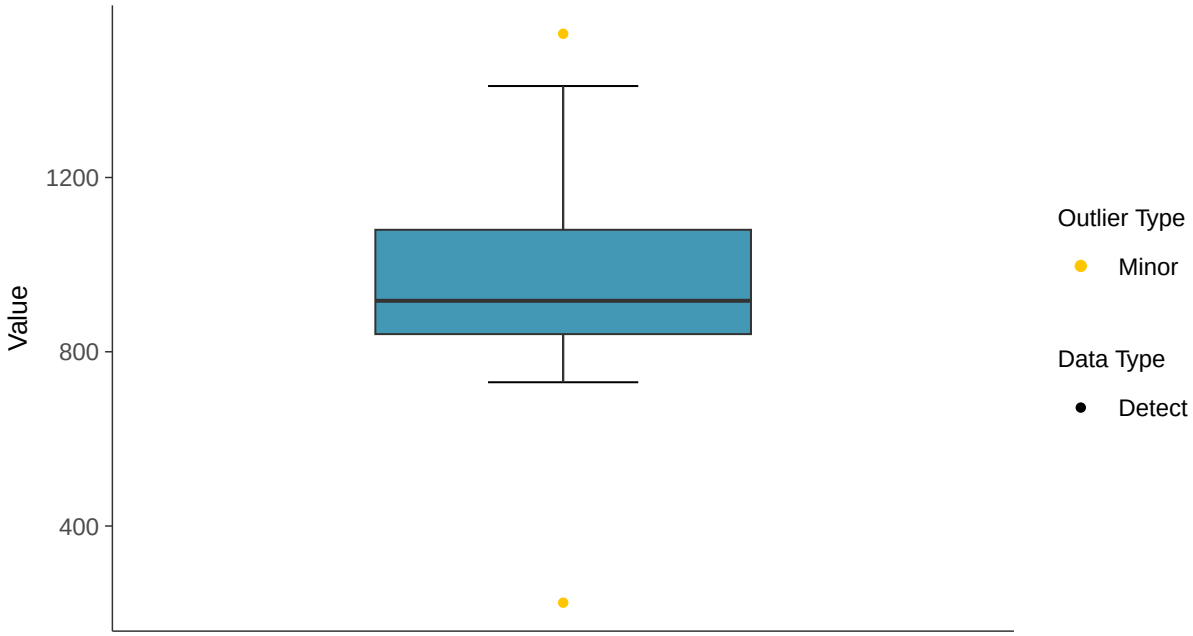
ID: 08_02_125





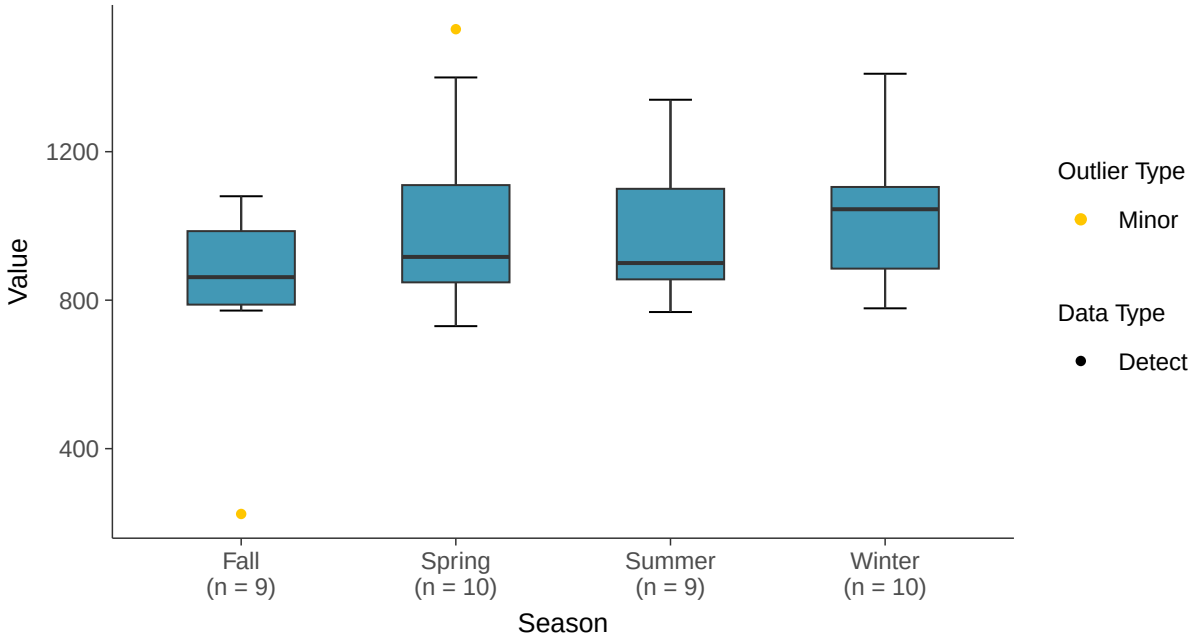
Boxplot

Total Dissolved Solids, MW-8 (mg/L)



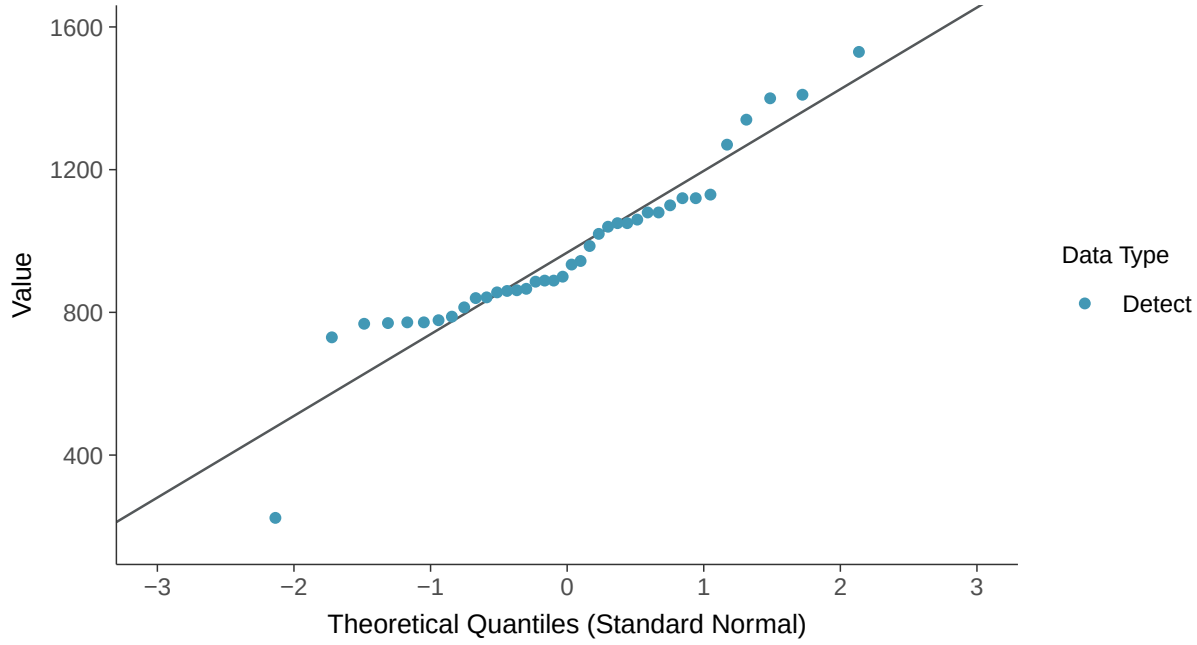
Boxplot by Season

Total Dissolved Solids, MW-8 (mg/L)



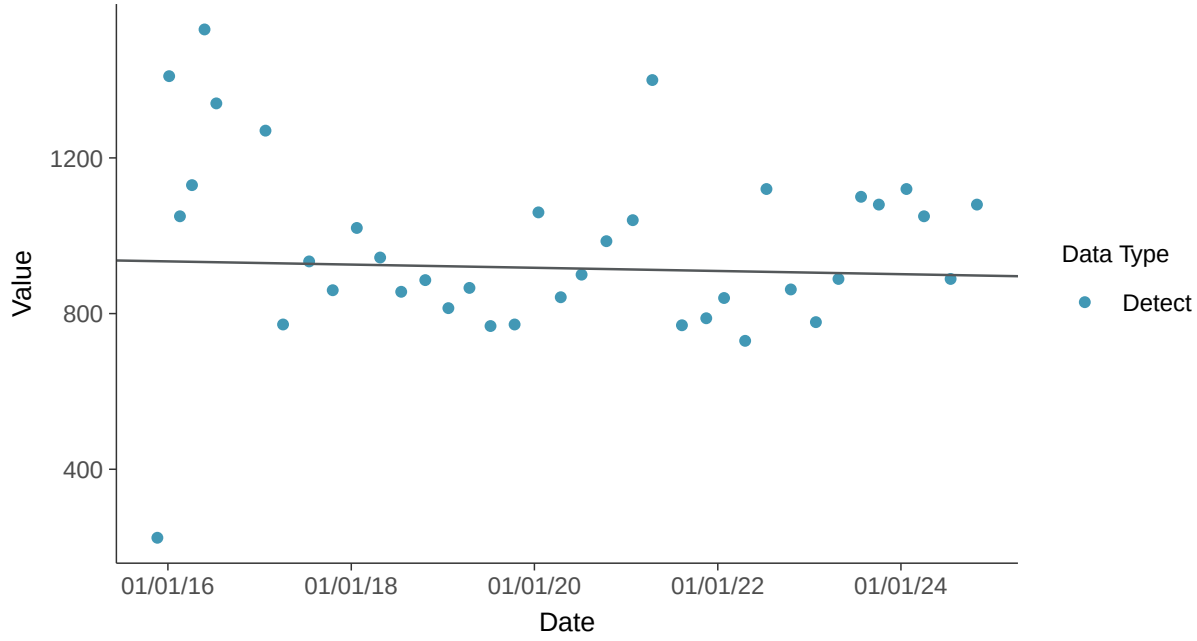
Normal Q-Q plot

Total Dissolved Solids, MW-8 (mg/L)



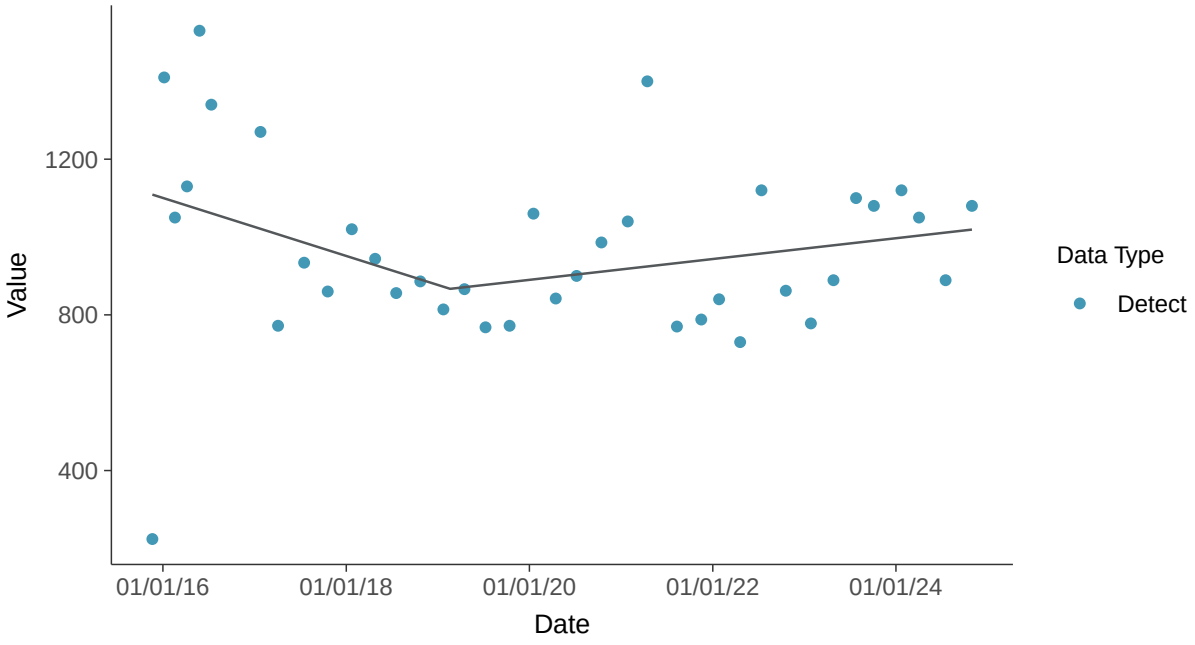
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-8 (mg/L)



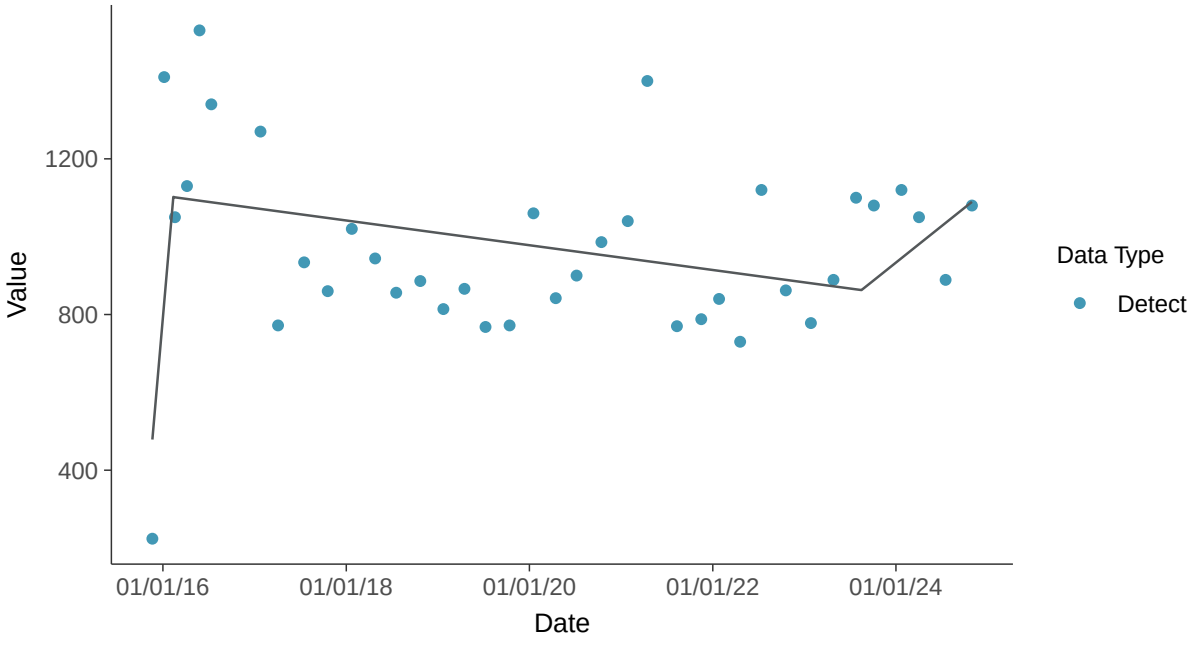
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-8 (mg/L)

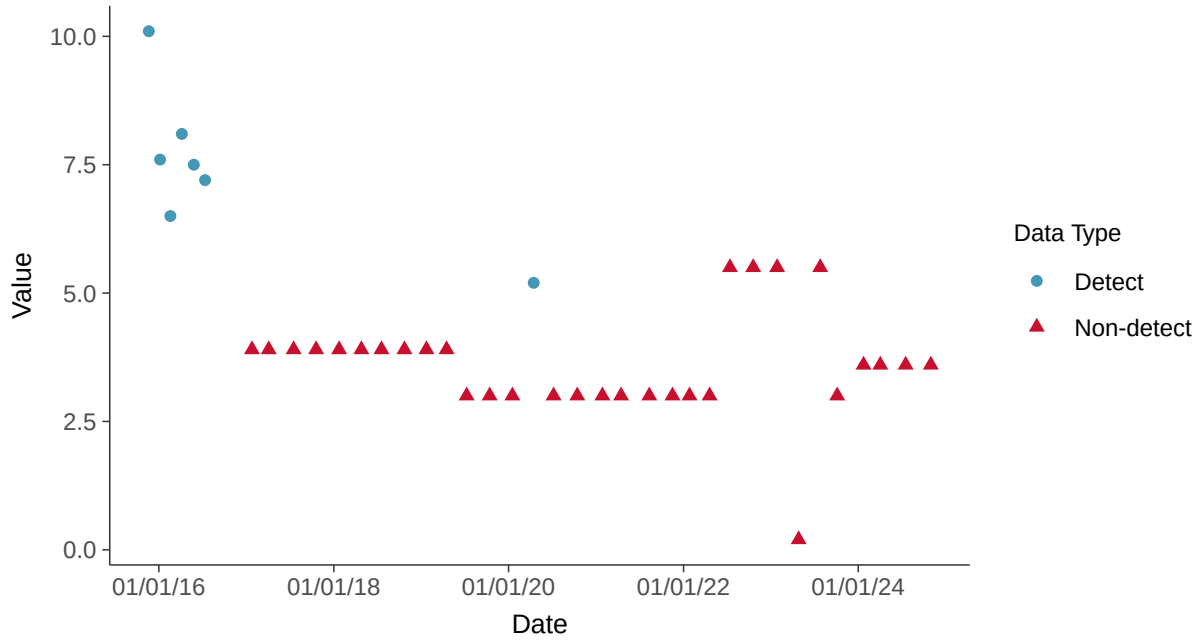


App. IV: Antimony, MW-8

ID: 08_03_101

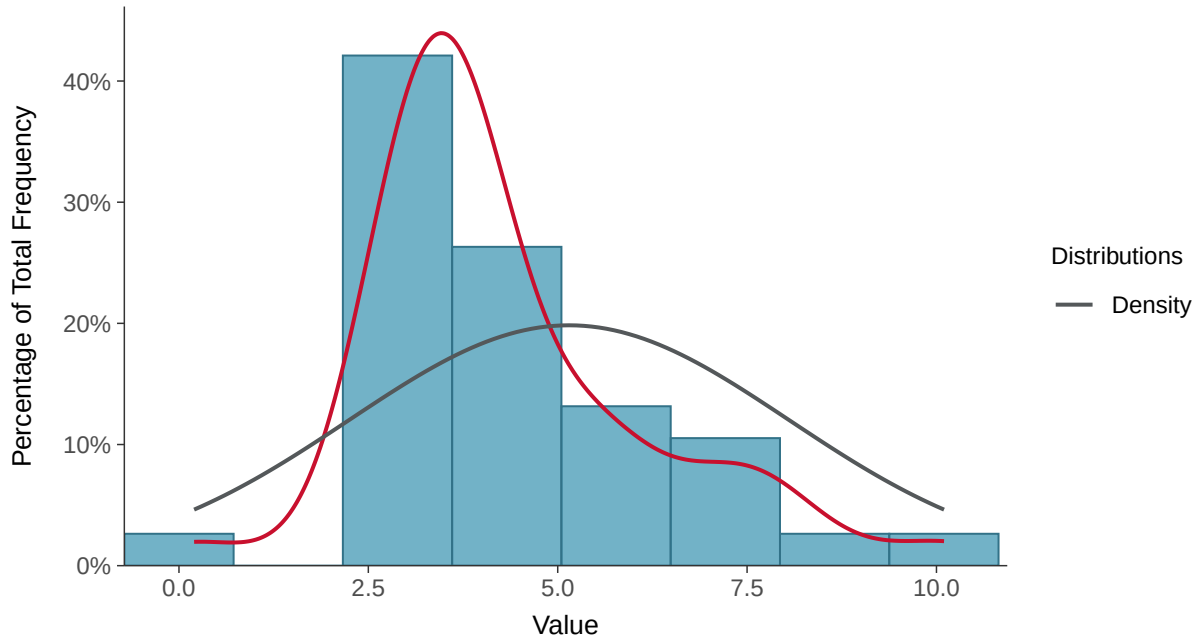
Scatter Plot

Antimony, MW-8 (ug/L)



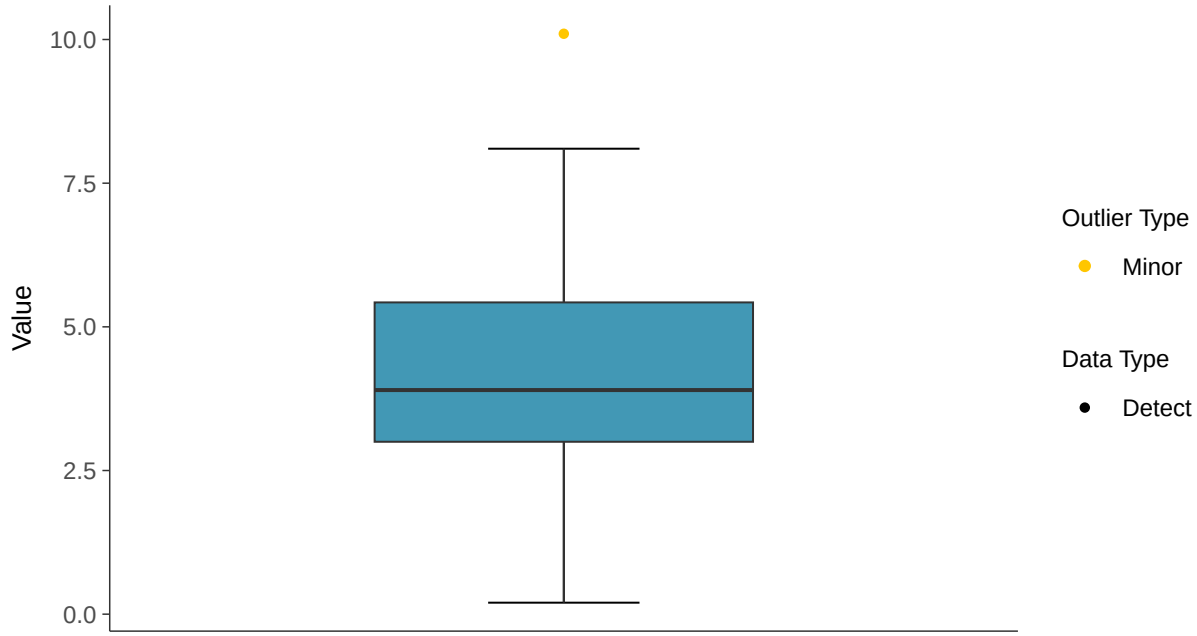
Histogram

Antimony, MW-8 (ug/L)



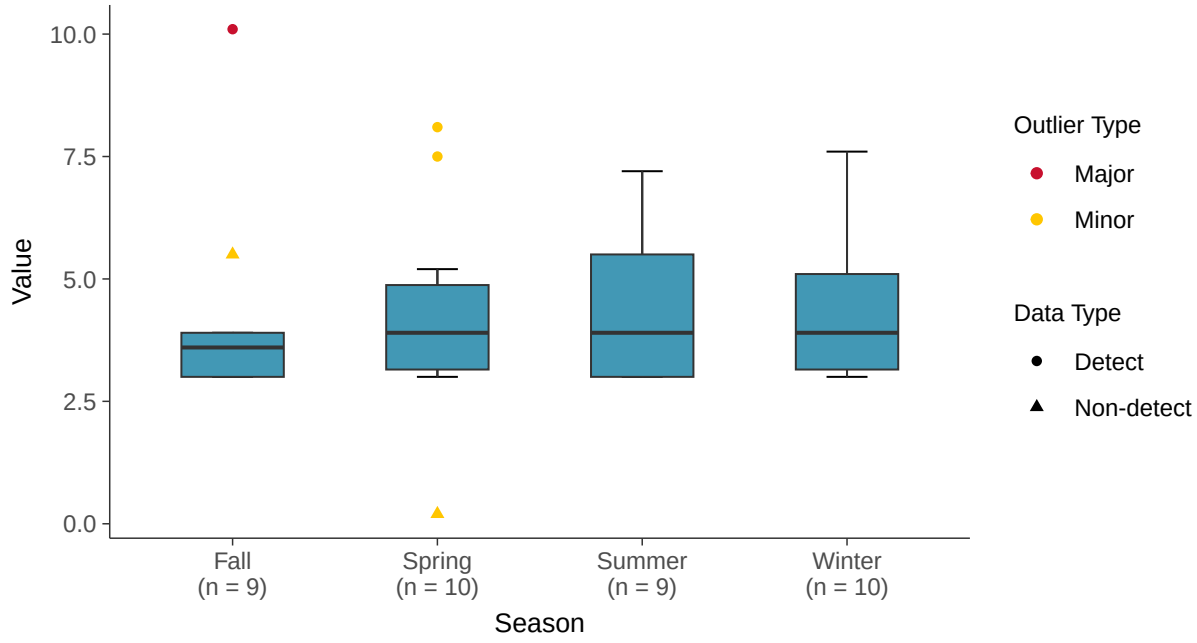
Boxplot

Antimony, MW-8 (ug/L)



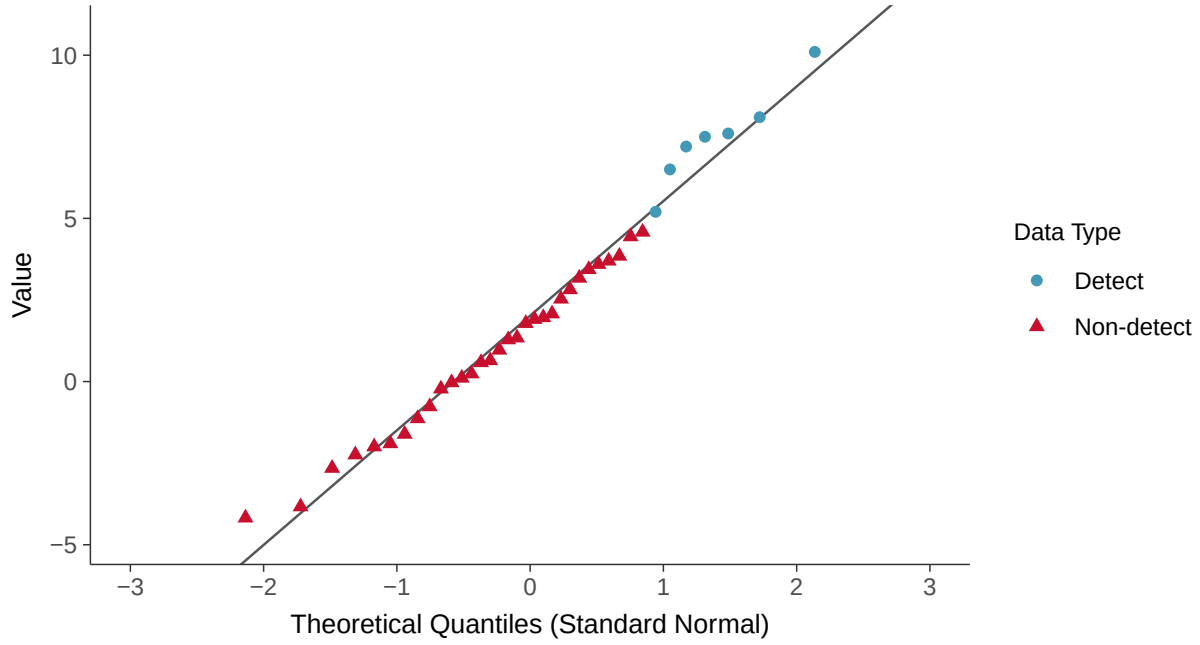
Boxplot by Season

Antimony, MW-8 (ug/L)



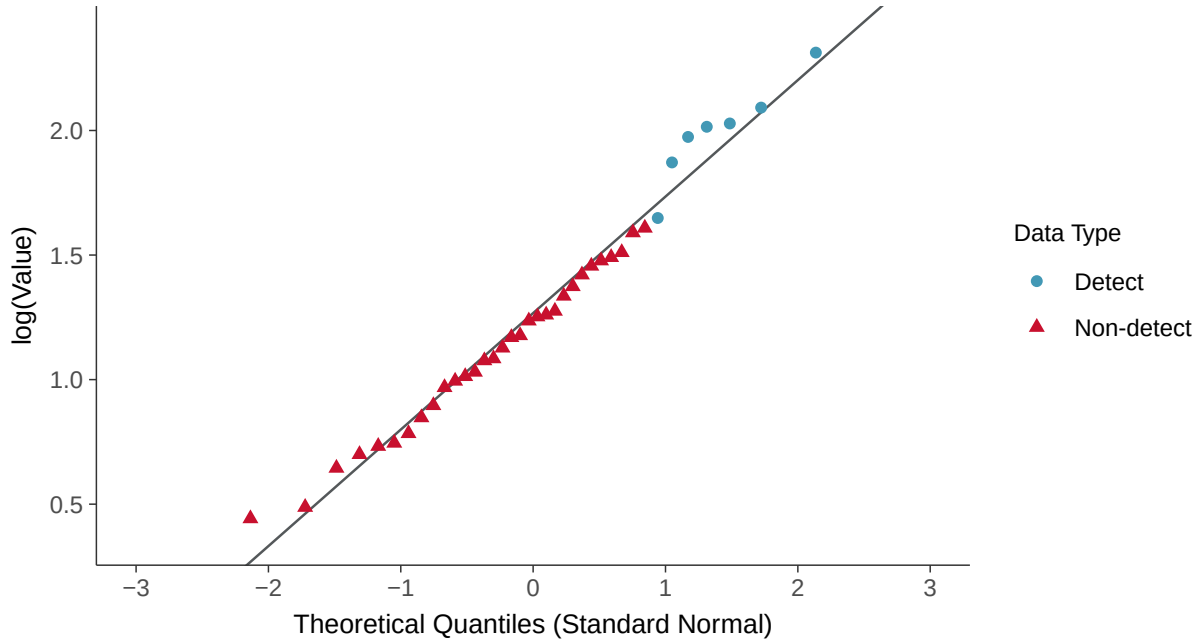
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



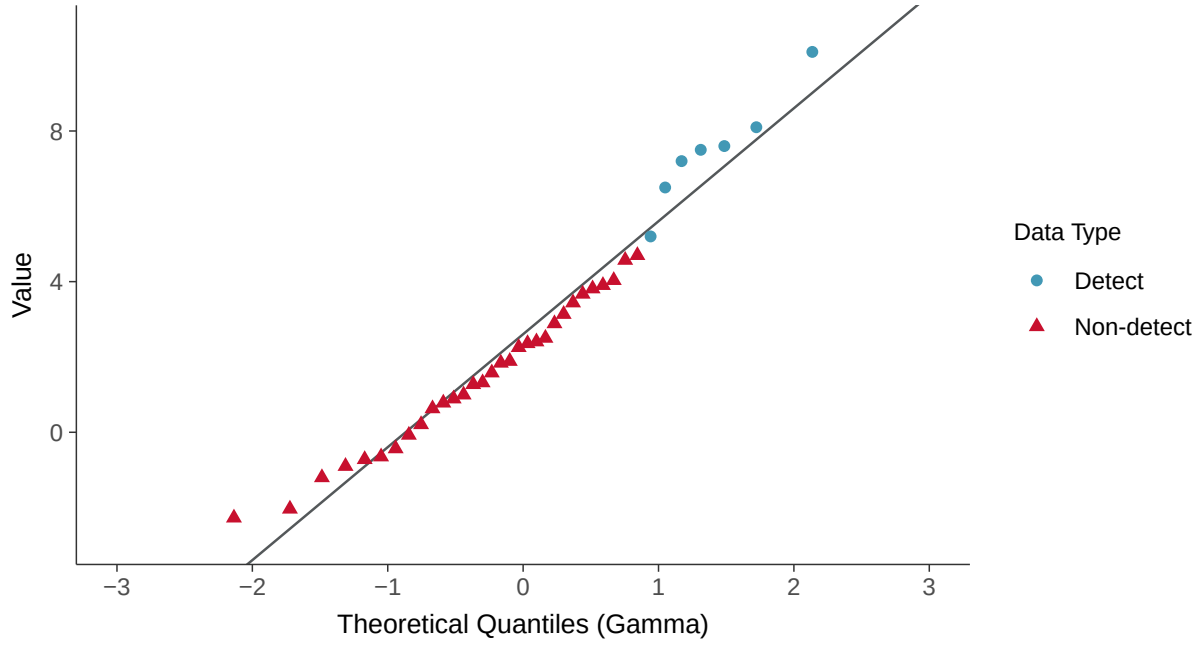
Lognormal Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



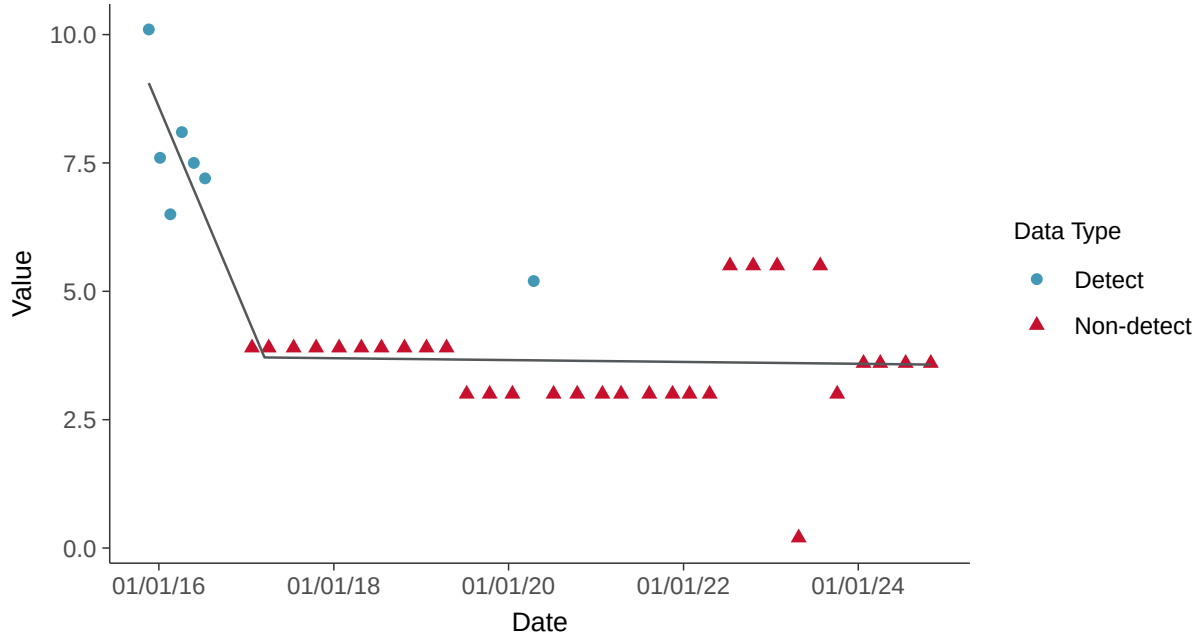
Gamma Q-Q plot using ROS Imputed Estimates

Antimony, MW-8 (ug/L)



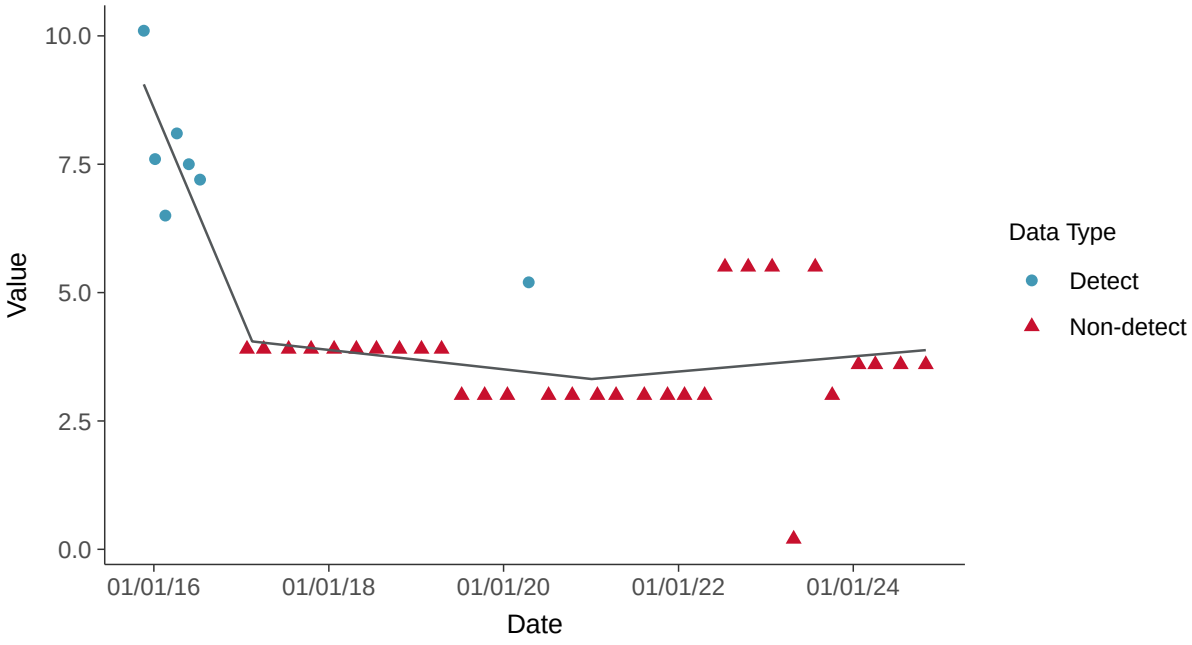
Trend Regression: Piecewise Linear-Linear

Antimony, MW-8 (ug/L)



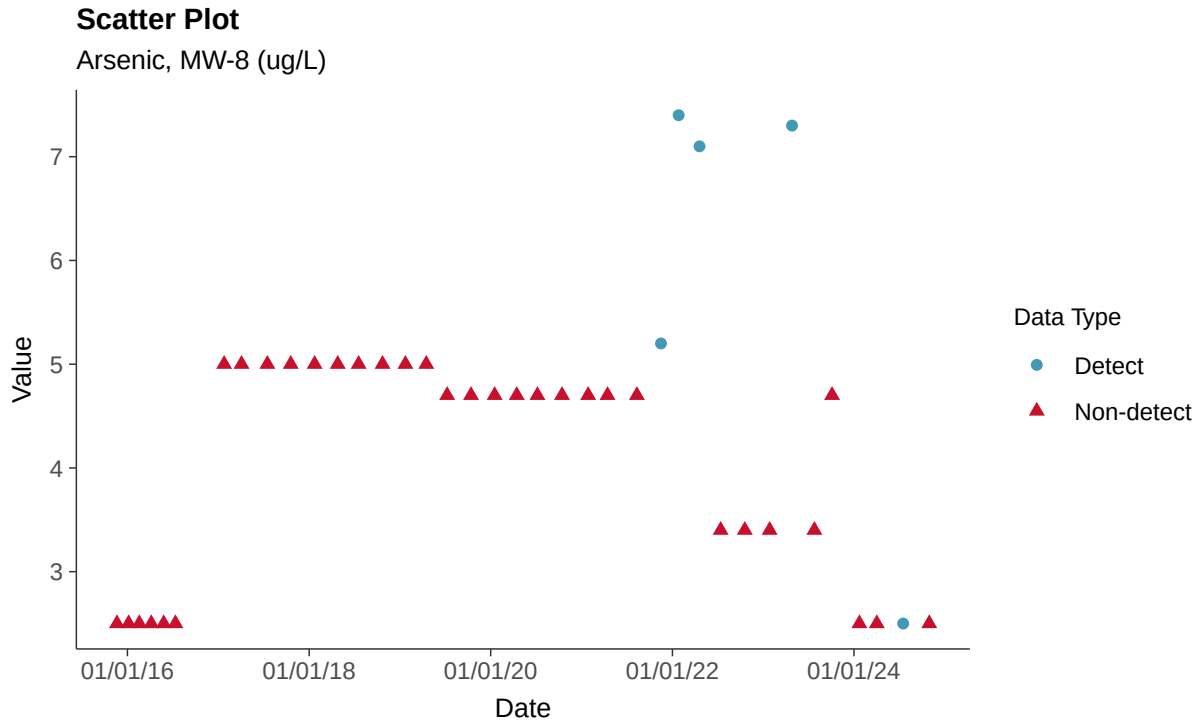
Trend Regression: Piecewise Linear-Linear-Linear

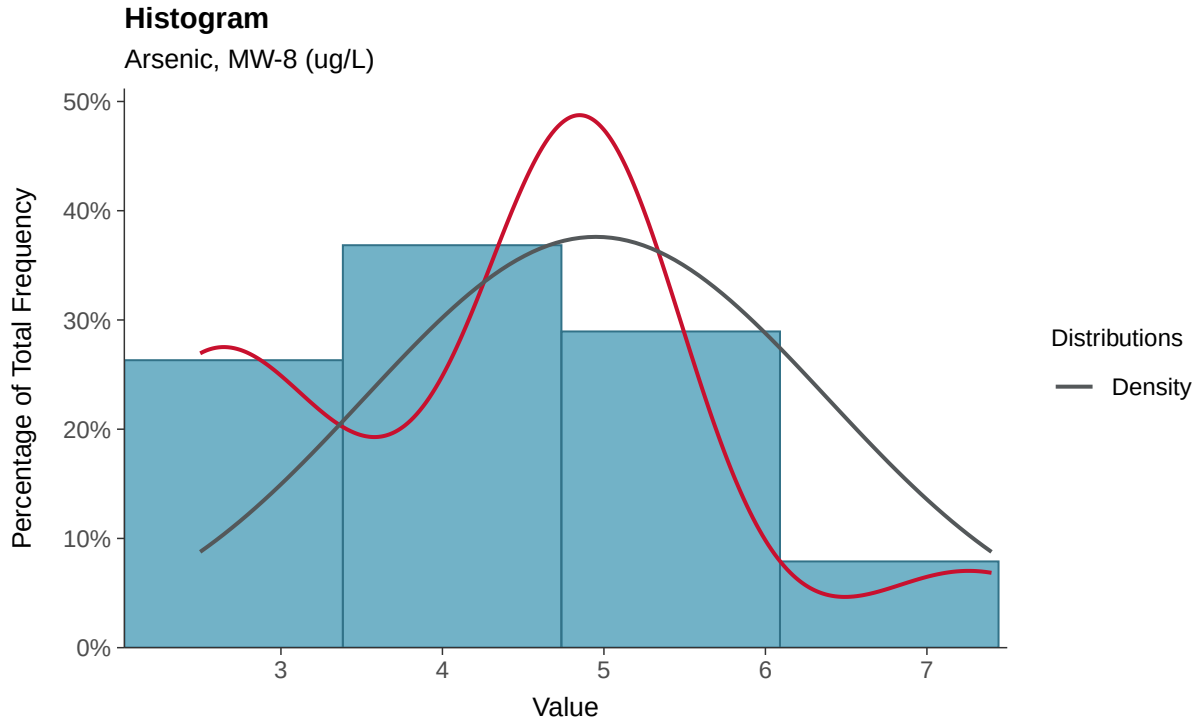
Antimony, MW-8 (ug/L)



App. IV: Arsenic, MW-8

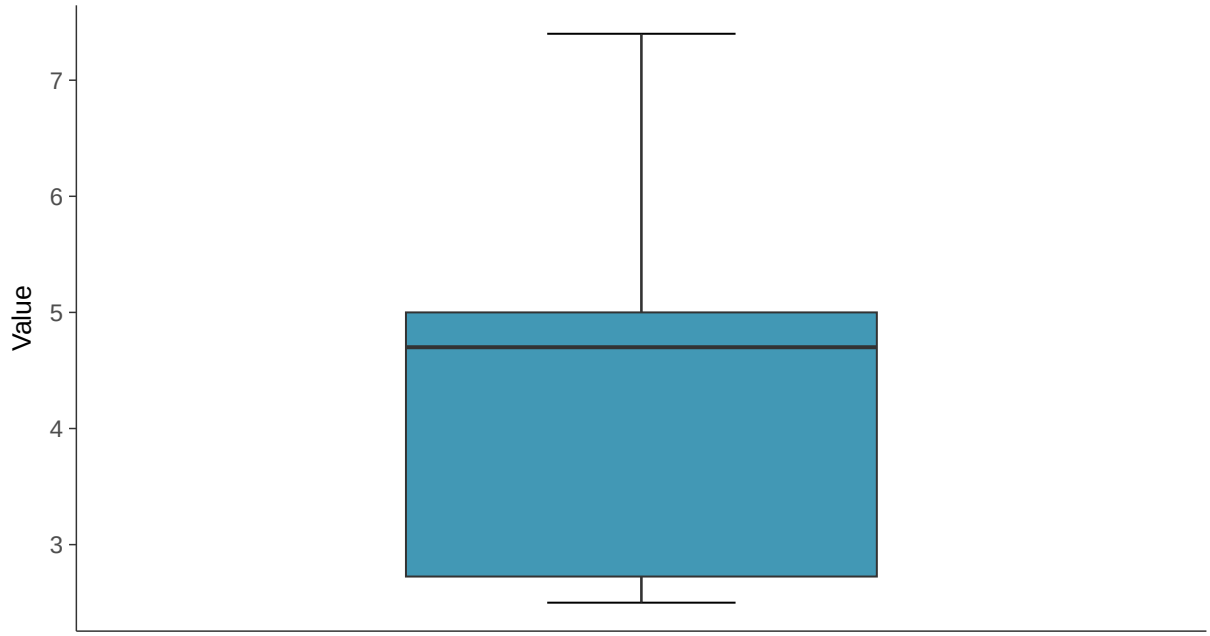
ID: 08_03_102





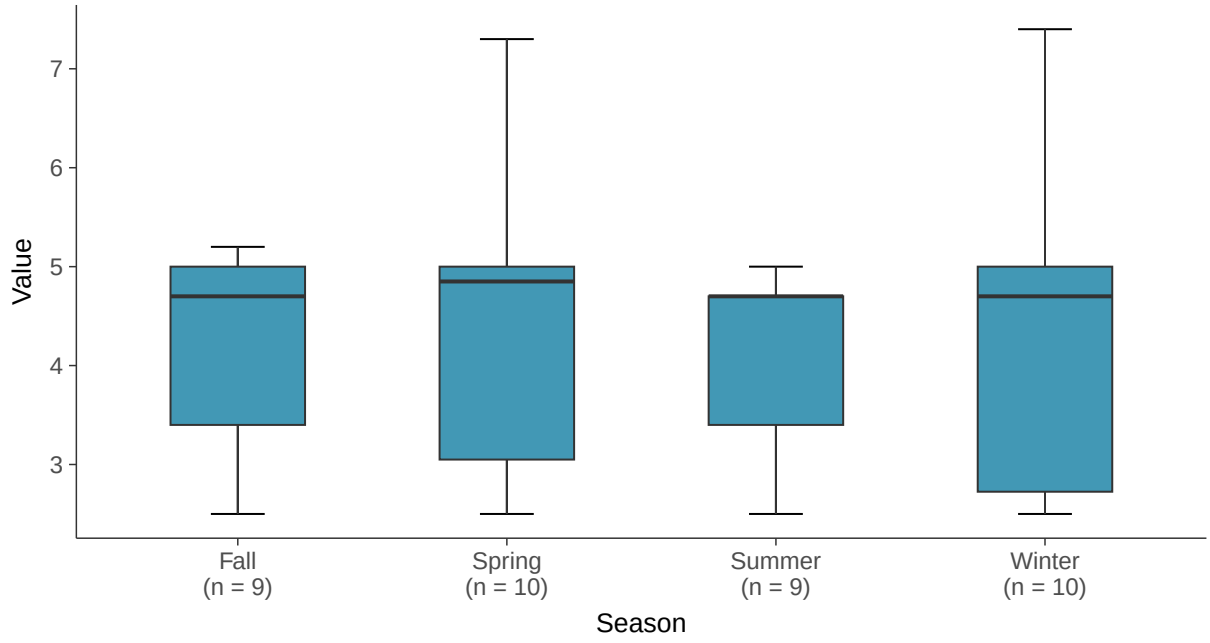
Boxplot

Arsenic, MW-8 (ug/L)



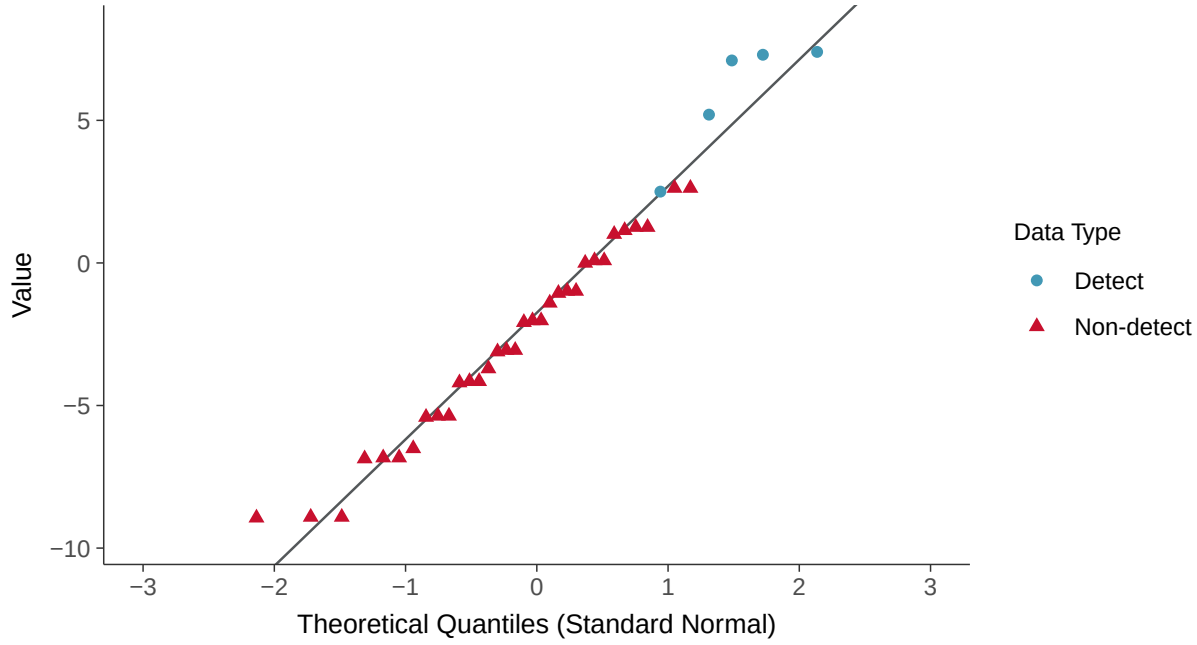
Boxplot by Season

Arsenic, MW-8 (ug/L)



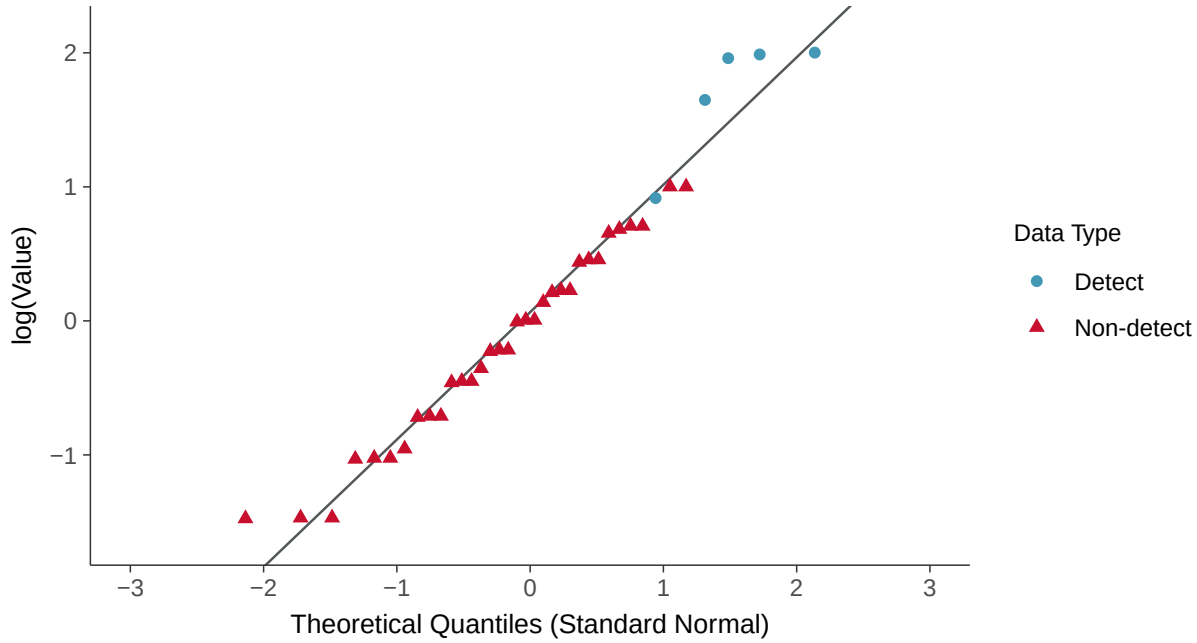
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-8 (ug/L)



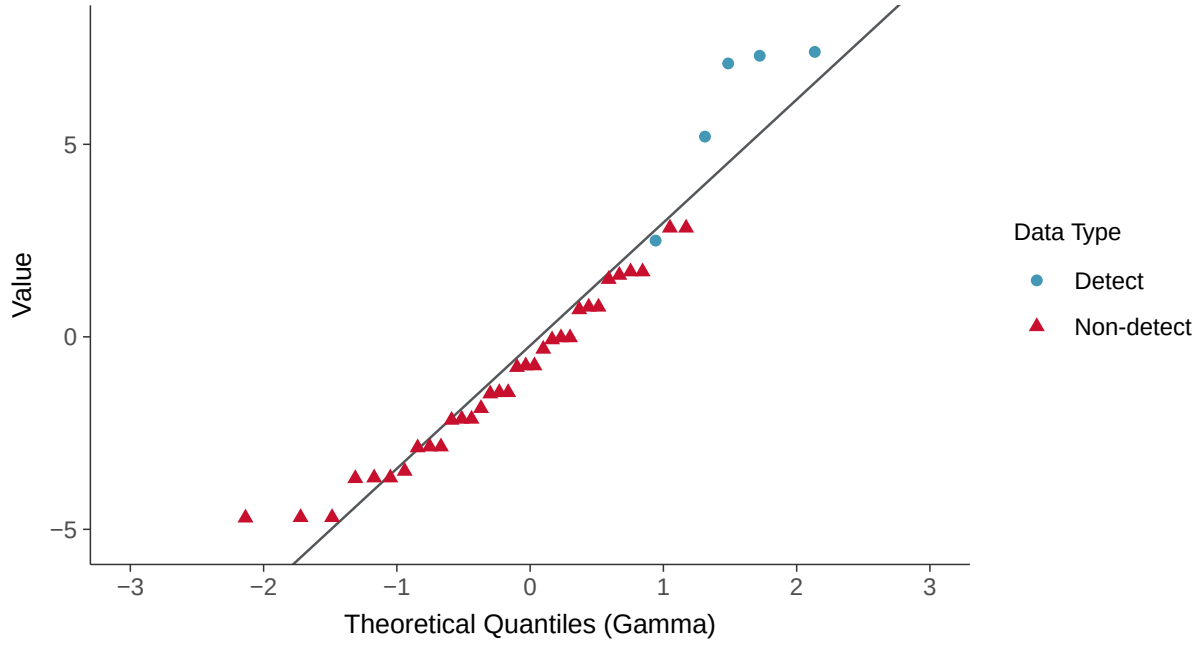
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-8 (ug/L)



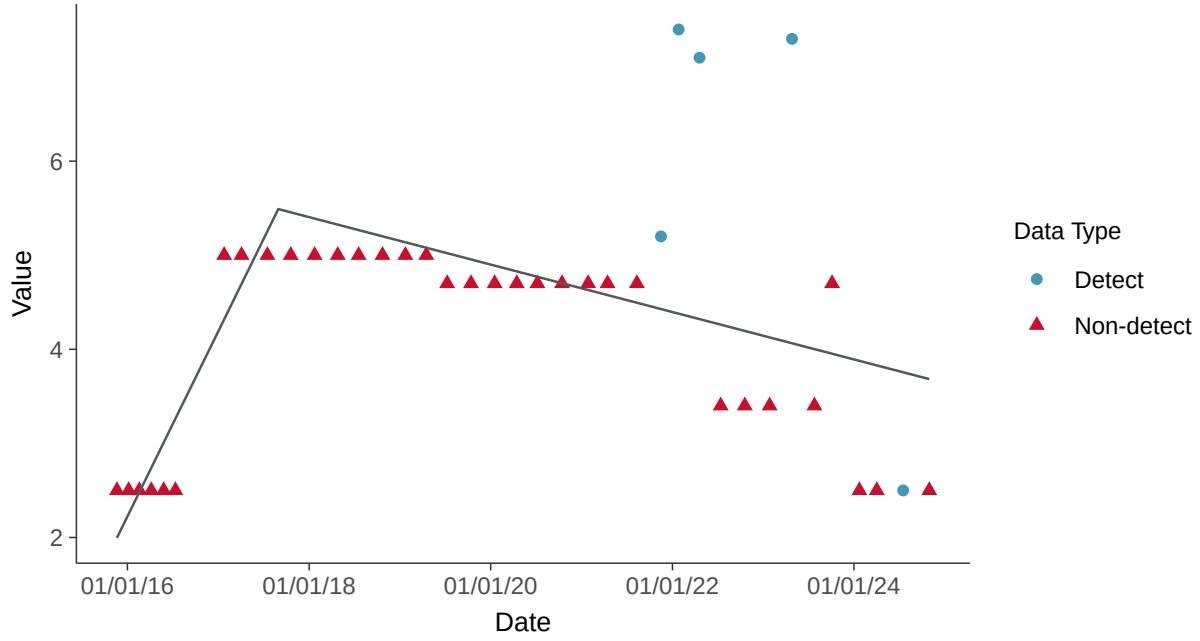
Gamma Q-Q plot using ROS Imputed Estimates

Arsenic, MW-8 (ug/L)



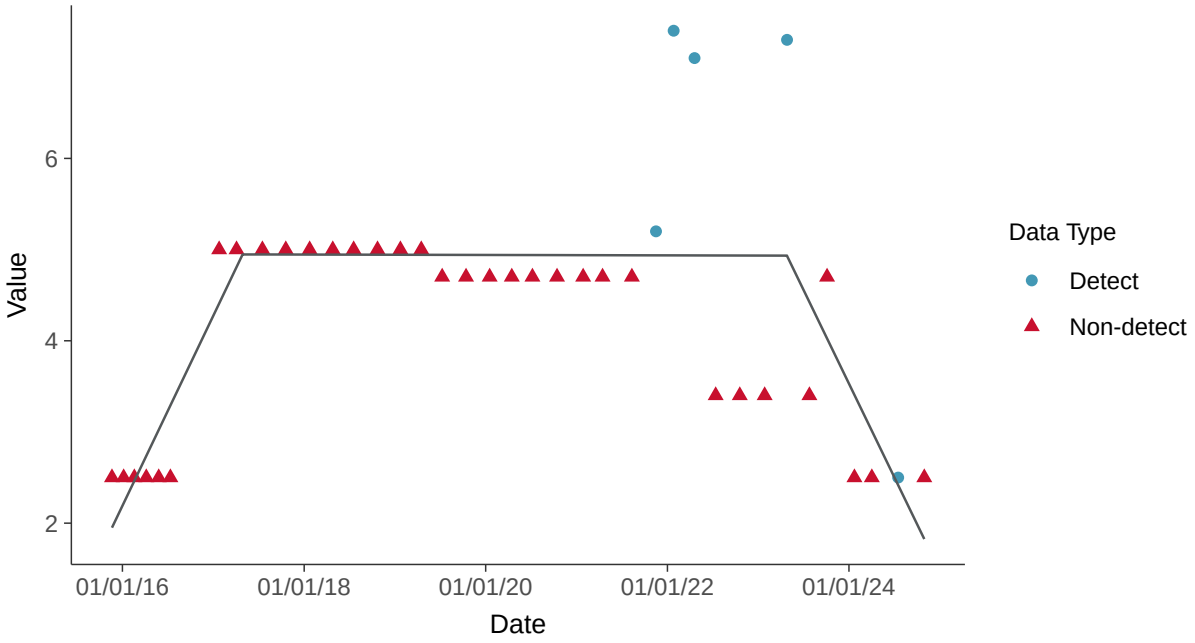
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Arsenic, MW-8 (ug/L)

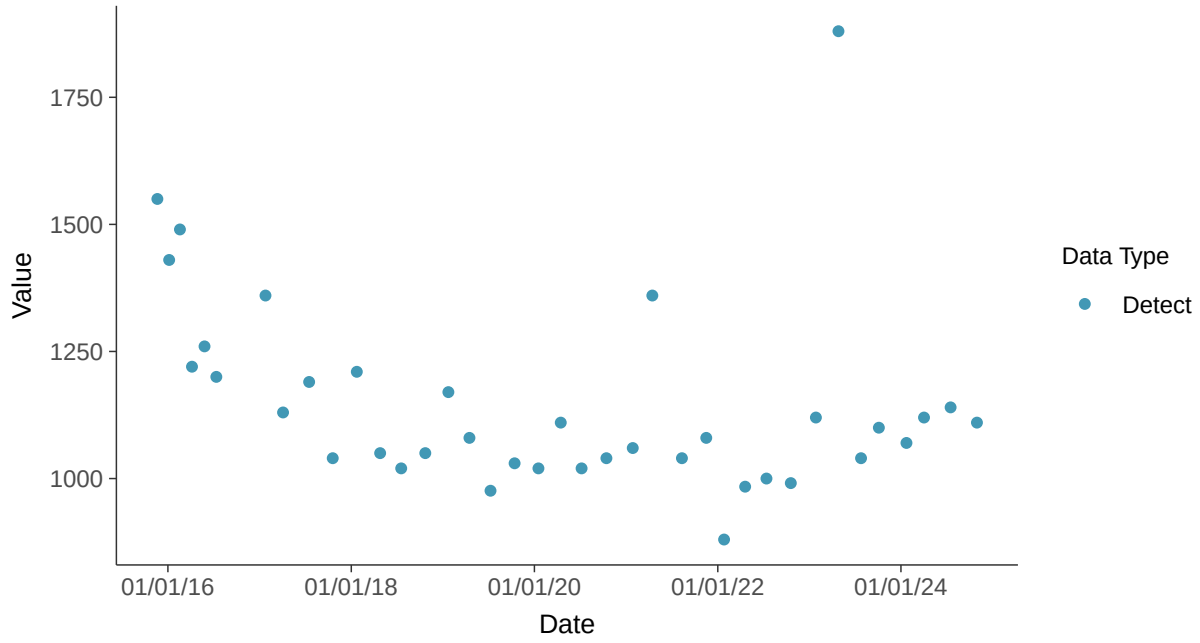


App. IV: Barium, MW-8

ID: 08_03_103

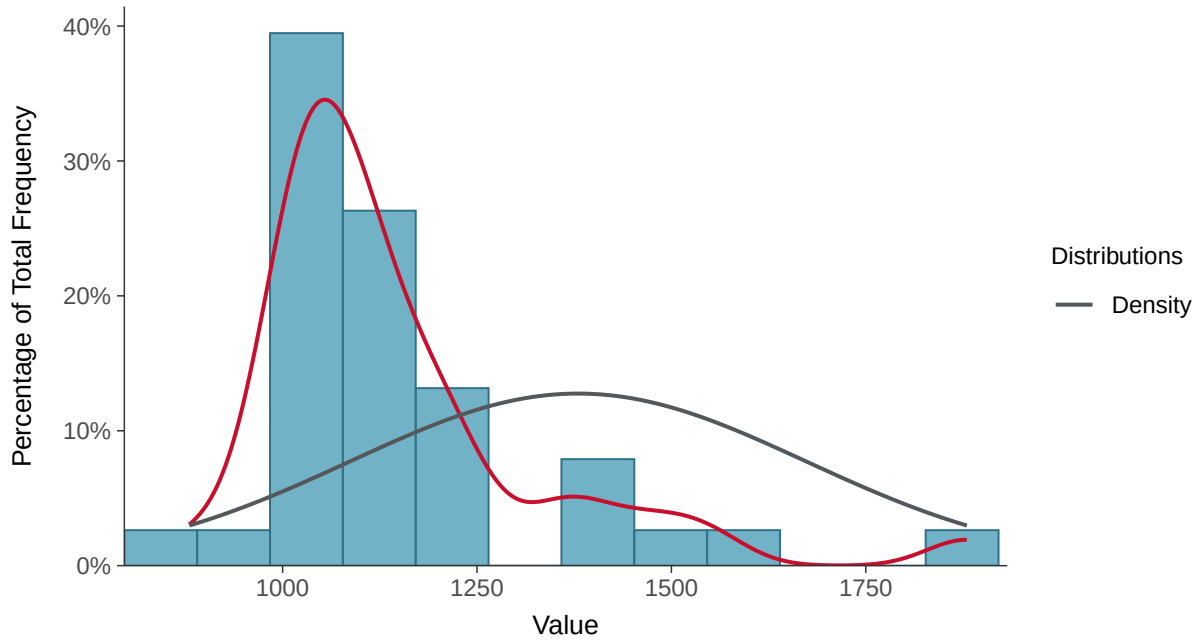
Scatter Plot

Barium, MW-8 (ug/L)



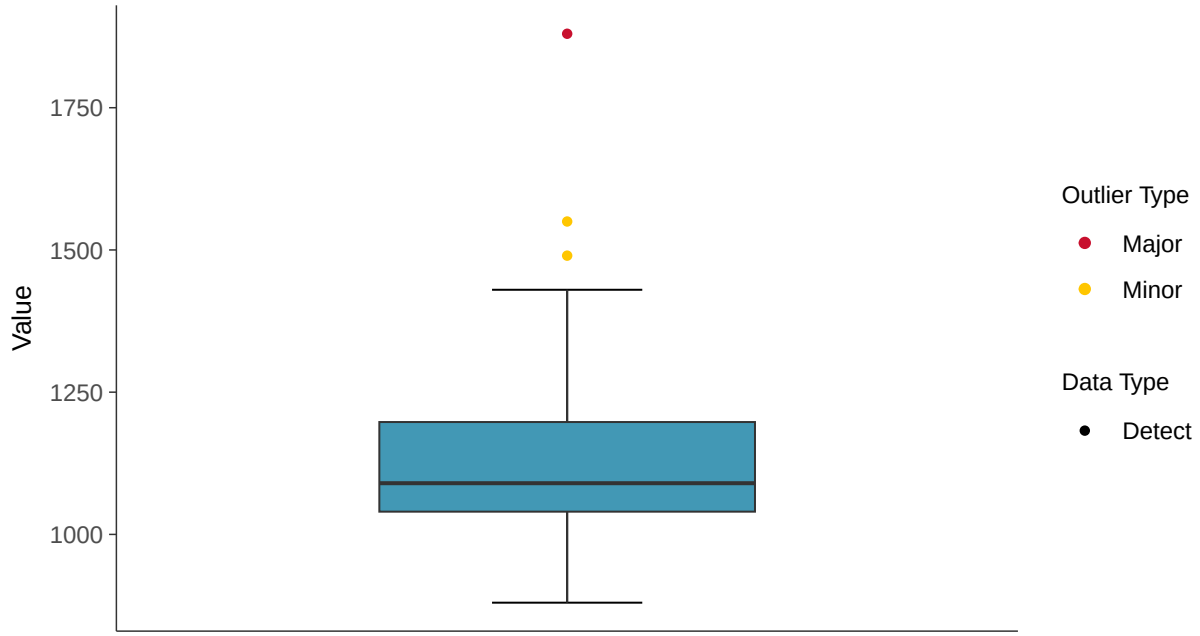
Histogram

Barium, MW-8 (ug/L)



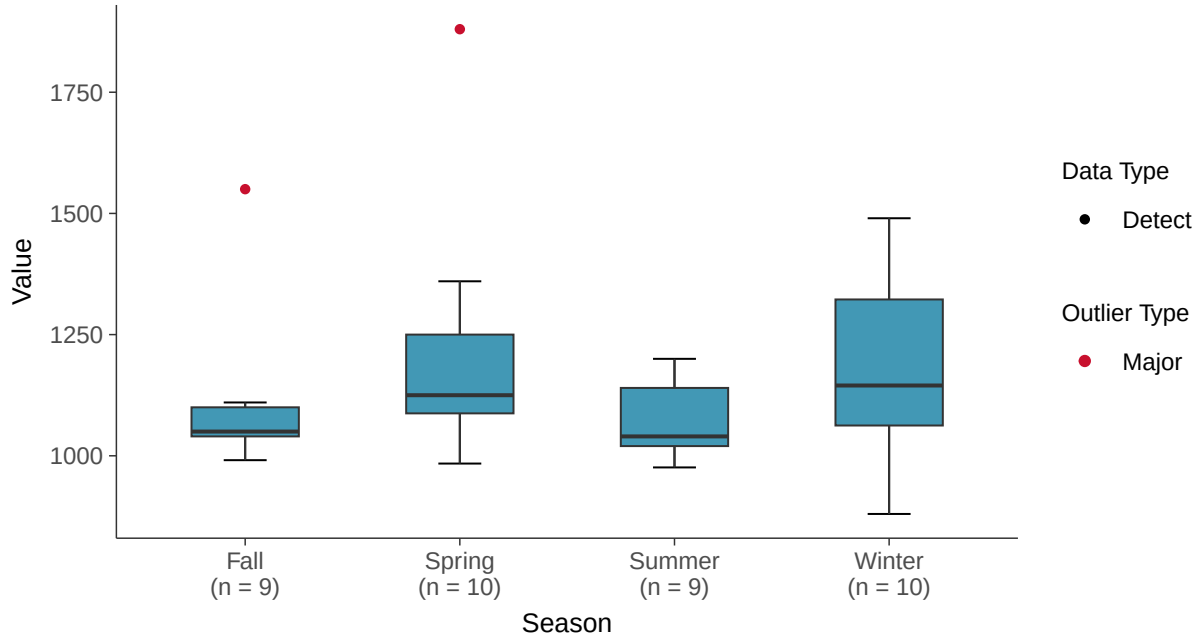
Boxplot

Barium, MW-8 (ug/L)



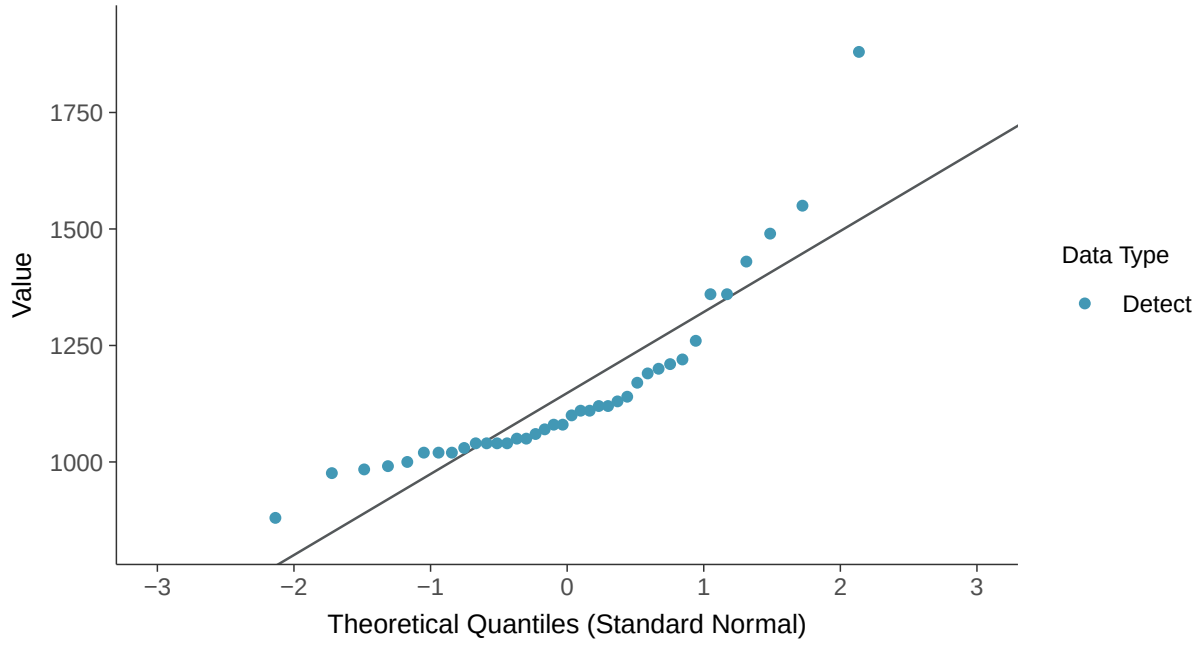
Boxplot by Season

Barium, MW-8 (ug/L)



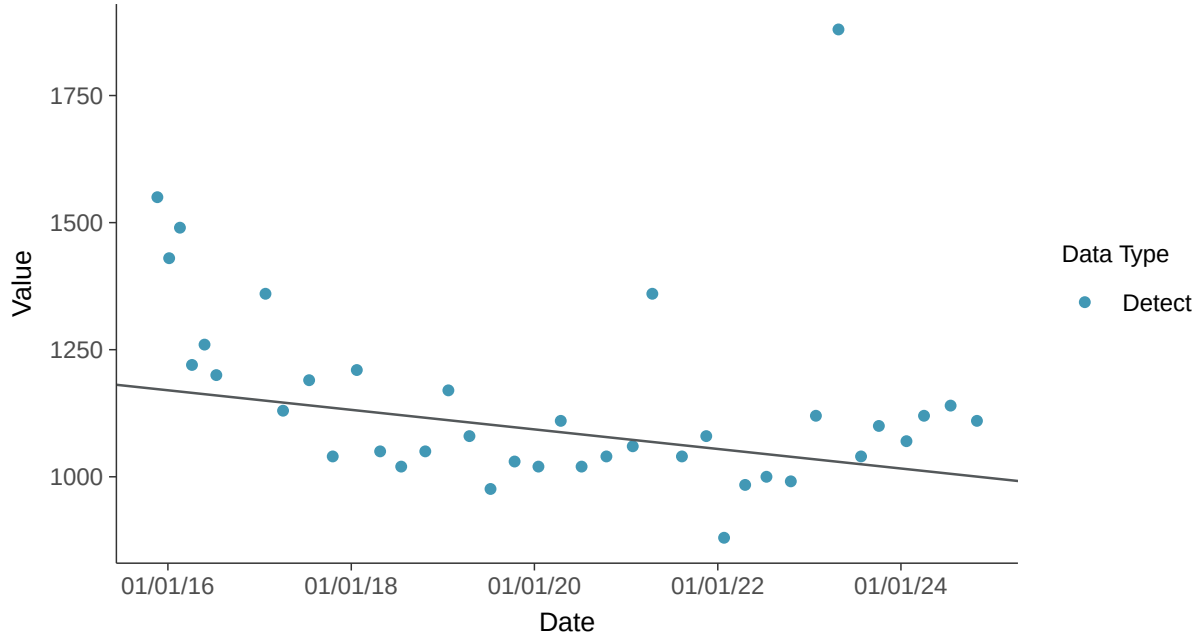
Normal Q-Q plot

Barium, MW-8 (ug/L)



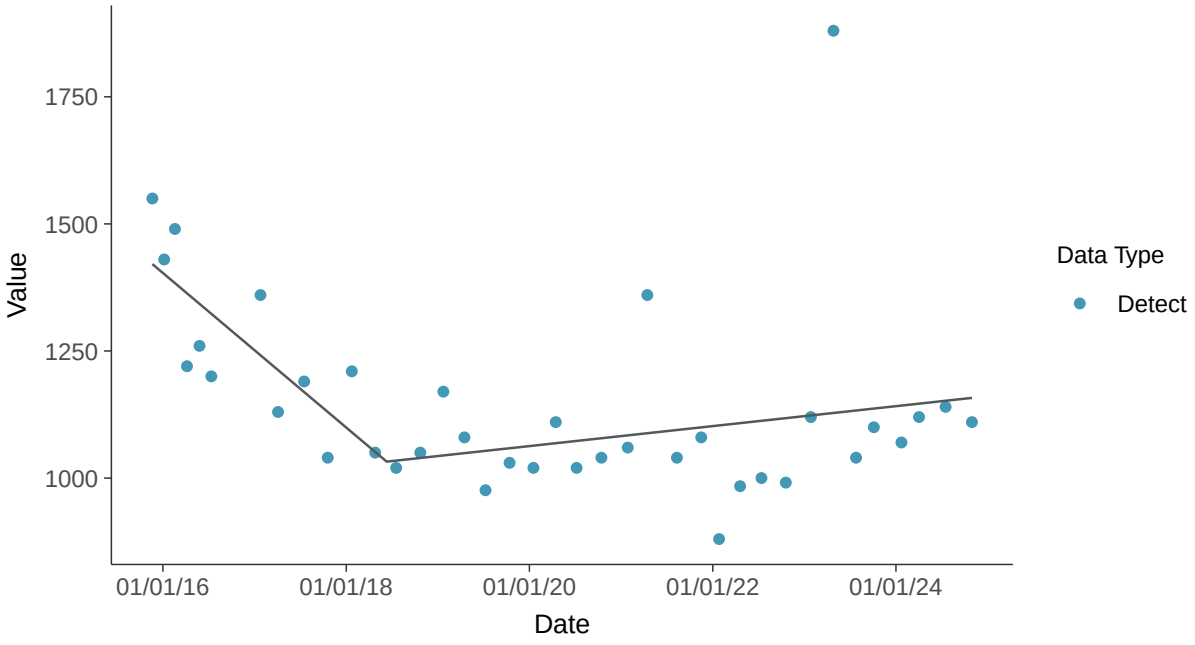
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-8 (ug/L)



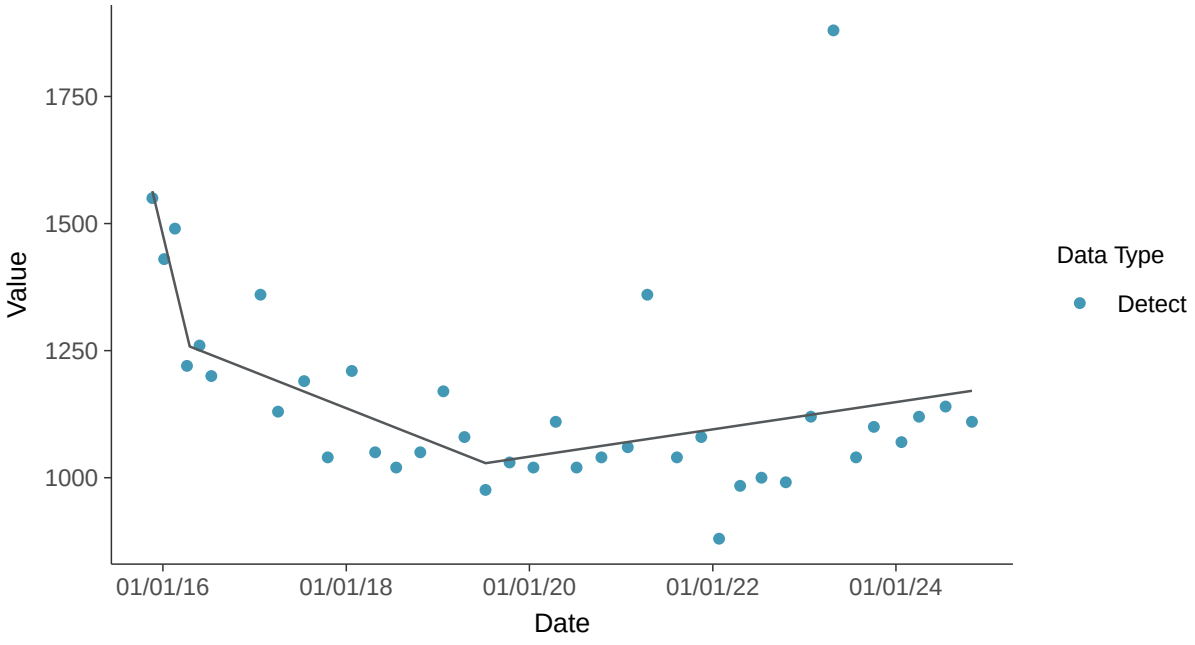
Trend Regression: Piecewise Linear-Linear

Barium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Barium, MW-8 (ug/L)

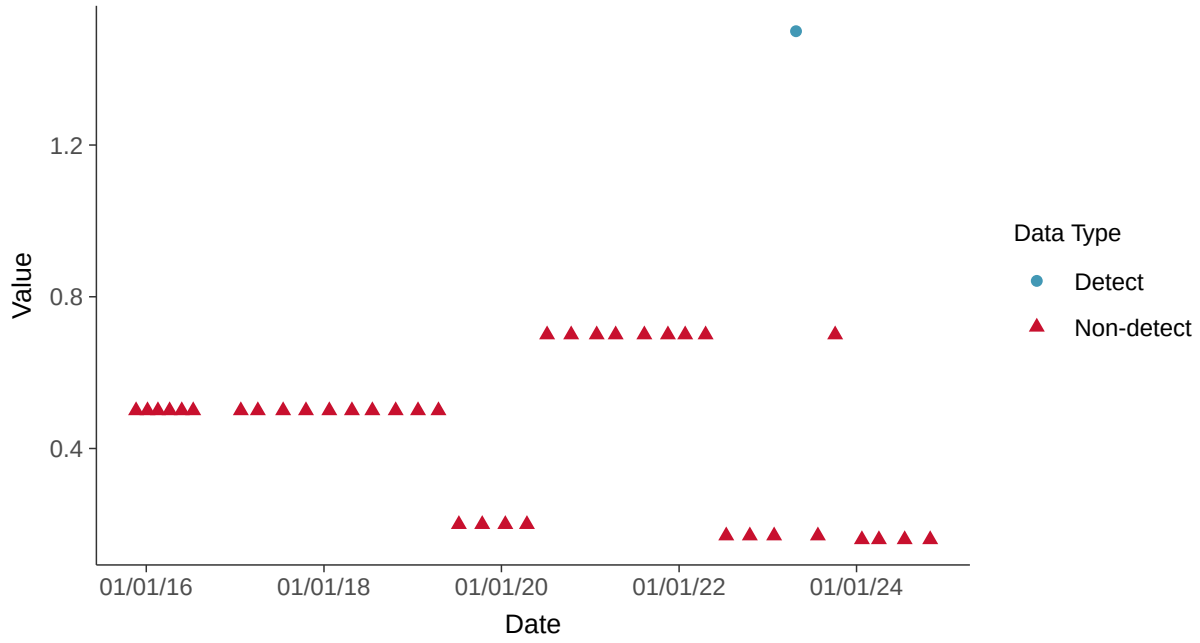


App. IV: Beryllium, MW-8

ID: 08_03_104

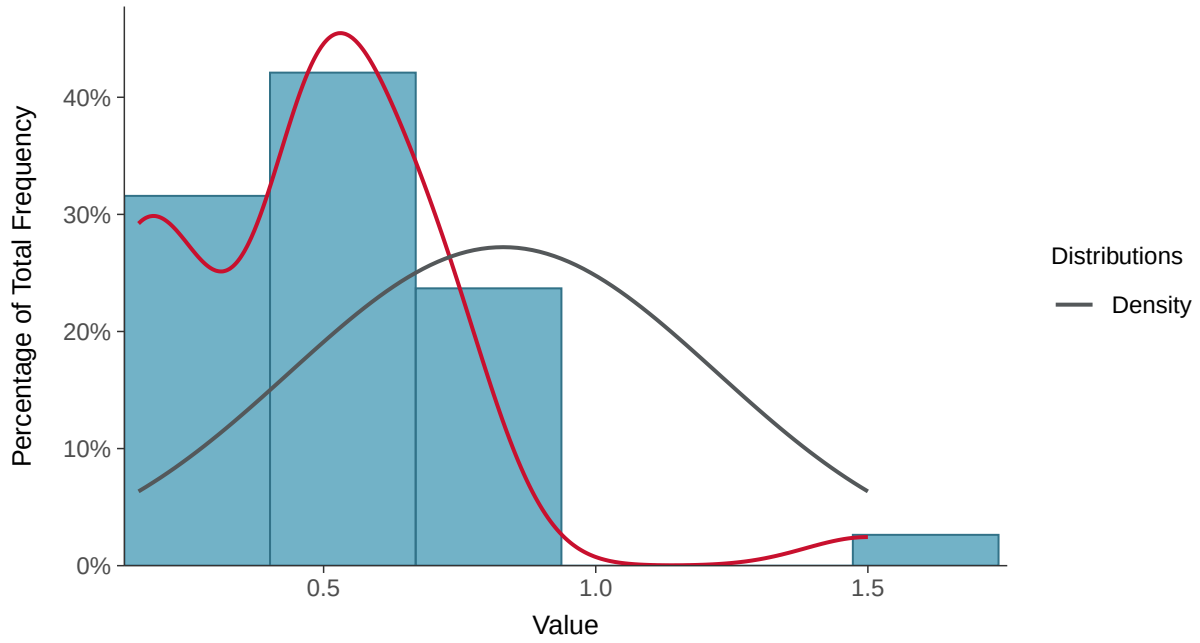
Scatter Plot

Beryllium, MW-8 (ug/L)



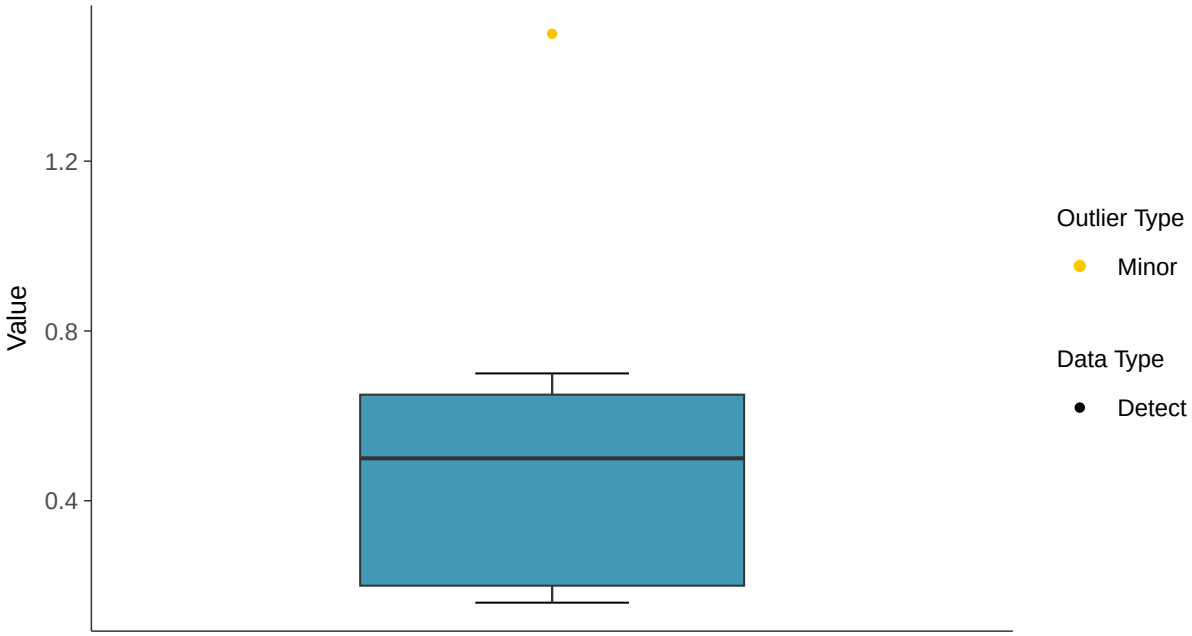
Histogram

Beryllium, MW-8 (ug/L)



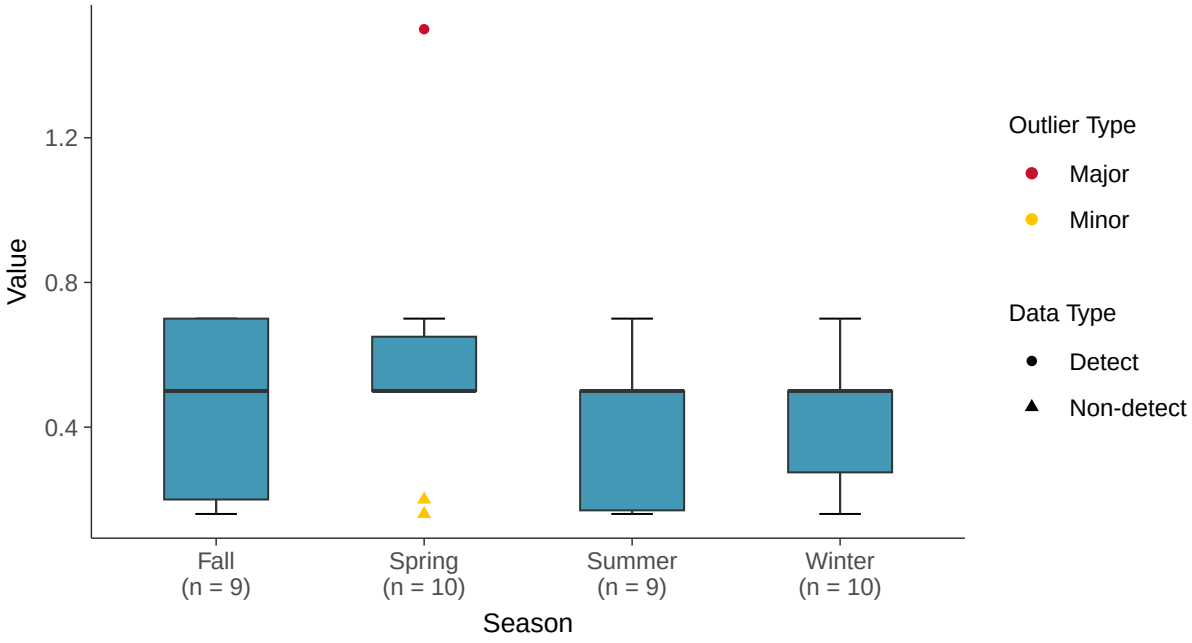
Boxplot

Beryllium, MW-8 (ug/L)



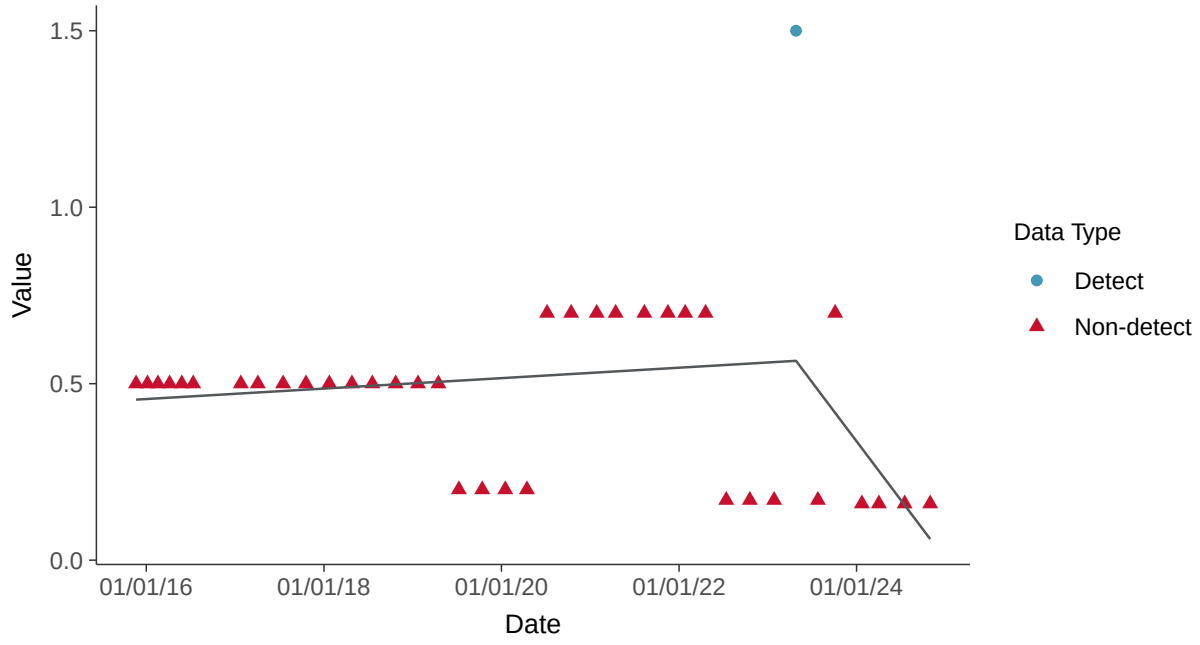
Boxplot by Season

Beryllium, MW-8 (ug/L)



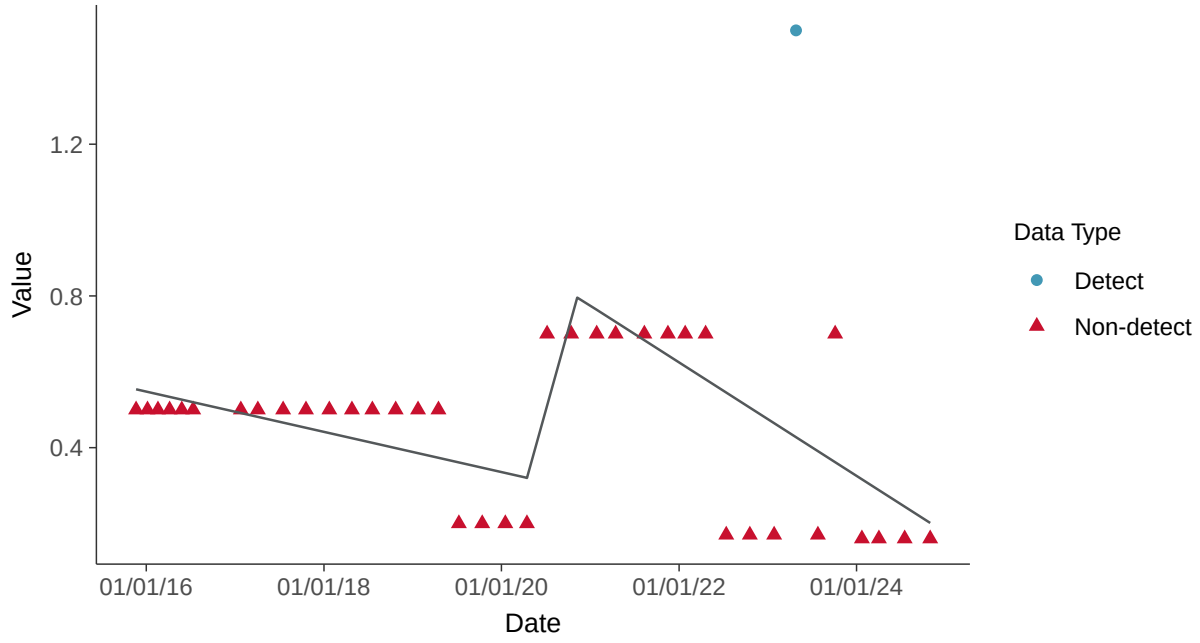
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-8 (ug/L)

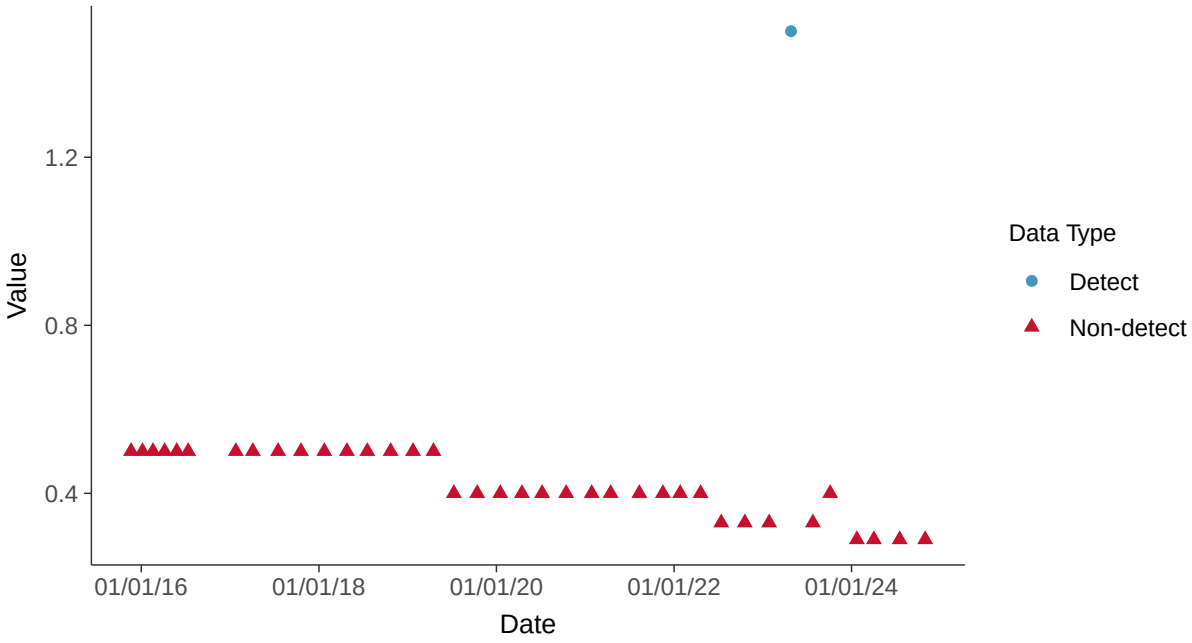


App. IV: Cadmium, MW-8

ID: 08_03_106

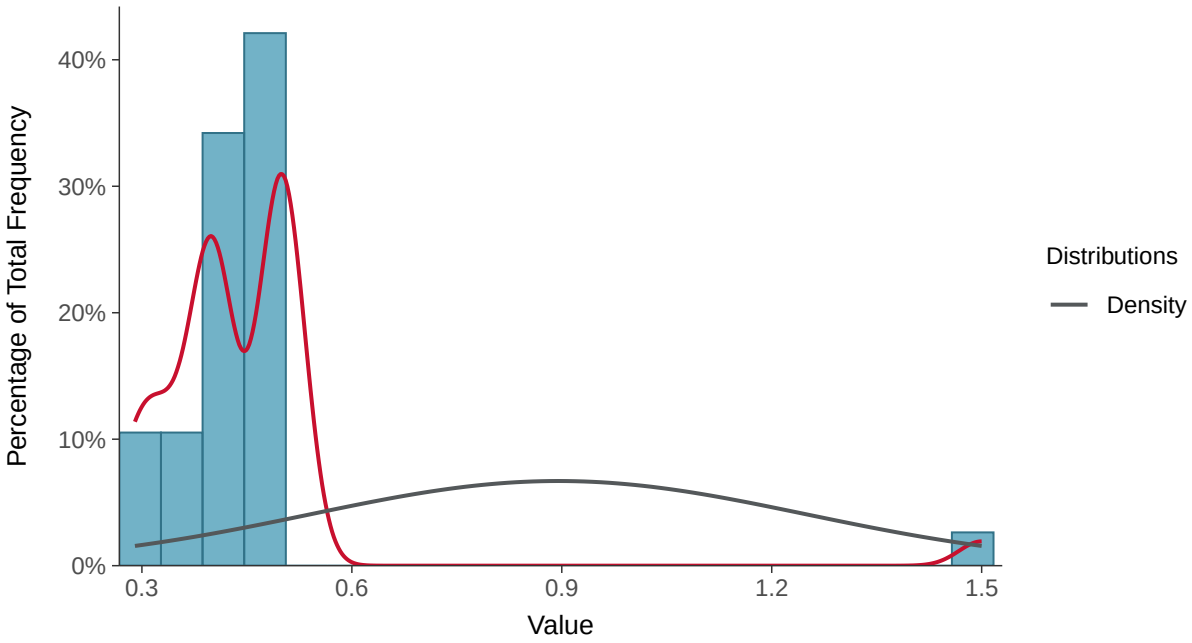
Scatter Plot

Cadmium, MW-8 (ug/L)



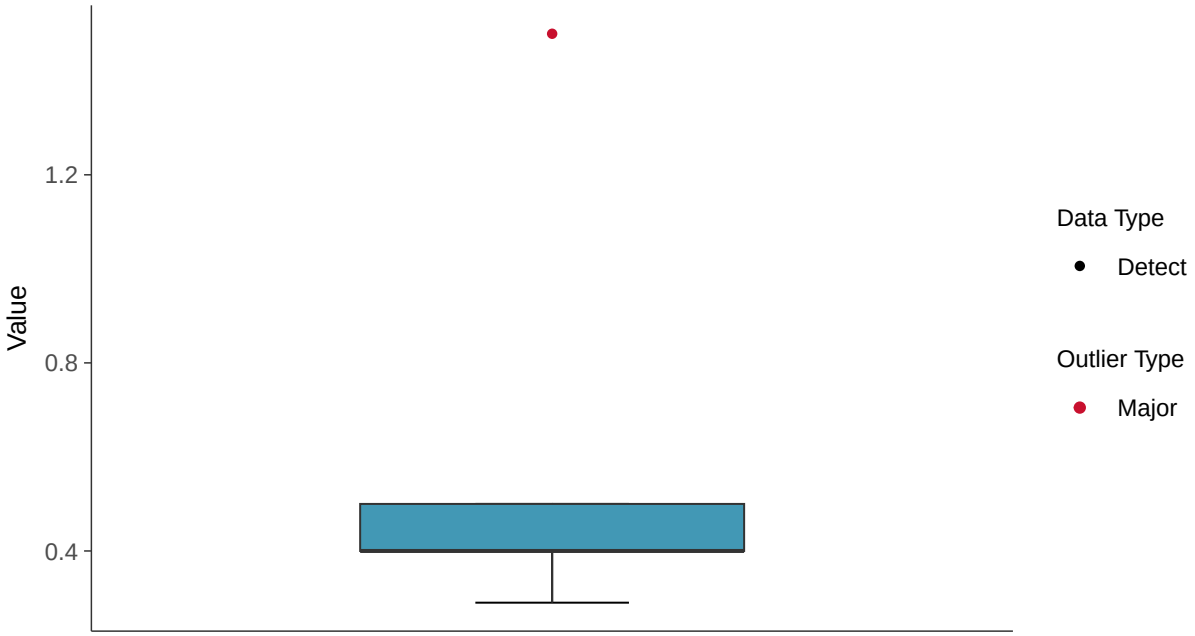
Histogram

Cadmium, MW-8 (ug/L)



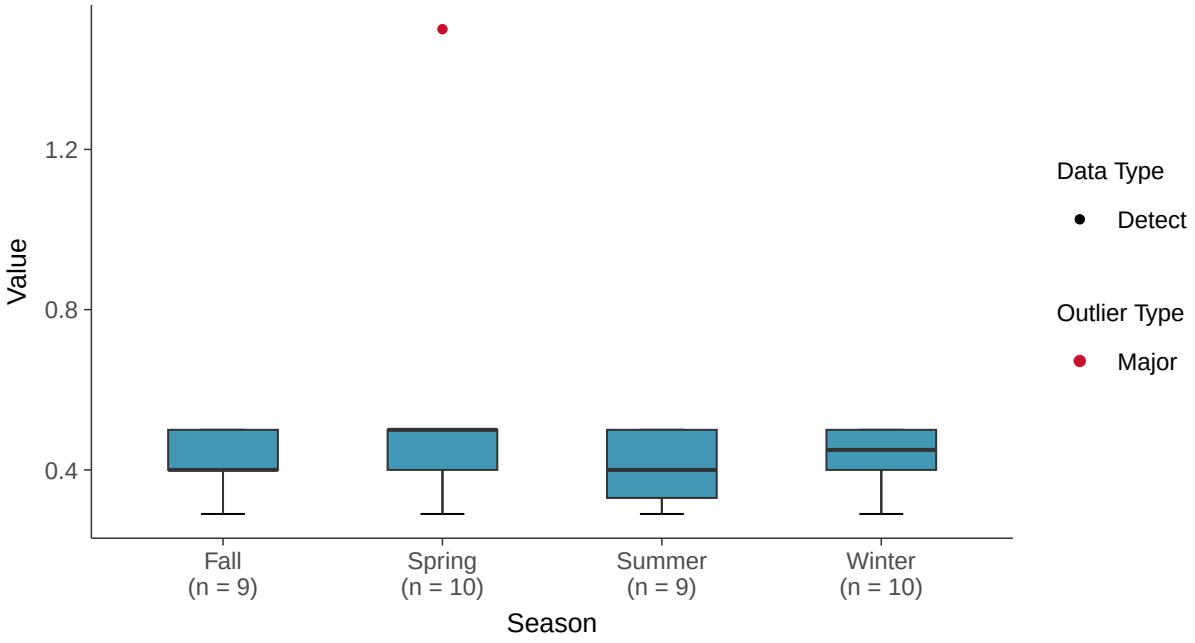
Boxplot

Cadmium, MW-8 (ug/L)



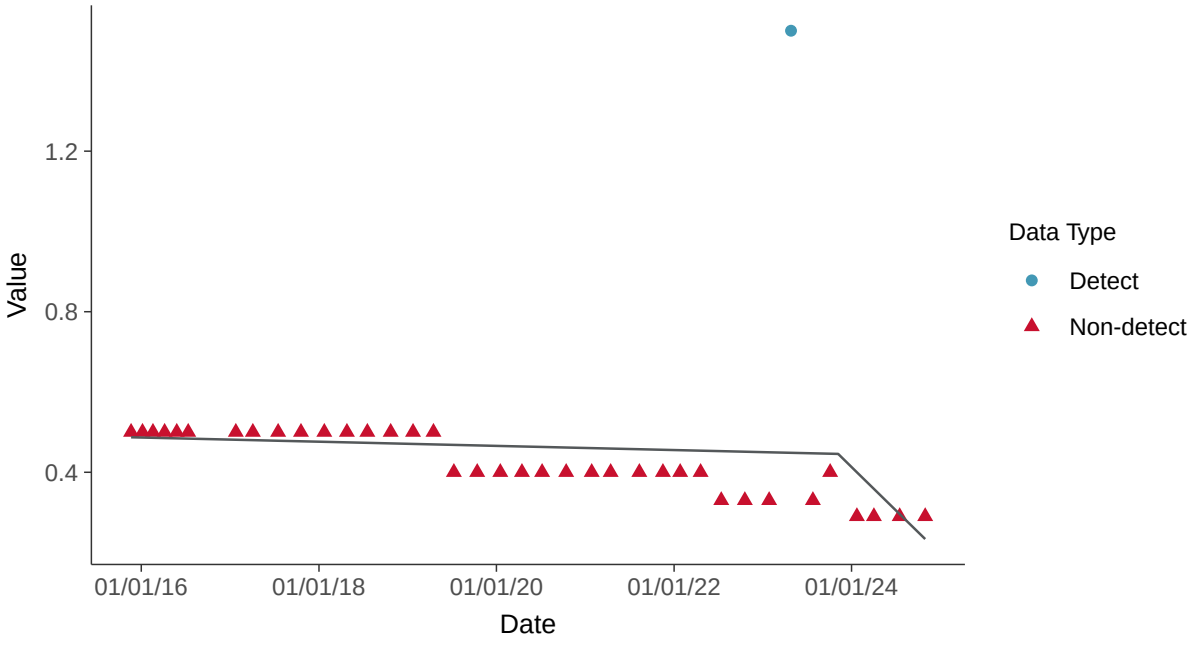
Boxplot by Season

Cadmium, MW-8 (ug/L)



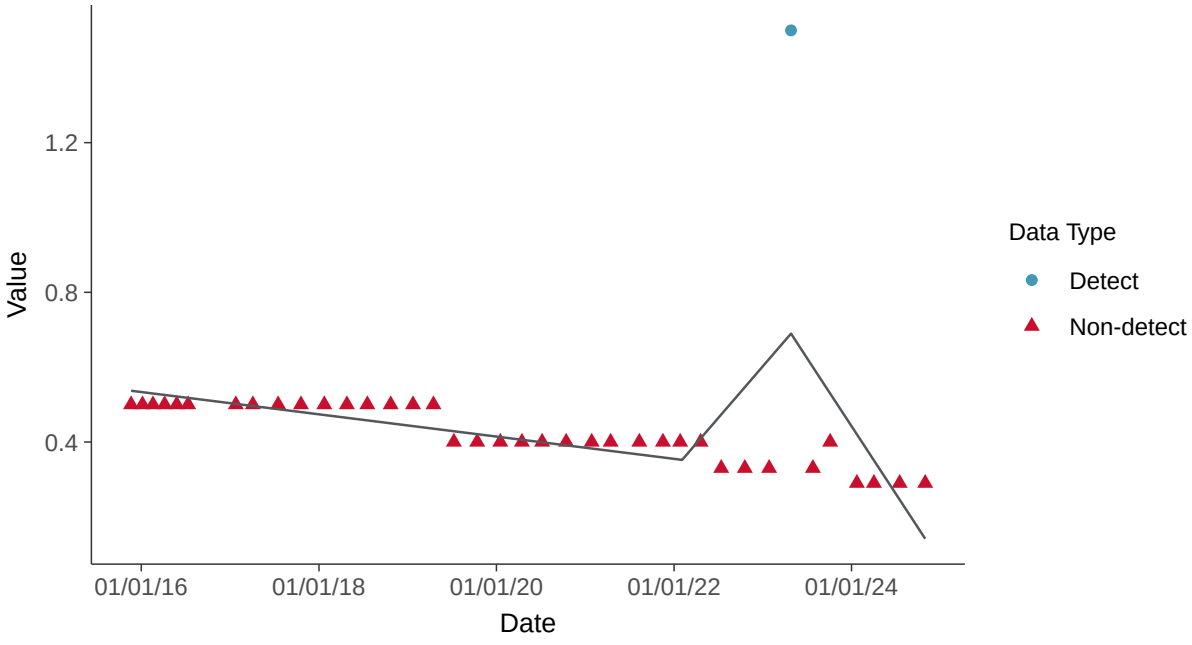
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-8 (ug/L)

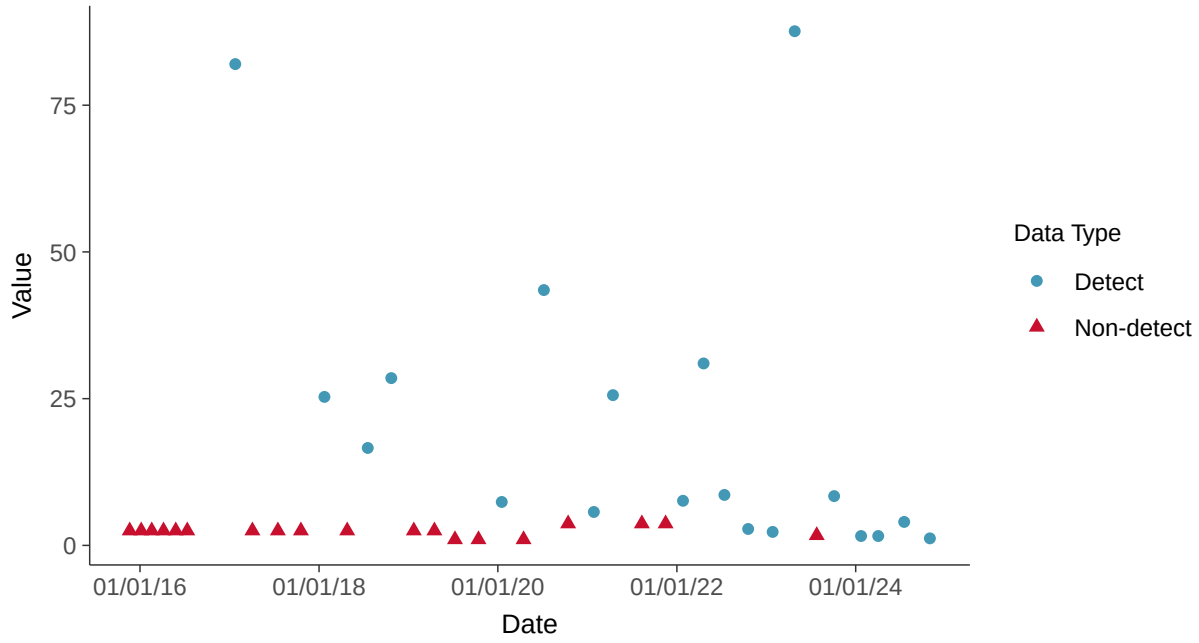


App. IV: Chromium, MW-8

ID: 08_03_109

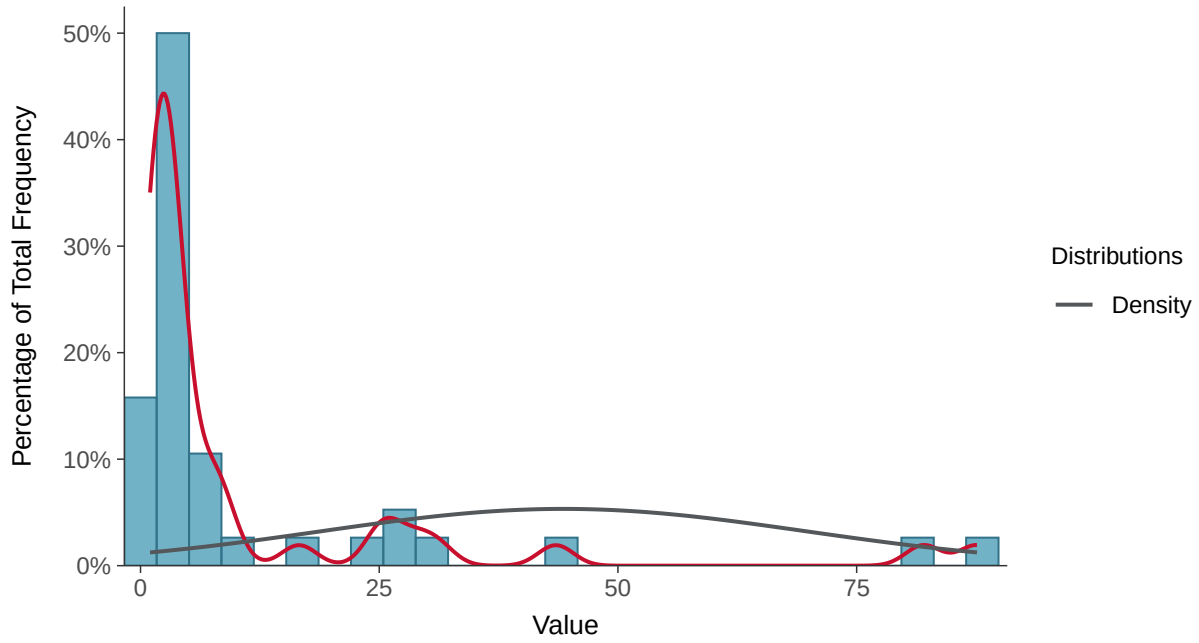
Scatter Plot

Chromium, MW-8 (ug/L)



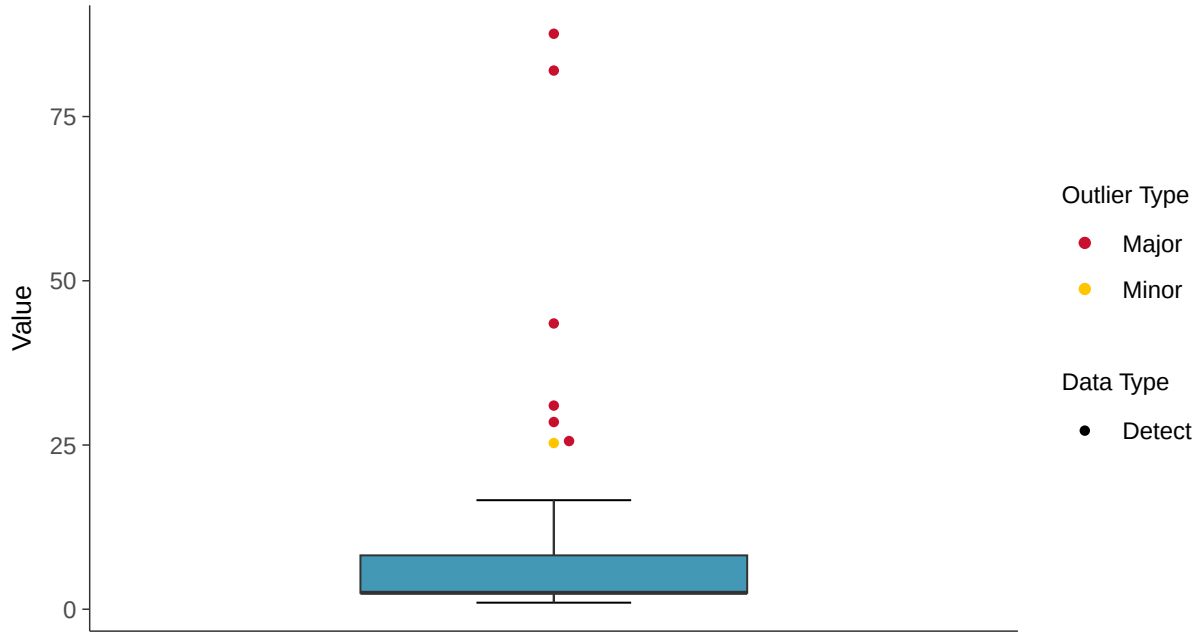
Histogram

Chromium, MW-8 (ug/L)



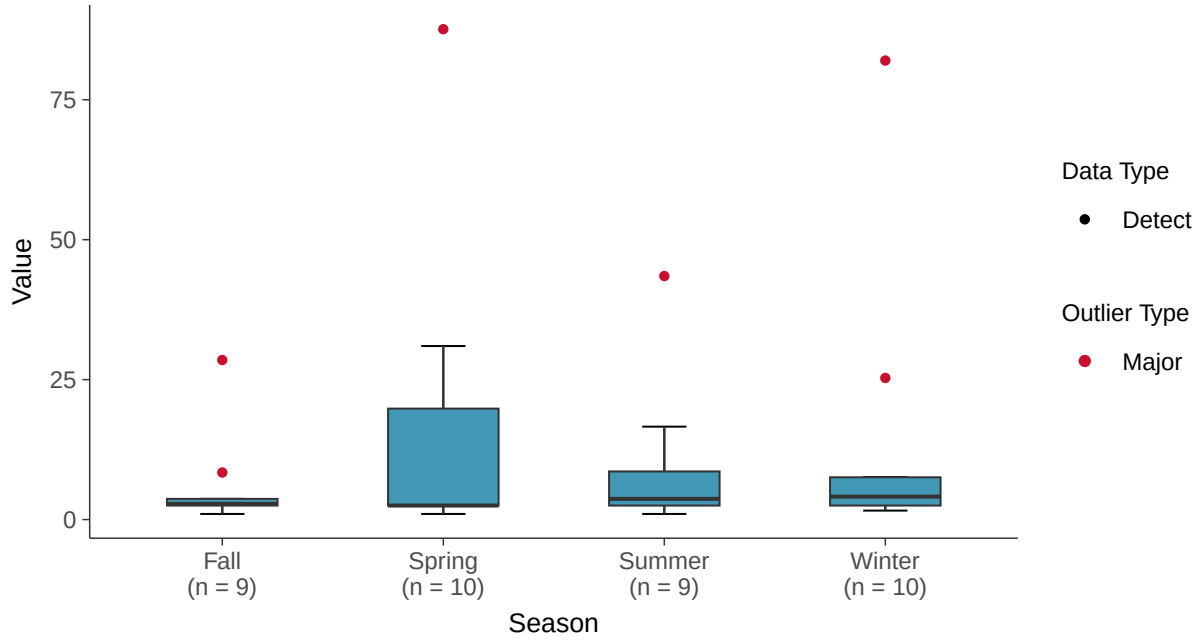
Boxplot

Chromium, MW-8 (ug/L)



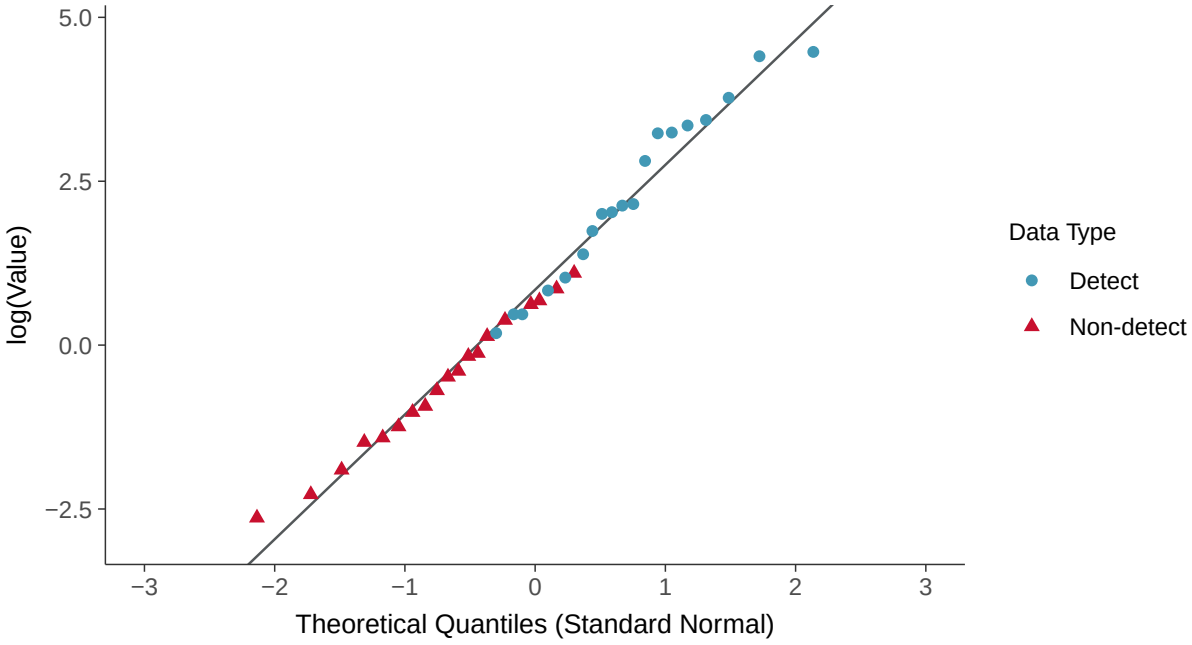
Boxplot by Season

Chromium, MW-8 (ug/L)



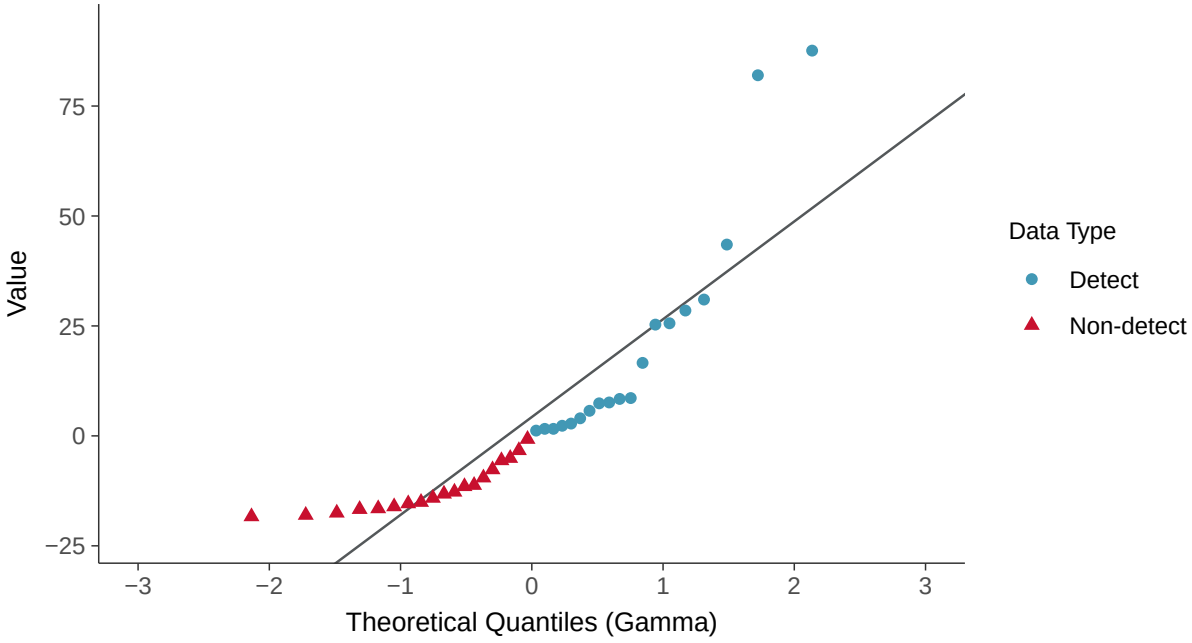
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-8 (ug/L)



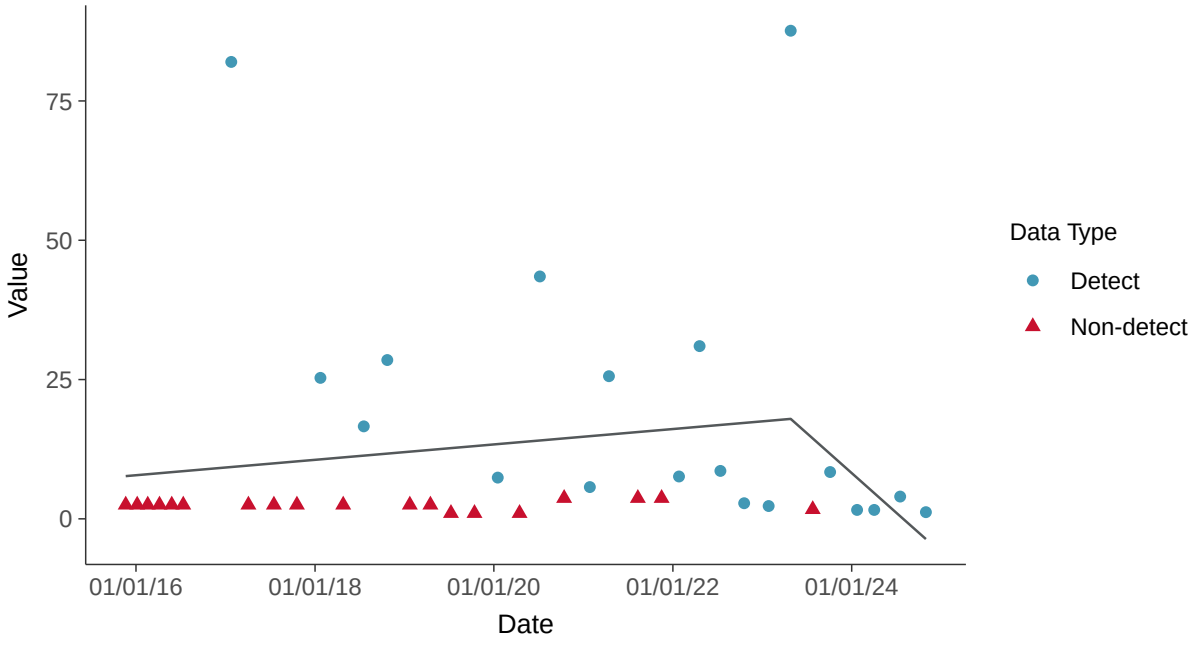
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-8 (ug/L)



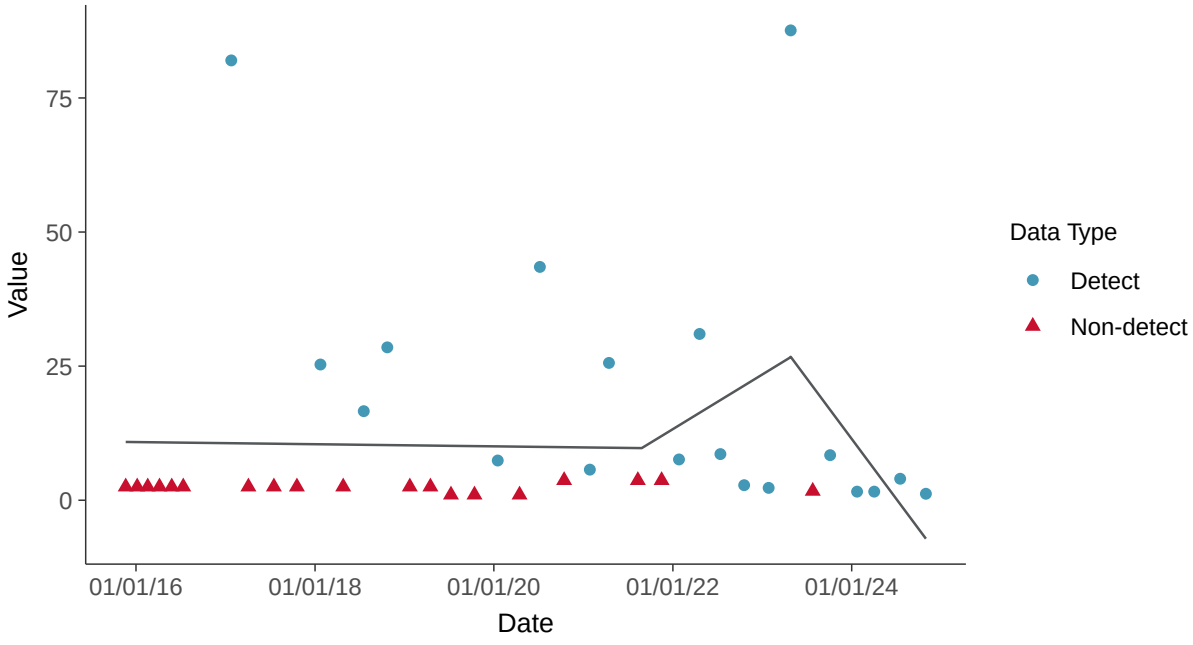
Trend Regression: Piecewise Linear-Linear

Chromium, MW-8 (ug/L)



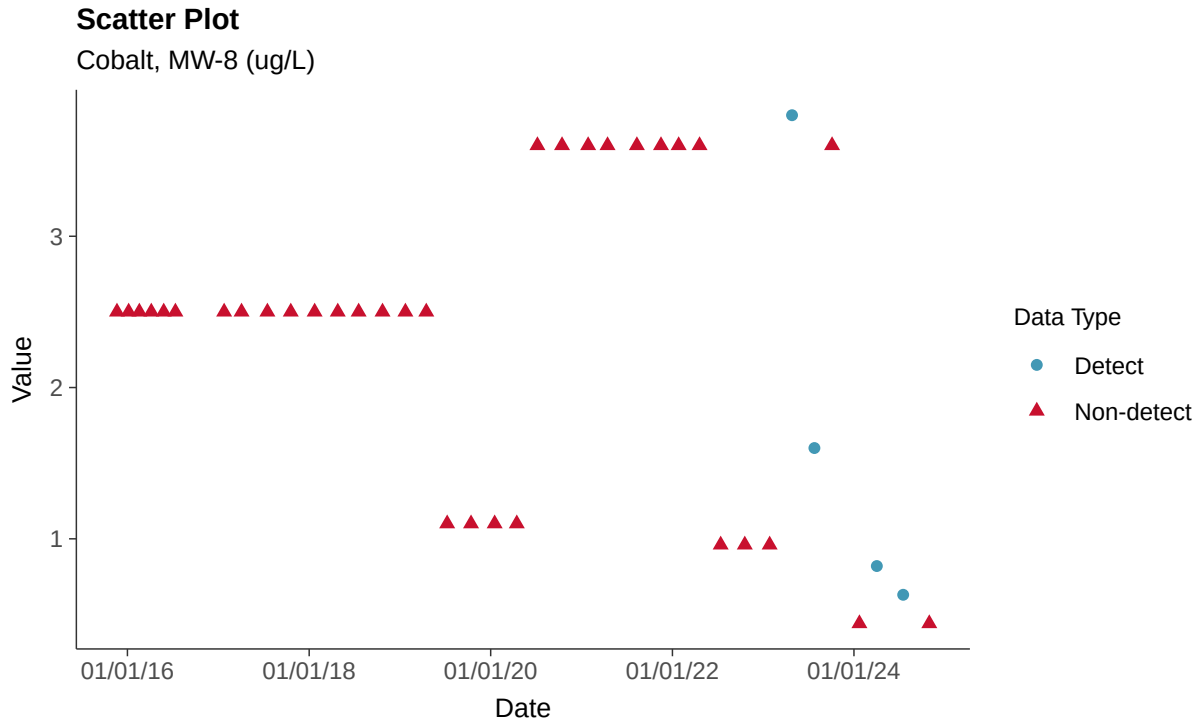
Trend Regression: Piecewise Linear-Linear-Linear

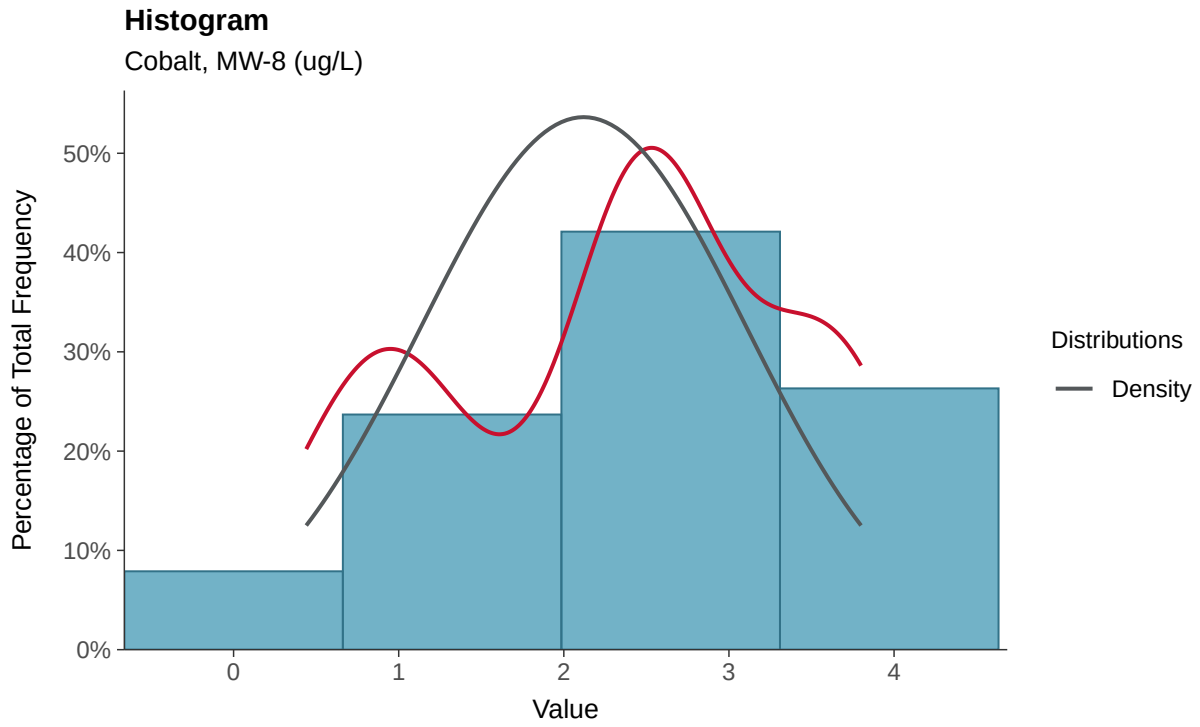
Chromium, MW-8 (ug/L)



App. IV: Cobalt, MW-8

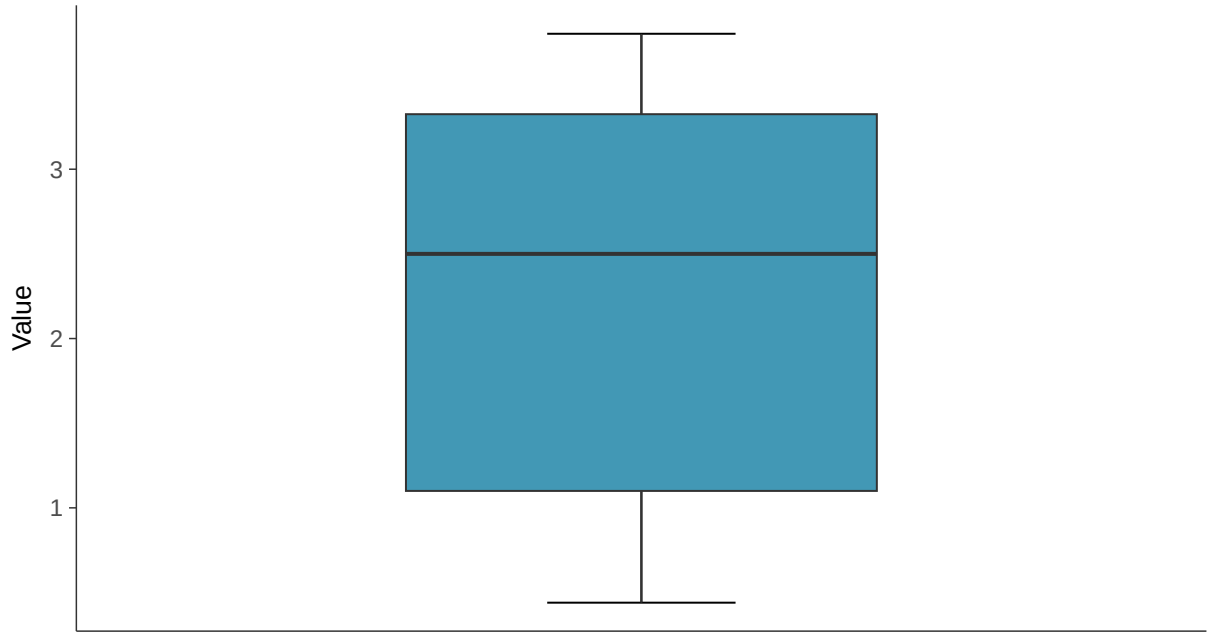
ID: 08_03_110





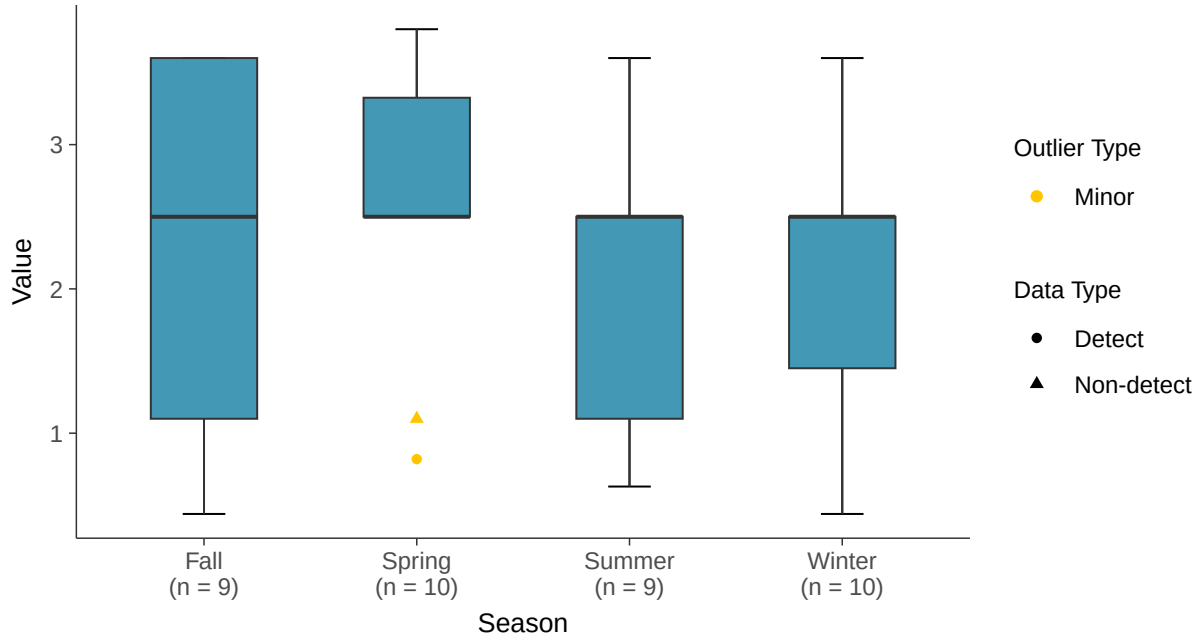
Boxplot

Cobalt, MW-8 (ug/L)



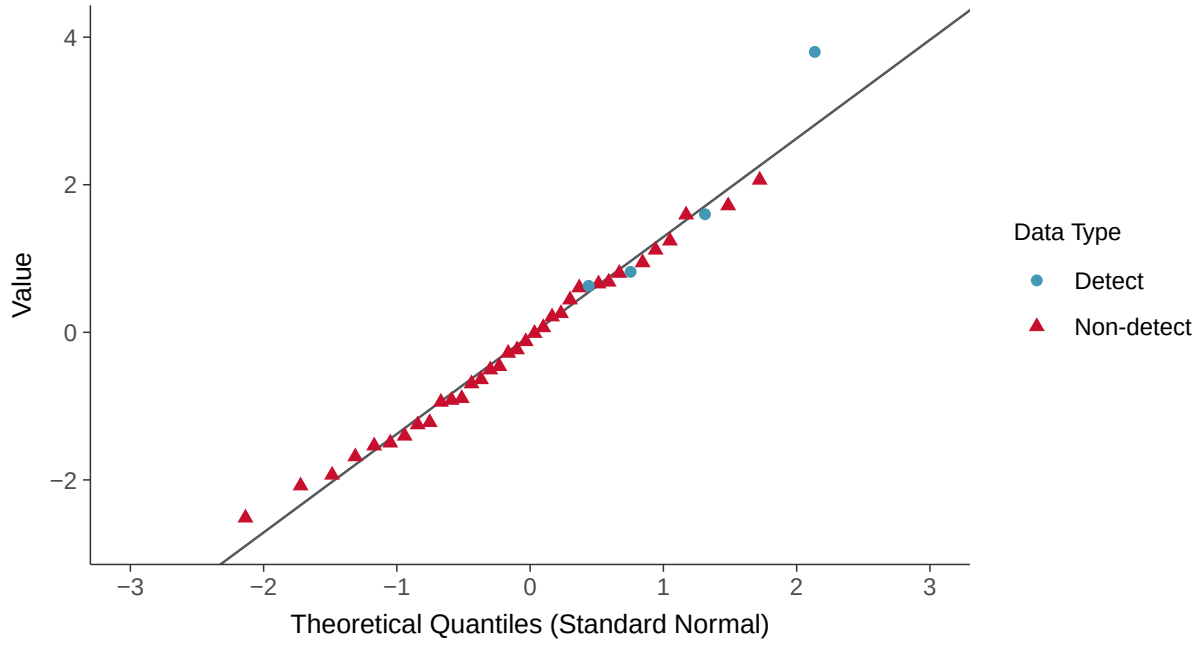
Boxplot by Season

Cobalt, MW-8 (ug/L)



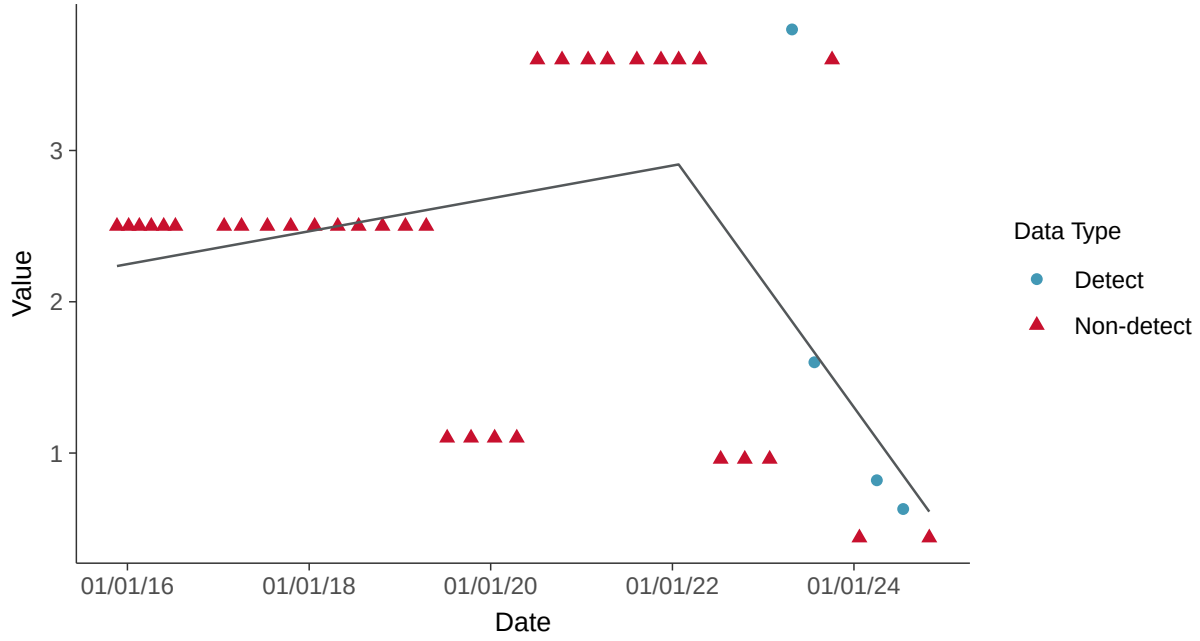
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-8 (ug/L)



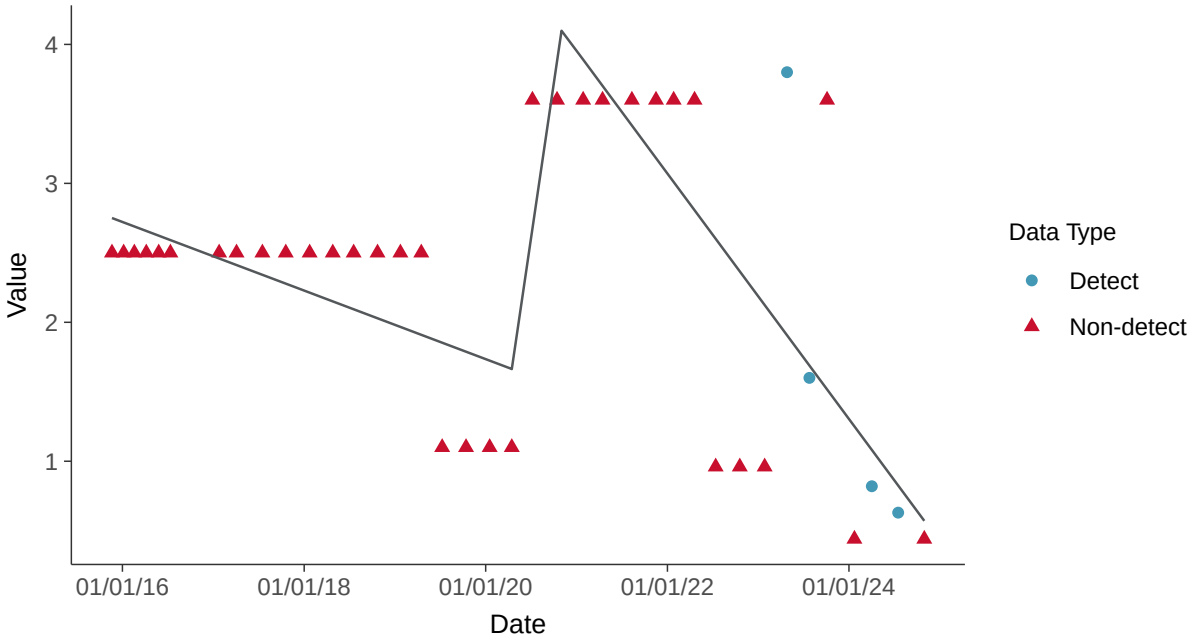
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-8 (ug/L)

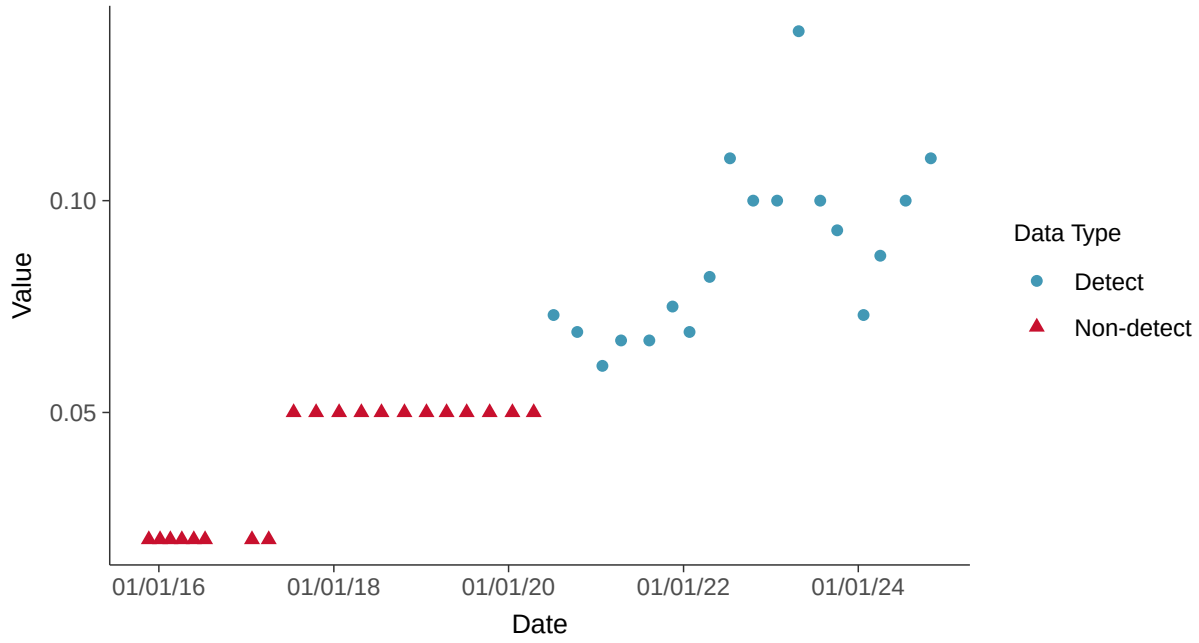


App. IV: Fluoride, MW-8

ID: 08_03_112

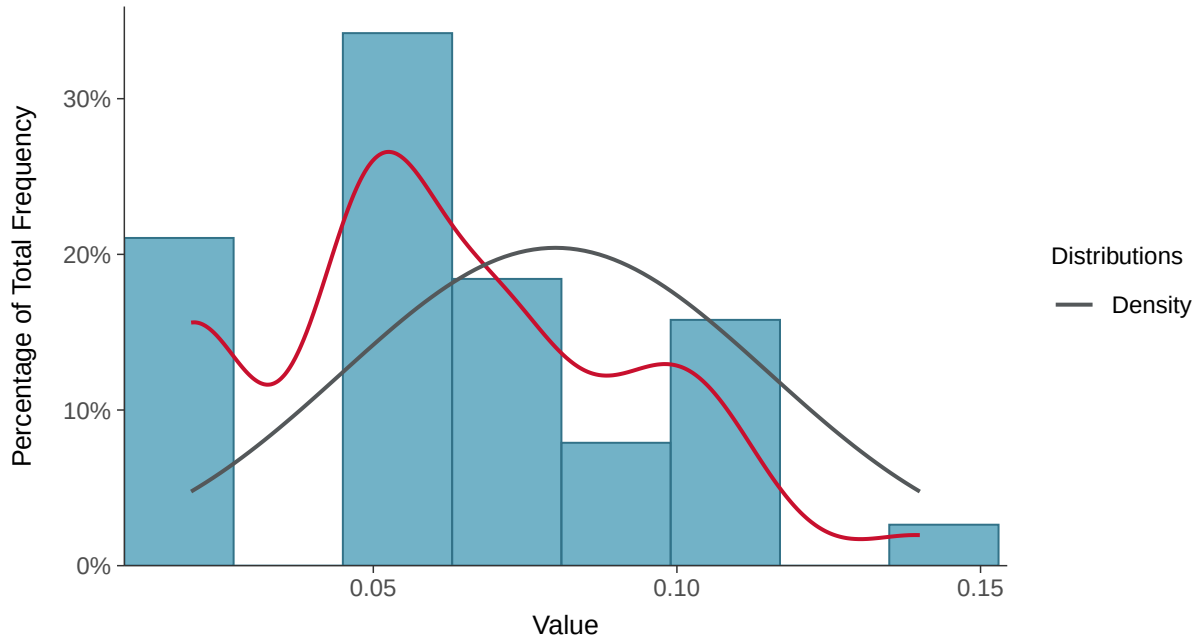
Scatter Plot

Fluoride, MW-8 (mg/L)



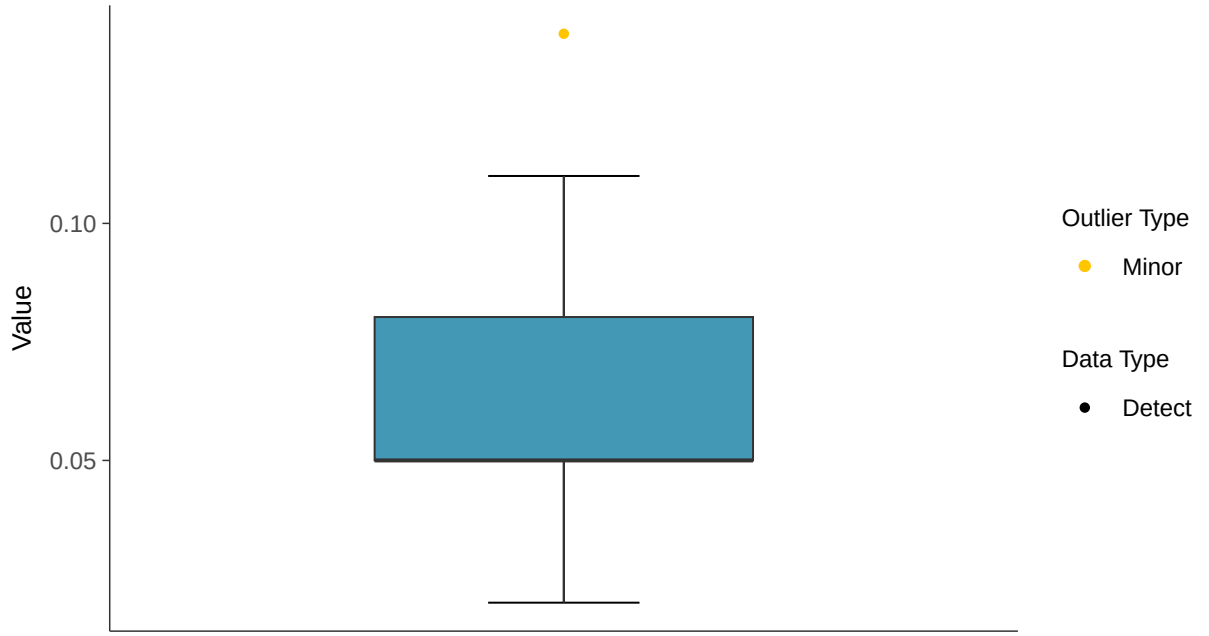
Histogram

Fluoride, MW-8 (mg/L)



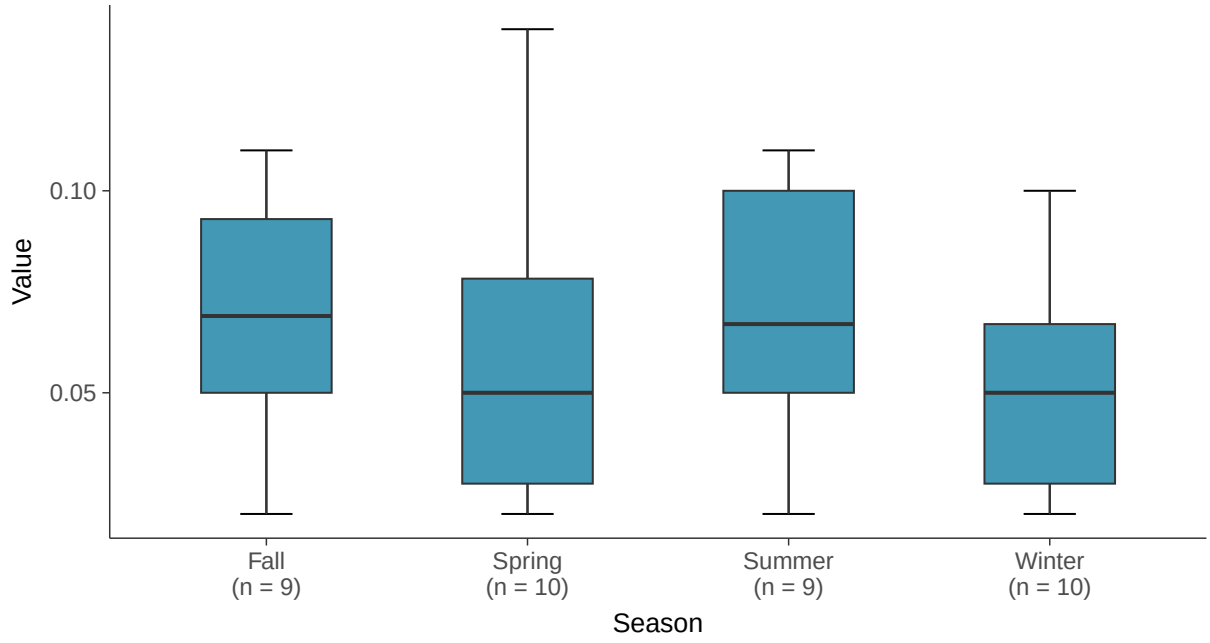
Boxplot

Fluoride, MW-8 (mg/L)



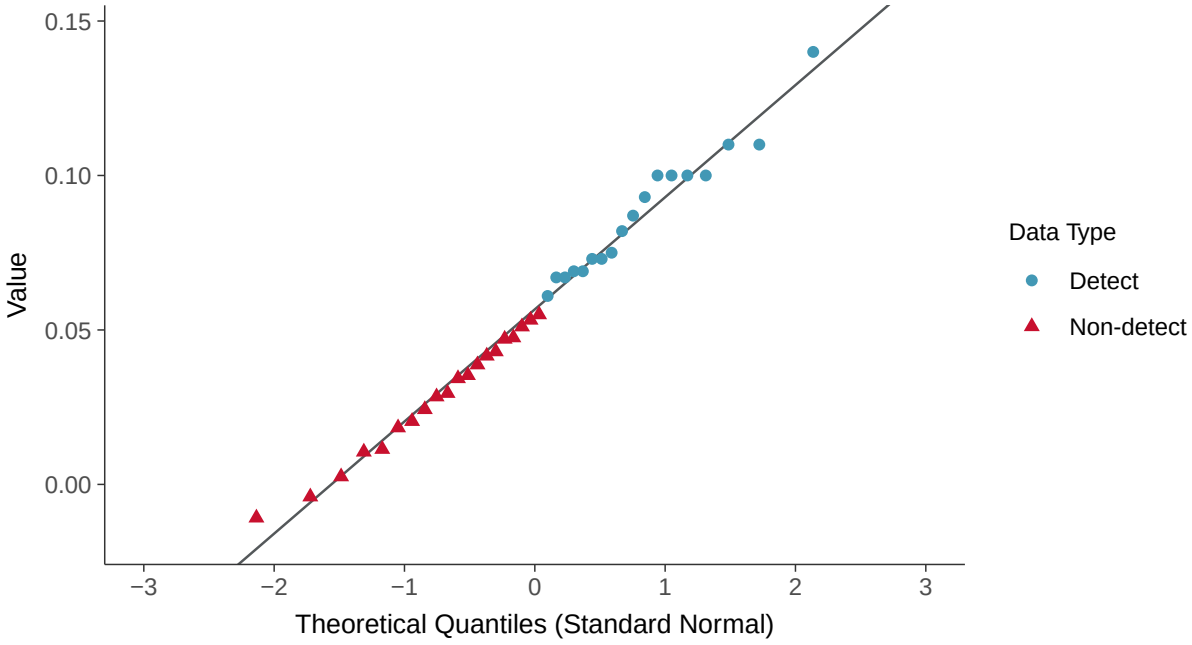
Boxplot by Season

Fluoride, MW-8 (mg/L)



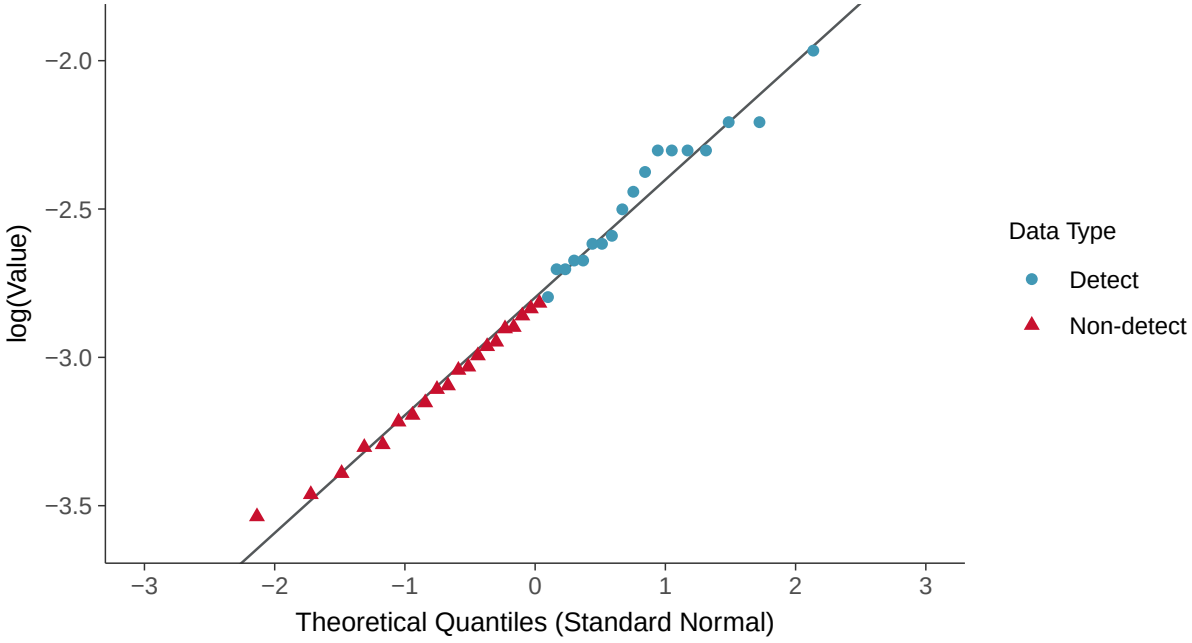
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



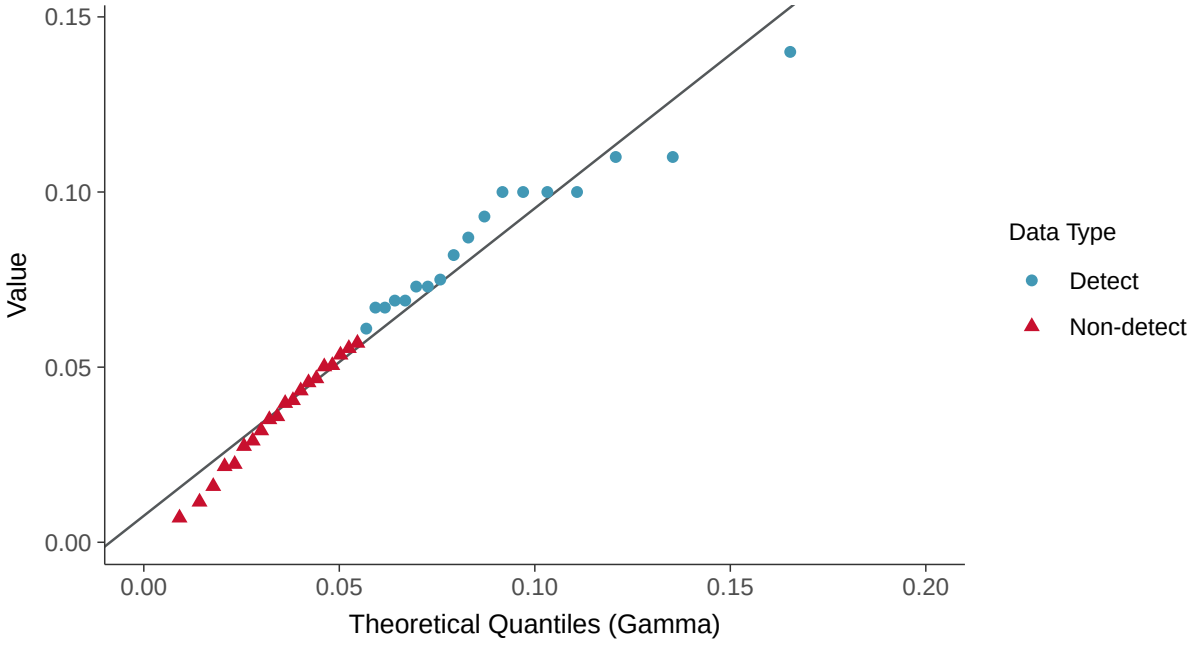
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



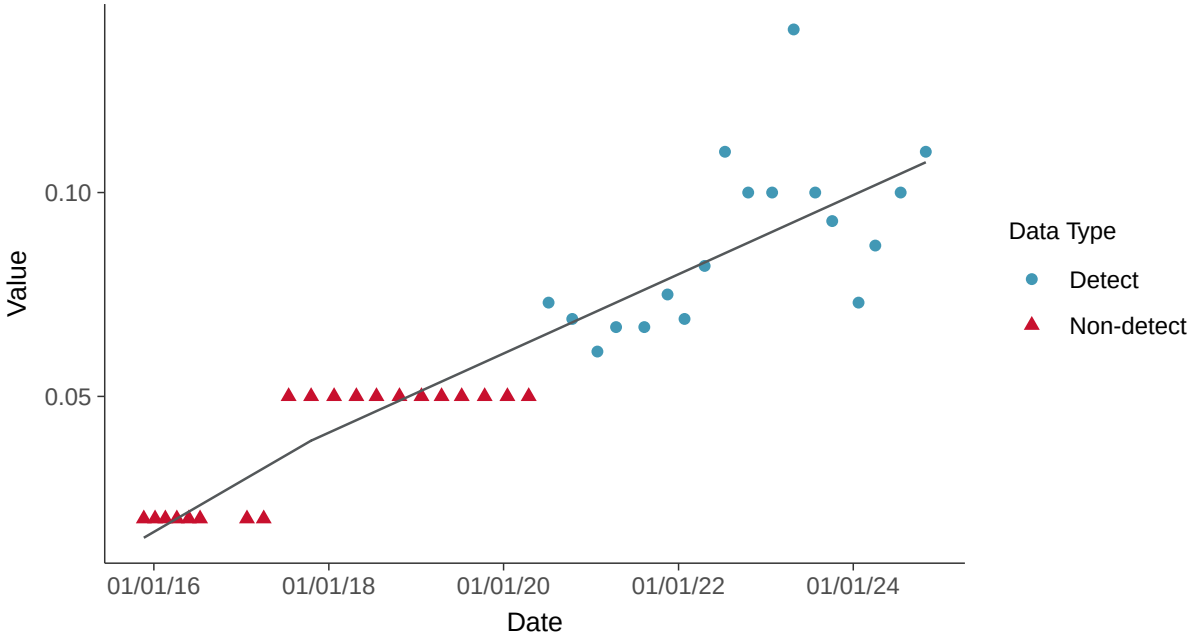
Gamma Q-Q plot using ROS Imputed Estimates

Fluoride, MW-8 (mg/L)



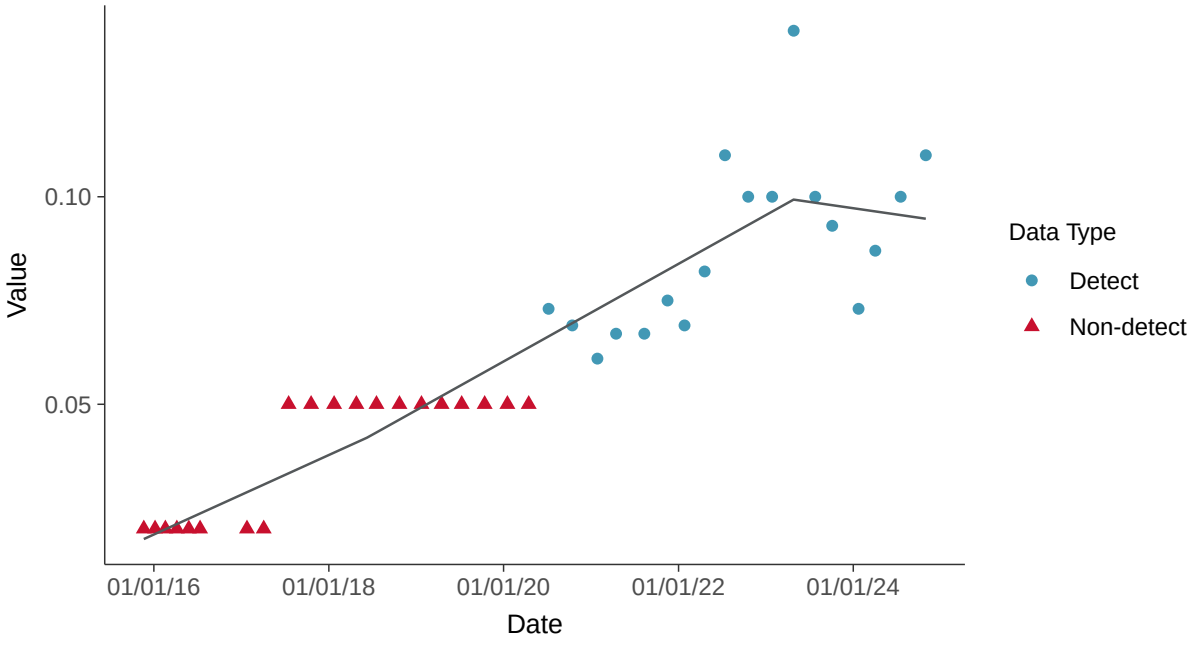
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-8 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-8 (mg/L)

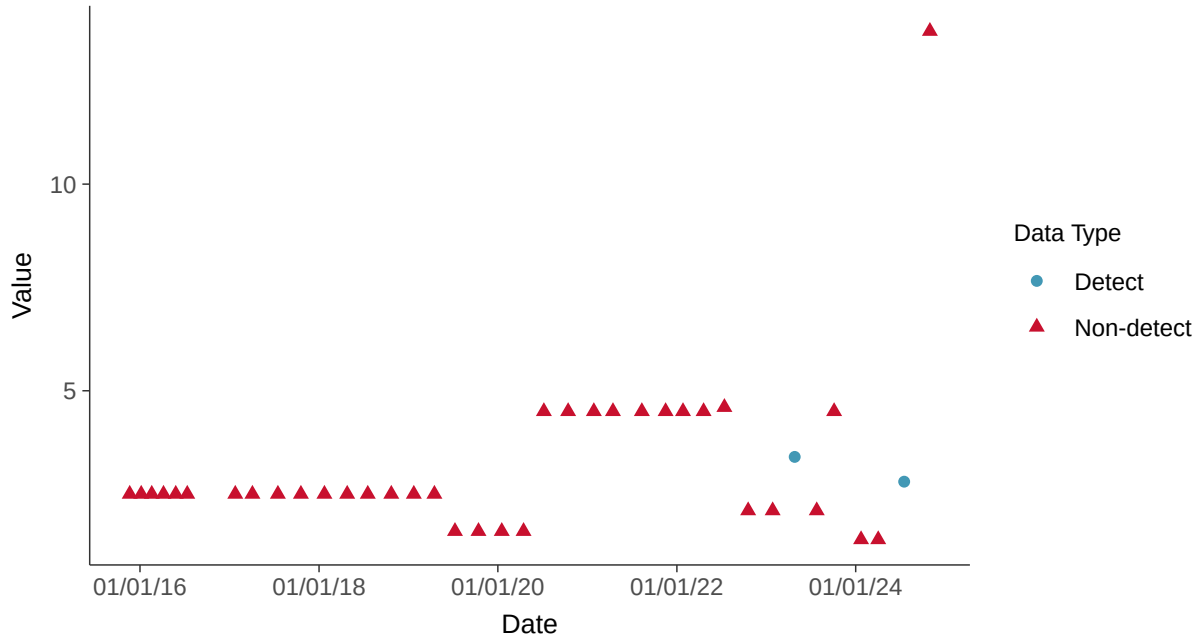


App. IV: Lead, MW-8

ID: 08_03_113

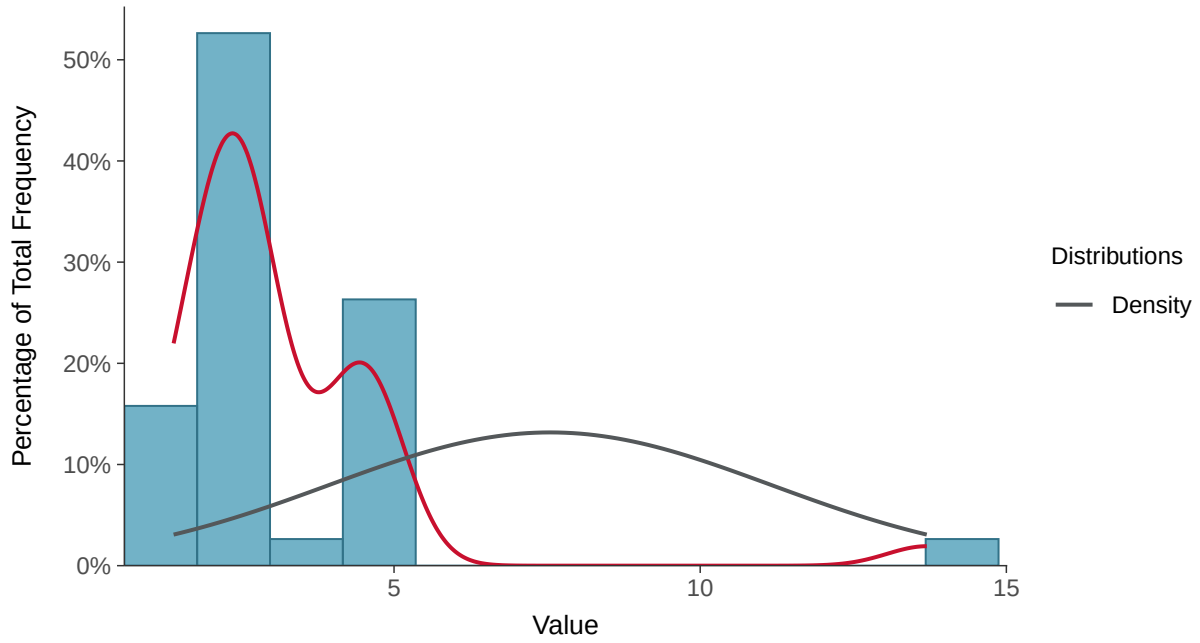
Scatter Plot

Lead, MW-8 (ug/L)



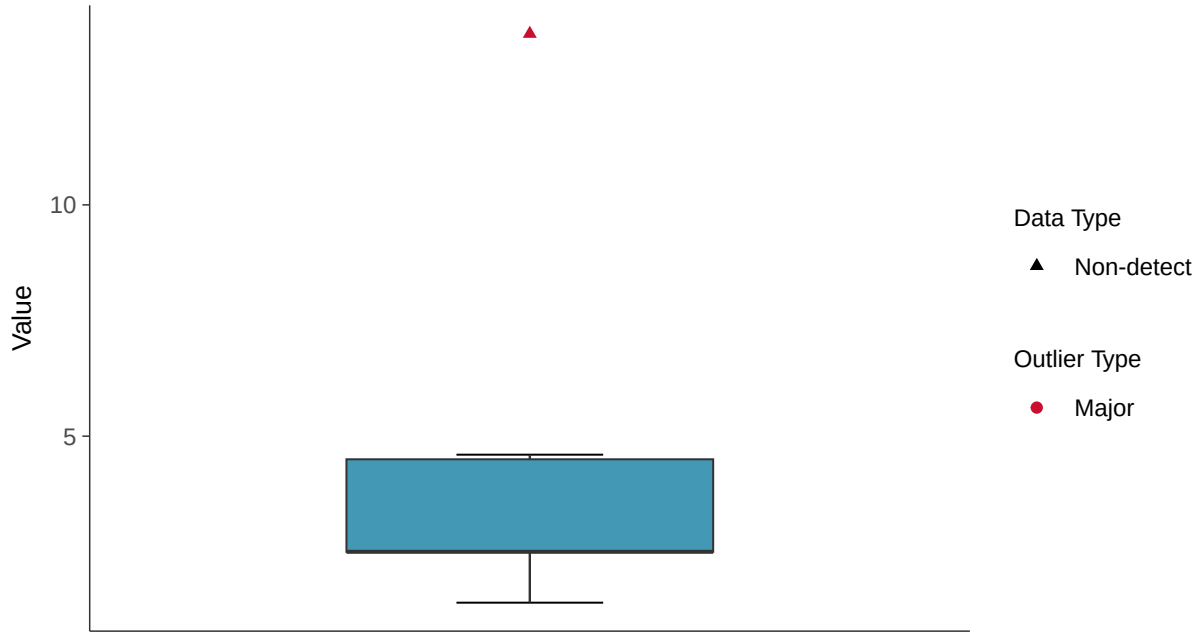
Histogram

Lead, MW-8 (ug/L)



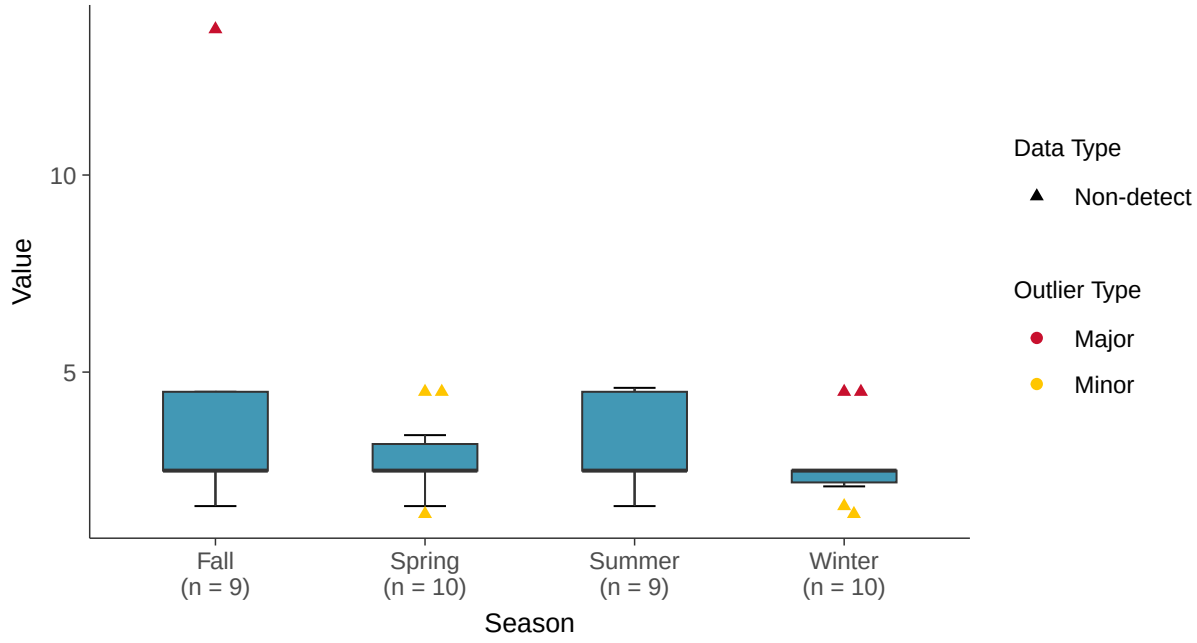
Boxplot

Lead, MW-8 (ug/L)



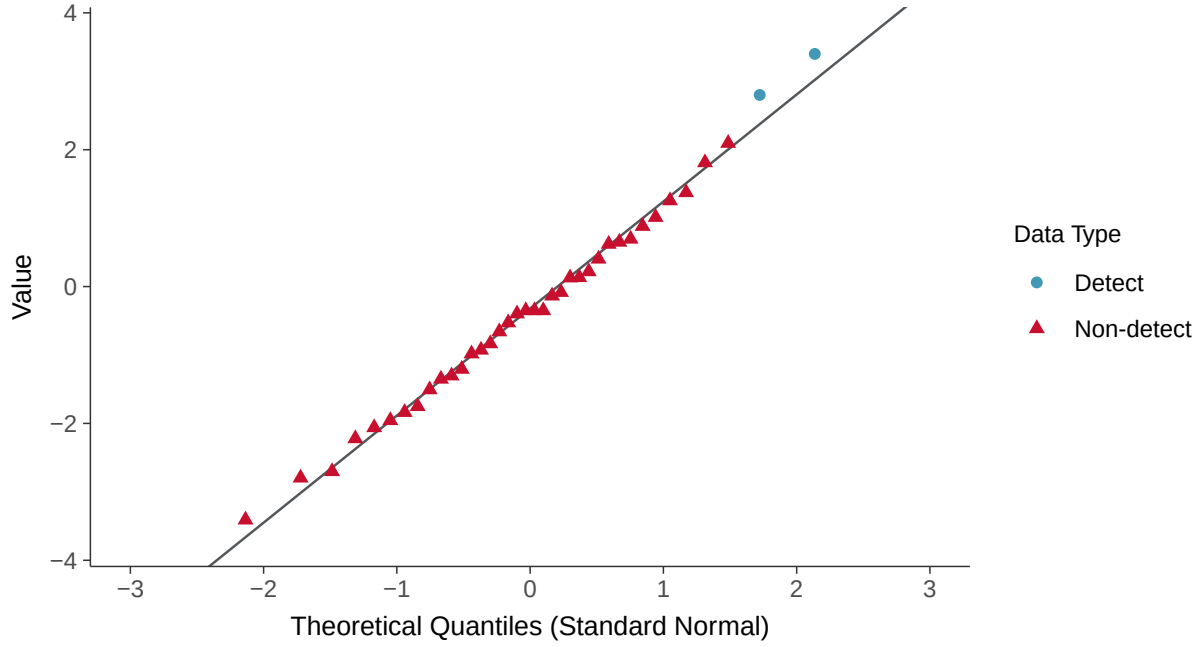
Boxplot by Season

Lead, MW-8 (ug/L)



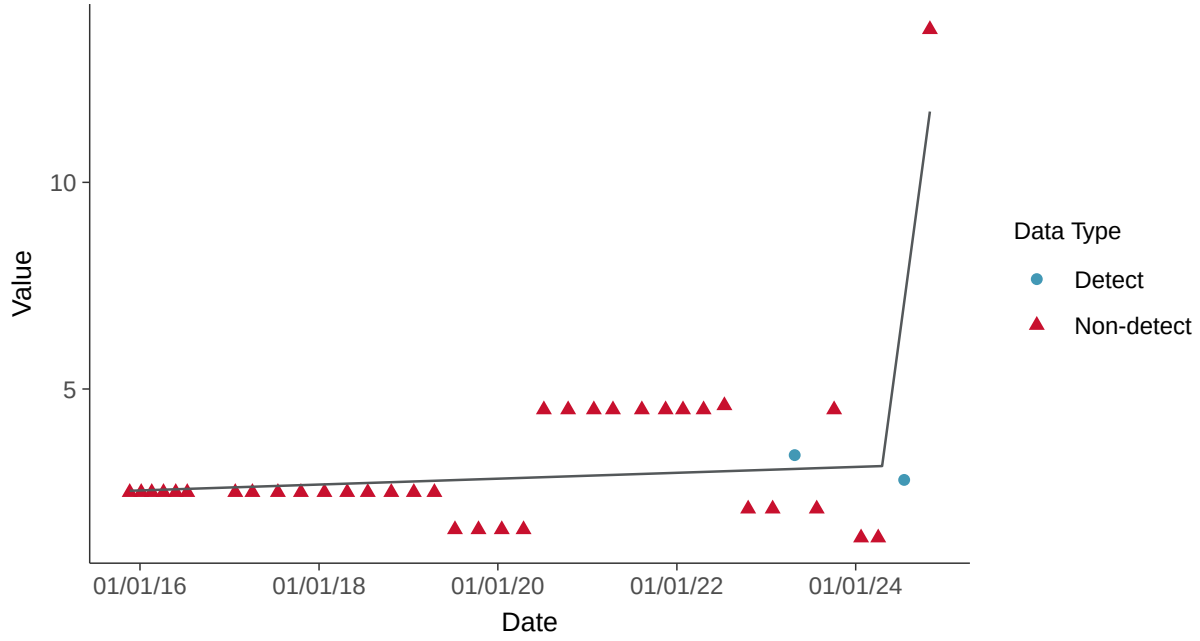
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-8 (ug/L)



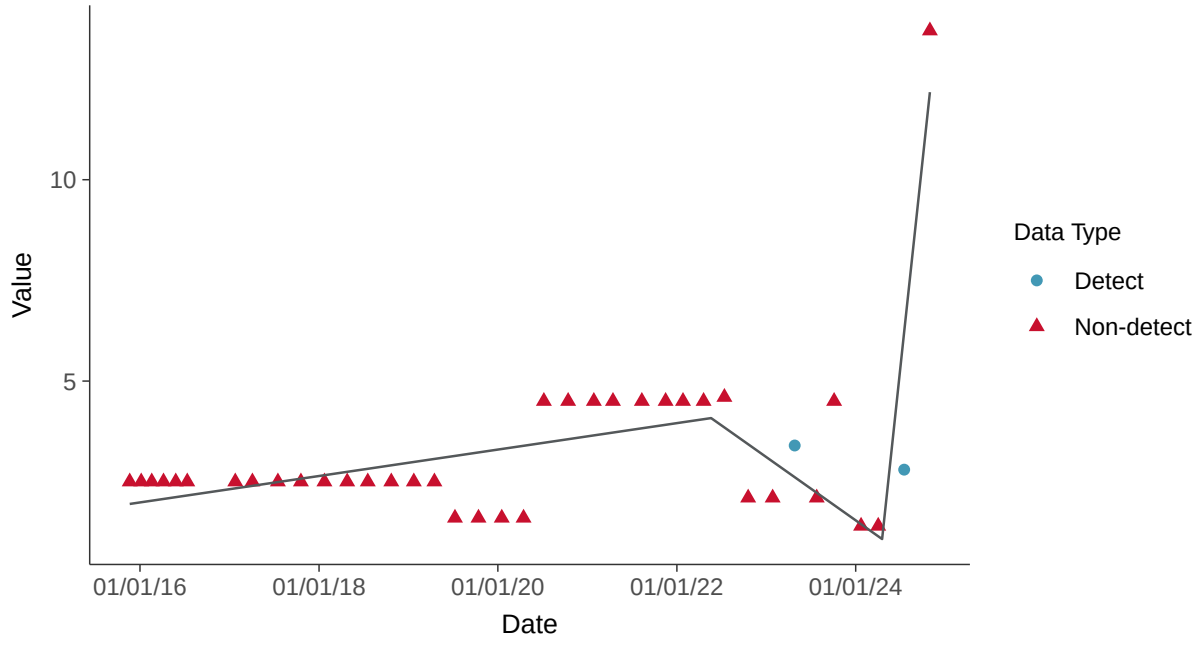
Trend Regression: Piecewise Linear-Linear

Lead, MW-8 (ug/L)



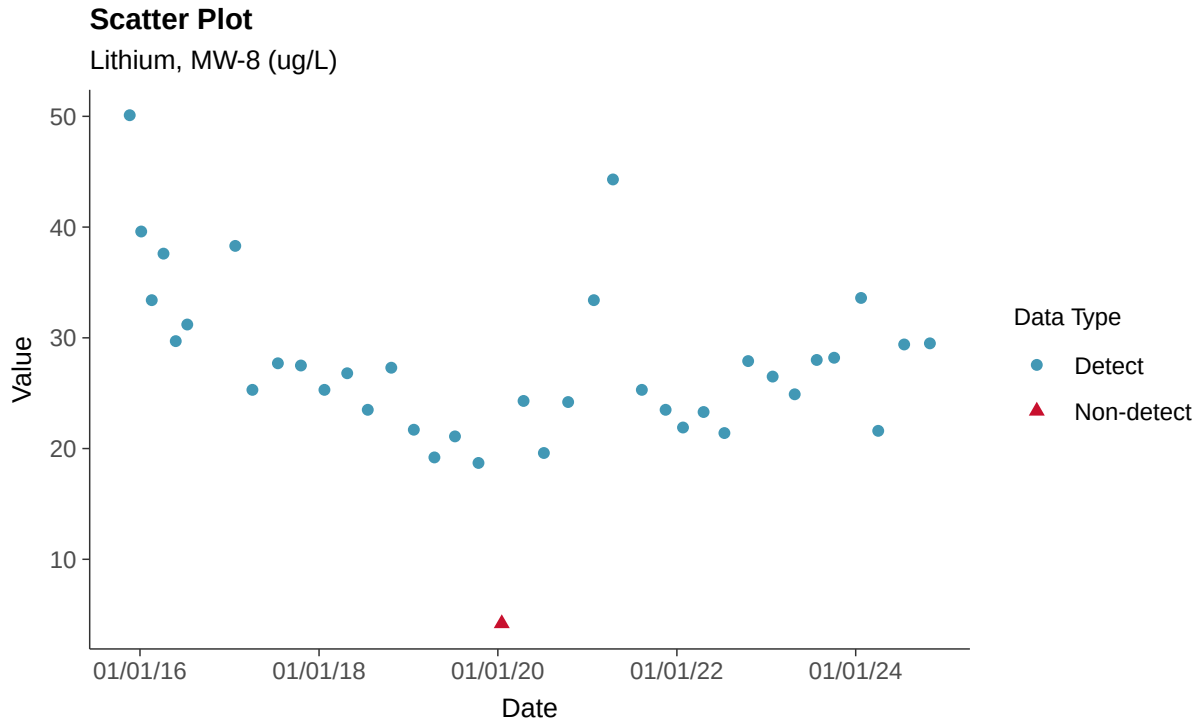
Trend Regression: Piecewise Linear-Linear-Linear

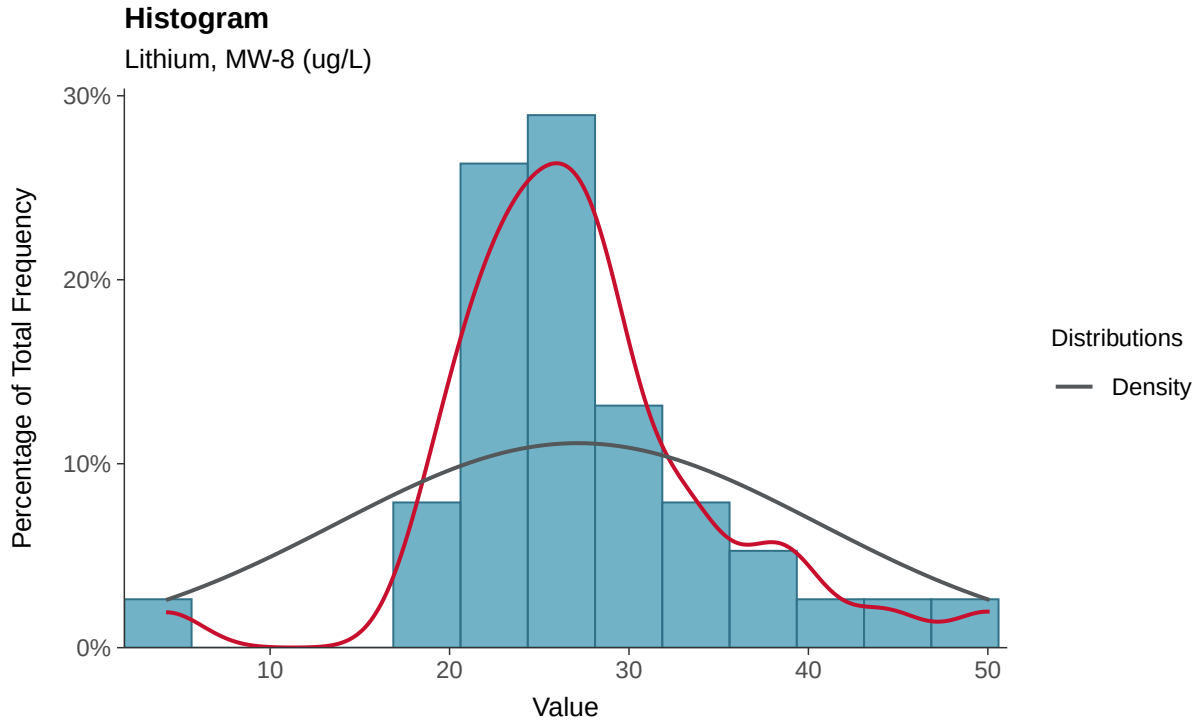
Lead, MW-8 (ug/L)



App. IV: Lithium, MW-8

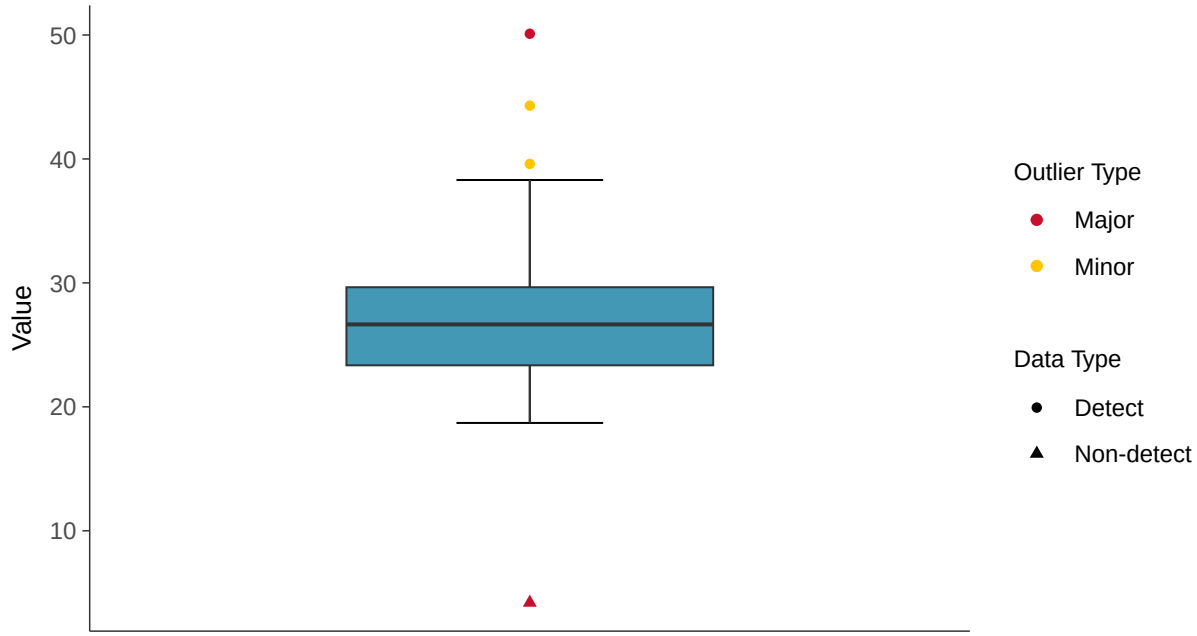
ID: 08_03_114





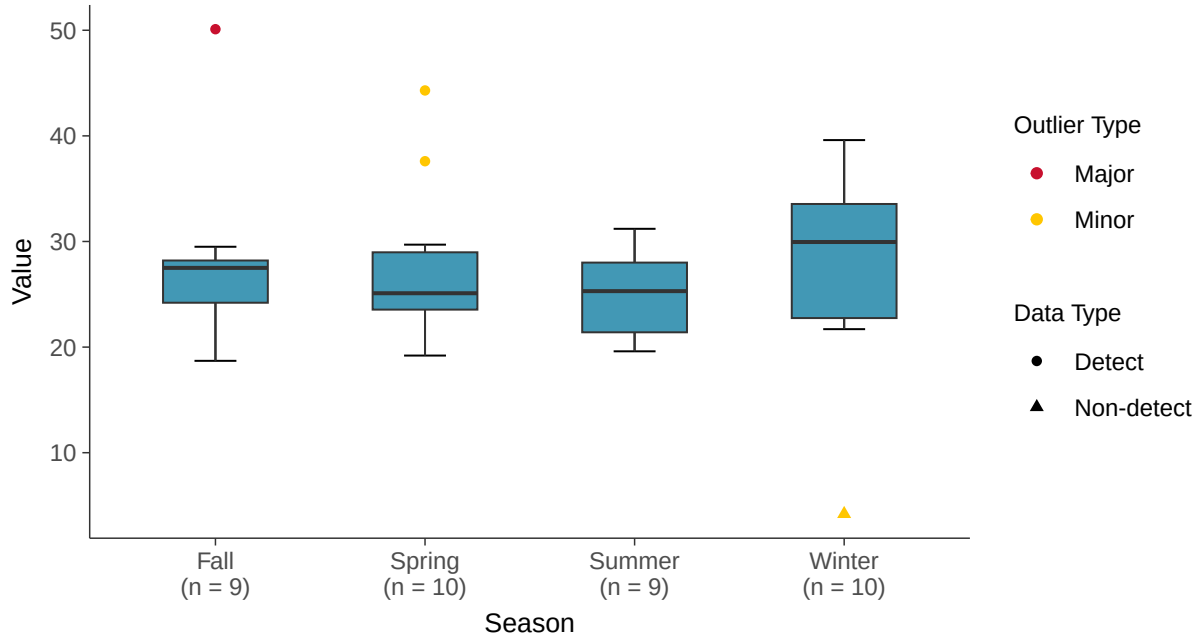
Boxplot

Lithium, MW-8 (ug/L)



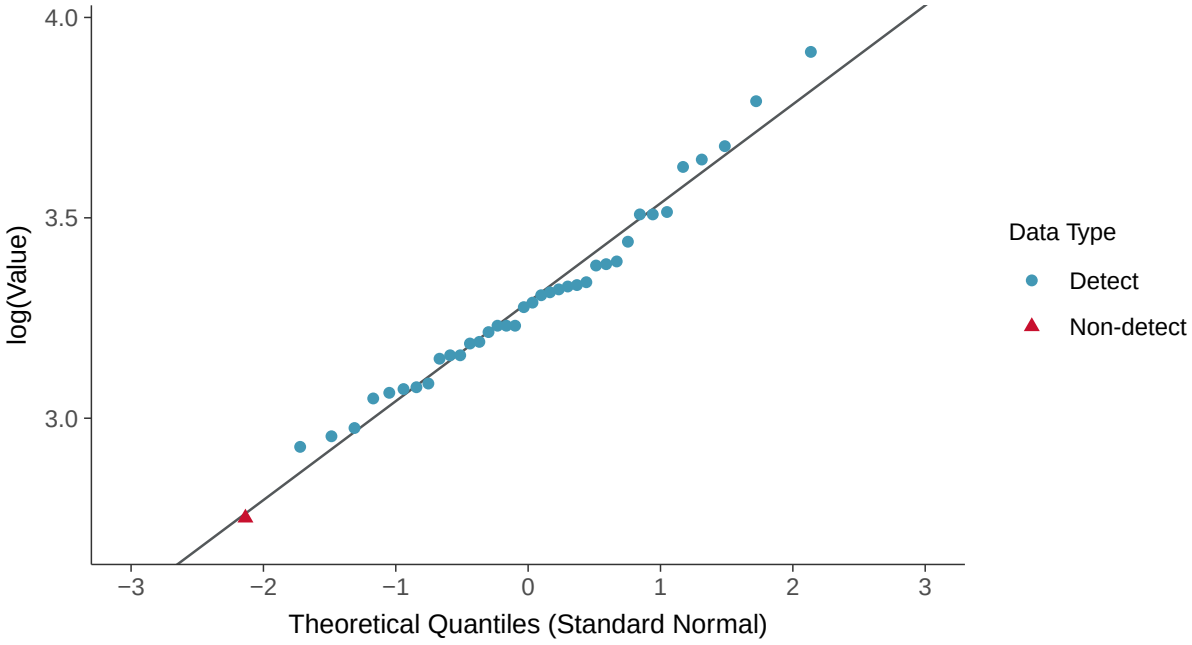
Boxplot by Season

Lithium, MW-8 (ug/L)



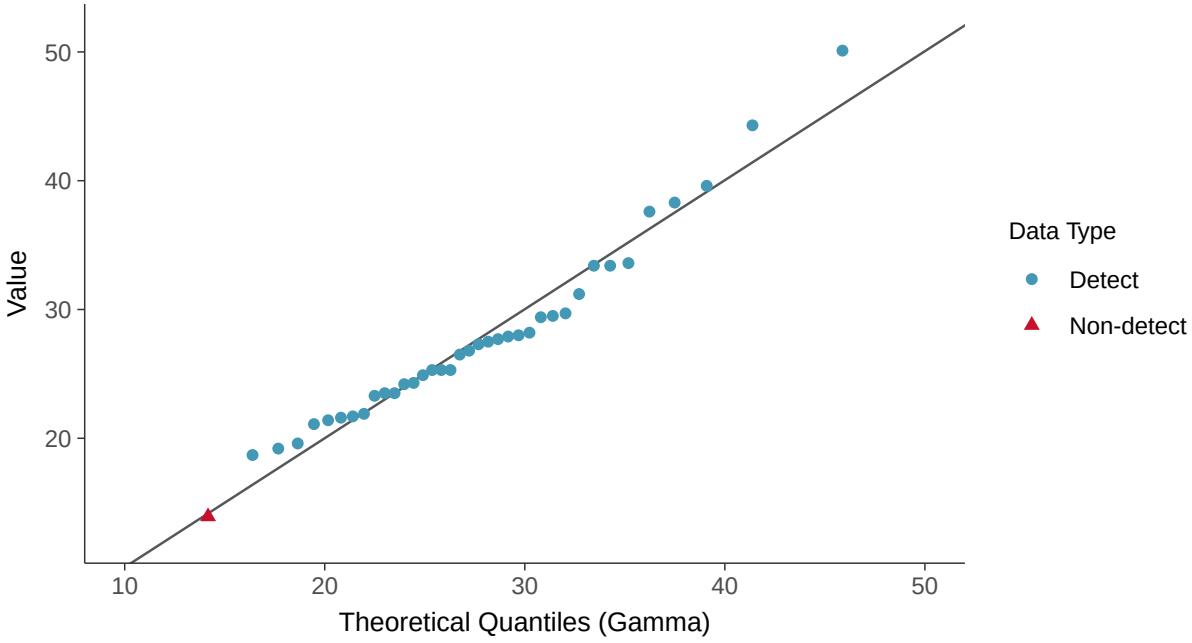
Lognormal Q-Q plot using ROS Imputed Estimates

Lithium, MW-8 (ug/L)



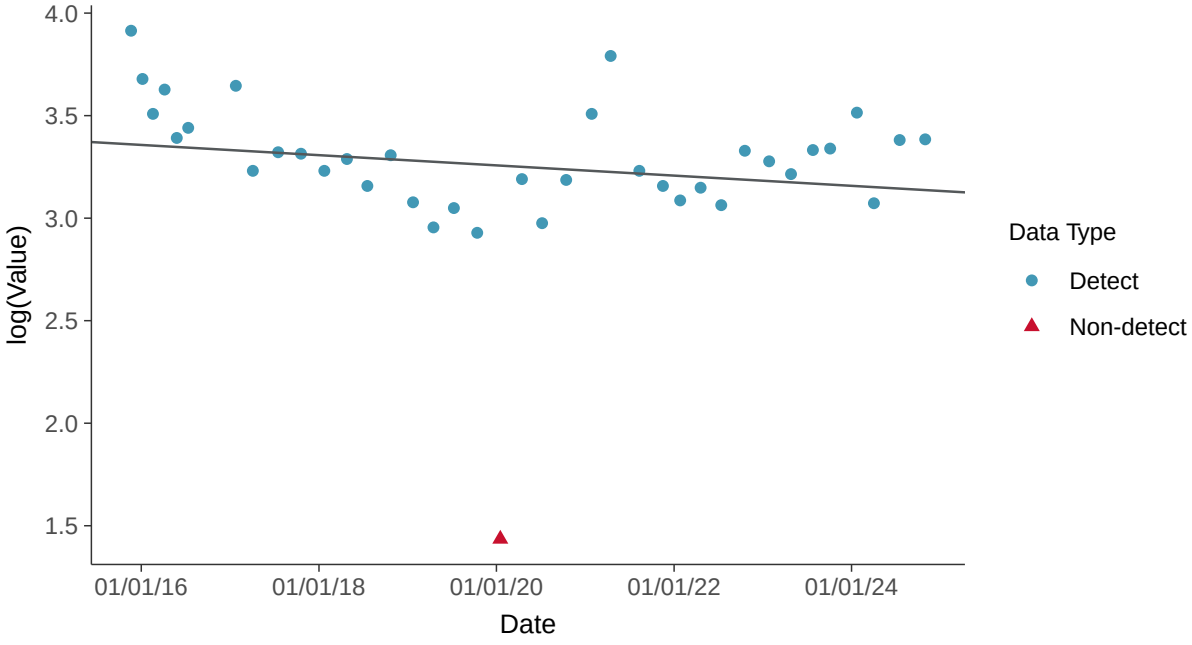
Gamma Q-Q plot using ROS Imputed Estimates

Lithium, MW-8 (ug/L)



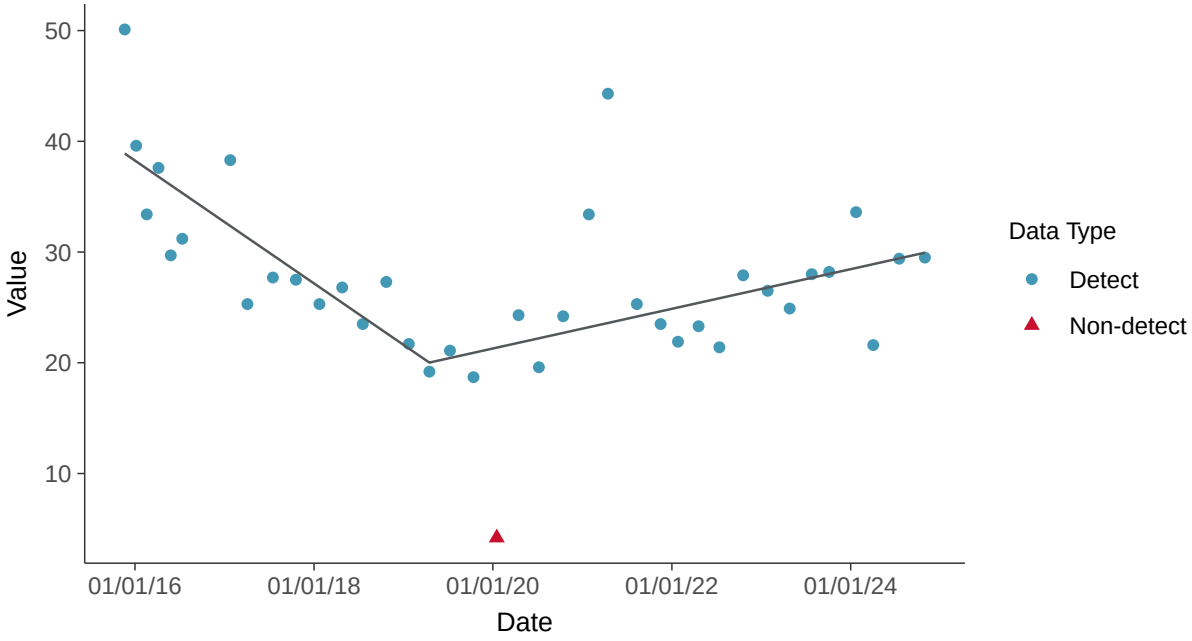
Trend Regression: Lognormal MLE

Lithium, MW-8 (ug/L)



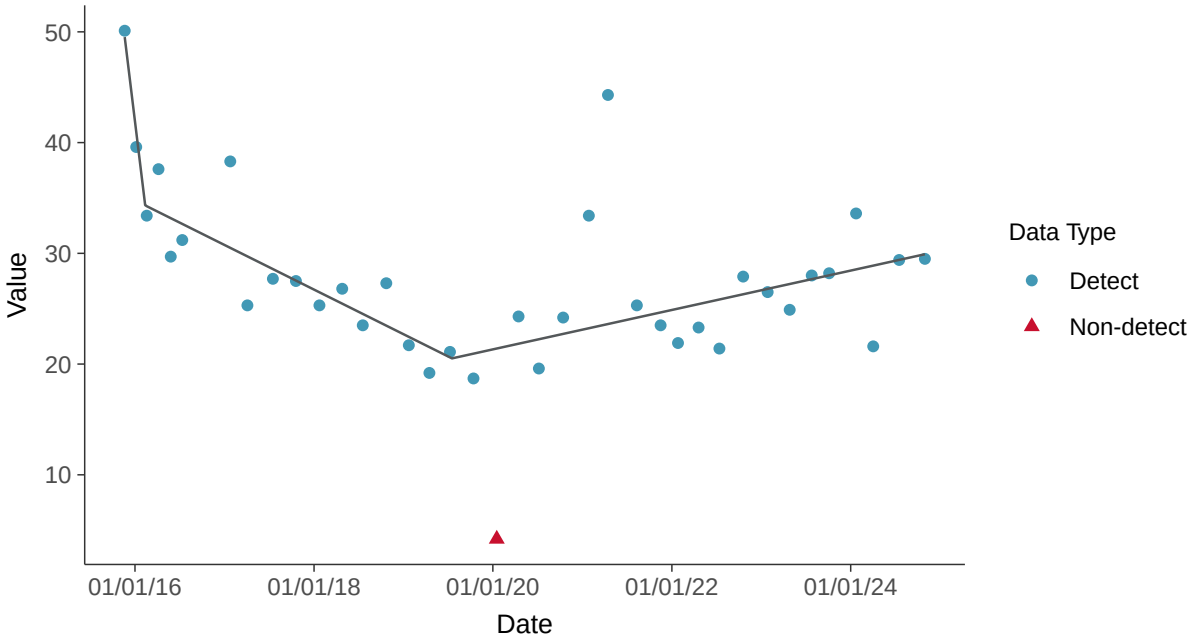
Trend Regression: Piecewise Linear-Linear

Lithium, MW-8 (ug/L)



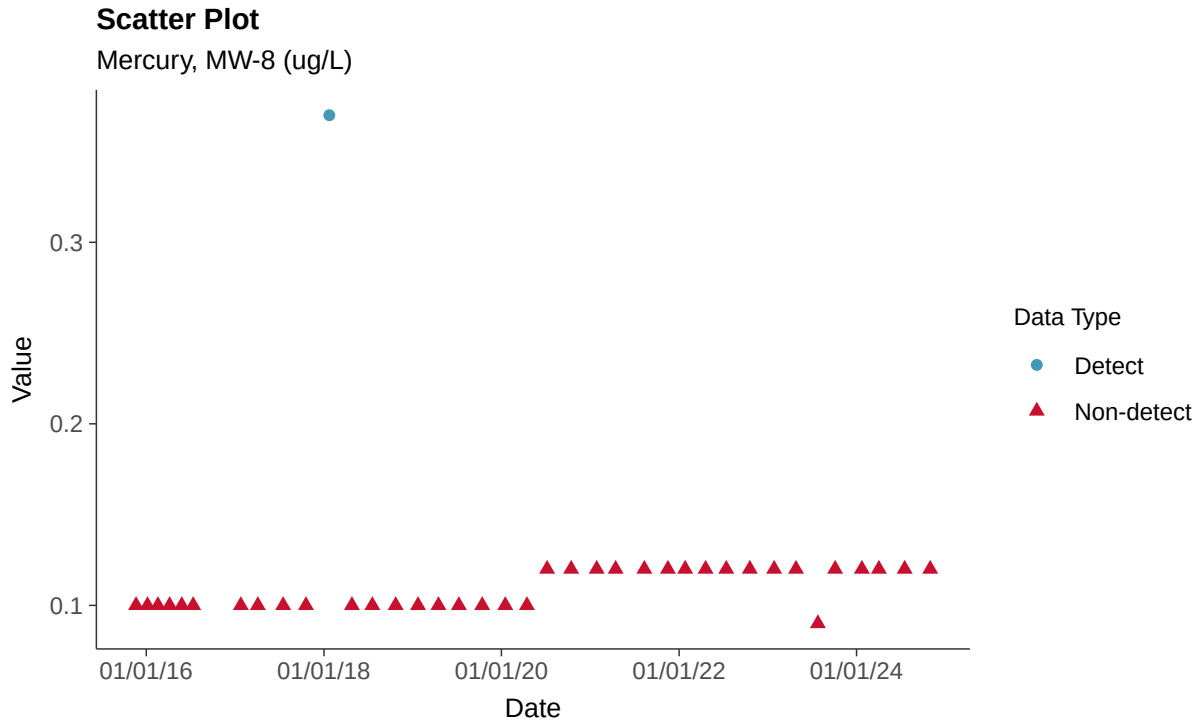
Trend Regression: Piecewise Linear-Linear-Linear

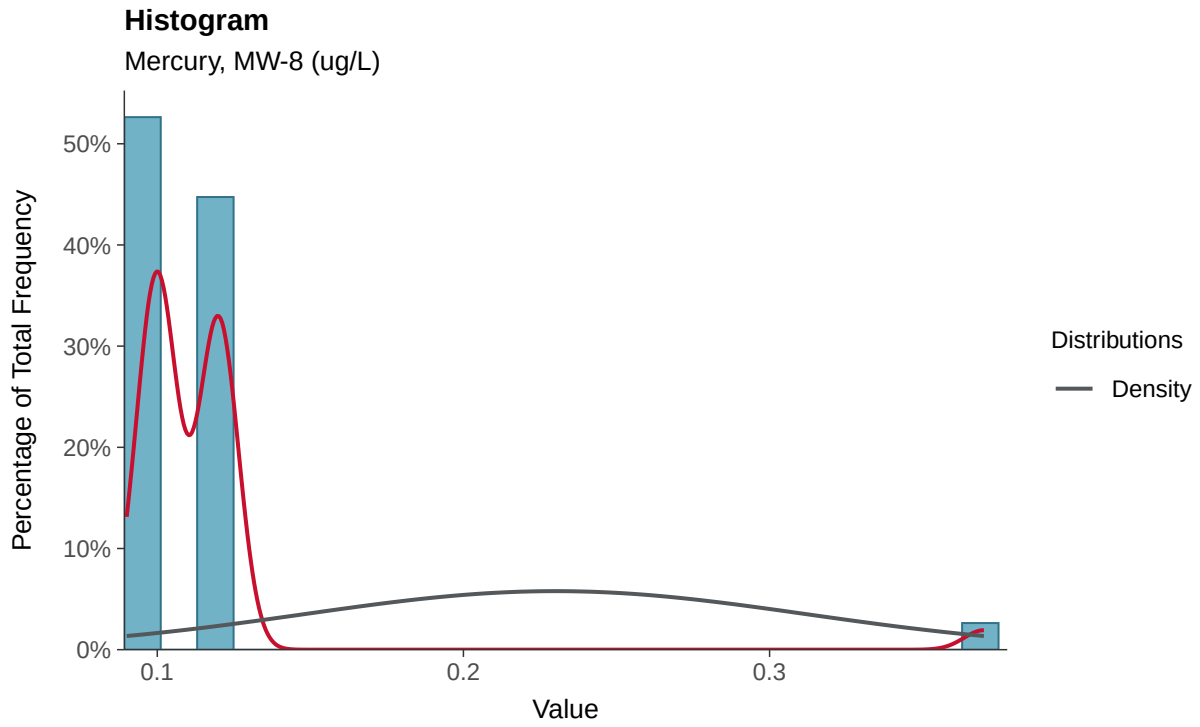
Lithium, MW-8 (ug/L)



App. IV: Mercury, MW-8

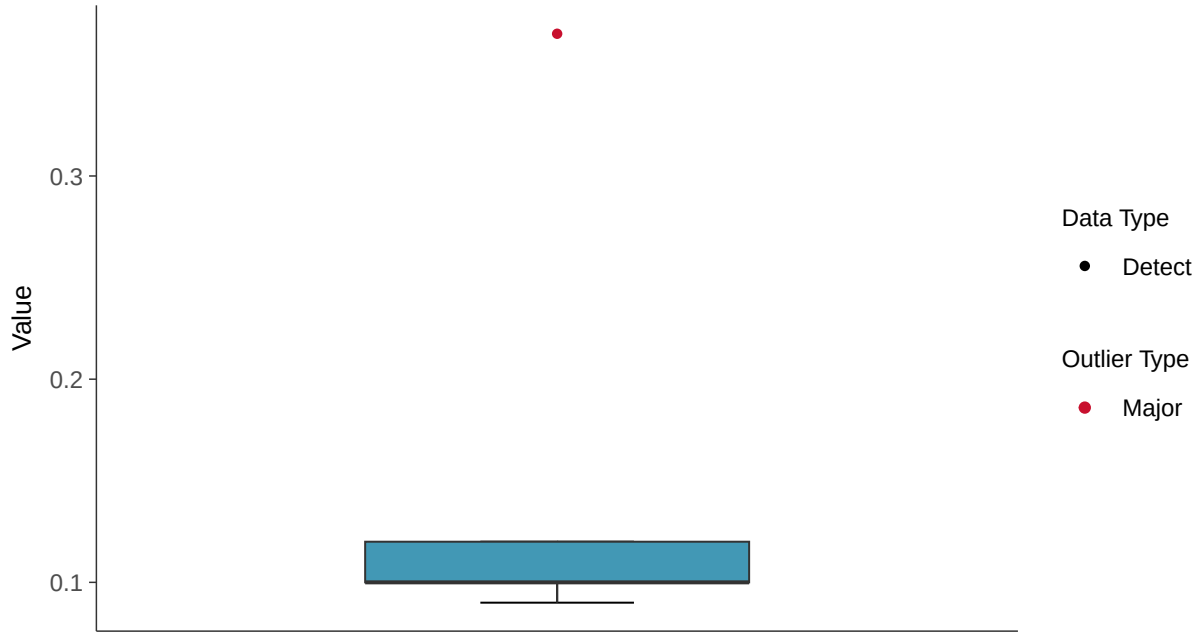
ID: 08_03_115





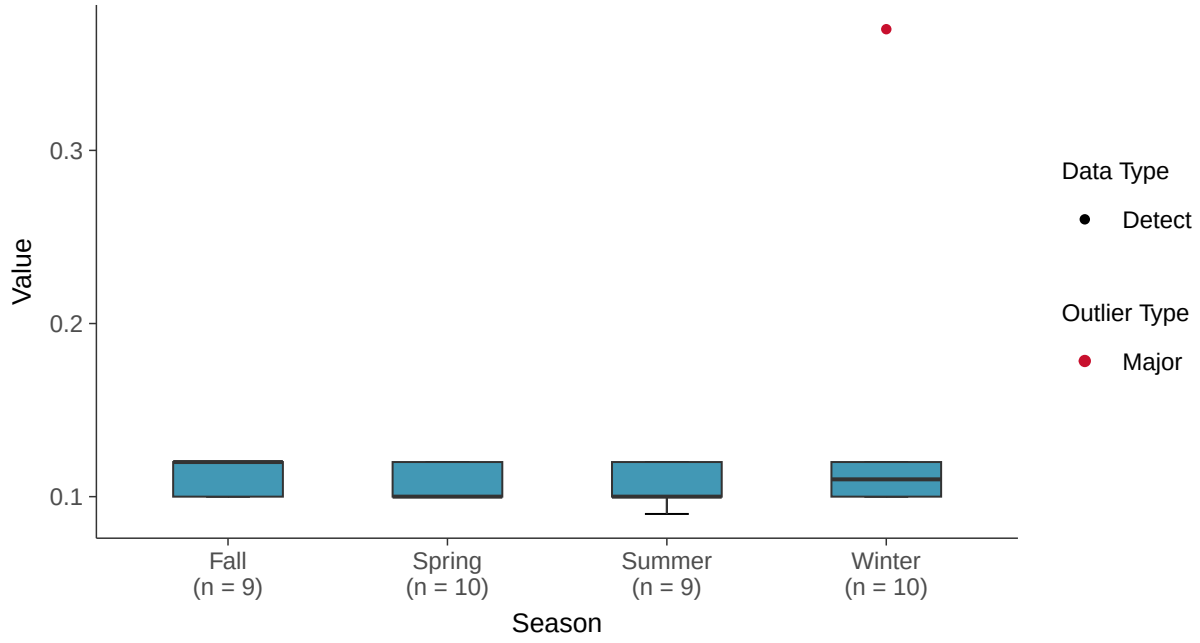
Boxplot

Mercury, MW-8 (ug/L)



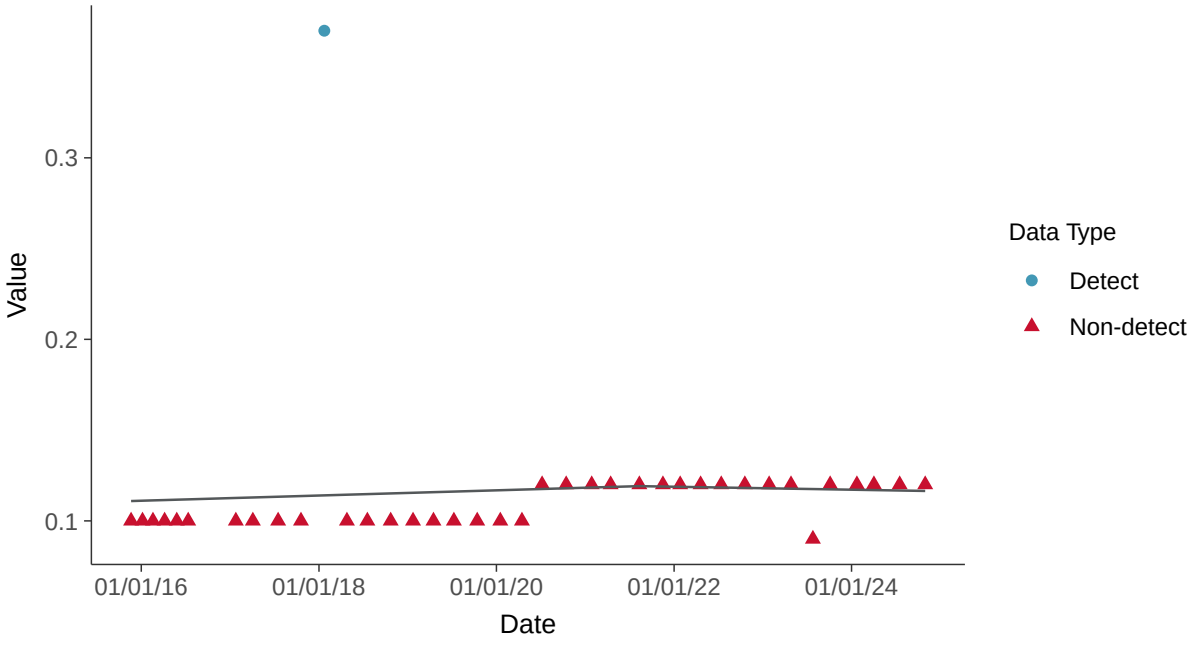
Boxplot by Season

Mercury, MW-8 (ug/L)



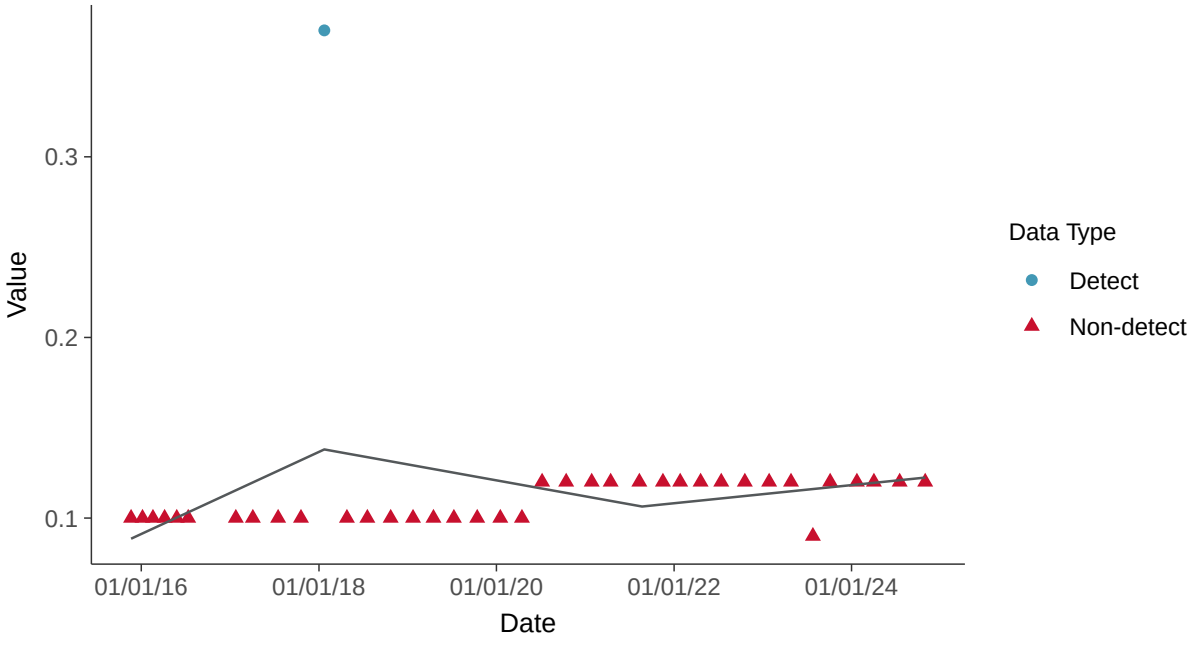
Trend Regression: Piecewise Linear-Linear

Mercury, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-8 (ug/L)

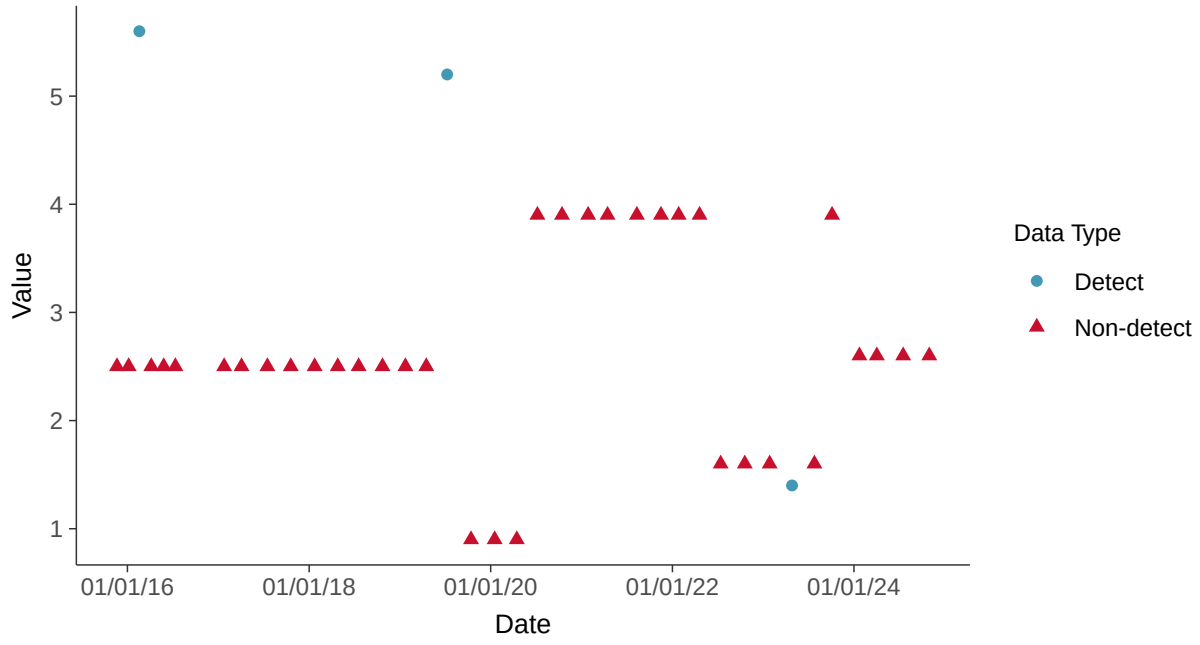


App. IV: Molybdenum, MW-8

ID: 08_03_116

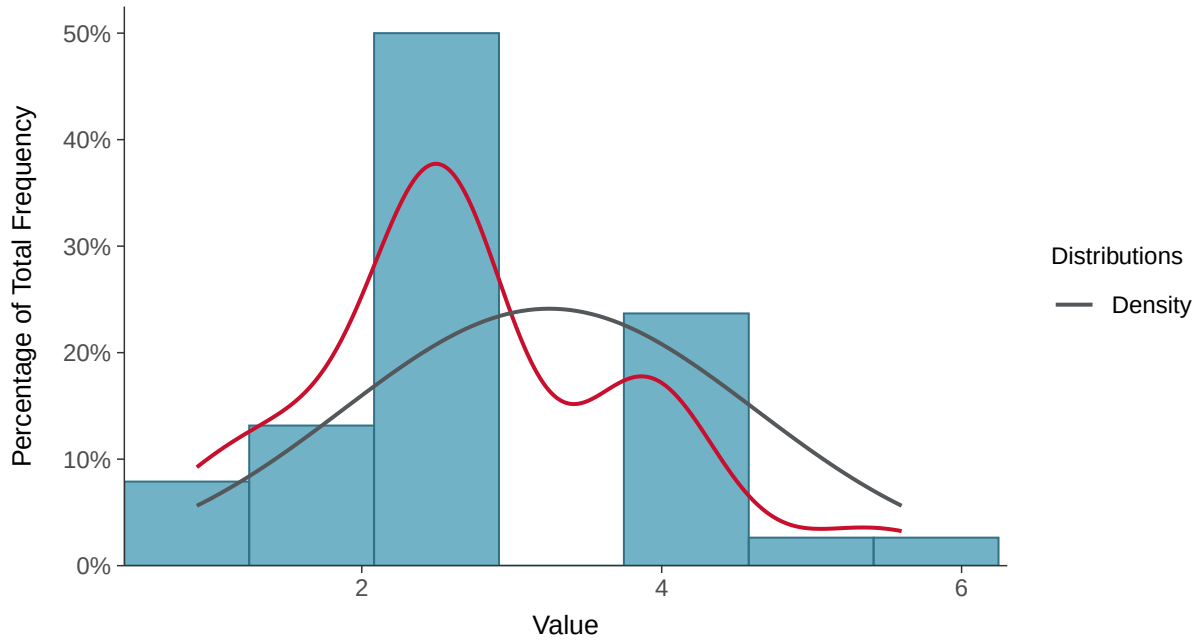
Scatter Plot

Molybdenum, MW-8 (ug/L)



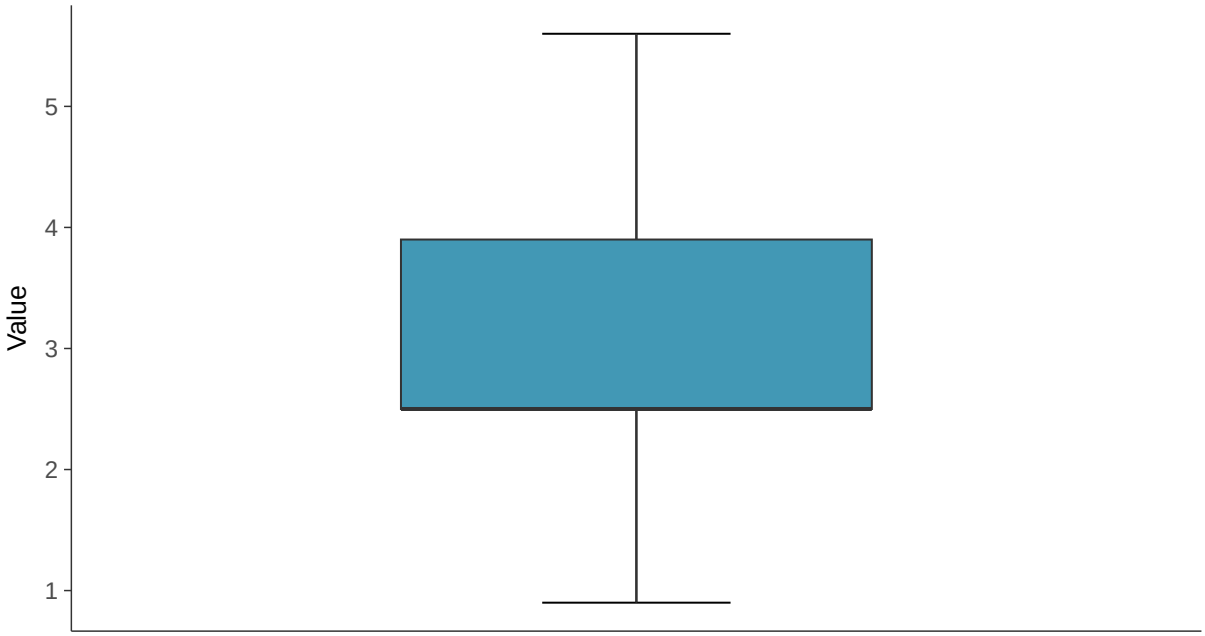
Histogram

Molybdenum, MW-8 (ug/L)



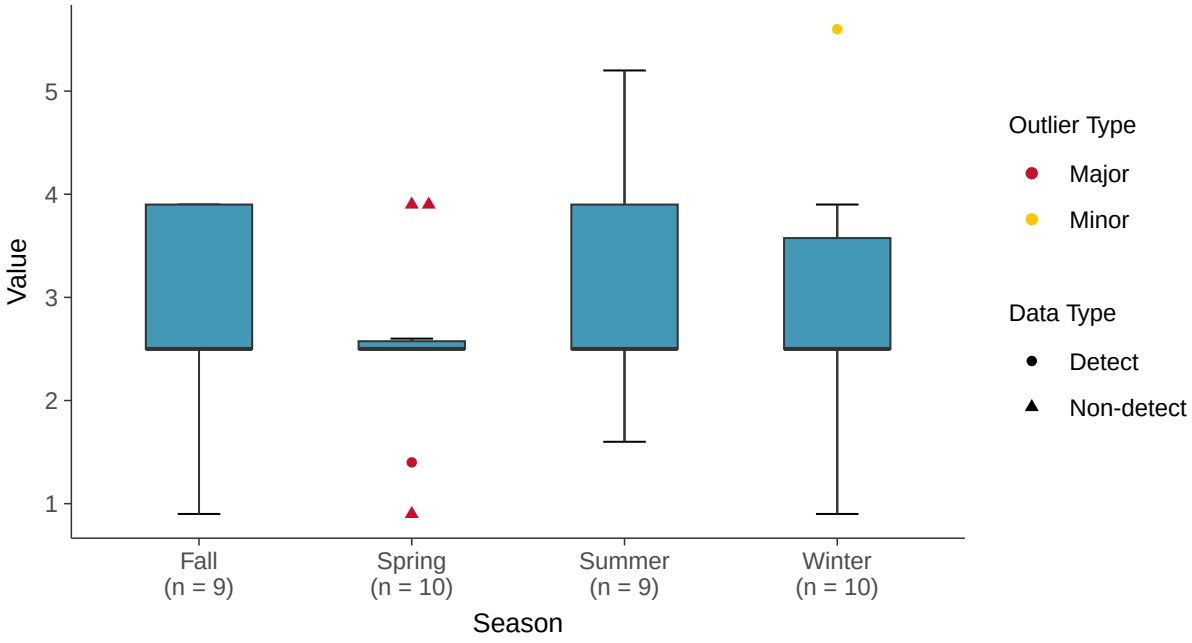
Boxplot

Molybdenum, MW-8 (ug/L)



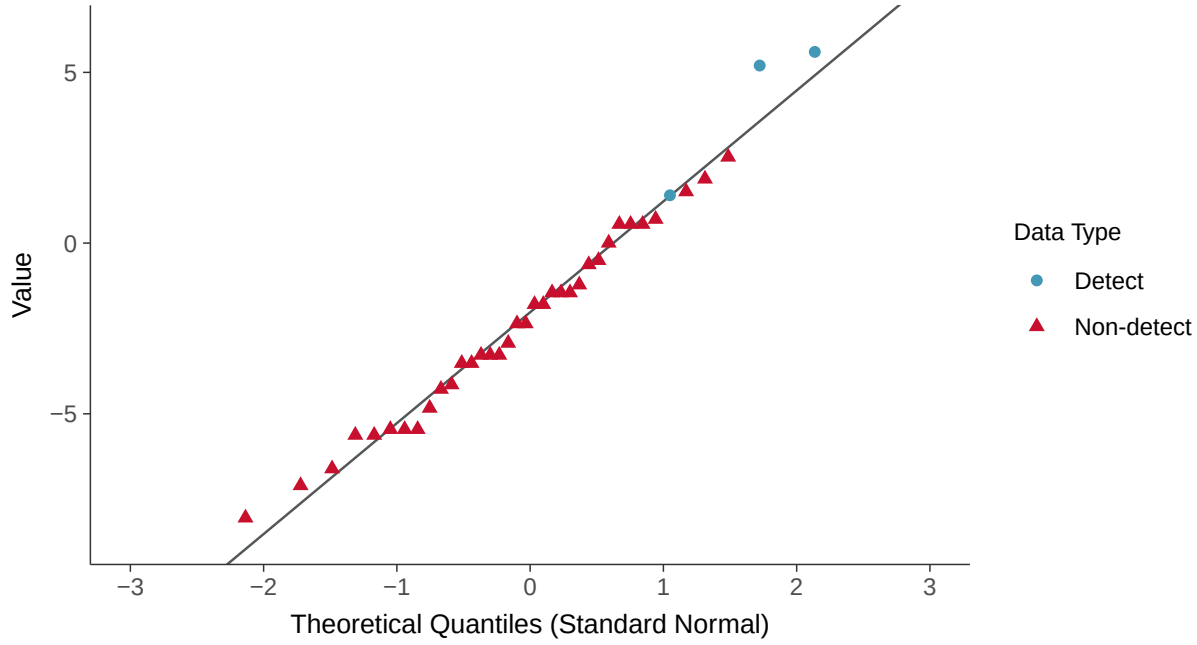
Boxplot by Season

Molybdenum, MW-8 (ug/L)



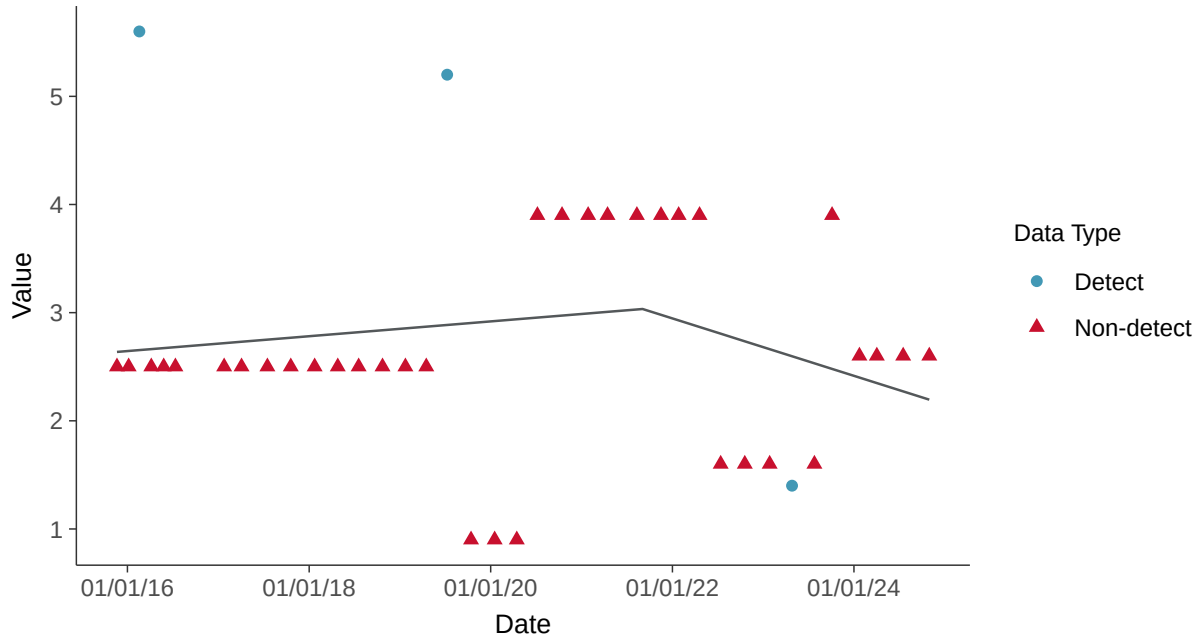
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-8 (ug/L)



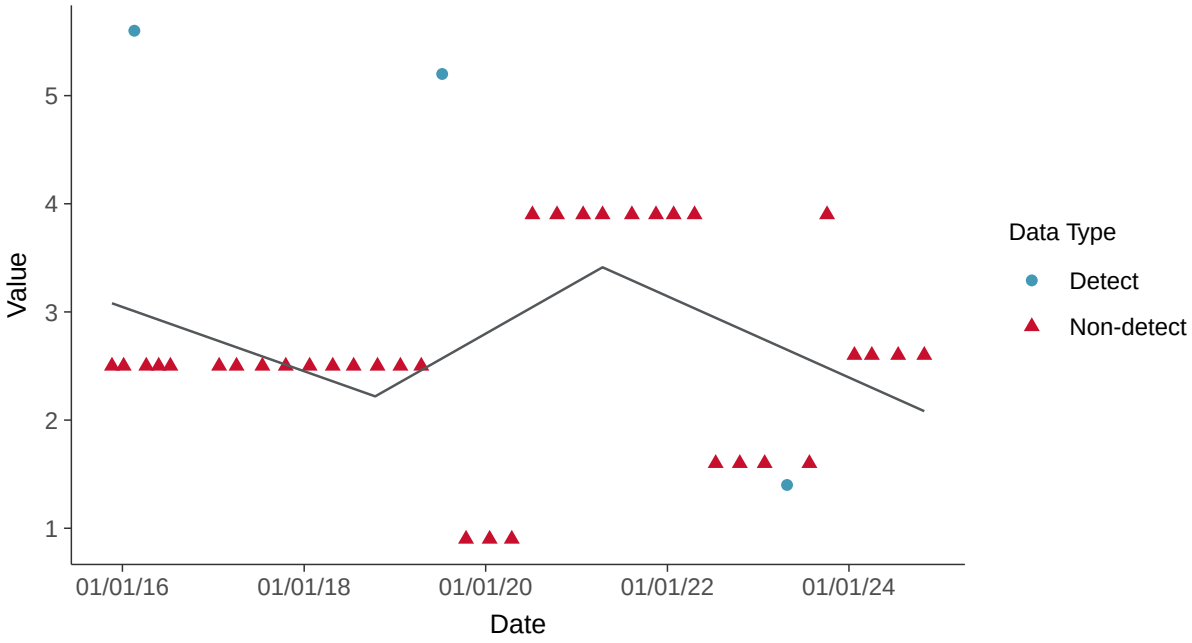
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-8 (ug/L)



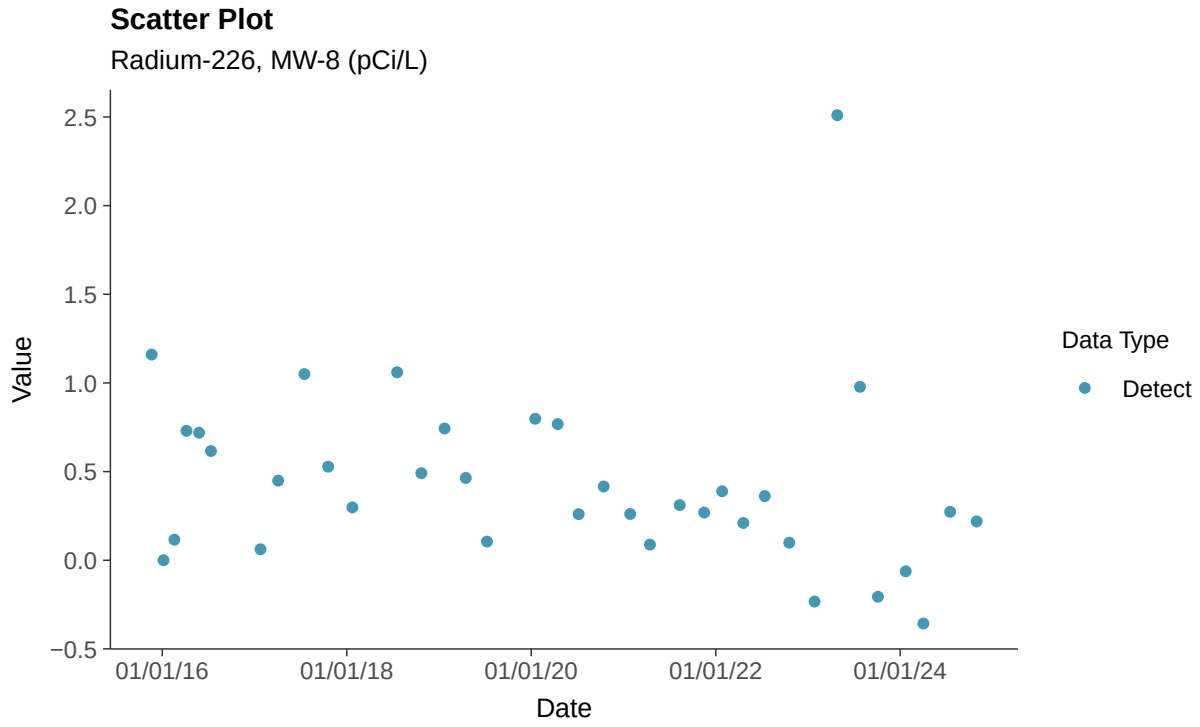
Trend Regression: Piecewise Linear-Linear-Linear

