APPENDIX 14-A

Surface Water and Groundwater Quality Baseline Report

Red Mountain Underground Gold Project Environmental Assessment Baseline Surface Water and Groundwater Quality Report

Prepared for

IDM Mining



Prepared by

SRK Consulting (Canada) Inc.
1CI019.002
May 2017

Red Mountain Underground Gold Project Environmental Assessment Baseline Surface Water and Groundwater Quality Report

May 2017

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Executive Summary

This report presents recent and historic baseline surface water and groundwater quality results for the proposed Red Mountain Project near Stewart, BC. The report was prepared by SRK Consulting (Canada) Inc. on behalf of IDM Mining Ltd. Avison Management Services Ltd. was responsible for all of the recent sampling activities, and contributed to the methods section of the report.

The primary objective of the baseline water quality monitoring program was to establish a baseline against which to evaluate potential changes that could occur as a result of the proposed mining project. The results were also used: 1) to establish whether baseline water quality concentrations naturally exceed Provincial or Federal water quality guidelines and if site-specific water quality objectives (WQOs) or science-based environmental benchmarks (SBEBs) should be considered; 2) as inputs to the predictive water and load balance that was used to generate water quality predictions; and 3) to determine the scope and frequency of monitoring that will be required over the life of the project.

The baseline surface and groundwater water quality program for Red Mountain was designed to meet the requirements for submission of an environmental assessment application. Surface water and groundwater monitoring locations were established upstream and downstream of areas potentially affected by the proposed construction, operation and closure of the mine, including far field locations to provide a baseline for evaluating downstream and/or cumulative effects. Reference sites upstream of mining areas or in adjacent watersheds were also established. The baseline water quality dataset has been supplemented with historical data dating back to 1990.

The proposed underground mine is in the Red Mountain cirque, a hanging valley above the Bitter Creek valley that is drained by Goldslide Creek. The proposed tailings facility and processing plant are located adjacent to Otter Creek. Both Goldslide and Otter Creek flow into Bitter Creek. Bitter Creek itself is a tributary to the Bear River, which flows into the Portland Canal near Stewart, BC. All of these catchments except Goldslide Creek are glacially-influenced, with peak flows occurring during summer as a result of glacial melt (typically in July). In contrast, peak flows in Goldslide Creek typically occur in June.

Surface water has circumneutral pH. Calcium and sulphate are the dominant ions in Goldslide Creek, Otter Creek, and Bitter Creek. Baseline water quality in these watersheds is naturally influenced by mineralization in the watershed, and many of the samples have pH, fluoride, and total and/or dissolved aluminum, arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc concentrations that exceed Federal and/or Provincial water quality guidelines. Bitter and Otter Creek, which are strongly influenced by glacial meltwater, have high seasonal suspended sediment loads during high flow periods in the summer, and are associated with elevated levels of trace metals. Consequently, site-specific WQOs or SBEBs based on dissolved concentrations should be considered for the project. Groundwater quality in the cirque also has circumneutral pH, and is a calcium sulphate dominated water influenced by mineralization. Concentrations of arsenic, chromium, selenium, and nitrite exceed Provincial standards.

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List of Abbreviations

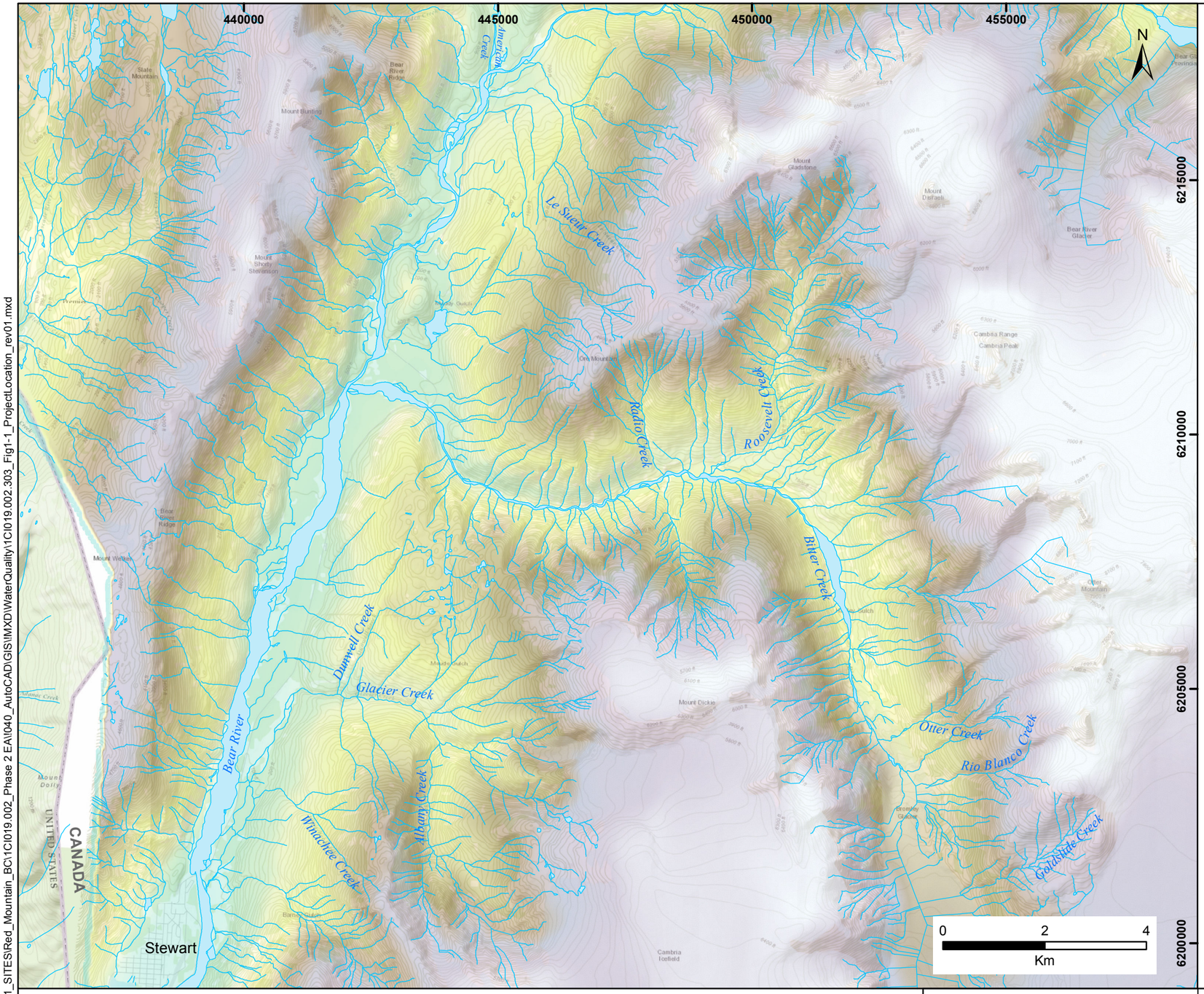
BC WQG	British Columbia water quality guideline
CCME	Canadian Council of Ministers of the Environment
CEQG	Canadian Environmental Quality Guideline
CSR	Contaminated Sites Regulation
HKP	Hallam Knight Piésold
masl	meters above sea
MMER	Metal Mining Effluent Regulations
NAMC	North American Metals Corporation
SBEB	science-based environmental benchmark
t	tonne
TDS	total dissolved solids
TMF	tailings management facility
TSS	total suspended solids
QA/QC	quality assurance/quality control
WQG	water quality guideline
WQO	water quality objective

1 Introduction

This report presents recent and historic baseline surface water and groundwater quality results for the proposed Red Mountain Project near Stewart, BC. The report was prepared by SRK Consulting (Canada) Inc. on behalf of IDM Mining Ltd. Avison Management Services Ltd. was responsible for all the recent sampling activities, and contributed to the methods section of the report.

The primary objective of the baseline water quality monitoring program was to establish a baseline against which to evaluate potential changes that could occur as a result of the proposed mining project. The results were also used: 1) to establish whether baseline water quality concentrations naturally exceed Provincial or Federal water quality guidelines and therefore whether site-specific water quality objectives (WQOs) or science-based environmental benchmarks (SBEBs) should be considered; 2) as inputs to the predictive water and load balance that was used to generate water quality predictions (SRK 2017b); and 3) to determine the scope and frequency of monitoring that will be required over the life of the project.

The baseline water quality program for Red Mountain was designed to meet the requirements for submission of an environmental assessment application, as described in the *Water and Air Baseline Monitoring Guidance Document for Mine Proponents and Operators* (MOE 2016a). Surface water and groundwater monitoring locations were established upstream and downstream of areas potentially affected by the proposed construction, operation and closure of the mine, including far field locations to provide a baseline for evaluating downstream and/or cumulative effects. Reference sites upstream of mining areas or in adjacent watersheds were also established. The baseline water quality dataset has been supplemented with historical data dating back to 1990.



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Legend

- Watercourse
- Waterbody

Site Location



Notes:
Coordinate System: NAD 1983 UTM Zone 9N

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Red Mountain Underground Gold Project

Project Location

Date:	Approved:	Figure:
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2 Background

2.1 Physical and Hydrological Setting

The Red Mountain Project is located west of the Cambria Ice Field and north of the Bromley Glacier (Figure 1-1) and is characterized by rugged, steep terrain with weather conditions typical of the northern coastal mountains. The deposit is under the summit of Red Mountain at elevations ranging between 1,600 and 2,000 meters above sea level (masl). Temperatures are moderated year-round by the coastal influence. Precipitation is significant throughout the year; October is typically the wettest month and there is significant snow accumulation in the winter. The snowfall, steep terrain, and frequently windy conditions present blizzard and avalanche hazards during the winter (JDS 2016).

The proposed underground mine is in the Red Mountain cirque, a short, westerly trending hanging valley above the Bitter Creek valley (Rescan 1995). The cirque is drained by Goldslide Creek. Goldslide Creek flows southwest to the side of Bromley Glacier close to its current extent. Flows in Goldslide Creek peak during freshet (typically in June) and Goldslide Creek is not glacially-influenced. Goldslide and Rio Blanco Creeks are the two uppermost tributaries to Bitter Creek. Other Bitter Creek tributaries relevant to the baseline water quality evaluation are Otter Creek and Roosevelt Creek. Otter Creek is glacially-influenced and flows peak during summer (typically in July) as a result of glacial melt. Like Otter Creek, Bitter Creek is glacially-influenced and flows peak in summer (typically in July). Bitter Creek itself is a tributary to the Bear River, which flows into the Portland Canal near Stewart (Figure 1-1).

2.2 Existing Infrastructure

Existing infrastructure on the site includes an underground decline and drift development that was developed in 1993 and 1994 for bulk sampling the mineralized Marc zone, a 50,000 tonne (t) waste rock pile, a surface tote road network, camp buildings, helipads, and used mobile equipment (JDS 2016).

2.3 Historical Environmental Baseline Monitoring

Historical environmental baseline monitoring was completed from 1990 to 1992 by Hallam Knight Piésold (HKP) for Bond Gold and then Lac Minerals (HKP 1992), from 1993 to 1994 by Rescan for Lac Minerals (Rescan 1994, 1995), and from 1996 to 1997 by Royal Oak (Royal Oak 1996, 1998). Limited environmental monitoring was done in 2000 when NAMC purchased the property (SRK 2001) and annual monitoring was completed from 2003 to 2013 to address reclamation permit requirements (SRK 2004 through 2014). Details on the historical surface water and groundwater quality monitoring methods and data included in this report are described in Section 3. Relevant results are incorporated into the results and findings (Section 4).

3 Methods

3.1 Overview

The current surface water and groundwater quality monitoring programs were initiated during the summer of 2014 to support the Environmental Assessment application and are consistent with MOE (2016a) guidelines regarding locations, frequency, parameter suite, and detection limits. Details on the current and historical surface water quality and groundwater quality monitoring methods and the water quality dataset are provided in Sections 3.2 and 3.3 respectively.

Data analysis and interpretation procedures are described in Section 3.4. Quality assurance/quality control (QA/QC) and data management for both surface water and groundwater data are discussed in Sections 3.5 and 3.6.

3.2 Surface Water Quality Monitoring

3.2.1 IDM Surface Water Quality Monitoring Program

Baseline surface water quality sampling at Red Mountain was initiated on June 24, 2014. Avison were responsible for all field sampling activities. This report presents the results of the sampling events completed through the end of 2016.

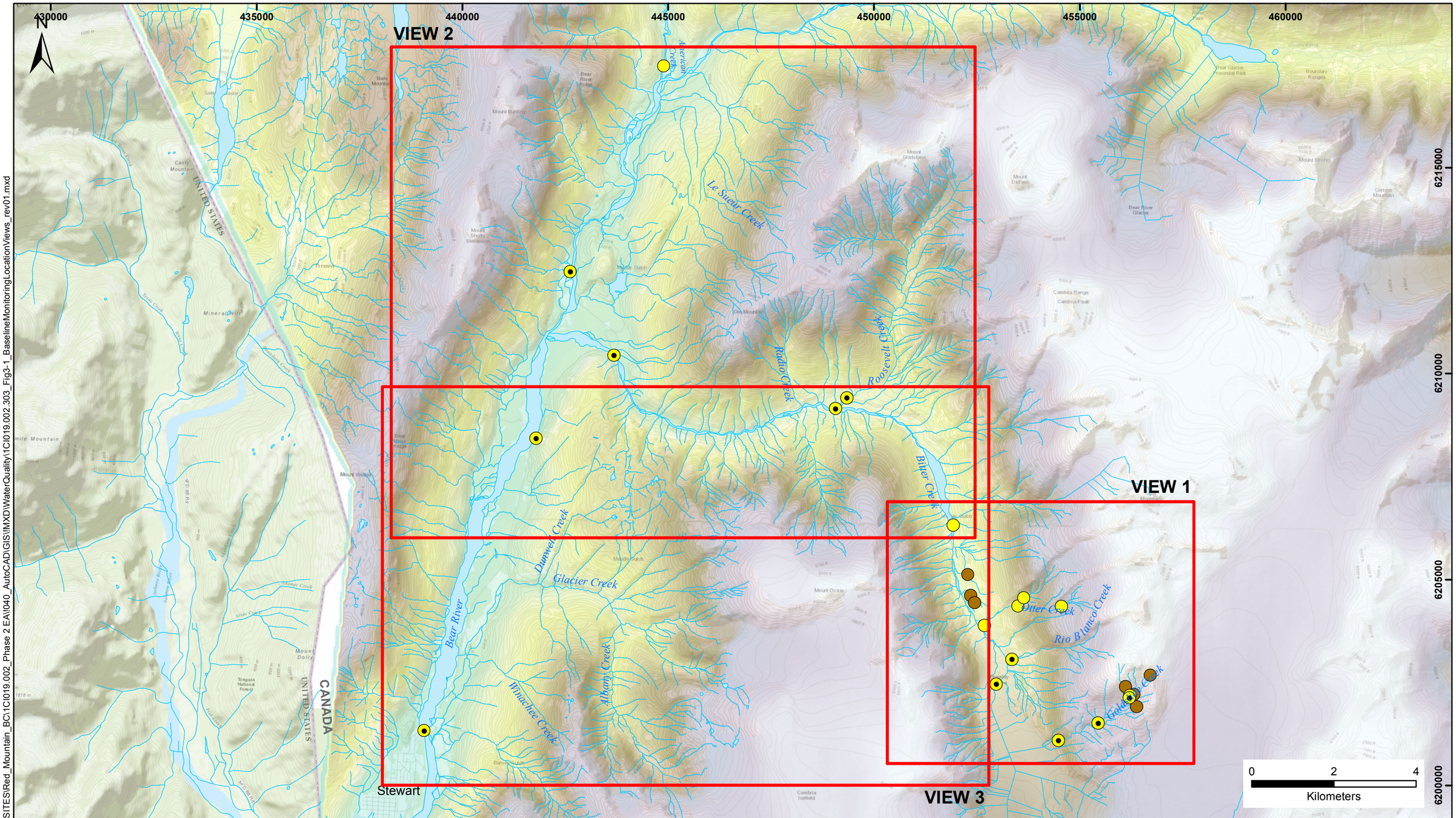
Monitoring Locations

The baseline surface water quality monitoring locations are presented in Table 3-1. The surface water and groundwater baseline monitoring locations are shown together on Figures 3-1 through 3-4. Figure 3-1 shows the three extents of Figure 3-2 through Figure 3-4. The cirque, Goldslide Creek, upper Bitter Creek, Rio Blanco Creek, and Otter Creek are shown on Figure 3-2 (View 1). Roosevelt Creek, American Creek, lower Bitter Creek, and the Bear River confluence are shown on Figure 3-3 (View 2). Lower Bear River and Stuart are shown on Figure 3-4 (View 3). Photographs of the monitoring locations are provided in Appendix A.

The locations were chosen to provide baseline data for all areas that could be affected by the proposed construction, operation, and closure of the mine, including upstream (where possible) and downstream of potential impacts, as well as locations farther afield where downstream and/or cumulative effects could be assessed. The monitoring program has been modified over the past two years as the project engineering studies were completed: two monitoring locations on Otter Creek and an additional monitoring location on Bitter Creek were added to the program in spring 2016 based on early input from the EA Working Group.

The receiving watersheds in the monitoring program are Goldslide Creek, Bitter Creek, Otter Creek, and Bear River and the reference watersheds are Rio Blanco Creek, Roosevelt Creek, and American Creek. Many of the current monitoring locations are the same as historical monitoring locations or are very close to historical monitoring locations, making it possible to use historical data to supplement the results of the more recent baseline monitoring program (Section 3.2.2).

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Notes:
Coordinate System: NAD 1983 UTM Zone 9N

Legend

- Current Groundwater Samples
- Surface Water Locations
- Historical Surface Water Locations
- Watercourse
- Waterbody

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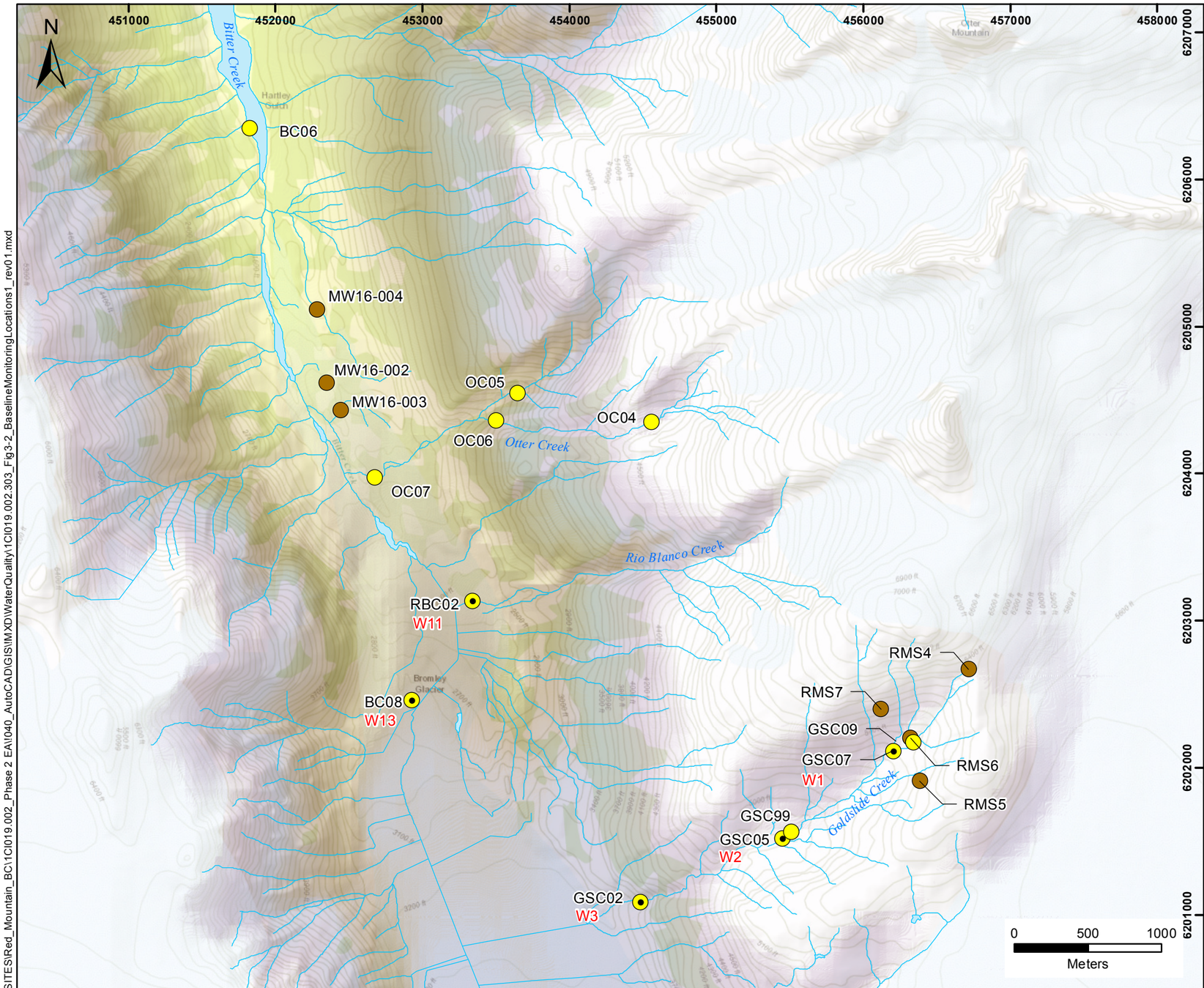
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Base Monitoring Location
View Map

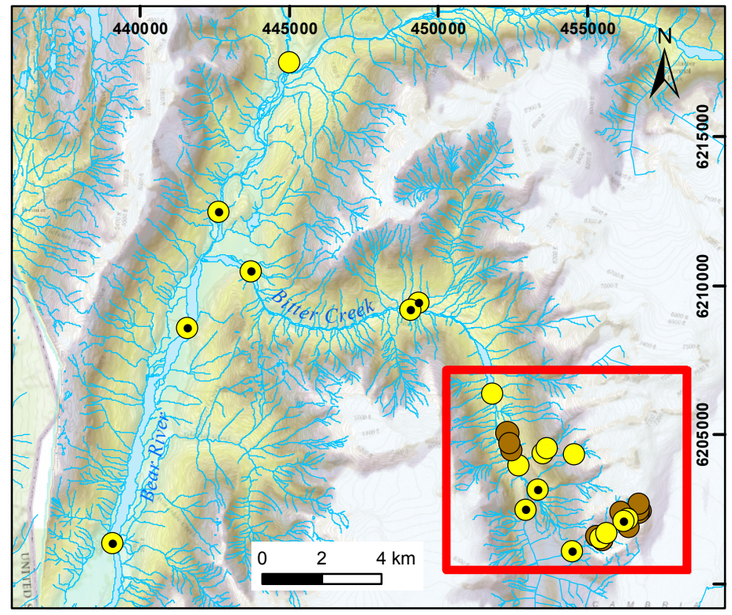
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Legend

- Current Groundwater Samples
- RC02 — Surface Water Locations
- W18 — Historical Surface Water Locations
- Watercourse
- Waterbody

Project Location



Notes:
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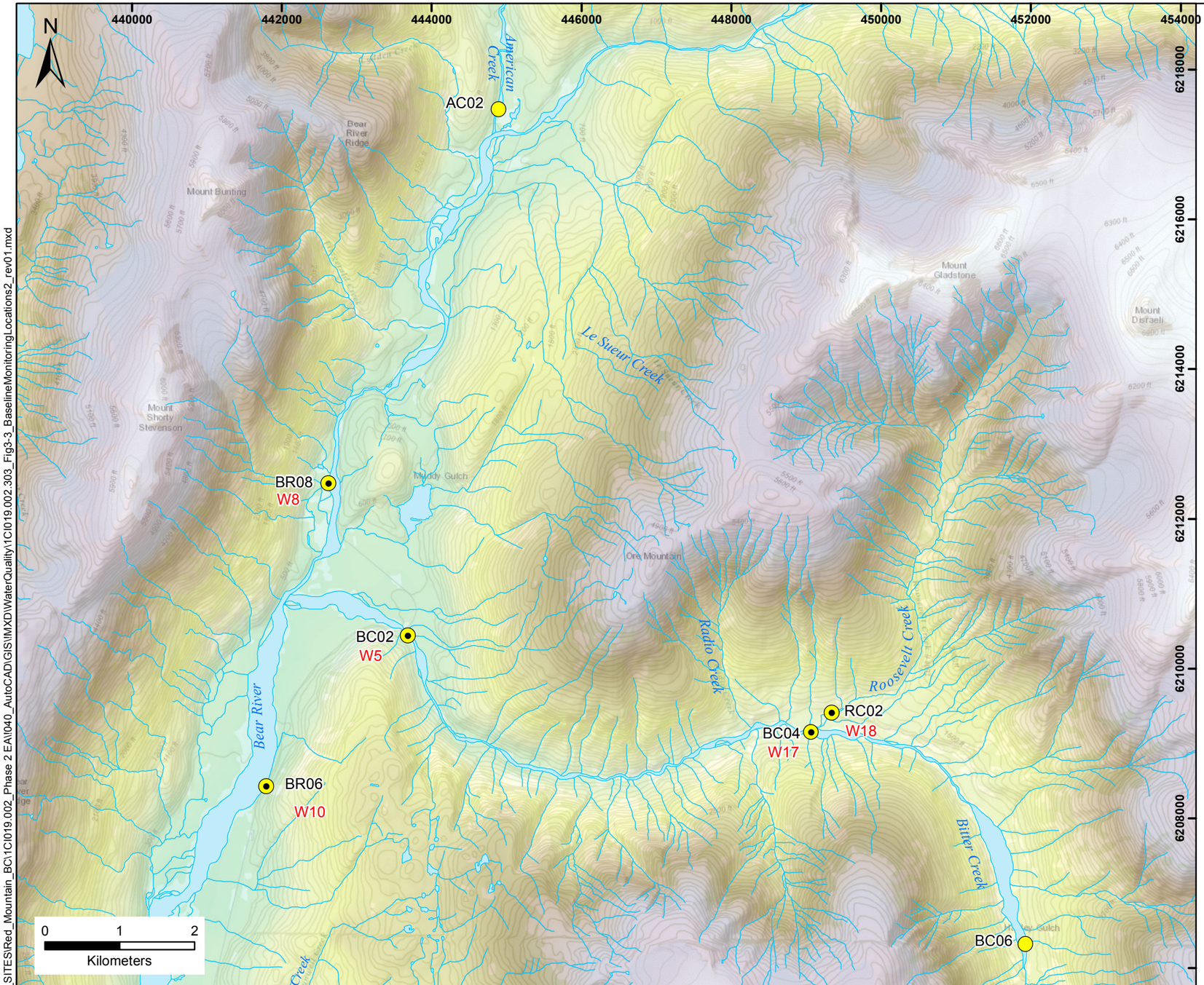
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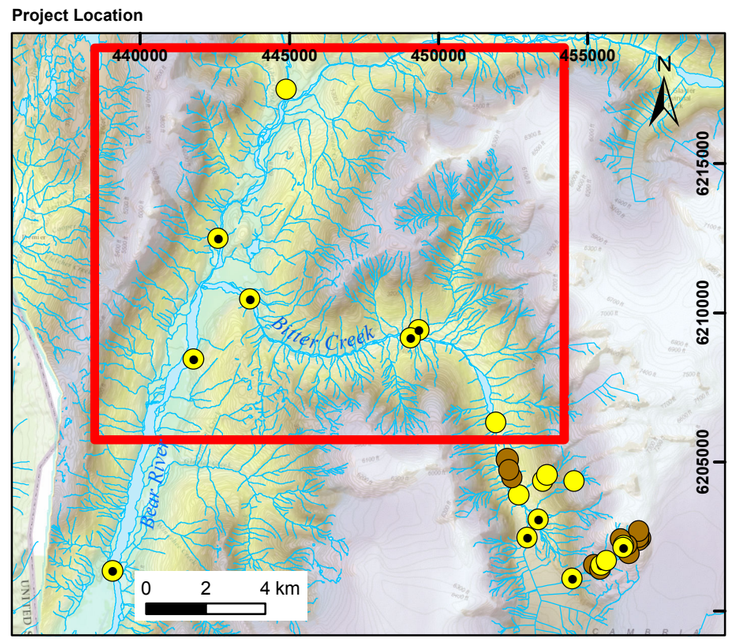
Red Mountain Underground Gold Project

Base Monitoring Location
View 1

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Legend

- Current Groundwater Samples
- RC02 — Surface Water Locations
- W18 — Historical Surface Water Locations
- Watercourse
- Waterbody

Notes:
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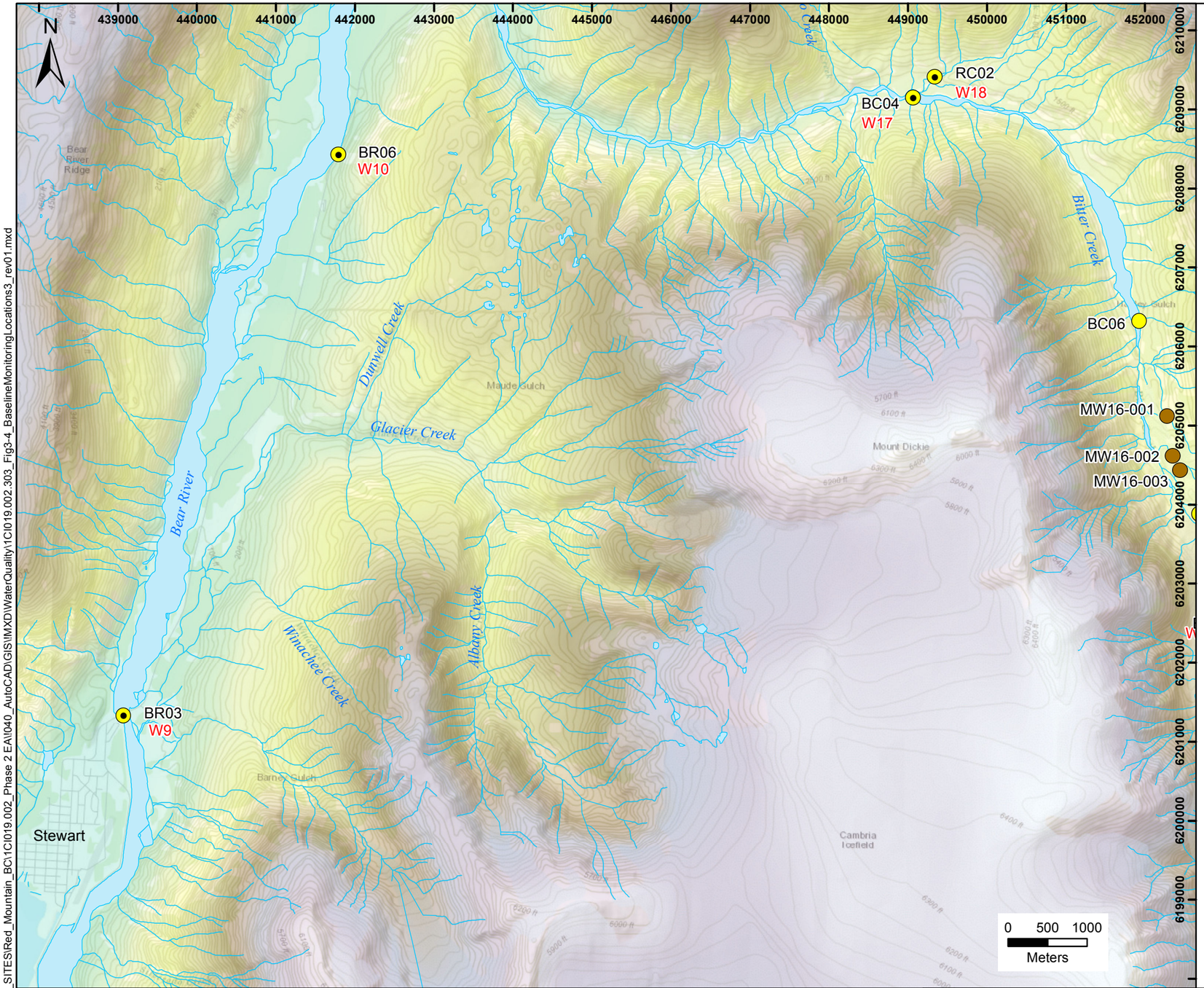
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Red Mountain Project

Base Monitoring Location
View 2

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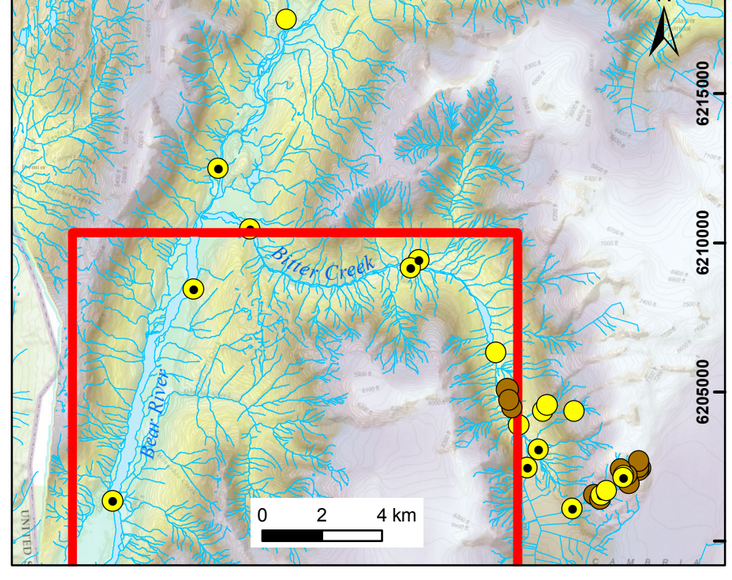
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Legend

- Current Groundwater Samples
- RC02 — Surface Water Locations
- W18 — Historical Surface Water Locations
- Watercourse
- Waterbody

Project Location



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Base Monitoring Location
View 3

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Goldslide Creek

Goldslide Creek, the uppermost tributary of Bitter Creek, drains the cirque in which the proposed mine will be located. The four Goldslide Creek monitoring locations (GSC02, GSC05, GSC07, and CGS09) are all downstream of the proposed mining facilities. The existing development throughout the cirque (e.g., the underground portal and waste rock dump) and steep topography means that there can be no upstream reference location for Goldslide Creek (Figure 3-2).

Otter Creek

The proposed location for the processing plant and tailings management facility (TMF) will be located at about 500 masl at Bromley Humps in the Bitter Creek valley near Otter Creek. Otter Creek has three reference monitoring locations upstream of this location (OC04, OC05, and OC06) and one monitoring location (OC07) downstream of Bromley Humps (Figure 3-2). Locations OC05 and OC07 were added to the monitoring program in April 2016 when the proposed TMF location was changed to Bromley Humps.

Bitter Creek

The four Bitter Creek monitoring locations (BC02, BC04, BC06, and BC08) are all downstream of the proposed mining facilities. There are no monitoring locations on Bitter Creek upstream of the Goldslide Creek confluence and thus no upstream reference location. Historically, the upper reaches of Bitter Creek area were covered by the Bromley Glacier, but despite recent glacial recession, the area cannot be safely accessed by the field team (Figure 3-2 and Figure 3-3). Location BC06 was added to the monitoring program in June 2016.

Bear River

Bitter Creek flows into the Bear River. Bear River has one monitoring location upstream of the confluence with Bitter Creek (BR08) and two monitoring locations downstream of the confluence, BR03 and BR06 (Figure 3-3 and Figure 3-4).

Reference Watersheds

Three monitoring locations were also established at the reference watersheds. Rio Blanco Creek runs parallel to Goldslide Creek and the monitoring location RBC02 on lower Rio Blanco Creek is a reference monitoring location for lower Goldslide Creek (GSC02). Monitoring locations on American Creek (AC02) and Roosevelt Creek (RC02) are both reference locations for fisheries and aquatic work (Figure 3-2 and Figure 3-3).

Table 3-1: Baseline Surface Water Monitoring Locations and Descriptions

Watershed	Location	Date Established	Equivalent Historical Location	Description of Monitoring Location	Rationale for Inclusion
American Creek	AC02	August 2014	None	Lower American Creek, approximately 300 m upstream of the Bear River confluence	Reference watershed for fisheries and aquatics
Bitter Creek	BC02	June 2014	W5	Lower Bitter Creek, near the Highway 37A bridge	Receiving watershed
	BC04	July 2014	W17	Middle Bitter Creek, immediately upstream of the Roosevelt Creek confluence	Receiving watershed
	BC06	June 2016	None	Middle Bitter Creek, downstream of the Otter Creek confluence	Receiving watershed
	BC08	July 2014	W13	Upper Bitter Creek, downstream of the Goldslide Creek confluence and the Bromley Glacier and upstream of the Rio Blanco Creek confluence	Receiving watershed
Bear River	BR03	June 2014	W9	Bear River, significantly downstream of the Bitter Creek, near the Highway 37A bridge just outside the town of Stewart	Receiving watershed Monitoring far downstream effects
	BR06	June 2014	W10	Bear River, downstream of the Bitter Creek confluence	Receiving watershed Monitoring far downstream effects
	BR08	June 2014	W8	Bear River, upstream of the Bitter Creek confluence	Upstream reference location for receiving watershed
Goldslide Creek	GSC02	June 2014	W3	Lower Goldslide Creek, below the existing exploration camp and above the Bromley Glacier on the steep slope	Receiving watershed
	GSC05 /GSC99[1]	June 2014	W2	Middle Goldslide Creek, near the existing exploration camp just upstream of the hydrology station	Receiving watershed
	GSC07	July 2014	W1	Upper Goldslide Creek, upstream of the confluence with tributary, drains the area below the portal, shop, and existing waste rock dump	Receiving watershed
	GSC09	September 2014	None	Tributary of Upper Goldslide Creek, drains area above and around the portal	Receiving watershed
Otter Creek	OC04 /OC06[2]	August 2014	None	Upper Otter Creek, southern branch of creek	Upstream reference location for receiving watershed
	OC05	April 2016	None	Middle Otter Creek, northern branch of creek	Upstream reference location for receiving watershed
	OC07	April 2016	None	Lower Otter Creek, downstream of the proposed mill	Receiving watershed
Rio Blanco Creek	RBC02	June 2014	W11	Lower Rio Blanco Creek	Reference watershed for Goldslide Creek
Roosevelt Creek	RC02	July 2014	W18	Lower Roosevelt Creek, approximately 300 m upstream of the Bitter Creek confluence	Reference watershed for fisheries and aquatics

Source: compiled in text from Avison 2016.

Note:

(1) GSC99 is an alternate winter sampling site for GSC05, which is sometimes covered by drifting snow. GSC99 is approximately 80 m upstream and is clear during the winter.

(2) OC06 on the southern branch of Otter Creek is an alternate sampling site for OC04 when snowpack at OC04 makes it inaccessible.

Sample Collection and Laboratory Analysis

Surface water quality samples were collected every month from June 2014 to July 2016, with the exception of November 2014 through June 2015 and November through December 2015 due to budgetary and safety considerations. There was also an intensive freshet sampling period (five sampling events in one month) from late May to late June 2016. Section 3.2.3 has specific details on temporal coverage of the surface water quality dataset.

All the surface water quality samples were grab samples. Samples were collected by Avison following the water sampling guidance in the *British Columbia Field Sampling Manual* (MWLAP 2013) when practical, with some minor deviations for safety. Notably, smaller sample bottles were filled using the larger general parameters bottle to minimize the amount of time that field personnel were close to the streams. Some of the streams, especially Bitter Creek, have extremely high and turbulent flows and can be hazardous.

Whenever possible, samples were collected mid-stream (rather than near shore) or from sections of considerable flow to ensure samples were representative. Winter samples from one location (GSC99) were collected from under the ice, but all others were collected from open water. Field parameters were measured *in situ* or from a separate sub-sample and included temperature, conductivity, specific conductivity, dissolved oxygen, oxidation-reduction potential (ORP), and pH using a YSI 556 or Pro Plus, and turbidity using an Oakton Turbidity Meter. Field notes were taken recording time of sample collection, weather conditions, stream level and flow, any deviations from regular sampling protocols, and any other information relevant to quality of the sample or the sample results. Notes and parameters were recorded in a field log book on waterproof paper. All sampling was conducted by qualified personnel, with a minimum of one crew member having significant water quality sampling experience. Nitrile gloves were worn throughout sampling and filtration.

All sample bottles were obtained from ALS Laboratory in Burnaby, BC and were pre-cleaned, so the bottles were not rinsed in the field. Sample bottles were only open long enough to fill and preserve the samples. Sample bottles and lids were only handled on the outside surface, and nothing foreign was allowed to touch the inside. Preservatives were added immediately after bottles were filled and samplers were careful not to touch the preservative containers to the sample bottles.

Sample filtration was conducted in the field using a reusable vacuum filter and hand pump provided by ALS. The filter used individually packaged disposable filter papers with a pore size of 0.45µm. The filter unit was rinsed thoroughly with deionized water for each new sample set. Field blank samples were also filtered using this filter. Samples with high turbidity (>50 NTU) were extremely difficult to filter in the field. For these samples only, the dissolved metals, dissolved mercury, and dissolved carbon bottles were filled with unfiltered water and were not preserved in the field. Filtering and preservation was done by ALS upon arrival at the testing laboratory. Samples with high turbidity were most often from Bitter Creek and Bear River, and were occasionally taken from American Creek, Roosevelt Creek, and Otter Creek.

Samples were stored with ice packs in a clean cooler immediately after being collected. Samples were packed with enough ice to ensure they remained below 4°C throughout sample collection and subsequent shipping to ALS. Chains of custody were included with each shipment.

Samples were analyzed for the following parameters.

- Physical parameters: color, conductivity, hardness, pH, total suspended solids (TSS), total dissolved solids (TDS), and turbidity
- Anions and nutrients: acidity, bicarbonate alkalinity, carbonate alkalinity, hydroxide alkalinity, phenolphthalein alkalinity, total ammonia, bromide, chloride, fluoride, nitrate, nitrite, total Kjeldahl nitrogen, dissolved orthophosphate, total phosphorus, total dissolved phosphorus, and sulphate
- Total and dissolved organic carbon
- Total and dissolved metals: aluminum, antimony, arsenic, barium, beryllium, bismuth, boron, cadmium, calcium, chromium, cobalt, iron, lead, lithium, magnesium, manganese, mercury, molybdenum, nickel, potassium, selenium, silicon, silver, sodium, strontium, thallium, tin, titanium, uranium, vanadium, and zinc

The detection limits for these parameters meet MOE requirements (2016a) and are summarized in Table 3-2.

Table 3-2: Detection Limits for Current Monitoring Program

Parameter	Detection Limit	Unit
Physical Parameters		
Color, True	5	CU
Conductivity	2	uS/cm
Hardness (as $CaCO_3$)	0.5	mg/L
pH	0.1	s.u.
Total Suspended Solids	3	mg/L
Total Dissolved Solids	13	mg/L
Turbidity	0.1	NTU
Anions and Nutrients		
Acidity (as $CaCO_3$)	1	mg/L
Alkalinity, Bicarbonate (as $CaCO_3$)	1	mg/L
Alkalinity, Carbonate (as $CaCO_3$)	1	mg/L
Alkalinity, Hydroxide (as $CaCO_3$)	1	mg/L
Alkalinity, Total (as $CaCO_3$)	1	mg/L
Ammonia, Total (as N)	0.005	mg/L
Bromide (Br)	0.05	mg/L
Chloride (Cl)	0.5	mg/L

Parameter	Detection Limit	Unit
Fluoride (F)	0.02	mg/L
Nitrate (as N)	0.005	mg/L
Nitrite (as N)	0.001	mg/L
Total Kjeldahl Nitrogen	0.05	mg/L
Orthophosphate Dissolved (as P)	0.001	mg/L
Phosphorus (P) Total Dissolved	0.002	mg/L
Phosphorus (P) Total	0.002	mg/L
Sulfate (SO_4)	0.3	mg/L
Organic Carbon		
Dissolved Organic Carbon	0.5	mg/L
Total Organic Carbon	0.5	mg/L
Metals		
Aluminum (Al) Total and Dissolved	0.005	mg/L
Antimony (Sb) Total and Dissolved	0.0005	mg/L
Arsenic (As) Total and Dissolved	0.0005	mg/L
Barium (Ba) Total and Dissolved	0.02	mg/L
Beryllium (Be) Total and Dissolved	0.001	mg/L
Bismuth (Bi) Total and Dissolved	0.00005	mg/L
Boron (B) Total and Dissolved	0.1	mg/L
Cadmium (Cd) Total	0.000005	mg/L
Cadmium (Cd) Dissolved	0.000017	mg/L
Calcium (Ca) Total and Dissolved	0.1	mg/L
Chromium (Cr) Total and Dissolved	0.001	mg/L
Cobalt (Co) Total and Dissolved	0.0003	mg/L
Copper (Cu) Total and Dissolved	0.001	mg/L
Iron (Fe) Total and Dissolved	0.03	mg/L
Lead (Pb) Total and Dissolved	0.0005	mg/L
Lithium (Li) Total and Dissolved	0.001	mg/L
Magnesium (Mg) Total and Dissolved	0.1	mg/L
Manganese (Mn) Total and Dissolved	0.0001	mg/L
Mercury (Hg) Total and Dissolved	0.000005	mg/L
Molybdenum (Mo) Total and Dissolved	0.001	mg/L
Nickel (Ni) Total and Dissolved	0.001	mg/L
Potassium (K) Total and Dissolved	2	mg/L
Selenium (Se) Total and Dissolved	0.00005	mg/L
Silicon (Si) Total and Dissolved	0.05	mg/L
Silver (Ag) Total and Dissolved	0.00002	mg/L

Parameter	Detection Limit	Unit
Sodium (Na) Total and Dissolved	2	mg/L
Strontium (Sr) Total and Dissolved	0.001	mg/L
Thallium (Tl) Total and Dissolved	0.0002	mg/L
Tin (Sn) Total and Dissolved	0.0005	mg/L
Titanium (Ti) Total and Dissolved	0.01	mg/L
Uranium (U) Total and Dissolved	0.0002	mg/L
Vanadium (V) Total and Dissolved	0.0005	mg/L
Zinc (Zn) Total and Dissolved	0.005	mg/L

Source: compiled in text.

3.2.2 Historical Sampling Programs

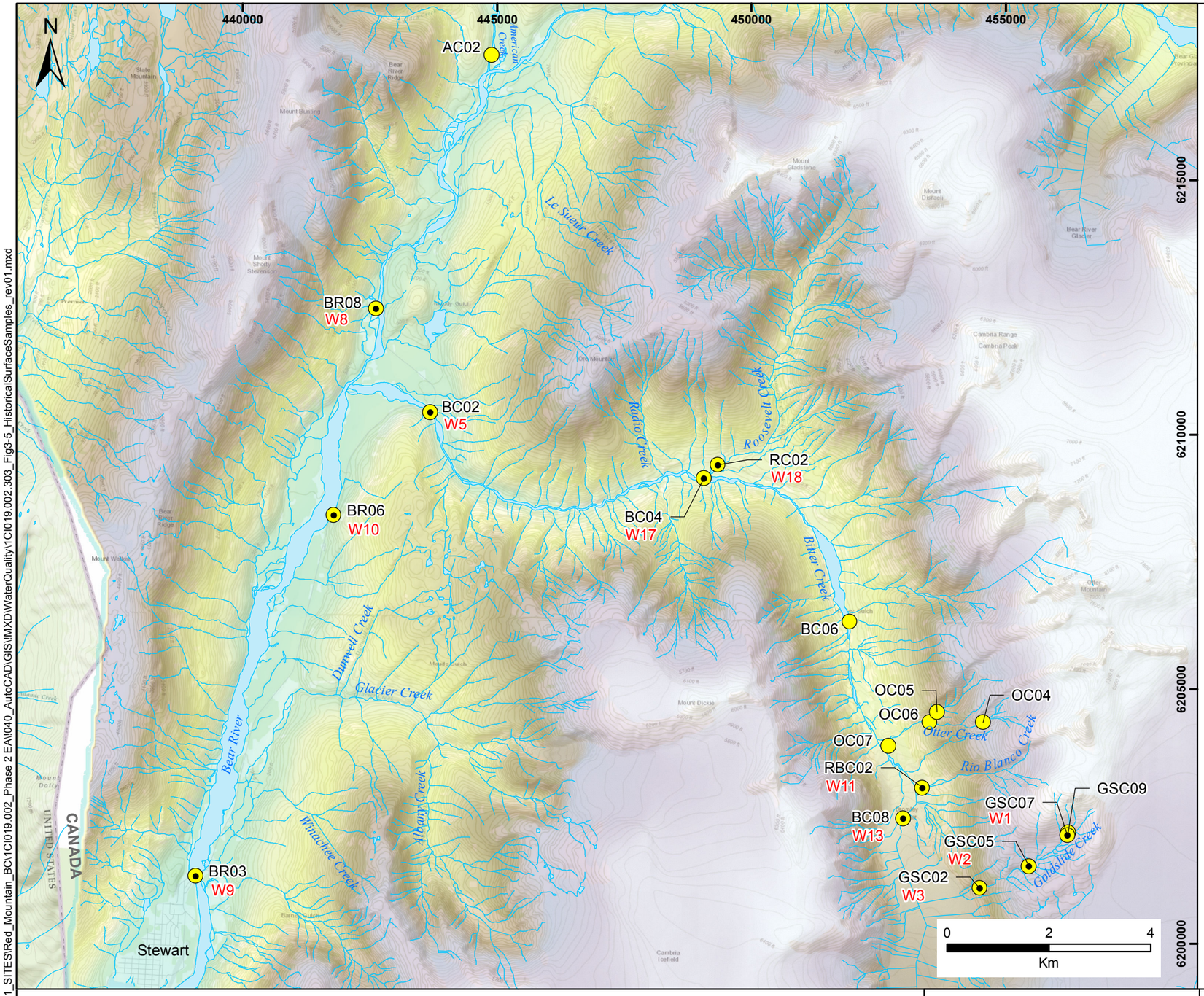
This section describes the historical sampling methods for the HKP data from 1990 to 1992, the Rescan data from 1993 to 1994, the Royal Oak data from 1996 to 1997, and SRK data in 2000 and from 2003 to 2013.

Table 3-3 lists the historical surface water quality baseline monitoring locations in chronological order. The table includes details on when each location was established, when each location was discontinued, and the equivalent location, if any, in the current monitoring program (Section 3.2.1). The historical locations are shown with the current locations in Figure 3-5.

HKP (1990 to 1992) Sampling Methods

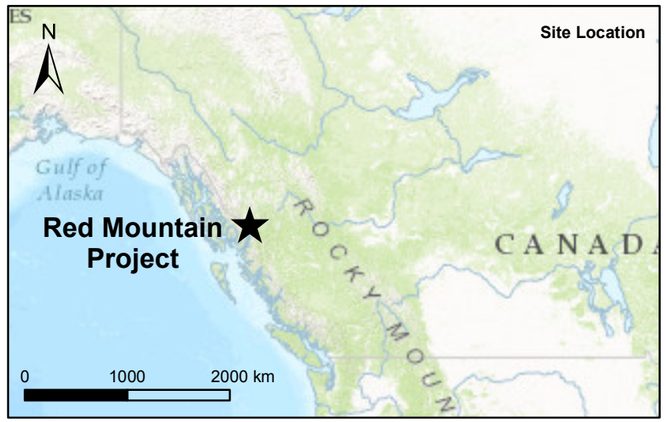
Environmental baseline data were collected by HKP on behalf of Bond Gold and Lac Minerals Ltd. from October 11, 1990 to June 30, 1992 to support a potential mine development permit application. HKP (1992) presents the baseline data and details of the methodologies and instrumentation used in the monitoring program and is summarized herein. HKP collected samples at 10 monitoring locations, W1 through W10, for Goldslide Creek, Bitter Creek, and Bear River (Table 3-3) and groundwater in the cirque (Section 3.3.2). Seven of these locations (W1, W2, W3, W5, S7, W8, W9, and W10) are relevant to the current baseline water quality program because they are in the same place as a current monitoring location. The 1990 to 1992 data included in this evaluation are provided in Appendix B-1.

Samples collected during 1990 to 1992 were field-filtered, preserved, and shipped to Analytical Services Laboratories (ASL) in Vancouver, BC within 48 hours of collection. No field parameters were recorded. Samples were analyzed for physical parameters (pH, conductivity, hardness, TDS TSS, and turbidity), major ions, nutrients (including nitrogen and phosphorus species), and total and dissolved metals (HKP 1992). The only parameters that were not included in the 1990 to 1992 analyte list that are part of the current baseline monitoring program are total and dissolved organic carbon, thallium, tin, and titanium (Appendix B-1). Detection limits for some parameters were higher than in the current program (Section 3.2.3).



Legend

- RC02 — Baseline Monitoring Locations
- W18 — Historical Surface Water Locations
- Watercourse
- Waterbody



Notes:
Coordinate System: NAD 1983 UTM Zone 9N

srk consulting

Job No: 1CI019.002.303
Filename: 1CI019.002.303_Fig3-5_HistoricalSurfaceSamples_rev01

IDM MINING

Red Mountain Underground Gold Project

Historical Surface Water Monitoring Locations

Date:	Approved:	Figure:
Nov. 2016	LC	3-5

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Table 3-3: Historical Baseline Surface Water Monitoring Locations (Listed in Chronological Order)

Watershed	Location	Established	Discontinued	Monitored By	Description	Equivalent Current Location
Goldslide Creek	W1	September 1990	August 1994	HKP Rescan	Upper Goldslide Creek	GSC07
Goldslide Creek	W2	September 1990	February 1994	HKP Rescan	Upper Goldslide Creek	GCS05
Goldslide Creek	W3	September 1990	November 1997	HKP Rescan Royal Oak SRK (2000)	Lower Goldslide Creek	GSC02
Bitter Creek	W4	September 1990	July 1993	HKP Rescan	Upper Bitter Creek	
Bitter Creek	W5	September 1990	November 1997	HKP Rescan Royal Oak SRK (2000)	Lower Bitter Creek near bridge	BC02
Goldslide Creek	W7	September 1990	June 1992	HKP	Upper Goldslide Creek	
Bear River	W8	October 1990	February 1994	HKP Rescan	Upstream of Bitter Creek confluence	BR08
Bear River	W9	October 1990	January 1994	HKP Rescan	Upstream of Stewart, BC	BR03
Bear River	W10	May 1991	February 1994	HKP Rescan	Downstream of Bitter Creek confluence	BR06
Rio Blanco Creek	W11	January 1993	November 1997	Rescan Royal Oak SRK (2000)	Lower Rio Blanco Creek	RBC02
Bitter Creek	W13	February 1993	February 1994	Rescan	Upper Bitter Creek	BC08
QC Sample	W14	February 1993	September 1997	Rescan Royal Oak	Blank sample	
QC Sample	W15	February 1993	July 1997	Rescan Royal Oak	Replicate sample	
QC Sample	W16	February 1993	May 1997	Rescan Royal Oak	Split sample	
Bitter Creek	W17	February 1993	November 1997	Rescan Royal Oak SRK (2000)	Upstream of Roosevelt Creek confluence	BC04
Roosevelt Creek	W18	February 1993	November 1997	Rescan Royal Oak SRK (2000)	Lower Roosevelt Creek	RC02
Roosevelt Creek	W19	February 1993	February 1994	Rescan	Lower Roosevelt Creek	
Goldslide Creek	N/A	August 2003	August 2013	SRK	Upper Goldslide Creek	Close to GSC07
Bitter Creek	N/A	August 2003	August 2013	SRK	Middle Bitter Creek	See text

Source: compiled in text.

Rescan (1993 to 1994) Sampling Methods

Rescan reinitiated water quality sampling in February 1993 program to support permitting for Lac Minerals. Rescan (1995) presents the baseline data and details of the methodologies and instrumentation used in the monitoring program. Rescan established six additional monitoring locations in Rio Blanco Creek, Bitter Creek, and Roosevelt Creek (Table 3-3). Four of these locations (W11, W13, W17, and W18) are relevant to the current baseline water quality program because they are in the same place as a current monitoring location. The 1993 to 1994 data included in this evaluation are provided in Appendix B-2.

In addition to monthly sampling at all of the Rescan locations, five samples per month were collected at one location in each watershed during June, September, and February to characterize short-term variability in water quality during both low- and high-flow months. These stations were W3 on Goldslide Creek near the exploration camp in the cirque, W10 on Bear River, W11 on Rio Blanco Creek, W17 on Bitter Creek south of the confluence with Roosevelt Creek, and W18 on Roosevelt Creek (Rescan 1995).

During 1993 and 1994, field blanks, split samples, and replicate samples were collected during each sampling event. Field blanks were labeled as site W14, replicate samples as site W15, and split samples as site W16 (Rescan 1995).

During 1993 and 1994, sample bottles and caps were rinsed three times before being filled completely to minimize headspace. Sample bottles for cyanide analysis were not rinsed, as these bottles contained sodium hydroxide pellets. Samples were stored in a cooler immediately after being collected. Conductivity, temperature, and pH were measured in Lac's offices in Stewart. Samples were shipped to Elemental Research Inc. (ERI) in North Vancouver. Sample filtration and preservation were done at the lab. Analyses were performed by ERI in accordance with US EPA Method 200.8 for total and dissolved metals and with APHA Standard Methods, 18th Edition (1989) for the remaining analyses (Rescan 1995).

Samples were analyzed for physical parameters, nutrients, total and dissolved metals, and occasionally for total cyanide. The only parameters that were not included in the 1993 to 1994 analyte list that are part of the current baseline monitoring program are total and dissolved organic carbon, bismuth, silicon, thallium, tin, and titanium (Appendix B-2). Detection limits for some parameters were higher than in the current program (Section 3.2.3).

Royal Oak (1996 to 1997) Sampling Methods

Royal Oak reinitiated water quality sampling in May 1996 for a two year period at a subset of the water quality monitoring locations from the 1994 monitoring program to support a feasibility study (Table 3-3). Royal Oak did not establish any new water quality monitoring locations. Data collected by Royal Oak that are relevant to this report are provided in Appendix B-2.

No information was found on sample collection methods during 1996 and 1997, but samples were analyzed by ERI in North Vancouver, the same lab as the Rescan (1995) sampling program (Royal Oak 1998). The only parameters that were not included in the 1996 to 1997 analyte list that are part of the current baseline monitoring program are total and dissolved organic carbon,

bismuth, silicon, thallium, tin, and titanium (Appendix B-2). Detection limits for some parameters were higher than in the current program (Section 3.2.3).

SRK Site Visit (2000) Sampling Methods

After NAMC purchased the property in 2000, SRK visited the site in early August 2000, and collected baseline water quality samples and water quality samples from waste rock dump seepage sites and underground workings (SRK 2001). SRK collected samples from W3, W5, W11, W17, W18, and ponded water in the underground. A duplicate sample and a field blank sample were also taken. Samples were taken following standard environmental sampling procedures that were consistent with current requirements in the *British Columbia Field Sampling Manual* (MWLAP 2013) when practical. All the SRK (2000) data have been included in this report (Appendix B-2). The only parameters that were not included in the 2000 analyte list that are part of the current baseline monitoring program are conductivity, acidity, total and dissolved organic carbon, bismuth, silicon, strontium, and tin.

SRK Permit Monitoring (2003 to 2013) Sampling Methods

SRK completed annual site visits from 2003 to 2013, with the exception of 2012, as a requirement of Mineral and Coal Exploration Activities & Reclamation Permit No. Mx-1-422 (MEM 2002) for Seabridge. The results of the inspections are documented in SRK's annual reports (SRK 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, and 2014). Most of the annual site visits were conducted in August, although several were conducted in July or September. The purpose of the site visits was to document site conditions and included monitoring related to the underground workings and surface waste rock dump.

The sampling program included collecting water quality samples from Goldslide Creek and Bitter Creek and when possible, from the underground mine pool. The Goldslide Creek annual monitoring location was approximately halfway between the existing portal and waste rock dump higher up and the exploration camp lower down and is similar to the current monitoring location GSC07. The Bitter Creek annual monitoring location was approximately halfway between the confluences with Hartley Gulch upstream and Cambria Creek downstream and is in between current monitoring locations BC04 and BC06.

Grab samples were collected following standard environmental sampling procedures that were consistent with current requirements in the *British Columbia Field Sampling Manual* (MWLAP 2013) when practical. The dissolved metals samples were filtered and preserved in the field. Laboratory analyses were conducted by ALS Environmental in Burnaby, BC. Field measurements for pH, conductivity, temperature, and oxidation-reduction potential (ORP) were taken at each sample location. The parameters that were not included in the 2003 to 2013 analyte list that are part of the current baseline monitoring program are TSS, turbidity, acidity, major ions, and all total metals (Appendix B-3).

3.2.3 Surface Water Quality Baseline Dataset

Temporal Coverage

The surface water quality dataset used for the baseline evaluation includes results from sampling events completed from 1990 through the end of December 2016. All raw data for the current and historical stations listed in Table 3-1 are presented in Appendices B-1 (1990 to 1992), B-2 (1993 to 2000), B-3 (2003 to 2013), and C (2014 to 2016).

The temporal coverage of the surface water quality dataset is summarized in Table 3-4 by year (1990 to 2016) and in Table 3-5 by month. Table 3-4 demonstrates that the historical water quality data supplements the 2014 to 2016 program, providing at least two results for each month for most of the monitoring locations. The exceptions include the following:

- Monthly sampling was put on hold from November 2014 through June 2015 and from November through December 2015 due to budgetary and safety considerations. Consequently, no samples were collected in the current monitoring program in March and only one set of samples was collected in January, February, April, August, November, and December.
- Locations that do not have a historical equivalent have fewer than two monthly samples for some or all months: American Creek monitoring location AC02, all three of the Otter Creek monitoring locations, one of four Goldslide Creek locations (GSC09), and one of four Bitter Creek locations (BC06).
- Locations that are impossible or unsafe to sample during the winter due to no or low flow conditions and/or unsafe access have fewer than two monthly samples for winter months. For example, only four of the monitoring locations (BC02, BC04, BR06, and BR08) have at least two samples from December and only two of the locations (GSC02 and RBC02) have at least two samples from March.
- Two of the Otter Creek monitoring locations (OC05 and OC07) were established in April 2016 when the proposed tailings facility and processing plant were relocated to the Bromley Humps areas. One Bitter Creek monitoring location (BC06) was also added to the program in June 2016. Therefore, these three locations have limited samples.

Table 3-4: Temporal Coverage of Surface Water Quality Samples (By Year)

Watershed	Current Location	Equivalent Historical Location	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
American Creek	AC02	None																									X	X	X
Bitter Creek	BC02	W5	X	X	X	X	X	X	X	X			X														X	X	X
	BC04	W17				X	X	X	X	X			X				X[3]	X[3]	X[3]	X[3]	X[3]	X[3]	X[3]	X[3]		X[3]	X	X	X
	BC06	None																											X
	BC08	W13				X	X																				X	X	X
Bear River	BR03	W9	X	X	X	X																					X	X	X
	BR06	W10	X	X	X	X	X																				X	X	X
	BR08	W8	X	X	X	X	X																				X	X	X
Goldslide Creek	GSC02	W3	X	X	X	X	X	X	X	X			X														X	X	X
	GSC05/GSC99[4]	W2	X	X	X	X	X																				X	X	X
	GSC07	W1	X	X	X	X	X									X[3]	X[3]		X[3]	X[3]	X[3]	X[3]	X[3]	X[3]		X[3]	X	X	X
	GSC09	None																									X	X	X
Otter Creek	OC04/OC06[4]	None																									X	X	X
	OC05	None																											X
	OC07	None																											X
Rio Blanco Creek	RBC02	W11				X	X	X	X	X			X														X	X	X
Roosevelt Creek	RC02	W18				X	X		X	X			X														X	X	X

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\!080_Deliverables\!EA_Deliverables\WQ_Baseline_Report\020_Tables\WQ_Baseline_Rpt_Tables_1CI019-002_rev01_lmc.xlsx

Notes:

(1) An “X” indicates that at least one sample was taken for that year at a given location.

(2) The “current location” names were used starting in 2014. The “equivalent historical location” names were used from 1990 through 2013.

(3) Samples collected from 2003 to 2013 from Goldslide Creek and Bitter Creek were listed for the closest station.

(4) Temporal coverage for GSC05 includes samples collected at winter sampling location GSC99 and temporal coverage for OC04 includes samples collected at OC06.

Table 3-5: Temporal Coverage of Surface Water Quality Samples (By Month)

Watershed	Current Location	Equivalent Historical Location	January	February	March	April	May	June	July	August	September	October	November	December
American Creek	AC02	None	1 current	1 current		1 current	2 current	4 current	2 current	2 current	2 current	2 current	1 current	1 current
Bitter Creek	BC02	W5	1 current, 3 historical	1 current, 5 historical	2 historical	1 current, 3 historical	2 current, 4 historical	5 current, 5 historical	3 current, 5 historical	2 current, 3 historical	2 current, 3 historical	2 current, 8 historical	1 current 2 historical	1 current 3 historical
	BC04	W17	1 current, 2 historical	1 current, 8 historical	1 historical	1 current, 2 historical	2 current, 2 historical	4 current, 8 historical	4 current, 10 historical	2 current, 7 historical	2 current, 6 historical	2 current, 14 historical	1 current 2 historical	1 current 1 historical
	BC06	None						4 current	2 current				1 current	1 current
	BC08	W13	1 current, 1 historical	2 historical		1 current	2 current, 1 historical	4 current, 1 historical	4 current, 1 historical	2 current, 1 historical	1 current	2 current, 2 historical	1 current 1 historical	1 current
Bear River	BR03	W9	1 current, 1 historical	1 historical	1 historical	1 current, 1 historical	1 historical	1 current, 1 historical	2 current		1 current	1 current, 2 historical	1 current	
	BR06	W10	1 current, 1 historical	1 current, 6 historical	1 historical	1 current, 1 historical	2 current, 2 historical	5 current, 6 historical	3 current, 1 historical	2 current, 1 historical	2 current, 4 historical	2 current, 3 historical	1 current	1 current 1 historical
	BR08	W8	1 current, 1 historical	1 current, 3 historical	1 historical	1 current, 1 historical	2 current, 2 historical	5 current, 2 historical	3 current, 1 historical	2 current, 1 historical	2 current	2 current, 4 historical	1 current	1 current 1 historical
Goldslide Creek	GSC02	W3		4 historical	3 historical	3 historical	1 current, 3 historical	2 current, 9 historical	3 current, 8 historical	2 current, 7 historical	2 current, 7 historical	1 current, 15 historical	1 current 3 historical	1 historical
	GSC05/ GSC99[2]	W2	1 current, 2 historical	1 current, 3 historical		1 current, 1 historical	2 current, 2 historical	5 current, 2 historical	3 current, 1 historical	2 current, 1 historical	2 current, 1 historical	2 current, 4 historical	1 current 1 historical	
	GSC07	W1		1 historical			1 historical	1 current, 2 historical	3 current, 1 historical	2 current, 1 historical	2 current, 1 historical	2 current, 3 historical	1 current 1 historical	
	GSC09	None						1 current	2 current	1 current	2 current	2 current		
Otter Creek	OC04/ OC06[2]	None		1 current			2 current	4 current	2 current	2 current	2 current	2 current	1 current	
	OC05	None				1 current	2 current	4 current	1 current		1 current		1 current	1 current
	OC07	None				1 current	2 current	4 current	1 current		1 current		1 current	1 current
Rio Blanco Creek	RBC02	W11	2 historical	1 current, 6 historical	2 historical	1 current, 4 historical	2 current, 3 historical	5 current, 8 historical	3 current, 9 historical	2 current, 5 historical	1 current, 6 historical	2 current, 9 historical	1 current 3 historical	1 historical
Roosevelt Creek	RC02	W18	1 current, 1 historical	1 current, 3 historical		1 current, 1 historical	2 current, 2 historical	4 current, 1 historical	3 current, 9 historical	2 current, 4 historical	1 current, 6 historical	2 current, 8 historical	1 current 2 historical	1 current

Source: compiled in text

Notes:

(1) "Current" samples were collected from 2014 to 2016 as part of the current baseline monitoring program. "Historical" samples were collected between 1990 and 2013, as described in Section 3.2.2.

(2) Temporal coverage for GSC05 includes samples collected at winter sampling location GSC99 and temporal coverage for OC04 includes samples collected at OC06.

Use of Historical Data

When possible, the historical water quality results were used to supplement the results from the current baseline monitoring program. However, it was not possible to use all of the historical data for this purpose. Some parameters were not measured historically, such as total and dissolved bismuth, silicon, strontium, and tin, as discussed in Section 3.2.2, and for some parameters, historical detection limits are higher than current detection limits, and were therefore inappropriate for use in calculating summary statistics.

Based on these two factors, historical data for some water quality parameters were removed from the dataset that was used to calculate summary statistics (Section 3.4.2). These data were retained in the water quality data tables and plots (Appendix B and E) for reference. The parameters for which historical data were removed from the summary statistics dataset are listed in Table 3-6. The parameters for which historical data were included in the summary statistics dataset are listed in Table 3-7.

Table 3-6: Historical Surface Water Quality Parameters Excluded from Evaluation

Parameter	Justification for Exclusion
Chloride	Detection limit inconsistency
Fluoride	Detection limit inconsistency
Bromide	Detection limit inconsistency
Nitrate Nitrogen	Detection limit inconsistency
Nitrite Nitrogen	Detection limit inconsistency
Total Nitrogen	No historical data available
Ammonia Nitrogen	Limited historical data available
Ortho-Phosphate	Limited historical data available
Phosphorus, total	Detection limit inconsistency
Organic Carbon, total and dissolved	No historical data available
Dissolved Organic Carbon	No historical data available
Arsenic, total and dissolved	Detection limit inconsistency
Beryllium, total and dissolved	Detection limit inconsistency
Bismuth, total and dissolved	Detection limit inconsistency
Boron, total and dissolved	Detection limit inconsistency
Chromium, total and dissolved	Detection limit inconsistency
Mercury, total and dissolved	Detection limit inconsistency
Selenium, total and dissolved	Detection limit inconsistency
Silver, total and dissolved	Detection limit inconsistency
Thallium, total and dissolved	Limited historical data available
Tin, total and dissolved	Limited historical data available
Titanium, total and dissolved	Limited historical data available
Uranium, total and dissolved	Limited historical data available
Vanadium, total and dissolved	Limited historical data available

Source: compiled in text.

Table 3-7: Historical Surface Water Quality Parameters Included in Evaluation

Parameter
pH
Conductivity
Hardness
Total dissolved solids
Total suspended solids
Turbidity
Alkalinity
Acidity
Sulphate
Aluminum, total and dissolved
Antimony, total and dissolved
Barium, total and dissolved
Cadmium, total and dissolved
Calcium, total and dissolved
Cobalt, total and dissolved
Copper, total and dissolved
Iron, total and dissolved
Lead, total and dissolved
Magnesium, total and dissolved
Manganese, total and dissolved
Molybdenum, total and dissolved
Nickel, total and dissolved
Silicon, total and dissolved
Sodium, total and dissolved
Strontium, total and dissolved
Zinc, total and dissolved

Source: compiled in text.

Outlier Removal

The compiled surface water quality dataset was also reviewed to identify any outliers. Outliers were identified visually from data plots as data points that were significantly higher or lower than the rest of the data for each location. The standard deviation from the mean of the water body was calculated for each outlier after they were identified. All of the outliers were a minimum of 15 standard deviations from the mean of the water body, and were often several hundred standard deviations from the mean. Once an outlier was identified, it was removed from the dataset used to calculate summary statistics (Section 3.4.2), but was retained in the water quality data tables and plots (Appendices B and E) for reference. The outliers that were removed from the summary statistics dataset are shown in Table 3-8.

QA/QC Issues

Some results were removed from the surface water quality dataset after failing QA reviews, as discussed in Section 3.5.

Table 3-8: Outliers Removed from Surface Water Quality Dataset

Station	Date	Parameter	Unit	Value
BC06	28-Jun-16	Iron, dissolved	mg/L	1.7
RBC02	24-Jun-14	Bismuth, dissolved	mg/L	0.05
	24-Jun-14	Bismuth, total	mg/L	0.05
W11	30-Jul-93	Iron, total	mg/L	91
	26-Oct-00	Molybdenum, dissolved	mg/L	0.03
W17	30-Jul-93	TDS	mg/L	840
	1-Oct-96	Conductivity	µS/cm	1153
	26-Oct-00	Conductivity	µS/cm	1500
W18	26-Oct-00	Conductivity	µS/cm	1290
W3	29-Mar-94	Aluminum, total	mg/L	7.15
	29-Mar-94	Iron, total	mg/L	15.6
	29-Mar-94	Manganese, total	mg/L	0.438
	29-Mar-94	TSS	mg/L	320
	29-Mar-94	Turbidity	mg/L	170
	26-Apr-94	Aluminum, total	mg/L	13.5
	26-Apr-94	Iron, total	mg/L	7.26
	26-Apr-94	Manganese, total	mg/L	0.692
	26-Apr-94	TSS	mg/L	3700
	26-Apr-94	Turbidity	mg/L	120
	13-Oct-94	Turbidity	mg/L	61
	26-Oct-00	Conductivity	µS/cm	1520
W5	26-Oct-00	Aluminum, dissolved	mg/L	3.02
	26-Oct-00	Conductivity	µS/cm	1610
	26-Oct-00	Iron, dissolved	mg/L	4.95

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Monthly_REV03_KNK

3.3 Groundwater Quality Monitoring

3.3.1 IDM Groundwater Quality Monitoring Program

Baseline groundwater quality sampling at Red Mountain was reinitiated on August 24, 2014. Avison were responsible for all field sampling activities. This report presents the results of the sampling events completed through the end of December 2016.

Monitoring Locations

The groundwater quality monitoring locations are presented in Table 3-9 and are shown on Figure 3-2. Eight groundwater quality monitoring locations were established. Photographs of the monitoring locations are provided in Appendix A. Four of these provide baseline data for the area in which the underground mine will be located, and are discussed in this report, while the remaining four monitor discharge from the existing waste rock dump and crib tests, and are discussed in the geochemistry evaluation (SRK 2017a).

The groundwater monitoring locations included in the baseline water quality evaluation are:

- Ponded water in the exploration decline (RMS4)
- An artesian drillhole (M94173) on the steep slope of the southern edge of the cirque (RMS5)
- An artesian drillhole (8902) in the cirque near GSC09 and GSC07 (RMS6)
- An artesian drillhole (M94217) on the steep slope of the northern edge of the cirque (RMS7)

Three monitoring wells were installed at Bromley Humps in August 2016 in the vicinity of the proposed TMF (MW16-002, MW16-003, and MW16-004). The limited results available from these wells are presented in Appendix I (Table 3-9).

Table 3-9: Groundwater Quality Monitoring Locations and Descriptions

Location	Established	Description	Notes
RMS1[1]	August 2014	Seep on east side of waste rock dump	Included in geochemistry evaluation
RMS2[1]	August 2014	Seep on southwest side of waste rock dump	Included in geochemistry evaluation
RMS3[1]	August 2014	Seep on northwest side of waste rock dump	Included in geochemistry evaluation
RMS4	June 2014	Ponded water in the underground decline	Included in baseline water quality evaluation
RMS5	July 2015	Artesian drillholes located on steep slope on the southern edge of cirque, the inclined pipe is sampled	Included in baseline water quality evaluation
RMS6	August 2014	Artesian drillhole located in cirque near GSC09 and GSC07	Included in baseline water quality evaluation
RMS7	September 2014	Artesian drillhole located on steep slope on the northern side of cirque	Included in baseline water quality evaluation
NCribs[1]	October 2015	Two separate cribs (Ncrib N and Ncrib S) containing waste rock near portal entrance	Included in geochemistry evaluation
MW16-002[2]	August 2016	Monitoring well near Bromley Humps west of south embankment of proposed tailings facility	Monitoring initiated in September 2016
MW16-003[2]	August 2016	Monitoring well near Bromley Humps west of south embankment of proposed tailings facility	Monitoring initiated in September 2016
MW16-004[2]	August 2016	Monitoring well near Bromley Humps northwest of north embankment of proposed tailings facility	Monitoring initiated in September 2016

Source: compiled in text from Avison 2016.

Notes:

(1) These groundwater monitoring locations are discussed in the Baseline Geochemistry Report (SRK 2017a) and are not referenced in the remainder of this report.

(2) These groundwater monitoring locations are discussed in Appendix I.

Sample Collection and Laboratory Analysis

All of the groundwater quality samples were grab samples because they were taken from ponded water or flowing drillholes. Samples were taken and analyzed following the same procedures as for surface water samples (Section 3.2.1).

3.3.2 Historical Sampling Programs

This section describes the groundwater-specific sampling methods for the HKP data from 1990 to 1992, the Rescan data from 1993 to 1994, the Royal Oak data from 1996 to 1997, and SRK's annual monitoring data from 2003 to 2013. Complete information on these sampling programs is provided in Section 3.2.2.

Table 3-10 identifies the known equivalent locations as well as historical groundwater monitoring locations that are in the general vicinity of areas of interest to the Project. The names of the seeps and springs changed throughout the 1990s and 2000s, so it is difficult to determine the continuity of individual monitoring locations. The historical locations are shown with the current locations in Figure 3-6.

HKP (1990 to 1992) Sampling Methods

Baseline water quality data were collected by HKP on behalf of Bond Gold and Lac Minerals Ltd. from October 11, 1990 to June 30, 1992 to support a potential mine development permit application. Details on the methodologies and instrumentation used in the monitoring program are presented in HKP (1992), and are summarized in Section 3.2.2. Sampling location W6 was a baseline groundwater station located at drillhole BZ89-02 in the upper cirque. W6 was monitored beginning in September 1990 (Appendix D).

Klohn-Crippen (1993) Sampling Methods

Klohn-Crippen completed a seeps and springs survey in 1993 to support a baseline hydrogeology assessment. The survey included monitoring of 24 monitoring locations, which included two underground boreholes (MC-92-124 and MC92-76), two surface piezometers (TD93-159 and TD93-160), two discharge locations from the existing decline, and 18 groundwater seeps and springs the locations starting with "WS93-"). In total, 19 of the locations were sampled in July, eight in September, two in October, and two in November (Klohn Crippen 1994a, 1994b). These locations are listed in Table 3-10.

Rescan (1993 to 1994) Sampling Methods

Rescan reinitiated water quality sampling in February 1993 program to support permitting for Lac Minerals. Rescan (1995) presents the baseline data and details of the methodologies and instrumentation used in the monitoring program and are summarized in Section 3.2.2. Rescan monitored W6, established in 1990 by HKP, and established monitoring location W12, a seep near the middle reaches of Rio Blanco Creek in Bitter Creek Valley, which was monitored from February 1993 to February 1994 (Appendix D). Rescan collected samples from ponded water in the decline of the underground portal ("UG Discharge") beginning in August 1993. Rescan also

collected samples from discharged water from the underground during dewatering efforts when the exploration decline reopened for further development in March 1994 (Appendix D).

Six springs were also sampled in 1994. Locations SS-I, SS-II, and SS-III were located near Rio Blanco Creek within the Bitter Creek valley and locations SS-IV, SS-V, and SS-Va were located within the cirque (Rescan 1995). Based on the descriptions of precipitates at the seeps and springs, some of the locations sampled in 1993 by Klohn-Crippen were also monitored in 1994. The Bitter Creek valley seeps WS93-10 and WS93-11 were described in 1993 as having "significant rust staining" (Klohn Crippen 1994a, 1994b) and appear to be in the same area of the valley south of Rio Blanco Creek as locations SS-I, SS-II, and SS-III, which were described as having "strong iron staining" (Rescan 1994). Similarly, WS93-6 in the lower cirque above the camp was described as "the only spring observed with calcium carbonate deposit buildup" in 1993 (Klohn Crippen 1994a, 1994b) and location SS-IV, which appears to be in the same general location based on a hand-drawn map, is described as having "strong carbonate staining and accumulation" in 1994 (Rescan 1994). Seeps SS-V and SS-Va, which are located in the middle cirque according to a hand-drawn map, were described as having "zinc moss growing within its wetted areas" in 1994 (Rescan), but no seeps with matching descriptions were mentioned in the 1993 survey (Klohn Crippen 1994a, 1994b).

Royal Oak (1996 to 1997) Sampling Methods

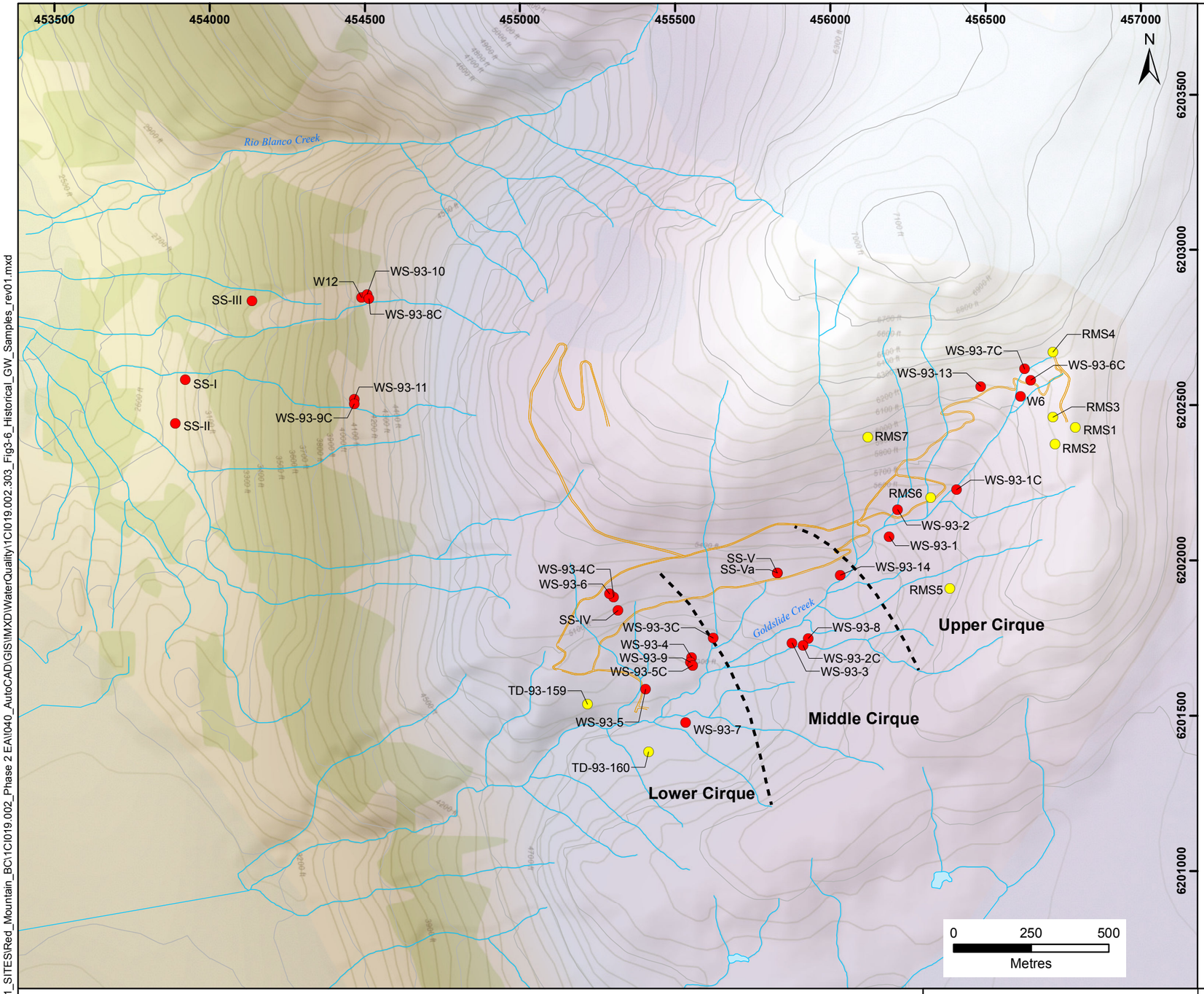
Royal Oak reinitiated water quality sampling in May 1996 for a two-year period at a subset of the water quality monitoring locations from the 1994 monitoring program (Section 3.2.2). W6 was sampled twice in 1996. Royal Oak also collected samples from ponded water in the decline of the underground portal periodically in 1996 and 1997 and sampled seeps SS-1 through SS-Va in 1996 (Appendix D).

SRK Site Visit (2000) Sampling Methods

After NAMC purchased the property in 2000, SRK visited the site in early August 2000 (Section 3.2.2). SRK collected a sample of ponded water in the decline of the underground portal (Appendix D). The sample was collected following standard environmental sampling procedures that were consistent with current requirements in the *British Columbia Field Sampling Manual* (MWLAP 2013) when practical.

SRK Permit Monitoring (2003 to 2013) Sampling Methods

SRK completed annual site visits from 2003 to 2013, with the exception of 2012, as a requirement of Mineral and Coal Exploration Activities & Reclamation Permit No. Mx-1-422 (MEM 2002) for Seabridge (Section 3.2.2). Ponded water from the decline was monitored during the 2003, 2004, 2005, and 2006 annual site visits (Appendix D). Samples were collected following standard environmental sampling procedures that were consistent with current requirements in the *British Columbia Field Sampling Manual* (MWLAP 2013) when practical.



Legend

- Current Groundwater Samples
- Historical Groundwater Samples
- Existing Road
- Contour
- Watercourse
- Waterbody

Site Location



Notes:
Coordinate System: NAD 1983 UTM Zone 9N

srk consulting

Job No: 1CI019.002.201

Filename: 1CI019.002.303_Fig3-6_Historical_GW_Samples_rev01

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Red Mountain Underground Gold Project

Historical Groundwater Monitoring Locations

Date:	Approved:	Figure:
Oct. 2016	LC	**3-6**

\\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.002_Phase 2 EA\l040_AutoCAD\GIS\MXD\WaterQuality\1CI019.002.303_Fig3-6_Historical_GW_Samples_rev01.mxd

Table 3-10: Equivalent and Similar Historical and Current Groundwater Monitoring Locations

Area	Current Location	Equivalent Historical Location	Other Historical Locations in Area	Notes on Historical Monitoring Locations
Pooled water in adit, Exploration decline	RMS4	UG Discharge (Rescan, Royal Oak, SRK)	WS93-6C (Klohn-Crippen) WS93-7C (Klohn-Crippen)	Names for discharge from the underground and/or ponded water in the adit have varied historically and include UG, RM-SEEP-04, 04RM01, RMUG, and 06 RM UG.
Upper cirque			WS93-1 (Klohn-Crippen) WS93-2 (Klohn-Crippen) WS93-1C (Klohn-Crippen) WS93-13 (Klohn-Crippen) W6 (HKP, Rescan, Royal Oak)	W6 may be the same monitoring location as RMS6, but the identification could not be confirmed.
Middle cirque	RMS5 RMS6 RMS7		WS93-3 (Klohn-Crippen) WS93-8 (Klohn-Crippen) WS93-2C (Klohn-Crippen) WS93-14 (Klohn-Crippen) SS-V (Rescan, Royal Oak) SS-Va (Rescan, Royal Oak)	
Lower cirque			TD-93-159 (drillhole) TD-93-160 (drillhole) WS93-3C (Klohn-Crippen) WS93-4 (Klohn-Crippen) WS93-5C (Klohn-Crippen) WS93-5 (Klohn-Crippen) WS93-7 (Klohn-Crippen) WS93-9 (Klohn-Crippen) WS93-6 (Klohn-Crippen) WS93-4C (Klohn-Crippen) SS-IV (Rescan, Royal Oak)	WS93-6 (monitored in 1993) and SS-IV (monitored in 1994 and 1996) may be the same seep based on historical descriptions.
Bitter Creek Valley			WS93-8C (Klohn-Crippen) WS93-9C (Klohn-Crippen) WS93-10 (Klohn-Crippen) WS93-11 (Klohn-Crippen) SS-I (Rescan, Royal Oak) SS-II (Rescan, Royal Oak) SS-III (Rescan, Royal Oak) W12 (Rescan)	WS93-10 and WS93-11 (monitored in 1993) may be the same as SS-I, SS-II, and SS-III (monitored in 1994 and 1996) based on historical descriptions.

Source: compiled in text.

3.3.3 Groundwater Quality Baseline Dataset

Temporal Coverage

The groundwater quality dataset used for the baseline evaluation includes results from sampling events completed from 1990 through the end of December 2016. All raw data for the current and historical stations listed in Table 3-10 are presented in Appendix D. The temporal coverage of the groundwater quality dataset is summarized in Table 3-11 by year and in Table 3-12 by quarter. Table 3-12 shows that none of the current groundwater monitoring locations were sampled in January through March (first quarter) and RMS4 does not have any samples from October through December (fourth quarter) from the current monitoring program.

Use of Historical Data

The historical water quality results for the pooled water in the adit can be used to supplement the results from the current baseline monitoring results for RMS4. Like surface water, some parameters were not measured historically or historical detection limits are higher than current detection limits (see discussion in Section 3.2.3). These data were retained in the water quality data tables and plots (Appendix D and F) for reference. The historical water quality results for the pooled water in the adit includes samples collected during active dewatering in 1994. Some of these samples have extremely elevated TSS levels. Samples where TSS exceeded 15 mg/L were excluded from the summary statistics dataset.

The other monitoring locations (RMS5, RMS6, and RMS7) cannot be supplemented with historical water quality data.

Outlier Removal

The groundwater quality dataset was also reviewed to identify any outliers. No outliers were removed from the dataset.

QA/QC Issues

Some results were removed from the groundwater quality dataset after failing QA (Section 3.5).

Table 3-11: Spatial and Temporal Coverage of Groundwater Quality Samples

Area	Current Location	Historical Locations	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Pooled water in adit, Exploration decline	RMS4	UG Discharge (1993 – 1997, 2000s) WS93-6C (1993) WS93-7C (1993)				X	X		X	X			X			X	X	X	X							X	X	X
Middle cirque	RMS5 RMS6 RMS7	WS93-3 (1993) WS93-8 (1993) WS93-2C (1993) WS93-14 (1993) SS-V (1994, 1996) SS-Va (1994, 1996)				X[2]	X[2]		X[2]																	X	X	X

Source: compiled in text.

Notes:

(1) An "X" indicates that at least one sample was taken for that year at a given location.

(2) Historical groundwater quality results from seeps and springs in the upper and middle cirque were not used to supplement the results of the current baseline monitoring program.

Table 3-12: Temporal Coverage of Current Surface Water Quality Samples (By Quarter)

Current Location	Q1 (January to March)	Q2 (April to June)	Q3 (July to September)	Q4 (October to December)
RMS4		2 current	1 current	
RMS5		1 current	3 current	2 current
RMS6		1 current	2 current	2 current
RMS7		1 current	2 current	1 current

Source: compiled in text.

3.4 Data Analysis Procedures

The two primary data analysis procedures were comparing the data to guidelines to identify exceedances (Section 3.4.1) and calculating summary statistics for key locations (Section 3.4.2), which will be used in the water quality model (SRK 2017b).

The surface water and groundwater quality datasets that were used to identify exceedances and to calculate summary statistics exclude some historical data, as described in Section 3.2.3 and 3.3.3. The excluded historical data were retained in summary tables and plots in the appendices for reference, but were not used.

3.4.1 Comparison to Guidelines

Surface Water

The surface water quality dataset was compared to the Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines and the approved and working British Columbia Water Quality Guidelines (BC WQGs) for the protection of freshwater aquatic life. Both guidelines provide a short-term guideline, a long-term average guideline, or both. The short-term guidelines are to be applied over a short period of time (several days) or to individual samples. The long-term guideline is based upon the average concentrations of samples collected over a period of time (typically 30 days). An exceedance was counted if a sample exceeded one or more of the guidelines for a given parameter.

Results were compared to both Provincial and Federal guidelines because there are both Provincial and Federal reviewers for the Project. Technically, the CCME guidelines are only applicable for total metals and most of the BC WQGs are also only for total metals. However, due to the high TSS measured in many of the samples at this site, results for dissolved metals are also compared to these guidelines for reference. The water quality guidelines used for comparison are summarized in Appendix H.

Groundwater

All groundwater data were compared to the British Columbia Contaminated Sites Regulation (BC CSR) standards for the protection of aquatic life. These water quality guidelines are summarized in Appendix H.

3.4.2 Calculating Summary Statistics

Surface Water

Seasonal summary statistics were calculated to characterize water quality throughout the year. These summary statistics were used in the water quality model (SRK 2017b) to represent background water quality for various model scenarios. Summary statistics include the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile. A list of water quality monitoring stations that were used to characterize each water body is provided in Table 3-13.

Table 3-13: Surface Water Body Grouping for Summary Statistics

Water Body Description	Current Location	Historical Location
American Creek	AC02	None
Bitter Creek at BC02	BC02	W5
Bitter Creek at BC04	BC04	W17
Bitter Creek at BC06	BC06	None
Bitter Creek at BC08	BC08	W13
Bear River downstream of Bitter Creek confluence	BR06	W10
Bear River upstream of Bitter Creek confluence	BR08	W8
Upper Goldslide Creek Tributary	GSC09	None
Goldslide Creek main stem	GSC02	W3
	GSC05/GSC99	W2
Otter Creek	OC04/OC06	None
	OC05	None
	OC07	None
Rio Blanco Creek	RBC02	W11
Roosevelt Creek	RC02	W18

Source: compiled in text.

Not all of the monitoring locations in the surface water quality baseline monitoring program were used to calculate summary statistics for the water body in which they are located. The excluded locations are GSC07 and BR03.

- GSC07 was not included because it is the most upstream of the locations on the main stem of Goldslide Creek and does not have the dilution that occurs before Goldslide Creek drains into Bitter Creek.
- BR03 is the far downstream monitoring location for the Bear River just outside the town of Stewart. BR06, just downstream of the confluence with Bitter Creek, is better suited to characterizing the influence of Bitter Creek on the Bear River.

Water quality data were also grouped by season to increase sample sizes and to better represent seasonal variability. The seasonal groupings were based on the monthly average unit flow rates and monthly TSS concentration trends for the Goldslide Creek and Bitter Creek catchments and were confirmed by historical observations about seasonality and concentration trends for TDS and total and dissolved metals. The monthly average unit flows for the two catchments are shown in Figure 3-7. Monthly TSS in Goldslide Creek and Bitter Creek are shown in Figure 3-8 and Figure 3-9, respectively. Monthly TDS in Goldslide Creek and Bitter Creek are shown in Figure 3-10 and Figure 3-11, respectively. Months with distinct flows and TSS and TDS levels were grouped together to calculate summary statistics. The seasons identified for the summary statistics are shown in Table 3-14.

Flows in Bitter Creek and Otter Creek are dominated by glacial melt, whereas flow in Goldslide Creek is dominated by freshet conditions (SRK 2017c), and consequently peak flows in Bitter Creek typically occur in July and in Goldslide Creek in June (Figure 3-7). The high flow season is June and July and captures the highest flows in both kinds of creeks.

Historical observations indicate that October is the month with the highest precipitation (Rescan 1995), and historical water quality data corroborates this observation (i.e., elevated metals concentrations in October in Bitter Creek, Appendix E), so there is a separate fall shoulder season (September, October, and November) for the purposes of summary statistics. September and November are included in the fall shoulder season to increase sample numbers and to capture natural variability in precipitation timing, because the October rains may not always happen in October. Similarly, the spring shoulder season (April, May, and June) captures the transition between winter low flow and freshet and glacial melt. This transition typically occurs in May, but may also happen in April or June in some years.

Table 3-14: Seasonal Groupings for Surface Water Summary Statistics

Season	Months
Winter Low Flow	November to April
Spring Shoulder Season	April to June
High Flow	June to July
Summer	August to September
Fall Shoulder Season	September to November

Source: compiled in text.

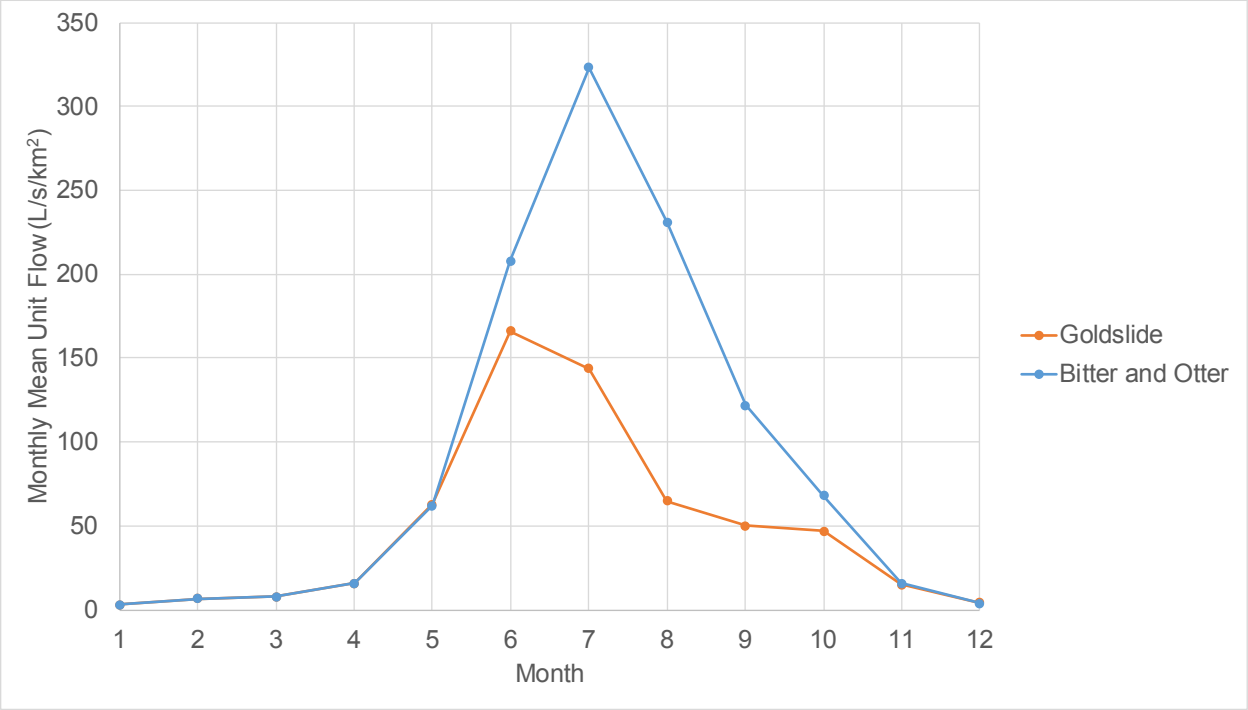


Figure 3-7: Monthly Average Unit Flow in Goldslide and Bitter Creeks

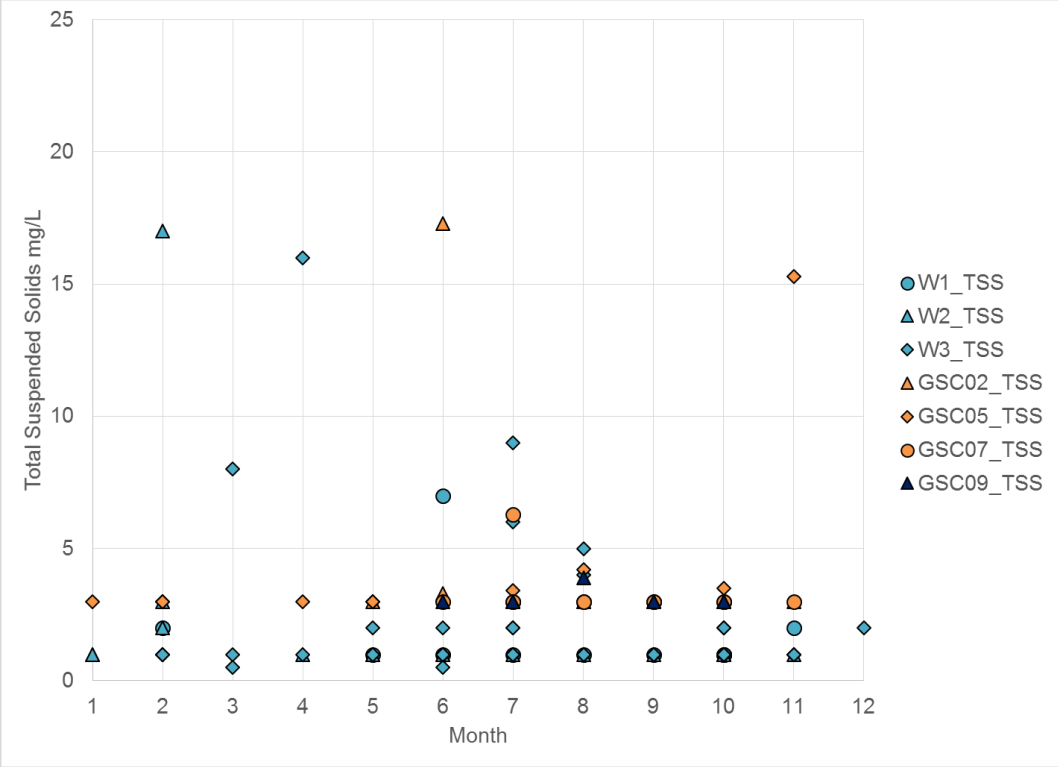


Figure 3-8: Monthly TSS in Goldslide Creek

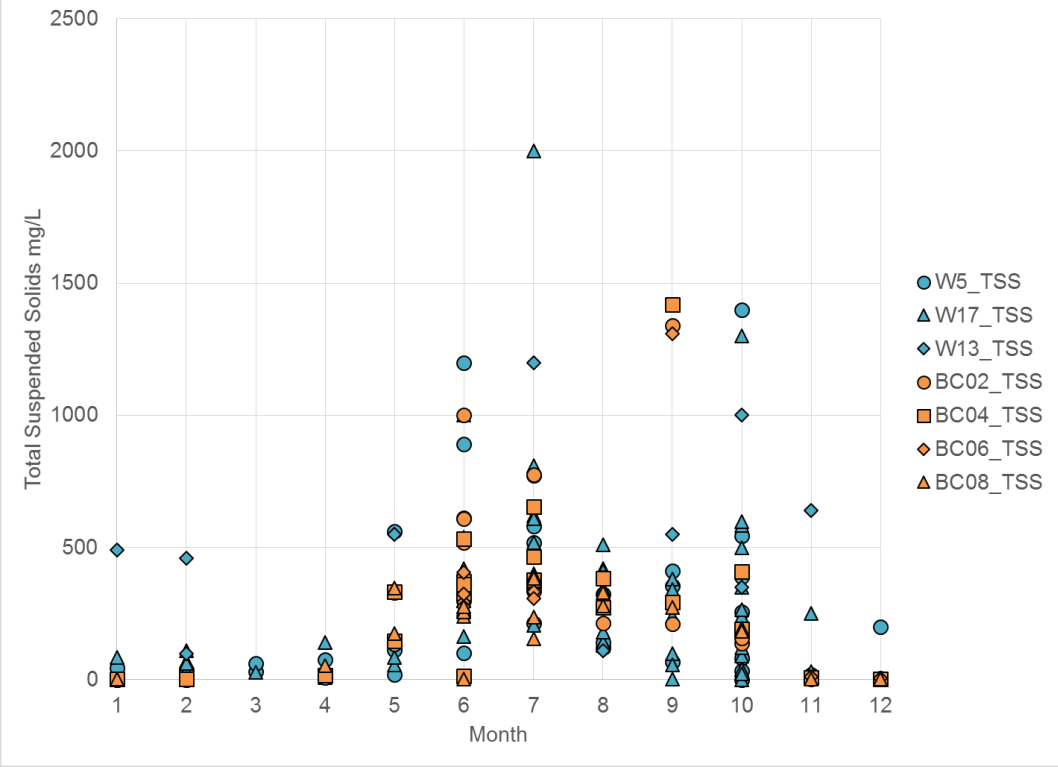


Figure 3-9: Monthly TSS in Bitter Creek

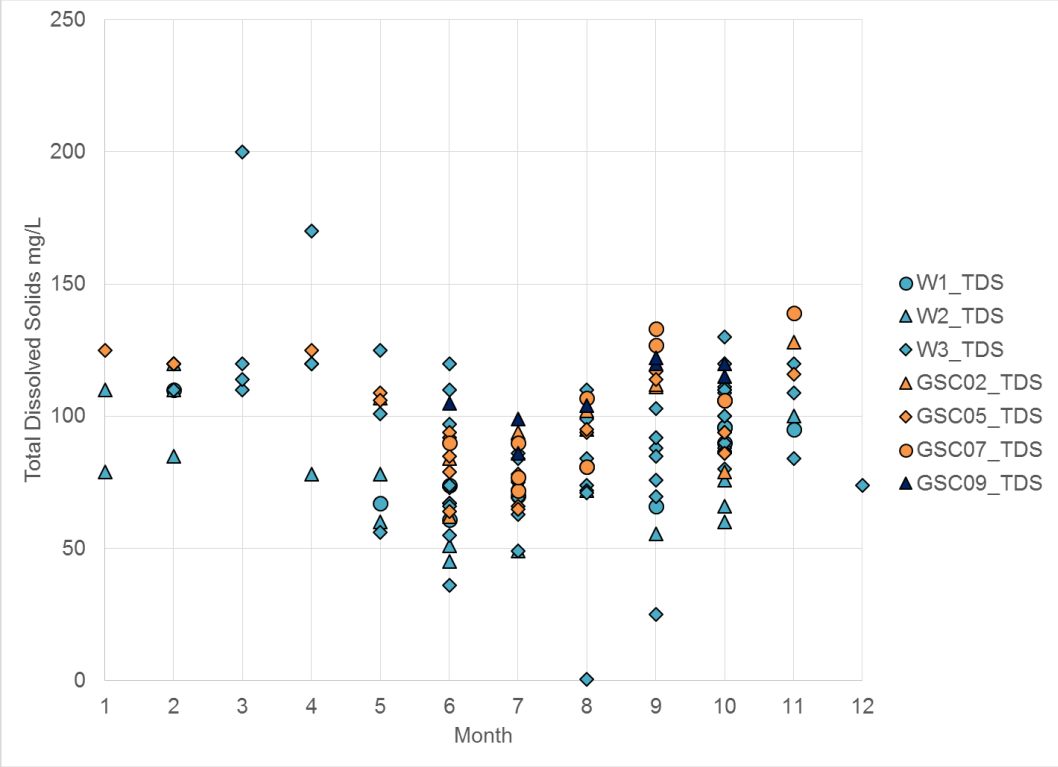


Figure 3-10: Monthly TDS in Goldslide Creek

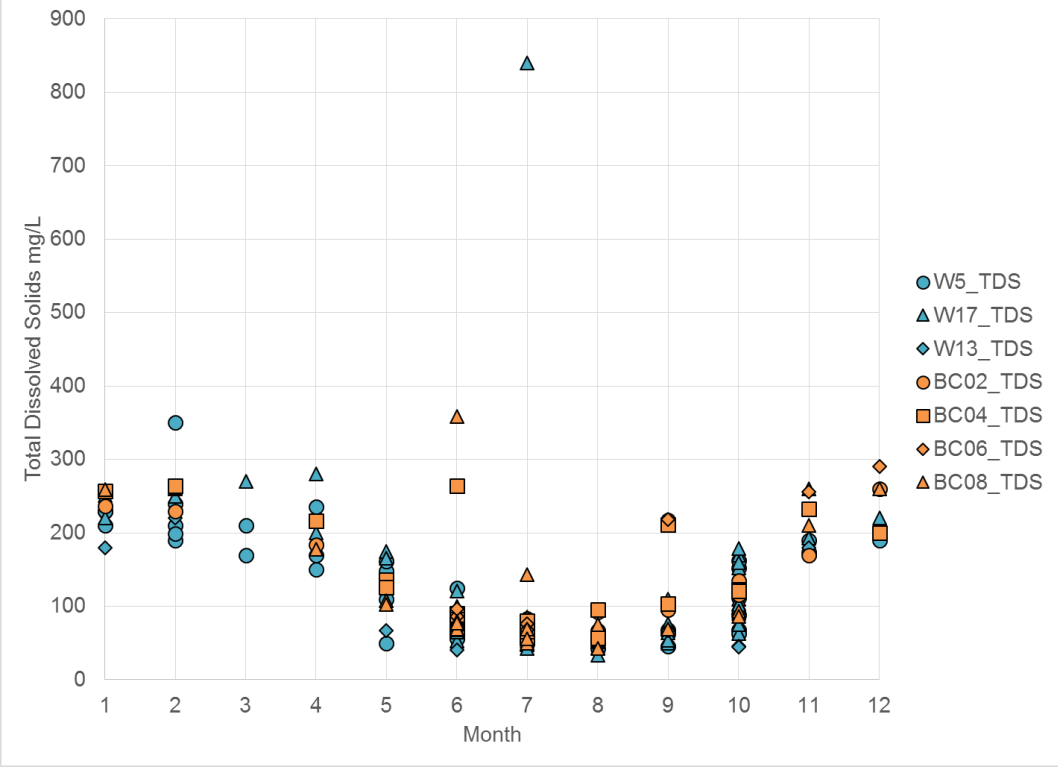


Figure 3-11: Monthly TDS in Bitter Creek

Groundwater

Summary statistics were calculated to characterize groundwater quality. These summary statistics will be used in the water quality model (SRK 2017b) to represent background water quality for various model scenarios. Summary statistics include the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile on an annual, not seasonal, basis.

A list of water quality monitoring stations that were used to characterize each water body is provided in Table 3-15. Only the pooled water in the existing adit (RMS4) has historical data. Some of the historical samples were taken during dewatering efforts in the 1990s and have elevated TSS and turbidity. Samples that exceeded 15 mg/L TSS were excluded from the summary statistics.

Table 3-15: Groundwater Grouping for Summary Statistics

Location	Current Locations	Historical Locations
Pooled Water in Adit	RMS4	WS93-6C WS93-7C UG RM-SEEP-04 04MR01 RMUG 06 RM UG
Cirque Groundwater	RMS5 RMS6 RMS7	None

Source: compiled in text.

3.5 QA/QC

3.5.1 QA/QC Methods

In the 2014 to 2016 monitoring program (Sections 3.2.1 and 3.3.1), at least 10% of the total samples from any sampling event were quality control samples that included field blanks, field duplicates, and trip blanks. ALS also evaluated analytical duplicates, certified reference material, and matrix spikes for quality control.

3.5.2 QA/QC Results

SRK completed a QA check of the analytical results from the current baseline monitoring program during database compilation, which included confirming report completeness, calculating ion balances, reviewing results of field and travel blanks, and comparing total and dissolved concentrations of metals. For historical samples (Sections 3.2.2 and 3.3.2), SRK also calculated ion balances and compared total and dissolved concentrations of metals.

Historical Data

SRK calculated ion balances and compared total and dissolved concentrations of metals for all historical data, as summarized in Table 3-16. The quality of the historical dataset was deemed to be generally acceptable. 39 samples failed the ion balance and were removed from the working dataset (Table 3-16) and 21 parameters in 18 samples failed the total and dissolved comparison and were removed from the dataset (Table 3-17).

Table 3-16: Historical QA Results

Dataset	QA Criteria	QA Outcome	Comments
HKP (1990 to 1992)	Ion balance[1]	44 of 44 samples passed	
	Total vs. dissolved[2]	0 results failed	
Rescan (1993 to 1994) and Royal Oak (1996 to 1997)	Ion balance[1]	617 of 656 samples passed	Failing samples removed from dataset
	Total vs. dissolved[2]	21 results for individual parameters failed in 18 samples	See list of failing parameters in Table 3-17; removed from dataset
SRK (2000, 2003 to 2013)	Ion balance[1]	75 of 75 samples passed	
	Total vs. dissolved[2]	0 results failed	

Source: compiled in text from \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\QAQC\Red_Mtn_WQ_Monitoring_Locations_1CI019-002_rev02_lmc_knk_QAQC.xlsm.

Notes:

(1) To pass the ion balance, samples must have an ion imbalance less than or equal to 20% or electrical conductivity less than 100 µS/cm. Ion balance cannot be reliably calculated when electrical conductivity is less than 100 µS/cm and samples with electrical conductivity less than 100 µS/cm are assumed to pass.

(2) To pass total vs. dissolved concentrations, dissolved concentrations must be less or within 20% of total concentrations for results exceeding 10 times the detection limit.

Table 3-17: Historical Dissolved Concentrations Exceeding Total Concentrations

Location	Results Failing	Date	Comments
W5	Copper, lead, zinc	February 1993	Failing parameters removed from dataset
W8	Lead	February 1993	Failing parameter removed from dataset
W9	Lead	February 1993	Failing parameter removed from dataset
W3	Potassium	March 1993	Failing parameter removed from dataset
W13	Strontium	May 1993	Failing parameter removed from dataset
W16	Zinc	March 1994	Failing parameter removed from dataset
Underground discharge	Strontium	August 1994	Failing parameter removed from dataset
SS-IV (seep)	Calcium	September 1996	Failing parameter removed from dataset
SS-V (seep)	Calcium	September 1996	Failing parameter removed from dataset
W18	Calcium	September 1996	Failing parameter removed from dataset
W18	Copper	May 1997	Failing parameter removed from dataset
Underground discharge	Manganese	July 1997	Failing parameter removed from dataset

Location	Results Failing	Date	Comments
Underground discharge	Cobalt	September 1997	Failing parameter removed from dataset
W11	Chromium	September 1997	Failing parameter removed from dataset
W14	Beryllium	September 1997	Failing parameter removed from dataset
W18	Barium	September 1997	Failing parameter removed from dataset
W3	Antimony, strontium	September 1997	Failing parameters removed from dataset
W5	Antimony	September 1997	Failing parameter removed from dataset

Source: compiled in text from \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\QAQC\Red_Mtn_WQ_Monitoring_Locations_1CI019-002_rev02_lmc_knk_QAQC.xlsm.

IDM Data

SRK calculated ion balances and compared total and dissolved concentrations of metals to QA the current (2014 to 2016) dataset, as summarized in Table 3-18. The quality of the historical dataset was deemed acceptable. No samples failed the ion balance and so none were removed from the working dataset (Table 3-18), but 27 parameters in 15 samples failed the total and dissolved comparison and were removed from the dataset (Table 3-19). These failures are typical for a monitoring program of this type and no systematic issues were identified that should be corrected for future monitoring programs.

Table 3-18: Current QA Results

Dataset	QA Criteria	QA Outcome	Comments
2014 to 2016	Ion balance[1]	303 of 303 samples passed	
	Total vs. dissolved[2]	29 results for individual parameters failed in 17 samples	See list of failing parameters in Table 3-19; removed from dataset

Source: compiled in text from \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\QAQC\Red_Mtn_WQ_Monitoring_Locations_1CI019-002_rev02_lmc_knk_QAQC.xlsm.

Notes:

(1) To pass the ion balance, samples must have an ion imbalance less than or equal to 20% and electrical conductivity must be greater than 100 µS/cm. Ion balance cannot be reliably calculated when electrical conductivity is less than 100 µS/cm and samples with electrical conductivity less than 100 µS/cm are assumed to pass.

(2) To pass total vs. dissolved concentrations, dissolved concentrations must be less than 20% higher than total concentrations for results exceeding 10 times the detection limit.

Table 3-19: Current Dissolved Concentrations Exceeding Total Concentrations

Location	Results Failing	Date	Notes
GSC99	Cadmium, manganese, zinc	January 2014	Failing parameters removed from dataset
GSC02	Barium, cadmium, calcium, magnesium, manganese, molybdenum, selenium, silicon, sodium, strontium	September 2014	Sample removed from dataset
BC08	Tin	September 2014	Failing parameter removed from dataset

Location	Results Failing	Date	Notes
GSC02	Aluminum, copper	October 2014	Failing parameters removed from dataset
GSC07	Cadmium	October 2014	Failing parameter removed from dataset
BC08	Tin	July 2015	Failing parameter removed from dataset
BC08	Cadmium	January 2016	Failing parameter removed from dataset
BR06	Cadmium	January 2016	Failing parameter removed from dataset
BC08	Lead	January 2016	Failing parameter removed from dataset
BC02	Cadmium	February 2016	Failing parameter removed from dataset
BC04	Cadmium	February 2016	Failing parameter removed from dataset
BR06	Cadmium	April 2016	Failing parameter removed from dataset
AC02	Tin	June 2016	Failing parameter removed from dataset
BR08	Tin	June 2016	Failing parameter removed from dataset
OC07	Tin	June 2016	Failing parameter removed from dataset
BC08	Selenium	September 2016	Failing parameter removed from dataset
GSC07	Manganese	September 2016	Failing parameter removed from dataset

Source: compiled in text from \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\QAQC\Red_Mtn_WQ_Monitoring_Locations_1CI019-002_rev02_lmc_knk_QAQC.xlsm.

3.6 Data Management

The results from the baseline monitoring program were compiled in a database by SRK along with historical water quality data. An electronic version of this database can be provided upon request.

4 Baseline Program Results and Discussion

4.1 Surface Water Quality Results

Baseline surface water quality results are described in the following sections for the upper Goldslide Creek tributary (Section 4.1.1), the main stem of Goldslide Creek (Section 4.1.2), Otter Creek (Section 4.1.3), Bitter Creek (Section 4.1.4), Bear River (Section 4.1.5), and reference watersheds (Section 4.1.6). Each section includes a description of the water body, characterization of typical water quality, a summary of guideline exceedances (method described in Section 3.4.1), and summary statistics (method described in Section 3.4.2). Historical surface water quality data are provided in Appendix B, 2014 to 2016 data are provided in Appendix C, water quality plots are provided in Appendix E, and summary statistics, including the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile, for each season are provided in Appendix G.

4.1.1 Upper Goldslide Creek Tributary (Area of Existing Infrastructure and Mineralized Zone)

Description

Monitoring locations GSC09 is on a small tributary that drains the area above and around the portal and joins Goldslide Creek just downstream of GSC07 (Table 3-1 and Figure 3-2). GSC09 is not considered in the water quality results of Goldslide Creek because of its distinct water quality from the other Goldslide Creek locations. However, it monitors contributions from the existing infrastructure on site (Section 2.2) and may also reflect natural mineralization in the deposit area.

Water Quality Results and Summary Statistics

Table 4-1 provides selected summary statistics for GSC09 for low flow and high flow conditions. Complete summary statistics for each season are provided in Appendix G. No data were available for winter low flow conditions (November through April) due to the high snow cover present at this location during the winter months.

GSC09 is slightly acidic (approximately 5.6 s.u.) and has lower pH and alkalinity and elevated concentrations of sulphate and total and dissolved aluminum, cadmium, copper, and zinc compared to monitoring locations on Goldslide Creek (Section 4.1.2). GSC09 is dominated by calcium and sulphate and has negligible alkalinity.

Table 4-1: Selected Summary Statistics for Existing Infrastructure and Mineralized Zone (GSC09)

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	N/A	5.24	N/A	5.64	N/A	6.78
Hardness	N/A	50.9	N/A	53.7	N/A	56
TSS	N/A	3	N/A	3	N/A	3
TDS	N/A	87.3	N/A	99	N/A	104
Sulphate	N/A	54.9	N/A	59.6	N/A	59.9

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
Alkalinity	N/A	1.05	N/A	1.5	N/A	2.13
Calcium, dissolved	N/A	16.8	N/A	17.6	N/A	18.4
Magnesium, dissolved	N/A	2.16	N/A	2.33	N/A	2.44
Aluminum, total	N/A	0.11	N/A	0.117	N/A	0.125
Aluminum, dissolved	N/A	0.0988	N/A	0.115	N/A	0.116
Cadmium, total	N/A	0.000769	N/A	0.000836	N/A	0.000886
Cadmium, dissolved	N/A	0.000851	N/A	0.000856	N/A	0.000872
Copper, total	N/A	0.00934	N/A	0.0095	N/A	0.00968
Copper, dissolved	N/A	0.00888	N/A	0.009	N/A	0.00936
Iron, total	N/A	0.012	N/A	0.03	N/A	0.03
Iron, dissolved	N/A	0.0156	N/A	0.03	N/A	0.03
Selenium, total	N/A	0.000673	N/A	0.000708	N/A	0.00074
Selenium, dissolved	N/A	0.000634	N/A	0.000686	N/A	0.000689
Zinc, total	N/A	0.0538	N/A	0.0554	N/A	0.0585
Zinc, dissolved	N/A	0.0564	N/A	0.058	N/A	0.0594

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Comparison to Guidelines

Table 4-2 summarizes the exceedances of CCME and BC water quality guidelines for GSC09. As indicated previously, results for both total and dissolved metals were compared to the guidelines, even though they are typically only considered applicable for total metals. CCME and BC water quality guidelines were exceeded for total and dissolved aluminum, cadmium, copper, and zinc for all samples that were collected.

Table 4-2: Exceedances of Guidelines for Existing Infrastructure and Mineralized Zone

Parameter	Exceedances[1,2]
	GSC09
Field pH	4 of 6
Aluminum, dissolved	8 of 8
Aluminum, total	8 of 8
Cadmium, dissolved	8 of 8
Cadmium, total	8 of 8
Copper, dissolved	8 of 8
Copper, total	8 of 8

Parameter	Exceedances[1,2]
	GSC09
Zinc, dissolved	8 of 8
Zinc, total	8 of 8

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\Exceedances_ReportTable_REV09_KNK.xlsm

Notes:

(1) An exceedance was counted if the concentration exceeded one or more of the water quality guidelines (long-term and short-term CCME and BC water quality guidelines).

(2) Some water quality guidelines are hardness or pH dependent. The median pH or hardness for the monitoring location was used to calculate these water quality guidelines.

4.1.2 Main Stem of Goldslide Creek

Description

Goldslide Creek is a small alpine creek flowing southwest to the side of Bromley Glacier that drains the Red Mountain cirque, the site of the proposed underground mine (Figure 3-2). The creek is characterized by very steep gradients and strong seasonal fluctuations in flow (Rescan 1995). The flow in Goldslide Creek is highest during freshet, typically in June, and is not influenced by glacial melt.

The water quality of Goldslide Creek was characterized from samples collected at monitoring locations along the creek listed from upstream to downstream: GSC07, GSC05, and GSC02 (Table 3-1 and Figure 3-2). GSC07 is located in upper Goldslide Creek and is upstream of a tributary that drains the area above and around the portal (the tributary is sampled as location GSC09). About half of the existing waste rock dump is within the GSC07 catchment. GSC05 is located in middle Goldslide Creek just upstream of the hydrology station and has a larger catchment than GSC07 and has an alternate sampling site called GSC99 when GSC05 cannot be accessed. GSC02 is located in lower Goldslide Creek upstream of the Bromley Glacier and has the largest watershed catchment of the Goldslide Creek monitoring locations.

Water Quality Results and Summary Statistics

Summary statistics were generated for Goldslide Creek using results from the two most downstream locations, GSC02 and GSC05, following the procedures described in Section 3.4.2. The complete summary statistics for Goldslide Creek are provided in Appendix G. Summary statistics include the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile.

Table 4-3 provides selected summary statistics for Goldslide Creek. Goldslide Creek is typically circumneutral. The historical results are more acidic, with pH levels frequently below 6.5. The historical data was mostly based on laboratory measurements, which are typically more acidic than field measurements. Goldslide Creek is dominated by calcium and sulphate with low but measurable levels of alkalinity. Physical parameters such as turbidity and TSS are typically higher during freshet and lower during the low flow periods during the winter. Some dissolved metals and ions, including magnesium, calcium, and sulphate, are lower during higher flow periods,

which is likely due to a higher proportion of meltwater or runoff relative to groundwater which provides more dilution in the creek.

In general, the most upstream monitoring location (GSC07) had higher concentrations of most water quality constituents than the downstream locations (Appendix E), likely due to dilution from areas unaffected by mining activity. The only exceptions to this pattern are selenium and molybdenum (both total and dissolved).

Table 4-3: Selected Summary Statistics for Goldslide Creek (GSC02 and GSC05)

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	6.53	7.12	7.2	7.44	8.36	7.98
Hardness	58	32.5	70	46.5	99	58.9
TSS	0.975	1	1.5	1.5	16.1	8.25
TDS	79.3	50.5	120	75	168	107
Sulphate	35	20.5	58	34.8	80	48.1
Alkalinity	10.1	7.63	15.5	10	31	14.3
Calcium, dissolved	19	10.6	24	15.4	31.1	19.8
Magnesium, dissolved	2	1.38	2.6	1.84	3.37	2.4
Aluminum, total	0.001	0.0148	0.0094	0.0623	0.0528	0.158
Aluminum, dissolved	0.0006	0.00642	0.0062	0.019	0.0232	0.0278
Cadmium, total	0.0000785	0.00021	0.000189	0.0003	0.001	0.000864
Cadmium, dissolved	0.00008	0.0001	0.000135	0.000272	0.000338	0.000346
Copper, total	0.0013	0.00314	0.0035	0.00594	0.0483	0.0116
Copper, dissolved	0.0002	0.00122	0.00183	0.00381	0.00873	0.00828
Iron, total	0.01	0.01	0.018	0.03	0.088	0.208
Iron, dissolved	0.01	0.01	0.01	0.01	0.0314	0.03
Selenium, total	0.00207	0.00104	0.00216	0.00126	0.00229	0.00136
Selenium, dissolved	0.00203	0.00103	0.0022	0.00124	0.00227	0.00136
Zinc, total	0.0085	0.0134	0.0215	0.0186	0.107	0.0486
Zinc, dissolved	0.00176	0.0118	0.011	0.0177	0.0242	0.031

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Comparison to Guidelines

Table 4-4 summarizes the exceedances of CCME and BC water quality guidelines in Goldslide Creek. As discussed in Section 3.4.1, results for both total and dissolved metals were compared to the guidelines, even though most guidelines are only applicable for total, or in some cases,

dissolved metals. CCME and BC water quality guidelines were exceeded for total and dissolved cadmium, copper, and zinc for nearly every Goldslide Creek sample collected. Concentrations were typically lower during November to April, but still exceeded the guidelines for cadmium, copper, and zinc. Exceedances were also observed for other total and dissolved metals (Table 4-4).

Table 4-4: Exceedances of Guidelines for Goldslide Creek (1990 to 2016)

Parameter	Exceedances[1,2]		
	GSC02	GSC05	GSC07
Field pH	2 of 53	4 of 24	2 of 14
Fluoride	8 of 75	3 of 38	1 of 22
Cyanide, total	1 of 10		
Aluminum, dissolved	3 of 75		1 of 22
Aluminum, total	35 of 75	2 of 38	6 of 22
Arsenic, total	4 of 75		
Beryllium, dissolved	8 of 75		
Beryllium, total	16 of 75	2 of 38	
Cadmium, dissolved	47 of 75	31 of 38	19 of 22
Cadmium, total	59 of 75	33 of 38	20 of 22
Cobalt, total	2 of 75		
Copper, dissolved	50 of 75	22 of 38	22 of 22
Copper, total	70 of 75	30 of 38	22 of 22
Iron, total	48 of 75	14 of 38	8 of 22
Lead, dissolved	1 of 75	1 of 38	1 of 22
Lead, total	12 of 75	3 of 38	2 of 22
Mercury, dissolved	7 of 70		1 of 18
Mercury, total	3 of 75		2 of 22
Nickel, total	1 of 75	1 of 38	1 of 22
Selenium, dissolved	20 of 74	20 of 38	3 of 22
Selenium, total	36 of 74	23 of 38	5 of 22
Silver, dissolved	1 of 75		
Silver, total	14 of 75	2 of 38	1 of 22
Zinc, dissolved	61 of 75	37 of 38	22 of 22
Zinc, total	70 of 75	38 of 38	22 of 22

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\Exceedances_ReportTable_REV09_KNK.xlsm

Notes:

(1) An exceedance was counted if the concentration exceeded one or more of the water quality guidelines (long-term and short-term CCME and BC water quality guidelines).

(2) Some water quality guidelines are hardness or pH dependent. The median pH or hardness for the monitoring location was used to calculate these water quality guidelines.

4.1.3 Otter Creek

Description

Otter Creek is a small alpine creek flowing west to the side of Bromley Glacier that drains into Bitter Creek downstream of the Rio Blanco and Bitter Creek confluence. There are two upstream branches of Otter Creek that eventually merge. The flow in Otter Creek is influenced both by freshet and glacial melt.

The water quality of Otter Creek was characterized from samples collected at three water quality monitoring locations along the creek listed from upstream to downstream: OC04, OC05, and OC07 (Table 3-1 and Figure 3-2). OC04 is located in upper Otter Creek on the southern branch. OC04 has an alternate sampling site called OC06 when OC04 is not accessible due to snowpack. OC05 is located in middle Otter Creek in the northern branch and has iron precipitates in the stream bed. OC07 is located on lower Otter Creek, downstream of where the northern and southern branches of Otter Creek merge. The Otter Creek and Bitter Creek confluence is located approximately 2.2 km upstream of Bitter Creek monitoring location BC06.

Limited data are available for Otter Creek, as OC05 and OC07 weren't added to the monitoring program until April 2016, and it is difficult to access OC04 and OC06 during the winter.

Water Quality Results and Summary Statistics

Summary statistics were generated for Otter Creek using results from all the monitoring locations following the procedures described in Section 3.4.2. The complete summary statistics for Otter Creek are provided in Appendix G. Summary statistics include the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile.

Table 4-5 provides selected summary statistics for Otter Creek. Unlike Goldslide Creek, Otter Creek more dominated by glacial meltwater. Although available data for Otter Creek are limited, it appears that all of the monitoring locations in Otter Creek have similar chemistry and seasonal trends, are circumneutral, and are dominated by calcium and sulphate. TSS and concentrations of total metals are elevated during summer high flows compared to winter low flows due to glacial meltwater. Concentrations of other parameters, such as TDS, sulphate, and dissolved metals; are higher during the winter, indicating that there is a greater proportion of groundwater compared to meltwater or runoff during this period.

Table 4-5: Selected Summary Statistics for Otter Creek

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	8.54	7.47	8.54	7.65	8.54	8.95
Hardness	348	33.4	411	76.9	412	120
TSS	3	13.6	3	29.3	4.35	199
TDS	430	54.9	481	98	504	136

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
Sulphate	214	10.4	245	34.9	263	58
Alkalinity	129	29.4	134	43.8	135	57.2
Calcium, dissolved	107	11.6	125	24.7	125	39
Magnesium, dissolved	19.8	1.13	23.9	3.32	23.9	5.56
Aluminum, total	0.0154	0.415	0.0255	1.06	0.0307	3.39
Aluminum, dissolved	0.005	0.0227	0.005	0.045	0.005	0.0727
Cadmium, total	0.000124	0.0000997	0.000139	0.000162	0.000231	0.00034
Cadmium, dissolved	0.0000819	0.0000233	0.000108	0.000051	0.000201	0.0000742
Copper, total	0.001	0.00162	0.001	0.0032	0.001	0.0106
Copper, dissolved	0.001	0.000538	0.001	0.001	0.001	0.001
Iron, total	0.161	0.729	0.282	1.46	0.334	5.01
Iron, dissolved	0.03	0.03	0.03	0.039	0.1	0.0659
Selenium, total	0.00626	0.00034	0.00634	0.00134	0.0111	0.00247
Selenium, dissolved	0.0064	0.000283	0.00698	0.0011	0.0115	0.00215
Zinc, total	0.0193	0.0121	0.0218	0.0182	0.0362	0.0332
Zinc, dissolved	0.0124	0.0022	0.0155	0.005	0.0314	0.00671

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Comparison to Guidelines

Table 4-6 summarizes the exceedances of CCME and BC water quality guidelines in Otter Creek. CCME and BC water quality guidelines were exceeded for total aluminum, total iron, and total and dissolved selenium for most of the samples collected in Otter Creek. Typically aluminum, copper, and iron are elevated from June to October while cadmium, lead, selenium, and zinc are elevated for a shorter period of time during freshet. Exceedances were also observed for other total and dissolved metals (Table 4-6).

Table 4-6: Exceedances of Guidelines for Otter Creek (2014 to 2016)

Parameter	Exceedances[1,2]		
	OC04/OC06	OC05	OC07
Field pH		1 of 11	
Fluoride		3 of 11	1 of 11
Aluminum, dissolved	3 of 15	1 of 11	1 of 11
Aluminum, total	12 of 15	7 of 11	6 of 11
Cadmium, dissolved		4 of 11	

Parameter	Exceedances[1,2]		
	OC04/OC06	OC05	OC07
Cadmium, total	1 of 15	11 of 11	2 of 11
Copper, total	3 of 15	1 of 11	2 of 11
Iron, total	12 of 15	11 of 11	11 of 11
Lead, total	3 of 15	1 of 11	1 of 11
Nickel, dissolved		1 of 11	
Nickel, total		1 of 11	
Selenium, dissolved	5 of 15	9 of 11	9 of 11
Selenium, total	5 of 15	10 of 11	10 of 11
Silver, total	1 of 15		
Zinc, dissolved		1 of 11	
Zinc, total	1 of 15	2 of 11	1 of 11
Fluoride		3 of 11	1 of 11
Aluminum, dissolved	3 of 15	1 of 11	1 of 11

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\Exceedances_ReportTable_REV09_KNK.xlsm

Notes:

(1) An exceedance was counted if the concentration exceeded one or more of the water quality guidelines (long-term and short-term CCME and BC water quality guidelines).

(2) Some water quality guidelines are hardness or pH dependent. The median pH or hardness for the monitoring location was used to calculate these water quality guidelines.

4.1.4 Bitter Creek

Description

Bitter Creek receives glacial melt from the Bromley Glacier and the Cambria Ice Field and freshet flows from various tributaries including Goldslide Creek, Otter Creek, Rio Blanco Creek, and Roosevelt Creek. Bitter Creek flows into the Bear River.

Water Quality Results and Summary Statistics

The water quality of Bitter Creek was characterized by samples collected at four water quality monitoring locations along the creek listed from upstream to downstream: BC08, BC06, BC04, and BC02 (Table 3-1 and Figure 3-2 and Figure 3-3). BC08 is located in upper Bitter Creek just downstream of the Bromley Glacier and the Goldslide Creek confluence. The Rio Blanco Creek confluence is located downstream of BC08. BC06 is located in middle Bitter Creek downstream of the Otter Creek confluence. BC04 is located in middle Bitter Creek immediately upstream of the Roosevelt Creek confluence. Finally, BC02 is located in lower Bitter Creek upstream of the Highway 37 bridge and where Bitter Creek drains into Bear River.

Summary statistics were calculated for each of the four Bitter Creek monitoring locations independently due to the varying sizes of each location's catchment area and influence of tributaries. The complete summary statistics for Bitter Creek are provided in Appendix G.

Summary statistics include the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile.

Table 4-7 provides selected summary statistics for the most upstream Bitter Creek monitoring location, BC08, and Table 4-8 provides selected summary statistics for the most downstream Bitter Creek monitoring location, BC02. Bitter Creek has circumneutral to slightly alkaline pH, with calcium, bicarbonate and sulphate as the dominant ions. Bitter Creek is dominated by glacial meltwater and has a very high seasonal suspended sediment load, particularly during high flow periods in the summer. Trace metals are elevated in the suspended sediments, so many total metals concentrations exceed guidelines. TSS and concentrations of total metals are consequently elevated during summer high flows compared to winter low flows due to glacial meltwater. Concentrations of other parameters, such as TDS, sulphate, and dissolved metals, are higher during the winter, indicating that there is a greater proportion of groundwater compared to meltwater or runoff during this period. BC02, the most downstream location, tends to have higher TSS, TDS, and alkalinity than BC08, the most upstream location.

Table 4-7: Selected Summary Statistics for Upper Bitter Creek (BC08)

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	7.6	7.74	7.7	8.21	8.2	8.83
Hardness	131	21.5	149	32.3	200	169
TSS	3	79	77.4	258	588	798
TDS	179	45.5	215	69	260	251
Sulphate	60	6.43	96.6	11.3	116	107
Alkalinity	61.7	24.4	82.3	27	97.9	77
Calcium, dissolved	45.1	7.33	51	11.2	68.3	57
Magnesium, dissolved	4.67	0.717	5.25	1.1	7.24	6.6
Aluminum, total	0.0365	1.78	1.51	7.88	10.4	13.7
Aluminum, dissolved	0.00633	0.0185	0.0245	0.0998	0.0984	0.138
Cadmium, total	0.0000425	0.000131	0.000104	0.000418	0.00041	0.000695
Cadmium, dissolved	0.0000373	0.0000151	0.0001	0.000017	0.0001	0.000231
Copper, total	0.000675	0.0087	0.005	0.0274	0.0595	0.0659
Copper, dissolved	0.0002	0.00073	0.000395	0.001	0.001	0.00227
Iron, total	0.0538	2.67	2.08	11.1	17.7	24.5
Iron, dissolved	0.01	0.022	0.03	0.039	0.111	0.093
Selenium, total	0.00135	0.000962	0.00161	0.00132	0.00201	0.00171
Selenium, dissolved	0.00145	0.000352	0.00168	0.000559	0.00215	0.00134
Zinc, total	0.00359	0.0235	0.00765	0.0503	0.0932	0.111
Zinc, dissolved	0.00249	0.000945	0.00475	0.005	0.0103	0.0139

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Table 4-8: Selected Summary Statistics for Lower Bitter Creek (BC02)

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	7.24	7.56	7.9	8.12	8.36	8.51
Hardness	110	35	153	49.8	199	72.7
TSS	1	197	7	520	75	1030
TDS	170	51.7	205	71	260	94.4
Sulphate	41	7.54	67	12	86.9	25.7
Alkalinity	82	36.6	101	43.8	110	62.3
Calcium, dissolved	36	12.3	50.8	17.1	66.5	23
Magnesium, dissolved	4.9	1.13	6.5	1.72	8.14	2.5
Aluminum, total	0.0084	3.01	0.12	10.7	1.94	16.7
Aluminum, dissolved	0.0009	0.033	0.0043	0.0863	0.0223	0.159
Cadmium, total	0.0000382	0.000371	0.0001	0.000582	0.000261	0.00106
Cadmium, dissolved	0.000036	0.0000156	0.0001	0.0001	0.000132	0.000205
Copper, total	0.000485	0.0122	0.00175	0.0324	0.0186	0.0749
Copper, dissolved	0.00005	0.000185	0.0005	0.0007	0.0023	0.00115
Iron, total	0.01	2.53	0.21	14.7	3.39	27.6
Iron, dissolved	0.01	0.005	0.01	0.03	0.09	0.0806
Selenium, total	0.00303	0.00128	0.00329	0.00168	0.00365	0.00271
Selenium, dissolved	0.00329	0.000395	0.00351	0.000673	0.00371	0.00101
Zinc, total	0.003	0.0176	0.0071	0.0824	0.0283	0.132
Zinc, dissolved	0.000965	0.0004	0.00255	0.00187	0.00606	0.005

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Comparison to Guidelines

Table 4-9 summarizes the exceedances of CCME and BC water quality guidelines. For a large proportion of samples collected in Bitter Creek, CCME and BC water quality guidelines were exceeded for total aluminum, arsenic, beryllium, cadmium, cobalt, copper, iron, lead, nickel, selenium, silver, and zinc and dissolved aluminum and selenium. Typically silver, aluminum, cobalt, copper, lead, iron, and zinc are elevated from June to October while selenium is elevated during the winter months. Exceedances were also observed for other total and dissolved metals (Table 4-9).

Table 4-9: Exceedances of Guidelines for Bitter Creek (1990 to 2016)

Parameter	Exceedances[1,2]			
	BC02	BC04	BC06	BC08
Field pH		1 of 62	1 of 9	2 of 25
Fluoride	4 of 67	6 of 84		5 of 30
Aluminum, dissolved	26 of 67	42 of 84	7 of 9	22 of 30
Aluminum, total	60 of 67	77 of 84	9 of 9	29 of 30
Antimony, total		1 of 84		
Arsenic, dissolved	1 of 67			
Arsenic, total	35 of 67	49 of 84	7 of 9	22 of 30
Beryllium, dissolved	7 of 67	9 of 84		1 of 30
Beryllium, total	30 of 67	38 of 84		11 of 30
Cadmium, dissolved	10 of 67	10 of 84	2 of 9	3 of 30
Cadmium, total	45 of 67	60 of 84	9 of 9	24 of 30
Cobalt, dissolved	1 of 66			
Cobalt, total	24 of 66	41 of 83	7 of 9	19 of 30
Copper, dissolved	7 of 67	4 of 84	1 of 9	1 of 30
Copper, total	53 of 67	73 of 84	8 of 9	27 of 30
Iron, dissolved	1 of 67		1 of 9	
Iron, total	66 of 67	82 of 84	9 of 9	30 of 30
Lead, dissolved	2 of 67		1 of 9	
Lead, total	39 of 67	60 of 84	7 of 9	26 of 30
Manganese, total	3 of 67	3 of 84	1 of 9	1 of 30
Mercury, dissolved	9 of 62	8 of 84		
Mercury, total	6 of 67	6 of 84	1 of 9	2 of 30
Nickel, total	32 of 67	42 of 84	1 of 9	4 of 30
Selenium, dissolved	25 of 66	20 of 83	3 of 9	11 of 30
Selenium, total	40 of 66	53 of 83	9 of 9	21 of 30
Silver, dissolved	1 of 67			
Silver, total	38 of 67	62 of 84	7 of 9	25 of 30
Zinc, dissolved	3 of 67	8 of 84	1 of 9	2 of 30
Zinc, total	55 of 67	76 of 84	9 of 9	26 of 30

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\Exceedances_ReportTable_REV09_KNK.xlsm

Notes:

(1) An exceedance was counted if the concentration exceeded one or more of the water quality guidelines (long-term and short-term CCME and BC water quality guidelines).

(2) Some water quality guidelines are hardness or pH dependent. The median pH or hardness for the monitoring location was used to calculate these water quality guidelines.

4.1.5 Bear River

Description

Bear River is the receiving water for all runoff from the proposed mine site. Bitter Creek drains into Bear River, which flows past the town of Stewart and into the Portland Canal.

Water Quality Results and Summary Statistics

The quality of Bear River is characterized by samples collected at three water quality monitoring locations along the river listed from upstream to downstream: BR08, BR06, and BR03 (Table 3-1 and Figure 3-3 and Figure 3-4). BR06 is located in Bear River upstream of the Bitter Creek confluence. BR08 is located in Bear River downstream of the Bitter Creek confluence. BR03 is located in Bear River significantly downstream of the Bitter Creek confluence near the town of Stewart, BC.

Summary statistics were calculated for BR06 and BR08 independently to quantify the effect of Bitter Creek on Bear River water quality. The complete summary statistics for Bear River are provided in Appendix G. Summary statistics include the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile.

Table 4-10 provides selected summary statistics for Bear River upstream of the Bitter Creek confluence (BR08) and Table 4-11 provides selected summary statistics for Bear River just downstream of the Bitter Creek confluence (BR06). The downstream Bear River monitoring location has significantly higher TSS and higher concentrations of TDS, sulphate, and total and dissolved metals compared to the upstream monitoring location. Both locations are circumneutral and both are dominated by calcium and bicarbonate.

Physical parameters such as turbidity and TSS are typically higher during freshet and lower during the low flow periods during the winter. Some dissolved metals and ions, including magnesium, calcium, sodium and sulfate, are lower during higher flow periods, which is likely due to more dilution in the river. Total metals such as aluminum iron, copper, cobalt, lead, and manganese are typically higher during freshet and lower during low flow periods.

Table 4-10: Selected Summary Statistics for Bear River Upstream of Bitter Creek (BR08)

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	7.03	7.27	7.8	7.54	8.22	8.05
Hardness	62.6	25.6	80	33.4	98.3	44.9
TSS	1	13.5	3	34	9.3	119
TDS	81.1	40.5	102	54	169	65
Sulphate	13.7	6.86	19	10	32.6	12.2
Alkalinity	56.2	21.5	70.1	27	75.5	34.5
Calcium, dissolved	21.6	8.99	27.5	11.9	34.3	15.7

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
Magnesium, dissolved	1.8	0.774	2.45	1	3.09	1.38
Aluminum, total	0.00749	0.861	0.02	1.59	0.0684	5.02
Aluminum, dissolved	0.0005	0.0449	0.0027	0.052	0.00725	0.0968
Cadmium, total	0.00000693	0.0000542	0.000065	0.000148	0.000145	0.000406
Cadmium, dissolved	0.0000152	0.000017	0.000075	0.000024	0.0001	0.0002
Copper, total	0.0004	0.0013	0.001	0.00322	0.00246	0.0131
Copper, dissolved	0.0002	0.0003	0.0007	0.001	0.00195	0.00375
Iron, total	0.0182	0.854	0.0535	1.6	0.144	5.5
Iron, dissolved	0.01	0.0195	0.0135	0.044	0.035	0.064
Selenium, total	0.000349	0.000118	0.00037	0.000173	0.000405	0.000718
Selenium, dissolved	0.000325	0.0000961	0.000372	0.000154	0.000409	0.000717
Zinc, total	0.00328	0.0091	0.00715	0.0198	0.0394	0.097
Zinc, dissolved	0.000355	0.0022	0.00415	0.005	0.0159	0.005

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Table 4-11: Selected Summary Statistics for Bear River Downstream of Bitter Creek (BR06)

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	7.04	7.44	7.8	7.89	8.09	8.41
Hardness	94.3	36.4	111	47	134	61.7
TSS	1	171	3.5	385	16	562
TDS	118	57.4	150	69	186	93.2
Sulphate	23.9	8	39	11.7	51.1	15.9
Alkalinity	68.1	33.7	85.5	40.9	103	47.1
Calcium, dissolved	26.8	12.8	38	16	45.7	20.1
Magnesium, dissolved	2.76	1	4	1.5	4.75	2.03
Aluminum, total	0.0087	2.64	0.048	7.54	0.453	12.8
Aluminum, dissolved	0.00085	0.0583	0.005	0.092	0.0118	0.156
Cadmium, total	0.0000162	0.000204	0.00008	0.00039	0.000332	0.000742
Cadmium, dissolved	0.000021	0.0000134	0.00008	0.000028	0.0001	0.0002
Copper, total	0.00034	0.0124	0.001	0.023	0.00258	0.0469
Copper, dissolved	0.0002	0.0002	0.00053	0.00088	0.00161	0.001
Iron, total	0.0268	3.56	0.098	10.6	0.7	18.5

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
Iron, dissolved	0.00898	0.017	0.01	0.03	0.0366	0.0693
Selenium, total	0.00128	0.000847	0.00145	0.0011	0.00156	0.00157
Selenium, dissolved	0.0013	0.000288	0.00144	0.000497	0.00164	0.000863
Zinc, total	0.00232	0.0283	0.005	0.061	0.0393	0.151
Zinc, dissolved	0.00037	0.0004	0.0042	0.005	0.0135	0.0074

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Comparison to Guidelines

Table 4-12 summarizes the exceedances of CCME and BC water quality guidelines. For a large proportion of samples collected in Bear River, there were exceedances of total aluminum, copper, iron, lead, silver, and zinc. Typically silver, aluminum, copper, iron, and zinc are elevated from June to October while selenium is elevated during the winter months. Exceedances were also observed for other total and dissolved metals (Table 4-12).

Table 4-12: Exceedances of Guidelines for Bear River (1990 to 2016)

Parameter	Exceedances[1,2]		
	BR03	BR06	BR08
Fluoride	2 of 16	5 of 48	3 of 38
Aluminum, dissolved	6 of 16	26 of 48	15 of 38
Aluminum, total	12 of 16	40 of 48	26 of 38
Antimony, total		1 of 48	
Arsenic, total	5 of 16	22 of 48	5 of 38
Beryllium, dissolved		4 of 48	1 of 38
Beryllium, total	2 of 16	12 of 48	4 of 38
Cadmium, dissolved		2 of 48	
Cadmium, total	6 of 16	29 of 48	13 of 38
Cobalt, total	4 of 16	12 of 48	
Copper, dissolved		1 of 48	1 of 38
Copper, total	10 of 16	35 of 48	16 of 38
Iron, total	16 of 16	47 of 48	38 of 38
Lead, total	6 of 16	29 of 48	25 of 38
Manganese, total		1 of 48	
Mercury, dissolved		1 of 45	1 of 34

Parameter	Exceedances[1,2]		
	BR03	BR06	BR08
Mercury, total	1 of 16	1 of 48	2 of 38
Nickel, total	4 of 16	11 of 48	2 of 38
Selenium, dissolved	3 of 16	10 of 48	
Selenium, total	6 of 16	29 of 48	2 of 38
Silver, total	6 of 16	29 of 48	12 of 38
Zinc, dissolved	1 of 16	2 of 48	1 of 38
Zinc, total	12 of 16	38 of 48	26 of 38

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\Exceedances_ReportTable_REV09_KNK.xlsm

Notes:

(1) An exceedance was counted if the concentration exceeded one or more of the water quality guidelines (long-term and short-term CCME and BC water quality guidelines).

(2) Some water quality guidelines are hardness or pH dependent. The median pH or hardness for the monitoring location was used to calculate these water quality guidelines.

4.1.6 Reference Watersheds

Description

There are three reference watersheds for the Project. Rio Blanco Creek runs parallel to Goldslide Creek and the monitoring location RBC02 on lower Rio Blanco Creek is a reference monitoring location for lower Goldslide Creek (GSC02). Monitoring locations on American Creek (AC02) and Roosevelt Creek (RC02) are both reference locations for fisheries and aquatic work.

Water Quality Results and Summary Statistics

Rio Blanco Creek only has a single monitoring location, RBC02, on its lower reaches. Similarly, Roosevelt Creek and American Creek each have a single monitoring location, RC02 and AC02, respectively (Table 3-1 and Figure 3-2 and Figure 3-3). Similar to Goldslide and Otter Creeks, physical parameters such as turbidity and TSS are typically higher during freshet and lower during the low flow periods during the winter. Some dissolved metals and ions, including magnesium, calcium, and sulfate, are lower during higher flow periods, which is likely due to more dilution in the creeks.

Summary statistics were calculated for each of the reference watersheds. The complete summary statistics for Rio Blanco Creek, Roosevelt Creek, and American Creek are provided in Appendix G. Summary statistics include the mean, standard deviation, minimum, maximum, median, 5th percentile, 25th percentile, 75th percentile, 90th percentile, and 95th percentile. Table 4-12, Table 4-13, and Table 4-14 provide selected summary statistics for Rio Blanco, Roosevelt, and American Creeks, respectively.

Rio Blanco Creek, the reference watershed for Goldslide Creek and Otter Creek, has a higher pH than Goldslide Creek and a lower pH than Otter Creek. Rio Blanco has significantly higher TSS than Goldslide and somewhat similar TSS to Otter. Rio Blanco has higher TDS, sulphate, and

alkalinity than Goldslide and lower TDS, sulphate, and alkalinity than Otter. Rio Blanco has significantly higher total aluminum and total iron concentrations compared to both Goldslide and Otter Creeks.

Table 4-13: Selected Summary Statistics for Rio Blanco Creek

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH	6.92	7.5	7.7	7.71	8.28	8.15
pH (Field)	130	50	187	64.5	230	107
Hardness	1	1	5	14	110	220
TSS	200	71.1	260	97	379	147
TDS	82	18	132	36.7	180	70.6
Sulphate	49	25.1	66	30.4	110	42.8
Alkalinity	44	17	60.6	21.8	75.1	37.2
Calcium, dissolved	4.2	1.71	6.83	2.25	10	3.54
Magnesium, dissolved	0.0042	0.0686	0.0268	0.157	2.01	1.55
Aluminum, total	0.0005	0.00129	0.002	0.0128	0.0364	0.0544
Aluminum, dissolved	0.00006	0.0001	0.0001	0.000189	0.00104	0.00118
Cadmium, total	0.00008	0.00008	0.0001	0.0001	0.00029	0.00016
Cadmium, dissolved	0.0004	0.00085	0.0018	0.0033	0.0204	0.0153
Copper, total	0.00005	0.0001	0.00087	0.00058	0.00154	0.00149
Copper, dissolved	0.0219	0.0996	0.08	0.252	4.33	3.45
Iron, total	0.01	0.01	0.01	0.0145	0.094	0.0367
Iron, dissolved	0.00419	0.00114	0.00431	0.00173	0.00472	0.00225
Selenium, total	0.00441	0.00108	0.00446	0.00162	0.00464	0.00231
Selenium, dissolved	0.005	0.00696	0.018	0.0126	0.084	0.054
Zinc, total	0.00067	0.00245	0.005	0.00585	0.0149	0.00999
Zinc, dissolved	6.92	7.5	7.7	7.71	8.28	8.15

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Table 4-14: Selected Summary Statistics for Roosevelt Creek

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	7.33	7.19	8.04	7.74	8.38	8.15
Hardness	93	27.6	114	36	127	56.9

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
TSS	1	1	3	20	4.5	80.6
TDS	119	37	130	53	146	69.4
Sulphate	19.5	5.8	28	10.5	33.5	13.1
Alkalinity	79.1	28.2	87	32	92	47.6
Calcium, dissolved	28	7.88	34.6	11.4	38.2	17.9
Magnesium, dissolved	5.43	1.5	6.3	1.95	7.07	2.85
Aluminum, total	0.00075	0.154	0.0147	0.733	0.055	2.05
Aluminum, dissolved	0.0005	0.0005	0.0016	0.022	0.005	0.0536
Cadmium, total	0.00000575	0.0000186	0.0001	0.00008	0.00022	0.0004
Cadmium, dissolved	0.000017	0.0000138	0.00004	0.00009	0.0001	0.0002
Copper, total	0.00015	0.00086	0.001	0.00264	0.00415	0.00624
Copper, dissolved	0.000075	0.00009	0.00038	0.00029	0.001	0.0017
Iron, total	0.01	0.178	0.03	0.855	0.122	2.61
Iron, dissolved	0.01	0.009	0.019	0.03	0.07	0.052
Selenium, total	0.000819	0.00012	0.00112	0.000206	0.00118	0.000279
Selenium, dissolved	0.0009	0.00012	0.00107	0.000188	0.00126	0.000304
Zinc, total	0.0014	0.002	0.005	0.0101	0.019	0.0718
Zinc, dissolved	0.000945	0.00028	0.0044	0.002	0.00815	0.0061

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Table 4-15: Selected Summary Statistics for American Creek

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
pH (Field)	8.16	7.37	8.17	7.58	8.26	8.13
Hardness	66.4	33.2	75.8	38.6	77.9	44
TSS	3	14	3	20.6	12.4	62.2
TDS	89.2	47.3	94	56.5	99.2	66.8
Sulphate	16.7	7.89	19.3	9.89	20.3	10.8
Alkalinity	55.5	27.8	57.5	31.2	60.2	35.4
Calcium, dissolved	24	12	27.5	14	28.3	15.9
Magnesium, dissolved	1.57	0.758	1.67	0.925	1.72	1.05
Aluminum, total	0.00852	0.58	0.0117	1.3	0.0331	1.76

Parameter	5th Percentile		Median		95th Percentile	
	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]	Low Flow[1]	High Flow[2]
Aluminum, dissolved	0.00428	0.0303	0.0059	0.0349	0.00776	0.0583
Cadmium, total	0.000005	0.0000123	0.000005	0.0000256	0.00000508	0.0000457
Cadmium, dissolved	0.0000137	0.0000166	0.000017	0.000017	0.000017	0.000017
Copper, total	0.0006	0.00103	0.001	0.00235	0.001	0.00281
Copper, dissolved	0.00036	0.000423	0.001	0.001	0.001	0.001
Iron, total	0.014	0.568	0.03	1.27	0.0446	1.94
Iron, dissolved	0.014	0.03	0.03	0.03	0.03	0.0378
Selenium, total	0.000301	0.000147	0.000311	0.000162	0.000372	0.000192
Selenium, dissolved	0.000322	0.000117	0.000334	0.000142	0.000371	0.000173
Zinc, total	0.0034	0.005	0.005	0.0056	0.005	0.00825
Zinc, dissolved	0.0018	0.002	0.005	0.005	0.005	0.005

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_WQ_SumStats_Seasonal_REV05_KNK.xlsm

Notes:

(1) Low flow summary statistics are for November through April.

(2) High flow summary statistics are for June and July.

Comparison to Guidelines

Table 4-15 summarizes the exceedances of CCME and BC water quality guidelines in Rio Blanco Creek, Roosevelt Creek, and American Creek. Similar to Goldslide and Otter Creeks, CCME and BC water quality guidelines were exceeded for total aluminum, copper, iron, selenium, and zinc for a large proportion of samples. Exceedances were also observed for other total and dissolved metals (Table 4-16).

Table 4-16: Exceedances of Guidelines for Reference Watersheds

Parameter	Exceedances[1,2]		
	RBC02	RC02	AC02
Fluoride	14 of 77	1 of 57	
Nitrite Nitrogen		1 of 57	
Aluminum, dissolved	4 of 77	6 of 57	3 of 19
Aluminum, total	51 of 77	43 of 57	14 of 19
Arsenic, total	10 of 77	4 of 57	
Beryllium, dissolved	5 of 77	2 of 57	
Beryllium, total	18 of 77	5 of 57	
Cadmium, dissolved	36 of 77	4 of 57	
Cadmium, total	53 of 77	14 of 57	1 of 19
Cobalt, total	4 of 76		
Copper, dissolved	2 of 77	1 of 57	

Parameter	Exceedances[1,2]		
	RBC02	RC02	AC02
Copper, total	44 of 77	21 of 57	7 of 19
Iron, total	72 of 77	53 of 57	16 of 19
Lead, total	9 of 77	19 of 57	8 of 19
Manganese, total	1 of 77		
Mercury, dissolved	7 of 77	7 of 57	
Mercury, total	2 of 77	6 of 57	
Nickel, total	9 of 77	1 of 57	
Selenium, dissolved	33 of 76	5 of 56	
Selenium, total	45 of 76	11 of 56	
Silver, dissolved		1 of 57	
Silver, total	10 of 77	16 of 57	1 of 19
Zinc, dissolved	1 of 77	1 of 57	
Zinc, total	29 of 77	24 of 57	4 of 19

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\Exceedances_ReportTable_REV09_KNK.xlsm

Notes:

(1) An exceedance was counted if the concentration exceeded one or more of the water quality guidelines (long-term and short-term CCME and BC water quality guidelines).

(2) Some water quality guidelines are hardness or pH dependent. The median pH or hardness for the monitoring location was used to calculate these water quality guidelines.

4.2 Groundwater Quality Results

Groundwater quality data from 1990 to 2016 are provided in Appendix D, water quality plots are provided in Appendix F, and summary statistics are provided in Appendix G.

The complete set of groundwater quality data for the current baseline monitoring program is included in Appendix C, water quality plots are provided in Appendix E, and summary statistics are provided in Appendix G.

The limited results from the Bromley Humps monitoring wells are discussed in Appendix I.

Description

The four current groundwater monitoring locations that are included in this evaluation are RMS4 (ponded water in the decline of the underground portal), RMS5 (an artesian drillhole on the steep slope of the southern edge of the cirque), RMS6 (an artesian drillhole in the cirque near GSC09 and GSC07), and RMS7 (an artesian drillhole on the steep slope of the northern edge of the cirque) and are shown on .

Water Quality Results and Summary Statistics

Table 4-17 provides selected annual summary statistics for the middle cirque groundwater (current monitoring locations RMS5, RMS6, and RMS7), and Table 4-18 provides selected annual summary statistics for the ponded water in the exploration decline, which is current monitoring location RMS4.

Table 4-17: Selected Summary Statistics for the Cirque Groundwater (RMS5, RMS6, and RMS7)

Parameter	5th Percentile	Median	95th Percentile
pH (Field)	7.15	8.11	8.9
Hardness	179	224	241
TSS	3	3	7.22
TDS	259	325	355
Sulphate	113	178	197
Alkalinity	57.9	65.6	71.7
Calcium, dissolved	58.9	72.5	79.9
Magnesium, dissolved	7.74	9.68	10.7
Aluminum, total	0.003	0.005	0.0177
Aluminum, dissolved	0.001	0.0018	0.005
Cadmium, total	1.14E-05	0.000046	0.000588
Cadmium, dissolved	1.18E-05	0.000018	0.000552
Copper, total	0.0005	0.0005	0.00495
Copper, dissolved	0.0002	0.0002	0.001
Iron, total	0.0206	0.086	0.594

Parameter	5th Percentile	Median	95th Percentile
Iron, dissolved	0.018	0.032	0.069
Selenium, total	0.000681	0.00146	0.00175
Selenium, dissolved	0.000749	0.00139	0.00168
Zinc, total	0.003	0.005	0.0429
Zinc, dissolved	0.00126	0.004	0.0415

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_GW_SumStats_REV03_KNK.xlsm

Table 4-18: Selected Summary Statistics for the Underground Decline

Parameter	5th Percentile	Median	95th Percentile
pH (Field)	7.14	7.7	7.9
Hardness	95.3	194	241
TSS	0.701	5.3	12.6
TDS	162	294	369
Sulphate	77.4	160	216
Alkalinity	44.4	50	69.7
Calcium, dissolved	30.8	64.7	75.6
Magnesium, dissolved	4.91	8.18	13
Aluminum, total	0.0009	0.053	1.07
Aluminum, dissolved	0.0005	0.00435	0.0163
Cadmium, total	0.000097	0.0003	0.00096
Cadmium, dissolved	9.99E-05	0.00014	0.000828
Copper, total	0.00046	0.0022	0.0317
Copper, dissolved	0.0001	0.000405	0.00291
Iron, total	0.0588	0.23	2.03
Iron, dissolved	0.01	0.025	0.064
Selenium, total	0.000767	0.001	0.008
Selenium, dissolved	0.000825	0.001	0.002
Zinc, total	0.00392	0.019	0.0449
Zinc, dissolved	0.00384	0.0114	0.0817

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\Water_Quality\Summary_Stats\RedMt_GW_SumStats_REV03_KNK.xlsm

Historical data from the seeps and springs were not included in the summary statistics. Some interpretation of groundwater quality was done after the 1993 seeps and springs survey (Section 3.2.2). Klohn-Crippen categorized the seeps and springs into three distinct groups based on water chemistry (1994a, 1994b). Key insights from these documents include the observation that groundwater is dominated by calcium, magnesium, and sulphate and has very low sodium and potassium concentrations, which is typical of oxidized sulphide deposits. Seeps and springs throughout the area tend to be elevated in aluminum, manganese, copper, and zinc.

Comparison to Guidelines

Groundwater samples from the ponded water in the exploration decline (RMS4) occasionally exceed BC CSR guidelines for nitrite, total and dissolved arsenic, total chromium, and total selenium. Groundwater samples from the cirque (RMS5, RMS6, and RMS7) do not exceed BC CSR guidelines for nitrite, total chromium, and total selenium. Seasonal trends could not be observed due to the small number of samples.

Table 4-19: Exceedances of Guidelines for Groundwater (1990 to 2016)

Parameter	Exceedances[1]
	Portal (RMS4)
Nitrite Nitrogen	2 of 25
Arsenic, total	1 of 21
Arsenic, dissolved	1 of 26
Chromium, total	1 of 21
Selenium, total	1 of 21

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\1CI019.001_2015_2016_EA\!080_Deliverables\!EA_Deliverables\WQ_Baseline_Report\020_Tables\WQ_Baseline_Rpt_Tables_Exceedances_1CI019-002_rev06_KNK.xlsm

Notes:

(1) Some water quality guidelines are hardness or pH or chloride concentration dependent. The WQG used was determined by adopting the median guideline from all measured data at the corresponding monitoring location.

5 Summary

The primary objective of the baseline water quality monitoring program was to establish a baseline against which to evaluate potential changes that could occur as a result of the proposed mining project. The results were also used: 1) to establish whether baseline water quality concentrations naturally exceed provincial or federal water quality guidelines and therefore whether site-specific water quality objectives (WQOs) or science-based environmental benchmarks (SBEBs) should be considered; 2) as inputs to the predictive water and load balance that was used to generate water quality predictions; and 3) to determine the scope and frequency of monitoring that will be required over the life of the project.

The baseline water quality program for Red Mountain was designed to meet the requirements for submission of an environmental assessment application. Surface water and groundwater monitoring locations were established upstream and downstream of areas potentially affected by the proposed construction, operation and closure of the mine, including far field locations to provide a baseline for evaluating downstream and/or cumulative effects. Reference sites upstream of mining areas or in adjacent watersheds were also established.

The proposed underground mine is in the Red Mountain cirque, a hanging valley above the Bitter Creek valley that is drained by Goldslide Creek. The proposed tailings facility and processing plant are located adjacent to Otter Creek. Both Goldslide and Otter Creek flow into Bitter Creek. Bitter Creek itself is a tributary to the Bear River, which flows into the Portland Canal near Stewart, BC. All of these catchments except Goldslide Creek are glacially-influenced, with peak flows occurring during summer as a result of glacial melt (typically in July). In contrast, peak flows in Goldslide Creek typically occur in June.

The baseline monitoring network includes four surface water monitoring locations on Goldslide Creek, four monitoring locations on Otter Creek, four monitoring locations on Bitter Creek, three monitoring locations on Bear River, and one monitoring location on each of three reference watersheds (Rio Blanco Creek, Roosevelt Creek, and American Creek). There are four current groundwater monitoring locations: ponded water in the exploration decline and three artesian drillholes in the cirque.

The current baseline monitoring program was reinitiated in the summer of 2014 and the baseline water quality evaluation includes data collected through December 2016. Samples were collected monthly, with the exception of November 2014 through June 2015 and November through December 2015 due to budgetary and safety considerations. There was also an intensive freshet sampling period for surface water, where five weekly samples were taken from late May to late June 2016. Sampling and analysis procedures met Provincial requirements. The baseline water quality dataset has been supplemented with historical data dating back to 1990. These data were collected by HKP from 1990 to 1992, by Rescan from 1993 to 1994, by Royal Oak from 1996 to 1997, and by SRK in 2000 and from 2003 to 2013.

Surface water has circumneutral pH. Calcium and sulphate are the dominant ions in Goldslide Creek, Otter Creek, and Bitter Creek. Baseline water quality in these watersheds is naturally

influenced by mineralization in the watershed, and many of the samples have pH, fluoride, and total and/or dissolved aluminum, arsenic, cadmium, cobalt, copper, iron, lead, manganese, mercury, nickel, selenium, silver, and zinc concentrations that exceed Federal and/or Provincial water quality guidelines. Bitter and Otter Creek, which are strongly influenced by glacial meltwater, have high seasonal suspended sediment loads during high flow periods in the summer, and are associated with elevated levels of trace metals. Consequently, site-specific WQOs or SBEBs based on dissolved concentrations should be considered for the project.

Groundwater quality in the cirque also has circumneutral pH, and is a calcium sulphate dominated water influenced by mineralization. Concentrations of arsenic, chromium, selenium, and nitrite exceed Provincial standards.

This report, Red Mountain Underground Gold Project Environmental Assessment Baseline Surface Water and Groundwater Quality, was prepared by

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All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted professional engineering and environmental practices.

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The opinions expressed in this report have been based on the information available to SRK at the time of preparation. SRK has exercised all due care in reviewing information supplied by others for use on this project. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information, except to the extent that SRK was hired to verify the data.

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Appendix A – Photographs and Descriptions of Sample Locations

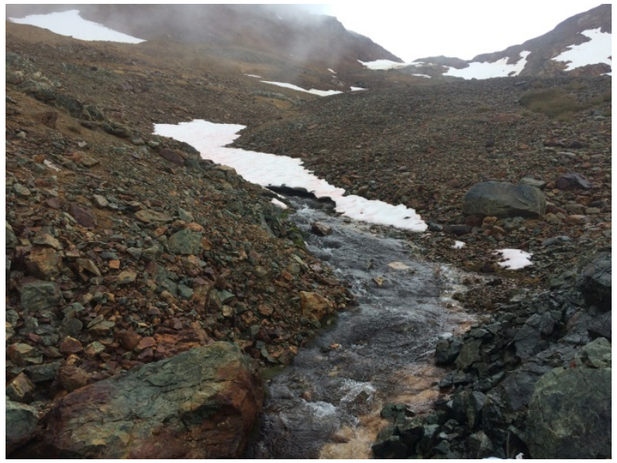
Surface Water Sites

GSC09

Site Description

GSC09 is located on the northernmost of the two main tributaries of upper Goldslide Creek. This branch of the stream flows from the area around and above the portal. It also drains the portal entrance when it is discharging. There is significant moss growth in the stream channel during summer months, often beginning in July and dying off around October. The stream flows below ground for a significant portion and re-emerges nearby and upstream to the sample site. Banks and substrate both consist of gravels and cobbles.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

GSC07

Site Description

GSC07 is located on the southernmost of the two main tributaries of upper Goldslide Creek. This branch of the stream is located in the basin down-slope from the portal entrance and shop area. Banks and substrate both consist of gravels and cobbles.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

GSC05

Site Description

GSC05 is located on the middle reaches of Goldslide Creek and also has a hydrology station installed. Water samples are taken upstream of this hydrology station in order to alleviate any possible interference with the sample. Banks consist of fines, gravels, and cobbles, with bedrock substrate. Site is located in a small but steep valley.

High Flow



Upstream View



Across-Stream View



Downstream View



GSC05 : Water Quality Site (right) and Hydrology station (left).

GSC05 (GSC099)

Site Description

GSC99 is an alternate winter low flow sample site for GSC05, which experiences severe snow drifting in winter and therefore is often inaccessible. Banks and substrate are composed of gravels, cobbles, and bedrock. Site also exists in a short steep valley.

Low Flow



Upstream View



Across-Stream View



Downstream View

GSC02

Site Description

GSC02 (lower Goldslide Creek) is located on a steep slope below GSC05 and above the Bromley glacier. Both banks and substrate consist of gravels and cobbles. Steep grades increase the rate of flow at this site.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

RBC02

Site Description

RBC02 is sampled at Rio Blanco Creek before it joins Bitter Creek. The channel splits before joining Bitter Creek; therefore samples are collected from the main channel upstream of the split and downstream of a waterfall. Both banks and substrate consist of cobbles, gravels, and boulders. Steep grades increase the rate of flow at this site.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

OC07

Site Description

OC07 is located on the lower reaches of Otter Creek below the confluence of the north and south branches, and downslope from the proposed processing plant location. The site exists in an area thick with alder brush but can be accessed by helicopter from a rock outcropping. The stream channel consists of cobbles, boulders, bedrock, and gravel, and the sample is collected from below a small falls.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

OC05

Site Description

OC05 is located on the northern arm of Otter Creek, roughly 300m upstream from its confluence with the southern arm. The stream channel is composed of cobbles, gravel, and boulders. The creek follows a deep valley running down the steep slope.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

OC04

Site Description

OC04 is located on the upper reaches of Otter Creek's northern arm, in the large basin below a glacier, and where all the smaller streams have converged here into one main channel with a small side channel. There is also a hydrology station installed here, upstream of which water sampling is done to alleviate any interference that might occur with the sample. The stream banks and substrate consist mostly of gravels and cobbles, along with the occasional boulder and some fines.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

OC06

Site Description

OC06 is an alternate winter sampling location on the southern arm of upper Otter Creek, as OC04 further upstream on that arm is subject to extremely high snowpack. This site exists near the base of a long waterfall in a valley that has a thick cover of mature Subalpine Fir, Alder, and Devil's Club. These conditions prevented helicopter access, so the site was accessed on foot from OC05. The stream channel is composed of cobbles, boulders, and gravels.

Low Flow Alternate Site



Upstream View



Across-Stream View



Downstream View

RC02

Site Description

RC02 is located on Roosevelt Creek approximately 300 m upstream of the confluence with Bitter Creek. Banks and channel consist of gravels, cobbles, and boulders. The surrounding area is dominated by coniferous trees with deciduous throughout.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

BC08

Site Description

BC08 is located on the upper reaches of Bitter Creek, in a deep valley, and near the toe of the Bromley glacier. Stream banks and channel consist of a combination of fines, gravels, cobbles, and boulders. Bitter Creek is often extremely turbid, requiring samples from this site to be filtered in lab.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

BC06

Site Description

This site exists on Bitter Creek downstream from the new proposed location for the tailings facility near the Bromley Humps. The sample is collected from a gravel bar on the right bank that is the nearest access point due to a long and narrow canyon upstream. Banks and channel consist of fines, gravels, cobbles and boulders. Bitter Creek is often extremely turbid, requiring samples from this site to be filtered in lab.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

BC04

Site Description

BC04 is located on the middle reaches of Bitter Creek upstream of the confluence with Roosevelt Creek. The banks consist of fines, gravels, and cobbles. Bitter Creek is often extremely turbid, requiring samples from this site to be filtered in the lab.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

BC02

Site Description

BC02 (lower Bitter Creek) is sampled on the right bank upstream from the highway bridge crossing. Stream bed and banks consist of fines, gravels, and cobbles. The surrounding slopes are dominated by coniferous forest. Bitter Creek is often extremely turbid, requiring samples from this site to be filtered in lab.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

AC02

Site Description

AC02 is located on American Creek near the confluence with the Bear River and downstream approximately 200m from a bridge. The surrounding area is dominated by coniferous forest with deciduous trees throughout. The banks consist of fines, gravels, and cobbles.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

BR08

Site Description

BR08 is sampled at Bear River upstream of Bitter Creek; it is also immediately upstream of another small stream confluence, though far enough away to remove any possible interference. The site exists in a wide floodplain with minimal stream banks, mostly gravels and cobbles, and a stream bed consisting of fines and gravels.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

BR06

Site Description

BR06 is sampled at Bear River downstream of Bitter Creek. The sample site is accessed by road where the river runs parallel to the highway. Banks consist of cobbles and boulders. Bear River downstream of the Bitter Creek confluence is often extremely turbid, requiring samples from this site to be filtered in lab.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

BR03

Site Description

BR03 is sampled on Bear River upstream of the town of Stewart. This site is accessed by truck and sampled downstream of the highway bridge. The banks consist of fines and boulders. Bear River downstream of the Bitter Creek confluence is often extremely turbid, requiring samples from this site to be filtered in lab.

High Flow



Upstream View



Across-Stream View



Downstream View

Low Flow



Upstream View



Across-Stream View



Downstream View

Groundwater Sites

RMS1

Site Description

RMS1 consists of a small pool that collects seepage water running out of the east side of the waste rock dump. This shallow pool easily fills up with sediments, making it difficult to sample. When samples cannot be collected, the pool is dredged deeper to remove these sediments. Samples can only be collected from this site during the snow- and ice-free period and when rain or snowmelt provide sufficient inflows.



Dredging the pool deeper at RMS1.



Small pool at RMS1, too shallow to sample.

RMS2

Site Description

RMS2 consists of a small pool that collects seepage water running out of the southwest side of the waste rock dump. This shallow pool easily fills up with sediments, making it difficult to sample. When samples cannot be collected, the pool is dredged deeper to remove these sediments. Samples can only be collected from this site during the snow- and ice-free period and when rain or snowmelt provide sufficient inflows.



RMS2 sampling pool with sediments removed.



RMS2 pool ready to sample.

RMS3

Site Description

RMS3 consists of a small pool that collects seepage water running out of the northwest side of the waste rock dump. This shallow pool easily fills up with sediments, making it difficult to sample. When samples cannot be collected, the pool is dredged deeper to remove these sediments. Samples can only be collected from this site during the snow- and ice-free period and when rain or snowmelt provide sufficient inflows.



RMS3 pool dry.



RMS3 pool ready to sample.

RMS4

Site Description

RMS4 samples are collected from the water which fills the existing mine shaft. Samples can be collected at low water conditions by entering the portal and descending down the decline until standing water is encountered. Alternatively, during high water conditions samples are collected from the water that discharges from the portal entrance.



Inside the portal.



Water discharging from portal.

RMS5

Site Description

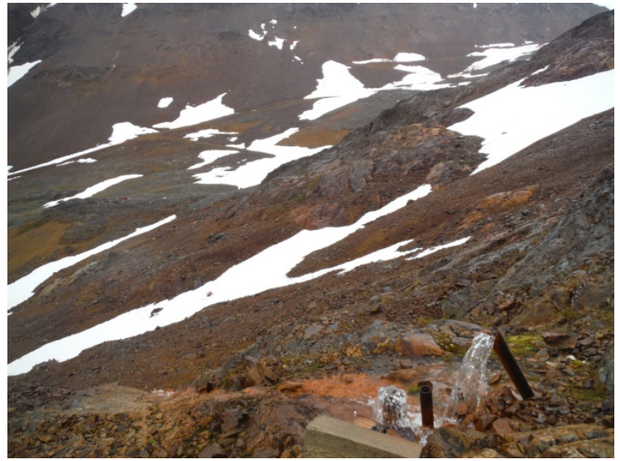
This site consists of 2 drillholes that discharge water due to artesian conditions. The holes are located on the steep slope around the southern edge of the cirque. Well caps were installed on these pipes in November 2014 to monitor groundwater pressure. Subsequent sample collection has been through the nozzle in cap or via the removal of the cap. Upon initial release from the cap, the water runs noticeably dirty and therefore is left to purge for 10 to 30 minutes before sample collection.



With cap removed



After capping



Before capping

RMS6

Site Description

This site consists of a drillhole that discharges water due to artesian conditions. This hole is located near the upper reaches of Goldslide Creek. A well cap was installed on this pipe in November 2014 to monitor groundwater pressure. Subsequent sample collection has been through the nozzle in cap or via the removal of the cap. Upon initial release from cap, the water runs noticeably dirty and therefore is left to purge for 10-30 minutes before sample collection.



Purging dirty water



After dirty water purge

RMS7

Site Description

This site consists of a drill hole which discharges water due to artesian conditions. This hole is located on the steep side of the mountain on northern side of cirque. A well cap was installed on this pipe in November 2014 to monitor groundwater pressure. Subsequent sample collection has been through the nozzle in cap or via the removal of the cap. Upon initial release from the cap, the water runs noticeably dirty and therefore is left to purge for 10 to 30 minutes before sample collection.



Purging water



With cap installed



Before capping

Weathering Cribs

N-Crib-N (Right) and N-Crib-S (Left)

Site Description

There are two separate weathering cribs containing waste rock located near the portal entrance. Sealed catchment containers were installed in September 2015 to collect rain and snowmelt water, which percolates through rock exposed to weathering. Samples are collected from these containers. Containers are removed before winter and reinstalled in spring.



N-Cribs



N-Crib-N with catchment installed



N-Crib-S with catchment installed

Appendix B – Historical Surface Water Quality Data

Appendix B - 1 – 1990 to 1992 Surface Water Quality Data

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W1	W1	W1	W1	W2	W2	W2	W2	W2	W3
Sampling Date						27-Sep-90	10-Oct-90	29-Oct-91	30-Jun-92	27-Sep-90	10-Oct-90	21-May-91	29-Oct-91	30-Jun-92	27-Sep-90
		Long Term	Short Term	Long Term	Short Term										
Field pH	pH units	**6.5 - 9**		**6.5 - 9**											
Conductivity	uS/cm														
Specific Conductivity	uS/cm														
Dissolved Oxygen	mg/L														
Dissolved Oxygen	%														
ORP	mV														
Turbidity	NTU														
TDS	mg/L														
Temperature	degC														
pH	pH units	**6.5 - 9**		**6.5 - 9**		6.79	*6.45*	*6.38*	6.72	6.94	6.74	7.6	*6.48*	6.84	7.16
Specific Conductance	uS/cm					98.1	135	150	90	88.5	97.5	113	97	67.8	108
Total Hardness	mg/L					42.3	57.7	71.6	38.2	36	40	50.6	45.1	29.1	45.5
Total dissolved solids	mg/L					66	90	96	61	55.7	60	78	66	45	69.6
Total suspended solids	mg/L					<1	<1	<1	1	<1	<1	<1	<1	<1	<1
Turbidity	NTU					0.2	0.1	<0.1	<0.1	0.1	0.2	0.12	0.14	0.1	0.2
Major Ions															
Total alkalinity	mg/L as Ca CO3					6.8	9.3	9.4	5.1	6.9	7.7	9.9	7.1	4.9	10.8
Alkalinity to pH 4.5	mg/L as Ca CO3														
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3														
Acidity	mg/L														
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	0.6	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.04	0.05	0.05	0.04	0.03	0.04	0.07	0.04	0.04	0.04
Bromide	mg/L														
Sulfate	mg/L			**EQ23**		32.5	48.5	51.7	35.3	28.5	34.4	41.2	35.7	24.6	33.6
Nutrients															
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.066	1.75	0.029	0.03	0.006	<0.005	0.046	0.011	0.024	<0.005
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	0.02	<0.001	0.003	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Nitrogen, total	mg/L as N														
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	0.057	<0.005	<0.005	0.019	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N														
Ortho phosphorus, dissolved	mg/L					<0.001	0.001	0.001	<0.001	<0.001	0.002	0.001	0.001	0.001	<0.001
Phosphorus, total	mg/L					<0.001	0.001	0.003	0.003	0.005	0.002	0.002	0.005	0.002	<0.001
Organics															
Total Organic Carbon	mg/L														
Dissolved Organic Carbon	mg/L														
Other															
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide, WAD	mg/L			**0.005**	**0.01**										
Thiocyanate	mg/L														
Metals															
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.017	0.01	0.01	0.105	0.017	0.056	0.041	0.021	0.049	0.043
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.015	0.01	0.01	0.05	0.013	0.032	0.023	0.018	0.025	0.033
Antimony, total	mg/L			**0.009**		0.0007	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001
Antimony, dissolved	mg/L			**0.009**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		0.0012	0.0005	0.0004	<0.0001	<0.0001	0.0004	<0.0001	0.0001	<0.0001	0.0002
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.0003	0.0003	0.0003	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Barium, total	mg/L			**1**		0.017	0.019	0.027	0.024	0.019	0.024	0.023	0.04	0.024	0.025
Barium, dissolved	mg/L			**1**		0.017	0.019	0.027	0.024	0.019	0.024	0.023	0.04	0.024	0.025
Beryllium, total	mg/L			**0.00013**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Beryllium, dissolved	mg/L			**0.00013**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth, total	mg/L					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bismuth, dissolved	mg/L					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	0.0002	<0.1	<0.1	<0.1	<0.1	0.0002	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1		<0.1	<0.1	<0.1	<0.1		<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0003	<0.0002	0.0002	0.0004	0.0004	0.0002	<0.0002	<0.0002	0.0003	<0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0003	0.0003	0.0002	0.0004	0.0003	0.0002	<0.0002	<0.0002	0.0003	<0.0002
Calcium, total	mg/L					15.1	19.8	19.2	12.9	12.5	13.4	16.8	13.3	9.61	15.7
Calcium, dissolved	mg/L					14.1	19.5	19.2	12.7	11.8	13.2	16.8	13.3	9.61	15.1
Cesium, total	mg/L														
Cesium, dissolved	mg/L														
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L														
Cobalt, total	mg/L			**0.004**	**0.11**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.018	0.012	0.011	0.017	0.003	0.006	0.003	0.002	0.005	0.004
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.018	0.008	0.011	0.016	0.003	0.005	0.002	0.002	0.004	0.004
Iron, total	mg/L	**0.3**		**0.001**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.001	0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.001	0.002	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Magnesium, total	mg/L					1.86	2.12	5.61	1.59	1.67	1.68	2.06	2.81	1.24	1.91
Magnesium, dissolved	mg/L					1.7	2.12	5.61	1.57	1.54	1.66	2.06	2.81	1.24	1.84
Manganese, total	mg/L			**EQ10**	**EQ11**	0.008	<0.005	<0.005	0.024	<0.005	<0.005	<0.005	<0.005	0.008	0.006
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.008	<0.005	<0.005	0.024	<0.005	<0.005	<0.005	<0.005	0.008	<0.005
Mercury, total	mg/L	**0.000026**		**0.00002**		0.00011	<0.00005	<0.00001	<0.00001	0.00002	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001
Mercury, dissolved	mg/L	**0.000026**		**0.00002**											
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.003	0.003	0.004	0.002	0.003	0.004	0.005	0.005	0.002	0.006
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.003	0.003	0.004	0.002	0.002	0.004	0.005	0.005	0.002	0.005
Nickel, total	mg/L	**EQ20**		**EQ22**		0.001	0.007	0.002	0.002	0.002	0.003	0.001	0.002	0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.001	0.002	0.001	0.002	<0.001	0.002	<0.001	0.002	0.001	<0.001
Potassium, total	mg/L														
Potassium, dissolved	mg/L					0.07	0.1	0.12	0.06	0.09	0.25	0.11	0.13	0.05	0.12
Selenium, total	mg/L	**0.001**		**0.002**		<0.0005	0.007	<0.0005	<0.0005	<0.0005	0.003	<0.0005	<0.0005	<0.0005	<0.0005
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silicon, total	mg/L					1.89	1.83		2.28	2.4	2.6	2.36		2.16	3
Silicon, dissolved	mg/L					1.77	1.83		2.24	2.3	2.6	2.36		2.16	2.7
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L														
Sodium, dissolvd	mg/L					0.83	1.35	1.21	0.8	0.96	1.59	1.06	1.21	0.72	1.2
Strontium, total	mg/L					0.053	0.065	0.087	0.074	0.068	0.073	0.085	0.101	0.038	0.087
Strontium, dissolved	mg/L					0.048	0.065	0.087	0.072	0.065	0.071	0.084	0.101	0.038	0.079
Sulfur, total	mg/L														
Sulfur, dissolved	mg/L														
Thallium, total	mg/L	**0.0008**		**0.0008**											
Thallium, dissolved	mg/L	**0.0008**		**0.0008**											
Tin, total	mg/L														
Tin, dissolved	mg/L														
Titanium, total	mg/L														
Titanium, dissolved	mg/L														
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.0001	<0.00005	<0.00005	<0.00005	0.00013	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Vanadium, total	mg/L					<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Vanadium, dissolved	mg/L					<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.014	0.025	0.019	0.038	0.01	0.022	0.014	0.017	0.02	0.008
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.014	0.016	0.019	0.035	0.01	0.022	0.014	0.016	0.02	0.008

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W3	W3	W3	W3	W5	W5	W5	W5	W5	W8
Sampling Date						10-Oct-90	21-May-91	29-Oct-91	30-Jun-92	27-Sep-90	10-Oct-90	21-May-91	29-Oct-91	30-Jun-92	10-Oct-90
		Long Term	Short Term	Long Term	Short Term										
Field pH	pH units	**6.5 - 9**		**6.5 - 9**											
Conductivity	uS/cm														
Specific Conductivity	uS/cm														
Dissolved Oxygen	mg/L														
Dissolved Oxygen	%														
ORP	mV														
Turbidity	NTU														
TDS	mg/L														
Temperature	degC														
pH	pH units	**6.5 - 9**		**6.5 - 9**		6.84	7.45	6.9	7.1	8.14	7.7	7.9	7.8	8.25	8.02
Specific Conductance	uS/cm					122	138	132	79.9	94.4	189	198	232	90.5	131
Total Hardness	mg/L					54	35.7	58.7	35	42.7	92.6	96.6	106	43.2	61.1
Total dissolved solids	mg/L					80	101	88	55	68.5	120	148	152	73	80
Total suspended solids	mg/L					<1	1	2	<1	356	81.3	114	35	612	4
Turbidity	NTU					0.1	1.39	0.16	0.31	162	74.5	98	32.8	498	6.6
Major Ions															
Total alkalinity	mg/L as Ca CO3					13	17.3	18.6	8.4	28.4	56.2	61.2	71.8	38	47.4
Alkalinity to pH 4.5	mg/L as Ca CO3														
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3														
Acidity	mg/L														
Chloride	mg/L	**120**	**640**	**150**	**600**	0.6	<0.5	<0.5	<0.5	1.6	0.8	<0.5	<0.5	<0.5	0.8
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.07	0.05	0.04	0.03	0.04	0.07	0.04	0.03	0.05
Bromide	mg/L														
Sulfate	mg/L			**EQ23**		40.6	48.7	34	27.5	11.3	37.4	35.7	26.9	11	14.5
Nutrients															
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.005	0.032	<0.005	0.026	0.008	0.11	0.25	0.162	0.053	0.15
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.001
Nitrogen, total	mg/L as N														
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	0.029	0.019	<0.005	<0.005	0.013	<0.005
Free Ammonia	mg/L as NH3-N														
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	<0.001	0.003	<0.001	0.039	0.043	0.016	0.003	0.007
Phosphorus, total	mg/L					<0.001	<0.001	0.005	0.004	0.012	0.04	0.3	0.113	1.38	0.016
Organics															
Total Organic Carbon	mg/L														
Dissolved Organic Carbon	mg/L														
Other															
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide, WAD	mg/L			**0.005**	**0.01**										
Thiocyanate	mg/L														
Metals															
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.061	0.078	0.061	0.095	1.91	3.55	4.58	1.35	12.2	<0.005
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.037	0.013	0.019	0.028	0.14	0.062	0.037	0.03	0.12	0.038
Antimony, total	mg/L			**0.009**		<0.0001	<0.0001	0.0003	<0.0001	0.0005	0.001	0.0008	0.0047	0.0006	0.0002
Antimony, dissolved	mg/L			**0.009**		<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0007	0.0005	0.0004	0.0004	0.0002
Arsenic, total	mg/L	**0.005**		**0.005**		0.0004	0.0002	0.0002	<0.0001	0.0008	0.0038	0.0046	0.0021	0.016	0.0009
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.0002	0.0002	0.0002	<0.0001	0.0006	0.0006	0.0005	0.0006	0.0005	0.0005
Barium, total	mg/L			**1**		0.027	0.024	0.038	0.027	0.072	0.078	0.084	0.065	0.237	0.095
Barium, dissolved	mg/L			**1**		0.027	0.022	0.035	0.024	0.027	0.034	0.028	0.053	0.019	0.082
Beryllium, total	mg/L			**0.00013**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Beryllium, dissolved	mg/L			**0.00013**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth, total	mg/L					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bismuth, dissolved	mg/L					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.0002	<0.1	<0.1	<0.1	<0.1	<0.0002	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1		<0.1	<0.1	<0.1	<0.1		<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	0.0003	<0.0002	0.001	<0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	<0.0002	<0.0002	0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Calcium, total	mg/L					18.2	22.3	18.6	11.9	16.4	30.3	32.3	30	30.7	21.3
Calcium, dissolved	mg/L					18.2	22.2	18.1	11.7	14.7	30.3	31.8	30	15	21.2
Cesium, total	mg/L														
Cesium, dissolved	mg/L														
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	0.001	0.009	0.006	0.003	0.016	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L														
Cobalt, total	mg/L			**0.004**	**0.11**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.001	0.01	<0.001
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.008	0.006	0.005	0.006	0.001	0.007	0.013	0.007	0.06	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.001	0.002	0.003	0.004	<0.001	0.007	0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		<0.03	0.033	<0.03	<0.03	1.21	4.06	5.63	1.47	20.7	0.171
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.038	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.002	<0.001	<0.001	<0.001	0.001	0.013	0.004	<0.001	0.017	0.002
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium, total	mg/L					2.02	2.46	3.36	1.39	2.12	5.28	6.28	7.73	9.15	1.99
Magnesium, dissolved	mg/L					2.02	2.43	3.2	1.37	1.42	3.94	4.06	7.36	1.39	1.93
Manganese, total	mg/L			**EQ10**	**EQ11**	<0.005	<0.005	0.007	0.008	0.03	0.112	0.125	0.051	0.683	0.022
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	<0.005	<0.005	0.006	0.008	0.008	0.006	0.013	0.009	0.022	0.008
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00005	<0.00001	<0.00001	<0.00001	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**											
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.006	0.007	0.006	0.003	<0.001	0.004	0.005	0.004	0.001	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.006	0.006	0.005	0.003	<0.001	0.003	0.003	0.003	0.001	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		0.002	<0.001	0.001	0.001	<0.001	0.001	0.007	0.004	0.019	0.002
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.002	<0.001	0.001	0.001	<0.001	0.001	<0.001	0.001	<0.001	<0.001
Potassium, total	mg/L														
Potassium, dissolved	mg/L					0.15	0.18	0.19	0.07	0.45	0.73	0.67	0.77	0.62	0.26
Selenium, total	mg/L	**0.001**		**0.002**		0.002	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0005	0.0009	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silicon, total	mg/L					3.2	3.11		2.72	4.59	6.97	10.3		17	1.29
Silicon, dissolved	mg/L					3.17	3.01		2.69	0.498	1.3	1.42		0.622	1.12
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	<0.0001	<0.0001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L														
Sodium, dissolvd	mg/L					1.78	1.3	1.58	0.85	0.47	1.41	1.08	1.49	0.47	1.1
Strontium, total	mg/L					0.091	0.114	0.136	0.047	0.086	0.17	0.175	0.228	0.148	0.137
Strontium, dissolved	mg/L					0.09	0.111	0.133	0.038	0.074	0.17	0.163	0.228	0.074	0.138
Sulfur, total	mg/L														
Sulfur, dissolved	mg/L														
Thallium, total	mg/L	**0.0008**		**0.0008**											
Thallium, dissolved	mg/L	**0.0008**		**0.0008**											
Tin, total	mg/L														
Tin, dissolved	mg/L														
Titanium, total	mg/L														
Titanium, dissolved	mg/L														
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00005	<0.00005	<0.00005	<0.00005	0.00005	0.00045	0.00013	0.0002	0.00036	0.00005
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0002	0.0001	0.00012	<0.00005	<0.00005
Vanadium, total	mg/L					<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.033	<0.03
Vanadium, dissolved	mg/L					<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.012	0.01	0.011	0.013	0.006	0.019	0.029	0.011	0.102	0.006
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	0.01	0.011	0.013	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W8	W8	W8	W9	W9	W9	W9	W10	W10	W10
Sampling Date						21-May-91	29-Oct-91	30-Jun-92	10-Oct-90	21-May-91	29-Oct-91	30-Jun-92	21-May-91	29-Oct-91	30-Jun-92
		Long Term	Short Term	Long Term	Short Term										
Field pH	pH units	**6.5 - 9**		**6.5 - 9**											
Conductivity	uS/cm														
Specific Conductivity	uS/cm														
Dissolved Oxygen	mg/L														
Dissolved Oxygen	%														
ORP	mV														
Turbidity	NTU														
TDS	mg/L														
Temperature	degC														
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.87	7.73	7.06	8.06	7.87	7.78	8.06	7.9	7.8	8.26
Specific Conductance	uS/cm					123	146	66.2	161	158	188	91.6	171	190	95.9
Total Hardness	mg/L					62	70.8	33.4	81.4	73.5	81.2	45.3	85.4	90.1	48.2
Total dissolved solids	mg/L					100	102	54	100	120	123	75	135	133	71
Total suspended solids	mg/L					15	1	73	18	28	32	353	23	18	468
Turbidity	NTU					10.6	3.3	72.7	23.1	23.1	11.2	290	21.8	12.2	365
Major Ions															
Total alkalinity	mg/L as Ca CO3					46.4	56.6	26.4	55.3	54.3	65.3	39.8	61.3	66.6	36.3
Alkalinity to pH 4.5	mg/L as Ca CO3														
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3														
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3														
Acidity	mg/L														
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	0.7	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.07	0.05	0.05	0.04	0.07	0.05	0.04	0.07	0.05	0.04
Bromide	mg/L														
Sulfate	mg/L			**EQ23**		19.5	8.4	9.2	24.4	25.5	15.6	9.8	27.3	19.9	9
Nutrients															
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.277	0.159	0.056	0.13	0.248	0.147	0.064	0.177	0.153	0.072
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	0.005	0.002	<0.001	<0.001	0.002	<0.001	<0.001	0.002
Nitrogen, total	mg/L as N														
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	0.015	0.009	<0.005	0.012	0.02	<0.005	0.014	0.024
Free Ammonia	mg/L as NH3-N														
Ortho phosphorus, dissolved	mg/L					0.008	0.006	0.004	0.016	0.013	0.008	0.003	0.017	0.01	0.003
Phosphorus, total	mg/L					0.04	0.012	0.4	0.072	0.083	0.039	0.95	0.095	0.038	1.31
Organics															
Total Organic Carbon	mg/L														
Dissolved Organic Carbon	mg/L														
Other															
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cyanide, WAD	mg/L			**0.005**	**0.01**										
Thiocyanate	mg/L														
Metals															
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.165	0.125	2.84	0.35	1.3	0.35	8.24	1.25	1.14	8.87
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.032	0.021	0.045	0.052	0.039	0.036	0.21	0.043	0.044	0.145
Antimony, total	mg/L			**0.009**		0.0005	0.0007	0.0002	0.0004	0.0007	0.0022	0.0005	0.0006	0.2	0.0005
Antimony, dissolved	mg/L			**0.009**		0.0005	0.0002	<0.0001	0.0004	0.0005	0.0003	0.0003	0.0005	0.0005	0.0003
Arsenic, total	mg/L	**0.005**		**0.005**		0.001	0.0006	0.0036	0.0014	0.0023	0.0011	0.015	0.0017	0.019	0.0108
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.0006	0.0005	0.0003	0.0008	0.0006	0.0006	0.0006	0.0004	0.0005	0.0004
Barium, total	mg/L			**1**		0.079	0.123	0.166	0.073	0.076	0.083	0.225	0.07	0.098	0.195
Barium, dissolved	mg/L			**1**		0.065	0.111	0.052	0.063	0.055	0.083	0.032	0.049	0.085	0.03
Beryllium, total	mg/L			**0.00013**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Beryllium, dissolved	mg/L			**0.00013**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Bismuth, total	mg/L					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Bismuth, dissolved	mg/L					<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.0002	<0.1	<0.1	<0.1	<0.0002	<0.1	<0.1	<0.0002	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1		<0.1	<0.1	<0.1		<0.1	<0.1		<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0002	<0.0002	0.0005	<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	0.0006
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Calcium, total	mg/L					22	22.6	13.2	28.1	25.1	24.7	23.9	29.3	26.8	25.4
Calcium, dissolved	mg/L					21.6	22.6	11.9	28.1	25.1	24.7	16.1	29.3	26.8	16.9
Cesium, total	mg/L														
Cesium, dissolved	mg/L														
Chromium, total	mg/L					<0.001	<0.001	0.002	<0.001	0.002	0.002	0.01	0.002	0.002	0.011
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L														
Cobalt, total	mg/L			**0.004**	**0.11**	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	0.007	<0.001	<0.001	0.005
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.001	<0.001	0.006	0.002	0.004	0.004	0.038	0.005	0.008	0.042
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.32	0.147	4.93	0.506	1.41	0.58	15.4	1.43	1.6	15.1
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	0.055	0.032	<0.03	<0.03	0.076	0.034	<0.03	0.084
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.014	<0.001	0.009	0.002	0.002	<0.001	0.014	0.003	0.001	0.013
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Magnesium, total	mg/L					2.01	3.55	2.15	2.8	2.98	4.63	6.32	3.33	5.51	6.96
Magnesium, dissolved	mg/L					1.91	3.41	0.876	2.66	2.56	4.63	1.22	2.89	5.27	1.49
Manganese, total	mg/L			**EQ10**	**EQ11**	0.028	0.025	0.28	0.037	0.047	0.038	0.561	0.056	0.068	0.512
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.006	0.008	0.016	0.011	0.009	0.016	0.02	0.018	0.011	0.026
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	0.00006	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Mercury, dissolved	mg/L	**0.000026**		**0.00002**											
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.001	0.001	<0.001	0.002	0.002	0.002	<0.001	0.002	0.005	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	0.002	0.002	0.002	<0.001	0.002	0.003	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	0.002	0.001	0.002	0.002	0.013	0.002	0.003	0.013
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Potassium, total	mg/L														
Potassium, dissolved	mg/L					0.29	0.31	0.19	0.74	0.55	0.8	0.6	0.64	0.64	0.57
Selenium, total	mg/L	**0.001**		**0.002**		<0.0005	<0.0005	<0.0005	0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silicon, total	mg/L					1.34		4.2	1.54	3.94		11.5	3.8		12.1
Silicon, dissolved	mg/L					1.14		0.679	1.25	1.3		0.808	1.38		0.827
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.0003	<0.0001	0.0002	0.0003
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L														
Sodium, dissolvd	mg/L					0.85	1.09	0.38	1.29	0.93	1.25	0.51	0.99	1.27	0.5
Strontium, total	mg/L					0.125	0.195	0.074	0.151	0.136	0.189	0.119	0.144	0.206	0.126
Strontium, dissolved	mg/L					0.119	0.183	0.066	0.151	0.136	0.189	0.078	0.142	0.206	0.081
Sulfur, total	mg/L														
Sulfur, dissolved	mg/L														
Thallium, total	mg/L	**0.0008**		**0.0008**											
Thallium, dissolved	mg/L	**0.0008**		**0.0008**											
Tin, total	mg/L														
Tin, dissolved	mg/L														
Titanium, total	mg/L														
Titanium, dissolved	mg/L														
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00005	0.00007	0.00025	0.0001	0.00008	0.00012	0.00015	<0.00005	0.00012	0.00045
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00005	<0.00005	<0.00005	0.00005	<0.00005	0.00006	0.00005	<0.00005	0.00006	0.00006
Vanadium, total	mg/L					<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Vanadium, dissolved	mg/L					<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.005	<0.005	0.064	<0.005	0.014	0.009	0.073	0.015	0.013	0.073
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Appendix B - 2 – 1993 to 2000 Surface Water Quality Data

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W1	W1	W1	W1	W1	W1	W1	W2	W2
Sampling Date						10-Feb-93	29-May-93	25-Jun-93	30-Jul-93	26-Aug-93	31-Oct-93	29-Nov-93	4-Jan-93	10-Feb-93
		Long Term	Short Term	Long Term	Short Term		1		1				1	1
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.3	*5.62*	6.87	6.73	7.46	7.3	6.7	7.02	7.14
Conductivity	uS/cm					141	92.7	99.3	76.2	104	135	161	137.5	112
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		6.6	*4.6*	6.9	*6.5*	6.8	7.4	6.7	*5.8*	*6.1*
Specific Conductance	uS/cm					150	87	100	79	110	140	140	130	110
Total Hardness	mg/L					84	40	37	28	41	51	81	59	65
Total dissolved solids	mg/L					110	67	74	70	81	96	95	79	85
Total suspended solids	mg/L					2	<1	7	<1	<1	<1	2	<1	2
Turbidity	NTU					0.11	0.21	0.5	0.24	0.3	0.2	0.13	0.2	0.11
Major Ions														
Total alkalinity	mg/L as Ca CO3					11	1	8	4	6	8	6	12	9
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					3.6	6.1	3	3.5	4	2.4	34	3.2	2.7
Chloride	mg/L	**120**	**640**	**150**	**600**	1	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	0.5	0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.15	0.05	0.1	0.1	0.1	0.1	0.1	0.1	0.05
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		48	31	27	21	33	36	35	51	36
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	1	<0.5	<0.5	0.72	0.5	1	0.2	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	<0.05	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	0.5	<0.5	<0.5	0.11	<0.5	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	<0.05	<0.05
Phosphorus, total	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01	<0.05	<0.05
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**				<0.005		<0.005			
Cyanide, WAD	mg/L			**0.005**	**0.01**				<0.005		<0.005			
Thiocyanate	mg/L								0.05					
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.012	0.27	0.51	0.1	0.019	0.0046	0.07	0.0094	0.012
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0077	0.2	0.00099	0.0032	0.011	0.0023	<0.001	0.00052	0.0062
Antimony, total	mg/L			**0.009**		0.00033	0.00016	0.00063	0.00078	0.00033	0.00039	0.00069	0.00039	0.00038
Antimony, dissolved	mg/L			**0.009**		0.00033	<0.0001	0.0001	<0.0001	0.00007	<0.0001	<0.0001	<0.00006	0.00037
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.023	0.022	0.017	0.024	0.023	0.02	0.027	0.024	0.027
Barium, dissolved	mg/L			**1**		0.023	0.016	0.017	0.024	0.018	0.02	0.027	0.021	0.027
Beryllium, total	mg/L			**0.00013**		<0.00006	<0.00009	<0.0001	<0.0001	<0.00008	<0.00006	<0.0001	0.00007	<0.00006
Beryllium, dissolved	mg/L			**0.00013**		<0.00006	<0.0002	<0.0001	<0.0001	0.00006	<0.00006	<0.0001	<0.00005	<0.00006
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0075	0.042	0.013	0.022	0.024	0.0054	0.018	0.017	0.0073
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0039	0.013	<0.0006	0.0065	0.005	0.0028	0.0043	0.0022	0.0042
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00044	***0.0017***	0.00024	<0.0001	***0.0011***	0.00012	0.00013	<0.00005	0.00049
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00044	***0.0015***	0.00013	<0.0001	0.00025	<0.0001	<0.0001	<0.00009	0.00048
Calcium, total	mg/L					28	12	12	9	15	22	31	20	21
Calcium, dissolved	mg/L					28	10	12	8.9	13	17	28	19	21
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.003	0.0035	0.001	0.005	0.017	0.001	0.015	0.0014	0.008
Chromium, dissolved	mg/L					0.00066	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00048	<0.0005	0.00076
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00058	0.00099	0.0011	0.00086	0.00072	0.00062	0.00062	0.00009	0.00033
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00058	0.00094	0.00061	0.00086	0.00072	0.00049	0.0004	0.00008	0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.017	0.017	0.024	0.026	0.038	0.015	0.0081999	0.0026	0.0065
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.016	0.013	0.019	0.026	0.038	0.011	0.0026	0.00073	0.0046999
Iron, total	mg/L	**0.3**		**0.001**		0.064	<0.01	0.17	0.021	0.097	0.05	0.091	<0.01	0.039
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.019	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00012	0.00082	0.00018	0.00028	0.011	0.00017	0.0002	0.00031	0.00015
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00007	<0.00007	<0.0001	0.00007	0.00018	<0.0001	<0.0001	0.00002	0.000035
Magnesium, total	mg/L					3.5	2.4	1.7	1.5	2.1	2.4	4.3	2.2	3
Magnesium, dissolved	mg/L					3.5	1.9	1.7	1.4	2	2.1	2.7	2	3
Manganese, total	mg/L			**EQ10**	**EQ11**	0.008	0.046	0.014	0.032	0.014	0.0084	0.0079	0.0017	0.005
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.008	0.042	0.012	0.031	0.014	0.0068	0.0026	<0.0001	0.0046
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0029	<0.0001	0.0026	0.0014	0.0017	0.0025	0.0053	0.0079	0.0051
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0029	<0.0002	0.0018	0.0014	0.0016	0.0023	0.0053	0.0069	0.005
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0046	0.0055	0.23	0.018	0.0087	0.0036	0.0047	0.0013	0.0036
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0029	0.0027	0.0011	0.00085	0.0027	0.0013	0.0017	<0.0003	0.0029
Potassium, total	mg/L					0.46	0.27	0.14	0.17	0.32	0.53	0.33	0.2	0.48
Potassium, dissolved	mg/L					0.27	0.17	0.12	0.12	0.098	<0.05	0.24	0.085	0.33
Selenium, total	mg/L	**0.001**		**0.002**		0.006	<0.001	<0.001	<0.001	<0.001	0.004	0.003	0.0011	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00002	<0.00002	0.00005	<0.00001	0.00005	<0.00001	0.00002	<0.00002	0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00003	<0.0001
Sodium, total	mg/L					1.4	1.4	0.84	0.8	1	1.5	3	1.2	1.3
Sodium, dissolvd	mg/L					1.3	1.2	0.77	0.78	0.88	0.81	1.9	1.1	1.3
Strontium, total	mg/L					0.18	0.062	0.082	0.054	0.08	0.12	0.38	0.11	0.11
Strontium, dissolved	mg/L					0.18	0.06	0.073	0.053	0.08	0.11	0.35	0.1	0.11
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00003	<0.00002	<0.00005	<0.00003	<0.00002	0.0013	<0.00004	<0.00001	<0.00003
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00003	<0.00004	<0.00005	<0.00003	<0.00002	<0.00002	<0.00004	<0.00002	<0.00003
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.0029	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.036	0.094	0.026	0.09	0.053	0.013	0.029	0.037	0.028
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.036	0.087	0.024	0.041	0.038	0.013	0.022	0.0064	0.028

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W2	W2	W2	W2	W2	W2	W2	W2
Sampling Date						29-Apr-93	29-May-93	25-Jun-93	30-Jul-93	26-Aug-93	3-Oct-93	31-Oct-93	29-Nov-93
		Long Term	Short Term	Long Term	Short Term	1	1				1		
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			*6.35*	7.17	7	7.63	6.8	7.3	6.9
Conductivity	uS/cm						73	82.9	65	95	135	112	161
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		*5.8*	*5.5*	6.9	6.6	6.9	*6.2*	7.2	6.7
Specific Conductance	uS/cm					140	76	82	64	94	130	120	140
Total Hardness	mg/L					82	42	27	23	35	50	42	64
Total dissolved solids	mg/L					78	60	51	49	72	89	76	100
Total suspended solids	mg/L					<1	<1	<1	<1	<1	<1	<1	<1
Turbidity	NTU					0.2	0.23	0.13	0.2	0.13	0.1	0.14	<0.1
Major Ions													
Total alkalinity	mg/L as Ca CO3					14	6	7	4	7	12	8	10
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					3.2	2.6	2.3	2.7	2.7	3.2	2.1	29
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.05	0.05	0.05	0.1	0.05	0.05	0.1
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		47	23	19	18	28	40	36	38
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.01
Phosphorus, total	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**				<0.005		<0.005	<0.005	
Cyanide, WAD	mg/L			**0.005**	**0.01**				<0.005		<0.005	<0.005	
Thiocyanate	mg/L								0.05				
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0087	0.02	0.018	0.041	0.008	0.0057	<0.001	0.021
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.008	0.0045	0.0094	0.0054	0.0059	<0.0006	<0.001	<0.001
Antimony, total	mg/L			**0.009**		<0.00005	0.00024	0.00035	0.00068	0.00092	<0.00006	0.00026	0.00058
Antimony, dissolved	mg/L			**0.009**		<0.00005	0.00024	0.00035	<0.0001	0.00006	<0.00004	<0.0001	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	0.0032	<0.001	0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.03	0.022	0.017	0.023	0.028	0.022	0.026	0.026
Barium, dissolved	mg/L			**1**		0.027	0.019	0.017	0.02	0.02	0.022	0.023	0.026
Beryllium, total	mg/L			**0.00013**		0.00005	<0.00009	0.0002	<0.0001	0.00009	<0.00005	0.00006	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.00008	<0.0002	<0.0001	<0.0001	<0.00006	<0.00005	0.00006	<0.0001
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.045	0.047	0.013	0.024	0.005	0.044	0.0065	0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	0.0081	<0.0006	0.0052	0.0032	0.0028	0.0031	0.0013
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00015	0.00087	0.00034	0.00091	0.00047	<0.0001	0.00021	0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00014	0.00085	<0.0002	<0.0001	0.00033	0.00009	0.00017	<0.0001
Calcium, total	mg/L					27	13	9.5	7.2	13	17	20	25
Calcium, dissolved	mg/L					21	13	8.8	7.2	11	19	14	22
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.0022	0.004	0.0013	0.0048	0.019	<0.0005	0.001	0.016
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00022
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00014	0.00034	0.00029	0.00036	0.0011	<0.00006	0.00035	0.00045
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00007	<0.00078	0.00027	0.00035	0.00026	<0.00006	<0.0001	0.00017
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0091	0.0093	0.0066999	0.0086	0.013	0.0039	0.0096999	0.0066
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00067	0.0061999	0.0066999	0.0085	0.013	0.002	0.0022	0.0012
Iron, total	mg/L	**0.3**		**0.001**		0.018	0.02	0.033	0.012	0.15	0.016	0.04	0.019
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.011
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00065	0.00081	0.00014	0.00027	0.0044	0.00028	0.00038	0.00021
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00004	0.00011	0.00005	0.000035	0.00007	0.00015	0.00005	0.00005
Magnesium, total	mg/L					3.6	2.2	1.5	1.3	2	1.9	2.2	3.5
Magnesium, dissolved	mg/L					2.1	2.2	1.3	1.3	1.8	2.1	1.8	2.2
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00074	0.0081	0.005	0.011	0.0072	0.00021	0.0046	0.0031
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0007	0.0081	0.0048	0.011	0.0056	0.00017	0.0035	0.00075
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0091999	0.0036	0.0027	0.0019	0.0031	0.0056	0.0044	0.0055
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0076	0.0036	0.0027	0.00078	0.003	0.0066	0.0033	0.0054
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0012	0.0057	0.012	0.0024	0.21	<0.0003	0.0029	0.0037
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00067	0.0027	<0.0004	0.00037	0.0013	<0.0003	<0.0005	0.0017
Potassium, total	mg/L					0.14	0.34	0.16	0.079	0.35	0.17	0.66	0.32
Potassium, dissolved	mg/L					0.11	0.18	0.092	0.06	0.03	0.15	<0.05	0.2
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00002	0.00002	0.00003	0.00065	<0.00002	0.00003	0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.00002	0.00002	<0.0001	<0.0001	<0.00002	<0.0001	0.00002
Sodium, total	mg/L					1.2	1.1	0.75	0.62	1.1	1.1	1.7	2.6
Sodium, dissolvd	mg/L					1.2	1	0.64	0.62	0.85	1.2	0.71	1.6
Strontium, total	mg/L					0.15	0.076	0.053	0.04	0.063	0.11	0.15	0.24
Strontium, dissolved	mg/L					0.13	0.076	0.053	0.04	0.062	0.1	0.13	0.21
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00002	<0.00002	<0.00005	<0.00003	<0.00002	<0.00002	0.00004	<0.00004
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00004	<0.00003	<0.00005	<0.00003	<0.00002	<0.00002	0.00004	<0.00004
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.005	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.029	0.049	0.031	0.031	0.063	0.017	0.0078	0.023
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.015	0.037	0.021	0.031	0.024	0.0096999	0.0078	0.013

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W2	W2	W2	W3	W3	W3	W3	W3	W3
Sampling Date						10-Jan-94	2-Feb-94	27-Feb-94	10-Mar-93	1-Apr-93	29-Apr-93	29-May-93	3-Jun-93	8-Jun-93
		Long Term	Short Term	Long Term	Short Term	1				1	1	1		
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			*6.2*	7	7.1	7.38		6.8	7.44	7.43
Conductivity	uS/cm						146	161		182		78.6	86	92.8
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		*6.5*	7.1	7.1	7	*6.3*	*6.4*	*5.7*	6.8	6.8
Specific Conductance	uS/cm					140	170	160	180	120	160	84	82	91
Total Hardness	mg/L					60	62	62	69	71	110	47	47	39
Total dissolved solids	mg/L					110	110	120	110	120	120	56	36	110
Total suspended solids	mg/L					<1	3	17	<1	<1	16	<1	<1	<1
Turbidity	NTU					0.16	0.14	0.17	0.1	0.2	0.2	0.45	0.3	0.35
Major Ions														
Total alkalinity	mg/L as Ca CO3					18	14	14	30	32	28	9	8	10
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					3.2	2.8	4.4	2	2.8	3	2.6	3.8	2.5
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.15	0.15	0.25	0.05	0.15	0.1	0.1	0.1	0.05
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		35	64	62	49	68	47	23	22	22
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.1	0.1	0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.005	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					0.01	0.01	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**			<0.005	<0.005					
Cyanide, WAD	mg/L			**0.005**	**0.01**			<0.005	<0.005					
Thiocyanate	mg/L							0.05						
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.001	0.0045	0.0018	0.0039	0.0052	0.016	0.06	0.074	0.03
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.001	0.00078	<0.001	<0.0006	0.00062	<0.0009	0.015	0.014	0.019
Antimony, total	mg/L			**0.009**		0.0002	0.00021	<0.00009	<0.00008	0.00033	0.00016	0.00035	0.0003	0.00093
Antimony, dissolved	mg/L			**0.009**		<0.00005	0.00008	<0.00009	0.00005	0.00006	0.00011	0.00035	0.00022	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	0.0022	<0.001	<0.001	<0.001	0.0045
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.03	0.032	0.024	0.02	0.02	0.026	0.024	0.024	0.025
Barium, dissolved	mg/L			**1**		0.029	0.029	0.024	0.019	0.017	0.024	0.02	0.021	0.022
Beryllium, total	mg/L			**0.00013**		0.00013	<0.00006	<0.0001	0.00007	0.00003	0.00015	<0.00009	<0.00009	0.00053
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.00006	<0.0001	<0.00005	<0.00005	<0.00008	<0.0002	<0.0002	0.00023
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0074	0.0049	0.0046	0.058	0.02	0.056	0.043	0.064	0.17
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0053	0.0023	<0.0005	0.0026	0.001	<0.001	0.0052	0.0061	<0.002
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00068	0.00029	<0.0001	0.0001	0.00028	<0.00008	0.00054	0.00046	0.00029
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00014	0.00026	<0.0001	<0.00008	<0.00009	<0.00007	0.00047	<0.0002	0.00024
Calcium, total	mg/L					25	23	26	24	24	37	15	15	13
Calcium, dissolved	mg/L					20	21	21	27	23	29	15	15	13
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0014	0.0006	0.0005	<0.0005	0.00085	0.0027	0.0043	0.0041999	0.0021
Chromium, dissolved	mg/L					<0.0005	<0.0003	0.00022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00012	0.00008	<0.00009	<0.00006	0.00006	0.00016	0.00057	0.00088	0.00082
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00008	<0.00006	<0.00009	<0.00006	0.00006	<0.00007	0.00057	0.00088	0.00065
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0046999	0.0024	0.0035	0.0028	0.0017	0.0044	0.0095	0.0086999	0.0076999
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0046999	0.0024	0.003	0.00075	<0.0002	<0.0003	0.0064	0.0074	0.0056
Iron, total	mg/L	**0.3**		**0.001**		<0.01	<0.01	0.03	0.015	<0.01	0.018	0.017	<0.01	0.02
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.002	0.00018	0.00024	0.0019	0.00032	0.00017	0.0013	0.00075	0.0008
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00024	0.00009	<0.00007	<0.00007	0.00006	0.00016	0.00015	<0.00007	<0.0001
Magnesium, total	mg/L					3.1	2.7	2.9	2.3	2.6	4.4	2.2	2.2	1.7
Magnesium, dissolved	mg/L					2.4	2.3	2.2	2.6	2.3	2.6	2.2	2.2	1.7
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00068	0.00052	0.00059	0.00022	0.00027	0.0011	0.011	0.012	0.008
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00019	0.0004	0.00035	<0.0001	<0.0001	0.00078	0.011	0.012	0.008
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0068	0.0073	0.0068	0.0061999	0.0073	0.011	0.0039	0.0046999	0.0048
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0061	0.0063	0.0061999	0.0069	0.0061	0.0086999	0.0039	0.0046999	0.0038
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0026	0.0018	0.0013	0.00062	0.00081	0.0018	0.0034	0.0025	0.0027
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0011	0.0015	0.0013	<0.0003	<0.0003	0.00081	0.0021	0.002	<0.0008
Potassium, total	mg/L					0.29	0.2	0.2	0.25	0.28	0.26	0.27	0.27	0.29
Potassium, dissolved	mg/L					0.11	0.1	0.12	0.35	0.17	0.25	0.22	0.26	0.28
Selenium, total	mg/L	**0.001**		**0.002**		0.002	0.003	<0.001	<0.001	<0.001	<0.001	0.0046999	0.0068	0.0016
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.001	0.002	<0.001	<0.001	<0.001	<0.001	0.0035	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00007	0.00002	0.00003	<0.00002	<0.00002	0.00002	0.00002	0.00003	0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	0.00001	<0.0001	<0.00002	<0.00003	0.00002	0.00002	<0.0001	<0.0001
Sodium, total	mg/L					2.1	1.7	1.8	1.3	1.4	1.4	1.1	1.1	1
Sodium, dissolvd	mg/L					1.5	1.4	1.3	1.5	1.3	1.3	1.1	1.2	1
Strontium, total	mg/L					0.27	0.28	0.27	0.11	0.13	0.18	0.083	0.082	0.074
Strontium, dissolved	mg/L					0.25	0.27	0.26	0.13	0.13	0.16	0.083	0.082	0.068
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00002	<0.00002	<0.00003	0.00007	0.00005	0.00006	<0.00002	0.00004	<0.00005
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00002	<0.00002	<0.00003	0.00005	0.00003	0.00005	<0.00004	0.00004	0.00004
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.035	0.024	0.012	0.017	0.023	0.017	0.028	0.03	0.031
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.015	0.024	0.012	0.005	0.0018	0.011	0.026	0.025	0.031

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W3	W3	W3	W3	W3	W3	W3	W3	W3
Sampling Date						16-Jun-93	20-Jun-93	25-Jun-93	30-Jul-93	26-Aug-93	6-Sep-93	14-Sep-93	19-Sep-93	25-Sep-93
		Long Term	Short Term	Long Term	Short Term	1					1			1
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.18	7.3		7.12	7.38	7.38	7.82	7.42	7.47
Conductivity	uS/cm					92.3	85.5		73	107.6	116	77	121	123
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		*5.8*	6.9	6.9	6.9	6.9	*5.7*	6.9	6.9	*6*
Specific Conductance	uS/cm					85	98	93	71	110	120	120	130	120
Total Hardness	mg/L					37	42	34	24	40	55	60	63	75
Total dissolved solids	mg/L					67	73	66	49	0.5	76	88	85	92
Total suspended solids	mg/L					<1	<1	<1	6	<1	1	<1	1	<1
Turbidity	NTU					0.17	0.2	0.13	0.55	0.13	0.18	0.17	0.15	0.15
Major Ions														
Total alkalinity	mg/L as Ca CO3					8	11	10	7	11	29	12	14	12
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					3.5	2.5	2.3	2.4	3.2	4.1	4.4	3.1	4
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.1	0.05	0.1	0.05	0.15	0.1	0.1
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		22	24	20	18	33	32	36	41	40
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	0.008
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**				0.015					
Cyanide, WAD	mg/L			**0.005**	**0.01**				<0.005					
Thiocyanate	mg/L								0.05					
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.07	0.075	0.066	0.097	0.016	0.044	0.036	0.019	0.04
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.025	0.027	0.024	0.01	0.016	0.022	0.014	0.015	0.02
Antimony, total	mg/L			**0.009**		0.00071	0.0016	0.00044	0.00076	0.0011	<0.0001	<0.00005	0.00021	0.0004
Antimony, dissolved	mg/L			**0.009**		<0.0001	0.00017	0.00021	<0.0001	<0.00003	<0.0001	<0.00005	0.00007	0.00008
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.0091999	<0.001	<0.001	<0.001	0.005	<0.001	<0.001	0.008
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.023	0.026	0.018	0.027	0.025	0.027	0.025	0.026	0.027
Barium, dissolved	mg/L			**1**		0.021	0.023	0.018	0.02	0.019	0.027	0.024	0.022	0.022
Beryllium, total	mg/L			**0.00013**		0.00044	0.0016	0.00039	<0.0001	<0.00008	<0.00005	<0.00006	0.00009	0.00009
Beryllium, dissolved	mg/L			**0.00013**		<0.00006	0.00041	<0.0001	<0.0001	<0.00006	<0.00005	<0.00006	0.00006	<0.00006
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.036	0.046	0.012	0.03	0.0025	0.046	0.005	0.006	0.0062
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.002	<0.002	<0.0006	0.0025	0.0025	<0.0006	0.0031	0.0019	0.0028
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00068	0.00037	<0.0002	0.00025	0.00018	0.00059	<0.00007	<0.0001	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00033	0.00017	<0.0002	<0.0001	0.00018	0.00018	<0.00007	<0.0001	<0.0001
Calcium, total	mg/L					12	14	12	9.9	16	24	22	24	25
Calcium, dissolved	mg/L					12	14	11	7.4	13	18	20	21	25
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0014	0.0014	0.0013	0.0066999	0.017	0.013	0.003	0.004	0.003
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00064	0.00048	0.00054	0.00071
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00088	0.00079	0.00058	0.0007	0.00057	0.00045	0.00074	0.00037	0.00053
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00064	0.00061	0.00046	0.00047	0.00032	0.00043	0.00042	0.00037	0.00048
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0055	0.0069	0.0065	0.01	0.0076	0.015	0.0059	0.012	0.079
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0038	0.0049	0.0048	0.0074	0.0058	0.011	0.0059	0.0064	0.0054
Iron, total	mg/L	**0.3**		**0.001**		0.041	0.076	0.023	0.063	0.058	0.12	0.33	<0.01	0.1
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00051	0.0013	<0.0001	0.00061	0.0012	0.0029	0.00038	0.00031	0.00054
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0001	0.00026	<0.0001	<0.00007	<0.00005	<0.00007	0.00008	<0.00006	<0.00006
Magnesium, total	mg/L					1.6	1.8	1.8	1.5	2.1	3.4	2.6	2.9	3.3
Magnesium, dissolved	mg/L					1.6	1.8	1.5	1.2	1.8	2.4	2.4	2.6	3.1
Manganese, total	mg/L			**EQ10**	**EQ11**	0.007	0.0078	0.0083	0.013	0.007	0.0064	0.0059	0.0047	0.0069
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0064	0.0061	0.0083	0.0095	0.0059	0.0057	0.0038	0.0047	0.0049
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00004	<0.00004	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00004
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0056999	0.0051	0.0035	0.0027	0.004	0.0053	0.0056	0.0071999	0.008
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.004	0.0045	0.0033	0.0024	0.0038	0.0049	0.0056	0.0071999	0.0071
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00054	0.0047	0.0056	0.002	0.0044	0.005	0.021	0.0025	0.0036
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0008	<0.0008	0.0012	<0.0004	0.0012	0.0023	<0.0004	0.0025	0.0024
Potassium, total	mg/L					0.27	0.27	0.24	0.15	0.31	0.72	0.67	0.77	0.69
Potassium, dissolved	mg/L					0.27	0.27	0.15	0.042	0.13	0.27	0.22	0.23	0.33
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.0029	<0.001	0.0021	<0.001	0.003	0.0005	0.004	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	0.0014	<0.001	<0.001	<0.001	0.004	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	0.00002	<0.00001	<0.00001	0.00005	0.00026	0.00005	0.00014	0.00007
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					0.87	1	0.99	0.79	1.2	1.9	1.7	1.7	1.7
Sodium, dissolvd	mg/L					0.87	1	0.81	0.63	0.97	1.3	1.2	1.4	1.6
Strontium, total	mg/L					0.076	0.088	0.063	0.049	0.075	0.092	0.096	0.11	0.11
Strontium, dissolved	mg/L					0.065	0.072	0.06	0.044	0.065	0.084	0.096	0.11	0.11
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00013	0.0002	<0.00005	<0.00003	<0.00002	<0.00003	0.00003	0.00005	<0.00004
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00003	0.00004	<0.00005	<0.00003	<0.00002	<0.00003	<0.00003	0.00005	0.00003
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	0.0035	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.024	0.018	0.052	0.064	0.036	0.045	0.025	0.018	0.048
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.019	0.018	0.015	0.019	0.014	0.045	0.013	0.018	0.015

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W3	W3	W3	W3	W3	W3	W3	W3	W3
Sampling Date						2-Oct-93	4-Nov-93	29-Nov-93	2-Feb-94	7-Feb-94	9-Mar-94	29-Mar-94	26-Apr-94	1-Jun-94
		Long Term	Short Term	Long Term	Short Term	1							1	
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.51	7.2	7.2	6.6	*6.3*	7.6	7.4	7.1	7.4
Conductivity	uS/cm					122	122	146	145	152	169	269	216	150
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		*6.3*	6.8	7.1	7.2	6.6	6.9	7	*6.5*	7.1
Specific Conductance	uS/cm					110	120	150	180	180	190	250	230	150
Total Hardness	mg/L					66	47	78	70	70	70	99	90	60
Total dissolved solids	mg/L					87	84	120	120	120	120	200	170	120
Total suspended solids	mg/L					<1	<1	<1	1	3	8	320	3700	<1
Turbidity	NTU					0.11	0.19	<0.1	0.14	0.6	0.15	170	120	0.7
Major Ions														
Total alkalinity	mg/L as Ca CO3					13	12	19	24	22	24	31	16	15
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					2.9	2.8	29	2.8	6.4	3.1	4.1	5.3	3.8
Chloride	mg/L	**120**	**640**	**150**	**600**	1	1	<0.5	<0.5	0.5	1.5	0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.1	0.15	0.2	0.15	0.15	0.2	0.1
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		36	35	38	64	58	120	98	80	46
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.05	0.05	0.05	0.05	0.17	<0.05	<0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.001	0.004	0.018
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.005	<0.5	<0.005	<0.005	0.035	<0.005	<0.005	<0.005	0.035
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	0.02	<0.01	<0.01	<0.01	0.012	0.002	<0.002
Phosphorus, total	mg/L					<0.05	<0.05	<0.02	0.04	0.02	0.01	0.39	2.3	0.003
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**		<0.005				<0.005			
Cyanide, WAD	mg/L			**0.005**	**0.01**		<0.005				<0.005			
Thiocyanate	mg/L										0.05			
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.032	0.06	0.024	0.052	<0.001	0.0114	7.15	13.5	0.0175
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.018	0.011	0.015	0.0078	<0.001	<0.001	<0.001	0.0417	0.011
Antimony, total	mg/L			**0.009**		0.00039	0.00033	0.00064	0.00027	0.00029	0.00021	0.00049	0.00041	<0.0001
Antimony, dissolved	mg/L			**0.009**		0.00011	<0.00005	<0.0001	<0.00007	<0.0002	0.00021	0.00019	<0.00072	<0.00004
Arsenic, total	mg/L	**0.005**		**0.005**		0.008	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	0.006	0.002
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.027	0.025	0.024	0.034	0.027	0.028	0.174	0.314	0.0298
Barium, dissolved	mg/L			**1**		0.023	0.021	0.024	0.026	0.025	0.023	0.0365	0.0419	0.0268
Beryllium, total	mg/L			**0.00013**		<0.00006	0.0001	<0.0001	<0.00006	<0.00007	0.00017	0.00048	0.00094	<0.00008
Beryllium, dissolved	mg/L			**0.00013**		<0.00006	<0.00005	<0.0001	<0.00006	<0.00007	<0.00012	<0.0001	<0.0003	<0.00008
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0081	0.0062	0.0077	0.0026	<0.0008	<0.0014	0.00401	0.00084	0.00819
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0081	<0.0006	<0.0006	0.00085	<0.0008	<0.0014	0.00117	<0.00079	0.00296
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00058	0.0001	<0.0001	0.00039	0.00008	0.00052	0.00094	***0.00223***	0.00029
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00058	0.0001	<0.0001	<0.0001	<0.00008	<0.00011	<0.00013	0.0002	<0.00009
Calcium, total	mg/L					25	23	29	26	32	35.7	50.8	40.1	23
Calcium, dissolved	mg/L					22	15	27	24	24	23.7	34.1	31.1	20.2
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.009	0.003	0.018	0.0004	<0.0005	0.0085	0.00243	0.0124	<0.0004
Chromium, dissolved	mg/L					0.0006	0.00026	0.00052	<0.0003	<0.0005	0.00071	<0.0005	0.00081	<0.0004
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.0005	0.0033	0.00072	0.00021	0.00013	0.00022	0.00608	0.00914	0.00054
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00044	<0.0006	0.0005	0.00009	0.00009	0.00009	<0.00014	0.00011	0.00032
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.007	0.015	0.016	0.0037	0.0027	0.00251	0.0483	0.0904	0.00594
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0041999	0.0041	0.0034	0.0023	0.0022	0.0025	0.0087299	0.0118	0.0059
Iron, total	mg/L	**0.3**		**0.001**		0.025	0.02	0.017	0.08	<0.01	0.03	15.6	7.26	<0.01
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.0314	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0002	0.00025	0.00087	0.00016	0.00013	0.0025	0.0074299	0.02	0.00255
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00007	<0.00007	0.00034	0.00013	<0.00006	0.00245	0.00022	0.00014	0.00026
Magnesium, total	mg/L					3.1	3.3	4	3	3.6	3.86	9.79	12.5	2.78
Magnesium, dissolved	mg/L					2.7	2.2	2.6	2.4	2.5	2.47	3.25	2.9	2.3
Manganese, total	mg/L			**EQ10**	**EQ11**	0.007	0.012	0.0062	0.0028	0.00081	0.00109	0.438	0.692	0.00947
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0058	0.0077	0.0034	0.00061	0.00058	<0.00019	0.0692	0.0459	0.00791
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0063	0.0064	0.0069	0.0091	0.0086	0.00925	0.00914	0.0166	0.00554
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0061999	0.0051999	0.0069	0.008	0.0086	0.0076999	0.0042199	0.0073899	0.00494
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0036	0.07	0.0038	0.0016	0.0016	0.00112	0.0188	0.02	0.00137
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0024	<0.002	0.0019	0.0016	0.0011	<0.00041	0.00194	<0.00044	0.00123
Potassium, total	mg/L					0.57	1	0.43	0.39	0.42	0.4	5.39	6.86	0.15
Potassium, dissolved	mg/L					0.28	<0.05	0.37	0.2	0.25	<0.05	1.92	2.35	0.1
Selenium, total	mg/L	**0.001**		**0.002**		0.0005	0.008	0.004	0.001	0.001	0.004	0.003	0.006	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.003	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00008	0.00011	0.00004	0.00001	0.00005	0.00008	0.00065	0.00109	0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	0.00001	<0.0001	<0.0001	0.00001	0.00003	<0.0001	<0.0001	0.00001
Sodium, total	mg/L					1.6	2.5	2.9	1.9	2.1	2.5	2.99	4.35	1.35
Sodium, dissolvd	mg/L					1.2	0.98	1.8	1.5	1.5	1.1	1.59	1.75	1.13
Strontium, total	mg/L					0.1	0.15	0.19	0.19	0.21	0.22	0.247	0.234	0.158
Strontium, dissolved	mg/L					0.1	0.13	0.17	0.19	0.19	0.168	0.189	0.167	0.141
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00003	<0.00002	<0.00004	0.00005	0.00004	0.00004	0.00049	0.00147	0.00003
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00003	<0.00002	<0.00004	0.00005	0.00004	<0.00003	0.00013	0.00019	0.00002
Vanadium, total	mg/L					0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.027	0.05	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.024	0.014	0.021	0.016	0.0085	0.011	0.104	0.173	0.0186
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.016	0.014	0.018	0.016	0.008	0.00548	0.00438	0.0143	0.0165

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W3	W3	W3	W3	W3	W3	W3	W3
Sampling Date						28-Jun-94	19-Jul-94	23-Jul-94	27-Jul-94	1-Aug-94	7-Aug-94	28-Aug-94	5-Oct-94
		Long Term	Short Term	Long Term	Short Term	1	1	1	1	1		1	
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.5	7.7	7.5	7.4	7.4	7.5	7.6	7.6
Conductivity	uS/cm					102	82	99	91	108	94	122	111
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		*4.5*	*6.3*	*6.1*	*5.9*	*6.2*	7	*6.5*	7.1
Specific Conductance	uS/cm					120	96	100	95	110	100	130	130
Total Hardness	mg/L					39	46	38	32	34	29	58	52
Total dissolved solids	mg/L					74	72	63	75	84	74	72	110
Total suspended solids	mg/L					2	2	<1	<1	<1	1	3	<1
Turbidity	NTU					1.1	2.2	1.3	0.25	0.3	0.32	0.25	0.33
Major Ions													
Total alkalinity	mg/L as Ca CO3					10	9	10	10	11	10	14	12
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					2.2	2	24	3.8	3.6	3.1	1.6	2.4
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	<0.1	0.5	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.05	0.1	0.15	0.05	0.1	0.05
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		27	23	30	27	29	24	36	37
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.1	0.1	<0.05	0.1	0.09	<0.05	0.05	0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	0.002	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					0.017	0.006	0.014	0.007	0.007	<0.005	<0.005	<0.005
Ortho phosphorus, dissolved	mg/L					<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus, total	mg/L					0.007	0.006	0.004	0.03	<0.002	0.002	0.004	<0.002
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0623	0.115	0.0623	0.0514	0.044	0.0815	0.0560999	0.0113
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.022	0.0257	0.0156	0.0131	0.0172	0.0067	0.0256	0.00431
Antimony, total	mg/L			**0.009**		0.00056	<0.0002	<0.0002	0.00079	0.00032	0.00061	<0.0002	<0.0001
Antimony, dissolved	mg/L			**0.009**		<0.0002	<0.0002	<0.0002	<0.0002	0.0003	0.00014	<0.0002	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0273	0.0296	0.0263	0.0287	0.0363	0.0212	0.024	0.0297
Barium, dissolved	mg/L			**1**		0.0213	0.0289	0.0237	0.0197	0.0195	0.0192	0.0237999	0.028
Beryllium, total	mg/L			**0.00013**		<0.00011	<0.0001	<0.0001	0.0002	0.00011	0.00058	0.0004	0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.00011	<0.0001	<0.0001	0.0002	0.00011	0.0001	0.0004	0.0001
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.00068	0.0214	0.00835	0.0005	0.0005	0.0008	<0.00074	0.0005
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.00068	0.0119	<0.001	<0.001	<0.001	<0.0016	<0.00074	<0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00038	0.0002	***0.00152***	0.00036	***0.00105***	0.000085	0.0001	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00035	0.00016	<0.0001	0.00015	0.00067	<0.00017	<0.0002	<0.0001
Calcium, total	mg/L					16.1	15.6	16.3	14	14	14.1	23.9	17.8
Calcium, dissolved	mg/L					13.1	15.4	12.3	10.5	11.4	9.55	19.2	17.6
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.00062	0.00135	0.00215	<0.0005	0.0033	0.00123	0.00677	<0.0005
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00085	0.00062	0.00018	0.0007	0.0006	0.00056	0.00083	0.00039
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.0008	0.00061	<0.00015	0.00062	0.00036	0.00033	0.00048	0.00024
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0059699	0.0114	0.0117	0.0052199	0.0058699	0.0045	0.0365999	0.00356
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00501	0.0102	0.00407	0.00289	0.00266	0.00276	0.00717	0.00227
Iron, total	mg/L	**0.3**		**0.001**		<0.01	0.07	0.01	<0.01	<0.01	0.05	0.04	<0.01
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00052	0.00066	0.00089	0.00011	<0.00008	0.00027	0.00067	0.00105
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00008	<0.00005	<0.00008	<0.00008	<0.00008	<0.00009	<0.00007
Magnesium, total	mg/L					1.93	1.92	2.4	1.98	1.58	1.89	3.61	1.86
Magnesium, dissolved	mg/L					1.61	1.86	1.73	1.4	1.23	1.2	2.47	1.84
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0146	0.016	0.0146	0.0109	0.0115	0.0128	0.0111999	0.00997
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0146	0.0153	0.0108	0.00792	0.0085	0.00682	0.00679	0.0098599
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00016
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00515	0.00466	0.0049899	0.00434	0.00535	0.00344	0.0064	0.0056
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00508	0.00114	0.00373	0.0033699	0.00434	0.00326	0.0059699	0.00555
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0017	0.00311	0.00267	0.00225	0.00539	0.00169	0.00137	<0.0004
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00167	0.00304	0.00054	<0.0005	<0.0005	0.00169	<0.0005	<0.0004
Potassium, total	mg/L					0.15	0.2	0.35	0.1	0.1	0.2	0.34	0.15
Potassium, dissolved	mg/L					0.15	0.2	0.15	0.05	0.05	<0.05	0.225	0.1
Selenium, total	mg/L	**0.001**		**0.002**		0.00091	0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00002	0.00001	0.00001	0.00005	0.00001	0.00002	0.00002	0.00007
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	0.00001	0.00001	0.00005	0.00005	0.00005	0.00005	0.00001
Sodium, total	mg/L					1.06	1.1	1.49	0.927	0.955	1.26	2.17	1.3
Sodium, dissolvd	mg/L					0.992	1	1	0.628	0.732	0.627	1.49	1.25
Strontium, total	mg/L					0.112	0.107	0.104	0.0967	0.101	0.0763	0.133	0.11
Strontium, dissolved	mg/L					0.109	0.097	0.0878	0.0807	0.0902	0.0652	0.13	0.109
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00002	<0.00002	<0.00002	<0.00003	<0.00003	<0.00002	<0.00002	<0.00002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00002	<0.00002	<0.00002	<0.00003	<0.00003	<0.00002	<0.00002	<0.00002
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0317	0.0265	0.0194	0.0183	0.017	0.0107	0.0049099	0.0146999
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0146	0.0244	0.0117	0.0129	0.0118	0.00548	0.004	0.012

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W3	W3	W3	W3	W3	W3	W3	W3	W3
Sampling Date						8-Oct-94	13-Oct-94	20-Oct-94	24-Oct-94	30-Oct-94	1-Dec-94	8-Feb-95	25-Feb-95	15-May-96
		Long Term	Short Term	Long Term	Short Term	1		1	1	1	1	1	1	
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.5	7.59	7.36	7.47	7.38	7.81			
Conductivity	uS/cm					121.5	124.4	118	118	126	135			
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		*6.4*	7.7	*6*	*6.3*	*6*	*6.5*	*6.4*	*5.4*	7.6
Specific Conductance	uS/cm					140	190	130	130	140	160	140	150	237
Total Hardness	mg/L					59	93	40	38	42	70	63	58	61
Total dissolved solids	mg/L					100	120	86	94	100	74	110	120	125
Total suspended solids	mg/L					2	51	<1	1	<1	2	<1	<1	2
Turbidity	NTU					1.6	61	0.17	0.83	0.7	0.2	0.3	0.2	0.5
Major Ions														
Total alkalinity	mg/L as Ca CO3					14	56	12	14	15	22	12	10	27
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					4	4.2	4	4	3.9	4	7	4	2
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	0.5	<0.1	<0.5	0.5	<0.5	<0.5	<0.5	0.16
Fluoride	mg/L	**0.12**			**EQ7**	0.05	<0.05	0.05	<0.05	<0.05	0.1	0.05	0.05	0.1
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		40	36	40	36	41	54	42	47	59.6
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.1	0.05	0.025
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.013
Ortho phosphorus, dissolved	mg/L					<0.002	<0.002	0.002	0.002	<0.002	0.004	<0.002	<0.002	0.002
Phosphorus, total	mg/L					0.01	0.1	0.004	0.006	0.002	0.006	<0.002	0.002	0.002
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0944	0.653	0.0340999	0.132	0.0585999	0.0147	0.00594	0.00982	0.0233999
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0560999	0.103	0.0148999	0.0113	0.0138	0.0067	<0.001	0.00683	0.007
Antimony, total	mg/L			**0.009**		<0.0001	0.00075	<0.00005	<0.0001	<0.00005	<0.0001	<0.0002	<0.0002	0.00009
Antimony, dissolved	mg/L			**0.009**		<0.0001	0.00054	<0.00005	<0.00005	<0.00005	<0.0001	<0.0002	<0.0002	<0.00005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.00113	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0275	0.0489	0.0225	0.0265	0.0193999	0.0244	0.0338	0.0282	0.0256
Barium, dissolved	mg/L			**1**		0.0262	0.0374	0.0183999	0.0181	0.0172	0.0238	0.0311	0.0273	0.0236
Beryllium, total	mg/L			**0.00013**		0.0001	0.0001	0.0001	0.0001	0.0001	0.00025	0.00015	0.00025	<0.00005
Beryllium, dissolved	mg/L			**0.00013**		0.0001	0.0001	0.0001	0.0001	0.0001	0.00025	0.00015	0.00025	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0005	0.0005	0.0005	0.0325999	0.0005	0.0005	0.003	0.0005	<0.001
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	<0.001	<0.001	0.0167	<0.001	<0.001	0.0005	<0.001	<0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	0.00025	0.00023	0.00017	<0.0001	<0.0001	0.0002	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	0.00014	<0.0001	<0.0001	0.00014	0.0002
Calcium, total	mg/L					19.8	31.2	18.8	19.6	17.2	28.6	25.9	21.7	25
Calcium, dissolved	mg/L					19.4	30.3	13.2	12.8	14	23.8	21.2	21.6	20.1
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.0005	0.00187	0.00084	<0.0005	<0.0005	<0.0005	0.00085	0.00129	<0.0005
Chromium, dissolved	mg/L					<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0012	<0.0005
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.000538	0.00062	0.00045	0.00038	0.00031	0.00023	<0.00007	<0.00005	0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.000536	<0.00005	0.00036	0.00032	0.00029	0.00017	<0.00007	<0.00005	0.00015
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00444	0.00335	0.00383	0.00444	0.00205	<0.0005	0.0296	0.00487	0.0046999
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0005	<0.0004	0.00139	0.00077	0.00048	<0.0005	0.00061	0.0024	0.0007
Iron, total	mg/L	**0.3**		**0.001**		0.0736	0.682	<0.01	0.0826999	0.0222	<0.01	<0.01	0.0155	0.06
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	0.0567999	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0034	0.00071	0.00019	0.00019	0.00091	0.00055	0.00012	0.00017	0.00008
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.0001	<0.00008	<0.00006	0.00008
Magnesium, total	mg/L					2.53	4.61	2.43	2.63	2.09	3.13	2.96	2.52	2.82
Magnesium, dissolved	mg/L					2.46	4.07	1.58	1.45	1.61	2.64	2.37	0.87	2.56
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0136	0.0402999	0.0074099	0.0121	0.00726	0.00295	0.00069	0.00021	0.006
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0116	0.00507	0.0055	0.0051799	0.00446	0.00226	0.00039	0.00014	0.0033
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00639	0.00453	0.0051399	0.00531	0.00465	0.00783	0.00902	0.00796	0.0076599
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0063899	0.00436	0.00417	0.00374	0.0044499	0.00776	0.00894	0.00752	0.00679
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00325	0.00246	0.00144	0.00131	0.00075	0.00088	0.00353	0.00095	0.0007
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00146	0.00084	0.00057	0.00054	0.00047	<0.0005	0.0011	0.00084	0.00015
Potassium, total	mg/L					0.65	0.95	0.15	0.25	0.15	0.35	0.15	0.25	0.35
Potassium, dissolved	mg/L					0.5	0.95	<0.05	<0.05	<0.05	0.35	0.1	0.25	0.28
Selenium, total	mg/L	**0.001**		**0.002**		0.002	<0.001	<0.001	0.001	<0.001	<0.001	0.003	<0.001	0.003
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.002
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00003	0.00005	0.00005	0.00005	0.00002	<0.00001	0.00003	<0.00001	0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00001	0.00005	0.00005	0.00005	<0.00001	0.00001	<0.00001	<0.00001
Sodium, total	mg/L					2.07	1.12	1.48	1.51	1.21	1.93	1.7	1.5	1.73
Sodium, dissolvd	mg/L					1.74	1.06	0.888	0.837	0.912	1.63	1.62	1.5	1.55
Strontium, total	mg/L					0.125	0.179	0.108	0.111	0.0988	0.168	0.223	0.214	0.161
Strontium, dissolved	mg/L					0.125	0.171	0.0888	0.0825	0.0915	0.166	0.213	0.21	0.14
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00002	0.00024	<0.00002	<0.00002	<0.00002	0.00003	0.000045	<0.00005	0.00007
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00002	0.00022	<0.00002	<0.00002	<0.00002	<0.00002	0.000045	<0.00005	0.00007
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0486	0.0046	0.012	0.0131	0.006	0.0191	0.0233	0.0085	0.007
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0105	<0.001	0.0066	0.0063	0.00509	0.0076	0.00109	0.00847	0.006

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W3	W3	W3	W3	W3	W3	W3	W3	W3
Sampling Date						2-Jun-96	3-Jul-96	18-Jul-96	27-Jul-96	1-Aug-96	8-Aug-96	4-Sep-96	1-Oct-96	8-Oct-96
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.08	7.25	7.37			7.7	7.41	6.75	
Conductivity	uS/cm							134.4			153	142.6	168	
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.5	7.2	7.2	7.2	7.3	7.6	7.1	7.1	7.3
Specific Conductance	uS/cm					186	135	135	126	156	220	172	183	190
Total Hardness	mg/L					60	47	50	54	55	69	56	80	80
Total dissolved solids	mg/L					97	84	86	91	99	110	25	111	109
Total suspended solids	mg/L					<1	<1	9	<1	3	4	<1	1	<1
Turbidity	NTU					0.6	0.3	3.2	1	3	0.3	0.6	0.5	0.2
Major Ions														
Total alkalinity	mg/L as Ca CO3					16	12	12	12	14	12	14	15	17
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.6	2	2	1	2	2	2	2	2
Chloride	mg/L	**120**	**640**	**150**	**600**	0.22	0.16	0.16	0.17	0.14	0.14	0.16	0.17	0.16
Fluoride	mg/L	**0.12**			**EQ7**	0.09	0.07	0.08	0.06	0.06	<0.05	0.05	0.07	0.07
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		63.9	42.9	45.3	47.9	61.6	67.9	74.3	75.7	84.4
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.123	0.089	0.152	0.112	0.14	0.133	0.081	0.094	0.075
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	0.006	0.004	0.005	0.004	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					0.008	<0.005	0.021	<0.005	0.034	0.013	0.01	0.01	0.02
Ortho phosphorus, dissolved	mg/L					0.002	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
Phosphorus, total	mg/L					0.002	<0.002	0.008	0.008	0.008	0.006	0.002	0.026	0.002
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0054	0.05	0.15	0.16	0.0974	0.0673	0.0316	0.0915	0.0415999
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.0005	0.0264	0.015	0.0215	0.0079	0.0208999	0.0211	0.0173999	0.0231
Antimony, total	mg/L			**0.009**		0.00007	0.00012	0.00031	0.00036	0.00042	0.00062	0.00052	0.00057	0.00031
Antimony, dissolved	mg/L			**0.009**		<0.00005	<0.00005	0.00013	0.00029	0.00039	0.00057	0.00037	0.00054	0.0003
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	0.002	<0.001	<0.001	0.003	0.002	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.026	0.0298	0.0265	0.0352	0.0271	0.0307999	0.0231	0.0227999	0.0211
Barium, dissolved	mg/L			**1**		0.0253	0.0255	0.0236	0.0287	0.0242999	0.0287	0.022	0.0222	0.0178999
Beryllium, total	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	0.00013	<0.00005	<0.00005	<0.00005	0.00006
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.001	0.002	0.003	0.005	<0.001	0.004	0.003	0.005	0.006
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	0.001	0.001	0.002	<0.001	0.003	0.003	0.005	0.006
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	0.0004	0.0006	0.0006	0.0006	0.0004	***0.0011***	0.0004	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	0.0003	0.0003	0.0004	0.0002	0.0004	0.0006	0.0002	0.0002
Calcium, total	mg/L					21	15.5	16.8	21.8	21.4	24.1	21.2	27.2	28.2
Calcium, dissolved	mg/L					21	15.5	16.1	18.4	18.2	23.2	18.8	27.1	27.7
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.0005	0.0015	<0.0005	0.0018	<0.0005	<0.0005	0.0012	<0.0005	<0.0005
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00033	0.00044	0.00055	0.00066	0.00037	0.00092	0.001	0.00088	0.00053
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00033	0.0004	0.00047	0.0005	0.00034	0.00067	0.0004	0.00055	0.00053
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0019	0.0041	0.0055	0.0063	0.002	0.0021	0.0063	0.0038	0.004
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0012	0.0032	0.0011	0.0013	0.0008	0.0018	0.0016	0.0013	0.0029
Iron, total	mg/L	**0.3**		**0.001**		<0.01	<0.01	0.2	0.21	0.09	0.06	0.02	0.12	0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	0.0003	0.00028	0.00017	0.00012	0.00054	<0.00005	0.00011
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L					1.89	2.04	2.96	2.64	2.41	2.91	2.54	2.99	2.8
Magnesium, dissolved	mg/L					1.74	2.03	2.43	2.04	2.3	2.74	2.25	2.98	2.75
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0029	0.0081	0.0187999	0.0217999	0.0172999	0.023	0.0088999	0.0172	0.0128999
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.002	0.008	0.0121	0.0156999	0.0171	0.0211	0.0083	0.0128	0.0116999
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00016	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00013	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00525	0.00413	0.00373	0.00486	0.00367	0.0053899	0.00358	0.0049299	0.00467
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00521	0.00377	0.00367	0.00389	0.00342	0.00501	0.00338	0.00423	0.00455
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0011	0.0015	0.0016	0.0029	0.0009	0.0028	0.00036	0.0014	0.0013
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0007	0.0015	0.0013	0.0018	0.0008	0.002	0.00032	0.0014	0.0011
Potassium, total	mg/L					0.11	0.14	0.18	0.38	0.15	0.17	0.42	0.19	0.15
Potassium, dissolved	mg/L					0.16	0.14	0.13	0.2	0.14	0.14	0.17	0.18	0.13
Selenium, total	mg/L	**0.001**		**0.002**		0.002	0.001	<0.001	0.002	0.002	<0.001	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.002	0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	0.00006	0.00004	0.00013	0.00001	<0.00001	0.00007	<0.00001	0.00075
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	0.00004	<0.00001	<0.00001	0.00007	<0.00001	<0.00001
Sodium, total	mg/L					0.93	1.18	1.58	1.46	1.42	1.49	1.42	1.45	1.48
Sodium, dissolvd	mg/L					0.95	1.17	1.3	1.15	1.31	1.24	1.22	1.44	1.45
Strontium, total	mg/L					0.133	0.0919	0.115	0.16	0.151	0.218	0.132	0.205	0.24
Strontium, dissolved	mg/L					0.13	0.0899	0.114	0.132	0.144	0.215	0.117	0.201	0.231
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00002	<0.00001	0.00001	<0.00001	0.00004	0.00002	0.00007	<0.00001	<0.00001
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	<0.00001	0.00001	<0.00001	0.00004	<0.00001	0.00007	<0.00001	<0.00001
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.008	0.015	0.013	0.03	0.011	0.016	0.012	0.014	0.014
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.008	0.015	0.012	0.031	0.01	0.015	0.008	0.014	0.014

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W3	W3	W3	W3	W3	W3	W3	W3
Sampling Date						15-Oct-96	24-Oct-96	29-Oct-96	8-Jul-97	11-Aug-97	16-Sep-97	3-Nov-97	26-Oct-00
		Long Term	Short Term	Long Term	Short Term								1
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.03	6.72	7.05					
Conductivity	uS/cm					171	144	144.5					
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.1	7.4	7.3	6.8	7.3	7.6	7	*6.47*
Specific Conductance	uS/cm					187	167	167	102	116	161	165	1520
Total Hardness	mg/L					73	61	62	35	48	68	68	61.1
Total dissolved solids	mg/L					130	110	106	68	71	103	109	90
Total suspended solids	mg/L					<1	<1	<1	1	5	<1	<1	<3
Turbidity	NTU					0.5	0.4	0.5	0.3	0.3	0.2	0.3	
Major Ions													
Total alkalinity	mg/L as Ca CO3					16	18	19	11	11	17	15	13
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3								11	11	17	15	
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3								0.5	0.5	0.5	0.5	
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					3	2	2	2	2	3	3	22
Chloride	mg/L	**120**	**640**	**150**	**600**	0.14	0.16	0.14	0.16	0.08	0.08	0.08	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.07	0.08	0.08	0.04	0.05	0.05	0.06	0.07
Bromide	mg/L												<0.5
Sulfate	mg/L			**EQ23**		68	68.8	68.2	38.8	45.2	54.9	59.2	51
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.074	0.07	0.064	0.054	0.03	<0.005	0.039	0.024
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**					0.01	0.01	0.01	0.01	<0.005
Free Ammonia	mg/L as NH3-N					0.01	0.04	0.01					
Ortho phosphorus, dissolved	mg/L					<0.002	0.004	0.004	0.009	0.002	<0.002	<0.002	
Phosphorus, total	mg/L					0.004	0.012	0.012	0.011	<0.002	<0.002	0.002	
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								<0.005
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0395999	0.0205	0.0177999	0.0612	0.043	0.0285	0.0442	0.059
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0232	0.0105	0.0096999	0.0118	0.004	0.0143999	0.0121999	0.022
Antimony, total	mg/L			**0.009**		0.00045	0.00023	0.00017	0.00014	0.00069	0.00011	0.00005	<0.0001
Antimony, dissolved	mg/L			**0.009**		0.00038	0.00018	0.00016	<0.00005	0.00049	0.00036	<0.00001	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.002	0.001	0.004	0.004	<0.001	<0.001	0.0002
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0001
Barium, total	mg/L			**1**		0.0236	0.0256	0.0272999	0.037	0.0231	0.0218999	0.0225	0.03
Barium, dissolved	mg/L			**1**		0.0233999	0.0237	0.0268999	0.0232999	0.0225	0.0232999	0.0225	0.02
Beryllium, total	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00019	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00018	<0.001
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.008	0.001	0.002	<0.001	0.002	0.004	<0.001	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.008	0.001	0.001	<0.001	0.002	0.003	<0.001	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0003	0.0004	0.0003	0.0004	0.0006	0.0006	0.00033	0.00024
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	0.0003	0.0003	0.0002	0.0005	0.0004	0.00033	0.00025
Calcium, total	mg/L					25	20.7	22	14.1	16.5	22.2	24.5	20
Calcium, dissolved	mg/L					24.3	20.5	21.3	11.4	16.5	22.7	22.7	20.3
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.0005	0.0007	0.0008	0.0044	0.0007	0.0011	0.0006	<0.0005
Chromium, dissolved	mg/L					<0.0005	0.0007	<0.0005	0.00025	0.00025	0.00025	0.00025	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00073	0.00062	0.00048	0.00088	0.00024	<0.00006	0.00054	0.0005
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.0007	0.00057	0.00048	0.00034	0.00003	0.00003	0.00045	0.0004
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0041	0.0045	0.0034	0.0051	0.0074	0.0033	0.0032	0.0053
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.003	0.0036	0.0031	0.0018	0.0026	0.0027	0.00005	0.0041
Iron, total	mg/L	**0.3**		**0.001**		0.01	0.04	0.04	<0.01	0.04	0.13	0.16	<0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.02	0.005	0.005	0.005	0.07	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0002	0.00008	0.00008	0.00074	0.00032	0.001	0.00033	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.000025	0.00013	<0.00005
Magnesium, total	mg/L					3.02	2.52	2.25	1.66	1.77	2.82	2.72	2.5
Magnesium, dissolved	mg/L					2.99	2.29	2.25	1.51	1.72	2.82	2.64	2.5
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0143	0.0111999	0.0091	0.0088999	0.007	0.0031	0.0063	0.009
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0136	0.0091	0.0079	0.0085	0.006	0.0033	0.006	0.009
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.000025	0.000025	<0.00002
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.005	0.00688	0.00679	0.00272	0.0041599	0.00382	0.00536	<0.03
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00467	0.00653	0.00677	0.00151	0.00383	0.00379	0.00533	<0.03
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0028	0.0018	0.0014	0.0018	0.0028	0.0032	0.0019	0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0014	0.0013	0.0013	0.0013	0.0013	0.0014	0.0008	0.001
Potassium, total	mg/L					0.12	0.22	0.28	<0.02	0.2	0.19	0.28	<2
Potassium, dissolved	mg/L					0.1	0.21	0.25	<0.02	0.2	0.21	0.15	<2
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.001	0.004		0.004	0.002	0.004	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.001	0.002		<0.001	<0.001	<0.001	0.002
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.0002	<0.00001	0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					1.55	1.46	1.32	0.96	1.23	1.42	1.62	<2
Sodium, dissolvd	mg/L					1.53	1.25	1.3	0.91	1.12	1.46	1.58	<2
Strontium, total	mg/L					0.29	0.194	0.173	0.0950999	0.111	0.0933	0.134	
Strontium, dissolved	mg/L					0.277	0.152	0.173	0.0914	0.105	0.121	0.133	
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									<0.00005
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									<0.00005
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												<0.01
Titanium, dissolved	mg/L												<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00005	0.00002	0.00001	<0.00001	0.0002	0.00075	<0.00001	<0.0001
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00002	<0.00001	0.00001	<0.00001	0.00009	0.00009	<0.00001	<0.0001
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.023	<0.001	<0.001	0.001	<0.03
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.03
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.016	0.018	0.02	0.035	0.027	0.021	0.02	0.011
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.016	0.016	0.017	0.017	0.021	0.013	0.014	0.011

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W5	W5	W5	W5	W5	W5	W5	W5	W5
Sampling Date						26-Feb-93	31-Mar-93	29-Apr-93	29-May-93	3-Jun-93	25-Jun-93	28-Jul-93	26-Aug-93	2-Oct-93
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			8.11		7.05	8.47	8.5	8.52	7.85	8.25
Conductivity	uS/cm						345		114.1	109	95.4	74.1	94	101
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	7.7	7.5	7.4	7.4	7.3	7.4	7.2	7.2
Specific Conductance	uS/cm					320	330	220	126	100	98	80	99	96
Total Hardness	mg/L					180	130	150	74	71	35	44	42	78
Total dissolved solids	mg/L					190	210	150	50	70	56	52	67	68
Total suspended solids	mg/L					<1	30	25	560	1200	300	580	120	390
Turbidity	NTU					2	550	46	550	560	160	410	100	270
Major Ions														
Total alkalinity	mg/L as Ca CO3					110	120	82	55	62	43	39	37	44
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					7	3.1	3.2	2.6	2.9	1.3	0.9	1.8	2.1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	1	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	1
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.1	0.05	0.1	<0.05	0.1	0.1	0.05
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		61	85	24	12	12	11	12	18	11
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					<1	<0.05	<0.1	<0.46	0.34	<0.05	<0.05	0.09	0.15
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.005								
Cyanide, WAD	mg/L			**0.005**	**0.01**	<0.005								
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.12	0.4	0.84	0.52	1.1	5	12	3.4	8.9
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0012	0.0029	<0.0009	0.037	0.049	0.074	0.13	0.06	0.13
Antimony, total	mg/L			**0.009**		0.0015	0.00062	0.00072	0.0011	0.0017	0.0019	0.002	0.0018	0.0032
Antimony, dissolved	mg/L			**0.009**		0.00063	0.00042	0.0007	0.0011	0.0017	0.00089	0.0012	0.00049	0.0013
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.0014	<0.001	<0.001	<0.001	0.0056999	0.02	<0.001	0.015
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.059	0.051	0.05	0.035	0.044	0.094	0.12	0.083	0.18
Barium, dissolved	mg/L			**1**		0.049	0.043	0.038	0.024	0.024	0.019	0.029	0.025	0.038
Beryllium, total	mg/L			**0.00013**		0.00021	<0.00002	0.00014	<0.00009	0.00033	0.00034	0.00063	<0.00008	0.00042
Beryllium, dissolved	mg/L			**0.00013**		<0.00009	<0.00005	0.00013	<0.0002	<0.0002	<0.0001	0.00008	<0.00006	0.00011
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.04	0.029	0.034	0.038	0.048	0.012	0.12	0.014	0.015
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.011	0.0093	<0.001	0.0061	0.0054	<0.0006	0.0037	0.0027	0.0041
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.00005	0.0001	<0.00006	0.0005	0.00057	0.00099	0.00038	0.00021
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.00009	0.0001	<0.0001	0.00023	<0.0002	<0.0001	<0.00007	<0.0001
Calcium, total	mg/L					57	44	47	24	23	17	24	16	29
Calcium, dissolved	mg/L					42	44	36	22	21	12	15	14	27
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.012	0.0019	0.0026	0.0028	0.0058	0.013	0.041	0.019	0.014
Chromium, dissolved	mg/L					0.00076	<0.0005	0.00099	0.00079	0.00081	<0.0005	0.0022	0.0018	0.0033
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00063	0.00055	0.00095	0.00043	0.00052	0.004	0.0046	0.003	0.0088999
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00006	0.00009	<0.00007	<0.0001	<0.0001	<0.00008	<0.0001	0.0001	0.00015
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0034	0.0033	0.01	0.0039	0.01	0.023	0.033	0.017	0.045
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0071	<0.0002	<0.0003	<0.0002	0.00021	<0.0003	0.002	0.00044	0.00064
Iron, total	mg/L	**0.3**		**0.001**		0.25	0.75	1.4	0.58	0.91	5.4	7.5	5.9	12
Iron, dissolved	mg/L	**0.3**		**0.35**		0.047	<0.01	<0.01	<0.01	<0.01	0.017	0.02	<0.01	0.042
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00076	0.00077	0.0015	0.0018	0.0015	0.0051999	0.0036	0.0051	0.0091
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0031	0.00006	<0.00008	<0.00007	<0.00007	<0.0001	<0.00006	<0.00005	<0.00007
Magnesium, total	mg/L					8.3	6	7	3.5	3.2	6.2	8.8	4	11
Magnesium, dissolved	mg/L					6.1	5.4	4.1	2.8	2.5	1.3	1.6	1.7	2.6
Manganese, total	mg/L			**EQ10**	**EQ11**	0.015	0.029	0.043	0.012	0.017	0.25	0.24	0.16	0.53
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0019	0.0035	0.00005	0.00022	0.00028	0.0021	<0.0003	0.0007	0.0015
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	0.00013	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		0.0001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0045	0.0038	0.005	0.0033	0.0039	0.0031	0.0016	0.0018	0.0036
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.004	0.0032	0.0043	0.0033	0.0039	0.0019	0.0016	0.0017	0.0029
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0062	0.0026	0.0038	0.014	0.0027	0.02	0.015	0.065	0.024
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.001	0.00048	0.00053	0.0007	0.0011	<0.0004	0.00091	0.00058	0.0015
Potassium, total	mg/L					1.6	1.1	1.1	1.2	1.9	2.4	6.8	1.8	4.1
Potassium, dissolved	mg/L					1	0.96	0.78	0.93	1.4	0.78	1.7	0.59	1.4
Selenium, total	mg/L	**0.001**		**0.002**		0.003	<0.001	<0.001	0.0019	0.0011	<0.001	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00003	0.00003	0.00005	<0.00002	0.00004	0.0002	0.00057	0.00015	0.00045
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00003	<0.00003	<0.0001	<0.00002	<0.0001	<0.0001	0.00003	<0.0001	0.00002
Sodium, total	mg/L					2.1	1.5	1.2	0.8	0.84	1.1	6.2	0.91	1.6
Sodium, dissolvd	mg/L					1.6	1.4	1	0.63	0.62	0.34	0.93	0.43	0.56
Strontium, total	mg/L					0.3	0.24	0.24	0.12	0.11	0.095	0.095	0.089	0.12
Strontium, dissolved	mg/L					0.25	0.24	0.19	0.12	0.11	0.071	0.077	0.08	0.12
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00033	0.00042	0.00026	0.00016	0.00014	0.00018	0.00022	0.00013	0.00031
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00035	0.00032	0.00026	0.00016	0.00012	<0.00005	0.00007	0.00008	0.00012
Vanadium, total	mg/L					<0.001	0.0011	0.0017	0.0011	0.0032	0.018	0.02	0.011	0.042
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.002
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.02	0.019	0.028	0.014	0.015	0.13	0.095	0.049	0.075
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.034	<0.0004	0.0014	<0.0004	<0.0004	<0.0004	0.00073	0.00045	0.0031

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W5	W5	W5	W5	W5	W5	W5	W5	W5
Sampling Date						30-Oct-93	2-Dec-93	6-Jan-94	2-Feb-94	27-Feb-94	31-Mar-94	27-Apr-94	30-May-94	28-Jun-94
		Long Term	Short Term	Long Term	Short Term									1
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.5	8		7.1	7.4	7.8	7.5	7.7	8.5
Conductivity	uS/cm					99	264		270	312	282	231	185	105
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.1	7.7	7.8	7.8	7.7	7.7	7.6	7.5	*5.9*
Specific Conductance	uS/cm					120	290	280	340	310	290	240	180	140
Total Hardness	mg/L					65	120	150	140	140	110	110	67	52
Total dissolved solids	mg/L					63	190	210	210	350	170	170	110	72
Total suspended solids	mg/L					1400	200	46	38	25	63	75	140	890
Turbidity	NTU					660	170	43	28	12	47	56	120	910
Major Ions														
Total alkalinity	mg/L as Ca CO3					130	98	100	110	110	94	110	65	64
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1	5	5.6	3	6.2	4.1	3.4	2.4	1.2
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	0.5	0.5	0.5	1	0.5	<0.5	<0.5	0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.05	0.3	0.15	0.3	0.1	0.2	0.1	0.05
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		18	41	60	75	72	61	44	31	7.6
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	0.32	0.2	0.15	0.15	0.42	0.26	0.12	<0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.001	0.002	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.005	0.023	<0.005	<0.005	<0.005	<0.005	<0.005	0.114
Ortho phosphorus, dissolved	mg/L					<0.05	<0.01	0.01	<0.01	<0.01	<0.002	<0.002	0.008	<0.002
Phosphorus, total	mg/L					0.5	0.12	0.06	0.07	0.02	0.083	0.091	0.126	0.344
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.005				<0.005				
Cyanide, WAD	mg/L			**0.005**	**0.01**	<0.005				<0.005				
Thiocyanate	mg/L									0.05				
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	46	5.6	1.6	0.75	0.13	1.33	1.94	4.69	11
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.045	0.021	0.026	0.011	0.018	0.002	0.0134	0.0437	0.038
Antimony, total	mg/L			**0.009**		0.0043	0.0014	0.0011	0.00084	0.0005	0.0006	0.00086	0.00143	0.00308
Antimony, dissolved	mg/L			**0.009**		0.0013	0.00093	0.00074	0.00074	0.00045	0.00039	0.00057	0.00062	0.0012
Arsenic, total	mg/L	**0.005**		**0.005**		0.066	0.006	<0.001	0.001	<0.001	<0.001	<0.001	0.006	0.017
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.003	0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.41	0.11	0.07	0.068	0.057	0.0551	0.0786	0.107	0.283
Barium, dissolved	mg/L			**1**		0.024	0.045	0.052	0.06	0.051	0.0332	0.0414	0.0307	0.0321
Beryllium, total	mg/L			**0.00013**		0.0008	0.00022	0.00014	<0.00006	0.00045	0.00018	0.00059	0.00011	0.00031
Beryllium, dissolved	mg/L			**0.00013**		0.00006	0.00013	<0.00006	<0.00006	<0.0001	<0.0001	<0.0003	<0.0001	<0.00011
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.01	<0.001	0.017	0.014	0.01	0.0104	0.0444	0.0142	0.00342
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0024	<0.001	0.0091	0.0082	0.01	0.0047	0.0349	0.00219	<0.00068
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00069	0.00028	<0.0001	<0.0001	<0.0001	<0.00013	0.00026	0.0003	0.00051
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001	<0.00013	<0.00011	<0.00004	<0.0001
Calcium, total	mg/L					55	44	61	50	63	60.3	51.9	33.7	24
Calcium, dissolved	mg/L					22	39	48	46	46	37.2	35.5	22.3	17.6
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.072	0.019	0.0059	0.002	0.002	0.00065	0.00426	0.00826	0.014
Chromium, dissolved	mg/L					0.0018	0.0091999	0.0011	0.0006	0.0019	0.00063	0.00298	0.00119	0.00057
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.034	0.0044	0.00097	0.00049	0.0001	0.00107	0.00202	0.00255	0.0071199
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	0.00011	<0.00006	<0.00009	<0.00014	<0.0001	<0.00003	<0.00006
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.18	0.021	0.0027	0.0019	0.0036	0.0089399	0.012	0.0138	0.0361
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0004	<0.0004	<0.0005	0.00081	0.0021	0.00221	0.00398	0.00022	<0.0004
Iron, total	mg/L	**0.3**		**0.001**		130	9.6	1.8	1	0.21	2.7	3.39	5.66	13.1
Iron, dissolved	mg/L	**0.3**		**0.35**		0.037	0.061	0.024	<0.01	<0.01	<0.01	0.1	0.02	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.032	0.0071999	0.0012	0.001	0.0011	0.00196	0.0029	0.00389	0.016
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0001	<0.00008	0.00017	0.00014	<0.00007	<0.00005	<0.00012	<0.0001	<0.00005
Magnesium, total	mg/L					29	7.9	10	7.6	9.1	8.99	9.09	6.61	9.57
Magnesium, dissolved	mg/L					2.4	4.9	6.7	6.5	6.4	4.91	5.26	2.69	2.06
Manganese, total	mg/L			**EQ10**	**EQ11**	2.1	0.2	0.059	0.029	0.0044	0.0926	0.116	0.172	0.491
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	<0.0003	<0.0007	0.0026	0.0015	0.00034	0.00026	<0.00021	0.00376	<0.0003
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.011	0.005	0.0048	0.0044	0.0041	0.00272	0.00453	0.0054099	0.00401
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0041	0.0037	0.0043	0.0044	0.0035	0.00225	0.00321	0.00369	0.00371
Nickel, total	mg/L	**EQ20**		**EQ22**		0.08	0.013	0.00051	0.0034	0.0037	0.00676	0.0079	0.00889	0.0147
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	<0.003	<0.0005	0.0029	0.0016	0.0006	<0.00044	0.00063	<0.0005
Potassium, total	mg/L					6	1.1	2.1	1.6	1.8	1.85	2.6	2.45	3.8
Potassium, dissolved	mg/L					1.2	0.59	1.2	1.2	1.1	0.85	0.85	0.7	1.42
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.006	0.003	0.003	0.001	0.007	0.005	0.002	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	0.002	0.003	0.001	0.004	0.003	<0.001	0.00073
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.0014	0.00015	0.00003	0.00001	0.00003	0.00022	0.00022	0.00017	0.00054
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					2.5	1	3.2	1.9	2.3	1.94	3.1	1.75	1.39
Sodium, dissolvd	mg/L					0.62	0.66	2.8	1.6	1.5	1.1	1.4	0.695	0.511
Strontium, total	mg/L					0.3	0.3	0.32	0.3	0.32	0.316	0.307	0.19	0.16
Strontium, dissolved	mg/L					0.12	0.27	0.29	0.3	0.27	0.225	0.217	0.143	0.124
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00062	0.00044	0.00036	0.00046	0.00033	0.00026	0.00038	0.00038	0.00047
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00011	0.00034	0.00036	0.0004	0.00033	0.00021	0.00025	0.0002	0.00007
Vanadium, total	mg/L					0.13	0.018	0.005	0.001	<0.001	0.0041	0.00619	0.0156	0.031
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.23	0.033	0.026	0.012	0.011	0.0162	0.0131	0.0227	0.0893
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.0007	<0.0003	<0.002	0.0071999	0.0013	0.00421	0.00169	0.00114	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W5	W5	W5	W5	W5	W5	W5	W5	W5
Sampling Date						30-Jul-94	28-Aug-94	5-Oct-94	14-Nov-94	2-Dec-94	23-Jan-95	25-Feb-95	2-Jun-96	18-Jul-96
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.3	8.2	7.93	8.07	8.27			7.95	8.45
Conductivity	uS/cm					89	81	129	222	247				109.3
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.6	7.2	7	7.3	7.6	7.2	7.2	8.1	8.4
Specific Conductance	uS/cm					81	98	150	270	320	350	340	198	116
Total Hardness	mg/L					38	50	64	120	160	180	170	82	53
Total dissolved solids	mg/L					62	57	130	190	200	230	240	125	64
Total suspended solids	mg/L					520	140	170	6	7	<1	4	101	362
Turbidity	NTU					400	130	170	5.5	2.7	0.6	0.4	110	290
Major Ions														
Total alkalinity	mg/L as Ca CO3					40	36	52	4.4	100	95	110	61	44
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.6	<0.1	3.6	3.1	7	12	6	1	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.1	0.5	<0.1	0.5	0.5	0.5	0.5	0.2	0.12
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.05	0.05	<0.05	0.1	0.05	0.1	0.08	0.06
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		7.2	14	18	51	67	63	64	39	15.6
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.05	<0.05	0.05	0.3	0.25	0.25	0.17	0.122	0.033
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					0.017	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.006
Ortho phosphorus, dissolved	mg/L					0.002	0.002	<0.002	0.002	0.002	0.002	<0.002	0.002	0.004
Phosphorus, total	mg/L					0.29	0.15	0.15	0.014	0.016	0.002	0.006	0.018	0.104
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	8.1	6.36	1.11	0.139	0.0138	0.0084	0.0299	3.35	13.1
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.179	0.153	0.0302999	0.00735	0.00344	0.00307	0.0223	0.0045	0.0410999
Antimony, total	mg/L			**0.009**		0.0026	0.00151	0.00163	0.00073	0.00069	0.00087	0.00048	0.00106	0.00269
Antimony, dissolved	mg/L			**0.009**		0.00104	<0.0002	0.00056	0.00062	0.00068	0.00085	0.00034	0.00045	0.00067
Arsenic, total	mg/L	**0.005**		**0.005**		0.0155	<0.001	0.0092399	<0.001	0.00194	0.00148	0.001	0.006	0.009
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.002	<0.001	<0.001	<0.001	<0.001	0.00132	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.217	0.102	0.0906999	0.0624	0.0604	0.0804	0.0793	0.0762	0.184
Barium, dissolved	mg/L			**1**		0.0379	0.0327	0.0344	0.0552	0.0599	0.0775	0.0686	0.0268	0.0324
Beryllium, total	mg/L			**0.00013**		0.0001	0.0007	0.00021	0.00015	0.00025	0.00015	0.00025	0.00008	0.00016
Beryllium, dissolved	mg/L			**0.00013**		0.0001	0.0001	0.0001	0.00015	0.00025	0.00015	0.00025	<0.00005	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0117	0.00169	0.0005	0.00659	0.0005	0.002	0.0005	0.004	0.009
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	<0.00074	<0.001	0.00523	<0.001	0.0005	<0.001	0.002	0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00068	0.0001	0.00013	<0.0001	<0.0001	<0.0001	0.00011	0.0003	0.001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001
Calcium, total	mg/L					18.6	21.8	28.6	50.4	54.2	75.4	59.7	33.1	22.5
Calcium, dissolved	mg/L					13.4	16.6	21.9	39	53.4	58.5	54	28.5	17.6
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0167	0.0128999	0.00706	0.00123	<0.0005	0.00083	0.00154	0.0069	0.0196
Chromium, dissolved	mg/L					<0.0005	0.00135	0.00057	0.0011	<0.0005	0.00054	0.00102	<0.0005	0.0012
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.007	0.00351	0.0033699	0.00029	<0.00007	0.00007	0.00008	0.00262	0.00619
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00024	0.0003	<0.00006	<0.00005	<0.00007	<0.00007	0.00008	0.00029	<0.00006
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0382	0.0266	0.021	<0.0004	<0.0005	0.0185	0.00209	0.0126	0.0318999
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0004	0.0111999	<0.0004	<0.0004	<0.0005	<0.0004	0.00082	0.0005	0.0001
Iron, total	mg/L	**0.3**		**0.001**		14.9	6.45	3.21	0.195	0.0109	0.0136	0.0351	4.17	18.7
Iron, dissolved	mg/L	**0.3**		**0.35**		0.08	0.09	0.0402	<0.01	<0.01	<0.01	0.0316	<0.01	0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0147	0.00298	0.00628	0.00068	<0.0001	<0.00008	0.00019	0.00241	0.00754
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00008	0.0005	<0.00007	<0.00007	<0.0001	<0.00008	<0.00006	<0.00005	<0.00005
Magnesium, total	mg/L					7.05	6.72	5.88	6.92	7.66	10.6	8.66	5.28	10.4
Magnesium, dissolved	mg/L					1.14	1.97	2.24	4.91	7.35	7.84	7.64	2.53	2.22
Manganese, total	mg/L			**EQ10**	**EQ11**	0.506	0.203	0.211	0.0113	0.00218	0.00185	0.00237	0.122	0.424
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00183	0.00735	0.00195	0.00321	0.00042	0.00109	0.002	0.008	<0.0001
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	0.0002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00224	0.00348	0.00408	0.00458	0.00473	0.00528	0.00486	0.00369	0.00467
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00183	0.0023599	0.00317	0.00415	0.0046	0.00493	0.00404	0.00267	0.00452
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0193	0.0093999	0.0080299	0.00161	0.00076	0.00219	0.00201	0.0404	0.0181
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	0.00352	<0.0004	0.00076	<0.0005	<0.0005	0.00188	0.0012	0.00015
Potassium, total	mg/L					3.13	3	1.37	1.37	1.65	2.28	2.05	1.91	3.42
Potassium, dissolved	mg/L					1.58	1.04	0.6	1.01	1.65	1.72	1.51	0.78	0.74
Selenium, total	mg/L	**0.001**		**0.002**		0.003	0.001	0.001	0.002	<0.001	0.002	0.003	0.003	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	0.001	0.002	<0.001	0.002	0.001	0.002	0.002
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00058	0.00019	0.00003	0.00002	<0.00001	0.00001	0.00003	0.00009	0.00032
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00001	0.00001	0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					1.18	1.56	1.1	1.72	1.84	2.54	1.89	1.25	3.06
Sodium, dissolvd	mg/L					0.322	0.657	0.58	1.22	1.77	2.04	1.85	0.6	0.54
Strontium, total	mg/L					0.115	0.106	0.157	0.279	0.308	0.371	0.365	0.169	0.106
Strontium, dissolved	mg/L					0.0894	0.0928	0.124	0.245	0.298	0.363	0.324	0.145	0.103
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00029	0.0002	0.00031	0.00029	0.0003	0.00015	0.00034	0.00035	0.00074
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00004	0.00008	0.00017	0.00028	0.0003	0.00014	0.00028	<0.00001	0.00008
Vanadium, total	mg/L					0.04	0.0113999	<0.001	<0.001	<0.001	<0.001	<0.001	0.018	0.059
Vanadium, dissolved	mg/L					0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0755	0.0153	0.0339	0.0075	0.00594	0.00312	0.0062	0.018	0.101
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.00174	0.015	<0.001	0.00116	<0.001	<0.001	0.00133	0.002	0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W5	W5	W5	W5	W5	W5	W5	W5	W5
Sampling Date						3-Sep-96	1-Oct-96	29-Oct-96	13-Dec-96	3-Jan-97	6-Feb-97	4-Apr-97	6-May-97	3-Jul-97
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.65	7.5	7.65	7.76					
Conductivity	uS/cm					88.7	138	224	294					
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.4	7.8	8.1	8	8.1	7.9	8.2	8	8.2
Specific Conductance	uS/cm					125	154	272	347	342	366	366	260	140
Total Hardness	mg/L					41	76	115	131	218	197	147	35	59
Total dissolved solids	mg/L					46	88	162	205	229	199	236	161	83
Total suspended solids	mg/L					412	257	<1	2	<1	<1	20	19	214
Turbidity	NTU					340	220	9.1	2.2	1.7	0.7	11	21	170
Major Ions														
Total alkalinity	mg/L as Ca CO3					46	54	78	96	101	103	111	80	50
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					<1	2	1	2	4	2.5	<1	1	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.08	0.21	0.18	0.24	0.22	0.28	0.29	0.2	0.15
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.05	0.07	0.08	0.07	0.06	0.09	0.05	0.06
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		11	25.6	67.7	72.3	76.2	78.4	87.8	46.2	23.4
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.022	0.074	0.203	0.209	0.206	0.202	0.243	0.442	0.04
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					0.01	0.01	0.01	0.01	<0.02	<0.02	<0.02	<0.02	<0.005
Ortho phosphorus, dissolved	mg/L					<0.002	<0.002	0.006	0.004	0.008	<0.002	<0.002	<0.002	0.002
Phosphorus, total	mg/L					0.2263	0.082	0.012	0.004	0.008	<0.002	0.044	0.041	0.01
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	12.5	8.12	0.823	0.011	0.017	0.0015	0.356	0.79	4.13
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0532999	0.0212	0.004	0.0029	0.0033	0.0009	<0.0005	0.0093	0.0521
Antimony, total	mg/L			**0.009**		0.0019	0.00244	0.00078	0.00094	0.00078	0.00091	0.00067	0.00048	0.00215
Antimony, dissolved	mg/L			**0.009**		0.00045	0.00116	0.00075	0.00064	0.00062	0.00041	0.00058	0.00039	0.00068
Arsenic, total	mg/L	**0.005**		**0.005**		0.013	0.015	0.002	<0.001	0.001	<0.001	<0.001	0.011	0.007
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.23	0.166	0.0510999	0.07	0.058	0.0890999	0.0715	0.047	0.17
Barium, dissolved	mg/L			**1**		0.0251	0.0302999	0.0477	0.054	0.057	0.077	0.0617	0.0385999	0.0307
Beryllium, total	mg/L			**0.00013**		0.00022	0.00033	<0.00005	<0.00005	<0.00005	0.00015	0.00006	<0.00005	0.00013
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00015	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.01	0.009	0.005	0.013	0.001	0.012	0.009	0.014	0.013
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	0.009	0.005	0.01	0.001	0.007	0.008	0.004	0.002
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0005	0.0005	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0005
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001
Calcium, total	mg/L					20.8	31.7	38.6	45	75.4	66	50	55.3	20.6
Calcium, dissolved	mg/L					14.3	26	38.3	41.5	75.4	55.2	48.9	50.4	19.6
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.018	0.0162	0.0019	<0.0005	0.0016	0.0005	0.001	0.0018	0.0113
Chromium, dissolved	mg/L					0.0007	<0.0005	0.0005	<0.0005	0.0016	0.0005	0.00025	0.00025	0.0012
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.0057199	0.006	0.00054	0.00008	0.00007		0.00026	0.00052	0.00285
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00006	<0.00006	0.00013	0.00006	<0.00006		0.00003	0.00003	0.00008
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0325999	0.0362	0.0023	0.0008	0.0009	0.0002	0.0015	0.0037	0.0146
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0001	<0.0001	0.0006	0.0002	0.0004	0.0001	0.00005	0.0011	0.0009
Iron, total	mg/L	**0.3**		**0.001**		15.1	10.8	0.99	<0.01	0.01	0.03	0.5	1.03	2.82
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.02	<0.01	<0.01	<0.01	0.005	0.01	0.005
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0098199	0.0074099	0.00033	0.0001	<0.00005	0.00018	0.00074	0.00064	0.00426
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.000025
Magnesium, total	mg/L					8.2	7.76	4.74	6.8	8.6	7.8	6.65	6.5	5.14
Magnesium, dissolved	mg/L					1.36	2.72	4.71	6.6	7.1	6.5	6	5.28	2.33
Manganese, total	mg/L			**EQ10**	**EQ11**	0.395	0.297	0.0334	0.002	0.0022	0.0035	0.0212	0.0340999	0.22
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	<0.0001	<0.0001	0.003	0.0012	0.0008	0.0013	0.0024	0.0028	0.001
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.000025
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00238	0.0044099	0.00388	0.0064	0.0066	0.0038599	0.0038599	0.0036	0.00333
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0012	0.00318	0.0038599	0.0055	0.006	0.00347	0.00328	0.00321	0.00257
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0207999	0.0191	0.0023	0.0014	0.0017	0.0012	0.0025	0.0027	0.0091
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00015	0.00015	0.0012	0.0014	0.0016	0.0009	0.001	0.0015	0.0015
Potassium, total	mg/L					3.62	2.13	0.92	0.99	1.2	1.6	1.35	1.17	2.73
Potassium, dissolved	mg/L					0.72	0.72	0.83	0.97	1.2	1.3	1.11	0.95	0.66
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	<0.001	0.002	0.002	0.002	<0.001	<0.001	0.003	0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	0.002	0.002	0.002	<0.001	<0.001	0.003	0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00031	0.0005	<0.00001	<0.00001	0.00002	0.00003	0.00005	<0.00001	0.00022
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					2.19	1.47	1.12	1.8	2	2.1	1.79	1.48	1.5
Sodium, dissolvd	mg/L					0.34	0.66	1.12	1.8	1.9	1.8	1.58	1.26	0.73
Strontium, total	mg/L					0.103	0.15	0.264	0.38	0.436	0.385	0.333	0.238	0.117
Strontium, dissolved	mg/L					0.0739	0.13	0.259	0.37	0.38	0.345	0.318	0.227	0.1
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00047	<0.00001	0.0003	0.0004	<0.00001	0.00064	0.00048	0.00029	0.00047
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	<0.00001	0.00027	0.00038	<0.00001	0.00043	0.00042	0.00012	0.00011
Vanadium, total	mg/L					0.063	0.036	0.003	<0.001	<0.001	<0.001	0.003	0.005	0.024
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.06	0.064	0.009	0.004	0.008	0.011	0.003	0.012	0.037
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.003	<0.001	0.003	0.003	0.004	0.005	0.001	0.004	0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W5	W5	W5	W5	W5	W8	W8	W8	W8
Sampling Date						8-Jul-97	11-Aug-97	16-Sep-97	3-Nov-97	26-Oct-00	26-Feb-93	31-Mar-93	29-Apr-93	29-May-93
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**								7.71		
Conductivity	uS/cm											184.3		
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		8	8.5	7.8	7.8	8.02	7.6	7.4	7.5	7.2
Specific Conductance	uS/cm					93	78	121	275	1610	170	180	130	85
Total Hardness	mg/L					36	29	57	126	80.8	85	63	76	52
Total dissolved solids	mg/L					50	43	63	174	112	91	100	69	79
Total suspended solids	mg/L					477	325	69	20	545	<1	2	3	50
Turbidity	NTU					360	260	71	19		0.24	0.3	4.6	73
Major Ions														
Total alkalinity	mg/L as Ca CO3					47	32	37	77	46	71	75	54	33
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					47	31	37	77					
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					0.5	1	0.5	0.5					
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					<1	<1	3	1	7	6	2.7	2.8	2.4
Chloride	mg/L	**120**	**640**	**150**	**600**	0.1	0.04	0.08	0.12	<0.5	0.75	1.5	0.5	0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.03	0.03	0.03	0.06	0.06	0.066	0.1	0.1	0.05
Bromide	mg/L									<0.5				
Sulfate	mg/L			**EQ23**		9.5	7	23.5	57.7	24	15	20	12	7.9
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.005	0.008	<0.005	0.266	0.06	1.1	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	0.002	<0.05	<0.05	<0.05	<0.05
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.01	0.01	0.01	0.01	<0.005				
Free Ammonia	mg/L as NH3-N										<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					0.011	0.005	0.004	<0.002		<0.05	0.07	<0.05	<0.05
Phosphorus, total	mg/L					0.582	0.212	0.086	0.051		<1	<0.05	<0.05	<0.05
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**					<0.005	<0.005			
Cyanide, WAD	mg/L			**0.005**	**0.01**						<0.005			
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	14.8	9.85	2.41	0.577	6.53	0.016	0.0065	0.097	0.33
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0849	0.046	0.0105	0.0024	3.02	<0.0005	0.0036	<0.0009	0.069
Antimony, total	mg/L			**0.009**		0.00118	0.00288	0.00005	0.00051	0.002	0.0011	0.0004	0.00042	0.00043
Antimony, dissolved	mg/L			**0.009**		0.00027	0.00073	0.00028	0.00051	0.0012	0.00047	0.00018	0.00038	0.00041
Arsenic, total	mg/L	**0.005**		**0.005**		0.043	0.023	0.005	<0.001	0.0227	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	0.0108	0.0013	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.109	0.194	0.0564	0.0450999	0.14	0.095	0.082	0.081	0.068
Barium, dissolved	mg/L			**1**		0.0311	0.0191	0.0248999	0.0429	0.07	0.091	0.075	0.074	0.057
Beryllium, total	mg/L			**0.00013**		0.00016	0.00039	0.00006	0.00013	<0.001	<0.0002	0.00003	0.0001	<0.00009
Beryllium, dissolved	mg/L			**0.00013**		0.00007	<0.00005	<0.00005	0.00007	<0.001	0.00011	<0.00005	<0.00008	<0.0002
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.003	0.005	0.007	0.002	<0.1	0.059	0.039	0.055	0.046
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	<0.001	0.003	0.002	<0.1	0.016	0.013	<0.001	0.014
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.001	0.0007	***0.0014***	0.00016	0.00067	<0.0002	<0.00005	<0.00008	0.00016
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	<0.0001	0.0003	0.00016	0.00031	<0.0001	<0.00009	<0.00007	<0.0001
Calcium, total	mg/L					26.6	15.5	20.2	43.3	28.9	29	22	26	18
Calcium, dissolved	mg/L					12.3	10.3	18.9	41.5	25.4	24	22	21	18
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0291	0.0138999	0.0058	0.001	0.0109	0.012	0.00058	0.0012	0.0023
Chromium, dissolved	mg/L					0.0009	0.00025	0.002	0.0007	0.0053	0.00075	<0.0005	<0.0005	0.00089
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.0093	0.00189	0.00084	0.00054	0.0111	<0.00008	0.00006	0.00006	0.00032
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00003	0.00022	0.00003	0.00049	0.005	<0.00006	0.00006	<0.00007	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0417	0.0318999	0.0113	0.0012	0.0562	0.0016	0.0008	0.0021	0.0038
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0002	0.00005	0.0008	0.00005	0.0252	0.0019	<0.0002	<0.0003	0.00087
Iron, total	mg/L	**0.3**		**0.001**		21.6	2.92	3.53	0.91	12.6	0.067	0.005	0.16	0.4
Iron, dissolved	mg/L	**0.3**		**0.35**		0.005	0.005	0.04	0.09	4.95	0.015	<0.01	<0.01	0.021
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0133	0.00977	0.00292	0.00026	0.0167	0.00022	0.00058	0.0032	0.003
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.000025	0.000025	0.000025	0.00025	0.00709	0.0012	<0.00004	<0.00008	0.00028
Magnesium, total	mg/L					10.2	6.22	3.71	5.88	6.7	3.1	2	2.8	1.8
Magnesium, dissolved	mg/L					1.17	0.809	2.33	5.43	4.2	2.2	1.9	1.8	1.8
Manganese, total	mg/L			**EQ10**	**EQ11**	0.39	0.48	0.0911999	0.0248999	0.561	0.012	0.0068	0.011	0.034
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00005	0.0005	0.0037	0.0046	0.25	0.0072	0.0068	0.0041	0.025
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	0.00031	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		0.000025	0.000025	0.000025	0.000025	0.00011	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00313	0.00221	0.00269	0.0031099	<0.03	0.0013	0.0015	0.0011	0.0014
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00127	0.00089	0.0013	0.0029	<0.03	0.0012	0.00043	0.0011	0.0014
Nickel, total	mg/L	**EQ20**		**EQ22**		0.19	0.0192999	0.0076	0.0018	0.02	0.0061	0.00029	0.0037	0.0042
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0016	<0.0003	0.0014	0.0018	0.009	<0.0003	<0.0003	<0.0002	0.0042
Potassium, total	mg/L					3.61	1.98	0.8	0.93	<2	0.47	0.28	0.33	0.59
Potassium, dissolved	mg/L					0.49	0.6	0.42	0.72	<2	0.32	0.19	0.27	0.44
Selenium, total	mg/L	**0.001**		**0.002**			0.001	<0.001	0.001	0.001	0.002	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**			<0.001	0.002	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00059	0.00015	0.00018	<0.00001	0.00046	<0.00003	<0.00002	0.00002	0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	0.00022	<0.00003	<0.00003	<0.0001	<0.00002
Sodium, total	mg/L					1.91	2.11	0.8	1.43	3	1.5	1	0.84	0.8
Sodium, dissolvd	mg/L					0.34	0.35	0.55	1.34	<2	1.1	0.92	0.77	0.8
Strontium, total	mg/L					0.151	0.111	0.0966999	0.24		0.17	0.14	0.14	0.12
Strontium, dissolved	mg/L					0.0721999	0.0597999	0.105	0.24		0.15	0.14	0.13	0.12
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**						0.00009				
Thallium, dissolved	mg/L	**0.0008**		**0.0008**						<0.00005				
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L									0.11				
Titanium, dissolved	mg/L									0.05				
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	0.00054	<0.00001	0.00032	0.0005	0.00012	0.00013	0.00009	0.00009
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	0.00026	<0.00001	0.00029	0.0003	0.00015	0.00009	0.00008	0.00009
Vanadium, total	mg/L					0.059	0.046	0.017	0.001	<0.03	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.03	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.101	0.142	0.021	0.01	0.065	0.025	0.057	0.01	0.016
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.001	<0.001	0.006	0.006	0.028	0.029	<0.0004	<0.0004	0.0059

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W8	W8	W8	W8	W8	W8	W8	W8	W8
Sampling Date						25-Jun-93	28-Jul-93	26-Aug-93	2-Oct-93	30-Oct-93	2-Dec-93	6-Jan-94	2-Feb-94	27-Feb-94
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			7.54	7.68	7.54	8.1	7.8		7	7.1
Conductivity	uS/cm						49.7	67	59	93	150		157	189
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.2	7.2	7.4	7.3	7.8	7.6	7.6	7.7	7.5
Specific Conductance	uS/cm					73	51	65	51	100	160	160	180	180
Total Hardness	mg/L					29	25	32	43	48	62	80	80	77
Total dissolved solids	mg/L					52	39	45	40	63	97	99	110	110
Total suspended solids	mg/L					15	110	16	41	67	<1	<1	1	17
Turbidity	NTU					18	92	12	49	92	1.5	0.42	0.27	0.41
Major Ions														
Total alkalinity	mg/L as Ca CO3					31	23	25	24	50	62	68	74	74
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					2.2	2.3	2.2	2.8	2	4.2	4	2.8	16
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	0.5	<0.5	1	0.5	1	0.5	1	1.5
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.1	0.1	0.1	0.05	0.05	0.2	0.15	0.25
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		10	11	15	6.7	17	17	19	17	16
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	<0.5	<0.5	0.2	0.15	0.1	0.2
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.005	<0.5	<0.005	<0.005	<0.005	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.02	<0.01	<0.01
Phosphorus, total	mg/L					<0.05	<0.05	<0.05	0.05	0.1	0.03	0.02	0.03	<0.01
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**					<0.005				<0.005
Cyanide, WAD	mg/L			**0.005**	**0.01**					<0.005				<0.005
Thiocyanate	mg/L													0.05
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.8	5.8	0.44	4.4	3.4	0.045	0.024	0.013	0.012
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.052	0.058	0.064	0.15	0.071	<0.0005	<0.002	0.0026	<0.001
Antimony, total	mg/L			**0.009**		0.00078	0.0011	0.00078	0.0012	0.00079	0.00059	0.00042	0.00055	0.0005
Antimony, dissolved	mg/L			**0.009**		0.00052	0.00037	<0.00007	0.00062	<0.0001	0.0005	0.00032	0.00042	0.00029
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.018	<0.001	0.021	0.006	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.069	0.16	0.076	0.18	0.15	0.094	0.1	0.12	0.11
Barium, dissolved	mg/L			**1**		0.049	0.053	0.053	0.07	0.067	0.091	0.097	0.11	0.099
Beryllium, total	mg/L			**0.00013**		0.00019	0.00046	<0.00008	0.0003	0.00017	<0.00008	0.00008	<0.00006	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		0.00014	<0.00008	0.0001	<0.00006	0.00007	<0.00008	<0.00006	<0.00006	<0.0001
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.016	0.12	0.0042	0.015	0.015	<0.001	0.021	0.019	0.023
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0012	0.0044	0.0042	0.0074	0.0069	0.0005	0.015	0.012	0.013
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00018	0.00018	<0.0002	0.00042	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0002	<0.0001	<0.00004	<0.0001	<0.0001	<0.00008	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					13	16	11	15	20	22	34	29	37
Calcium, dissolved	mg/L					10	8.8	11	15	17	22	28	28	27
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0014	0.021	0.015	0.0026	0.011	0.0075	0.0029	0.0007	0.0013
Chromium, dissolved	mg/L					<0.0005	0.0013	0.0016	0.0026	0.0014	0.0071	0.00061	0.0007	0.0012
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00054	0.0021	0.00012	0.0028	0.0024	<0.0001	0.00009	0.00019	<0.00009
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00008	<0.0001	0.00008	0.00016	0.00013	<0.0001	<0.00004	<0.00006	<0.00009
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0056	0.019	0.0028	0.011	0.012	<0.0004	<0.0004	0.0004	0.0029
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0056	0.0019	0.00043	0.00065	<0.0004	<0.0004	<0.0004	0.00035	0.002
Iron, total	mg/L	**0.3**		**0.001**		0.82	4.5	0.7	6.7	7.1	0.13	0.06	0.03	0.058
Iron, dissolved	mg/L	**0.3**		**0.35**		0.02	0.044	0.028	0.14	0.07	0.041	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0023	0.008	0.0031	0.014	0.0055	0.00057	<0.0001	0.00018	0.00083
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0001	0.00011	0.00009	0.00018	<0.0001	<0.00008	<0.00008	0.0001	<0.00007
Magnesium, total	mg/L					1.6	3.3	1.1	2.9	2.9	1.9	3.4	2.9	3.4
Magnesium, dissolved	mg/L					1	0.79	0.99	1.4	1.4	1.8	2.5	2.5	2.4
Manganese, total	mg/L			**EQ10**	**EQ11**	0.047	0.24	0.034	0.34	0.29	0.011	0.016	0.018	0.02
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0094	0.007	0.0092	0.023	0.013	0.0034	0.011	0.015	0.014
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.0002	0.0011	0.00069	0.0013	0.0014	0.0013	0.0011	0.0012	0.0012
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.0002	0.00061	0.00027	0.00084	0.00074	0.0013	0.001	0.0012	0.0011
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0015	0.054	0.016	0.0031	0.0061	<0.003	<0.0005	0.0011	0.0018
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0004	0.00093	0.00048	0.0013	<0.0005	<0.003	<0.0005	0.00077	0.00035
Potassium, total	mg/L					0.88	5.3	0.66	3	2.2	0.13	0.51	0.45	0.5
Potassium, dissolved	mg/L					0.27	0.38	0.27	0.68	0.19	0.1	0.34	0.3	0.3
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00006	0.0002	0.00005	0.0002	0.00011	<0.0001	0.00005	<0.0001	0.00004
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	0.00004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					0.57	4.9	0.48	0.81	1.7	0.48	2.3	1.4	1.6
Sodium, dissolvd	mg/L					0.42	0.49	0.43	0.57	0.49	0.44	2.2	1.1	1.1
Strontium, total	mg/L					0.073	0.064	0.075	0.091	0.13	0.16	0.19	0.18	0.19
Strontium, dissolved	mg/L					0.071	0.05	0.066	0.091	0.099	0.16	0.17	0.18	0.17
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00006	0.00013	0.00005	0.00021	0.00012	0.00009	0.0001	0.00014	0.00011
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00005	<0.00002	0.00004	0.00006	0.00008	0.00009	0.0001	0.00013	0.00009
Vanadium, total	mg/L					<0.001	0.013	<0.001	0.016	0.009	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.052	0.13	0.054	0.061	0.041	0.0035	0.02	0.0093	0.017
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0034	0.0049	0.00096	0.0043	<0.0007	<0.0003	<0.002	0.0033	0.0051999

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W9	W9	W9	W9	W10	W10	W10	W10	W10
Sampling Date						26-Feb-93	31-Mar-93	29-Apr-93	6-Jan-94	26-Feb-93	31-Mar-93	29-Apr-93	29-May-93	3-Jun-93
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			7.84				7.94			8.2
Conductivity	uS/cm						254				253			108
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.6	7.6	7.5	7.7	7.7	7.8	7.5	7.4	7.6
Specific Conductance	uS/cm					230	250	160	190	210	190	160	97	110
Total Hardness	mg/L					120	87	100	80	110	88	110	66	68
Total dissolved solids	mg/L					140	140	95	130	140	140	110	68	64
Total suspended solids	mg/L					<1	3	24	18	<1	<1	16	200	660
Turbidity	NTU					0.57	3.2	13	4.6	0.75	4.6	16	230	390
Major Ions														
Total alkalinity	mg/L as Ca CO3					91	95	68	76	85	90	64	43	51
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					4	2.5	3	4.1	2	2.5	2.6	2.5	2.7
Chloride	mg/L	**120**	**640**	**150**	**600**	0.76	1.5	0.5	1	2.1	1.5	0.5	0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.058	0.15	0.1	0.2	0.054	0.1	0.1	0.05	0.1
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		30	38	20	23	30	36	12	7.9	11
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	0.15	<0.5	0.66	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	0.01	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					<1	<0.05	<0.05	0.06	<0.2	<0.05	<0.05	0.15	0.36
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.005				<0.005				
Cyanide, WAD	mg/L			**0.005**	**0.01**	<0.005				<0.005				
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.047	0.02	0.24	0.21	0.043	0.023	0.46	0.52	1.8
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.00069	0.0024	0.0016	<0.002	<0.0005	0.0022	0.002	0.042	0.049
Antimony, total	mg/L			**0.009**		0.0013	0.00057	0.00057	0.00053	0.001	0.00048	0.00044	0.00081	0.0012
Antimony, dissolved	mg/L			**0.009**		0.00066	0.00019	0.00045	0.00041	0.00045	0.00026	0.00043	0.00054	0.0012
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.0012	0.0012	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.082	0.067	0.066	0.069	0.08	0.066	0.078	0.057	0.066
Barium, dissolved	mg/L			**1**		0.071	0.063	0.057	0.064	0.073	0.066	0.058	0.029	0.028
Beryllium, total	mg/L			**0.00013**		0.00031	<0.00002	<0.00003	<0.00006	<0.0002	<0.00002	0.00012	<0.00009	0.00032
Beryllium, dissolved	mg/L			**0.00013**		<0.00009	<0.00005	<0.00008	<0.00006	0.00022	<0.00005	<0.00008	<0.0002	<0.0002
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.07	0.03	0.056	0.01	0.043	0.044	0.066	0.025	0.054
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.01	0.009	<0.001	0.0077	0.015	0.012	<0.001	0.0069	0.0058
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0002	<0.00005	<0.00008	<0.0001	0.00053	<0.00005	<0.00008	<0.00006	0.00019
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.00009	<0.00007	<0.0001	<0.00008	<0.00009	<0.00007	<0.0001	0.00019
Calcium, total	mg/L					40	30	34	36	38	30	38	22	22
Calcium, dissolved	mg/L					30	28	25	28	28	30	24	16	20
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.012	0.0006	0.0018	0.0028	0.011	0.00057	0.003	0.0036	0.0051
Chromium, dissolved	mg/L					0.00065	<0.0005	<0.0005	0.00056	0.00066	<0.0005	<0.0005	<0.0005	0.00083
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00036	0.00008	0.00029	0.00023	0.00021	0.0001	0.00048	0.00044	0.00083
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00006	0.00008	<0.00007	<0.00004	<0.00006	0.00007	<0.00007	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.034	0.0011	0.011	<0.0004	0.0019	0.00091	0.0037	0.0041	0.0064
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0017	<0.0002	<0.0003	<0.0004	0.00061	<0.0002	<0.0003	0.00025	<0.0002
Iron, total	mg/L	**0.3**		**0.001**		0.21	0.032	0.37	0.4	0.098	0.034	0.67	0.59	1.6
Iron, dissolved	mg/L	**0.3**		**0.35**		0.0088999	<0.01	<0.01	<0.01	0.0066	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0011	0.0005	0.00064	0.00052	0.0005	0.00039	0.0012	0.0031	0.002
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0014	0.00008	<0.00008	<0.00008	0.00019	<0.00004	<0.00008	<0.00007	0.00008
Magnesium, total	mg/L					4.6	2.9	4.1	3.4	4.7	3.1	4.8	2.8	3.2
Magnesium, dissolved	mg/L					3.1	2.6	2.1	2.4	3.2	3.1	2.2	1.8	2.2
Manganese, total	mg/L			**EQ10**	**EQ11**	0.022	0.012	0.023	0.03	0.0094	0.0052	0.026	0.018	0.035
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.012	0.011	0.0094	0.011	0.0035	0.0047	0.003	0.0039	0.00034
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0031	0.0019	0.0025	0.0023	0.0031	0.0019	0.0026	0.0022	0.0026
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0024	0.0016	0.0022	0.0022	0.0023	0.0017	0.0016	0.0015	0.0026
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0066	0.00079	0.0018	<0.0005	0.0051	0.00062	0.004	0.0047	0.0035
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0003	<0.0003	0.00038	<0.0005	0.00038	<0.0003	0.00047	0.0016	0.00039
Potassium, total	mg/L					1.3	0.88	0.8	1.4	0.9	0.57	0.58	1	2.1
Potassium, dissolved	mg/L					0.91	0.72	0.61	0.96	0.55	0.53	0.45	0.54	1.1
Selenium, total	mg/L	**0.001**		**0.002**		0.002	<0.001	<0.001	<0.001	0.003	<0.001	<0.001	0.005	0.0045
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.0012
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00003	0.00003	0.00005	0.00005	<0.00003	<0.00002	0.00003	0.00002	0.00003
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00003	<0.00003	<0.0001	<0.0001	<0.00003	<0.00003	<0.0001	<0.00002	0.00001
Sodium, total	mg/L					1.6	1	1.1	2.6	1.6	1	0.92	0.79	0.91
Sodium, dissolvd	mg/L					1.1	0.92	0.83	2.4	1.1	1	0.77	0.54	0.61
Strontium, total	mg/L					0.2	0.16	0.17	0.16	0.21	0.17	0.19	0.11	0.12
Strontium, dissolved	mg/L					0.17	0.15	0.14	0.15	0.17	0.17	0.14	0.093	0.12
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00022	0.00018	0.00014	0.00012	0.0002	0.0002	0.00015	0.00012	0.00012
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00018	0.00013	0.00013	0.00012	0.00024	0.00017	0.00013	0.00012	0.00011
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	0.0048
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.18	0.032	0.009	0.035	0.027	0.068	0.016	0.022	0.017
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.085	<0.0004	0.0011	<0.002	0.029	<0.0004	0.00056	0.0019	<0.0004

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W10	W10	W10	W10	W10	W10	W10	W10	W10
Sampling Date						8-Jun-93	16-Jun-93	20-Jun-93	25-Jun-93	28-Jul-93	26-Aug-93	6-Sep-93	14-Sep-93	19-Sep-93
		Long Term	Short Term	Long Term	Short Term							1		
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.2	8.37	8.01		8.45	7.57	7.82	7.39	8.02
Conductivity	uS/cm					100.9	92.9	89.3		74	90	77	88	114
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		6.9	7.2	7.6	7.5	7.7	7.3	*6.2*	7	6.9
Specific Conductance	uS/cm					110	93	98	100	78	85	75	87	110
Total Hardness	mg/L					59	47	44	38	37	41	41	49	83
Total dissolved solids	mg/L					110	59	56	58	59	55	50	46	80
Total suspended solids	mg/L					310	250	171	210	400	26	100	37	7
Turbidity	NTU					270	120	120	110	310	29	80	30	17
Major Ions														
Total alkalinity	mg/L as Ca CO3					43	39	39	42	38	32	32	32	38
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.5	1.9	1.8	1.5	1.1	2.1	2.7	3.1	2.8
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	0.5	0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.05	<0.05	0.05	0.1	0.05	0.1	0.1
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		11	12	12	11	12	17	11	13	11
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					0.05	0.1	0.2	0.1	0.15	<0.05	0.1	0.05	<0.05
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	3	5.6	5.3	4.4	15	2.4	2.9	1.1	0.51
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.095	0.088	0.18	0.066	0.092	0.063	0.12	0.066	0.086
Antimony, total	mg/L			**0.009**		0.0017	0.0025	0.0032	0.0015	0.0017	0.001	0.0007	0.00067	0.00063
Antimony, dissolved	mg/L			**0.009**		0.0007	0.00066	0.00091	0.00064	0.00061	0.00053	0.00032	0.00037	0.00063
Arsenic, total	mg/L	**0.005**		**0.005**		0.005	0.0095	0.0014	0.0023	0.025	0.001	0.004	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.1	0.16	0.16	0.1	0.19	0.091	0.09	0.058	0.072
Barium, dissolved	mg/L			**1**		0.039	0.033	0.035	0.027	0.032	0.04	0.047	0.044	0.072
Beryllium, total	mg/L			**0.00013**		0.00042	<0.0001	0.00042	0.0003	0.00043	<0.00008	0.00018	0.00012	<0.00004
Beryllium, dissolved	mg/L			**0.00013**		0.00023	0.00027	0.00017	<0.0001	<0.00008	<0.00006	<0.00005	0.00008	<0.00004
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.11	0.048	0.046	0.018	0.047	0.035	0.032	0.008	0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.002	<0.002	<0.002	<0.0006	0.0021	0.0035	<0.0006	0.0036	0.0057
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00047	0.00069	0.00021	0.00039	0.00022	<0.0002	0.00024	<0.00007	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00008	<0.00008	<0.00008	<0.0002	0.00007	<0.00007	<0.00009	<0.00006	<0.0001
Calcium, total	mg/L					18	16	17	17	22	16	19	17	28
Calcium, dissolved	mg/L					18	16	15	13	13	14	14	16	28
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0051	0.011	0.011	0.01	0.032	0.014	0.011	0.002	0.004
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	0.0021	0.0024	0.0018	0.0015	0.0023
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.002	0.0038	0.0037	0.0032	0.0081999	0.0023	0.0021	0.0015	0.00046
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.0001	0.00018	0.00009	<0.00008	<0.0001	0.00009	0.00009	0.0001	0.00013
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.016	0.023	0.015	0.019	0.05	0.014	0.017	0.0068	0.0025
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0005	<0.0005	<0.0005	0.00026	0.00088	0.00077	<0.0005	0.00025	0.00076
Iron, total	mg/L	**0.3**		**0.001**		4.4	8.2	7.5	4.5	11	4.5	4.7	3.4	0.69
Iron, dissolved	mg/L	**0.3**		**0.35**		0.02	0.035	0.037	0.023	0.028	0.025	0.076	0.05	0.06
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0041999	0.0088	0.008	0.0055	0.011	0.0066	0.0048	0.0015	0.00059
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00018	<0.0001	0.00012	<0.0001	<0.00006	<0.00005	<0.00007	<0.00006	<0.00006
Magnesium, total	mg/L					3.3	4.3	4.3	5.5	11	3	4.5	2.3	3.1
Magnesium, dissolved	mg/L					1.8	1.6	1.5	1.3	1.2	1.4	1.4	1.6	3.1
Manganese, total	mg/L			**EQ10**	**EQ11**	0.13	0.26	0.22	0.19	0.51	0.13	0.14	0.068	0.022
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	<0.0003	0.00063	0.011	0.0034	<0.0003	0.0027	0.007	0.012	0.013
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.0001	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00004	<0.00004	<0.00004	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0041	0.0032	0.0041999	0.0025	0.0027	0.0016	0.0016	0.0014	0.0032
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.002	0.0018	0.0015	0.0014	0.0011	0.0013	0.0011	0.0013	0.0032
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0037	0.011	0.023	0.013	0.033	0.081	0.009	0.17	0.0022
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0008	<0.0008	<0.0008	<0.0004	0.00055	0.0012	<0.0003	<0.0004	0.0022
Potassium, total	mg/L					1.5	2.5	2.6	2.4	6	1.6	1.8	1.1	1.2
Potassium, dissolved	mg/L					1	0.89	0.67	0.68	0.95	0.6	0.65	0.48	0.96
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.0022	0.0045	<0.001	<0.001	0.0059	0.004	0.002	0.004
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00016	0.00022	0.00018	0.0002	0.00041	0.0001	0.00036	0.00003	0.00004
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	0.00001	0.00001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					0.71	1	1.1	1.1	4.1	0.76	1	0.89	0.92
Sodium, dissolvd	mg/L					0.59	0.44	0.49	0.38	0.4	0.48	0.43	0.5	0.92
Strontium, total	mg/L					0.11	0.12	0.12	0.096	0.097	0.081	0.088	0.088	0.17
Strontium, dissolved	mg/L					0.096	0.084	0.089	0.075	0.069	0.077	0.075	0.088	0.17
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00015	0.00041	0.00053	0.00017	0.00045	0.00013	0.00009	0.00008	0.00018
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00011	0.00009	0.0001	0.00005	0.00007	0.00007	0.00003	0.00008	0.00018
Vanadium, total	mg/L					0.0078	0.018	0.018	0.017	0.048	<0.001	0.0071	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.044	0.061	0.036	0.2	0.13	0.054	0.029	0.02	0.011
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.013	0.0037	0.0024	<0.0004	0.00046	0.0025	<0.0004	0.00079	0.0027

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W10	W10	W10	W10	W10	W10	W10	W10	W10
Sampling Date						25-Sep-93	2-Oct-93	30-Oct-93	2-Dec-93	6-Jan-94	2-Feb-94	7-Feb-94	15-Feb-94	22-Feb-94
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.93	7.98	8.4			7.1	7	7.8	7.1
Conductivity	uS/cm					112	86	124			215	245	264	237
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		6.7	7.7	8.1	7.7	7.7	7.8	7.6	7.6	7.5
Specific Conductance	uS/cm					110	79	130	240	210	250	300	310	250
Total Hardness	mg/L					75	69	61	97	110	110	120	140	130
Total dissolved solids	mg/L					72	54	86	150	150	140	180	200	170
Total suspended solids	mg/L					200	220	730	15	11	11	<1	8	13
Turbidity	NTU					230	160	520	9.3	12	4	0.26	1	7.3
Major Ions														
Total alkalinity	mg/L as Ca CO3					42	38	70	88	80	88	100	110	88
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					2.9	1.7	1.3	3.8	3.5	2.6	5.2	3.9	5.8
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	1.5	0.5	1	1	0.5	1	1	1
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.05	0.05	0.1	0.2	0.15	0.15	0.1	0.15
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		8	9.2	21	33	29	39	56	49	44
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	0.19	0.2	0.15	0.05	0.05	0.1
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus, total	mg/L					0.1	0.15	0.35	0.05	0.06	0.05	0.01	0.03	0.03
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**			<0.005						
Cyanide, WAD	mg/L			**0.005**	**0.01**			<0.005						
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	9.4	6.2	27	0.45	0.2	0.12	<0.001	0.048	0.17
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.11	0.13	0.058	0.0094	0.0066	0.0058	<0.001	0.002	0.0039
Antimony, total	mg/L			**0.009**		0.003	0.0018	0.0033	0.00082	0.00091	0.0007	0.00082	0.00073	0.00051
Antimony, dissolved	mg/L			**0.009**		0.00087	0.00081	0.00064	0.00044	0.00049	0.0006	0.00074	0.0006	0.00051
Arsenic, total	mg/L	**0.005**		**0.005**		0.012	0.014	0.037	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.19	0.15	0.31	0.074	0.086	0.096	0.1	0.079	0.091
Barium, dissolved	mg/L			**1**		0.048	0.051	0.028	0.068	0.079	0.089	0.096	0.079	0.088
Beryllium, total	mg/L			**0.00013**		0.00036	0.0003	0.00062	<0.00008	0.00007	<0.00006	<0.00007	<0.00005	0.00031
Beryllium, dissolved	mg/L			**0.00013**		0.00009	<0.00006	<0.00006	<0.00008	<0.00006	<0.00006	<0.00007	<0.00005	<0.00009
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.018	0.013	0.014	<0.001	0.018	0.015	0.0075	0.0098	0.018
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0053	0.0052	0.0047	<0.001	0.012	0.011	<0.0008	0.005	0.013
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00059	0.00069	***0.0012***	<0.00008	<0.0001	0.0002	0.00009	<0.00007	0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	0.0001	<0.0001	<0.00008	<0.0001	<0.0001	<0.00008	<0.00007	<0.00009
Calcium, total	mg/L					26	24	43	36	45	40	53	49	57
Calcium, dissolved	mg/L					26	24	21	34	36	36	41	47	43
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.013	0.005	0.051	0.012	0.0026	0.0008	<0.0005	0.0016	0.0012
Chromium, dissolved	mg/L					0.002	0.0032	0.0018	0.011	0.0007	0.00049	<0.0005	0.0014	0.001
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.0056999	0.0049	0.022	0.00067	0.00024	0.00013	0.00011	<0.00007	0.00023
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00015	0.00017	<0.0001	0.00031	<0.00012	<0.00006	<0.00005	<0.00007	<0.00007
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.087	0.024	0.11	0.002	<0.0004	0.0005	0.001	0.002	0.0021
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00047	0.00068	<0.0004	<0.0004	<0.0004	0.0005	0.001	0.00053	0.0021
Iron, total	mg/L	**0.3**		**0.001**		11	9	75	0.77	0.27	0.15	<0.01	0.12	0.26
Iron, dissolved	mg/L	**0.3**		**0.35**		0.064	0.081	0.047	0.052	<0.01	<0.01	<0.01	0.013	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0071	0.0093999	0.021	0.00073	0.00018	0.0005	<0.00012	0.00067	0.00033
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00006	0.00012	<0.0001	<0.00008	<0.00008	0.00011	0.00006	0.00025	0.00016
Magnesium, total	mg/L					7.5	6.6	21	3.3	5.5	4.7	5.8	5	6.4
Magnesium, dissolved	mg/L					2.4	2.1	2	3	4	3.9	4.1	4.4	4.6
Manganese, total	mg/L			**EQ10**	**EQ11**	0.35	0.36	1.4	0.037	0.018	0.016	0.016	0.021	0.016
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0016	0.0016	0.0021	0.014	0.0074	0.011	0.011	0.016	0.0047
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0044	0.0022	0.0063	0.003	0.0027	0.0026	0.0029	0.0028	0.0029
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0025	0.0021	0.0025	0.0026	0.0023	0.0021	0.0027	0.0028	0.0023
Nickel, total	mg/L	**EQ20**		**EQ22**		0.017	0.011	0.053	0.011	<0.0005	0.0013	0.0019	0.0014	0.0023
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0011	0.001	<0.0005	<0.003	<0.0005	0.0013	0.0012	<0.0003	0.0016
Potassium, total	mg/L					4.8	3	5.2	0.55	1.2	1.2	2.3	1.9	1.7
Potassium, dissolved	mg/L					0.91	1.1	0.69	0.55	0.81	0.9	1.7	1.8	1.2
Selenium, total	mg/L	**0.001**		**0.002**		0.002	<0.001	0.002	0.001	<0.001	0.001	0.004	0.002	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	0.001	<0.001	0.001	0.003	0.002	0.002
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00024	0.00024	0.00081	<0.0001	0.00007	<0.0001	<0.0001	0.00001	<0.0001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					1.6	1.1	2.6	0.54	2.7	1.6	1.6	1.2	2
Sodium, dissolvd	mg/L					0.68	0.57	0.41	0.49	2.2	1.2	1.1	1.1	1.4
Strontium, total	mg/L					0.13	0.11	0.23	0.2	0.23	0.22	0.26	0.24	0.27
Strontium, dissolved	mg/L					0.13	0.11	0.11	0.2	0.21	0.22	0.22	0.24	0.24
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00033	0.00017	0.00034	0.00019	0.00019	0.00023	0.00019	0.00017	0.00018
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00015	0.00014	0.00013	0.00016	0.00019	0.0002	0.00019	0.00017	0.00018
Vanadium, total	mg/L					0.045	0.019	0.083	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.075	0.062	0.14	0.0051	0.0051	0.0091999	0.0027	0.0025	0.011
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.0005	0.0021	<0.0007	<0.0003	<0.002	0.0041999	0.0025	0.0021	0.0055

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W10	W11	W11	W11	W11	W11	W11
Sampling Date						27-Feb-94	10-Mar-93	1-Apr-93	29-Apr-93	29-May-93	3-Jun-93	8-Jun-93
		Long Term	Short Term	Long Term	Short Term					1		
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.2	7.7	8.01			7.8	7.57
Conductivity	uS/cm					254	60	323			125	111.3
Specific Conductivity	uS/cm											
Dissolved Oxygen	mg/L											
Dissolved Oxygen	%											
ORP	mV											
Turbidity	NTU											
TDS	mg/L											
Temperature	degC											
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.6	7.6	7.6	7.6	*6.3*	7.3	6.9
Specific Conductance	uS/cm					260	330	300	270	130	110	100
Total Hardness	mg/L					130	150	120	180	71	66	52
Total dissolved solids	mg/L					170	190	230	200	88	72	87
Total suspended solids	mg/L					16	<1	6	27	42	18	22
Turbidity	NTU					0.8	0.4	8.4	26	43	7.1	18
Major Ions												
Total alkalinity	mg/L as Ca CO3					100	68	66	60	27	25	26
Alkalinity to pH 4.5	mg/L as Ca CO3											
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3											
Acidity	mg/L					5.4	3.2	2.3	2.6	2.3	3.2	2.1
Chloride	mg/L	**120**	**640**	**150**	**600**	1.5	<0.5	0.5	<0.5	0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.2	0.1	0.15	0.1	0.05	0.1	0.05
Bromide	mg/L											
Sulfate	mg/L			**EQ23**		38	100	100	82	23	23	18
Nutrients												
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.15	<0.5	<1.26	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, total	mg/L as N											
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**								
Free Ammonia	mg/L as NH3-N					<0.005	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organics												
Total Organic Carbon	mg/L											
Dissolved Organic Carbon	mg/L											
Other												
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.005	<0.005					
Cyanide, WAD	mg/L			**0.005**	**0.01**	<0.005	<0.005					
Thiocyanate	mg/L					0.05						
Metals												
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.012	0.023	0.028	1.1	0.36	0.14	0.36
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.001	<0.0006	<0.0003	<0.0009	0.039	0.007	0.027
Antimony, total	mg/L			**0.009**		0.00045	0.00074	0.00049	0.0009	0.00058	0.00035	0.00038
Antimony, dissolved	mg/L			**0.009**		0.00043	0.00019	0.00019	0.00019	<0.0001	0.00035	0.00013
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0041999
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.071	0.04	0.036	0.069	0.036	0.026	0.034
Barium, dissolved	mg/L			**1**		0.07	0.033	0.035	0.039	0.02	0.02	0.025
Beryllium, total	mg/L			**0.00013**		<0.0001	0.00013	0.00006	<0.00003	<0.00009	<0.00009	0.00065
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.00005	<0.00005	<0.00008	<0.0002	<0.0002	0.00009
Bismuth, total	mg/L											
Bismuth, dissolved	mg/L											
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.01	0.062	0.018	0.061	0.037	0.034	0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.01	0.0067	0.0052	<0.001	0.0061	0.0063	<0.002
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	0.00008	0.00006	0.00004	0.00015	0.00014	0.00017
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.00008	<0.00009	<0.00007	0.00015	<0.0001	<0.00008
Calcium, total	mg/L					47	50	40	61	24	22	18
Calcium, dissolved	mg/L					45	44	40	45	19	21	18
Cesium, total	mg/L											
Cesium, dissolved	mg/L											
Chromium, total	mg/L					0.002	0.0014	0.00066	0.0022	0.0032	0.0035	0.00082
Chromium, dissolved	mg/L					0.0019	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L											
Cobalt, total	mg/L			**0.004**	**0.11**	<0.00009	0.00015	0.00011	0.0014	0.00057	0.00033	0.00063
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00009	<0.00006	0.00003	<0.00007	<0.0001	0.00015	0.00024
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	0.0043	0.0011	0.011	0.0058	0.0039	0.003
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	0.00092	<0.0002	<0.0003	0.00057	<0.0002	<0.0005
Iron, total	mg/L	**0.3**		**0.001**		0.04	0.065	0.066	2.6	0.65	0.23	0.78
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	0.01	<0.01	<0.01	0.026	<0.01	0.012
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00007	0.0011	0.00071	0.002	0.002	0.0013	0.001
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00007	0.00013	<0.00004	<0.00008	0.00007	<0.00007	0.00022
Magnesium, total	mg/L					4.6	5.7	4.2	7.7	2.7	2.6	1.8
Magnesium, dissolved	mg/L					4.4	4.8	4.2	4.1	2.2	2.3	1.7
Manganese, total	mg/L			**EQ10**	**EQ11**	0.017	0.0019	0.0023	0.063	0.031	0.018	0.028
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.016	0.00016	0.00073	0.00005	0.012	0.013	0.012
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0024	0.0033	0.0029	0.0046999	0.0017	0.0017	0.0018
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0024	0.0029	0.0027	0.0029	0.0016	0.0013	0.0014
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0013	0.0015	0.0015	0.0072	0.0048	0.0042	0.0049
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0012	<0.0003	0.00055	0.0003	0.002	0.0015	<0.0008
Potassium, total	mg/L					1.6	0.6	0.37	0.54	0.46	0.38	0.34
Potassium, dissolved	mg/L					1.3	0.41	0.28	0.35	0.25	0.27	0.34
Selenium, total	mg/L	**0.001**		**0.002**		0.002	0.0054	<0.001	<0.001	<0.001	0.0088999	0.0088999
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L											
Silicon, dissolved	mg/L											
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00007	0.00019	<0.00002	0.00011	<0.00002	0.00001	0.00003
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.00002	<0.00003	<0.0001	<0.00004	<0.0001	<0.0001
Sodium, total	mg/L					1.3	2.2	1.6	1.7	0.86	0.8	0.66
Sodium, dissolvd	mg/L					1.1	1.9	1.6	1.6	0.7	0.74	0.66
Strontium, total	mg/L					0.21	0.18	0.16	0.23	0.088	0.084	0.084
Strontium, dissolved	mg/L					0.21	0.16	0.16	0.18	0.079	0.087	0.068
Sulfur, total	mg/L											
Sulfur, dissolved	mg/L											
Thallium, total	mg/L	**0.0008**		**0.0008**								
Thallium, dissolved	mg/L	**0.0008**		**0.0008**								
Tin, total	mg/L											
Tin, dissolved	mg/L											
Titanium, total	mg/L											
Titanium, dissolved	mg/L											
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00015	0.00036	0.00043	0.0004	0.00009	0.00009	0.00013
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00015	0.00028	0.00043	0.00032	0.00009	0.00009	0.0001
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.0036	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0019	0.019	0.084	0.024	0.014	0.023	0.026
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0019	0.00067	<0.0004	0.0018	0.0049	0.0037	0.01

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W11	W11	W11	W11	W11	W11	W11
Sampling Date						16-Jun-93	20-Jun-93	25-Jun-93	30-Jul-93	26-Aug-93	6-Sep-93	14-Sep-93
		Long Term	Short Term	Long Term	Short Term						1	
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.79	7.67		7.18	7.78	7.74	7.72
Conductivity	uS/cm					121.8	154.1		124	155	132	187
Specific Conductivity	uS/cm											
Dissolved Oxygen	mg/L											
Dissolved Oxygen	%											
ORP	mV											
Turbidity	NTU											
TDS	mg/L											
Temperature	degC											
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.1	7.3	7.3	7.3	7.3	*6.4*	7
Specific Conductance	uS/cm					130	150	140	120	150	130	180
Total Hardness	mg/L					59	67	50	44	65	64	88
Total dissolved solids	mg/L					72	100	105	91	110	83	120
Total suspended solids	mg/L					5	<1	6	4000	<1	5	2
Turbidity	NTU					2.5	1.5	2.5	360	1.1	1.2	0.5
Major Ions												
Total alkalinity	mg/L as Ca CO3					28	31	34	49	34	30	37
Alkalinity to pH 4.5	mg/L as Ca CO3											
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3											
Acidity	mg/L					3	2.5	2.3	14	2.1	2.9	3.3
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.05	0.05	0.05	0.1	0.05	0.15
Bromide	mg/L											
Sulfate	mg/L			**EQ23**		24	33	27	29	33	28	44
Nutrients												
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005
Nitrogen, total	mg/L as N											
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**								
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					<0.05	<0.05	<0.05	0.05	<0.05	<0.05	<0.05
Organics												
Total Organic Carbon	mg/L											
Dissolved Organic Carbon	mg/L											
Other												
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**				<0.005			
Cyanide, WAD	mg/L			**0.005**	**0.01**				<0.005			
Thiocyanate	mg/L								0.05			
Metals												
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.11	0.097	0.17	34	0.048	0.12	0.037
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.014	0.0089	0.0079	0.027	0.0081	0.014	0.0033
Antimony, total	mg/L			**0.009**		0.0008	0.0017	0.00073	0.0081999	0.00049	<0.0001	0.0003
Antimony, dissolved	mg/L			**0.009**		<0.0001	0.00015	0.0005	<0.0001	0.00012	<0.0001	0.00027
Arsenic, total	mg/L	**0.005**		**0.005**		0.0027	<0.001	<0.001	0.14	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.03	0.038	0.024	0.63	0.037	0.033	0.037
Barium, dissolved	mg/L			**1**		0.025	0.026	0.019	0.016	0.027	0.031	0.034
Beryllium, total	mg/L			**0.00013**		0.0015	0.0013	0.00042	0.00071	<0.00008	0.00006	<0.00006
Beryllium, dissolved	mg/L			**0.00013**		0.00019	0.00032	<0.0001	<0.0001	0.00008	<0.00005	<0.00006
Bismuth, total	mg/L											
Bismuth, dissolved	mg/L											
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.07	0.09	0.014	0.031	0.042	0.067	0.02
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.002	<0.002	<0.0006	0.0036	0.0025	<0.0006	0.003
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00089	***0.0012***	<0.0001	***0.0051999***	<0.00008	0.00028	<0.00009
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00008	<0.00008	<0.0001	<0.0001	0.00008	<0.00009	<0.00007
Calcium, total	mg/L					20	24	21	21	25	29	35
Calcium, dissolved	mg/L					20	23	17	15	22	22	30
Cesium, total	mg/L											
Cesium, dissolved	mg/L											
Chromium, total	mg/L					0.0012	0.0018	0.0027	0.045	0.014	0.008	0.0015
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	0.0024	0.0019	0.0015
Chromium, hexavalent	mg/L											
Cobalt, total	mg/L			**0.004**	**0.11**	0.00058	0.00089	0.00026	0.04	0.00026	0.00023	0.00086
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00023	0.00016	0.00014	0.00017	0.00018	0.00008	0.00008
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0025	0.0066999	0.0023	0.32	0.0036	0.011	0.0049
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0005	<0.0005	0.00066	0.00086	0.0012	<0.0005	0.00032
Iron, total	mg/L	**0.3**		**0.001**		0.21	0.12	0.25	91	0.15	0.26	1.4
Iron, dissolved	mg/L	**0.3**		**0.35**		0.017	<0.01	<0.01	0.023	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0015	0.0051	0.00034	0.057	0.0015	0.0017	0.00063
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0001	<0.0001	<0.0001	<0.00007	0.00042	<0.00007	<0.00006
Magnesium, total	mg/L					2.1	2.5	2.6	22	2.8	3.5	3.6
Magnesium, dissolved	mg/L					2.1	2.4	1.9	1.5	2.4	2.3	3.1
Manganese, total	mg/L			**EQ10**	**EQ11**	0.01	0.0052	0.012	2.2	0.0055	0.0075	0.0091
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0042	0.0019	0.0038	0.016	0.004	0.003	0.0011
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	0.00013	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00004	<0.00004	<0.00005	<0.00005	0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0029	0.0026	0.0015	0.023	0.0012	0.0014	0.002
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0014	0.0016	0.0013	0.0033	0.0012	0.0013	0.0015
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0033	0.07	0.0037	0.096	0.0088	0.018	0.13
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0008	<0.0008	0.00051	<0.0004	0.004	0.00061	0.0002
Potassium, total	mg/L					0.33	0.29	0.38	2.8	0.47	0.65	0.74
Potassium, dissolved	mg/L					0.33	0.29	0.19	0.25	0.15	0.21	0.24
Selenium, total	mg/L	**0.001**		**0.002**		0.013	0.0063	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L											
Silicon, dissolved	mg/L											
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	0.0016	0.00003	0.0022	0.00005	0.00028	0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					0.7	0.96	0.86	1.7	1	1.3	1.5
Sodium, dissolvd	mg/L					0.68	0.82	0.64	0.44	0.78	0.76	0.98
Strontium, total	mg/L					0.11	0.12	0.086	0.1	0.095	0.089	0.12
Strontium, dissolved	mg/L					0.083	0.094	0.078	0.065	0.086	0.079	0.11
Sulfur, total	mg/L											
Sulfur, dissolved	mg/L											
Thallium, total	mg/L	**0.0008**		**0.0008**								
Thallium, dissolved	mg/L	**0.0008**		**0.0008**								
Tin, total	mg/L											
Tin, dissolved	mg/L											
Titanium, total	mg/L											
Titanium, dissolved	mg/L											
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00022	0.00034	0.00006	0.0029	0.00012	0.00005	0.00013
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00008	0.00011	0.00006	<0.00003	0.00008	0.00006	0.00013
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.13	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.012	0.012	0.014	0.54	0.038	0.011	0.067
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0045	0.006	0.0028	0.0038	0.0081999	0.0013	0.0028

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W11	W11	W11	W11	W11	W11	W11	W11
Sampling Date						19-Sep-93	25-Sep-93	2-Oct-93	30-Oct-93	29-Nov-93	6-Jan-94	2-Feb-94	7-Feb-94
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.9	7.79	7.8	7.8	7.5		7.5	6.8
Conductivity	uS/cm					192	211	124	197	278		442	274
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.1	6.8	7.6	7.6	7.5	7.8	7.8	7.7
Specific Conductance	uS/cm					200	210	110	210	290	430	500	330
Total Hardness	mg/L					120	120	72	91	150	220	220	130
Total dissolved solids	mg/L					140	150	76	140	200	350	340	230
Total suspended solids	mg/L					<1	<1	110	2	2	<1	18	5
Turbidity	NTU					0.35	0.52	80	0.53	1.1	0.52	4.4	1.3
Major Ions													
Total alkalinity	mg/L as Ca CO3					41	40	30	40	49	110	100	62
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					2.9	3.4	2.2	2	22	3.4	4	3.8
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	0.5	1	<0.5	<0.5	0.5	0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.1	0.1	0.1	0.45	0.25	0.15
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		58	53	22	55	71	180	180	110
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	<0.5	<0.05	<0.05	<0.05	<0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.005	<0.5	<0.005	<0.005	<0.005	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	0.01	0.01	<0.01	<0.01
Phosphorus, total	mg/L					<0.05	<0.05	0.15	<0.05	0.01	0.03	0.06	0.02
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**				<0.005				
Cyanide, WAD	mg/L			**0.005**	**0.01**				<0.005				
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.02	0.089	3.2	0.1	0.024	0.018	0.8	0.027
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0068	0.0069	0.05	<0.001	<0.001	<0.002	0.0033	<0.001
Antimony, total	mg/L			**0.009**		0.00028	0.00015	0.00084	0.00022	0.00073	0.00067	0.0011	0.00047
Antimony, dissolved	mg/L			**0.009**		0.00028	0.00015	0.00044	<0.0001	<0.0001	0.00052	0.00069	0.00034
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.006	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.043	0.042	0.093	0.034	0.038	0.022	0.039	0.053
Barium, dissolved	mg/L			**1**		0.043	0.037	0.032	0.031	0.038	0.021	0.023	0.047
Beryllium, total	mg/L			**0.00013**		<0.00004	<0.00006	0.00016	<0.00006	<0.0001	0.0001	0.00018	<0.00007
Beryllium, dissolved	mg/L			**0.00013**		<0.00004	<0.00006	<0.00006	<0.00006	<0.0001	<0.00006	0.00006	<0.00007
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0081	0.0057	0.0084	0.0071	0.017	0.024	0.024	<0.0008
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0038	0.0037	0.0039	0.0044	0.0034	0.017	0.014	<0.0008
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0002	0.00043	0.00013	<0.0001	<0.0001	0.00028	0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.00008
Calcium, total	mg/L					41	46	26	39	61	90	76	62
Calcium, dissolved	mg/L					39	40	25	31	53	71	69	45
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.003	0.0015	0.002	0.002	0.017	0.0029	0.0016	<0.0005
Chromium, dissolved	mg/L					0.0014	0.0015	0.002	0.0012	0.0015	0.00089	0.0011	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00014	0.00045	0.0027	0.0002	0.00053	0.0002	0.00086	0.00016
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.000035	0.00018	0.00015	0.00005	0.00023	0.00016	0.00013	<0.00005
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.021	0.066	0.03	0.0053	0.008	<0.0004	0.0059	0.0024
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0003	<0.0004	0.00056	<0.0004	<0.0002	<0.0004	0.00037	0.0011
Iron, total	mg/L	**0.3**		**0.001**		0.037	0.14	5.2	0.39	0.038	0.084	1.4	0.08
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.011	0.015	0.024	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00036	0.00072	0.0031	0.00018	0.00081	0.00033	0.0012	0.0002
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00006	<0.00006	<0.00007	<0.0001	<0.0001	<0.00008	0.00011	0.00011
Magnesium, total	mg/L					4.8	5.4	4.5	4	8.7	14	12	7.5
Magnesium, dissolved	mg/L					4.2	4.4	2.4	3.2	5.4	10	9.6	5.1
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0037	0.0059	0.15	0.0065	0.0027	0.11	0.21	0.0034
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0011	0.0012	0.0085	0.00059	0.0004	0.085	0.071	0.00017
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0021	0.0031	0.0022	0.0023	0.003	0.0051	0.0051	0.0033
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0021	0.0019	0.0016	0.0018	0.003	0.0045	0.0039	0.0029
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0024	0.0049	0.0073	0.0038	0.0038	0.002	0.01	0.0028
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0021	0.0018	0.0013	<0.0005	0.0012	<0.0005	0.0075	0.0015
Potassium, total	mg/L					0.89	0.81	1.3	0.81	0.65	1.6	1.6	0.64
Potassium, dissolved	mg/L					0.34	0.35	0.37	<0.05	0.46	1.1	1.2	0.42
Selenium, total	mg/L	**0.001**		**0.002**		0.008	<0.001	<0.001	0.003	0.001	0.001	0.002	0.006
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.003	<0.001	<0.001	<0.001	0.001	<0.001	0.002	0.005
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00003	0.00002	0.0018	0.00001	0.00001	<0.00001	0.00005	0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	0.00001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					1.6	1.7	1.1	1.7	3.5	5.5	3.6	2.6
Sodium, dissolvd	mg/L					1.4	1.3	0.73	0.58	2.2	5	3.2	1.9
Strontium, total	mg/L					0.15	0.13	0.084	0.14	0.22	0.51	0.49	0.23
Strontium, dissolved	mg/L					0.15	0.13	0.084	0.12	0.19	0.47	0.45	0.2
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00022	0.00012	0.00018	0.00009	0.00018	0.00082	0.0011	0.00043
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00022	0.00012	0.00008	0.00009	0.00018	0.00082	0.00083	0.0004
Vanadium, total	mg/L					<0.001	<0.001	0.005	<0.001	<0.001	<0.001	0.003	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.018	0.015	0.044	0.0011	0.02	0.03	0.057	0.0071999
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0048	<0.0005	0.0023	<0.0007	0.0048	<0.002	0.015	0.007

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W11	W11	W11	W11	W11	W11	W11	W11
Sampling Date						22-Feb-94	27-Feb-94	29-Mar-94	26-Apr-94	1-Jun-94	28-Jun-94	8-Jul-94	12-Jul-94
		Long Term	Short Term	Long Term	Short Term						1		
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7	7.8	7.6	7.6	7.9	7.8	7.7	7.5
Conductivity	uS/cm					457	496	580	329	232	143	137	117
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.6	7.7	7.6	7.4	7.3	*5.9*	6.8	6.7
Specific Conductance	uS/cm					390	450	540	350	240	160	150	130
Total Hardness	mg/L					230	220	230	140	100	61	63	82
Total dissolved solids	mg/L					360	350	420	260	170	100	100	89
Total suspended solids	mg/L					3	20	110	690	<1	10	14	14
Turbidity	NTU					1.1	0.9	61	45	1.3	7.5	8.4	5.8
Major Ions													
Total alkalinity	mg/L as Ca CO3					100	110	73	37	48	36	30	30
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					6.6	5.8	4.4	3.5	3.6	1.7	3.4	1.8
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	1	0.5	<0.5	<0.5	1	<0.1	<0.1
Fluoride	mg/L	**0.12**			**EQ7**	0.25	0.45	0.35	0.4	0.15	0.05	0.25	0.05
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		160	160	160	140	71	<0.5	31	25
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.05	<0.05	0.06	0.47	<0.05	<0.05	<0.05	<0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.005	<0.001	0.001	<0.001	<0.001	0.002	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Ortho phosphorus, dissolved	mg/L					<0.01	<0.01	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus, total	mg/L					<0.01	<0.01	0.13	0.58	<0.002	0.025	0.029	0.038
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**		<0.005						
Cyanide, WAD	mg/L			**0.005**	**0.01**		<0.005						
Thiocyanate	mg/L						0.05						
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.013	0.017	2.01	6.37	0.0072	0.0613	0.167	0.0681
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0011	<0.001	0.003	0.0392	<0.001	0.0065	0.0137	0.0118
Antimony, total	mg/L			**0.009**		0.0006	0.0007	0.00091	0.0022	0.0003	<0.0002	0.00039	0.00192
Antimony, dissolved	mg/L			**0.009**		0.00052	0.00061	0.0003	0.00056	0.0003	<0.0002	<0.0001	0.00087
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	0.008	<0.001	<0.001	<0.001	0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Barium, total	mg/L			**1**		0.02	0.022	0.0533	0.116	0.0391	0.0268	0.0333	0.0292
Barium, dissolved	mg/L			**1**		0.02	0.021	0.0199	0.0229	0.0356	0.0201	0.0258	0.0282
Beryllium, total	mg/L			**0.00013**		<0.00009	0.00014	<0.0001	0.00106	<0.00008	<0.00011	0.00008	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.00009	<0.0001	<0.0001	<0.0003	<0.00008	<0.00011	0.00008	<0.0001
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.02	0.02	0.0368	0.0876	0.00871	<0.00068	0.0111	<0.00071
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.017	0.014	0.0248	0.0709	0.00325	<0.00068	<0.00073	<0.00071
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00014	<0.0001	***0.00104***	***0.00293***	<0.00009	<0.0001	<0.0001	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00009	<0.0001	0.00029	0.00071	<0.00009	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					98	92	124	65.7	42	27	22.1	28.8
Calcium, dissolved	mg/L					75	72	75.1	44.1	34.6	20.9	21.8	28.7
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.011	0.0021	0.00052	0.0080699	0.00079	<0.0005	<0.0005	<0.0005
Chromium, dissolved	mg/L					0.001	0.0021	0.00051	0.0009	0.00079	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00013	0.00013	0.00378	0.00993	0.00013	0.00007	0.00024	<0.0001
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00011	<0.00009	0.00044	0.00099	<0.00005	<0.0001	0.00013	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0013	0.0044	0.0204	0.0811	0.00179	<0.0004	0.00293	<0.0005
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0013	0.00082	0.00106	0.00096	0.0015	<0.0004	0.00282	<0.0005
Iron, total	mg/L	**0.3**		**0.001**		0.11	0.07	4.33	8.01	<0.01	0.05	0.311	0.0985
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00024	0.0013	0.0023599	0.0092399	0.00136	0.00015	0.00031	0.00015
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00007	0.00007	<0.00005	<0.00012	0.001	<0.00005	<0.0001	<0.00008
Magnesium, total	mg/L					14	14	17.5	13.3	4.65	2.79	2.15	2.57
Magnesium, dissolved	mg/L					10	10	9.93	5.98	3.7	2.12	2.06	2.39
Manganese, total	mg/L			**EQ10**	**EQ11**	0.13	0.11	0.358	0.583	0.00053	0.00476	0.013	0.00573
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.096	0.088	0.113	0.0953	<0.0001	0.0026	0.00576	0.00225
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0059	0.0051	0.0042199	0.00826	0.00276	0.00187	0.00178	0.00277
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0041	0.0038	0.00234	0.00245	0.00259	0.0018	0.00142	0.00039
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0095	0.0069	0.0352	0.0581	0.00231	0.0019	0.0024	0.00282
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0056	0.0048	0.011	0.0115	0.00221	0.00129	0.00234	0.00272
Potassium, total	mg/L					1.6	1.7	3.26	3.83	0.25	0.2	0.274	0.3
Potassium, dissolved	mg/L					1.1	1	1.55	1.25	0.2	0.15	0.201	0.3
Selenium, total	mg/L	**0.001**		**0.002**		0.002	<0.001	0.009	0.009	<0.001	0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.001	<0.001	0.005	0.003	<0.001	0.00195	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	0.00018	0.00072	<0.0001	0.00002	0.00002	0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00001	0.00005
Sodium, total	mg/L					5.1	5.2	4.66	4.12	1.3	0.687	0.709	0.863
Sodium, dissolvd	mg/L					3.9	3.7	2.71	1.93	1.04	0.662	0.678	0.846
Strontium, total	mg/L					0.53	0.52	0.588	0.319	0.168	0.122	0.104	0.12
Strontium, dissolved	mg/L					0.48	0.46	0.404	0.226	0.151	0.111	0.103	0.11
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00072	0.00086	0.0007	0.00095	0.00026	0.00013	0.00012	0.0001
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.0007	0.00085	0.00055	0.00041	0.00024	0.00012	0.00012	0.0001
Vanadium, total	mg/L					<0.001	<0.001	0.0061999	0.0246	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.01	0.031	0.0695	0.166	0.0095	0.00968	0.0096	0.00689
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0096	0.0093	0.0149	0.0049	0.008	<0.001	0.00484	0.006

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W11	W11	W11	W11	W11	W11	W11	W11
Sampling Date						18-Jul-94	27-Jul-94	28-Aug-94	5-Oct-94	6-Nov-94	1-Dec-94	25-Feb-95	15-May-96
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.7	7.8		7.62	8.18	8.24		
Conductivity	uS/cm					109	110		215	288	289		
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		6.6	6.6	7.4	7.3	6.8	7.5	7.2	8
Specific Conductance	uS/cm					120	110	170	250	340	350	500	345
Total Hardness	mg/L					56	34	84	110	150	180	230	107
Total dissolved solids	mg/L					71	85	100	190	250	240	360	218
Total suspended solids	mg/L					7	11	8	8	31	8	20	10
Turbidity	NTU					6.5	6	1.9	4.5	17	3	2.6	1.1
Major Ions													
Total alkalinity	mg/L as Ca CO3					26	22	36	44	53	58	96	61
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					2.3	3.4	<0.1	3.6	4	4	6	1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.1	<0.1	0.5	<0.1	<0.1	<0.5	0.5	0.21
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.1	0.1	0.05	0.1	0.25	0.11
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		16	18	34	75	120	120	170	111.7
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.025
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.018
Ortho phosphorus, dissolved	mg/L					<0.002	0.006	<0.002	<0.002	0.002	0.002	<0.002	<0.002
Phosphorus, total	mg/L					0.016	0.024	0.018	0.01	0.053	0.02	0.036	0.002
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.119	0.147	0.156	0.0247	0.551	0.0268	0.0541	0.0407
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0101	0.0112	0.017	0.00346	0.00977	0.00836	0.0364	0.0046
Antimony, total	mg/L			**0.009**		0.00029	0.00052	<0.0002	0.00035	0.00043	0.00036	0.00035	0.00034
Antimony, dissolved	mg/L			**0.009**		<0.0002	0.00027	<0.0002	0.00023	0.00025	0.00031	0.00034	0.00023
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.003	<0.001	0.00119	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0295	0.0314	0.0389	0.0492	0.0607999	0.0481	0.0235	0.0357
Barium, dissolved	mg/L			**1**		0.0288	0.0181	0.0370999	0.0482999	0.0545	0.0452	0.0202	0.0327
Beryllium, total	mg/L			**0.00013**		<0.0001	0.0007	0.0005	0.0001	0.0001	0.00025	0.00025	<0.00005
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	0.00058	0.0001	0.0001	0.0001	0.00025	0.00025	<0.00005
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0138	0.00149	<0.00074	0.0005	0.00206	0.0005	0.0005	0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0117	<0.001	<0.00074	<0.001	0.00134	<0.001	<0.001	0.008
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	0.00018	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Calcium, total	mg/L					20.3	18.9	32.7	41.8	54	72	80	40.3
Calcium, dissolved	mg/L					19.3	11.7	28.7	37.7	51.3	60.6	74.3	34.8
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.00122	<0.0005	0.00147	<0.0005	0.00105	<0.0005	0.00175	0.0015
Chromium, dissolved	mg/L					<0.0005	<0.0005	0.00113	<0.0005	0.00062	<0.0005	0.00156	0.0015
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00013	0.00012	0.00047	0.00009	0.00051	<0.00007	0.00019	0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	0.00032	<0.00006	0.00017	<0.00007	0.00012	0.00026
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00964	0.00182	0.007	0.00139	0.0046	<0.0005	0.00165	0.0005
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0005	<0.0004	0.0069299	<0.0004	0.00087	<0.0005	0.00154	0.0001
Iron, total	mg/L	**0.3**		**0.001**		0.139	0.2	0.24	0.05	0.884	0.0219	0.097	0.08
Iron, dissolved	mg/L	**0.3**		**0.35**		0.02	<0.01	<0.01	<0.01	<0.01	<0.01	0.094	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0009	0.00018	0.00096	0.00049	0.0074	<0.0001	0.00045	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00008	<0.00008	0.00059	<0.00007	<0.00008	<0.0001	0.00012	<0.00005
Magnesium, total	mg/L					1.9	1.99	4.01	4.25	6.66	8.44	10.8	5.83
Magnesium, dissolved	mg/L					1.89	1.1	3.08	3.54	5.56	6.83	9.67	4.82
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00786	0.011	0.0135	0.00889	0.0253999	0.00225	0.0197	0.0022
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00501	0.00282	0.00458	0.00511	0.00521	0.0013	0.019	0.0002
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00152	0.00159	0.00272	0.0021199	0.0023	0.0026	0.00484	0.00239
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00046	0.00066	0.0026199	0.0021	0.00217	0.00255	0.0043	0.00227
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00349	0.0019	0.0053	0.00205	0.00224	0.00133	0.00338	0.0005
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00339	<0.0005	0.00507	0.00072	<0.0005	<0.0005	0.00332	0.0004
Potassium, total	mg/L					0.25	0.2	0.15	0.25	0.4	0.65	1.43	0.46
Potassium, dissolved	mg/L					0.2	0.05	0.15	0.25	0.3	0.55	1.17	0.36
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	0.002	0.001	<0.001	<0.001	0.004
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001	0.004
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00005	0.00004	0.00007	0.0002	<0.00001	0.00007	0.00007
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00005	0.00005	0.00001	0.00005	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					0.678	0.554	1.21	1.44	2.1	2.73	3.54	2.03
Sodium, dissolvd	mg/L					0.65	0.305	1.2	1.24	1.81	2.21	3.45	1.69
Strontium, total	mg/L					0.093	0.0804	0.117	0.159	0.208	0.271	0.481	0.178
Strontium, dissolved	mg/L					0.091	0.0566	0.116	0.158	0.199	0.248	0.434	0.159
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00006	0.00007	0.00013	0.00027	0.00043	0.00035	0.00083	0.0004
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00006	0.00004	0.00013	0.00026	0.00042	0.00035	0.00063	0.00041
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0154	0.0107	0.007	0.0088999	0.0155	0.0088	0.0105	0.001
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.00971	0.00243	0.005	0.00226	<0.001	<0.001	0.00765	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W11	W11	W11	W11	W11	W11	W11	W11
Sampling Date						2-Jun-96	3-Jul-96	18-Jul-96	27-Jul-96	1-Aug-96	8-Aug-96	4-Sep-96	1-Oct-96
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.85	7.75	7.87	8.14		7.92	8.08	7.55
Conductivity	uS/cm							169	124.4		189	148	223
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.9	7.8	7.8	8	8.2	7.8	7.6	7.6
Specific Conductance	uS/cm					235	215	176	145	184	236	169	254
Total Hardness	mg/L					107	60	71	63	67	86	57	118
Total dissolved solids	mg/L					147	135	108	107	113	133	109	153
Total suspended solids	mg/L					30	<1	38	398	724	23	12	13
Turbidity	NTU					18	0.5	19	330	640	4	12	6.2
Major Ions													
Total alkalinity	mg/L as Ca CO3					42	36	33	32	40	38	28	42
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.2	2	1	1	<1	2	1	2
Chloride	mg/L	**120**	**640**	**150**	**600**	0.16	0.16	0.12	0.12	0.27	0.1	0.16	0.13
Fluoride	mg/L	**0.12**			**EQ7**	0.11	0.1	0.08	0.08	0.07	0.05	0.06	0.09
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		71.3	59.5	46.6	37.6	55.6	69.4	55.9	88.4
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.044	0.005	0.021	0.017	<0.005	0.006	0.042	0.026
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	0.009	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.01
Ortho phosphorus, dissolved	mg/L					0.004	0.002	0.004	0.004	0.006	<0.002	<0.002	<0.002
Phosphorus, total	mg/L					0.056	0.002	0.054	0.21	0.283	0.004	0.024	0.022
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.359	0.0428	0.743	14	10.6	0.157	0.12	0.152
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.0005	0.0003	0.0098999	0.007	0.0045	0.0143999	0.0106999	0.0036
Antimony, total	mg/L			**0.009**		0.0005	0.00028	0.00039	0.00173	0.0014	0.00037	0.00037	0.0004
Antimony, dissolved	mg/L			**0.009**		0.0003	0.00022	0.00026	0.0005	0.0008	0.00036	0.00025	0.00038
Arsenic, total	mg/L	**0.005**		**0.005**		0.003	<0.001	<0.001	0.015	0.012	0.003	0.004	0.002
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0359	0.026	0.0362999	0.249	0.203	0.0360999	0.0281	0.0347999
Barium, dissolved	mg/L			**1**		0.0256	0.0253	0.0252	0.0315	0.0370999	0.0352	0.0233999	0.032
Beryllium, total	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	0.00024	0.00052	<0.00005	<0.00005	<0.00005
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.003	0.004	0.003	0.008	0.001	0.003	0.003	0.009
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.003	0.004	0.003	0.002	<0.001	0.003	0.003	0.008
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	0.0003	0.0006	***0.0012***	***0.0015***	0.0002	***0.0012***	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0001	0.0002	0.0003	<0.0001	<0.0001	<0.0001	0.0001	0.0001
Calcium, total	mg/L					37.6	23.6	23.1	30.2	23.1	30.4	17.6	40.8
Calcium, dissolved	mg/L					37.3	19.2	22.8	21.7	22.9	29.1	19.5	40.6
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.0005	0.0008	<0.0005	0.0148	0.0116	<0.0005	0.0013	<0.0005
Chromium, dissolved	mg/L					<0.0005	0.0008	<0.0005	0.0005	0.0013	<0.0005	0.0007	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00079	0.00022	0.00045	0.0062399	0.00646	0.00035	0.0017	0.00027
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.0004	0.00012	0.00009	0.00034	0.00015	0.00027	0.0005	0.00014
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0026	0.0006	0.0038	0.0535	0.0515	0.0011	0.001	0.0063
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0001	0.0003	0.0001	<0.0001	0.0002	0.0003	0.0004	<0.0001
Iron, total	mg/L	**0.3**		**0.001**		0.67	0.04	0.84	14.3	23.1	0.18	0.12	0.27
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.01	0.02	<0.01	0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00071	<0.00005	0.0004	0.00682	0.011	0.00017	0.00017	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00008	<0.00005
Magnesium, total	mg/L					3.62	2.93	3.69	7.86	11.4	3.54	2.44	4.12
Magnesium, dissolved	mg/L					3.42	2.91	3.41	2.19	2.3	3.33	2.08	4.11
Manganese, total	mg/L			**EQ10**	**EQ11**	0.022	0.0026	0.0237999	0.283	0.519	0.0146	0.009	0.0135
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0053	0.0015	0.0059	0.0162	0.0135	0.0115	0.0074	0.0063
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00211	0.00143	0.00147	0.0074499	0.00734	0.00165	0.00099	0.00196
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00179	0.00136	0.00143	0.00139	0.00192	0.00164	0.00078	0.00148
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0078	0.0021	0.002	0.0225	0.0221	0.0026	0.00016	0.0021
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0017	0.0014	0.0015	0.0014	0.0006	0.0024	0.00012	0.0019
Potassium, total	mg/L					0.36	0.23	0.33	2.71	2.25	0.26	0.45	0.33
Potassium, dissolved	mg/L					0.32	0.23	0.24	0.58	0.67	0.25	0.24	0.31
Selenium, total	mg/L	**0.001**		**0.002**		0.005	0.002	0.002	0.006	0.005	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.003	0.002	<0.001	0.005	<0.001	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00095	0.00005	0.00009	0.00127	0.00044	<0.00001	0.00012	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	0.00001	0.00001	<0.00001	<0.00001	0.00007	<0.00001
Sodium, total	mg/L					0.87	0.91	1.1	1.91	2.02	1.12	0.95	1.36
Sodium, dissolvd	mg/L					0.81	0.91	1.03	0.62	0.8	1.1	0.86	1.34
Strontium, total	mg/L					0.134	0.109	0.106	0.133	0.119	0.151	0.0734	0.146
Strontium, dissolved	mg/L					0.133	0.108	0.105	0.0795	0.0996999	0.149	0.0489	0.146
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00018	0.0001	0.00012	0.00048	0.00132	0.00017	0.00022	0.00035
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.0002	0.0001	0.00012	0.00009	0.00045	0.00013	0.00011	0.00026
Vanadium, total	mg/L					0.001	<0.001	0.003	0.036	0.035	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.017	0.007	0.013	0.104	0.099	0.013	0.005	0.007
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.002	0.006	0.012	0.004	<0.001	0.013	0.001	0.004

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W11	W11	W11	W11	W11	W11	W11	W11	W11
Sampling Date						8-Oct-96	15-Oct-96	24-Oct-96	29-Oct-96	3-Jan-97	5-Feb-97	4-Apr-97	5-May-97	8-Jul-97
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			6.86	7.4	7.44					
Conductivity	uS/cm						264	265	293					
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.6	7.5	7.9	7.9	8	7.7	7.9	8	7.3
Specific Conductance	uS/cm					241	288	319	325	526	357	379	353	68
Total Hardness	mg/L					97	129	132	138	416	193	139	40	50
Total dissolved solids	mg/L					149	195	205	217	379	245	256	123	42
Total suspended solids	mg/L					5	<1	<1	<1	<1	<1	<1	9	1
Turbidity	NTU					0.6	1.7	0.5	1.3	1.1	0.6	3.7	7	1.7
Major Ions														
Total alkalinity	mg/L as Ca CO3					27	46	50	50	124	59	63	59	26
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													26
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													0.5
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					3	2	2	1	6	3	1	2	2
Chloride	mg/L	**120**	**640**	**150**	**600**	0.4	0.13	0.12	0.15	1.05	0.12	0.16	0.14	0.07
Fluoride	mg/L	**0.12**			**EQ7**	0.17	0.08	0.09	0.09	0.2	0.07	0.11	0.08	0.05
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		104	98.5	110	115	167	126	134	113	39.8
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.094	0.009	<0.005	0.012	0.039	0.022	0.015	<0.005	<0.005
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.006	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										0.01
Free Ammonia	mg/L as NH3-N					0.01	0.01	0.01	0.01	<0.02	<0.02	<0.02	<0.02	
Ortho phosphorus, dissolved	mg/L					<0.002	<0.002	0.006	0.006	0.006	<0.002	0.002	<0.002	0.009
Phosphorus, total	mg/L					<0.002	0.004	0.006	0.01	0.008	<0.002	0.013	0.021	0.004
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0980999	0.0118	0.0091	0.0029	0.0041999	<0.0005	0.058	0.191	0.131
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0115	0.0034	0.0007	0.0008	<0.0005	<0.0005	<0.0005	0.0026	0.0068
Antimony, total	mg/L			**0.009**		0.00015	0.0003	0.00034	0.00037	0.00059	0.00045	0.00032	0.00029	0.0006
Antimony, dissolved	mg/L			**0.009**		0.00013	0.00029	0.00028	0.00028	0.00046	0.00021	0.00032	0.00029	0.00035
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	0.002	<0.001	0.001	<0.001	0.011	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0222	0.0364	0.042	0.0432999	0.029	0.0517	0.0452	0.039	0.0235
Barium, dissolved	mg/L			**1**		0.0216	0.0352	0.0415	0.0414	0.028	0.049	0.0434	0.0354	0.021
Beryllium, total	mg/L			**0.00013**		<0.00005	0.00005	<0.00005	<0.00005	0.00005	<0.00005	0.0001	<0.00005	0.00008
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	0.00008
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.004	0.012	0.008	0.01	0.003	0.009	0.01	0.008	0.005
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.004	0.012	0.006	0.004	0.002	0.007	0.01	0.007	0.003
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0006	<0.0001	0.0002	0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0004	<0.0001	0.0002	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					32.6	46	47.3	46.8	145	66	48.3	72.9	20.6
Calcium, dissolved	mg/L					32.4	44.1	44.4	46.8	145	53.4	46.6	66	17.1
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.0005	<0.0005	0.0006	0.001	0.0023	<0.0005	<0.0005	0.0008	0.0044
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	0.0013	<0.0005	0.00025	0.00025	0.00025
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00083	0.00027	0.00012	0.00015	0.00045		0.00009	0.00024	0.0005
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00041	0.00027	0.0001	0.00009	0.00013		0.00008	0.00023	0.00003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0055	0.0016	0.0007	0.0014	0.0021	0.0003	0.0004	0.0009	0.0008
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0013	0.0002	0.0007	0.0009	0.0016	<0.0001	0.00005	0.0002	0.0002
Iron, total	mg/L	**0.3**		**0.001**		0.22	0.05	0.04	0.02	0.07	<0.01	0.1	0.28	0.17
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.02	0.02	<0.01	<0.01	0.005	0.02	0.005
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0002	0.00046	0.00007	0.00007	<0.00005	0.00022	0.00014	0.00014	0.00095
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0002	0.00023	<0.00005	<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.000025
Magnesium, total	mg/L					3.83	4.89	5.34	5.5	15	6.9	5.64	7.18	2.04
Magnesium, dissolved	mg/L					3.79	4.63	5.24	5.23	13	5.5	5.57	6.1	1.81
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0432999	0.0032	0.0069	0.002	0.13	0.0007	0.0036	0.007	0.0036
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0172	0.0018	0.0009	0.0007	0.13	0.0002	0.0006	0.0022	0.0003
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.000025
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00184	0.00185	0.00248	0.00282	0.0064499	0.00228	0.00308	0.00291	0.00103
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0017	0.00171	0.00226	0.00269	0.0064499	0.00208	0.00316	0.00269	0.00096
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0115	0.0028	0.0021	0.0018	0.0028	0.0008	0.0015	0.0015	0.0029
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0096999	0.0018	0.0019	0.0015	0.0026	0.0006	0.0009	0.0012	0.0014
Potassium, total	mg/L					0.62	0.26	0.37	0.38	1.2	0.31	0.35	0.51	0.09
Potassium, dissolved	mg/L					0.58	0.26	0.37	0.36	1.2	0.24	0.33	0.41	<0.02
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.005	<0.001	0.003	0.001	<0.001	<0.001	0.005	
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.004	<0.001	0.003	0.001	<0.001	<0.001	0.006	
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00105	<0.00001	<0.00001	<0.00001	0.00002	0.00002	0.00008	<0.00001	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					3	1.64	1.92	1.93	12	3	2.45	2.85	0.7
Sodium, dissolvd	mg/L					2.91	1.6	1.87	1.78	10	2.4	2.2	2.45	0.6
Strontium, total	mg/L					0.168	0.239	0.263	0.259	1.06	0.265	0.241	0.245	0.103
Strontium, dissolved	mg/L					0.164	0.22	0.238	0.217	0.966	0.25	0.217	0.242	0.0948
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00009	0.00029	0.00044	0.00036	0.0013	0.00044	0.0006	0.00042	<0.00001
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00007	0.00028	0.00001	0.00033	0.0013	0.00041	0.0005	0.0004	<0.00001
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.016
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.054	0.022	0.011	0.008	0.018	0.013	0.01	0.007	0.055
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.048	0.008	0.006	0.005	0.014	0.013	<0.001	0.004	0.006

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W11	W11	W11	W11	W13	W13	W13	W13	W13
Sampling Date						11-Aug-97	16-Sep-97	3-Nov-97	26-Oct-00	29-May-93	25-Jun-93	30-Jul-93	26-Aug-93	2-Oct-93
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**								8.72	8.82	*9.17*
Conductivity	uS/cm											82.2	94	67
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.5	7.8	7.6	7.68	7.7	8	8	8.2	8.6
Specific Conductance	uS/cm					102	280	348	2690	89	60	75	93	60
Total Hardness	mg/L					39	111	156	122	52	21	32	48	48
Total dissolved solids	mg/L					56	168	238	204	67	41	58	62	46
Total suspended solids	mg/L					197	71	9	3	550	240	1200	110	350
Turbidity	NTU					150	55	5		560	140	130	80	300
Major Ions														
Total alkalinity	mg/L as Ca CO3					21	42	51	42	41	27	50	25	29
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					21	42	51						
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					0.5	0.5	0.5						
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					3	3	2	21	1.1	<1	<0.5	<0.1	0.6
Chloride	mg/L	**120**	**640**	**150**	**600**	0.05	0.17	0.08	<0.5	0.5	<0.5	1	<0.5	1
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.06	0.07	0.09	0.05	0.05	0.05	0.1	0.15
Bromide	mg/L								<0.5					
Sulfate	mg/L			**EQ23**		28.5	85.5	109	81	9.4	9.3	17	22	9.2
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.005	0.014	<0.005	0.009	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	0.001	<0.05	<0.05	<0.05	<0.05	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.01	0.01	0.01	<0.005					
Free Ammonia	mg/L as NH3-N									<0.5	<0.5	<0.5	<0.5	<0.005
Ortho phosphorus, dissolved	mg/L					0.004	0.004	0.002		<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					0.174	0.088	0.014		0.3	0.15	0.3	0.15	0.2
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**				<0.005			<0.005		
Cyanide, WAD	mg/L			**0.005**	**0.01**							<0.005		
Thiocyanate	mg/L											0.05		
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	4.42	1.69	0.145	0.054	0.82	5.1	16	2.7	9.9
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0005	<0.0005	0.0054	0.015	0.077	0.1	0.11	0.11	0.23
Antimony, total	mg/L			**0.009**		0.00267	0.00083	0.00053	0.0002	0.0014	0.0022	0.0036	0.0017	0.0038
Antimony, dissolved	mg/L			**0.009**		0.00041	0.00022	0.00028	0.0002	0.0014	0.00081	0.00067	0.00024	0.0015
Arsenic, total	mg/L	**0.005**		**0.005**		0.041	0.003	<0.001	0.0006	<0.001	0.0053	0.026	<0.001	0.024
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	0.0004	<0.001	<0.001	0.0015	<0.001	0.003
Barium, total	mg/L			**1**		0.153	0.101	0.0430999	0.03	0.03	0.085	0.25	0.063	0.16
Barium, dissolved	mg/L			**1**		0.0242999	0.0355999	0.0359	0.03	0.015	0.011	0.016	0.016	0.014
Beryllium, total	mg/L			**0.00013**		0.0003	<0.00005	0.00016	<0.001	<0.00009	<0.0001	0.00022	<0.00008	0.00056
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.001	<0.0002	<0.0001	<0.0001	<0.00006	0.00015
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.007	0.02	0.003	<0.1	0.044	0.0082	0.039	0.013	0.013
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.002	0.009	0.002	<0.1	0.0033	<0.0006	0.0023	0.0038	0.0014
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	***0.0022***	***0.0012***	0.00024	0.00017	0.00006	<0.0002	0.00073	0.00014	0.0005
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0003	0.0003	0.00016	0.00016	<0.0001	<0.0002	<0.0001	0.00007	0.00017
Calcium, total	mg/L					16.5	43.3	53.3	40.4	17	15	21	17	25
Calcium, dissolved	mg/L					13.7	37.1	52.3	41.3	17	7	11	16	17
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0075	0.0046999	0.0016	<0.0005	0.0044	0.014	0.029	0.018	0.018
Chromium, dissolved	mg/L					0.00025	0.0059	0.0009	<0.0005	0.00076	<0.0005	<0.0005	0.0021	0.0022
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00183	0.00038	0.00133	<0.0001	0.00056	0.0045	0.013	0.0023	0.0098999
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00003	0.00003	0.0005	<0.0001	<0.0001	<0.00008	0.00006	0.00008	0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.085	0.0126	0.0013	0.0017	0.0061999	0.028	0.08	0.013	0.057
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0002	0.0006	0.00005	0.0007	0.00045	0.00052	0.0035	0.0011	0.00057
Iron, total	mg/L	**0.3**		**0.001**		2.94	3.12	0.36	0.07	0.87	6.1	30	4.8	13
Iron, dissolved	mg/L	**0.3**		**0.35**		0.005	0.05	0.12	<0.03	0.028	0.041	0.026	0.06	0.14
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0123999	0.00384	0.00054	0.0001	0.0016	0.0073	0.018	0.0031	0.01
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.000025	0.00012	0.0001	<0.00005	0.00011	<0.0001	0.00033	0.00005	0.00013
Magnesium, total	mg/L					3.33	5.6	6.31	4.6	2.6	5.4	12	3.4	12
Magnesium, dissolved	mg/L					1.24	4.34	6.21	4.7	2.3	0.76	1.1	1.9	1.4
Manganese, total	mg/L			**EQ10**	**EQ11**	0.492	0.0665	0.0123	0.007	0.017	0.29	0.74	0.15	0.57
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0005	0.021	0.005	<0.005	0.00073	0.0012	0.0018	0.0017	0.0031
Mercury, total	mg/L	**0.000026**		**0.00002**		0.0001	<0.00005	<0.00005	<0.00002	<0.00005	<0.00005	<0.00005	0.00011	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		0.0001	0.000025	0.000025	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00355	0.00307	0.00194	<0.03	0.0043	0.0034	0.0045	0.002	0.0041999
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00087	0.00152	0.00186	<0.03	0.0043	0.0017	0.0015	0.0019	0.0031
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0241	0.0085	0.0044	0.002	0.004	0.015	0.032	0.015	0.029
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0003	0.0029	0.0031	0.002	0.00047	<0.0004	<0.0004	0.0041	0.0017
Potassium, total	mg/L					0.46	0.62	0.36	<2	1.2	2.3	2.4	1.5	4
Potassium, dissolved	mg/L					0.17	0.37	0.32	<2	0.84	0.47	0.54	0.7	1.1
Selenium, total	mg/L	**0.001**		**0.002**		0.003	0.015	0.02	0.003	0.0056	<0.001	<0.001	<0.001	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.004	<0.001	0.003	<0.001	<0.001	<0.001	0.0011	0.002
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00026	0.00019	<0.00001	<0.00001	0.00007	0.00025	0.00072	0.00005	0.00059
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					1.56	1.82	2.35	<2	0.73	0.85	1.6	1.2	1.7
Sodium, dissolvd	mg/L					0.56	1.51	2.33	<2	0.68	0.24	0.5	1.1	0.49
Strontium, total	mg/L					0.0789	0.233	0.253		0.084	0.072	0.1	0.086	0.096
Strontium, dissolved	mg/L					0.0730999	0.187	0.249		0.11	0.041	0.058	0.083	0.076
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**					<0.00005					
Thallium, dissolved	mg/L	**0.0008**		**0.0008**					<0.00005					
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L								<0.01					
Titanium, dissolved	mg/L								<0.01					
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00055	0.001	0.00037	0.0002	0.00019	0.00018	0.00057	0.00017	0.0003
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00021	0.00101	0.00033	0.0002	0.00019	<0.00005	0.00011	0.00013	0.00009
Vanadium, total	mg/L					0.032	0.009	<0.001	<0.03	0.0023	0.001	0.058	0.01	0.057
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.03	<0.001	<0.001	<0.001	<0.001	0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.216	0.049	0.018	0.006	0.014	0.054	0.15	0.069	0.083
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.005	0.006	0.005	<0.005	0.0022	0.00079	0.0041	0.0051	0.0025

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W13	W13	W13	W13	W13	W17	W17	W17
Sampling Date						30-Oct-93	29-Nov-93	6-Jan-94	2-Feb-94	27-Feb-94	8-Jun-93	13-Jun-93	16-Jun-93
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		*9*	7.7		7.6	7.6	8.57	8.25	8.7
Conductivity	uS/cm					87	252		288	326	98.3	104	81
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.5	7.8	7.8	7.7	7.6	7.6	7.8	7.6
Specific Conductance	uS/cm					65	260	290	330	320	110	110	89
Total Hardness	mg/L					39	170	130	140	140	100	53	44
Total dissolved solids	mg/L					45	180	180	220	230	100	71	66
Total suspended solids	mg/L					1000	640	490	460	100	540	260	420
Turbidity	NTU					660	460	440	410	110	420	220	120
Major Ions													
Total alkalinity	mg/L as Ca CO3					100	94	90	100	86	43	38	36
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					<1	20	2.6	3	16	0.8	1.1	1.1
Chloride	mg/L	**120**	**640**	**150**	**600**	1	0.5	0.5	0.5	1	0.5	1	0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.1	0.2	0.2	0.2	<0.05	<0.05	0.05
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		14	56	100	99	93	12	13	12
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.05	<0.05	<0.05	<0.05	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.05	<0.05	<0.05
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.5	0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.05	0.01	0.02	<0.01	<0.01	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					0.5	0.15	0.3	0.2	0.07	0.15	<0.05	0.2
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**	<0.005				<0.005			
Cyanide, WAD	mg/L			**0.005**	**0.01**	<0.005				<0.005			
Thiocyanate	mg/L									0.05			
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	36	13	5	5.7	1	12	6.1	8.4
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.068	0.034	0.032	0.017	0.13	0.11	0.1	0.11
Antimony, total	mg/L			**0.009**		0.0039	0.004	0.0028	0.002	0.0006	0.0043	0.0036	0.0038
Antimony, dissolved	mg/L			**0.009**		0.0014	0.0023	0.0019	0.00096	0.00055	0.0011	0.00075	0.00076
Arsenic, total	mg/L	**0.005**		**0.005**		0.044	<0.001	0.017	0.013	<0.001	0.023	0.0063	0.0049
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.31	0.13	0.11	0.12	0.053	0.27	0.13	0.17
Barium, dissolved	mg/L			**1**		0.019	0.028	0.033	0.043	0.042	0.028	0.027	0.023
Beryllium, total	mg/L			**0.00013**		0.00065	0.00076	0.00029	0.00027	<0.0001	0.00052	0.00026	0.0014
Beryllium, dissolved	mg/L			**0.00013**		0.00008	<0.0001	<0.00006	0.00007	<0.0001	0.00009	0.00026	0.0003
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0085	0.018	0.0073	0.006	0.0018	0.058	0.048	0.039
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0018	<0.0006	0.0026	0.00087	<0.0005	<0.002	<0.002	<0.002
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	***0.0016***	0.0002	0.0002	0.0005	<0.0001	***0.0011***	0.00074	***0.0012***
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00008	<0.00008	0.00019
Calcium, total	mg/L					39	82	70	62	66	24	18	18
Calcium, dissolved	mg/L					13	59	45	47	48	17	18	15
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.046	0.048	0.026	0.021	0.0035	0.024	0.014	0.019
Chromium, dissolved	mg/L					0.0012	0.0017	0.00062	0.00075	0.0017	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.023	0.012	0.0086999	0.0073	0.0008	0.0096	0.0046999	0.007
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	0.00035	0.00021	0.00026	0.00022	0.00019	0.00012	0.00018
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.12	0.07	0.04	0.035	0.0026	0.058	0.026	0.045
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0004	<0.0002	<0.0004	0.0003	<0.0002	<0.0005	<0.0005	<0.0005
Iron, total	mg/L	**0.3**		**0.001**		100	24	3.9	6	1.4	24	9.5	13
Iron, dissolved	mg/L	**0.3**		**0.35**		0.084	0.056	0.023	0.01	0.14	0.025	0.048	0.045
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.022	0.015	0.012	0.01	0.00084	0.019	0.008	0.014
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0001	<0.0001	<0.00008	0.00006	0.00012	0.00034	<0.0001	0.00014
Magnesium, total	mg/L					23	30	16	12	8	10	5.4	6.7
Magnesium, dissolved	mg/L					1.5	5.3	5	5.1	5.2	1.9	2	1.6
Manganese, total	mg/L			**EQ10**	**EQ11**	1.6	0.71	0.5	0.41	0.067	0.61	0.28	0.38
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00045	0.0057	0.015	0.023	0.029	<0.0003	<0.0003	<0.0003
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00004	<0.00004	<0.00004
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0085	0.0088	0.011	0.012	0.012	0.0051	0.0041999	0.005
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0045	0.0079	0.01	0.011	0.0096999	0.0024	0.0028	0.0022
Nickel, total	mg/L	**EQ20**		**EQ22**		0.055	0.037	0.023	0.021	0.0047	0.026	0.013	0.019
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	0.0027	<0.0005	0.0038	0.0024	<0.0008	<0.0008	<0.0008
Potassium, total	mg/L					5.4	7.2	3.8	3.7	2.9	4.4	2.5	3.5
Potassium, dissolved	mg/L					0.83	2.6	1.8	2.1	1.9	1.2	0.93	1
Selenium, total	mg/L	**0.001**		**0.002**		0.006	0.005	0.001	<0.001	<0.001	0.014	0.0096	0.0076
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.0011	0.00056	0.00037	0.00026	0.00004	0.00056	0.00022	0.00038
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.00002	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					2.1	4.9	4.2	2.8	3	1.5	1	1.3
Sodium, dissolvd	mg/L					0.38	1.9	3	1.9	2	0.59	0.53	0.42
Strontium, total	mg/L					0.2	0.44	0.44	0.47	0.47	0.18	0.13	0.13
Strontium, dissolved	mg/L					0.086	0.3	0.34	0.4	0.39	0.089	0.096	0.078
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00038	0.00057	0.00079	0.0011	0.0008	0.00049	0.00036	0.00051
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.0001	0.00045	0.00066	0.00081	0.00079	0.00011	0.00011	0.00009
Vanadium, total	mg/L					0.093	0.053	0.035	0.03	<0.001	0.048	0.023	0.032
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.18	0.096	0.088	0.063	0.0046999	0.11	0.061	0.068
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.0007	0.0034	<0.002	0.0039	0.0045	0.0056	0.0031	0.0012