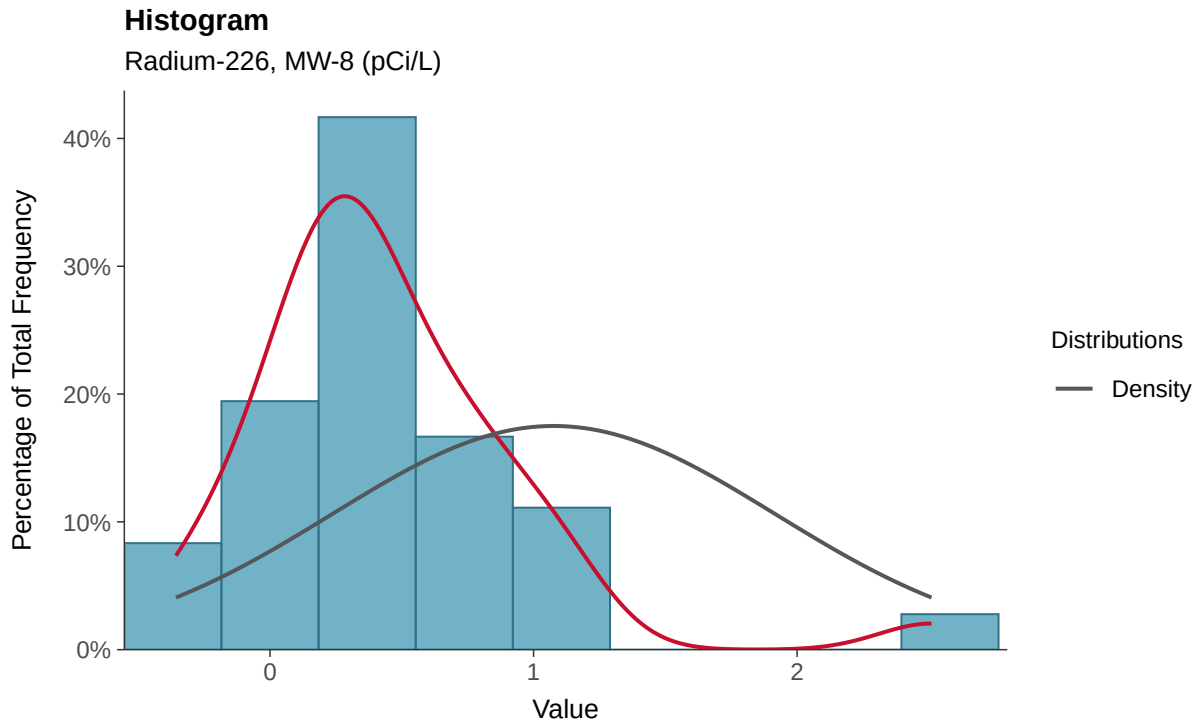
Molybdenum, MW-8 (ug/L)



App. IV: Radium-226, MW-8

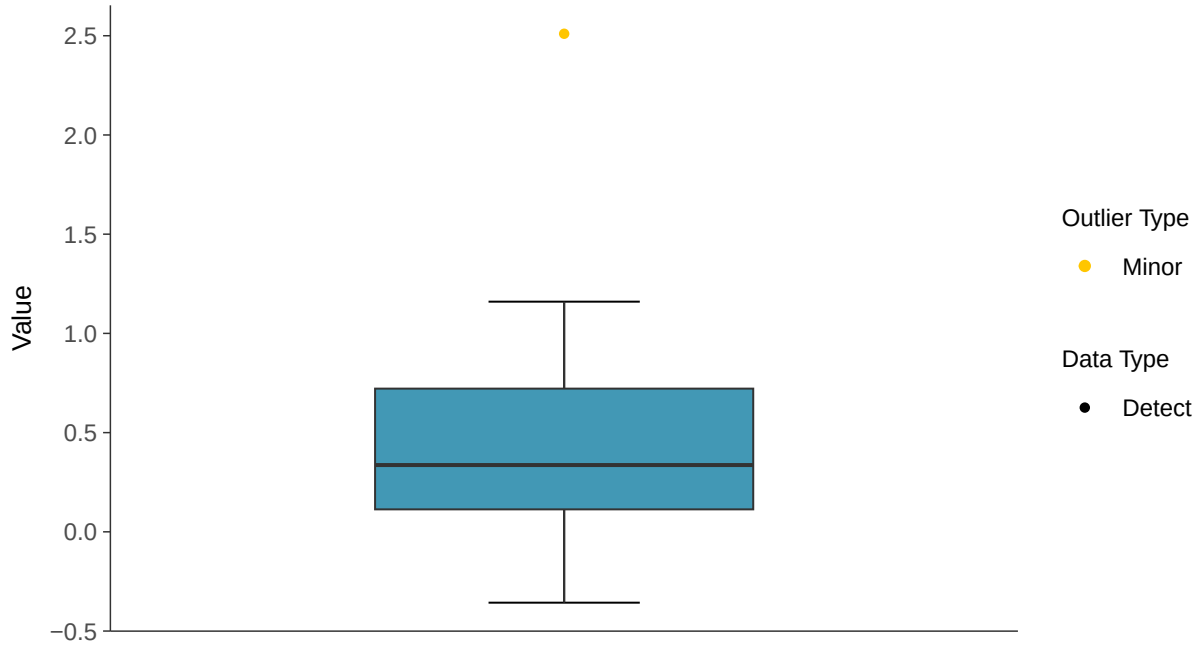
ID: 08_03_119





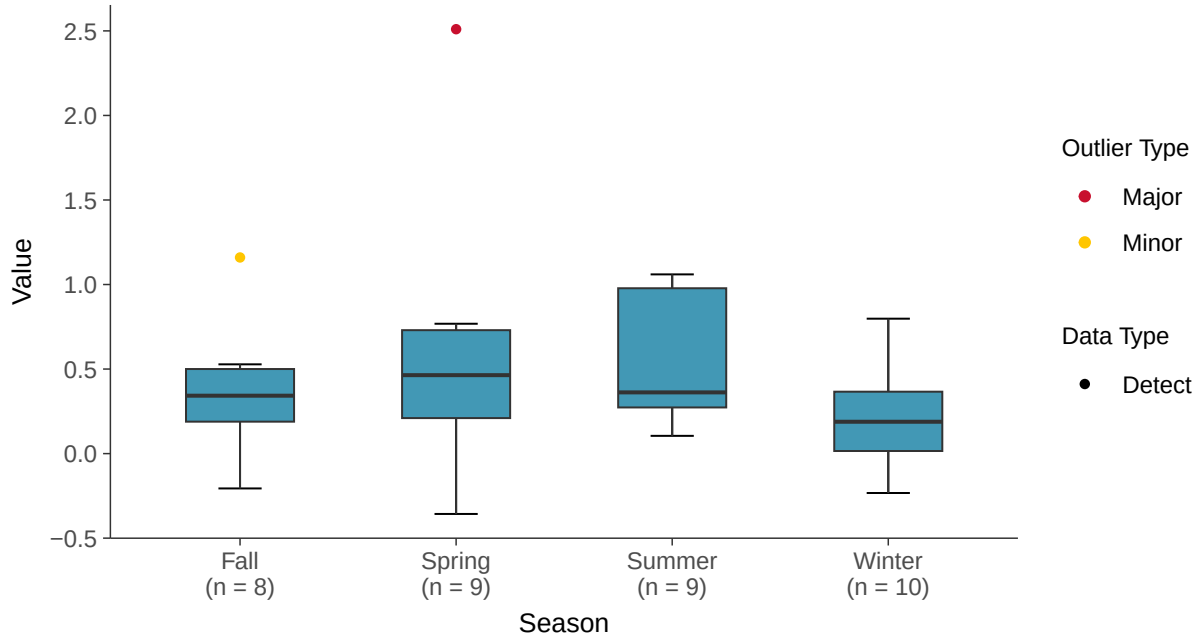
Boxplot

Radium-226, MW-8 (pCi/L)



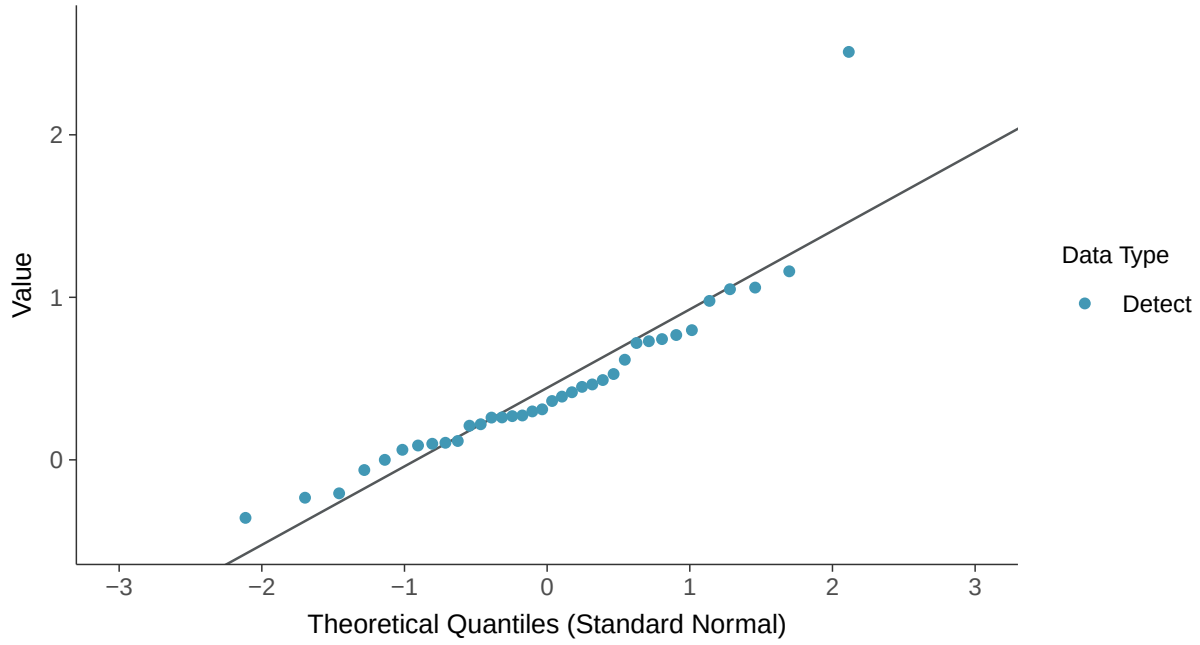
Boxplot by Season

Radium-226, MW-8 (pCi/L)



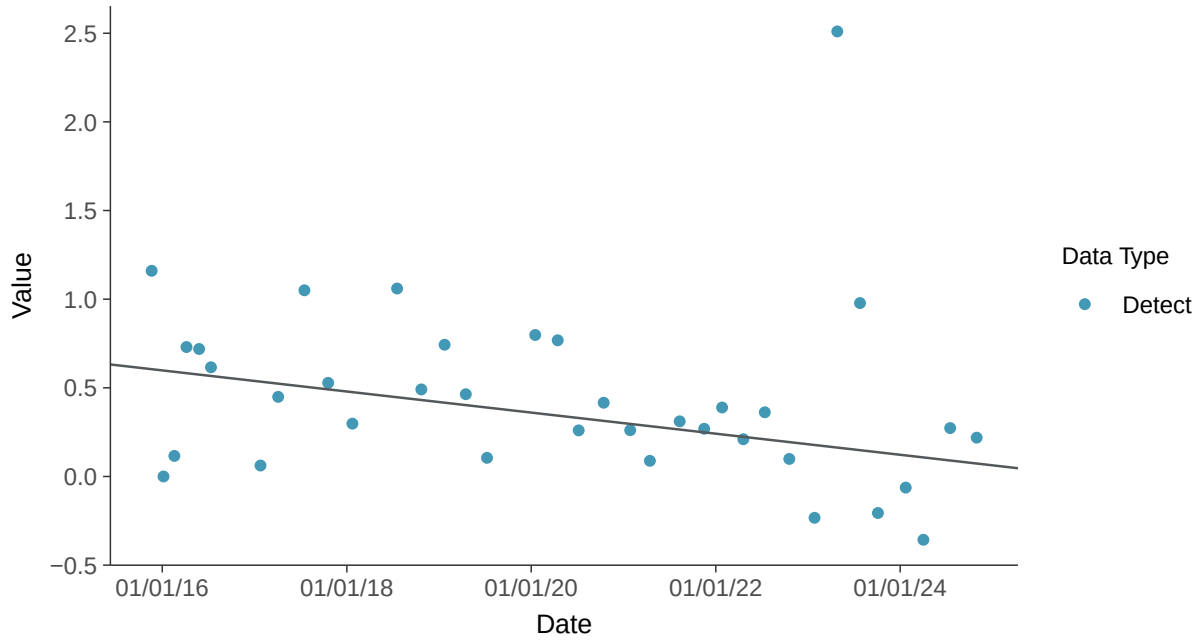
Normal Q-Q plot

Radium-226, MW-8 (pCi/L)



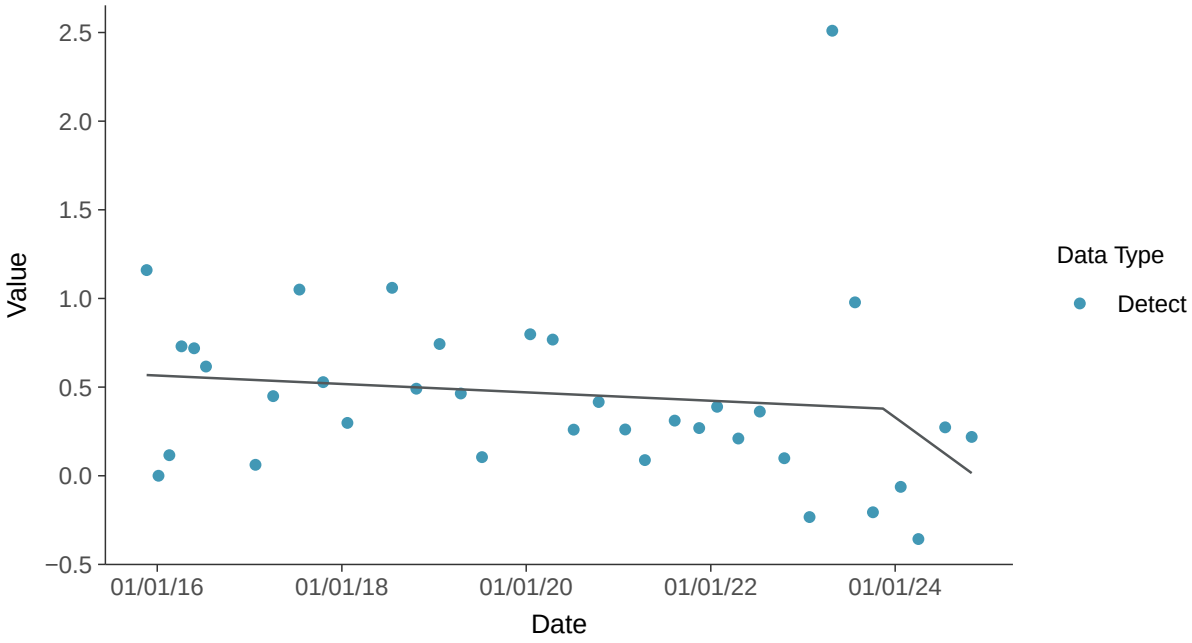
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-8 (pCi/L)



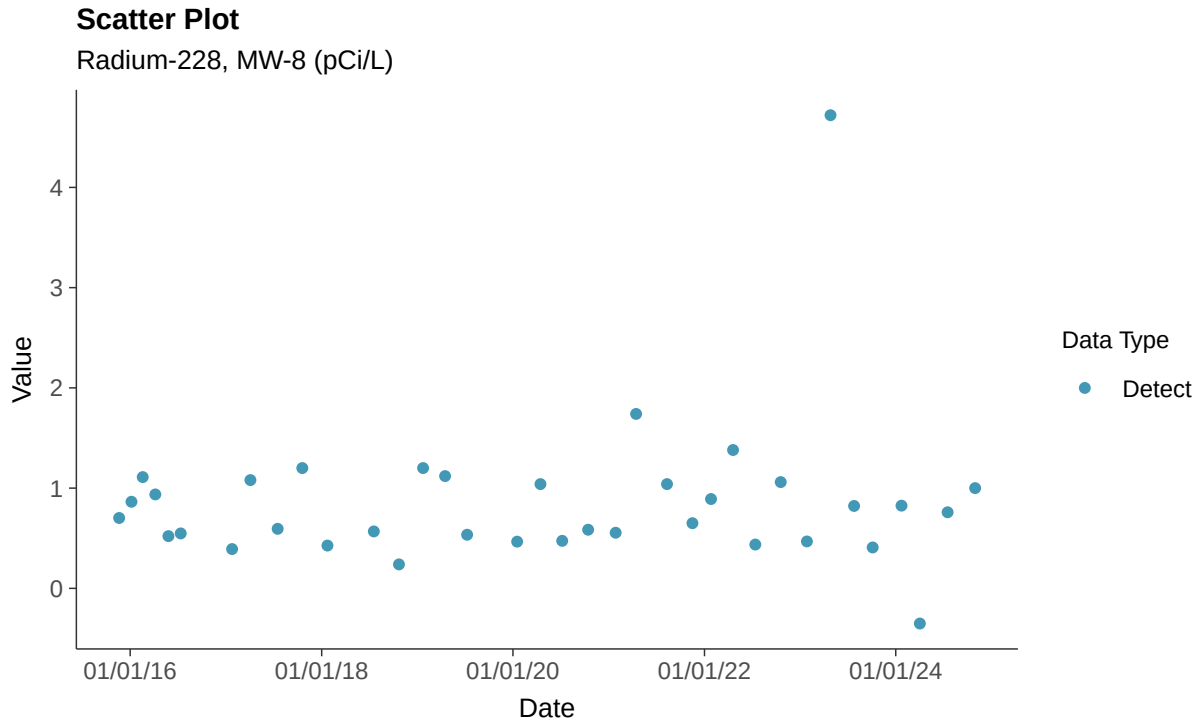
Trend Regression: Piecewise Linear-Linear

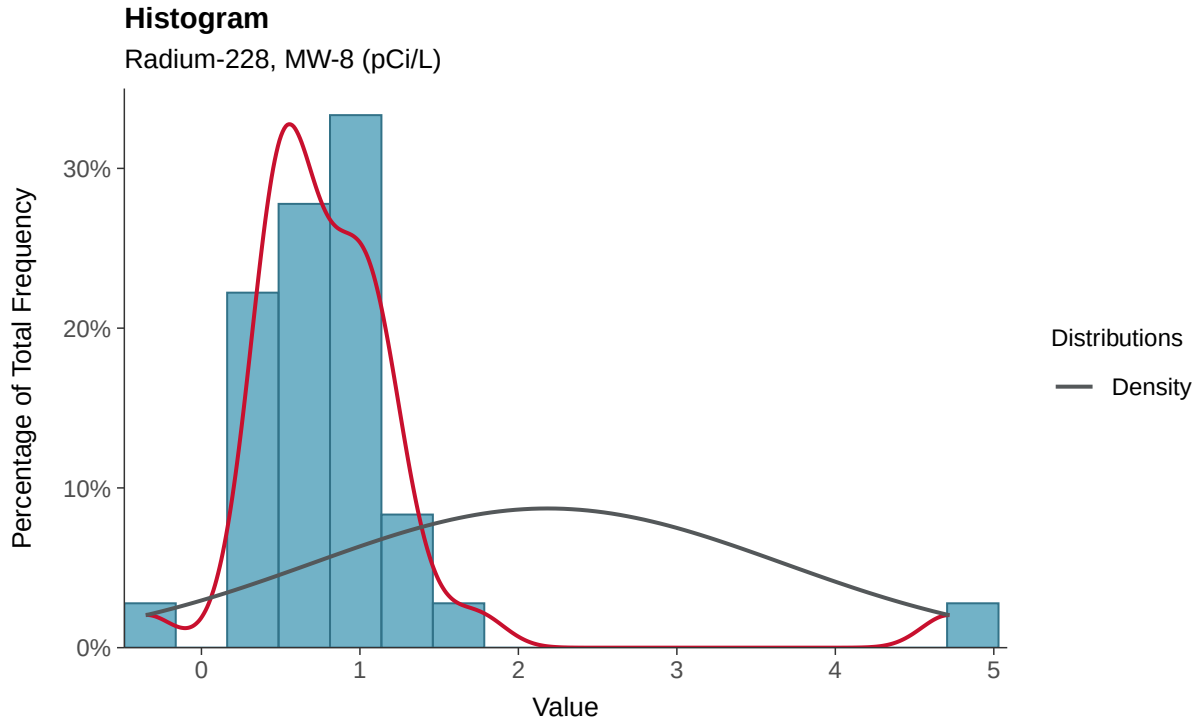
Radium-226, MW-8 (pCi/L)



App. IV: Radium-228, MW-8

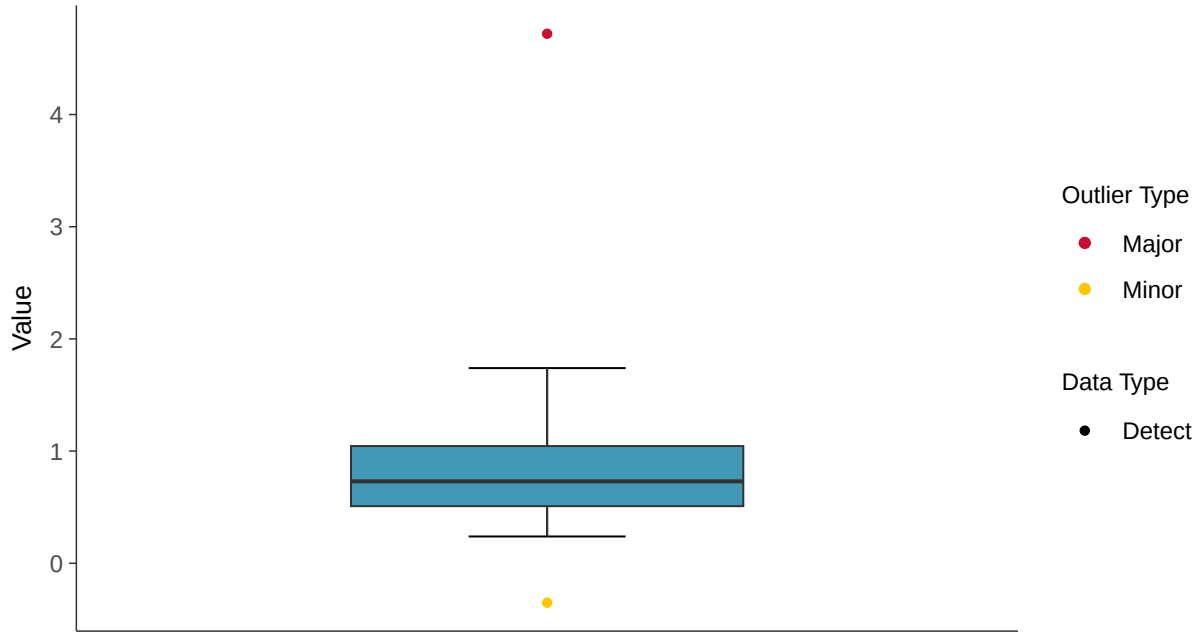
ID: 08_03_120





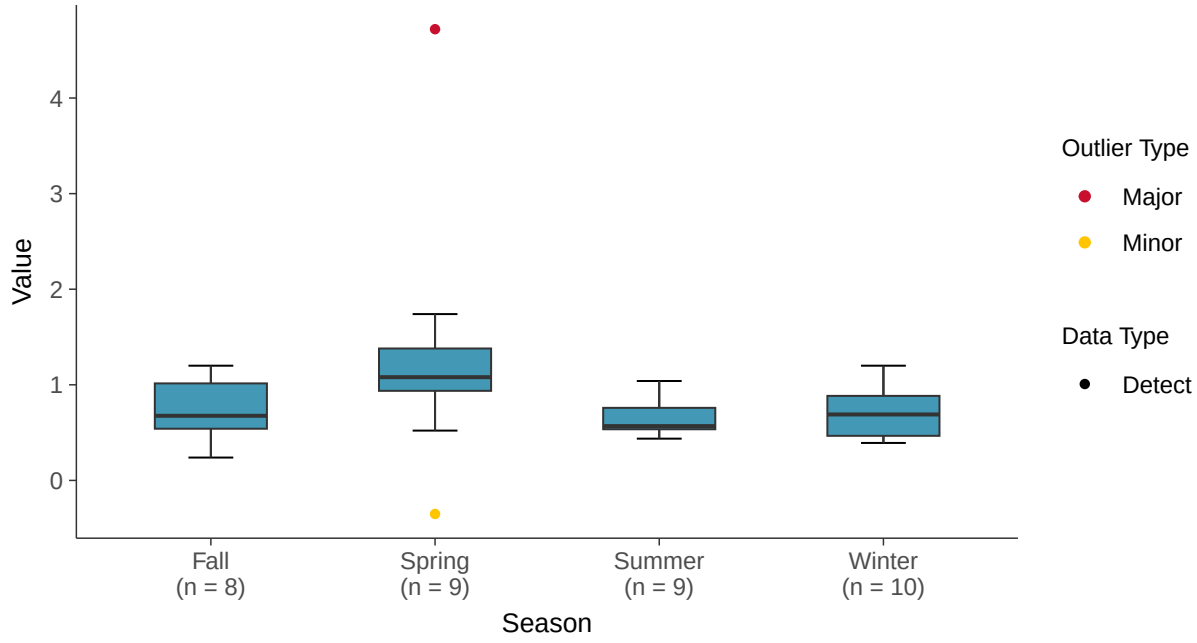
Boxplot

Radium-228, MW-8 (pCi/L)



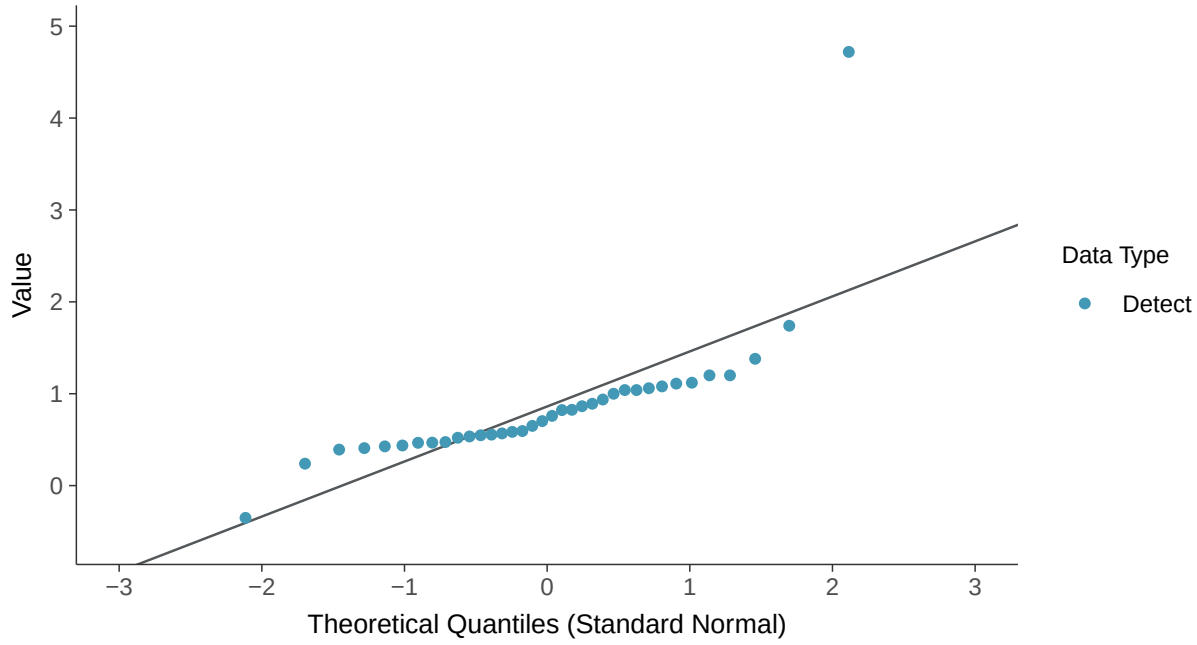
Boxplot by Season

Radium-228, MW-8 (pCi/L)



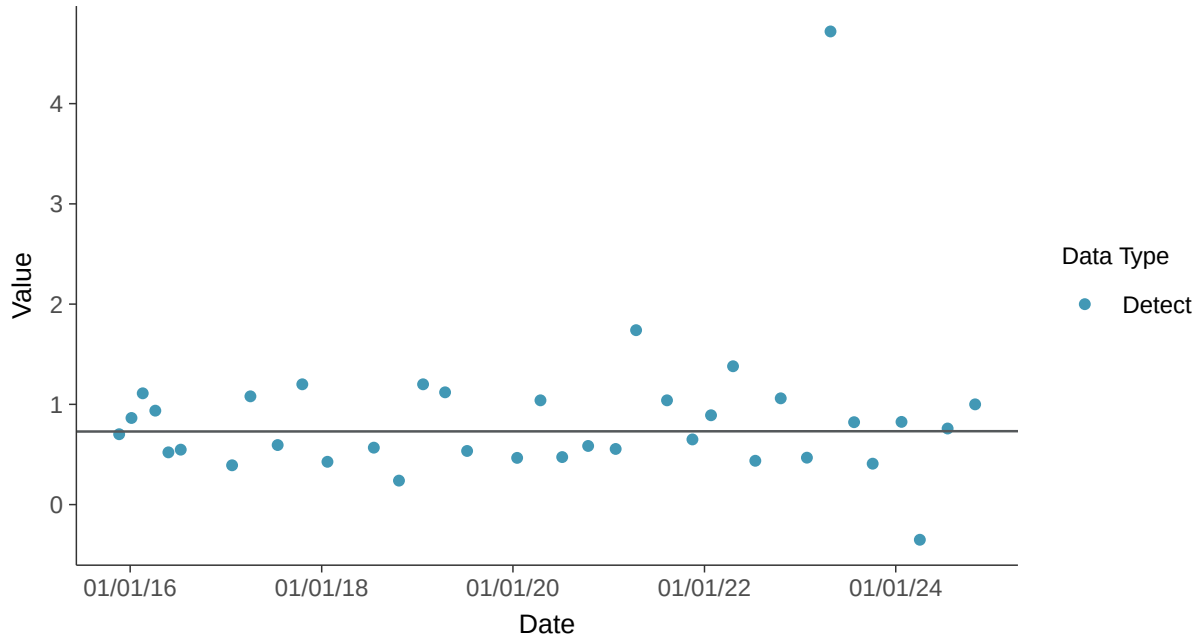
Normal Q-Q plot

Radium-228, MW-8 (pCi/L)



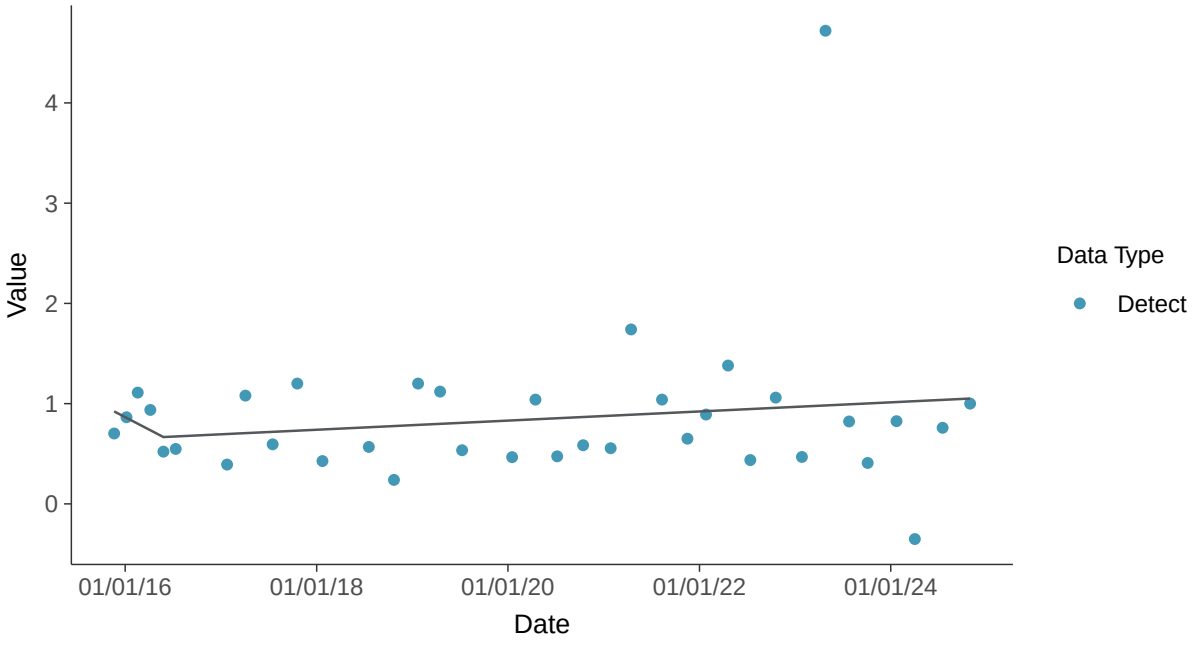
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-8 (pCi/L)



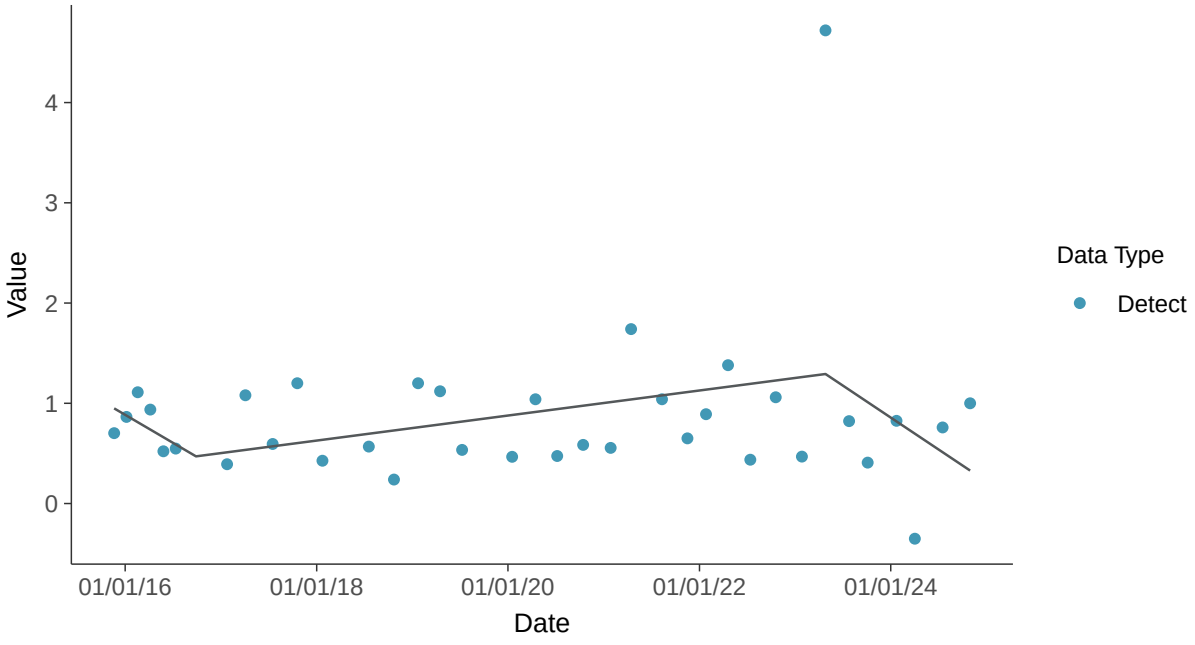
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-8 (pCi/L)



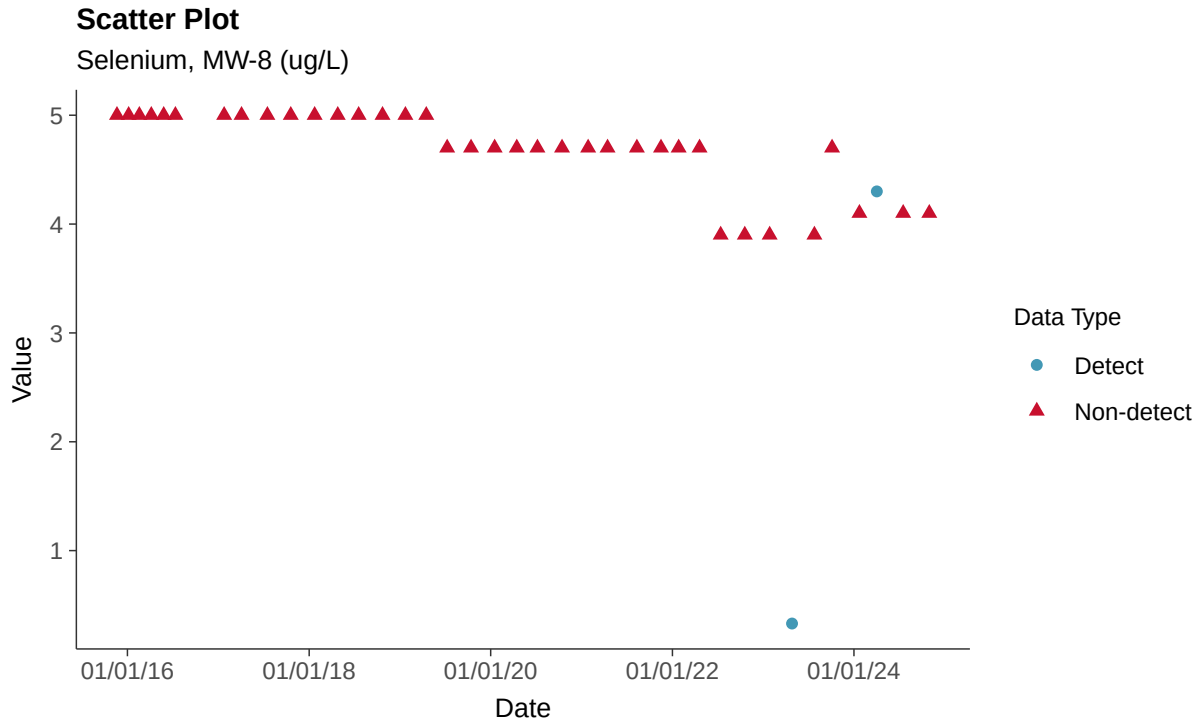
Trend Regression: Piecewise Linear-Linear-Linear

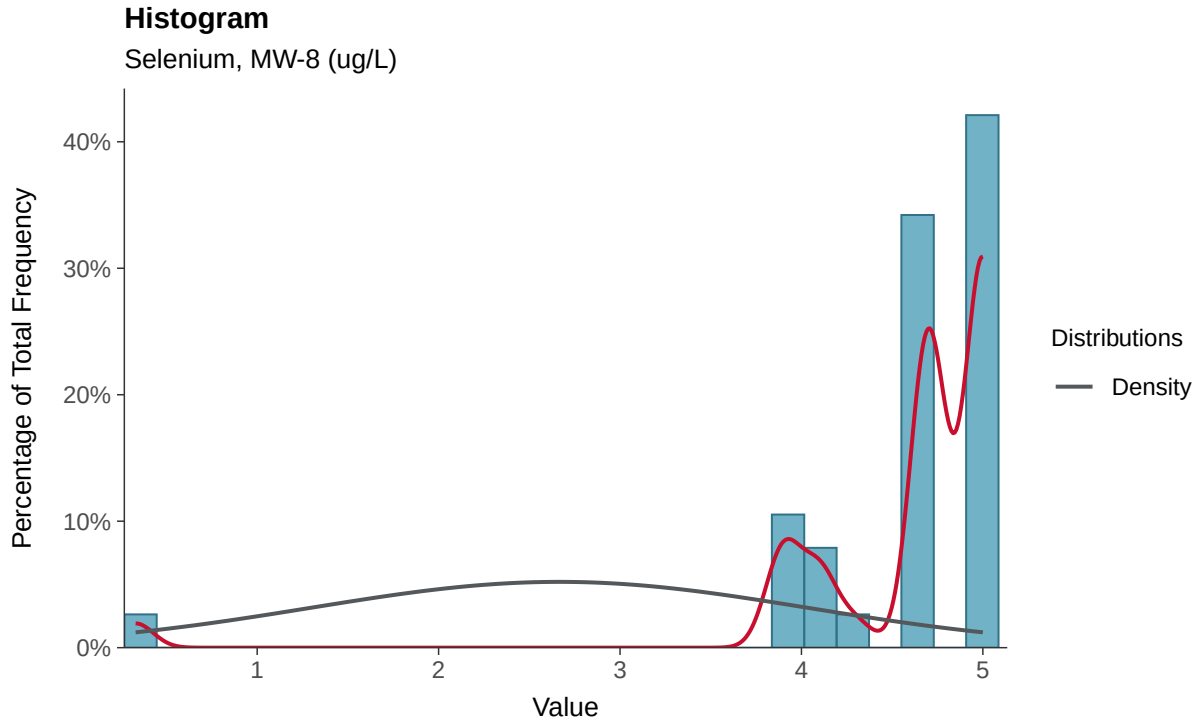
Radium-228, MW-8 (pCi/L)



App. IV: Selenium, MW-8

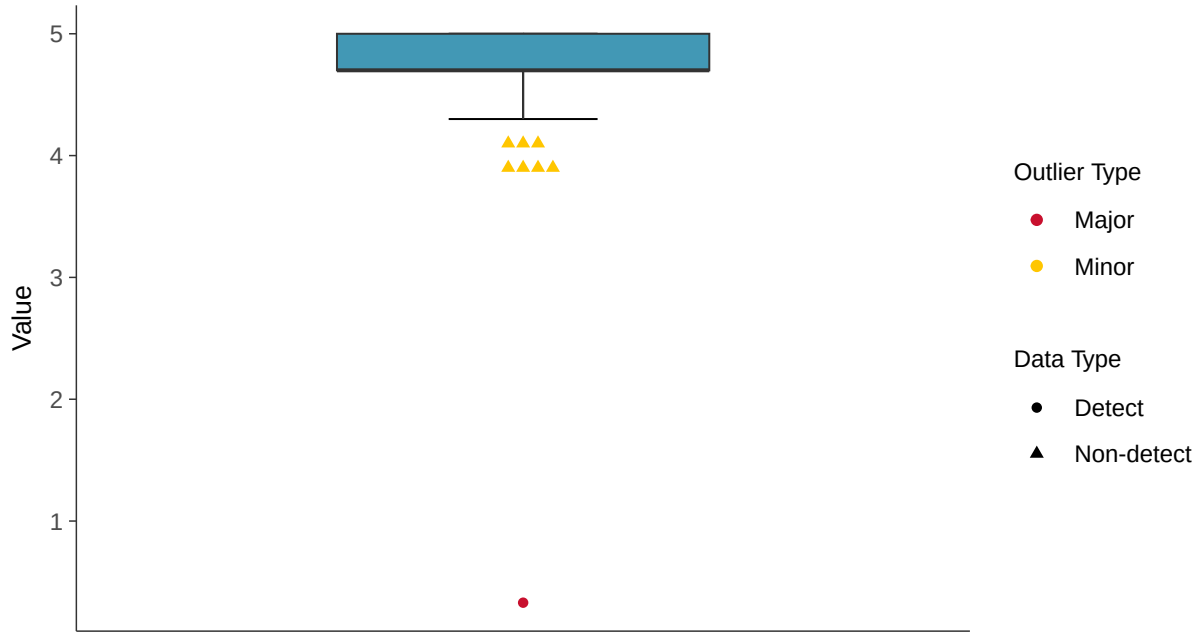
ID: 08_03_121





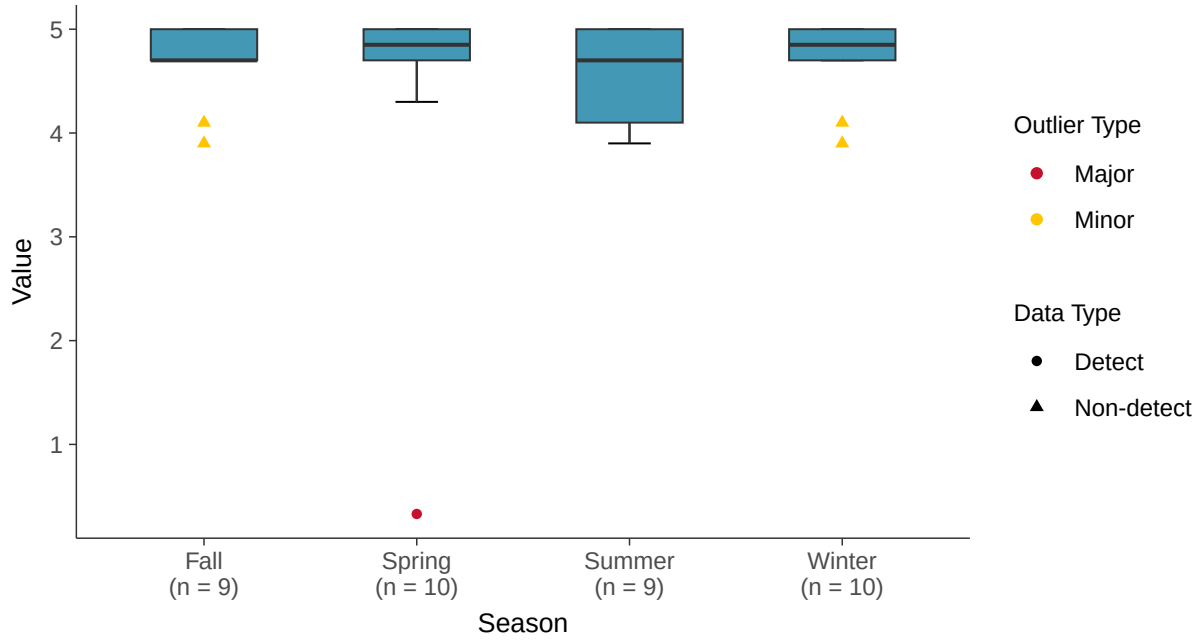
Boxplot

Selenium, MW-8 (ug/L)



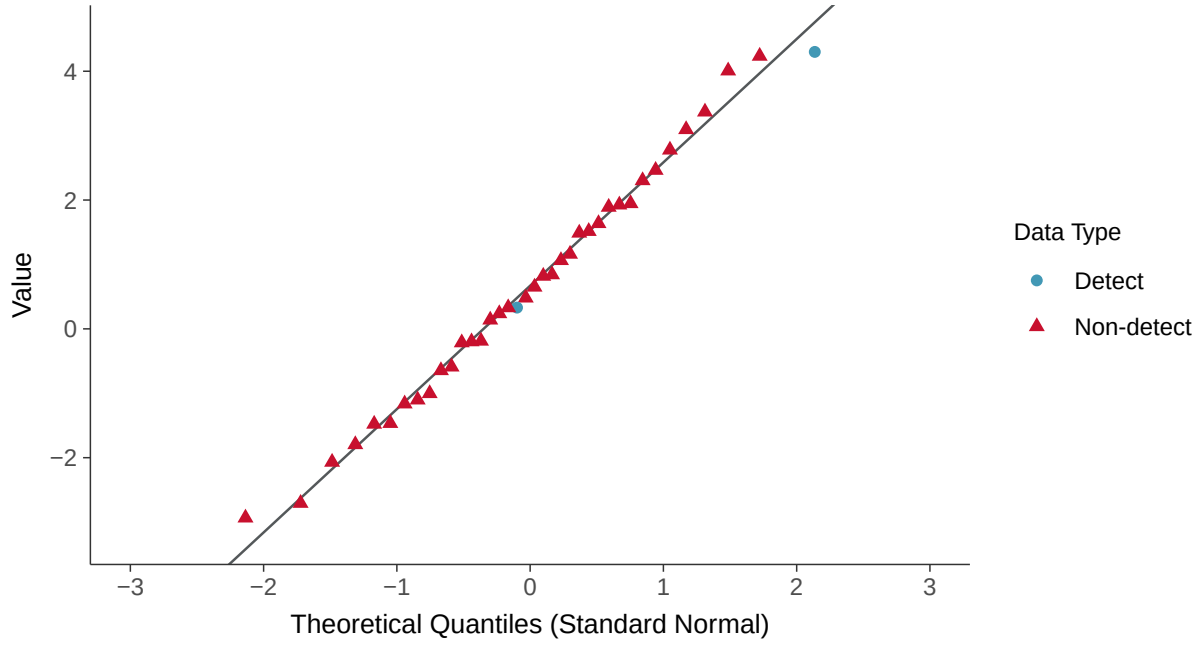
Boxplot by Season

Selenium, MW-8 (ug/L)



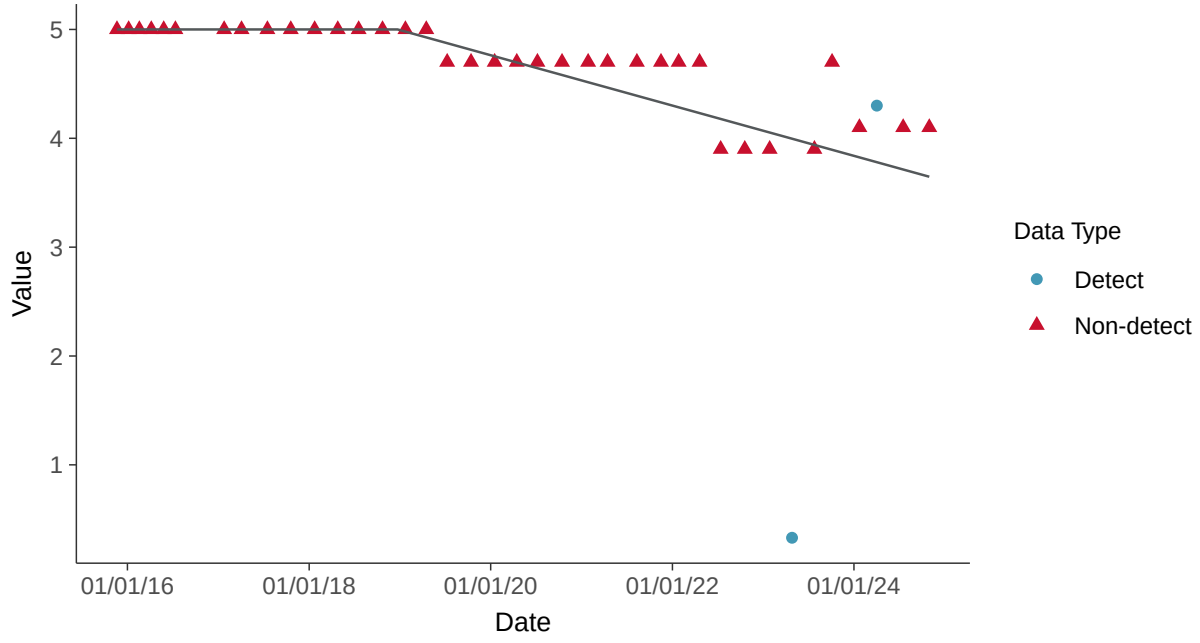
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-8 (ug/L)



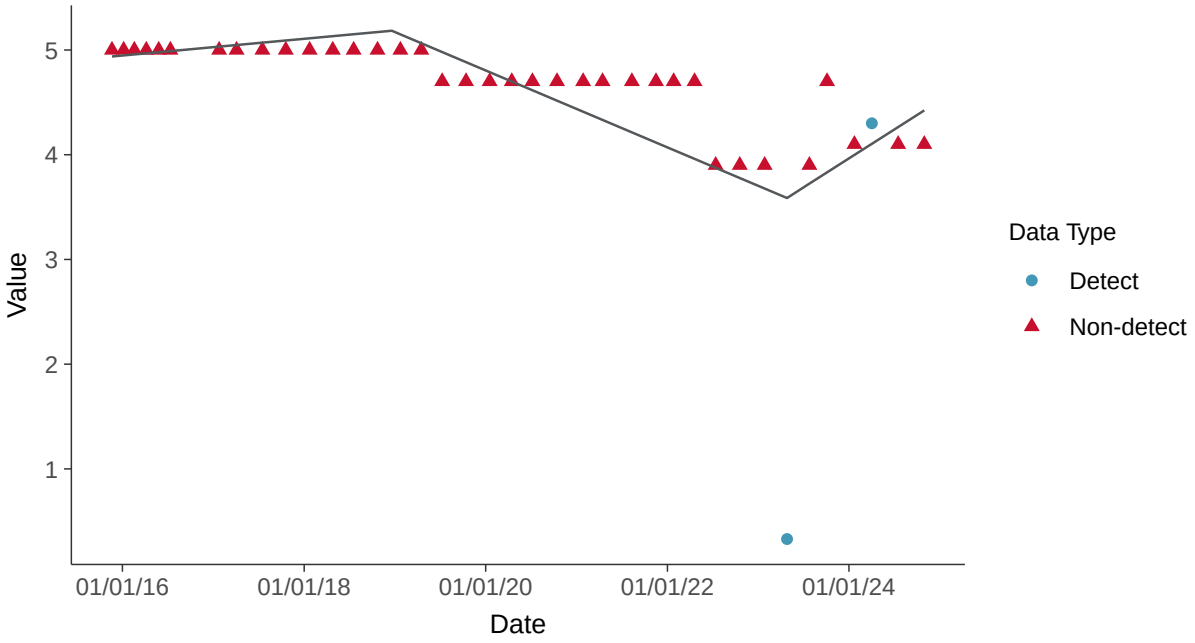
Trend Regression: Piecewise Linear-Linear

Selenium, MW-8 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Selenium, MW-8 (ug/L)

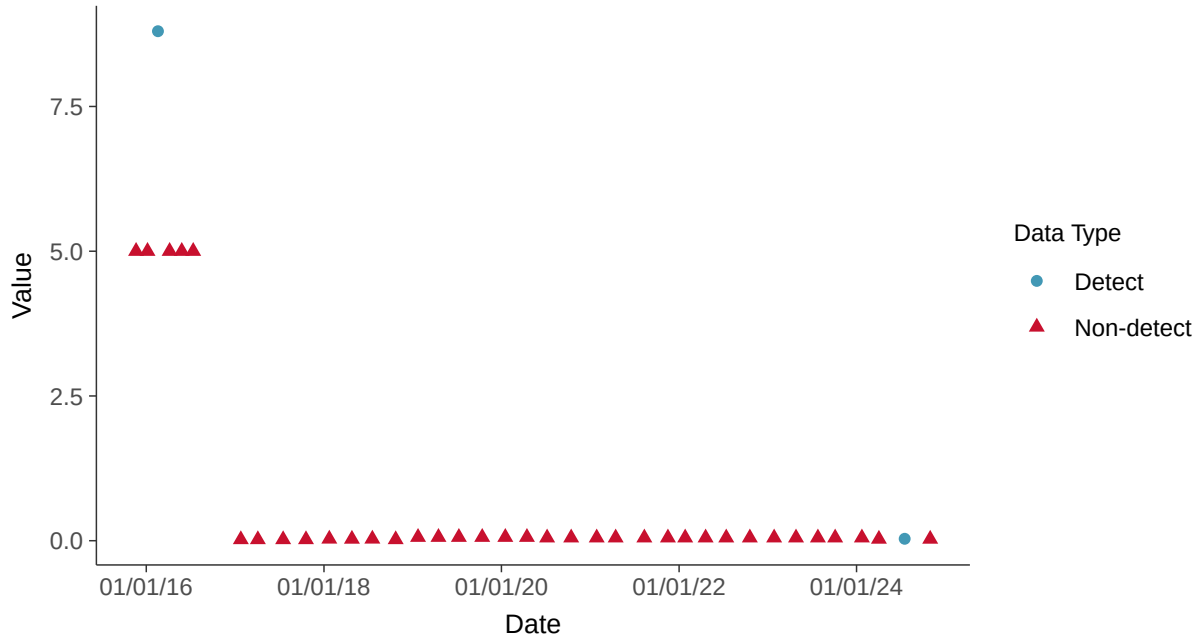


App. IV: Thallium, MW-8

ID: 08_03_124

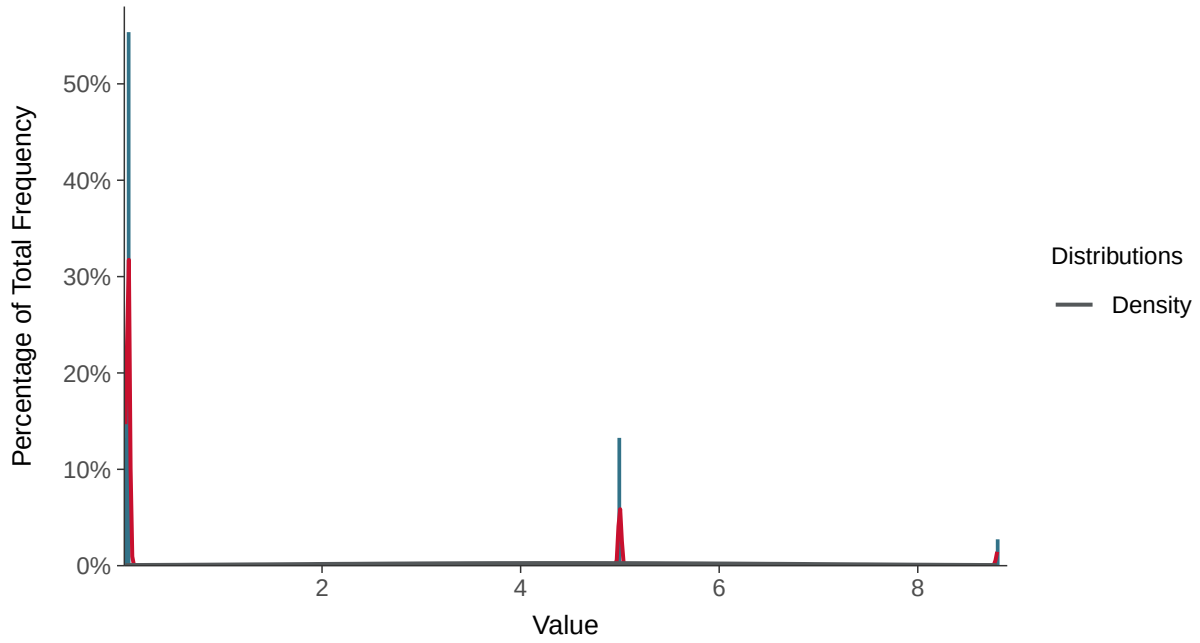
Scatter Plot

Thallium, MW-8 (ug/L)



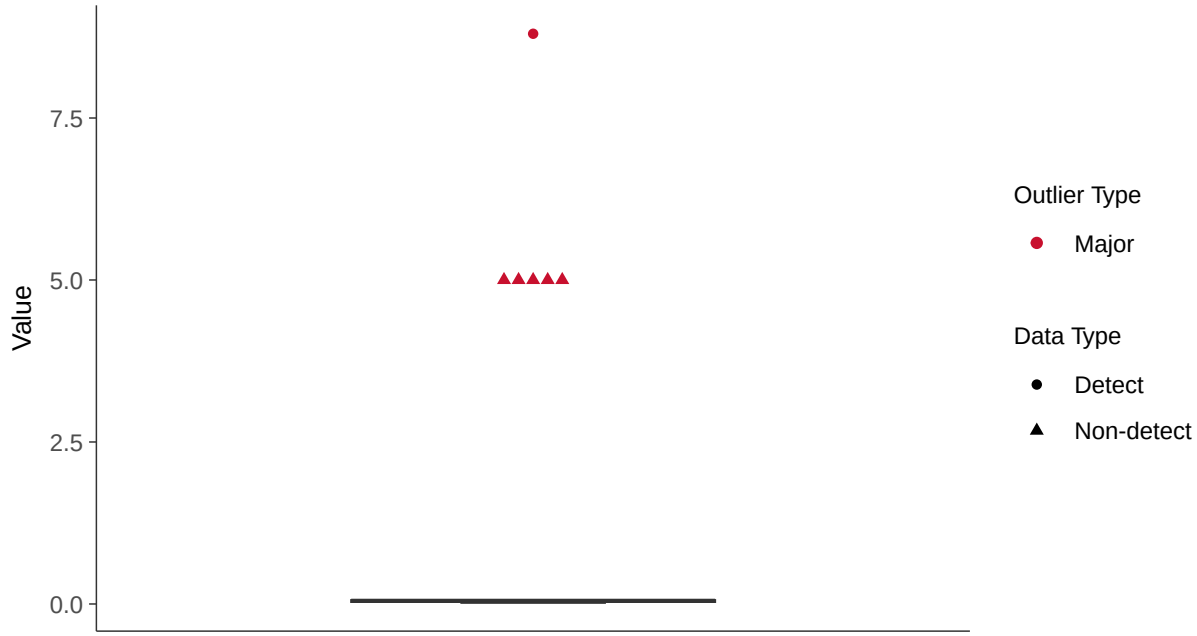
Histogram

Thallium, MW-8 (ug/L)



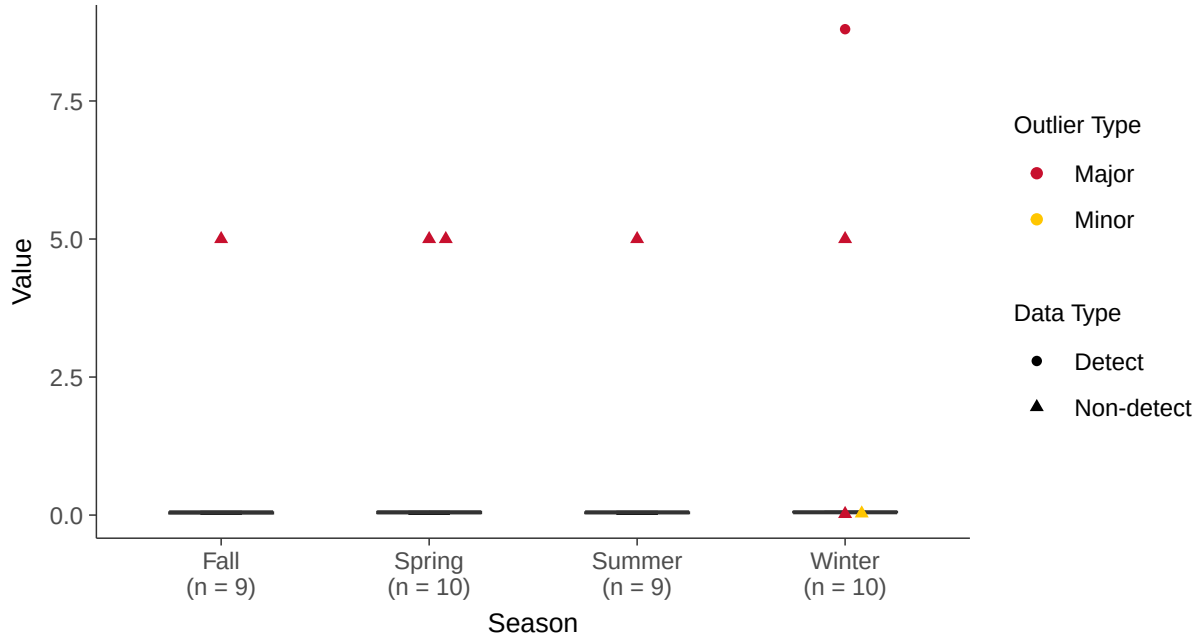
Boxplot

Thallium, MW-8 (ug/L)



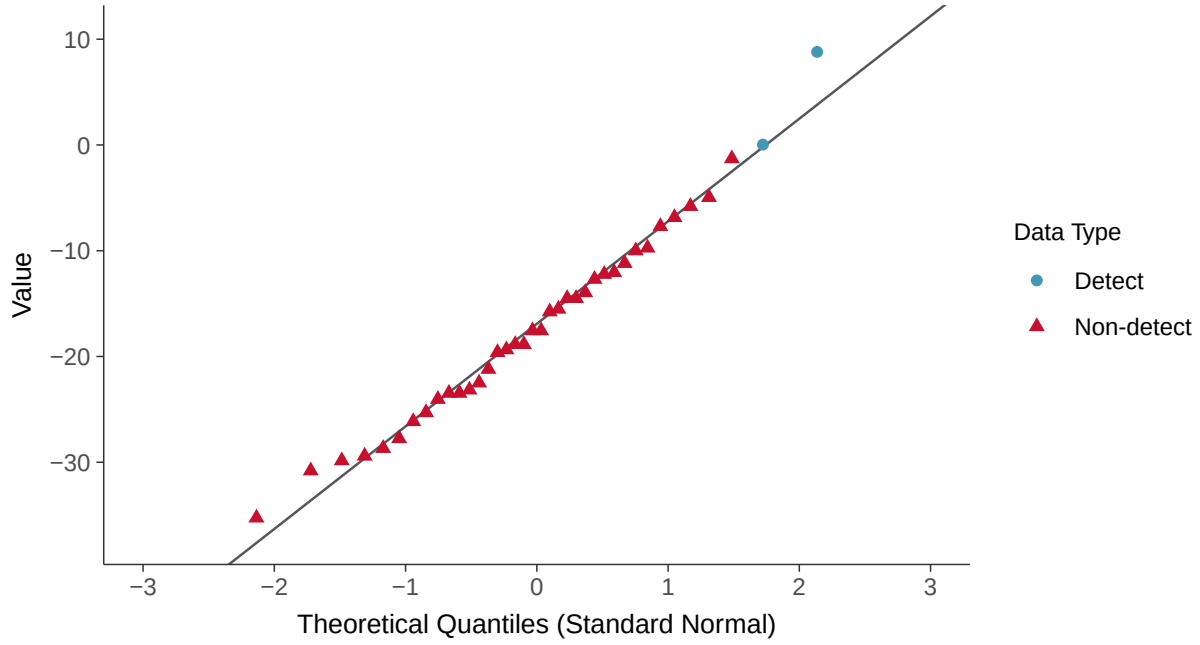
Boxplot by Season

Thallium, MW-8 (ug/L)



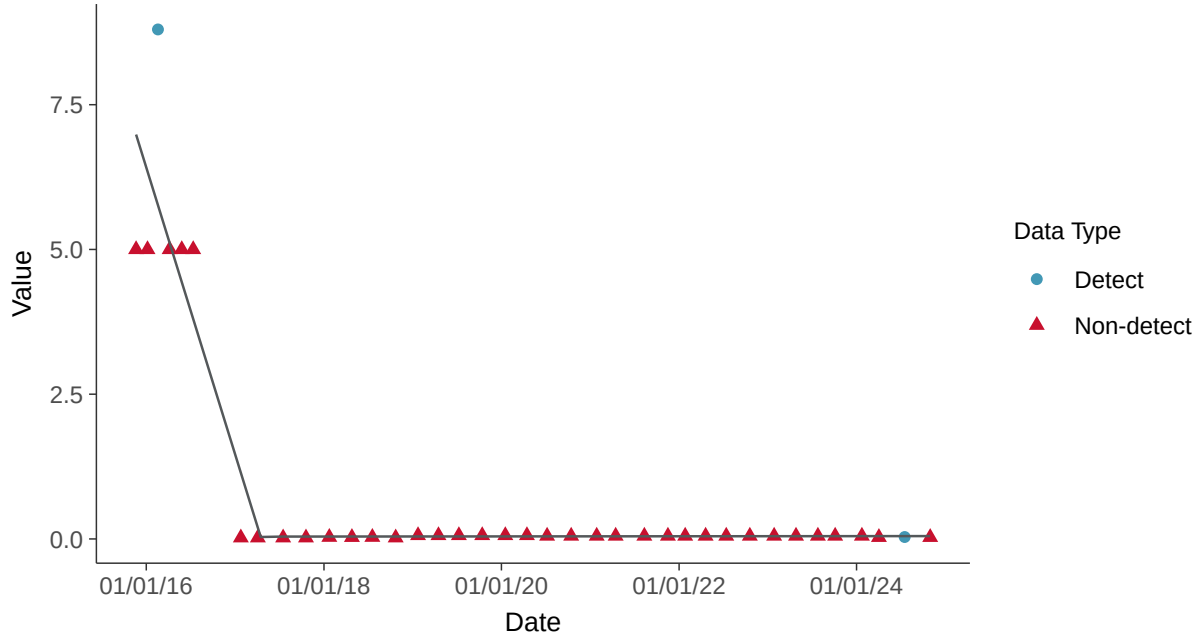
Normal Q-Q plot using ROS Imputed Estimates

Thallium, MW-8 (ug/L)



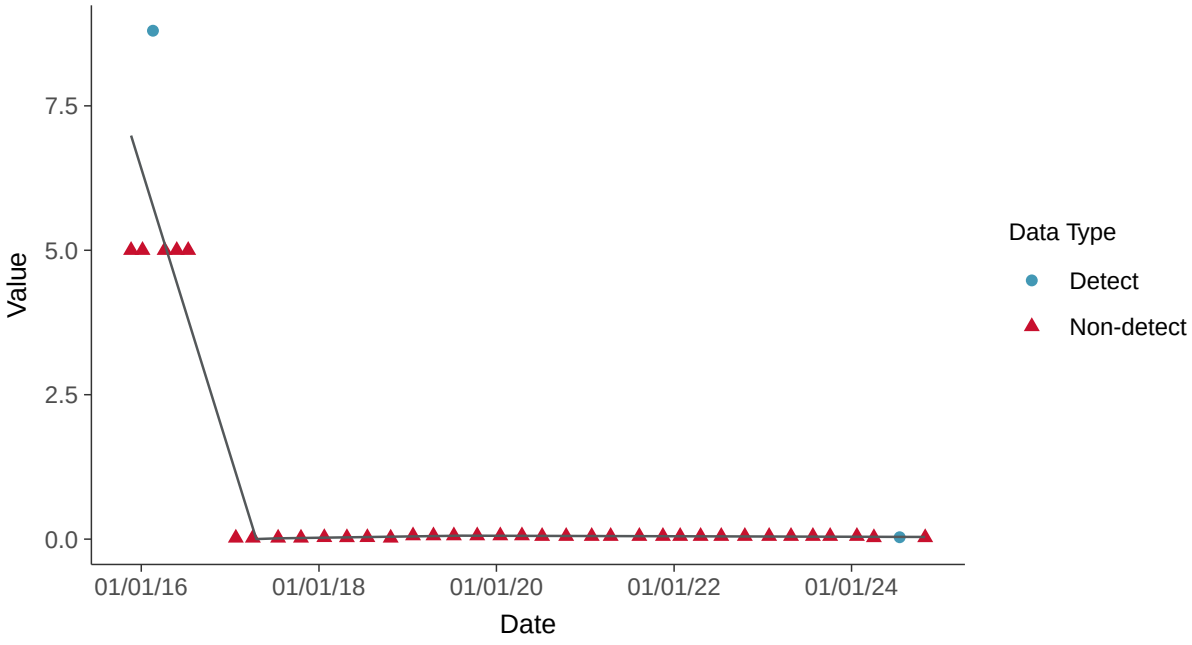
Trend Regression: Piecewise Linear-Linear

Thallium, MW-8 (ug/L)



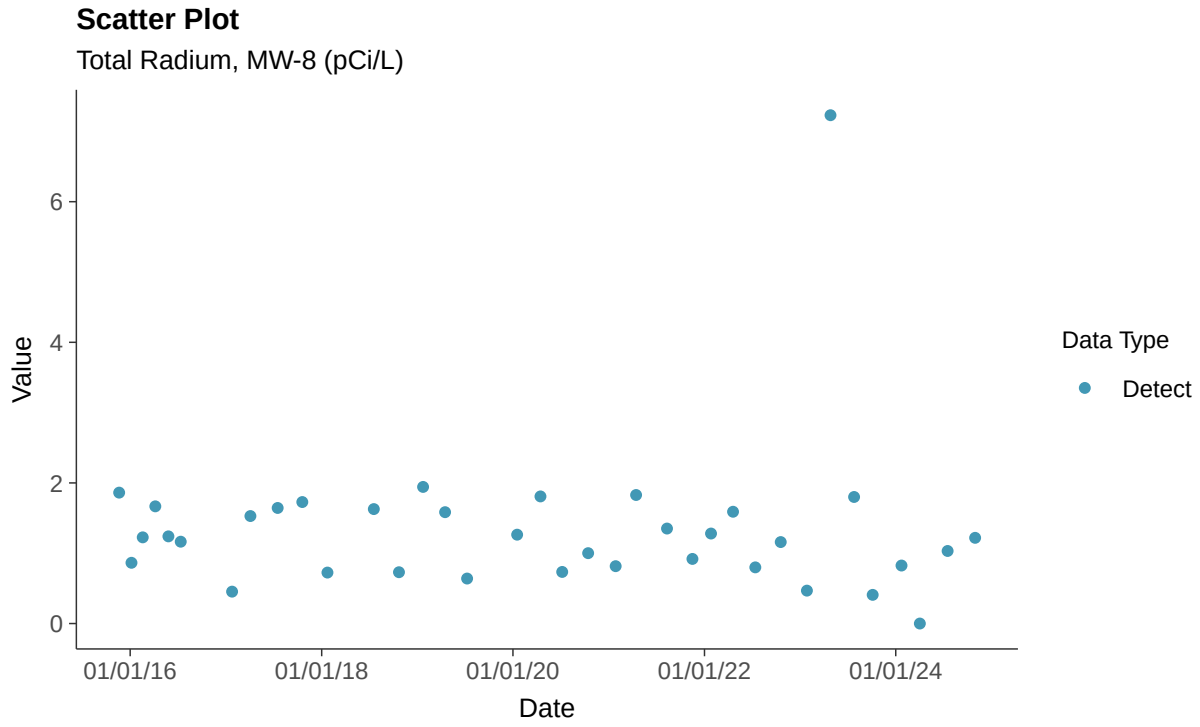
Trend Regression: Piecewise Linear-Linear-Linear

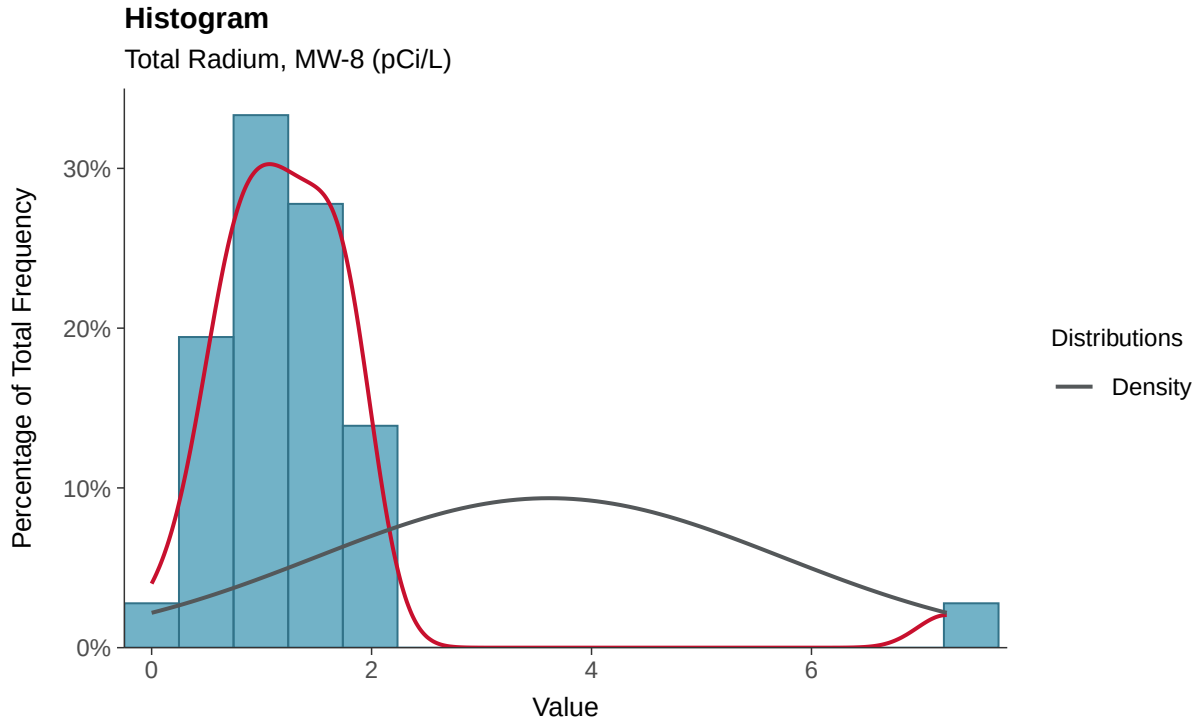
Thallium, MW-8 (ug/L)



App. IV: Total Radium, MW-8

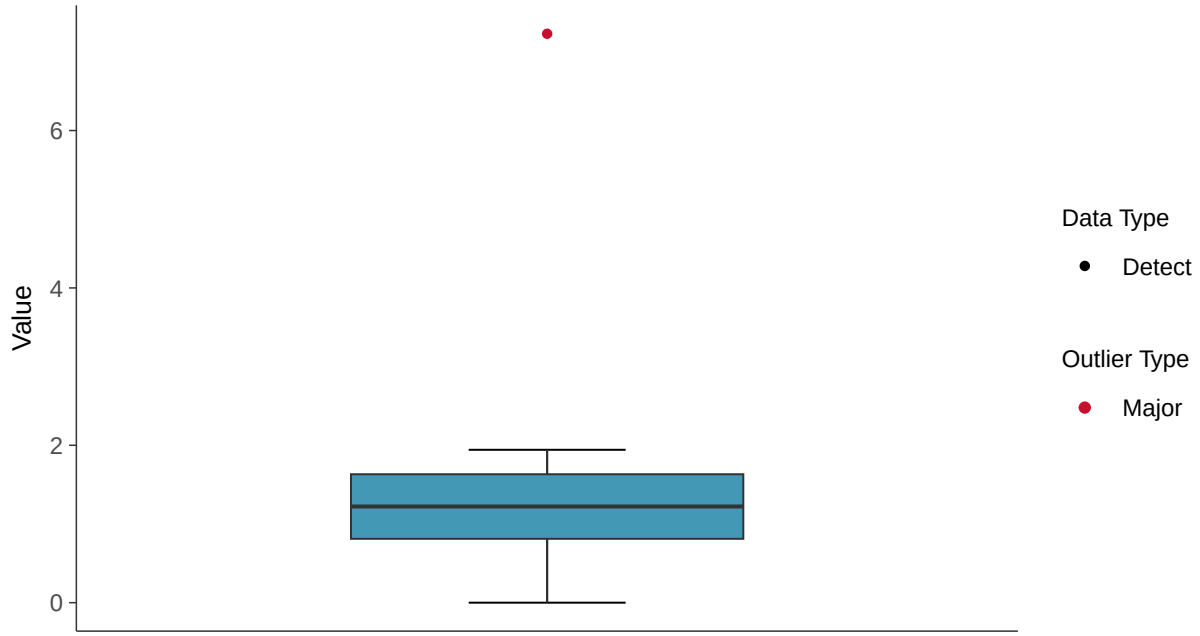
ID: 08_03_126





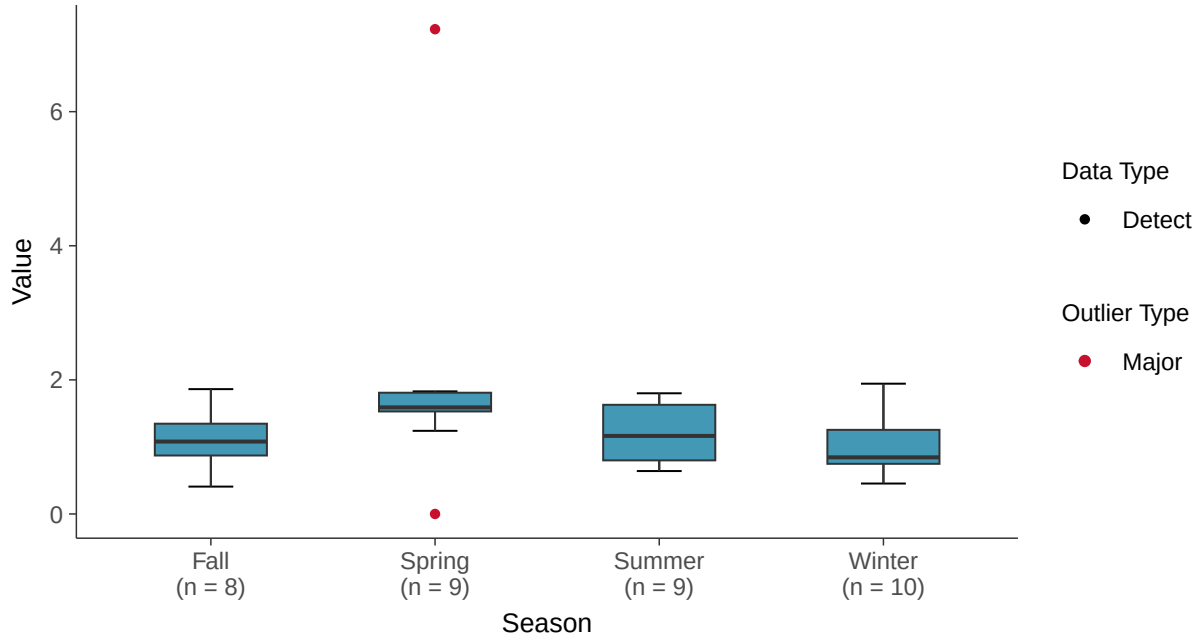
Boxplot

Total Radium, MW-8 (pCi/L)



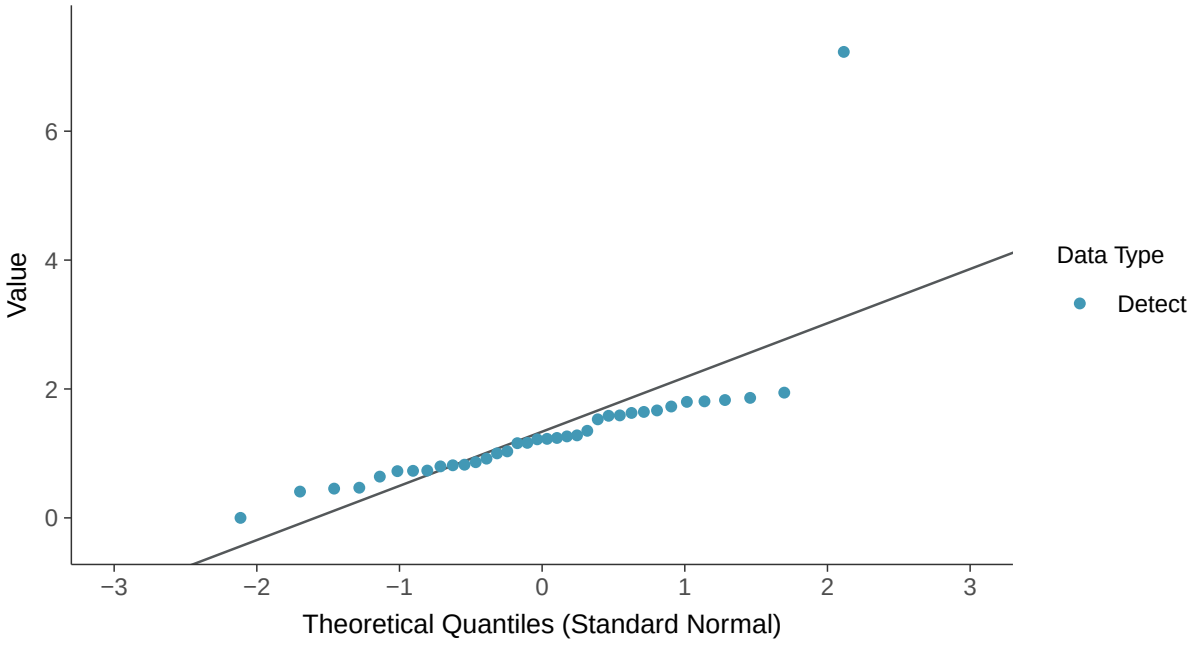
Boxplot by Season

Total Radium, MW-8 (pCi/L)



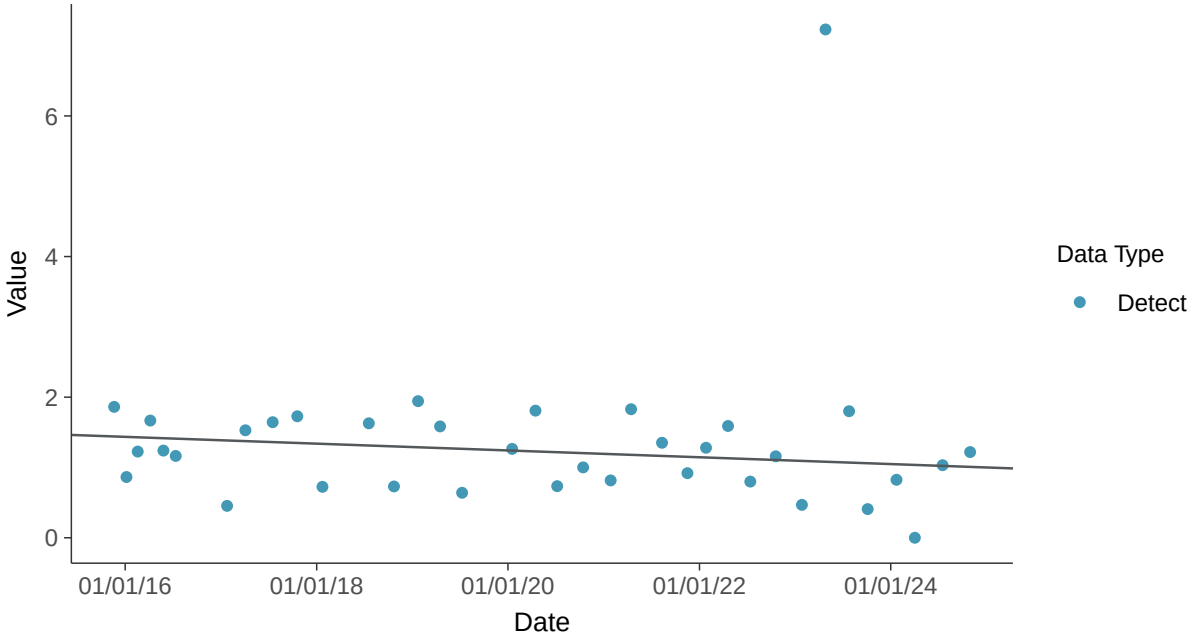
Normal Q-Q plot

Total Radium, MW-8 (pCi/L)



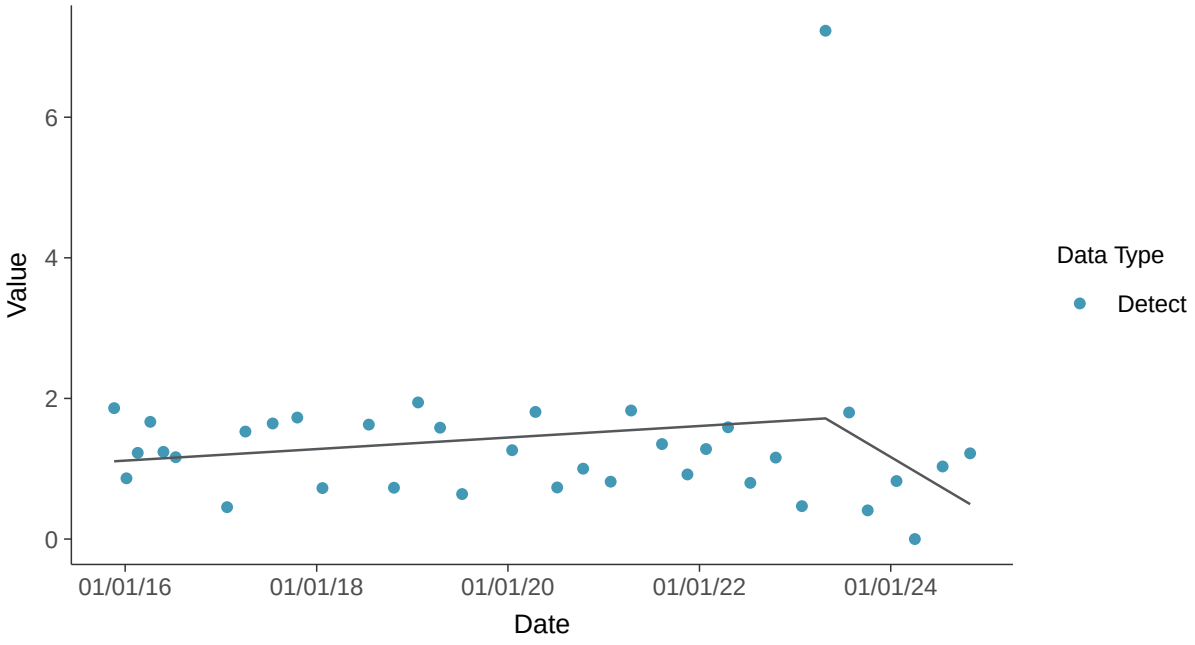
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-8 (pCi/L)



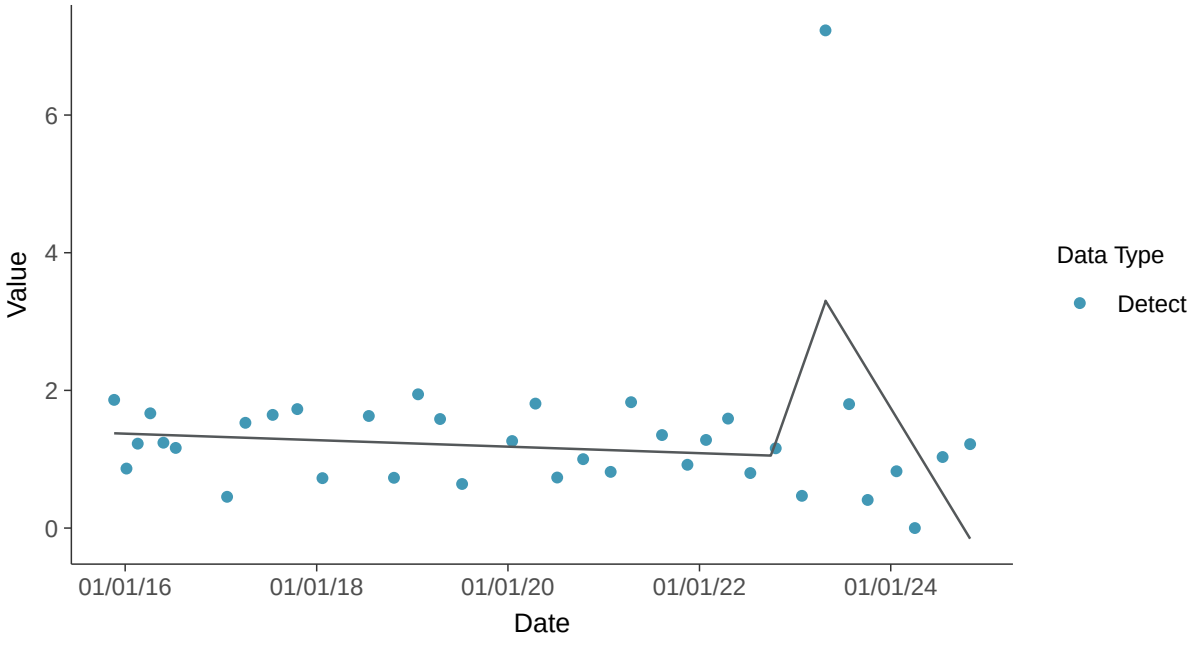
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-8 (pCi/L)



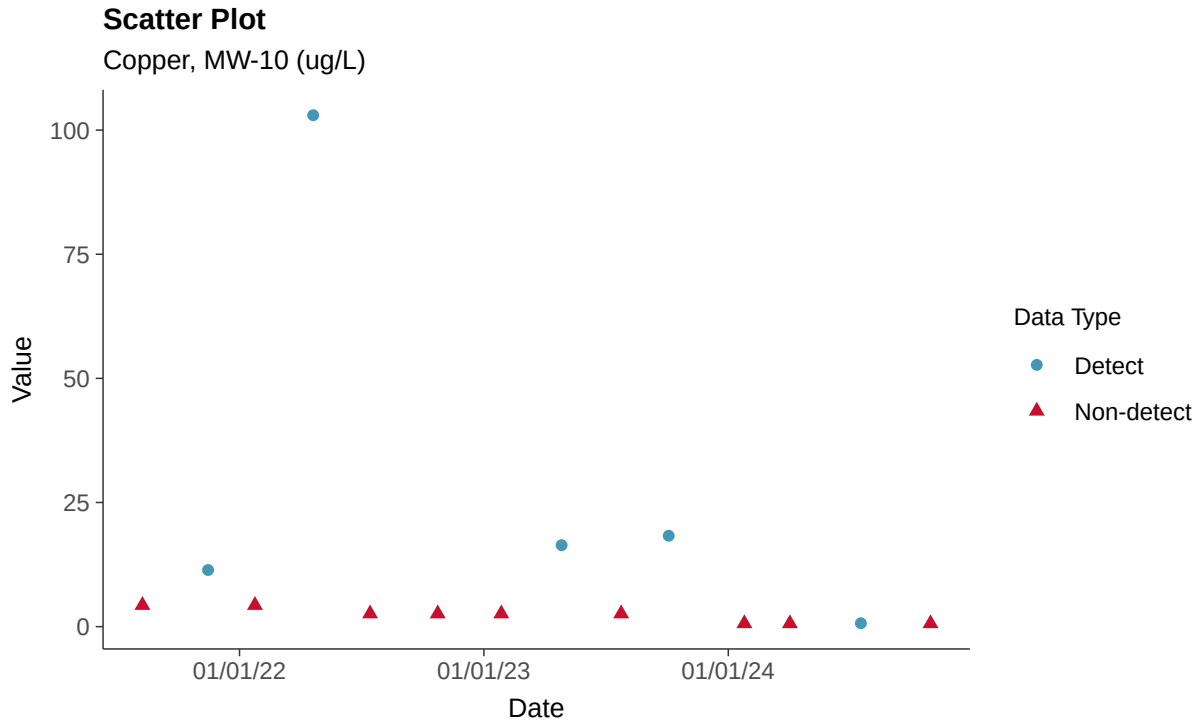
Trend Regression: Piecewise Linear-Linear-Linear

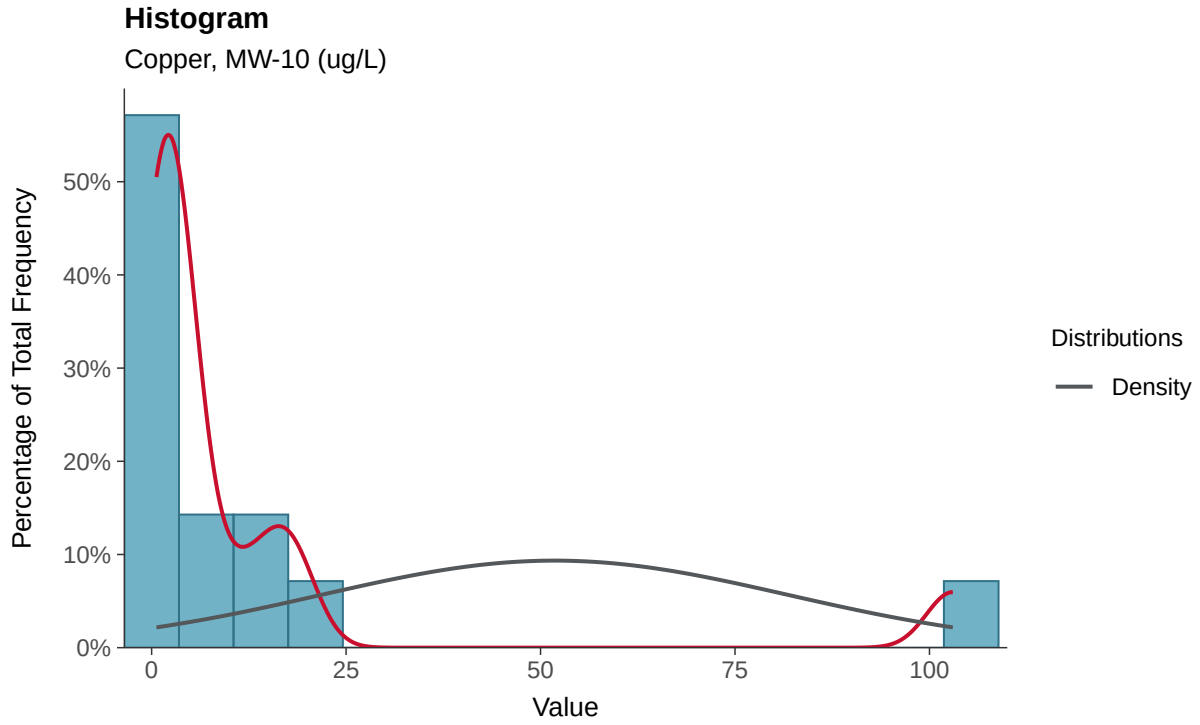
Total Radium, MW-8 (pCi/L)



App. I Metals: Copper, MW-10

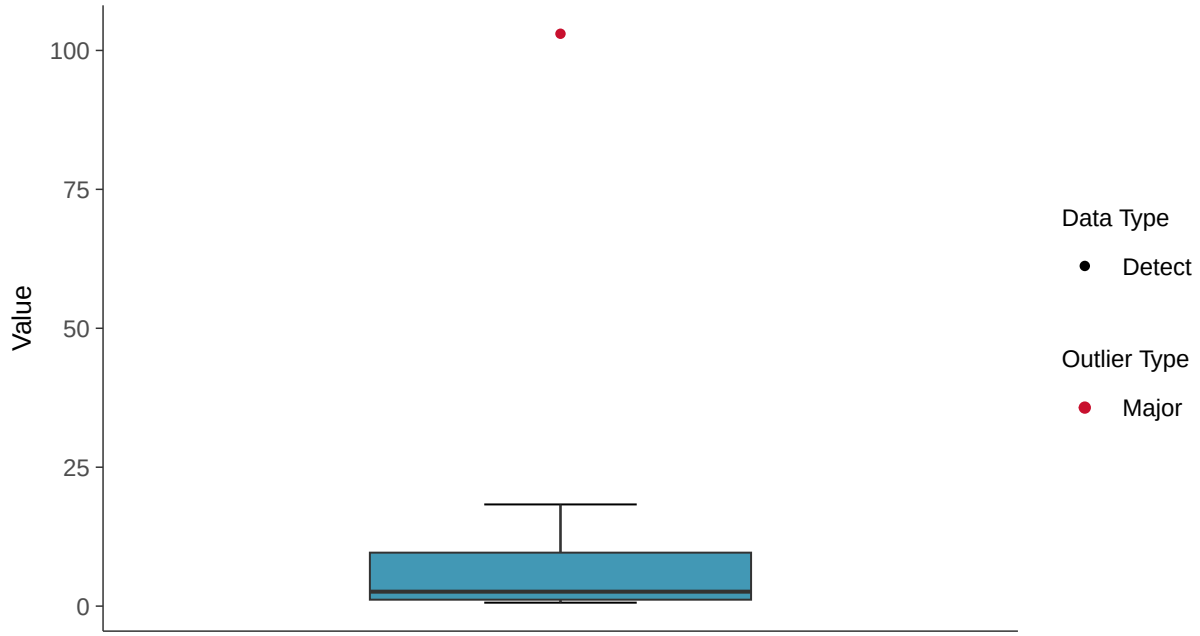
ID: 09_01_111





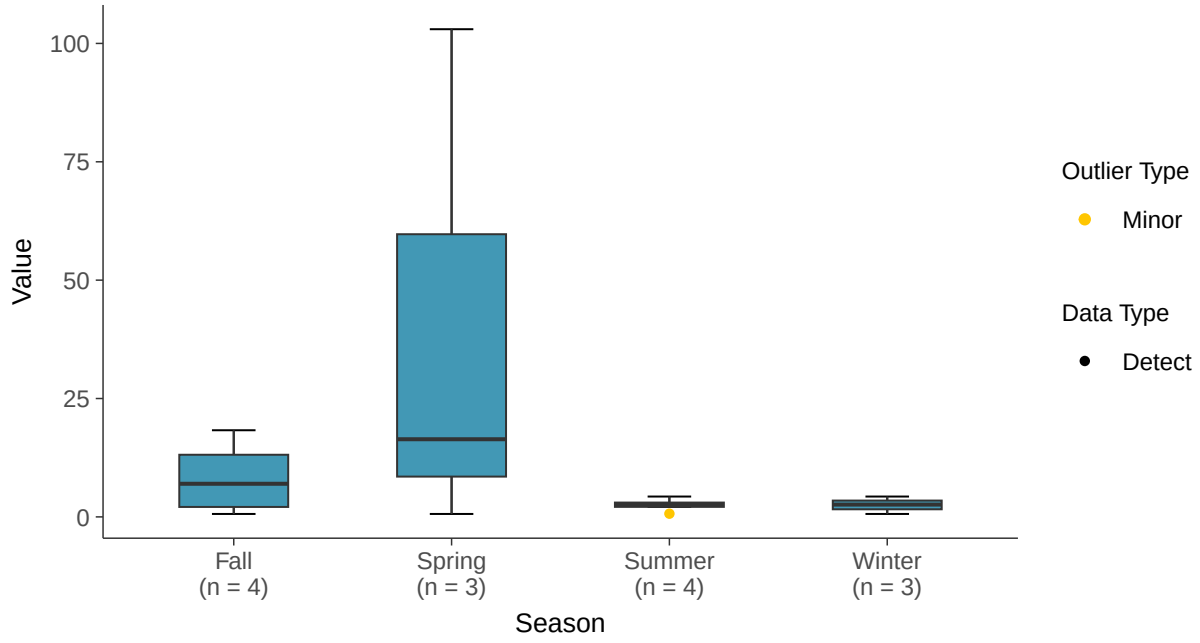
Boxplot

Copper, MW-10 (ug/L)



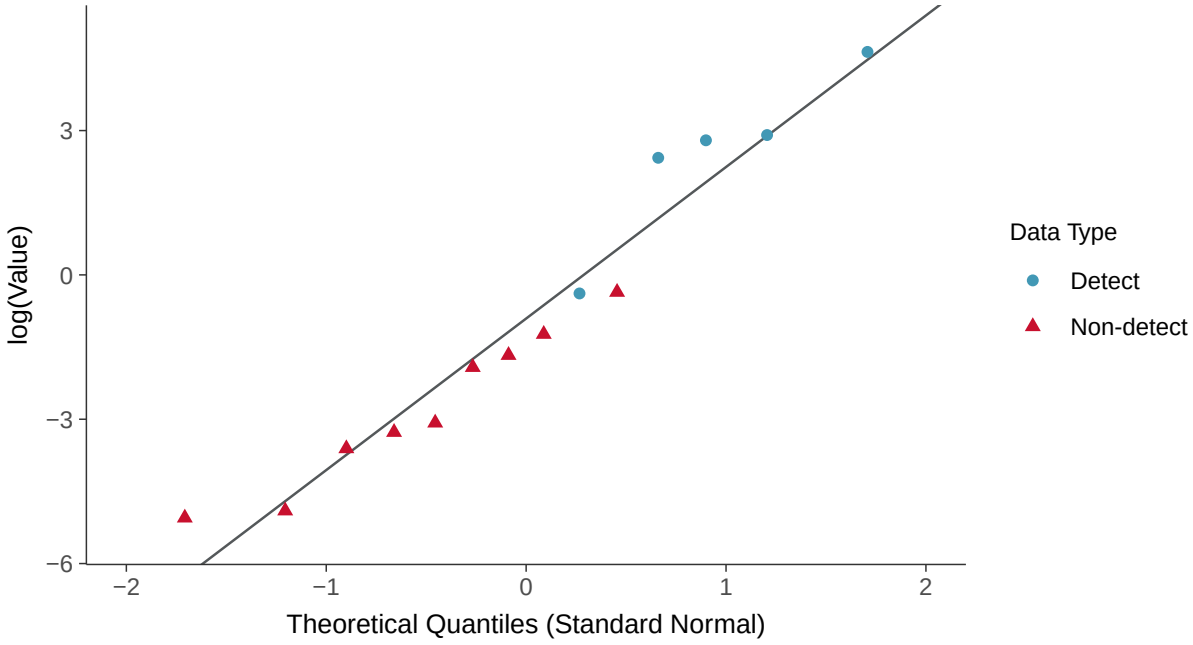
Boxplot by Season

Copper, MW-10 (ug/L)



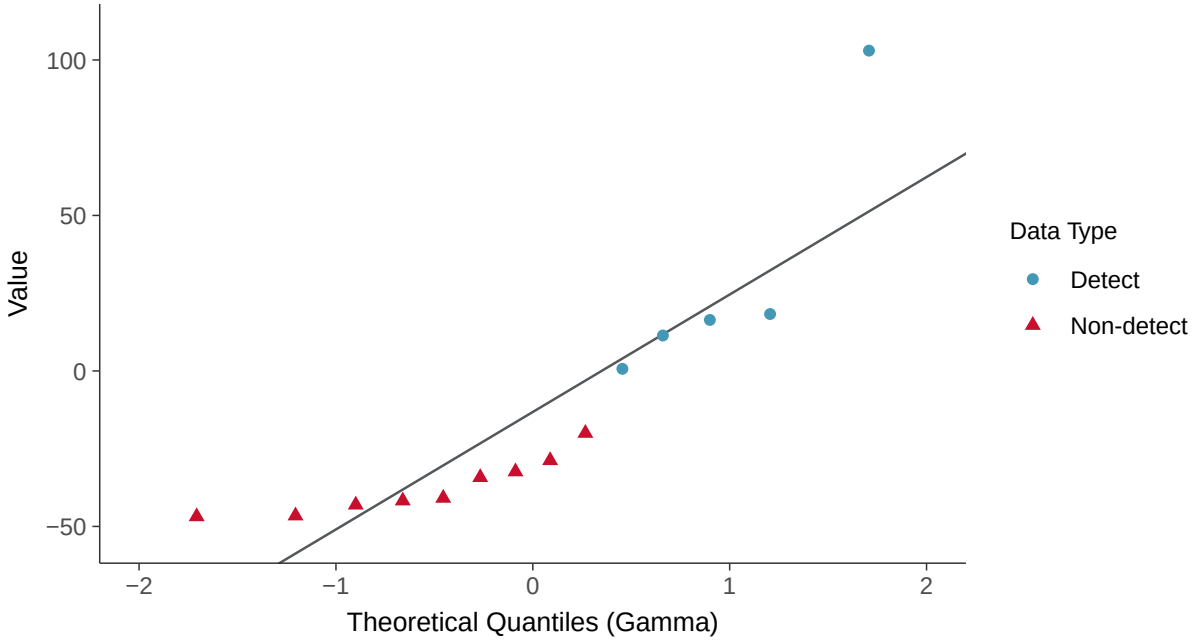
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-10 (ug/L)



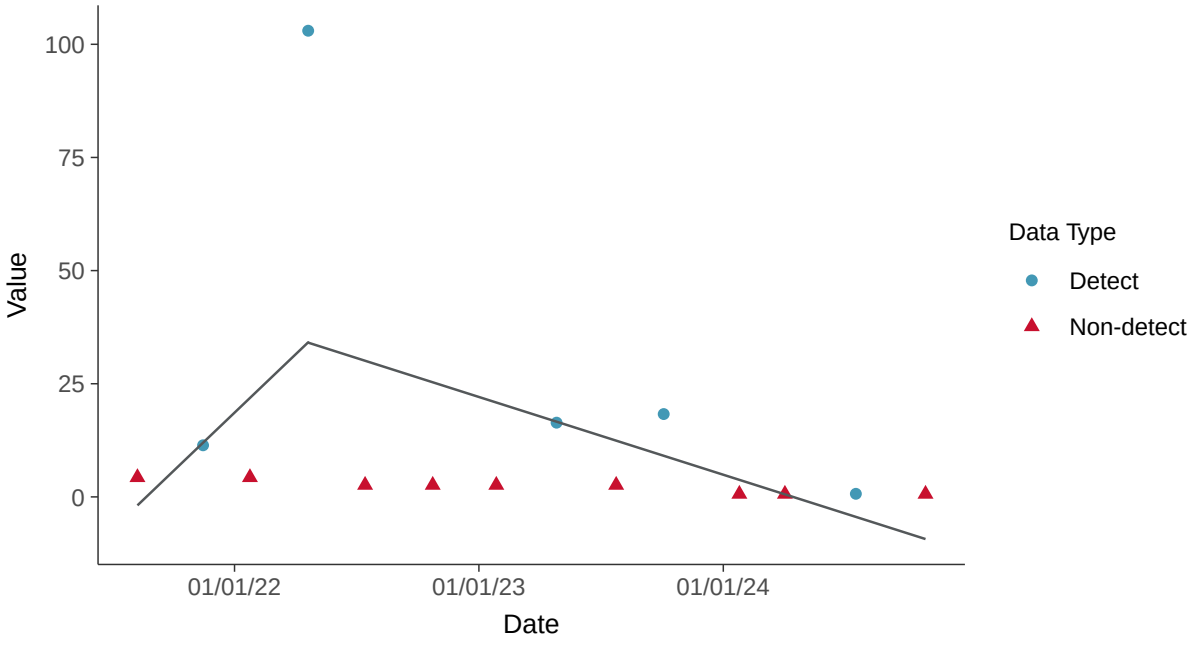
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-10 (ug/L)



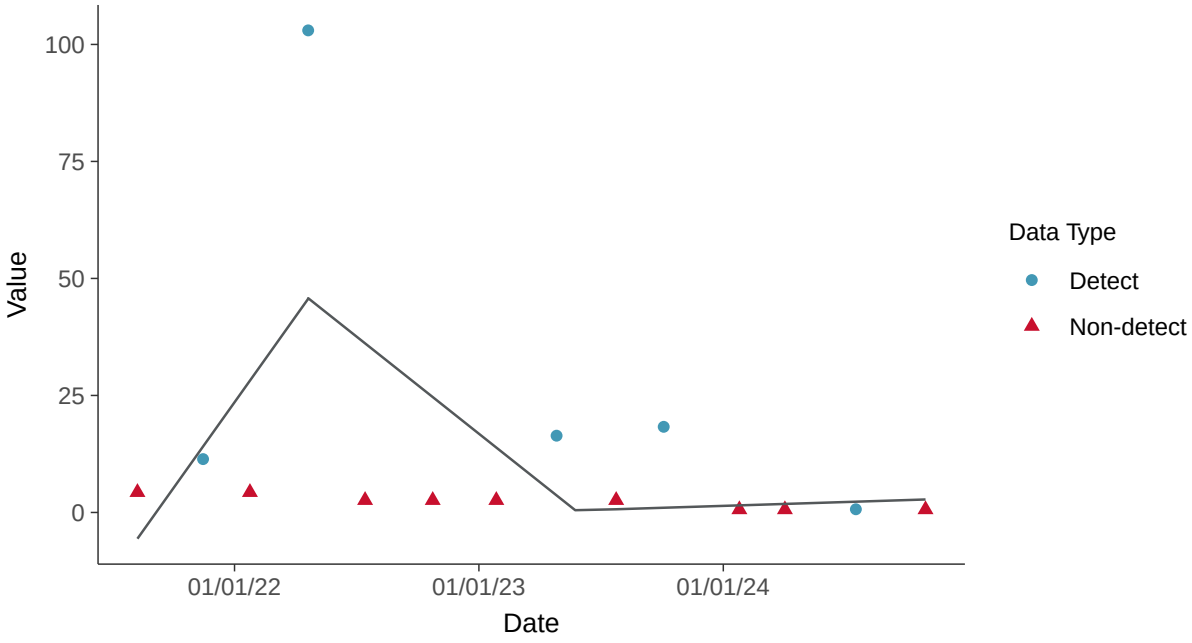
Trend Regression: Piecewise Linear-Linear

Copper, MW-10 (ug/L)



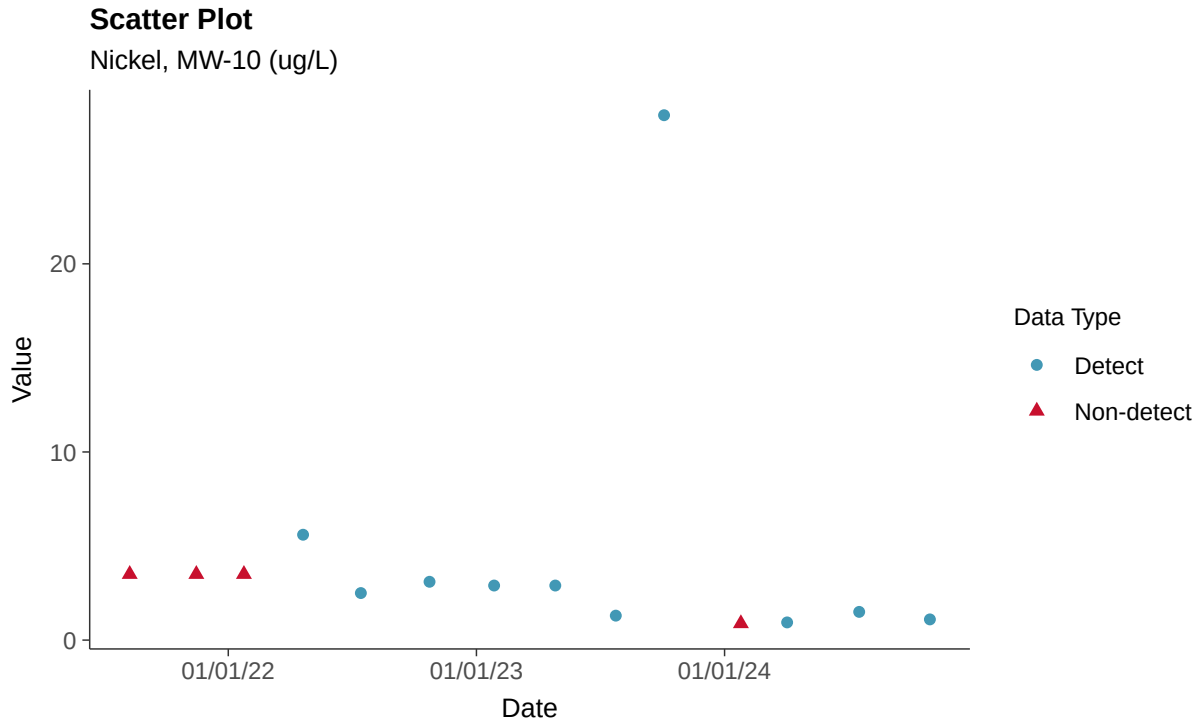
Trend Regression: Piecewise Linear-Linear-Linear

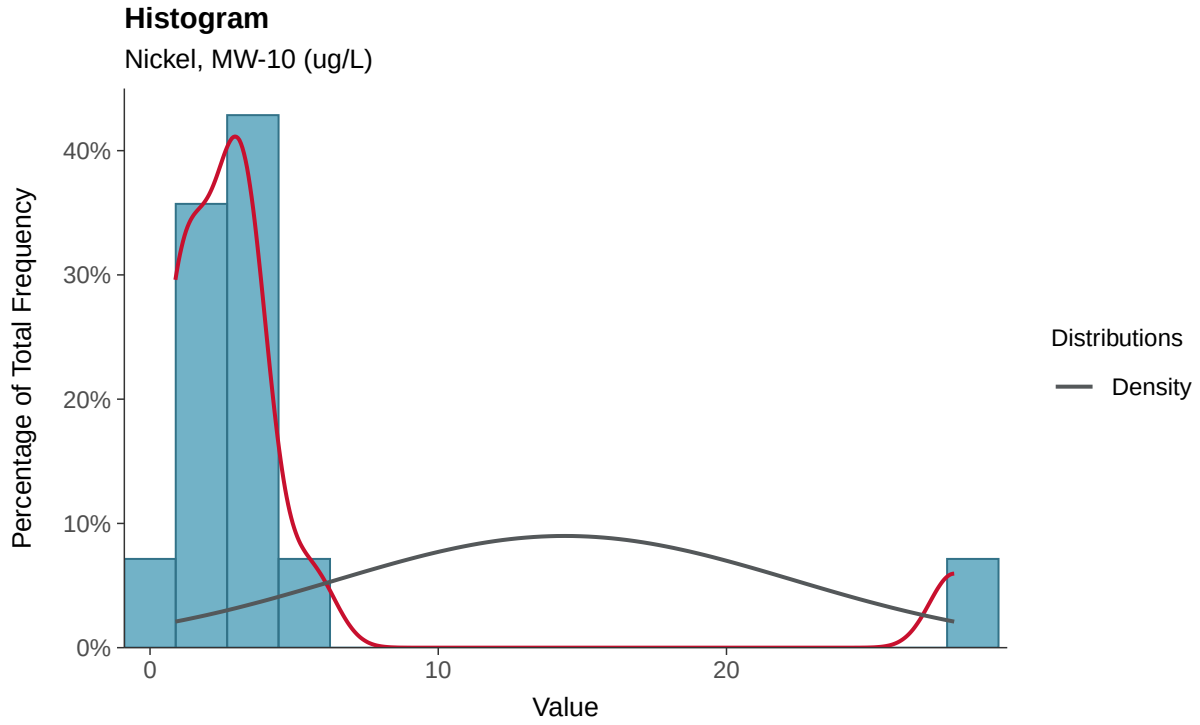
Copper, MW-10 (ug/L)



App. I Metals: Nickel, MW-10

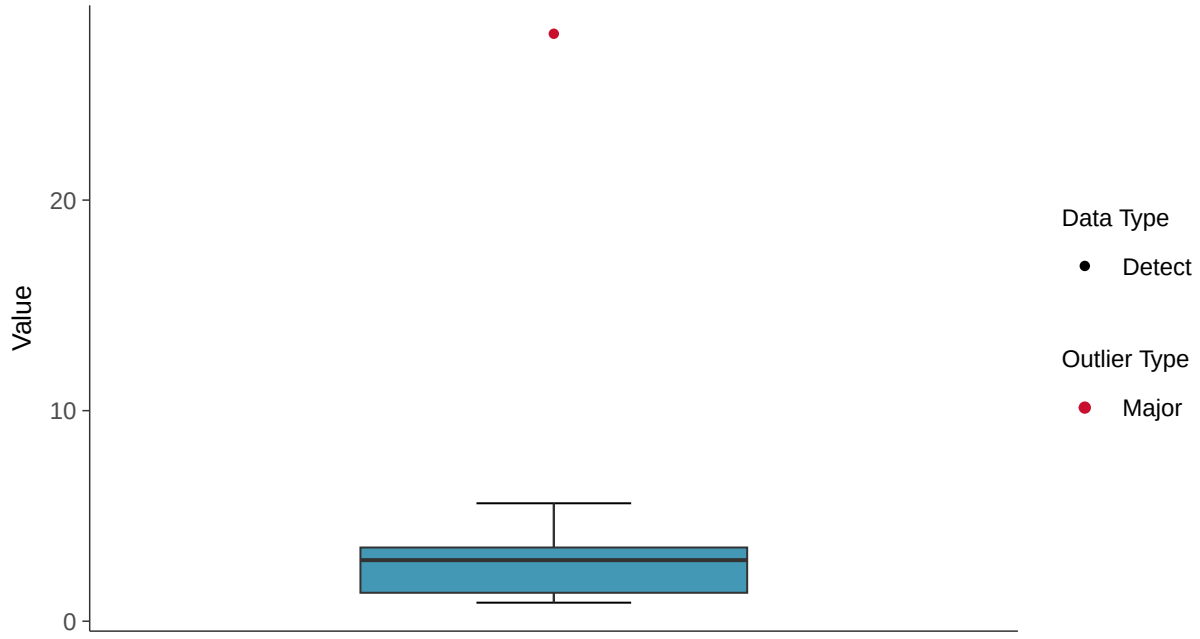
ID: 09_01_117





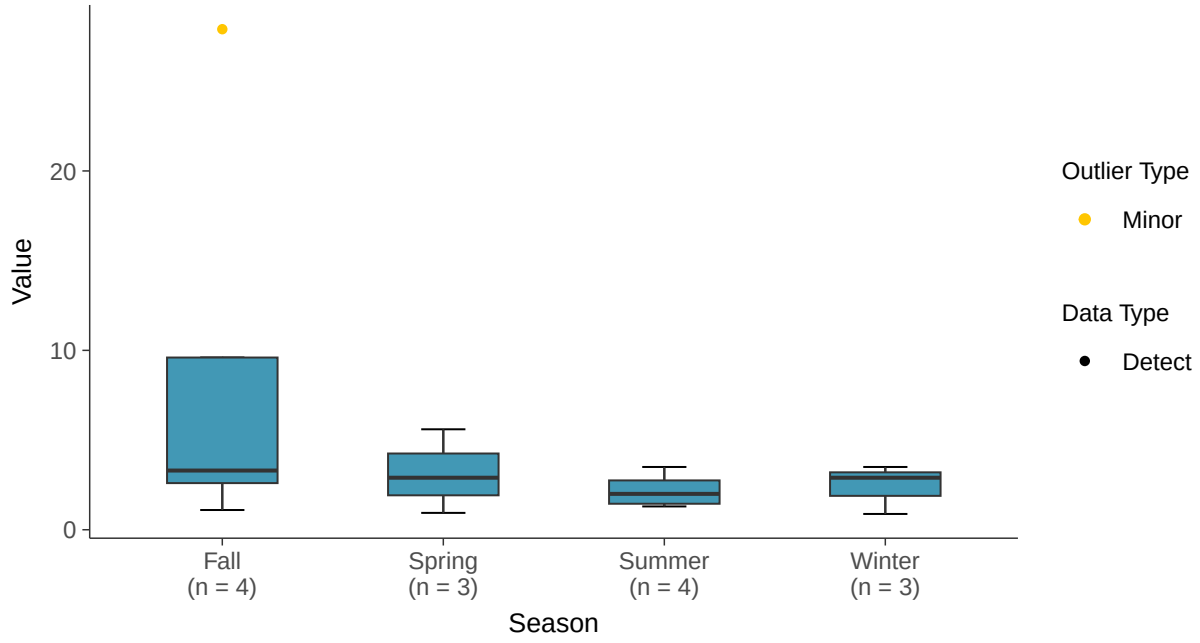
Boxplot

Nickel, MW-10 (ug/L)



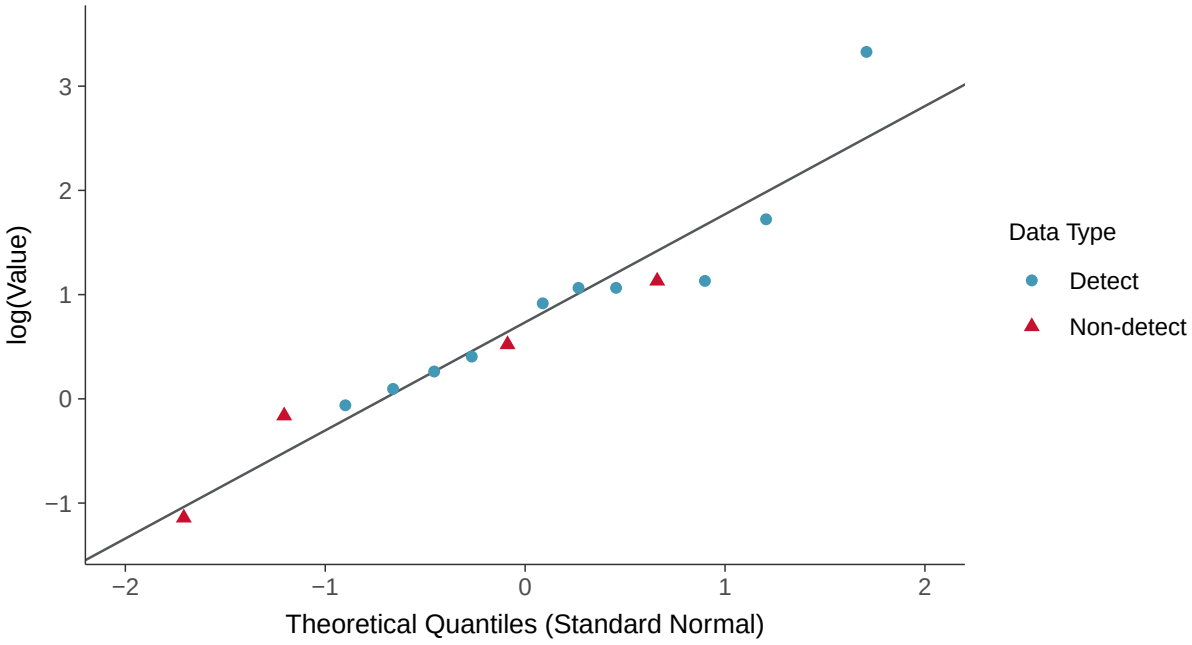
Boxplot by Season

Nickel, MW-10 (ug/L)



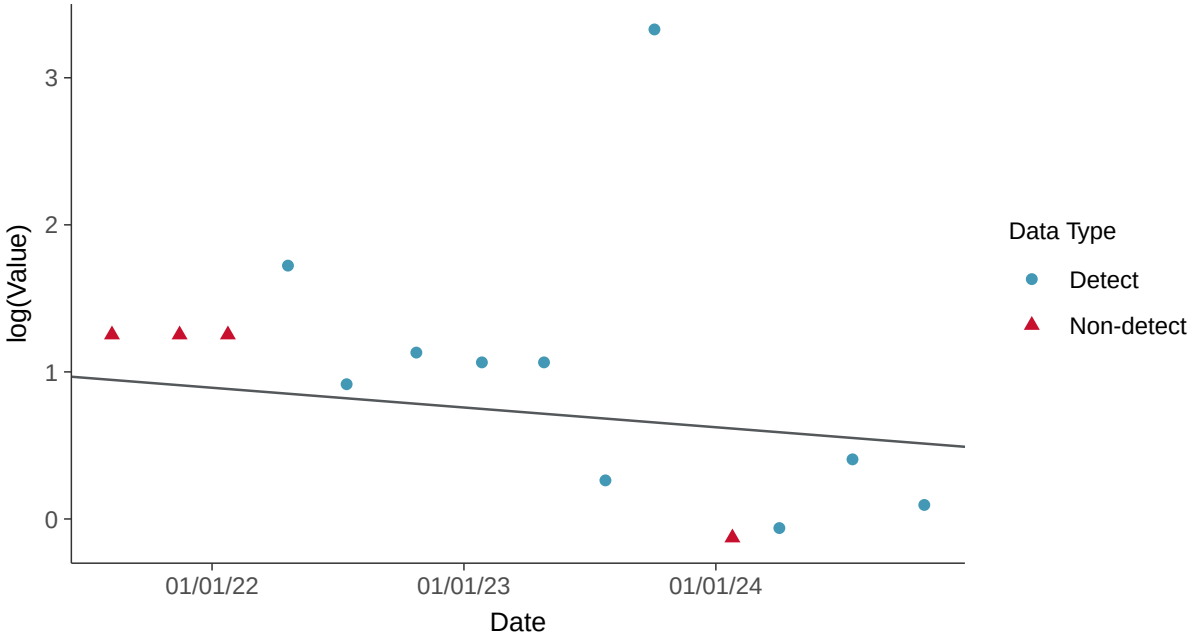
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-10 (ug/L)



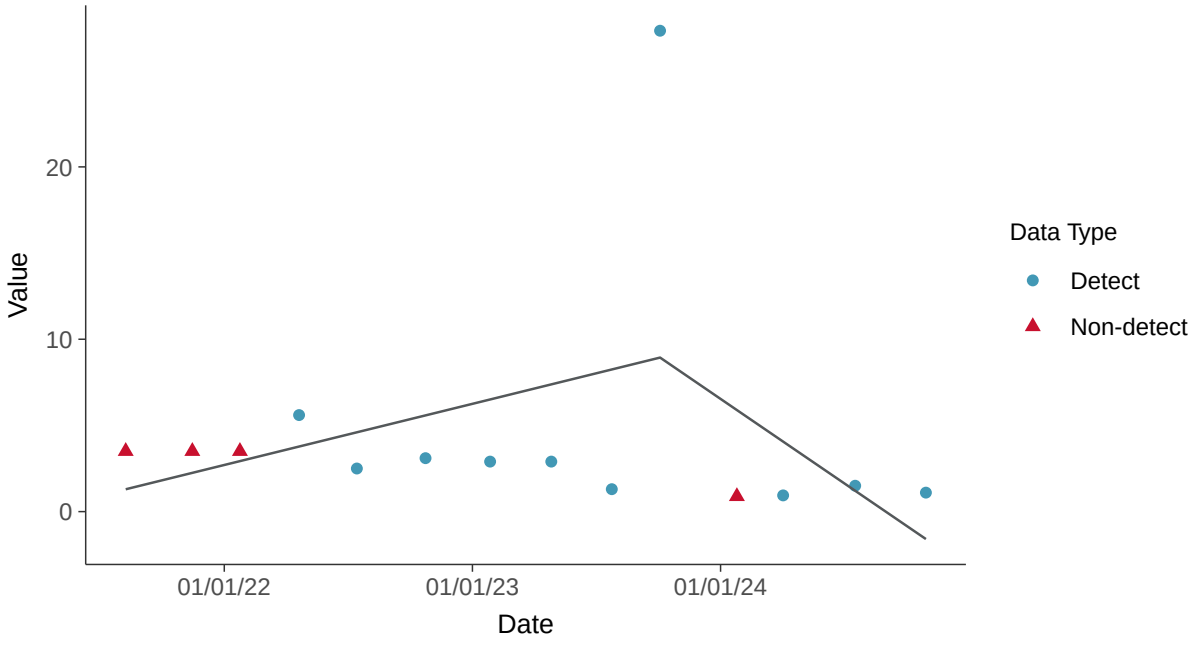
Trend Regression: Lognormal MLE

Nickel, MW-10 (ug/L)



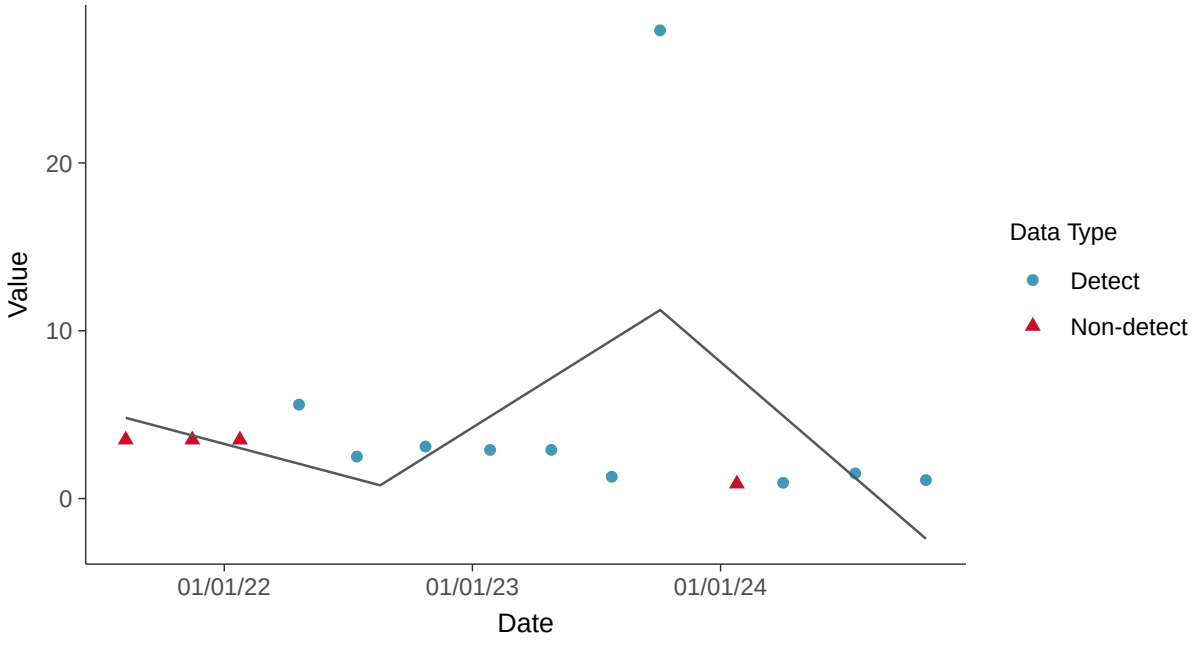
Trend Regression: Piecewise Linear-Linear

Nickel, MW-10 (ug/L)



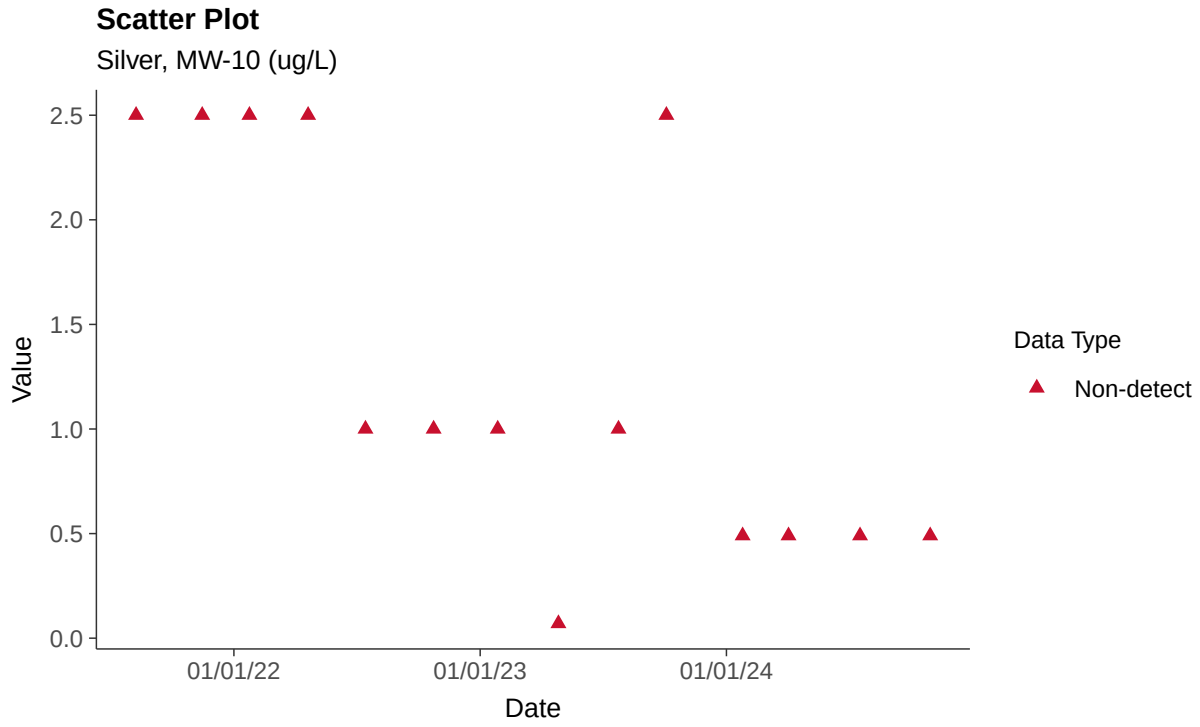
Trend Regression: Piecewise Linear-Linear-Linear

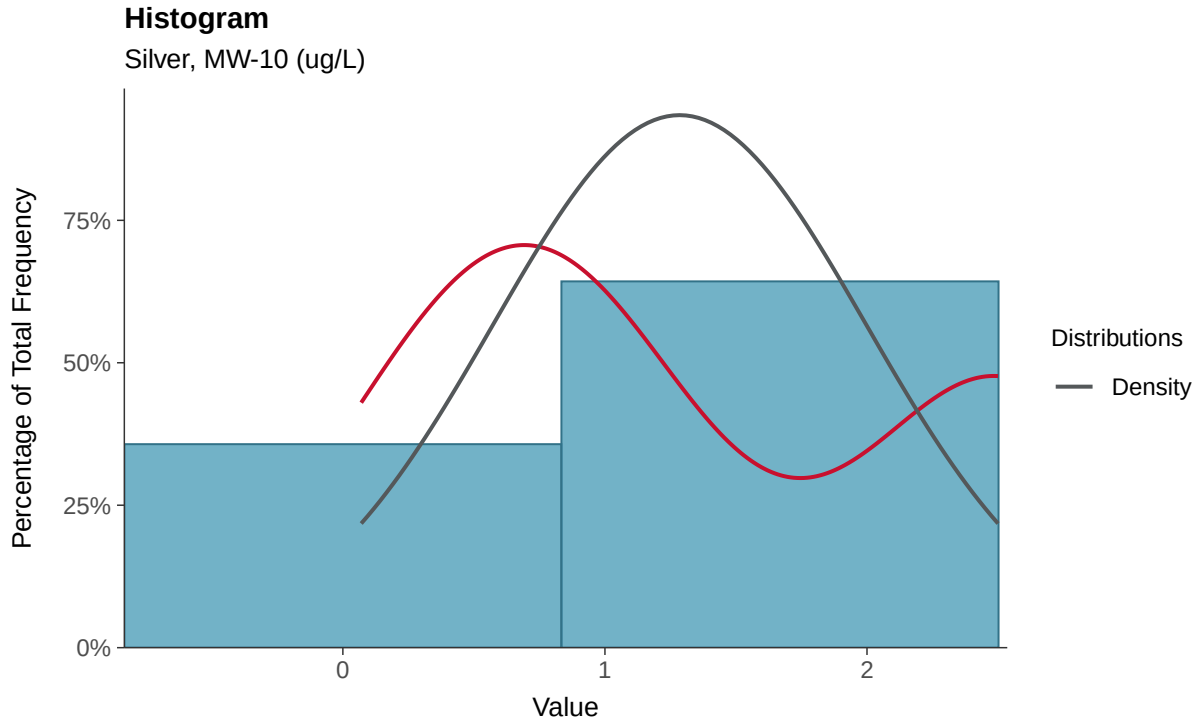
Nickel, MW-10 (ug/L)



App. I Metals: Silver, MW-10

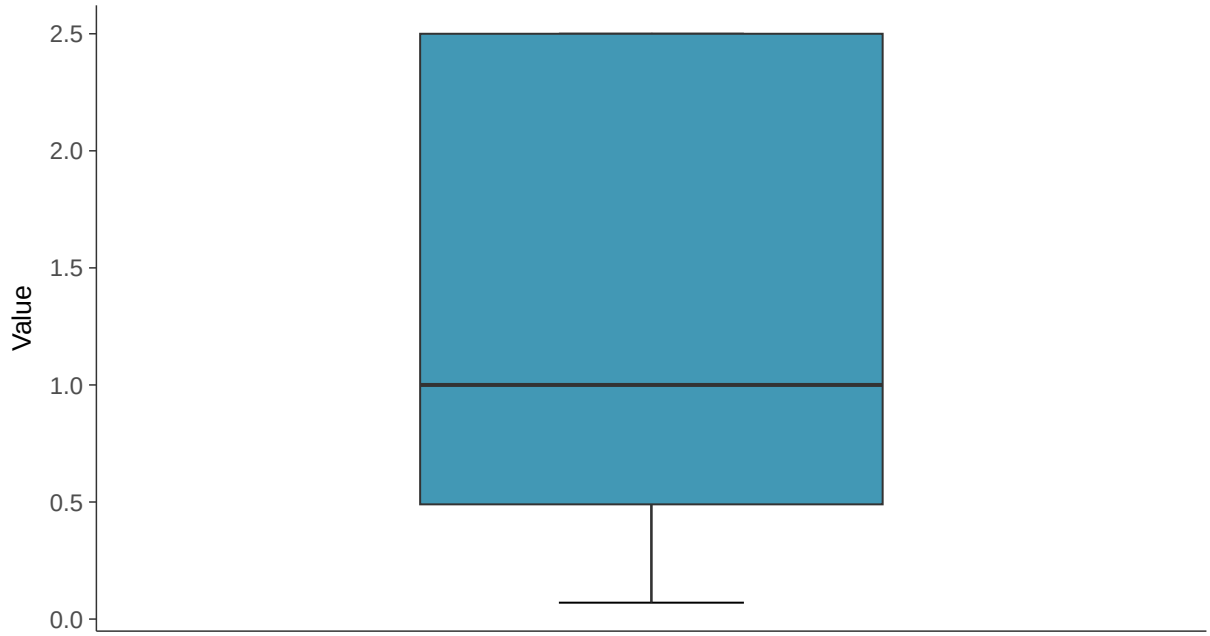
ID: 09_01_122





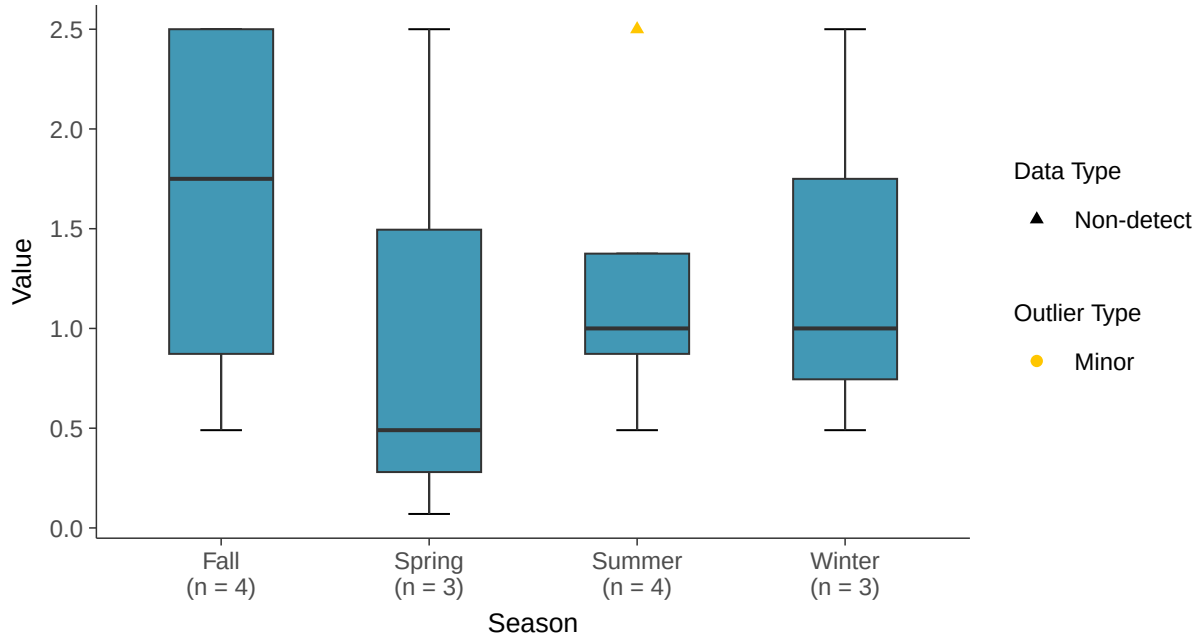
Boxplot

Silver, MW-10 (ug/L)



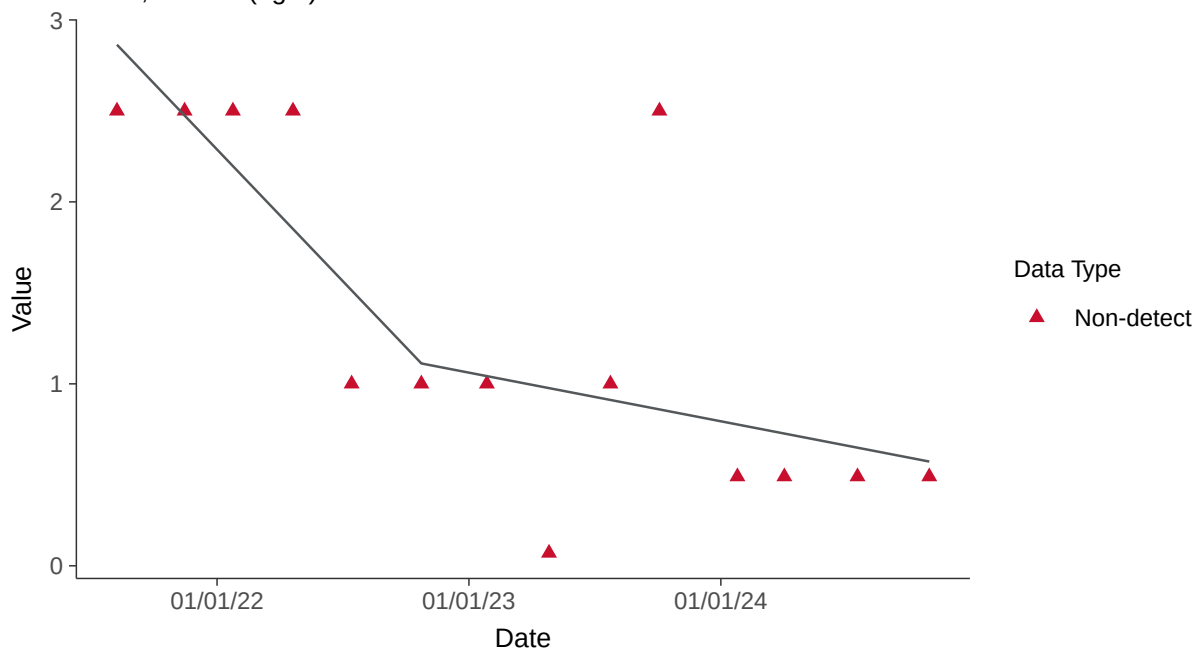
Boxplot by Season

Silver, MW-10 (ug/L)



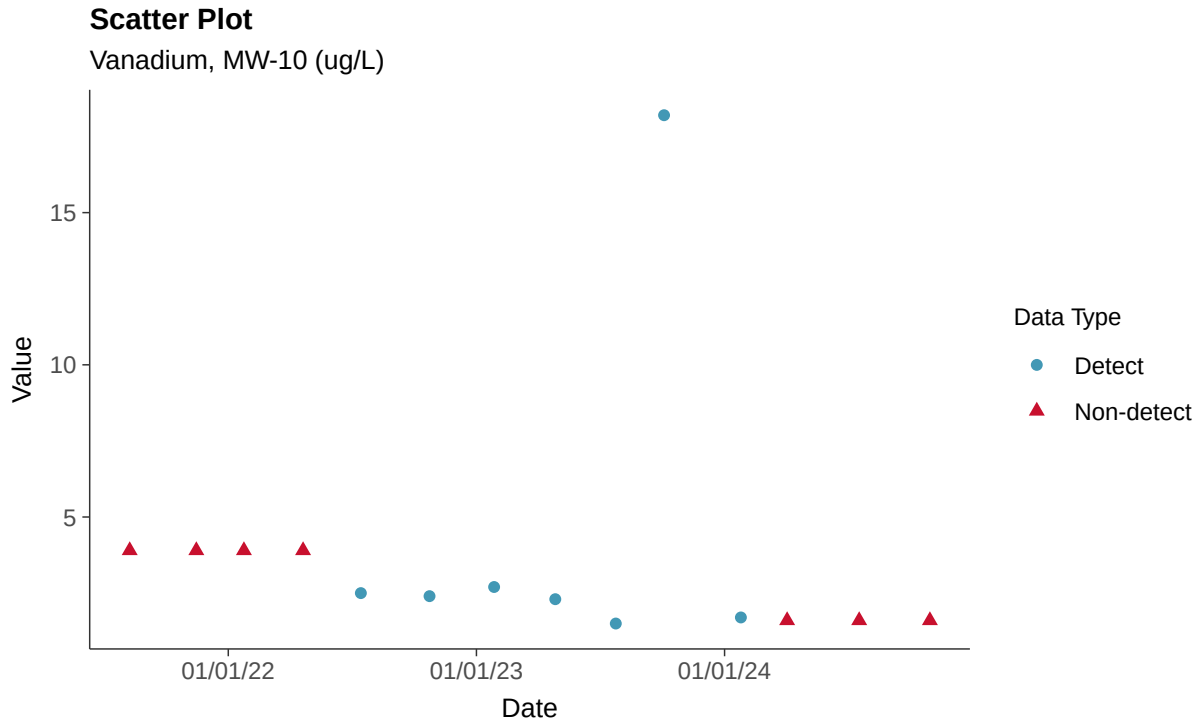
Trend Regression: Piecewise Linear-Linear

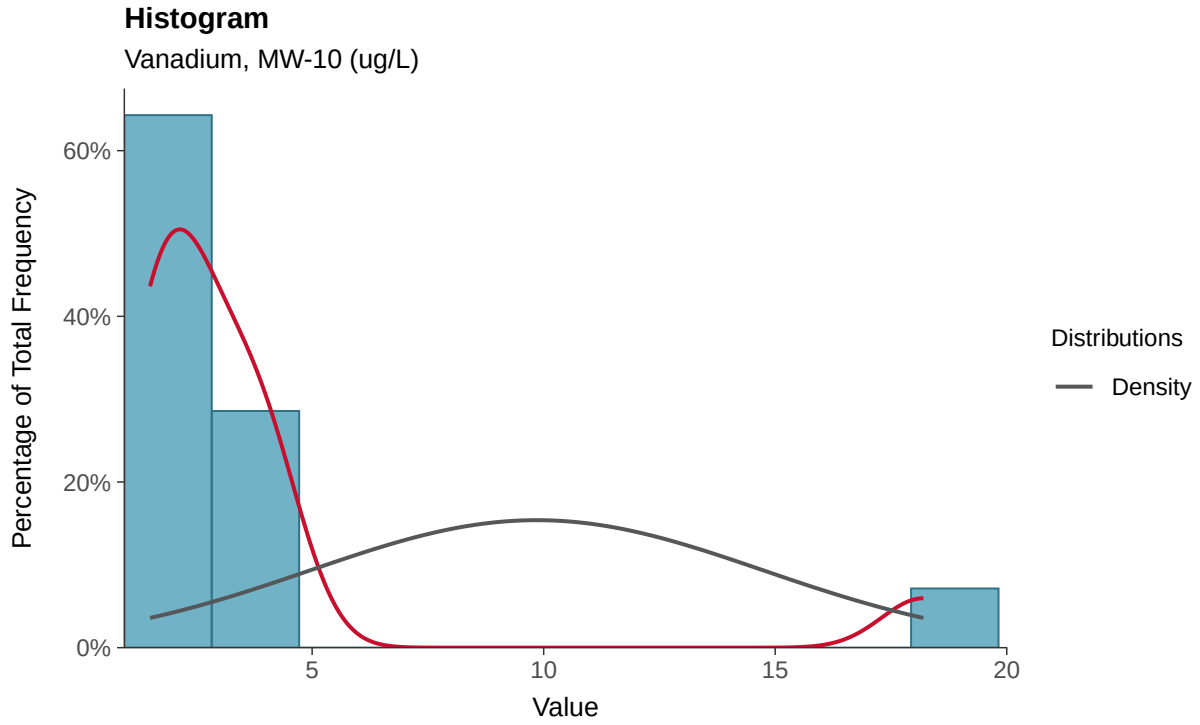
Silver, MW-10 (ug/L)



App. I Metals: Vanadium, MW-10

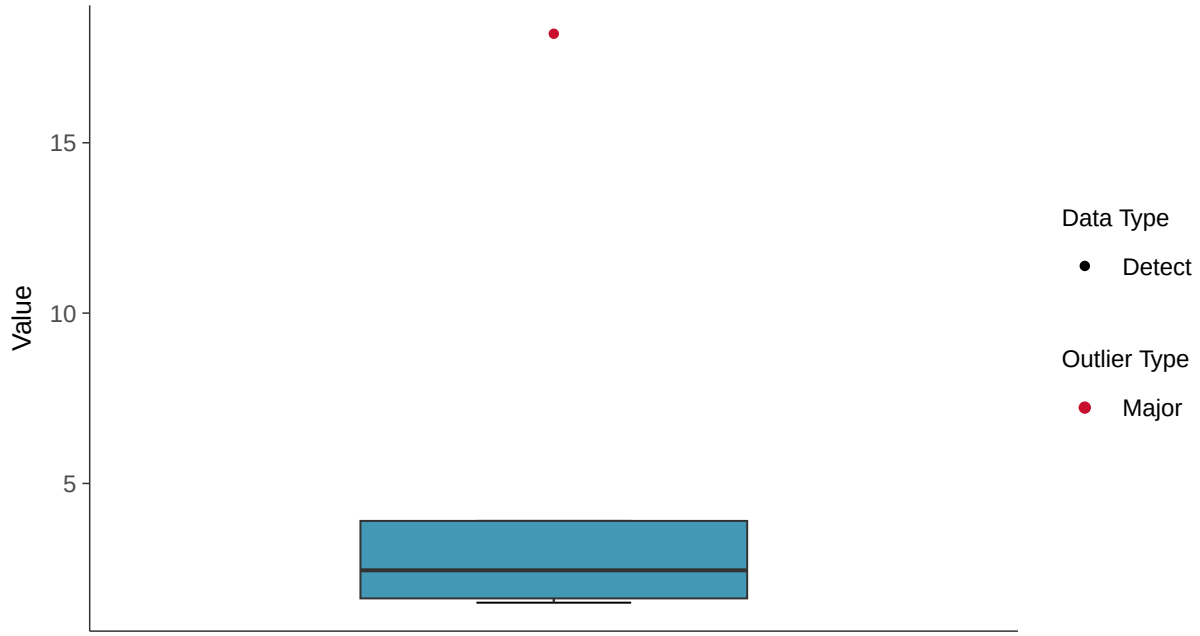
ID: 09_01_127





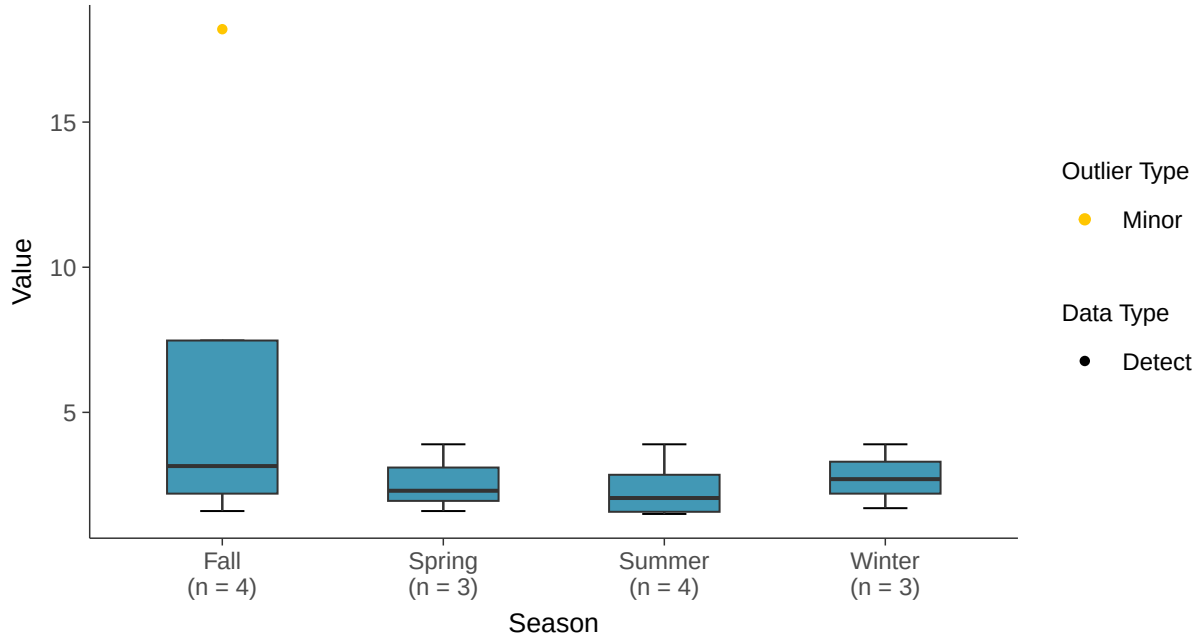
Boxplot

Vanadium, MW-10 (ug/L)



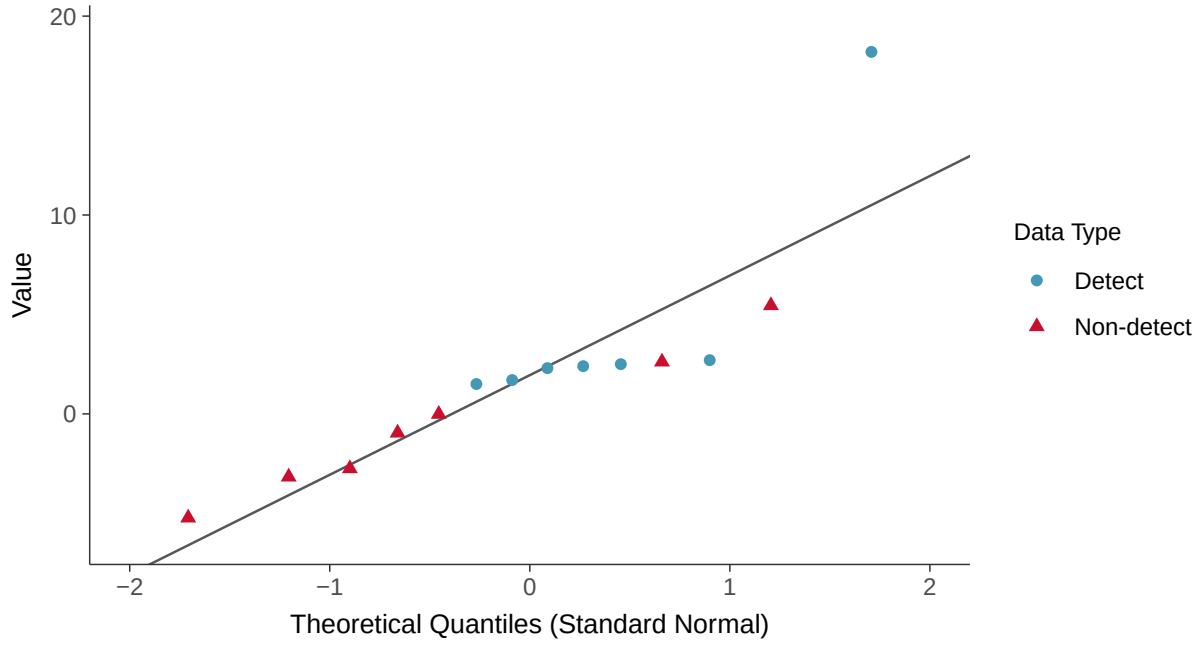
Boxplot by Season

Vanadium, MW-10 (ug/L)



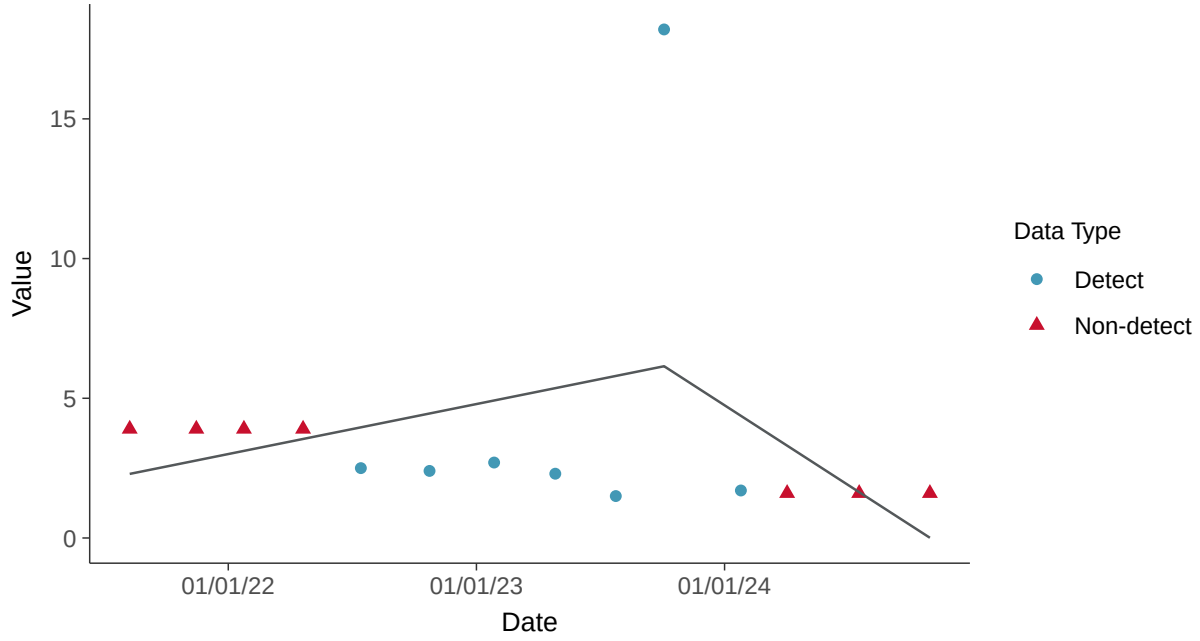
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-10 (ug/L)



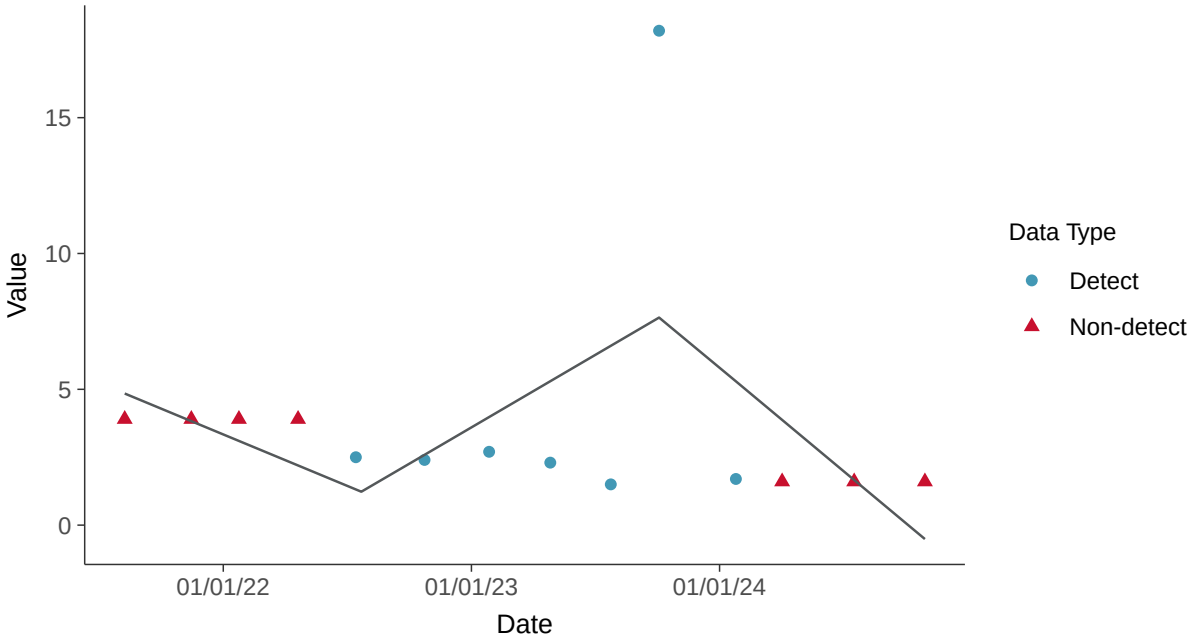
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-10 (ug/L)



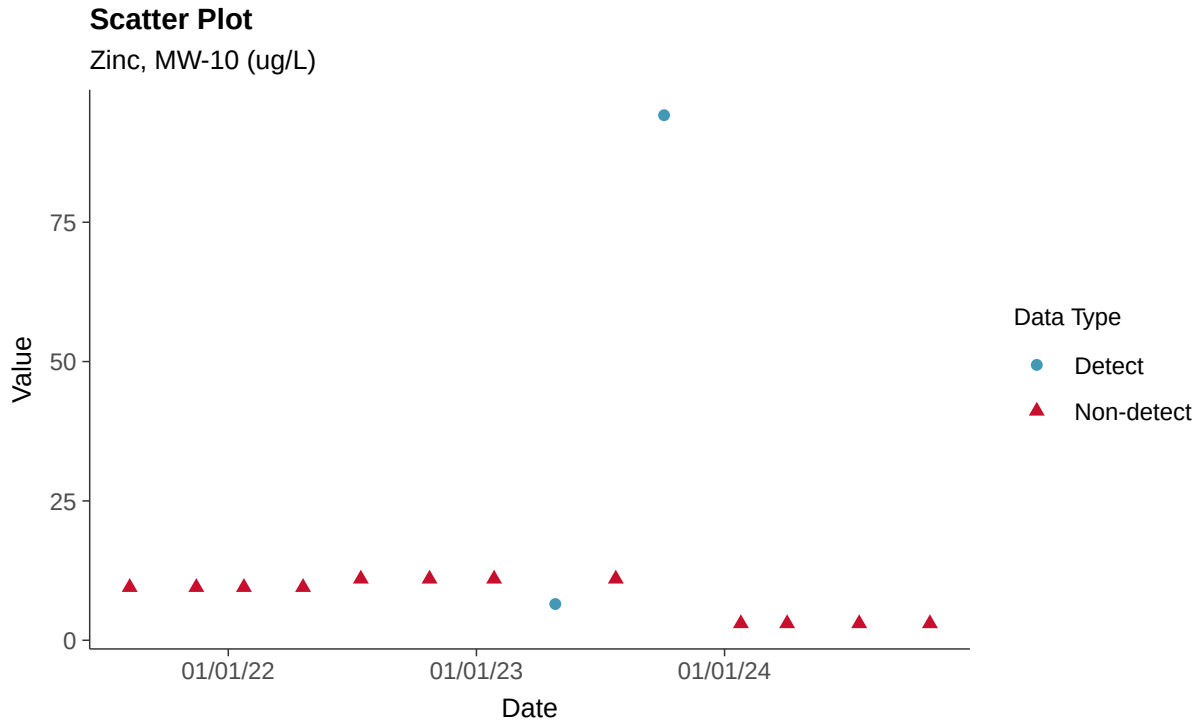
Trend Regression: Piecewise Linear-Linear-Linear

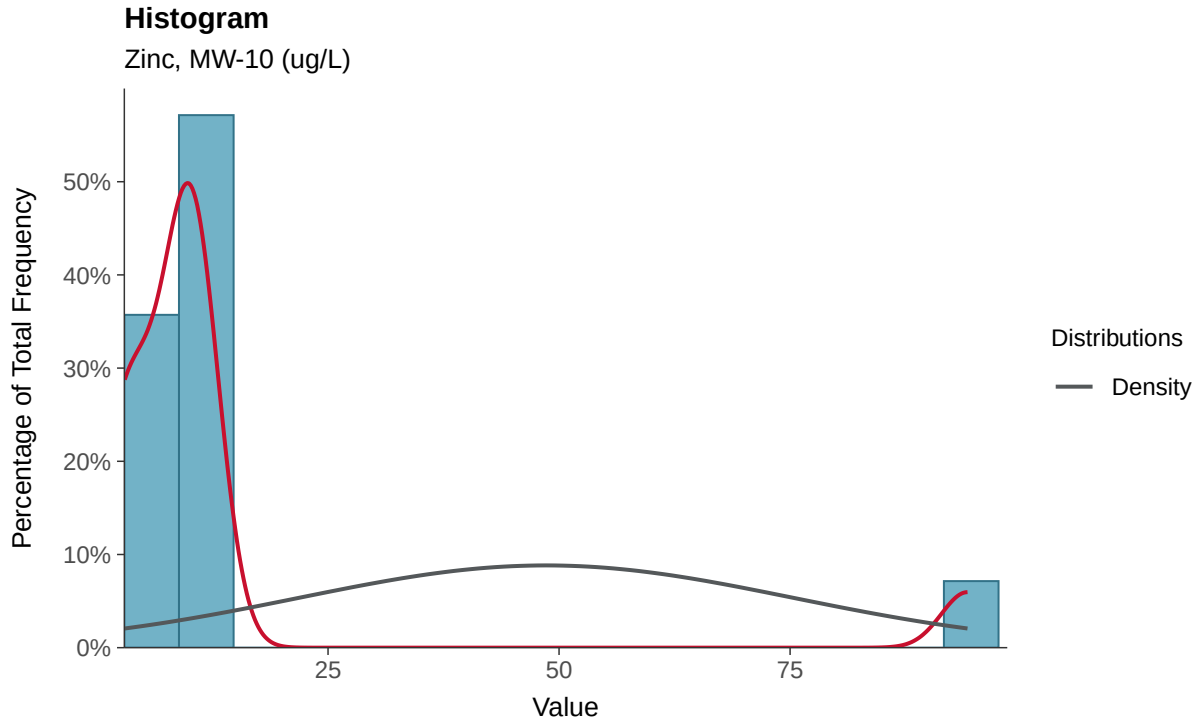
Vanadium, MW-10 (ug/L)



App. I Metals: Zinc, MW-10

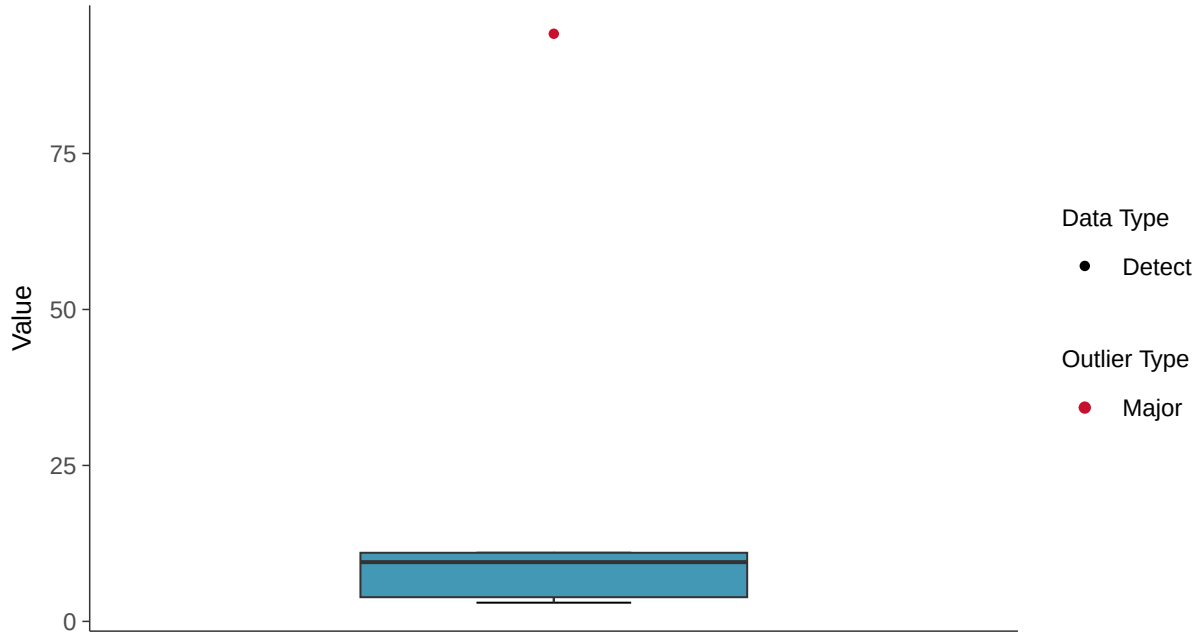
ID: 09_01_128





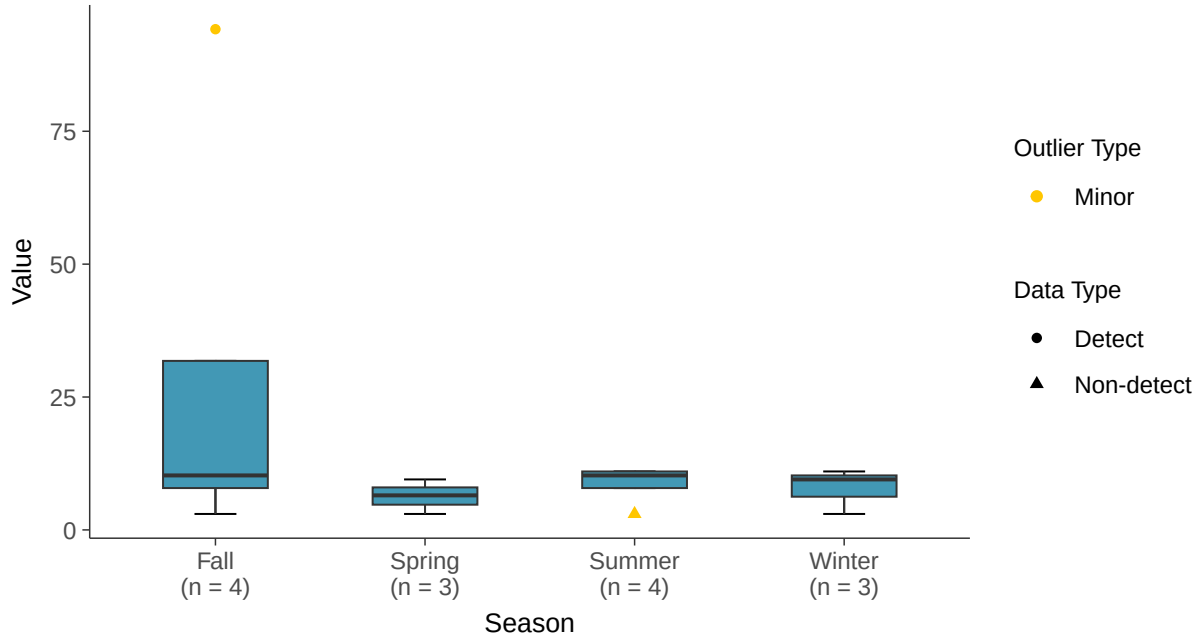
Boxplot

Zinc, MW-10 (ug/L)



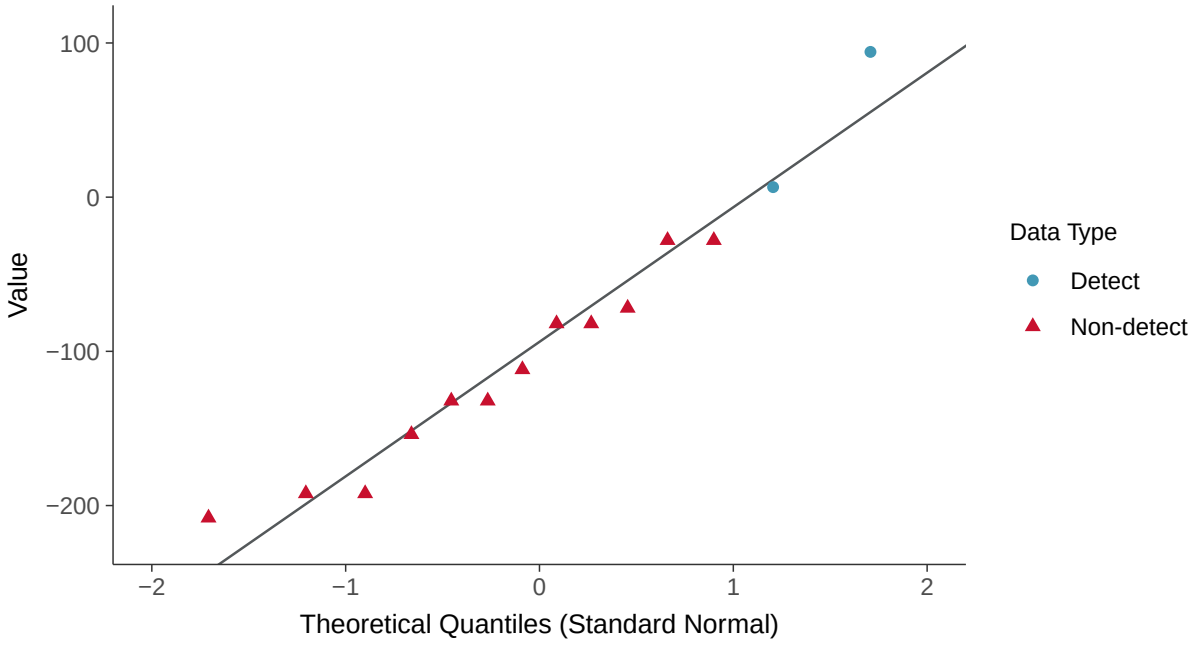
Boxplot by Season

Zinc, MW-10 (ug/L)



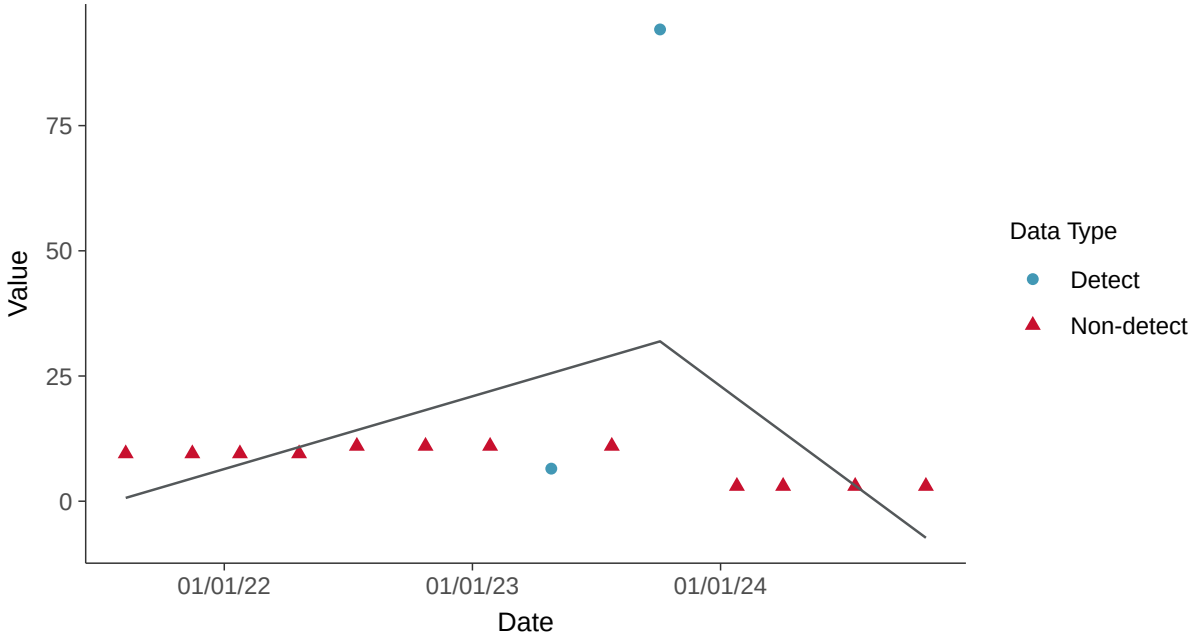
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-10 (ug/L)



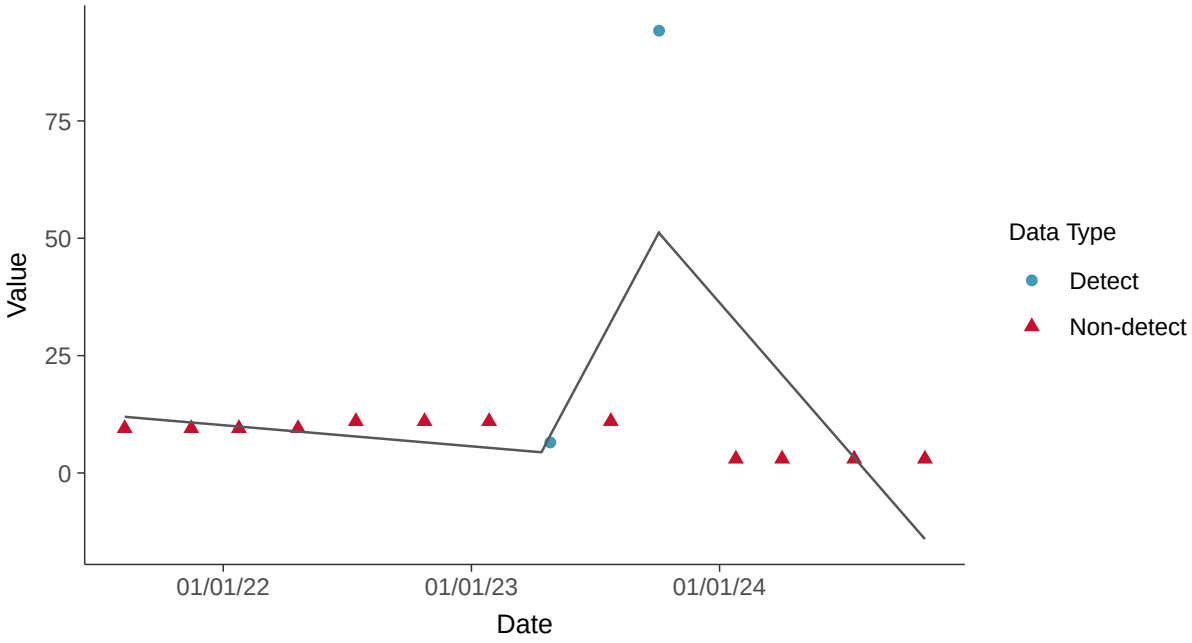
Trend Regression: Piecewise Linear-Linear

Zinc, MW-10 (ug/L)



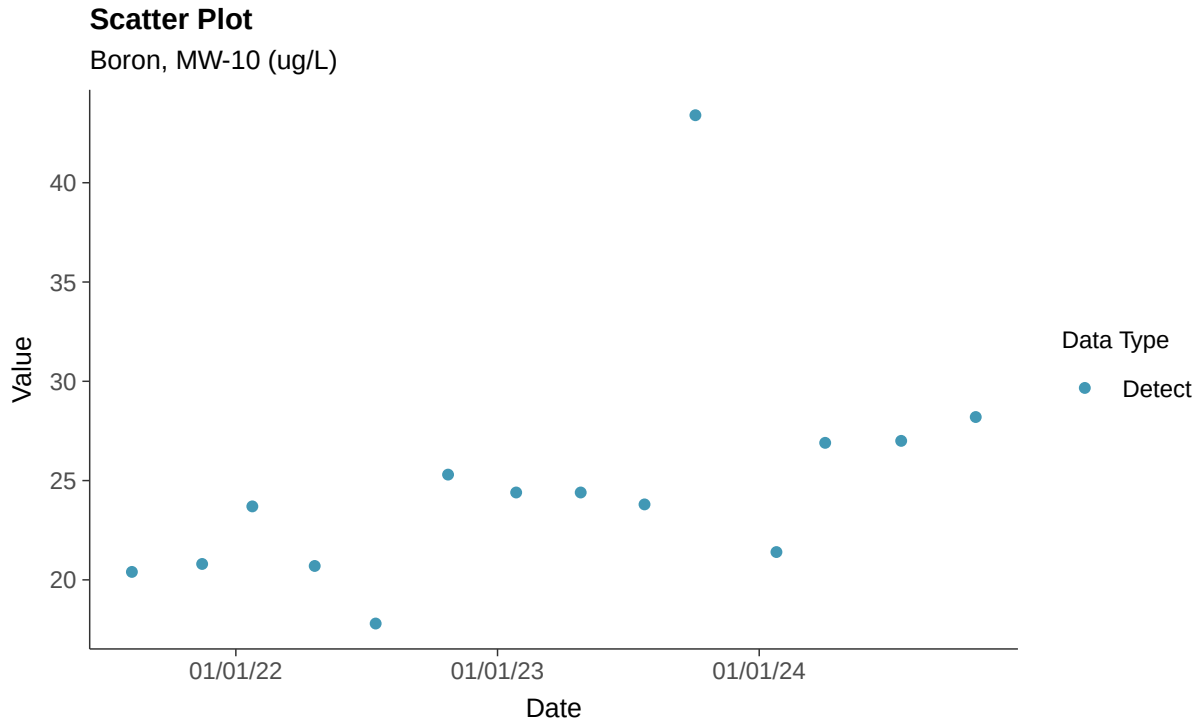
Trend Regression: Piecewise Linear-Linear-Linear

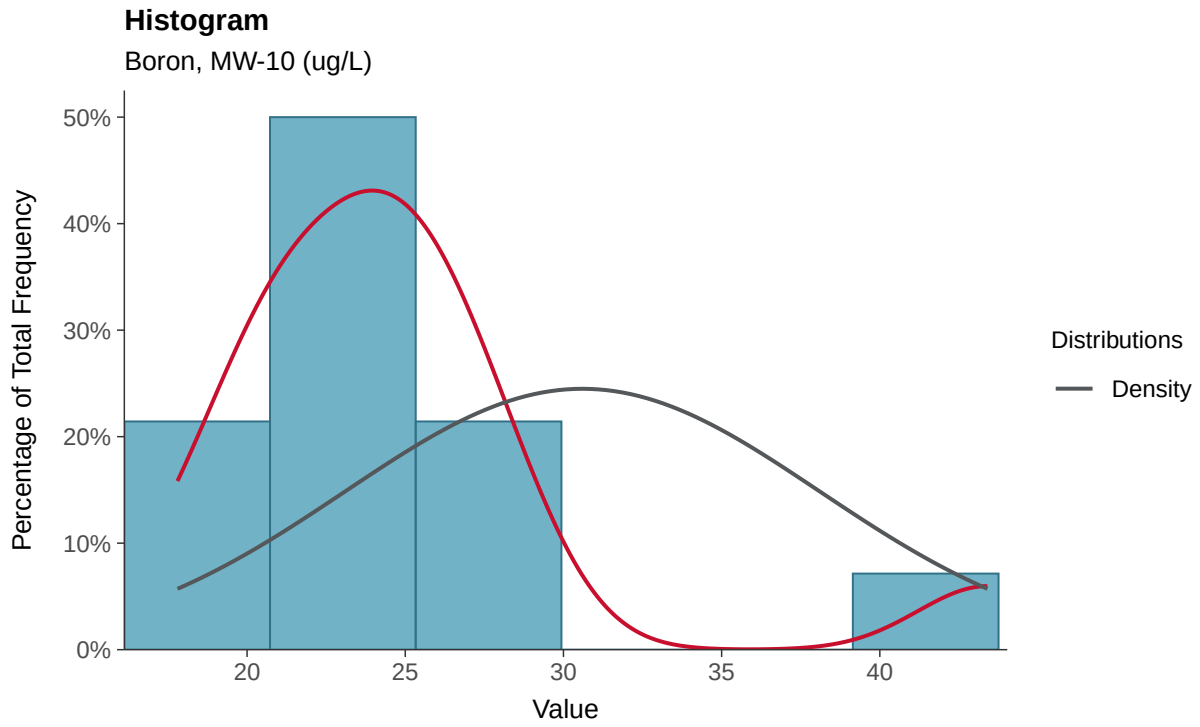
Zinc, MW-10 (ug/L)



App. III: Boron, MW-10

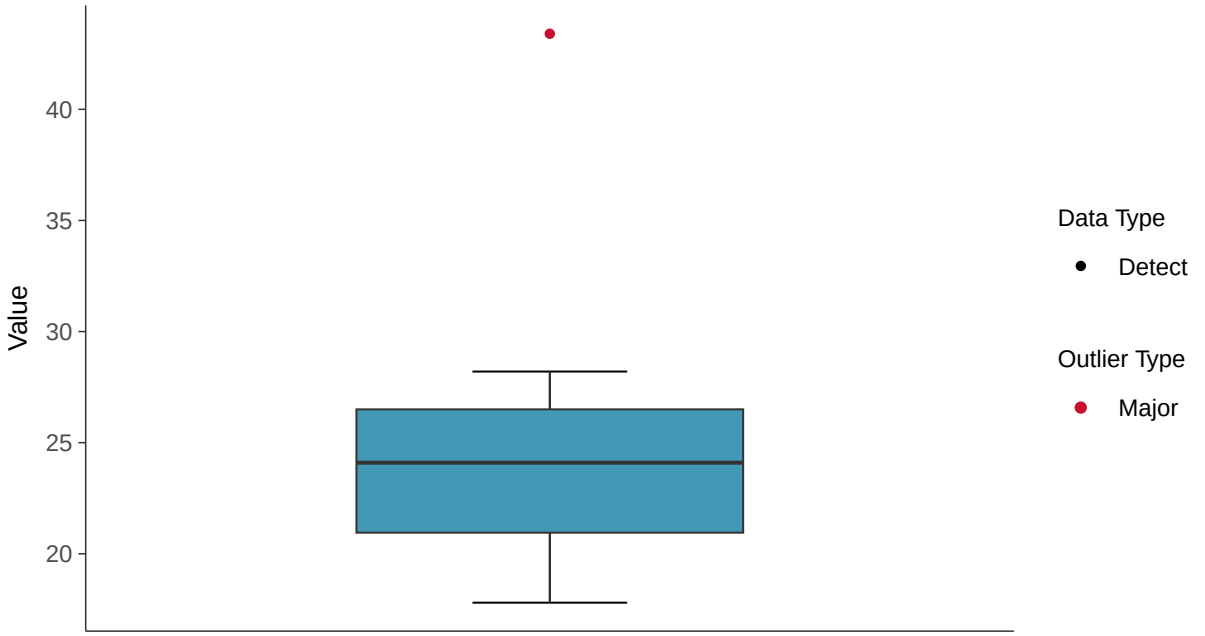
ID: 09_02_105





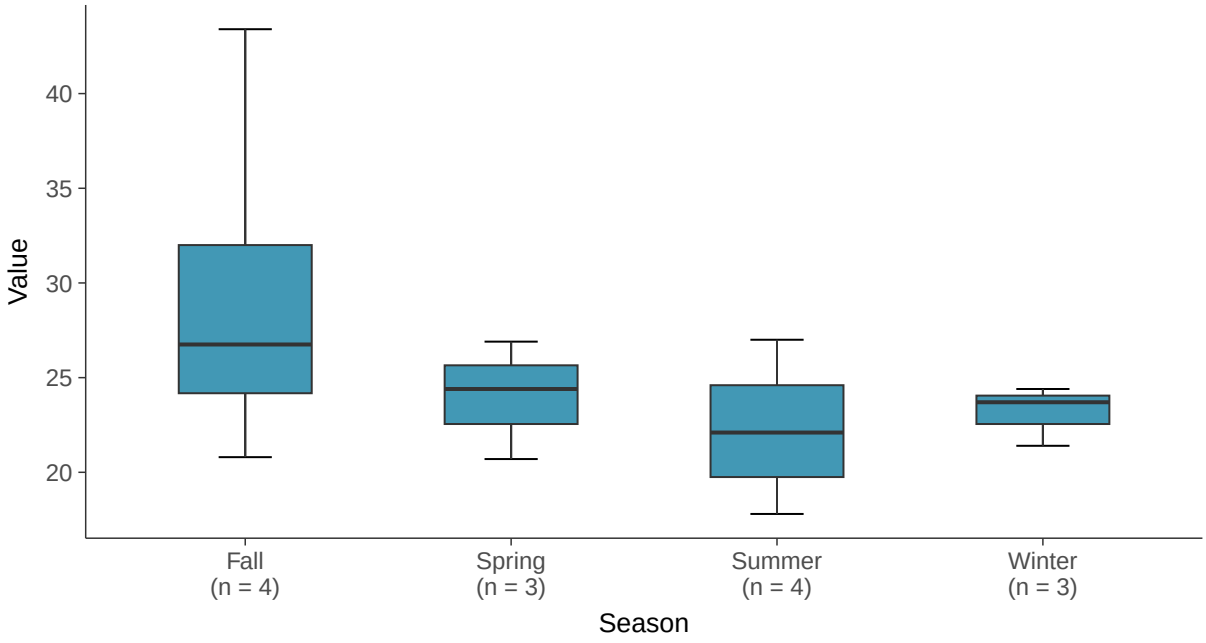
Boxplot

Boron, MW-10 (ug/L)



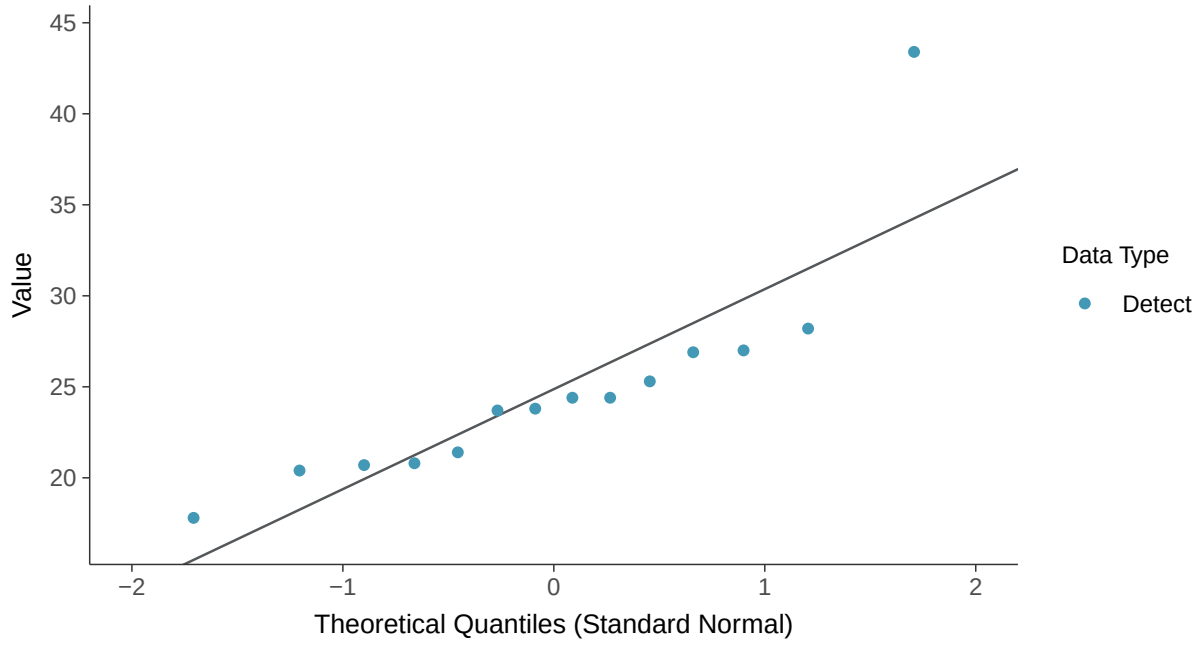
Boxplot by Season

Boron, MW-10 (ug/L)



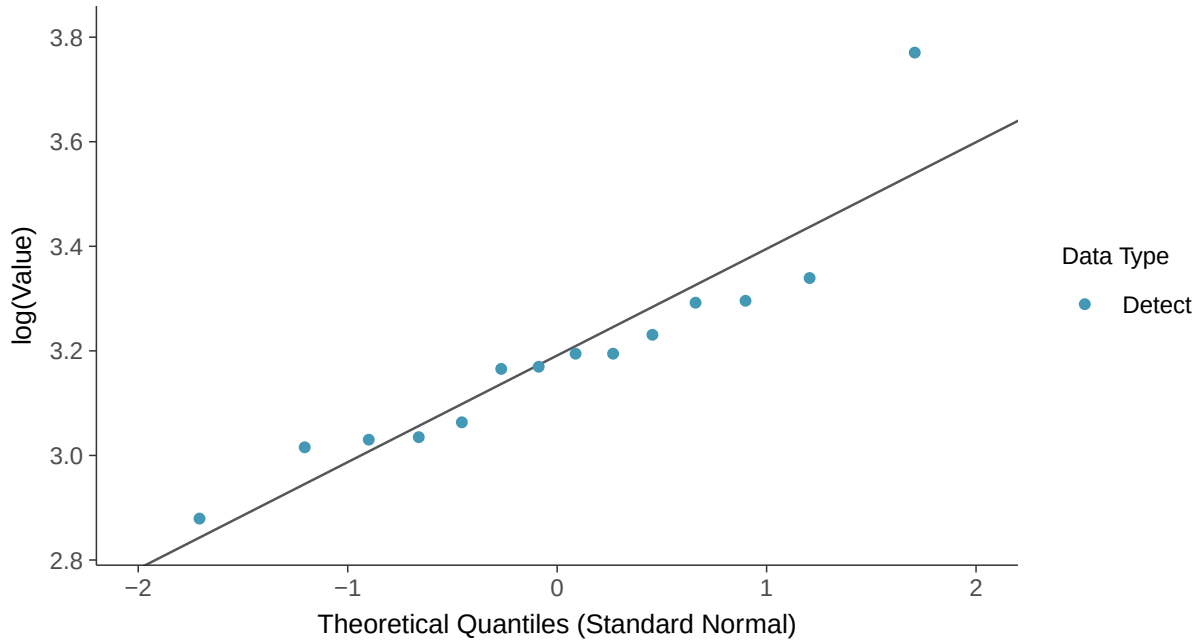
Normal Q-Q plot

Boron, MW-10 (ug/L)



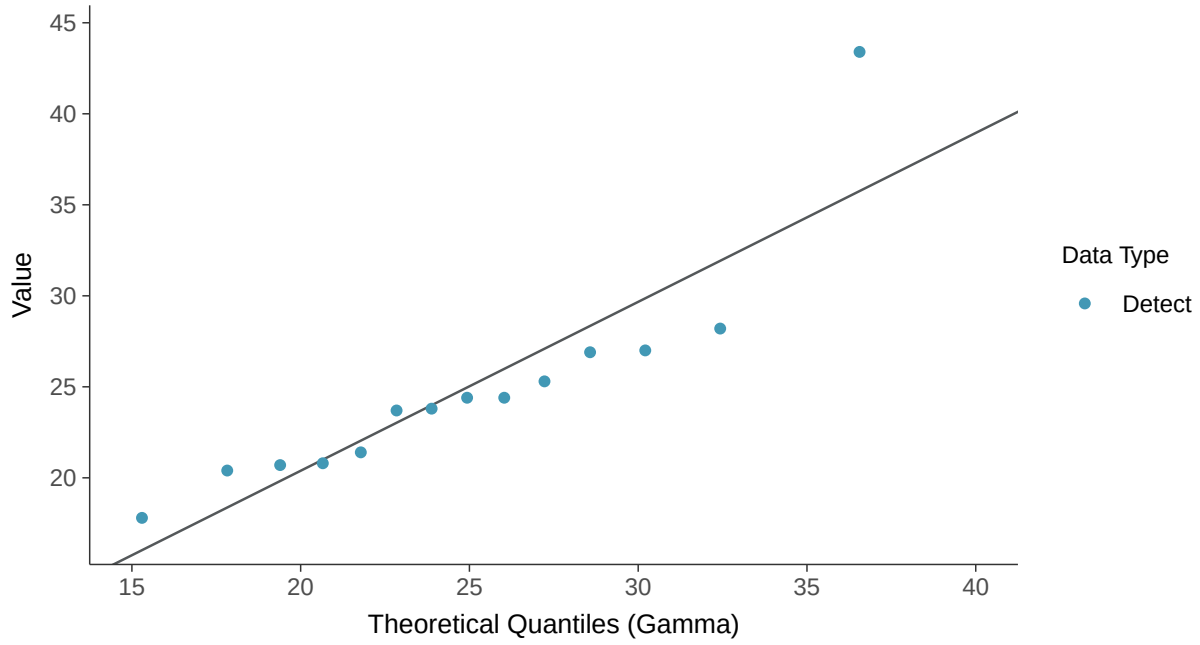
Lognormal Q-Q plot

Boron, MW-10 (ug/L)



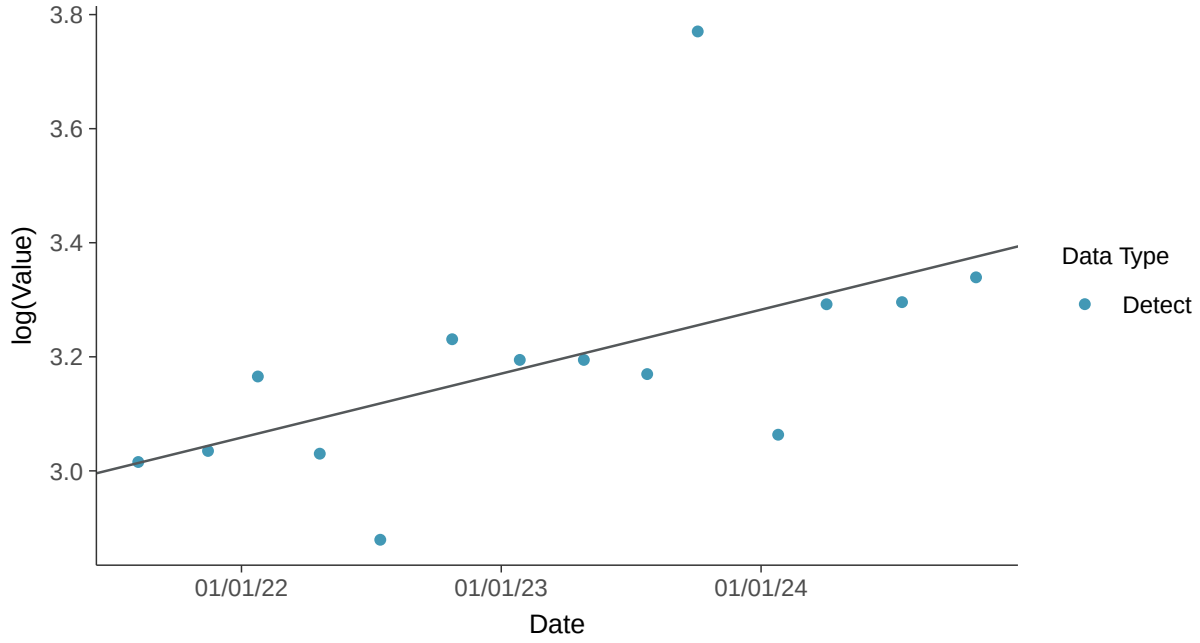
Gamma Q-Q plot

Boron, MW-10 (ug/L)



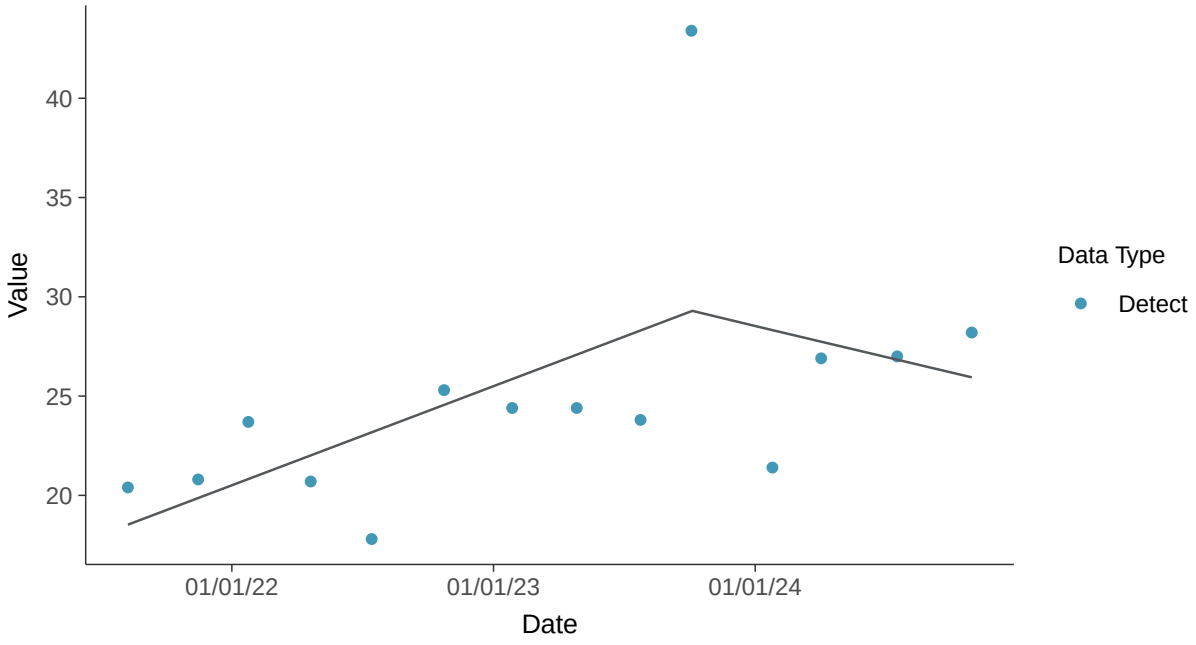
Trend Regression: Lognormal MLE

Boron, MW-10 (ug/L)



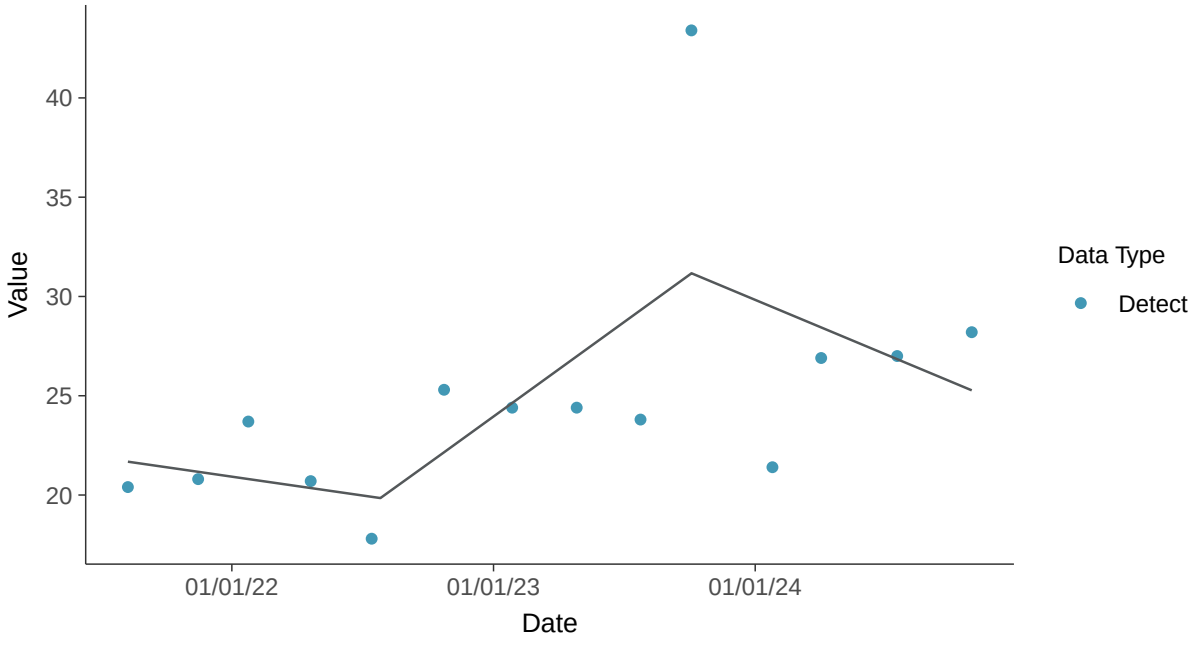
Trend Regression: Piecewise Linear-Linear

Boron, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Boron, MW-10 (ug/L)

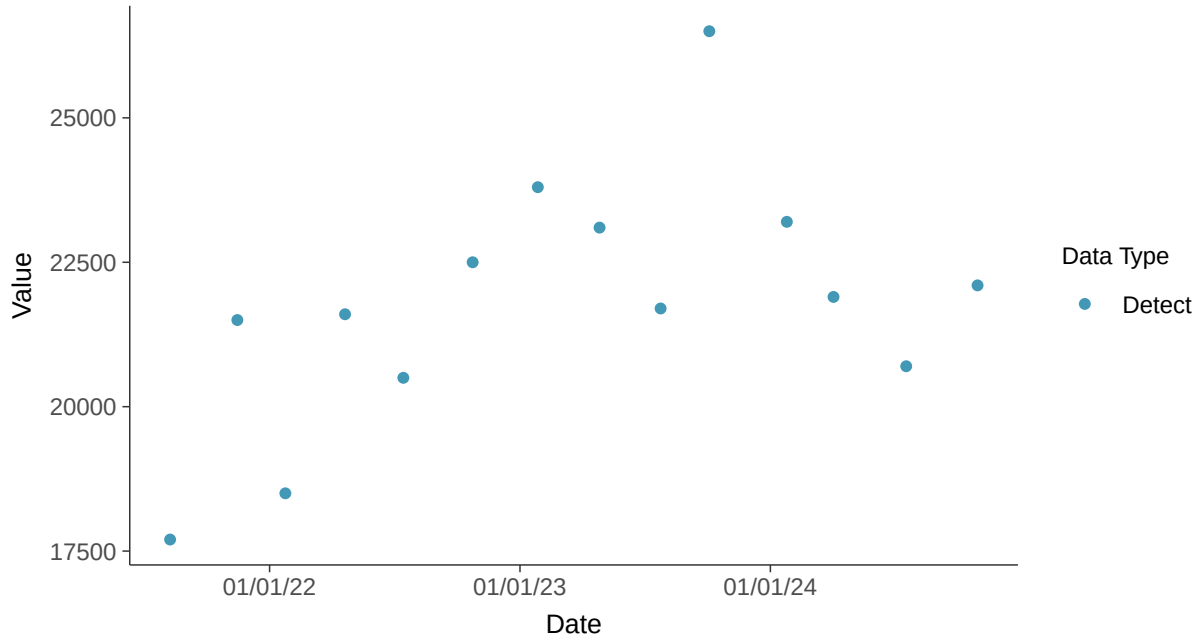


App. III: Calcium, MW-10

ID: 09_02_107

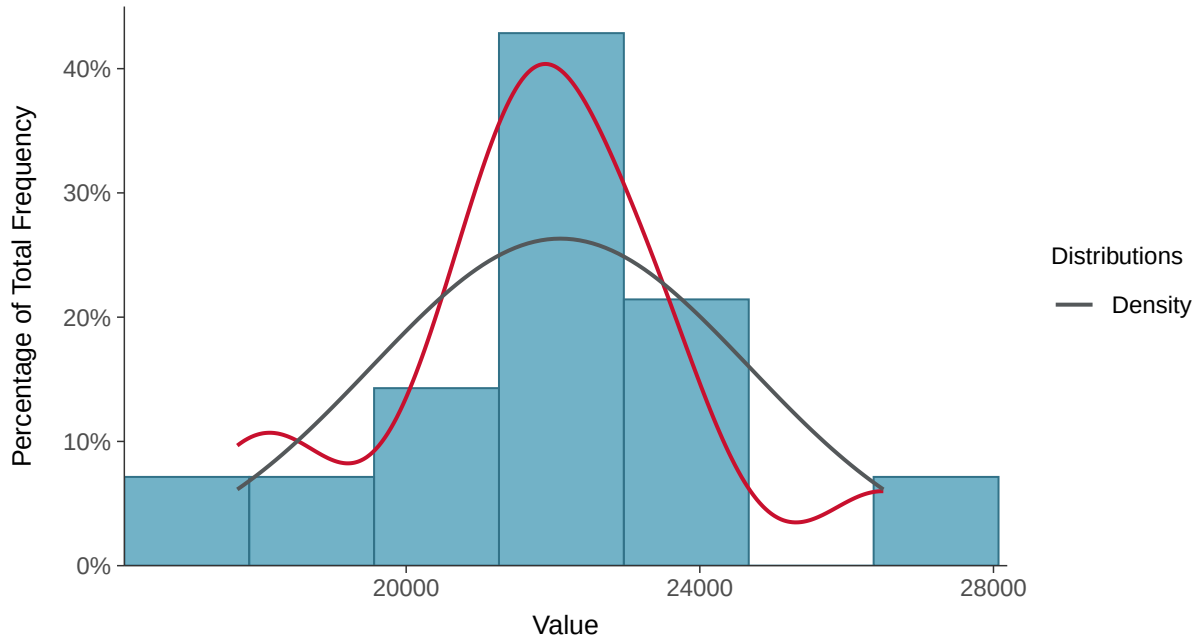
Scatter Plot

Calcium, MW-10 (ug/L)



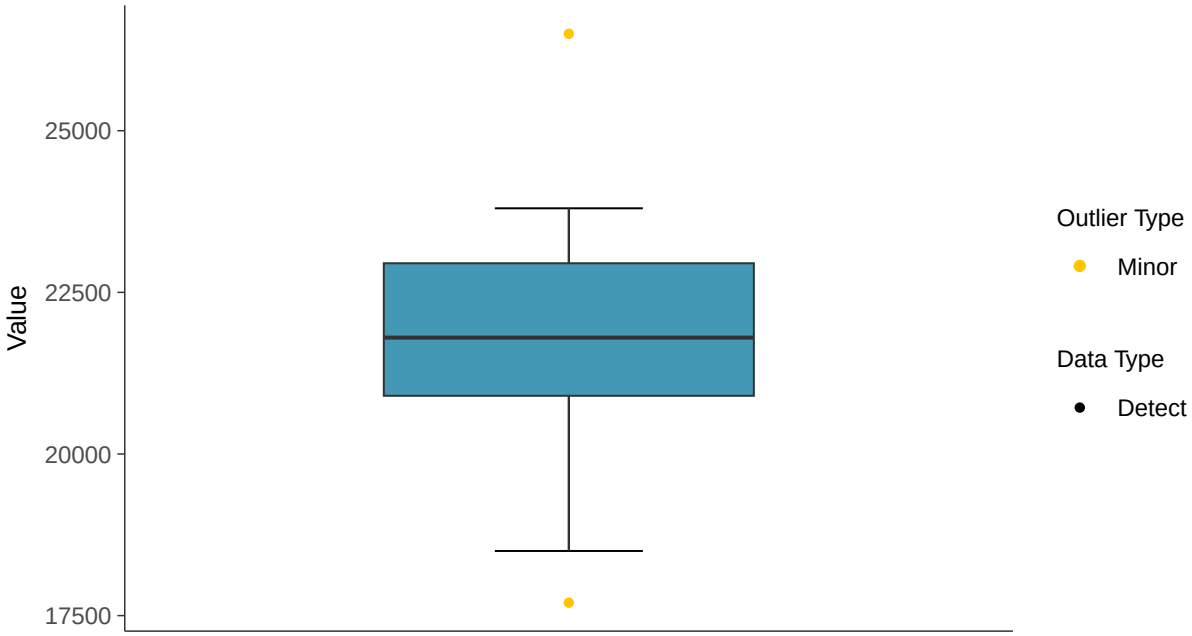
Histogram

Calcium, MW-10 (ug/L)



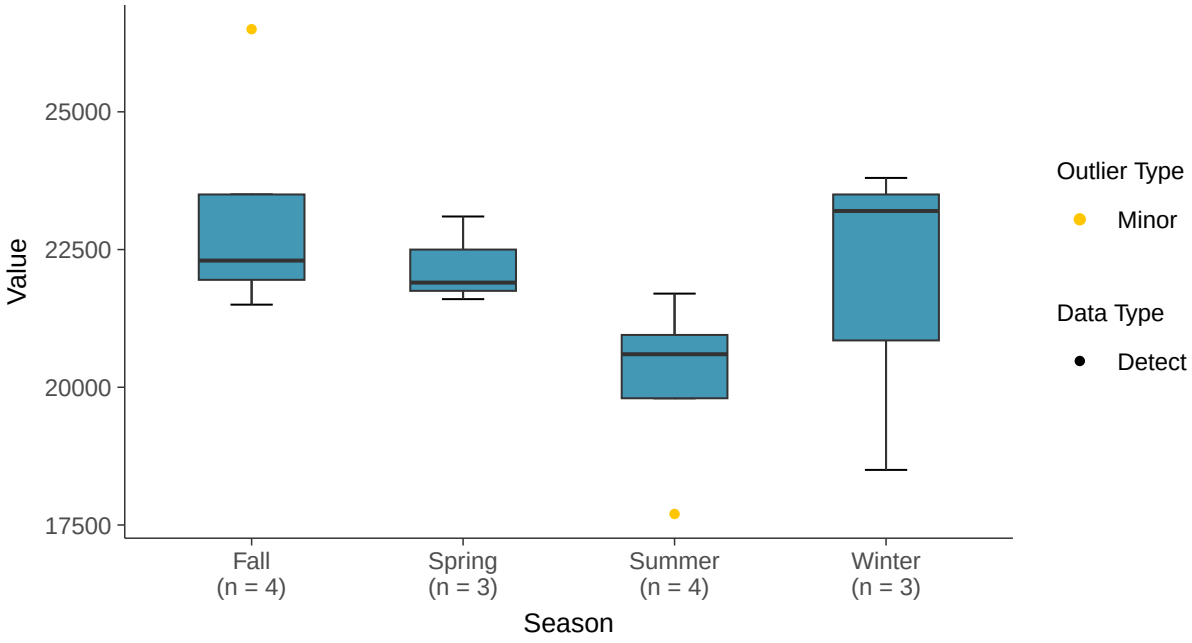
Boxplot

Calcium, MW-10 (ug/L)



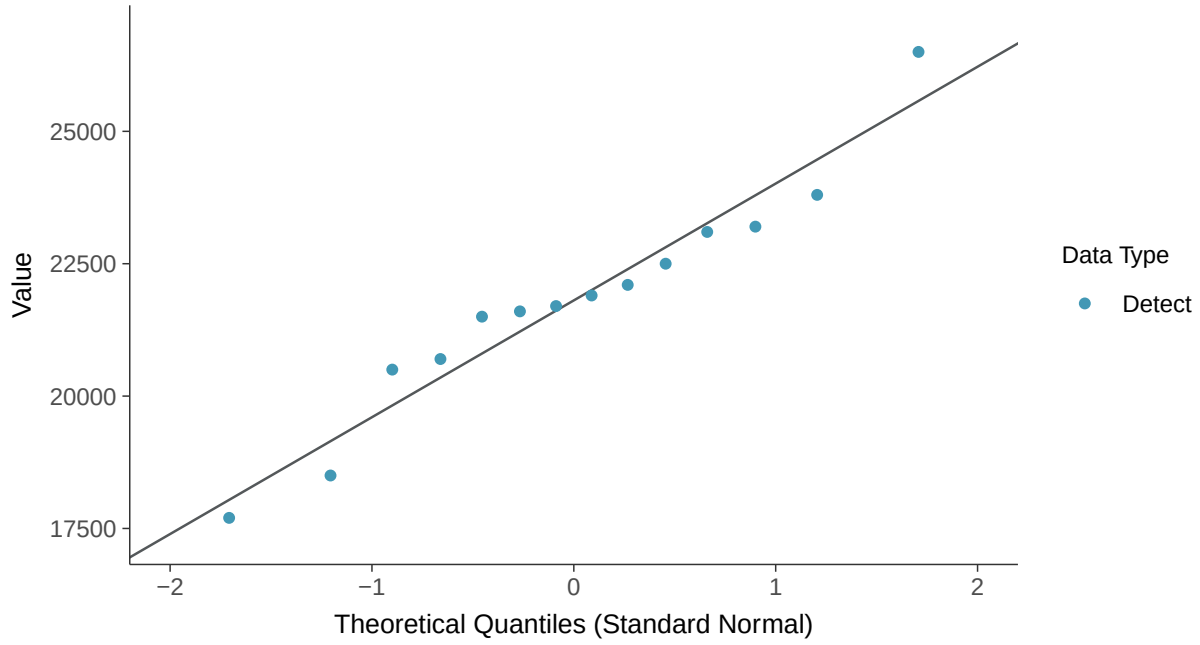
Boxplot by Season

Calcium, MW-10 (ug/L)



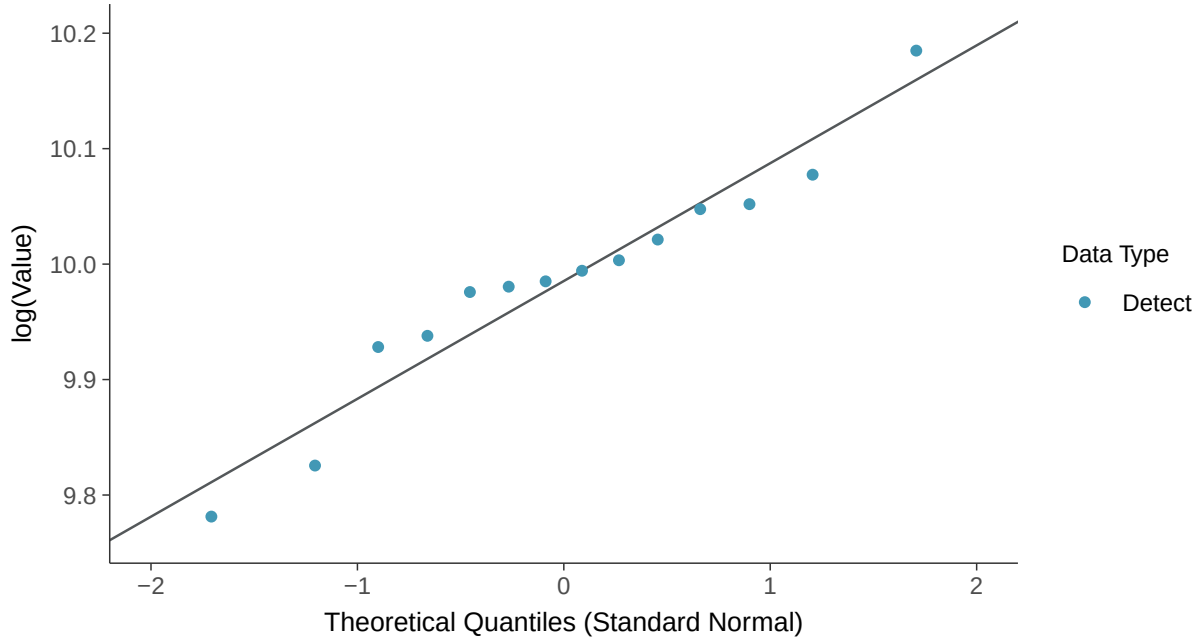
Normal Q-Q plot

Calcium, MW-10 (ug/L)



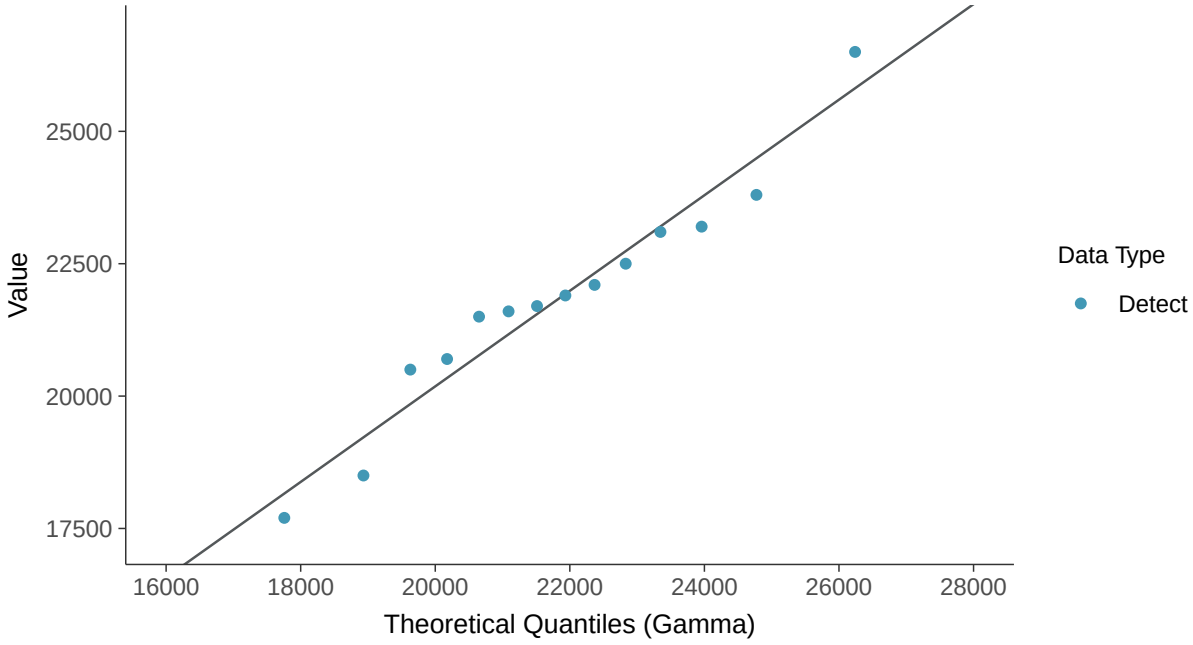
Lognormal Q-Q plot

Calcium, MW-10 (ug/L)



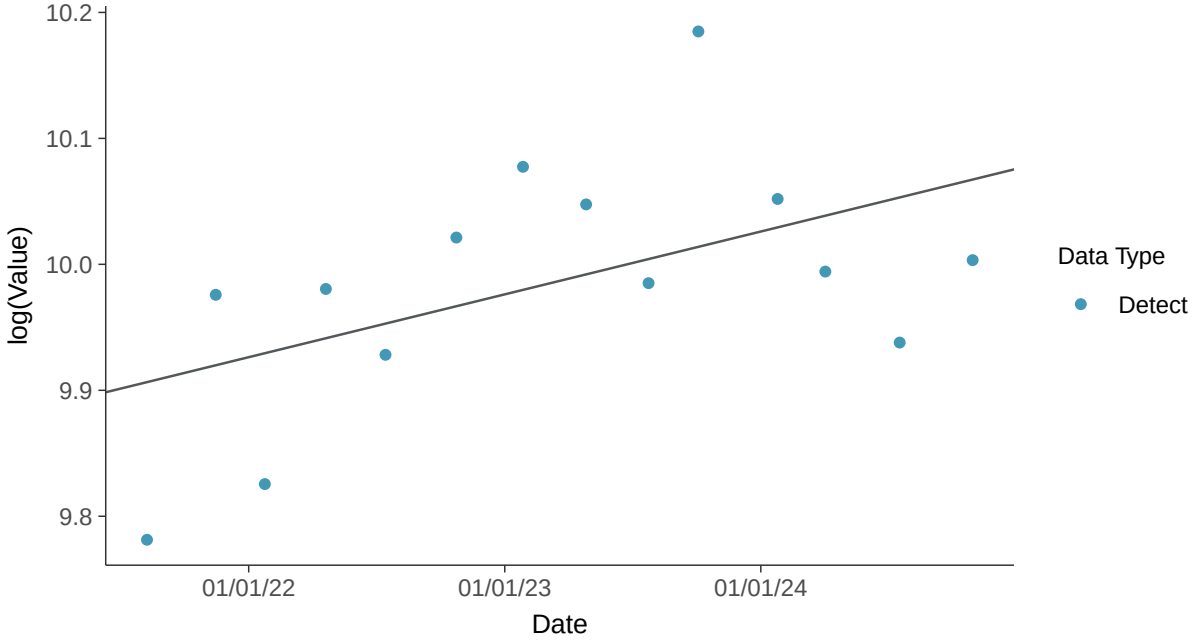
Gamma Q-Q plot

Calcium, MW-10 (ug/L)



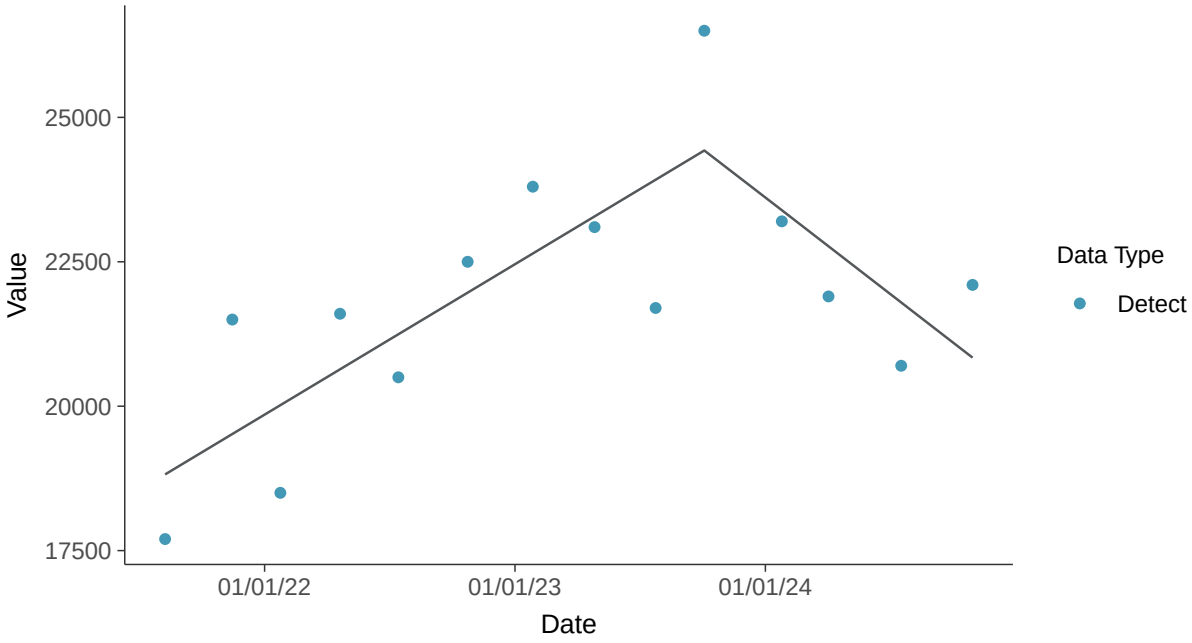
Trend Regression: Lognormal MLE

Calcium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, MW-10 (ug/L)

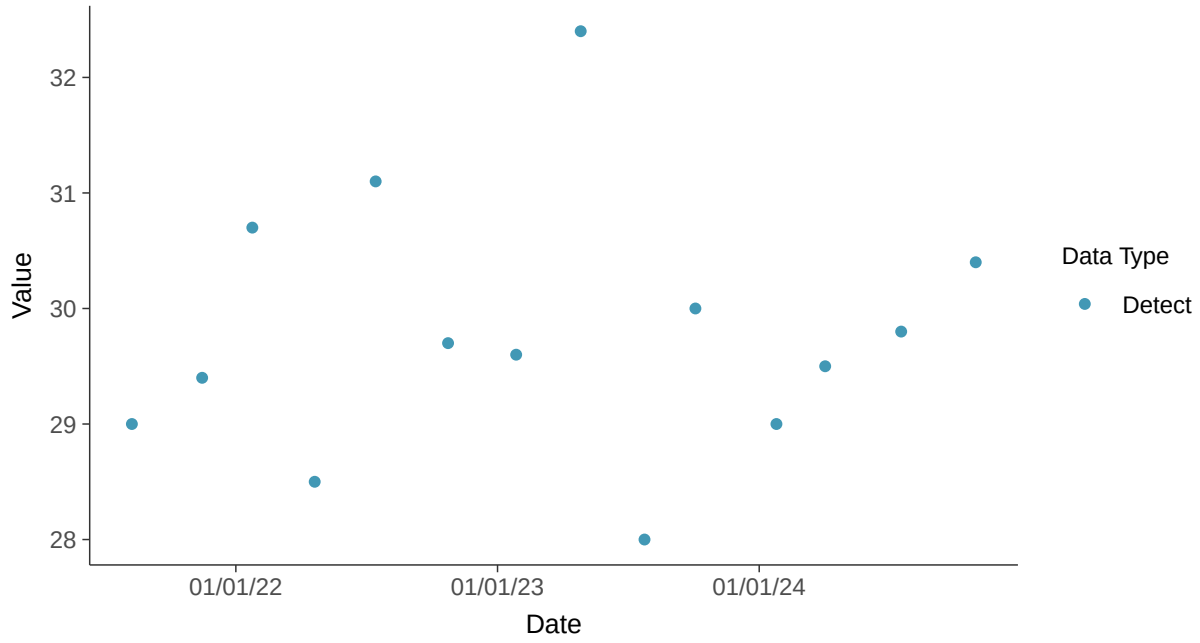


App. III: Chloride, MW-10

ID: 09_02_108

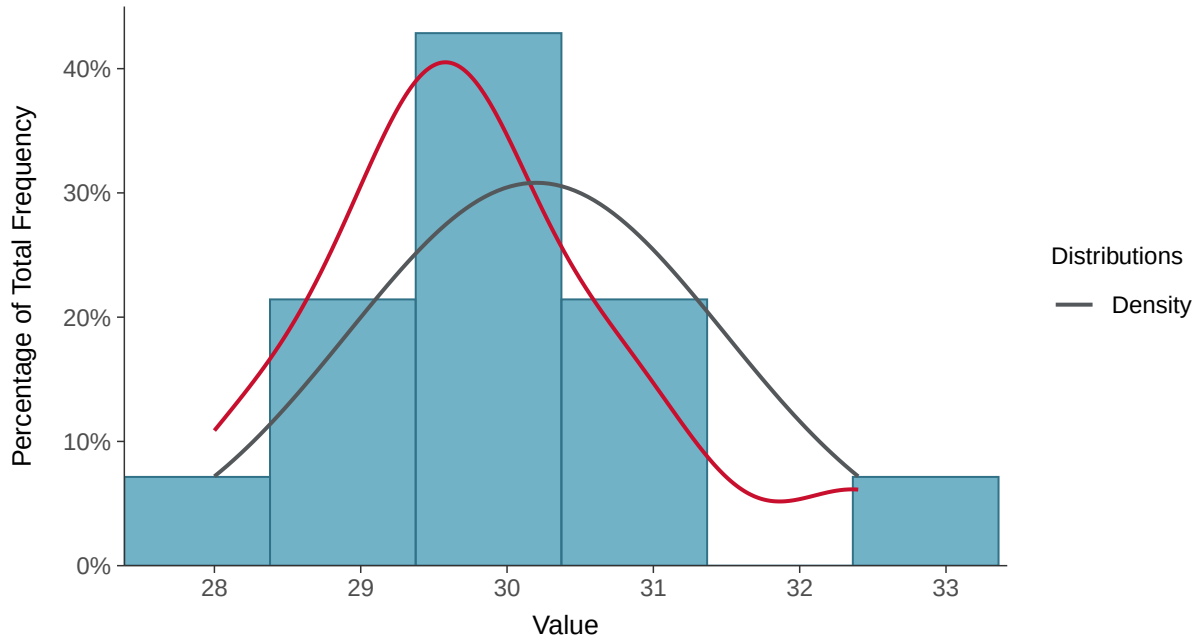
Scatter Plot

Chloride, MW-10 (mg/L)



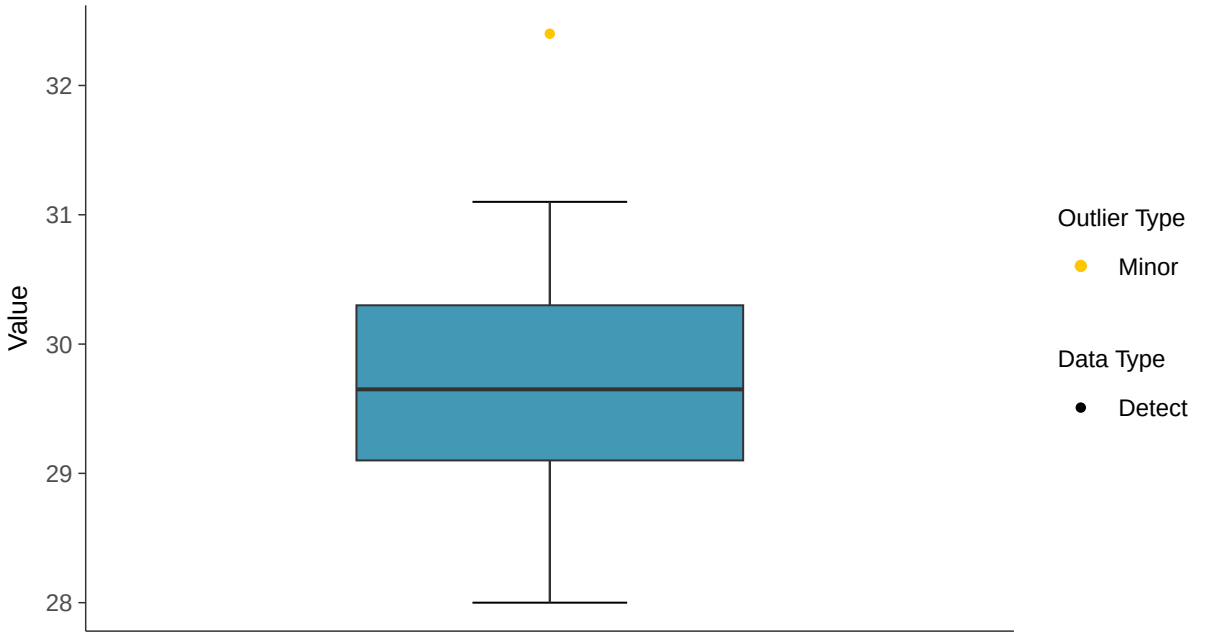
Histogram

Chloride, MW-10 (mg/L)



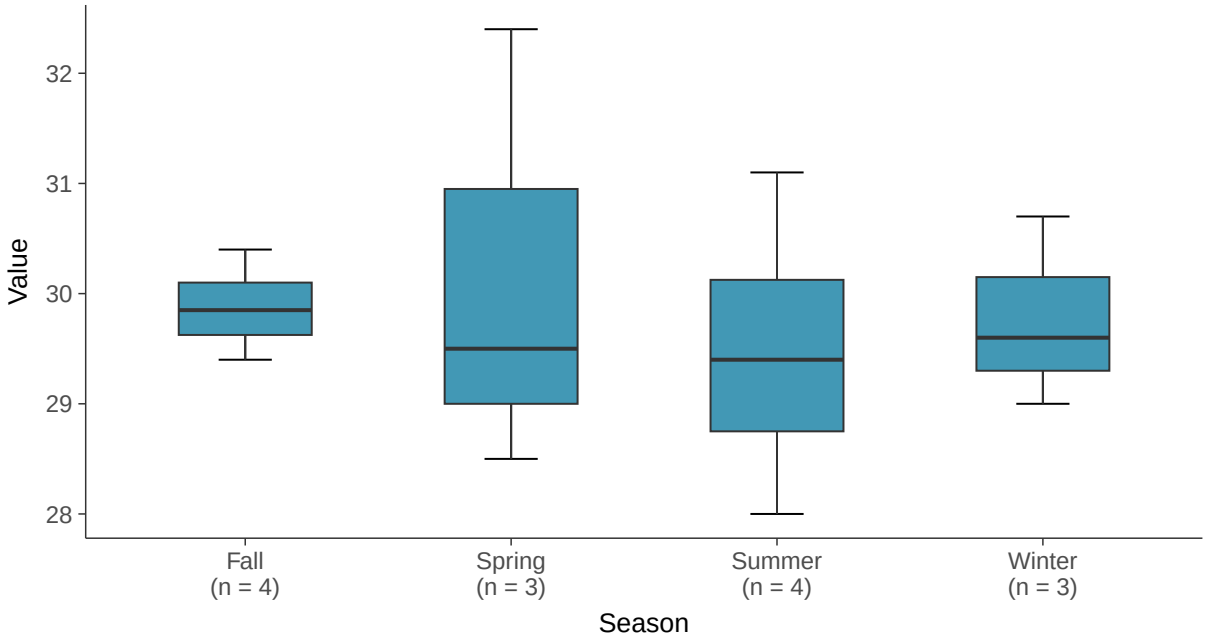
Boxplot

Chloride, MW-10 (mg/L)



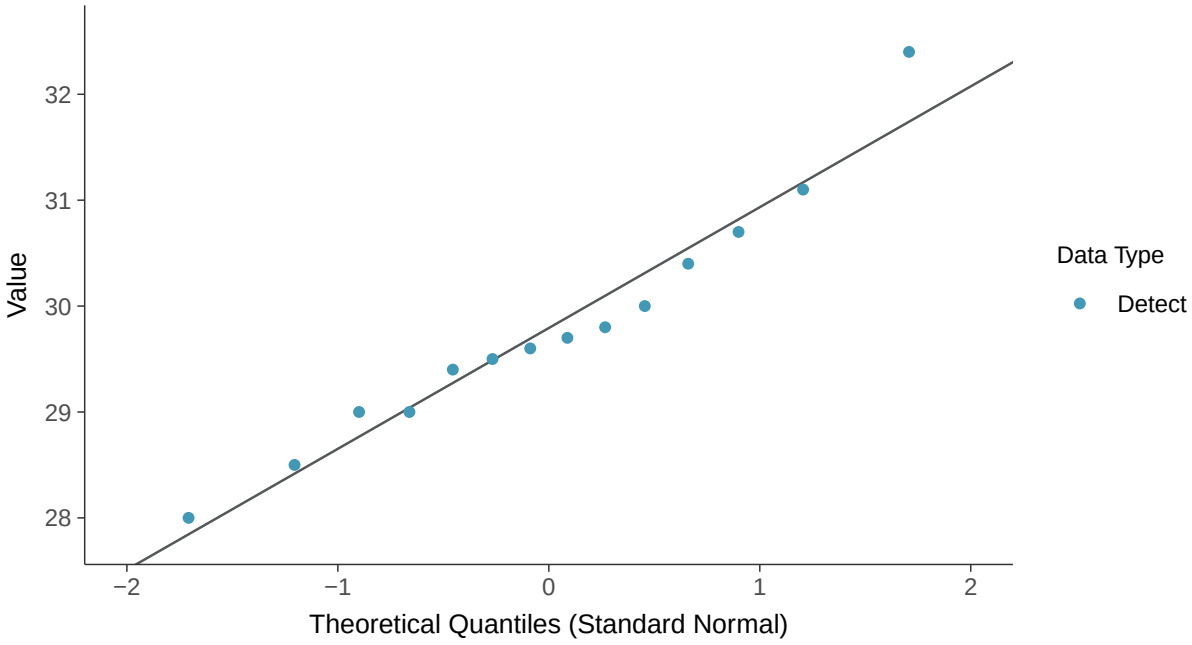
Boxplot by Season

Chloride, MW-10 (mg/L)



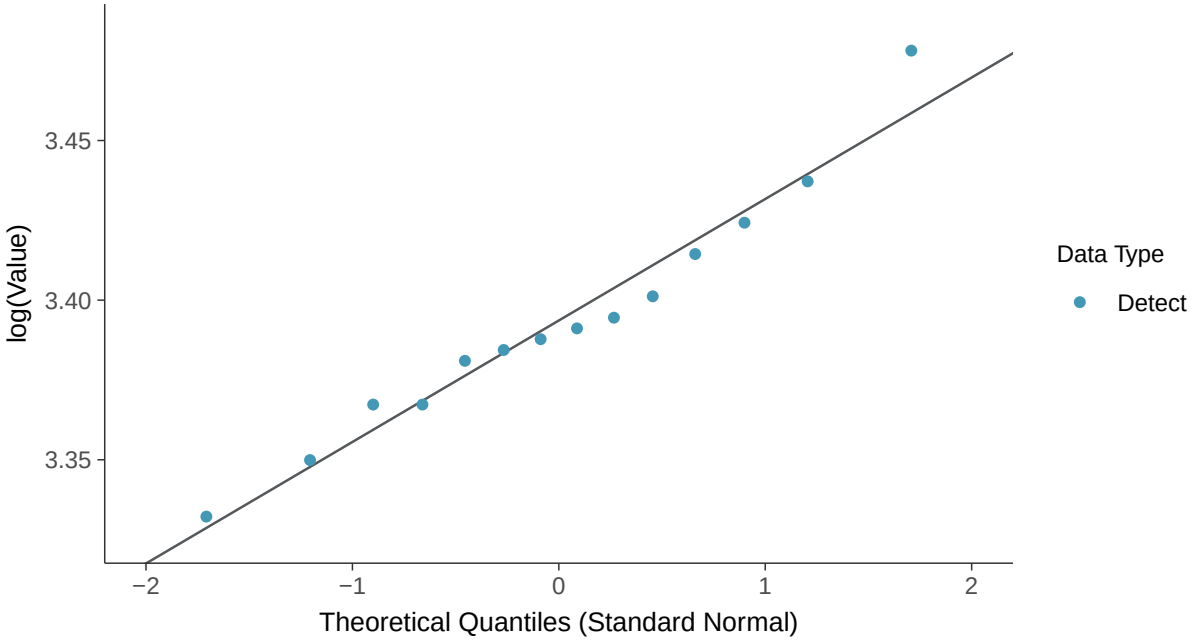
Normal Q-Q plot

Chloride, MW-10 (mg/L)



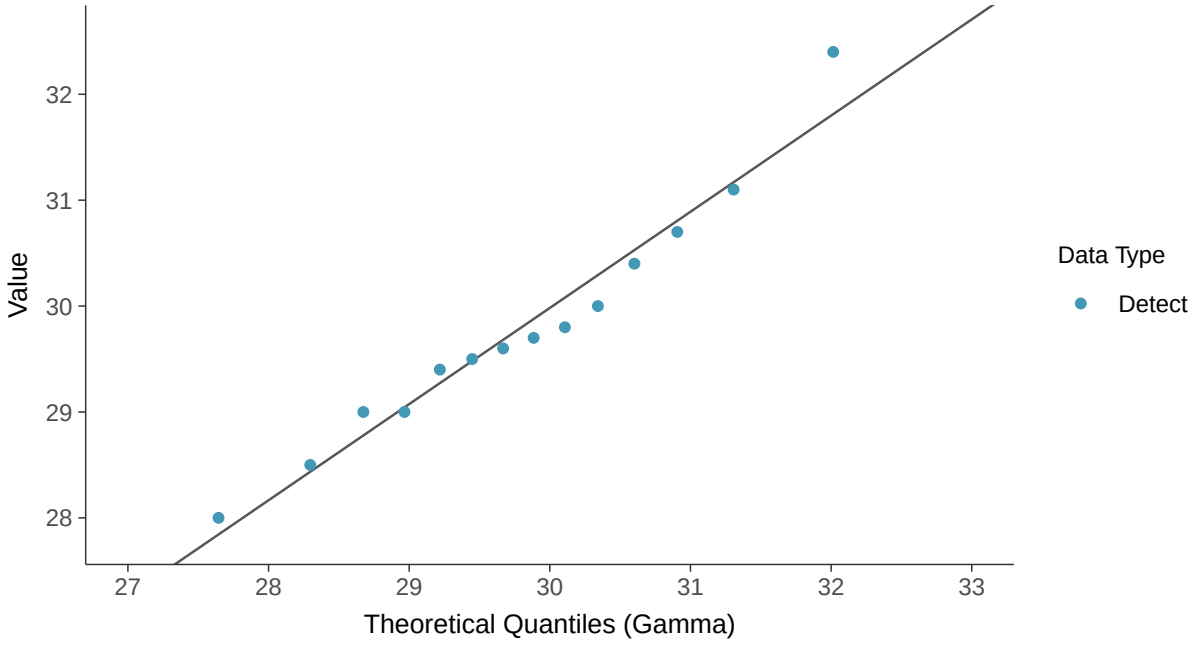
Lognormal Q-Q plot

Chloride, MW-10 (mg/L)



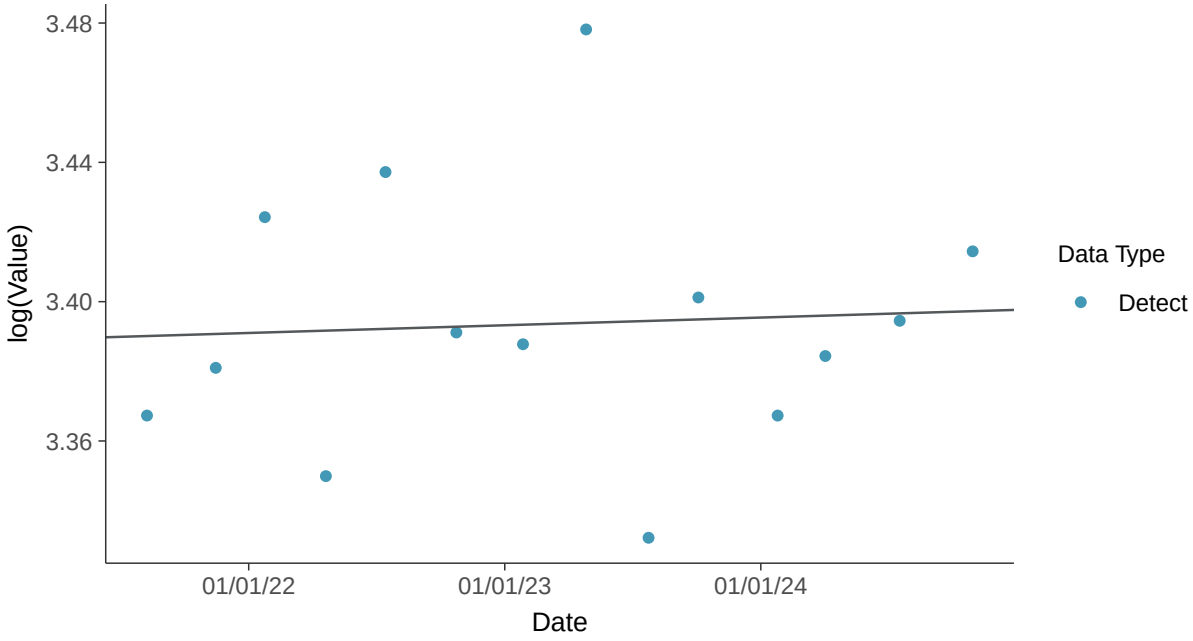
Gamma Q-Q plot

Chloride, MW-10 (mg/L)



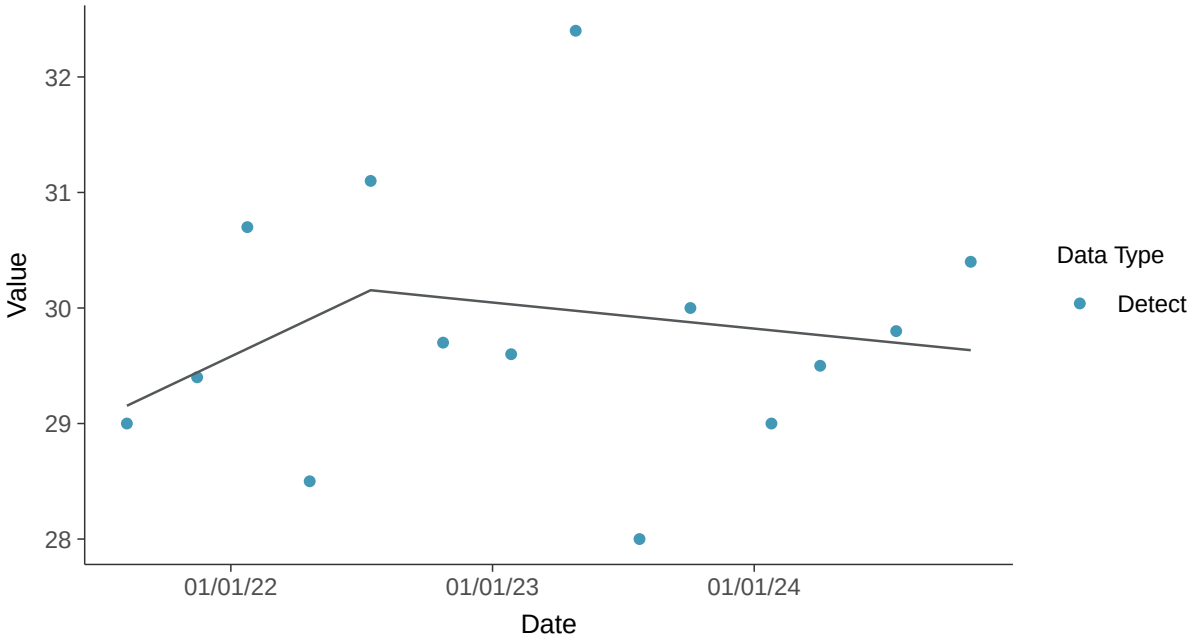
Trend Regression: Lognormal MLE

Chloride, MW-10 (mg/L)



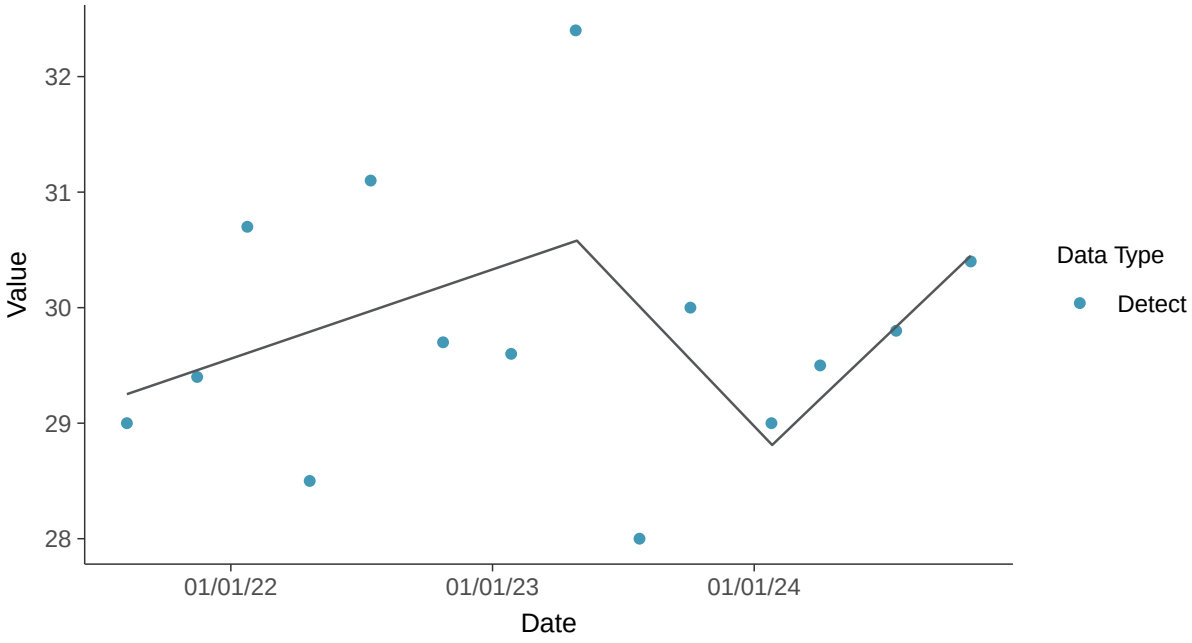
Trend Regression: Piecewise Linear-Linear

Chloride, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chloride, MW-10 (mg/L)

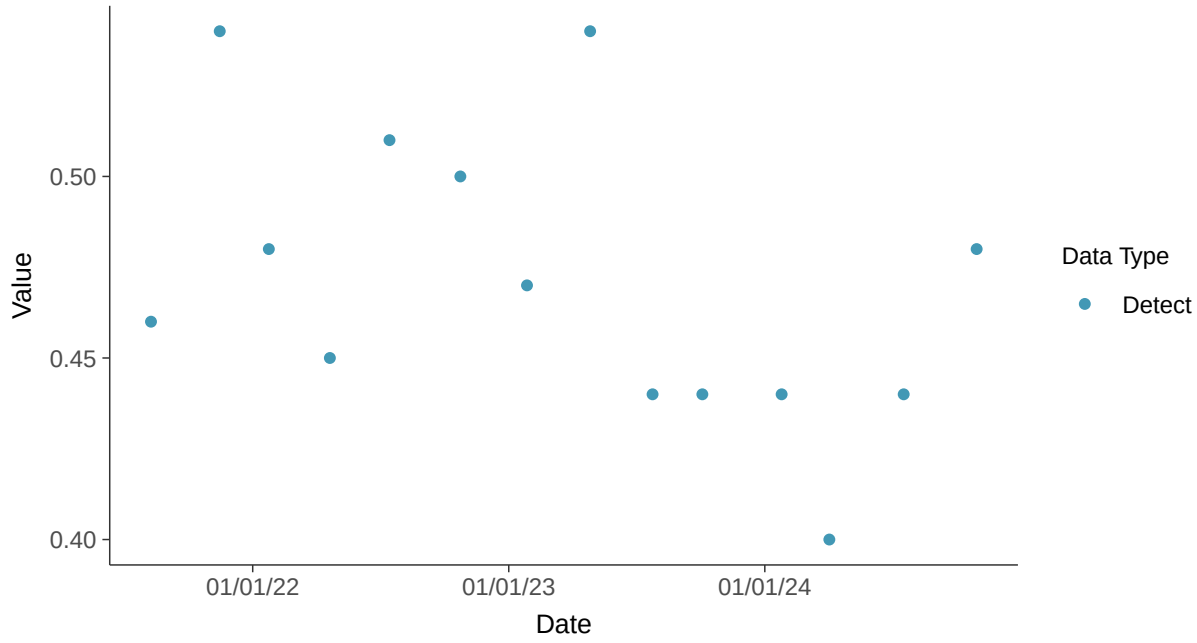


App. III: Fluoride, MW-10

ID: 09_02_112

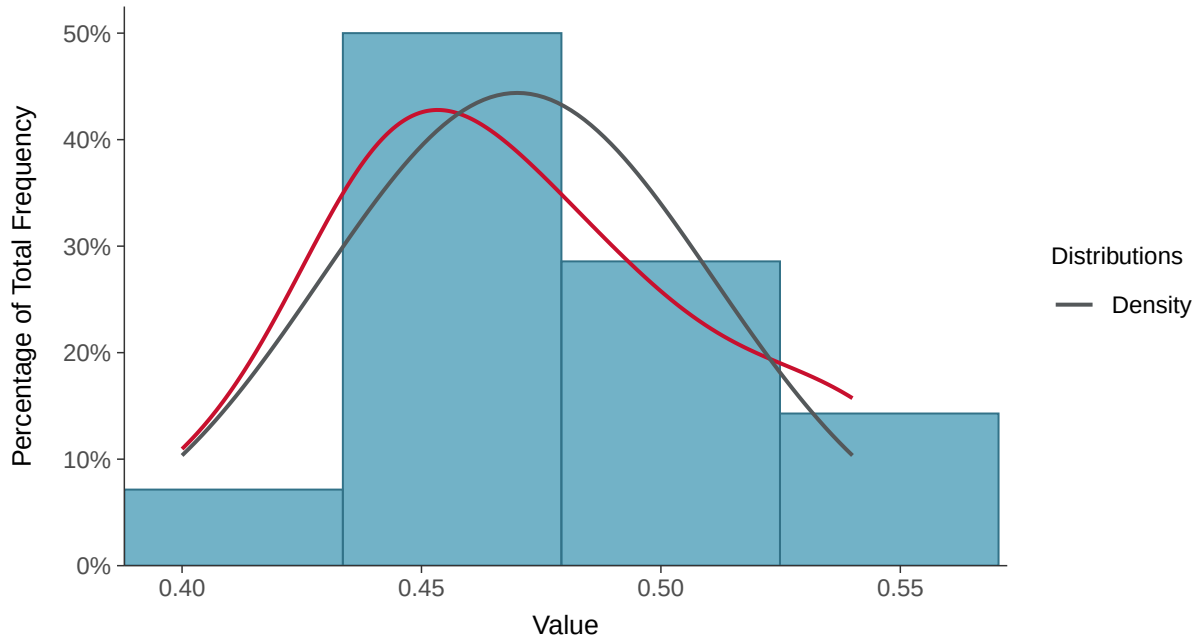
Scatter Plot

Fluoride, MW-10 (mg/L)



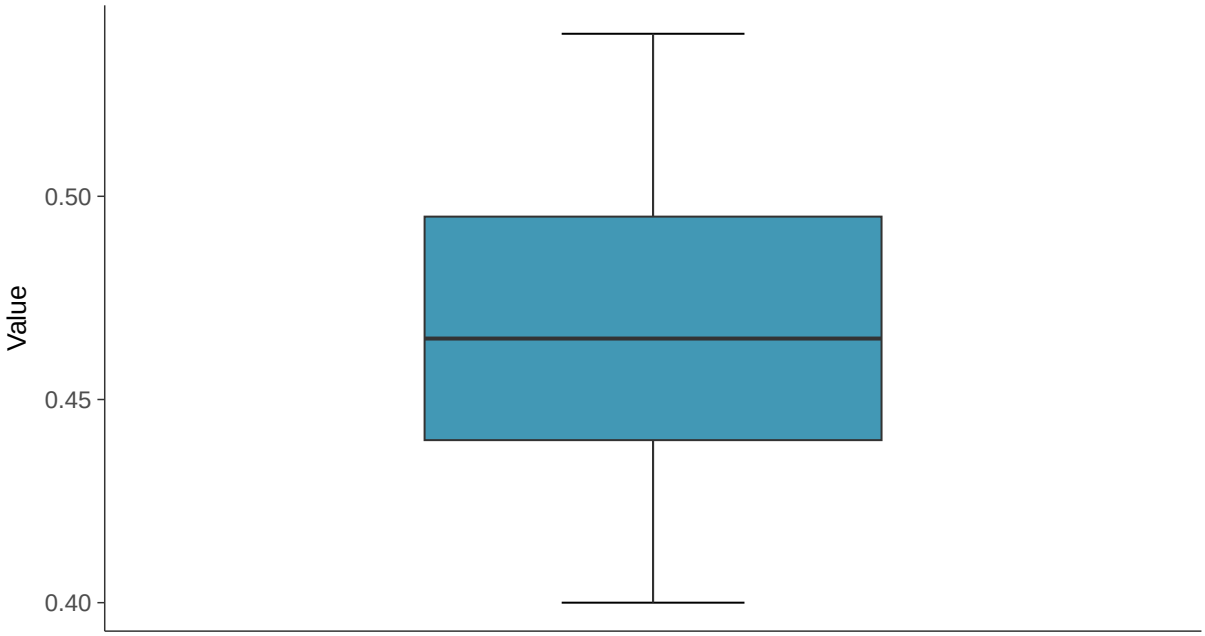
Histogram

Fluoride, MW-10 (mg/L)



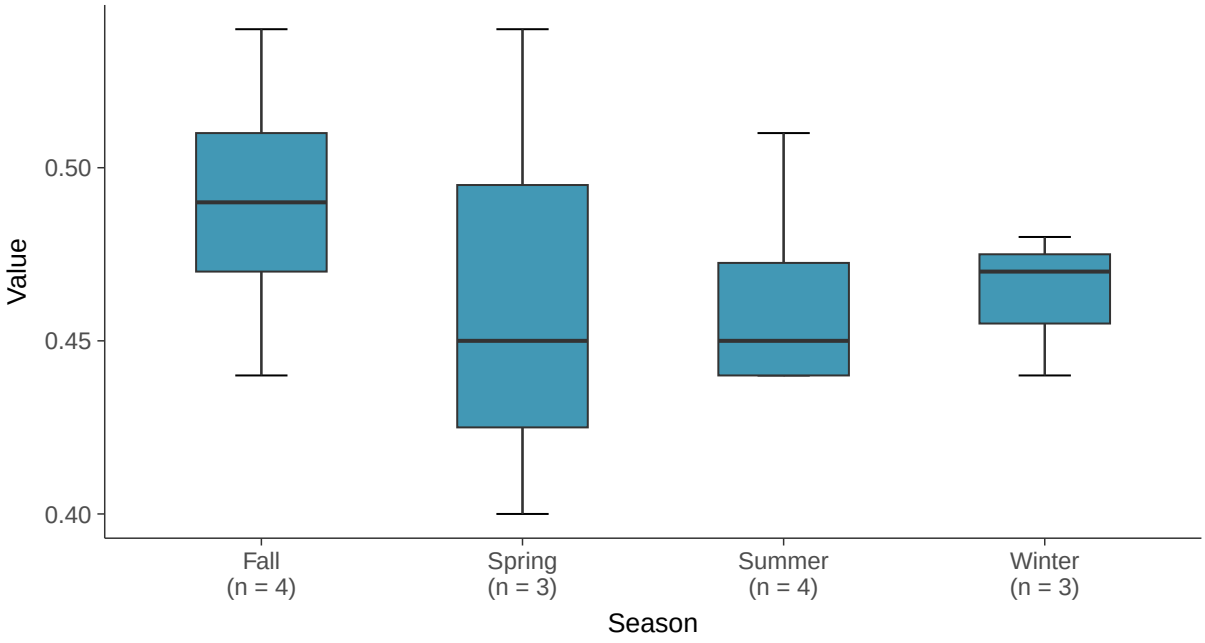
Boxplot

Fluoride, MW-10 (mg/L)



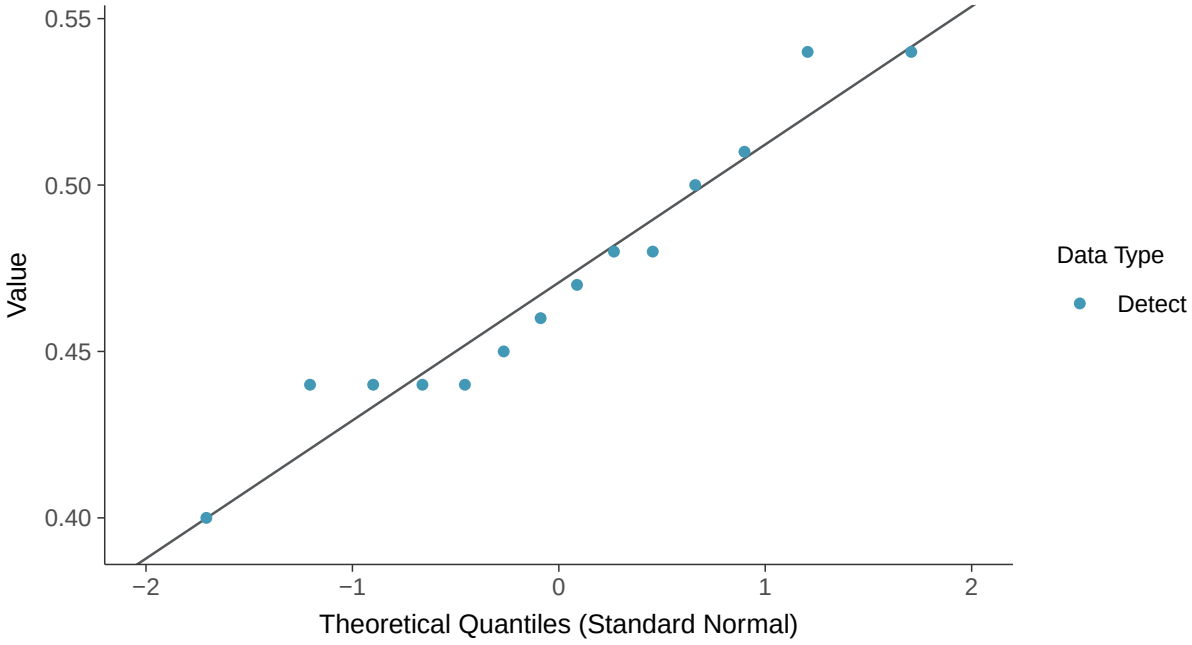
Boxplot by Season

Fluoride, MW-10 (mg/L)



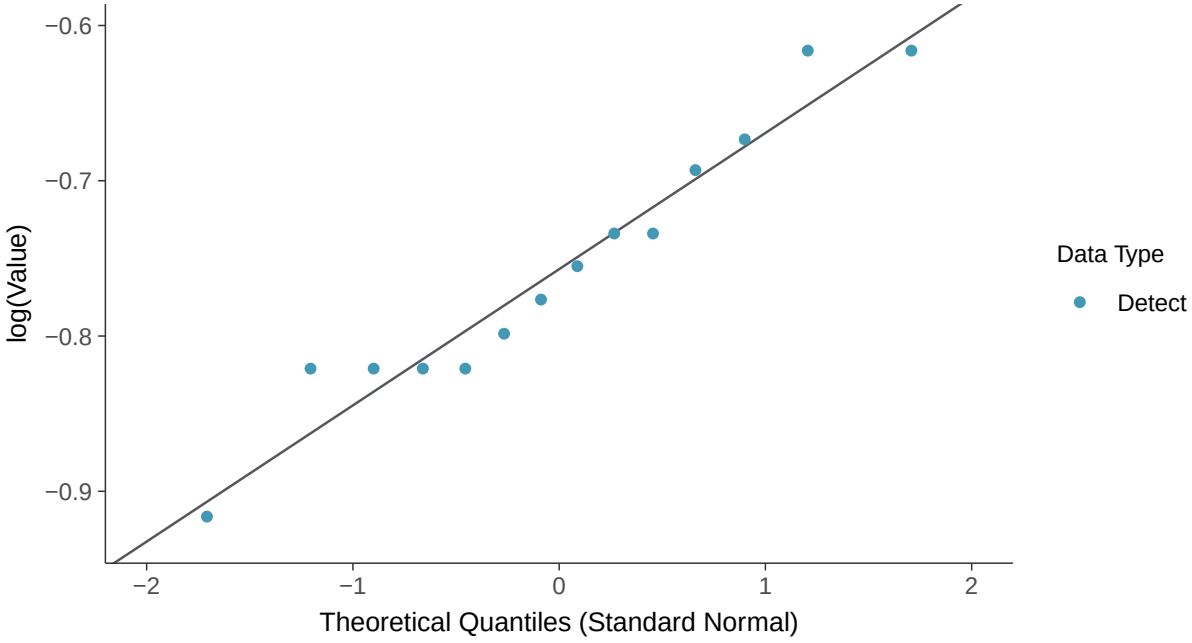
Normal Q-Q plot

Fluoride, MW-10 (mg/L)



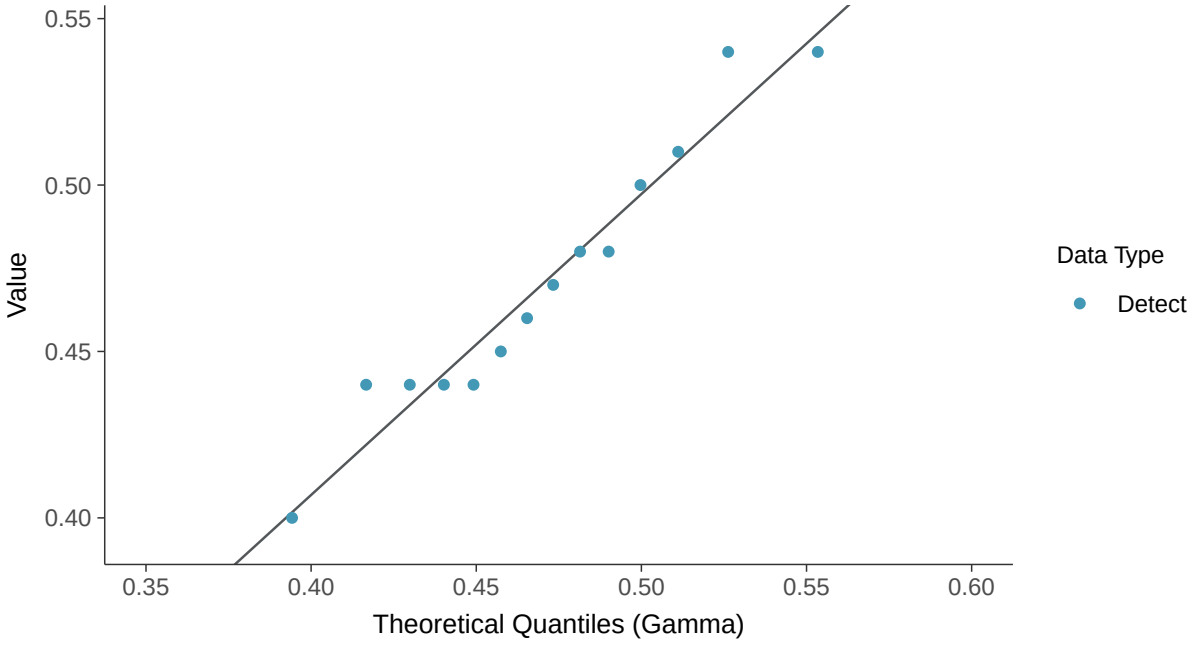
Lognormal Q-Q plot

Fluoride, MW-10 (mg/L)



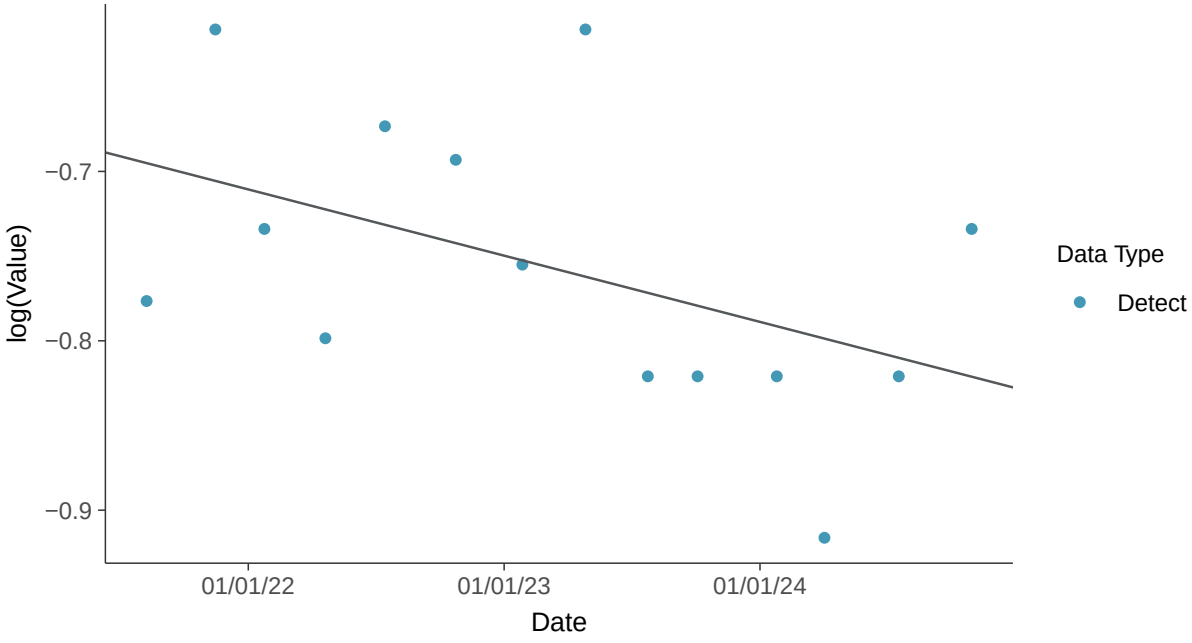
Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



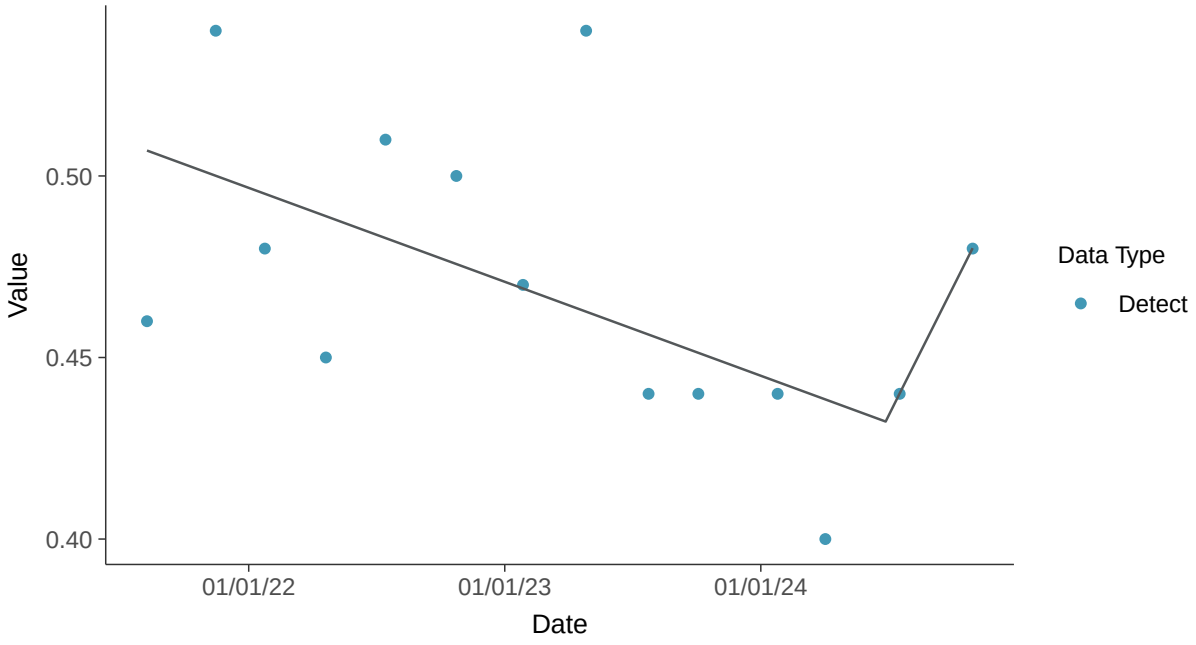
Trend Regression: Lognormal MLE

Fluoride, MW-10 (mg/L)



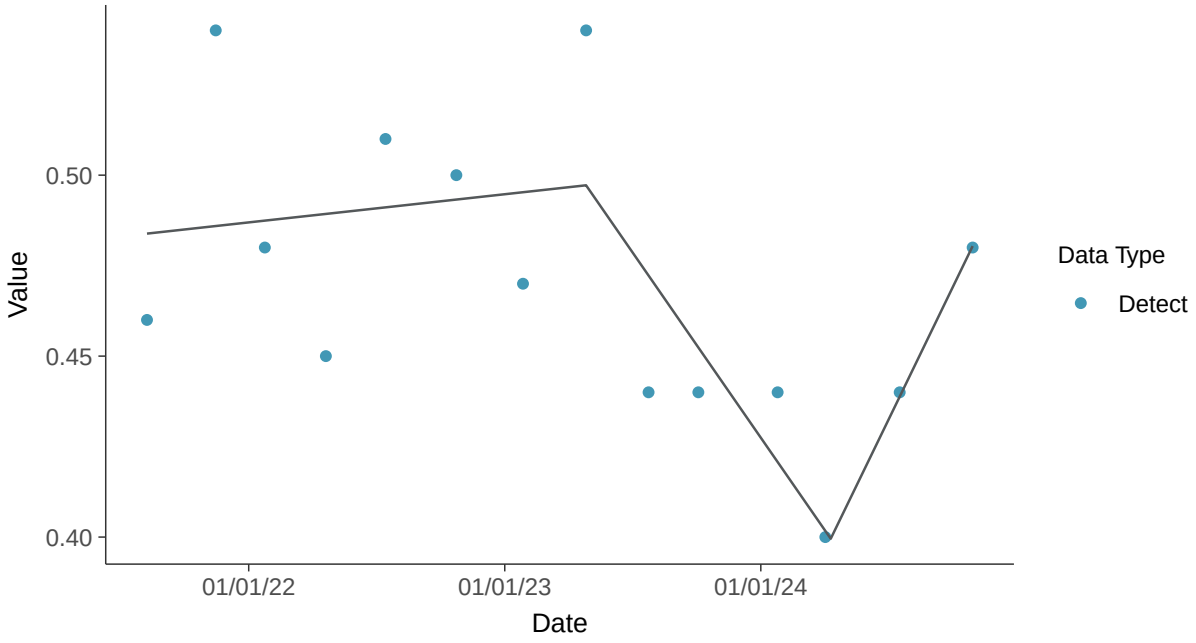
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-10 (mg/L)

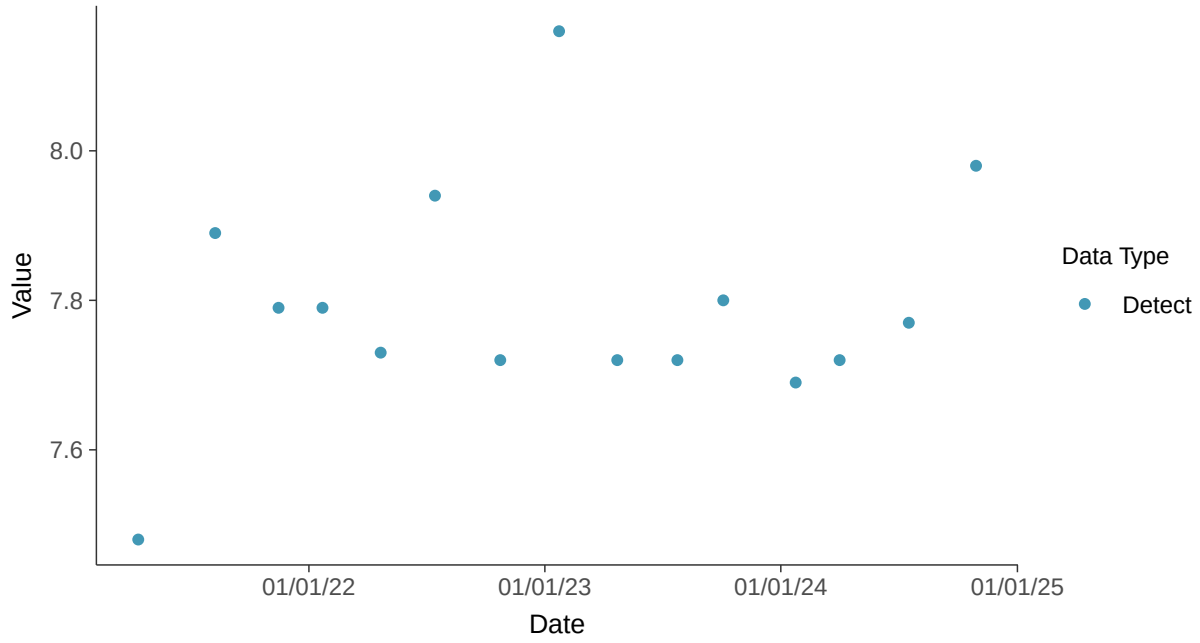


App. III: pH (Field), MW-10

ID: 09_02_118

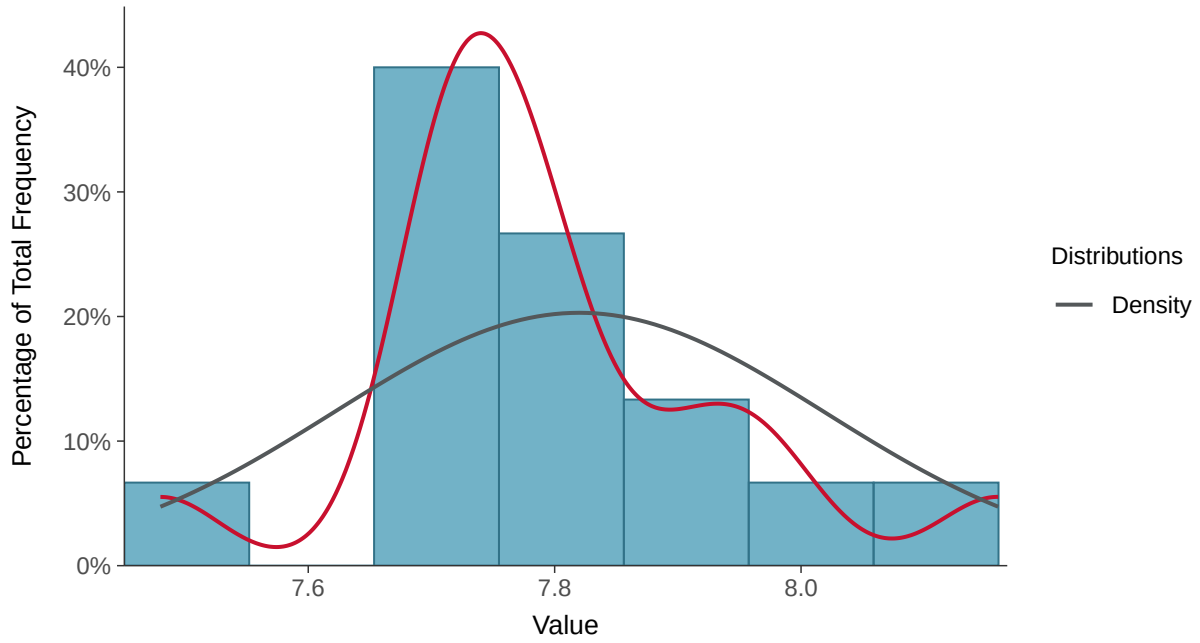
Scatter Plot

pH (Field), MW-10 (S.U.)



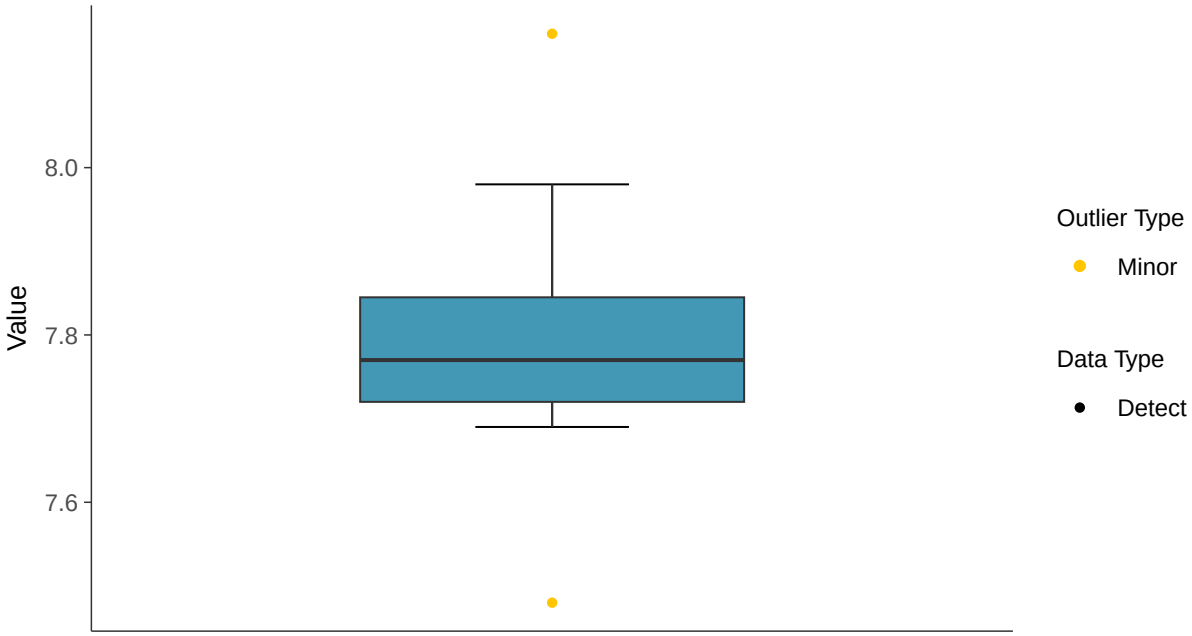
Histogram

pH (Field), MW-10 (S.U.)



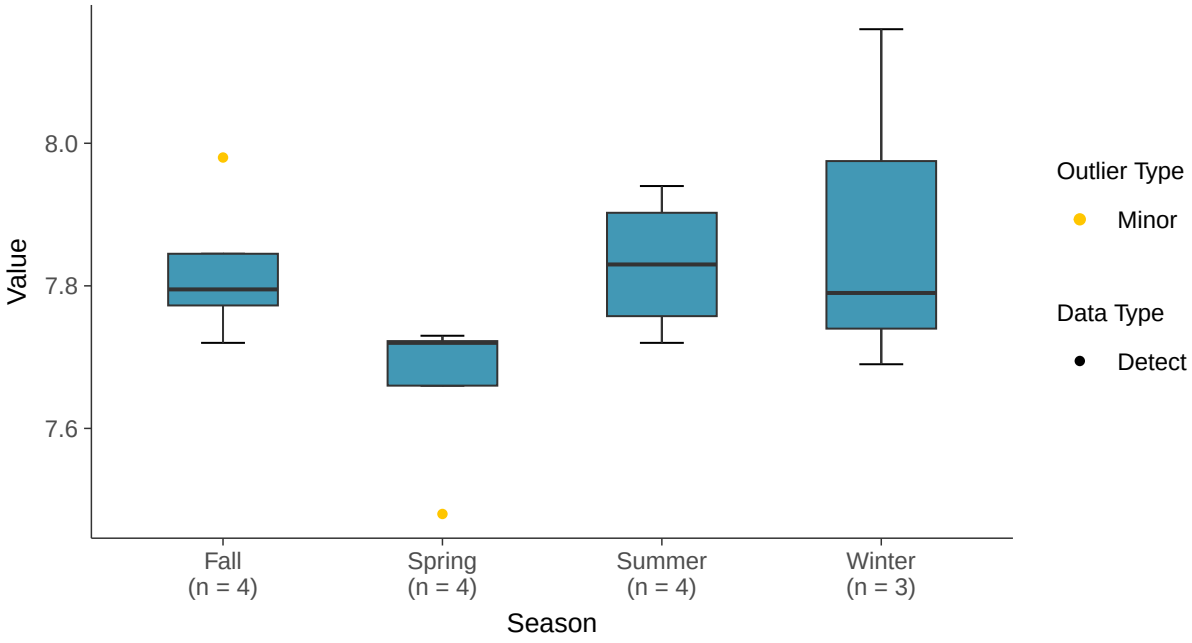
Boxplot

pH (Field), MW-10 (S.U.)



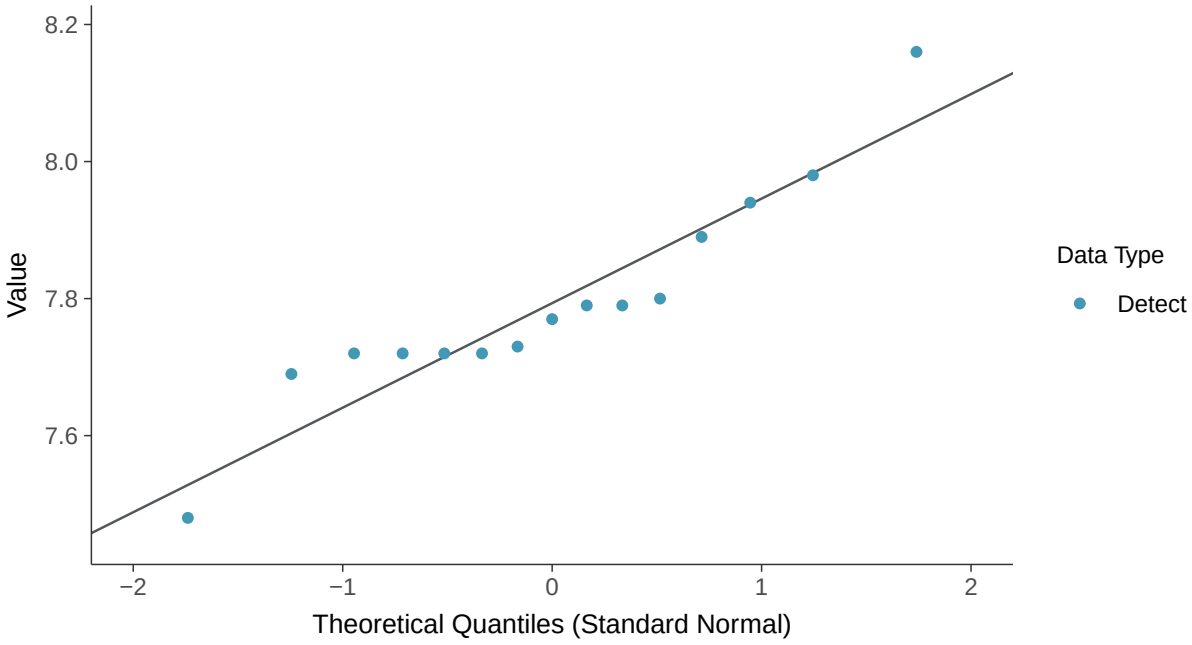
Boxplot by Season

pH (Field), MW-10 (S.U.)



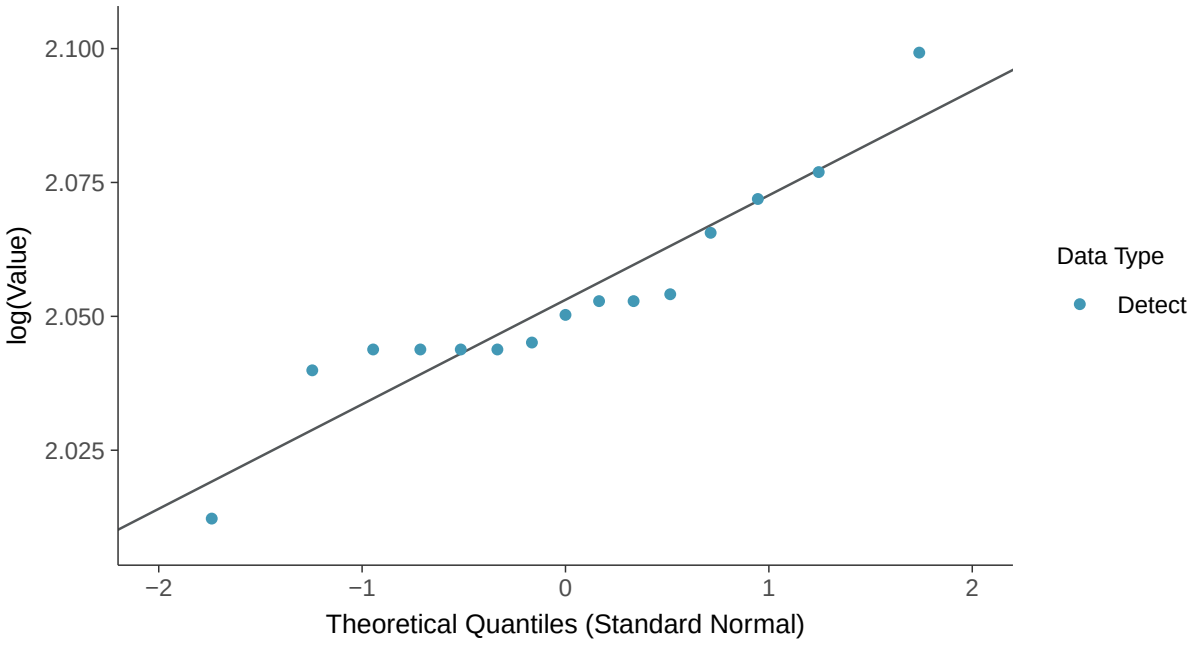
Normal Q-Q plot

pH (Field), MW-10 (S.U.)



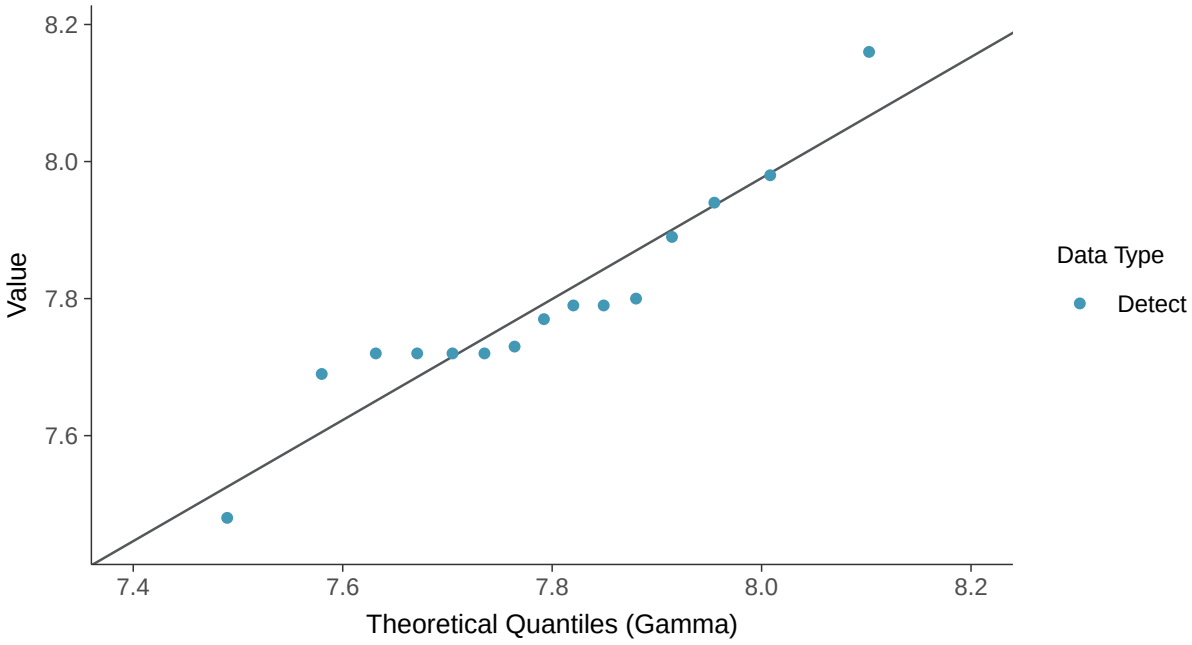
Lognormal Q-Q plot

pH (Field), MW-10 (S.U.)



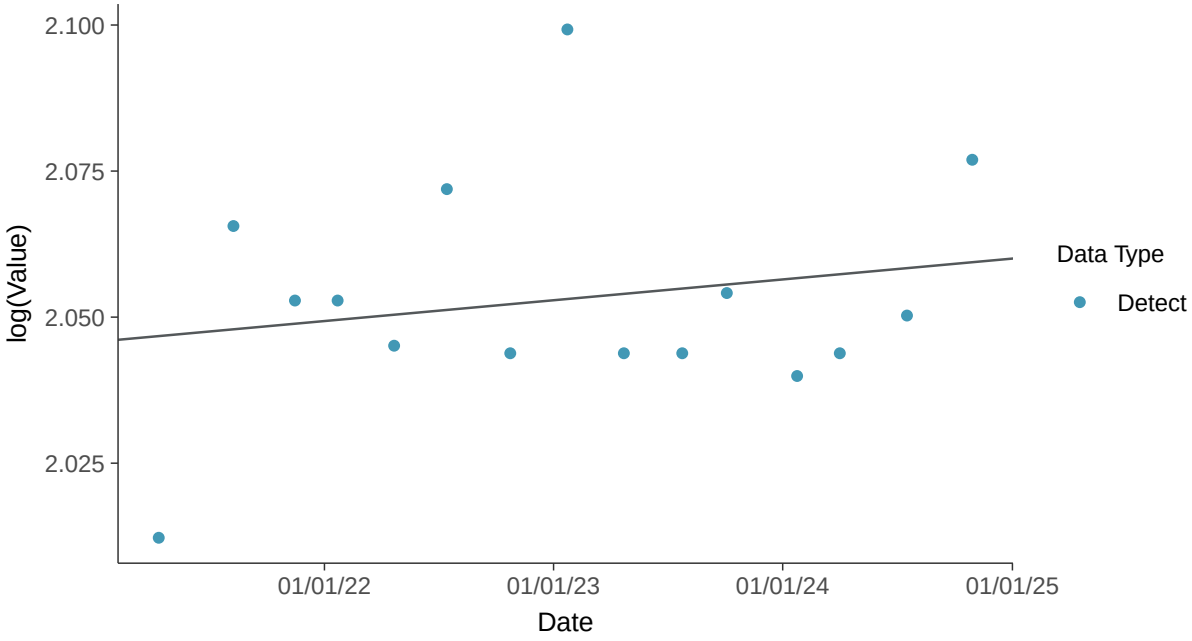
Gamma Q-Q plot

pH (Field), MW-10 (S.U.)



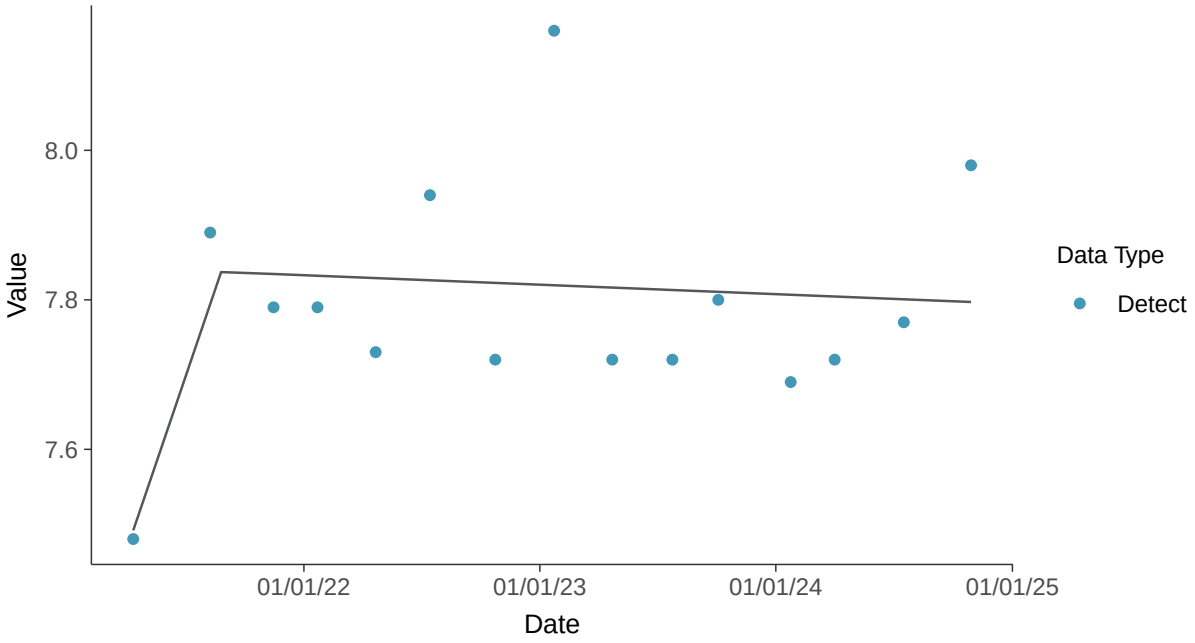
Trend Regression: Lognormal MLE

pH (Field), MW-10 (S.U.)



Trend Regression: Piecewise Linear-Linear

pH (Field), MW-10 (S.U.)

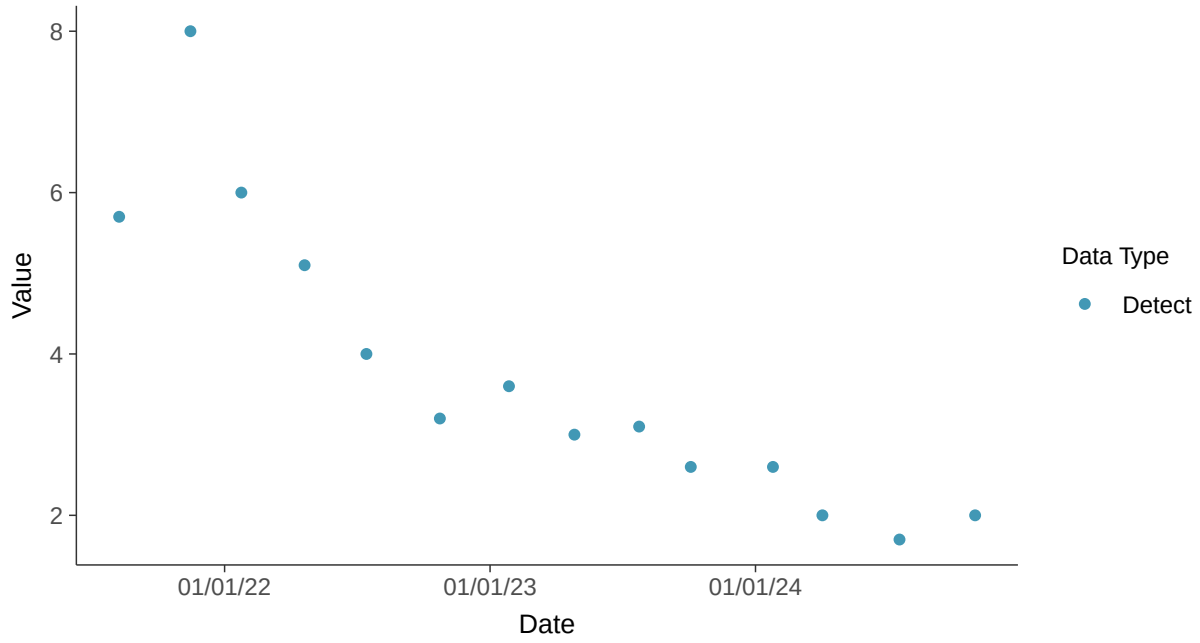


App. III: Sulfate, MW-10

ID: 09_02_123

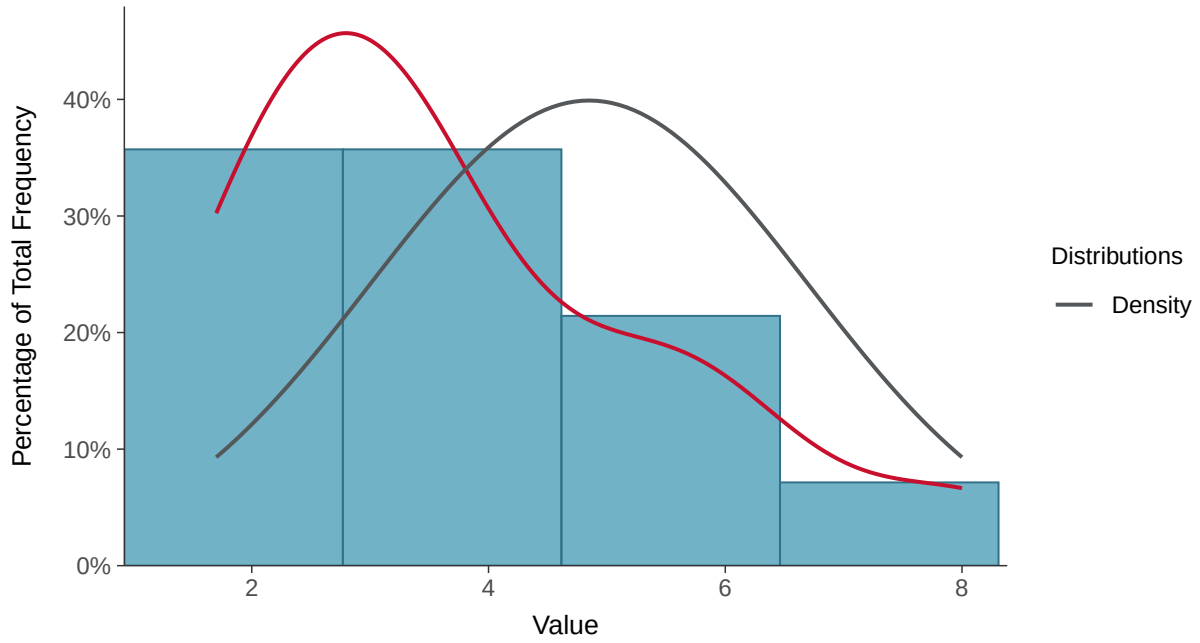
Scatter Plot

Sulfate, MW-10 (mg/L)



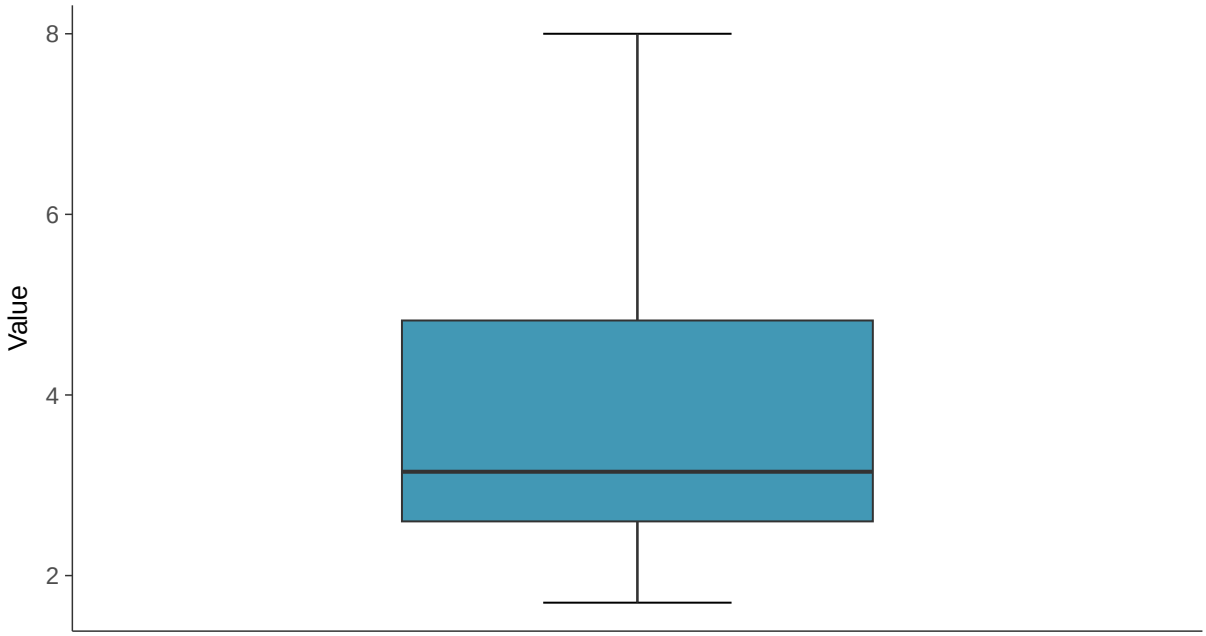
Histogram

Sulfate, MW-10 (mg/L)



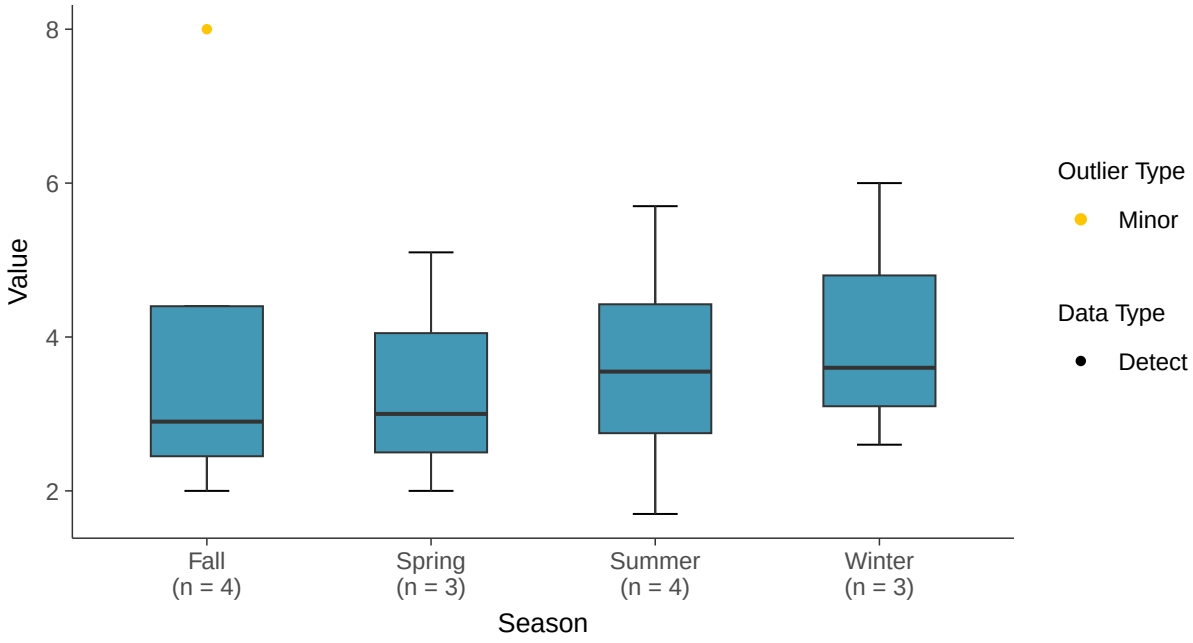
Boxplot

Sulfate, MW-10 (mg/L)



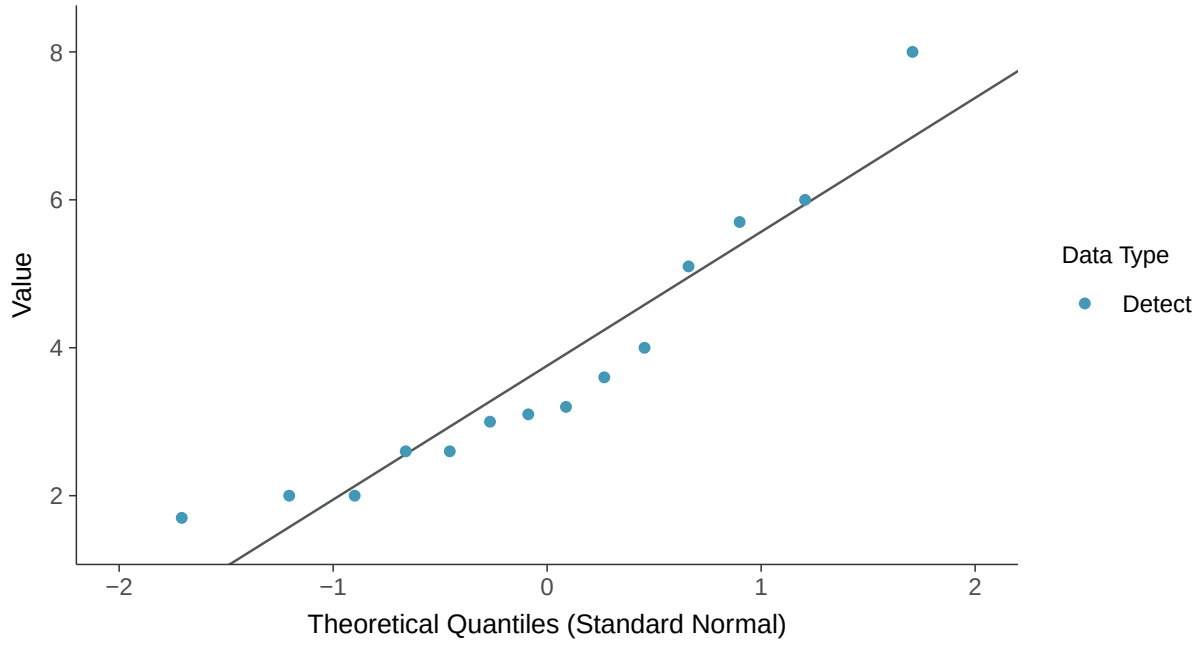
Boxplot by Season

Sulfate, MW-10 (mg/L)



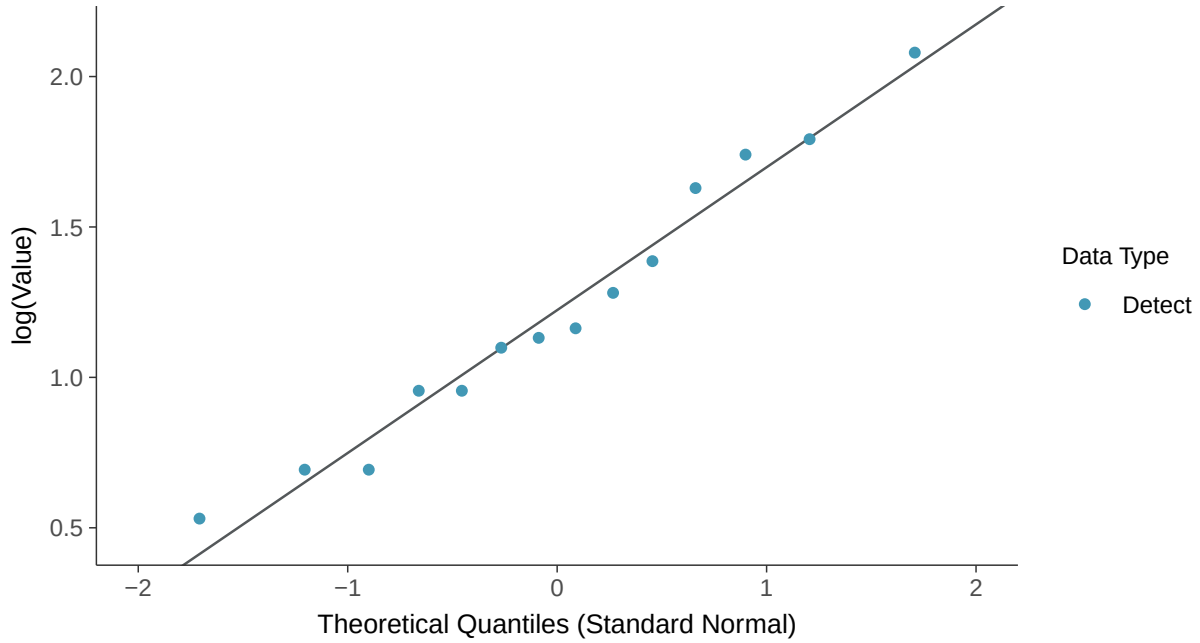
Normal Q-Q plot

Sulfate, MW-10 (mg/L)



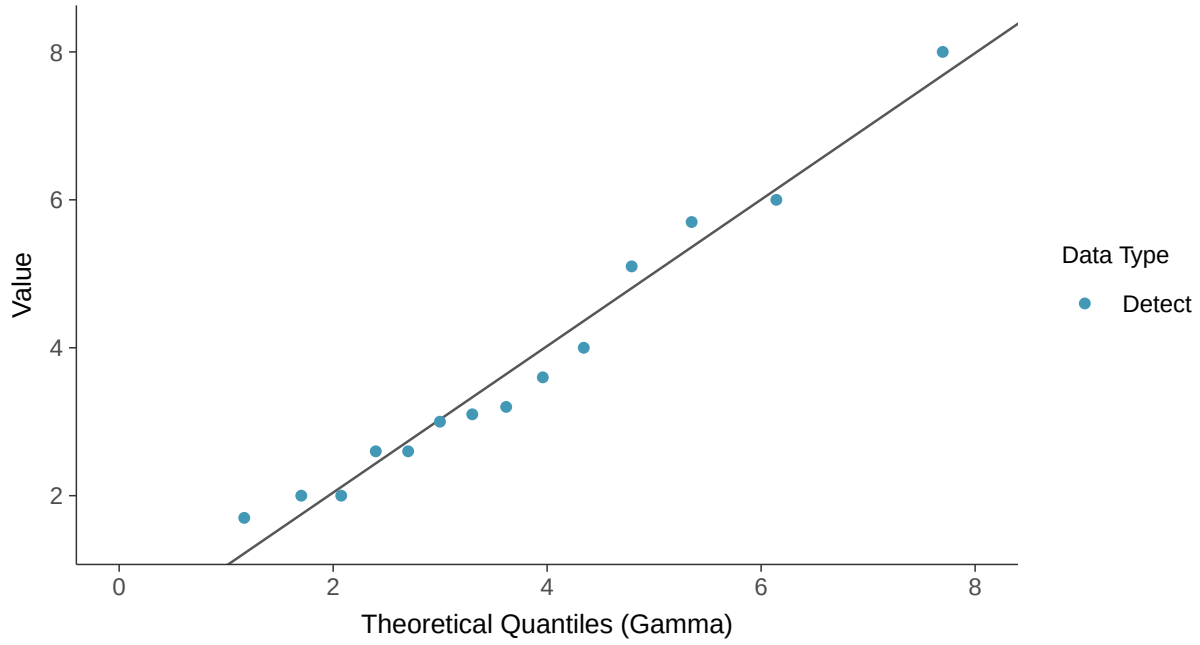
Lognormal Q-Q plot

Sulfate, MW-10 (mg/L)



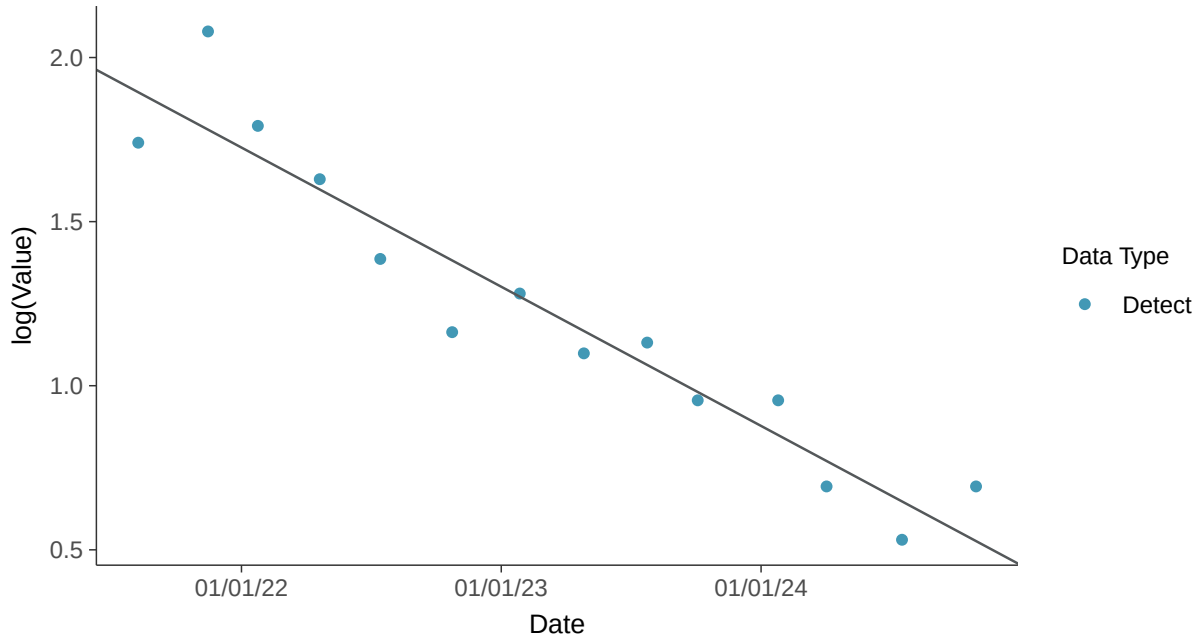
Gamma Q-Q plot

Sulfate, MW-10 (mg/L)



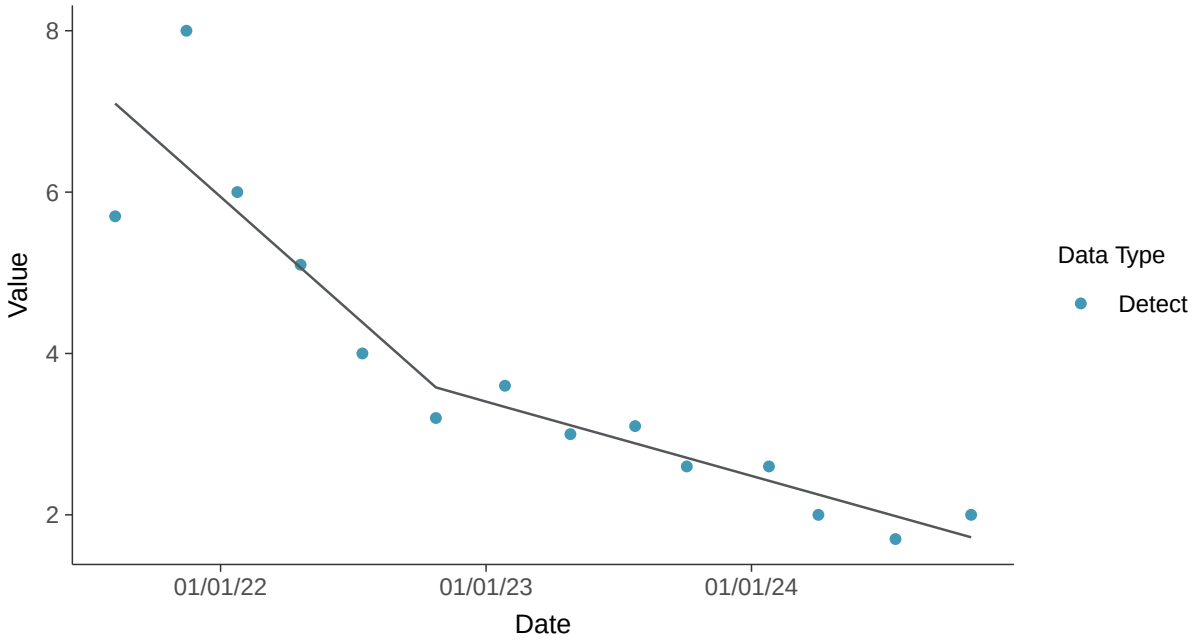
Trend Regression: Lognormal MLE

Sulfate, MW-10 (mg/L)



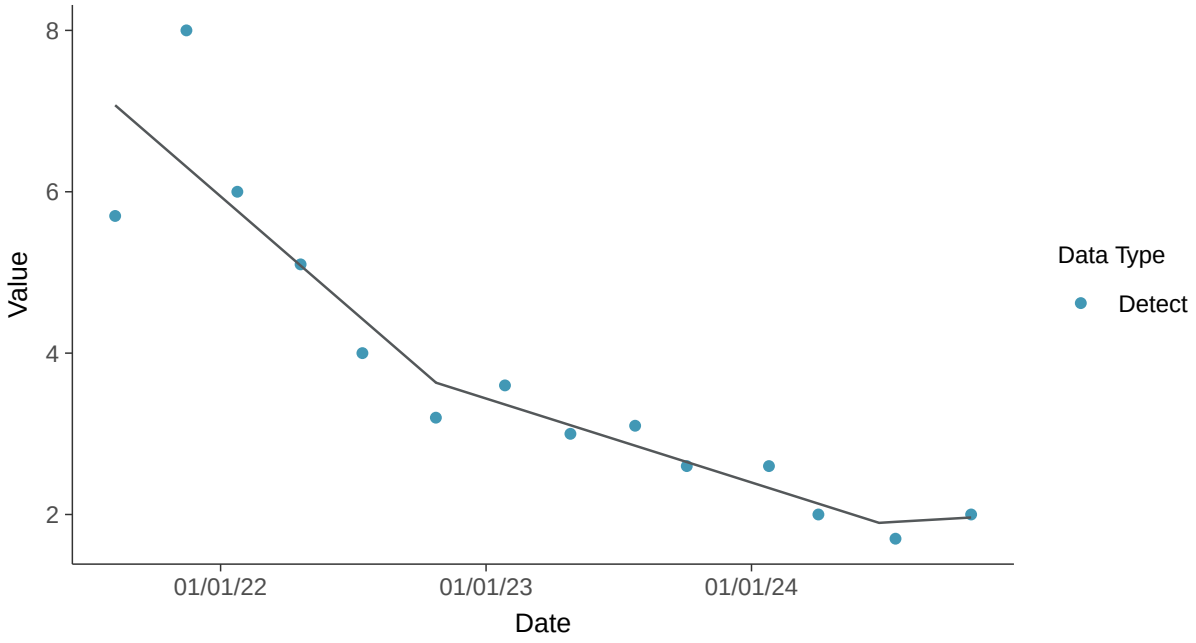
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-10 (mg/L)

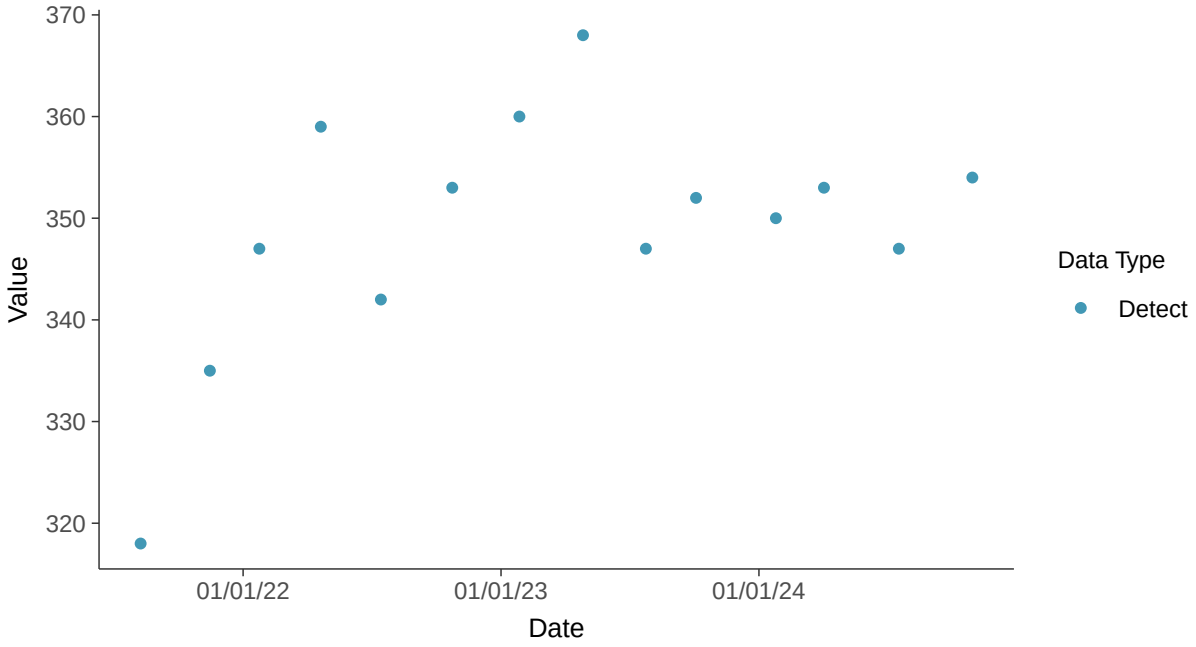


App. III: Total Dissolved Solids, MW-10

ID: 09_02_125

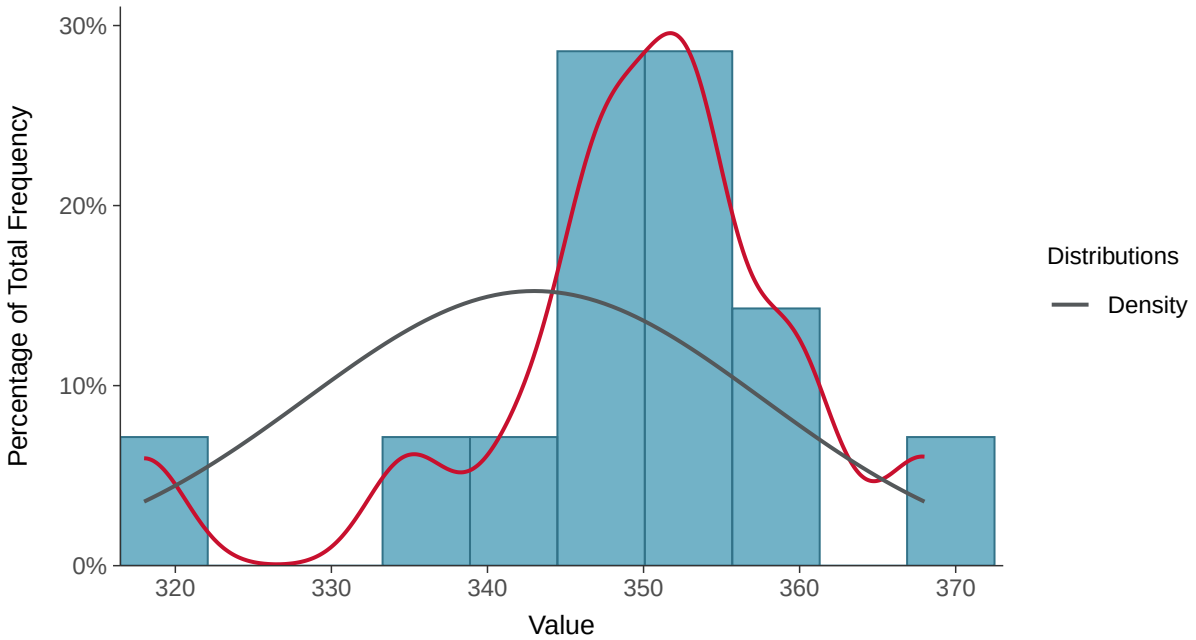
Scatter Plot

Total Dissolved Solids, MW-10 (mg/L)



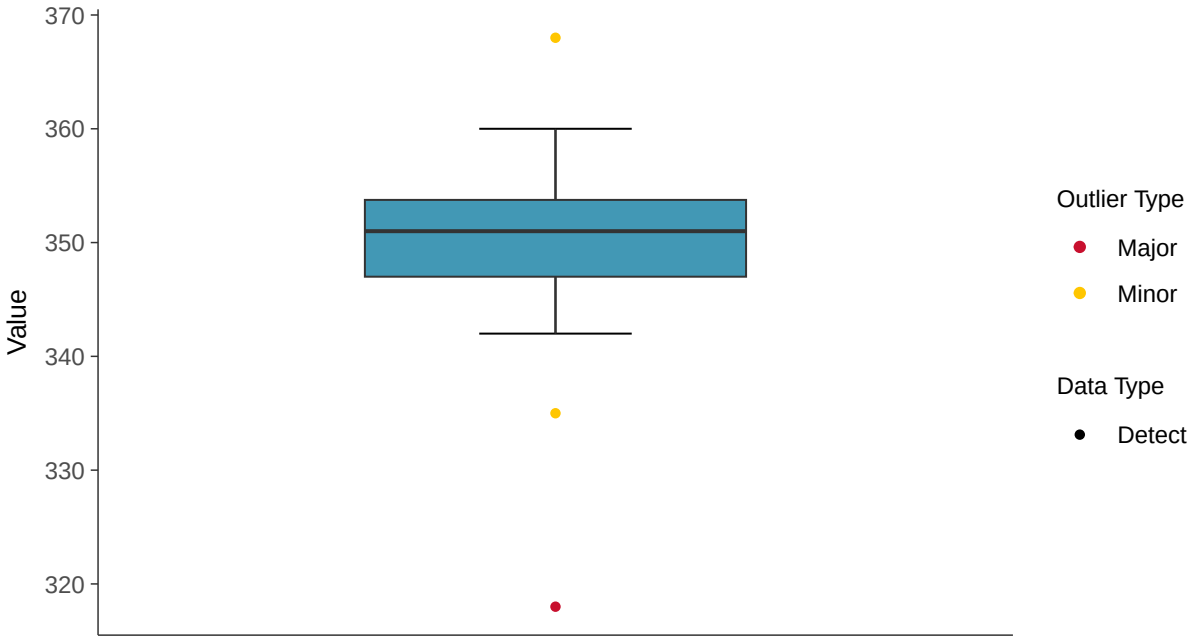
Histogram

Total Dissolved Solids, MW-10 (mg/L)



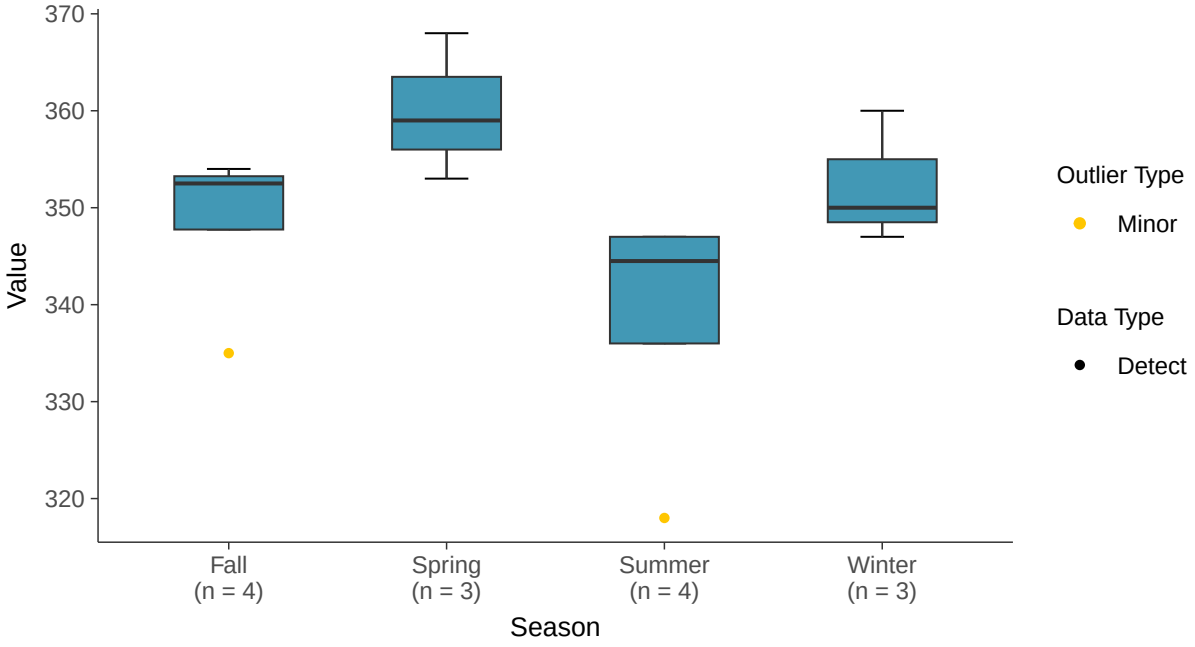
Boxplot

Total Dissolved Solids, MW-10 (mg/L)



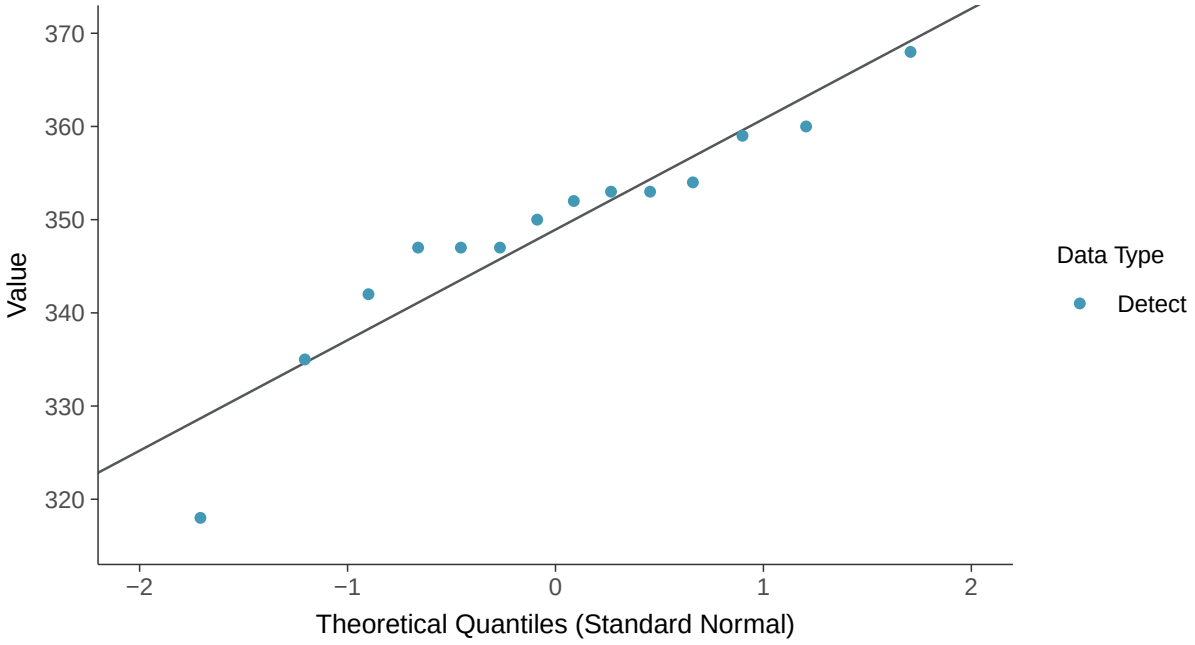
Boxplot by Season

Total Dissolved Solids, MW-10 (mg/L)



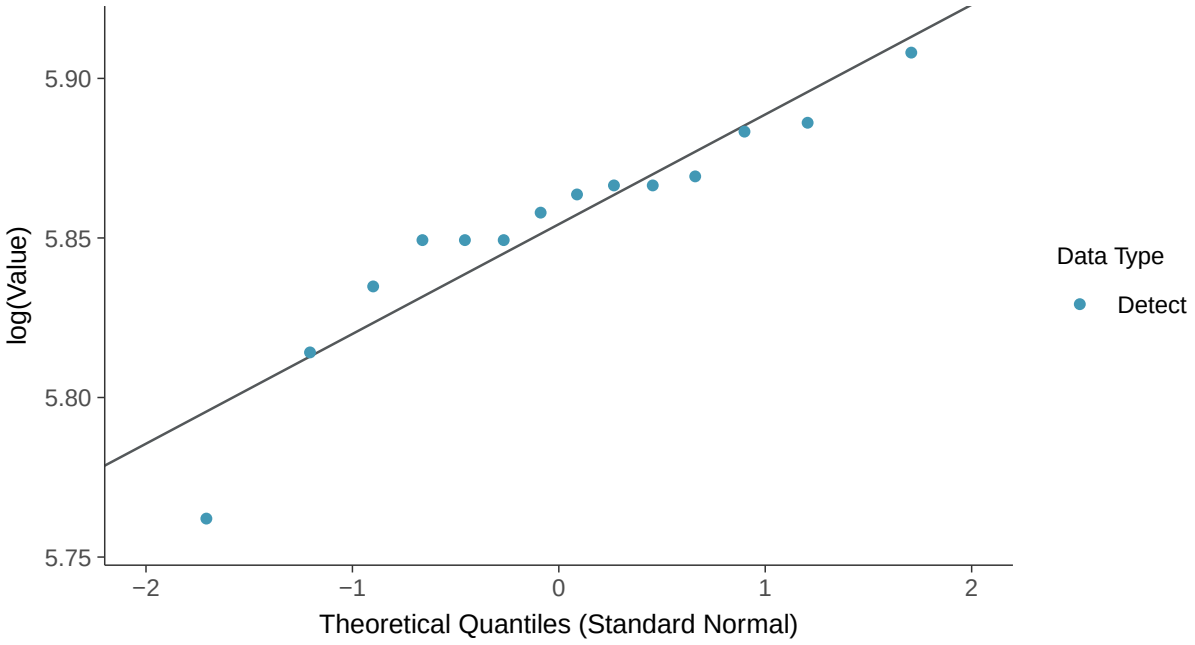
Normal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



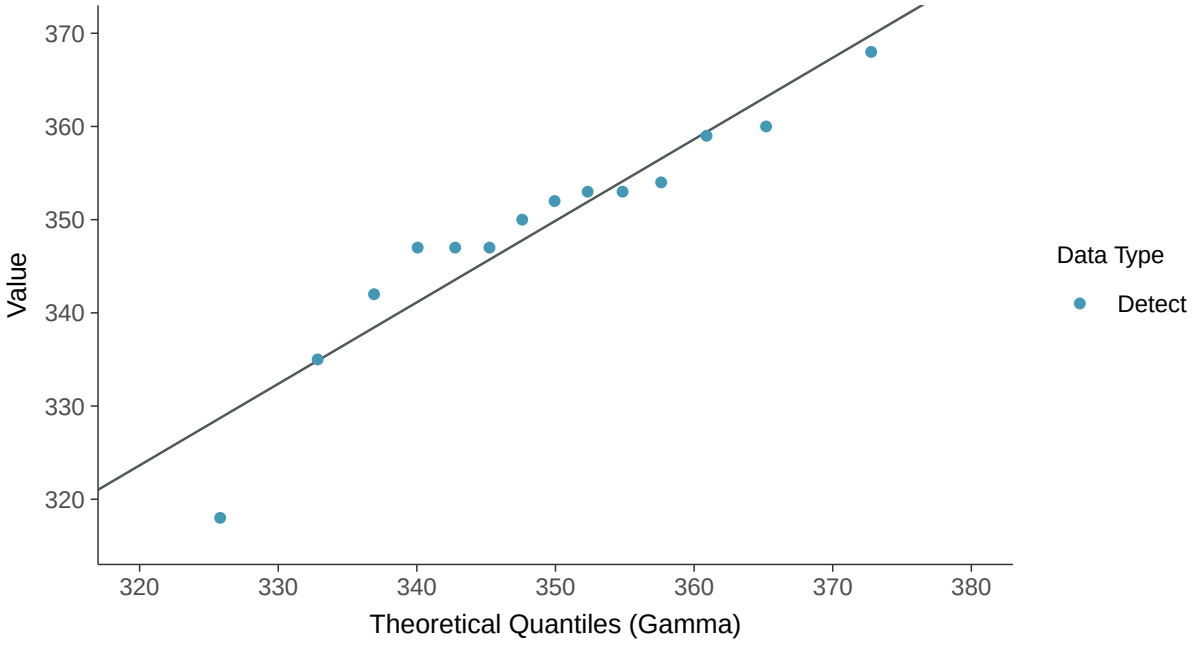
Lognormal Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



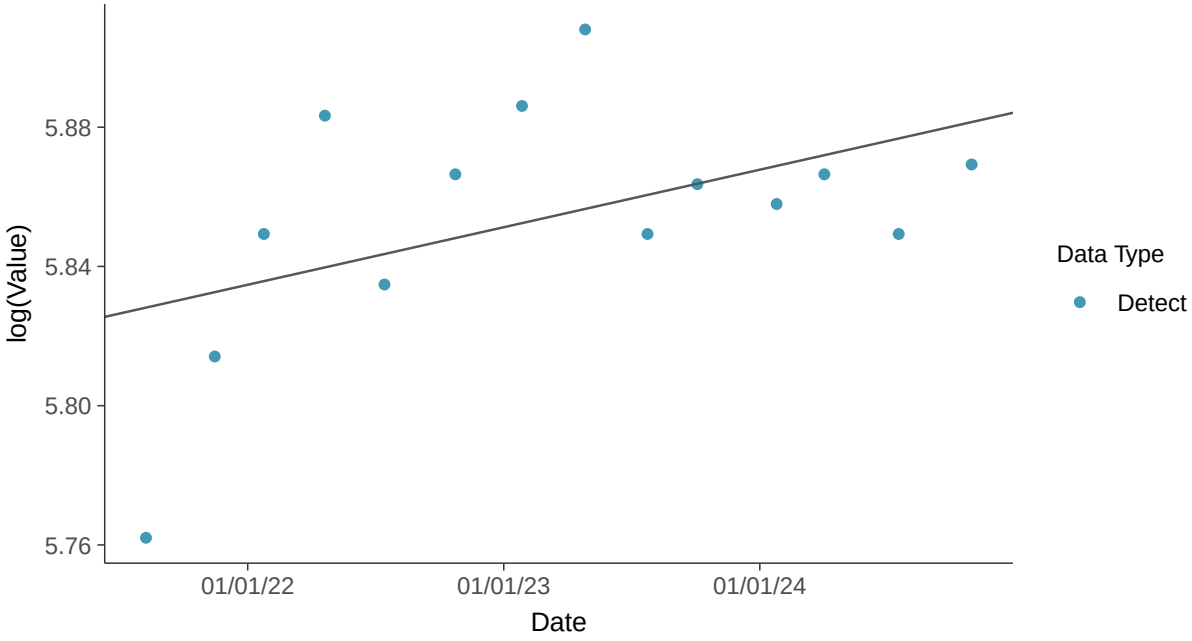
Gamma Q-Q plot

Total Dissolved Solids, MW-10 (mg/L)



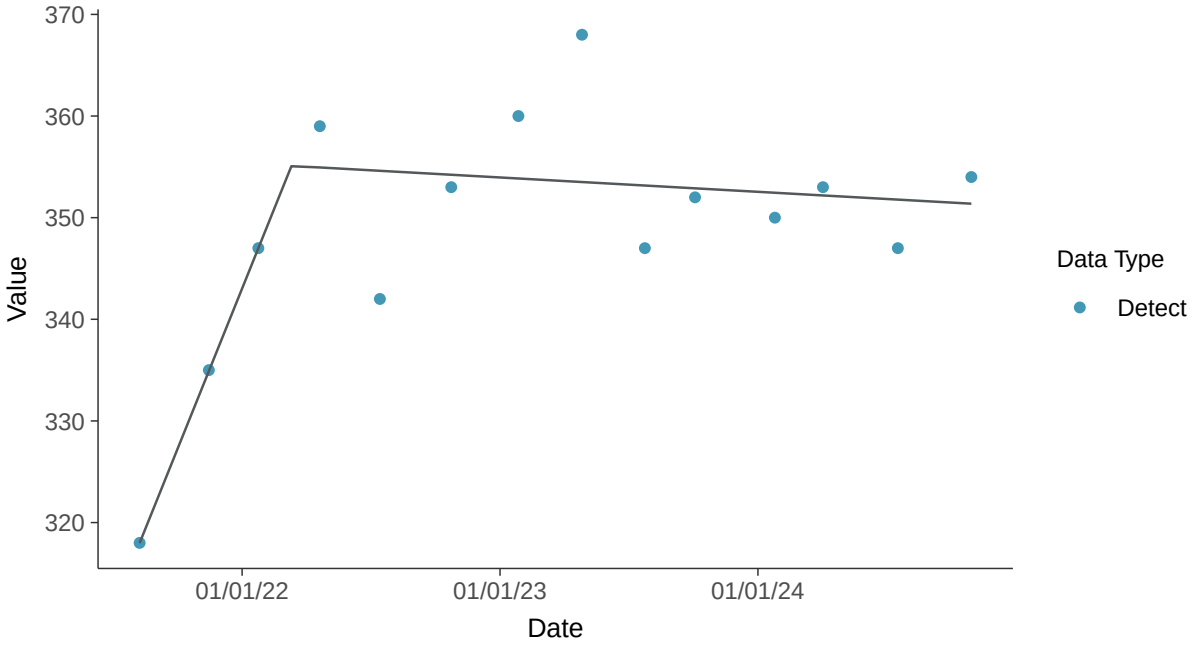
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-10 (mg/L)



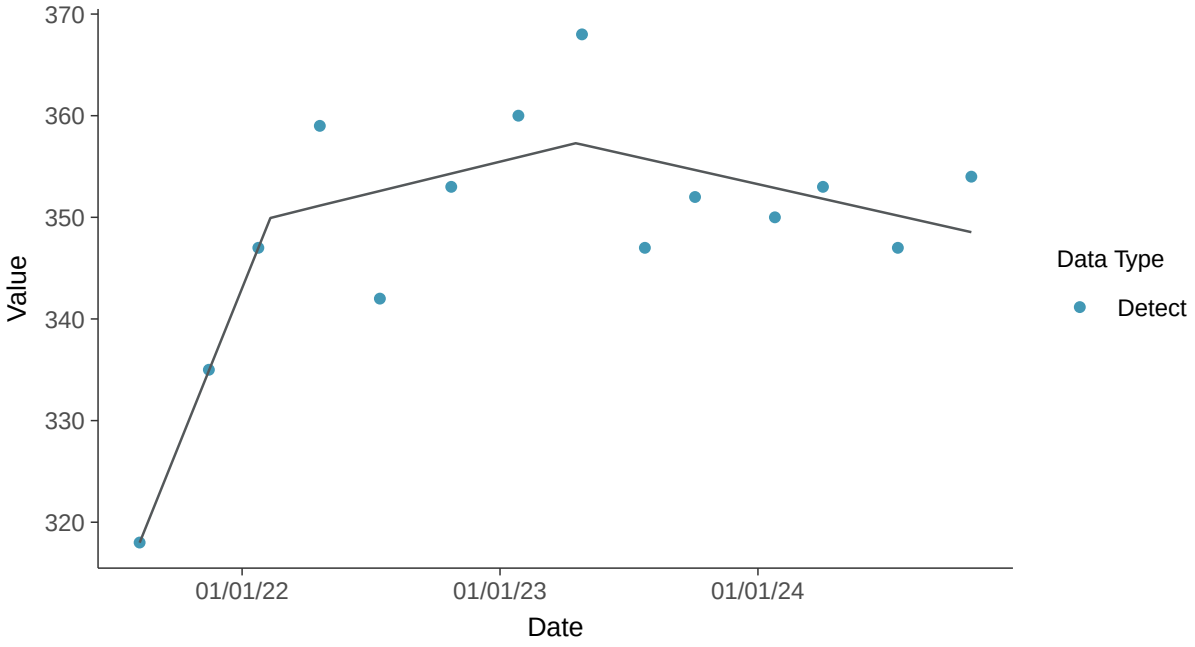
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-10 (mg/L)

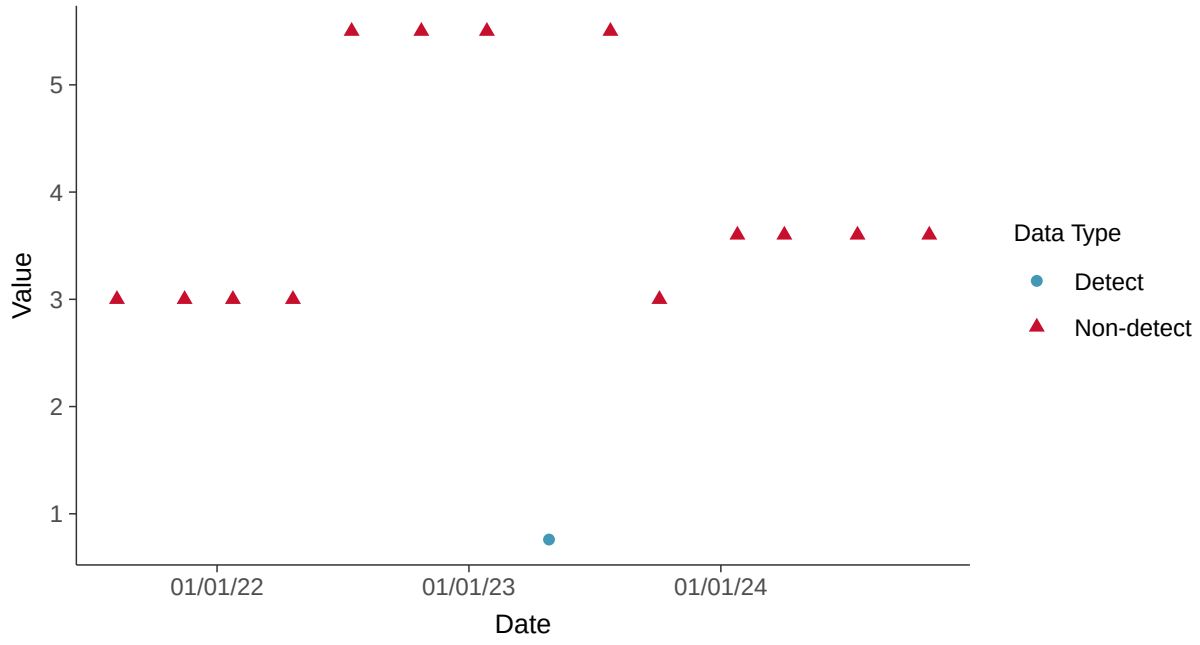


App. IV: Antimony, MW-10

ID: 09_03_101

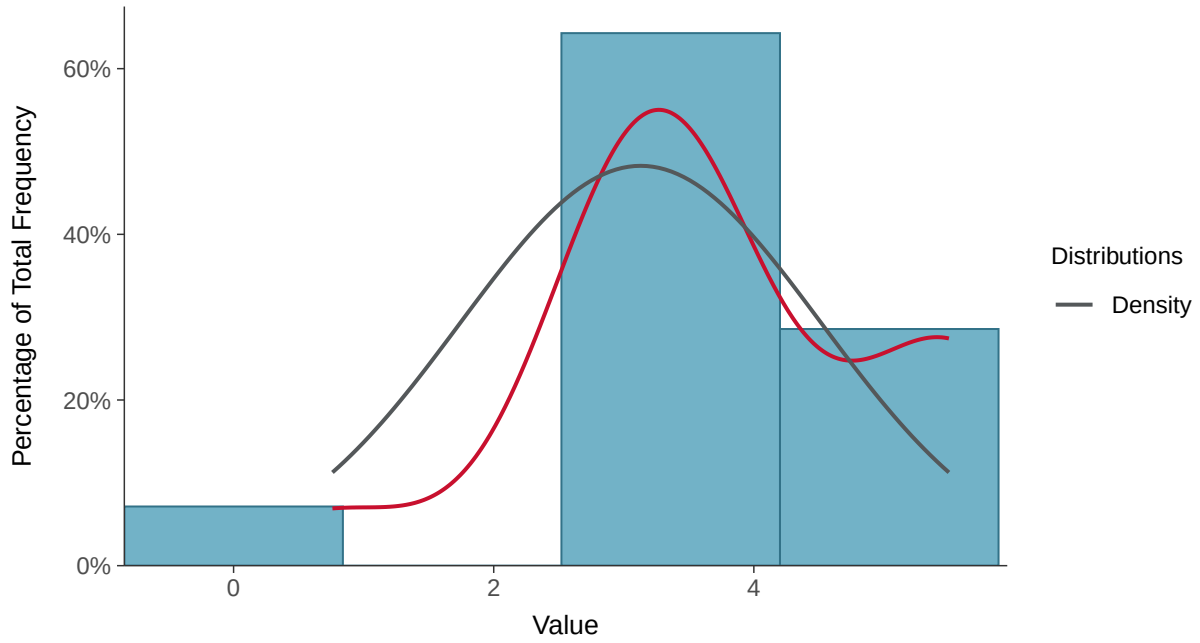
Scatter Plot

Antimony, MW-10 (ug/L)



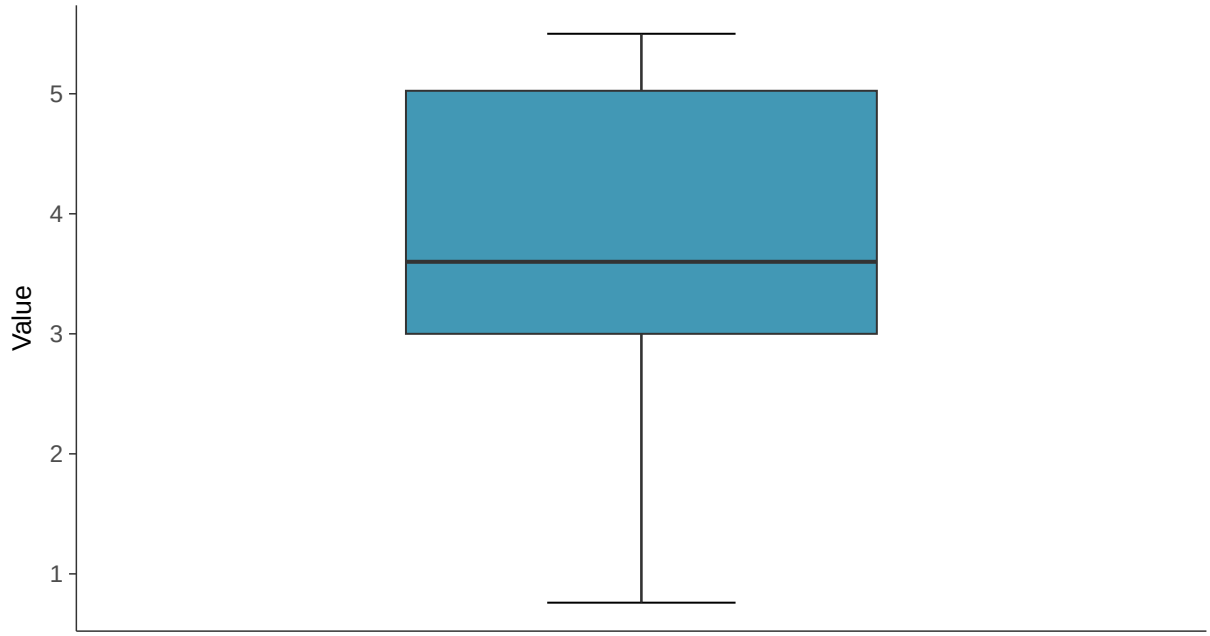
Histogram

Antimony, MW-10 (ug/L)



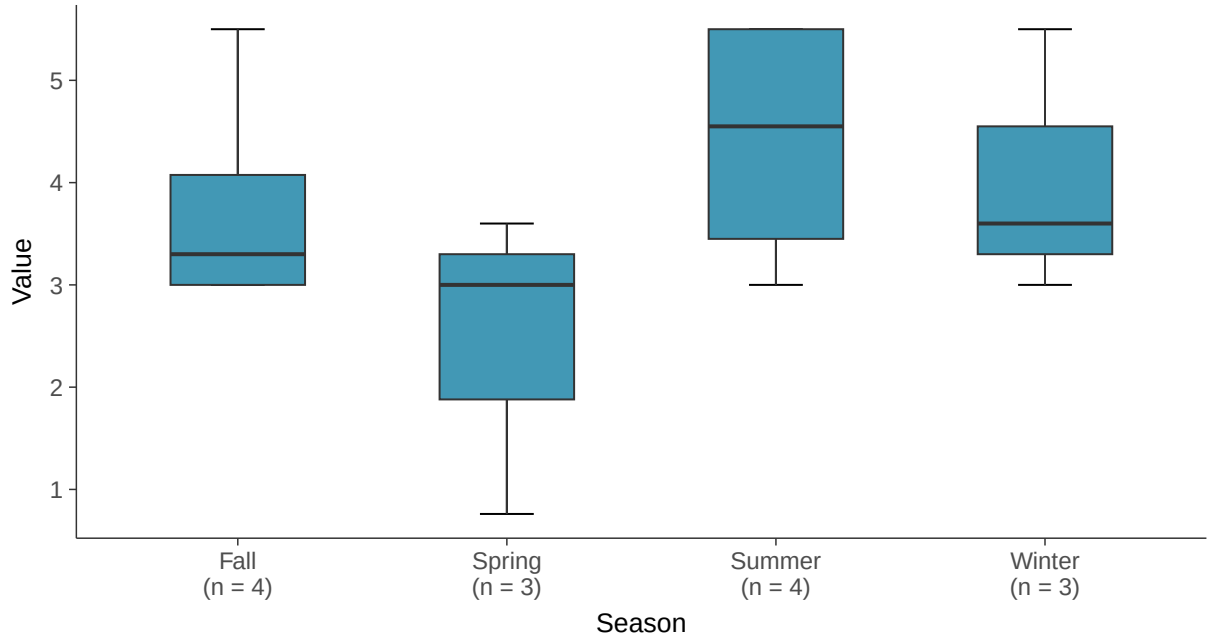
Boxplot

Antimony, MW-10 (ug/L)



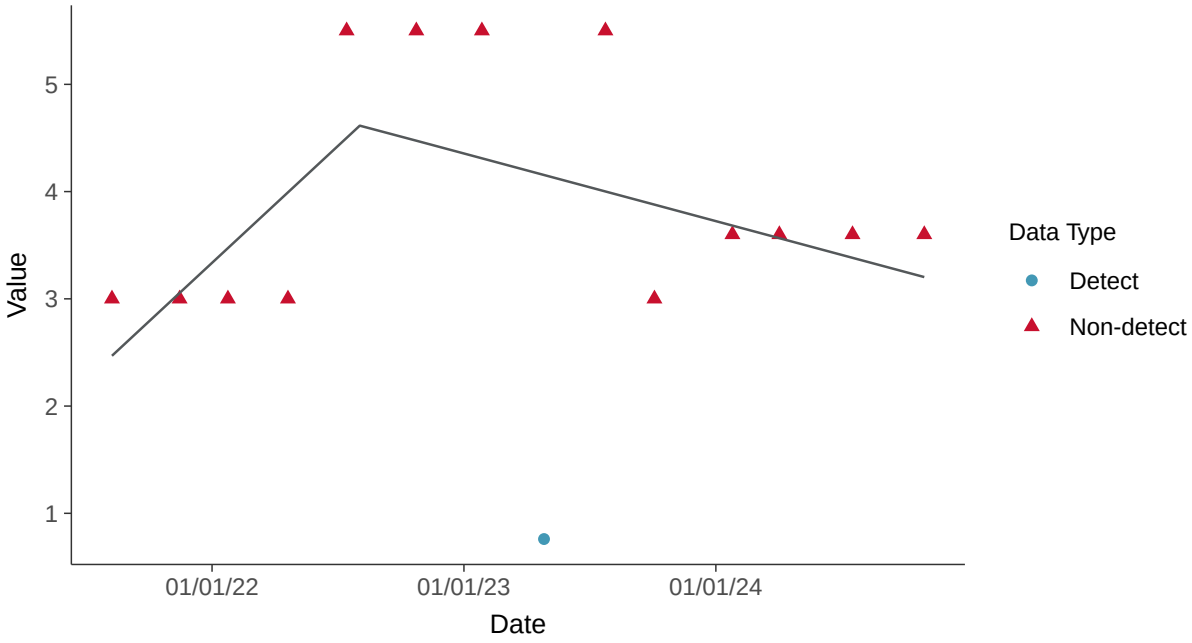
Boxplot by Season

Antimony, MW-10 (ug/L)



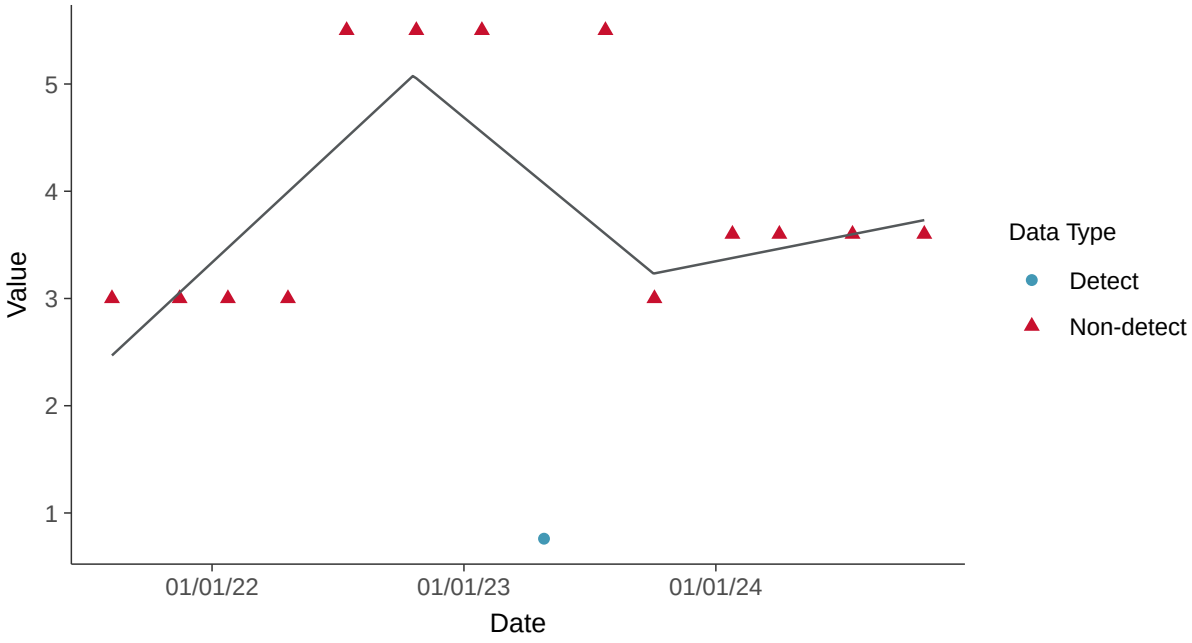
Trend Regression: Piecewise Linear-Linear

Antimony, MW-10 (ug/L)



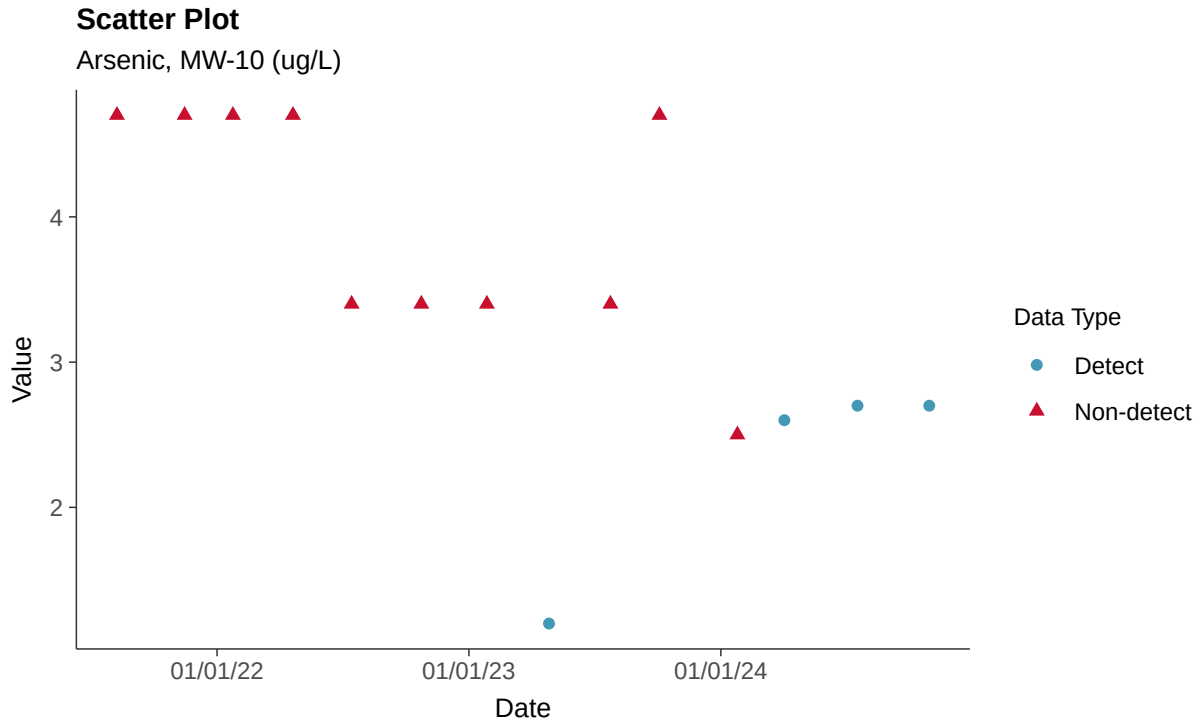
Trend Regression: Piecewise Linear-Linear-Linear

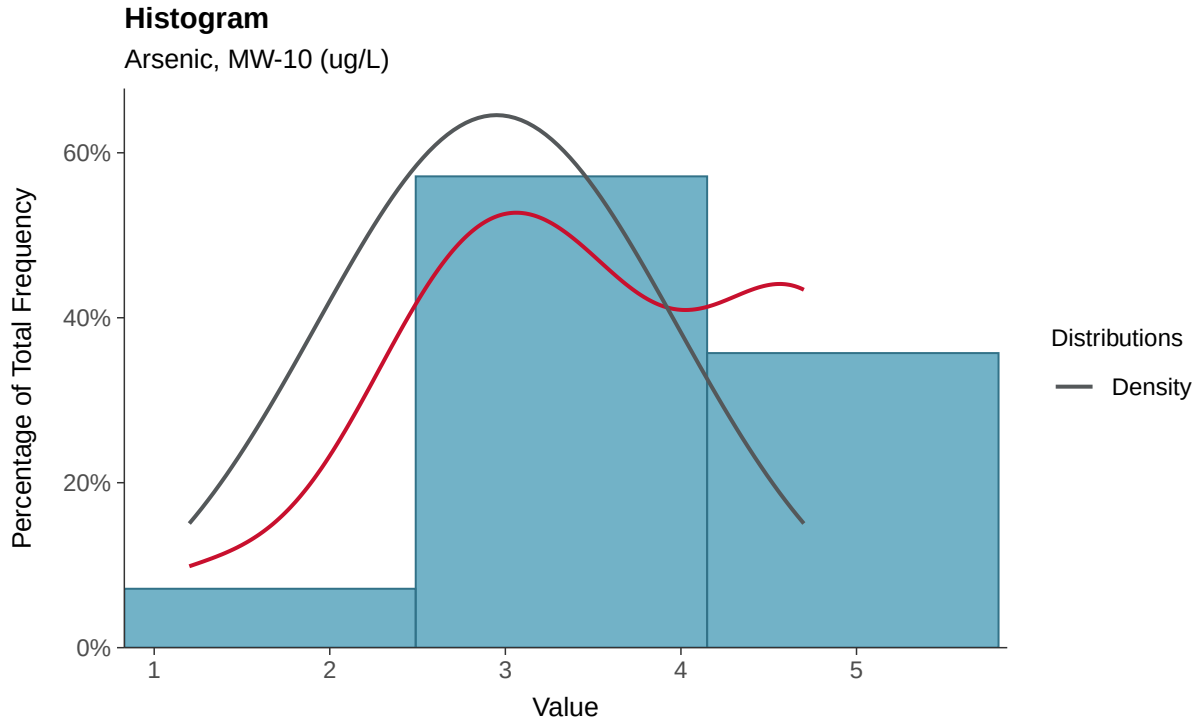
Antimony, MW-10 (ug/L)



App. IV: Arsenic, MW-10

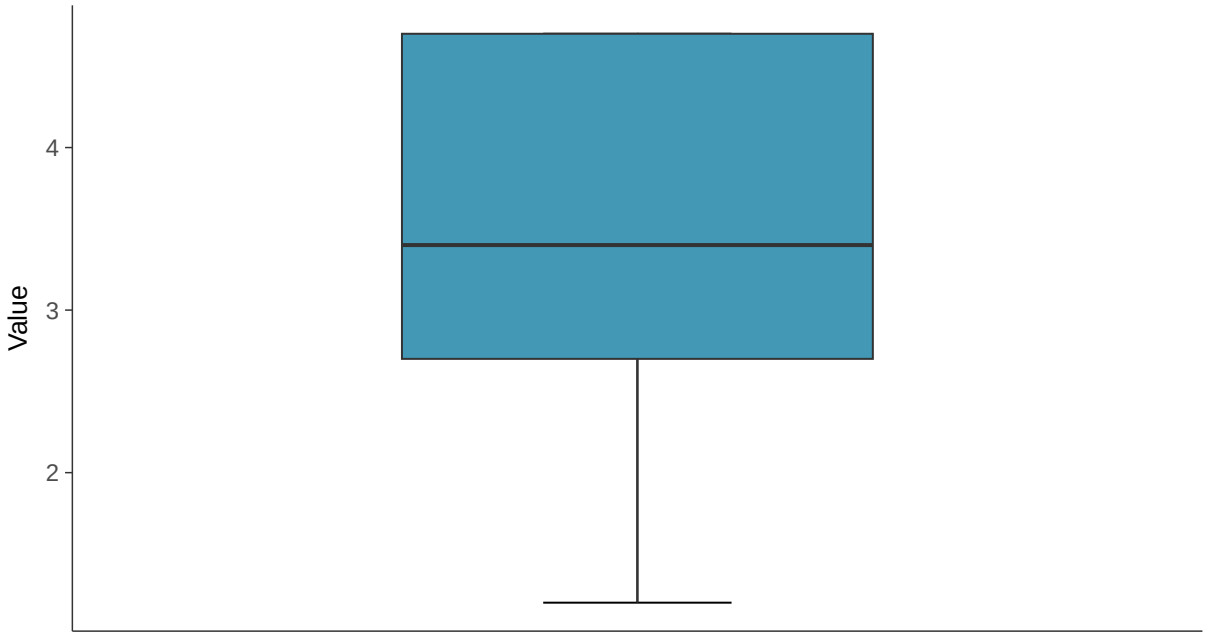
ID: 09_03_102





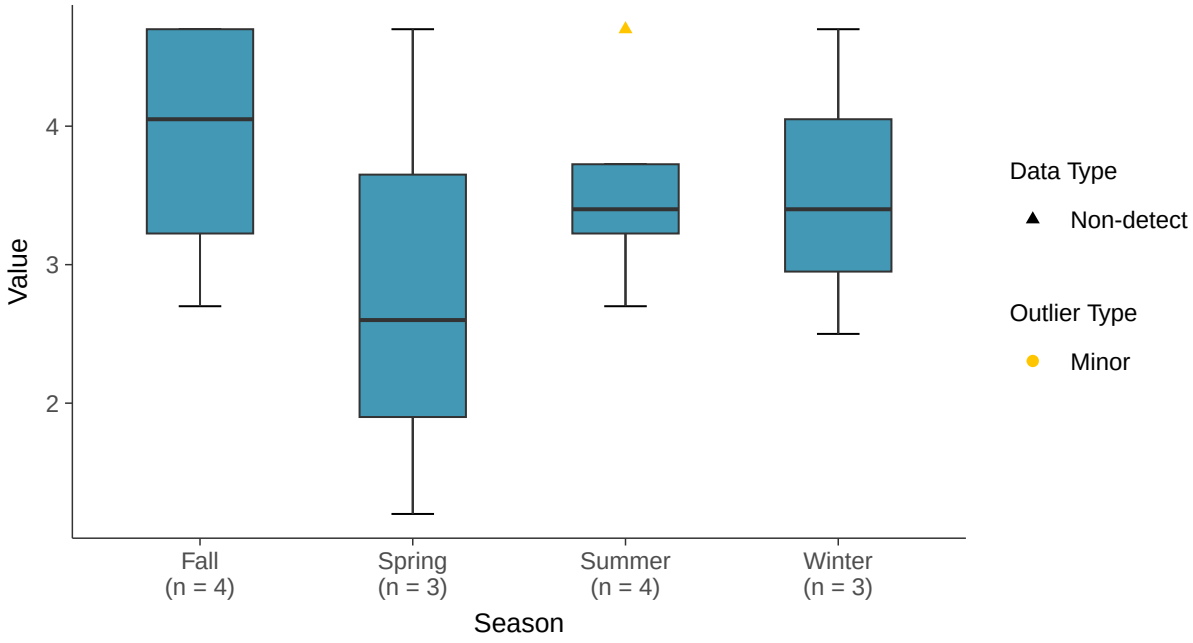
Boxplot

Arsenic, MW-10 (ug/L)



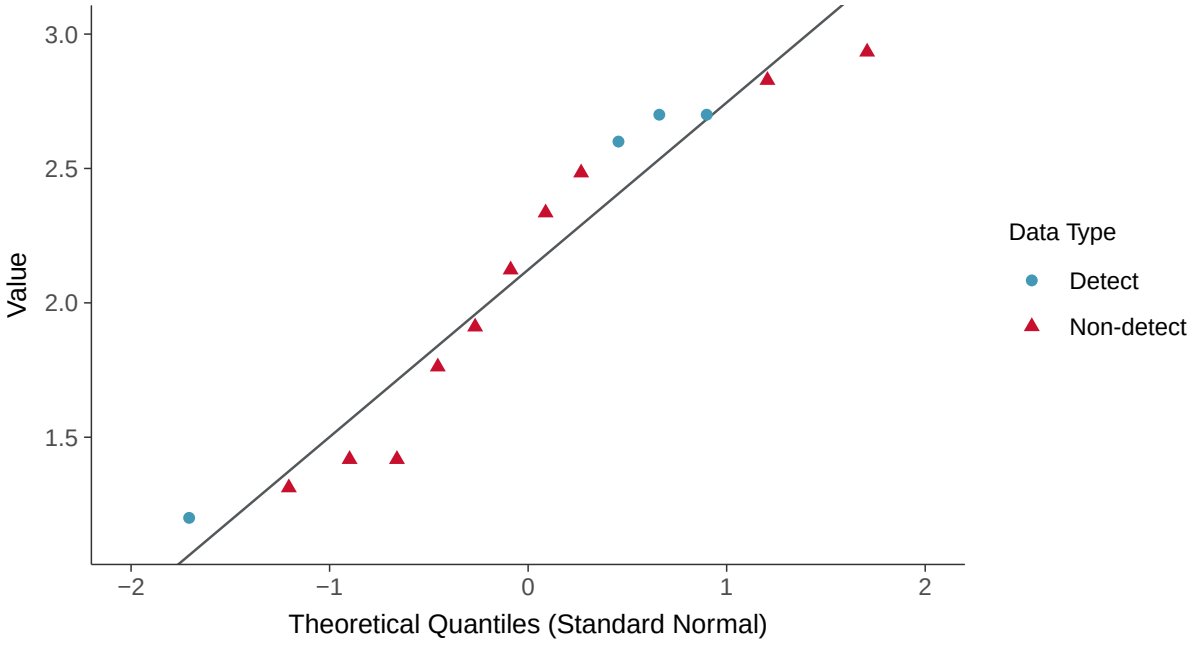
Boxplot by Season

Arsenic, MW-10 (ug/L)



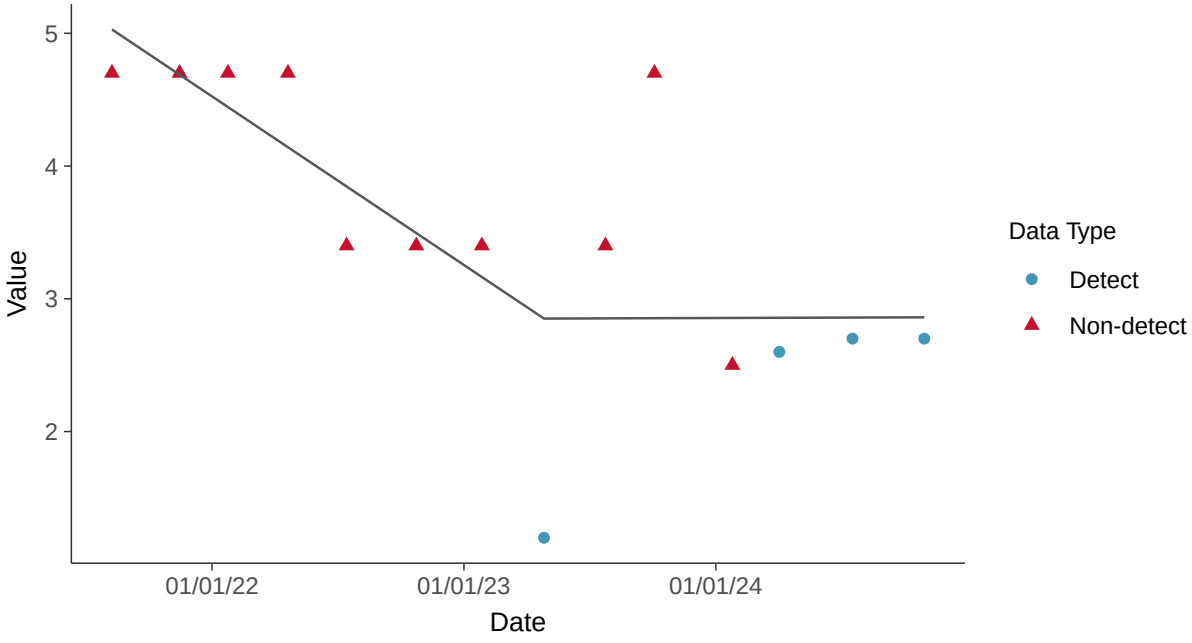
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-10 (ug/L)



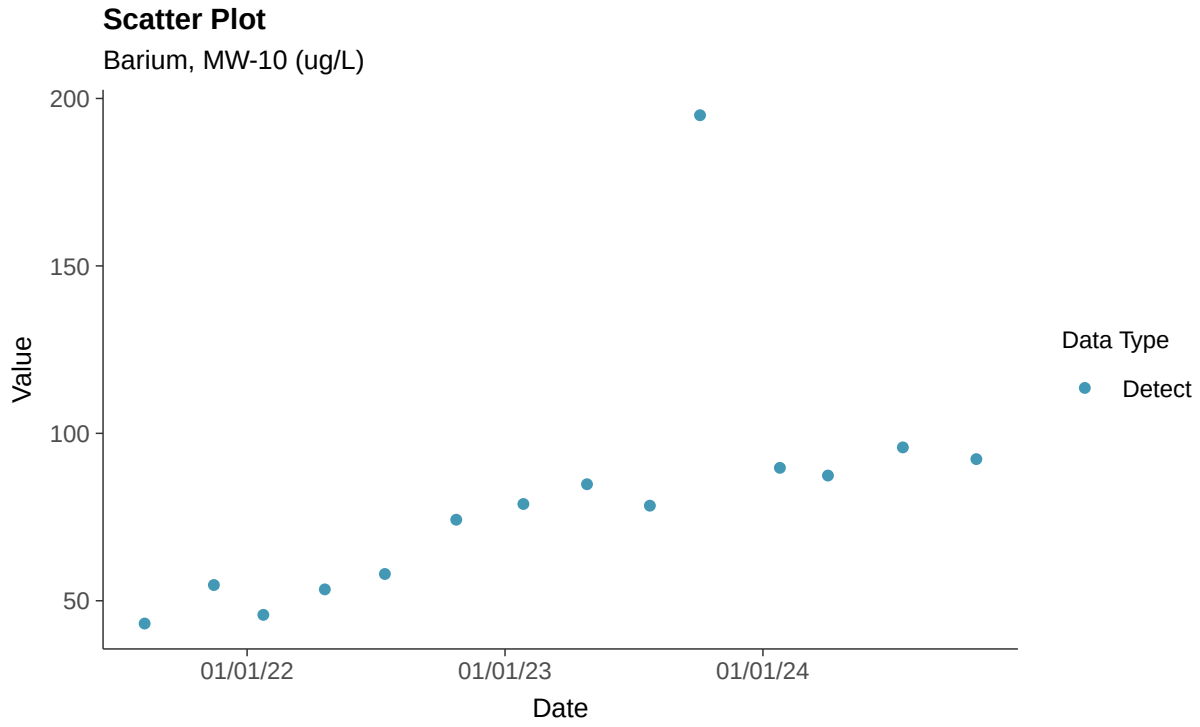
Trend Regression: Piecewise Linear-Linear

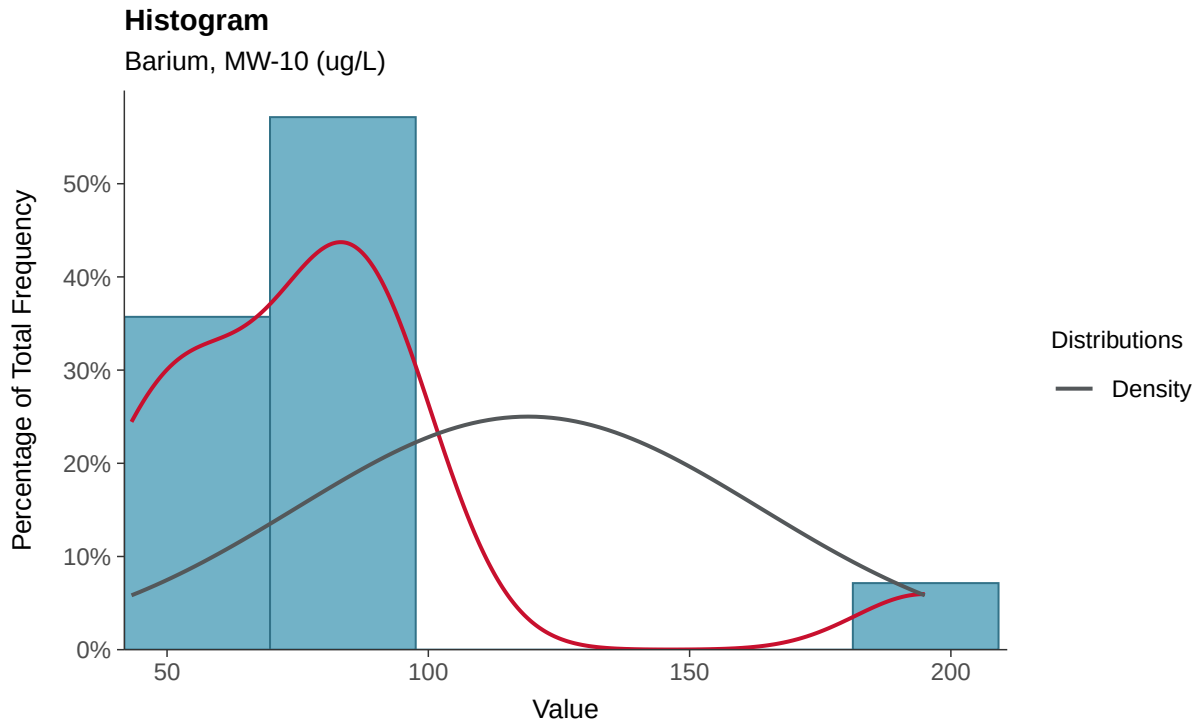
Arsenic, MW-10 (ug/L)



App. IV: Barium, MW-10

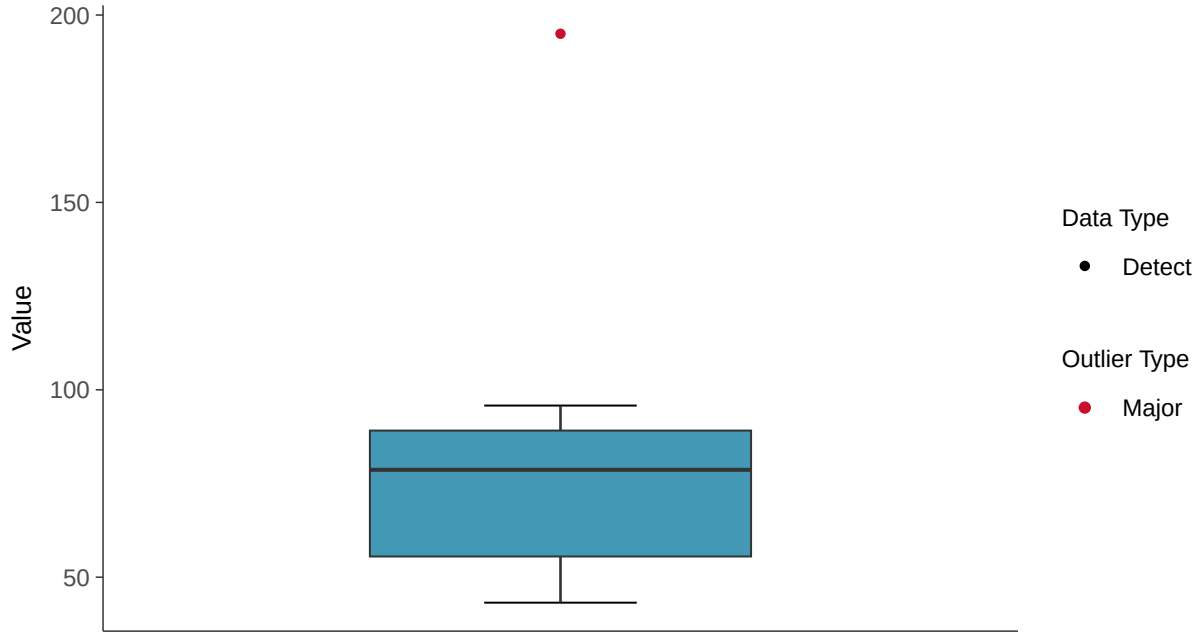
ID: 09_03_103





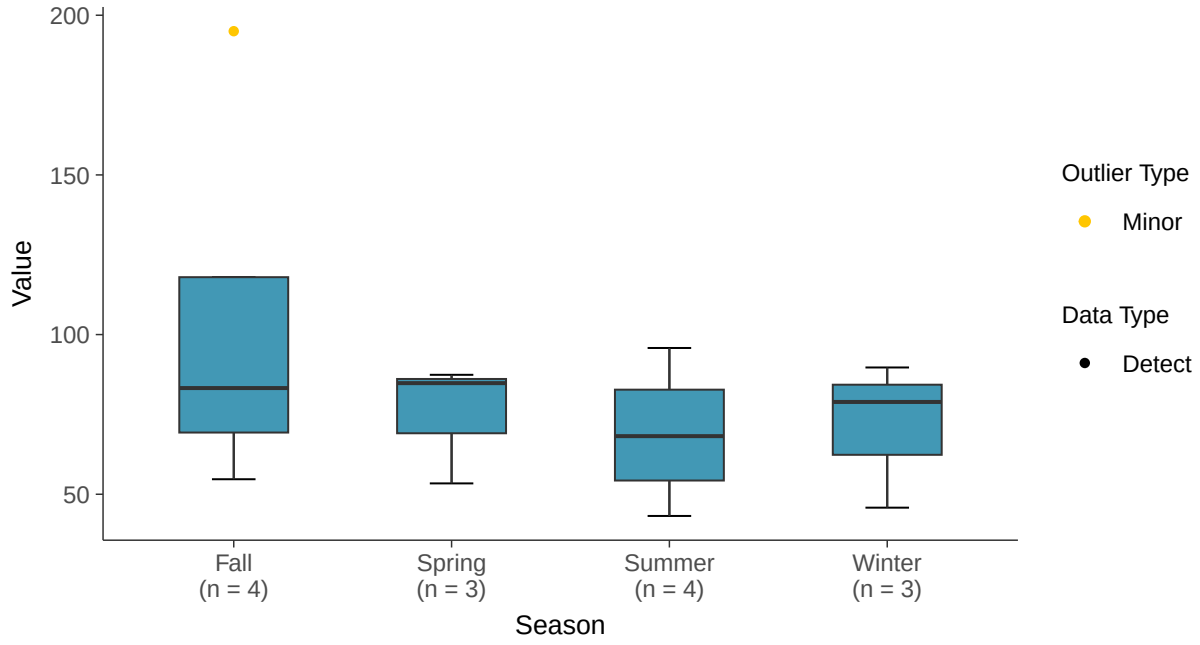
Boxplot

Barium, MW-10 (ug/L)



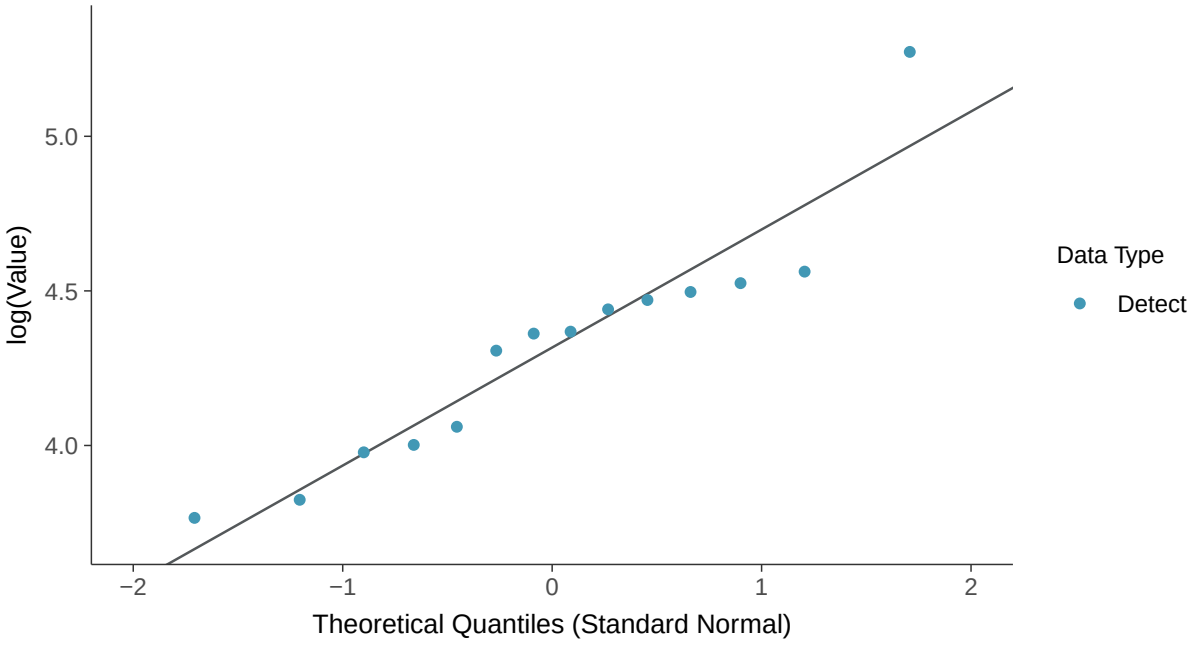
Boxplot by Season

Barium, MW-10 (ug/L)



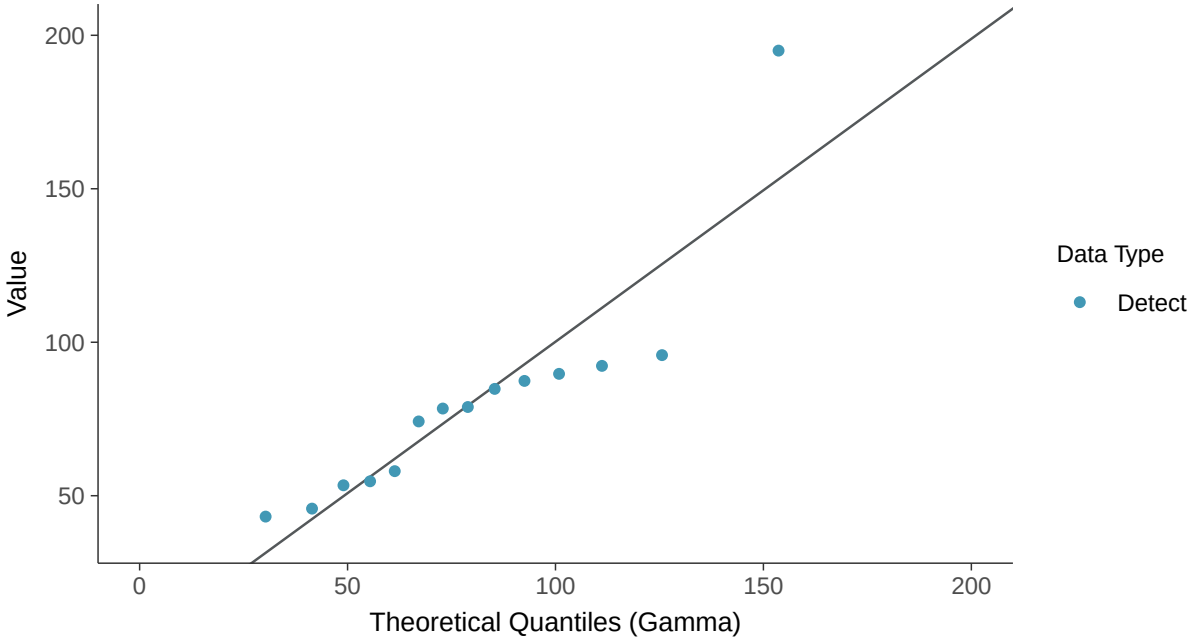
Lognormal Q-Q plot

Barium, MW-10 (ug/L)



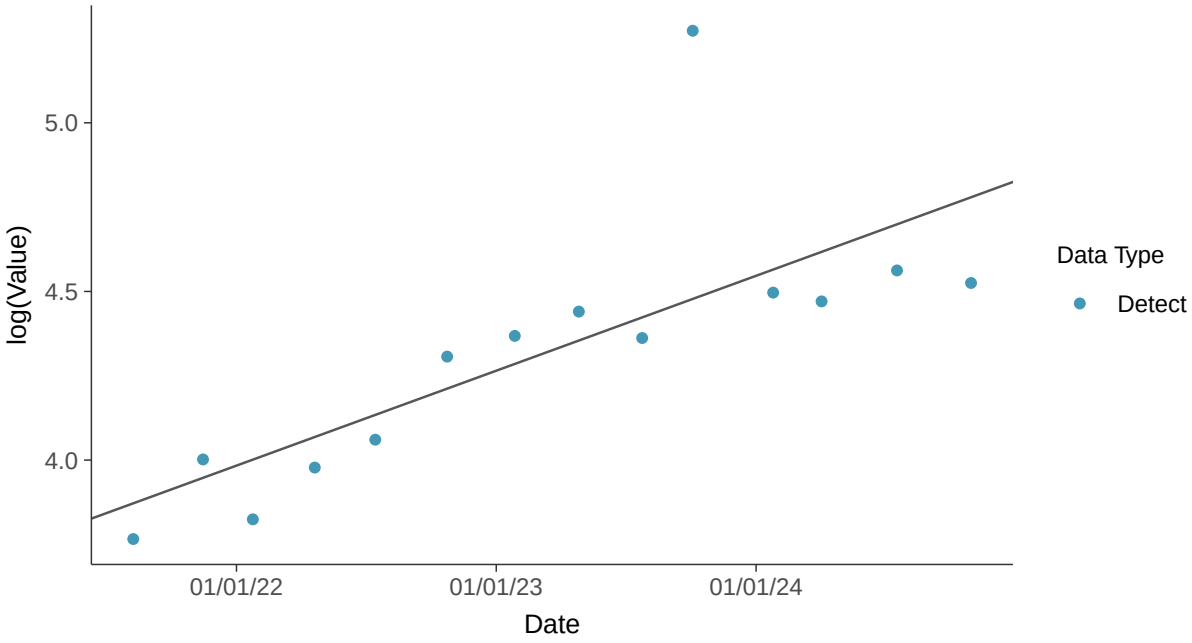
Gamma Q-Q plot

Barium, MW-10 (ug/L)



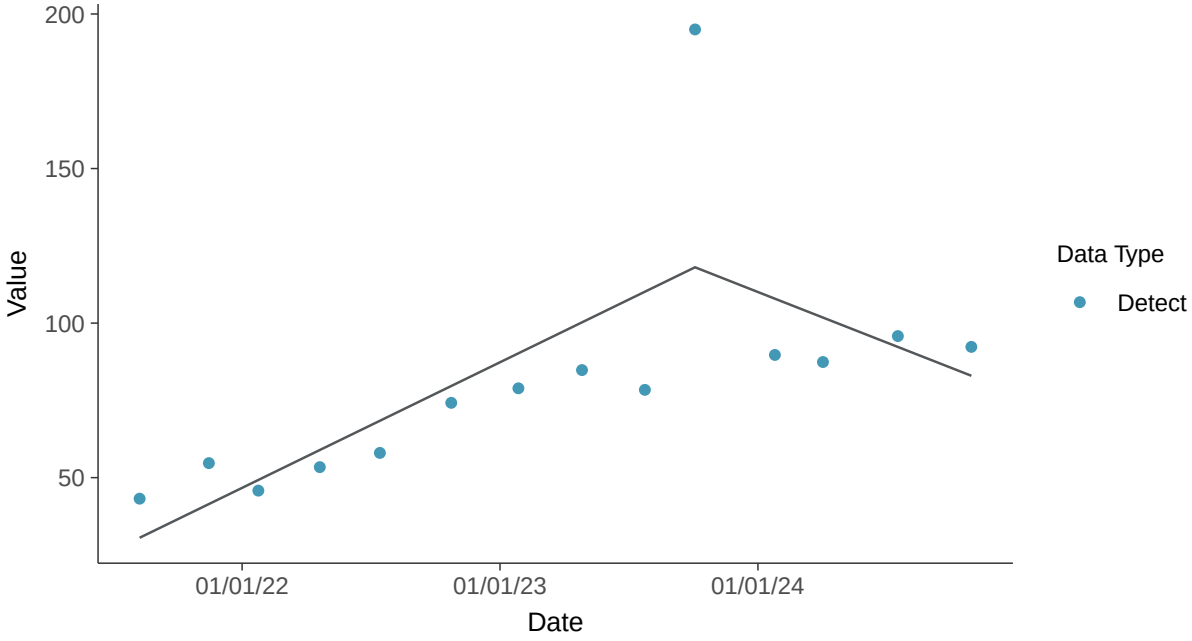
Trend Regression: Lognormal MLE

Barium, MW-10 (ug/L)



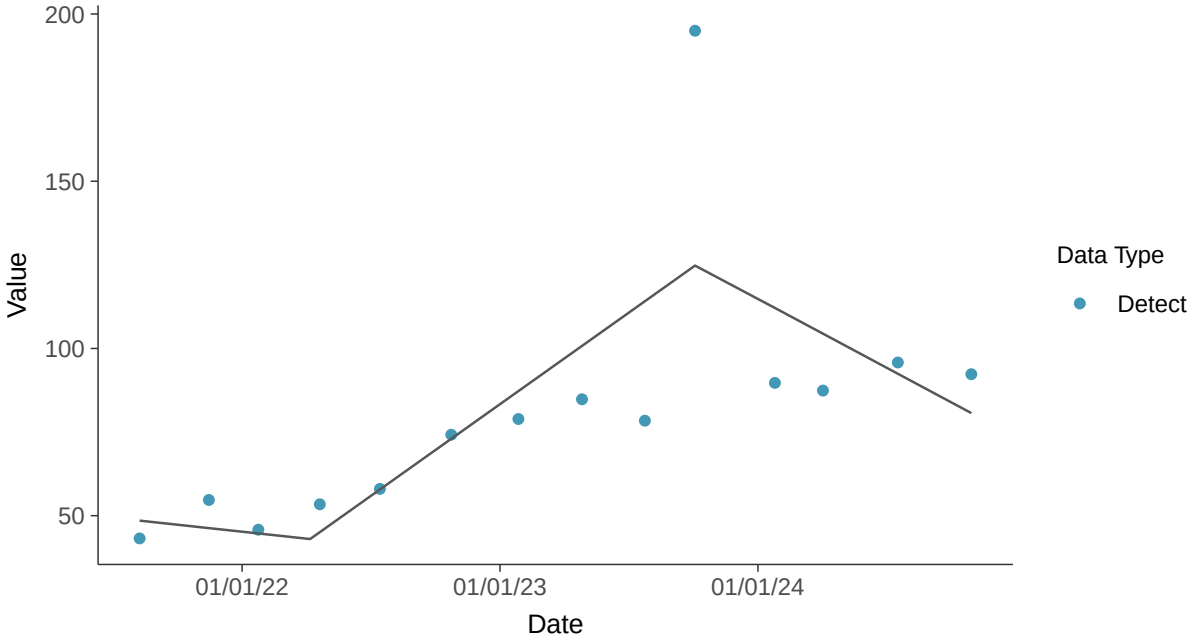
Trend Regression: Piecewise Linear-Linear

Barium, MW-10 (ug/L)



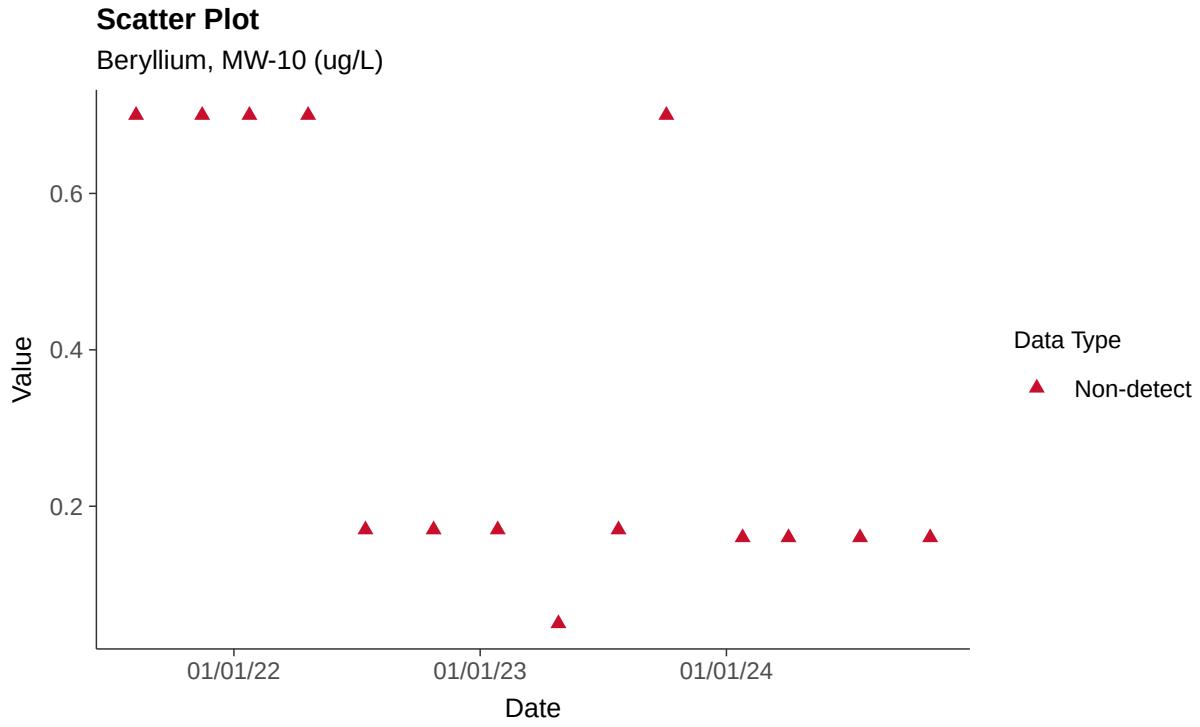
Trend Regression: Piecewise Linear-Linear-Linear

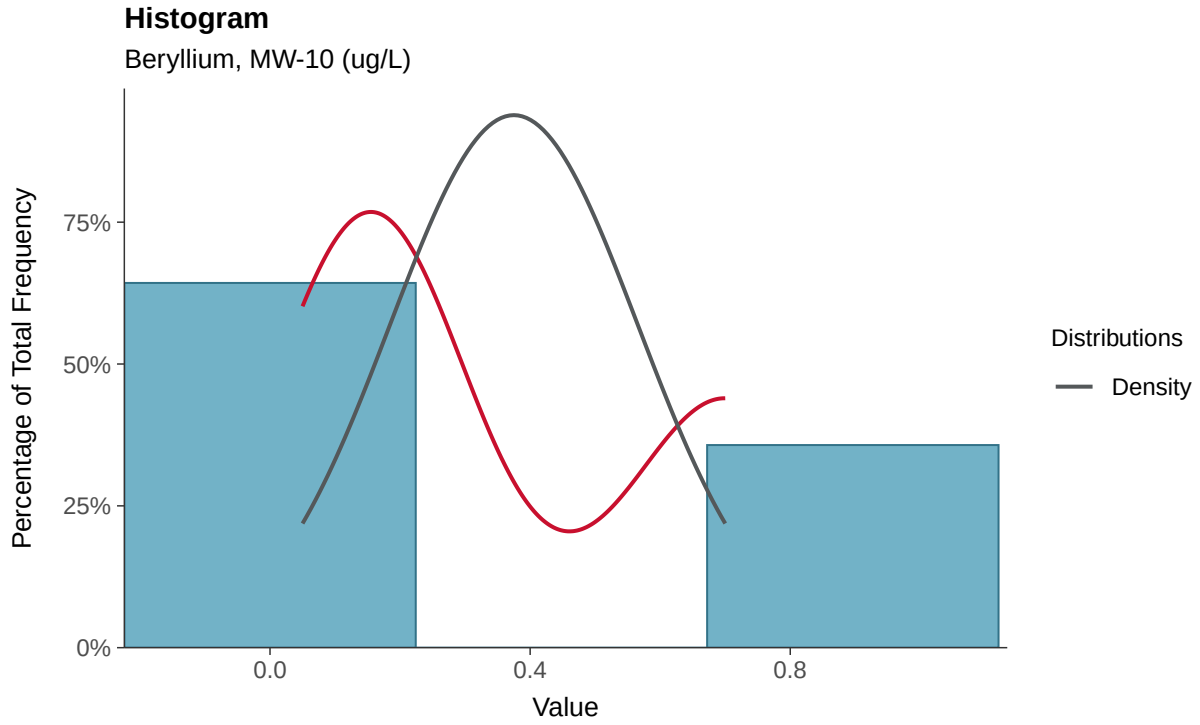
Barium, MW-10 (ug/L)



App. IV: Beryllium, MW-10

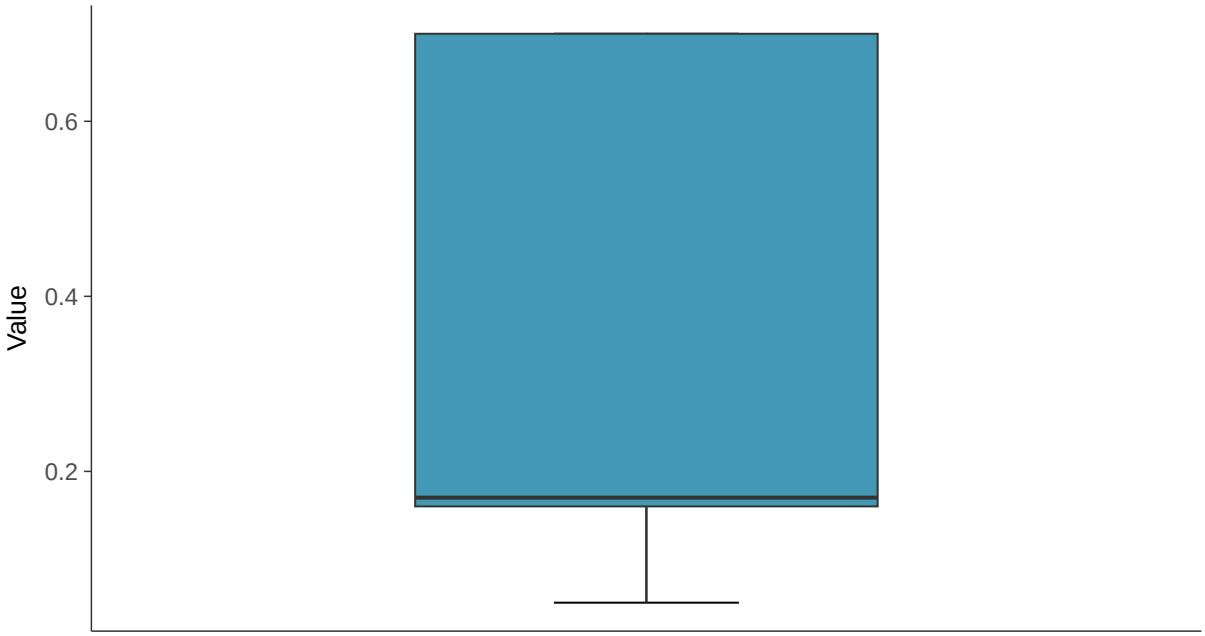
ID: 09_03_104





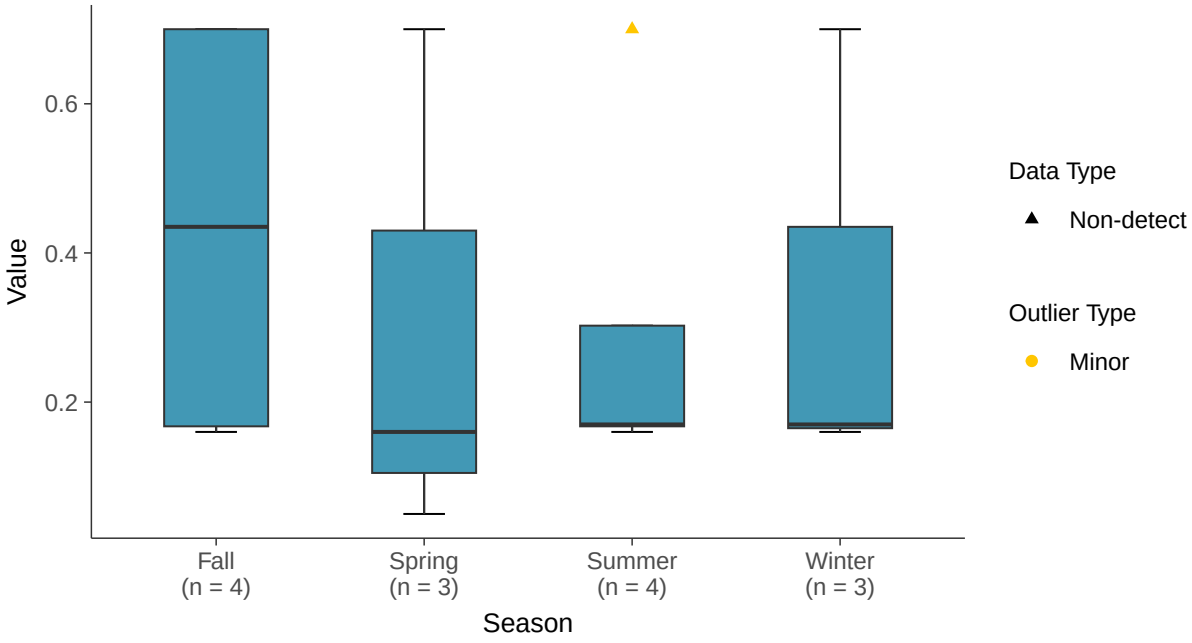
Boxplot

Beryllium, MW-10 (ug/L)



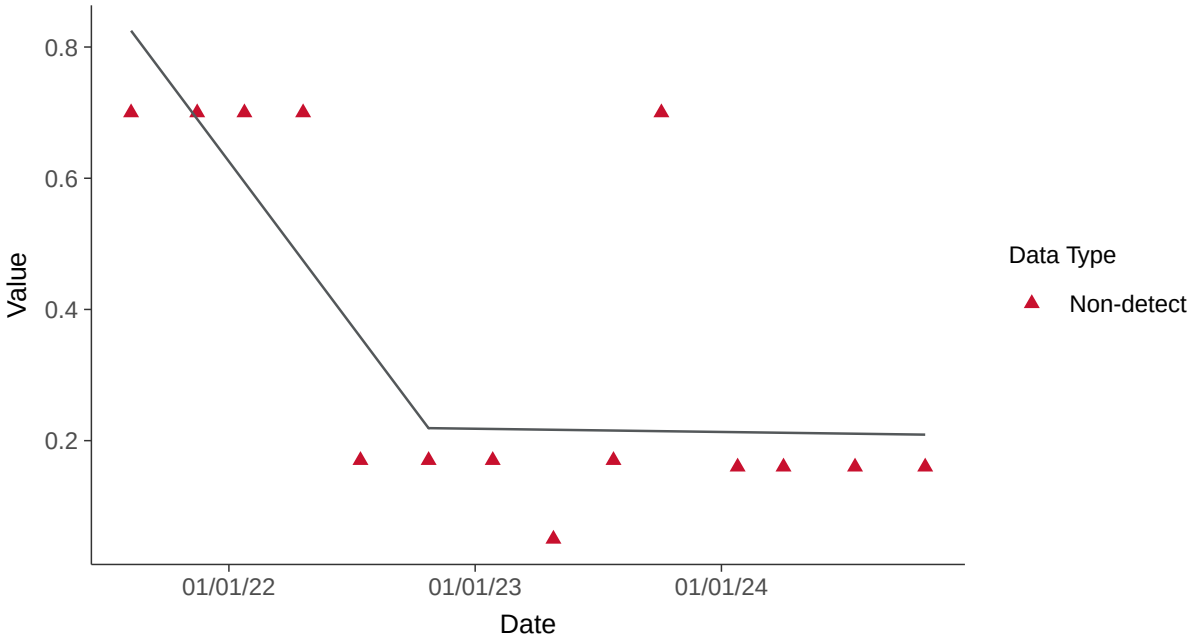
Boxplot by Season

Beryllium, MW-10 (ug/L)



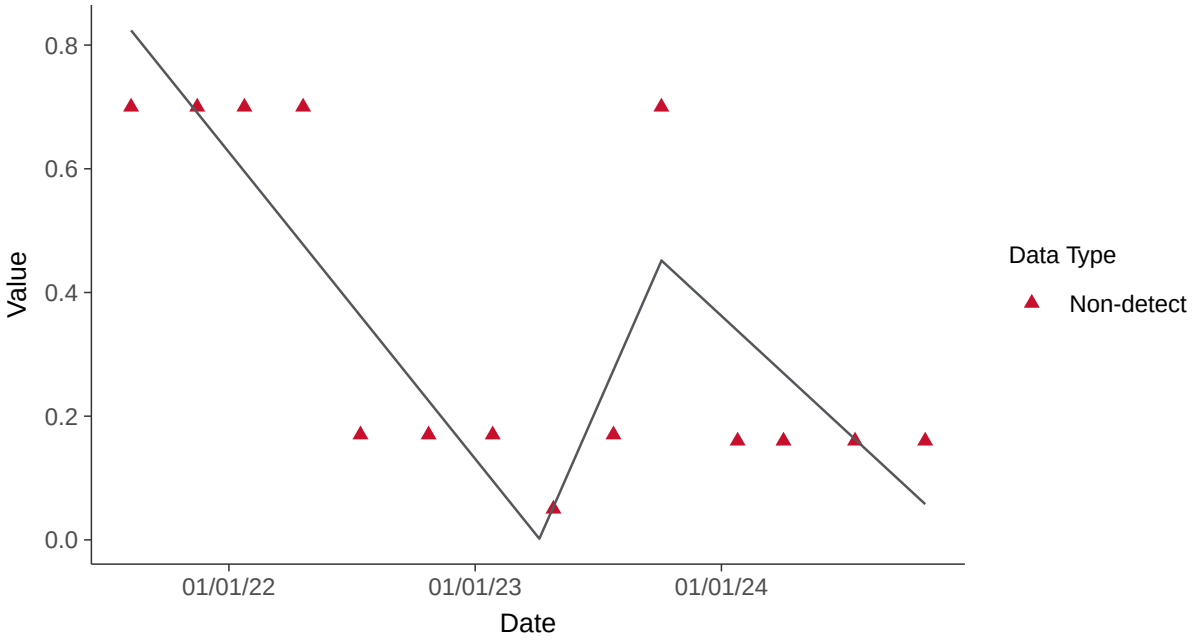
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Beryllium, MW-10 (ug/L)

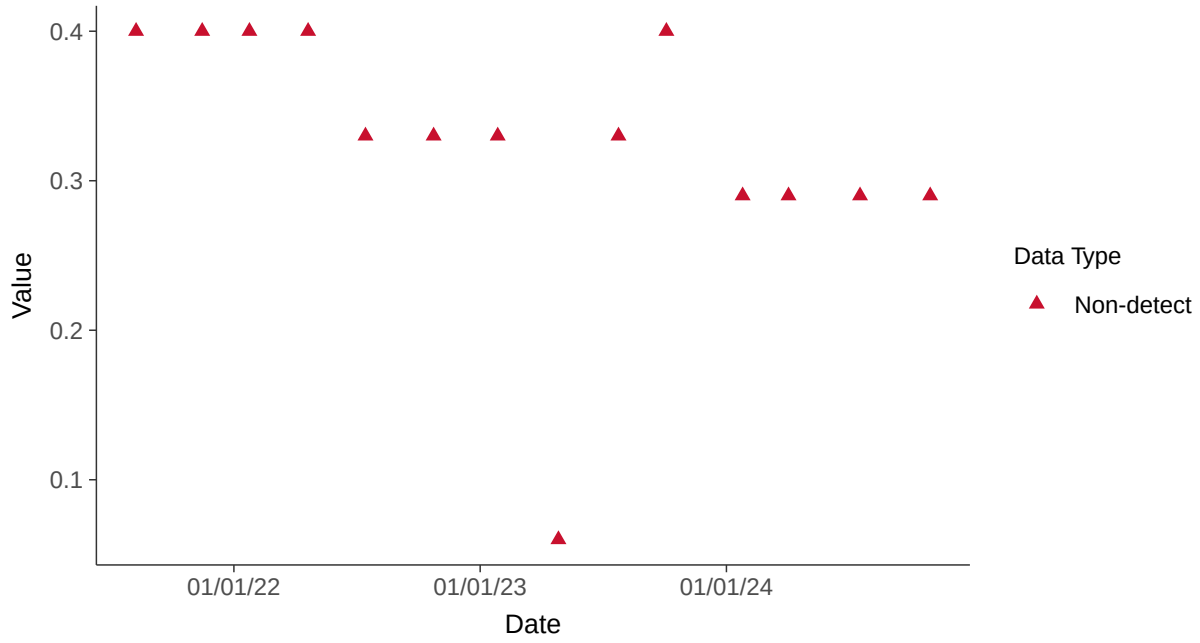


App. IV: Cadmium, MW-10

ID: 09_03_106

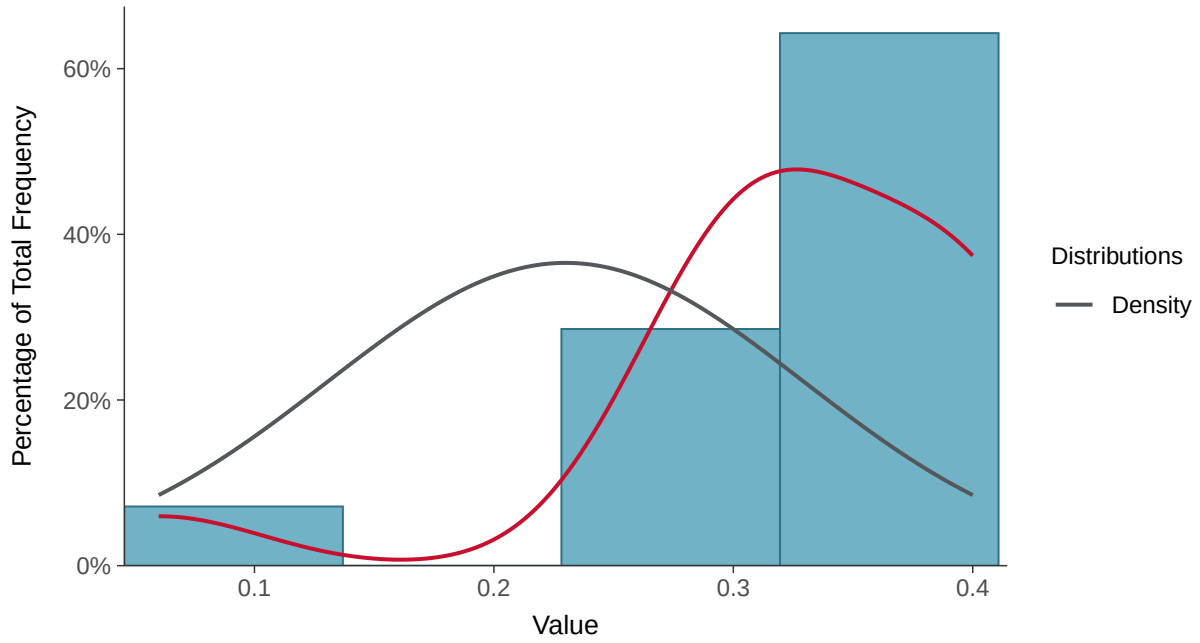
Scatter Plot

Cadmium, MW-10 (ug/L)



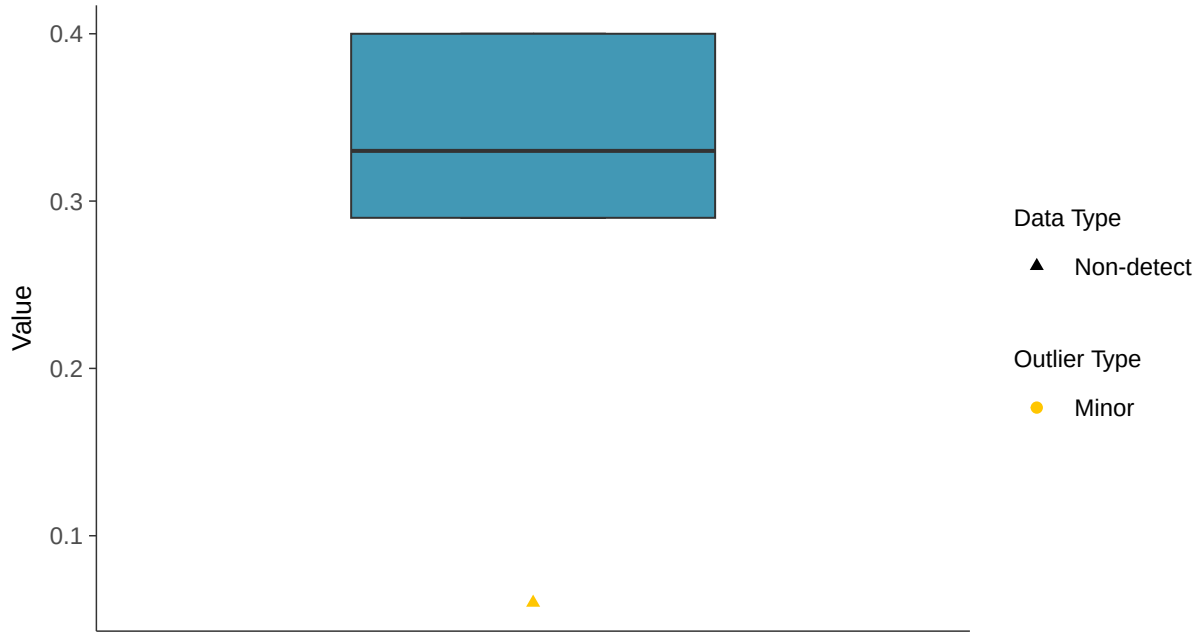
Histogram

Cadmium, MW-10 (ug/L)



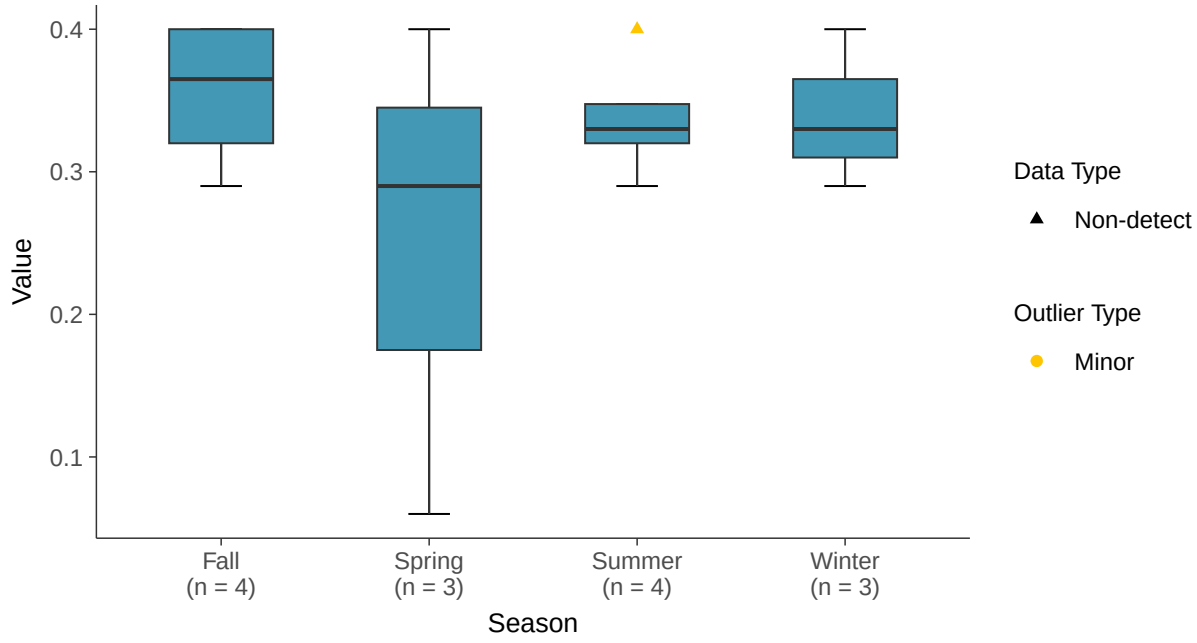
Boxplot

Cadmium, MW-10 (ug/L)



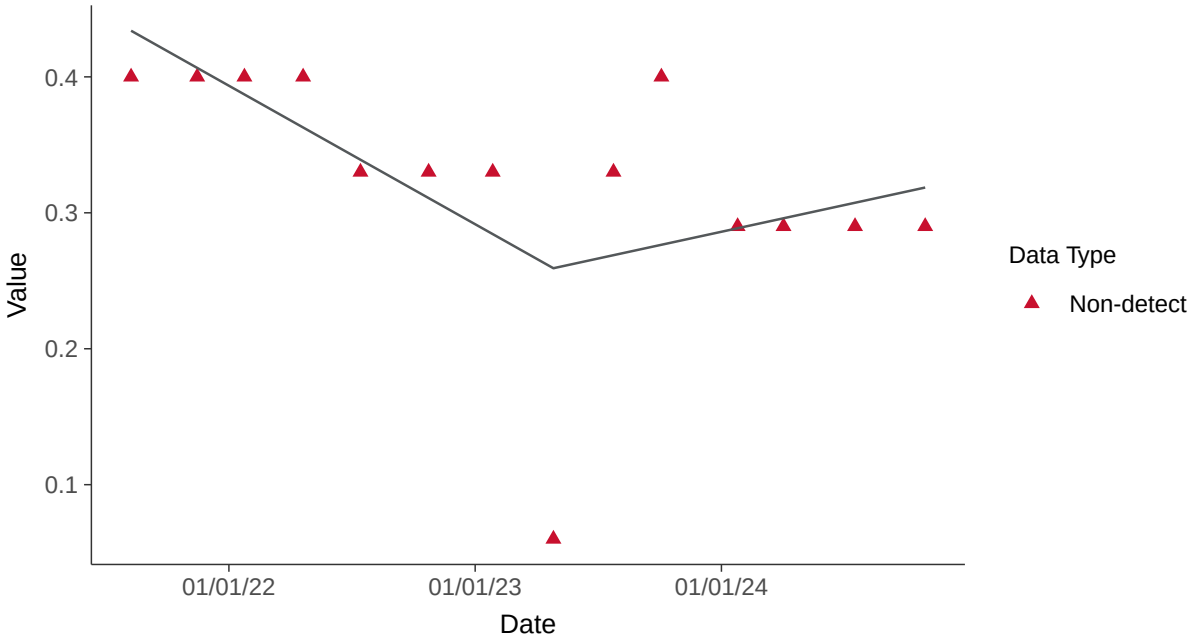
Boxplot by Season

Cadmium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cadmium, MW-10 (ug/L)

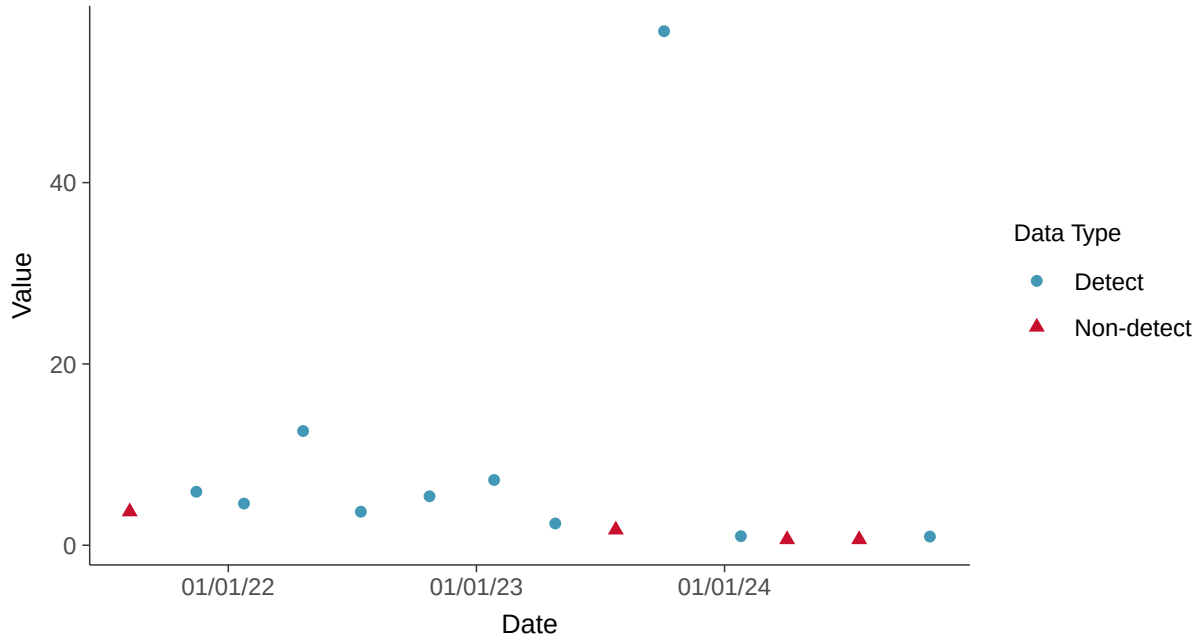


App. IV: Chromium, MW-10

ID: 09_03_109

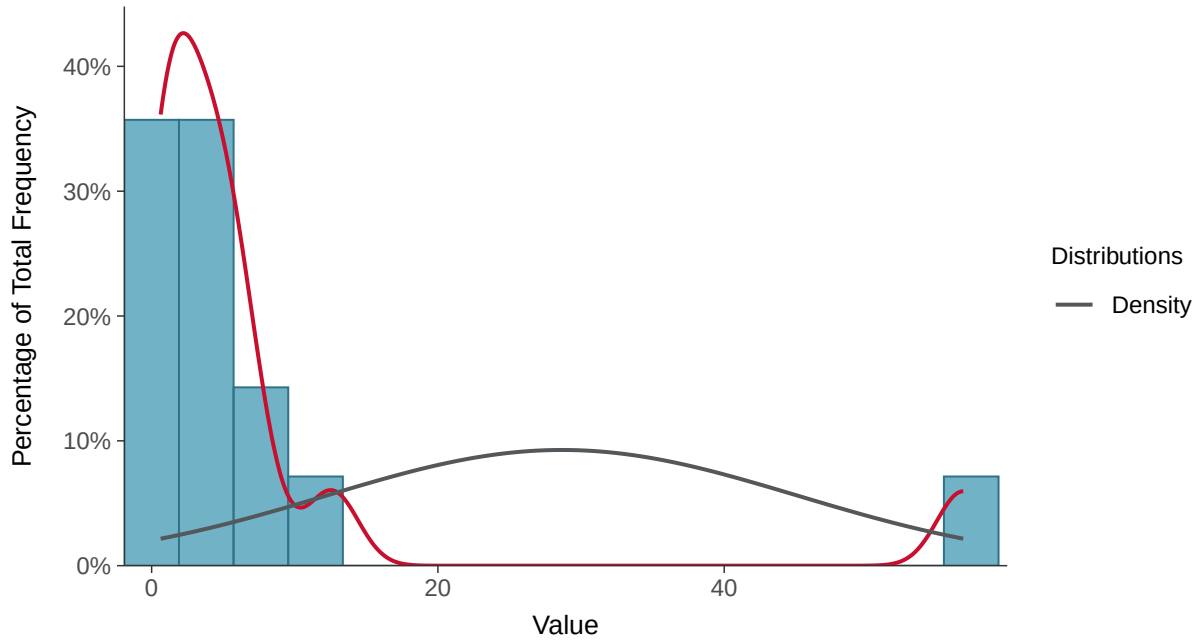
Scatter Plot

Chromium, MW-10 (ug/L)



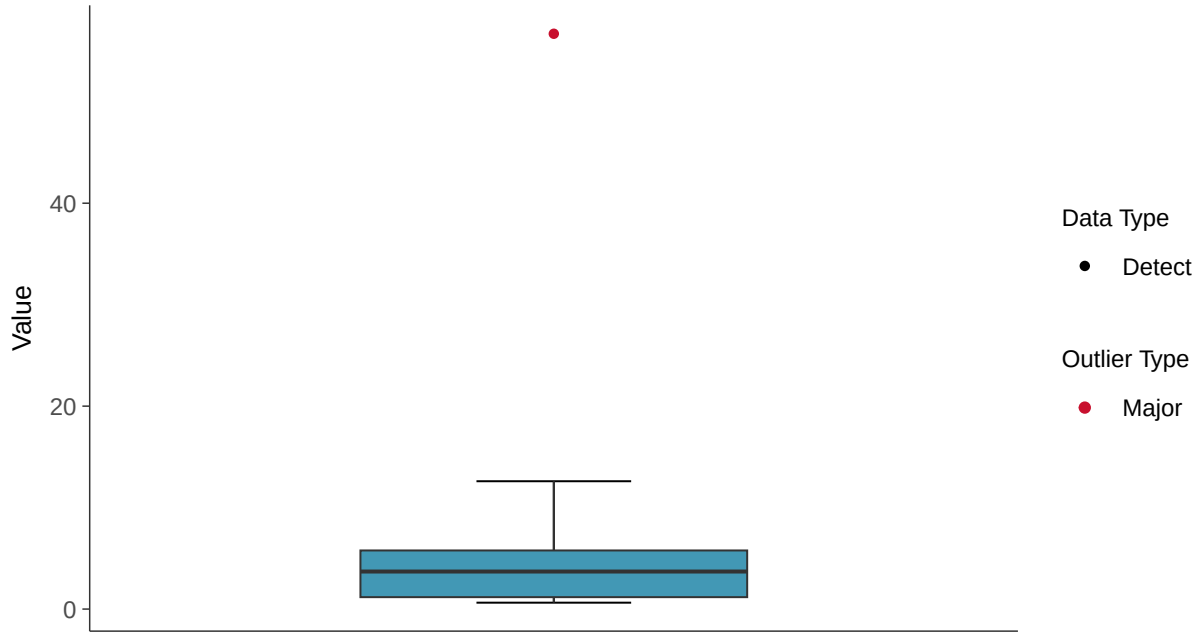
Histogram

Chromium, MW-10 (ug/L)



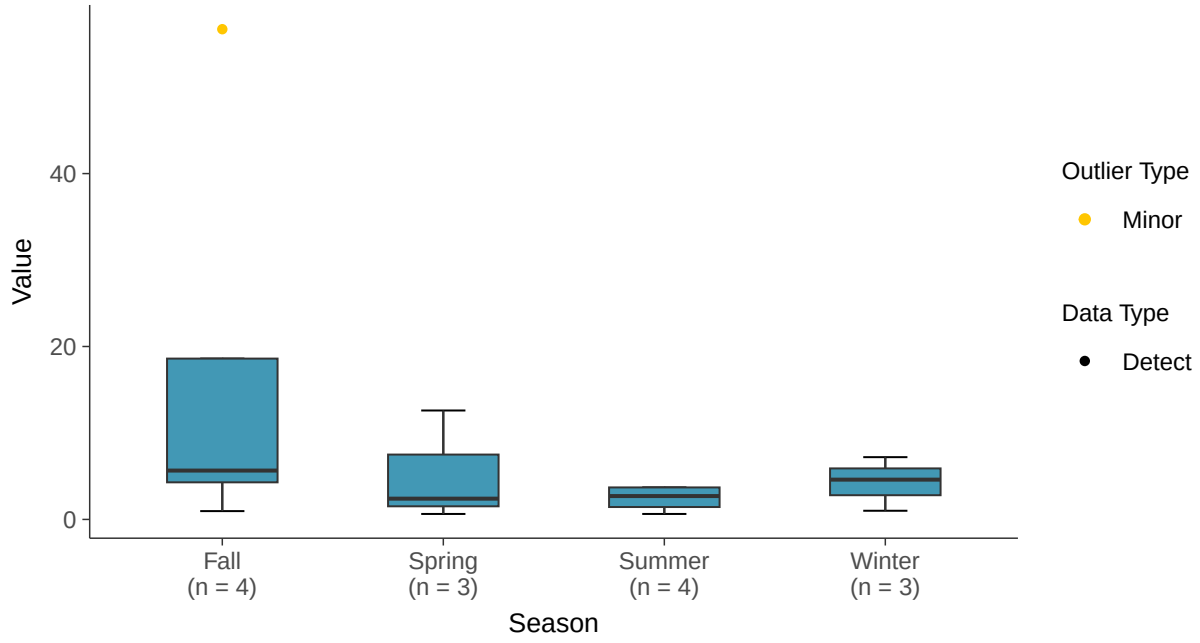
Boxplot

Chromium, MW-10 (ug/L)



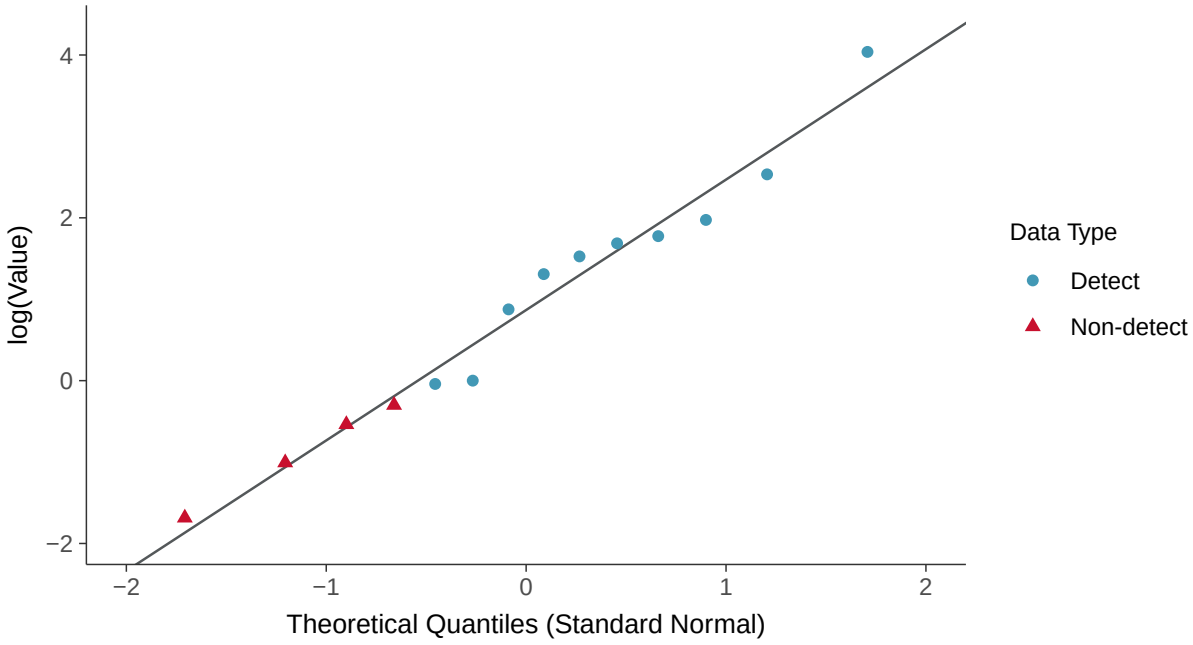
Boxplot by Season

Chromium, MW-10 (ug/L)



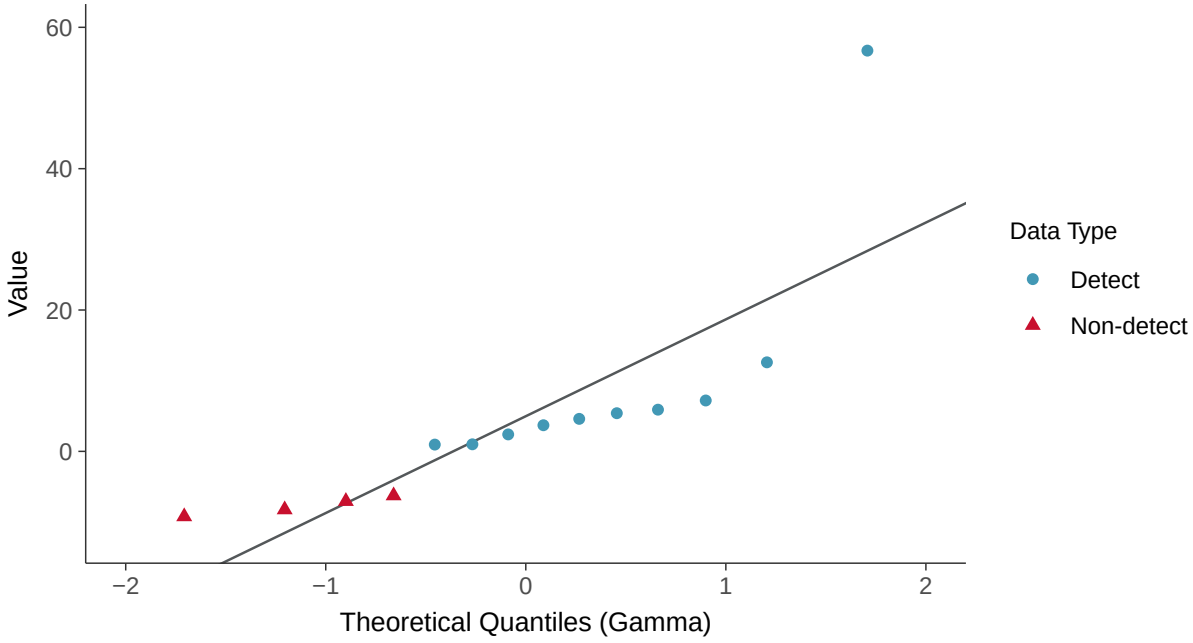
Lognormal Q-Q plot using ROS Imputed Estimates

Chromium, MW-10 (ug/L)



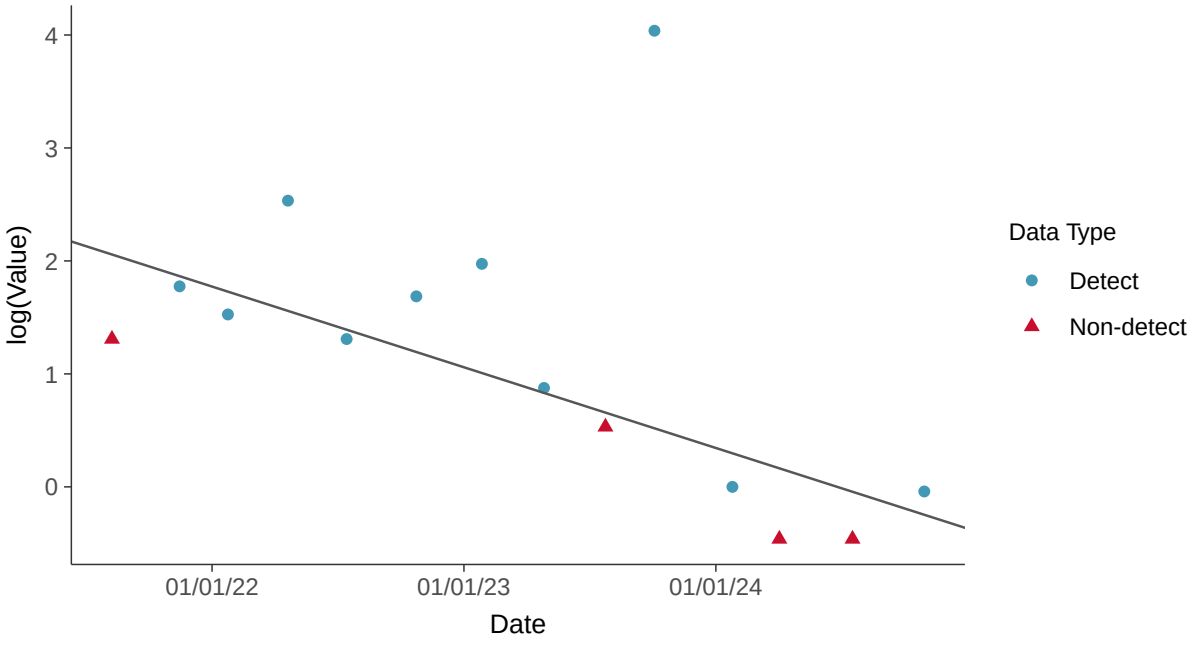
Gamma Q-Q plot using ROS Imputed Estimates

Chromium, MW-10 (ug/L)



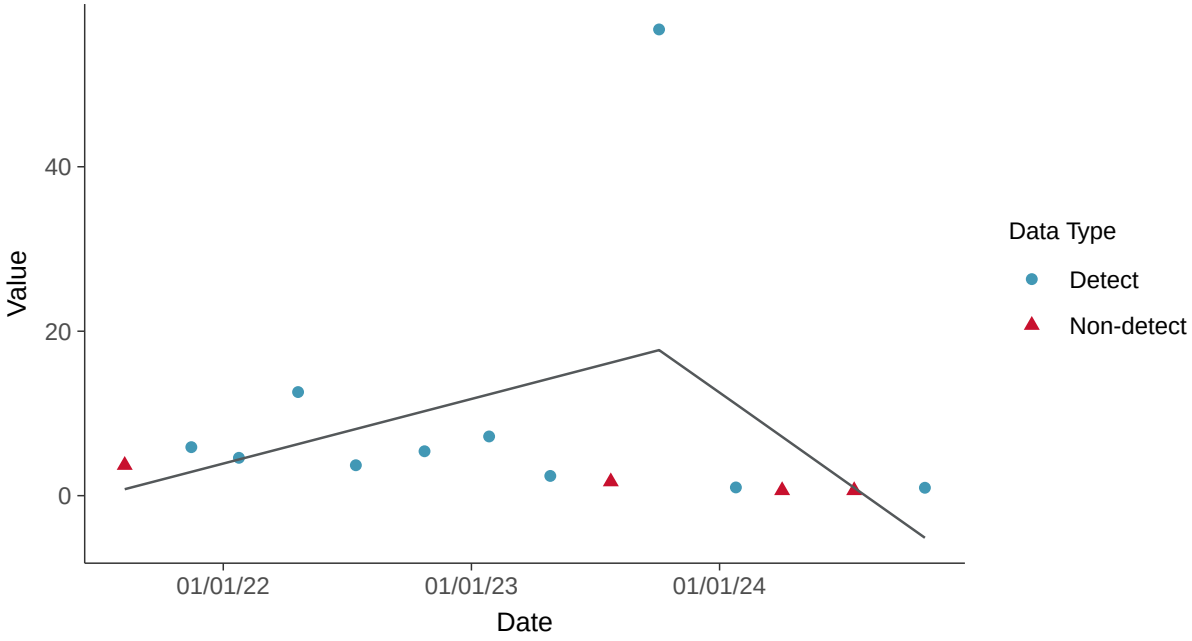
Trend Regression: Lognormal MLE

Chromium, MW-10 (ug/L)



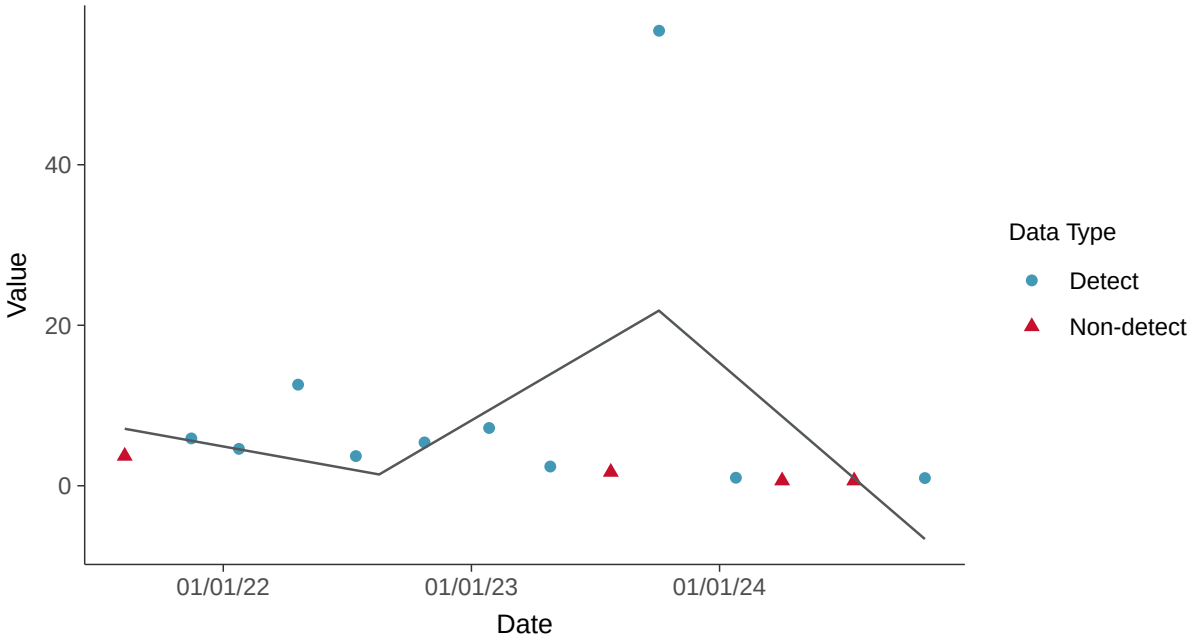
Trend Regression: Piecewise Linear-Linear

Chromium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Chromium, MW-10 (ug/L)

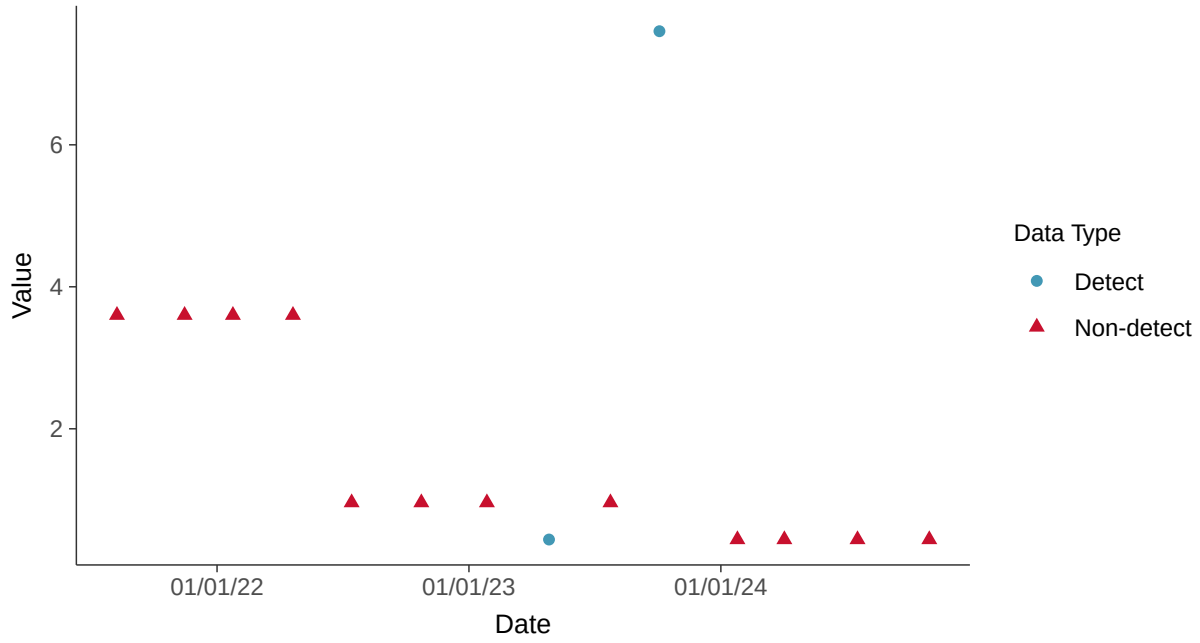


App. IV: Cobalt, MW-10

ID: 09_03_110

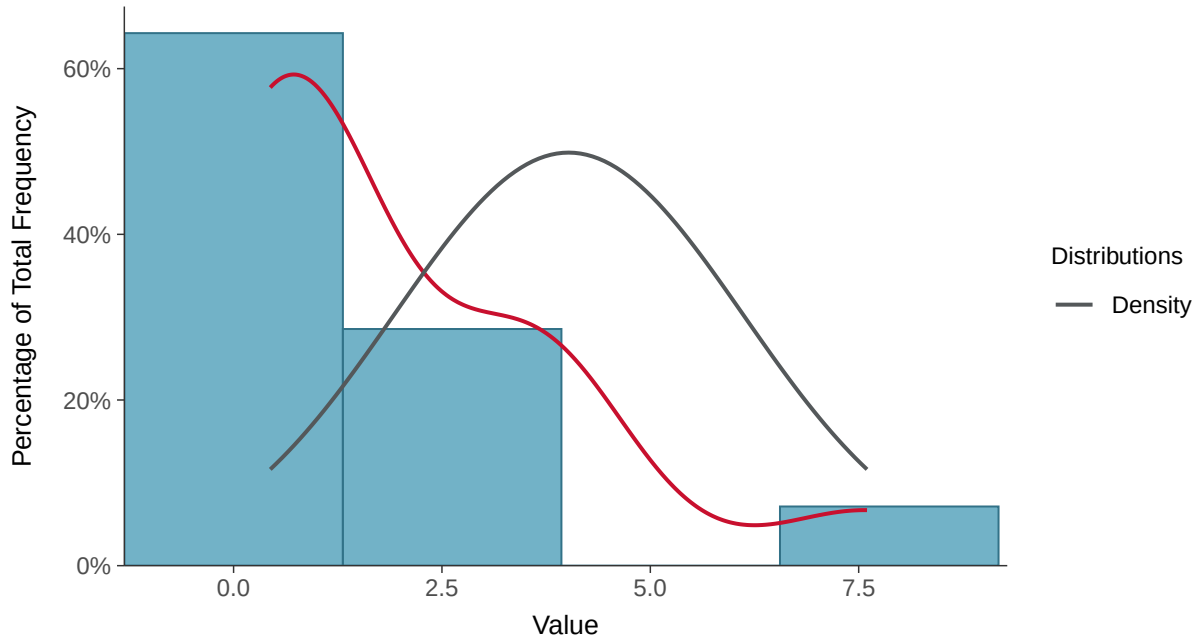
Scatter Plot

Cobalt, MW-10 (ug/L)



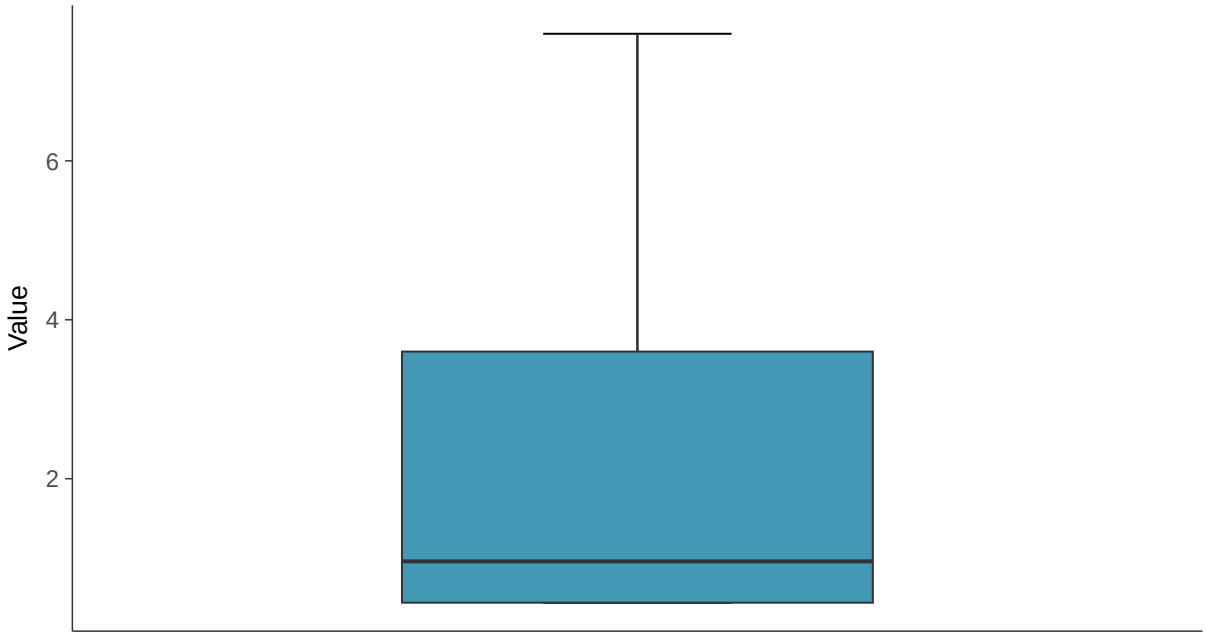
Histogram

Cobalt, MW-10 (ug/L)



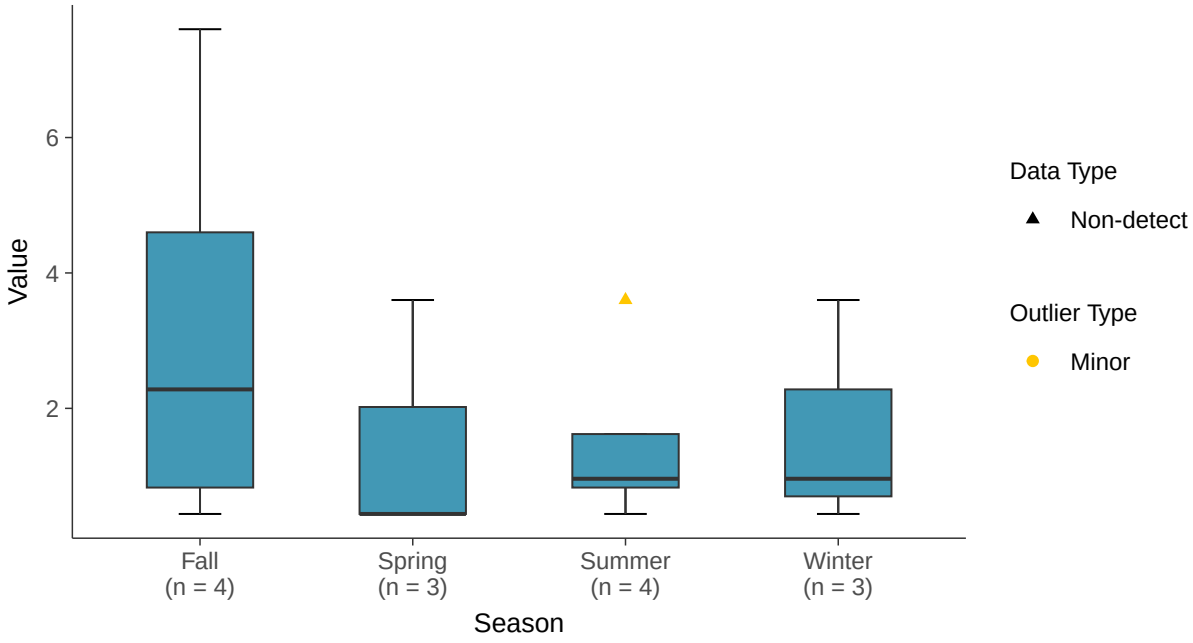
Boxplot

Cobalt, MW-10 (ug/L)



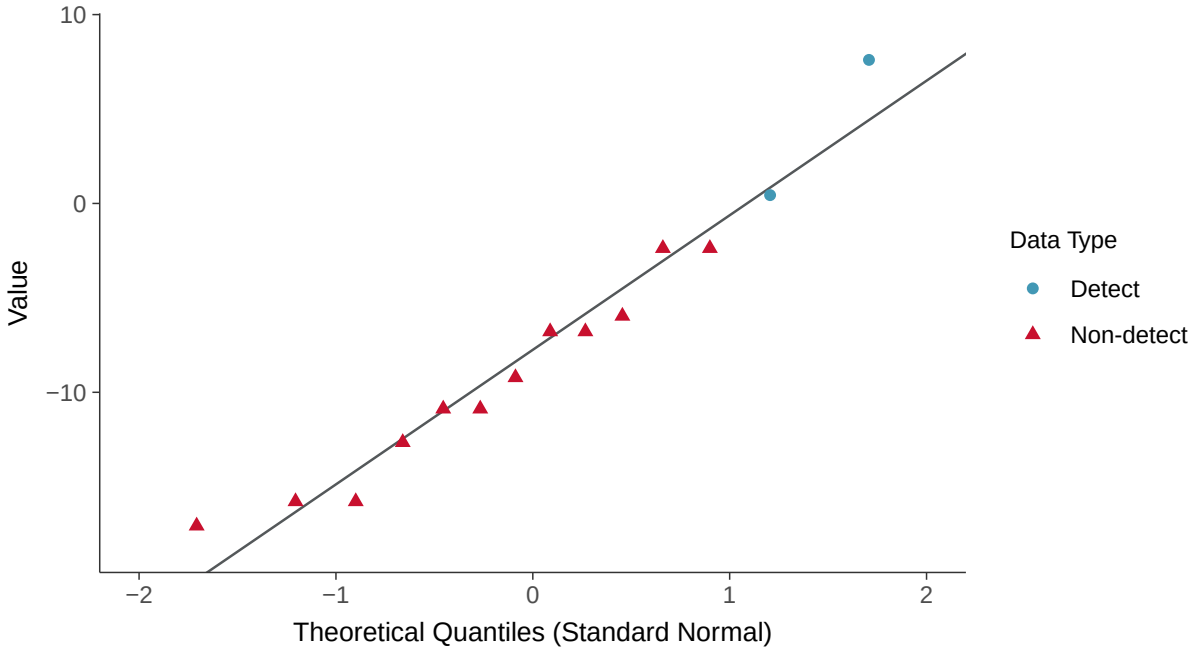
Boxplot by Season

Cobalt, MW-10 (ug/L)



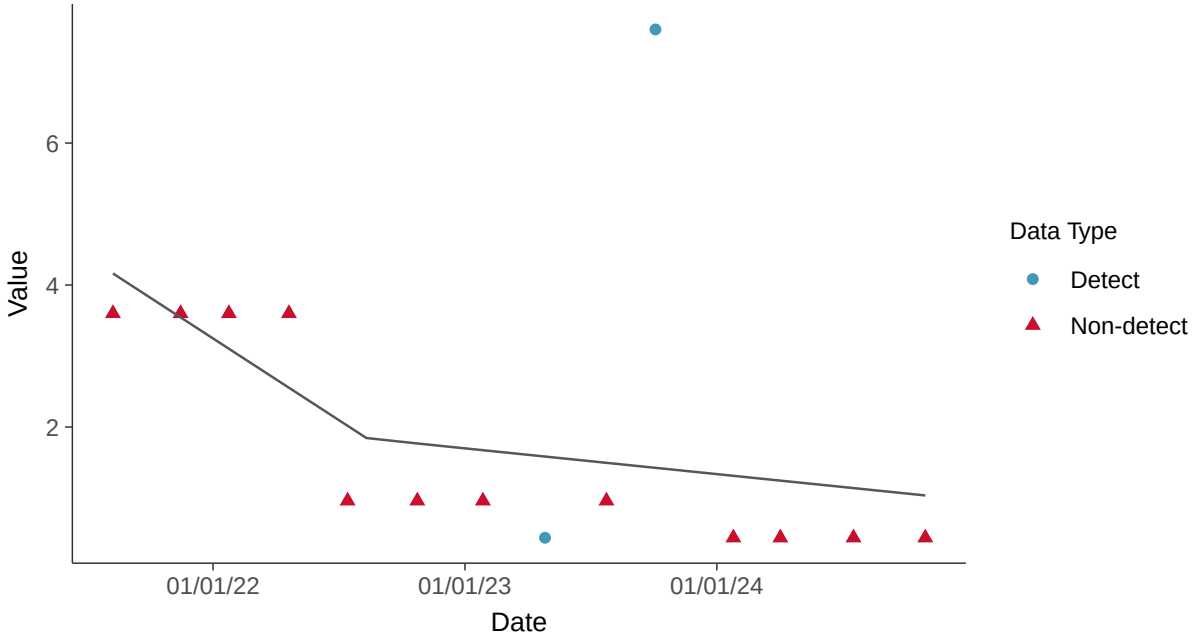
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-10 (ug/L)



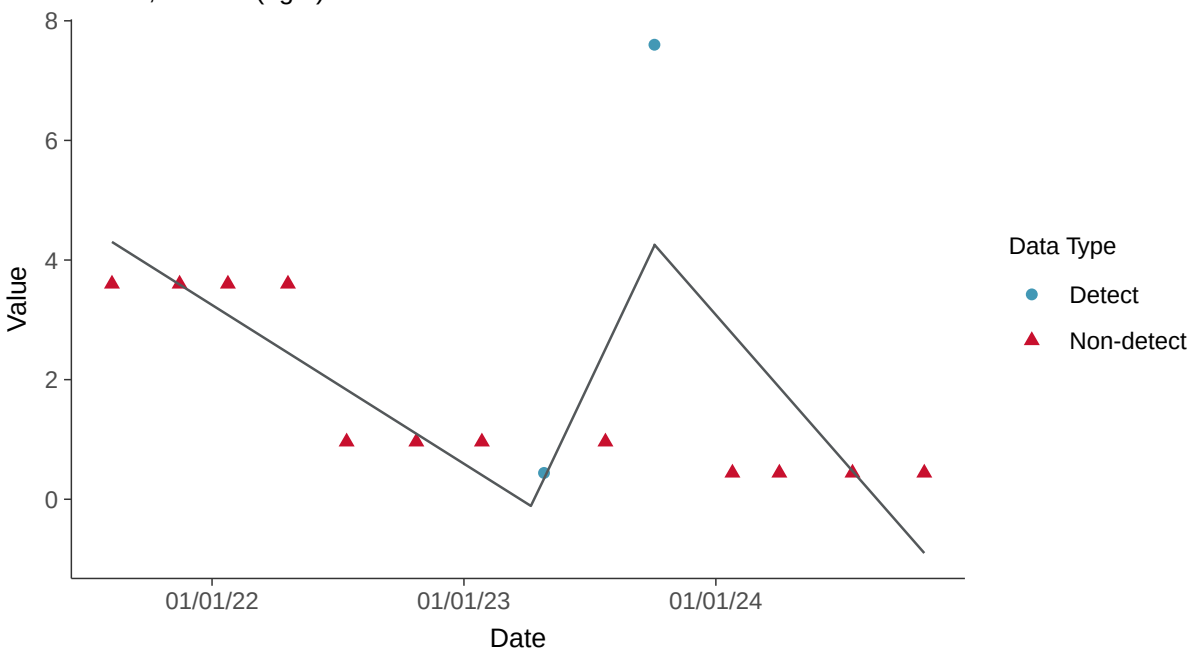
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cobalt, MW-10 (ug/L)

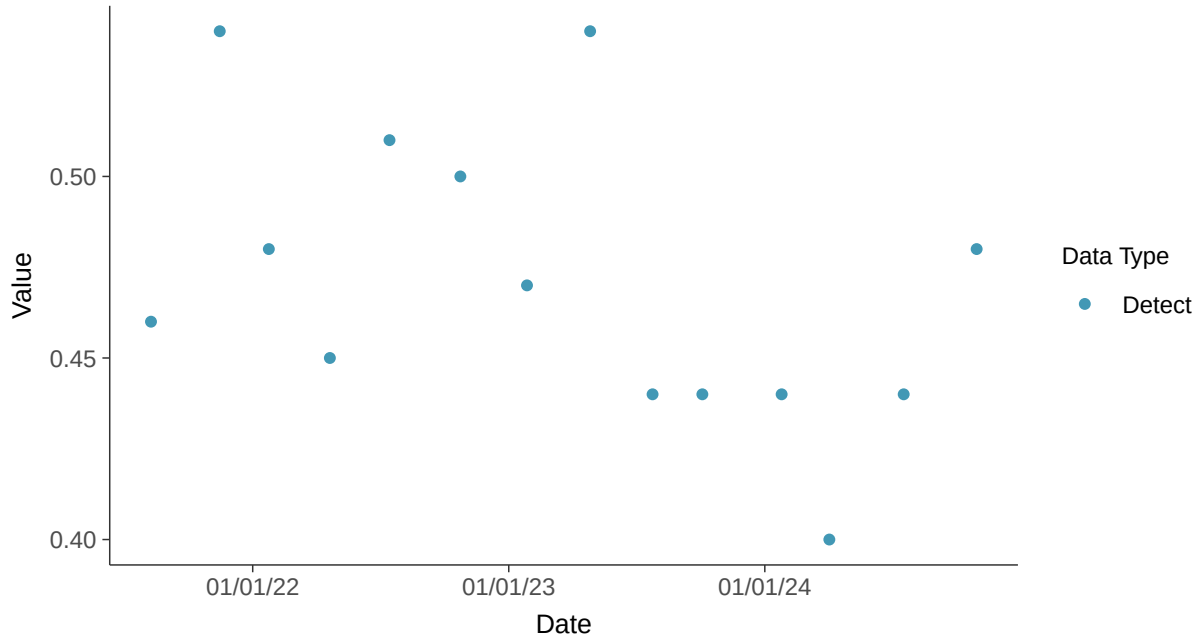


App. IV: Fluoride, MW-10

ID: 09_03_112

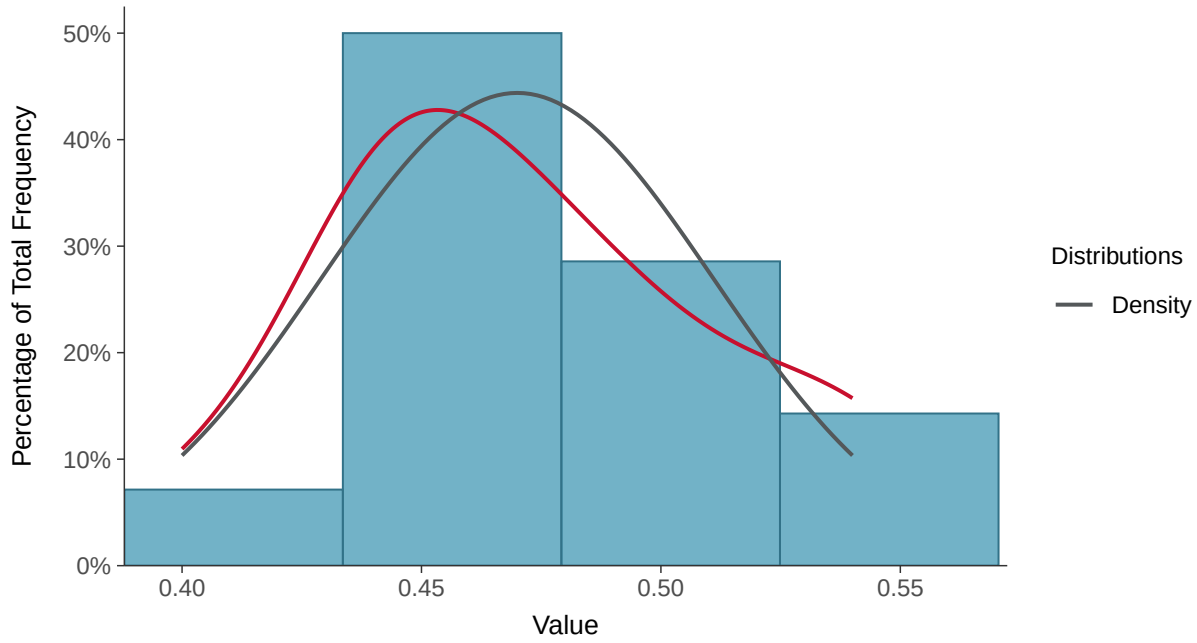
Scatter Plot

Fluoride, MW-10 (mg/L)



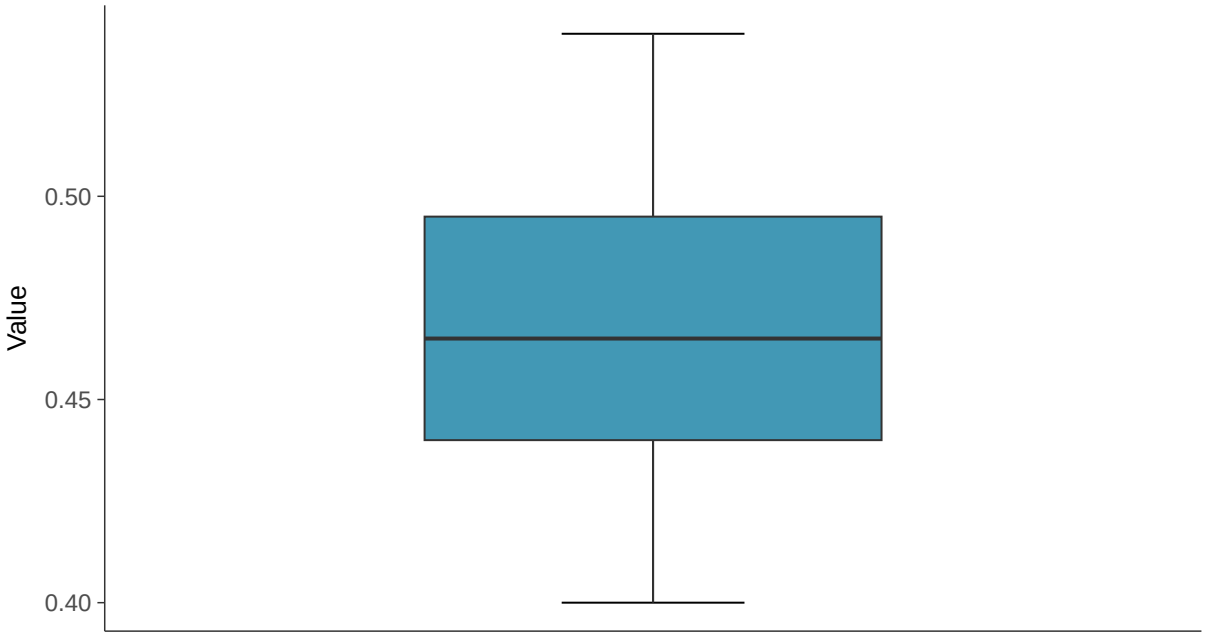
Histogram

Fluoride, MW-10 (mg/L)



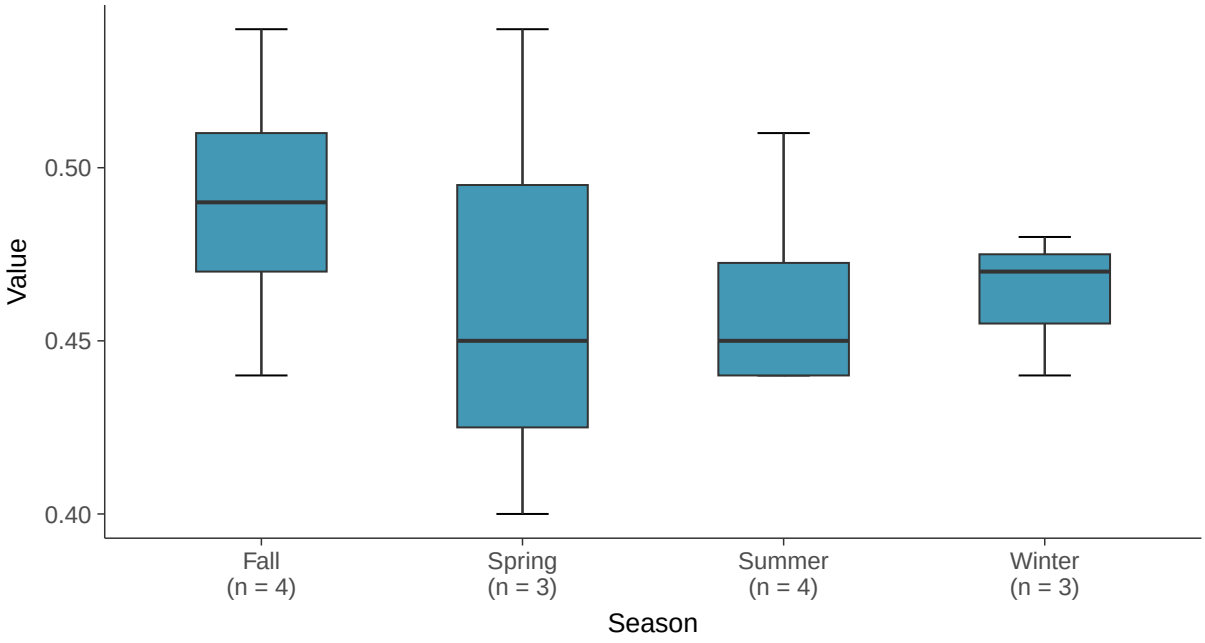
Boxplot

Fluoride, MW-10 (mg/L)



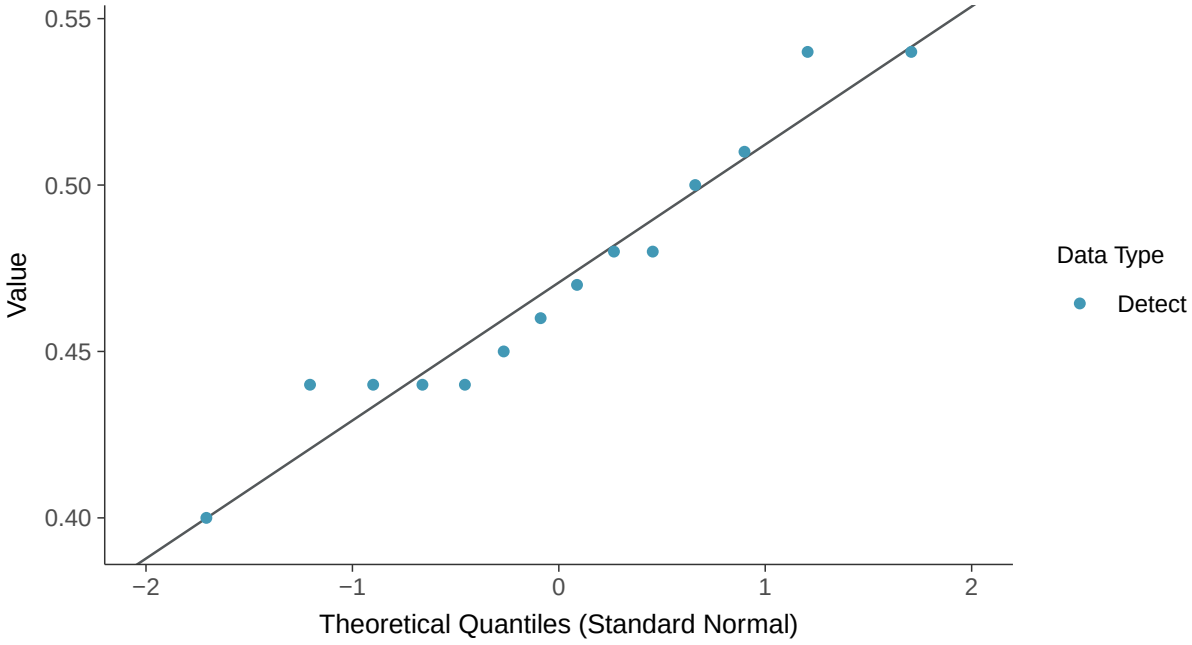
Boxplot by Season

Fluoride, MW-10 (mg/L)



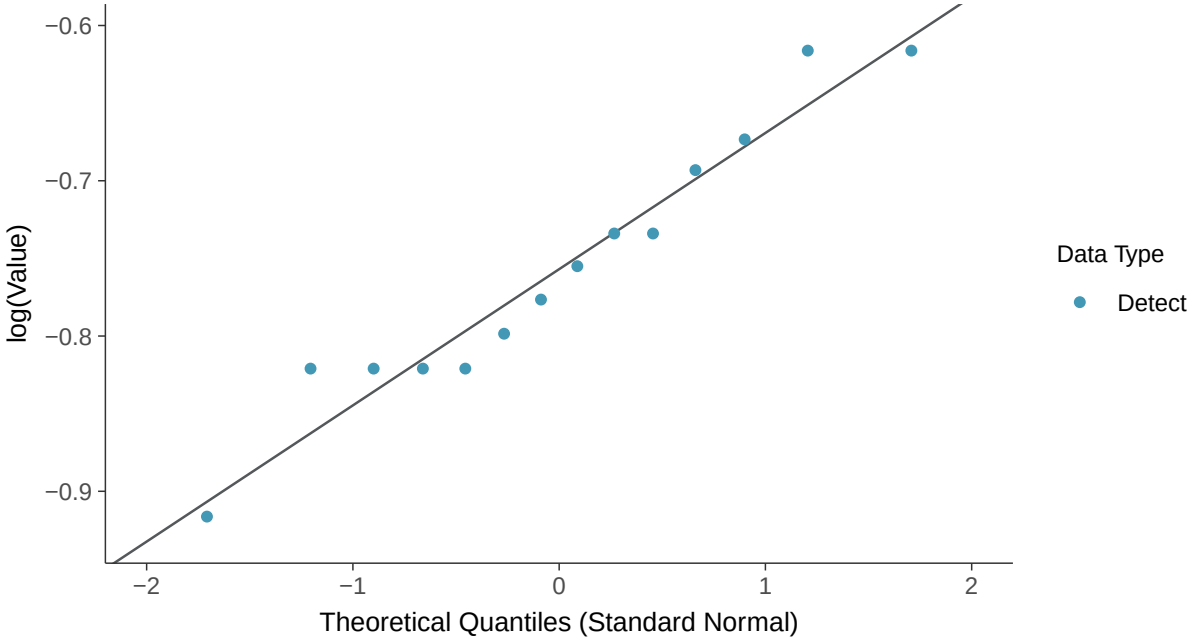
Normal Q-Q plot

Fluoride, MW-10 (mg/L)



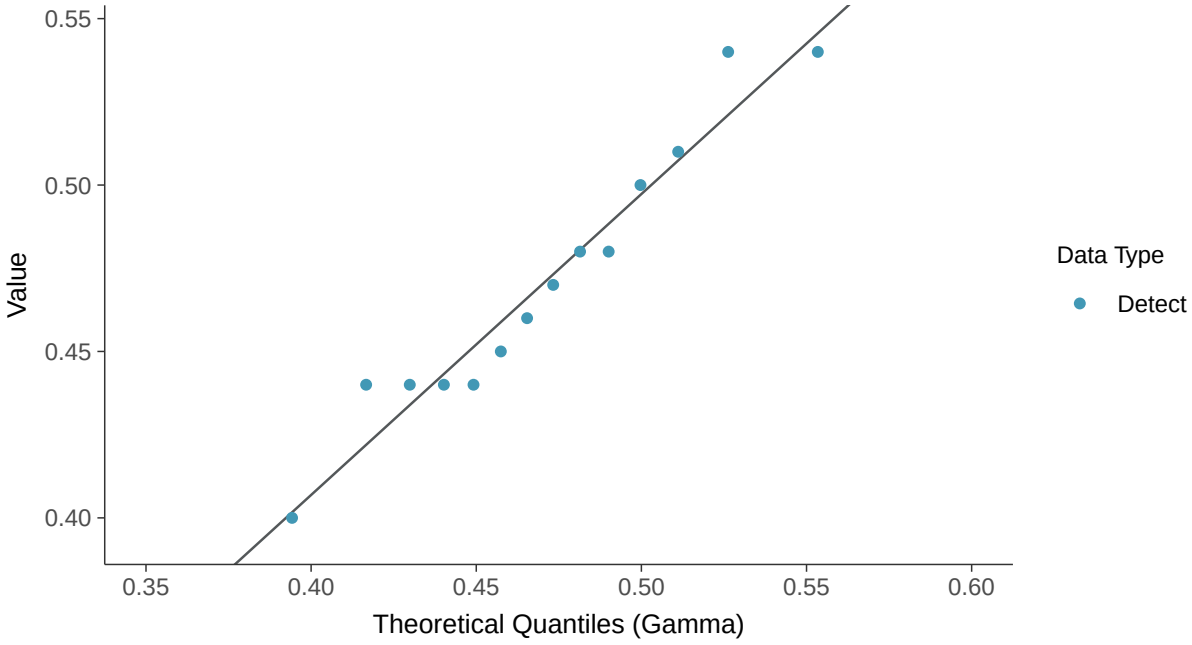
Lognormal Q-Q plot

Fluoride, MW-10 (mg/L)



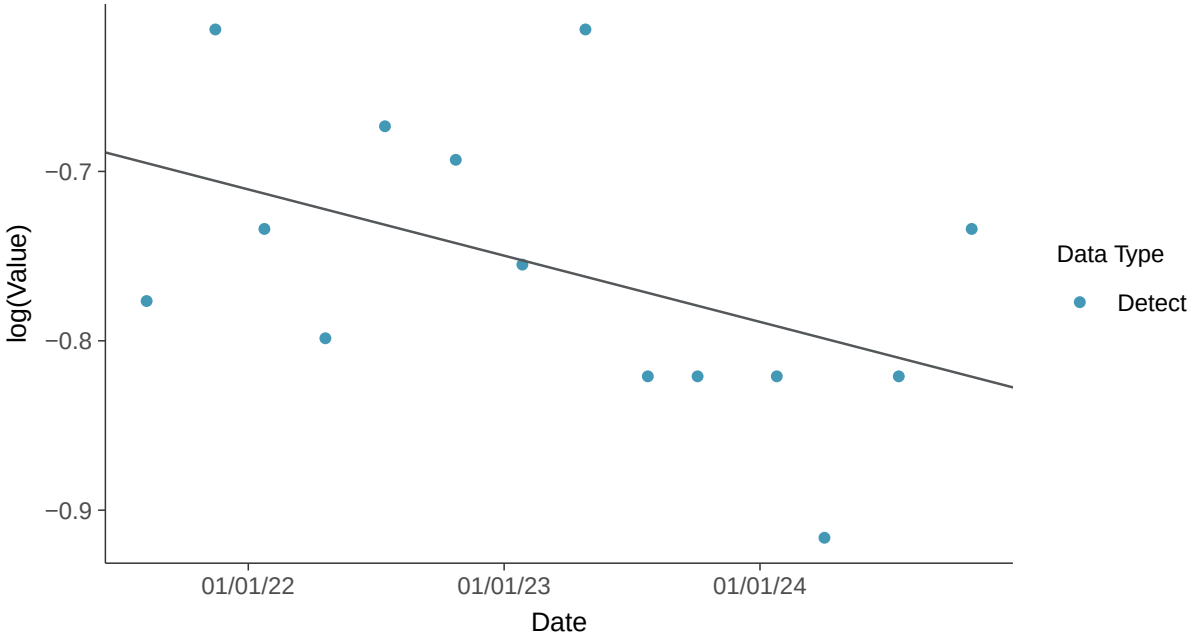
Gamma Q-Q plot

Fluoride, MW-10 (mg/L)