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W17	W17	W17	W17	W17	W17
Sampling Date						20-Jun-93	25-Jun-93	30-Jul-93	26-Aug-93	6-Sep-93	14-Sep-93	19-Sep-93	25-Sep-93
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.43		8.1	7.86	8.02	7.44		8.54
Conductivity	uS/cm					95.3		74.4	89	76	86		123
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	7.6	8.1	7.8	6.8	7.1	7.2	7.1
Specific Conductance	uS/cm					91	87	77	91	80	86	120	120
Total Hardness	mg/L					44	32	29	45	44	47	78	84
Total dissolved solids	mg/L					67	53	840	62	52	50	110	76
Total suspended solids	mg/L					277	300	2000	130	240	100	2	380
Turbidity	NTU					170	150	140	95	140	73	47	420
Major Ions													
Total alkalinity	mg/L as Ca CO3					37	41	75	33	34	32	39	49
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.1	<1	1	1	1.3	2.1	2.3	1.3
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.05	<0.05	0.05	<0.05	0.1	0.05	0.1
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		13	10	14	20	12	14	14	11
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.005	<0.005	0.008
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					0.2	0.15	0.45	0.15	0.15	0.1	0.05	0.15
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**			<0.005					
Cyanide, WAD	mg/L			**0.005**	**0.01**			<0.005					
Thiocyanate	mg/L							0.2					
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	6.7	5.6	24	3.3	5.8	2.5	1.9	14
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.088	0.077	0.12	0.08	0.13	0.089	0.076	0.11
Antimony, total	mg/L			**0.009**		0.0027	0.0024	0.0055	0.0015	0.0019	0.0009	0.0011	0.0061
Antimony, dissolved	mg/L			**0.009**		0.0008	0.00097	0.00072	0.00061	0.00088	0.0006	0.001	0.0017
Arsenic, total	mg/L	**0.005**		**0.005**		0.011	0.012	0.054	<0.001	0.008	0.002	0.14	0.65
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.15	0.093	0.36	0.074	0.095	0.045	0.043	0.22
Barium, dissolved	mg/L			**1**		0.022	0.015	0.015	0.022	0.023	0.019	0.028	0.029
Beryllium, total	mg/L			**0.00013**		0.00058	0.0011	0.00022	0.00012	0.00025	0.00014	0.00012	0.00048
Beryllium, dissolved	mg/L			**0.00013**		0.00012	<0.0001	<0.0001	<0.00006	<0.00005	<0.00006	<0.00004	<0.00006
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.034	0.044	0.023	0.0021	0.041	0.0028	0.006	0.018
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.002	<0.0006	0.0017	0.0021	<0.0006	0.0028	0.0037	0.0025
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00052	0.00071	***0.0016***	0.00021	***0.0018***	<0.00009	<0.0001	<0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00012	<0.0002	<0.0001	0.0001	<0.00009	<0.00007	<0.0001	<0.0001
Calcium, total	mg/L					17	18	27	15	23	17	26	34
Calcium, dissolved	mg/L					15	11	10	15	15	16	26	29
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.016	0.016	0.04	0.008	0.018	0.002	0.004	0.023
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	0.0019	0.0015	0.0018	0.0019
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.0056999	0.0056	0.021	0.0029	0.0054	0.0029	0.0014	0.0098999
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00023	<0.00008	0.00007	0.00008	<0.00006	0.00009	0.00018	0.00015
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.031	0.029	0.12	0.017	0.041	0.016	0.008	0.094
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0005	<0.0003	0.00031	0.00065	<0.0005	0.0006	0.0012	<0.0004
Iron, total	mg/L	**0.3**		**0.001**		10	6.3	46	6.3	8.3	4.7	2.6	17
Iron, dissolved	mg/L	**0.3**		**0.35**		0.04	0.021	<0.01	0.039	0.074	0.04	0.054	0.057
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0068	0.0076	0.031	0.0048	0.0091999	0.0025	0.0016	0.011
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00019	<0.0001	0.00007	<0.00005	<0.00007	<0.00006	<0.00006	<0.00006
Magnesium, total	mg/L					5.9	6.6	18	3.6	8.6	3.9	4.8	13
Magnesium, dissolved	mg/L					1.6	1.1	1	1.7	1.5	1.7	3.1	2.8
Manganese, total	mg/L			**EQ10**	**EQ11**	0.31	0.31	1.1	0.18	0.31	0.13	0.07	0.66
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	<0.0003	0.00036	0.00057	0.00056	0.00086	0.013	0.0047	0.00092
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	0.00015	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00004	<0.00005	<0.00005	0.00013	<0.00005	<0.00005	<0.00005	<0.00004
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0043	0.0033	0.005	0.0022	0.0029	0.0022	0.0049	0.0069
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0021	0.0018	0.0014	0.0015	0.0018	0.0022	0.0049	0.0043
Nickel, total	mg/L	**EQ20**		**EQ22**		0.015	0.027	0.049	0.019	0.043	0.057	0.0051	0.031
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0008	<0.0004	0.0068	0.0016	<0.0003	<0.0004	0.0013	0.0013
Potassium, total	mg/L					3	2.6	3.2	1.5	2.7	1.4	1.6	5.6
Potassium, dissolved	mg/L					0.81	0.64	0.71	0.8	0.85	0.64	0.92	1.3
Selenium, total	mg/L	**0.001**		**0.002**		0.0068	0.0024	<0.001	<0.001	0.002	0.001	0.003	0.007
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.003	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00033	0.00029	0.00093	0.0001	0.00085	0.00019	0.00005	0.00053
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					1.2	1.1	1.9	0.7	1.5	0.97	1.1	2.1
Sodium, dissolvd	mg/L					0.43	0.3	0.29	0.57	0.43	0.55	0.9	0.71
Strontium, total	mg/L					0.12	0.1	0.13	0.079	0.098	0.089	0.15	0.14
Strontium, dissolved	mg/L					0.083	0.064	0.052	0.077	0.076	0.084	0.15	0.12
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00051	0.00025	0.00081	0.00011	0.00014	0.00008	0.00022	0.00054
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.0001	<0.00005	0.00008	0.00006	0.00006	0.00008	0.00022	0.00018
Vanadium, total	mg/L					0.027	<0.001	0.075	0.013	0.021	0.0076	0.0076999	0.07
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.053	0.06	0.21	0.052	0.071	0.046	0.02	0.12
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.001	0.0004	0.016	0.0028	<0.0004	0.002	0.0023	<0.0005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W17	W17	W17	W17	W17	W17	W17
Sampling Date						2-Oct-93	30-Oct-93	29-Nov-93	10-Jan-94	2-Feb-94	7-Feb-94	15-Feb-94	22-Feb-94	27-Feb-94
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			8.6	7.7		7.4	7.3	7.9	7.4	7.9
Conductivity	uS/cm						120	300		349	338	320	354	428
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.2	8.3	7.9	7.8	7.9	7.8	7.8	7.7	7.8
Specific Conductance	uS/cm					85	110	310	310	370	360	350	370	360
Total Hardness	mg/L					75	51	180	150	160	170	150	190	150
Total dissolved solids	mg/L					63	76	260	220	250	260	260	260	260
Total suspended solids	mg/L					350	1300	250	86	64	34	110	71	63
Turbidity	NTU					270	690	240	82	73	35	110	54	32
Major Ions														
Total alkalinity	mg/L as Ca CO3					42	120	100	110	100	120	120	110	110
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					0.8	<1	32	4.2	2.8	4.2	3.5	5	7.4
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	0.5	0.5	1	0.5	0.5	0.5	0.5	1
Fluoride	mg/L	**0.12**			**EQ7**	<0.05	0.05	0.05	0.15	0.15	0.15	0.1	0.2	0.2
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		10	18	57	57	100	100	91	96	93
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	0.05	0.15	0.15	0.2	0.15	0.15	0.1
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.005	<0.5	<0.005	<0.005	<0.005	<0.005	0.019	0.007	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Phosphorus, total	mg/L					0.2	0.45	0.09	0.15	0.1	0.07	0.13	0.07	0.06
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**		<0.005							<0.005
Cyanide, WAD	mg/L			**0.005**	**0.01**		<0.005							<0.005
Thiocyanate	mg/L													0.05
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	9.6	64	9.8	2.5	2	0.24	2	2	0.24
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.17	0.055	0.0047	0.013	0.011	0.0033	0.027	0.0067	0.011
Antimony, total	mg/L			**0.009**		0.0033	0.0039	0.0024	0.0014	0.0012	0.00091	0.0012	0.0007	0.0007
Antimony, dissolved	mg/L			**0.009**		0.0015	0.0014	0.0015	0.001	0.00093	0.00086	0.00077	0.00069	0.00055
Arsenic, total	mg/L	**0.005**		**0.005**		0.023	0.064	<0.001	0.004	0.002	<0.001	0.003	0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.001	<0.001
Barium, total	mg/L			**1**		0.17	0.44	0.11	0.074	0.082	0.065	0.07	0.071	0.055
Barium, dissolved	mg/L			**1**		0.028	0.021	0.042	0.051	0.056	0.061	0.046	0.053	0.05
Beryllium, total	mg/L			**0.00013**		0.00041	0.00093	0.00048	<0.0001	0.00011	<0.00007	<0.0001	0.0001	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.00006	0.0001	<0.0001	<0.0001	<0.00006	<0.00007	<0.0001	0.0001	<0.0001
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.014	0.013	0.03	0.014	0.014	0.0083	0.014	0.016	0.0097
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0036	0.0017	0.0055	0.0093	0.0073	0.0015	0.0052	0.0098	0.0084
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0005	***0.0024***	<0.0001	0.00039	<0.0001	0.0001	0.0003	0.00018	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00008	<0.00007	<0.00009	<0.0001
Calcium, total	mg/L					29	56	84	62	58	70	61	76	65
Calcium, dissolved	mg/L					26	17	61	50	53	55	49	61	50
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.023	0.074	0.025	0.0061	0.0055	0.0012	0.0058	0.004	0.002
Chromium, dissolved	mg/L					0.003	0.0017	0.0024	0.00095	0.0011	0.0011	0.0011	0.0011	0.0019
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.0093999	0.033	0.0056999	0.002	0.0018	0.00025	0.0017	0.0014	0.00028
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00014	<0.0001	0.00025	0.00018	<0.00006	0.0001	<0.00007	<0.00007	<0.00009
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.055	0.18	0.037	0.011	0.0073	0.0018	0.011	0.0075	0.0004
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00057	<0.0004	<0.0002	0.001	0.00053	0.00096	0.00045	0.00087	<0.0002
Iron, total	mg/L	**0.3**		**0.001**		13	130	11	3.2	2.9	0.34	4.4	2.9	0.42
Iron, dissolved	mg/L	**0.3**		**0.35**		0.08	0.05	0.024	<0.01	<0.01	0.01	0.032	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0086999	0.033	0.0068	0.0032	0.0027	0.00035	0.0035	0.0016	0.00051
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00007	<0.0001	<0.0001	0.00013	0.00015	0.00018	0.00011	<0.00005	<0.00007
Magnesium, total	mg/L					12	31	22	11	9.8	10	10	12	9.4
Magnesium, dissolved	mg/L					2.4	2	7.6	7.2	7.3	7.4	6.7	8.4	6.9
Manganese, total	mg/L			**EQ10**	**EQ11**	0.53	2.3	0.32	0.12	0.1	0.011	0.1	0.086	0.013
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0017	0.00015	0.0041	0.006	0.003	0.0027	0.0047	0.00054	0.00073
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0033	0.011	0.0063	0.0065	0.006	0.0051999	0.0061	0.0064	0.0055
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.003	0.0039	0.0051	0.0058	0.006	0.0051999	0.0054	0.0056999	0.0041999
Nickel, total	mg/L	**EQ20**		**EQ22**		0.026	0.082	0.02	0.0092	0.008	0.0045	0.0085	0.0072	0.003
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0013	<0.0005	0.0024	0.0024	0.0034	0.0027	0.0014	0.0026	0.002
Potassium, total	mg/L					4.3	7.5	5.4	2.7	2.3	2.5	2.4	2.8	2.1
Potassium, dissolved	mg/L					1.5	0.89	2.1	1.6	1.7	1.8	1.6	1.8	1.4
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.003	0.007	0.004	0.003	<0.001	<0.001	0.005	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	0.003	0.002	0.002	<0.001	<0.001	0.003	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.0004	0.0013	0.00026	<0.0004	0.00006	0.00003	0.00007	0.00004	0.00003
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					1.7	2.9	5	2.9	2.4	2.5	2.3	3	2.4
Sodium, dissolvd	mg/L					0.64	0.27	2.3	2	1.9	1.9	1.7	2.2	1.7
Strontium, total	mg/L					0.12	0.31	0.43	0.38	0.37	0.38	0.39	0.42	0.37
Strontium, dissolved	mg/L					0.11	0.11	0.31	0.34	0.37	0.35	0.33	0.38	0.32
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00031	0.00058	0.00048	0.00048	0.00061	0.00043	0.00047	0.00041	0.00041
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00009	0.00008	0.00039	0.00048	0.00051	0.00043	0.00039	0.00041	0.0004
Vanadium, total	mg/L					0.048	0.14	0.026	0.0086	0.006	<0.001	0.0071	0.003	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.073	0.27	0.047	0.025	0.022	0.014	0.03	0.013	0.0049
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0024	<0.0007	0.0038	0.0091	0.0073	0.0035	<0.002	0.0012	0.0048

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W17	W17	W17	W17	W17	W17
Sampling Date						29-Mar-94	27-Apr-94	1-Jun-94	28-Jun-94	8-Jul-94	12-Jul-94	18-Jul-94	23-Jul-94
		Long Term	Short Term	Long Term	Short Term				1				
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	7.3	7.8	8.7	8.6	8.6	8.7	8.9
Conductivity	uS/cm					412	287	162	95	87	73	76	73
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	7.7	7.6	*6.2*	7.8	8.1	7.6	7.2
Specific Conductance	uS/cm					380	290	160	130	97	80	83	76
Total Hardness	mg/L					160	120	65	47	43	52	48	35
Total dissolved solids	mg/L					270	200	100	65	62	59	49	53
Total suspended solids	mg/L					29	140	300	1000	610	810	400	620
Turbidity	NTU					22	80	280	980	490	620	340	490
Major Ions													
Total alkalinity	mg/L as Ca CO3					110	97	57	64	44	47	35	39
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					3.2	2.7	3	<1	1	<0.1	<0.1	<0.1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	1	<0.1	<0.1	<0.1	0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.1	0.1	<0.05	0.15	0.05	0.05	0.05
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		100	58	29	5.5	6.1	3.1	2	1.5
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.21	0.24	0.05	<0.05	<0.05	0.05	0.05	<0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	0.001	0.002	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.005	0.014	<0.005	0.012	<0.005	<0.005	0.016	0.017
Ortho phosphorus, dissolved	mg/L					<0.002	<0.002	<0.002	<0.002	0.026	<0.002	<0.002	<0.002
Phosphorus, total	mg/L					0.047	0.18	0.13	0.219	0.118	<0.002	0.24	0.53
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.655	1.69	5.77	11.8	9.97	16.2	3.91	6.51
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.001	0.0192	0.0421	0.056	0.342	0.217	0.175	0.154
Antimony, total	mg/L			**0.009**		0.00074	0.00072	0.00188	0.00318	0.00333	0.012	0.00278	0.00129
Antimony, dissolved	mg/L			**0.009**		0.00048	0.00072	0.00073	0.0012	0.00099	0.00195	0.00105	0.00029
Arsenic, total	mg/L	**0.005**		**0.005**		0.003	0.003	0.008	0.017	0.0178	0.018	0.005	0.295
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0544	0.0542	0.131	0.279	0.29	0.298	0.128	0.148
Barium, dissolved	mg/L			**1**		0.0395	0.0356	0.0272	0.03	0.0343	0.0338	0.0532	0.0291
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.0003	<0.00008	<0.00011	0.00008	<0.0001	<0.0001	0.00024
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	0.00044	<0.00008	<0.00011	0.00008	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0132	0.0069	0.00748	<0.00068	0.0039	0.00985	0.0144	0.00795
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.00945	0.00161	0.00228	<0.00068	<0.00073	<0.00071	0.00926	<0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00013	0.00039	0.00021	0.00061	0.00079	0.00097	0.00017	0.00075
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00013	<0.00011	<0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					80.4	51.4	28.5	24.5	18.2	25.9	17.4	15.1
Calcium, dissolved	mg/L					53.5	39.8	21.9	15.6	14.7	18	16.5	10.5
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.00081	0.00349	0.012	0.0154	0.0172	0.0301	0.00816	0.0115
Chromium, dissolved	mg/L					0.0008	0.00283	0.00099	<0.0005	0.00103	<0.0005	0.00075	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00051	0.00145	0.00455	0.0091199	0.0069899	0.00968	0.00332	0.00382
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00014	<0.0001	<0.00005	<0.0001	0.0002	<0.0001	0.00009	<0.00015
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00453	0.0121	0.0228	0.0451	0.0355	0.0561	0.0213	0.023
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00052	<0.0005	0.00144	<0.0004	0.0023699	<0.0005	0.0023599	0.00065
Iron, total	mg/L	**0.3**		**0.001**		1.39	2.45	7.57	14.5	15.2	6.1	5.43	8.96
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.01	0.01	0.202	0.107	0.09	0.05
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00077	0.00202	0.0082299	0.0197	0.0135	0.015	0.00586	0.0063699
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00012	0.0005	<0.00005	0.00017	<0.00008	<0.00008	<0.0001
Magnesium, total	mg/L					11.2	8.99	6.47	12	6.72	11.6	3.73	5.44
Magnesium, dissolved	mg/L					7.05	5.65	2.42	1.9	1.6	1.66	1.67	1.06
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0544	0.073	0.26	0.648	0.452	0.611	0.222	0.239
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00254	<0.0002	0.00167	<0.0003	0.00495	0.0027	0.00193	0.0012
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0049099	0.0052399	0.0059699	0.00397	0.00397	0.00526	0.00194	0.00254
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00352	0.00463	0.00454	0.00335	0.00249	0.00046	0.00056	0.0014
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00541	0.0077	0.0124	0.0197	0.016	0.033	0.0109	0.0112
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00179	<0.00044	0.00199	<0.0005	0.0011	0.0005	0.00532	<0.0005
Potassium, total	mg/L					2.65	2.73	2.45	2.9	5.35	6.66	2.34	3.5
Potassium, dissolved	mg/L					1.56	1.2	0.7	1.41	1.47	1.78	1.81	1.4
Selenium, total	mg/L	**0.001**		**0.002**		0.001	0.004	<0.001	<0.001	0.002	0.002	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.001	<0.001	<0.001	0.00073	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00015	0.00028	0.00055	0.00054	0.00074	0.0002	0.00016
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	0.00002	0.00005	0.00005	0.00001
Sodium, total	mg/L					2.7	2.94	1.3	1.24	1.72	2.62	0.778	1.25
Sodium, dissolvd	mg/L					1.69	1.53	0.52	0.482	0.465	0.489	0.555	0.318
Strontium, total	mg/L					0.466	0.313	0.169	0.157	0.123	0.129	0.107	0.0956
Strontium, dissolved	mg/L					0.352	0.264	0.134	0.113	0.093	0.0931	0.094	0.0656
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00038	0.00038	0.00048	0.00039	0.00053	0.00053	0.00015	0.00018
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00038	0.00034	0.00021	0.00006	0.00009	0.00008	0.00009	0.00003
Vanadium, total	mg/L					<0.001	0.0051599	0.0216	0.031	0.0442	0.066	0.014	0.0218
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0312	0.0234	0.0423	0.121	0.077	0.111	0.0465	0.0404
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.00205	<0.001	0.0156	<0.001	0.0036199	0.00125	0.0217	0.00268

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W17	W17	W17	W17	W17	W17
Sampling Date						27-Jul-94	1-Aug-94	7-Aug-94	28-Aug-94	5-Oct-94	8-Oct-94	13-Oct-94	20-Oct-94
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.8	8.7		8.1	7.87	8.11	8.08	8.15
Conductivity	uS/cm					73	78		80	128	146.2	173.3	140
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.9	7.5	8.1	7.7	7.6	6.9	7.3	7.1
Specific Conductance	uS/cm					75	81	70	90	140	160	120	160
Total Hardness	mg/L					26	34	26	46	71	80	57	62
Total dissolved solids	mg/L					57	61	52	44	100	110	90	99
Total suspended solids	mg/L					520	420	510	140	240	91	<1	500
Turbidity	NTU					400	360	480	130	59	94	0.3	650
Major Ions													
Total alkalinity	mg/L as Ca CO3					34	34	32	32	47	50	16	57
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.8	1.9	<0.1	<0.1	1.8	4.1	2.9	3
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.1	0.5	<0.1	0.5	<0.1	<0.1	<0.1	<0.1
Fluoride	mg/L	**0.12**			**EQ7**	0.05	0.1	0.05	0.05	0.05	<0.05	<0.05	<0.05
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		7	9.4	7.7	14	18	29	40	22
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.05	<0.05	<0.05	<0.05	<0.05	0.05	<0.05	<0.05
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	0.001	0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					0.014	0.013	0.008	0.013	<0.005	<0.005	<0.005	0.03
Ortho phosphorus, dissolved	mg/L					0.004	0.005	<0.002	0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus, total	mg/L					0.63	0.11	0.27	0.148	0.23	0.094	<0.002	0.28
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	11	8.9	13.1	4.2	1.37	2.13	0.0345	13.4
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.178	0.141	0.153	0.19	0.0248999	0.27	0.0232999	0.0650999
Antimony, total	mg/L			**0.009**		0.00203	0.00206	0.00232	0.00115	0.00181	0.00067	<0.00007	0.00314
Antimony, dissolved	mg/L			**0.009**		0.00084	0.0012	0.0005	<0.0002	0.00072	0.00053	<0.00007	0.00108
Arsenic, total	mg/L	**0.005**		**0.005**		0.0214	0.00952	0.0131	<0.001	0.0111999	0.00243	<0.001	0.0182999
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	0.00103	<0.001	<0.001
Barium, total	mg/L			**1**		0.221	0.205	0.222	0.0724	0.0854	0.0422	0.0273999	0.17
Barium, dissolved	mg/L			**1**		0.0289	0.0425	0.0257	0.0256	0.0283999	0.0318999	0.0267	0.0268999
Beryllium, total	mg/L			**0.00013**		0.00065	0.00011	0.00035	0.0003	0.0001	0.0001	0.0001	0.0001
Beryllium, dissolved	mg/L			**0.00013**		0.0002	0.00011	0.00034	0.0001	0.0001	0.0001	0.0001	0.0001
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0005	0.00636	0.0008	<0.00074	0.0115	0.0005	0.0005	0.0091999
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	<0.001	<0.0016	<0.00074	<0.001	<0.001	<0.001	0.00902
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00082	0.00069	0.00058	0.00022	0.00029	<0.0001	0.00011	***0.00108***
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	0.00037	<0.00017	<0.0002	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					19.7	19.4	17.2	18	27	27.6	21	36.6
Calcium, dissolved	mg/L					9	12.8	8.97	15.6	24	26.9	19.1	21
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.0195	0.0158	0.0188	0.00748	0.00758	0.00408	<0.0005	0.0251
Chromium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	0.00065	<0.0005	0.00122	<0.0005	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00889	0.00881	0.00742	0.0027	0.00428	0.000808	0.00051	0.0093599
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	0.0008	<0.00011	0.00013	<0.00006	0.000112	0.00038	<0.00004
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0536	0.0482	0.0399	0.0044	0.0255	0.0072	0.00403	0.0495999
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0004	0.00064	<0.0004	0.0005	<0.0004	<0.0005	0.00218	<0.0004
Iron, total	mg/L	**0.3**		**0.001**		18.4	17	13	4.51	3.9	1.36	<0.01	15
Iron, dissolved	mg/L	**0.3**		**0.35**		0.06	0.06	0.05	0.126	0.0203999	0.104	<0.01	0.0251
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0187	0.0153	0.0089399	0.00523	0.0074899	0.0013	0.00024	0.0182999
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00008	<0.00008	<0.00008	0.00069	<0.00007	<0.00008	<0.00008	<0.00008
Magnesium, total	mg/L					10	7.06	8.34	4.91	6.31	3.94	2.53	12.6
Magnesium, dissolved	mg/L					0.865	1.11	0.793	1.74	2.56	3.14	2.22	2.28
Manganese, total	mg/L			**EQ10**	**EQ11**	0.576	0.543	0.516	0.138	0.287	0.0542	0.00908	0.629
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00083	0.00139	0.00143	0.00372	0.00095	0.00478	0.00842	0.00068
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0046799	0.00384	0.00303	0.00281	0.0041799	0.00447	0.00681	0.0061599
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00158	0.00251	0.00133	0.00275	0.0041199	0.00432	0.00623	0.004
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0229	0.0185	0.0162	0.00879	0.0099799	0.00362	0.00118	0.0238999
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	<0.0005	<0.0004	<0.0005	<0.0004	0.00107	0.00108	<0.0004
Potassium, total	mg/L					3.25	2.98	5.52	2.06	1.46	1.25	0.25	3.39
Potassium, dissolved	mg/L					1.15	1.45	0.95	0.901	0.85	0.95	0.15	1.05
Selenium, total	mg/L	**0.001**		**0.002**		0.004	0.002	<0.001	<0.001	<0.001	0.003	<0.001	0.002
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.002	<0.001	<0.001	<0.001	0.001	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.0006	0.00081	0.00037	0.00015	0.00027	0.00004	0.00002	0.00033
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00005	0.00005	0.00002	0.00005	0.00001	0.00005	0.00005
Sodium, total	mg/L					1.1	1.15	2.41	1.1	1.05	0.928	1.48	1.7
Sodium, dissolvd	mg/L					0.216	0.344	0.233	0.644	0.737	0.757	1.38	0.562
Strontium, total	mg/L					0.117	0.122	0.0886	0.0930999	0.139	0.157	0.12	0.19
Strontium, dissolved	mg/L					0.0618	0.0916	0.0503	0.0865	0.132	0.155	0.12	0.124
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00045	0.00038	0.00046	0.00015	0.00031	0.00017	<0.00002	0.00044
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00004	0.00009	0.00005	0.00009	0.00016	0.00014	<0.00002	0.00015
Vanadium, total	mg/L					0.041	0.034	0.05	0.0072199	0.0111999	0.00126	<0.001	0.0349
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0902	0.0819	0.0694	0.0272999	0.0377999	0.0187	0.0096999	0.0880999
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0016	0.0032	<0.001	<0.001	0.00284	<0.001	0.0066	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W17	W17	W17	W17	W17	W17	W17
Sampling Date						24-Oct-94	30-Oct-94	1-Dec-94	9-Feb-95	25-Feb-95	15-May-96	2-Jun-96	18-Jul-96	27-Jul-96
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.02	7.82	8.23				8.11		8.63
Conductivity	uS/cm					170	216	271						109.3
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.1	7.1	7.7	7.4	7.4	8.2	8.2	8.4	8.7
Specific Conductance	uS/cm					190	240	330	380	360	295	218	106	82
Total Hardness	mg/L					70	81	190	110	170	92	90	40	37
Total dissolved solids	mg/L					130	170	220	260	260	175	121	59	48
Total suspended solids	mg/L					120	37	7	7	3	57	165	358	608
Turbidity	NTU					96	45	2.7	1.1	0.6	61	176	325	470
Major Ions														
Total alkalinity	mg/L as Ca CO3					58	71	96	96	100	81	60	40	42
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					4.2	4.3	4	11	4	<1	0.4	<1	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.5	0.5	0.5	0.5	0.5	0.27	0.18	0.14	0.14
Fluoride	mg/L	**0.12**			**EQ7**	<0.05	<0.05	0.05	0.05	0.1	0.11	0.08	0.06	0.05
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		32	45	83	83	93	64.1	47.8	15	10.3
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.06	<0.05	0.15	0.15	0.15	0.21	0.104	0.03	0.019
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.005	<0.005	<0.005	0.007	<0.005	0.017	0.013	0.005	<0.005
Ortho phosphorus, dissolved	mg/L					0.004	0.002	<0.002	<0.002	<0.002	0.004	0.004	0.002	<0.002
Phosphorus, total	mg/L					0.12	0.1	0.01	0.006	0.014	0.004	0.05	0.056	0.296
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	2.58	1.31	0.0194	0.0302	0.0439	1.43	4.5	11.2	18.1
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0392	0.0232	0.00543	0.00144	0.0394	0.331	0.0526	0.0459	0.109
Antimony, total	mg/L			**0.009**		0.0015	0.00108	0.00088	0.00091	0.00055	0.00074	0.00137	0.00294	0.00327
Antimony, dissolved	mg/L			**0.009**		0.00068	0.00062	0.00085	0.00072	0.00055	0.00057	0.00059	0.00116	0.00056
Arsenic, total	mg/L	**0.005**		**0.005**		0.00494	0.00333	0.00169	<0.001	<0.001	0.002	0.006	0.006	0.034
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0567	0.0475	0.0554	0.0812	0.0667	0.0380999	0.095	0.197	0.263
Barium, dissolved	mg/L			**1**		0.0287999	0.029	0.0552	0.0788	0.0635	0.0306	0.0234	0.0247	0.0272999
Beryllium, total	mg/L			**0.00013**		0.0001	0.0001	0.00025	0.00015	0.00025	<0.00005	0.00015	0.00026	0.00025
Beryllium, dissolved	mg/L			**0.00013**		0.0001	0.0001	0.00025	0.00015	0.00025	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.00381	0.00671	0.0005	0.0005	0.0005	0.006	0.003	0.011	0.004
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.00206	<0.001	<0.001	0.0005	<0.001	0.006	0.001	<0.001	<0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	0.0004	***0.0011***	***0.0016***
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	0.0001
Calcium, total	mg/L					31.4	41	65.1	81.3	57.6	30.4	36.1	21.9	26.9
Calcium, dissolved	mg/L					23.6	26.8	63.8	69.3	56.6	29.1	31.7	13.5	13.1
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.00381	0.00406	<0.0005	0.00067	0.00192	0.0032	0.0122	0.02	0.027
Chromium, dissolved	mg/L					<0.0005	0.0005	<0.0005	0.00067	0.00185	0.0027	<0.0005	0.0009	<0.0005
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00151	0.00079	<0.00007	0.00021	<0.00005	0.00165	0.00385	0.00588	0.012
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00004	<0.00004	<0.00007	<0.00007	<0.00005	0.00025	0.00034	<0.00006	<0.00006
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0082399	0.00401	<0.0005	0.0021	0.00047	0.0074	0.0191	0.033	0.0512999
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0004	<0.0004	<0.0005	<0.0004	<0.0004	0.0007	0.0003	0.0002	<0.0001
Iron, total	mg/L	**0.3**		**0.001**		3.79	1.67	0.0202	0.0372	0.0845	2.26	6.7	14.9	31.3
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	0.072	0.1	0.04	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00288	0.00115	0.00107	0.00014	0.00019	0.00124	0.00382	0.00796	0.0166
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00008	<0.00008	<0.0001	<0.00008	0.00019	0.00013	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L					5.78	6.65	8.77	10.9	7.7	5.79	6.39	10.1	12.3
Magnesium, dissolved	mg/L					2.71	3.43	8.26	8.65	7.21	4.67	2.58	1.64	1.16
Manganese, total	mg/L			**EQ10**	**EQ11**	0.117	0.0585	0.00567	0.00266	0.00802	0.0786999	0.186	0.422	0.627
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00111	0.00448	0.00186	0.00082	0.0078	0.0054	0.0079	<0.0001	<0.0001
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0046599	0.00486	0.00659	0.00614	0.00524	0.00446	0.00479	0.0037	0.0085
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00363	0.00359	0.00628	0.0061	0.00509	0.0044499	0.00395	0.00224	0.00131
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0052199	0.00379	0.00219	0.0021	0.00133	0.0046	0.0654	0.0187	0.016
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0004	<0.0004	0.00126	0.00147	0.00115	0.001	0.0017	0.00015	0.0005
Potassium, total	mg/L					1.56	1.65	2.39	2.76	1.9	1.41	3.31	3.76	3.5
Potassium, dissolved	mg/L					0.75	0.75	2.07	2.19	1.9	1.28	0.91	0.55	0.95
Selenium, total	mg/L	**0.001**		**0.002**		0.002	0.002	<0.001	0.001	0.002	0.002	0.003	0.002	0.003
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.001	<0.001	<0.001	0.001	0.002	0.002	0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00011	0.00003	0.00006	<0.00001	<0.00001	0.00022	0.00018	0.00039	0.00206
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00004
Sodium, total	mg/L					1.14	1.58	2.26	2.56	1.92	1.4	1.44	2.22	1.4
Sodium, dissolvd	mg/L					0.674	0.839	2.16	2.39	1.86	1.32	0.63	0.46	0.33
Strontium, total	mg/L					0.169	0.226	0.397	0.453	0.379	0.211	0.184	0.111	0.156
Strontium, dissolved	mg/L					0.142	0.165	0.395	0.452	0.363	0.208	0.172	0.0881999	0.0693
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00024	0.00028	0.00037	0.00023	0.00053	0.00037	0.00043	0.00045	0.00032
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00018	0.00019	0.00034	0.00021	0.00042	0.00039	0.00019	<0.00001	0.00001
Vanadium, total	mg/L					0.00507	<0.001	<0.001	<0.001	<0.001	0.004	0.017	0.052	0.07
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.011	0.0108	0.018	0.00397	<0.001	0.01	0.025	0.072	0.088
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	<0.001	<0.002	<0.001	<0.001	0.001	0.001	0.022	0.004

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W17	W17	W17	W17	W17	W17
Sampling Date						1-Aug-96	8-Aug-96	4-Sep-96	1-Oct-96	8-Oct-96	15-Oct-96	24-Oct-96	29-Oct-96
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			8.46	8.1	7.98		*1.5*	7.64	7.68
Conductivity	uS/cm						82.6	78.8	113		167	212	245
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.6	7.9	8.1	8.1	8.1	7.9	8	8
Specific Conductance	uS/cm					88	113	91	1153	179	191	257	283
Total Hardness	mg/L					31	48	26	60	85	89	102	123
Total dissolved solids	mg/L					54	60	64	75	104	152	159	179
Total suspended solids	mg/L					344	181	340	585	265	188	39	23
Turbidity	NTU					290	124	270	580	182	150	52	38
Major Ions													
Total alkalinity	mg/L as Ca CO3					36	24	40	56	56	54	67	74
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					<1	1	<1	2	2	2	1	1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.1	0.1	0.09	0.12	0.14	0.14	0.16	0.16
Fluoride	mg/L	**0.12**			**EQ7**	0.03	<0.05	0.02	0.05	0.05	0.05	0.06	0.07
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		10.9	13.1	11.2	19.4	44.8	45.5	59.2	65.8
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.007	0.026	<0.005	0.046	0.037	0.067	0.105	0.139
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									
Free Ammonia	mg/L as NH3-N					<0.005	<0.005	0.01	0.01	0.01	0.01	0.01	0.01
Ortho phosphorus, dissolved	mg/L					<0.002	<0.002	<0.002	0.002	0.002	0.004	0.004	0.006
Phosphorus, total	mg/L					0.095	0.011	0.146	0.211	0.108	0.046	0.004	0.006
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	9.81	3.71	3.85	17.1	7.6	3.85	1.9	1.47
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0457999	0.0469	0.0879	0.031	0.0163999	0.0253999	0.005	0.0045
Antimony, total	mg/L			**0.009**		0.00702	0.0011	0.00107	0.00459	0.00206	0.00173	0.00092	0.00139
Antimony, dissolved	mg/L			**0.009**		0.00038	0.00046	0.00048	0.00129	0.00093	0.00088	0.00082	0.00095
Arsenic, total	mg/L	**0.005**		**0.005**		0.012	0.011	0.005	0.044	0.009	0.006	0.002	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.137	0.0976999	0.067	0.211	0.107	0.0664	0.0545	0.0512999
Barium, dissolved	mg/L			**1**		0.0303999	0.0245	0.0235	0.028	0.0207	0.0258999	0.0354	0.0400999
Beryllium, total	mg/L			**0.00013**		0.00016	0.00011	0.00024	0.00039	0.00014	0.00007	<0.00005	0.00006
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.001	0.003	0.001	0.009	0.009	0.007	0.008	0.007
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.001	<0.001	<0.001	0.005	0.008	0.006	0.001	0.002
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0009	0.0003	<0.0001	***0.0011***	0.0004	0.0002	<0.0001	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					14.5	16.7	7.97	35.3	30	33.9	47.3	52.2
Calcium, dissolved	mg/L					10.8	14.1	9.26	20.8	29.1	30.4	34.7	41.5
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.0073	0.0046999	0.0043	0.0320999	0.0136	0.0069	0.003	0.0032
Chromium, dissolved	mg/L					0.0009	<0.0005	0.0006	<0.0005	0.0019	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	0.00444	0.00213	0.0228999	0.016	0.00398	0.00324	0.00127	0.00099
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00006	0.00009	0.00015	<0.00006	0.00009	0.00014	0.00009	0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0245	0.0121	0.0083	0.0793	0.0233999	0.0187999	0.0061999	0.0051
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0001	0.0001	0.0002	<0.0001	<0.0001	0.0001	0.0004	0.0004
Iron, total	mg/L	**0.3**		**0.001**		12.1	3.85	4.05	30.3	9.31	5.63	2.25	1.74
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0079099	0.00253	0.00278	0.0145	0.00411	0.00433	0.00148	0.00071
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	0.0005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L					6.96	3.31	2.61	13.1	6.35	6.15	7.27	7.62
Magnesium, dissolved	mg/L					1.07	3.18	0.798	1.92	2.88	3.24	3.78	4.71
Manganese, total	mg/L			**EQ10**	**EQ11**	0.335	0.102	0.13	0.71	0.227	0.188	0.0755	0.0517999
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	<0.0001	0.0002	<0.0001	<0.0001	0.0003	0.0004	0.0026	0.003
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00278	0.00224	0.00147	0.00601	0.00413	0.00367	0.00506	0.00576
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0015	0.00171	0.00066	0.0036	0.00359	0.00342	0.00384	0.00438
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0105	0.0076	0.00131	0.0422999	0.0133999	0.0101	0.0043	0.0038
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0005	0.0002	<0.00006	0.00015	0.0006	0.0007	0.0012	0.0016
Potassium, total	mg/L					1.73	1.53	1.17	2.59	3.06	1.11	1.34	1.49
Potassium, dissolved	mg/L					0.57	0.44	0.59	0.74	0.76	0.65	0.8	0.93
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00022	0.00009	0.00012	0.00134	0.00051	0.00007	<0.00001	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	0.00003	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					1.17	1.12	0.62	1.1	1.8	1.02	1.38	1.68
Sodium, dissolvd	mg/L					0.32	1.09	0.3	0.55	0.74	0.79	0.88	1.19
Strontium, total	mg/L					0.0809	0.105	0.0512999	0.168	0.176	0.24	0.318	0.388
Strontium, dissolved	mg/L					0.0609	0.0875999	0.039	0.102	0.153	0.185	0.235	0.264
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00021	0.00019	0.00021	0.0006	0.00043	0.0006	0.00043	0.00041
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00006	0.00008	0.00008	0.00009	0.00014	0.00017	0.00034	0.00041
Vanadium, total	mg/L					0.019	0.012	0.009	0.151	0.028	0.014	0.005	0.004
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.059	0.021	0.014	0.123	0.038	0.028	0.014	0.013
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	0.001	<0.001	0.001	0.013	0.004	0.002	0.004

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W17	W17	W17	W17	W17	W17
Sampling Date						3-Jan-97	5-Feb-97	4-Apr-97	5-May-97	3-Jul-97	8-Jul-97	11-Aug-97	16-Sep-97
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**									
Conductivity	uS/cm												
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.1	7.9	8.2	8	8.3	7.9	8.7	7.6
Specific Conductance	uS/cm					393	395	424	266	126	85	69	115
Total Hardness	mg/L					249	231	161	39	52	30	26	50
Total dissolved solids	mg/L					251	261	280	166	85	43	34	54
Total suspended solids	mg/L					<1	<1	9	86	207	365	412	55
Turbidity	NTU					2.4	0.8	2.6	83	180	310	330	51
Major Ions													
Total alkalinity	mg/L as Ca CO3					101	102	112	76	48	31	31	33
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3										31	29	33
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3										0.5	1	0.5
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					3	3	<1	1	<1	2	<1	2
Chloride	mg/L	**120**	**640**	**150**	**600**	0.2	0.2	0.27	0.16	0.15	0.06	0.05	0.07
Fluoride	mg/L	**0.12**			**EQ7**	0.07	0.06	0.09	0.06	0.06	0.02	0.03	0.03
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		94.1	100	111	63	23.1	8.4	6.1	22.8
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.162	0.159	0.191	0.244	0.027	<0.005	<0.005	0.031
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**							0.01	0.01	0.01
Free Ammonia	mg/L as NH3-N					<0.02	<0.02	<0.02	<0.02	<0.005			
Ortho phosphorus, dissolved	mg/L					0.006	<0.002	<0.002	0.002	0.002	0.007	0.006	0.003
Phosphorus, total	mg/L					0.008	<0.002	0.004	0.118	0.034	0.389	0.242	0.035
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.018	0.0025	0.0133	4.37	8.87	14.1	10.8	1.29
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0044	<0.0005	<0.0005	0.011	0.022	0.0899	0.049	0.0103999
Antimony, total	mg/L			**0.009**		0.0008	0.00058	0.00059	0.00099	0.0037	0.00127	0.00605	0.00072
Antimony, dissolved	mg/L			**0.009**		0.00063	0.00045	0.00055	0.00047	0.00067	0.00025	0.00068	0.00069
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.004	<0.001	0.016	0.011	0.019	0.034	0.002
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.053	0.0715	0.0619	0.0728	0.221	0.0973	0.21	0.0414
Barium, dissolved	mg/L			**1**		0.053	0.054	0.0585999	0.0318999	0.0287	0.0247999	0.0175	0.0192
Beryllium, total	mg/L			**0.00013**		<0.00005	0.00016	<0.00005	0.00008	0.00015	0.00043	0.00043	0.00023
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	0.00016
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.001	0.009	0.009	0.003	0.008	0.003	0.005	0.003
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.001	0.008	0.009	0.002	0.001	<0.001	<0.001	0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	0.0003	0.0007	***0.0011***	0.001	0.0004
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0001
Calcium, total	mg/L					87	78	59.3	61	19.6	24.6	17.2	17.3
Calcium, dissolved	mg/L					87	55.8	52.3	59.2	17.7	10.4	9.38	16.9
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.0009	0.0007	<0.0005	0.0056	0.0126	0.0287999	0.0217	0.0031
Chromium, dissolved	mg/L					0.0008	<0.0005	0.00025	0.00025	0.001	0.0005	0.00025	0.00025
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**	<0.00006		0.00026	0.0028699	0.0649	0.0083599	0.0023	<0.00006
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.00006		0.00022	0.00003	0.00018	0.00003	0.00003	0.00003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0007	0.0005	0.0006	0.0138	0.0357	0.0335	0.0412999	0.005
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0006	<0.0001	0.00005	0.0001	0.0006	0.00005	0.0002	0.00005
Iron, total	mg/L	**0.3**		**0.001**		<0.01	0.01	0.04	5.14	6.34	19.5	2.94	1.96
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.005	0.03	0.005	0.005	0.005	0.02
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	0.00007	0.00009	0.00284	0.00397	0.0118999	0.017	0.00157
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	0.00008	0.000025	0.000025	0.000025	0.000025	0.000025	0.00029
Magnesium, total	mg/L					8.7	8.8	7.41	8.27	5.82	8.16	7.24	2.86
Magnesium, dissolved	mg/L					7.8	7	7.4	5.92	1.94	1.02	0.725	2.01
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0049	0.0049	0.0071999	0.169	0.248	0.395	0.596	0.053
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0033	0.0036	0.0059	0.0025	0.0002	0.00015	0.0005	0.0027
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00041	0.00006	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	0.000025	0.000025	0.000025	0.00013	0.000025	0.000025
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0078	0.0044499	0.0052399	0.00548	0.00395	0.00327	0.0028699	0.00172
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0075	0.00436	0.00509	0.00475	0.00281	0.00112	0.00098	0.00175
Nickel, total	mg/L	**EQ20**		**EQ22**		0.002	0.0016	0.002	0.0088	0.0272	0.163	0.0267	0.0041
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0019	0.0013	0.0016	0.0018	0.0014	0.0015	<0.0003	0.0005
Potassium, total	mg/L					1.7	2.1	1.67	2.32	3.42	3.95	2.13	0.54
Potassium, dissolved	mg/L					1.6	1.7	1.35	1.37	0.58	0.62	0.54	0.33
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	0.004	0.002		0.003	0.0015
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	0.004	<0.001		<0.001	0.004
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	0.00003	0.00008	0.00026	0.00034	0.00031	0.00008
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00001
Sodium, total	mg/L					2.2	2.5	1.98	2.06	2.14	1.67	2.4	0.58
Sodium, dissolvd	mg/L					2	2	1.67	1.5	0.6	0.24	0.27	0.49
Strontium, total	mg/L					0.472	0.405	0.395	0.273	0.122	0.125	0.104	0.103
Strontium, dissolved	mg/L					0.44	0.375	0.356	0.261	0.0927	0.0706999	0.0577999	0.0975
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**									
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L												
Titanium, dissolved	mg/L												
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00039	0.00044	0.00069	0.00068	0.00041	<0.00001	0.00089	0.00093
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00034	0.00032	0.0005	0.00035	0.00009	<0.00001	0.00025	<0.00001
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.017	0.022	0.06	0.057	0.014
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.008	0.022	0.002	0.029	0.102	0.081	0.144	0.022
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.004	0.021	0.002	0.002	0.002	0.001	<0.001	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W17	W17	W18	W18	W18	W18	W18	W18	W18
Sampling Date						3-Nov-97	26-Oct-00	9-Jul-93	13-Jul-93	19-Jul-93	23-Jul-93	30-Jul-93	26-Aug-93	6-Sep-93
		Long Term	Short Term	Long Term	Short Term									1
Field pH	pH units	**6.5 - 9**		**6.5 - 9**				7.73	7.84	7.74	7.28	7.05	7.78	7.79
Conductivity	uS/cm							64	65.8	59.9	67.8	72	103	71
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	8.13	7	7.3	6.6	6.9	7.4	7.7	*6.2*
Specific Conductance	uS/cm					298	1500	76	69	64	69	71	99	72
Total Hardness	mg/L					140	65.5	30	28	26	29	29	44	43
Total dissolved solids	mg/L					193	103	49	53	33	42	54	64	49
Total suspended solids	mg/L					31	597	20	11	14	15	140	<1	10
Turbidity	NTU					31		7.6	13	17	19	92	3.9	12
Major Ions														
Total alkalinity	mg/L as Ca CO3					74	41	32	31	29	31	36	40	33
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					74								
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					0.5								
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1	5	3.4	2.8	3.5	2.1	2.7	1.9	2.5
Chloride	mg/L	**120**	**640**	**150**	**600**	0.12	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.06	0.05	0.05	0.05	<0.05	0.05	<0.05	0.05	<0.05
Bromide	mg/L						<0.5							
Sulfate	mg/L			**EQ23**		73.7	23	13	12	12	13	12	19	9.4
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.179	0.046	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	0.002	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.01	<0.005							
Free Ammonia	mg/L as NH3-N							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L					0.006		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L					0.071		<0.05	0.1	<0.05	<0.05	<0.05	<0.05	<0.05
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**		<0.005					<0.005		
Cyanide, WAD	mg/L			**0.005**	**0.01**							<0.005		
Thiocyanate	mg/L											0.1		
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	1.06	6.26	0.24	0.22	0.52	0.47	2.8	0.17	0.41
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0074	0.026	0.016	0.022	0.05	0.044	0.052	0.018	0.056
Antimony, total	mg/L			**0.009**		0.00057	0.002	0.00064	0.00053	0.00081	0.00065	0.0013	0.00067	<0.0001
Antimony, dissolved	mg/L			**0.009**		0.00048	0.0006	<0.0001	<0.0001	0.00017	0.00022	<0.0001	0.00021	0.0002
Arsenic, total	mg/L	**0.005**		**0.005**		0.003	0.0216	0.013	<0.001	<0.001	0.0061	0.0037	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	0.0007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0510999	0.15	0.059	0.056	0.059	0.075	0.17	0.078	0.078
Barium, dissolved	mg/L			**1**		0.0354	0.02	0.047	0.046	0.043	0.047	0.058	0.058	0.07
Beryllium, total	mg/L			**0.00013**		0.00006	<0.001	0.00012	0.00005	0.00019	0.00015	<0.0001	<0.00008	0.00007
Beryllium, dissolved	mg/L			**0.00013**		0.00006	<0.001	0.00008	0.00005	0.00016	0.00011	<0.0001	0.00009	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.002	<0.1	0.012	0.035	0.02	0.025	0.035	0.067	0.033
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.002	<0.1	<0.0008	<0.0008	0.0057	0.0064	0.0072	0.0065	0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00026	0.00074	<0.0001	<0.0002	0.00008	0.00007	0.00012	<0.00008	0.00021
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00018	<0.00005	<0.0002	<0.0002	<0.00009	<0.00009	<0.0001	<0.00007	<0.00009
Calcium, total	mg/L					50	35.3	11	10	7.7	10	11	15	17
Calcium, dissolved	mg/L					46.4	22.3	9.2	8.6	7.4	8	9.3	13	13
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0016	0.0107	0.01	0.0093999	0.0058	0.0049	0.0088	0.011	0.006
Chromium, dissolved	mg/L					0.0016	<0.0005	0.0015	0.0007	0.00099	0.00081	<0.0005	<0.0005	0.0021
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00166	0.0111	0.0005	0.00023	0.00055	0.00041	0.0025	0.00042	0.00026
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00104	<0.0001	0.00009	<0.00008	0.0001	0.00009	<0.00005	0.00008	<0.00006
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0029	0.0508	0.0053	0.0051	0.0032	0.0025	0.01	0.0032	0.014
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00005	0.0004	0.0045	<0.0003	0.00021	0.00097	0.00013	<0.0002	<0.0005
Iron, total	mg/L	**0.3**		**0.001**		1.56	11.9	0.59	0.35	0.89	0.55	4.4	0.25	0.53
Iron, dissolved	mg/L	**0.3**		**0.35**		0.13	<0.03	0.047	0.064	0.049	0.04	<0.01	<0.01	0.049
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00055	0.0161	0.0021	0.0011	0.0016	0.0021	0.01	0.0016	0.004
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0002	<0.00005	0.00022	<0.0001	<0.00006	<0.00006	0.00013	0.00006	<0.00007
Magnesium, total	mg/L					6.19	7	1.8	1.6	1.7	2.9	3	2.8	3.6
Magnesium, dissolved	mg/L					5.76	2.4	1.7	1.5	1.7	2.1	1.5	2.7	2.5
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0437999	0.594	0.026	0.015	0.061	0.037	0.29	0.011	0.023
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0061999	0.025	0.0037	0.005	0.0073	0.0077	0.0038	0.0011	0.0046
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	0.00028	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		0.000025	<0.00002	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00469	<0.03	0.0013	0.001	0.00019	0.00037	0.0023	0.0004	0.00077
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00404	<0.03	0.0002	<0.0001	<0.0002	0.00022	0.00017	0.0004	0.00047
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0054	0.022	<0.001	<0.001	0.0053	0.00052	0.0023	0.0061	0.007
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0024	<0.001	<0.001	<0.001	<0.0004	<0.0004	<0.0004	0.00054	<0.0003
Potassium, total	mg/L					1.26	2	0.77	0.77	0.43	0.45	1.2	0.39	1.2
Potassium, dissolved	mg/L					1	<2	0.066	0.07	0.12	0.13	0.086	0.19	0.3
Selenium, total	mg/L	**0.001**		**0.002**		0.01	0.001	<0.001	<0.001	0.0016	0.0014	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	0.0004	0.0001	0.00004	0.00044	0.00005	0.00015	0.00005	0.00044
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					1.61	2	0.28	0.27	0.33	0.44	0.41	0.53	0.92
Sodium, dissolvd	mg/L					1.53	<2	0.22	0.24	0.24	0.28	0.2	0.44	0.35
Strontium, total	mg/L					0.253		0.058	0.055	0.054	0.063	0.053	0.085	0.075
Strontium, dissolved	mg/L					0.246		0.053	0.049	0.051	0.061	0.05	0.079	0.074
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**			0.00007							
Thallium, dissolved	mg/L	**0.0008**		**0.0008**			<0.00005							
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L						0.12							
Titanium, dissolved	mg/L						<0.01							
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00034	0.001	0.00006	<0.00004	0.00006	0.00005	0.00011	0.00005	<0.00003
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00032	0.0001	0.00006	<0.00004	0.00003	0.00003	<0.00003	0.00005	<0.00003
Vanadium, total	mg/L					<0.001	<0.03	<0.001	<0.001	0.0013	0.0055	0.016	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.03	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.02	0.063	0.055	0.071	0.06	0.075	0.039	0.024	0.025
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.001	<0.005	0.0002	<0.0006	<0.0003	<0.0003	0.0065	0.0002	<0.0004

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W18	W18	W18	W18	W18	W18	W18	W18	W18
Sampling Date						14-Sep-93	19-Sep-93	25-Sep-93	2-Oct-93	30-Oct-93	29-Nov-93	10-Jan-94	2-Feb-94	27-Feb-94
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.7	7.44	7.98	7.77	8	7.7		7.2	7.8
Conductivity	uS/cm					106	131	128	84	131	191		206	236
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.2	7.3	7.1	7.8	7.9	7.9	7.8	7.9	7.8
Specific Conductance	uS/cm					100	130	130	73	130	200	210	230	210
Total Hardness	mg/L					54	86	89	71	61	120	94	98	92
Total dissolved solids	mg/L					56	90	85	53	78	120	120	130	130
Total suspended solids	mg/L					8	<1	<1	61	10	6	<1	1	3
Turbidity	NTU					4.7	2.5	2.7	54	11	0.59	0.36	0.34	0.41
Major Ions														
Total alkalinity	mg/L as Ca CO3					43	54	51	38	60	87	88	94	90
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					2.8	2.7	2.9	1.9	2.2	23	3.4	2.1	8.4
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	0.5	0.5	0.5	1	1	<0.5	1
Fluoride	mg/L	**0.12**			**EQ7**	0.1	0.05	0.1	<0.05	<0.05	0.05	0.1	0.15	0.1
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		14	10	9.1	7.2	16	28	18	25	21
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.5	<0.5	<0.5	<0.5	<0.5	0.45	0.25	0.3	0.15
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.005	<0.5	<0.005	<0.005	<0.005	<0.005
Ortho phosphorus, dissolved	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	0.02	<0.01	<0.01	<0.01
Phosphorus, total	mg/L					<0.05	<0.05	<0.05	0.05	<0.05	0.03	0.03	0.05	0.1
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**					<0.005				<0.005
Cyanide, WAD	mg/L			**0.005**	**0.01**					<0.005				<0.005
Thiocyanate	mg/L													0.05
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.13	0.049	0.21	3.3	0.73	0.067	<0.001	0.013	0.043
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0079	0.0061	0.0098	0.073	0.031	<0.001	<0.001	0.0016	<0.001
Antimony, total	mg/L			**0.009**		0.00018	0.00028	0.00055	0.00083	0.00028	0.00063	0.0004	0.00053	0.0004
Antimony, dissolved	mg/L			**0.009**		0.00009	0.00028	0.00014	0.0005	<0.0001	<0.0001	0.0003	0.00021	0.00016
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	0.36	0.002	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.074	0.095	0.087	0.14	0.073	0.086	0.095	0.11	0.099
Barium, dissolved	mg/L			**1**		0.074	0.095	0.087	0.082	0.066	0.086	0.095	0.096	0.086
Beryllium, total	mg/L			**0.00013**		<0.00006	<0.00004	<0.00006	0.00024	0.00008	<0.0001	0.00016	<0.00006	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.00006	<0.00004	<0.00006	0.00012	0.00008	<0.0001	<0.0001	<0.00006	<0.0001
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.0079	0.018	0.018	0.023	0.02	0.052	0.032	0.031	0.029
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.0078	0.014	0.014	0.01	0.011	0.018	0.021	0.02	0.019
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00009	<0.0001	<0.0002	0.00023	<0.0001	<0.0001	0.0002	<0.0001	<0.0001
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00007	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					19	26	26	22	24	42	35	33	40
Calcium, dissolved	mg/L					19	26	26	22	19	38	28	30	28
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0021	0.0025	0.0024	0.004	0.008	0.014	0.001	0.0011	0.0025
Chromium, dissolved	mg/L					0.0021	0.0025	0.0024	0.0031	0.0023	0.0024	0.00077	0.0011	0.0018
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00069	0.00016	0.00036	0.002	0.00061	0.00065	<0.00006	0.00007	<0.00009
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00007	0.00016	0.00016	0.00018	<0.0001	<0.00006	<0.00006	<0.00006	<0.00009
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.004	0.0016	0.039	0.0098	0.0086	0.0064	0.0019	0.00039	<0.0002
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	0.0016	<0.0004	0.00036	<0.0004	<0.0002	<0.0005	0.00038	<0.0002
Iron, total	mg/L	**0.3**		**0.001**		1.2	0.066	0.31	4.1	1.3	0.074	<0.01	0.01	0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		0.028	<0.01	0.033	0.06	0.054	0.019	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00058	0.00017	0.00085	0.0044	0.0007	0.00015	0.0012	0.00016	0.00007
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00006	0.00012	<0.00006	<0.00007	<0.0001	<0.0001	<0.00007	0.00006	<0.00007
Magnesium, total	mg/L					3.5	5.3	5.8	4.5	4.2	9.9	8	6.9	7.9
Magnesium, dissolved	mg/L					3.5	5.1	5.8	3.8	3.4	6.3	5.9	5.6	5.4
Manganese, total	mg/L			**EQ10**	**EQ11**	0.015	0.0021	0.016	0.23	0.035	0.004	0.00073	0.00092	0.0006
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0028	0.0021	0.0013	0.0013	0.0024	0.00022	<0.0001	0.00018	<0.0002
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00004	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0008	0.0017	0.0019	0.0008	0.00065	0.0014	0.0015	0.0014	0.0015
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00055	0.0017	0.00092	0.00061	0.00064	<0.0002	0.0013	0.0012	0.00096
Nickel, total	mg/L	**EQ20**		**EQ22**		0.08	0.002	0.0028	0.0033	0.0029	0.0034	0.0011	0.001	0.0005
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0004	0.002	0.0014	0.0018	<0.0005	<0.0003	0.00041	0.001	0.00049
Potassium, total	mg/L					0.71	0.9	0.93	2.5	1.5	0.85	0.53	0.5	0.4
Potassium, dissolved	mg/L					0.35	0.48	0.56	0.65	<0.05	0.52	0.35	0.35	0.31
Selenium, total	mg/L	**0.001**		**0.002**		0.002	0.003	<0.001	<0.001	0.006	0.001	<0.001	0.002	0.003
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	0.003	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00005	0.00001	0.00001	0.00011	0.00004	0.00004	0.0001	<0.00001	0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L					0.81	0.92	0.85	0.74	1.6	2.3	1.7	1.4	1.5
Sodium, dissolvd	mg/L					0.55	0.86	0.82	0.57	0.27	1.4	1.2	1.1	1
Strontium, total	mg/L					0.11	0.16	0.16	0.11	0.13	0.21	0.22	0.21	0.23
Strontium, dissolved	mg/L					0.11	0.16	0.16	0.11	0.12	0.19	0.19	0.2	0.18
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00003	0.0001	<0.00004	0.00006	0.00003	0.00007	0.00009	0.00013	0.00008
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00003	0.0001	0.00007	0.00006	0.00003	0.00007	0.00009	0.0001	0.00007
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.013	0.0056	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	0.01	0.022	0.016	0.0023	0.015	0.012	0.023	0.0018
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.00057	0.0039	<0.0005	0.0021	<0.0007	0.00089	0.0044	0.0071999	0.0017

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W18	W18	W18	W18	W18	W18	W18	W18	W18
Sampling Date						15-May-96	2-Jun-96	3-Jul-96	18-Jul-96	27-Jul-96	1-Aug-96	8-Aug-96	4-Sep-96	1-Oct-96
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			8.08	7.98	7.81	7.86		8.06	7.92	7.74
Conductivity	uS/cm								90.3	68.2		93.5	83.1	129
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.5	8.1	8	7.9	7.9	7.9	7.8	7.6	7.6
Specific Conductance	uS/cm					199	138	121	92	78	94	134	86	142
Total Hardness	mg/L					51	57	47	39	38	35	46	31	67
Total dissolved solids	mg/L					111	75	68	47	42	48	60	51	81
Total suspended solids	mg/L					2	<1	<1	20	22	14	7	6	2
Turbidity	NTU					2.5	6	4.8	21	32	17	4.4	23	4.4
Major Ions														
Total alkalinity	mg/L as Ca CO3					79	53	46	37	32	36	36	32	56
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1	0.8	1	1	1	2	2	2	1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.2	0.16	0.12	0.11	0.14	0.11	0.13	0.17	0.26
Fluoride	mg/L	**0.12**			**EQ7**	0.07	0.06	0.05	0.05	<0.05	0.03	<0.05	0.02	0.04
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		17.6	13.6	12.6	8.5	7.2	9.5	11.4	10.1	17.6
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.53	0.168	0.076	0.048	0.031	0.034	0.051	0.032	0.165
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	0.137	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**										
Free Ammonia	mg/L as NH3-N					0.015	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.04
Ortho phosphorus, dissolved	mg/L					0.002	0.004	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Phosphorus, total	mg/L					0.004	0.008	0.006	0.042	0.07	0.044	0.041	0.018	0.014
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.067	0.161	0.128	0.89	1.68	0.275	0.252	0.348	0.213
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0282999	<0.0005	<0.0005	0.0069	0.0096999	0.0021	0.008	0.0061	0.0026
Antimony, total	mg/L			**0.009**		0.00033	0.00022	0.00029	0.00036	0.0004	0.00016	0.00028	0.00015	0.00025
Antimony, dissolved	mg/L			**0.009**		0.00022	0.00018	0.00018	0.00022	0.00022	0.00014	0.00022	0.00013	0.00023
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	0.001	<0.001	0.002	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0739	0.0639	0.0691	0.0644	0.102	0.0582	0.0639	0.0577	0.0908
Barium, dissolved	mg/L			**1**		0.0725999	0.0552	0.0622	0.0540999	0.0627999	0.0577999	0.0615	0.0524	0.0745
Beryllium, total	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00015	<0.00005
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.026	0.005	0.009	0.006	0.007	<0.001	0.005	0.002	0.012
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.024	0.005	0.009	0.004	0.004	<0.001	0.005	0.001	0.012
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0001	<0.0001	0.0001	0.0004	0.0004	0.0004	<0.0001	<0.0001	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L					17.5	19.7	14.5	12.1	14.7	14.7	15.3	6.23	22.7
Calcium, dissolved	mg/L					13.5	19.1	14.5	11.6	12.1	11	14.1	9.69	21
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0018	<0.0005	0.0008	0.0016	0.0014	<0.0005	<0.0005	0.0009	0.0005
Chromium, dissolved	mg/L					0.0015	<0.0005	0.0006	0.001	<0.0005	<0.0005	<0.0005	0.0008	<0.0005
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00023	0.0003	0.00009	0.00054	0.00107	<0.00006	0.00018	0.001	0.0002
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00018	0.00019	<0.00006	<0.00006	<0.00006	<0.00006	0.00006	0.00015	<0.00006
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0003	0.0003	0.001	0.0018	0.0034	0.0006	0.0004	0.0007	0.0007
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0003	<0.0001	0.0002	0.0001	<0.0001	<0.0001	0.0001	0.0002	<0.0001
Iron, total	mg/L	**0.3**		**0.001**		0.11	0.21	0.05	0.73	1.83	0.39	0.2	0.23	0.22
Iron, dissolved	mg/L	**0.3**		**0.35**		0.03	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00014	0.00037	0.00011	0.0007	0.00196	0.00056	0.00038	0.00058	0.00028
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L					5.06	3.06	2.75	3.14	2.83	2.37	2.7	1.78	3.8
Magnesium, dissolved	mg/L					4.22	2.28	2.74	2.41	1.95	1.95	2.52	1.73	3.63
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0041999	0.0115	0.0042	0.0345	0.13	0.0126999	0.0123	0.0106	0.0151999
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0014	0.0016	0.0008	0.0018	0.0037	0.0002	0.0021	0.0002	0.0017
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	0.00006	0.00009	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00082	0.00041	0.00052	0.00062	<0.00005	0.00043	0.00059	0.00022	0.00072
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00074	0.0003	0.00043	0.00049	0.00005	0.00043	0.00051	0.00016	0.00064
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00015	0.0018	0.0009	0.00015	0.0011	0.00015	0.0006	0.00012	0.00015
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00015	0.00015	0.0006	0.00015	0.00015	0.00015	0.00015	<0.00006	0.00015
Potassium, total	mg/L					0.44	0.28	0.31	0.58	0.9	0.35	0.32	0.43	0.36
Potassium, dissolved	mg/L					0.35	0.21	0.25	0.19	0.28	0.15	0.21	0.19	0.26
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00003	<0.00001	0.00005	0.00005	0.00016	0.00009	<0.00001	0.00007	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	<0.00001	0.00007	<0.00001
Sodium, total	mg/L					0.9	0.42	0.57	0.42	0.35	0.4	0.42	0.34	0.58
Sodium, dissolvd	mg/L					0.77	0.32	0.52	0.36	0.28	0.32	0.34	0.32	0.55
Strontium, total	mg/L					0.151	0.109	0.0908	0.0899	0.0875	0.076	0.117	0.0487	0.117
Strontium, dissolved	mg/L					0.141	0.0909	0.0905	0.0845	0.0739	0.0739	0.109	0.0425	0.114
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00011	0.00005	0.00004	0.00005	<0.00001	<0.00001	0.00003	0.00002	0.00011
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	0.00002	0.00003	0.00003	<0.00001	<0.00001	0.00002	0.00002	<0.00001
Vanadium, total	mg/L					<0.001	<0.001	<0.001	0.003	0.004	0.001	<0.001	0.001	0.001
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	0.002	0.002	0.007	0.019	0.007	<0.001	<0.001	0.003
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	0.001	0.001	0.006	0.003	0.001	<0.001	<0.001	0.002

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W18	W18	W18	W18	W18	W18	W18	W18	W18
Sampling Date						8-Oct-96	15-Oct-96	24-Oct-96	29-Oct-96	5-Feb-97	4-Apr-97	5-May-97	8-Jul-97	11-Aug-97
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			7.08	7.74	7.73					
Conductivity	uS/cm						150	156.4	178					
Specific Conductivity	uS/cm													
Dissolved Oxygen	mg/L													
Dissolved Oxygen	%													
ORP	mV													
Turbidity	NTU													
TDS	mg/L													
Temperature	degC													
pH	pH units	**6.5 - 9**		**6.5 - 9**		8	7.7	8.1	8.1	7.8	8.2	8	7.4	7.8
Specific Conductance	uS/cm					160	173	195	202	236	243	191	82	63
Total Hardness	mg/L					73	79	84	82	129	74	40	36	28
Total dissolved solids	mg/L					81	115	114	116	130	148	101	46	32
Total suspended solids	mg/L					9	<1	<1	<1	<1	2	5	27	147
Turbidity	NTU					3.1	3	1.7	1.2	0.5	0.3	7	31	128
Major Ions														
Total alkalinity	mg/L as Ca CO3					61	64	72	77	85	90	75	32	26
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												32	26
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												0.5	0.5
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3													
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					2	1	1	1	2	<1	1	2	2
Chloride	mg/L	**120**	**640**	**150**	**600**	0.15	0.15	0.15	0.14	0.11	0.14	0.17	0.07	0.07
Fluoride	mg/L	**0.12**			**EQ7**	0.04	<0.05	0.05	0.05	0.03	0.06	0.03	0.02	0.03
Bromide	mg/L													
Sulfate	mg/L			**EQ23**		20.4	23.8	28	27.6	30.7	39.4	20	5.8	4.7
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.187	0.232	0.297	0.386	0.366	0.409	0.825	0.056	0.011
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**									0.01	0.01
Free Ammonia	mg/L as NH3-N					0.01	0.01	0.01	0.01	<0.02	<0.02	<0.02		
Ortho phosphorus, dissolved	mg/L					<0.002	<0.002	0.004	0.004	<0.002	0.003	0.002	0.011	0.011
Phosphorus, total	mg/L					0.011	0.006	0.006	0.006	<0.002	<0.002	0.015	0.059	0.132
Organics														
Total Organic Carbon	mg/L													
Dissolved Organic Carbon	mg/L													
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.163	0.0778	0.0111999	0.0068	<0.0005	0.0015	0.215	0.968	2.72
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0014	0.0018	<0.0005	<0.0005	<0.0005	<0.0005	0.0048	0.0063	0.0005
Antimony, total	mg/L			**0.009**		0.00019	0.00029	0.00026	0.00026	0.00038	0.0003	0.00023	0.00092	0.00114
Antimony, dissolved	mg/L			**0.009**		0.00013	0.00017	0.00019	0.00024	0.00016	0.0003	0.00021	0.00041	0.00049
Arsenic, total	mg/L	**0.005**		**0.005**		0.001	<0.001	0.001	<0.001	0.001	<0.001	0.011	0.003	0.005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L			**1**		0.0656999	0.0779	0.097	0.0998	0.132	0.106	0.0763	0.0344	0.146
Barium, dissolved	mg/L			**1**		0.0632	0.0726999	0.0935999	0.0989	0.11	0.101	0.0758	0.0268999	0.0643
Beryllium, total	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00011	<0.00005	0.0001	0.00011
Beryllium, dissolved	mg/L			**0.00013**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L													
Bismuth, dissolved	mg/L													
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.017	0.022	0.018	0.022	0.03	0.021	0.012	0.004	0.006
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.016	0.02	0.015	0.016	0.018	0.021	0.012	0.003	0.001
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Calcium, total	mg/L					23.1	23.9	26.2	27.8	39	21.1	40.3	19.3	9.61
Calcium, dissolved	mg/L					23	23.6	26	25.5	28.2	20.1	39.8	11.4	8.91
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0006	<0.0005	0.0007	0.001	0.001	0.0006	0.0009	0.0031	0.0036
Chromium, dissolved	mg/L					0.0006	<0.0005	<0.0005	<0.0005	<0.0005	0.00025	0.00025	0.0009	0.00025
Chromium, hexavalent	mg/L													
Cobalt, total	mg/L			**0.004**	**0.11**	0.00016	0.00014	0.00008	0.00008		<0.00006	0.00013	0.0003	<0.00006
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00007	0.00006	<0.00006	<0.00006		0.00003	0.00003	0.00003	0.00003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0001	0.0006	0.001	0.0009	0.0003	0.0002	0.001	0.0015	0.0071
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0001	<0.0001	0.0002	0.0005	<0.0001	0.00005	0.0019	0.00005	0.00005
Iron, total	mg/L	**0.3**		**0.001**		0.16	0.12	0.02	0.02	0.01	0.01	0.35	0.99	2.55
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	0.02	<0.01	0.005	0.04	0.005	0.005
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00029	0.00041	<0.00005	<0.00005	<0.00005	0.00005	0.00025	0.00172	0.0053
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.000025	0.000025
Magnesium, total	mg/L					3.92	4.81	4.81	4.93	7.6	6.11	6.14	2.11	2.35
Magnesium, dissolved	mg/L					3.79	4.76	4.73	4.47	6.9	5.84	5.98	1.74	1.37
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0101999	0.006	0.002	0.0019	0.0013	0.0002	0.0138999	0.0392999	0.453
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.001	0.0008	0.0005	0.0005	<0.0001	0.0002	0.0012	0.0003	0.0005
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00019	<0.00005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000025	0.000025	0.00012	0.000025
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00058	0.00072	0.00114	0.00104	0.00109	0.00185	0.0007	0.00051	0.00041
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00058	0.00063	0.00113	0.00101	0.00095	0.00135	0.0007	0.00044	0.00036
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00015	0.001	<0.0003	0.0013	0.001	<0.0003	<0.0003	0.0066999	0.0041999
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00015	0.00015	0.00015	0.0011	0.0005	<0.0003	<0.0003	0.0016	<0.0003
Potassium, total	mg/L					0.26	0.22	0.41	0.42	0.41	0.3	0.51	0.53	1.04
Potassium, dissolved	mg/L					0.22	0.22	0.35	0.35	0.28	0.29	0.48	0.04	0.21
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001		<0.001
Silicon, total	mg/L													
Silicon, dissolved	mg/L													
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00007	<0.00001	<0.00001	<0.00001	0.00007	0.00002	<0.00001	<0.00001	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					0.59	0.75	0.89	0.75	1.5	1.19	1.28	0.33	0.68
Sodium, dissolvd	mg/L					0.59	0.74	0.88	0.74	1.4	1.1	1.17	0.26	0.26
Strontium, total	mg/L					0.123	0.188	0.2	0.217	0.23	0.213	0.181	0.135	0.0542999
Strontium, dissolved	mg/L					0.123	0.169	0.197	0.19	0.2	0.188	0.171	0.073	0.0502999
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**										
Thallium, dissolved	mg/L	**0.0008**		**0.0008**										
Tin, total	mg/L													
Tin, dissolved	mg/L													
Titanium, total	mg/L													
Titanium, dissolved	mg/L													
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00004	0.00005	0.00013	0.0001	<0.00001	0.00004	<0.00001	<0.00001	0.00034
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00002	0.00002	0.00011	0.00007	<0.00001	<0.00001	<0.00001	<0.00001	0.00013
Vanadium, total	mg/L					<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	0.023	0.02
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.002	0.007	0.003	0.005	0.011	0.001	0.008	0.026	0.03
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.002	0.002	0.002	0.003	0.004	<0.001	0.003	0.002	0.006

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		W18	W18	W18
Sampling Date						16-Sep-97	3-Nov-97	26-Oct-00
		Long Term	Short Term	Long Term	Short Term			
Field pH	pH units	**6.5 - 9**		**6.5 - 9**				
Conductivity	uS/cm							
Specific Conductivity	uS/cm							
Dissolved Oxygen	mg/L							
Dissolved Oxygen	%							
ORP	mV							
Turbidity	NTU							
TDS	mg/L							
Temperature	degC							
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	7.8	7.95
Specific Conductance	uS/cm					131	200	1290
Total Hardness	mg/L					63	99	59.9
Total dissolved solids	mg/L					60	118	93
Total suspended solids	mg/L					6	<1	16
Turbidity	NTU					9	0.7	
Major Ions								
Total alkalinity	mg/L as Ca CO3					48	76	43
Alkalinity to pH 4.5	mg/L as Ca CO3							
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					48	76	
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					0.5	0.5	
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3							
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3							
Acidity	mg/L					3	1	1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.06	0.12	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.03	0.04	<0.02
Bromide	mg/L							<0.5
Sulfate	mg/L			**EQ23**		18.1	21.3	14
Nutrients								
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.048	0.55	0.092
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	0.002
Nitrogen, total	mg/L as N							
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.01	0.01	0.005
Free Ammonia	mg/L as NH3-N							
Ortho phosphorus, dissolved	mg/L					<0.002	0.002	
Phosphorus, total	mg/L					0.01	0.007	
Organics								
Total Organic Carbon	mg/L							
Dissolved Organic Carbon	mg/L							
Other								
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**			<0.005
Cyanide, WAD	mg/L			**0.005**	**0.01**			
Thiocyanate	mg/L							
Metals								
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.147	0.0226	0.764
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.0005	<0.0005	0.049
Antimony, total	mg/L			**0.009**		0.00021	0.00025	0.0002
Antimony, dissolved	mg/L			**0.009**		<0.00005	0.00025	0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		<0.001	0.002	0.0006
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.001	<0.001	0.0002
Barium, total	mg/L			**1**		0.0492	0.092	0.08
Barium, dissolved	mg/L			**1**		0.0764	0.092	0.06
Beryllium, total	mg/L			**0.00013**		<0.00005	<0.00005	<0.001
Beryllium, dissolved	mg/L			**0.00013**		0.00016	<0.00005	<0.001
Bismuth, total	mg/L							
Bismuth, dissolved	mg/L							
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.013	0.005	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.01	0.005	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0003	0.00024	<0.00005
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0002	0.00004	<0.00005
Calcium, total	mg/L					18.7	31.3	18.7
Calcium, dissolved	mg/L					19.1	30.4	18.5
Cesium, total	mg/L							
Cesium, dissolved	mg/L							
Chromium, total	mg/L					0.0016	0.0018	0.0007
Chromium, dissolved	mg/L					0.00025	0.0018	<0.0005
Chromium, hexavalent	mg/L							
Cobalt, total	mg/L			**0.004**	**0.11**	0.00047	0.00098	0.0004
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00003	0.0002	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0008	<0.0001	0.0019
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00005	0.00005	0.0002
Iron, total	mg/L	**0.3**		**0.001**		0.21	0.17	0.65
Iron, dissolved	mg/L	**0.3**		**0.35**		0.03	0.11	0.05
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0003	0.0001	0.00113
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.000025	0.00004	<0.00005
Magnesium, total	mg/L					3.77	5.57	3.5
Magnesium, dissolved	mg/L					3.6	5.56	3.3
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0079	0.002	0.048
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0004	0.00005	<0.005
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00005	0.00002
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		0.000025	0.000025	<0.00002
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00036	0.00091	<0.03
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00028	0.00073	<0.03
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0012	0.0011	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0003	<0.0001	<0.001
Potassium, total	mg/L					0.26	0.41	<2
Potassium, dissolved	mg/L					0.23	0.32	<2
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.013	<0.001
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001
Silicon, total	mg/L							
Silicon, dissolved	mg/L							
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00006	<0.00001	0.00003
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					0.57	1.1	<2
Sodium, dissolvd	mg/L					0.51	1.1	<2
Strontium, total	mg/L					0.104	0.172	
Strontium, dissolved	mg/L					0.113	0.17	
Sulfur, total	mg/L							
Sulfur, dissolved	mg/L							
Thallium, total	mg/L	**0.0008**		**0.0008**				<0.00005
Thallium, dissolved	mg/L	**0.0008**		**0.0008**				<0.00005
Tin, total	mg/L							
Tin, dissolved	mg/L							
Titanium, total	mg/L							<0.01
Titanium, dissolved	mg/L							<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00076	0.00002	<0.0001
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	0.00002	<0.0001
Vanadium, total	mg/L					0.006	<0.001	<0.03
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.03
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.005	<0.001	<0.005
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.001	<0.001	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Appendix B - 3 – 2003 to 2013 Surface Water Quality Data

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		Bitter Creek	BITTER CREEK	Bitter Creek	BITTER CREEK	BITTER CREEK	BITTER CREEK	BITTER CK	BITTER CK
Sampling Date						12-Sep-04	29-Jul-05	28-Jul-06	8-Aug-07	31-Aug-08	11-Aug-09	3-Sep-10	29-Aug-11
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**									
Conductivity	uS/cm												
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.63	7.85	7.99	7.92	8.01	7.38	8.35	8.15
Specific Conductance	uS/cm							81.7	85.6	128	78.2	96.1	99.6
Total Hardness	mg/L						36.8	39.1	41.1	55.8	36.7	44.5	40.1
Total dissolved solids	mg/L					82	56	67	62	90	43	89	
Total suspended solids	mg/L												
Turbidity	NTU												
Major Ions													
Total alkalinity	mg/L as Ca CO3					34	28.1	2	29.4	40.5	28.5	38.9	34.3
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					2.6	1.9	1	1.3	3.3	2.9	<1	2.2
Chloride	mg/L	**120**	**640**	**150**	**600**								
Fluoride	mg/L	**0.12**			**EQ7**								
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		23.1	10.5		12.6	23.4	11	12.3	13.4
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0067	0.0084	0.014	0.0072	0.0175	0.0098	0.0174	0.0148
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.0127	<0.005	0.008	<0.005	<0.005	<0.005	<0.005	0.0056
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L												
Phosphorus, total	mg/L												
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**								
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0225	0.0395	0.0918	0.0768	0.0862	0.0349	0.113	0.0617
Antimony, total	mg/L			**0.009**									
Antimony, dissolved	mg/L			**0.009**		0.00057	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00069	0.00054
Arsenic, total	mg/L	**0.005**		**0.005**									
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00055	<0.0005	0.00055	<0.0005	0.00061	<0.0005	0.0007	0.00053
Barium, total	mg/L			**1**									
Barium, dissolved	mg/L			**1**		0.0161	0.022	<0.02	<0.02	<0.02	0.022	0.0294	0.0125
Beryllium, total	mg/L			**0.00013**									
Beryllium, dissolved	mg/L			**0.00013**		<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L											<0.0005	<0.0005
Boron, total	mg/L	**1.5**	**29**	**1.2**									
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**								
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00005	0.000022	0.00003	0.000017	0.00011	0.000025	<0.00005	<0.00005
Calcium, total	mg/L												
Calcium, dissolved	mg/L					18	12.5	13.3	13.5	18.5	12.4	15.3	13.9
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L												
Chromium, dissolved	mg/L					<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**								
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00012	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**								
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0005
Iron, total	mg/L	**0.3**		**0.001**									
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	0.087	0.053	0.091	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**								
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005
Magnesium, total	mg/L												
Magnesium, dissolved	mg/L					1.9	1.37	1.39	1.79	2.32	1.37	1.55	1.29
Manganese, total	mg/L			**EQ10**	**EQ11**								
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0296	0.0212	0.0187	0.0175	0.017	0.017	0.000387	0.0204
Mercury, total	mg/L	**0.000026**		**0.00002**									
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002		
Molybdenum, total	mg/L	**0.073**		**1**	**2**								
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00221	0.0013	0.0012	0.0014	0.0024	0.0012	0.00243	0.00165
Nickel, total	mg/L	**EQ20**		**EQ22**									
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00068	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005
Potassium, total	mg/L												
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**									
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L												
Silicon, dissolved	mg/L											0.602	0.471
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**								
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Sodium, total	mg/L												
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L												
Strontium, dissolved	mg/L											0.0803	0.0716
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001
Tin, total	mg/L												
Tin, dissolved	mg/L					<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001
Titanium, total	mg/L												
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**									
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000131	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000081	0.000045
Vanadium, total	mg/L												
Vanadium, dissolved	mg/L					<0.001	<0.03	<0.03	<0.03	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**								
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	<0.003

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BITTER CREEK	Goldsld 066	OLD SLIDE CREE	OLDSLIDE CREE	OLDSLIDE CREE	GOLDSLIDE CK	GOLD SLIDE CK	OLDSLIDE CREE
Sampling Date						2-Aug-13	28-Jul-06	8-Aug-07	31-Aug-08	11-Aug-09	3-Sep-10	29-Aug-11	2-Aug-13
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**									
Conductivity	uS/cm												
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.97	7.35	7.64	7.75	7.47	7.69	7.87	7.36
Specific Conductance	uS/cm					66.1	130	122	143	116	114	138	105
Total Hardness	mg/L					27	59.7	56	62.3	49	47.4	53.8	42.8
Total dissolved solids	mg/L						90	81	91	87	77		
Total suspended solids	mg/L												
Turbidity	NTU												
Major Ions													
Total alkalinity	mg/L as Ca CO3					24.1	2	8.1	9.6	8.7	8.7	9.7	7.9
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					<1	1	1.5	3.9	2.5	2.9	3.3	1.6
Chloride	mg/L	**120**	**640**	**150**	**600**								
Fluoride	mg/L	**0.12**			**EQ7**								
Bromide	mg/L												
Sulfate	mg/L			**EQ23**		5.88		45.4	48.4	42.5	39.7	47.9	37.9
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0083	0.0211	0.0157	0.0157	0.0164	0.0212	0.0245	0.012
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L												
Phosphorus, total	mg/L												
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**								
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0555	0.0097	0.0094	0.0079	0.0077	0.01	0.0074	0.009
Antimony, total	mg/L			**0.009**									
Antimony, dissolved	mg/L			**0.009**		0.00031	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**									
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00044	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Barium, total	mg/L			**1**									
Barium, dissolved	mg/L			**1**		0.012	0.021	<0.02	0.021	<0.02	0.0174	0.0191	0.0181
Beryllium, total	mg/L			**0.00013**									
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0001
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L					<0.0005					<0.0005	<0.0005	<0.0005
Boron, total	mg/L	**1.5**	**29**	**1.2**									
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**								
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000016	0.000499	0.000319	0.000434	0.000403	0.000383	0.000397	0.000374
Calcium, total	mg/L												
Calcium, dissolved	mg/L					9.5	19.4	17.9	20.4	16.1	15.4	17.6	14.1
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L												
Chromium, dissolved	mg/L					<0.0001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0001
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L			**0.004**	**0.11**								
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	0.00024	0.00016	0.0002
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**								
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00028	0.0056	0.0014	0.0031	0.0037	0.00428	0.00293	0.00394
Iron, total	mg/L	**0.3**		**0.001**									
Iron, dissolved	mg/L	**0.3**		**0.35**		0.034	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**								
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L												
Magnesium, dissolved	mg/L					0.8	2.74	2.76	2.76	2.13	2.15	2.43	1.84
Manganese, total	mg/L			**EQ10**	**EQ11**								
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0193	0.00641	0.00451	0.00323	0.00342	0.00584	0.00348	0.00354
Mercury, total	mg/L	**0.000026**		**0.00002**									
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00002	<0.00002	<0.00002	<0.00002			<0.00001
Molybdenum, total	mg/L	**0.073**		**1**	**2**								
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0008	0.0028	0.0025	0.0021	0.002	0.00282	0.00232	0.00216
Nickel, total	mg/L	**EQ20**		**EQ22**									
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	0.0016	0.0011	0.0014	0.0012	0.00134	0.0013	0.00121
Potassium, total	mg/L												
Potassium, dissolved	mg/L					0.3	<2	<2	<2	<2	<2	<2	<0.1
Selenium, total	mg/L	**0.001**		**0.002**									
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00026	0.001	0.0011	0.0013	<0.001	<0.001	0.0011	0.00099
Silicon, total	mg/L												
Silicon, dissolved	mg/L					0.285					1.9	2.25	1.93
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**								
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L												
Sodium, dissolvd	mg/L					0.202	<2	<2	<2	<2	<2	<2	0.773
Strontium, total	mg/L												
Strontium, dissolved	mg/L					0.0468					0.12	0.14	0.115
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L					1.92							12.3
Thallium, total	mg/L	**0.0008**		**0.0008**									
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0001	<0.0001	<0.00001
Tin, total	mg/L												
Tin, dissolved	mg/L					<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Titanium, total	mg/L												
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**									
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000015	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Vanadium, total	mg/L												
Vanadium, dissolved	mg/L					<0.001	<0.03	<0.03	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**								
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	0.0303	0.023	0.0275	0.0252	0.0231	0.0223	0.0217

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Appendix C – 2014 to 2016 Surface Water Quality Data

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02
Sampling Date						26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	20-Jan-16	24-Feb-16	14-Apr-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.49	7.34	7.69	7.33	7.64	7.7	8.27	8.17	8.16
Conductivity	uS/cm					41	55	71.3	49	57.9	77.1	176.5	85	81
Specific Conductivity	uS/cm						82.3	114.4	68	82.9	121.3	308	146	129
Dissolved Oxygen	mg/L					10.59	12.09	13.05	11.32	12.61	12.35	13.74		12.8
Dissolved Oxygen	%					88.6	102.1	106.2	100.2	111.2	99.8	101.9		101.7
ORP	mV							249		278.6	300.8	214.2		126.5
Turbidity	NTU					64.1	24.7	10.49	53.9	39.6	10.29	0	0	1.07
TDS	mg/L								0.044					
Temperature	degC					7.52	7.6	5.3	9.95	9.2	5.9	2.6	3.21	5.46
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.74	7.78	7.67	7.82	7.82	7.8	7.92	7.97	7.95
Specific Conductance	uS/cm					66.3	72	103	72.6	83.4	117	161	161	148
Total Hardness	mg/L					30.7	36.1	46.6	32.8	37.7	56.4	75.8	77	65.8
Total dissolved solids	mg/L					54	65	72	47	59	65	100	96	88
Total suspended solids	mg/L					57.4	31	7.4	68	44.5	6.8	<3	<3	14.7
Turbidity	NTU					37.3	11.7	11	31.9	15.5	6	0.15	0.18	0.43
Major Ions														
Total alkalinity	mg/L as Ca CO3					25.6	28.2	41.2	27.5	33.1	47.1	57.6	57.5	55.4
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					25.6	28.2	41.2	27.5	33.1	47.1	57.6	57.5	55.4
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												<2	
Acidity	mg/L					1.9	1.3	1.9	1.7	1.8	1.3	1.2	1.1	1.2
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.037	0.032	0.042	0.036	0.029	0.041	0.062	0.06	0.067
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		7.3	9.11	12.2	7.75	8.99	13.7	20.5	19.3	16.3
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0282	0.0335	0.156	0.0249	0.049	0.135	0.177	0.221	0.33
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N								<0.03			0.174		
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	0.0018	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					<0.3	0.0219	0.0116	0.0555	<0.05	0.0076	<0.002	0.0024	0.0024
Organics														
Total Organic Carbon	mg/L					0.68	<0.5	0.73	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					0.61	<0.5	1.11	<0.5	<0.5	0.66	0.8	<0.5	0.52
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	2.44	1.07	0.571	1.73	1.18	0.384	0.0079	0.0117	0.035
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0461	0.0302	0.0559	0.0622	0.0303	0.0279	0.0041	0.0059	0.0068
Antimony, total	mg/L			**0.009**		0.00037	0.00027	0.00032	0.00033	0.00041	0.00034	0.00035	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		0.0002	0.00022	0.00028	0.00022	0.00027	0.00032	0.00034	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00158	0.0011	0.00075	0.00109	0.00105	0.00072	0.00064	0.00066	0.00068
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00033	0.00041	0.00054	0.00038	0.00042	0.00058	0.00067	0.00063	0.00062
Barium, total	mg/L			**1**		0.119	0.108	0.1	0.101	0.0991	0.105	0.13	0.128	0.109
Barium, dissolved	mg/L			**1**		0.0575	0.0666	0.0853	0.0578	0.0701	0.0945	0.129	0.121	0.103
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001
Bismuth, total	mg/L					<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	0.013	0.012	0.011	<0.01	0.016	0.014	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	0.012	<0.01	<0.01	0.012	0.014	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000064	0.000031	0.000012	0.0000409	0.0000259	0.0000095	<0.000005	<0.000005	<0.000005
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.00001	<0.00001	<0.00001	0.0000164	<0.000005	0.0000119	0.0000129	<0.000017	<0.000017
Calcium, total	mg/L					11.6	13.3	17.7	12	13.9	21.1	27.7	28.4	23.4
Calcium, dissolved	mg/L					11.2	13.1	16.8	11.9	13.6	20.4	27.5	28.1	23.8
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.00052	0.00034	0.00014	0.00035	0.00023	0.00013	<0.0001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00108	0.00061	0.00023	0.00084	0.0006	0.00013	<0.0001	<0.0003	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00345	0.00192	0.00104	0.00284	0.00216	0.00062	<0.0005	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	0.00021	0.00034	0.00023	0.00022	0.00027	<0.0002	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		2.63	1.3	0.525	1.96	1.33	0.276	<0.01	<0.03	0.048
Iron, dissolved	mg/L	**0.3**		**0.35**		0.027	0.022	0.031	0.04	0.014	0.01	<0.01	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00228	0.0011	0.000392	0.00161	0.00139	0.000305	<0.00005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	0.000064	<0.00005	<0.00005	0.000087	<0.0005	<0.0005
Magnesium, total	mg/L					1.56	1.27	1.36	1.4	1.35	1.49	1.69	1.71	1.55
Magnesium, dissolved	mg/L					0.677	0.829	1.14	0.741	0.902	1.31	1.7	1.67	1.55
Manganese, total	mg/L			**EQ10**	**EQ11**	0.104	0.0522	0.022	0.0822	0.0589	0.0152	0.00093	0.00097	0.00287
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0137	0.00488	0.00477	0.0104	0.00737	0.00338	0.00069	0.00068	0.00099
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.000514	0.000571	0.000652	0.000494	0.000569	0.000763	0.000795	<0.001	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.000426	0.000504	0.000616	0.000451	0.000539	0.000684	0.000706	<0.001	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Potassium, total	mg/L					1.07	0.531	0.431	0.8	0.629	0.334	0.227	<2	<2
Potassium, dissolved	mg/L					0.162	0.147	0.224	0.175	0.189	0.21	0.248	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00015	0.00016	0.00021	0.000146	0.000164	0.000237	0.000307	0.000356	0.000311
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.0001	0.00014	0.00019	0.000118	0.000115	0.00024	0.000326	0.000373	0.000321
Silicon, total	mg/L					4.45	2.37	2.18	3.47	2.54	1.82	1.48	1.58	1.52
Silicon, dissolved	mg/L					0.615	0.687	1.28	0.703	0.787	1.28	1.46	1.59	1.43
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000033	0.000017	<0.00001	0.00003	0.000024	<0.00001	<0.00001	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium, total	mg/L					0.521	0.536	0.719	0.55	0.558	0.797	1.05	<2	<2
Sodium, dissolvd	mg/L					0.35	0.45	0.658	0.394	0.493	0.746	1.07	<2	<2
Strontium, total	mg/L					0.0681	0.0803	0.108	0.0684	0.0811	0.126	0.155	0.157	0.14
Strontium, dissolved	mg/L					0.0647	0.0754	0.102	0.0653	0.0789	0.12	0.153	0.151	0.138
Sulfur, total	mg/L								2.61	2.93	4.55	6.98		
Sulfur, dissolved	mg/L								2.21	2.81	4.66	6.61		
Thallium, total	mg/L	**0.0008**		**0.0008**		0.000032	0.000011	<0.00001	0.000022	0.000019	<0.00001	<0.00001	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0001	<0.0001	<0.0001	0.00017	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005
Titanium, total	mg/L					0.061	0.037	0.013	0.0519	0.0349	0.00796	<0.0003	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	0.00071	<0.0003	0.00037	<0.0003	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000102	0.000072	0.000076	0.000081	0.00009	0.00008	0.000113	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000036	0.000045	0.000064	0.000037	0.000055	0.000072	0.000105	<0.0002	<0.0002
Vanadium, total	mg/L					0.0065	0.0031	0.0017	0.00476	0.00327	0.00117	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0113	0.0065	0.0033	0.0083	0.0057	<0.003	<0.003	<0.005	<0.005
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	<0.001	0.0016	<0.001	<0.001	0.0013	<0.001	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		AC02	AC02	AC02	AC02	AC02	AC02	AC02	AC02
Sampling Date						11-May-16	29-May-16	8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	27-Sep-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.71	8.21	8.25	7.49	7.56	7.6		7.62
Conductivity	uS/cm					71	60	59.9	56.8	52.6	57.1		66.6
Specific Conductivity	uS/cm					108	97.9	93.1	89.9	78.3	80.3		105.3
Dissolved Oxygen	mg/L						13.62	12.69	13.69	12.11	11.66		14.04
Dissolved Oxygen	%						105.5	104.8	110.5	102.6	103.2		112.1
ORP	mV					67.2	264.8	284.1	334.9	238.7			
Turbidity	NTU					19.23	15.62	45	16.98	18.14	31.5		193
TDS	mg/L												
Temperature	degC					7.07	4.7	6.3	5.7	7.8	9.9		5.8
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.99	7.84	7.73	7.79	7.94	7.66	7.54	7.89
Specific Conductance	uS/cm					110	99.5	92.6	88.3	85	79.7	72.5	106
Total Hardness	mg/L					52.9	46.8	44.4	42.7	40	37.2	34.3	46.9
Total dissolved solids	mg/L					72	68	69	57	56	60	48	116
Total suspended solids	mg/L					8.4	12.7	13.8	15	14.4	26.2	44.9	112
Turbidity	NTU					3.97	8.71	19.3	9.69	12	12.9	31.2	146
Major Ions													
Total alkalinity	mg/L as Ca CO3					41	39	35.9	33.9	32.6	29.8	28.5	42.3
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					41	39	35.9	33.9	32.6	29.8	28.5	42.3
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1	1.3	1.6	1.7	1.6	1.9	1.1	2.5
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.044	0.041	0.039	0.035	0.035	0.037	0.032	0.043
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		12.7	11.5	10.9	10.6	9.86	9.91	8.29	12.3
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.13	0.0722	0.0531	0.051	0.0354	0.032	0.0288	0.118
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	0.0012	<0.001	<0.001	0.0011	<0.001	0.003
Phosphorus, total	mg/L					0.0125	0.018	0.0253	0.0193	0.0205	0.0377	0.0567	0.146
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	0.78	0.64	0.58	0.57	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.208	0.455	1.25	0.52	0.759	1.34	1.77	6.67
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.018	0.0299	0.0296	0.0334	0.0363	0.0323	0.0467	0.052
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00068
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00073	0.00072	0.00091	0.00064	0.00071	0.00103	0.00136	0.00252
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00057	0.00053	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.089	0.093	0.105	0.088	0.091	0.103	0.105	0.243
Barium, dissolved	mg/L			**1**		0.082	0.075	0.073	0.071	0.068	0.066	0.068	0.079
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000125
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000121	0.0000135	0.0000249	0.0000109	0.0000163	0.0000262	0.0000473	0.000106
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium, total	mg/L					18.6	17	15.6	15.4	14.5	13.7	12.2	18.4
Calcium, dissolved	mg/L					19.2	16.9	16	15.4	14.5	13.4	12.4	17
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	0.00051	<0.0003	<0.0003	0.00053	0.00076	0.00261
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	0.0024	<0.001	0.0011	0.0023	0.0027	0.0148
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.273	0.463	1.26	0.51	0.74	1.27	1.88	6.33
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.031	0.032
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	0.00055	0.00131	0.00053	0.00064	0.0011	0.00169	0.00742
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					1.31	1.32	1.56	1.24	1.24	1.37	1.43	3.54
Magnesium, dissolved	mg/L					1.23	1.11	1.06	1.02	0.95	0.9	0.81	1.11
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0135	0.0219	0.0522	0.0216	0.0304	0.0527	0.0743	0.271
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00244	0.00358	0.00506	0.00375	0.00475	0.00637	0.0135	0.0115
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	0.000012
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	2.8
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.000237	0.000217	0.00019	0.000193	0.000151	0.000154	0.000169	0.000334
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000221	0.00017	0.000168	0.000174	0.00015	0.000133	0.000117	0.000217
Silicon, total	mg/L					1.53	1.83	2.93	1.68	2.28	3.12	3.95	12.3
Silicon, dissolved	mg/L					1.14	1	0.921	0.918	0.828	0.769	0.698	0.973
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	0.000022	<0.00002	<0.00002	<0.00002	0.000024	0.000136
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.114	0.107	0.0965	0.0943	0.0892	0.088	0.0709	0.109
Strontium, dissolved	mg/L					0.115	0.102	0.0957	0.0916	0.087	0.0847	0.07	0.105
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	0.00891	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.012	0.019	0.038	0.016	0.026	0.044	0.062	0.177
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					0.00073	0.00143	0.00358	0.00134	0.00225	0.00358	0.00453	0.0128
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	0.0052	<0.005	<0.005	0.006	0.0081	0.024
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		AC02	AC02	BC02	BC02	BC02	BC02	BC02	BC02
Sampling Date						16-Nov-16	15-Dec-16	24-Jun-14	29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.01	8.17		7.59	7.5	7.39	7.76	7.84
Conductivity	uS/cm					83.1	86		48	46	68.3	129	46
Specific Conductivity	uS/cm					142.5	164.5				110.7	216.5	75
Dissolved Oxygen	mg/L					13.14	19.86		11.91	11.46	12.98	13.48	12.61
Dissolved Oxygen	%					99.2	136		90.1	89.1	102.3	105.1	98.6
ORP	mV						220.6					268.8	
Turbidity	NTU					0.15			388	190	229	98.8	483
TDS	mg/L												0.049
Temperature	degC					3.1	0		3.67	4.74	4.9	3.9	4.93
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.04	7.6	8.03	8.15	7.96	8.15	7.96	8.36
Specific Conductance	uS/cm					142	157	122	80.8	84.1	104	199	84.9
Total Hardness	mg/L					68.7	78.1	57.1	35	36.1	47	94.2	39.4
Total dissolved solids	mg/L					94	94	78	52	56	95	135	64
Total suspended solids	mg/L					<3	<3	1000	773	214	211	138	777
Turbidity	NTU					0.24	0.27	632	446	133	129	97.9	478
Major Ions													
Total alkalinity	mg/L as Ca CO3					55.9	60.8	47.2	33.1	30.4	35.5	64	37.2
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					55.9	60.8	47.2	33.1	30.4	35.5	64	37.2
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<2	<2	<2	<2	<2	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<2	<2	<2	<2	<2	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.1	1.6		<1	1.5	2.4	1.8	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	1.03	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.047	0.059	0.022	<0.02	<0.02	<0.02	0.04	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		18.3	19.7	15.9	8.12	10.2	15.9	40.4	8.06
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.264	0.211	0.036	0.014	0.0146	0.0159	0.138	0.0113
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N							<0.25	<0.25				<0.15
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	0.0119	0.0064	0.005	<0.005	<0.005	0.0084
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	0.0016	0.0014	<0.001	<0.001	0.0012	0.0015
Phosphorus, total	mg/L					0.0029	<0.002	0.954	0.49	<0.3	0.434	<0.3	0.694
Organics													
Total Organic Carbon	mg/L					0.58	<0.5	2.68	1.92	1.04	1.48	0.8	2.64
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.82
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0253	0.011	17.8	11.6	5.33	6.78	4.19	16
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.008	<0.005	0.0624	0.0876	0.0529	0.0311	0.0899	0.156
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	0.00402	0.00237	0.00151	0.00171	0.00172	0.00303
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	0.00063	0.00034	0.00045	0.00056	0.00104	0.00049
Arsenic, total	mg/L	**0.005**		**0.005**		0.00074	0.00069	0.0318	0.0188	0.00883	0.0142	0.00974	0.038
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00072	0.00071	<0.0005	0.00039	0.00045	0.00061	0.00108	0.00087
Barium, total	mg/L			**1**		0.118	0.128	0.301	0.184	0.101	0.101	0.091	0.209
Barium, dissolved	mg/L			**1**		0.117	0.13	<0.02	0.0159	0.0202	0.0206	0.0405	0.02
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	0.00028	0.00013	0.00013	0.0001	0.00039
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	0.000301
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	0.01	<0.01	0.011	<0.01	<0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000005	0.0000051	***0.00138***	0.000593	0.000265	0.000281	0.00034	0.000959
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000017	<0.000017	0.000033	0.000022	0.00003	0.000027	0.000035	0.0000075
Calcium, total	mg/L					25.8	26.7	32.4	19.2	14.5	17.9	30.8	25.9
Calcium, dissolved	mg/L					24.8	28.4	19.6	12.3	12.5	15.9	31.5	13.8
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	<0.001	0.0239	0.0159	0.00754	0.0118	0.0067	0.0273
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	0.00032	<0.0001	<0.0001	0.00015	0.00015
Chromium, hexavalent	mg/L					<0.001	<0.001			<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	0.0133	0.00758	0.0033	0.00476	0.0034	0.014
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	0.0775	0.0411	0.0183	0.0264	0.0188	0.0744
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	0.00031	0.00043	0.00032	0.00073	0.0004
Iron, total	mg/L	**0.3**		**0.001**		0.031	<0.03	30.9	17.2	7.72	9.45	6.9	27
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	0.046	0.056	0.038	0.021	0.055	0.084
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	0.0189	0.0109	0.0046	0.00614	0.00485	0.0268
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	0.000062	<0.00005	<0.00005	0.000072	0.000063
Magnesium, total	mg/L					1.66	1.64	13.3	7.28	4.11	5.68	6.1	11.9
Magnesium, dissolved	mg/L					1.64	1.72	1.98	1.05	1.21	1.79	3.79	1.17
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00284	0.00227	0.919	0.49	0.217	0.237	0.185	0.778
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0015	0.00122	0.0218	0.0295	0.0282	0.023	0.0143	0.00232
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	0.000025	<0.00001	<0.00001	<0.00001	<0.00001	0.0000142
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	0.0067	0.00253	0.00179	0.00243	0.00425	0.00293
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	0.002	0.000932	0.00111	0.00168	0.00389	0.0011
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	0.033	0.0189	0.0083	0.013	0.00951	0.0347
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.0005	<0.0005	0.00059	0.00069	<0.0005
Potassium, total	mg/L					<2	<2	3.5	2.58	1.44	1.63	1.49	2.77
Potassium, dissolved	mg/L					<2	<2	<2	0.341	0.3	0.345	0.732	0.547
Selenium, total	mg/L	**0.001**		**0.002**		0.0003	0.000376	0.0031	0.00142	0.00094	0.00107	0.00253	0.00182
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000334	0.000364	<0.001	0.00036	0.00046	0.00074	0.00222	0.000459
Silicon, total	mg/L					1.54	1.52	27.4	20.1	8.97	10.9	7.97	21.7
Silicon, dissolved	mg/L					1.47	1.56	0.711	0.452	0.451	0.591	1.57	0.658
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	0.000733	0.000353	0.000164	0.000191	0.000156	0.000608
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					<2	<2	2.2	1.47	0.85	1.08	1.29	1.71
Sodium, dissolvd	mg/L					<2	<2	<2	0.25	0.305	0.451	0.902	0.29
Strontium, total	mg/L					0.155	0.153	0.173	0.108	0.0846	0.112	0.186	0.143
Strontium, dissolved	mg/L					0.164	0.153	0.101	0.0625	0.0694	0.0931	0.188	0.0711
Sulfur, total	mg/L												3.85
Sulfur, dissolved	mg/L												2.69
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	0.000092	0.000043	0.000045	0.000037	0.000103
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	0.00012	<0.0001	<0.0001	<0.0001	0.00014
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	0.00013	<0.0001	<0.0001
Titanium, total	mg/L					<0.01	<0.01	0.443	0.258	0.13	0.156	0.108	0.369
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0015
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	0.00077	0.000379	0.000185	0.000252	0.000413	0.000464
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	0.000027	0.000044	0.000084	0.0003	0.000049
Vanadium, total	mg/L					<0.0005	<0.0005	0.0539	0.0352	0.0158	0.0198	0.0133	0.0506
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	0.142	0.0663	0.031	0.0363	0.0328	0.112
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	0.0017	<0.001	<0.001	0.002	0.0014

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC02	BC02	BC02	BC02	BC02	BC02	BC02	BC02
Sampling Date						5-Aug-15	15-Oct-15	20-Jan-16	24-Feb-16	14-Apr-16	11-May-16	29-May-16	8-Jun-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.89	7.75	8.32	8.12	8.4	7.82	8.27	8.48
Conductivity	uS/cm					61	113.4	406		178	116	93.8	80.4
Specific Conductivity	uS/cm					98.1	189.9	725		283	185	161.5	131.2
Dissolved Oxygen	mg/L					14.11	12.93	14.1	13.77	12.8		14.14	12.95
Dissolved Oxygen	%					111.6	99	102.4	100.2	101.9		104.5	102.9
ORP	mV					270.7	300.6	216.7	274.5	129.4	51.8	281.3	285.2
Turbidity	NTU					263	187	2.13	2.13	12.04	110	272	292
TDS	mg/L												
Temperature	degC					5.2	3.9	2	2.2	5.58	5.48	3	4.7
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.11	7.99	8.12	8.18	8.17	8.1	8.03	8.11
Specific Conductance	uS/cm					103	183	375	370	297	194	167	136
Total Hardness	mg/L					47.9	89.6	185	199	153	100	78.6	64.9
Total dissolved solids	mg/L					92	116	237	230	184	129	125	86
Total suspended solids	mg/L					386	158	<3	<3	9.5	135	329	326
Turbidity	NTU					186	131	1.36	1.23	4.84	94.3	221	244
Major Ions													
Total alkalinity	mg/L as Ca CO3					39.9	61	104	103	92	62	57.3	49.1
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					39.9	61	104	103	92	62	57.3	49.1
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3								<2				
Acidity	mg/L					<1	<1	1.1	<1	<1	1.2	1.8	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	0.03	0.065	0.071	0.066	0.035	0.026	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		13.4	34.6	85.5	83.2	58.5	35.4	28	20.3
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0182	0.0959	0.174	0.231	0.339	0.109	0.0549	0.034
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N							0.163					
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0051	0.0149
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					0.0011	0.0016	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013
Phosphorus, total	mg/L					0.0194	0.187	0.0033	0.004	0.0114	0.143	0.25	0.348
Organics													
Total Organic Carbon	mg/L					<0.5	0.97	<0.5	<0.5	<0.5	1.5	0.56	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	0.62	0.52	<0.5	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	6.58	5.37	0.0513	0.056	0.31	3.06	6.78	9.9
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0711	0.0543	0.0043	0.0074	0.008	0.0398	0.0447	0.0762
Antimony, total	mg/L			**0.009**		0.00211	0.00146	0.00069	0.00069	0.00064	0.00134	0.00206	0.00224
Antimony, dissolved	mg/L			**0.009**		0.00043	0.00074	0.00069	0.00064	0.00053	0.00068	0.00077	0.00064
Arsenic, total	mg/L	**0.005**		**0.005**		0.0105	0.00737	0.00083	0.00077	0.00118	0.00547	0.0112	0.0139
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00044	0.00054	0.00067	0.00066	0.00056	0.00054	0.00059	0.00054
Barium, total	mg/L			**1**		0.129	0.106	0.0585	0.058	0.049	0.082	0.129	0.165
Barium, dissolved	mg/L			**1**		0.0334	0.0337	0.0589	0.056	0.042	0.033	0.029	0.027
Beryllium, total	mg/L			**0.00013**		0.00014	0.00012	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					0.000095	0.00008	<0.00005	<0.00005	0.000056	0.000101	0.000069	0.000099
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	0.01	0.012	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	0.011	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000365	0.000209	0.0000383	0.0000437	0.0000575	0.000187	0.000288	0.000386
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000005	0.0000205	0.000035	0.000112	0.000038	0.000023	<0.000017	<0.000017
Calcium, total	mg/L					20.2	32.3	61.3	64.7	51.5	35	31	28.8
Calcium, dissolved	mg/L					16.5	30	60.5	66.5	51	33.6	26.5	22
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.00902	0.00742	0.00013	<0.001	<0.001	0.0044	0.0105	0.0131
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00489	0.00327	<0.0001	<0.0003	<0.0003	0.00226	0.00414	0.00587
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0242	0.017	0.00061	<0.001	0.0018	0.013	0.0227	0.03
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	<0.0002	0.00024	0.0012	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		11	7.55	0.078	0.085	0.462	5.3	9.99	14
Iron, dissolved	mg/L	**0.3**		**0.35**		0.017	0.016	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00669	0.00344	0.000114	<0.0005	<0.0005	0.00294	0.00431	0.00659
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	0.000156	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					5.33	6.58	8.23	8.24	6.47	5.97	7.51	8.14
Magnesium, dissolved	mg/L					1.65	3.59	8.14	8.09	6.14	3.91	3.04	2.4
Manganese, total	mg/L			**EQ10**	**EQ11**	0.344	0.189	0.00513	0.0053	0.0166	0.128	0.256	0.374
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00087	0.00749	0.00155	0.00244	0.00355	0.00433	0.0007	0.00142
Mercury, total	mg/L	**0.000026**		**0.00002**		0.0000137	0.0000074	<0.000005	<0.000005	<0.000005	<0.000005	<0.000025	<0.000025
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00211	0.0038	0.00453	0.0044	0.0045	0.0043	0.0041	0.0033
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00143	0.00335	0.00418	0.004	0.0042	0.0037	0.0034	0.0024
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0111	0.00855	0.00137	0.0014	0.0019	0.006	0.0125	0.0151
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	0.00066	0.00117	0.0015	0.0012	<0.001	<0.001	<0.001
Potassium, total	mg/L					1.65	1.57	1.07	<2	<2	<2	2.5	2.8
Potassium, dissolved	mg/L					0.484	0.7	1.08	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00109	0.00214	0.00325	0.00371	0.00297	0.00191	0.00182	0.00176
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000596	0.00164	0.00351	0.00374	0.00329	0.00162	0.0012	0.00101
Silicon, total	mg/L					10.8	9.65	2.59	2.66	2.8	8.27	14.6	18.5
Silicon, dissolved	mg/L					0.612	1.26	2.45	2.55	2.14	1.36	1.02	0.889
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000227	0.00013	<0.00001	<0.00002	<0.00002	0.000111	0.000199	0.000251
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					1.03	1.5	2.21	2.2	<2	<2	<2	2
Sodium, dissolvd	mg/L					0.405	0.891	2.05	2.1	<2	<2	<2	<2
Strontium, total	mg/L					0.108	0.188	0.335	0.351	0.281	0.187	0.175	0.164
Strontium, dissolved	mg/L					0.0867	0.162	0.333	0.346	0.269	0.176	0.147	0.124
Sulfur, total	mg/L					4.82	11.8	29.4					
Sulfur, dissolved	mg/L					4.33	11.2	28.5					
Thallium, total	mg/L	**0.0008**		**0.0008**		0.000054	0.000036	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.154	0.138	0.00133	0.012	0.023	0.114	0.205	0.281
Titanium, dissolved	mg/L					<0.0003	<0.0003	<0.0003	0.011	0.011	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000256	0.000315	0.000497	0.00051	0.00041	0.00034	0.00035	0.00032
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000084	0.000207	0.000486	0.00048	0.00037	0.00025	<0.0002	<0.0002
Vanadium, total	mg/L					0.0199	0.0163	<0.0005	<0.0005	0.0011	0.00896	0.0213	0.0279
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0412	0.0268	<0.003	<0.005	<0.005	0.0219	0.0359	0.0532
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	<0.001	0.0021	0.0056	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC02	BC02	BC02	BC02	BC02	BC02	BC02	BC04	BC04
Sampling Date						15-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	27-Sep-16	16-Nov-16	13-Dec-16	29-Jul-14	26-Aug-14
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.5	7.79	7.85	7.89	7.83	8.14	7.72	7.74	
Conductivity	uS/cm					68.1	59.4	56.4	51.1	83.7	179	146.2	47	
Specific Conductivity	uS/cm					116.5	97.6	92.5	85.3	143.6	326	287		
Dissolved Oxygen	mg/L					14.45	13.19	13.53	14.27	15.1	13.92	14.4	11.83	
Dissolved Oxygen	%					109.2	102.8	105.1	109.5	112.4	100.3	90.2	88.3	
ORP	mV					345	238.6		315.5			273.3		
Turbidity	NTU					363	295	422	354	610	5.12	3.08	308	
TDS	mg/L													
Temperature	degC					3.3	4.5	4.6	4	3.2	1.4	-0.1	3.12	
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.21	8.1	8.14	7.82	8.16	8.19	8.11	8.12	7.43
Specific Conductance	uS/cm					121	115	105	91.4	147	312	368	91.2	74.3
Total Hardness	mg/L					59.4	52.6	47.5	42.4	65.8	165	197	37.9	35.1
Total dissolved solids	mg/L					89	80	83	69	217	170	260	64	57
Total suspended solids	mg/L					519	374	610	337	1340	3.9	<3	466	273
Turbidity	NTU					297	246	375	264	1500	1.26	1.49	234	163
Major Ions														
Total alkalinity	mg/L as Ca CO3					47.3	43.5	41	38.5	55.9	94.6	106	34.7	28
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					47.3	43.5	41	38.5	55.9	94.6	106	34.7	28
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<2	<2
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<2	<2
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					<1	1.1	<1	<1	1.6	<1	<1	<1	2.3
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	<0.02	<0.02	<0.02	0.02	0.055	0.061	<0.02	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		17.5	14.6	11.9	9.39	21.5	77.7	86.9	11.7	9.68
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0313	0.0223	0.0166	0.0126	0.0472	0.208	0.2	0.0139	0.0118
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												<0.25	
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.0071	<0.005	0.0093	<0.005	0.0109	<0.005	<0.005	0.0052	0.0055
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					0.0015	0.0017	0.0017	0.0013	0.0019	<0.001	<0.001	0.0011	<0.001
Phosphorus, total	mg/L					0.557	0.312	0.821	0.0385	1.46	0.0054	0.0024	0.363	<0.3
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	2.36	<0.5	<0.5	1.69	0.97
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	9.28	10.2	16.5	10.4	34	0.0964	0.0398	10	5.64
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.104	0.0971	0.116	0.104	0.0943	0.0068	0.0057	0.0882	0.044
Antimony, total	mg/L			**0.009**		0.0019	0.00181	0.00259	0.00173	0.00657	0.0008	0.00068	0.00223	0.00159
Antimony, dissolved	mg/L			**0.009**		0.00056	<0.0005	0.00056	<0.0005	0.00114	0.00067	0.00065	0.00035	0.00052
Arsenic, total	mg/L	**0.005**		**0.005**		0.0132	0.012	0.0238	0.0125	0.0661	0.00086	0.0007	0.0166	0.00919
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00055	<0.0005	0.00063	<0.0005	0.00073	0.00059	0.00059	0.00044	0.00049
Barium, total	mg/L			**1**		0.164	0.174	0.253	0.184	0.532	0.055	0.062	0.16	0.095
Barium, dissolved	mg/L			**1**		0.027	0.025	0.026	0.03	0.035	0.053	0.062	0.0155	0.015
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00023	0.00014
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001
Bismuth, total	mg/L					0.000102	0.000111	0.000252	0.000078	0.00041	<0.00005	<0.00005	<0.0005	<0.0005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000384	0.000389	0.000853	0.000398	***0.00197***	0.0000558	0.0000354	0.00056	0.000273
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.000044	0.000036	0.000027	0.000025
Calcium, total	mg/L					24.2	22.6	30.5	19.4	48	59.2	63.2	19.9	13.2
Calcium, dissolved	mg/L					20.2	18	16.5	14.9	22.7	54.5	65.6	13.2	12.3
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0134	0.0149	0.0237	0.0141	0.0492	<0.001	<0.001	0.0138	0.00799
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0004	<0.0001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001		<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00581	0.0059	0.0111	0.00617	0.0269	<0.0003	<0.0003	0.00653	0.00354
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0312	0.0303	0.0577	0.0311	0.149	0.001	<0.001	0.0369	0.0195
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00033	0.00043
Iron, total	mg/L	**0.3**		**0.001**		13.9	14.4	25.1	15.6	60.6	0.165	0.046	15.2	8.1
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.061	0.035
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00682	0.00717	0.0156	0.00784	0.0306	<0.0005	<0.0005	0.00905	0.00452
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000068	0.000053
Magnesium, total	mg/L					7.94	7.73	11.5	7	24.5	7.35	8	6.58	4.08
Magnesium, dissolved	mg/L					2.2	1.83	1.54	1.28	2.21	7.11	8.14	1.19	1.03
Manganese, total	mg/L			**EQ10**	**EQ11**	0.342	0.347	0.659	0.413	1.81	0.0106	0.00482	0.428	0.224
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00082	0.00057	0.00048	0.00032	0.00121	0.00452	0.00116	0.027	0.03
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	0.0000097	0.0000126	<0.000025	<0.000005	<0.000005	<0.000005	0.00001	<0.00001
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0029	0.0026	0.0032	0.002	0.0068	0.0048	0.0042	0.00281	0.00182
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0021	0.0017	0.0015	0.0011	0.0039	0.0043	0.0043	0.00113	0.00128
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0152	0.0159	0.0292	0.015	0.0625	0.0019	0.0016	0.0164	0.00891
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	0.0015	<0.0005	<0.0005
Potassium, total	mg/L					2.6	2.7	3.3	2.4	4.5	<2	<2	2.28	1.43
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	0.322	0.278
Selenium, total	mg/L	**0.001**		**0.002**		0.0016	0.00143	0.00199	0.0012	0.00482	0.00329	0.00339	0.00168	0.00089
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000885	0.000696	0.000649	0.000486	0.00135	0.00329	0.00358	0.00066	0.0004
Silicon, total	mg/L					17.7	20.7	27.3	17.9	43.6	2.47	2.52	19	9.83
Silicon, dissolved	mg/L					0.873	0.72	0.695	0.665	0.794	2.24	2.51	0.533	0.394
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000259	0.000264	0.000507	0.000265	0.00134	<0.00002	<0.00002	0.000327	0.000172
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001
Sodium, total	mg/L					<2	2.1	2.5	<2	2.8	<2	<2	1.36	0.85
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	2.1	0.299	0.284
Strontium, total	mg/L					0.146	0.138	0.179	0.113	0.243	0.326	0.346	0.107	0.0787
Strontium, dissolved	mg/L					0.112	0.101	0.0939	0.0782	0.127	0.337	0.354	0.0664	0.07
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000073	0.000046
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001
Titanium, total	mg/L					0.279	0.338	0.466	0.288	0.401	<0.01	<0.01	0.257	0.117
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00029	0.0003	0.00048	0.0003	0.00091	0.00049	0.00049	0.000335	0.000183
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00046	0.00051	0.000037	0.000041
Vanadium, total	mg/L					0.0262	0.0306	0.049	0.0299	0.114	<0.0005	<0.0005	0.0309	0.0168
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0499	0.0485	0.0912	0.0547	0.237	<0.005	<0.005	0.0604	0.032
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0023	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC04	BC04	BC04	BC04	BC04	BC04	BC04	BC04
Sampling Date						16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	20-Jan-16	24-Feb-16	14-Apr-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.27	7.73	7.61	7.67	7.7	8.25	8.26	8.38
Conductivity	uS/cm					57.8	122.3	39	53.2	102.9	436.6	235	194
Specific Conductivity	uS/cm					99	215.3	67	90.5	178.1	779.1	423	320
Dissolved Oxygen	mg/L					13.5	13.9	13.24	14.63	13.32	13.7		13.03
Dissolved Oxygen	%					103.5	106.1	99.6	112.2	101	100.7		100.8
ORP	mV						238.6		284.7	295.3	194.6		134.5
Turbidity	NTU					273	141	493	252	183	3.14	3.66	21.9
TDS	mg/L							0.043					
Temperature	degC					3.2	2.4	3.53	3.4	2.9	2	1.8	4.44
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.89	7.97	8.43	8.12	7.96	8.08	8.15	8.15
Specific Conductance	uS/cm					91.8	197	73.7	95.6	174	399	423	336
Total Hardness	mg/L					42.6	89.3	35.6	44	79.8	199	227	177
Total dissolved solids	mg/L					104	123	57	95	121	257	264	216
Total suspended solids	mg/L					293	408	655	383	193	<3	<3	18.2
Turbidity	NTU					151	146	417	177	135	1.69	1.85	9.53
Major Ions													
Total alkalinity	mg/L as Ca CO3					32.8	62.1	33	37	53	105	108	92.5
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					32.8	62.1	33	37	53	105	108	92.5
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3											<2	
Acidity	mg/L					1.3	1.6	<1	<1	1.1	1.5	1.3	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	0.036	<0.02	<0.02	0.026	0.073	0.068	0.068
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		15.1	44.5	7.51	13.2	35.7	95.6	108	77.4
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0135	0.0823	0.0102	0.0138	0.0553	0.114	0.17	0.236
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N							<0.15			0.107		
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	0.0082	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					0.0016	0.0015	0.0018	0.0012	0.0015	<0.001	<0.001	0.0013
Phosphorus, total	mg/L					0.338	0.351	0.611	0.323	0.198	0.0033	0.0043	0.0197
Organics													
Total Organic Carbon	mg/L					1.35	1.41	2	1.1	0.99	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	0.78	0.73	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	8.23	7.57	14	6.44	6.18	0.0518	0.0889	0.565
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0615	0.0783	0.173	0.19	0.0601	0.0033	0.0084	0.0112
Antimony, total	mg/L			**0.009**		0.00199	0.00287	0.00268	0.00169	0.00182	0.00062	0.0008	0.00073
Antimony, dissolved	mg/L			**0.009**		0.00064	0.00114	0.00045	0.00044	0.00088	0.0006	0.00074	0.00077
Arsenic, total	mg/L	**0.005**		**0.005**		0.0179	0.0201	0.0328	0.0105	0.0102	0.00095	0.00091	0.00165
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00079	0.00105	0.00089	0.00054	0.00067	0.00066	0.00064	0.0006
Barium, total	mg/L			**1**		0.11	0.133	0.169	0.122	0.104	0.0426	0.058	0.044
Barium, dissolved	mg/L			**1**		0.0151	0.0335	0.0171	0.0308	0.0317	0.0432	0.058	0.037
Beryllium, total	mg/L			**0.00013**		0.00016	0.0002	0.00032	0.00014	0.00014	<0.0001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001
Bismuth, total	mg/L					<0.0005	<0.0005	0.000274	0.000104	0.000179	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000393	0.000766	0.00072	0.000381	0.000283	0.0000804	0.0000683	0.0000877
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000032	0.00004	0.00001	<0.000005	0.0000246	0.0000841	0.000117	0.000059
Calcium, total	mg/L					18.3	36.7	19.1	19	29.4	64.8	71	57.5
Calcium, dissolved	mg/L					14.6	30	12.6	15.2	26.8	65.7	75.9	59.1
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.0155	0.0123	0.0238	0.00838	0.00902	0.00016	<0.001	<0.001
Chromium, dissolved	mg/L					<0.0001	0.0001	0.00013	<0.0001	0.00014	<0.0001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00602	0.00648	0.012	0.00463	0.00378	0.00011	<0.0003	0.00051
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0333	0.0358	0.0651	0.024	0.0214	0.00067	<0.001	0.0032
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00209	0.00045	0.00041	0.00023	0.0002	0.00022	0.0013	<0.001
Iron, total	mg/L	**0.3**		**0.001**		12	13.4	23.1	10.6	8.47	0.088	0.125	0.907
Iron, dissolved	mg/L	**0.3**		**0.35**		0.068	0.049	0.075	0.115	0.026	<0.01	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00777	0.0115	0.0149	0.00692	0.00415	0.000151	<0.0005	0.0006
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00013	<0.00005	0.000071	0.00007	<0.00005	0.000329	<0.0005	<0.0005
Magnesium, total	mg/L					6.3	8.11	10.2	4.92	6.69	8.3	9.02	7.22
Magnesium, dissolved	mg/L					1.53	3.52	1.02	1.47	3.1	8.45	9.2	7.06
Manganese, total	mg/L			**EQ10**	**EQ11**	0.296	0.351	0.603	0.332	0.213	0.00887	0.011	0.0299
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0266	0.00526	0.00156	0.00092	0.00657	0.00471	0.00652	0.00866
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	0.0000123	0.0000143	0.0000067	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00283	0.00598	0.00273	0.00226	0.00458	0.00517	0.0053	0.0066
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00177	0.0043	0.00109	0.00153	0.00361	0.0049	0.0051	0.007
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0162	0.0176	0.0292	0.0104	0.0104	0.00194	0.0024	0.003
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00075	0.00117	<0.0005	<0.0005	0.00089	0.00172	0.0023	0.002
Potassium, total	mg/L					1.95	2.1	2.49	1.7	1.78	0.953	<2	<2
Potassium, dissolved	mg/L					0.343	0.817	0.491	0.458	0.665	0.969	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00116	0.00276	0.0015	0.00107	0.00198	0.00442	0.00355	0.00306
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00064	0.00212	0.000445	0.000555	0.00151	0.00495	0.00348	0.00267
Silicon, total	mg/L					15.8	12.4	20.2	10.3	10.6	2.82	2.68	3.11
Silicon, dissolved	mg/L					0.567	1.37	0.602	0.575	1.09	2.84	2.55	2.15
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000247	0.000314	0.000535	0.000253	0.00018	<0.00001	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	0.000015	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002
Sodium, total	mg/L					1.28	1.58	1.58	1.03	1.43	2.2	2.4	<2
Sodium, dissolvd	mg/L					0.431	0.92	0.272	0.399	0.849	2.24	2.6	<2
Strontium, total	mg/L					0.114	0.221	0.11	0.102	0.179	0.356	0.407	0.33
Strontium, dissolved	mg/L					0.0897	0.181	0.0634	0.0808	0.155	0.362	0.417	0.338
Sulfur, total	mg/L							3.25	4.72	11.5	32.5		
Sulfur, dissolved	mg/L							2.37	4.21	11.6	32.1		
Thallium, total	mg/L	**0.0008**		**0.0008**		0.000054	0.00007	0.000084	0.000055	0.000045	<0.00001	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	0.000019	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	0.00014	0.0001	<0.0001	<0.0001	<0.0005	<0.0005
Tin, dissolved	mg/L					0.00031	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005
Titanium, total	mg/L					0.199	0.195	0.326	0.152	0.163	0.00096	<0.01	0.032
Titanium, dissolved	mg/L					<0.01	<0.01	0.00157	<0.0012	0.00048	<0.0003	0.012	0.013
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000293	0.000638	0.000384	0.000249	0.000411	0.000529	0.00057	0.00049
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000076	0.00028	0.000056	0.000079	0.000228	0.000515	0.00054	0.00054
Vanadium, total	mg/L					0.0246	0.0242	0.0439	0.0201	0.0189	<0.0005	<0.0005	0.00162
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.048	0.0682	0.0892	0.0416	0.0312	0.0039	<0.005	0.0077
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0019	0.0012	0.0022	<0.001	<0.001	0.0043	0.008	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC04	BC04	BC04	BC04	BC04	BC04	BC04	BC04	BC04
Sampling Date						11-May-16	29-May-16	8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16	4-Jul-16	20-Jul-16	27-Sep-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.76	8.32	8.46	6.82	7.79	7.76	7.74	7.8	8.02
Conductivity	uS/cm					113	86.3	69.8	61.2	49.7	45.9	144	42.5	72.7
Specific Conductivity	uS/cm					188	152.8	118.8	108.3	85.9	80.7	249	74.4	128.5
Dissolved Oxygen	mg/L						14.19	13.48	14.78	13.38	14.12	10.97	14.49	15.32
Dissolved Oxygen	%						104.3	104.5	110.2	101.4	105	83	108.6	113
ORP	mV					76.6	286.1	277.9	342.3	245.8		97.3	323.6	
Turbidity	NTU					115	284	304	348	274	395	4.25	337	533
TDS	mg/L											124		
Temperature	degC					3.91	2.2	3.4	2.2	3	2.5	2.68	2.6	2.3
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.1	8	8.1	8.28	8.12	8.25	8.15	7.93	8.22
Specific Conductance	uS/cm					195	159	125	113	106	93	94.6	81.8	137
Total Hardness	mg/L					101	74.3	59.1	55.2	47.4	41.6	42.4	37.5	60.4
Total dissolved solids	mg/L					136	126	79	90	82	69	80	66	211
Total suspended solids	mg/L					148	333	328	372	362	532	371	377	1420
Turbidity	NTU					112	231	260	227	235	341	283	244	2070
Major Ions														
Total alkalinity	mg/L as Ca CO3					58.7	52.2	44.4	41.1	38.6	35.6	35.3	33.6	49.1
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					58.7	52.2	44.4	41.1	38.6	35.6	35.3	33.6	49.1
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					<1	3.9	<1	<1	1.1	<1	<1	<1	1.1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.034	0.024	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		39.7	28.4	19.4	17.1	13.8	11	11.6	8.81	20.7
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0767	0.0402	0.0246	0.025	0.0184	0.0138	0.0161	0.0109	0.0291
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	0.0071	0.0093	<0.005	0.0082	0.0058	0.0058	0.0122
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					0.0013	<0.001	0.0015	0.0017	0.0017	0.0016	0.0014	0.0013	0.0023
Phosphorus, total	mg/L					0.173	0.0279	0.402	0.463	0.436	0.758	0.615	0.441	1.55
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2.37
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	4.49	7.68	10.5	9.19	8.33	14	10.6	9.34	36.6
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0395	0.0457	0.0965	0.0883	0.0838	0.11	0.0803	0.106	0.0616
Antimony, total	mg/L			**0.009**		0.00162	0.00239	0.00238	0.00234	0.0017	0.00256	0.00233	0.00185	0.0068
Antimony, dissolved	mg/L			**0.009**		0.0009	0.00087	0.00065	0.00061	<0.0005	0.00053	<0.0005	<0.0005	0.00124
Arsenic, total	mg/L	**0.005**		**0.005**		0.00743	0.0122	0.0205	0.017	0.0115	0.0227	0.0215	0.0129	0.0756
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00062	0.00064	0.00056	0.00061	0.00051	0.0007	0.00064	0.00051	0.00105
Barium, total	mg/L			**1**		0.088	0.14	0.16	0.168	0.145	0.206	0.185	0.175	0.536
Barium, dissolved	mg/L			**1**		0.03	0.027	0.024	0.023	0.023	0.022	0.023	0.028	0.032
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					0.000178	0.00008	0.000118	0.000115	0.000095	0.00026	0.000157	0.000074	0.00042
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000255	0.000348	0.000585	0.000477	0.000353	0.000752	0.000644	0.000431	***0.0022***
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000029	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium, total	mg/L					34.9	31.1	26.8	26.9	19.3	26.5	23.4	17.9	47.3
Calcium, dissolved	mg/L					34.4	25.1	20.2	18.9	16.3	14.5	14.7	13.2	20.8
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0064	0.0121	0.0143	0.0151	0.0123	0.0202	0.0168	0.0129	0.0558
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00278	0.00466	0.00683	0.00692	0.00495	0.0101	0.00776	0.00588	0.03
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0163	0.0256	0.0332	0.0368	0.0268	0.0526	0.0427	0.0297	0.166
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		6.5	11.5	16.1	15.5	12.2	22.2	17.5	14	63.2
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.037	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00347	0.00488	0.00816	0.00828	0.0056	0.014	0.00873	0.0074	0.0316
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					6.29	7.66	8.58	8.31	6.42	10.1	7.94	6.43	25.1
Magnesium, dissolved	mg/L					3.8	2.82	2.12	1.94	1.6	1.33	1.37	1.12	2.03
Manganese, total	mg/L			**EQ10**	**EQ11**	0.162	0.291	0.427	0.413	0.291	0.584	0.498	0.398	1.93
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0045	0.00052	0.00099	0.00066	0.00031	0.00029	0.00034	0.00034	0.00098
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000025	<0.00001	<0.00001	0.0000131	0.0000099	0.0000152	<0.000025	0.000081
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0052	0.0046	0.0035	0.0033	0.0025	0.003	0.0026	0.002	0.0072
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0047	0.0038	0.0024	0.0023	0.0017	0.0015	0.0015	0.0011	0.0042
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0082	0.0142	0.0174	0.0177	0.0135	0.0253	0.0194	0.0142	0.0702
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					<2	2.4	2.7	2.8	2.3	2.7	2.2	2.2	4.6
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00198	0.00195	0.00186	0.00176	0.00122	0.00177	0.00153	0.00113	0.00543
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00175	0.00116	0.000807	0.000797	0.000562	0.000604	0.000536	0.000499	0.00127
Silicon, total	mg/L					9.63	17	18.4	20	17.2	22.1	19.1	16.5	46.8
Silicon, dissolved	mg/L					1.2	0.914	0.802	0.755	0.613	0.597	0.562	0.623	0.771
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.00014	0.000217	0.000327	0.000319	0.000223	0.000433	0.000384	0.000263	0.00154
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	2	<2	<2	2.8
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.194	0.181	0.158	0.165	0.12	0.159	0.135	0.105	0.233
Strontium, dissolved	mg/L					0.185	0.147	0.112	0.107	0.0924	0.0837	0.0819	0.0711	0.121
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.15	0.236	0.278	0.314	0.264	0.384	0.296	0.26	0.458
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.0004	0.00036	0.00034	0.00033	0.00025	0.00042	0.00033	0.00029	0.00096
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00028	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					0.0136	0.0244	0.0297	0.0295	0.0254	0.0396	0.0383	0.0277	0.129
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0271	0.0409	0.0667	0.059	0.0429	0.0829	0.0668	0.0521	0.254
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	0.0067	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC04	BC04	BC06	BC06	BC06	BC06	BC06	BC06	BC06
Sampling Date						16-Nov-16	15-Dec-16	8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16	4-Jul-16	20-Jul-16	27-Sep-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.08	8.11	8.46	*6.25*	7.83	7.74	7.78	7.65	8.17
Conductivity	uS/cm					194.7	215.1	62.3	51.7	43.3	40.5	128	37.2	64.5
Specific Conductivity	uS/cm					355.3	411	111.5	94.8	77.1	72.9	227	66.6	116.5
Dissolved Oxygen	mg/L					14.07	17.18	73.99	15.4	14.14	14.87	11.17	15.33	15.9
Dissolved Oxygen	%					102.7	119.1	105.7	114	105.7	109.2	84.1	114	116.6
ORP	mV							299.4	352.5	247.7		100	322.6	
Turbidity	NTU					9.06		290	313	253	356	412	305	518
TDS	mg/L											113		
Temperature	degC					1.3	0	2.2	1.5	2	1.7	2.14	1.9	1.6
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.14	7.88	8.13	8.29	8.09	8.13	8.31	7.92	8.28
Specific Conductance	uS/cm					359	404	120	106	96.2	84.1	84.4	77.1	125
Total Hardness	mg/L					173	204	55.8	50	42.2	42.8	37.8	34.4	53.9
Total dissolved solids	mg/L					233	200	86	96	68	75	76	68	218
Total suspended solids	mg/L					7.1	<3	293	325	277	406	332	307	1310
Turbidity	NTU					3	1.83	249	232	219	262	250	220	2320
Major Ions														
Total alkalinity	mg/L as Ca CO3					91.5	107	40.8	37.9	34.7	31.4	32.5	32	44.2
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					91.5	107	40.8	37.9	34.7	31.4	32.5	32	44.2
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.7	2.2	<1	<1	<1	<1	1.8	<1	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.06	0.07	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		95.4	104	19	16.5	12.8	10.7	10.9	8.4	19.3
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.138	0.138	0.0131	0.0168	0.0135	0.0135	0.011	0.0073	0.0159
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	0.0087	0.005	<0.005	0.007	0.0058	<0.005	0.0116
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	0.0013	0.0018	0.002	0.0015	0.0019	0.0018	0.0022
Phosphorus, total	mg/L					0.0091	0.002	0.354	0.413	0.246	0.543	0.569	0.357	1.44
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.1	<0.5	3.96
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.19	0.0529	9.24	8.32	7.64	12.6	9.74	8.09	36.8
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0092	0.0055	0.085	0.0925	0.0796	1.91	0.0758	0.103	0.0804
Antimony, total	mg/L			**0.009**		0.00099	0.0008	0.00253	0.00218	0.00171	0.00227	0.00218	0.00176	0.00711
Antimony, dissolved	mg/L			**0.009**		0.00087	0.00074	0.00076	0.0006	0.00052	0.0007	<0.0005	<0.0005	0.0013
Arsenic, total	mg/L	**0.005**		**0.005**		0.00111	0.00072	0.0151	0.0164	0.0102	0.0197	0.0192	0.0117	0.0808
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00069	0.00056	0.0006	0.00067	0.00061	0.0026	0.00068	0.00057	0.00096
Barium, total	mg/L			**1**		0.05	0.052	0.155	0.149	0.133	0.179	0.176	0.165	0.537
Barium, dissolved	mg/L			**1**		0.044	0.053	0.023	0.022	0.022	0.054	0.021	0.028	0.028
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	0.000199	0.000107	0.000074	0.000202	0.000131	0.000083	0.00045
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000742	0.0000675	0.000432	0.000448	0.000322	0.000733	0.00061	0.00037	***0.00229***
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000073	0.000056	<0.000017	<0.000017	<0.000017	0.000077	<0.000017	<0.000017	<0.000017
Calcium, total	mg/L					64	67.1	24.4	23.8	17.4	21.8	22.4	16.4	48.7
Calcium, dissolved	mg/L					57.2	67.5	19.3	17.3	14.7	14.2	13.2	12.2	18.8
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.001	<0.001	0.0124	0.0135	0.011	0.0183	0.0157	0.0113	0.058
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	0.0021	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					0.0152	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	0.00583	0.00634	0.00445	0.00854	0.00732	0.00531	0.0311
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00095	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0016	<0.001	0.0298	0.0335	0.024	0.0465	0.0405	0.0276	0.175
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	0.0045	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.356	0.105	13.5	13.7	10.4	18.3	16.4	12.3	64.4
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	0.032	<0.03	1.7	<0.03	0.038	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	0.00714	0.00686	0.00536	0.0107	0.00859	0.00643	0.0339
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0015	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					7.86	8.32	7.28	7.22	5.52	8.23	7.3	5.57	25.2
Magnesium, dissolved	mg/L					7.21	8.63	1.87	1.67	1.34	1.79	1.17	0.96	1.72
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0199	0.0146	0.369	0.369	0.274	0.504	0.486	0.358	1.98
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0107	0.00886	0.0007	0.00072	0.00024	0.0642	0.0003	0.00044	0.00142
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	0.0000089	0.000011	0.0000084	0.0000096	0.0000127	<0.000025	0.000086
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0065	0.0054	0.0035	0.0031	0.0024	0.0029	0.0025	0.0018	0.0075
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0058	0.0052	0.0025	0.0023	0.0017	0.0015	0.0015	0.0011	0.0044
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0028	0.0025	0.015	0.0164	0.0117	0.0225	0.0182	0.0126	0.0735
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0025	0.0027	<0.001	<0.001	<0.001	0.0036	<0.001	<0.001	<0.001
Potassium, total	mg/L					<2	<2	2.6	2.4	2.1	2.3	<2	2.1	4.5
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00296	0.00298	0.00171	0.00173	0.00121	0.0016	0.00151	0.00113	0.00569
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00322	0.00297	0.000884	0.000834	0.000659	0.000705	0.00059	0.000484	0.00135
Silicon, total	mg/L					2.64	2.58	16.6	16.8	14.3	18.7	15.8	14.5	47.2
Silicon, dissolved	mg/L					2.16	2.53	0.742	0.712	0.54	4.82	0.512	0.574	0.683
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	0.000267	0.000278	0.000195	0.000356	0.000351	0.000239	0.0016
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000038	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					2.1	2.2	<2	<2	<2	<2	<2	<2	2.7
Sodium, dissolvd	mg/L					<2	2.2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.375	0.385	0.141	0.139	0.105	0.129	0.126	0.0956	0.231
Strontium, dissolved	mg/L					0.371	0.374	0.102	0.0967	0.0823	0.0813	0.0727	0.0649	0.108
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	<0.01	0.228	0.257	0.224	0.309	0.247	0.214	0.445
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	0.07	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00058	0.00053	0.00034	0.0003	0.00025	0.00035	0.0003	0.00029	0.00102
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00051	0.00052	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					0.00066	<0.0005	0.0269	0.0271	0.0231	0.0367	0.0346	0.0237	0.134
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00635	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0058	0.0051	0.053	0.0516	0.0397	0.0759	0.0634	0.0489	0.258
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	0.0087	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC06	BC06	BC08	BC08	BC08	BC08	BC08	BC08	BC08
Sampling Date						16-Nov-16	15-Dec-16	29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.02	8.28	7.68		8.36	7.82	8.22	8.33	7.62
Conductivity	uS/cm					195	228.9	155		34.5	78.8	25	34.6	75.2
Specific Conductivity	uS/cm					365.2	439.1			63.7	149	46	63.9	138
Dissolved Oxygen	mg/L					14.2	16.4	10		13.79	13.54	13.98	15.66	12.9
Dissolved Oxygen	%					102.5	115	84.1		101.1	101	98.7	115.9	96.3
ORP	mV										242.4		285.8	286.6
Turbidity	NTU					13.14		48.1		215	158	359	240	214
TDS	mg/L											0.03		
Temperature	degC					0.6	-0.1	7.92		0.5	0.4	1.04	1	1.1
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.11	7.72	7.88	8.42	6.67	8.06	8.73	8.33	8.01
Specific Conductance	uS/cm					364	430	191	49.5	64.9	145	53	69.4	128
Total Hardness	mg/L					181	213	81.7	20.9	27.7	61.8	21.9	31.1	57.4
Total dissolved solids	mg/L					256	290	143	43	69	93	50	75	86
Total suspended solids	mg/L					12.3	5.8	155	280	275	194	395	331	184
Turbidity	NTU					5.13	3.29	73.3	164	170	149	298	196	141
Major Ions														
Total alkalinity	mg/L as Ca CO3					78	93.6	25	20.9	20.4	35.9	23.7	27.6	38
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					78	93.6	25	20.9	20.4	35.9	23.7	27.6	38
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<2	<1	<2	<2	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<2	<1	<2	<2	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.3	1.6	1.5	<1	8.3	1.3	<1	<1	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.072	0.091	0.132	<0.02	<0.02	0.028	<0.02	<0.02	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		110	130	66.2	6.37	10.8	34.8	5.43	9.79	27.2
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0629	0.043	0.0133	0.0054	<0.005	0.011	0.008	0.0074	0.0117
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N							0.11				<0.15		
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	0.0051	<0.005	<0.005	0.0056	<0.005	0.0068
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	0.0014	0.0015	0.0018	0.0021	0.002	0.0021	0.0018
Phosphorus, total	mg/L					0.0145	0.0055	0.141	<0.3	0.245	<0.3	0.465	0.26	0.219
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	1.18	1.16	1.34	1.54	1.01	1.09	1.07
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	0.53	0.52	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.353	0.0901	3.55	5.84	6.24	6.8	11.3	5.89	5.84
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0137	0.0092	0.0319	0.0619	0.0838	0.0942	0.0998	0.127	0.0565
Antimony, total	mg/L			**0.009**		0.00125	0.00114	0.00093	0.00181	0.00204	0.0025	0.00248	0.00156	0.00246
Antimony, dissolved	mg/L			**0.009**		0.00112	0.00104	0.00018	0.00048	0.00071	0.00131	0.00029	0.00042	0.00101
Arsenic, total	mg/L	**0.005**		**0.005**		0.00159	0.001	0.00608	0.0108	0.0115	0.0138	0.028	0.00961	0.0131
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00073	0.00063	0.00032	0.00076	0.00104	0.001	0.00072	0.0007	0.00098
Barium, total	mg/L			**1**		0.049	0.053	0.0733	0.095	0.0842	0.114	0.143	0.116	0.11
Barium, dissolved	mg/L			**1**		0.044	0.052	0.0222	0.00846	0.00828	0.0253	0.0094	0.0284	0.0277
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.0001	0.00014	0.00014	0.00017	0.00025	0.00013	0.00016
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	0.000234	0.00009	0.000186
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000118	0.000121	0.000539	0.000334	0.000293	0.000472	0.000587	0.000313	0.00029
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000101	0.000099	0.000262	0.000035	0.000023	0.000013	0.0000131	<0.000005	0.000007
Calcium, total	mg/L					66.6	73.1	28.6	11.5	13.3	25.7	15.9	15.2	23.2
Calcium, dissolved	mg/L					61.2	71.8	27.3	7.43	9.6	21	7.66	10.8	19.5
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.001	<0.001	0.00449	0.00864	0.0111	0.0102	0.0184	0.0074	0.00936
Chromium, dissolved	mg/L					<0.001	<0.001	<0.0001	<0.0001	0.00014	0.0001	<0.0001	<0.0001	0.00013
Chromium, hexavalent	mg/L					<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00045	<0.0003	0.00264	0.004	0.00402	0.00468	0.00974	0.00417	0.00395
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	0.00033	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0027	0.0018	0.0164	0.0223	0.0226	0.0267	0.0518	0.0225	0.0233
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	0.00104	0.00056	0.00067	<0.0002	0.00094	0.00027	<0.0002
Iron, total	mg/L	**0.3**		**0.001**		0.61	0.217	5.18	9.12	8.64	10.3	19	9.55	8.56
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	0.018	0.054	0.087	0.048	0.105	0.067	0.025
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	0.00281	0.00528	0.00564	0.00743	0.0123	0.00597	0.0043
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	0.000056	0.000082	0.000093	<0.00005	0.000128	0.000052	<0.00005
Magnesium, total	mg/L					7.11	8.2	4.93	3.9	4.38	5.78	7.83	4.31	5.46
Magnesium, dissolved	mg/L					6.8	8.29	3.3	0.57	0.913	2.26	0.673	1.02	2.13
Manganese, total	mg/L			**EQ10**	**EQ11**	0.024	0.0165	0.162	0.254	0.206	0.271	0.516	0.311	0.23
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00889	0.00718	0.021	0.0124	0.0106	0.00122	0.0103	0.00167	0.00072
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	0.0000105	0.0000161	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0078	0.0073	0.00206	0.00203	0.00277	0.00621	0.00226	0.0021	0.00506
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0074	0.007	0.0015	0.00116	0.00207	0.005	0.000719	0.00144	0.00423
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0041	0.0046	0.0117	0.00967	0.0119	0.0128	0.0235	0.00914	0.0106
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0035	0.0042	0.00589	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium, total	mg/L					<2	<2	1.09	1.4	1.59	2.04	2.05	1.56	1.75
Potassium, dissolved	mg/L					<2	<2	0.323	0.208	0.291	0.718	0.224	0.337	0.612
Selenium, total	mg/L	**0.001**		**0.002**		0.0033	0.00275	0.00171	0.00095	0.00104	0.00192	0.00118	0.000834	0.00166
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00355	0.0027	0.00143	0.00041	0.00058	0.00145	0.000303	0.000458	0.00105
Silicon, total	mg/L					2.77	2.63	10.2	9.05	11	10.9	16	9.11	11.6
Silicon, dissolved	mg/L					2.15	2.47	4.37	0.267	0.387	0.859	0.322	0.512	0.69
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	0.0001	0.000198	0.00019	0.000247	0.000459	0.000215	0.000219
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					2.1	2.5	2.5	0.758	0.94	1.23	1.23	0.866	1.36
Sodium, dissolvd	mg/L					<2	2.4	2.29	0.191	0.348	0.639	0.217	0.303	0.629
Strontium, total	mg/L					0.383	0.431	0.147	0.0663	0.0841	0.163	0.089	0.0798	0.142
Strontium, dissolved	mg/L					0.398	0.41	0.136	0.0419	0.0605	0.133	0.0395	0.0593	0.126
Sulfur, total	mg/L											2.4	3.28	8.98
Sulfur, dissolved	mg/L											1.64	3.08	8.67
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	0.000029	0.000047	0.000047	0.000063	0.00007	0.000049	0.000053
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin, total	mg/L					<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0001	<0.0001	0.0127	<0.0001	0.00328	<0.0001	<0.0001
Titanium, total	mg/L					0.012	<0.01	0.09	0.12	0.132	0.179	0.243	0.121	0.155
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.00093	0.00093	0.00041
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00073	0.00073	0.000204	0.000194	0.000237	0.000534	0.000327	0.000219	0.000453
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00064	0.00071	0.000078	0.000029	0.000073	0.000286	0.00002	0.000067	0.00023
Vanadium, total	mg/L					0.00126	<0.0005	0.011	0.0185	0.0194	0.0213	0.0349	0.0181	0.0208
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0095	0.0088	0.0516	0.0375	0.034	0.0473	0.0725	0.038	0.0335
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0061	0.0067	0.0186	0.0012	0.0019	0.0011	0.0011	<0.001	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC08	BC08	BC08	BC08	BC08	BC08	BC08	BC08
Sampling Date						20-Jan-16	14-Apr-16	11-May-16	29-May-16	8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.02	8.24		8.65	8.92	8.12	8.2	7.97
Conductivity	uS/cm					404.2	136		62.8	47.9	45.6	45.6	33
Specific Conductivity	uS/cm					774.3	254		117.1	88.7	85.6	82.9	62.1
Dissolved Oxygen	mg/L					11.51	13.42		14.14	14.01	15.4	13	14.56
Dissolved Oxygen	%					83.1	94.5		103.1	105	111.6	97.3	105.9
ORP	mV					185.9	126		293.6	288.4	339.2	244.3	
Turbidity	NTU					1.44	66		294	285	275	232	314
TDS	mg/L												
Temperature	degC					0	0.72		0.8	0.9	0.6	1	0.5
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.92	8.02	8.12	7.95	8.26	8.57	8.15	8.43
Specific Conductance	uS/cm					392	262	145	121	103	86.1	82.3	71.2
Total Hardness	mg/L					182	132	64.7	54.9	46.8	39.8	38.6	31
Total dissolved solids	mg/L					259	178	108	103	79	79	69	77
Total suspended solids	mg/L					<3	54.7	174	348	239	267	258	277
Turbidity	NTU					1.39	40.1	139	244	211	218	191	232
Major Ions													
Total alkalinity	mg/L as Ca CO3					78.2	59.5	40.5	39.1	34.4	30.6	29.7	26.5
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					78.2	59.5	40.5	39.1	34.4	28.2	29.7	24.1
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	2.4	<1	2.4
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					2	<1	<1	<1	<1	<1	<1	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.067	0.063	0.024	<0.02	<0.02	<0.02	<0.02	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		116	67.5	30.3	22.4	16.9	13.6	11.3	9.14
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.005	0.0089	0.0151	0.0139	0.0101	0.0138	0.0103	0.0101
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N					<0.03							
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	0.0155	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	0.0026	0.0016	0.0011	0.0016	0.0014	0.0023	0.0015
Phosphorus, total	mg/L					0.0032	0.0502	0.253	0.307	0.309	0.414	0.232	0.368
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	0.76	0.54	0.54	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					0.68	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0533	2.01	5.46	7.51	7.51	7.95	7.88	9.07
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0088	0.0398	0.0571	0.0862	0.136	0.0703	0.14	0.0935
Antimony, total	mg/L			**0.009**		0.00143	0.00113	0.00204	0.00257	0.00224	0.00203	0.00188	0.00186
Antimony, dissolved	mg/L			**0.009**		0.00135	0.00087	0.00092	0.00091	0.00065	0.00058	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00097	0.00394	0.00995	0.0126	0.0131	0.0123	0.0133	0.0139
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00085	0.00091	0.00069	0.00083	0.00076	0.00081	0.00069	0.00079
Barium, total	mg/L			**1**		0.0628	0.049	0.107	0.137	0.14	0.139	0.14	0.152
Barium, dissolved	mg/L			**1**		0.0612	0.028	0.025	0.024	0.024	0.02	0.022	<0.02
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	0.000062	0.000202	0.000069	0.000077	0.000078	0.000107	0.000141
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000539	0.000104	0.000314	0.000353	0.000368	0.000301	0.000456	0.000418
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000183	0.000037	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium, total	mg/L					66.1	43.4	25.5	23.6	20.3	17.8	19.2	16.4
Calcium, dissolved	mg/L					61.3	45.4	21.9	18.5	15.9	13.6	13.2	10.7
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.0001	0.0033	0.0079	0.0117	0.0096	0.0102	0.012	0.0121
Chromium, dissolved	mg/L					<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0001	0.00123	0.00374	0.00462	0.00457	0.00457	0.0052	0.00571
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0005	0.0074	0.0214	0.0257	0.0247	0.025	0.0274	0.031
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00039	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.072	2.76	8.69	11	11.1	10.7	12.1	13.2
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	0.037	<0.03	0.038	0.077	<0.03	0.081	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.000061	0.00154	0.00464	0.00492	0.00538	0.00531	0.00611	0.00695
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00086	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					7.16	5.37	5.87	6.74	5.84	5.71	5.97	6.11
Magnesium, dissolved	mg/L					6.93	4.49	2.45	2.09	1.7	1.43	1.36	1.04
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00549	0.0632	0.218	0.287	0.316	0.26	0.319	0.351
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00398	0.00604	0.00067	0.00079	0.00217	0.00044	0.00186	0.00048
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000025	<0.00001	0.000012	0.0000084	0.0000091
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.013	0.0111	0.006	0.0047	0.0033	0.0031	0.0027	0.0024
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0115	0.0108	0.005	0.0039	0.0027	0.0024	0.0019	0.0014
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00273	0.0043	0.0098	0.0136	0.0119	0.0117	0.0139	0.0148
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00271	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					1.91	<2	<2	2.4	2.1	2.2	<2	2
Potassium, dissolved	mg/L					1.9	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00134	0.00184	0.00146	0.00162	0.00132	0.0014	0.00133	0.00116
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00143	0.0018	0.00102	0.00091	0.000661	0.000687	0.000514	0.000559
Silicon, total	mg/L					1.76	5.22	11	16.6	13.6	15.3	14.6	15.3
Silicon, dissolved	mg/L					1.68	1.33	0.721	0.713	0.773	0.537	0.651	0.463
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	0.000051	0.000178	0.000216	0.000228	0.000246	0.000241	0.000259
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					2.33	<2	<2	<2	<2	<2	<2	<2
Sodium, dissolvd	mg/L					2.3	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.454	0.296	0.157	0.148	0.123	0.108	0.115	0.101
Strontium, dissolved	mg/L					0.422	0.307	0.132	0.113	0.095	0.0793	0.0794	0.0657
Sulfur, total	mg/L					40.1							
Sulfur, dissolved	mg/L					39.1							
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					0.00041	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.0038	0.074	0.182	0.212	0.172	0.209	0.208	0.221
Titanium, dissolved	mg/L					<0.0003	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000994	0.00071	0.00047	0.00035	0.00028	0.00025	0.00025	0.00026
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000891	0.00064	0.00024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					<0.0005	0.00586	0.0161	0.0243	0.0217	0.0215	0.0245	0.0264
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.003	0.0103	0.0338	0.0411	0.0466	0.0388	0.0501	0.0503
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0131	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BC08	BC08	BC08	BC08	BC08	BR03	BR03	BR03	BR03
Sampling Date						4-Jul-16	20-Jul-16	28-Sep-16	16-Nov-16	14-Dec-16	24-Jun-14	16-Sep-14	7-Jul-15	15-Oct-15
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.46	7.81	8.55	8.02	8.2		7.42	7.78	7.62
Conductivity	uS/cm					108	30.3	43.9	169.3	207.9		70	60	99.7
Specific Conductivity	uS/cm					198	56.3	83.3	320.6	396.6		105.9	86	156.2
Dissolved Oxygen	mg/L					10.53	14.96	15.91	12.49	10.48		1.85	11.5	12.1
Dissolved Oxygen	%					79.1	111.1	115.2	91.7	76.1		96.8	99	97.2
ORP	mV					82.3	335.6			248.6				305.9
Turbidity	NTU					396	263	569	13.48	2.07		103	380	89.3
TDS	mg/L					99							0.056	
Temperature	degC					1.14	1	0.3	0.3	0.1		6.8	8.78	6.1
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.2	8.67	8.19	8.06	8.08	8.05	8.1	8.24	7.89
Specific Conductance	uS/cm					72.2	67.5	85.2	307	386	112	98.1	92.3	148
Total Hardness	mg/L					32.3	27.8	38.6	158	210	52.8	44.3	44.2	74.4
Total dissolved solids	mg/L					69	56	151	210	260	82	84	70	95
Total suspended solids	mg/L					385	238	662	<3	3.9	416	101	560	54.8
Turbidity	NTU					274	180	683	11.6	1.13	289	70.8	291	62
Major Ions														
Total alkalinity	mg/L as Ca CO3					26.8	27	34.1	65.9	78.5	44.6	35.4	39.1	53.9
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					26.8	27	31.7	65.9	78.5	44.6	35.4	39.1	53.9
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	2.4	<1	<1	<2	<2	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<2	<2	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					<1	<1	<1	1.3	1.5		2.6	<1	1.2
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	<0.02	<0.02	0.048	0.052	0.034	0.025	<0.02	0.039
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		9.7	7.43	14.7	94.1	115	13	13.7	9.23	22.3
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0099	0.0063	0.011	<0.005	<0.005	0.0566	0.0269	0.0232	0.117
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N										0.11		<0.15	
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	0.0097	<0.005	<0.005	0.0095	<0.005	0.0067	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					0.0021	0.0018	0.0025	<0.001	<0.001	<0.001	0.0011	<0.001	0.0016
Phosphorus, total	mg/L					0.584	0.397	0.731	0.0152	<0.002	0.851	0.0921	0.634	0.0894
Organics														
Total Organic Carbon	mg/L					0.59	<0.5	1.5	<0.5	<0.5	1.35	1.09	1.91	1.09
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	10.1	6.6	17.2	0.513	0.0275	9.84	3.45	11.5	3.05
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0651	0.09	0.076	0.0157	<0.005	0.088	0.0331	0.15	0.0903
Antimony, total	mg/L			**0.009**		0.00246	0.00156	0.00183	0.00151	0.00139	0.00222	0.00088	0.00211	0.00079
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	0.00135	0.00142	0.00143	<0.0005	0.00039	0.00041	0.00045
Arsenic, total	mg/L	**0.005**		**0.005**		0.0217	0.01	0.0136	0.00181	0.0009	0.0157	0.0061	0.0223	0.00388
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00079	0.00066	0.00107	0.00106	0.00083	0.00063	0.0006	0.00076	0.00065
Barium, total	mg/L			**1**		0.183	0.139	0.183	0.055	0.061	0.21	0.0949	0.203	0.102
Barium, dissolved	mg/L			**1**		<0.02	0.023	<0.02	0.051	0.061	0.035	0.0389	0.0358	0.0538
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	0.00029	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					0.000137	0.000053	<0.00005	<0.00005	<0.00005	<0.05	<0.0005	0.000179	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.05	<0.0005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.012	0.012	0.012
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00066	0.00031	0.000892	0.0000449	0.0000414	0.000577	0.000147	0.000621	0.0000997
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000017	<0.000017	<0.000017	0.000038	0.000038	0.000027	0.00002	0.0000056	0.0000175
Calcium, total	mg/L					21.1	12.9	26.9	57.2	65.4	21.6	17	19.8	26.4
Calcium, dissolved	mg/L					11.2	9.77	13.3	53.9	72	18.6	15.4	15.8	25.8
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0164	0.0087	0.0056	<0.001	<0.001	0.0118	0.00503	0.0165	0.00335
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	0.0001
Chromium, hexavalent	mg/L					<0.001	0.0011	<0.001	<0.001	<0.001		<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00797	0.00423	0.0075	0.00032	<0.0003	0.00635	0.00206	0.00858	0.00145
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0464	0.0222	0.0466	0.0018	<0.001	0.0317	0.0109	0.0434	0.00744
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003	0.00035	0.00046
Iron, total	mg/L	**0.3**		**0.001**		17.9	9.44	9.15	0.674	0.044	14.9	4.4	18.7	3.53
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	0.039	0.055	<0.03	<0.03	0.089	0.032	0.057	0.051
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00954	0.00539	0.0109	<0.0005	<0.0005	0.0124	0.00388	0.0149	0.00265
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000087	0.000059	0.000083
Magnesium, total	mg/L					7.62	4.18	4.41	5.83	6.77	7.02	3.18	7.65	3.89
Magnesium, dissolved	mg/L					1.08	0.83	1.3	5.69	7.4	1.56	1.41	1.12	2.42
Manganese, total	mg/L			**EQ10**	**EQ11**	0.505	0.303	0.55	0.019	0.00742	0.518	0.128	0.544	0.114
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00023	0.0005	0.00036	0.00375	0.00433	0.0168	0.0163	0.00154	0.0238
Mercury, total	mg/L	**0.000026**		**0.00002**		0.0000146	<0.000025	0.000061	<0.000005	<0.000005	0.000016	<0.00001	0.0000163	0.0000051
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0028	0.0016	0.0022	0.0103	0.0094	0.0027	0.00168	0.0022	0.00231
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0016	0.0012	0.0044	0.0099	0.0096	0.0012	0.00113	0.0011	0.00208
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0204	0.0097	0.0162	0.0022	0.0022	0.0144	0.00515	0.0197	0.00358
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	0.0015	0.0022	<0.001	<0.0005	<0.0005	<0.0005
Potassium, total	mg/L					2	<2	<2	<2	<2	2.6	1.19	2.69	1.27
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	0.343	0.567	0.602
Selenium, total	mg/L	**0.001**		**0.002**		0.0017	0.00083	0.00114	0.00204	0.00138	0.0014	0.00063	0.00136	0.000974
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000542	0.000425	0.00179	0.00221	0.00155	<0.001	0.00051	0.000412	0.000806
Silicon, total	mg/L					17.6	11.8	10.2	2.27	1.65	16	6.37	19	6.53
Silicon, dissolved	mg/L					0.442	0.437	0.646	1.48	1.66	0.921	0.697	0.83	1.52
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000433	0.000196	0.0002	<0.00002	<0.00002	0.000354	0.000103	0.000414	0.000066
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					<2	<2	<2	<2	2.1	<2	0.83	1.51	1.23
Sodium, dissolvd	mg/L					<2	<2	<2	<2	2.2	<2	0.451	0.386	0.881
Strontium, total	mg/L					0.121	0.0747	0.135	0.361	0.433	0.125	0.102	0.113	0.154
Strontium, dissolved	mg/L					0.0659	0.0552	0.0802	0.382	0.415	0.0971	0.0886	0.0799	0.143
Sulfur, total	mg/L												3.59	7.65
Sulfur, dissolved	mg/L												3.06	7.45
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000037	0.000105	0.000035
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	0.00011	<0.0001
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Titanium, total	mg/L					0.266	0.166	0.114	0.016	<0.01	0.239	0.075	0.297	0.0727
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0015	0.00109
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.0003	0.00026	0.00039	0.00082	0.00074	0.00038	0.00015	0.000362	0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	0.00075	0.00077	<0.0002	0.000065	0.000066	0.000143
Vanadium, total	mg/L					0.0361	0.0207	0.0148	0.00185	<0.0005	0.0292	0.0096	0.0338	0.00858
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0656	0.0366	0.0667	<0.005	<0.005	0.0706	0.0203	0.0748	0.0168
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.001	0.0011	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BR03	BR03	BR03	BR03	BR06	BR06	BR06	BR06	BR06
Sampling Date						20-Jan-16	14-Apr-16	20-Jul-16	16-Nov-16	24-Jun-14	29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.01	7.89	7.78	7.99		7.7	7.57	7.37	7.71
Conductivity	uS/cm					297	125.7	61.4	131.8		52	38	59.1	98.6
Specific Conductivity	uS/cm					522	189	92.2	224.5				92.2	158.8
Dissolved Oxygen	mg/L					13.59	12.03	12.7	12.61		11.67	11	12.55	12.74
Dissolved Oxygen	%					99.5	100.1	105.2	94.2		92.6	88.6	101.5	102.3
ORP	mV						302.1	315.4						258.2
Turbidity	NTU					0.3	3.26	251	1.56		373	136	95.8	50
TDS	mg/L													
Temperature	degC					2.46	7.5	7.5	3.3		5.43	6.08	6.2	5.8
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.07	8.02	7.79	8.15	7.51	8.06	7.96	8.11	7.97
Specific Conductance	uS/cm					268	204	94.3	227	105	78.3	69.8	84.8	147
Total Hardness	mg/L					133	105	43.9	111	50	35.1	31.1	37.9	66.9
Total dissolved solids	mg/L					165	123	67	165	78	60	55	73	96
Total suspended solids	mg/L					<3	<3	246	<3	520	471	172	82.6	75.1
Turbidity	NTU					0.38	1.79	165	0.72	363	291	103	62.6	47.9
Major Ions														
Total alkalinity	mg/L as Ca CO3					86.5	70	39.2	78.4	43.3	31.2	26.6	30.2	52.9
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					86.5	70	39.2	78.4	43.3	31.2	26.6	30.2	52.9
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<2	<2	<2	<2	<2
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<2	<2	<2	<2	<2
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.1	1	<1	<1		<1	1.6	2.7	1.5
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.059	0.064	0.02	0.053	0.03	0.024	0.024	0.022	0.041
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		45.2	30.5	9.78	40.4	12.7	8.08	8.24	11.9	23.6
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.136	0.283	0.0209	0.194	0.0496	0.0251	0.0202	0.0227	0.142
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N					0.123				<0.2	<0.25			
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	0.0118	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	0.0014	0.0011	0.0011	<0.001	0.0017
Phosphorus, total	mg/L					<0.002	0.0032	0.284	0.007	0.71	0.59	<0.3	0.212	0.0637
Organics														
Total Organic Carbon	mg/L					0.54	0.64	<0.5	<0.5	0.76	2.54	0.6	0.82	1.08
Dissolved Organic Carbon	mg/L					0.68	0.72	<0.5	<0.5	<0.5	0.58	<0.5	<0.5	0.95
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0157	0.0903	7.6	0.0435	11.9	11.7	4.29	2.77	2.43
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0041	0.0113	0.0919	0.0069	0.0623	0.0883	0.0592	0.0362	0.0852
Antimony, total	mg/L			**0.009**		0.00051	<0.0005	0.00119	<0.0005	0.00269	0.00249	0.00101	0.00073	0.00091
Antimony, dissolved	mg/L			**0.009**		0.00048	<0.0005	<0.0005	<0.0005	<0.0005	0.0003	0.00027	0.00034	0.00052
Arsenic, total	mg/L	**0.005**		**0.005**		0.00069	0.00084	0.00888	0.00078	0.0198	0.0224	0.00685	0.00502	0.00501
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00061	0.0006	0.00057	0.00065	<0.0005	0.00037	0.00033	0.00048	0.00079
Barium, total	mg/L			**1**		0.0894	0.072	0.163	0.084	0.253	0.224	0.129	0.0881	0.0963
Barium, dissolved	mg/L			**1**		0.0861	0.071	0.038	0.08	0.029	0.0242	0.035	0.0369	0.0584
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.001	<0.001	<0.001	<0.001	0.00034	0.00012	<0.0001	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					<0.00005	<0.00005	0.000054	<0.00005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.014	<0.1	<0.1	<0.1	<0.1	0.012	<0.01	0.011	0.011
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.013	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000162	0.0000243	0.000272	0.0000184	0.000749	0.000739	0.000241	0.000135	0.000156
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000191	0.000026	<0.000017	<0.000017	0.000028	0.000021	0.000029	0.00002	0.00003
Calcium, total	mg/L					48.4	36.2	17.4	42	24.3	19.2	12.8	14.4	23.7
Calcium, dissolved	mg/L					45.9	36.5	15.6	38.4	17.4	12.4	10.9	13.1	22.9
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.0001	<0.001	0.0095	<0.001	0.0144	0.0154	0.00425	0.00371	0.00309
Chromium, dissolved	mg/L					<0.0001	<0.001	<0.001	<0.001	<0.001	0.00016	<0.0001	<0.0001	<0.0001
Chromium, hexavalent	mg/L					<0.001	<0.001	0.0015	<0.001				<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0001	<0.0003	0.00441	<0.0003	0.00806	0.00905	0.0026	0.00171	0.00167
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0005	<0.001	0.0207	<0.001	0.0399	0.0455	0.0113	0.00838	0.00844
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	<0.001	<0.001	<0.001	<0.001	0.00039	0.00023	0.00035	0.00065
Iron, total	mg/L	**0.3**		**0.001**		0.036	0.136	10.2	0.084	18.2	19.3	6.12	3.56	3.59
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.03	<0.03	<0.03	0.05	0.063	0.045	0.039	0.051
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.0005	0.00606	<0.0005	0.0154	0.0167	0.00619	0.00354	0.00318
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	0.000121	0.0001	0.000123	0.000086
Magnesium, total	mg/L					4.74	3.34	5.12	3.85	8.23	7.22	3.02	2.54	3.57
Magnesium, dissolved	mg/L					4.56	3.34	1.21	3.7	1.56	0.992	0.926	1.26	2.36
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0125	0.0148	0.303	0.0168	0.621	0.637	0.228	0.115	0.111
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0106	0.0101	0.00099	0.015	0.0181	0.0207	0.0225	0.0167	0.0143
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000025	<0.000005	<0.00005	<0.00001	<0.00001	<0.00001	<0.00001
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00251	0.0022	0.0016	0.0022	0.0029	0.00232	0.00121	0.00117	0.00205
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0022	0.002	0.001	0.0021	0.0012	0.000761	0.000719	0.000877	0.00175
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.0005	<0.001	0.0098	<0.001	0.0183	0.0205	0.00488	0.00423	0.0042
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	0.00051
Potassium, total	mg/L					0.96	<2	2.1	<2	3.2	2.55	1.48	1.02	1.03
Potassium, dissolved	mg/L					0.935	<2	<2	<2	<2	0.321	0.255	0.247	0.491
Selenium, total	mg/L	**0.001**		**0.002**		0.00173	0.00128	0.000833	0.00139	0.0016	0.0014	0.00054	0.00049	0.00111
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00172	0.00122	0.000445	0.00149	<0.001	0.00027	0.00027	0.0004	0.00092
Silicon, total	mg/L					1.94	1.93	14.1	1.81	20.5	18.8	7.49	4.93	5.11
Silicon, dissolved	mg/L					1.81	1.8	0.786	1.65	0.748	0.535	0.491	0.585	1.4
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00002	0.000173	<0.00002	0.000474	0.000438	0.000138	0.000074	0.000089
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					1.54	<2	<2	<2	<2	1.4	0.704	0.625	1
Sodium, dissolvd	mg/L					1.49	<2	<2	<2	<2	0.288	0.272	0.371	0.766
Strontium, total	mg/L					0.257	0.196	0.103	0.225	0.139	0.114	0.0753	0.0889	0.146
Strontium, dissolved	mg/L					0.241	0.196	0.0826	0.226	0.094	0.0685	0.0619	0.0792	0.139
Sulfur, total	mg/L					16								
Sulfur, dissolved	mg/L					14.9								
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	0.00012	0.000067	0.000035	0.000029
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin, total	mg/L					<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	0.00013	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/L					0.00012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Titanium, total	mg/L					0.00041	0.011	0.227	<0.01	0.309	0.275	0.108	0.061	0.062
Titanium, dissolved	mg/L					<0.0003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000251	<0.0002	0.0002	0.00021	0.00047	0.000387	0.000189	0.000138	0.00023
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000232	0.0002	<0.0002	0.0002	<0.0002	0.000036	0.000036	0.000054	0.000144
Vanadium, total	mg/L					<0.0005	<0.0005	0.0212	<0.0005	0.0351	0.0341	0.0118	0.0075	0.0071
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.003	<0.005	0.0384	<0.005	0.0837	0.0822	0.0315	0.0179	0.0178
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.001	<0.005	<0.005	<0.005	<0.005	0.0026	0.0011	0.0015	0.0011

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BR06	BR06	BR06	BR06	BR06	BR06	BR06	BR06
Sampling Date						7-Jul-15	5-Aug-15	15-Oct-15	20-Jan-16	24-Feb-16	14-Apr-16	11-May-16	29-May-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.06	7.69	7.68	8.13	8.03	7.97	7.8	8.51
Conductivity	uS/cm					49	59.9	99.9	294		125	101.9	89.9
Specific Conductivity	uS/cm					75	90.1	160.5	509		187	151.4	132.8
Dissolved Oxygen	mg/L					12.21	13.31	12.18	14.59	13.12	12.24	11.56	12.37
Dissolved Oxygen	%					101	111.2	96.6	107.5	96.7	103	96.6	103.9
ORP	mV						281.2	307.6		281.1	290.6		268.6
Turbidity	NTU					350	195	118	0.65	1.57	4.76	43.3	130
TDS	mg/L					0.049							
Temperature	degC					7.18	7.5	5.4	2.56	3	7.6	7.9	8.1
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.35	8.05	7.96	8.07	8.09	8.06	8.01	7.95
Specific Conductance	uS/cm					80.2	94.8	153	262	253	205	155	134
Total Hardness	mg/L					37.8	43.3	77.9	130	128	99.9	74	64.5
Total dissolved solids	mg/L					69	82	103	165	157	121	96	97
Total suspended solids	mg/L					512	350	99.9	<3	<3	3.5	33.9	167
Turbidity	NTU					265	138	81.7	0.45	0.45	1.75	22.5	108
Major Ions													
Total alkalinity	mg/L as Ca CO3					34.7	38	55.5	82.3	82.8	69.9	54.3	50.7
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					34.7	38	55.5	82.3	82.8	69.9	54.3	50.7
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3									<2			
Acidity	mg/L					<1	1.3	1	1.3	1	1	1.3	1.6
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	0.53	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	<0.02	0.036	0.066	0.066	0.064	0.047	0.039
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		7.82	11.4	25	47.5	43	31.4	23.5	19.9
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0174	0.0289	0.109	0.165	0.205	0.31	0.131	0.0586
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N					<0.15			0.155				
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.0066	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					0.0014	<0.001	0.0018	<0.001	<0.001	0.0012	<0.001	<0.001
Phosphorus, total	mg/L					0.447	0.249	0.131	<0.002	0.0136	0.005	0.0503	0.161
Organics													
Total Organic Carbon	mg/L					0.61	1.27	0.88	<0.5	<0.5	<0.5	0.51	0.82
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	0.64	0.95	0.67	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	10.7	5.02	3.63	0.0211	0.0264	0.116	1.34	3.97
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.123	0.0773	0.0467	0.0065	<0.005	0.0159	0.0305	0.059
Antimony, total	mg/L			**0.009**		0.00209	0.00123	0.001	0.00045	<0.0005	<0.0005	0.0007	0.0012
Antimony, dissolved	mg/L			**0.009**		0.00037	0.00034	0.00051	0.00043	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.0207	0.00821	0.00506	0.00055	0.00052	0.00074	0.00256	0.00612
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00068	0.00055	0.00054	0.00049	<0.0005	<0.0005	0.00054	0.00056
Barium, total	mg/L			**1**		0.185	0.125	0.115	0.0909	0.088	0.078	0.082	0.119
Barium, dissolved	mg/L			**1**		0.0285	0.0434	0.0524	0.0904	0.084	0.074	0.058	0.047
Beryllium, total	mg/L			**0.00013**		0.00027	0.00012	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					0.000213	0.000075	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.011	<0.01	0.012	0.015	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	0.01	0.014	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000598	0.000322	0.000148	0.000018	0.0000138	0.000029	0.0000698	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000005	<0.000005	0.0000212	0.0000898	0.000025	0.000059	0.00002	<0.000017
Calcium, total	mg/L					18.1	17.7	26.8	46.2	43.1	33.4	25.6	23.8
Calcium, dissolved	mg/L					13.5	15.1	26.7	44.2	43.8	34.3	25.4	22.3
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.0153	0.0062	0.00459	<0.0001	<0.001	<0.001	0.0018	0.0056
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00799	0.00383	0.00202	<0.0001	<0.0003	<0.0003	0.00088	0.00233
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0414	0.0176	0.0109	<0.0005	<0.001	<0.001	0.0048	0.0122
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	<0.0002	0.00024	0.00038	<0.001	0.0014	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		17.3	8.48	4.78	0.036	0.038	0.171	2	5.59
Iron, dissolved	mg/L	**0.3**		**0.35**		0.039	0.021	0.015	<0.01	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0148	0.00645	0.00343	<0.00005	<0.0005	<0.0005	0.00145	0.00347
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					7.03	4.17	4.56	4.87	4.55	3.57	3.33	4.47
Magnesium, dissolved	mg/L					1.01	1.35	2.73	4.77	4.41	3.5	2.57	2.14
Manganese, total	mg/L			**EQ10**	**EQ11**	0.512	0.284	0.14	0.00895	0.00776	0.0115	0.0585	0.156
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00119	0.00198	0.0103	0.00807	0.00675	0.00604	0.00625	0.00562
Mercury, total	mg/L	**0.000026**		**0.00002**		0.0000129	0.0000101	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	0.0000091	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0021	0.00148	0.0023	0.00233	0.002	0.002	0.002	0.0022
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.000871	0.00101	0.00203	0.00211	0.0019	0.002	0.0019	0.0019
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0184	0.00784	0.00519	<0.0005	<0.001	<0.001	0.0023	0.0065
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					2.36	1.44	1.2	0.656	<2	<2	<2	<2
Potassium, dissolved	mg/L					0.435	0.414	0.515	0.679	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00107	0.000742	0.00113	0.00152	0.00157	0.00129	0.000892	0.000959
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000321	0.000429	0.000947	0.00165	0.00158	0.00129	0.000784	0.00068
Silicon, total	mg/L					17	7.63	6.84	1.9	1.99	1.89	4.03	9.73
Silicon, dissolved	mg/L					0.629	0.668	1.26	1.89	1.94	1.68	1.28	1.03
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000431	0.000179	0.000101	<0.00001	<0.00002	<0.00002	0.000038	0.000112
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					1.39	0.827	1.14	1.56	<2	<2	<2	<2
Sodium, dissolvd	mg/L					0.298	0.382	0.814	1.57	<2	<2	<2	<2
Strontium, total	mg/L					0.105	0.0974	0.162	0.262	0.249	0.202	0.155	0.152
Strontium, dissolved	mg/L					0.0696	0.0812	0.149	0.251	0.24	0.199	0.15	0.134
Sulfur, total	mg/L					2.93	4.03	8.3	15.9				
Sulfur, dissolved	mg/L					2.38	3.84	8.37	15.7				
Thallium, total	mg/L	**0.0008**		**0.0008**		0.000108	0.000055	0.000039	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0001	<0.0001	<0.0001	0.00014	<0.0005	0.00053	<0.0005	<0.0005
Titanium, total	mg/L					0.272	0.124	0.0898	0.00042	<0.01	<0.01	0.05	0.144
Titanium, dissolved	mg/L					<0.0015	0.00032	0.00034	<0.0003	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000386	0.000192	0.000213	0.00027	0.00024	<0.0002	<0.0002	0.00023
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000053	0.000074	0.000141	0.000264	0.00023	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					0.0314	0.015	0.0105	<0.0005	<0.0005	<0.0005	0.00384	0.012
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0713	0.035	0.0222	<0.003	<0.005	<0.005	0.01	0.024
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	<0.001	<0.001	0.0068	<0.005	0.0061	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BR06	BR06	BR06	BR06	BR06	BR06	BR06	BR06
Sampling Date						8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	28-Sep-16	16-Nov-16	15-Dec-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.39	7.75	7.89	7.8	7.87	7.96	8.04	7.95
Conductivity	uS/cm					78.5	69.2	59.2	61.3	51.2	82.4	124.8	139.3
Specific Conductivity	uS/cm					118.9	111.1	90.2	91.7	80.9	134.1	216.8	265.9
Dissolved Oxygen	mg/L					12.25	13.68	12.3	12.48	13.39	13.87	13.2	19
Dissolved Oxygen	%					102.4	108.4	101.5	104.2	108.2	108.3	97.9	128.9
ORP	mV					275.9	335.2	239.5		318.1			237.5
Turbidity	NTU					168	234	237	333	265	337	1.81	
TDS	mg/L												
Temperature	degC					7.2	5.3	6.9	7.8	5.9	5.1	2.8	-0.1
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.06	8.13	8.05	8.11	7.88	8.02	8.14	7.81
Specific Conductance	uS/cm					124	117	107	101	86.6	135	214	260
Total Hardness	mg/L					58.4	55.9	48.7	45	38.3	68.1	111	132
Total dissolved solids	mg/L					86	80	70	75	61	162	149	170
Total suspended solids	mg/L					170	295	385	409	304	262	<3	<3
Turbidity	NTU					135	178	211	257	185	260	0.89	0.67
Major Ions													
Total alkalinity	mg/L as Ca CO3					45.4	43.8	41	40.9	35.7	49.9	72.1	85.5
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					45.4	43.8	41	40.9	35.7	49.9	72.1	85.5
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					<1	<1	1.1	<1	<1	1.6	<1	1.3
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.032	0.029	0.023	0.021	<0.02	0.029	0.055	0.066
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		16.7	15.5	12.6	11.7	8.99	20.2	40.5	47.8
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0445	0.0392	0.027	0.0246	0.0167	0.0811	0.227	0.212
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.0063	<0.005	<0.005	0.006	<0.005	0.006	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					0.0013	0.0012	0.0014	0.0017	0.0012	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					0.0205	0.474	0.301	0.622	0.326	0.326	0.0041	<0.002
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	0.91	0.58	<0.5	1.48	0.72	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	6.32	6.08	8.13	11.8	7.54	8.87	0.0594	0.0173
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0831	0.0731	0.0979	0.097	0.111	0.0752	0.0101	<0.005
Antimony, total	mg/L			**0.009**		0.00137	0.0013	0.00139	0.00199	0.00132	0.00265	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00066	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.0078	0.00815	0.00975	0.0183	0.00953	0.0175	0.00067	0.00051
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00054	<0.0005	<0.0005	0.00055	<0.0005	0.00081	0.00053	<0.0005
Barium, total	mg/L			**1**		0.15	0.136	0.157	0.206	0.166	0.194	0.089	0.096
Barium, dissolved	mg/L			**1**		0.042	0.038	0.035	0.033	0.032	0.049	0.088	0.096
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					0.000068	0.000069	0.000128	0.000155	0.000057	0.000103	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000273	0.000262	0.000339	0.000645	0.000342	0.000502	0.0000219	0.0000178
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	0.000023	0.000018
Calcium, total	mg/L					22.6	20.7	19.6	24.1	16.7	28.8	39.3	44.9
Calcium, dissolved	mg/L					20.2	19.3	17	15.7	13.5	23.7	38	45.1
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					0.0074	0.0082	0.0114	0.0168	0.0098	0.0149	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00341	0.00346	0.00488	0.00827	0.00445	0.00625	<0.0003	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0164	0.018	0.0251	0.0413	0.0218	0.0359	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		8.28	8.52	11.4	18	10.6	14.3	0.089	0.036
Iron, dissolved	mg/L	**0.3**		**0.35**		0.034	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00467	0.00505	0.00669	0.0117	0.00668	0.00687	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					5.37	5.3	6.06	8.23	5.33	7.7	3.99	4.61
Magnesium, dissolved	mg/L					1.95	1.84	1.53	1.37	1.09	2.15	3.98	4.74
Manganese, total	mg/L			**EQ10**	**EQ11**	0.23	0.216	0.295	0.503	0.316	0.387	0.0106	0.00979
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00477	0.00078	0.00055	0.00032	0.00087	0.00135	0.00869	0.00802
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.00001	0.0000075	0.0000115	0.0000143	0.0000133	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	0.0000054	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0021	0.002	0.002	0.0023	0.0015	0.0034	0.002	0.0021
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0016	0.0015	0.0013	0.0012	<0.001	0.0024	0.002	0.0019
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0083	0.0088	0.0126	0.0203	0.0107	0.0173	<0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					2.2	<2	2.2	2.5	2.1	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.000944	0.00106	0.00112	0.0015	0.000794	0.0022	0.00128	0.00145
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000581	0.000608	0.000492	0.000501	0.000363	0.000978	0.00135	0.00144
Silicon, total	mg/L					12.9	11.9	15.3	18.9	14.1	13.8	1.81	1.89
Silicon, dissolved	mg/L					0.968	0.891	0.759	0.696	0.564	1.02	1.75	1.9
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000152	0.00017	0.000254	0.000389	0.000194	0.000354	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.145	0.13	0.124	0.148	0.1	0.155	0.23	0.255
Strontium, dissolved	mg/L					0.118	0.112	0.0995	0.0937	0.0741	0.135	0.243	0.249
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.196	0.184	0.247	0.332	0.235	0.185	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00024	0.00021	0.00025	0.00055	0.00021	0.00033	0.00023	0.00025
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	0.00024
Vanadium, total	mg/L					0.0175	0.0172	0.0236	0.0349	0.0212	0.034	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0332	0.0347	0.0441	0.071	0.0455	0.0575	<0.005	<0.005
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BR08	BR08	BR08	BR08	BR08	BR08	BR08	BR08	BR08
Sampling Date						24-Jun-14	29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	20-Jan-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			7.81	7.56	7.28	7.64	7.15	7.37	7.59	8.23
Conductivity	uS/cm						39	32	50.8	79.3	41	51.9	79.9	223.5
Specific Conductivity	uS/cm								76.9	125	59	74.4	125.9	389.2
Dissolved Oxygen	mg/L						11.07	10.72	12.32	12.4	11.56	12.73	12.33	13.96
Dissolved Oxygen	%						91.1	88.4	102.7	101.5	100.6	111	99.3	103.3
ORP	mV									264.5		284.3	303.5	222.6
Turbidity	NTU						65.7	88.6	32.1	12.98	94.6	35.7	32.1	0
TDS	mg/L										0.038			
Temperature	degC						6.78	7	7.2	5.8	9.32	9.1	5.9	2.7
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	7.76	7.76	7.71	7.86	7.64	7.68	7.77	8.04
Specific Conductance	uS/cm					78.1	56.8	51.2	67.7	117	59.4	75.5	121	232
Total Hardness	mg/L					39.2	26.9	23.5	33	53.7	27.8	34	57.8	95.1
Total dissolved solids	mg/L					56	45	49	61	74	42	50	72	220
Total suspended solids	mg/L					127	68.9	80.7	20.9	32.6	96.3	53.1	11.7	<3
Turbidity	NTU					92.1	44.8	61.9	18.9	11.7	59.8	18.6	20.7	0.38
Major Ions														
Total alkalinity	mg/L as Ca CO3					30.5	21.2	18.2	24.7	46.2	21.8	28.9	46.6	76
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					30.5	21.2	18.2	24.7	46.2	21.8	28.9	46.6	76
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<2	<2	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<2	<2	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L						1.3	1.7	1.1	1.5	2.1	1.9	1.5	1.2
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.038	0.034	0.028	0.028	0.049	0.024	0.026	0.042	0.066
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		8.71	6.78	5.84	9.29	15	6.93	9.34	15.9	38.2
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0615	0.0303	0.0219	0.0286	0.143	0.0243	0.0363	0.125	0.175
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N					0.085	0.058				0.046			0.178
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	0.0012	0.0011	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					0.173	0.0781	<0.3	0.0193	0.0165	0.127	<0.05	0.0186	<0.002
Organics														
Total Organic Carbon	mg/L					0.73	0.72	0.53	0.52	0.98	0.61	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					1.09	<0.5	<0.5	<0.5	0.94	<0.5	<0.5	<0.5	0.56
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	4.23	2	2.94	1.14	0.571	2.99	1.2	1.08	0.0083
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.103	0.0682	0.0575	0.0485	0.0633	0.0451	0.0502	0.0995	0.0028
Antimony, total	mg/L			**0.009**		0.00079	0.00047	0.00048	0.00031	0.00029	0.00071	0.00042	0.00042	0.0003
Antimony, dissolved	mg/L			**0.009**		<0.0005	0.00015	0.00014	0.00016	0.00023	0.00018	0.00019	0.00027	0.00028
Arsenic, total	mg/L	**0.005**		**0.005**		0.00671	0.00301	0.00331	0.00142	0.00091	0.00513	0.00183	0.00169	0.00042
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	0.00029	0.00024	0.00037	0.00039	0.00025	0.00027	0.00048	0.00044
Barium, total	mg/L			**1**		0.182	0.108	0.131	0.0855	0.0956	0.144	0.0904	0.115	0.108
Barium, dissolved	mg/L			**1**		0.054	0.0477	0.0475	0.0557	0.0765	0.057	0.0563	0.0826	0.106
Beryllium, total	mg/L			**0.00013**		<0.001	<0.0001	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.01	<0.01	0.012	0.013	<0.01	<0.01	0.016	0.017
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.01	<0.01	<0.01	0.011	<0.01	<0.01	0.012	0.016
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000311	0.000148	0.000168	0.000056	0.00004	0.00023	0.000111	0.000068	<0.000005
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000029	0.000024	0.000028	0.00002	0.00002	0.0000287	0.0000088	0.0000221	0.0000129
Calcium, total	mg/L					14	9.75	8.82	11.8	18.5	10.5	12.1	20.2	33.9
Calcium, dissolved	mg/L					13.8	9.49	8.36	11.6	18.8	9.83	12	20.2	33.1
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0013	0.00076	0.00084	0.00042	0.00028	0.00107	0.00045	0.00052	<0.0001
Chromium, dissolved	mg/L					<0.001	0.00017	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium, hexavalent	mg/L							<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00247	0.00109	0.00135	0.00039	0.00028	0.00158	0.00067	0.00037	<0.0001
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0071	0.00322	0.00369	0.00154	0.00121	0.00473	0.00225	0.00149	<0.0005
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	0.0004	<0.0002	0.00022	0.00038	<0.0002	<0.0002	0.00036	<0.0002
Iron, total	mg/L	**0.3**		**0.001**		6.07	2.53	3.3	1.04	0.691	3.91	1.59	1.02	0.029
Iron, dissolved	mg/L	**0.3**		**0.35**		0.073	0.045	0.048	0.05	0.038	0.019	0.026	0.067	0.012
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00992	0.00478	0.00602	0.00247	0.00117	0.00858	0.00319	0.00316	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	0.000166	0.000167	0.000197	0.000085	0.000067	0.000075	0.000273	0.000092
Magnesium, total	mg/L					2.64	1.39	1.55	1.2	1.78	1.71	1.35	1.96	3.13
Magnesium, dissolved	mg/L					1.16	0.768	0.632	0.968	1.64	0.803	0.987	1.76	3.03
Manganese, total	mg/L			**EQ10**	**EQ11**	0.333	0.138	0.17	0.0523	0.039	0.216	0.0887	0.0525	0.0125
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0131	0.00982	0.0145	0.0105	0.0099	0.0117	0.0138	0.0104	0.0121
Mercury, total	mg/L	**0.000026**		**0.00002**		0.000021	<0.00001	<0.00001	<0.00001	<0.00001	0.0000112	0.0000055	0.0000075	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.001	0.000544	0.000519	0.000522	0.000659	0.000663	0.000566	0.000882	0.0011
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	0.00042	0.000332	0.000452	0.000643	0.000472	0.000529	0.000822	0.000997
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0015	0.00092	0.00102	<0.0005	<0.0005	0.00136	0.00121	0.00054	<0.0005
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium, total	mg/L					<2	0.947	1.32	0.712	0.485	1.51	0.752	0.821	0.311
Potassium, dissolved	mg/L					<2	0.175	0.16	0.173	0.31	0.195	0.265	0.318	0.306
Selenium, total	mg/L	**0.001**		**0.002**		<0.001	0.00013	0.0001	0.00012	0.00025	0.000172	0.000146	0.000239	0.00037
Selenium, dissolved	mg/L	**0.001**		**0.002**		<0.001	<0.0001	<0.0001	0.0001	0.0002	0.000113	0.000088	0.000242	0.000408
Silicon, total	mg/L					8.19	3.64	5.29	2.49	2.16	5.21	2.45	2.98	1.63
Silicon, dissolved	mg/L					0.827	0.57	0.462	0.61	1.35	0.559	0.657	1.29	1.65
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000152	0.000061	0.000089	0.000034	0.000031	0.000156	0.000054	0.000044	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					<2	0.451	0.472	0.444	0.665	0.544	0.422	0.733	1.34
Sodium, dissolvd	mg/L					<2	0.31	0.237	0.366	0.64	0.3	0.36	0.674	1.29
Strontium, total	mg/L					0.0911	0.0635	0.0574	0.0758	0.119	0.0671	0.0718	0.13	0.216
Strontium, dissolved	mg/L					0.0858	0.0595	0.0517	0.0761	0.119	0.0599	0.0702	0.124	0.209
Sulfur, total	mg/L										2.37	2.91	5.21	9.15
Sulfur, dissolved	mg/L										2.3	2.82	5.1	9.05
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	0.000058	0.000084	0.000035	0.00002	0.000095	0.000038	0.000045	<0.00001
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000015	<0.00001
Tin, total	mg/L					<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/L					<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium, total	mg/L					0.137	0.051	0.083	0.022	0.013	0.0812	0.0313	0.022	<0.0003
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	0.00036	0.0005	0.00142	<0.0003
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00021	0.000104	0.000144	0.000084	0.00009	0.000156	0.000085	0.000114	0.000157
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	0.00003	0.000026	0.00004	0.000068	0.000026	0.000038	0.00009	0.000145
Vanadium, total	mg/L					0.0109	0.0051	0.0072	0.0025	0.0015	0.00727	0.00301	0.00251	<0.0005
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0427	0.0198	0.0242	0.0103	0.0066	0.0328	0.0117	0.0128	<0.003
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	0.0034	0.0013	0.0012	0.0012	<0.001	0.0012	0.0018	<0.001

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BR08	BR08	BR08	BR08	BR08	BR08	BR08	BR08
Sampling Date						24-Feb-16	14-Apr-16	11-May-16	29-May-16	8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.2	8.16	7.74	8.09	8.21	7.46	7.52	7.54
Conductivity	uS/cm					113	100	85	67.4	66.5	57.9	53.6	54.1
Specific Conductivity	uS/cm					193	151	124	107.1	98.7	89.7	77.4	74.9
Dissolved Oxygen	mg/L						12.5		14.26	12.29	13.45	11.95	11.8
Dissolved Oxygen	%						103.3		111.6	106.1	110	104	105.4
ORP	mV						130.9	63.8	254.7	282.2	338.3	243	
Turbidity	NTU					0	1.72	8.4	16.47	46.6	33.2	21.2	50.9
TDS	mg/L												
Temperature	degC					3.34	7.22	8.46	5.6	7.9	6.4	8.9	10.4
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.06	7.98	8.01	7.82	7.78	7.77	7.9	7.59
Specific Conductance	uS/cm					197	158	128	108	97.6	89.6	84	75
Total Hardness	mg/L					96	75.2	62.6	50.2	46.7	43.1	39.3	34.8
Total dissolved solids	mg/L					113	91	79	75	70	60	58	57
Total suspended solids	mg/L					<3	<3	5.4	8	17.4	28.8	12	26.6
Turbidity	NTU					0.3	0.87	4.21	10.3	27.5	19.9	15.1	17.5
Major Ions													
Total alkalinity	mg/L as Ca CO3					69.1	58	47.7	40.5	36.5	32.4	30	27
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					69.1	58	47.7	40.5	36.5	32.4	30	27
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3					<2							
Acidity	mg/L					1.1	1.1	1.2	2	1.4	1.8	1.6	2.1
Chloride	mg/L	**120**	**640**	**150**	**600**	0.62	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.066	0.065	0.054	0.049	0.042	0.04	0.035	0.033
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		25.5	18.9	15.9	13.6	12.5	11.9	10.8	10.1
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.209	0.311	0.145	0.0777	0.0555	0.048	0.0329	0.0313
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	0.0015	<0.001	0.0012	0.0015
Phosphorus, total	mg/L					<0.002	<0.002	0.0056	0.015	0.0037	0.0387	0.0182	0.0435
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					0.54	<0.5	<0.5	<0.5	<0.5	<0.5	0.8	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0243	0.0309	0.223	0.498	1.59	1.02	0.921	1.37
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0053	0.0068	0.0255	0.0286	0.0898	0.0482	0.0448	0.0906
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	0.00077	0.00089	0.00134	0.00176	0.0012	0.00182
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.103	0.089	0.081	0.085	0.102	0.092	0.088	0.103
Barium, dissolved	mg/L			**1**		0.098	0.087	0.076	0.068	0.066	0.059	0.058	0.062
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000118	0.0000115	0.0000233	0.0000329	0.000057	0.0000799	0.0000514	0.0000959
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000019	<0.000017	<0.000017	<0.000017	0.000017	0.00002	0.000017	0.000024
Calcium, total	mg/L					33.9	26	21	18	15.9	14.7	13.9	12.4
Calcium, dissolved	mg/L					33.6	26.2	22	17.7	16.3	15.1	13.8	12.1
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	0.0006	0.00044	0.00033	0.00061
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	0.0018	0.0015	0.0011	0.002
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.051	0.044	0.268	0.489	1.4	1.17	0.887	1.6
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	0.046	0.039	<0.03	0.047
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	0.0006	0.00112	0.00211	0.00312	0.00183	0.0031
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					3.09	2.34	1.89	1.68	1.95	1.59	1.47	1.49
Magnesium, dissolved	mg/L					2.94	2.34	1.88	1.48	1.43	1.33	1.2	1.08
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0105	0.00675	0.0175	0.0275	0.0642	0.0565	0.041	0.0808
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00895	0.00551	0.00485	0.00606	0.00997	0.00647	0.00652	0.00953
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.000391	0.000348	0.000242	0.000229	0.000195	0.000173	0.000175	0.000165
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000409	0.000372	0.00027	0.000191	0.000192	0.000181	0.000159	0.000148
Silicon, total	mg/L					1.76	1.56	1.61	1.92	3.63	2.71	2.58	3.18
Silicon, dissolved	mg/L					1.69	1.51	1.26	0.984	0.991	0.88	0.766	0.735
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	0.000032	0.000051	0.000027	0.000044
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.211	0.162	0.134	0.121	0.109	0.0992	0.0955	0.0885
Strontium, dissolved	mg/L					0.2	0.161	0.138	0.116	0.107	0.0976	0.0915	0.0855
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00634	<0.0005
Titanium, total	mg/L					<0.01	<0.01	<0.01	0.015	0.043	0.031	0.026	0.037
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					<0.0005	<0.0005	0.00059	0.00133	0.00384	0.0021	0.00222	0.00318
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	0.0052	0.0092	0.0129	0.009	0.0145
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		BR08	BR08	BR08	BR08	GSC02	GSC02	GSC02	GSC02	GSC02
Sampling Date						20-Jul-16	27-Sep-16	16-Nov-16	15-Dec-16	24-Jun-14	29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.59	7.7	7.96	7.96		7.64	7.43	7.3	7.61
Conductivity	uS/cm					42.2	63.6	97.7	105.1		57	91	116.1	79.3
Specific Conductivity	uS/cm					62.5	99.8	166.4	201.9				173.3	144.7
Dissolved Oxygen	mg/L					12.64	13.92	13.19	18.78		9.65	9.49	10.67	12.5
Dissolved Oxygen	%					106.9	111.1	99.6	126.5		78.7	77.7	100.6	104.1
ORP	mV					313.5			232.1					221.6
Turbidity	NTU					49	106	0.78			0.04	0.41	0.31	0.44
TDS	mg/L													
Temperature	degC					8	6	3.4	-0.1		6.59	6.75	7.7	2.1
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.44	7.84	8.07	7.7	7.64	7.58	7.57	7.88	7.44
Specific Conductance	uS/cm					60.1	101	166	202	88.3	110	140	154	137
Total Hardness	mg/L					26.1	45.3	82.5	101	36.8	46.9	57.4	66.9	54.7
Total dissolved solids	mg/L					48	97	103	127	62	78	102	111	79
Total suspended solids	mg/L					34	52	<3	<3	17.3	<3	<3	<3	<3
Turbidity	NTU					26.7	88.9	0.69	0.36	6.9	0.35	0.23	<0.1	0.38
Major Ions														
Total alkalinity	mg/L as Ca CO3					23.2	38	62.9	75	8.5	10.6	13.2	15.6	12.4
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					23.2	38	62.9	75	8.5	10.6	13.2	15.6	12.4
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<2	<2	<2	<2	<2
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<2	<2	<2	<2	<2
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.9	1.5	1.1	1.4		1.5	2	4.4	1.4
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.025	0.036	0.055	0.067	0.036	0.045	0.052	0.051	0.054
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		7.81	13.3	24	28.1	30.7	39.2	50	57.8	50.6
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0223	0.11	0.243	0.225	0.0227	0.0098	<0.005	<0.005	0.0096
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N									0.053	<0.05			
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					0.0379	0.091	0.0054	<0.002	0.0229	<0.002	<0.3	<0.002	<0.002
Organics														
Total Organic Carbon	mg/L					<0.5	0.53	<0.5	<0.5	<0.5	<0.5	<0.5	0.63	<0.5
Dissolved Organic Carbon	mg/L					0.58	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	1.49	4.34	0.0313	0.0149	0.546	0.0447	0.023	0.0166	0.0218
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0463	0.0565	0.0078	<0.005	0.0131	0.0244	0.017	0.0214	0.0695
Antimony, total	mg/L			**0.009**		<0.0005	0.00051	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		0.002	0.00269	0.00056	<0.0005	0.00079	0.00014	0.00017	0.00011	0.00012
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	0.00052	<0.0005	<0.0005	0.0001	0.00016	0.00015	0.00013
Barium, total	mg/L			**1**		0.092	0.184	0.103	0.11	0.054	0.0197	0.0211	0.0157	0.0223
Barium, dissolved	mg/L			**1**		0.046	0.07	0.101	0.112	0.021	0.0196	0.0209	0.0234	0.0225
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.05	<0.0005	<0.0005	<0.0005	<0.0005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.01	<0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000987	0.000146	0.0000085	1.26E-05	0.000278	0.000217	0.00021	0.000132	0.0002
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000024	0.000029	<0.000017	<0.000017	0.000197	0.000235	0.000205	0.000207	0.0002
Calcium, total	mg/L					9.31	17.5	31	34.7	12.4	15.6	19.8	15.4	18.6
Calcium, dissolved	mg/L					9.17	16	28.8	35.2	12.2	15.7	19.3	22.7	18.3
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	0.00015	0.00019
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001				<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00069	0.00163	<0.0003	<0.0003	0.00121	0.00032	0.00021	0.00015	0.00052
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	0.00039	0.0003	0.0002	0.00021	0.00054
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0021	0.007	<0.001	<0.001	0.0193	0.0042	0.00233	0.00166	0.00493
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	0.0033	0.00381	0.002	0.00193	0.00666
Iron, total	mg/L	**0.3**		**0.001**		1.6	3.99	0.056	0.039	0.751	0.011	<0.01	<0.01	<0.01
Iron, dissolved	mg/L	**0.3**		**0.35**		0.032	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00317	0.00682	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L					1.22	2.8	2.6	3.01	1.69	1.79	2.26	1.7	2.22
Magnesium, dissolved	mg/L					0.78	1.29	2.55	3.16	1.54	1.84	2.24	2.48	2.16
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0899	0.185	0.0115	0.0158	0.0363	0.00504	0.00254	0.00168	0.00631
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0114	0.0174	0.0103	0.014	0.0051	0.00428	0.00229	0.00245	0.00657
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	0.0000115	<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	<0.001	0.0041	0.00396	0.00504	0.00404	0.00527
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	<0.001	0.003	0.00391	0.00493	0.00579	0.00509
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	0.0011	<0.001	<0.001	0.0014	0.00103	0.00103	0.00068	0.0012
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	0.00097	0.00093	0.00092	0.0011
Potassium, total	mg/L					<2	2.1	<2	<2	<2	0.112	0.147	0.11	0.137
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	0.122	0.14	0.175	0.133
Selenium, total	mg/L	**0.001**		**0.002**		0.000111	0.00023	0.000353	0.000409	<0.001	0.00108	0.00145	0.00117	0.00146
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000094	0.000174	0.00032	0.000344	<0.001	0.00107	0.00147	0.00183	0.00154
Silicon, total	mg/L					2.93	8.41	1.58	1.67	2.67	2.58	2.97	2.29	3.29
Silicon, dissolved	mg/L					0.515	0.879	1.49	1.7	2.19	2.6	3.01	3.39	3.36
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000042	0.000103	<0.00002	<0.00002	0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					<2	<2	<2	<2	<2	0.97	1.24	0.953	1.25
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	1.02	1.21	1.39	1.24
Strontium, total	mg/L					0.062	0.108	0.188	0.211	0.0806	0.1	0.127	0.096	0.11
Strontium, dissolved	mg/L					0.0592	0.102	0.196	0.211	0.0774	0.101	0.125	0.139	0.108
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001	<0.00001
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	0.00016
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001
Titanium, total	mg/L					0.036	0.116	<0.01	<0.01	0.011	<0.01	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000013	0.000016	0.000015	0.000013
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000011	0.000017	0.000019	0.000015
Vanadium, total	mg/L					0.00356	0.00753	<0.0005	<0.0005	0.0013	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0142	0.0254	<0.005	<0.005	0.0219	0.0129	0.01	0.0065	0.0111
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	0.0196	0.0128	0.0092	0.0084	0.0105

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		GSC02	GSC02	GSC02	GSC02	GSC02	GSC02	GSC02	GSC05	GSC05
Sampling Date						7-Jul-15	5-Aug-15	11-May-16	20-Jun-16	20-Jul-16	28-Sep-16	16-Nov-16	24-Jun-14	29-Jul-14
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.09	*6.09*	7.43	7.98	6.84	7.71	7.42		7.93
Conductivity	uS/cm					80	101.9	90	71.9	88.5	90	100.2		58
Specific Conductivity	uS/cm					118	153.4	156	113.7	138.1	148	190.4		
Dissolved Oxygen	mg/L					10.62	11.43	14.38	12.21	11.59	12.44	12.88		10.5
Dissolved Oxygen	%					89.8	107.3	106.3	109	105.1	107.5	100.7		78.3
ORP	mV						259.4	111.8	173.4	328.5				
Turbidity	NTU					0.1	0.18	0	1.32	0.42	0.45	0		0.25
TDS	mg/L					0.077								
Temperature	degC					7.89	7.7	2.77	5.8	6.2	4.5	0.2		3.08
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.41	7.38	7.62	7.49	7.09	7.37	7.64	7.46	7.53
Specific Conductance	uS/cm					120	144	158	120	131	142	195	86.3	102
Total Hardness	mg/L					48.3	58.5	69	51.4	52.7	59.7	88.1	37	42.5
Total dissolved solids	mg/L					75	95	107	84	94	112	128	64	66
Total suspended solids	mg/L					<3	<3	<3	3.3	<3	<3	<3	<3	<3
Turbidity	NTU					0.18	<0.1	0.13	0.72	0.2	0.31	0.13	1.19	0.46
Major Ions														
Total alkalinity	mg/L as Ca CO3					10.5	11.4	14.4	9.5	11.3	10.6	23.8	7.5	7.7
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					10.5	11.4	14.4	9.5	11.3	10.6	23.8	7.5	7.7
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<1	<1	<1	<1	<1	<1	<2	<2
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<1	<1	<1	<1	<1	<1	<2	<2
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					2.2	2.1	1.4	1.5	1.3	2.2	1.6		1.5
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.04	0.042	0.05	0.041	0.044	0.044	0.057	0.03	0.034
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		41	50.8	55.7	43.2	46.8	54.4	66.9	30.3	37.9
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0071	<0.005	0.0147	0.0156	0.0071	0.0075	0.0117	0.0237	0.014
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N					0.073							<0.05	<0.05
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013
Phosphorus, total	mg/L					<0.002	<0.002	<0.002	0.0022	<0.002	<0.002	0.0038	0.0082	<0.002
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	0.52	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0511	0.0527	0.029	0.103	0.0491	0.0415	0.0179	0.124	0.0108
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0423	0.0278	0.0146	0.0253	0.0238	0.0217	0.0108	0.007	0.0065
Antimony, total	mg/L			**0.009**		<0.0001	0.00012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Antimony, dissolved	mg/L			**0.009**		<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Arsenic, total	mg/L	**0.005**		**0.005**		0.00017	0.00023	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00052	<0.0001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00015	0.00013	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Barium, total	mg/L			**1**		0.0202	0.0231	0.022	0.022	0.021	0.023	0.023	0.024	0.019
Barium, dissolved	mg/L			**1**		0.0205	0.0225	0.022	0.02	<0.02	0.022	0.021	<0.02	0.0183
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.05	<0.0005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.05	<0.0005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000197	0.000228	0.000177	0.000236	0.000227	0.000219	0.000149	0.000268	0.000285
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000205	0.000213	0.000187	0.000235	0.000234	0.00021	0.000157	0.000284	0.000286
Calcium, total	mg/L					14.8	20.6	22.9	17	18.7	20.7	31.6	12.6	14.5
Calcium, dissolved	mg/L					16.1	19.5	23.4	17.1	17.6	20	30.4	12.1	14
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0003
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001		
Cobalt, total	mg/L			**0.004**	**0.11**	0.00037	0.00045	0.00032	0.00048	0.00041	0.00039	<0.0003	0.00033	0.00013
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00037	0.00039	<0.0003	0.00043	0.00039	0.00036	<0.0003	<0.0003	0.00012
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00473	0.00501	0.0034	0.007	0.005	0.004	0.0022	0.0063	0.00287
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00397	0.00406	0.0027	0.0043	0.0037	0.0027	0.0017	0.0033	0.00233
Iron, total	mg/L	**0.3**		**0.001**		0.016	0.015	<0.03	0.039	<0.03	<0.03	<0.03	0.307	<0.01
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005
Magnesium, total	mg/L					1.96	2.49	2.53	2.12	2.25	2.54	3.02	1.71	1.86
Magnesium, dissolved	mg/L					1.95	2.36	2.59	2.12	2.09	2.39	2.94	1.62	1.83
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00552	0.00648	0.00317	0.00747	0.00598	0.00545	0.00175	0.0118	0.00251
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00505	0.00562	0.00306	0.00585	0.00552	0.00485	0.00123	0.00301	0.00201
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00395	0.00498	0.0051	0.0041	0.0044	0.0053	0.007	0.0037	0.00372
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00396	0.00469	0.0051	0.0039	0.004	0.0048	0.0072	0.0031	0.00346
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00102	0.00122	<0.001	0.0011	0.0011	0.0013	<0.001	0.0012	0.00112
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.001	0.00124	<0.001	0.0011	0.0011	0.0011	<0.001	<0.001	0.00102
Potassium, total	mg/L					0.191	0.19	<2	<2	<2	<2	<2	<2	0.079
Potassium, dissolved	mg/L					0.139	0.192	<2	<2	<2	<2	<2	<2	0.079
Selenium, total	mg/L	**0.001**		**0.002**		0.00105	0.00141	0.0015	0.00119	0.00126	0.00144	0.00193	<0.001	0.00117
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00118	0.00135	0.00158	0.00117	0.00126	0.00139	0.00191	<0.001	0.00109
Silicon, total	mg/L					2.73	3.19	3.33	2.79	2.93	3.19	3.95	2.01	2.13
Silicon, dissolved	mg/L					2.74	3.11	3.33	2.73	2.79	3.05	3.76	1.79	2.07
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001
Sodium, total	mg/L					1.18	1.36	<2	<2	<2	<2	<2	<2	0.882
Sodium, dissolvd	mg/L					1.11	1.31	<2	<2	<2	<2	<2	<2	0.861
Strontium, total	mg/L					0.0937	0.123	0.134	0.107	0.121	0.12	0.161	0.0867	0.103
Strontium, dissolved	mg/L					0.102	0.115	0.135	0.105	0.11	0.121	0.155	0.0827	0.101
Sulfur, total	mg/L					13.8	17.9							
Sulfur, dissolved	mg/L					13.7	16.9							
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Tin, total	mg/L					<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Tin, dissolved	mg/L					0.00016	<0.0001	0.00064	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001
Titanium, total	mg/L					<0.0003	<0.0003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.0003	<0.0003	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000013	0.000017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000011	0.000014	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001
Vanadium, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0125	0.0139	0.0095	0.0126	0.0131	0.0106	0.0082	0.0201	0.0175
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0125	0.0155	0.0112	0.014	0.012	0.011	0.0064	0.0201	0.0179

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		GSC05	GSC05	GSC05	GSC05	GSC05	GSC05	GSC05	GSC05	GSC05
Sampling Date						26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	11-May-16	29-May-16	8-Jun-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			6.7	7.8	7.38	*6.49*	7.6	7.88	8.63	7.79
Conductivity	uS/cm						101.7		67	89.7	89	87	81.9	69.1
Specific Conductivity	uS/cm						166.8		113	143.1	153.3	160	147.2	127.7
Dissolved Oxygen	mg/L						10.96		2.24	11.76	11.43	14.8	12.64	13.03
Dissolved Oxygen	%						99.7		93	109.2	100.3	104.1	106.4	
ORP	mV									287.2	273.6	86.9	255.5	235.9
Turbidity	NTU						0.65	0	0	0	0	0	0	0.18
TDS	mg/L								0.073					
Temperature	degC						4.6	3	3.86	5.5	3.1	1.06	1.8	1.2
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.42	8.08	7.26	7.15	7.27	7.12	7.51	7.24	7.06
Specific Conductance	uS/cm					128	151	134	116	141	147	163	145	129
Total Hardness	mg/L					52.4	62.6	54.7	45.4	55.6	63	71.8	61.7	55.5
Total dissolved solids	mg/L					94	117	94	65	95	86	109	106	79
Total suspended solids	mg/L					<3	<3	<3	3.4	4.2	3.5	<3	<3	<3
Turbidity	NTU					<0.1	<0.1	0.12	0.15	<0.1	0.38	<0.1	0.13	0.1
Major Ions														
Total alkalinity	mg/L as Ca CO3					10.3	11.1	10.2	8.8	8.7	9.8	11.8	9.6	8.4
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					10.3	11.1	10.2	8.8	8.7	9.8	11.8	9.6	8.4
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					2.3	2.8	1.4	2.3	2.1	1.6	1.4	2.3	2.2
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.04	0.041	0.037	0.031	0.036	0.035	0.034	0.034	0.031
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		47.8	57.7	50.9	41.1	52.1	55.3	60.6	54.1	48.2
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0095	<0.005	0.008	0.0112	0.0091	0.0073	0.0227	0.0187	0.0241
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N								<0.03					
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013
Phosphorus, total	mg/L					<0.3	<0.002	<0.002	0.003	<0.002	<0.002	<0.002	<0.002	<0.002
Organics														
Total Organic Carbon	mg/L					<0.5	0.86	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	0.75	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0091	0.0148	0.0079	0.0429	0.0111	0.0115	0.0063	0.0075	0.0146
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0063	0.0074	0.0083	0.0072	0.008	0.0079	0.0069	<0.005	0.0064
Antimony, total	mg/L			**0.009**		<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0001	0.00012	<0.0001	0.00022	0.00011	<0.0001	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.0203	0.023	0.0219	0.0195	0.0216	0.0226	0.023	0.023	0.02
Barium, dissolved	mg/L			**1**		0.0206	0.0226	0.0218	0.0186	0.021	0.0222	0.023	0.021	<0.02
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000273	0.000236	0.000215	0.00025	0.000236	0.000234	0.000227	0.000253	0.000282
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000271	0.000237	0.000233	0.000257	0.00024	0.000217	0.00023	0.000241	0.000295
Calcium, total	mg/L					17.4	21.5	18.6	15.3	19.2	21	23.8	20.9	18.1
Calcium, dissolved	mg/L					17.3	20.8	18.1	15	18.2	20.9	24	20.5	18.2
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	<0.0001	0.00021	0.00014	<0.0001	<0.0003	<0.0003	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	<0.0001	0.00015	0.00012	<0.0001	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00181	0.00221	0.0018	0.00451	0.00279	0.00186	0.0021	0.0025	0.0033
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00171	0.00155	0.00178	0.00264	0.00239	0.00167	0.0018	0.0021	0.0029
Iron, total	mg/L	**0.3**		**0.001**		<0.01	0.02	<0.01	0.088	<0.01	<0.01	<0.03	<0.03	<0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	0.000067	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					2.2	2.64	2.31	1.91	2.6	2.7	2.91	2.7	2.54
Magnesium, dissolved	mg/L					2.23	2.62	2.3	1.96	2.45	2.62	2.92	2.55	2.43
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00139	0.00145	0.000997	0.00536	0.00231	0.00179	0.0008	0.00115	0.00325
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00129	0.000986	0.0012	0.00245	0.00223	0.00145	0.00092	0.00131	0.00337
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00403	0.00518	0.00554	0.00401	0.00442	0.00547	0.0053	0.0052	0.0042
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00403	0.00479	0.0052	0.00383	0.00437	0.00499	0.0051	0.0047	0.0037
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00108	0.00107	0.00091	0.00113	0.00121	0.001	<0.001	0.0011	0.0011
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00108	0.00102	0.00093	0.00116	0.00109	0.00104	0.001	0.001	0.0012
Potassium, total	mg/L					0.107	0.118	0.102	0.101	0.106	0.098	<2	<2	<2
Potassium, dissolved	mg/L					0.107	0.112	0.114	0.095	0.103	0.112	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00142	0.00157	0.00155	0.00112	0.00143	0.00161	0.00184	0.00168	0.00136
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00149	0.00173	0.00179	0.00132	0.0015	0.00163	0.00195	0.00158	0.00138
Silicon, total	mg/L					2.4	2.7	2.48	2.22	2.53	2.72	2.6	2.63	2.32
Silicon, dissolved	mg/L					2.44	2.72	2.54	2.12	2.44	2.66	2.57	2.54	2.28
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					1.04	1.3	1.1	0.923	1.16	1.26	<2	<2	<2
Sodium, dissolvd	mg/L					1.05	1.26	1.11	0.929	1.1	1.22	<2	<2	<2
Strontium, total	mg/L					0.124	0.136	0.114	0.102	0.124	0.128	0.151	0.125	0.124
Strontium, dissolved	mg/L					0.124	0.139	0.112	0.106	0.118	0.121	0.15	0.119	0.119
Sulfur, total	mg/L								13.3	17.4	18.6			
Sulfur, dissolved	mg/L								13.1	17.5	18.2			
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0001	0.00016	0.00014	0.00012	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	<0.01	<0.01	0.00063	<0.0003	<0.0003	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.0003	<0.0003	<0.0003	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	0.000014	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0136	0.012	0.01	0.0156	0.0146	0.0117	0.0115	0.015	0.0174
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.014	0.0116	0.0119	0.0157	0.015	0.0125	0.013	0.0135	0.0186

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		GSC05	GSC05	GSC05	GSC05	GSC05	GSC05	GSC07	GSC07	GSC07
Sampling Date						20-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	28-Sep-16	16-Nov-16	29-Jul-14	26-Aug-14	16-Sep-14
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.88	7.58	*6.26*	7.78	7.88	7.42	7.89		7.04
Conductivity	uS/cm					67.6	67.4	68.8	77.8	89.2	93	54		90.3
Specific Conductivity	uS/cm					188	121.2	122.6	132.1	149.9	172			161.5
Dissolved Oxygen	mg/L					12.82	11.84	12.09	12.21	12.64	12.31	10.58		11.46
Dissolved Oxygen	%					110.2	99.9	101.9	107.7	112.4	103.2	74		99.9
ORP	mV					194.9	227.9		298					
Turbidity	NTU					0.54	0.36	0.8	0.14	0.61	0	0		0.02
TDS	mg/L													
Temperature	degC					2.6	1.8	2.1	3.5	3.8	1	0.75		2
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.41	8.69	7.04	6.93	7.28	7.39	7.49	6.88	8.16
Specific Conductance	uS/cm					124	137	120	125	140	171	99.9	121	149
Total Hardness	mg/L					52.8	54.3	50	49.4	60.7	74	41.5	49.1	61.3
Total dissolved solids	mg/L					92	94	85	78	114	116	72	81	127
Total suspended solids	mg/L					<3	<3	<3	<3	<3	15.3	6.3	<3	<3
Turbidity	NTU					0.23	0.49	0.16	0.19	0.23	0.11	0.29	<0.1	<0.1
Major Ions														
Total alkalinity	mg/L as Ca CO3					7.9	8.8	7.5	7.9	9.2	11.9	5.9	7.5	9.6
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					7.9	8.8	7.5	7.9	9.2	11.9	5.9	7.5	9.6
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<2	<2	<2
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<2	<2	<2
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.5	<1	1.4	1.3	2.3	1.5	1.5	2.6	2.7
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.032	0.032	0.032	0.034	0.034	0.04	0.038	0.045	0.049
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		46	47.1	45.4	46.3	56.4	66	38.6	46.7	56.1
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0195	0.0178	0.0178	0.0135	0.0099	0.0169	0.0319	0.0227	0.0213
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N											<0.05		
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	0.0011	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					<0.002	<0.002	0.0057	0.0024	0.0023	0.0043	<0.002	<0.3	<0.002
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	0.54	<0.5	<0.5	<0.5	<0.5	0.75
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0114	0.0205	0.0154	0.0321	0.0101	0.0064	0.0196	0.0103	0.01
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0084	0.0065	0.0073	0.0073	0.0075	<0.005	0.015	0.009	0.0076
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	0.0001	0.00012
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	0.0001	0.00012
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Barium, total	mg/L			**1**		<0.02	0.02	<0.02	<0.02	0.022	0.023	0.0168	0.0179	0.019
Barium, dissolved	mg/L			**1**		<0.02	<0.02	<0.02	<0.02	0.023	0.021	0.0166	0.018	0.019
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	0.01
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.01	<0.01	<0.01
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000276	0.000263	0.000291	0.000296	0.000248	0.000196	0.000415	0.000313	0.000235
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000289	0.000266	0.000273	0.000272	0.000238	0.000193	0.000413	0.000334	0.000247
Calcium, total	mg/L					17.5	17.1	16.7	16.6	20.7	25.7	14.2	16	21.9
Calcium, dissolved	mg/L					17.4	18	16.4	16.3	20.2	25	14	16.5	20.8
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0001	<0.0001	0.00013
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.00021	<0.0001	<0.0001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	0.0011	<0.001	<0.001		<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00039	0.00031	0.00025
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00037	0.0003	0.00025
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0035	0.0031	0.0035	0.004	0.0025	0.0014	0.0096	0.00671	0.00538
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0029	0.0025	0.0028	0.0026	0.0018	0.0012	0.00892	0.00639	0.00484
Iron, total	mg/L	**0.3**		**0.001**		<0.03	<0.03	<0.03	0.07	<0.03	<0.03	<0.01	<0.01	<0.01
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L					2.34	2.29	2.26	2.14	2.66	2.92	1.62	1.95	2.31
Magnesium, dissolved	mg/L					2.27	2.27	2.2	2.1	2.52	2.83	1.6	1.9	2.25
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00284	0.00286	0.00324	0.00552	0.00217	0.00028	0.00669	0.00386	0.00187
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00289	0.00244	0.00282	0.00331	0.00202	0.00019	0.00644	0.00383	0.00191
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001	<0.00001
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.00001	<0.00001	<0.00001
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0042	0.0043	0.0039	0.0041	0.0053	0.0069	0.0022	0.00247	0.00317
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0039	0.0043	0.0037	0.0037	0.0048	0.0068	0.0021	0.00252	0.00297
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0011	0.001	0.0011	0.0012	0.0011	<0.001	0.00155	0.00154	0.00144
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0012	0.0011	0.0011	0.0011	0.001	0.0011	0.00153	0.00158	0.00141
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	0.078	0.088	0.086
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	0.075	0.09	0.08
Selenium, total	mg/L	**0.001**		**0.002**		0.00127	0.00135	0.00124	0.00127	0.00163	0.00213	0.00056	0.00067	0.0008
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00129	0.00119	0.00117	0.00128	0.00147	0.00219	0.0006	0.0007	0.00086
Silicon, total	mg/L					2.31	2.26	2.26	2.26	2.64	2.96	2.01	2.17	2.48
Silicon, dissolved	mg/L					2.27	2.3	2.24	2.24	2.56	2.81	1.99	2.15	2.42
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	0.699	0.841	0.992
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	0.698	0.829	0.986
Strontium, total	mg/L					0.118	0.114	0.12	0.114	0.126	0.151	0.0968	0.116	0.155
Strontium, dissolved	mg/L					0.115	0.113	0.117	0.112	0.128	0.144	0.0937	0.12	0.149
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0001	<0.0001
Titanium, total	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00001	<0.00001	<0.00001
Vanadium, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0166	0.0148	0.0177	0.0167	0.0124	0.0099	0.0284	0.0204	0.0151
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0177	0.0152	0.017	0.0164	0.0123	0.0078	0.0299	0.0224	0.0149

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		GSC07	GSC07	GSC07	GSC07	GSC07	GSC07	GSC07	GSC07
Sampling Date						20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	23-Jun-16	20-Jul-16	28-Sep-16	16-Nov-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.2	*6.36*	7.65	7.42	7.04	7.77	7.84	7.39
Conductivity	uS/cm						67	94.7	98.7	71.8	82.2	102.8	113.7
Specific Conductivity	uS/cm						124	161.7	180.3	135.5	147.6	178.6	211.7
Dissolved Oxygen	mg/L						12.08	12.56	11.86	12.07	12.34	12.34	12
Dissolved Oxygen	%						85.3	114.4	101.8	101.1	107	109.7	102.9
ORP	mV							267.1	266.4	245.1	313.9		
Turbidity	NTU					0.5	0	0	0	2.49	0.72	0.3	0
TDS	mg/L						0.081						
Temperature	degC					1.2	1.12	3.2	1.3	0.5	1.8	2.8	0.8
pH	pH units	**6.5 - 9**		**6.5 - 9**		6.98	6.93	7.14	7.05	6.99	6.82	7.21	7.38
Specific Conductance	uS/cm					150	123	160	168	143	140	174	209
Total Hardness	mg/L					61.4	50.5	66.3	74.9	59.4	54.1	75.5	101
Total dissolved solids	mg/L					106	77	107	106	90	90	133	139
Total suspended solids	mg/L					<3	<3	<3	<3	<3	<3	<3	<3
Turbidity	NTU					0.18	0.34	<0.1	<0.1	1.39	0.19	0.22	0.15
Major Ions													
Total alkalinity	mg/L as Ca CO3					9.7	6.9	6.8	8.1	6.2	6.5	7.7	10.9
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					9.7	6.9	6.8	8.1	6.2	6.5	7.7	10.9
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.5	2.8	2.2	1.7	2.1	1.5	2.3	1.5
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.046	0.033	0.039	0.04	0.032	0.037	0.039	0.043
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		59.5	46.4	61.6	67.9	54.4	53.8	70.5	86
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0301	0.0283	0.0259	0.0311	0.0366	0.0257	0.0254	0.0291
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Nitrogen, total	mg/L as N						<0.03						
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.0038	0.0035
Organics													
Total Organic Carbon	mg/L					<0.5	0.74	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					0.86	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0104	0.0287	0.0265	0.0119	0.0616	0.0356	0.0196	0.006
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0104	0.0244	0.0133	0.0102	0.0099	0.015	0.0317	<0.005
Antimony, total	mg/L			**0.009**		0.00012	<0.0001	0.00012	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		0.00011	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00011	<0.0001	0.00015	0.00011	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00012	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.0195	0.0181	0.0193	0.0196	<0.02	<0.02	<0.02	0.022
Barium, dissolved	mg/L			**1**		0.0182	0.0182	0.0197	0.0197	<0.02	<0.02	<0.02	0.023
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000275	0.000334	0.000332	0.00027	0.000367	0.000327	0.000319	0.000277
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000347	0.000319	0.000338	0.000284	0.000369	0.000328	0.000318	0.000266
Calcium, total	mg/L					22.6	16.5	22	23.7	19.7	19.3	24.9	34.9
Calcium, dissolved	mg/L					20.7	16.9	21.9	25.6	19.8	18.1	25.3	34.4
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.0001	<0.0001	<0.0001	0.00011	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	0.0014	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00028	0.0006	0.00043	0.00035	0.00057	0.00064	0.00046	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00027	0.00061	0.00042	0.00035	0.00052	0.0006	0.00045	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00624	0.0139	0.0101	0.00808	0.0128	0.0134	0.0097	0.0032
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00587	0.0133	0.00927	0.00735	0.0109	0.0117	0.0082	0.003
Iron, total	mg/L	**0.3**		**0.001**		<0.01	<0.01	0.013	<0.01	0.095	<0.03	<0.03	<0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					2.49	2.02	2.84	2.8	2.46	2.33	2.98	3.45
Magnesium, dissolved	mg/L					2.36	2.01	2.83	2.65	2.41	2.16	3.02	3.64
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00215	0.00819	0.00612	0.00321	0.00944	0.00899	0.00563	0.00034
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00235	0.00821	0.00607	0.00326	0.00858	0.00826	0.00685	0.00072
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.00343	0.00245	0.00263	0.00263	0.0025	0.0027	0.0032	0.0023
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.00291	0.00239	0.00255	0.00262	0.0024	0.0025	0.0029	0.0022
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00151	0.00163	0.00168	0.00167	0.0017	0.0018	0.0021	0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00153	0.00163	0.00166	0.00167	0.0018	0.0018	0.002	0.0012
Potassium, total	mg/L					0.097	0.084	0.104	0.093	<2	<2	<2	<2
Potassium, dissolved	mg/L					0.113	0.088	0.1	0.086	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.0009	0.000693	0.000819	0.000983	0.000817	0.000765	0.000997	0.00111
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00095	0.000737	0.000803	0.000998	0.000696	0.000767	0.00104	0.00118
Silicon, total	mg/L					2.42	2.1	2.31	2.38	2.32	2.28	2.5	2.78
Silicon, dissolved	mg/L					2.32	2.13	2.32	2.35	2.24	2.18	2.56	2.86
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					1.03	0.815	1.02	1.06	<2	<2	<2	<2
Sodium, dissolvd	mg/L					1.01	0.82	1.02	1.08	<2	<2	<2	<2
Strontium, total	mg/L					0.154	0.0866	0.129	0.131	0.111	0.102	0.119	0.234
Strontium, dissolved	mg/L					0.14	0.0878	0.128	0.136	0.109	0.0944	0.127	0.257
Sulfur, total	mg/L						15.3	20.4	21.7				
Sulfur, dissolved	mg/L						15.3	19.8	20.9				
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					0.00029	0.00016	<0.0001	0.00014	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	<0.0003	<0.0003	<0.0003	<0.01	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.0003	<0.0003	<0.0003	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0185	0.0233	0.0207	0.0171	0.0235	0.0208	0.0197	0.0163
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.019	0.0242	0.021	0.0168	0.0245	0.0217	0.0192	0.0168

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		GSC09	GSC09	GSC09	GSC09	GSC09	GSC09	GSC09	GSC09
Sampling Date						16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	28-Jun-16	20-Jul-16	28-Sep-16
		Long Term	Short Term	Long Term	Short Term		1	1	1	1	1	1	
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		*5.47*	6.9	*5.64*	*5.48*	*6.41*	*5.2*	6.91	7.52
Conductivity	uS/cm					93.3		72	90.6	107.8	78	85.9	91.5
Specific Conductivity	uS/cm					165		131	155	194.6	144.1	151.9	158.9
Dissolved Oxygen	mg/L					11.27		12.09	12.14	11.82	12.14	12.01	12.3
Dissolved Oxygen	%					99		86.6	109.3	103	101.8	105.7	109.6
ORP	mV								312.5	272.5		323.4	
Turbidity	NTU					0.39	0	0.07	0	0.04	3.81	0.09	0.18
TDS	mg/L							0.085					
Temperature	degC					2.2	1.4	1.69	3.2	1.7	0.9	2.3	2.8
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.76	*6.19*	*5.73*	*5.84*	*5.81*	*5.71*	*5.77*	6.26
Specific Conductance	uS/cm					148	162	134	155	185	140	145	153
Total Hardness	mg/L					59.5	63.6	50.6	58.8	77	56.3	53.7	62
Total dissolved solids	mg/L					120	115	86	104	120	105	99	122
Total suspended solids	mg/L					<3	<3	<3	3.9	<3	<3	<3	<3
Turbidity	NTU					<0.1	0.12	<0.1	<0.1	<0.1	0.15	0.14	<0.1
Major Ions													
Total alkalinity	mg/L as Ca CO3					<2	<2	2.2	1.1	1.3	<1	1.5	<1
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	2.2	1.1	1.3	<1	1.5	<1
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					3.9	1.9	3.6	2.4	2.9	2.2	2	2.1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.026	0.023	0.021	0.023	0.021	0.022	0.024	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		63.8	70.8	54.4	63.9	81.4	59.9	59.6	66.9
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0216	0.0253	0.0211	0.0208	0.0231	0.0336	0.0249	0.0324
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N							<0.03					
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					<0.002	<0.002	<0.002	<0.002	<0.002	0.0023	<0.002	<0.002
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.125	0.104	0.117	0.0985	0.108	0.126	0.109	0.0968
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.115	0.0981	0.115	0.0905	0.093	0.116	0.097	0.0752
Antimony, total	mg/L			**0.009**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.015	0.0152	0.015	0.016	0.0154	<0.02	<0.02	<0.02
Barium, dissolved	mg/L			**1**		0.0152	0.0146	0.015	0.0159	0.0154	<0.02	<0.02	<0.02
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		0.018	0.016	0.013	0.014	0.019	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		0.013	0.012	0.012	0.012	0.015	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0009	0.000959	0.000761	0.000858	0.000844	0.000836	0.000891	0.00088
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000915	***0.00105***	0.00085	0.000802	0.000869	0.000856	0.000874	0.000886
Calcium, total	mg/L					19.8	21.6	16.7	20.4	24.8	19.1	18.5	21.1
Calcium, dissolved	mg/L					19.5	20.6	16.7	18.9	25.3	18.5	17.6	20.3
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00054	0.00049	0.00049	0.0005	0.00049	0.00049	0.00047	0.00046
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00052	0.00047	0.00047	0.00047	0.00046	0.00046	0.00048	0.00039
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0113	0.0108	0.00932	0.00936	0.00977	0.0097	0.0095	0.011
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0109	0.00998	0.00887	0.00917	0.00914	0.009	0.0094	0.0092
Iron, total	mg/L	**0.3**		**0.001**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.03	<0.03	<0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.01	<0.01	0.014	<0.01	<0.01	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					2.71	3.06	2.21	2.95	3.44	2.52	2.44	2.86
Magnesium, dissolved	mg/L					2.64	2.96	2.14	2.8	3.32	2.45	2.33	2.75
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0253	0.0237	0.0228	0.0242	0.024	0.0223	0.0235	0.0241
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0241	0.0229	0.023	0.0234	0.0232	0.0216	0.0229	0.0204
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.000074	0.000131	0.00008	0.000122	0.000102	<0.001	<0.001	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.000054	0.000085	0.000074	0.000106	0.000095	<0.001	<0.001	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00252	0.00242	0.00206	0.00228	0.00243	0.0021	0.0021	0.0025
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.00239	0.00235	0.00207	0.00215	0.00241	0.002	0.0021	0.002
Potassium, total	mg/L					0.152	0.157	0.143	0.146	0.162	<2	<2	<2
Potassium, dissolved	mg/L					0.142	0.18	0.135	0.148	0.151	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00076	0.00085	0.000708	0.000729	0.000894	0.000743	0.000669	0.00069
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00078	0.00087	0.000628	0.000691	0.000925	0.000689	0.000686	0.000676
Silicon, total	mg/L					3.36	3.22	2.97	3.04	3.19	3.07	3.03	3.1
Silicon, dissolved	mg/L					3.29	3.06	2.93	2.92	3.07	3	2.95	3.03
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					1.28	1.38	1.21	1.26	1.66	<2	<2	<2
Sodium, dissolvd	mg/L					1.27	1.36	1.17	1.22	1.51	<2	<2	<2
Strontium, total	mg/L					0.2	0.214	0.17	0.189	0.237	0.204	0.196	0.211
Strontium, dissolved	mg/L					0.195	0.206	0.168	0.177	0.237	0.195	0.187	0.214
Sulfur, total	mg/L							18.2	21.9	26			
Sulfur, dissolved	mg/L							17.7	21	24.8			
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0001	<0.0001	<0.0001	0.00018	0.00047	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	<0.01	<0.0003	<0.0003	<0.0003	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.0003	<0.0003	<0.0003	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0622	0.0594	0.0554	0.0556	0.0526	0.0536	0.0588	0.056
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0642	0.0643	0.0562	0.0555	0.0534	0.058	0.0596	0.0607

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		OC04	OC04	OC04	OC04	OC04	OC04	OC04	OC04	OC04
Sampling Date						26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	11-May-16	29-May-16	8-Jun-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			7.14	7.75	7.41	7.7	7.87	7.72	8.47	8.08
Conductivity	uS/cm						51.6	120	37	52.8	64.5	111	100	59.7
Specific Conductivity	uS/cm						81.7	219	60	81.7	117.7	206	180.7	106.7
Dissolved Oxygen	mg/L						10.94	11.74	11.36	11.8			12.62	12.33
Dissolved Oxygen	%						101.2	83.6	89	111.1			104.8	104.4
ORP	mV									276.5	249.5	102.3	293.1	267.3
Turbidity	NTU						41.3		171	34.4	12.1	0.46	0.98	5.22
TDS	mg/L								0.039					
Temperature	degC						5.7	1.41	5	6.5	1.4	0.93	1.7	2
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.57	8.19	7.99	8.36	7.74	7.75	8.09	7.94	7.83
Specific Conductance	uS/cm					58.3	75.9	214	68.2	81.1	112	208	180	107
Total Hardness	mg/L					26.7	34.9	96	29.3	36.7	52.3	111	93.3	51
Total dissolved solids	mg/L					38	69	132	51	52	63	137	113	60
Total suspended solids	mg/L					14.4	30.9	4	247	31.5	8.4	<3	<3	5.6
Turbidity	NTU					11.6	17.5	3.04	112	16.8	9.28	0.47	0.63	4.08
Major Ions														
Total alkalinity	mg/L as Ca CO3					20	25.5	63.9	29.1	27.5	37.5	62.9	55.3	37.7
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					20	25.5	63.9	29.1	27.5	37.5	62.9	55.3	37.7
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.9	2	1.5	<1	1.8	1.3	<1	1.8	1.4
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		7.98	11.7	51.2	7.23	13.4	19.8	42.2	34.1	14.9
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0068	<0.005	0.0113	0.0083	<0.005	0.0369	0.0348	0.0322	0.0314
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N								<0.06					
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					<0.001	<0.001	0.001	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					<0.3	0.0295	<0.002	0.264	0.0222	0.0095	<0.002	<0.002	0.0054
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	0.55	<0.5	<0.5	<0.5	0.76	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.771	1.13	0.086	3.96	0.804	0.395	0.0166	0.0189	0.163
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0503	0.034	0.0072	0.0623	0.0487	0.0306	0.0084	0.0082	0.021
Antimony, total	mg/L			**0.009**		0.00014	0.00019	0.00022	0.00048	0.00026	0.0002	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0001	0.00011	0.00021	0.0001	0.00012	0.00014	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00045	0.00069	0.00021	0.00233	0.00066	0.00034	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00013	0.00016	0.00015	0.00016	0.00016	0.00014	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.0584	0.068	0.0666	0.127	0.0637	0.0704	0.05	0.054	0.056
Barium, dissolved	mg/L			**1**		0.0421	0.0408	0.0625	0.039	0.0447	0.0628	0.049	0.051	0.05
Beryllium, total	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000035	0.00004	0.000049	0.000176	0.0000487	0.0000795	0.000038	0.0000421	0.0000271
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000011	0.000019	0.00004	0.0000191	0.0000166	0.0000234	0.000047	0.000038	0.000021
Calcium, total	mg/L					9.79	12.4	34.4	12.2	13	17.7	37.9	32.3	17.6
Calcium, dissolved	mg/L					9.43	12.1	32.7	10.4	12.6	17.9	38.9	32.8	17.7
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.00057	0.001	0.00016	0.00301	0.00073	0.00042	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00039	0.00065	<0.0001	0.00256	0.00059	0.00025	<0.0003	<0.0003	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.00162	0.00268	<0.0005	0.0103	0.00247	0.00149	<0.001	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.0002	0.00043	<0.0002	0.00034	0.00026	0.00021	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.795	1.3	0.101	5.37	1.09	0.476	<0.03	<0.03	0.158
Iron, dissolved	mg/L	**0.3**		**0.35**		0.036	0.017	<0.01	0.054	0.028	0.019	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00079	0.00122	0.000121	0.00498	0.00129	0.000404	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	0.000073	<0.00005	<0.00005	0.000089	<0.00005	<0.00005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					1.04	1.57	3.68	2.41	1.61	2	3.23	2.81	1.73
Magnesium, dissolved	mg/L					0.772	1.13	3.47	0.815	1.28	1.84	3.27	2.74	1.63
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0329	0.0509	0.00504	0.233	0.0469	0.0202	0.00141	0.00175	0.00803
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00505	0.00519	0.00108	0.00927	0.00365	0.00344	0.00084	0.00108	0.00108
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	0.0000052	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.000233	0.000409	0.000812	0.000343	0.000322	0.000486	<0.001	<0.001	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.000208	0.000296	0.000788	0.000203	0.000304	0.000402	<0.001	<0.001	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		0.00082	0.00133	0.00087	0.00445	0.00128	0.00096	<0.001	<0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.0005	<0.0005	0.00071	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001
Potassium, total	mg/L					0.311	0.409	0.197	1.13	0.32	0.236	<2	<2	<2
Potassium, dissolved	mg/L					0.078	0.13	0.164	0.091	0.101	0.121	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00016	0.0002	0.0022	0.000235	0.000281	0.000541	0.00253	0.00179	0.000726
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00015	0.00021	0.00227	0.000177	0.000248	0.000514	0.00277	0.00177	0.00077
Silicon, total	mg/L					1.62	2.18	1.07	7.02	1.62	1.13	0.943	0.866	0.917
Silicon, dissolved	mg/L					0.34	0.388	0.918	0.366	0.428	0.562	0.913	0.828	0.625
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	0.000018	<0.00001	0.000087	0.000018	<0.00001	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					0.273	0.382	0.792	0.645	0.366	0.502	<2	<2	<2
Sodium, dissolvd	mg/L					0.195	0.32	0.741	0.197	0.296	0.475	<2	<2	<2
Strontium, total	mg/L					0.0525	0.0672	0.179	0.059	0.0666	0.0926	0.155	0.145	0.0924
Strontium, dissolved	mg/L					0.0509	0.064	0.169	0.0505	0.065	0.0952	0.157	0.141	0.0903
Sulfur, total	mg/L								2.15	4.32	6.14			
Sulfur, dissolved	mg/L								2.3	4.18	6.19			
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	0.000031	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0001	<0.0001	<0.0001	0.00032	0.00018	0.00018	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.032	0.017	<0.01	0.0877	0.0126	0.00658	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	0.00054	0.00041	0.00035	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.000054	0.000082	0.000241	0.000128	0.000085	0.000104	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.000039	0.000058	0.000235	0.000035	0.000067	0.000091	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					0.0018	0.0025	<0.001	0.00785	0.00174	0.0011	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0048	0.0073	0.0051	0.0241	0.0061	0.007	<0.005	<0.005	<0.005
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.001	0.0011	0.0034	<0.001	0.0012	0.0018	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		OC04	OC04	OC04	OC04	OC04	OC04	OC05	OC05
Sampling Date						20-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	29-Sep-16	16-Nov-16	14-Apr-16	11-May-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.68	7.54	7.48	7.51	7.85	7.41	8.3	8
Conductivity	uS/cm					52.1	52.7	52.7	41.9	119.1	179.2	390	263
Specific Conductivity	uS/cm					87.2	91.2	85.2	70	191.7	343.7	696	421
Dissolved Oxygen	mg/L					12.41	11.62	11.48	12.22	12.14	11.8	13.42	
Dissolved Oxygen	%					108.7	100	103.5	107.8	110.8	94.7	97.4	
ORP	mV					154.3	238.4		316.9			9.6	13.6
Turbidity	NTU					19.65	9.5	15.39	25	2.85	0	1.56	3
TDS	mg/L												
Temperature	degC					3.9	2.9	5	3.9	5.2	-0.1	2.03	5.27
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.83	7.87	7.62	7.44	7.86	8.13	8.23	8.24
Specific Conductance	uS/cm					91.4	98.1	83.9	67	195	338	715	428
Total Hardness	mg/L					44.8	46.1	39.6	29.9	92	179	412	235
Total dissolved solids	mg/L					67	58	54	47	127	220	481	283
Total suspended solids	mg/L					15.6	<3	7	14.5	40.6	<3	<3	<3
Turbidity	NTU					10.3	6.83	6.74	11.2	1.23	0.38	1.53	1.46
Major Ions													
Total alkalinity	mg/L as Ca CO3					31.3	32.1	27.8	23.8	52.1	77.8	135	96.9
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					31.3	32.1	27.8	23.8	52.1	77.8	135	96.9
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.3	1.9	1.8	1.2	1.8	1.2	<1	<1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.17	0.084
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25	<0.05
Sulfate	mg/L			**EQ23**		14.3	15.7	13.5	10.2	43.6	100	265	126
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0242	0.025	0.0151	0.0068	0.0129	0.0142	0.038	0.0599
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	0.0011	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					0.0121	0.0054	0.013	0.0159	0.0025	0.0044	<0.002	0.0047
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	0.93	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.549	0.335	0.551	0.69	0.0674	0.0137	0.012	0.0307
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.045	0.0413	0.0295	0.0531	0.0109	<0.005	<0.005	0.0054
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.061	0.057	0.061	0.058	0.077	0.068	0.038	0.044
Barium, dissolved	mg/L			**1**		0.048	0.048	0.044	0.04	0.069	0.063	0.038	0.042
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000056
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000359	0.0000226	0.0000254	0.0000263	0.0000408	0.0000481	0.000241	0.000122
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000019	<0.000017	<0.000017	<0.000017	0.000029	0.000047	0.000211	0.000103
Calcium, total	mg/L					15.5	15.7	14.3	10.6	33.1	64.4	125	74.4
Calcium, dissolved	mg/L					15.5	15.9	13.7	10.4	31.7	61	125	74.8
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	0.0011	0.0011	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	0.00037	<0.0003	<0.0003	0.00107	0.00045
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00101	0.0004
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0013	<0.001	0.0012	0.0017	<0.001	<0.001	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.573	0.287	0.542	0.779	0.062	<0.03	0.34	0.193
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.108	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00056	<0.0005	<0.0005	0.00054	<0.0005	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					1.67	1.61	1.53	1.21	3.4	6.76	24.2	11.9
Magnesium, dissolved	mg/L					1.49	1.53	1.31	0.95	3.11	6.44	23.9	11.8
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0243	0.011	0.0204	0.0272	0.00425	0.00118	0.0865	0.0343
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00197	0.00162	0.00168	0.00476	0.00107	0.00048	0.0794	0.0312
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	0.003	0.0026
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	<0.001	<0.001	0.0011	0.0029	0.0023
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0193	0.008
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0193	0.0076
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.000477	0.000566	0.00047	0.000199	0.00117	0.0024	0.0105	0.0057
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000485	0.000517	0.000398	0.000225	0.00108	0.00253	0.0117	0.00584
Silicon, total	mg/L					1.54	1.09	1.59	1.88	0.914	1.27	2.87	2.1
Silicon, dissolved	mg/L					0.563	0.546	0.474	0.375	0.78	1.14	2.78	2.02
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	2.4	<2
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	2.3	<2
Strontium, total	mg/L					0.0829	0.084	0.0803	0.0588	0.164	0.285	0.654	0.444
Strontium, dissolved	mg/L					0.0821	0.0824	0.076	0.057	0.161	0.265	0.644	0.436
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.012	<0.01	0.012	0.014	<0.01	<0.01	0.023	0.013
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.021	0.013
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	0.00021	0.00045	0.00156	0.00068
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00043	0.00145	0.00062
Vanadium, total	mg/L					0.00119	0.00074	0.00118	0.00133	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0378	0.0151
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0332	0.0123

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		OC05	OC05	OC05	OC05	OC05	OC05	OC05	OC05
Sampling Date						29-May-16	8-Jun-16	20-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	29-Sep-16	16-Nov-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.67	*9.45*	7.77	7.67	7.61	7.61	7.89	8.03
Conductivity	uS/cm					268	161.6	99.1	97.1	81.9	63.5	185.7	323
Specific Conductivity	uS/cm					434.5	257.9	149	156.4	120.2	98.9	291.7	616.1
Dissolved Oxygen	mg/L					12.26	11.88	11.95	11.37	11.09	12.13	12.52	13.59
Dissolved Oxygen	%					103.8	102.8	108.7	98.3	102.2	107	109.7	102.8
ORP	mV					287.5	175.9	102.2	94.6		306.3		
Turbidity	NTU					14.34	6.48	34.7	32.1	76.9	26.6	8.46	1.59
TDS	mg/L												
Temperature	degC					4.9	4.9	7.4	5.1	8.3	6.3	6	0
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.2	7.96	7.84	8.2	7.74	7.53	7.98	8.24
Specific Conductance	uS/cm					428	260	164	165	120	94.3	293	621
Total Hardness	mg/L					233	137	79.6	76.9	56	41.3	148	341
Total dissolved solids	mg/L					279	146	111	98	90	64	176	424
Total suspended solids	mg/L					8.3	7	29.3	15.4	87.8	15.4	4.1	<3
Turbidity	NTU					5.33	2.41	20.7	22.3	53.9	12.3	2.27	0.9
Major Ions													
Total alkalinity	mg/L as Ca CO3					98.6	61.1	43.8	44	35.8	29.3	70.8	128
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					98.6	61.1	43.8	44	35.8	29.3	70.8	128
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.7	1.7	1.6	1.1	1.8	1	2	1.2
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.081	0.043	0.026	0.023	<0.02	<0.02	0.046	0.124
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		128	67.3	36.3	34.9	23.8	17.7	76.9	210
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0193	0.0127	0.0211	0.0169	0.017	0.0064	0.0143	0.034
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					0.0012	<0.001	0.0011	<0.001	0.0015	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					0.0097	0.012	0.0293	0.0186	0.103	0.0233	0.0106	0.0059
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	0.62	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0584	0.14	1.06	1.15	2.05	0.78	0.224	0.0313
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.005	0.0093	0.0409	0.0771	0.0257	0.0379	0.0082	<0.005
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	0.00086	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0005	0.00058	0.00106	0.00052	0.00315	0.00062	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.053	0.057	0.093	0.106	0.139	0.086	0.107	0.065
Barium, dissolved	mg/L			**1**		0.05	0.051	0.069	0.077	0.071	0.059	0.098	0.061
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000098	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00015	0.000115	0.000162	0.000111	0.000388	0.0000949	0.0001	0.000139
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000113	0.000079	0.000063	0.000058	0.000047	0.000032	0.000078	<0.000017
Calcium, total	mg/L					73.9	44.5	24.7	24.6	19	14.1	47.3	108
Calcium, dissolved	mg/L					74.2	44.4	25.6	24.7	18.2	13.4	47.3	105
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	0.0016	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	0.0012	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00042	0.00032	0.00077	0.00059	0.00199	0.00053	0.00043	0.00068
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00032	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00032	0.00053
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	0.0011	0.0032	0.0019	0.0101	0.0021	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.263	0.507	1.46	1.18	4.16	1.1	0.325	0.282
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	0.039	0.071	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	0.00206	0.00198	0.00557	0.00193	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					11.8	6.64	4.06	4.14	3.57	2.28	7.74	20
Magnesium, dissolved	mg/L					11.5	6.3	3.82	3.7	2.59	1.88	7.34	19.3
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0325	0.0253	0.0602	0.0499	0.16	0.0481	0.0394	0.0556
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0266	0.0183	0.0146	0.0177	0.0115	0.0111	0.0292	0.0341
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	0.0000108	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0027	0.0019	0.0015	0.0012	0.0027	<0.001	0.0019	0.0034
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0024	0.0015	0.001	<0.001	<0.001	<0.001	0.0016	0.0032
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0074	0.0042	0.0041	0.0032	0.0073	0.0022	0.0052	0.0122
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0066	0.004	0.0024	0.0025	0.0014	0.0012	0.0046	0.0117
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.0055	0.00262	0.00134	0.00111	0.00162	0.000534	0.00257	0.00602
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00522	0.00242	0.00115	0.00101	0.00075	0.000478	0.00244	0.00485
Silicon, total	mg/L					2.06	1.52	2.67	3.23	4.3	1.94	1.65	2.56
Silicon, dissolved	mg/L					1.95	1.21	0.873	0.836	0.628	0.486	1.33	2.41
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	0.000021	0.000058	0.000038	0.000191	0.000043	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	2.4
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	<2	2.2
Strontium, total	mg/L					0.44	0.253	0.158	0.16	0.129	0.0944	0.29	0.611
Strontium, dissolved	mg/L					0.43	0.251	0.163	0.156	0.121	0.0876	0.301	0.579
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00074	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	<0.01	0.026	0.027	0.078	0.022	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00071	0.00039	0.00025	0.00023	0.00032	<0.0002	0.00046	0.00129
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00064	0.00033	<0.0002	<0.0002	<0.0002	<0.0002	0.00044	0.00116
Vanadium, total	mg/L					<0.0005	0.00075	0.00292	0.00255	0.00654	0.0018	0.00064	<0.0005
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.015	0.0126	0.0182	0.0134	0.0354	0.0119	0.0123	0.0218
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0092	0.0071	0.0052	0.0058	<0.005	<0.005	0.008	0.0121

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		OC05	GSC99	GSC99	GSC99	OC06	OC07	OC07	OC07
Sampling Date						14-Dec-16	20-Jan-16	24-Feb-16	14-Apr-16	14-Apr-16	14-Apr-16	11-May-16	29-May-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.22	8.73	7.51	7.64	8.34	8.54	8.09	8.75
Conductivity	uS/cm					376.4	221	103	97.4	173	370	241	236.4
Specific Conductivity	uS/cm					700.1	395.8	190	180.5	323	624	363	358.6
Dissolved Oxygen	mg/L					16.75	13.5		12.04	13.81	13.28		11.8
Dissolved Oxygen	%					128.6	114.6		110.6	96.7	100.8		101.2
ORP	mV					244.4	154.6		278.1	76	131.6	42.7	278.1
Turbidity	NTU					0.88	0	0	0	0.75	0.51	0.99	2.8
TDS	mg/L												
Temperature	degC					0.8	1.4	1.03	0.9	0.77	3.66	7.4	7.2
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.24	7.25	7.23	7.22	8.13	8.26	8.24	8.15
Specific Conductance	uS/cm					684	188	191	193	335	651	366	361
Total Hardness	mg/L					411	76.3	80.6	90	179	367	208	186
Total dissolved solids	mg/L					507	125	120	125	208	435	239	232
Total suspended solids	mg/L					4.5	<3	<3	<3	<3	<3	5.8	<3
Turbidity	NTU					0.9	<0.1	<0.1	0.11	0.22	0.25	1.92	1.32
Major Ions													
Total alkalinity	mg/L as Ca CO3					133	13.2	12.4	13.5	84.4	128	92.7	87.2
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					133	13.2	12.4	13.5	84.4	128	92.7	87.2
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3							<2					
Acidity	mg/L					<1	1.9	1.7	1.9	<1	<1	<1	1.9
Chloride	mg/L	**120**	**640**	**150**	**600**	<2.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.15	0.036	0.037	0.04	<0.02	0.137	0.063	0.06
Bromide	mg/L					<0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		245	68	70	71.3	82.2	218	100	97.5
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.031	0.0188	0.0197	0.0249	0.0363	0.0509	0.03	0.0088
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N						<0.03						
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					0.001	<0.001	<0.001	0.0017	0.0012	0.0017	<0.001	<0.001
Phosphorus, total	mg/L					0.0036	<0.002	0.0026	<0.002	<0.002	0.0022	<0.002	0.0024
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	0.56	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0177	0.0051	<0.005	<0.005	0.0143	0.0061	0.0187	0.0286
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.005	0.0232	<0.005	<0.005	<0.005	<0.005	0.0055	0.0052
Antimony, total	mg/L			**0.009**		<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.056	0.0233	0.023	0.023	0.077	0.042	0.046	0.05
Barium, dissolved	mg/L			**1**		0.054	0.0227	0.023	0.023	0.075	0.044	0.045	0.047
Beryllium, total	mg/L			**0.00013**		<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000122	0.000219	0.000204	0.000182	0.0000152	0.0000739	0.0000643	0.0000638
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000108	***0.00102***	0.000215	0.000183	0.000021	0.000074	0.000056	0.000064
Calcium, total	mg/L					118	26.2	27	29.5	63.2	111	67.4	61
Calcium, dissolved	mg/L					125	25.2	26.7	30.2	64	114	68.2	60.4
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.0001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00053	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	0.00279	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	0.00051	<0.0001	<0.0003	<0.0003	<0.0003	<0.0003	0.00238	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	0.0014	0.0013	0.0016	<0.001	<0.001	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	0.00183	0.0012	0.0014	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.147	<0.01	<0.03	<0.03	<0.03	0.052	0.073	0.09
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.01	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					22.6	3.34	3.5	3.47	4.82	19.4	9.31	8.9
Magnesium, dissolved	mg/L					23.9	3.24	3.37	3.52	4.79	19.8	9.26	8.48
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0414	<0.0001	0.00012	0.00014	0.00108	0.0115	0.0102	0.00968
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.0404	0.00878	0.00027	0.00016	0.00044	0.0111	0.00822	0.00714
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0034	0.00615	0.0062	0.0069	0.0011	0.0031	0.0023	0.0022
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0034	0.00565	0.0061	0.0066	0.001	0.0031	0.0019	0.002
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0129	0.00084	<0.001	<0.001	<0.001	0.0076	0.004	0.0037
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0129	0.00086	<0.001	<0.001	<0.001	0.0075	0.0036	0.0033
Potassium, total	mg/L					<2	0.168	<2	<2	<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	0.181	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00525	0.00206	0.00231	0.00218	0.0102	0.0116	0.00561	0.00463
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00567	0.002	0.00221	0.00228	0.00916	0.012	0.00568	0.00452
Silicon, total	mg/L					2.72	2.64	2.6	2.58	1.19	2.32	1.72	1.64
Silicon, dissolved	mg/L					2.74	2.55	2.54	2.61	1.17	2.35	1.68	1.57
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					2.7	1.42	<2	<2	<2	2.2	<2	<2
Sodium, dissolvd	mg/L					2.5	1.42	<2	<2	<2	2.2	<2	<2
Strontium, total	mg/L					0.644	0.179	0.185	0.193	0.243	0.582	0.358	0.334
Strontium, dissolved	mg/L					0.604	0.173	0.177	0.193	0.239	0.593	0.355	0.321
Sulfur, total	mg/L						23.4						
Sulfur, dissolved	mg/L						22.5						
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.00001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	0.00012	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	<0.0003	<0.01	<0.01	0.014	0.02	0.012	<0.01
Titanium, dissolved	mg/L					<0.01	<0.0003	<0.01	<0.01	0.013	0.02	0.011	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00144	<0.00001	<0.0002	<0.0002	0.00025	0.00116	0.00053	0.0005
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00144	0.000021	<0.0002	<0.0002	0.00024	0.00118	0.00046	0.00045
Vanadium, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.019	0.0103	0.0098	0.01	<0.005	0.0088	0.0051	0.0063
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0155	0.104	0.0124	0.0099	<0.005	0.0069	0.0063	0.0054

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		OC07	OC07	OC07	OC07	OC07	OC07	OC07	OC07
Sampling Date						8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	27-Sep-16	16-Nov-16	14-Dec-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.52	7.65	7.73	7.59	7.65	7.84	8.17	8.02
Conductivity	uS/cm					136.5	109.1	94.4	85	65.7	124.1	306.9	357
Specific Conductivity	uS/cm					210.5	170.4	141.1	117.3	96.5	198.3	581	685
Dissolved Oxygen	mg/L					11.71	12.69	11.36	10.81	11.8	13.47	14.05	18.65
Dissolved Oxygen	%					100.8	108.2	99.5	100.6	104.8	111	102.4	133.4
ORP	mV					264.8	332.9	213.3		319.4			245.5
Turbidity	NTU					11.25	45.6	23.5	69.1	25.6	14.24	0.51	1.42
TDS	mg/L												
Temperature	degC					6.6	6.2	7.6	10.5	8.3	5.4	0.3	-0.1
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.96	7.97	7.56	7.78	7.5	8.02	8.28	8.25
Specific Conductance	uS/cm					210	167	152	118	100	192	555	665
Total Hardness	mg/L					110	79.6	72.6	55.4	43	98.2	310	392
Total dissolved solids	mg/L					117	112	91	83	64	138	405	502
Total suspended solids	mg/L					12.6	50.4	15.8	75.5	20.5	11.2	<3	3.7
Turbidity	NTU					4.1	27.1	14.7	40.2	12.7	7.87	0.34	0.48
Major Ions													
Total alkalinity	mg/L as Ca CO3					55.3	48.1	44.3	36.6	30.2	56.5	127	134
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					55.3	48.1	44.3	36.6	30.2	56.5	127	134
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L					1.5	1.6	3	<1	1.9	2.2	<1	1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Fluoride	mg/L	**0.12**			**EQ7**	0.032	0.024	0.02	<0.02	<0.02	0.021	0.098	0.11
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.25
Sulfate	mg/L			**EQ23**		47.5	35.3	30.4	22	16.2	43.8	192	235
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0152	0.0211	0.0152	0.0105	0.01	0.0163	0.0338	0.048
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.005
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					0.0018	0.0015	0.0014	0.0018	<0.001	0.001	<0.001	0.002
Phosphorus, total	mg/L					0.0136	0.0852	0.0171	0.113	0.0223	0.0171	0.0052	0.0024
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	0.57	0.54	0.52	<0.5	<0.5
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.258	0.913	0.823	2.05	0.763	0.507	0.0151	0.0255
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0094	0.0266	0.0384	0.028	0.0515	0.0184	<0.005	<0.005
Antimony, total	mg/L			**0.009**		<0.0005	0.00069	<0.0005	0.00088	<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00072	0.00194	0.00056	0.00338	0.00061	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.051	0.073	0.08	0.116	0.075	0.097	0.075	0.074
Barium, dissolved	mg/L			**1**		0.043	0.042	0.058	0.057	0.053	0.088	0.073	0.069
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					0.000072	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000879	0.000212	0.0000884	0.000395	0.0000822	0.0000747	0.0000763	0.0000612
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000041	0.000051	0.000042	0.000038	0.000033	0.000044	0.000079	0.000052
Calcium, total	mg/L					35.2	28.4	23.7	18.9	14.5	33.1	102	113
Calcium, dissolved	mg/L					36.7	26.4	24	18.4	14.4	32.4	96.1	121
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	0.0012	<0.001	0.0022	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	0.00092	0.00042	0.00208	0.00048	0.00032	<0.0003	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0015	0.0051	0.0017	0.0107	0.0022	0.0013	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		0.57	1.95	0.872	3.94	1.05	0.566	0.071	0.077
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	0.039	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	0.00209	0.00121	0.00466	0.00137	0.00076	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					4.49	3.9	3.39	3.19	2.03	4.39	17.5	20.7
Magnesium, dissolved	mg/L					4.47	3.32	3.1	2.3	1.74	4.22	17	21.6
Manganese, total	mg/L			**EQ10**	**EQ11**	0.0221	0.0604	0.0333	0.154	0.0403	0.0276	0.0136	0.00475
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00531	0.00602	0.00691	0.00528	0.00643	0.00993	0.0128	0.00133
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	0.0000135	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0018	0.0025	0.0012	0.0031	<0.001	0.0013	0.0031	0.0035
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0014	0.0012	0.001	<0.001	<0.001	0.0012	0.0026	0.0035
Nickel, total	mg/L	**EQ20**		**EQ22**		0.003	0.005	0.0022	0.0086	0.0019	0.0023	0.0065	0.0048
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0019	0.0016	0.0013	<0.001	<0.001	0.0018	0.007	0.0047
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00229	0.00211	0.00119	0.00177	0.000584	0.002	0.00634	0.00625
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00228	0.00153	0.0011	0.000796	0.000531	0.00197	0.00698	0.00634
Silicon, total	mg/L					1.44	2.66	2.43	4.31	1.94	1.83	2.24	2.47
Silicon, dissolved	mg/L					1.02	0.893	0.786	0.641	0.554	0.905	2.16	2.35
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000034	0.0001	0.000034	0.000175	0.00003	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	2.2	2.6
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	2.1	2.4
Strontium, total	mg/L					0.191	0.158	0.141	0.118	0.09	0.18	0.556	0.619
Strontium, dissolved	mg/L					0.194	0.146	0.139	0.113	0.0825	0.182	0.577	0.557
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	0.00156	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	0.023	0.021	0.062	0.02	0.014	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00025	0.00026	<0.0002	0.00031	<0.0002	0.00024	0.0011	0.00134
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00022	<0.0002	<0.0002	<0.0002	<0.0002	0.00022	0.00085	0.00132
Vanadium, total	mg/L					0.00114	0.00335	0.00217	0.00663	0.00189	0.00092	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.009	0.0204	0.0093	0.0371	0.0076	0.0066	0.0092	0.0056
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0067	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		RBC02	RBC02	RBC02	RBC02	RBC02	RBC02	RBC02	RBC02	RBC02
Sampling Date						24-Jun-14	29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	24-Feb-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			7.62		7.64	7.86	7.5	7.66	7.62	8.17
Conductivity	uS/cm						86		139.7	210	91	133.8	164.7	222
Specific Conductivity	uS/cm								195.5	333.6	120	182	259.7	405
Dissolved Oxygen	mg/L						9.72		10.52	12.6	10.17	11.3	11.67	
Dissolved Oxygen	%						83.2		98.8	104.5	95	107.9	98.8	
ORP	mV									209.5		291.9	291.6	
Turbidity	NTU						35.6		11.09	6.91	24	42.5	4.69	2.19
TDS	mg/L										0.082			
Temperature	degC						8.58		10.1	4.2	12.26	10.9	5.9	1.32
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.79	7.79	7.84	8.03	7.84	7.72	7.82	7.87	8.01
Specific Conductance	uS/cm					146	128	122	180	302	134	189	242	413
Total Hardness	mg/L					69.3	58.4	53.6	82.9	137	62.5	84.7	113	215
Total dissolved solids	mg/L					94	92	82	134	204	85	121	157	261
Total suspended solids	mg/L					153	56.5	74.6	22.9	8.2	42.5	43.8	8.2	<3
Turbidity	NTU					30.3	22.9	29.2	4.61	4.04	9.56	22.9	1.91	0.25
Major Ions														
Total alkalinity	mg/L as Ca CO3					31.8	26.1	26.7	35.7	53.8	28	37.3	50	68.6
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					31.8	26.1	26.7	35.7	53.8	28	37.3	50	68.6
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<2	<2	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<2	<2	<2	<2	<2	<2	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													<2
Acidity	mg/L						1.6	1.9	3.4	2.1	2	2	1.5	1.6
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.044	0.037	0.03	0.046	0.091	0.035	0.044	0.058	0.094
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		39.1	35.4	32.2	53.1	103	35.8	53	75.1	132
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0173	<0.005	0.0065	<0.005	0.0187	<0.005	<0.005	0.0167	0.0156
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N					<0.05	<0.05				<0.03			
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					0.0011	<0.001	<0.001	<0.001	0.0035	0.0019	<0.001	0.0015	0.003
Phosphorus, total	mg/L					0.178	0.06	<0.3	0.0098	0.0112	0.0331	0.0444	0.006	0.0039
Organics														
Total Organic Carbon	mg/L					<0.5	0.55	<0.5	0.55	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	1.58	0.91	1.63	0.283	0.144	0.644	1.3	0.127	0.0154
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0364	0.0574	0.0754	0.0379	0.0256	0.0553	0.0775	0.0267	0.0052
Antimony, total	mg/L			**0.009**		0.00057	0.00035	0.00038	0.00022	0.00028	0.00033	0.00045	0.00025	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	0.00016	0.00015	0.00019	0.00021	0.0002	0.00022	0.00025	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00529	0.00346	0.00514	0.00156	0.00106	0.00253	0.00575	0.00099	0.00071
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	0.00067	0.00084	0.00074	0.00051	0.00075	0.00104	0.00062	0.00067
Barium, total	mg/L			**1**		0.067	0.0466	0.0674	0.0405	0.0438	0.0396	0.0655	0.0393	0.041
Barium, dissolved	mg/L			**1**		0.021	0.0248	0.0312	0.0325	0.0382	0.0245	0.0381	0.0355	0.04
Beryllium, total	mg/L			**0.00013**		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Bismuth, total	mg/L					<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.05	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.01	<0.01	0.012	<0.01	<0.01	<0.01	0.012	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000479	0.000316	0.000308	0.000214	0.000329	0.000195	0.000345	0.000203	0.00012
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000132	0.000119	0.000129	0.00016	0.000269	0.000108	0.000144	0.000191	0.000124
Calcium, total	mg/L					23.5	19.7	19.6	30.1	45.2	19.8	30.1	38	69
Calcium, dissolved	mg/L					23.9	20.1	18.4	28.5	46.4	21.5	28.9	37.9	73.3
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					0.0016	0.00091	0.00145	0.00034	0.00013	0.00054	0.00113	0.00023	<0.001
Chromium, dissolved	mg/L					<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.001
Chromium, hexavalent	mg/L							<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00199	0.00111	0.00157	0.00044	0.00053	0.00071	0.0016	0.00026	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	0.00011	0.00015	0.00015	0.00027	<0.0001	0.00021	0.00012	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0155	0.0115	0.0112	0.00756	0.00445	0.00679	0.0127	0.00333	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	0.00126	0.00184	0.00217	0.00168	0.00088	0.00171	0.0016	<0.001
Iron, total	mg/L	**0.3**		**0.001**		3.54	1.75	2.82	0.401	0.28	1.09	2.52	0.197	<0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	0.037	0.068	<0.01	<0.01	0.043	0.08	<0.01	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.00289	0.0018	0.00265	0.000589	0.000258	0.000973	0.00336	0.000211	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	0.000054	0.000115	<0.00005	<0.00005	<0.00005	0.000195	<0.00005	<0.0005
Magnesium, total	mg/L					3.09	2.34	2.58	3.04	5.47	2.37	3.67	4.32	7.92
Magnesium, dissolved	mg/L					2.33	1.97	1.85	2.85	5.25	2.12	3.05	4.33	7.86
Manganese, total	mg/L			**EQ10**	**EQ11**	0.111	0.0647	0.0929	0.0218	0.0217	0.0392	0.0777	0.0124	0.00086
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00515	0.00617	0.0107	0.00657	0.00907	0.00524	0.0105	0.00562	0.00023
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0016	0.00099	0.000949	0.00123	0.00215	0.00123	0.00138	0.00163	0.0028
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.001	0.000842	0.000805	0.00112	0.00205	0.00104	0.00123	0.00149	0.0027
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0053	0.00298	0.00318	0.00226	0.00433	0.00239	0.00333	0.00259	0.0015
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0016	0.00119	0.00119	0.00169	0.00346	0.00133	0.00173	0.0022	0.0014
Potassium, total	mg/L					<2	0.272	0.472	0.198	0.24	0.251	0.431	0.217	<2
Potassium, dissolved	mg/L					<2	0.096	0.148	0.127	0.225	0.131	0.155	0.229	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.0018	0.00113	0.00102	0.00144	0.00399	0.00132	0.00177	0.00259	0.00431
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.0016	0.00107	0.00094	0.00148	0.0042	0.00132	0.00168	0.00261	0.0044
Silicon, total	mg/L					4.06	2.83	3.97	2.35	3.83	2.54	4	2.64	3.58
Silicon, dissolved	mg/L					1.76	1.46	1.34	1.84	3.56	1.6	1.99	2.42	3.56
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000088	0.000034	0.00004	0.000011	<0.00001	0.000026	0.000054	<0.00001	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00002
Sodium, total	mg/L					<2	0.721	0.846	1.03	1.74	0.764	1.13	1.39	2.7
Sodium, dissolvd	mg/L					<2	0.629	0.626	0.963	1.66	0.711	0.976	1.41	2.6
Strontium, total	mg/L					0.114	0.0995	0.1	0.154	0.229	0.0978	0.145	0.196	0.326
Strontium, dissolved	mg/L					0.114	0.101	0.0942	0.154	0.231	0.106	0.139	0.186	0.323
Sulfur, total	mg/L										12.3	17.9	24.6	
Sulfur, dissolved	mg/L										12.6	17.2	23.6	
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.00001	0.000014	<0.00001	<0.00001	0.00001	0.000011	<0.00001	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.0002
Tin, total	mg/L					<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001	<0.0005
Titanium, total	mg/L					0.041	0.021	0.066	<0.01	<0.01	0.012	0.0283	<0.0024	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	0.00046	<0.0009	<0.0003	0.011
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00025	0.000118	0.000132	0.000154	0.000375	0.000133	0.000182	0.000225	0.00064
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	0.000082	0.000075	0.000126	0.000346	0.000089	0.000151	0.000214	0.00061
Vanadium, total	mg/L					0.0065	0.0036	0.0064	<0.001	<0.001	0.00247	0.00501	0.00057	<0.0005
Vanadium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0341	0.0188	0.0204	0.0119	0.0132	0.0122	0.0199	0.0083	<0.005
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0057	0.0061	0.0041	0.0059	0.0088	0.0034	0.0049	0.0079	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		RBC02	RBC02	RBC02	RBC02	RBC02	RBC02	RBC02	RBC02	RBC02
Sampling Date						14-Apr-16	11-May-16	29-May-16	8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16	20-Jul-16	29-Sep-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**			7.91	8.51	8.39	7.74	7.72	7.53	7.69	7.91
Conductivity	uS/cm						193	178.6	137	128.4	120.6	115.2	96.6	213.5
Specific Conductivity	uS/cm						293	285.5	213.3	207.1	179.6	168.9	141.8	316.2
Dissolved Oxygen	mg/L							12.37	11.97	12.66	11.09	11.22	11.67	11.54
Dissolved Oxygen	%							102.2	102	107.1	98.2	100.4	104.5	102.6
ORP	mV						48.6	287.9	288.8	333.3	232.1		324.9	
Turbidity	NTU						0.54	4.69	7	4.99	3.18	8.87	8.45	0.82
TDS	mg/L													
Temperature	degC						7.17	5.4	6.1	5.7	7.8	8.4	8.3	8
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.04	8.04	7.93	7.79	7.82	7.85	7.66	7.48	7.82
Specific Conductance	uS/cm					384	299	284	211	202	196	166	135	320
Total Hardness	mg/L					187	158	145	109	103	94.9	76.7	57.1	161
Total dissolved solids	mg/L					260	194	184	133	137	121	116	86	216
Total suspended solids	mg/L					<3	<3	<3	4.7	28	4	12.2	223	<3
Turbidity	NTU					0.17	0.34	0.29	0.56	1.85	1.41	2.56	4.12	0.36
Major Ions														
Total alkalinity	mg/L as Ca CO3					68.9	56.2	53.5	38.6	42.8	35.9	30.8	26.8	49.7
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					68.9	56.2	53.5	38.6	42.8	35.9	30.8	26.8	49.7
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1	1.3	2.3	1.8	1.8	2.1	2	1.3	2.9
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.103	0.087	0.081	0.054	0.05	0.045	0.041	0.033	0.072
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		120	91.4	86.9	62.3	61.7	55.6	49.6	37.8	106
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	<0.005	<0.005	<0.005	0.014	0.0091	0.0053	<0.005	<0.005	0.0114
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N													
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					0.0013	0.0012	<0.001	0.0014	0.0011	0.0012	0.001	0.0013	0.0011
Phosphorus, total	mg/L					<0.002	0.0046	0.0023	0.0049	0.044	0.004	0.021	0.0063	<0.002
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.74
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	0.69	0.57	<0.5	<0.5	<0.5	<0.5
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.012	0.0295	0.0241	0.0781	0.121	0.0991	0.32	0.235	0.0431
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0056	0.0103	0.0132	0.0229	0.0207	0.0219	0.0263	0.0291	0.0179
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00068	0.0006	0.00057	0.00076	0.00098	0.00088	0.00214	0.0012	0.0007
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00063	0.0005	<0.0005	<0.0005	<0.0005	0.0005	0.00055	0.00052	0.0006
Barium, total	mg/L			**1**		0.035	0.028	0.028	0.026	0.029	0.027	0.033	0.032	0.05
Barium, dissolved	mg/L			**1**		0.034	0.028	0.027	0.023	0.024	0.025	0.024	0.023	0.049
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.00011	0.000161	0.000172	0.000183	0.000206	0.000176	0.000225	0.000158	0.000175
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000109	0.000152	0.000176	0.000156	0.00016	0.00015	0.000141	0.000129	0.000177
Calcium, total	mg/L					66.7	52.5	49.4	37.4	36.2	31.5	26.8	21.4	53.8
Calcium, dissolved	mg/L					63.3	54.1	50.1	38	35.7	33	26.4	19.6	55.2
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0015	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00055	0.00031	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	0.0013	0.0023	0.0036	0.0025	0.0056	0.0038	0.0014
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		<0.03	0.046	0.033	0.125	0.253	0.158	0.603	0.346	0.065
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00098	0.00054	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					7.1	5.34	5.05	3.66	3.59	3.09	2.78	2.22	5.78
Magnesium, dissolved	mg/L					7	5.43	4.92	3.54	3.44	3.04	2.63	1.95	5.59
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00089	0.00318	0.00454	0.00916	0.0127	0.00879	0.0269	0.0169	0.00504
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00046	0.00197	0.00322	0.00424	0.00413	0.00394	0.00391	0.00464	0.00304
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0028	0.0023	0.0021	0.0015	0.0015	0.0013	0.0011	<0.001	0.0019
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0027	0.0021	0.0019	0.0013	0.0014	0.0013	0.0011	<0.001	0.0017
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0015	0.0017	0.0023	0.0022	0.0023	0.0019	0.0024	0.0016	0.0021
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0013	0.0017	0.0021	0.0019	0.002	0.0017	0.0015	0.0013	0.0022
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00477	0.00364	0.00329	0.00224	0.00225	0.00192	0.00165	0.00116	0.00355
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00466	0.00371	0.00335	0.0024	0.00215	0.00172	0.00164	0.0011	0.00373
Silicon, total	mg/L					3.66	3.43	3.27	2.49	2.44	2.08	2.21	1.9	3.32
Silicon, dissolved	mg/L					3.56	3.42	3.2	2.36	2.22	1.96	1.76	1.37	3.25
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					2.5	<2	<2	<2	<2	<2	<2	<2	<2
Sodium, dissolvd	mg/L					2.4	<2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.302	0.244	0.239	0.172	0.171	0.15	0.137	0.103	0.255
Strontium, dissolved	mg/L					0.302	0.248	0.23	0.167	0.164	0.148	0.134	0.097	0.264
Sulfur, total	mg/L													
Sulfur, dissolved	mg/L													
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.015	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00057	0.00035	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00033
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00055	0.00032	0.00027	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00029
Vanadium, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0012	0.00075	<0.0005
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	0.0055	0.0081	0.0083	0.0108	0.0068	0.0131	0.0086	0.0057
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	0.0057	0.0072	0.0061	0.0072	0.0057	<0.005	0.006	0.007

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		RBC02	RC02	RC02	RC02	RC02	RC02	RC02	RC02	RC02
Sampling Date						16-Nov-16	29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	5-Aug-15	15-Oct-15	20-Jan-16
		Long Term	Short Term	Long Term	Short Term									
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.11	7.54		7.56	7.91	7.24	7.48	7.73	8.28
Conductivity	uS/cm					213.2	41		63.4	112.2	44	61.9	102.5	257.4
Specific Conductivity	uS/cm					391.5			94	183.3	62	88.7	163.5	464
Dissolved Oxygen	mg/L					13.61	10.81		11.81	12.92	11.2	12.42	12.45	14.07
Dissolved Oxygen	%					102.3	87.8		102.2	105.1	98.6	110.3	100.6	102.9
ORP	mV									240.3		290.4	295.5	196
Turbidity	NTU					0.23	42.5		29.9	4.83	58	33	4.52	0
TDS	mg/L										0.041			
Temperature	degC					1.2	6.44		7.9	4.8	9.74	9.2	5.5	1.7
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.06	7.83	7.81	7.83	8.04	7.63	7.81	7.96	8.07
Specific Conductance	uS/cm					392	71.3	65.8	82.8	167	59.4	87	154	238
Total Hardness	mg/L					193	34.1	30.9	41.4	78.5	31.4	41.5	78.2	117
Total dissolved solids	mg/L					281	38	48	63	91	40	53	90	149
Total suspended solids	mg/L					<3	32.9	63	21.2	12.4	65.7	44.1	5.2	<3
Turbidity	NTU					0.14	27.4	21.2	13.9	4.43	28.3	16.8	2.47	0.29
Major Ions														
Total alkalinity	mg/L as Ca CO3					64.6	28.4	26.3	34	76	27.5	35	62.7	84.8
Alkalinity to pH 4.5	mg/L as Ca CO3													
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					64.6	28.4	26.3	34	76	27.5	35	62.7	84.8
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<2	<2	<2	<2	<2	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<2	<2	<2	<2	<2	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3													
Acidity	mg/L					1.4	1.4	1.7	1.2	1.5	2.1	1.8	1.2	1.1
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.091	0.033	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.025
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		137	7.39	6.66	9.86	19.2	5.78	9.49	19.2	33.6
Nutrients														
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0101	0.0275	0.0194	0.0183	0.295	0.0143	0.0309	0.198	0.332
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N						0.082				0.041			0.317
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N													
Ortho phosphorus, dissolved	mg/L					0.0013	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					0.0045	0.0373	<0.3	0.0185	0.0044	0.066	0.065	0.004	0.0025
Organics														
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	0.58	<0.5	<0.5	1.13	<0.5	0.77
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	0.55	<0.5	<0.5	0.64	0.83
Other														
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**									
Cyanide, WAD	mg/L			**0.005**	**0.01**									
Thiocyanate	mg/L													
Metals														
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0251	1.07	1.31	0.828	0.141	1.61	1.31	0.136	0.0144
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0145	0.0422	0.0543	0.0369	0.0177	0.0598	0.0745	0.0145	0.0047
Antimony, total	mg/L			**0.009**		<0.0005	0.00039	0.00039	0.00025	0.00021	0.00046	0.00046	0.00019	0.00024
Antimony, dissolved	mg/L			**0.009**		<0.0005	0.00013	0.00012	0.00013	0.00017	0.00014	0.00016	0.00019	0.00023
Arsenic, total	mg/L	**0.005**		**0.005**		0.00065	0.00123	0.00102	0.00074	0.0003	0.00169	0.00163	0.00027	0.00022
Arsenic, dissolved	mg/L	**0.005**		**0.005**		0.00059	0.00014	0.0001	0.00013	0.00018	0.00015	0.00019	0.0002	0.00021
Barium, total	mg/L			**1**		0.039	0.0867	0.0937	0.0817	0.0851	0.0973	0.107	0.081	0.0903
Barium, dissolved	mg/L			**1**		0.038	0.0488	0.0517	0.0602	0.0836	0.0485	0.0596	0.0747	0.0888
Beryllium, total	mg/L			**0.00013**		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L					<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	0.011	<0.01	0.014	0.018	<0.01	<0.01	0.018	0.026
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.01	<0.01	<0.01	0.015	<0.01	<0.01	0.014	0.023
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000209	0.000071	0.000069	0.000031	0.000014	0.0000788	0.0000667	0.0000211	0.0000075
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000228	<0.00001	0.000014	0.000011	0.000023	0.0000147	0.0000129	0.0000298	0.0000229
Calcium, total	mg/L					68.9	10.7	10.3	12.5	24	10.3	13.1	25.6	35.8
Calcium, dissolved	mg/L					64.8	10.8	9.9	12.9	24.5	10	12.8	24.2	35.6
Cesium, total	mg/L													
Cesium, dissolved	mg/L													
Chromium, total	mg/L					<0.001	0.00063	0.00059	0.00059	0.0002	0.00097	0.00097	0.00016	0.00013
Chromium, dissolved	mg/L					<0.001	0.00014	<0.0001	<0.0001	<0.0001	<0.0001	0.00012	<0.0001	0.00016
Chromium, hexavalent	mg/L					<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	0.0007	0.00072	0.00045	<0.0001	0.00108	0.00106	<0.0001	<0.0001
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0018	0.00264	0.00237	0.00206	0.00063	0.00405	0.00381	<0.0005	<0.0005
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0013	0.00029	<0.0002	0.00028	0.00072	0.00026	0.00023	0.00057	0.00036
Iron, total	mg/L	**0.3**		**0.001**		<0.03	1.38	1.49	0.921	0.175	2.16	2.12	0.131	0.016
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	0.025	0.035	0.024	0.01	0.045	0.049	<0.01	<0.01
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	0.00304	0.00279	0.00135	0.000384	0.00395	0.0032	0.000256	<0.00005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	0.000086	0.000112	0.000068	<0.00005	0.000145	0.000179	<0.00005	0.00026
Magnesium, total	mg/L					7.68	2.03	1.81	2.35	4.24	2.12	2.77	4.51	7
Magnesium, dissolved	mg/L					7.48	1.75	1.51	2.23	4.2	1.55	2.28	4.28	6.93
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00382	0.101	0.0943	0.0475	0.0113	0.135	0.125	0.00954	0.00119
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00338	0.00426	0.00645	0.00339	0.00111	0.00761	0.00708	0.00118	0.0004
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	0.0000076	0.0000056	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0022	0.00038	0.000323	0.000384	0.000692	0.000358	0.00041	0.000736	0.0012
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0021	0.000316	0.000258	0.000333	0.000707	0.000249	0.000339	0.000673	0.00114
Nickel, total	mg/L	**EQ20**		**EQ22**		0.0026	0.00066	0.00063	0.00058	<0.0005	0.00109	0.00109	<0.0005	<0.0005
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		0.0029	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Potassium, total	mg/L					<2	0.635	0.803	0.56	0.328	0.9	0.759	0.308	0.394
Potassium, dissolved	mg/L					<2	0.147	0.159	0.207	0.288	0.175	0.21	0.276	0.37
Selenium, total	mg/L	**0.001**		**0.002**		0.00418	0.00014	0.00012	0.00016	0.00056	0.000112	0.000171	0.000505	0.00112
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00446	0.00013	<0.0001	0.00017	0.00063	0.000117	0.00016	0.000495	0.00116
Silicon, total	mg/L					3.81	2.02	2.51	1.83	1.71	2.79	2.39	1.59	2.22
Silicon, dissolved	mg/L					3.77	0.519	0.456	0.582	1.51	0.489	0.63	1.34	2.15
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	0.000053	0.000044	0.000021	<0.00001	0.000069	0.000058	<0.00001	<0.00001
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L					2.5	0.322	0.296	0.387	0.781	0.324	0.408	0.807	1.38
Sodium, dissolvd	mg/L					2.4	0.266	0.231	0.372	0.795	0.241	0.335	0.786	1.38
Strontium, total	mg/L					0.316	0.0678	0.0647	0.084	0.149	0.0627	0.0805	0.155	0.219
Strontium, dissolved	mg/L					0.331	0.0685	0.0617	0.0846	0.151	0.0595	0.0793	0.143	0.218
Sulfur, total	mg/L										1.93	3.09	6.69	11.4
Sulfur, dissolved	mg/L										1.95	2.96	6.47	11
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	0.00003	0.000031	0.000014	<0.00001	0.000041	0.00003	<0.00001	<0.00001
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin, total	mg/L					<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/L					<0.0005	<0.0001	<0.0001	<0.0001	0.00018	0.00054	0.00018	<0.0001	<0.0001
Titanium, total	mg/L					<0.01	0.019	0.019	<0.01	<0.01	0.0234	0.0201	0.00181	<0.0003
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	0.00064	<0.0012	<0.0003	<0.0003
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		0.00051	0.000049	0.000061	0.000048	0.000062	0.000052	0.00006	0.000063	0.000111
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		0.00047	0.000024	0.000024	0.000034	0.000062	0.000018	0.000035	0.000056	0.000102
Vanadium, total	mg/L					<0.0005	0.003	0.0035	0.002	<0.001	0.00449	0.00394	<0.0005	<0.0005
Vanadium, dissolved	mg/L					<0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.008	0.0097	0.0087	0.0058	<0.003	0.0113	0.0092	<0.003	<0.003
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	0.0087	0.0019	<0.001	<0.001	0.0015	<0.001	<0.001	0.0026	0.0021

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		RC02	RC02	RC02	RC02	RC02	RC02	RC02	RC02
Sampling Date						24-Feb-16	14-Apr-16	11-May-16	29-May-16	8-Jun-16	15-Jun-16	23-Jun-16	28-Jun-16
		Long Term	Short Term	Long Term	Short Term								
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		8.31	8.4	7.92	8.38	8.36	7.3	7.61	7.58
Conductivity	uS/cm					135	120	99	90.3	73.3	63.5	61.4	61.7
Specific Conductivity	uS/cm					240	195	152	147.7	114.8	102.6	92.1	86.9
Dissolved Oxygen	mg/L						13		13.19	12.35	13.65	11.64	11.52
Dissolved Oxygen	%						101.6		103.6	102.7	110	99.6	103.1
ORP	mV						136.9	53.4	284.3	295.1	335.3	240.7	
Turbidity	NTU					1.09	1.75	5.75	9.55	10.77	49.4	16.32	23.2
TDS	mg/L												
Temperature	degC					2.07	4.87	5.75	4.6	6.1	5	7.5	9.7
pH	pH units	**6.5 - 9**		**6.5 - 9**		8.14	8.14	8.13	8.03	7.87	7.88	7.87	7.72
Specific Conductance	uS/cm					244	208	155	147	115	102	101	86.6
Total Hardness	mg/L					123	109	79.3	73	56.9	51	47.9	41.4
Total dissolved solids	mg/L					131	128	96	86	58	67	59	60
Total suspended solids	mg/L					<3	<3	4.6	14.5	3.5	32.9	6.4	11.2
Turbidity	NTU					0.44	0.82	1.8	2.24	4.91	34	7.79	11.4
Major Ions													
Total alkalinity	mg/L as Ca CO3					88.1	82.1	66	60.4	46.3	42.2	39.9	34.6
Alkalinity to pH 4.5	mg/L as Ca CO3												
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					88.1	82.1	66	60.4	46.3	42.2	39.9	34.6
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3					<2							
Acidity	mg/L					<1	<1	<1	2.6	1.5	1.7	1.5	1.3
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	0.027	0.024	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		31.7	21.4	16	16	11.6	10.2	10.5	9.39
Nutrients													
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.425	0.603	0.222	0.133	0.0718	0.0526	0.0403	0.0336
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N												
Ortho phosphorus, dissolved	mg/L					<0.001	0.0014	<0.001	<0.001	0.0012	<0.001	<0.001	<0.001
Phosphorus, total	mg/L					0.0036	<0.002	0.0025	0.0092	0.0091	0.0104	0.008	0.0214
Organics													
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.67
Dissolved Organic Carbon	mg/L					0.53	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.56
Other													
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**								
Cyanide, WAD	mg/L			**0.005**	**0.01**								
Thiocyanate	mg/L												
Metals													
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0163	0.0394	0.0781	0.0891	0.398	1.39	0.469	0.733
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	<0.005	<0.005	0.0072	<0.005	0.0192	0.0159	0.0303	0.039
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00128	<0.0005	0.0007
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.085	0.076	0.065	0.068	0.069	0.096	0.067	0.074
Barium, dissolved	mg/L			**1**		0.082	0.075	0.062	0.062	0.057	0.06	0.052	0.052
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000109	0.0000062	0.0000057	0.0000113	0.0000113	0.0000711	0.0000204	0.0000372
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000019	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017	<0.000017
Calcium, total	mg/L					38.5	34.3	24.4	22.7	17.4	15.7	14.9	12.9
Calcium, dissolved	mg/L					38.3	34.6	24.6	22.4	17.6	15.8	14.9	12.9
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00079	<0.0003	0.0004
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	<0.001	0.0015
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		<0.03	0.05	0.109	0.137	0.382	1.67	0.433	0.855
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.033
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	0.00056	0.00331	0.00099	0.00158
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					6.76	5.46	4.36	4.28	3.26	3.19	2.75	2.42
Magnesium, dissolved	mg/L					6.68	5.45	4.34	4.13	3.14	2.78	2.59	2.23
Manganese, total	mg/L			**EQ10**	**EQ11**	0.00129	0.00354	0.00648	0.00796	0.0225	0.0979	0.0251	0.0483
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00031	0.00053	0.00079	0.00071	0.00136	0.00217	0.00191	0.00568
Mercury, total	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	0.0012	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.00118	0.000801	0.000473	0.000432	0.000294	0.000245	0.000223	0.000206
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.00128	0.000865	0.000565	0.000443	0.000341	0.000219	0.000217	0.000188
Silicon, total	mg/L					2.27	2.04	1.57	1.38	1.59	3.04	1.61	1.84
Silicon, dissolved	mg/L					2.25	1.97	1.46	1.22	0.889	0.747	0.726	0.634
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000044	<0.00002	0.000024
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Sodium, dissolvd	mg/L					<2	<2	<2	<2	<2	<2	<2	<2
Strontium, total	mg/L					0.218	0.189	0.149	0.152	0.117	0.102	0.0996	0.0883
Strontium, dissolved	mg/L					0.215	0.189	0.149	0.145	0.116	0.0994	0.0959	0.0862
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	0.029	0.01	0.014
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	0.00117	0.00322	0.00133	0.00203
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	0.0089	<0.005	0.0052
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Monitoring Location		CCME Guidelines (Freshwater)		BC WQG (Freshwater)		RC02	RC02	RC02	RC02
Sampling Date						20-Jul-16	27-Sep-16	16-Nov-16	15-Dec-16
		Long Term	Short Term	Long Term	Short Term				
Field pH	pH units	**6.5 - 9**		**6.5 - 9**		7.8	7.83	8.1	8.14
Conductivity	uS/cm					51.3	92.2	120	117.2
Specific Conductivity	uS/cm					75.75	146.1	217.5	224.9
Dissolved Oxygen	mg/L					12.3	13.66	13.82	16.68
Dissolved Oxygen	%					106.6	110.5	101.5	115
ORP	mV					314.1			
Turbidity	NTU					62.5	13.76	0.08	
TDS	mg/L								
Temperature	degC					8.1	5.7	1.5	-0.1
pH	pH units	**6.5 - 9**		**6.5 - 9**		7.56	8.08	8.14	7.83
Specific Conductance	uS/cm					74	145	222	235
Total Hardness	mg/L					35.4	73.9	114	124
Total dissolved solids	mg/L					55	90	142	139
Total suspended solids	mg/L					27.5	6	<3	<3
Turbidity	NTU					33	5.76	0.16	0.38
Major Ions									
Total alkalinity	mg/L as Ca CO3					30.8	58.4	85.6	90
Alkalinity to pH 4.5	mg/L as Ca CO3								
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3					30.8	58.4	85.6	90
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3					<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3								
Acidity	mg/L					1.2	2	1.1	1.5
Chloride	mg/L	**120**	**640**	**150**	**600**	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**0.12**			**EQ7**	<0.02	<0.02	0.021	0.024
Bromide	mg/L					<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L			**EQ23**		7.41	17.6	30.4	33.3
Nutrients									
Nitrate Nitrogen	mg/L as N	**3**	**124**	**3**	**32.8**	0.0207	0.169	0.383	0.367
Nitrite Nitrogen	mg/L as N	**0.06**		**0.02**	**0.06**	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N								
Ammonia Nitrogen	mg/L as N	**EQ21**		**EQ13**		0.0078	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N								
Ortho phosphorus, dissolved	mg/L					<0.001	0.0012	<0.001	0.0011
Phosphorus, total	mg/L					0.579	0.0128	0.0044	0.002
Organics									
Total Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L					<0.5	<0.5	<0.5	<0.5
Other									
Cyanide, total	mg/L	**0.005**		**0.005**	**0.01**				
Cyanide, WAD	mg/L			**0.005**	**0.01**				
Thiocyanate	mg/L								
Metals									
Aluminum, total	mg/L	**EQ18**		**EQ1**	**EQ2**	1.86	0.352	0.0119	0.0147
Aluminum, dissolved	mg/L	**EQ18**		**EQ1**	**EQ2**	0.0332	0.0227	<0.005	<0.005
Antimony, total	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005
Antimony, dissolved	mg/L			**0.009**		<0.0005	<0.0005	<0.0005	<0.0005
Arsenic, total	mg/L	**0.005**		**0.005**		0.00091	<0.0005	<0.0005	<0.0005
Arsenic, dissolved	mg/L	**0.005**		**0.005**		<0.0005	<0.0005	<0.0005	<0.0005
Barium, total	mg/L			**1**		0.098	0.088	0.09	0.089
Barium, dissolved	mg/L			**1**		0.058	0.084	0.09	0.095
Beryllium, total	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L			**0.00013**		<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L					<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L					<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**1.5**	**29**	**1.2**		<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.0000716	0.0000253	0.0000053	0.000021
Cadmium, dissolved	mg/L	**EQ24**	**EQ26**	**EQ3**	**EQ4**	0.000017	<0.000017	<0.000017	<0.000017
Calcium, total	mg/L					10.8	22	36.1	35.5
Calcium, dissolved	mg/L					11.2	23.1	35	37.6
Cesium, total	mg/L								
Cesium, dissolved	mg/L								
Chromium, total	mg/L					<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L					<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L					0.0012	<0.001	<0.001	<0.001
Cobalt, total	mg/L			**0.004**	**0.11**	0.00086	<0.0003	<0.0003	<0.0003
Cobalt, dissolved	mg/L			**0.004**	**0.11**	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ19**		**EQ5**	**EQ6**	0.0029	<0.001	<0.001	<0.001
Copper, dissolved	mg/L	**EQ19**		**EQ5**	**EQ6**	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L	**0.3**		**0.001**		1.96	0.416	<0.03	<0.03
Iron, dissolved	mg/L	**0.3**		**0.35**		<0.03	<0.03	<0.03	<0.03
Lead, total	mg/L	**EQ25**		**EQ8**	**EQ9**	0.0042	0.00103	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ25**		**EQ8**	**EQ9**	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L					2.09	3.79	6.47	6.62
Magnesium, dissolved	mg/L					1.8	3.95	6.5	7.2
Manganese, total	mg/L			**EQ10**	**EQ11**	0.106	0.0272	0.0015	0.00238
Manganese, dissolved	mg/L			**EQ10**	**EQ11**	0.00951	0.0024	0.00037	0.00031
Mercury, total	mg/L	**0.000026**		**0.00002**		0.0000136	0.000082	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.000026**		**0.00002**		<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	0.001	0.0012
Molybdenum, dissolved	mg/L	**0.073**		**1**	**2**	<0.001	<0.001	<0.001	0.0012
Nickel, total	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001
Nickel, dissolved	mg/L	**EQ20**		**EQ22**		<0.001	<0.001	<0.001	<0.001
Potassium, total	mg/L					<2	<2	<2	<2
Potassium, dissolved	mg/L					<2	<2	<2	<2
Selenium, total	mg/L	**0.001**		**0.002**		0.000167	0.000378	0.000892	0.00116
Selenium, dissolved	mg/L	**0.001**		**0.002**		0.000126	0.000389	0.00104	0.00107
Silicon, total	mg/L					3.66	1.74	1.95	2.11
Silicon, dissolved	mg/L					0.494	1.17	1.98	2.23
Silver, total	mg/L	**0.00025**		**EQ14**	**EQ15**	0.000088	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**0.00025**		**EQ14**	**EQ15**	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L					<2	<2	<2	<2
Sodium, dissolvd	mg/L					<2	<2	<2	<2
Strontium, total	mg/L					0.0698	0.128	0.217	0.216
Strontium, dissolved	mg/L					0.0716	0.14	0.236	0.221
Sulfur, total	mg/L								
Sulfur, dissolved	mg/L								
Thallium, total	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.0008**		**0.0008**		<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L					<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005
Titanium, total	mg/L					0.035	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L					<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002
Uranium, dissolved	mg/L	**0.015**	**0.033**	**0.0085**		<0.0002	<0.0002	<0.0002	<0.0002
Vanadium, total	mg/L					0.00412	0.00093	<0.0005	0.00055
Vanadium, dissolved	mg/L					<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**0.03**		**EQ16**	**EQ17**	0.0101	<0.005	<0.005	<0.005
Zinc, dissolved	mg/L	**0.03**		**EQ16**	**EQ17**	<0.005	<0.005	<0.005	0.0091

Notes:

0.001	Underlined value exceeds CCME Long Term Water Quality Guidelines
0.001	Italisized value exceeds CCME Short Term Water Quality Guidelines
0.001	Red value exceeds BC Long Term Water Quality Guidelines
0.001	Highlighted value exceeds BC Short Term Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Tables H-1 and H-2 in Appendix H

Appendix D – 1990 to 2016 Groundwater Quality Data

Monitoring Location		BC CSR	Middle Cirque RMS5	Middle Cirque RMS6	Middle Cirque RMS7	Middle Cirque RMS5	Middle Cirque RMS5	Middle Cirque RMS6	Middle Cirque RMS7	Middle Cirque RMS6
Sampling Date			29-Jul-14	26-Aug-14	16-Sep-14	20-Oct-14	7-Jul-15	7-Jul-15	5-Aug-15	15-Oct-15
Field Parameters										
pH	pH units		8.33		7.46	9	7.88	7.03	8.11	
Conductivity	uS/cm		182		251.9		256	247	237	
Specific Conductivity	uS/cm				427.1		431	419	420.3	
Dissolved Oxygen	mg/L		3.24		1.54		0.87	2.15		
Dissolved Oxygen	%		24.4		14.6		6.8	16.5		
ORP	mV								186.4	
Turbidity	NTU		0.39		4.94	0	1.4	4.55	0.47	
TDS	mg/L						0.28	0.272		
Temperature	degC		3.52		3.4	3.9	3.8	3.14	2.1	
Physical Parameters										
pH	pH units		7.54	7.9	7.84	8.01	7.89	7.93	8.04	7.94
Specific Conductance	uS/cm		461	379	377	482	497	450	408	501
Total Hardness	mg/L		236	185	192	224	239	214	197	236
Total dissolved solids	mg/L		340	296	306	325	357	310	285	353
Total suspended solids	mg/L		<3	<3	9.1	<3	<3	<3	<3	4.4
Turbidity	NTU		0.3	<0.1	0.41	0.34	0.49	0.87	0.5	2.7
Major Ions										
Total alkalinity	mg/L as Ca CO3		66.9	57.5	72.2	64.1	66.6	64.9	71	63.3
Alkalinity to pH 4.5	mg/L as Ca CO3									
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3		66.9	57.5	72.2	64.1	66.6	64.9	71	63.3
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3		<2	<2	<2	<2	<2	<2	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3		<2	<2	<2	<2	<2	<2	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3									
Acidity	mg/L		4.2	2.4	6	1.7	2.6	2.4	1.7	1.8
Chloride	mg/L	**1500**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**EQ1**	0.096	0.084	0.045	0.087	0.083	0.079	0.042	0.075
Bromide	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L	**1000**	182	144	129	190	190	167	132	201
Nutrients										
Nitrate Nitrogen	mg/L as N	**400**	0.0052	<0.005	<0.005	0.0062	<0.005	<0.005	<0.005	<0.005
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N		<0.05				<0.03	<0.03		
Ammonia Nitrogen	mg/L as N	**EQ3**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N									
Ortho phosphorus, dissolved	mg/L		<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L		<0.002	<0.3	<0.002	<0.002	<0.002	0.0052	<0.002	<0.002
Organics										
Total Organic Carbon	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.59	<0.5
Other										
Cyanide, total	mg/L	**0.05**								
Cyanide, WAD	mg/L									
Thiocyanate	mg/L									
Metals										
Aluminum, total	mg/L		<0.003	<0.003	<0.003	<0.003	<0.003	0.0121	0.0102	0.0215
Aluminum, dissolved	mg/L		<0.001	<0.001	0.0018	0.0012	0.0027	0.0038	0.0015	0.0025
Antimony, total	mg/L	**0.2**	0.00131	0.00273	0.00511	0.00122	0.00141	0.00789	0.00596	0.00396
Antimony, dissolved	mg/L	**0.2**	0.00127	0.00271	0.00527	0.00122	0.00133	0.00302	0.00568	0.00283
Arsenic, total	mg/L	**0.05**	0.00326	0.00387	0.00634	0.00308	0.00407	0.0183	0.00824	0.0114
Arsenic, dissolved	mg/L	**0.05**	0.00325	0.00386	0.00641	0.00319	0.004	0.00428	0.00679	0.00393
Barium, total	mg/L	**10**	0.0129	0.0123	0.0118	0.0118	0.0127	0.0157	0.0123	0.0153
Barium, dissolved	mg/L	**10**	0.0126	0.0123	0.0121	0.0121	0.0128	0.0121	0.0124	0.0145
Beryllium, total	mg/L	**0.053**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Beryllium, dissolved	mg/L	**0.053**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**50**	0.011	<0.01	0.046	0.012	0.01	0.012	0.043	0.013
Boron, dissolved	mg/L	**50**	<0.01	<0.01	0.039	<0.01	<0.01	<0.01	0.039	<0.01
Cadmium, total	mg/L		0.000012	0.000046	0.000331	0.000011	0.0000158	0.000254	0.000404	0.0000373
Cadmium, dissolved	mg/L		<0.00001	0.000052	0.00035	0.000018	0.0000086	0.0000151	0.000341	0.0000144
Calcium, total	mg/L		79.8	60.1	60.9	75.5	77.2	71.2	66.6	85.5
Calcium, dissolved	mg/L		77.1	60.9	63.1	72.5	77.6	71.1	64.3	77.6
Cesium, total	mg/L									
Cesium, dissolved	mg/L									
Chromium, total	mg/L	**0.01**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00014	<0.0001	0.00018
Chromium, dissolved	mg/L	**0.01**	0.00011	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium, hexavalent	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L	**0.04**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00011	<0.0001	<0.0001
Cobalt, dissolved	mg/L	**0.04**	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Copper, total	mg/L	**EQ4**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00728	<0.0005	0.00146
Copper, dissolved	mg/L	**EQ4**	<0.0002	0.00054	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Iron, total	mg/L		0.028	0.017	0.048	0.026	0.095	0.715	0.104	0.412
Iron, dissolved	mg/L		0.021	0.016	0.046	0.023	0.083	0.024	0.048	0.032
Lead, total	mg/L	**EQ5**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000097	0.000162	0.000078
Lead, dissolved	mg/L	**EQ5**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L		10.4	7.91	8.33	10.4	10.8	8.76	9.01	10.6
Magnesium, dissolved	mg/L		10.5	7.91	8.34	10.3	10.9	8.8	8.8	10.3
Manganese, total	mg/L		0.0113	0.00995	0.0824	0.0102	0.0136	0.134	0.0918	0.0456
Manganese, dissolved	mg/L		0.0105	0.00966	0.0828	0.0102	0.0126	0.0179	0.0834	0.0233
Mercury, total	mg/L	**0.001**	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.001**	<0.00001	<0.00001	<0.00001	<0.00001	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**10**	0.0215	0.0259	0.00908	0.0201	0.0194	0.0284	0.0112	0.0252
Molybdenum, dissolved	mg/L	**10**	0.0204	0.0259	0.00864	0.0186	0.0185	0.0268	0.0108	0.0232
Nickel, total	mg/L	**EQ6**	<0.0005	<0.0005	0.00122	<0.0005	<0.0005	0.0009	0.00143	<0.0005
Nickel, dissolved	mg/L	**EQ6**	<0.0005	<0.0005	0.00125	<0.0005	<0.0005	<0.0005	0.00119	<0.0005
Potassium, total	mg/L		0.123	0.117	0.133	0.139	0.142	0.121	0.152	0.14
Potassium, dissolved	mg/L		0.12	0.129	0.127	0.144	0.145	0.118	0.153	0.126
Selenium, total	mg/L	**0.01**	0.00146	0.00146	0.00068	0.00106	0.00144	0.00176	0.000682	0.000826
Selenium, dissolved	mg/L	**0.01**	0.00139	0.0015	0.00073	0.00119	0.00145	0.0018	0.000777	0.000863
Silicon, total	mg/L		3.99	3.62	3.17	3.69	3.92	3.92	3.19	4.13
Silicon, dissolved	mg/L		3.84	3.68	3.18	3.81	4.04	3.79	3.09	3.73
Silver, total	mg/L	**EQ7**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Silver, dissolved	mg/L	**EQ7**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L		3.56	2.87	2.33	3.34	3.69	3.11	2.48	3.49
Sodium, dissolvd	mg/L		3.44	2.87	2.33	3.32	3.69	3.13	2.39	3.5
Strontium, total	mg/L		1.23	0.946	0.681	1.11	1.14	1.06	0.741	1.19
Strontium, dissolved	mg/L		1.18	0.952	0.708	1.06	1.13	1.05	0.715	1.13
Sulfur, total	mg/L						66.8	57.8	45.2	67.8
Sulfur, dissolved	mg/L						66.1	57.1	43.8	64.5
Thallium, total	mg/L	**0.003**	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Thallium, dissolved	mg/L	**0.003**	<0.00001	0.000011	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Tin, total	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/L		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Titanium, total	mg/L	**1**	<0.01	<0.01	<0.01	<0.01	<0.0003	0.00042	<0.0003	<0.0021
Titanium, dissolved	mg/L	**1**	<0.01	<0.01	<0.01	<0.01	<0.0003	<0.0003	<0.0003	<0.0003
Uranium, total	mg/L	**3**	0.000401	0.000301	0.00141	0.000393	0.000403	0.000352	0.00163	0.000385
Uranium, dissolved	mg/L	**3**	0.000381	0.000307	0.00136	0.000368	0.000389	0.000334	0.00155	0.000381
Vanadium, total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**EQ8**	<0.003	0.0033	0.0353	<0.003	<0.003	0.0116	0.0349	0.0048
Zinc, dissolved	mg/L	**EQ8**	0.0022	0.004	0.0359	0.0011	<0.001	0.0015	0.0322	0.0015

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

			Middle Cirque	Middle Cirque	Middle Cirque	Middle Cirque	Middle Cirque
Monitoring Location		BC CSR	RMS7	RMS-06	RMS5	RMS6	RMS7
Sampling Date			20-Jun-16	23-Jun-16	28-Sep-16	28-Sep-16	28-Sep-16
Field Parameters							
pH	pH units		8.21		7.35	7.1	7.53
Conductivity	uS/cm		191.5			308.6	200.7
Specific Conductivity	uS/cm		320.5			530.7	361.5
Dissolved Oxygen	mg/L		5.41		3.99	0.65	7.13
Dissolved Oxygen	%		51.9		36	6	62.5
ORP	mV		105.5				
Turbidity	NTU		2.03		3.4	8.89	6.99
TDS	mg/L						
Temperature	degC		2.4		2.8	3.1	1.7
Physical Parameters							
pH	pH units		8.03	7.99	7.93	7.94	8
Specific Conductance	uS/cm		330	479	521	515	347
Total Hardness	mg/L		175	243	281	274	169
Total dissolved solids	mg/L		242	334	408	400	252
Total suspended solids	mg/L		<3	<3	<3	5.5	<3
Turbidity	NTU		0.42	2.44	3.56	11.1	0.21
Major Ions							
Total alkalinity	mg/L as Ca CO3		65.6	58.4	63.4	62.7	69.1
Alkalinity to pH 4.5	mg/L as Ca CO3						
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3		65.6	58.4	63.4	62.7	69.1
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3		<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3		<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3						
Acidity	mg/L		1.6	2.1	2.6	2.6	2.1
Chloride	mg/L	**1500**	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoride	mg/L	**EQ1**	0.043	0.078	0.077	0.073	0.042
Bromide	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05
Sulfate	mg/L	**1000**	103	178	212	207	110
Nutrients							
Nitrate Nitrogen	mg/L as N	**400**	<0.005	<0.005	0.0051	<0.005	<0.005
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N						
Ammonia Nitrogen	mg/L as N	**EQ3**	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N						
Ortho phosphorus, dissolved	mg/L		0.0015	<0.001	<0.001	<0.001	<0.001
Phosphorus, total	mg/L		<0.002	<0.002	0.002	0.0034	<0.002
Organics							
Total Organic Carbon	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L		<0.5	<0.5	<0.5	<0.5	<0.5
Other							
Cyanide, total	mg/L	**0.05**					
Cyanide, WAD	mg/L						
Thiocyanate	mg/L						
Metals							
Aluminum, total	mg/L		<0.005	0.011	0.0214	0.0178	<0.005
Aluminum, dissolved	mg/L		<0.005	<0.005	<0.005	<0.005	<0.005
Antimony, total	mg/L	**0.2**	0.00647	0.00345	0.00147	0.00699	0.00488
Antimony, dissolved	mg/L	**0.2**	0.0062	0.00278	0.00118	0.00271	0.0047
Arsenic, total	mg/L	**0.05**	0.00921	0.00985	0.00625	0.0394	0.00774
Arsenic, dissolved	mg/L	**0.05**	0.00703	0.0039	0.00294	0.00364	0.00745
Barium, total	mg/L	**10**	<0.02	<0.02	<0.02	<0.02	<0.02
Barium, dissolved	mg/L	**10**	<0.02	<0.02	<0.02	<0.02	<0.02
Beryllium, total	mg/L	**0.053**	<0.001	<0.001	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L	**0.053**	<0.001	<0.001	<0.001	<0.001	<0.001
Bismuth, total	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**50**	<0.1	<0.1	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**50**	<0.1	<0.1	<0.1	<0.1	<0.1
Cadmium, total	mg/L		0.000711	0.0000229	0.0000224	0.0000635	0.00022
Cadmium, dissolved	mg/L		0.000687	<0.000017	<0.000017	<0.000017	0.000254
Calcium, total	mg/L		56.9	80.1	92.5	92.4	58.6
Calcium, dissolved	mg/L		57.6	81.5	92.2	91.7	55.9
Cesium, total	mg/L						
Cesium, dissolved	mg/L						
Chromium, total	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, dissolved	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt, total	mg/L	**0.04**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Cobalt, dissolved	mg/L	**0.04**	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Copper, total	mg/L	**EQ4**	0.001	<0.001	<0.001	0.0034	<0.001
Copper, dissolved	mg/L	**EQ4**	<0.001	<0.001	<0.001	<0.001	<0.001
Iron, total	mg/L		0.086	0.305	0.243	1.62	0.052
Iron, dissolved	mg/L		0.036	<0.03	0.039	0.037	0.053
Lead, total	mg/L	**EQ5**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ5**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L		7.55	9.75	12.8	11.6	7.67
Magnesium, dissolved	mg/L		7.62	9.68	12.3	10.8	7.15
Manganese, total	mg/L		0.0712	0.0302	0.0193	0.0578	0.0929
Manganese, dissolved	mg/L		0.0694	0.0228	0.0105	0.0299	0.0818
Mercury, total	mg/L	**0.001**	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.001**	<0.000005	<0.000005	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**10**	0.0082	0.0259	0.0189	0.0249	0.012
Molybdenum, dissolved	mg/L	**10**	0.0074	0.0246	0.0175	0.0225	0.0103
Nickel, total	mg/L	**EQ6**	0.0012	<0.001	<0.001	<0.001	0.0011
Nickel, dissolved	mg/L	**EQ6**	0.0012	<0.001	<0.001	<0.001	0.001
Potassium, total	mg/L		<2	<2	<2	<2	<2
Potassium, dissolved	mg/L		<2	<2	<2	<2	<2
Selenium, total	mg/L	**0.01**	0.00149	0.00174	0.00112	0.000869	0.000233
Selenium, dissolved	mg/L	**0.01**	0.0015	0.00149	0.00105	0.000785	0.000685
Silicon, total	mg/L		3.18	3.81	4.11	4.34	3.15
Silicon, dissolved	mg/L		3.14	3.77	3.92	3.86	3.04
Silver, total	mg/L	**EQ7**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Silver, dissolved	mg/L	**EQ7**	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L		2.3	3.4	3.7	3.5	2.1
Sodium, dissolvd	mg/L		2.3	3.3	3.7	3.5	2
Strontium, total	mg/L		0.662	1.17	1.19	1.25	0.615
Strontium, dissolved	mg/L		0.66	1.17	1.24	1.27	0.6
Sulfur, total	mg/L						
Sulfur, dissolved	mg/L						
Thallium, total	mg/L	**0.003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.003**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tin, total	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	0.00095
Titanium, total	mg/L	**1**	<0.01	<0.01	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L	**1**	<0.01	<0.01	<0.01	<0.01	<0.01
Uranium, total	mg/L	**3**	0.00149	0.00034	0.00045	0.00038	0.00128
Uranium, dissolved	mg/L	**3**	0.0014	0.00033	0.00043	0.00035	0.00113
Vanadium, total	mg/L		<0.0005	<0.0005	<0.0005	0.0006	<0.0005
Vanadium, dissolved	mg/L		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**EQ8**	0.0479	<0.005	<0.005	0.0059	0.0311
Zinc, dissolved	mg/L	**EQ8**	0.0453	<0.005	<0.005	<0.005	0.0339

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

Monitoring Location		BC CSR	Portal WS-93-6C	Portal WS-93-7C	Portal UG Discharge	Portal UG Discharge DDH-1225	Portal UG Discharge	Portal UG Discharge DDH-1106	Portal UG Discharge DDH-1113
Sampling Date			21-Oct-93	21-Oct-93	29-Nov-93	27-Feb-94	11-Mar-94	15-Jun-94	15-Jun-94
Field Parameters									
pH	pH units				7.7	7.2	7.7	7.6	7.6
Conductivity	uS/cm				338	310	294	238	382
Specific Conductivity	uS/cm								
Dissolved Oxygen	mg/L								
Dissolved Oxygen	%								
ORP	mV								
Turbidity	NTU								
TDS	mg/L								
Temperature	degC								
Physical Parameters									
pH	pH units		7.4	7.5		7.2	7.2	7.5	7.3
Specific Conductance	uS/cm		370	360		340	290	230	340
Total Hardness	mg/L					140	96	69	120
Total dissolved solids	mg/L		0.32	0.29		240	200	130	230
Total suspended solids	mg/L		<0.002	<0.002		10	2	5	11
Turbidity	NTU		0.17	0.28		17	0.4	4.3	7.8
Major Ions									
Total alkalinity	mg/L as Ca CO3					46	51	60	66
Alkalinity to pH 4.5	mg/L as Ca CO3		59	49					
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3								
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3								
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3								
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3								
Acidity	mg/L		2.7	2.5		5.2	4.6	4.4	4.8
Chloride	mg/L	**1500**	0.003	0.0025		0.5	1.5	0.5	0.5
Fluoride	mg/L	**EQ1**	0.0001	0.0001		0.2	0.15	0.1	0.1
Bromide	mg/L								
Sulfate	mg/L	**1000**	0.13	0.13		110	86	62	130
Nutrients									
Nitrate Nitrogen	mg/L as N	**400**	<0.5	<0.5		1.3	0.05	<0.05	0.05
Nitrite Nitrogen	mg/L as N	**EQ2**	88	94		0.055	0.005	<0.001	0.022
Nitrogen, total	mg/L as N								
Ammonia Nitrogen	mg/L as N	**EQ3**							
Free Ammonia	mg/L as NH3-N		<0.5	<0.5		0.15	<0.005	<0.005	0.006
Ortho phosphorus, dissolved	mg/L		<0.05	<0.05		0.004	<0.002	0.013	0.008
Phosphorus, total	mg/L					0.031	0.014	0.026	0.051
Organics									
Total Organic Carbon	mg/L								
Dissolved Organic Carbon	mg/L								
Other									
Cyanide, total	mg/L	**0.05**							
Cyanide, WAD	mg/L								
Thiocyanate	mg/L								
Metals									
Aluminum, total	mg/L		0.028	0.053	0.81	0.261	<0.001	0.027	0.0113
Aluminum, dissolved	mg/L		0.0037	<0.001	0.0057	0.00699	<0.001	<0.001	0.00225
Antimony, total	mg/L	**0.2**	0.0047	0.1	0.012	0.0204	0.0092399	0.0111	0.0321
Antimony, dissolved	mg/L	**0.2**	0.0036	0.1	0.011	0.0191	0.00794	0.0054099	0.0237
Arsenic, total	mg/L	**0.05**	0.059	0.021	0.005	0.009	0.01	0.038	0.007
Arsenic, dissolved	mg/L	**0.05**	0.058	0.014	0.005	0.009	0.01	0.031	0.005
Barium, total	mg/L	**10**	0.024	0.02	0.037	0.0273	0.0147	0.0245	0.0237
Barium, dissolved	mg/L	**10**	0.022	0.019	0.024	0.0221	0.0123	0.0214	0.0219
Beryllium, total	mg/L	**0.053**	0.00022	0.00024	0.00022	0.00006	0.0002	<0.0001	<0.0001
Beryllium, dissolved	mg/L	**0.053**	0.00011	0.00006	<0.00006	<0.00012	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L								
Bismuth, dissolved	mg/L								
Boron, total	mg/L	**50**	0.054	0.081	0.078	0.0534	0.0239	0.0409	0.052
Boron, dissolved	mg/L	**50**	0.011	0.015	0.058	0.0462	<0.001	0.0226	0.0484
Cadmium, total	mg/L		<0.0002	0.00034	<0.0001	<0.00011	0.00012	<0.0001	<0.0001
Cadmium, dissolved	mg/L		<0.0001	0.00022	<0.0001	<0.00011	<0.0001	<0.0001	<0.0001
Calcium, total	mg/L		96	86	85	60.7	39.4	28	41.4
Calcium, dissolved	mg/L		71	75	71	45.5	30.3	22	41.4
Cesium, total	mg/L								
Cesium, dissolved	mg/L								
Chromium, total	mg/L	**0.01**	0.0021	0.0021	0.004	0.0115	0.00088	0.00056	0.00138
Chromium, dissolved	mg/L	**0.01**	0.002	0.002	0.0033	0.00063	0.00075	0.00042	0.00069
Chromium, hexavalent	mg/L								
Cobalt, total	mg/L	**0.04**	0.00035	0.0013	0.00089	0.00033	<0.00004	<0.00004	0.00016
Cobalt, dissolved	mg/L	**0.04**	0.0003	0.00072	0.00036	0.00026	<0.00004	<0.00004	0.00015
Copper, total	mg/L	**EQ4**	0.01	0.01	0.023	0.00316	0.0306	0.00073	0.0014
Copper, dissolved	mg/L	**EQ4**	0.00031	0.00044	<0.0004	0.00316	0.00225	<0.0004	0.0011
Iron, total	mg/L		0.055	0.092	1.4	0.35	0.0542	0.06	0.05
Iron, dissolved	mg/L		0.049	0.06	<0.01	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ5**	0.00094	0.00095	0.0032	0.00079	0.0012	0.00125	0.00158
Lead, dissolved	mg/L	**EQ5**	<0.00009	<0.00009	<0.0002	<0.00012	<0.00007	0.00027	0.00041
Magnesium, total	mg/L		17	11	11	10.4	7.03	4.56	4.09
Magnesium, dissolved	mg/L		14	11	11	7.4	4.96	3.43	4.01
Manganese, total	mg/L		0.15	0.17	0.15	0.122	0.0159	0.0196	0.135
Manganese, dissolved	mg/L		0.12	0.17	0.13	0.0868	0.0105	0.0143	0.125
Mercury, total	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**10**	0.0028	0.0048	0.0037	0.00249	0.00185	0.00095	0.00278
Molybdenum, dissolved	mg/L	**10**	0.002	0.0044	0.0027	0.00201	0.00096	0.0008	0.00246
Nickel, total	mg/L	**EQ6**	0.0022	0.0035	0.0086	0.00284	0.0009	0.0118	0.00344
Nickel, dissolved	mg/L	**EQ6**	0.0007	0.0015	0.0032	0.00064	0.00082	0.00627	0.00339
Potassium, total	mg/L		0.61	0.73	3.2	0.75	0.3	0.15	0.2
Potassium, dissolved	mg/L		0.6	0.71	1.3	0.4	0.05	0.05	0.15
Selenium, total	mg/L	**0.01**	0.002	0.016	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L								
Silicon, dissolved	mg/L								
Silver, total	mg/L	**EQ7**	0.00022	0.00015	0.00018	0.00011	0.00016	0.00002	0.00002
Silver, dissolved	mg/L	**EQ7**	0.00001	<0.00001	<0.0001	0.00005	<0.0001	0.00005	0.00005
Sodium, total	mg/L		7.9	4.8	7.5	6.14	4.52	2.45	1.58
Sodium, dissolvd	mg/L		5.5	3.6	6.5	4.45	2.68	1.74	1.56
Strontium, total	mg/L		2.6	1.1	3	2.11	1.2	0.971	0.316
Strontium, dissolved	mg/L		2.3	1.1	2.7	1.85	0.995	0.844	0.307
Sulfur, total	mg/L								
Sulfur, dissolved	mg/L								
Thallium, total	mg/L	**0.003**							
Thallium, dissolved	mg/L	**0.003**							
Tin, total	mg/L								
Tin, dissolved	mg/L								
Titanium, total	mg/L	**1**							
Titanium, dissolved	mg/L	**1**							
Uranium, total	mg/L	**3**	0.0001	0.00034	0.00015	0.00016	0.00018	0.00016	0.00099
Uranium, dissolved	mg/L	**3**	0.00008	0.00032	0.00015	0.00016	0.00017	0.00013	0.00094
Vanadium, total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**	0.0022	0.0036	0.017	0.014	0.0446	0.00671	0.0125
Zinc, dissolved	mg/L	**EQ8**	<0.0007	<0.0007	0.0081999	0.00577	0.0174	0.00324	0.00501

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

Monitoring Location		BC CSR	Portal UG Discharge	Portal UG Discharge	Portal UG Discharge 1480A	Portal UG Discharge 1480B	Portal UG Discharge	Portal UG Discharge
Sampling Date			27-Jul-94	8-Aug-94	8-May-96	8-May-96	25-Jun-96	14-Aug-96
Field Parameters								
pH	pH units			7.52			7.55	7.81
Conductivity	uS/cm			226				437
Specific Conductivity	uS/cm							
Dissolved Oxygen	mg/L							
Dissolved Oxygen	%							
ORP	mV							
Turbidity	NTU							
TDS	mg/L							
Temperature	degC							
Physical Parameters								
pH	pH units			7.5	7.7	7.8	7.7	7.9
Specific Conductance	uS/cm			250	467	461	559	550
Total Hardness	mg/L			93	181	184	198	151
Total dissolved solids	mg/L			190	293	266	411	313
Total suspended solids	mg/L			3	<1	<1	11	14
Turbidity	NTU			1.6	0.35	0.5	10	18
Major Ions								
Total alkalinity	mg/L as Ca CO3			38	50	50	47	54
Alkalinity to pH 4.5	mg/L as Ca CO3							
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3							
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3							
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3							
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3							
Acidity	mg/L			3.2	1.7	1.6	2.4	3
Chloride	mg/L	**1500**		0.5	0.21	0.22	0.21	0.19
Fluoride	mg/L	**EQ1**		0.1	<0.05	<0.05	0.07	<0.05
Bromide	mg/L							
Sulfate	mg/L	**1000**		88	185	179	246	160
Nutrients								
Nitrate Nitrogen	mg/L as N	**400**		<0.05	0.02	0.018	0.015	0.579
Nitrite Nitrogen	mg/L as N	**EQ2**		0.009	<0.001	<0.001	<0.001	0.174
Nitrogen, total	mg/L as N							
Ammonia Nitrogen	mg/L as N	**EQ3**						
Free Ammonia	mg/L as NH3-N			0.067	0.013	0.016	<0.005	0.375
Ortho phosphorus, dissolved	mg/L			0.004	0.004	0.002	0.006	0.002
Phosphorus, total	mg/L			0.019	0.006	0.002	0.026	0.037
Organics								
Total Organic Carbon	mg/L							
Dissolved Organic Carbon	mg/L							
Other								
Cyanide, total	mg/L	**0.05**						
Cyanide, WAD	mg/L							
Thiocyanate	mg/L							
Metals								
Aluminum, total	mg/L			0.0493	<0.0005	<0.0005	0.153	0.265
Aluminum, dissolved	mg/L			<0.001	<0.0005	<0.0005	<0.0005	0.0076999
Antimony, total	mg/L	**0.2**		0.0556	0.0017	0.00168	0.00442	0.00659
Antimony, dissolved	mg/L	**0.2**		0.0556	0.00166	0.00161	0.00434	0.00653
Arsenic, total	mg/L	**0.05**		0.0215	0.003	0.003	0.009	0.004
Arsenic, dissolved	mg/L	**0.05**		0.0211	0.003	0.003	0.004	0.003
Barium, total	mg/L	**10**		0.0185	0.0169	0.0168	0.0253	0.0217
Barium, dissolved	mg/L	**10**		0.0183	0.0168	0.0169	0.0216	0.0155
Beryllium, total	mg/L	**0.053**		0.0001	<0.00005	<0.00005	<0.00005	<0.00005
Beryllium, dissolved	mg/L	**0.053**		0.0001	<0.00005	<0.00005	<0.00005	<0.00005
Bismuth, total	mg/L							
Bismuth, dissolved	mg/L							
Boron, total	mg/L	**50**		0.0264	0.006	0.008	0.038	0.029
Boron, dissolved	mg/L	**50**		<0.0016	0.005	0.005	0.034	0.024
Cadmium, total	mg/L			0.000085	0.0003	0.0002	0.0003	0.0004
Cadmium, dissolved	mg/L			<0.00017	0.0001	<0.0001	0.0003	0.0001
Calcium, total	mg/L			34.8	64.7	66	73.8	53.8
Calcium, dissolved	mg/L			30.8	62.7	63.9	66.7	49.4
Cesium, total	mg/L							
Cesium, dissolved	mg/L							
Chromium, total	mg/L	**0.01**		<0.0005	0.0011	0.0012	0.0017	0.0016
Chromium, dissolved	mg/L	**0.01**		<0.0005	0.0008	0.0006	0.0011	0.0009
Chromium, hexavalent	mg/L							
Cobalt, total	mg/L	**0.04**		0.00032	0.00042	0.00051	0.00052	0.00069
Cobalt, dissolved	mg/L	**0.04**		<0.00011	0.00035	0.00038	0.00027	0.00056
Copper, total	mg/L	**EQ4**		0.0363	0.0014	0.0019	0.0003	0.003
Copper, dissolved	mg/L	**EQ4**		0.00041	<0.0001	<0.0001	0.0003	0.0001
Iron, total	mg/L			0.07	0.04	0.06	0.38	0.4
Iron, dissolved	mg/L			<0.01	0.03	0.03	0.02	<0.01
Lead, total	mg/L	**EQ5**		0.00037	0.00012	0.00021	0.00151	0.00132
Lead, dissolved	mg/L	**EQ5**		<0.00008	<0.00005	<0.00005	<0.00005	<0.00005
Magnesium, total	mg/L			4.75	6.18	6.36	7.87	6.67
Magnesium, dissolved	mg/L			3.98	5.82	5.88	7.69	6.66
Manganese, total	mg/L			0.0429	0.0046	0.0046	0.0577	0.0843
Manganese, dissolved	mg/L			0.0376	0.0031	0.0037	0.0477	0.0728
Mercury, total	mg/L	**0.001**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.001**		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**10**		0.00259	0.00144	0.00157	0.00158	0.0023
Molybdenum, dissolved	mg/L	**10**		0.00216	0.00132	0.00137	0.00152	0.00127
Nickel, total	mg/L	**EQ6**		0.00106	0.0025	0.003	0.0011	0.0023
Nickel, dissolved	mg/L	**EQ6**		<0.0004	0.0009	0.0011	0.0004	0.0022
Potassium, total	mg/L			0.3	<0.02	0.05	0.27	0.34
Potassium, dissolved	mg/L			0.2	0.06	0.06	0.24	0.22
Selenium, total	mg/L	**0.01**		0.003	<0.001	<0.001	0.003	<0.001
Selenium, dissolved	mg/L	**0.01**		<0.001	<0.001	<0.001	0.002	<0.001
Silicon, total	mg/L							
Silicon, dissolved	mg/L							
Silver, total	mg/L	**EQ7**		0.00002	0.00005	0.00006	0.00002	0.00005
Silver, dissolved	mg/L	**EQ7**		0.00005	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L			2.45	2.26	2.26	2.87	2.83
Sodium, dissolvd	mg/L			1.96	2.07	2.11	2.58	2.96
Strontium, total	mg/L			0.699	3.14	2.98	1.86	0.82
Strontium, dissolved	mg/L			0.683	2.94	2.9	1.7	0.805
Sulfur, total	mg/L							
Sulfur, dissolved	mg/L							
Thallium, total	mg/L	**0.003**						
Thallium, dissolved	mg/L	**0.003**						
Tin, total	mg/L							
Tin, dissolved	mg/L							
Titanium, total	mg/L	**1**						
Titanium, dissolved	mg/L	**1**						
Uranium, total	mg/L	**3**		0.00028	0.0001	0.00011	0.00015	0.00011
Uranium, dissolved	mg/L	**3**		0.00027	0.00006	0.00013	0.00014	0.0001
Vanadium, total	mg/L			<0.001	<0.001	<0.001	0.001	0.001
Vanadium, dissolved	mg/L			<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**		0.0259	0.025	0.024	0.019	0.01
Zinc, dissolved	mg/L	**EQ8**		0.0116	0.01	0.01	0.008	0.005

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

Monitoring Location		BC CSR	Portal UG Discharge	Portal UG Discharge	Portal UG Discharge	Portal UG Discharge	Portal UG Discharge	Portal UG Discharge	Portal UG
Sampling Date			26-Aug-96	14-Sep-96	16-Sep-96	1-Oct-96	15-Oct-96	12-Aug-97	26-Oct-00
Field Parameters									
pH	pH units		7.87	7.06		7.3	7.2		7.6
Conductivity	uS/cm		367	367		457	440		
Specific Conductivity	uS/cm								
Dissolved Oxygen	mg/L								
Dissolved Oxygen	%								
ORP	mV								
Turbidity	NTU								
TDS	mg/L								
Temperature	degC								
Physical Parameters									
pH	pH units		7.9	7.6	7.8	7.5	7.6	7.8	7.6
Specific Conductance	uS/cm		512	420	427	486	485	437	
Total Hardness	mg/L		237	171	210	252	214	191	166
Total dissolved solids	mg/L		302	288	295	339	362	312	269
Total suspended solids	mg/L		8	11	<1	12	<1	6	
Turbidity	NTU		1.6	13	0.6	2.2	1.4	2.5	
Major Ions									
Total alkalinity	mg/L as Ca CO3		46	54	48	50	56	47	
Alkalinity to pH 4.5	mg/L as Ca CO3								
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3				48			47	
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3				0.5			0.5	
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3								
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3								
Acidity	mg/L		2	2	3	3	2	2	3
Chloride	mg/L	**1500**	0.15	0.16	0.12	0.15	0.15	0.15	
Fluoride	mg/L	**EQ1**	<0.05	<0.05	0.03	0.05	0.06	0.04	
Bromide	mg/L								
Sulfate	mg/L	**1000**	100	176	172.9	196	213	189	145
Nutrients									
Nitrate Nitrogen	mg/L as N	**400**	0.0633	0.082	0.015	0.044	0.029	0.027	0.02
Nitrite Nitrogen	mg/L as N	**EQ2**	0.021	0.025	<0.001	0.0197	0.009	<0.001	0.003
Nitrogen, total	mg/L as N								
Ammonia Nitrogen	mg/L as N	**EQ3**			0.01			0.01	<0.005
Free Ammonia	mg/L as NH3-N		0.054	<0.005		0.01	0.01		
Ortho phosphorus, dissolved	mg/L		0.002	0.006	0.007	0.004	0.004	0.004	
Phosphorus, total	mg/L		0.016	0.018	0.01	0.028	0.016	0.017	
Organics									
Total Organic Carbon	mg/L								
Dissolved Organic Carbon	mg/L								
Other									
Cyanide, total	mg/L	**0.05**							
Cyanide, WAD	mg/L								
Thiocyanate	mg/L								
Metals									
Aluminum, total	mg/L		0.199	0.0335	0.0165	0.127	0.0745999	0.02	
Aluminum, dissolved	mg/L		0.0034	0.0019	<0.0005	0.0028	<0.0005	0.016	0.008
Antimony, total	mg/L	**0.2**	0.00652	0.006	0.00661	0.0111	0.0197	0.0136	
Antimony, dissolved	mg/L	**0.2**	0.0059899	0.0059899	0.00573	0.0101999	0.0182	0.0128999	0.0081
Arsenic, total	mg/L	**0.05**	0.011	0.006	0.012	0.016	0.014	0.007	
Arsenic, dissolved	mg/L	**0.05**	0.008	0.004	0.011	0.01	0.014	0.006	0.0026
Barium, total	mg/L	**10**	0.0192	0.0205	0.0141	0.0273999	0.0175	0.0205	
Barium, dissolved	mg/L	**10**	0.0172999	0.0193999	0.0153	0.024	0.016	0.0202	0.01
Beryllium, total	mg/L	**0.053**	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	
Beryllium, dissolved	mg/L	**0.053**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.001
Bismuth, total	mg/L								
Bismuth, dissolved	mg/L								
Boron, total	mg/L	**50**	0.037	0.016	0.037	0.036	0.033	0.026	
Boron, dissolved	mg/L	**50**	0.03	0.016	0.036	0.036	0.033	0.024	<0.1
Cadmium, total	mg/L		0.0017	0.0009	0.0006	0.0003	<0.0001	0.0012	
Cadmium, dissolved	mg/L		0.0007	<0.0001	0.0005	0.0002	<0.0001	0.0012	0.00047
Calcium, total	mg/L		82.2	58.4	67.3	87.7	75.9	65.3	
Calcium, dissolved	mg/L		81.6	58.2	69.6	86.9	74.8	61.4	54.8
Cesium, total	mg/L								
Cesium, dissolved	mg/L								
Chromium, total	mg/L	**0.01**	0.0016	0.0013	0.0021	<0.0005	<0.0005	<0.0005	
Chromium, dissolved	mg/L	**0.01**	0.0016	0.0012	0.0009	<0.0005	<0.0005	0.00025	<0.0005
Chromium, hexavalent	mg/L								
Cobalt, total	mg/L	**0.04**	0.00032	0.002	<0.00006	0.00045	0.00056	0.00038	
Cobalt, dissolved	mg/L	**0.04**	0.00018	0.0011	0.0004	0.00037	0.00056	0.00003	0.0005
Copper, total	mg/L	**EQ4**	0.0019	0.0009	0.0009	0.0016	0.0007	0.0015	
Copper, dissolved	mg/L	**EQ4**	<0.0001	0.0003	0.0001	<0.0001	0.0002	0.0007	0.0014
Iron, total	mg/L		0.42	0.15	0.23	0.32	0.2	0.07	
Iron, dissolved	mg/L		<0.01	0.02	0.14	<0.01	0.01	0.03	<0.03
Lead, total	mg/L	**EQ5**	0.00061	0.00047	0.00016	0.00046	0.00087	0.00053	
Lead, dissolved	mg/L	**EQ5**	0.00009	0.00011	<0.00005	0.00013	<0.00005	0.000025	<0.0001
Magnesium, total	mg/L		9.28	6.39	9.04	9.13	12.1	9.25	
Magnesium, dissolved	mg/L		8.08	6.19	8.79	8.41	6.53	9.25	7.1
Manganese, total	mg/L		0.0369	0.054	0.0634	0.0442999	0.117	0.112	
Manganese, dissolved	mg/L		0.0308999	0.0505999	0.0735	0.0380999	0.112	0.1	0.091
Mercury, total	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.000025	<0.00002
Molybdenum, total	mg/L	**10**	0.00126	0.00109	0.00095	0.00275	0.00152	0.00222	
Molybdenum, dissolved	mg/L	**10**	0.0012	0.00106	0.00098	0.00263	0.00135	0.0022	0.03
Nickel, total	mg/L	**EQ6**	0.0022	0.00038	0.0028	0.0019	0.0023	0.0046999	
Nickel, dissolved	mg/L	**EQ6**	0.0014	0.00035	0.0024	0.0012	0.002	0.0032	0.001
Potassium, total	mg/L		0.39	0.23	0.36	0.36	0.18	0.34	
Potassium, dissolved	mg/L		0.29	0.22	0.24	0.34	0.17	0.16	<2
Selenium, total	mg/L	**0.01**	0.002	<0.001	0.005	<0.001	<0.001	<0.001	
Selenium, dissolved	mg/L	**0.01**	0.002	<0.001	0.002	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L								
Silicon, dissolved	mg/L								
Silver, total	mg/L	**EQ7**	0.00004	0.00009	0.00005	0.00005	<0.00001	<0.00001	
Silver, dissolved	mg/L	**EQ7**	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00002
Sodium, total	mg/L		3.63	2.64	3	3.3	3.05	2.55	
Sodium, dissolvd	mg/L		3.16	2.6	2.84	3.16	1.72	2.52	2
Strontium, total	mg/L		1.54	0.733	0.838	1.63	1.22	0.993	
Strontium, dissolved	mg/L		1.42	0.725	0.883	1.59	1.2	0.993	
Sulfur, total	mg/L								
Sulfur, dissolved	mg/L								
Thallium, total	mg/L	**0.003**							
Thallium, dissolved	mg/L	**0.003**							
Tin, total	mg/L								
Tin, dissolved	mg/L								
Titanium, total	mg/L	**1**							
Titanium, dissolved	mg/L	**1**							
Uranium, total	mg/L	**3**	0.00029	0.00018	0.00114	0.00034	0.00044	0.00055	
Uranium, dissolved	mg/L	**3**	0.00014	0.00017	0.00095	0.00014	0.00042	0.00055	<0.0002
Vanadium, total	mg/L		<0.001	<0.001	<0.001	0.002	<0.001	<0.001	
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.03
Zinc, total	mg/L	**EQ8**	0.005	0.019	0.012	0.016	0.004	0.046	
Zinc, dissolved	mg/L	**EQ8**	0.002	0.016	0.012	0.01	0.004	0.038	0.06

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

Monitoring Location		BC CSR	Portal RM-SEEP-04	Portal 04RM01	Portal RMVG	Portal 06 RM VG	Portal RMS4	Portal RMS4	Portal RMS4
Sampling Date			19-Aug-03	12-Sep-04	26-Jul-05	27-Jul-06	24-Jun-14	5-Aug-15	11-May-16
Field Parameters									
pH	pH units						7.78	7.88	7.9
Conductivity	uS/cm						239	222.9	238
Specific Conductivity	uS/cm							409	403.9
Dissolved Oxygen	mg/L						4.63	4.71	1.74
Dissolved Oxygen	%						33	41.5	16
ORP	mV							252.5	
Turbidity	NTU							1.35	0.1
TDS	mg/L								
Temperature	degC						1.4	1.2	3.6
Physical Parameters									
pH	pH units		7.96	7.96	7.75	7.9	7.99	7.83	7.78
Specific Conductance	uS/cm					386	431	454	436
Total Hardness	mg/L		176		197	194	237	225	236
Total dissolved solids	mg/L		230	254	264	278	318	316	321
Total suspended solids	mg/L						5.4	5.3	<3
Turbidity	NTU						4.6	0.62	1.83
Major Ions									
Total alkalinity	mg/L as Ca CO3		50	49.9	63.5	2	73	68.9	68.1
Alkalinity to pH 4.5	mg/L as Ca CO3								
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3						73	68.9	68.1
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3						<2	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3						<2	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3								
Acidity	mg/L		1	3.7	8.7	1		3.2	2.5
Chloride	mg/L	**1500**					<0.5	<0.5	<0.5
Fluoride	mg/L	**EQ1**					0.038	0.035	0.03
Bromide	mg/L						<0.05	<0.05	<0.05
Sulfate	mg/L	**1000**	130	135	133		153	161	160
Nutrients									
Nitrate Nitrogen	mg/L as N	**400**	<0.005	<0.005	<0.005	<0.005	0.0064	0.0058	<0.005
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N						<0.05		
Ammonia Nitrogen	mg/L as N	**EQ3**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Free Ammonia	mg/L as NH3-N								
Ortho phosphorus, dissolved	mg/L						0.001	<0.001	<0.001
Phosphorus, total	mg/L						0.0054	<0.002	<0.002
Organics									
Total Organic Carbon	mg/L						<0.5	<0.5	<0.5
Dissolved Organic Carbon	mg/L						<0.5	<0.5	<0.5
Other									
Cyanide, total	mg/L	**0.05**							
Cyanide, WAD	mg/L								
Thiocyanate	mg/L								
Metals									
Aluminum, total	mg/L						0.0898	0.0134	0.0295
Aluminum, dissolved	mg/L		<0.005	0.0016	0.0065	0.0061	<0.005	0.0058	<0.005
Antimony, total	mg/L	**0.2**					0.00795	0.00764	0.0063
Antimony, dissolved	mg/L	**0.2**	0.0064	0.00809	0.00837	0.00971	0.00718	0.00756	0.00543
Arsenic, total	mg/L	**0.05**					0.0478	0.0162	0.0446
Arsenic, dissolved	mg/L	**0.05**	0.0013	0.00074	0.0063	0.00561	0.0108	0.0124	0.0289
Barium, total	mg/L	**10**					<0.02	0.0126	<0.02
Barium, dissolved	mg/L	**10**	<0.02	0.0115	<0.02	<0.02	<0.02	0.0125	<0.02
Beryllium, total	mg/L	**0.053**					<0.001	<0.0001	<0.001
Beryllium, dissolved	mg/L	**0.053**	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0001	<0.001
Bismuth, total	mg/L						<0.05	<0.00005	<0.05
Bismuth, dissolved	mg/L						<0.05	<0.00005	<0.05
Boron, total	mg/L	**50**					<0.1	0.082	<0.1
Boron, dissolved	mg/L	**50**	<0.1	0.04	<0.1	<0.1	<0.1	0.078	<0.1
Cadmium, total	mg/L						0.000443	0.000163	0.000341
Cadmium, dissolved	mg/L		0.00046	0.000808	0.000632	0.00044	0.000111	0.000169	0.000097
Calcium, total	mg/L						71.4	73.6	77.3
Calcium, dissolved	mg/L		57.2	60.2	65.4	63	73.7	72.6	74.8
Cesium, total	mg/L								
Cesium, dissolved	mg/L								
Chromium, total	mg/L	**0.01**					<0.001	<0.0001	<0.001
Chromium, dissolved	mg/L	**0.01**	<0.001	<0.0005	<0.001	<0.001	<0.001	<0.0001	<0.001
Chromium, hexavalent	mg/L							<0.001	<0.001
Cobalt, total	mg/L	**0.04**					0.00044	<0.0001	0.00032
Cobalt, dissolved	mg/L	**0.04**	0.0003	0.00034	0.00036	0.00032	<0.0003	<0.0001	<0.0003
Copper, total	mg/L	**EQ4**					0.0037	<0.0005	0.0022
Copper, dissolved	mg/L	**EQ4**	<0.001	<0.0003	<0.001	<0.001	<0.001	0.00029	<0.001
Iron, total	mg/L						1.49	0.111	0.413
Iron, dissolved	mg/L		<0.03	<0.03	<0.03	<0.03	<0.03	0.05	<0.03
Lead, total	mg/L	**EQ5**					0.00129	0.000134	0.00057
Lead, dissolved	mg/L	**EQ5**	<0.0005	<0.00005	<0.0005	<0.0005	<0.0005	<0.00005	<0.0005
Magnesium, total	mg/L						12.4	10.7	12.4
Magnesium, dissolved	mg/L		8.1	8.4	8.25	8.85	12.9	10.7	11.9
Manganese, total	mg/L						0.174	0.0174	0.179
Manganese, dissolved	mg/L		0.0531	0.0647	0.0621	0.0454	0.0489	0.0169	0.00929
Mercury, total	mg/L	**0.001**					<0.00001	<0.000005	<0.000005
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00002	<0.00002	<0.00001	<0.000005	<0.000005
Molybdenum, total	mg/L	**10**					0.0016	0.00164	<0.001
Molybdenum, dissolved	mg/L	**10**	0.004	0.00343	0.0047	0.0058	0.0015	0.00161	<0.001
Nickel, total	mg/L	**EQ6**					0.0013	0.00058	0.0014
Nickel, dissolved	mg/L	**EQ6**	0.002	0.00264	0.0019	0.002	<0.001	0.00056	<0.001
Potassium, total	mg/L						<2	0.149	<2
Potassium, dissolved	mg/L		<2	<2	<2	<2	<2	0.158	<2
Selenium, total	mg/L	**0.01**					<0.001	0.000892	0.000266
Selenium, dissolved	mg/L	**0.01**	<0.001	0.0013	<0.001	<0.001	<0.001	0.000856	0.000233
Silicon, total	mg/L						3.59	3.28	3.72
Silicon, dissolved	mg/L						3.51	3.24	3.47
Silver, total	mg/L	**EQ7**					0.000031	<0.00001	<0.00002
Silver, dissolved	mg/L	**EQ7**	<0.00002	<0.00001	<0.00002	<0.00002	<0.00002	<0.00001	<0.00002
Sodium, total	mg/L						2.8	2.61	3.2
Sodium, dissolvd	mg/L		2	2.4	2.1	2.7	2.9	2.63	3
Strontium, total	mg/L						0.859	0.819	0.908
Strontium, dissolved	mg/L						0.88	0.806	0.863
Sulfur, total	mg/L							55.2	
Sulfur, dissolved	mg/L							54.9	
Thallium, total	mg/L	**0.003**					<0.0002	<0.00001	<0.0002
Thallium, dissolved	mg/L	**0.003**	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.00001	<0.0002
Tin, total	mg/L						<0.0005	<0.0001	<0.0005
Tin, dissolved	mg/L		<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	0.00015	<0.0005
Titanium, total	mg/L	**1**					<0.01	<0.0003	0.014
Titanium, dissolved	mg/L	**1**	<0.01	<0.01	<0.01	<0.01	<0.01	<0.0003	0.013
Uranium, total	mg/L	**3**					0.00022	0.000212	0.0002
Uranium, dissolved	mg/L	**3**	0.0002	0.000199	0.00027	0.00029	<0.0002	0.000211	<0.0002
Vanadium, total	mg/L						<0.001	<0.0005	<0.0005
Vanadium, dissolved	mg/L		<0.03	<0.001	<0.03	<0.03	<0.001	<0.0005	<0.0005
Zinc, total	mg/L	**EQ8**					0.0405	0.0235	0.0272
Zinc, dissolved	mg/L	**EQ8**	0.063	0.0984	0.0808	0.0487	0.0117	0.0233	0.0112

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

			RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV
Monitoring Location		BC CSR	SS-I	SS-II	SS-III	SS-I	SS-II	SS-III	W12	W12	W12	W12
Sampling Date			12-Jul-94	12-Jul-94	12-Jul-94	19-Sep-96	19-Sep-96	19-Sep-96	29-May-93	25-Jun-93	30-Jul-93	26-Aug-93
Field Parameters												
pH	pH units		6.6	5.5	7	6.46	7.35	7.29			7.39	7.75
Conductivity	uS/cm		108	123	257	126.8	119.1	116.2			554	562
Specific Conductivity	uS/cm											
Dissolved Oxygen	mg/L											
Dissolved Oxygen	%											
ORP	mV											
Turbidity	NTU											
TDS	mg/L											
Temperature	degC											
Physical Parameters												
pH	pH units		7.1	5.4	6.6	5.3	6.1	6	6.6	7.7	7.4	7.6
Specific Conductance	uS/cm		130	140	290	152	147	149	190	500	510	530
Total Hardness	mg/L		54	56	180	42	40	40	100	180	220	220
Total dissolved solids	mg/L		95	120	220	110	110	113	150	350	420	410
Total suspended solids	mg/L		1	<1	2	<1	1	<1	2	5	24	1
Turbidity	NTU		0.22	0.25	24	0.5	0.5	0.4	1.5	0.39	3.6	0.9
Major Ions												
Total alkalinity	mg/L as Ca CO3		4	2	54	2	4	5	25	130	120	150
Alkalinity to pH 4.5	mg/L as Ca CO3											
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3											
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3											
Acidity	mg/L		3.2	5.4	5.1	6	2	3	2.4	4.4	4.7	7.1
Chloride	mg/L	**1500**	<0.1	<0.1	<0.1	0.14	0.11	0.12	0.5	<0.5	<0.5	1.5
Fluoride	mg/L	**EQ1**	0.1	0.15	0.2	0.24	0.17	0.15	0.1	0.15	0.2	0.35
Bromide	mg/L											
Sulfate	mg/L	**1000**	42	52	94	74.2	69	69.6	68	140	150	140
Nutrients												
Nitrate Nitrogen	mg/L as N	**400**	<0.05	0.05	<0.05	0.016	<0.005	0.011	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.05
Nitrogen, total	mg/L as N											
Ammonia Nitrogen	mg/L as N	**EQ3**										
Free Ammonia	mg/L as NH3-N		<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L		<0.002	<0.002	0.005	<0.002	<0.002	0.002	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L		<0.002	<0.002	0.008	0.01	<0.002	0.002	<0.05	<0.05	<0.05	<0.05
Organics												
Total Organic Carbon	mg/L											
Dissolved Organic Carbon	mg/L											
Other												
Cyanide, total	mg/L	**0.05**									<0.005	
Cyanide, WAD	mg/L										<0.005	
Thiocyanate	mg/L										0.05	
Metals												
Aluminum, total	mg/L		0.0617	0.262	0.00616	0.24	0.0334	0.0257999	0.036	0.029	0.1	<0.0007
Aluminum, dissolved	mg/L		0.0239	0.233	<0.001	0.235	0.0287999	0.0212	0.012	<0.0005	0.013	<0.0005
Antimony, total	mg/L	**0.2**	0.00089	0.00065	0.0007	0.00007	<0.00005	0.00011	0.00046	0.0011	0.00073	0.00068
Antimony, dissolved	mg/L	**0.2**	0.00059	0.00049	0.00043	<0.00005	<0.00005	<0.00005	<0.0001	0.00055	0.00027	0.00027
Arsenic, total	mg/L	**0.05**	<0.001	<0.001	<0.001	0.002	<0.001	0.001	<0.001	<0.001	<0.001	<0.001
Arsenic, dissolved	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L	**10**	0.0289	0.0213	0.0171	0.0257	0.038	0.0355999	0.024	0.018	0.028	0.024
Barium, dissolved	mg/L	**10**	0.0273	0.0202	0.0163	0.0251	0.0357999	0.0297	0.02	0.018	0.027	0.022
Beryllium, total	mg/L	**0.053**	<0.0001	<0.0001	<0.0001	0.00005	<0.00005	<0.00005	0.0003	0.0003	<0.0001	<0.00008
Beryllium, dissolved	mg/L	**0.053**	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	<0.00005	<0.0002	0.0001	<0.0001	<0.00006
Bismuth, total	mg/L											
Bismuth, dissolved	mg/L											
Boron, total	mg/L	**50**	<0.00071	<0.00071	0.00104	<0.001	<0.001	<0.001	0.045	0.029	0.034	0.015
Boron, dissolved	mg/L	**50**	<0.00071	<0.00071	0.00093	<0.001	<0.001	<0.001	0.0044	0.0072	0.014	0.013
Cadmium, total	mg/L		0.0009	0.0017	<0.0001	0.0021	0.001	0.0008	0.0008	<0.0002	0.00044	0.00017
Cadmium, dissolved	mg/L		0.0009	0.0016	<0.0001	0.0019	0.001	0.0008	0.00038	<0.0002	0.00039	0.0001
Calcium, total	mg/L		18.1	18.1	61	12.2	12.3	13.4	34	71	70	88
Calcium, dissolved	mg/L		16.7	16.2	60.4	12.1	12.2	12.6	29	58	70	72
Cesium, total	mg/L											
Cesium, dissolved	mg/L											
Chromium, total	mg/L	**0.01**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.003	0.0013	0.0015	0.015
Chromium, dissolved	mg/L	**0.01**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0025
Chromium, hexavalent	mg/L											
Cobalt, total	mg/L	**0.04**	<0.0001	0.0034	<0.0001	0.00309	0.00009	0.00006	0.00042	0.00061	0.0023	0.00069
Cobalt, dissolved	mg/L	**0.04**	<0.0001	0.00314	<0.0001	0.00289	0.00009	<0.00006	0.00027	0.00019	0.0021	0.00033
Copper, total	mg/L	**EQ4**	0.0417	0.0953	0.00254	0.0713	0.0308999	0.0136999	0.0043	0.0031	0.0074	0.003
Copper, dissolved	mg/L	**EQ4**	<0.0005	0.095	<0.0005	0.0704	0.0297999	0.0121	0.0011	0.0008	0.0019	0.00083
Iron, total	mg/L		0.02	<0.01	2.22	<0.01	<0.01	<0.01	0.033	0.31	0.5	0.32
Iron, dissolved	mg/L		<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.013	<0.01	<0.01
Lead, total	mg/L	**EQ5**	0.0005	0.00023	0.00483	0.00011	<0.00005	0.00006	0.00065	0.00018	0.00044	0.0015
Lead, dissolved	mg/L	**EQ5**	<0.00008	<0.00008	<0.00008	<0.00005	<0.00005	<0.00005	<0.00007	<0.0001	<0.00007	<0.00005
Magnesium, total	mg/L		3.53	4.3	6.12	2.96	2.33	2.23	4.9	9	10	11
Magnesium, dissolved	mg/L		3.01	3.74	6.02	2.85	2.28	2.16	4.1	7.4	9.5	10
Manganese, total	mg/L		0.0021	0.049	0.424	0.0610999	0.0009	0.0008	0.019	0.18	0.24	0.27
Manganese, dissolved	mg/L		0.00108	0.0482	0.394	0.0492	0.0008	0.0008	0.015	0.16	0.23	0.2
Mercury, total	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**10**	0.00094	0.00057	0.00213	<0.00005	<0.00005	0.00043	0.0026	0.0039	0.004	0.0037
Molybdenum, dissolved	mg/L	**10**	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.00036	0.0023	0.0032	0.0033	0.0034
Nickel, total	mg/L	**EQ6**	0.0114	0.0187	0.00527	0.0151	0.0091	0.0079	0.011	0.012	0.018	0.019
Nickel, dissolved	mg/L	**EQ6**	0.0103	0.0178	0.00359	0.0143999	0.0085	0.0079	0.0067	0.0017	0.018	0.005
Potassium, total	mg/L		0.4	0.3	0.55	0.15	0.08	0.16	0.71	1.3	0.63	1.4
Potassium, dissolved	mg/L		0.3	0.25	0.4	0.15	0.08	0.13	0.52	0.88	0.58	0.97
Selenium, total	mg/L	**0.01**	0.006	0.002	<0.001	<0.001	<0.001	0.001	0.0035	<0.001	<0.001	<0.001
Selenium, dissolved	mg/L	**0.01**	0.006	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L											
Silicon, dissolved	mg/L											
Silver, total	mg/L	**EQ7**	0.00005	0.00003	0.00002	<0.00001	0.00003	0.00006	0.00003	0.0001	0.00002	0.00015
Silver, dissolved	mg/L	**EQ7**	0.00005	0.00005	0.00005	<0.00001	<0.00001	<0.00001	<0.00002	<0.0001	<0.0001	<0.0001
Sodium, total	mg/L		2.62	2.65	3.51	2.4	1.71	1.59	3	4.2	5.3	6.4
Sodium, dissolvd	mg/L		2.23	2.3	3.5	2.23	1.71	1.57	2.9	4	5	5.4
Strontium, total	mg/L		0.0699	0.0665	0.283	0.0612999	0.0645999	0.0671999	0.17	0.44	0.43	0.48
Strontium, dissolved	mg/L		0.0697	0.0648	0.277	0.0605	0.0627999	0.067	0.15	0.42	0.42	0.46
Sulfur, total	mg/L											
Sulfur, dissolved	mg/L											
Thallium, total	mg/L	**0.003**										
Thallium, dissolved	mg/L	**0.003**										
Tin, total	mg/L											
Tin, dissolved	mg/L											
Titanium, total	mg/L	**1**										
Titanium, dissolved	mg/L	**1**										
Uranium, total	mg/L	**3**	<0.00002	<0.00002	0.0001	0.00002	<0.00001	<0.00001	0.00012	0.00068	0.0011	0.00079
Uranium, dissolved	mg/L	**3**	<0.00002	<0.00002	0.0001	0.00002	<0.00001	<0.00001	0.00012	0.00068	0.001	0.00077
Vanadium, total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	<0.001
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**	0.0603	0.0953	0.0568	0.078	0.042	0.036	0.04	0.022	0.061	0.037
Zinc, dissolved	mg/L	**EQ8**	0.0437	0.0884	0.0199	0.068	0.039	0.033	0.035	0.0048	0.041	0.011

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

			RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV	RB BCV
Monitoring Location		BC CSR	W12	W12	W12	W12	W12	W12	W12	WS93-10	WS93-11	WS-93-8C	WS-93-9C
Sampling Date			2-Oct-93	30-Oct-93	29-Nov-93	5-Jan-94	6-Jan-94	2-Feb-94	27-Feb-94	10-Aug-93	10-Aug-93	1-Nov-93	1-Nov-93
Field Parameters													
pH	pH units		7.77	7.8	7.3			7.6	7.4				
Conductivity	uS/cm		597	462	437			445	541				
Specific Conductivity	uS/cm												
Dissolved Oxygen	mg/L												
Dissolved Oxygen	%												
ORP	mV												
Turbidity	NTU												
TDS	mg/L												
Temperature	degC												
Physical Parameters													
pH	pH units		7.7	7.7	7.8	7.8	7.8	7.8	7.6	6.6	5.1	7.2	4.9
Specific Conductance	uS/cm		540	440	460	500	500	510	510	290	140	290	140
Total Hardness	mg/L		540	240	250	220	220	210	230				
Total dissolved solids	mg/L		420	330	320	350	350	360	360	0.22	0.13	0.22	0.11
Total suspended solids	mg/L		5	7	2	8	8	1	14	0.007	<0.001	<0.001	<0.001
Turbidity	NTU		0.5	1.9	1.5	2.8	2.8	0.47	0.73	29	0.11	25	0.14
Major Ions													
Total alkalinity	mg/L as Ca CO3		160	120	110	120	120	130	140				
Alkalinity to pH 4.5	mg/L as Ca CO3									44	2	54	2
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3												
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3												
Acidity	mg/L		3.9	4.8	56	4.2	4.2	4.4	6.8	5.9	5.8	6	8
Chloride	mg/L	**1500**	2.5	1.5	1.5	1.5	1.5	1	2.5	0.0005	<0.0005	0.0015	<0.0005
Fluoride	mg/L	**EQ1**	0.35	0.3	0.25	0.5	0.5	0.25	0.45	0.00035	0.0003	0.00035	0.00025
Bromide	mg/L												
Sulfate	mg/L	**1000**	170	130	140	150	150	160	160	0.08	0.047	0.098	0.052
Nutrients													
Nitrate Nitrogen	mg/L as N	**400**	<0.5	<0.5	<0.05	<0.05	<0.05	0.05	0.05	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.005	<0.005	<0.005	0.0025	<0.005	<0.005	<0.005	<0.05	<0.05	0.035	0.03
Nitrogen, total	mg/L as N												
Ammonia Nitrogen	mg/L as N	**EQ3**											
Free Ammonia	mg/L as NH3-N		<0.005	<0.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L		<0.05	<0.05	0.01	0.02	0.02	<0.01	<0.01	<0.05	<0.05	0.1	0.1
Phosphorus, total	mg/L		<0.05	<0.05	0.03	0.04	0.04	0.03	<0.01				
Organics													
Total Organic Carbon	mg/L												
Dissolved Organic Carbon	mg/L												
Other													
Cyanide, total	mg/L	**0.05**		<0.005					<0.005				
Cyanide, WAD	mg/L			<0.005					<0.005				
Thiocyanate	mg/L								0.05				
Metals													
Aluminum, total	mg/L		0.026	0.16	0.021		0.038	0.033	0.021	0.026	0.36	<0.001	0.52
Aluminum, dissolved	mg/L		<0.001	<0.001	<0.001		<0.002	<0.0003	<0.001	<0.0005	0.28	<0.001	0.33
Antimony, total	mg/L	**0.2**	0.00077	0.00055	0.00081		0.00056	0.00088	0.0006	0.00076	0.00032	0.00076	0.00074
Antimony, dissolved	mg/L	**0.2**	0.00076	<0.0001	0.0006		0.00046	0.00049	0.00038	<0.00006	<0.00006	<0.00009	<0.0001
Arsenic, total	mg/L	**0.05**	<0.001	0.009	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.008
Arsenic, dissolved	mg/L	**0.05**	<0.001	0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L	**10**	0.043	0.021	0.02		0.023	0.025	0.025	0.016	0.016	0.013	0.02
Barium, dissolved	mg/L	**10**	0.042	0.021	0.02		0.022	0.024	0.022	0.0096	0.015	0.012	0.018
Beryllium, total	mg/L	**0.053**	0.00008	<0.00006	<0.0001		<0.00006	0.00011	0.00035	0.00035	<0.00007	<0.00006	0.00024
Beryllium, dissolved	mg/L	**0.053**	0.00008	<0.00006	<0.0001		<0.00006	<0.00006	<0.0001	<0.00007	0.00013	<0.00005	<0.00005
Bismuth, total	mg/L												
Bismuth, dissolved	mg/L												
Boron, total	mg/L	**50**	0.031	0.017	0.031		0.018	0.016	0.018	0.037	0.086	0.012	0.0085
Boron, dissolved	mg/L	**50**	0.031	0.014	0.0094		0.013	0.011	0.011	0.0059	0.0052	0.012	0.0073
Cadmium, total	mg/L		0.00019	0.0001	<0.0001		<0.0001	<0.0001	0.00017	0.00014	0.0018	<0.00008	0.0013
Cadmium, dissolved	mg/L		0.00019	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.00009	0.0013	<0.0001	0.0012
Calcium, total	mg/L		190	87	100		89	76	110	49	13	68	26
Calcium, dissolved	mg/L		190	78	85		73	70	77	28	11	53	17
Cesium, total	mg/L												
Cesium, dissolved	mg/L												
Chromium, total	mg/L	**0.01**	0.015	0.0048	0.017		0.0029	0.0013	0.0029	0.0032	0.005	0.0057	0.0099
Chromium, dissolved	mg/L	**0.01**	0.015	0.004	0.003		0.00096	0.0013	0.0025	<0.0005	<0.0005	0.001	<0.00003
Chromium, hexavalent	mg/L												
Cobalt, total	mg/L	**0.04**	0.00084	0.00057	0.00067		0.00021	0.00015	0.00012	0.00051	0.0044	0.00038	0.0056
Cobalt, dissolved	mg/L	**0.04**	0.00084	0.00053	0.00036		0.00009	0.00008	<0.00009	0.00026	0.0035	0.00028	0.0037
Copper, total	mg/L	**EQ4**	0.007	0.0056	0.008		<0.0004	0.0004	0.0046	0.002	0.1	0.011	0.14
Copper, dissolved	mg/L	**EQ4**	0.00075	<0.0004	<0.0002		<0.0004	0.0004	<0.0002	0.002	0.095	0.011	0.09
Iron, total	mg/L		0.5	0.97	0.079		0.19	0.23	0.25	8.6	0.042	3.7	0.01
Iron, dissolved	mg/L		0.027	0.033	0.014		<0.01	<0.01	<0.01	0.33	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ5**	0.00012	0.00011	0.00011		<0.00008	0.00027	0.0012	0.0043	0.00083	0.00018	0.00034
Lead, dissolved	mg/L	**EQ5**	<0.00007	<0.0001	<0.0001		<0.00008	0.00008	<0.00007	<0.00006	0.00009	<0.00008	<0.00008
Magnesium, total	mg/L		17	9.8	16		13	10	13	8	4.6	8.9	7.6
Magnesium, dissolved	mg/L		17	9.8	9.4		9.6	8.9	9.3	5.8	4.5	6.9	5.2
Manganese, total	mg/L		0.56	0.21	0.19		0.15	0.16	0.18	0.78	0.058	0.52	0.08
Manganese, dissolved	mg/L		0.55	0.18	0.14		0.12	0.098	0.14	0.42	0.054	0.39	0.055
Mercury, total	mg/L	**0.001**	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00005		<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**10**	0.0073	0.0033	0.0033		0.0041999	0.0041999	0.0045	0.0014	<0.00007	0.0016	0.00011
Molybdenum, dissolved	mg/L	**10**	0.0071999	0.0029	0.0029		0.0038	0.0037	0.0038	0.00048	<0.00007	0.0012	<0.00008
Nickel, total	mg/L	**EQ6**	0.0094	0.0081	0.0072		<0.0005	0.0042	0.0054	0.0016	0.038	0.005	0.031
Nickel, dissolved	mg/L	**EQ6**	0.0094	0.0066	0.0034		<0.0005	0.0035	0.0029	<0.0004	0.014	0.0024	0.018
Potassium, total	mg/L		2.4	1.6	1.5		1.3	1.1	1.5	0.65	0.33	0.3	0.5
Potassium, dissolved	mg/L		2.4	0.69	1.1		0.9	0.9	0.85	0.2	0.2	0.25	0.33
Selenium, total	mg/L	**0.01**	<0.001	0.001	<0.001		<0.001	<0.001	0.003	0.003	<0.001	0.006	0.007
Selenium, dissolved	mg/L	**0.01**	<0.001	<0.001	<0.001		<0.001	<0.001	0.001	<0.001	<0.001	<0.001	0.004
Silicon, total	mg/L												
Silicon, dissolved	mg/L												
Silver, total	mg/L	**EQ7**	0.00041	0.00001	0.00005		<0.00001	0.00001	0.00001	<0.00001	0.00002	<0.00001	0.00002
Silver, dissolved	mg/L	**EQ7**	<0.0001	<0.0001	<0.0001		<0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.00001	<0.00001
Sodium, total	mg/L		16	4.9	9.2		8.3	4.4	8.2	5.8	3.4	4.4	4.5
Sodium, dissolvd	mg/L		8.8	3.3	6.3		7.6	4.1	5.7	3.2	2.7	3	2.8
Strontium, total	mg/L		0.99	0.48	0.51		0.51	0.5	0.58	0.25	0.059	0.26	0.073
Strontium, dissolved	mg/L		0.99	0.46	0.43		0.47	0.47	0.49	0.16	0.052	0.23	0.055
Sulfur, total	mg/L												
Sulfur, dissolved	mg/L												
Thallium, total	mg/L	**0.003**											
Thallium, dissolved	mg/L	**0.003**											
Tin, total	mg/L												
Tin, dissolved	mg/L												
Titanium, total	mg/L	**1**											
Titanium, dissolved	mg/L	**1**											
Uranium, total	mg/L	**3**	0.0018	0.00049	0.00062		0.00095	0.0012	0.0011	0.00011	0.00004	0.00009	0.00003
Uranium, dissolved	mg/L	**3**	0.0018	0.00049	0.00062		0.00095	0.0011	0.0011	0.00005	0.00004	0.00009	<0.00002
Vanadium, total	mg/L		<0.001	0.0028	<0.001		<0.001	<0.001	<0.001	<0.001	0.0019	<0.001	<0.001
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**	0.021	0.018	0.018		0.015	0.035	0.027	0.088	0.096	0.011	0.12
Zinc, dissolved	mg/L	**EQ8**	0.017	0.012	0.014		0.0037	0.011	0.0064	0.00037	0.07	0.0067	0.085

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

Monitoring Location		BC CSR	Lower Cirque WS93-4	Lower Cirque WS93-5	Lower Cirque WS93-6	Lower Cirque WS93-7	Lower Cirque WS93-9	Lower Cirque WS-93-3C
Sampling Date			27-Jul-93	27-Jul-93	10-Aug-93	10-Aug-93	10-Aug-93	21-Oct-93
Field Parameters								
pH	pH units							
Conductivity	uS/cm							
Specific Conductivity	uS/cm							
Dissolved Oxygen	mg/L							
Dissolved Oxygen	%							
ORP	mV							
Turbidity	NTU							
TDS	mg/L							
Temperature	degC							
Physical Parameters								
pH	pH units		5.9	6.2	4.5	5.6	5.9	6.2
Specific Conductance	uS/cm		85	83	120	46	69	110
Total Hardness	mg/L							
Total dissolved solids	mg/L		0.061	0.066	0.095	0.033	0.047	0.08
Total suspended solids	mg/L		0.003	0.002	0.001	<0.001	0.001	<0.002
Turbidity	NTU		0.3	0.3	0.2	0.3	0.13	0.11
Major Ions								
Total alkalinity	mg/L as Ca CO3							
Alkalinity to pH 4.5	mg/L as Ca CO3		8	9	1	3	7	10
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3							
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3							
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3							
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3							
Acidity	mg/L		2.4	2.7	6.8	2.4	2.7	3.4
Chloride	mg/L	**1500**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0015
Fluoride	mg/L	**EQ1**	0.00015	0.0001	0.00015	0.0001	0.00005	0.0001
Bromide	mg/L							
Sulfate	mg/L	**1000**	0.023	0.022	0.012	0.016	0.019	0.027
Nutrients								
Nitrate Nitrogen	mg/L as N	**400**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.05	<0.05	<0.05	<0.05	<0.05	64
Nitrogen, total	mg/L as N							
Ammonia Nitrogen	mg/L as N	**EQ3**						
Free Ammonia	mg/L as NH3-N		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ortho phosphorus, dissolved	mg/L		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L							
Organics								
Total Organic Carbon	mg/L							
Dissolved Organic Carbon	mg/L							
Other								
Cyanide, total	mg/L	**0.05**						
Cyanide, WAD	mg/L							
Thiocyanate	mg/L							
Metals								
Aluminum, total	mg/L		<0.0005	<0.0005	0.78	0.031	0.02	0.02
Aluminum, dissolved	mg/L		<0.0005	<0.0005	0.33	<0.0005	<0.0005	0.02
Antimony, total	mg/L	**0.2**	<0.0001	<0.0002	0.001	0.00067	0.00064	0.0012
Antimony, dissolved	mg/L	**0.2**	<0.0001	<0.0001	0.00009	<0.00006	0.00016	<0.00006
Arsenic, total	mg/L	**0.05**	0.0013	<0.001	<0.001	<0.001	0.004	0.022
Arsenic, dissolved	mg/L	**0.05**	<0.001	0.0012	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L	**10**	0.019	0.019	0.017	0.016	0.039	0.022
Barium, dissolved	mg/L	**10**	0.019	0.019	0.016	0.014	0.031	0.022
Beryllium, total	mg/L	**0.053**	0.00014	0.00014	0.00043	0.00016	0.0003	0.0003
Beryllium, dissolved	mg/L	**0.053**	0.00011	0.00019	0.00034	0.00016	<0.00007	0.00009
Bismuth, total	mg/L							
Bismuth, dissolved	mg/L							
Boron, total	mg/L	**50**	0.0013	<0.0008	0.027	0.014	0.029	0.0017
Boron, dissolved	mg/L	**50**	<0.0008	<0.0008	0.0014	0.0031	0.002	0.001
Cadmium, total	mg/L		<0.0001	<0.0001	0.00047	0.0003	0.00018	0.00068
Cadmium, dissolved	mg/L		0.00021	<0.0002	0.00038	<0.00009	0.00018	<0.0001
Calcium, total	mg/L		8.7	10	11	4.8	11	21
Calcium, dissolved	mg/L		8.7	9.2	11	4.5	7.6	19
Cesium, total	mg/L							
Cesium, dissolved	mg/L							
Chromium, total	mg/L	**0.01**	0.015	0.013	0.0042	0.007	0.007	0.0015
Chromium, dissolved	mg/L	**0.01**	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0015
Chromium, hexavalent	mg/L							
Cobalt, total	mg/L	**0.04**	<0.00008	<0.00008	0.0036	0.00015	0.00017	<0.0002
Cobalt, dissolved	mg/L	**0.04**	0.0001	<0.00008	0.0036	0.00015	0.00012	0.00019
Copper, total	mg/L	**EQ4**	0.0046	0.006	0.081	0.0033	0.0028	0.028
Copper, dissolved	mg/L	**EQ4**	0.00079	0.0025	0.081	0.0033	0.0028	0.0025
Iron, total	mg/L		0.037	0.04	0.027	0.058	0.087	0.045
Iron, dissolved	mg/L		0.056	0.043	<0.01	<0.01	0.012	0.042
Lead, total	mg/L	**EQ5**	0.00059	0.0004	0.00086	0.001	0.0013	0.00056
Lead, dissolved	mg/L	**EQ5**	<0.0001	<0.0001	<0.00006	<0.00006	<0.00006	<0.00009
Magnesium, total	mg/L		1.4	0.87	1.8	0.92	1.4	3.2
Magnesium, dissolved	mg/L		1.4	0.88	1.8	0.92	1.1	3.2
Manganese, total	mg/L		<0.0002	<0.0002	0.033	0.0016	0.0011	<0.0004
Manganese, dissolved	mg/L		<0.0002	<0.0002	0.03	0.00017	0.00017	0.00036
Mercury, total	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**10**	0.0094	0.0068	0.0042	0.00067	0.0081	0.015
Molybdenum, dissolved	mg/L	**10**	0.0091	0.0062	0.0042	0.00025	0.0063	0.015
Nickel, total	mg/L	**EQ6**	<0.001	<0.001	0.013	0.0024	0.0013	0.0015
Nickel, dissolved	mg/L	**EQ6**	<0.001	<0.001	0.0073	<0.0004	<0.0004	0.0015
Potassium, total	mg/L		0.36	0.38	0.28	0.14	0.4	0.58
Potassium, dissolved	mg/L		0.36	0.32	0.13	0.023	0.076	0.58
Selenium, total	mg/L	**0.01**	<0.001	<0.001	0.0026	<0.001	0.0015	0.005
Selenium, dissolved	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Silicon, total	mg/L							
Silicon, dissolved	mg/L							
Silver, total	mg/L	**EQ7**	0.00003	0.00002	0.00007	0.00002	0.00002	0.00012
Silver, dissolved	mg/L	**EQ7**	<0.00001	<0.00001	<0.00001	<0.000014	0.00001	0.00004
Sodium, total	mg/L		0.77	0.77	2	0.54	1.8	1.9
Sodium, dissolvd	mg/L		0.77	0.77	1.8	0.48	1	1.5
Strontium, total	mg/L		0.029	0.029	0.041	0.032	0.041	0.051
Strontium, dissolved	mg/L		0.029	0.029	0.04	0.032	0.032	0.051
Sulfur, total	mg/L							
Sulfur, dissolved	mg/L							
Thallium, total	mg/L	**0.003**						
Thallium, dissolved	mg/L	**0.003**						
Tin, total	mg/L							
Tin, dissolved	mg/L							
Titanium, total	mg/L	**1**						
Titanium, dissolved	mg/L	**1**						
Uranium, total	mg/L	**3**	<0.00004	<0.00004	0.00004	<0.00002	<0.00002	<0.00007
Uranium, dissolved	mg/L	**3**	<0.00004	<0.00004	0.00004	<0.00002	<0.00002	<0.00004
Vanadium, total	mg/L		<0.001	<0.001	0.0017	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**	0.02	0.022	0.096	0.07	0.12	0.0046
Zinc, dissolved	mg/L	**EQ8**	0.0063	0.011	0.026	0.0034	0.00088	<0.0007