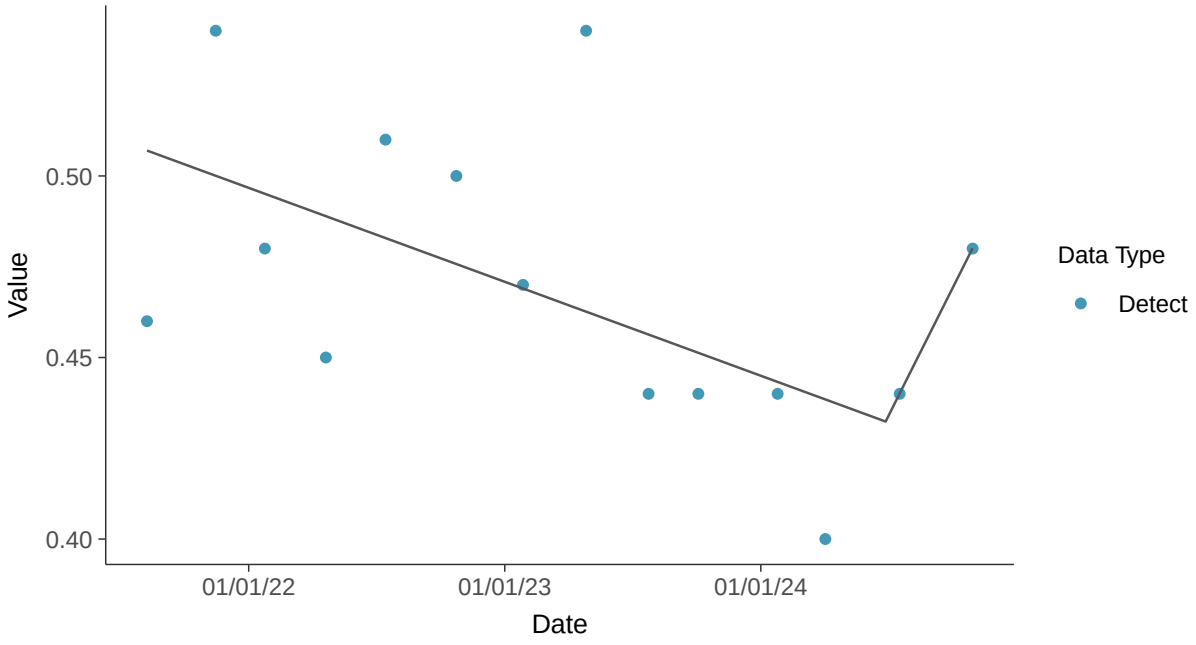
Trend Regression: Lognormal MLE

Fluoride, MW-10 (mg/L)



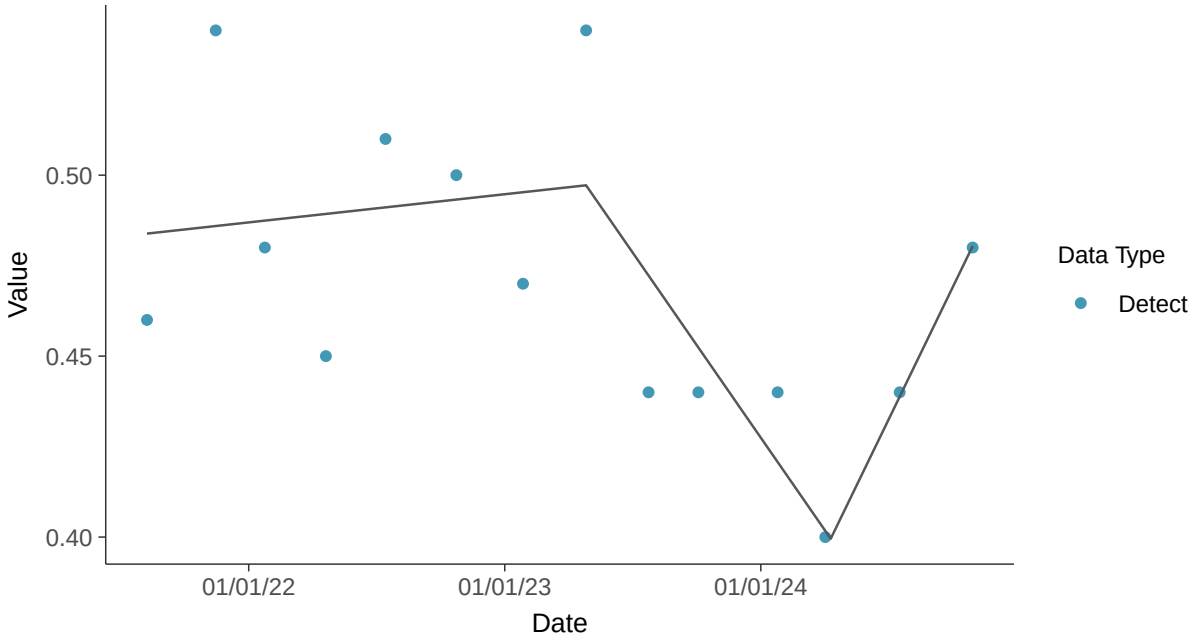
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-10 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-10 (mg/L)

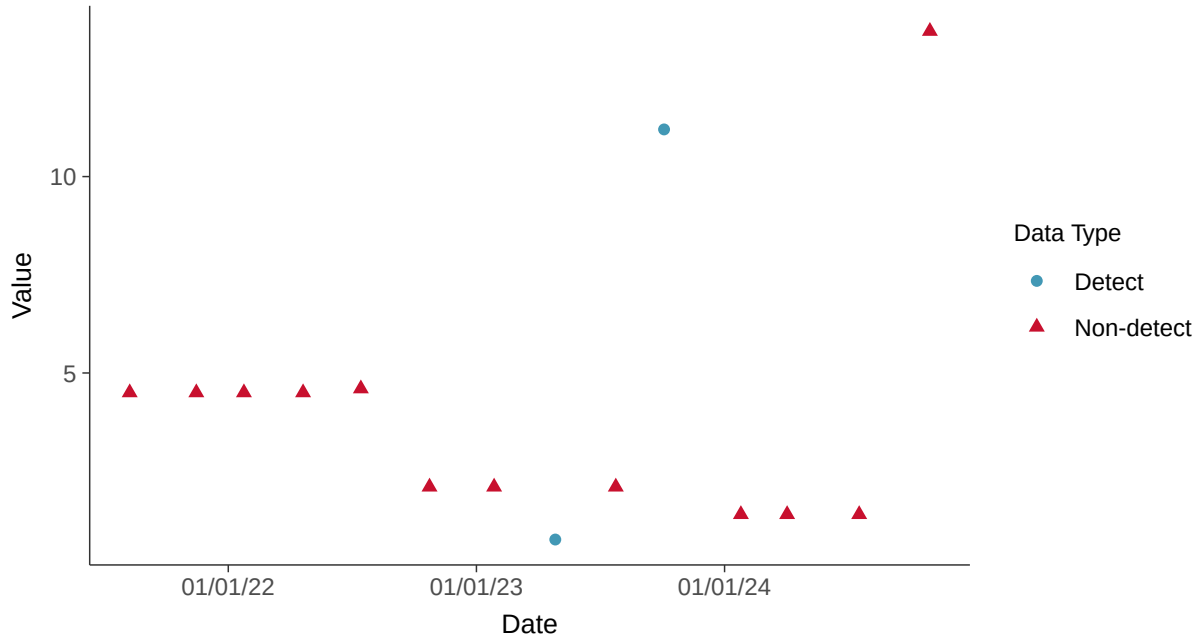


App. IV: Lead, MW-10

ID: 09_03_113

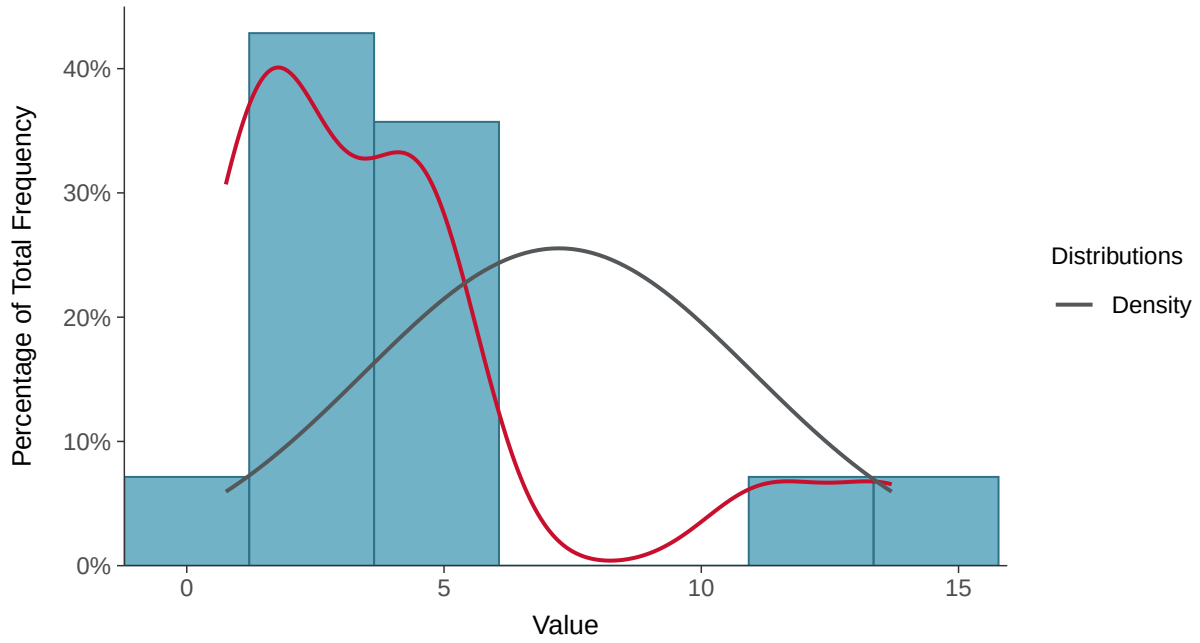
Scatter Plot

Lead, MW-10 (ug/L)



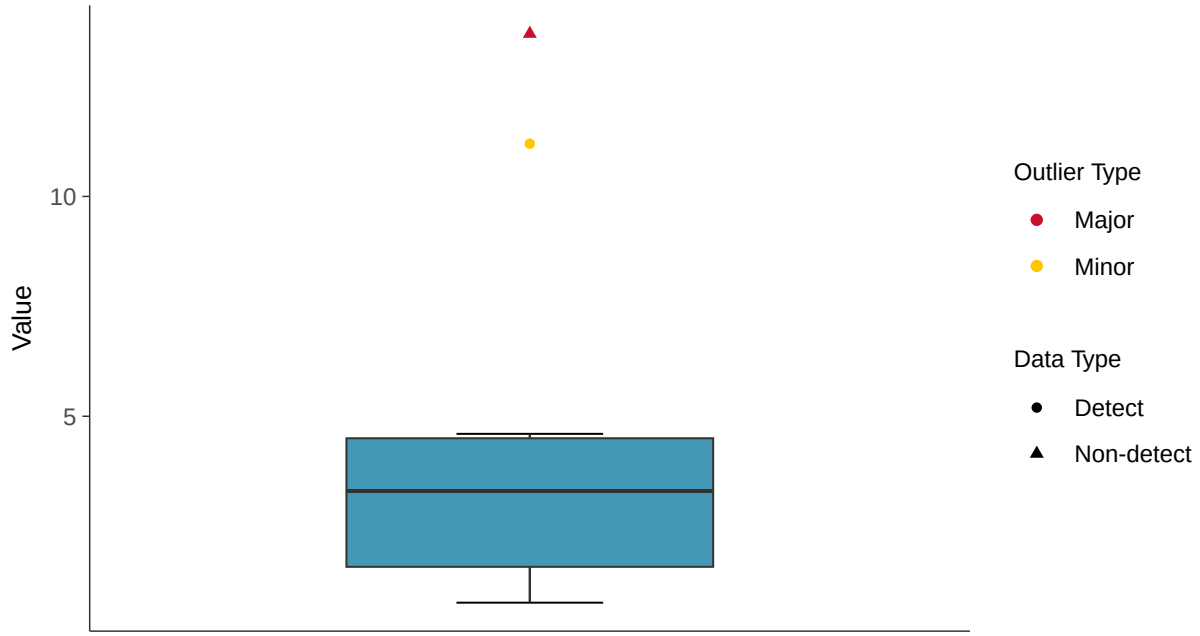
Histogram

Lead, MW-10 (ug/L)



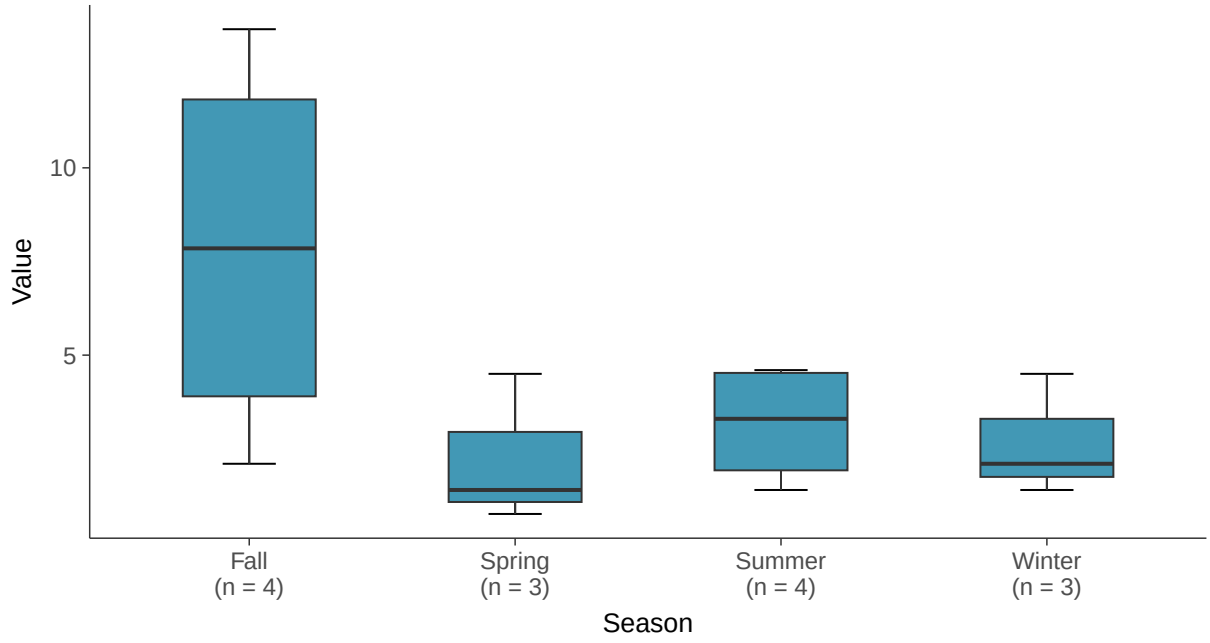
Boxplot

Lead, MW-10 (ug/L)



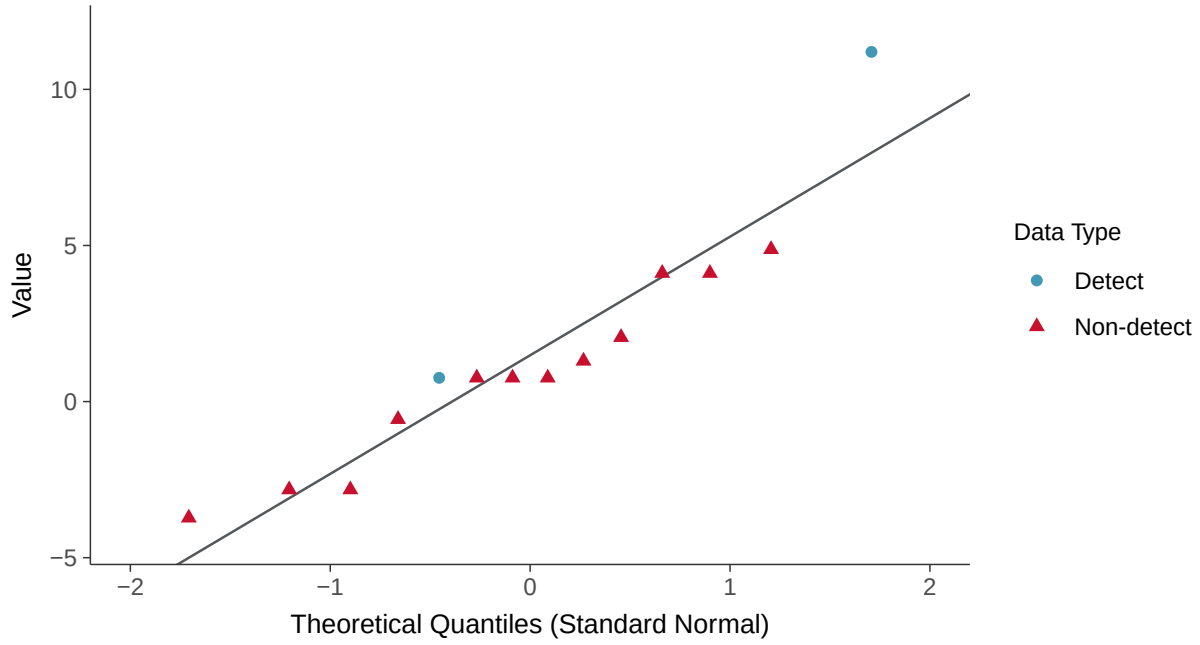
Boxplot by Season

Lead, MW-10 (ug/L)



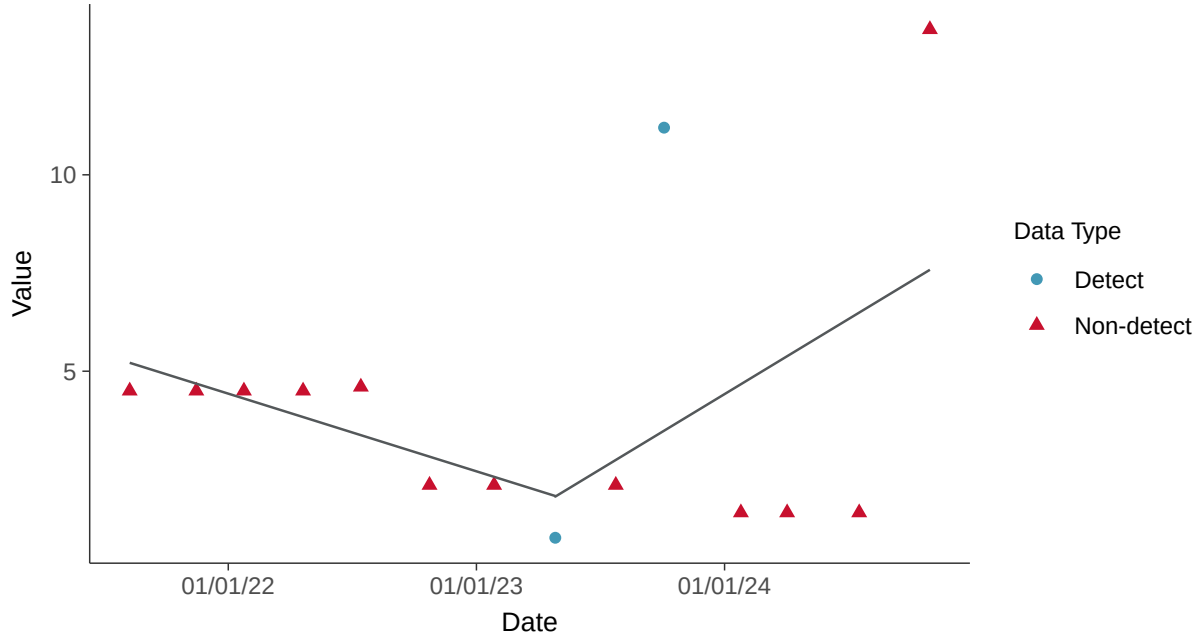
Normal Q-Q plot using ROS Imputed Estimates

Lead, MW-10 (ug/L)



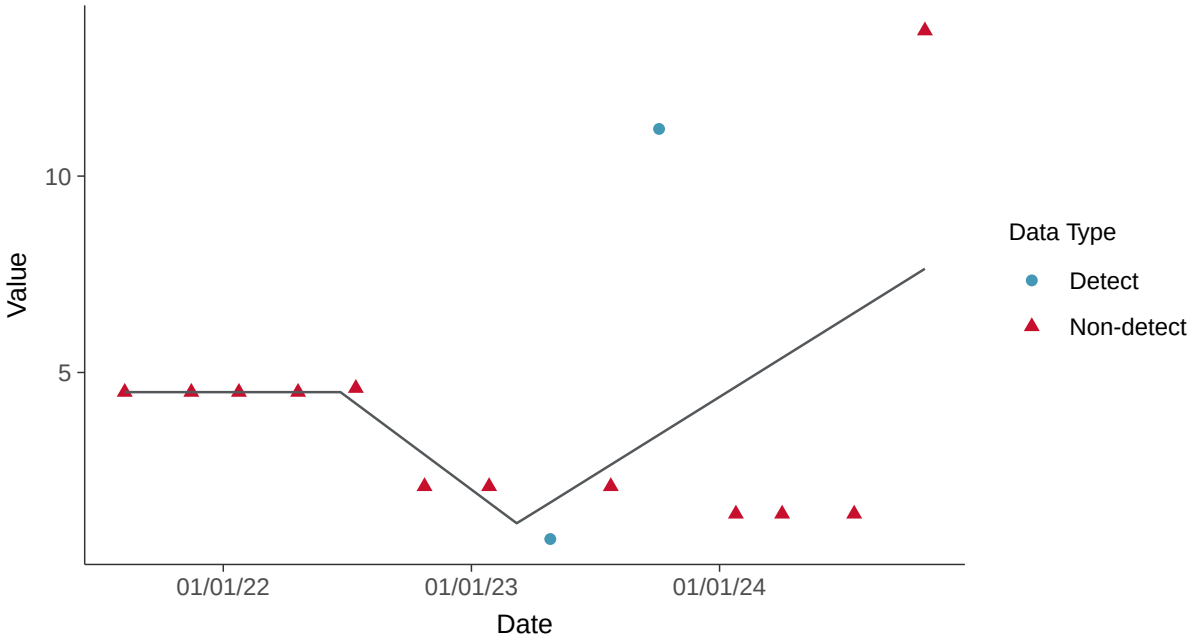
Trend Regression: Piecewise Linear-Linear

Lead, MW-10 (ug/L)



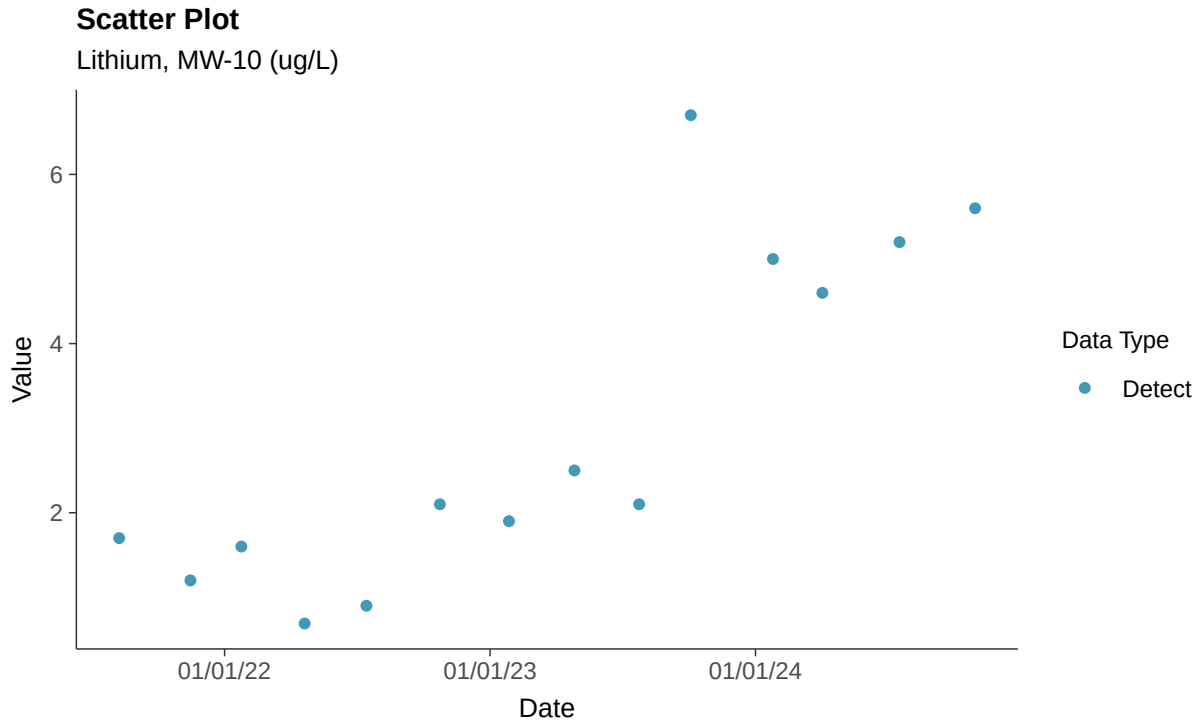
Trend Regression: Piecewise Linear-Linear-Linear

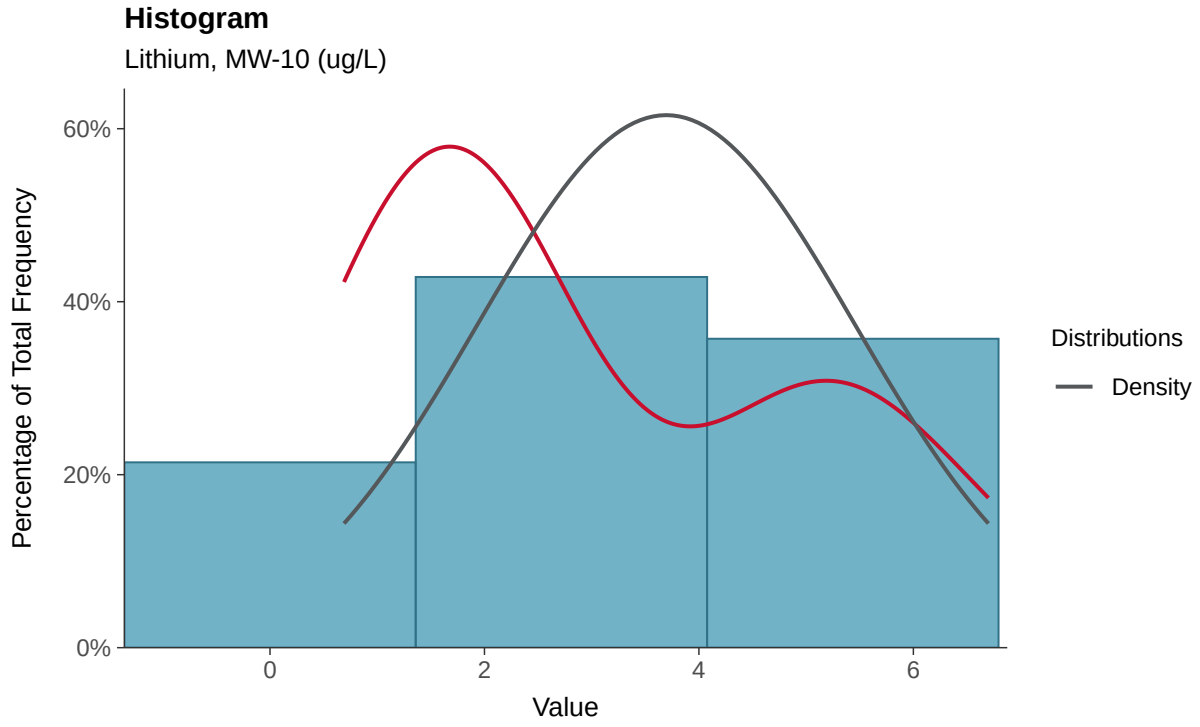
Lead, MW-10 (ug/L)



App. IV: Lithium, MW-10

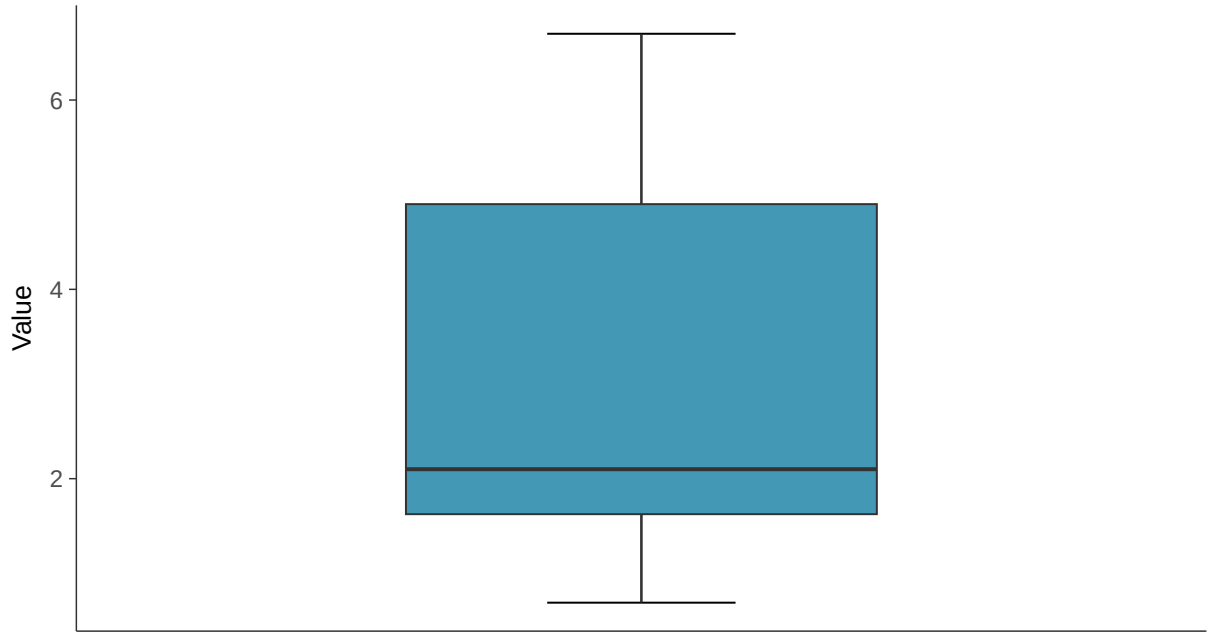
ID: 09_03_114





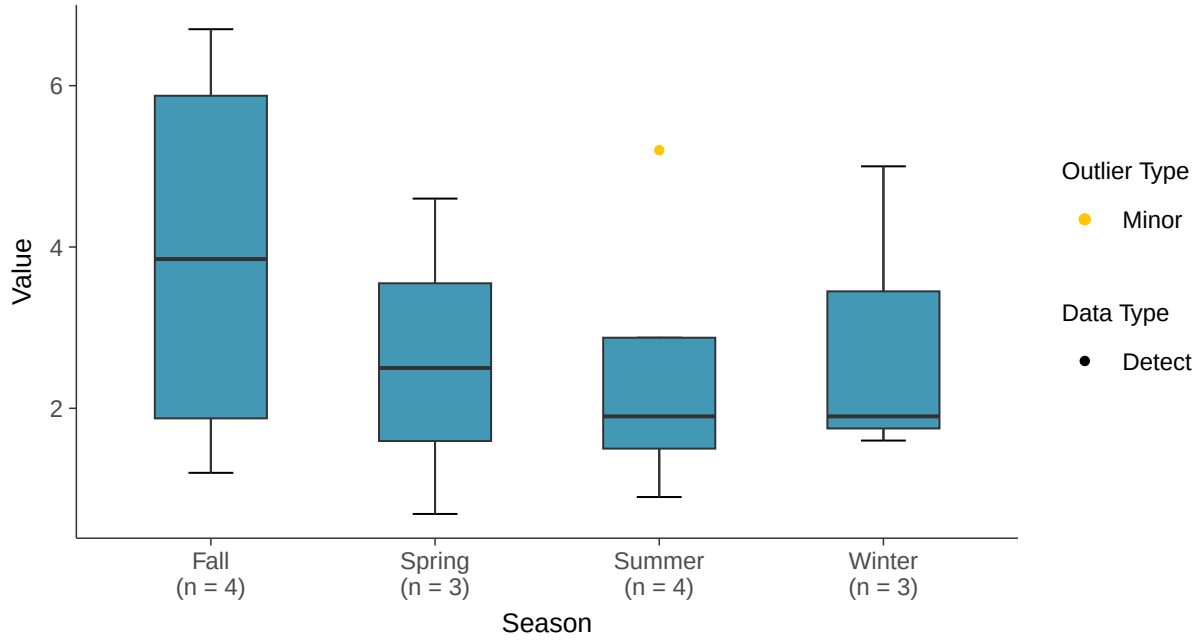
Boxplot

Lithium, MW-10 (ug/L)



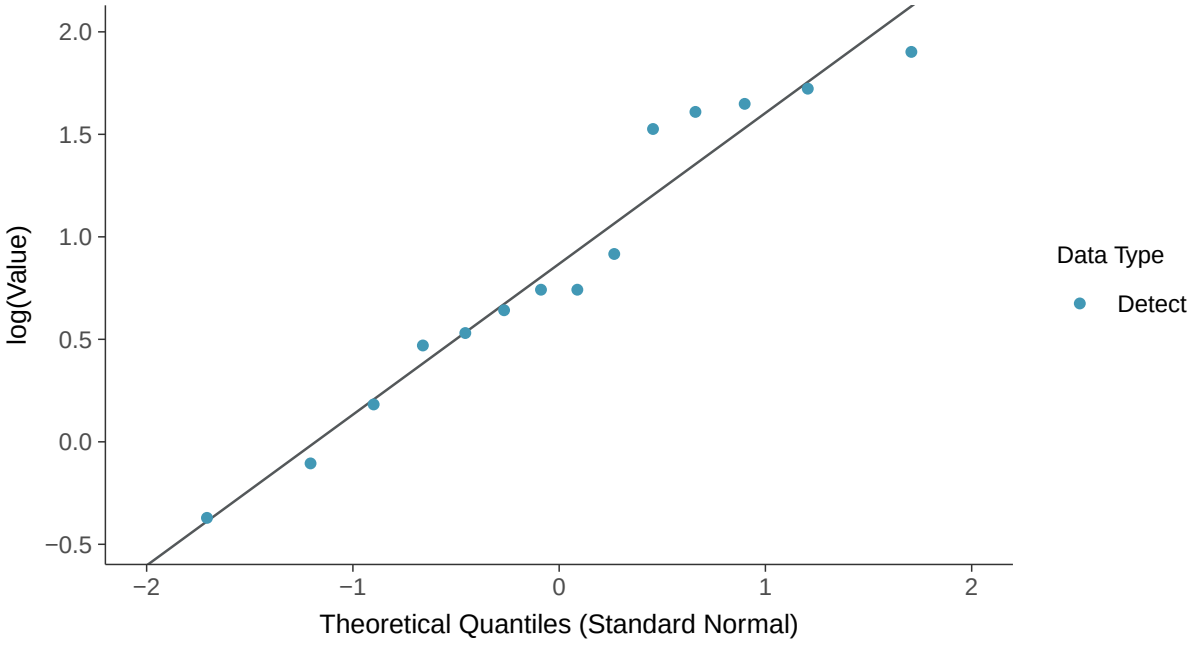
Boxplot by Season

Lithium, MW-10 (ug/L)



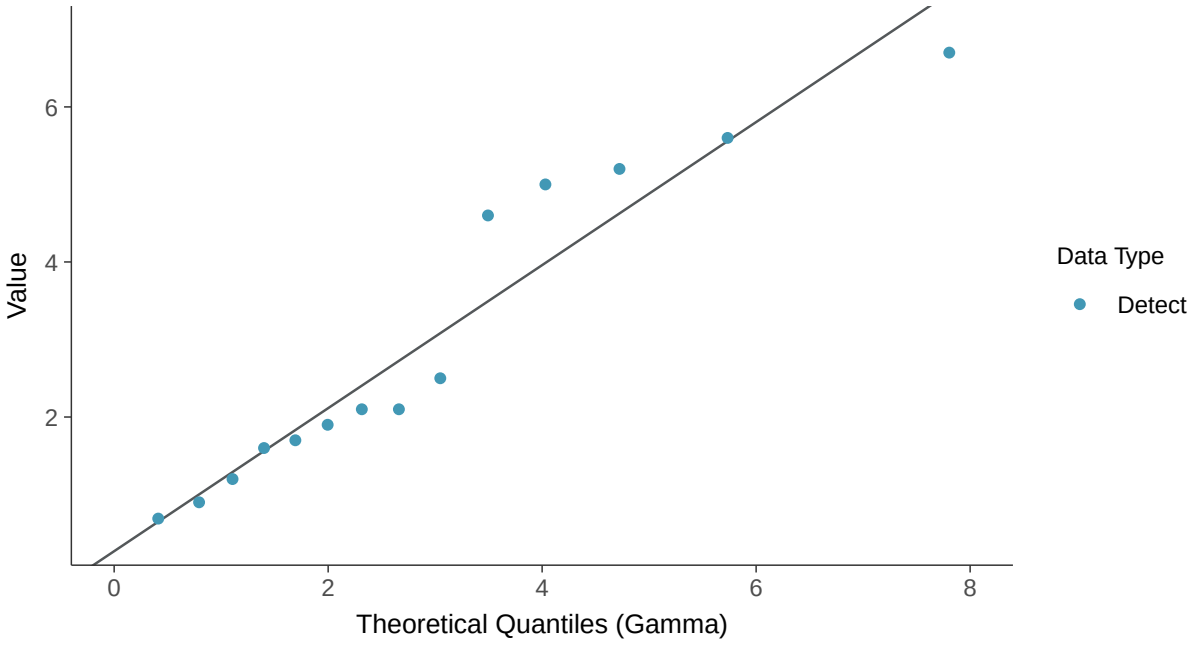
Lognormal Q-Q plot

Lithium, MW-10 (ug/L)



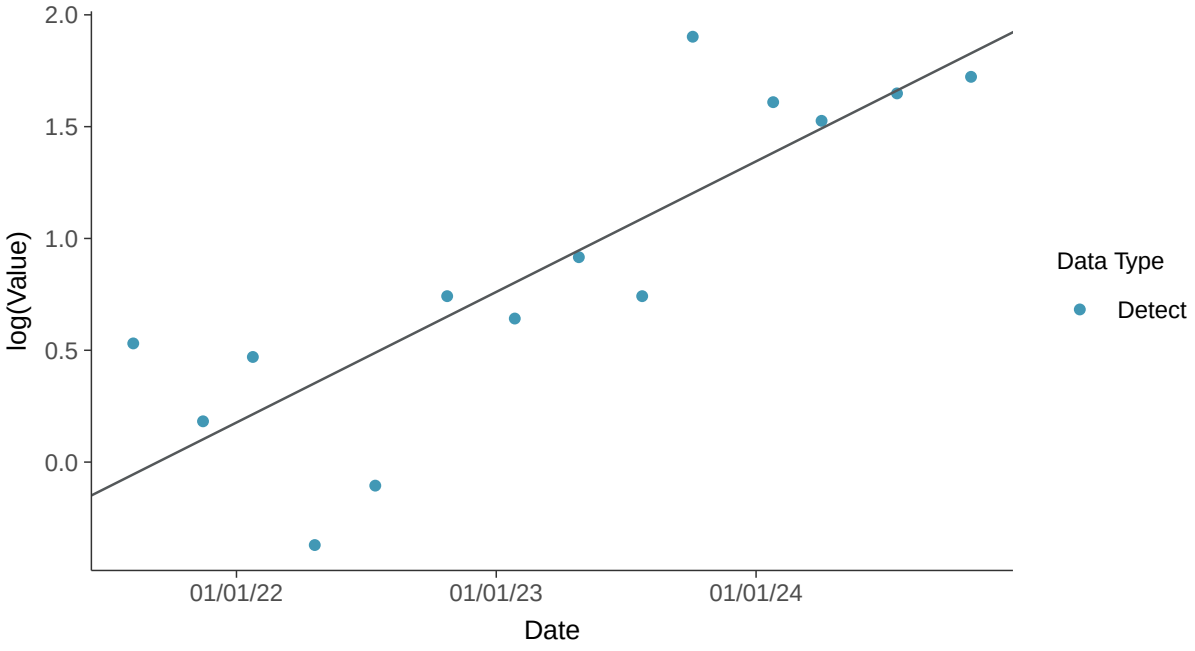
Gamma Q-Q plot

Lithium, MW-10 (ug/L)



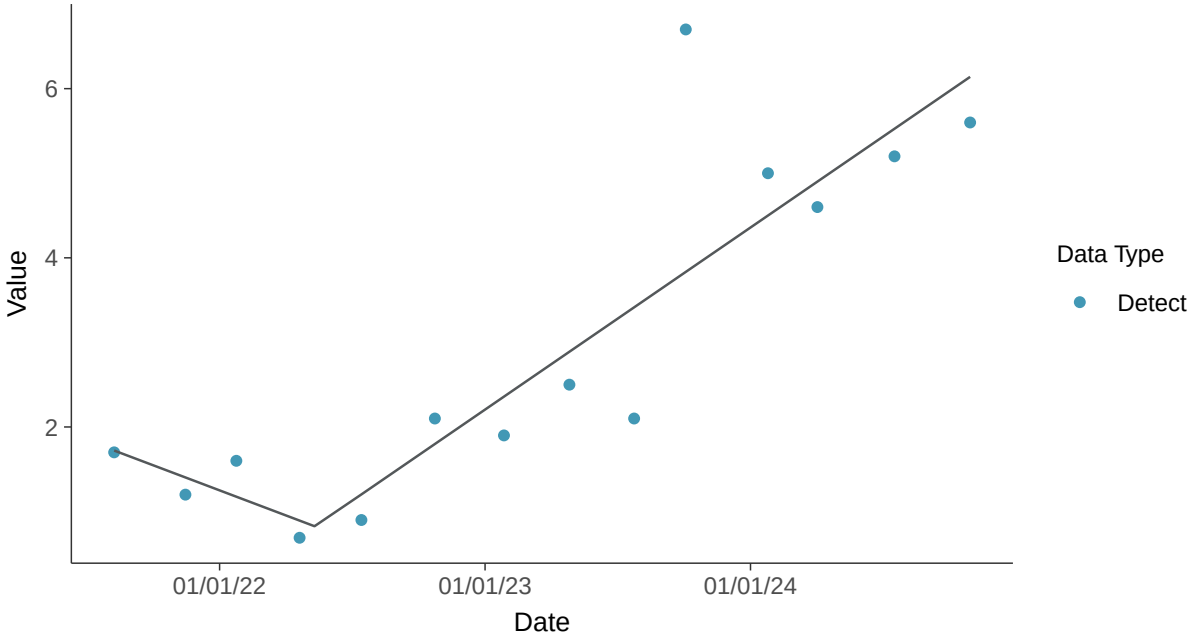
Trend Regression: Lognormal MLE

Lithium, MW-10 (ug/L)



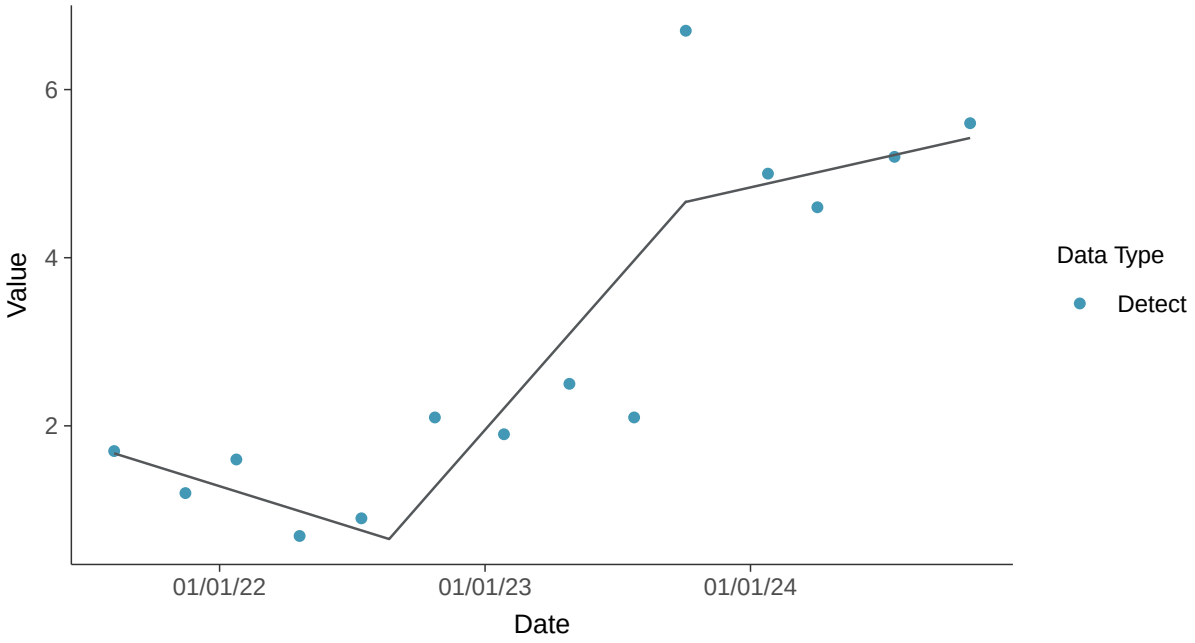
Trend Regression: Piecewise Linear-Linear

Lithium, MW-10 (ug/L)



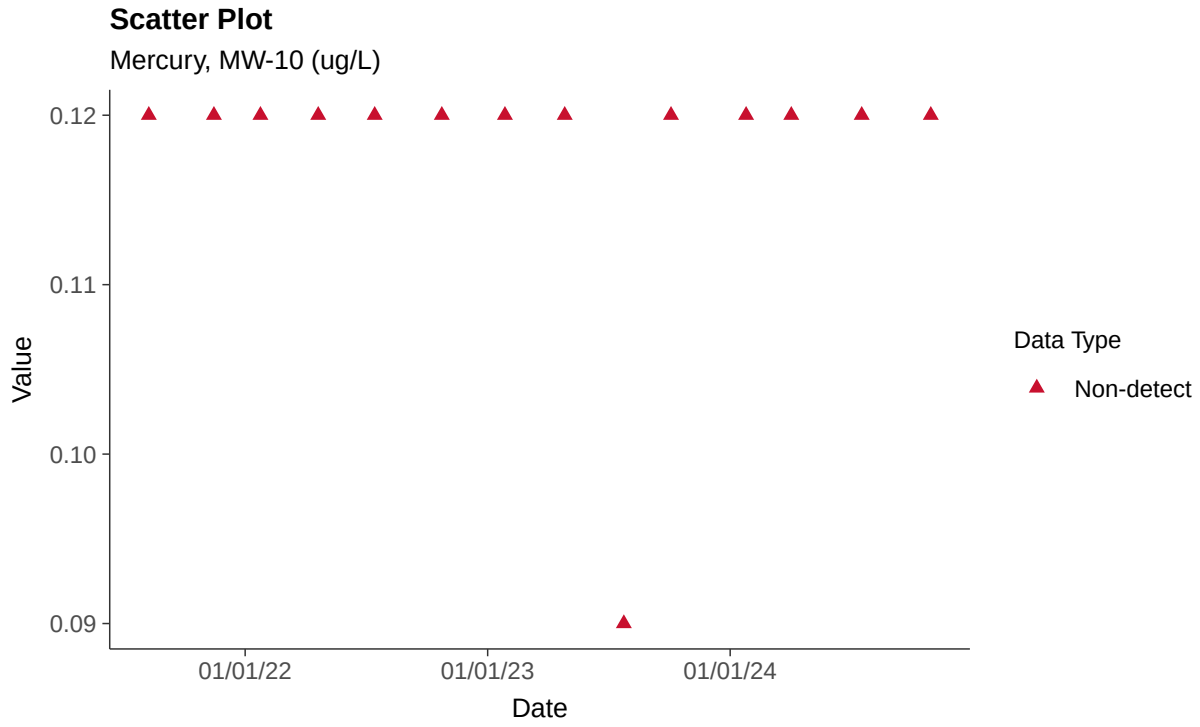
Trend Regression: Piecewise Linear-Linear-Linear

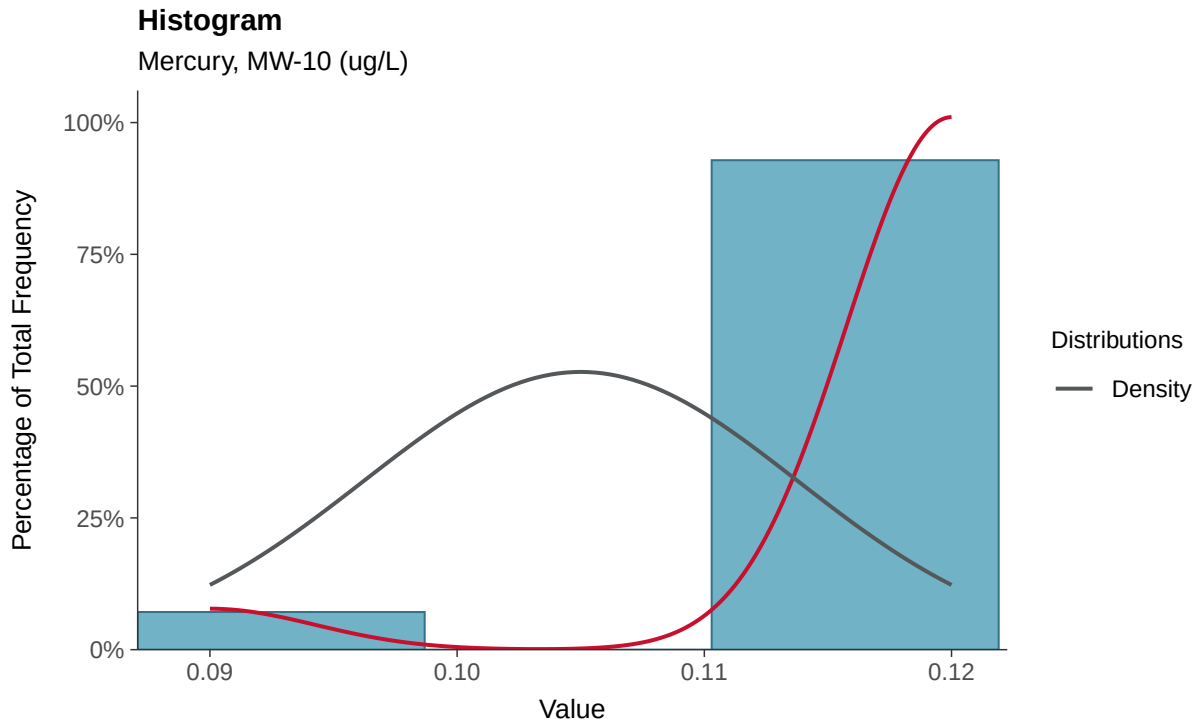
Lithium, MW-10 (ug/L)



App. IV: Mercury, MW-10

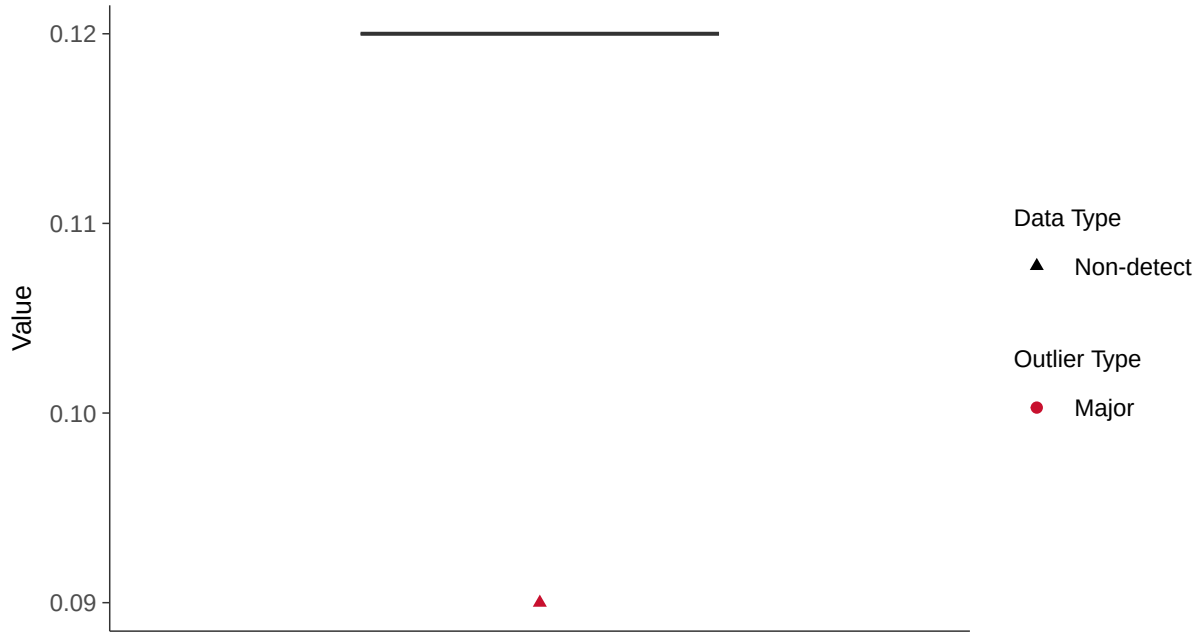
ID: 09_03_115





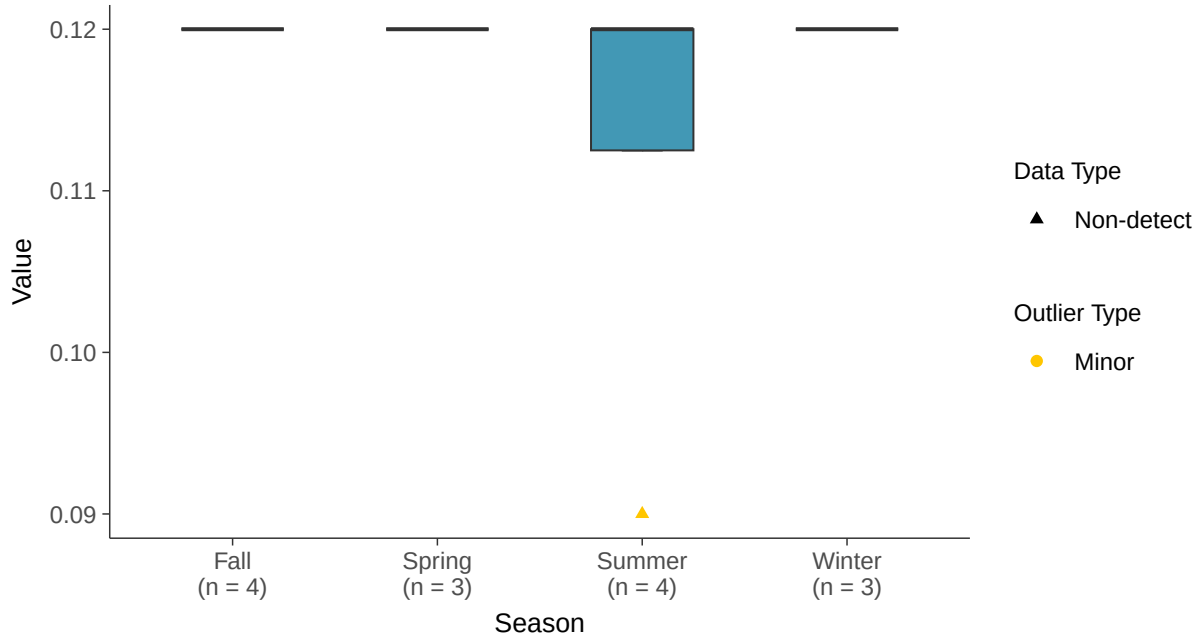
Boxplot

Mercury, MW-10 (ug/L)



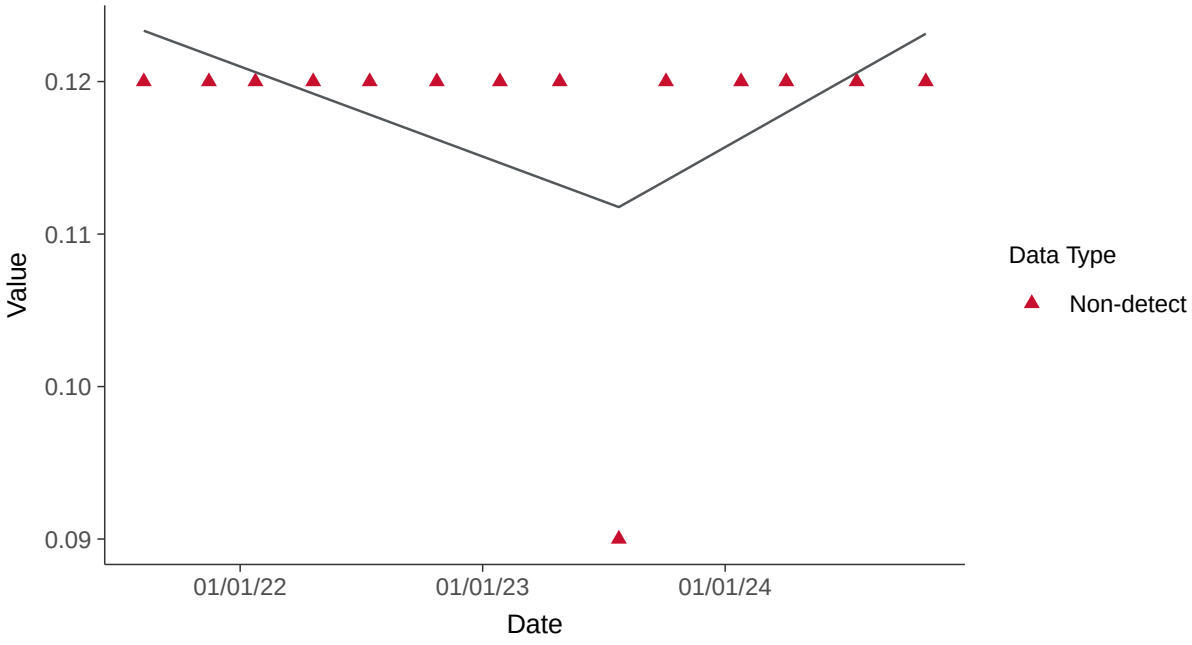
Boxplot by Season

Mercury, MW-10 (ug/L)



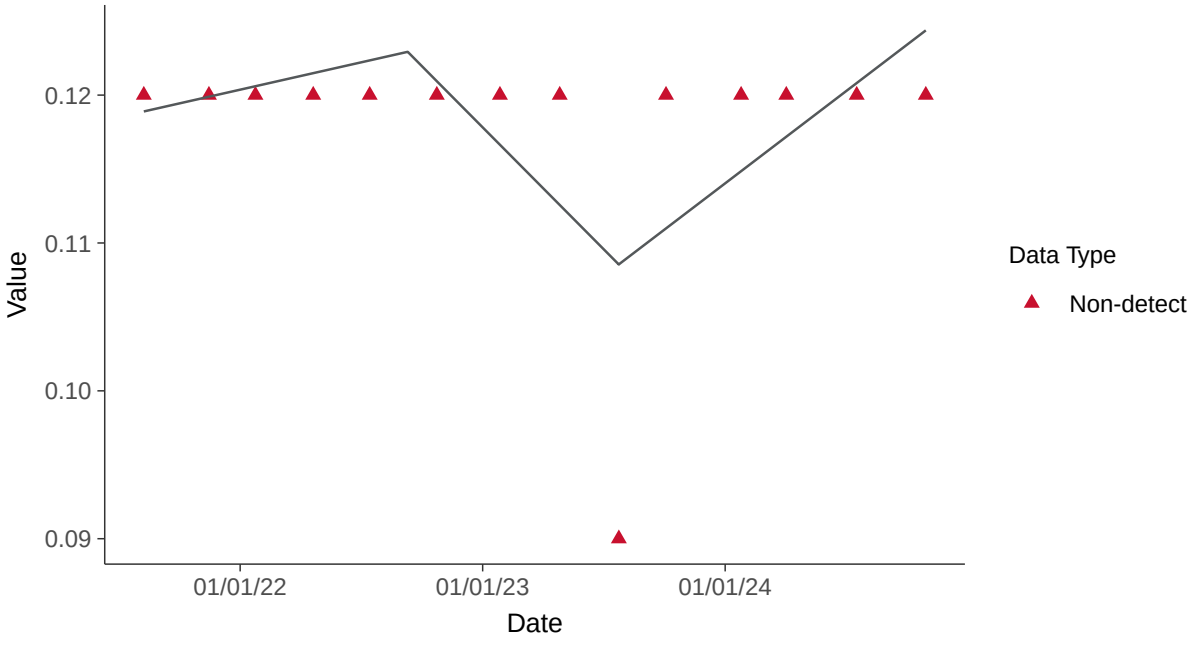
Trend Regression: Piecewise Linear-Linear

Mercury, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-10 (ug/L)

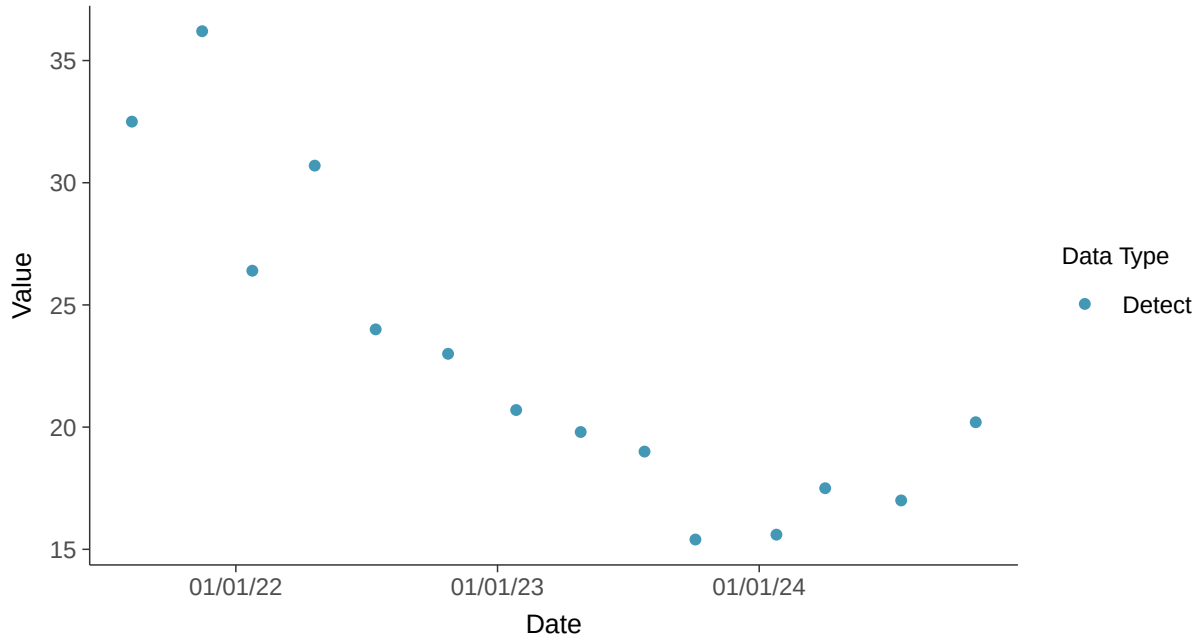


App. IV: Molybdenum, MW-10

ID: 09_03_116

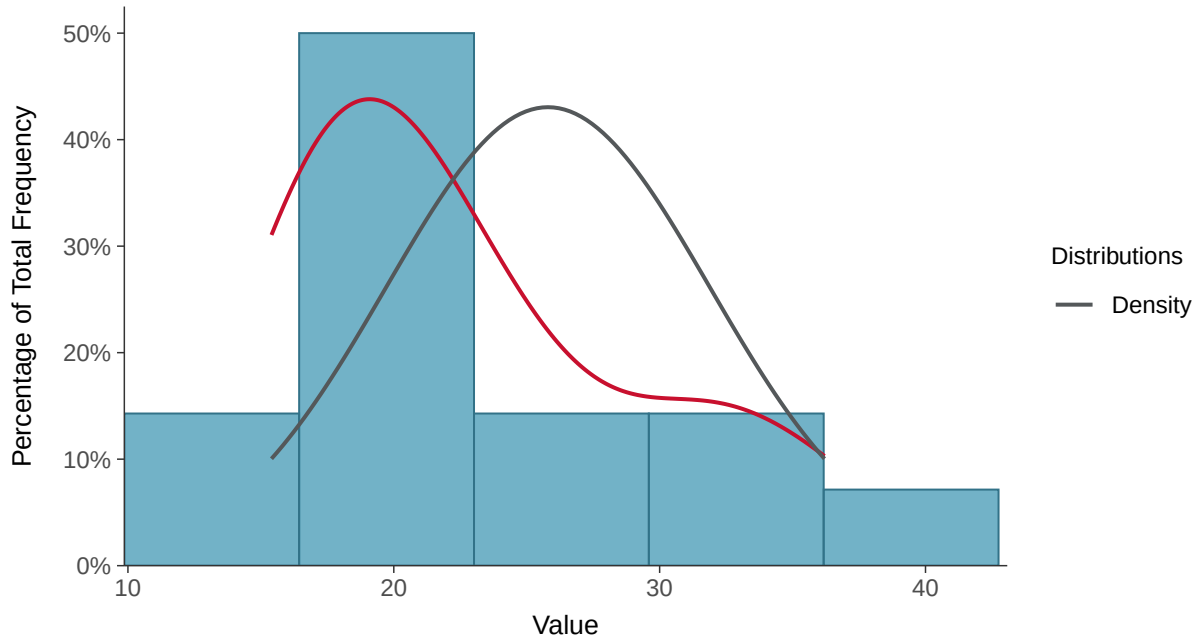
Scatter Plot

Molybdenum, MW-10 (ug/L)



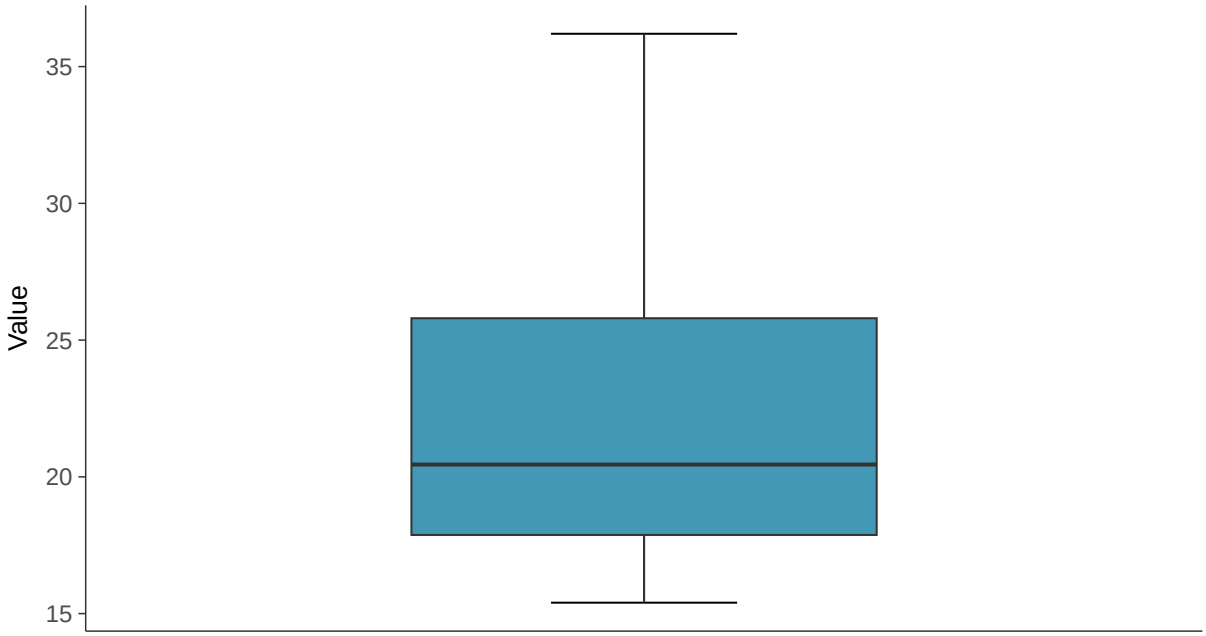
Histogram

Molybdenum, MW-10 (ug/L)



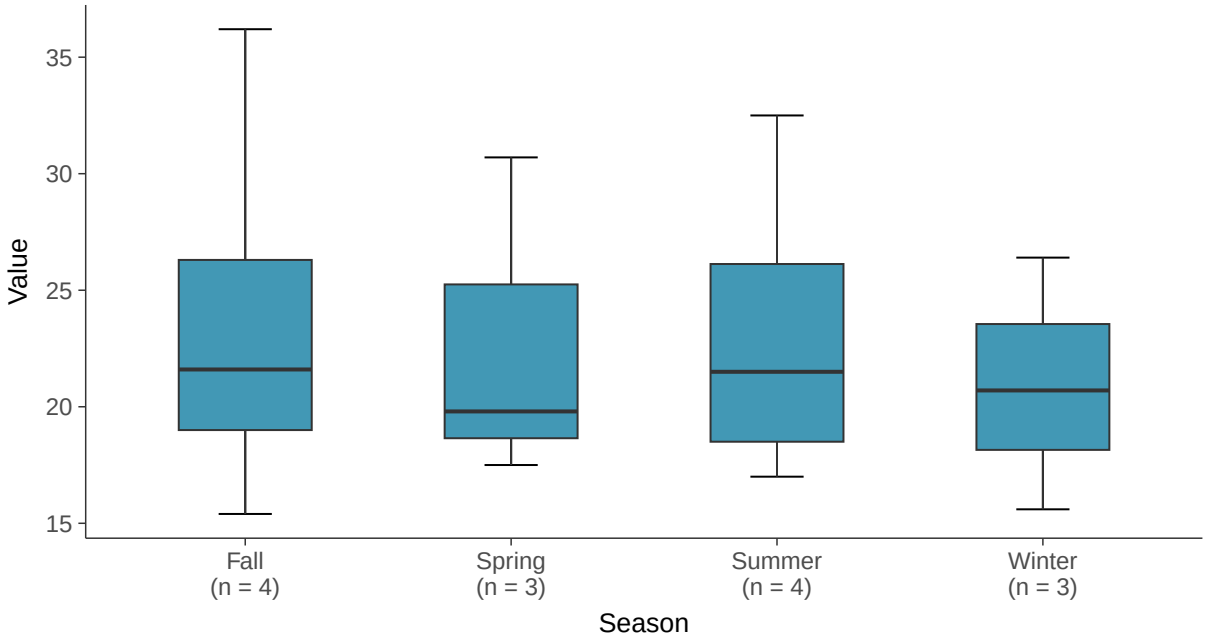
Boxplot

Molybdenum, MW-10 (ug/L)



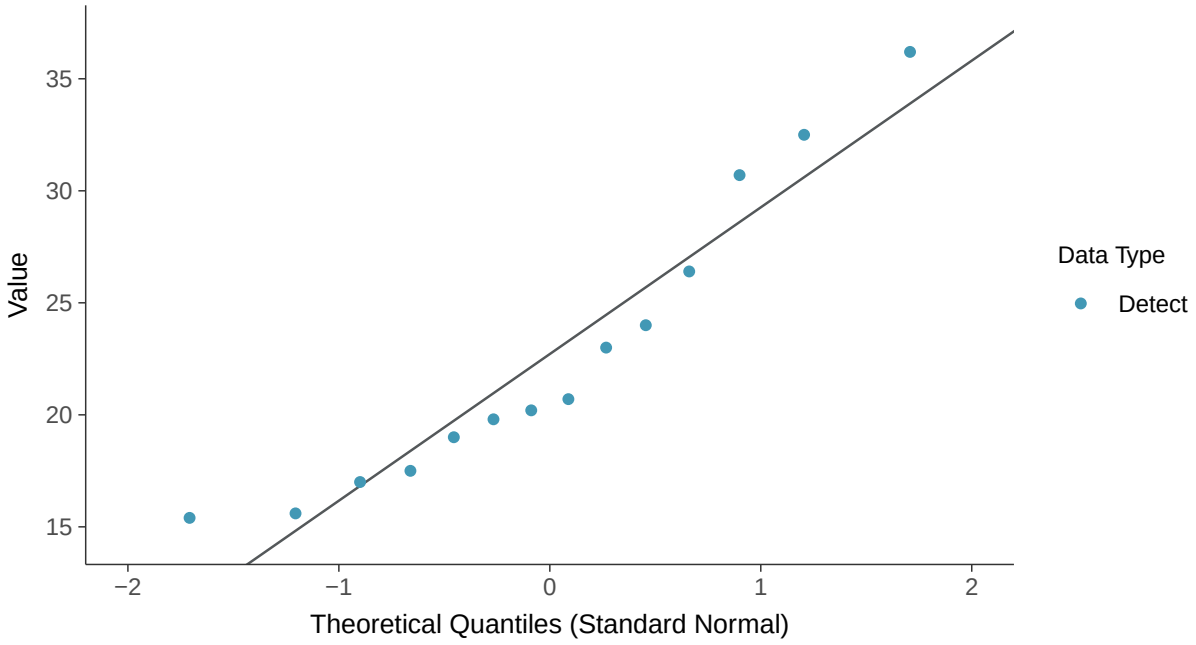
Boxplot by Season

Molybdenum, MW-10 (ug/L)



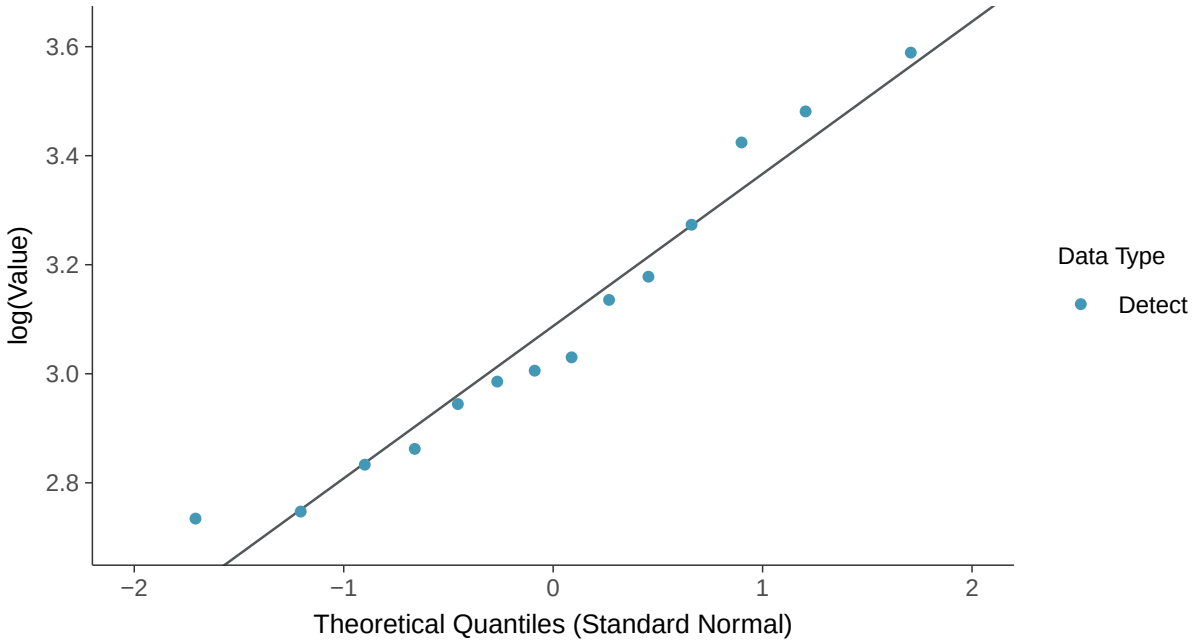
Normal Q-Q plot

Molybdenum, MW-10 (ug/L)



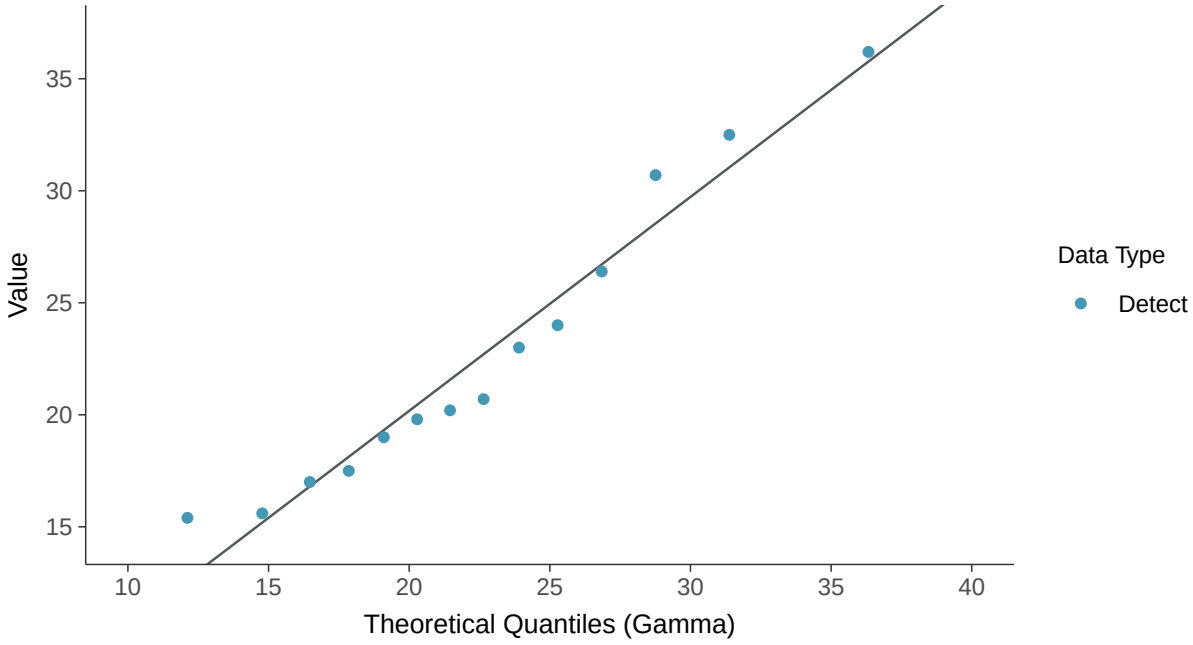
Lognormal Q-Q plot

Molybdenum, MW-10 (ug/L)



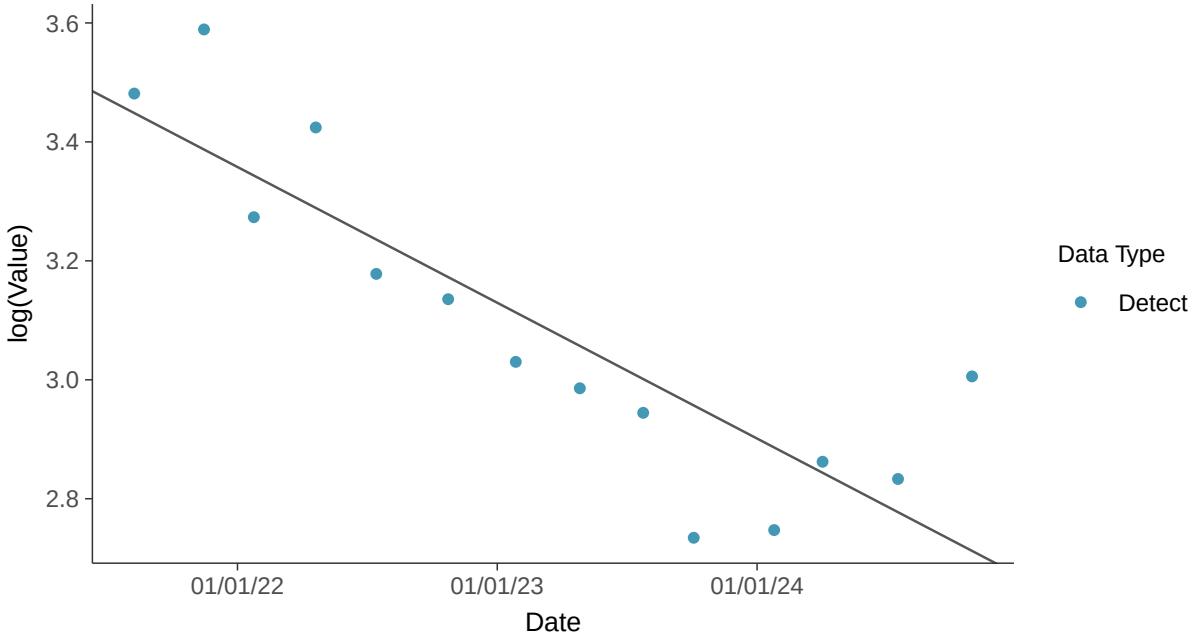
Gamma Q-Q plot

Molybdenum, MW-10 (ug/L)



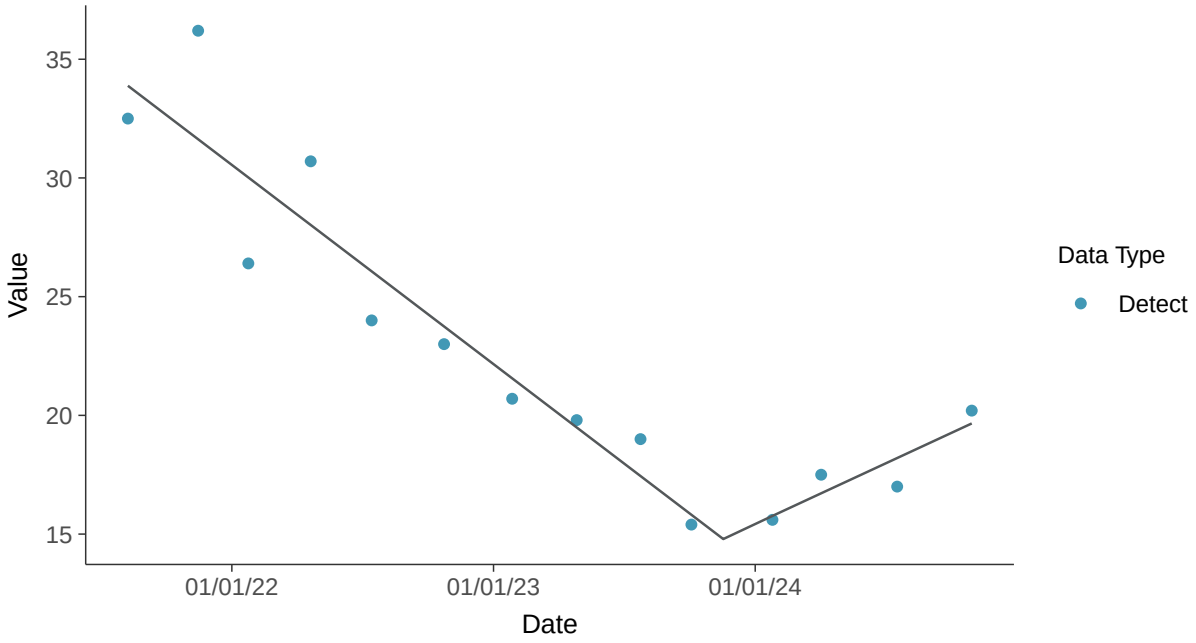
Trend Regression: Lognormal MLE

Molybdenum, MW-10 (ug/L)



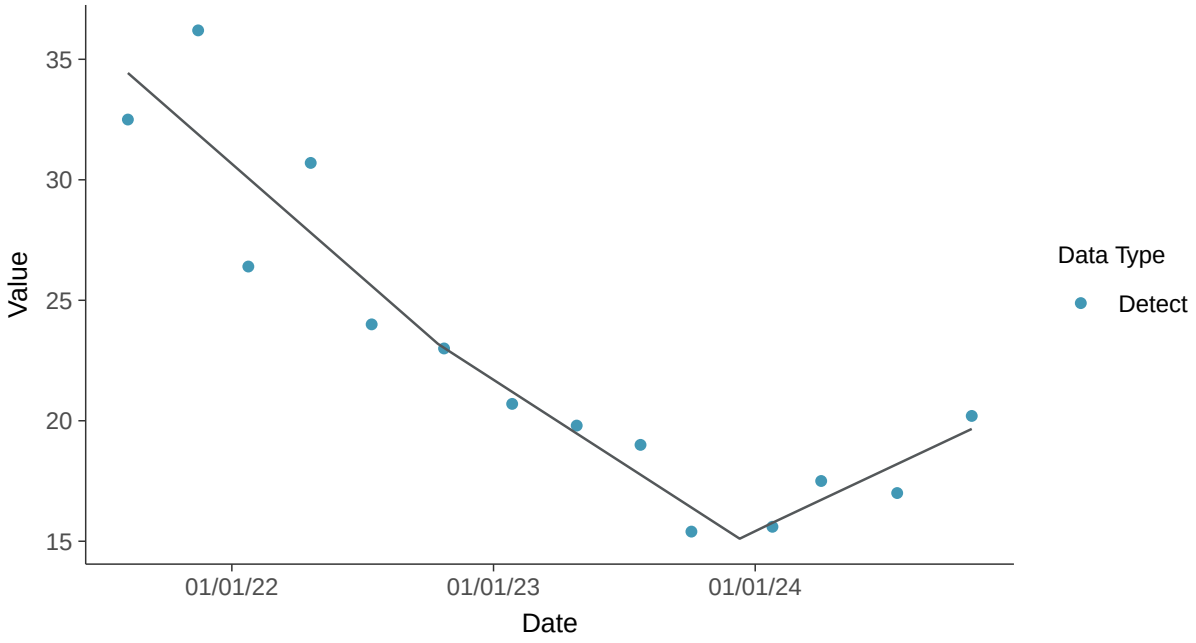
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Molybdenum, MW-10 (ug/L)

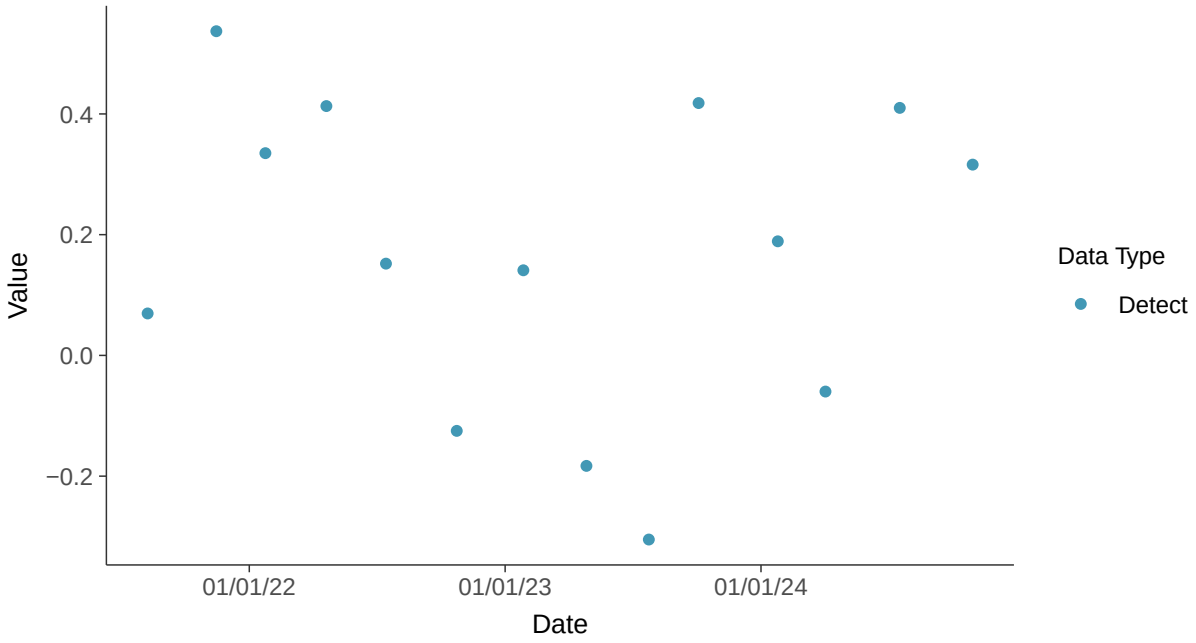


App. IV: Radium-226, MW-10

ID: 09_03_119

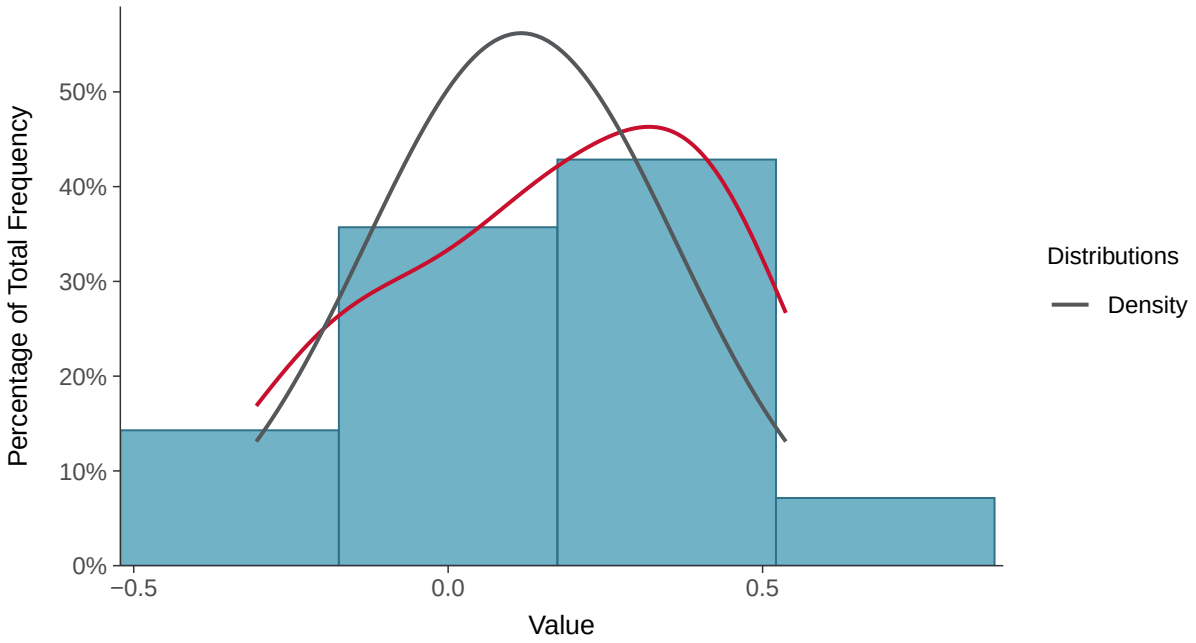
Scatter Plot

Radium-226, MW-10 (pCi/L)



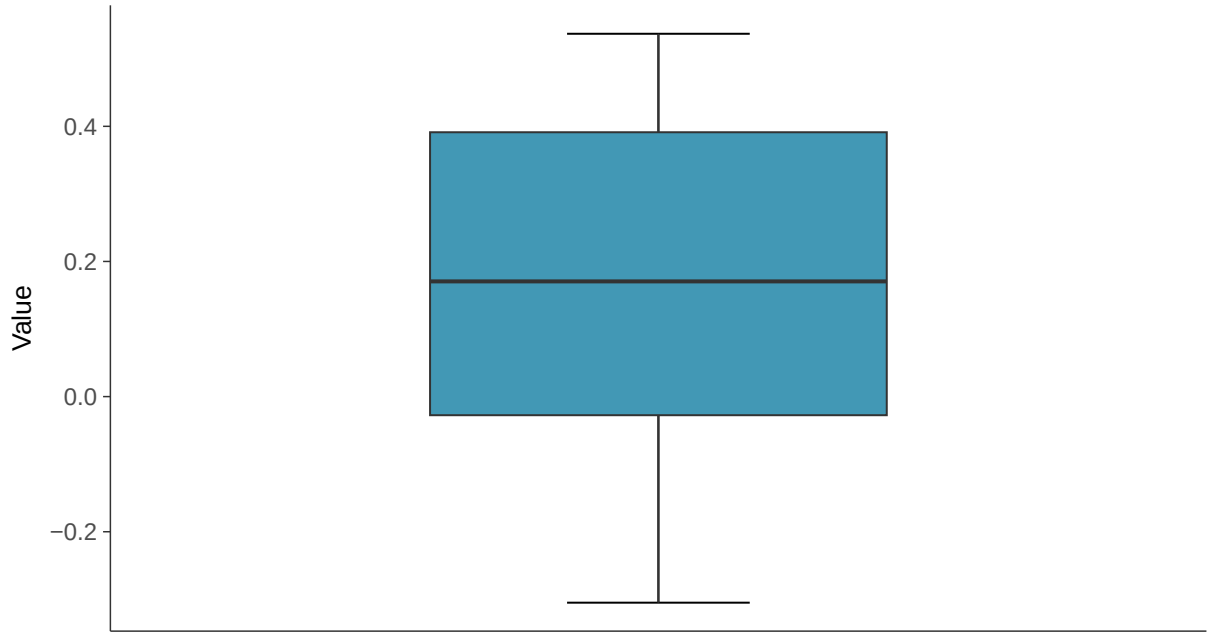
Histogram

Radium-226, MW-10 (pCi/L)



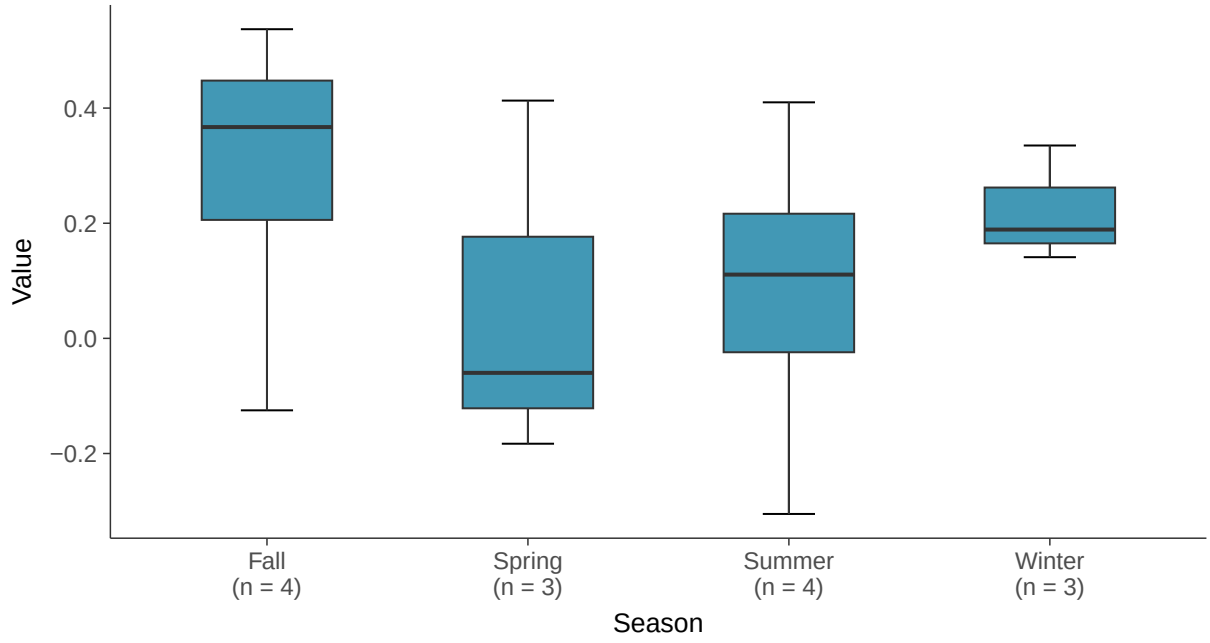
Boxplot

Radium-226, MW-10 (pCi/L)



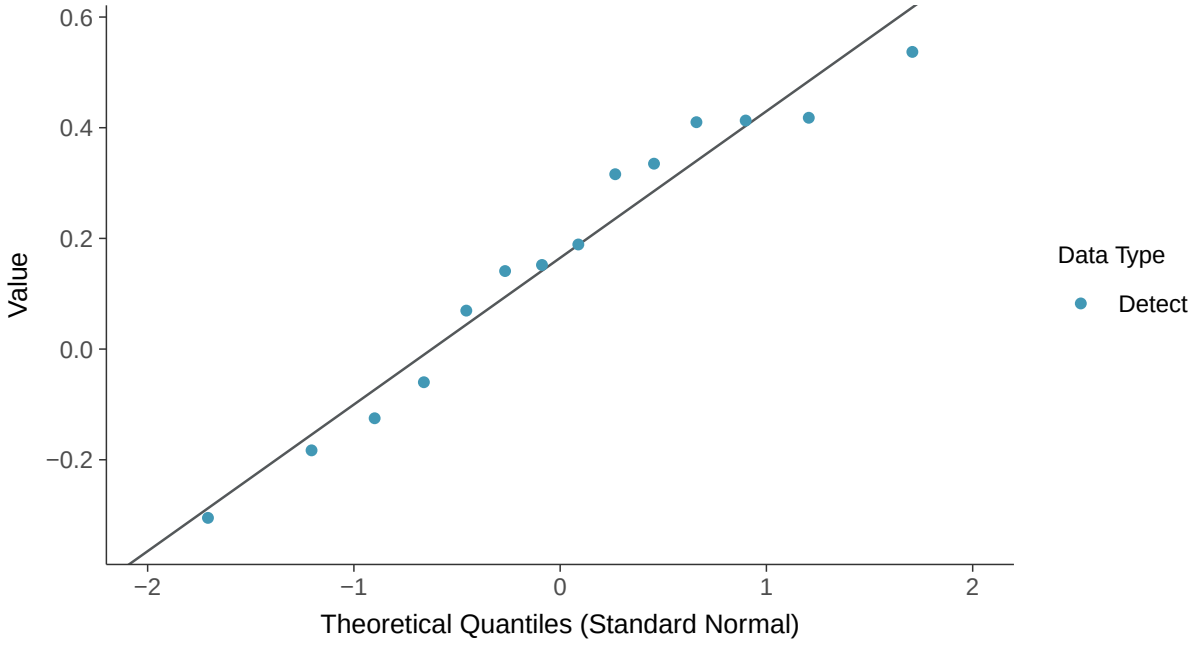
Boxplot by Season

Radium-226, MW-10 (pCi/L)



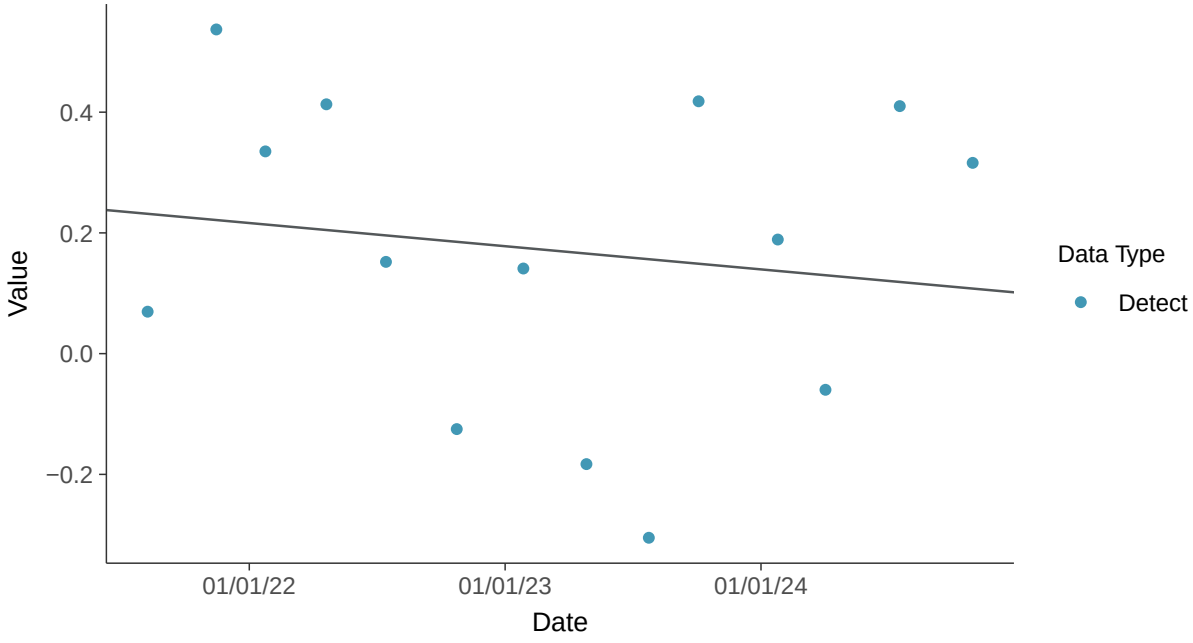
Normal Q-Q plot

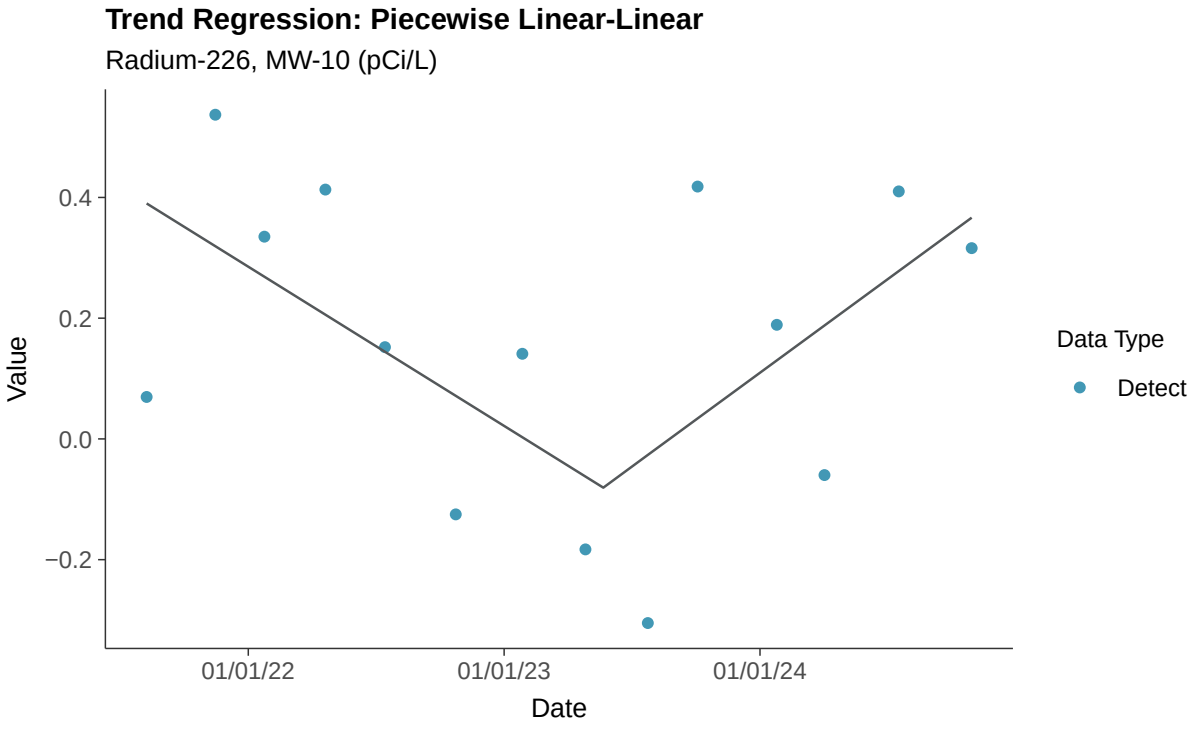
Radium-226, MW-10 (pCi/L)



Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-10 (pCi/L)



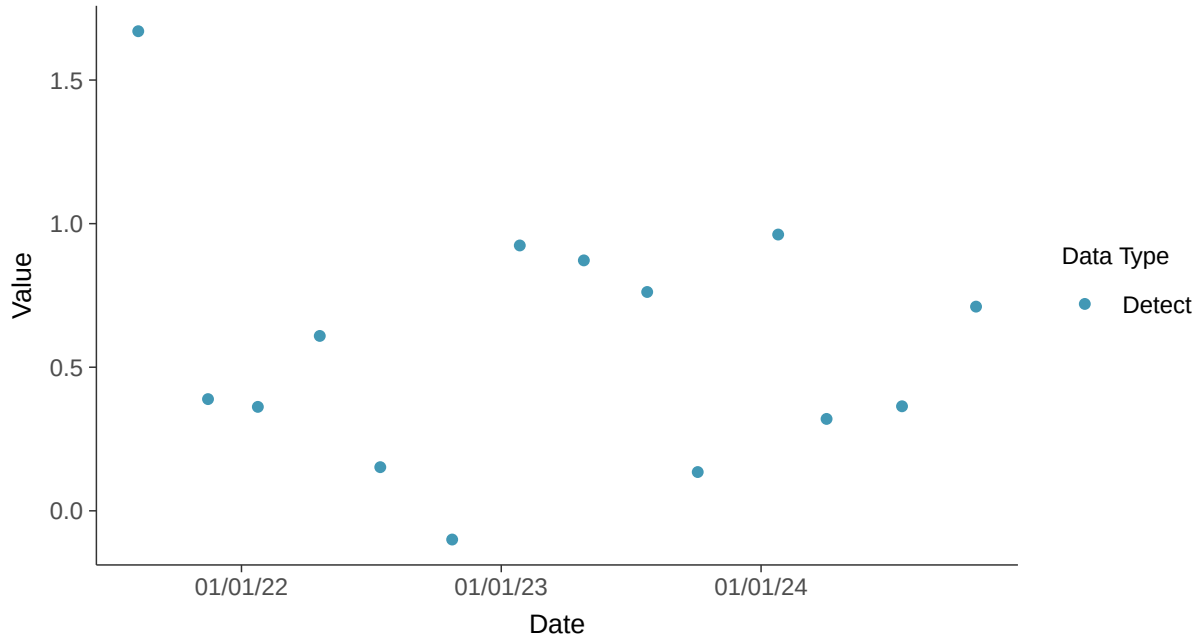

Trend Regression: Piecewise Linear-Linear
Radium-226, MW-10 (pCi/L)
Value
0.4
0.2
0.0
−0.2
01/01/22
01/01/23
01/01/24
Date
Data Type
Detect

App. IV: Radium-228, MW-10

ID: 09_03_120

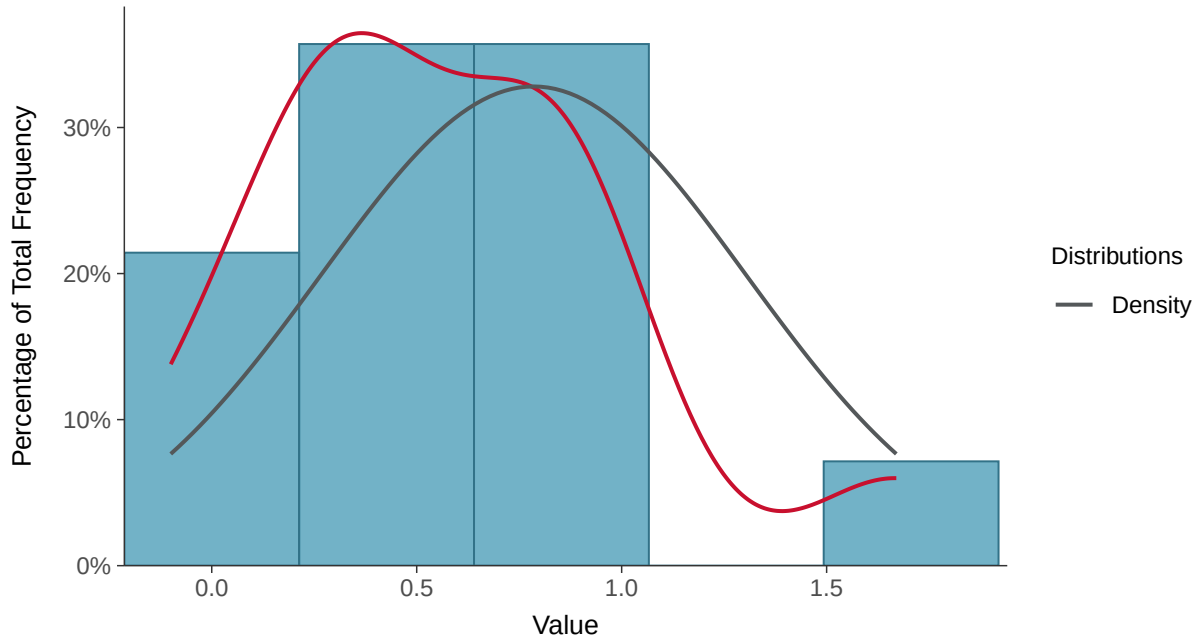
Scatter Plot

Radium-228, MW-10 (pCi/L)



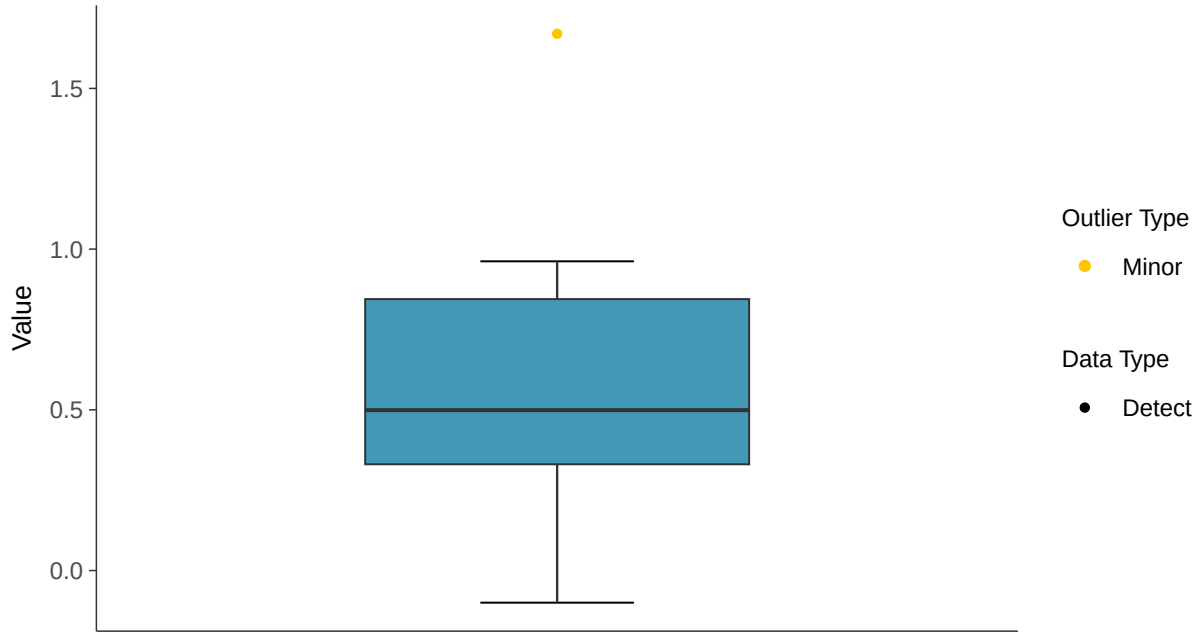
Histogram

Radium-228, MW-10 (pCi/L)



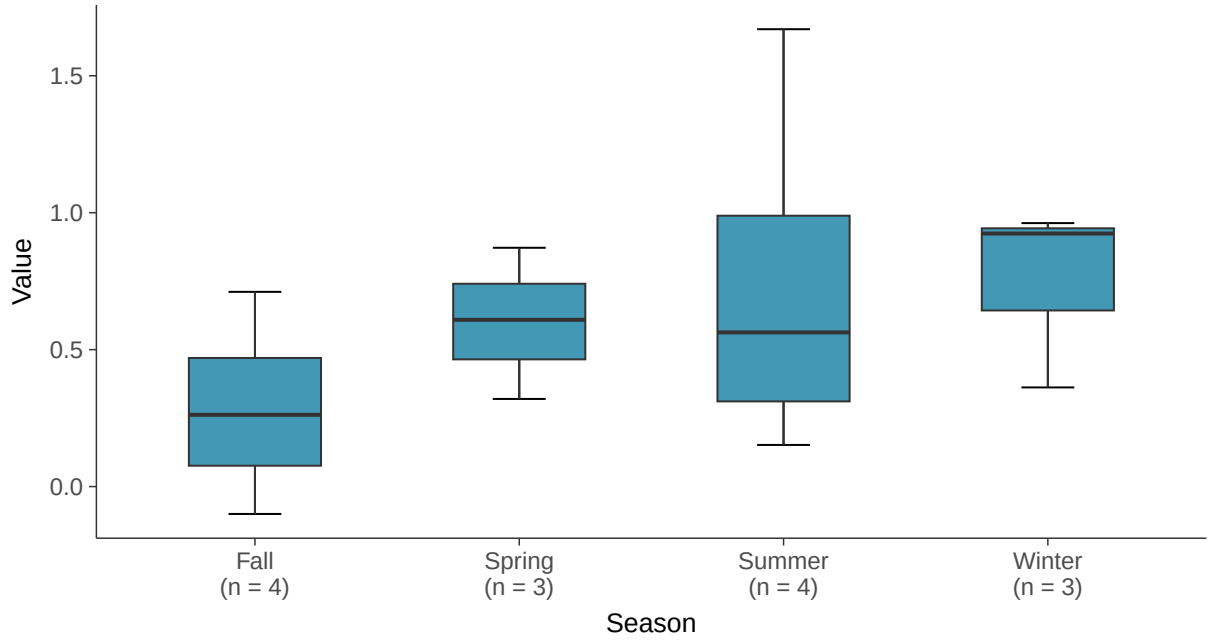
Boxplot

Radium-228, MW-10 (pCi/L)



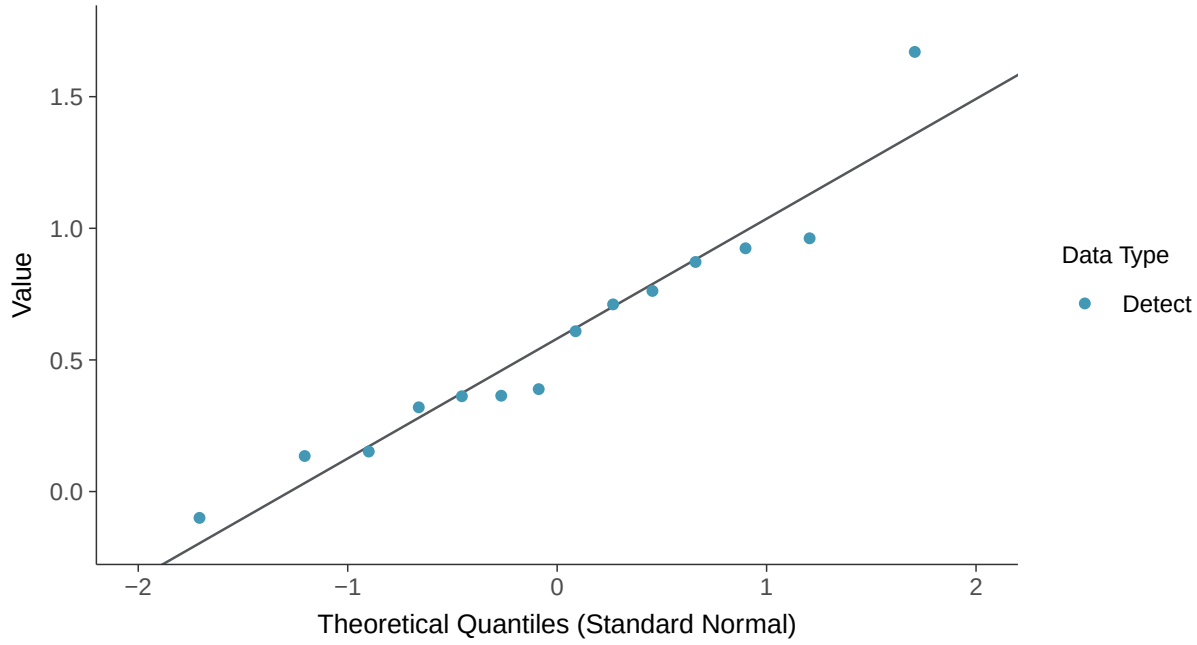
Boxplot by Season

Radium-228, MW-10 (pCi/L)



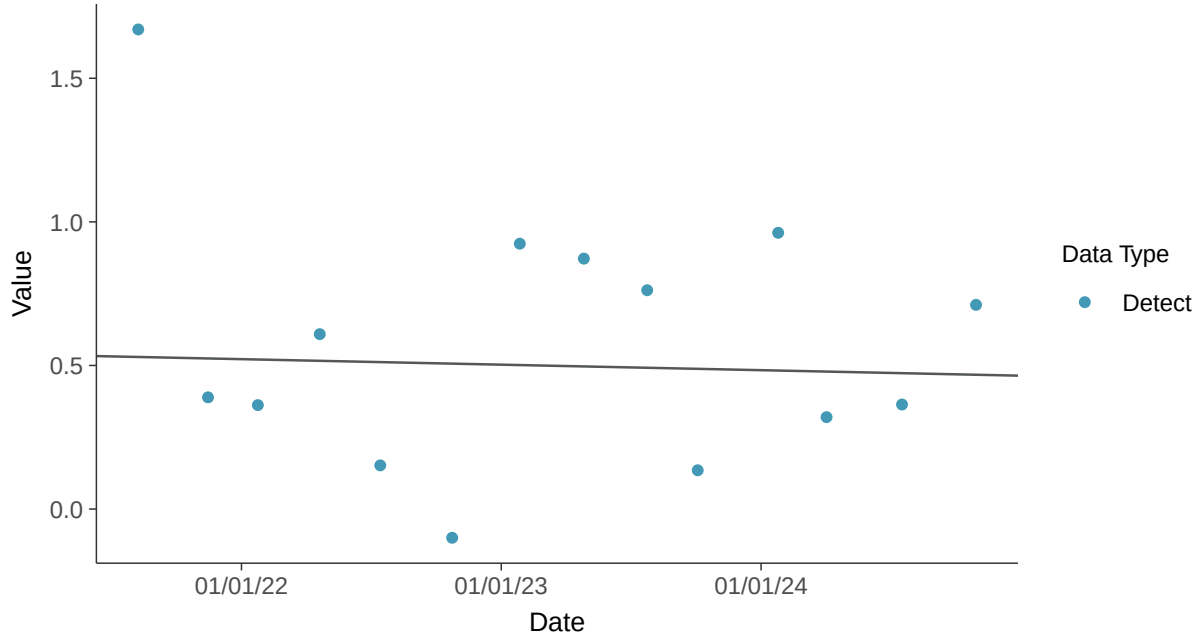
Normal Q-Q plot

Radium-228, MW-10 (pCi/L)



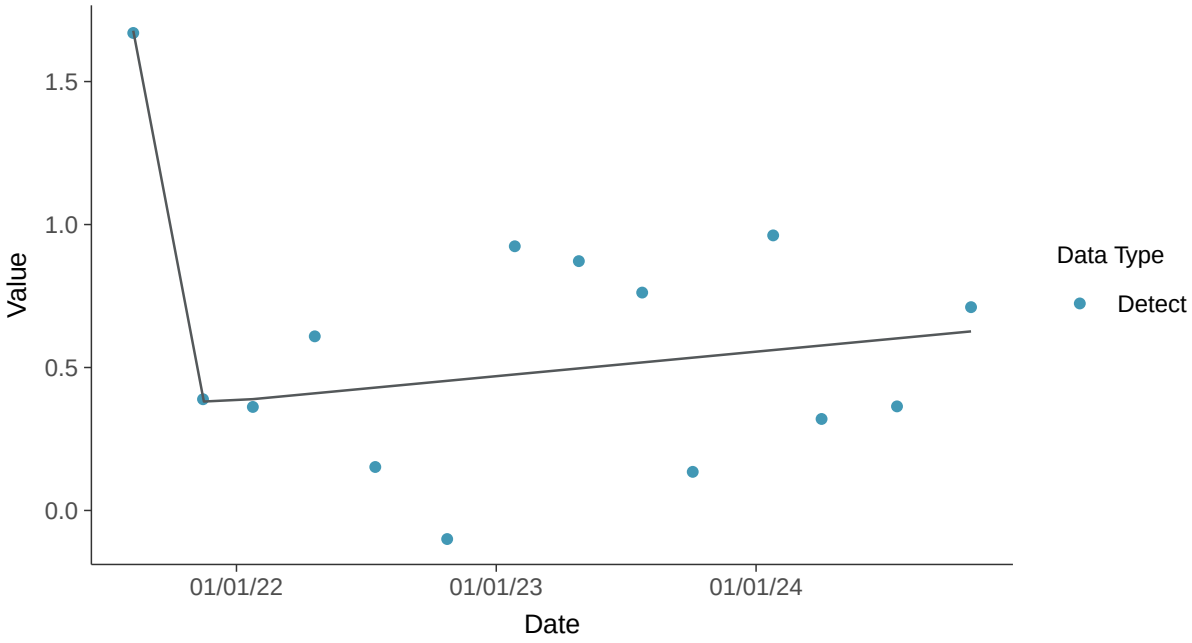
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-10 (pCi/L)



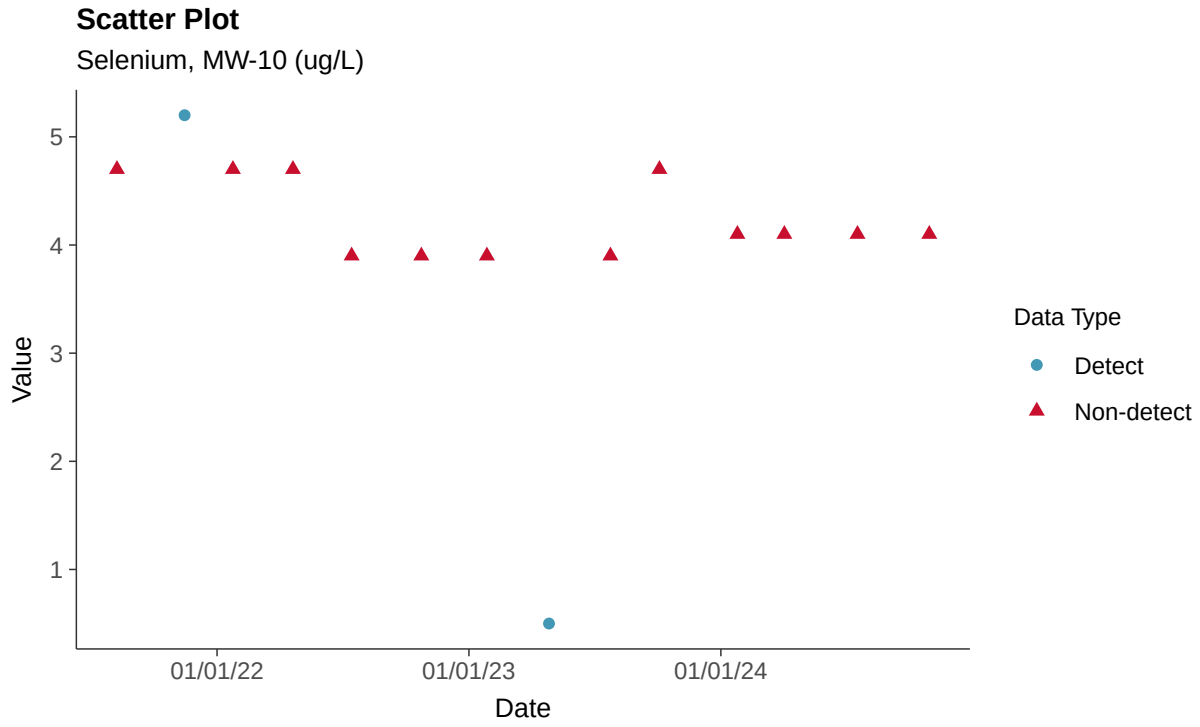
Trend Regression: Piecewise Linear-Linear

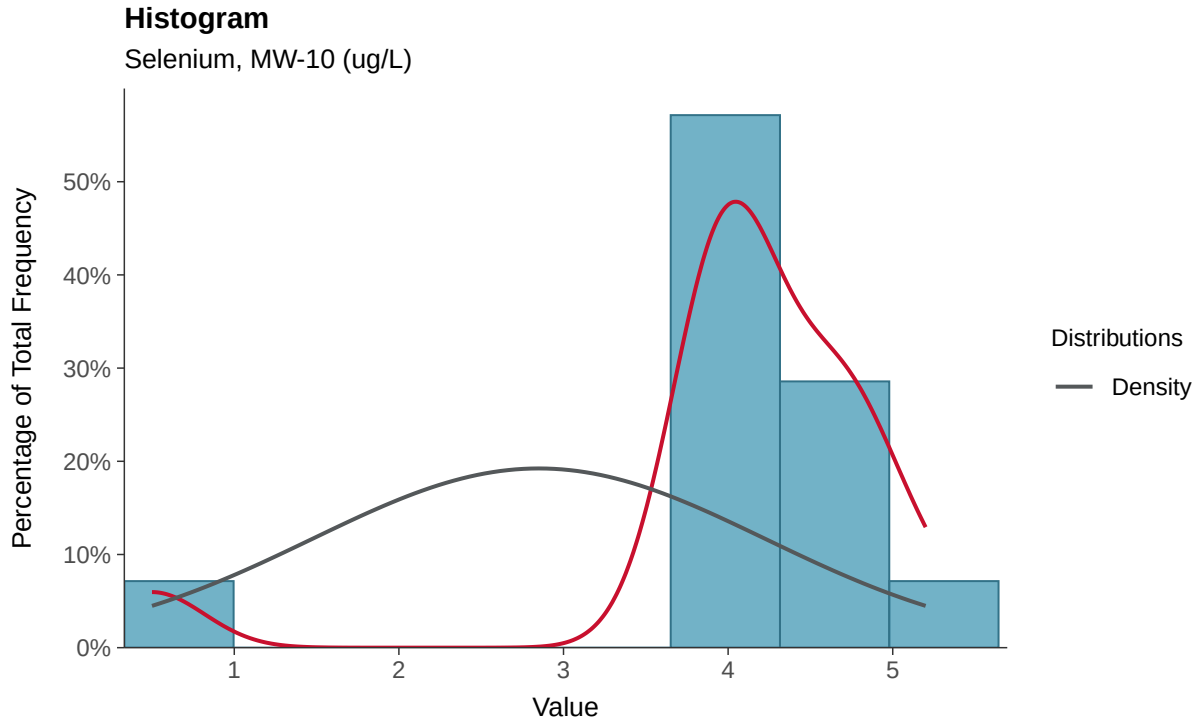
Radium-228, MW-10 (pCi/L)



App. IV: Selenium, MW-10

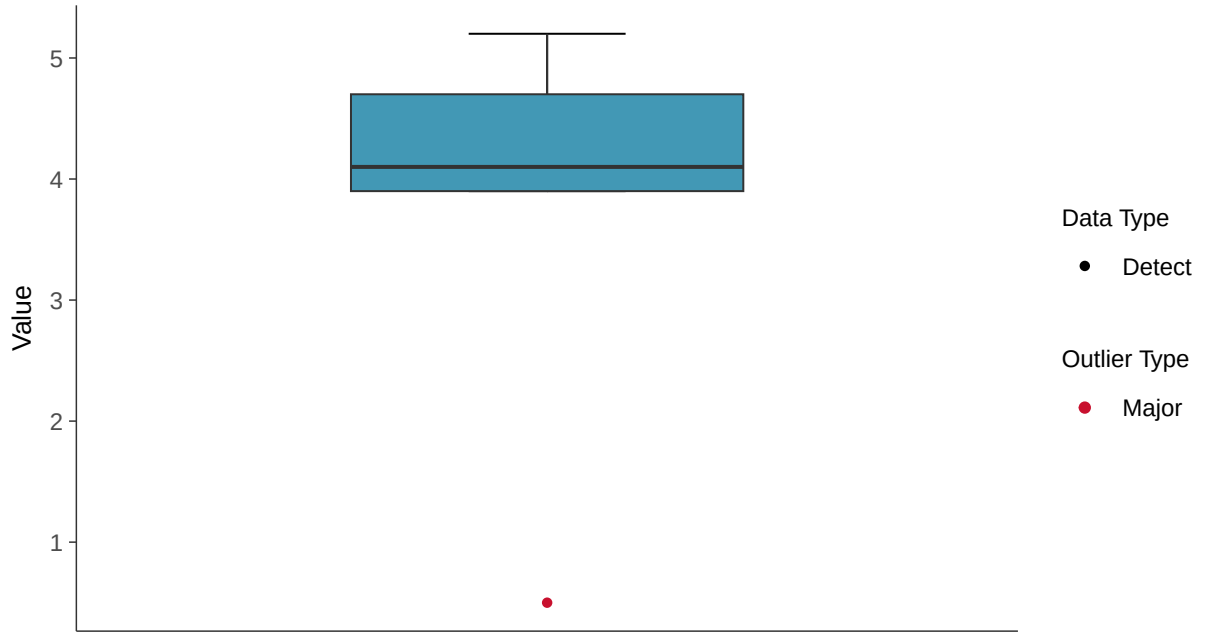
ID: 09_03_121





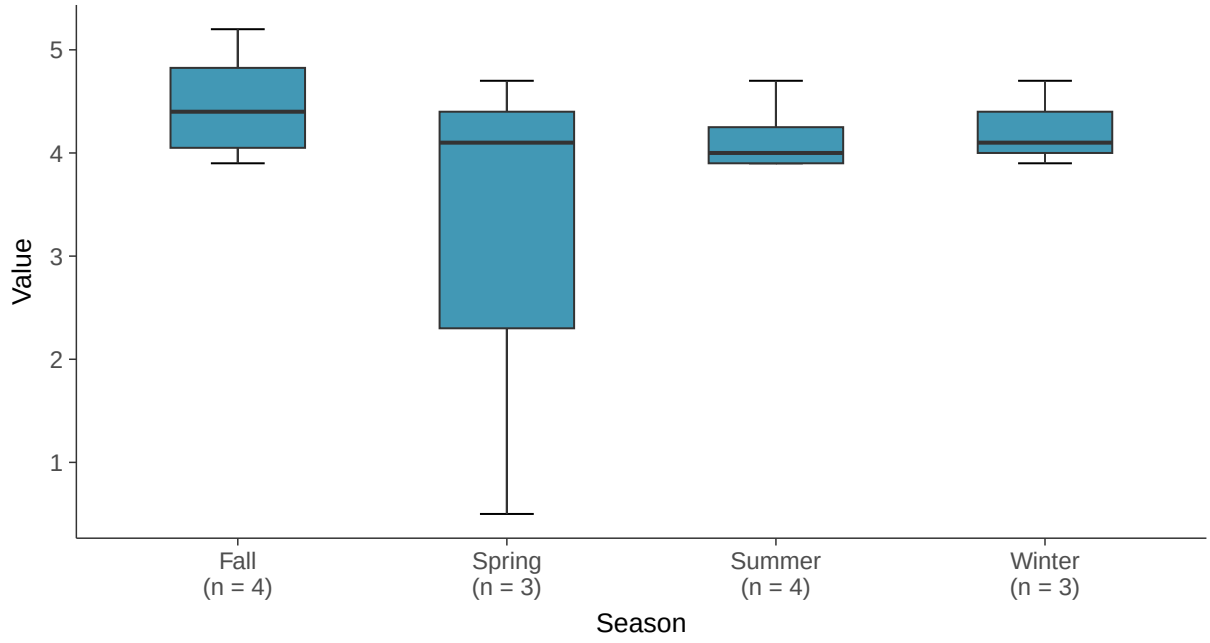
Boxplot

Selenium, MW-10 (ug/L)



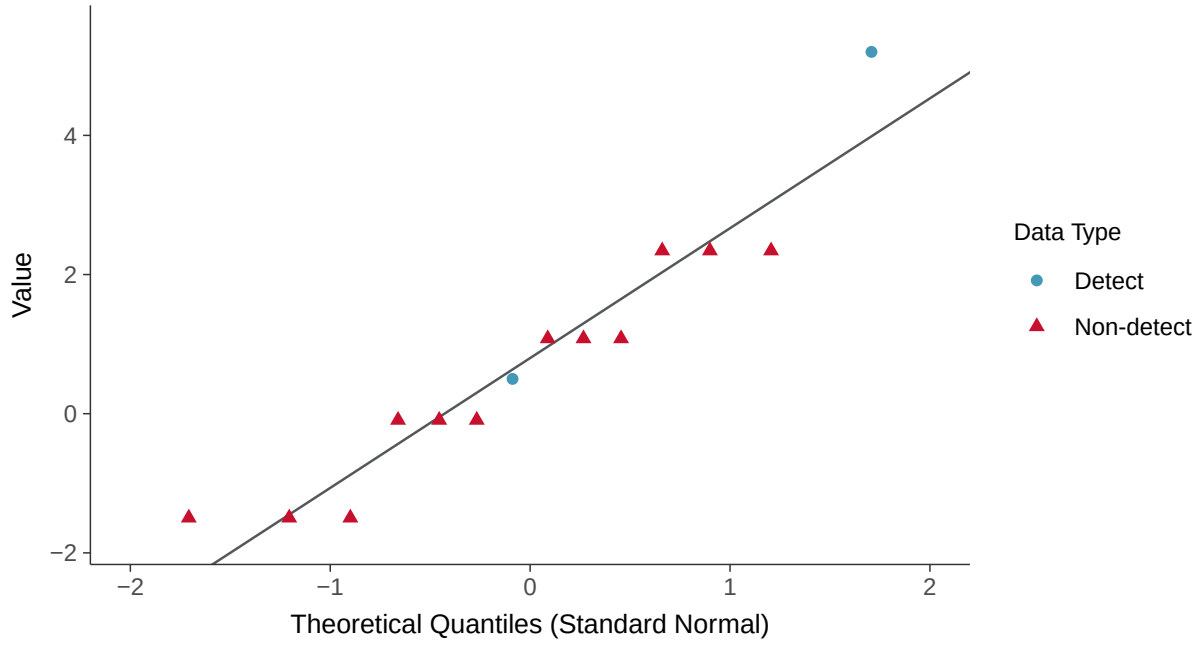
Boxplot by Season

Selenium, MW-10 (ug/L)



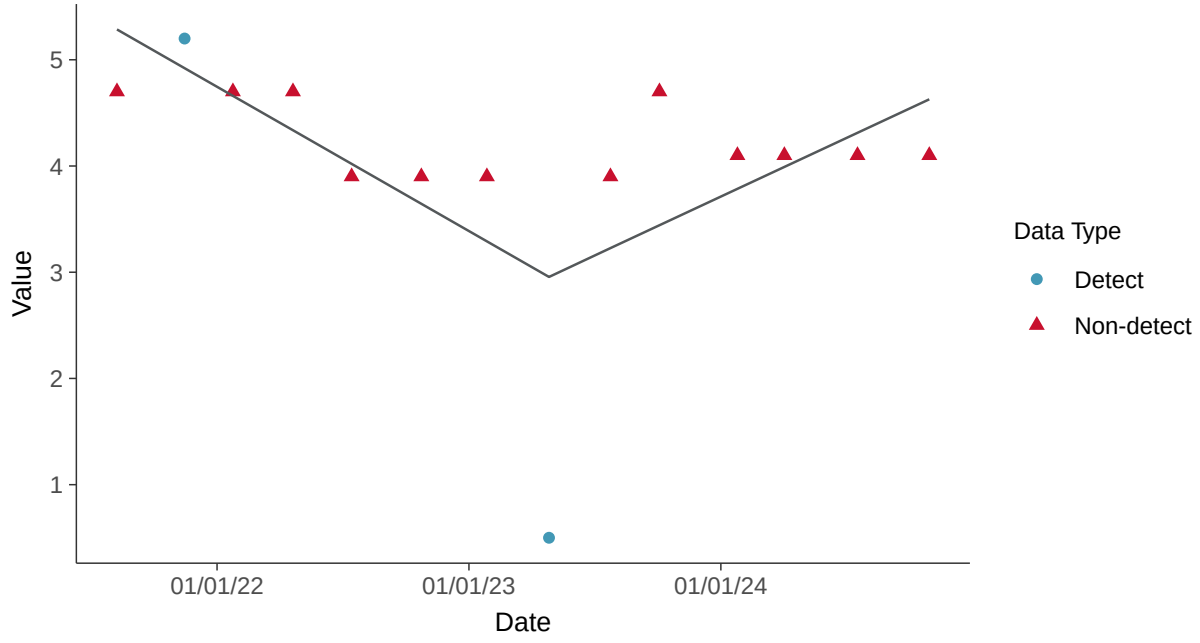
Normal Q-Q plot using ROS Imputed Estimates

Selenium, MW-10 (ug/L)



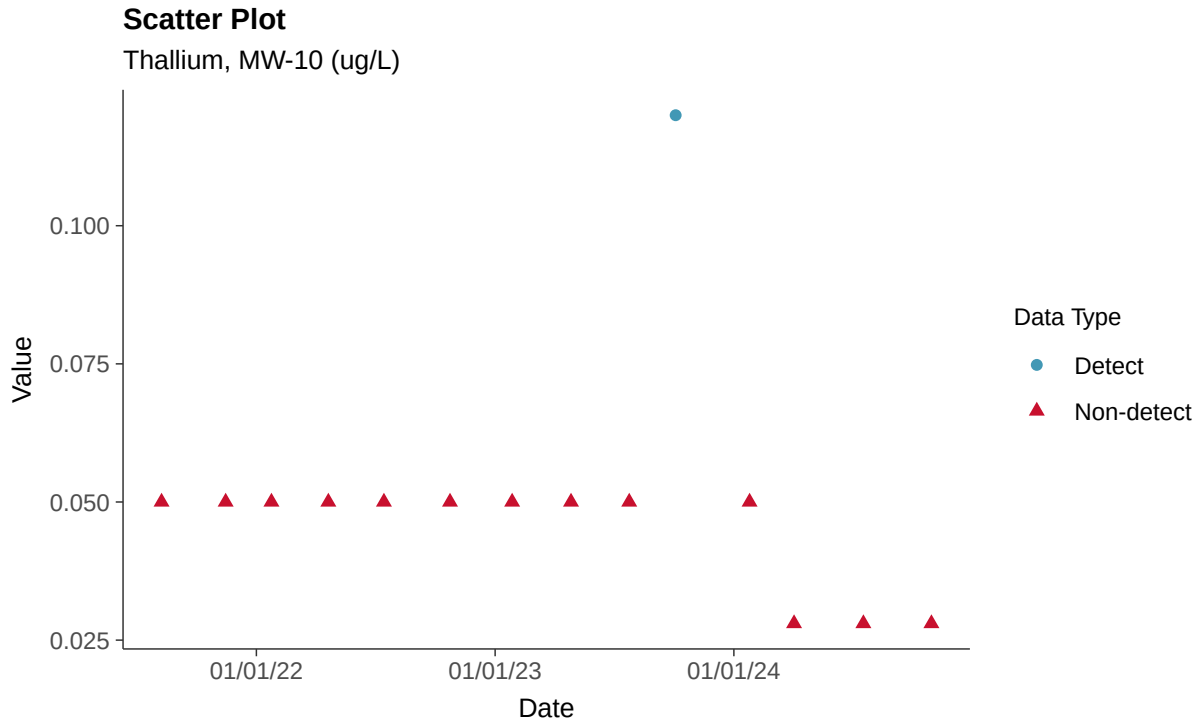
Trend Regression: Piecewise Linear-Linear

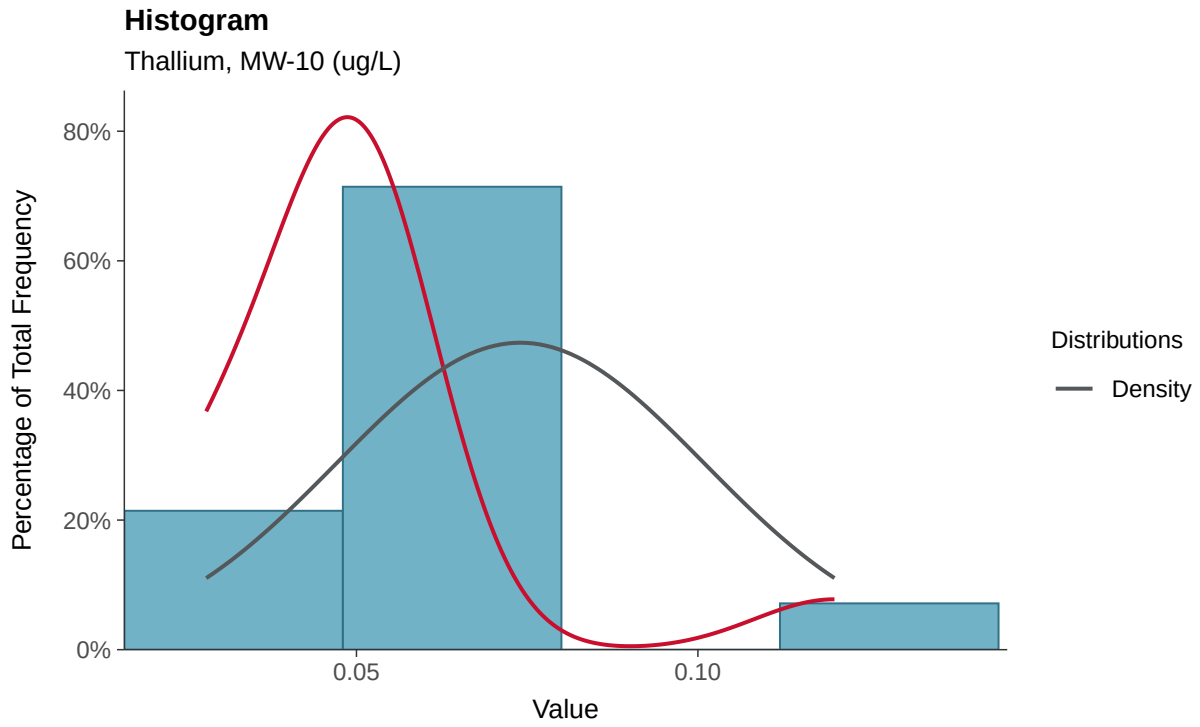
Selenium, MW-10 (ug/L)



App. IV: Thallium, MW-10

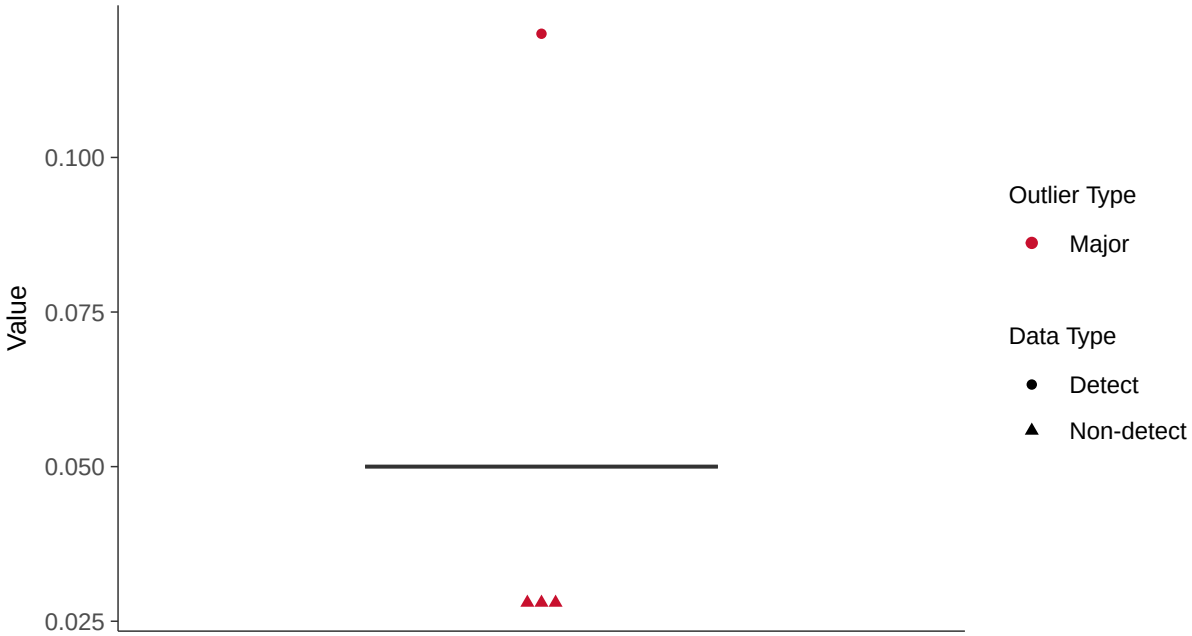
ID: 09_03_124





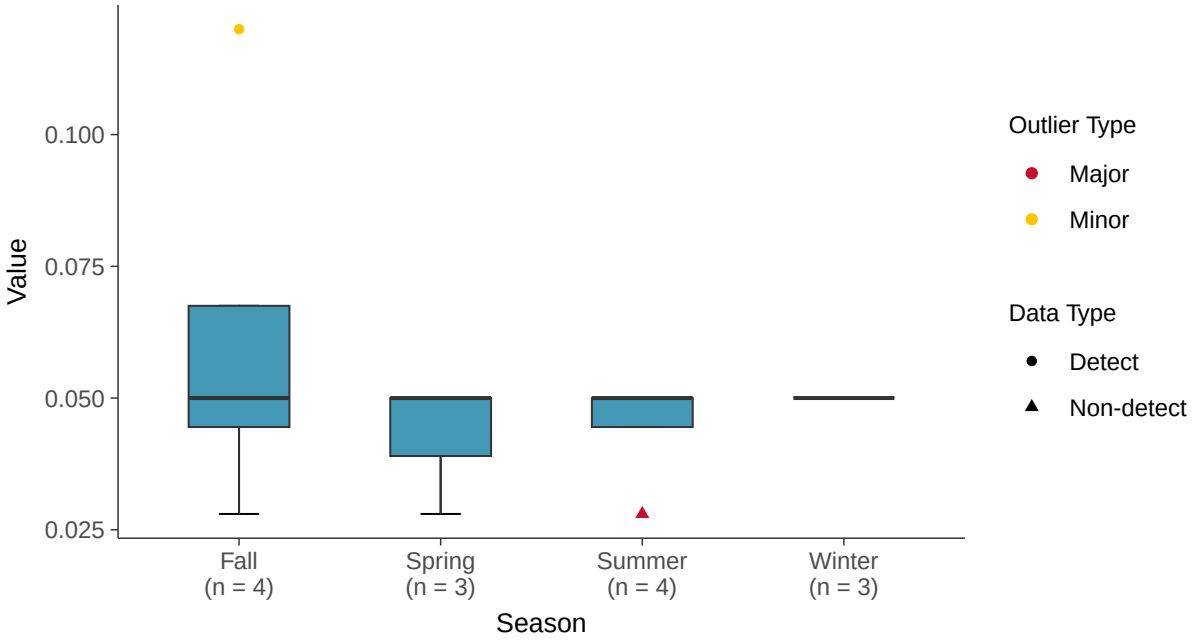
Boxplot

Thallium, MW-10 (ug/L)



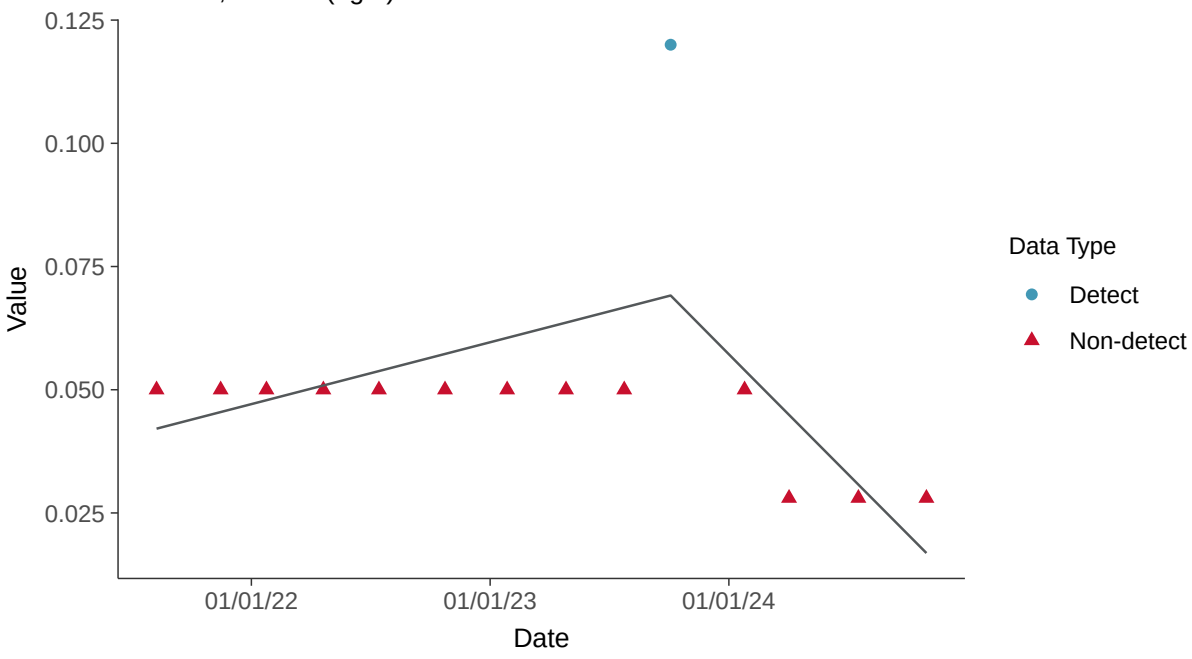
Boxplot by Season

Thallium, MW-10 (ug/L)



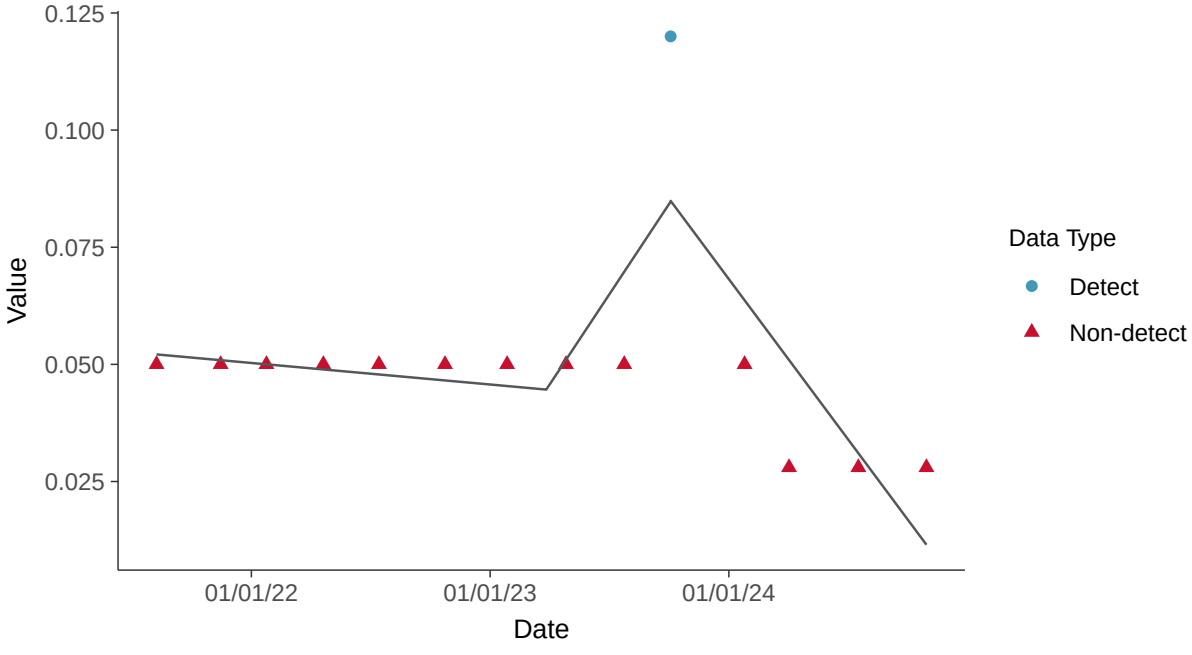
Trend Regression: Piecewise Linear-Linear

Thallium, MW-10 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-10 (ug/L)

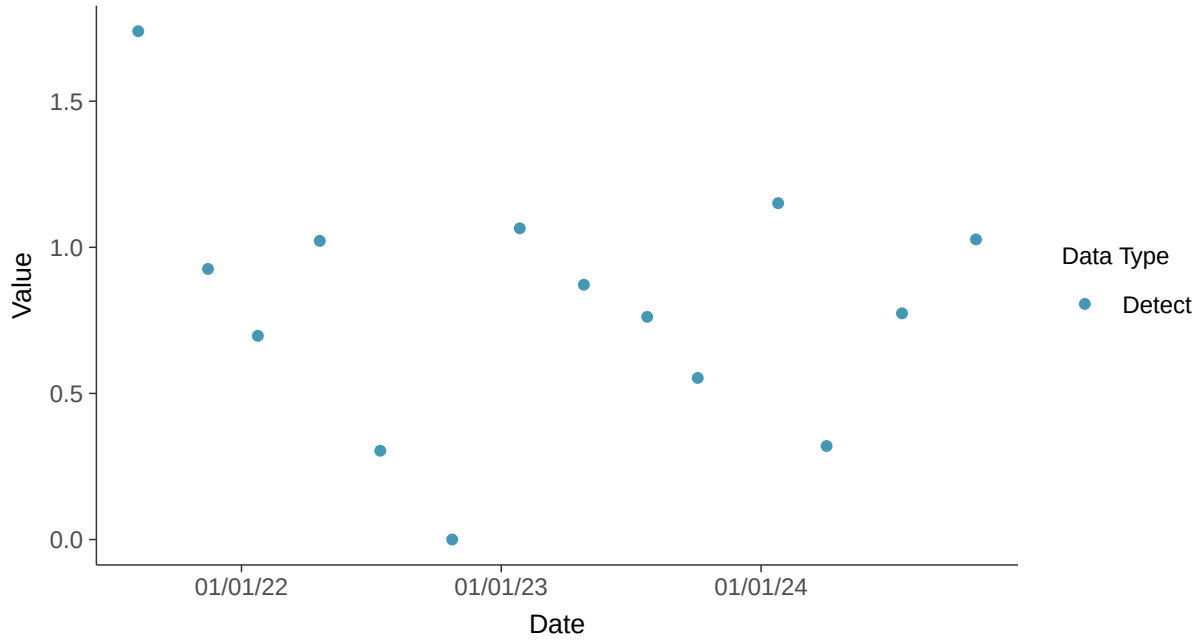


App. IV: Total Radium, MW-10

ID: 09_03_126

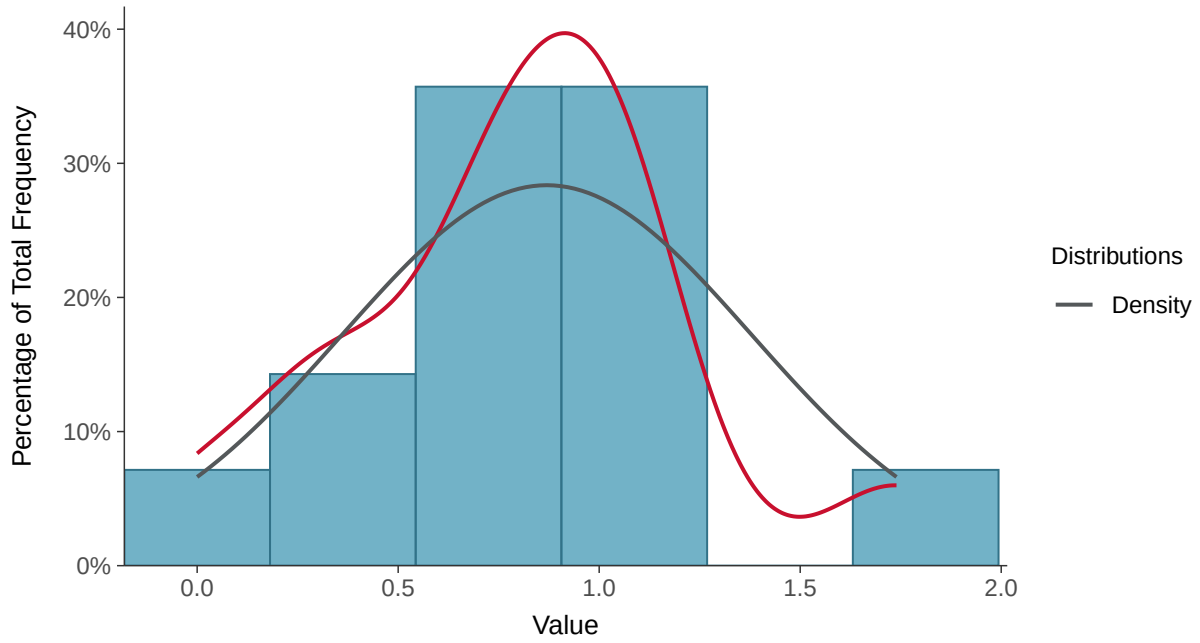
Scatter Plot

Total Radium, MW-10 (pCi/L)



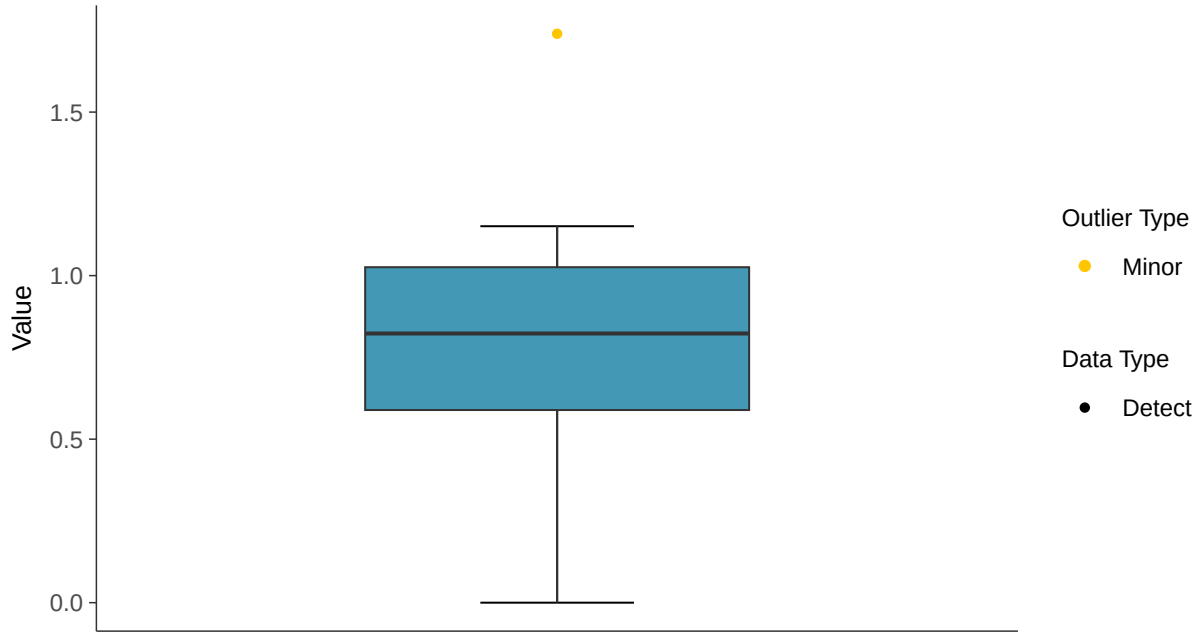
Histogram

Total Radium, MW-10 (pCi/L)



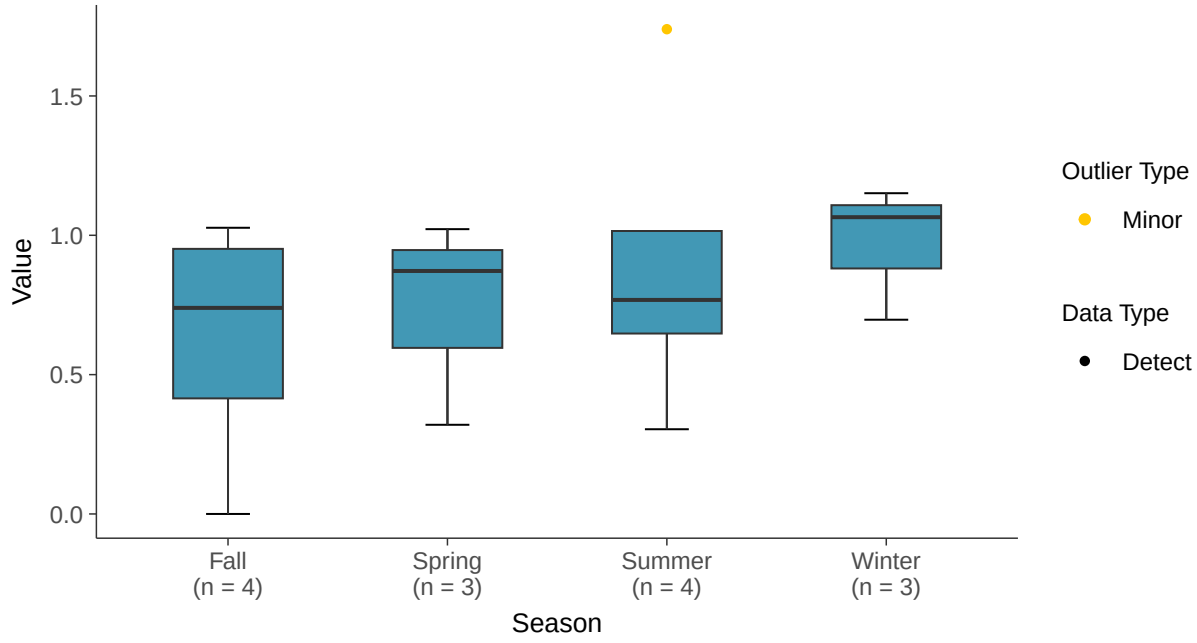
Boxplot

Total Radium, MW-10 (pCi/L)



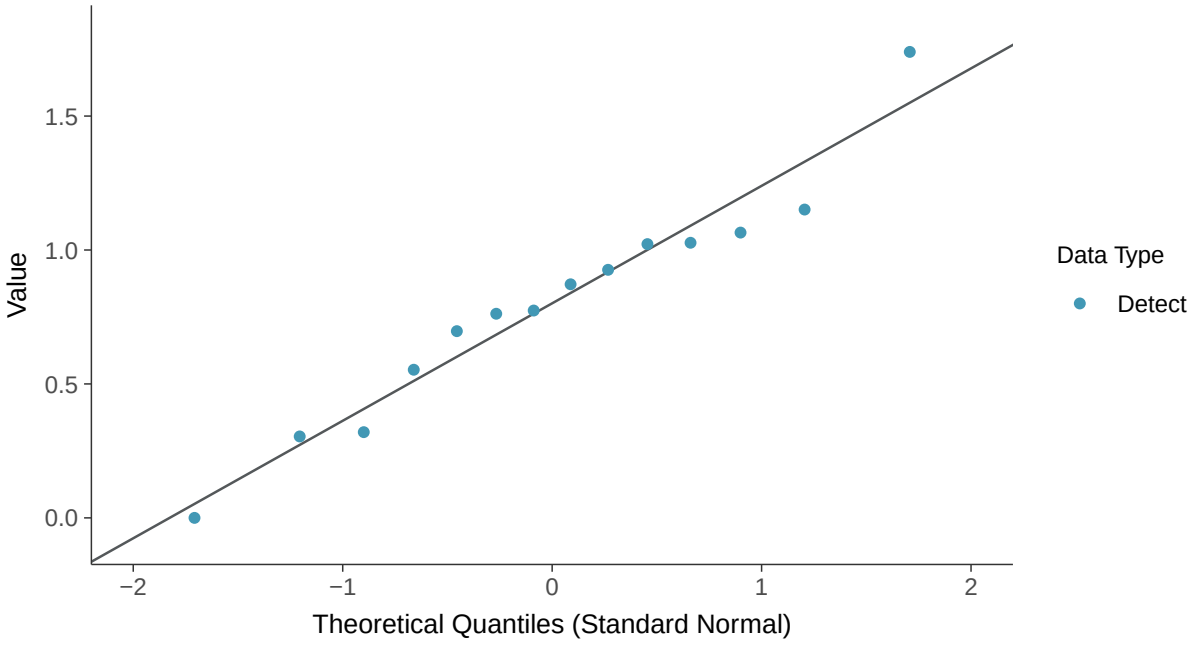
Boxplot by Season

Total Radium, MW-10 (pCi/L)



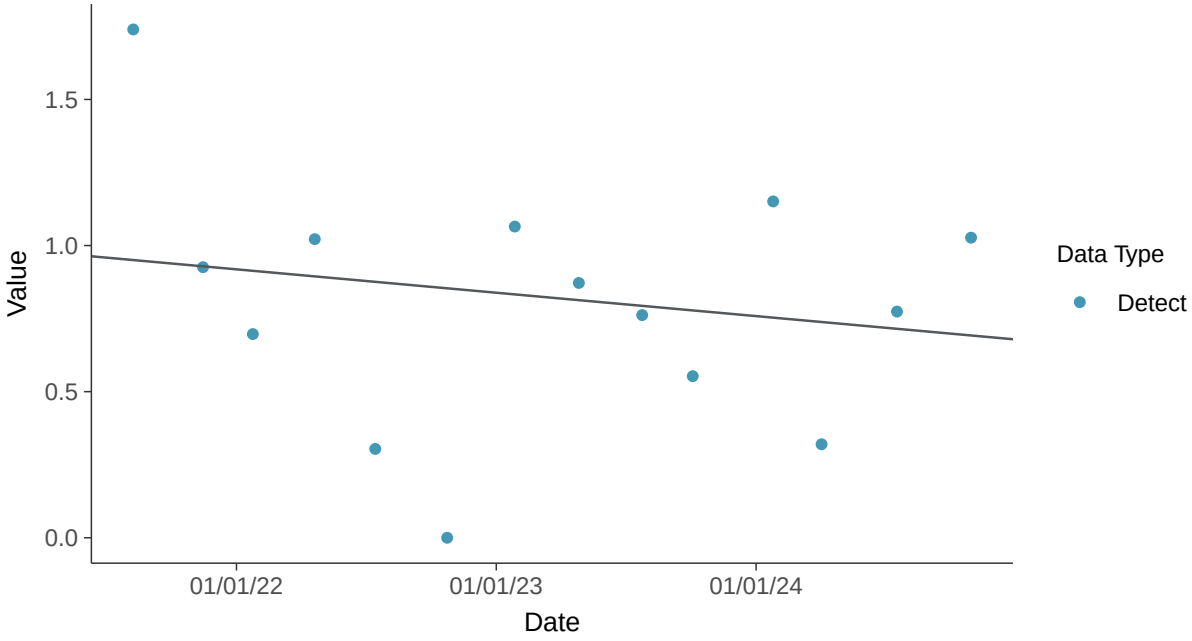
Normal Q-Q plot

Total Radium, MW-10 (pCi/L)



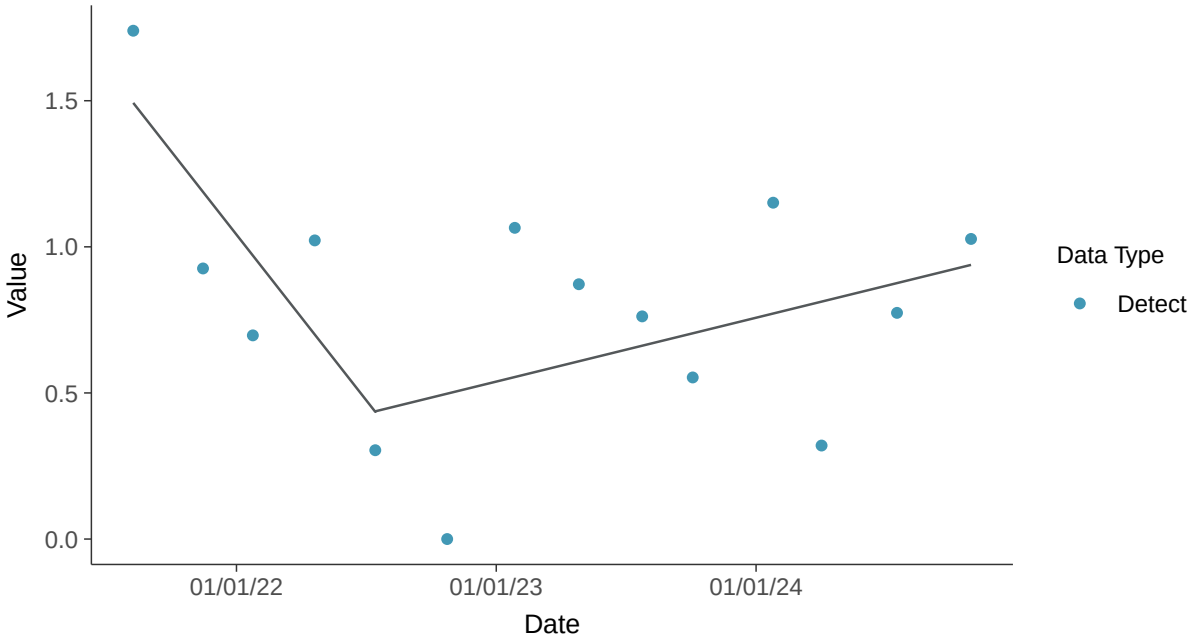
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-10 (pCi/L)



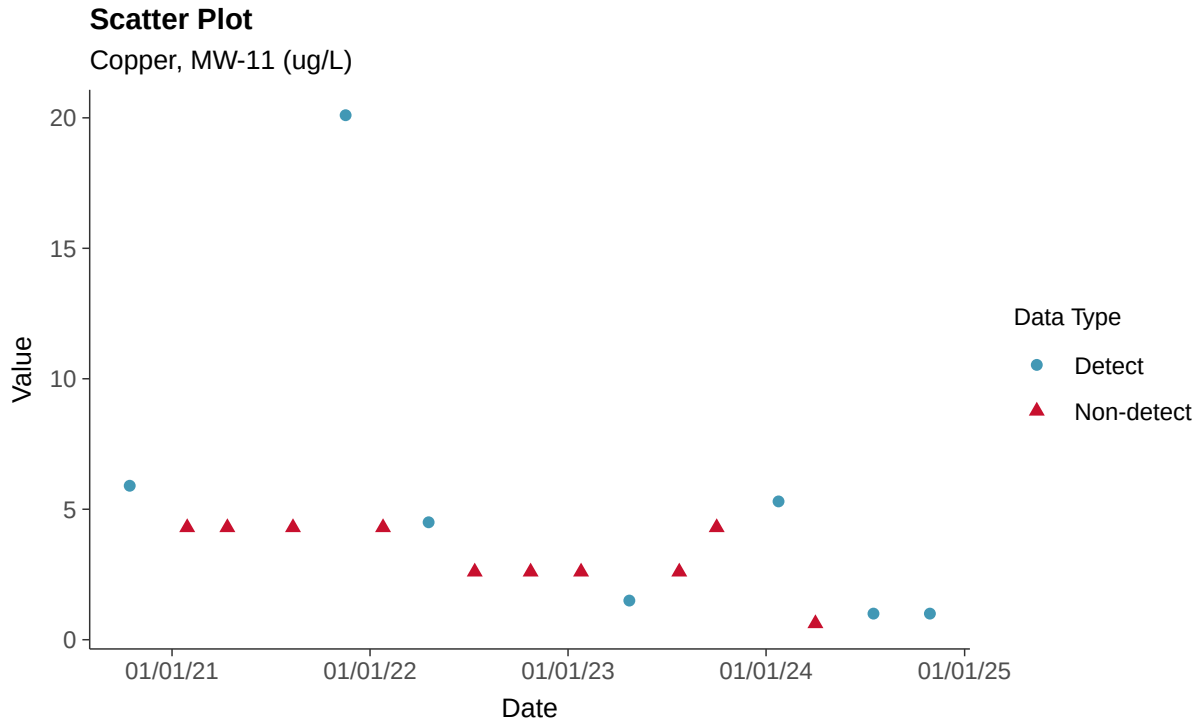
Trend Regression: Piecewise Linear-Linear

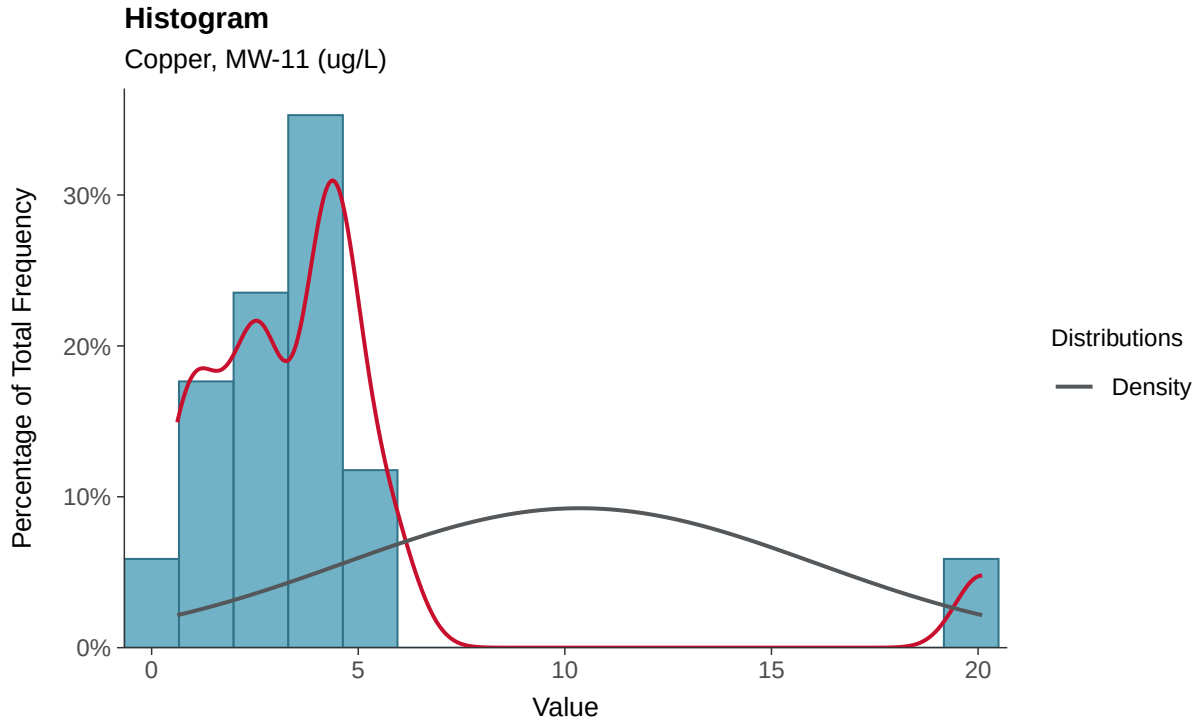
Total Radium, MW-10 (pCi/L)



App. I Metals: Copper, MW-11

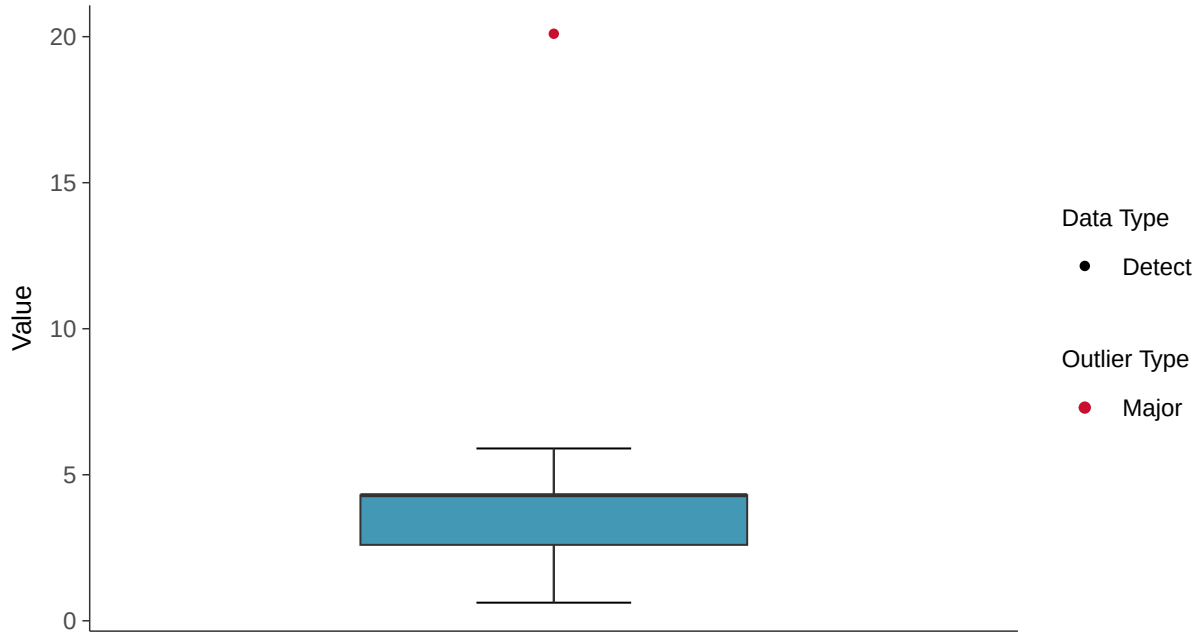
ID: 10_01_111





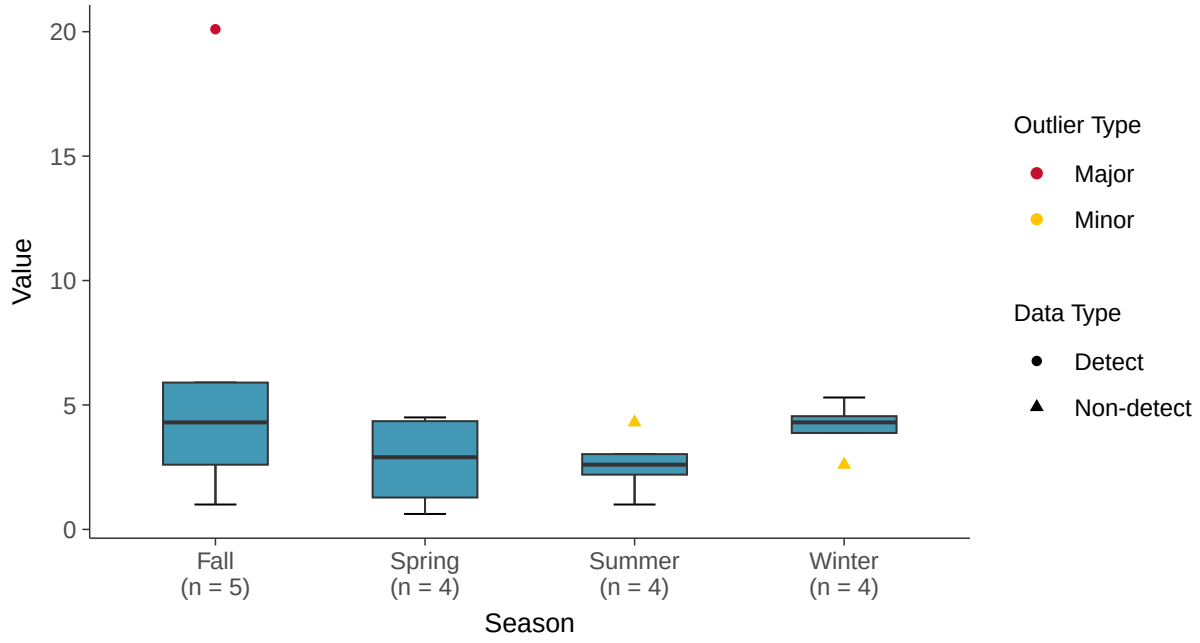
Boxplot

Copper, MW-11 (ug/L)



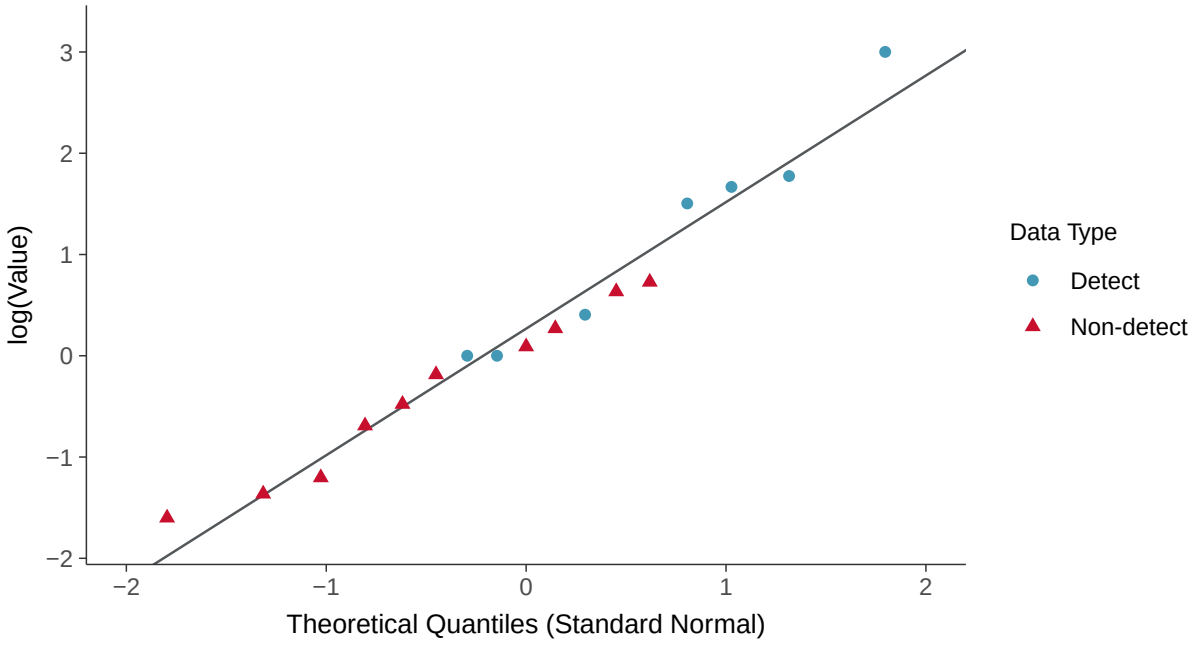
Boxplot by Season

Copper, MW-11 (ug/L)



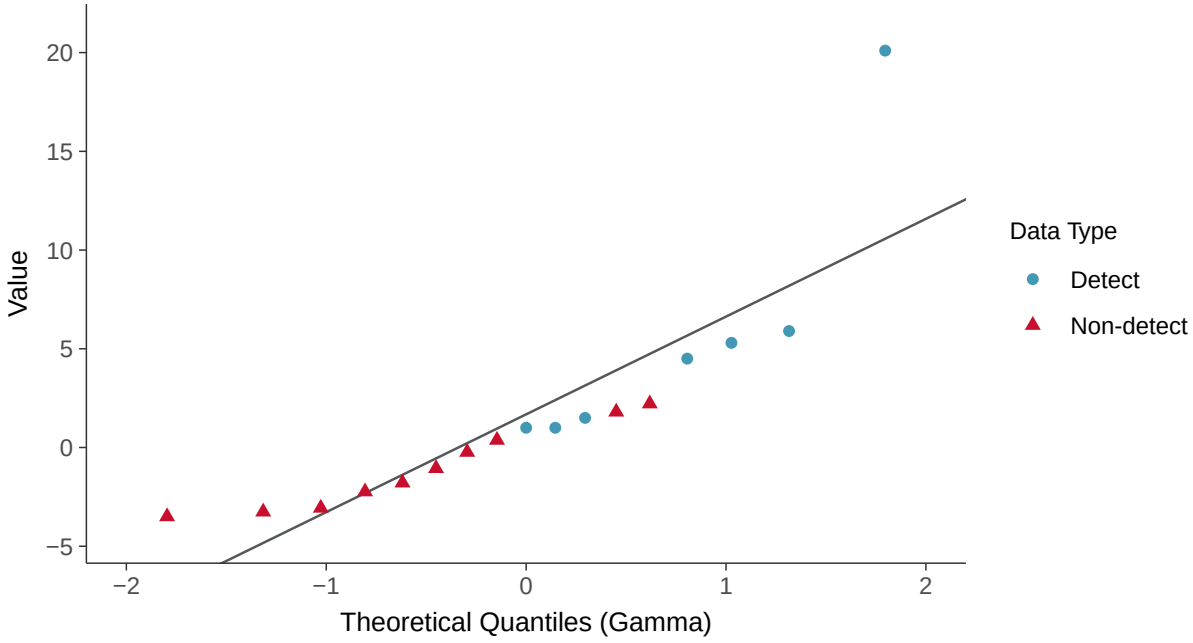
Lognormal Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (ug/L)



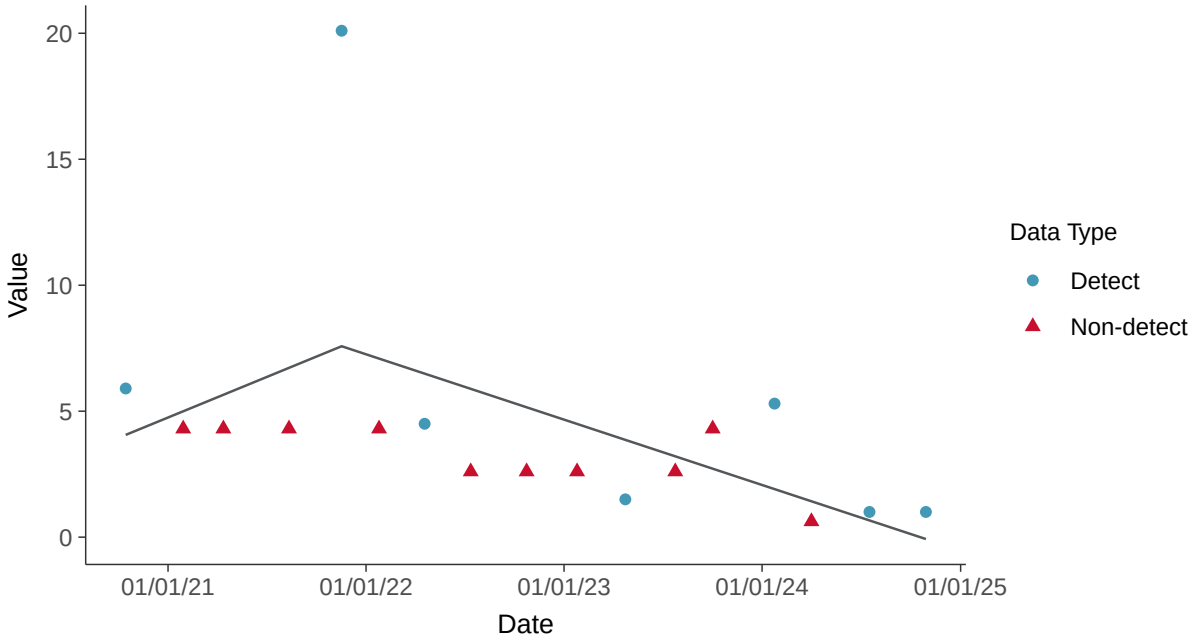
Gamma Q-Q plot using ROS Imputed Estimates

Copper, MW-11 (ug/L)



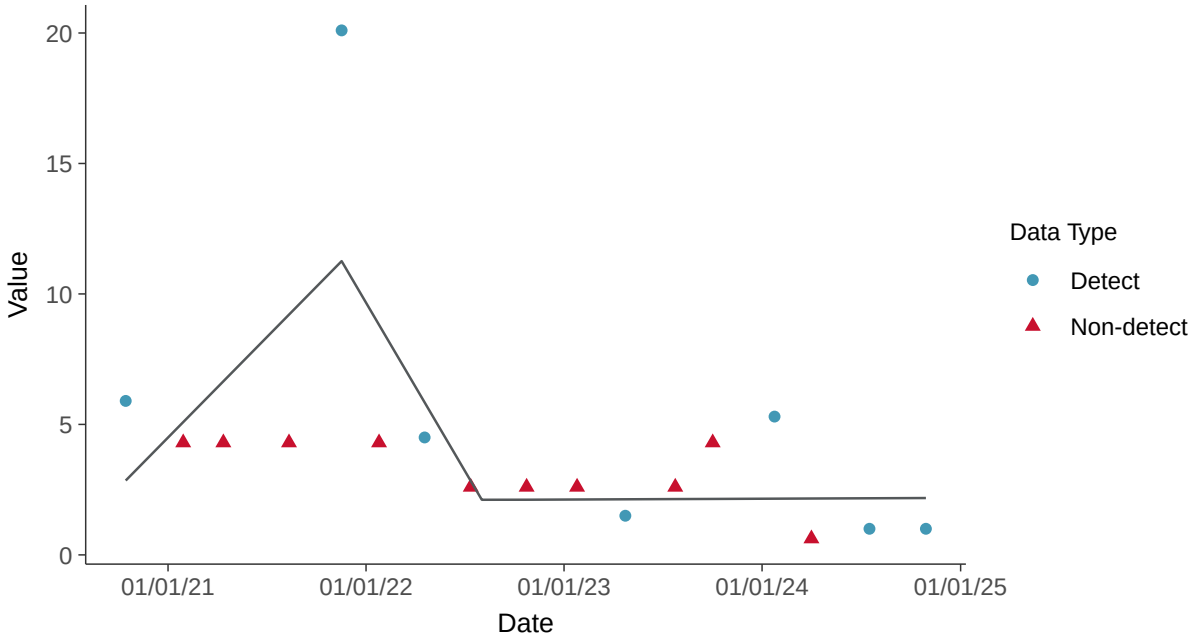
Trend Regression: Piecewise Linear-Linear

Copper, MW-11 (ug/L)



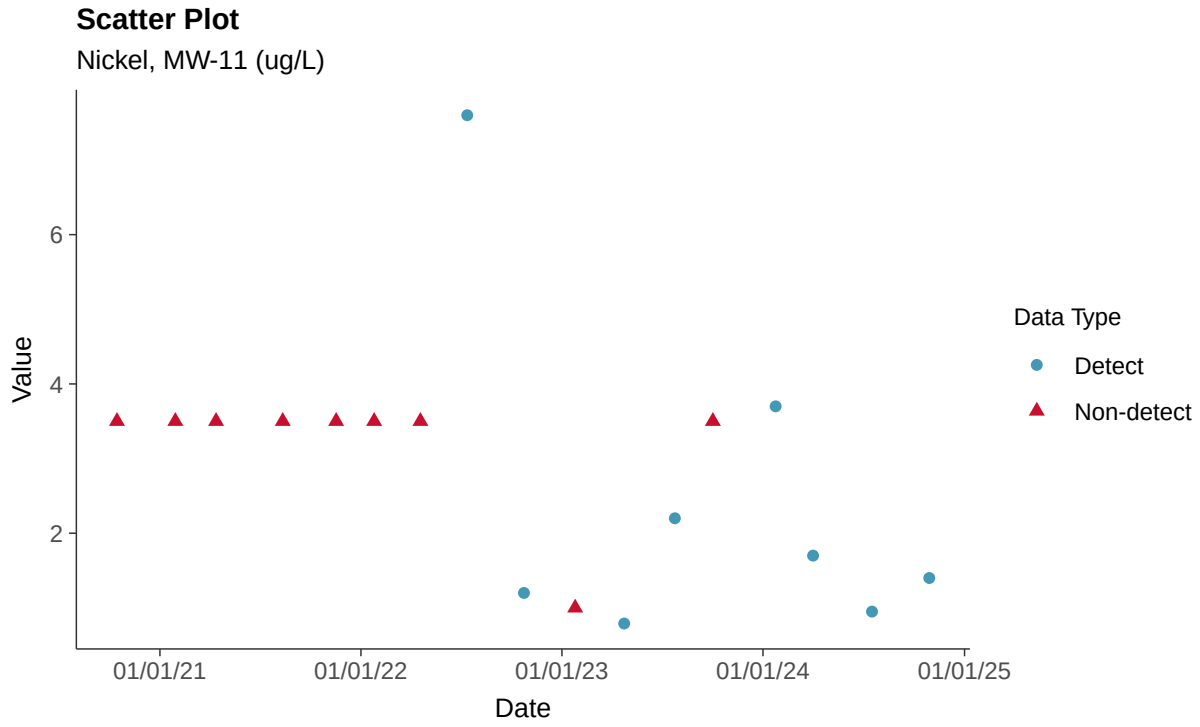
Trend Regression: Piecewise Linear-Linear-Linear

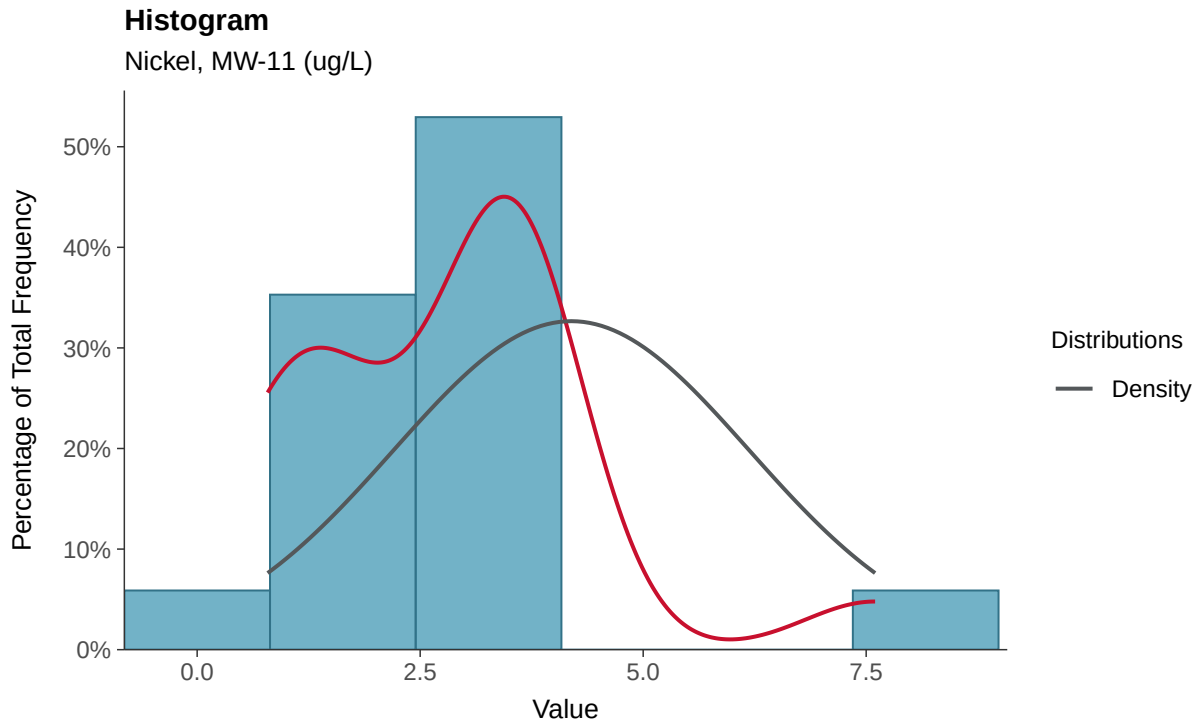
Copper, MW-11 (ug/L)



App. I Metals: Nickel, MW-11

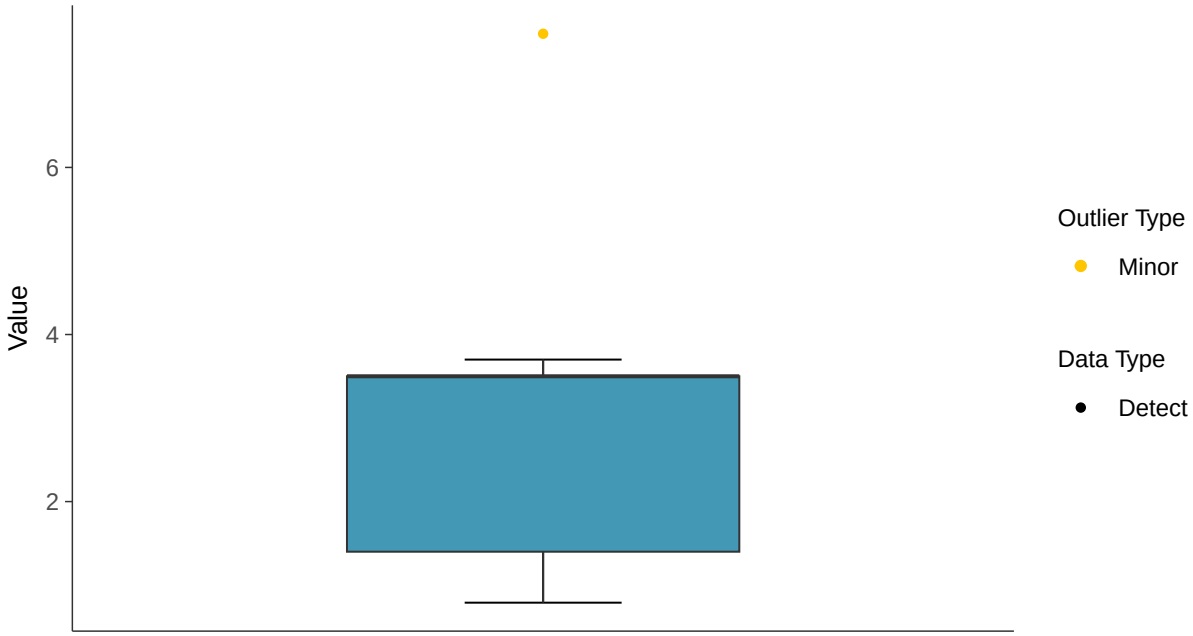
ID: 10_01_117





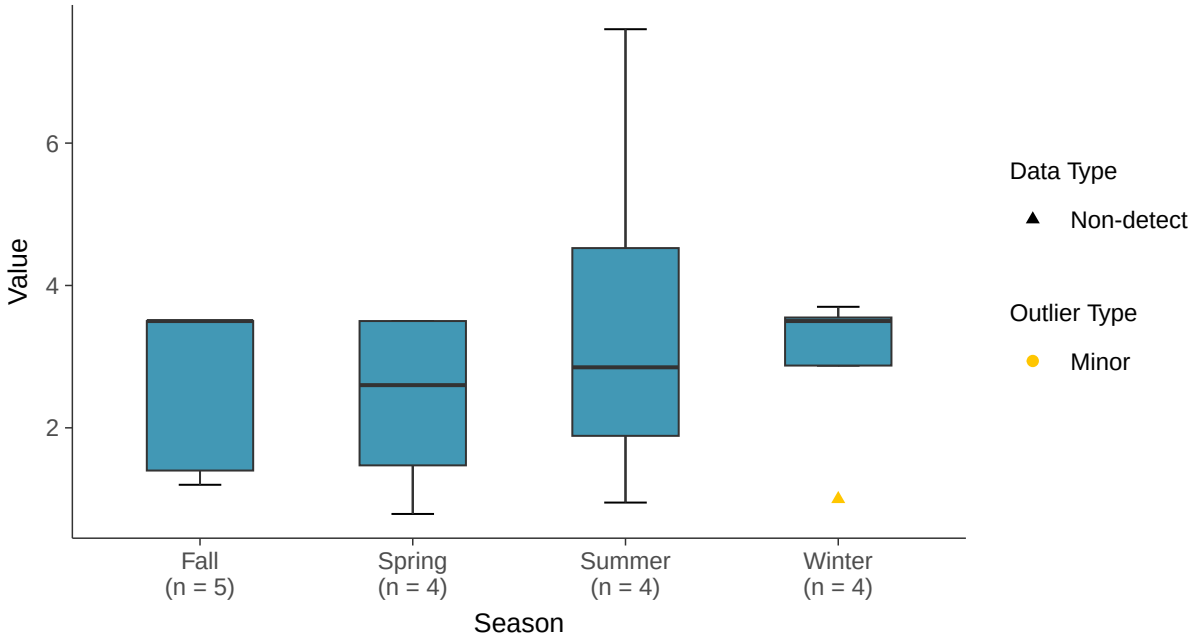
Boxplot

Nickel, MW-11 (ug/L)



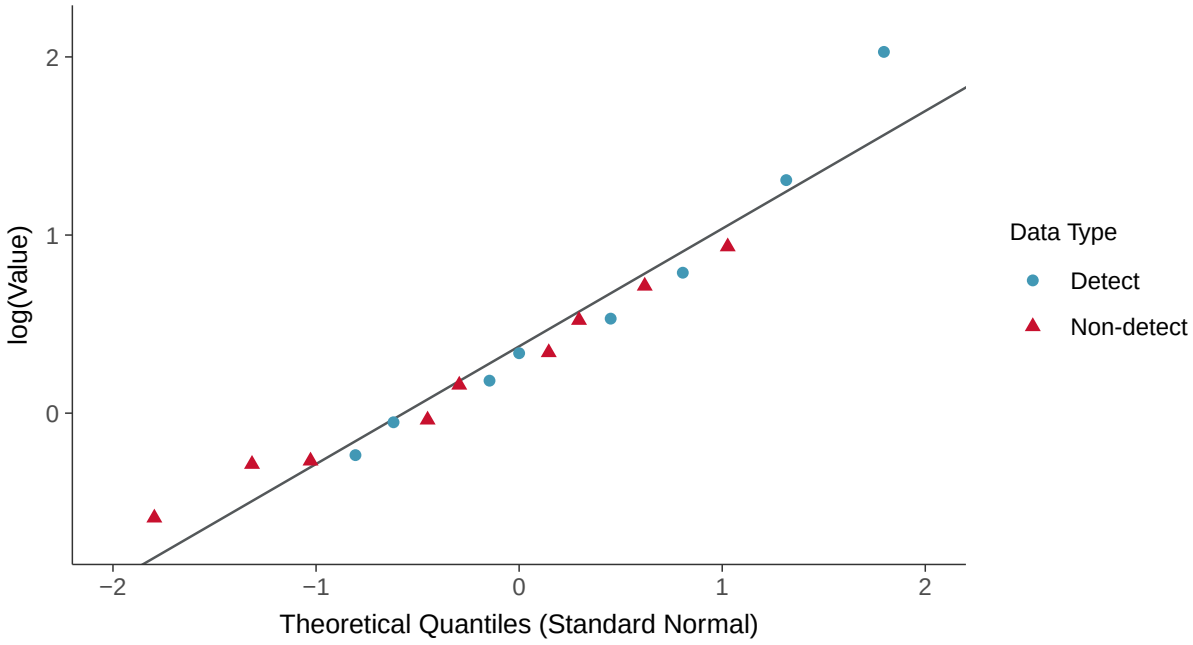
Boxplot by Season

Nickel, MW-11 (ug/L)



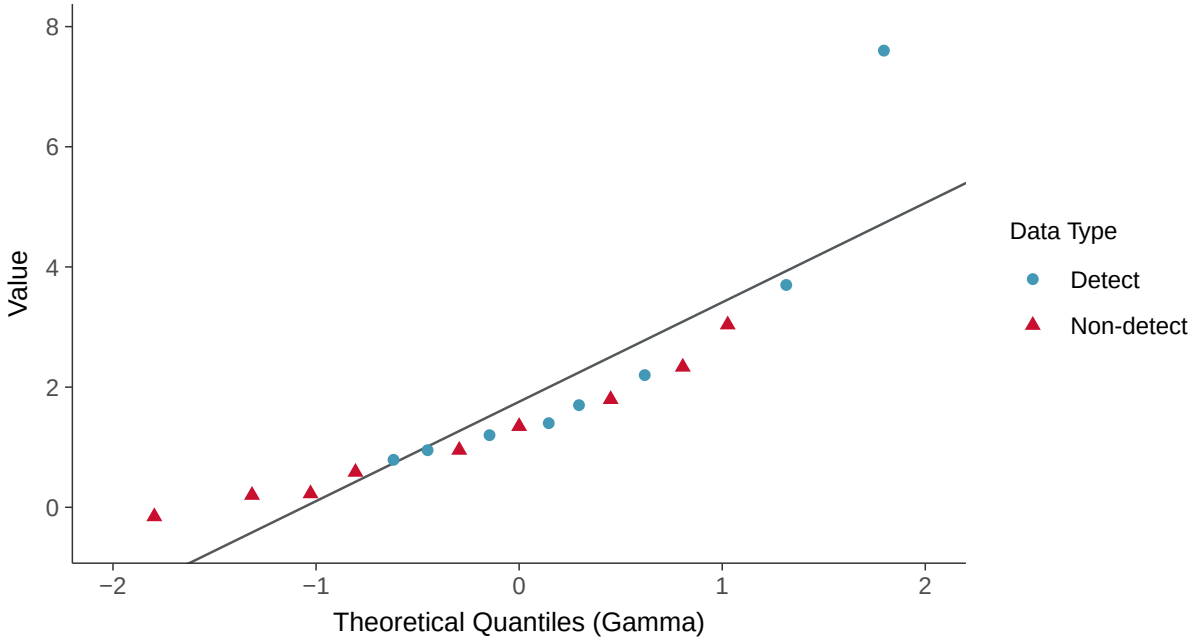
Lognormal Q-Q plot using ROS Imputed Estimates

Nickel, MW-11 (ug/L)



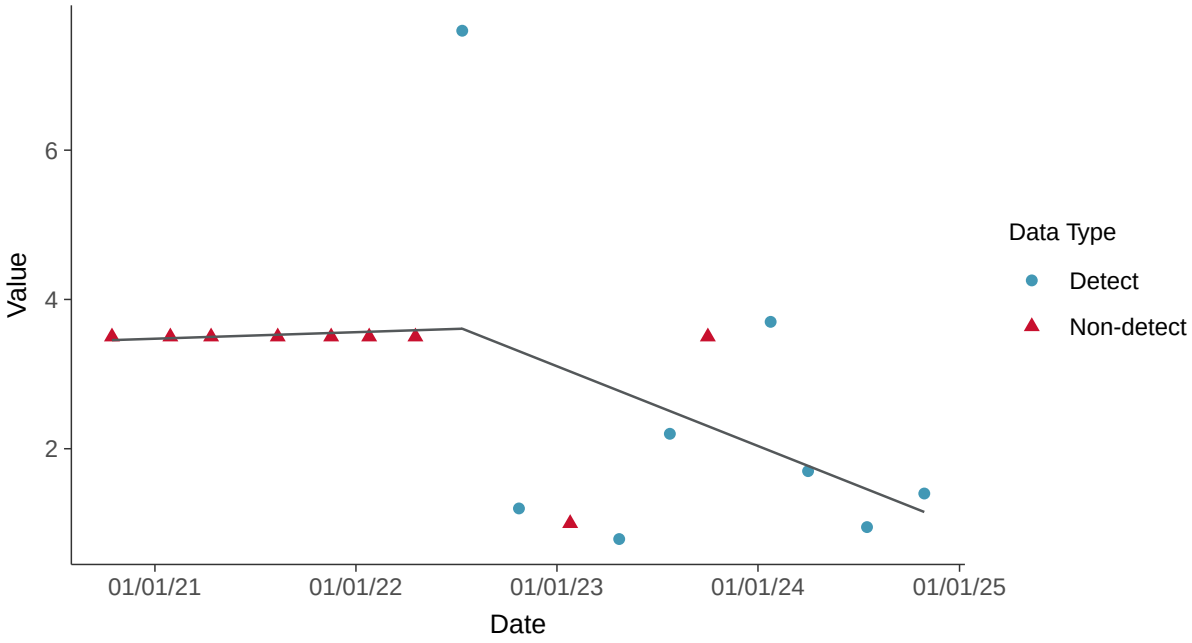
Gamma Q-Q plot using ROS Imputed Estimates

Nickel, MW-11 (ug/L)



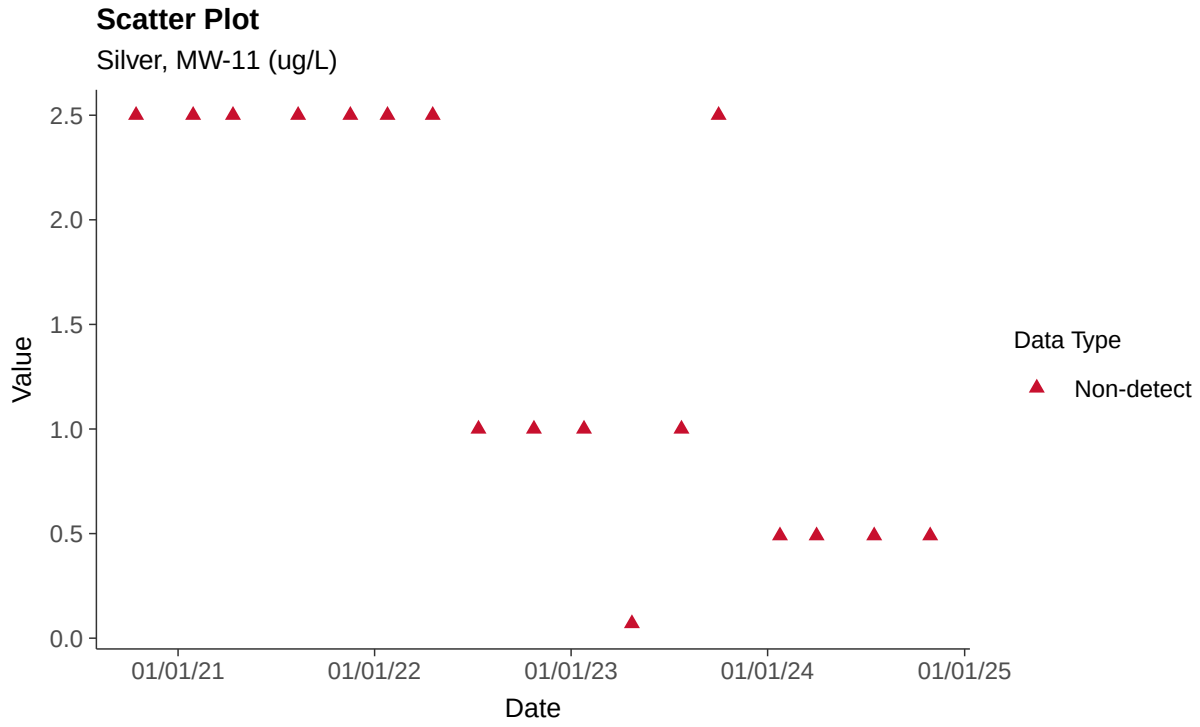
Trend Regression: Piecewise Linear-Linear

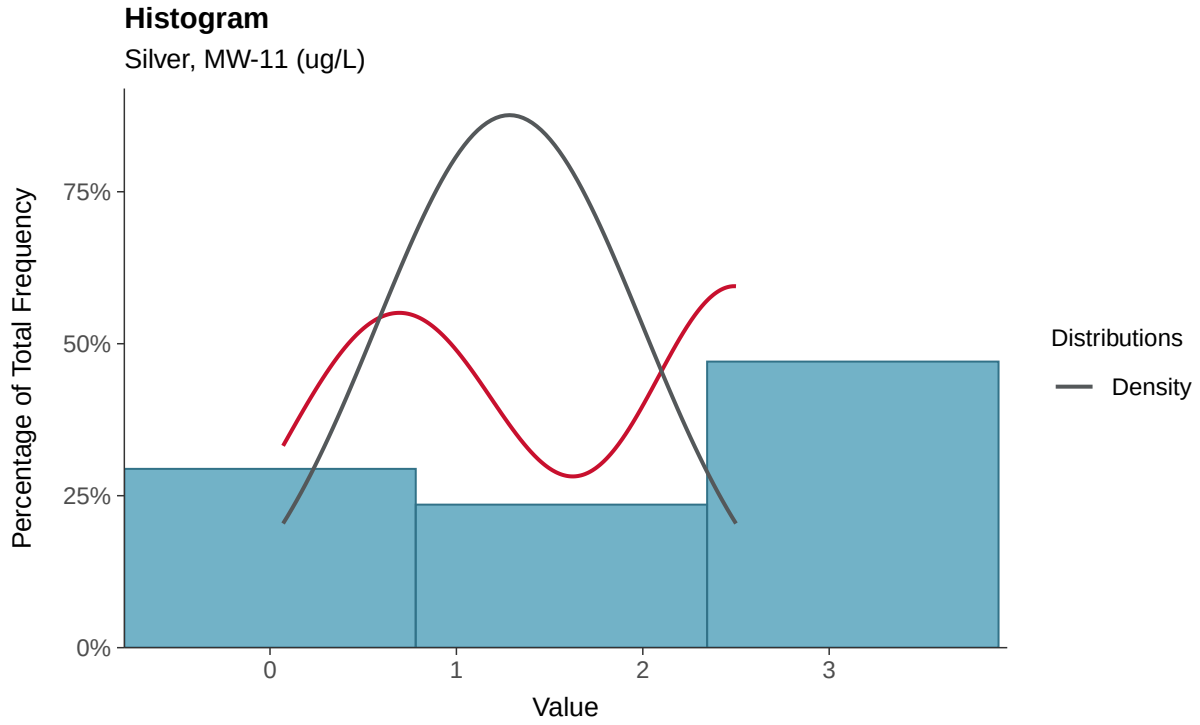
Nickel, MW-11 (ug/L)



App. I Metals: Silver, MW-11

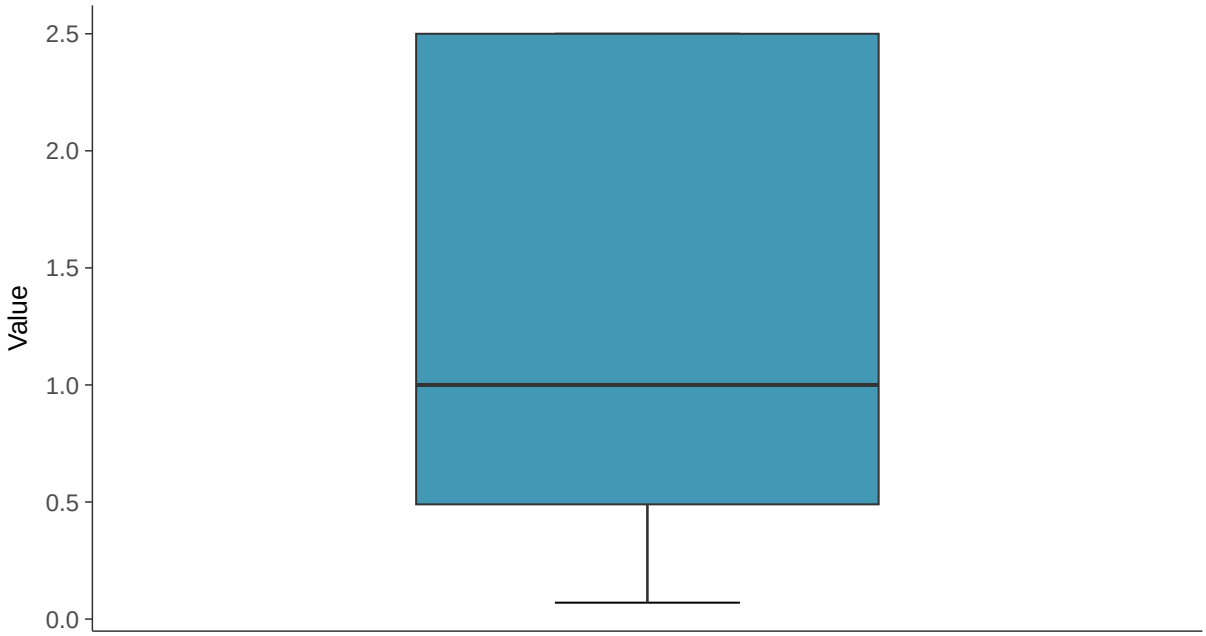
ID: 10_01_122





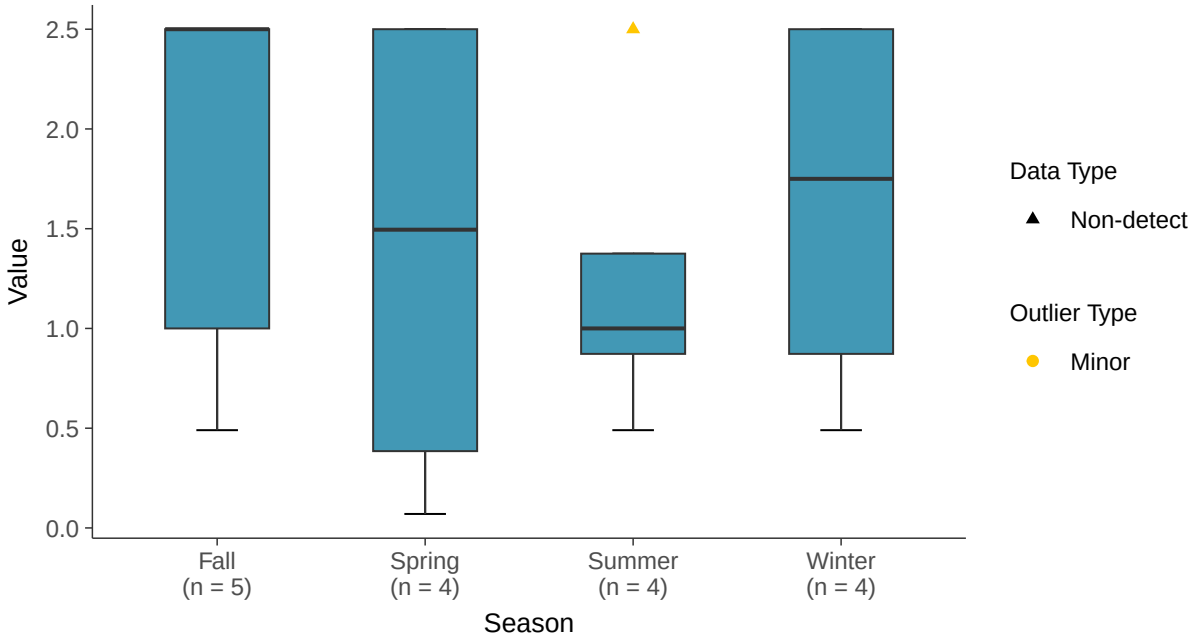
Boxplot

Silver, MW-11 (ug/L)



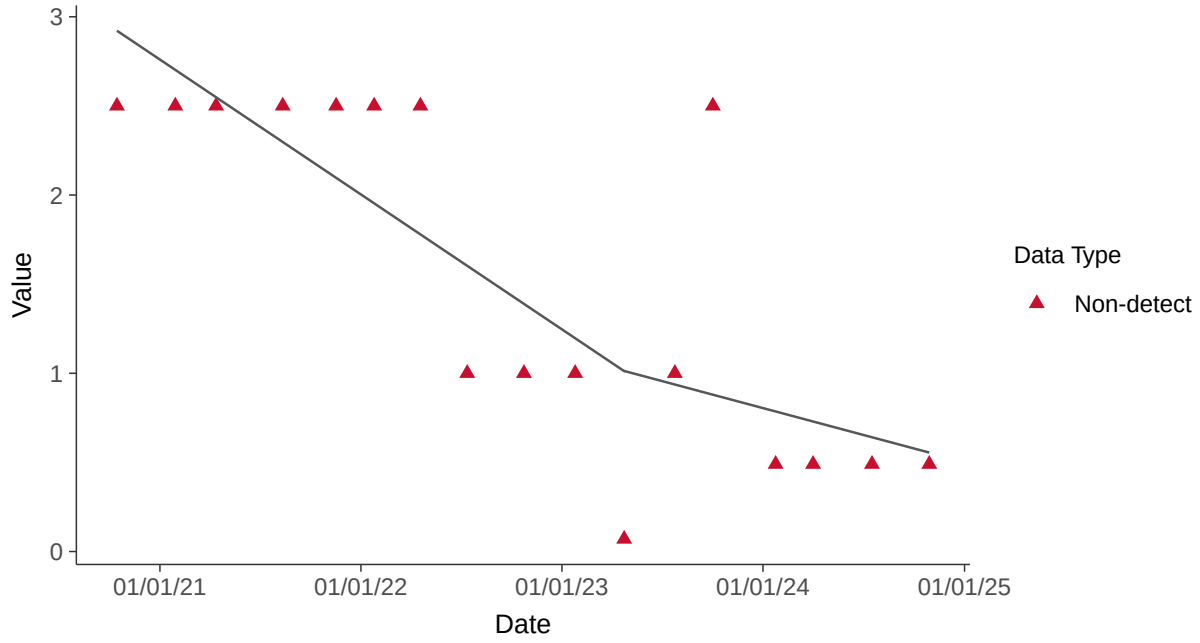
Boxplot by Season

Silver, MW-11 (ug/L)



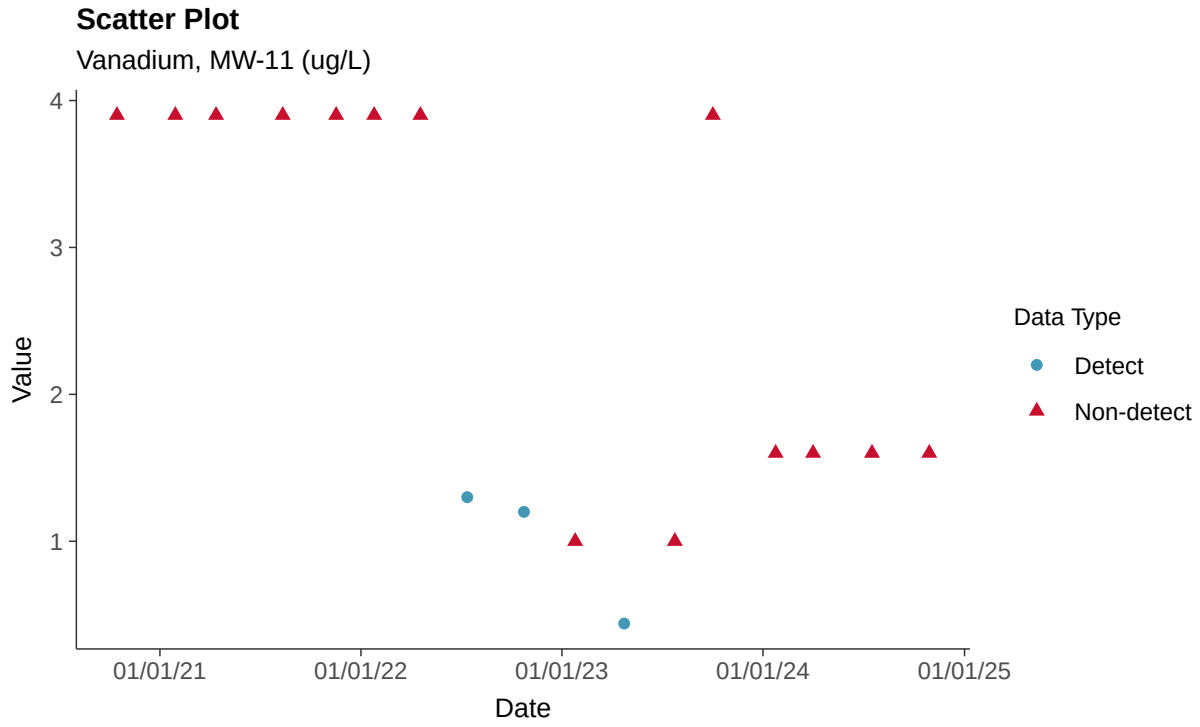
Trend Regression: Piecewise Linear-Linear

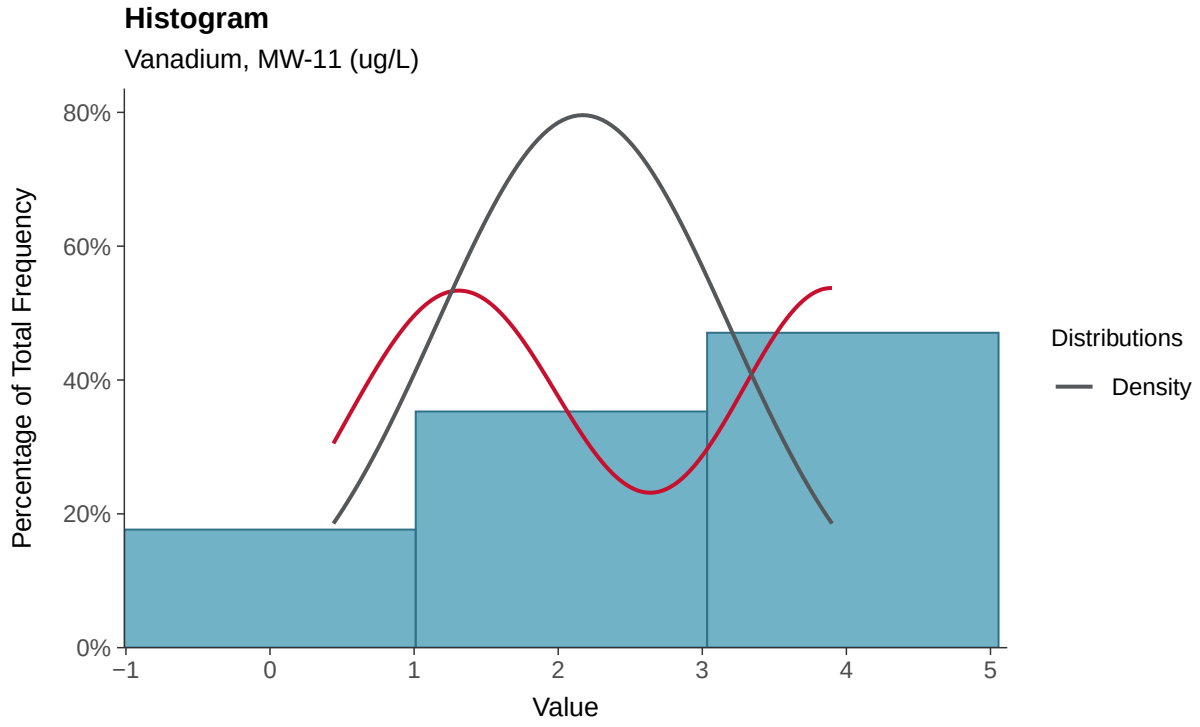
Silver, MW-11 (ug/L)



App. I Metals: Vanadium, MW-11

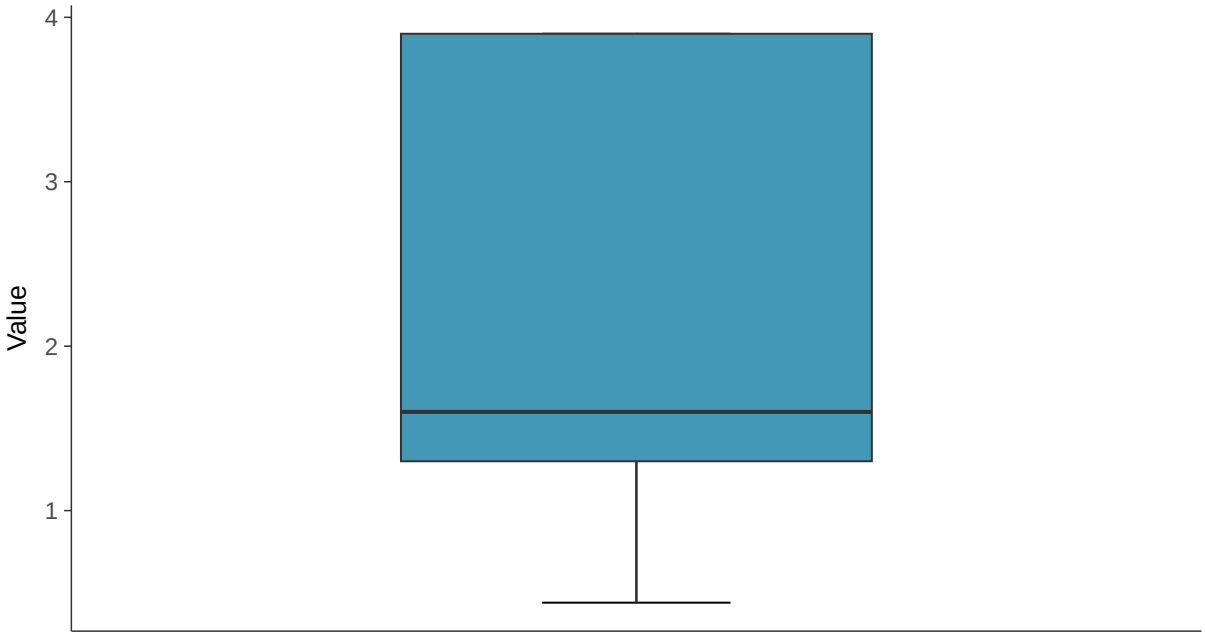
ID: 10_01_127





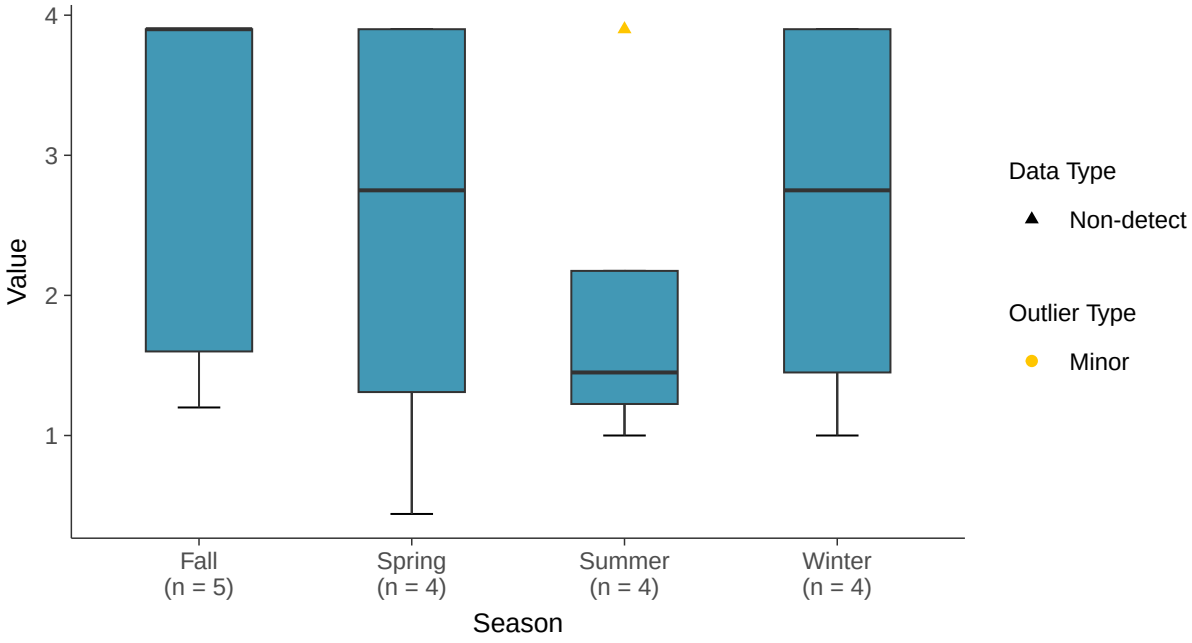
Boxplot

Vanadium, MW-11 (ug/L)



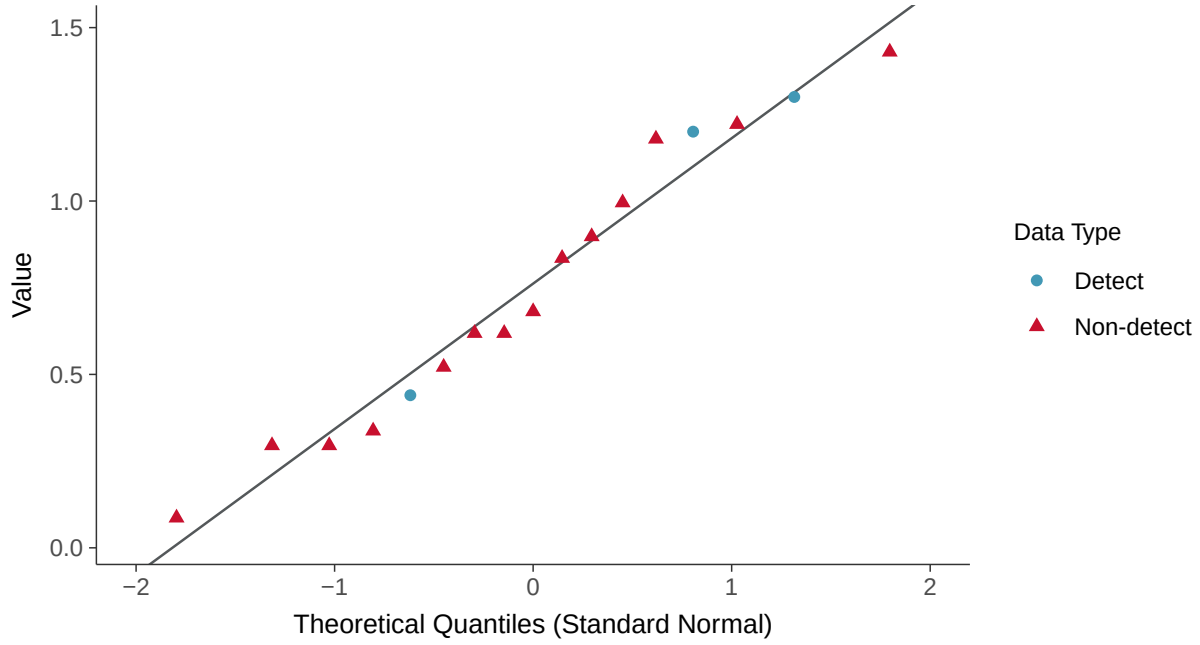
Boxplot by Season

Vanadium, MW-11 (ug/L)



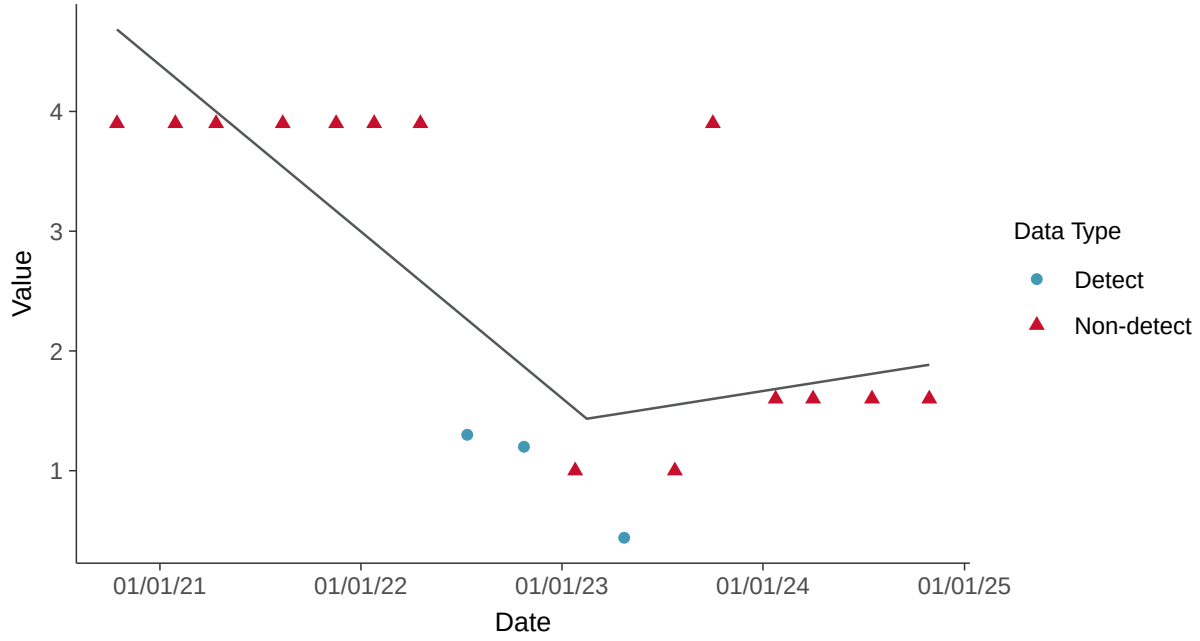
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-11 (ug/L)



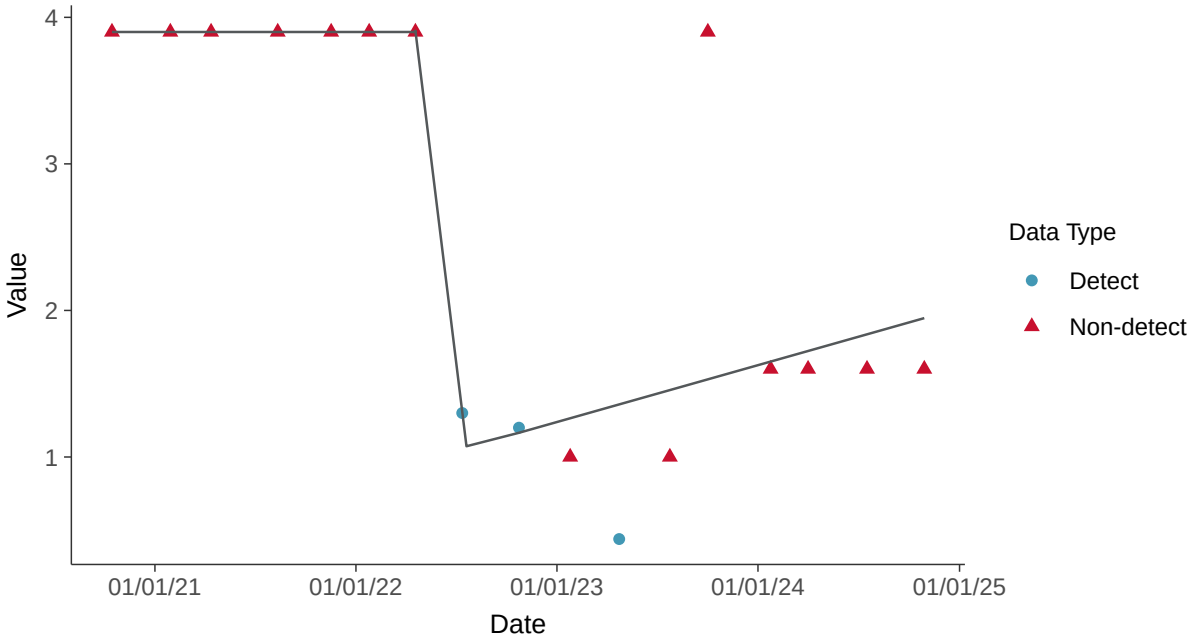
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-11 (ug/L)



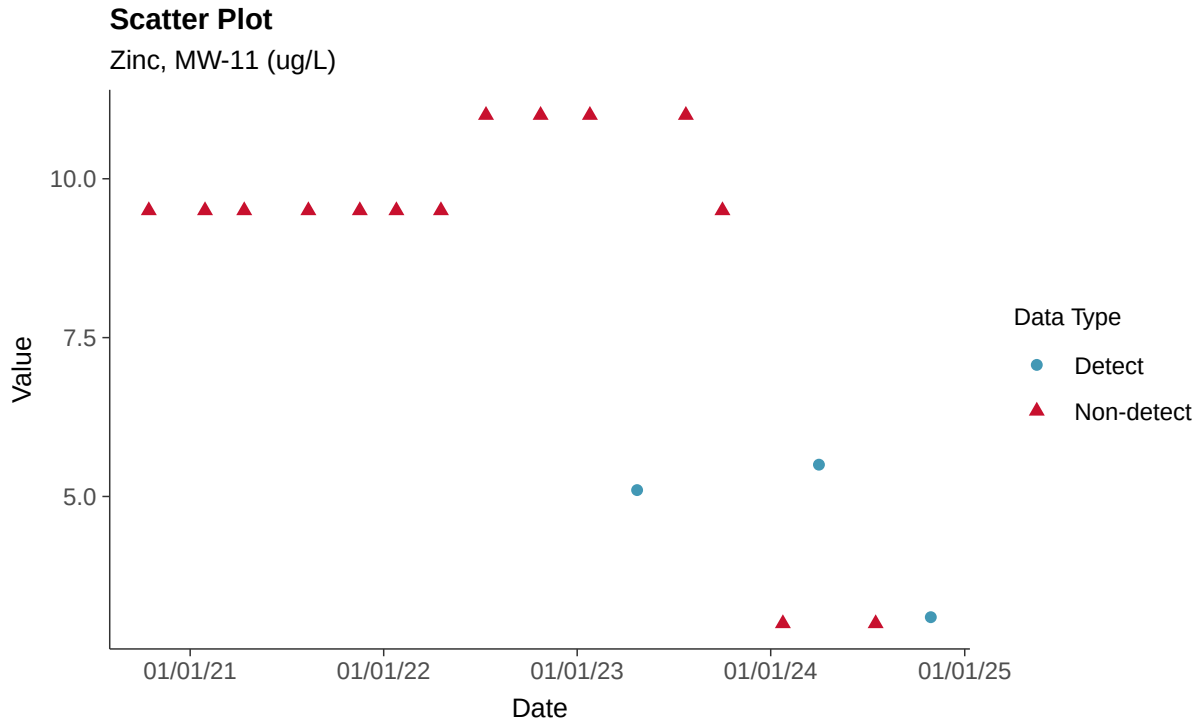
Trend Regression: Piecewise Linear-Linear-Linear

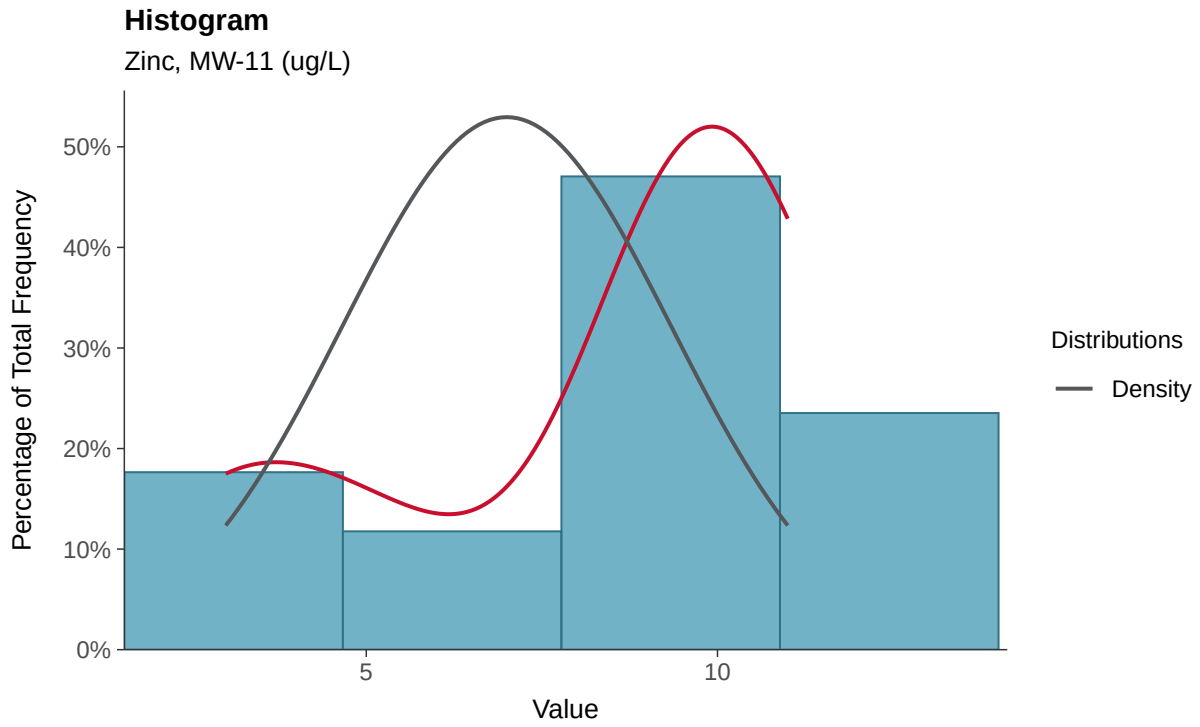
Vanadium, MW-11 (ug/L)