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

Monitoring Location		BC CSR	Lower Cirque WS-93-4C	Lower Cirque WS-93-5C	Lower Cirque TD93-159	Lower Cirque TD93-160	Lower Cirque SS-IV	Lower Cirque SS-IV	Lower Cirque SS-IV
Sampling Date			21-Oct-93	21-Oct-93	23-Nov-93	23-Nov-93	13-Jul-94	4-Oct-94	4-Sep-96
Field Parameters									
pH	pH units						6.3	4.55	
Conductivity	uS/cm						102	91.1	
Specific Conductivity	uS/cm								
Dissolved Oxygen	mg/L								
Dissolved Oxygen	%								
ORP	mV								
Turbidity	NTU								
TDS	mg/L								
Temperature	degC								
Physical Parameters									
pH	pH units		5.7	6.1	6	6	6.3	4.6	5.1
Specific Conductance	uS/cm		130	70	74	94	120	110	144
Total Hardness	mg/L						50	32	46
Total dissolved solids	mg/L		0.11	0.08	0.06	0.099	84	95	113
Total suspended solids	mg/L		0.002	0.006	0.13	2.5	2	4	<1
Turbidity	NTU		0.55	0.3	120	1400	0.24	0.9	0.3
Major Ions									
Total alkalinity	mg/L as Ca CO3						7	1	2
Alkalinity to pH 4.5	mg/L as Ca CO3		5	5	14	12			
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3								
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3								
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3								
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3								
Acidity	mg/L		6.4	3.6	7.8	16	3.9	13.4	1
Chloride	mg/L	**1500**	0.001	0.001	0.0005	0.001	<0.1	<0.1	0.11
Fluoride	mg/L	**EQ1**	0.0001	0.0001	0.0001	0.0001	0.1	0.1	0.1
Bromide	mg/L								
Sulfate	mg/L	**1000**	0.041	0.019	0.018	0.04	34	39	73.4
Nutrients									
Nitrate Nitrogen	mg/L as N	**400**	<0.5	<0.5	<0.5	<0.5	0.05	<0.05	0.024
Nitrite Nitrogen	mg/L as N	**EQ2**	64	67	<0.005	<0.005	<0.001	<0.001	<0.001
Nitrogen, total	mg/L as N								
Ammonia Nitrogen	mg/L as N	**EQ3**							
Free Ammonia	mg/L as NH3-N		<0.5	<0.5	<0.5	<0.5	<0.005	<0.005	0.01
Ortho phosphorus, dissolved	mg/L		<0.05	<0.05	<0.05	<0.05	<0.002	<0.002	<0.002
Phosphorus, total	mg/L						0.01	<0.002	<0.002
Organics									
Total Organic Carbon	mg/L								
Dissolved Organic Carbon	mg/L								
Other									
Cyanide, total	mg/L	**0.05**							
Cyanide, WAD	mg/L								
Thiocyanate	mg/L								
Metals									
Aluminum, total	mg/L		6.9	0.071	4.9	40	0.0947	0.398	0.724
Aluminum, dissolved	mg/L		0.053	<0.001	0.043	<0.001	0.00556	0.222	0.651
Antimony, total	mg/L	**0.2**	0.0013	0.001	0.00094	0.0022	0.00108	<0.0001	<0.00005
Antimony, dissolved	mg/L	**0.2**	<0.00006	<0.00006	0.00006	0.00011	0.0003	<0.0001	<0.00005
Arsenic, total	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Arsenic, dissolved	mg/L	**0.05**	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium, total	mg/L	**10**	0.021	0.048	0.5	0.94	0.0242	0.0212999	0.0197999
Barium, dissolved	mg/L	**10**	0.018	0.048	0.053	0.034	0.0242	0.0211	0.0185
Beryllium, total	mg/L	**0.053**	0.00016	0.00065	<0.00006	0.00082	<0.0001	0.00015	0.00011
Beryllium, dissolved	mg/L	**0.053**	0.00005	0.00005	<0.00006	<0.00006	<0.0001	0.00015	<0.00005
Bismuth, total	mg/L								
Bismuth, dissolved	mg/L								
Boron, total	mg/L	**50**	<0.001	<0.001	0.0056	0.019	<0.00071	0.0005	<0.001
Boron, dissolved	mg/L	**50**	<0.001	<0.001	<0.0004	0.004	<0.00071	<0.001	<0.001
Cadmium, total	mg/L		0.0011	<0.0002	0.0006	0.0023	0.00095	0.00057	0.0009
Cadmium, dissolved	mg/L		0.00093	<0.0001	<0.0001	0.00036	0.00088	0.00055	0.0004
Calcium, total	mg/L		30	19	14	40	18.1	11.8	12.2
Calcium, dissolved	mg/L		23	17	11	23	17.7	10.7	15.5
Cesium, total	mg/L								
Cesium, dissolved	mg/L								
Chromium, total	mg/L	**0.01**	0.001	0.001	<0.0002	0.056	<0.0005	<0.0005	0.0011
Chromium, dissolved	mg/L	**0.01**	<0.0002	0.00061	<0.0002	0.00069	<0.0005	<0.0005	<0.0005
Chromium, hexavalent	mg/L								
Cobalt, total	mg/L	**0.04**	0.0031	0.00043	0.0047	0.046	0.0022	0.00407	0.008
Cobalt, dissolved	mg/L	**0.04**	0.0024	0.0001	<0.0007	0.0017	0.00191	0.00397	0.008
Copper, total	mg/L	**EQ4**	0.09	0.007	0.026	1.1	0.0329	0.0824	0.0547999
Copper, dissolved	mg/L	**EQ4**	0.049	<0.0003	0.0048	0.011	0.0282	0.0809	0.0547
Iron, total	mg/L		0.8	0.052	7.2	150	<0.01	<0.01	<0.01
Iron, dissolved	mg/L		0.028	0.047	0.085	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ5**	0.00062	0.00042	0.0029	0.019	0.00048	0.00208	0.00017
Lead, dissolved	mg/L	**EQ5**	<0.00009	<0.00009	0.0002	<0.00009	<0.00008	<0.0001	<0.00005
Magnesium, total	mg/L		2.7	1.7	3.9	33	1.59	1.41	1.85
Magnesium, dissolved	mg/L		2.4	1.7	0.99	1.8	1.5	1.34	1.7
Manganese, total	mg/L		0.027	0.0065	0.3	1.6	0.016	0.0374	0.0276
Manganese, dissolved	mg/L		0.019	0.00031	0.027	0.04	0.0151	0.036	0.0267
Mercury, total	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	0.0007	<0.00005	0.00009
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**10**	0.013	0.0079	0.0078	0.14	0.00924	0.0041799	0.00232
Molybdenum, dissolved	mg/L	**10**	0.0067	0.0077	0.0053	0.002	0.00185	0.00331	0.00226
Nickel, total	mg/L	**EQ6**	0.011	<0.001	0.074	0.13	0.00791	0.0111999	0.00266
Nickel, dissolved	mg/L	**EQ6**	0.0089	<0.00003	<0.003	<0.003	0.00683	0.0103	0.0026199
Potassium, total	mg/L		0.47	0.57	3.9	8.7	0.25	0.2	0.35
Potassium, dissolved	mg/L		0.47	0.56	3.9	6.1	0.2	0.15	0.1
Selenium, total	mg/L	**0.01**	0.004	0.006	0.014	0.013	0.005	<0.001	<0.001
Selenium, dissolved	mg/L	**0.01**	<0.001	<0.001	<0.001	<0.001	0.005	<0.001	<0.001
Silicon, total	mg/L								
Silicon, dissolved	mg/L								
Silver, total	mg/L	**EQ7**	0.00032	0.00019	0.00052	0.001	0.00001	0.00008	0.00009
Silver, dissolved	mg/L	**EQ7**	<0.00001	<0.00001	0.00001	0.00011	0.00001	0.00002	0.00009
Sodium, total	mg/L		2.8	2.2	1.5	2.8	1.74	2.25	2.02
Sodium, dissolvd	mg/L		2	1.6	1.2	1.4	1.56	2.17	1.87
Strontium, total	mg/L		0.058	0.049	0.05	0.23	0.0516	0.0415	0.0394
Strontium, dissolved	mg/L		0.055	0.047	0.035	0.087	0.05	0.0405	0.0349
Sulfur, total	mg/L								
Sulfur, dissolved	mg/L								
Thallium, total	mg/L	**0.003**							
Thallium, dissolved	mg/L	**0.003**							
Tin, total	mg/L								
Tin, dissolved	mg/L								
Titanium, total	mg/L	**1**							
Titanium, dissolved	mg/L	**1**							
Uranium, total	mg/L	**3**	<0.00007	<0.00007	0.00007	0.0012	<0.00002	0.00002	0.00002
Uranium, dissolved	mg/L	**3**	<0.00004	<0.00004	<0.00005	<0.00005	<0.00002	<0.00002	0.00002
Vanadium, total	mg/L		<0.001	<0.001	0.014	0.17	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**	0.049	0.022	0.034	0.43	0.044	0.0293999	0.024
Zinc, dissolved	mg/L	**EQ8**	0.031	0.022	0.018	0.073	0.0298	0.0261	0.024

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

			Upper Cirque	Upper Cirque	Upper Cirque	Upper Cirque	Upper Cirque	Upper Cirque	Upper Cirque	Upper Cirque
Monitoring Location		BC CSR	W6	W6	W6	WS93-1	WS93-2	W6	W6	W6
Sampling Date			27-Sep-90	10-Oct-90	29-Oct-91	27-Jul-93	27-Jul-93	30-Jul-93	26-Aug-93	2-Oct-93
Field Parameters										
pH	pH units							7.87	7.95	7.91
Conductivity	uS/cm							338	346	331
Specific Conductivity	uS/cm									
Dissolved Oxygen	mg/L									
Dissolved Oxygen	%									
ORP	mV									
Turbidity	NTU									
TDS	mg/L									
Temperature	degC									
Physical Parameters										
pH	pH units		7.85	7.77	7.74	6	4.9	7.3	7.3	7.4
Specific Conductance	uS/cm		344	342	378	95	84	330	340	310
Total Hardness	mg/L		169	169	202			130	130	210
Total dissolved solids	mg/L		247	230	294	0.066	0.067	250	250	250
Total suspended solids	mg/L		<1	<1	23	0.002	0.008	<1	2	<1
Turbidity	NTU		0.5	0.6	6.7	0.3	0.3	0.38	1.1	0.19
Major Ions										
Total alkalinity	mg/L as Ca CO3		56.3	58.3	57.2			54	54	56
Alkalinity to pH 4.5	mg/L as Ca CO3					8	1			
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3									
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3									
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3									
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3									
Acidity	mg/L					2.4	4.2	3.9	3.1	2.9
Chloride	mg/L	**1500**	<0.5	0.7	<0.5	<0.0005	<0.0005	<0.5	<0.5	1
Fluoride	mg/L	**EQ1**	0.02	0.09	0.09	0.00015	0.00015	0.1	0.15	0.15
Bromide	mg/L									
Sulfate	mg/L	**1000**	115	108	134	0.024	0.024	100	120	120
Nutrients										
Nitrate Nitrogen	mg/L as N	**400**	<0.005	<0.005	<0.005	<0.5	<0.5	<0.5	<0.5	<0.5
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.001	<0.001	<0.001	<0.05	<0.05	<0.05	<0.05	<0.005
Nitrogen, total	mg/L as N									
Ammonia Nitrogen	mg/L as N	**EQ3**	0.006	<0.005	<0.005					
Free Ammonia	mg/L as NH3-N					<0.5	<0.5	<0.5	<0.5	<0.005
Ortho phosphorus, dissolved	mg/L		<0.001	0.002	0.007	<0.05	<0.05	<0.05	<0.05	<0.05
Phosphorus, total	mg/L		<0.001	0.002	0.028			<0.05	<0.05	<0.05
Organics										
Total Organic Carbon	mg/L									
Dissolved Organic Carbon	mg/L									
Other										
Cyanide, total	mg/L	**0.05**	<0.001	<0.001	<0.001			<0.005		
Cyanide, WAD	mg/L							<0.005		
Thiocyanate	mg/L							0.1		
Metals										
Aluminum, total	mg/L		0.013	5.06	0.15	0.027	0.15	0.0075	0.15	0.03
Aluminum, dissolved	mg/L		0.013	<0.005	0.009	0.015	0.15	<0.0005	<0.0005	<0.001
Antimony, total	mg/L	**0.2**	0.0066	0.0055	0.0037	0.00035	0.00029	0.0061	0.0071999	0.013
Antimony, dissolved	mg/L	**0.2**	0.0056	0.0047	0.0026	0.00026	<0.0001	0.0058	0.0061999	0.013
Arsenic, total	mg/L	**0.05**	0.0022	0.0026	0.0038	0.016	0.011	0.0063	0.003	0.002
Arsenic, dissolved	mg/L	**0.05**	0.0019	0.0021	0.0026	<0.001	<0.001	0.0039	0.003	0.002
Barium, total	mg/L	**10**	0.013	0.012	0.021	0.017	0.019	0.012	0.018	0.015
Barium, dissolved	mg/L	**10**	0.013	0.012	0.019	0.017	0.019	0.012	0.01	0.015
Beryllium, total	mg/L	**0.053**	<0.005	<0.005	<0.005	0.00013	0.0001	<0.0001	<0.00008	<0.00006
Beryllium, dissolved	mg/L	**0.053**	<0.005	<0.005	<0.005	<0.00003	0.00008	<0.0001	<0.00006	<0.00006
Bismuth, total	mg/L		<0.1	<0.1	<0.1					
Bismuth, dissolved	mg/L		<0.1	<0.1	<0.1					
Boron, total	mg/L	**50**	<0.1	<0.1	<0.0002	0.013	0.013	0.046	0.013	0.016
Boron, dissolved	mg/L	**50**	<0.1	<0.1		<0.0008	0.0014	0.0095	0.0069	0.011
Cadmium, total	mg/L		<0.0002	<0.0002	<0.0002	<0.0001	0.001	<0.0001	<0.0002	0.0003
Cadmium, dissolved	mg/L		<0.0002	<0.0002	<0.0002	<0.0002	0.00074	<0.0001	<0.00007	0.00028
Calcium, total	mg/L		58.2	54.9	58	11	8.8	46	48	70
Calcium, dissolved	mg/L		54.6	54.8	58	11	8.8	41	42	68
Cesium, total	mg/L									
Cesium, dissolved	mg/L									
Chromium, total	mg/L	**0.01**	<0.001	<0.001	<0.001	0.012	0.013	0.0046999	0.002	0.0032
Chromium, dissolved	mg/L	**0.01**	<0.001	<0.001	<0.001	0.0011	0.00049	<0.0005	0.0012	0.0032
Chromium, hexavalent	mg/L									
Cobalt, total	mg/L	**0.04**	<0.001	<0.001	<0.001	0.00072	0.00071	0.00024	0.00046	0.00037
Cobalt, dissolved	mg/L	**0.04**	<0.001	<0.001	<0.001	0.00072	0.00071	0.00023	0.00016	0.00032
Copper, total	mg/L	**EQ4**	<0.001	<0.001	<0.001	0.031	0.013	0.0026	0.0049	0.0034
Copper, dissolved	mg/L	**EQ4**	<0.001	<0.001	<0.001	0.026	0.013	0.00098	0.0015	0.00025
Iron, total	mg/L		0.043	0.058	0.206	0.055	0.034	0.032	0.36	<0.01
Iron, dissolved	mg/L		<0.03	<0.03	<0.03	0.097	0.075	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ5**	0.002	0.002	<0.001	0.0025	0.00094	0.00092	0.0011	0.00008
Lead, dissolved	mg/L	**EQ5**	<0.001	0.002	<0.001	0.0025	0.00029	<0.00007	0.00014	<0.00007
Magnesium, total	mg/L		8.28	7.98	13.6	1.4	1.5	7.5	7.1	11
Magnesium, dissolved	mg/L		7.7	7.55	13.6	1.4	1.5	6.4	6.8	9.4
Manganese, total	mg/L		0.018	0.02	0.023	0.012	0.031	0.014	0.022	0.018
Manganese, dissolved	mg/L		0.018	0.019	0.021	0.012	0.031	0.013	0.014	0.016
Mercury, total	mg/L	**0.001**	0.00005	<0.00005	<0.00001	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Mercury, dissolved	mg/L	**0.001**				<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Molybdenum, total	mg/L	**10**	0.048	0.035	0.031	0.0026	0.0006	0.031	0.03	0.033
Molybdenum, dissolved	mg/L	**10**	0.047	0.032	0.03	0.002	<0.0001	0.03	0.03	0.033
Nickel, total	mg/L	**EQ6**	<0.001	0.001	<0.001	<0.001	<0.001	0.0044	0.0032	0.0032
Nickel, dissolved	mg/L	**EQ6**	<0.001	0.001	<0.001	<0.001	<0.001	<0.0004	0.0012	0.002
Potassium, total	mg/L					0.76	0.46	0.13	0.24	0.49
Potassium, dissolved	mg/L		0.1	0.14	0.15	0.7	0.4	0.046	0.076	0.24
Selenium, total	mg/L	**0.01**	0.0029	0.0012	0.0007	<0.001	<0.001	<0.001	0.0032	0.001
Selenium, dissolved	mg/L	**0.01**	0.0028	0.001	0.0007	<0.001	<0.001	0.0024	<0.001	<0.001
Silicon, total	mg/L		4.3	4.07						
Silicon, dissolved	mg/L		3.9	4.07						
Silver, total	mg/L	**EQ7**	0.0002	<0.0001	<0.0001	0.00003	0.00003	0.00003	0.0001	0.00001
Silver, dissolved	mg/L	**EQ7**	0.0001	<0.0001	<0.0001	<0.00001	<0.00001	<0.0001	0.0001	<0.0001
Sodium, total	mg/L					0.63	0.95	2.8	2.7	9
Sodium, dissolvd	mg/L		3.54	5.39	4.18	0.63	0.95	2.4	2.3	2.8
Strontium, total	mg/L		1.17	1.16	1.6	0.064	0.053	0.86	0.89	1.1
Strontium, dissolved	mg/L		1.05	1.09	1.54	0.068	0.053	0.85	0.88	1.1
Sulfur, total	mg/L									
Sulfur, dissolved	mg/L									
Thallium, total	mg/L	**0.003**								
Thallium, dissolved	mg/L	**0.003**								
Tin, total	mg/L									
Tin, dissolved	mg/L									
Titanium, total	mg/L	**1**								
Titanium, dissolved	mg/L	**1**								
Uranium, total	mg/L	**3**	0.0004	0.0003	0.00014	0.00004	<0.00004	0.00026	0.00025	0.00029
Uranium, dissolved	mg/L	**3**	0.0002	0.0003	0.0001	<0.00004	<0.00004	0.00026	0.00021	0.00029
Vanadium, total	mg/L		<0.03	<0.03	<0.03	<0.001	<0.001	0.0029	<0.001	<0.001
Vanadium, dissolved	mg/L		<0.03	<0.03	<0.03	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**	<0.005	<0.005	<0.005	0.052	0.092	0.049	0.024	0.0096999
Zinc, dissolved	mg/L	**EQ8**	<0.005	<0.005	<0.005	0.028	0.092	0.0041	0.0041	0.0055

Notes:

0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

Monitoring Location		BC CSR	Upper Cirque WS-93-1C	Upper Cirque W6	Upper Cirque W6	Upper Cirque W6	Upper Cirque W6
Sampling Date			21-Oct-93	28-Aug-94	5-Oct-94	4-Sep-96	1-Oct-96
Field Parameters							
pH	pH units			8	7.85	8.03	7.53
Conductivity	uS/cm			330	316	304	349
Specific Conductivity	uS/cm						
Dissolved Oxygen	mg/L						
Dissolved Oxygen	%						
ORP	mV						
Turbidity	NTU						
TDS	mg/L						
Temperature	degC						
Physical Parameters							
pH	pH units		7.3	7.5	7.3	7.9	7.7
Specific Conductance	uS/cm		360	360	360	383	383
Total Hardness	mg/L			190	160	157	184
Total dissolved solids	mg/L		0.29	250	320	264	253
Total suspended solids	mg/L		<0.002	7	<1	<1	<1
Turbidity	NTU		0.2	0.16	0.31	0.3	0.1
Major Ions							
Total alkalinity	mg/L as Ca CO3			54	56	50	52
Alkalinity to pH 4.5	mg/L as Ca CO3		65				
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3						
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3						
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3						
Alkalinity, Phenolphthalein (as CaCO3)	mg/L as Ca CO3						
Acidity	mg/L		5.7	1.9	4.1	1	3
Chloride	mg/L	**1500**	0.001	0.5	<0.1	0.2	0.18
Fluoride	mg/L	**EQ1**	0.00025	0.1	0.1	0.09	0.1
Bromide	mg/L						
Sulfate	mg/L	**1000**	0.12	110	130	178	131
Nutrients							
Nitrate Nitrogen	mg/L as N	**400**	<0.5	<0.05	0.05	0.018	0.034
Nitrite Nitrogen	mg/L as N	**EQ2**	58	0.001	0.002	<0.001	<0.001
Nitrogen, total	mg/L as N						
Ammonia Nitrogen	mg/L as N	**EQ3**					
Free Ammonia	mg/L as NH3-N		<0.5	<0.005	<0.005	0.01	0.01
Ortho phosphorus, dissolved	mg/L		<0.05	<0.002	<0.002	0.002	0.002
Phosphorus, total	mg/L			0.006	<0.002	0.002	0.002
Organics							
Total Organic Carbon	mg/L						
Dissolved Organic Carbon	mg/L						
Other							
Cyanide, total	mg/L	**0.05**					
Cyanide, WAD	mg/L						
Thiocyanate	mg/L						
Metals							
Aluminum, total	mg/L		<0.002	0.0064	0.0083199	0.0029	0.0012
Aluminum, dissolved	mg/L		<0.001	0.0058899	<0.001	0.0012	<0.0005
Antimony, total	mg/L	**0.2**	0.012	0.0151	0.0101999	0.006	0.00675
Antimony, dissolved	mg/L	**0.2**	0.012	0.0143999	0.00972	0.0057399	0.0064299
Arsenic, total	mg/L	**0.05**	<0.001	<0.001	0.00384	0.002	0.001
Arsenic, dissolved	mg/L	**0.05**	<0.001	<0.001	0.00304	0.002	0.001
Barium, total	mg/L	**10**	0.014	0.0136999	0.0145	0.0118999	0.0123999
Barium, dissolved	mg/L	**10**	0.014	0.013	0.0131999	0.0116999	0.012
Beryllium, total	mg/L	**0.053**	0.00013	0.0001	0.0001	<0.00005	<0.00005
Beryllium, dissolved	mg/L	**0.053**	<0.00003	0.0001	0.0001	<0.00005	<0.00005
Bismuth, total	mg/L						
Bismuth, dissolved	mg/L						
Boron, total	mg/L	**50**	0.0097	0.0054299	0.0005	0.006	0.009
Boron, dissolved	mg/L	**50**	0.0031	0.00498	<0.001	0.005	0.008
Cadmium, total	mg/L		<0.0002	0.0001	<0.0001	0.001	<0.0001
Cadmium, dissolved	mg/L		<0.0001	<0.0002	<0.0001	0.0003	<0.0001
Calcium, total	mg/L		86	68	60.8	51.8	61.9
Calcium, dissolved	mg/L		73	61.4	52.6	52.6	61.5
Cesium, total	mg/L						
Cesium, dissolved	mg/L						
Chromium, total	mg/L	**0.01**	0.0022	<0.0005	<0.0005	0.0012	<0.0005
Chromium, dissolved	mg/L	**0.01**	0.0021	<0.0005	<0.0005	0.0009	<0.0005
Chromium, hexavalent	mg/L						
Cobalt, total	mg/L	**0.04**	0.00042	0.00027	<0.00006	0.0006	0.00016
Cobalt, dissolved	mg/L	**0.04**	0.00029	<0.00009	<0.00006	0.00015	0.00013
Copper, total	mg/L	**EQ4**	0.0068	0.0044	<0.0004	0.0007	0.0003
Copper, dissolved	mg/L	**EQ4**	0.0039	0.00431	<0.0004	0.0003	<0.0001
Iron, total	mg/L		0.089	0.02	0.0166	0.01	<0.01
Iron, dissolved	mg/L		0.055	<0.01	<0.01	<0.01	<0.01
Lead, total	mg/L	**EQ5**	<0.0002	0.00095	0.00011	0.00018	0.0001
Lead, dissolved	mg/L	**EQ5**	<0.00009	0.00019	<0.00007	<0.00005	0.00006
Magnesium, total	mg/L		11	11.7	8.35	6.8	7.85
Magnesium, dissolved	mg/L		11	9.16	6.61	6.3	7.42
Manganese, total	mg/L		0.019	0.0153999	0.0151	0.0064	0.0126999
Manganese, dissolved	mg/L		0.019	0.0136	0.0121	0.0063	0.0121999
Mercury, total	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	0.00009	<0.00005
Mercury, dissolved	mg/L	**0.001**	<0.00005	<0.00005	<0.00005	0.00008	<0.00005
Molybdenum, total	mg/L	**10**	0.033	0.0315	0.0334	0.0237999	0.032
Molybdenum, dissolved	mg/L	**10**	0.031	0.0296	0.031	0.0228999	0.0267999
Nickel, total	mg/L	**EQ6**	<0.001	0.00707	<0.0004	0.00011	0.0005
Nickel, dissolved	mg/L	**EQ6**	0.00093	0.00273	<0.0004	0.0001	0.0005
Potassium, total	mg/L		0.44	0.05	0.25	0.37	0.15
Potassium, dissolved	mg/L		0.41	<0.05	0.25	0.14	0.14
Selenium, total	mg/L	**0.01**	0.008	0.004	0.004	<0.001	<0.001
Selenium, dissolved	mg/L	**0.01**	<0.001	<0.001	0.002	<0.001	<0.001
Silicon, total	mg/L						
Silicon, dissolved	mg/L						
Silver, total	mg/L	**EQ7**	0.00007	0.00001	0.00005	0.0001	<0.00001
Silver, dissolved	mg/L	**EQ7**	<0.00001	0.00005	0.00005	0.0001	<0.00001
Sodium, total	mg/L		4.6	3.95	3.72	2.92	2.9
Sodium, dissolvd	mg/L		3.8	3.35	2.92	2.7	2.79
Strontium, total	mg/L		1.2	1.25	1.18	0.513	1.06
Strontium, dissolved	mg/L		1.2	1.21	1.15	0.507	1.03
Sulfur, total	mg/L						
Sulfur, dissolved	mg/L						
Thallium, total	mg/L	**0.003**					
Thallium, dissolved	mg/L	**0.003**					
Tin, total	mg/L						
Tin, dissolved	mg/L						
Titanium, total	mg/L	**1**					
Titanium, dissolved	mg/L	**1**					
Uranium, total	mg/L	**3**	0.00022	0.00039	0.00041	0.0004	0.00047
Uranium, dissolved	mg/L	**3**	0.00022	0.00038	0.00036	0.00029	0.00046
Vanadium, total	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Vanadium, dissolved	mg/L		<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, total	mg/L	**EQ8**	<0.002	0.0054	0.005	0.011	0.004
Zinc, dissolved	mg/L	**EQ8**	<0.0007	0.00521	<0.001	0.005	0.003

Notes:

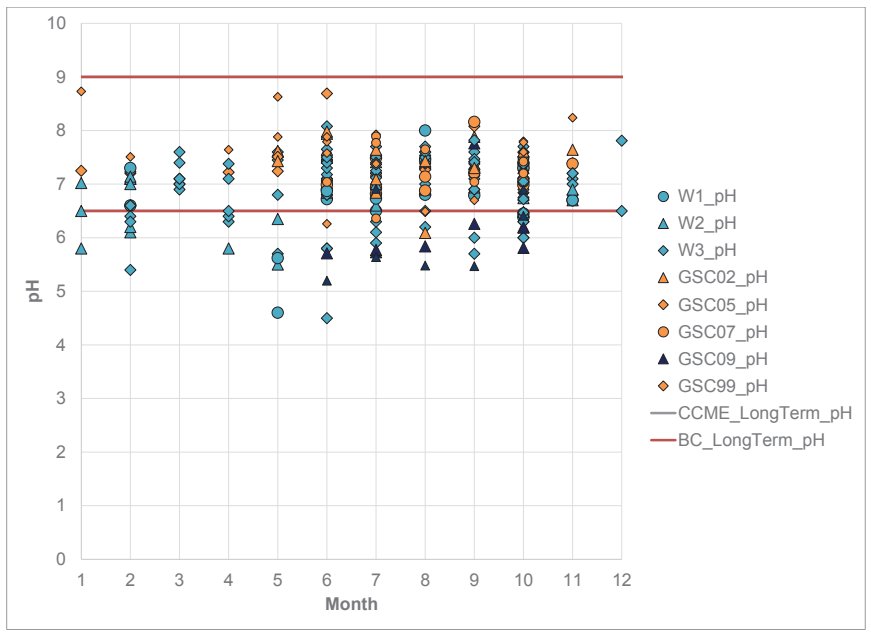
0.001	Red value exceeds BC CSR Water Quality Guidelines
<0.001	Less than detection limit
EQ##	Guideline is based on an equation or condition, see Table 3-15 in the main body of the report

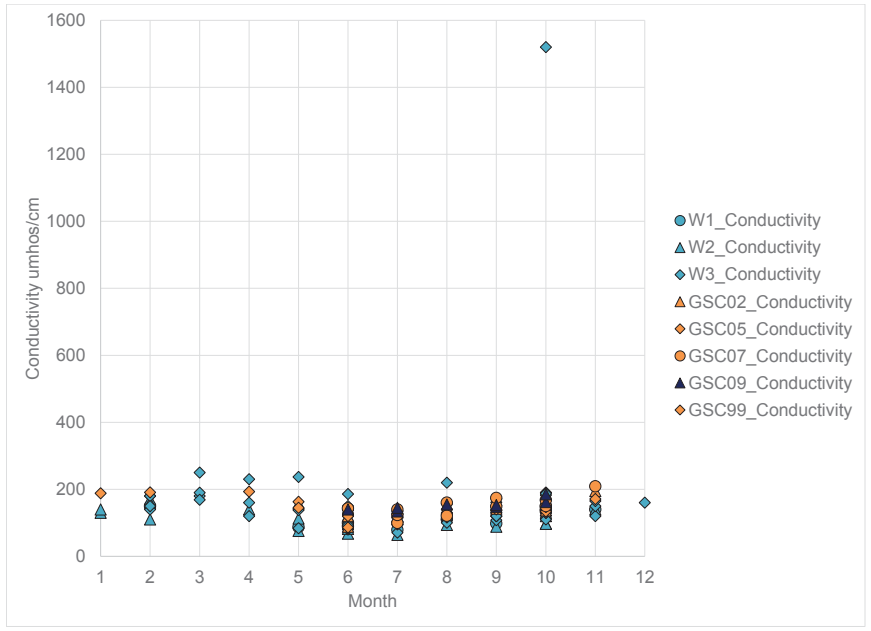
Appendix E – Surface Water Quality Plots

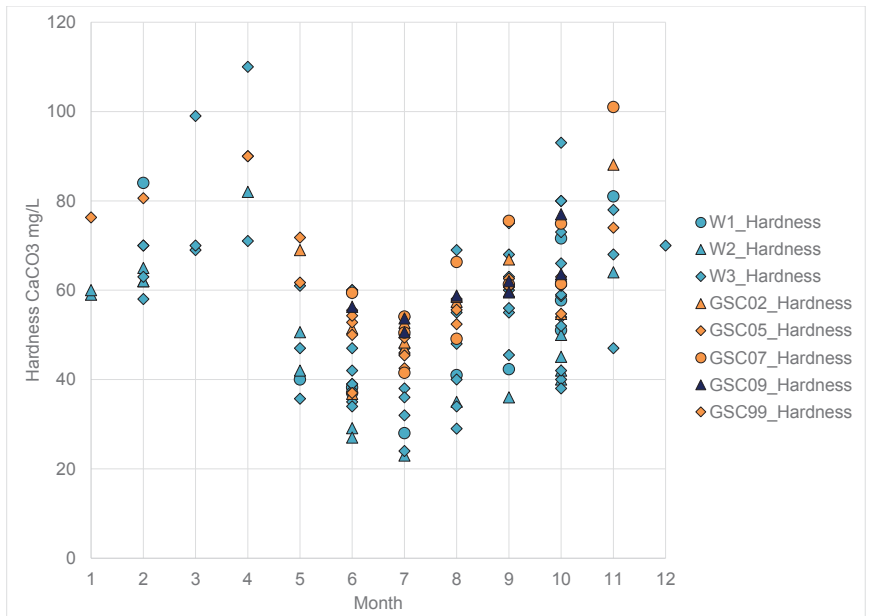
Appendix E - 1 – Monthly Surface Water Quality Plots

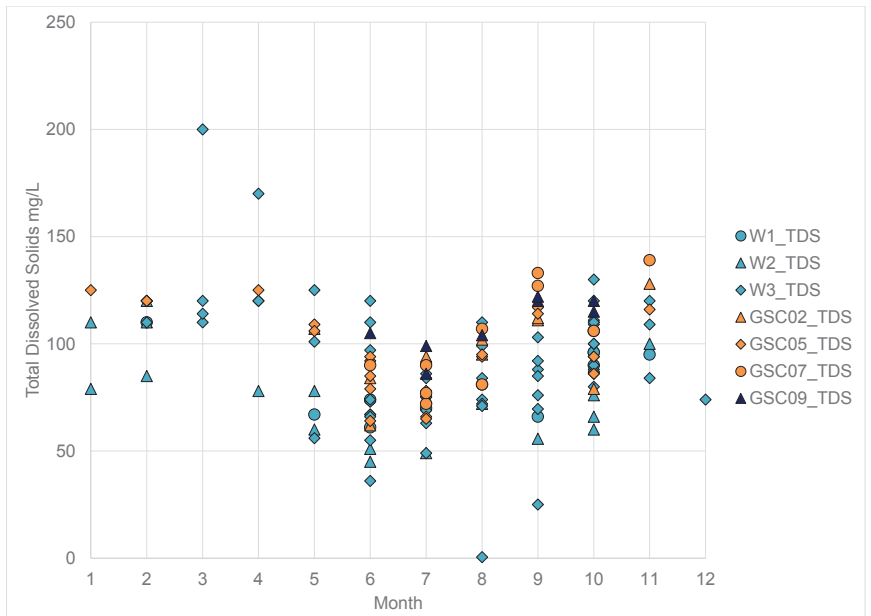
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

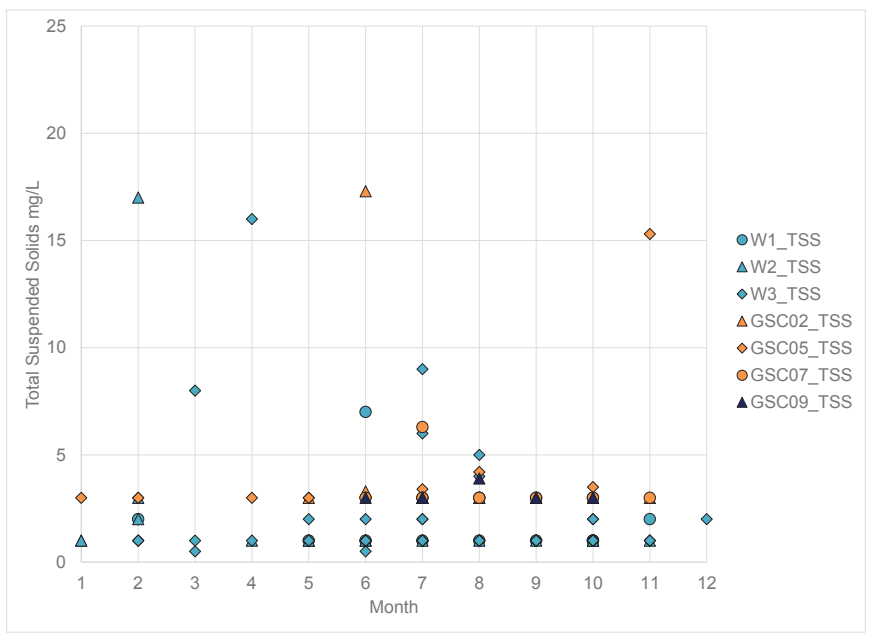
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

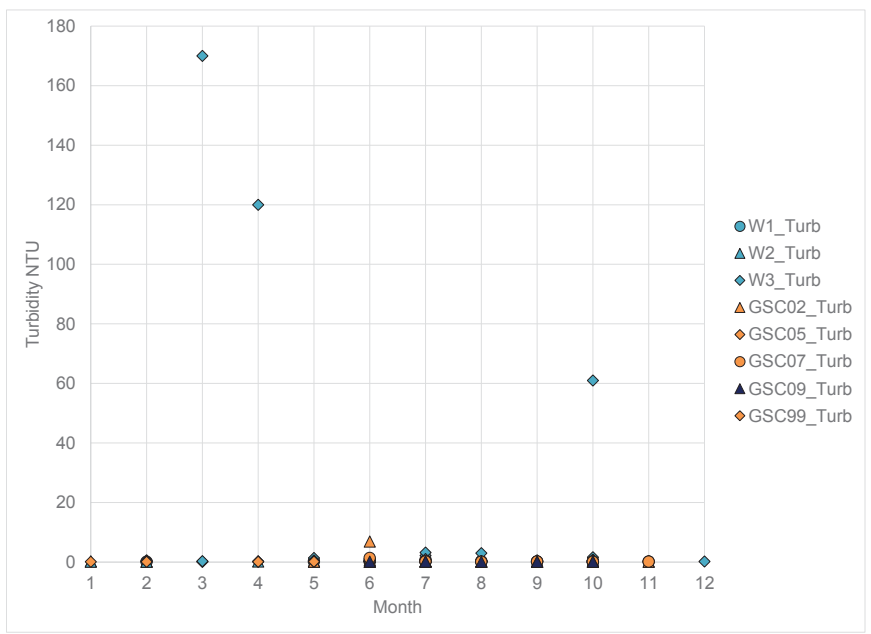


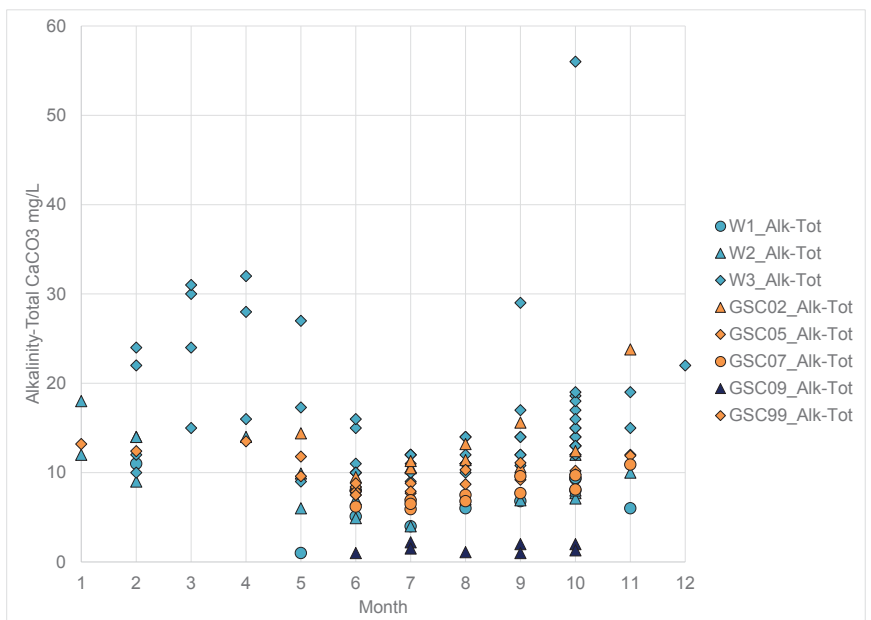


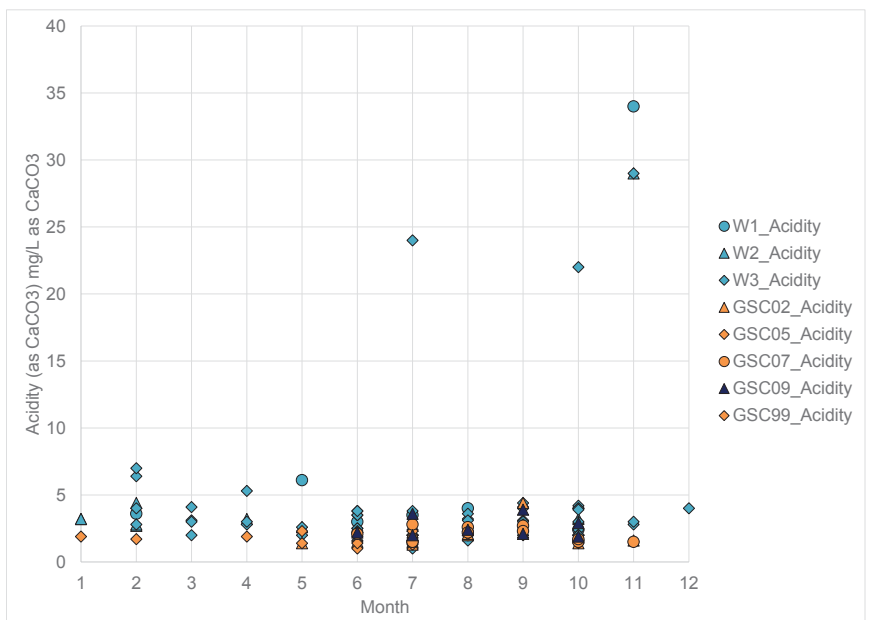






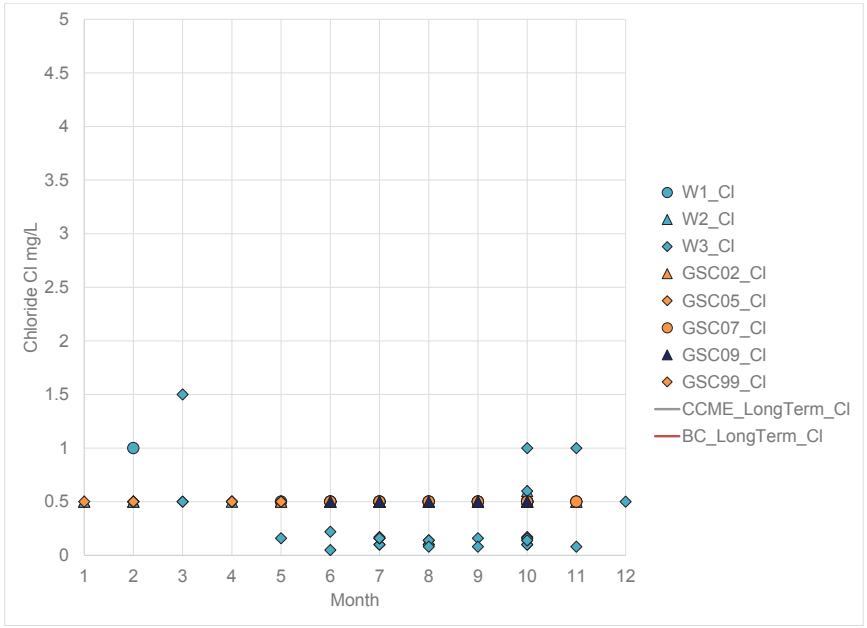


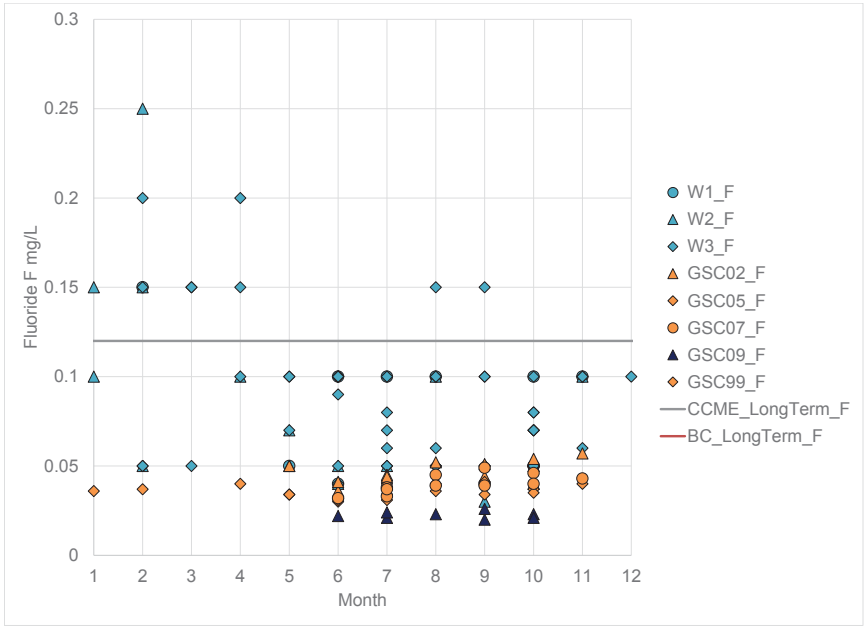


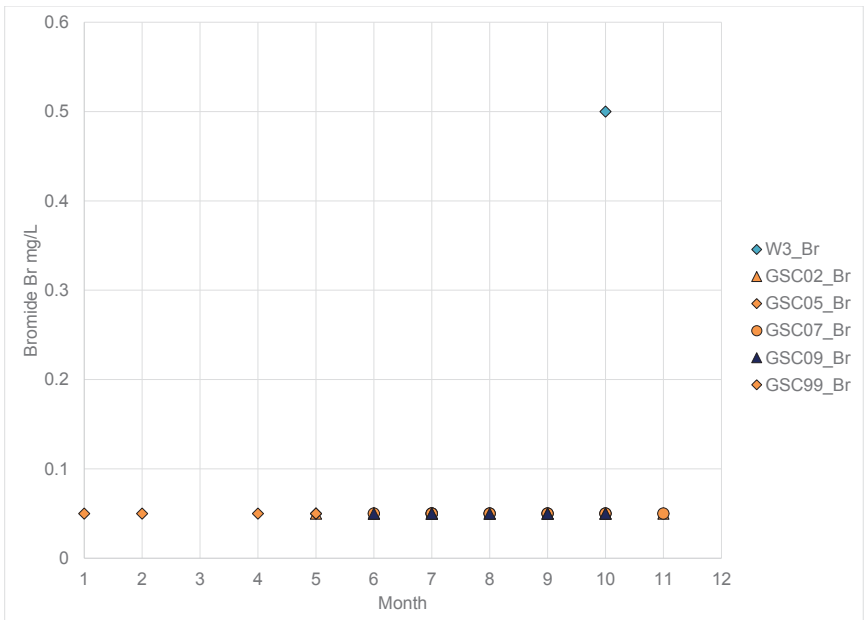


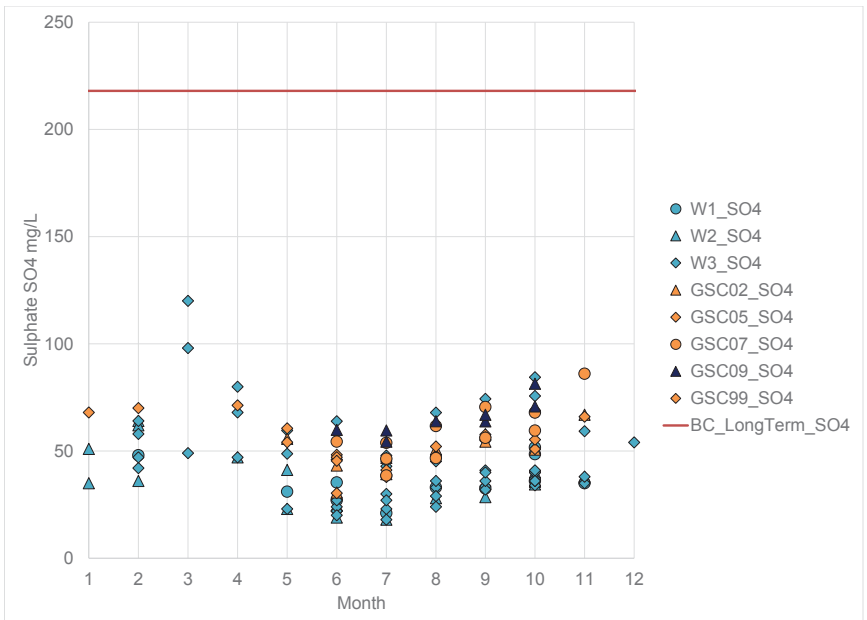
Note: Water Quality Guidelines are not shown on plots where the data is significantly lower than the guideline.

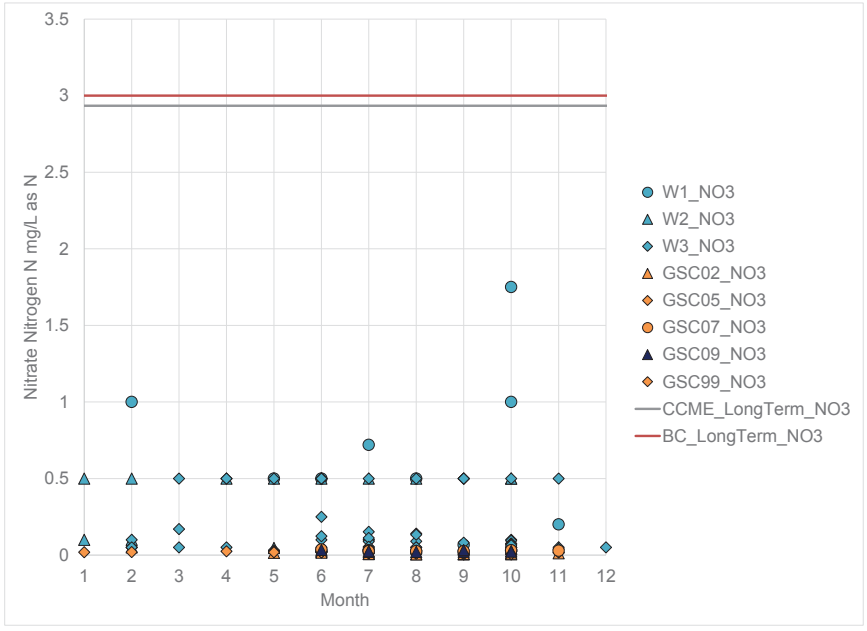
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

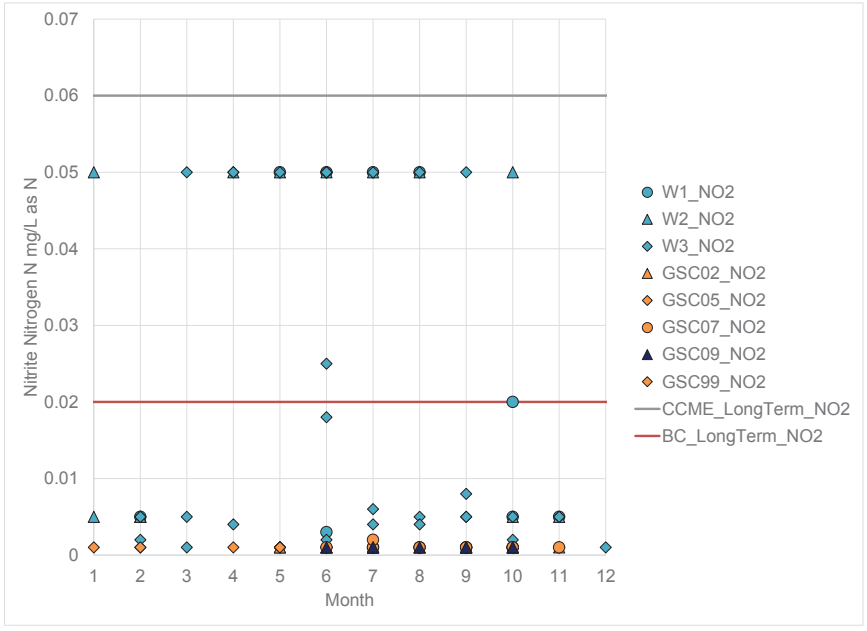


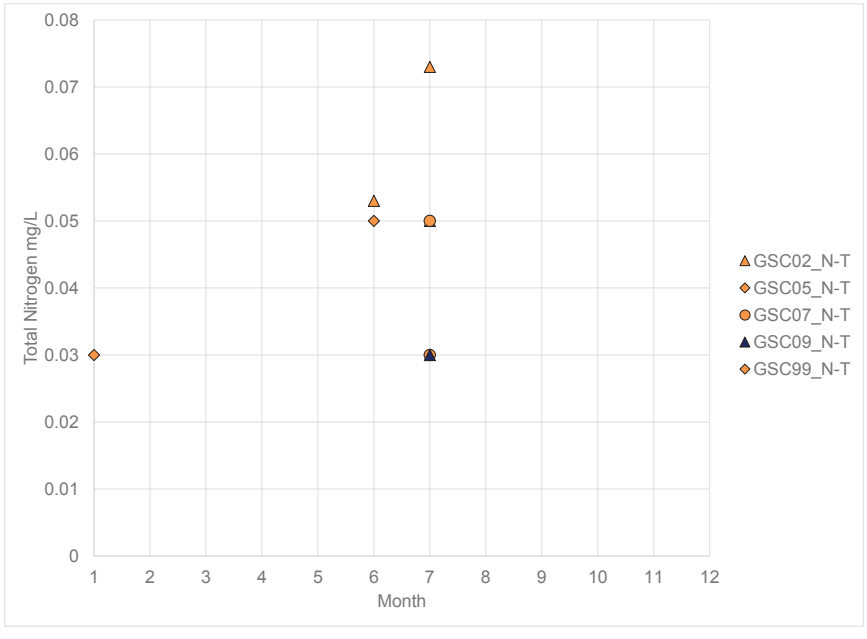


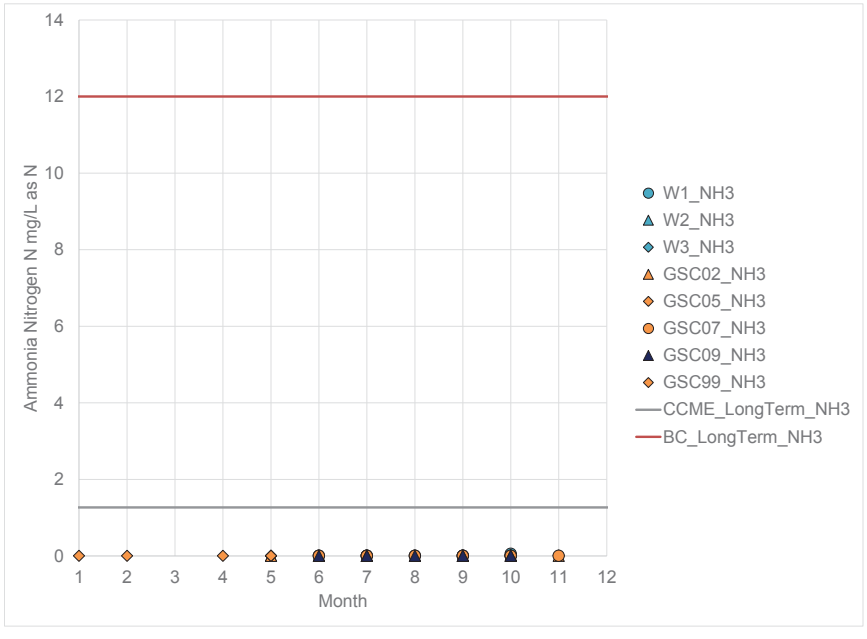






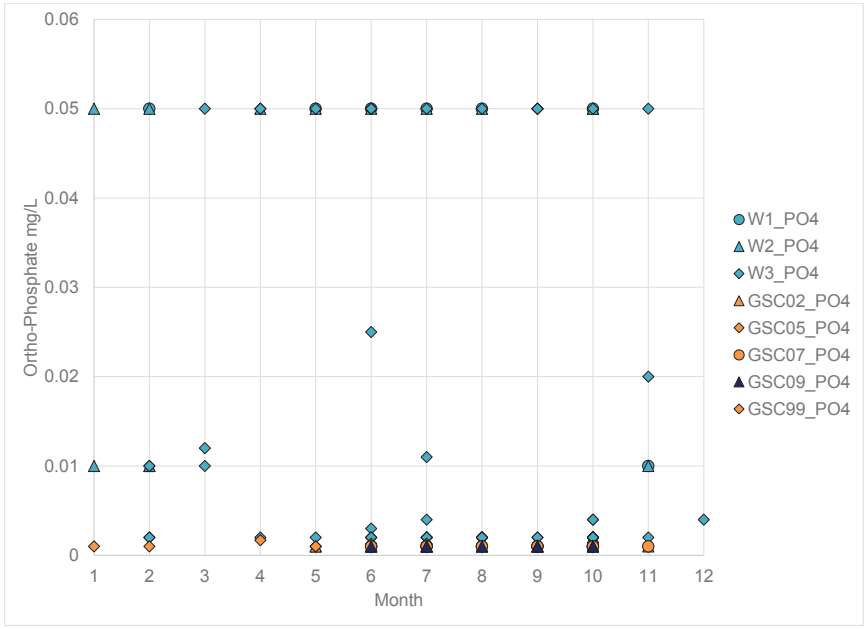


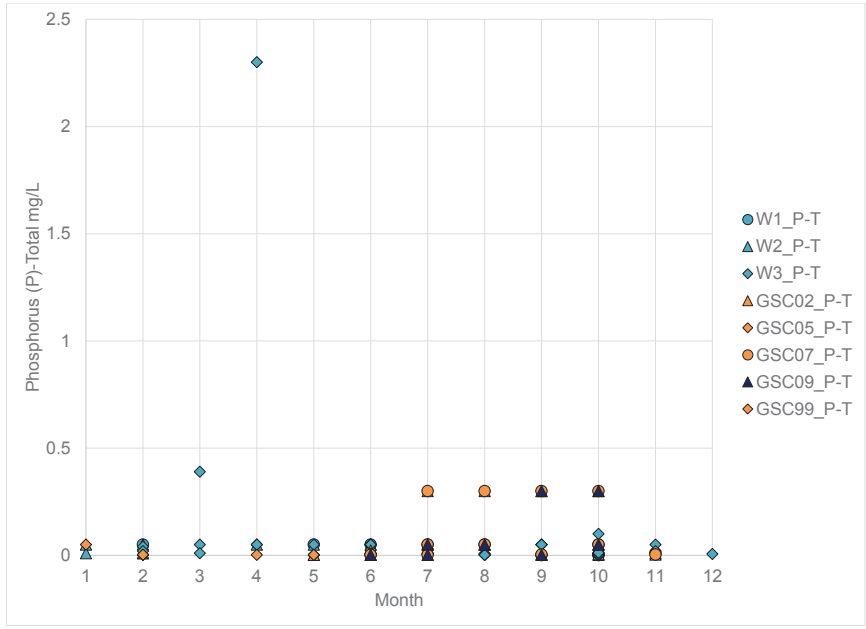


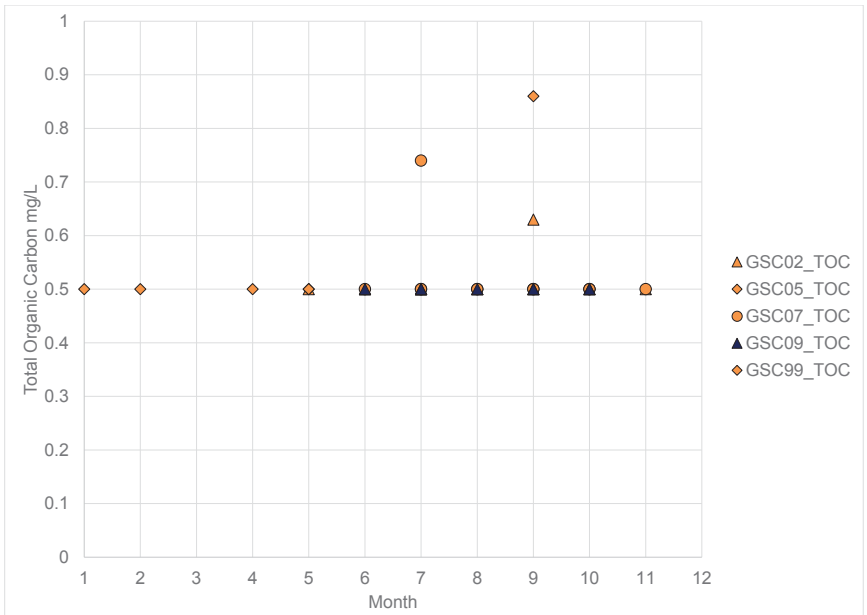


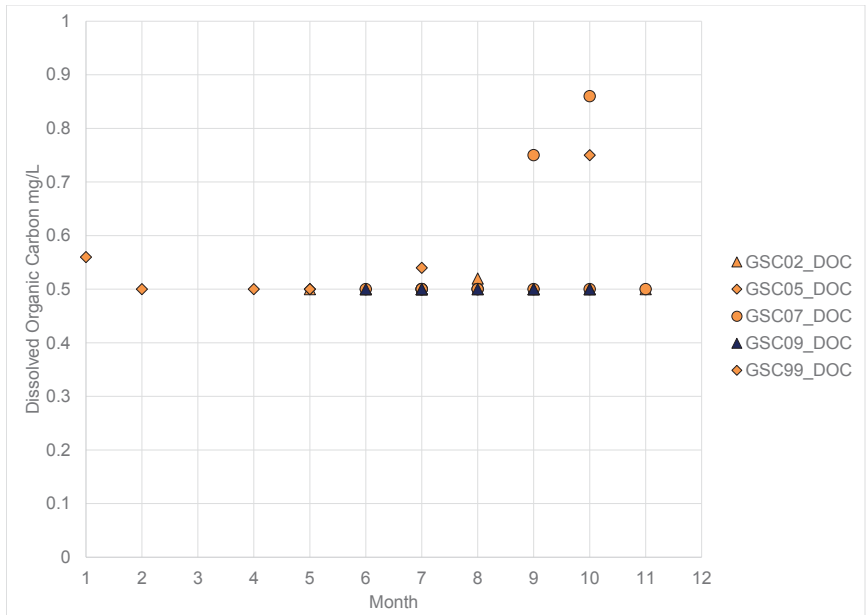
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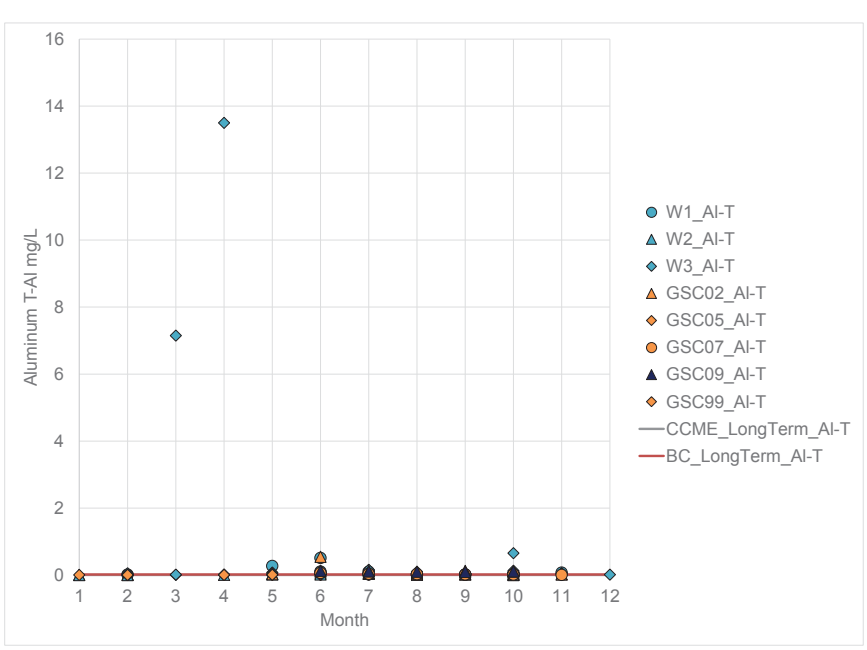
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

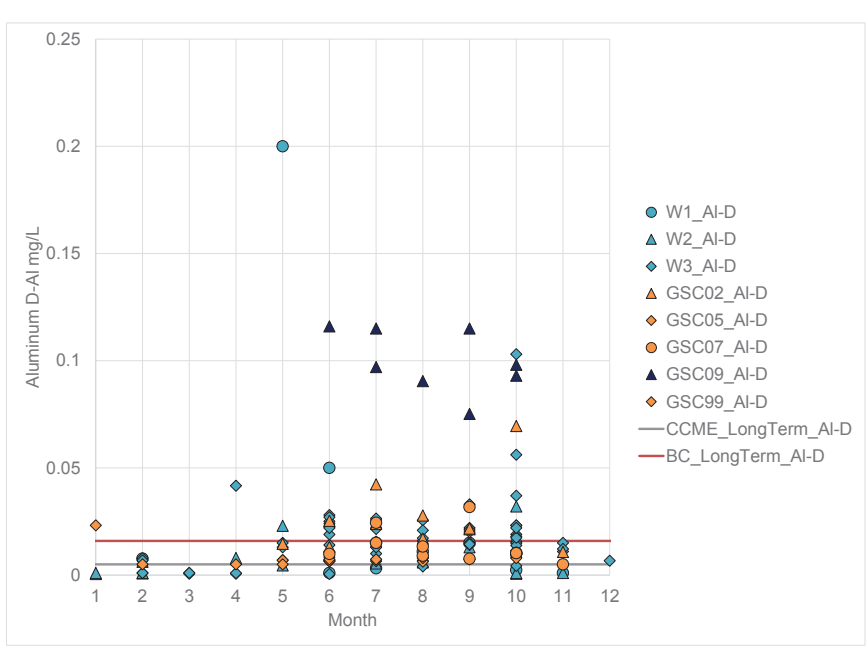


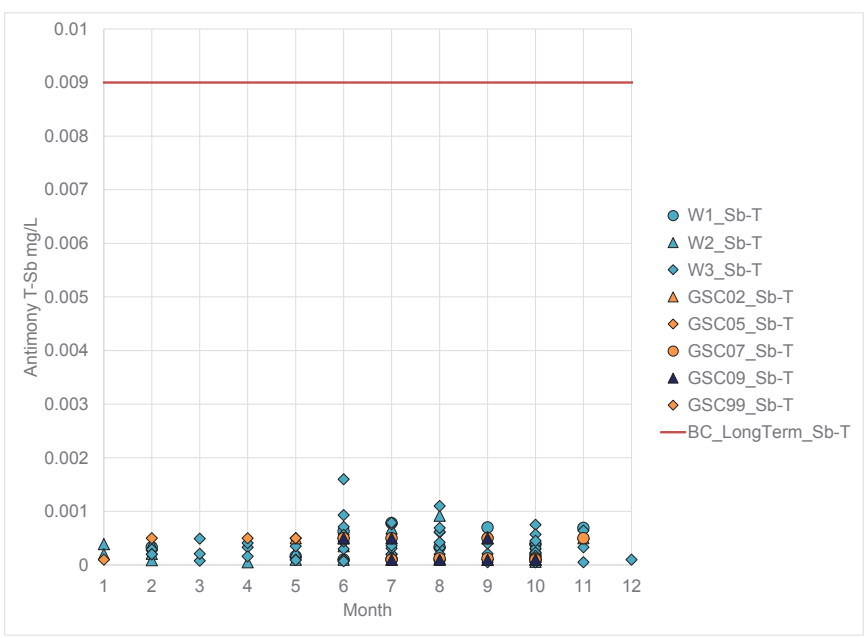


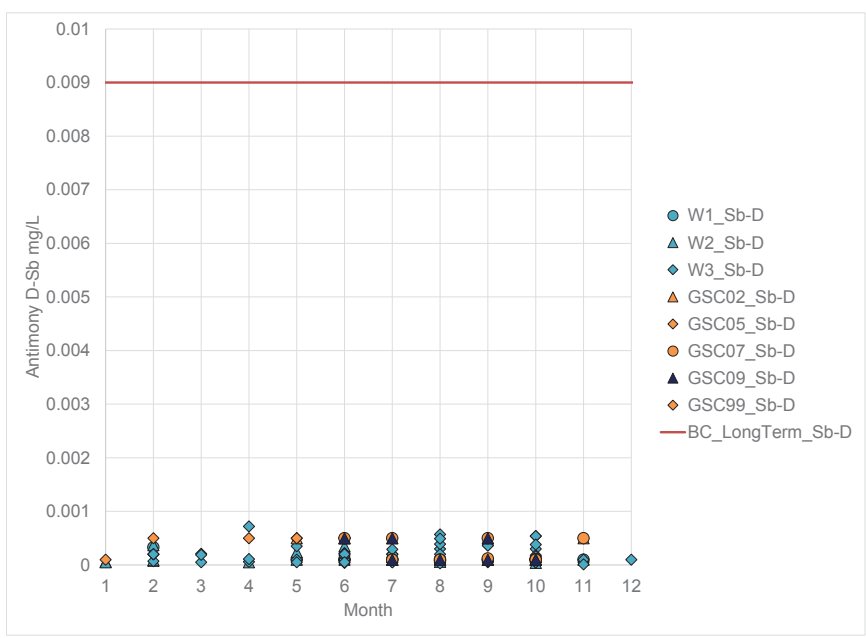






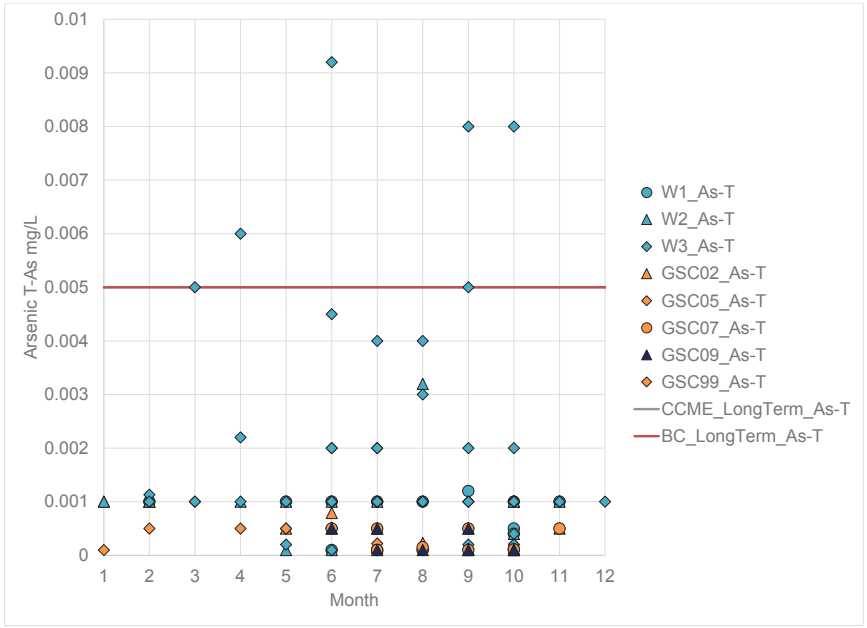


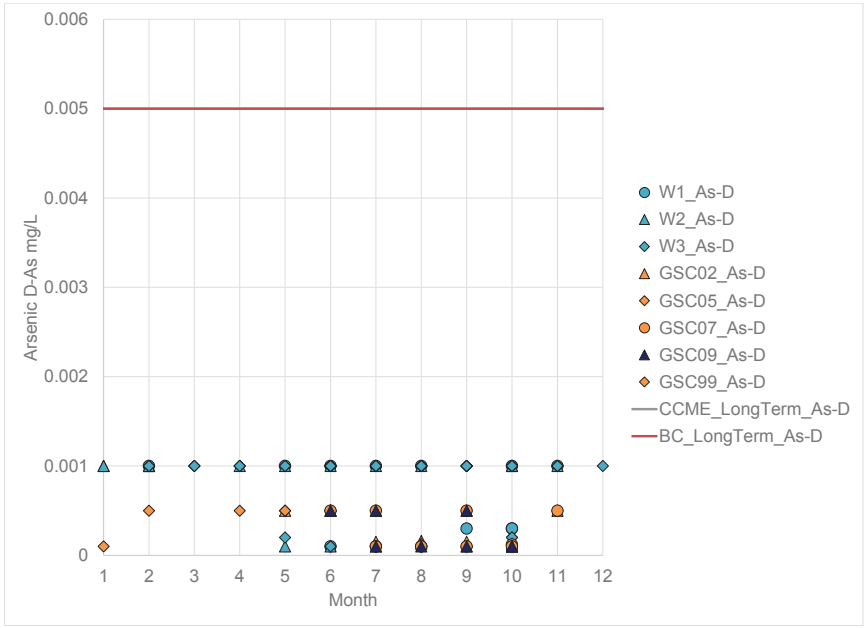


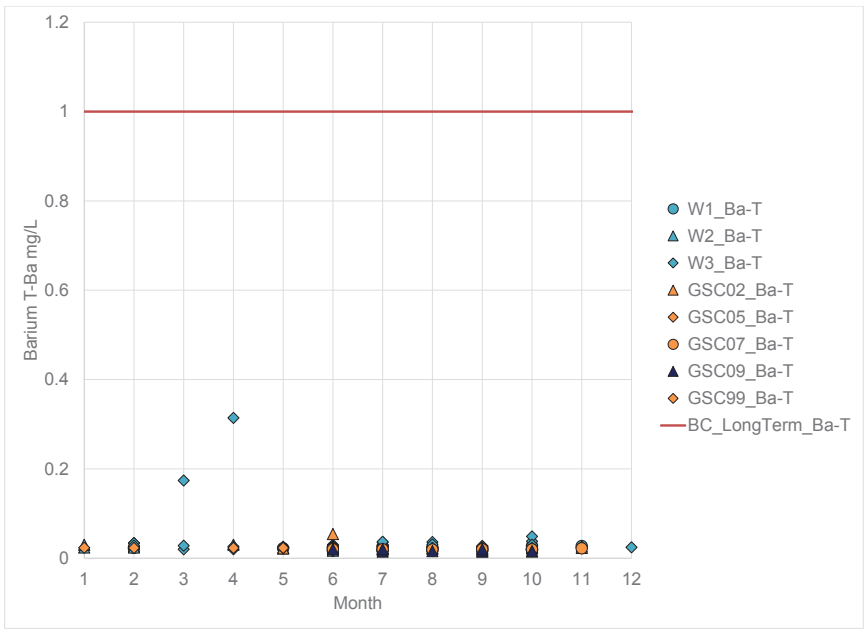


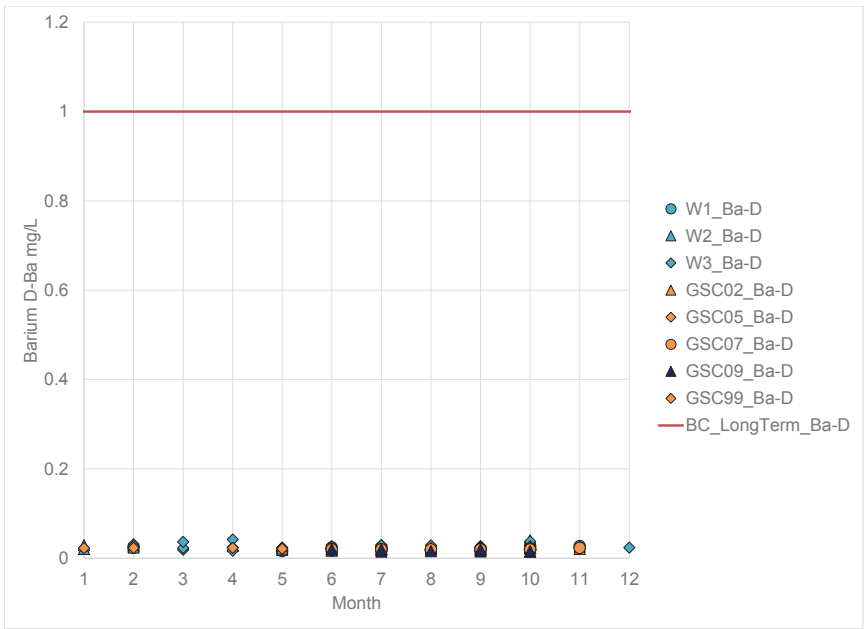
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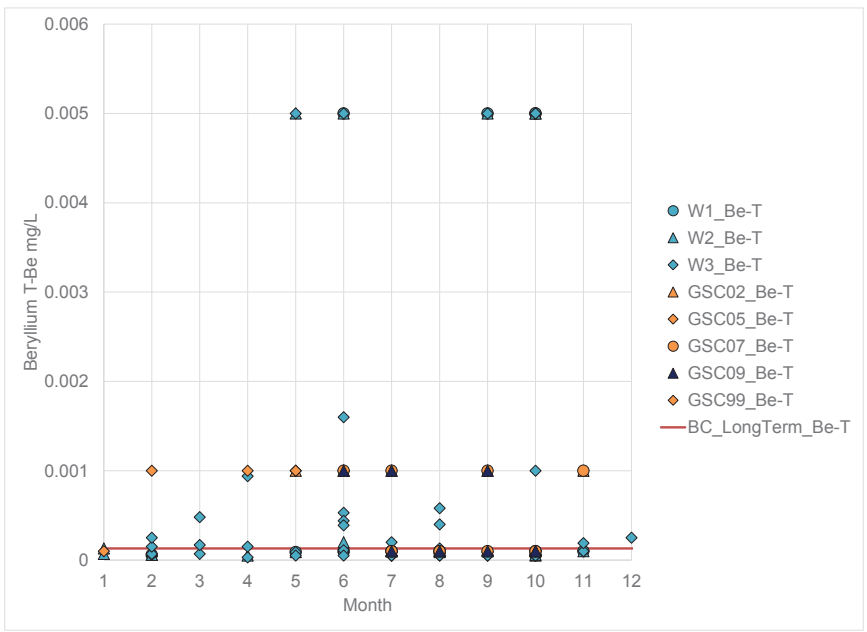
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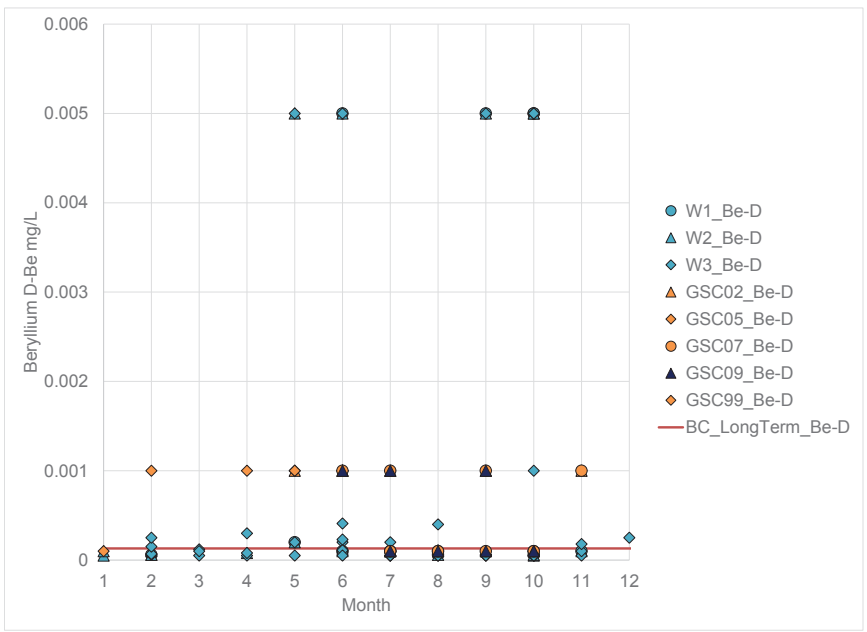


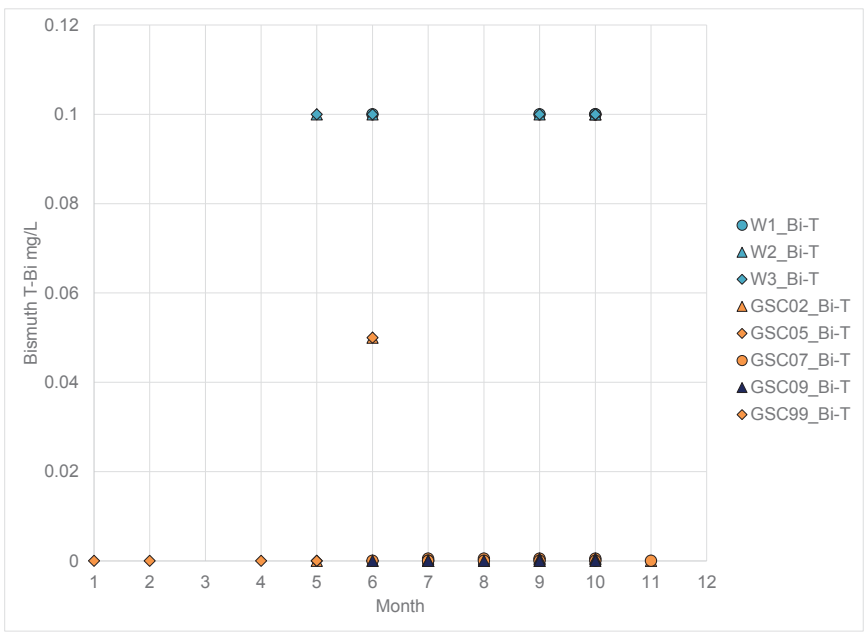


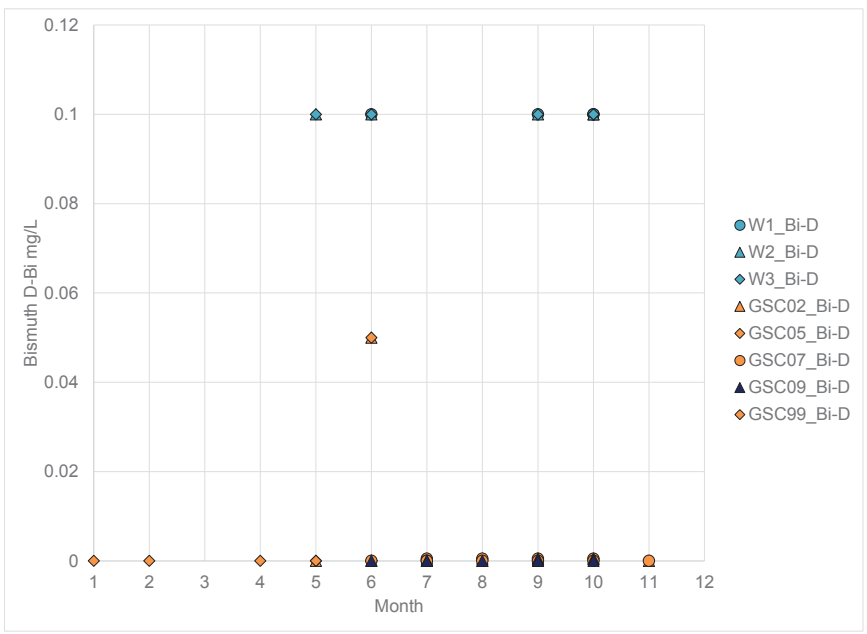






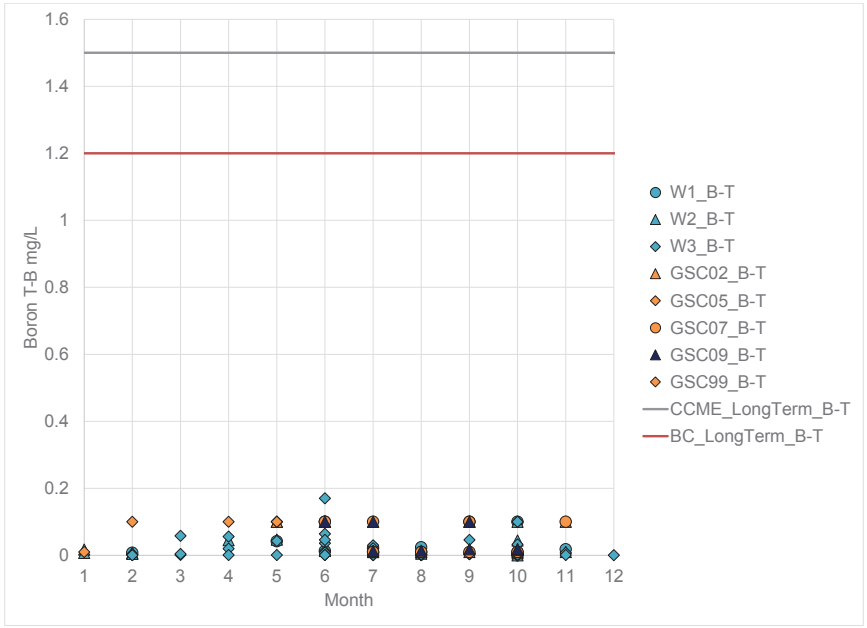


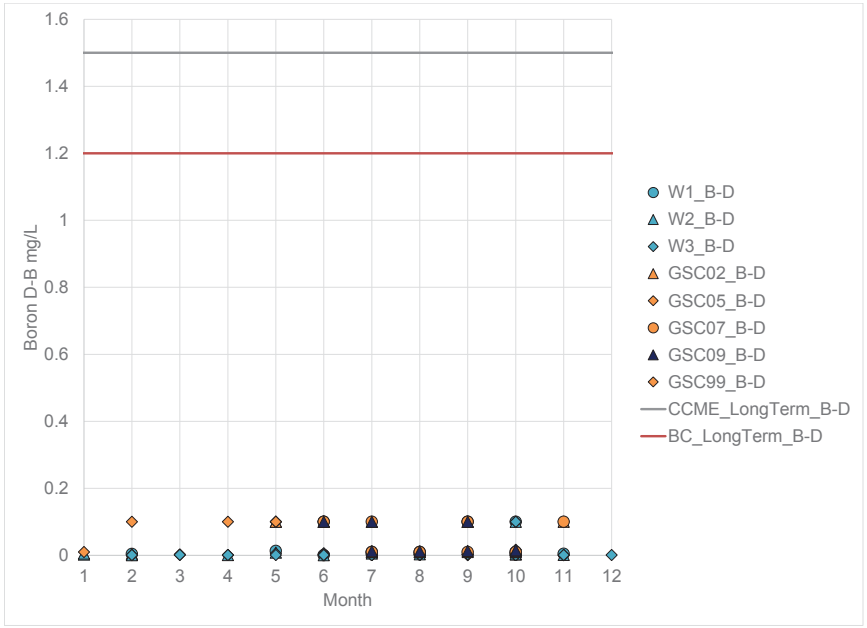


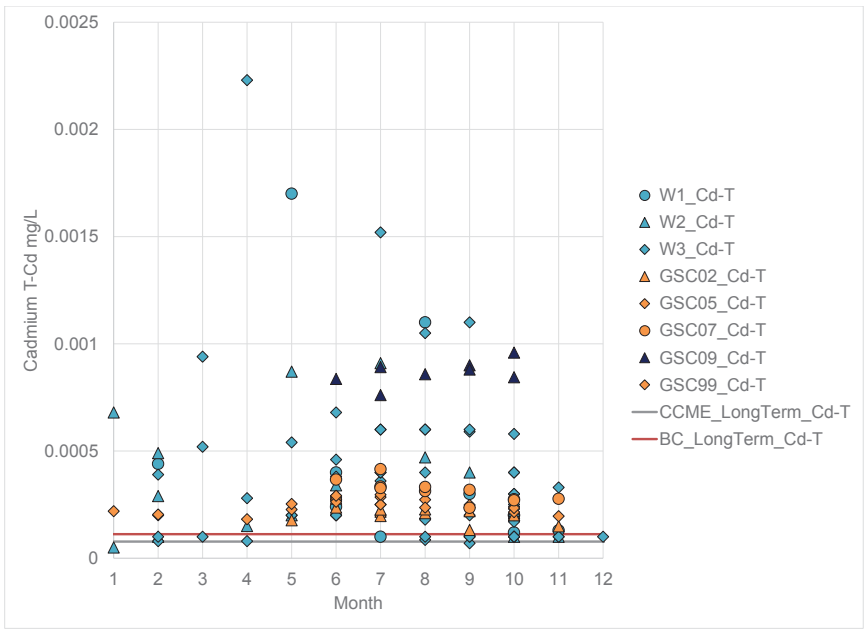


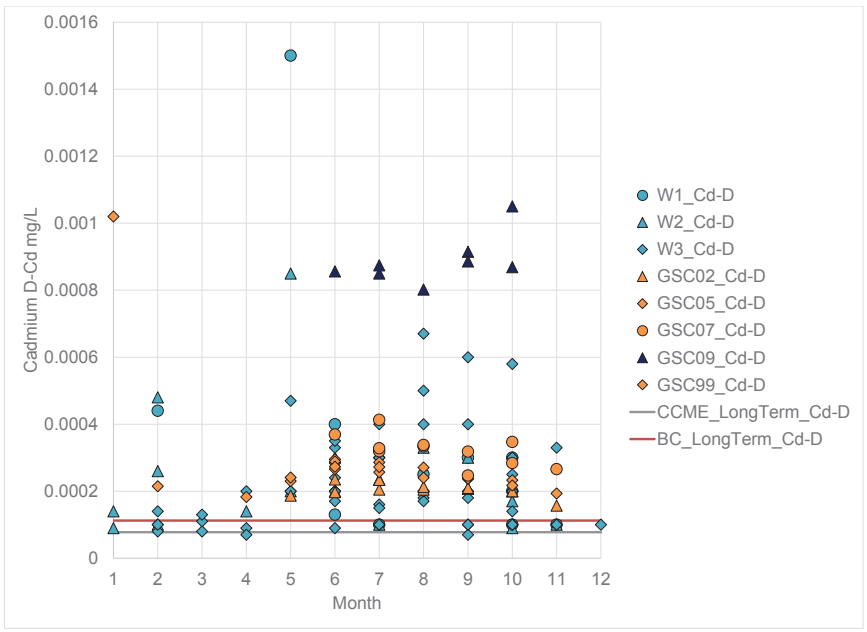
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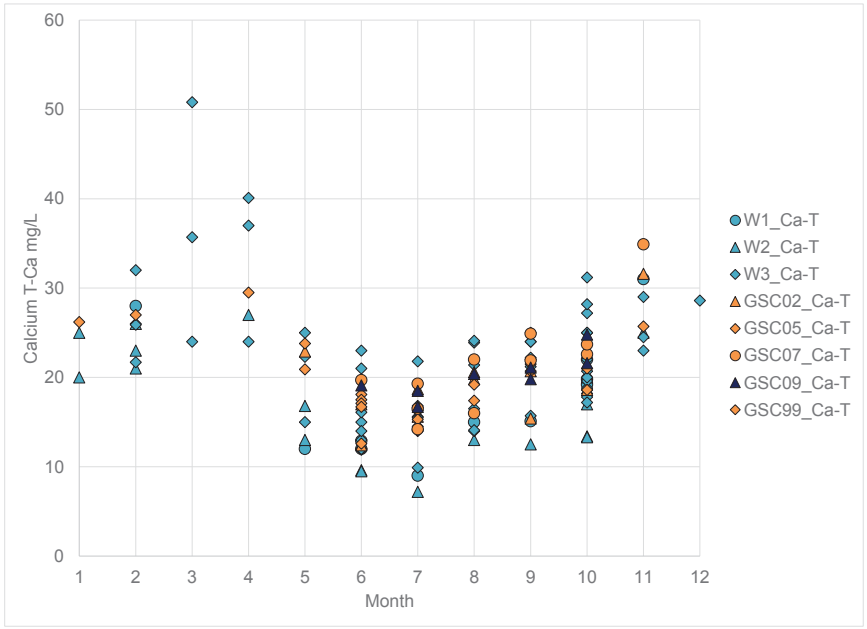
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

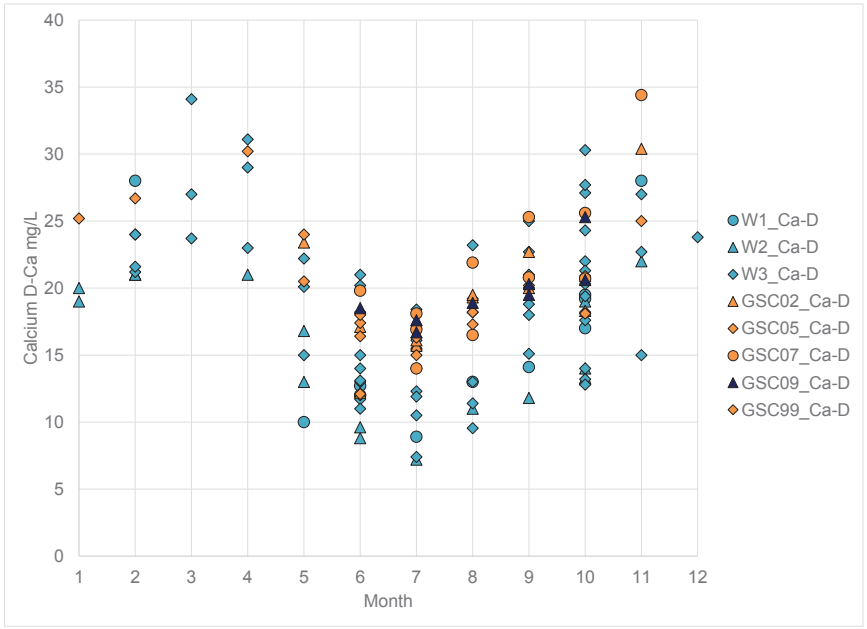


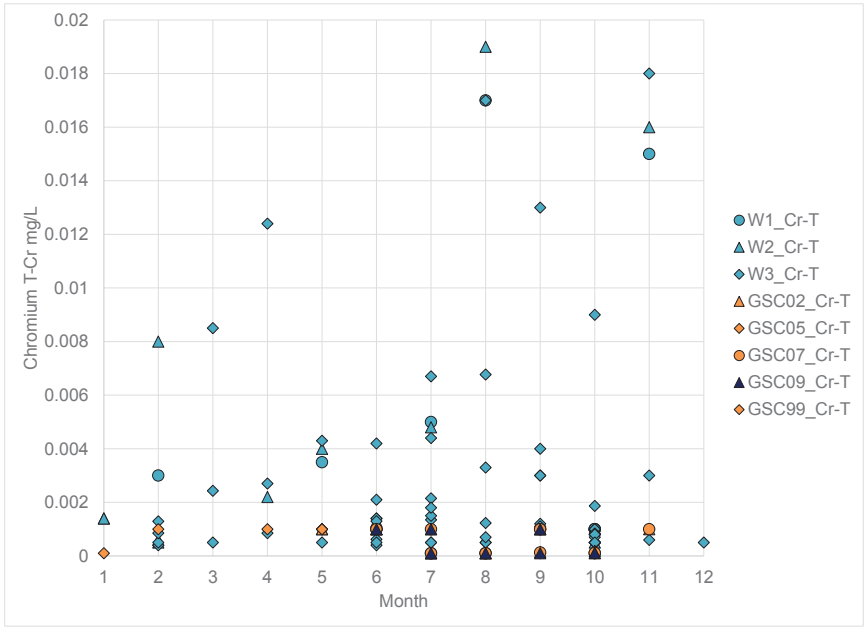


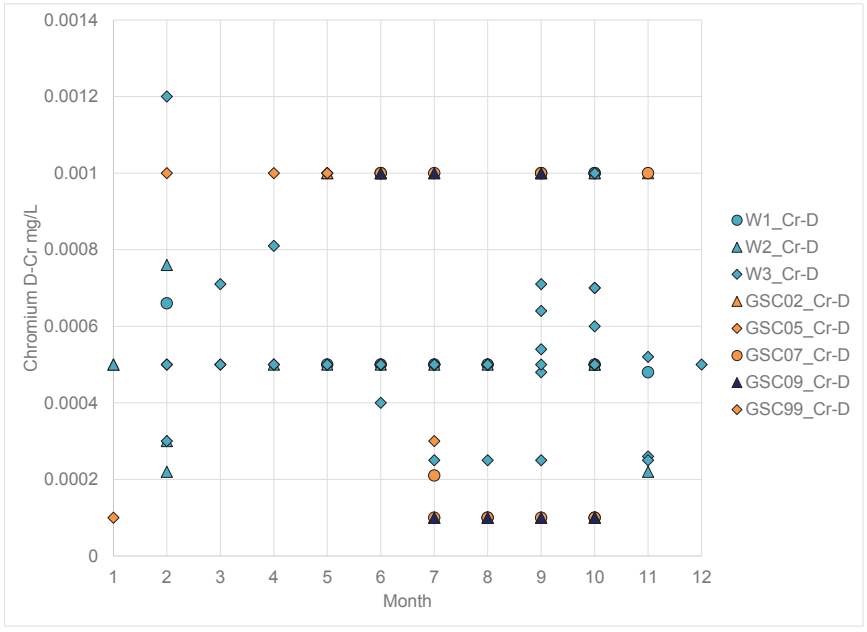






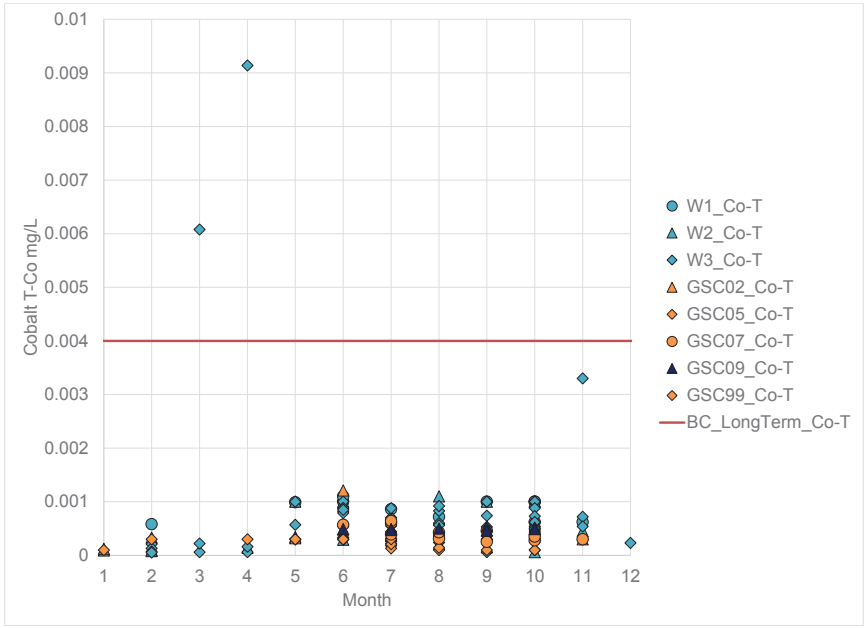


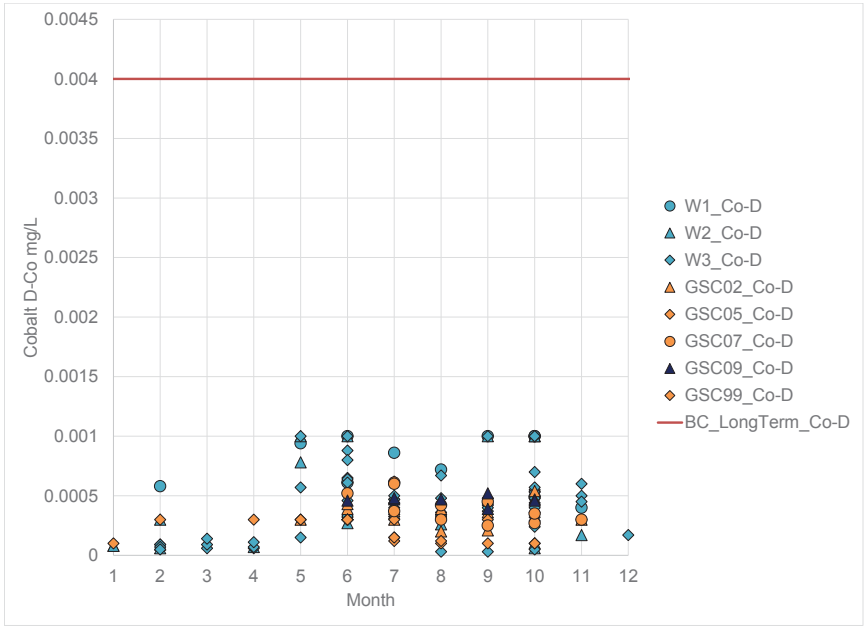


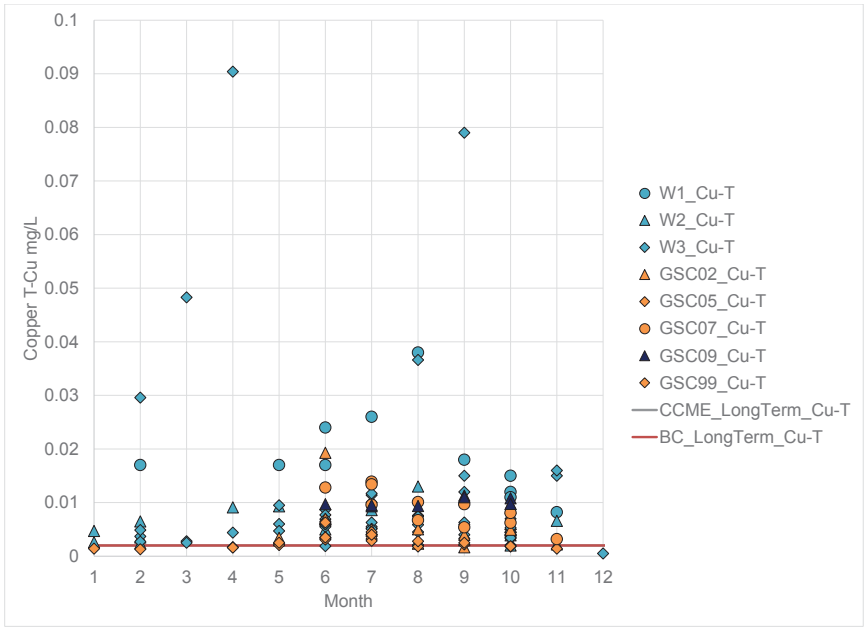


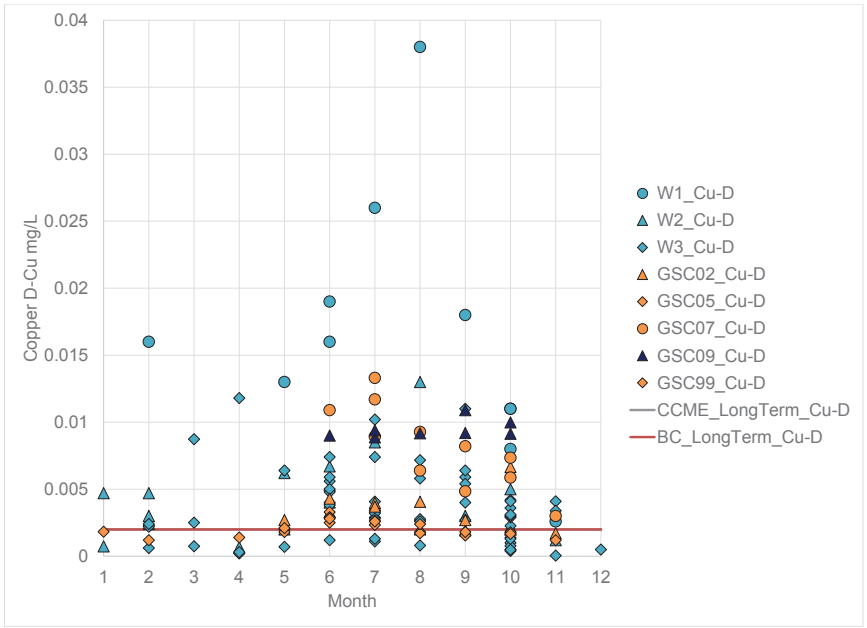
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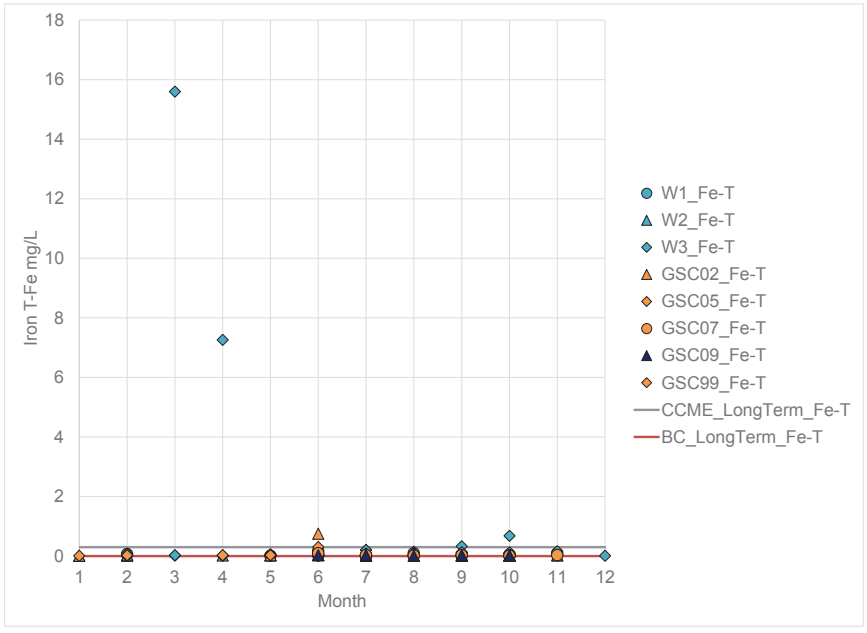
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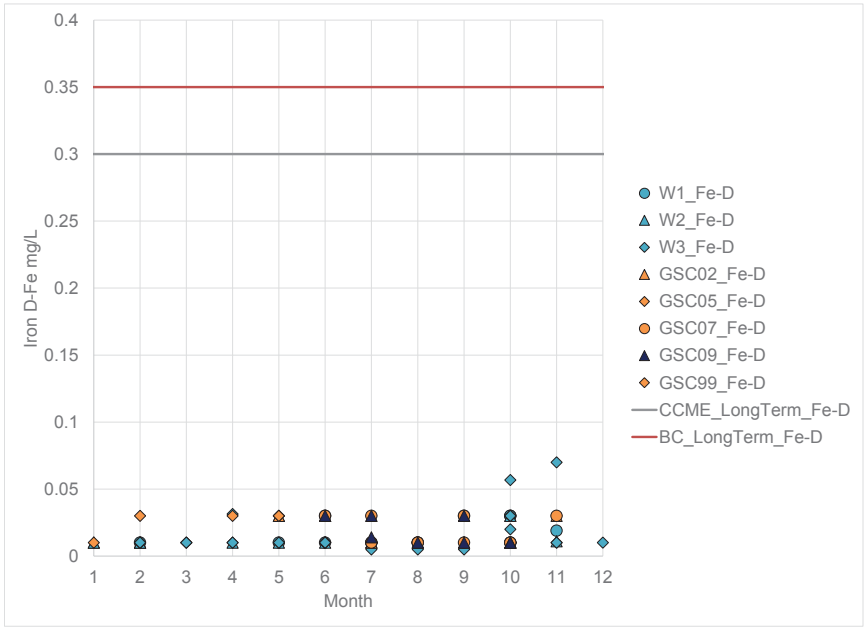


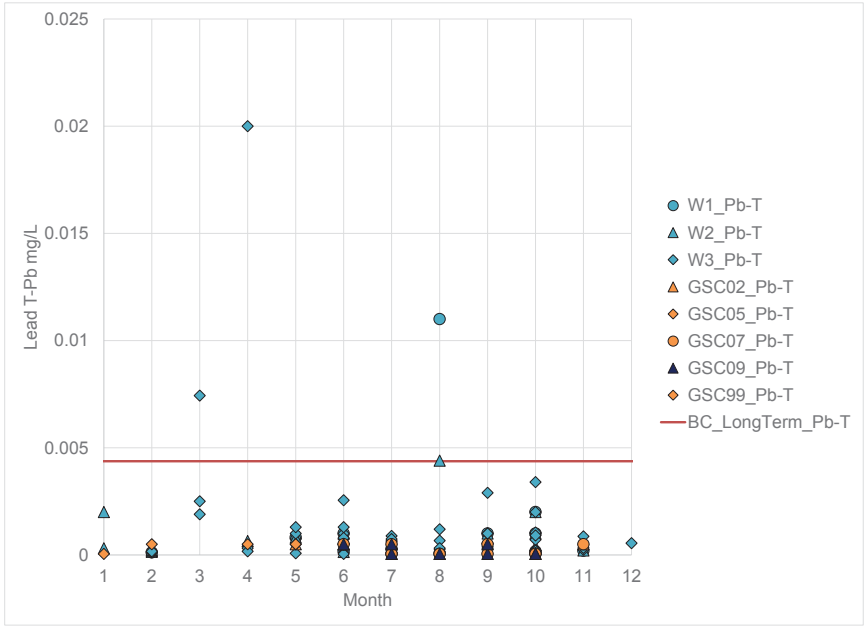


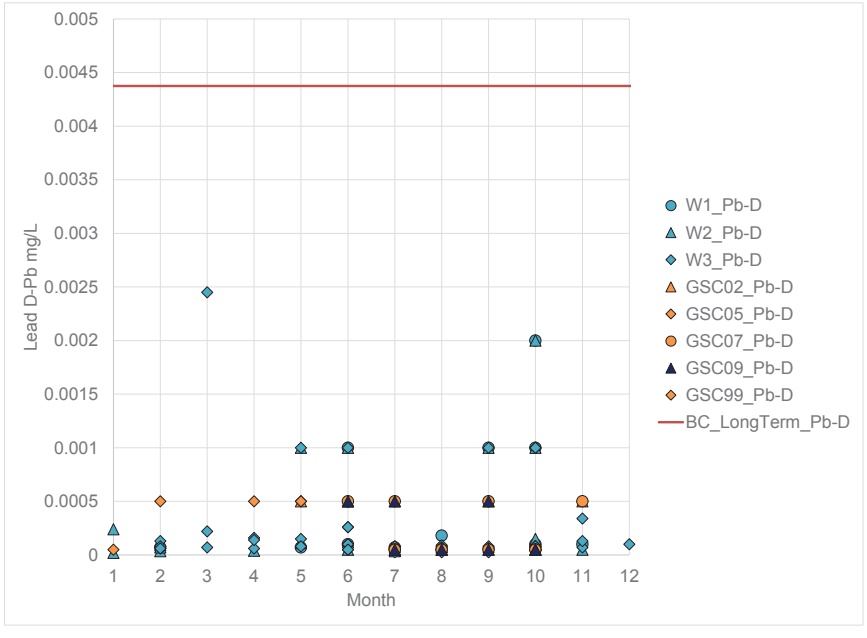






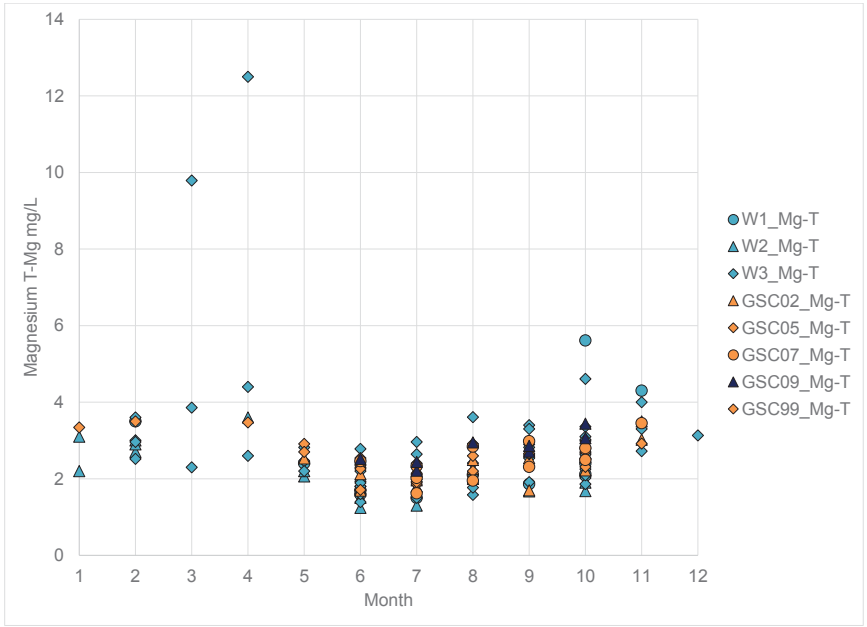


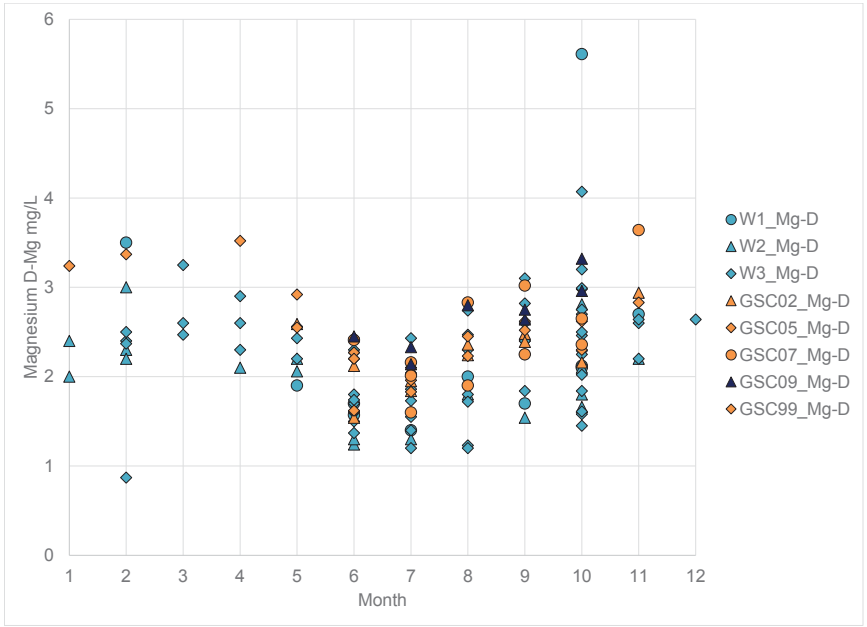


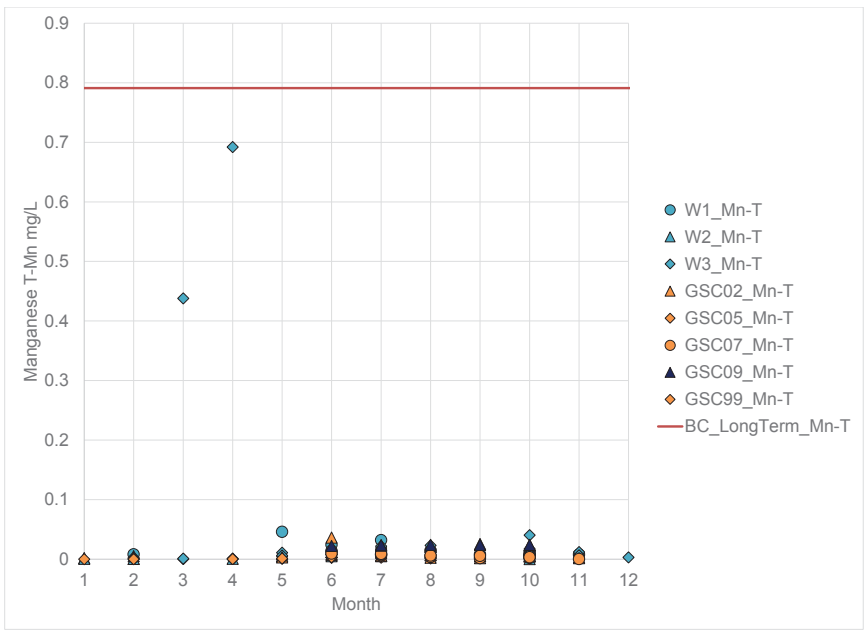


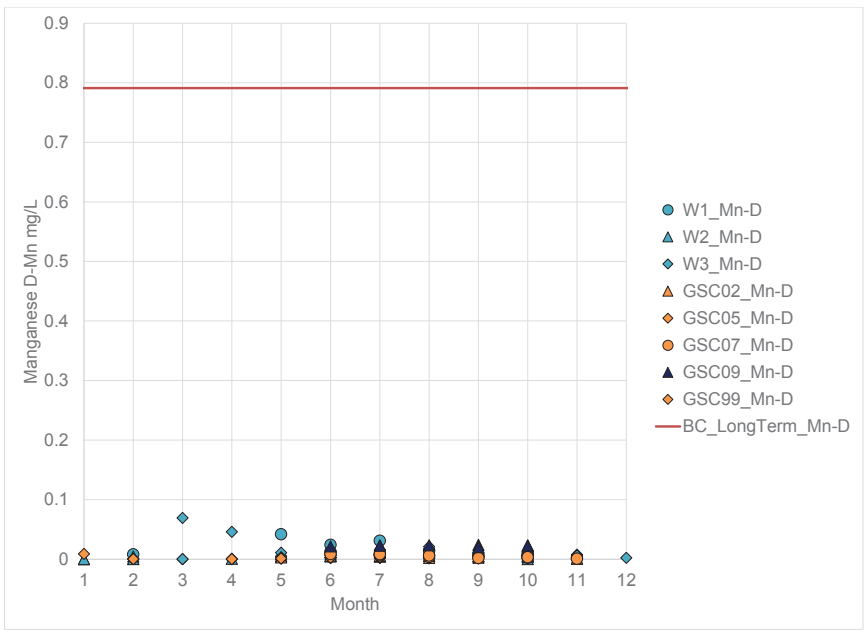
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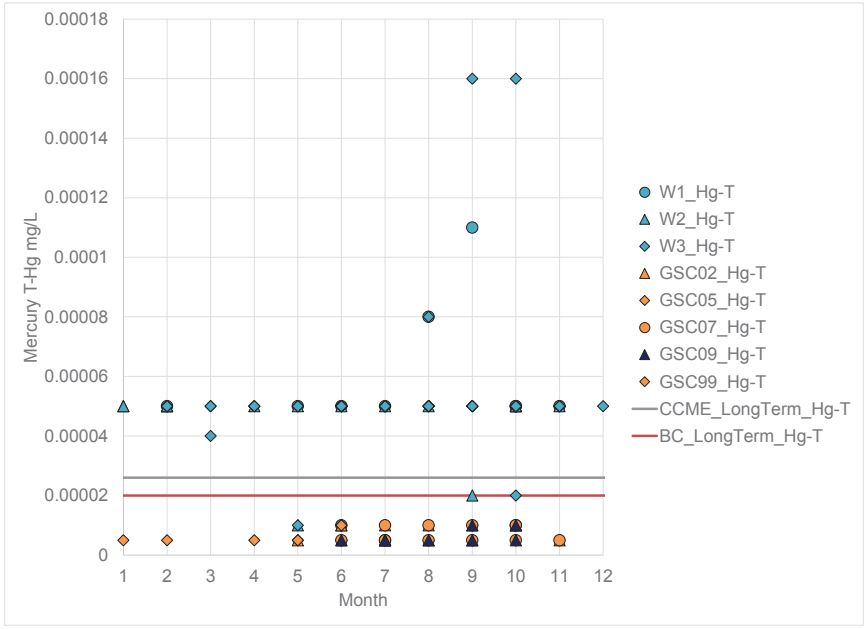
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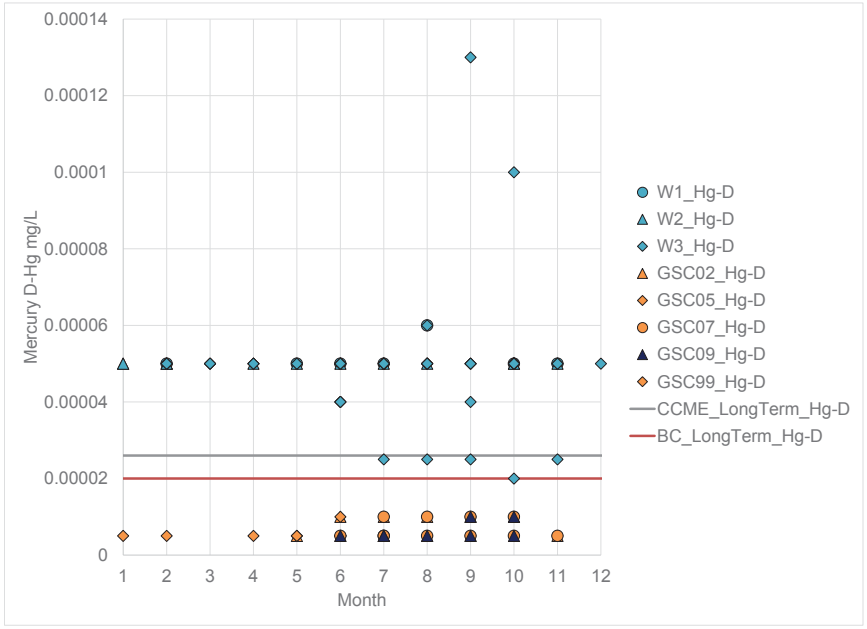


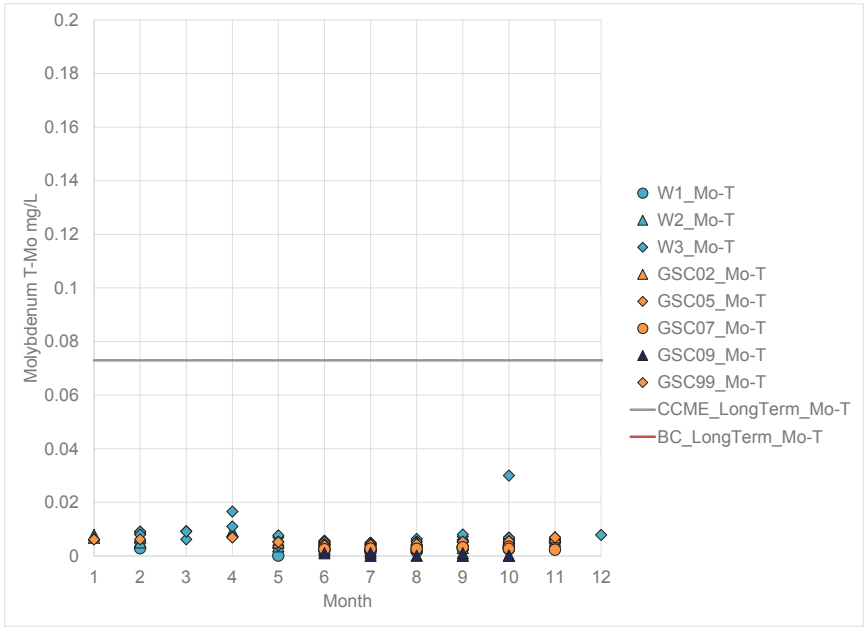


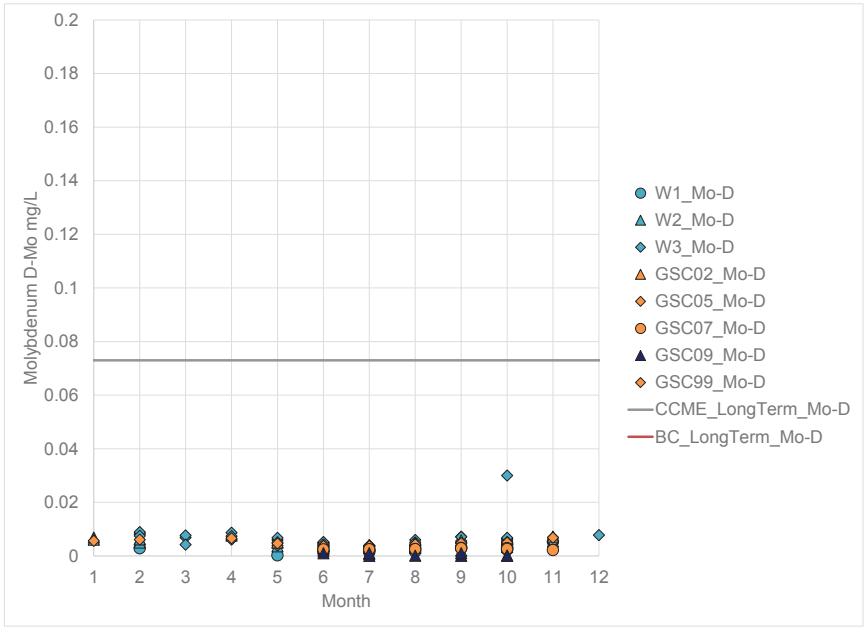




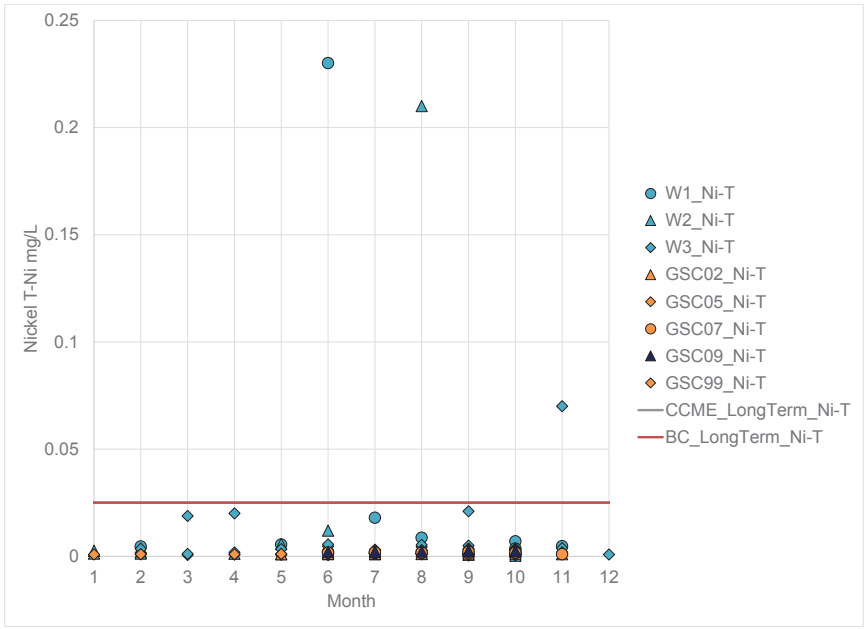


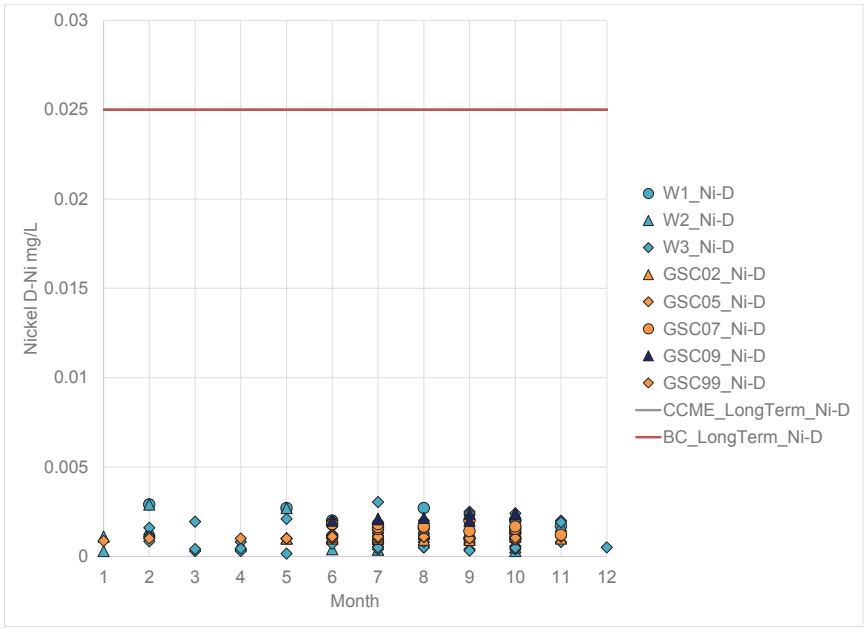


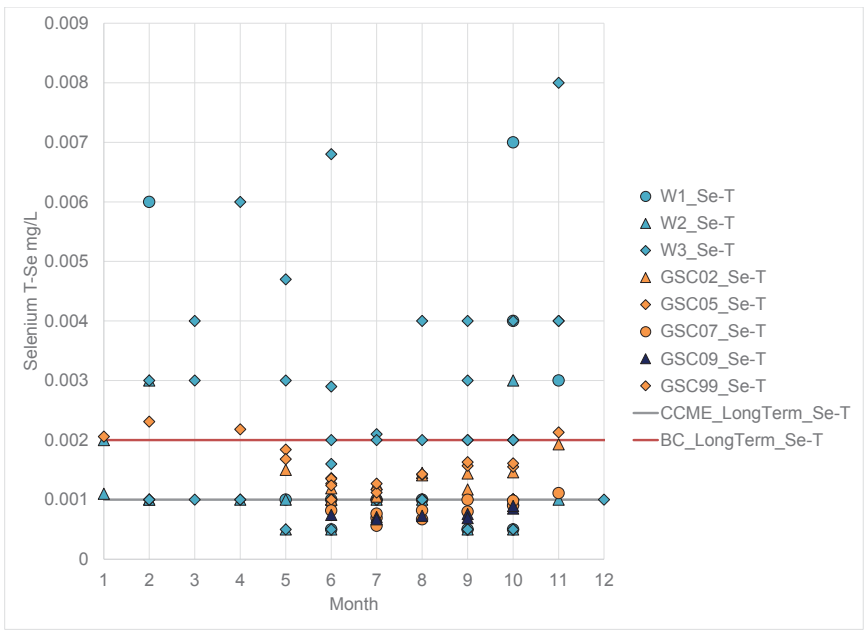


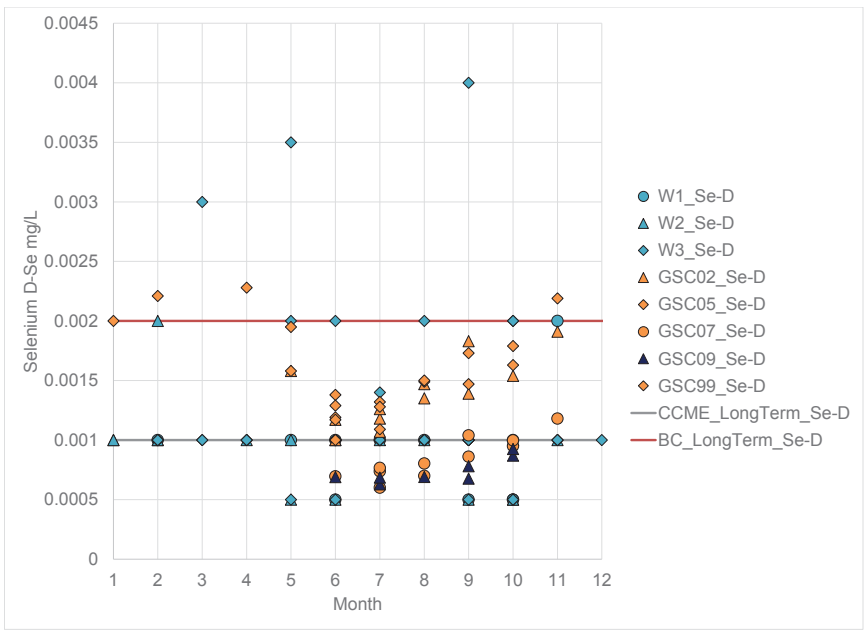


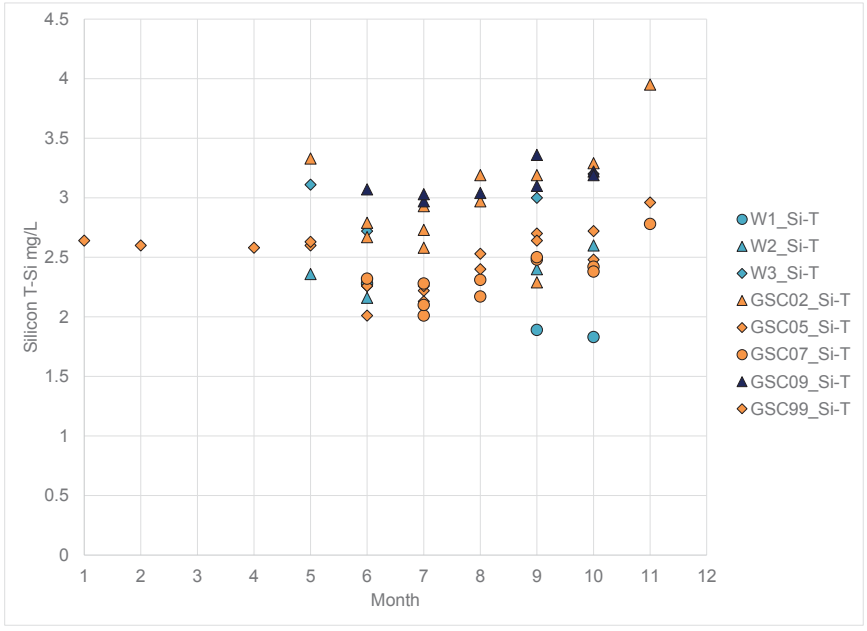
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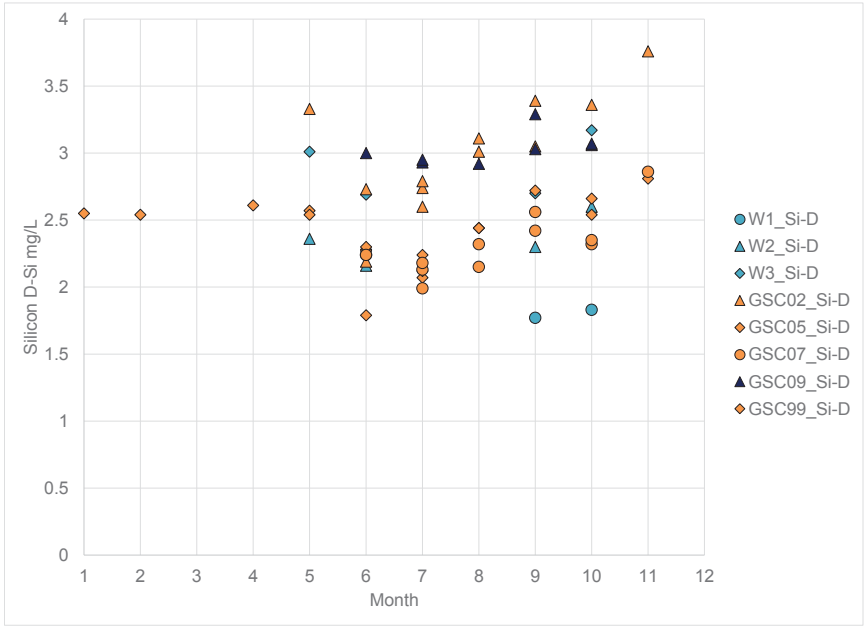


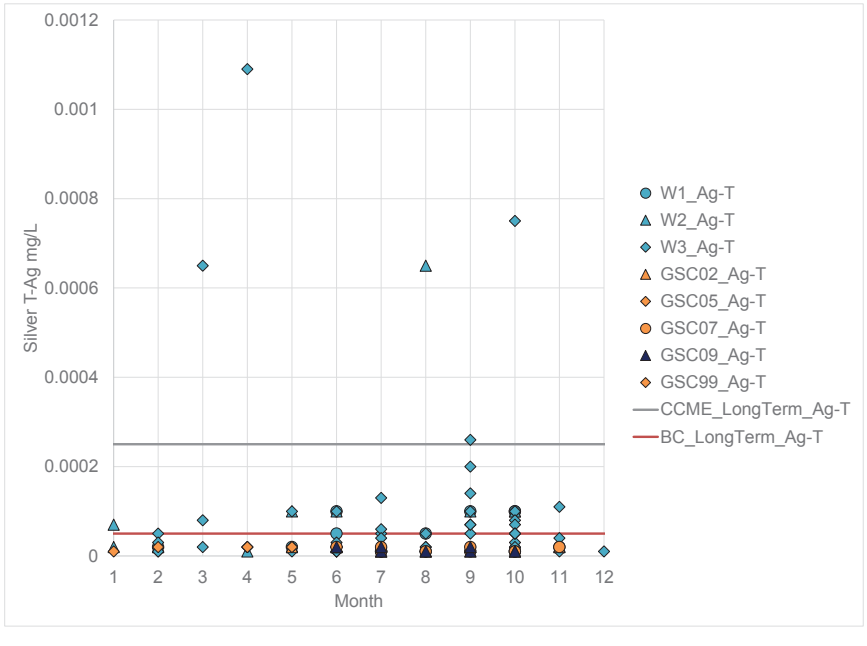


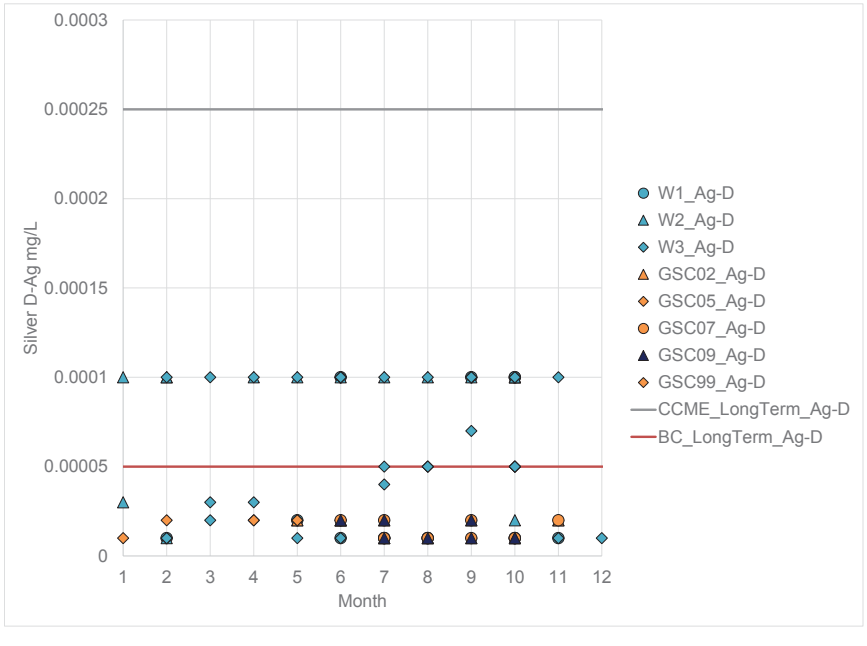






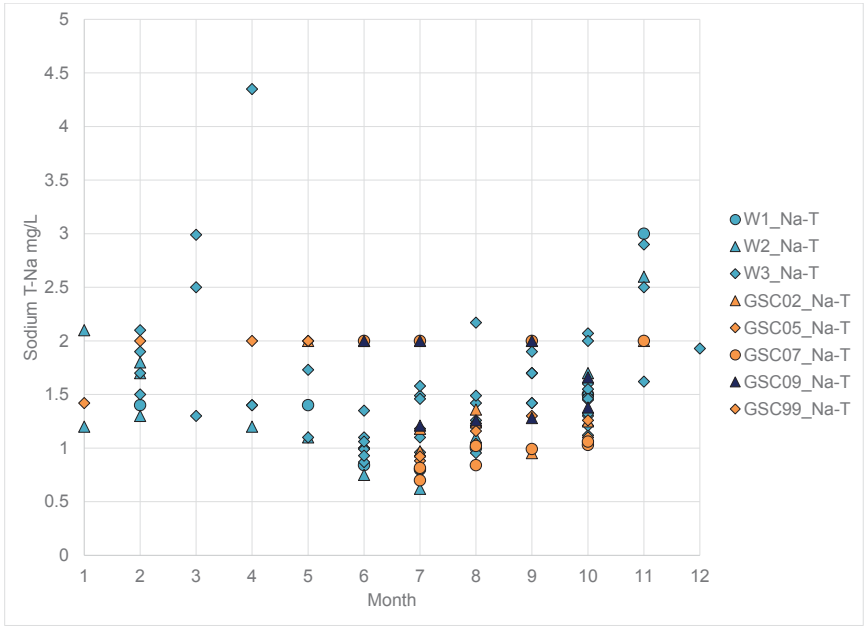


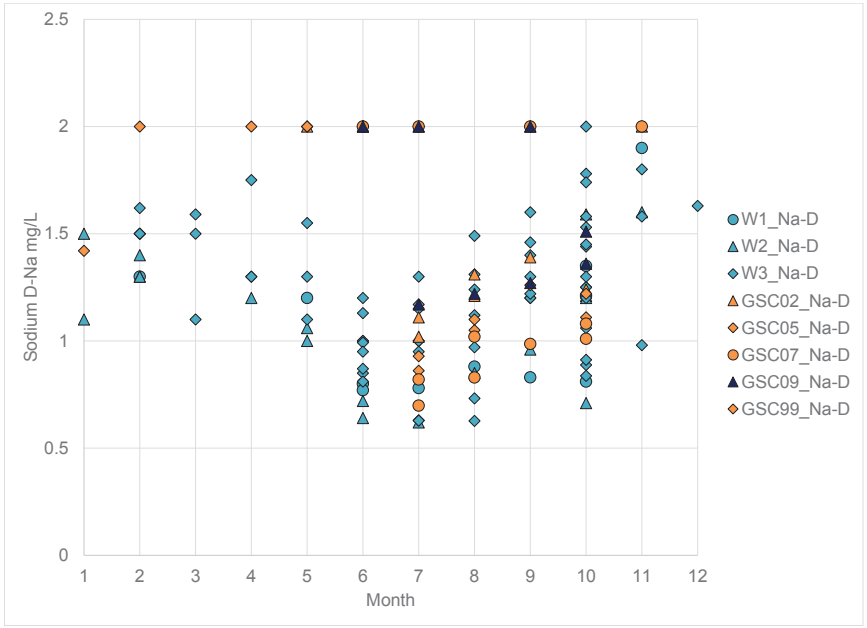


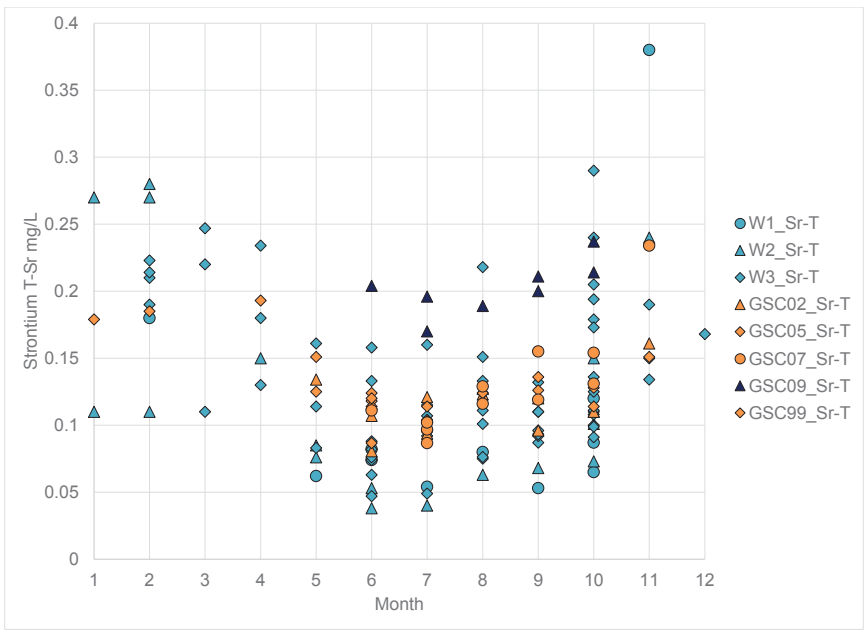


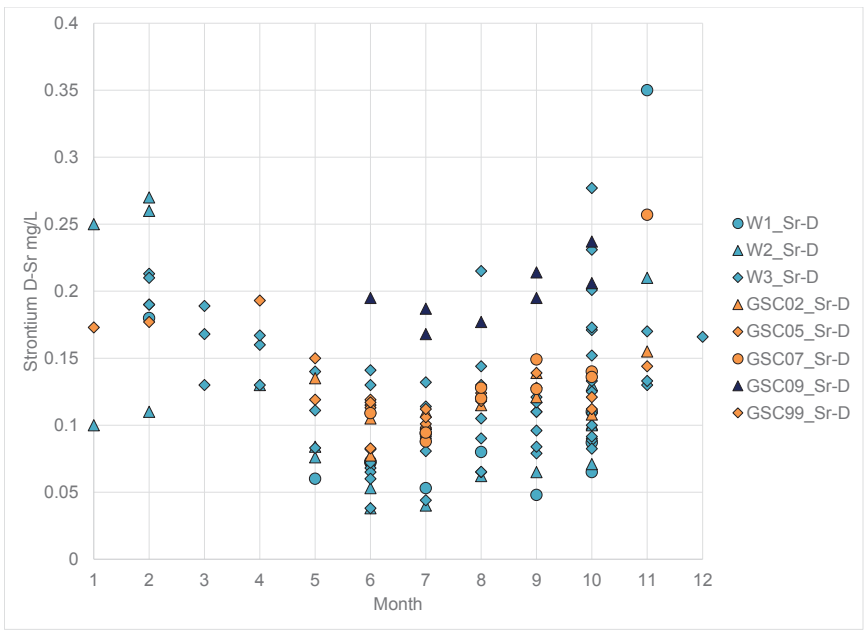
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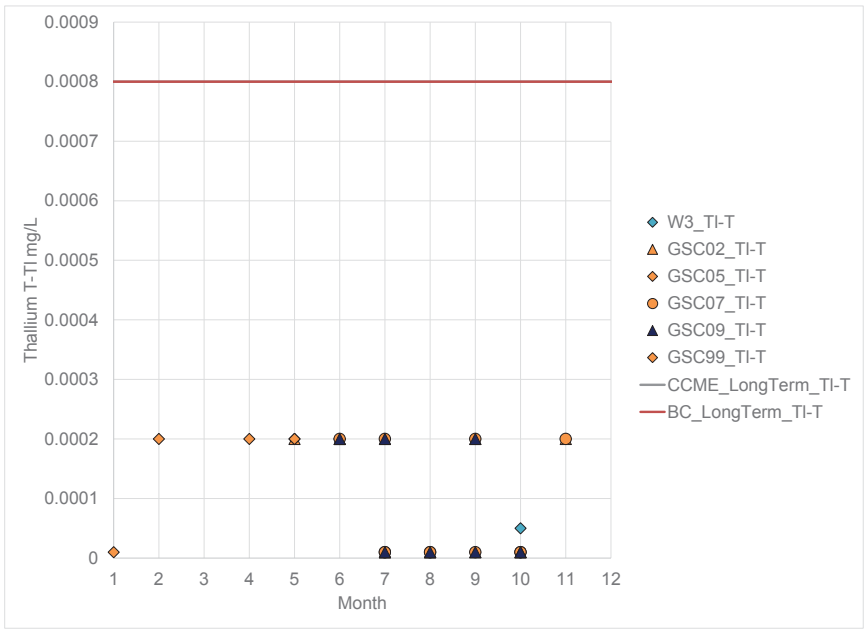
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

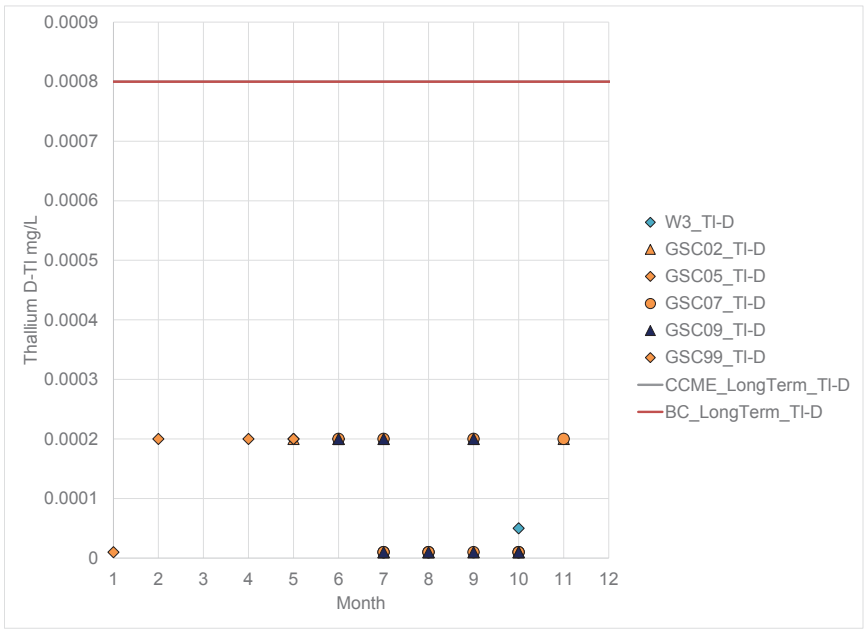


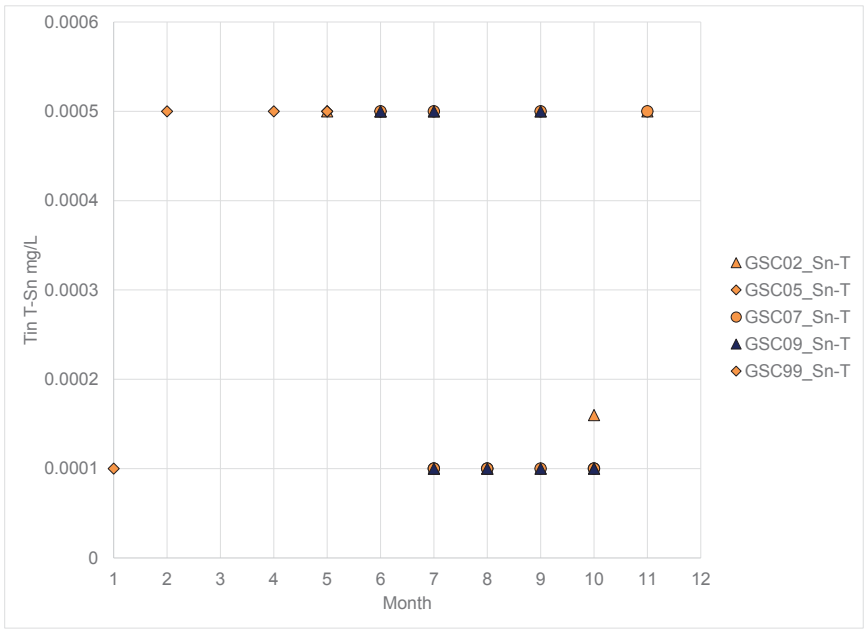


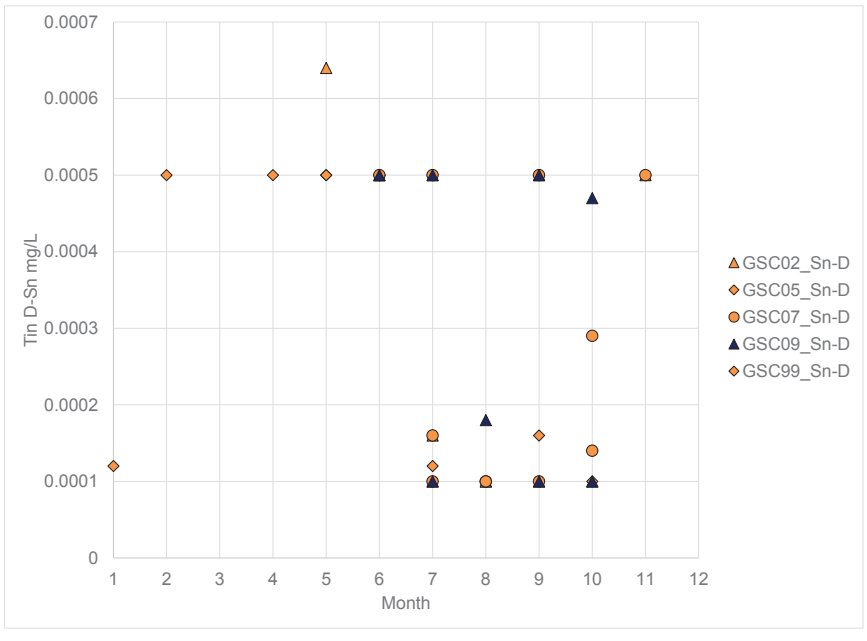






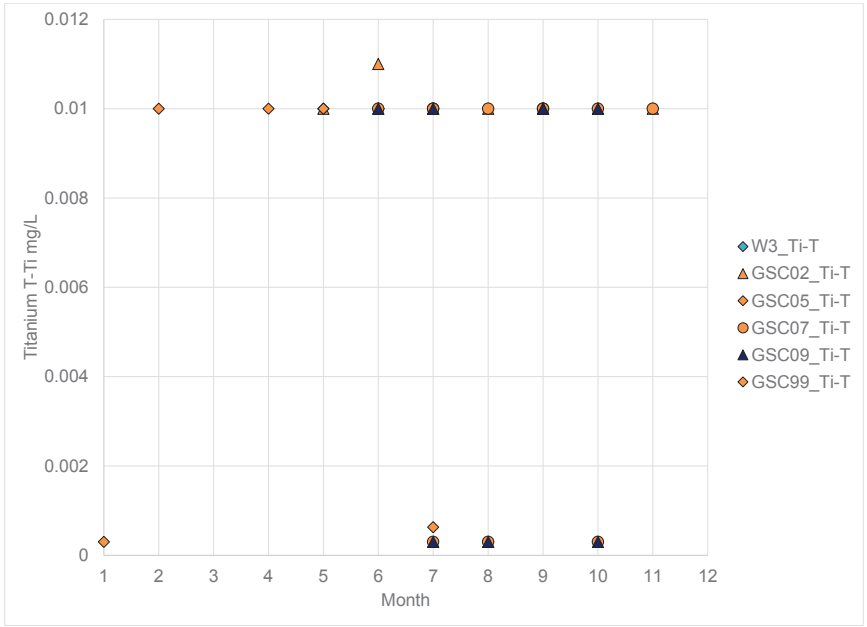


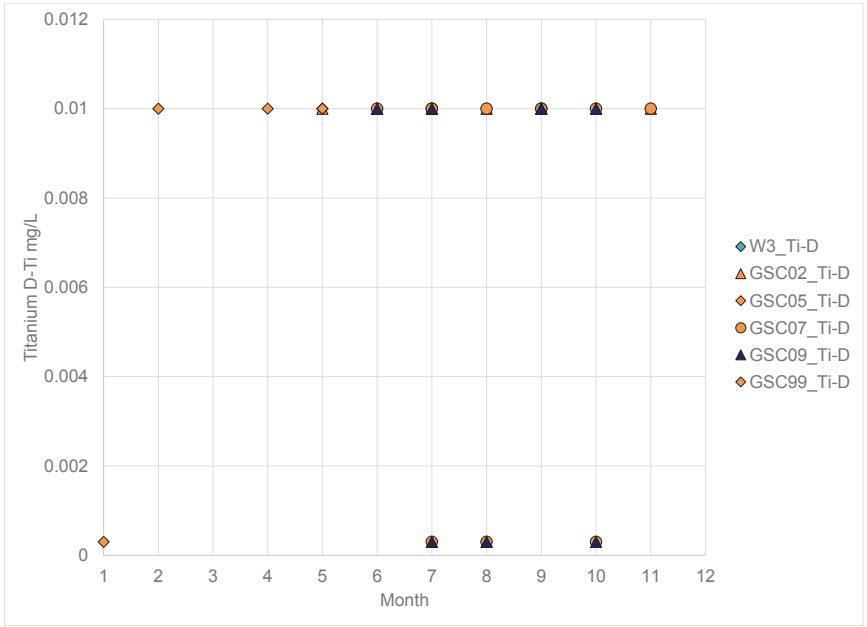


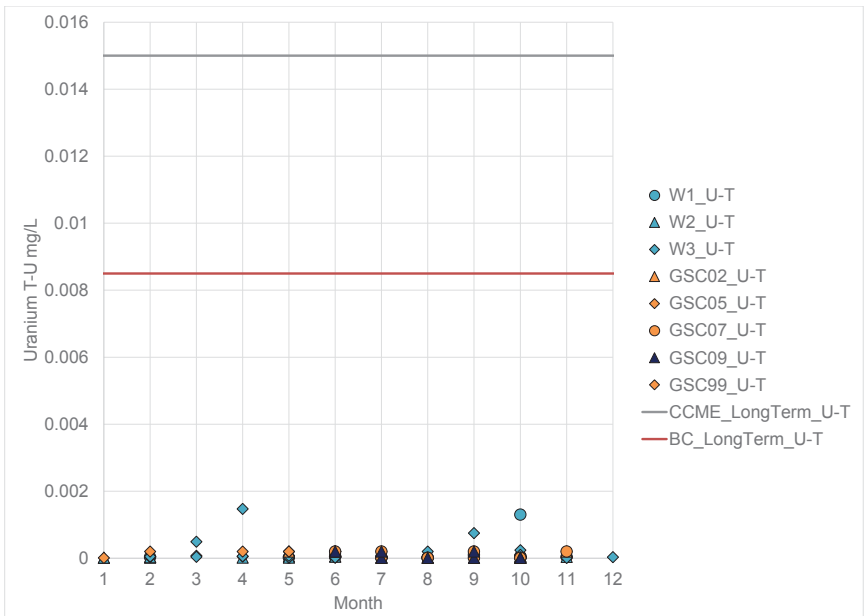


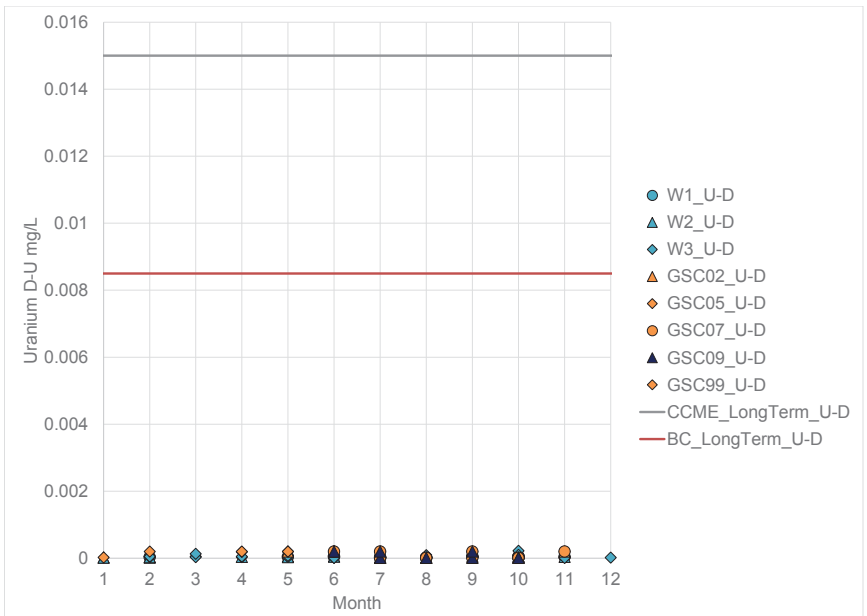
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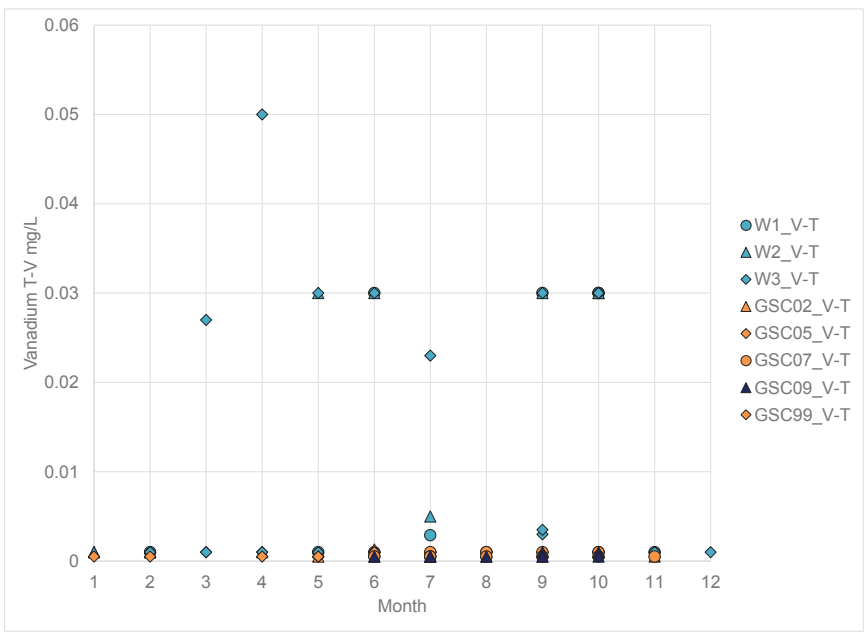
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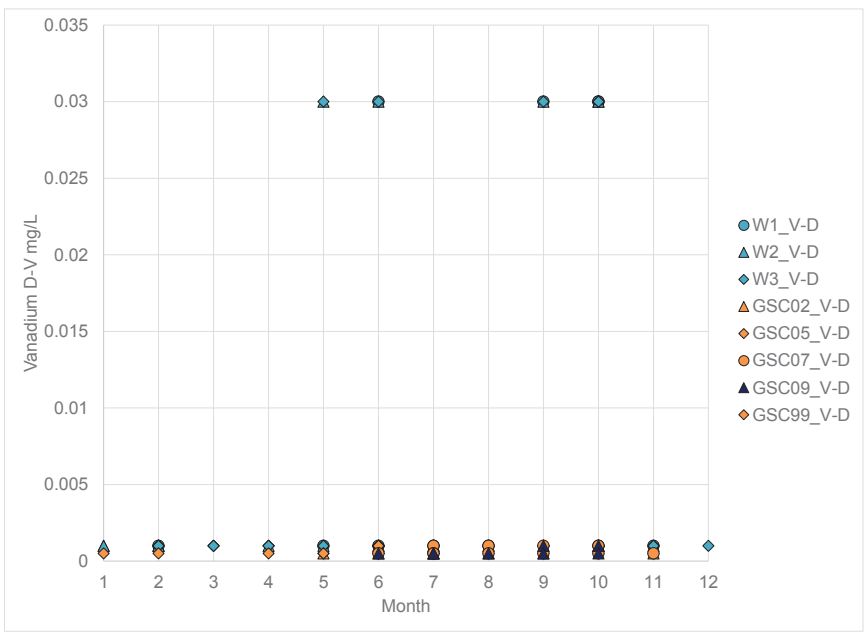


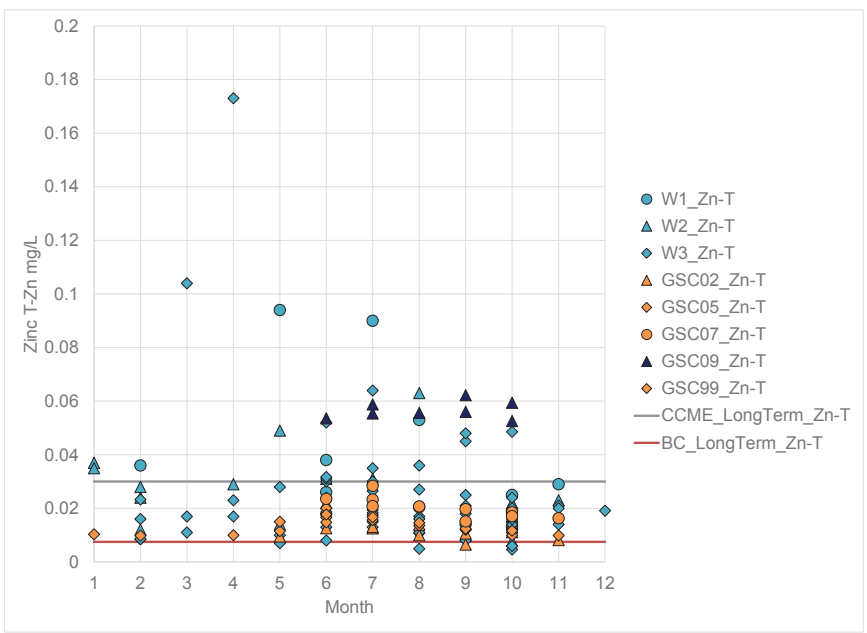


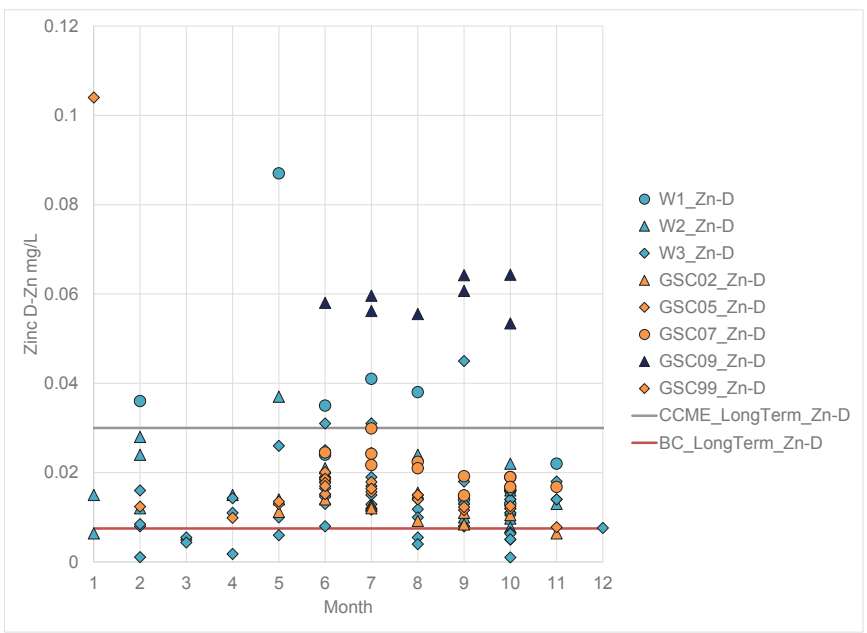








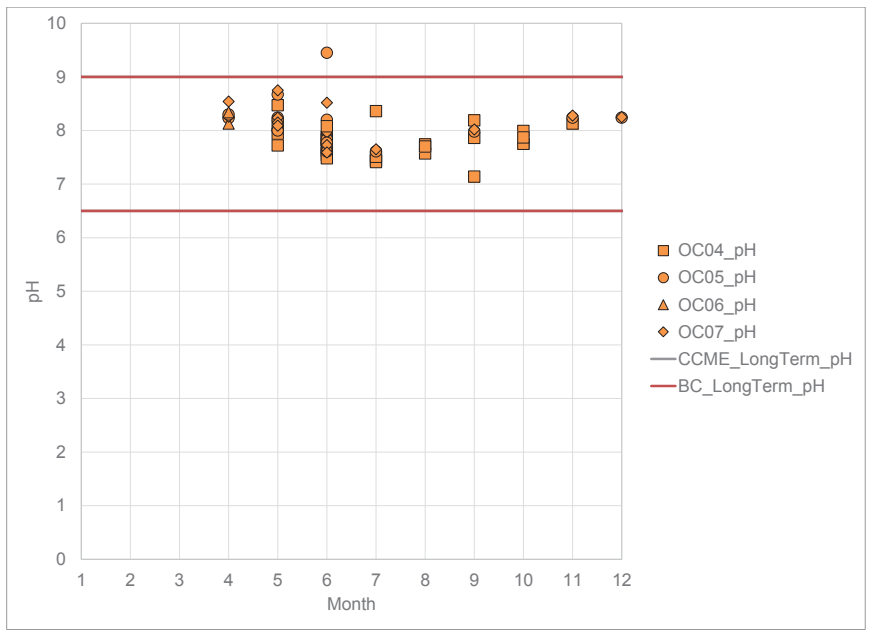


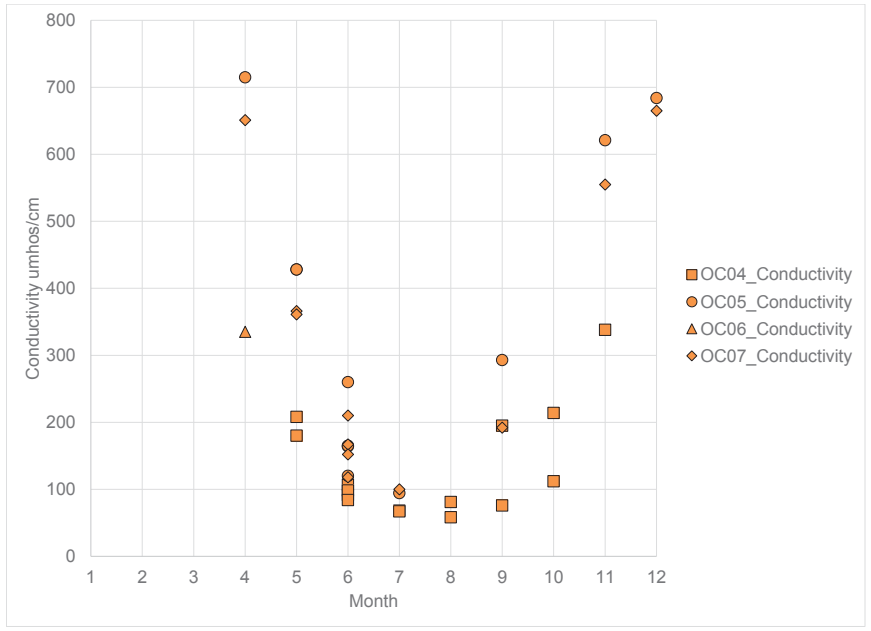


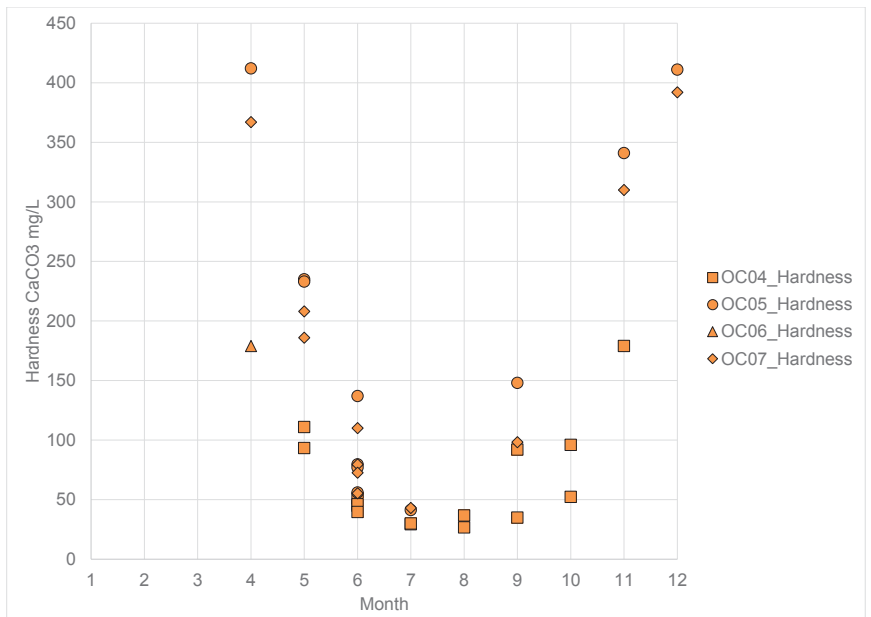
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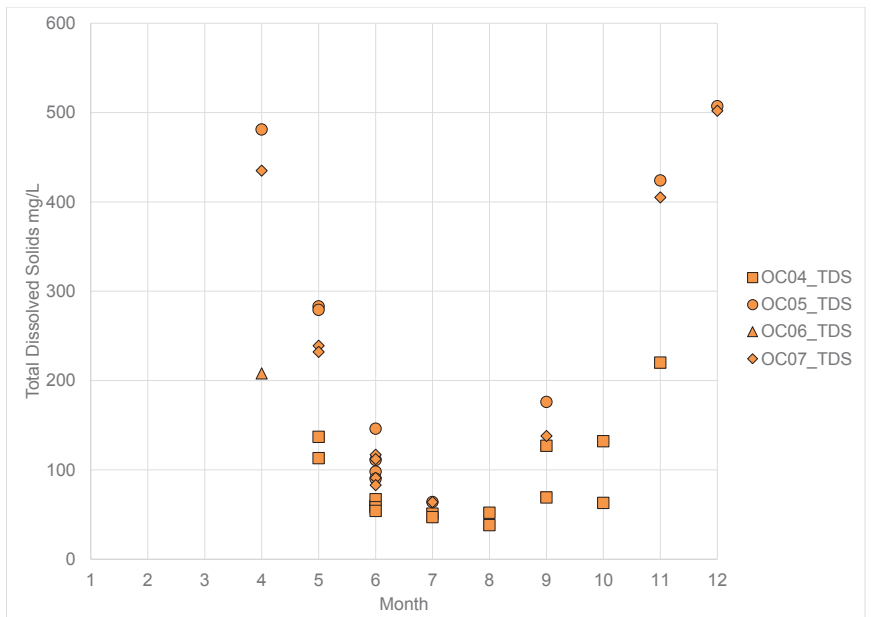
Otter Creek

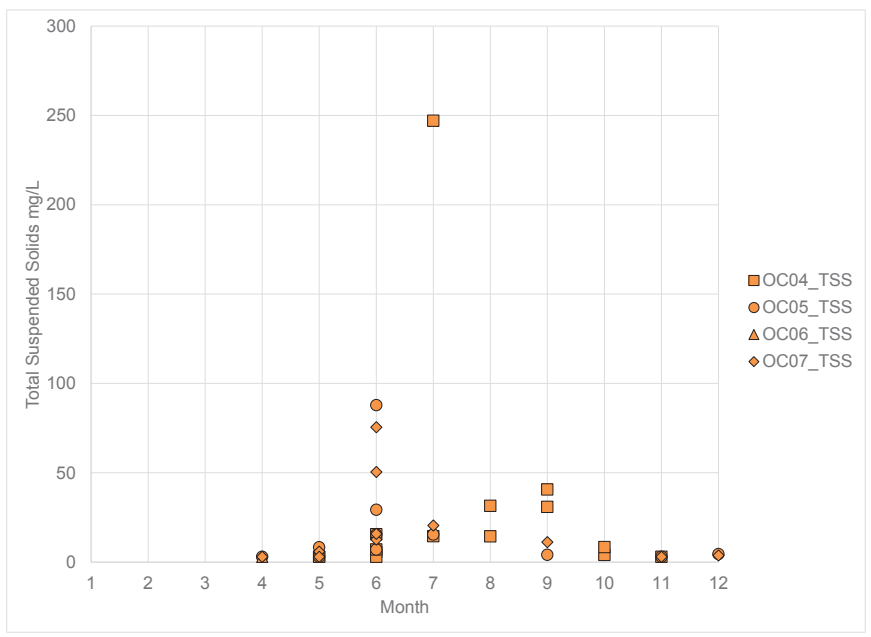
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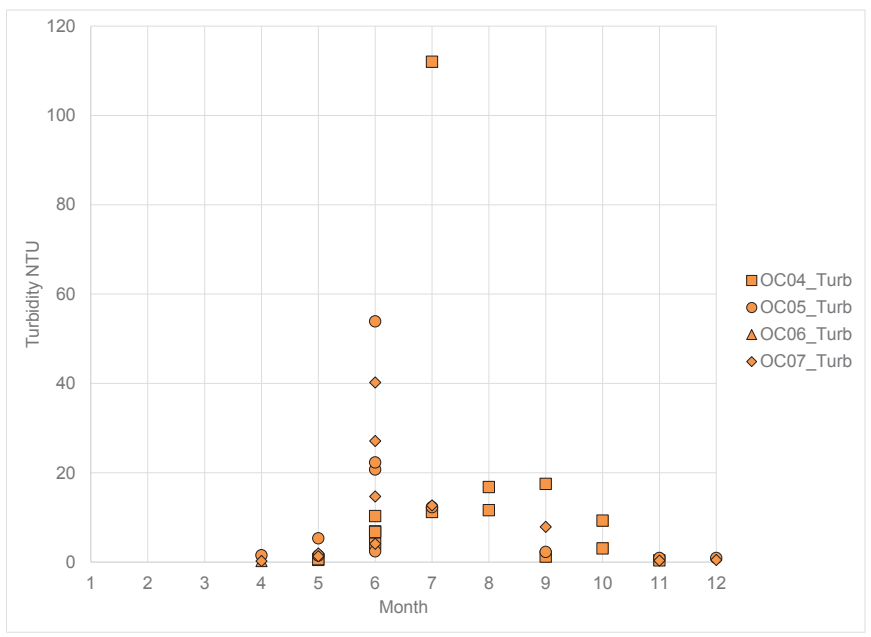


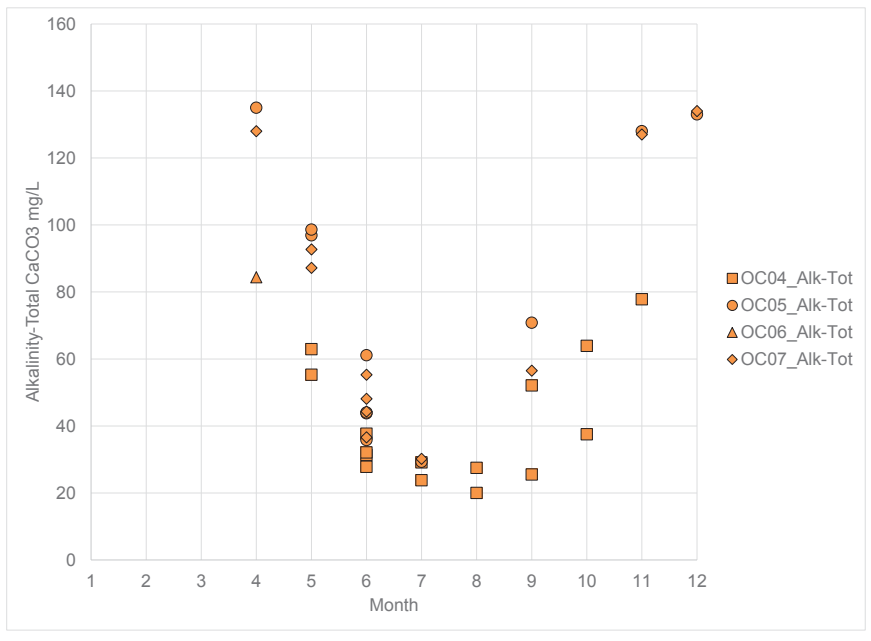


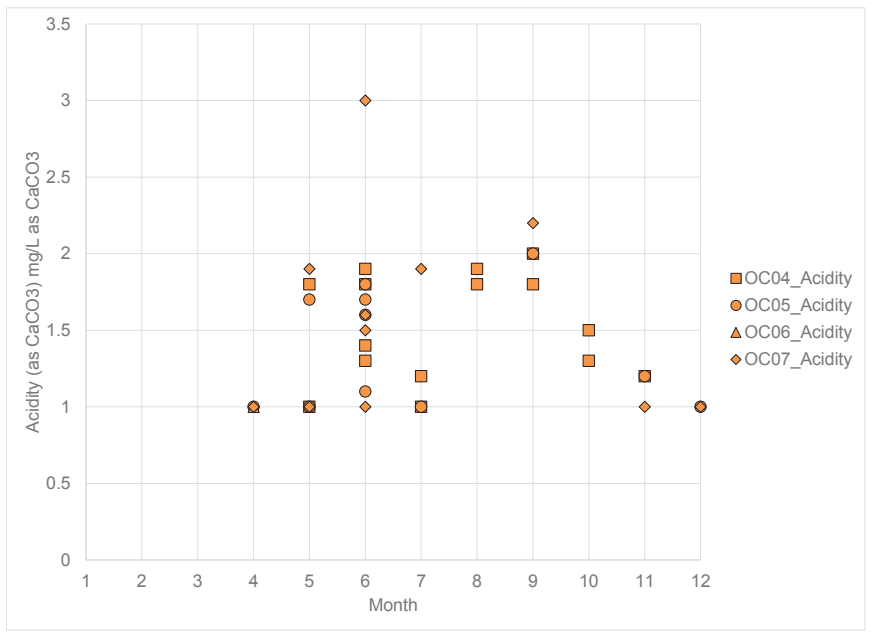






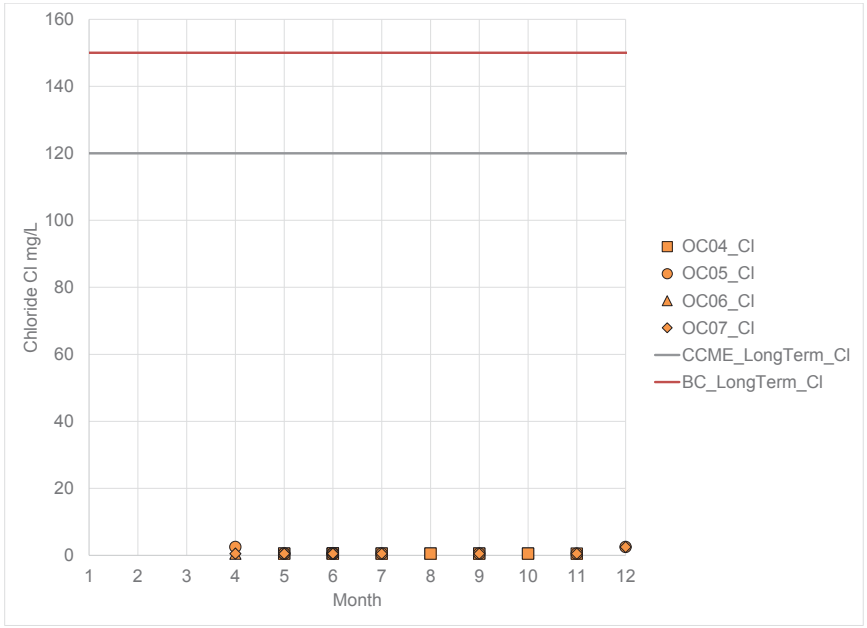


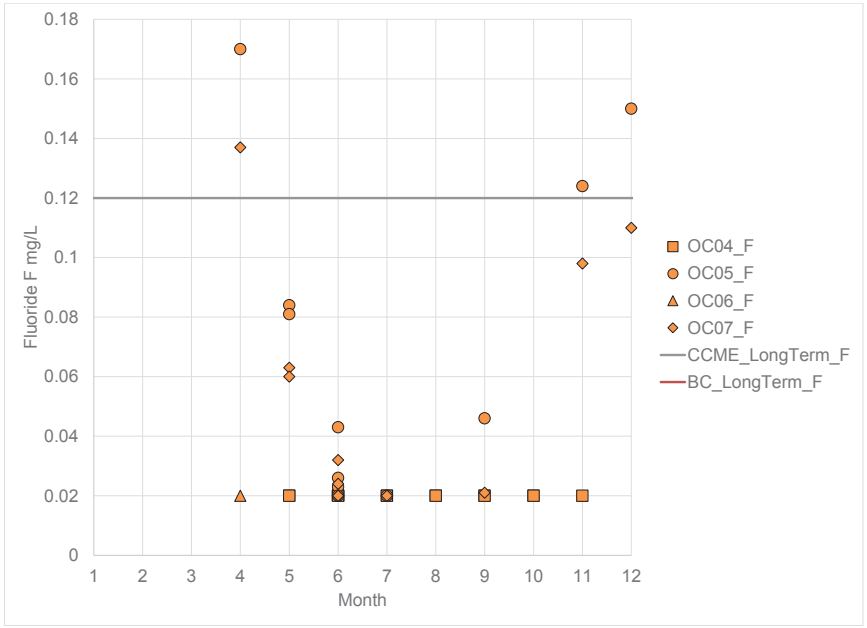


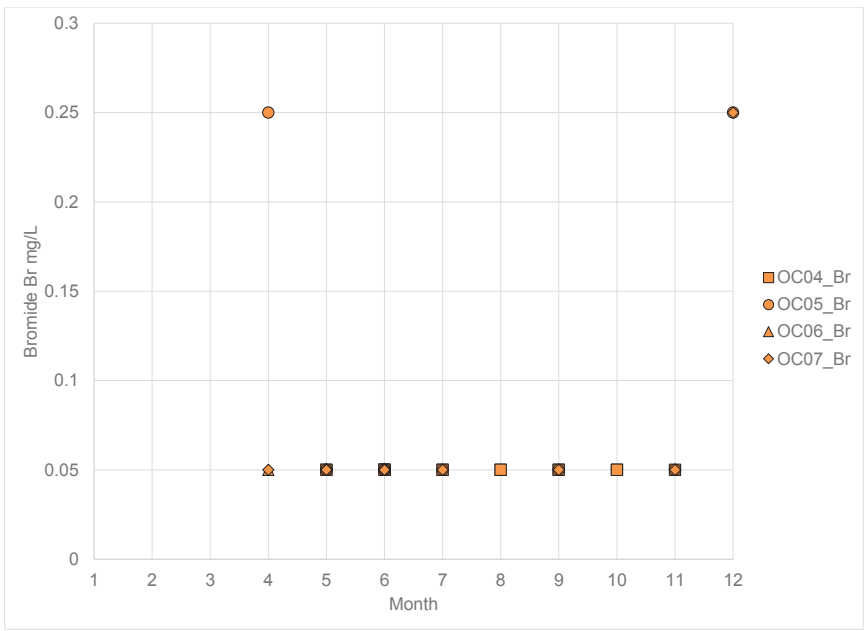


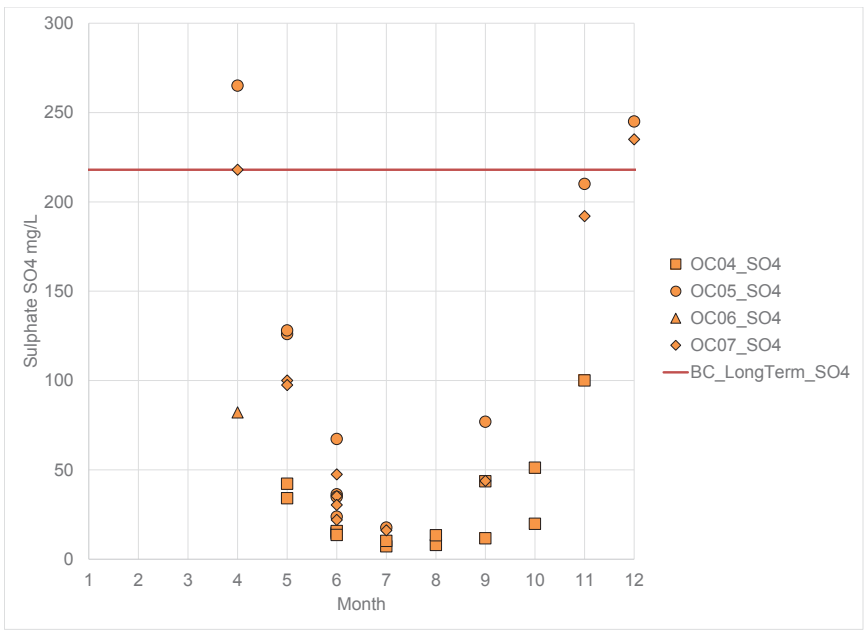
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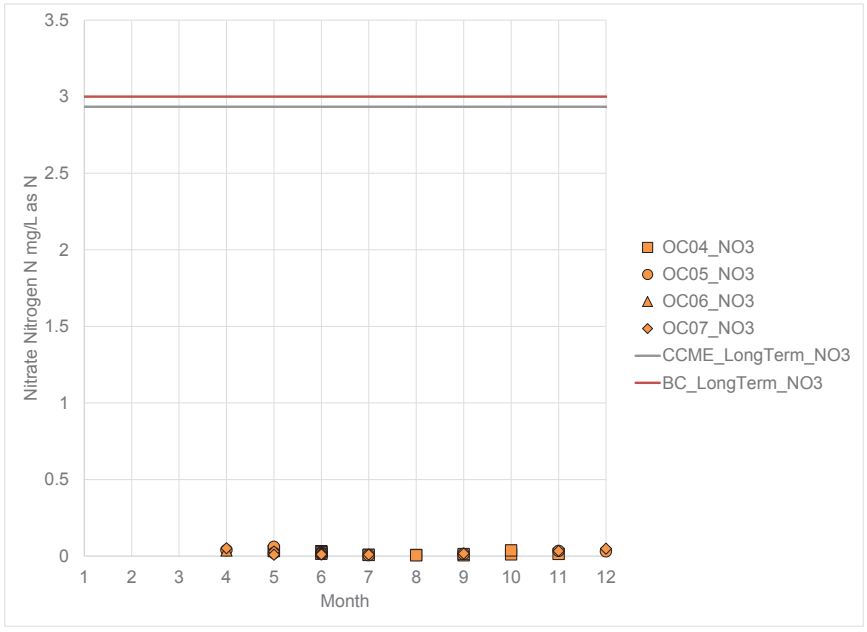
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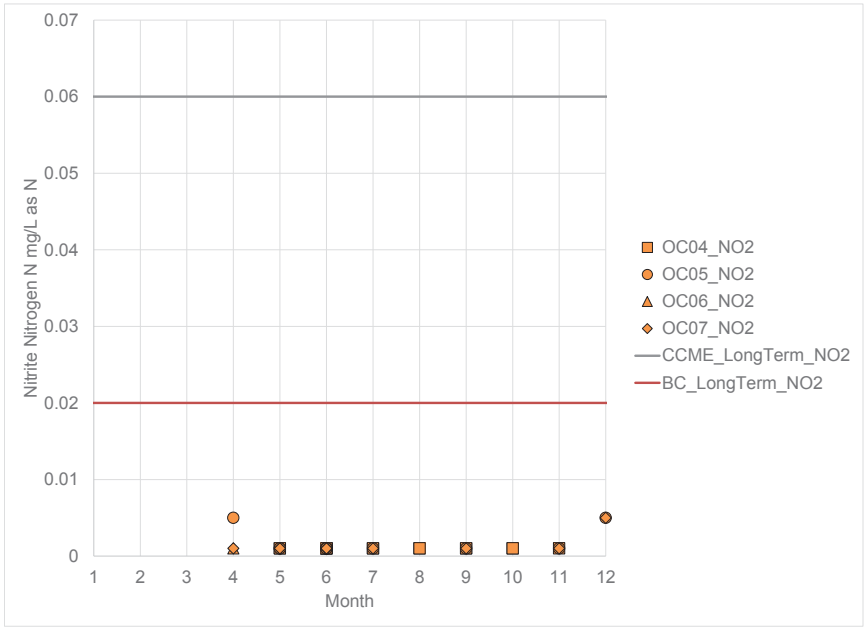