App. I Metals: Zinc, MW-11

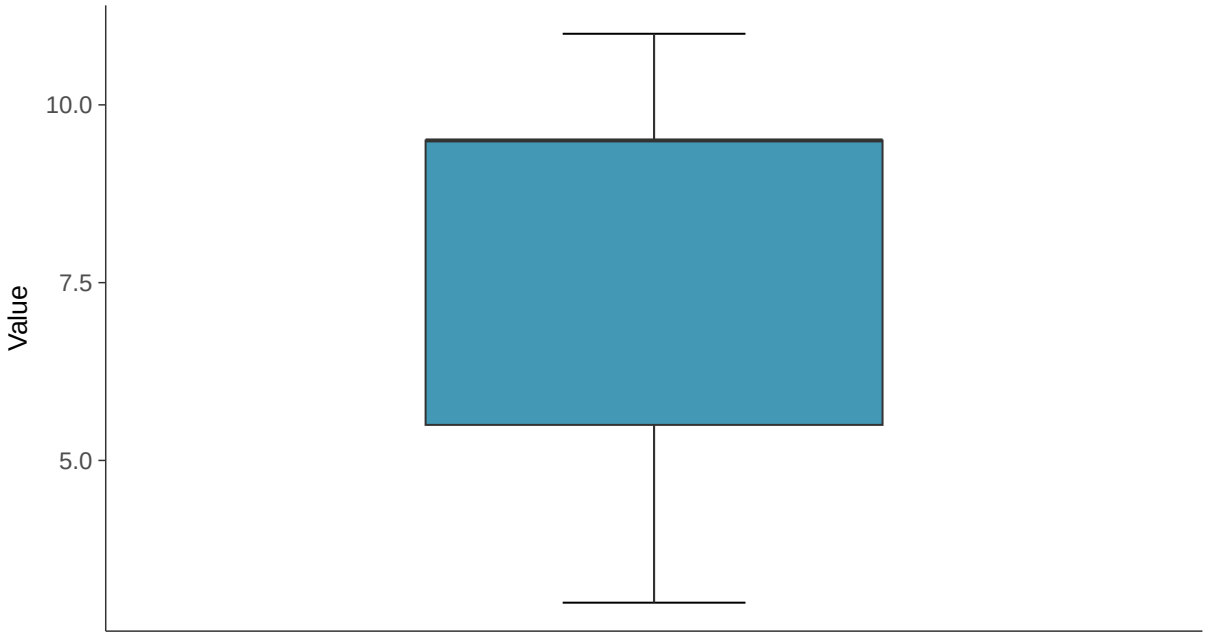
ID: 10_01_128





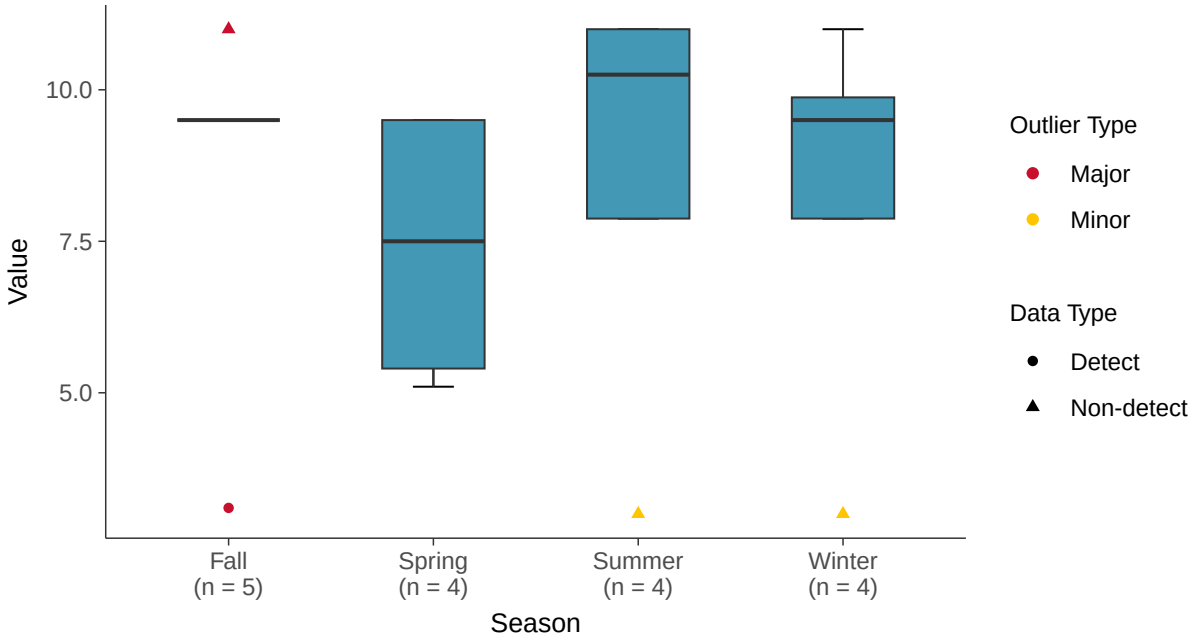
Boxplot

Zinc, MW-11 (ug/L)



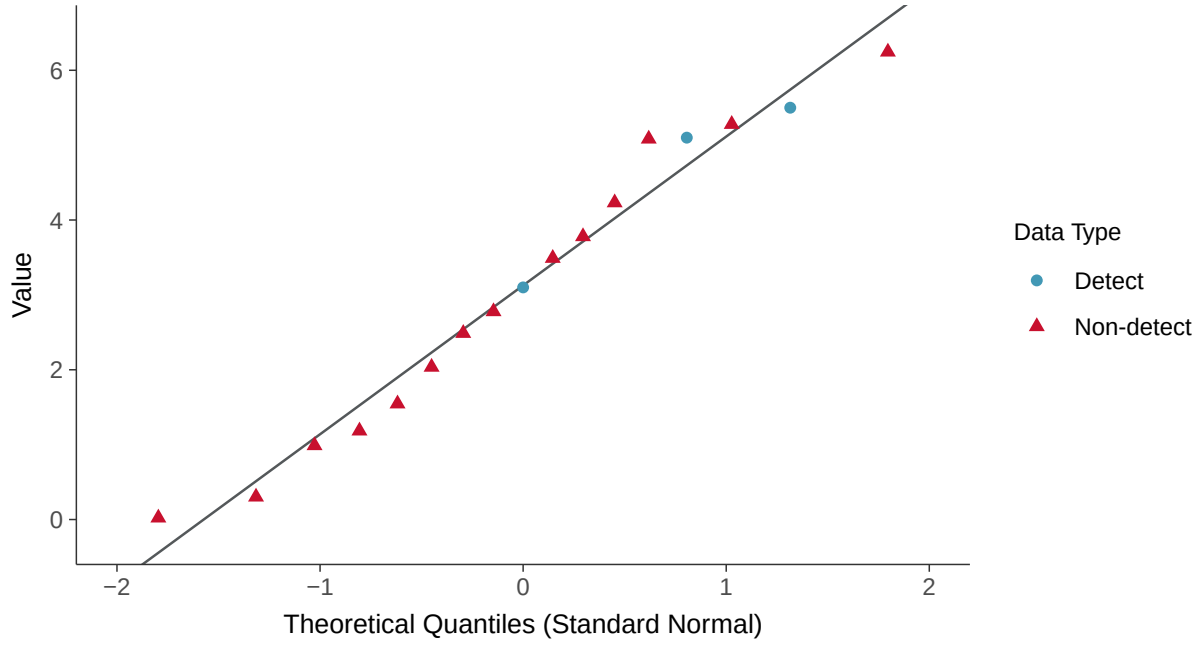
Boxplot by Season

Zinc, MW-11 (ug/L)



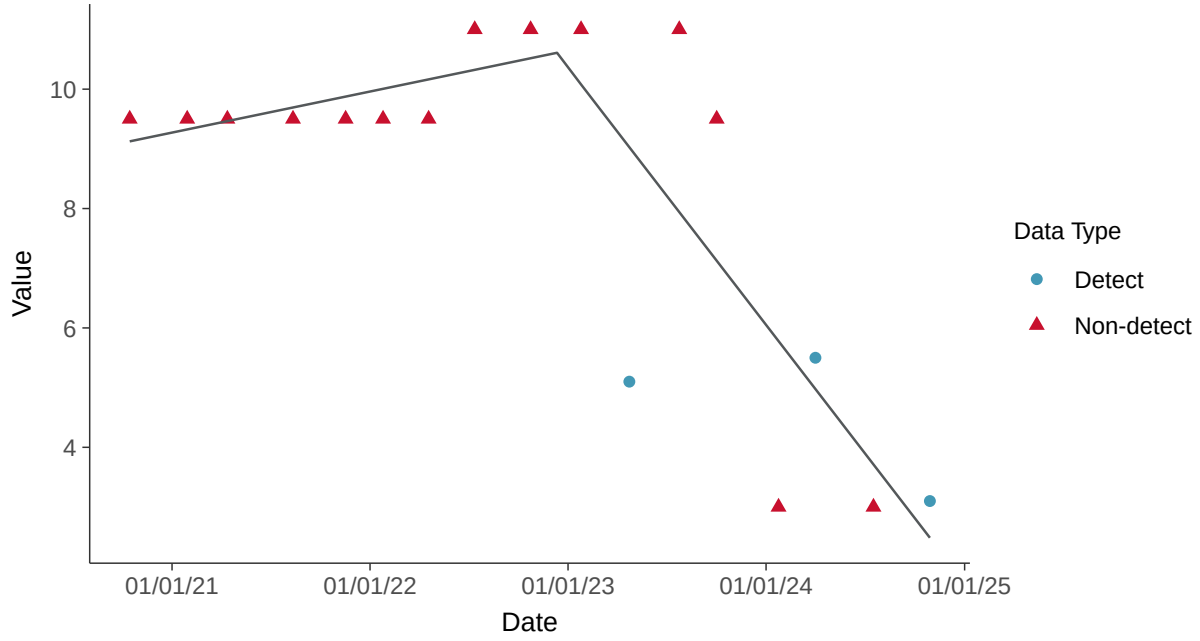
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-11 (ug/L)

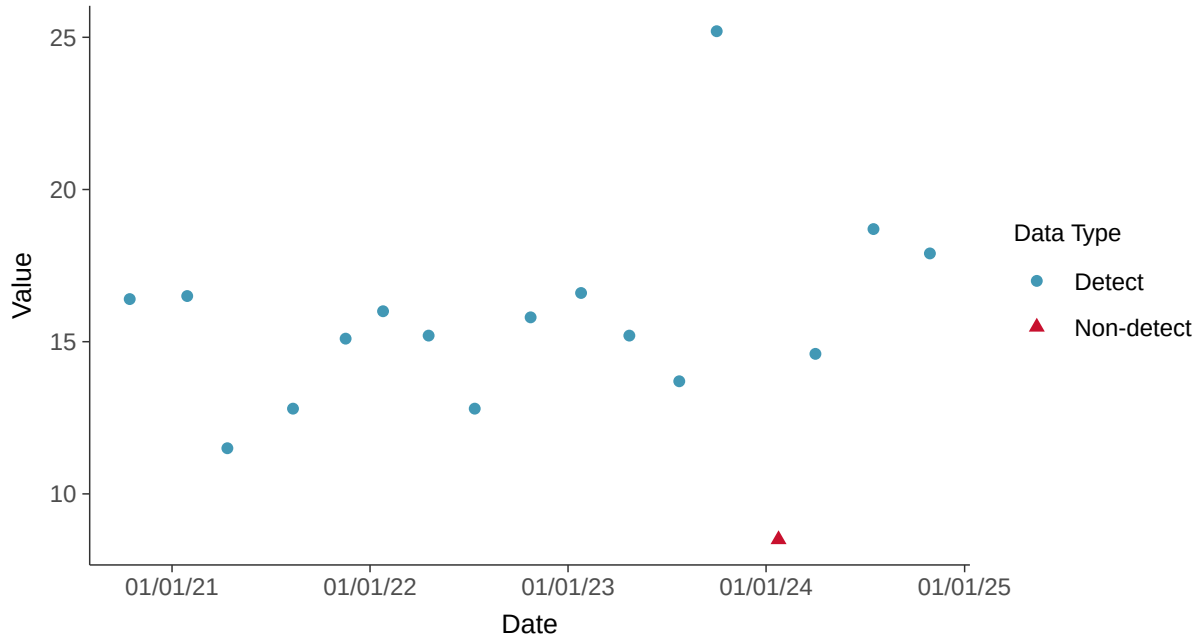


App. III: Boron, MW-11

ID: 10_02_105

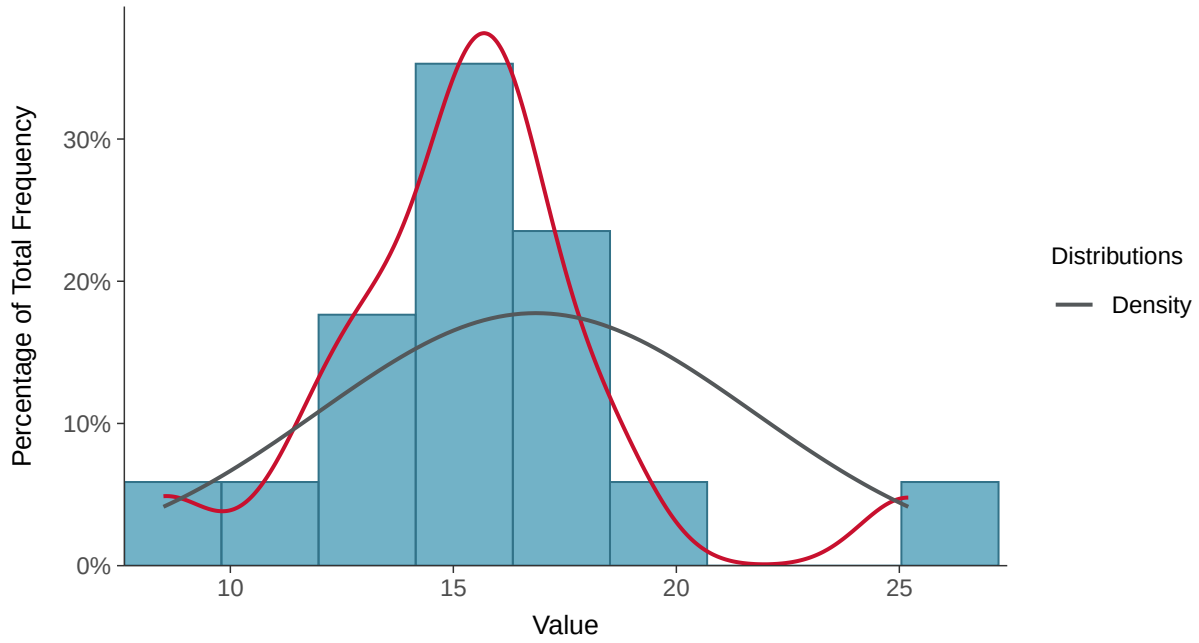
Scatter Plot

Boron, MW-11 (ug/L)



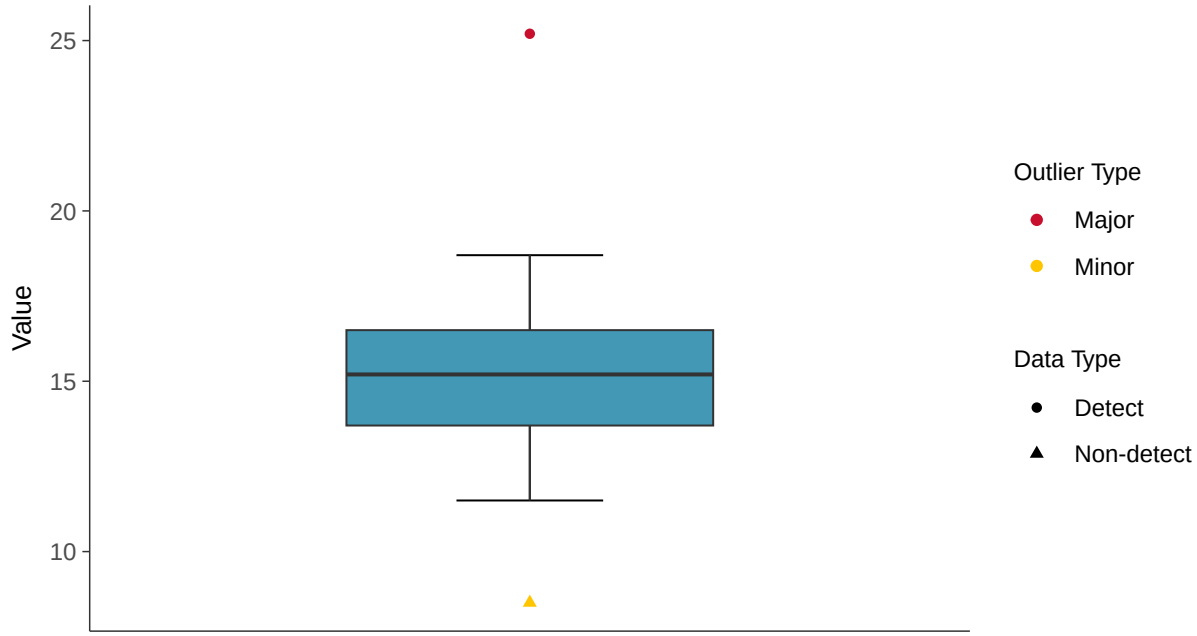
Histogram

Boron, MW-11 (ug/L)



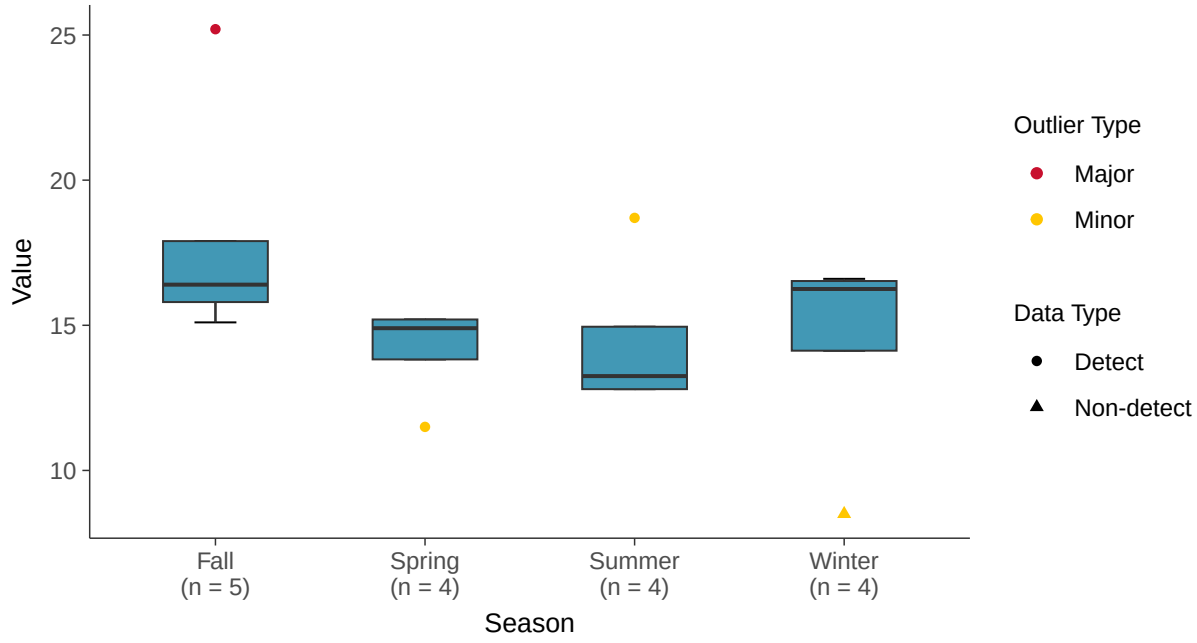
Boxplot

Boron, MW-11 (ug/L)



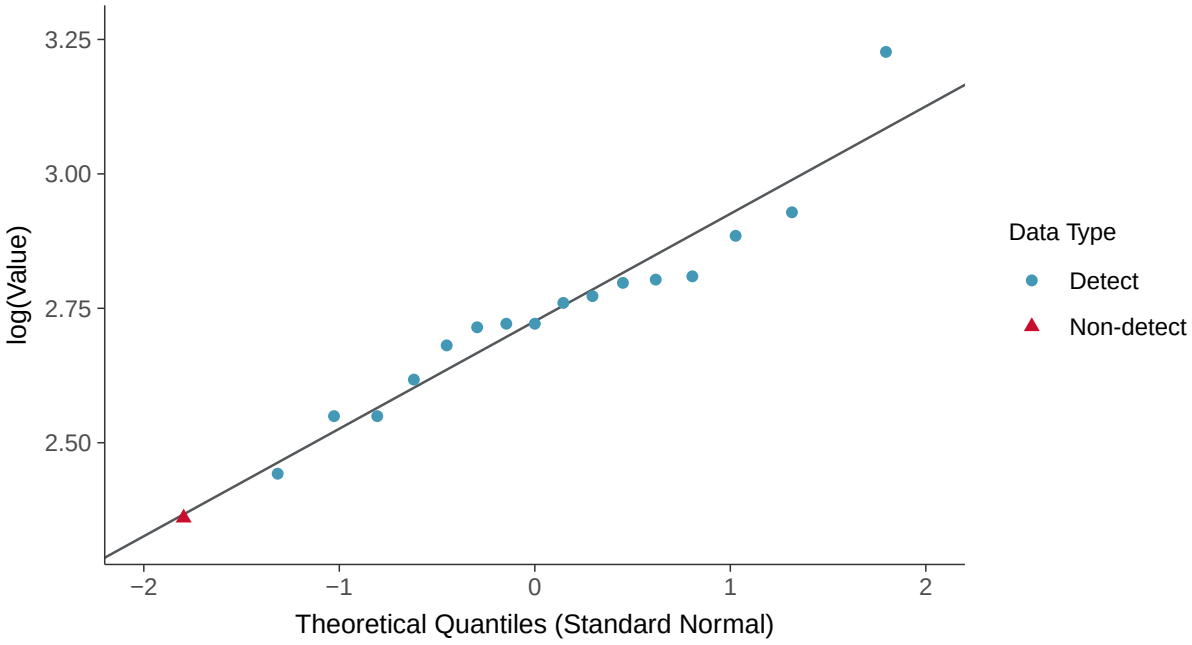
Boxplot by Season

Boron, MW-11 (ug/L)



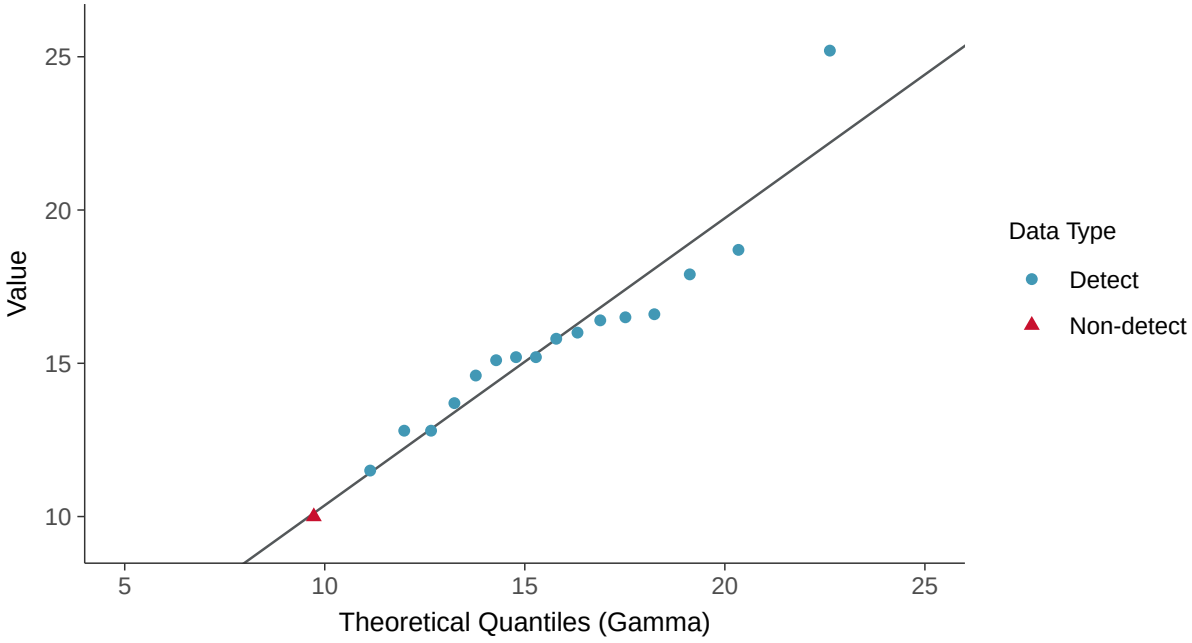
Lognormal Q-Q plot using ROS Imputed Estimates

Boron, MW-11 (ug/L)



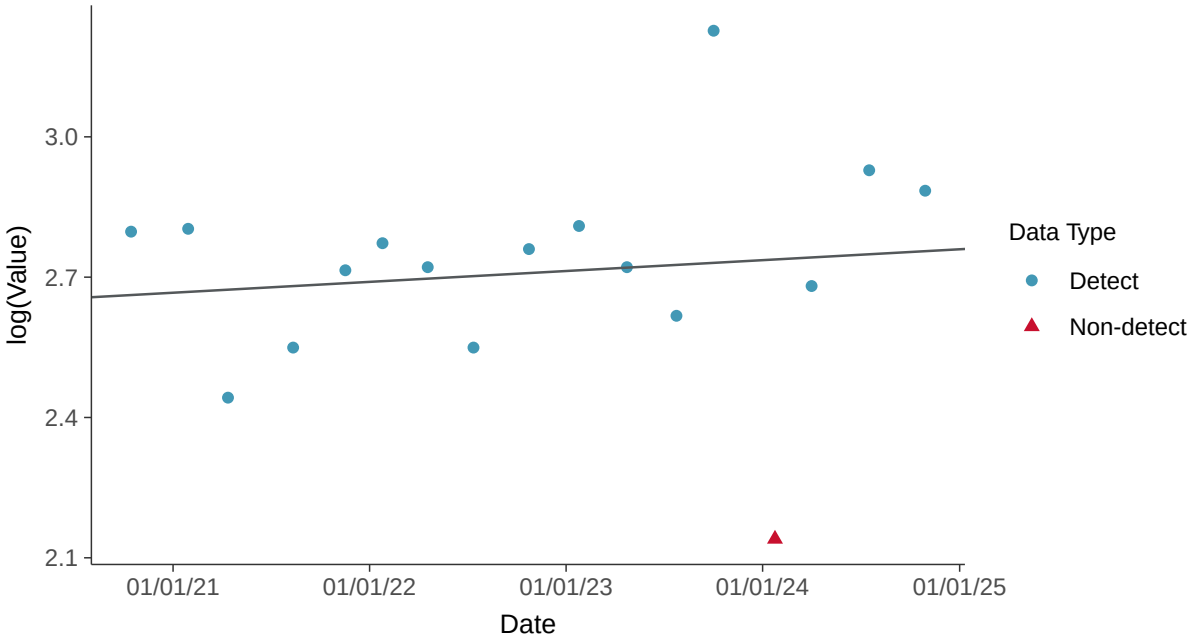
Gamma Q-Q plot using ROS Imputed Estimates

Boron, MW-11 (ug/L)



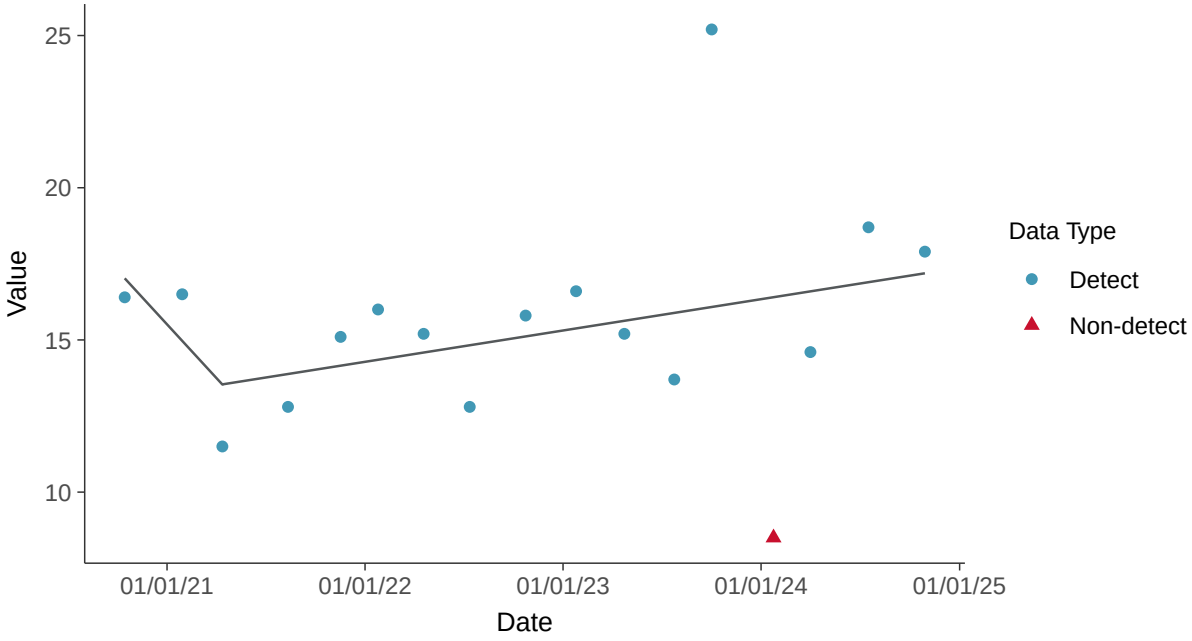
Trend Regression: Lognormal MLE

Boron, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Boron, MW-11 (ug/L)

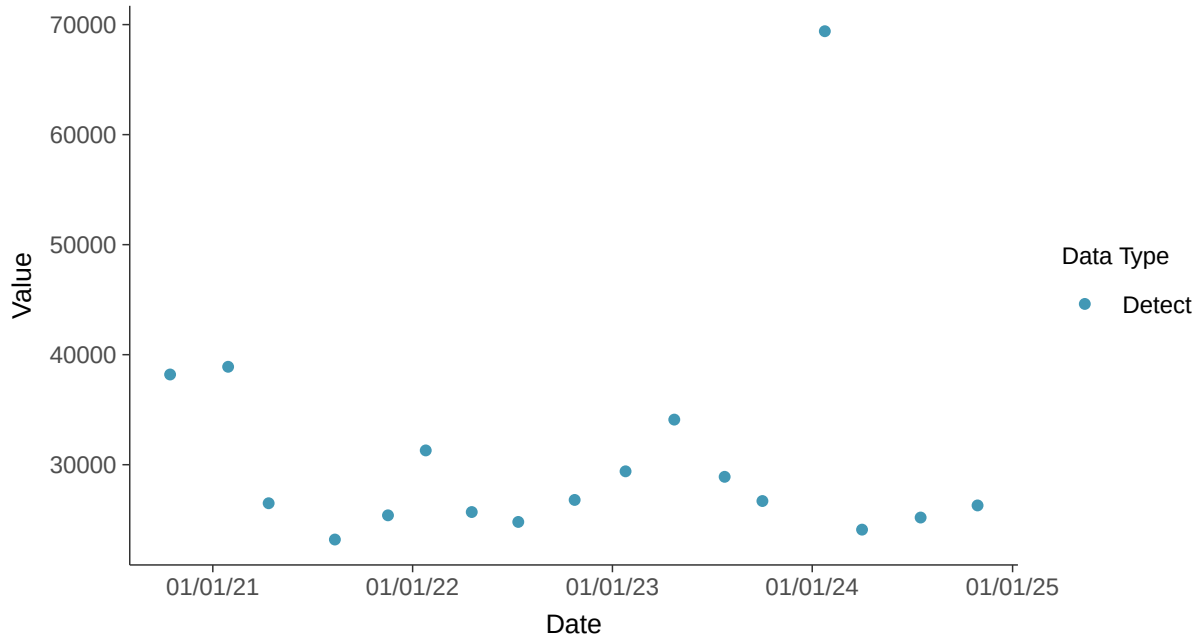


App. III: Calcium, MW-11

ID: 10_02_107

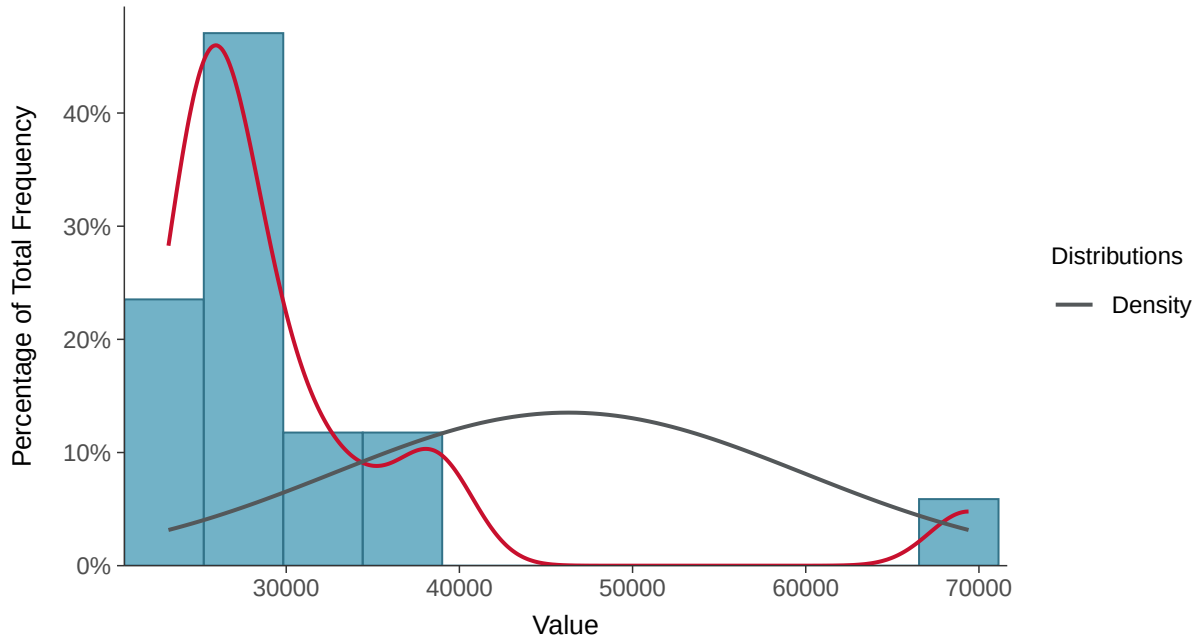
Scatter Plot

Calcium, MW-11 (ug/L)



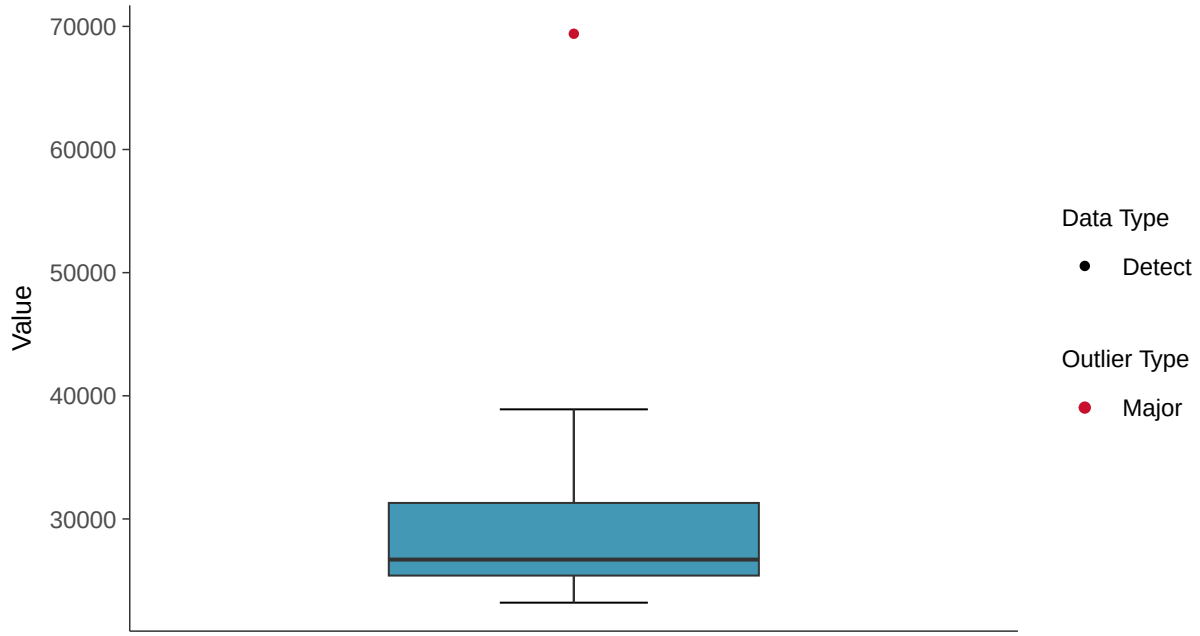
Histogram

Calcium, MW-11 (ug/L)



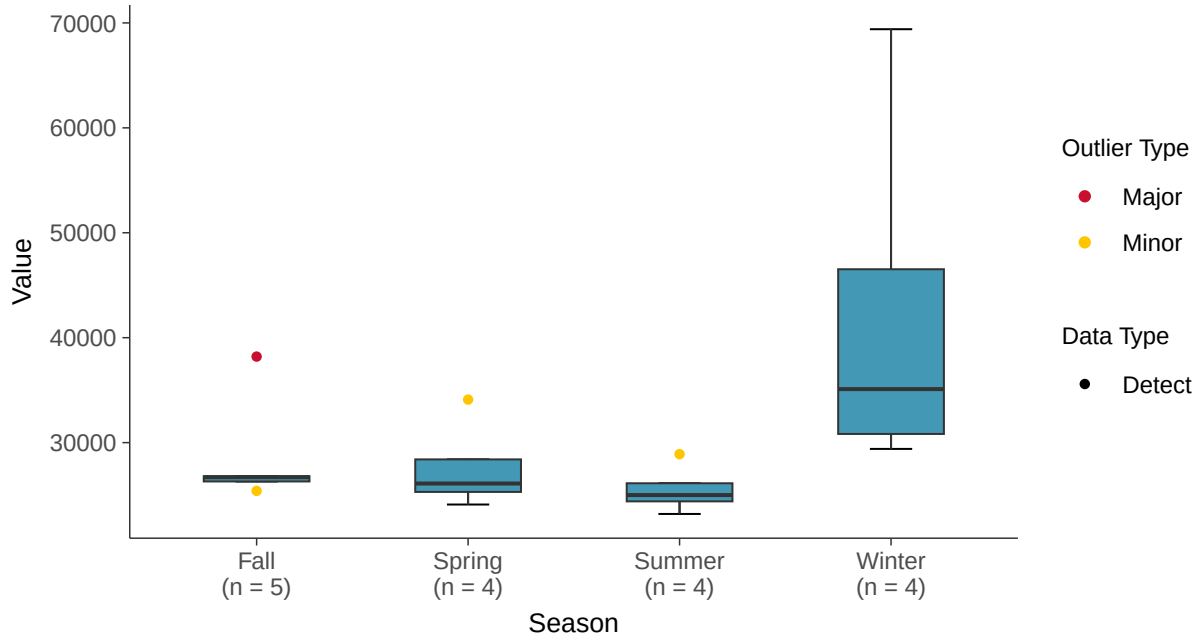
Boxplot

Calcium, MW-11 (ug/L)



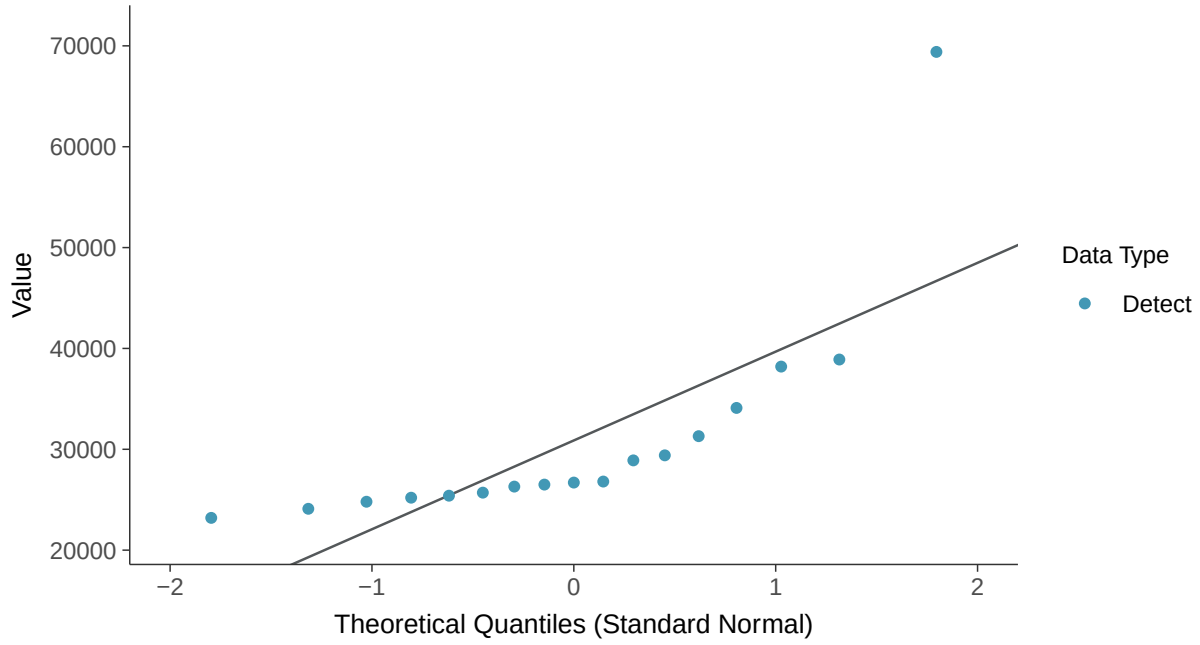
Boxplot by Season

Calcium, MW-11 (ug/L)



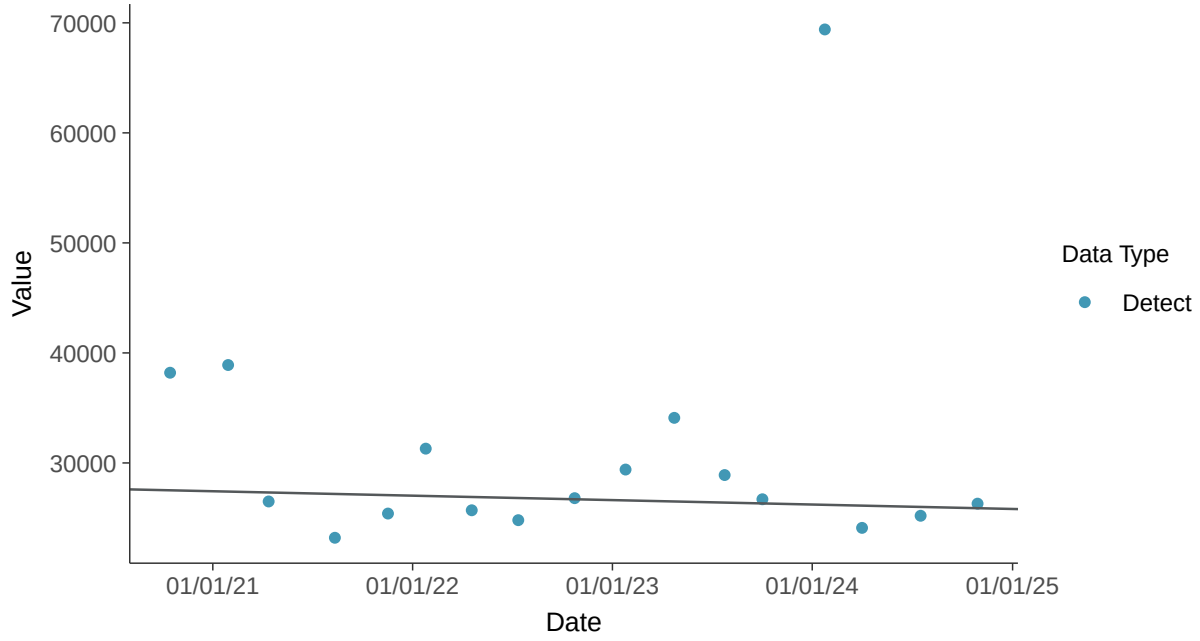
Normal Q-Q plot

Calcium, MW-11 (ug/L)



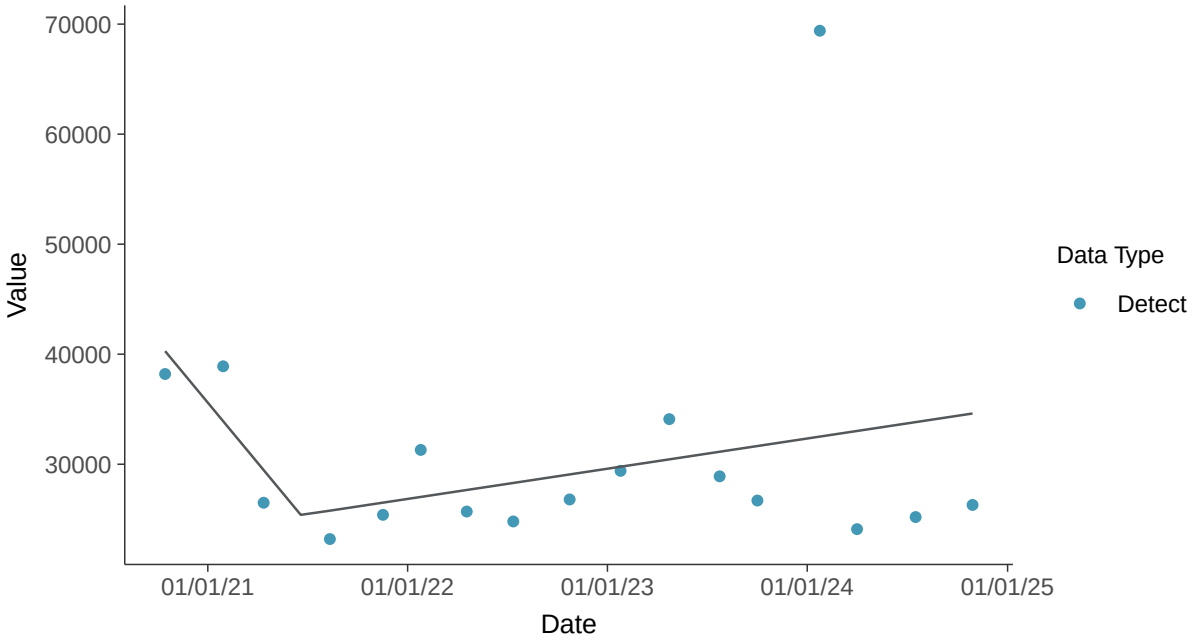
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-11 (ug/L)



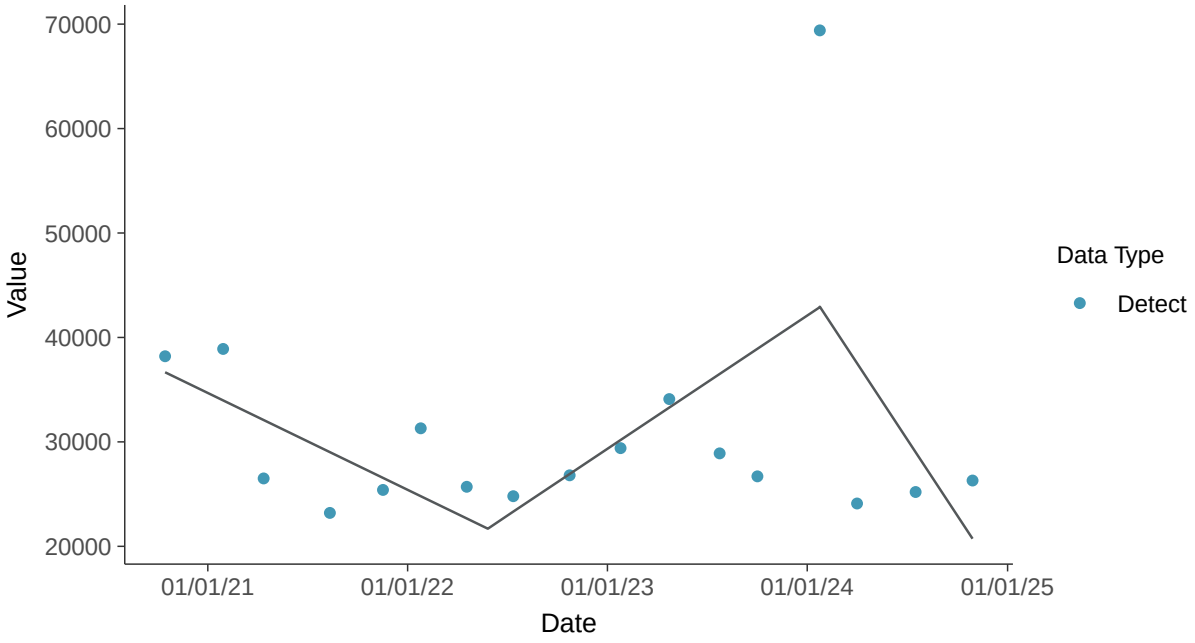
Trend Regression: Piecewise Linear-Linear

Calcium, MW-11 (ug/L)



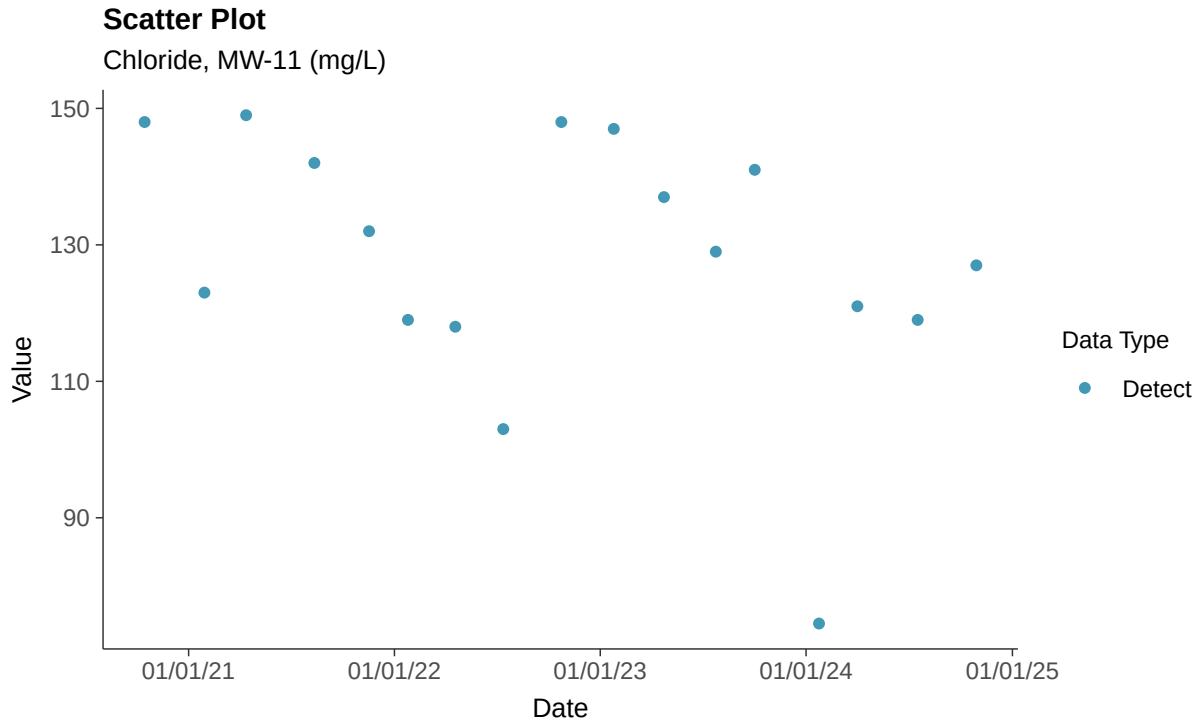
Trend Regression: Piecewise Linear-Linear-Linear

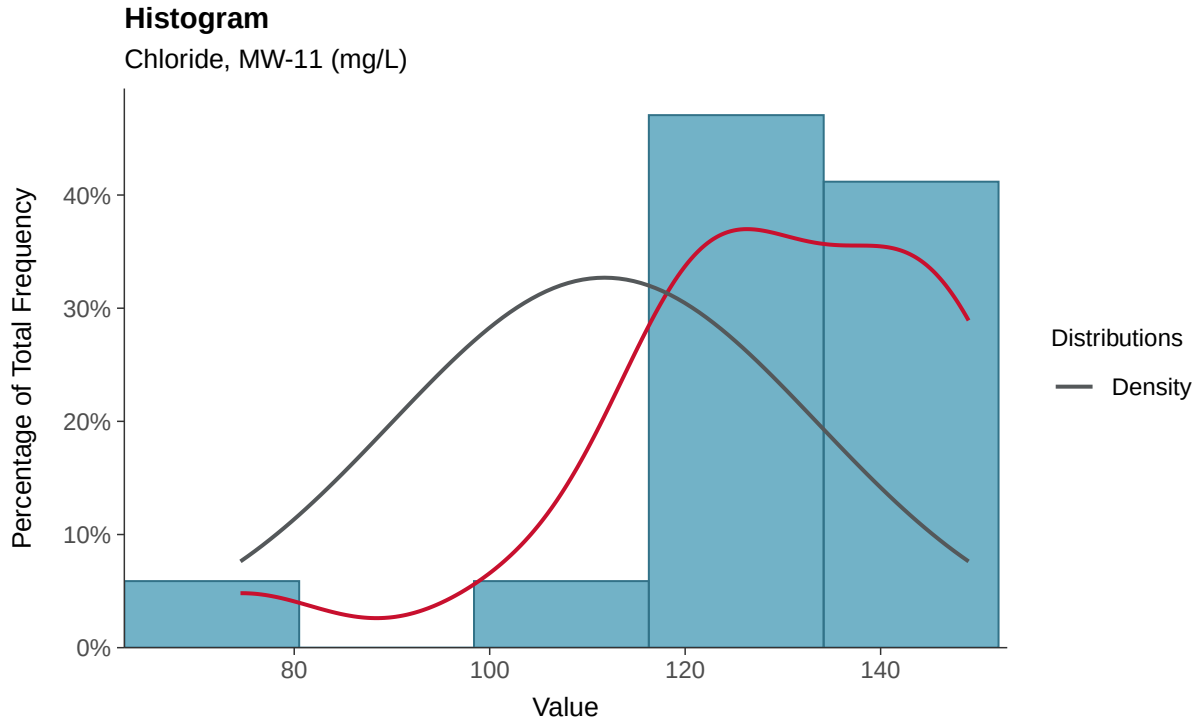
Calcium, MW-11 (ug/L)



App. III: Chloride, MW-11

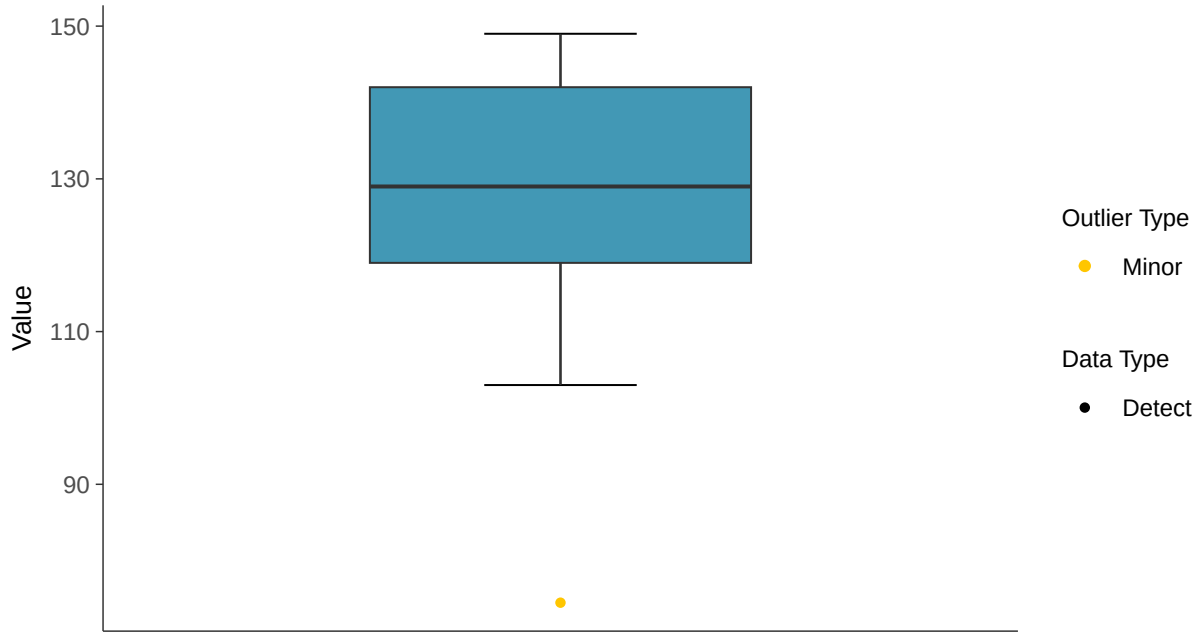
ID: 10_02_108





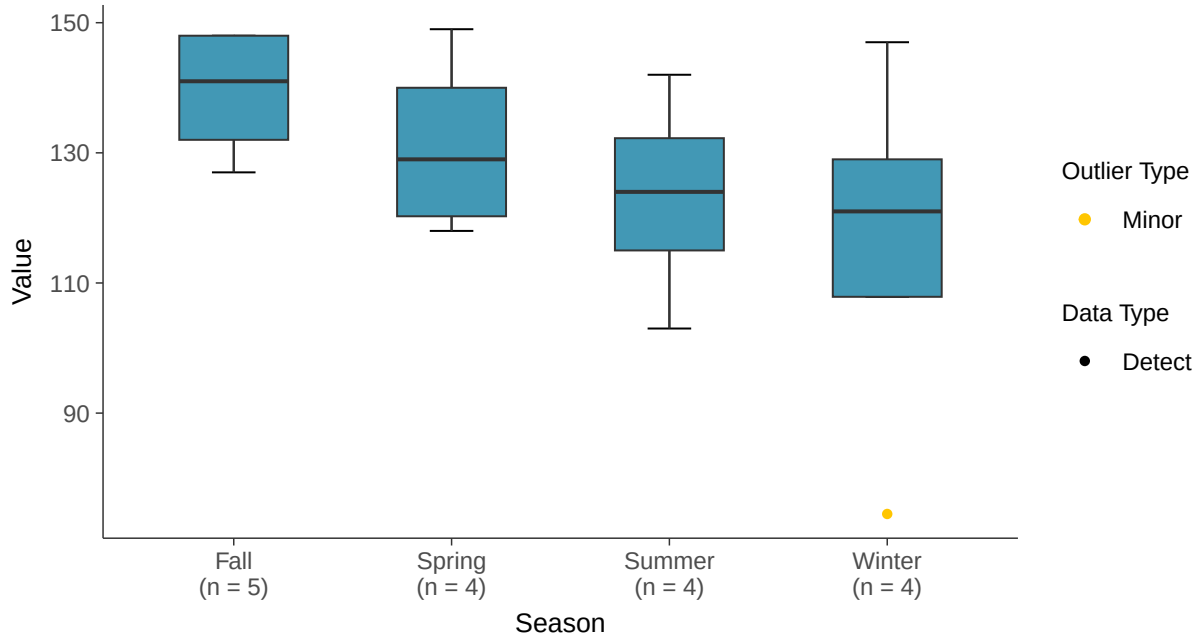
Boxplot

Chloride, MW-11 (mg/L)



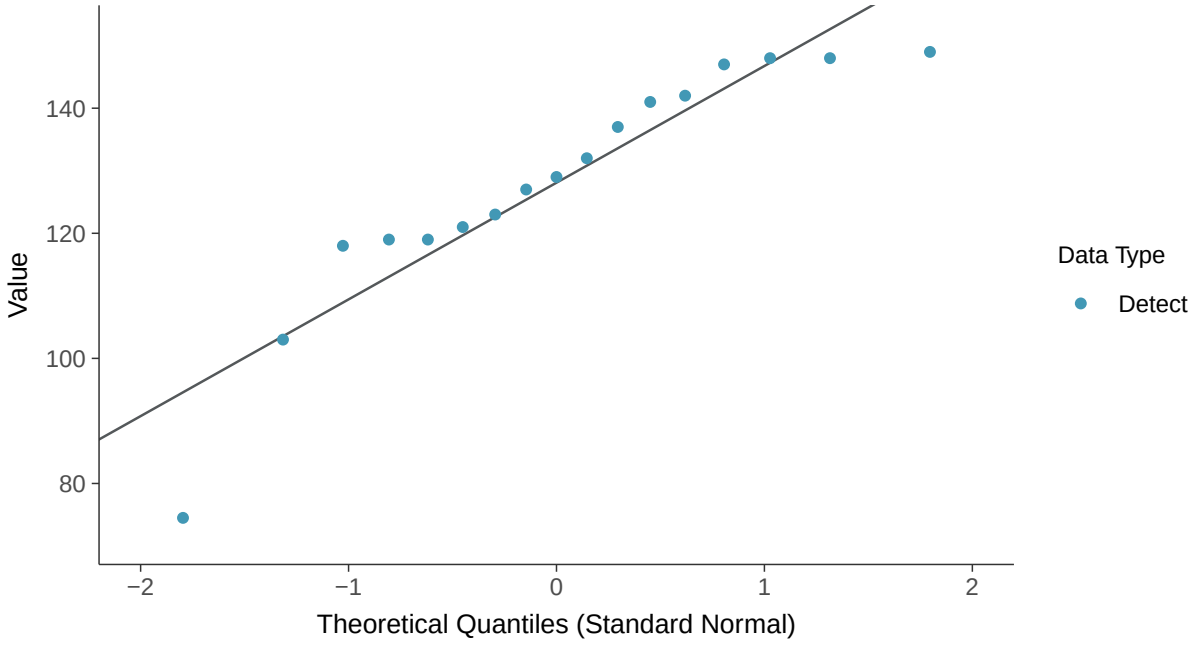
Boxplot by Season

Chloride, MW-11 (mg/L)



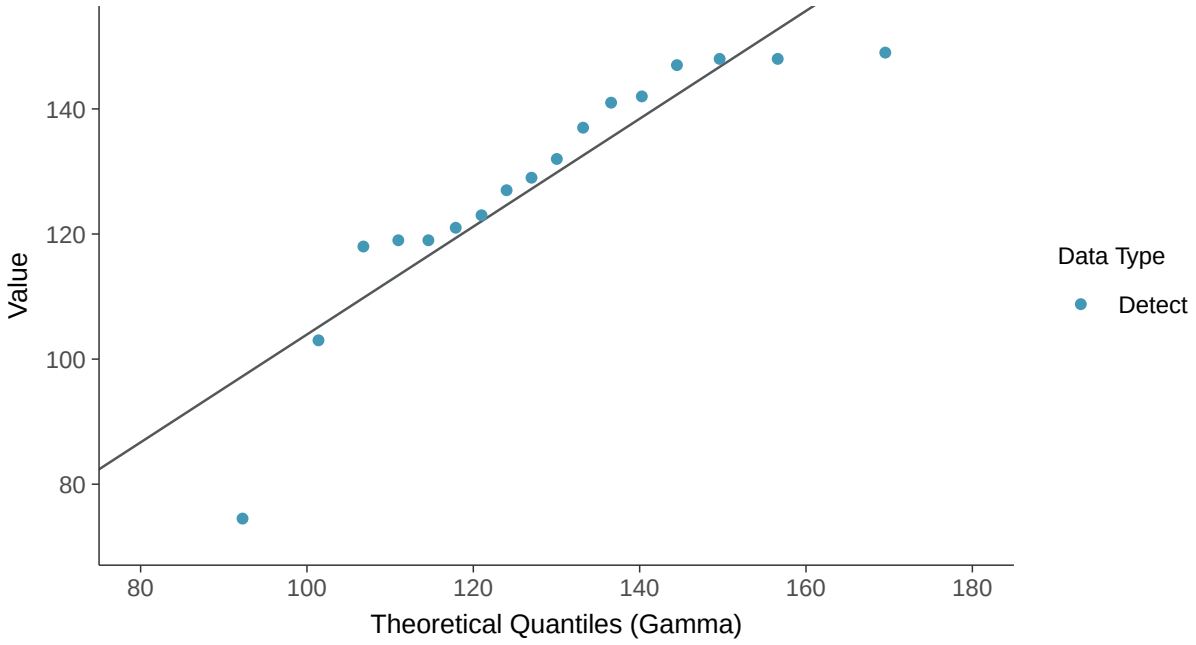
Normal Q-Q plot

Chloride, MW-11 (mg/L)



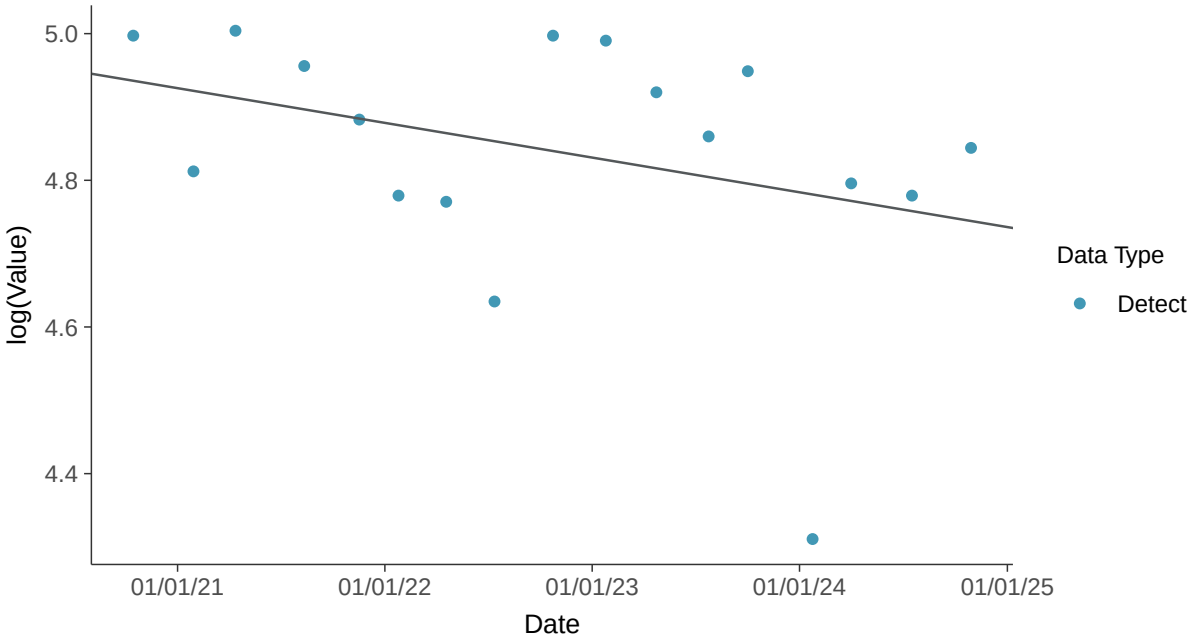
Gamma Q-Q plot

Chloride, MW-11 (mg/L)



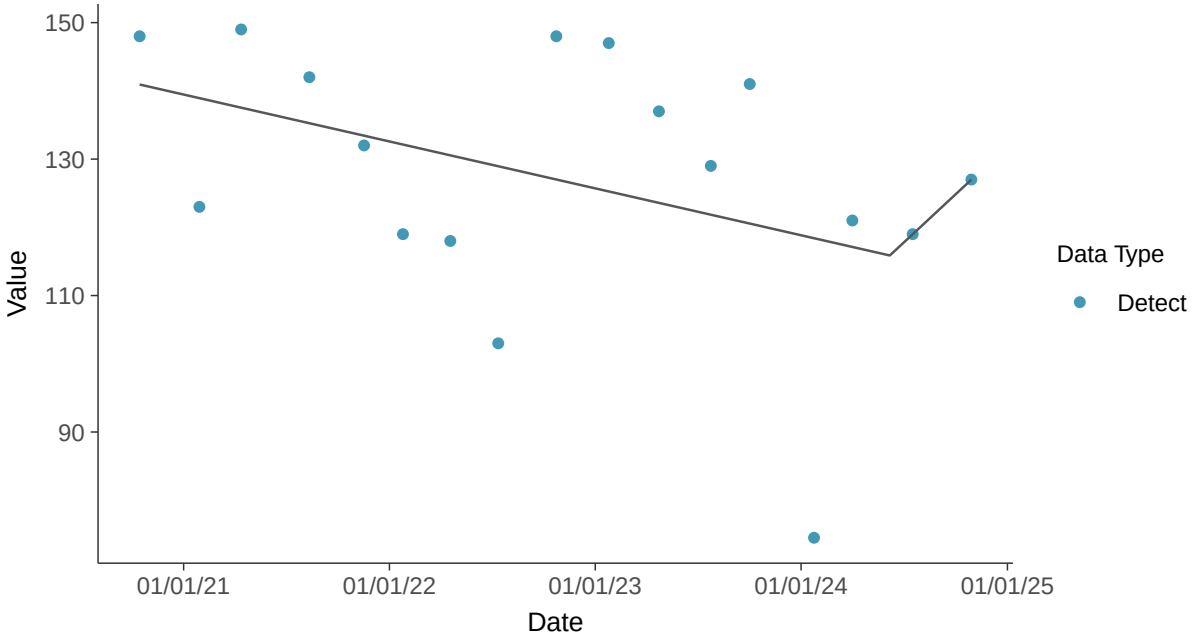
Trend Regression: Lognormal MLE

Chloride, MW-11 (mg/L)



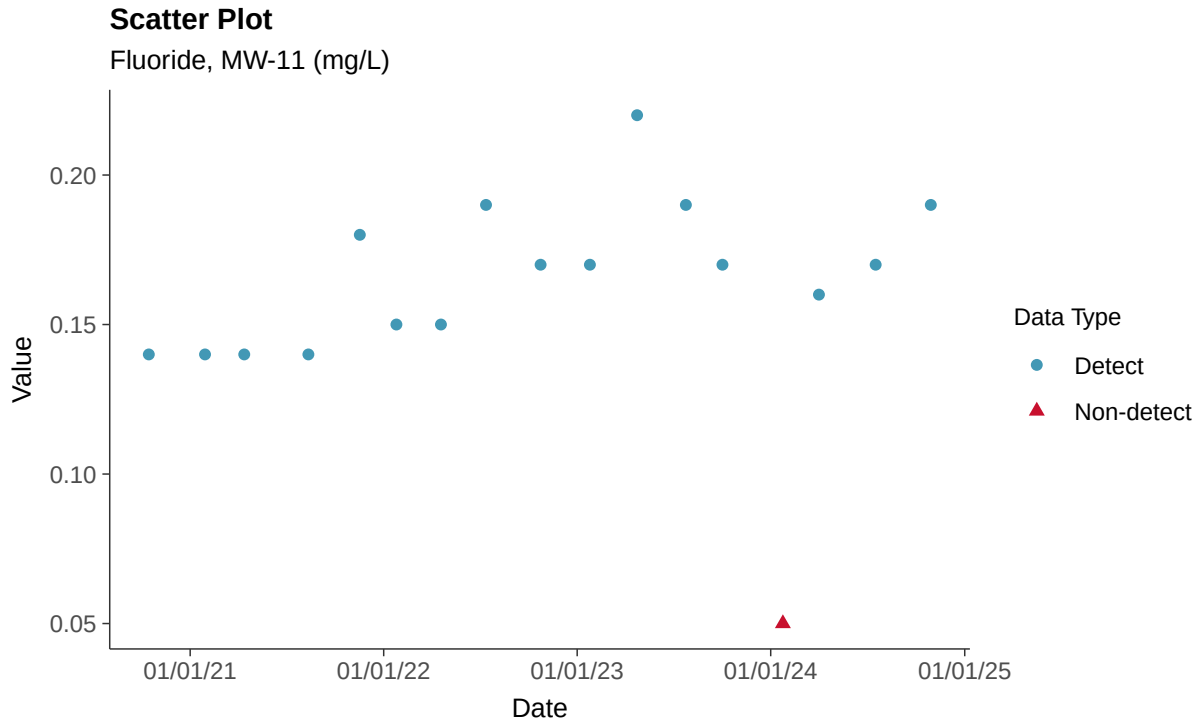
Trend Regression: Piecewise Linear-Linear

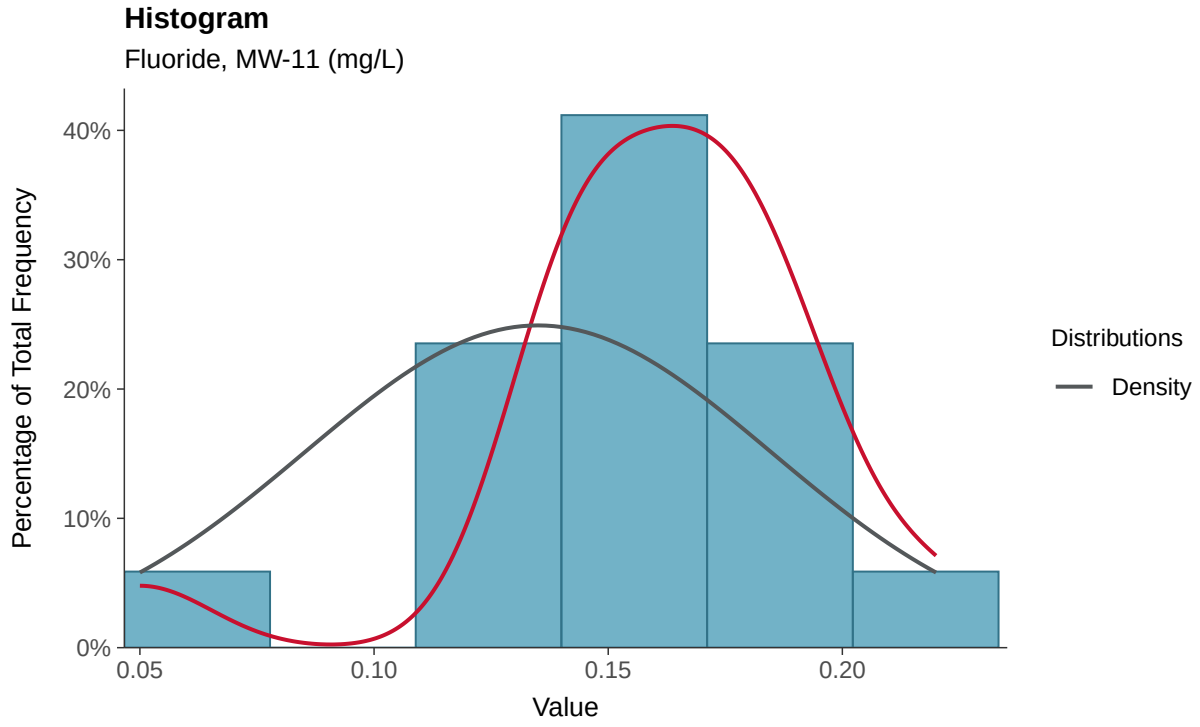
Chloride, MW-11 (mg/L)



App. III: Fluoride, MW-11

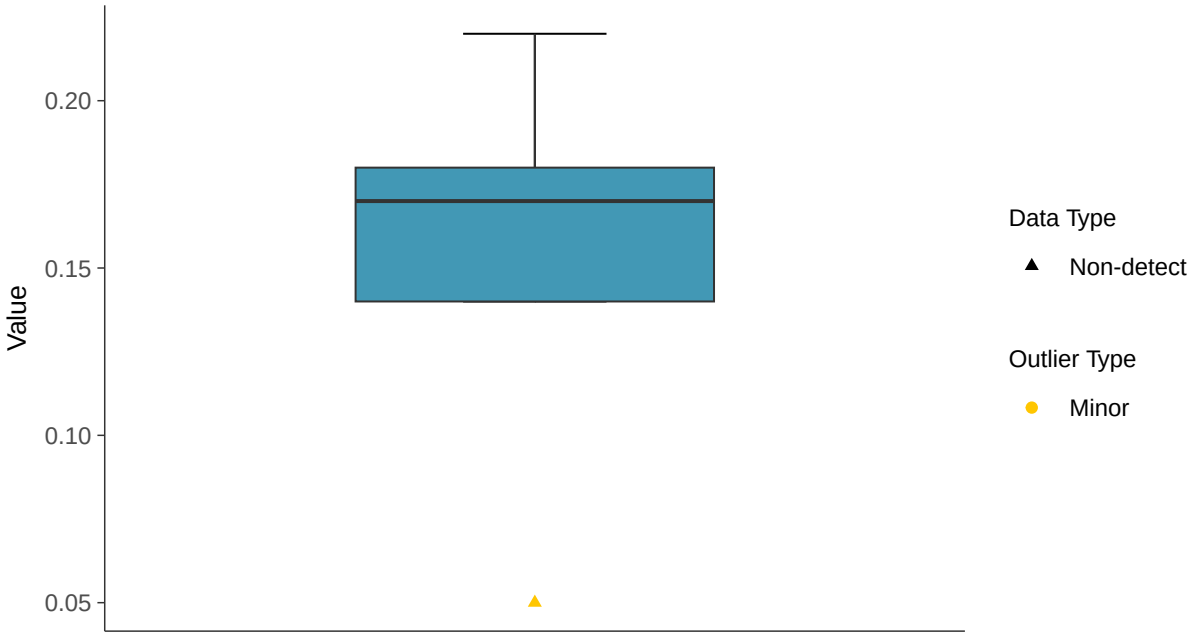
ID: 10_02_112





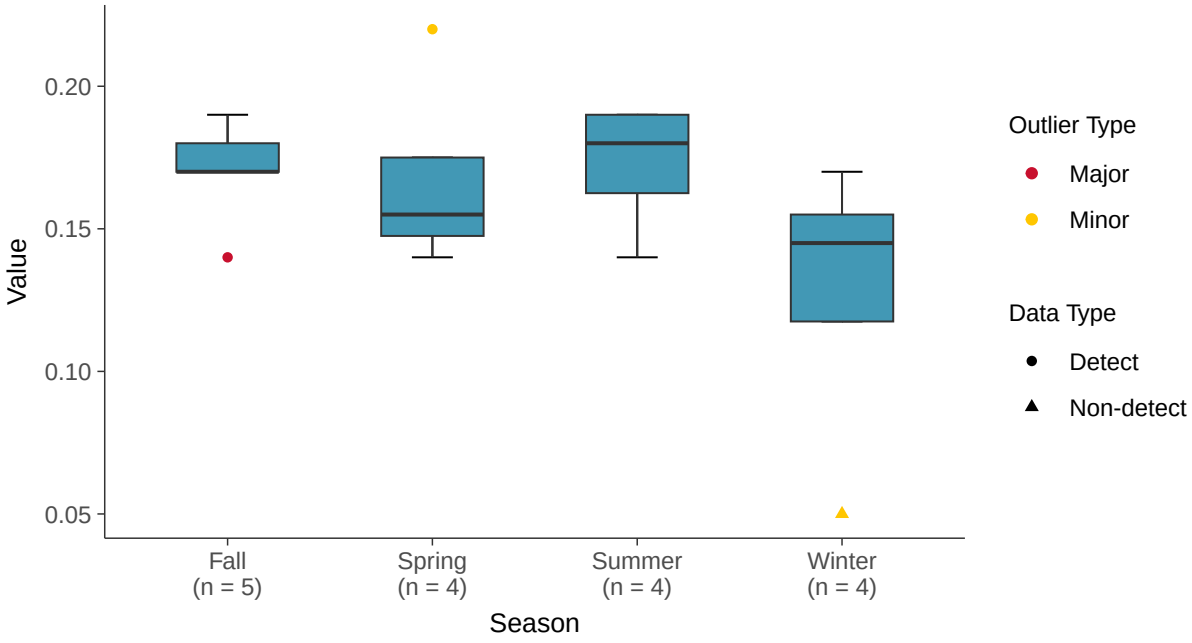
Boxplot

Fluoride, MW-11 (mg/L)



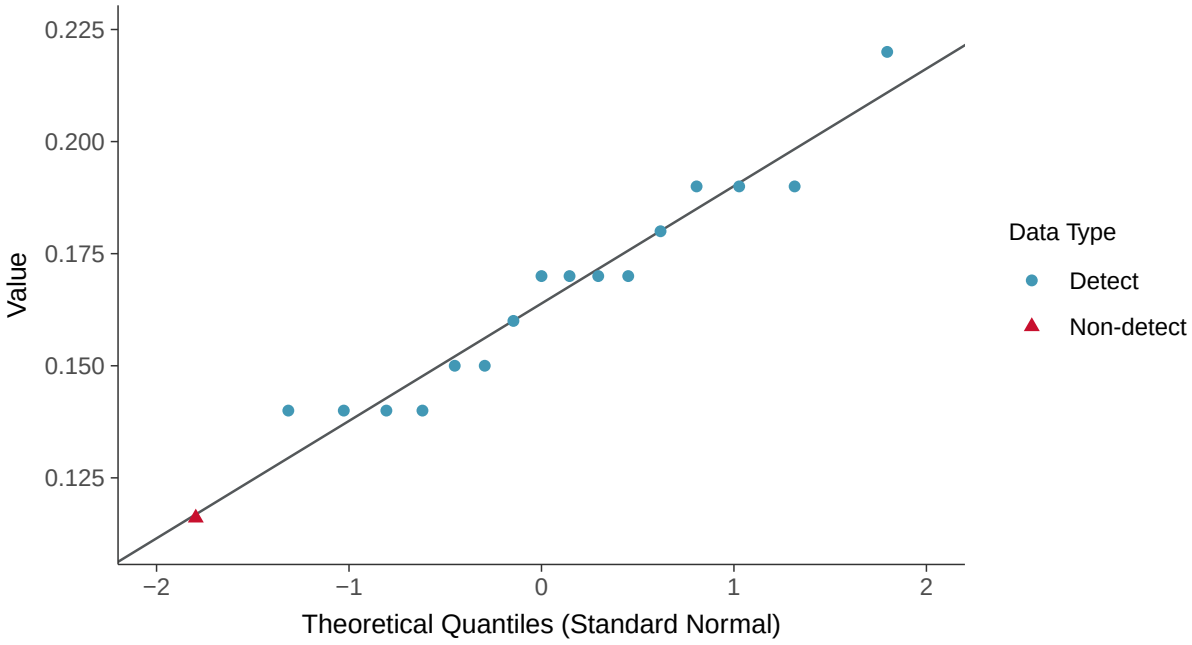
Boxplot by Season

Fluoride, MW-11 (mg/L)



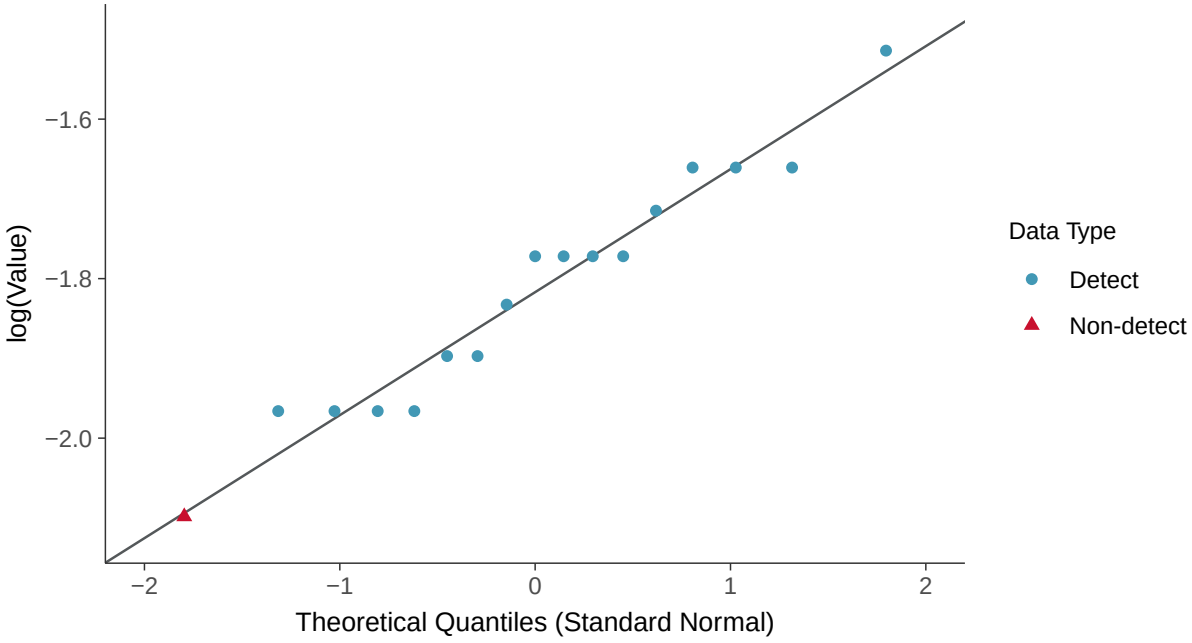
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



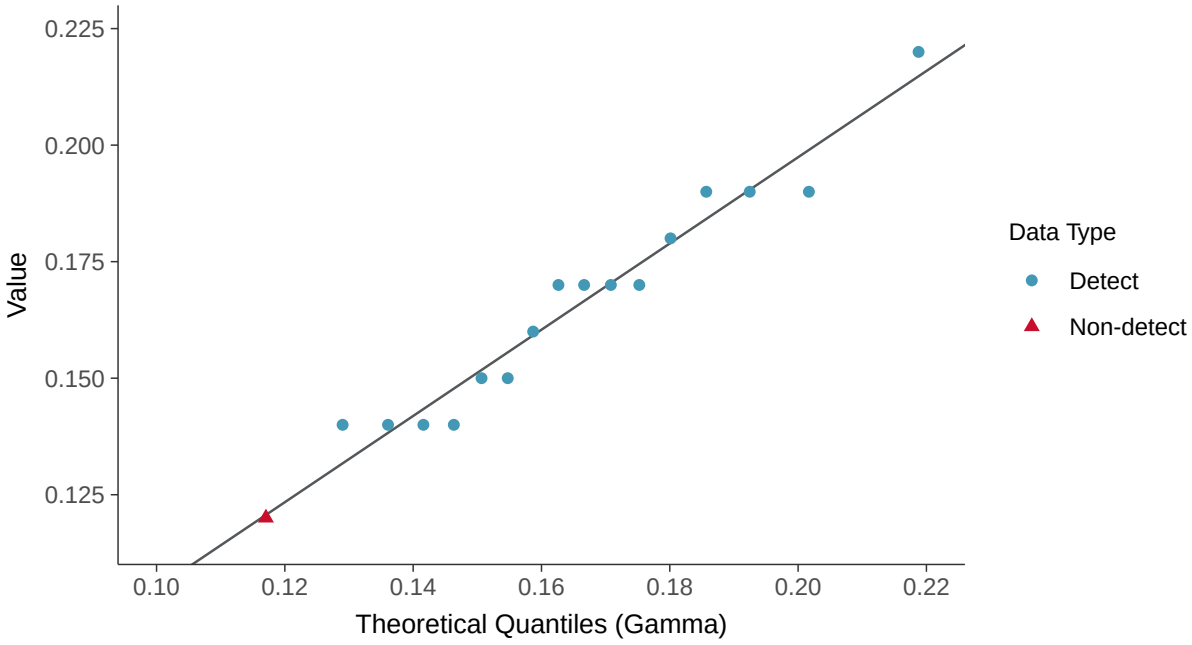
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



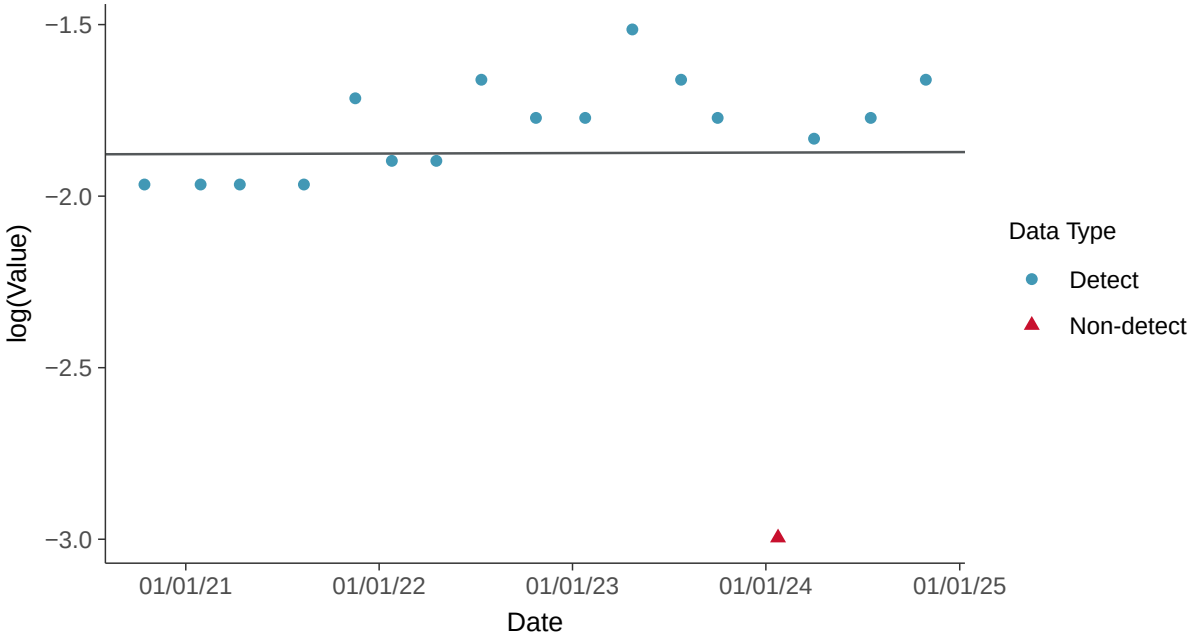
Gamma Q-Q plot using ROS Imputed Estimates

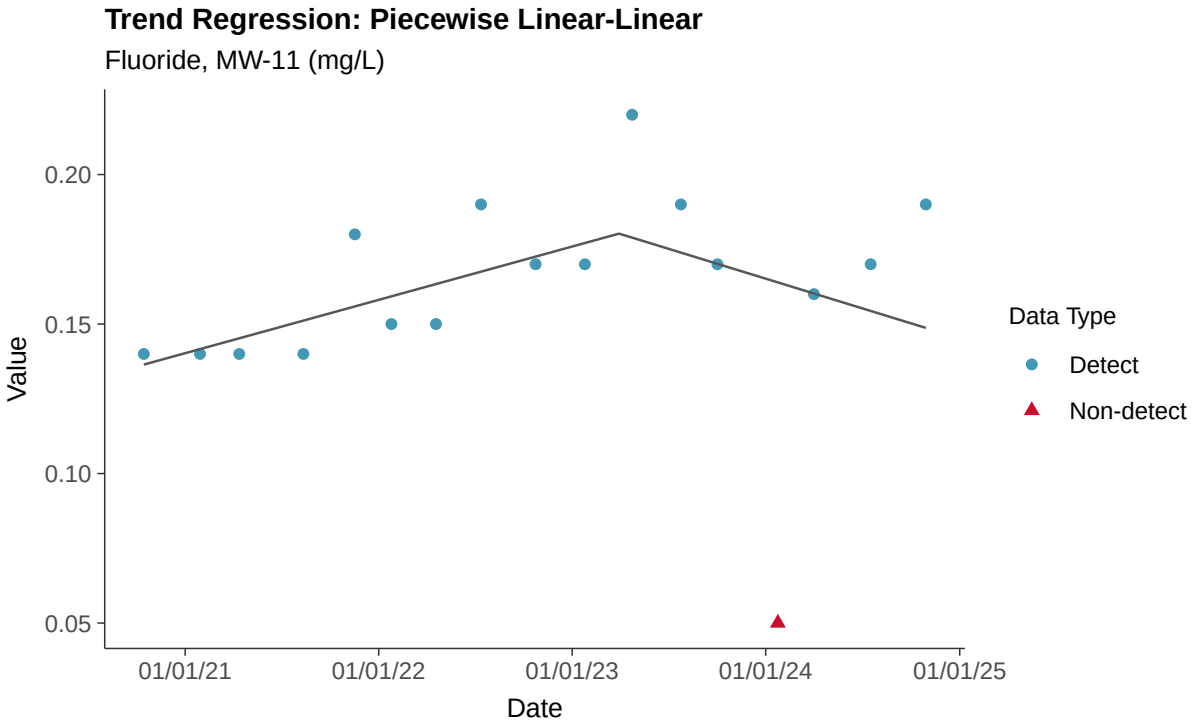
Fluoride, MW-11 (mg/L)



Trend Regression: Lognormal MLE

Fluoride, MW-11 (mg/L)



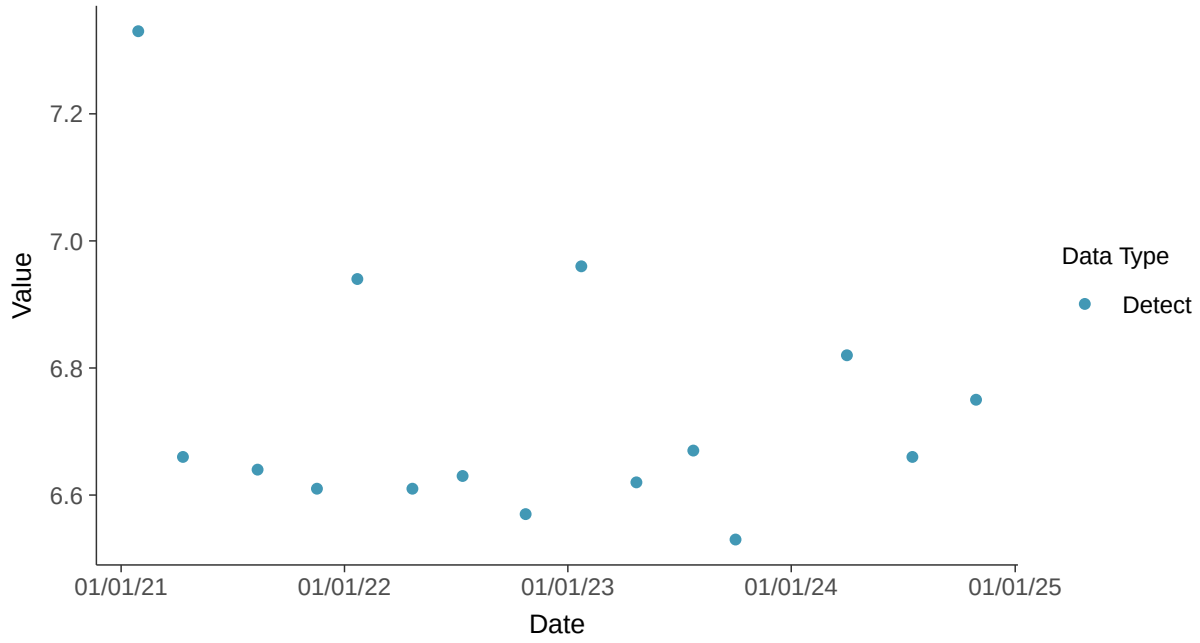

Trend Regression: Piecewise Linear-Linear
Fluoride, MW-11 (mg/L)
Value
0.20
0.15
0.10
0.05
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. III: pH (Field), MW-11

ID: 10_02_118

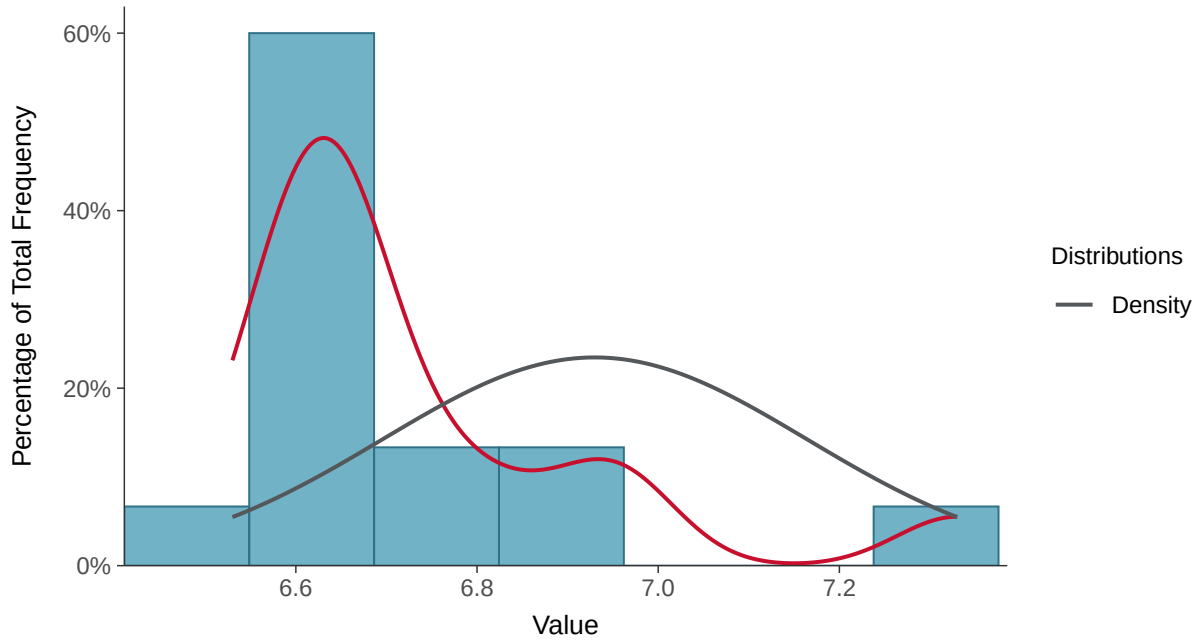
Scatter Plot

pH (Field), MW-11 (S.U.)



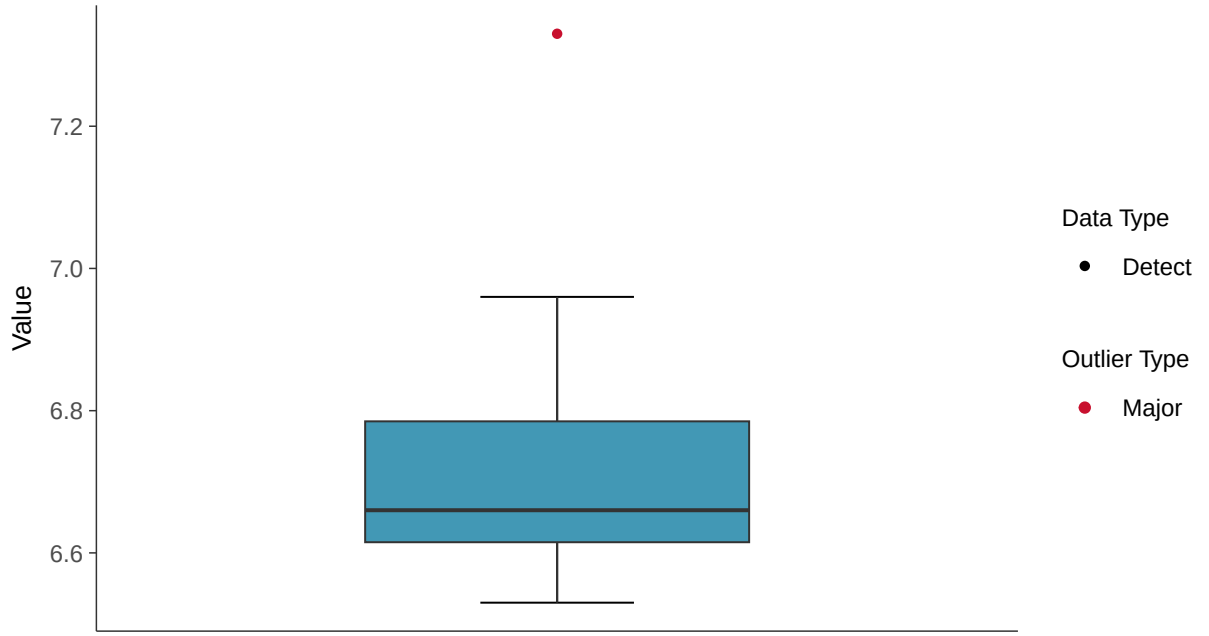
Histogram

pH (Field), MW-11 (S.U.)



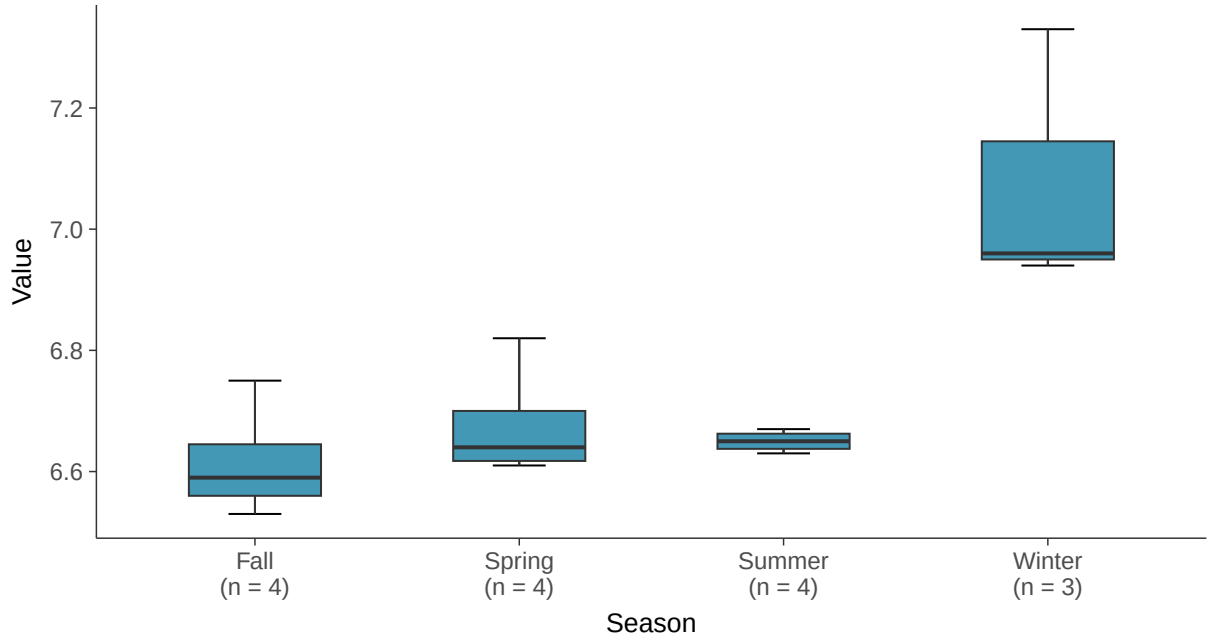
Boxplot

pH (Field), MW-11 (S.U.)



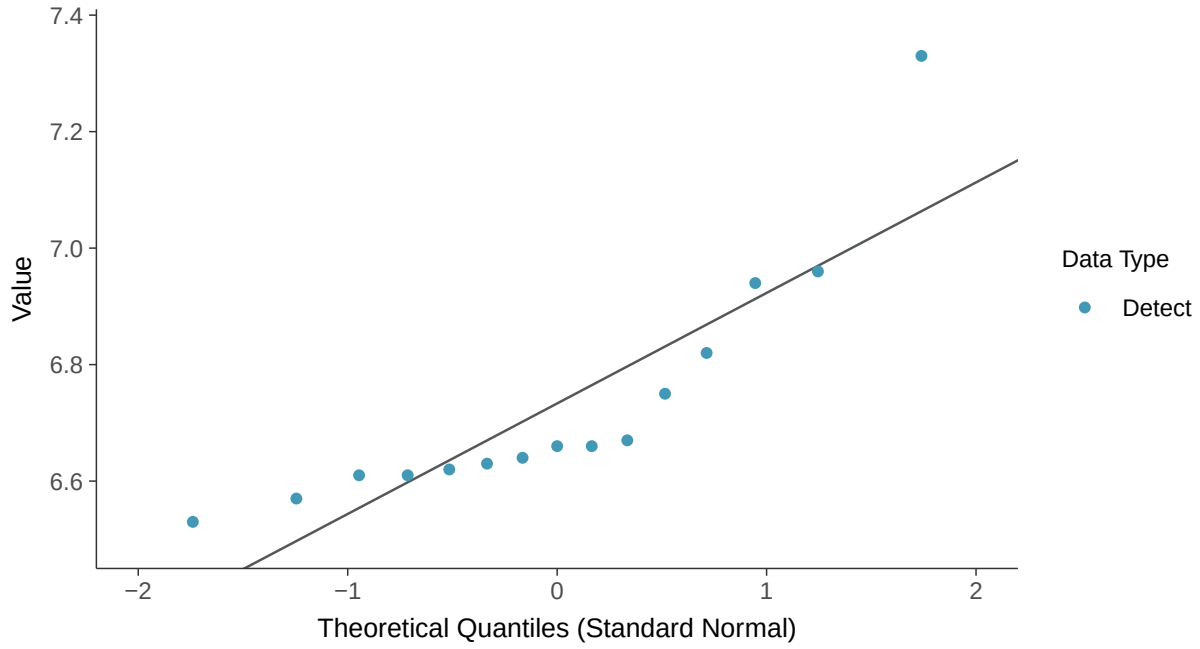
Boxplot by Season

pH (Field), MW-11 (S.U.)



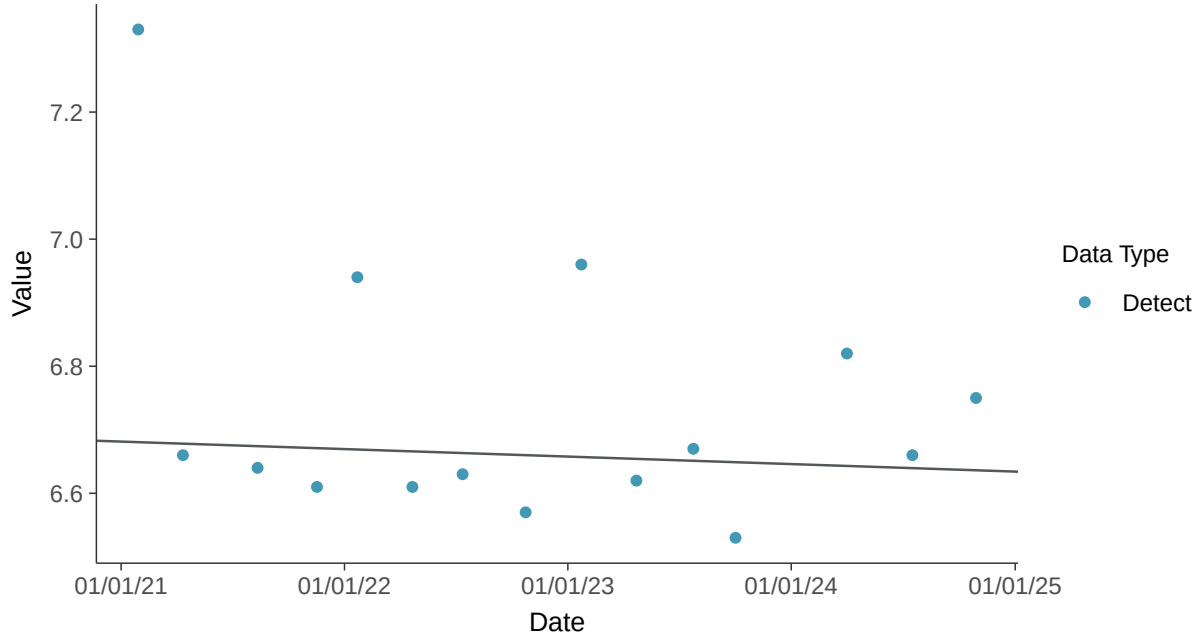
Normal Q-Q plot

pH (Field), MW-11 (S.U.)



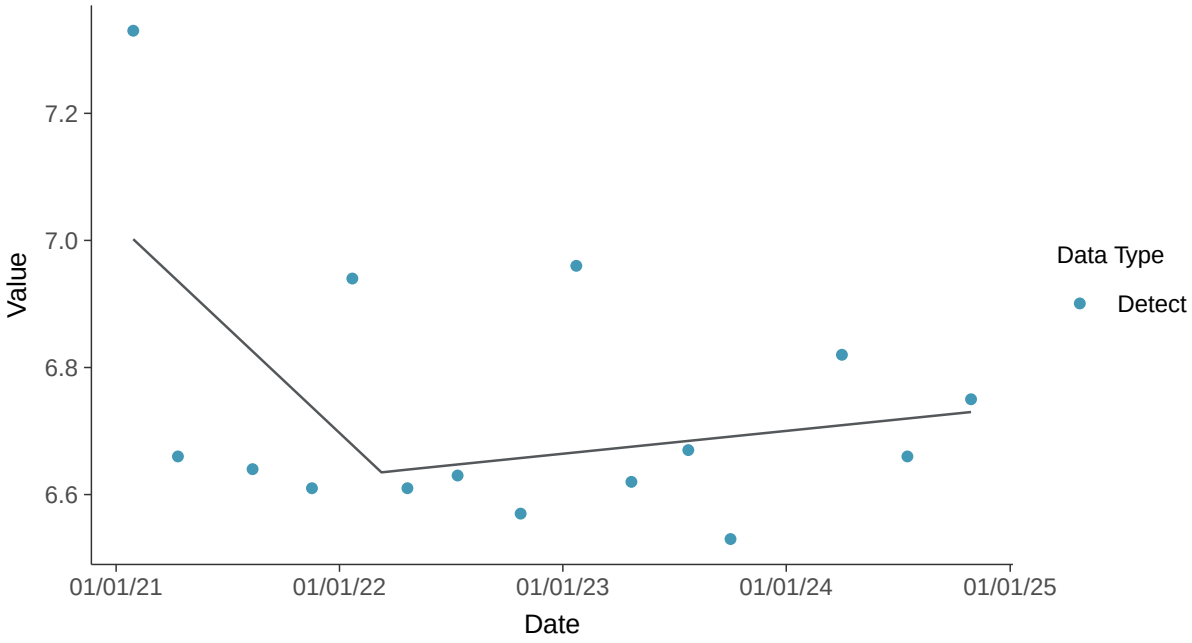
Trend Regression: Mann-Kendall/Theil-Sen Estimate

pH (Field), MW-11 (S.U.)



Trend Regression: Piecewise Linear-Linear

pH (Field), MW-11 (S.U.)

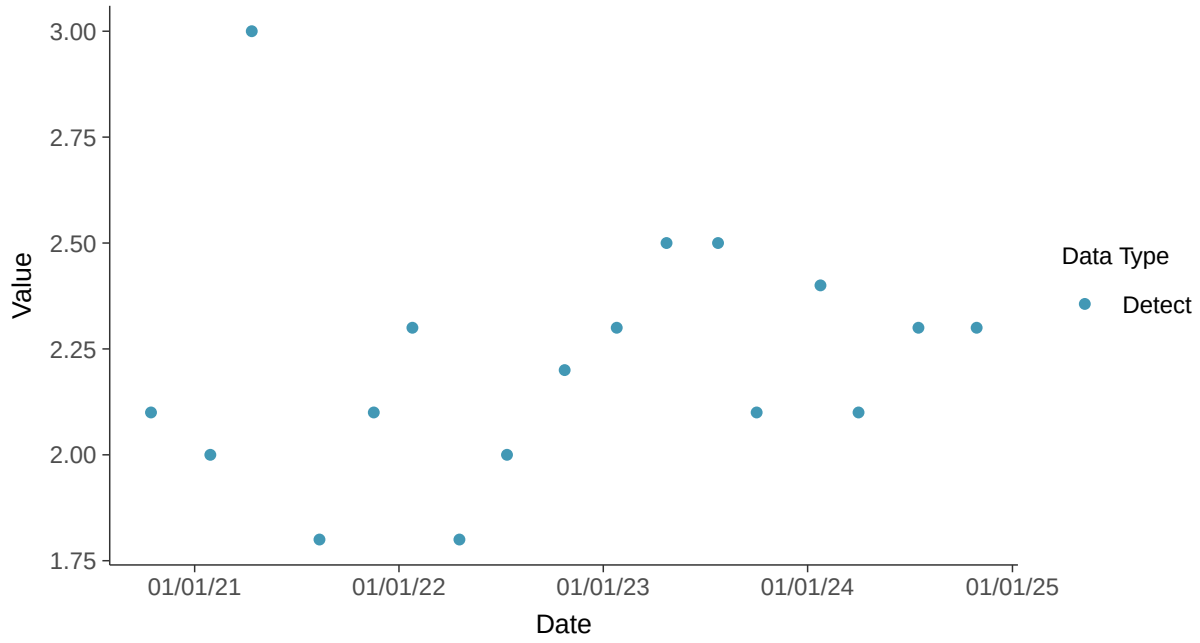


App. III: Sulfate, MW-11

ID: 10_02_123

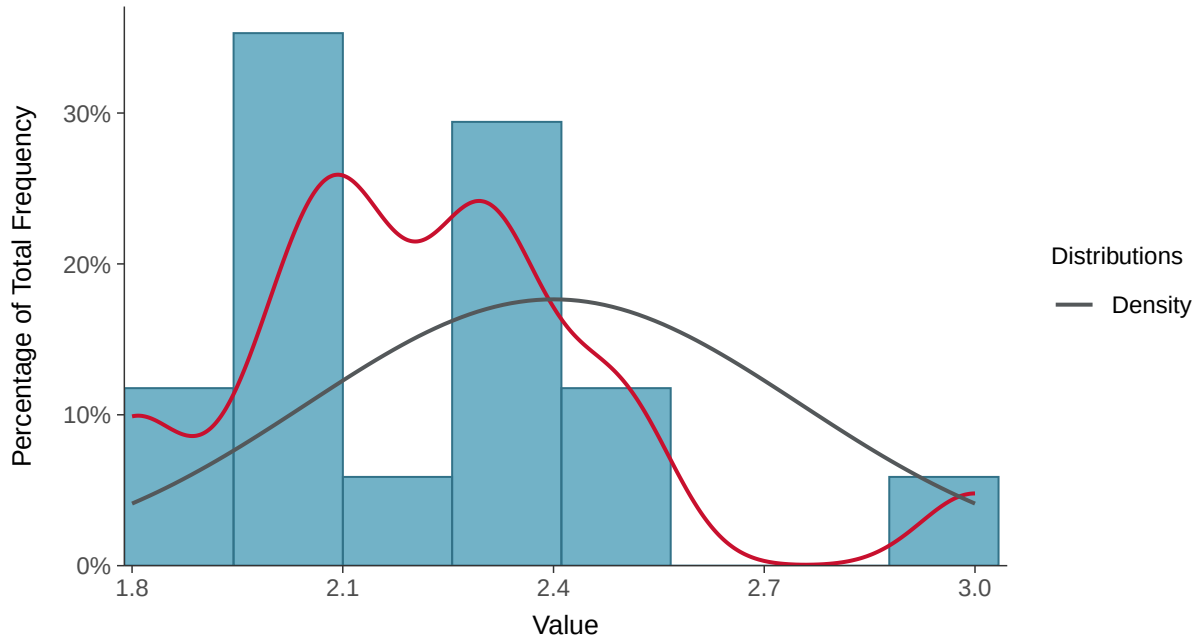
Scatter Plot

Sulfate, MW-11 (mg/L)



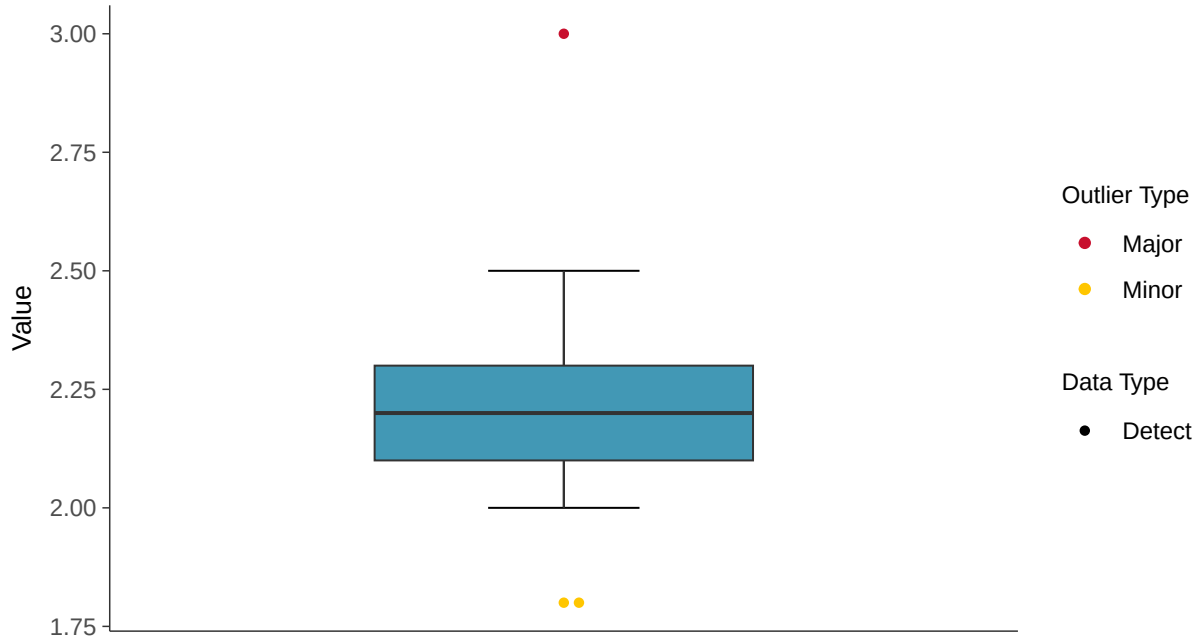
Histogram

Sulfate, MW-11 (mg/L)



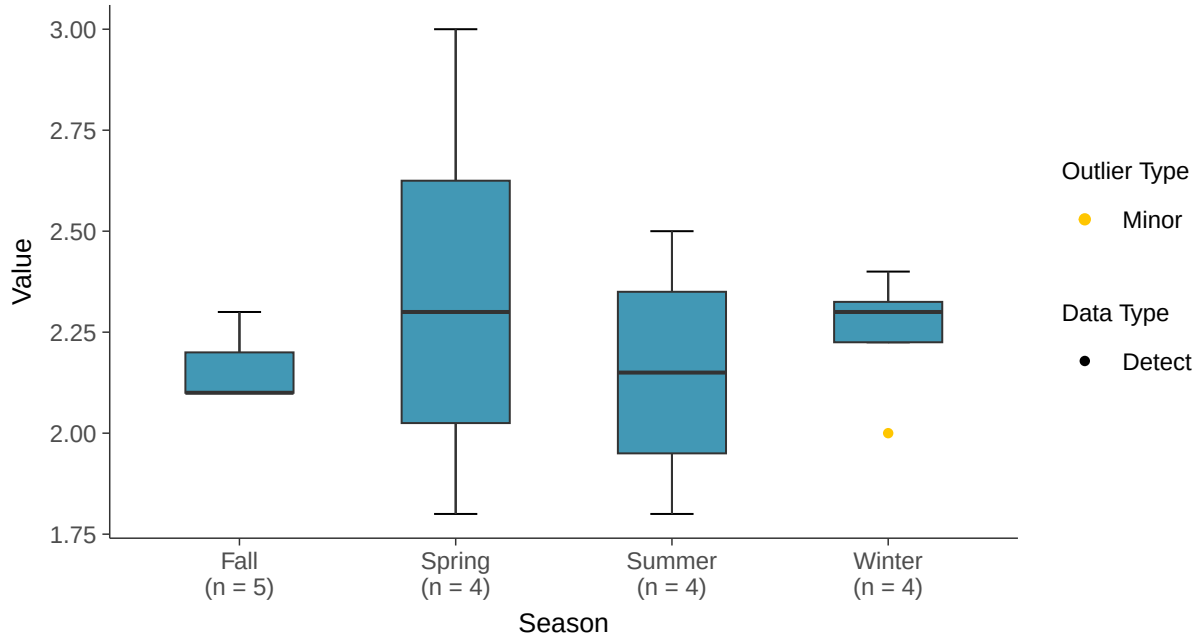
Boxplot

Sulfate, MW-11 (mg/L)



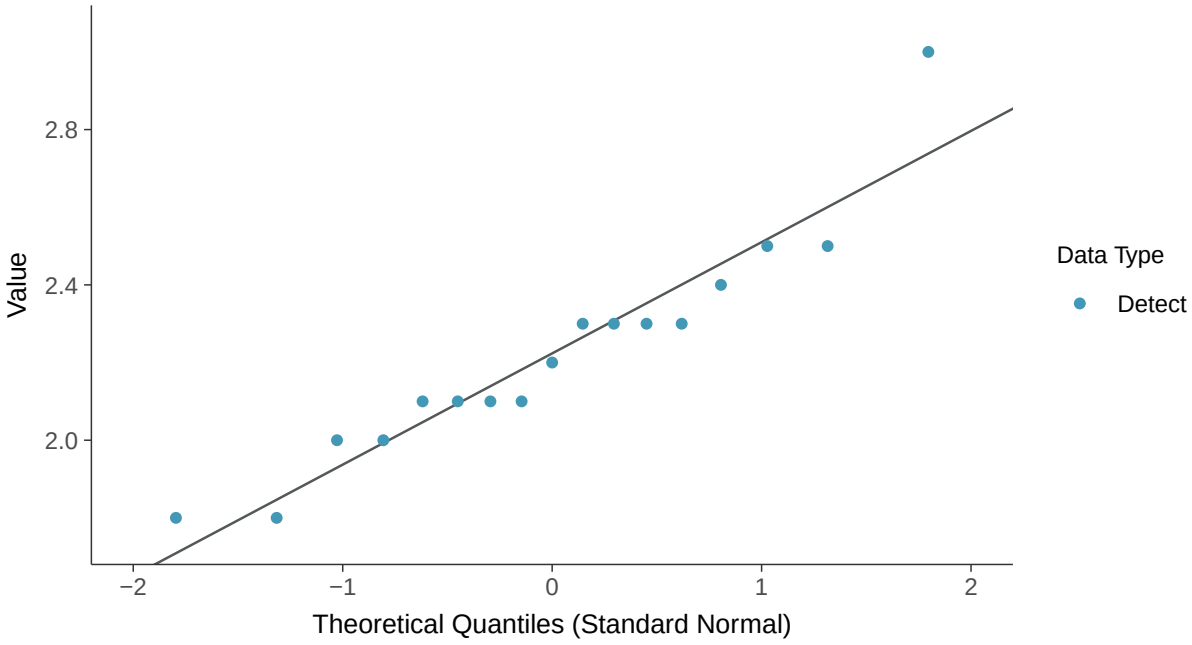
Boxplot by Season

Sulfate, MW-11 (mg/L)



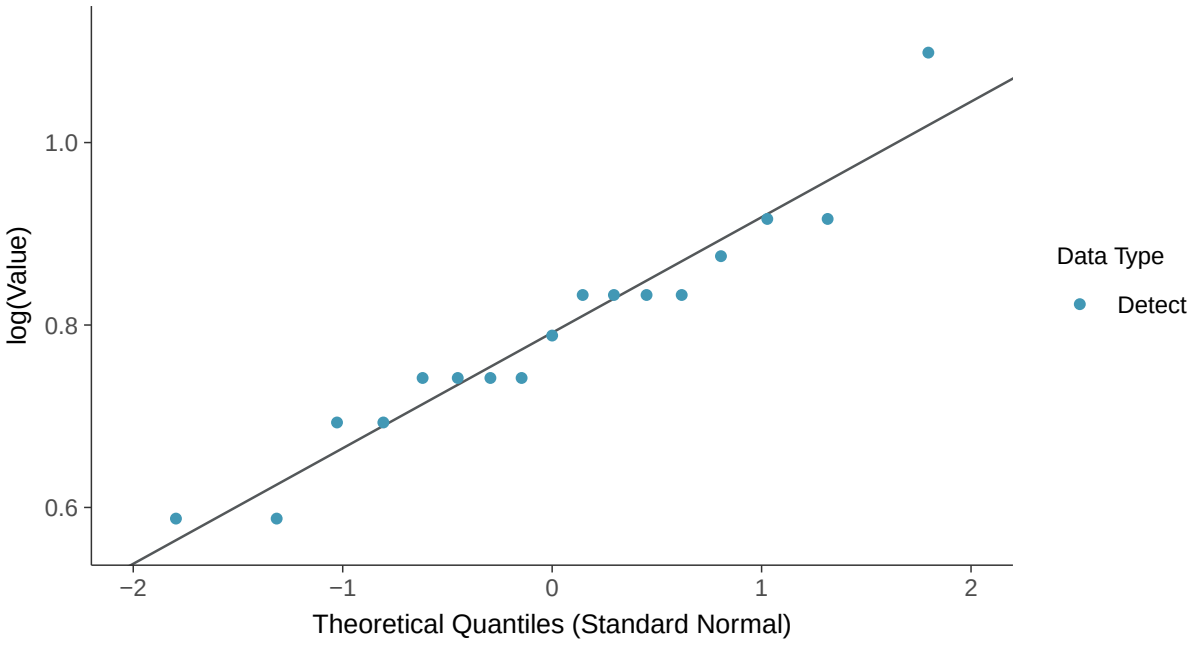
Normal Q-Q plot

Sulfate, MW-11 (mg/L)



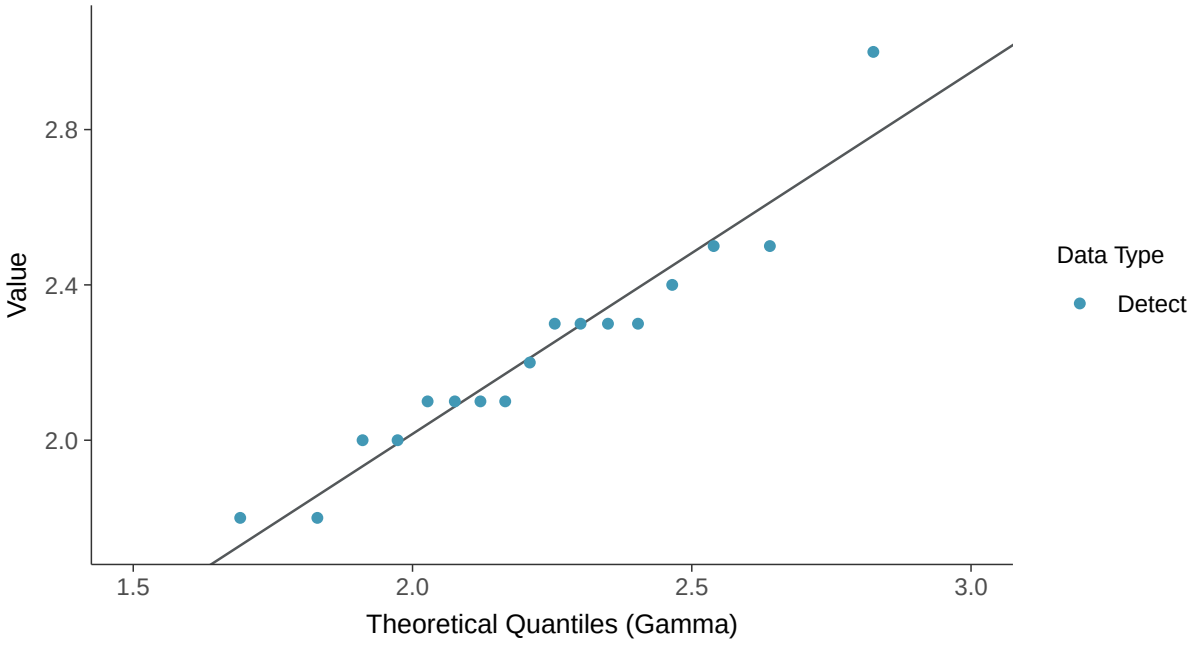
Lognormal Q-Q plot

Sulfate, MW-11 (mg/L)



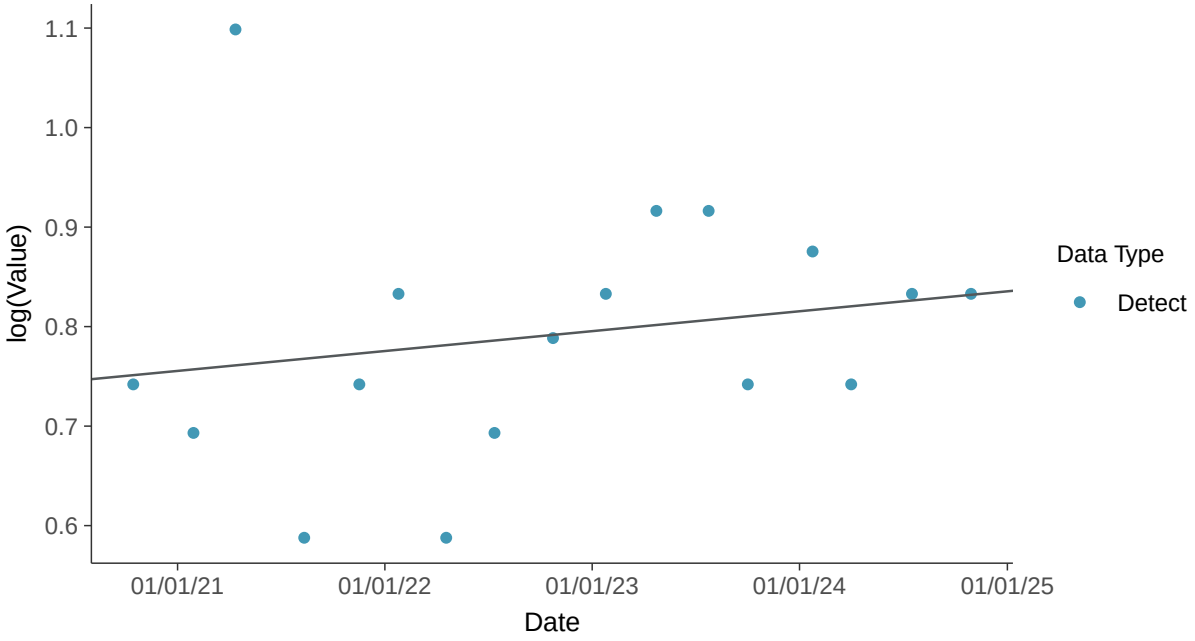
Gamma Q-Q plot

Sulfate, MW-11 (mg/L)



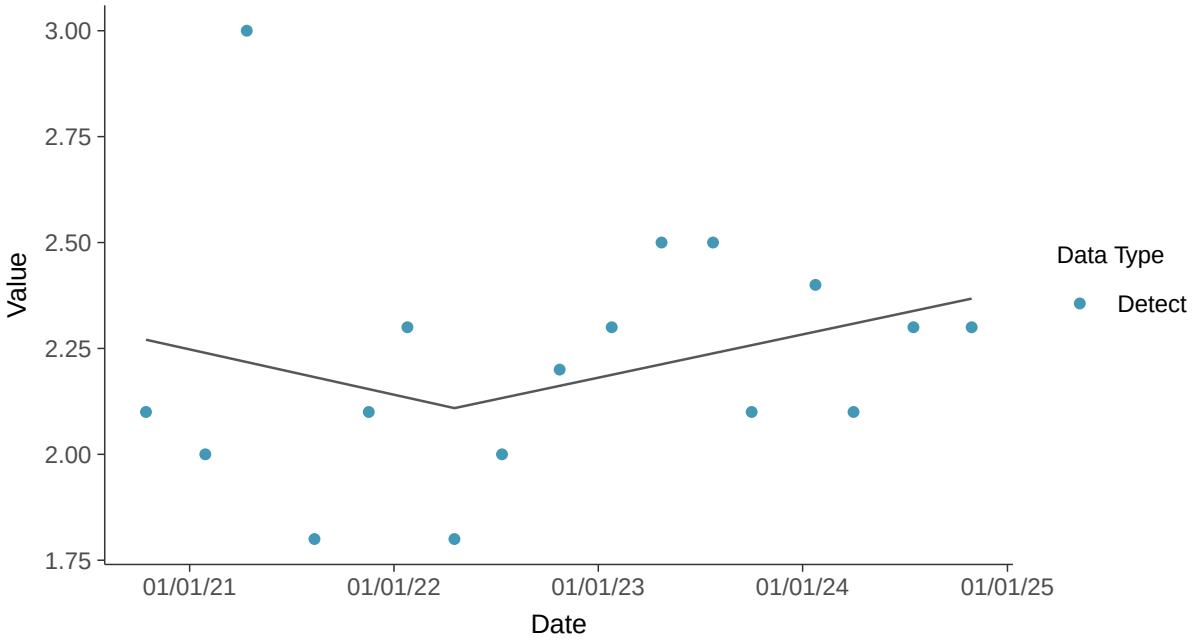
Trend Regression: Lognormal MLE

Sulfate, MW-11 (mg/L)



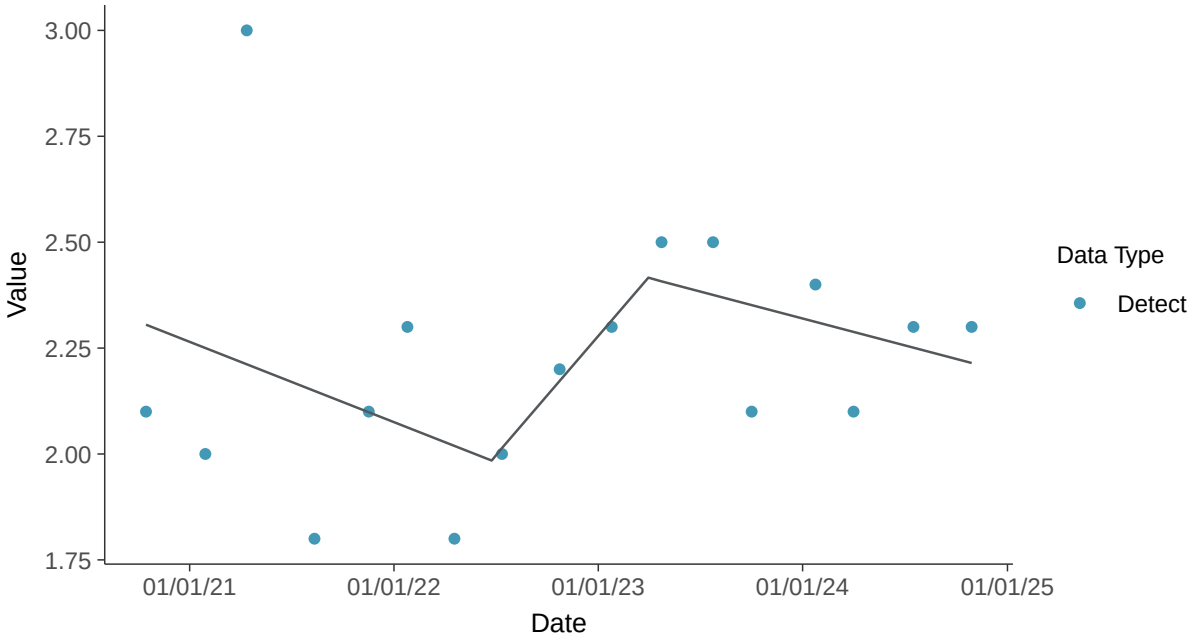
Trend Regression: Piecewise Linear-Linear

Sulfate, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Sulfate, MW-11 (mg/L)

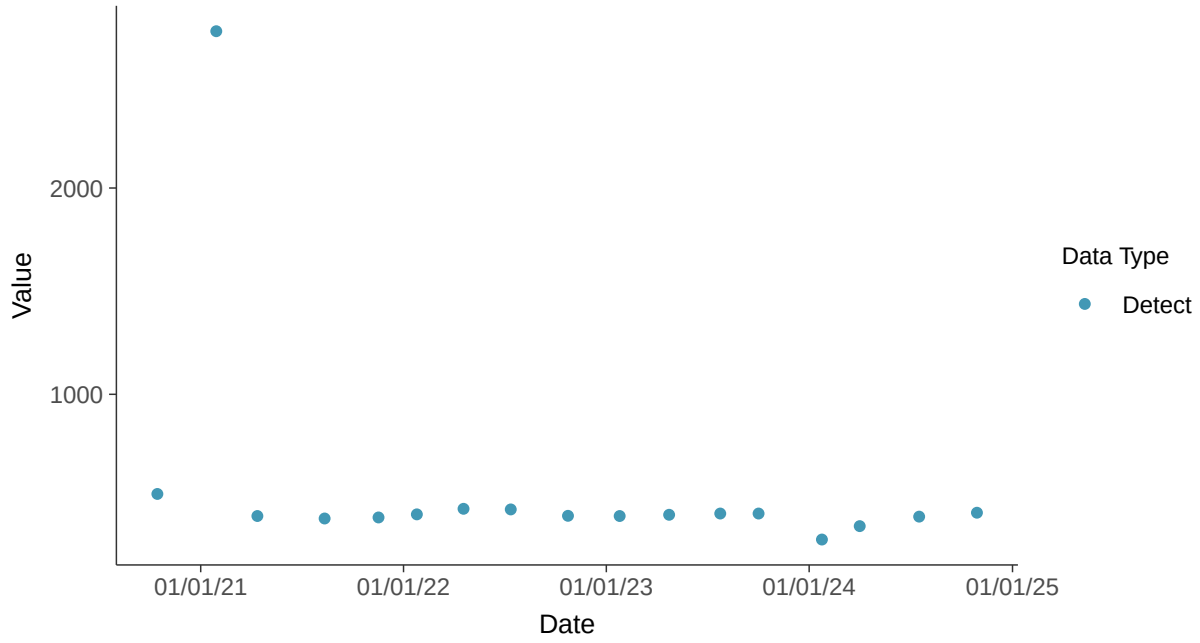


App. III: Total Dissolved Solids, MW-11

ID: 10_02_125

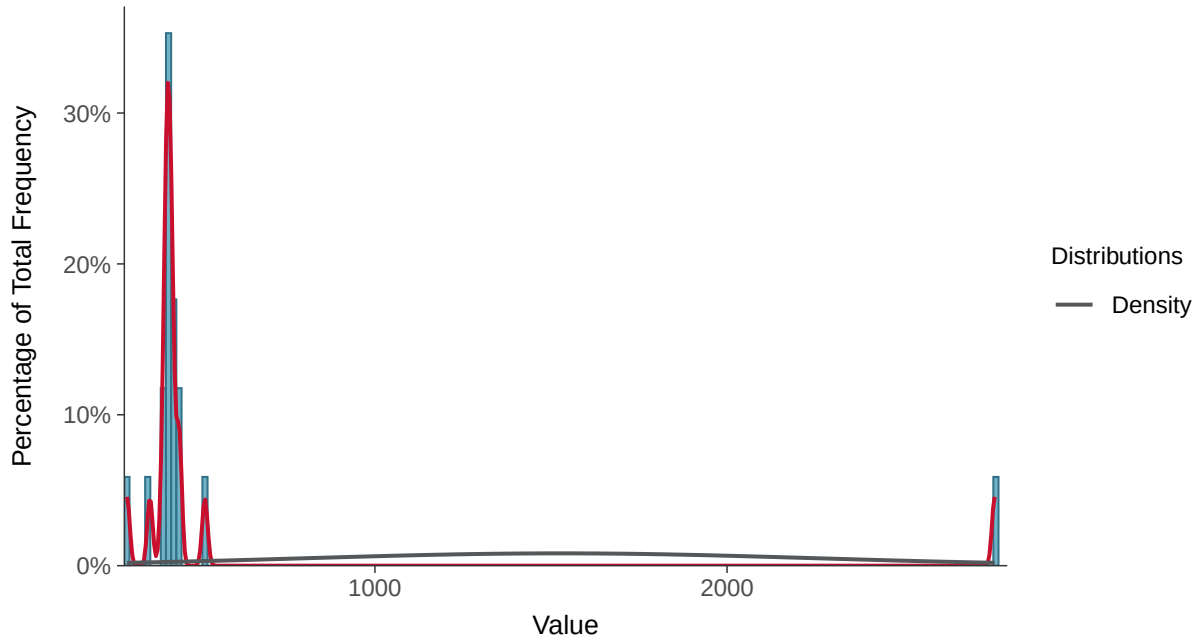
Scatter Plot

Total Dissolved Solids, MW-11 (mg/L)



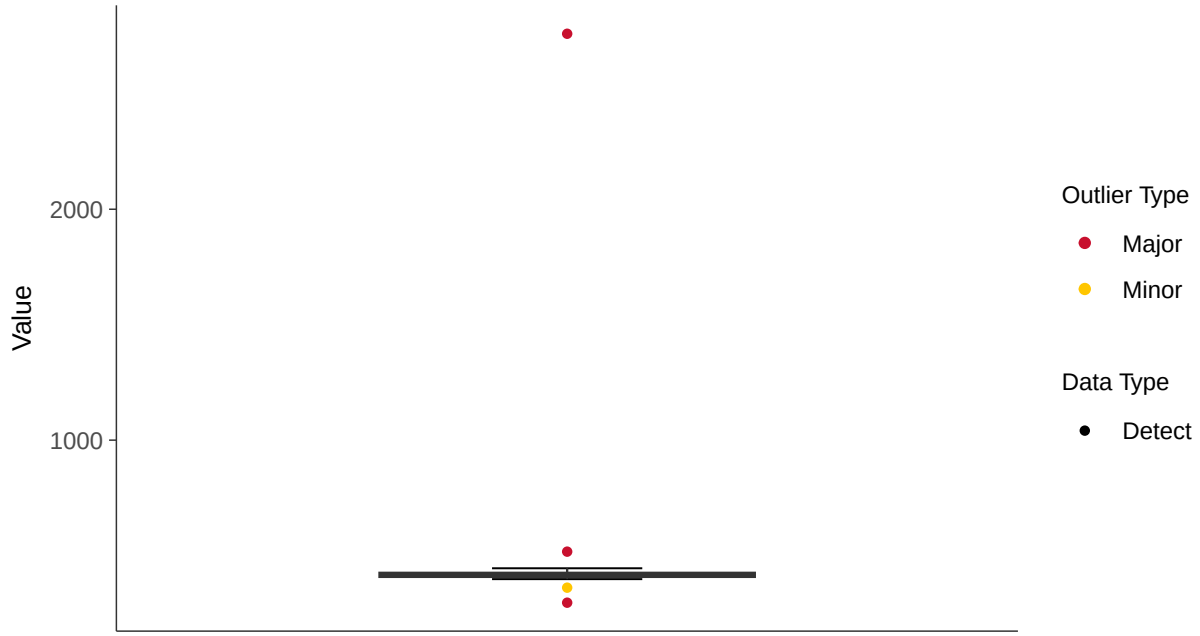
Histogram

Total Dissolved Solids, MW-11 (mg/L)



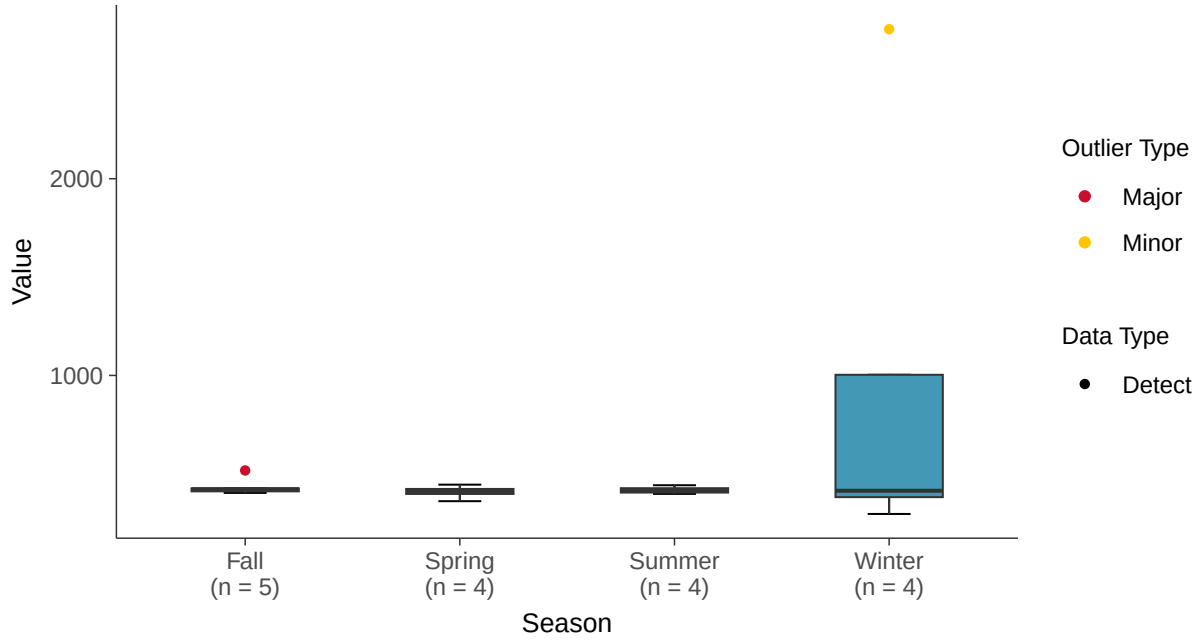
Boxplot

Total Dissolved Solids, MW-11 (mg/L)



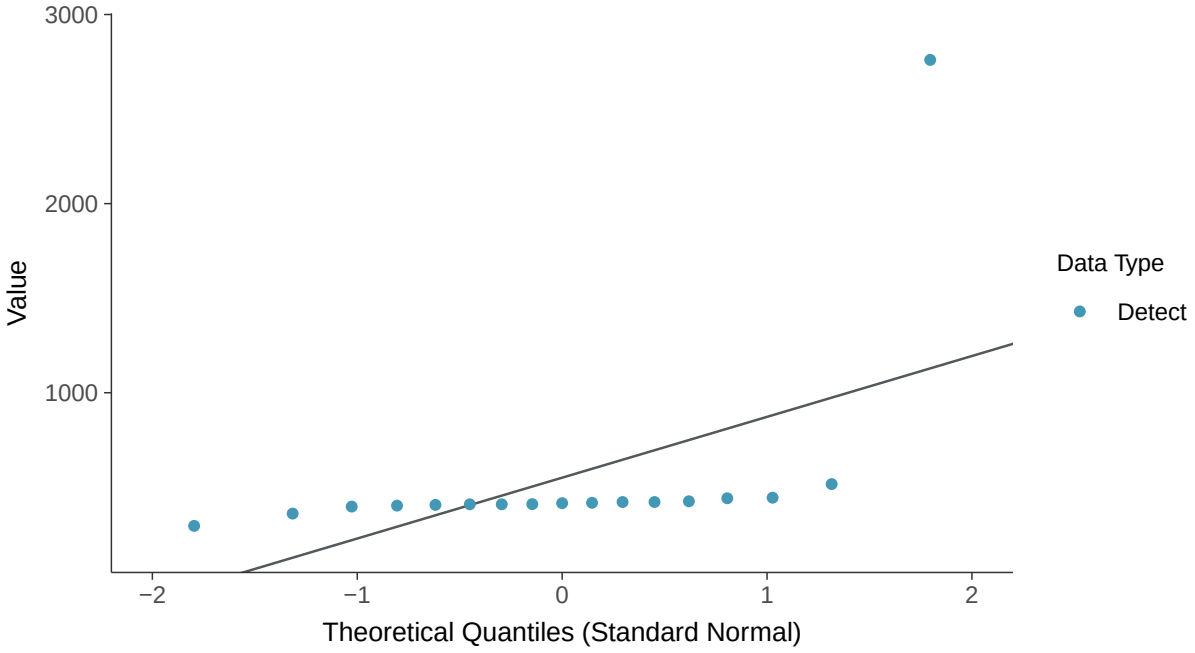
Boxplot by Season

Total Dissolved Solids, MW-11 (mg/L)



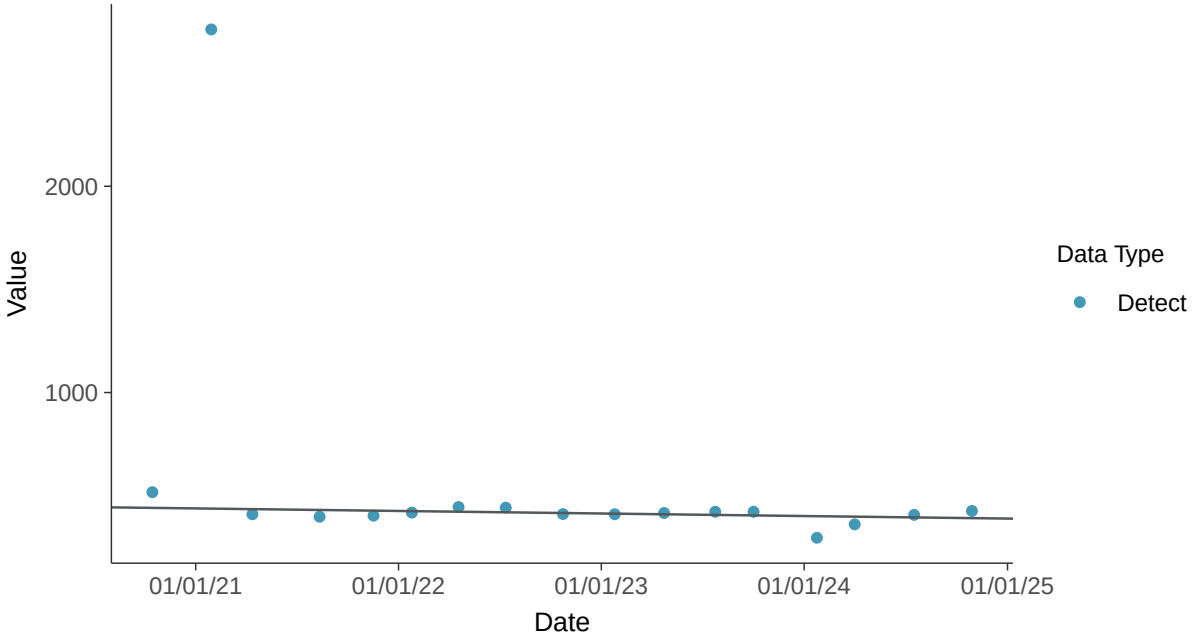
Normal Q-Q plot

Total Dissolved Solids, MW-11 (mg/L)



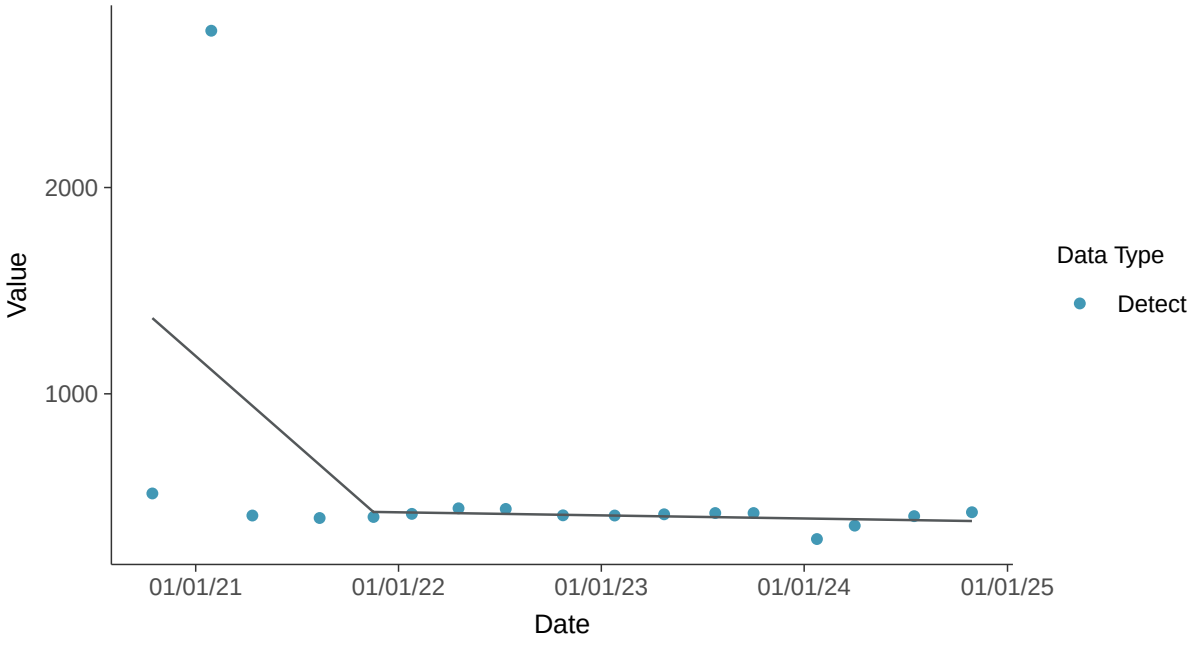
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Dissolved Solids, MW-11 (mg/L)



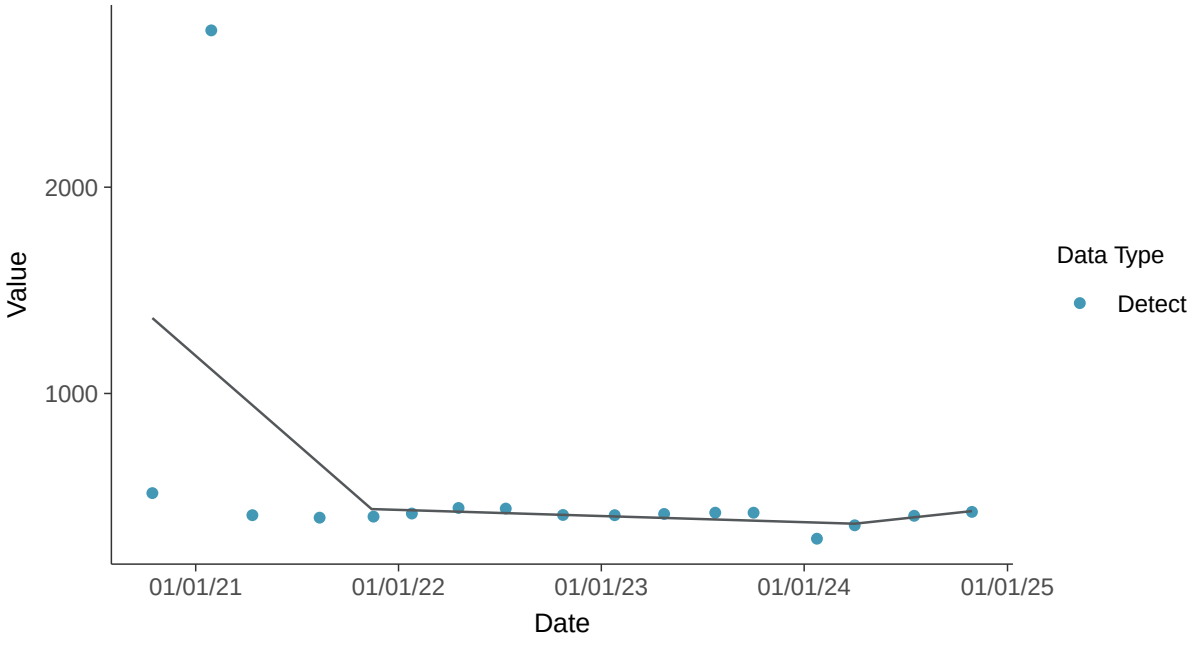
Trend Regression: Piecewise Linear-Linear

Total Dissolved Solids, MW-11 (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Dissolved Solids, MW-11 (mg/L)

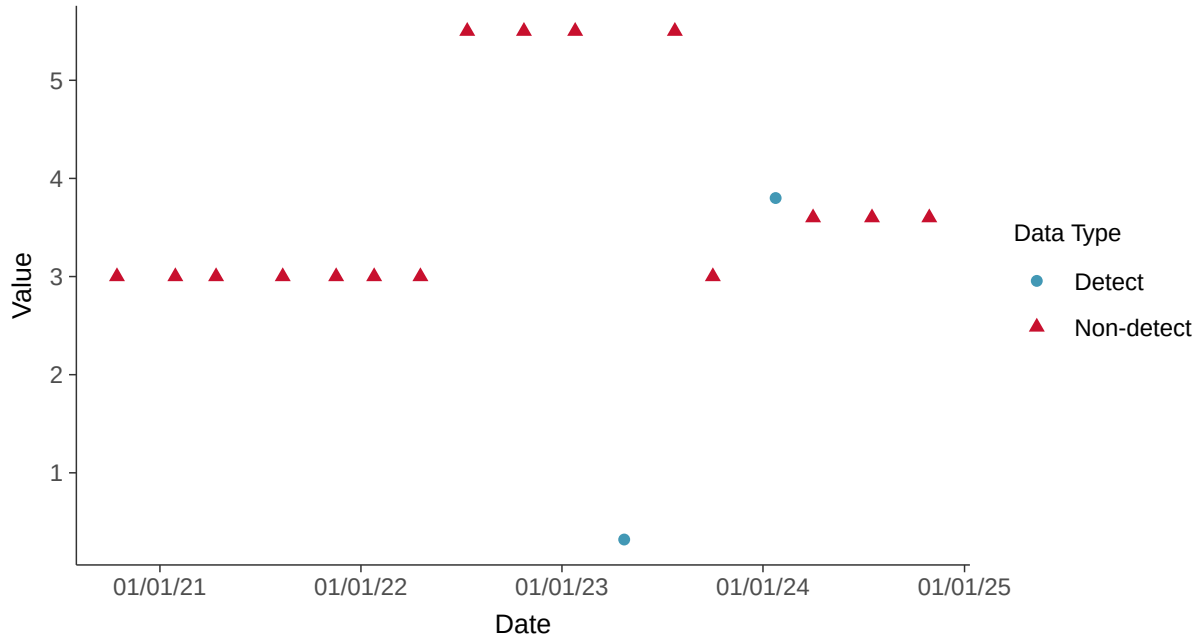


App. IV: Antimony, MW-11

ID: 10_03_101

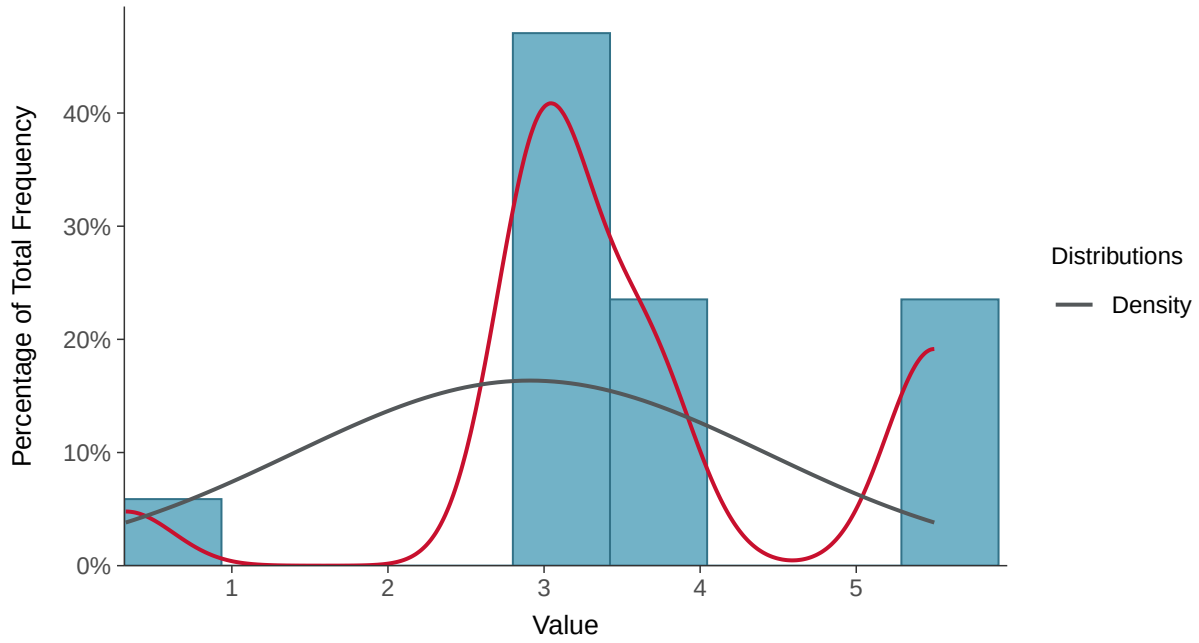
Scatter Plot

Antimony, MW-11 (ug/L)



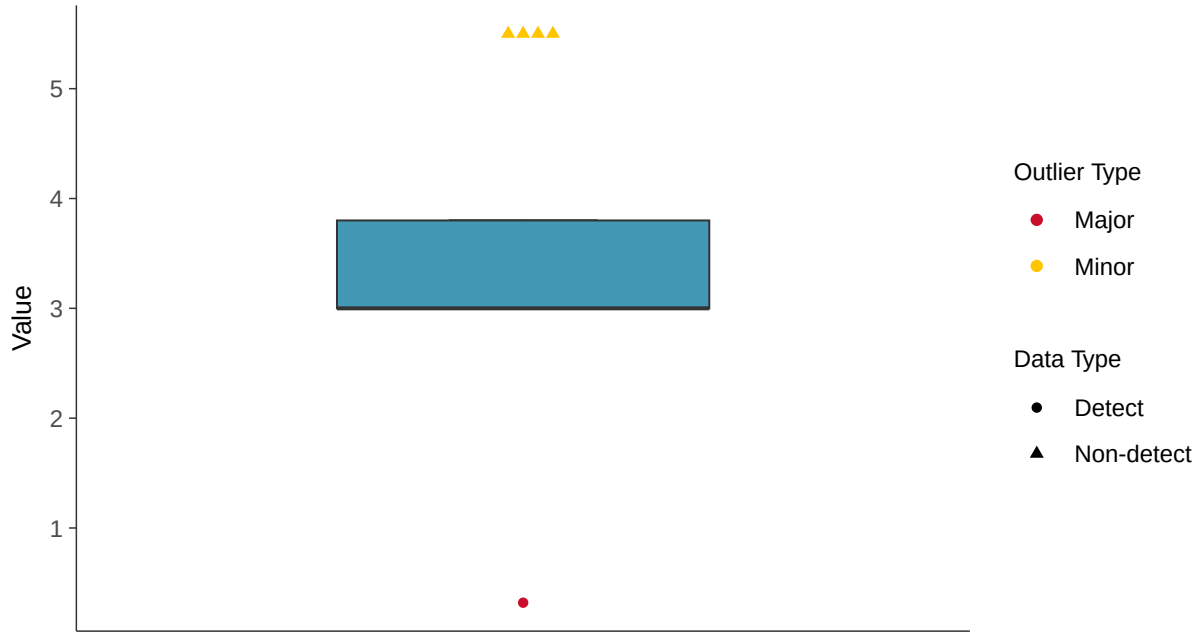
Histogram

Antimony, MW-11 (ug/L)



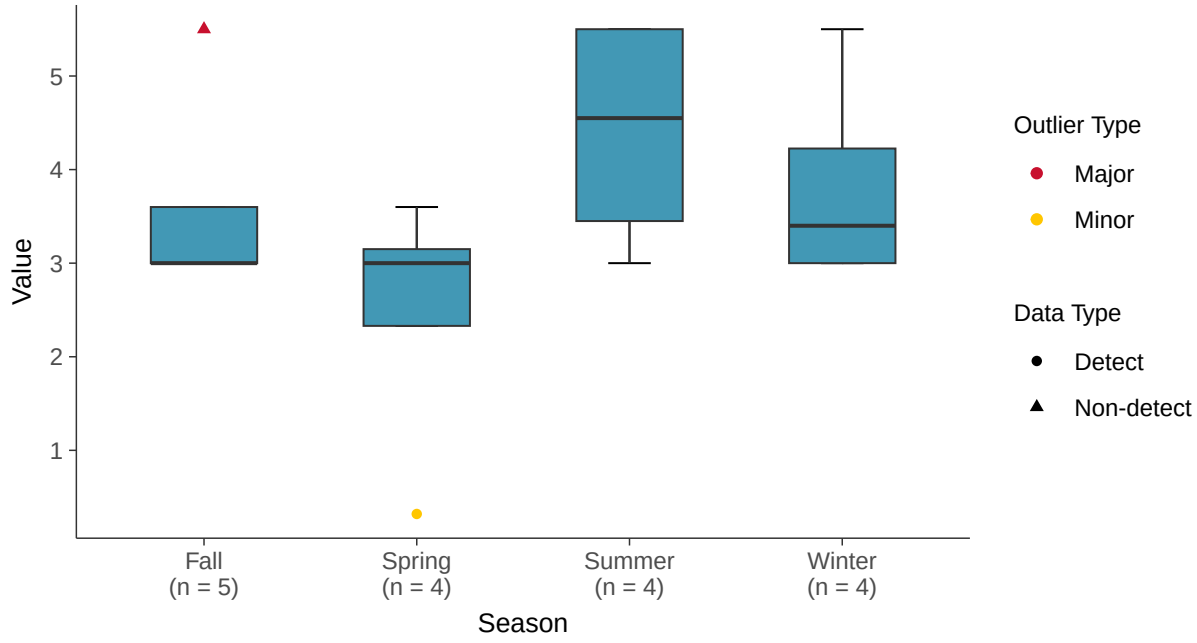
Boxplot

Antimony, MW-11 (ug/L)



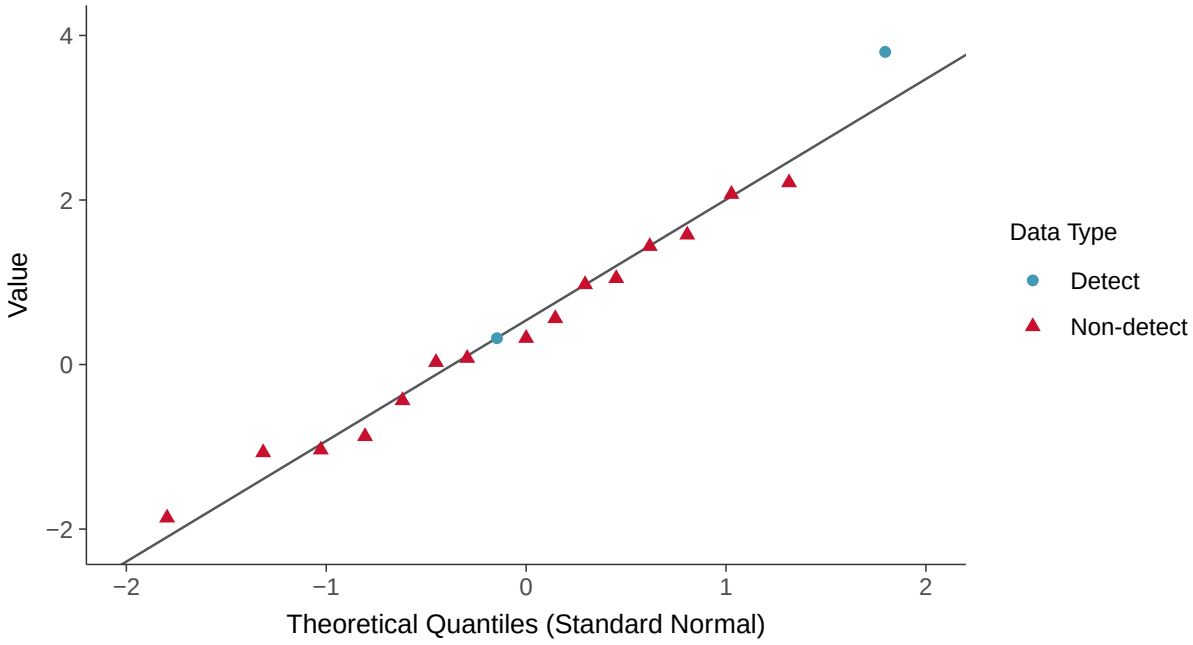
Boxplot by Season

Antimony, MW-11 (ug/L)



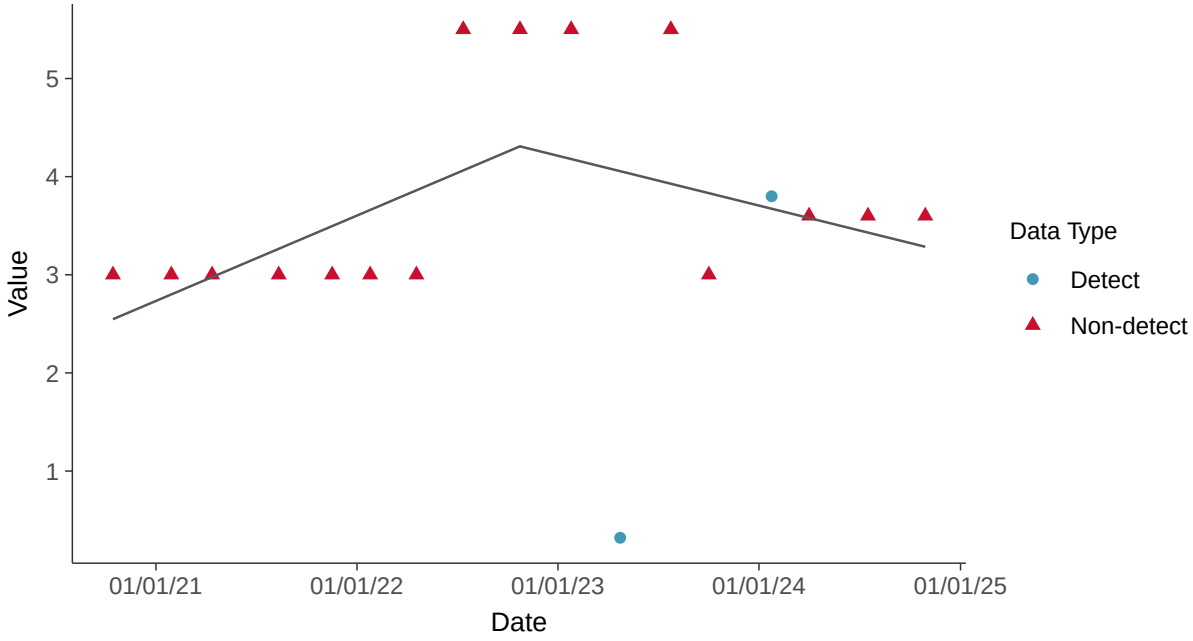
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11 (ug/L)



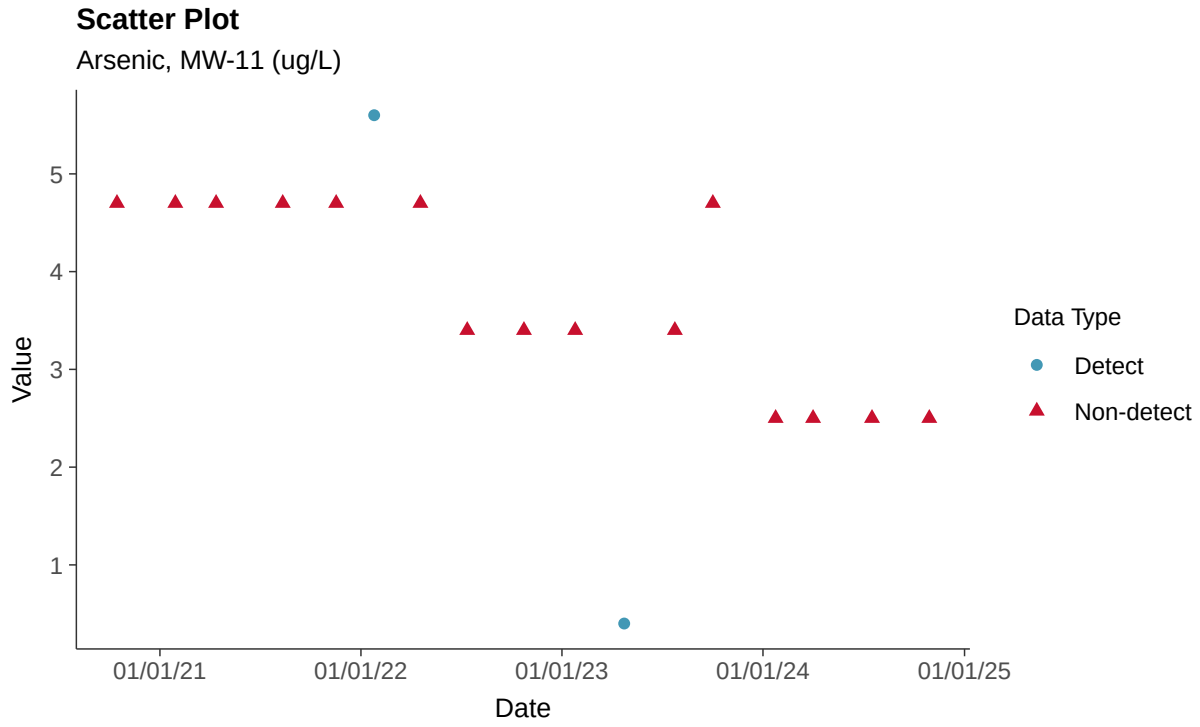
Trend Regression: Piecewise Linear-Linear

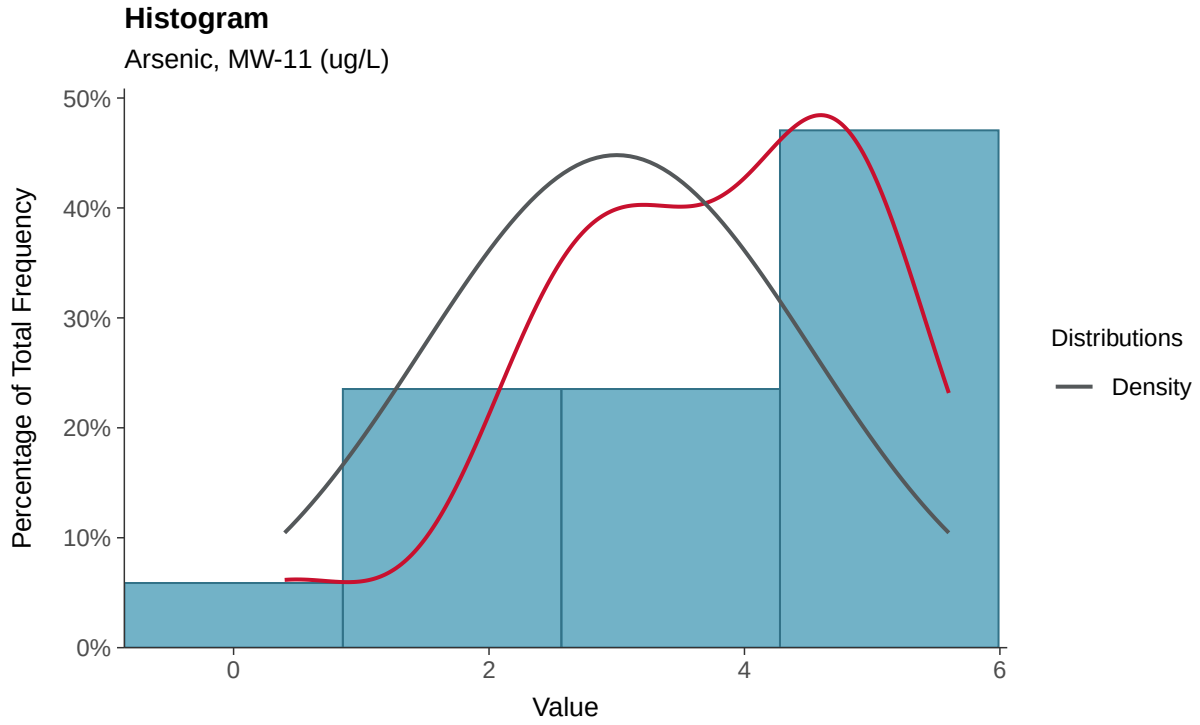
Antimony, MW-11 (ug/L)



App. IV: Arsenic, MW-11

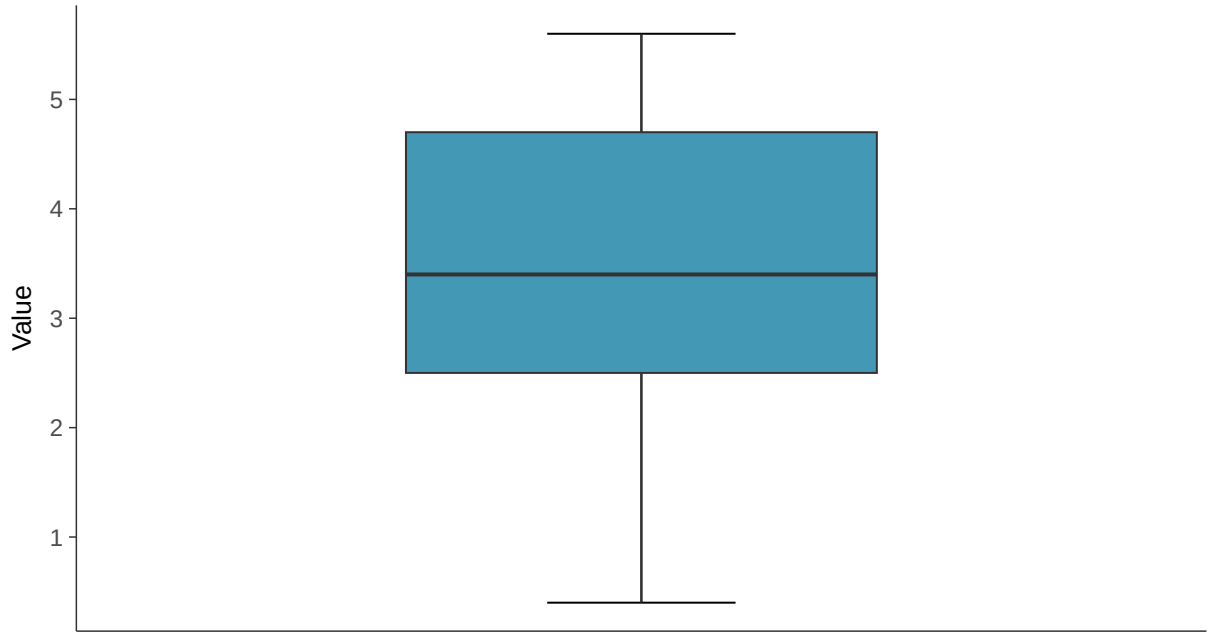
ID: 10_03_102





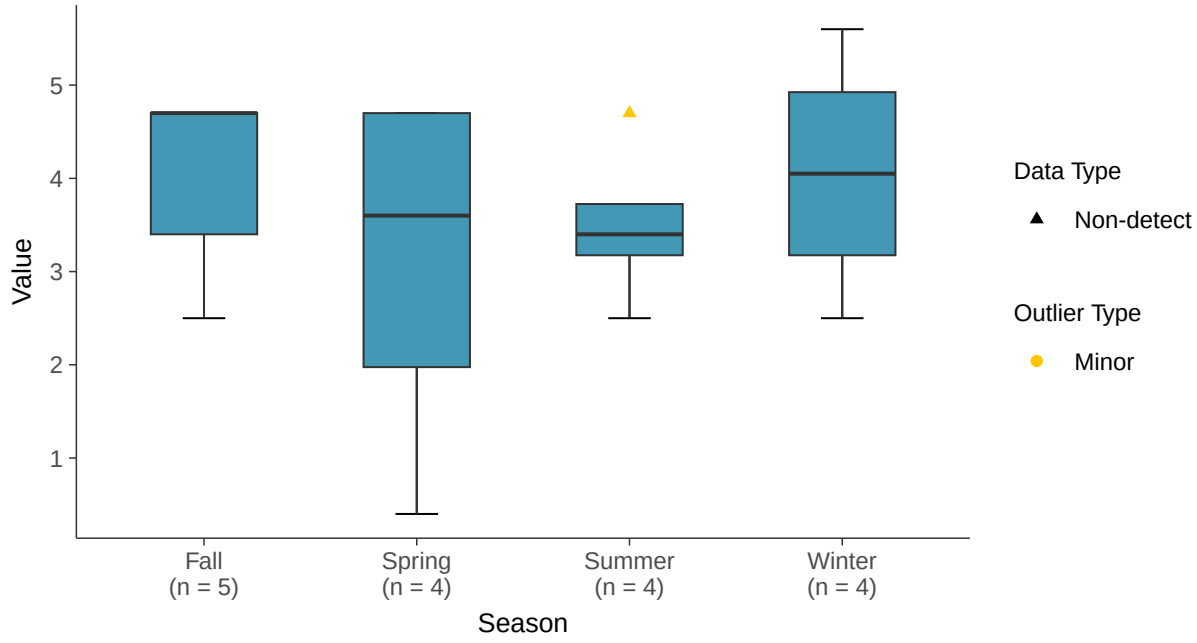
Boxplot

Arsenic, MW-11 (ug/L)



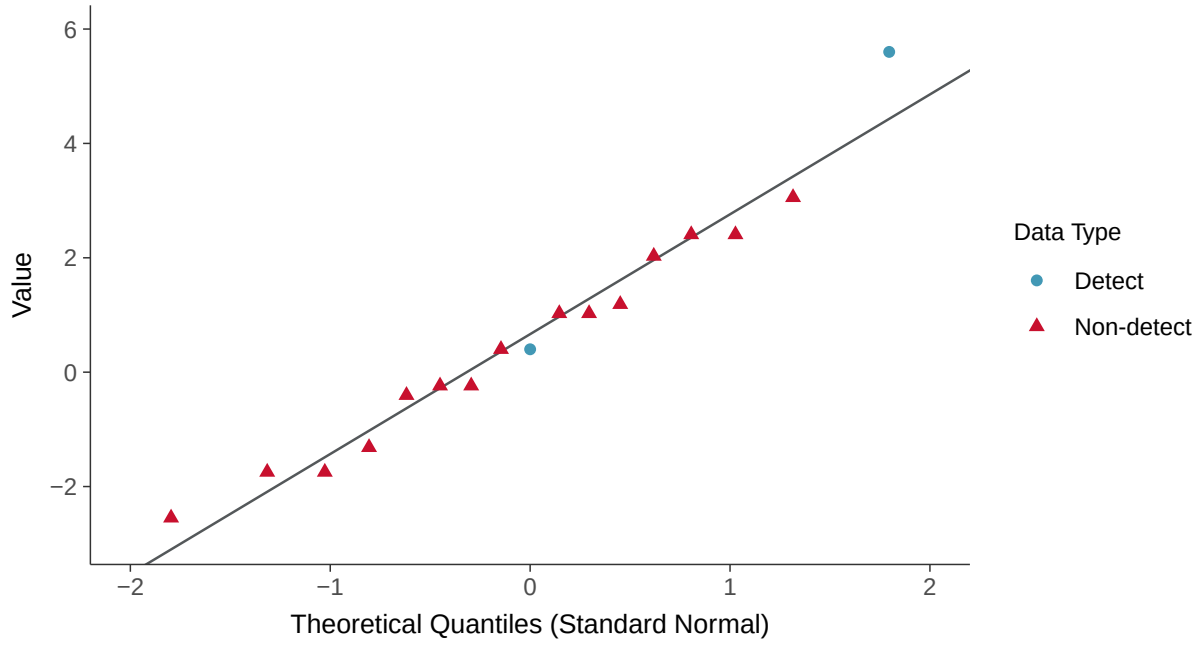
Boxplot by Season

Arsenic, MW-11 (ug/L)



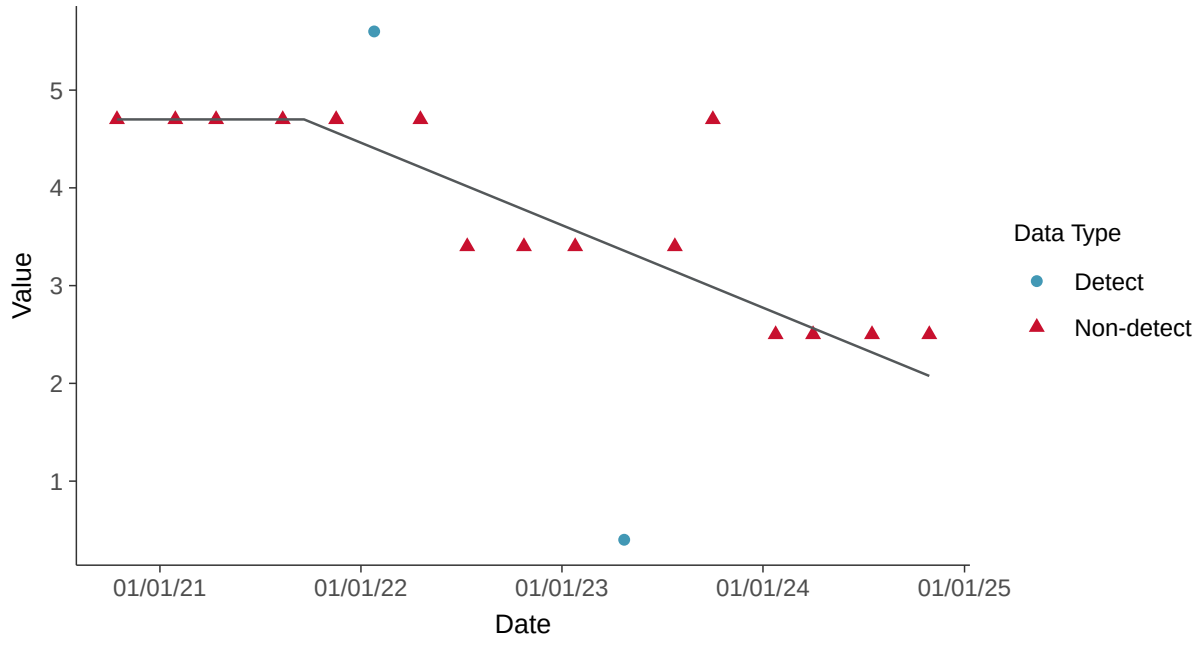
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11 (ug/L)



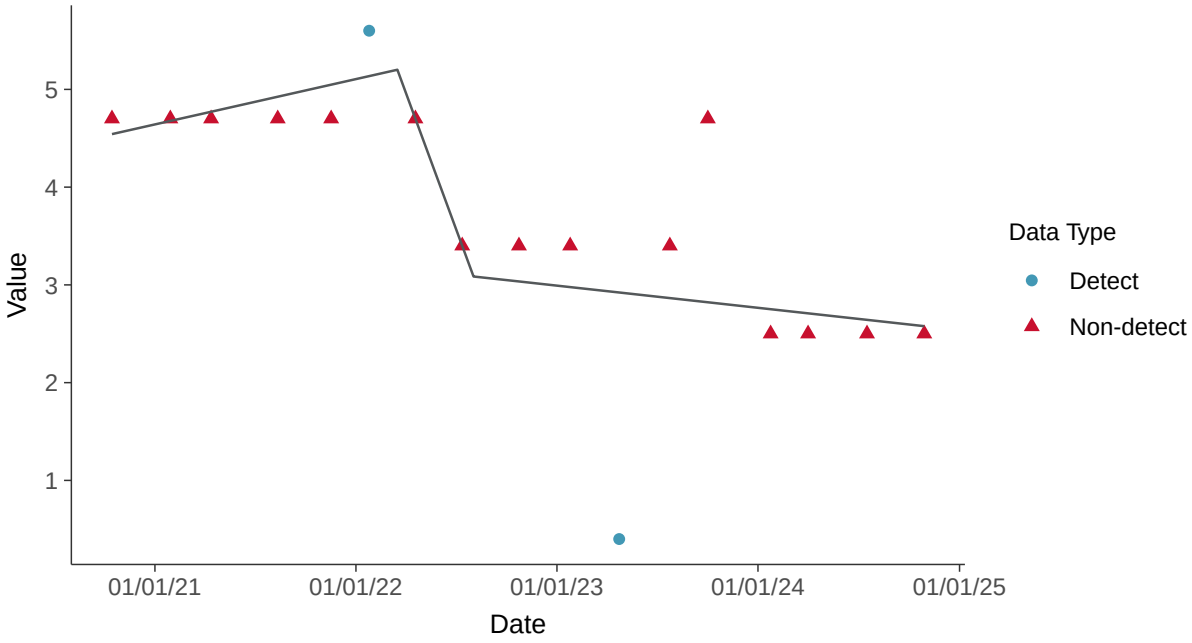
Trend Regression: Piecewise Linear-Linear

Arsenic, MW-11 (ug/L)



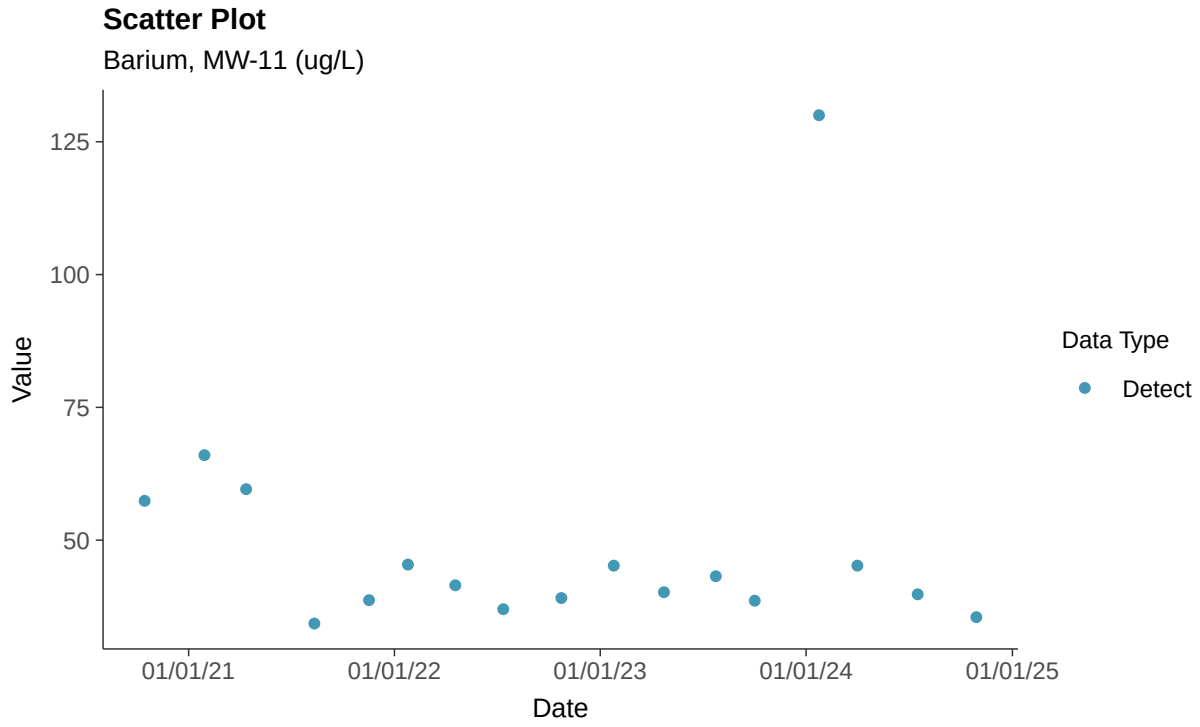
Trend Regression: Piecewise Linear-Linear-Linear

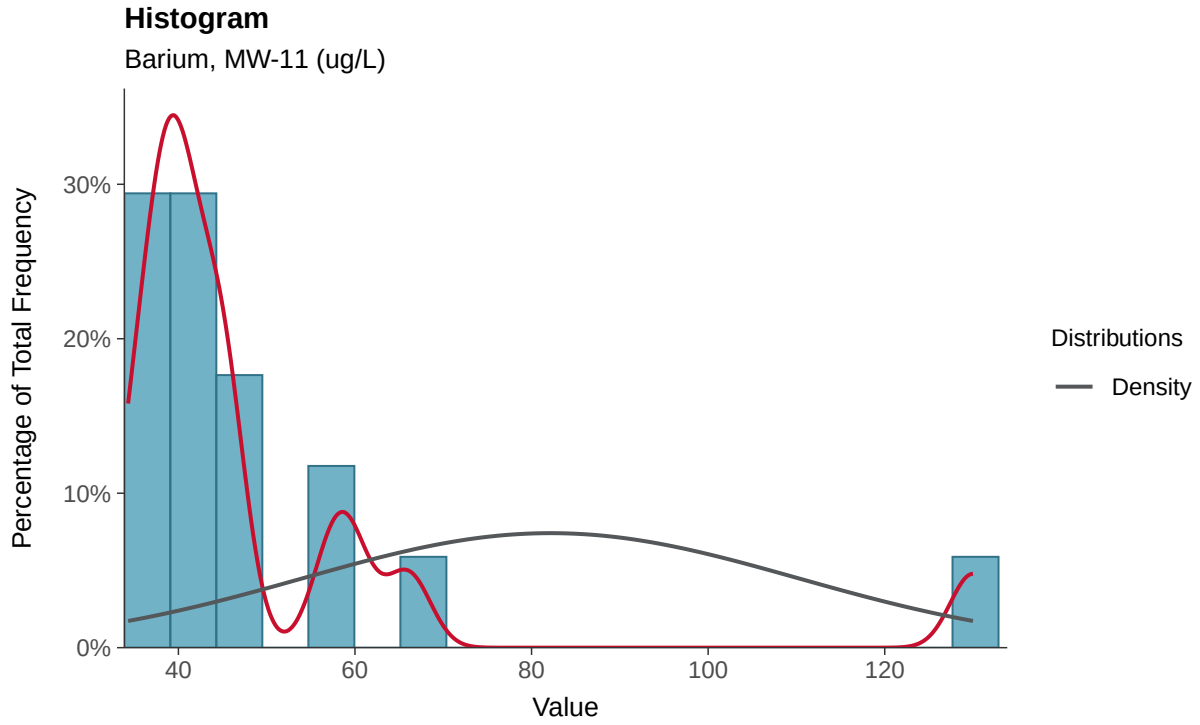
Arsenic, MW-11 (ug/L)



App. IV: Barium, MW-11

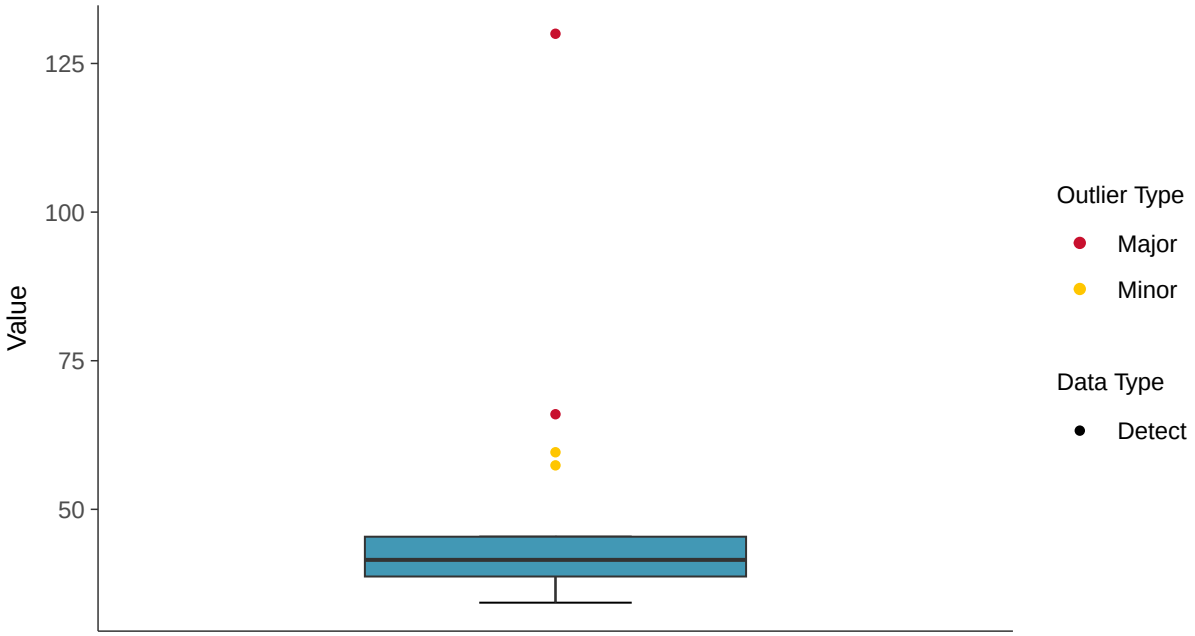
ID: 10_03_103





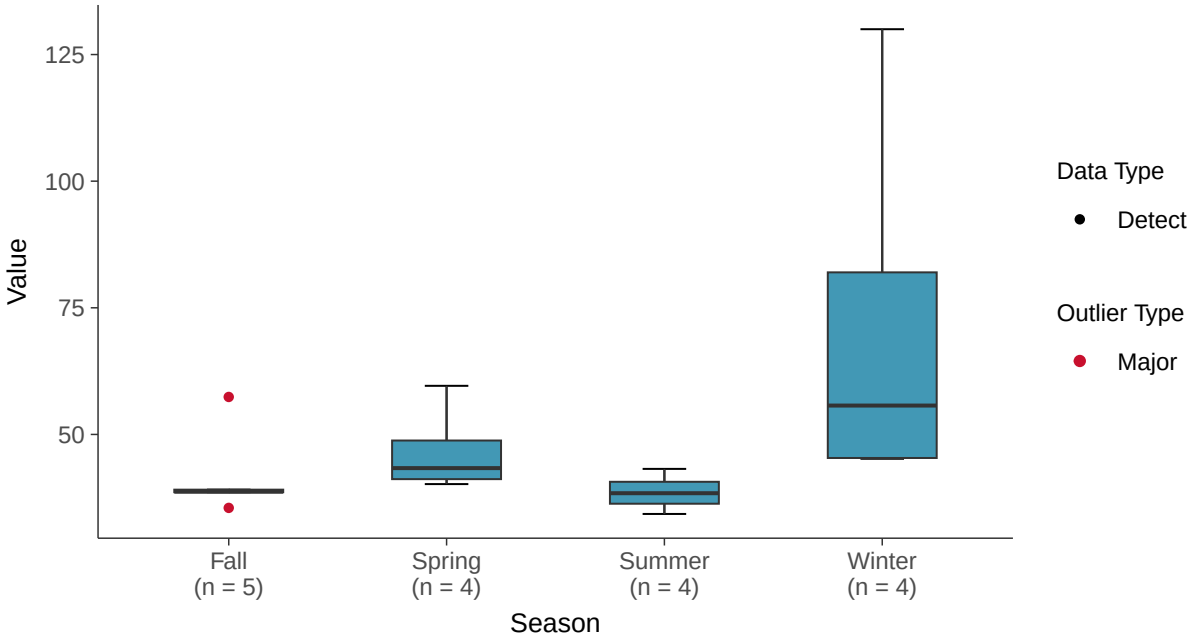
Boxplot

Barium, MW-11 (ug/L)



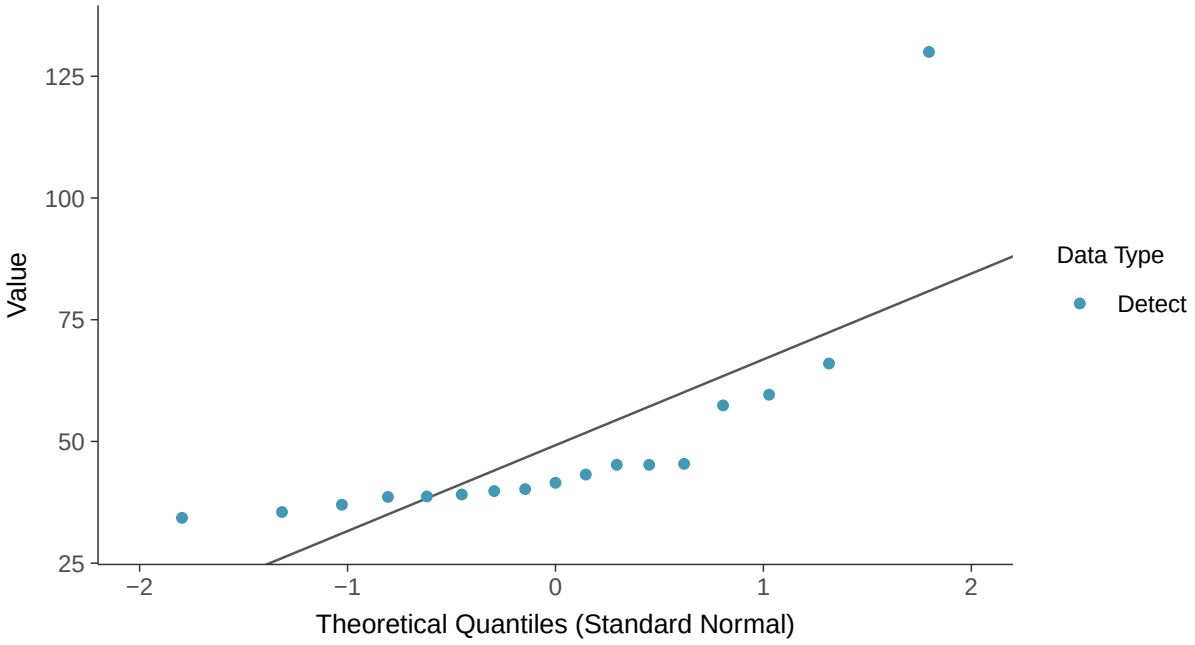
Boxplot by Season

Barium, MW-11 (ug/L)



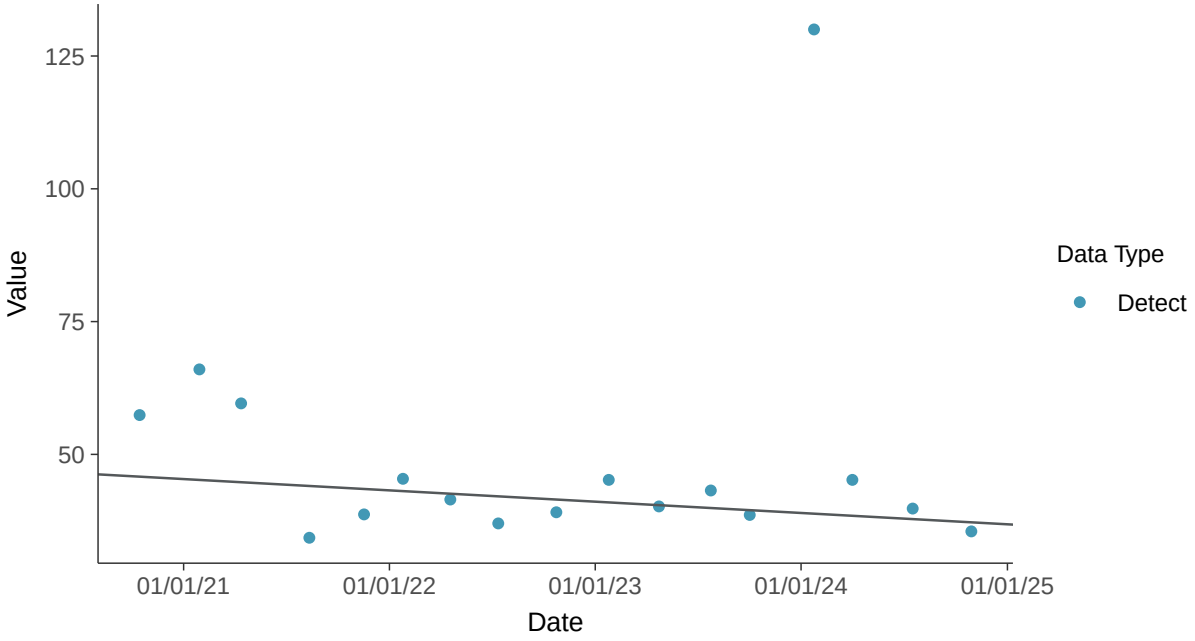
Normal Q-Q plot

Barium, MW-11 (ug/L)



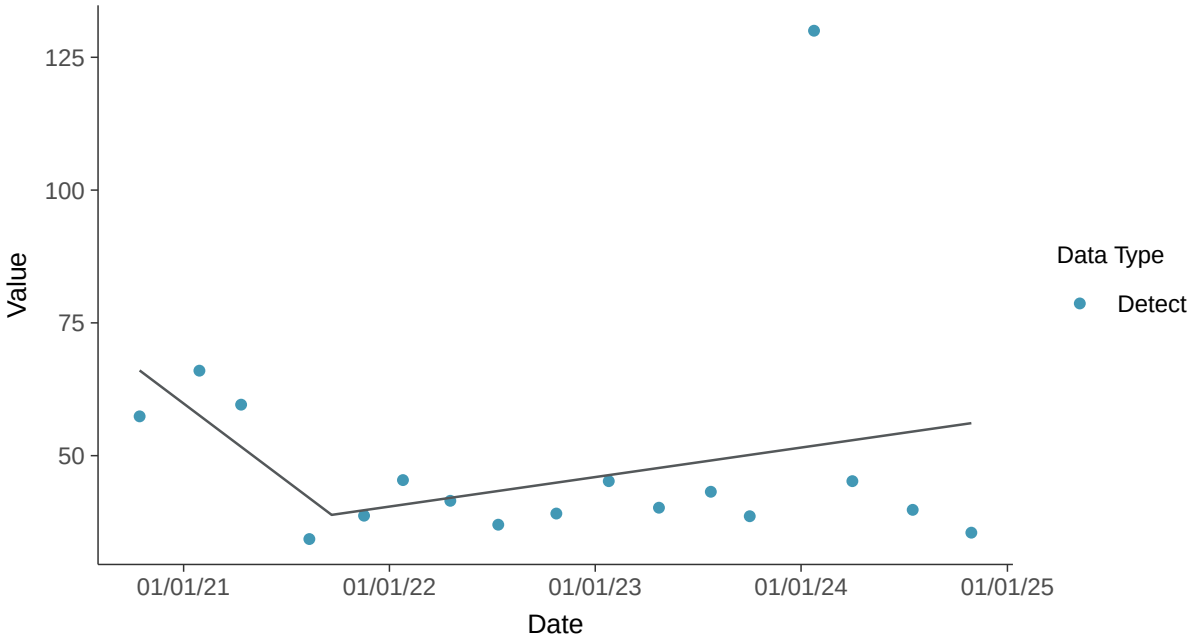
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Barium, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Barium, MW-11 (ug/L)

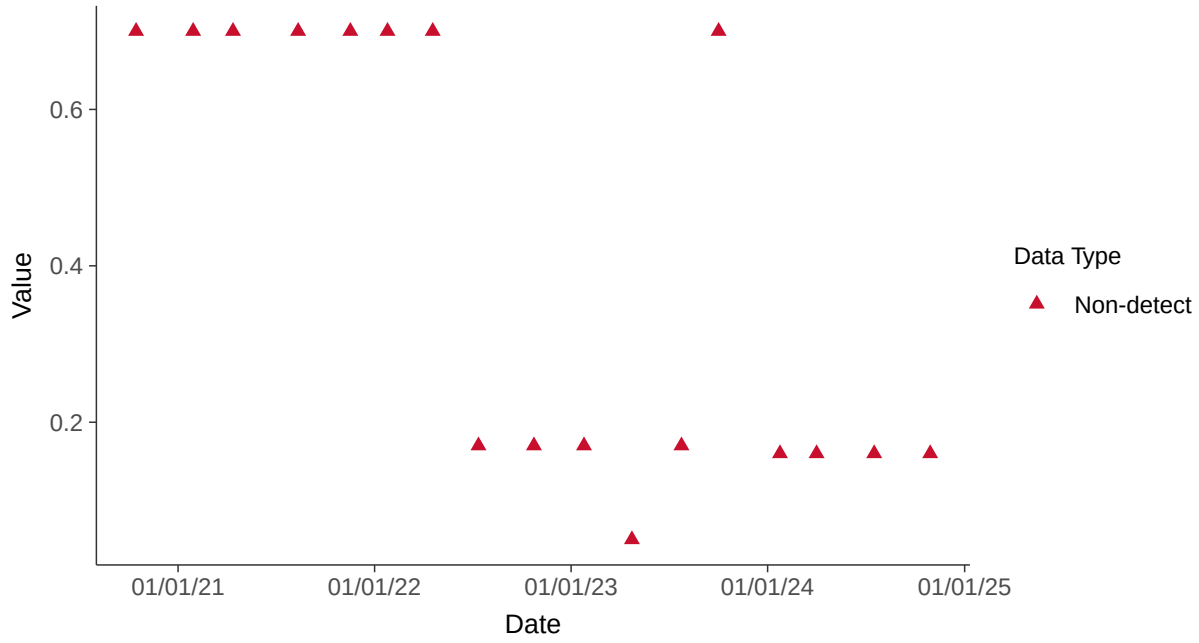


App. IV: Beryllium, MW-11

ID: 10_03_104

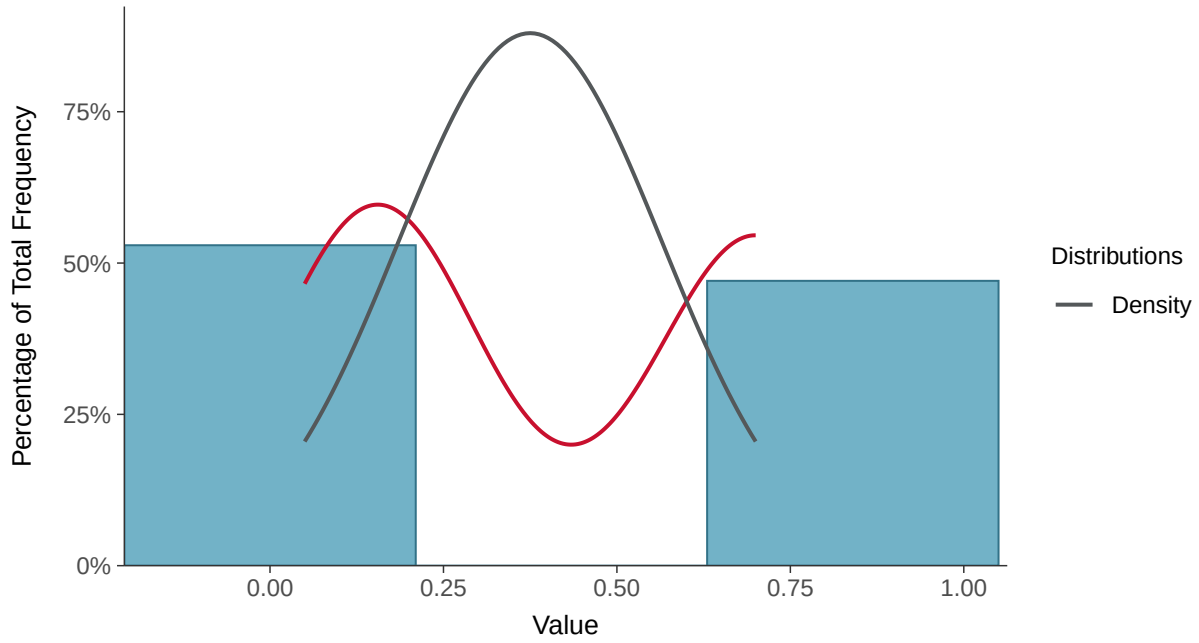
Scatter Plot

Beryllium, MW-11 (ug/L)



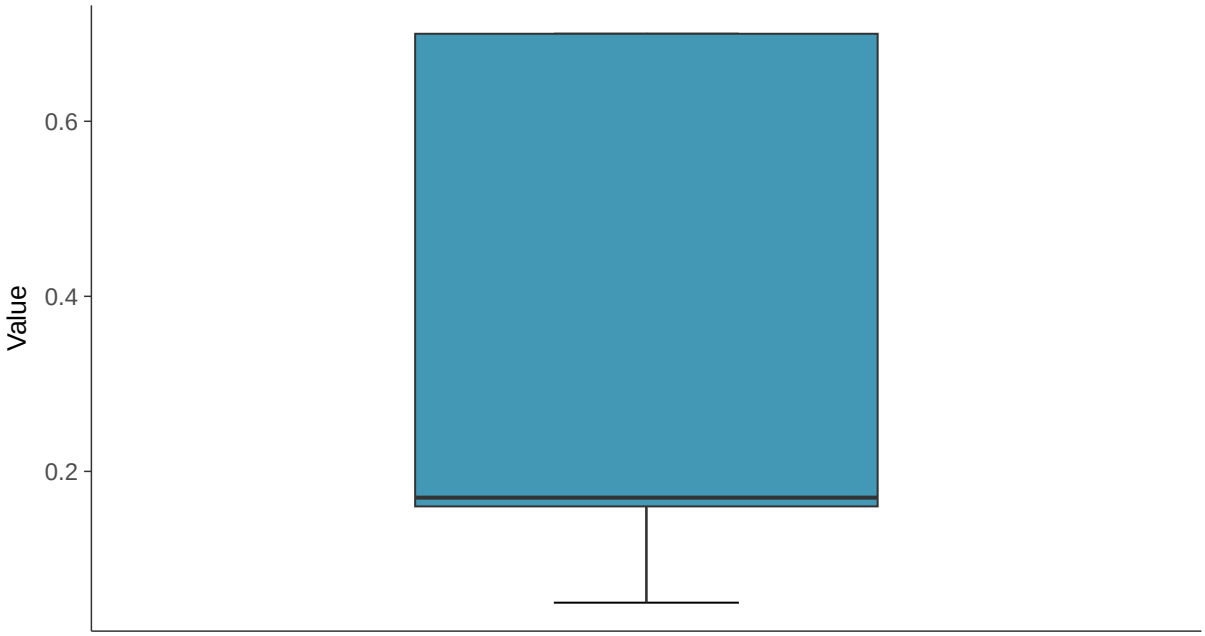
Histogram

Beryllium, MW-11 (ug/L)



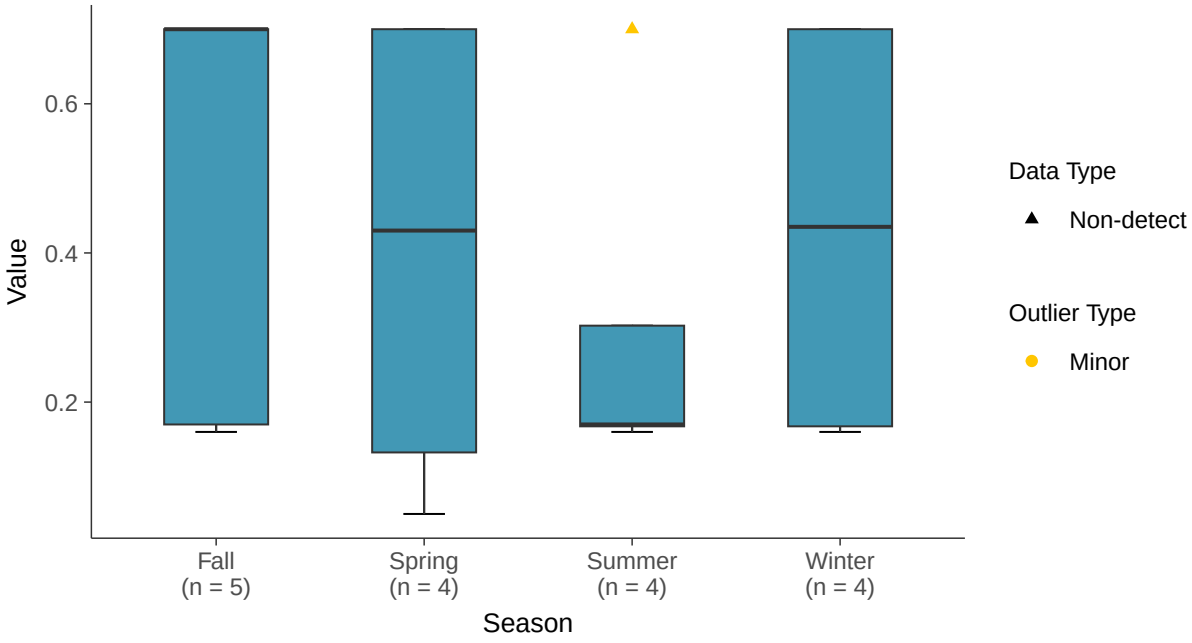
Boxplot

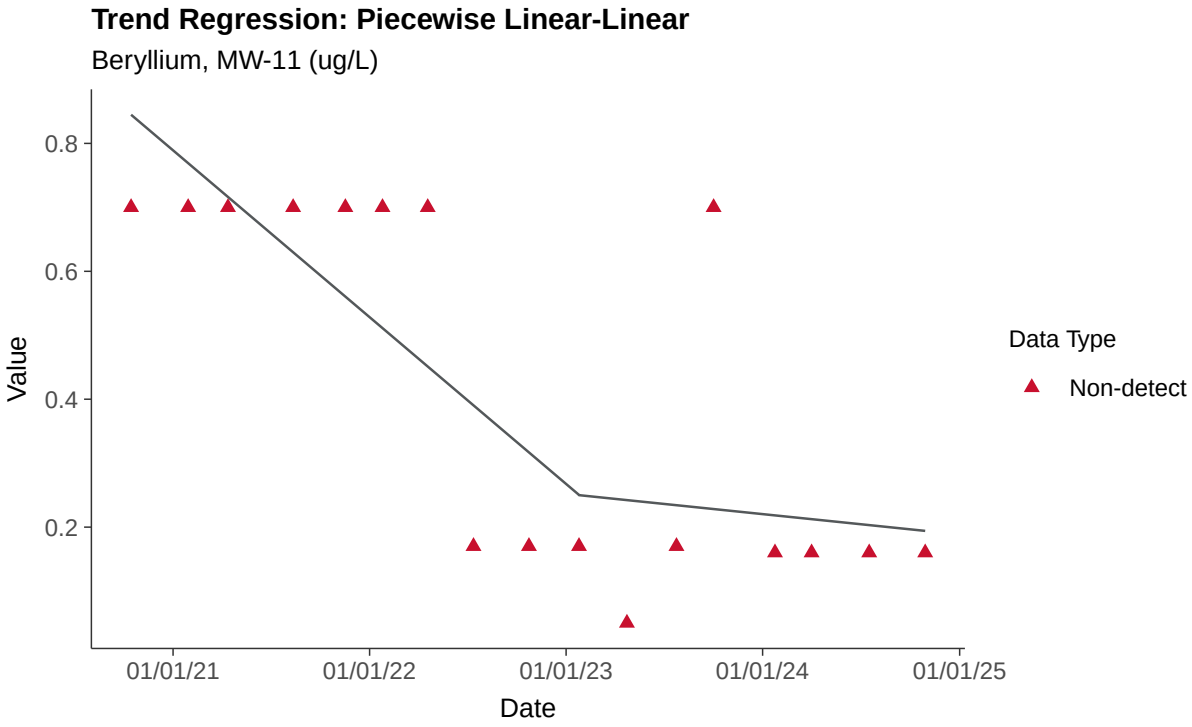
Beryllium, MW-11 (ug/L)



Boxplot by Season

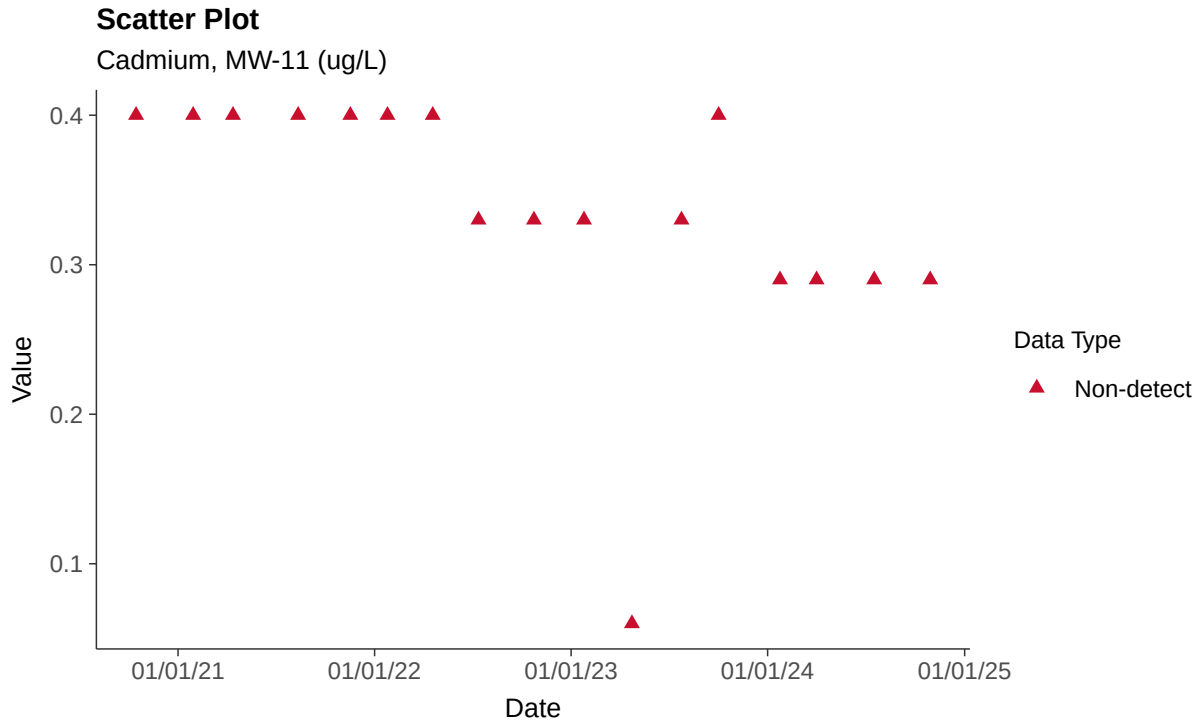
Beryllium, MW-11 (ug/L)

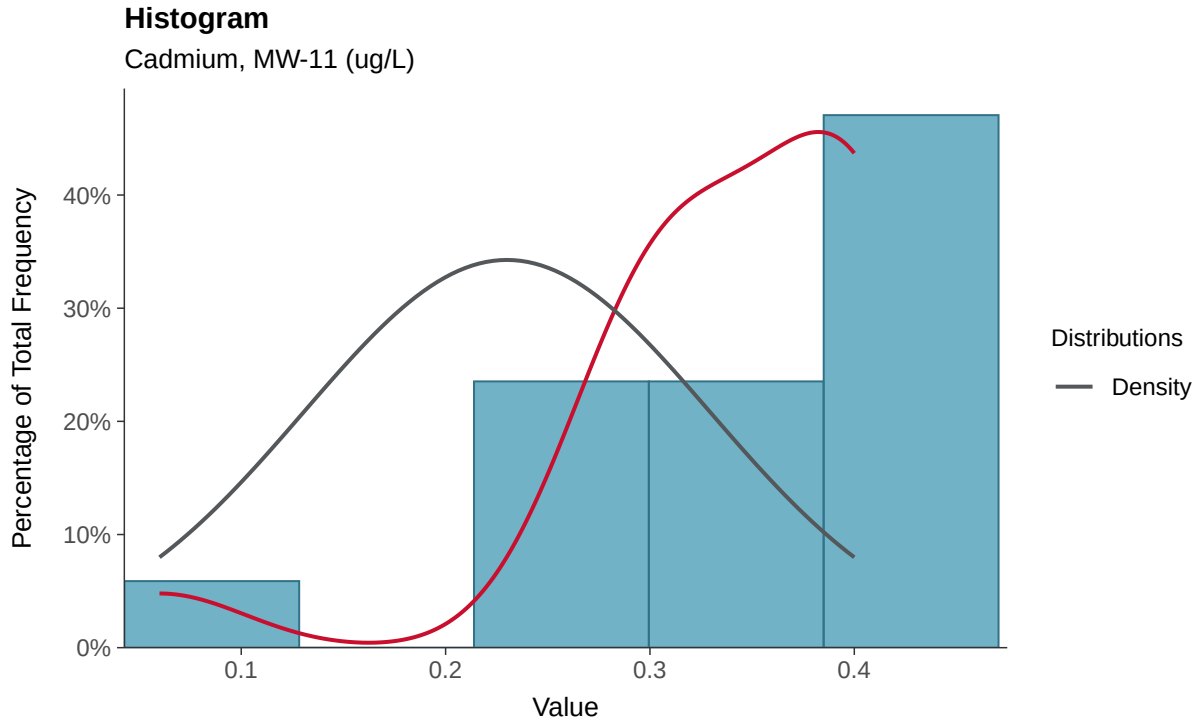



Trend Regression: Piecewise Linear-Linear
Beryllium, MW-11 (ug/L)
Value
0.8
0.6
0.4
0.2
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Non-detect

App. IV: Cadmium, MW-11

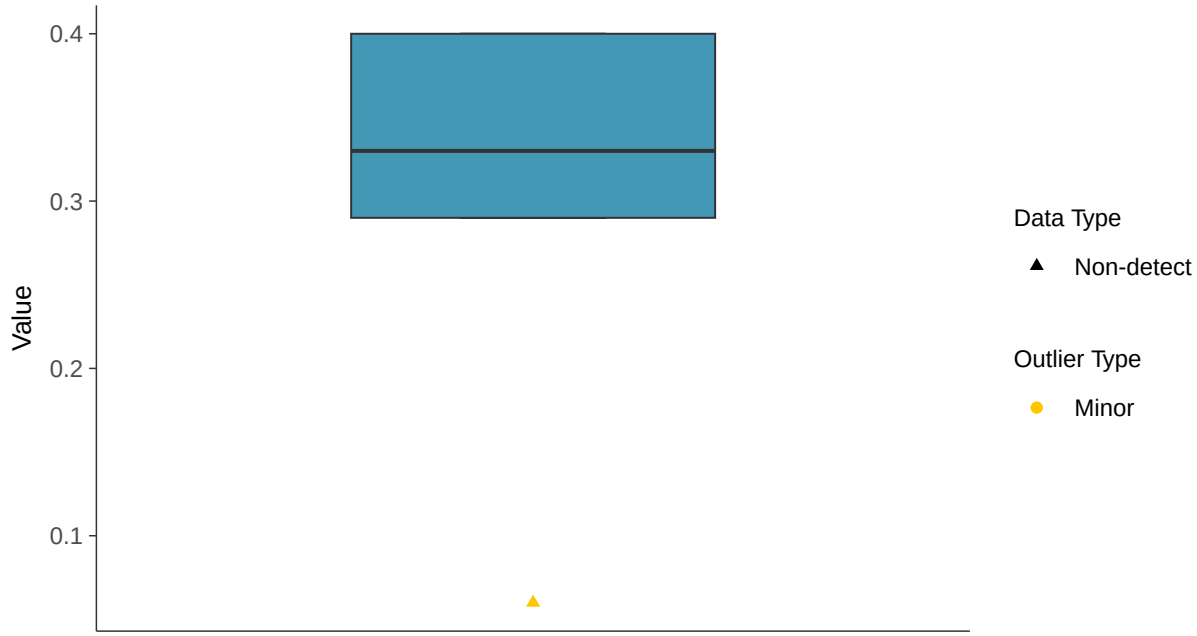
ID: 10_03_106





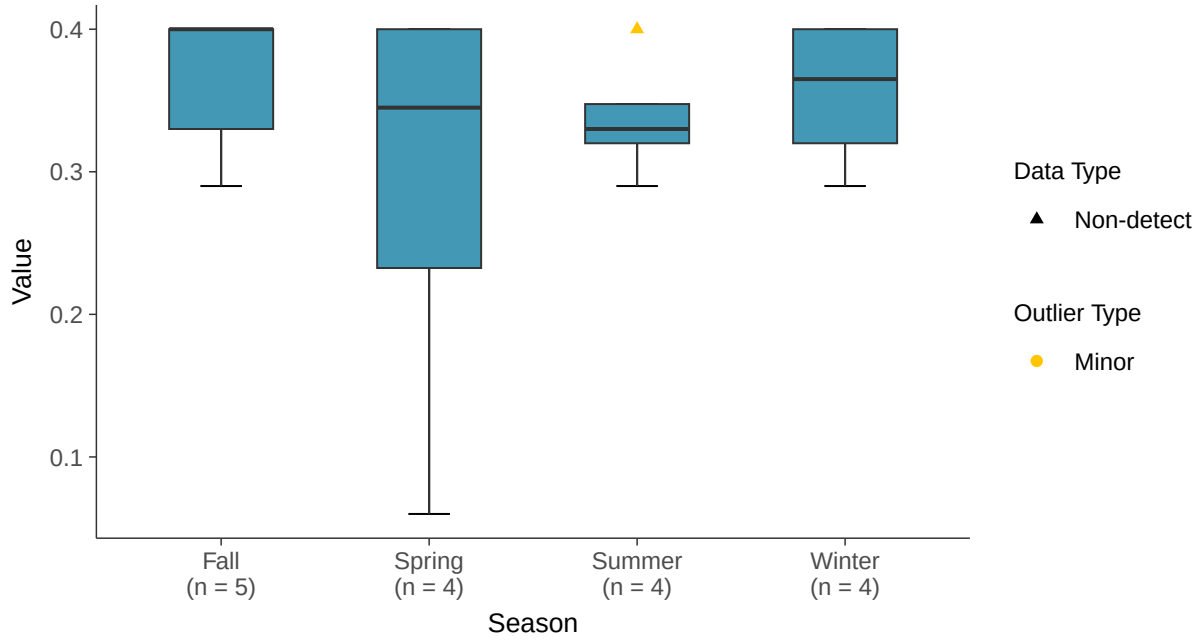
Boxplot

Cadmium, MW-11 (ug/L)



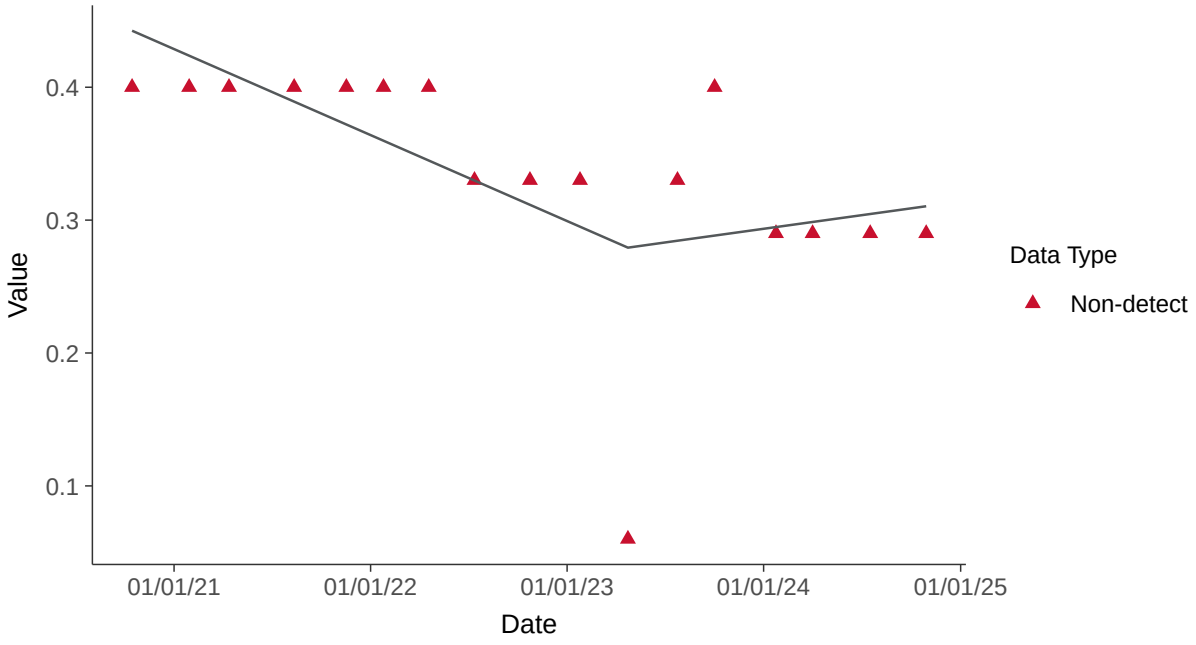
Boxplot by Season

Cadmium, MW-11 (ug/L)



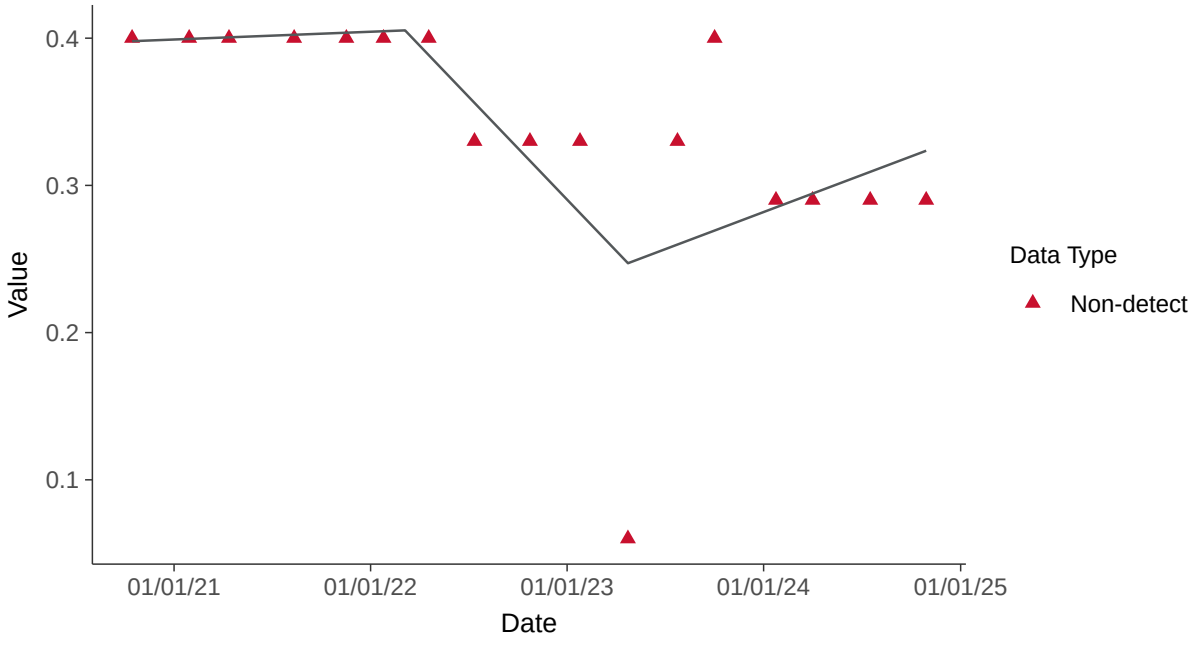
Trend Regression: Piecewise Linear-Linear

Cadmium, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Cadmium, MW-11 (ug/L)

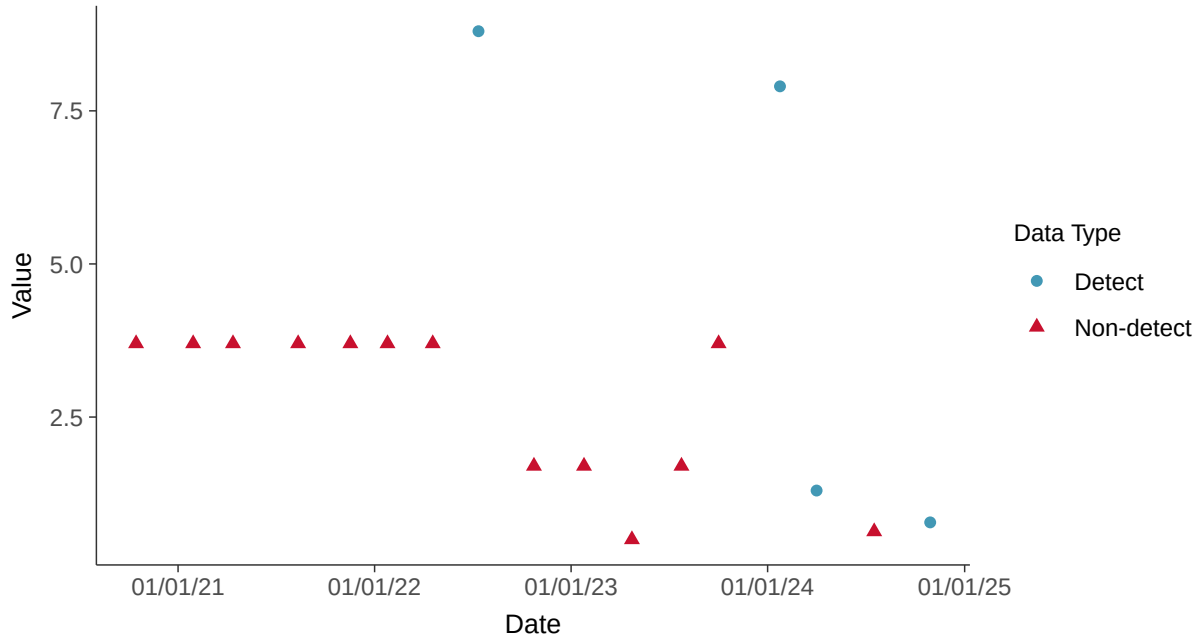


App. IV: Chromium, MW-11

ID: 10_03_109

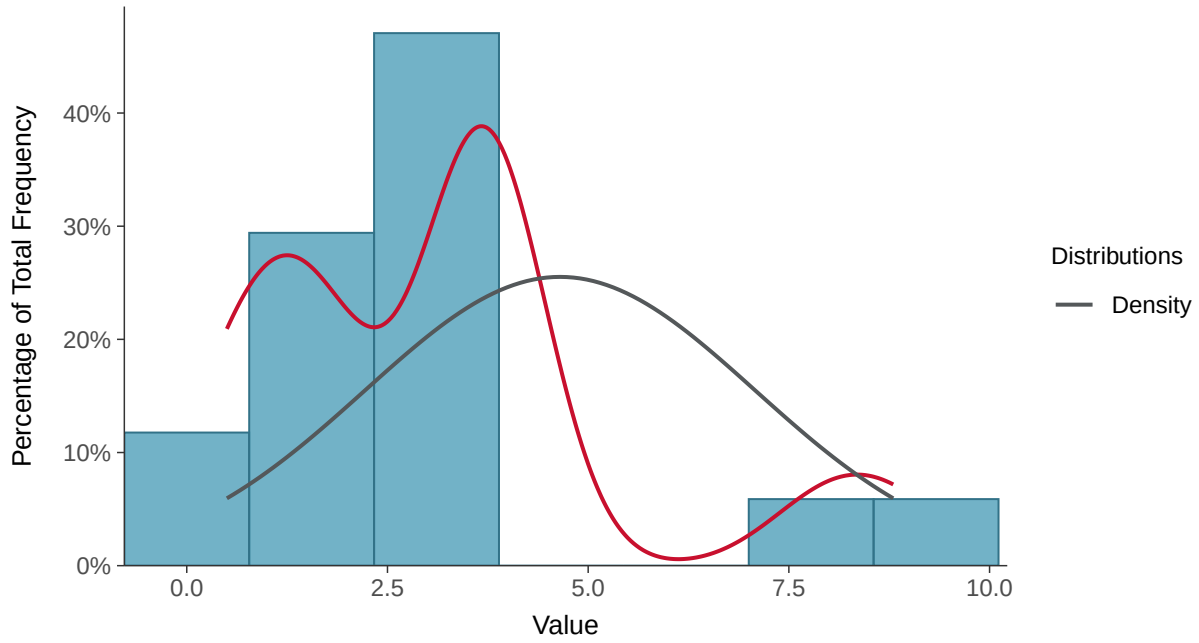
Scatter Plot

Chromium, MW-11 (ug/L)



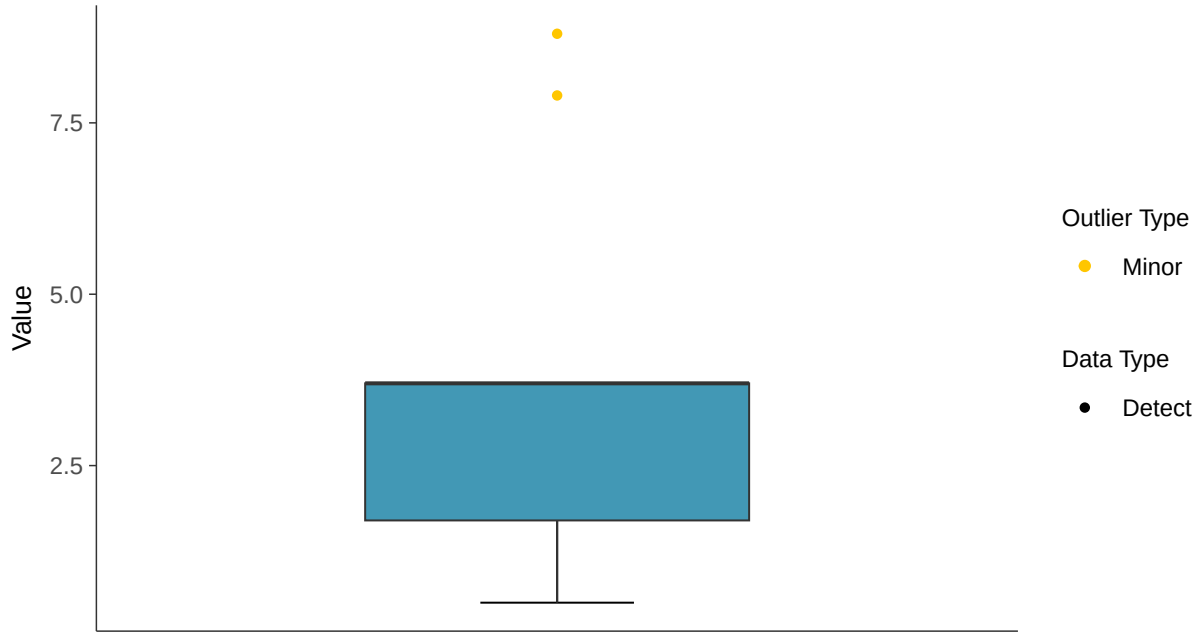
Histogram

Chromium, MW-11 (ug/L)



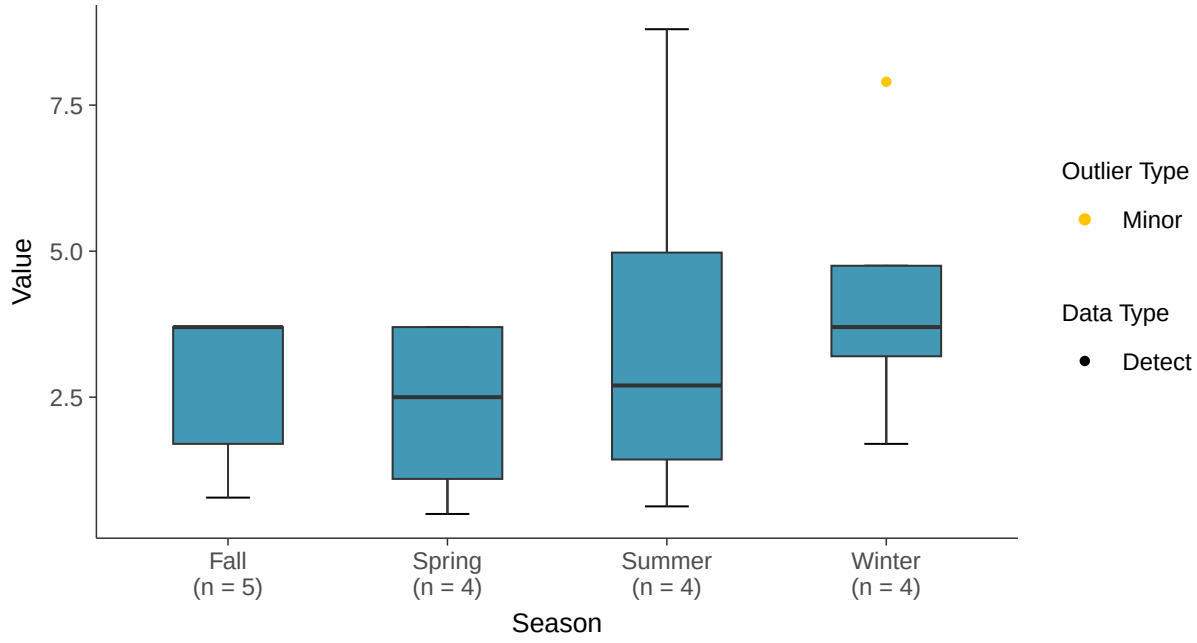
Boxplot

Chromium, MW-11 (ug/L)



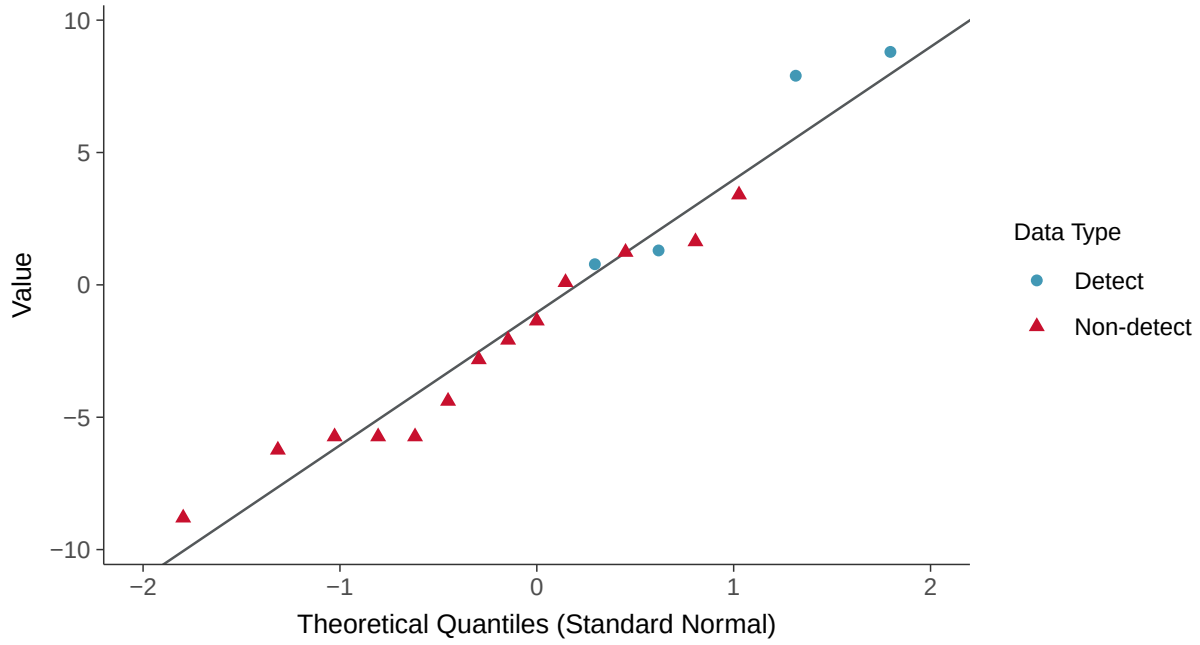
Boxplot by Season

Chromium, MW-11 (ug/L)



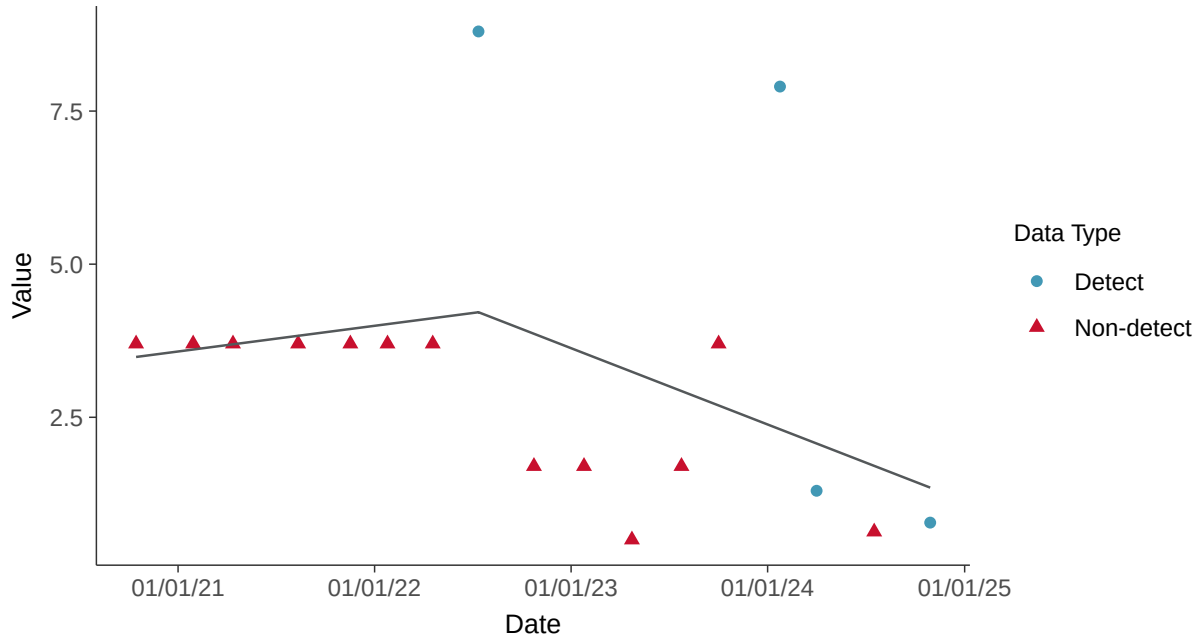
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-11 (ug/L)



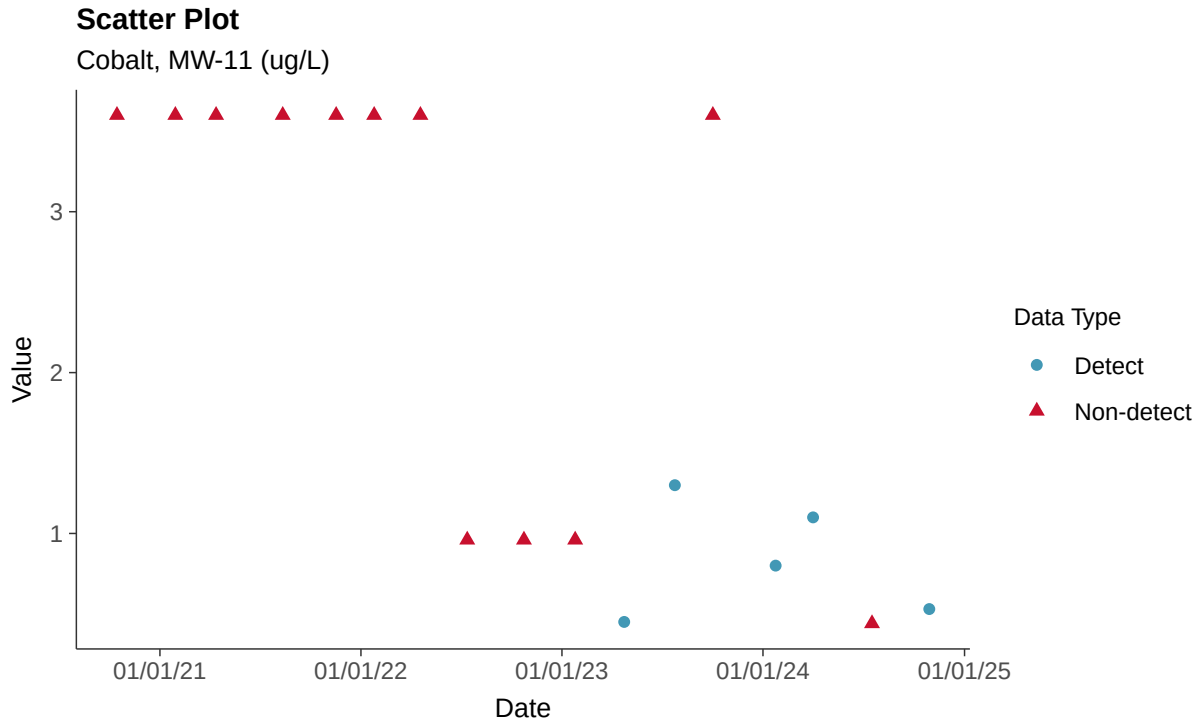
Trend Regression: Piecewise Linear-Linear

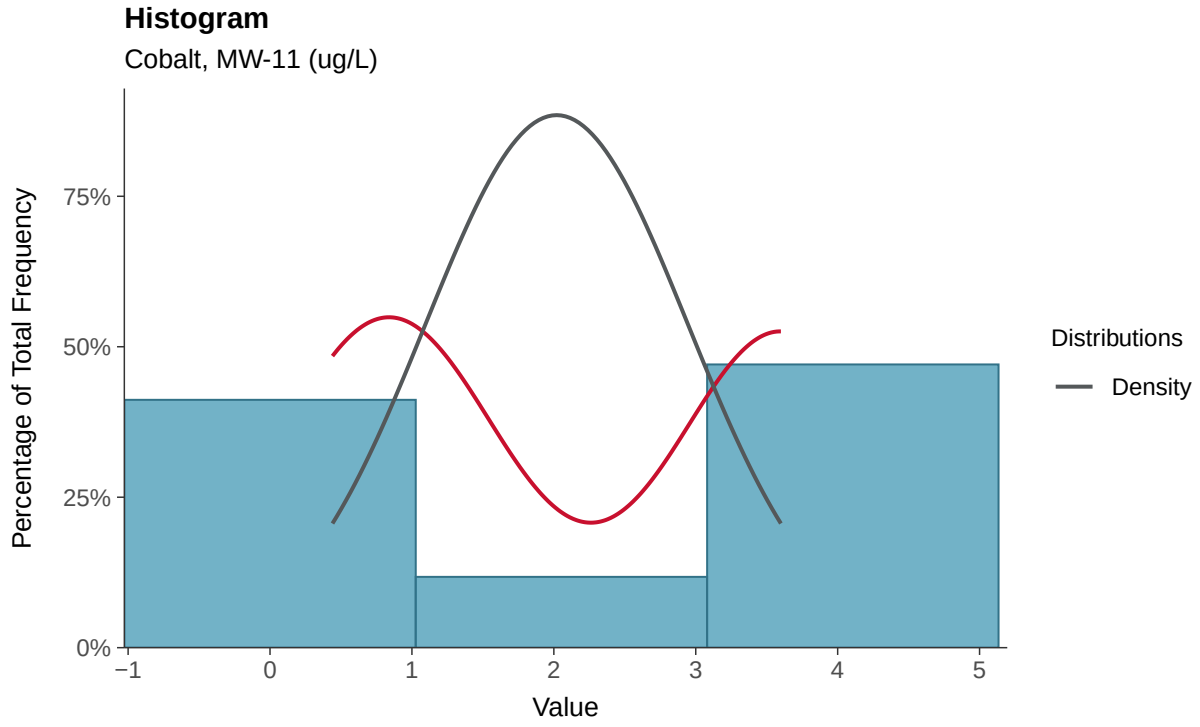
Chromium, MW-11 (ug/L)



App. IV: Cobalt, MW-11

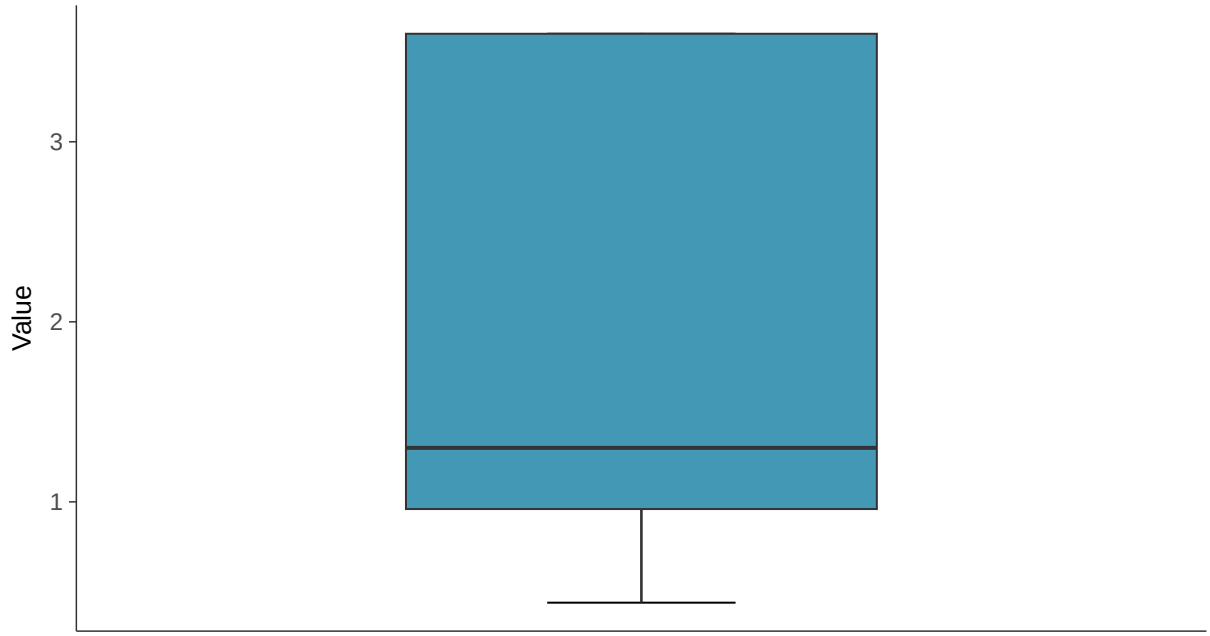
ID: 10_03_110





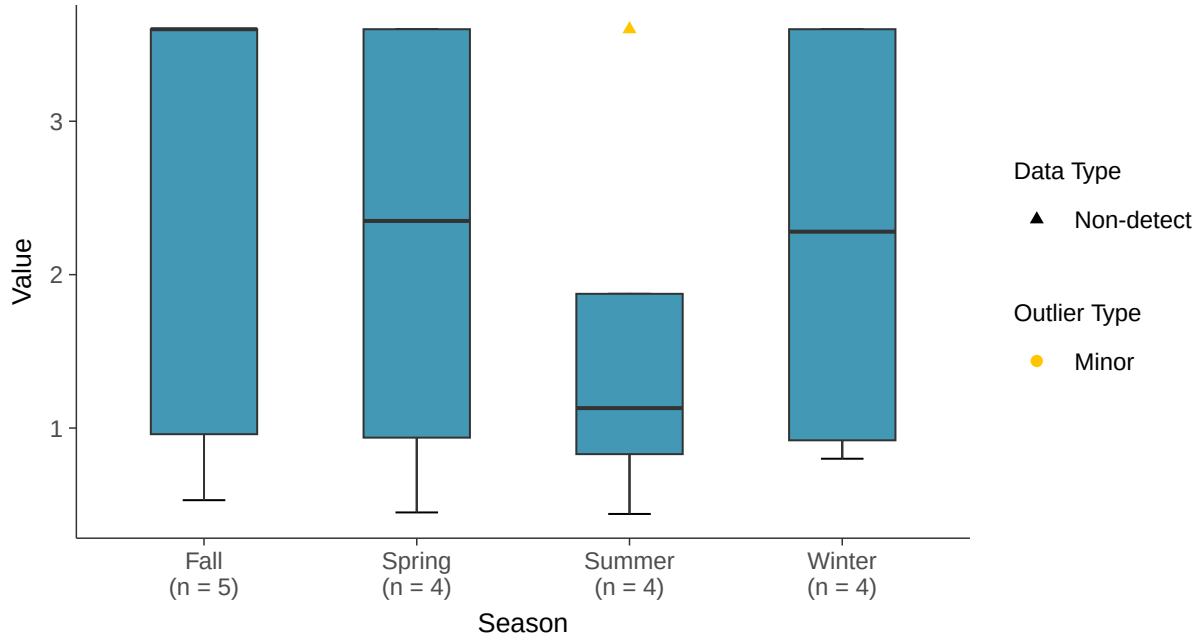
Boxplot

Cobalt, MW-11 (ug/L)



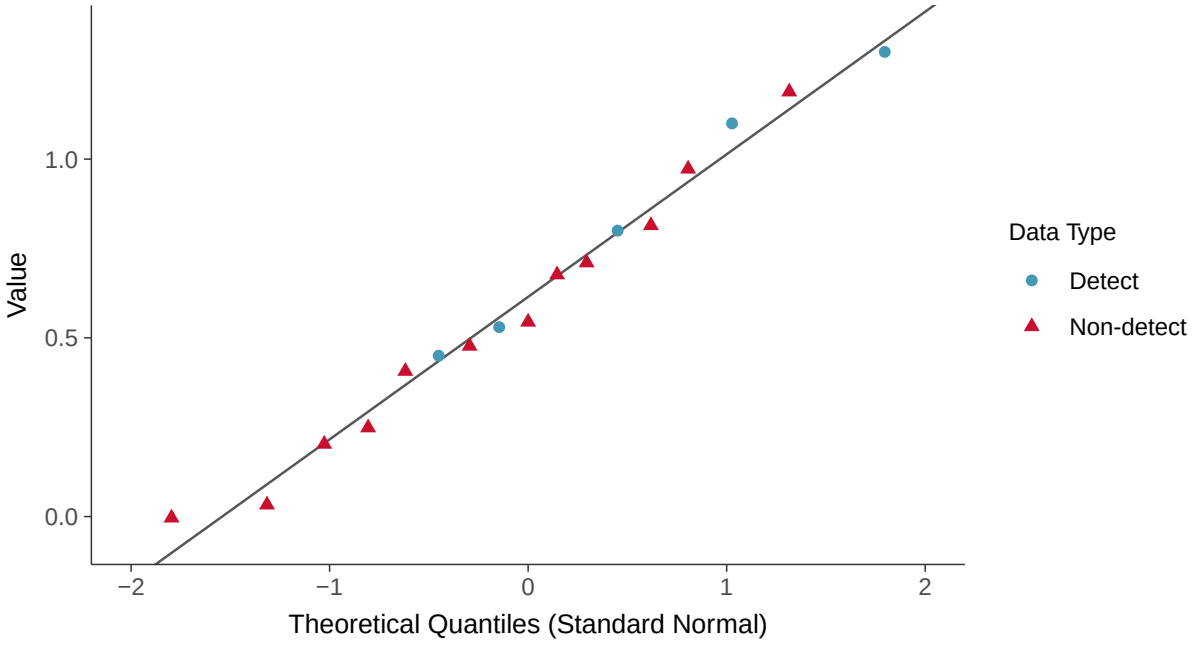
Boxplot by Season

Cobalt, MW-11 (ug/L)



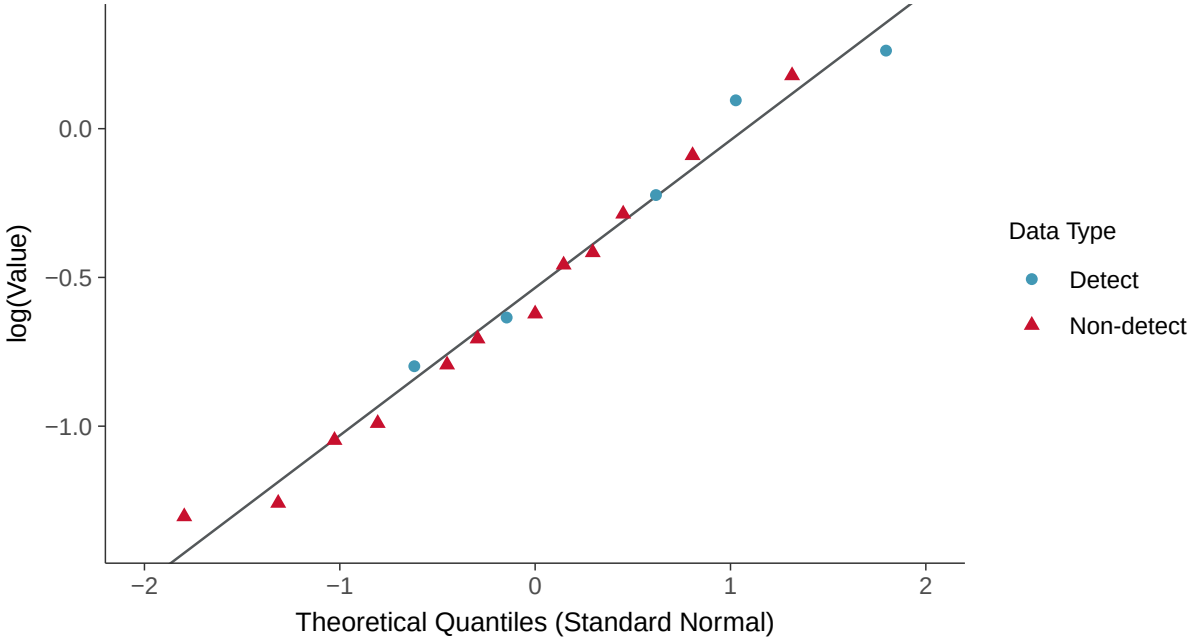
Normal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-11 (ug/L)



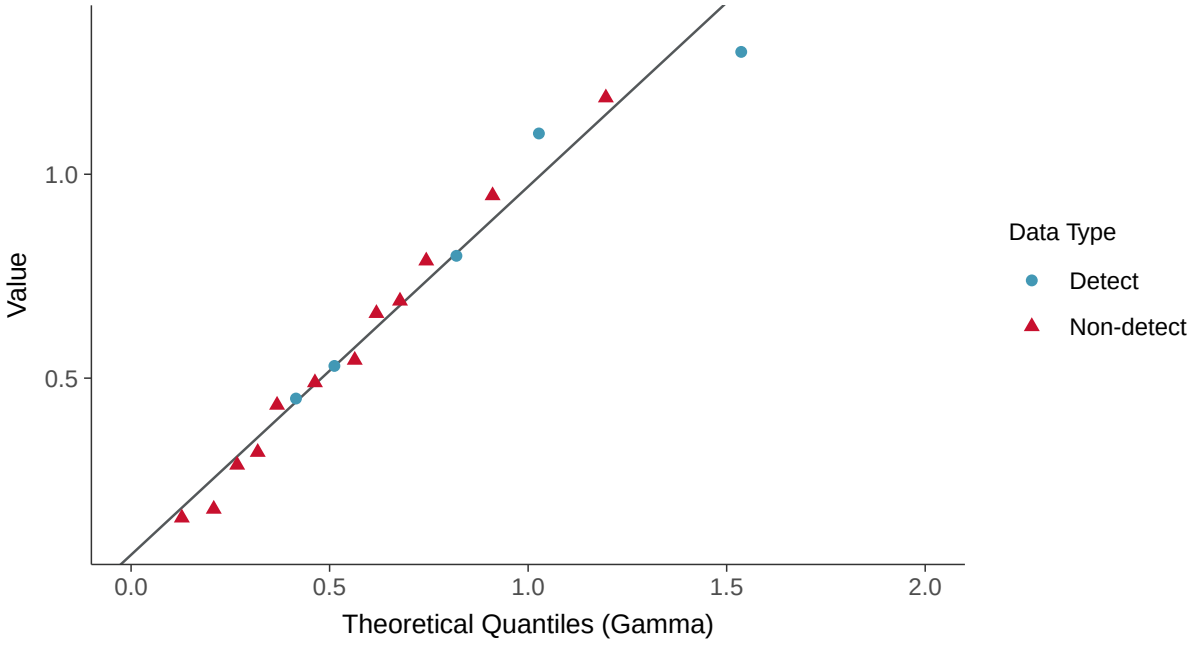
Lognormal Q-Q plot using ROS Imputed Estimates

Cobalt, MW-11 (ug/L)



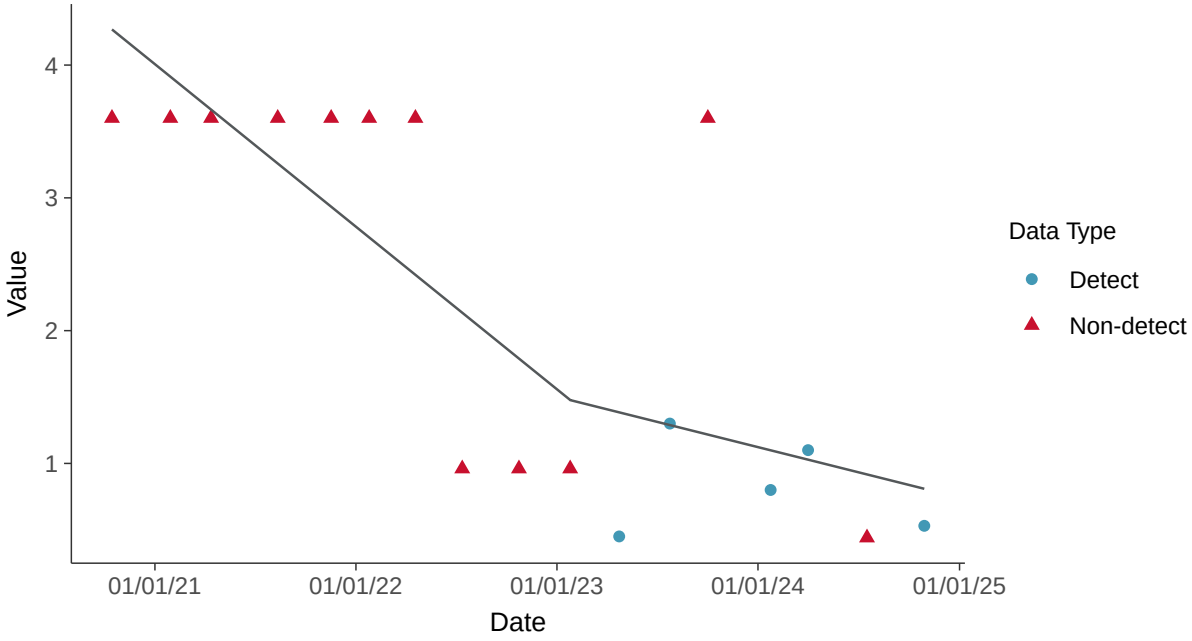
Gamma Q-Q plot using ROS Imputed Estimates

Cobalt, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear

Cobalt, MW-11 (ug/L)

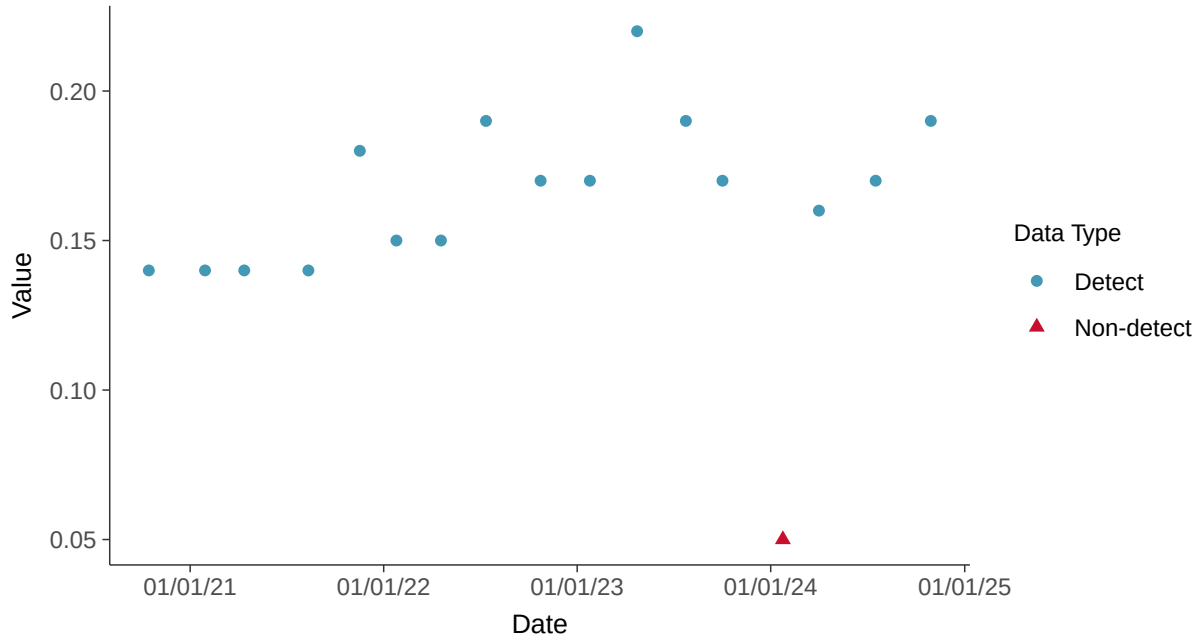


App. IV: Fluoride, MW-11

ID: 10_03_112

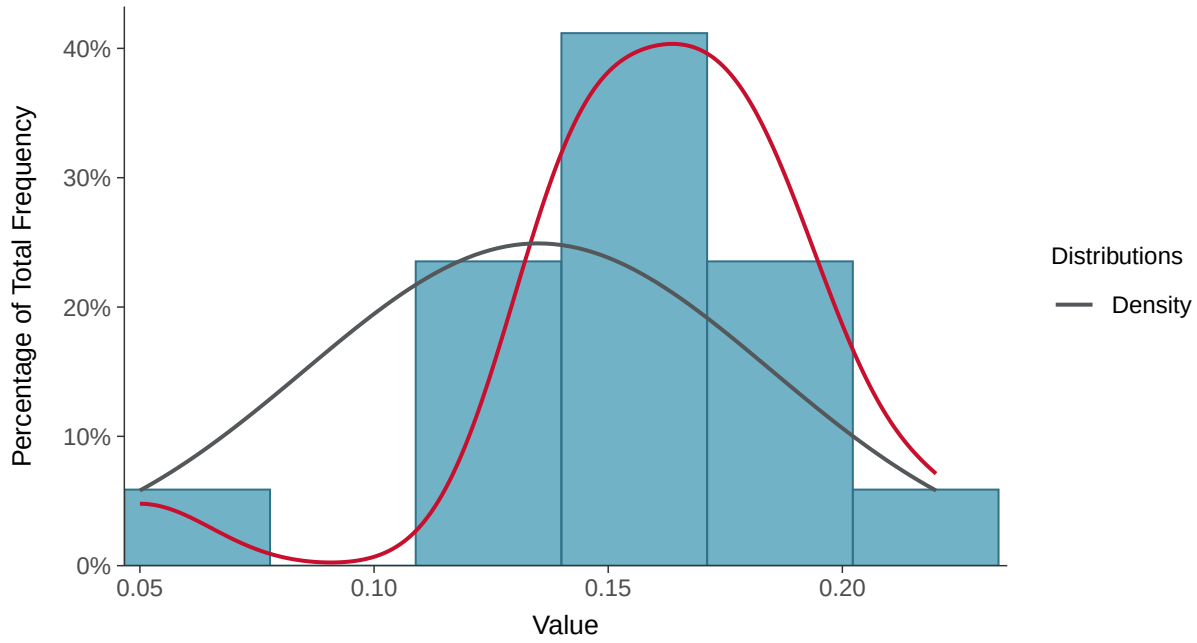
Scatter Plot

Fluoride, MW-11 (mg/L)



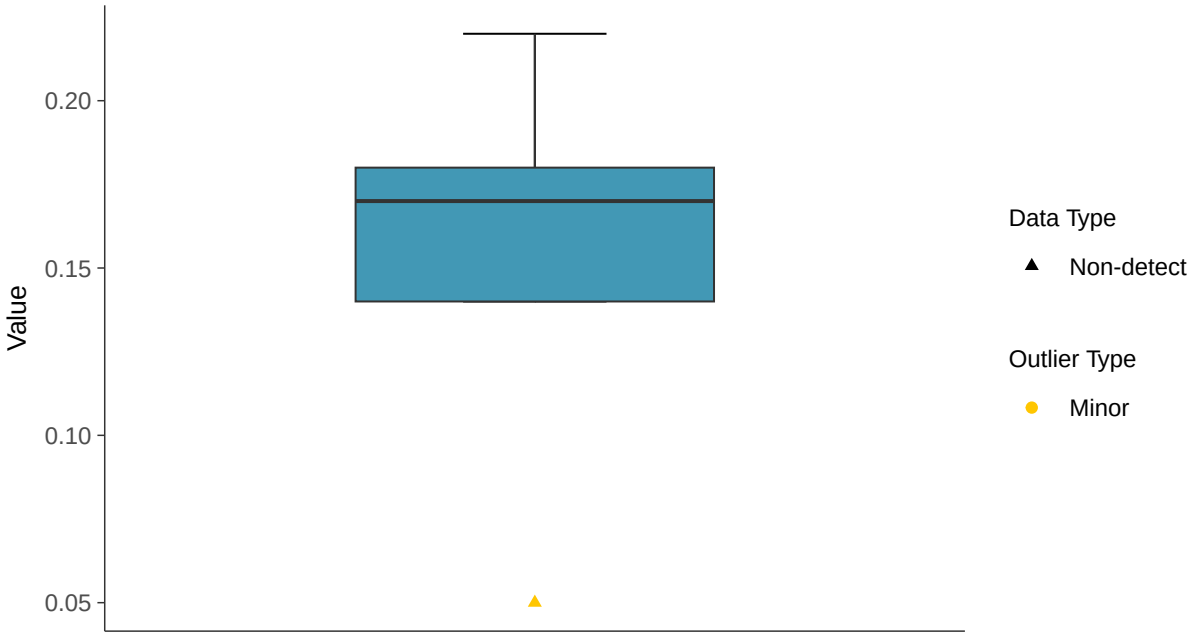
Histogram

Fluoride, MW-11 (mg/L)



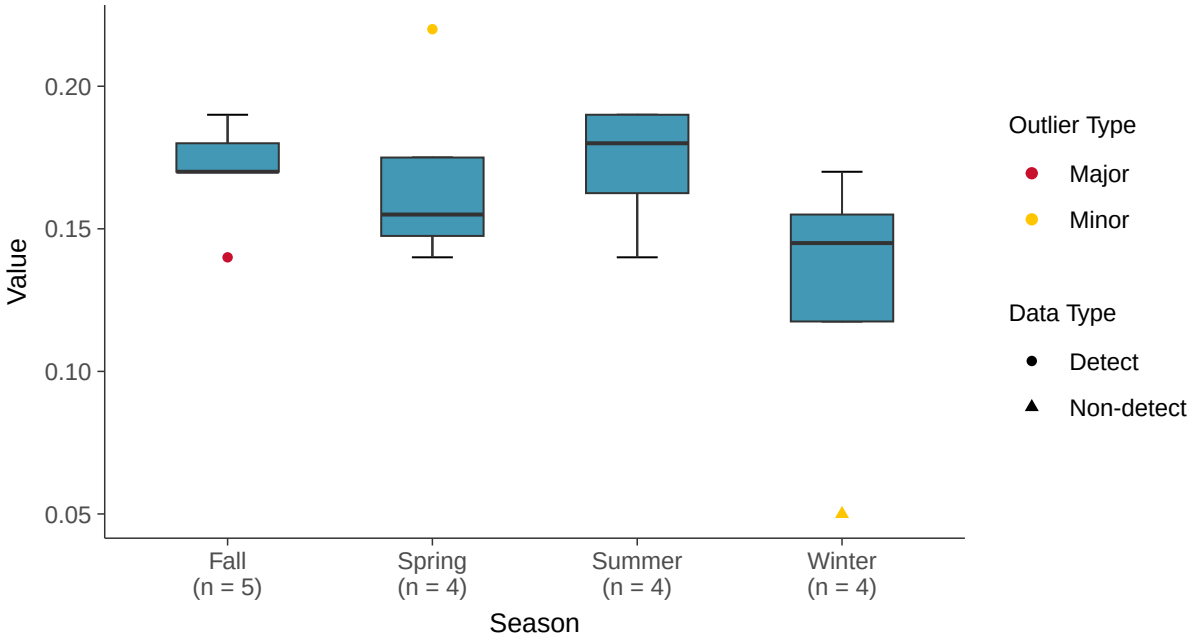
Boxplot

Fluoride, MW-11 (mg/L)



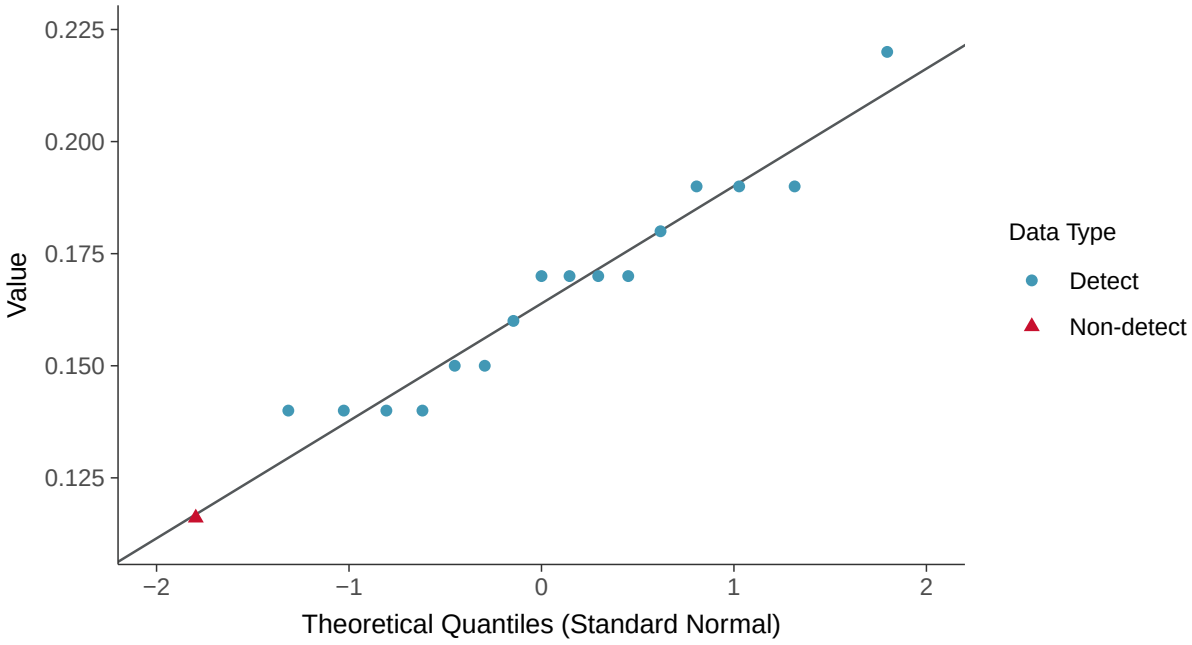
Boxplot by Season

Fluoride, MW-11 (mg/L)



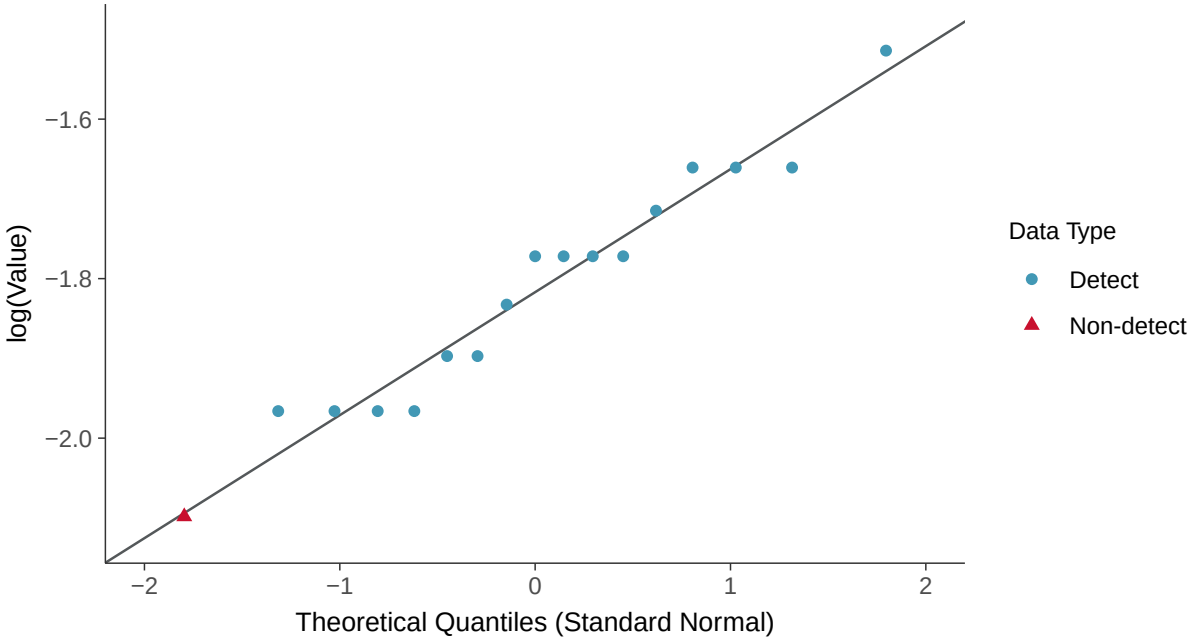
Normal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



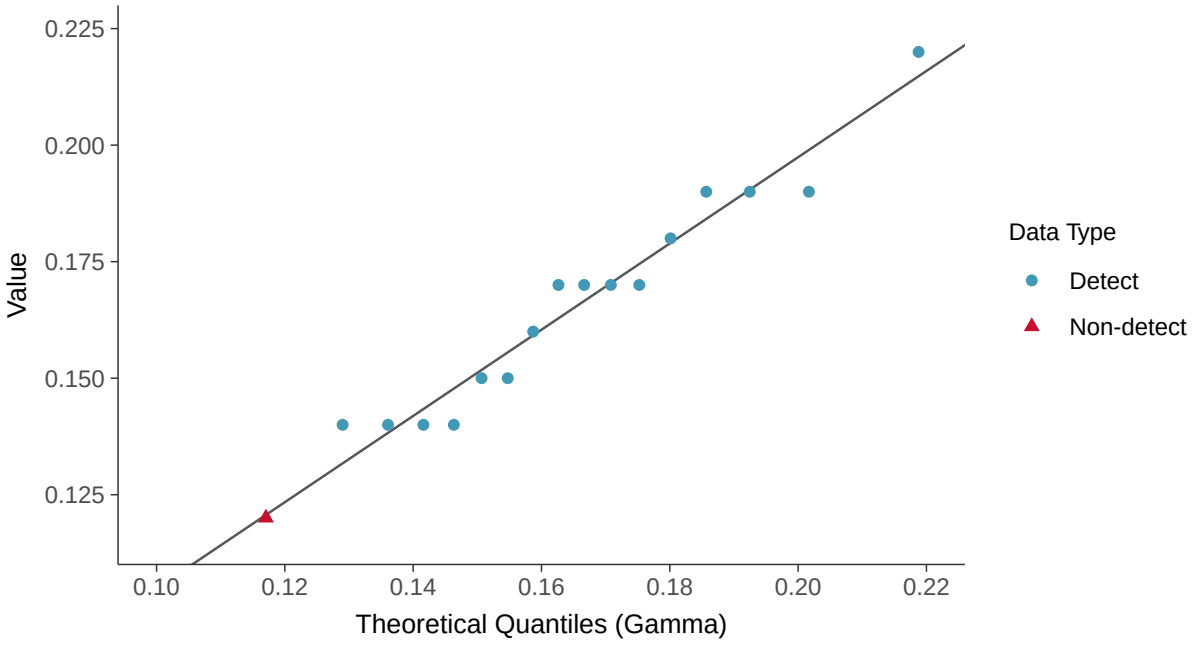
Lognormal Q-Q plot using ROS Imputed Estimates

Fluoride, MW-11 (mg/L)



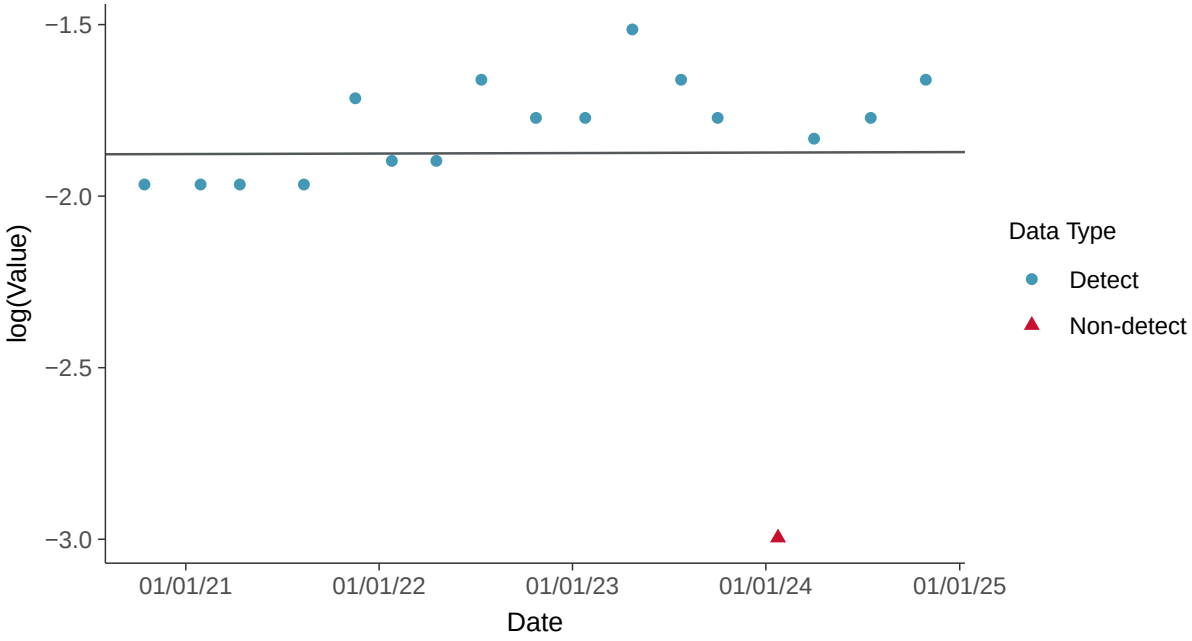
Gamma Q-Q plot using ROS Imputed Estimates

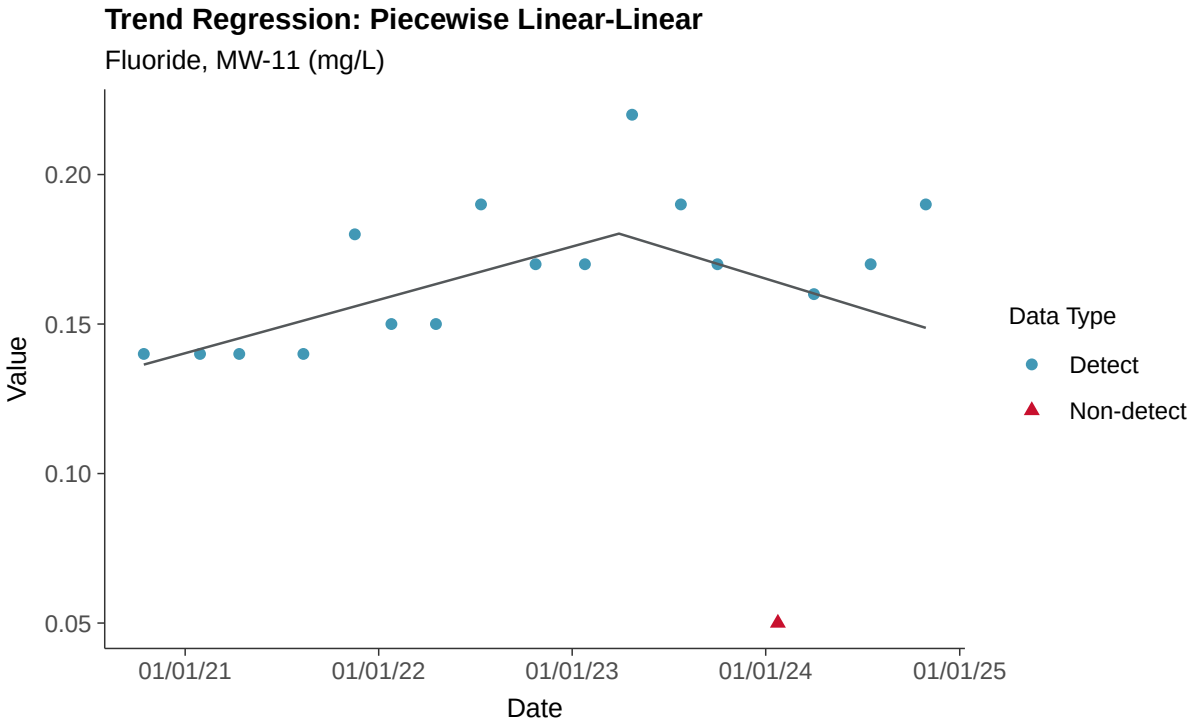
Fluoride, MW-11 (mg/L)



Trend Regression: Lognormal MLE

Fluoride, MW-11 (mg/L)



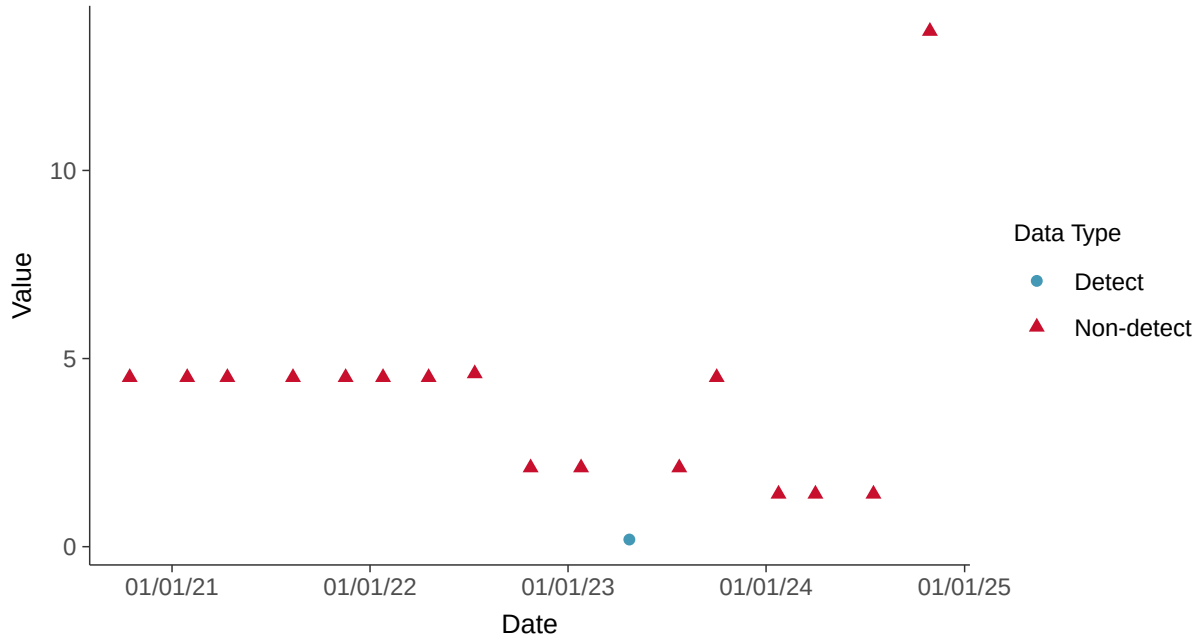

Trend Regression: Piecewise Linear-Linear
Fluoride, MW-11 (mg/L)
Value
0.20
0.15
0.10
0.05
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. IV: Lead, MW-11

ID: 10_03_113

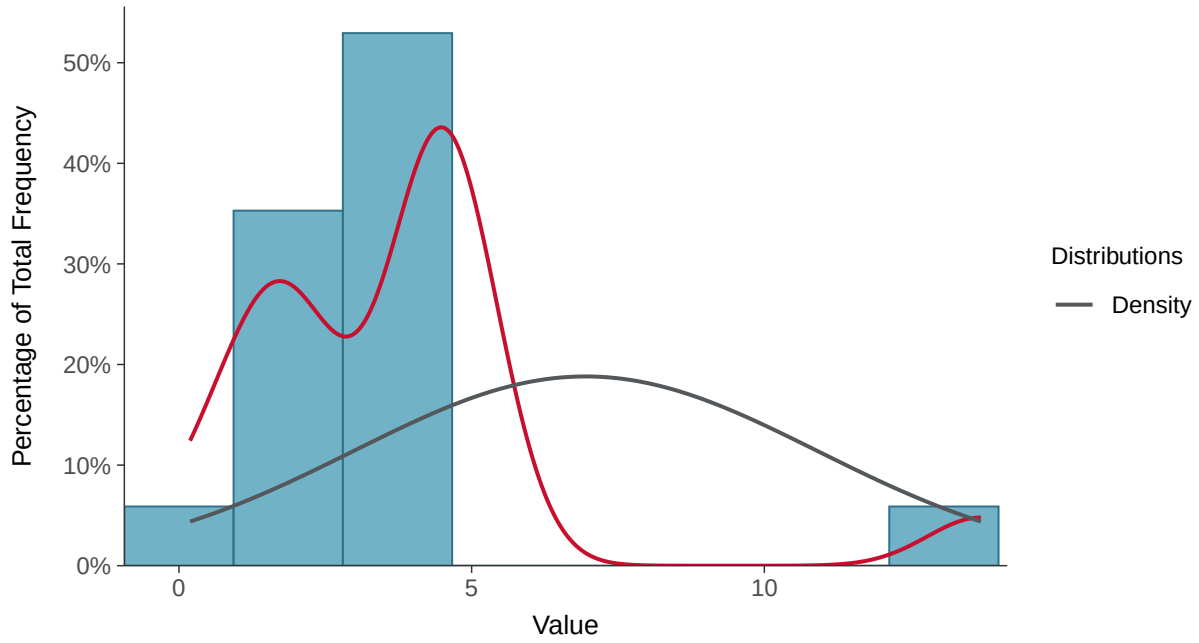
Scatter Plot

Lead, MW-11 (ug/L)



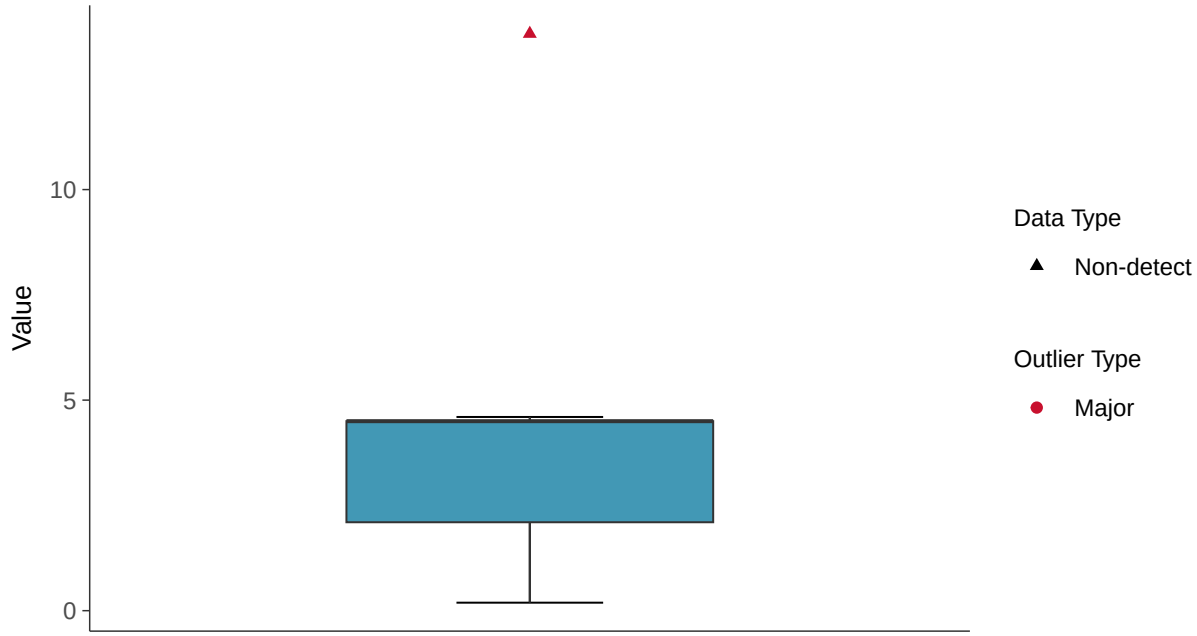
Histogram

Lead, MW-11 (ug/L)



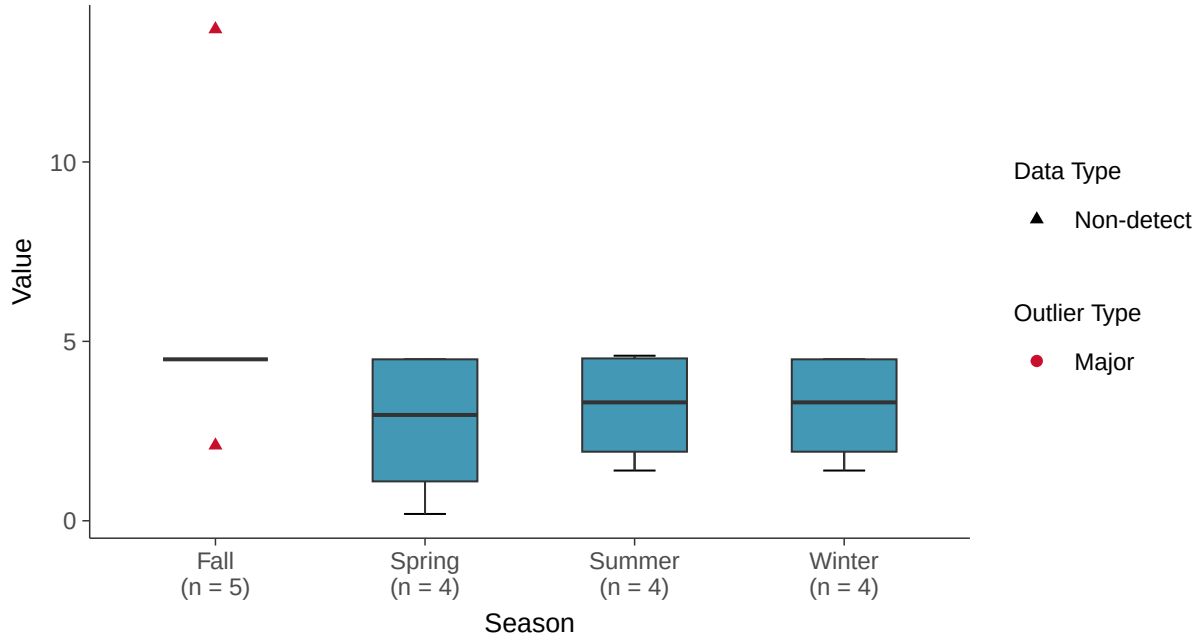
Boxplot

Lead, MW-11 (ug/L)



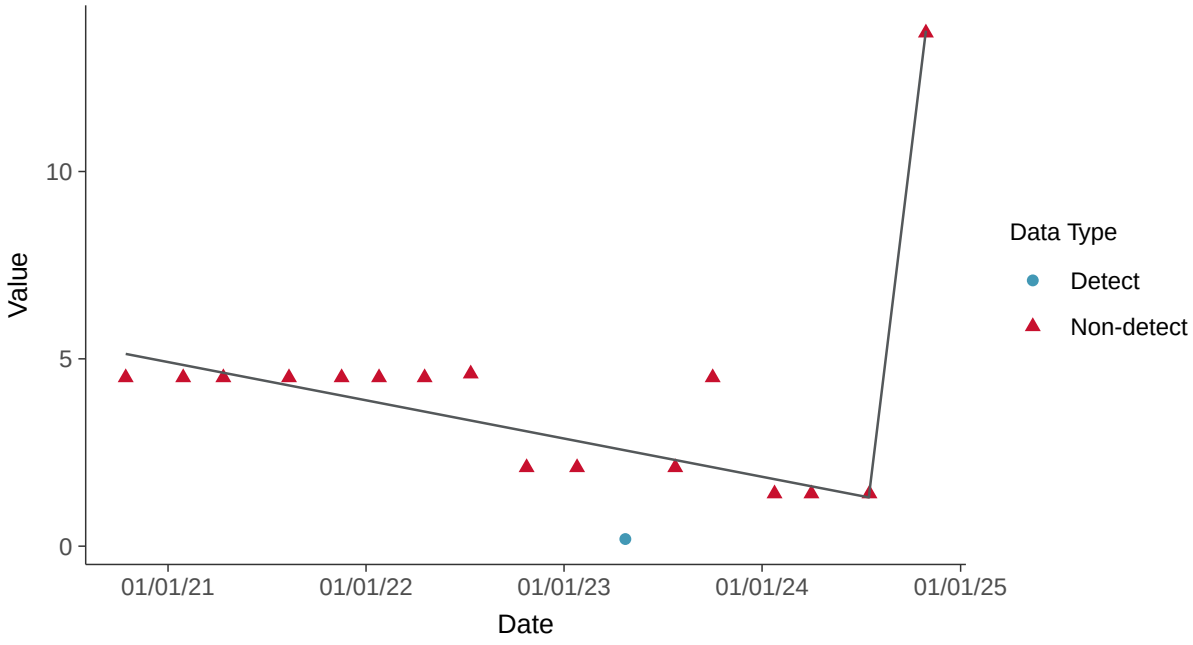
Boxplot by Season

Lead, MW-11 (ug/L)



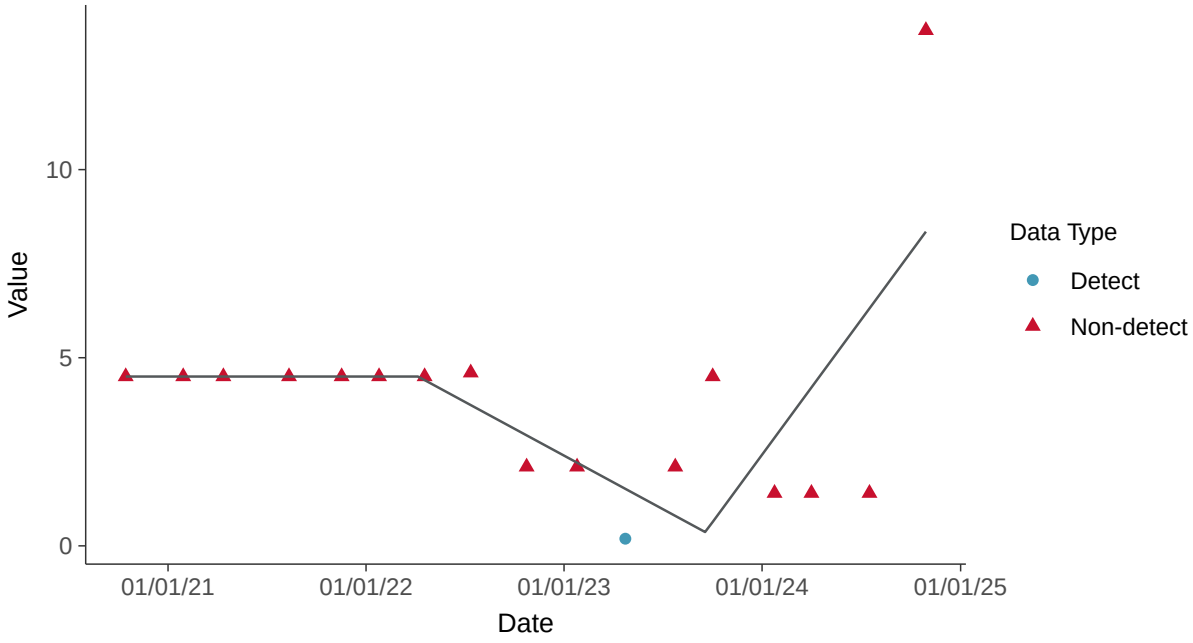
Trend Regression: Piecewise Linear-Linear

Lead, MW-11 (ug/L)



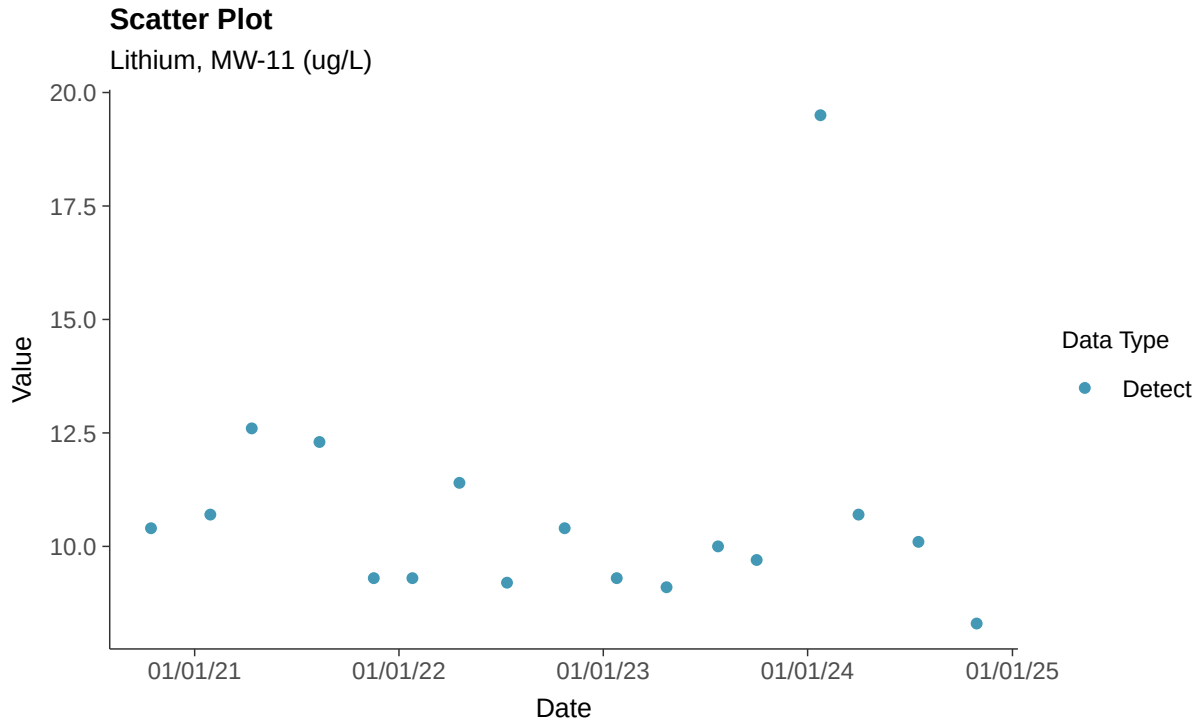
Trend Regression: Piecewise Linear-Linear-Linear

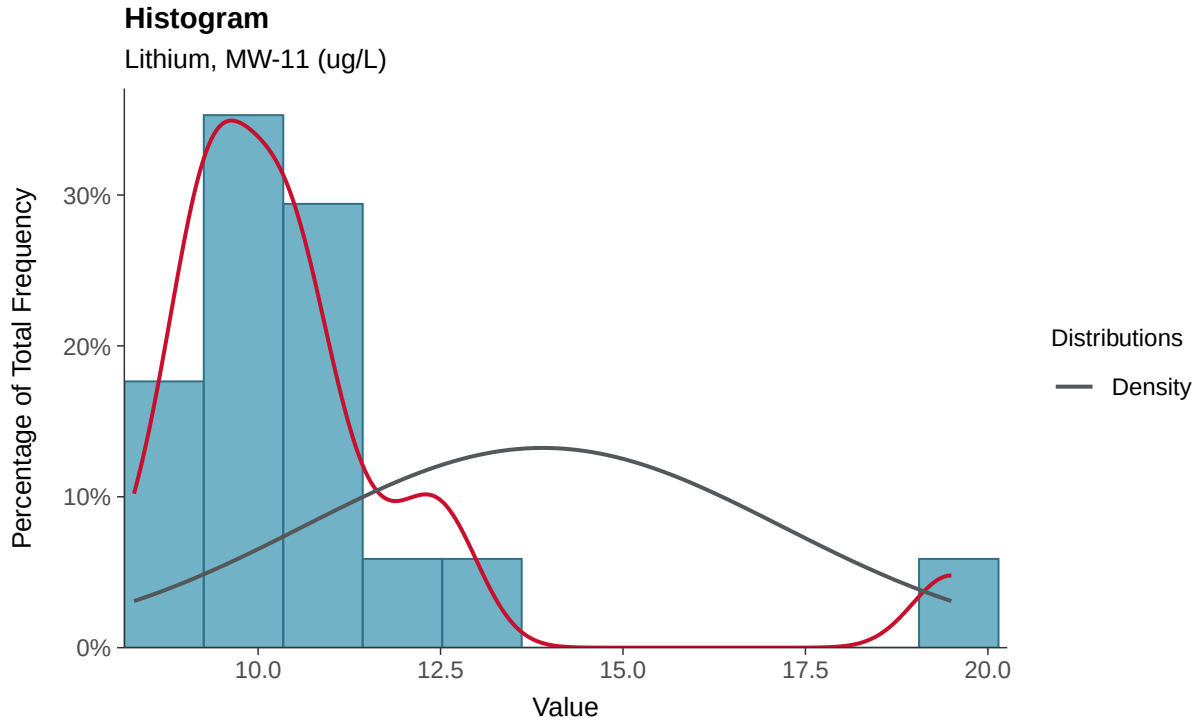
Lead, MW-11 (ug/L)



App. IV: Lithium, MW-11

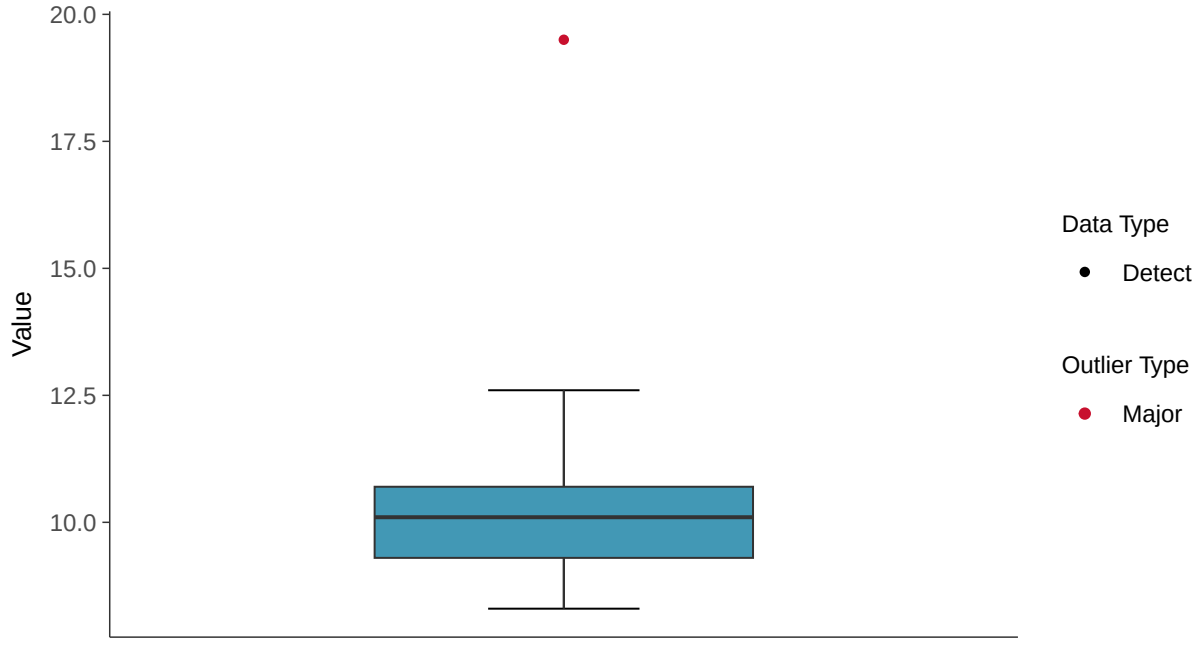
ID: 10_03_114





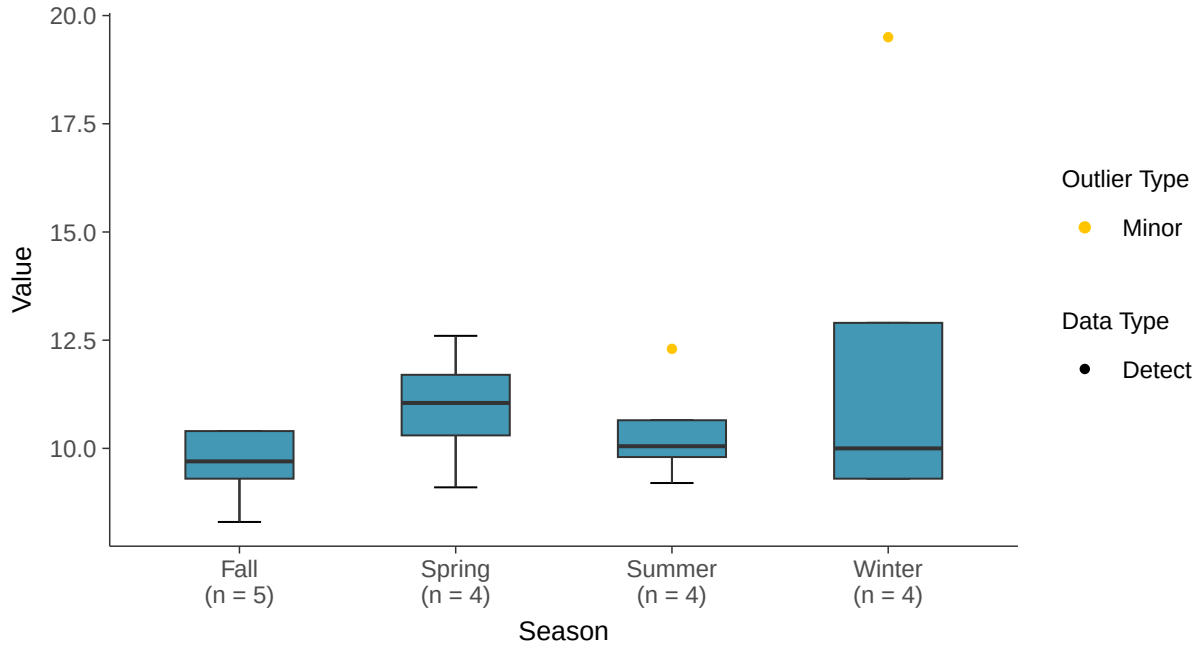
Boxplot

Lithium, MW-11 (ug/L)



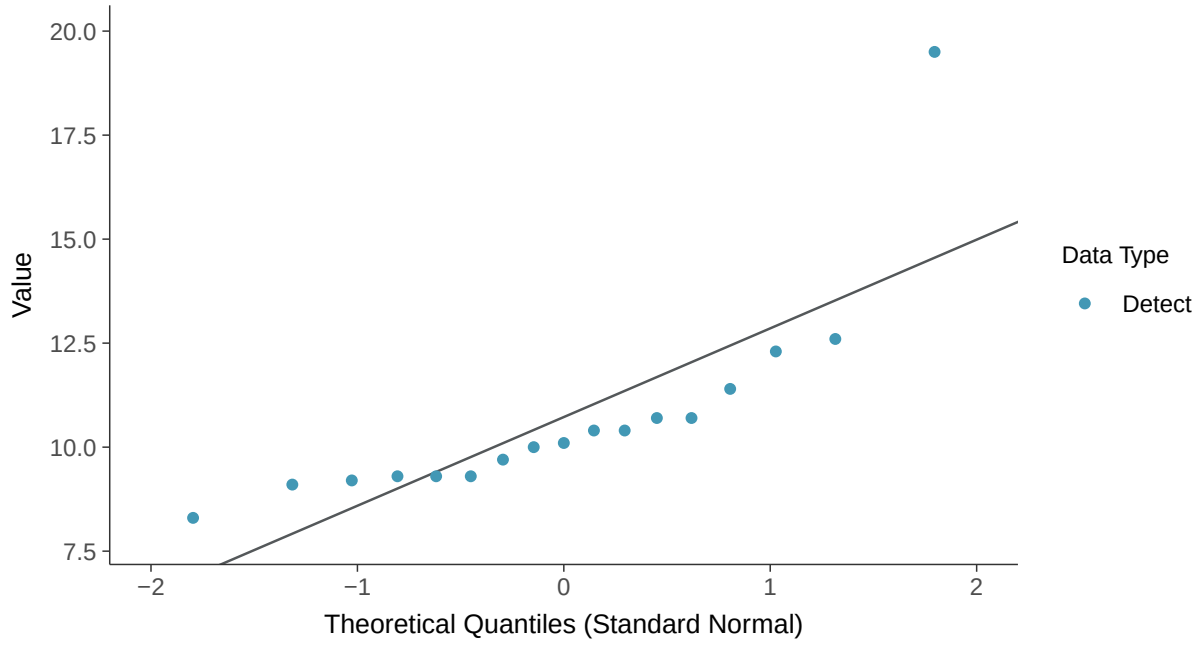
Boxplot by Season

Lithium, MW-11 (ug/L)



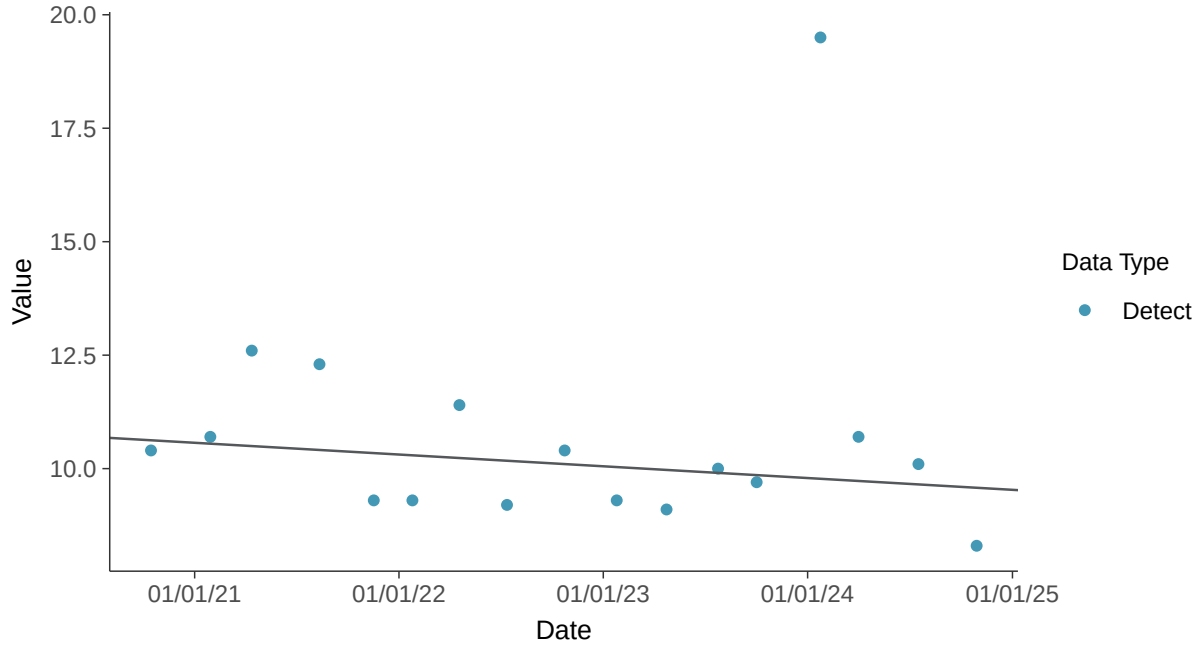
Normal Q-Q plot

Lithium, MW-11 (ug/L)



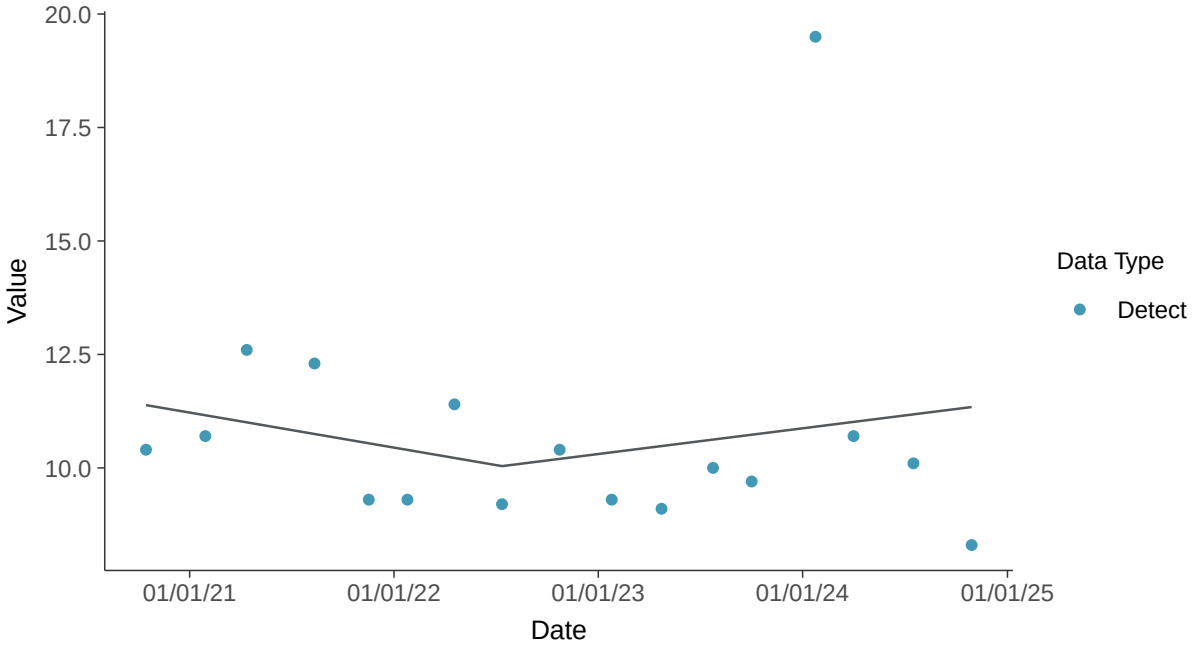
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Lithium, MW-11 (ug/L)



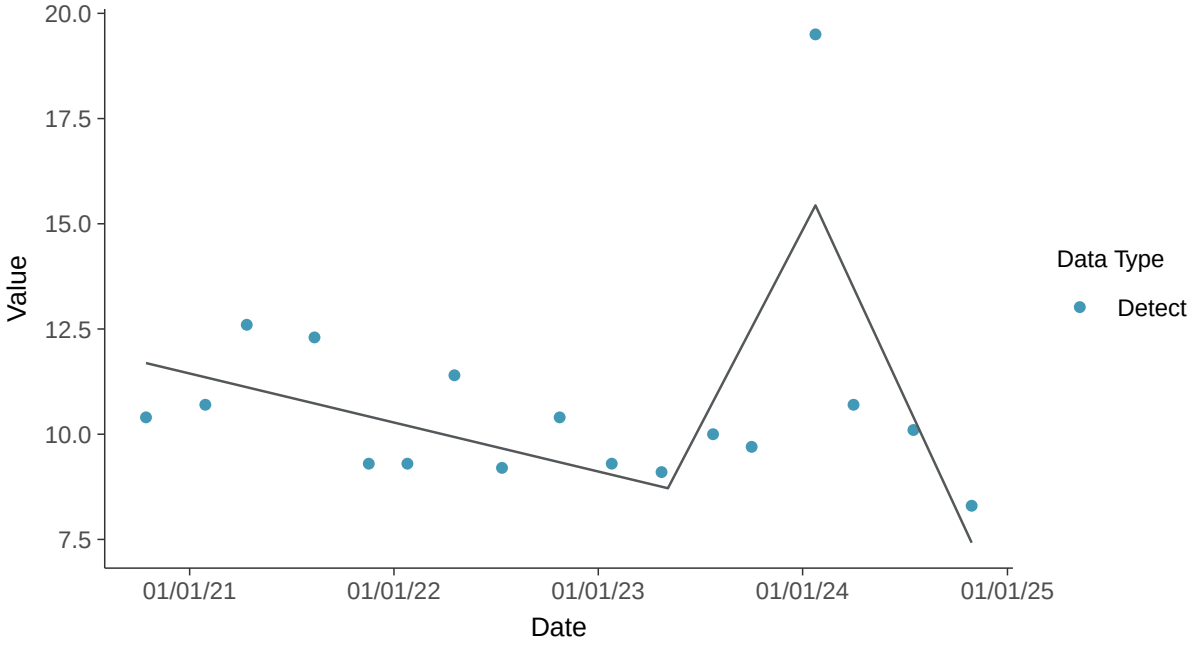
Trend Regression: Piecewise Linear-Linear

Lithium, MW-11 (ug/L)



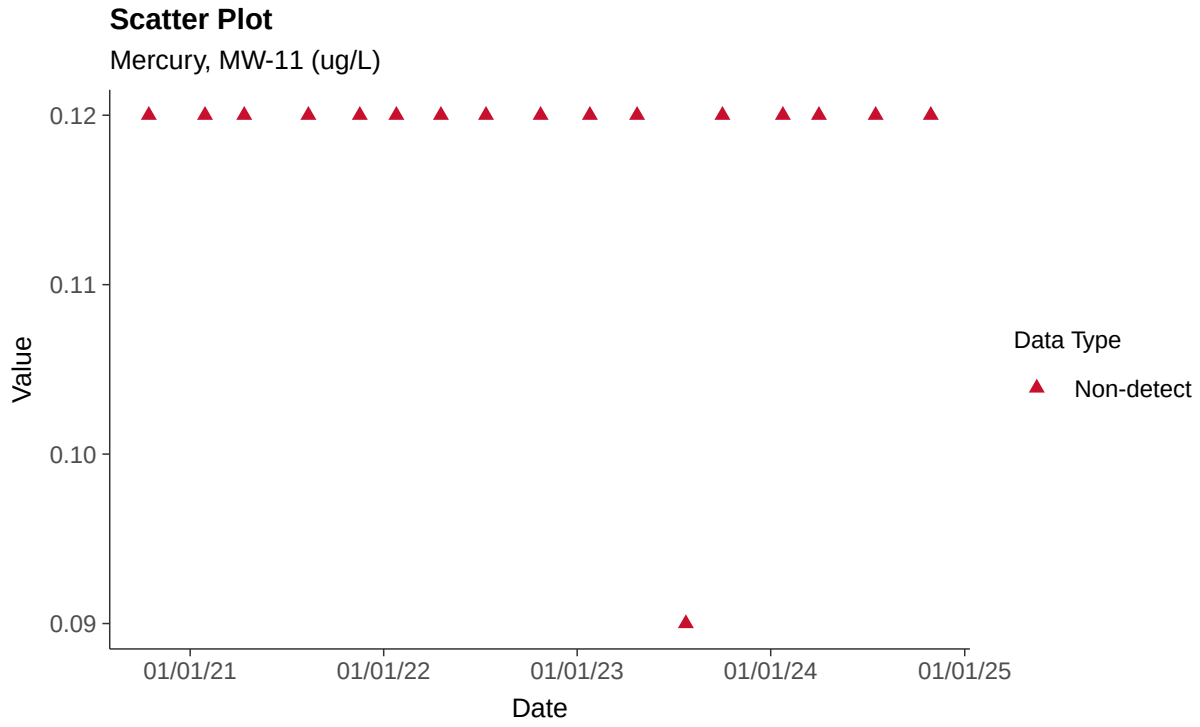
Trend Regression: Piecewise Linear-Linear-Linear

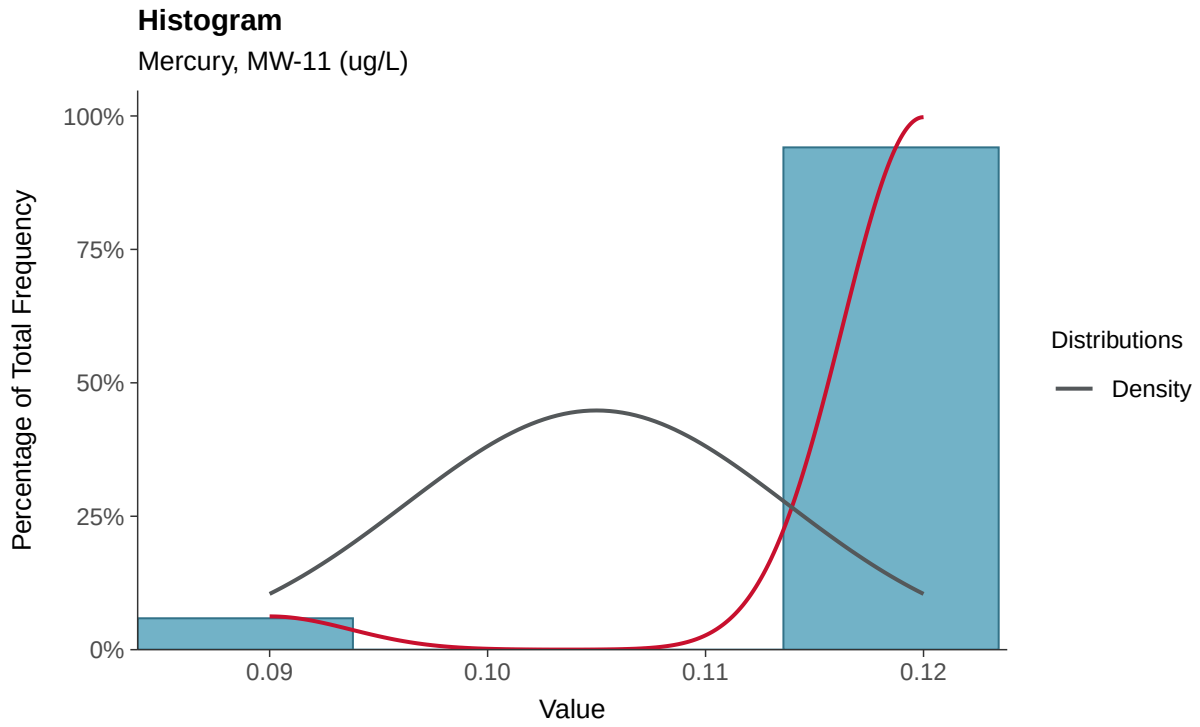
Lithium, MW-11 (ug/L)



App. IV: Mercury, MW-11

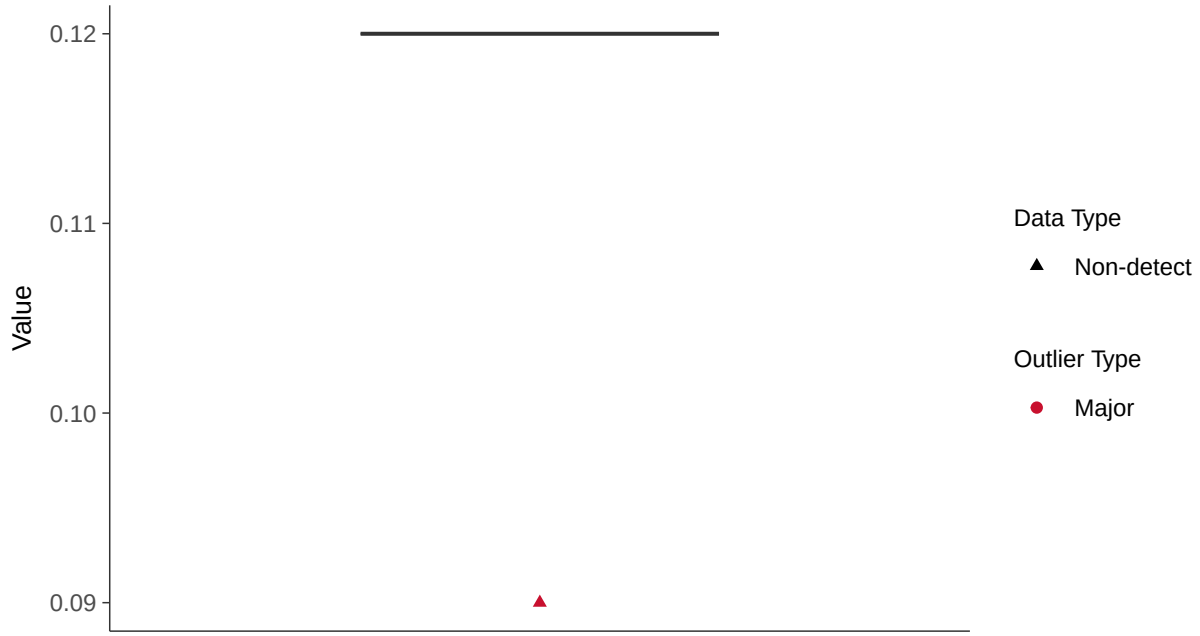
ID: 10_03_115





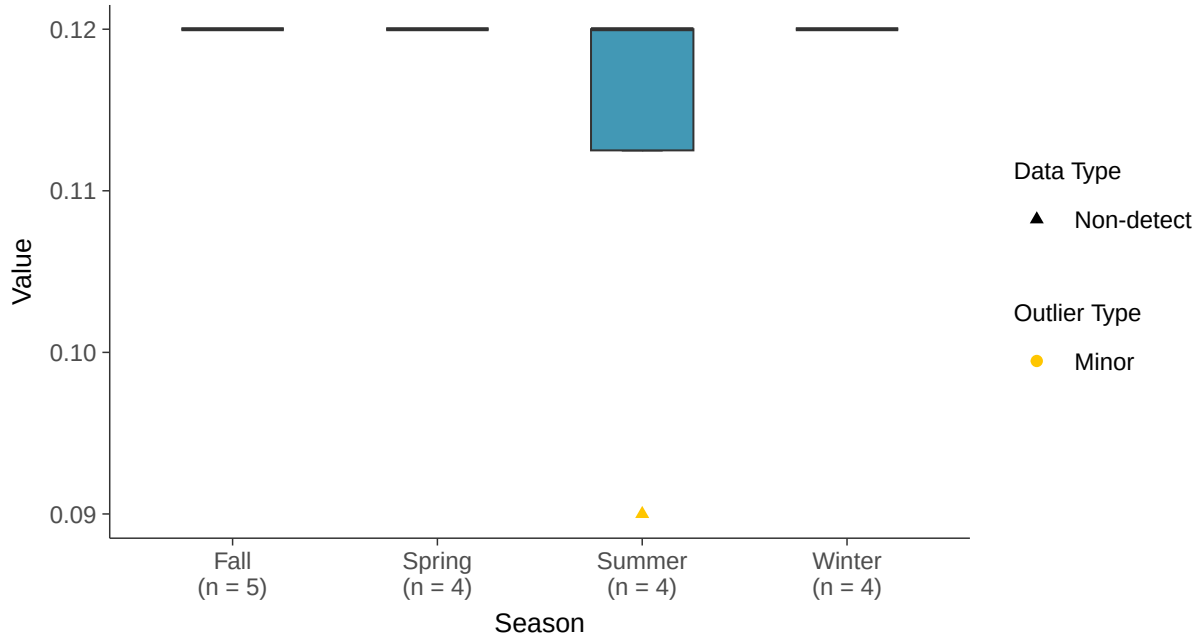
Boxplot

Mercury, MW-11 (ug/L)



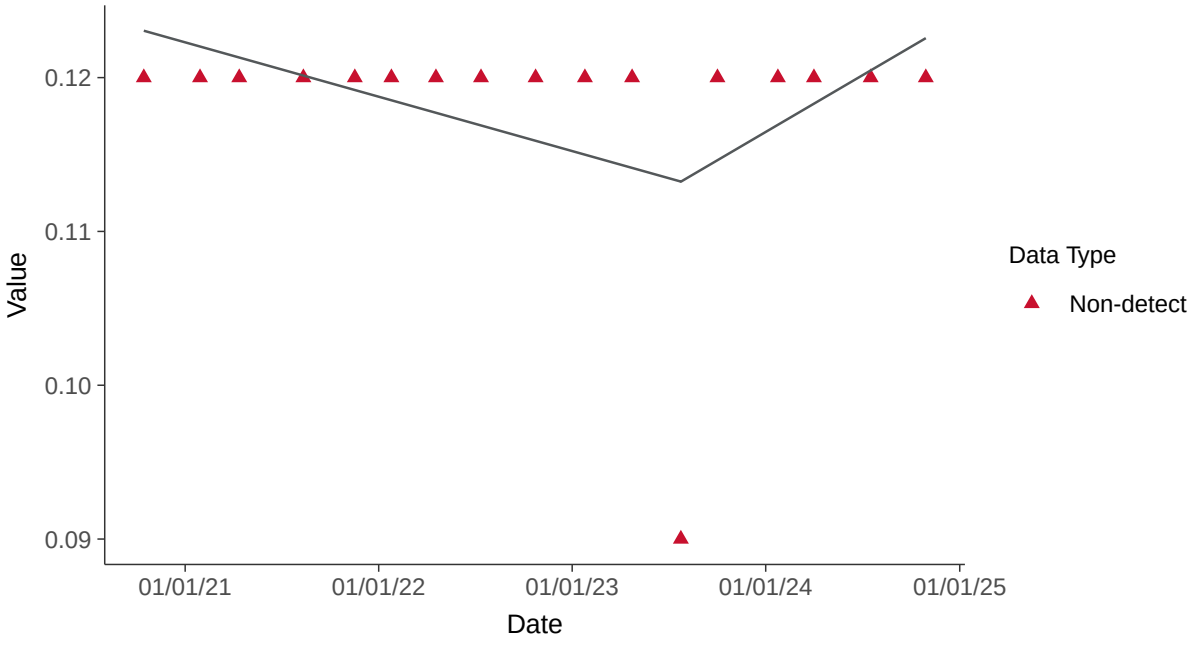
Boxplot by Season

Mercury, MW-11 (ug/L)



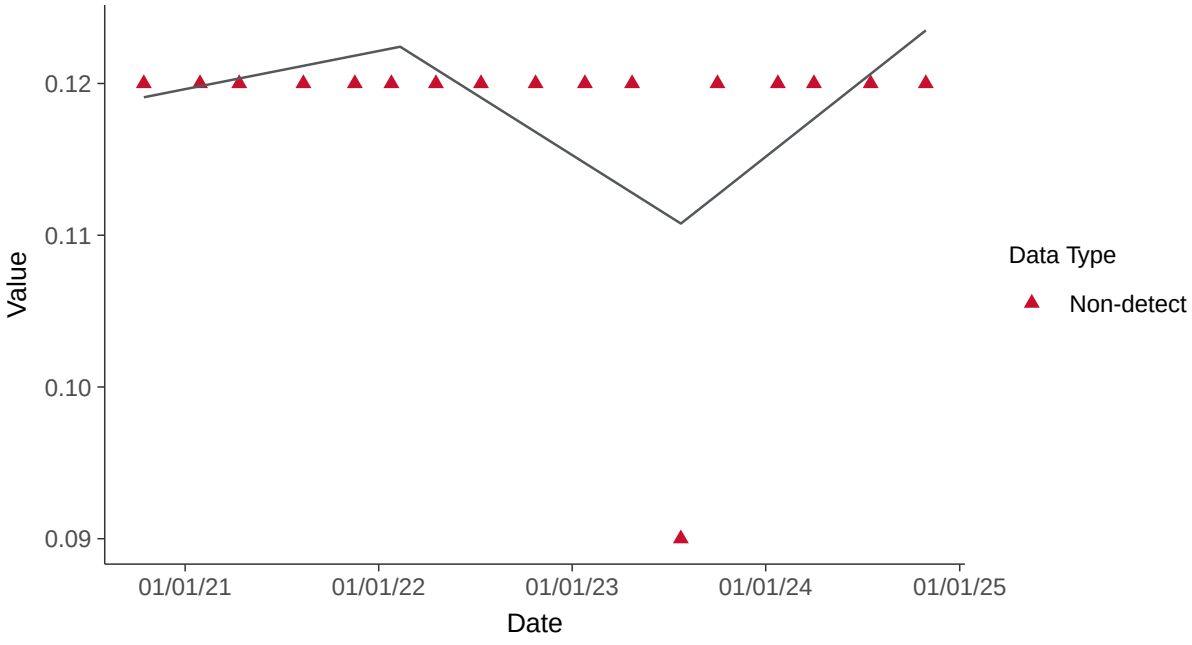
Trend Regression: Piecewise Linear-Linear

Mercury, MW-11 (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Mercury, MW-11 (ug/L)

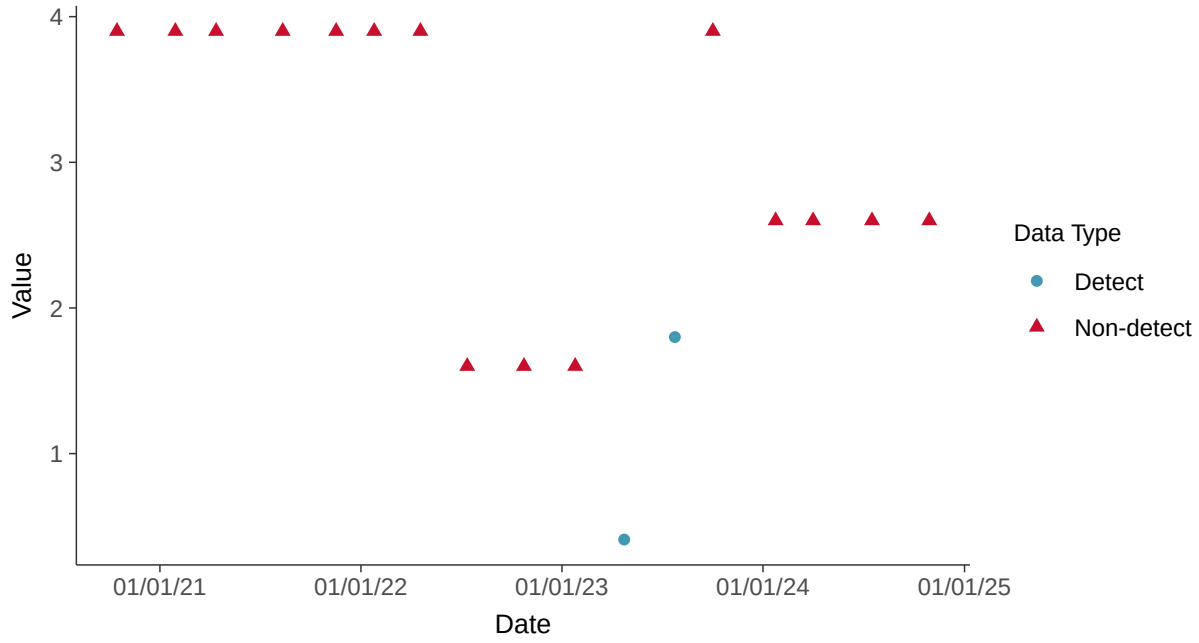


App. IV: Molybdenum, MW-11

ID: 10_03_116

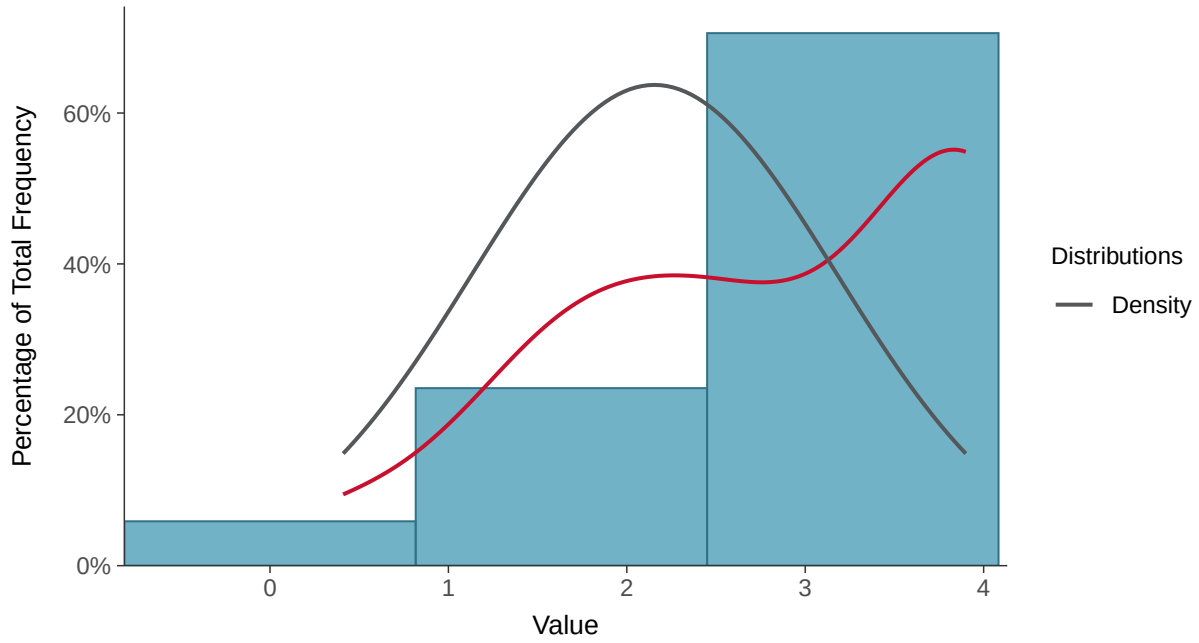
Scatter Plot

Molybdenum, MW-11 (ug/L)



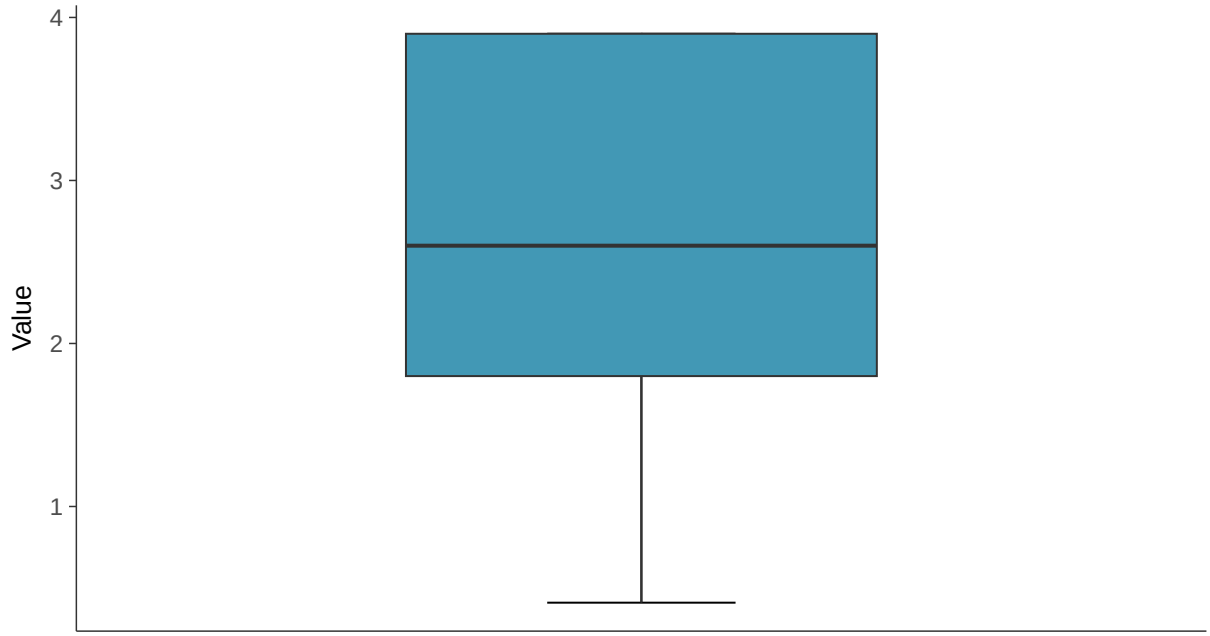
Histogram

Molybdenum, MW-11 (ug/L)



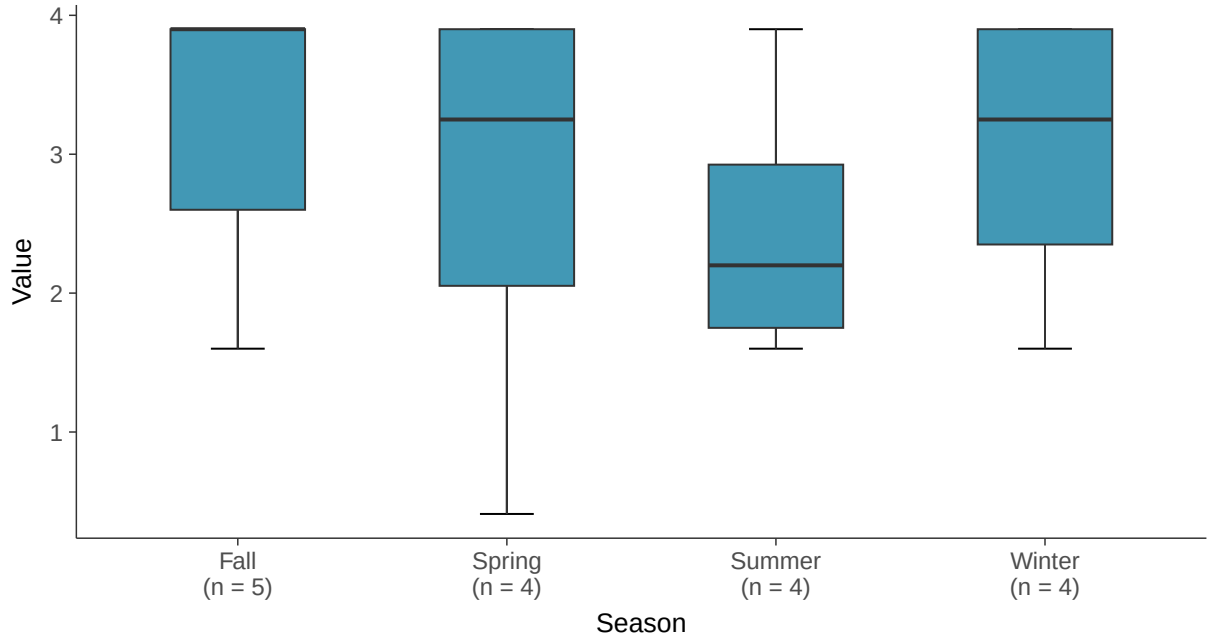
Boxplot

Molybdenum, MW-11 (ug/L)



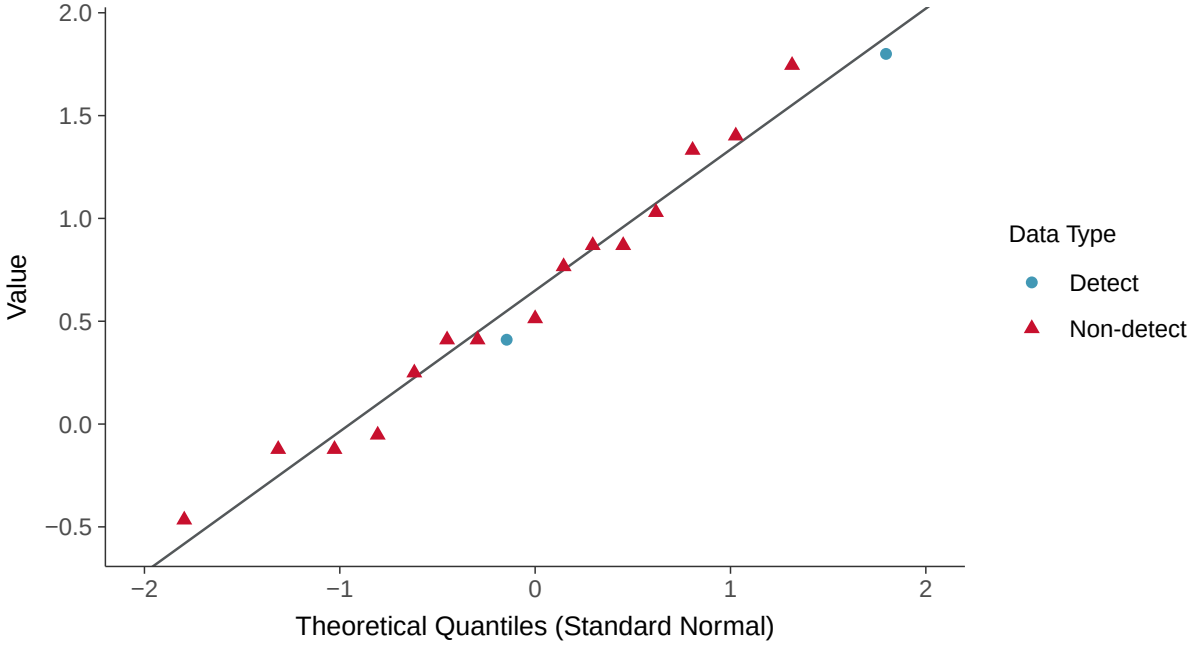
Boxplot by Season

Molybdenum, MW-11 (ug/L)



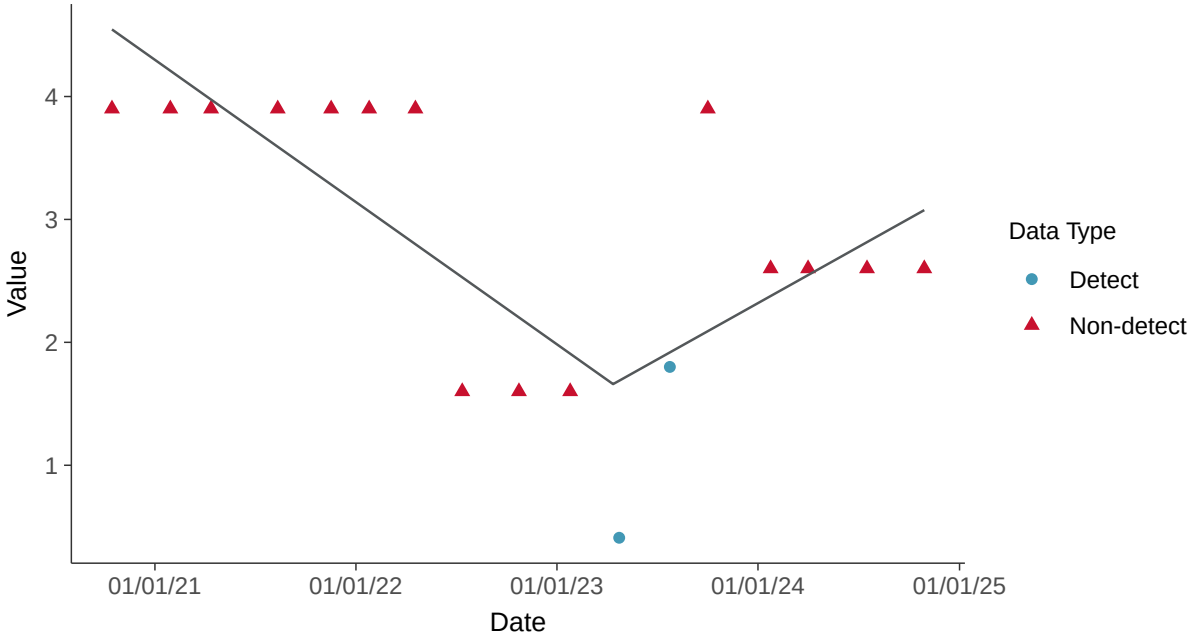
Normal Q-Q plot using ROS Imputed Estimates

Molybdenum, MW-11 (ug/L)



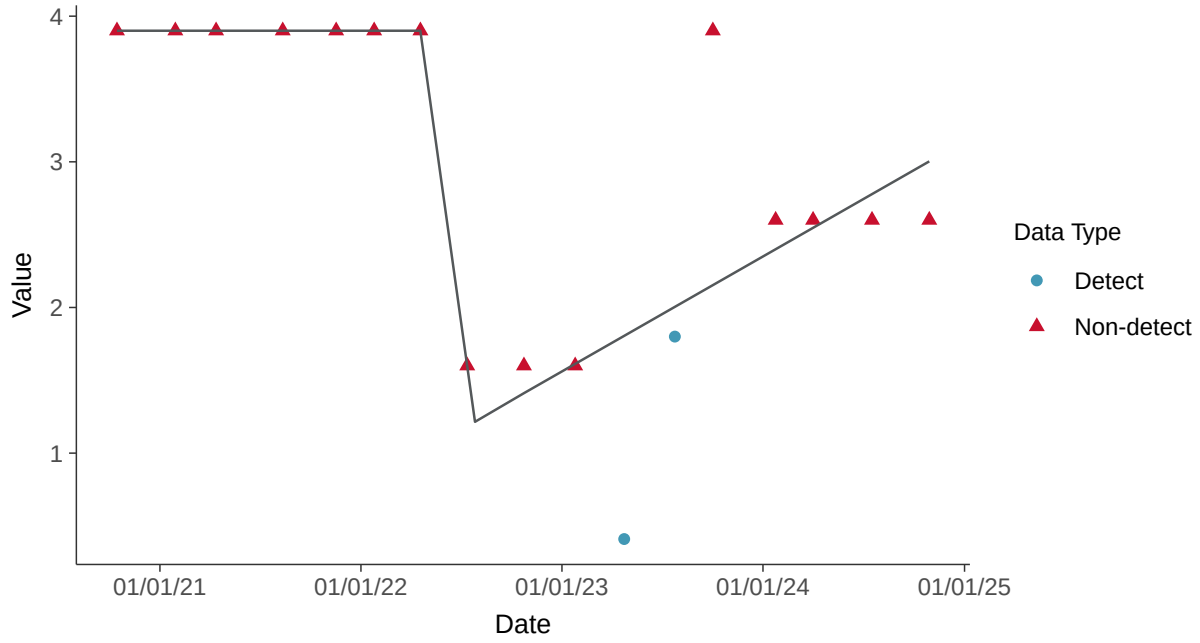
Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11 (ug/L)



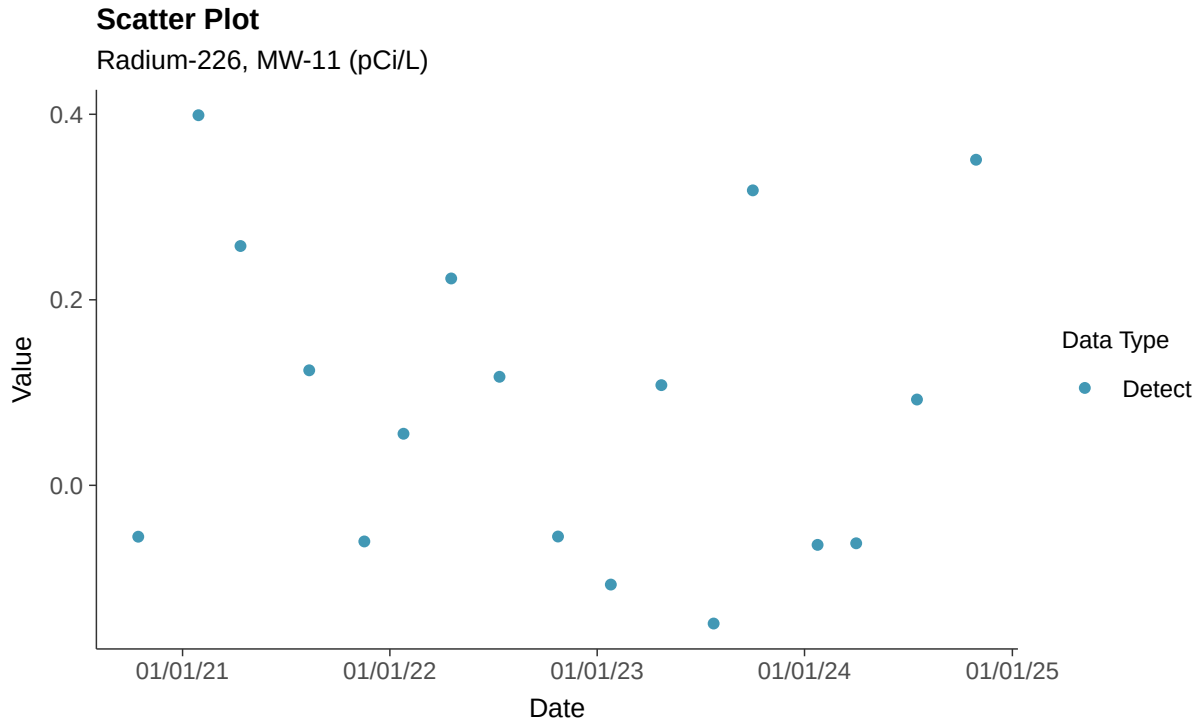
Trend Regression: Piecewise Linear-Linear-Linear

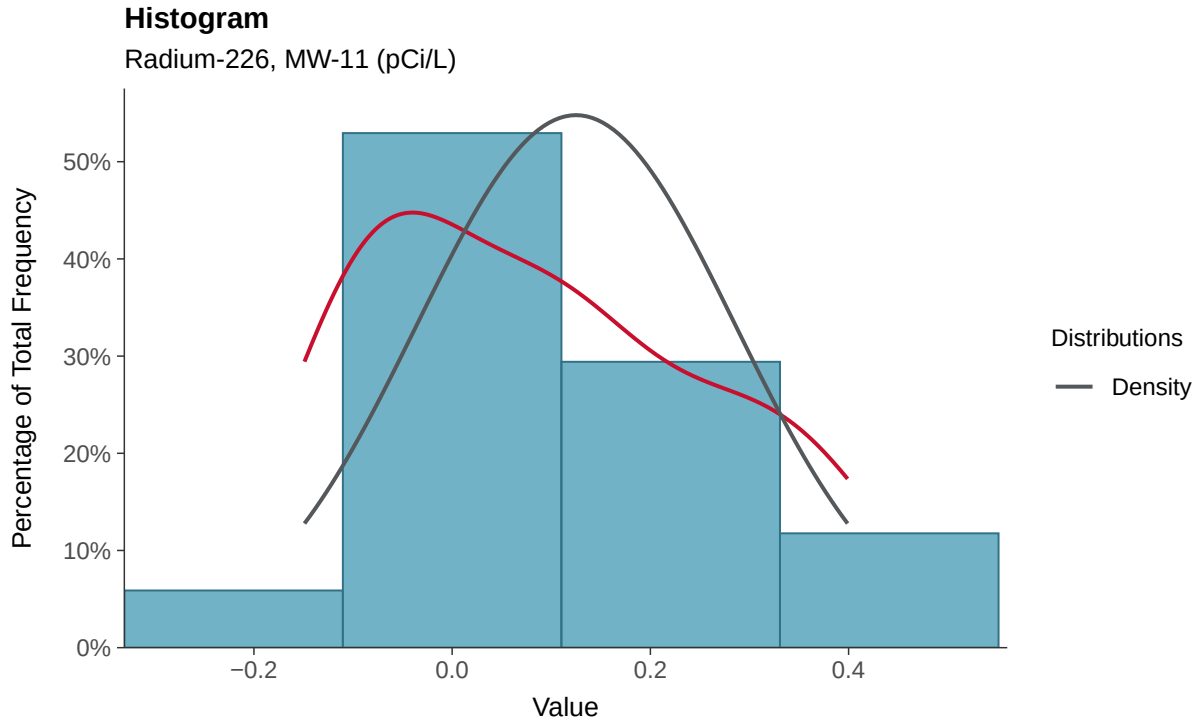
Molybdenum, MW-11 (ug/L)



App. IV: Radium-226, MW-11

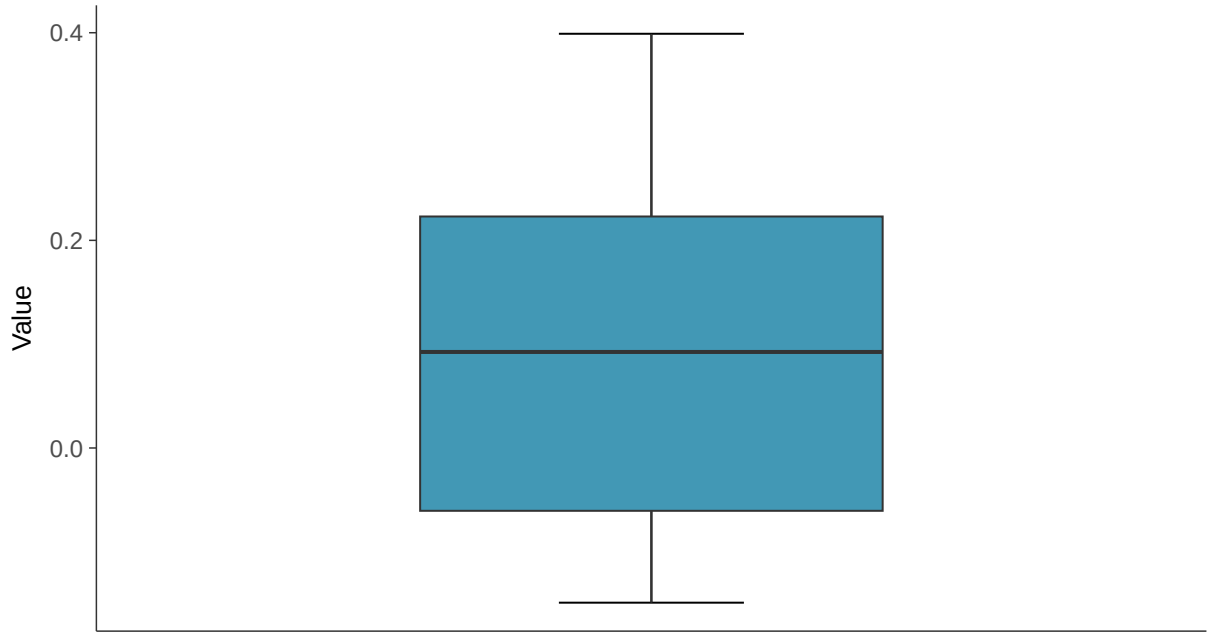
ID: 10_03_119





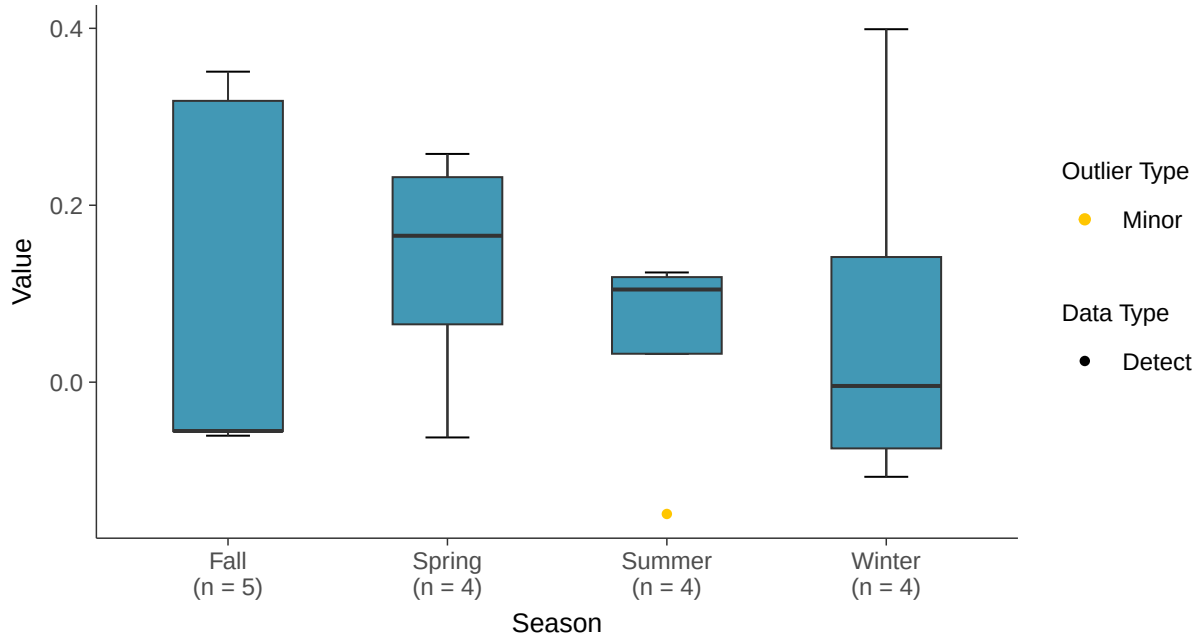
Boxplot

Radium-226, MW-11 (pCi/L)



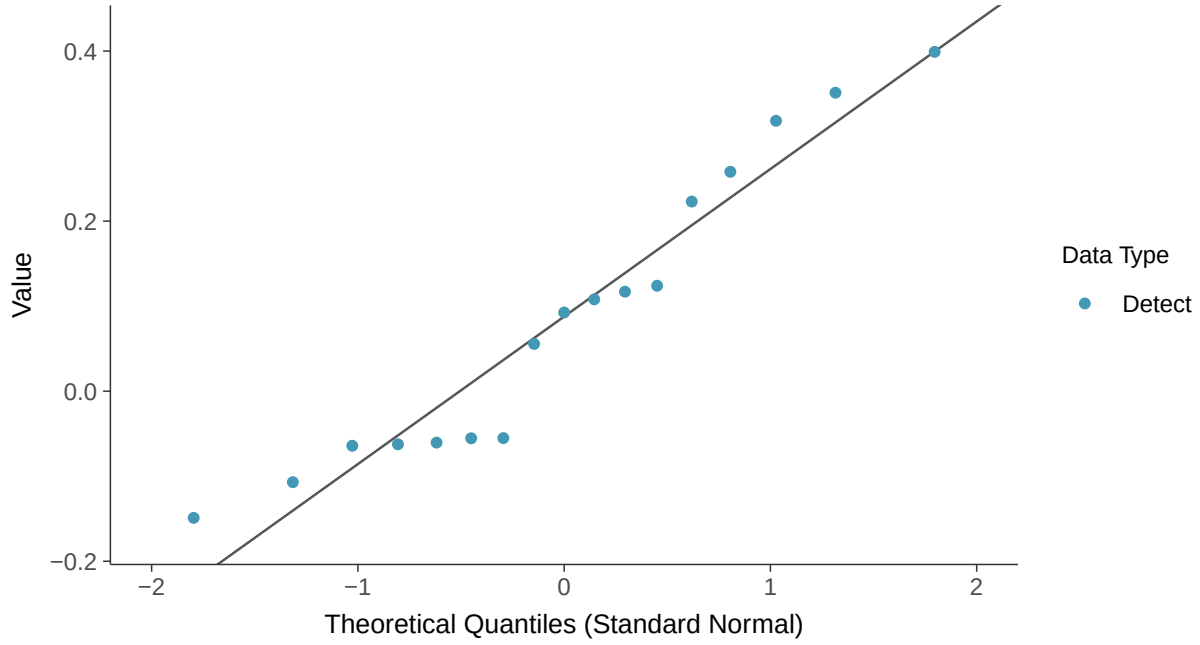
Boxplot by Season

Radium-226, MW-11 (pCi/L)



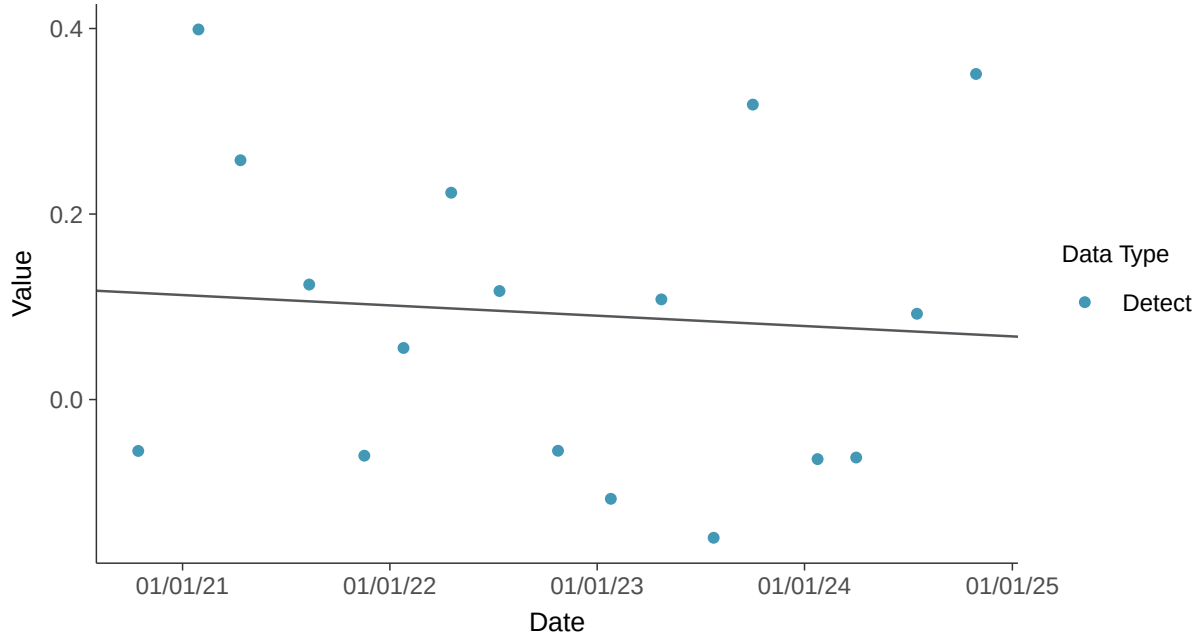
Normal Q-Q plot

Radium-226, MW-11 (pCi/L)



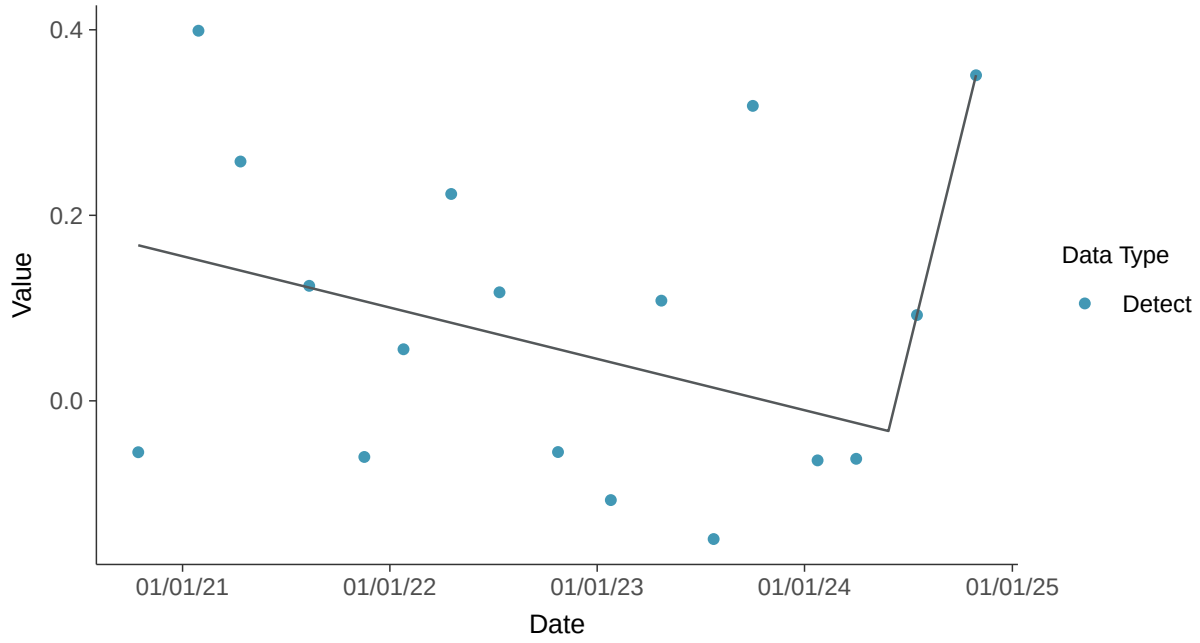
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-11 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-226, MW-11 (pCi/L)

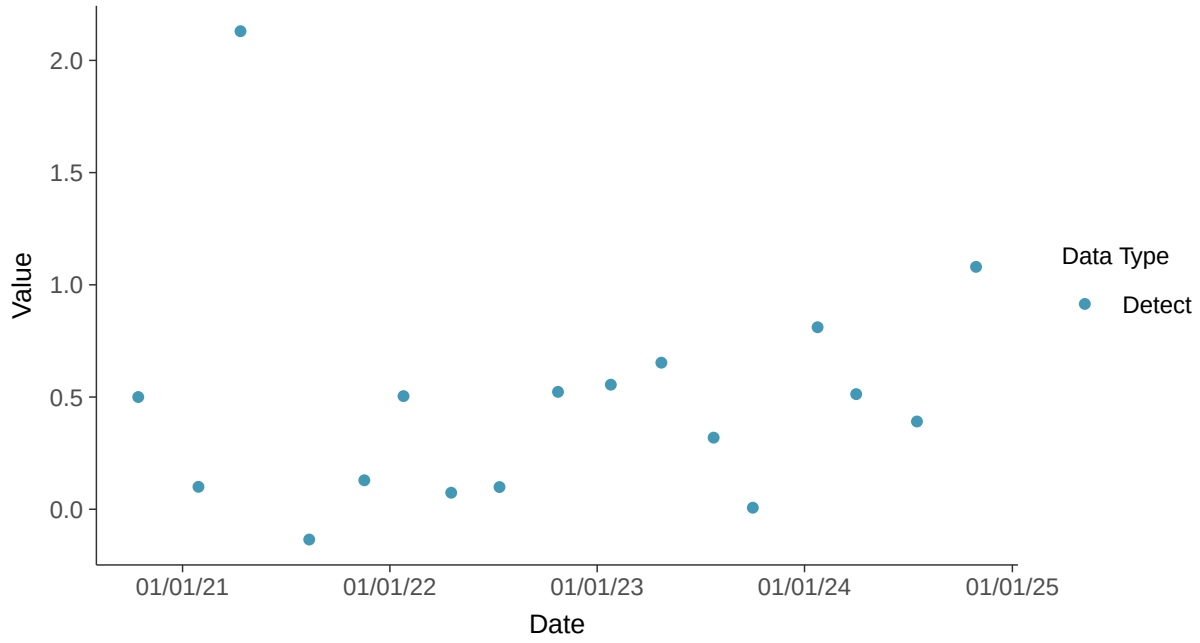


App. IV: Radium-228, MW-11

ID: 10_03_120

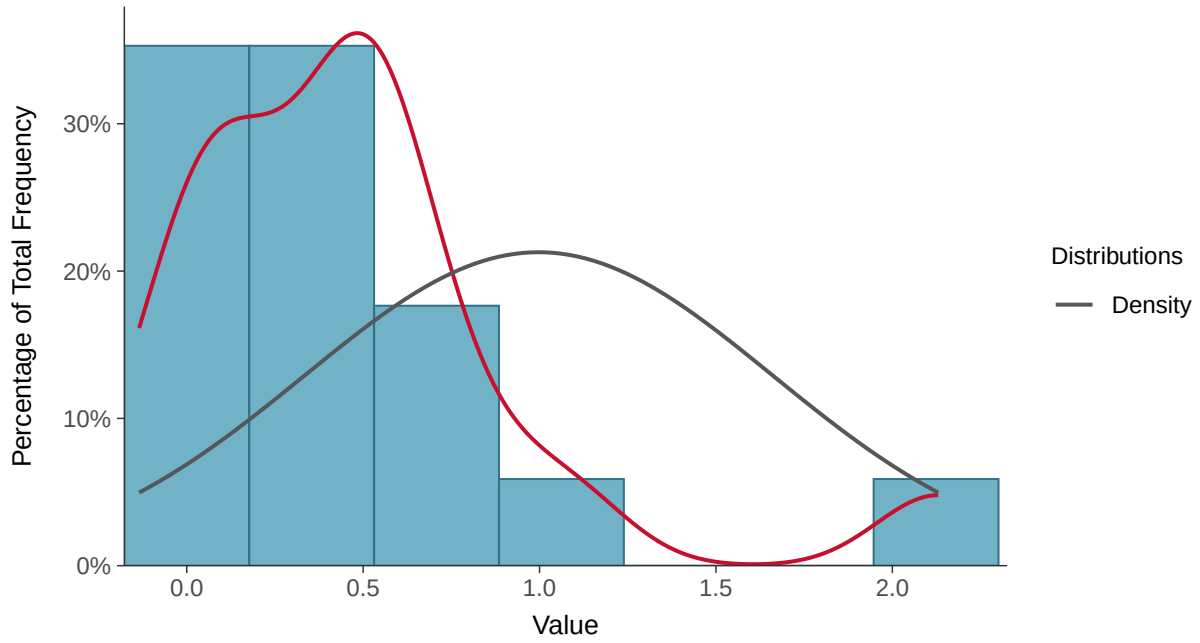
Scatter Plot

Radium-228, MW-11 (pCi/L)



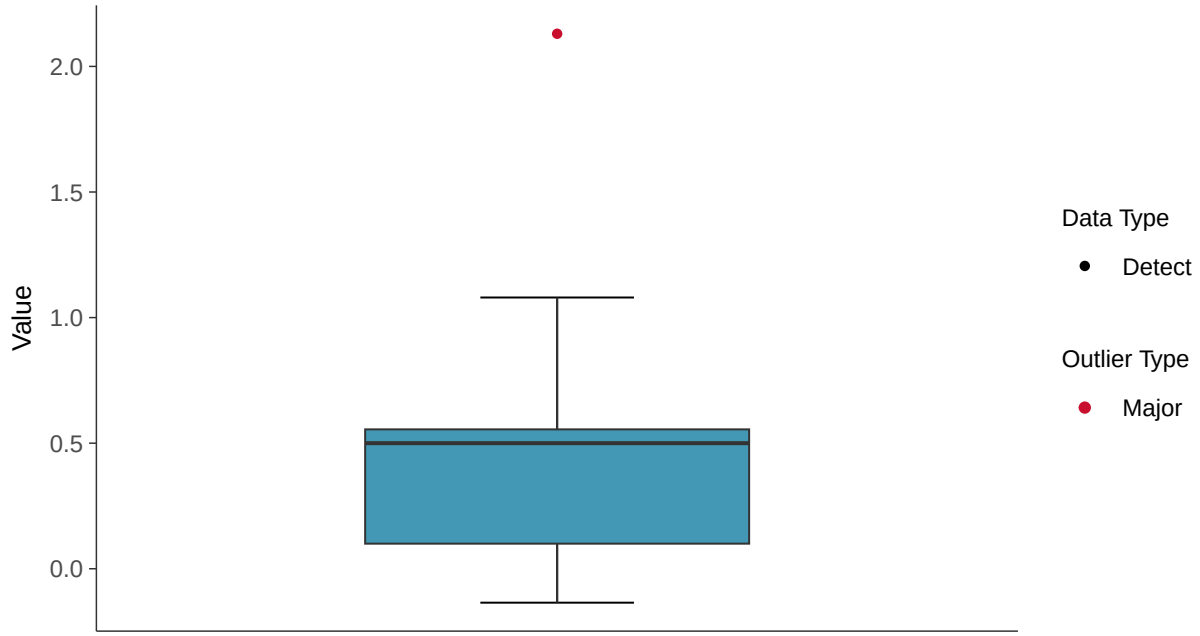
Histogram

Radium-228, MW-11 (pCi/L)



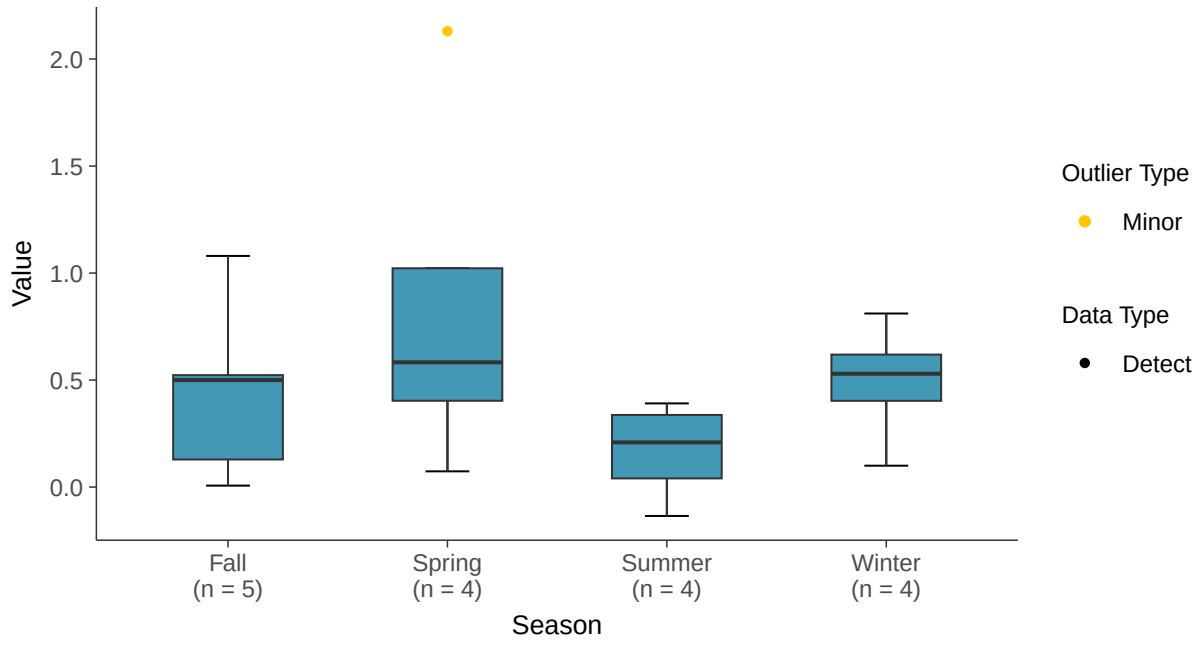
Boxplot

Radium-228, MW-11 (pCi/L)



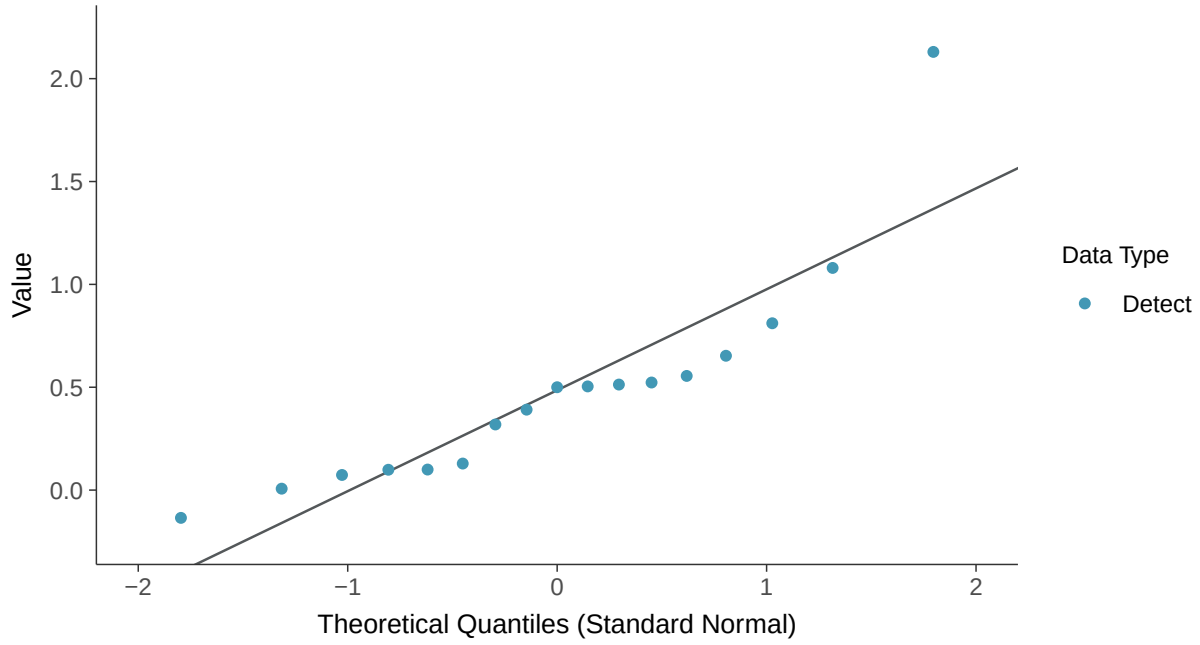
Boxplot by Season

Radium-228, MW-11 (pCi/L)



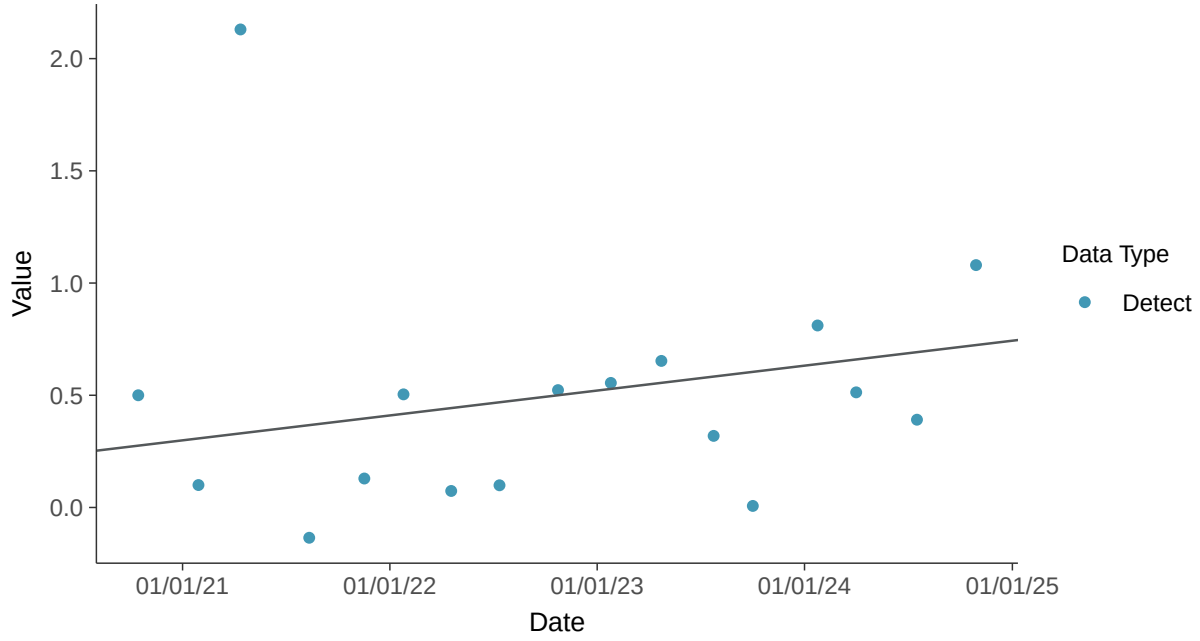
Normal Q-Q plot

Radium-228, MW-11 (pCi/L)



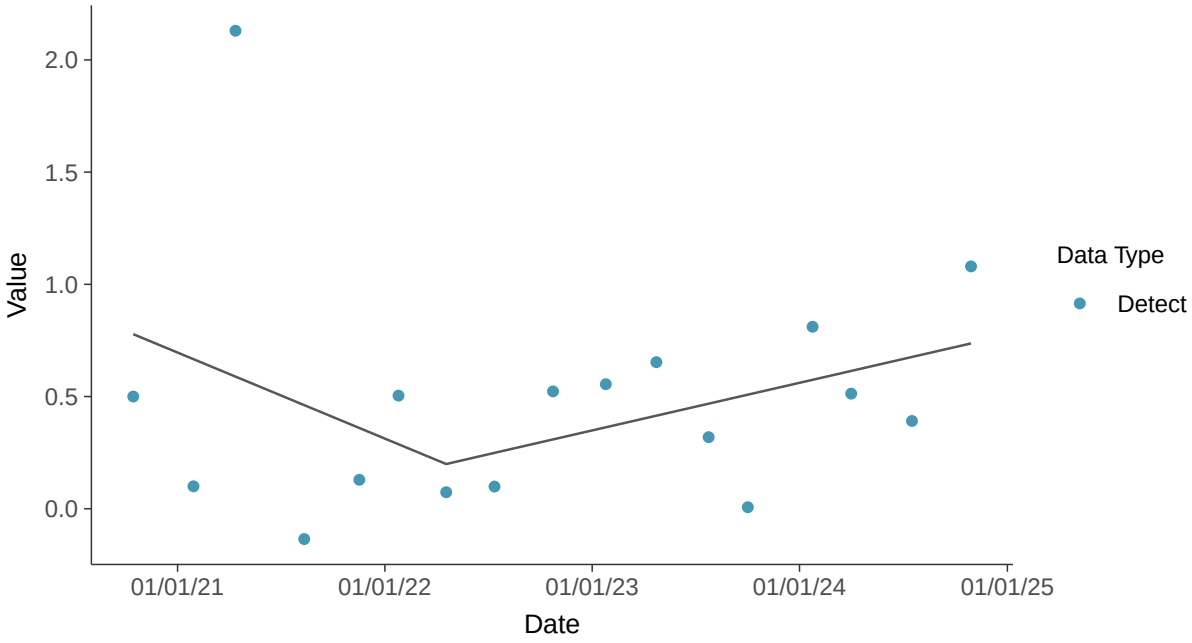
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-11 (pCi/L)



Trend Regression: Piecewise Linear-Linear

Radium-228, MW-11 (pCi/L)

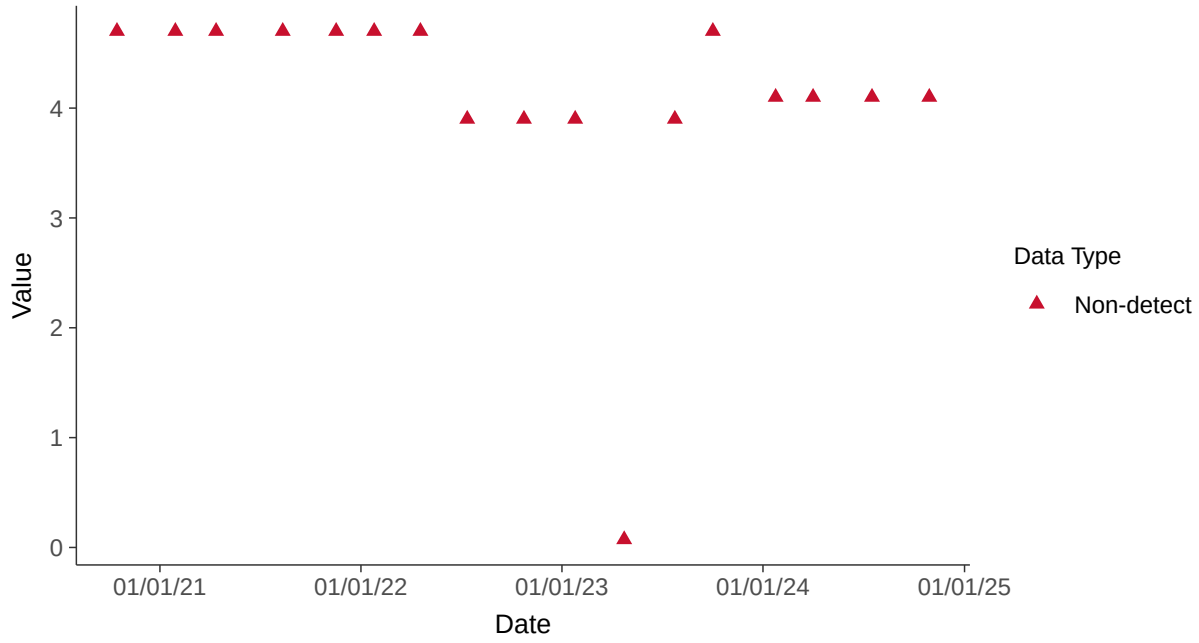


App. IV: Selenium, MW-11

ID: 10_03_121

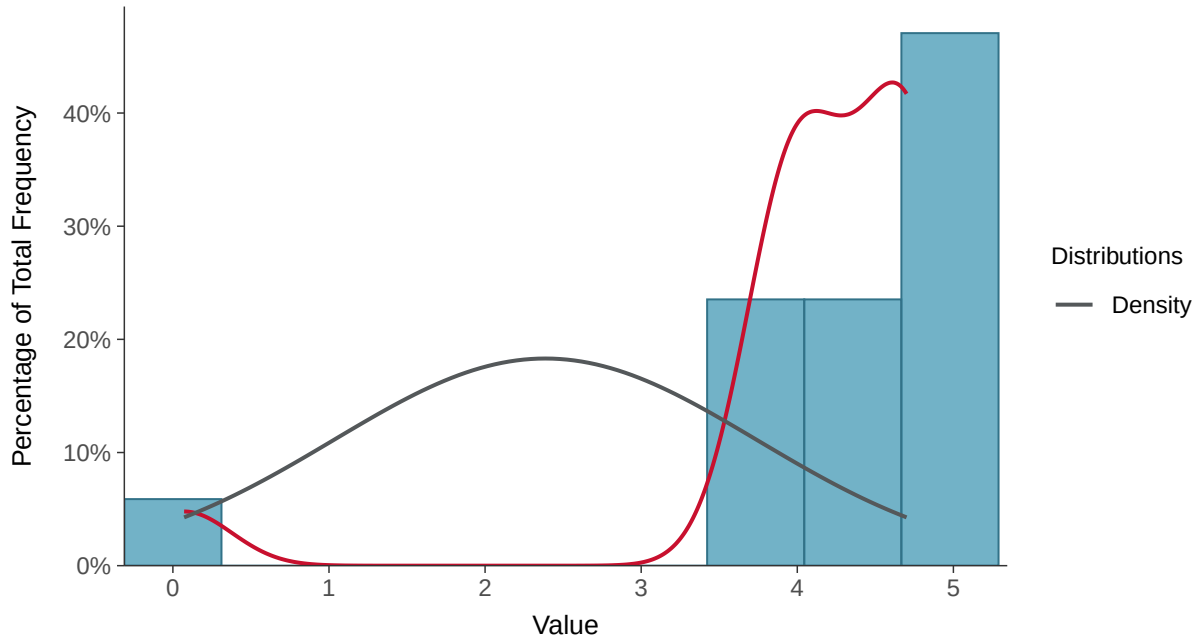
Scatter Plot

Selenium, MW-11 (ug/L)



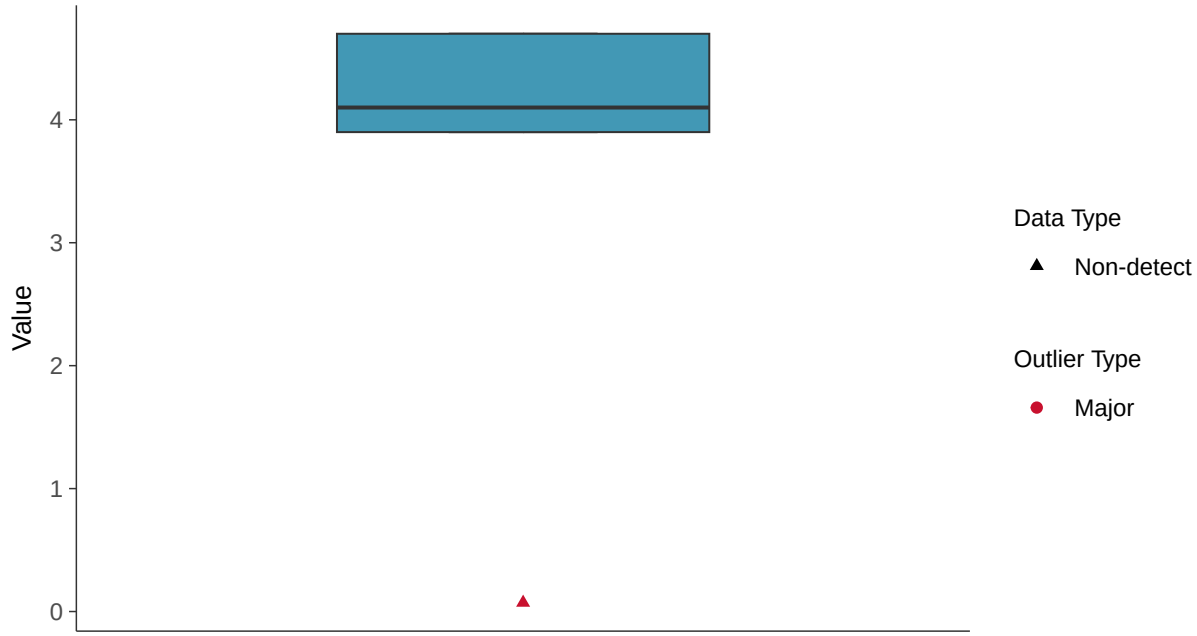
Histogram

Selenium, MW-11 (ug/L)



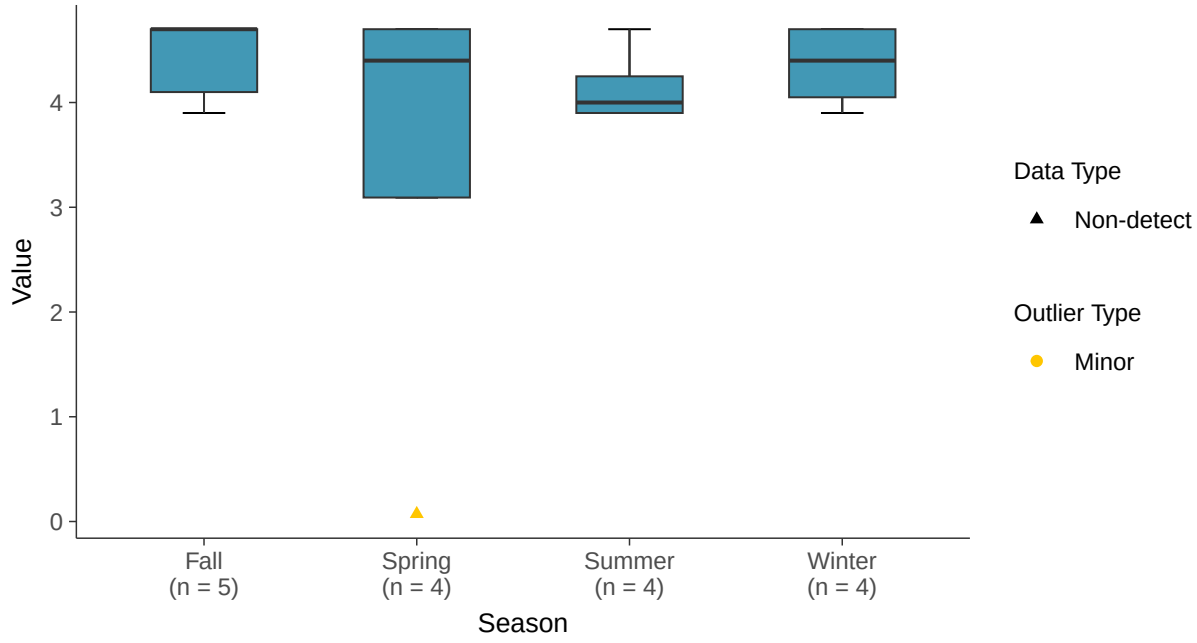
Boxplot

Selenium, MW-11 (ug/L)



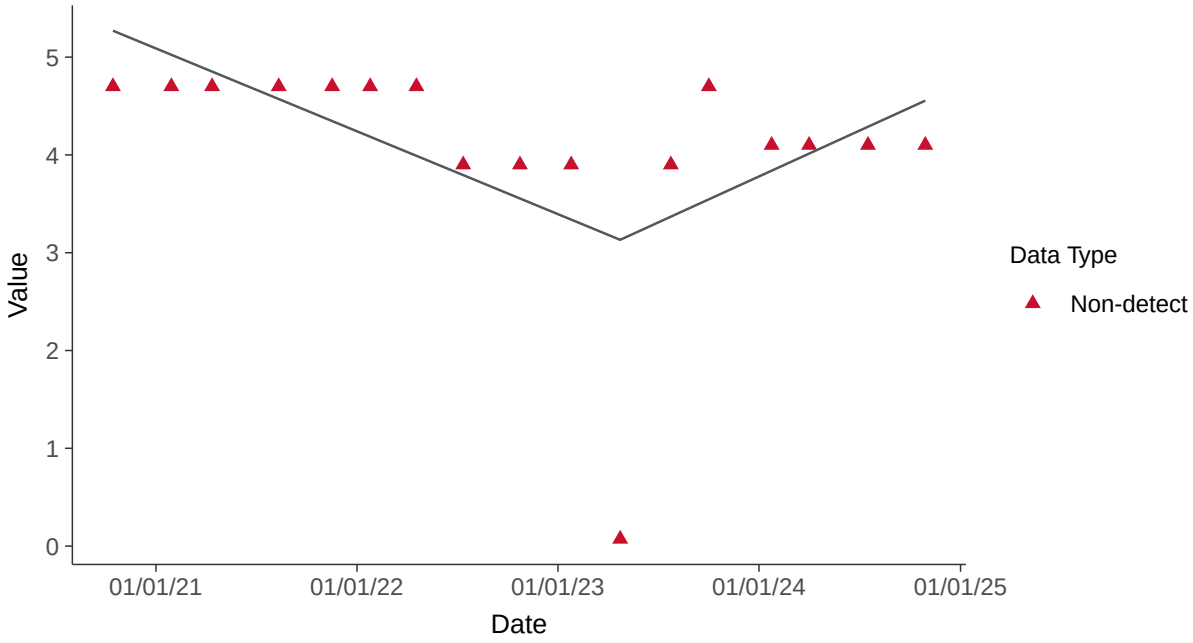
Boxplot by Season

Selenium, MW-11 (ug/L)



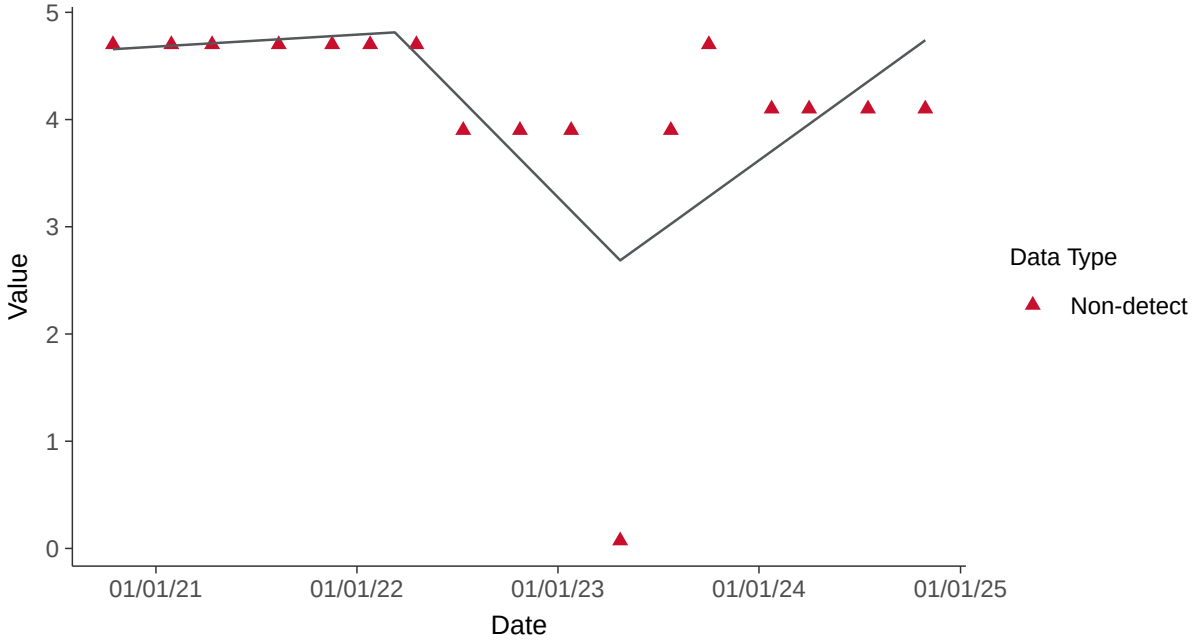
Trend Regression: Piecewise Linear-Linear

Selenium, MW-11 (ug/L)



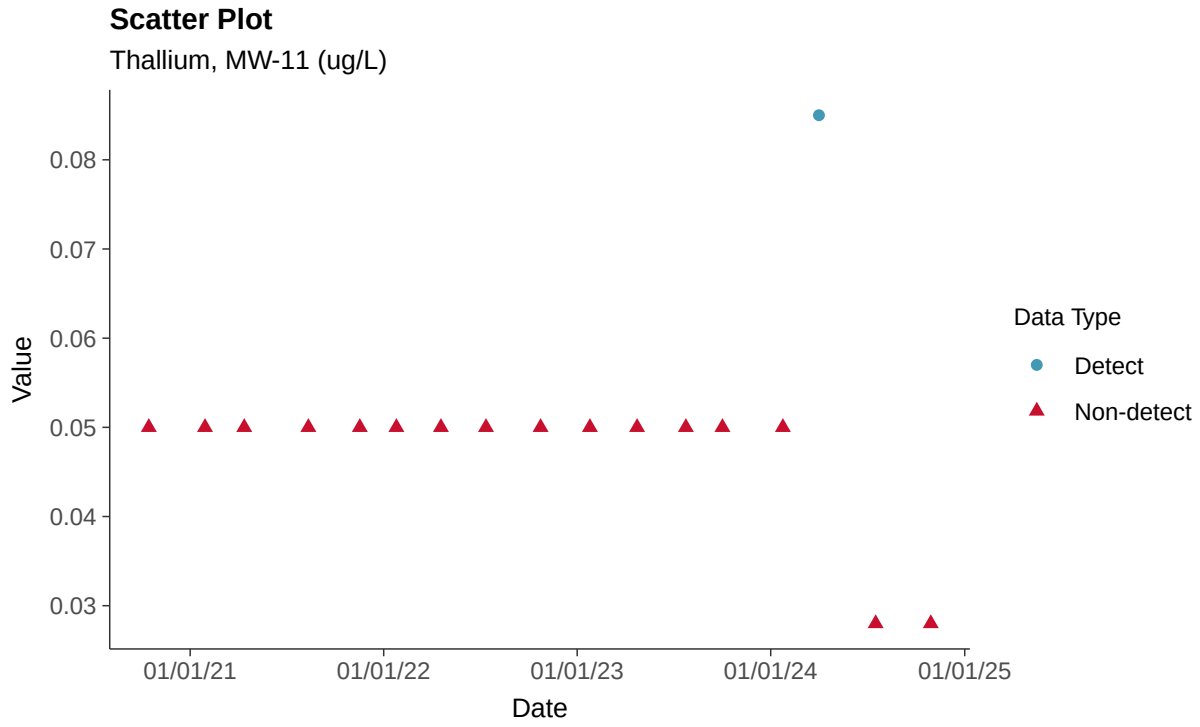
Trend Regression: Piecewise Linear-Linear-Linear

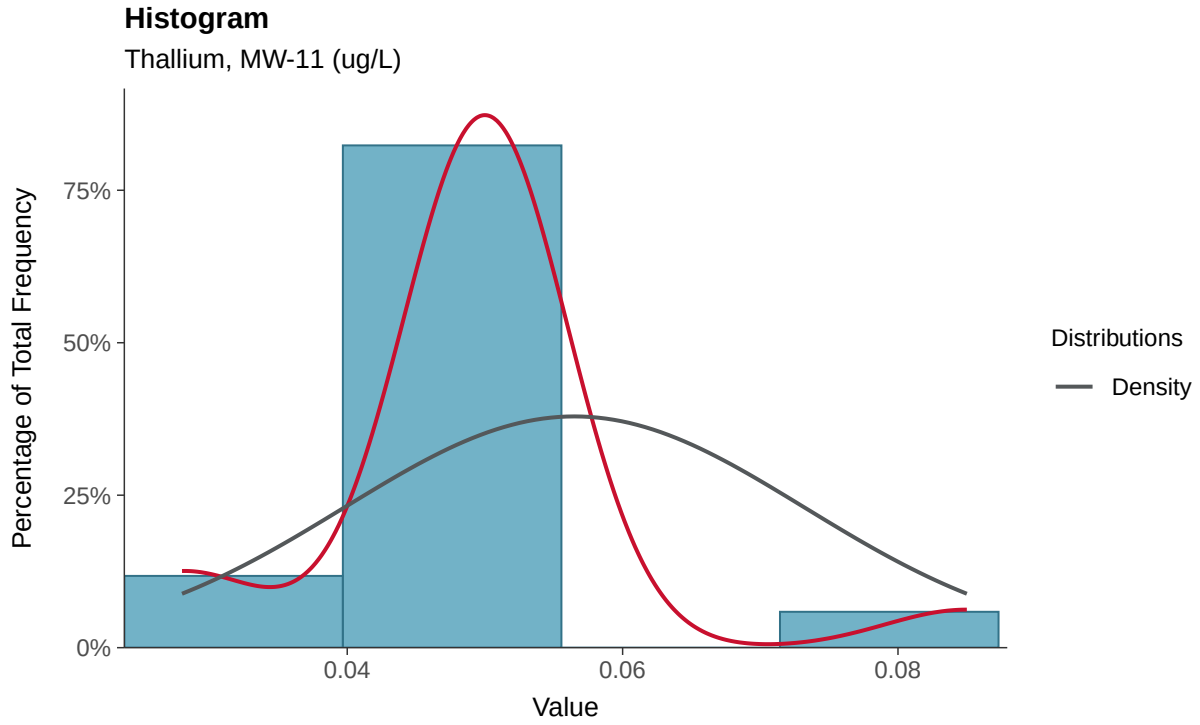
Selenium, MW-11 (ug/L)



App. IV: Thallium, MW-11

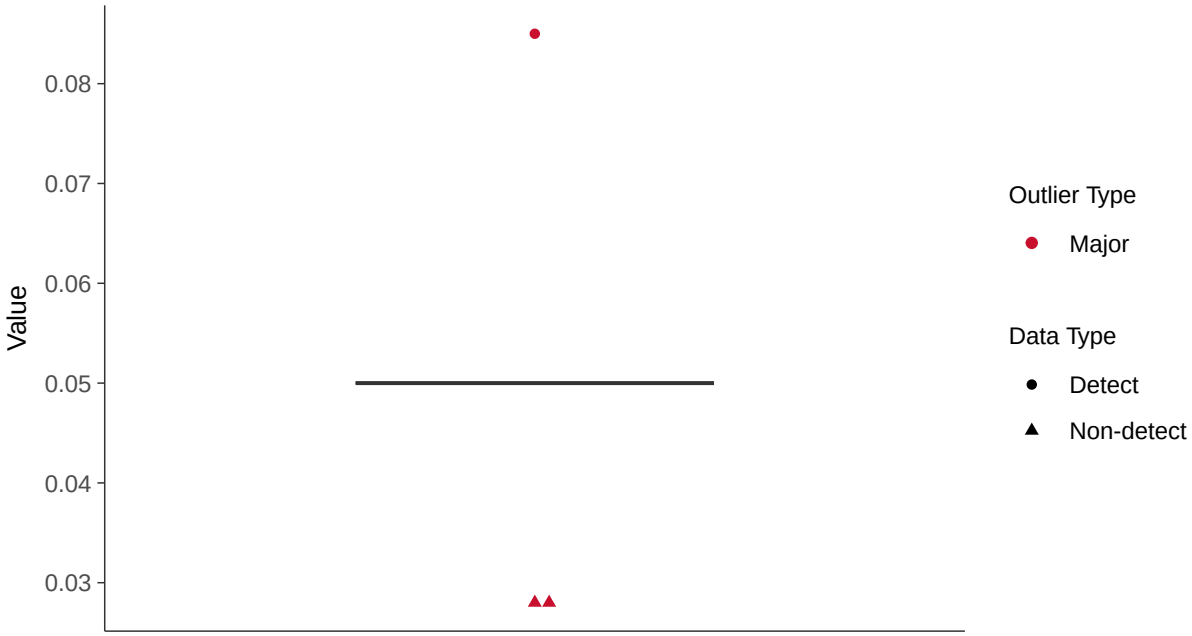
ID: 10_03_124





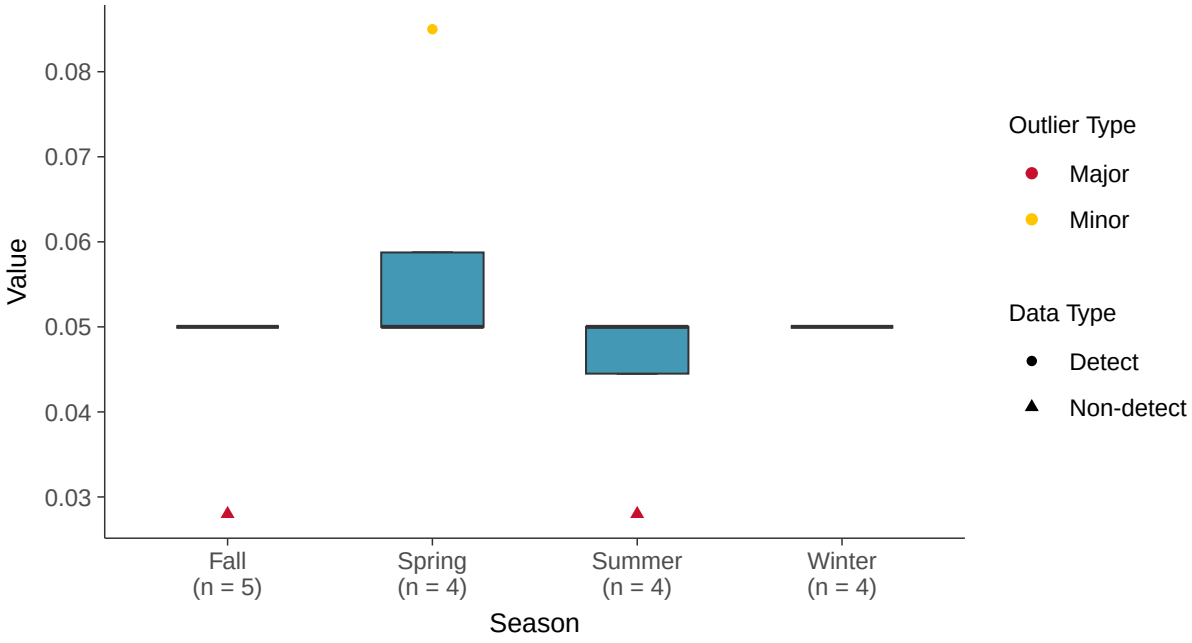
Boxplot

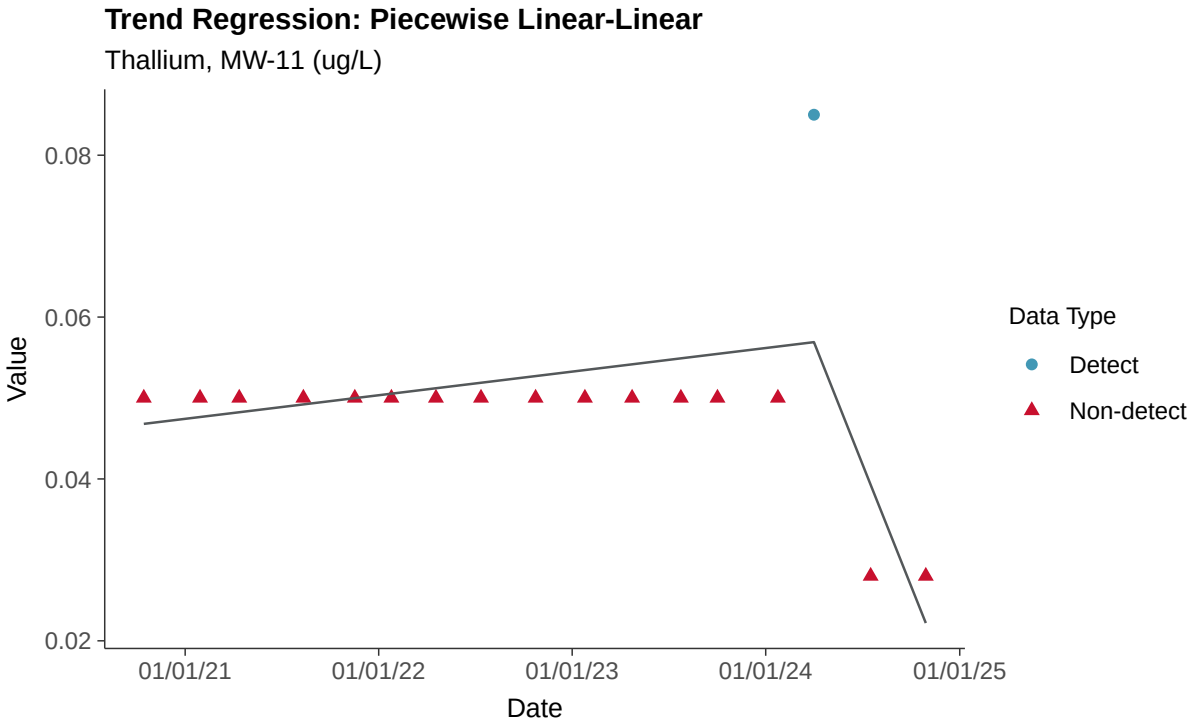
Thallium, MW-11 (ug/L)



Boxplot by Season

Thallium, MW-11 (ug/L)



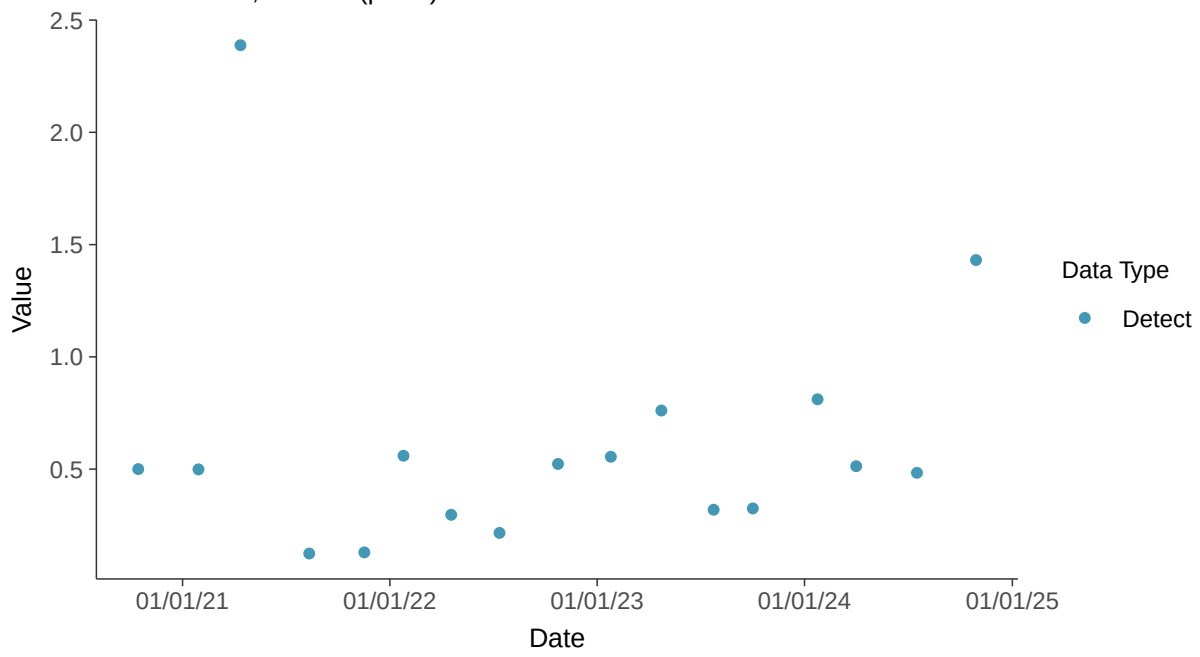

Trend Regression: Piecewise Linear-Linear
Thallium, MW-11 (ug/L)
0.08
0.06
0.04
0.02
Value
01/01/21
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. IV: Total Radium, MW-11

ID: 10_03_126

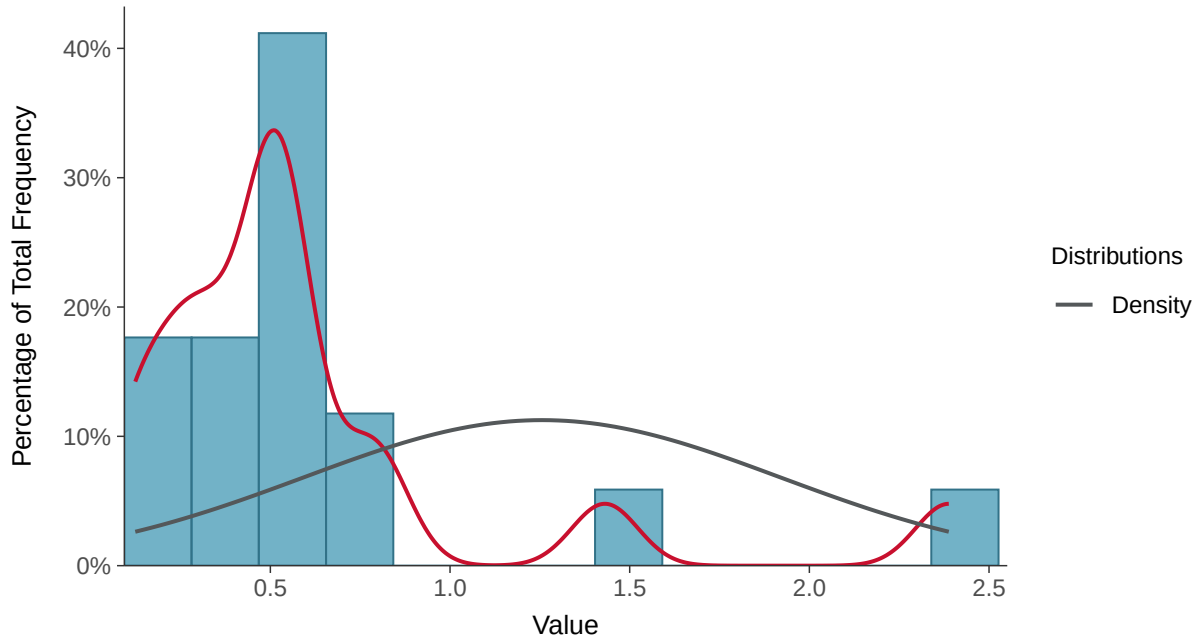
Scatter Plot

Total Radium, MW-11 (pCi/L)



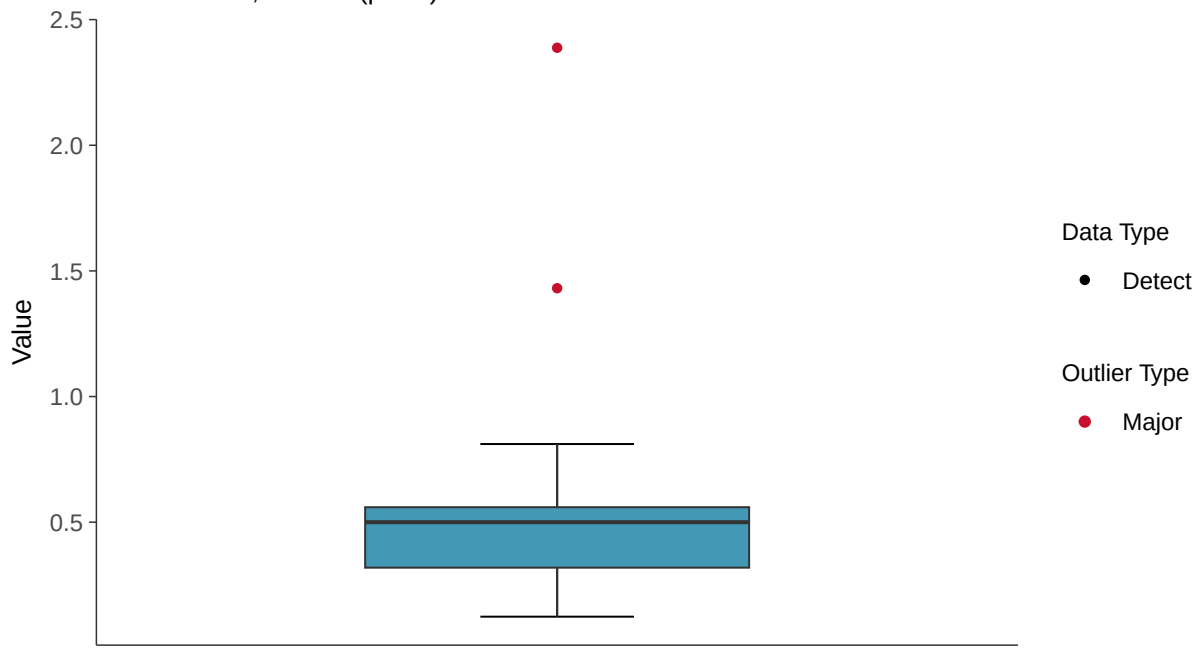
Histogram

Total Radium, MW-11 (pCi/L)



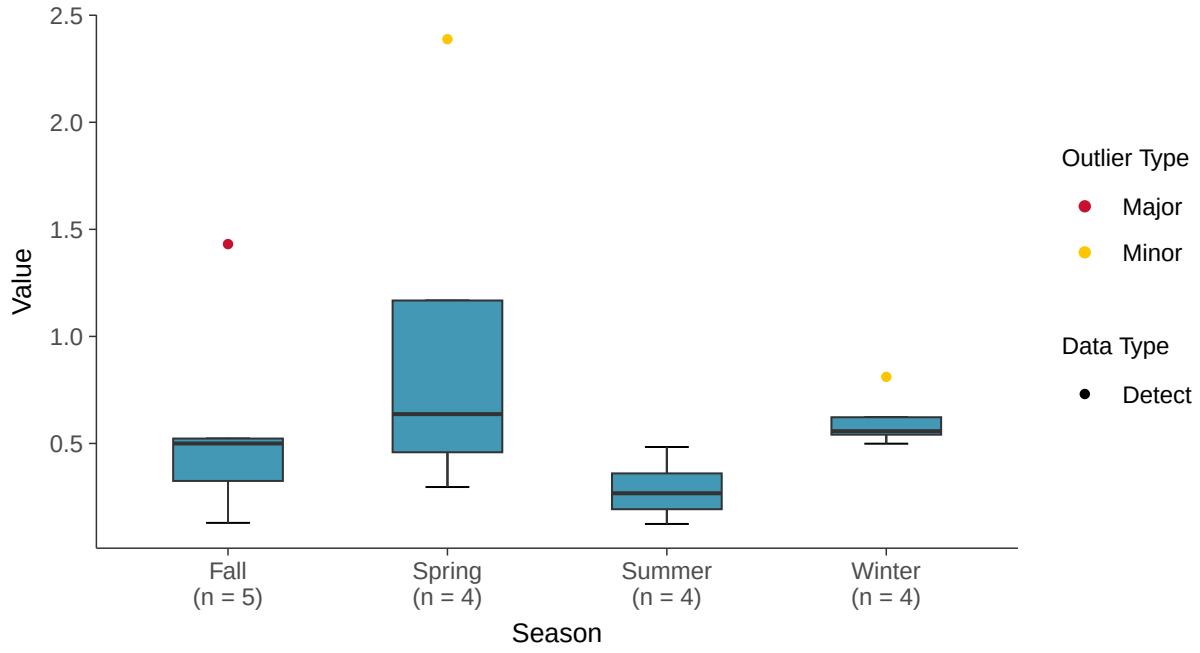
Boxplot

Total Radium, MW-11 (pCi/L)



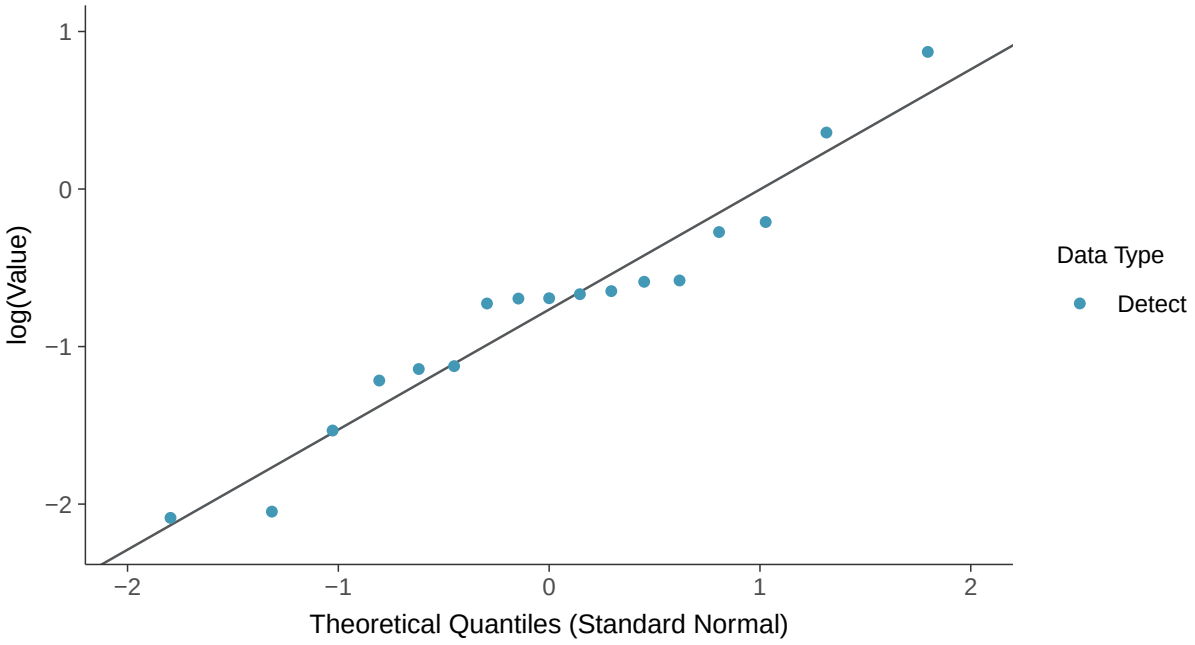
Boxplot by Season

Total Radium, MW-11 (pCi/L)



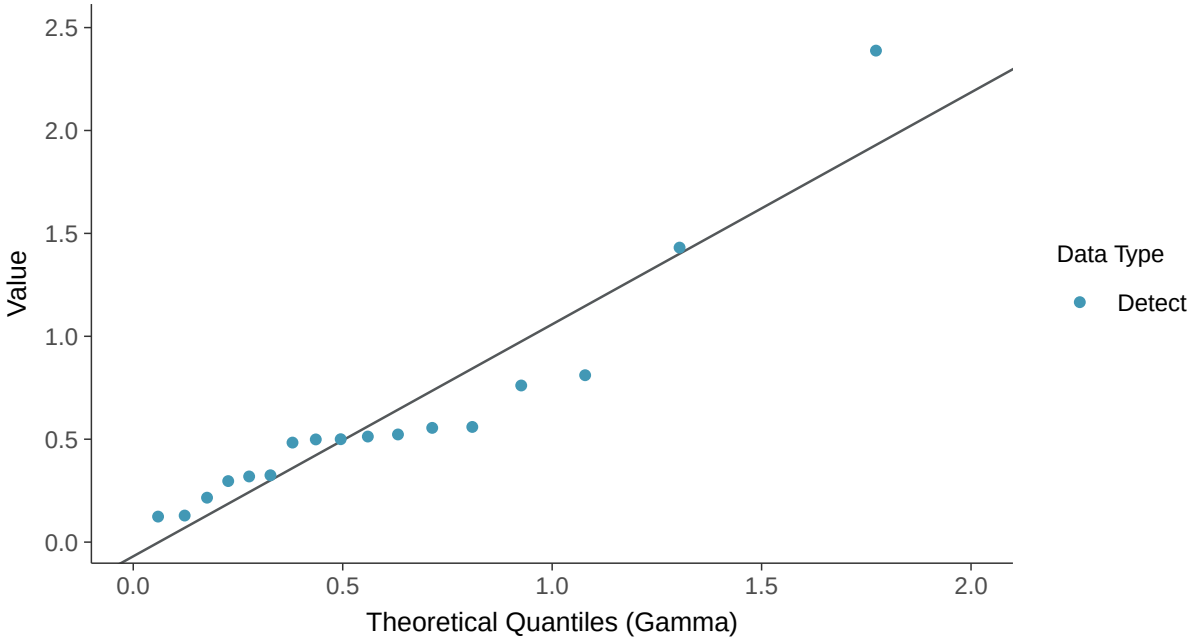
Lognormal Q-Q plot

Total Radium, MW-11 (pCi/L)



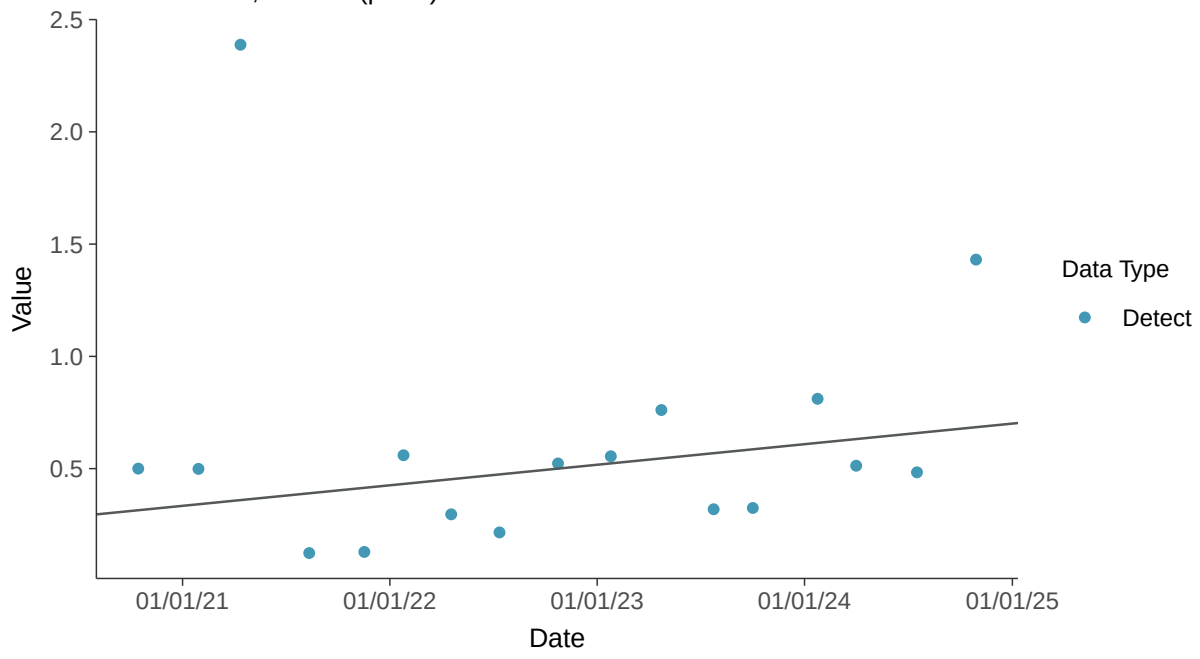
Gamma Q-Q plot

Total Radium, MW-11 (pCi/L)



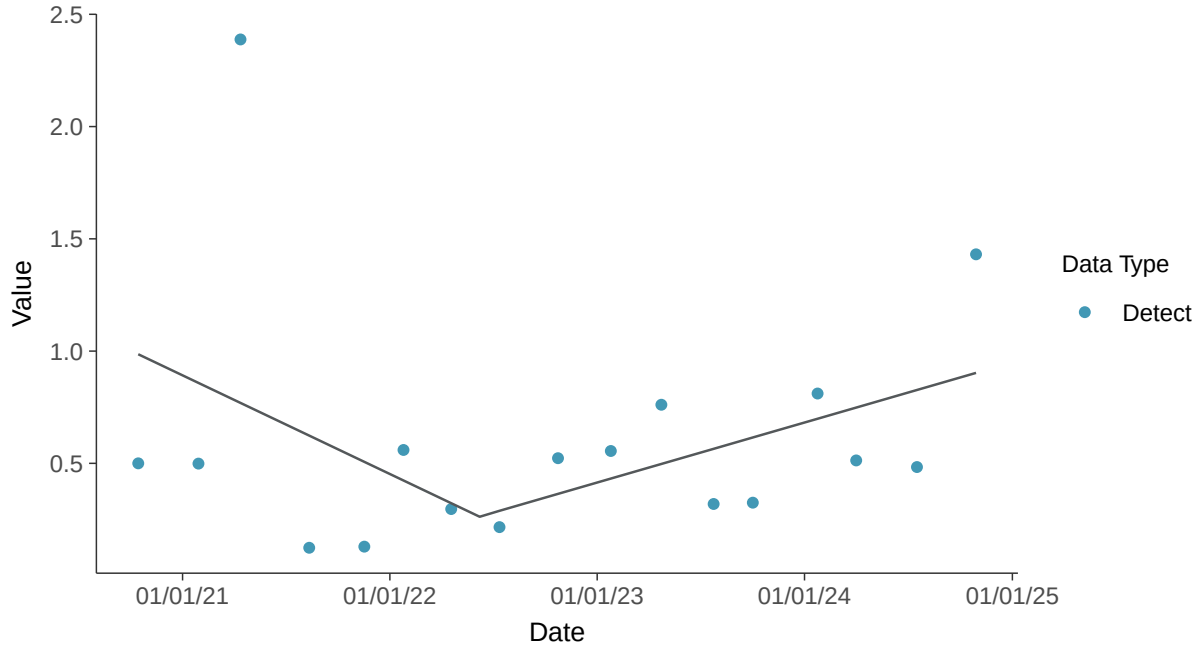
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-11 (pCi/L)



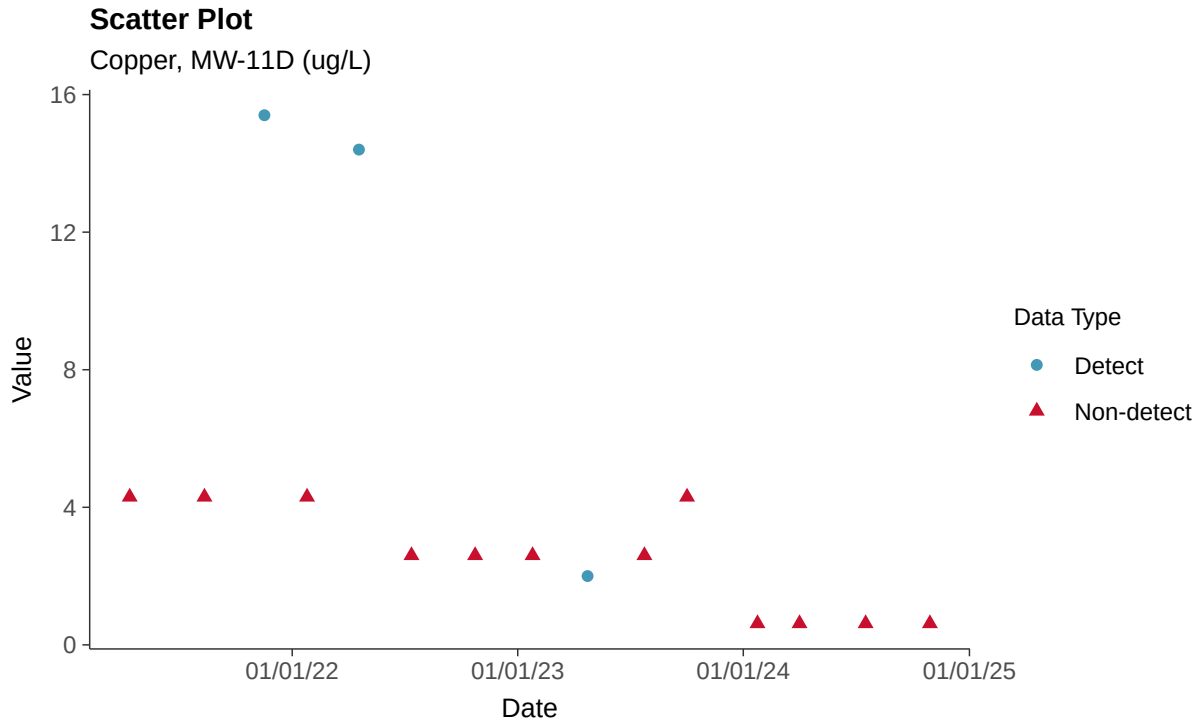
Trend Regression: Piecewise Linear-Linear

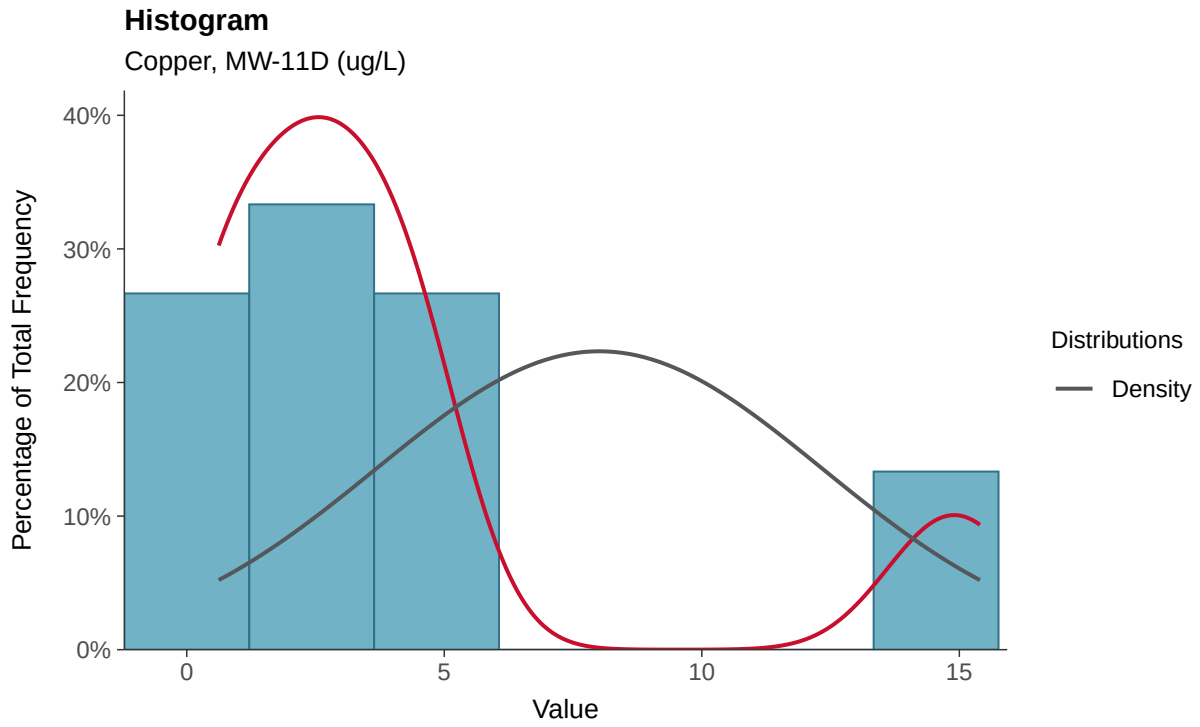
Total Radium, MW-11 (pCi/L)



App. I Metals: Copper, MW-11D

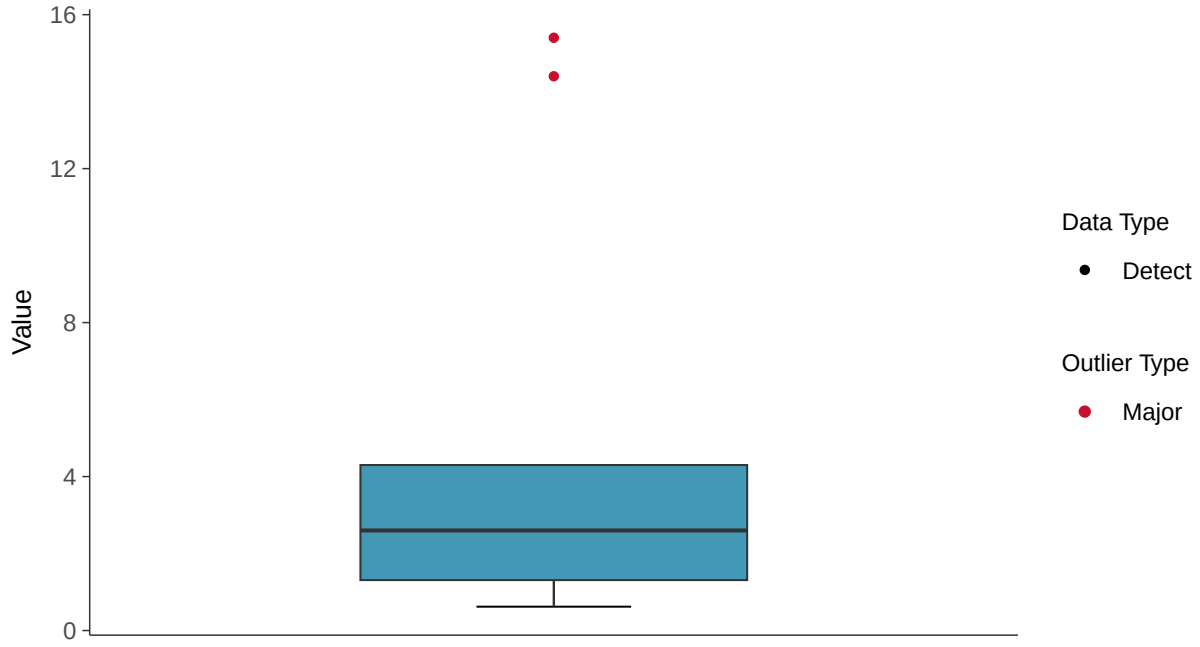
ID: 11_01_111





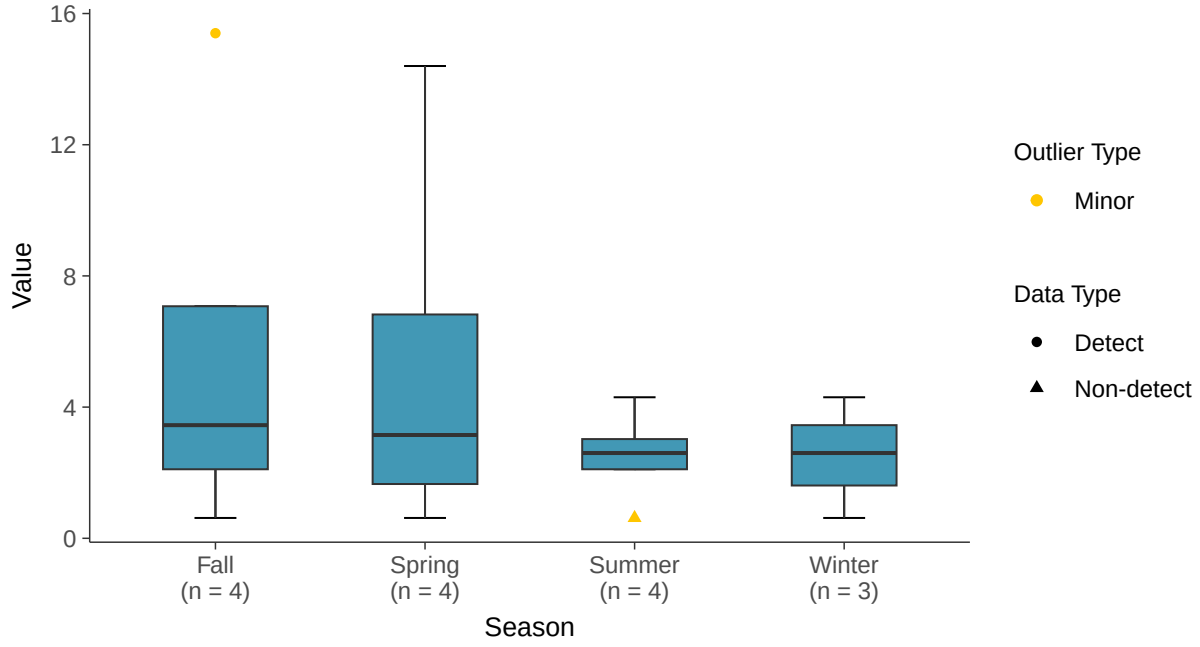
Boxplot

Copper, MW-11D (ug/L)



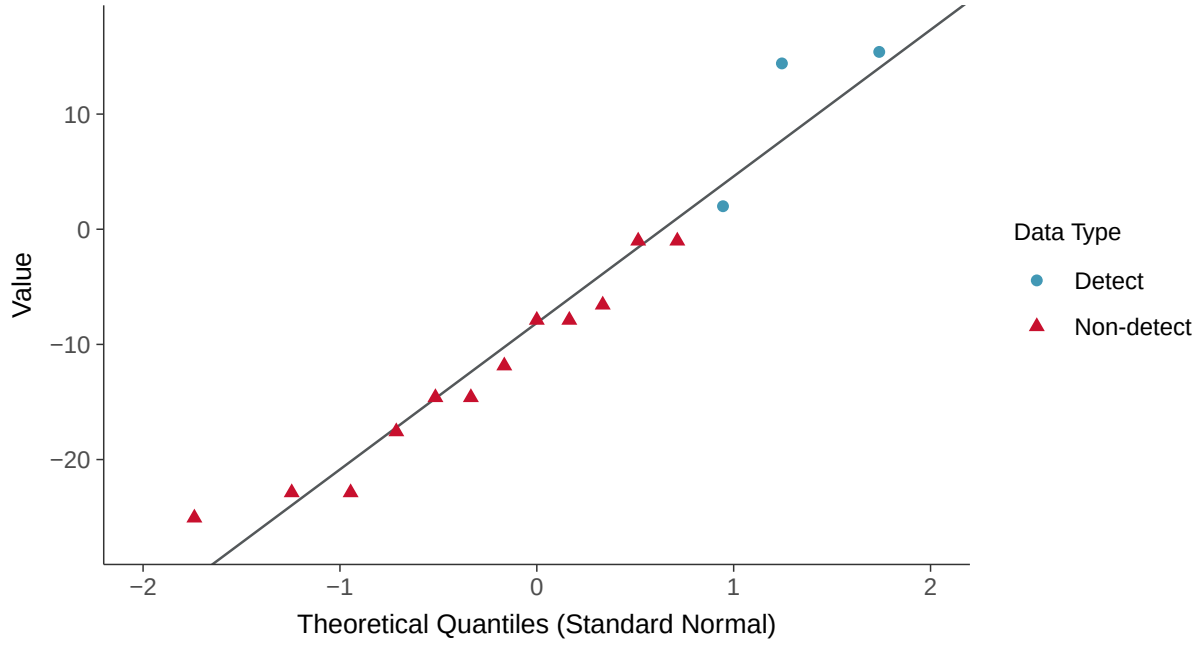
Boxplot by Season

Copper, MW-11D (ug/L)



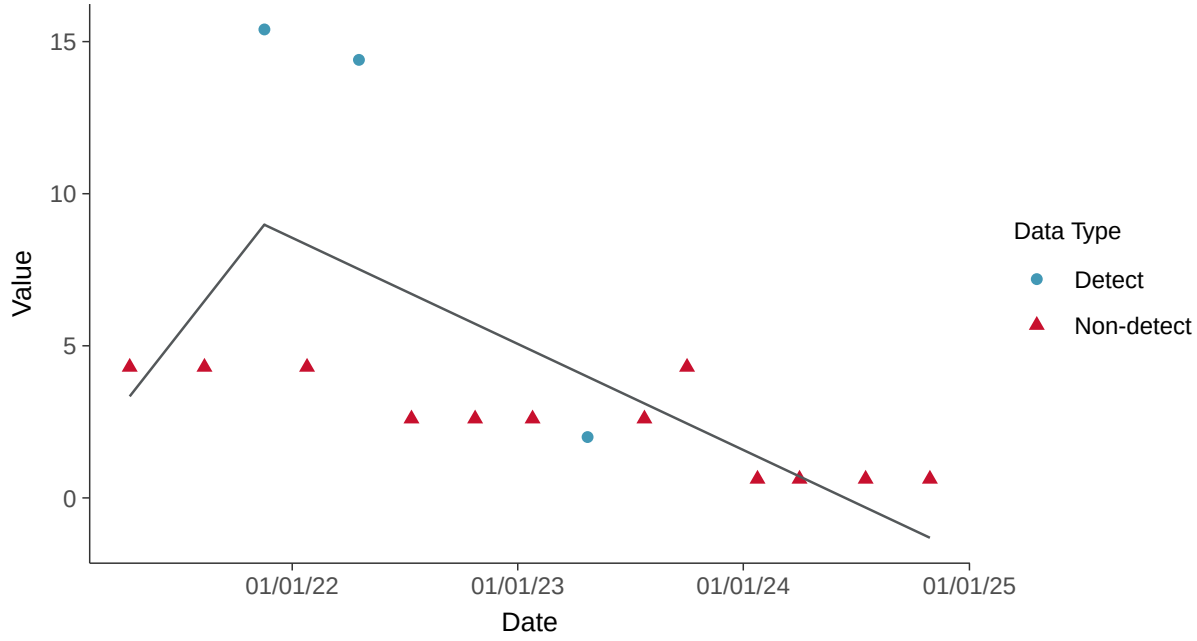
Normal Q-Q plot using ROS Imputed Estimates

Copper, MW-11D (ug/L)



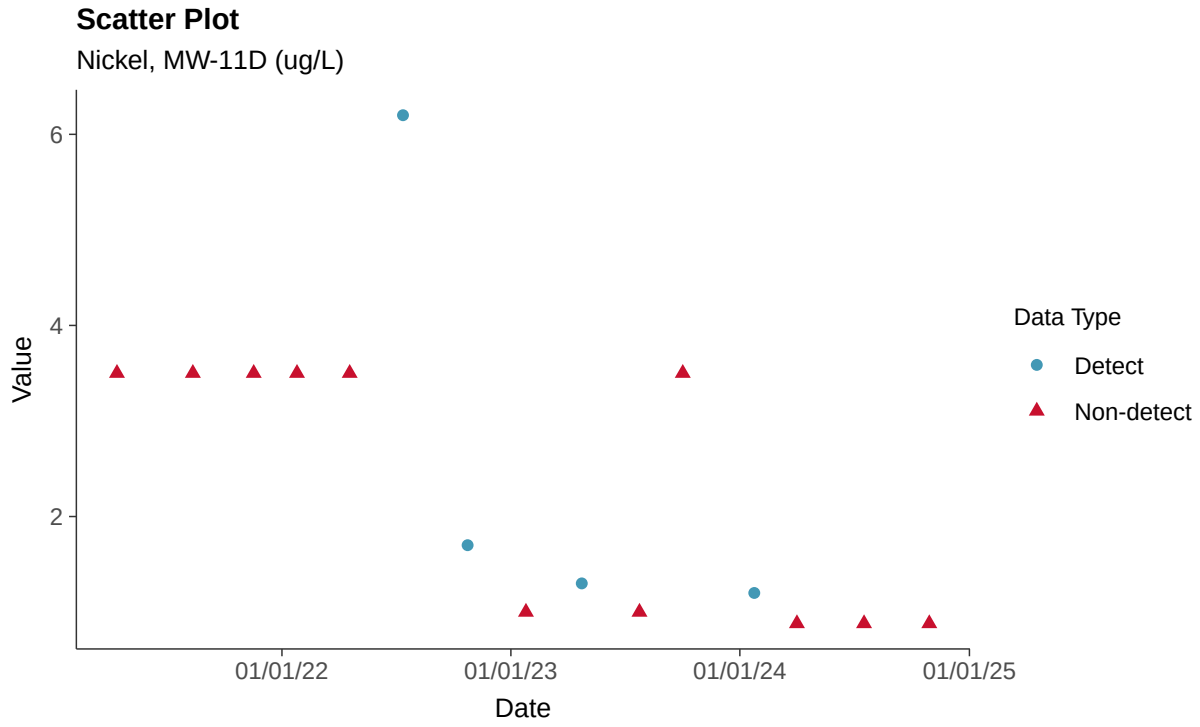
Trend Regression: Piecewise Linear-Linear

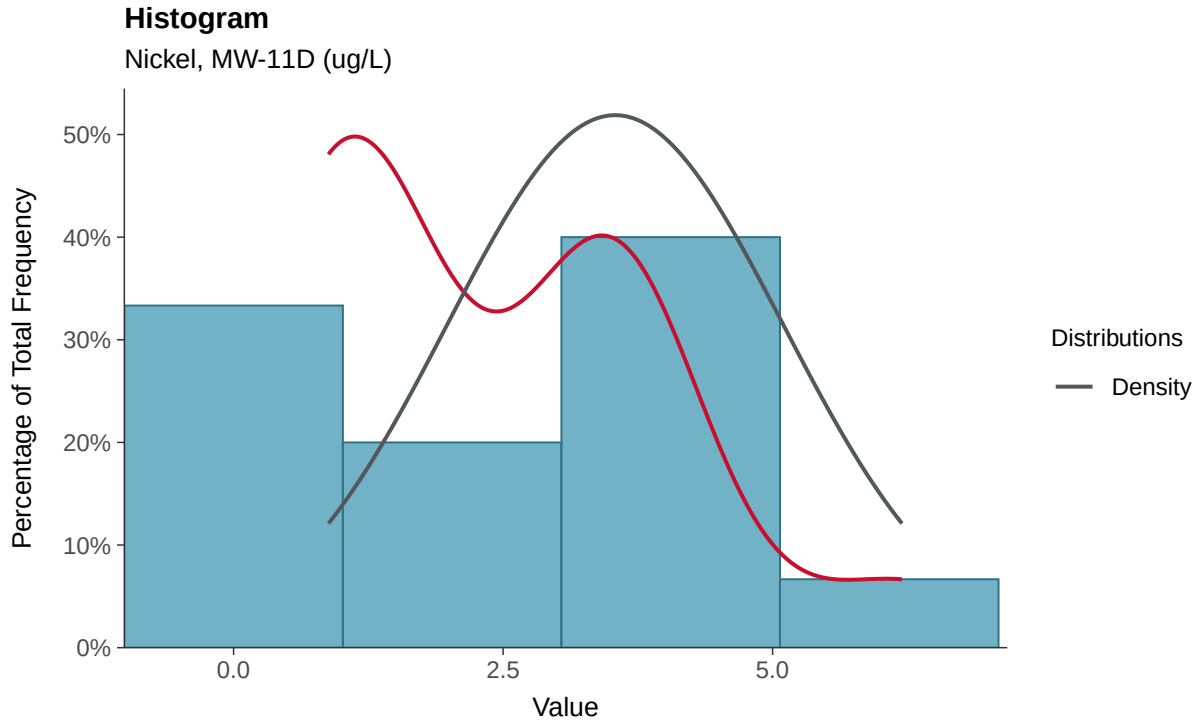
Copper, MW-11D (ug/L)



App. I Metals: Nickel, MW-11D

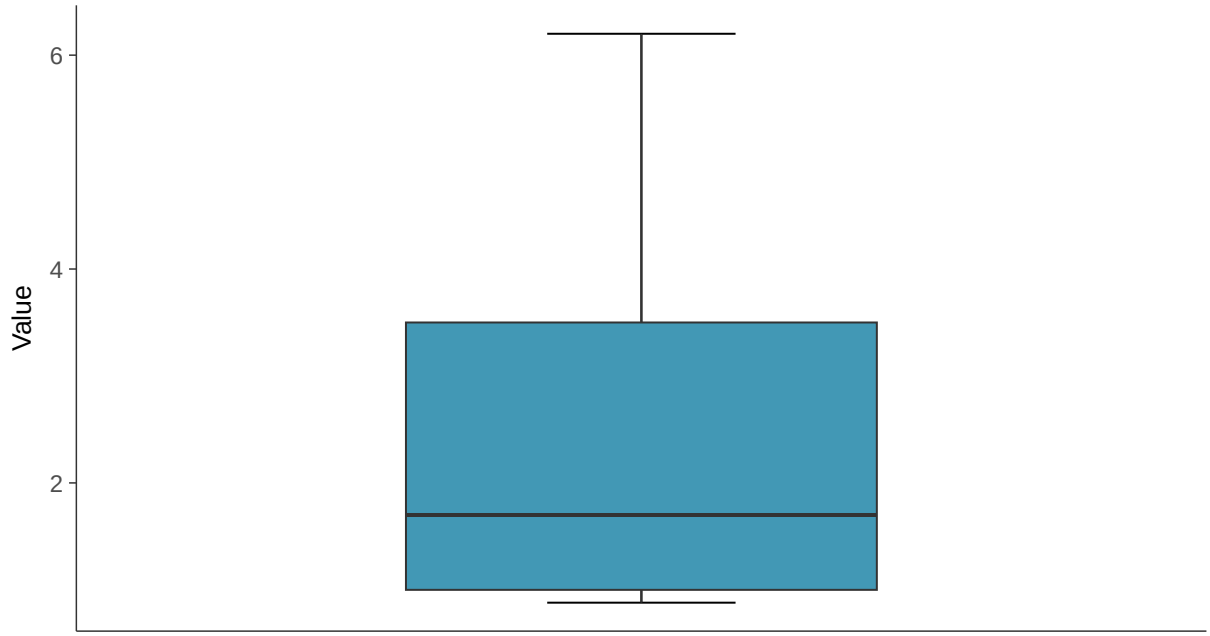
ID: 11_01_117





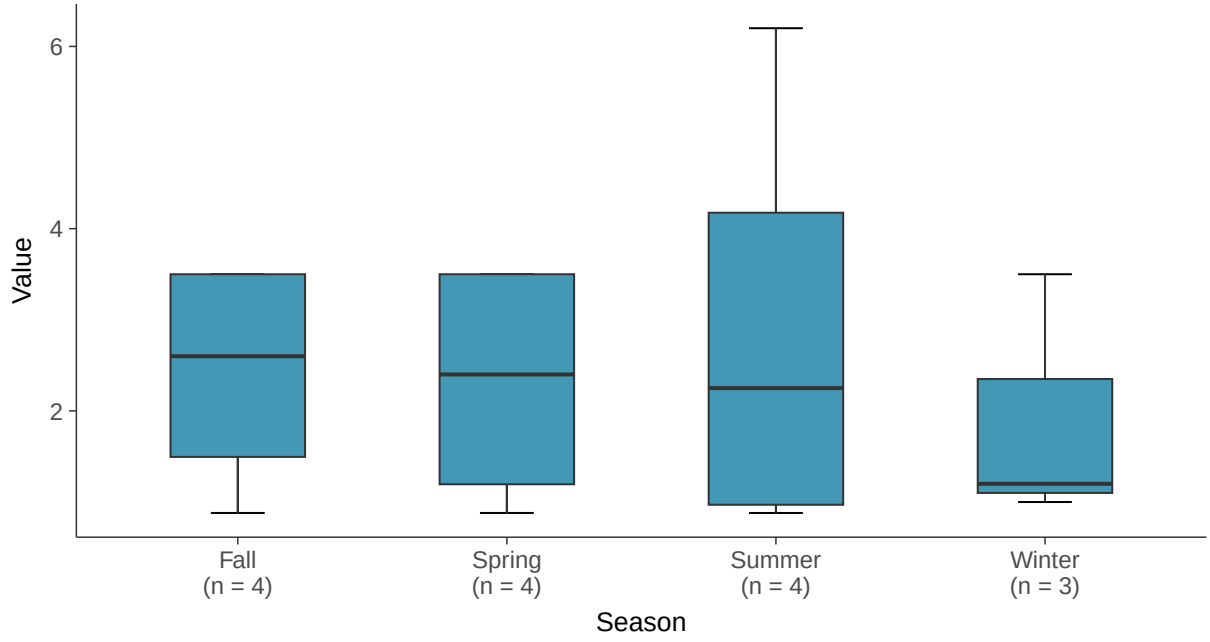
Boxplot

Nickel, MW-11D (ug/L)



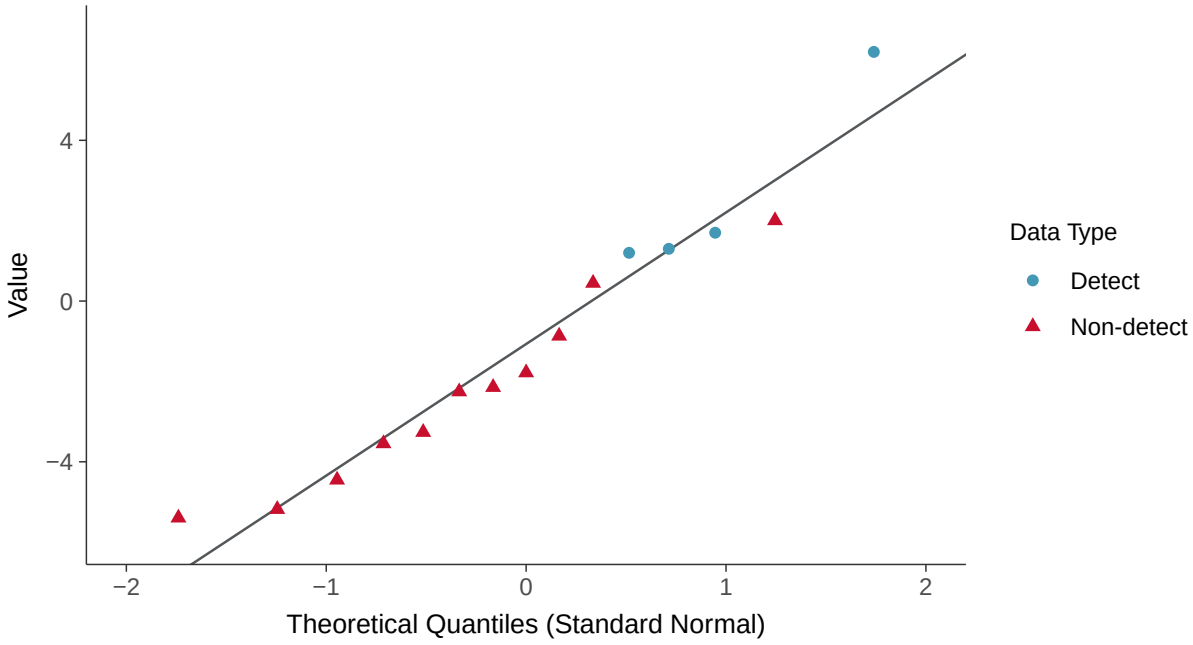
Boxplot by Season

Nickel, MW-11D (ug/L)



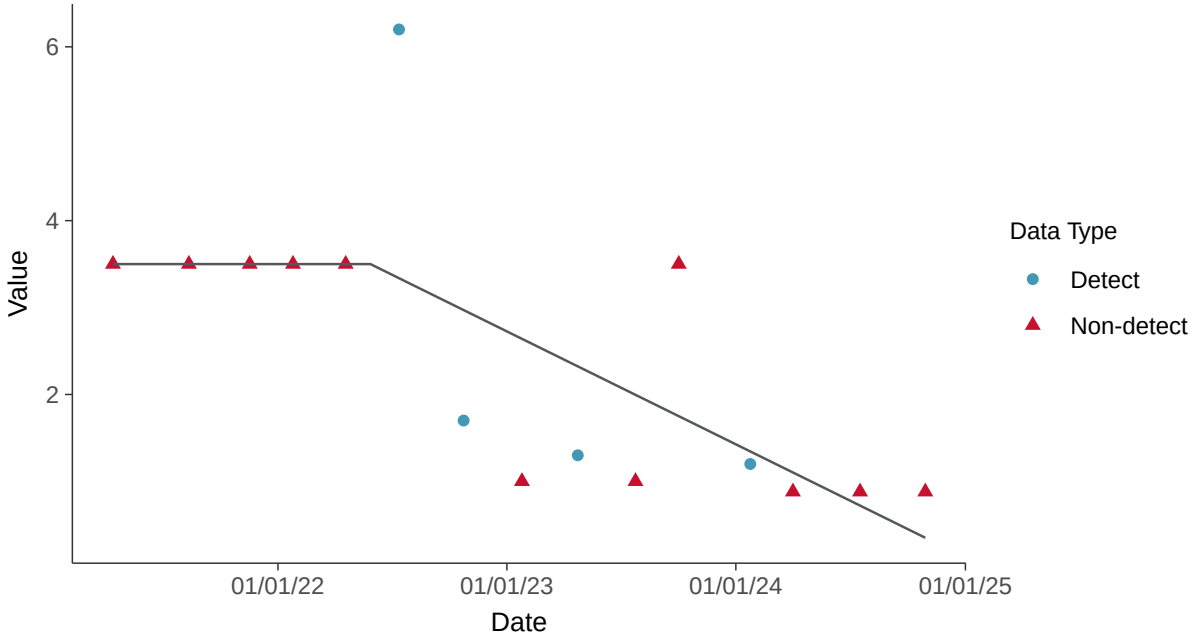
Normal Q-Q plot using ROS Imputed Estimates

Nickel, MW-11D (ug/L)



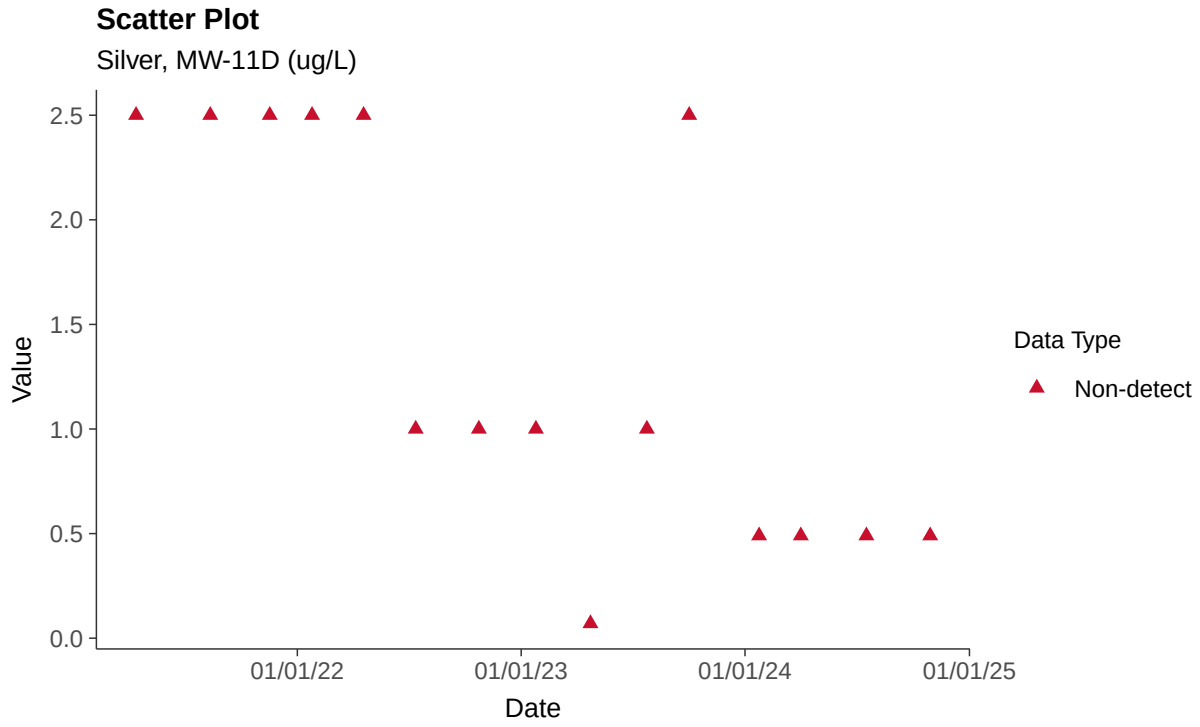
Trend Regression: Piecewise Linear-Linear

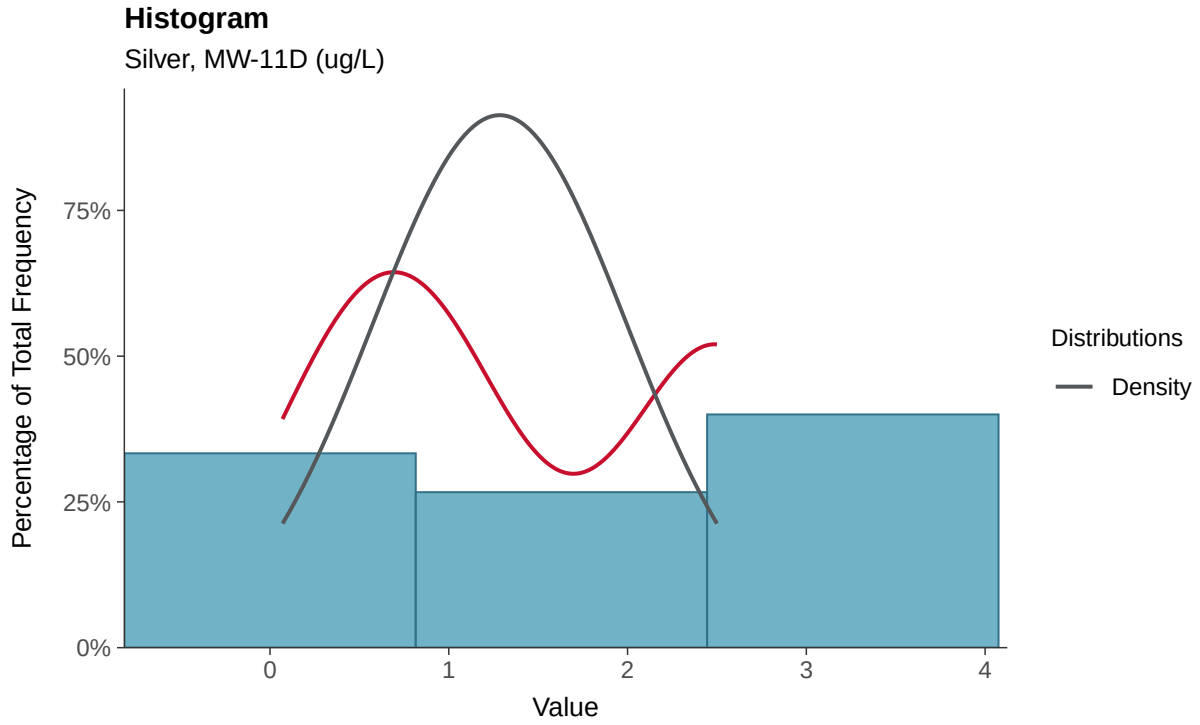
Nickel, MW-11D (ug/L)



App. I Metals: Silver, MW-11D

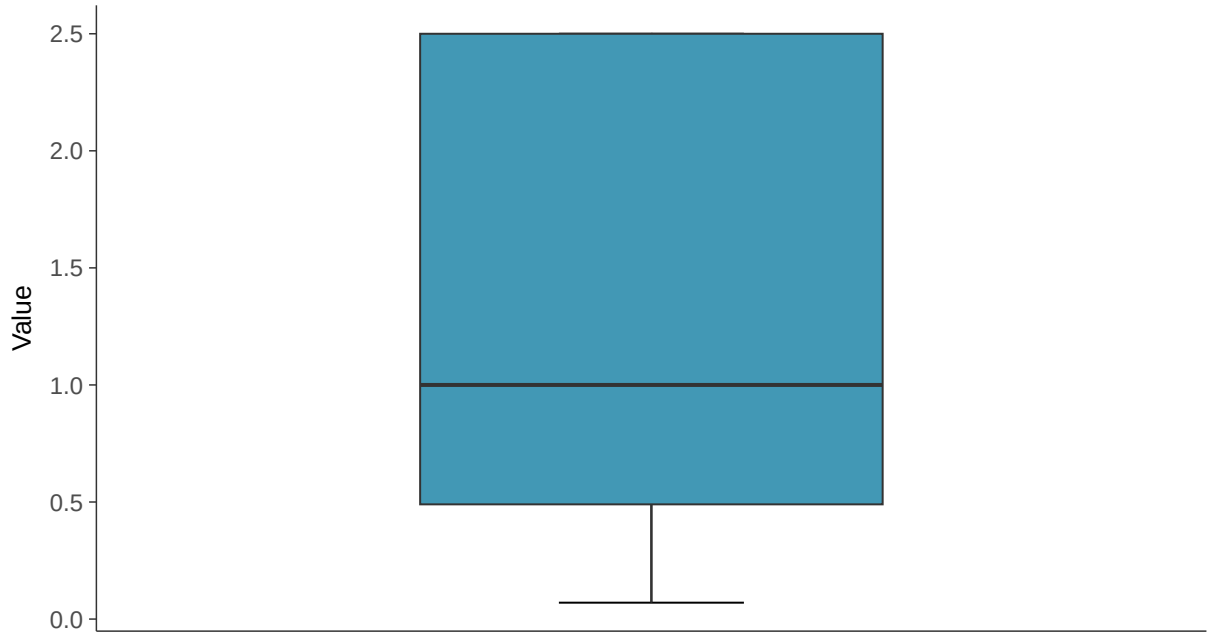
ID: 11_01_122





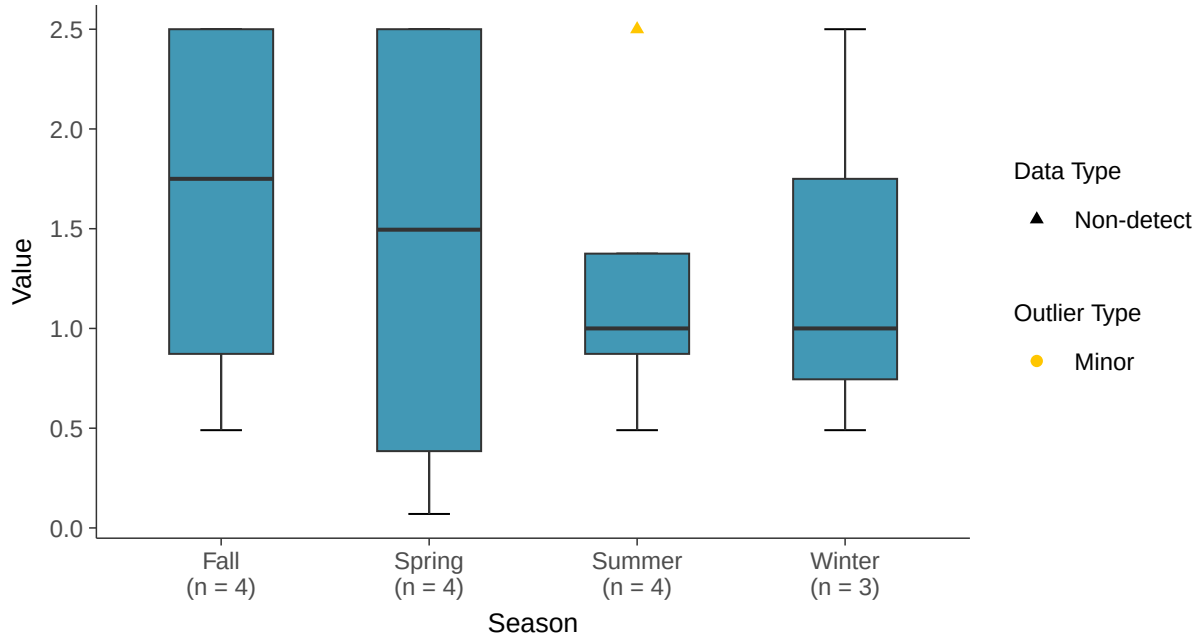
Boxplot

Silver, MW-11D (ug/L)



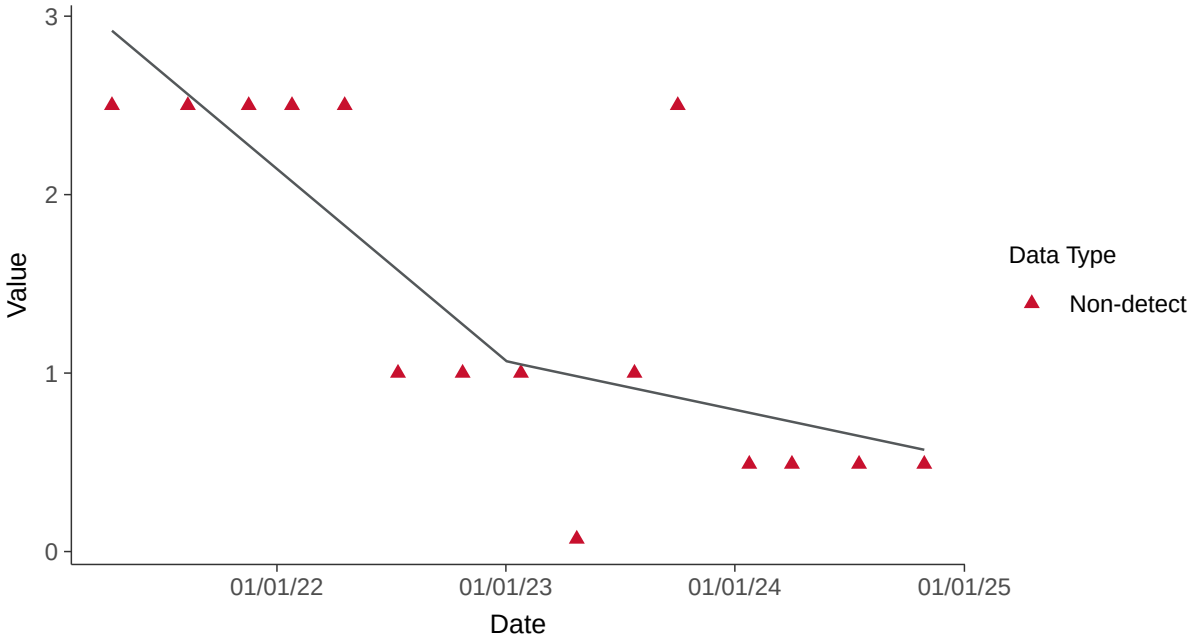
Boxplot by Season

Silver, MW-11D (ug/L)



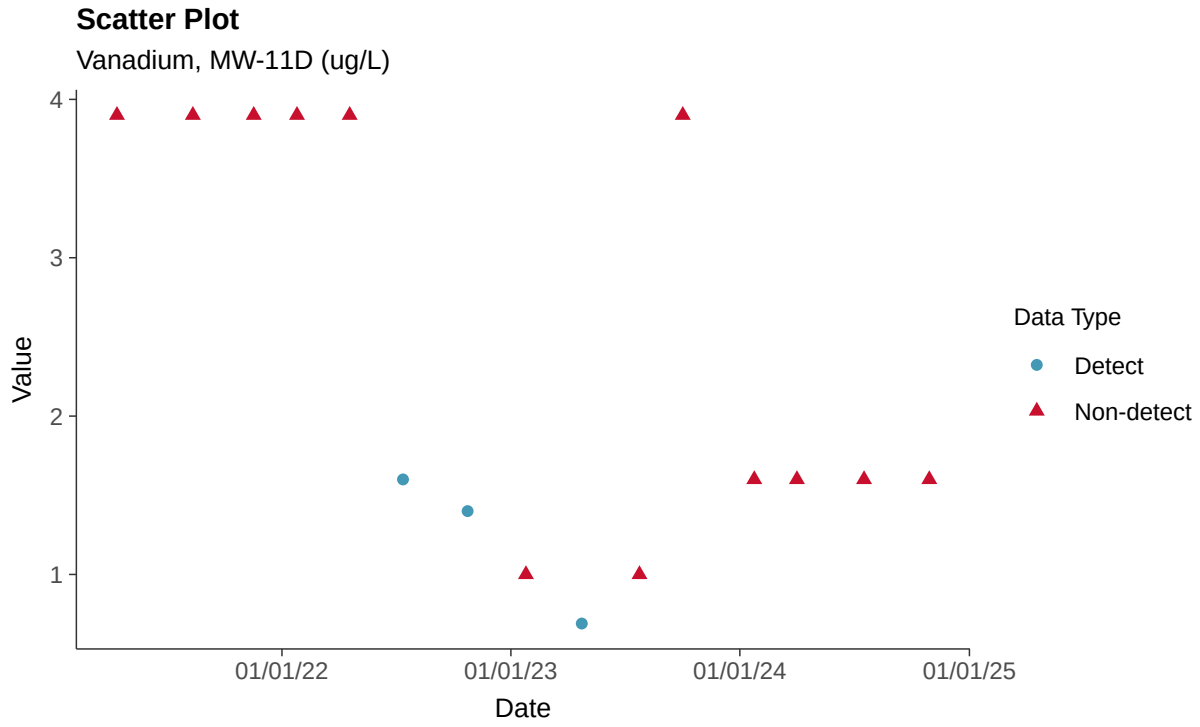
Trend Regression: Piecewise Linear-Linear

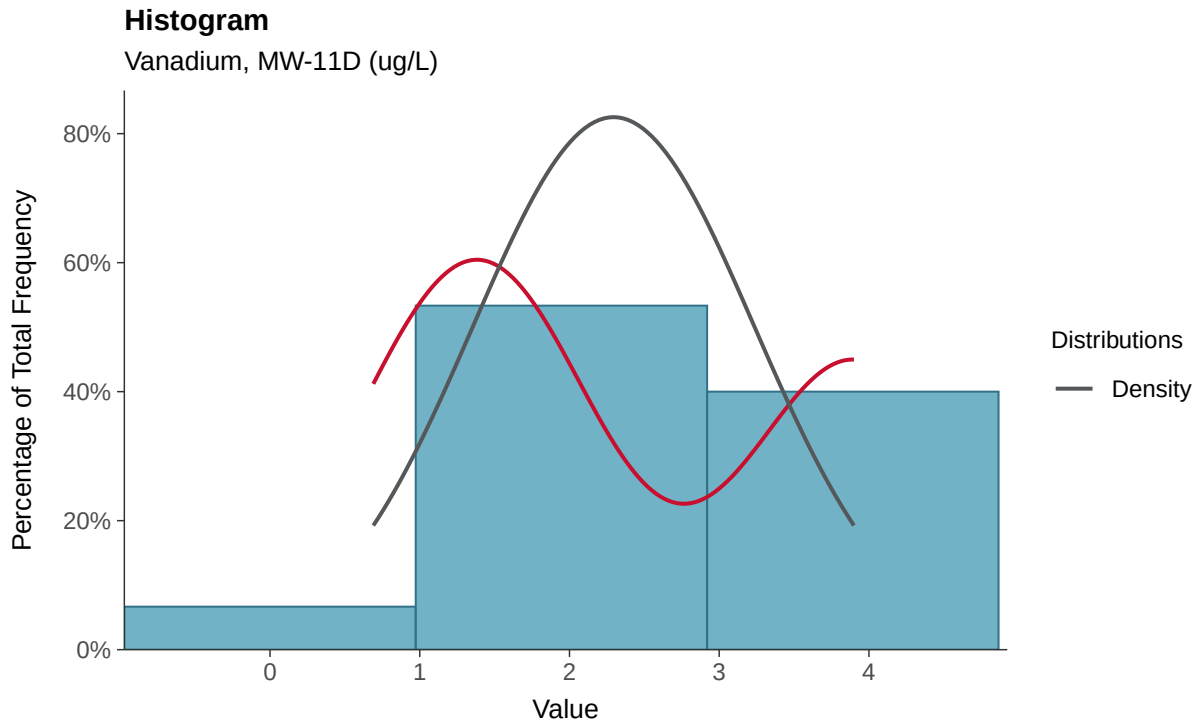
Silver, MW-11D (ug/L)