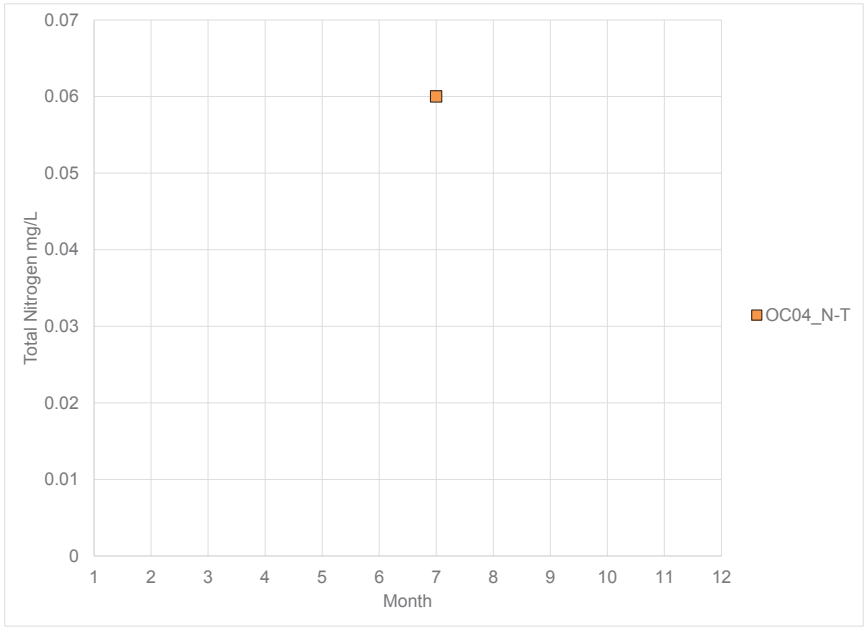


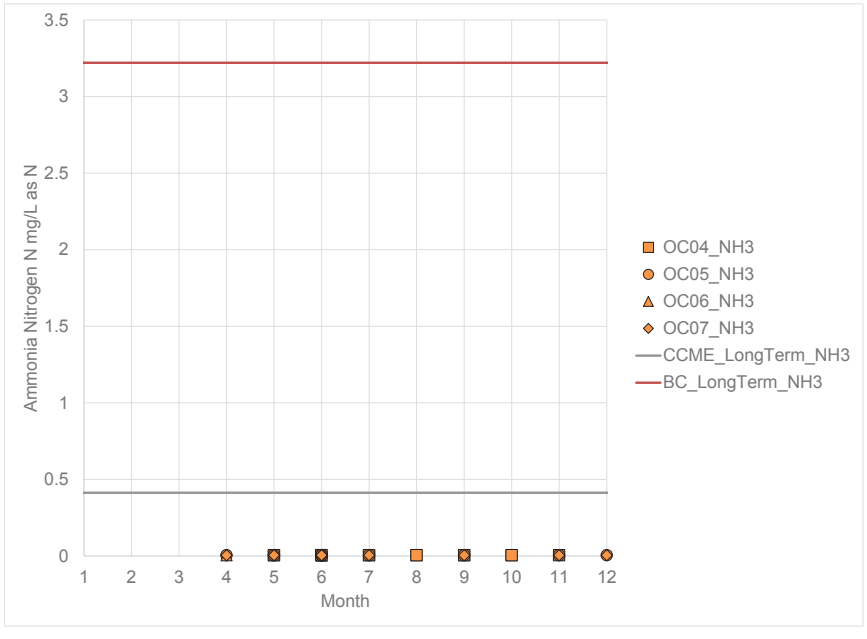






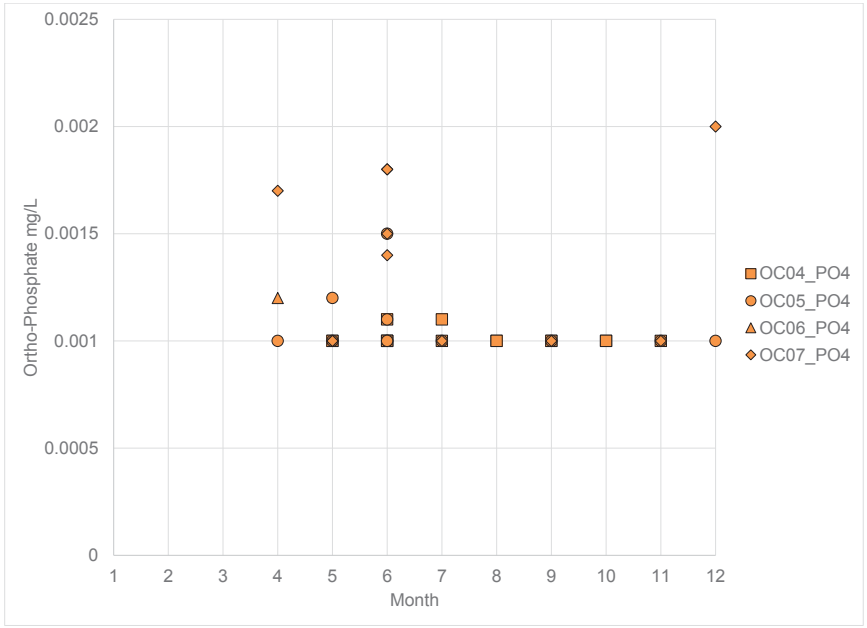


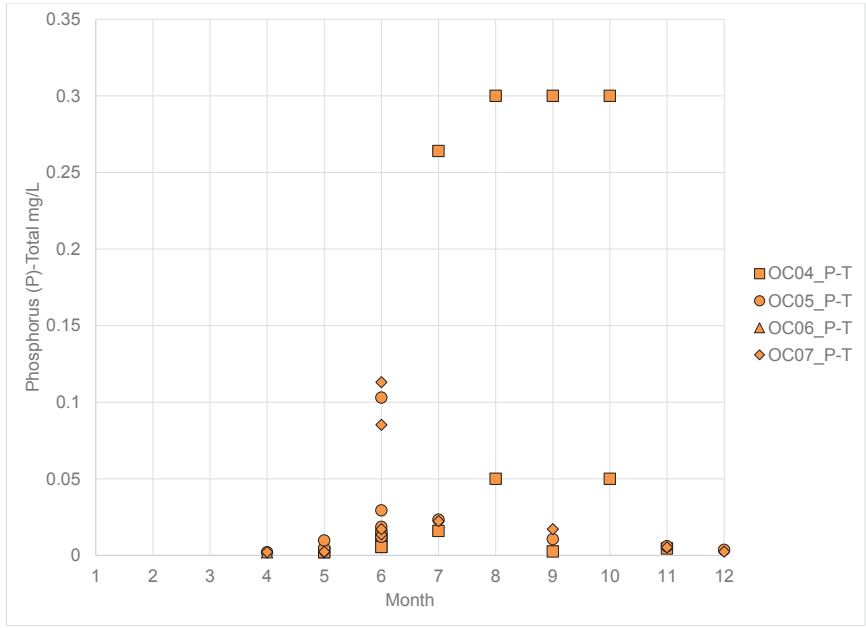


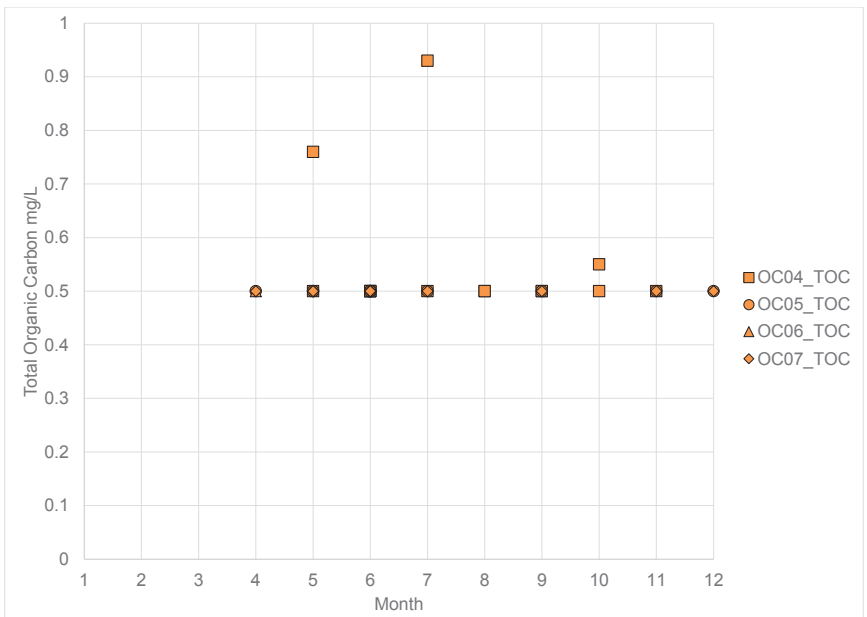


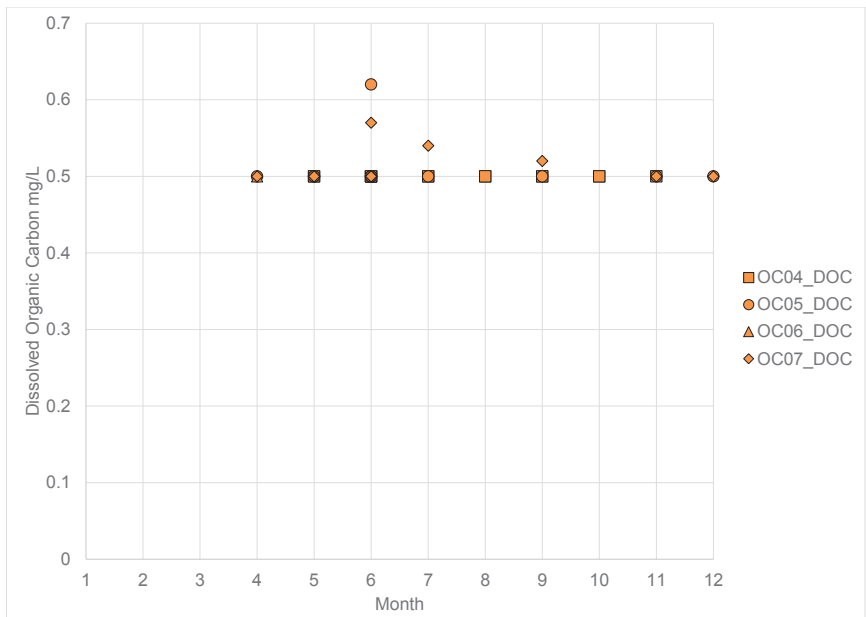
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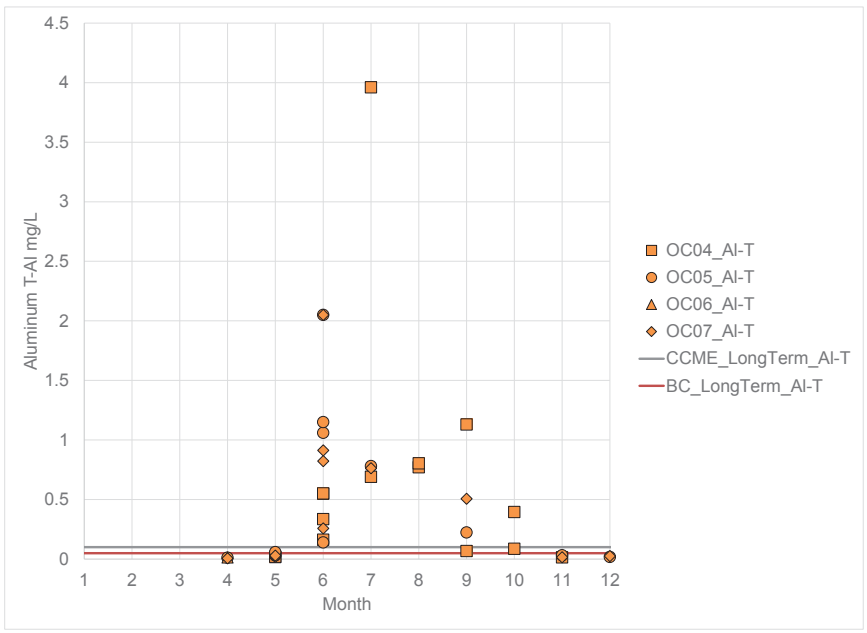
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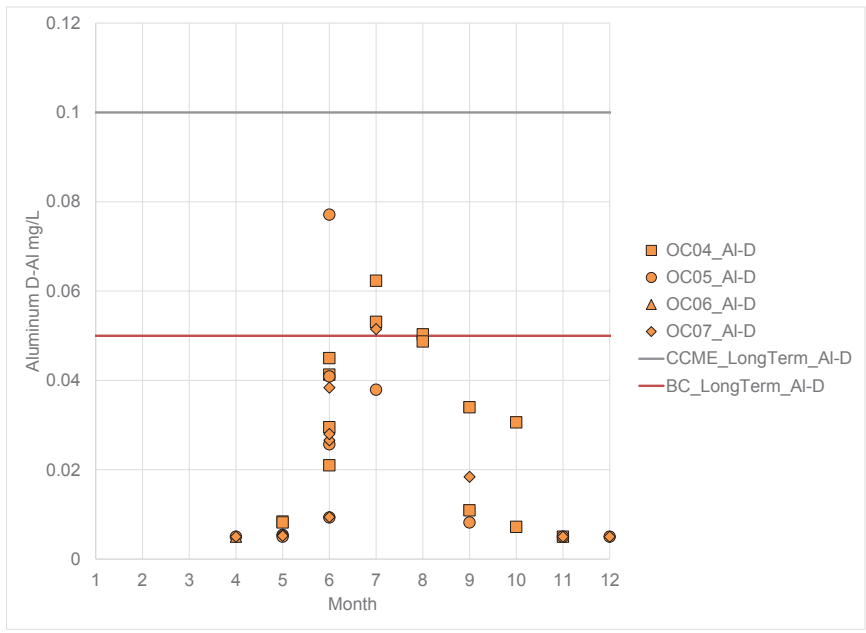


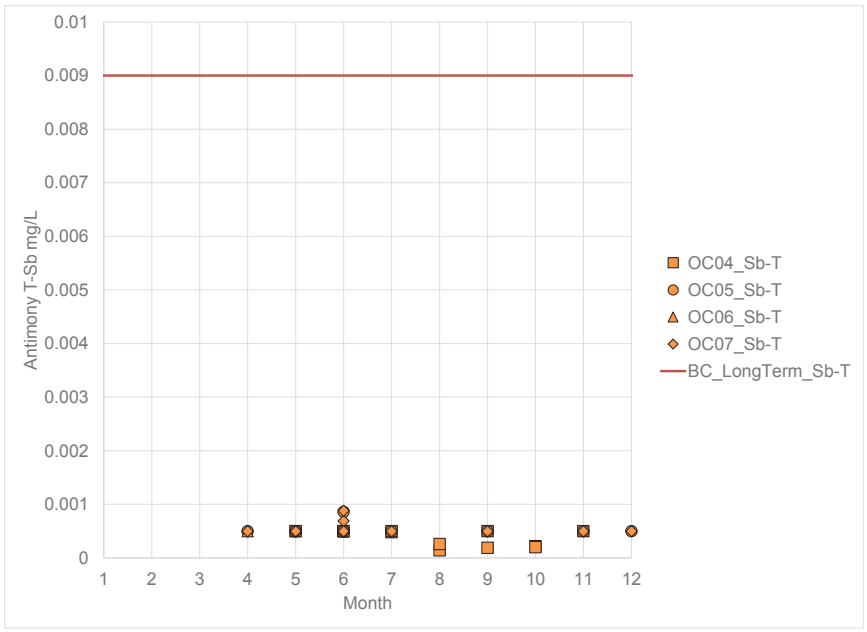


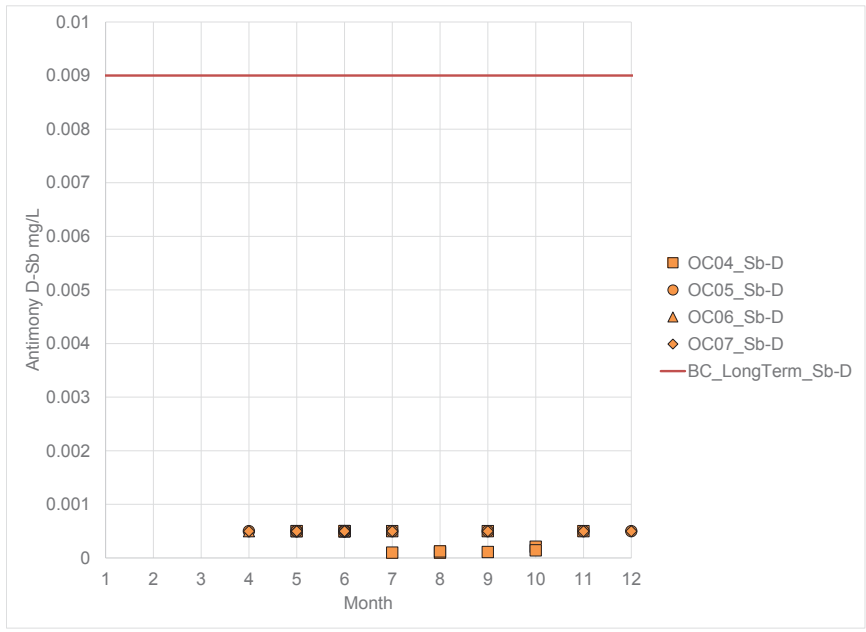






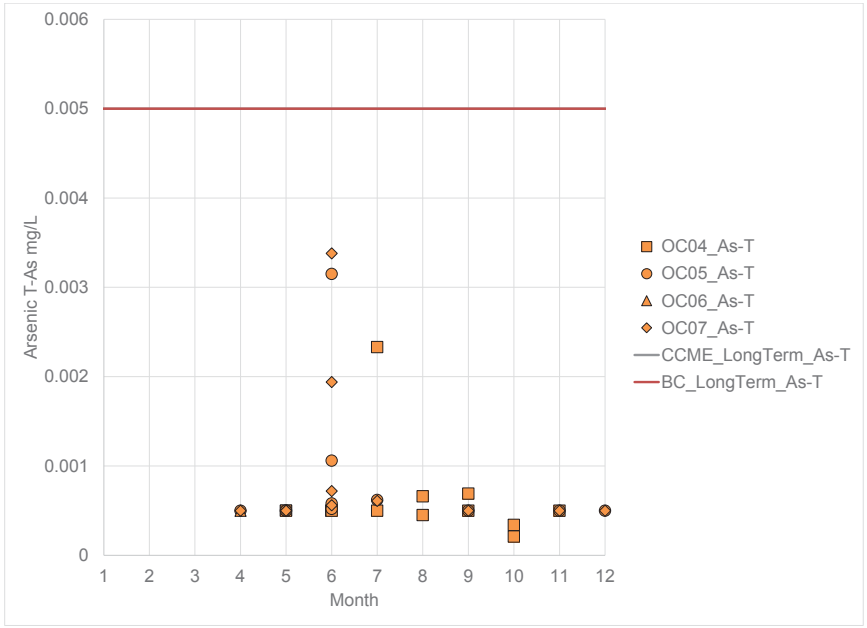


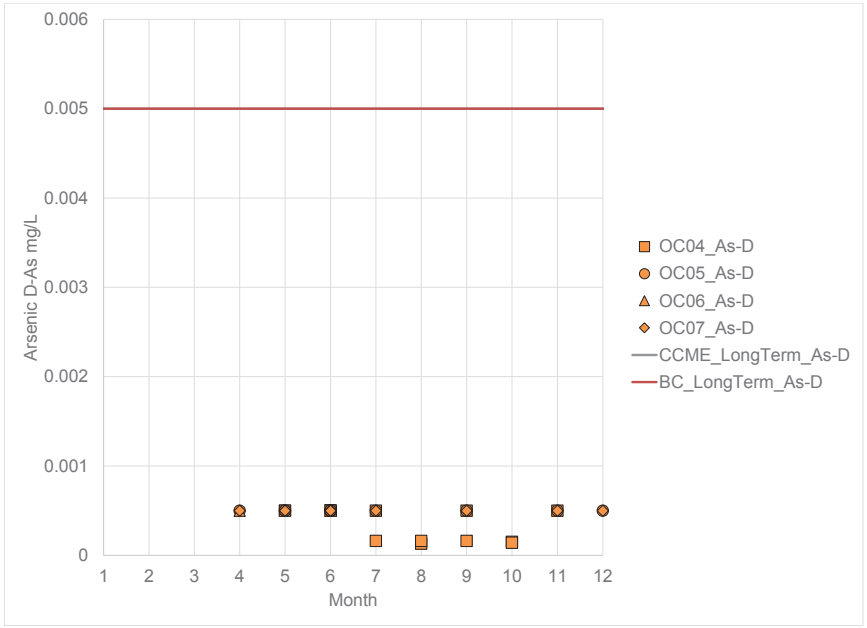


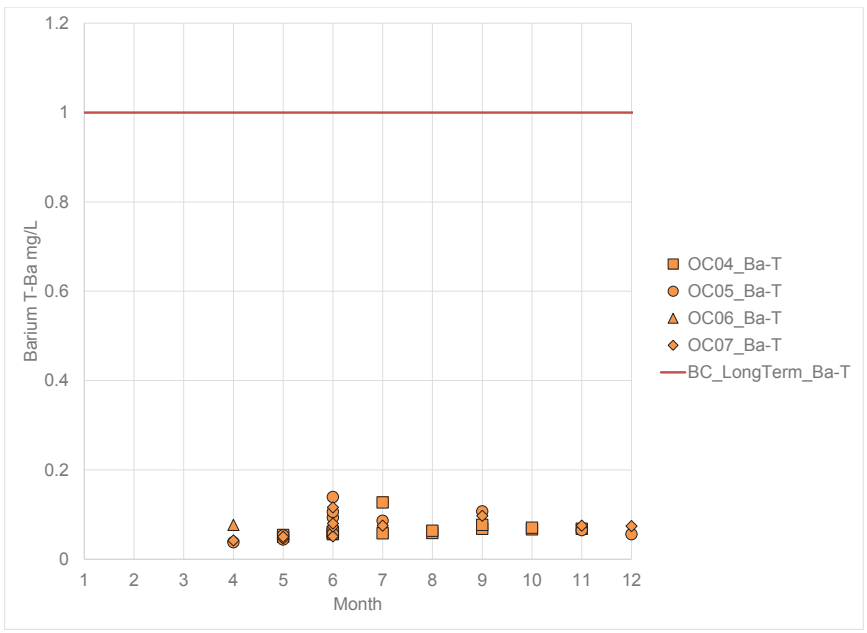


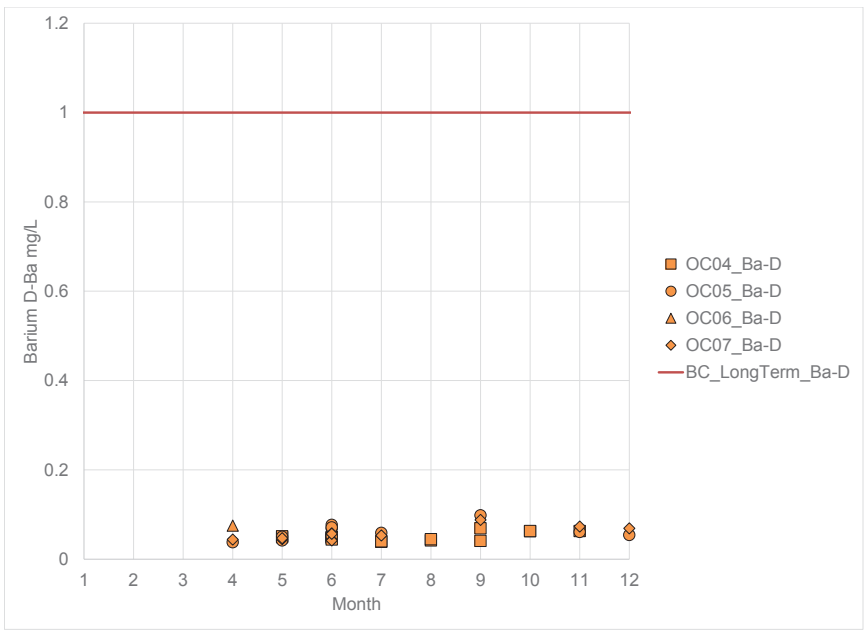
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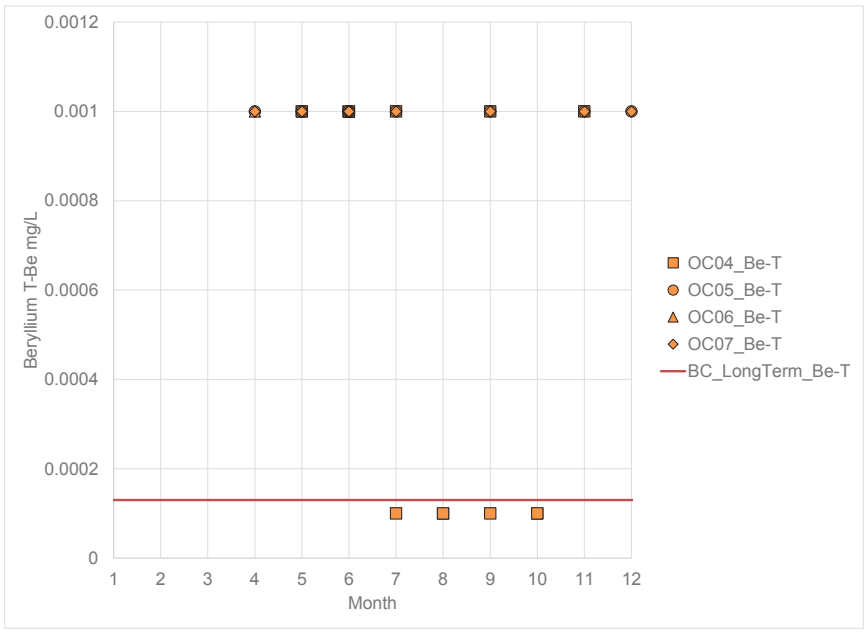
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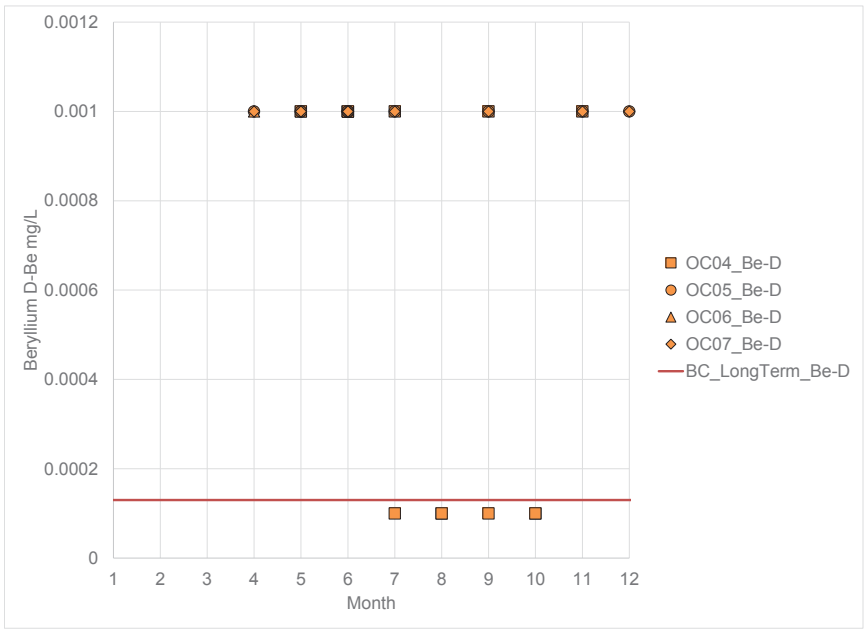


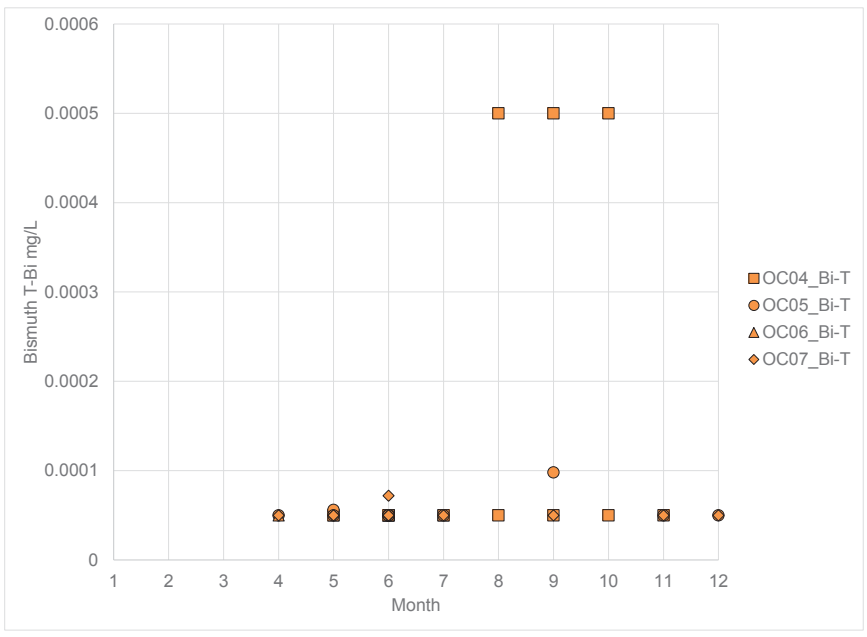


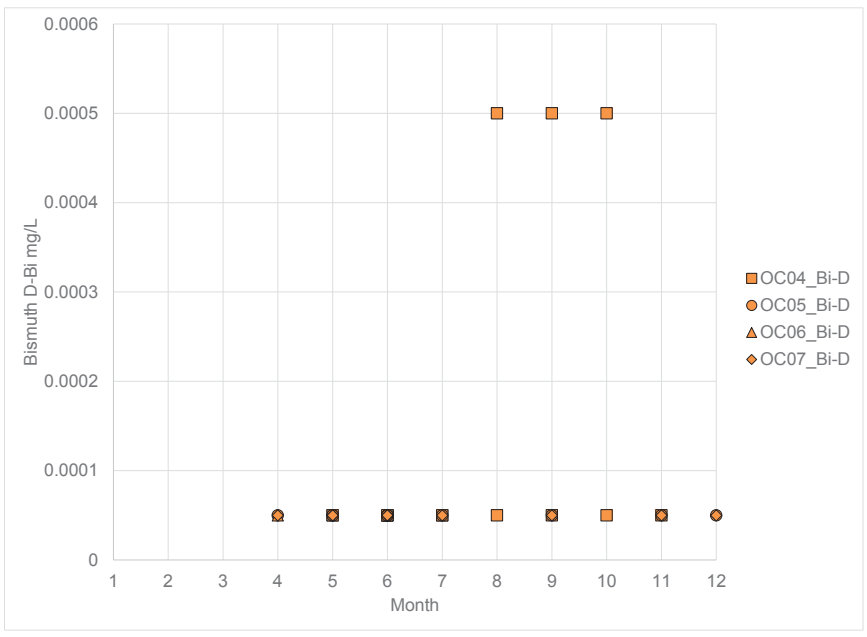






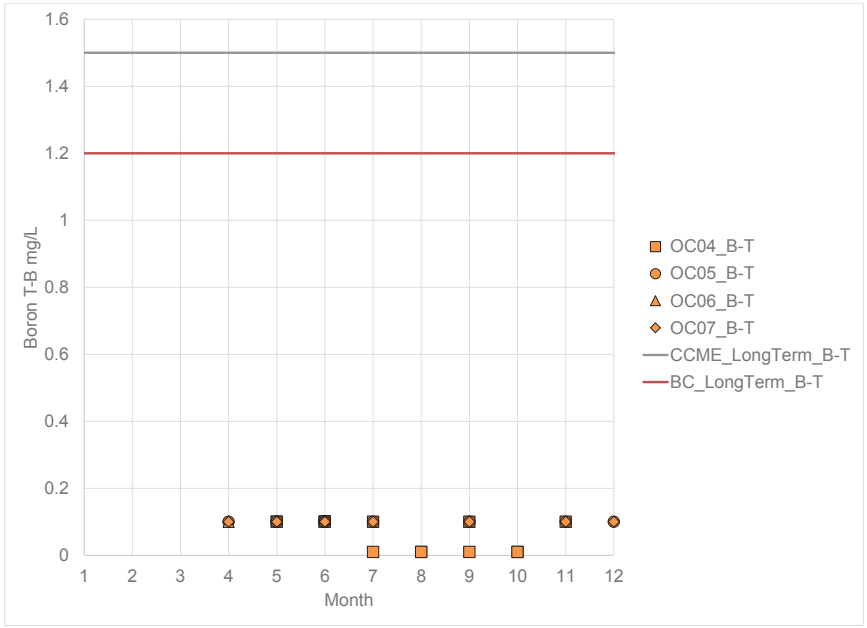


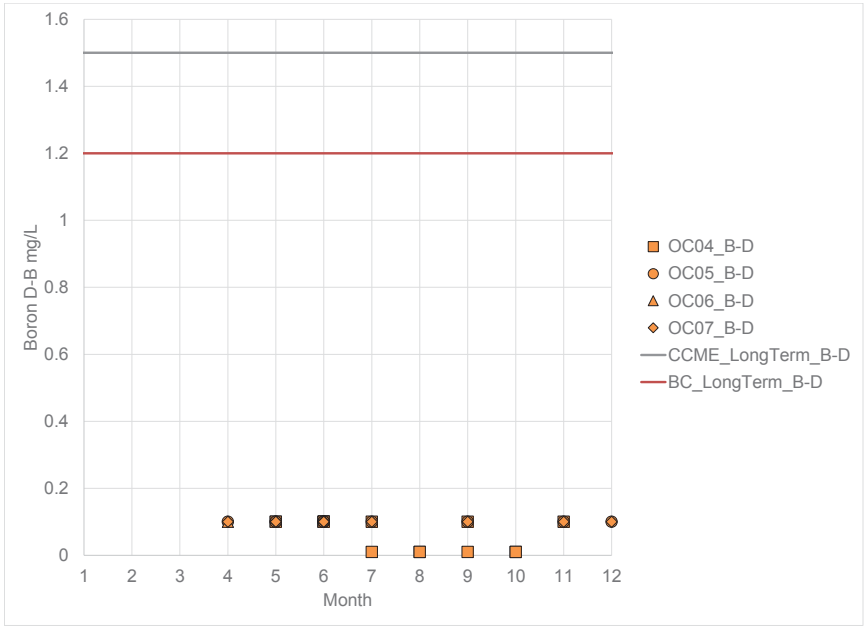


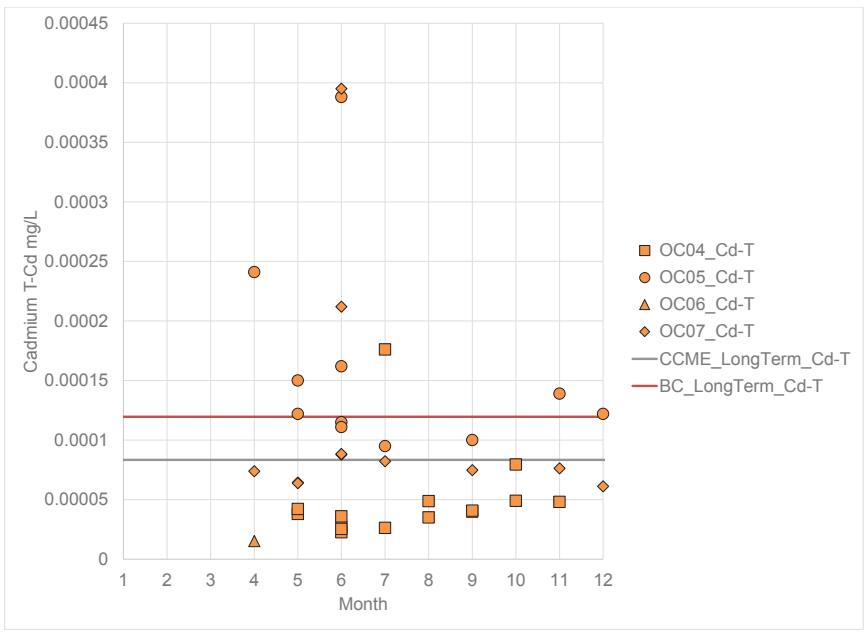


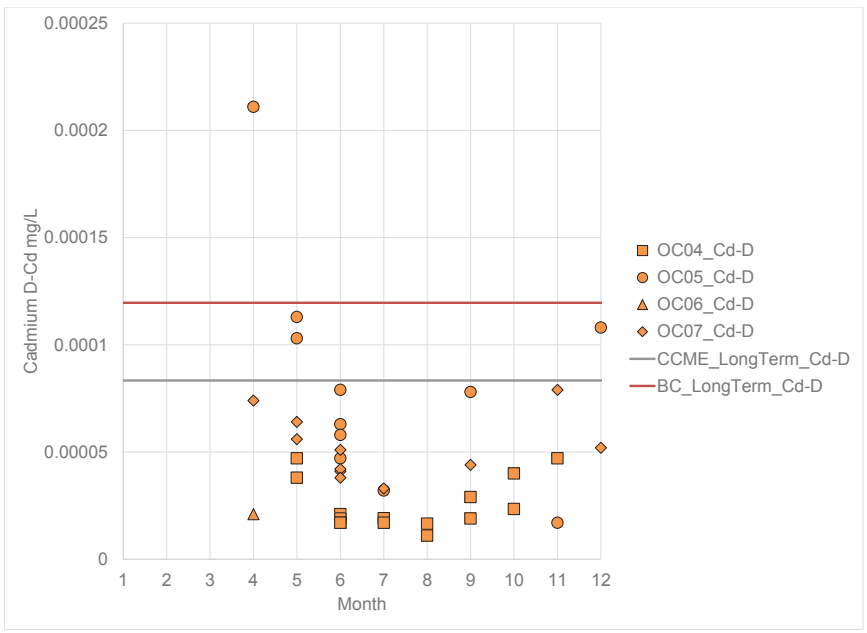
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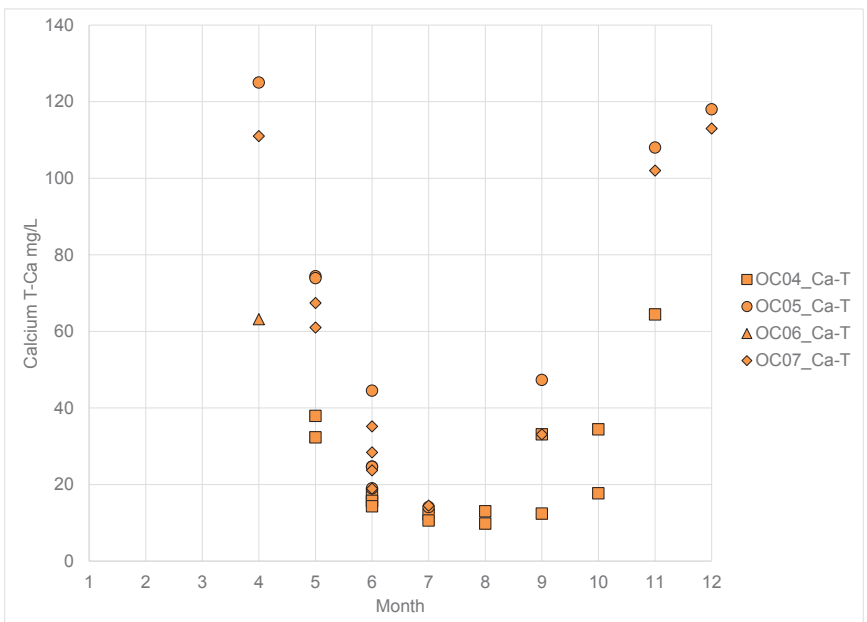
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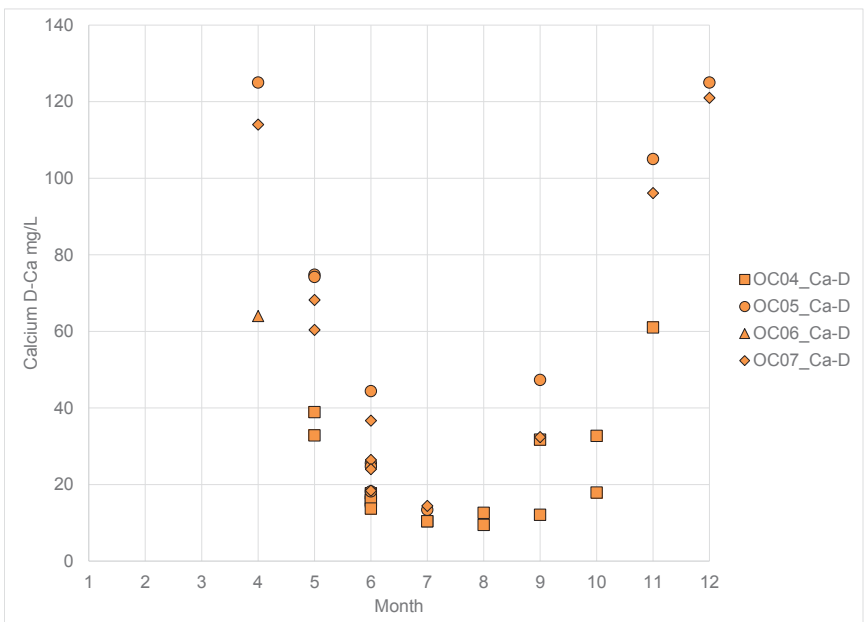


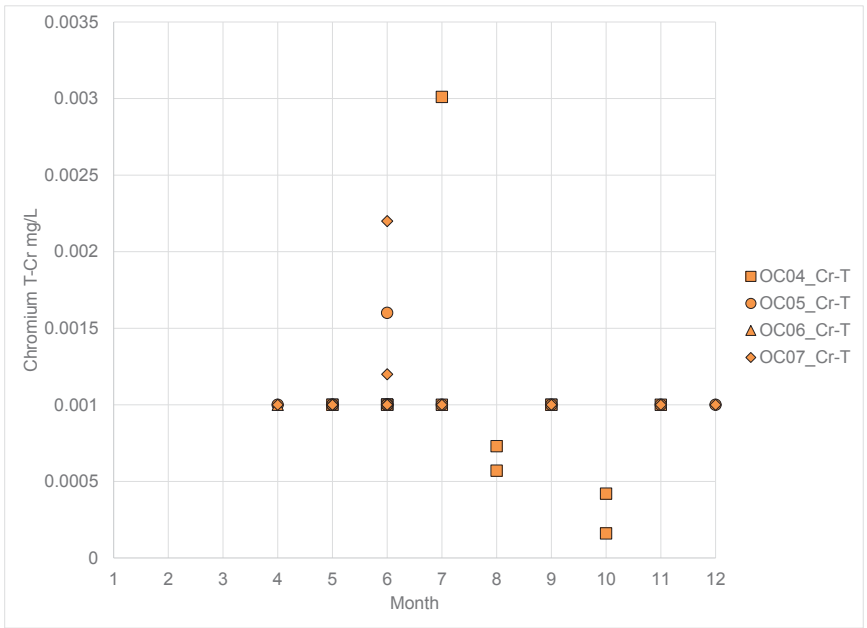


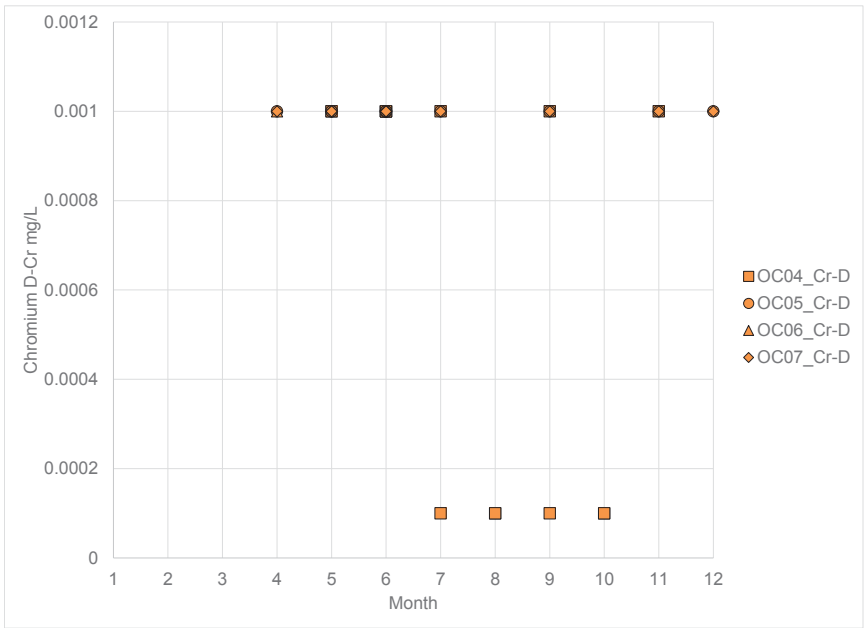






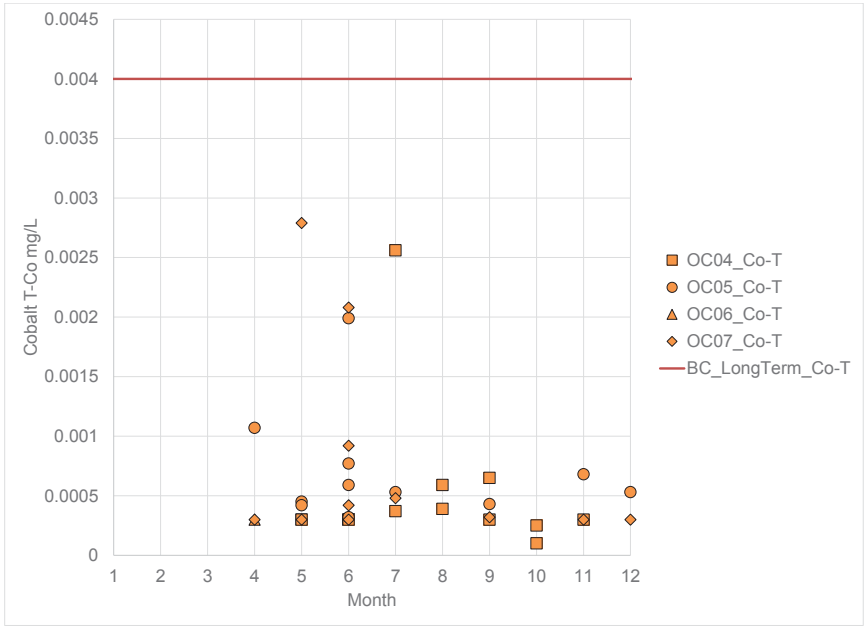


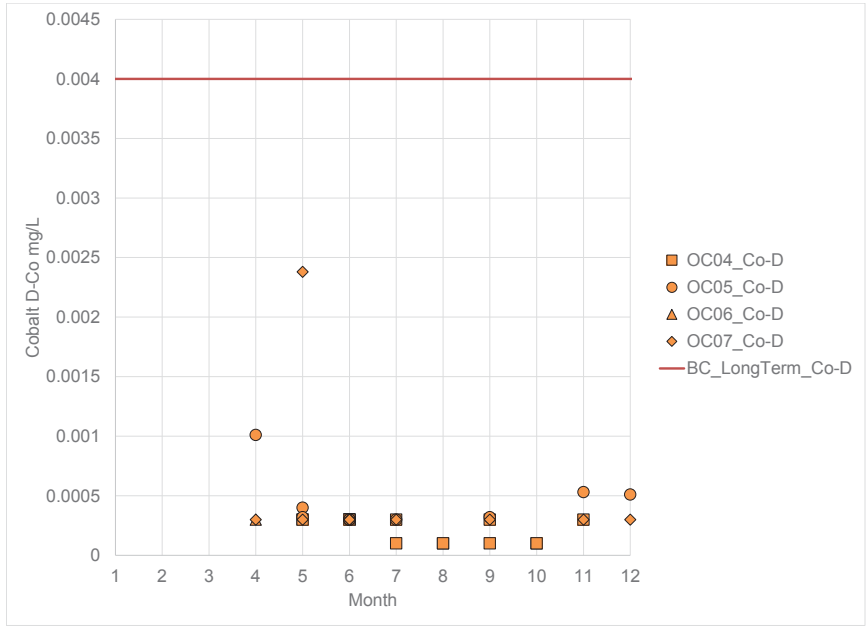


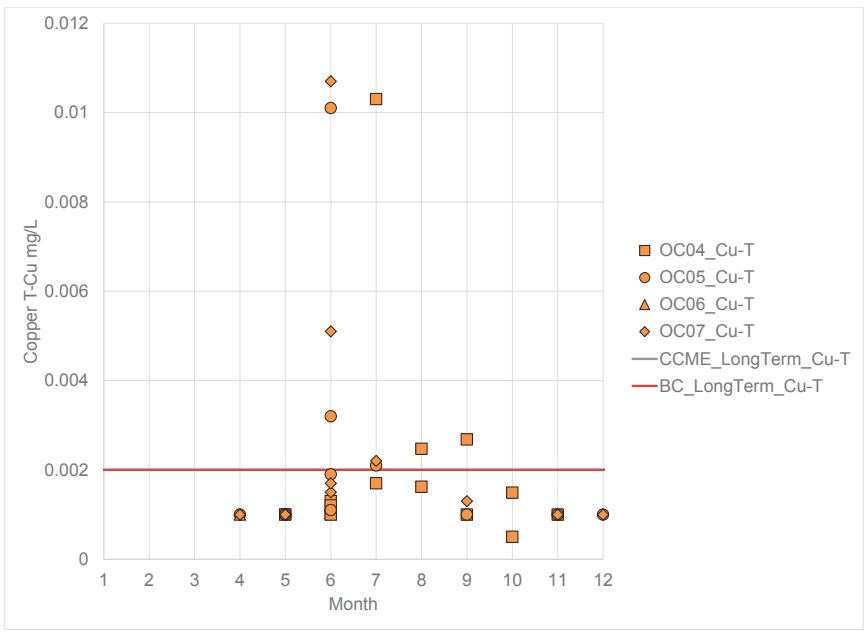


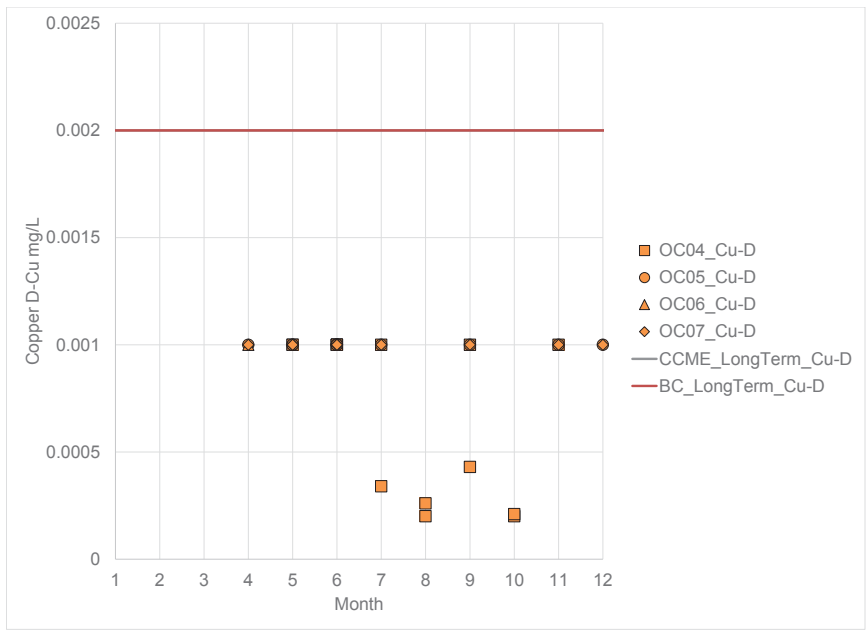
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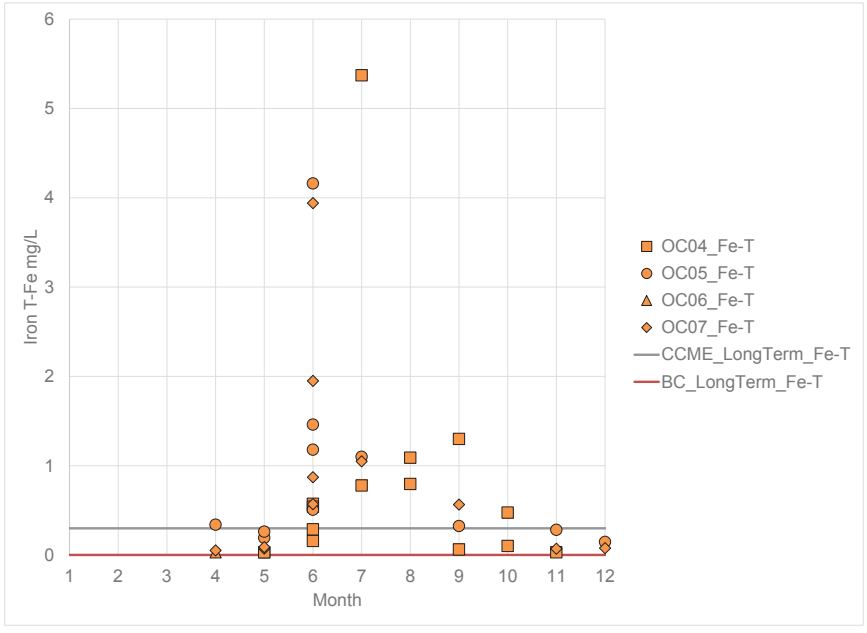
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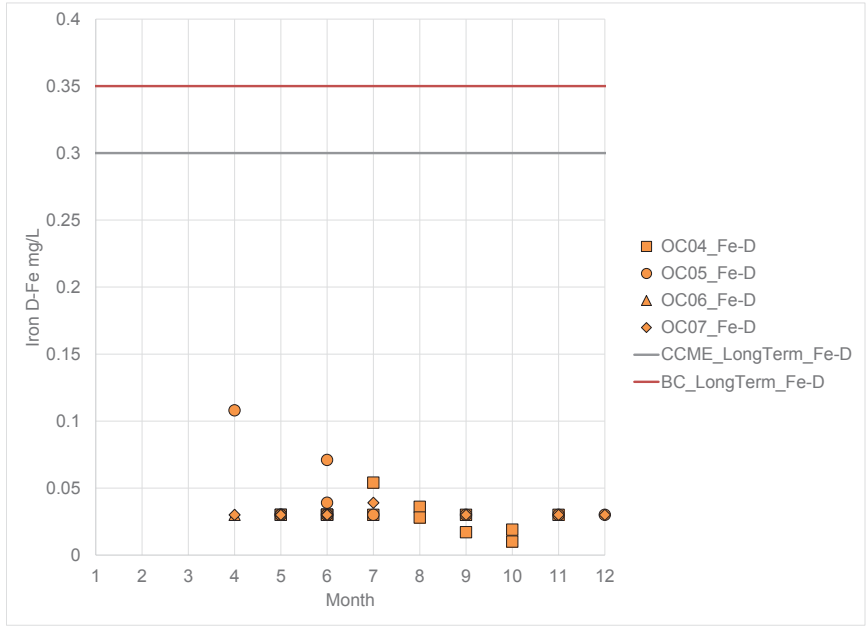


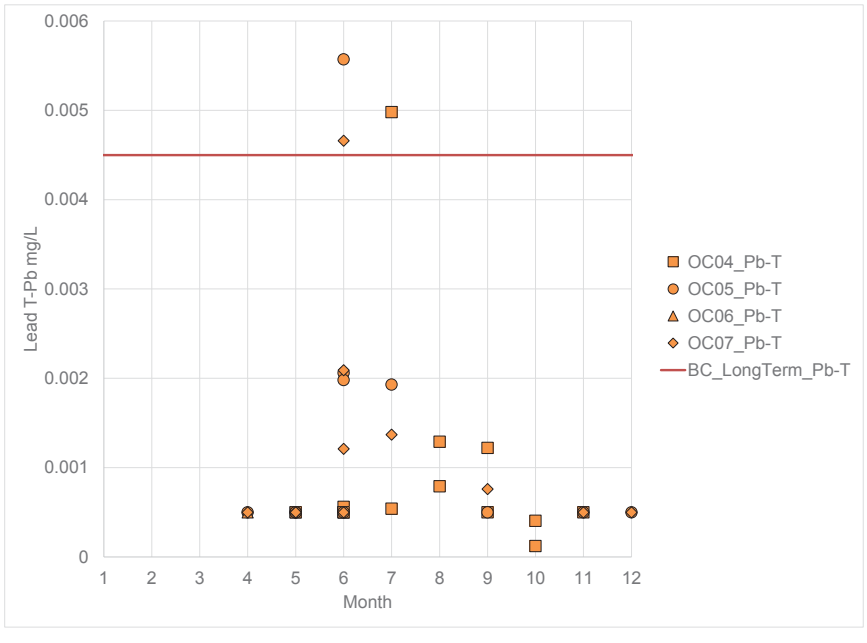


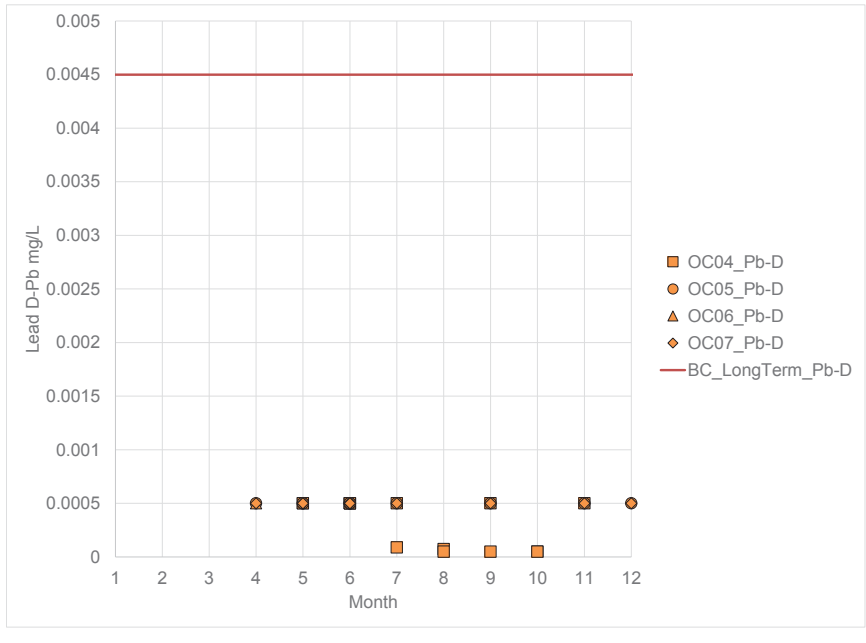






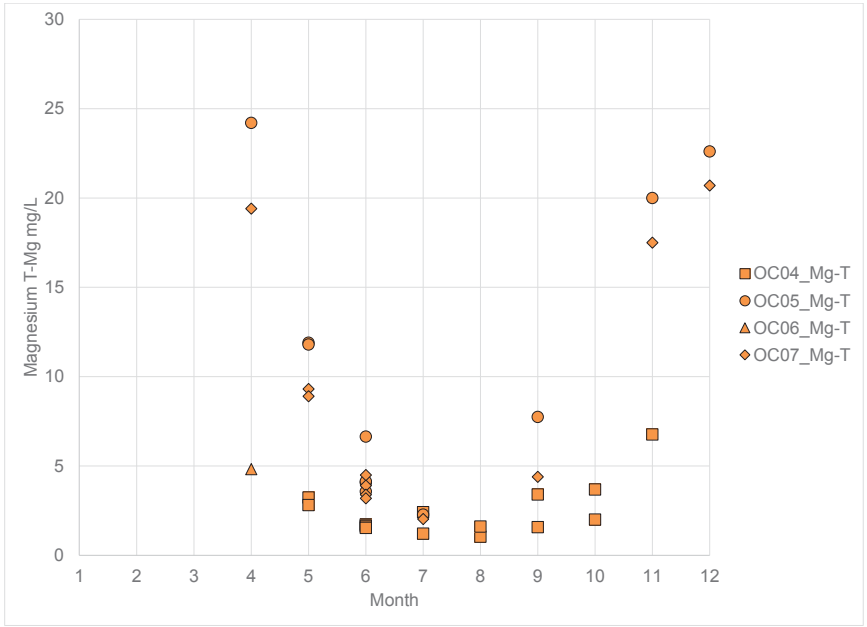


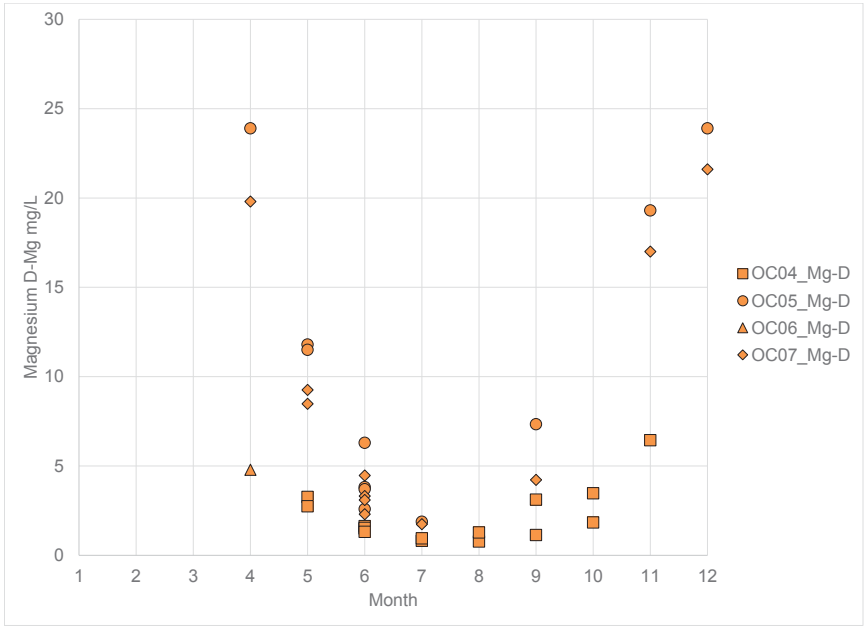


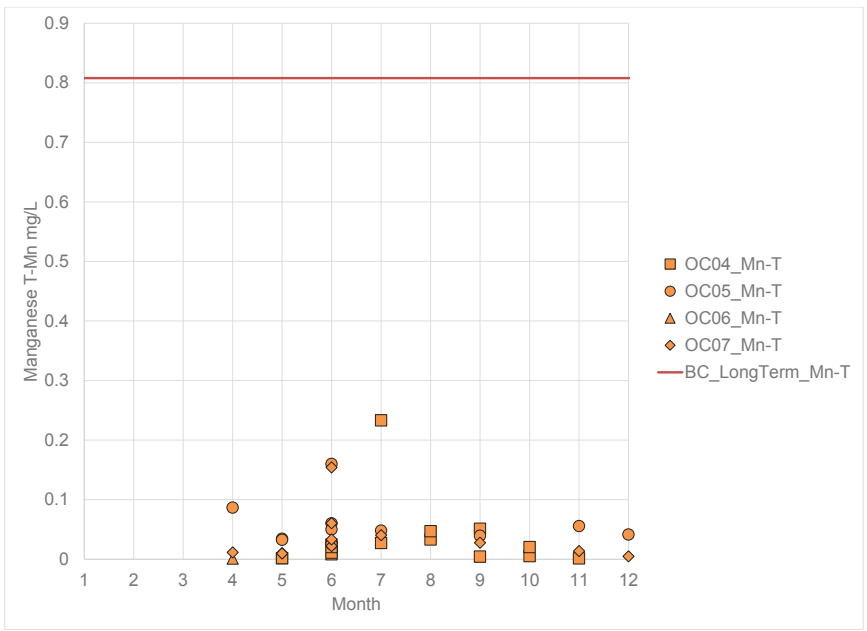


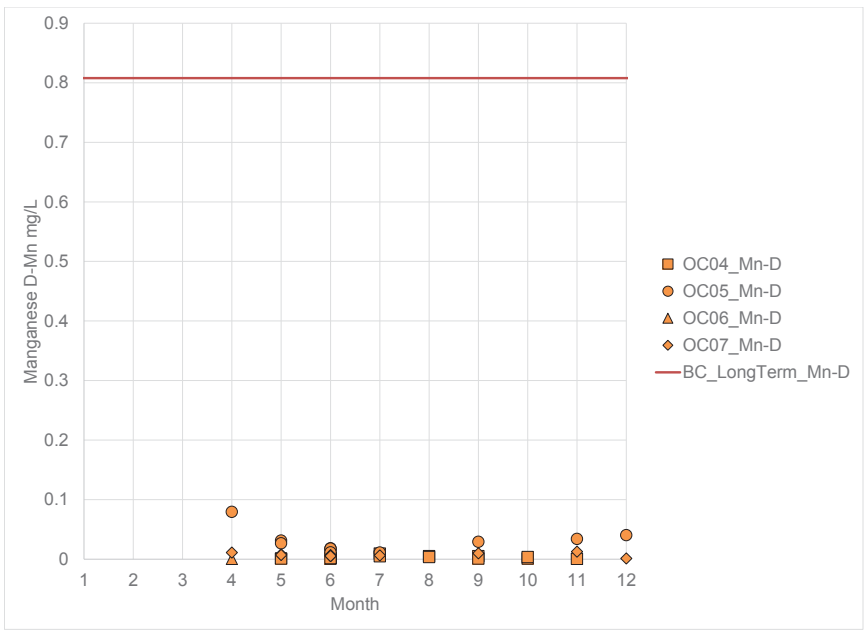
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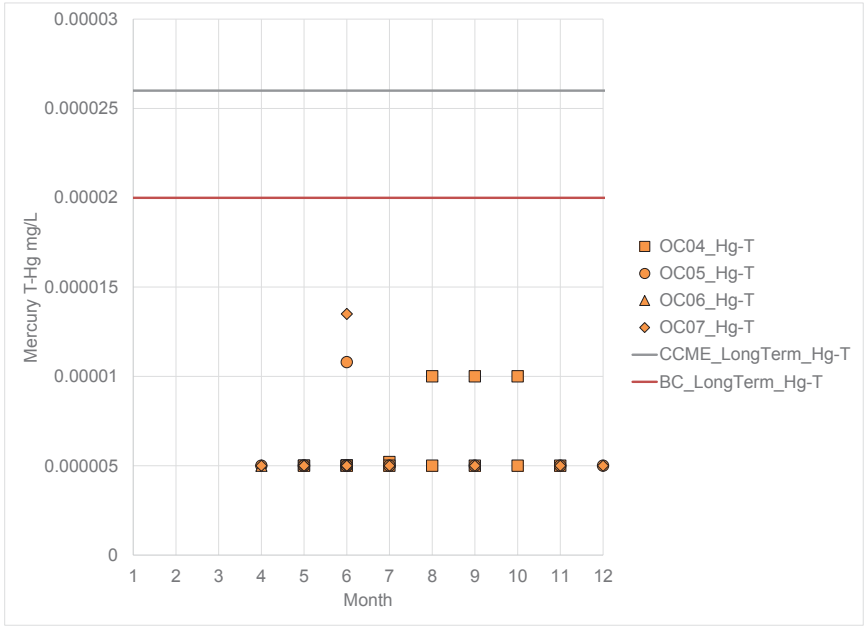
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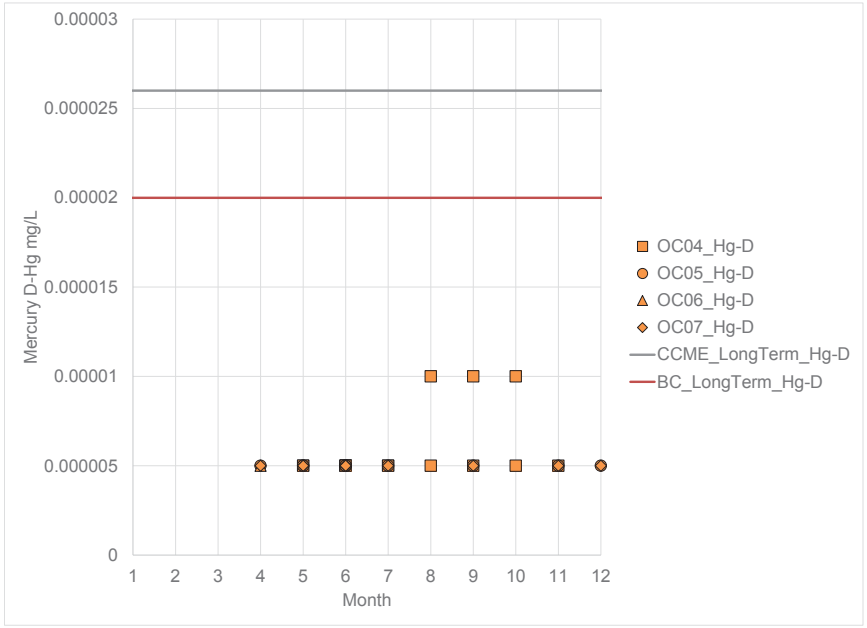


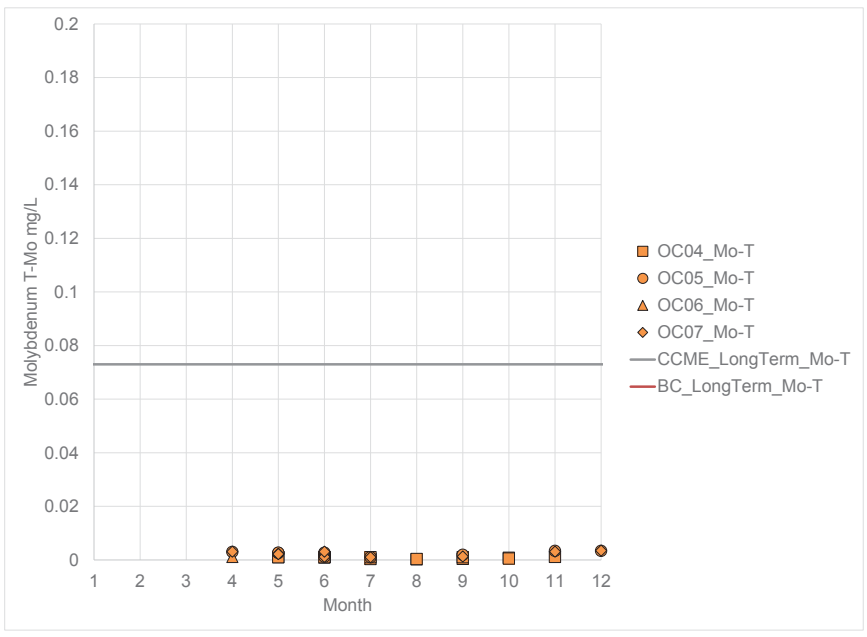


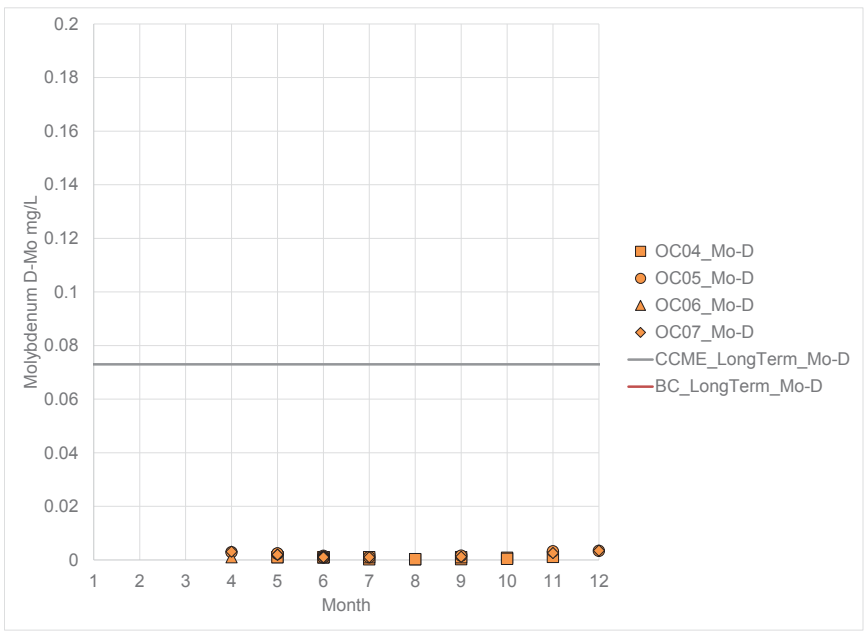






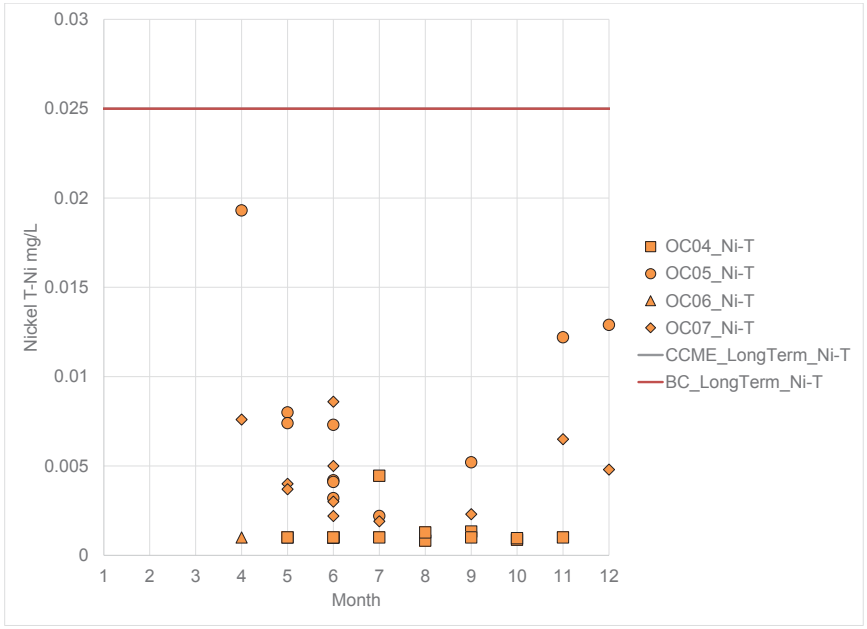


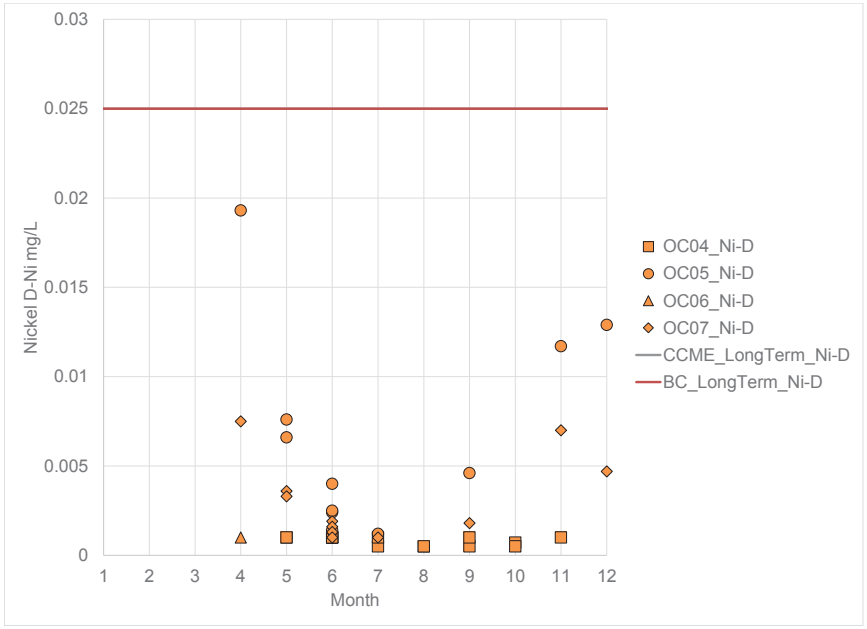


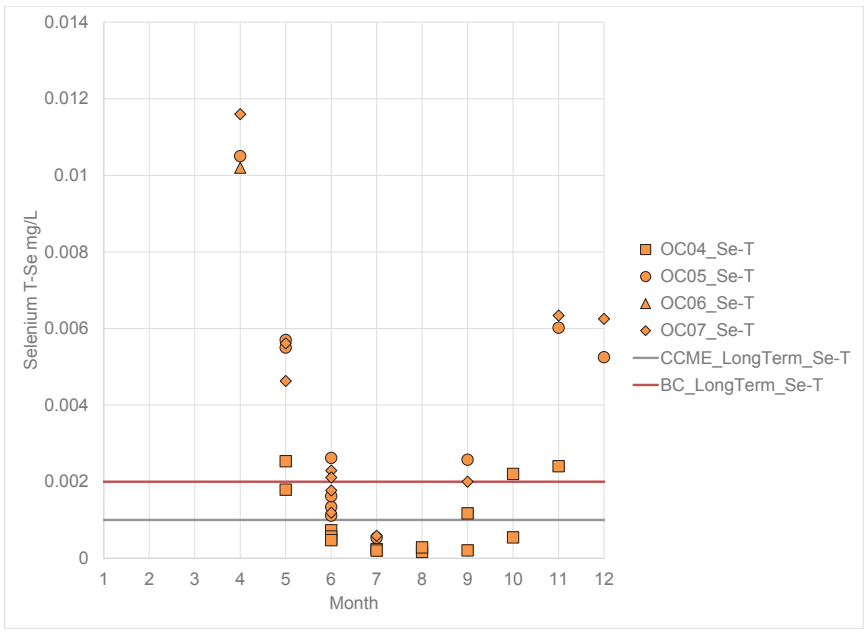


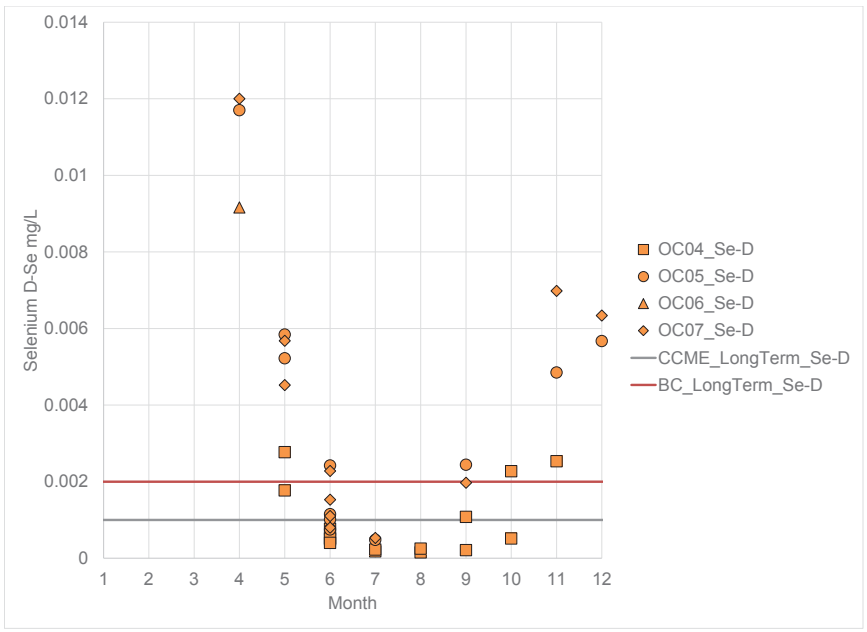
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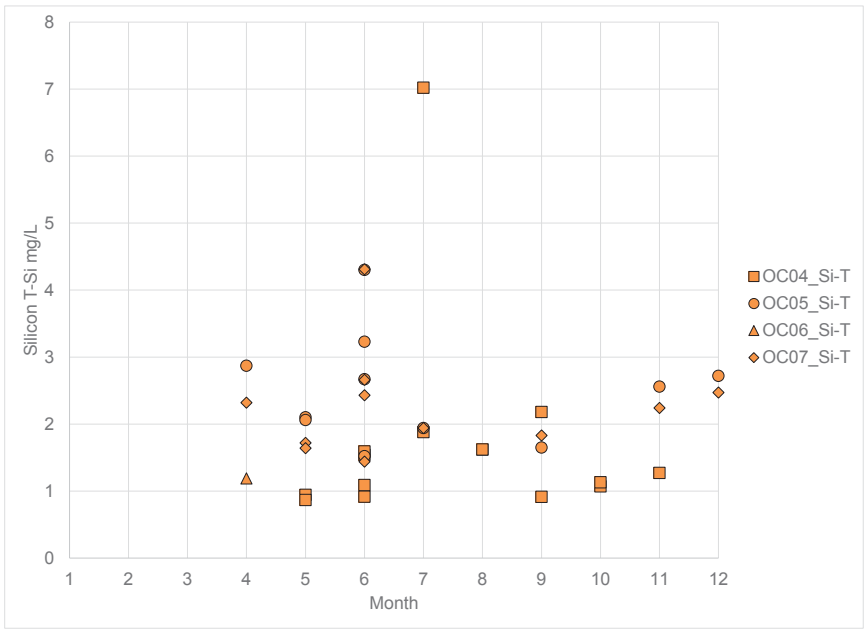
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

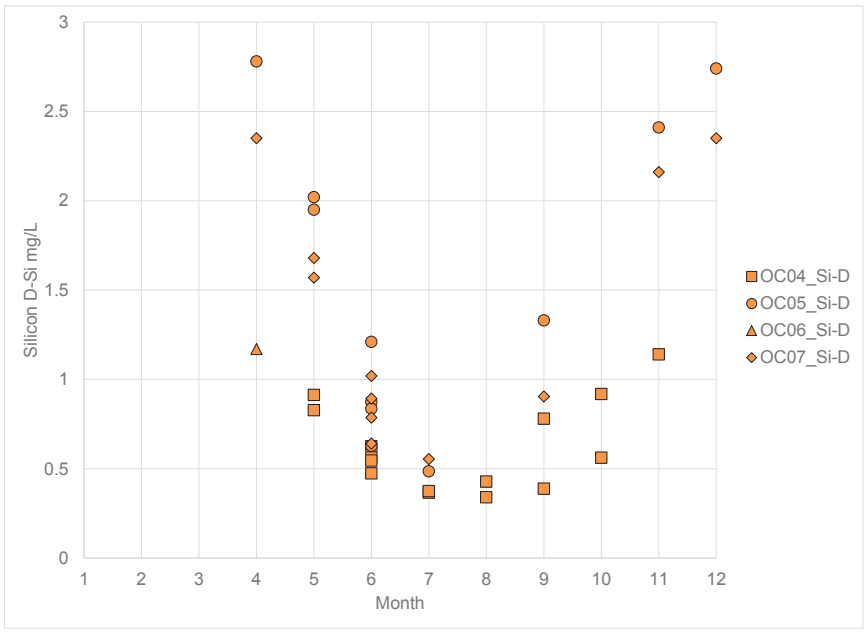


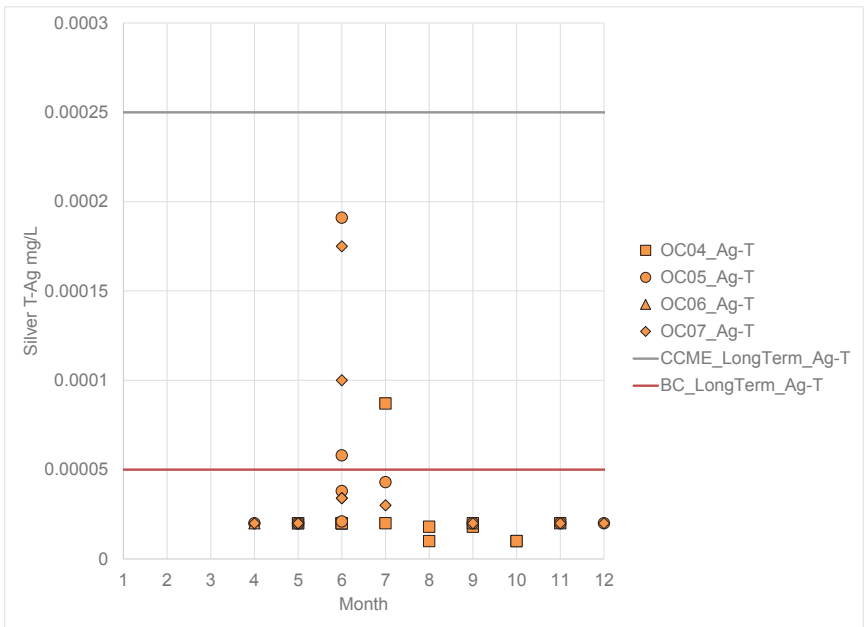


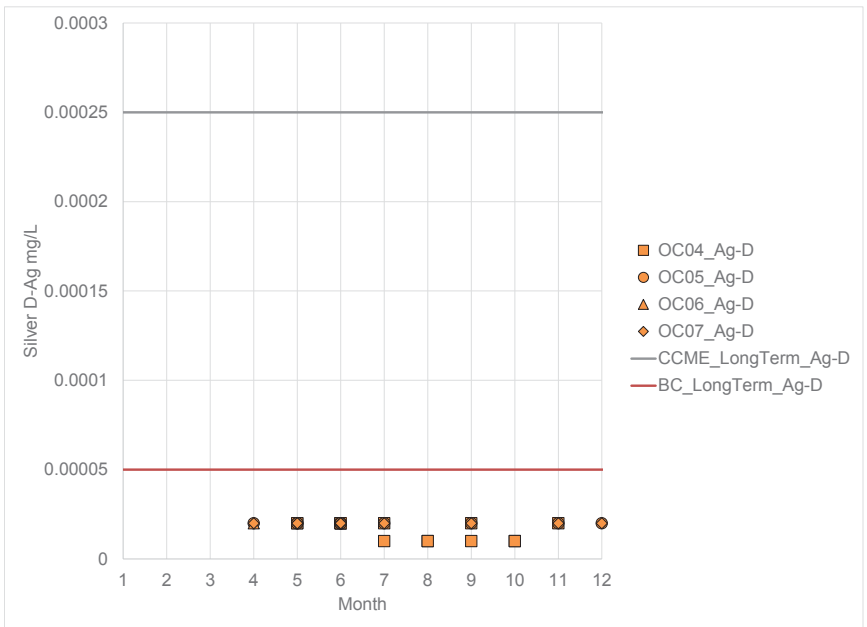




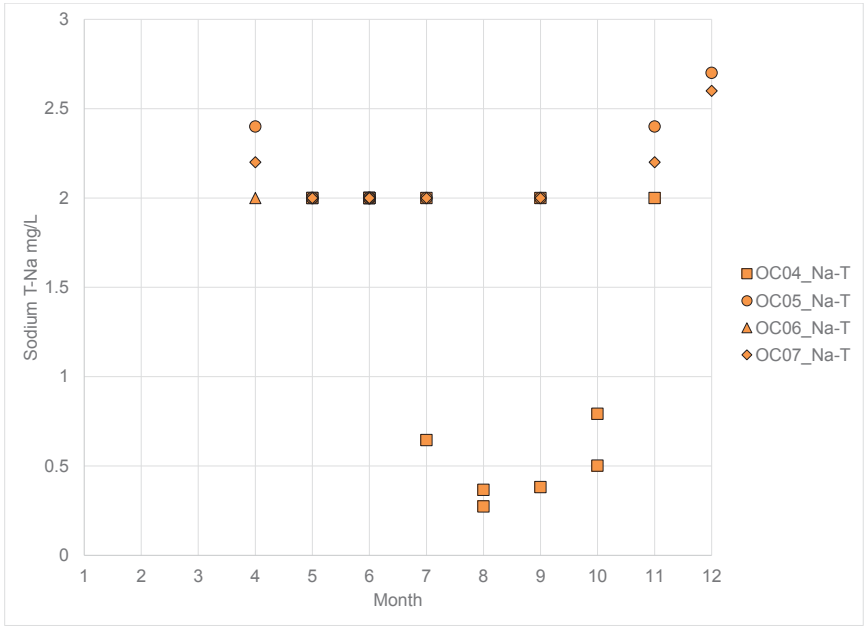


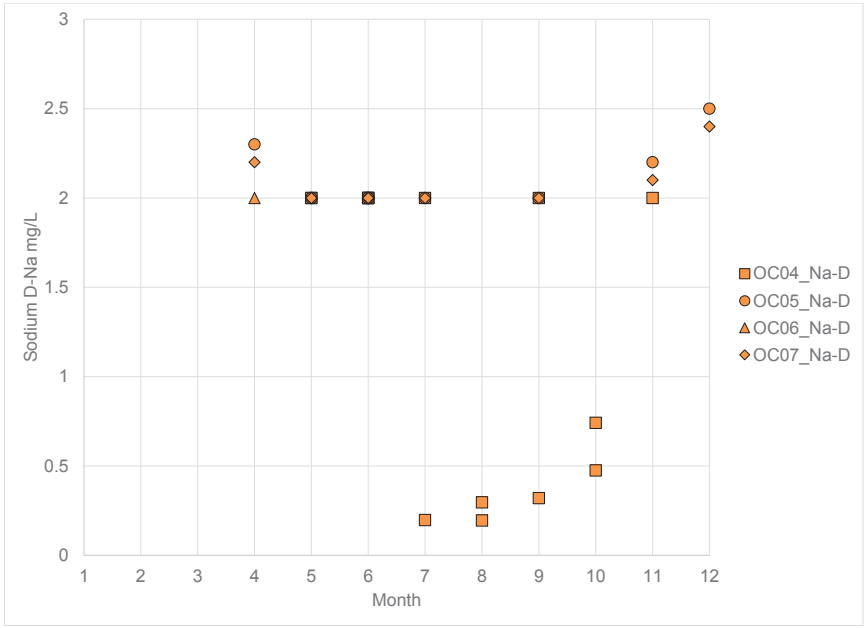


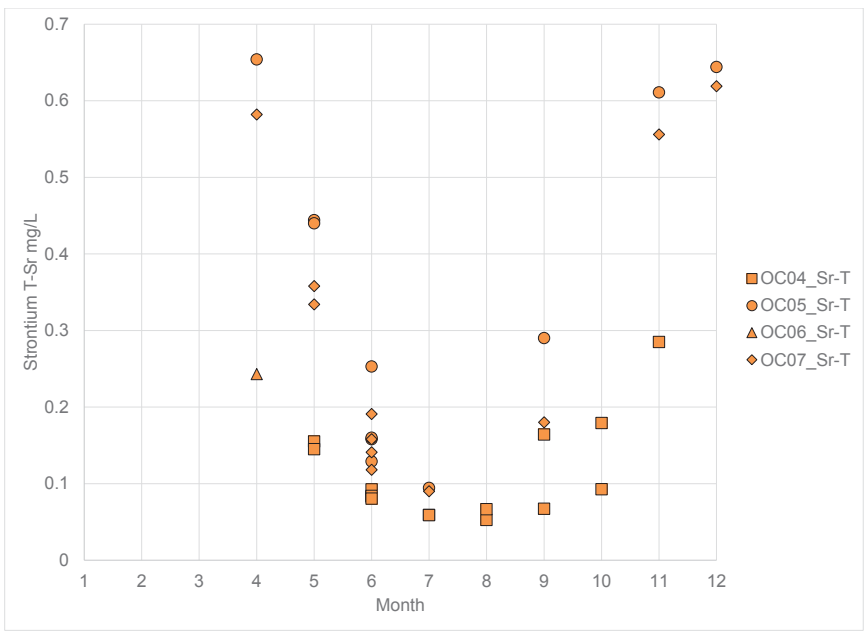


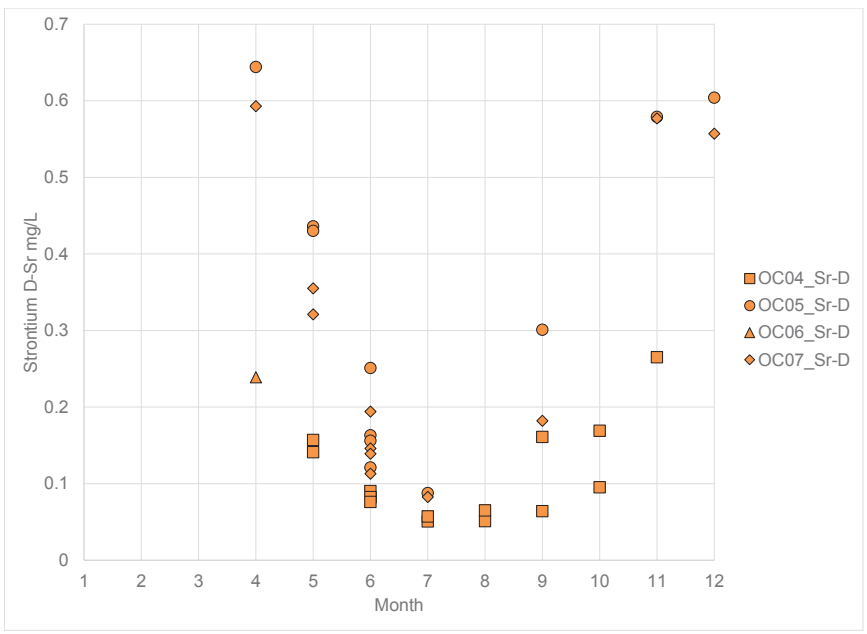


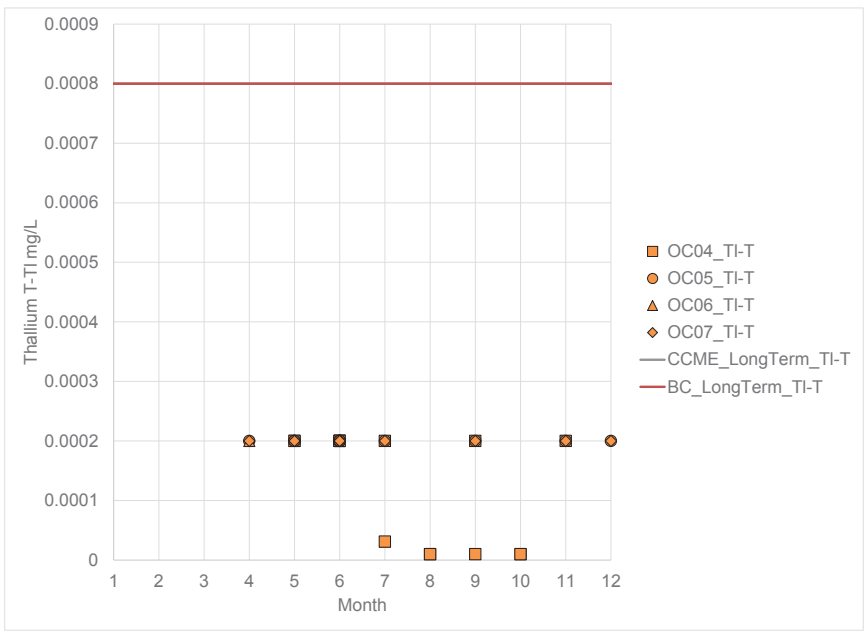
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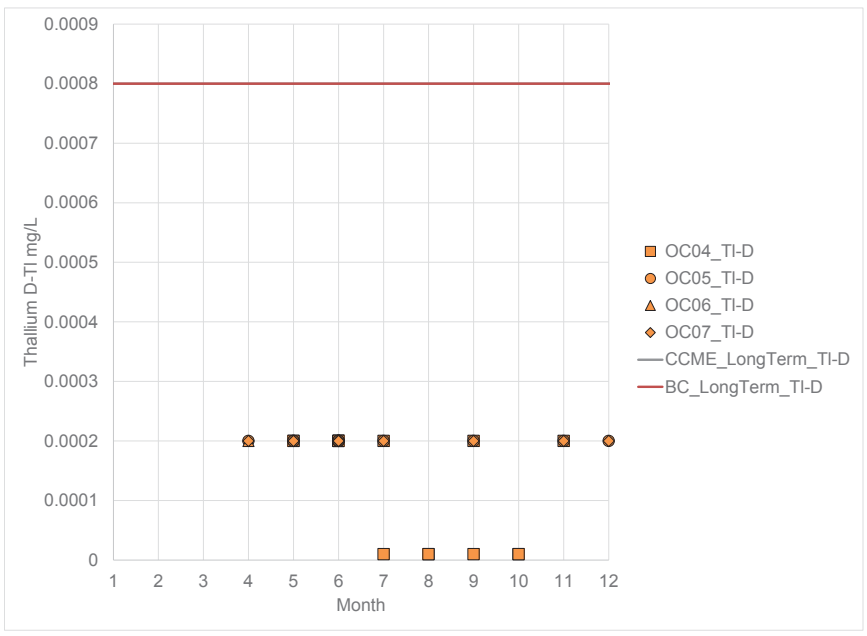


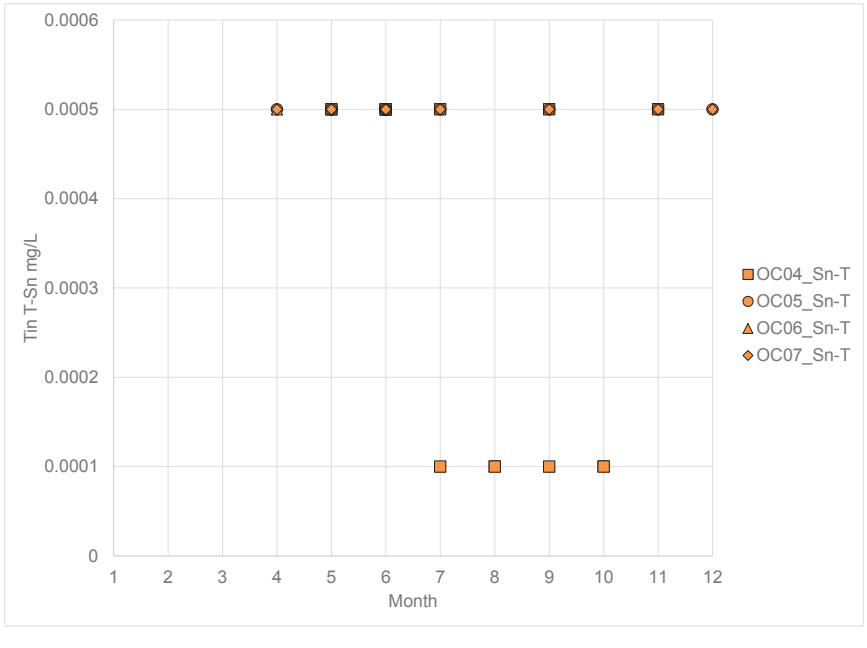


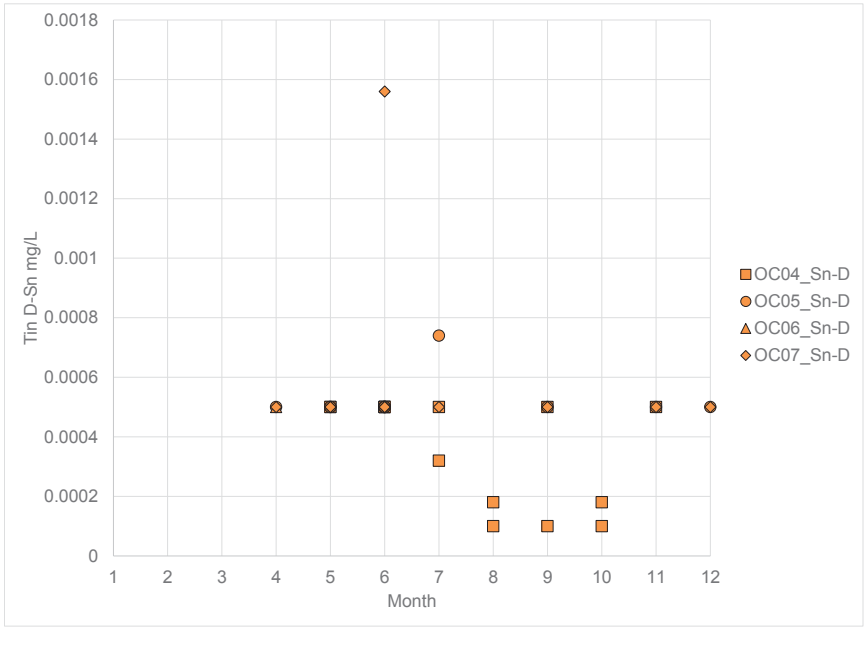






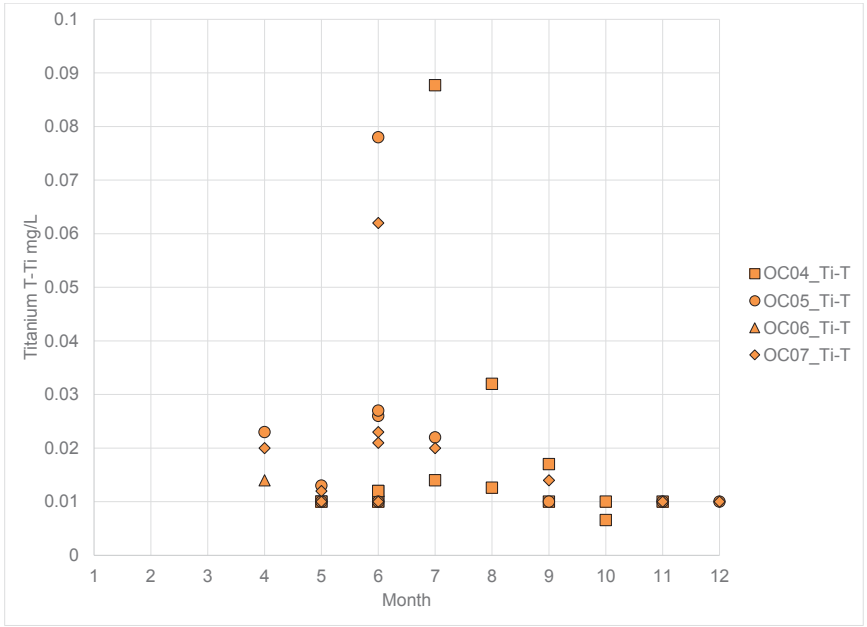


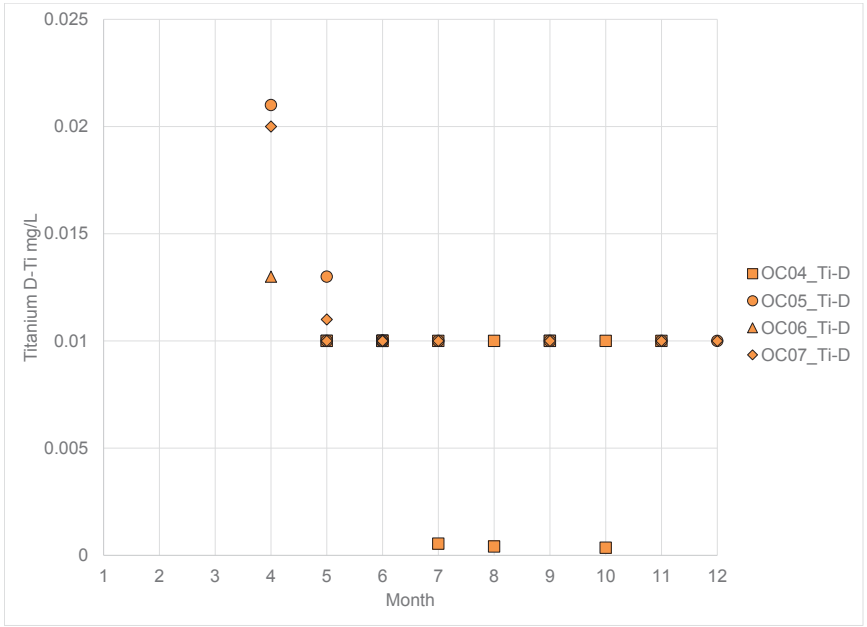


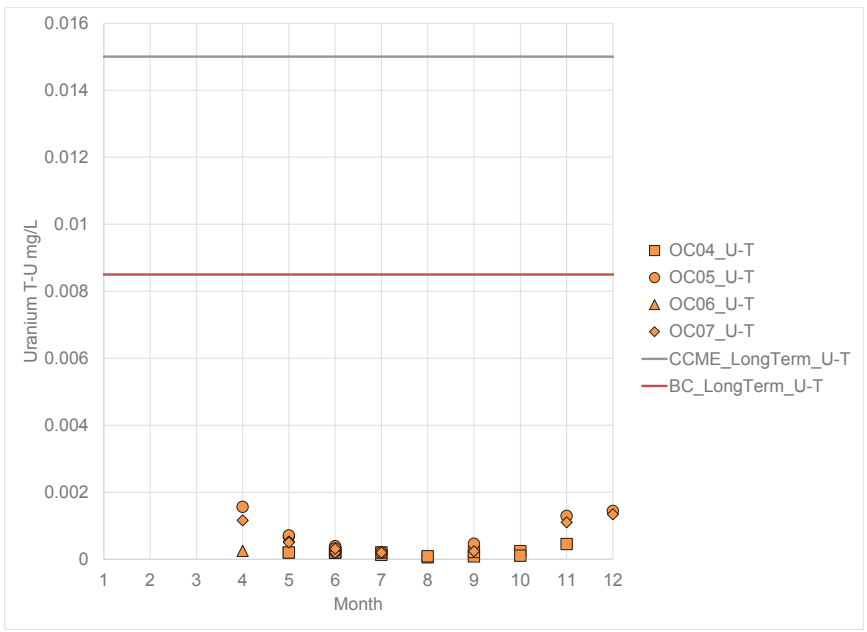


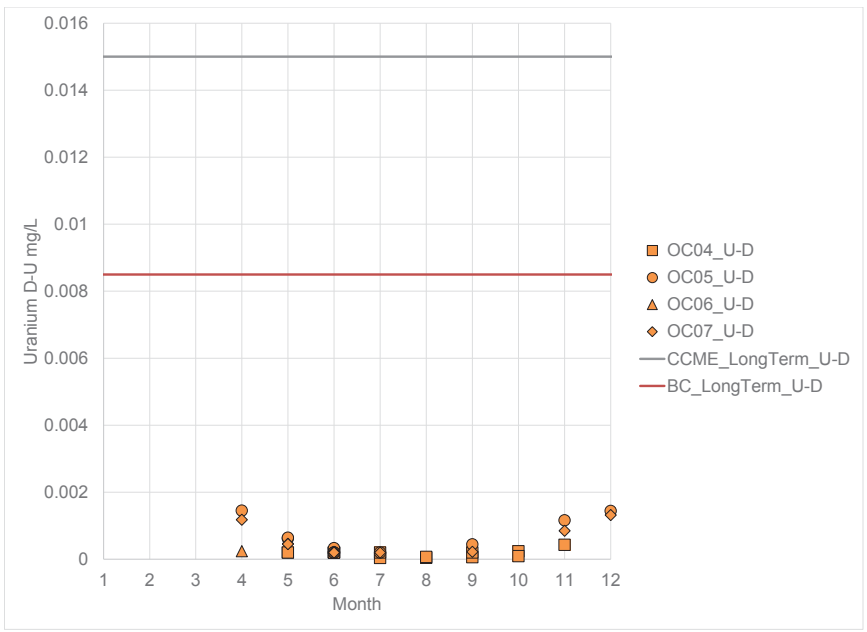
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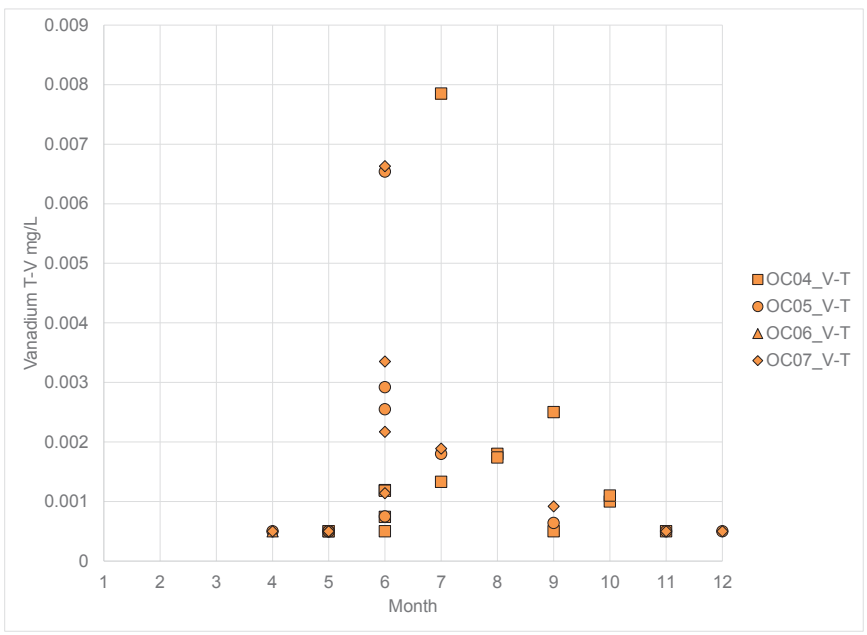
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

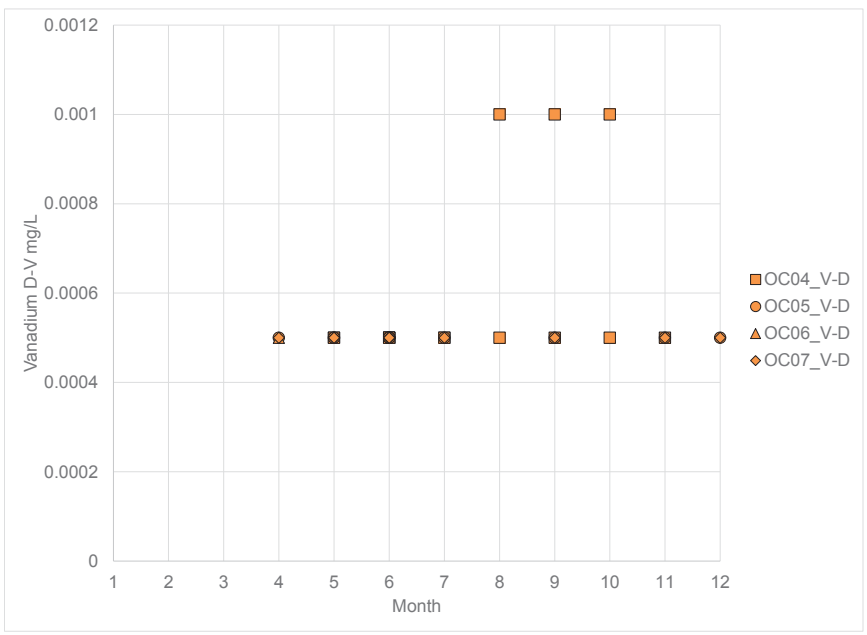


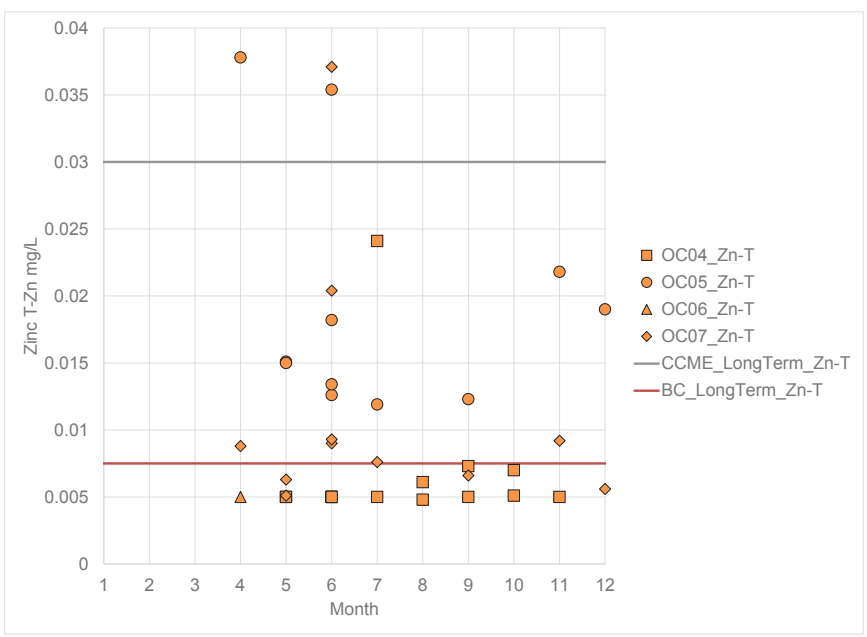


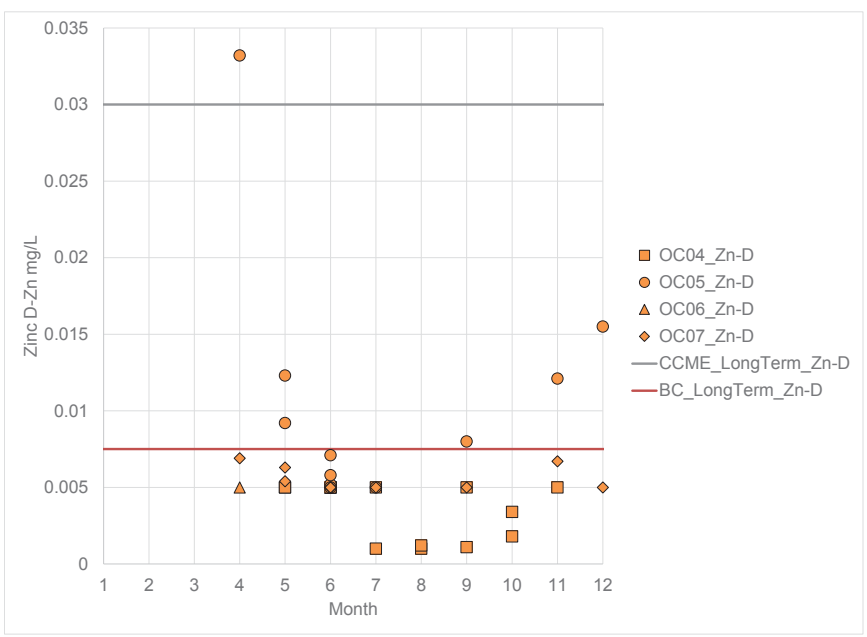








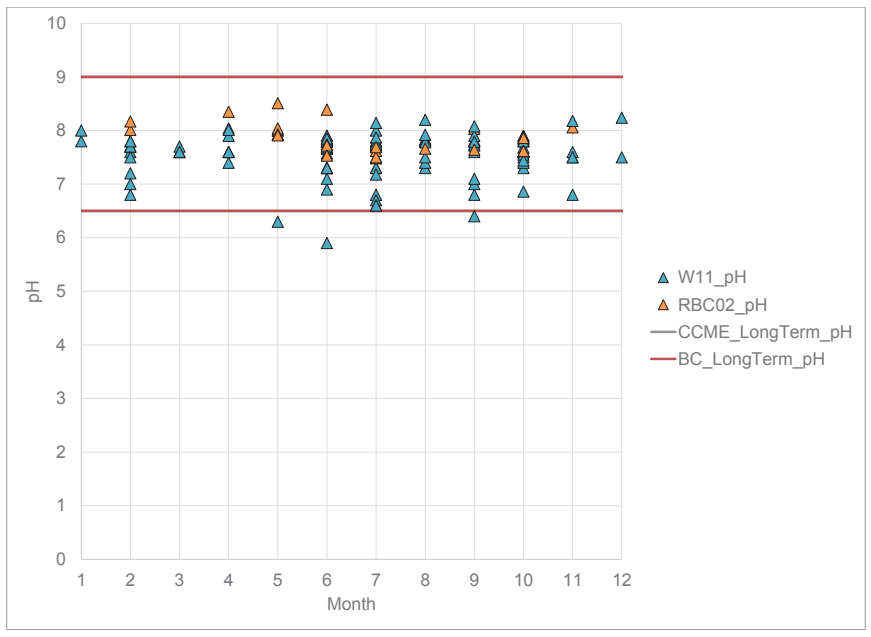


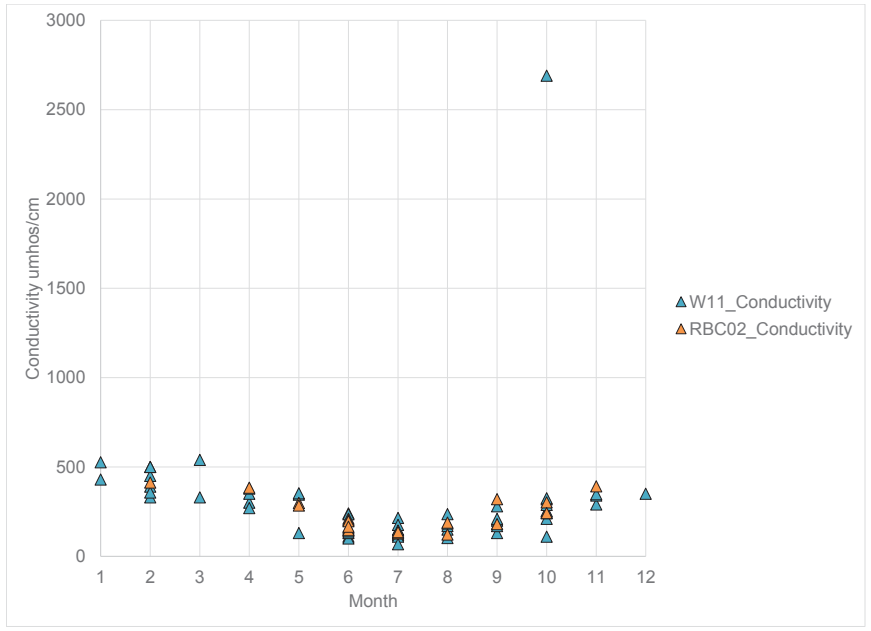


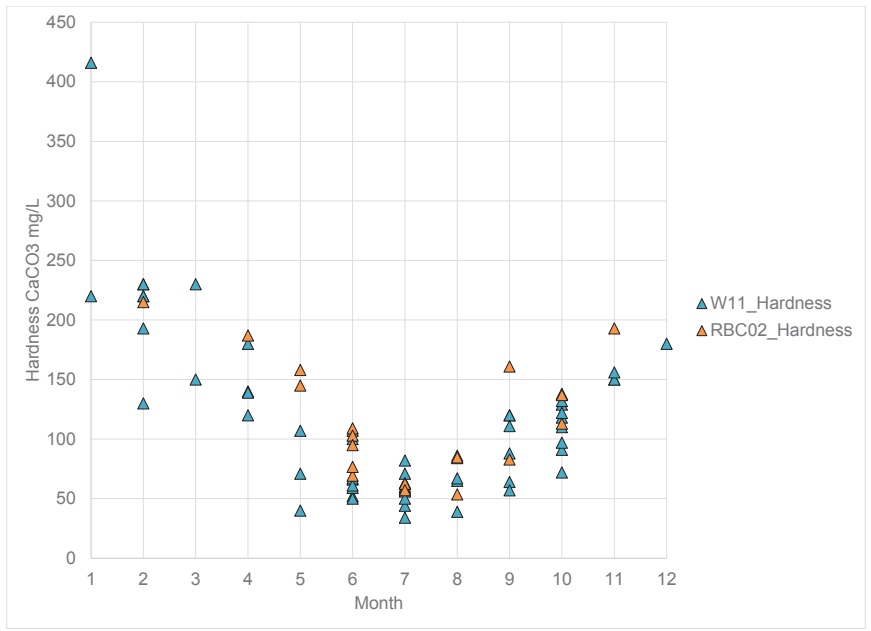
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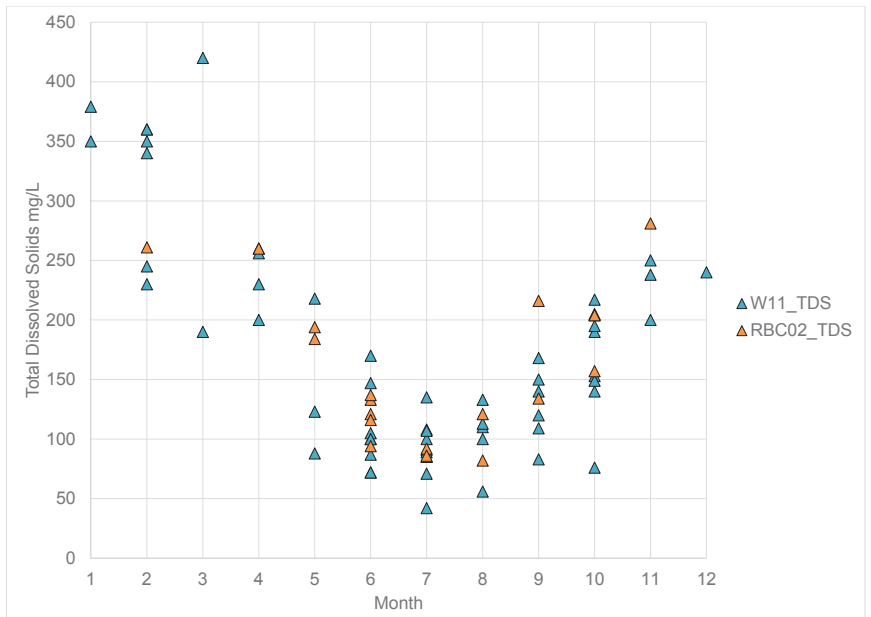
Rio Blanco Creek

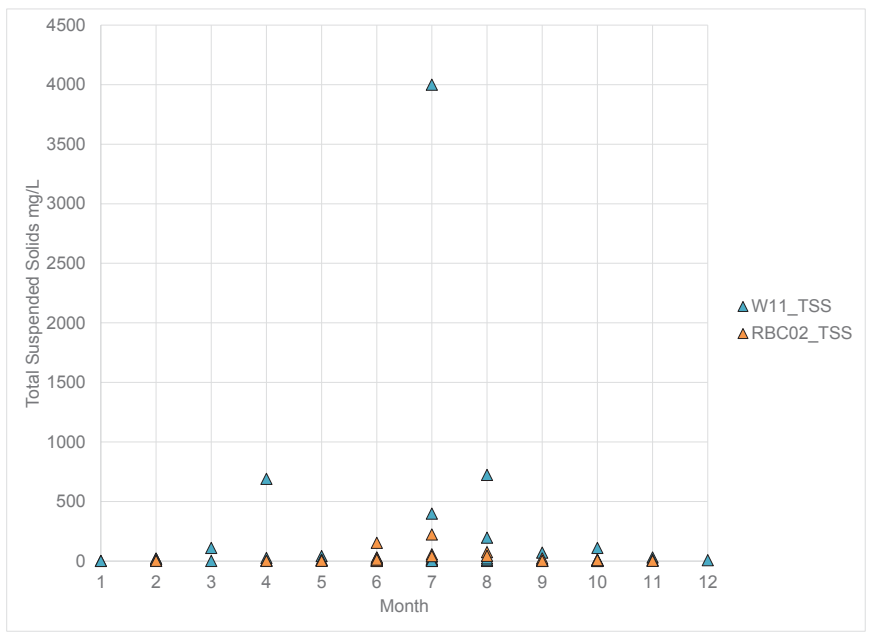
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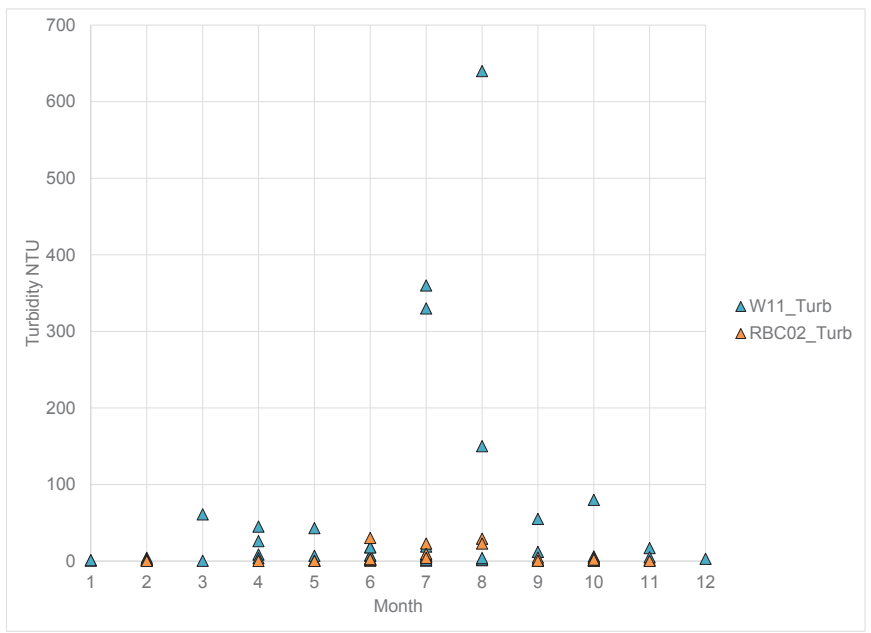


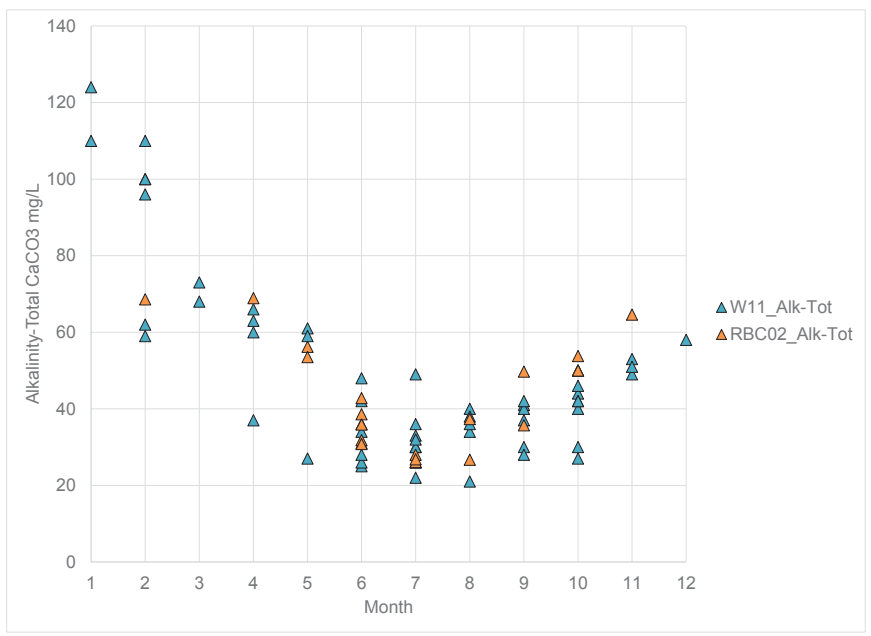


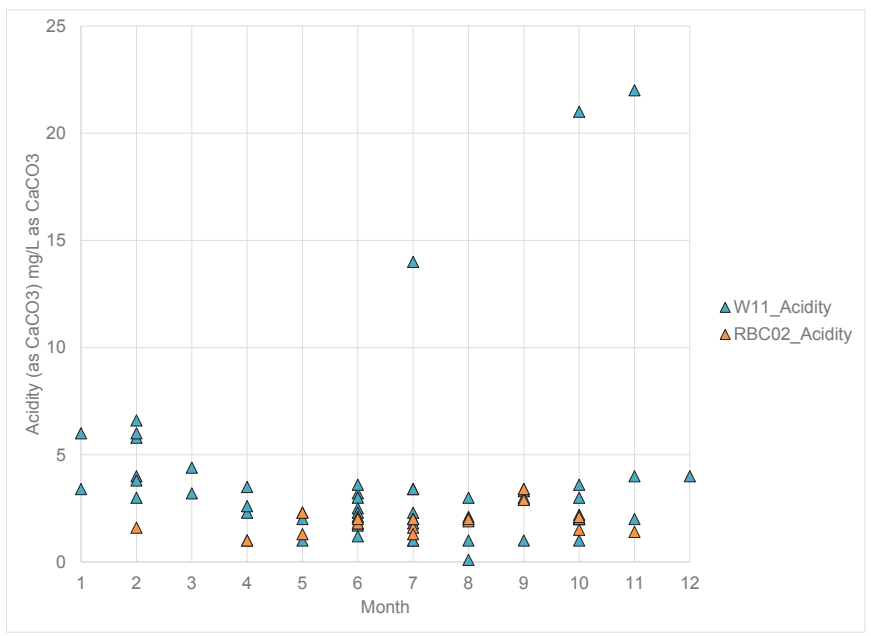






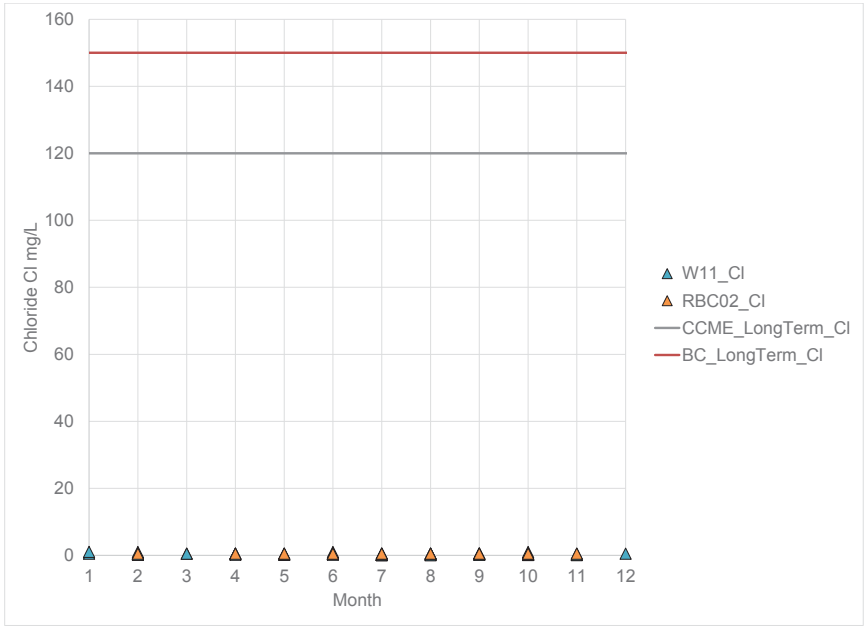


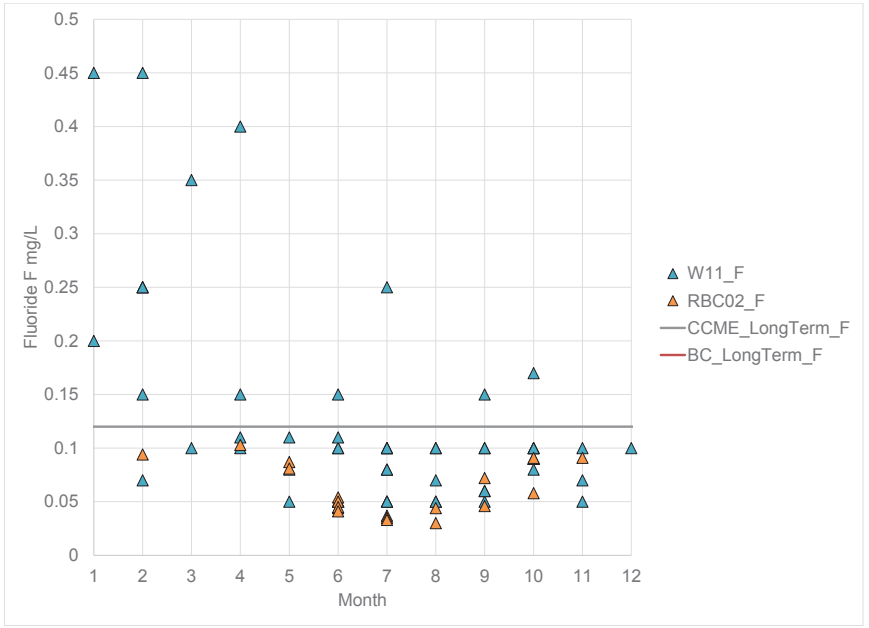


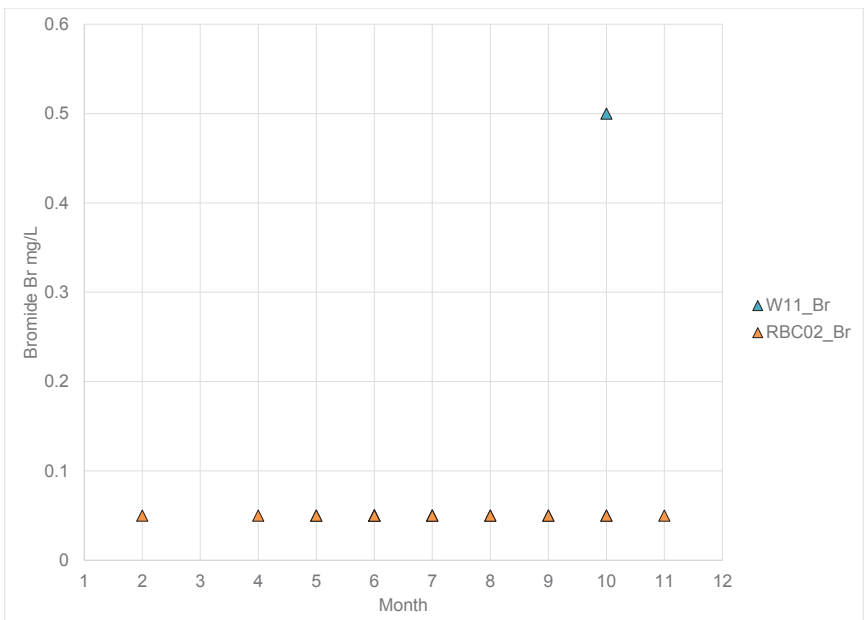


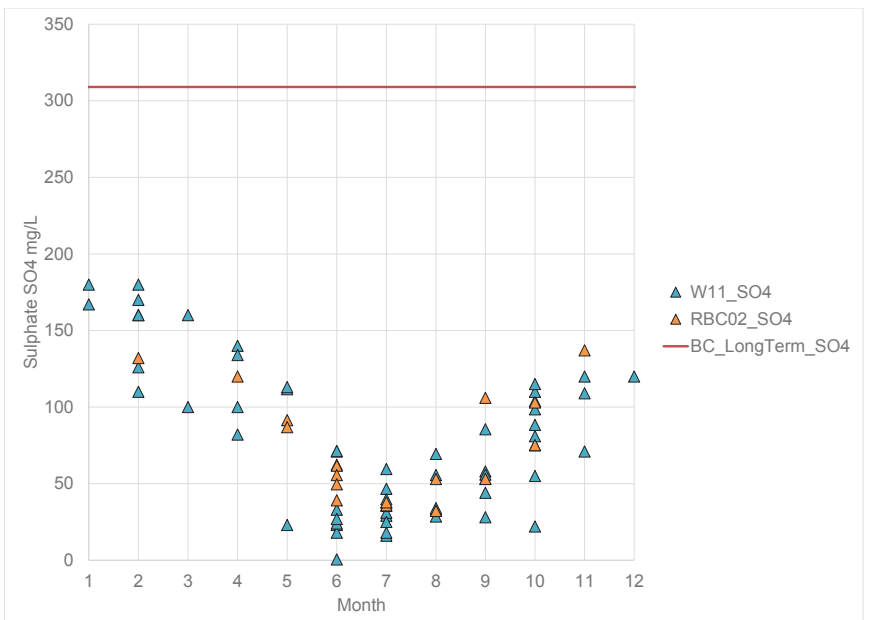
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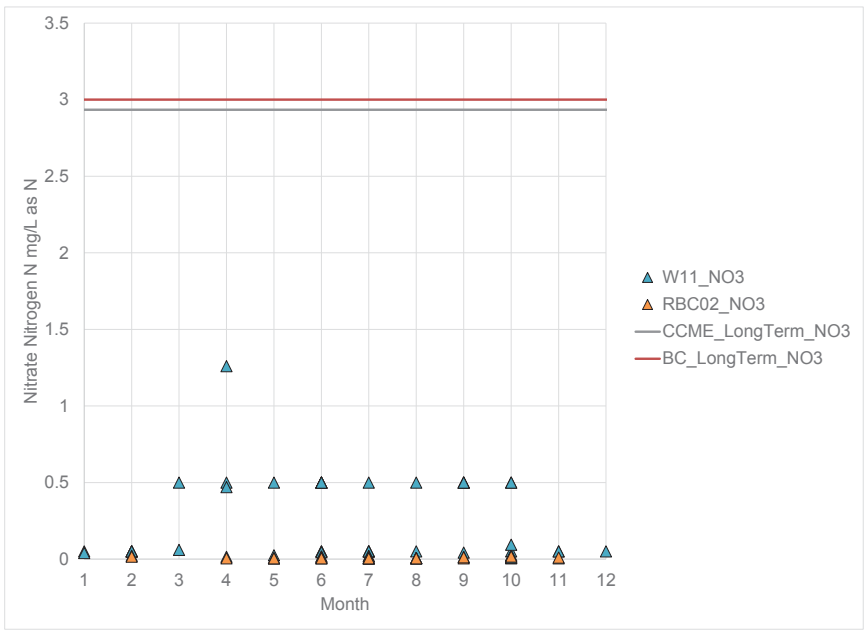
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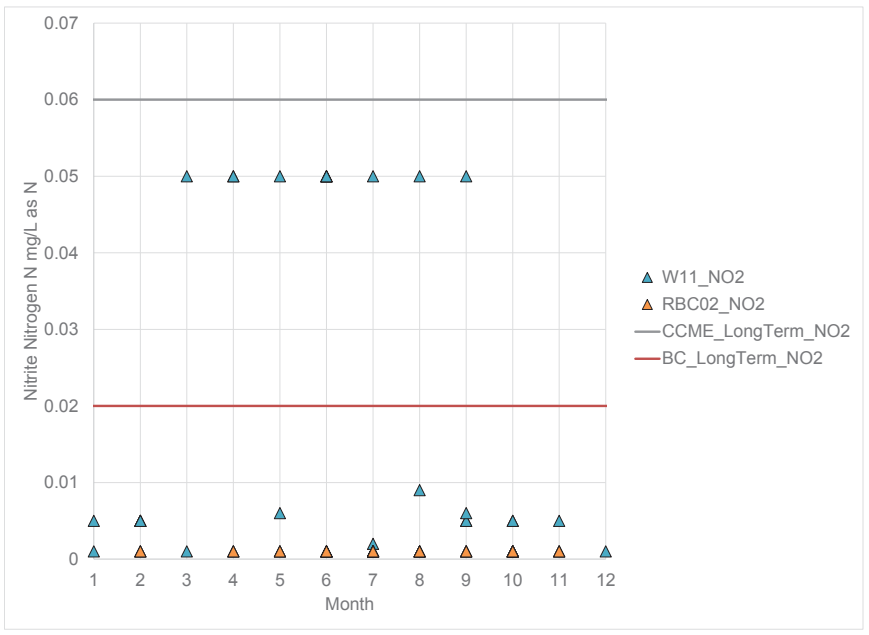


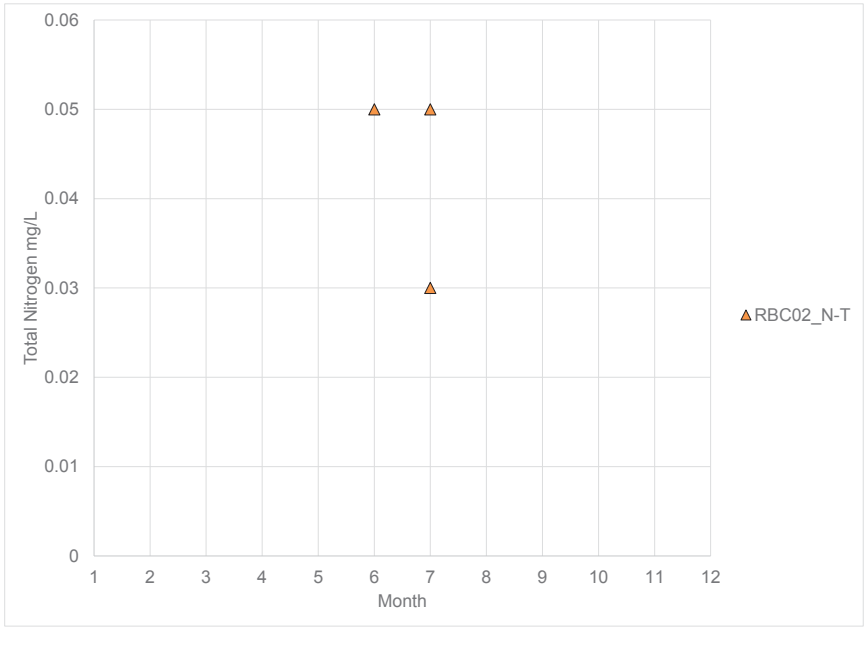


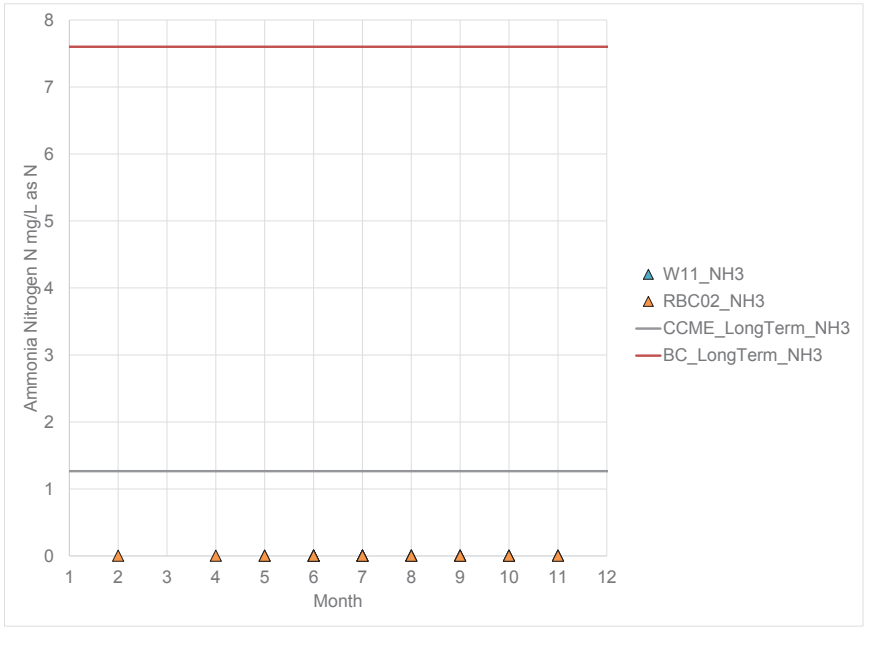






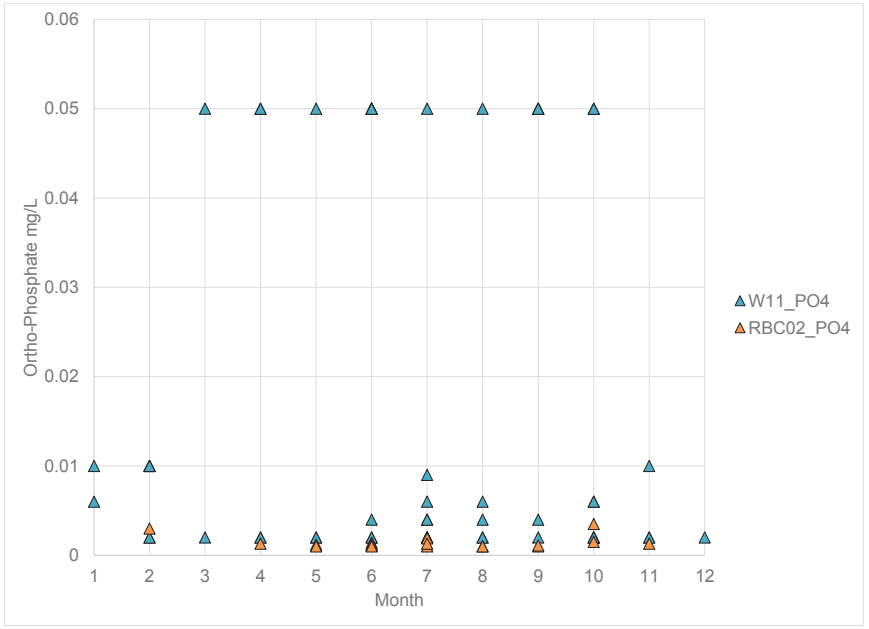


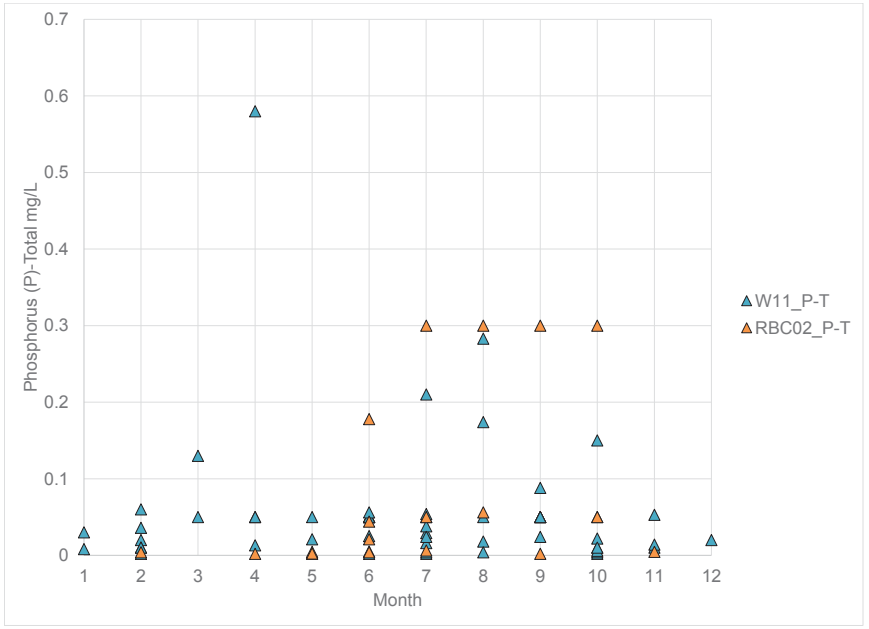


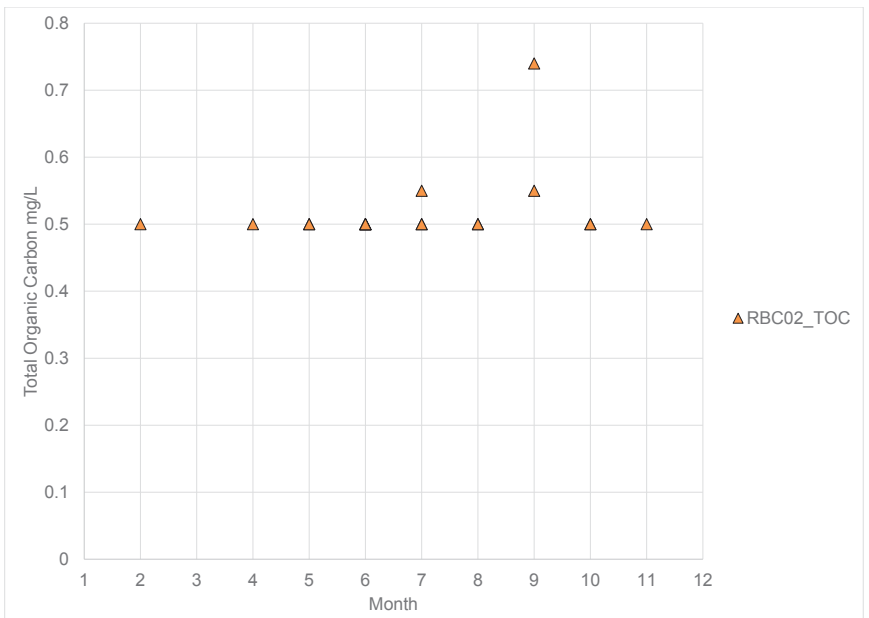


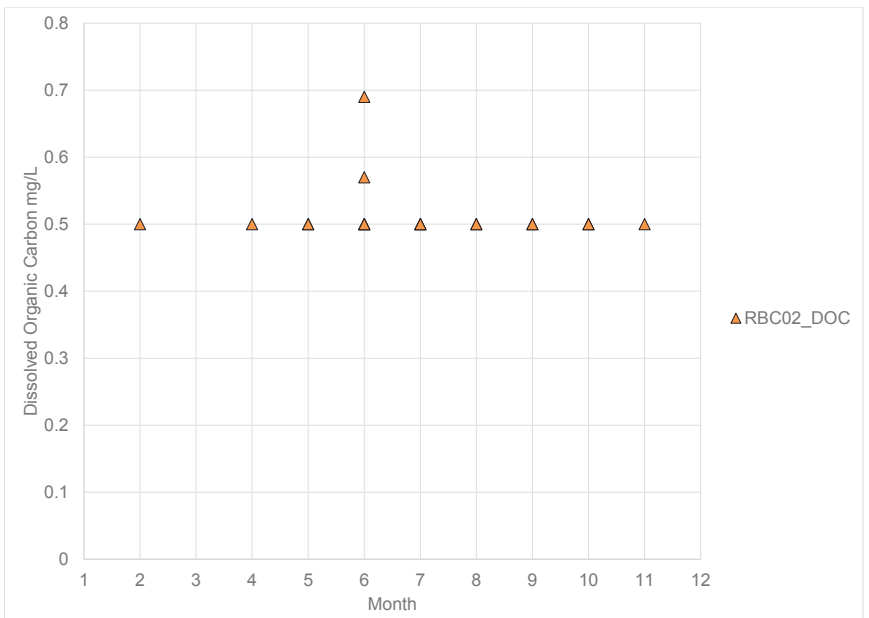
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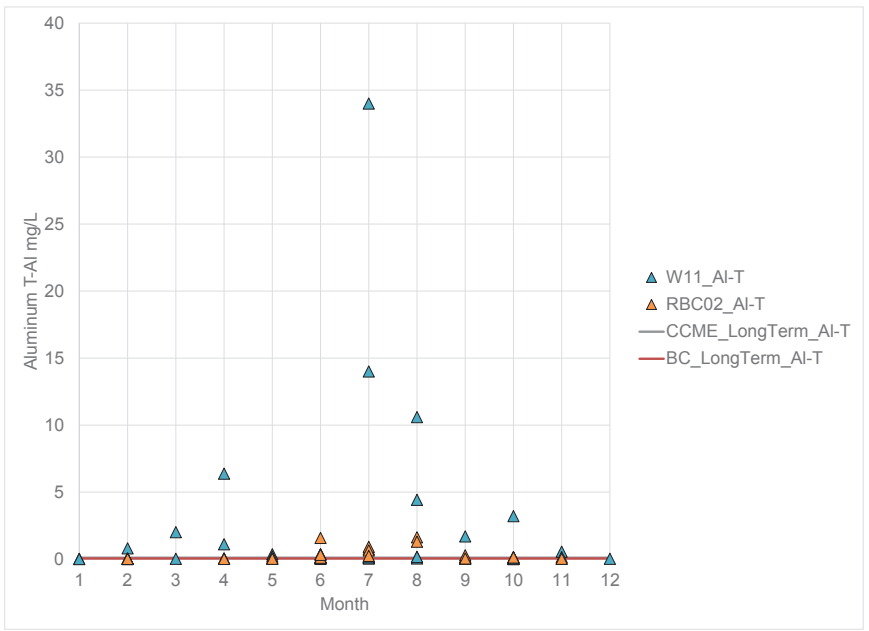
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

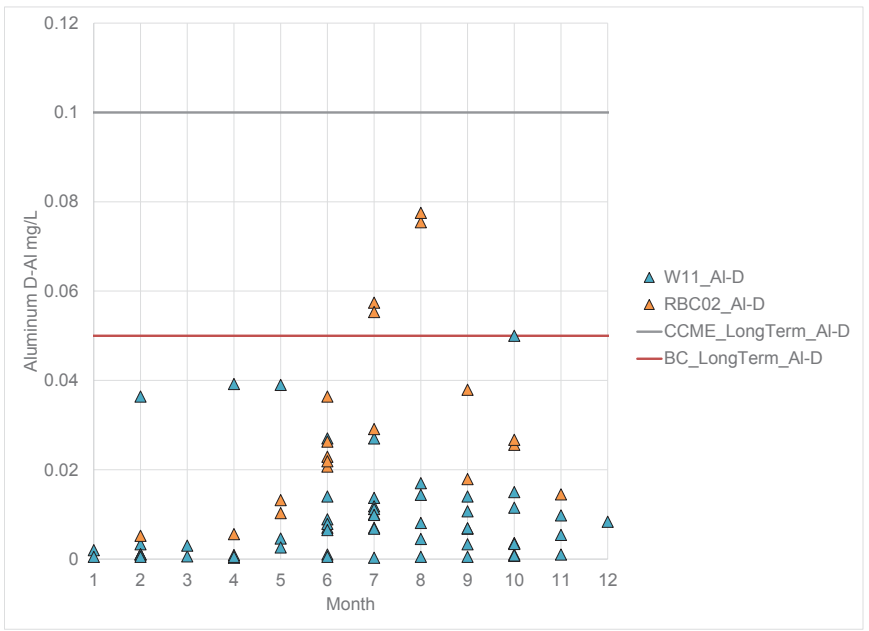


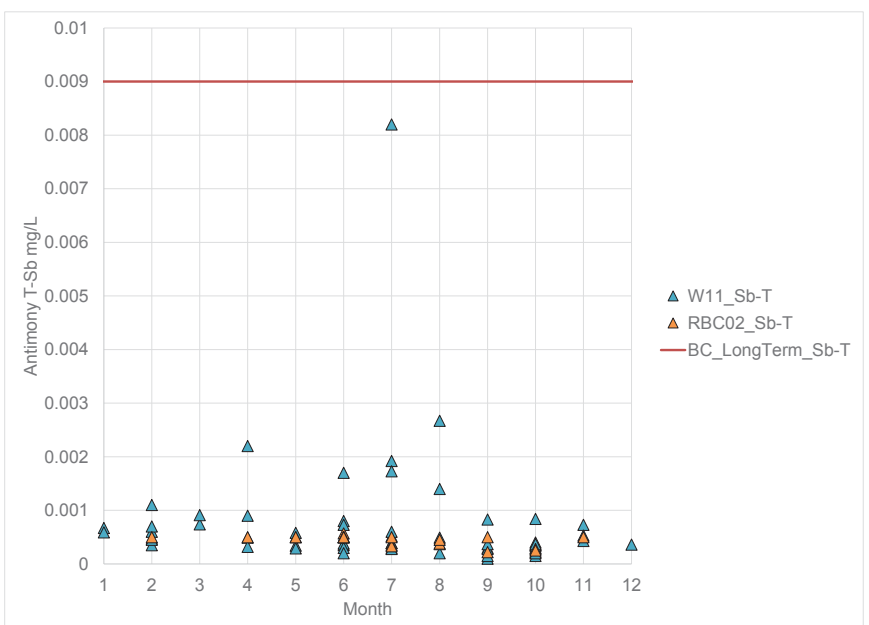


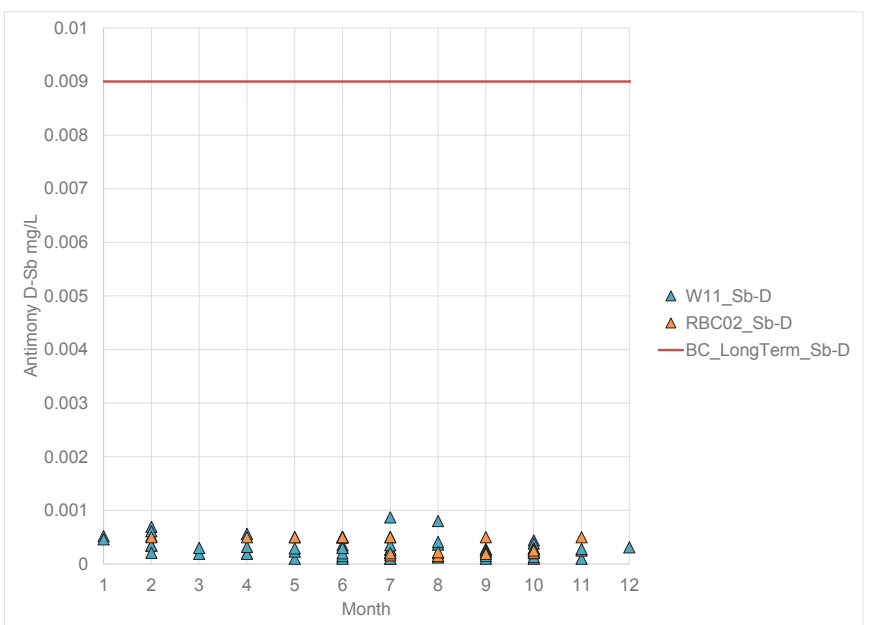






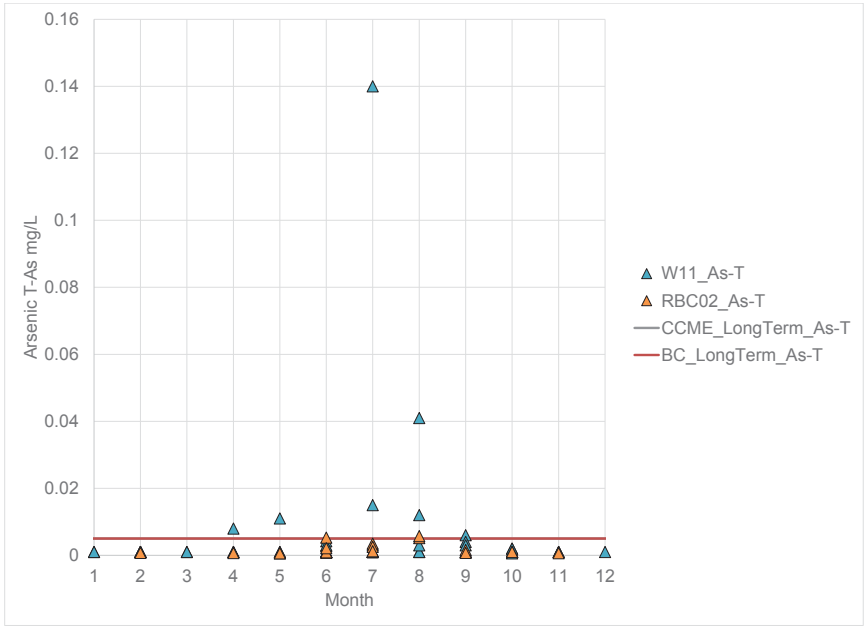


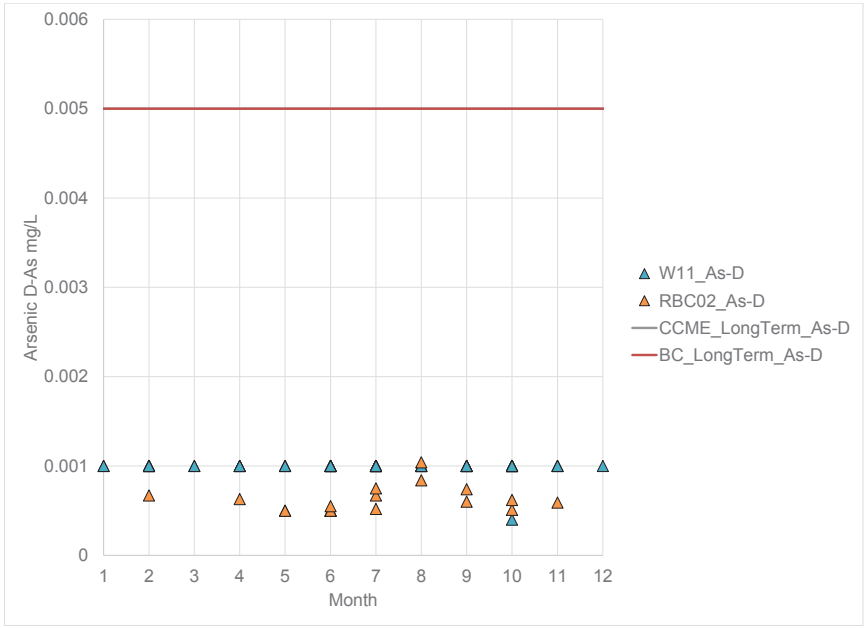


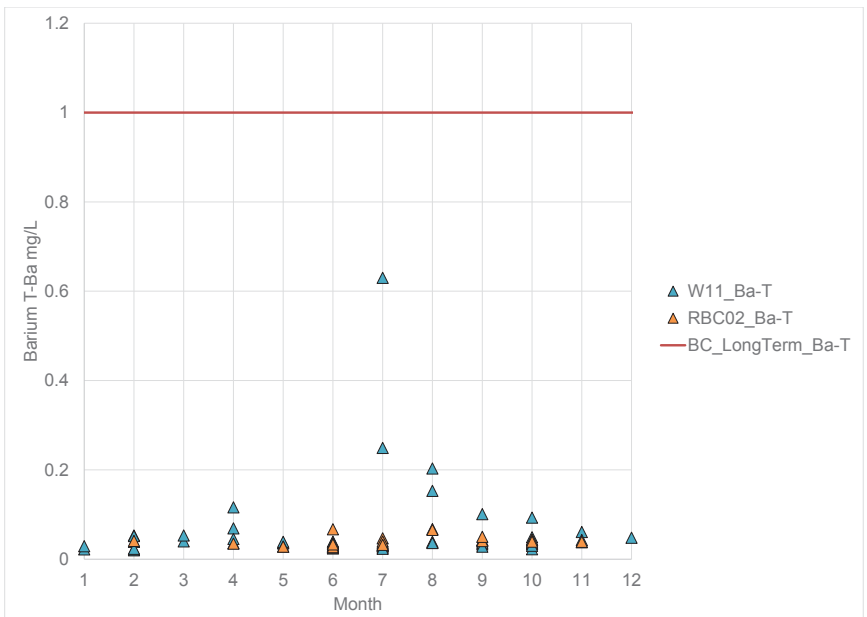


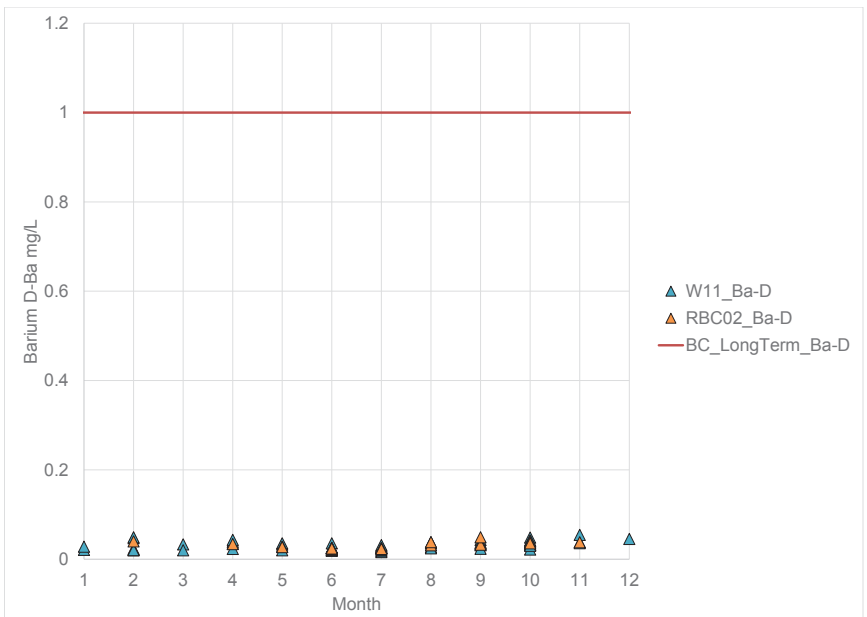
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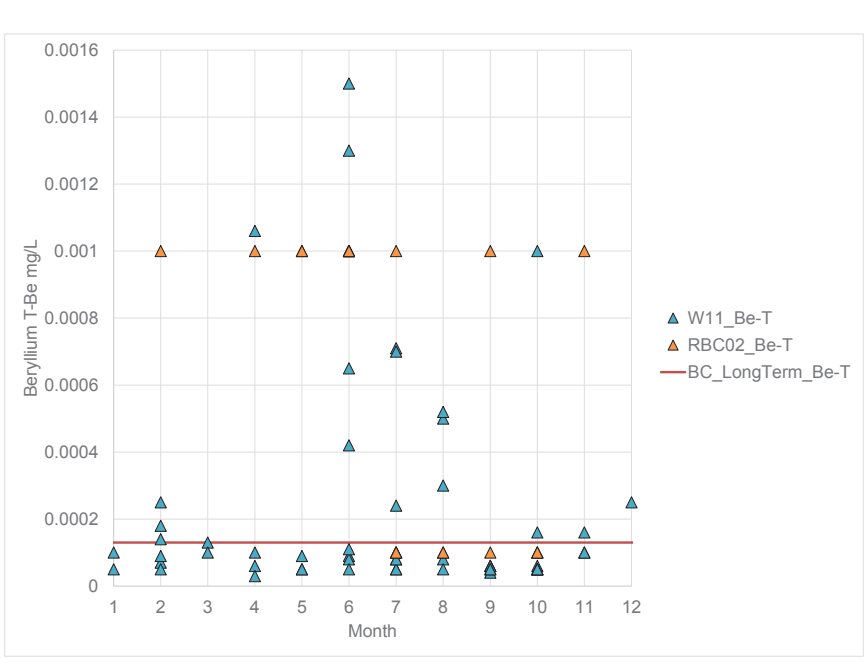
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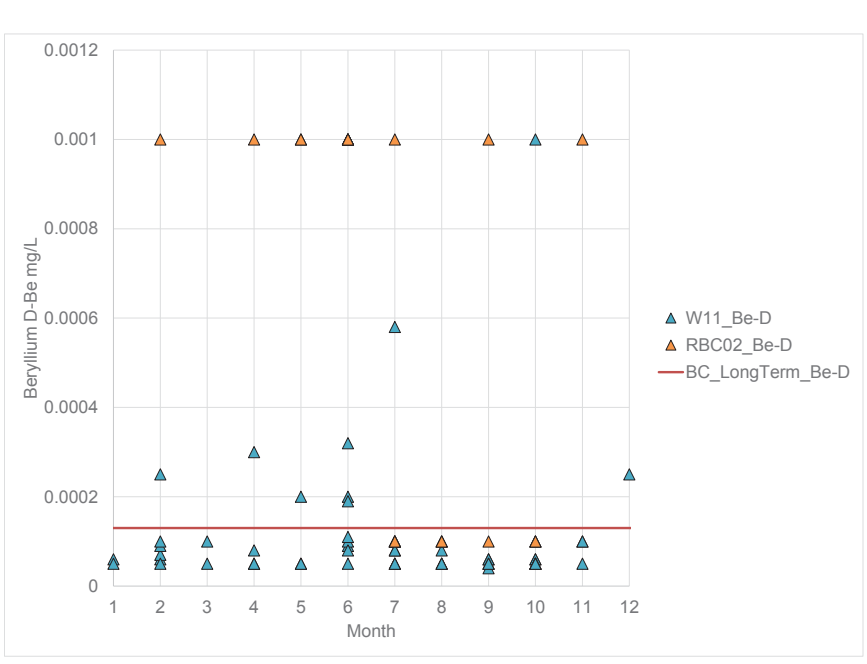


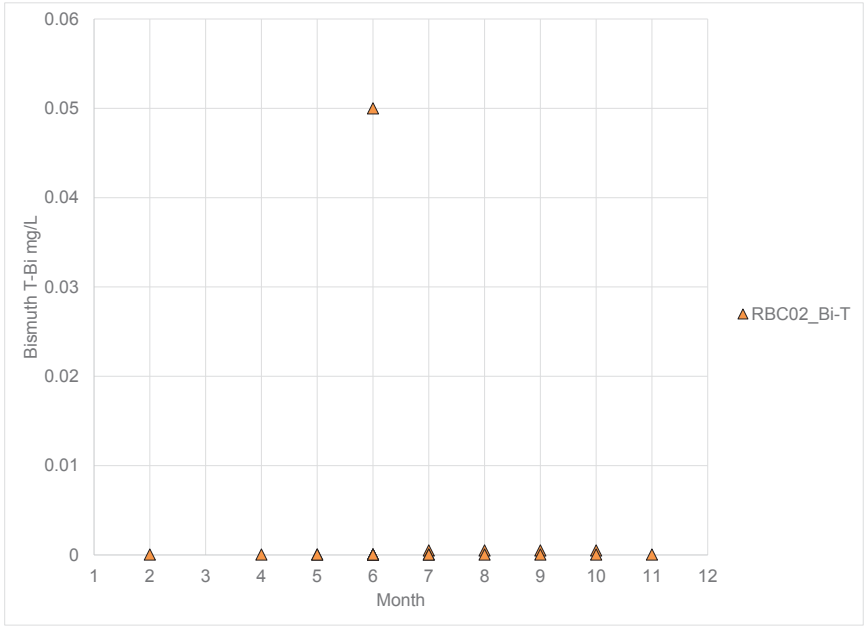


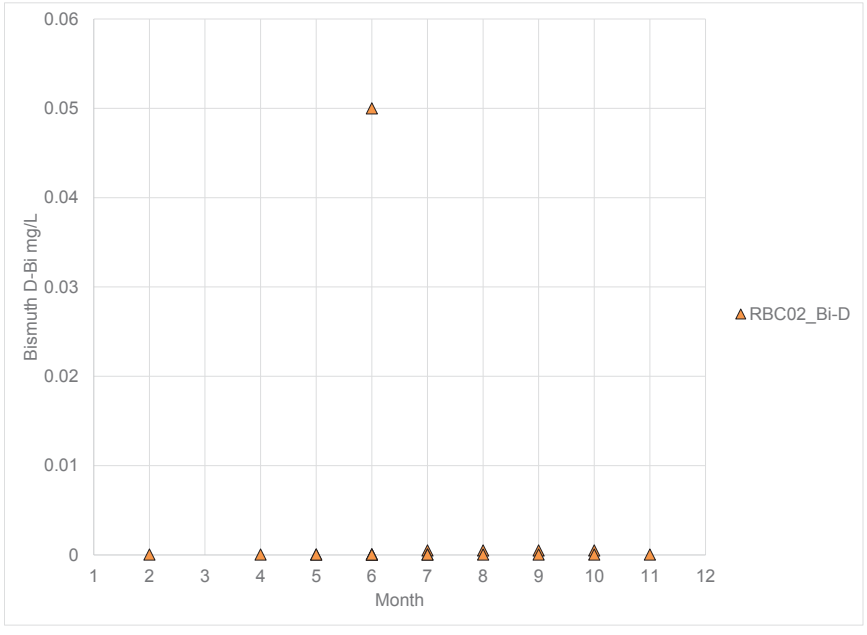






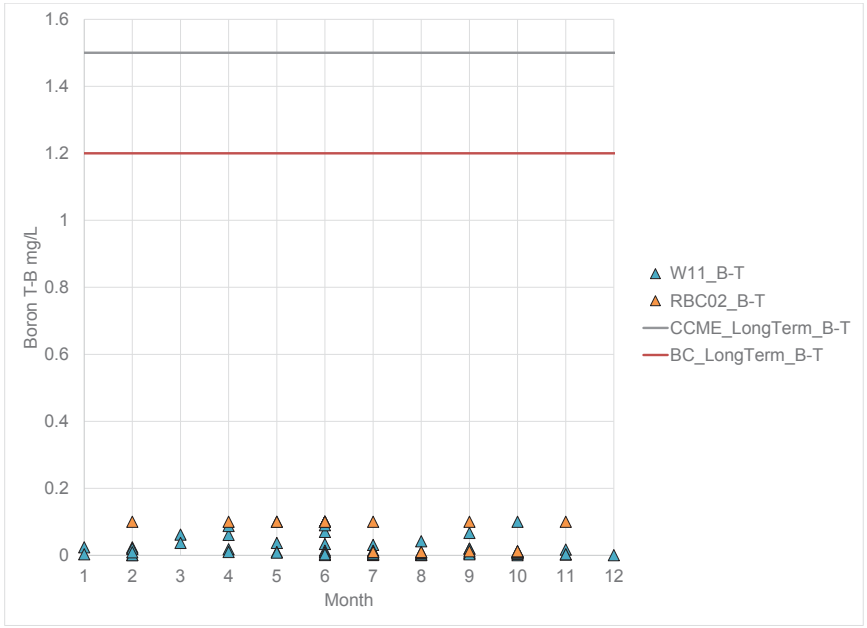


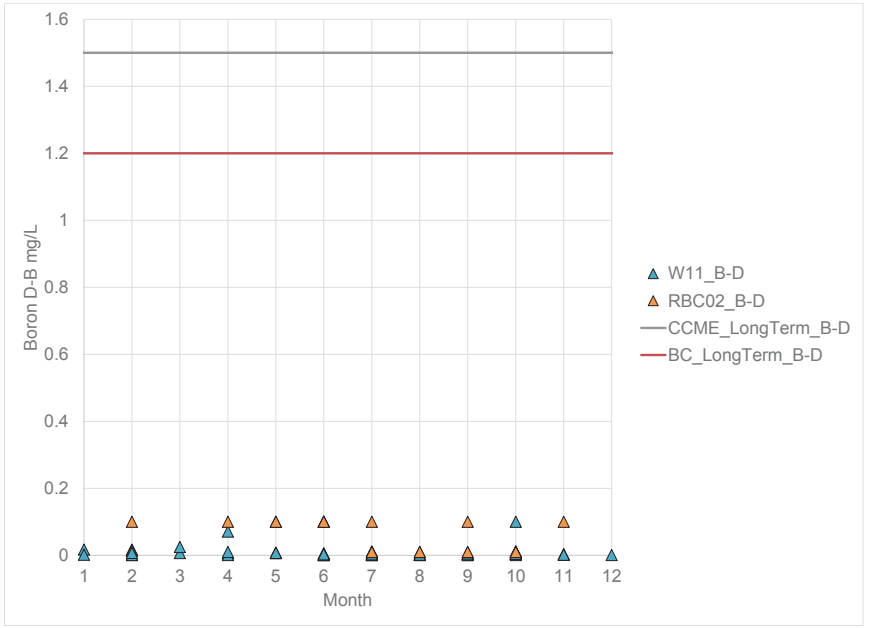


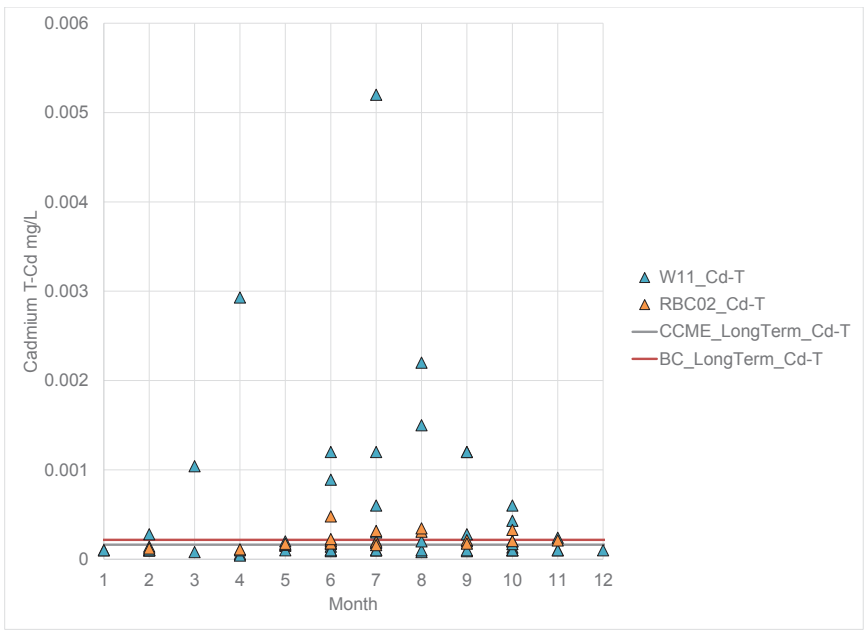


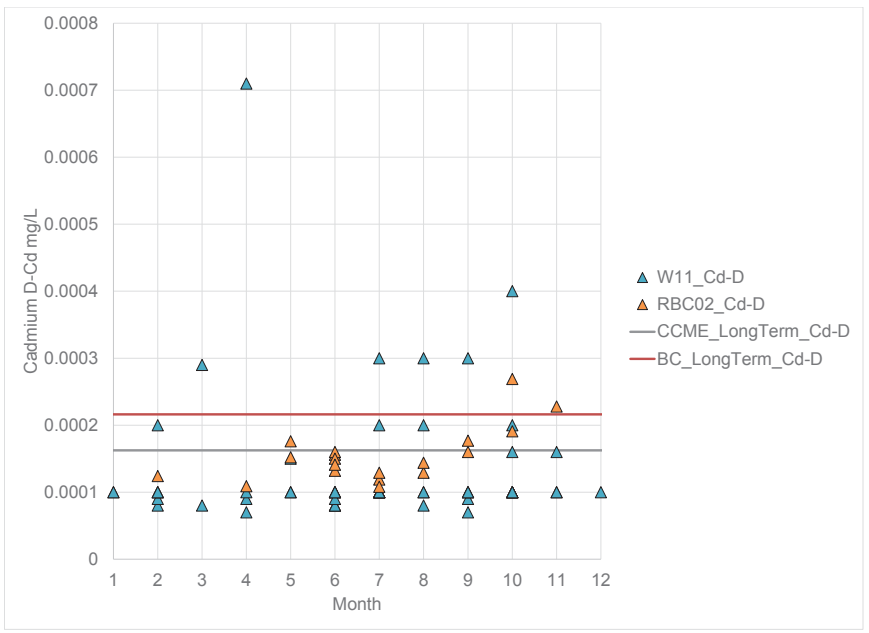
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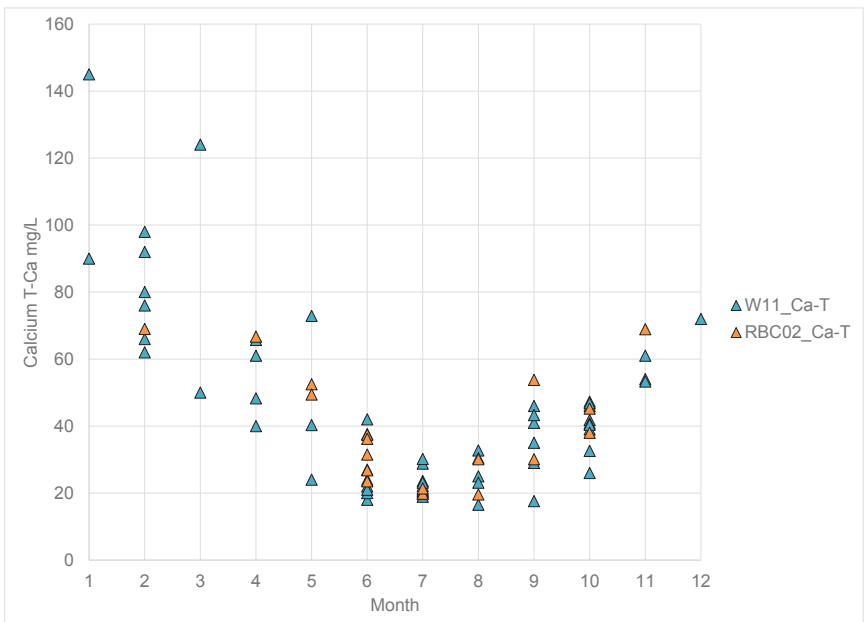
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

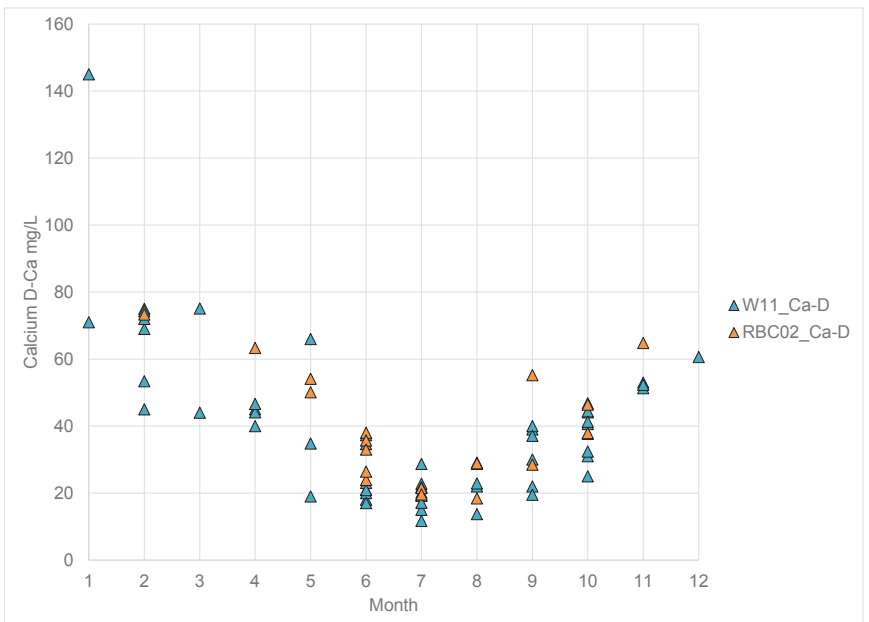


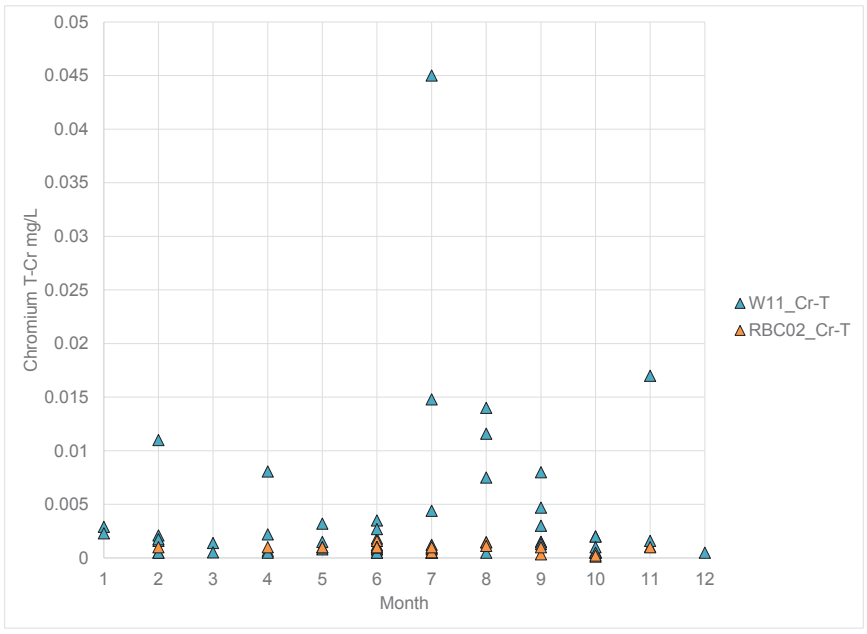


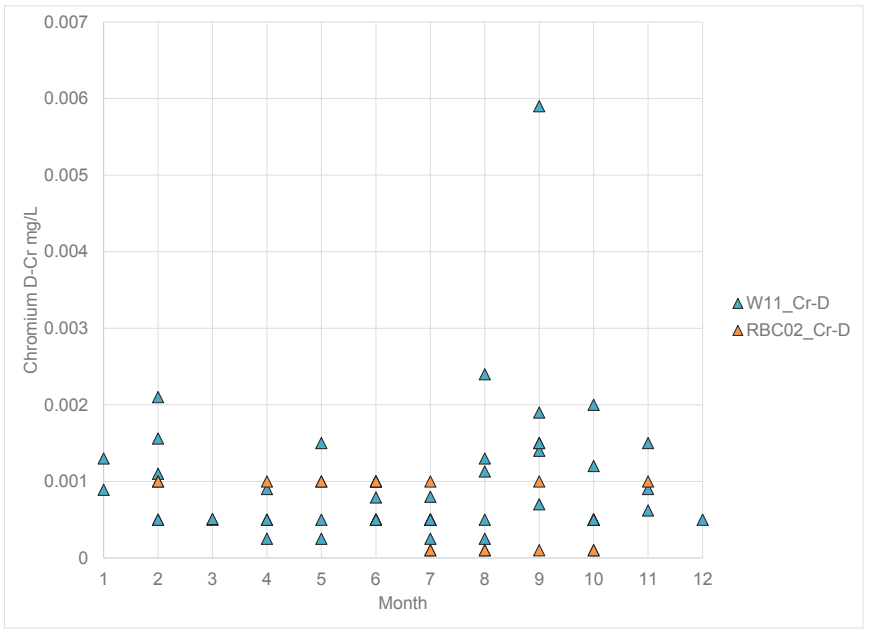






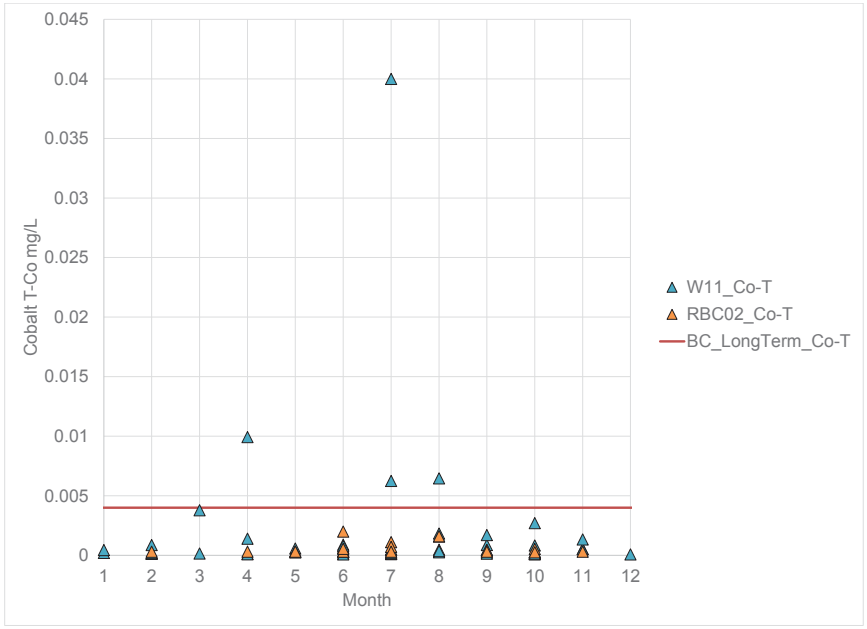


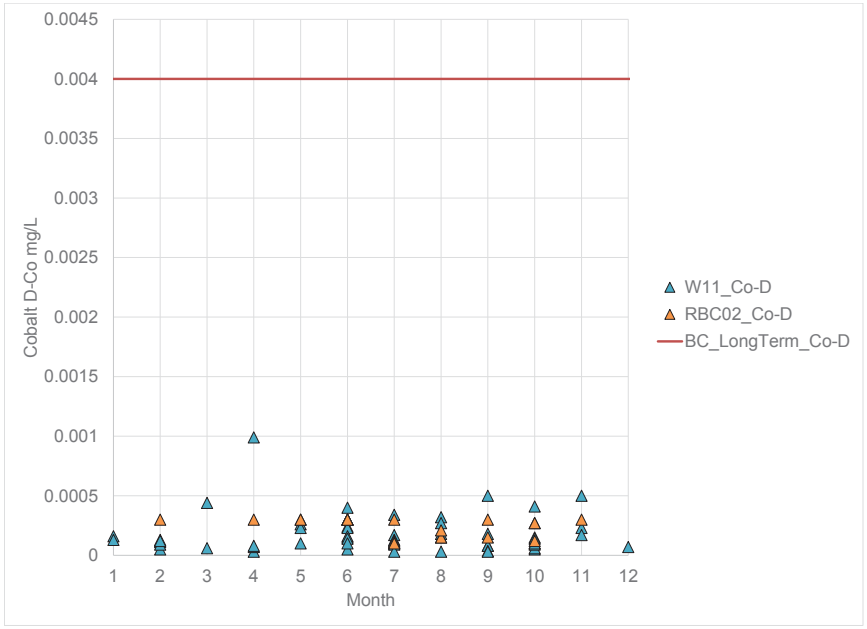


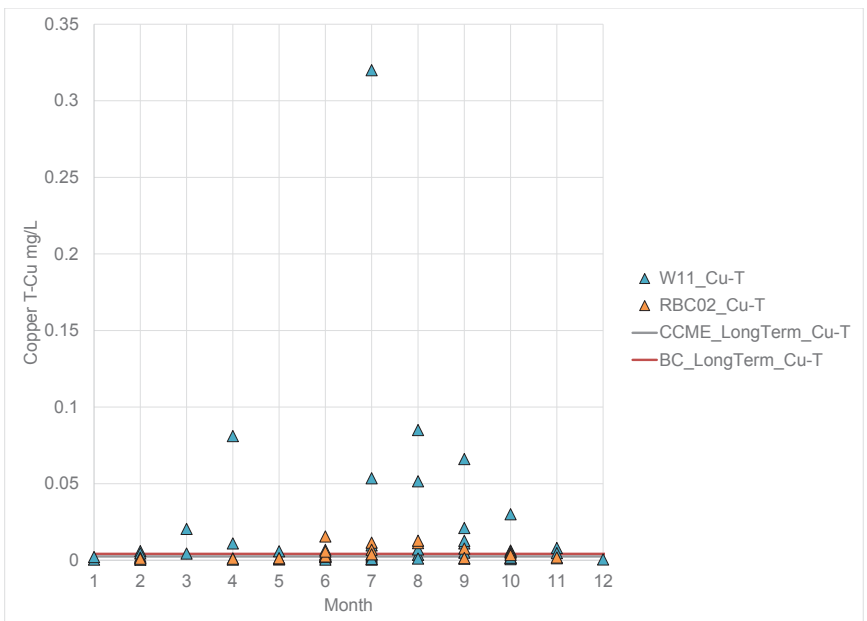


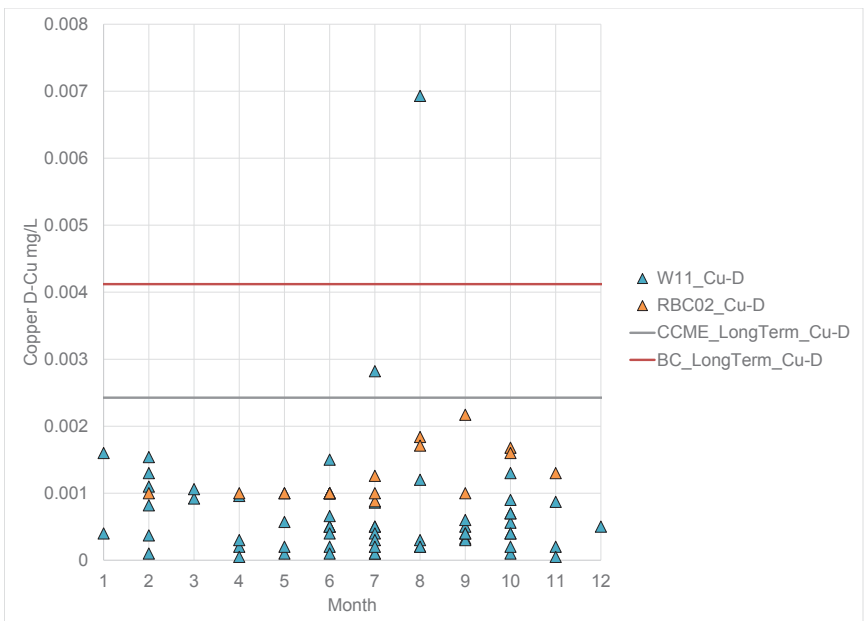
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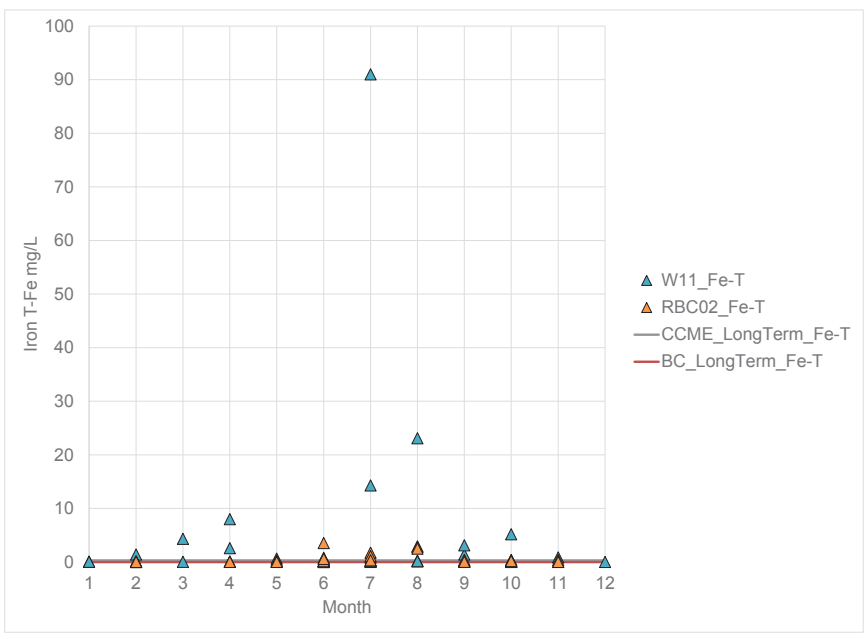
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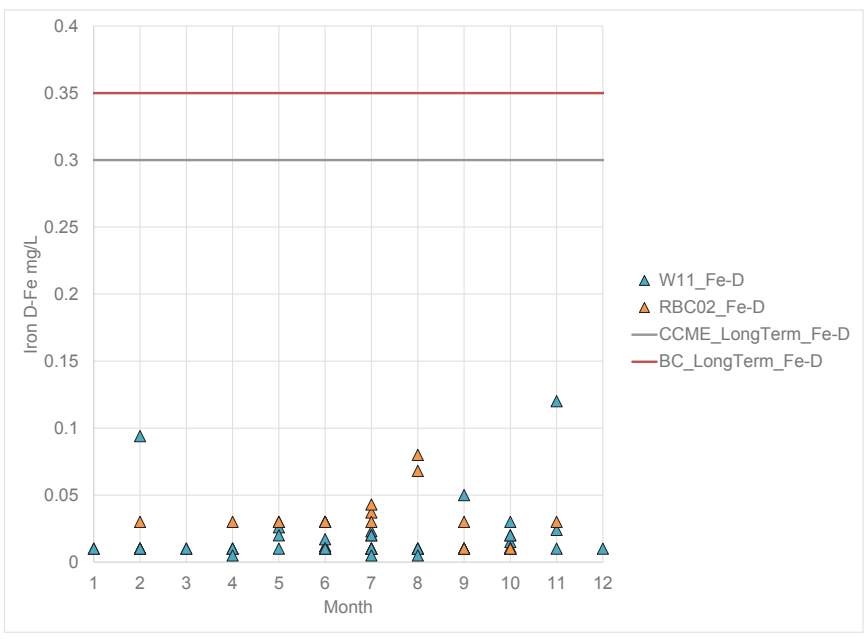


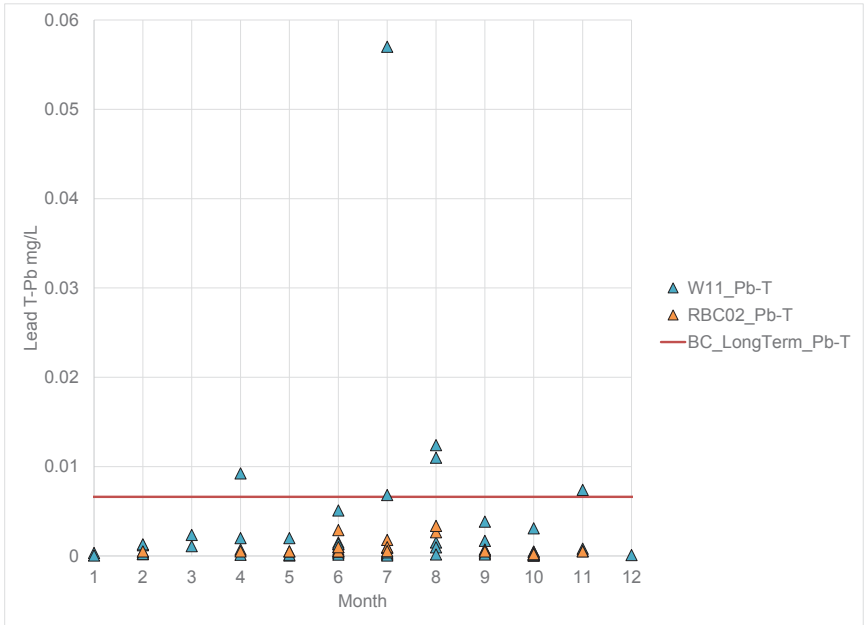


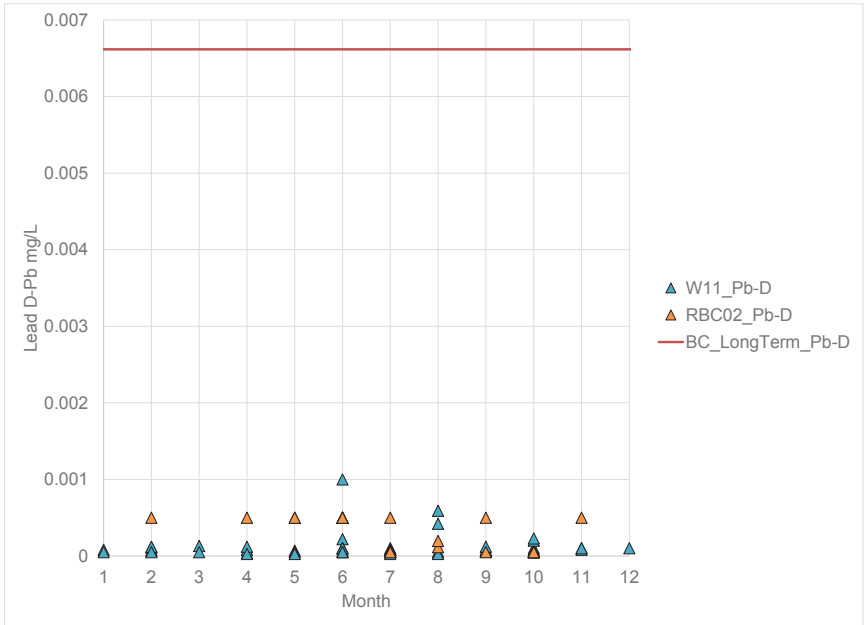






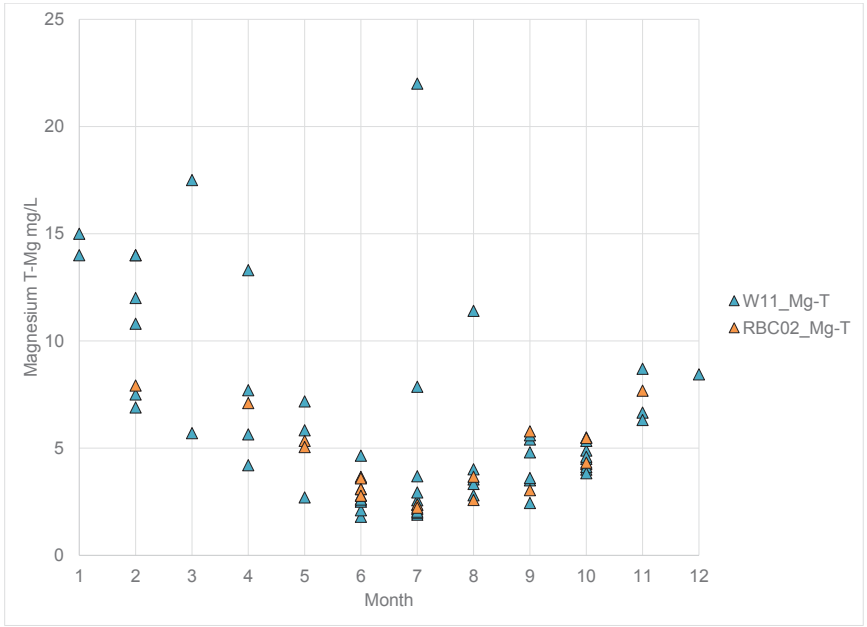


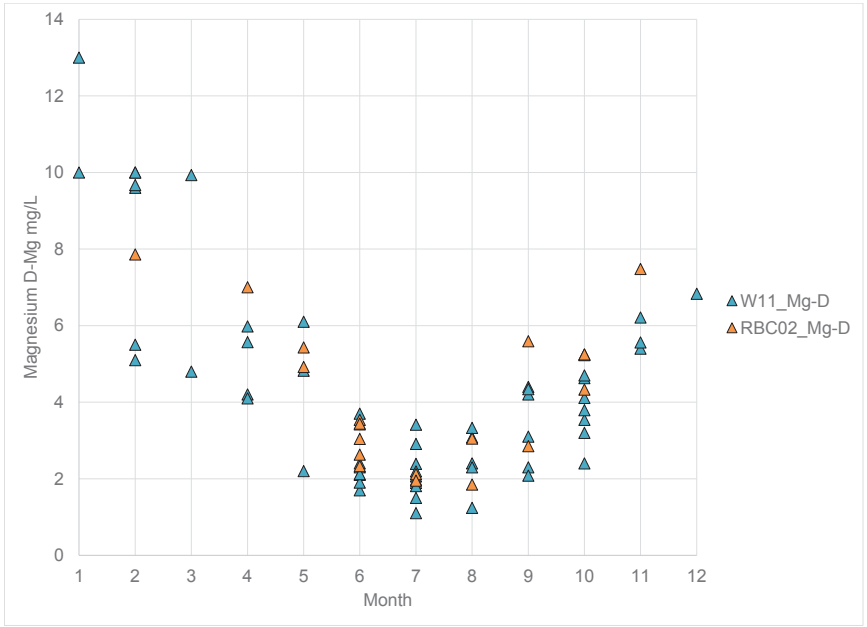


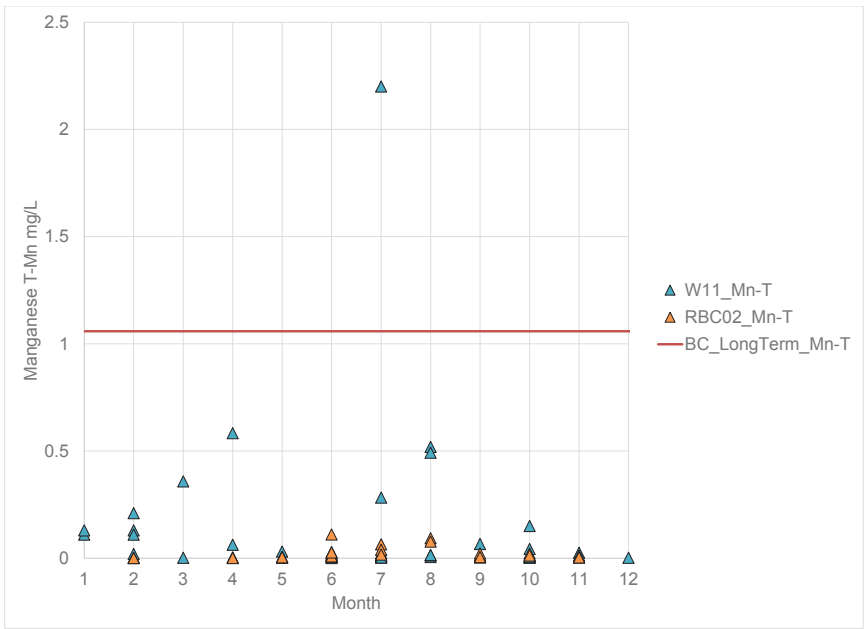


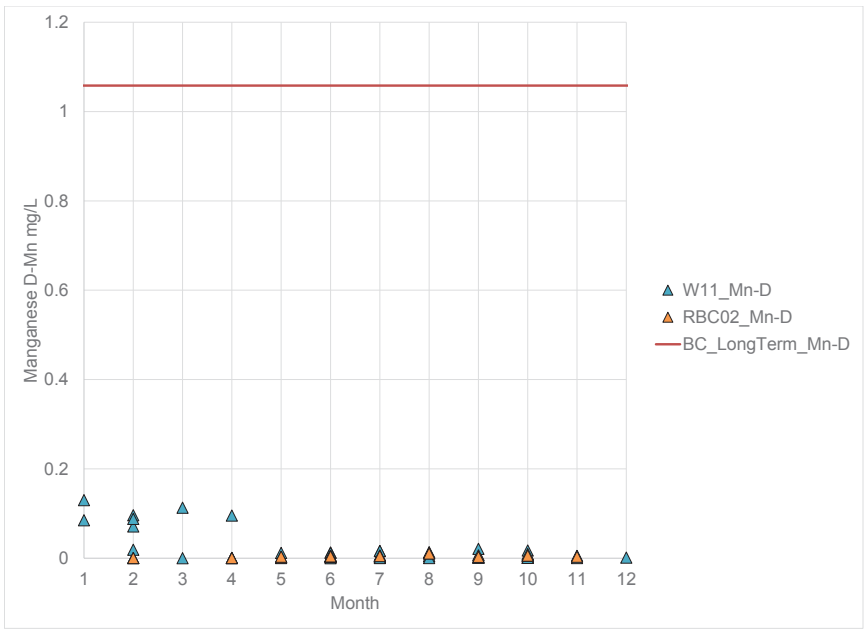
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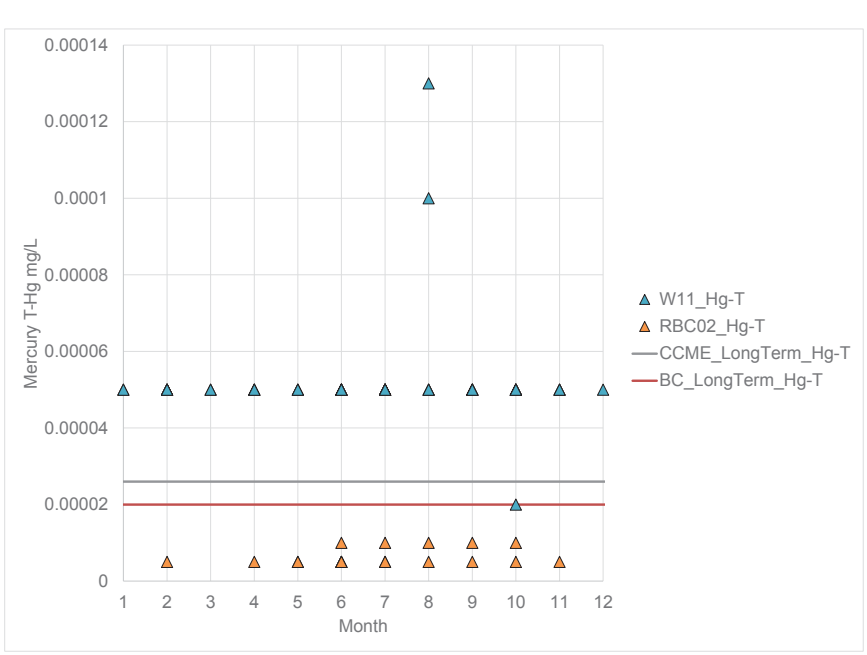
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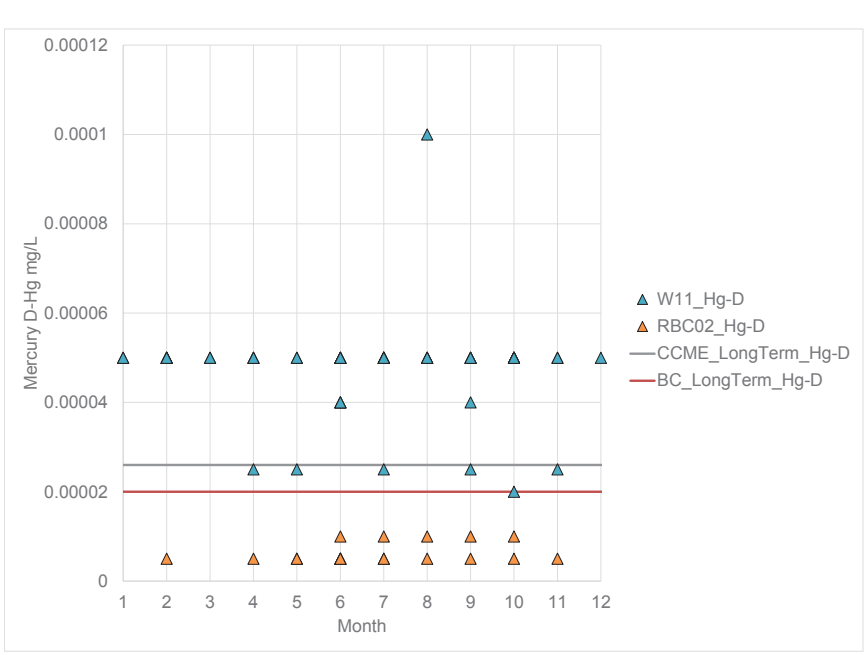


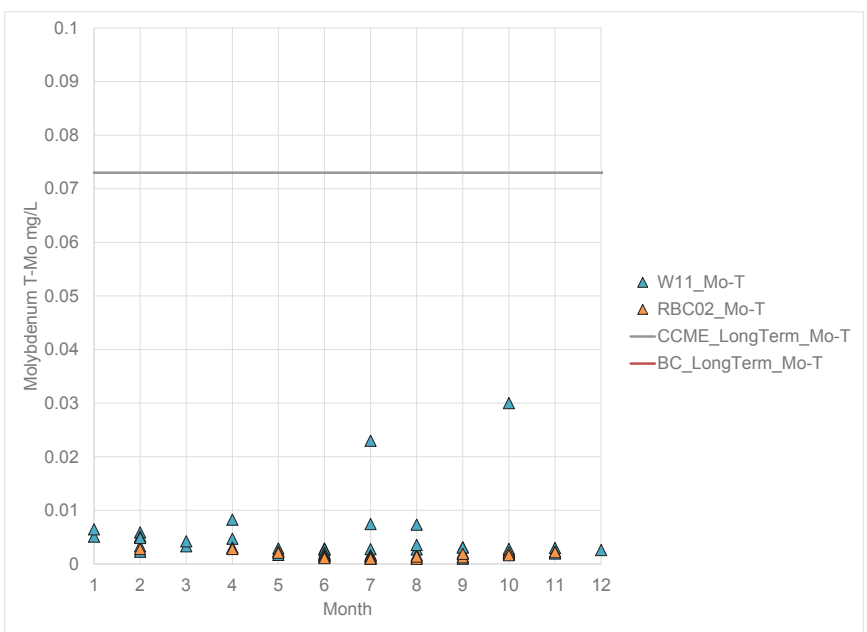


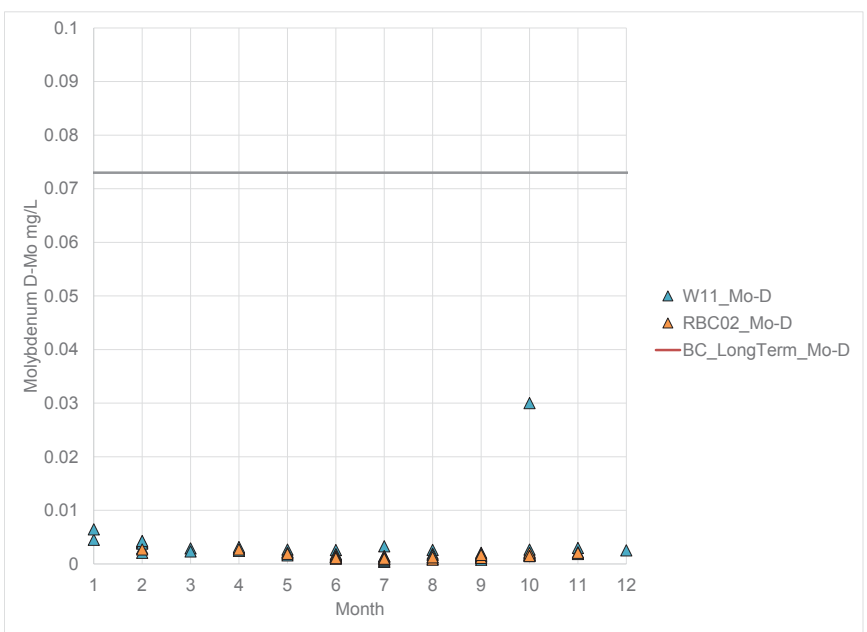






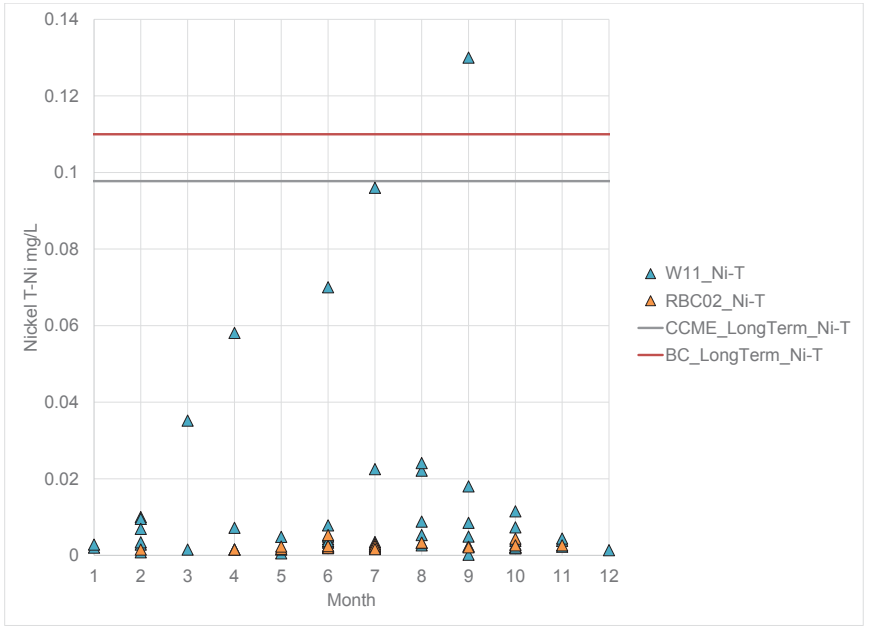


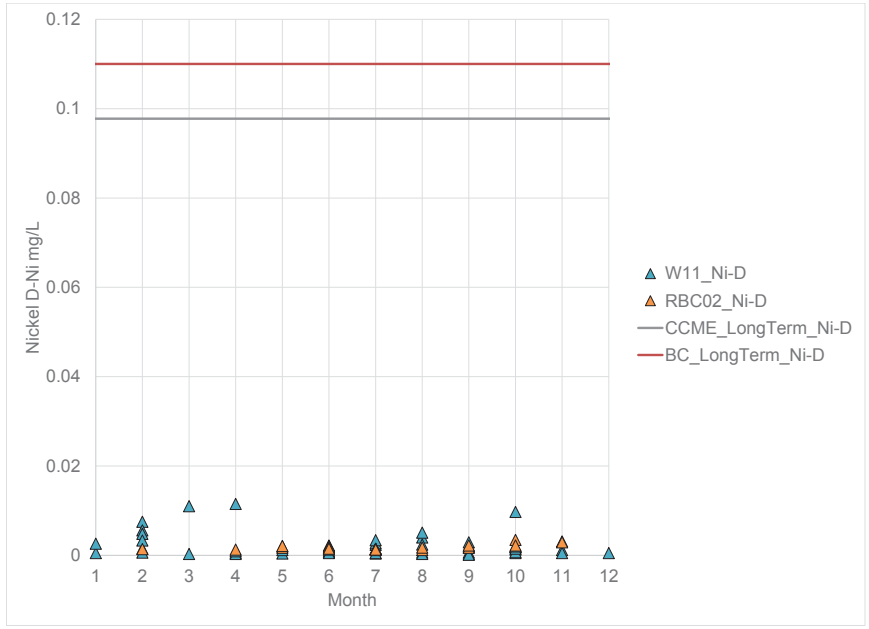


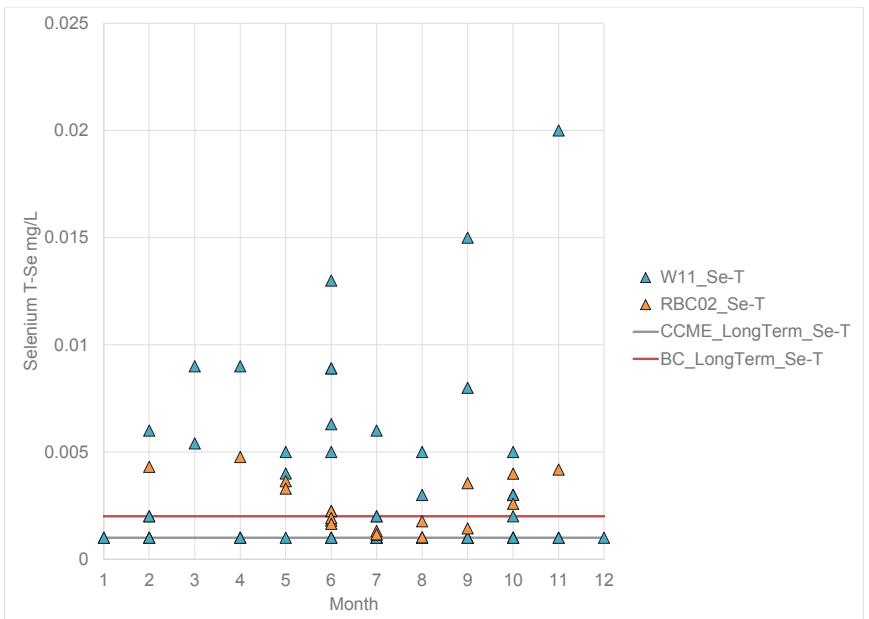


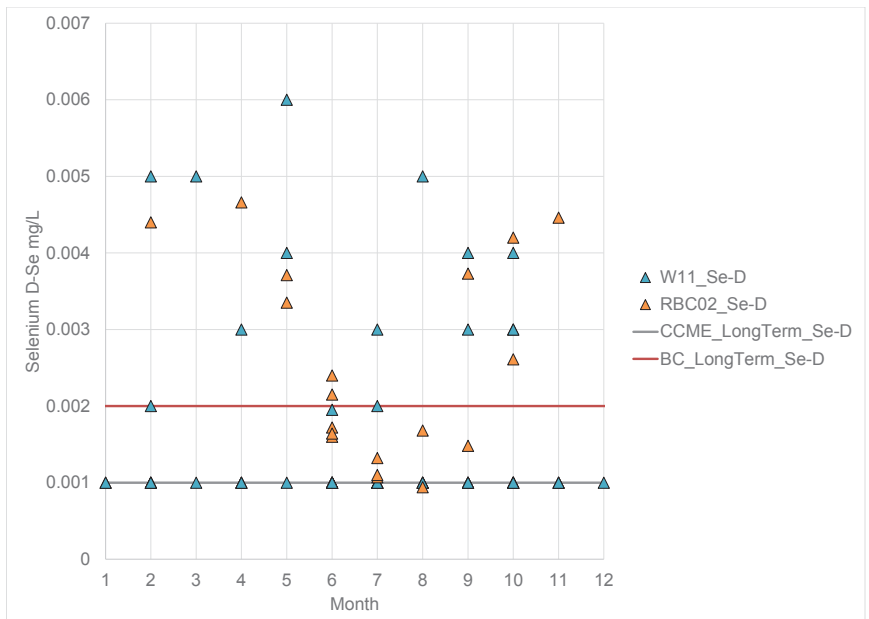
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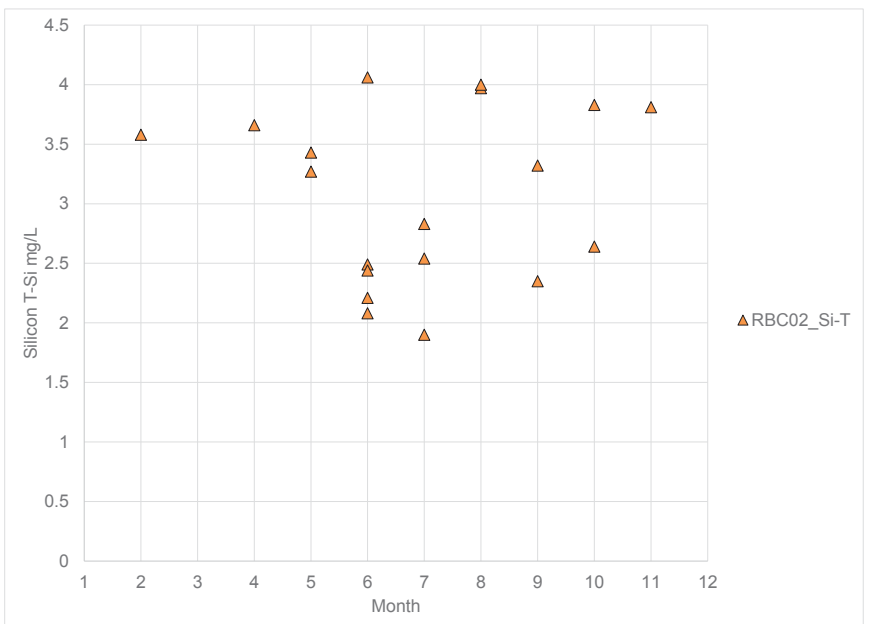
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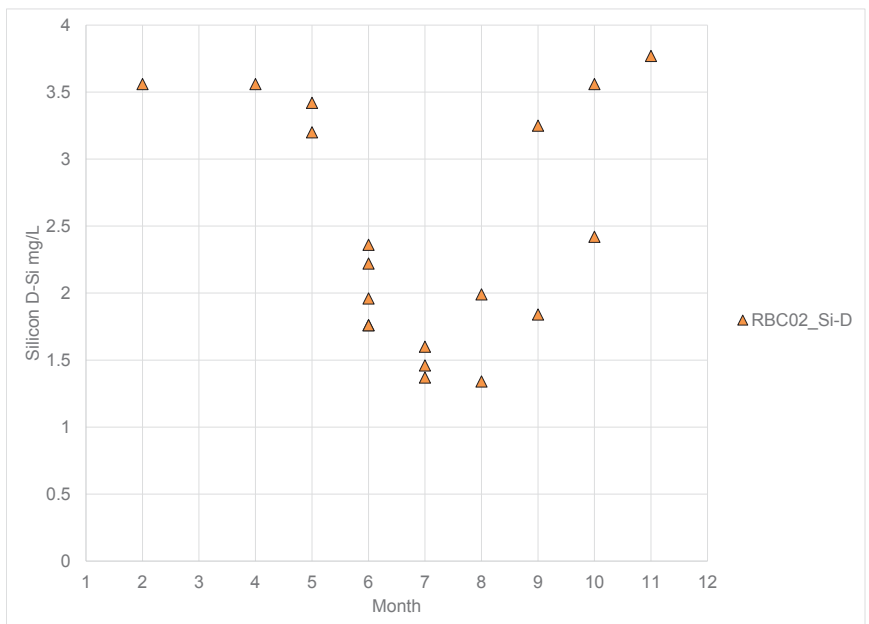


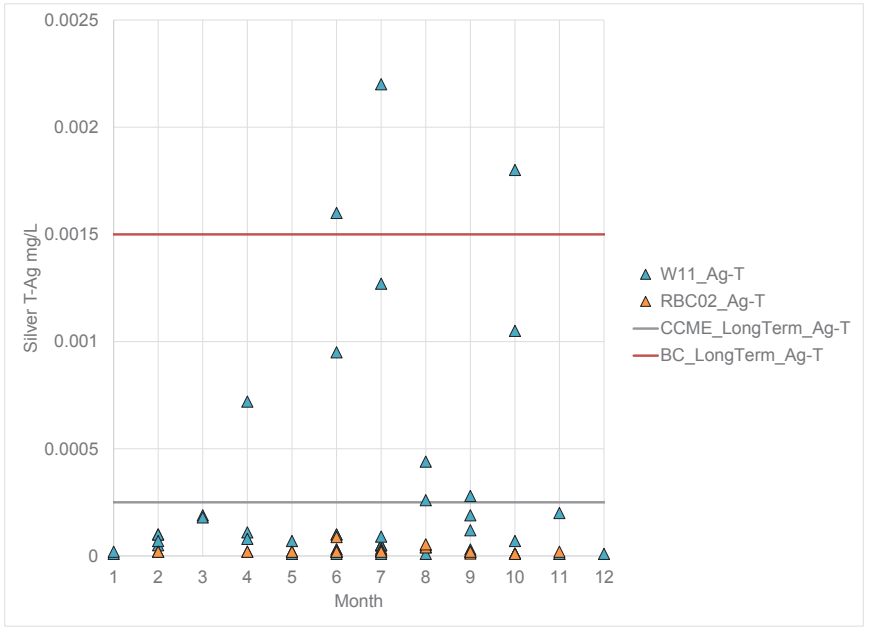


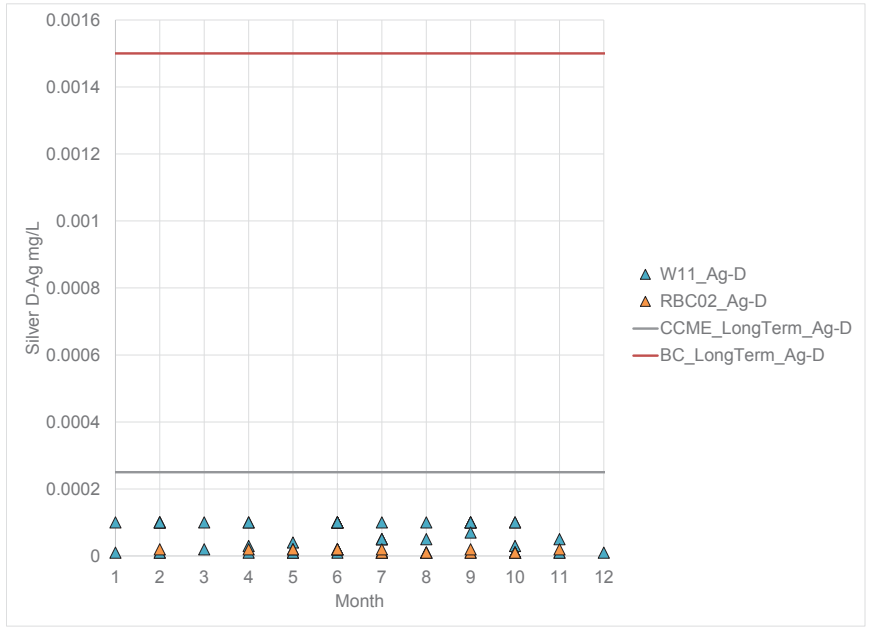




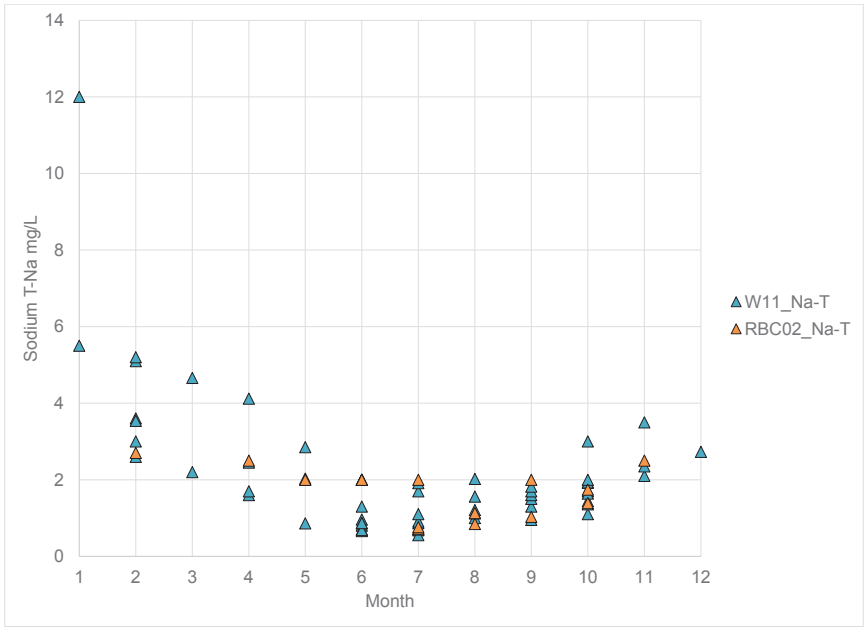


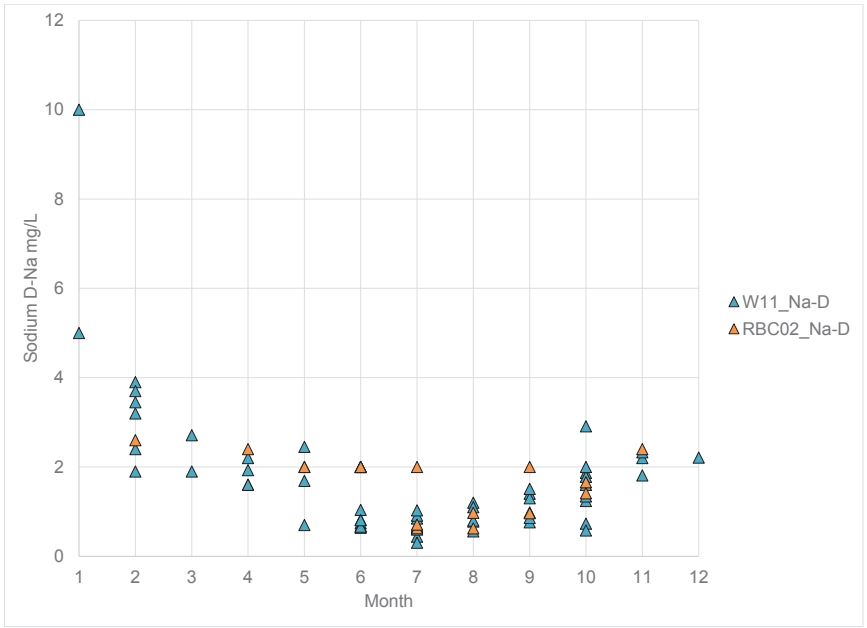


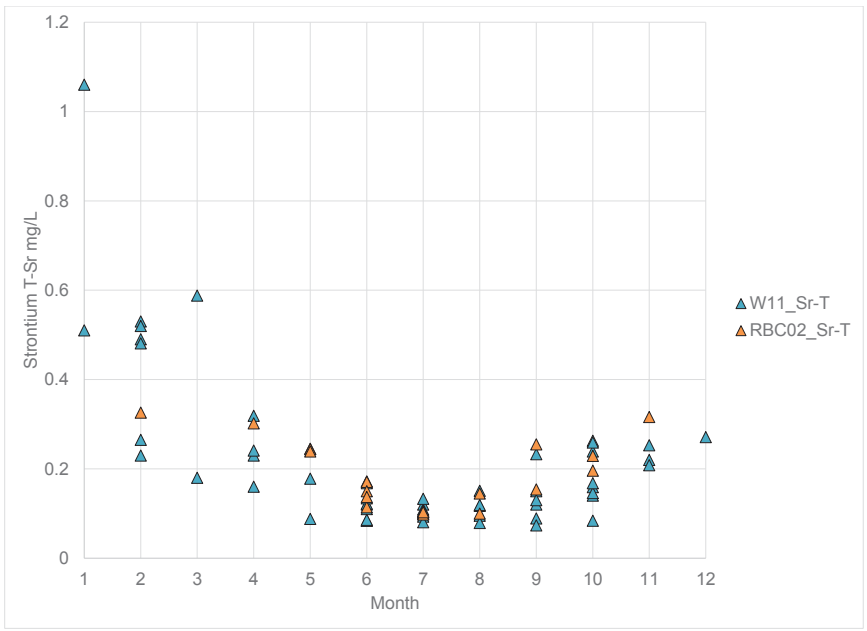


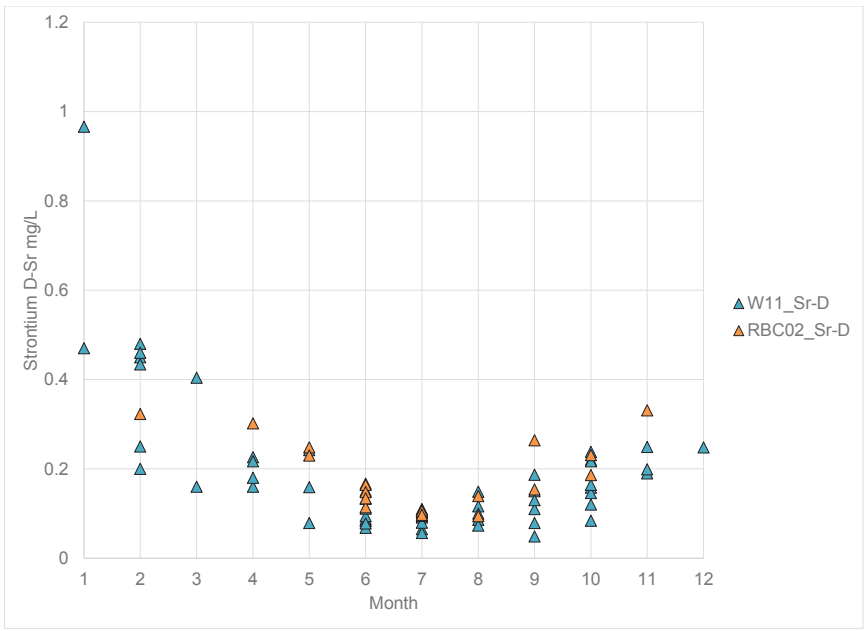


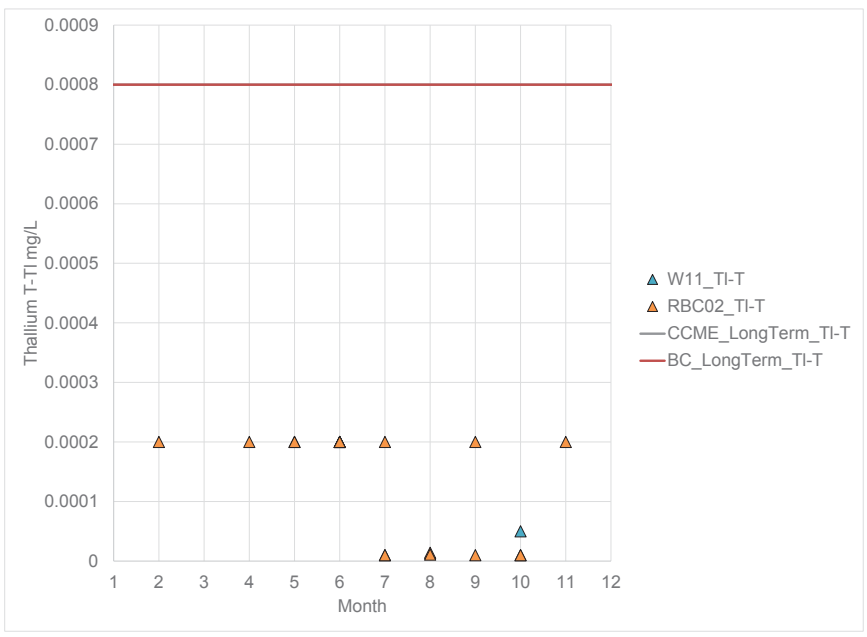
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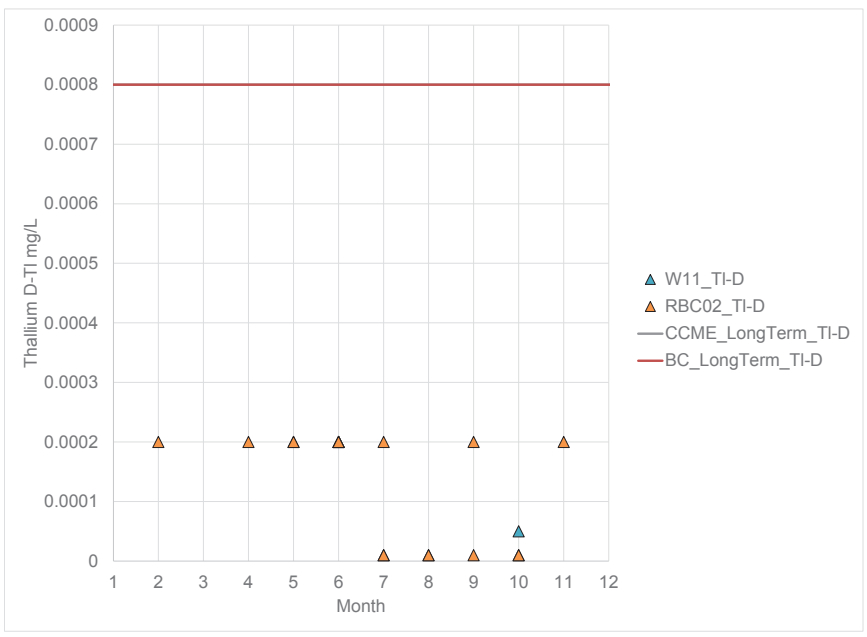


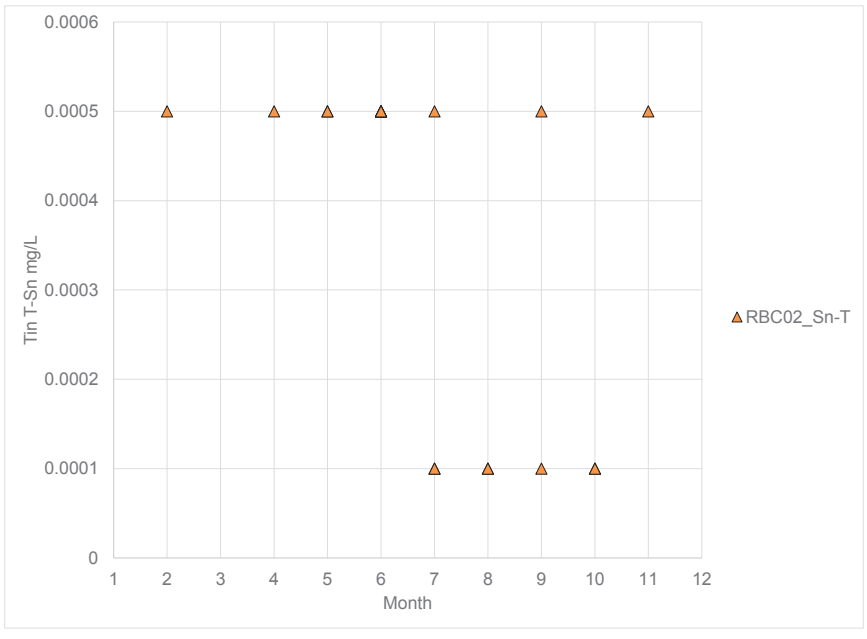


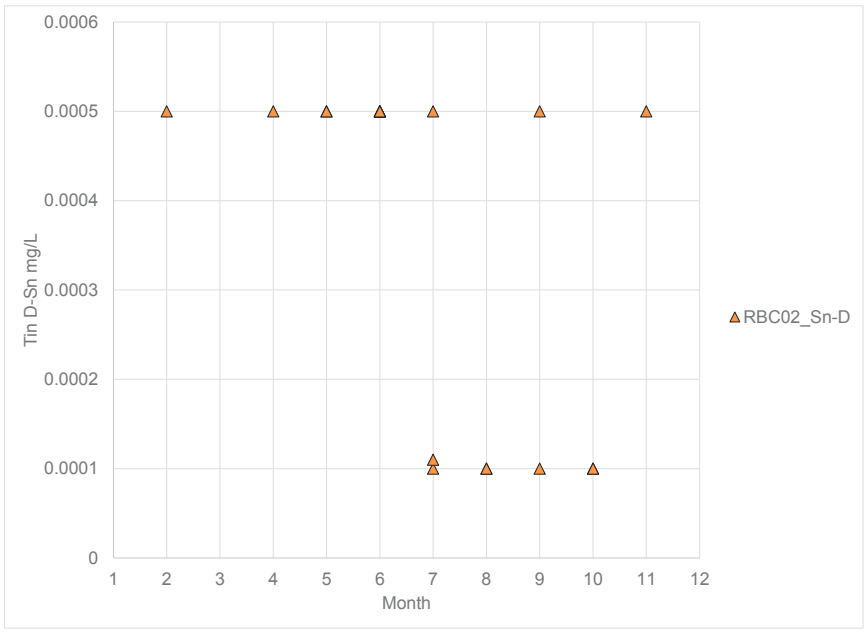






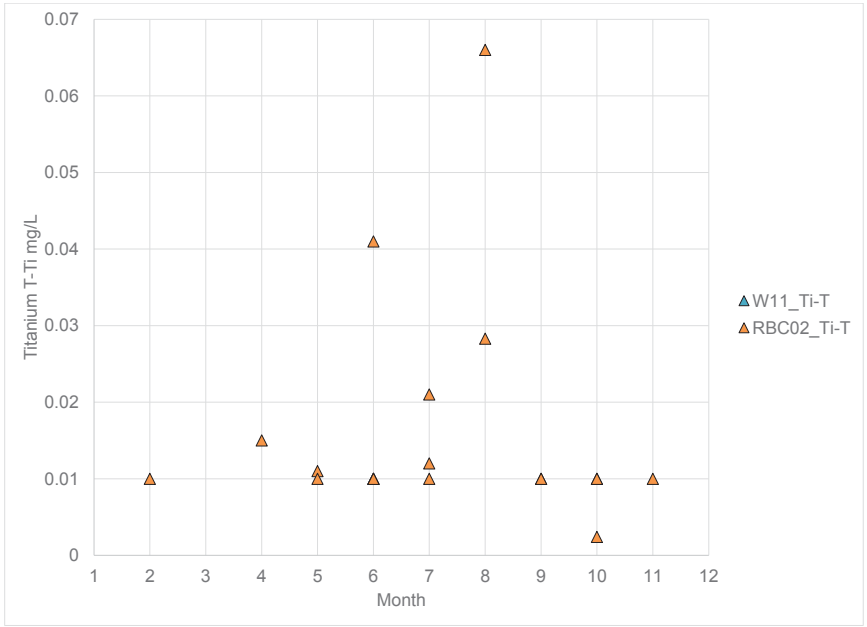


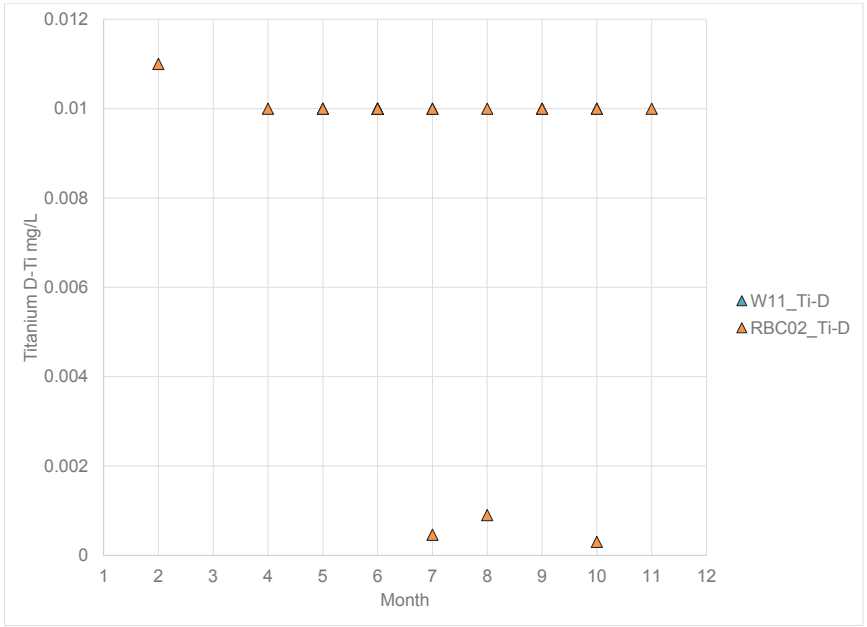


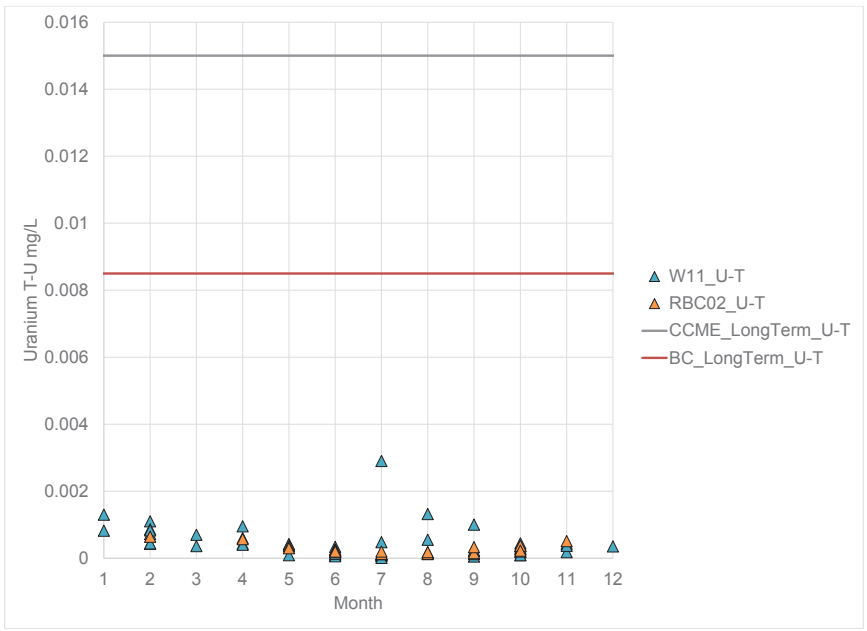


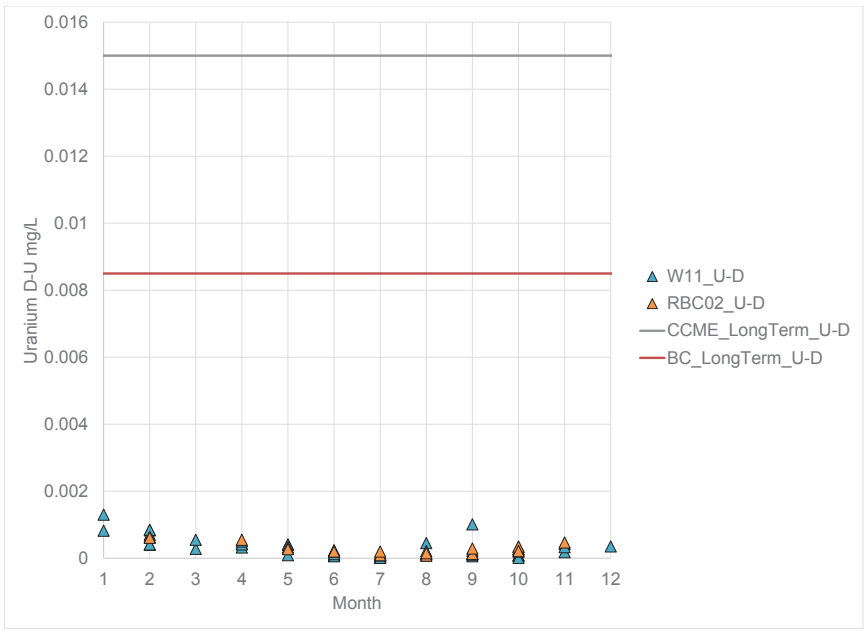
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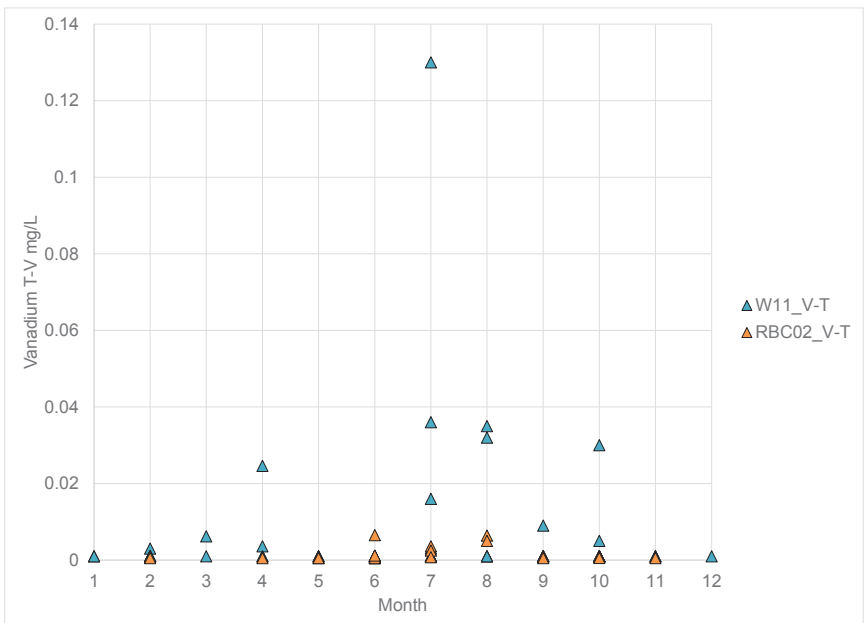
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

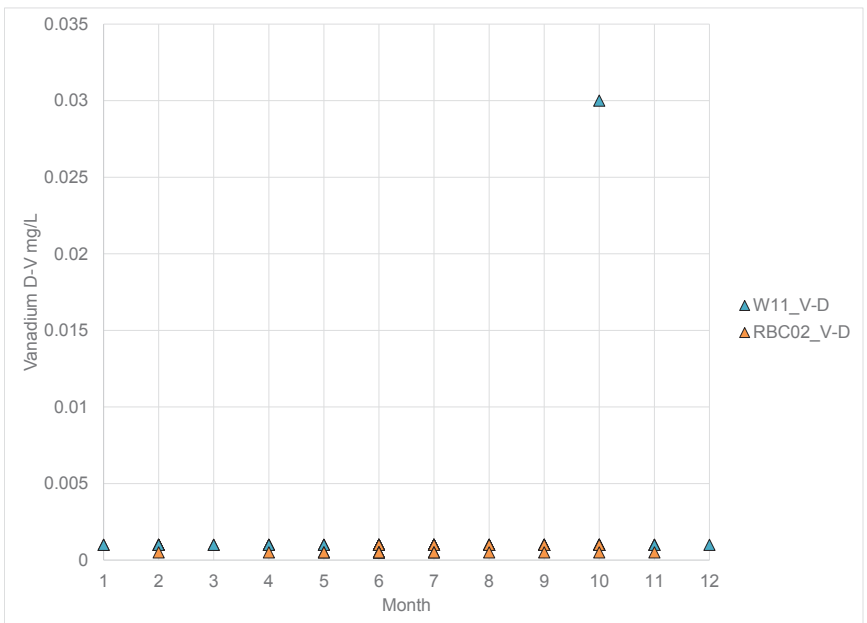


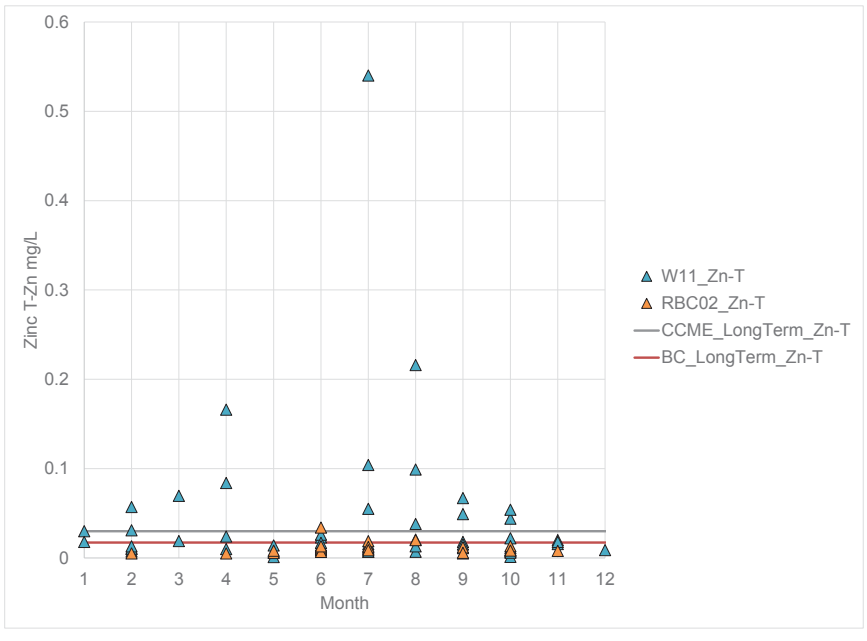


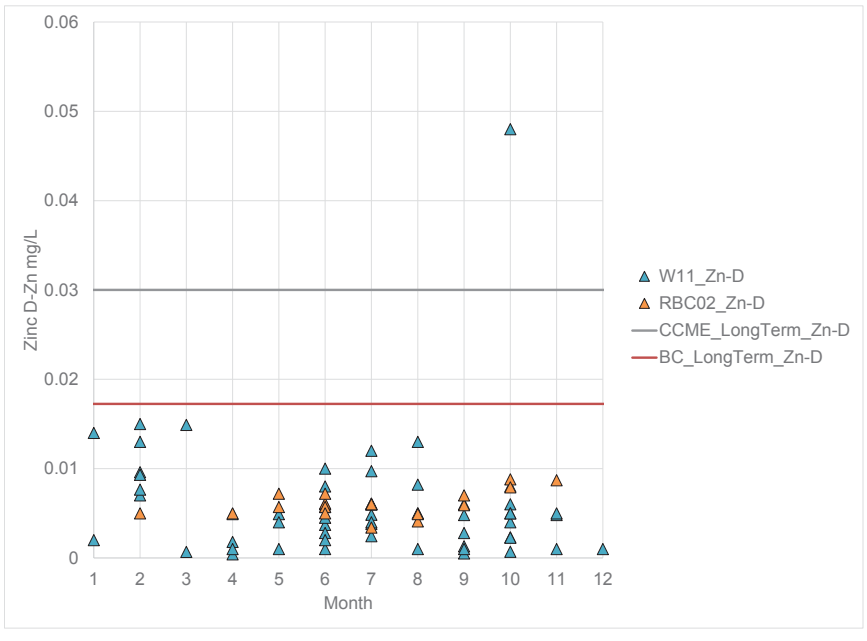








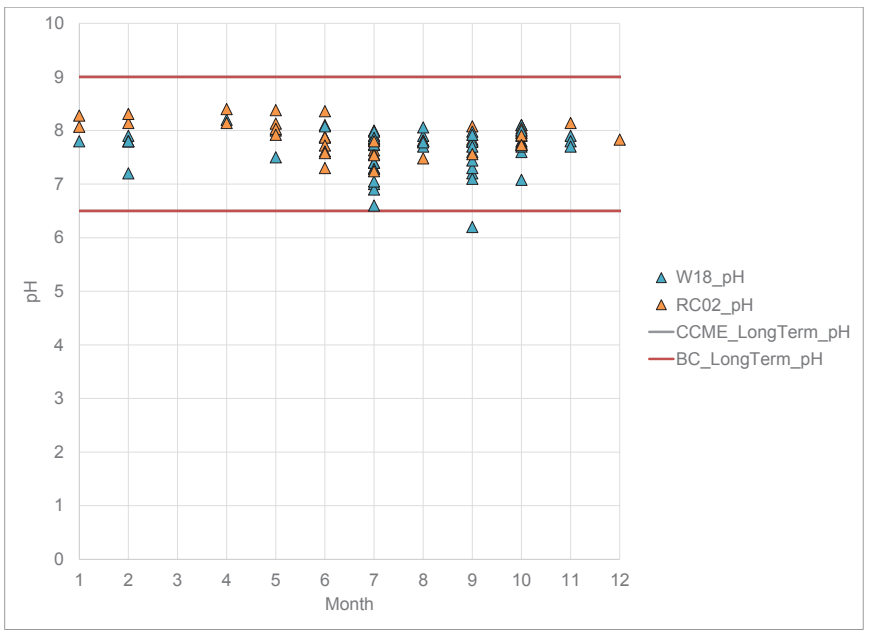


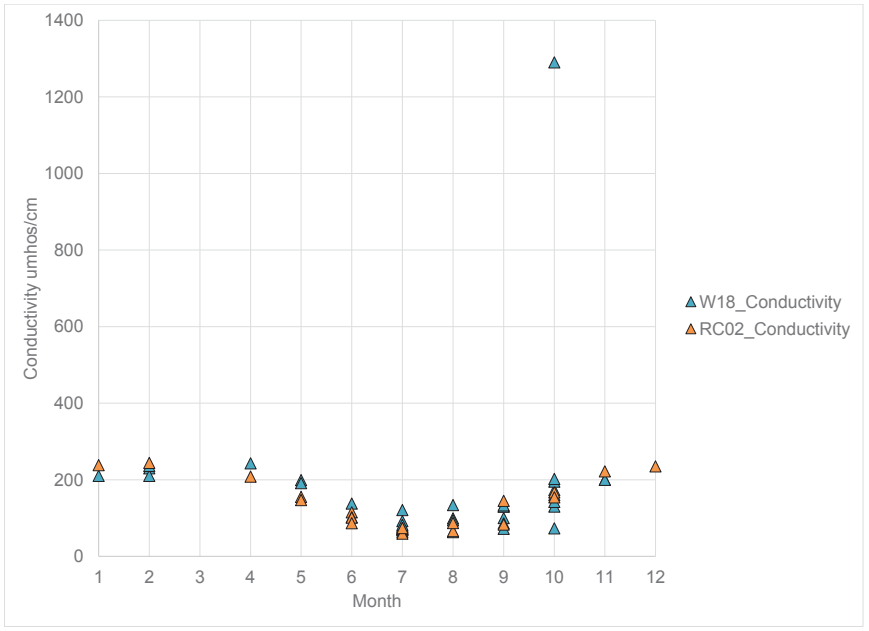


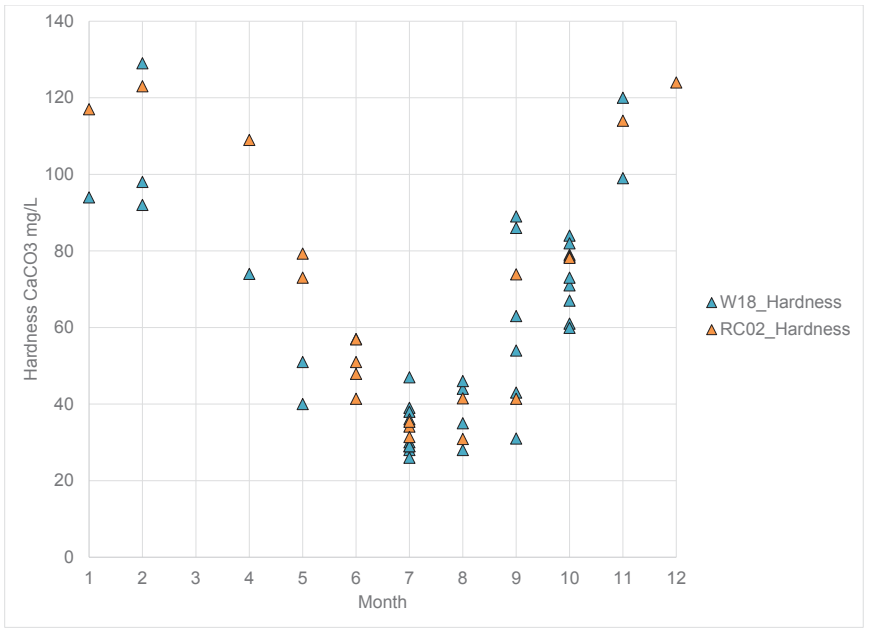
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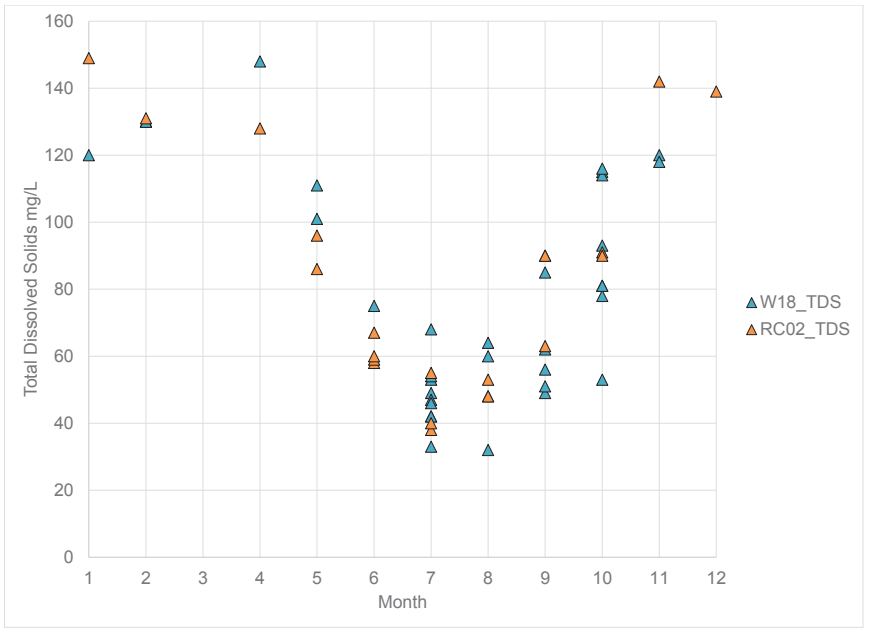
Roosevelt Creek

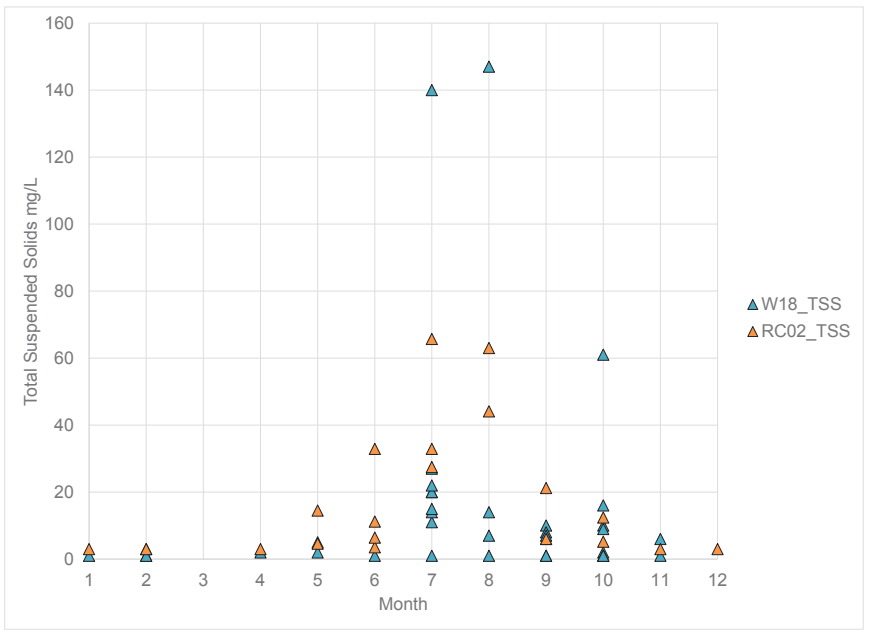
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

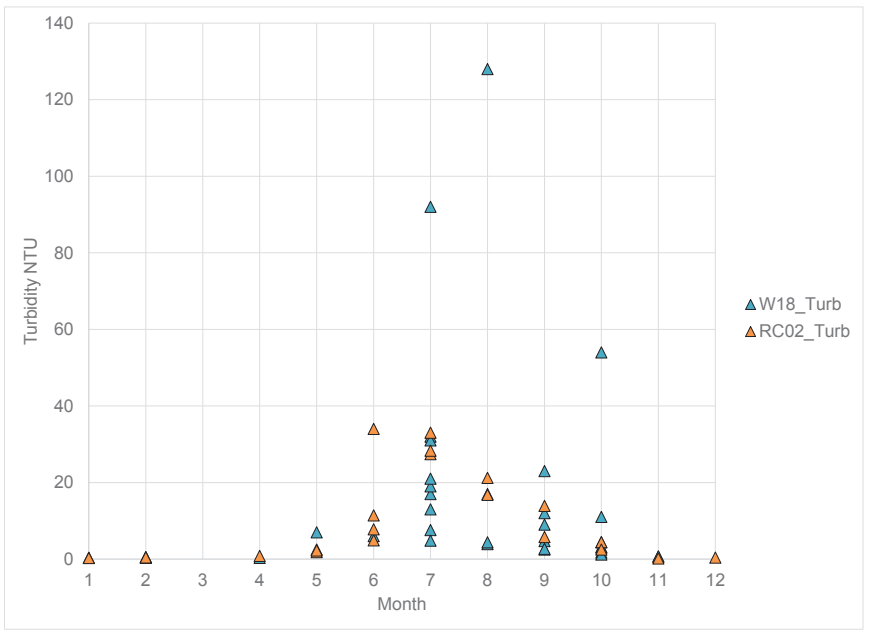


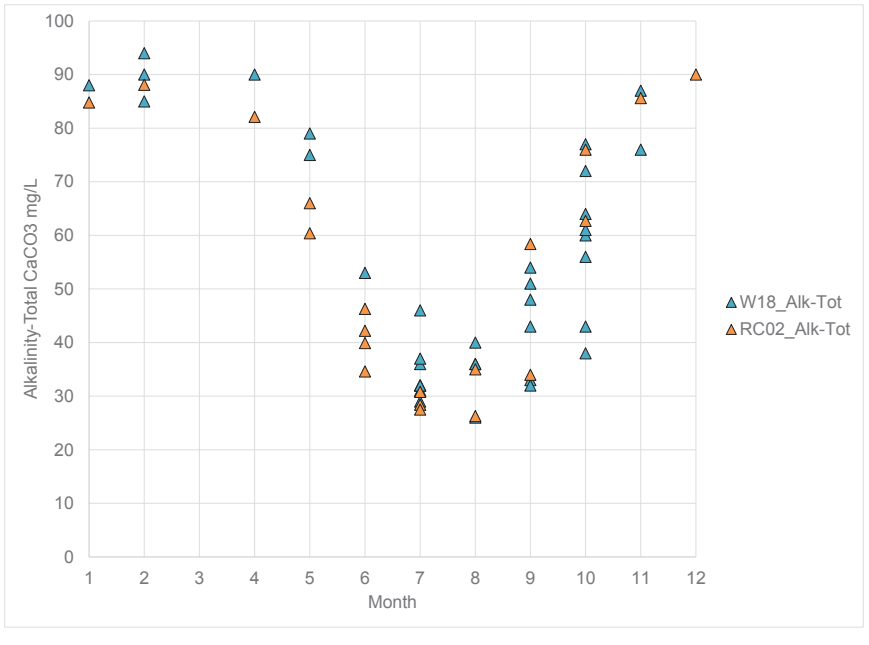


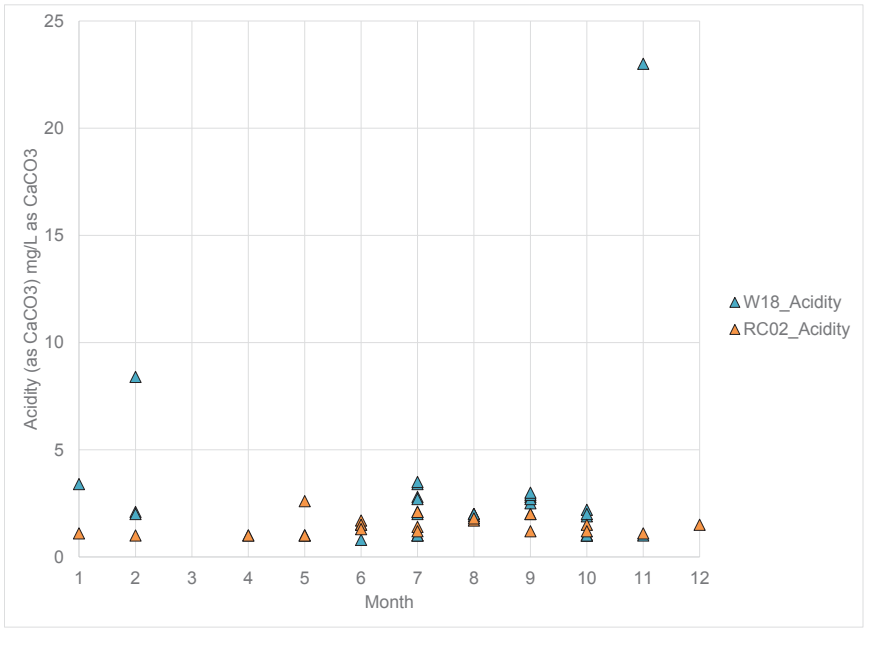






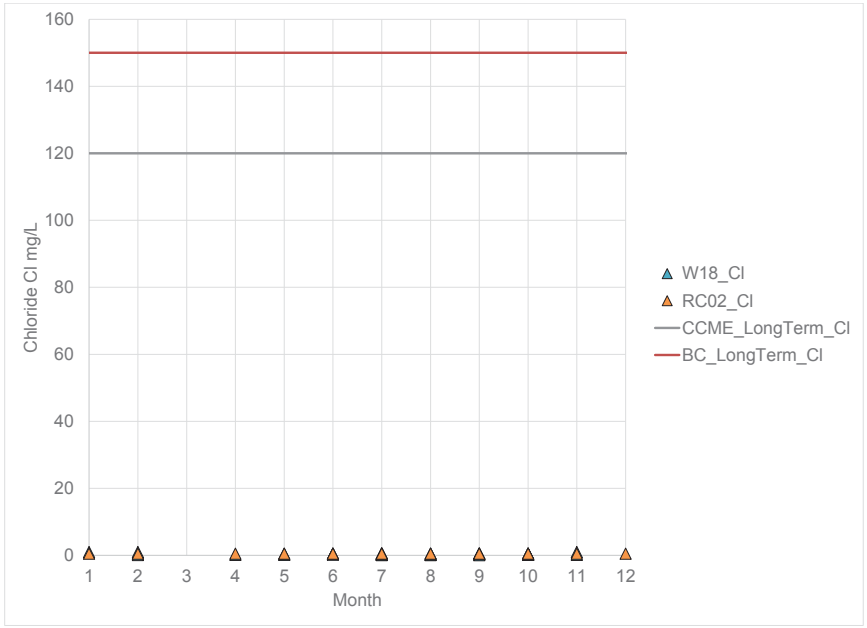


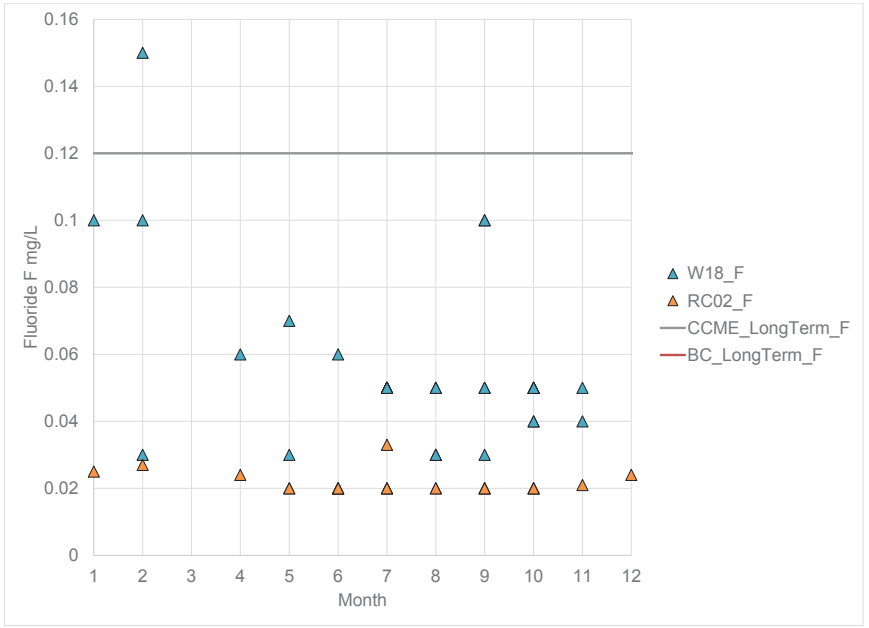


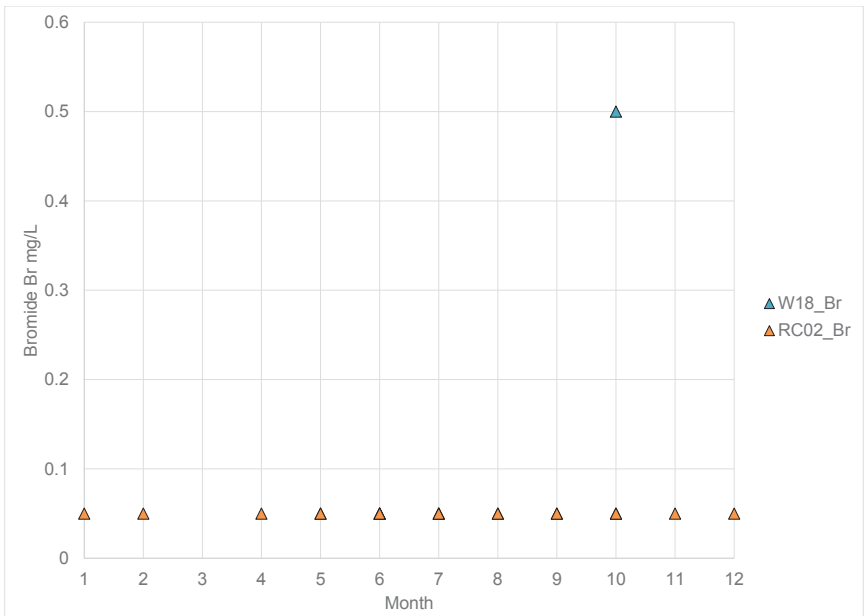


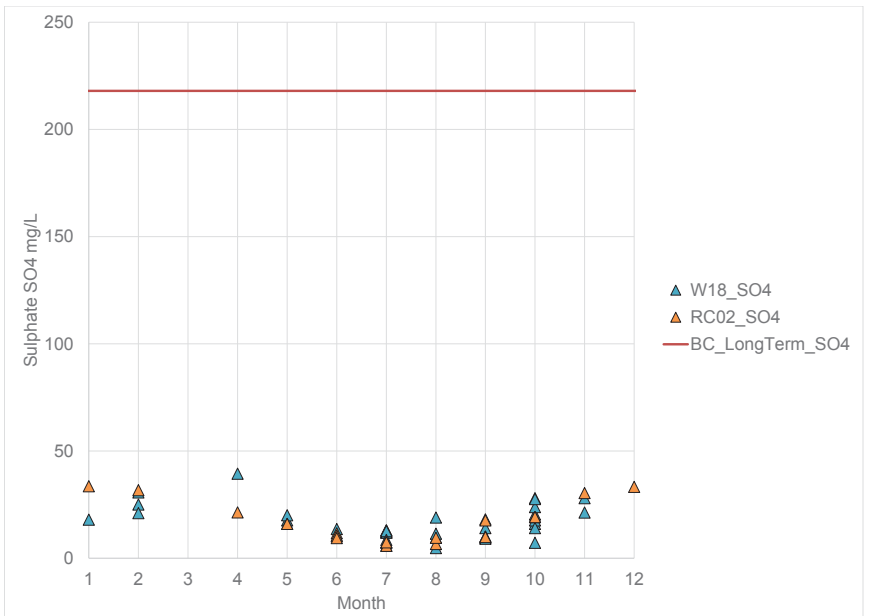
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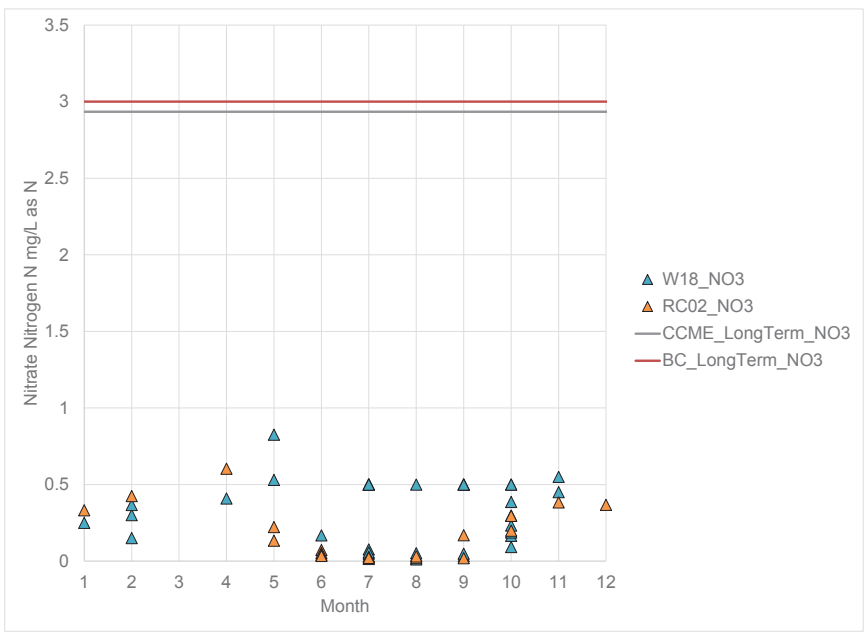
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

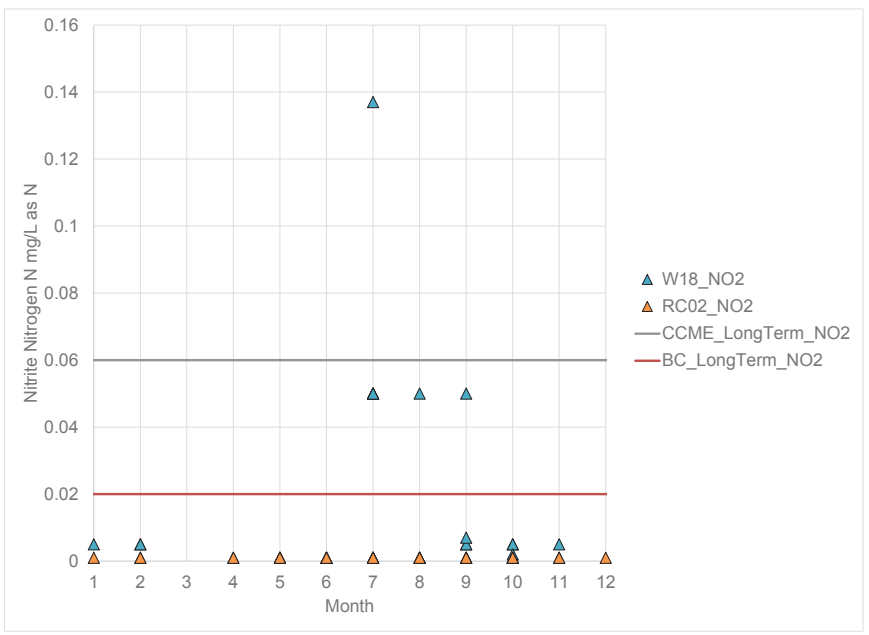


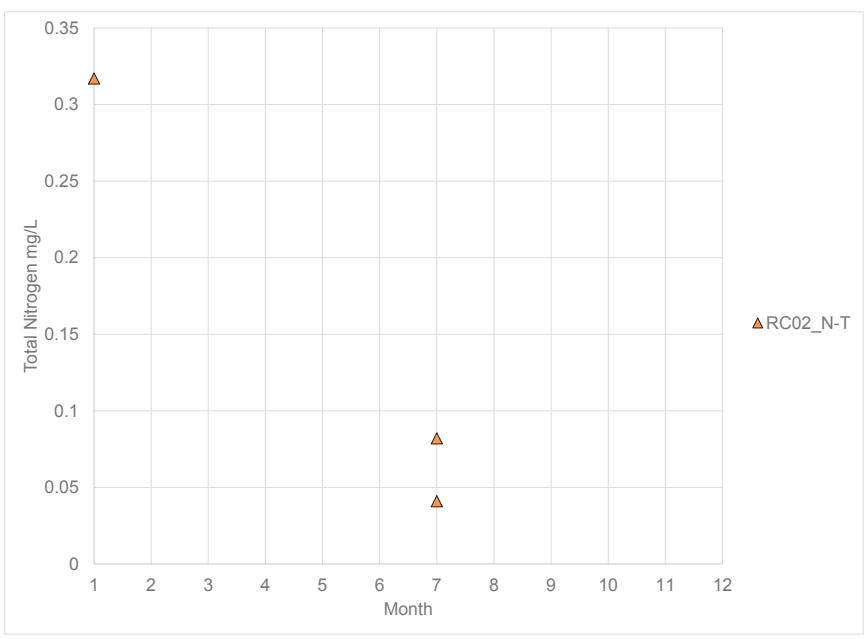


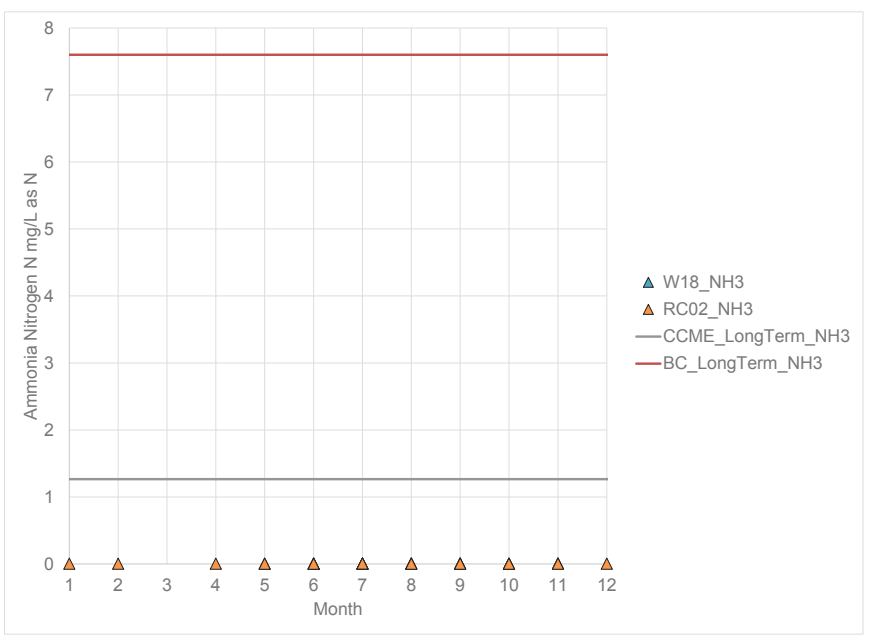






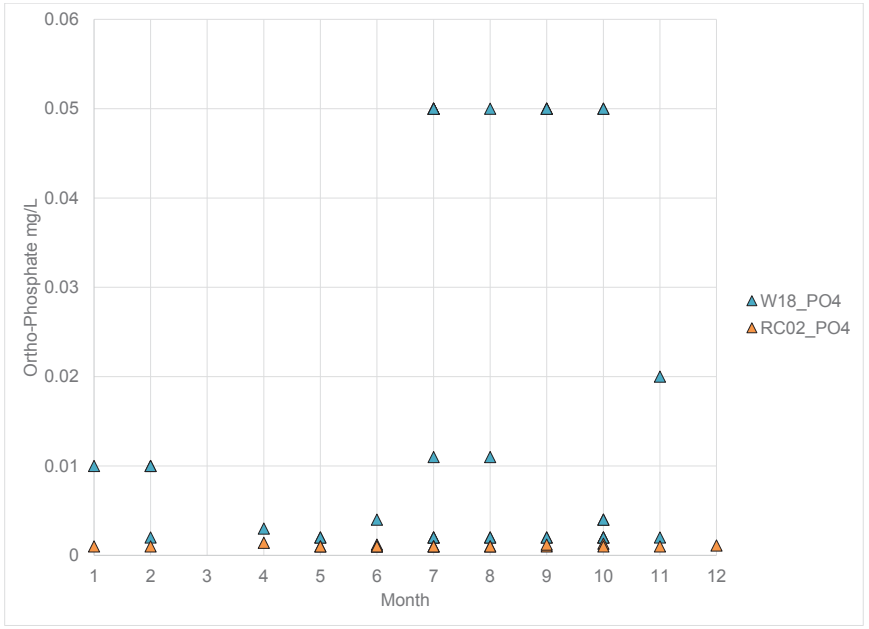


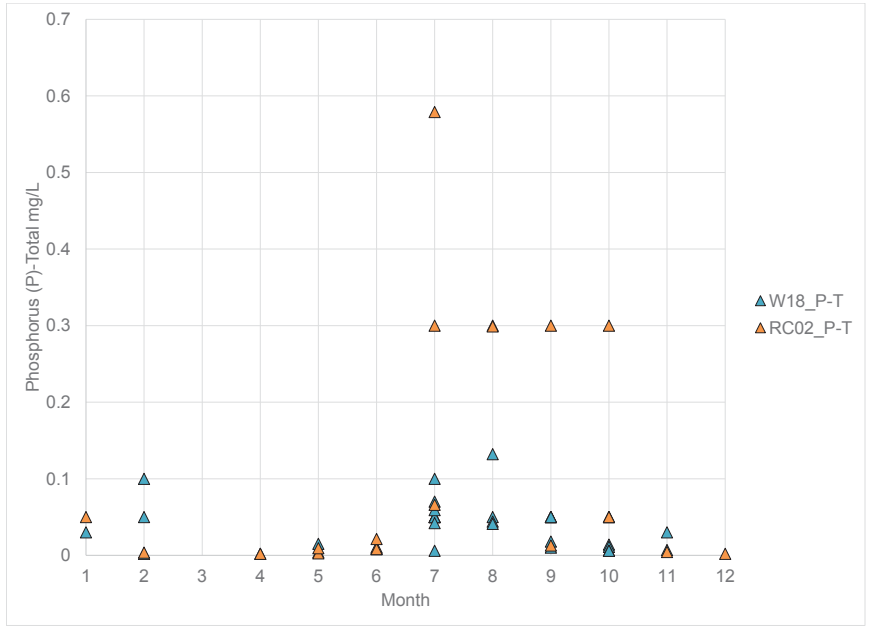


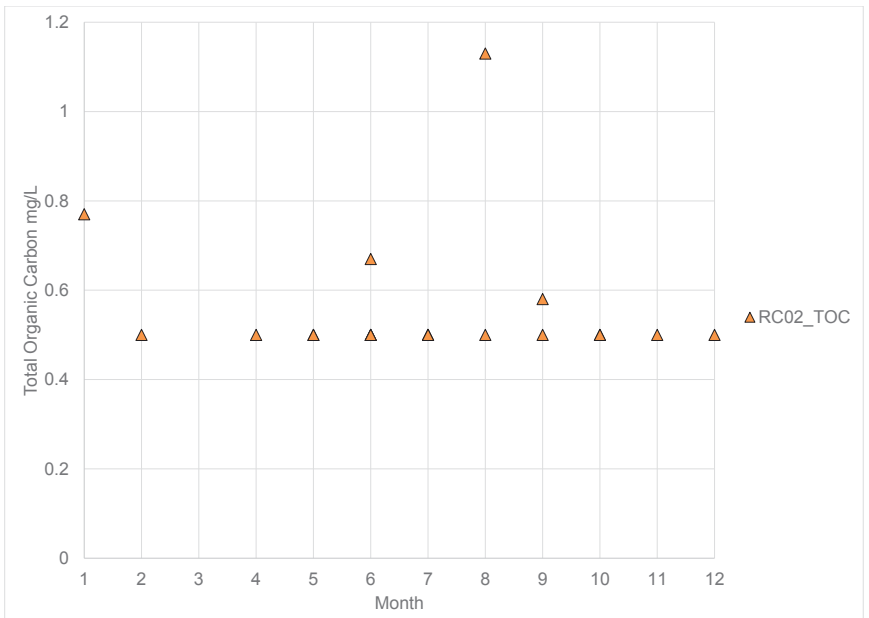


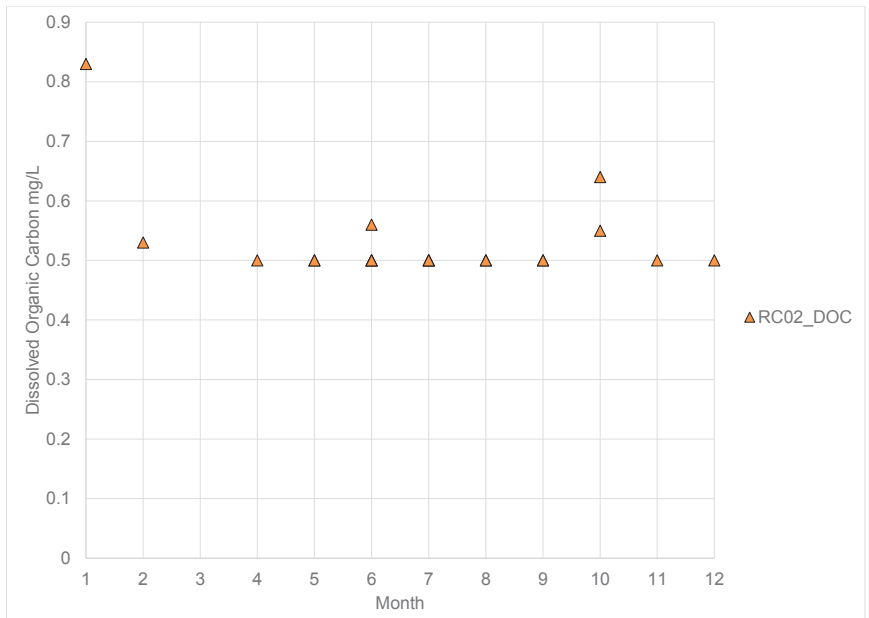
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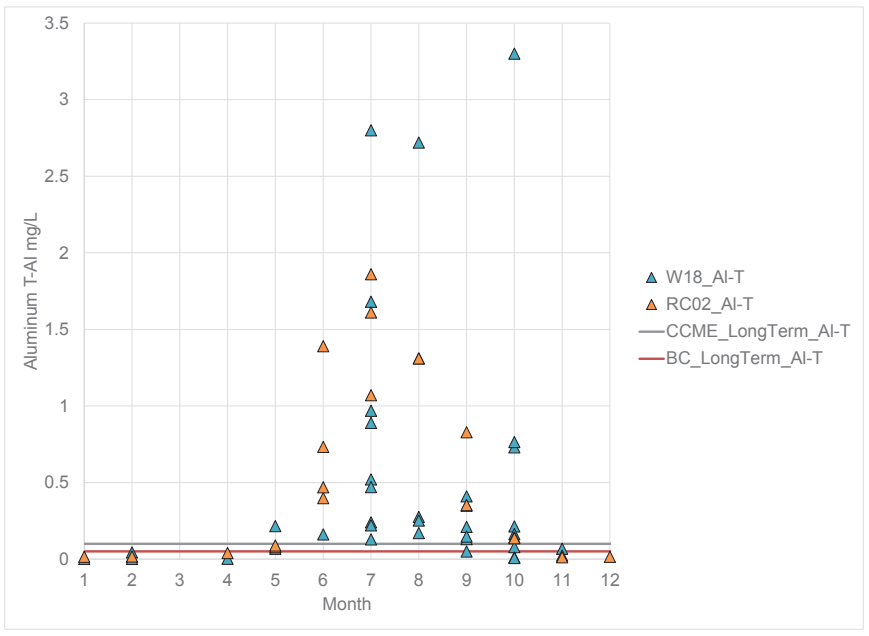
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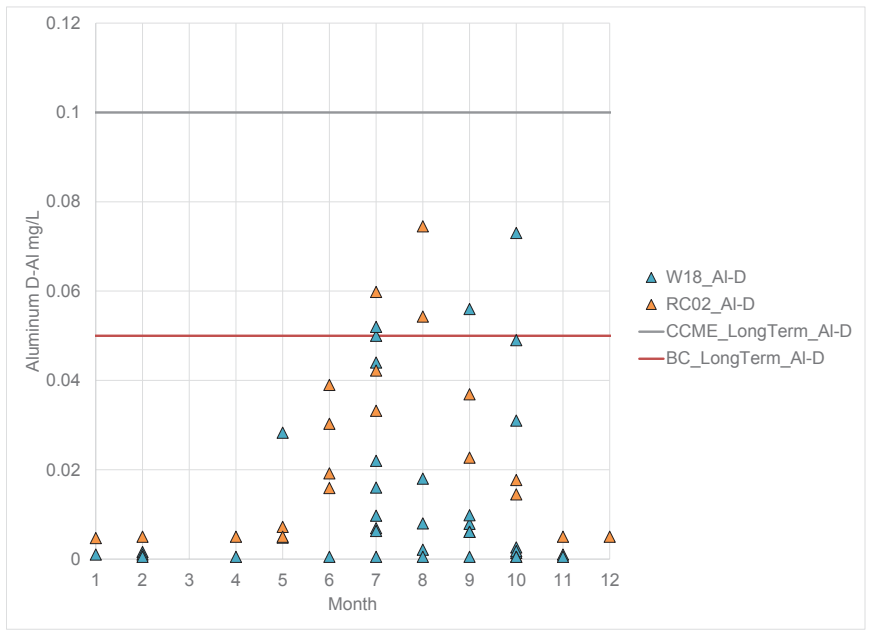


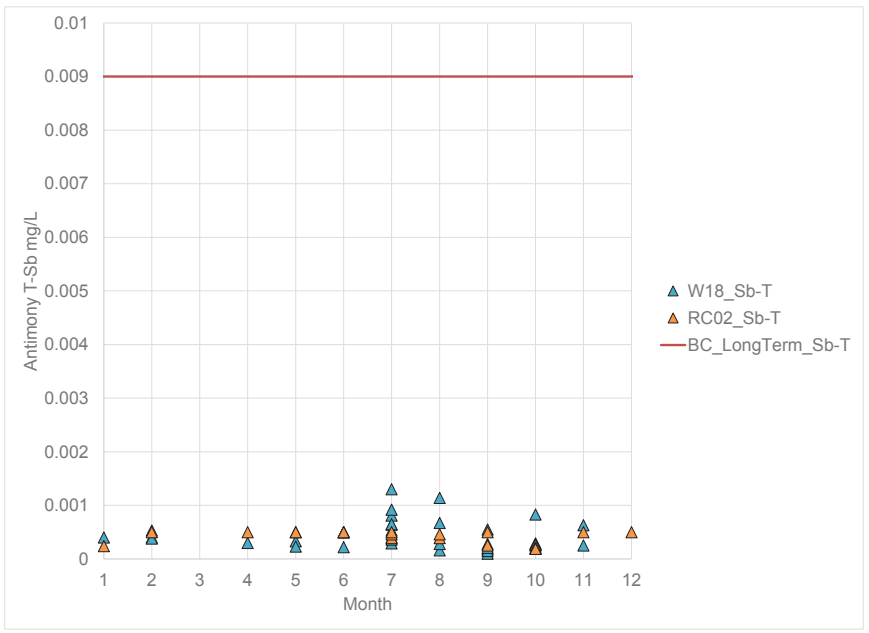


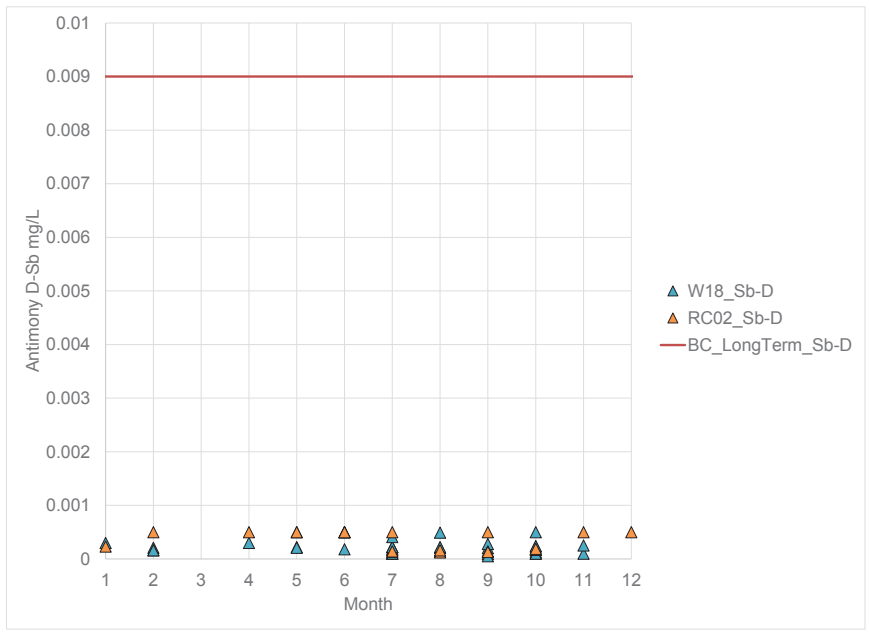






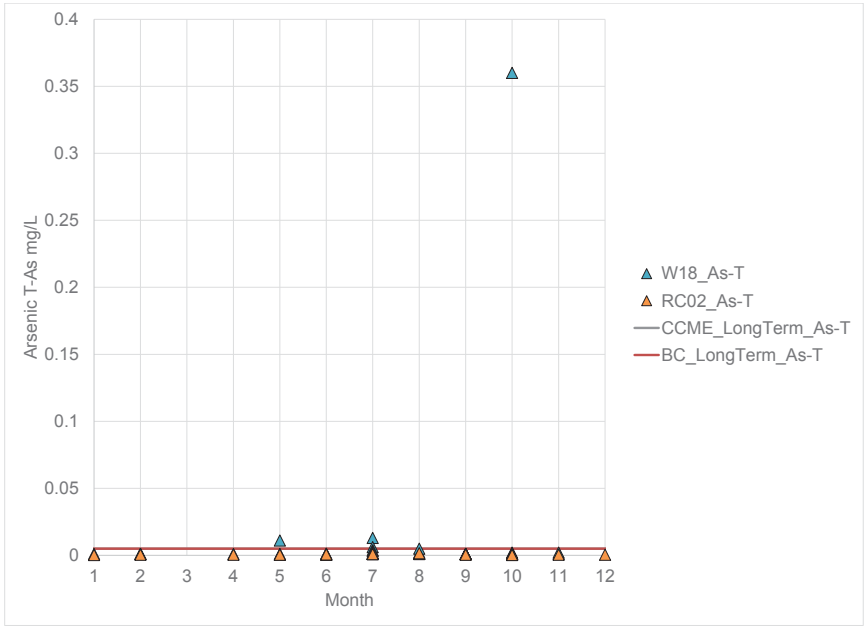


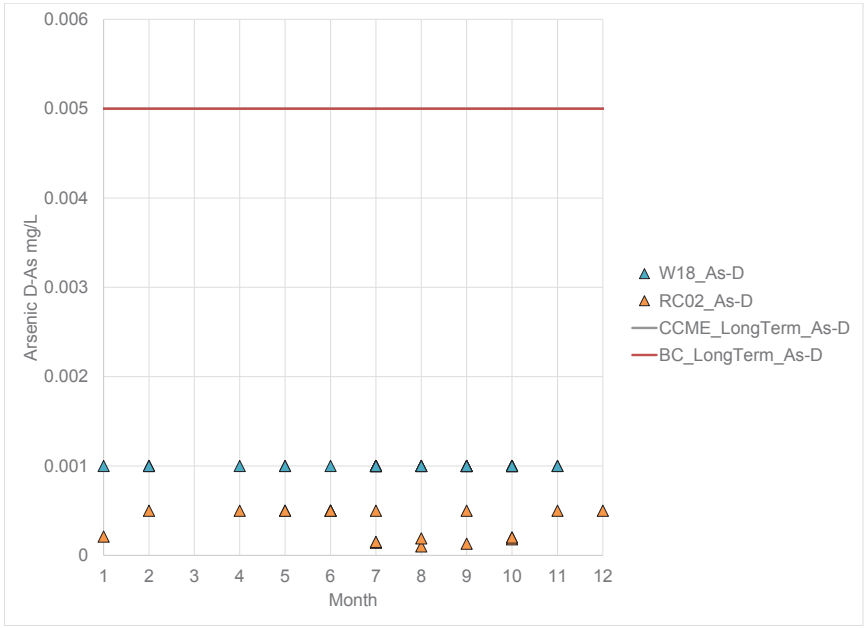


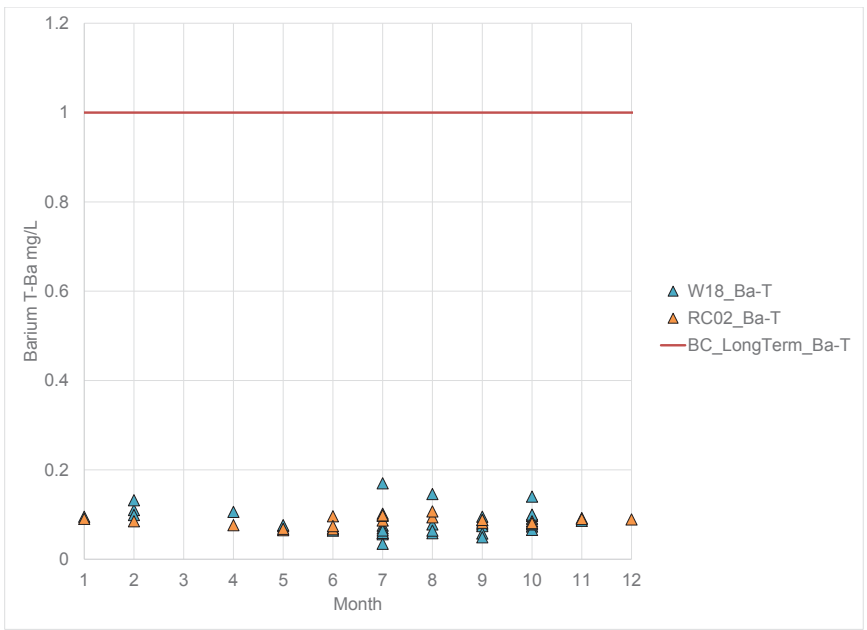


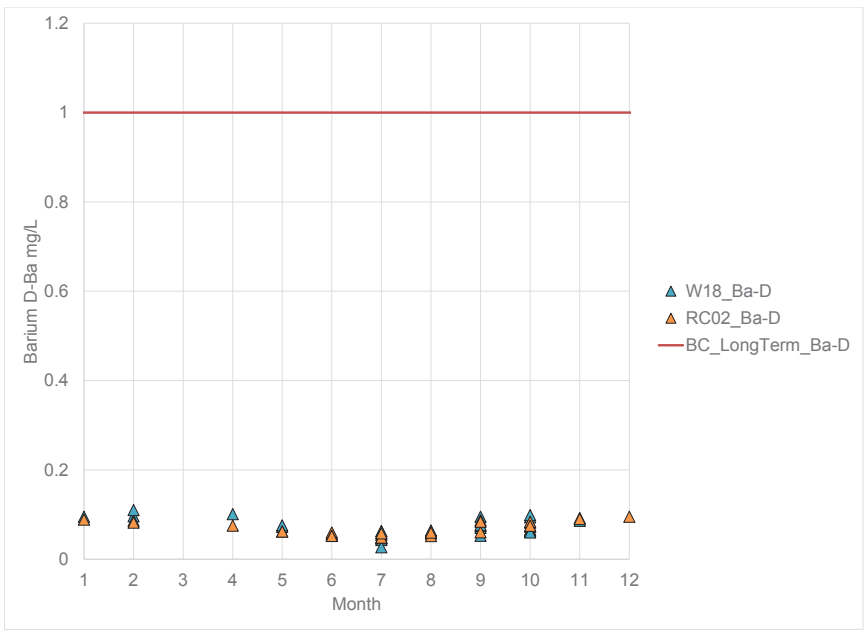
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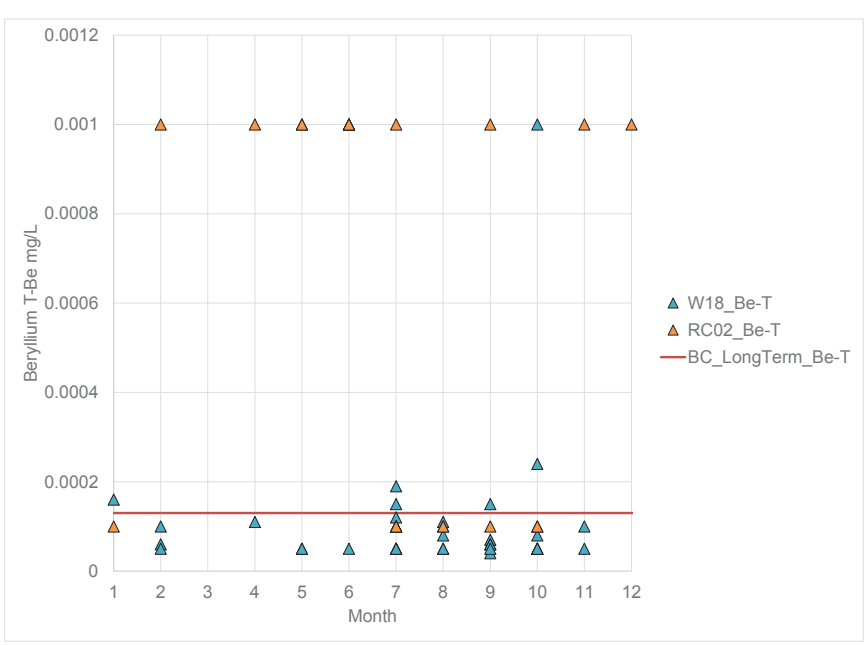
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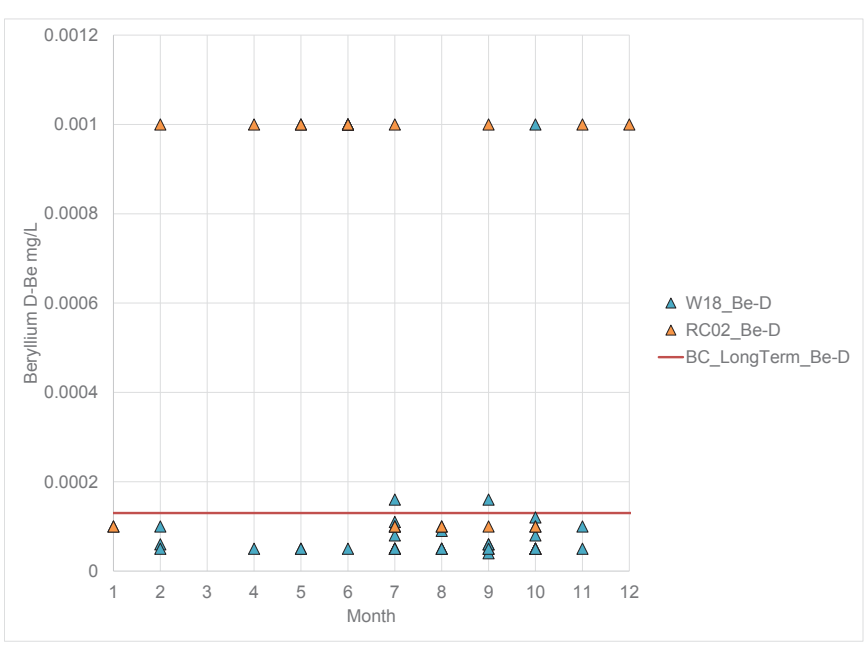


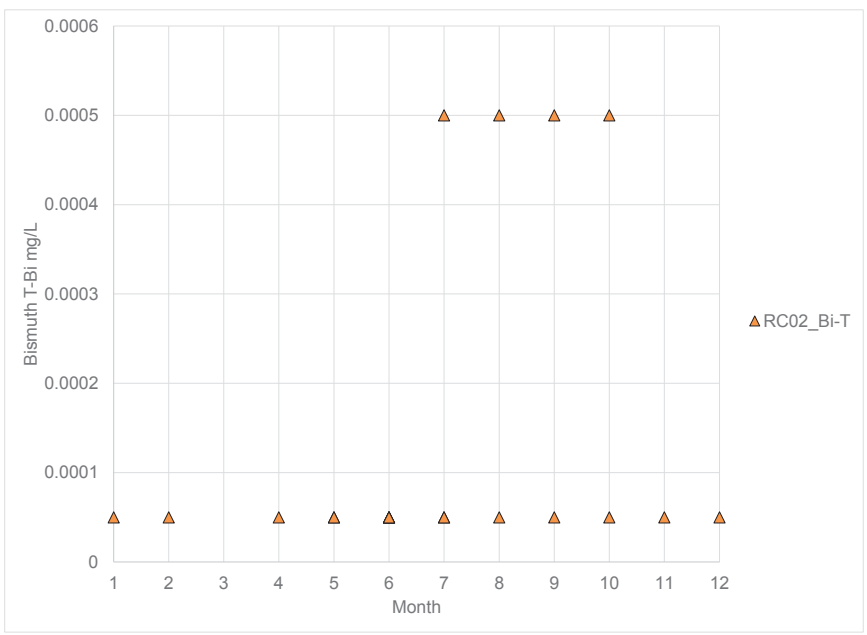


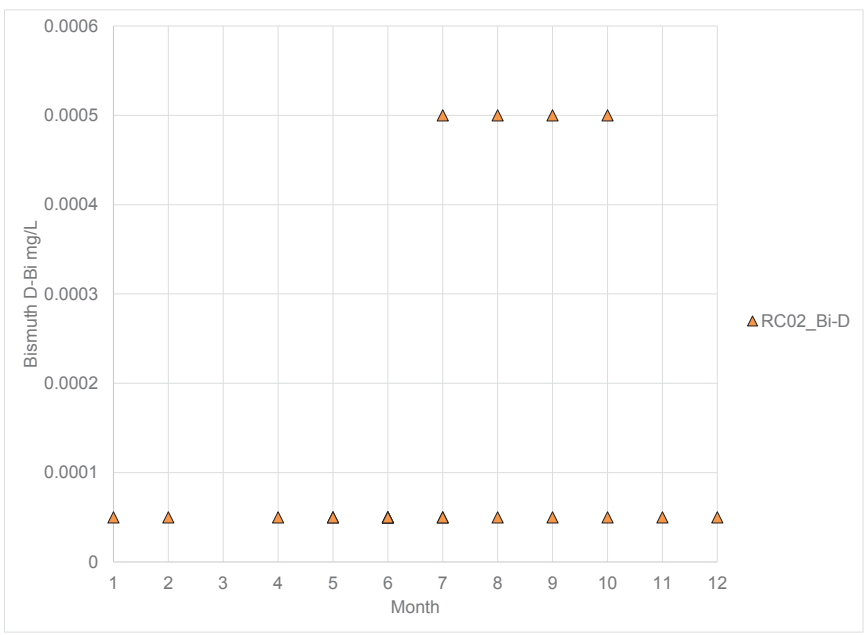






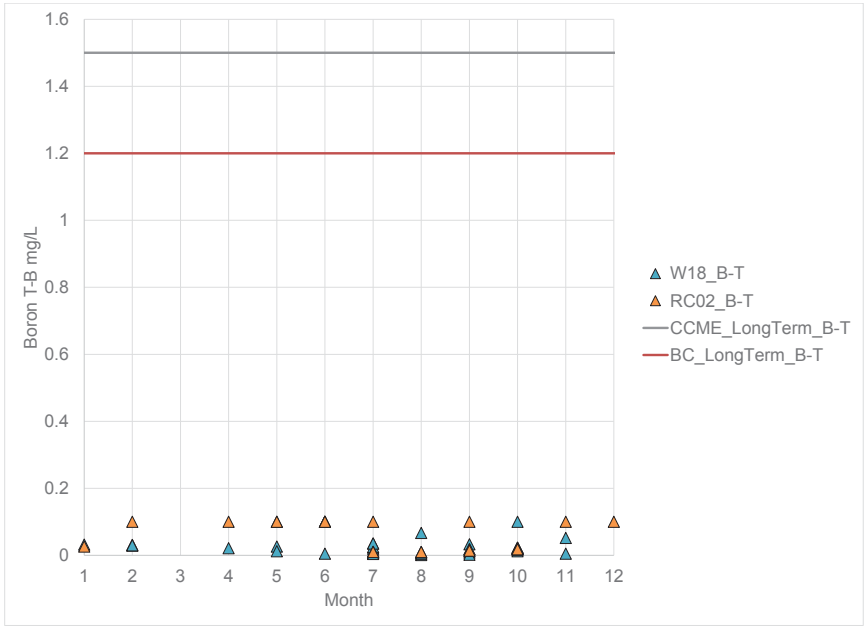


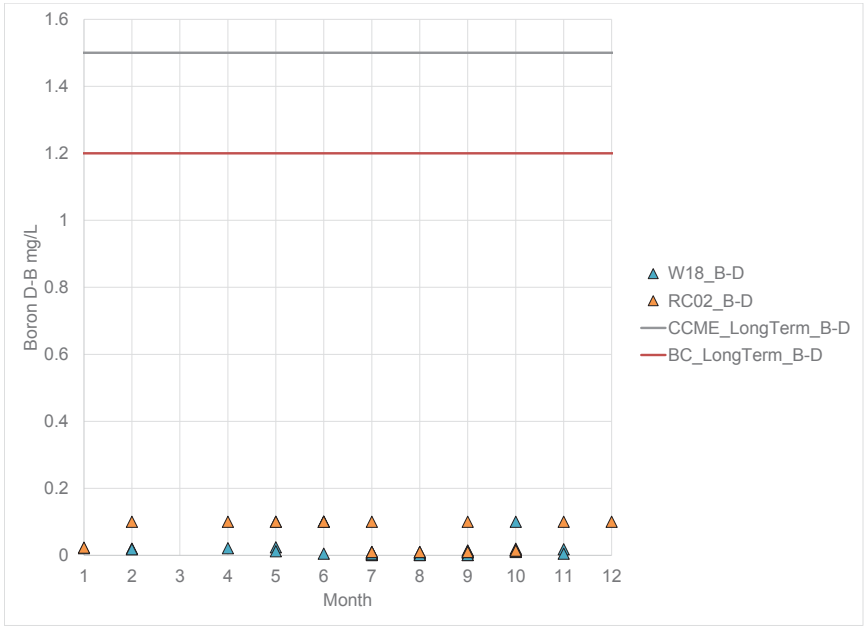


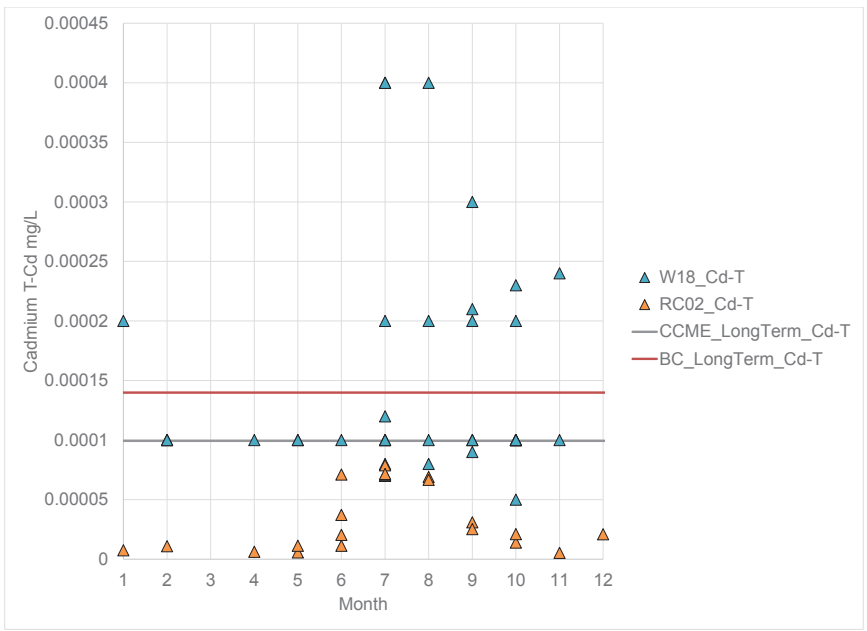


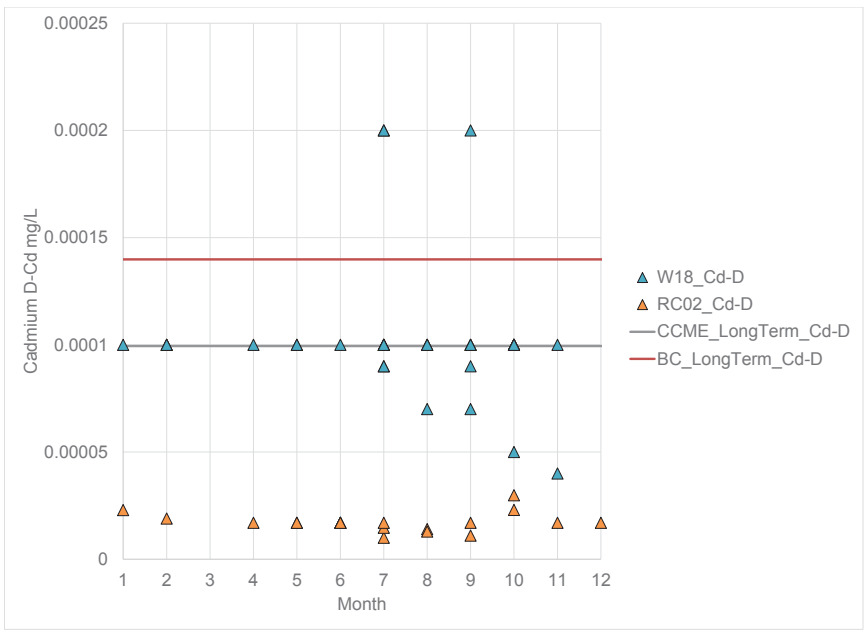
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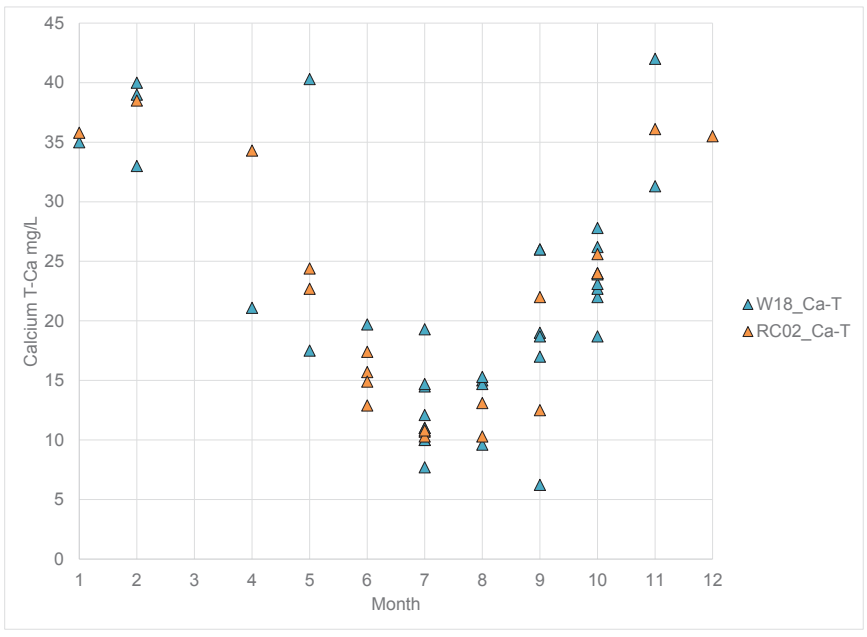
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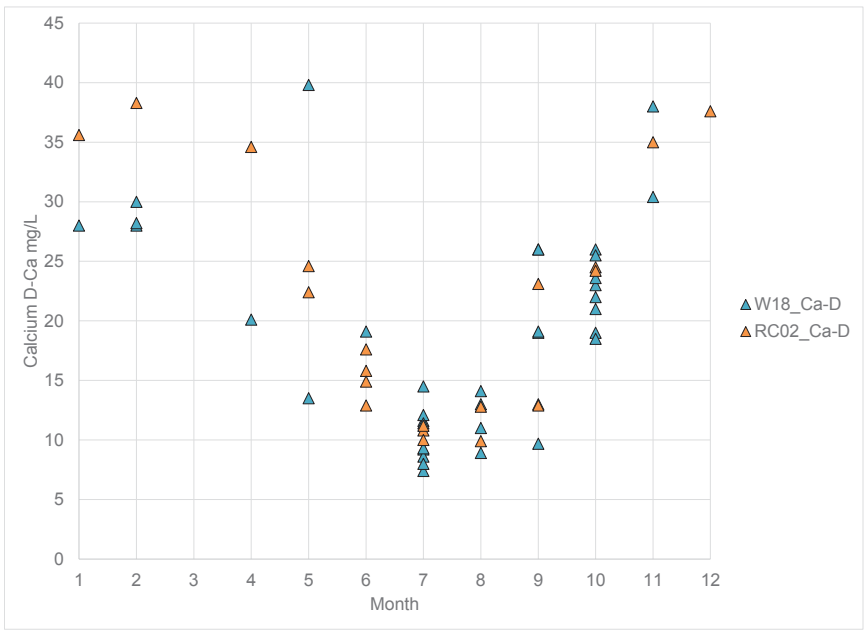


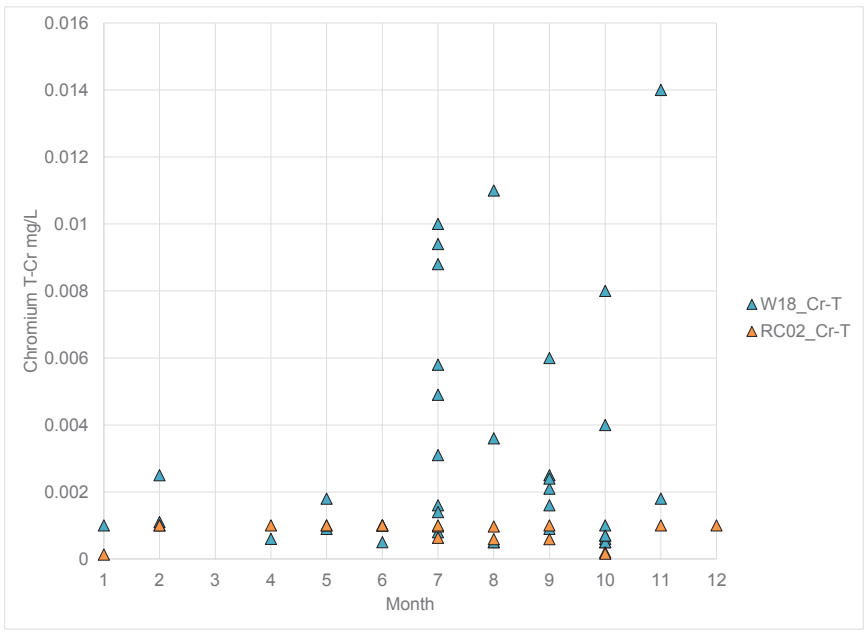


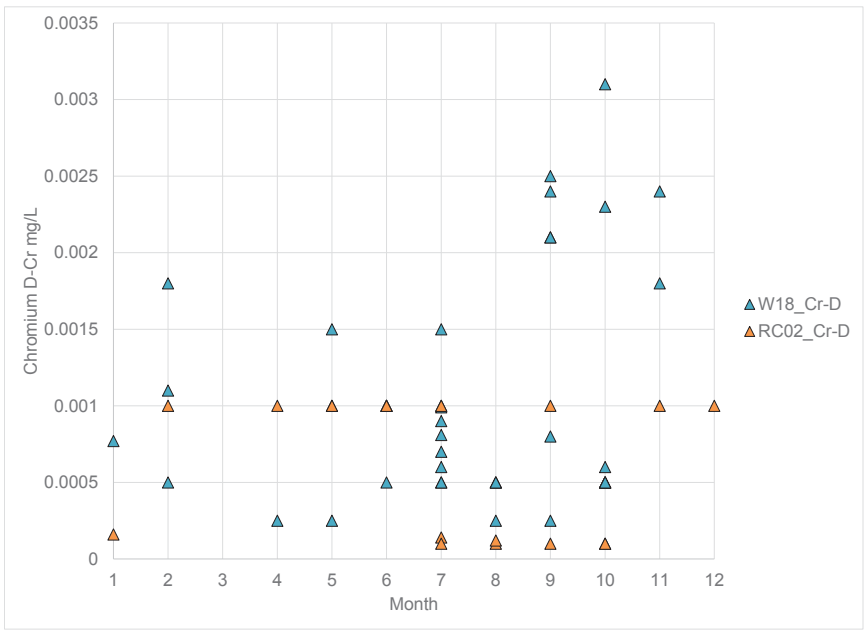






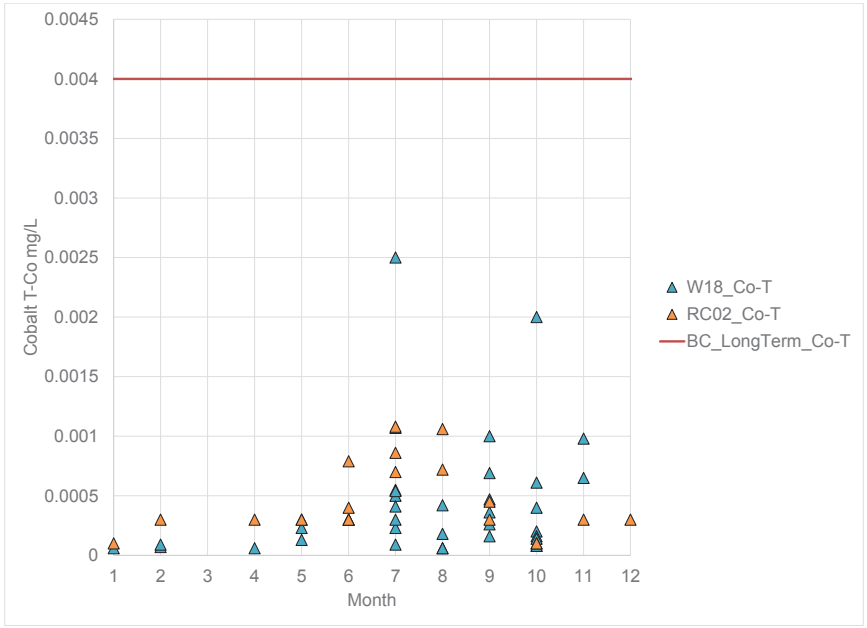


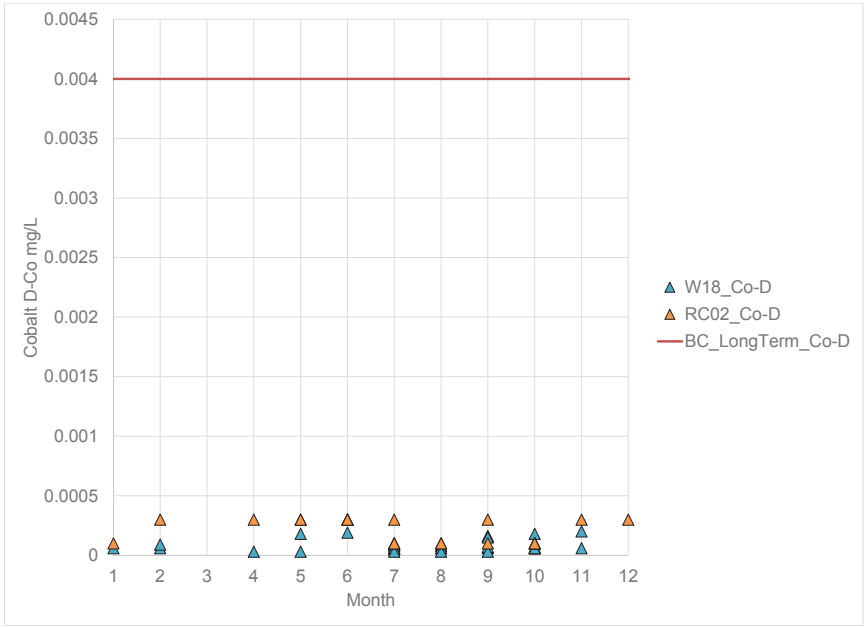


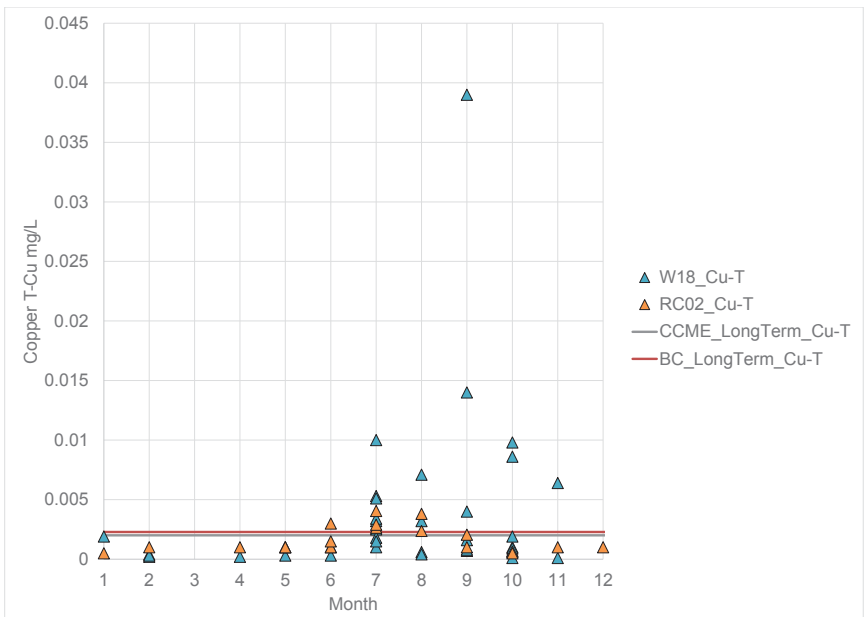


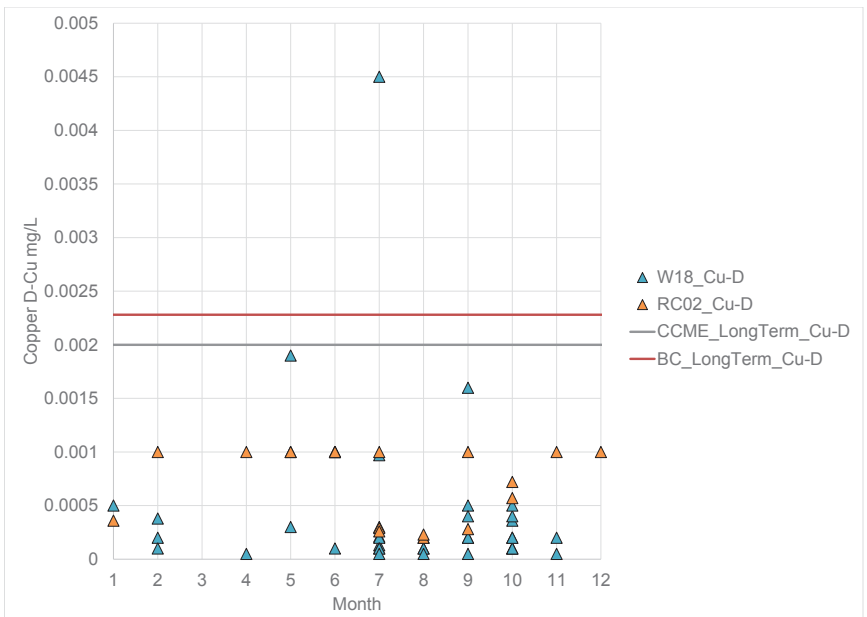
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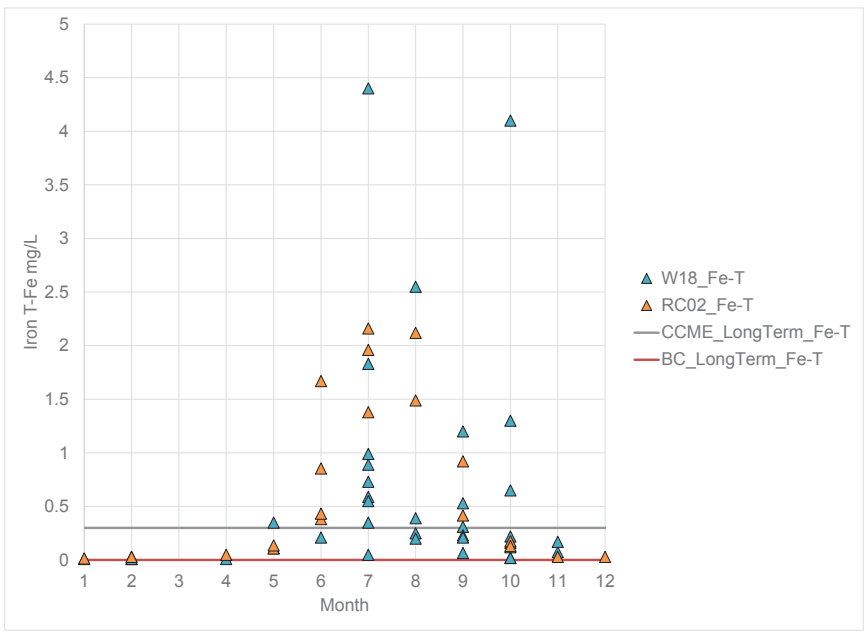
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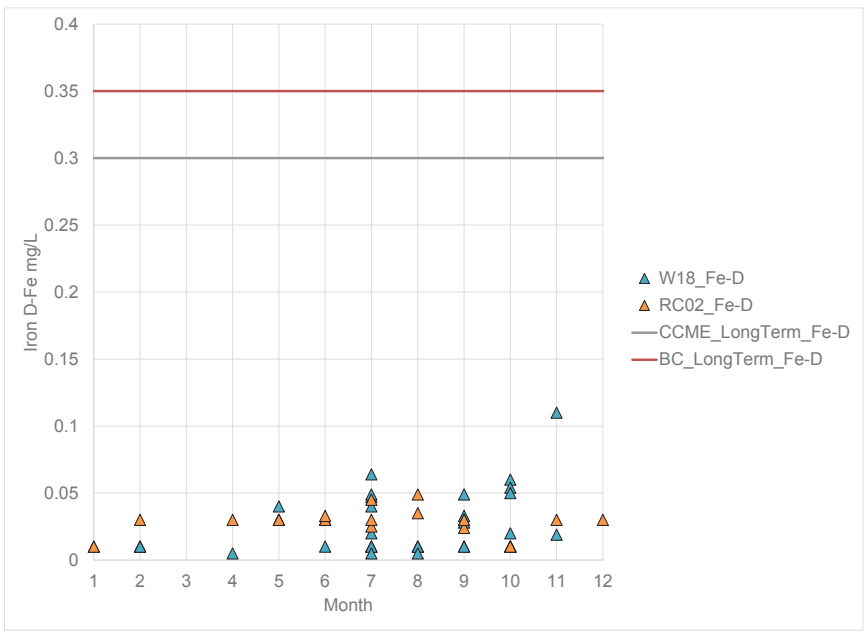


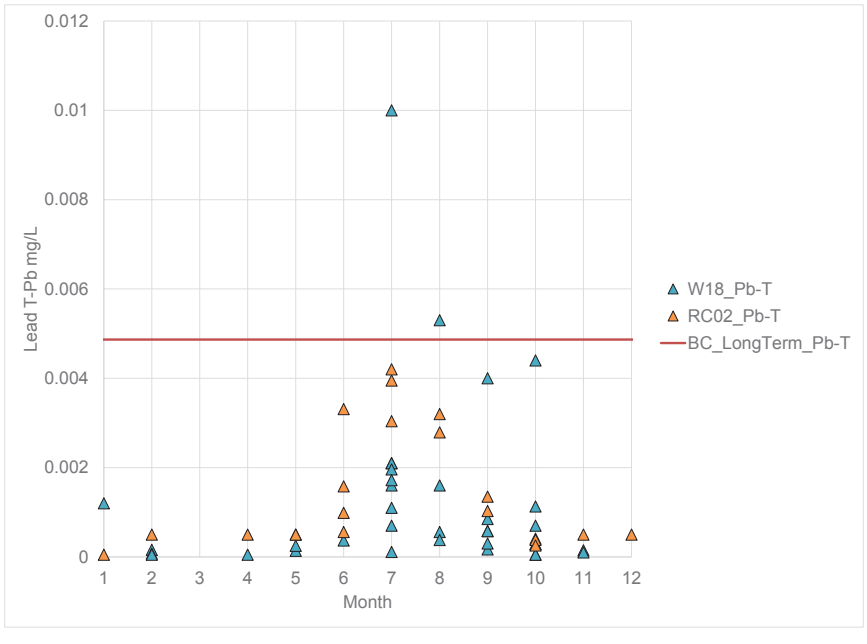


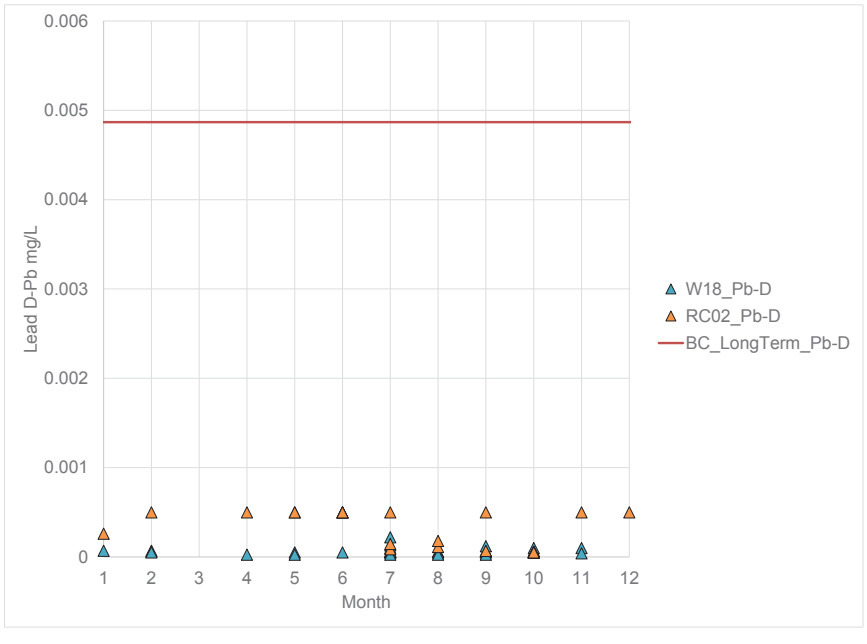






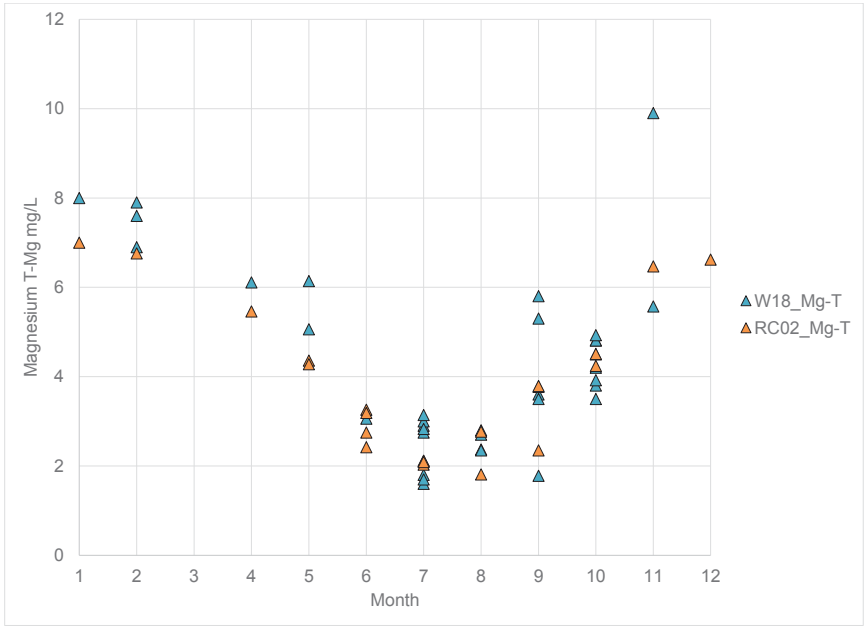


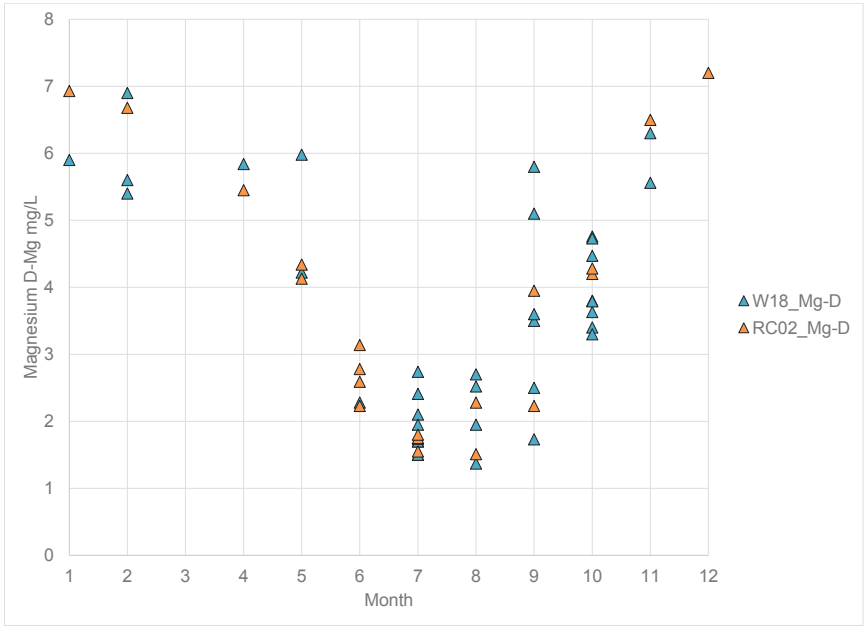


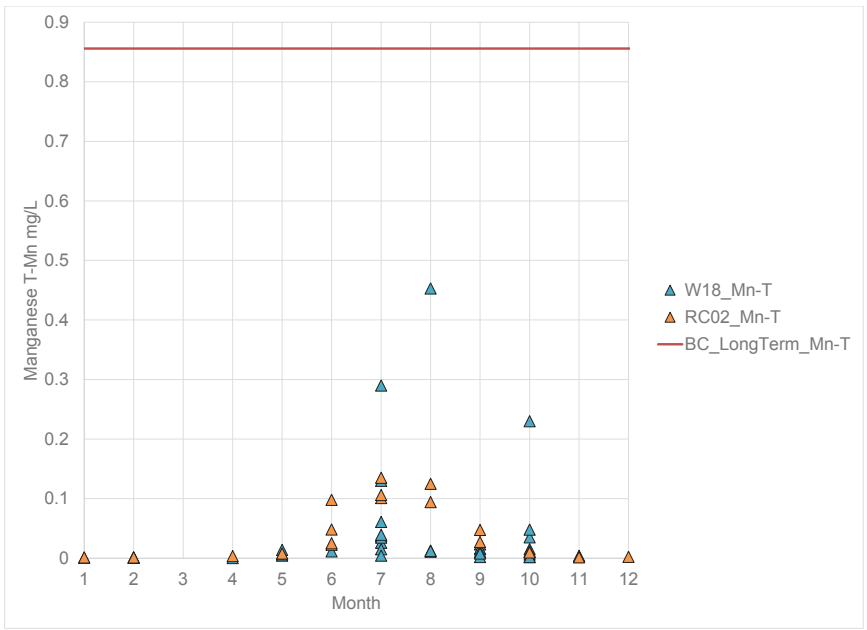


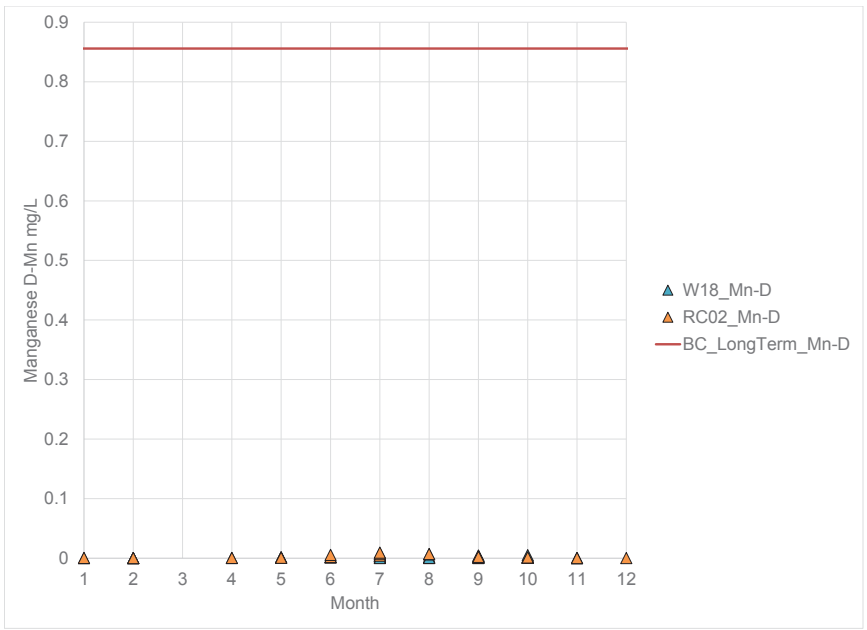
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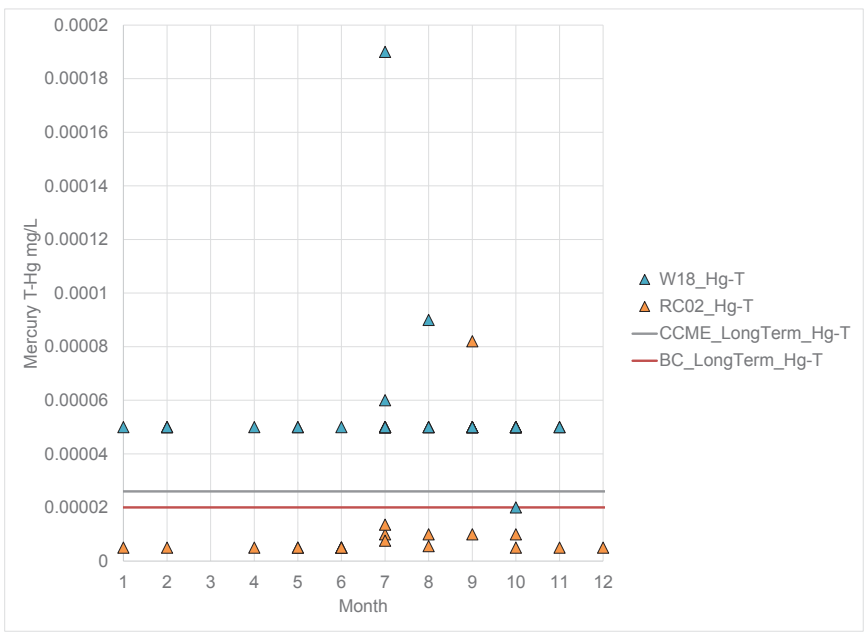
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

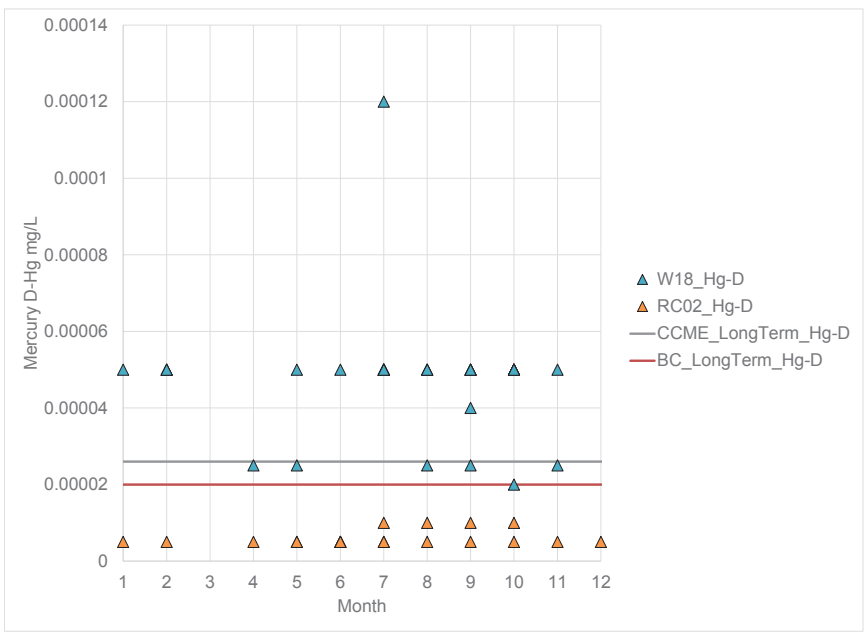


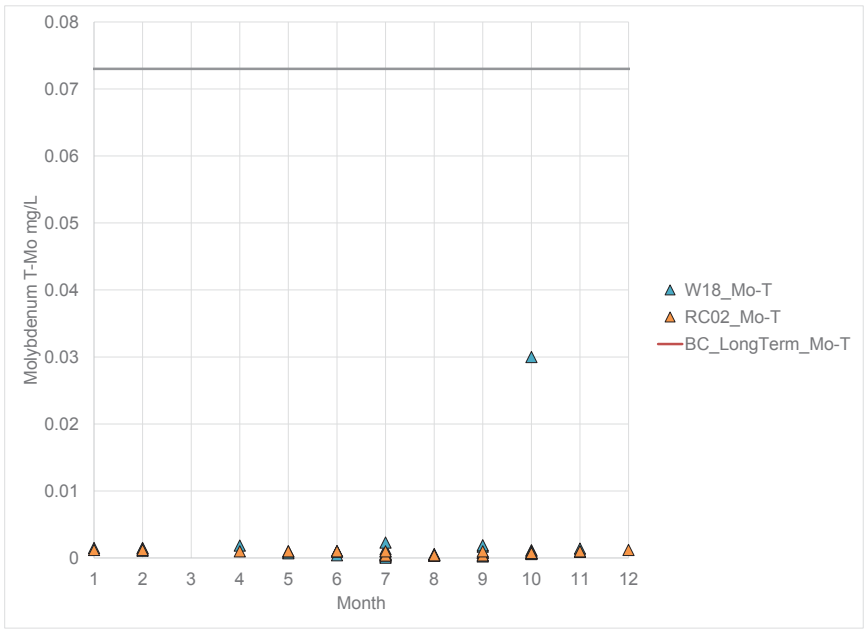


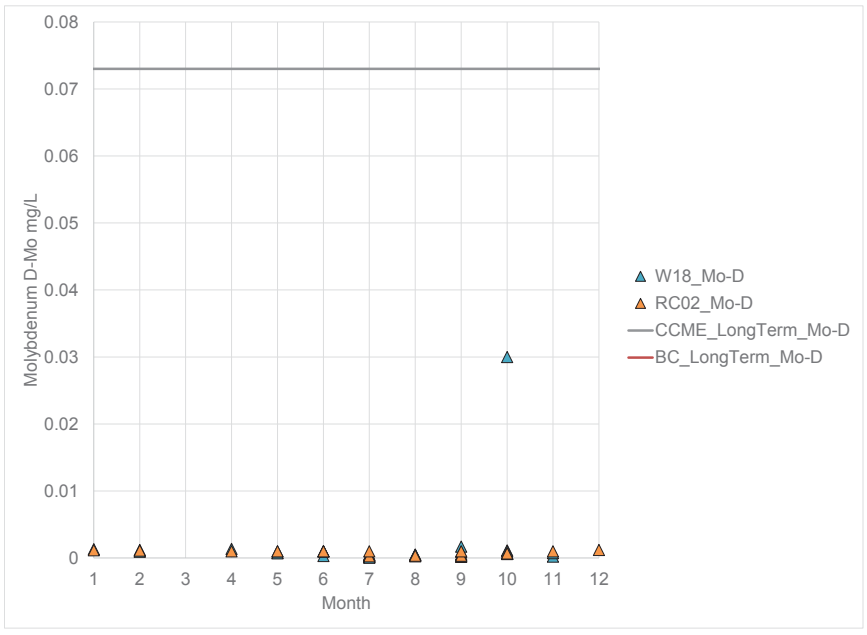




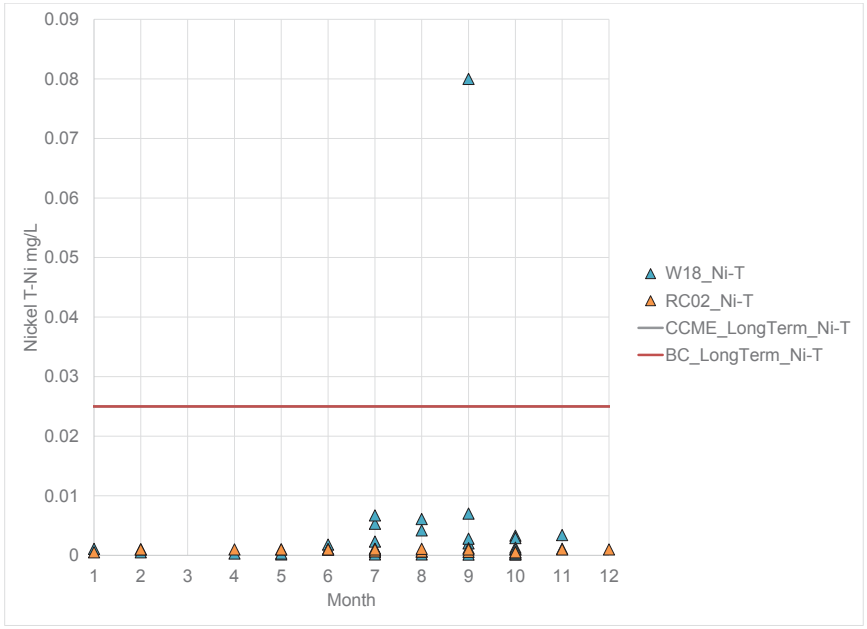


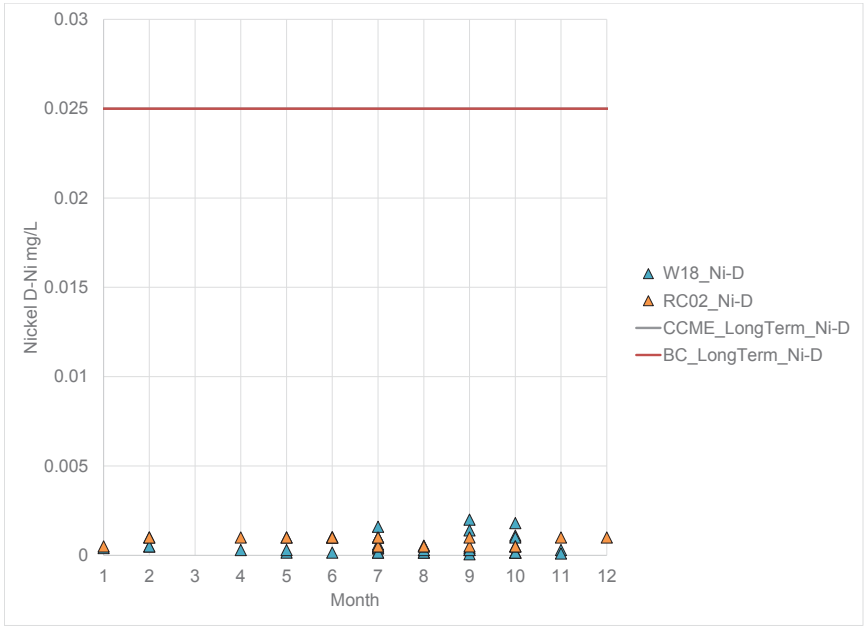


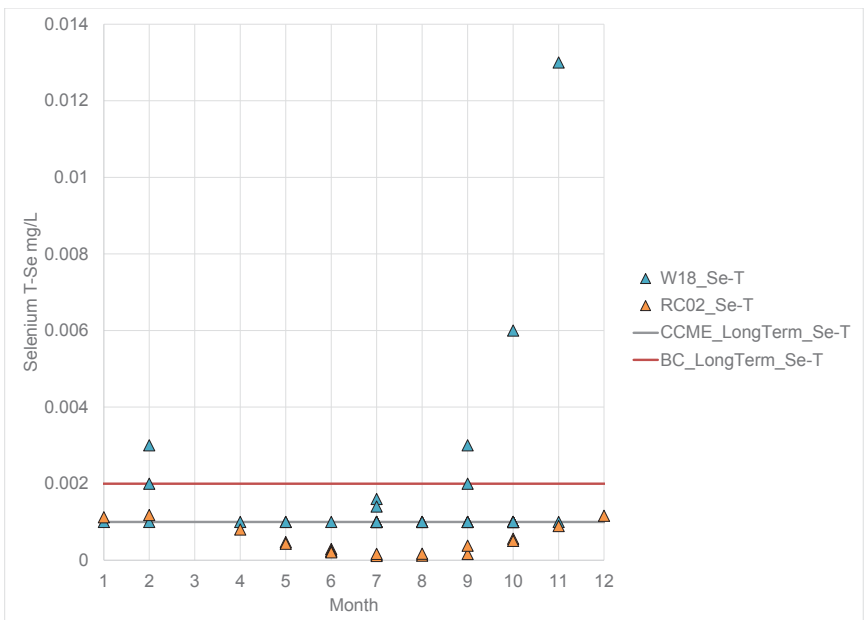


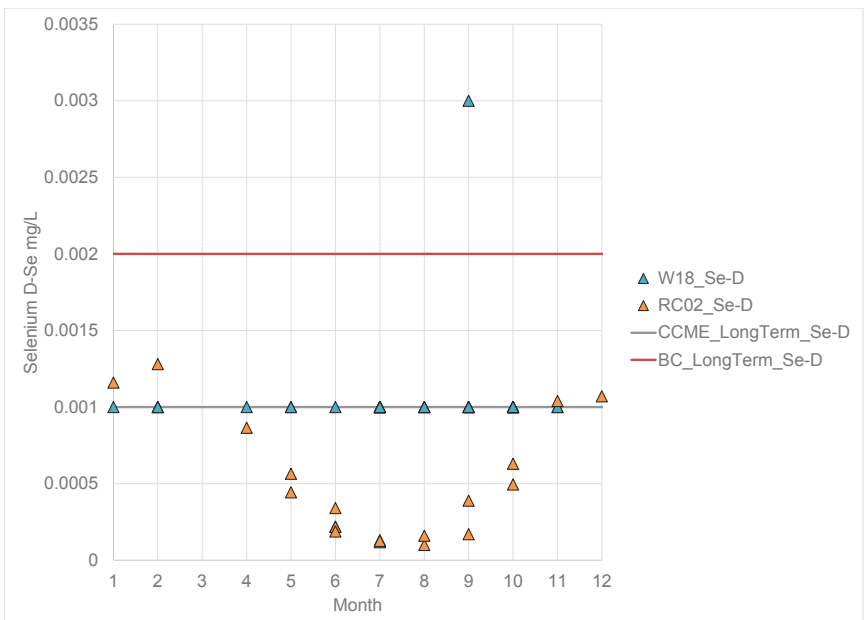


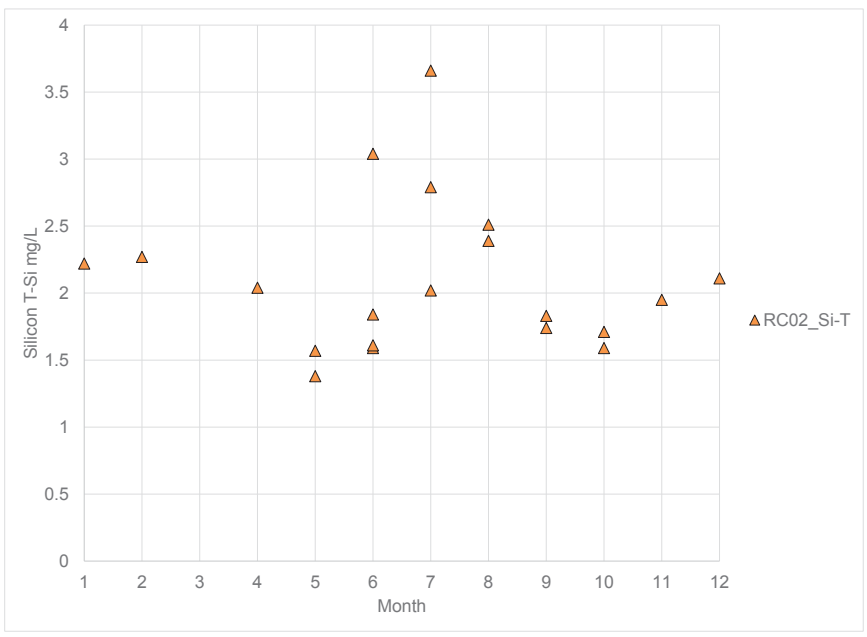
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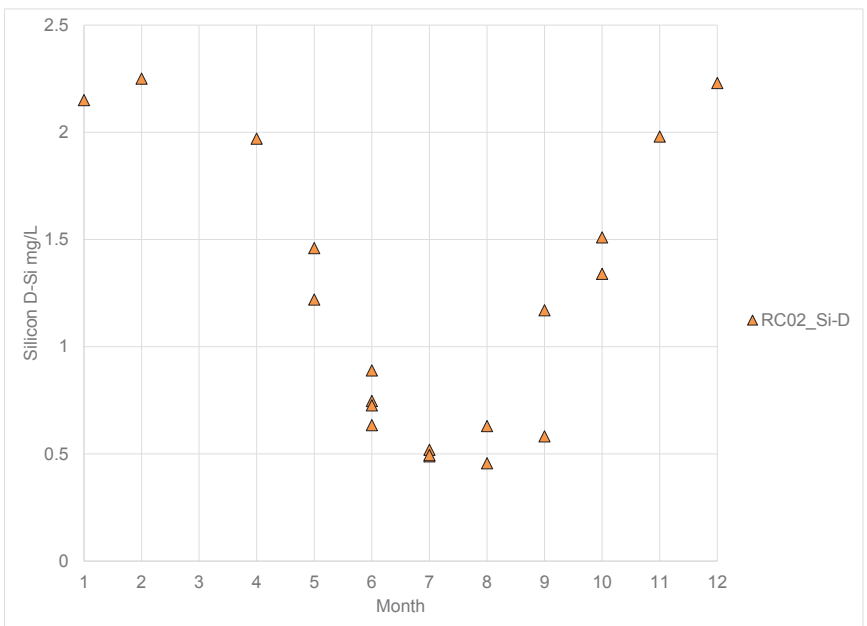


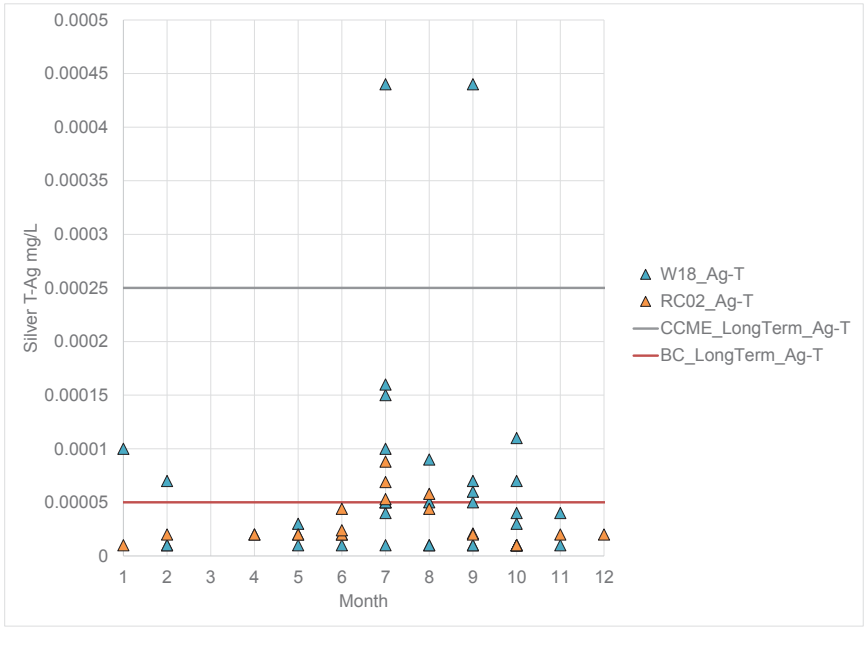


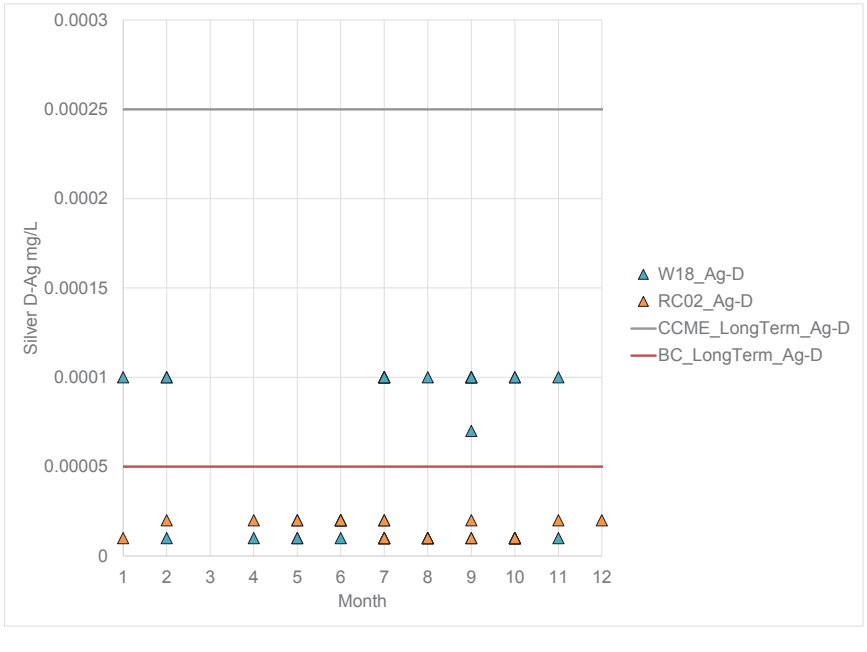






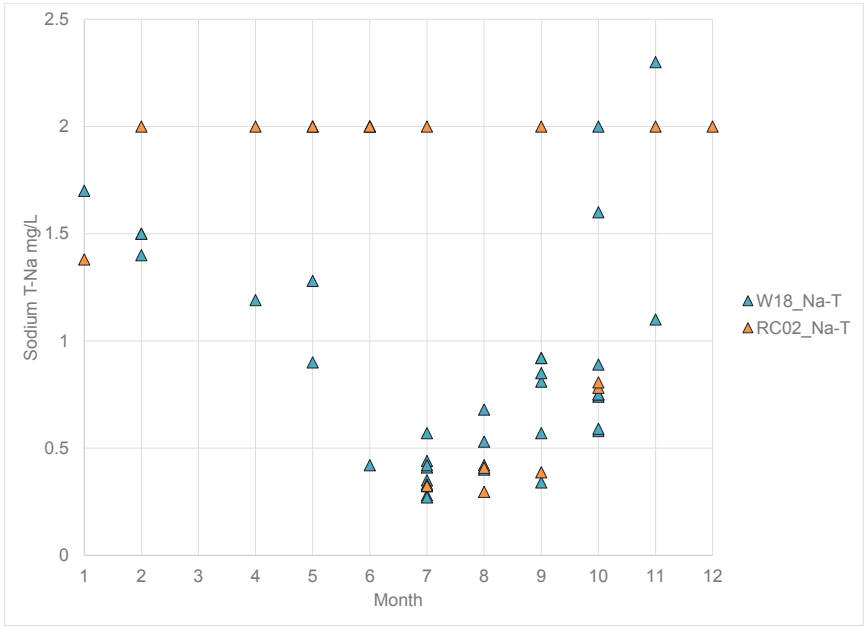


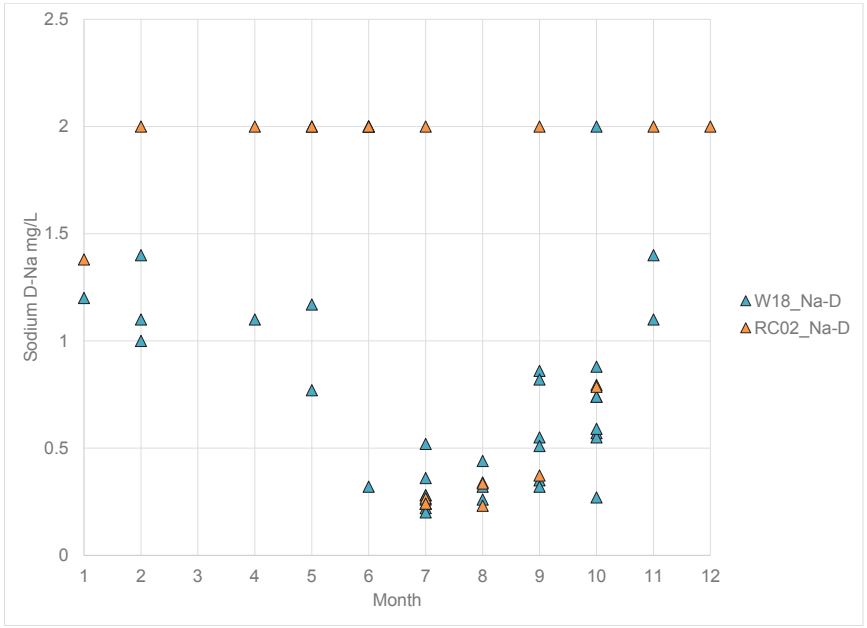


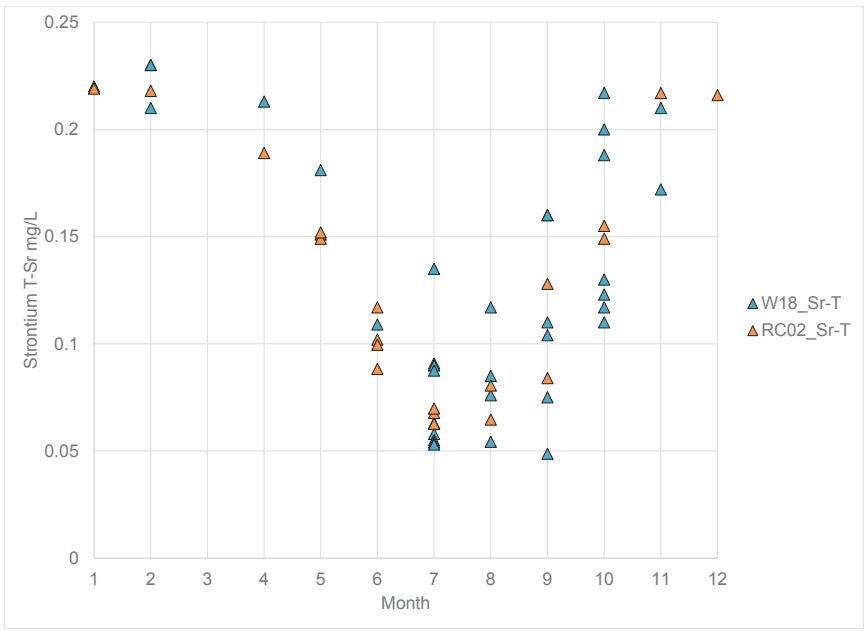


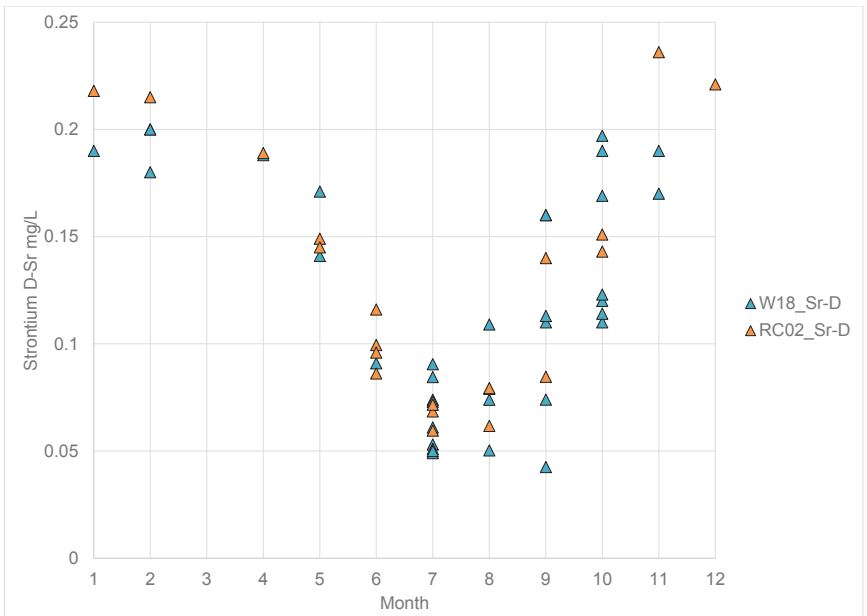
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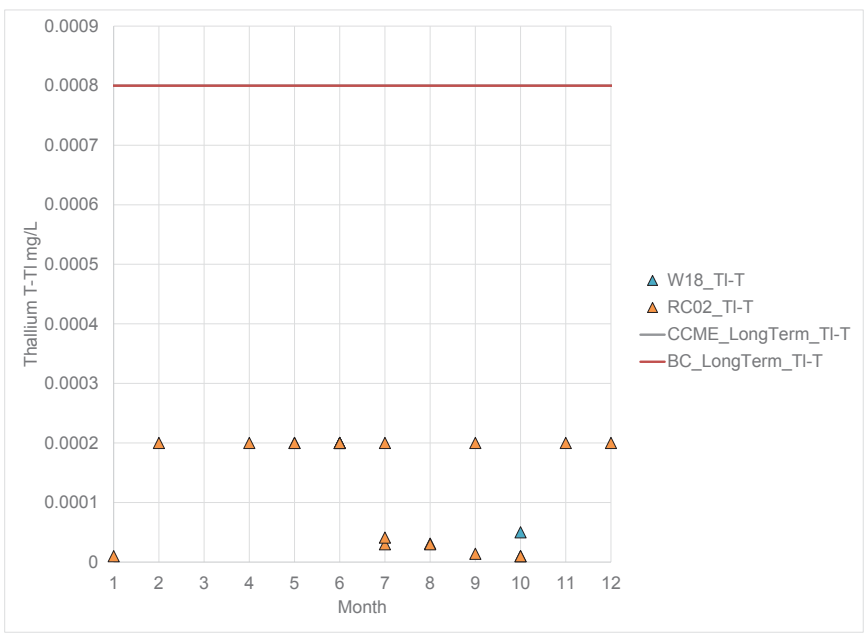
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

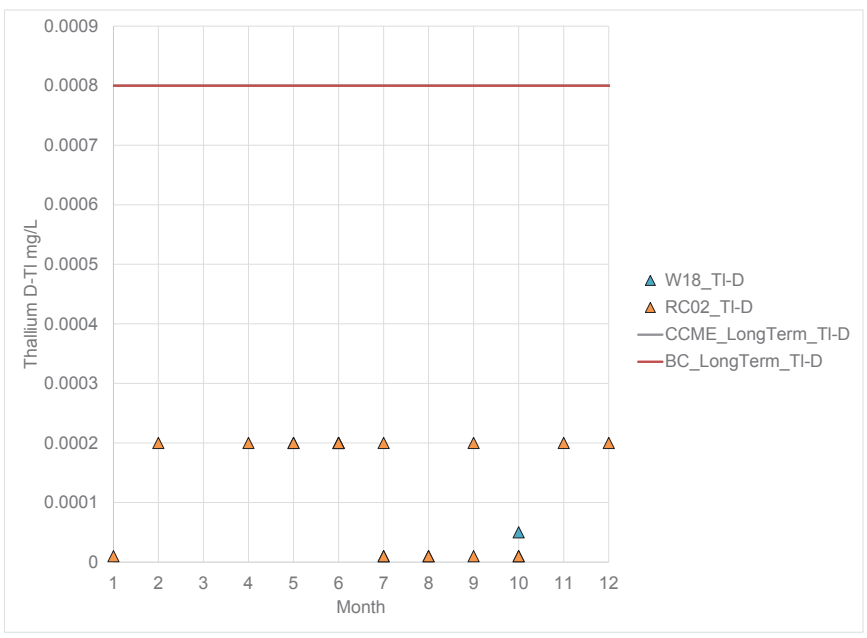


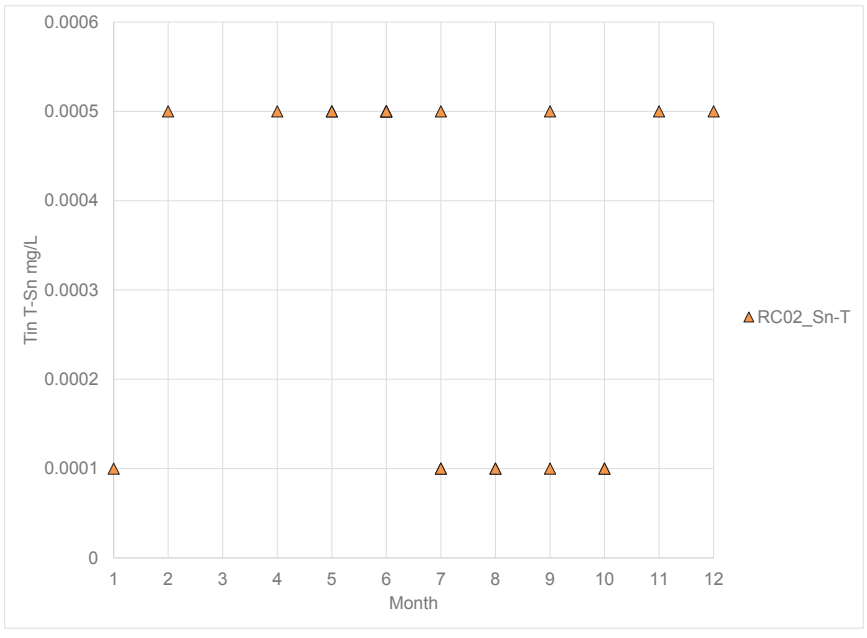


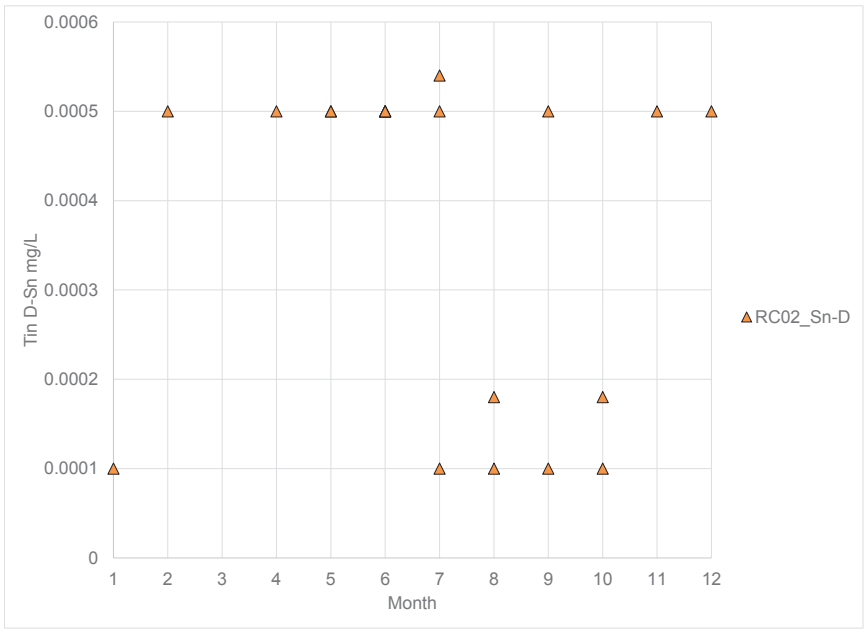






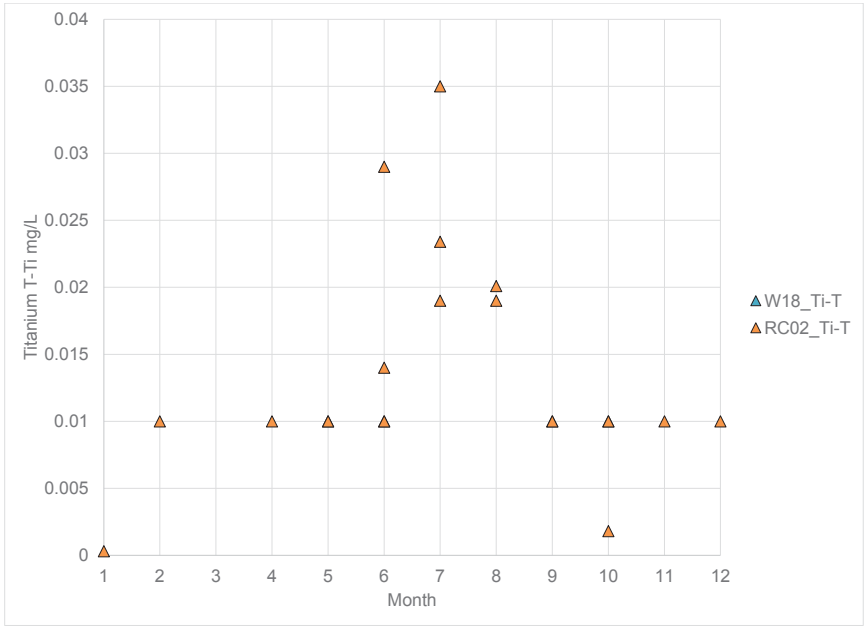


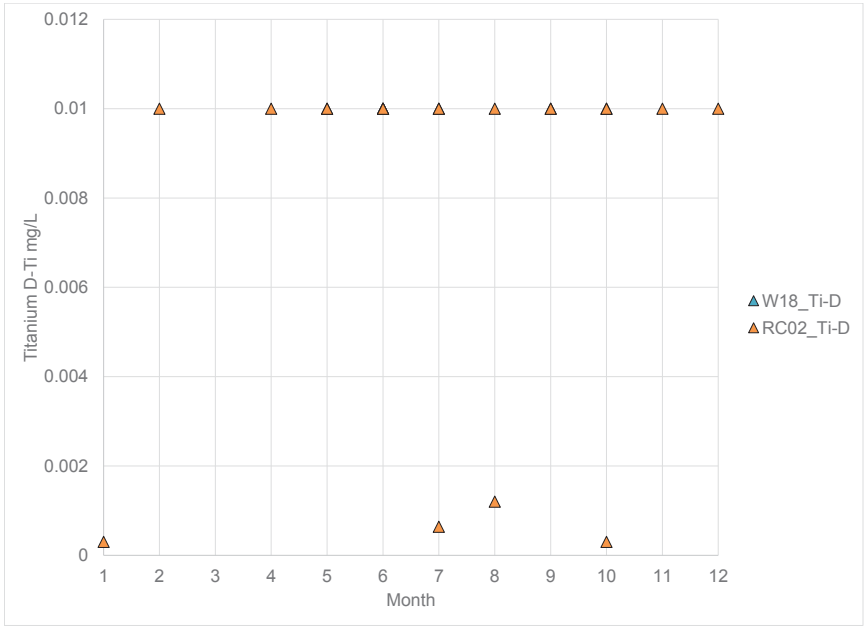


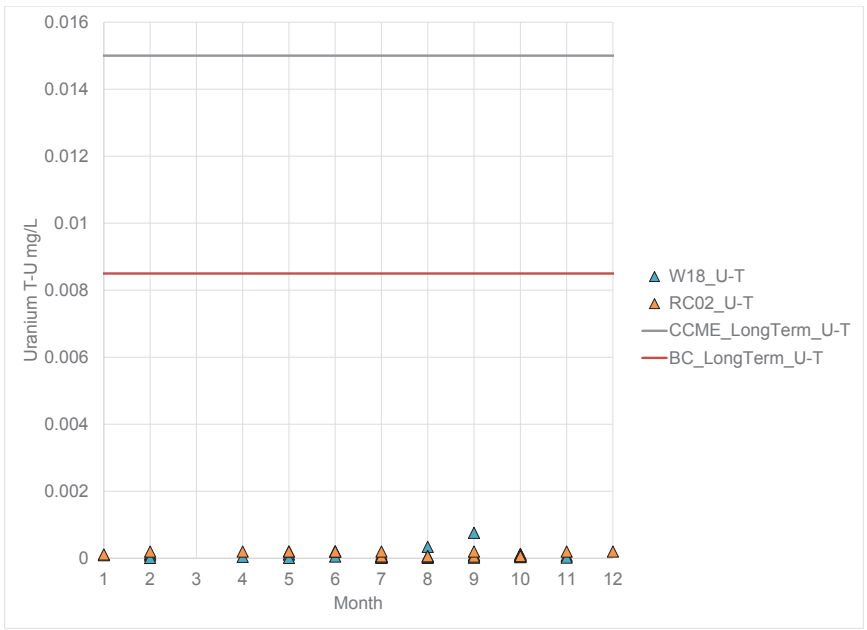


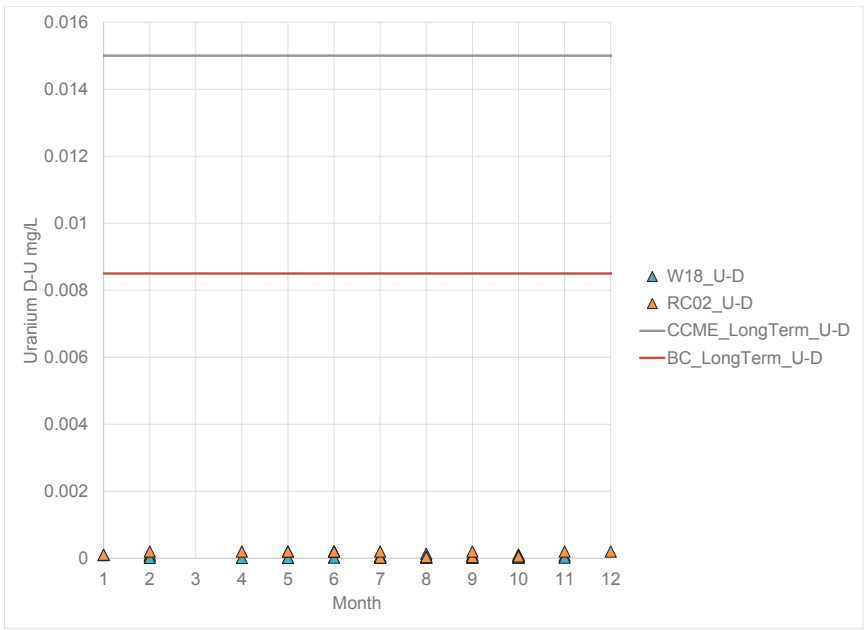
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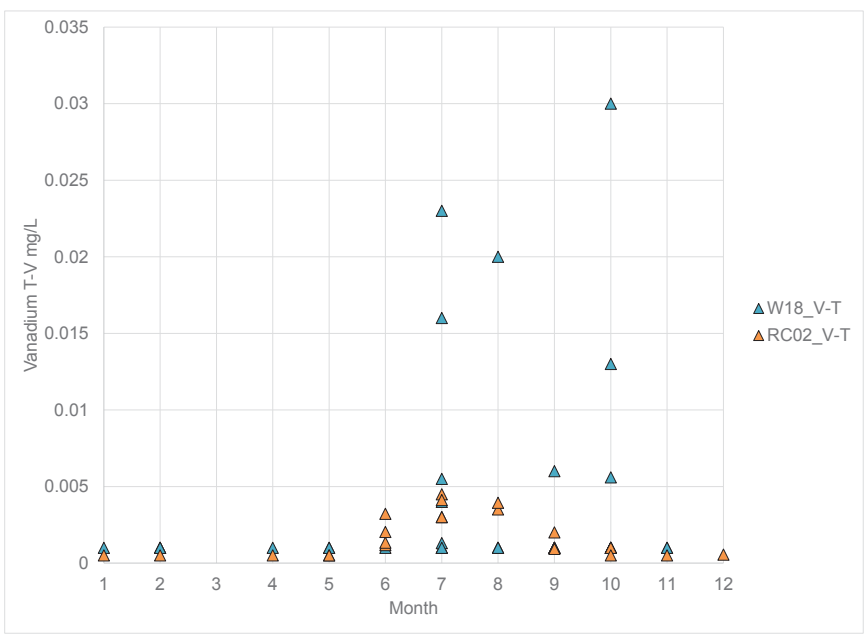
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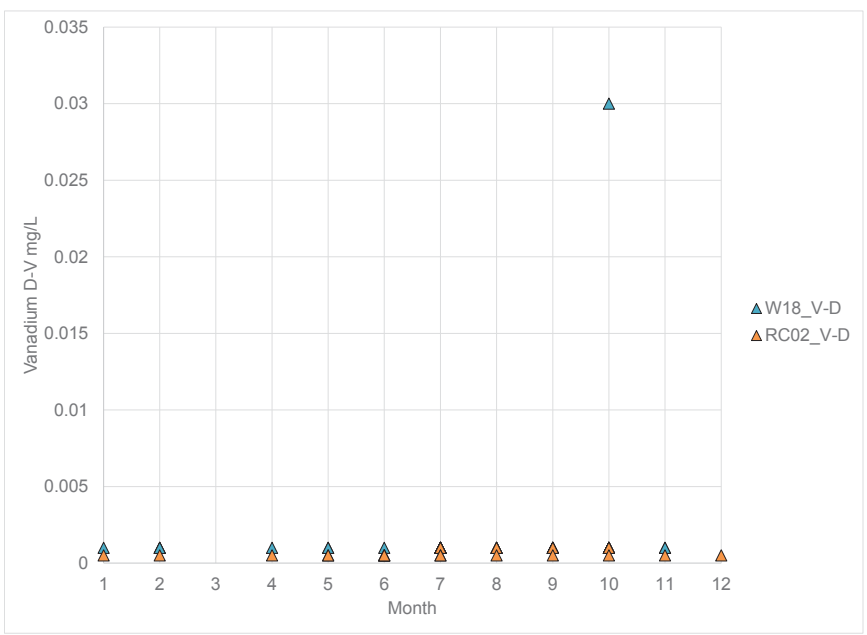