App. I Metals: Vanadium, MW-11D

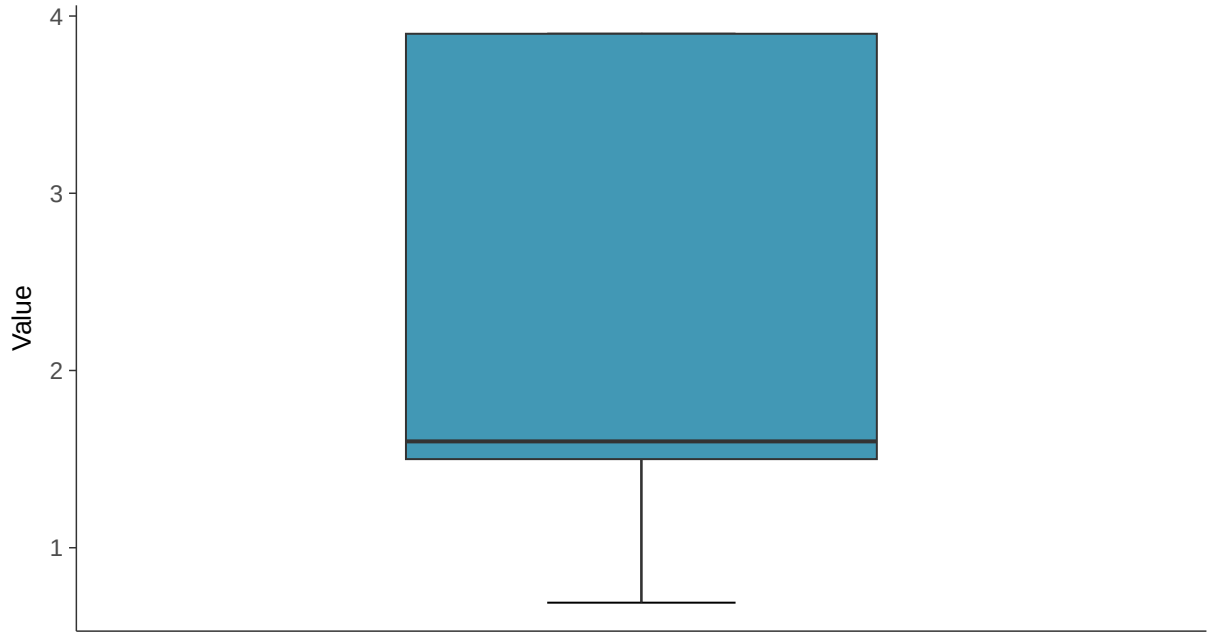
ID: 11_01_127





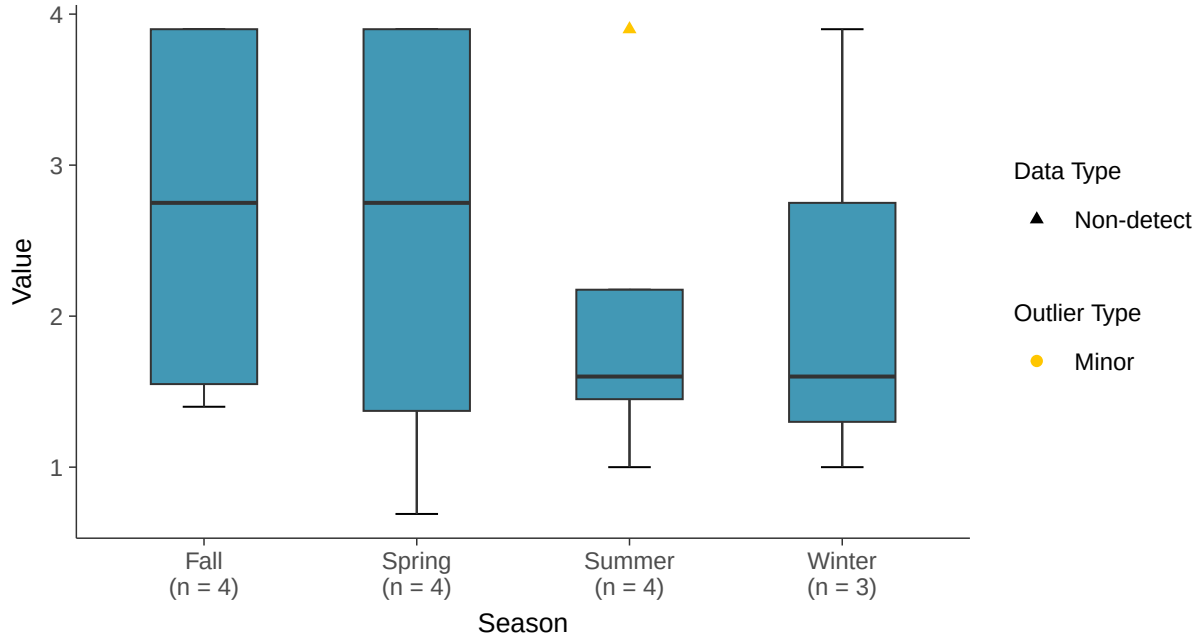
Boxplot

Vanadium, MW-11D (ug/L)



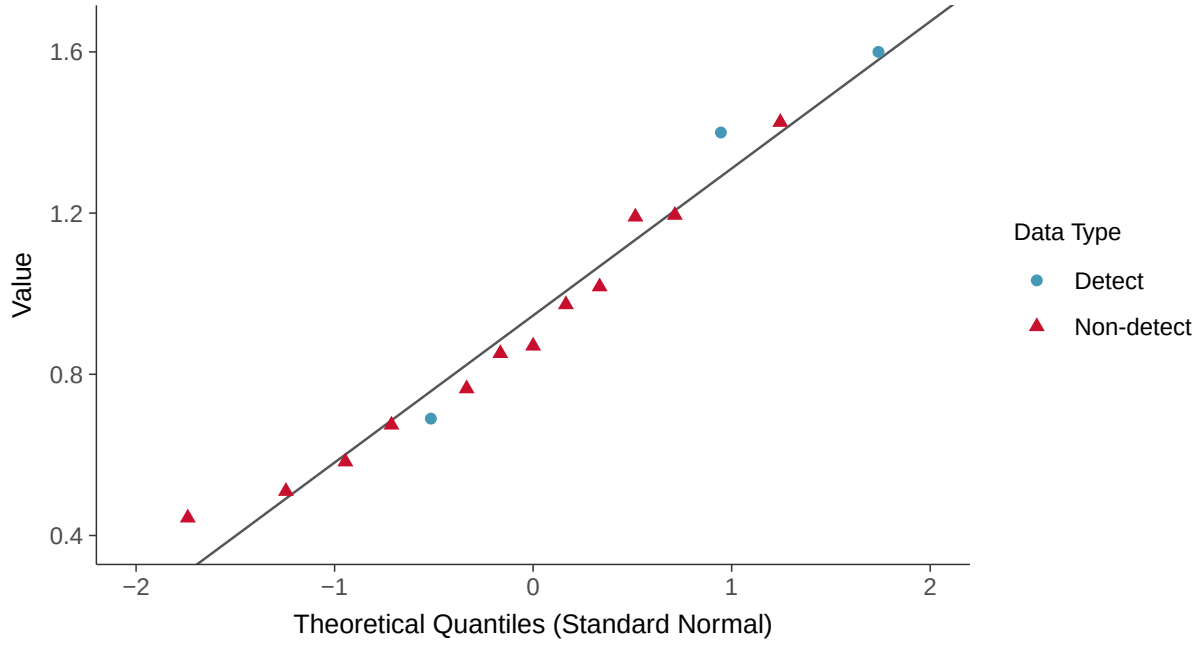
Boxplot by Season

Vanadium, MW-11D (ug/L)



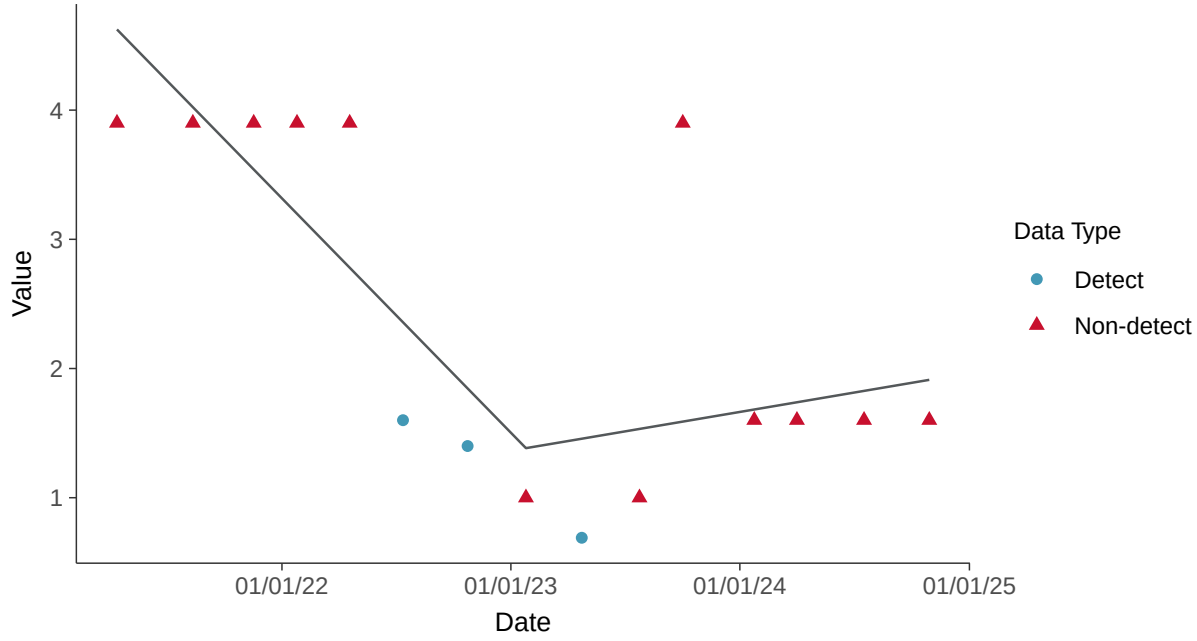
Normal Q-Q plot using ROS Imputed Estimates

Vanadium, MW-11D (ug/L)



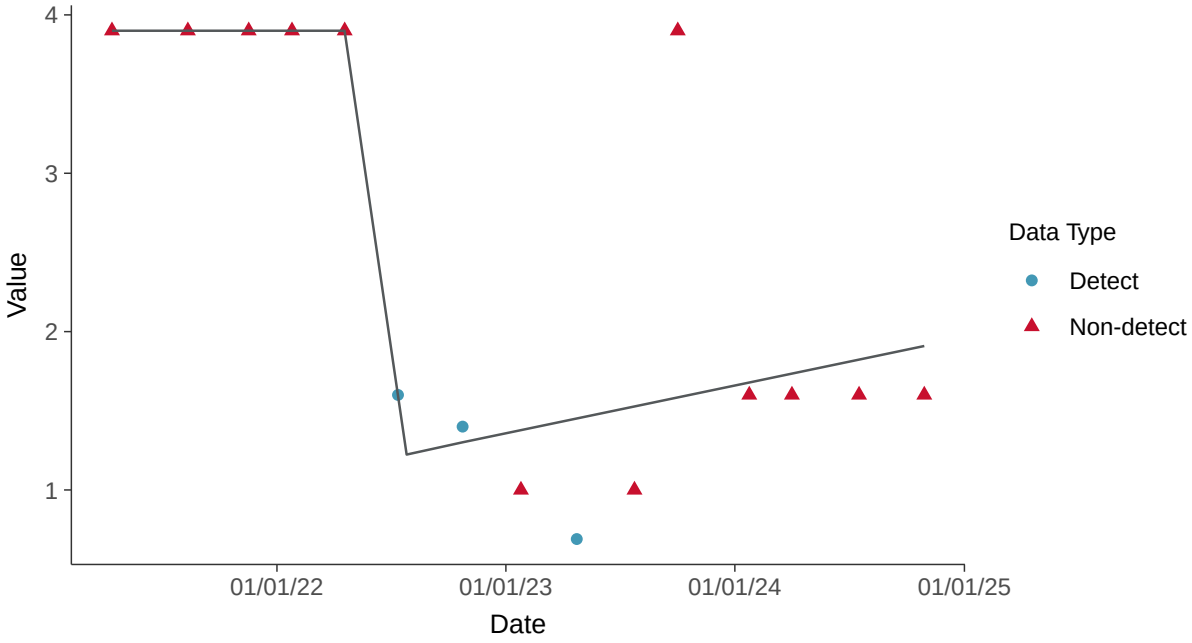
Trend Regression: Piecewise Linear-Linear

Vanadium, MW-11D (ug/L)



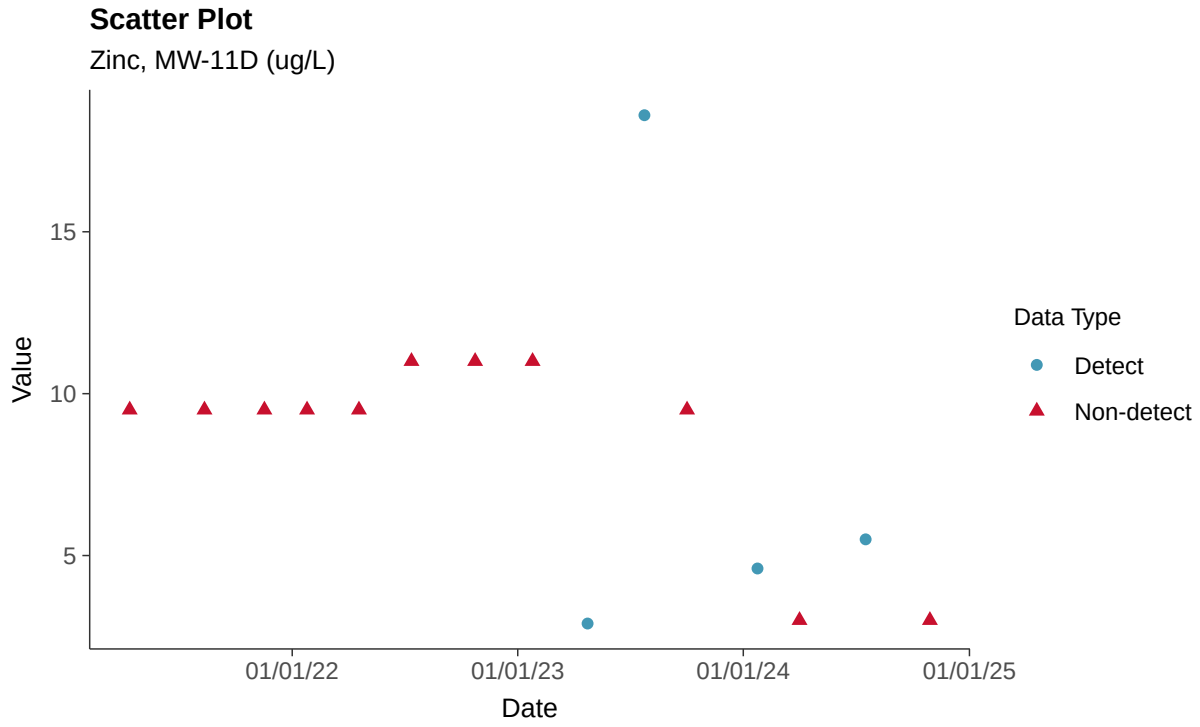
Trend Regression: Piecewise Linear-Linear-Linear

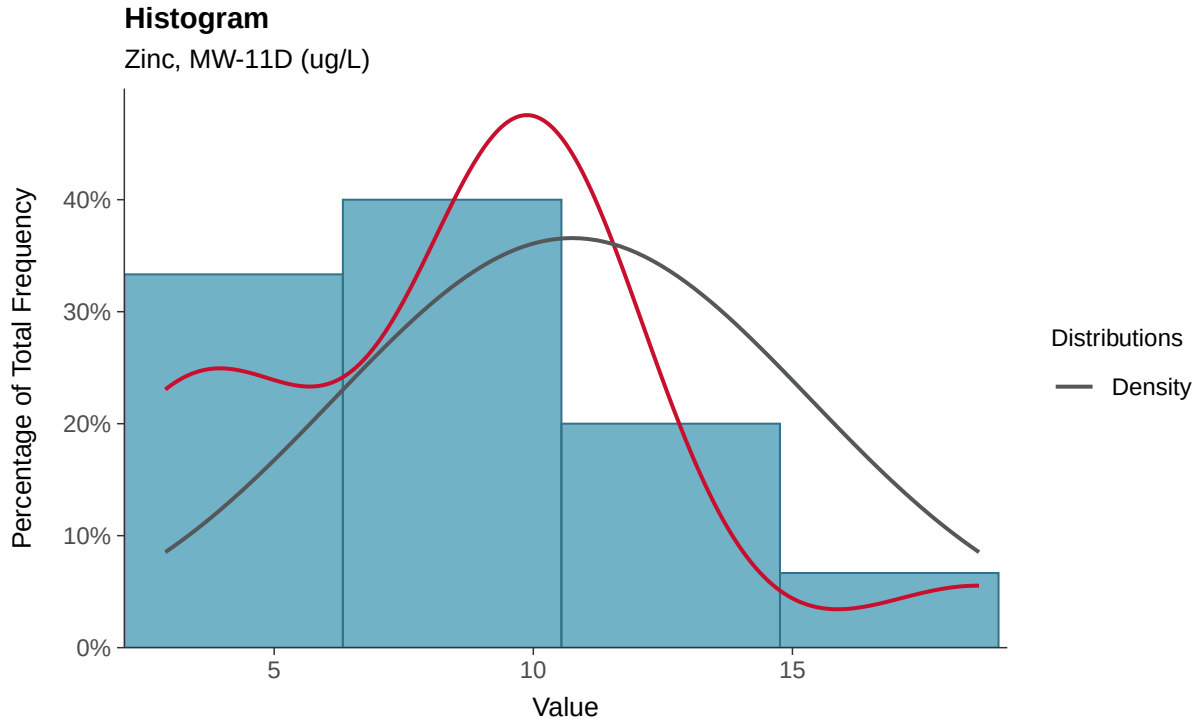
Vanadium, MW-11D (ug/L)



App. I Metals: Zinc, MW-11D

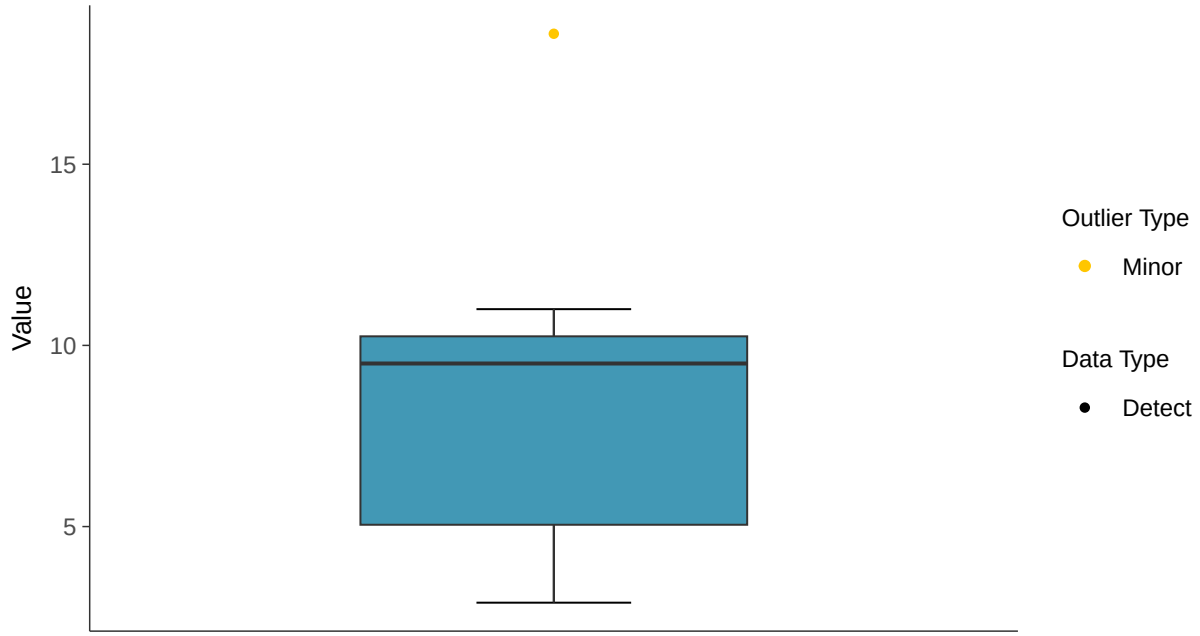
ID: 11_01_128





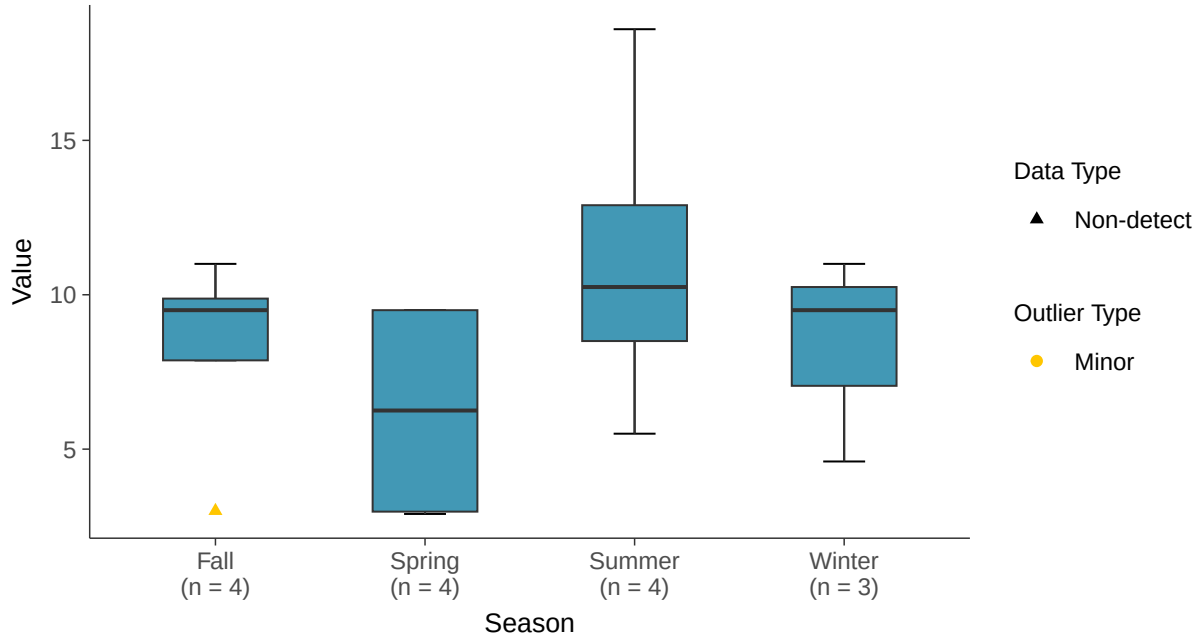
Boxplot

Zinc, MW-11D (ug/L)



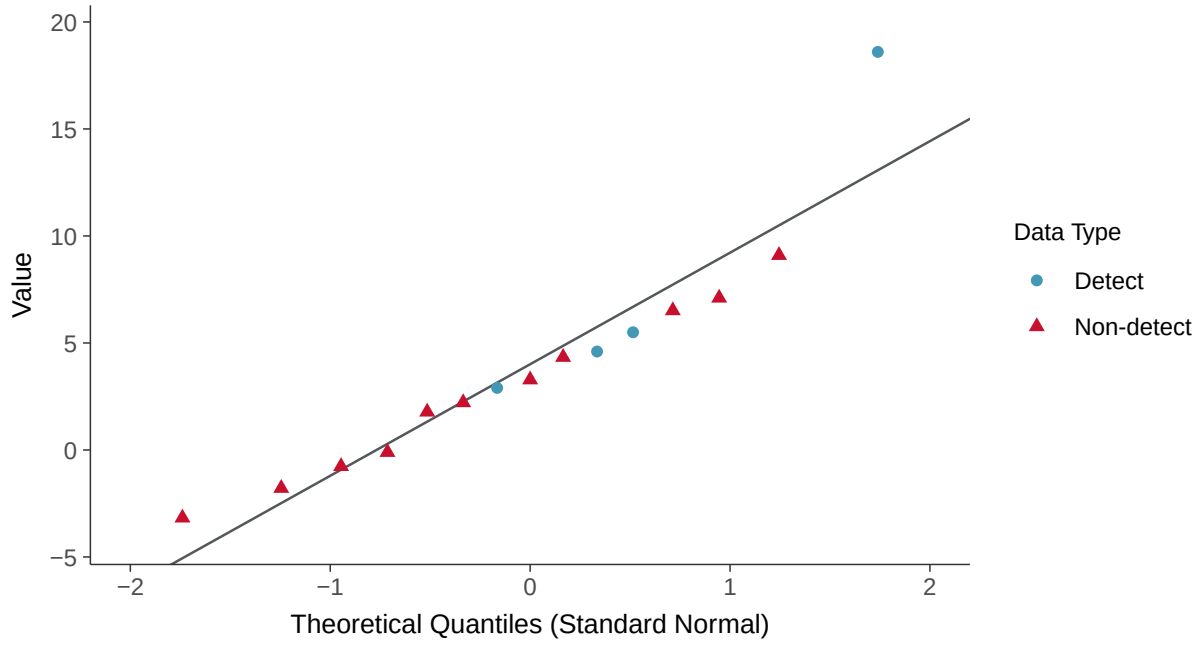
Boxplot by Season

Zinc, MW-11D (ug/L)



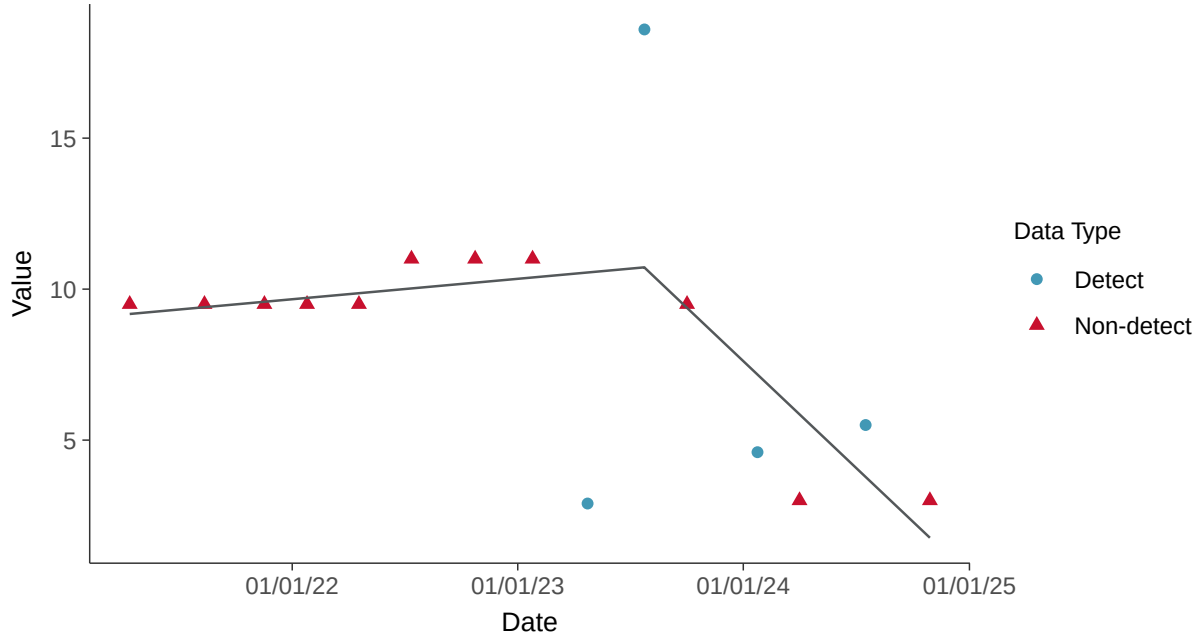
Normal Q-Q plot using ROS Imputed Estimates

Zinc, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Zinc, MW-11D (ug/L)

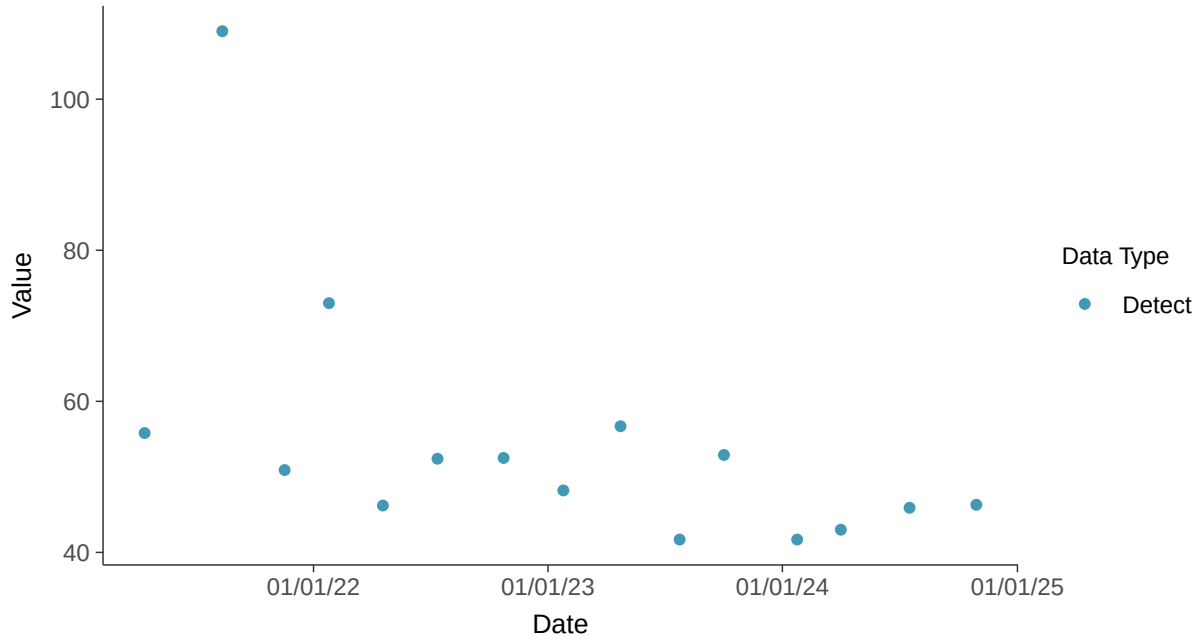


App. III: Boron, MW-11D

ID: 11_02_105

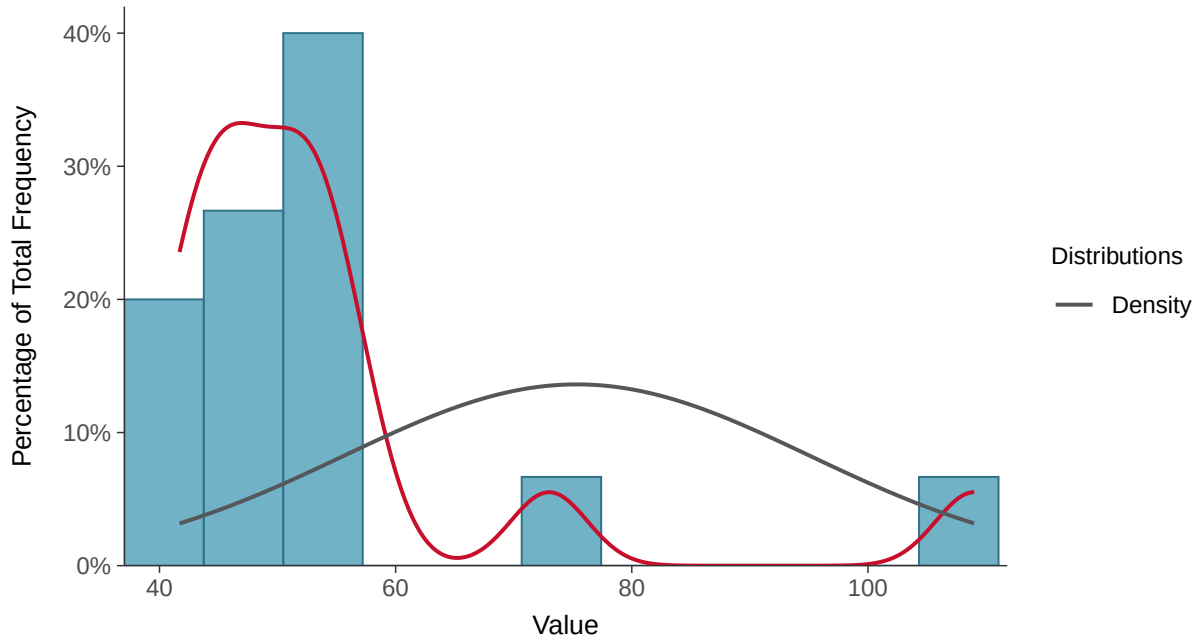
Scatter Plot

Boron, MW-11D (ug/L)



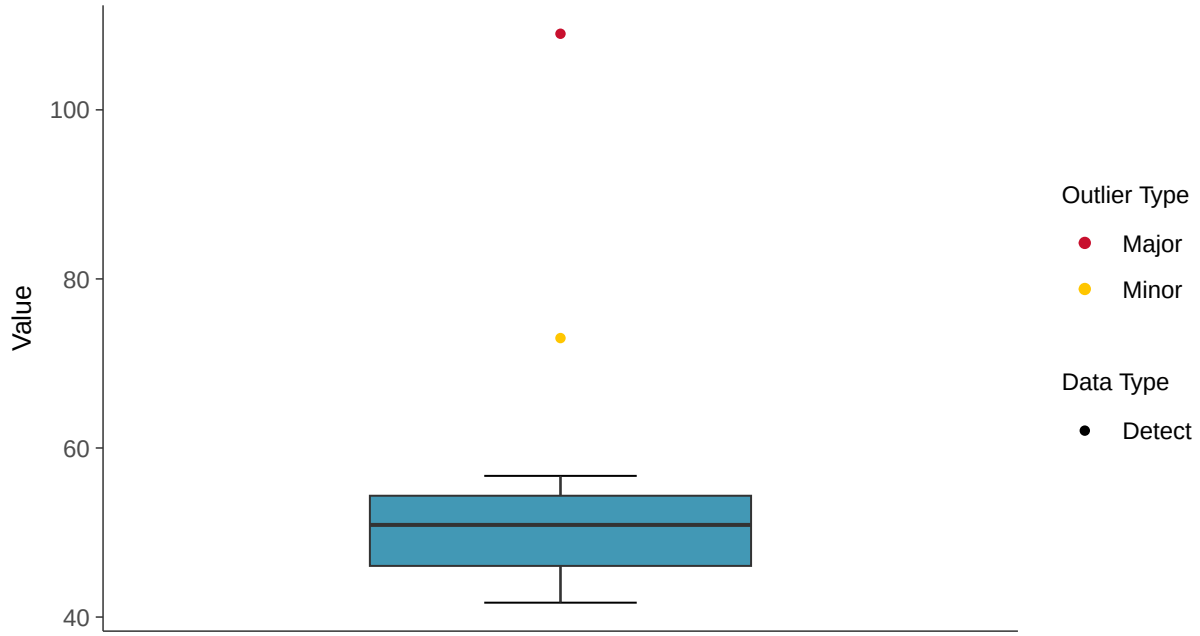
Histogram

Boron, MW-11D (ug/L)



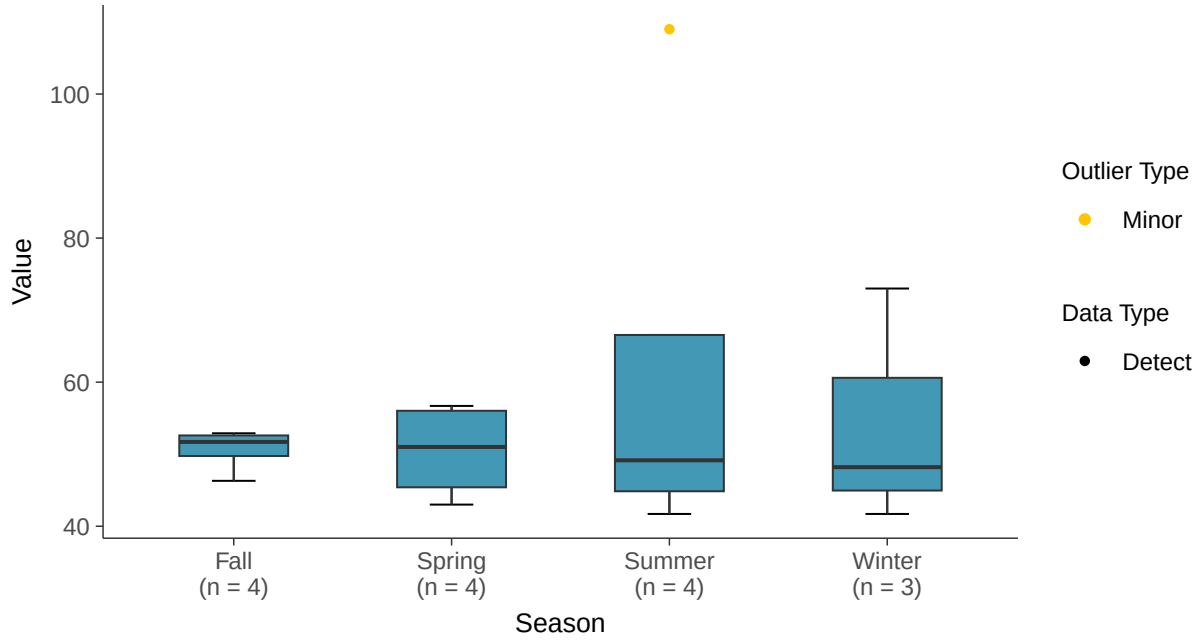
Boxplot

Boron, MW-11D (ug/L)



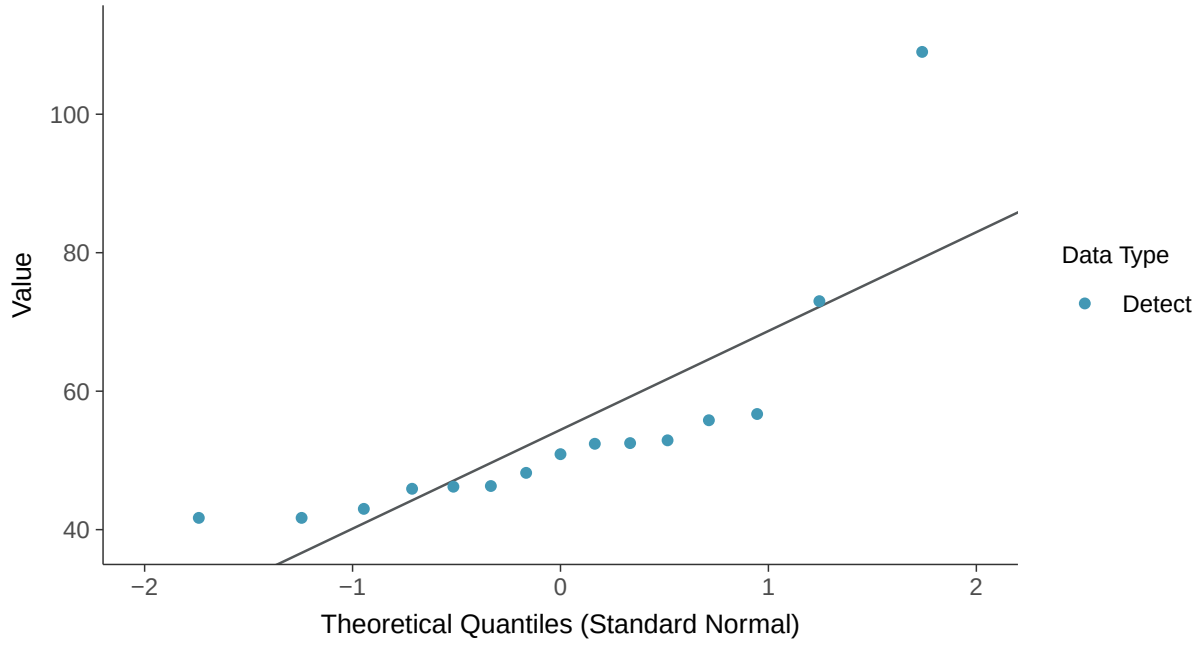
Boxplot by Season

Boron, MW-11D (ug/L)



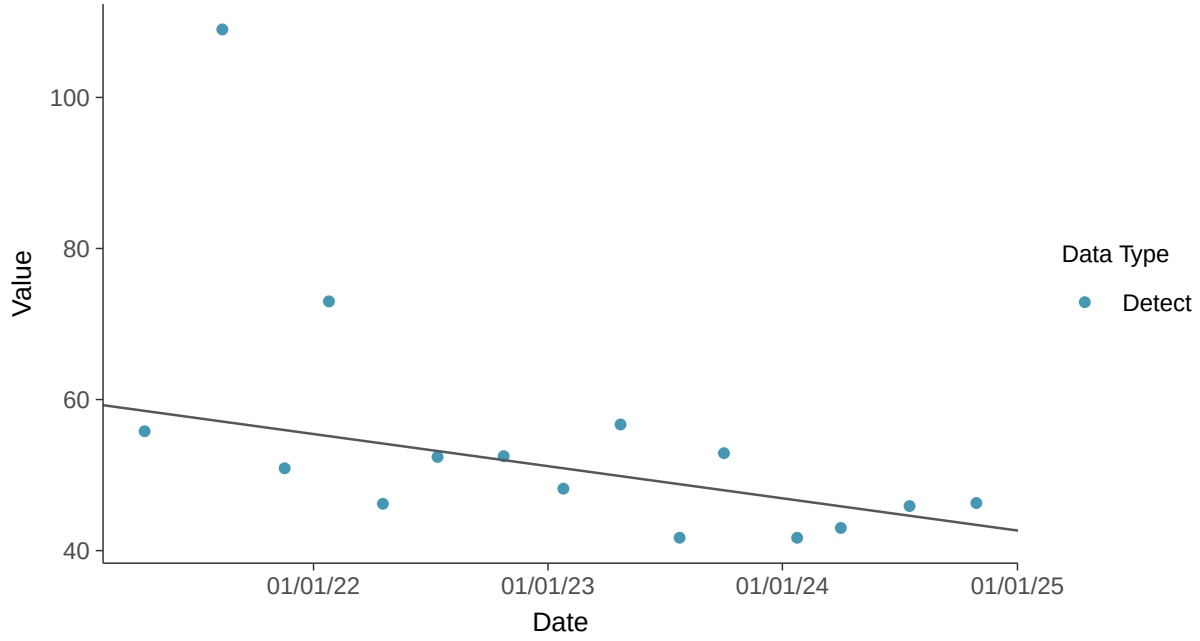
Normal Q-Q plot

Boron, MW-11D (ug/L)



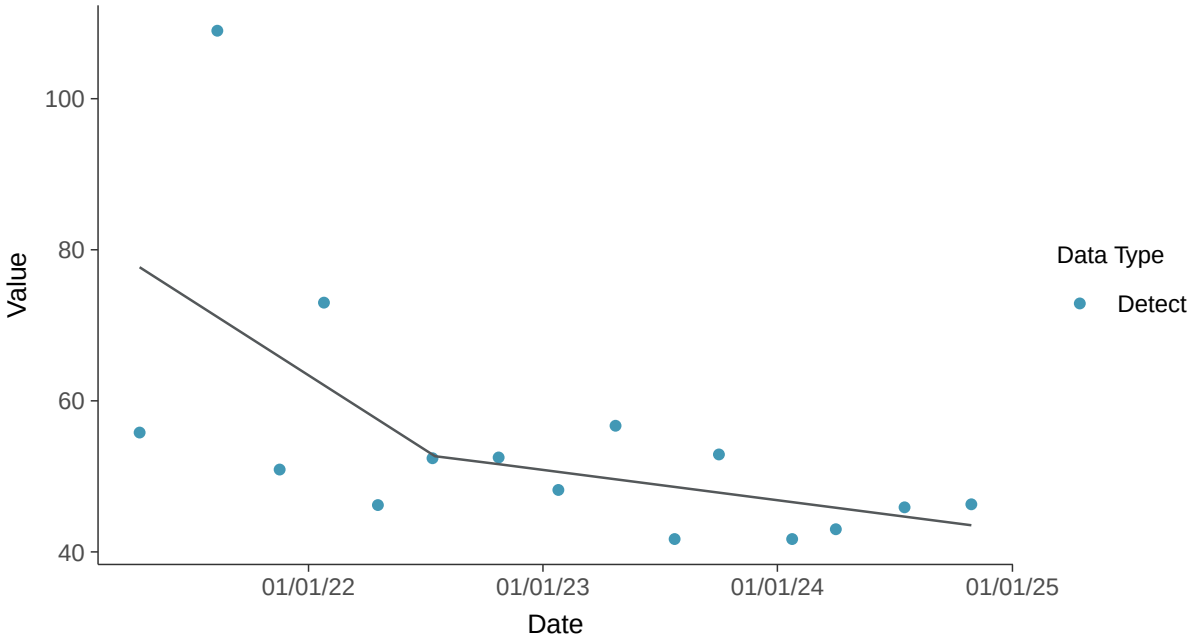
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Boron, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Boron, MW-11D (ug/L)

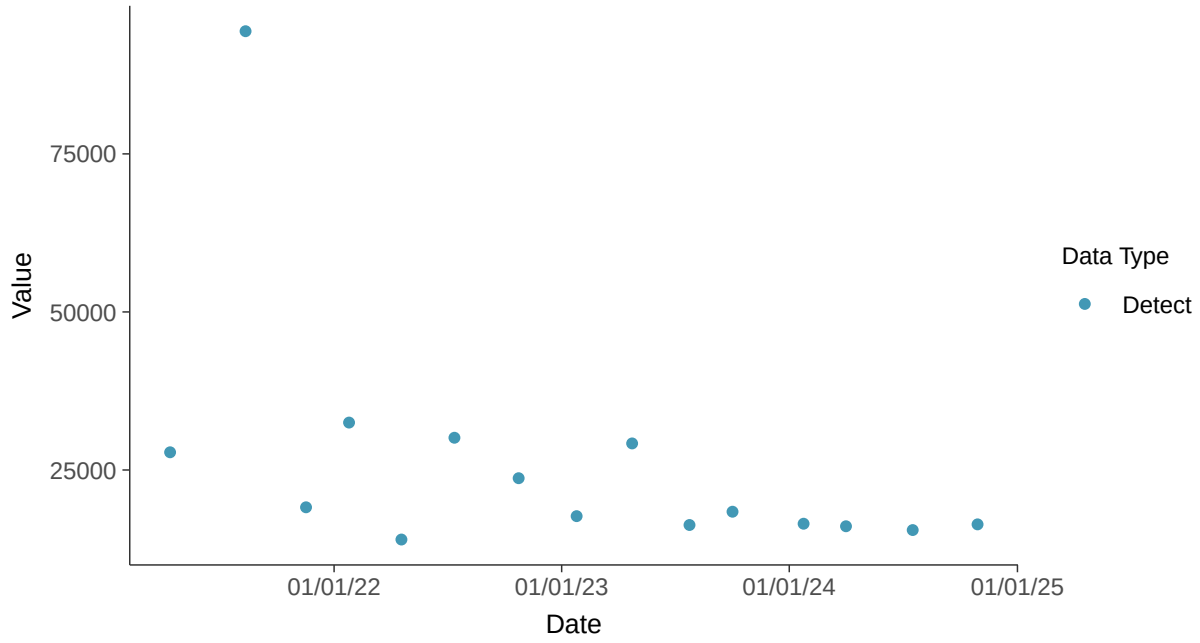


App. III: Calcium, MW-11D

ID: 11_02_107

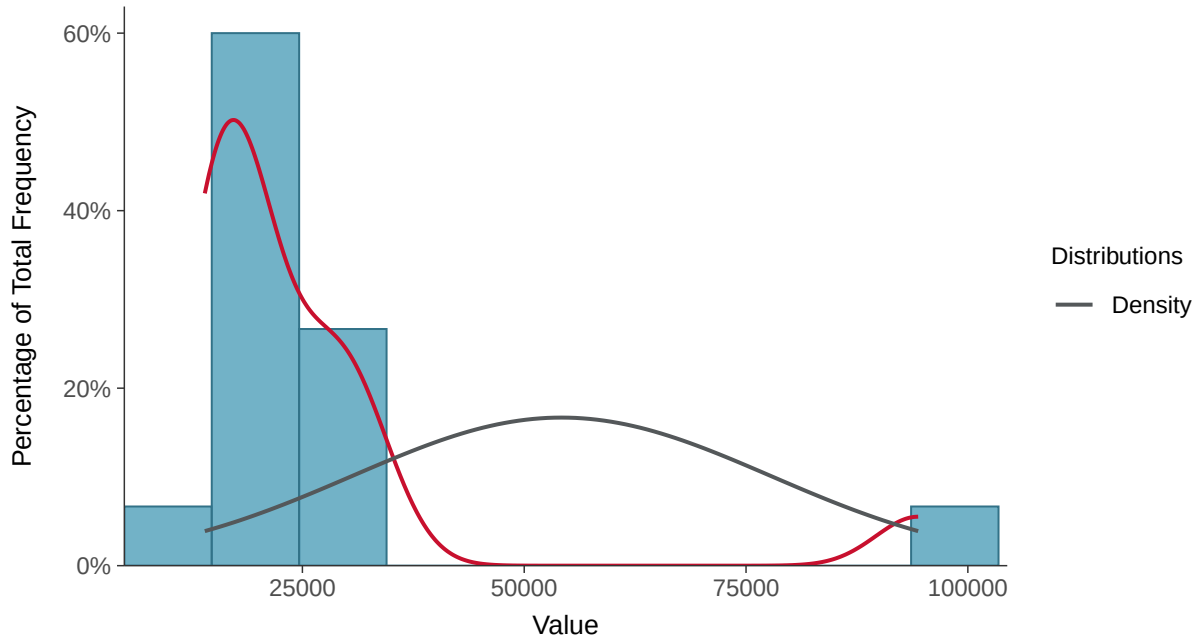
Scatter Plot

Calcium, MW-11D (ug/L)



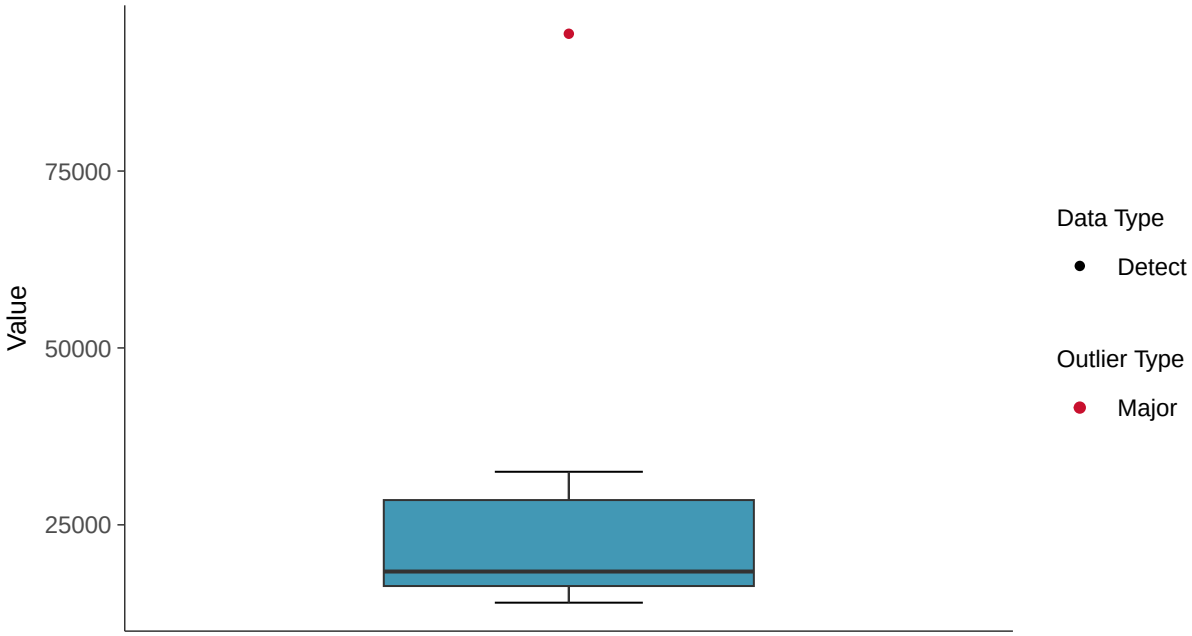
Histogram

Calcium, MW-11D (ug/L)



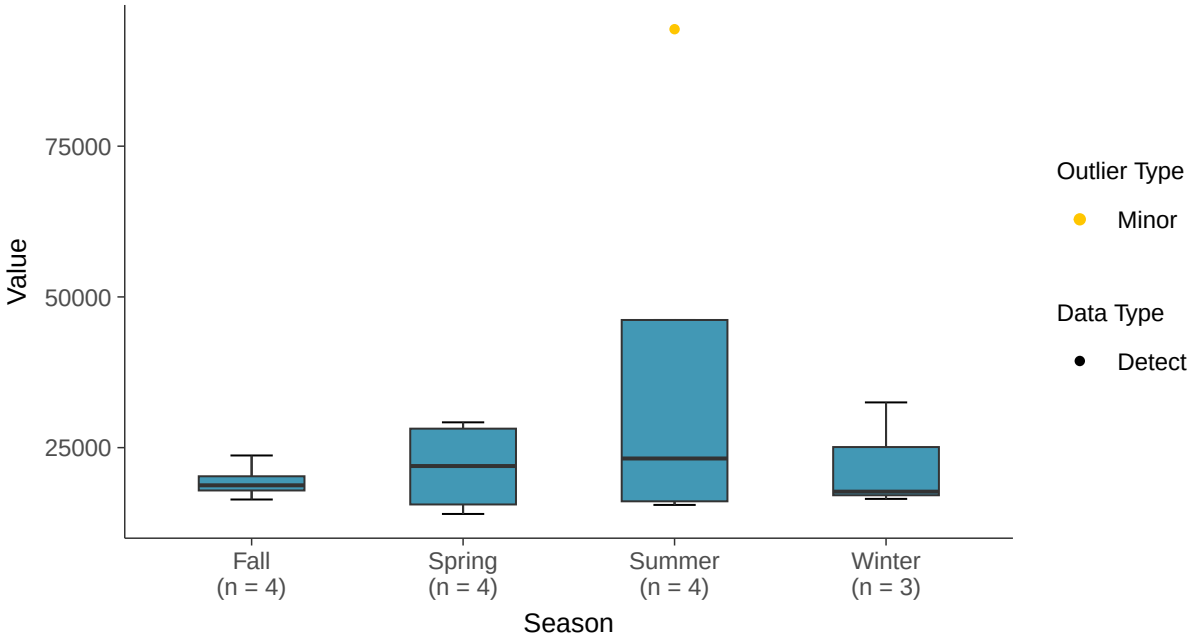
Boxplot

Calcium, MW-11D (ug/L)



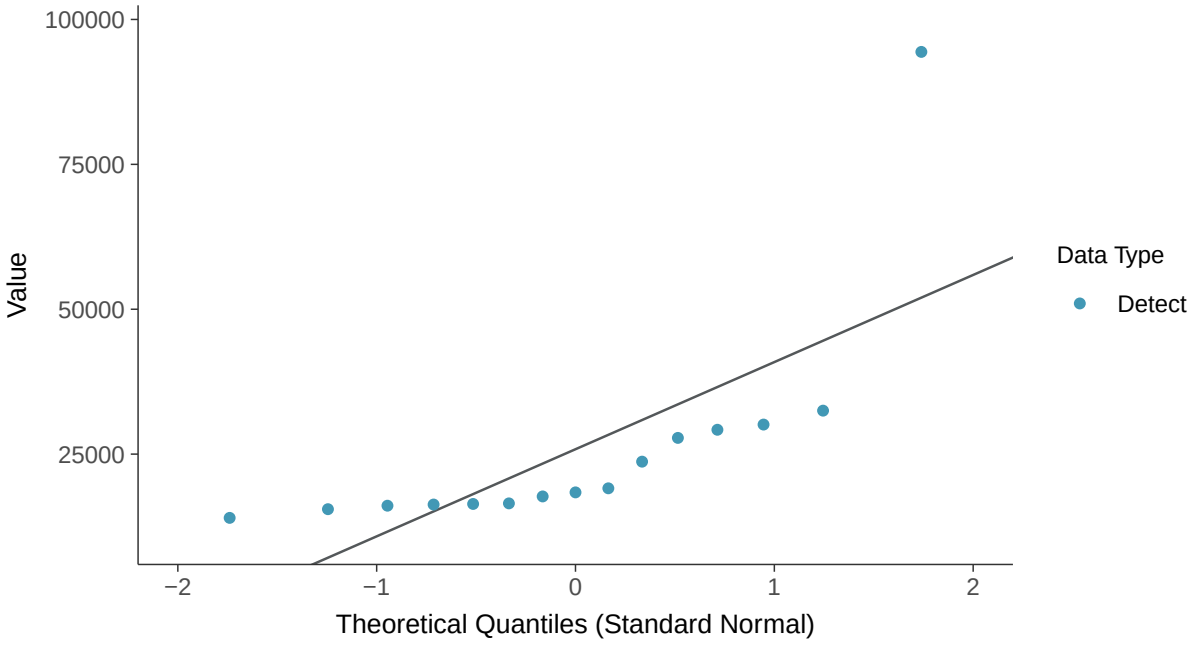
Boxplot by Season

Calcium, MW-11D (ug/L)



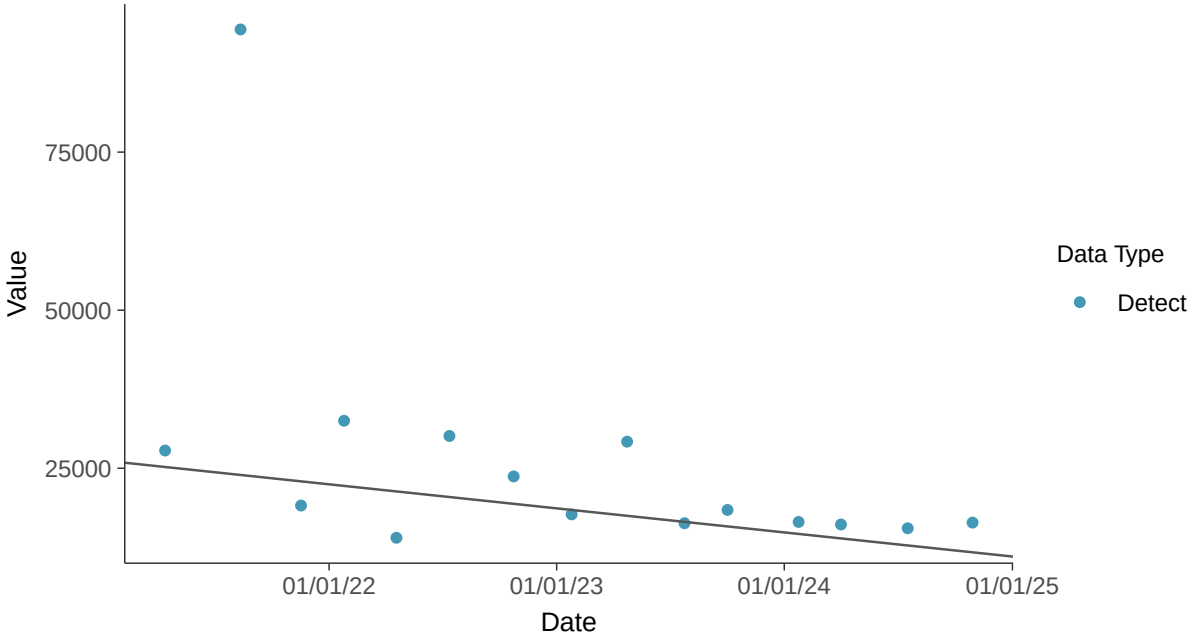
Normal Q-Q plot

Calcium, MW-11D (ug/L)



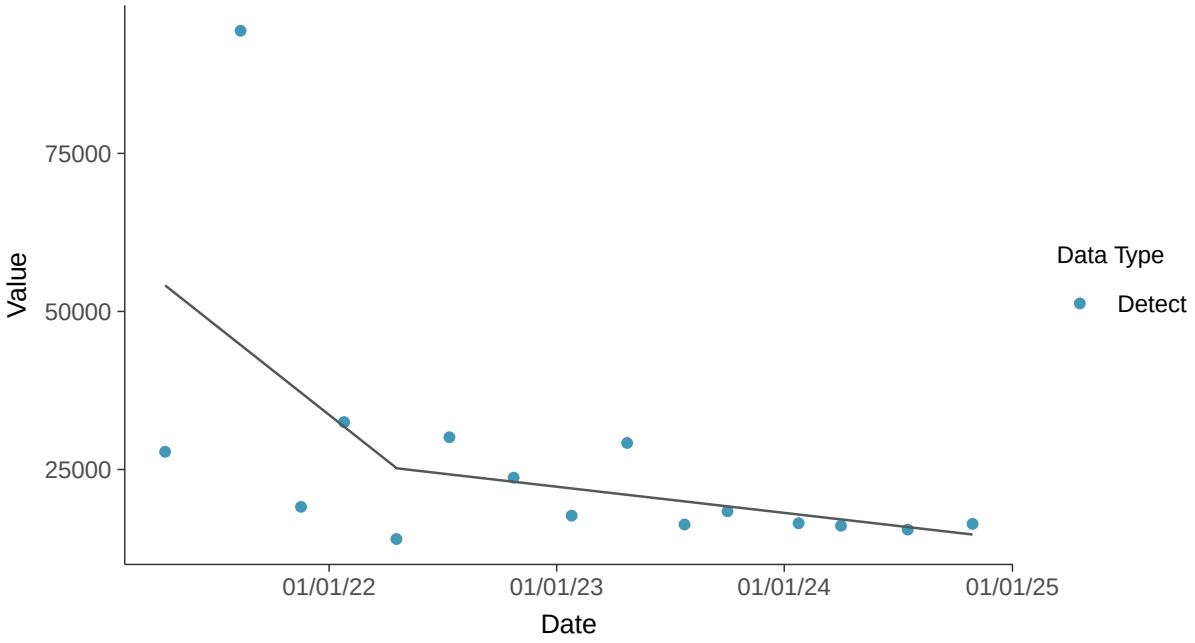
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Calcium, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Calcium, MW-11D (ug/L)

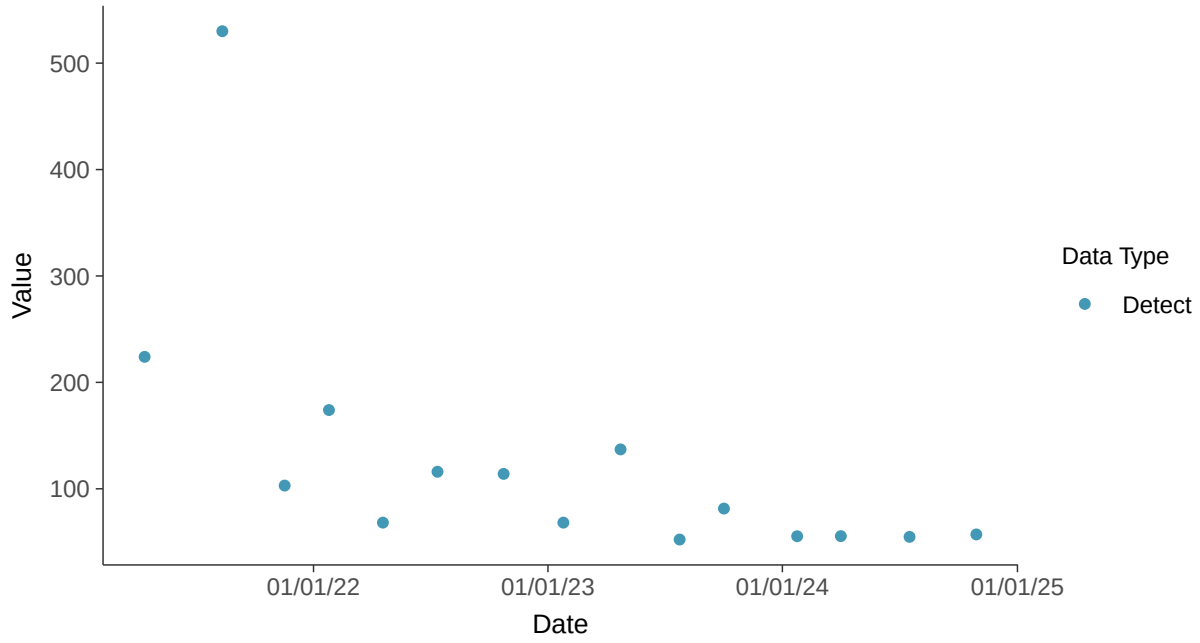


App. III: Chloride, MW-11D

ID: 11_02_108

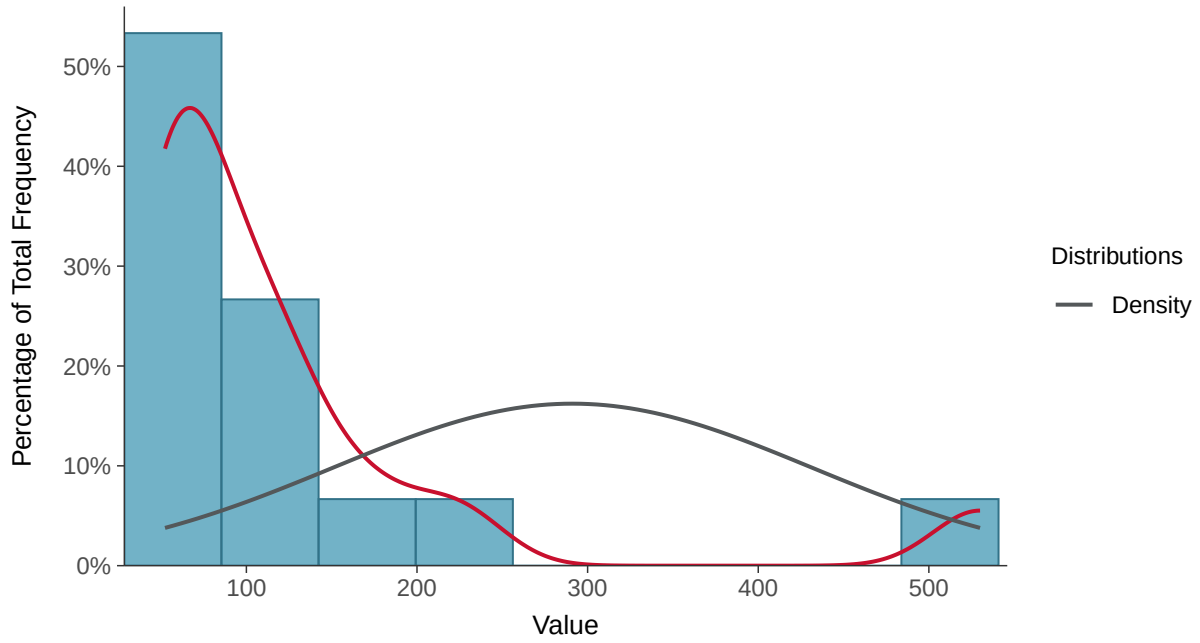
Scatter Plot

Chloride, MW-11D (mg/L)



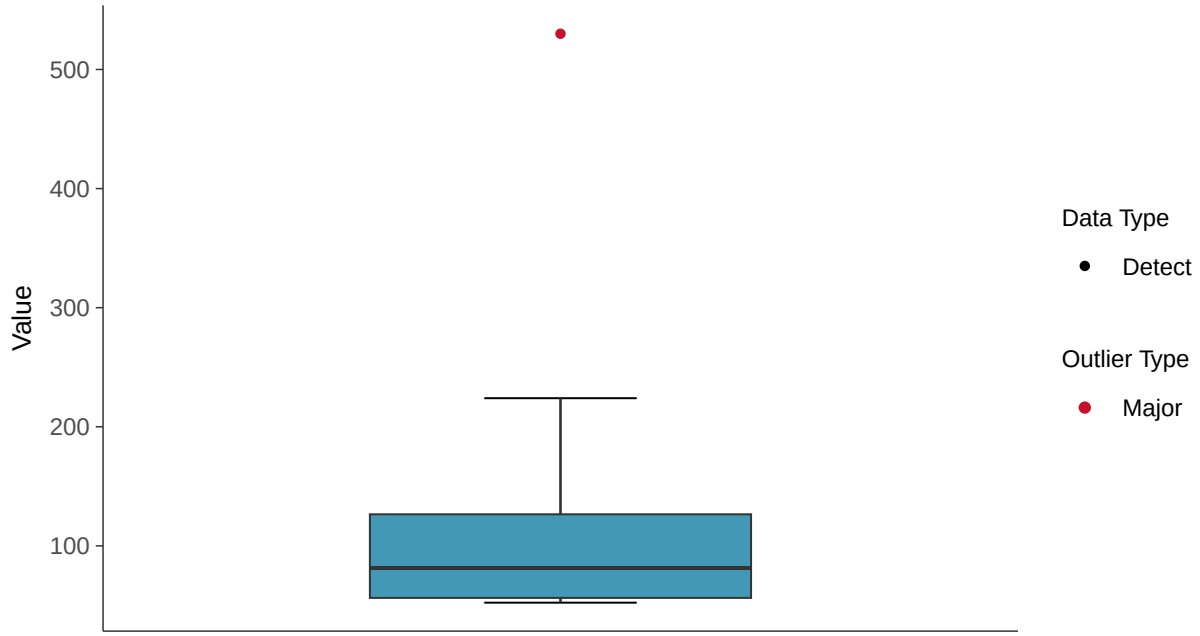
Histogram

Chloride, MW-11D (mg/L)



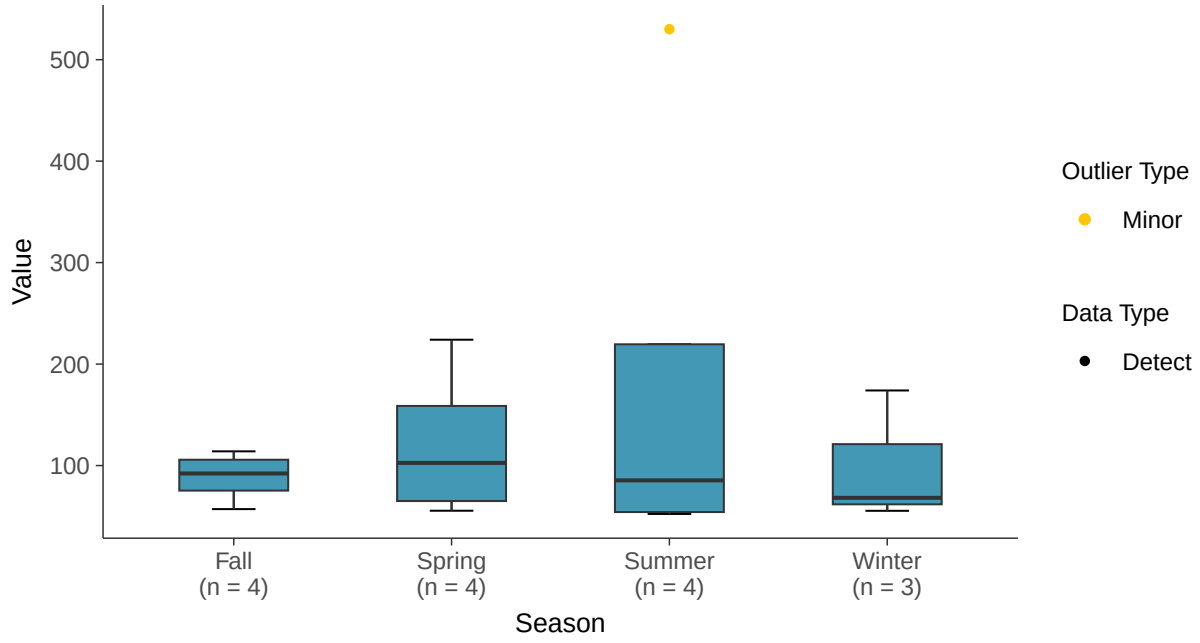
Boxplot

Chloride, MW-11D (mg/L)



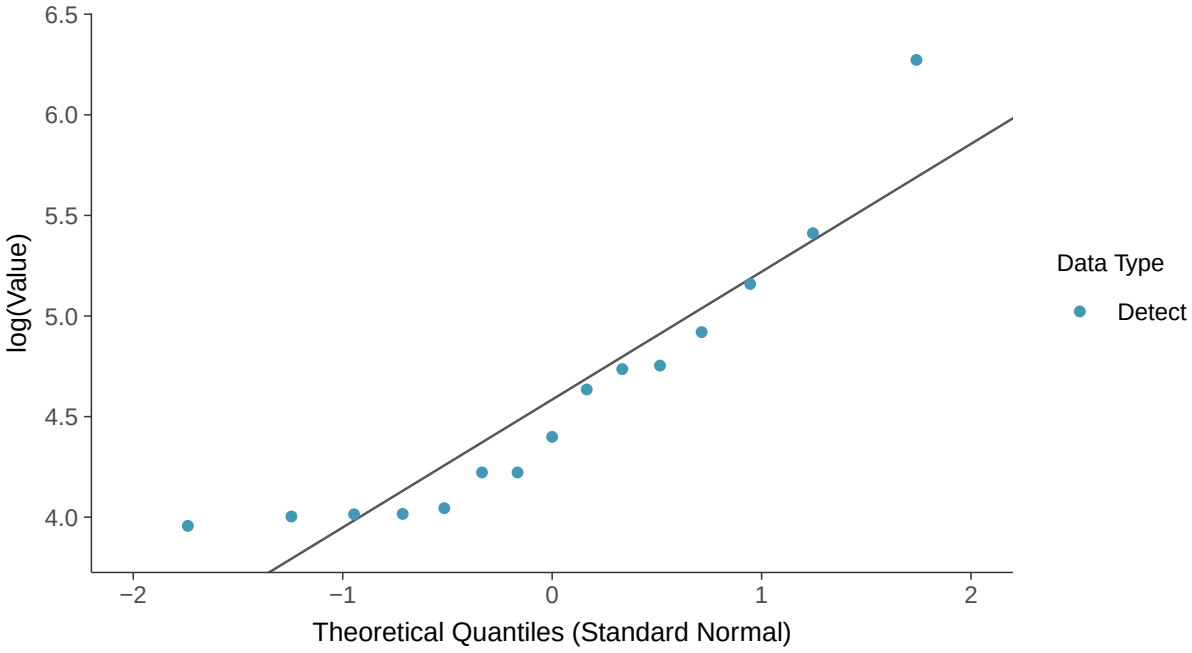
Boxplot by Season

Chloride, MW-11D (mg/L)



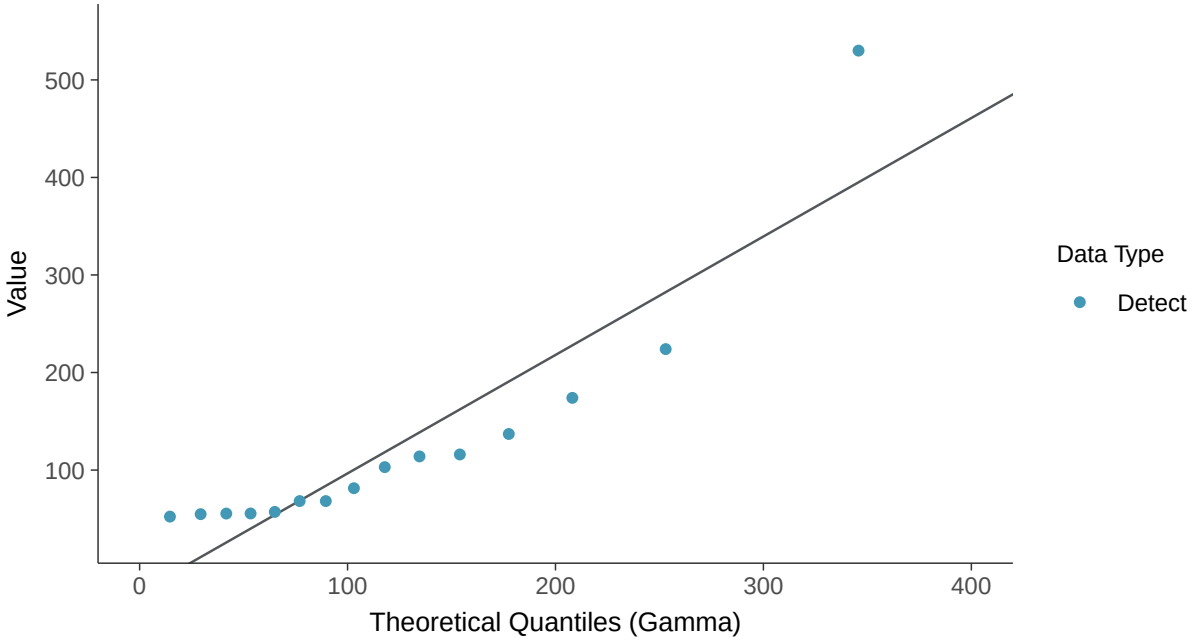
Lognormal Q-Q plot

Chloride, MW-11D (mg/L)



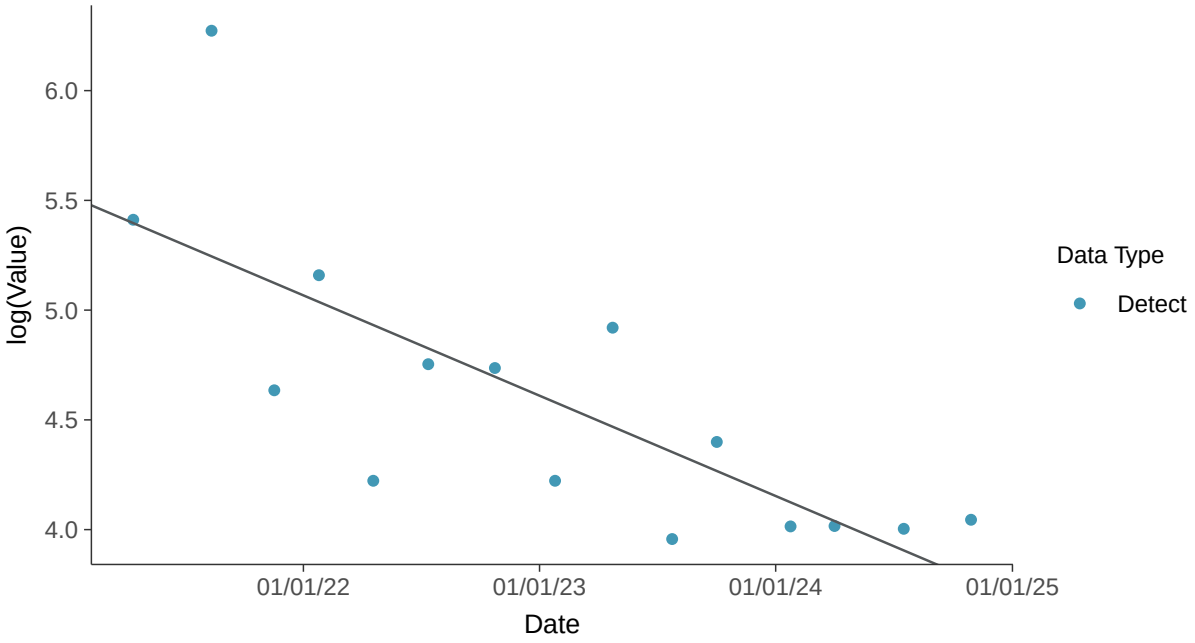
Gamma Q-Q plot

Chloride, MW-11D (mg/L)



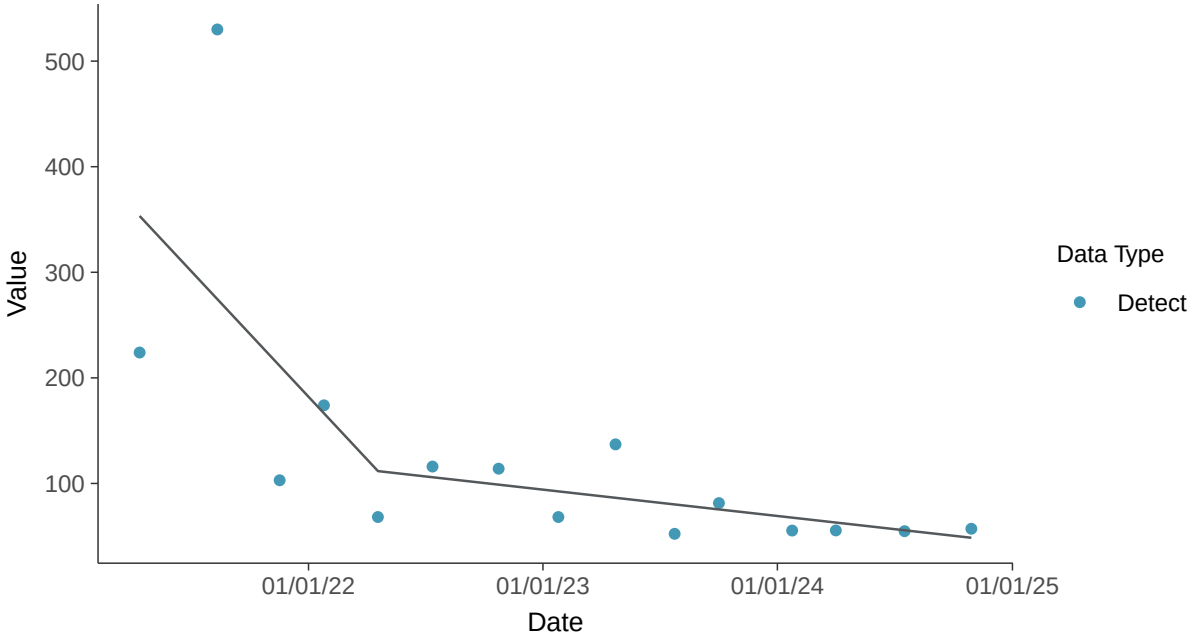
Trend Regression: Lognormal MLE

Chloride, MW-11D (mg/L)



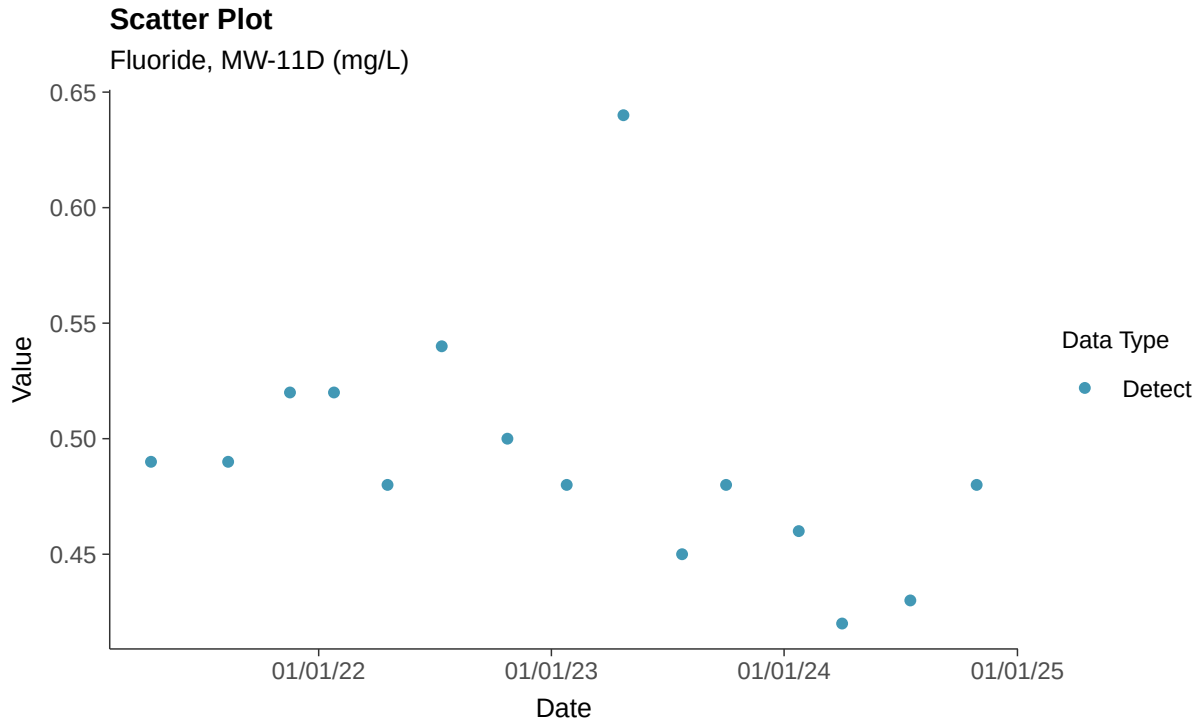
Trend Regression: Piecewise Linear-Linear

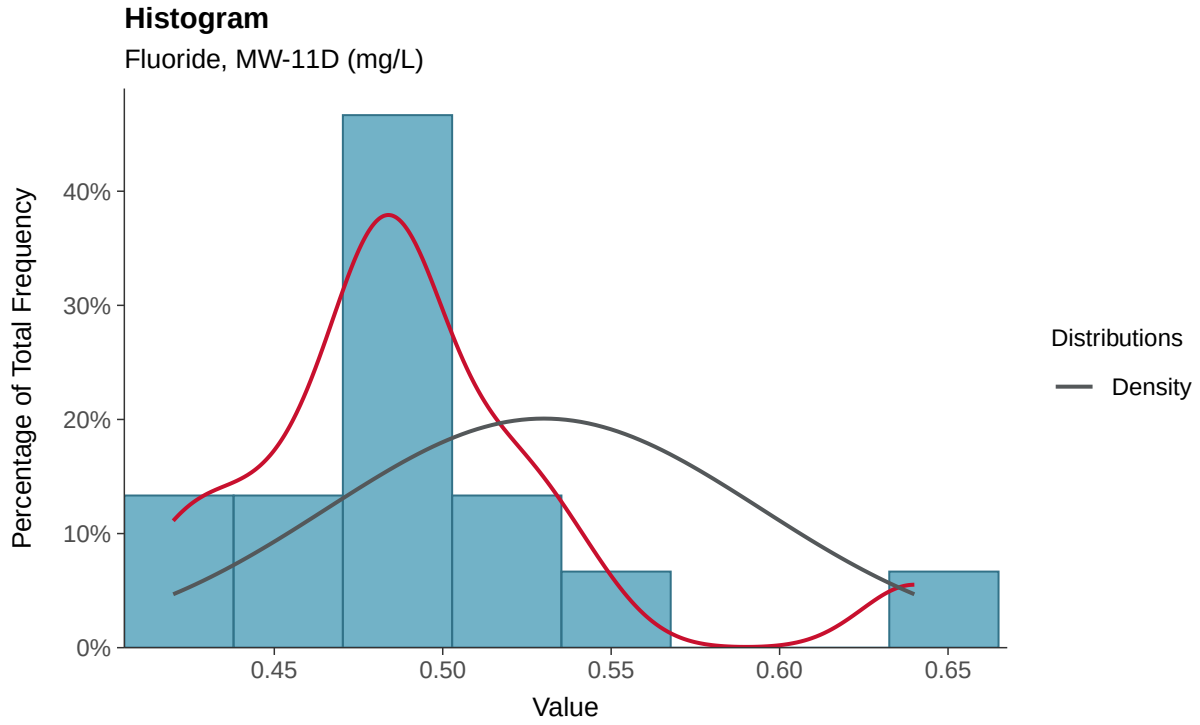
Chloride, MW-11D (mg/L)



App. III: Fluoride, MW-11D

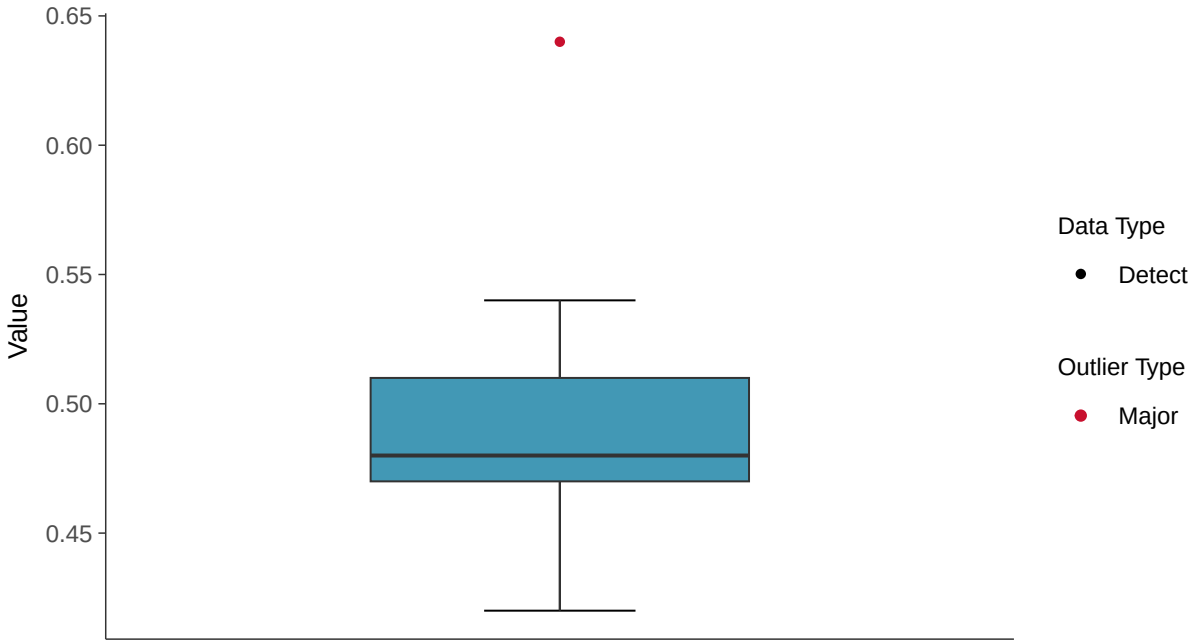
ID: 11_02_112





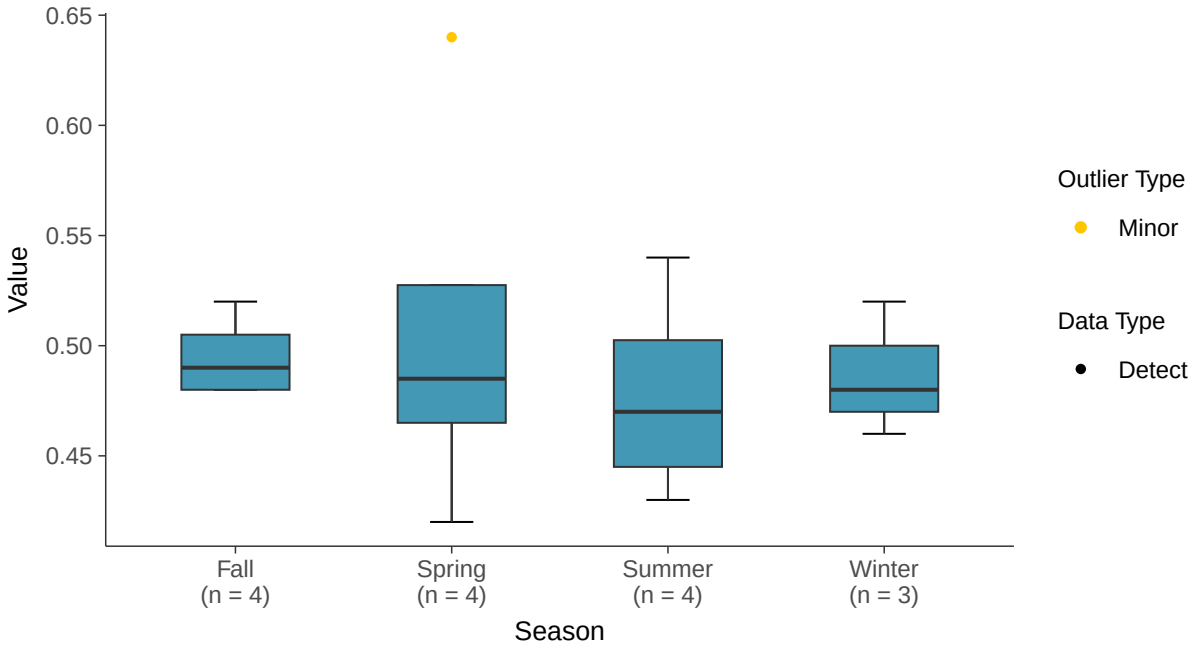
Boxplot

Fluoride, MW-11D (mg/L)



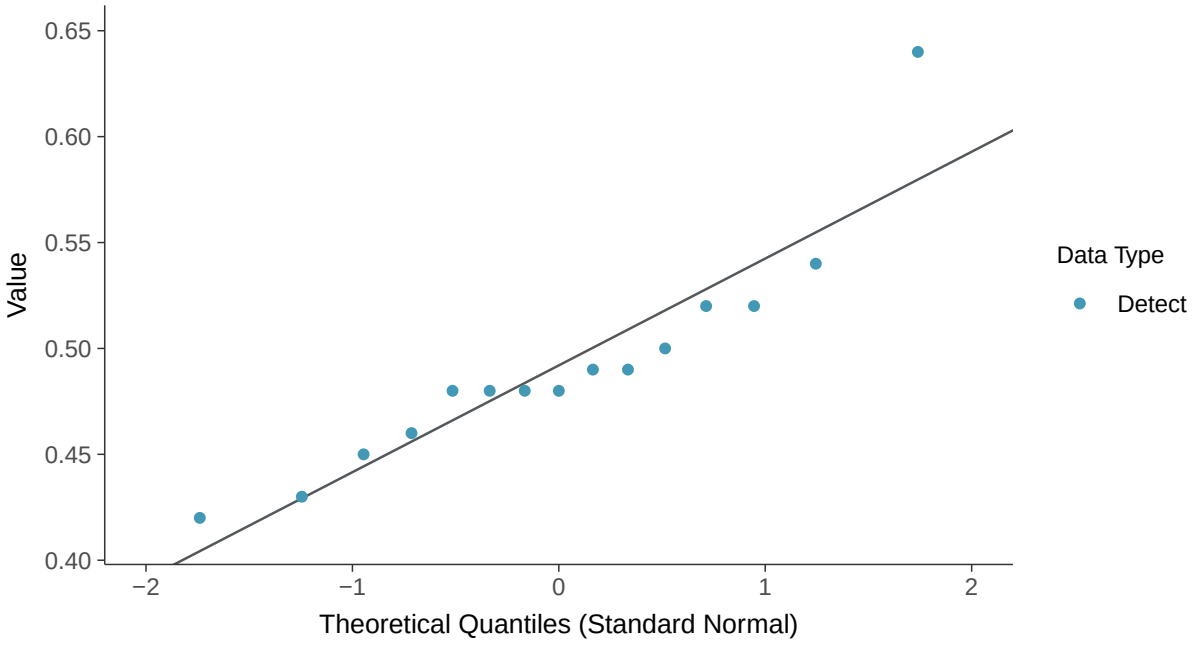
Boxplot by Season

Fluoride, MW-11D (mg/L)



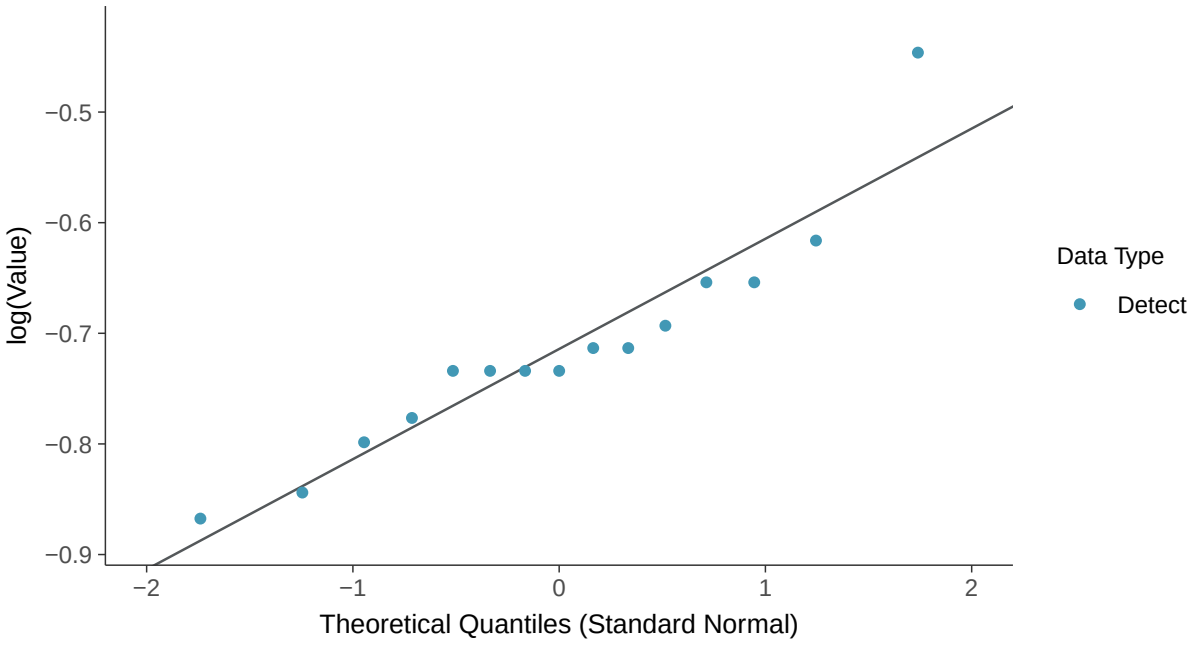
Normal Q-Q plot

Fluoride, MW-11D (mg/L)



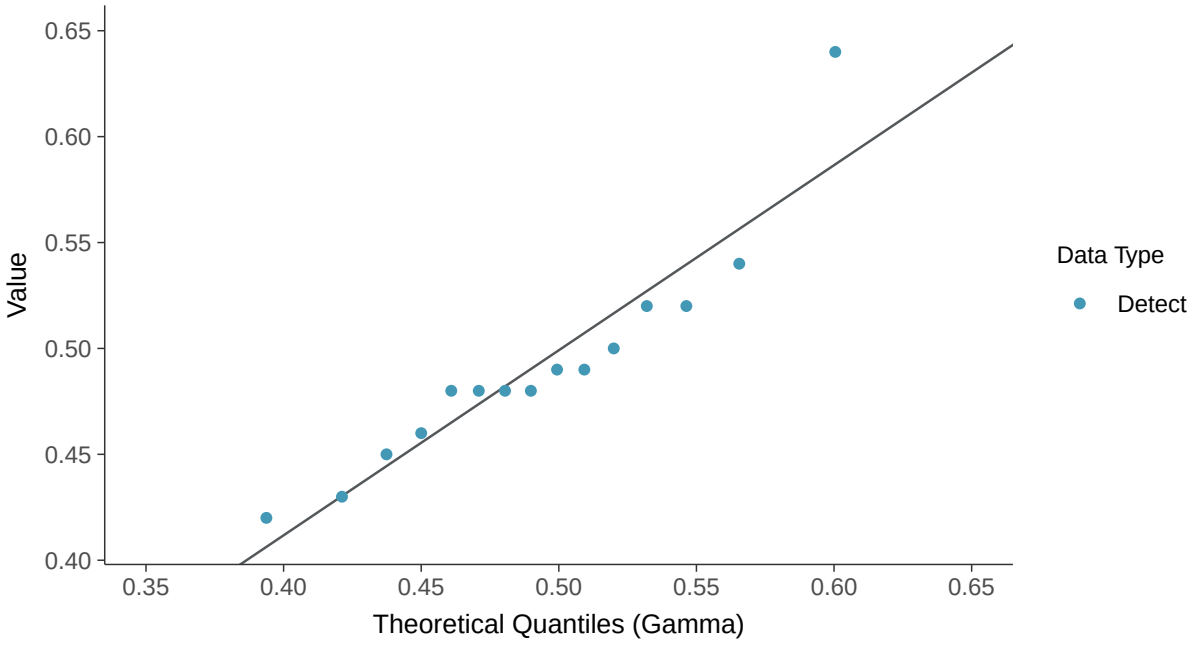
Lognormal Q-Q plot

Fluoride, MW-11D (mg/L)



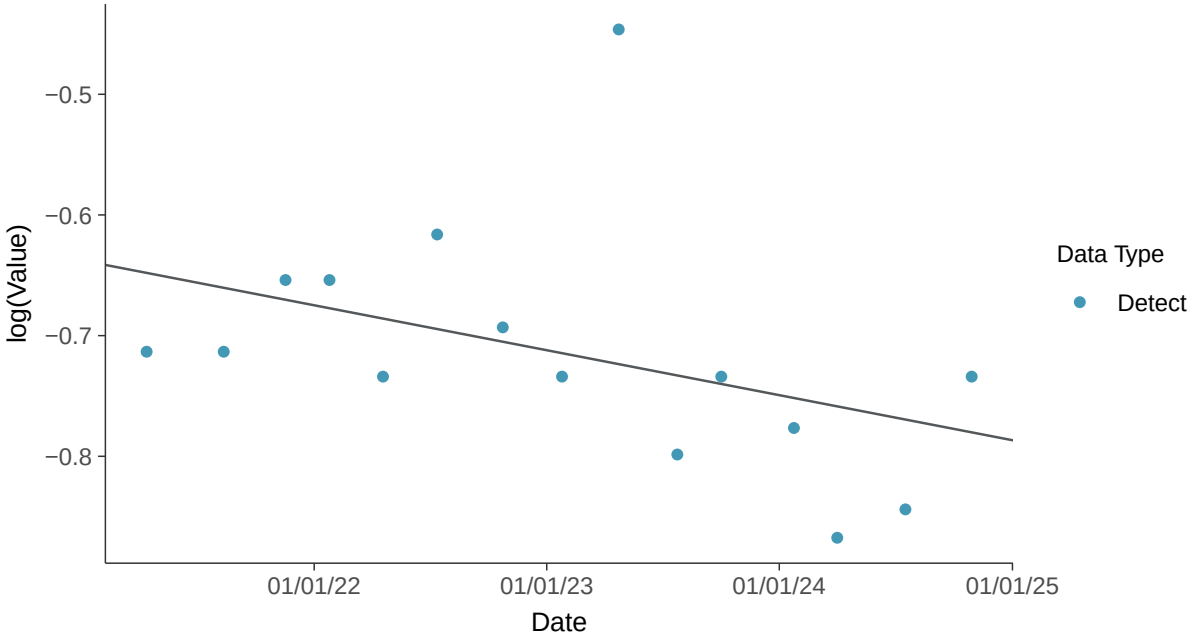
Gamma Q-Q plot

Fluoride, MW-11D (mg/L)



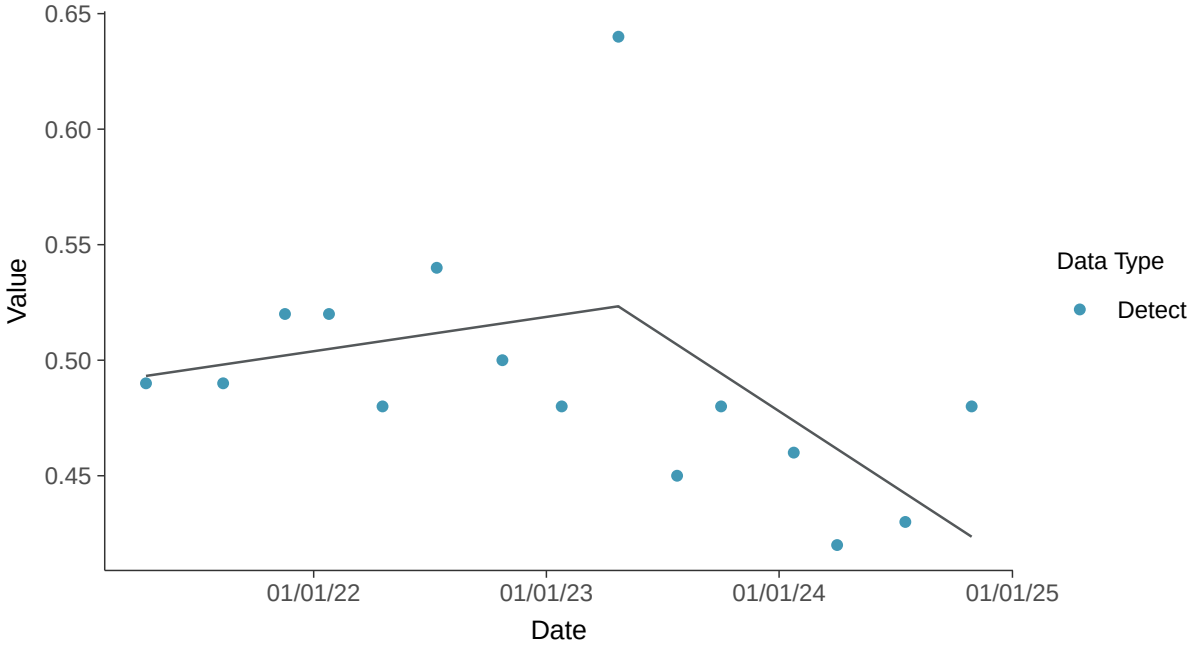
Trend Regression: Lognormal MLE

Fluoride, MW-11D (mg/L)



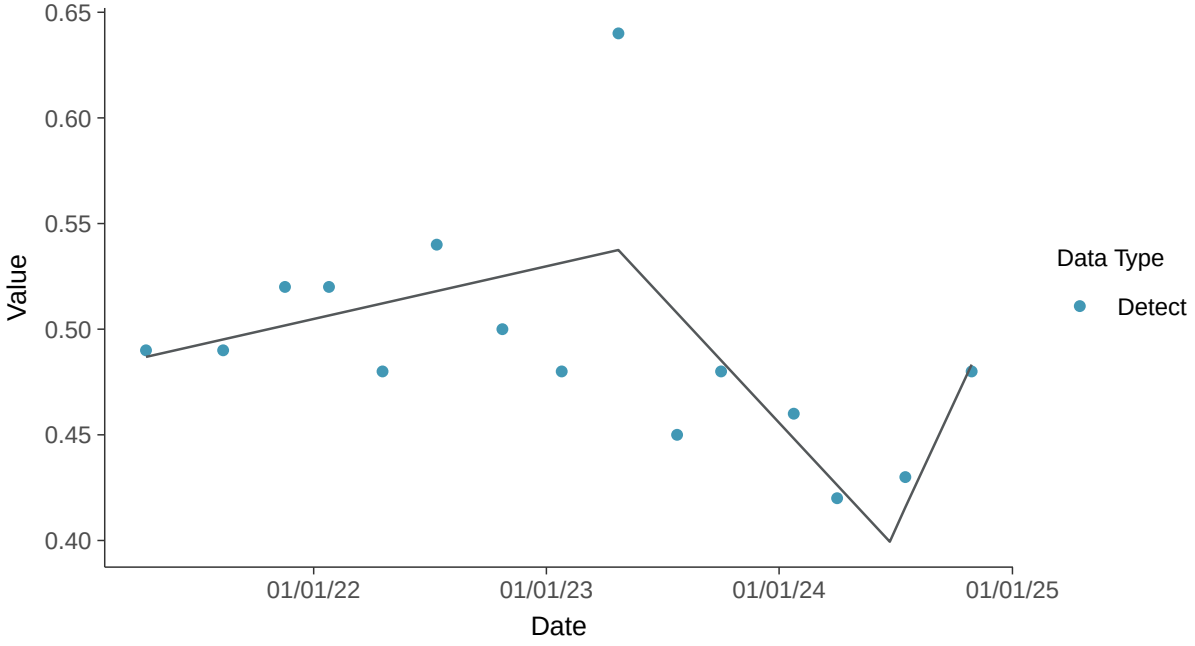
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-11D (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-11D (mg/L)

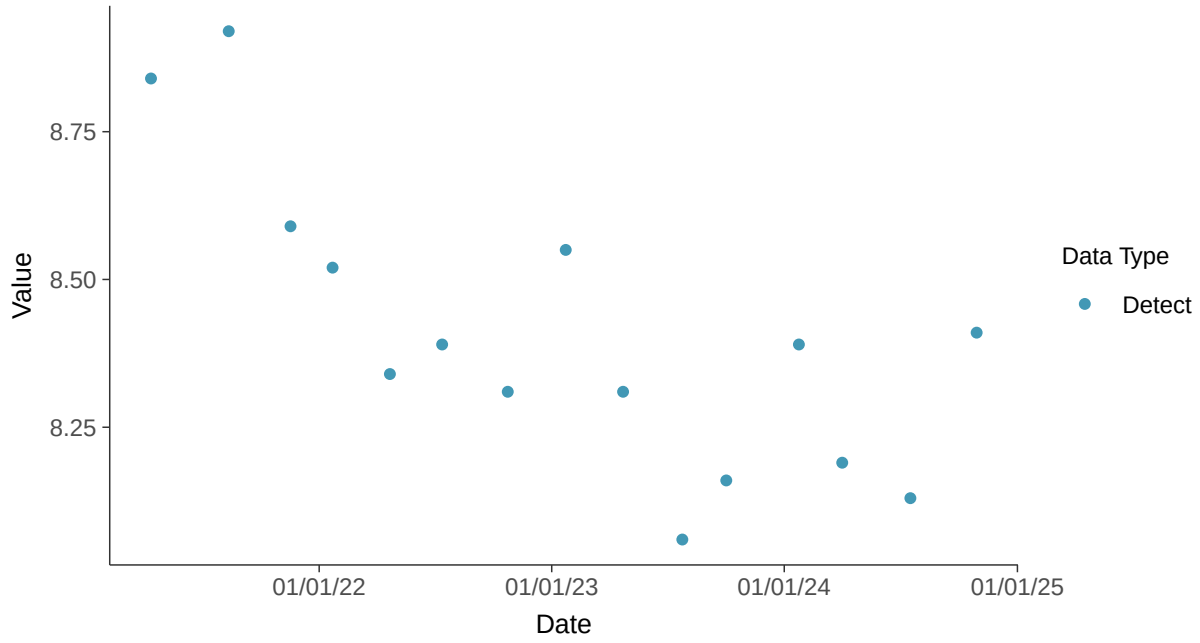


App. III: pH (Field), MW-11D

ID: 11_02_118

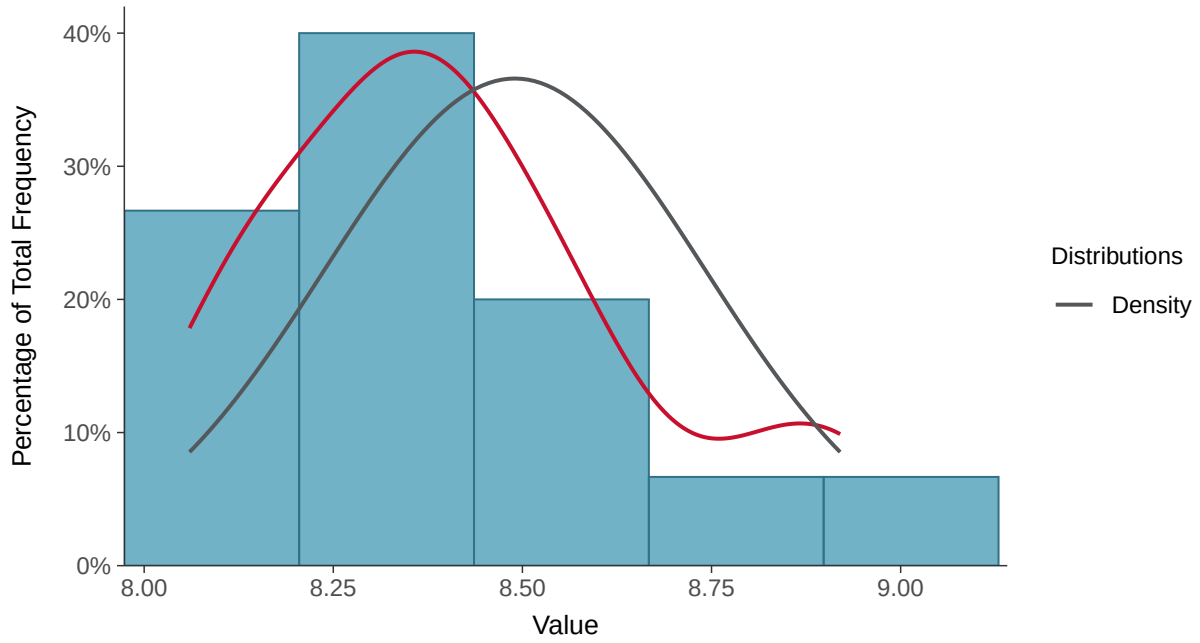
Scatter Plot

pH (Field), MW-11D (S.U.)



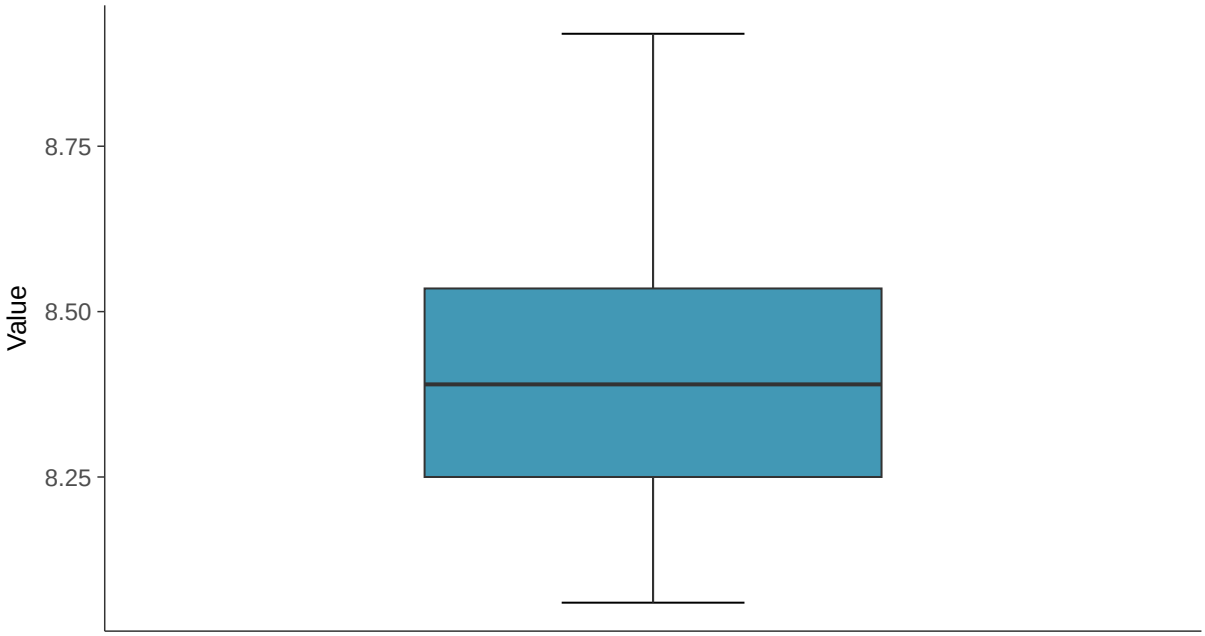
Histogram

pH (Field), MW-11D (S.U.)



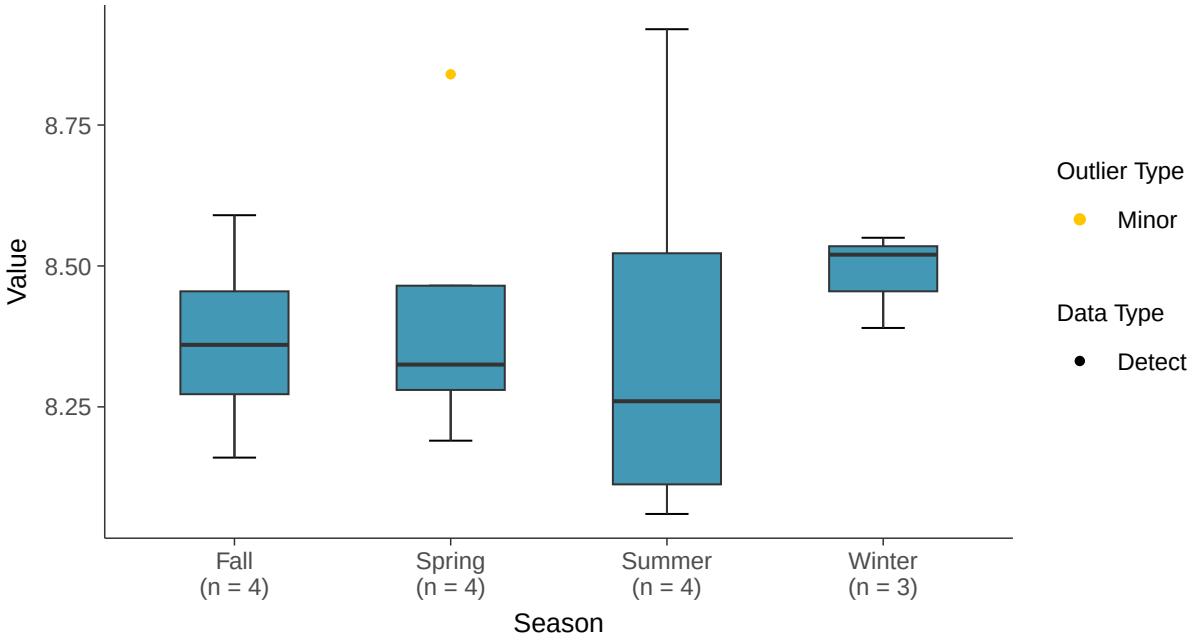
Boxplot

pH (Field), MW-11D (S.U.)



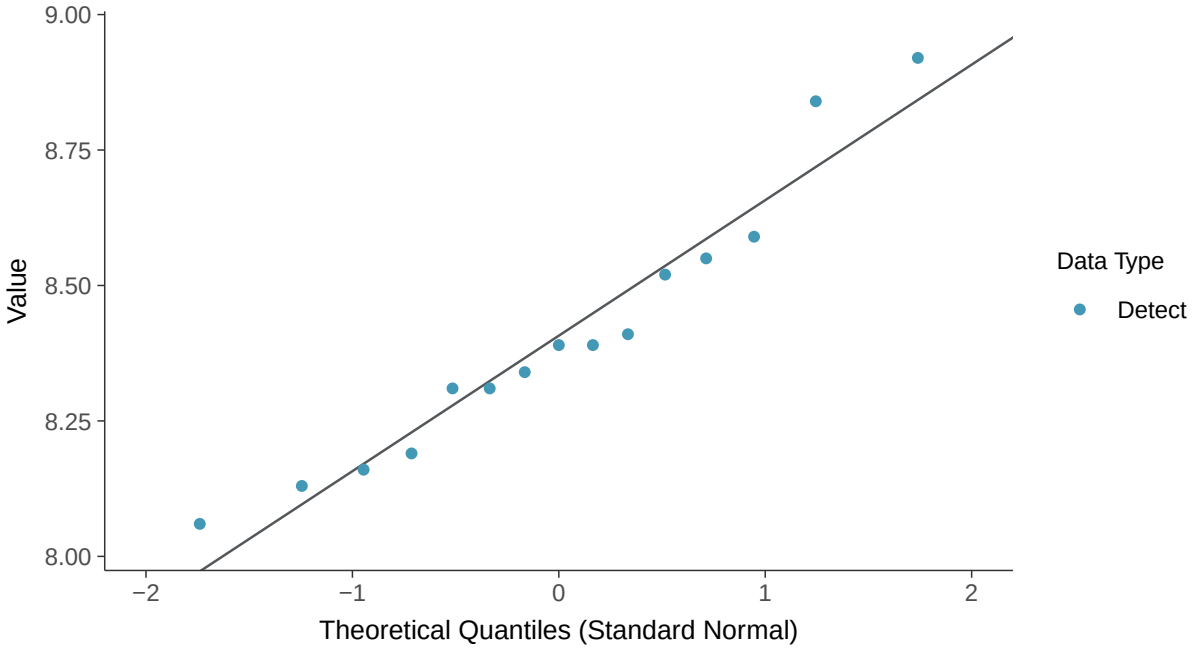
Boxplot by Season

pH (Field), MW-11D (S.U.)



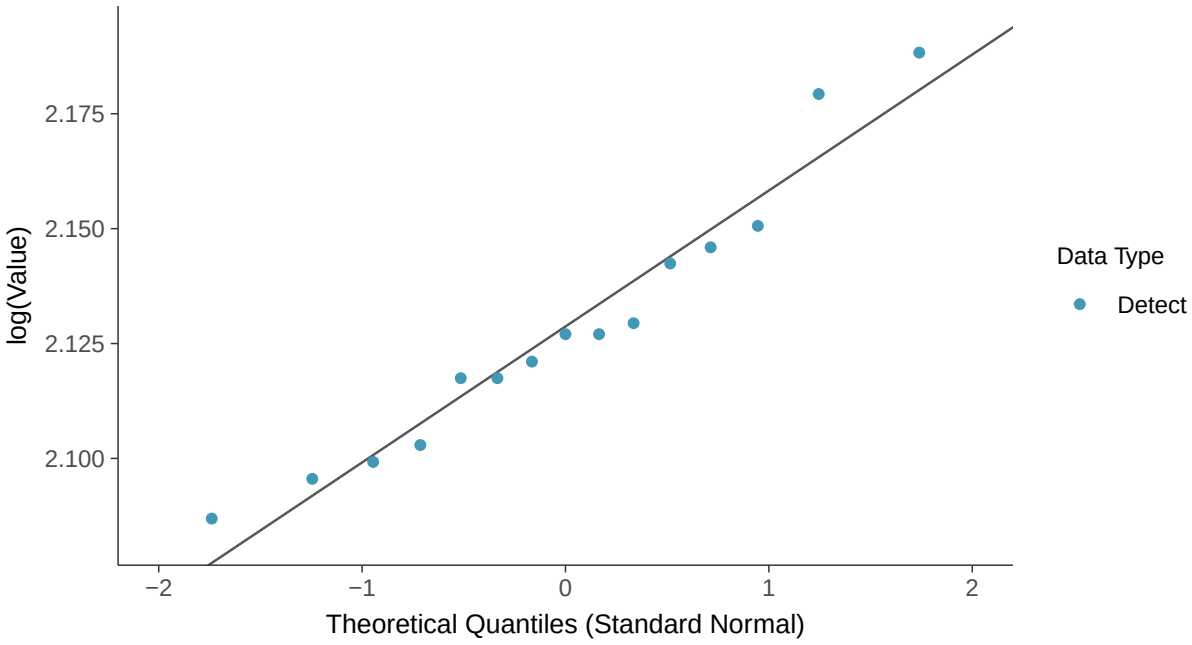
Normal Q-Q plot

pH (Field), MW-11D (S.U.)



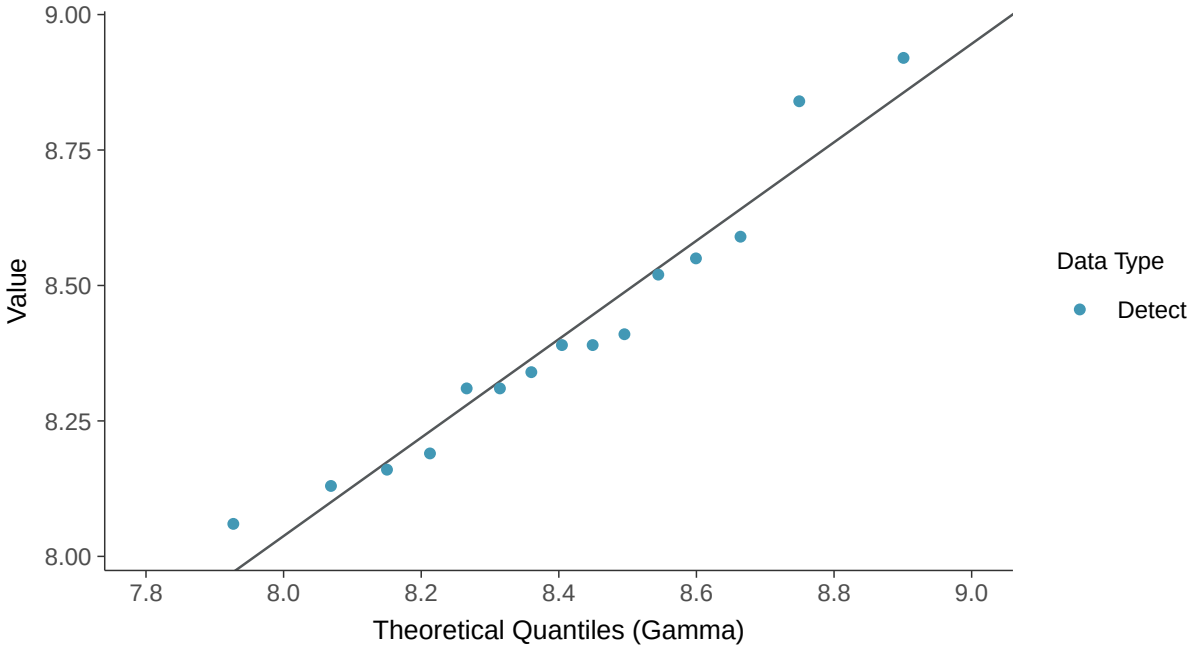
Lognormal Q-Q plot

pH (Field), MW-11D (S.U.)



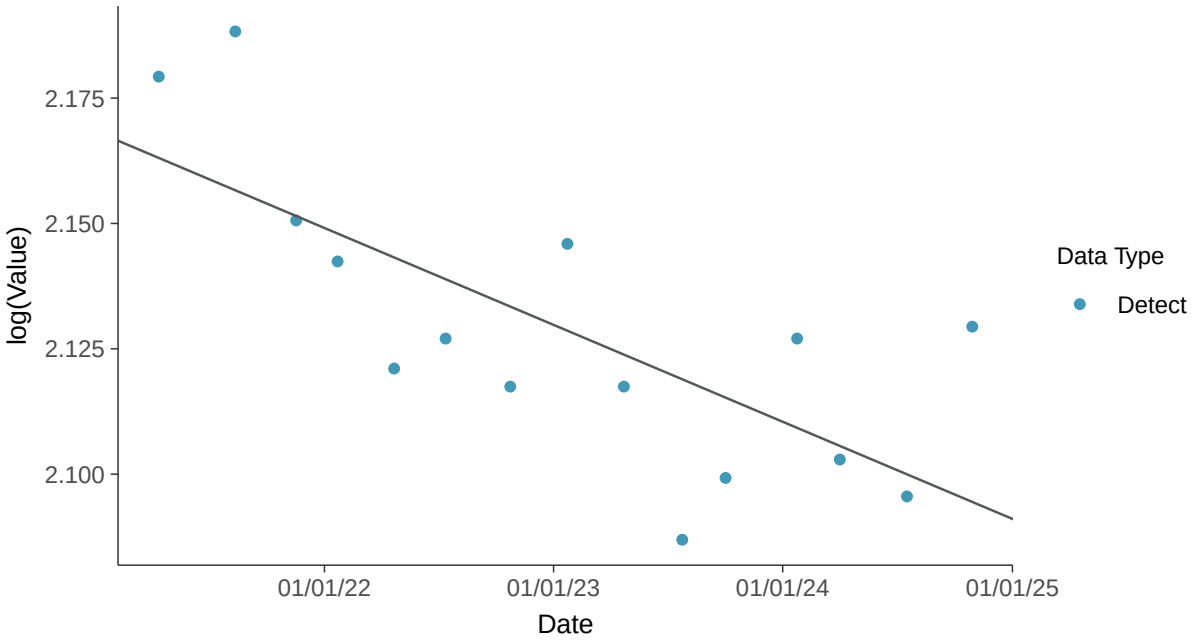
Gamma Q-Q plot

pH (Field), MW-11D (S.U.)



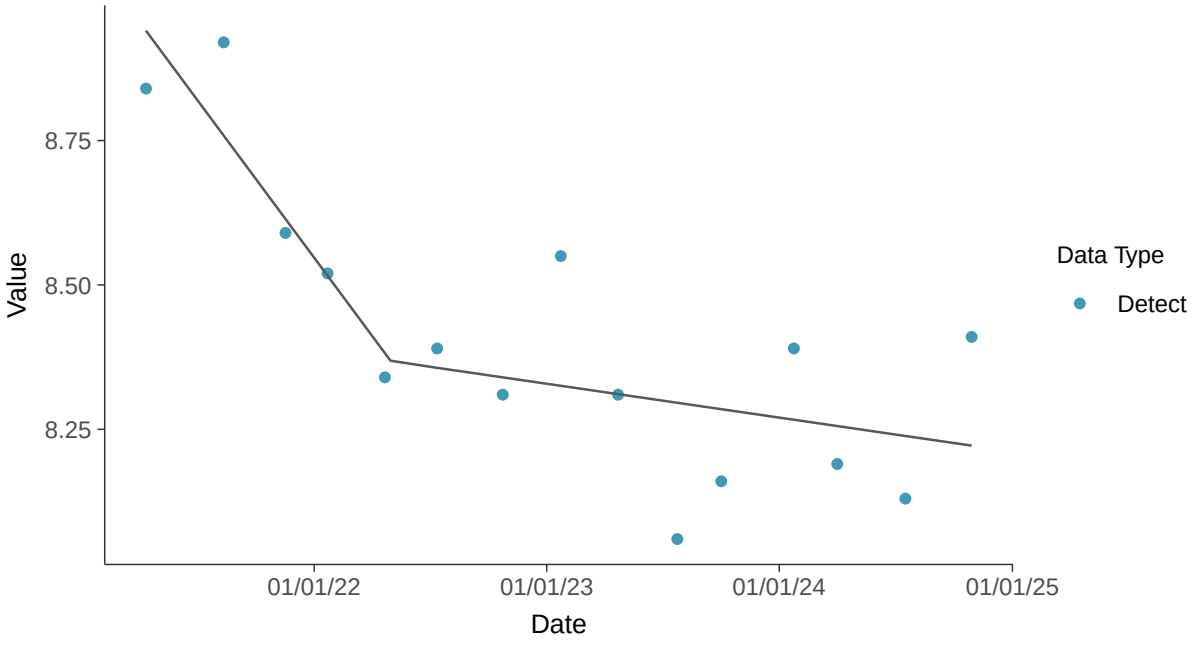
Trend Regression: Lognormal MLE

pH (Field), MW-11D (S.U.)



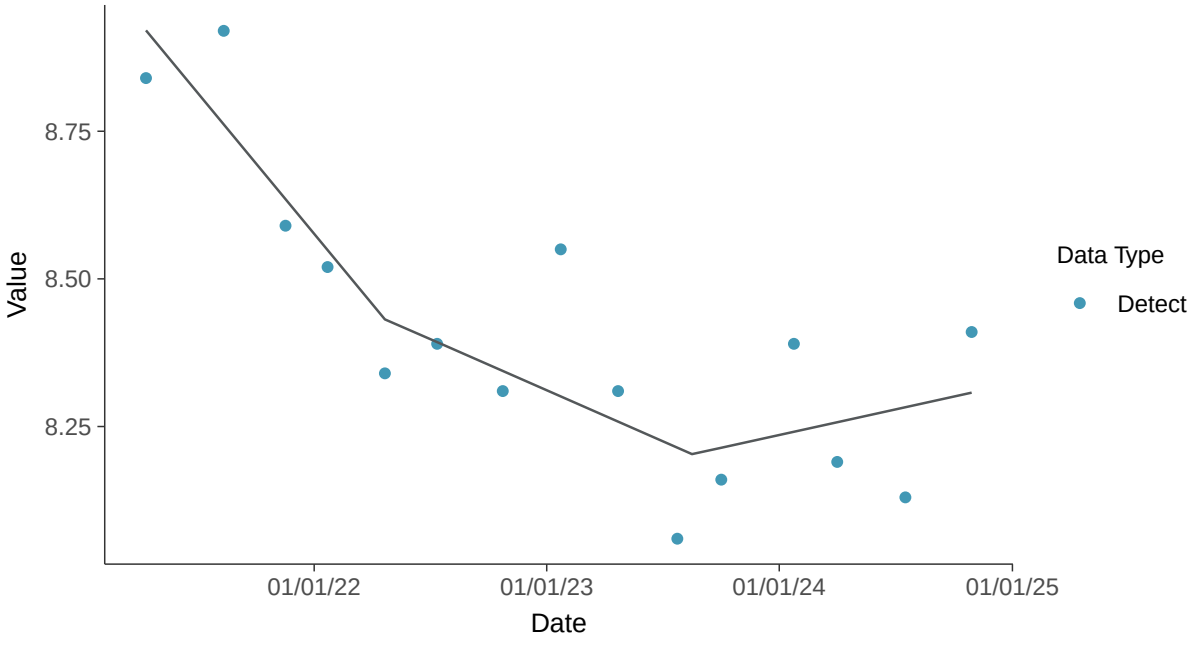
Trend Regression: Piecewise Linear-Linear

pH (Field), MW-11D (S.U.)



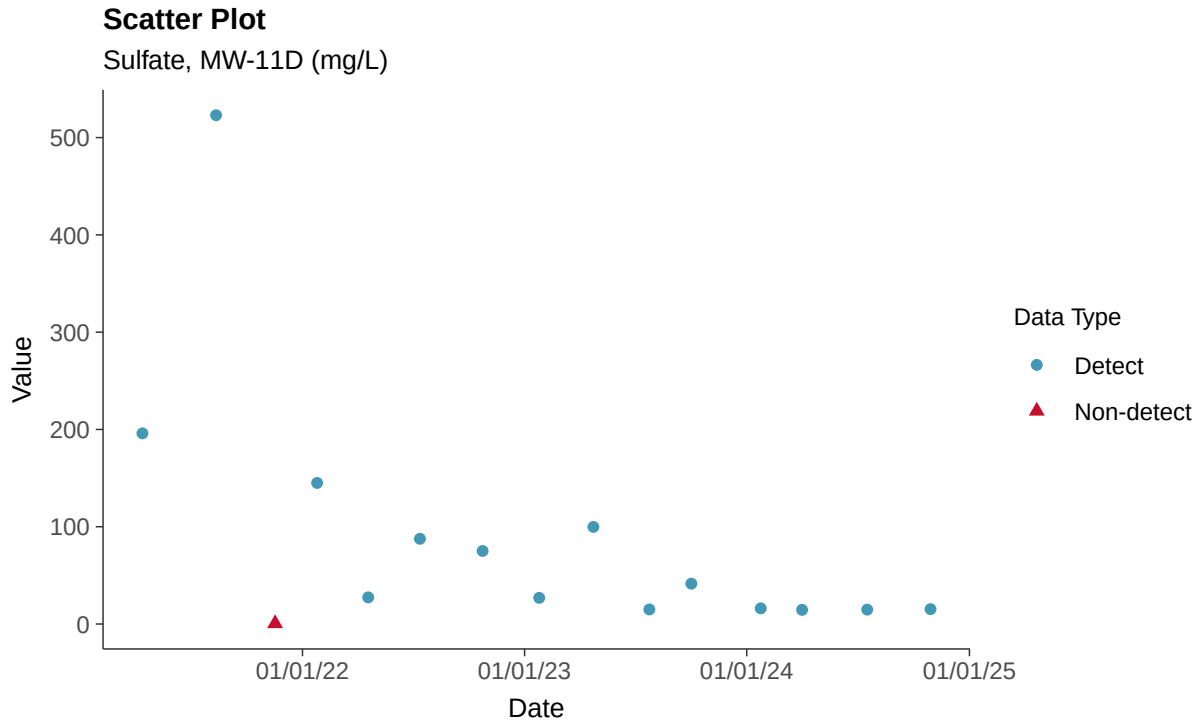
Trend Regression: Piecewise Linear-Linear-Linear

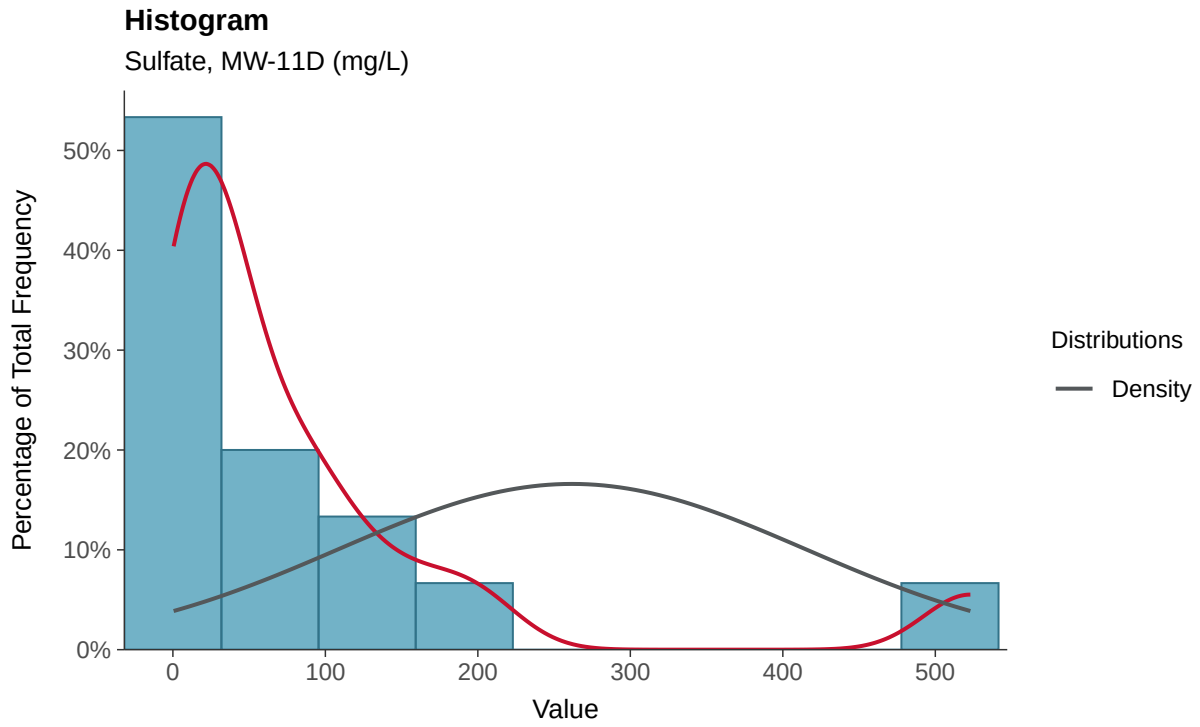
pH (Field), MW-11D (S.U.)



App. III: Sulfate, MW-11D

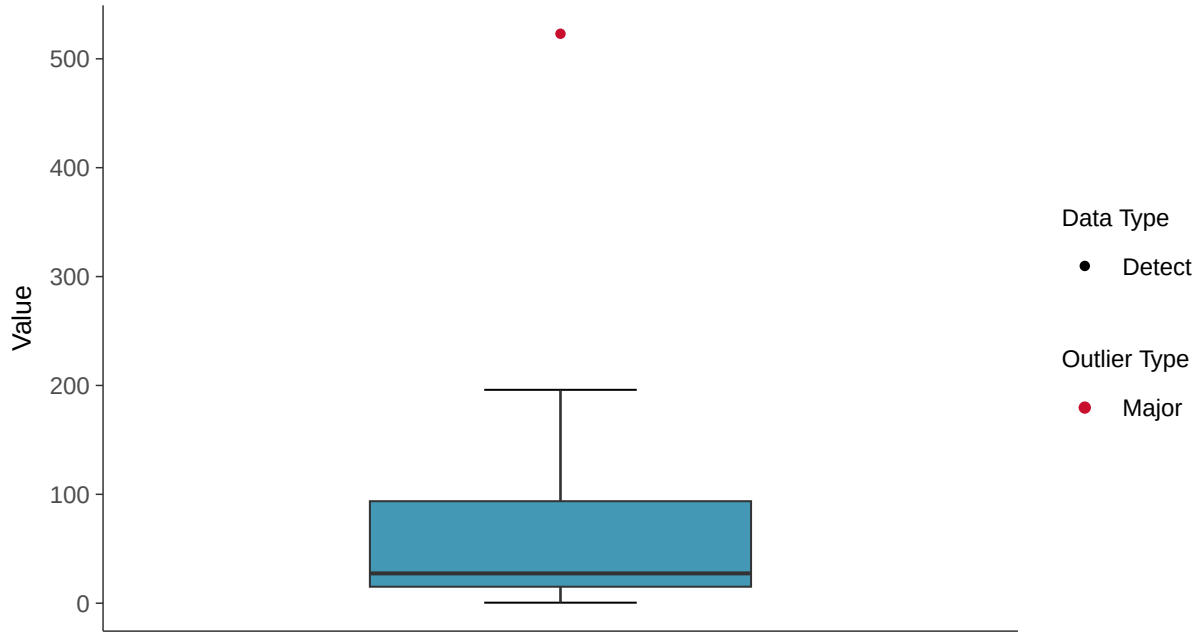
ID: 11_02_123





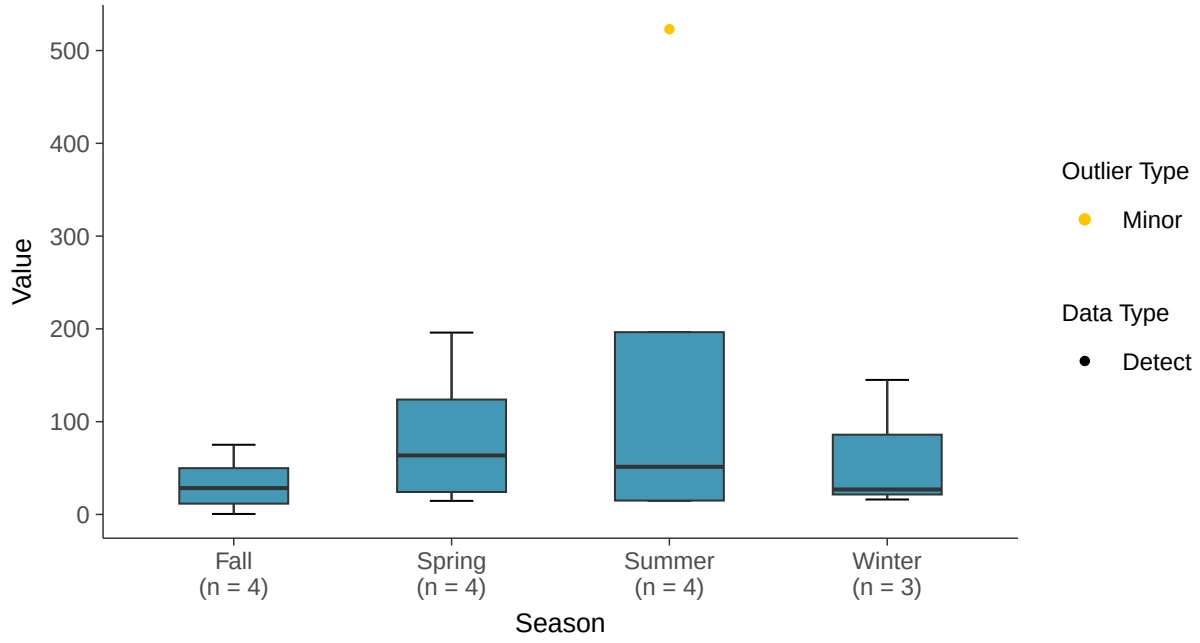
Boxplot

Sulfate, MW-11D (mg/L)



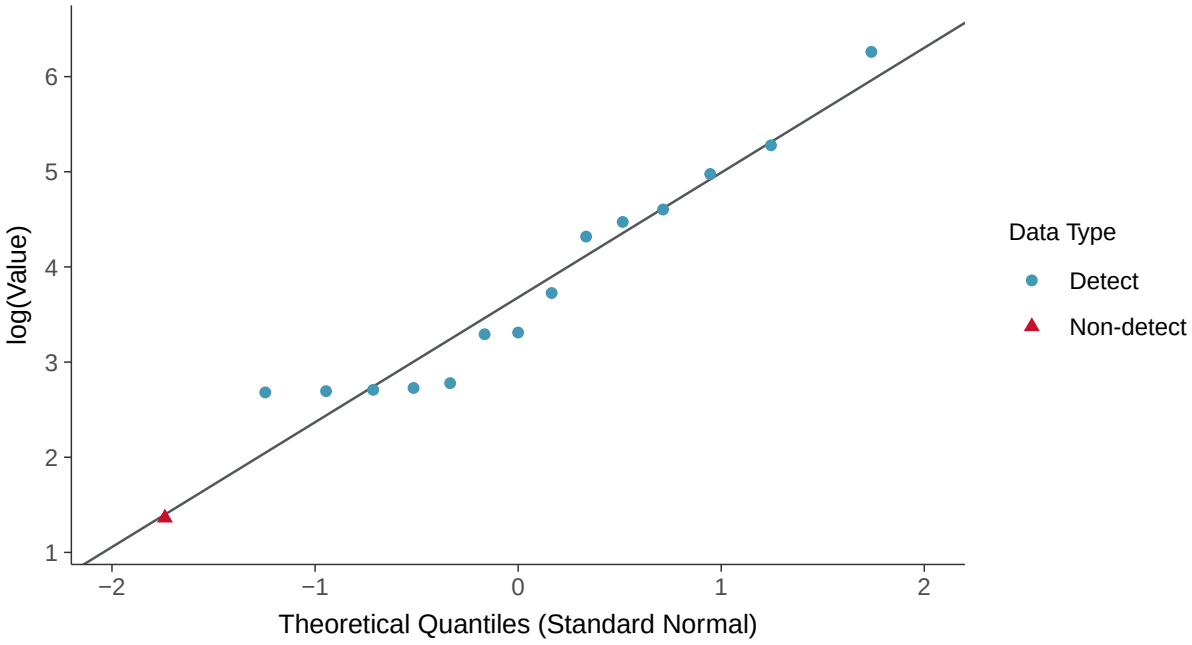
Boxplot by Season

Sulfate, MW-11D (mg/L)



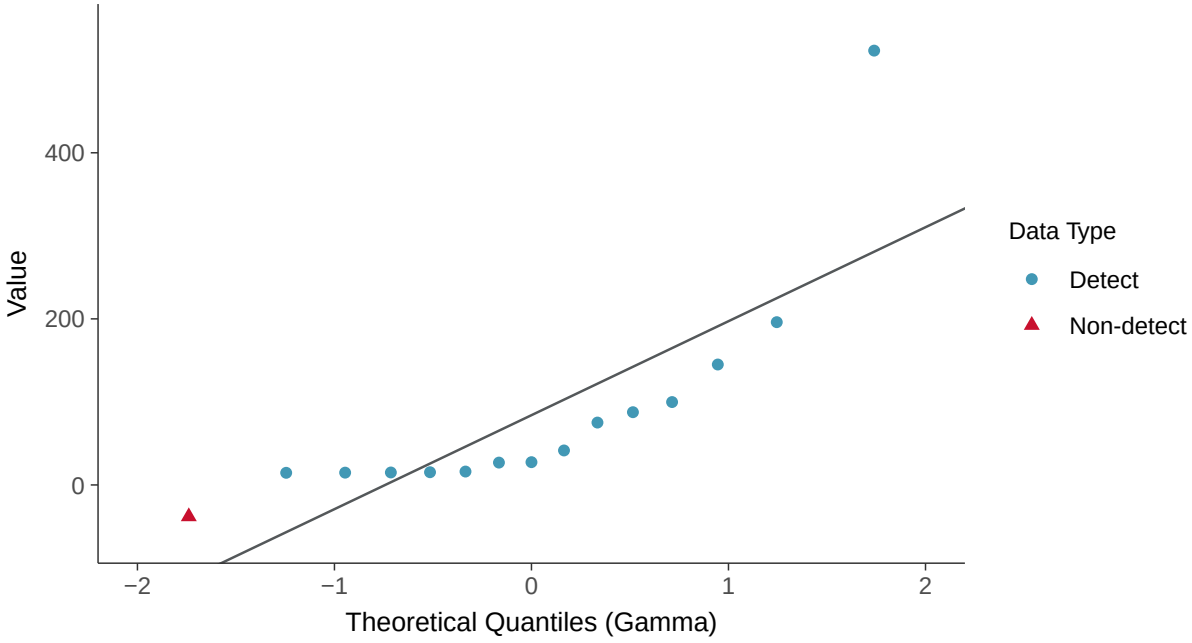
Lognormal Q-Q plot using ROS Imputed Estimates

Sulfate, MW-11D (mg/L)



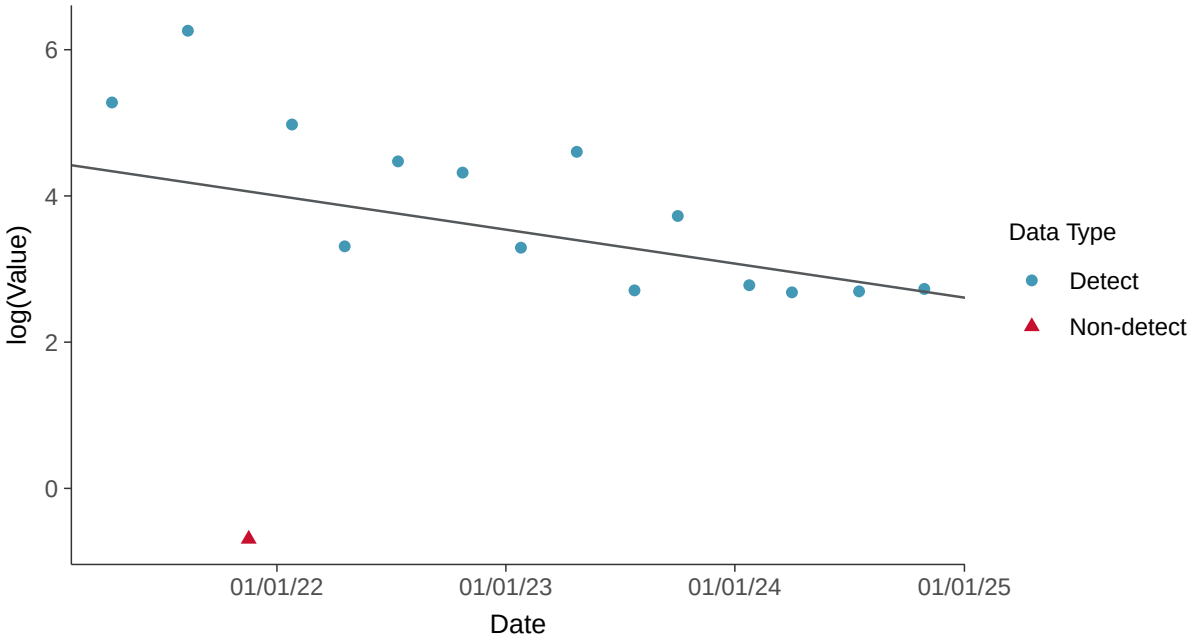
Gamma Q-Q plot using ROS Imputed Estimates

Sulfate, MW-11D (mg/L)



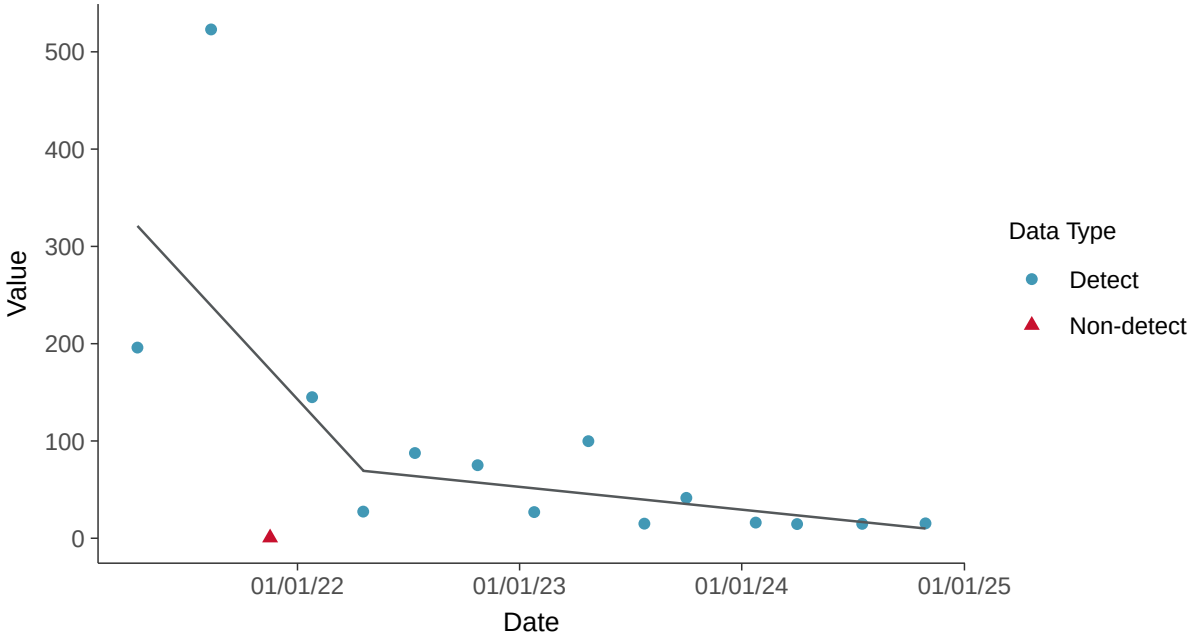
Trend Regression: Lognormal MLE

Sulfate, MW-11D (mg/L)



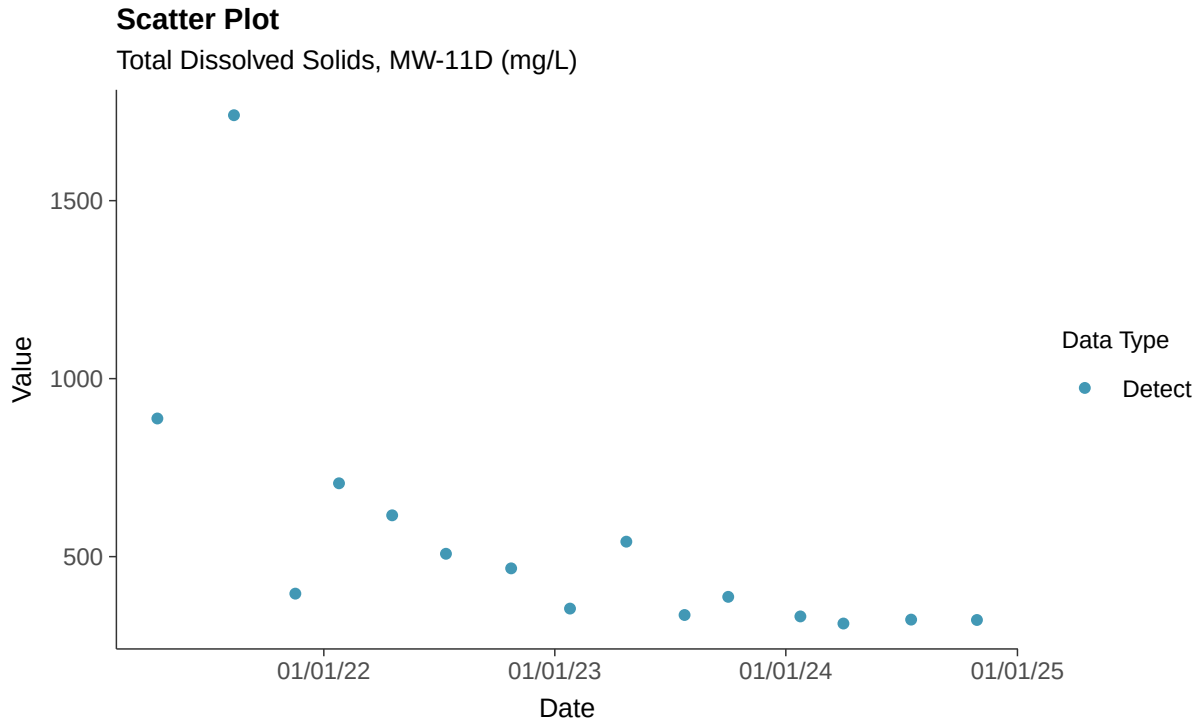
Trend Regression: Piecewise Linear-Linear

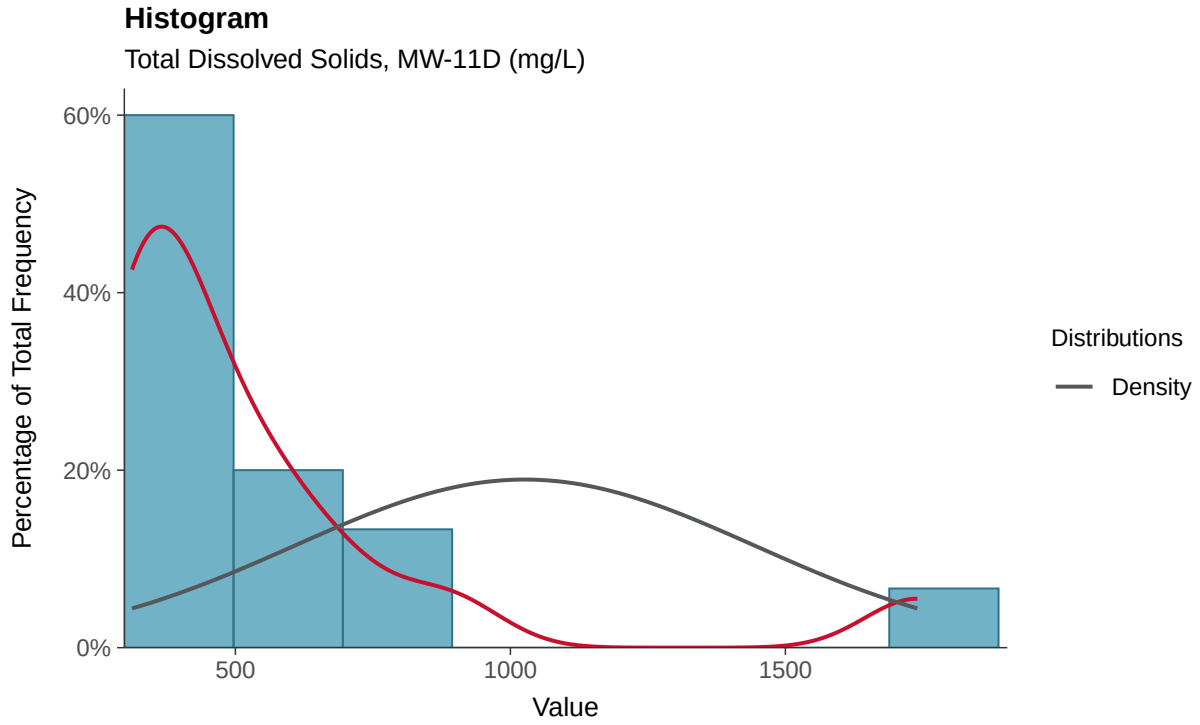
Sulfate, MW-11D (mg/L)



App. III: Total Dissolved Solids, MW-11D

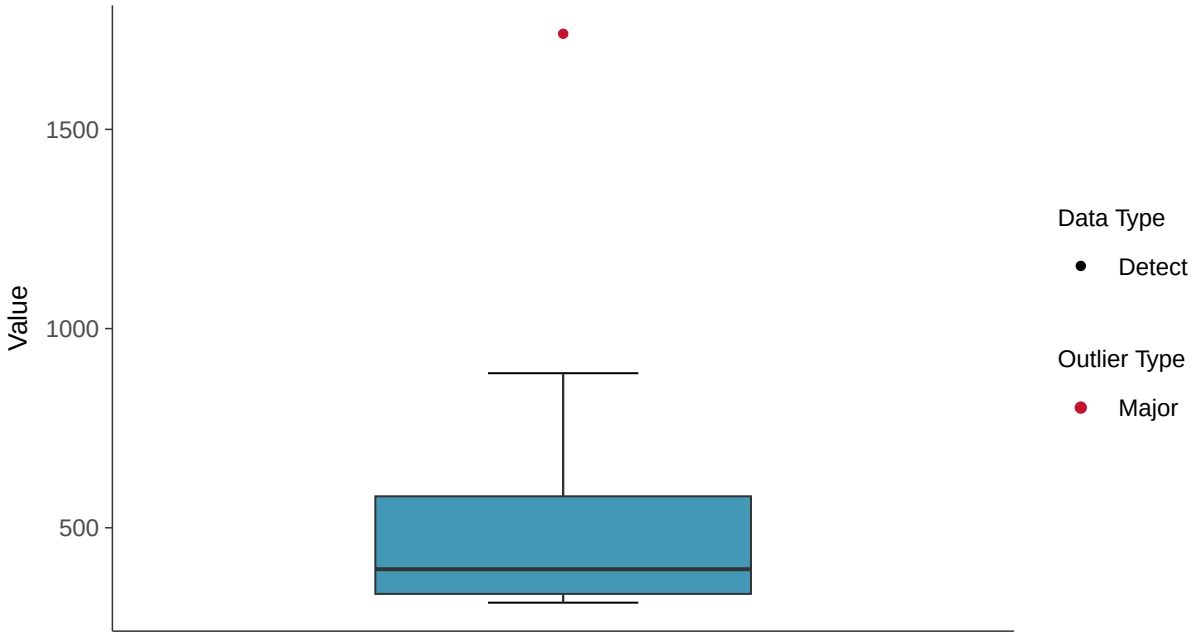
ID: 11_02_125





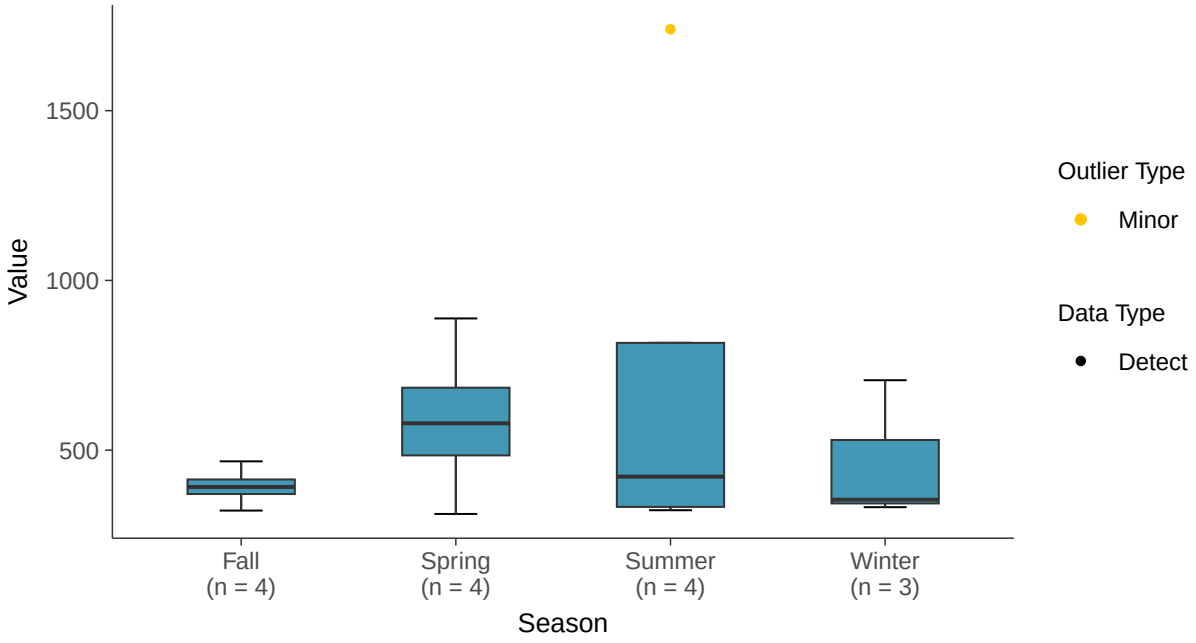
Boxplot

Total Dissolved Solids, MW-11D (mg/L)



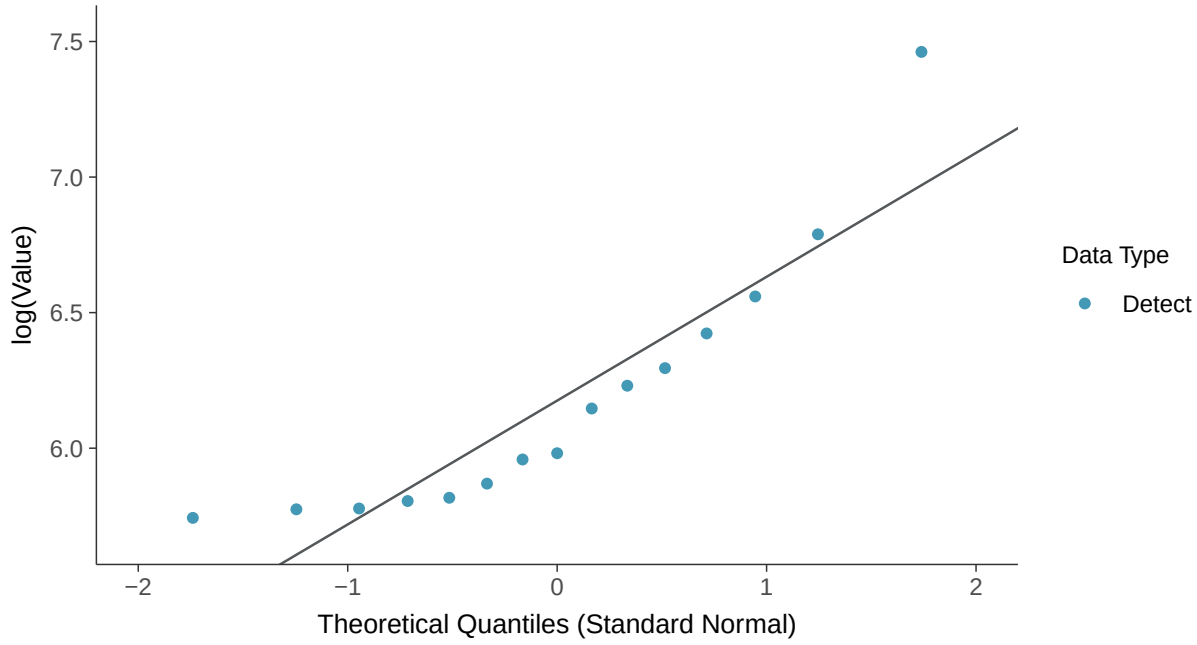
Boxplot by Season

Total Dissolved Solids, MW-11D (mg/L)



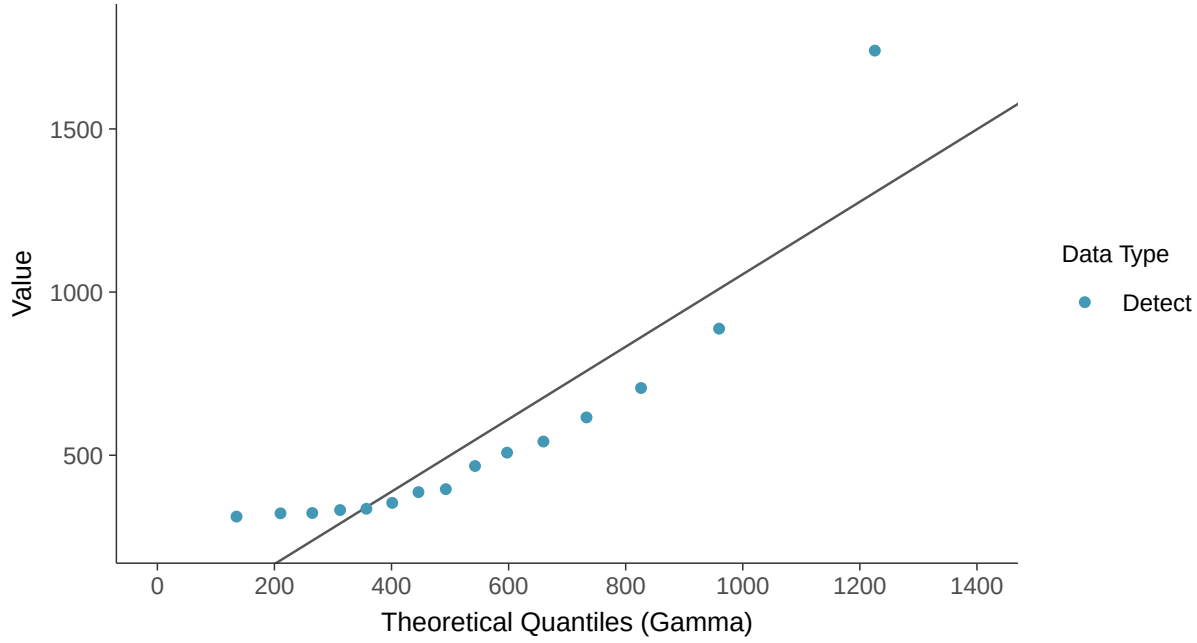
Lognormal Q-Q plot

Total Dissolved Solids, MW-11D (mg/L)



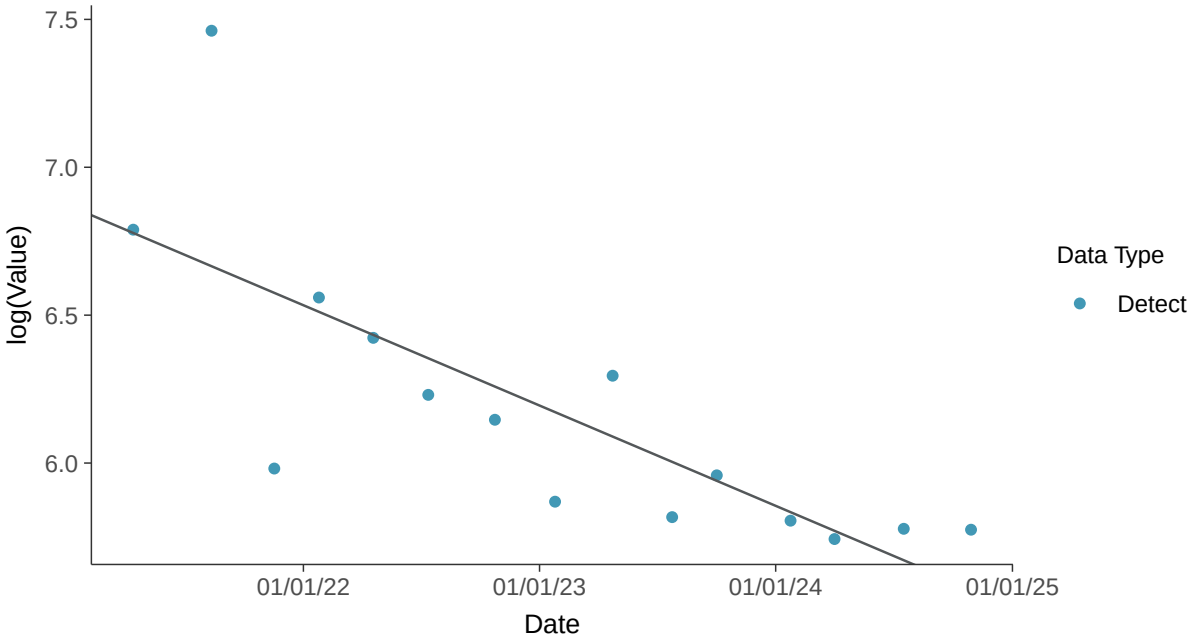
Gamma Q-Q plot

Total Dissolved Solids, MW-11D (mg/L)



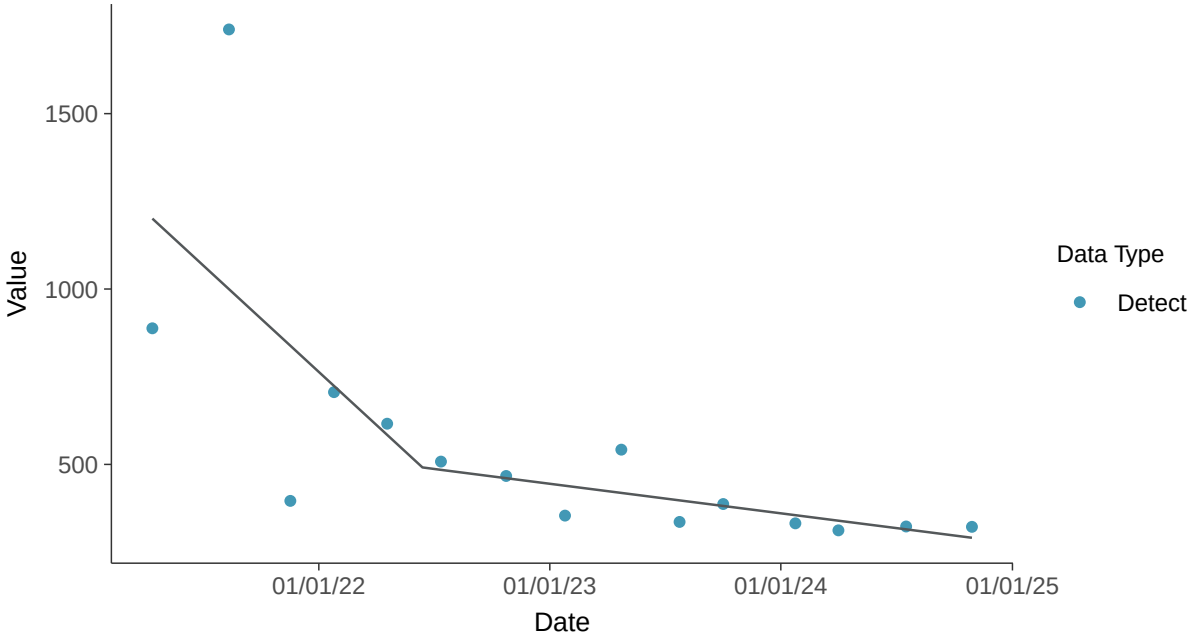
Trend Regression: Lognormal MLE

Total Dissolved Solids, MW-11D (mg/L)



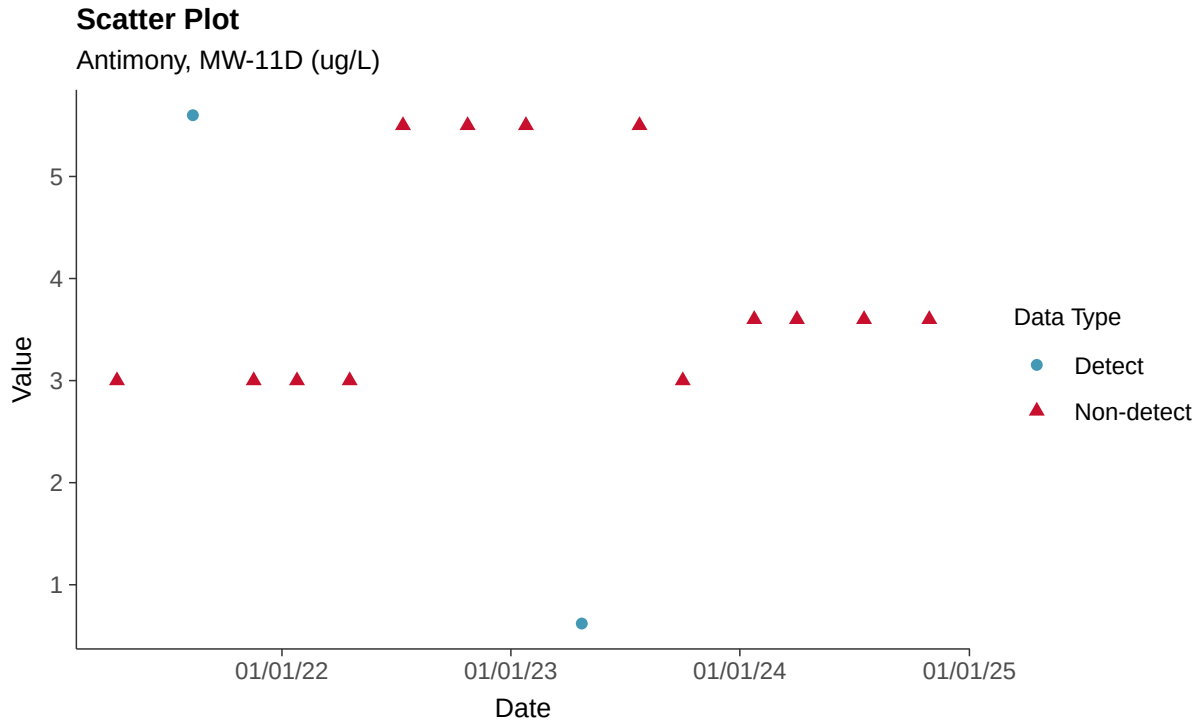
Trend Regression: Piecewise Linear-Linear

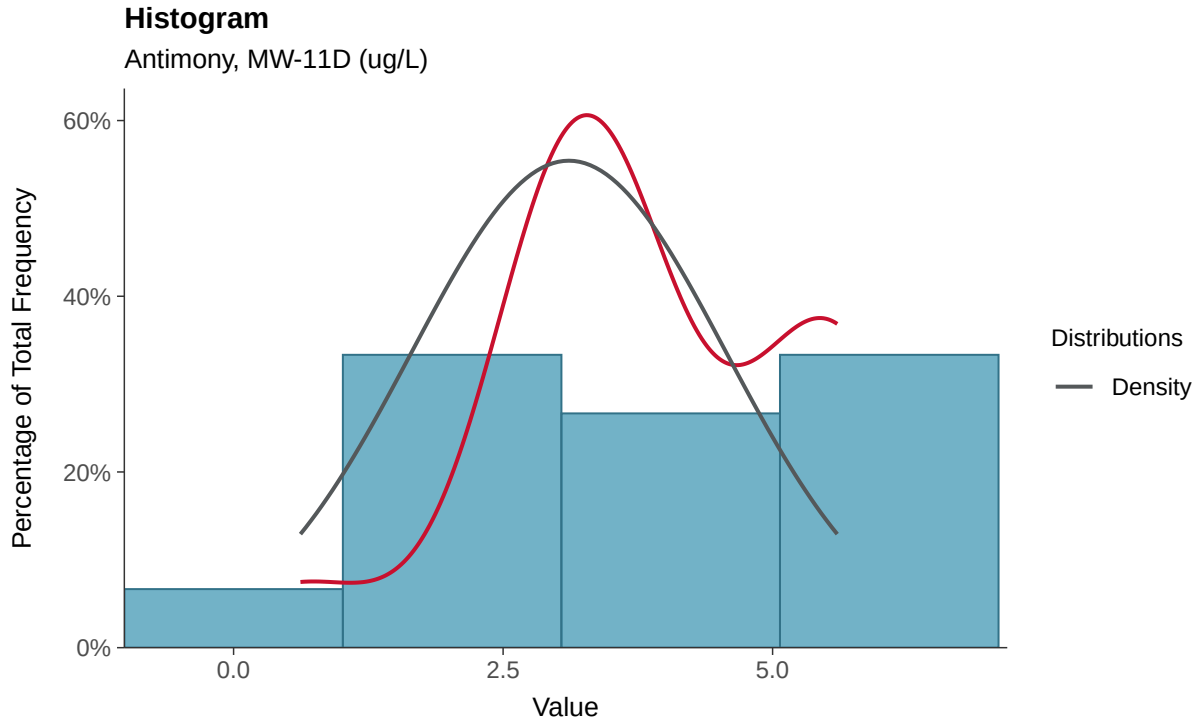
Total Dissolved Solids, MW-11D (mg/L)



App. IV: Antimony, MW-11D

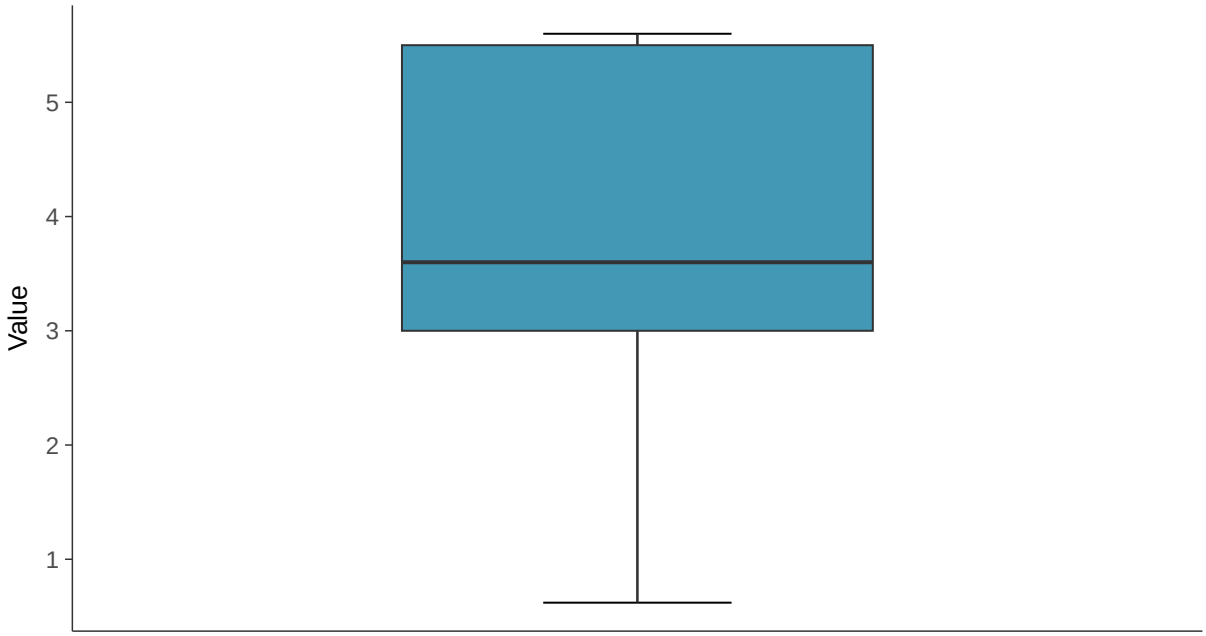
ID: 11_03_101





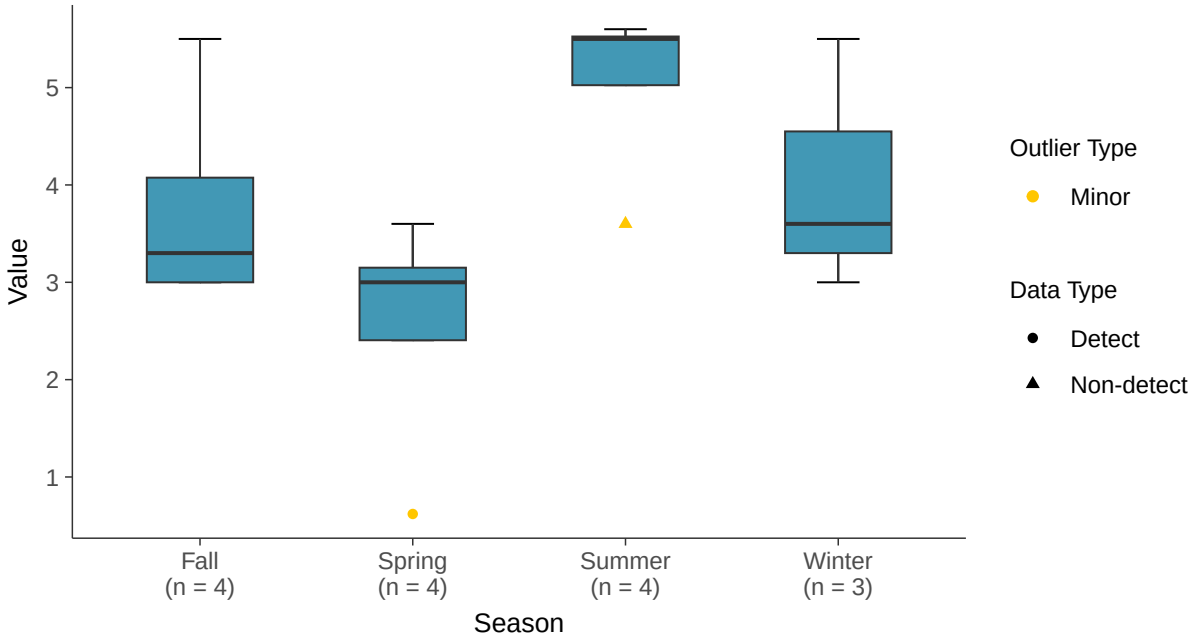
Boxplot

Antimony, MW-11D (ug/L)



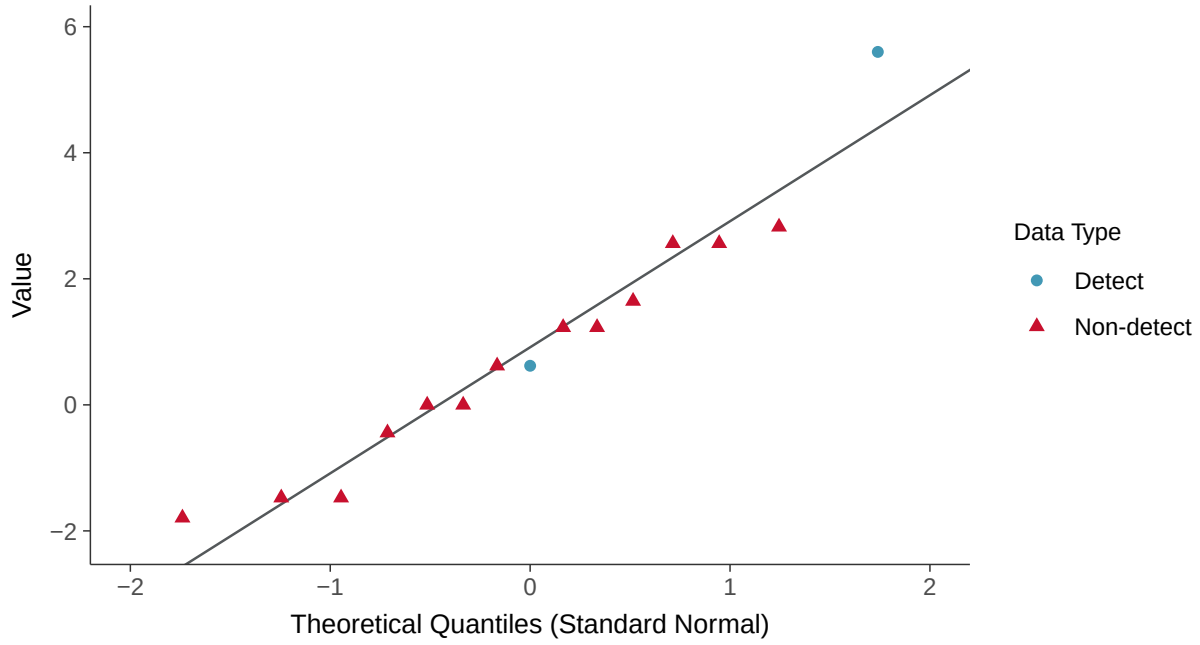
Boxplot by Season

Antimony, MW-11D (ug/L)



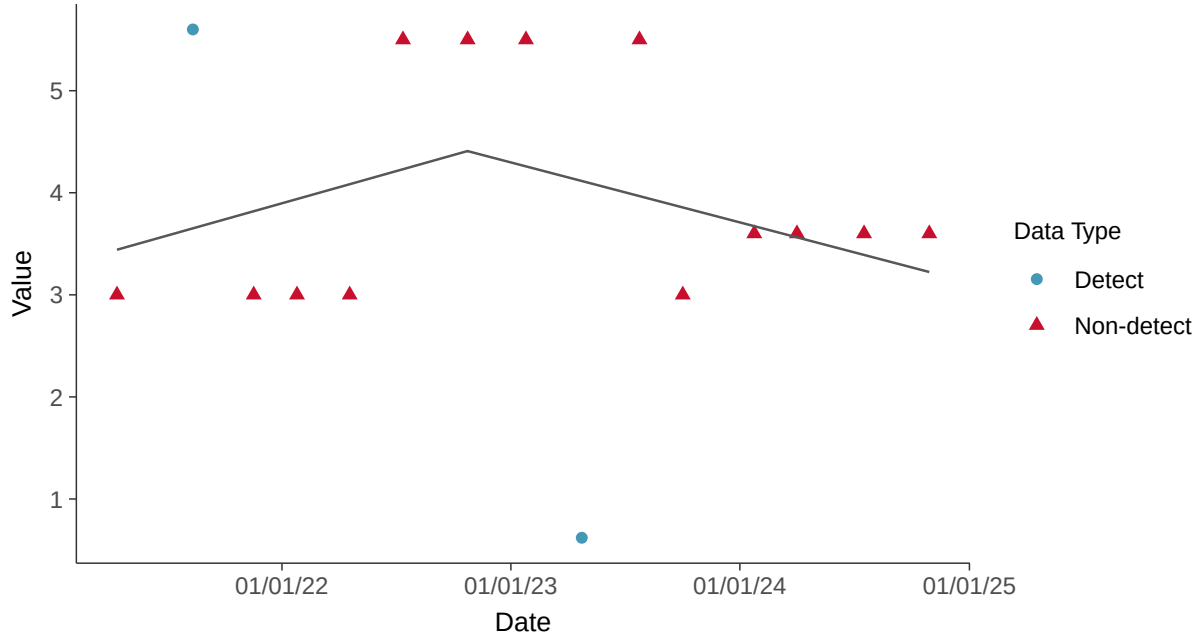
Normal Q-Q plot using ROS Imputed Estimates

Antimony, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Antimony, MW-11D (ug/L)

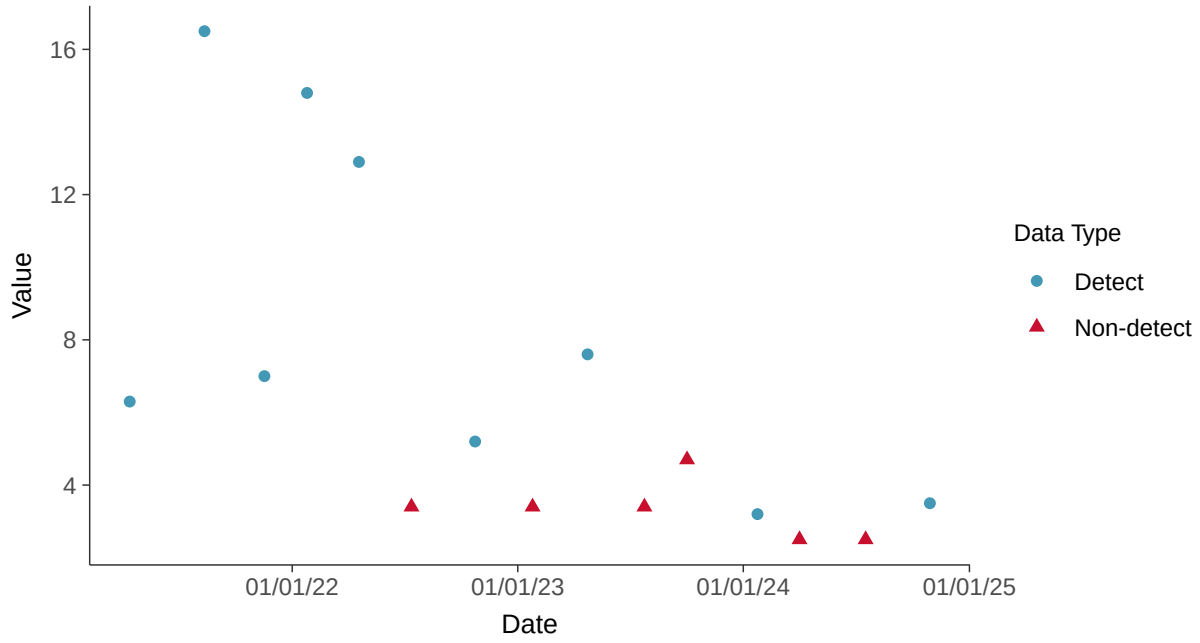


App. IV: Arsenic, MW-11D

ID: 11_03_102

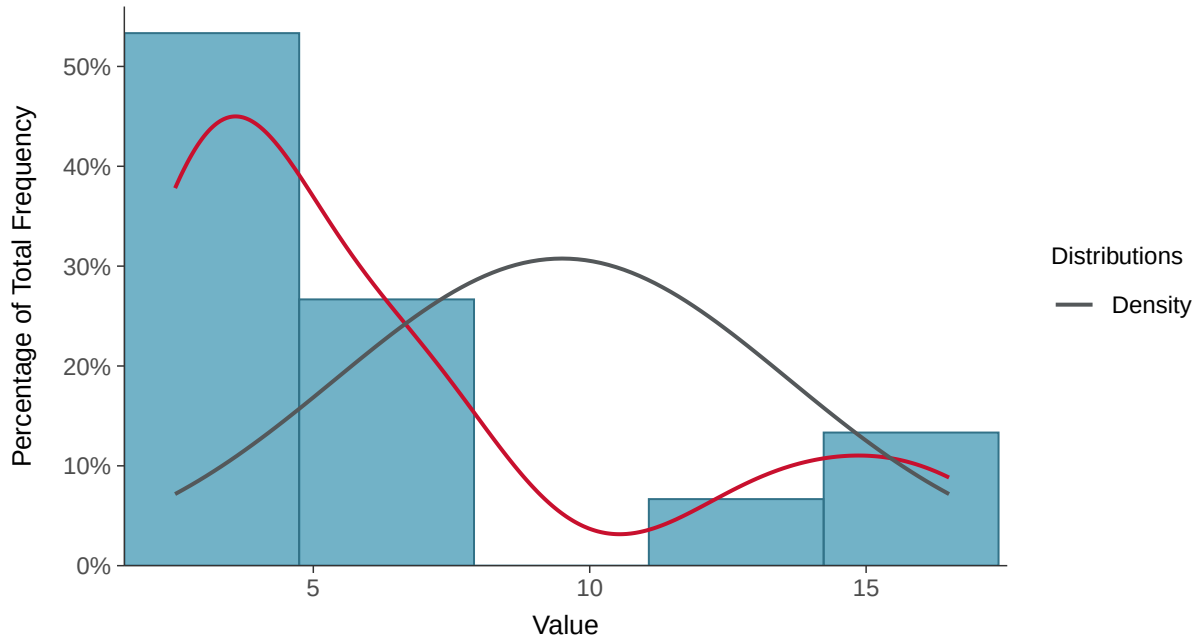
Scatter Plot

Arsenic, MW-11D (ug/L)



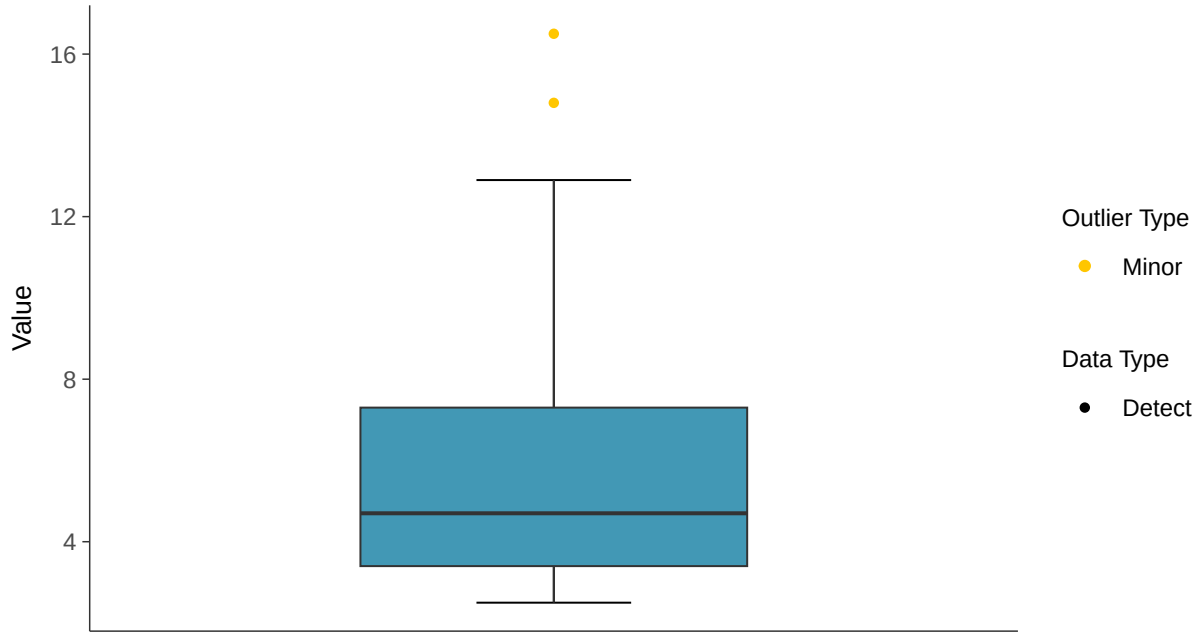
Histogram

Arsenic, MW-11D (ug/L)



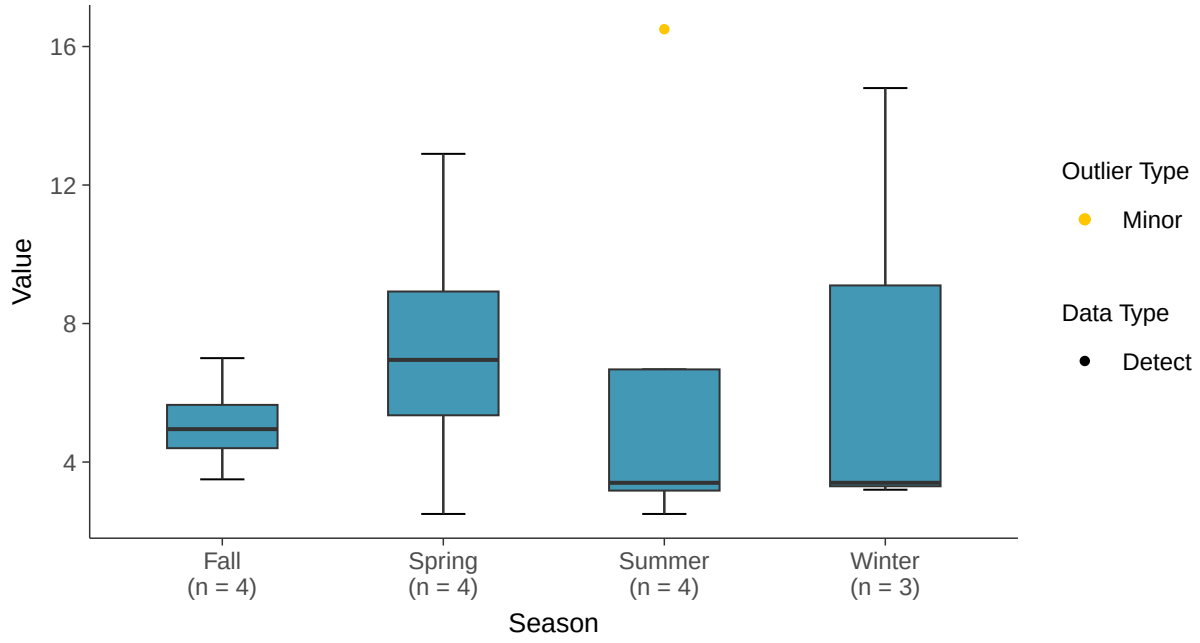
Boxplot

Arsenic, MW-11D (ug/L)



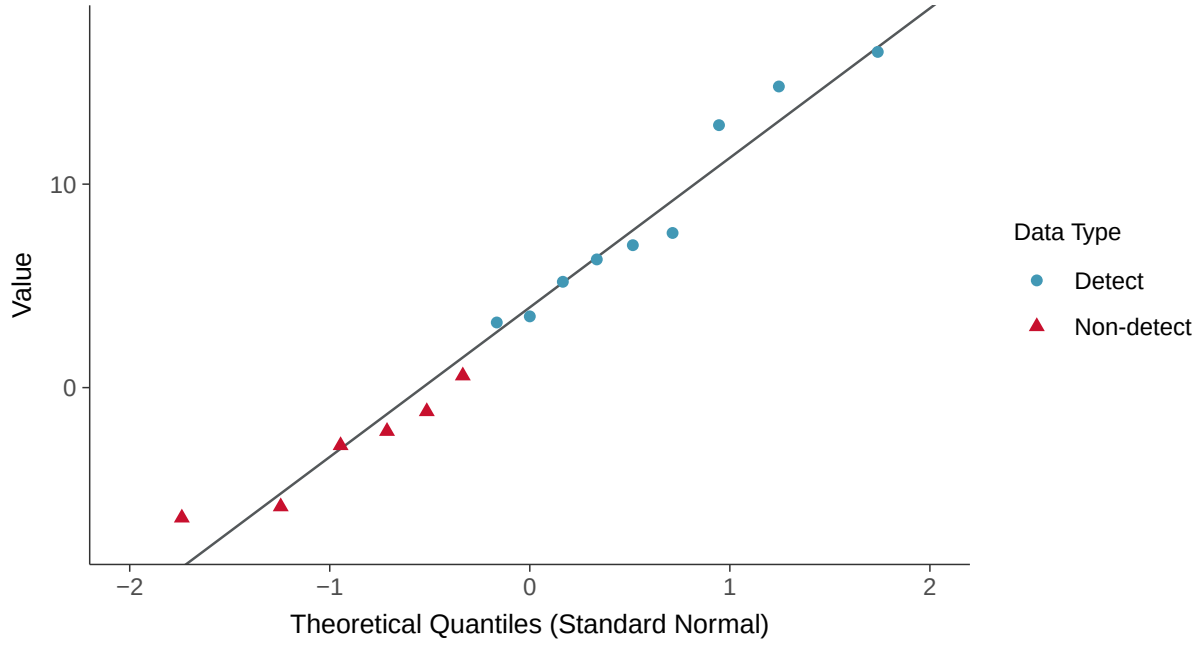
Boxplot by Season

Arsenic, MW-11D (ug/L)



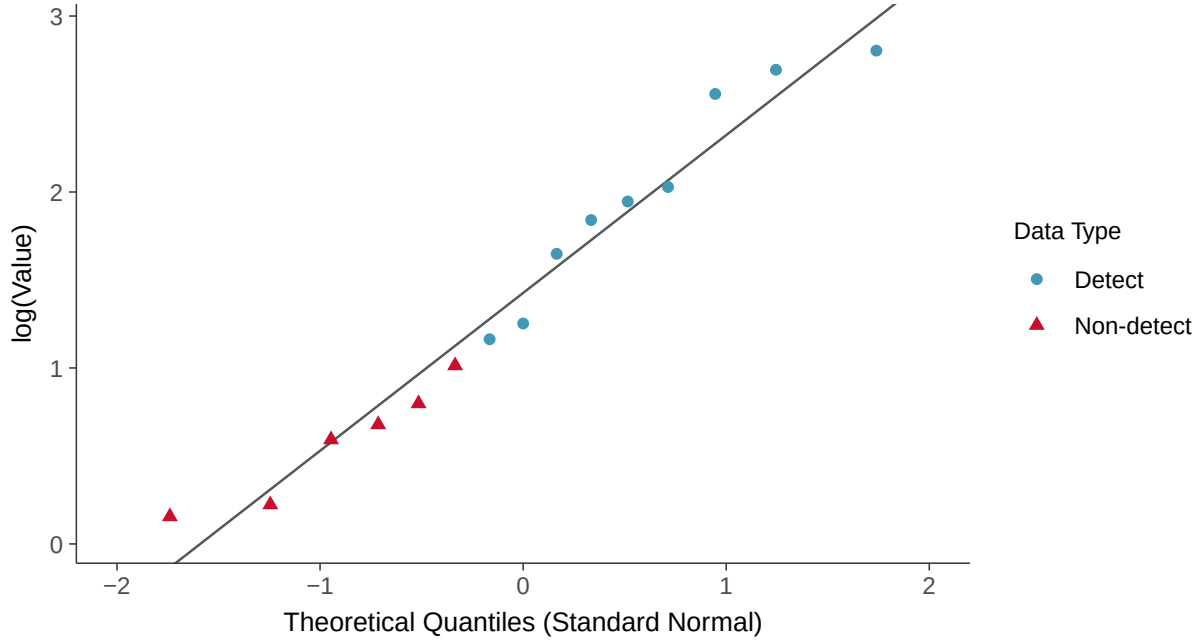
Normal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11D (ug/L)



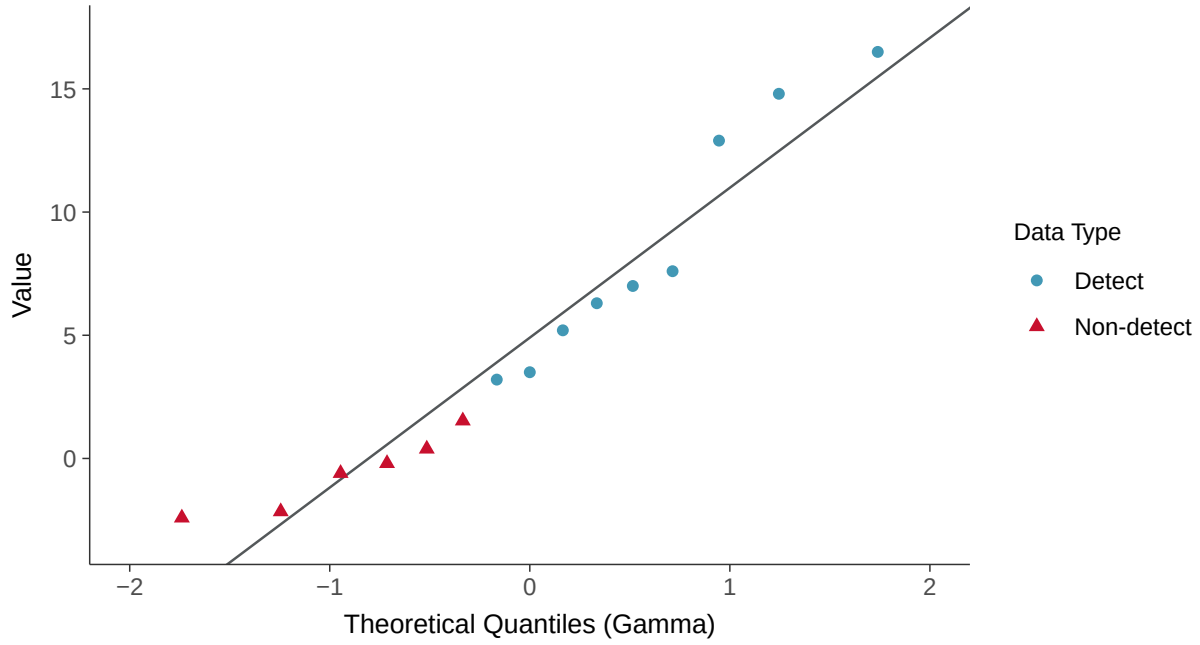
Lognormal Q-Q plot using ROS Imputed Estimates

Arsenic, MW-11D (ug/L)



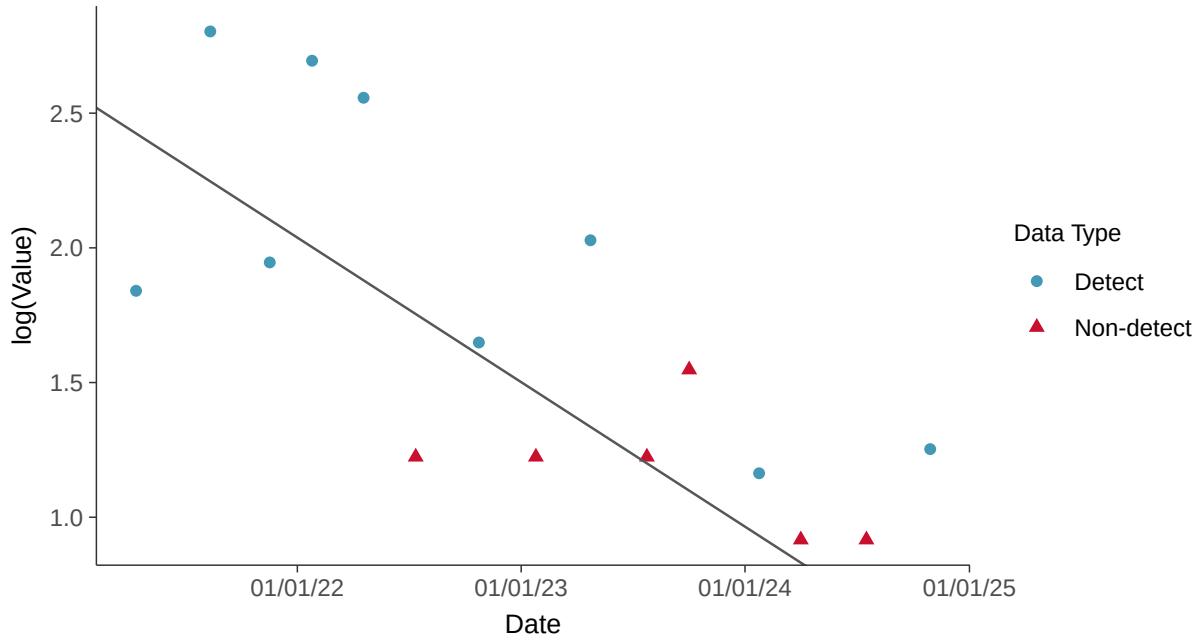
Gamma Q-Q plot using ROS Imputed Estimates

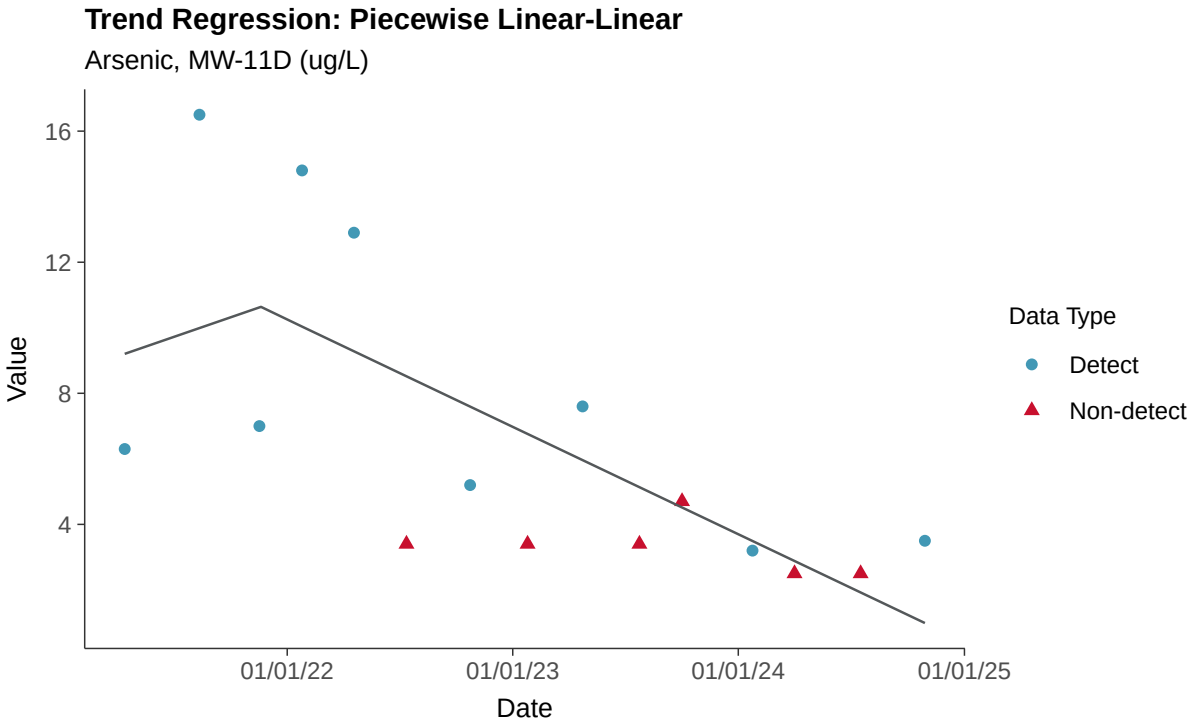
Arsenic, MW-11D (ug/L)



Trend Regression: Lognormal MLE

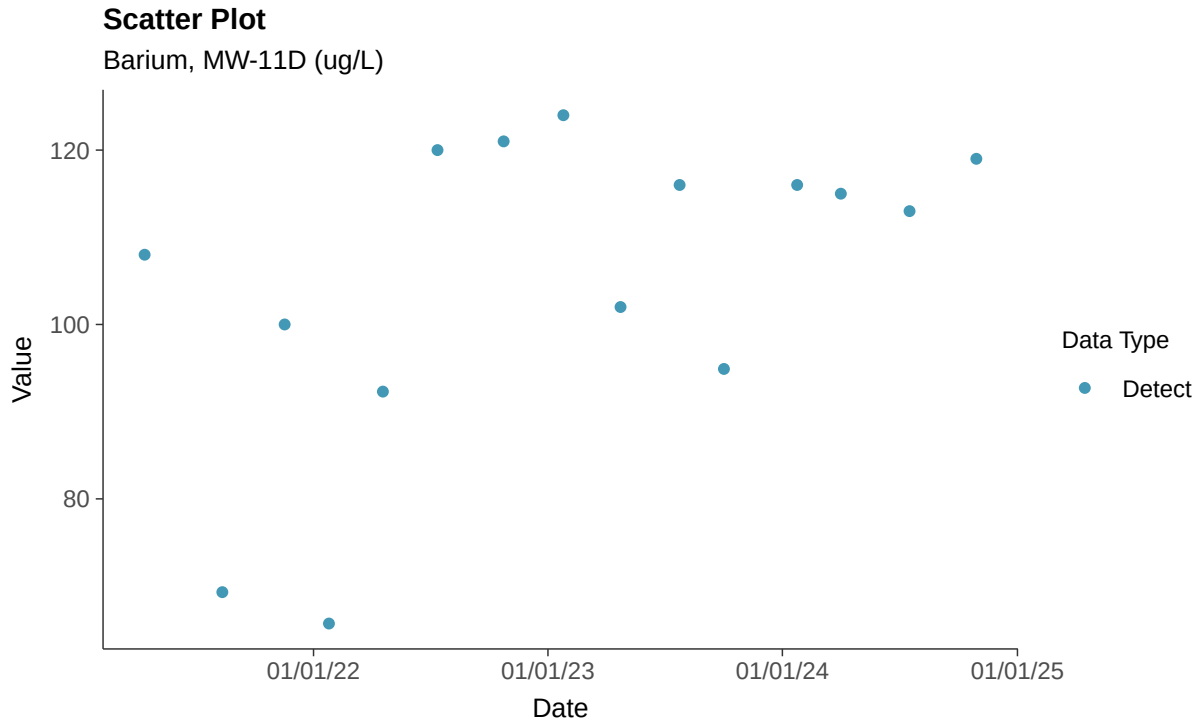
Arsenic, MW-11D (ug/L)

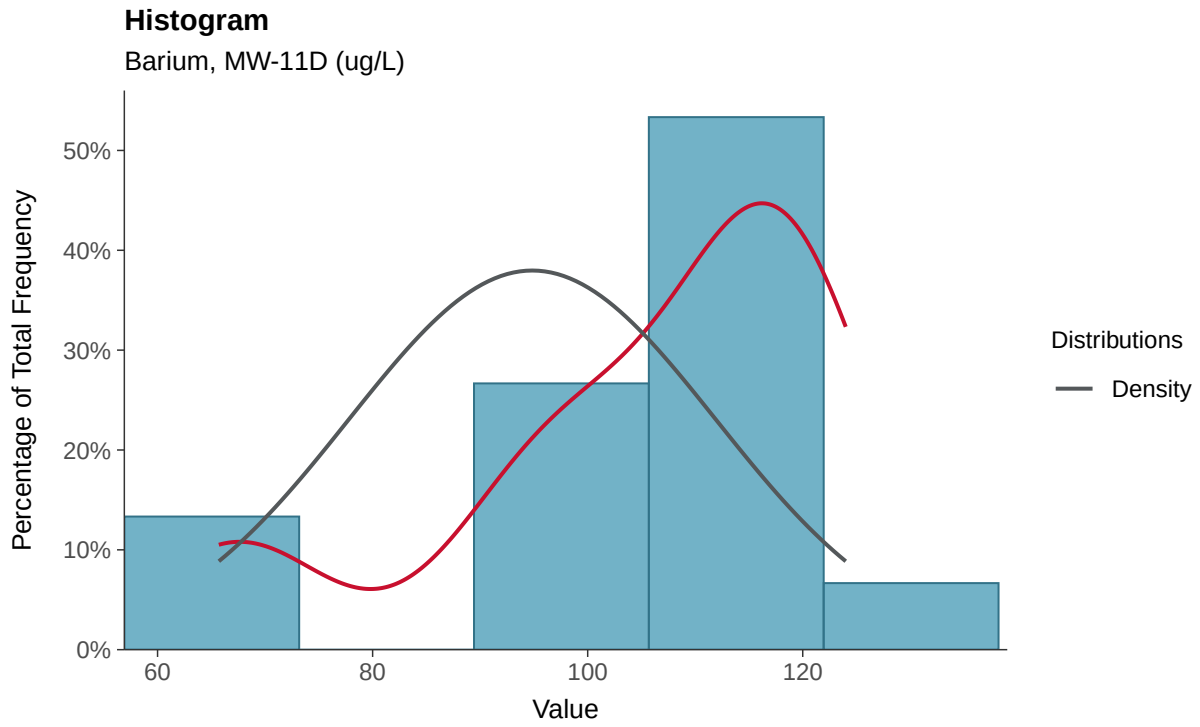



Trend Regression: Piecewise Linear-Linear
Arsenic, MW-11D (ug/L)
Value
16
12
8
4
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Detect
Non-detect

App. IV: Barium, MW-11D

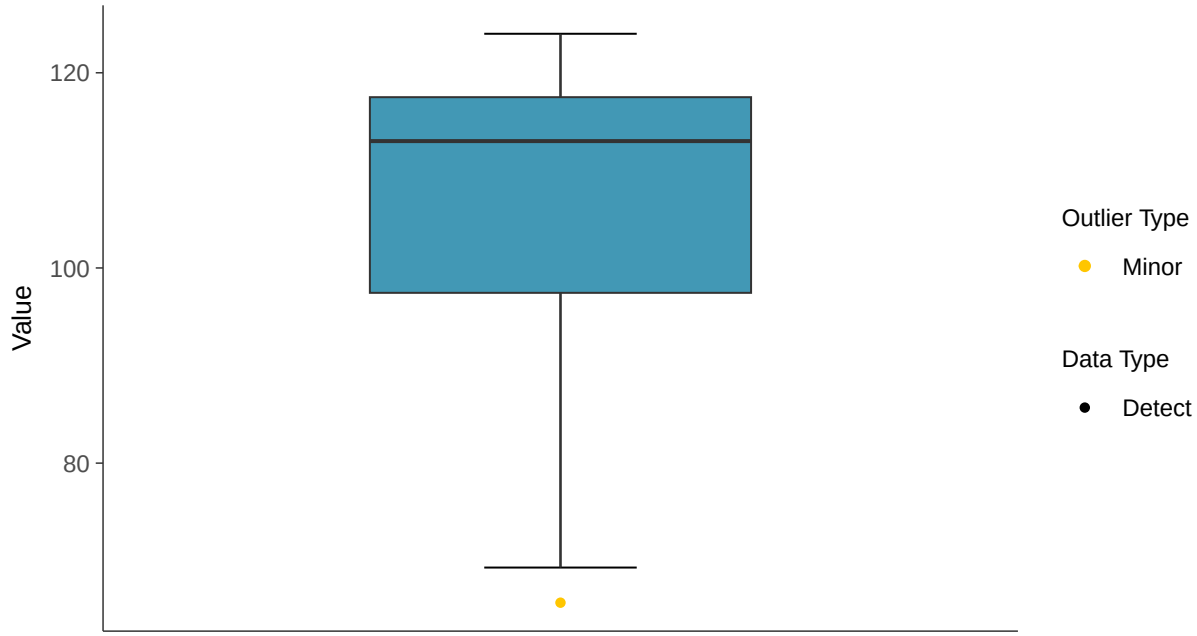
ID: 11_03_103





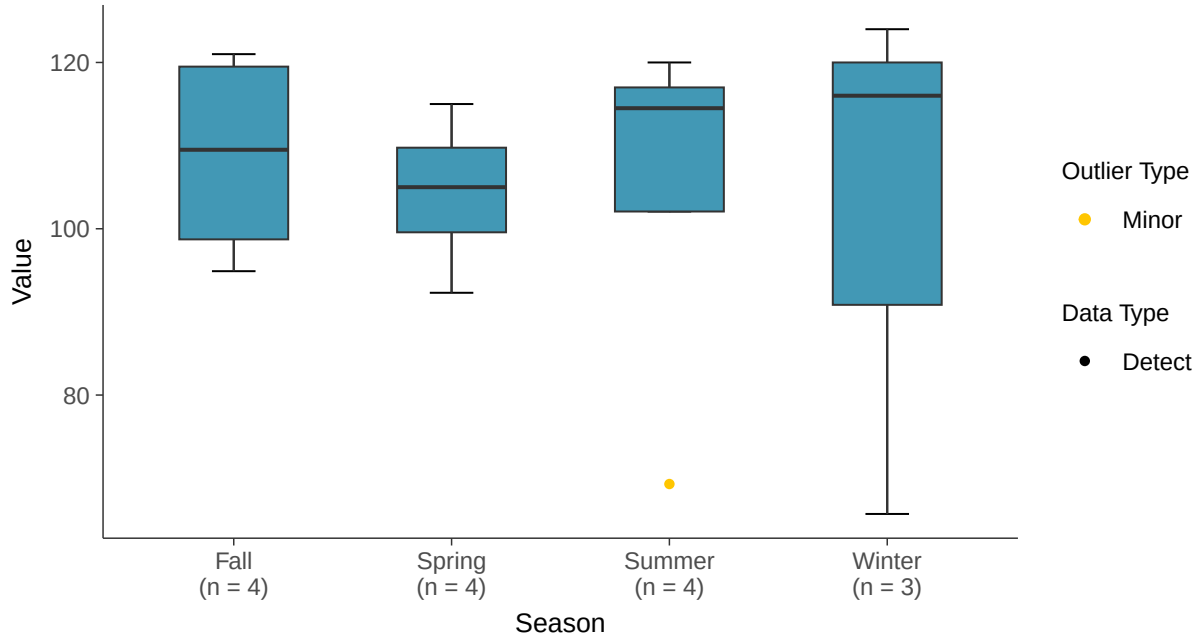
Boxplot

Barium, MW-11D (ug/L)



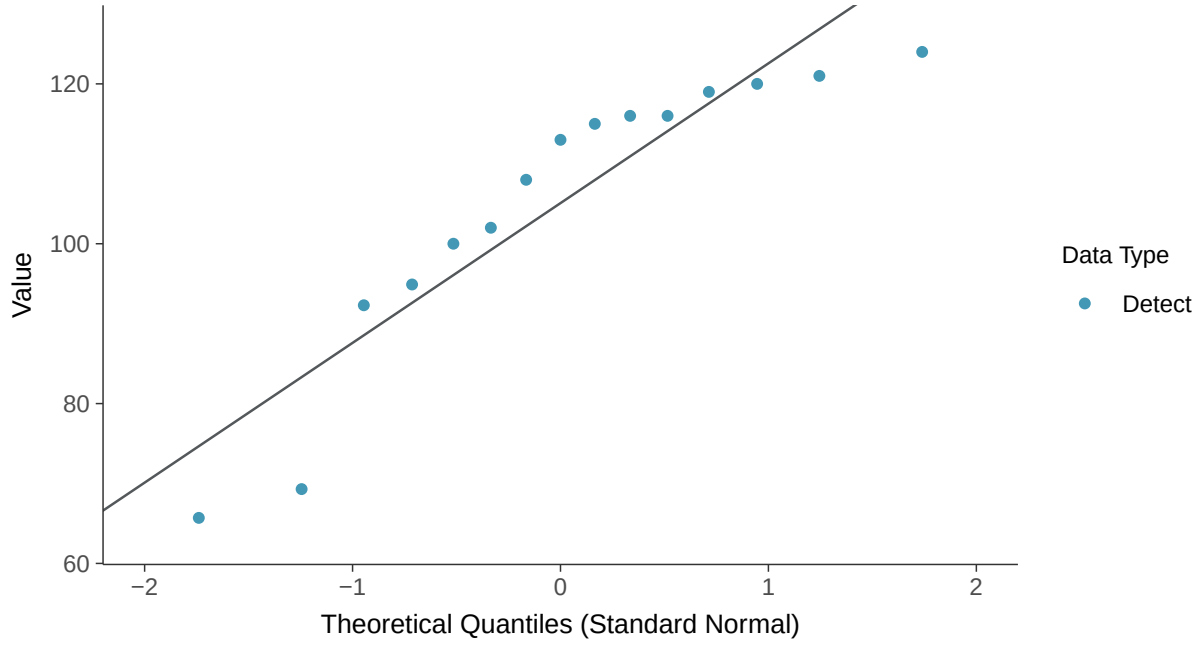
Boxplot by Season

Barium, MW-11D (ug/L)



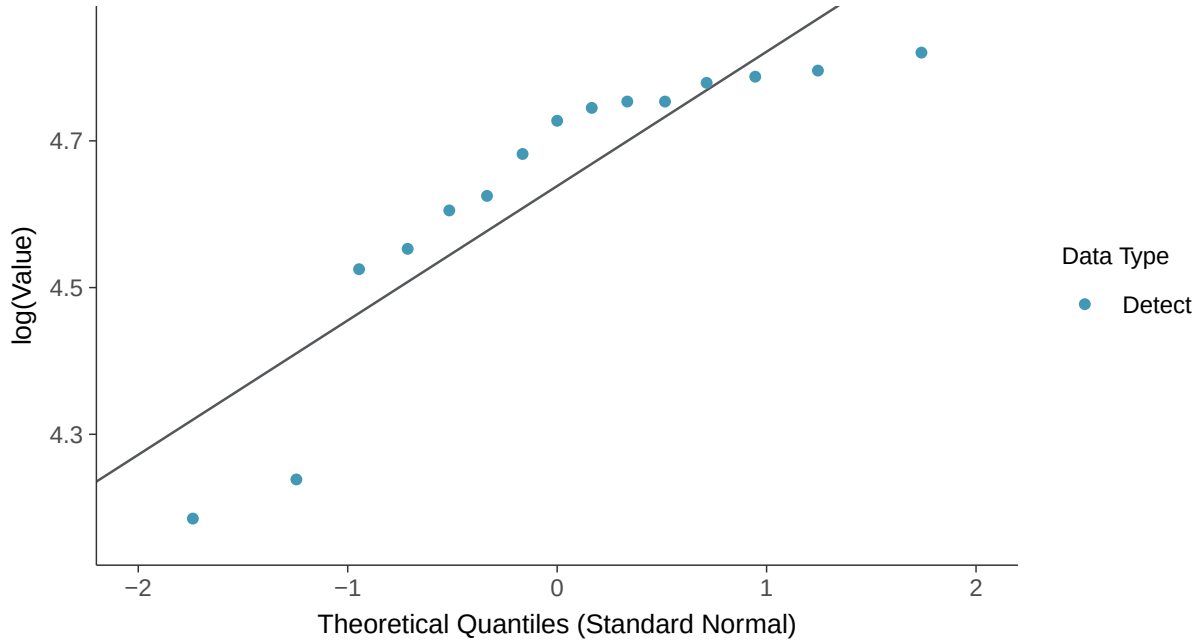
Normal Q-Q plot

Barium, MW-11D (ug/L)



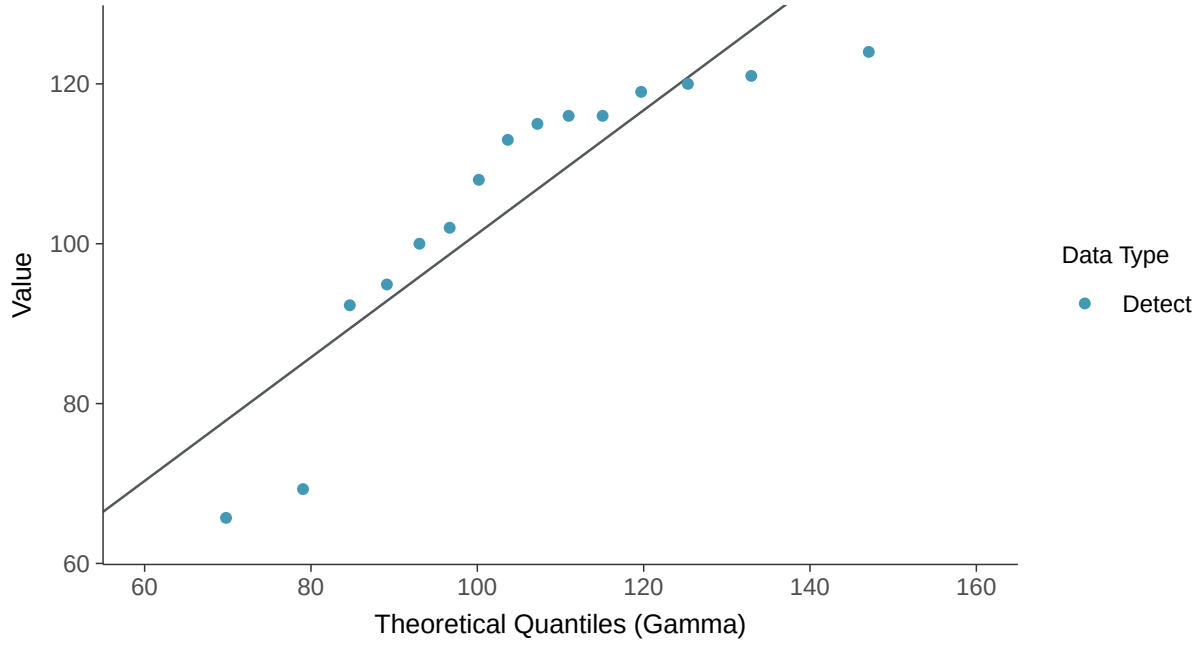
Lognormal Q-Q plot

Barium, MW-11D (ug/L)



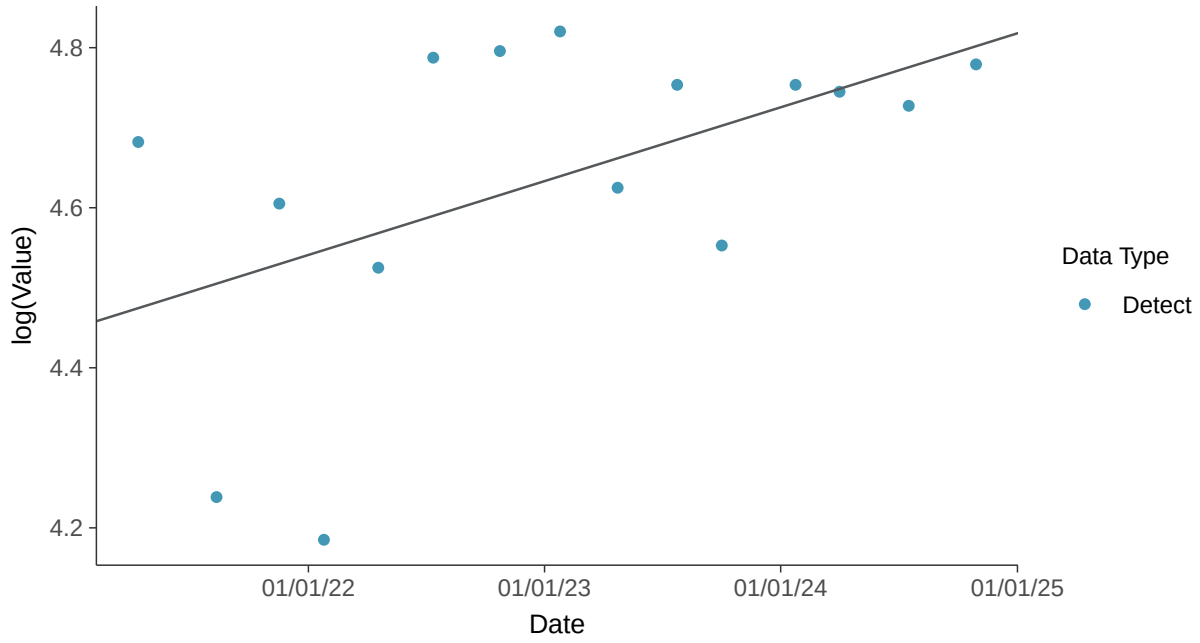
Gamma Q-Q plot

Barium, MW-11D (ug/L)



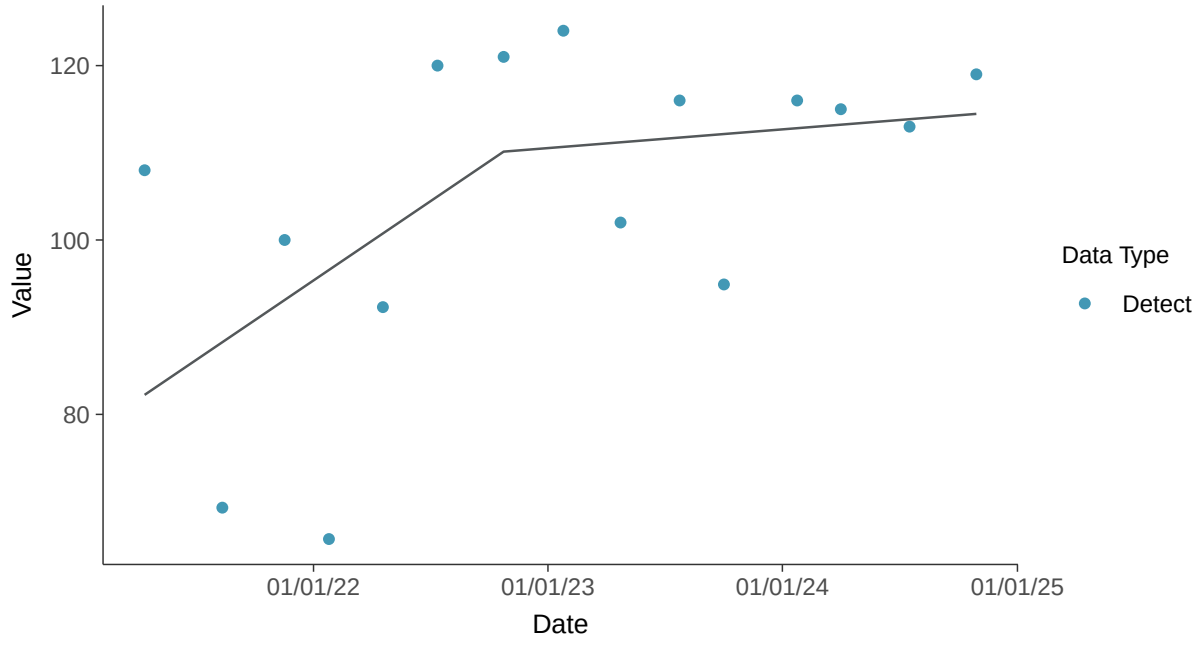
Trend Regression: Lognormal MLE

Barium, MW-11D (ug/L)



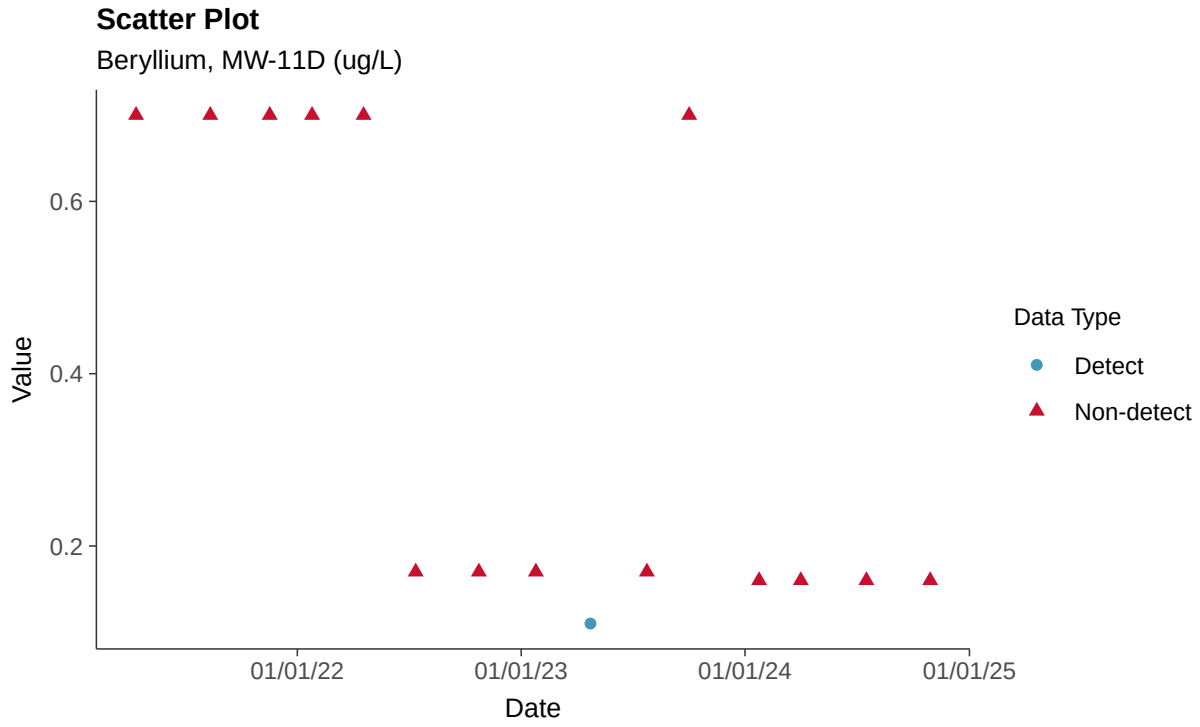
Trend Regression: Piecewise Linear-Linear

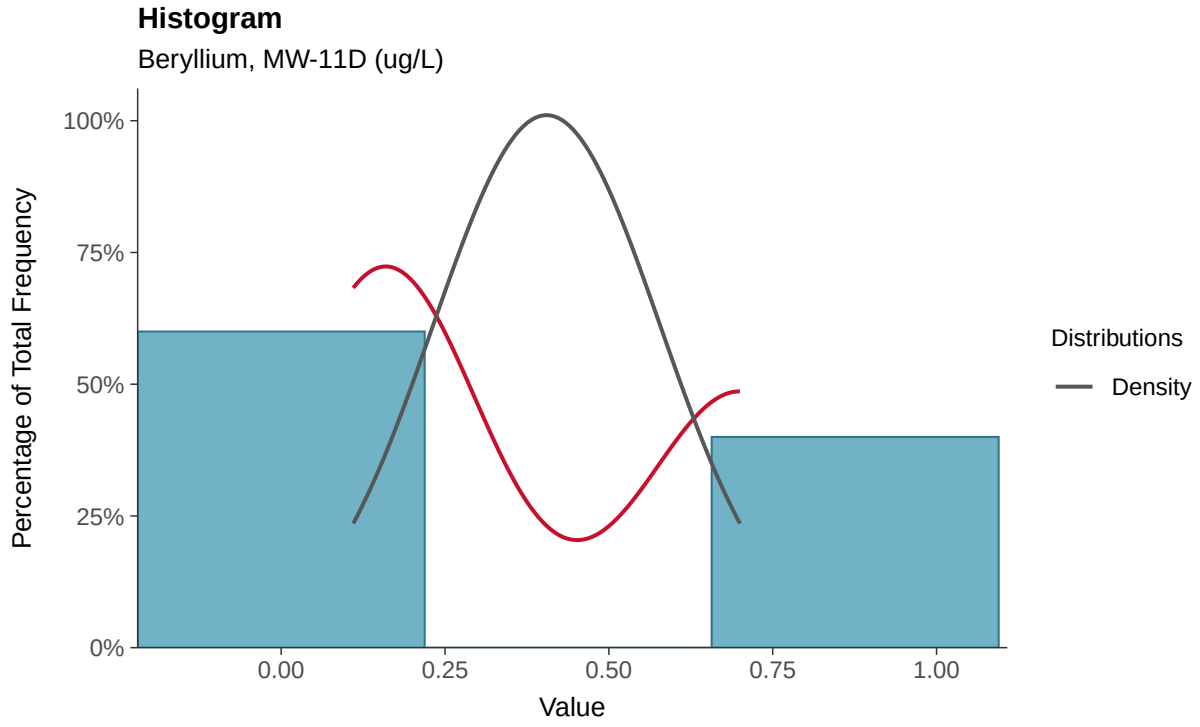
Barium, MW-11D (ug/L)



App. IV: Beryllium, MW-11D

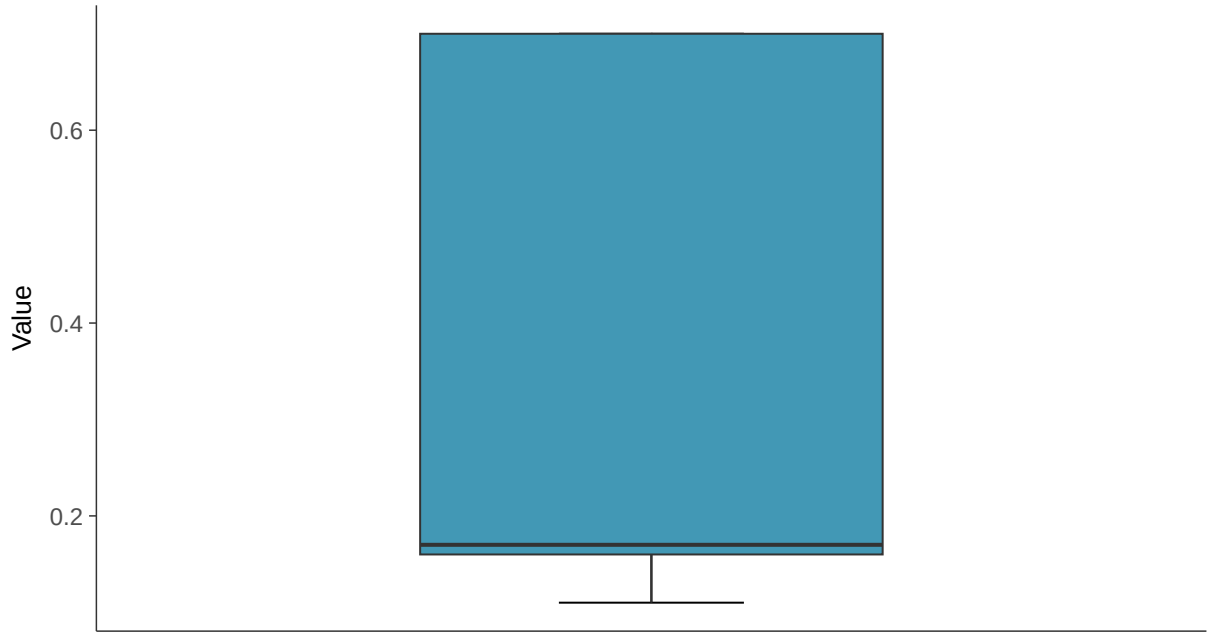
ID: 11_03_104





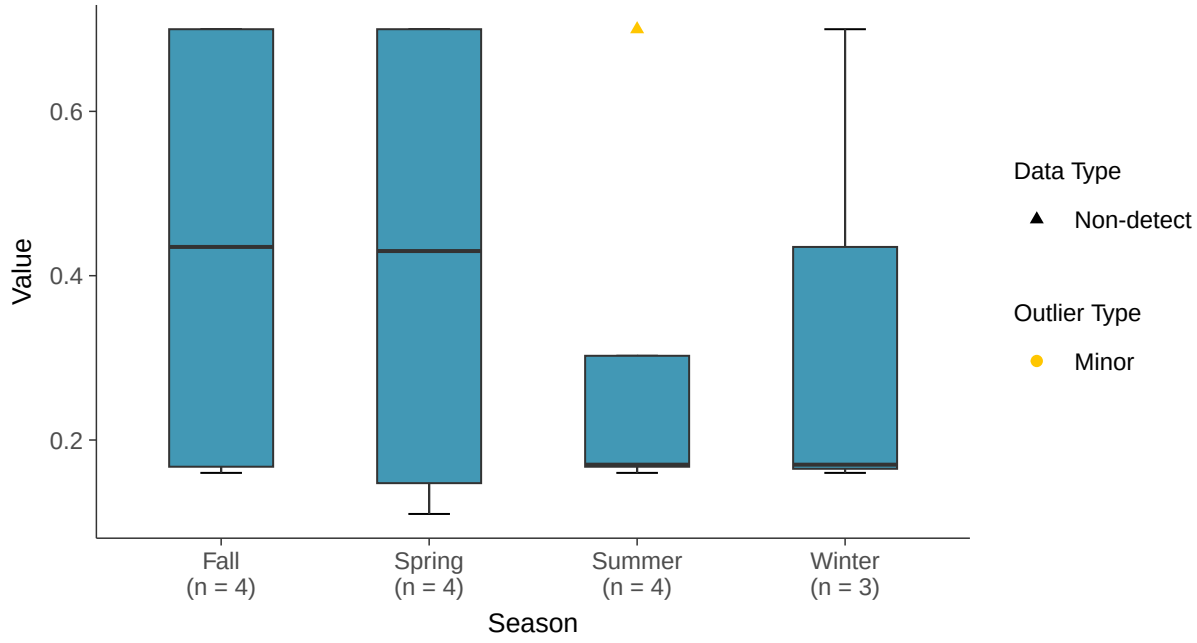
Boxplot

Beryllium, MW-11D (ug/L)



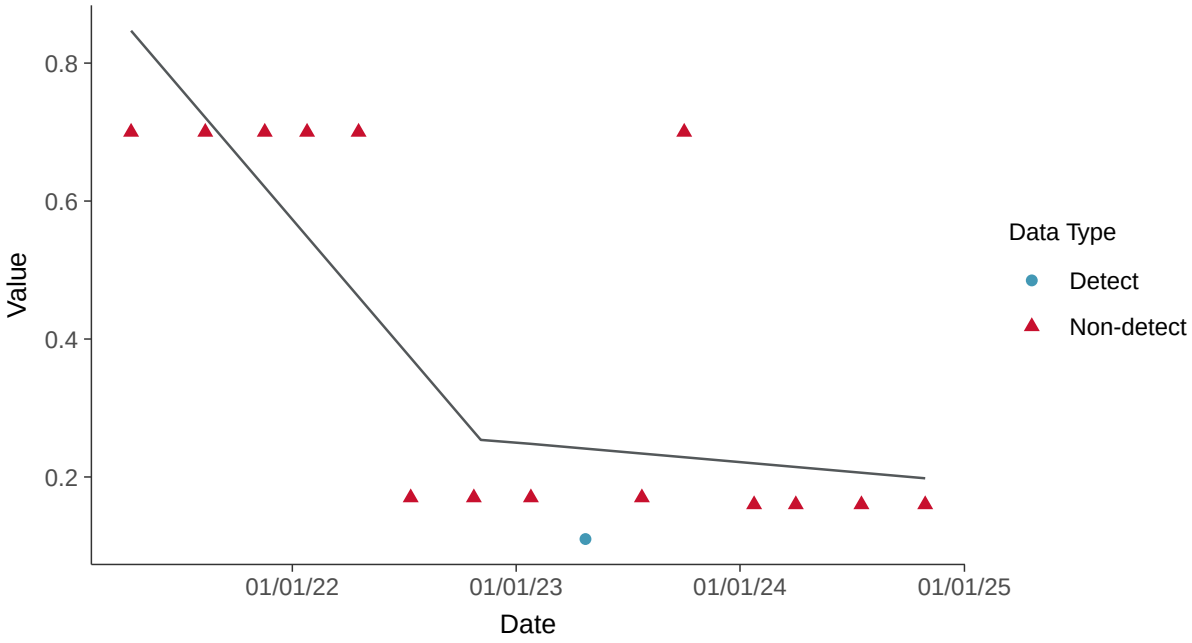
Boxplot by Season

Beryllium, MW-11D (ug/L)



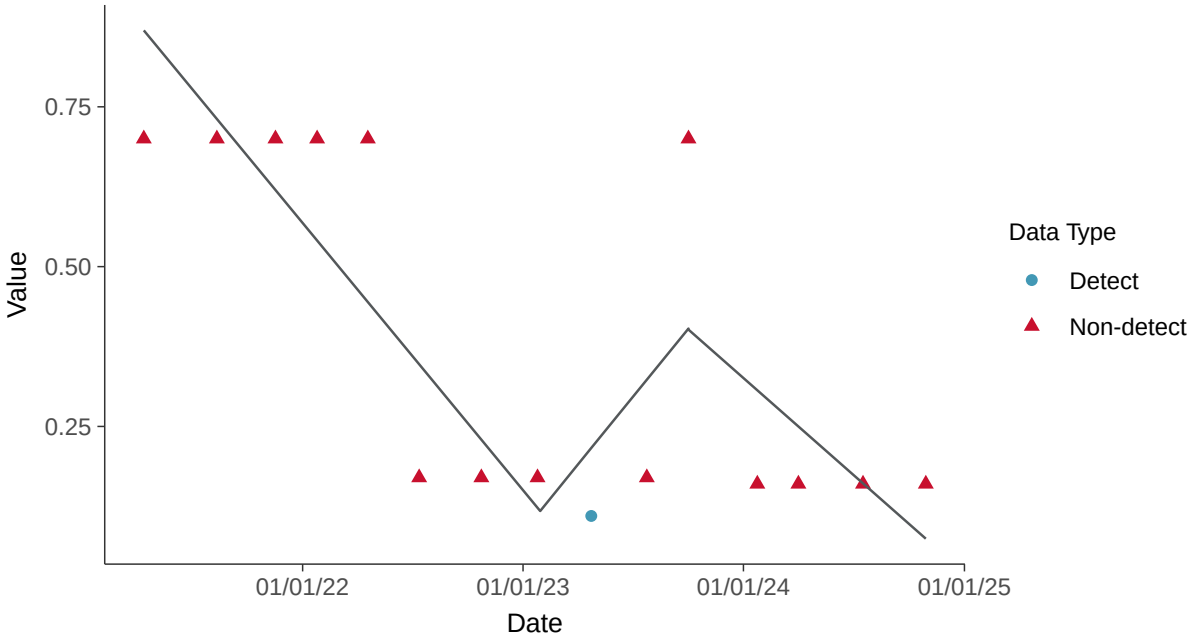
Trend Regression: Piecewise Linear-Linear

Beryllium, MW-11D (ug/L)



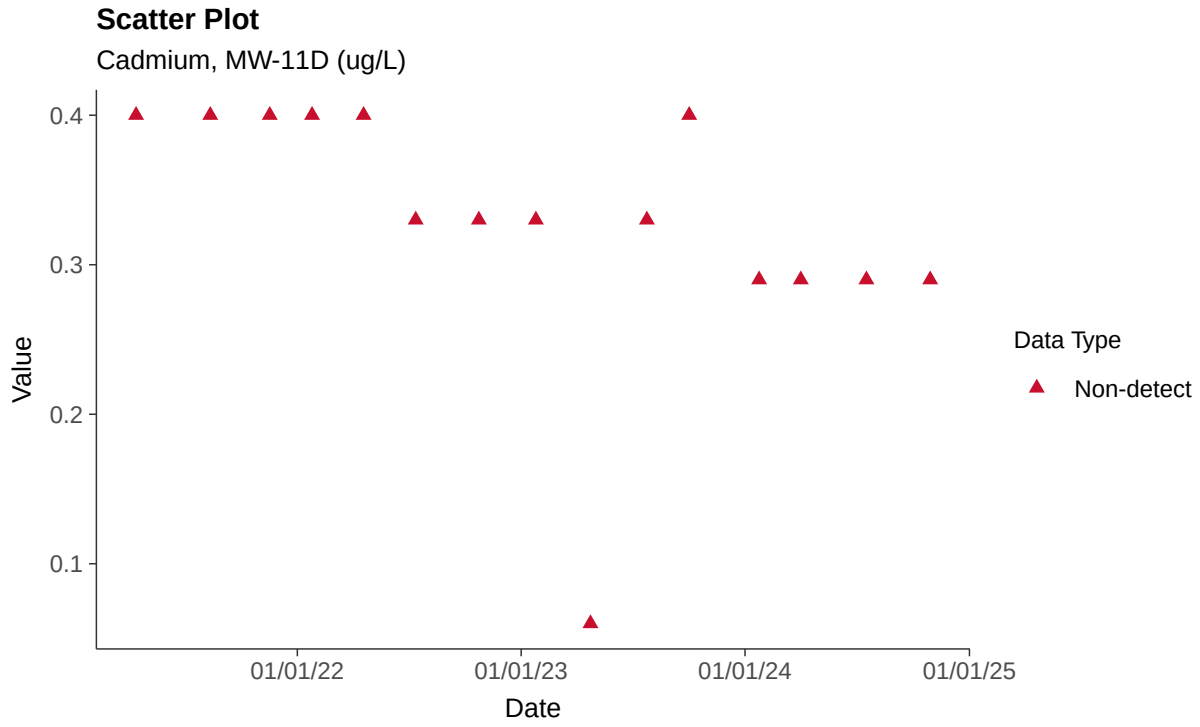
Trend Regression: Piecewise Linear-Linear-Linear

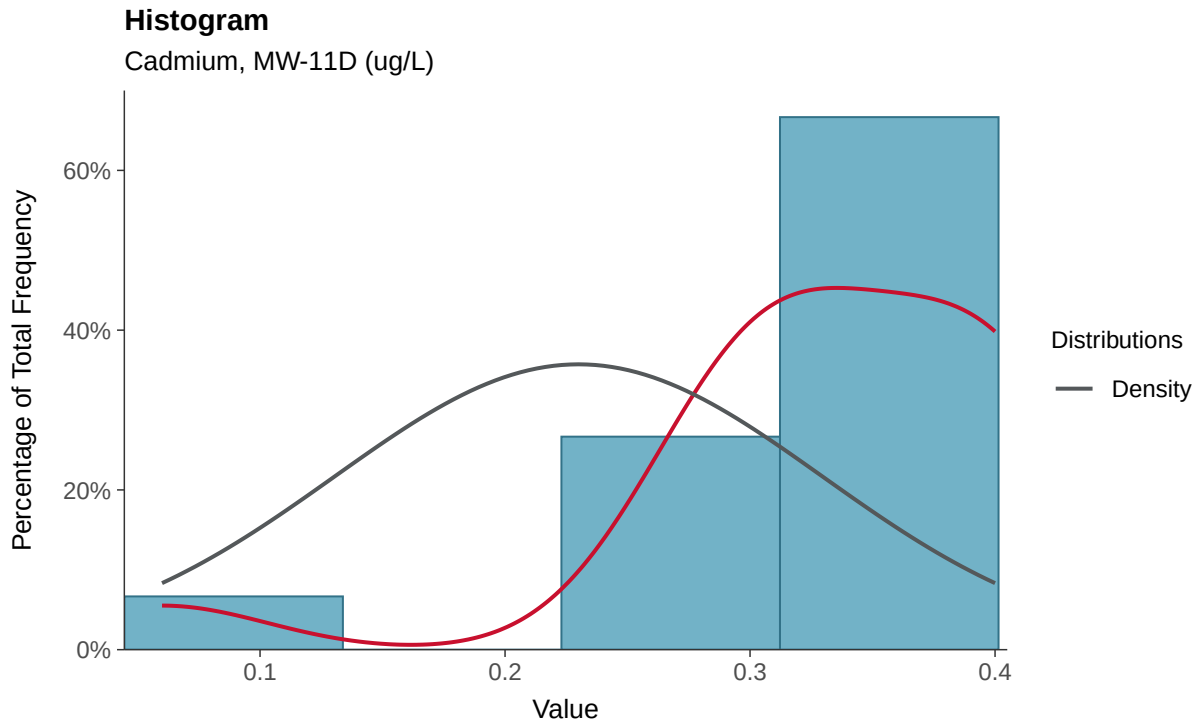
Beryllium, MW-11D (ug/L)



App. IV: Cadmium, MW-11D

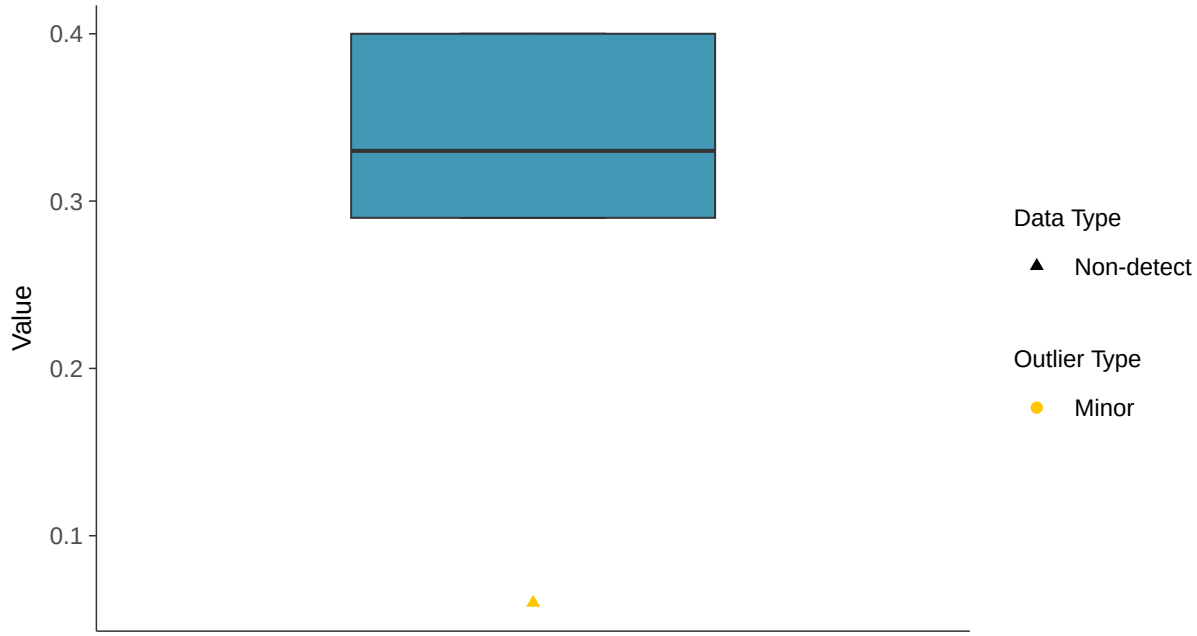
ID: 11_03_106





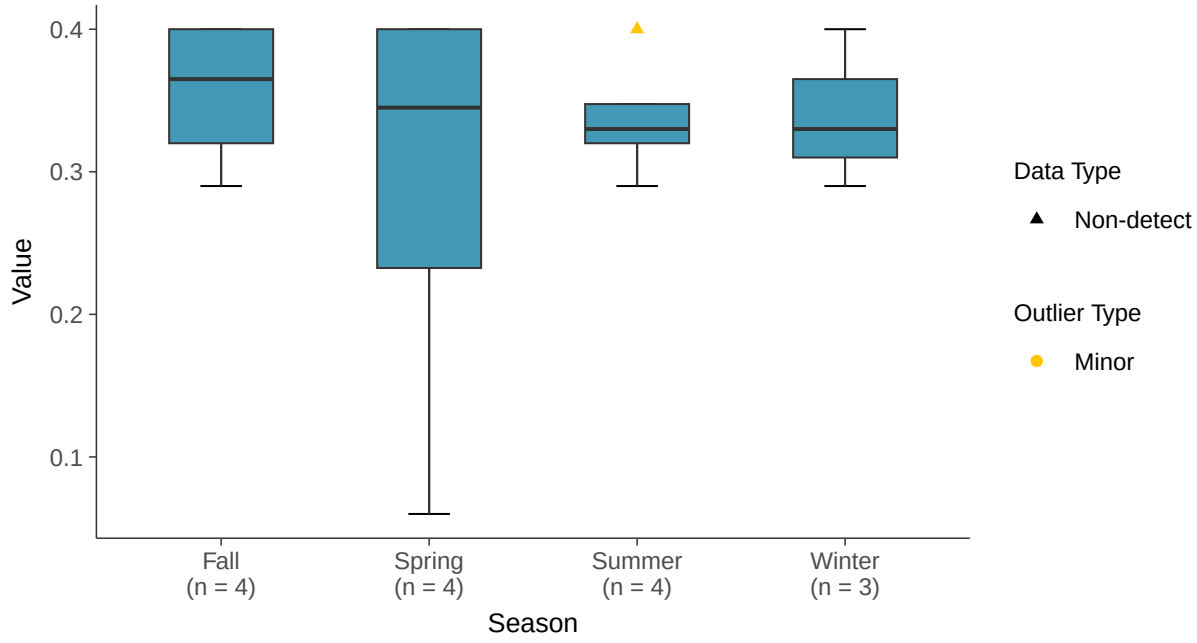
Boxplot

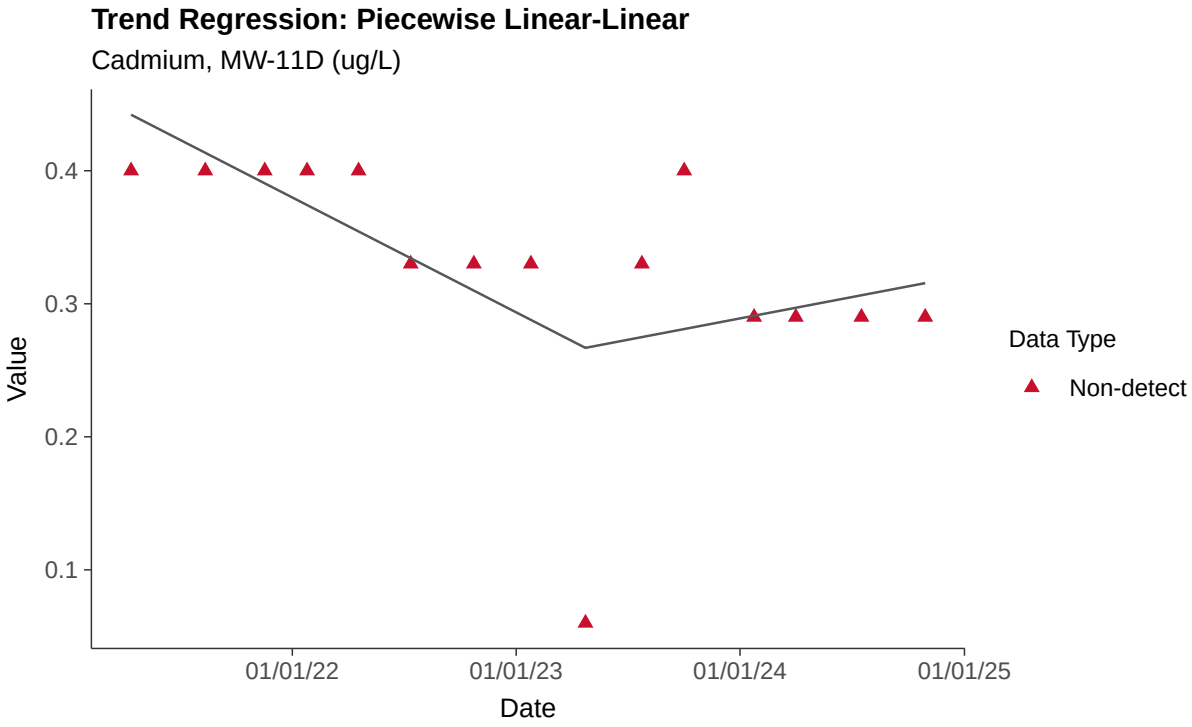
Cadmium, MW-11D (ug/L)



Boxplot by Season

Cadmium, MW-11D (ug/L)



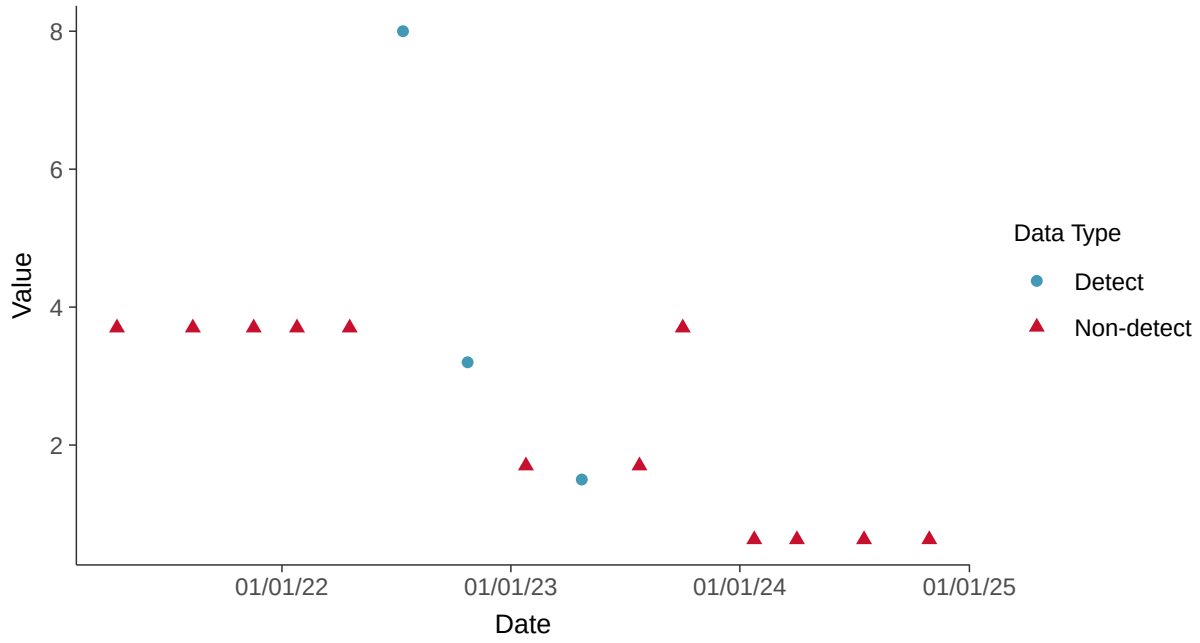

Trend Regression: Piecewise Linear-Linear
Cadmium, MW-11D (ug/L)
Value
0.4
0.3
0.2
0.1
01/01/22
01/01/23
01/01/24
01/01/25
Date
Data Type
Non-detect

App. IV: Chromium, MW-11D

ID: 11_03_109

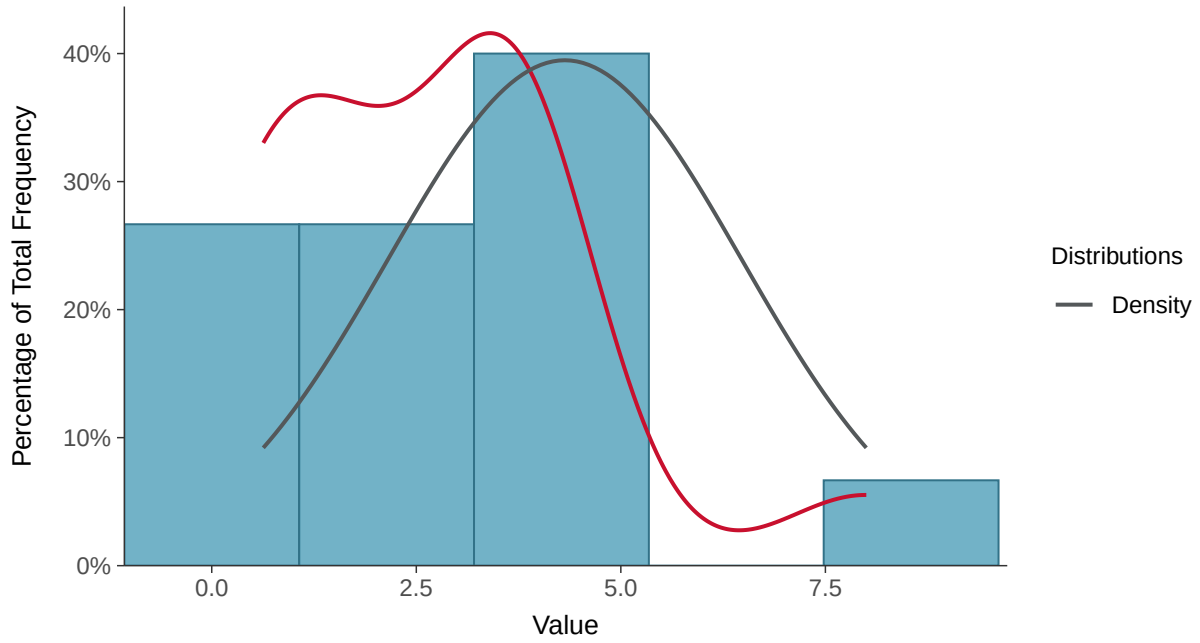
Scatter Plot

Chromium, MW-11D (ug/L)



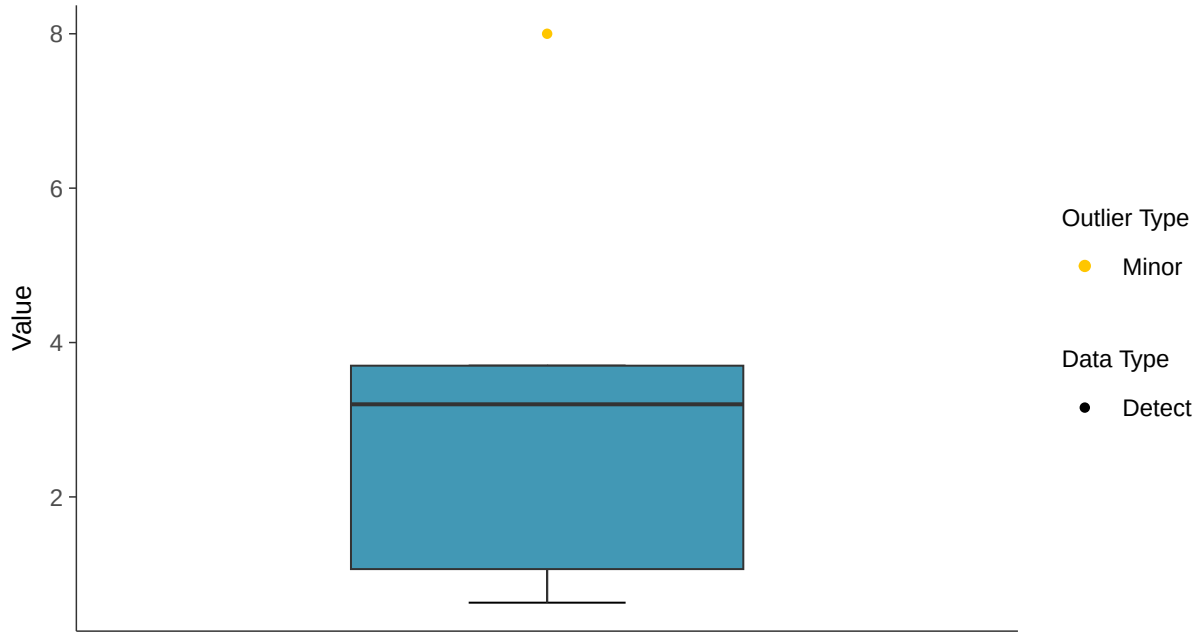
Histogram

Chromium, MW-11D (ug/L)



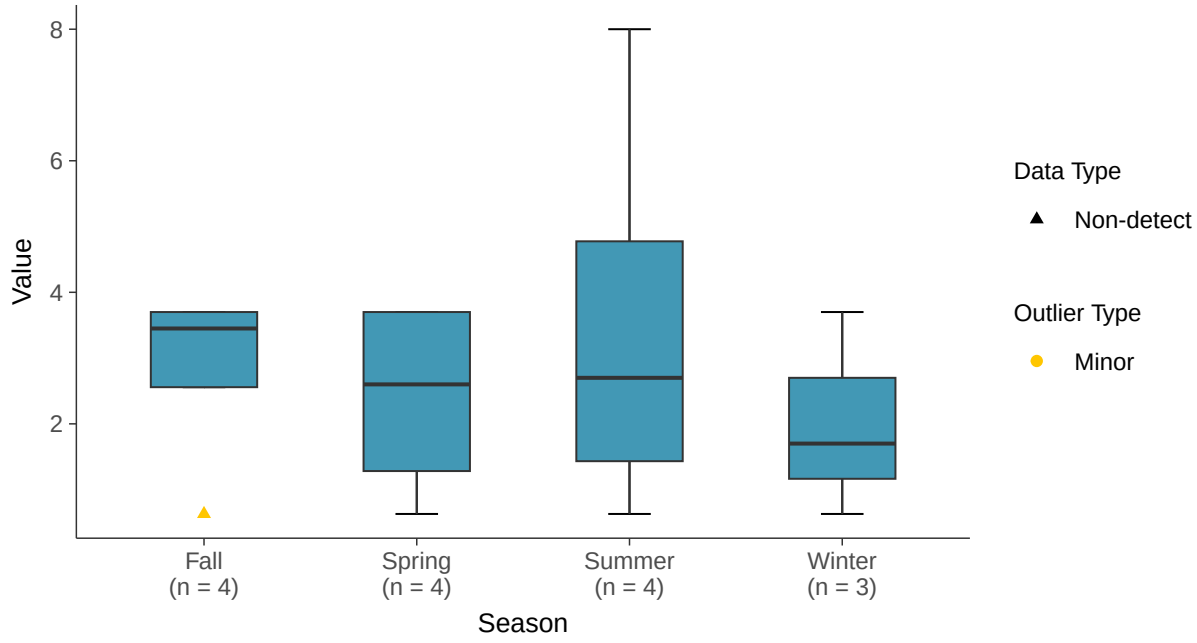
Boxplot

Chromium, MW-11D (ug/L)



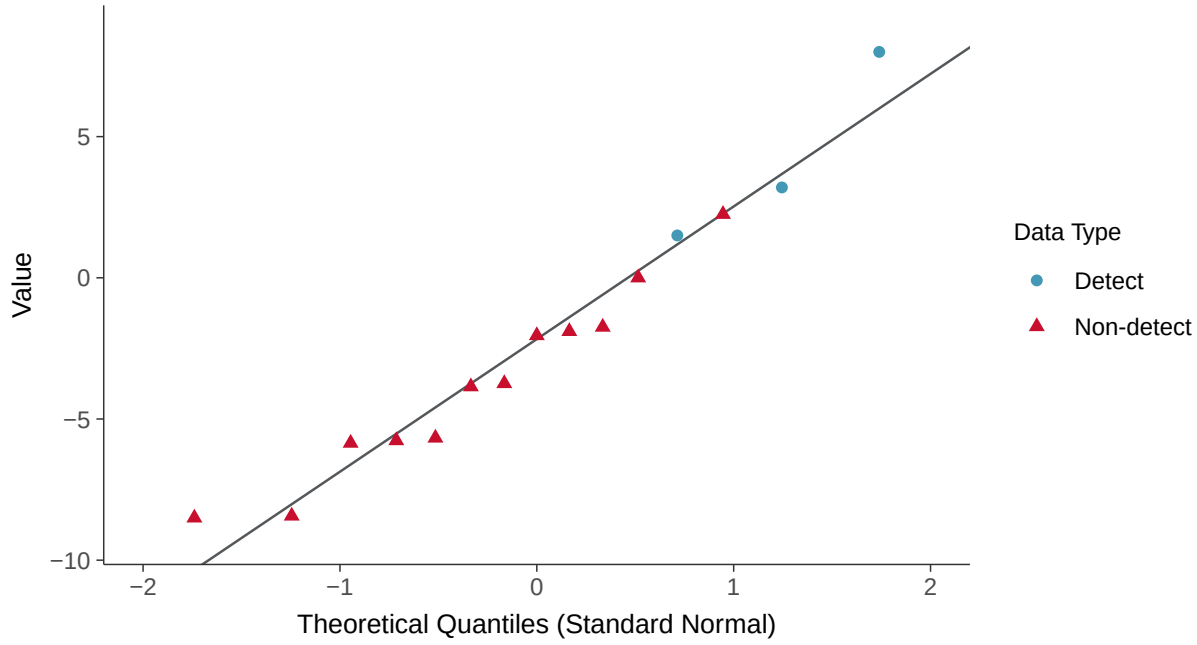
Boxplot by Season

Chromium, MW-11D (ug/L)



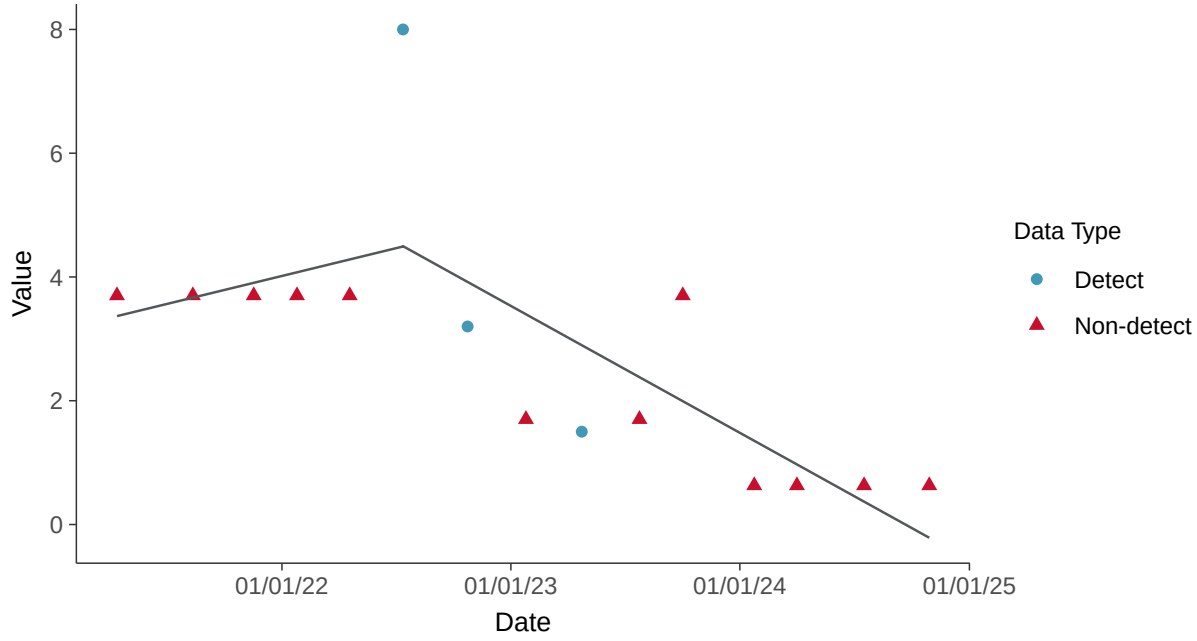
Normal Q-Q plot using ROS Imputed Estimates

Chromium, MW-11D (ug/L)



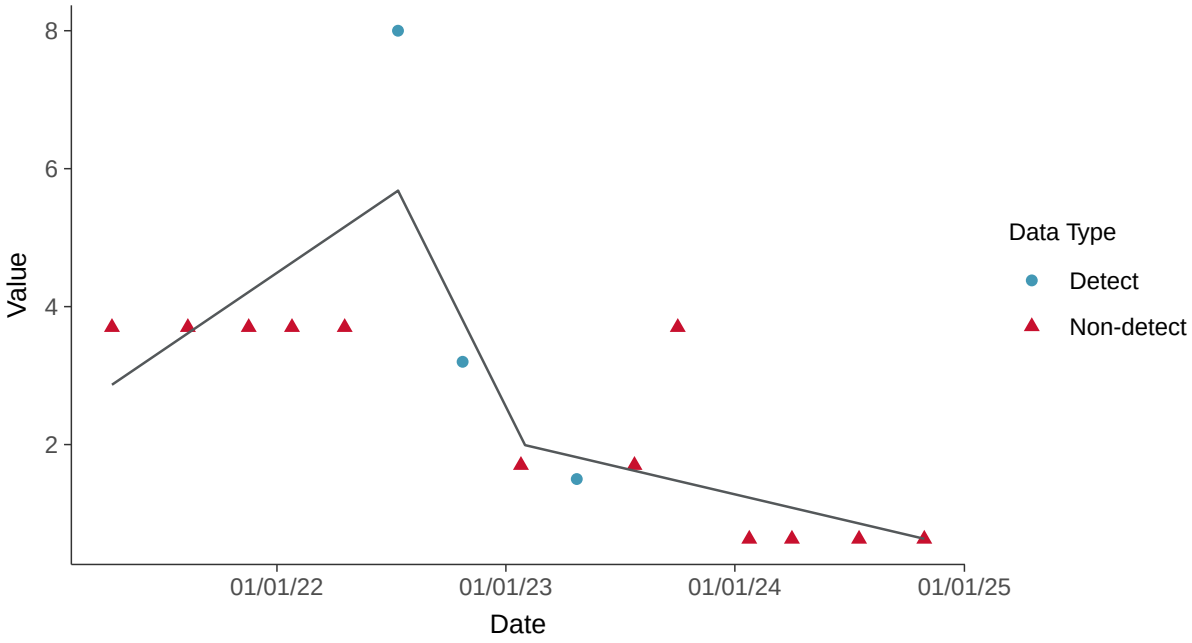
Trend Regression: Piecewise Linear-Linear

Chromium, MW-11D (ug/L)



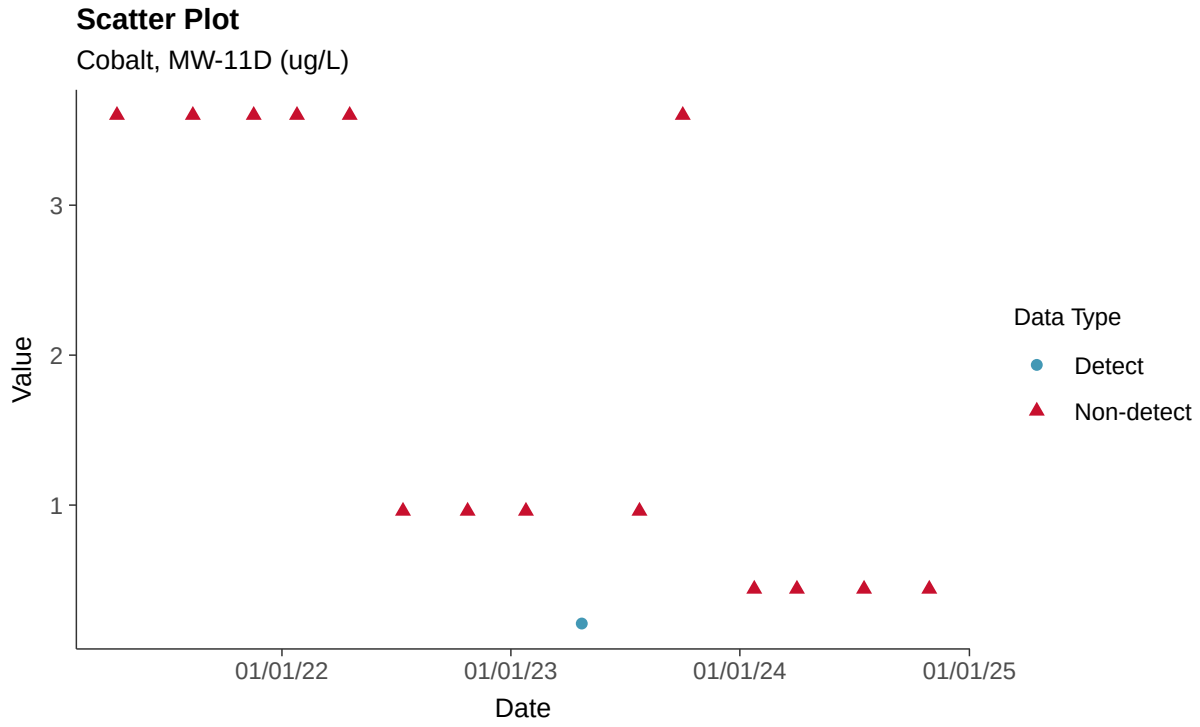
Trend Regression: Piecewise Linear-Linear-Linear

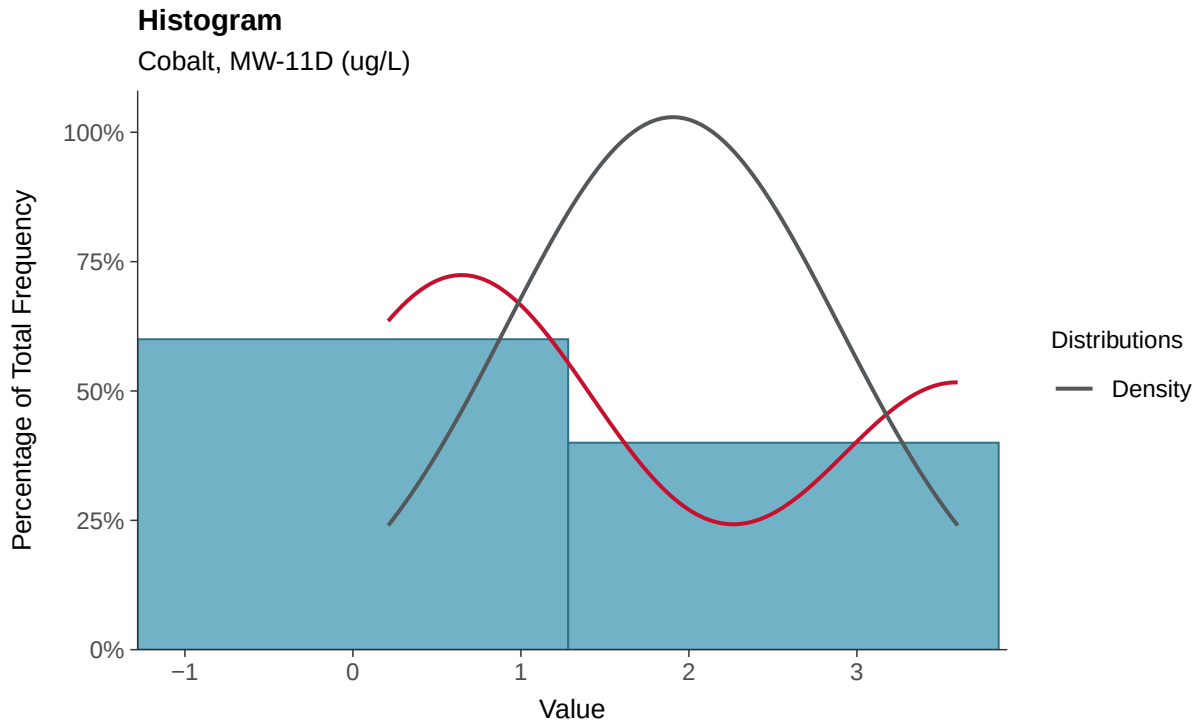
Chromium, MW-11D (ug/L)



App. IV: Cobalt, MW-11D

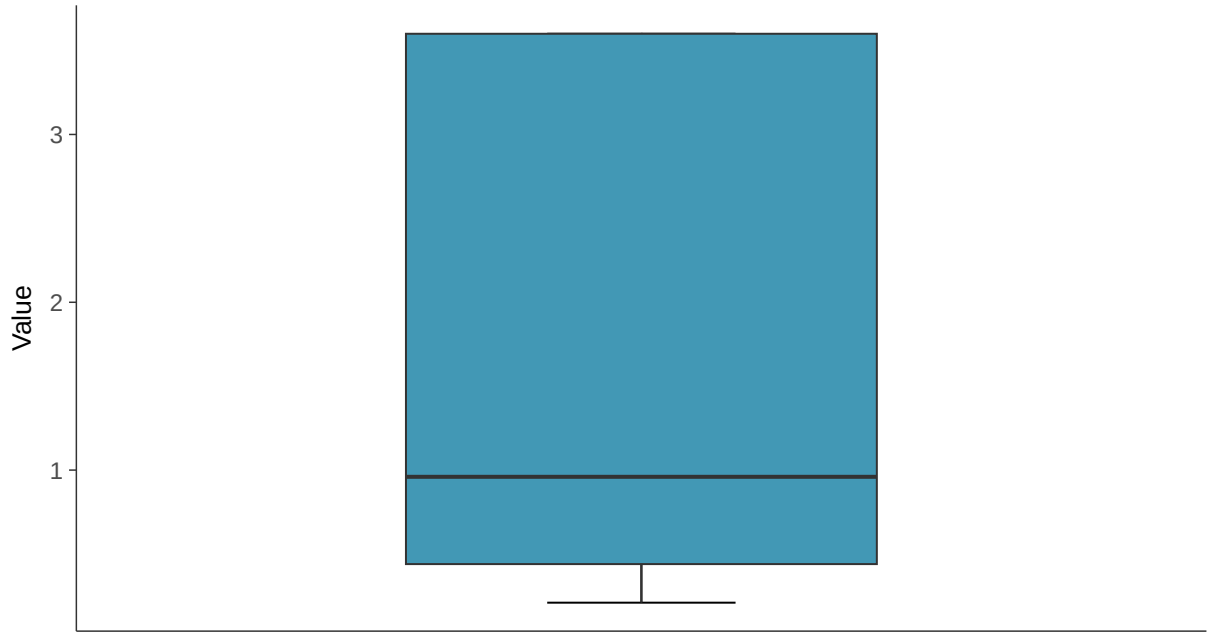
ID: 11_03_110





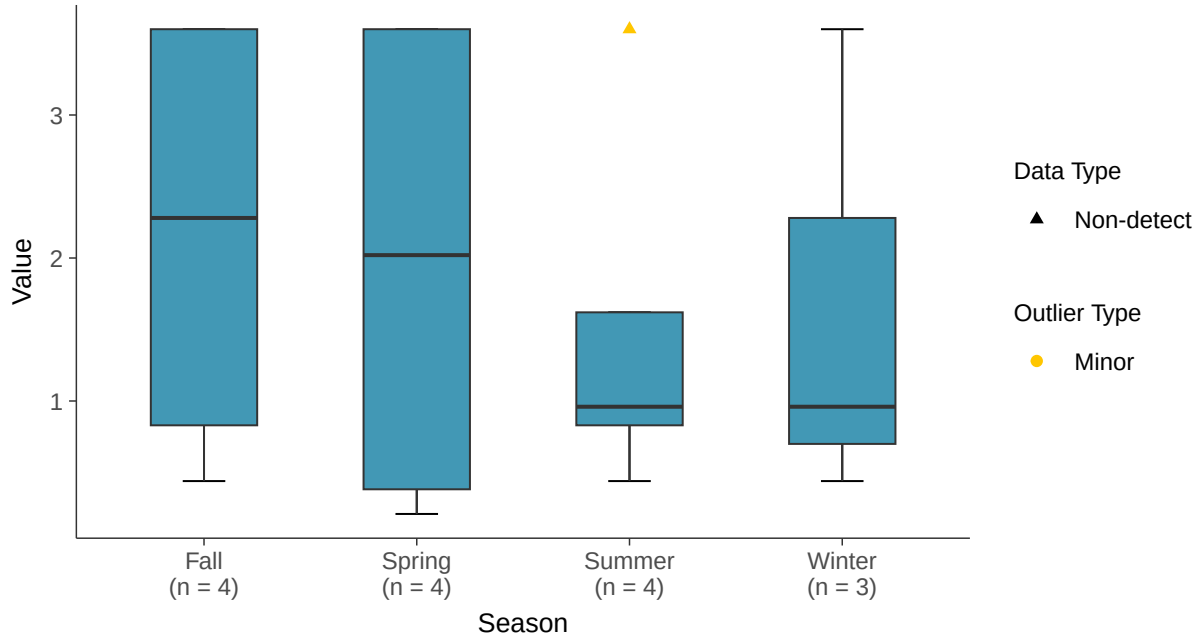
Boxplot

Cobalt, MW-11D (ug/L)



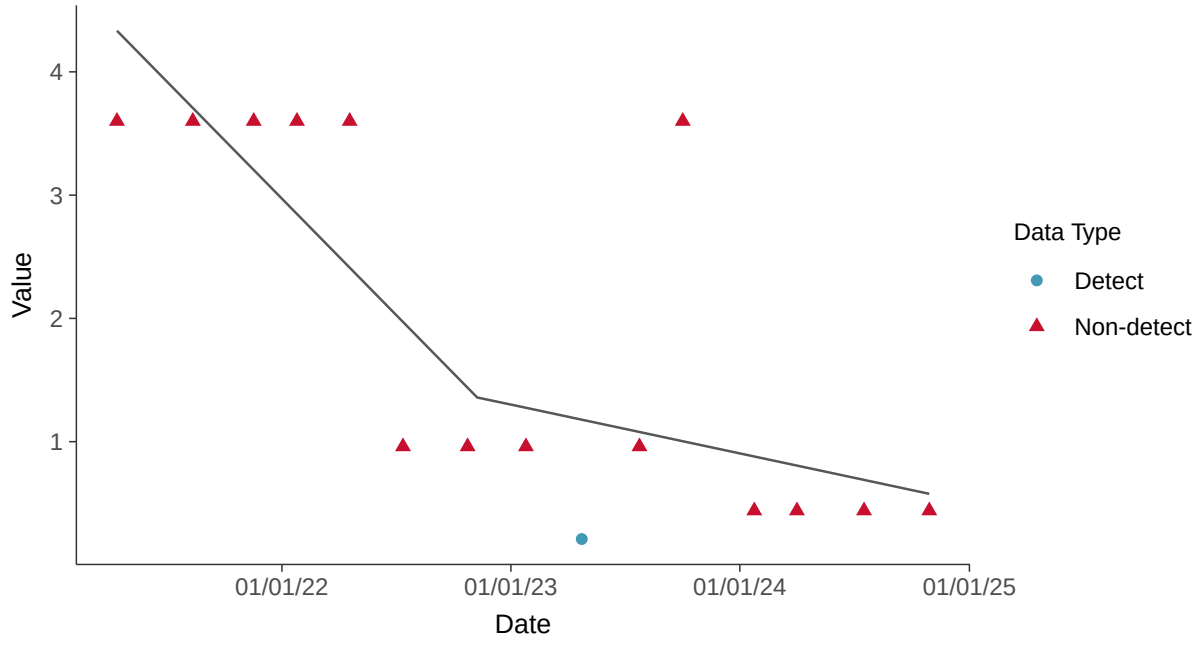
Boxplot by Season

Cobalt, MW-11D (ug/L)



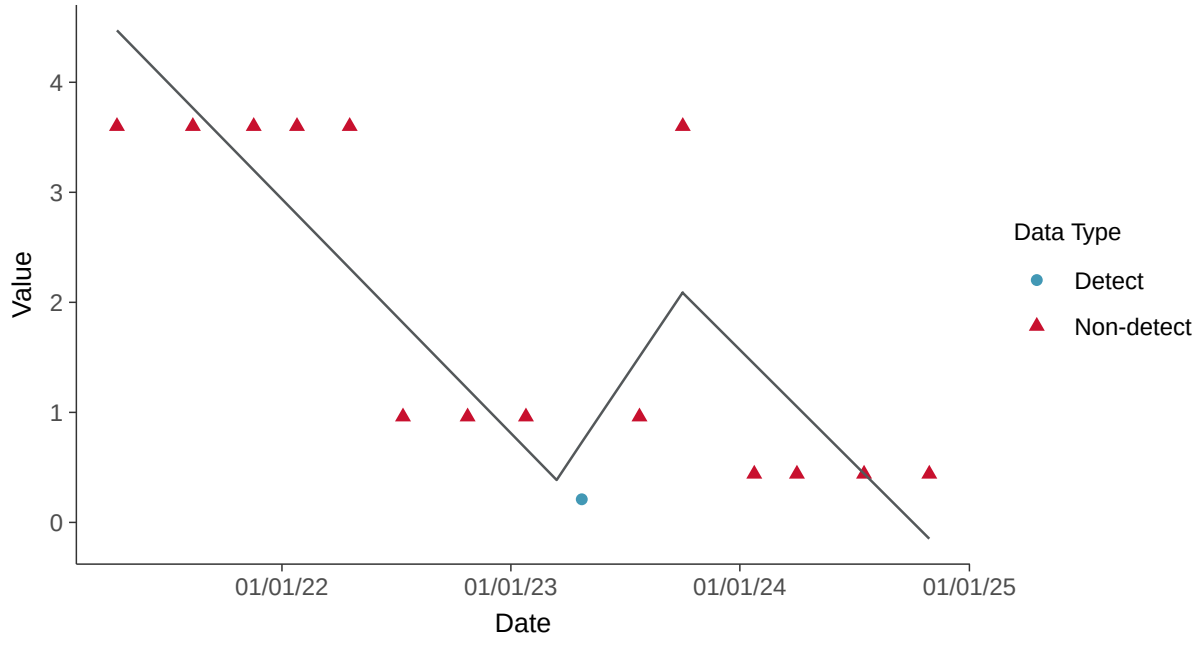
Trend Regression: Piecewise Linear-Linear

Cobalt, MW-11D (ug/L)



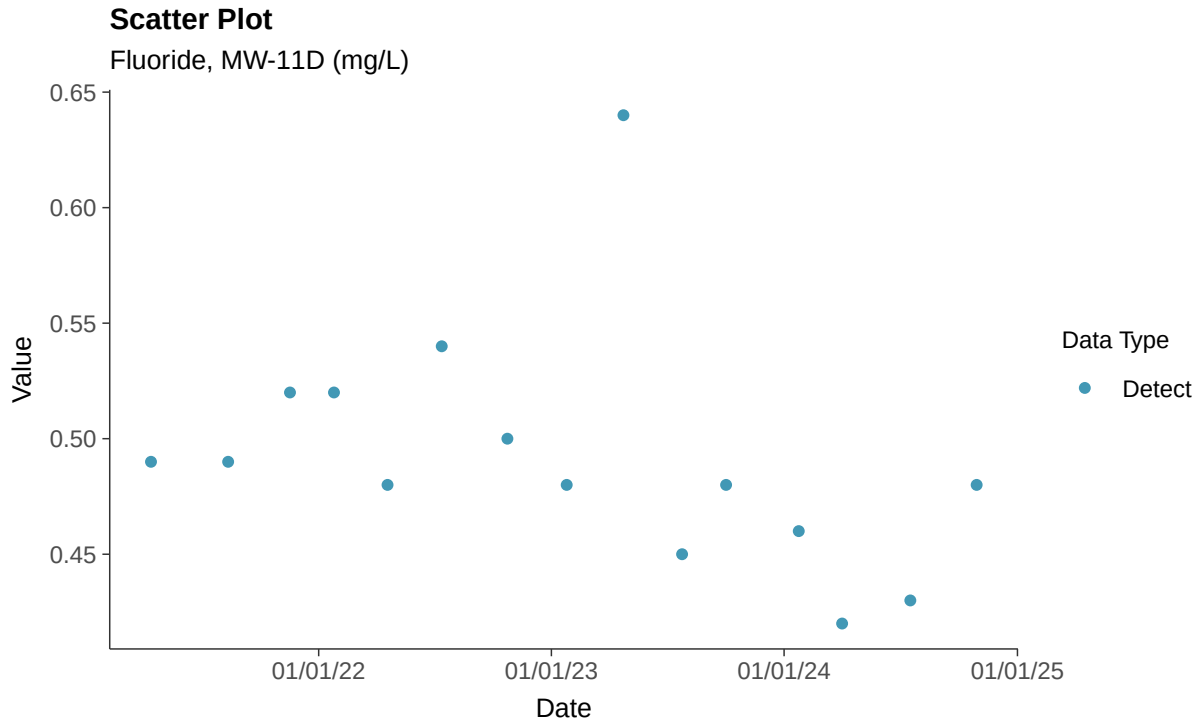
Trend Regression: Piecewise Linear-Linear-Linear

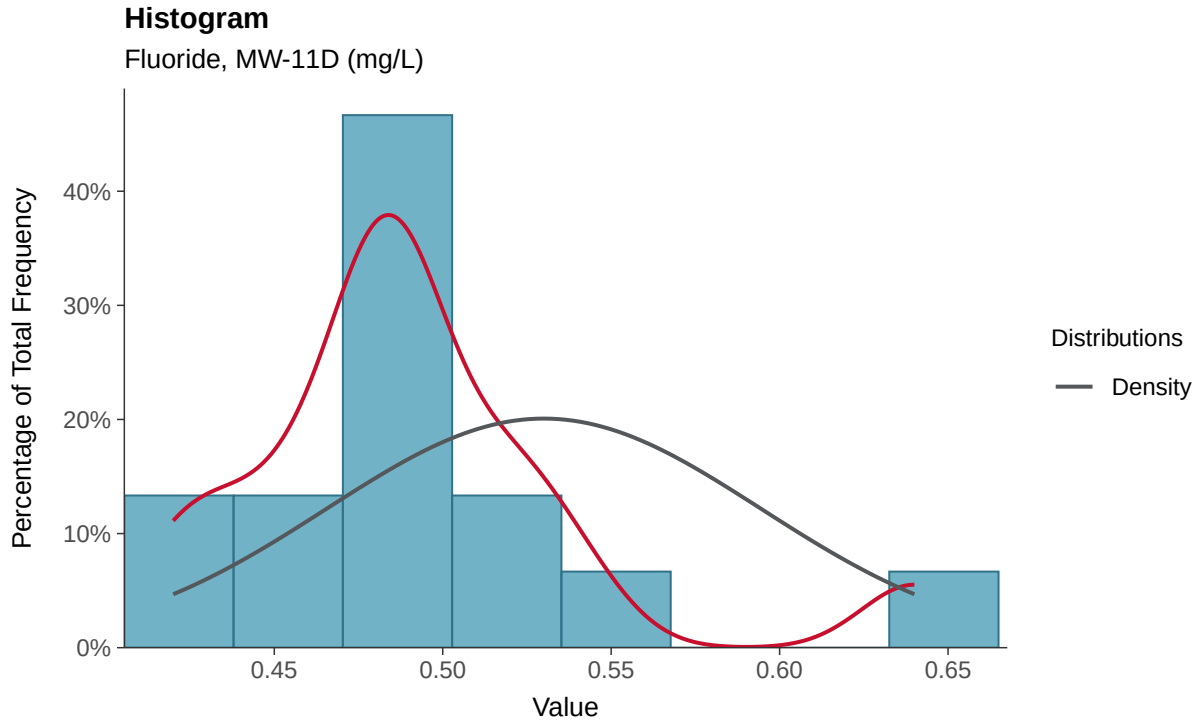
Cobalt, MW-11D (ug/L)



App. IV: Fluoride, MW-11D

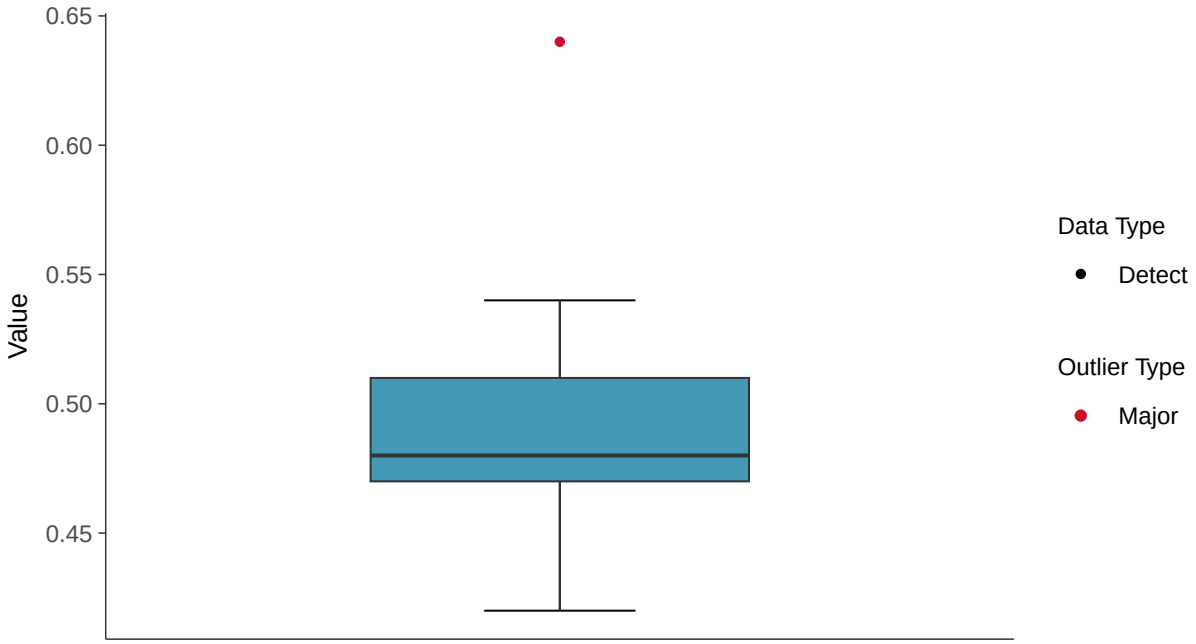
ID: 11_03_112





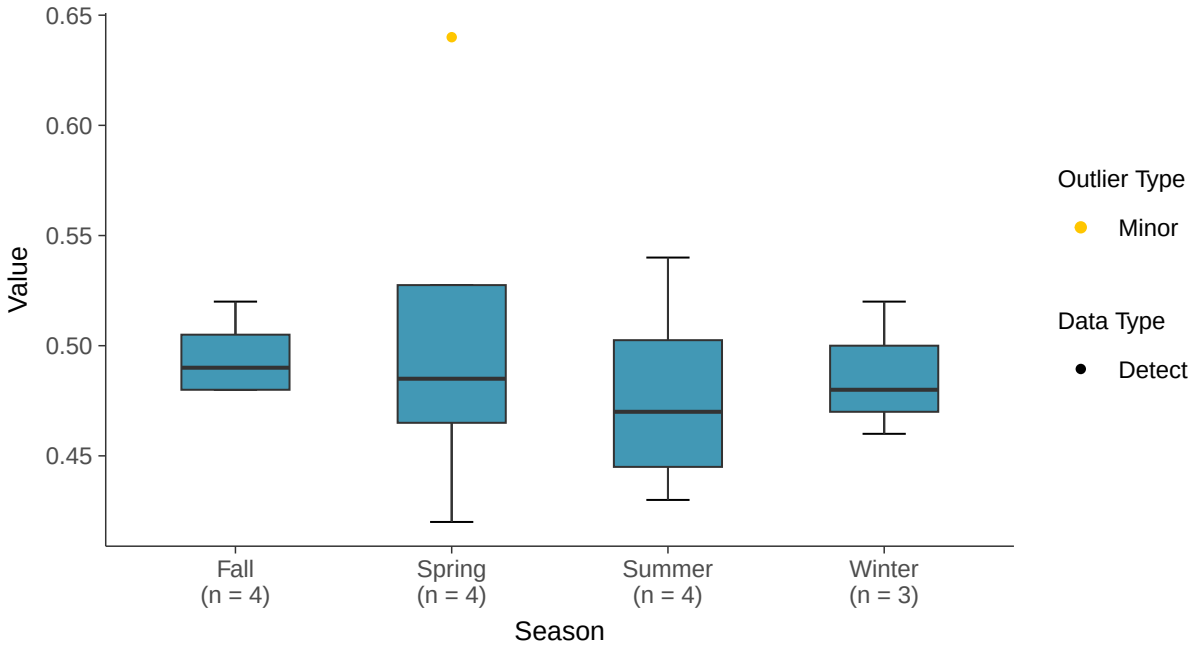
Boxplot

Fluoride, MW-11D (mg/L)



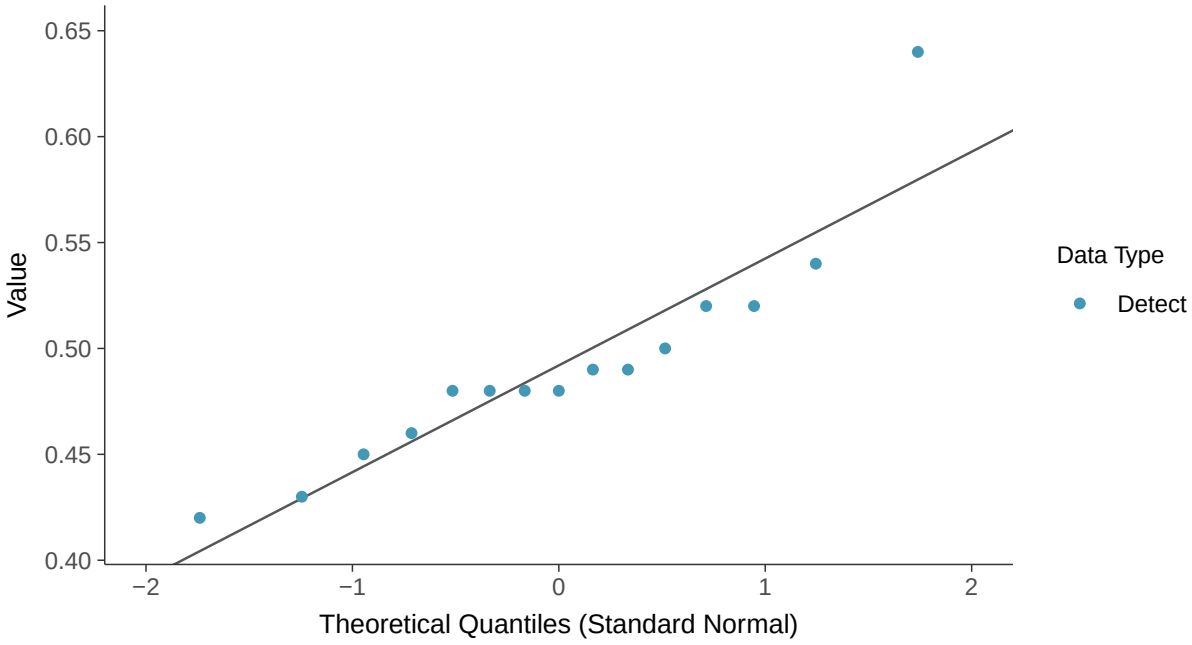
Boxplot by Season

Fluoride, MW-11D (mg/L)



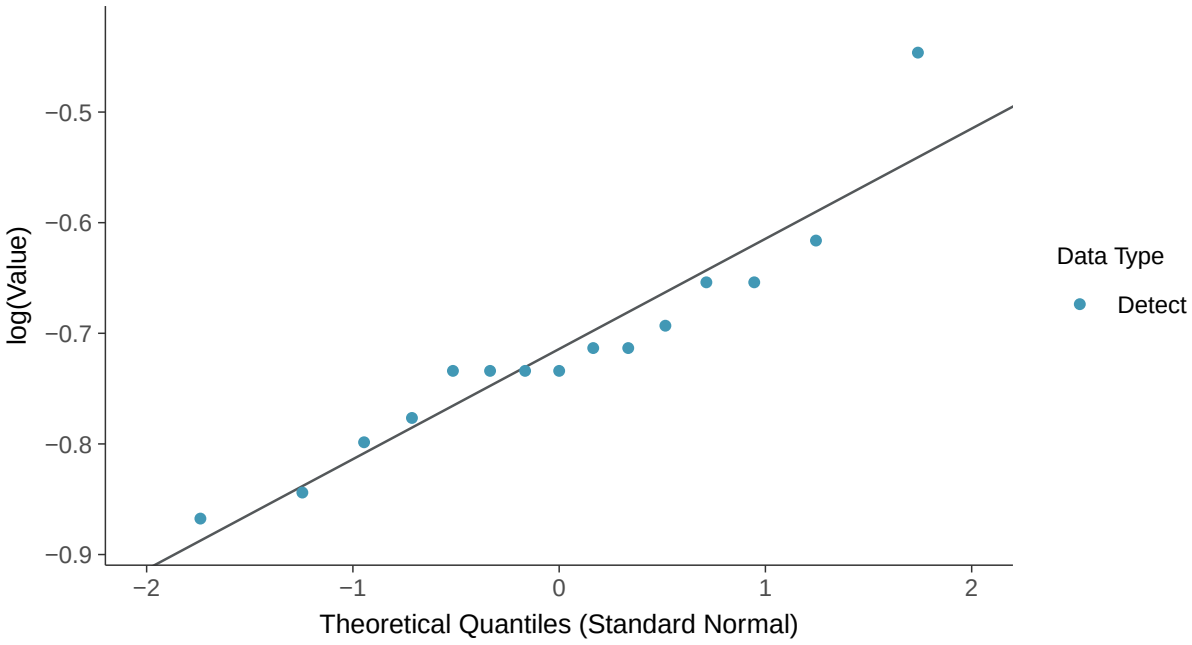
Normal Q-Q plot

Fluoride, MW-11D (mg/L)



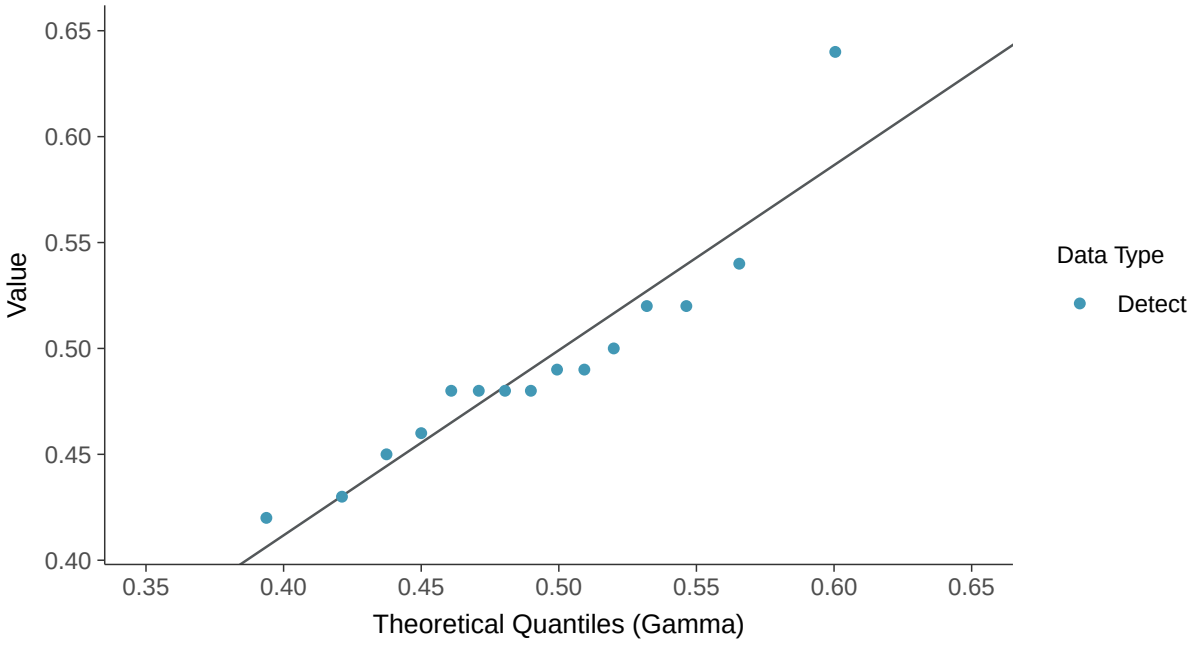
Lognormal Q-Q plot

Fluoride, MW-11D (mg/L)



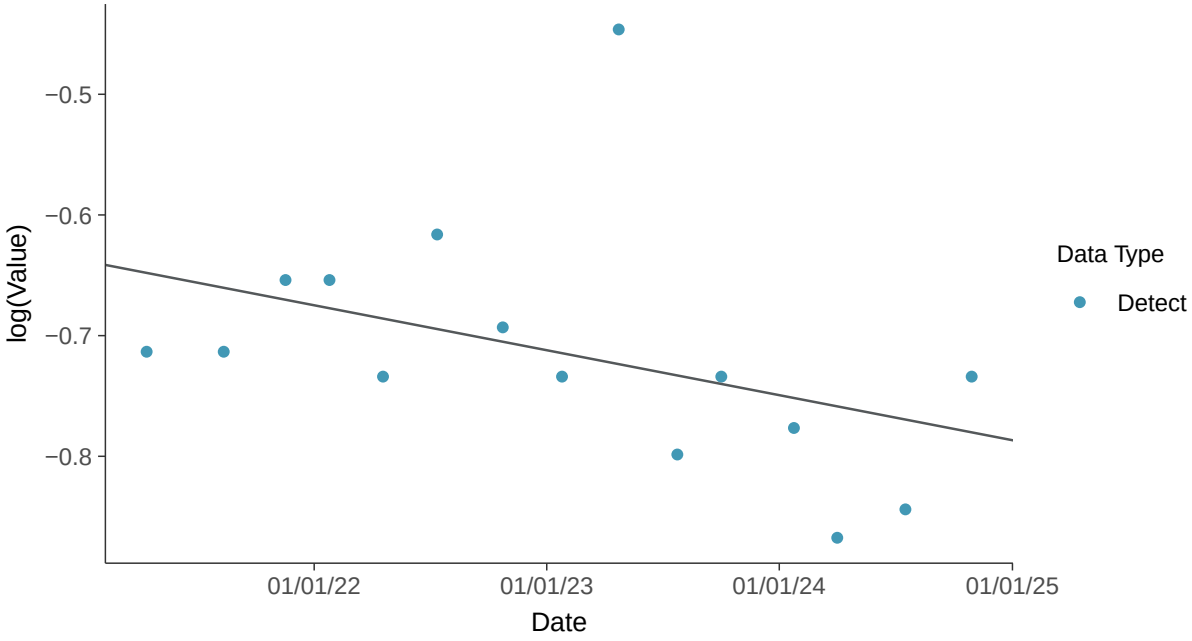
Gamma Q-Q plot

Fluoride, MW-11D (mg/L)



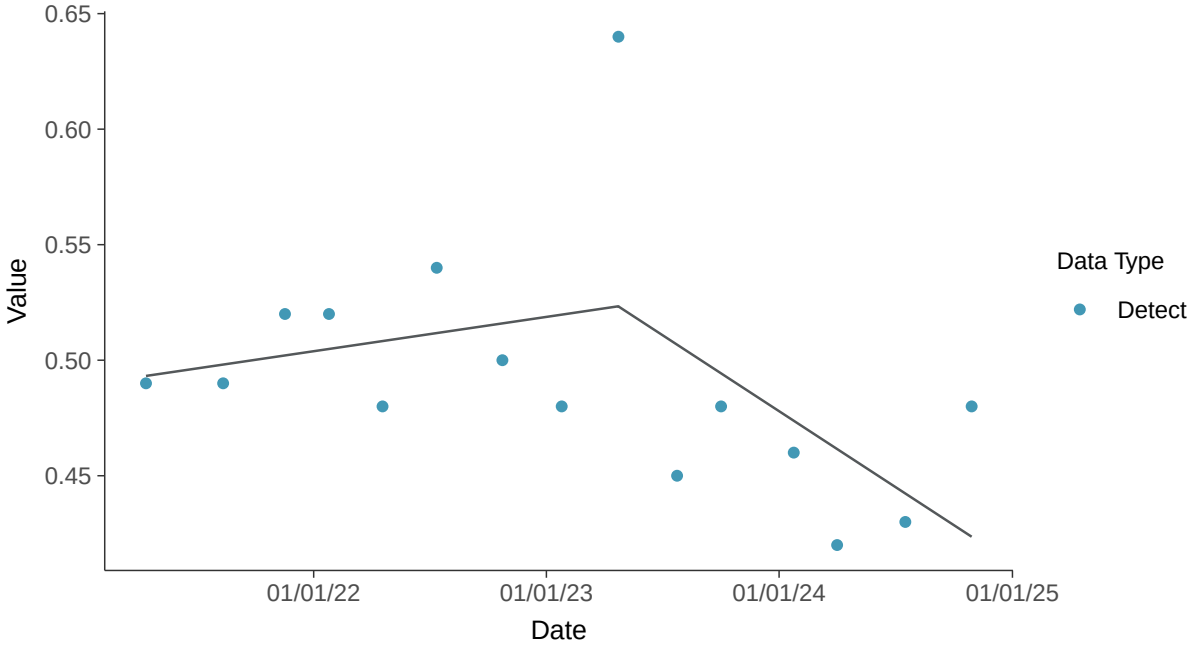
Trend Regression: Lognormal MLE

Fluoride, MW-11D (mg/L)



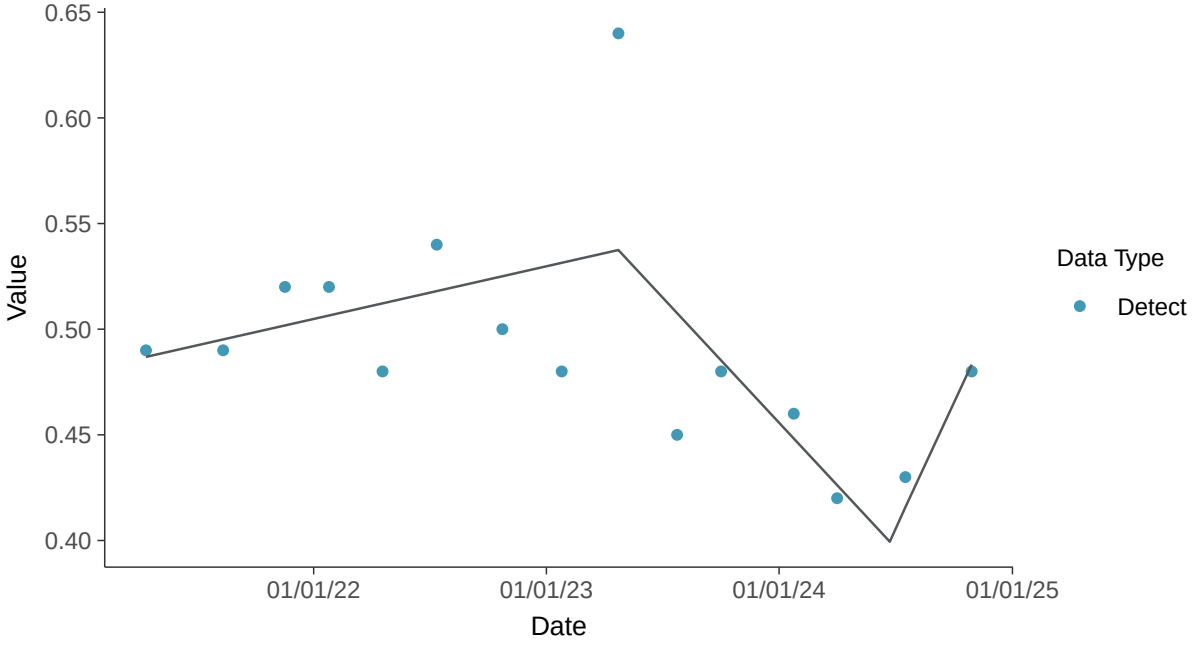
Trend Regression: Piecewise Linear-Linear

Fluoride, MW-11D (mg/L)



Trend Regression: Piecewise Linear-Linear-Linear

Fluoride, MW-11D (mg/L)

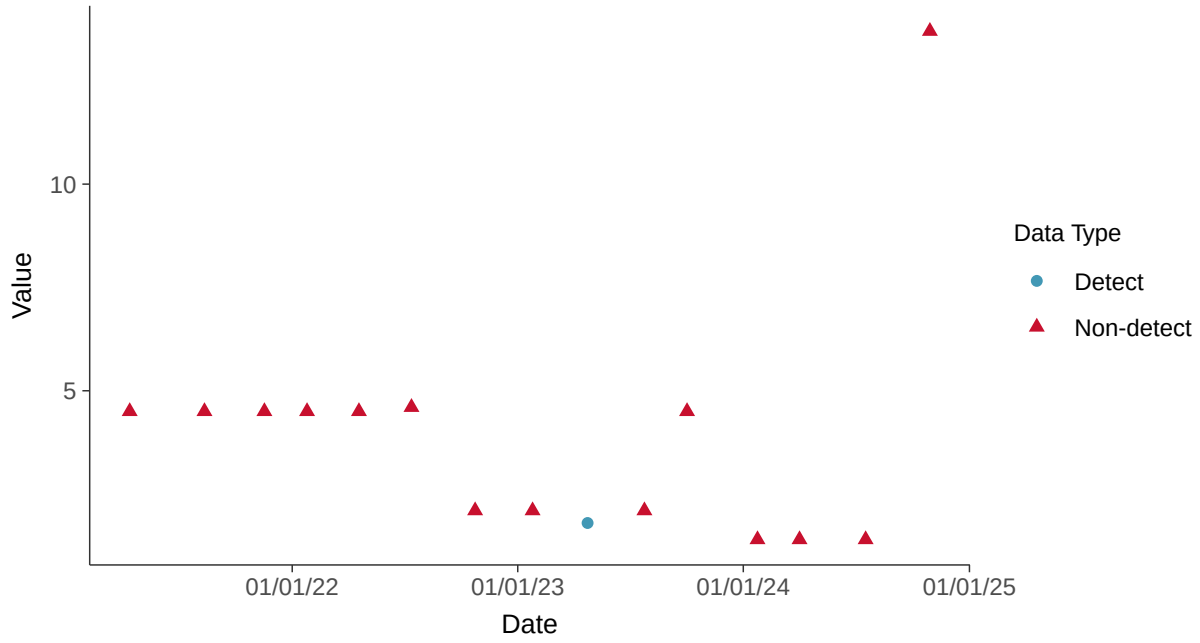


App. IV: Lead, MW-11D

ID: 11_03_113

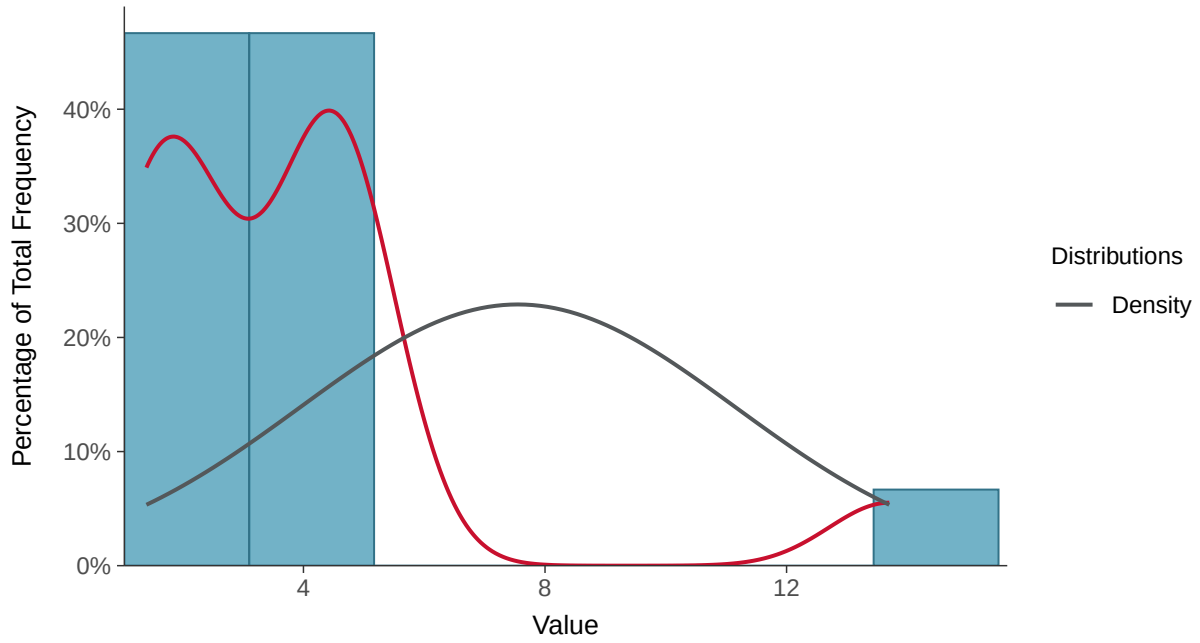
Scatter Plot

Lead, MW-11D (ug/L)



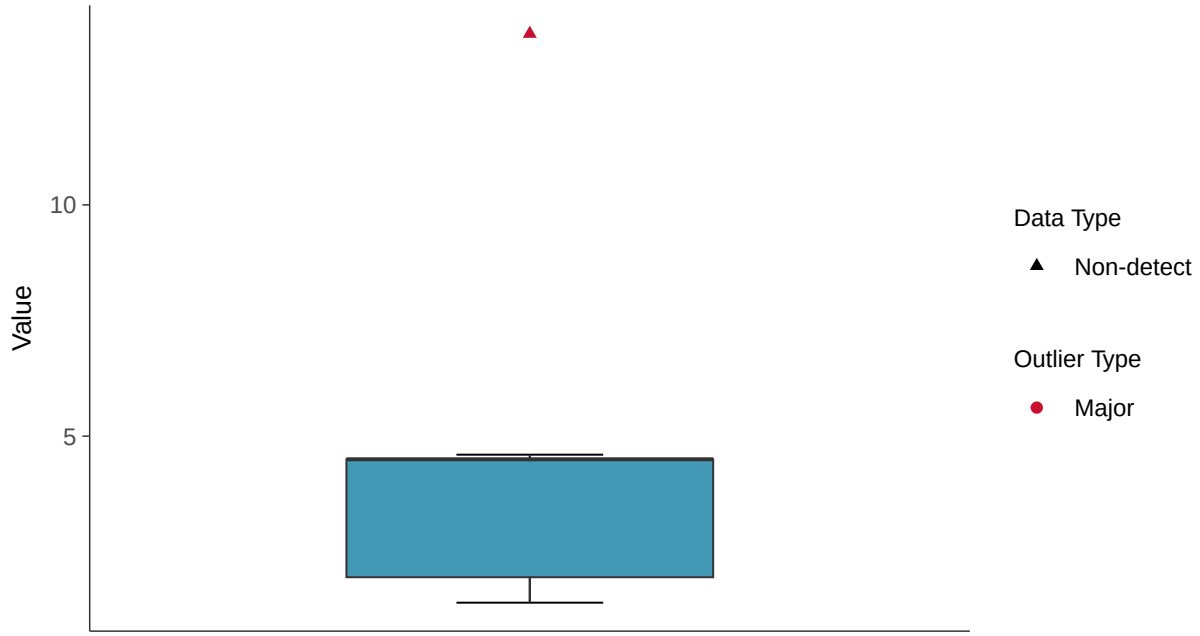
Histogram

Lead, MW-11D (ug/L)



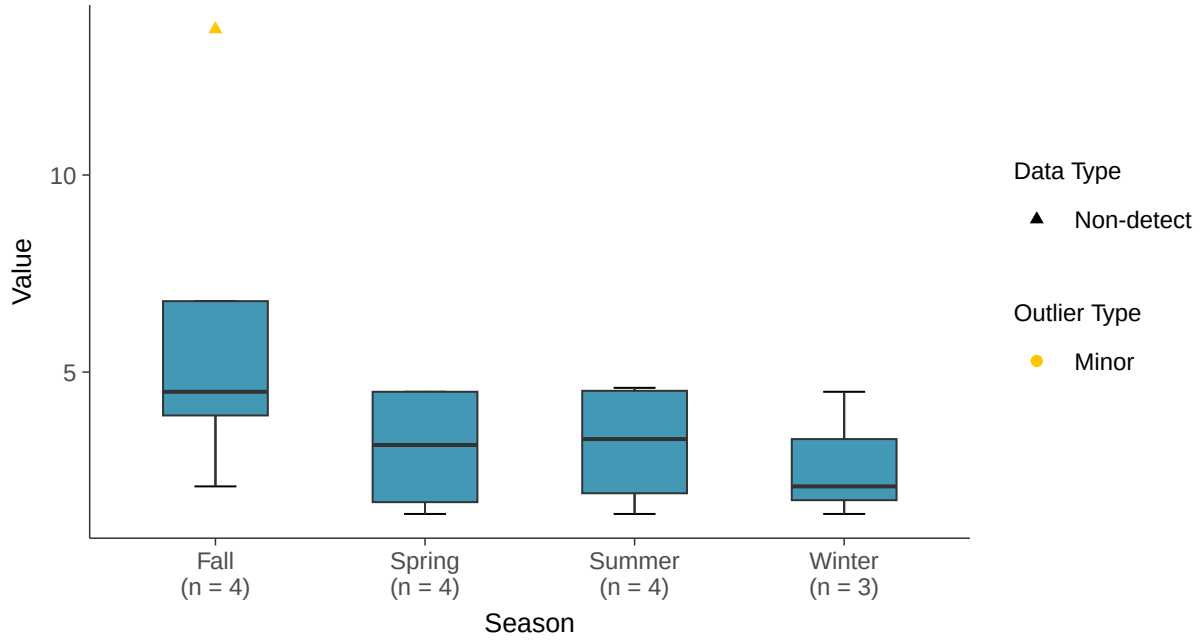
Boxplot

Lead, MW-11D (ug/L)



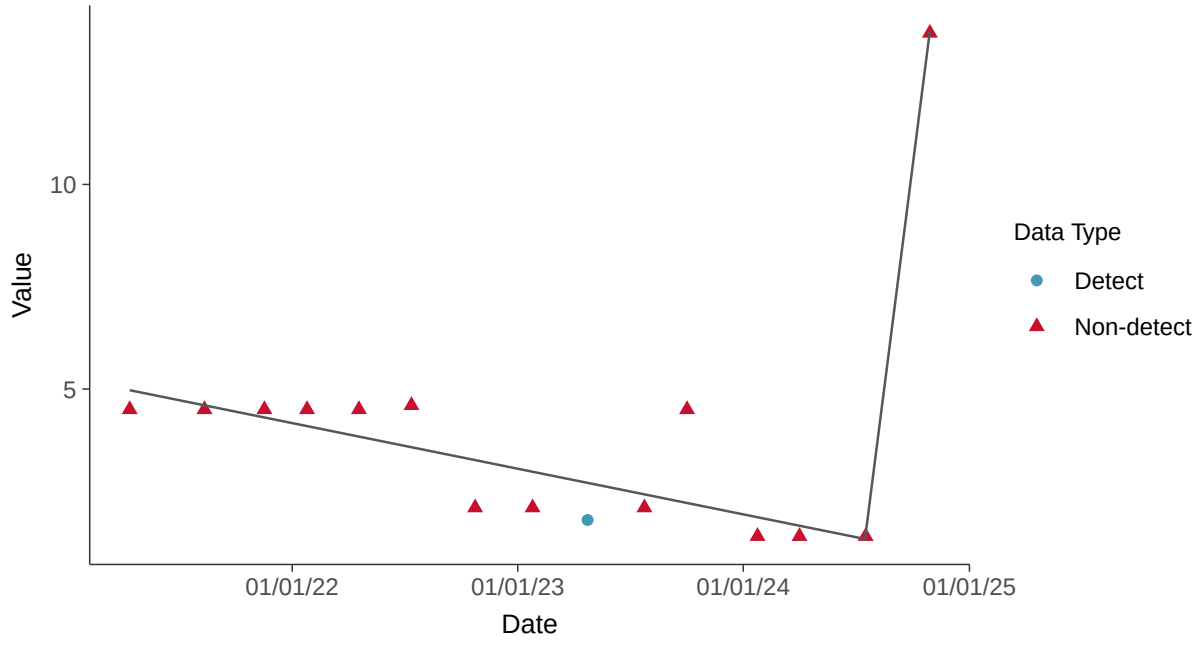
Boxplot by Season

Lead, MW-11D (ug/L)



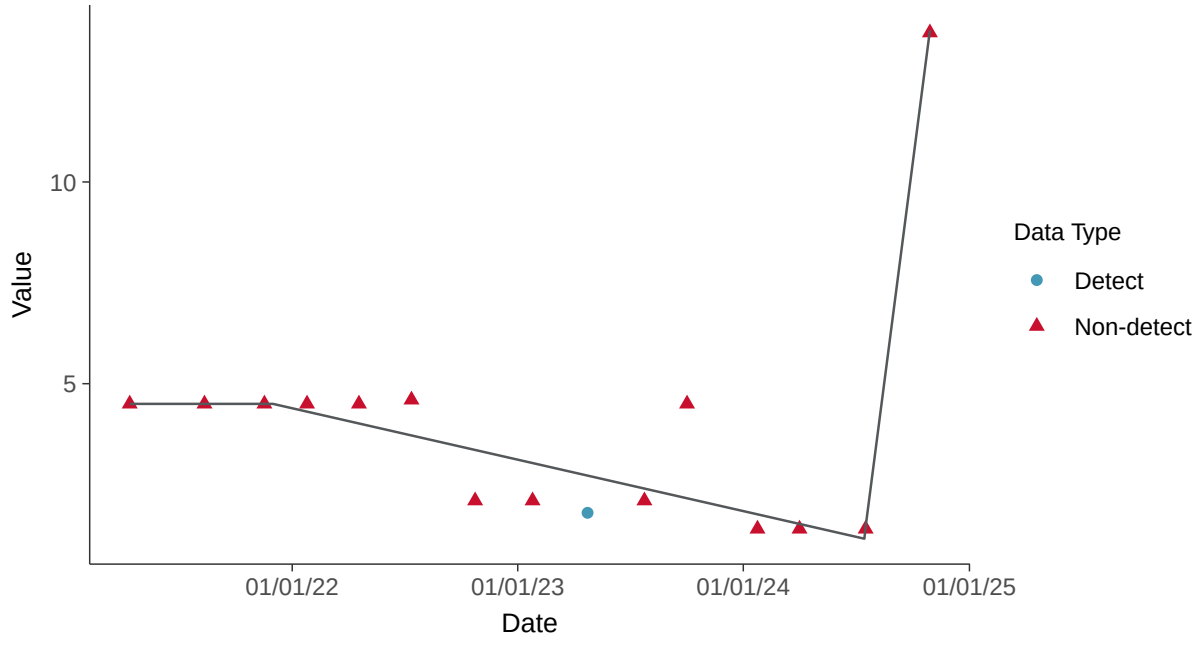
Trend Regression: Piecewise Linear-Linear

Lead, MW-11D (ug/L)



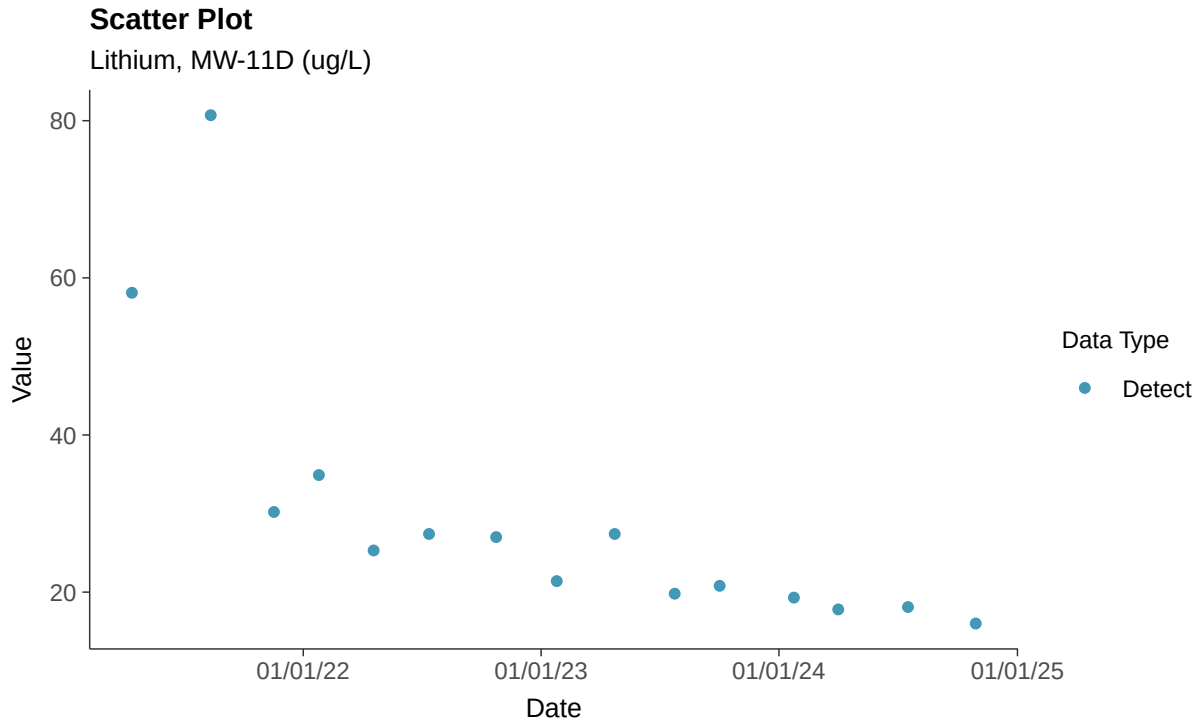
Trend Regression: Piecewise Linear-Linear-Linear

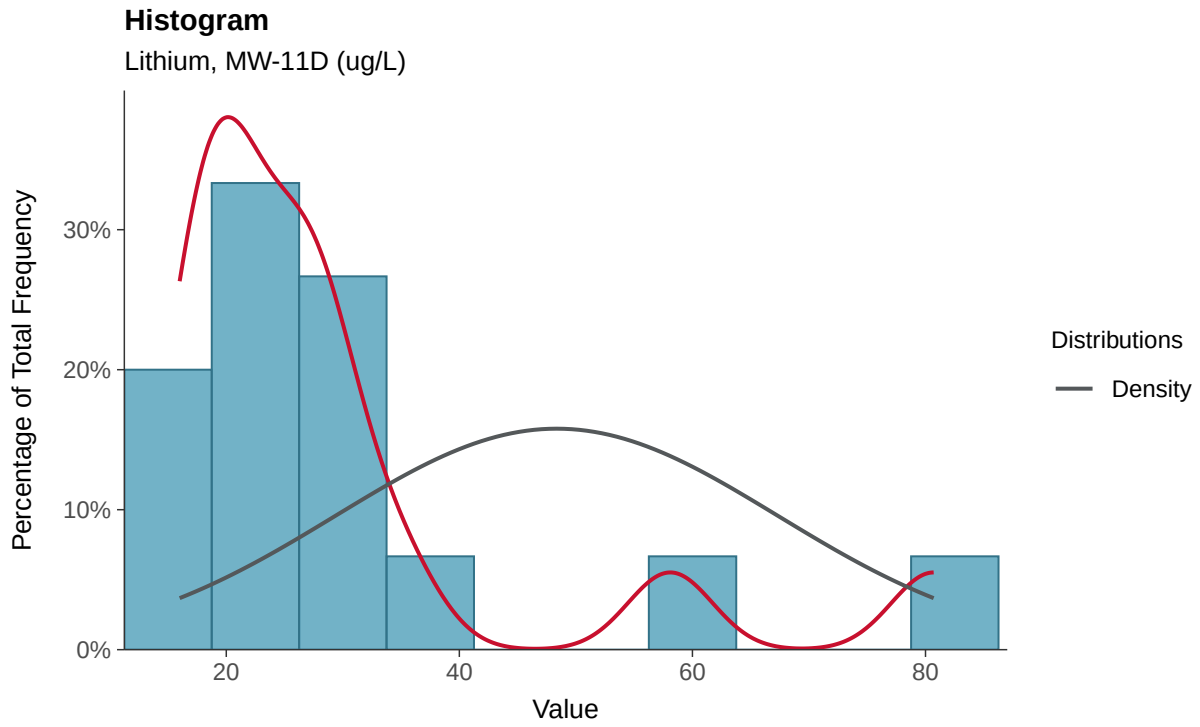
Lead, MW-11D (ug/L)



App. IV: Lithium, MW-11D

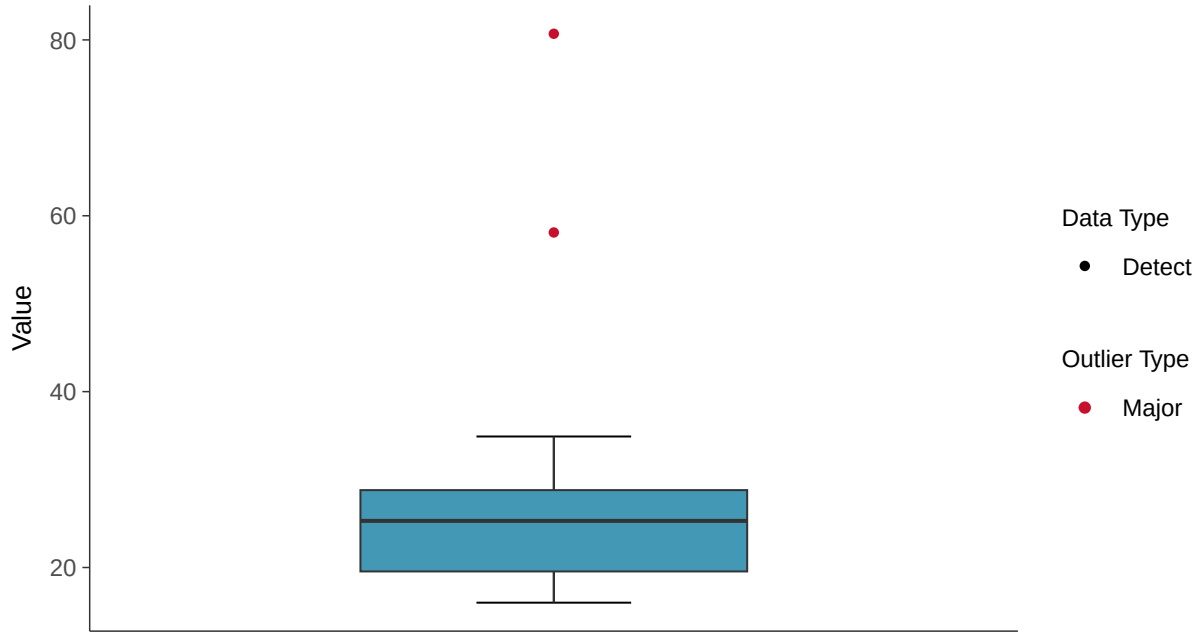
ID: 11_03_114





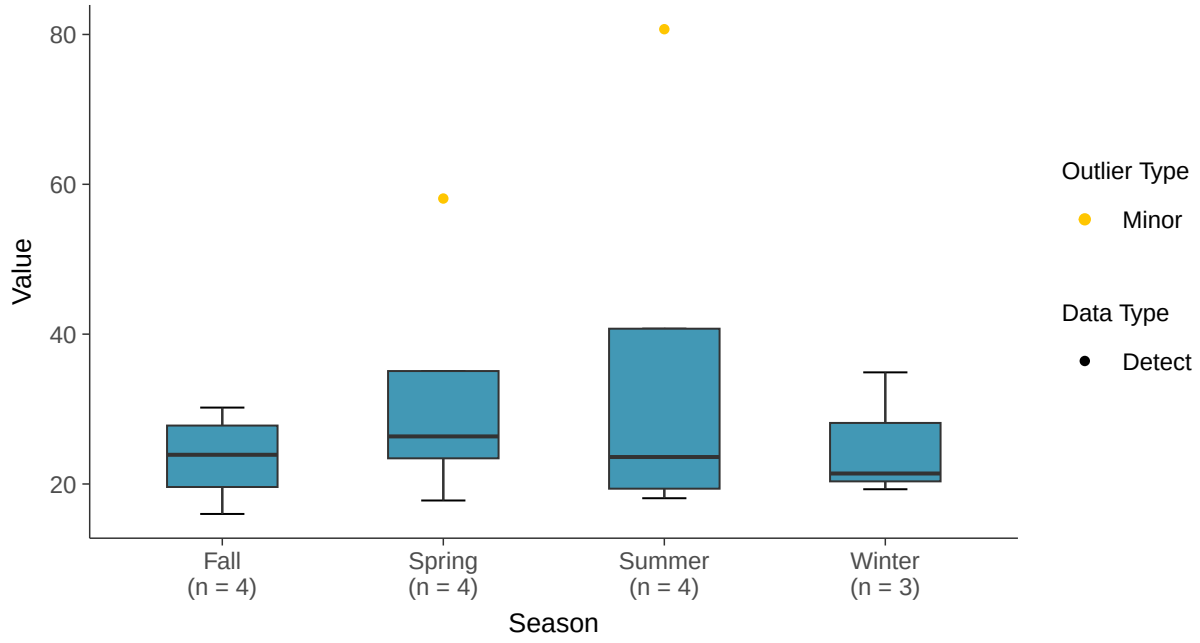
Boxplot

Lithium, MW-11D (ug/L)



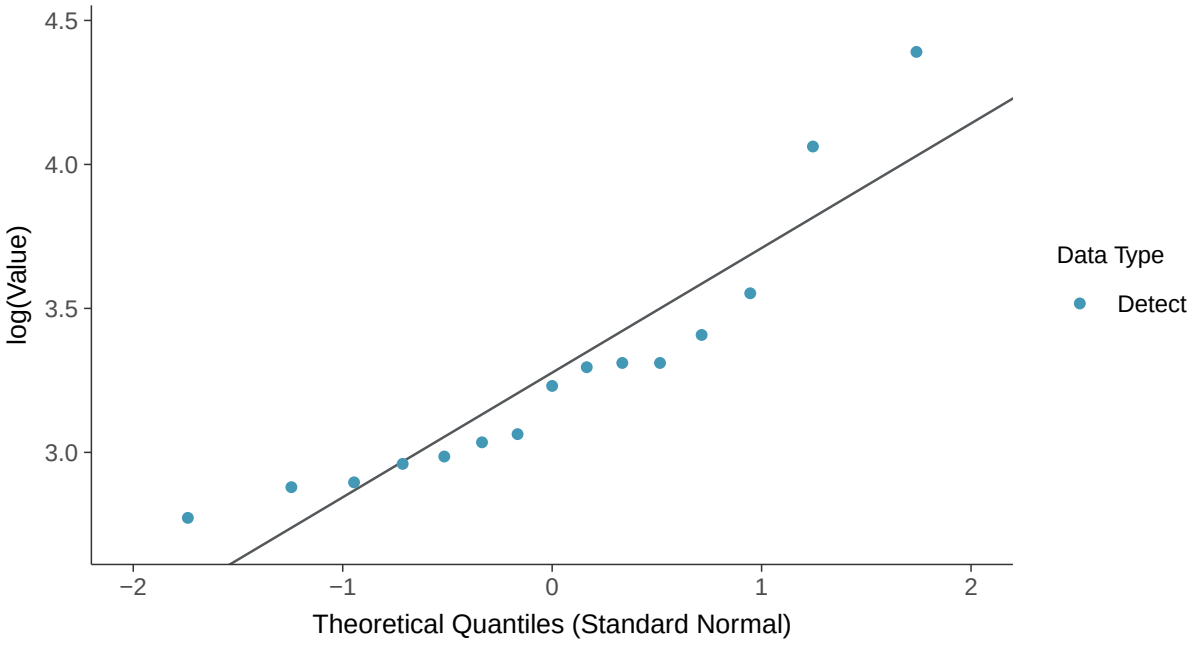
Boxplot by Season

Lithium, MW-11D (ug/L)



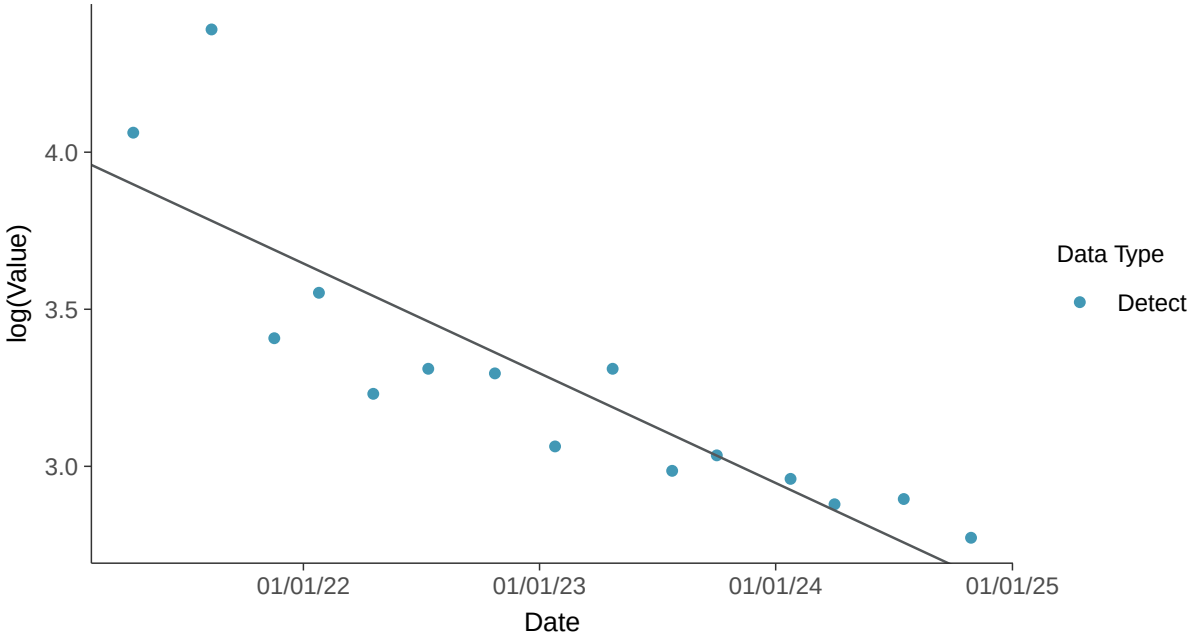
Lognormal Q-Q plot

Lithium, MW-11D (ug/L)



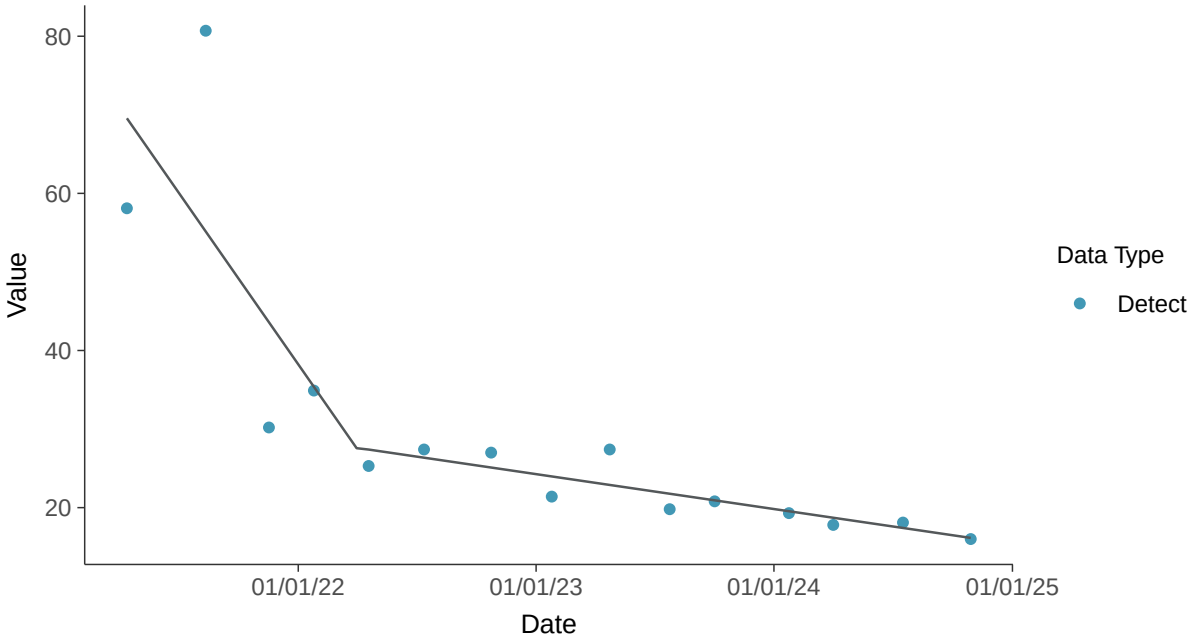
Trend Regression: Lognormal MLE

Lithium, MW-11D (ug/L)



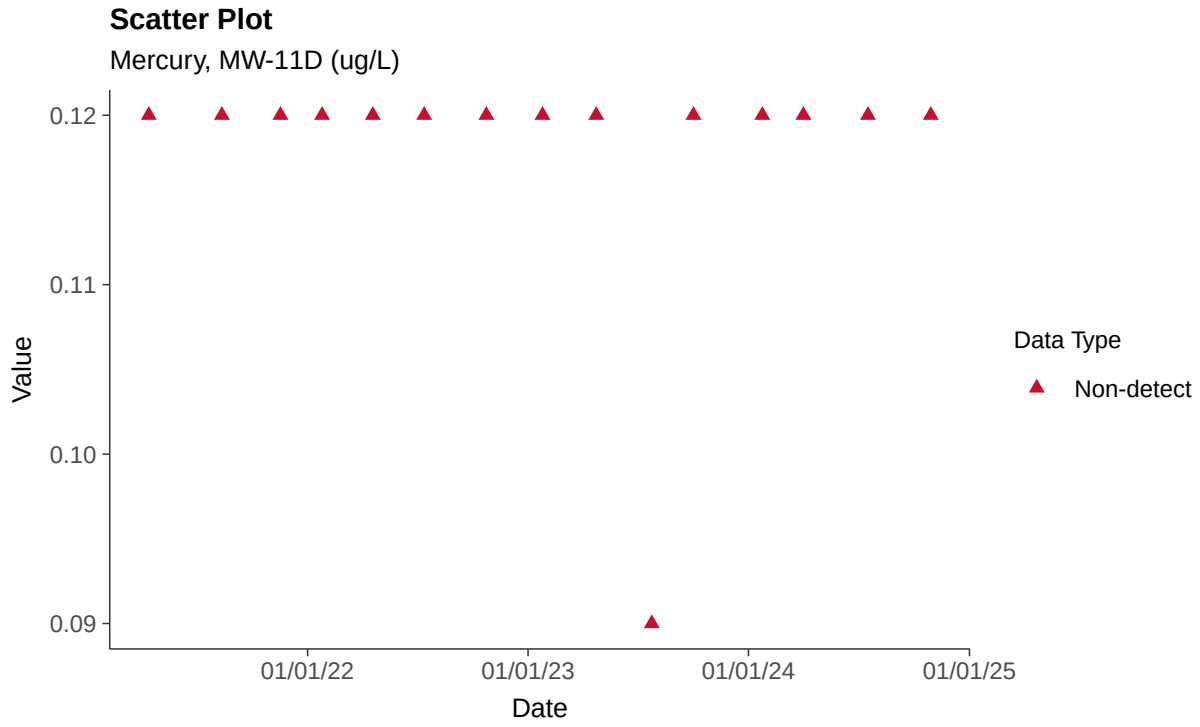
Trend Regression: Piecewise Linear-Linear

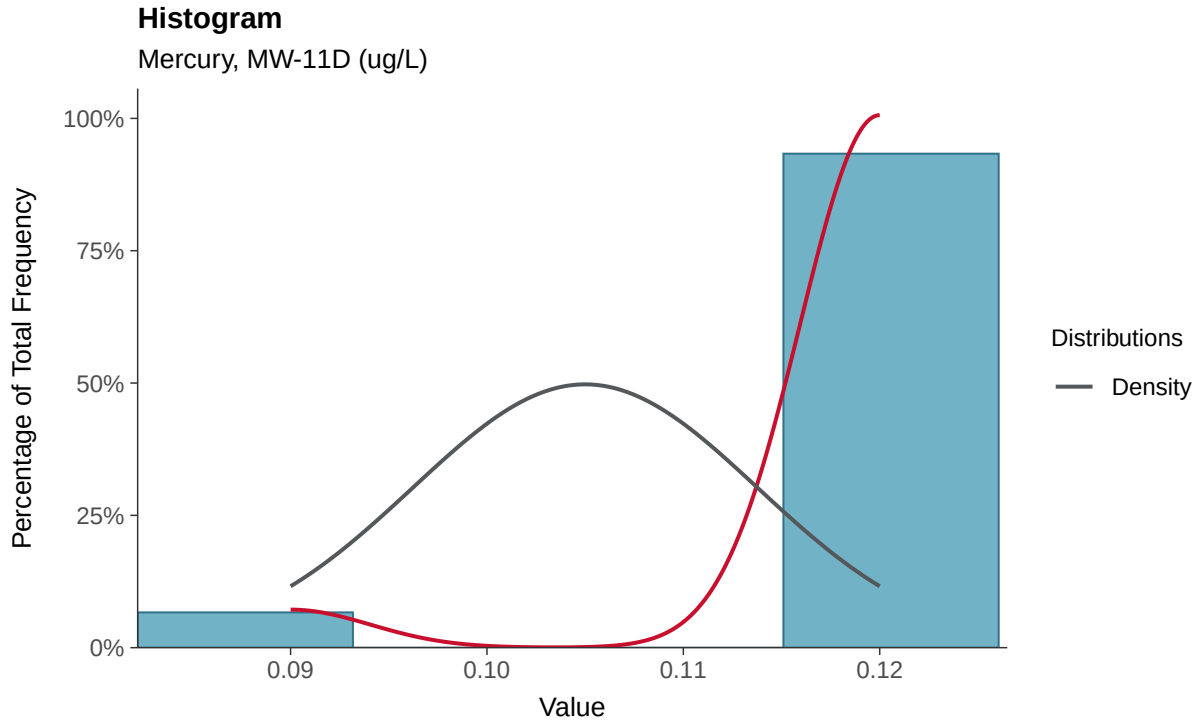
Lithium, MW-11D (ug/L)



App. IV: Mercury, MW-11D

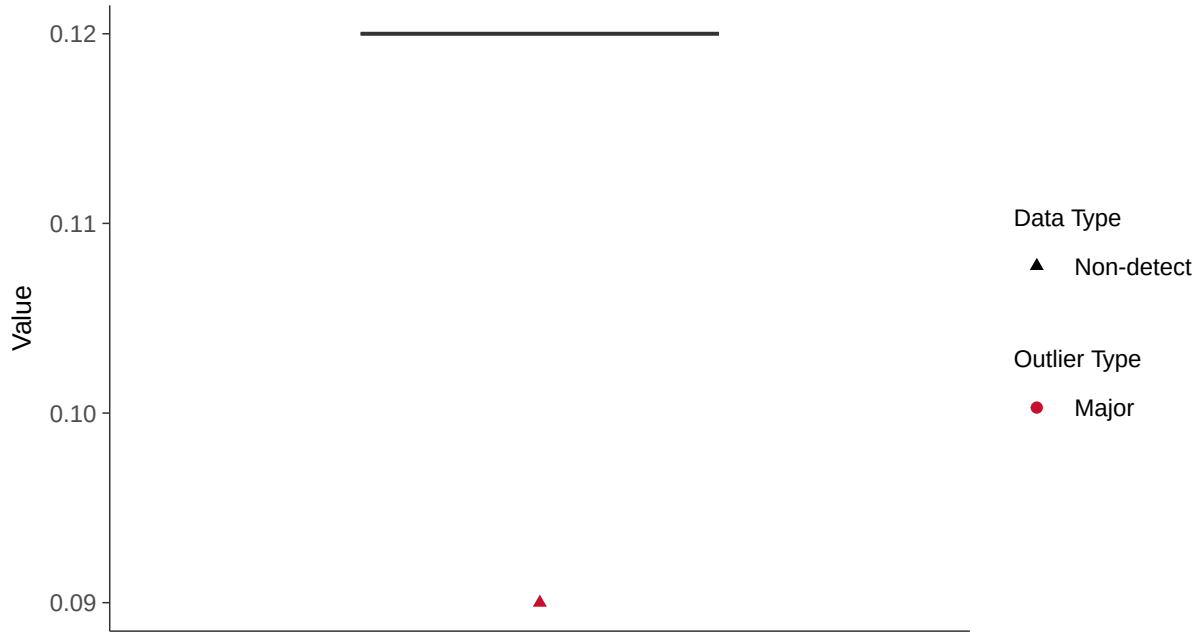
ID: 11_03_115





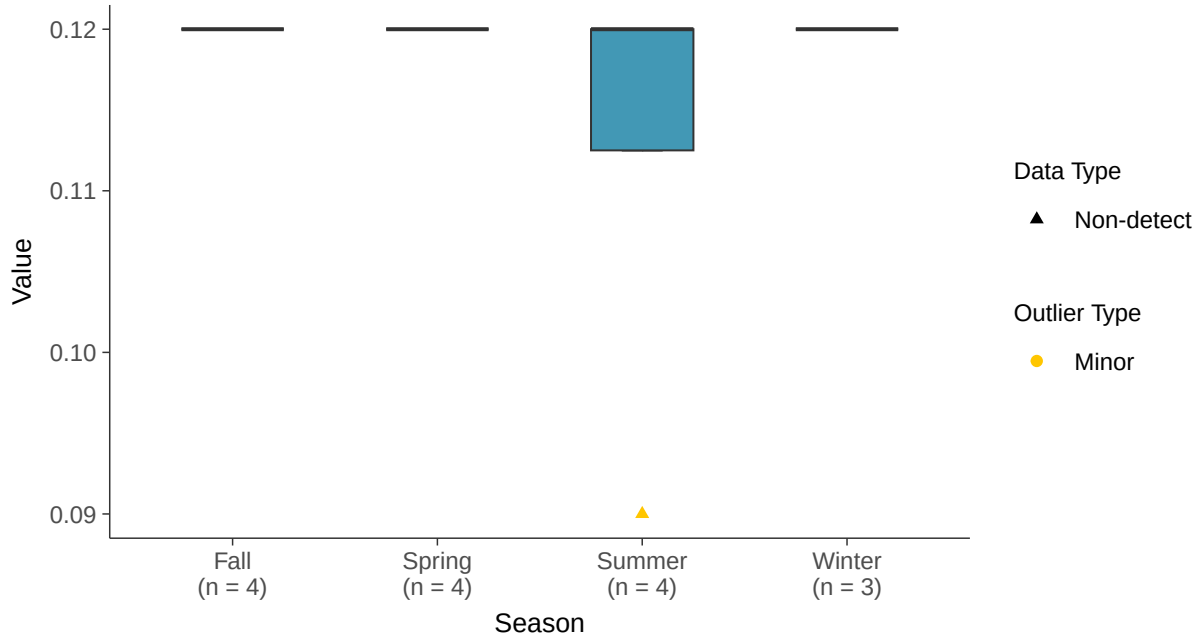
Boxplot

Mercury, MW-11D (ug/L)



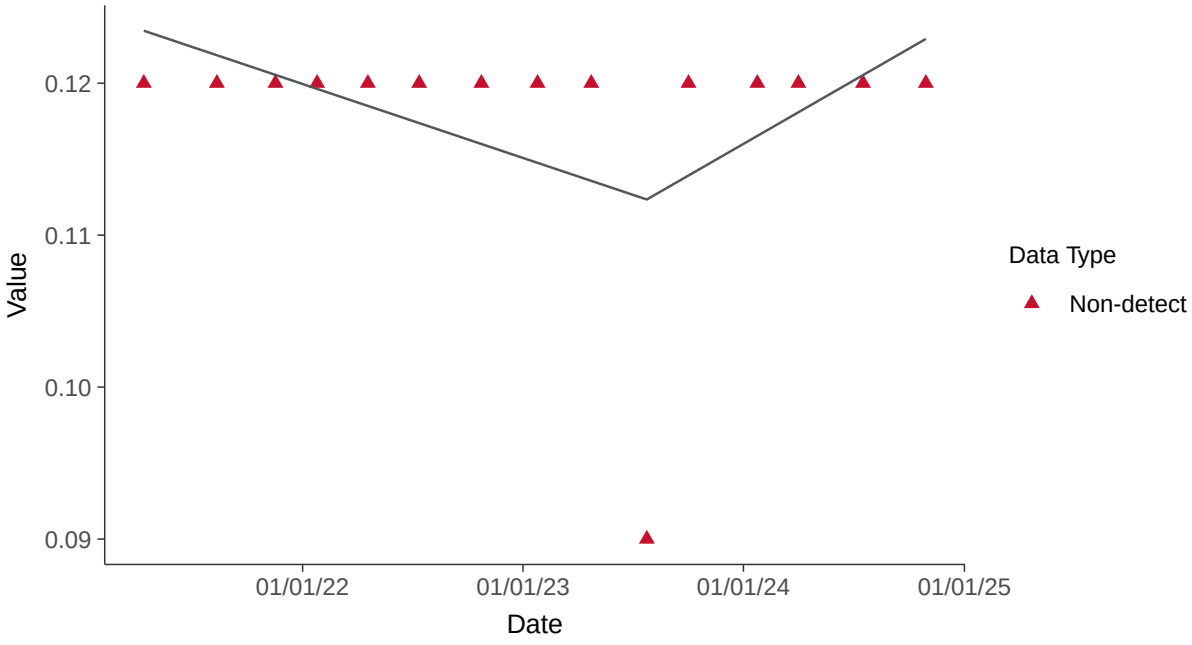
Boxplot by Season

Mercury, MW-11D (ug/L)



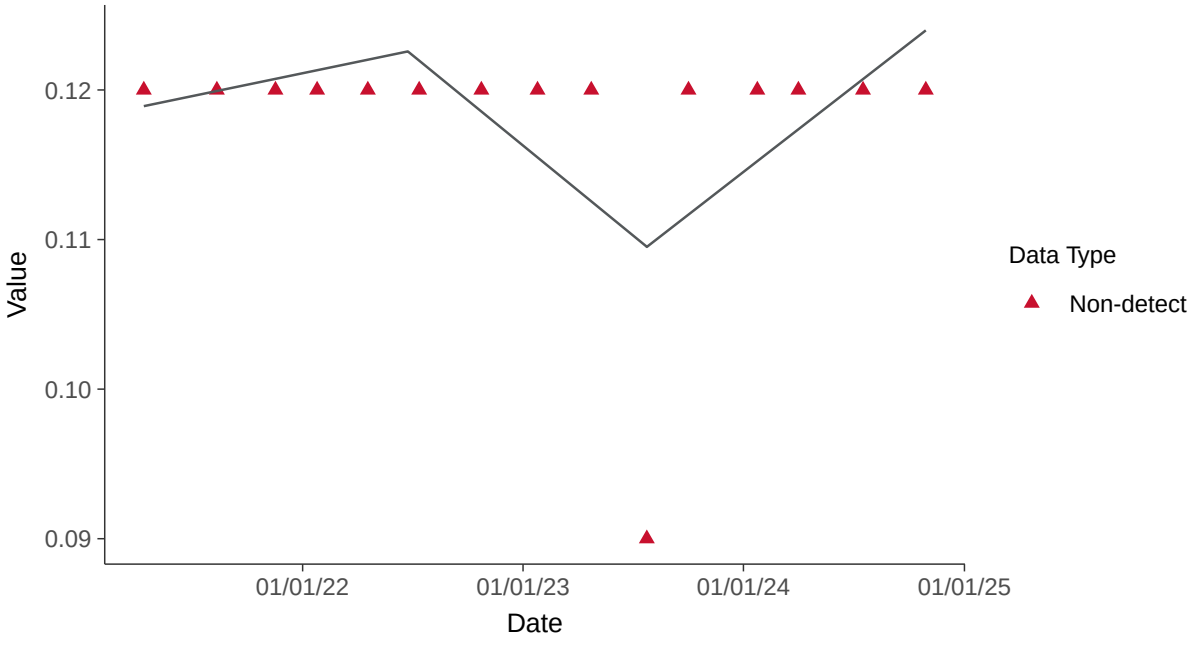
Trend Regression: Piecewise Linear-Linear

Mercury, MW-11D (ug/L)



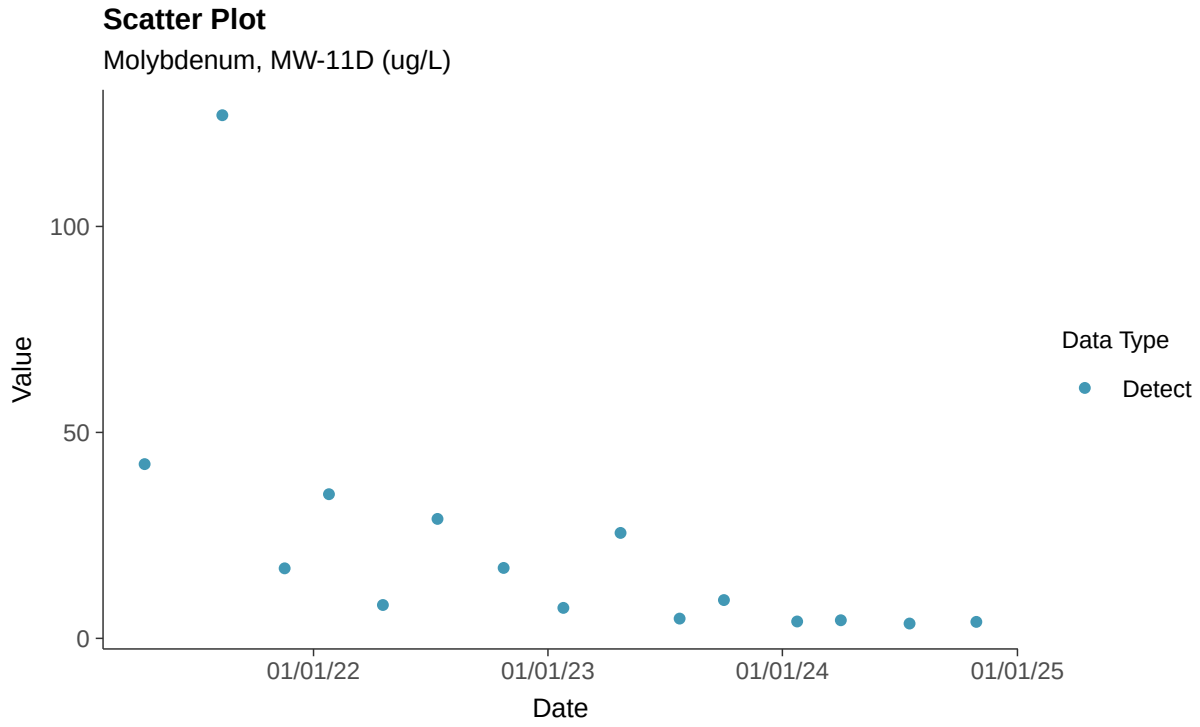
Trend Regression: Piecewise Linear-Linear-Linear

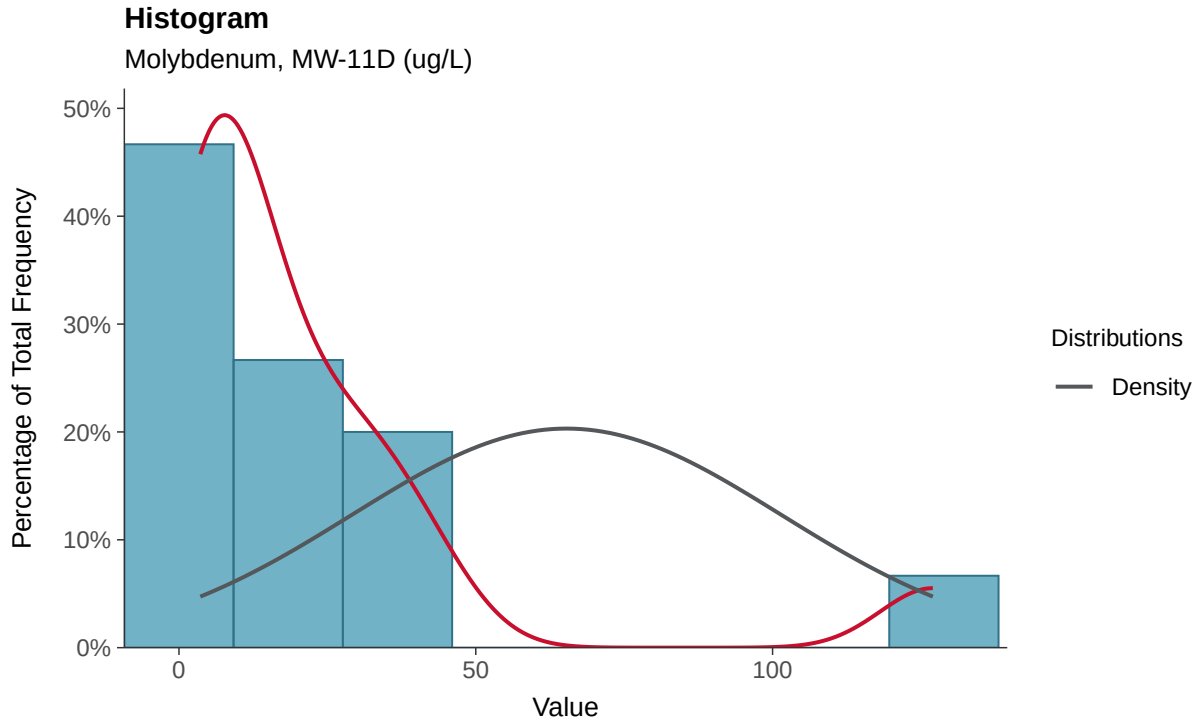
Mercury, MW-11D (ug/L)



App. IV: Molybdenum, MW-11D

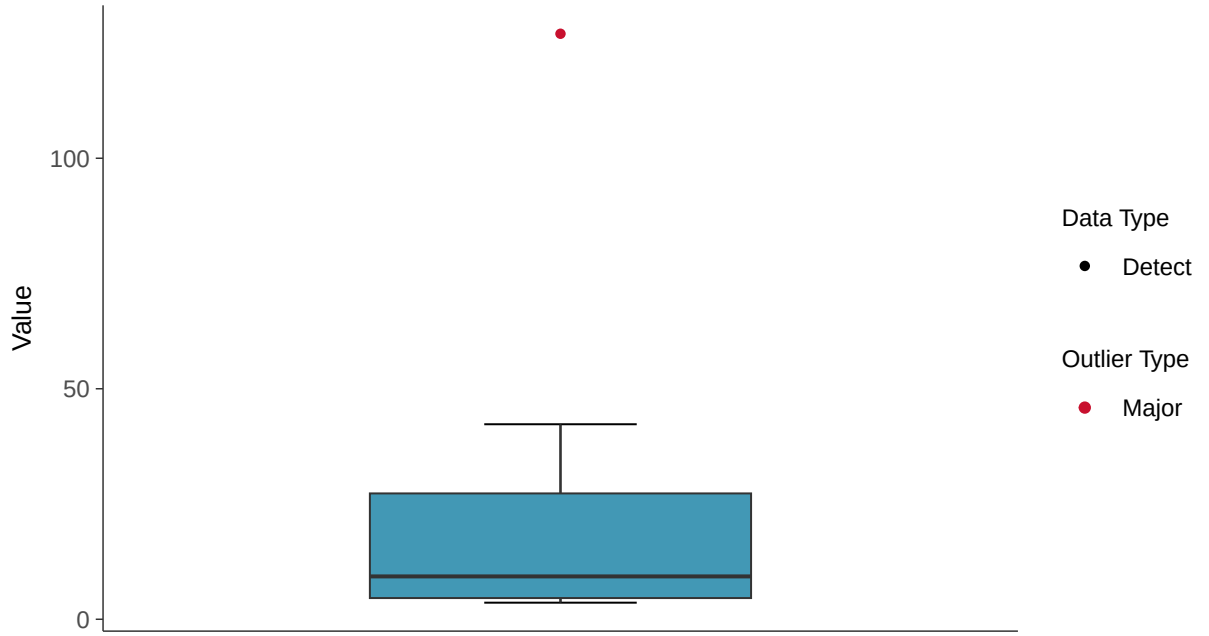
ID: 11_03_116





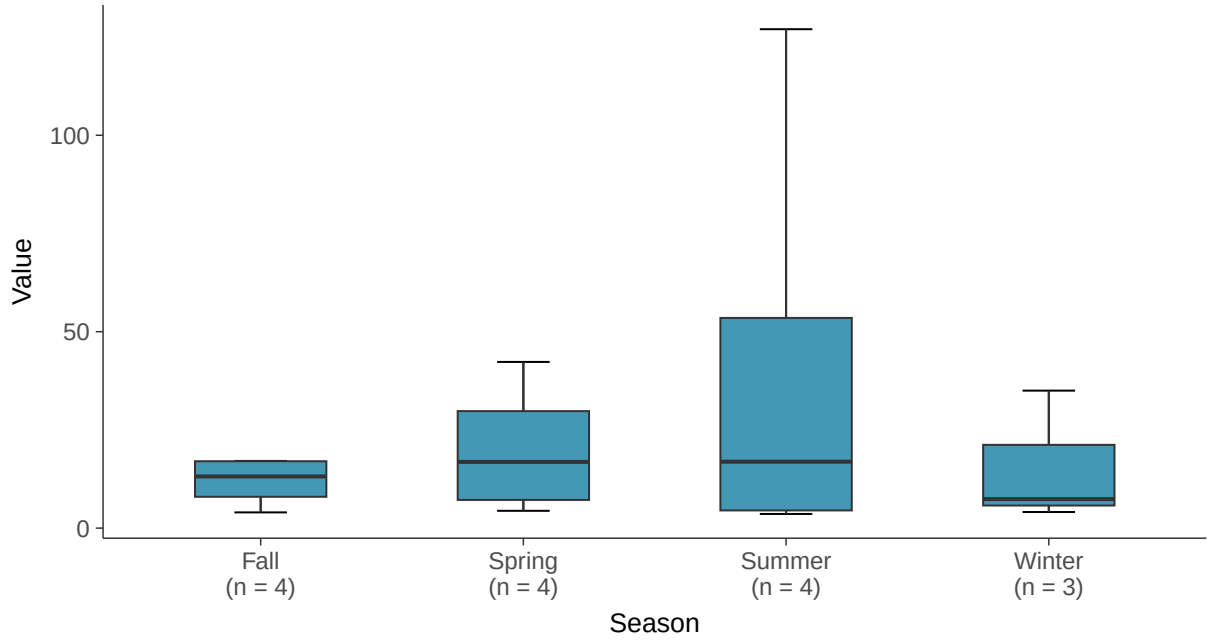
Boxplot

Molybdenum, MW-11D (ug/L)



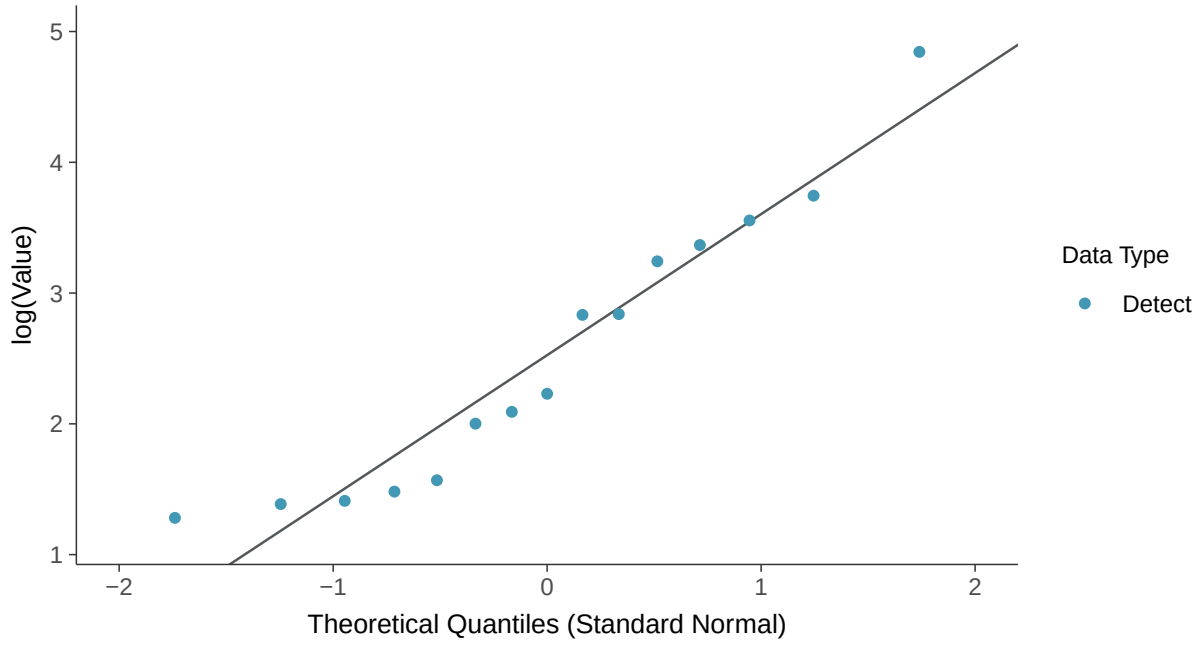
Boxplot by Season

Molybdenum, MW-11D (ug/L)



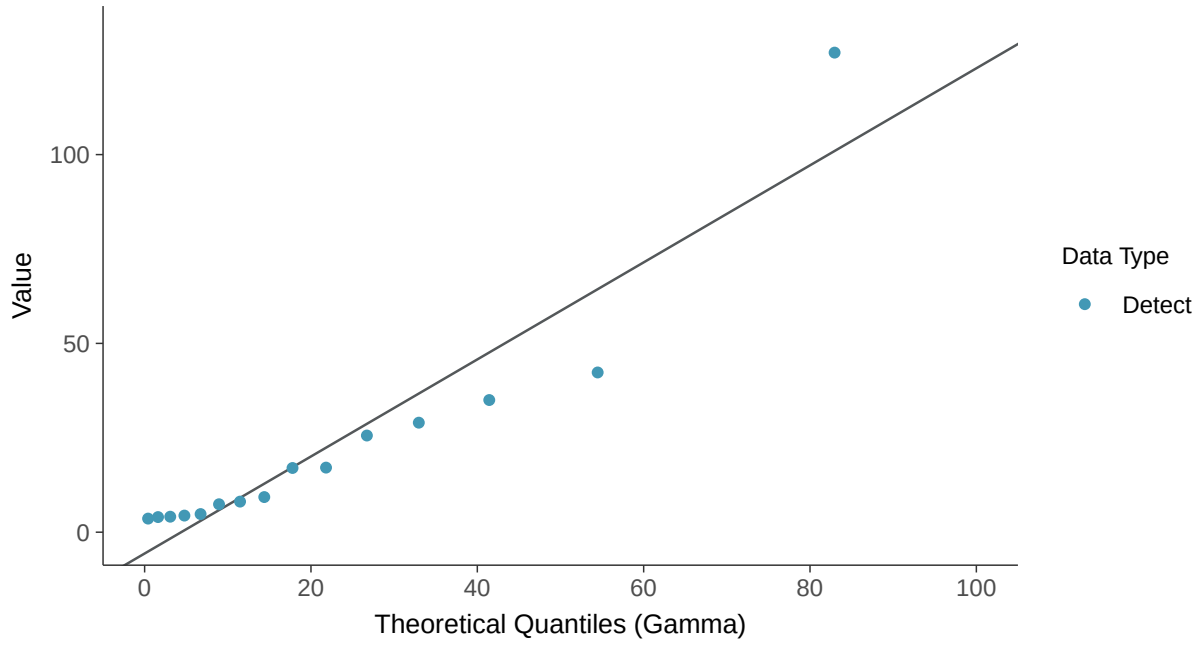
Lognormal Q-Q plot

Molybdenum, MW-11D (ug/L)



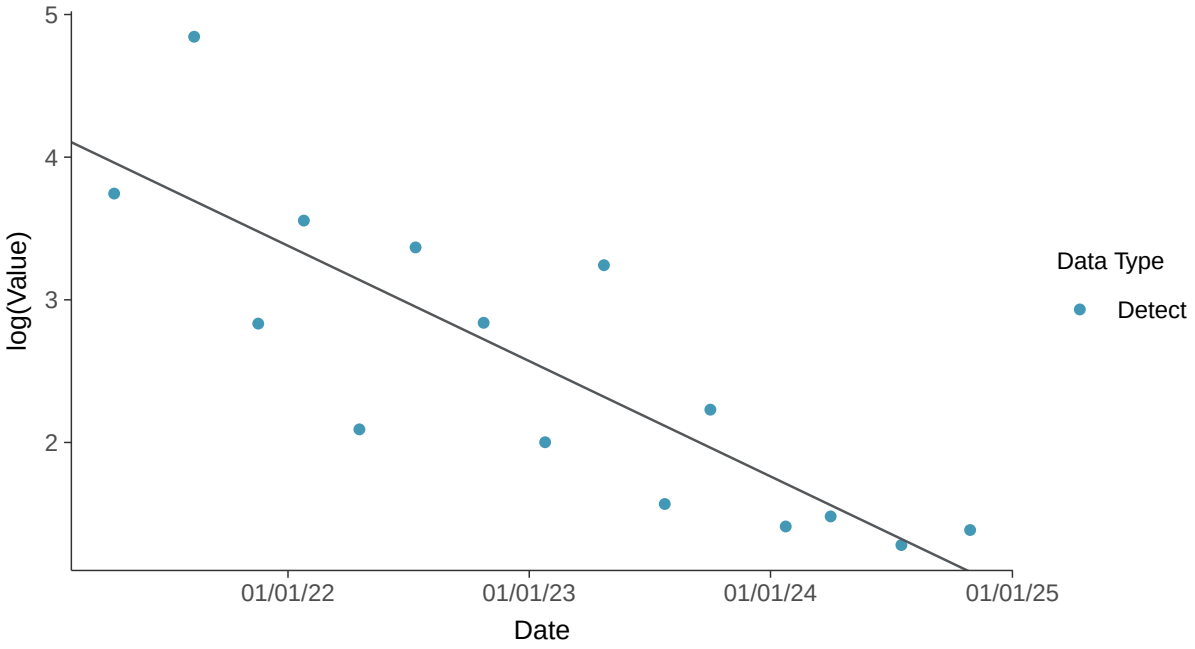
Gamma Q-Q plot

Molybdenum, MW-11D (ug/L)



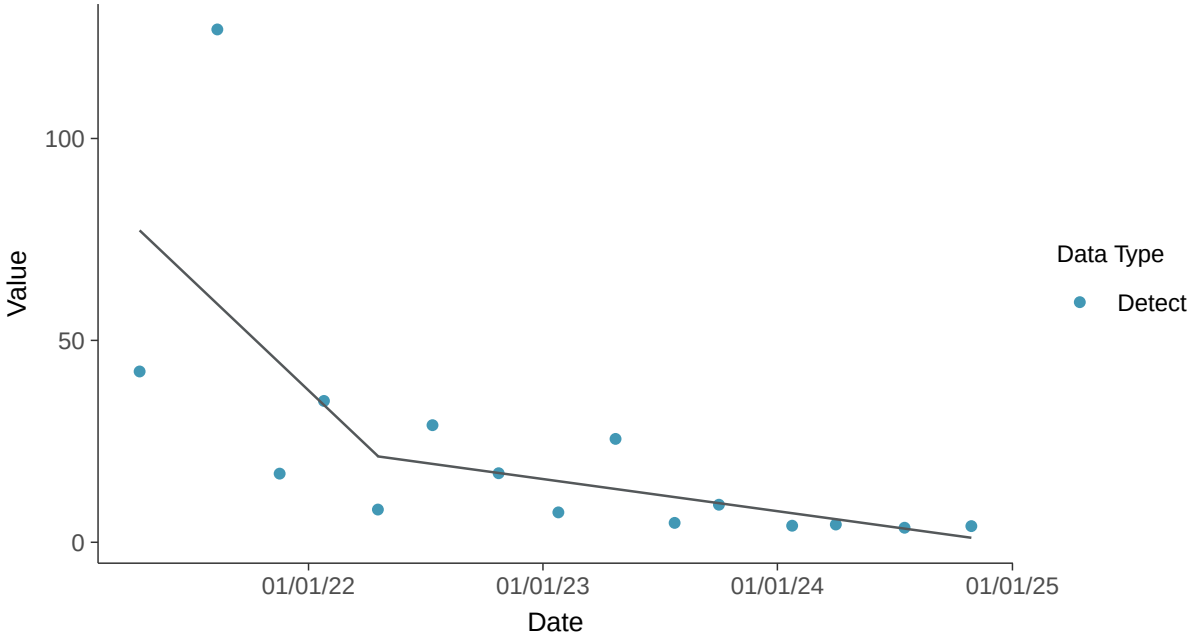
Trend Regression: Lognormal MLE

Molybdenum, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear

Molybdenum, MW-11D (ug/L)

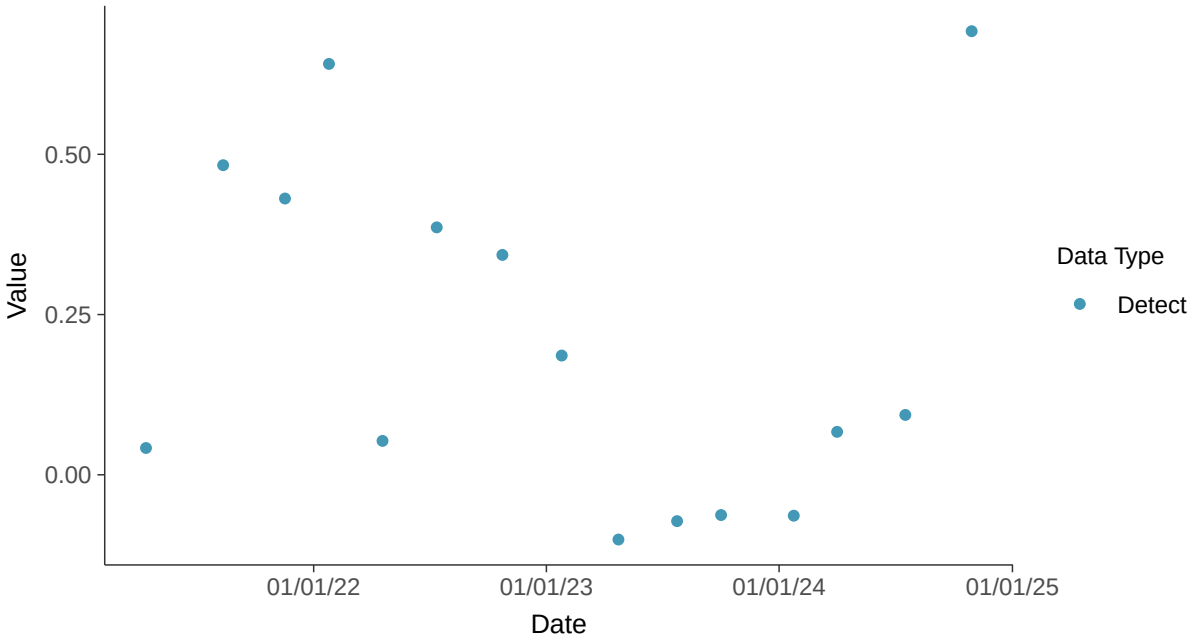


App. IV: Radium-226, MW-11D

ID: 11_03_119

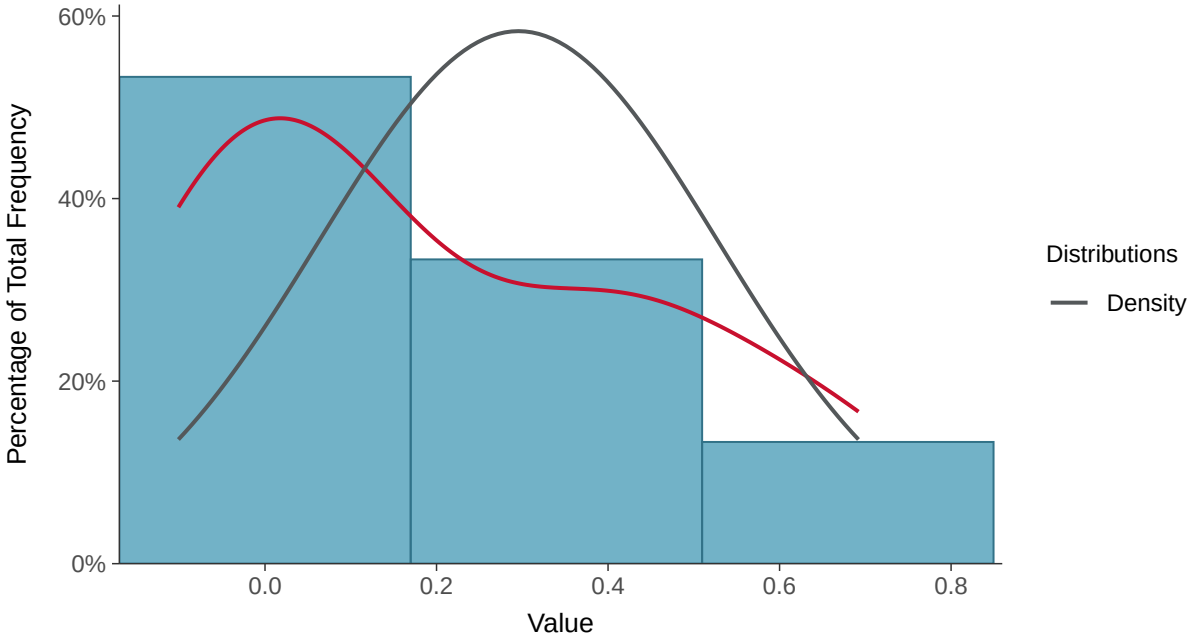
Scatter Plot

Radium-226, MW-11D (pCi/L)



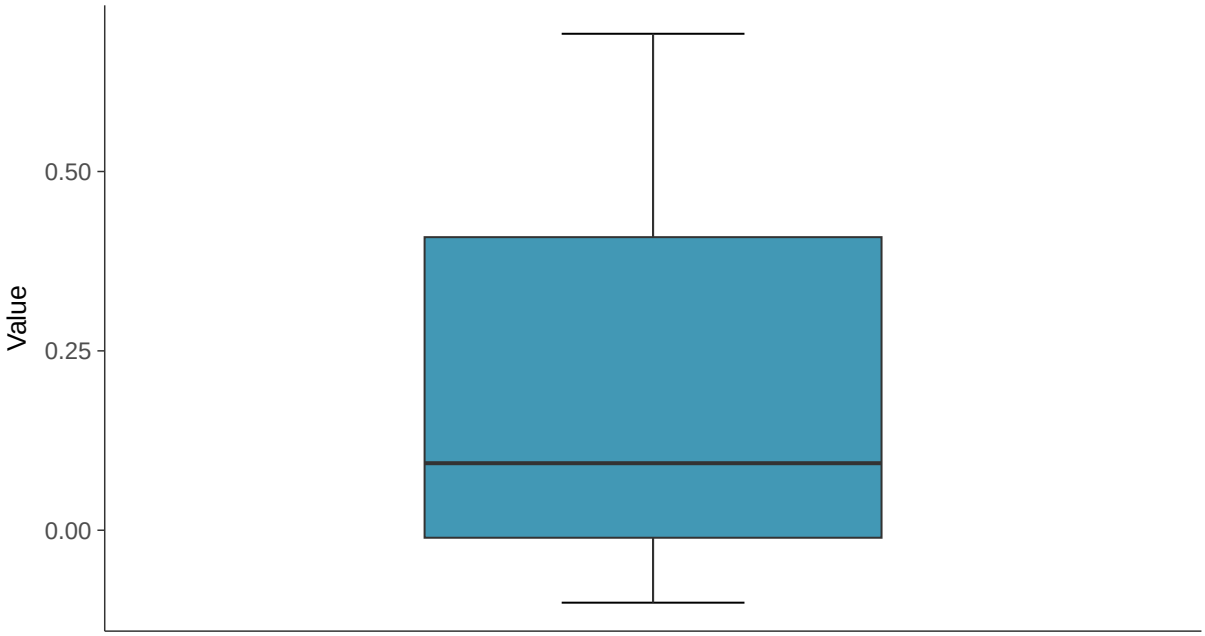
Histogram

Radium-226, MW-11D (pCi/L)



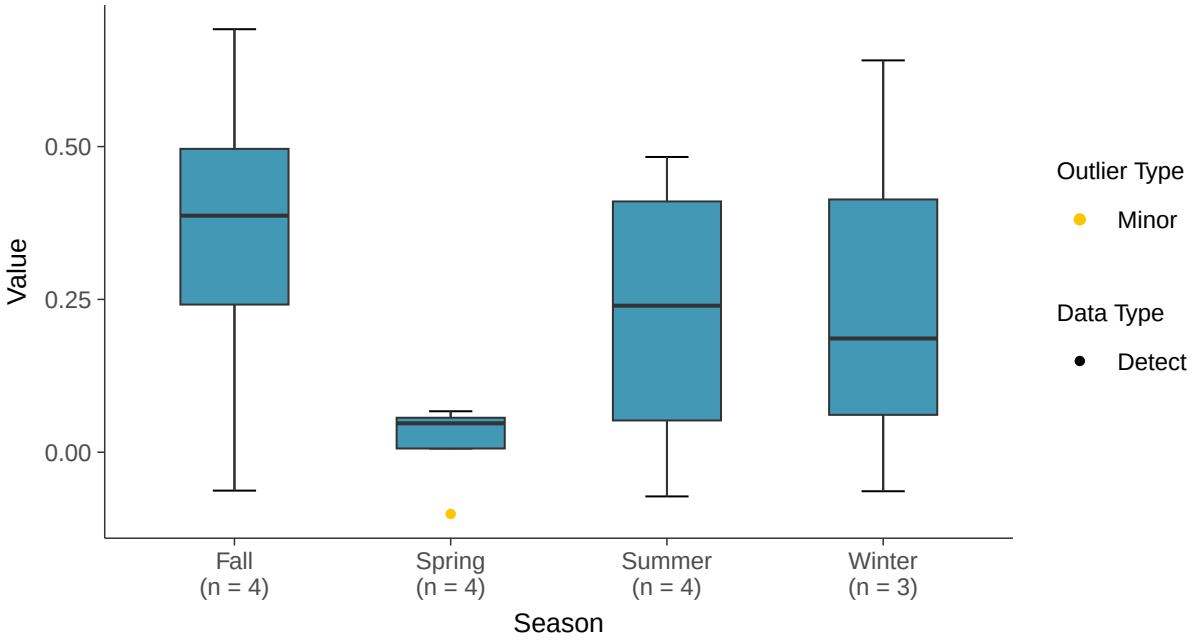
Boxplot

Radium-226, MW-11D (pCi/L)



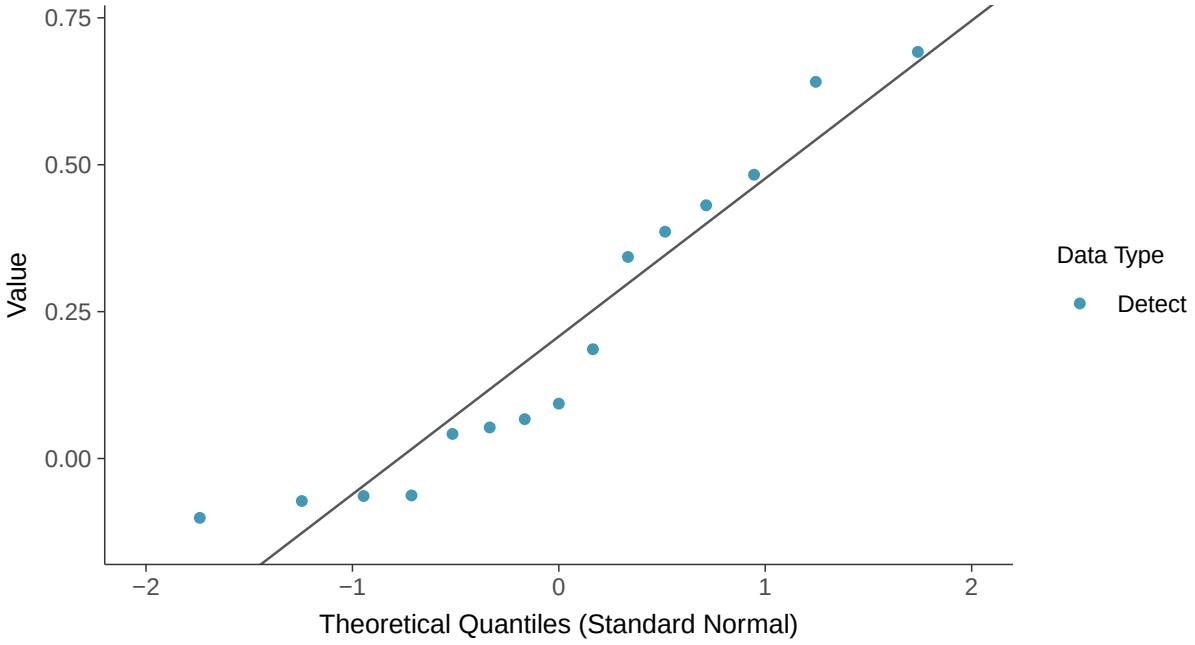
Boxplot by Season

Radium-226, MW-11D (pCi/L)



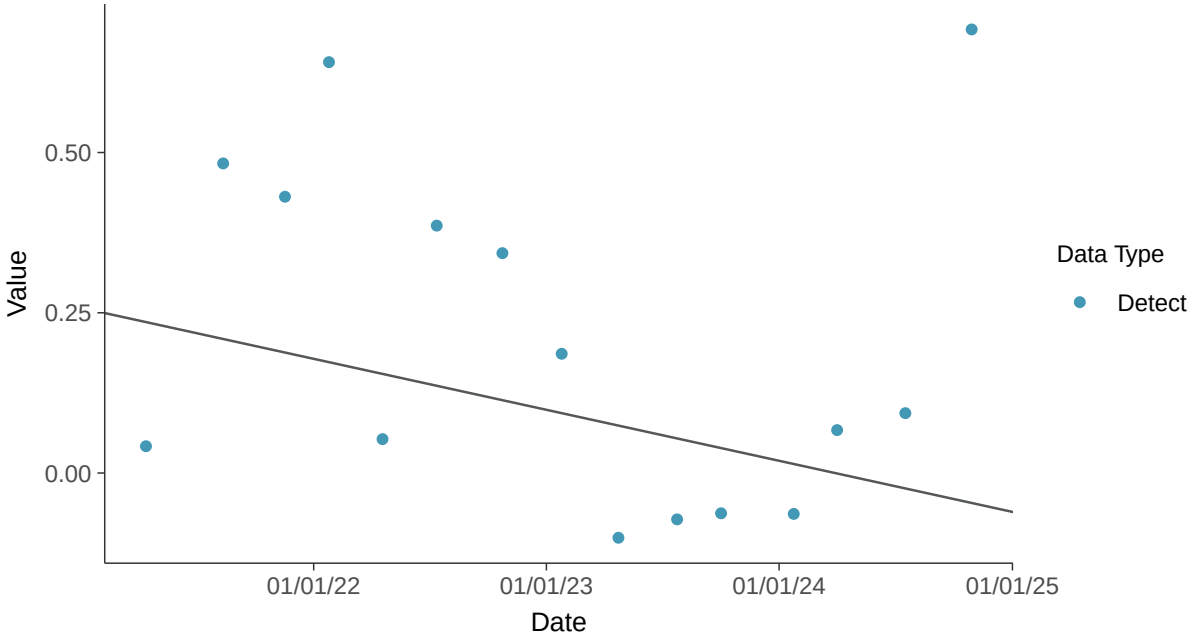
Normal Q-Q plot

Radium-226, MW-11D (pCi/L)



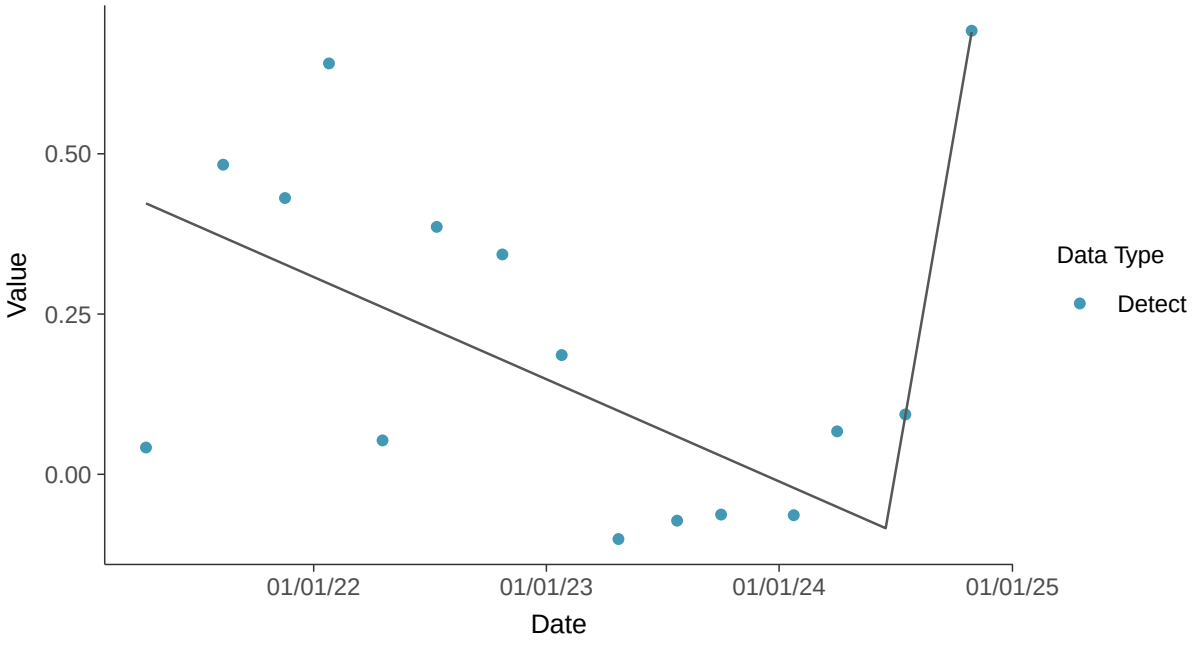
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-226, MW-11D (pCi/L)



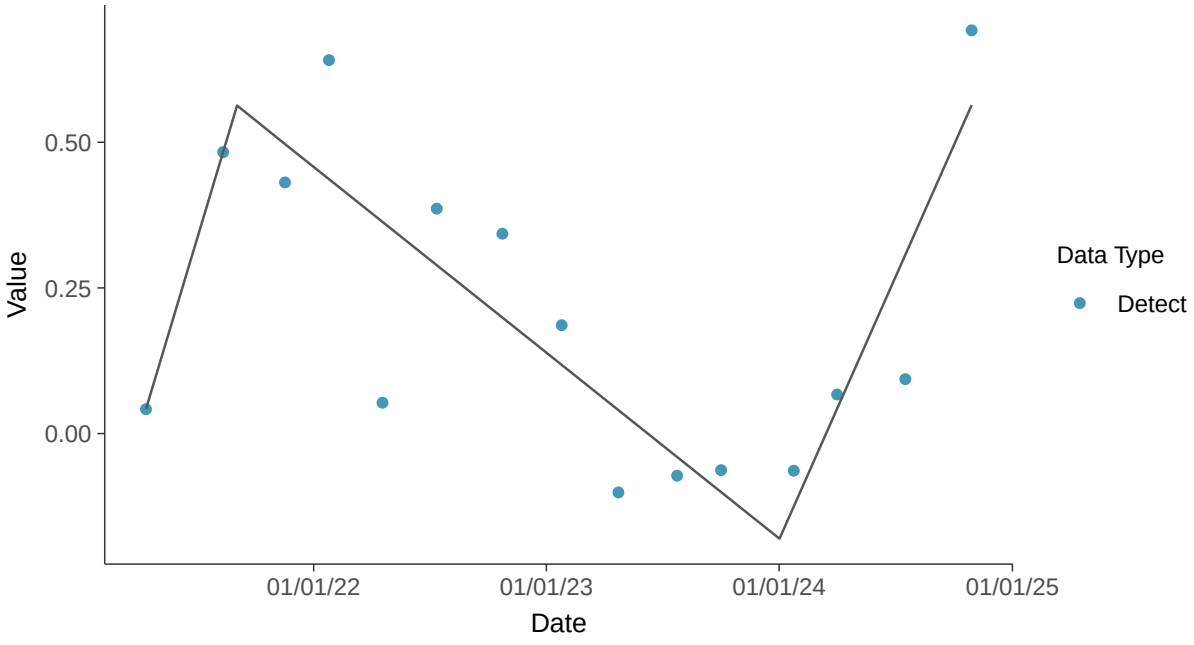
Trend Regression: Piecewise Linear-Linear

Radium-226, MW-11D (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Radium-226, MW-11D (pCi/L)

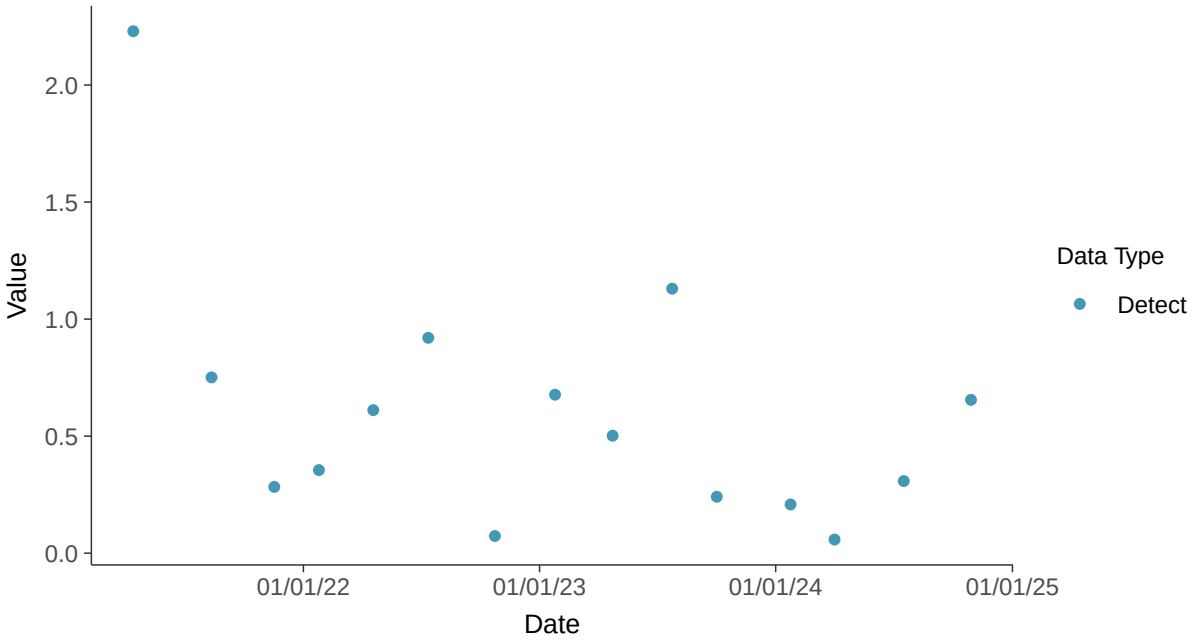


App. IV: Radium-228, MW-11D

ID: 11_03_120

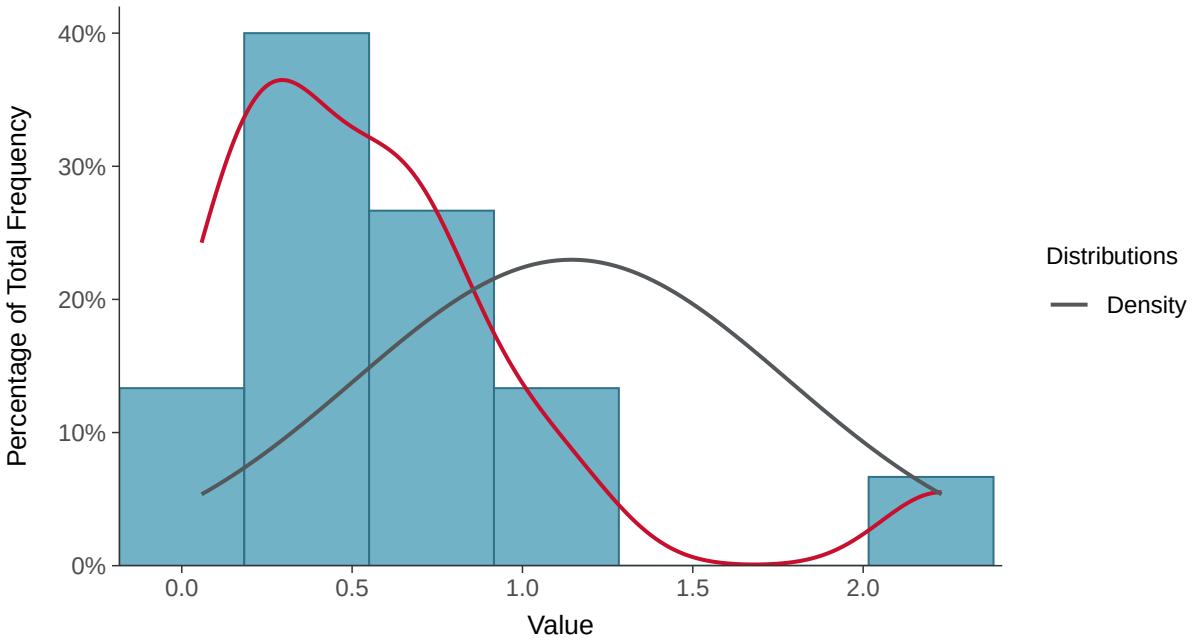
Scatter Plot

Radium-228, MW-11D (pCi/L)



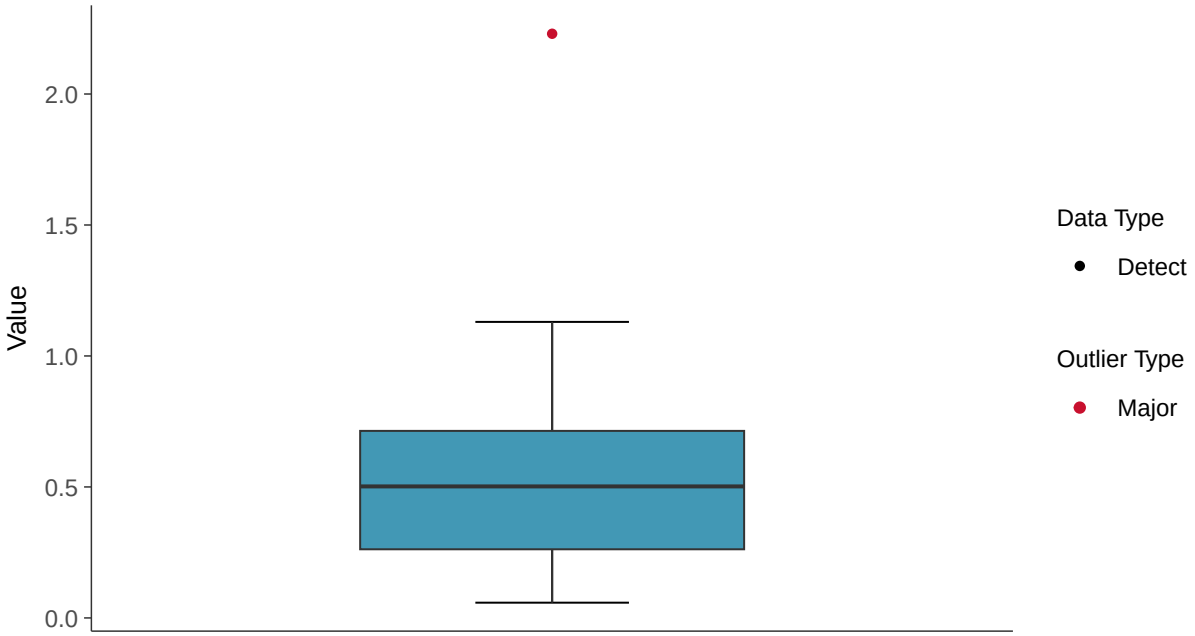
Histogram

Radium-228, MW-11D (pCi/L)



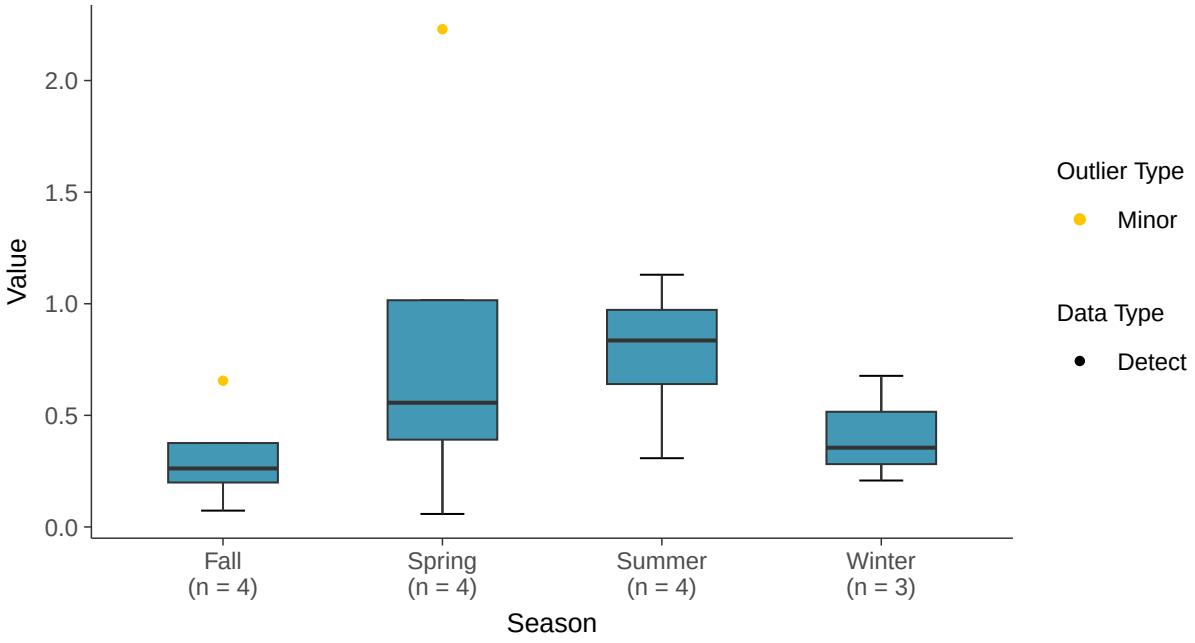
Boxplot

Radium-228, MW-11D (pCi/L)



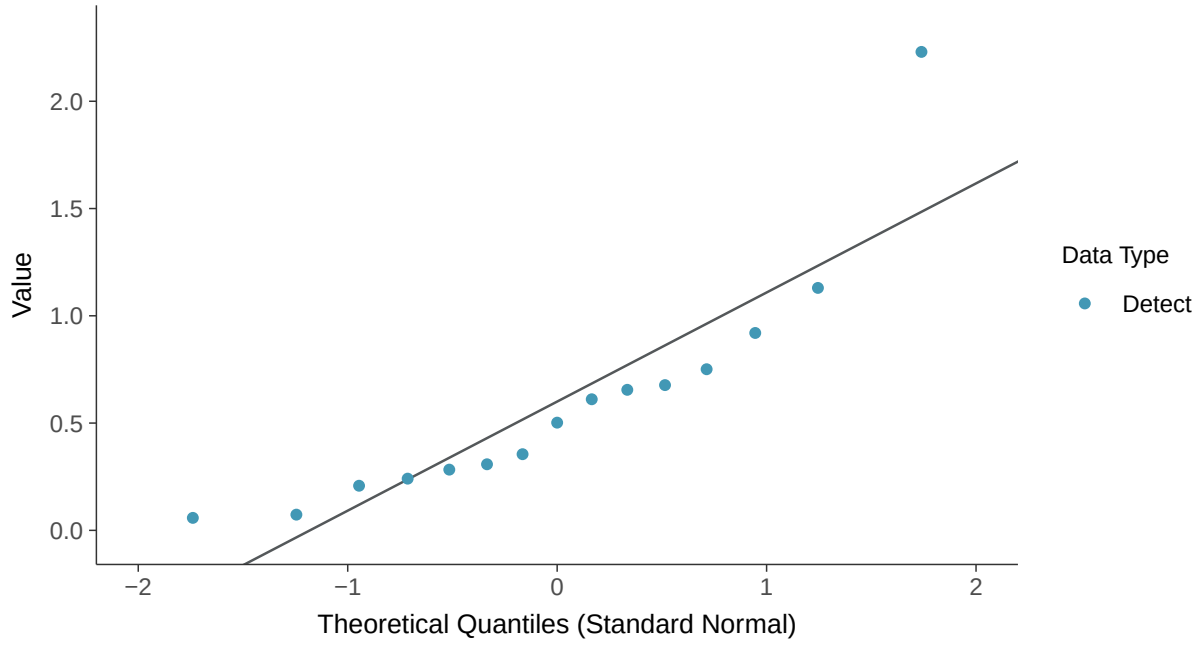
Boxplot by Season

Radium-228, MW-11D (pCi/L)



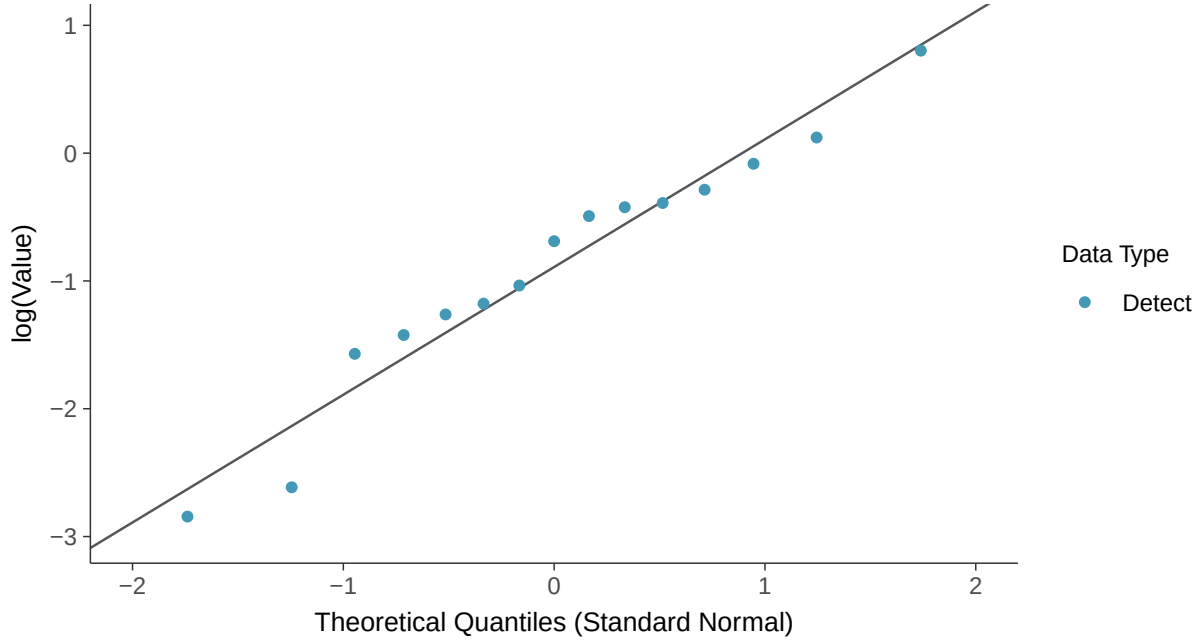
Normal Q-Q plot

Radium-228, MW-11D (pCi/L)



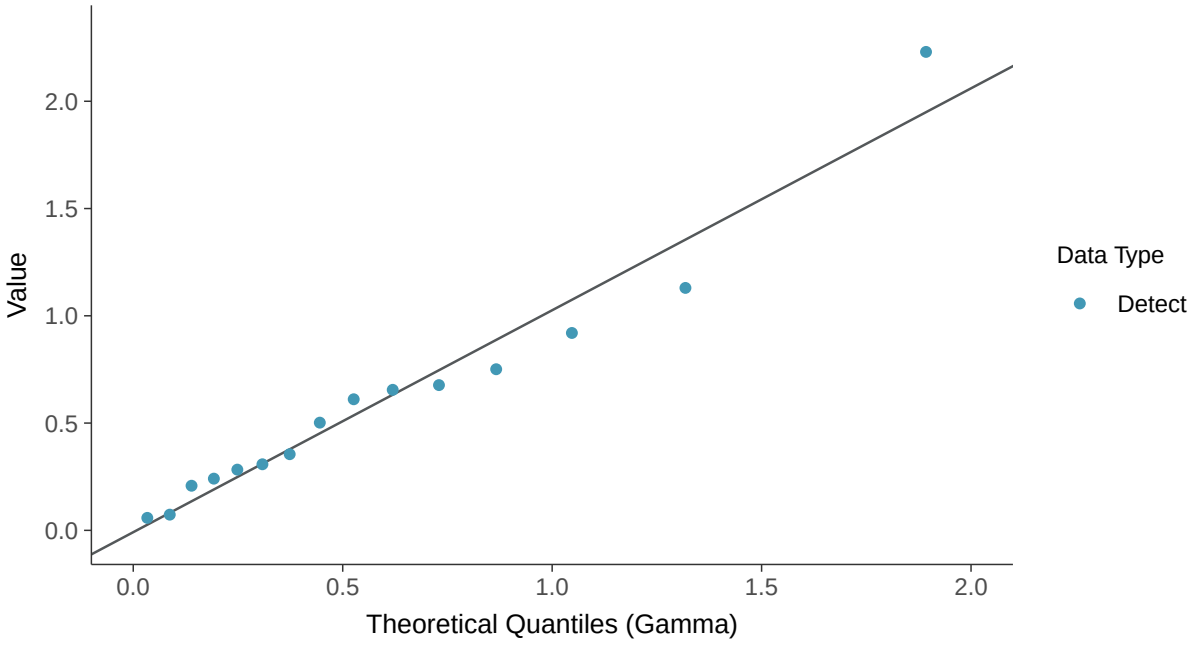
Lognormal Q-Q plot

Radium-228, MW-11D (pCi/L)



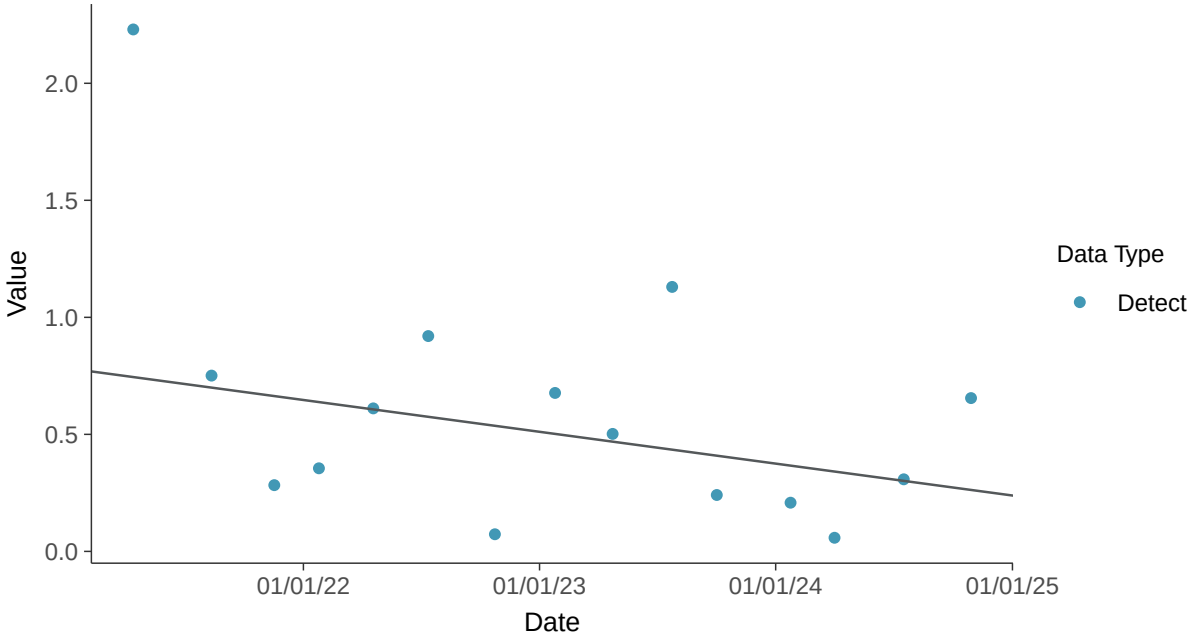
Gamma Q-Q plot

Radium-228, MW-11D (pCi/L)



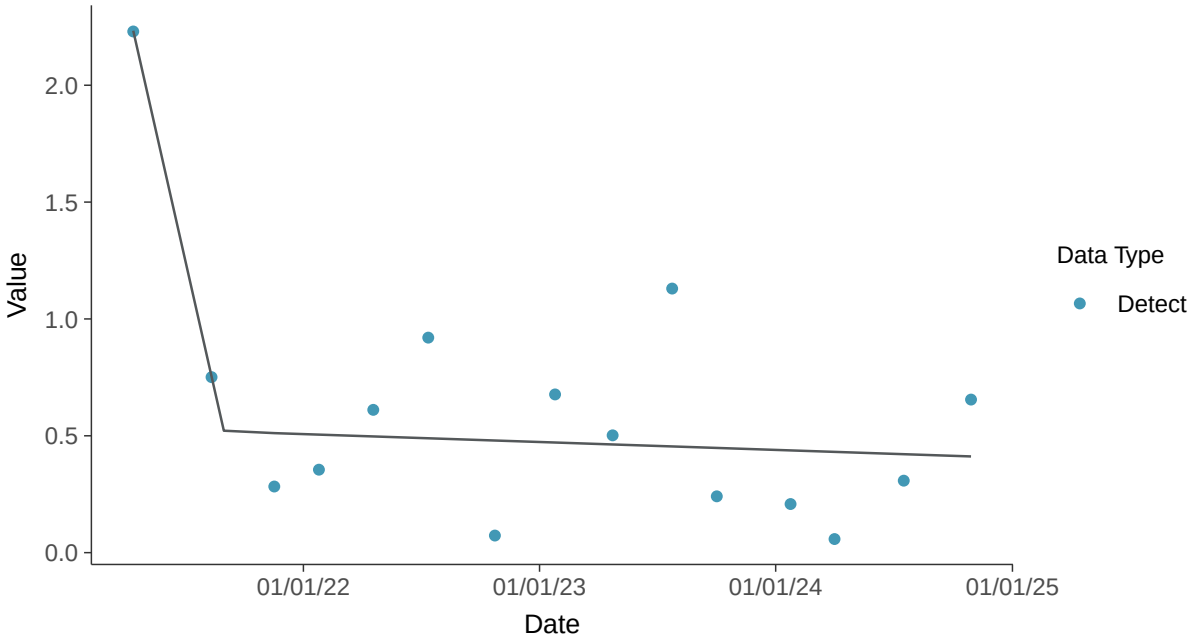
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Radium-228, MW-11D (pCi/L)



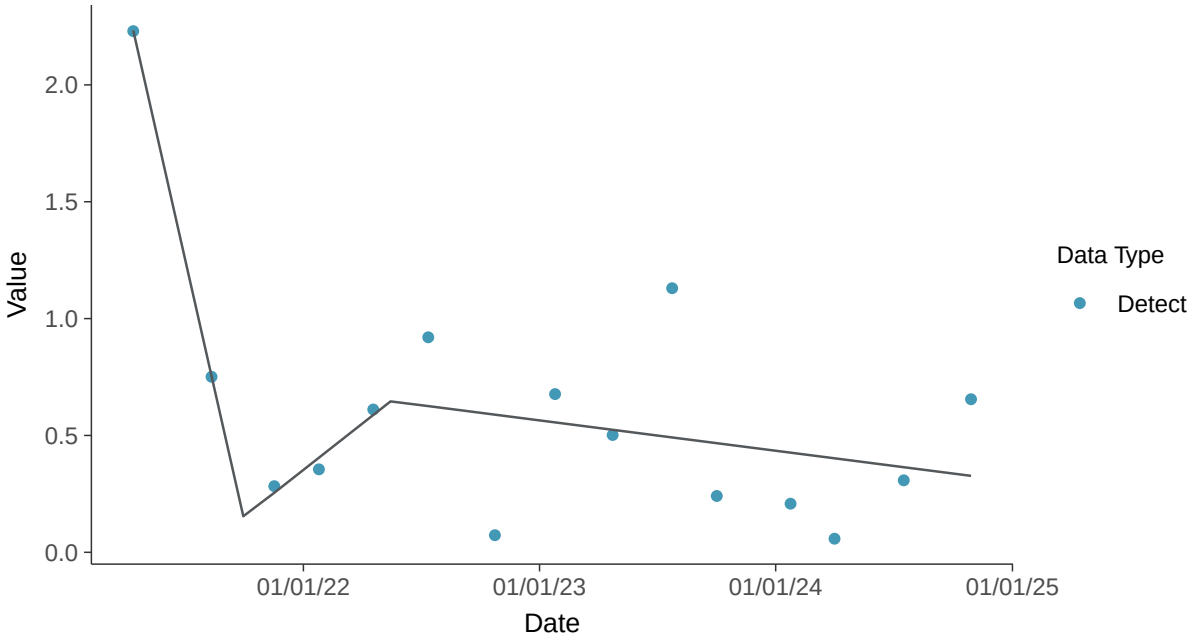
Trend Regression: Piecewise Linear-Linear

Radium-228, MW-11D (pCi/L)



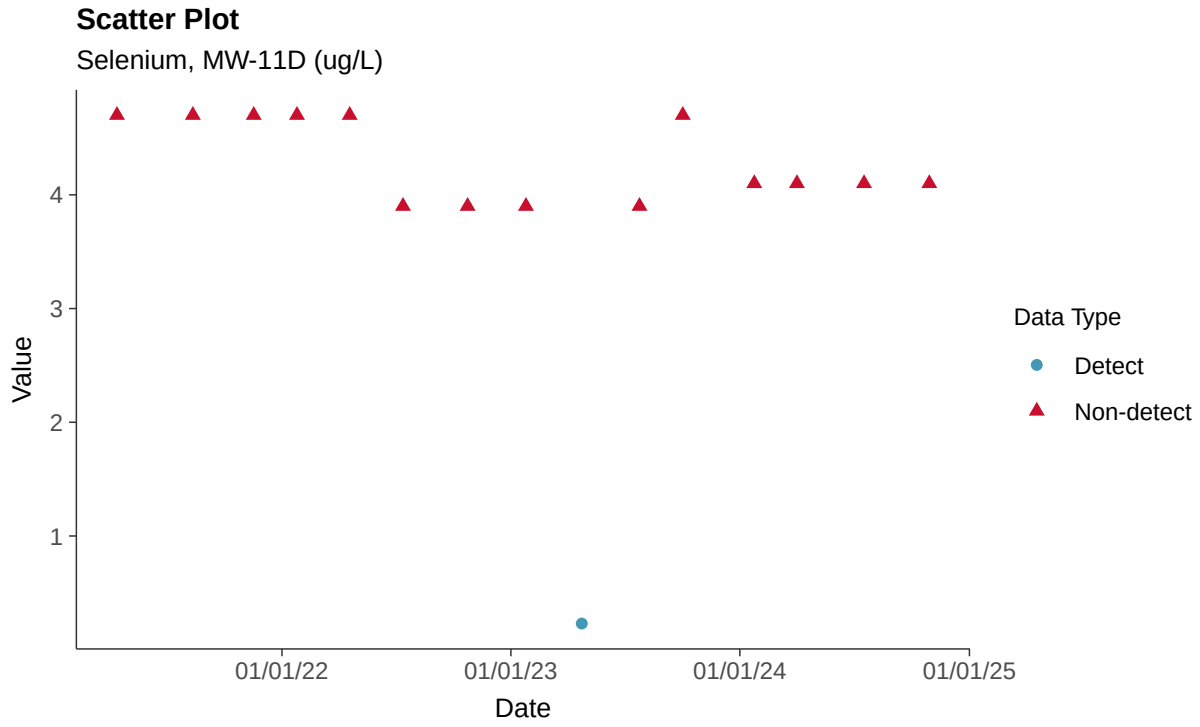
Trend Regression: Piecewise Linear-Linear-Linear

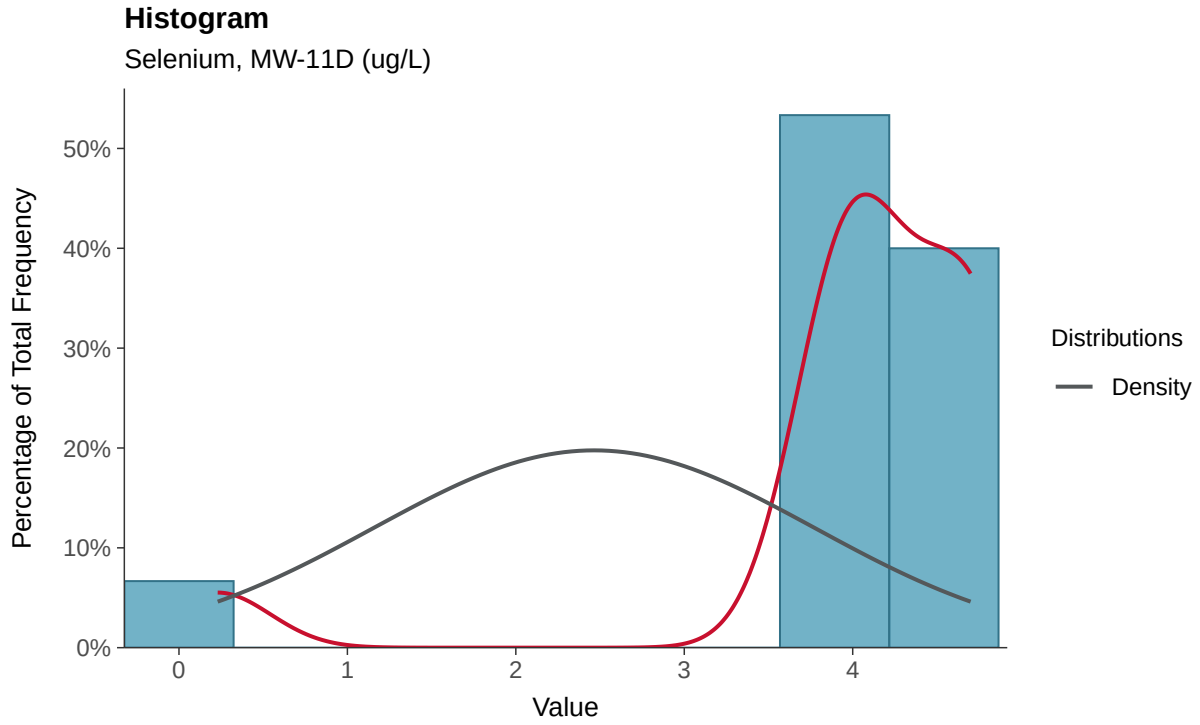
Radium-228, MW-11D (pCi/L)



App. IV: Selenium, MW-11D

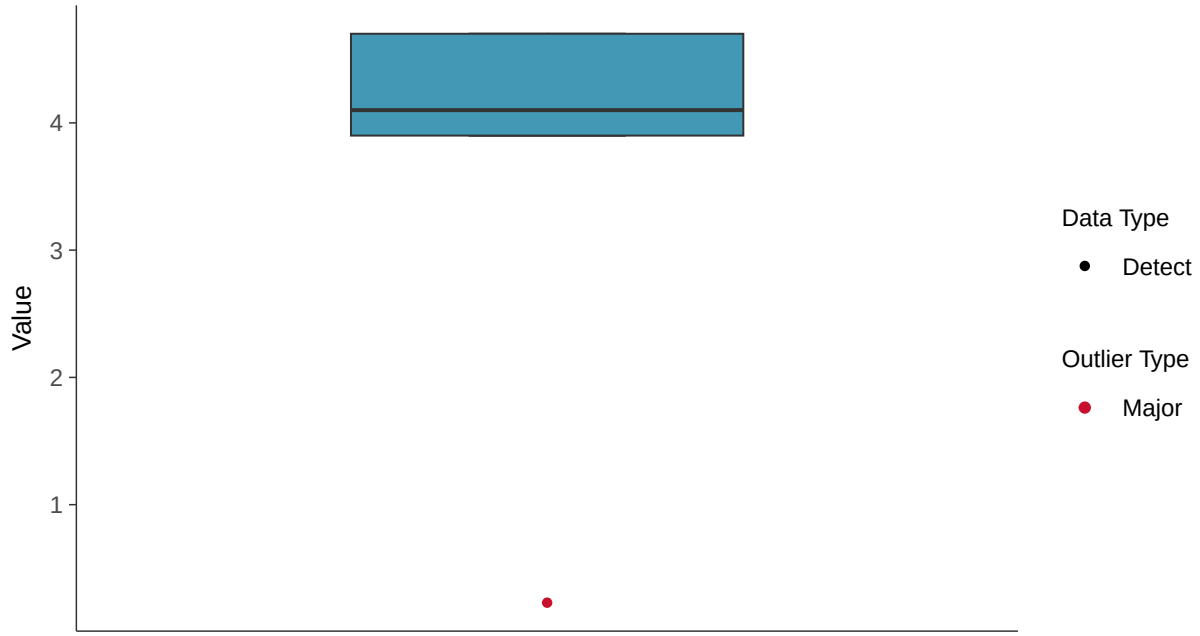
ID: 11_03_121





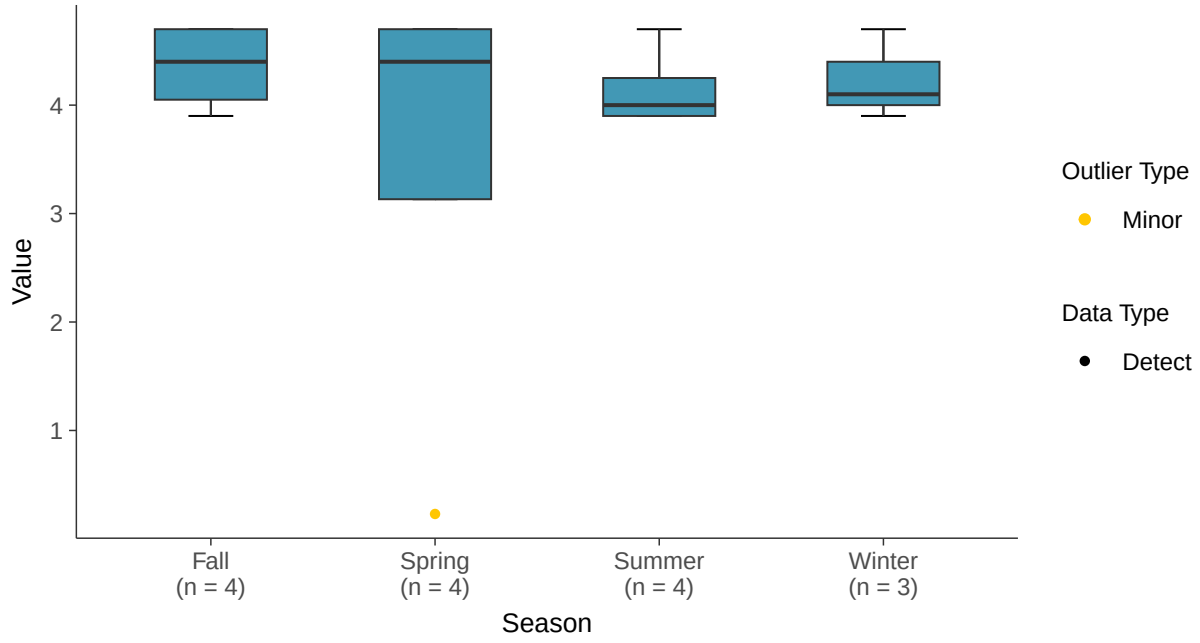
Boxplot

Selenium, MW-11D (ug/L)



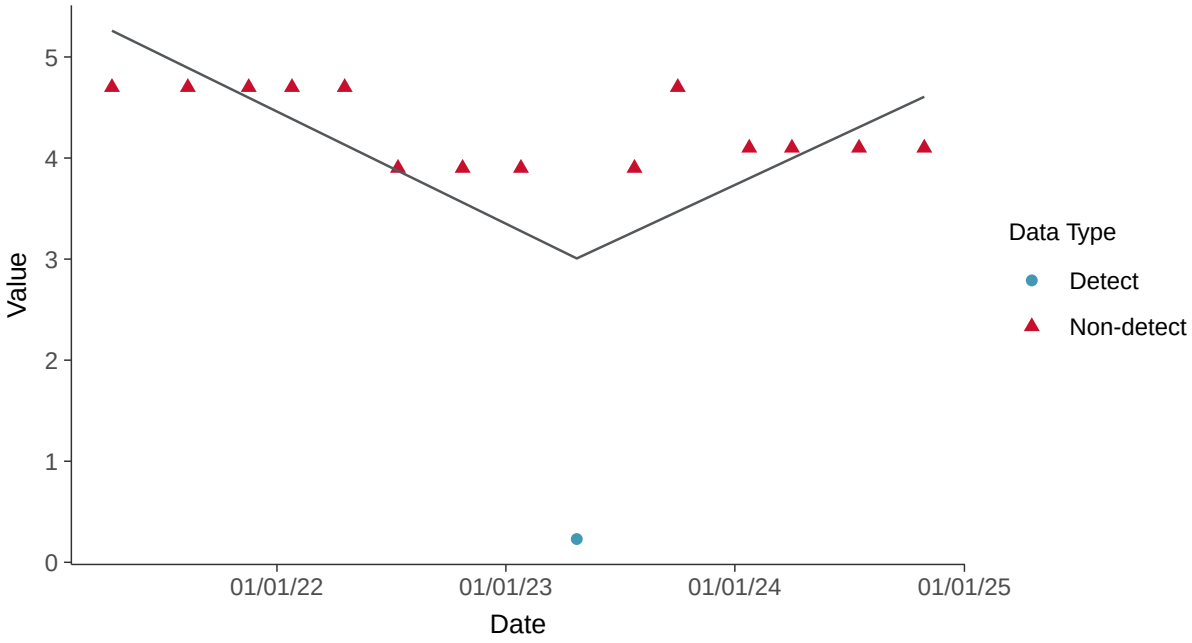
Boxplot by Season

Selenium, MW-11D (ug/L)



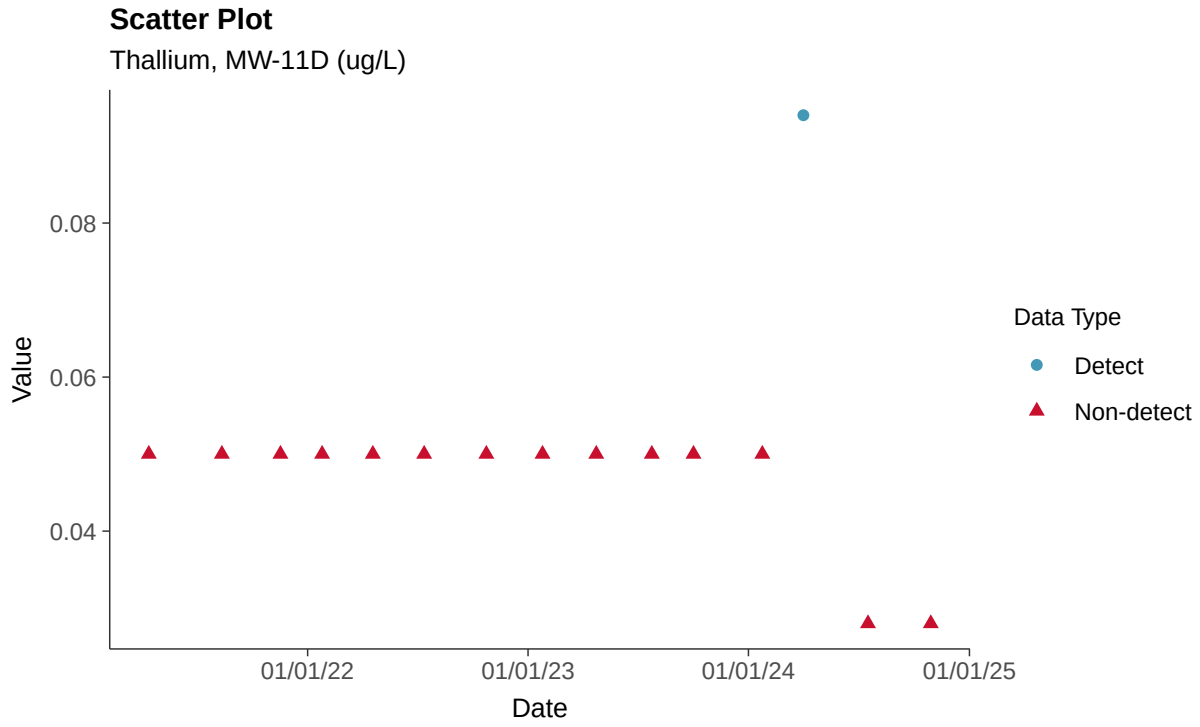
Trend Regression: Piecewise Linear-Linear

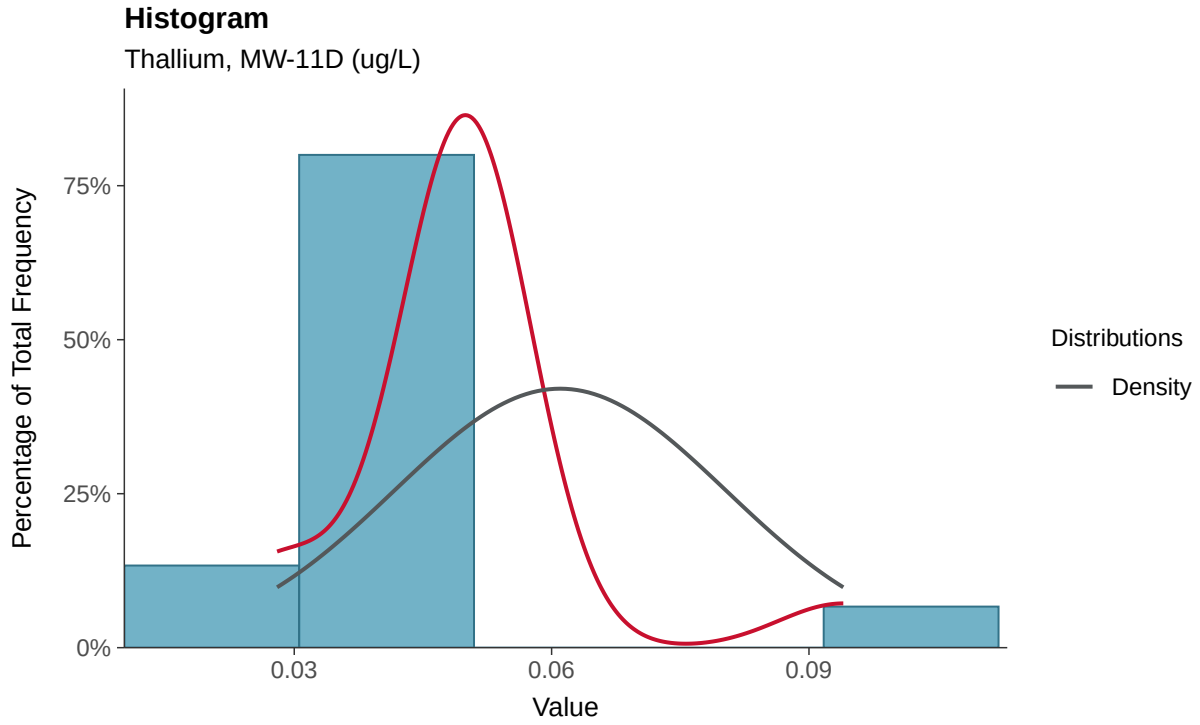
Selenium, MW-11D (ug/L)



App. IV: Thallium, MW-11D

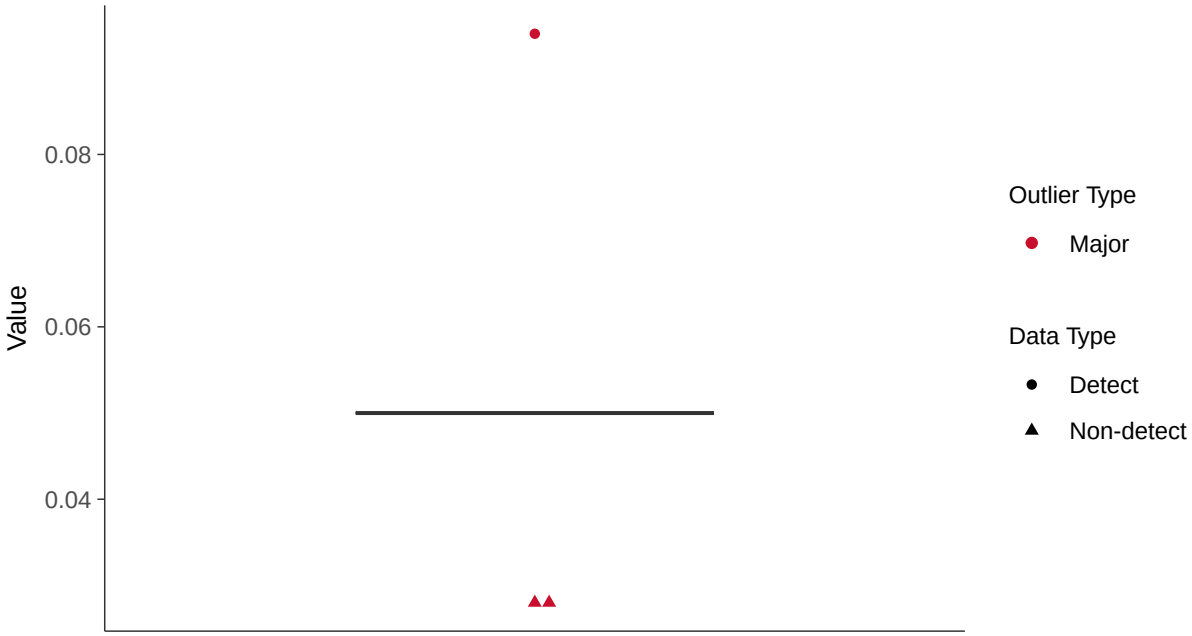
ID: 11_03_124





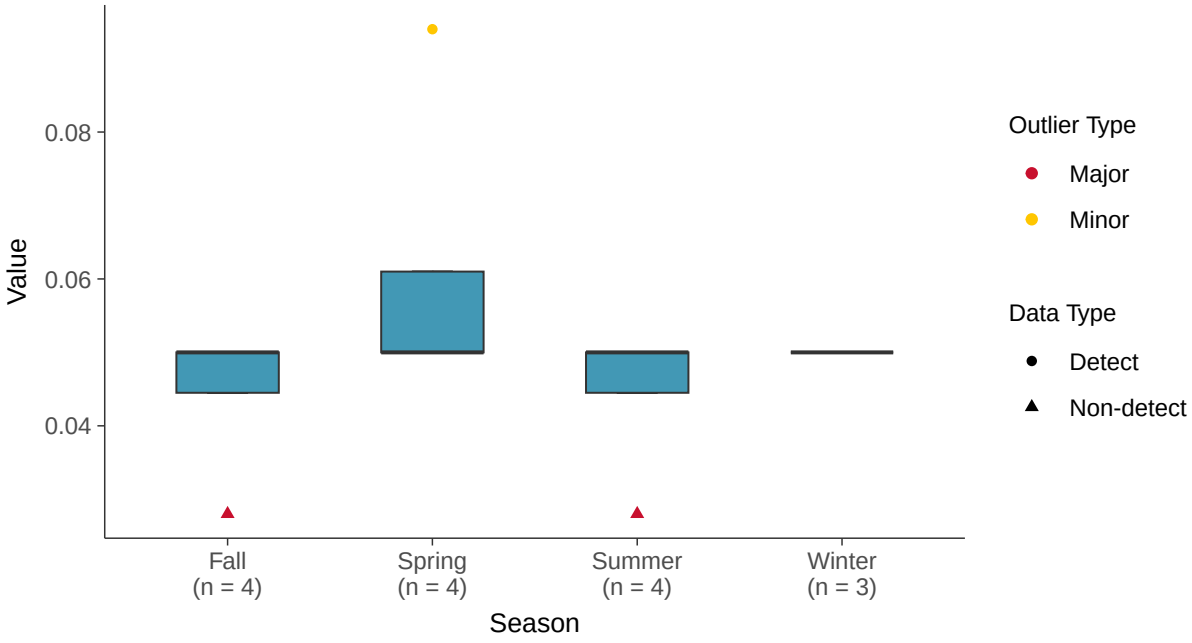
Boxplot

Thallium, MW-11D (ug/L)



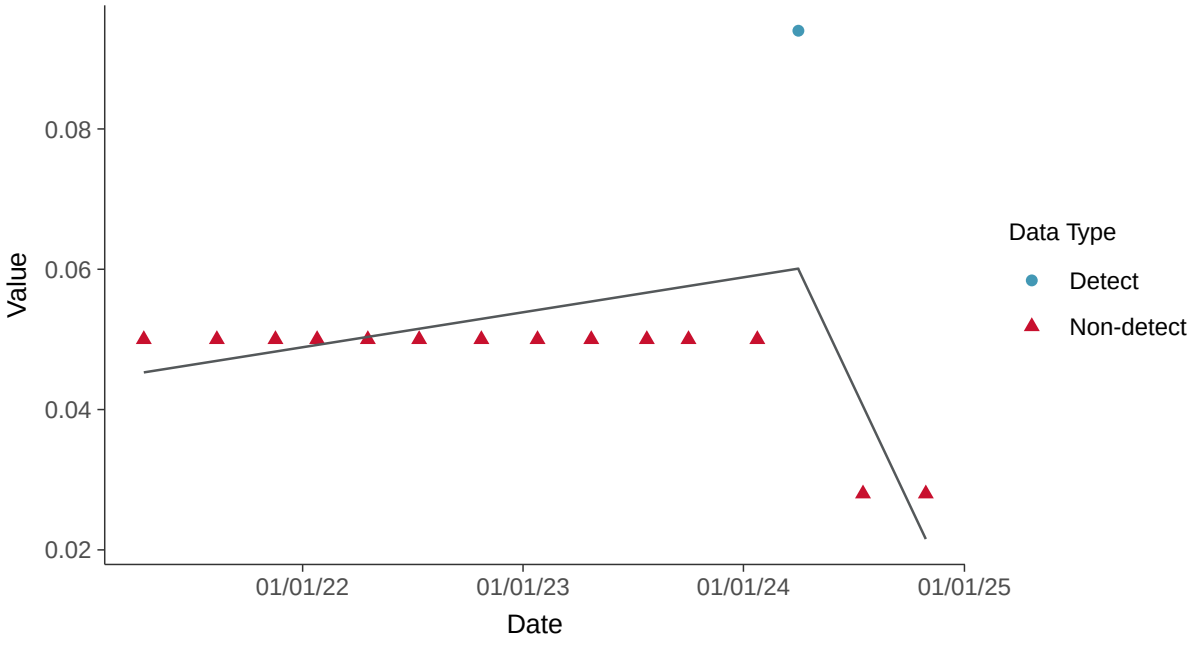
Boxplot by Season

Thallium, MW-11D (ug/L)



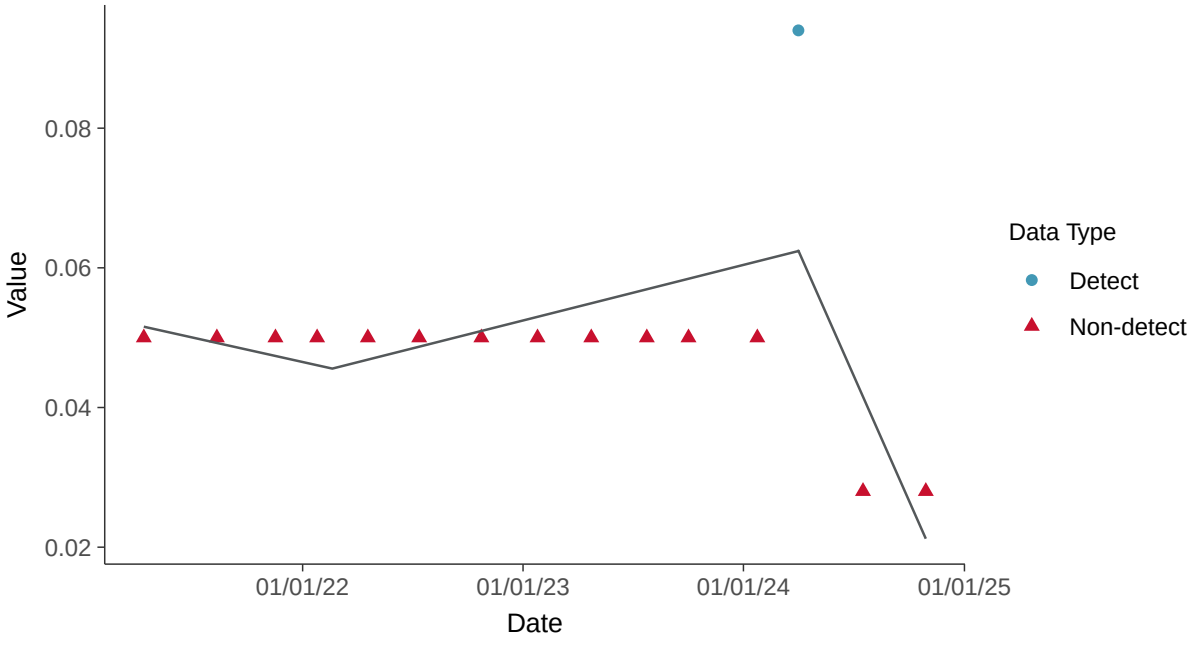
Trend Regression: Piecewise Linear-Linear

Thallium, MW-11D (ug/L)



Trend Regression: Piecewise Linear-Linear-Linear

Thallium, MW-11D (ug/L)

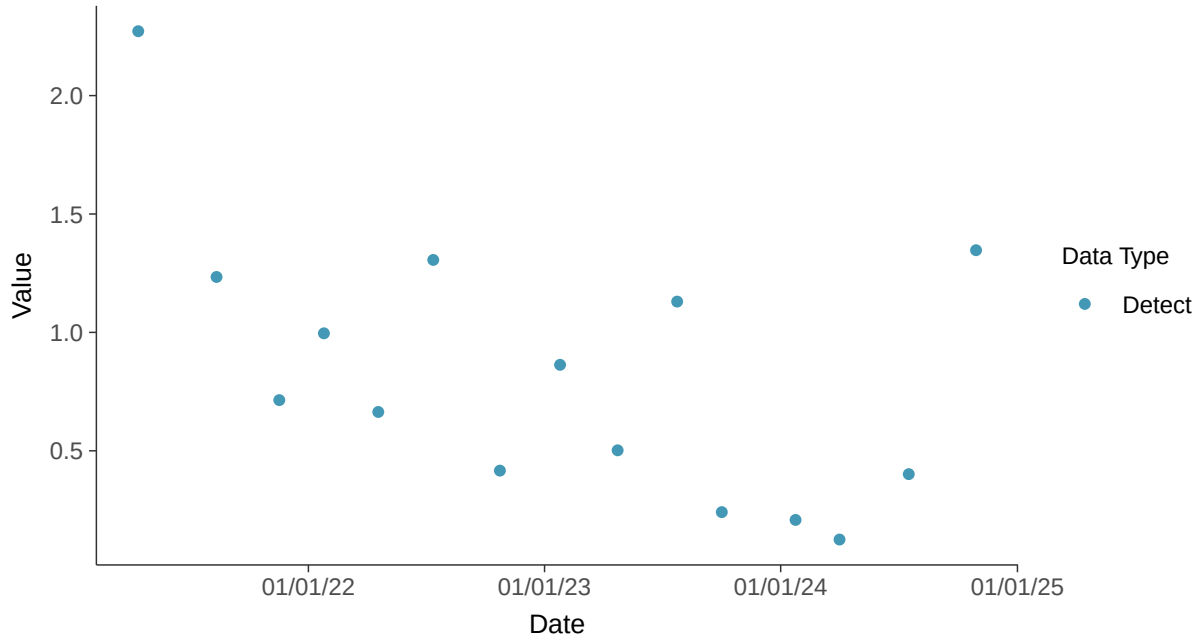


App. IV: Total Radium, MW-11D

ID: 11_03_126

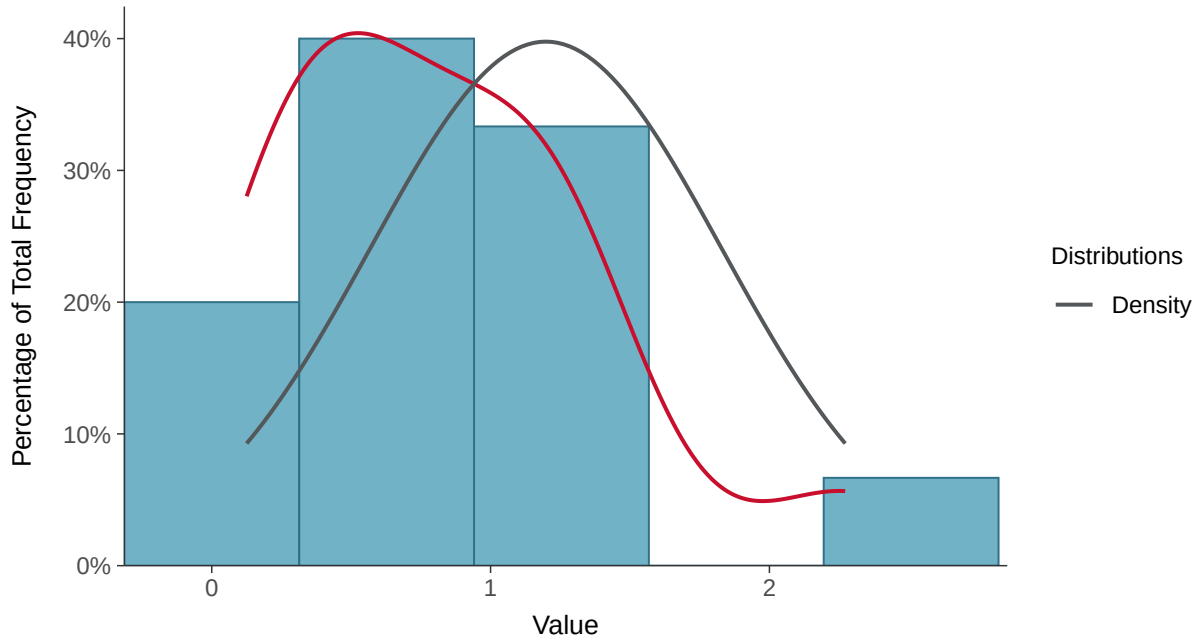
Scatter Plot

Total Radium, MW-11D (pCi/L)



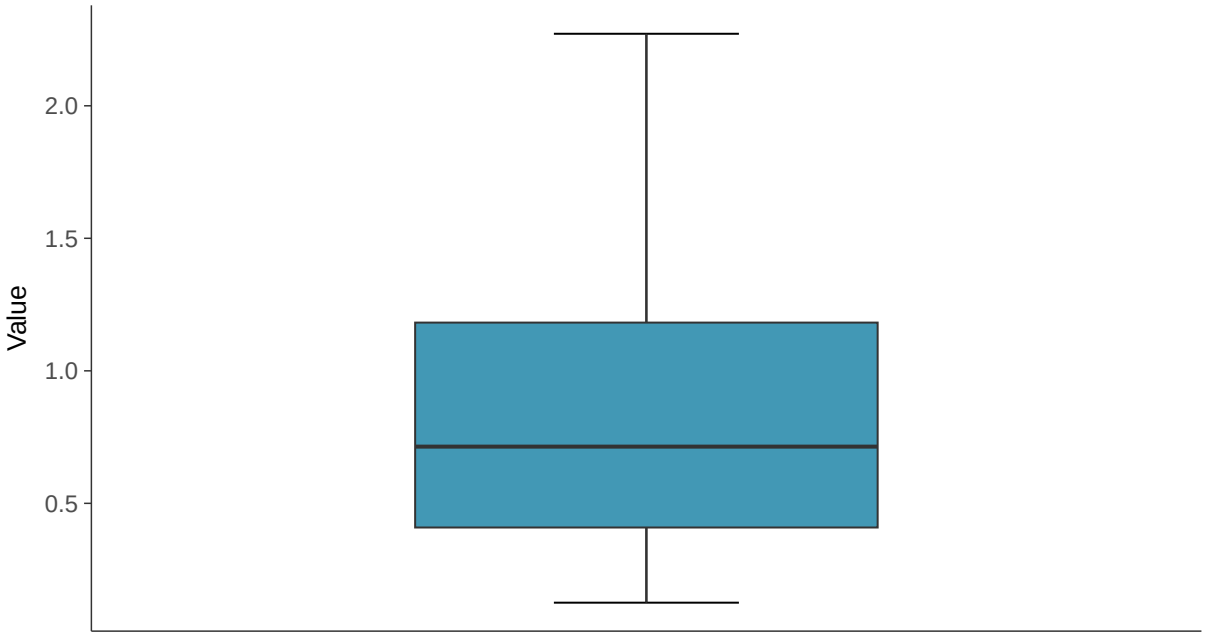
Histogram

Total Radium, MW-11D (pCi/L)



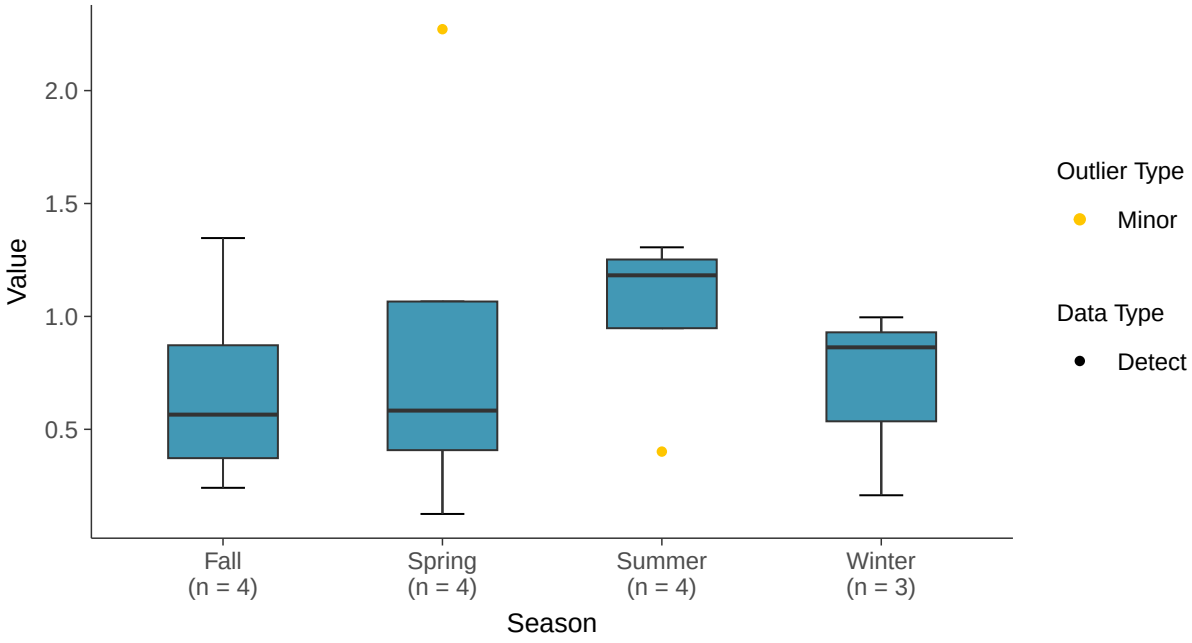
Boxplot

Total Radium, MW-11D (pCi/L)



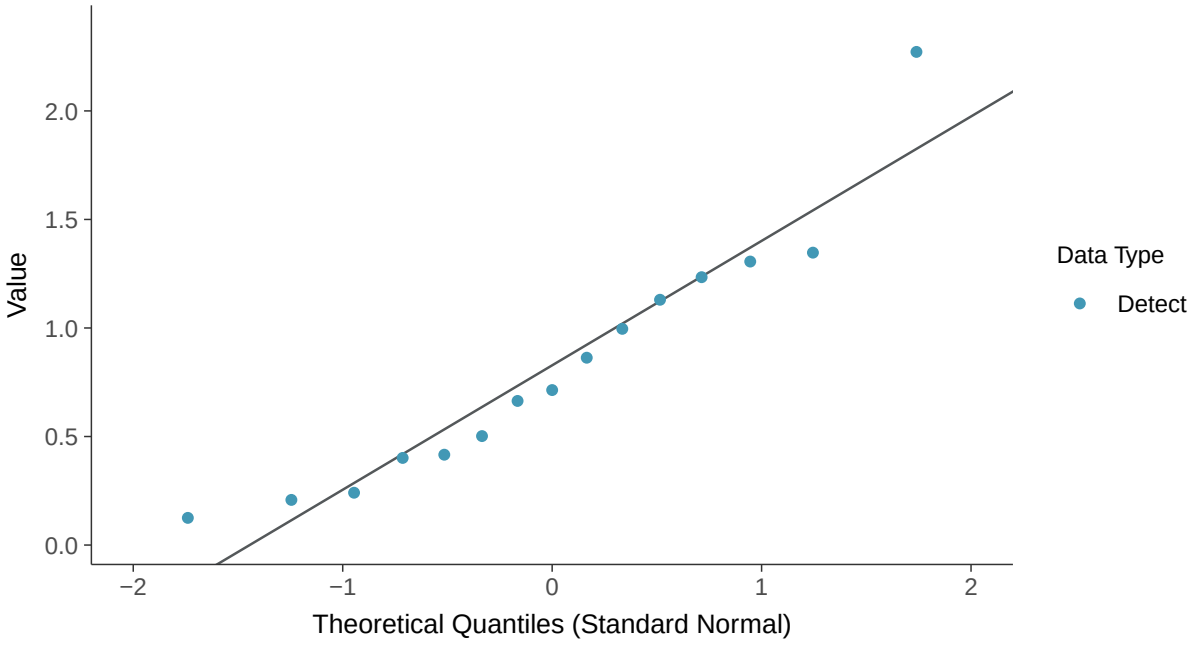
Boxplot by Season

Total Radium, MW-11D (pCi/L)



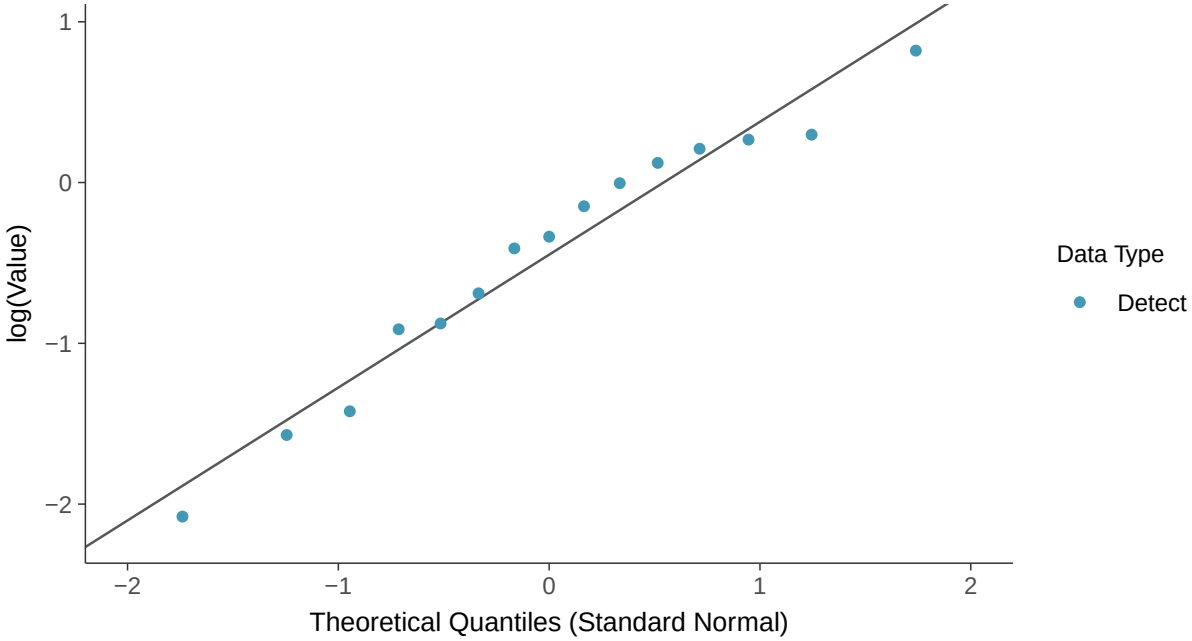
Normal Q-Q plot

Total Radium, MW-11D (pCi/L)



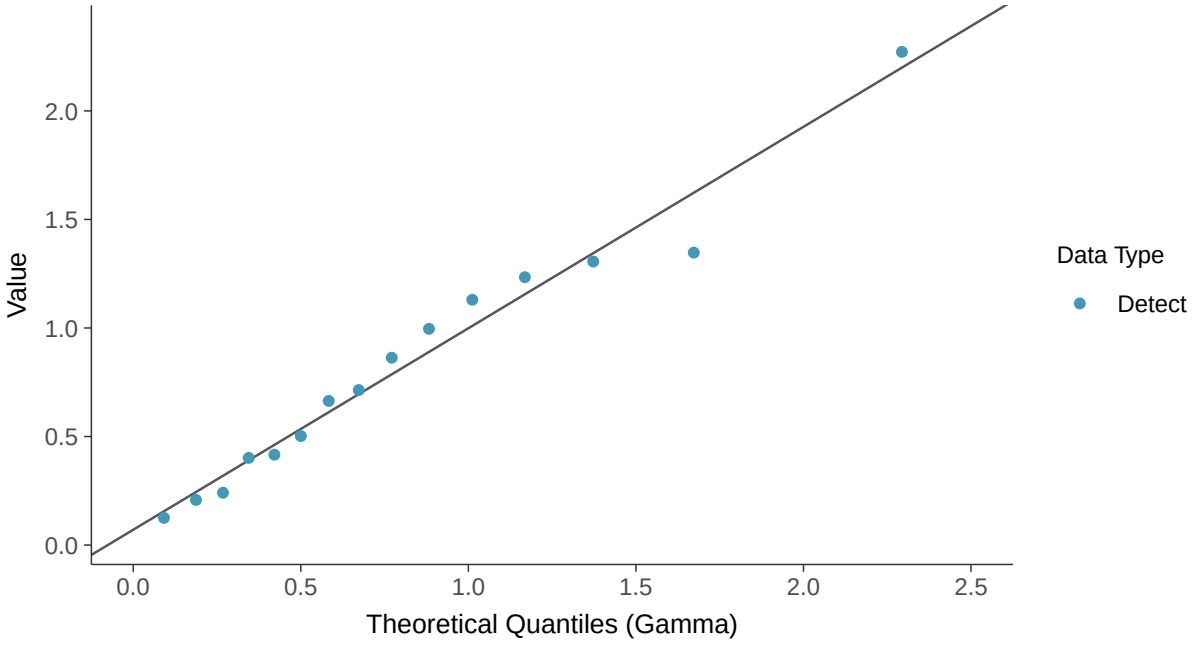
Lognormal Q-Q plot

Total Radium, MW-11D (pCi/L)



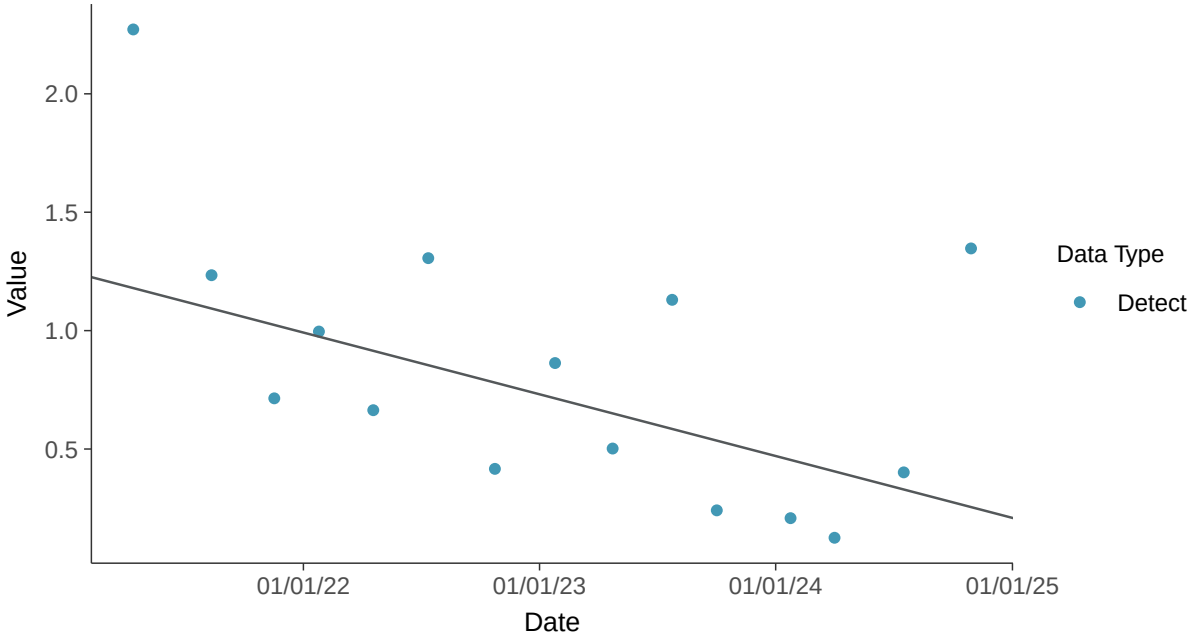
Gamma Q-Q plot

Total Radium, MW-11D (pCi/L)



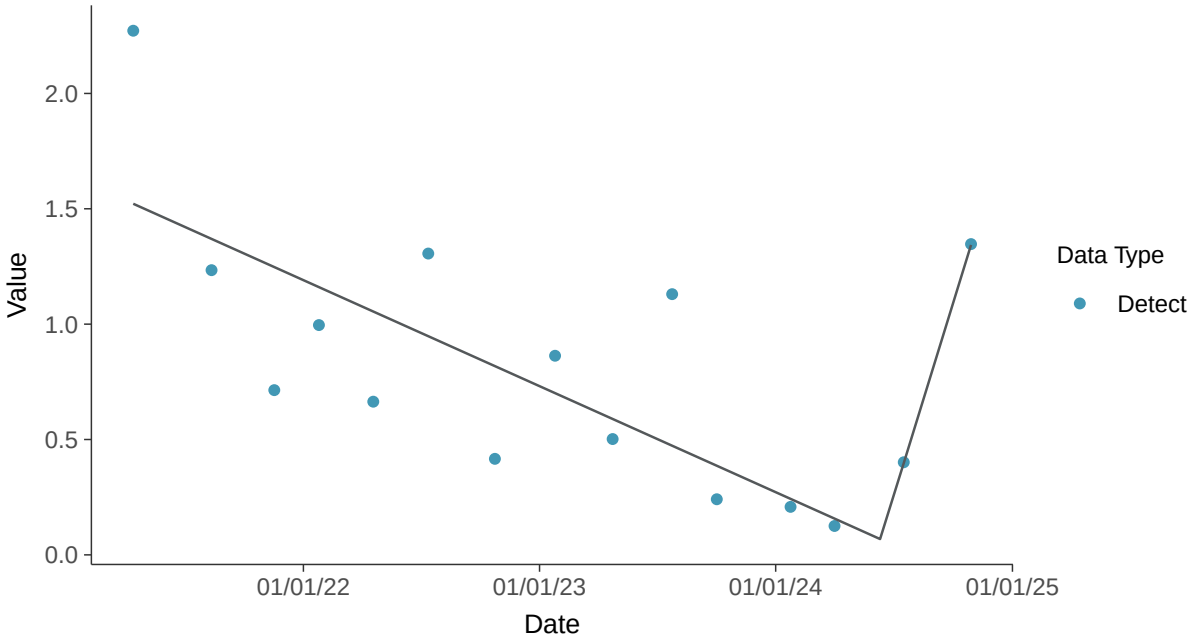
Trend Regression: Mann-Kendall/Theil-Sen Estimate

Total Radium, MW-11D (pCi/L)



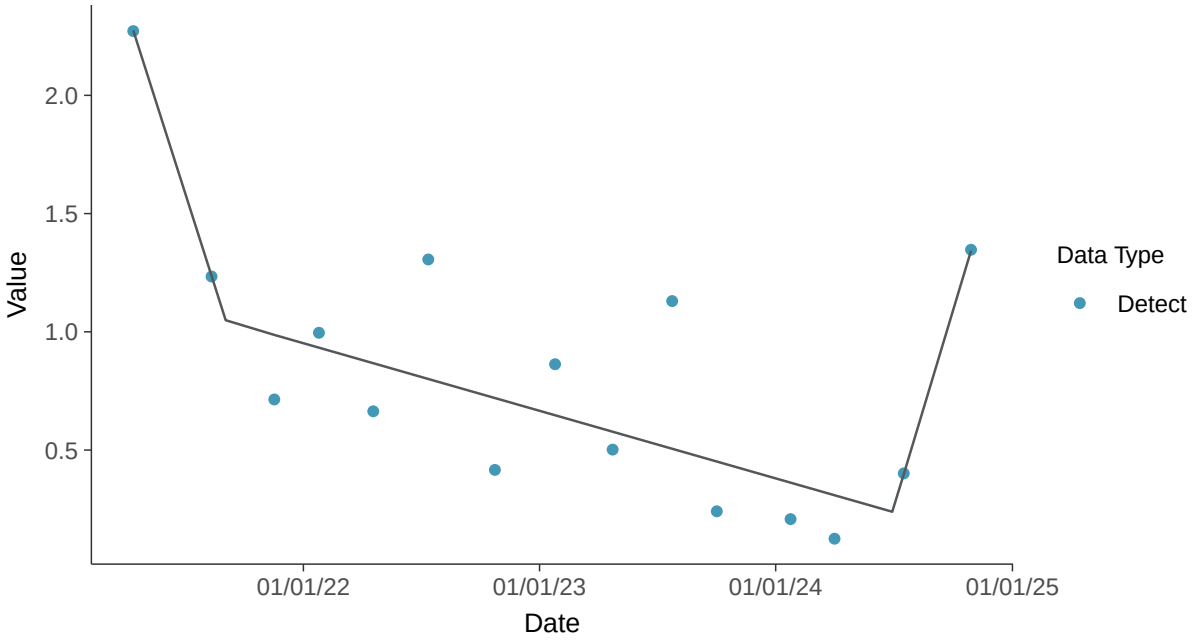
Trend Regression: Piecewise Linear-Linear

Total Radium, MW-11D (pCi/L)



Trend Regression: Piecewise Linear-Linear-Linear

Total Radium, MW-11D (pCi/L)



This page intentionally left blank.

440 S Church Street, Suite 1200
Charlotte, NC 28202-2075
704.338.6700
NC License F0116

hdrinc.com

© 2025 HDR, Inc., all rights reserved

HDR Engineering, Inc. of the Carolinas
440 S Church Street, Suite 1200
Charlotte, NC 28202-2075
704.338.6700
NC License F0116

hdrinc.com

© 2025 HDR, Inc., all rights reserved