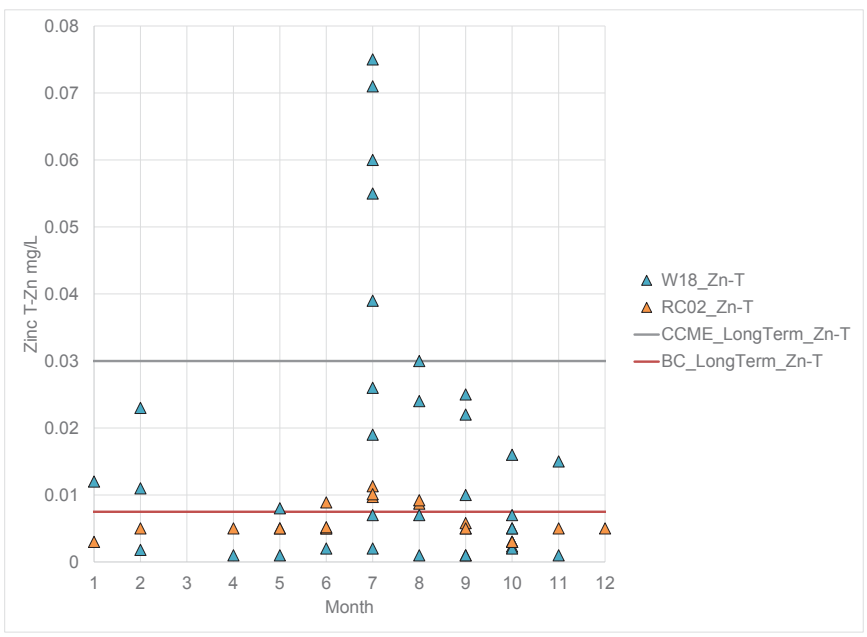


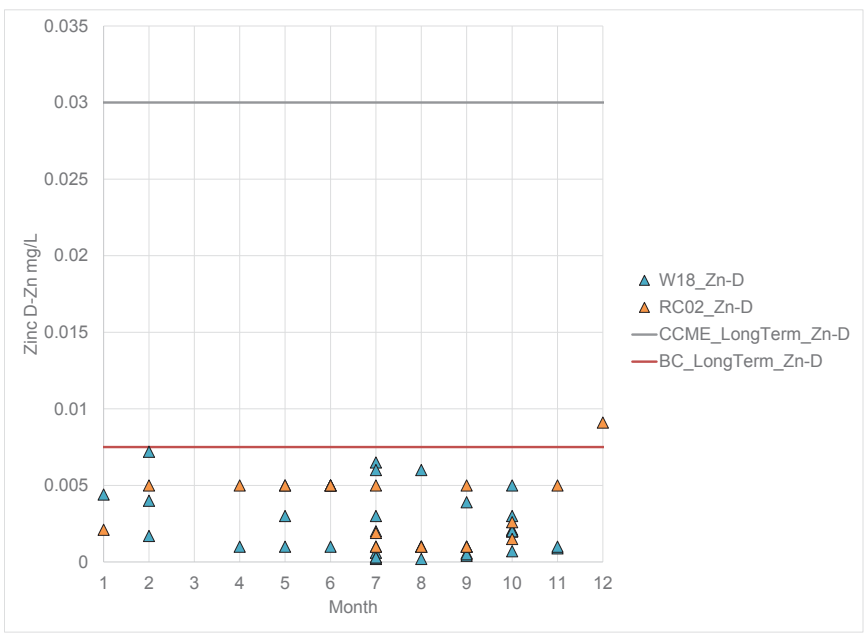






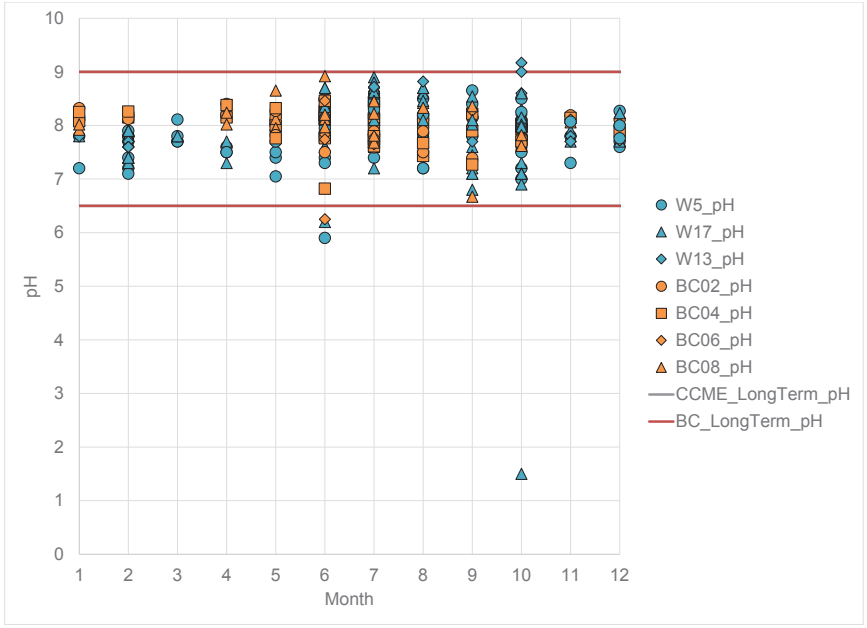


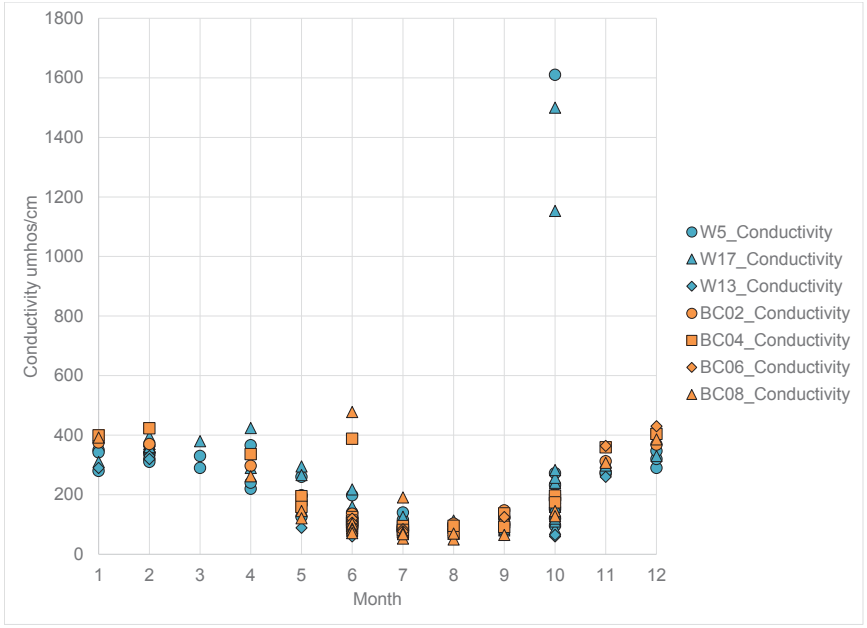


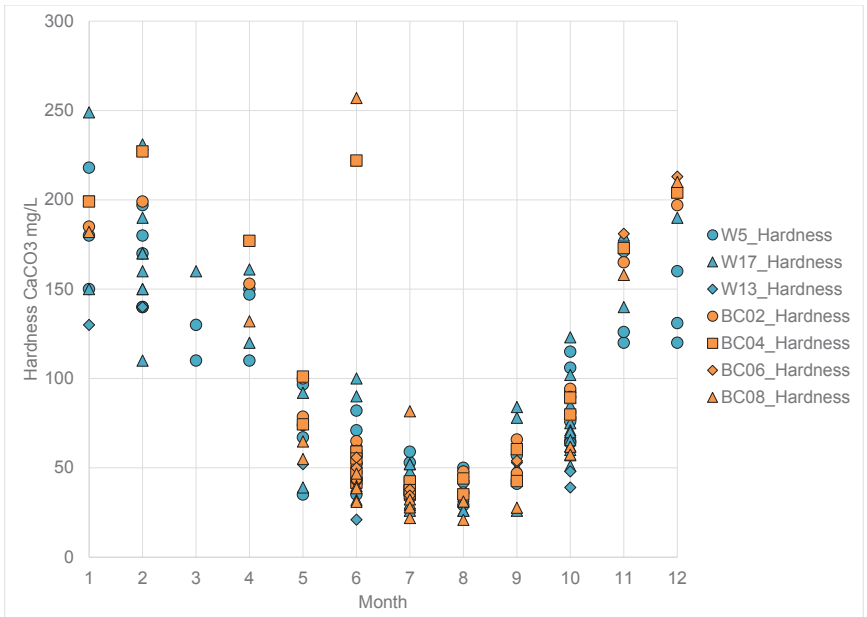


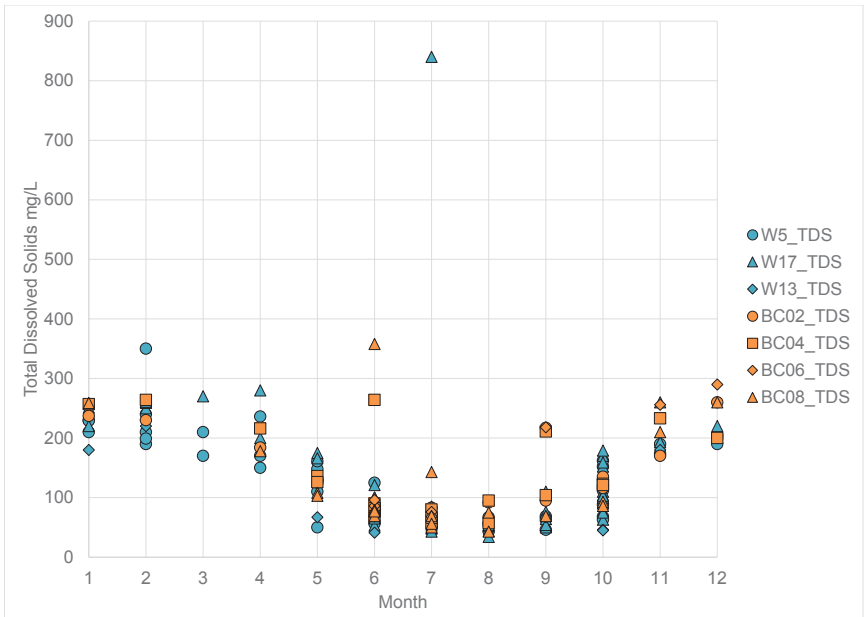
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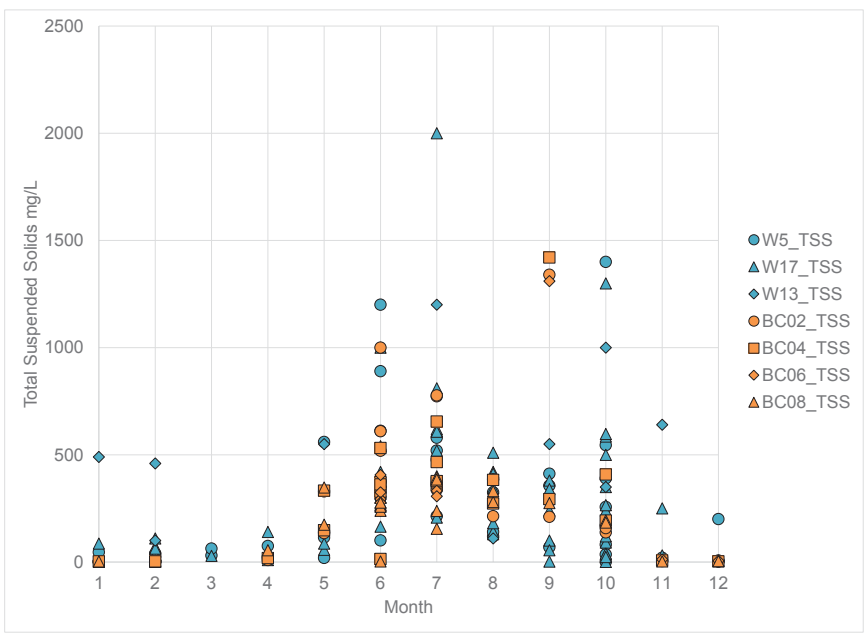
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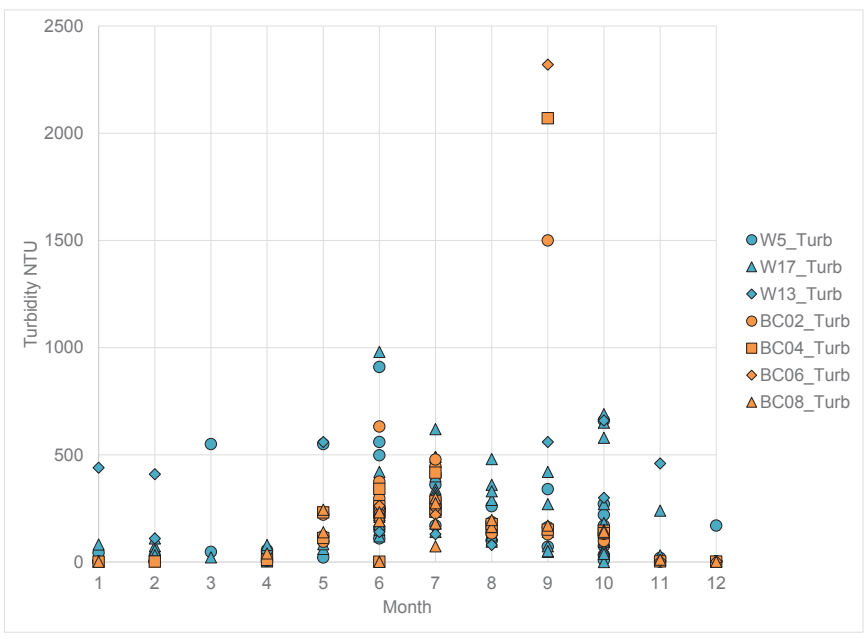


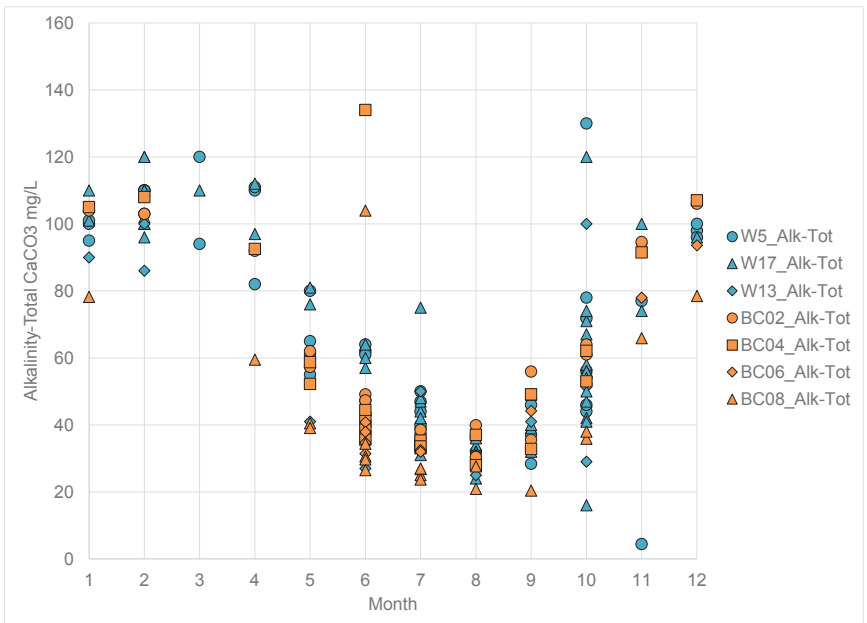


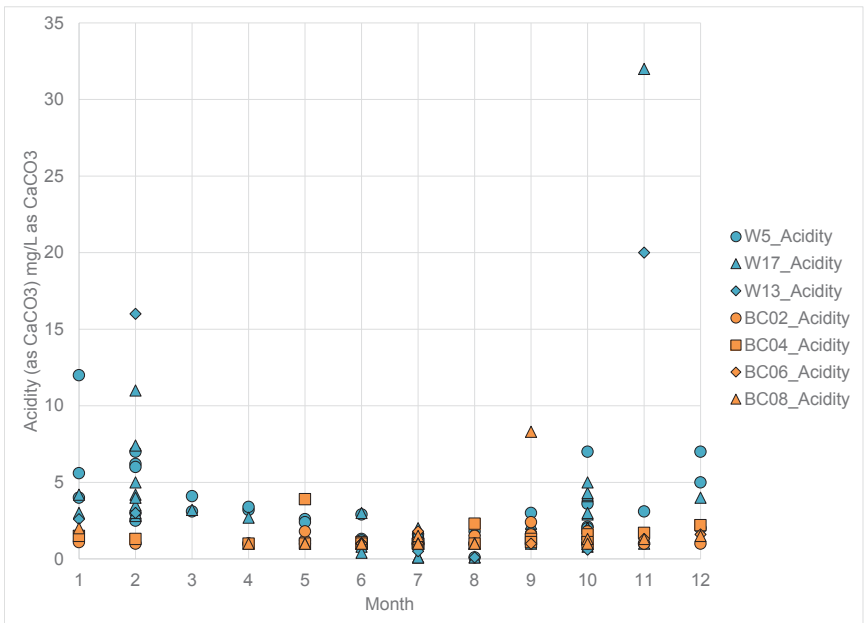






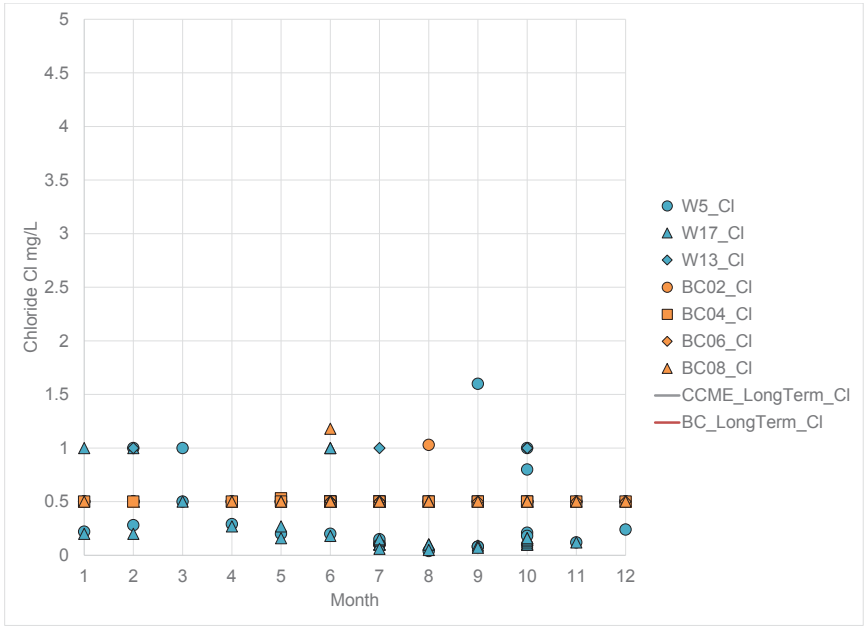


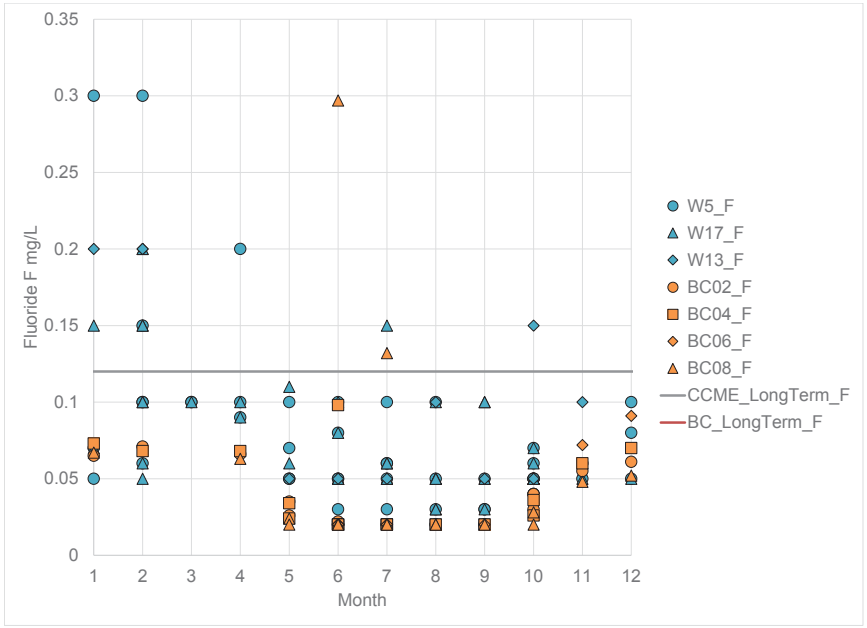


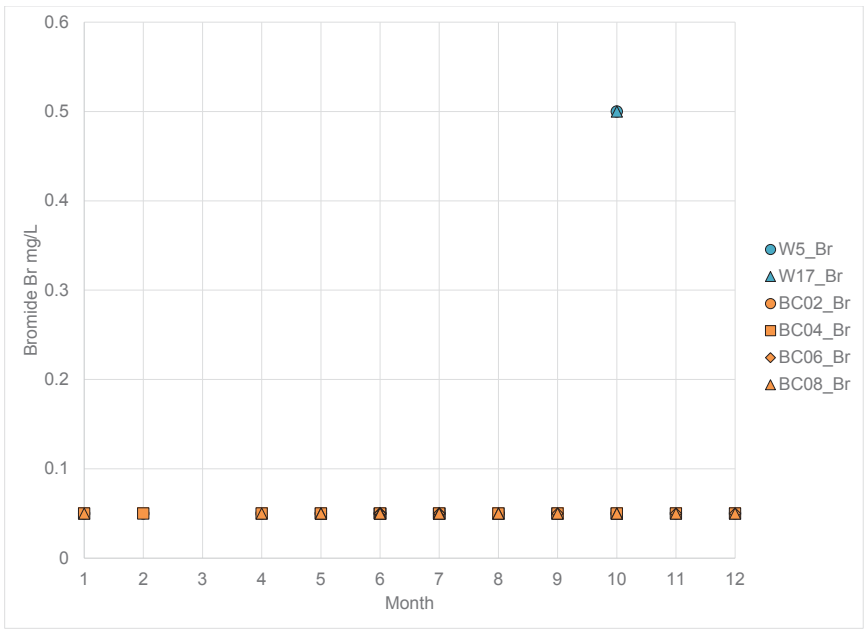


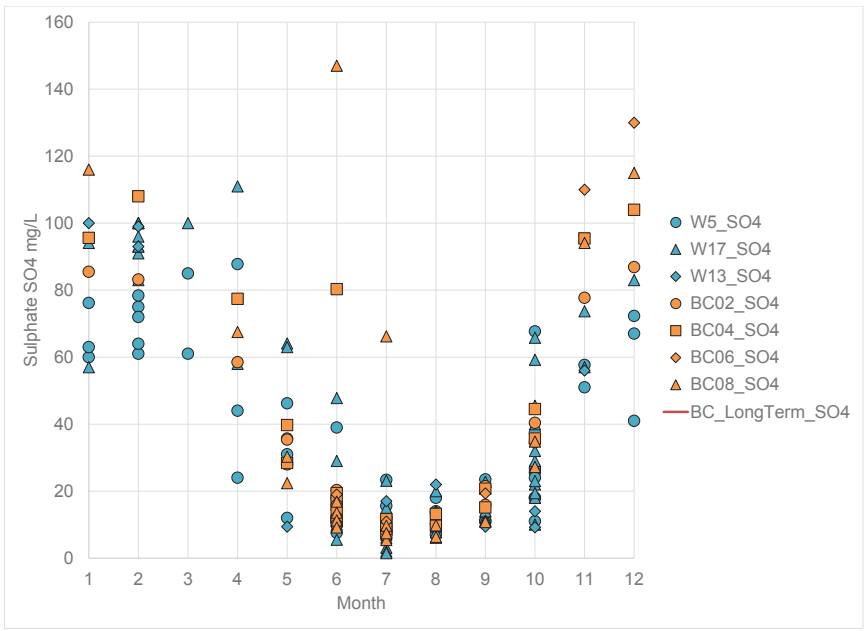
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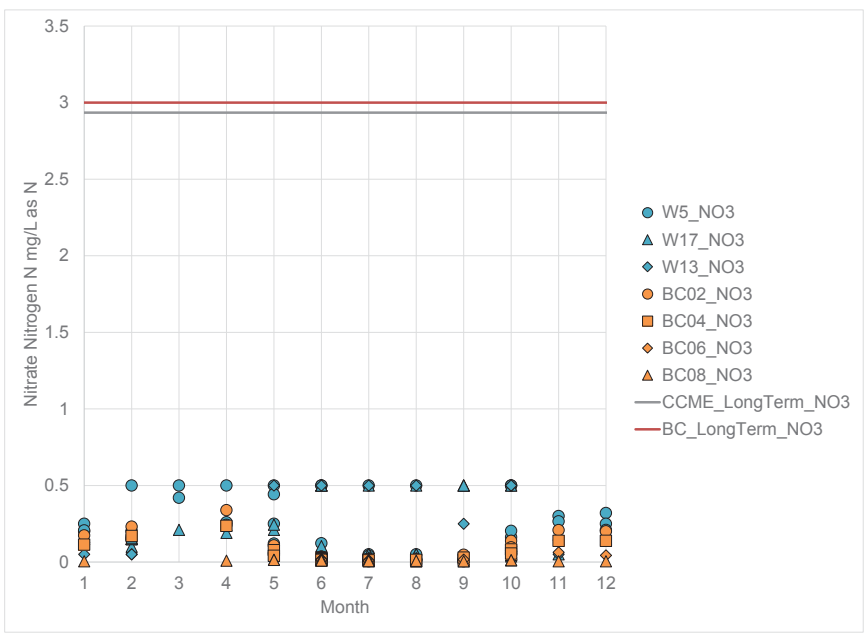
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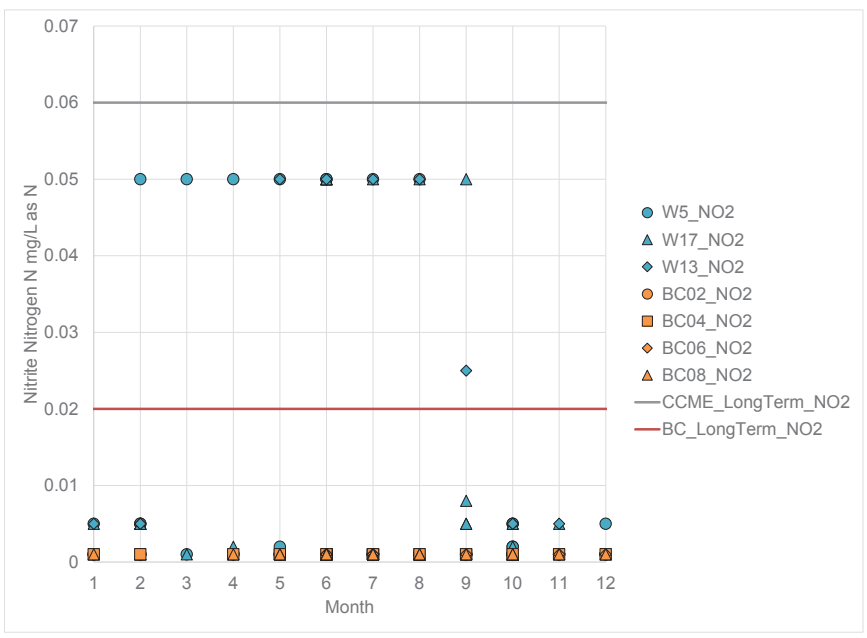


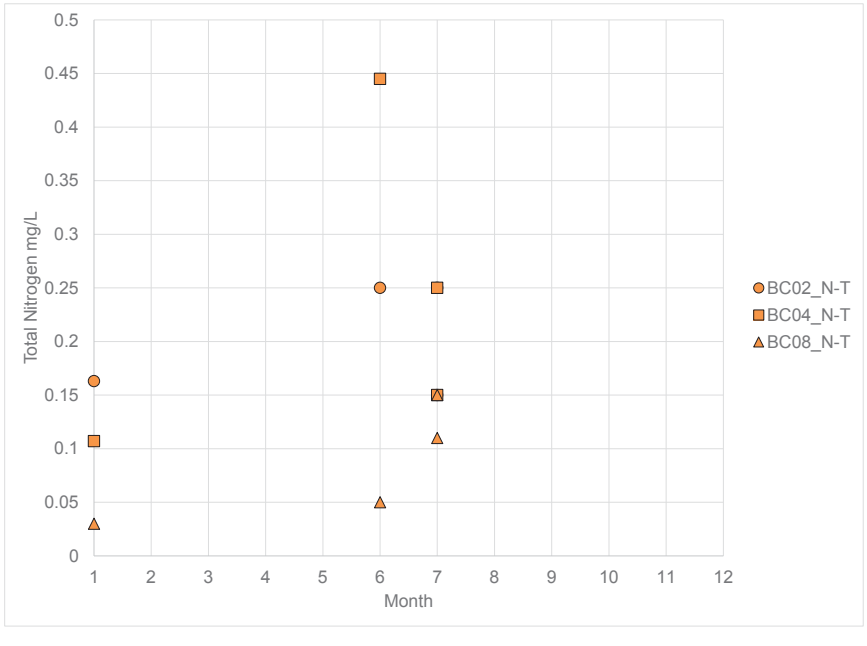


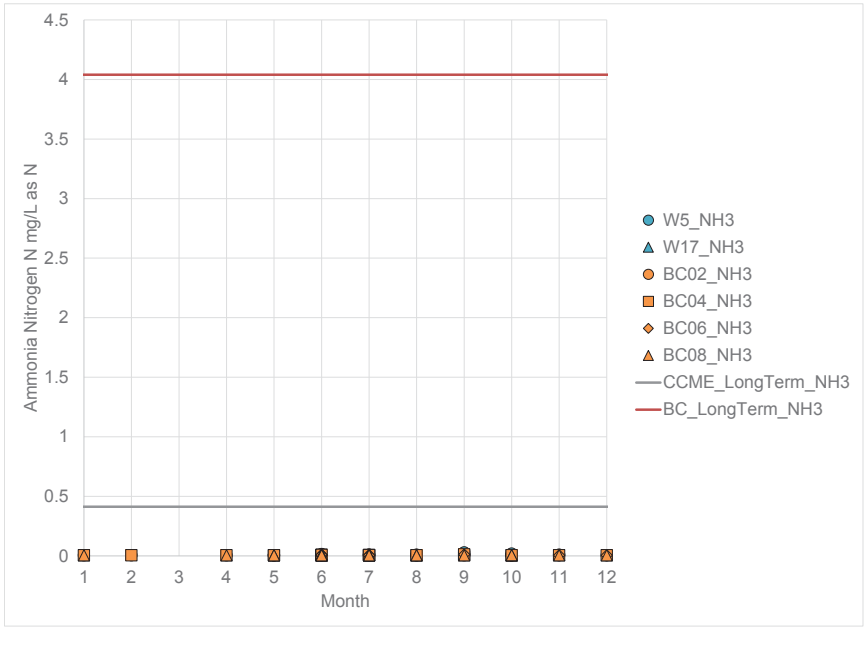






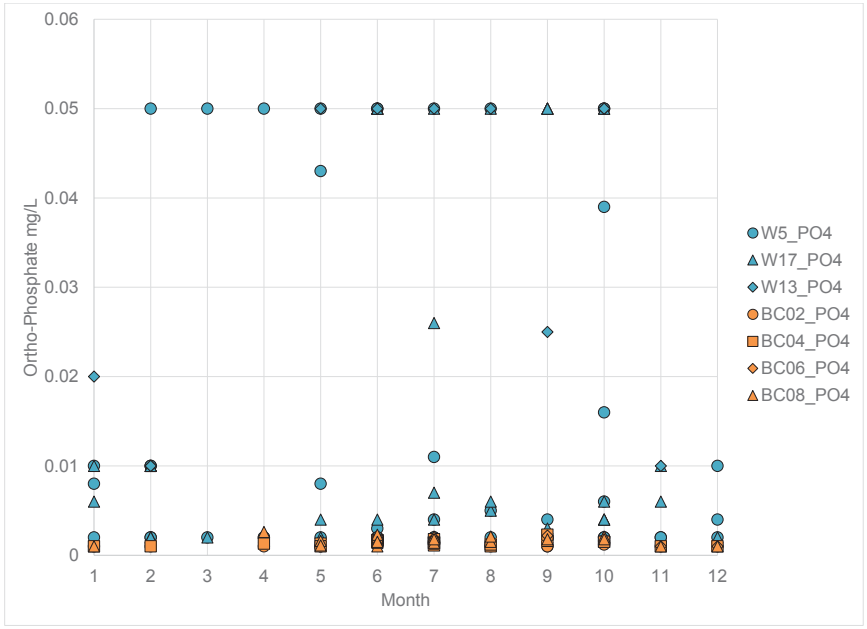


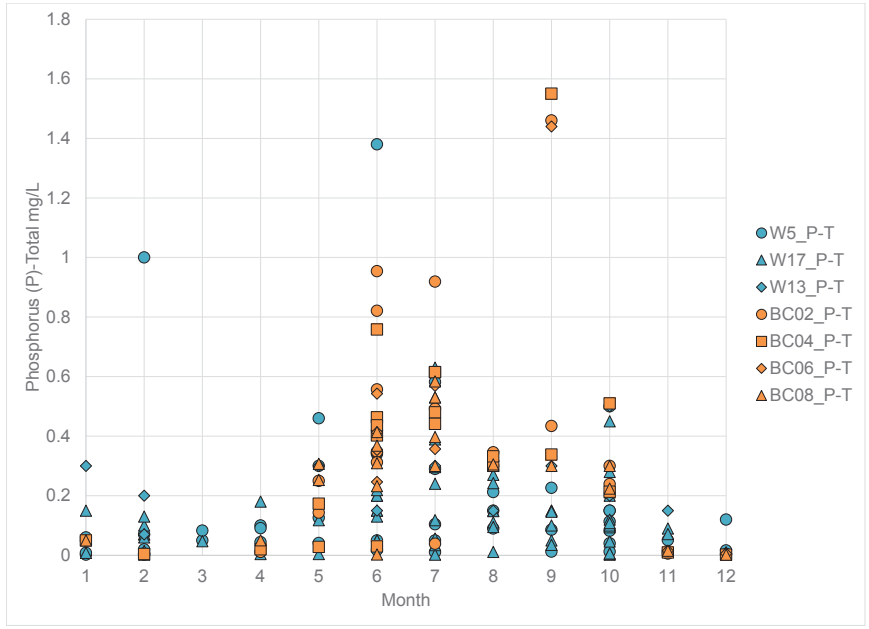


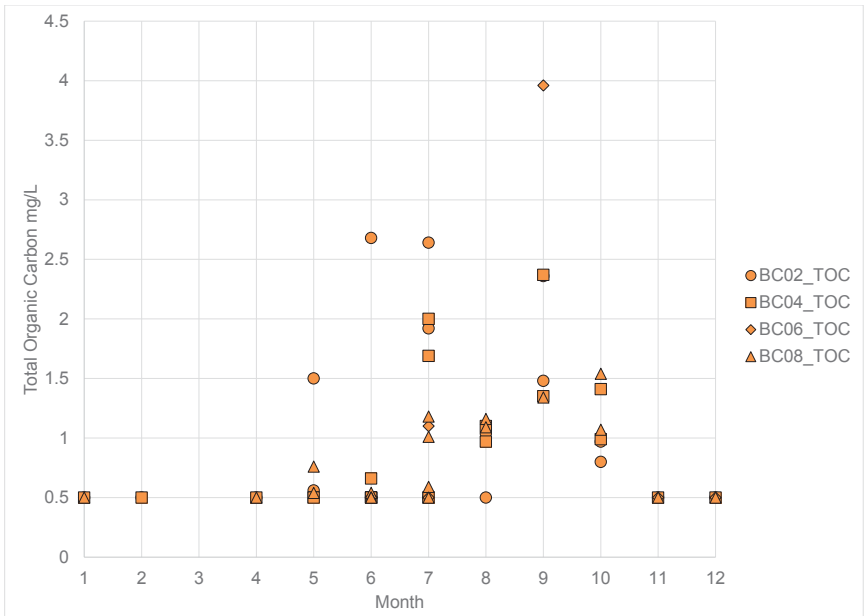


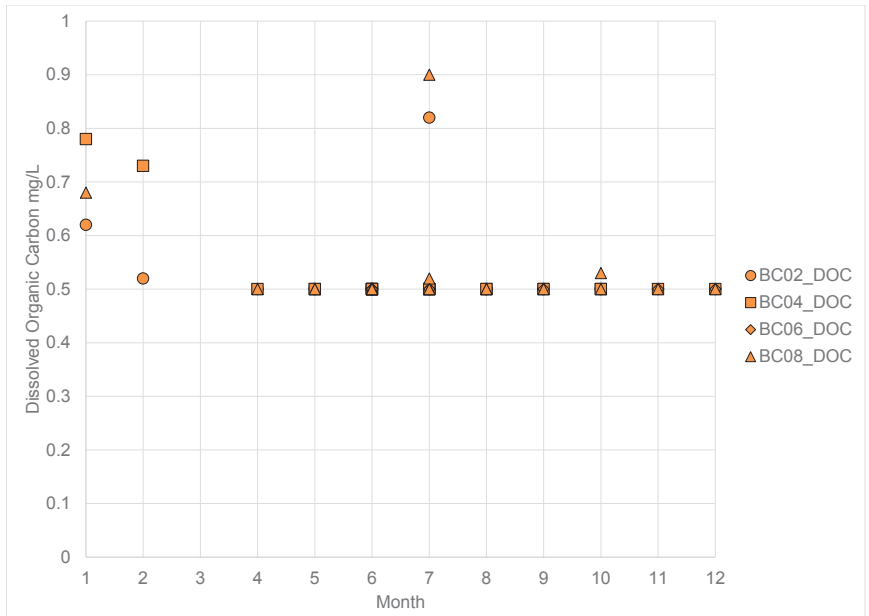
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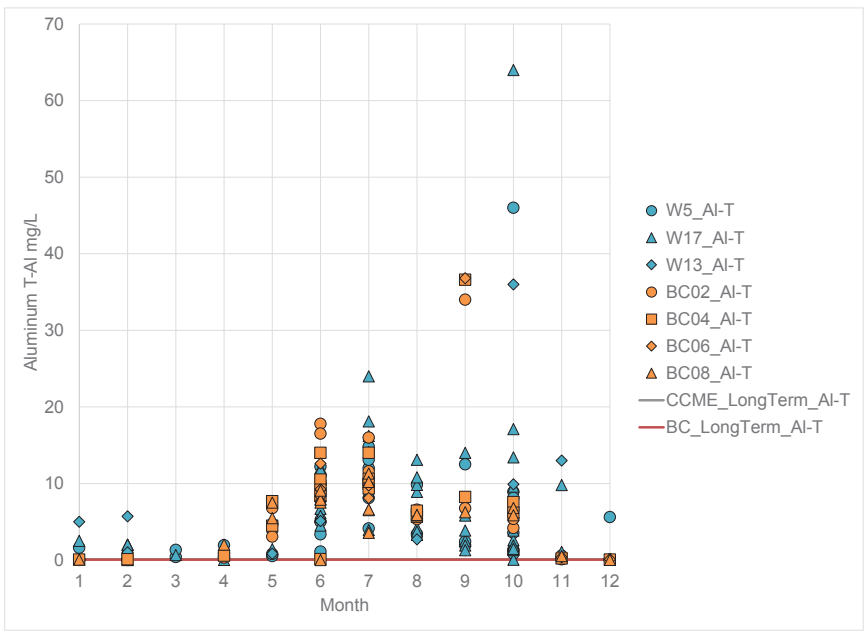
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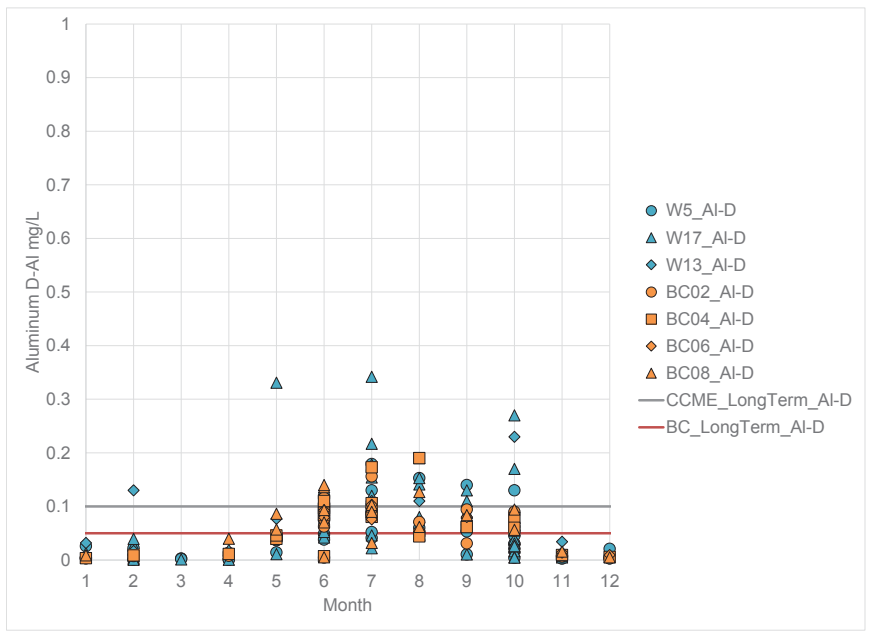


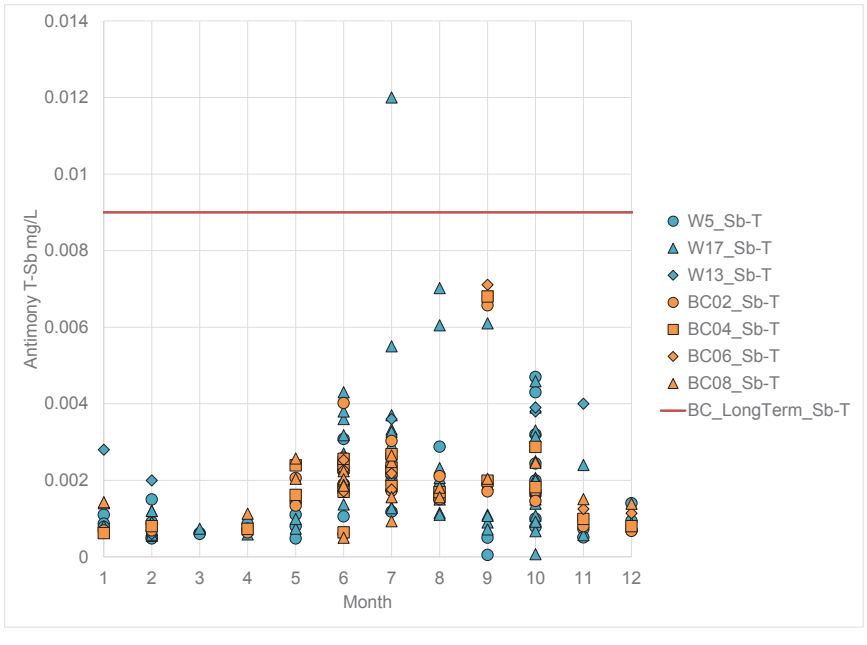


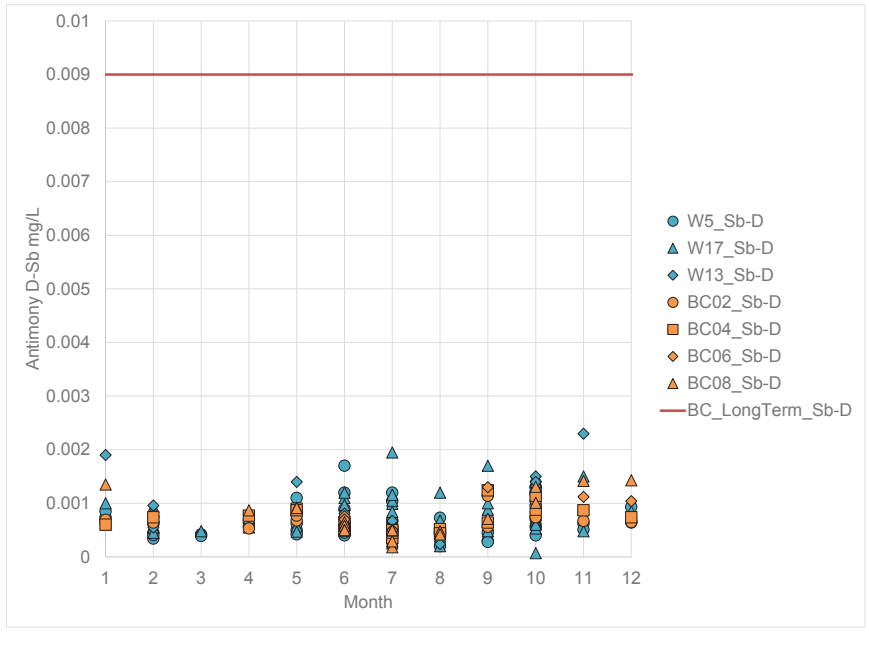






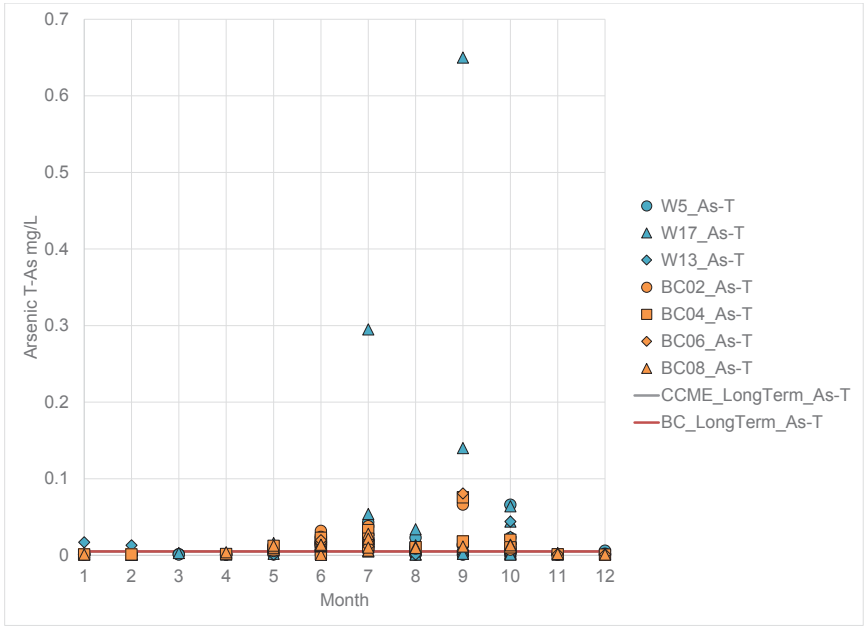


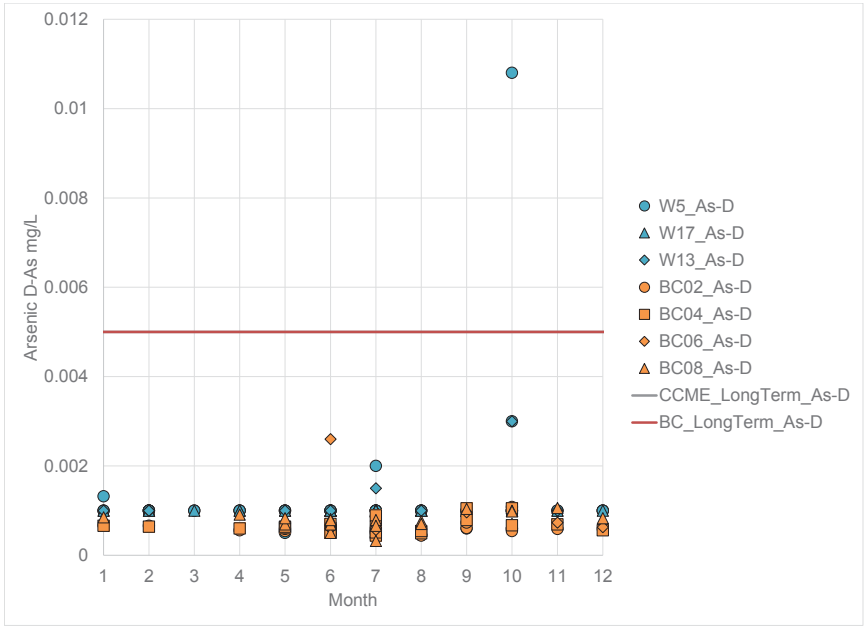


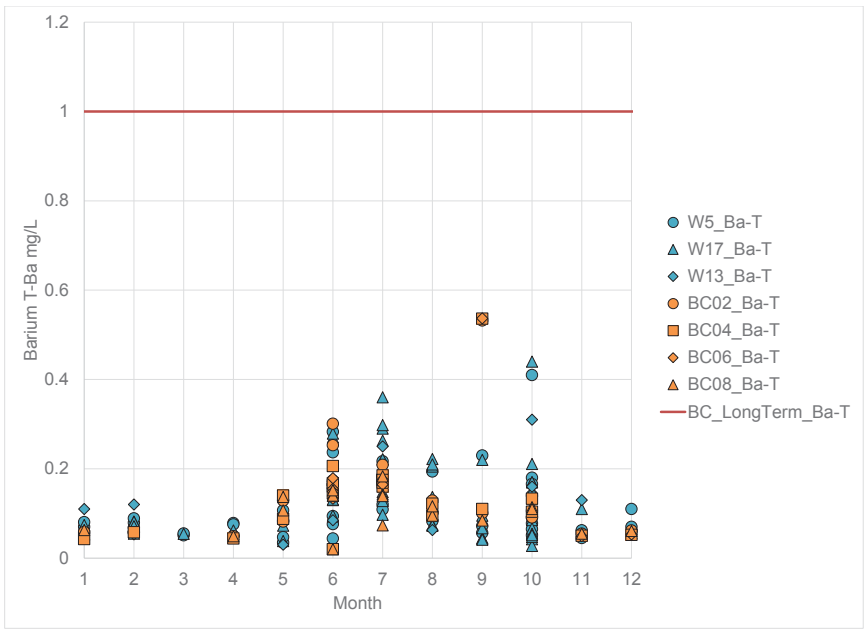


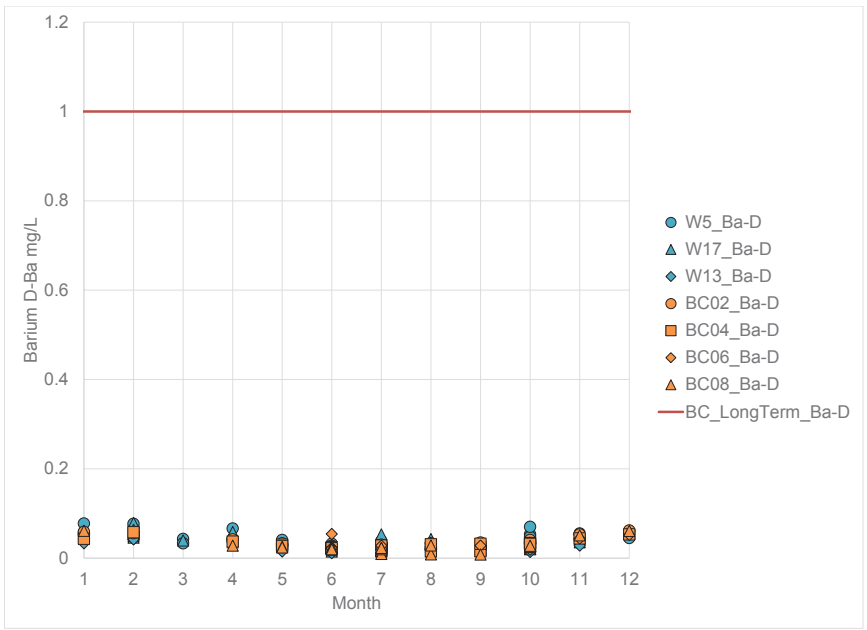
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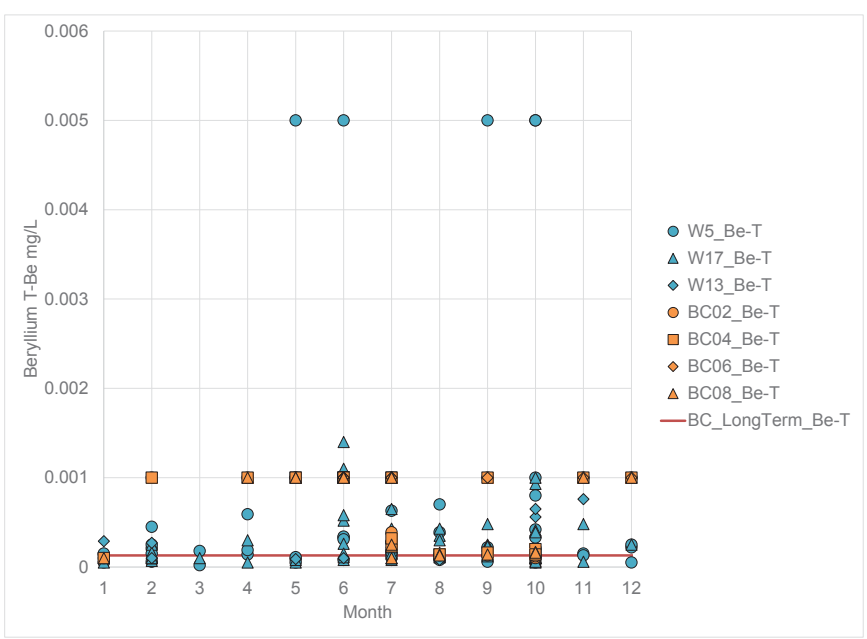
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

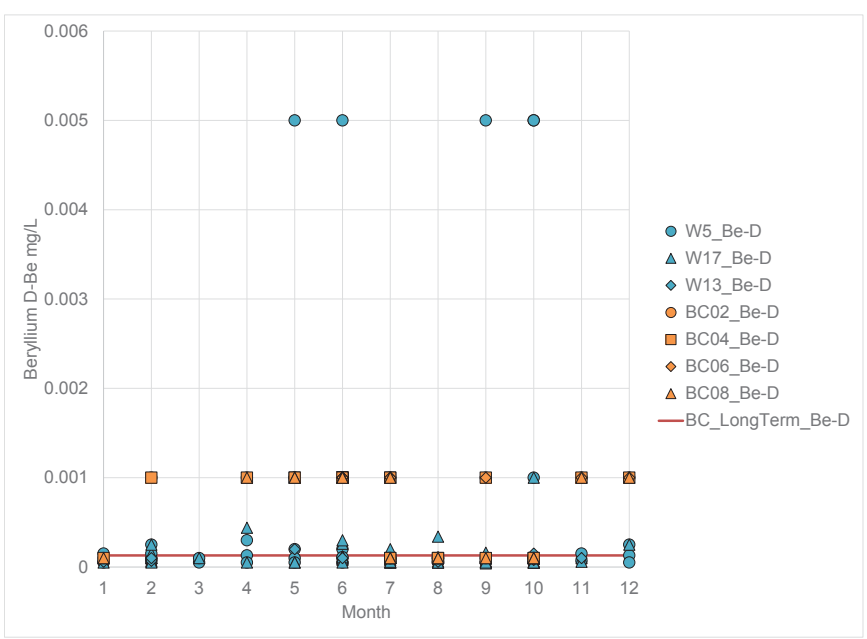


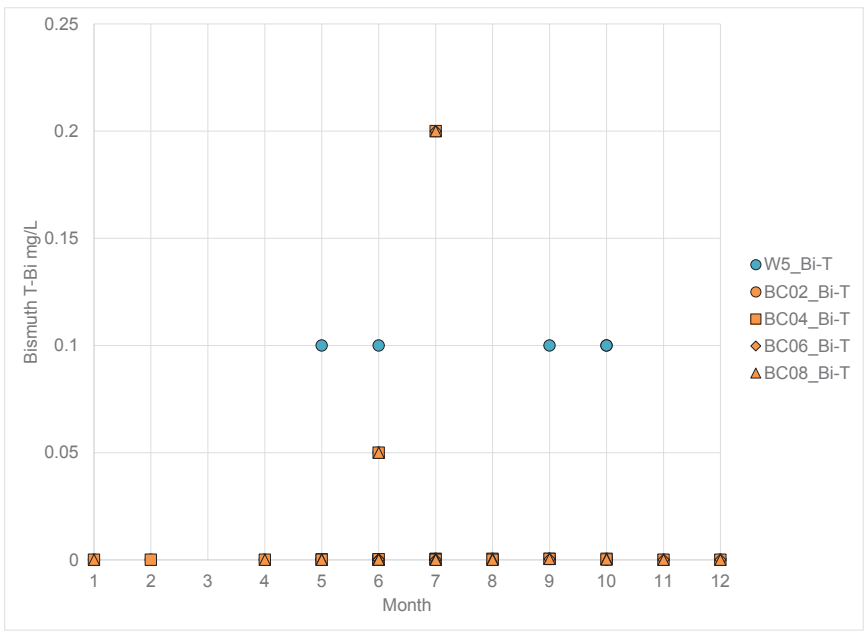


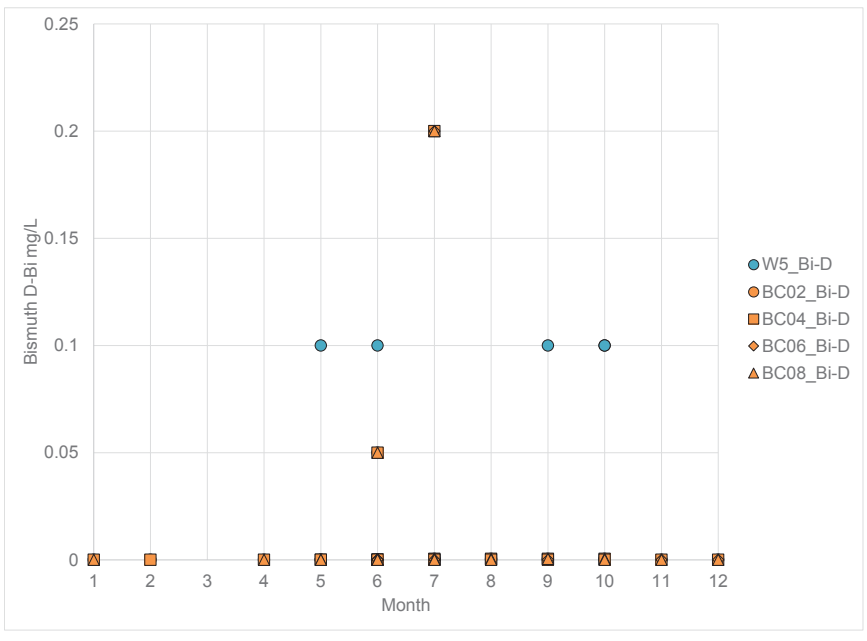






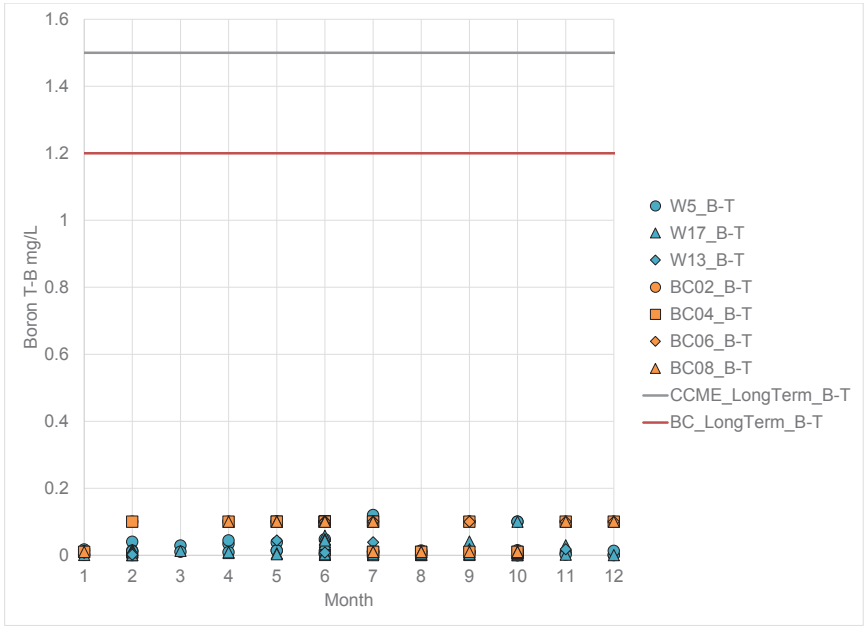


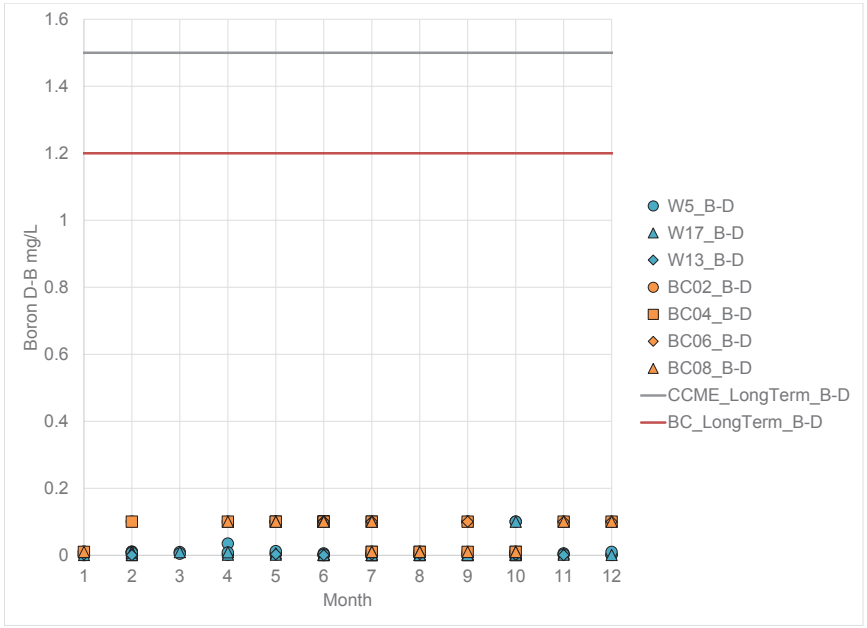


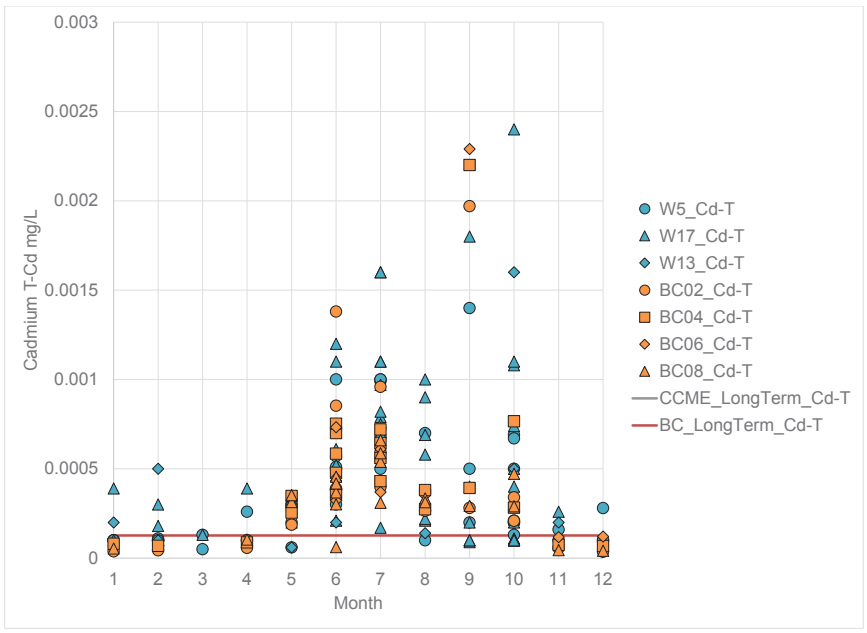


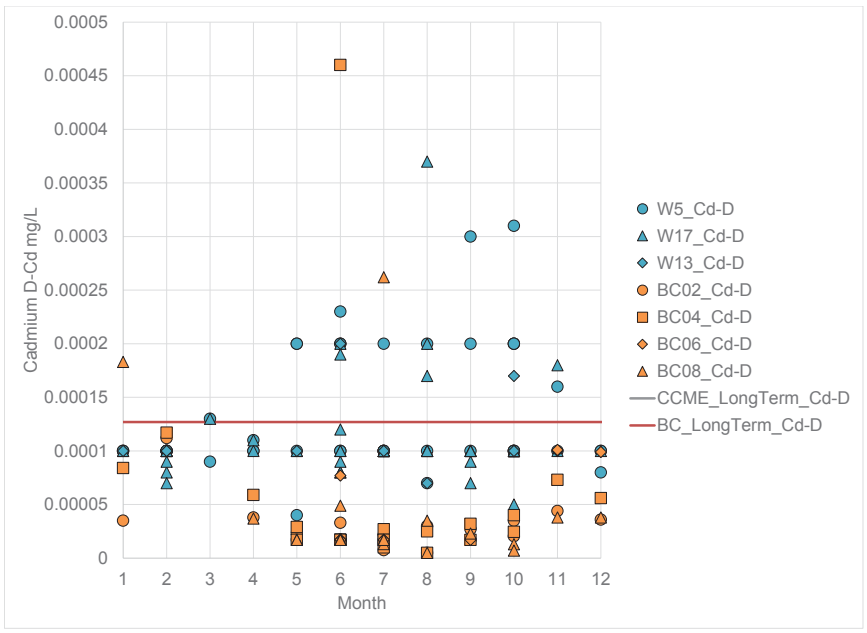
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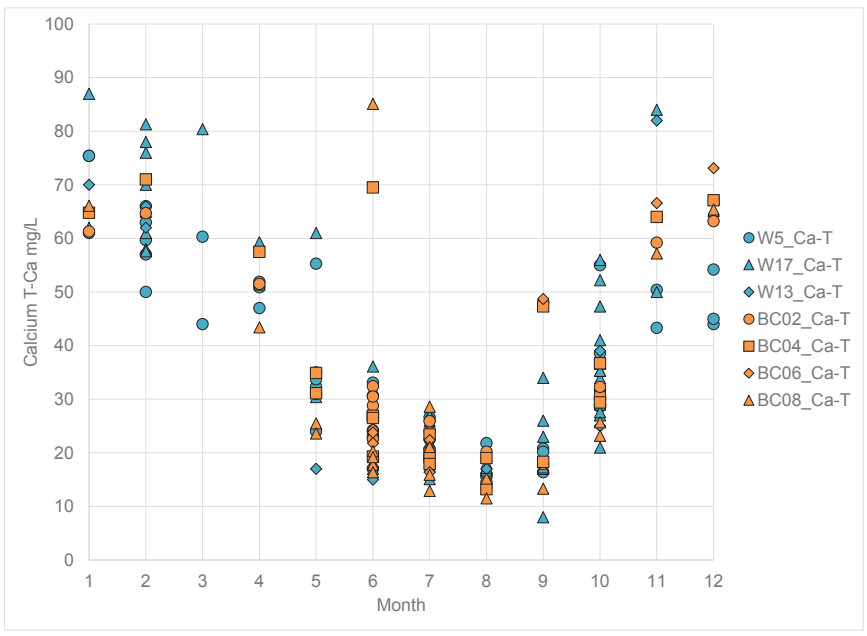
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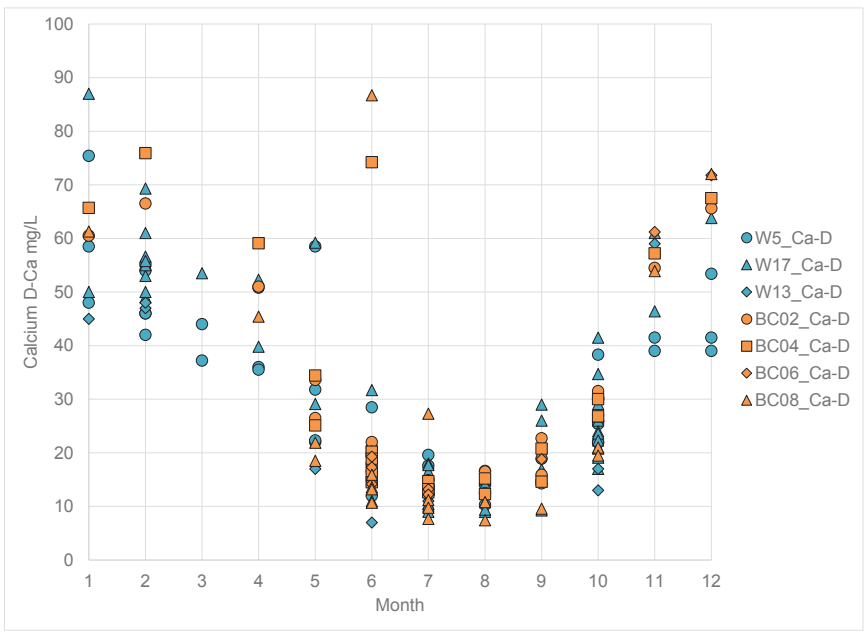


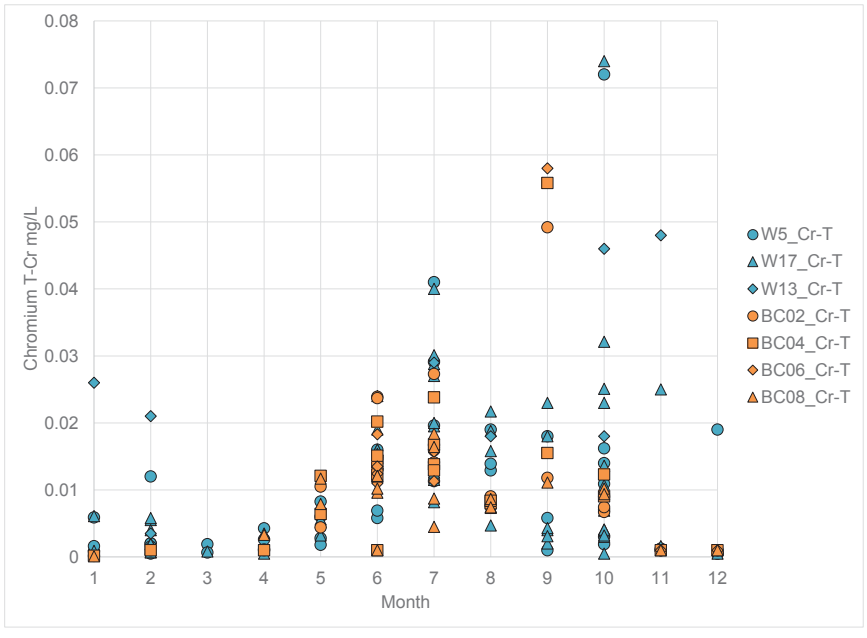


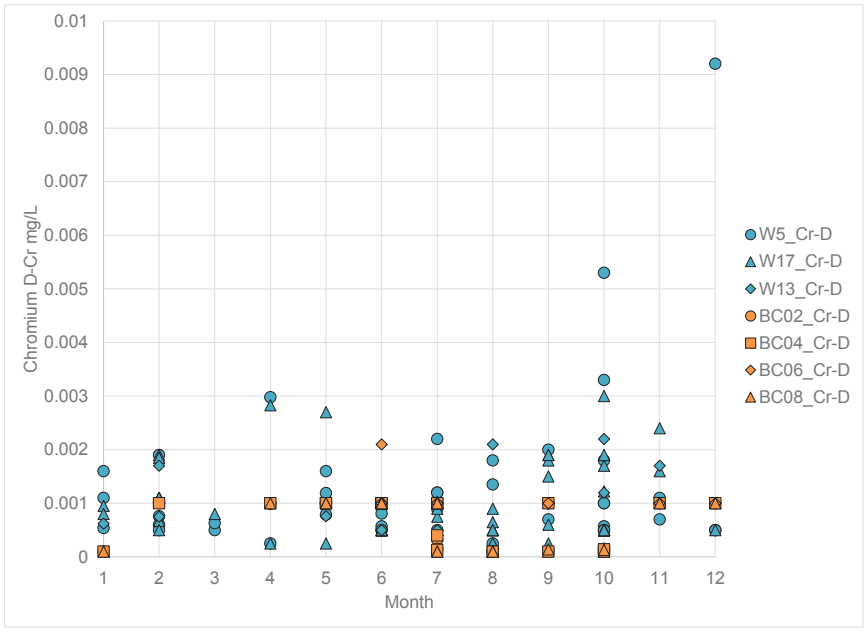






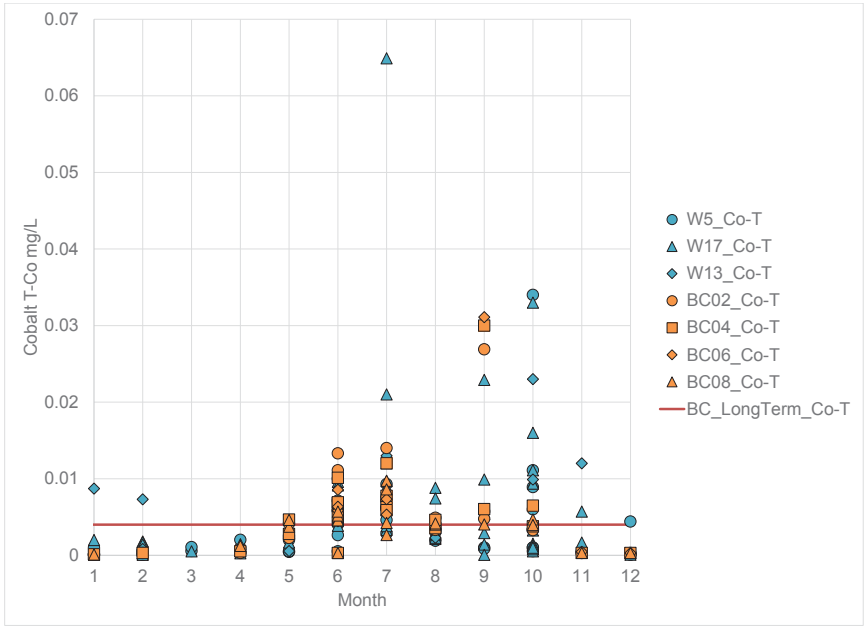


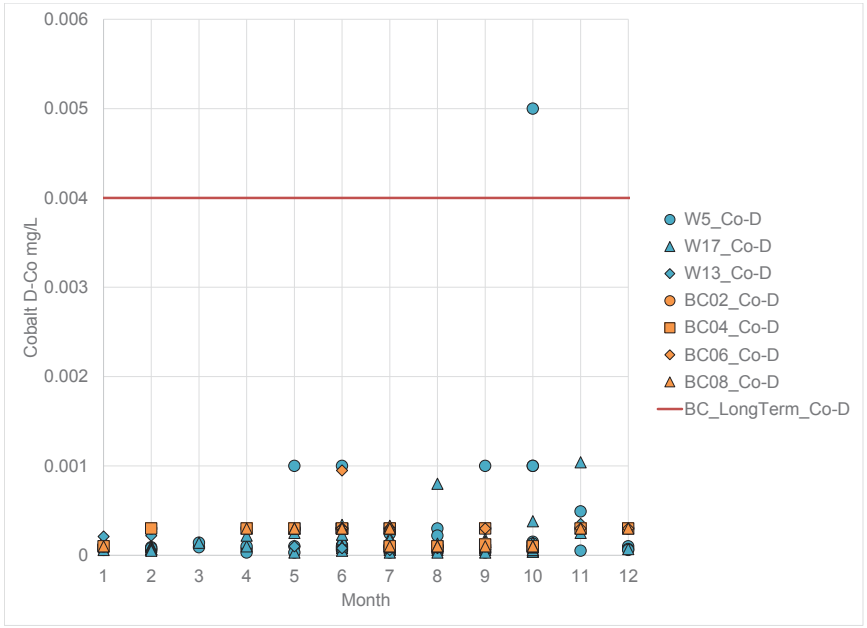


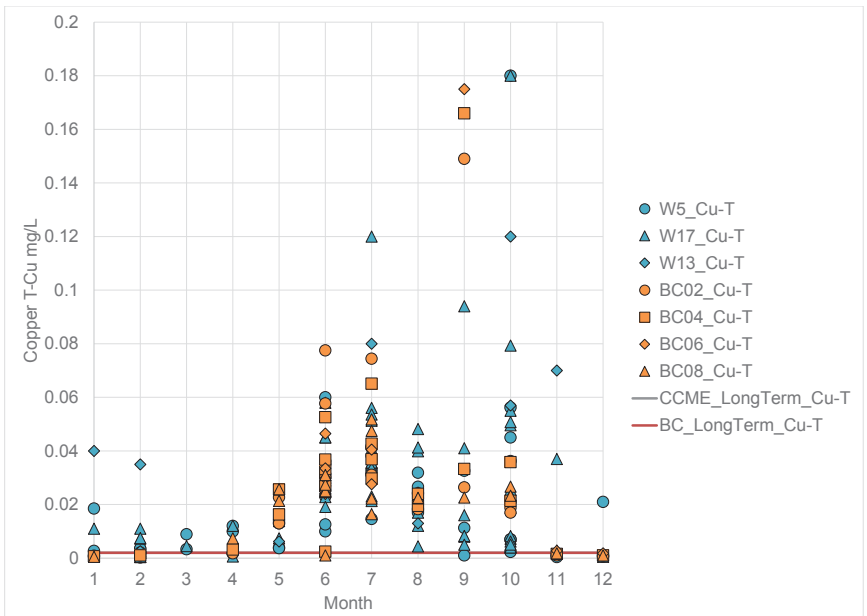


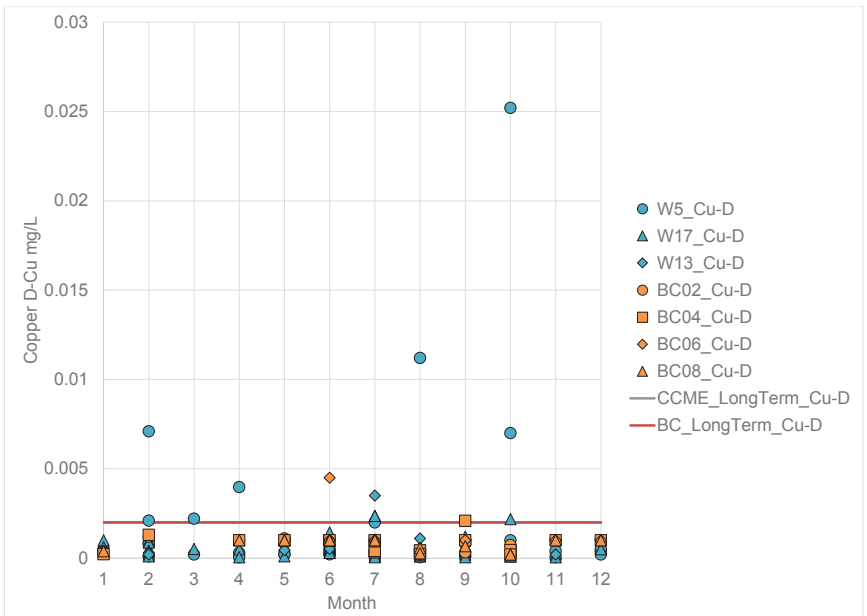
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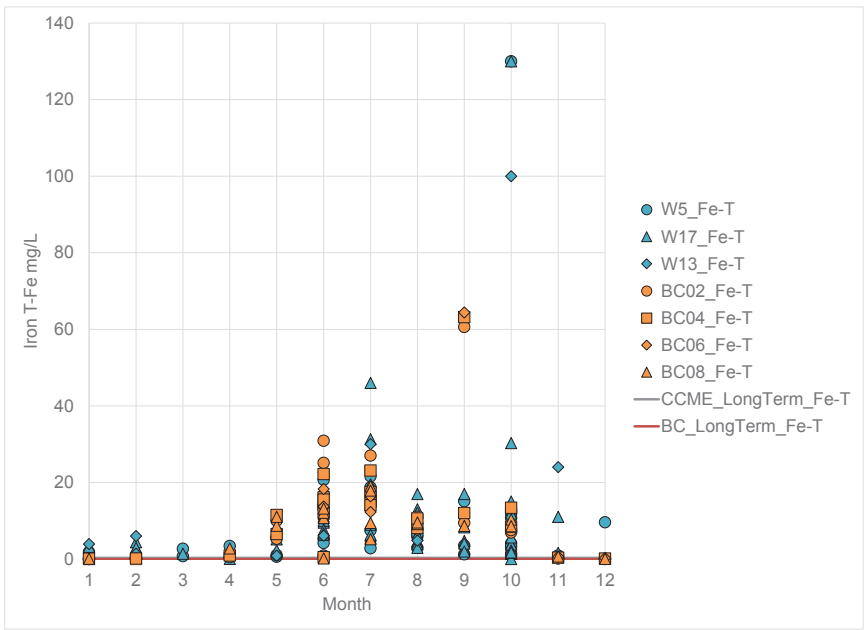
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

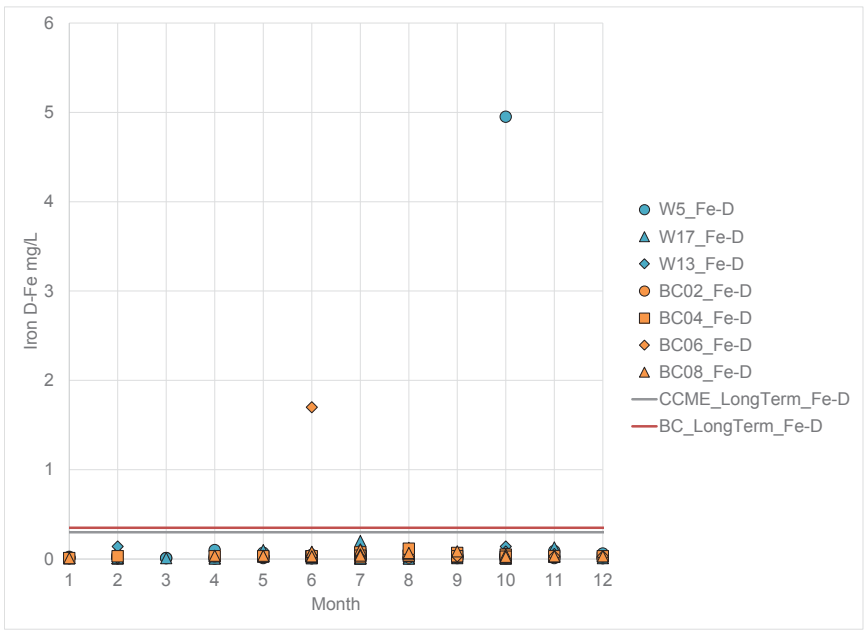


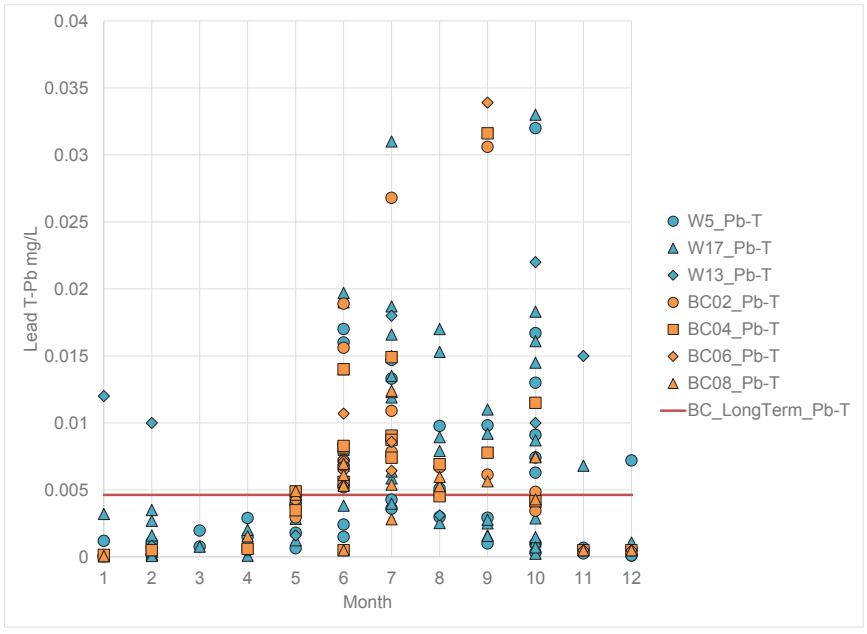


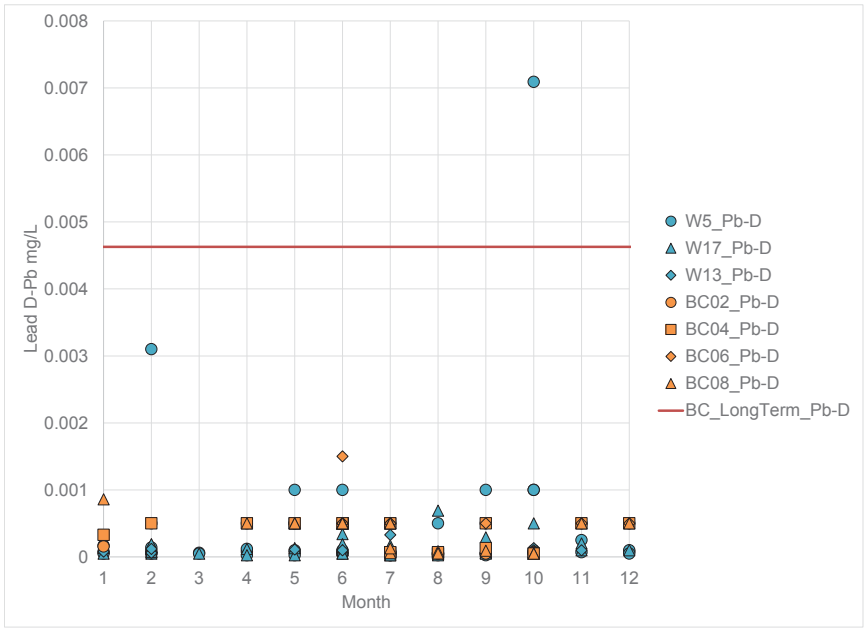






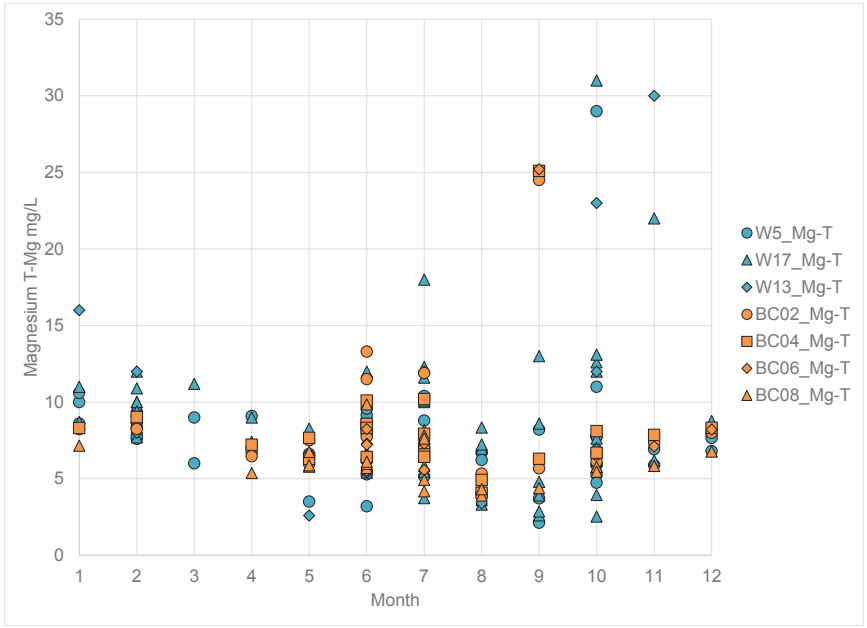


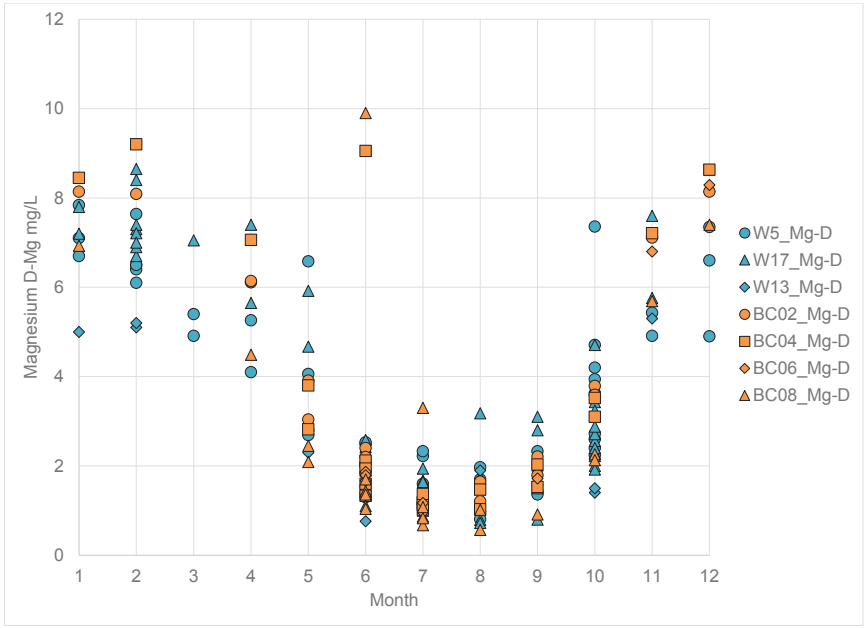


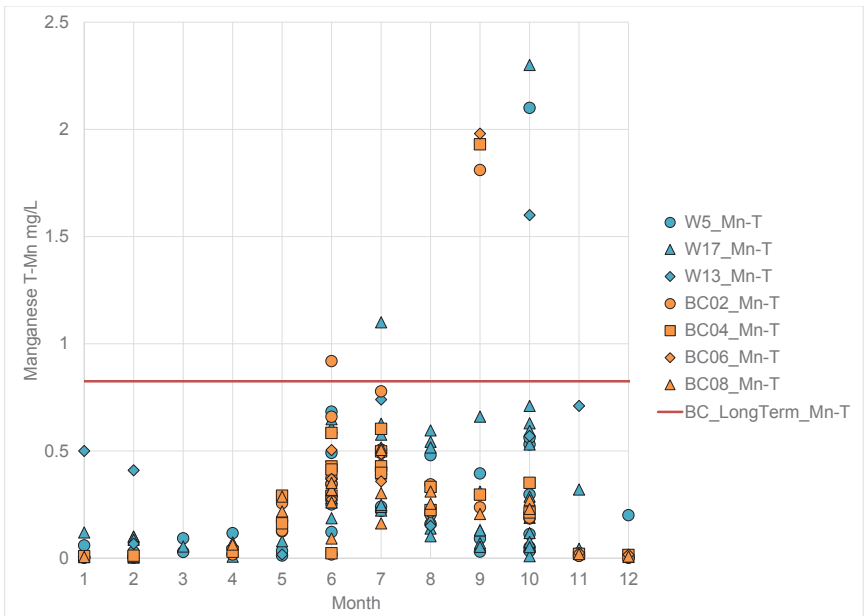


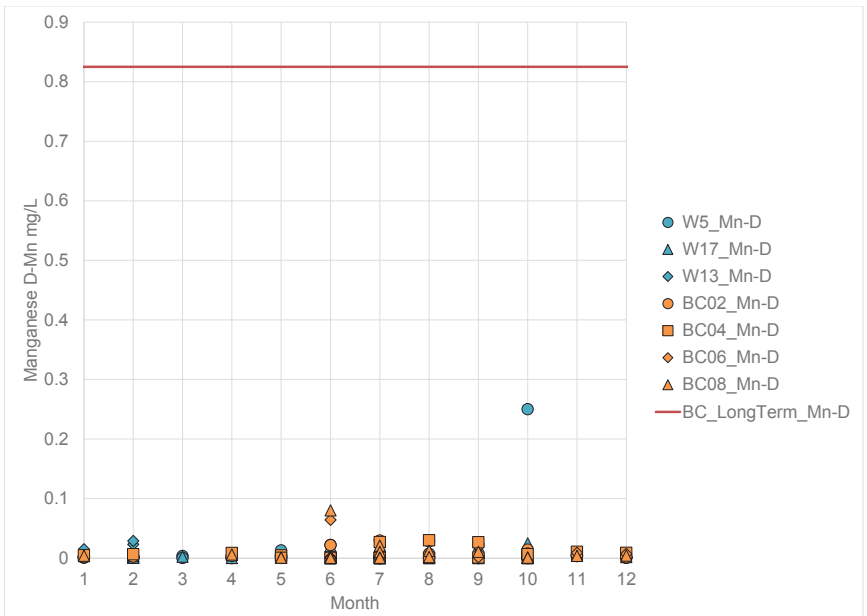
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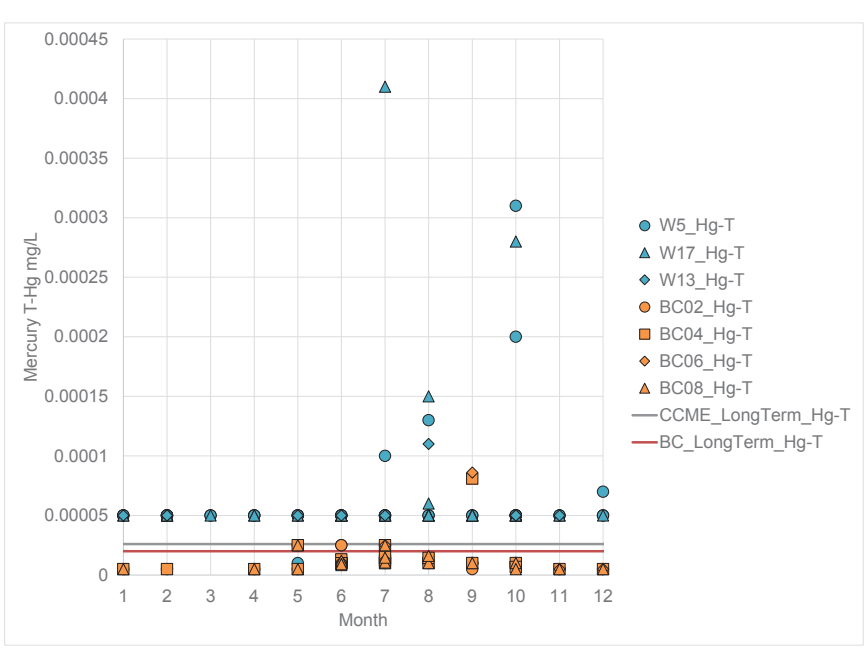
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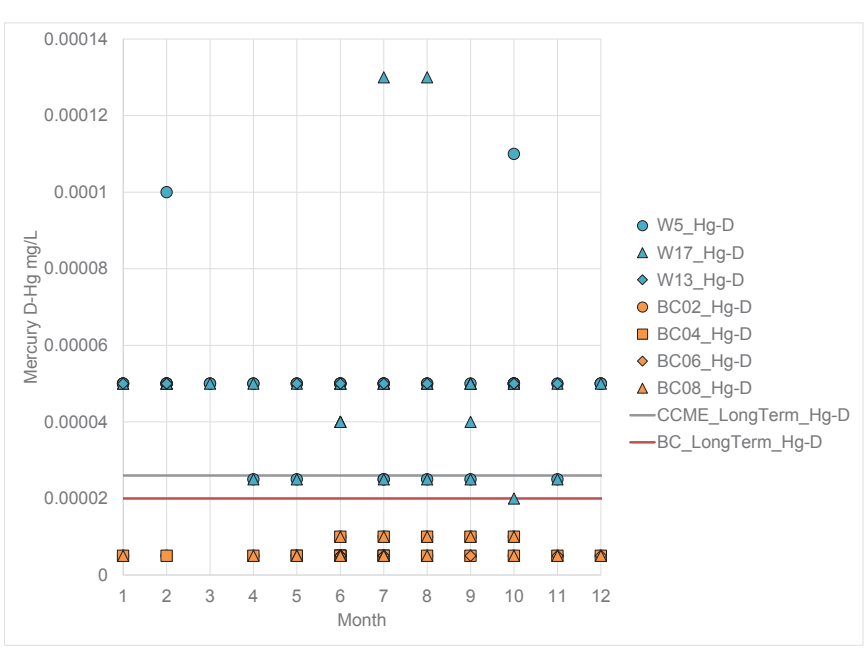


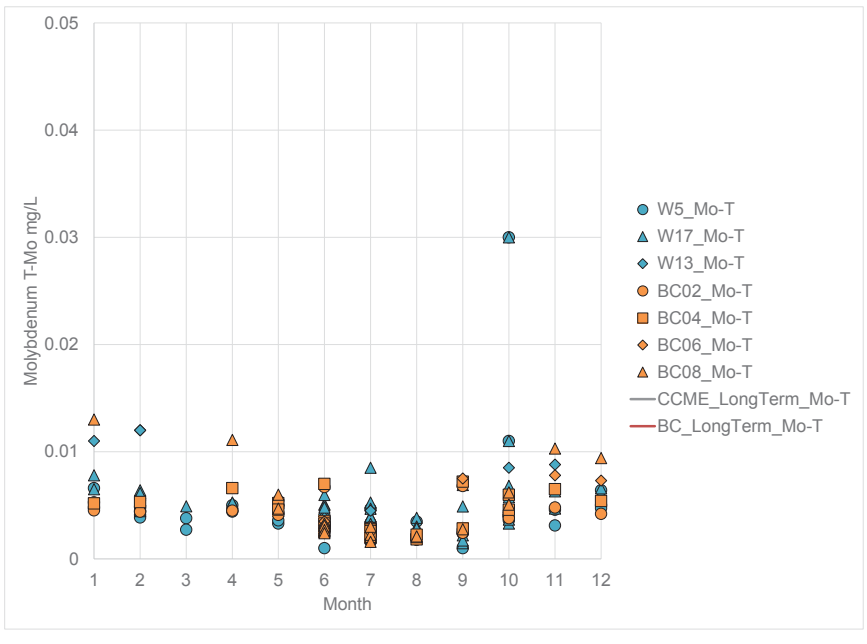


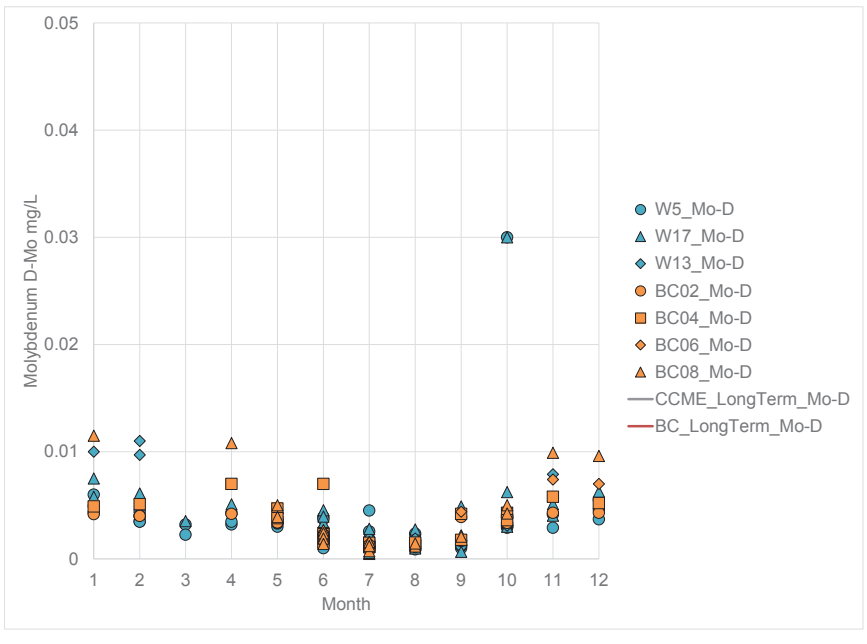




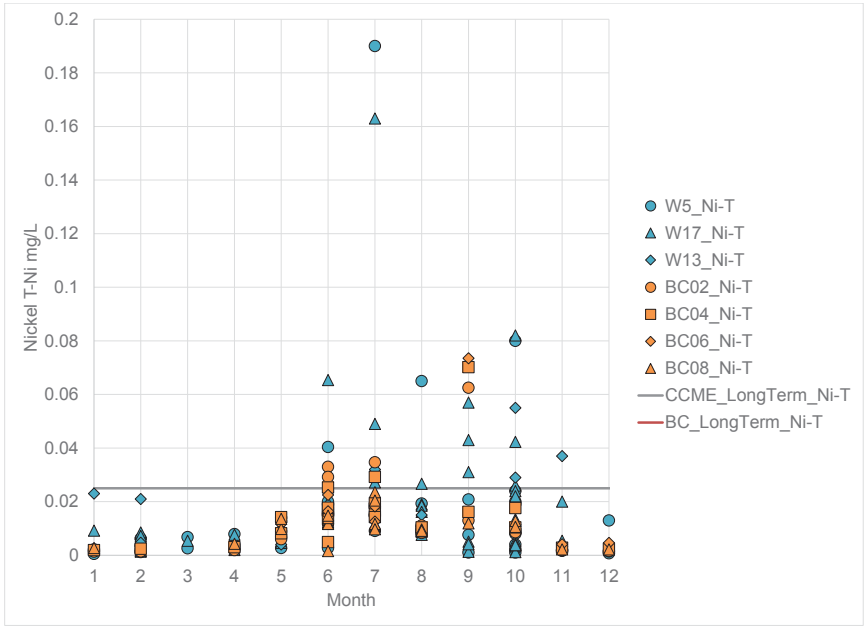


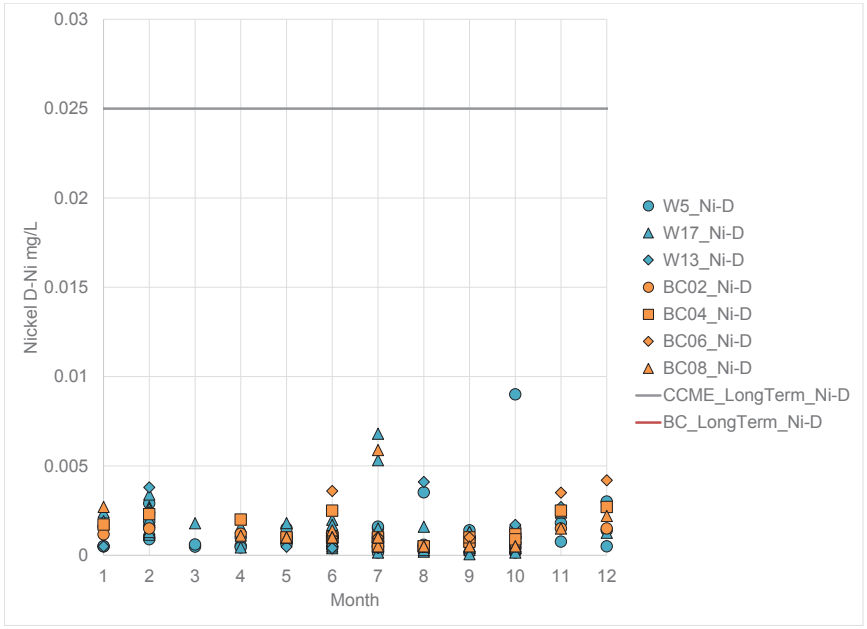


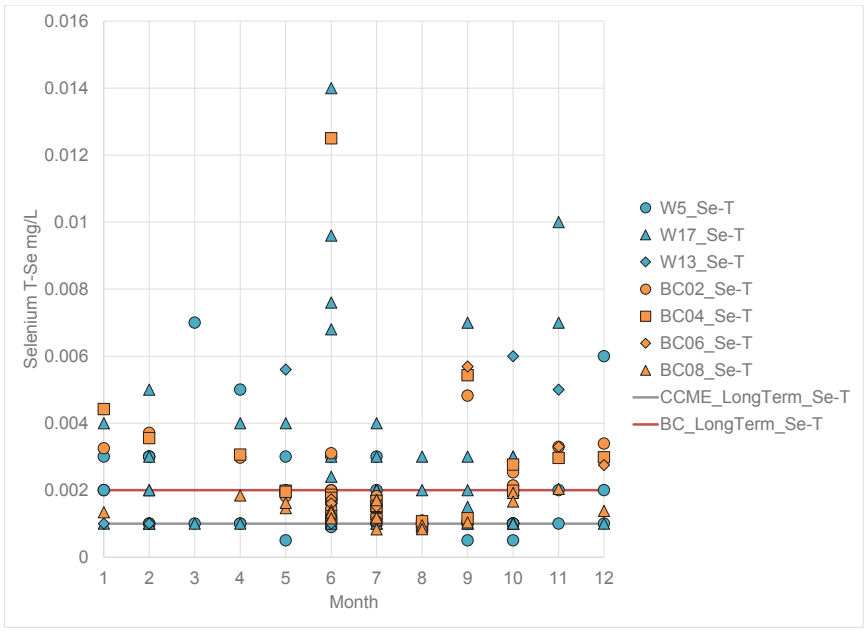


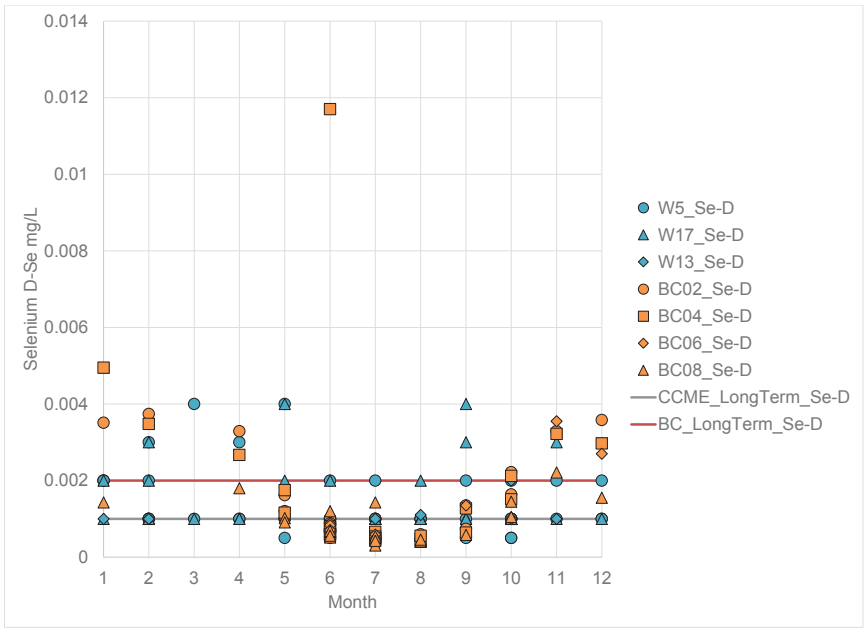


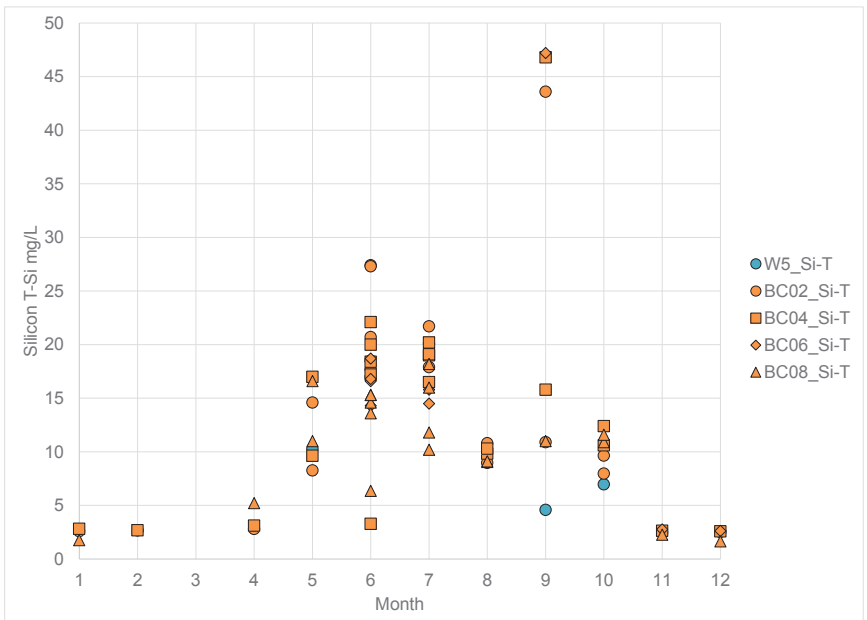
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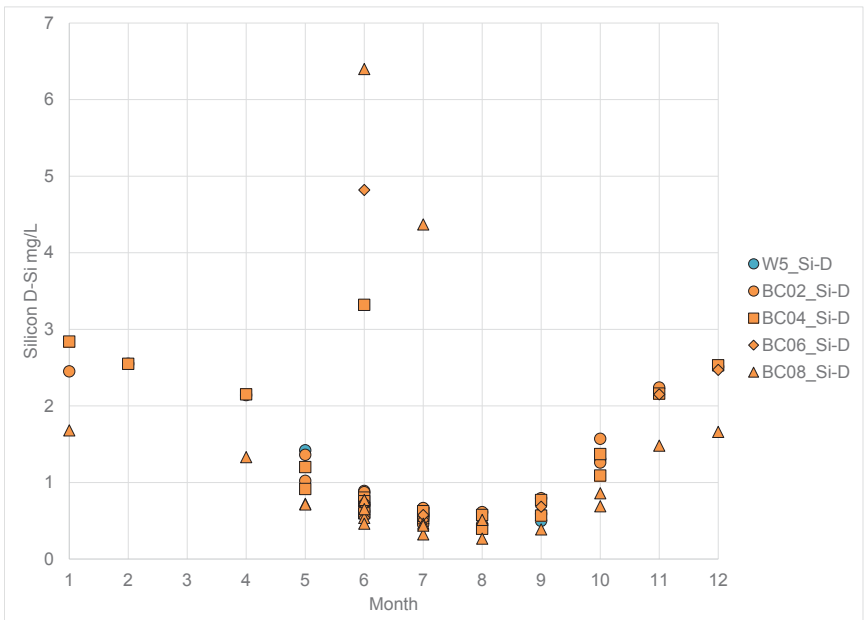


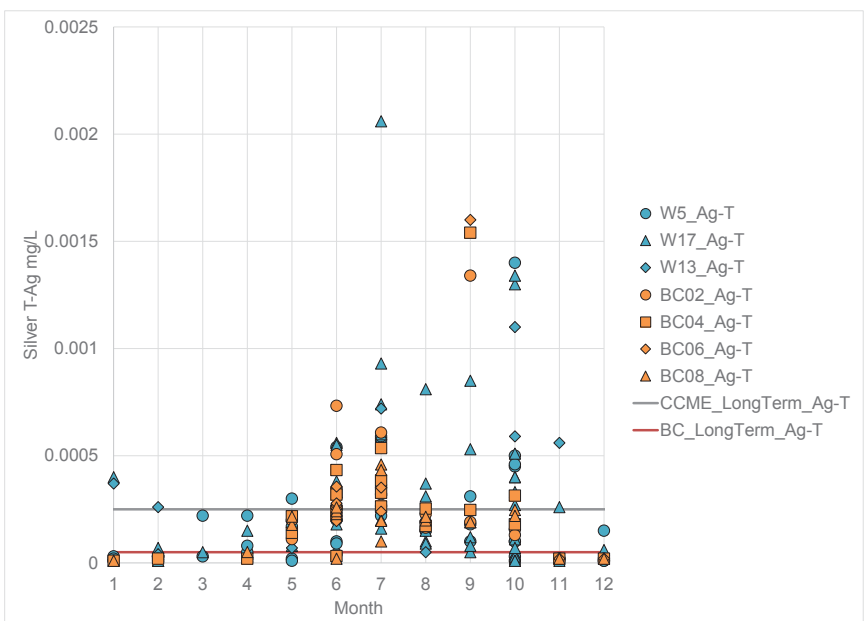


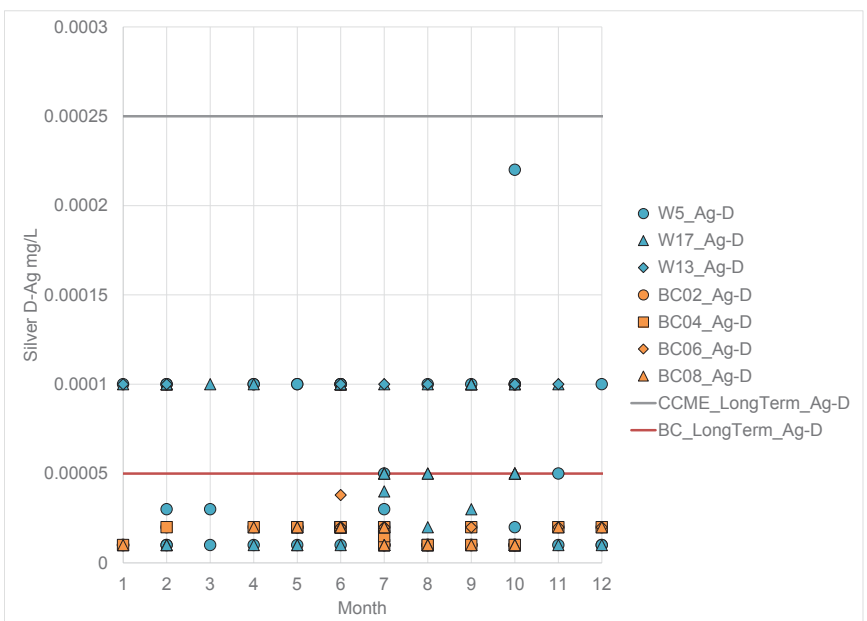






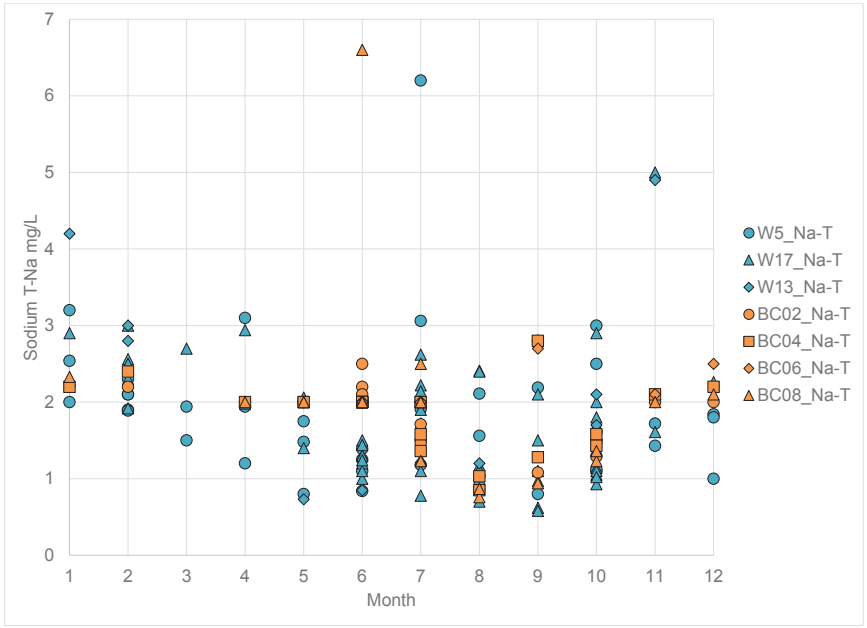


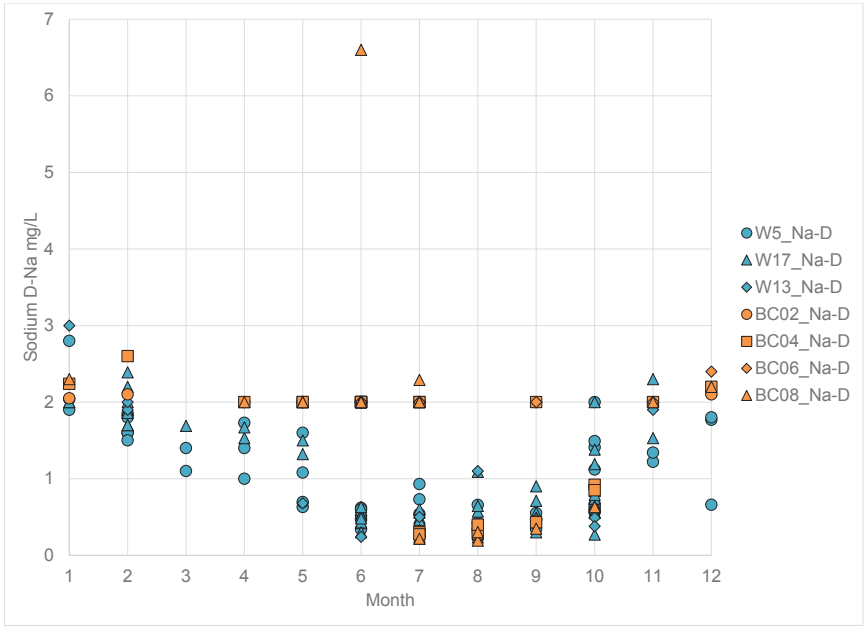


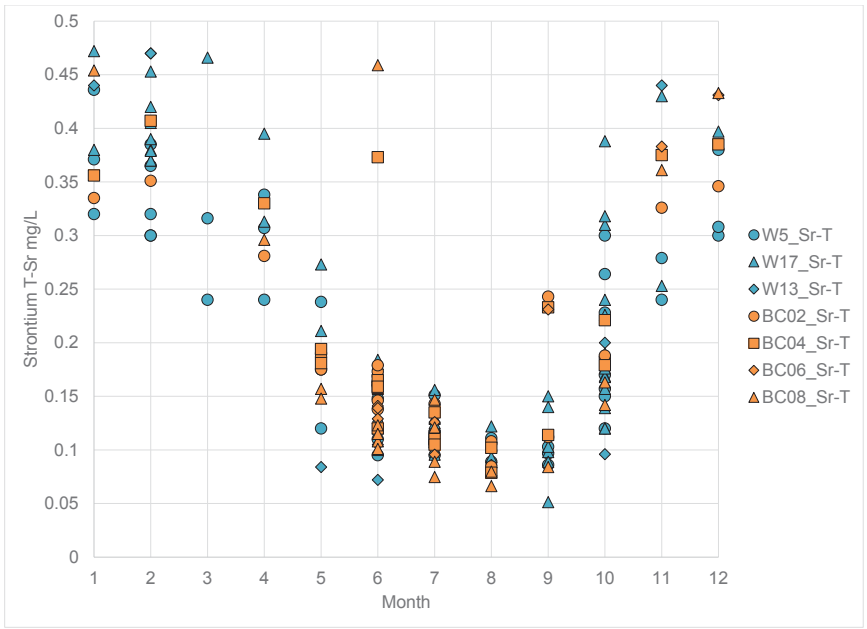


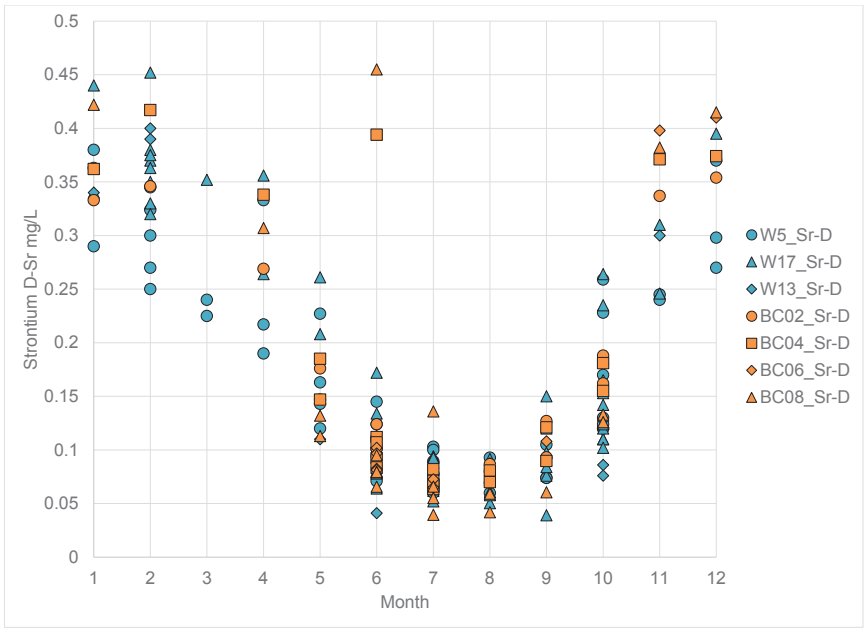
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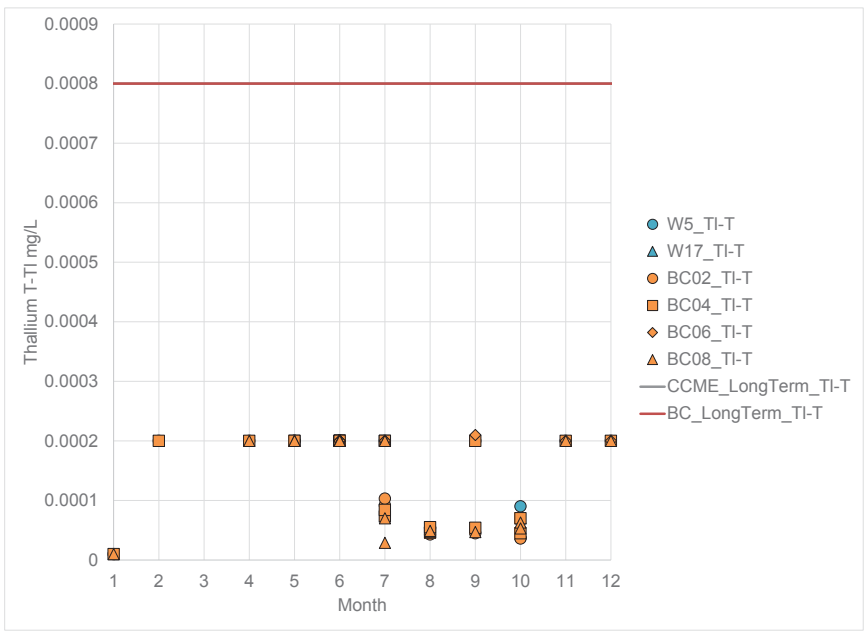
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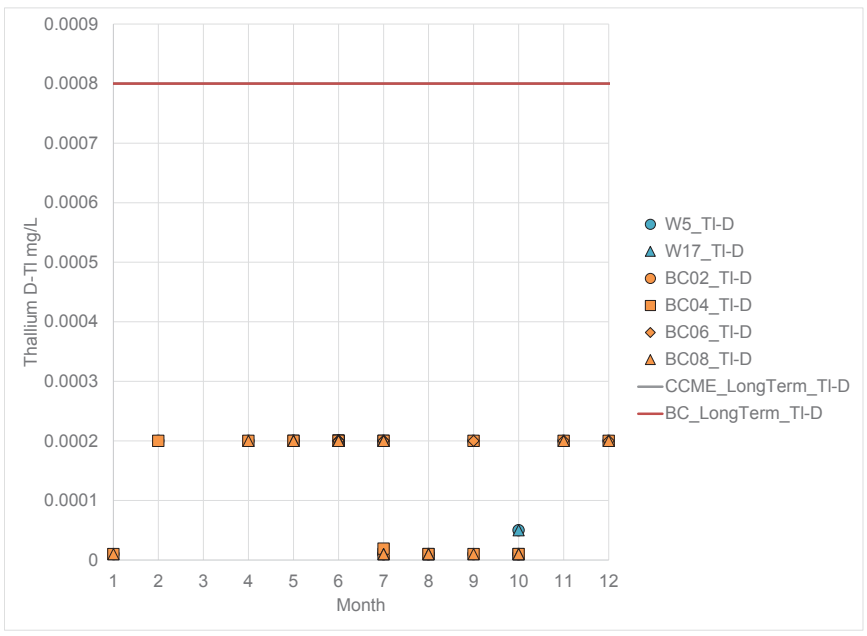


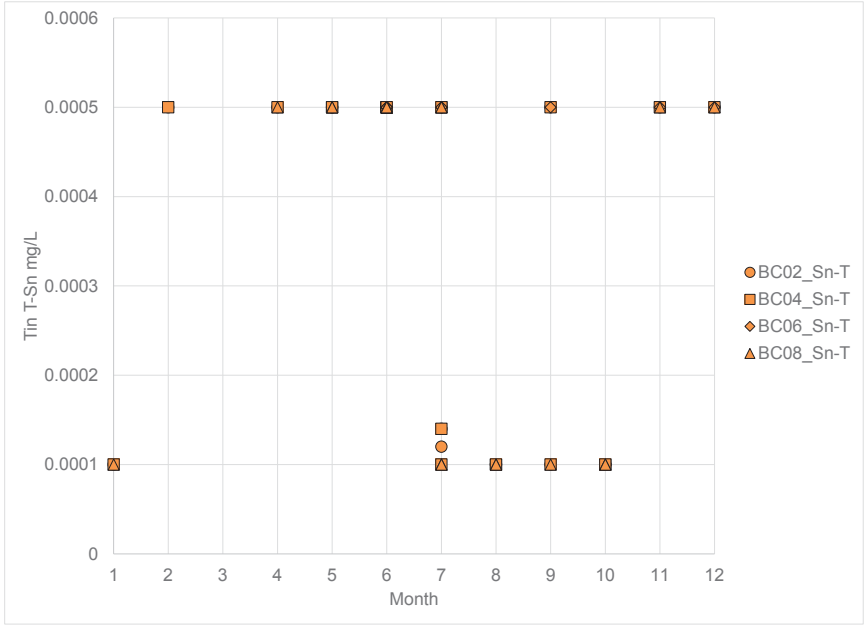


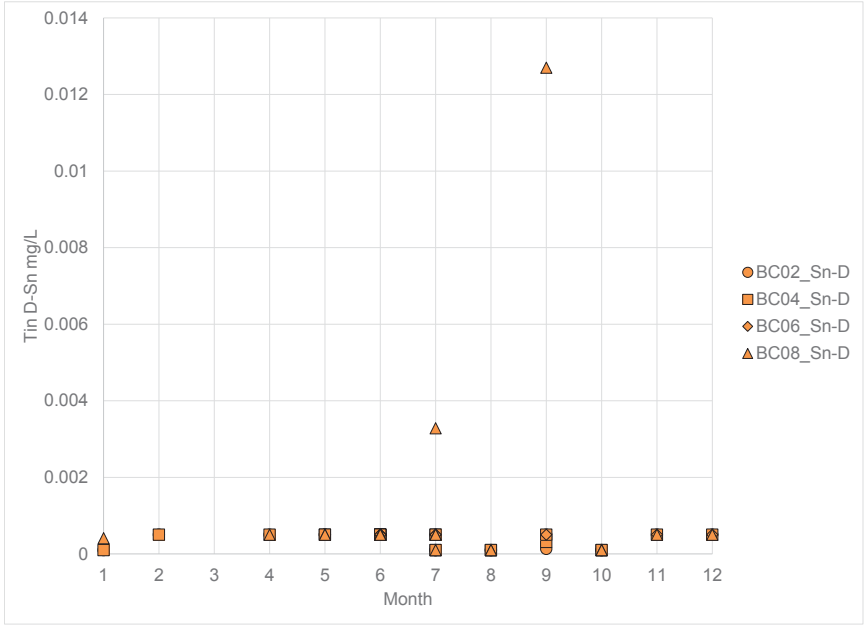






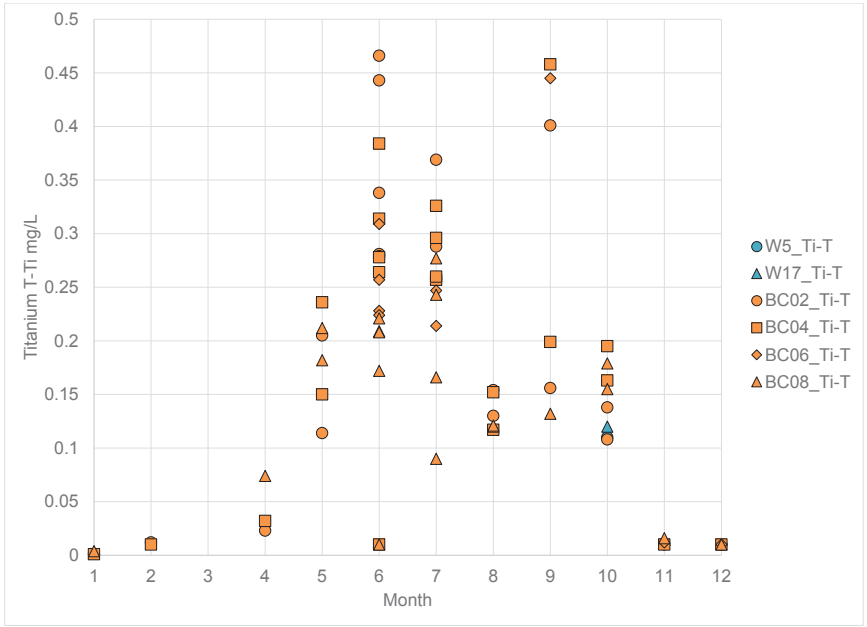


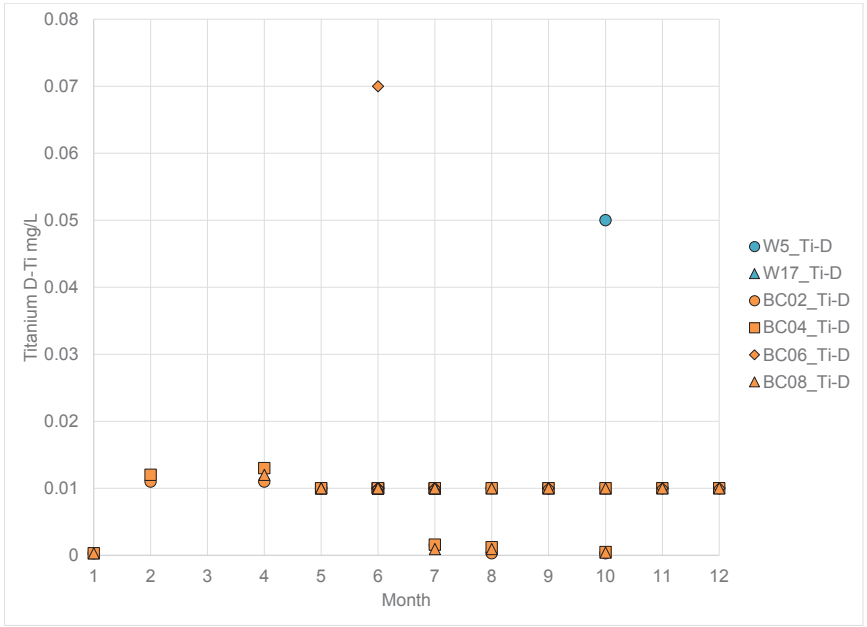


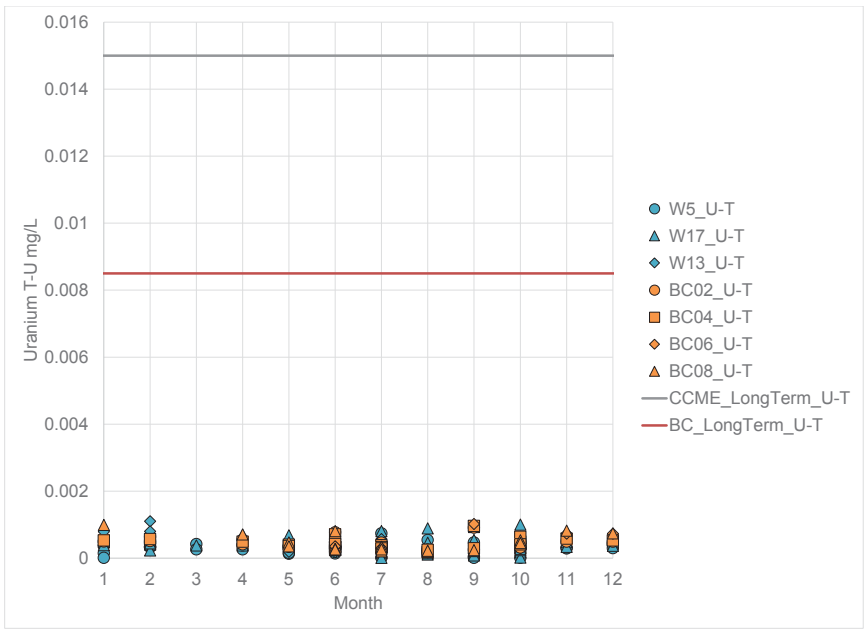


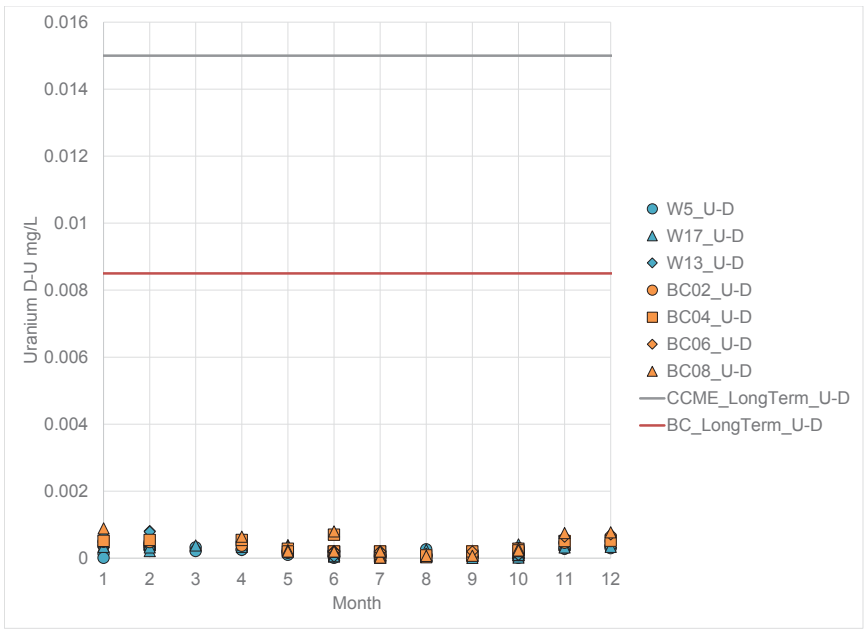
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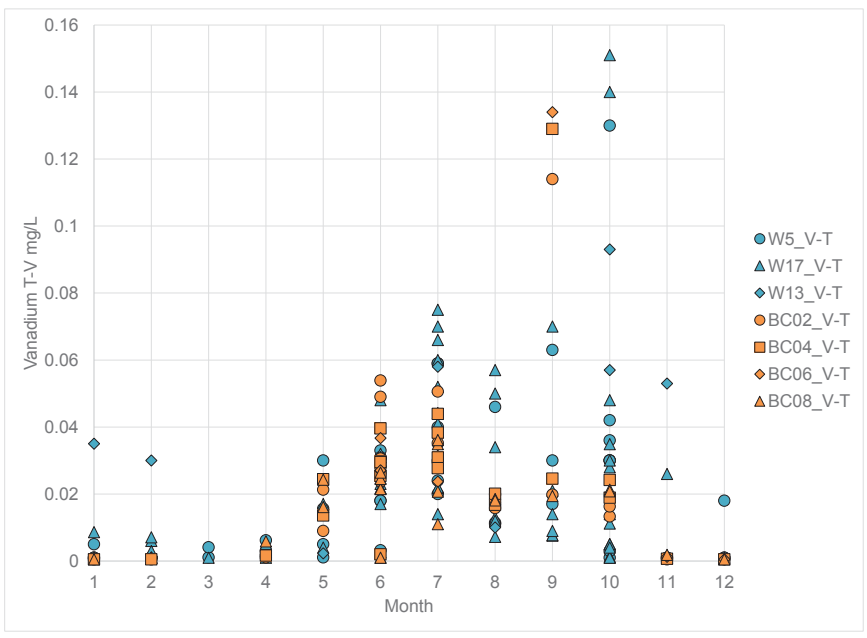
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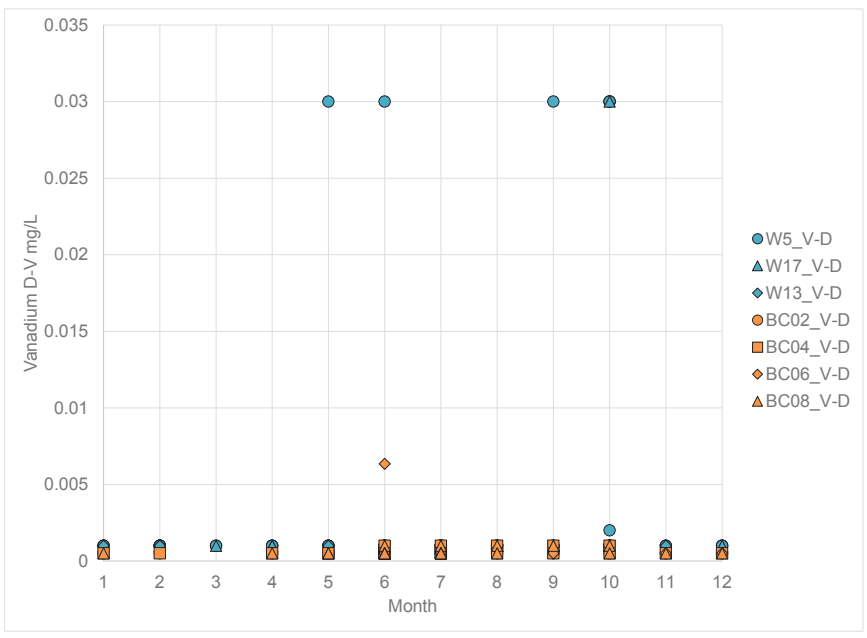


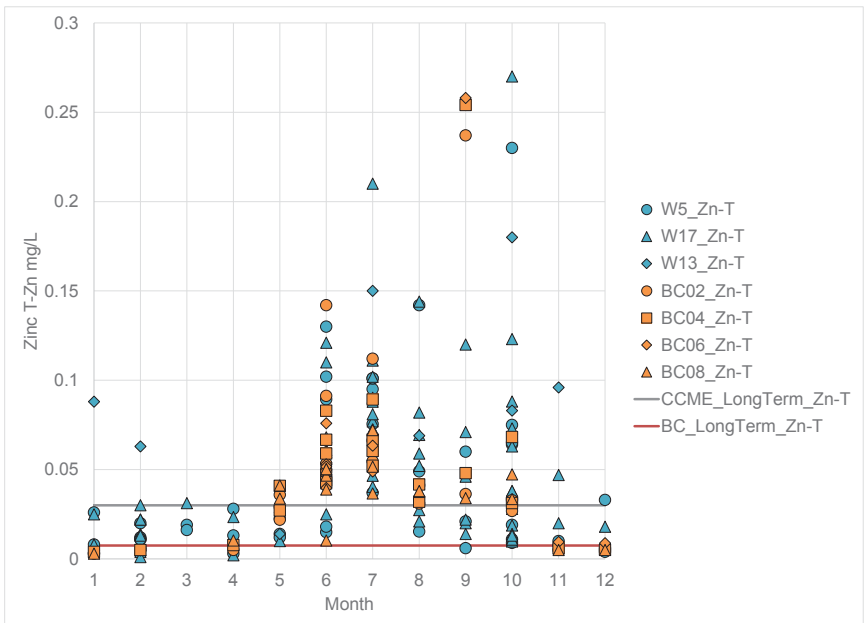


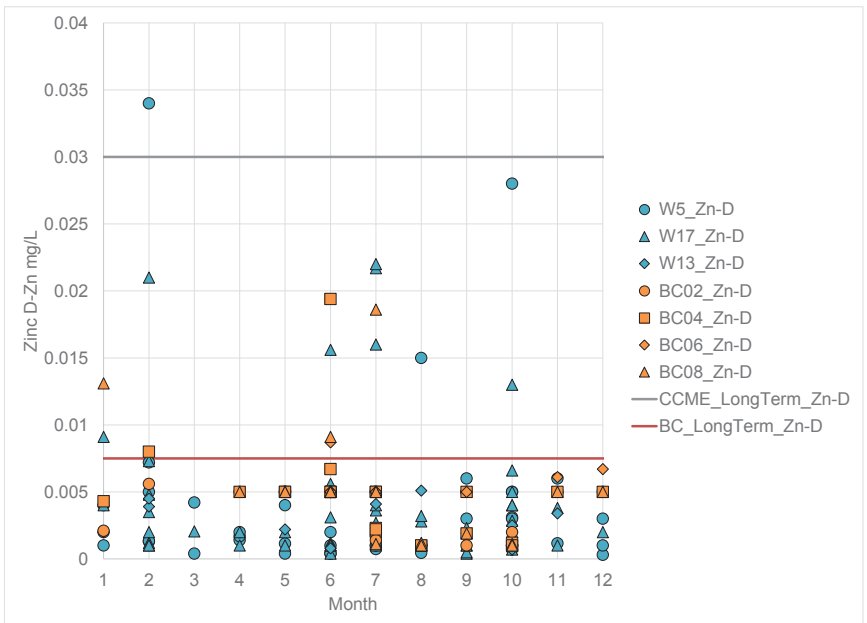








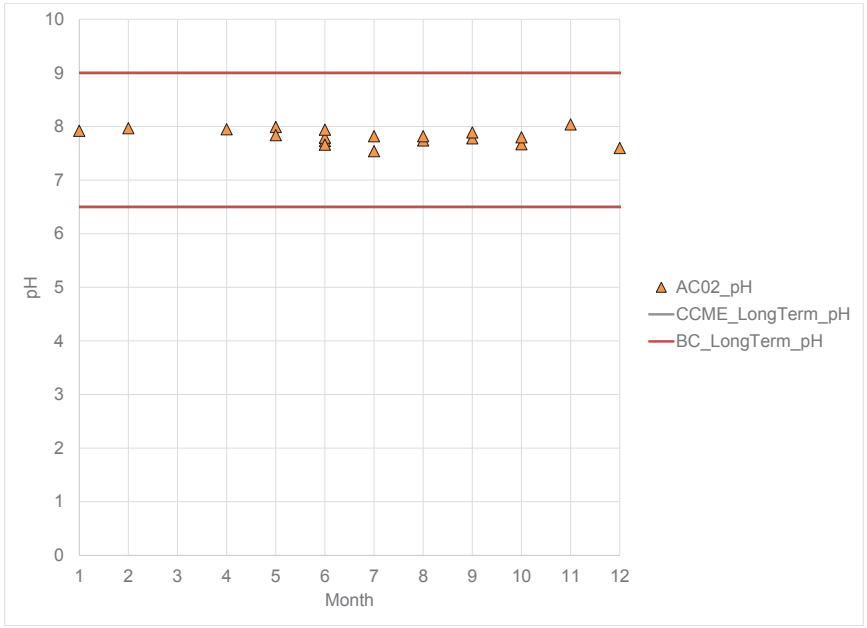


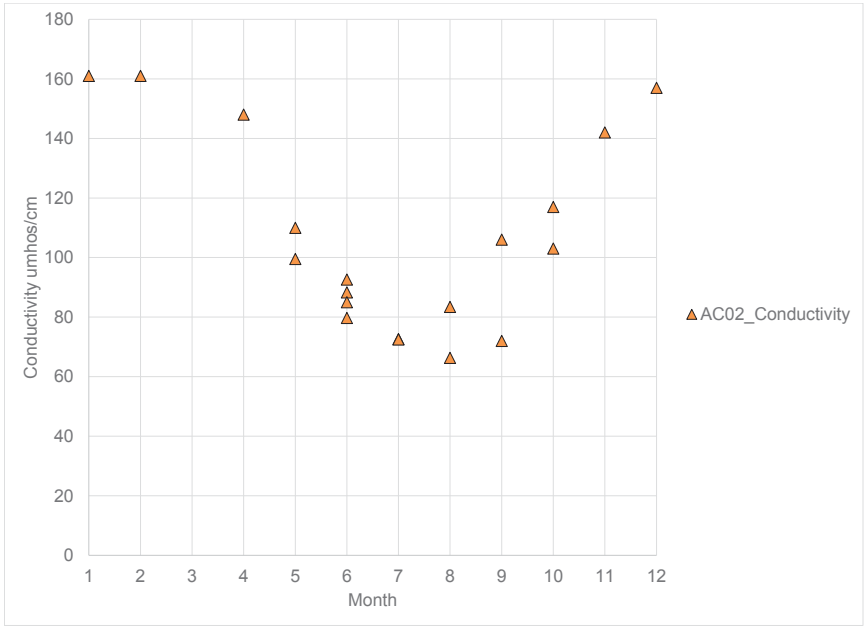


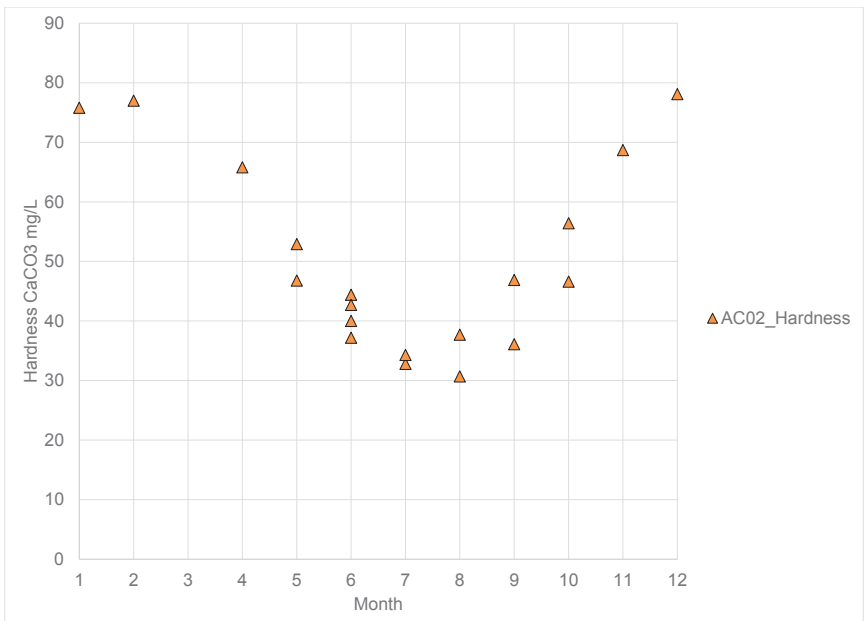
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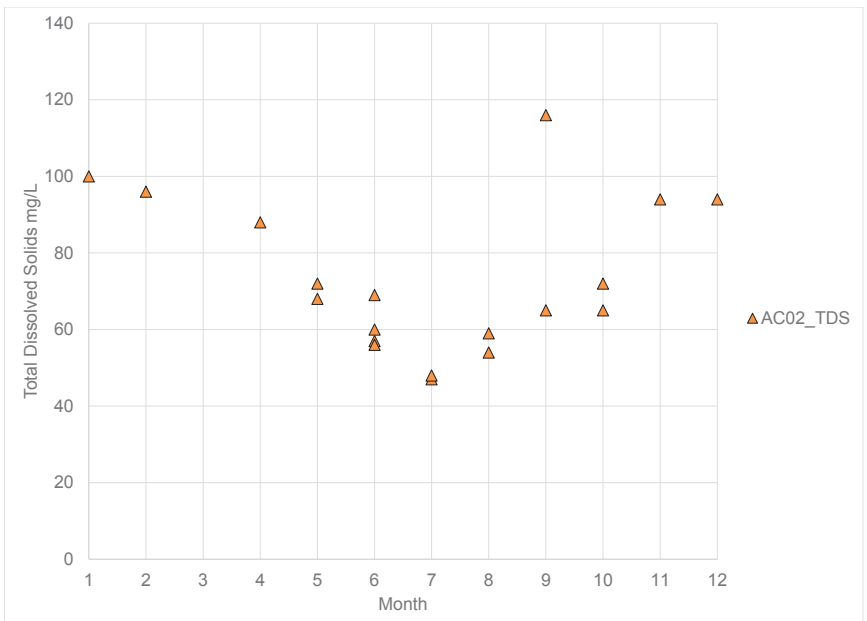
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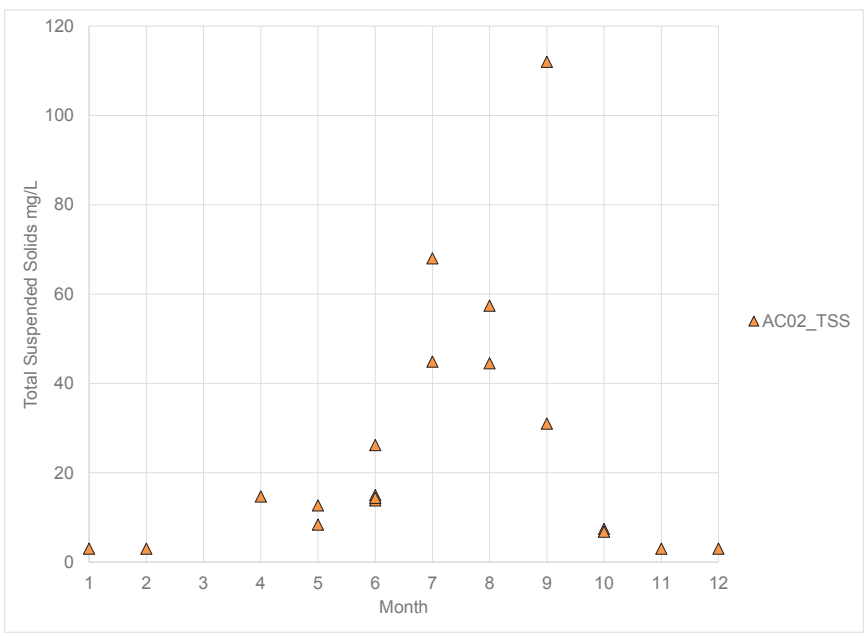
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

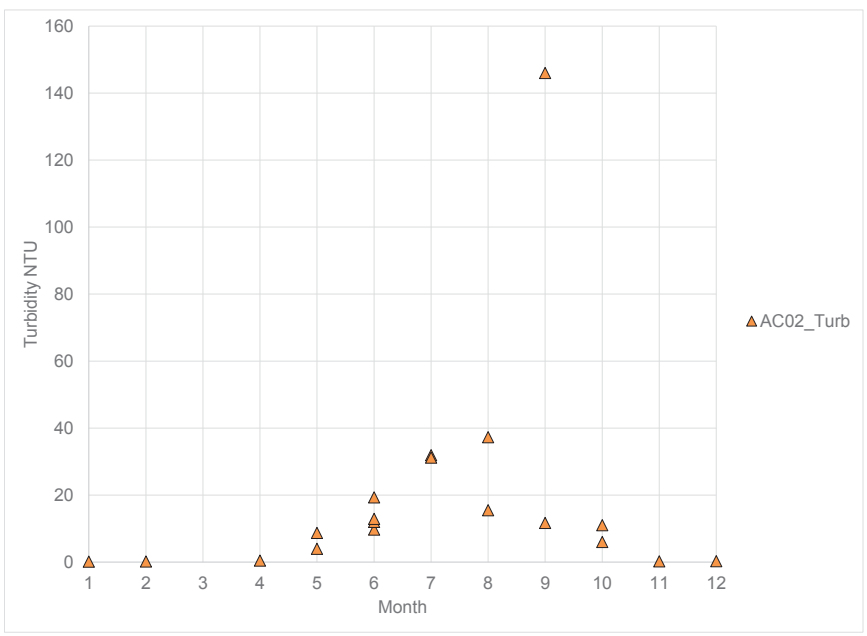


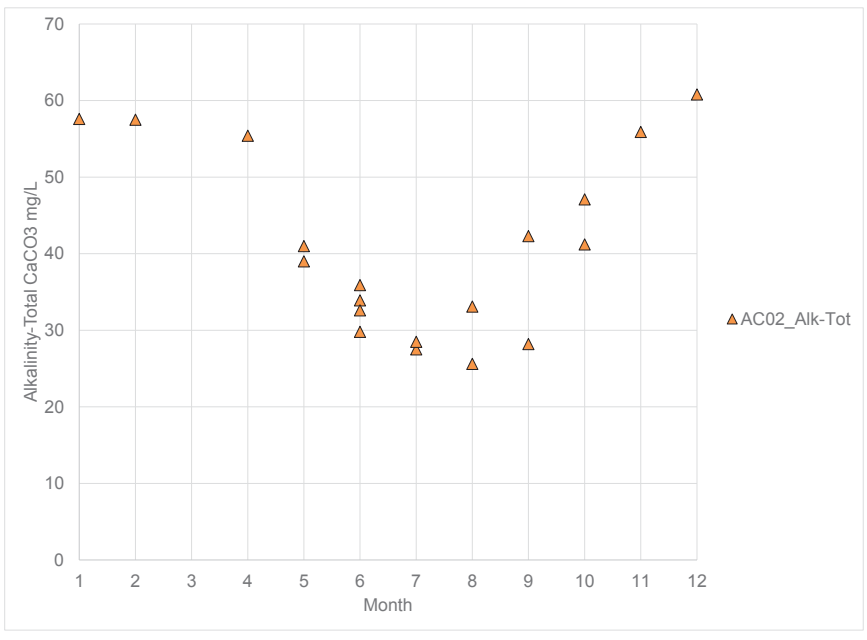


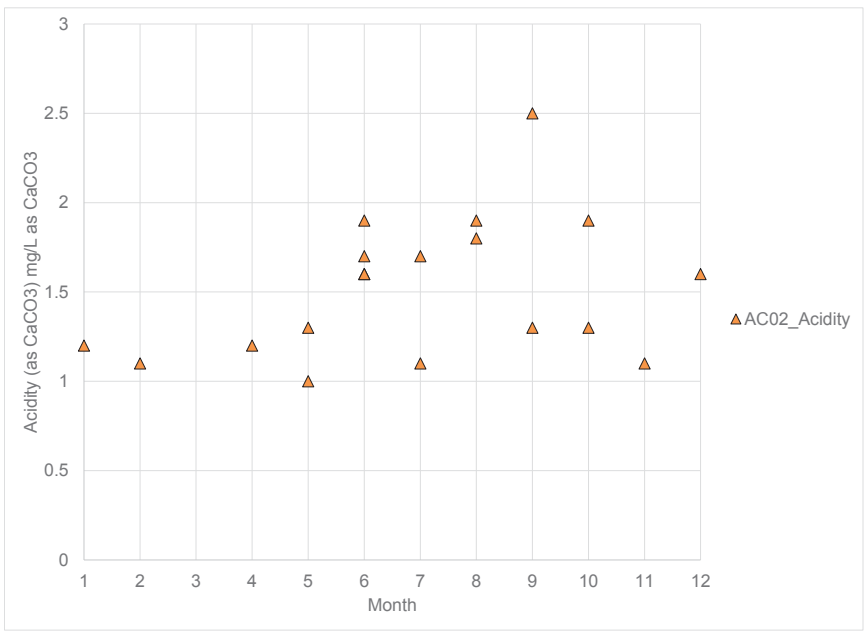






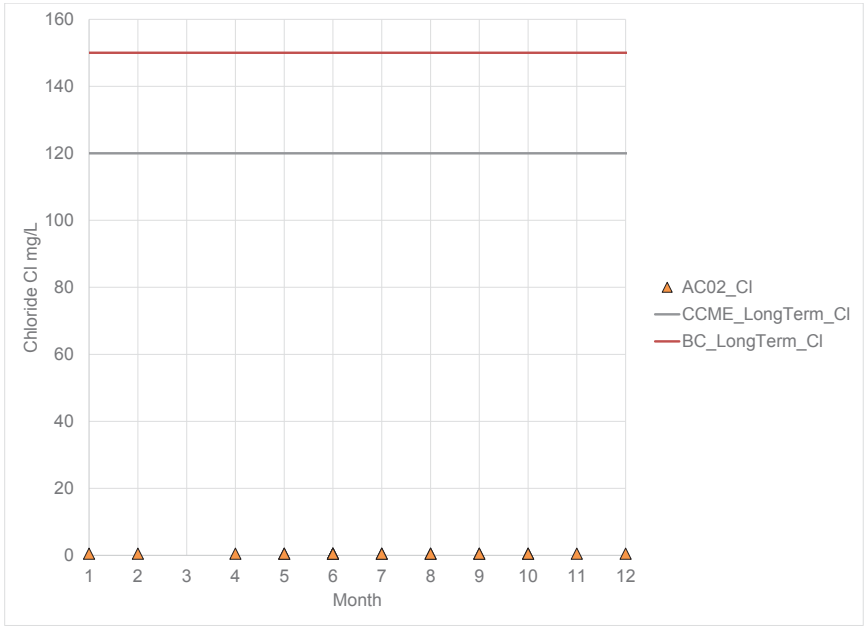


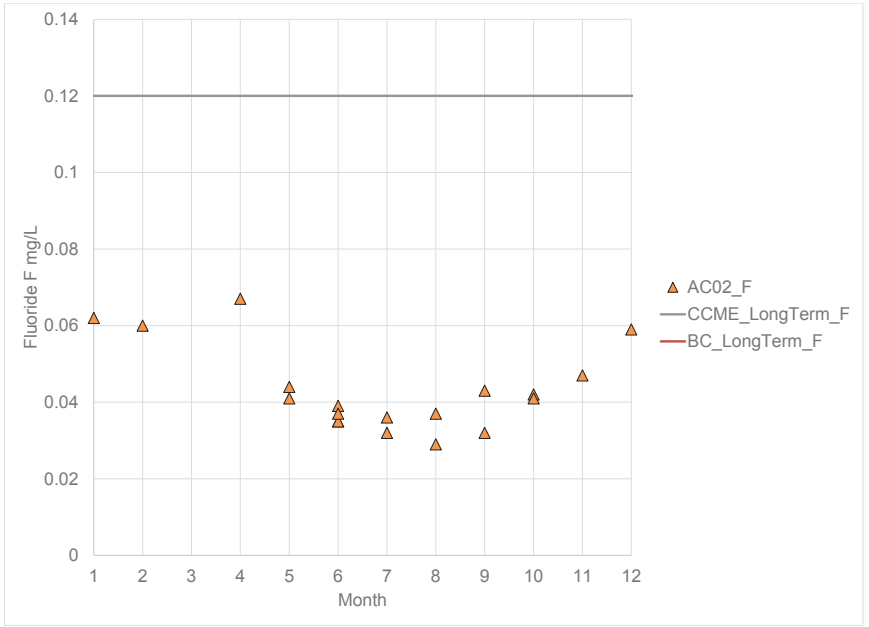


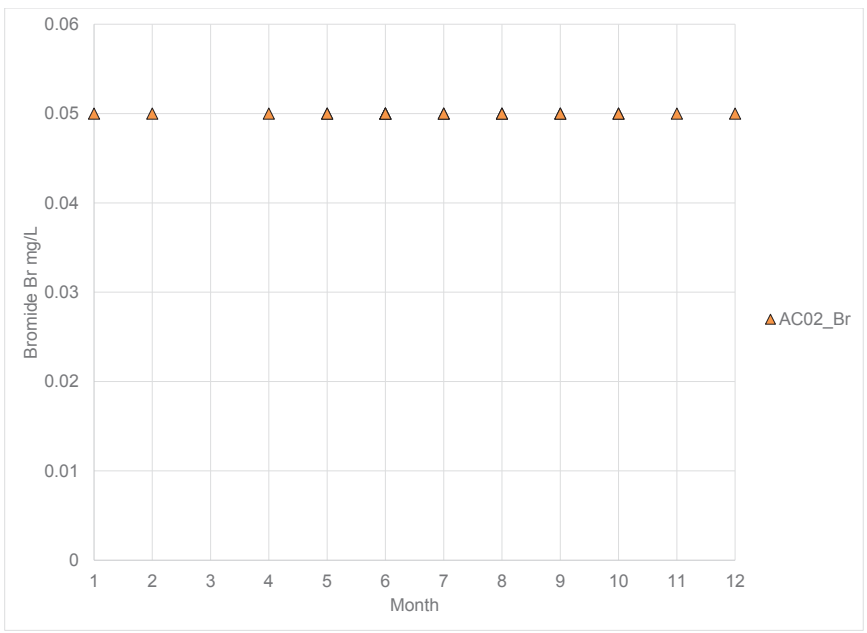


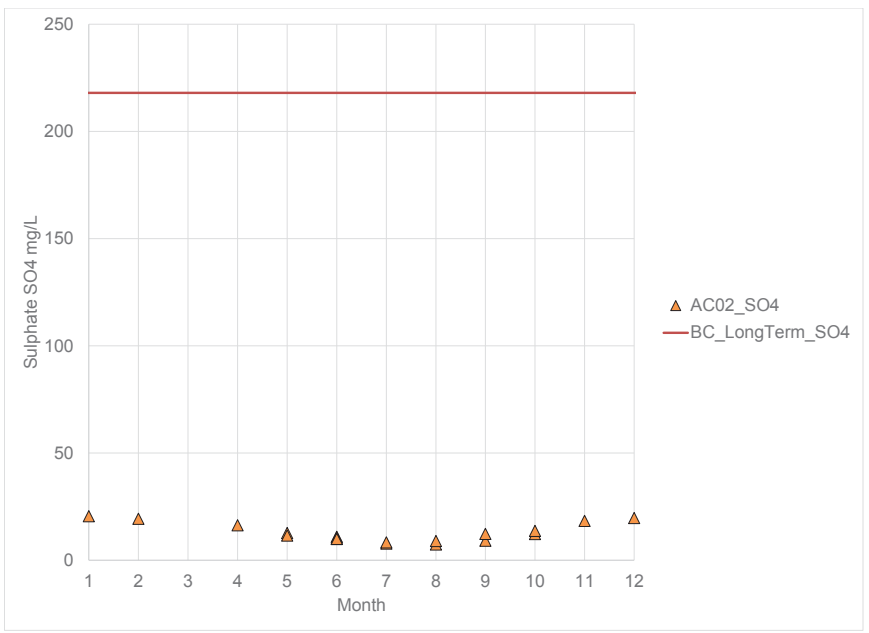
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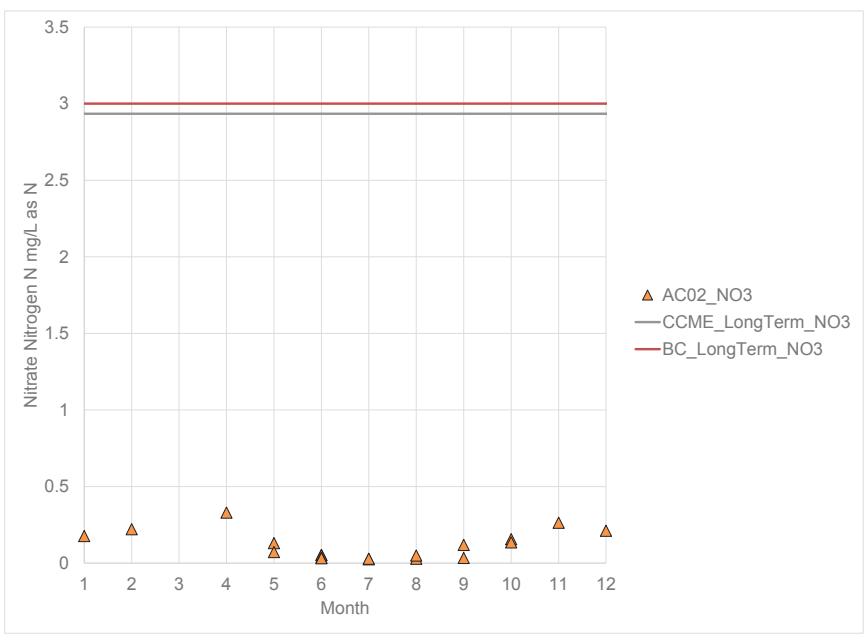
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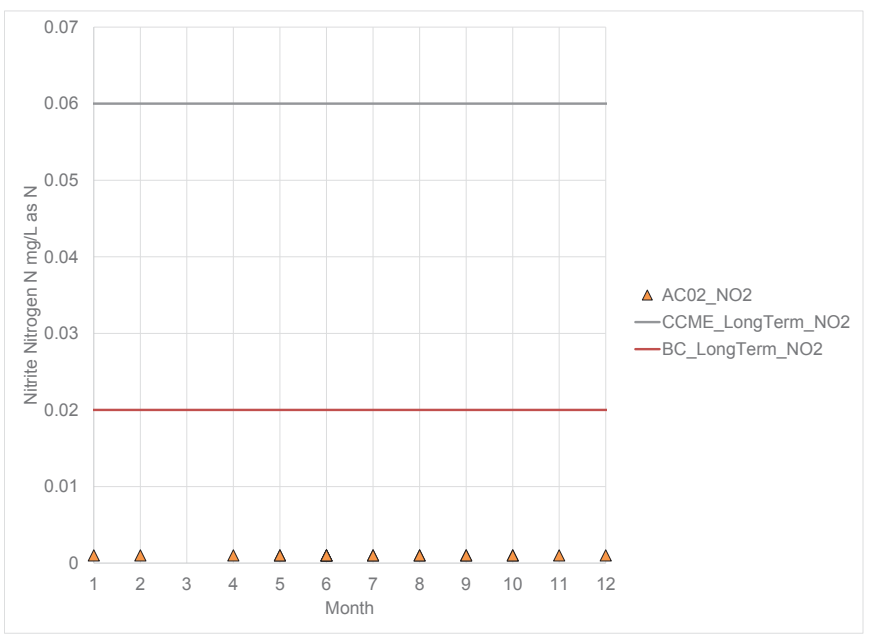


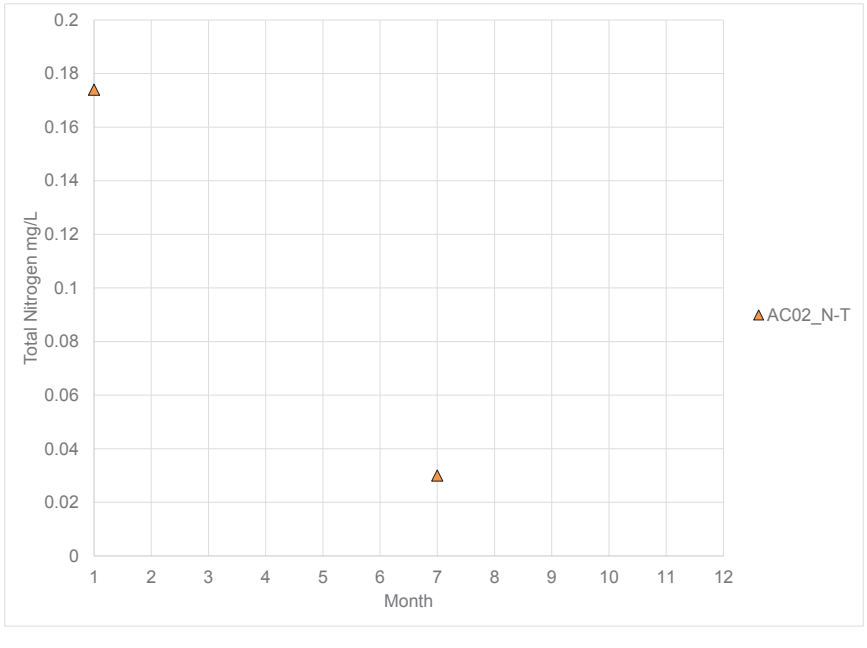


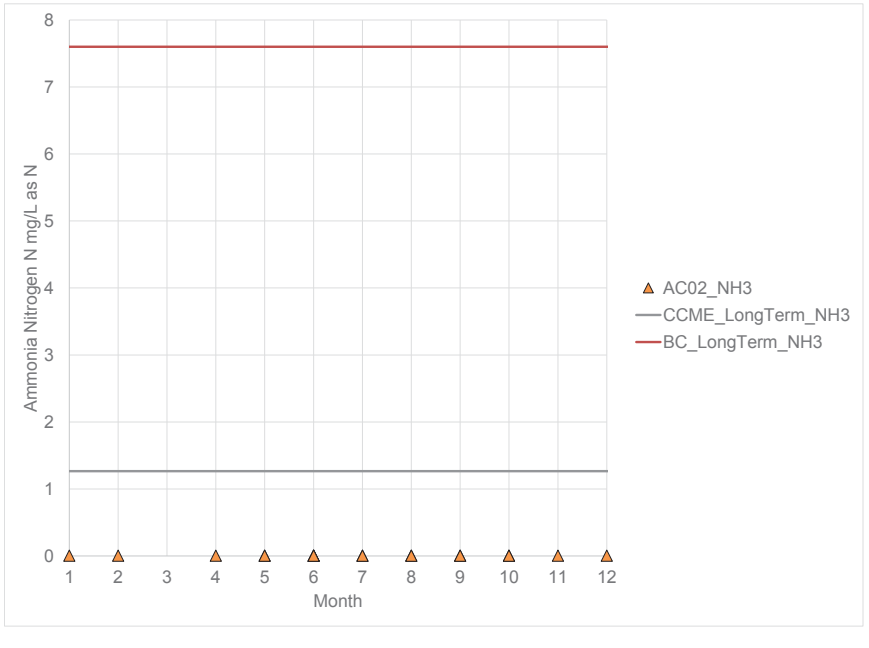






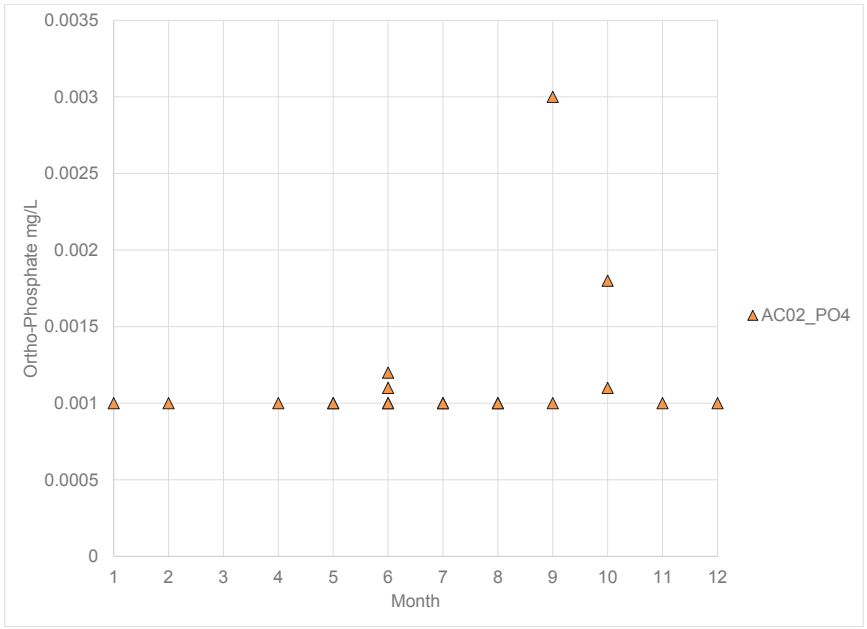


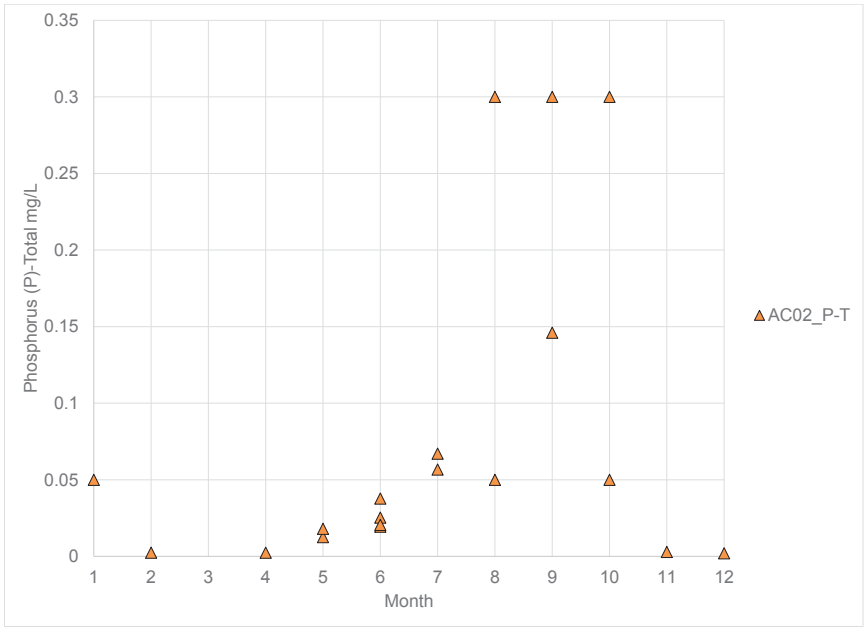


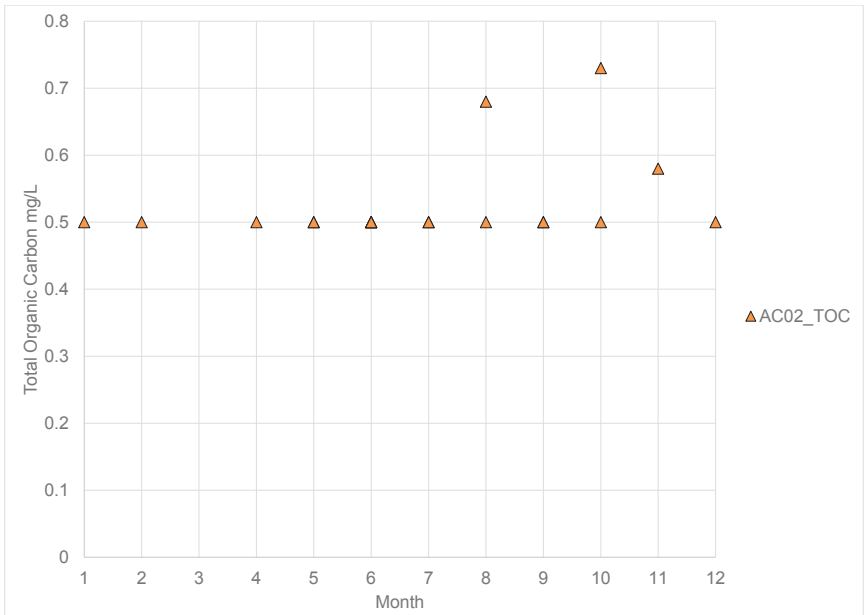


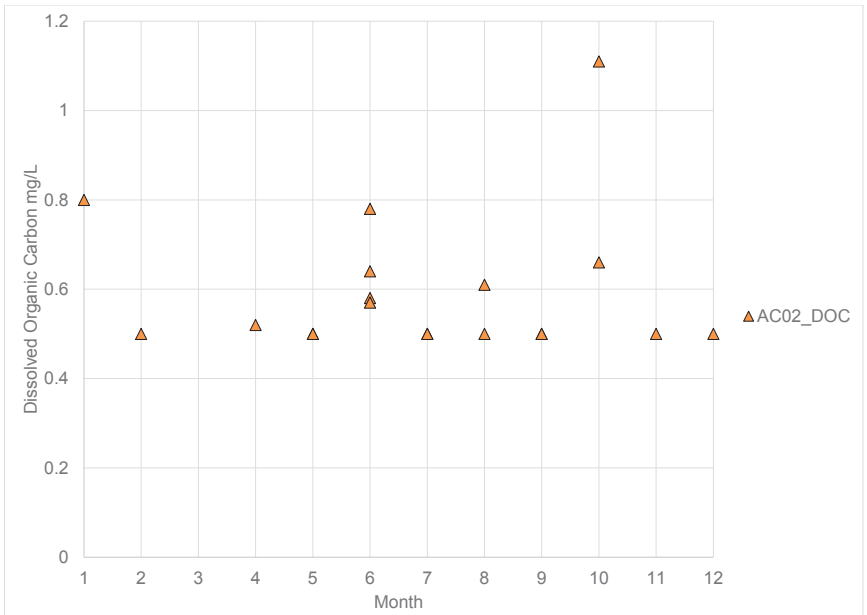
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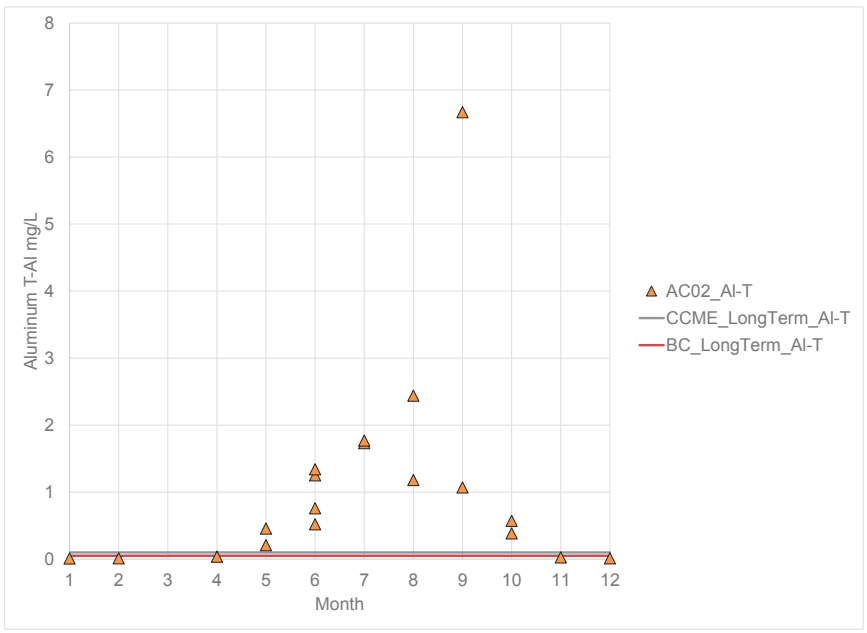
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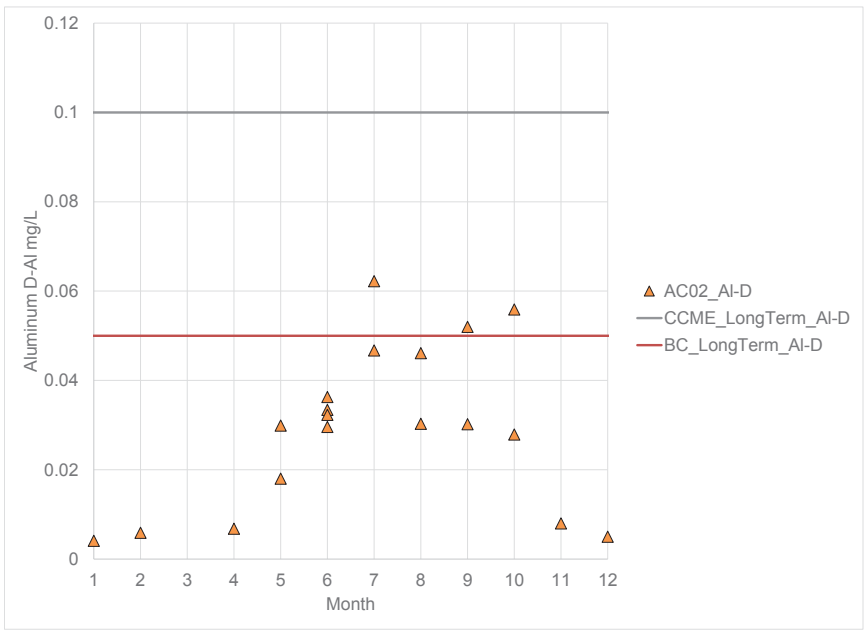


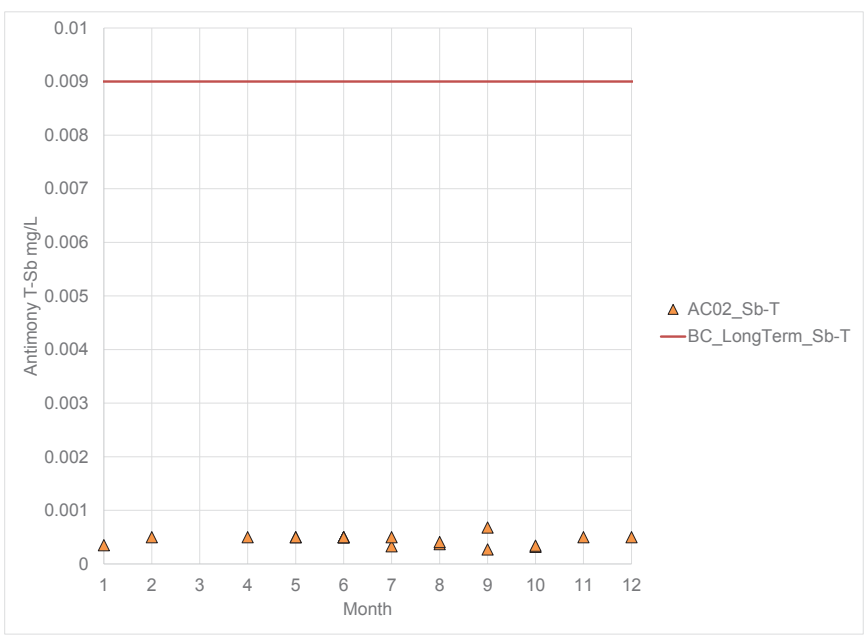


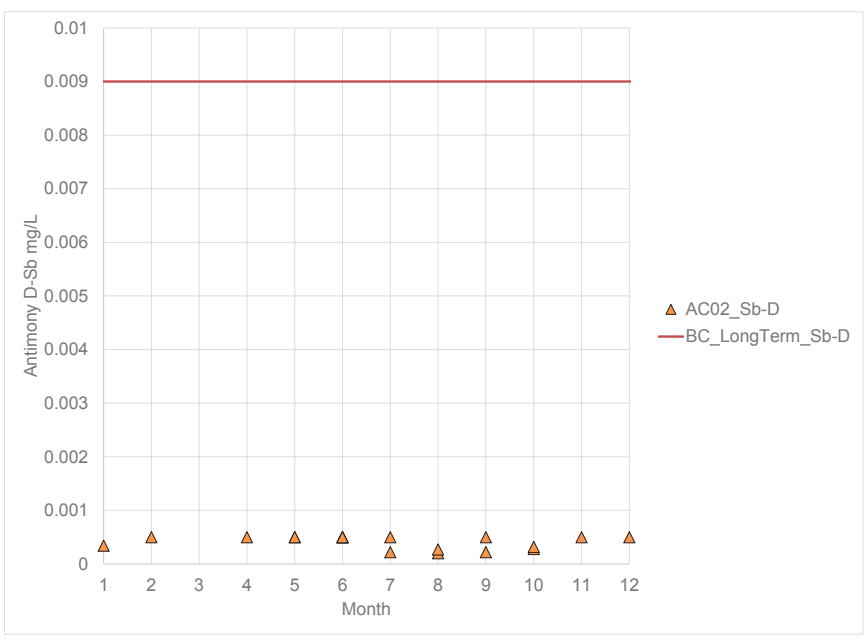






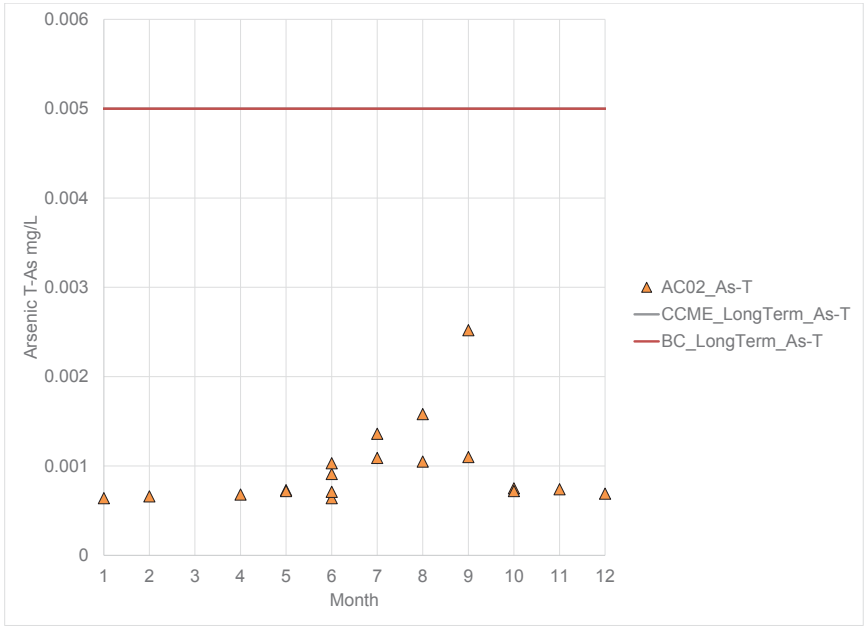


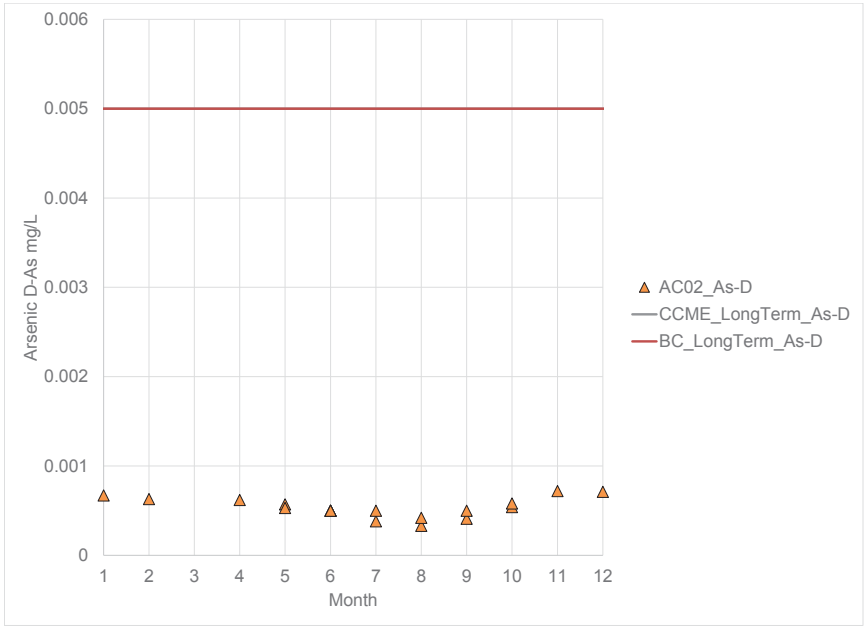


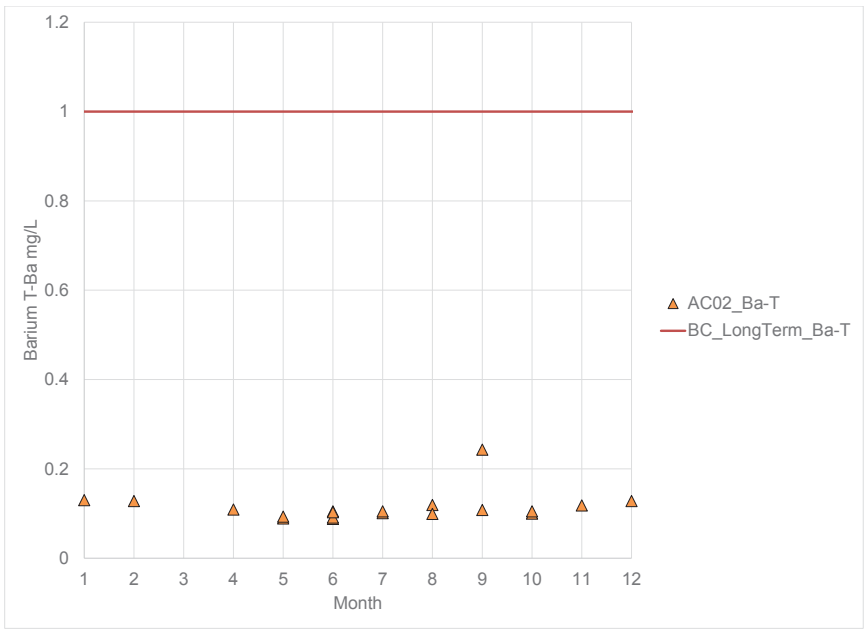


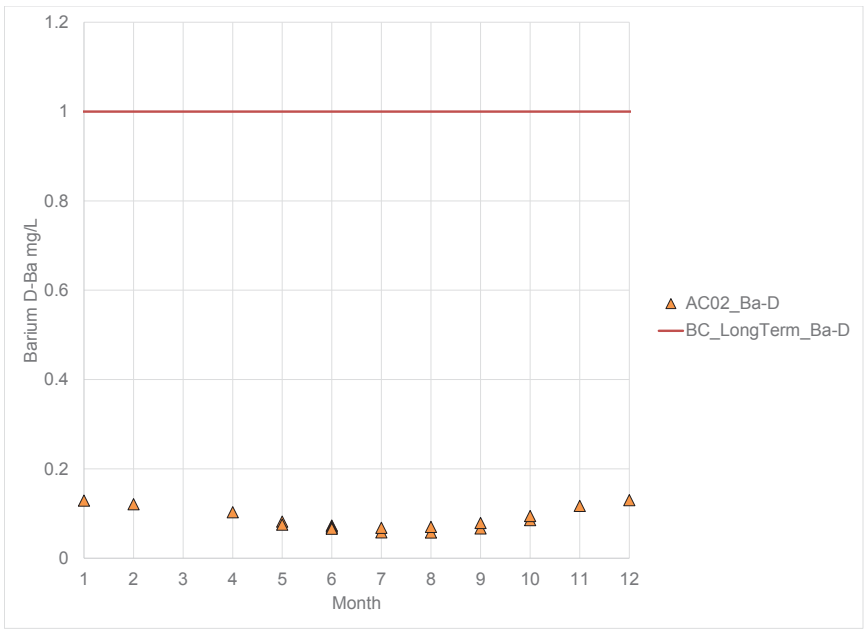
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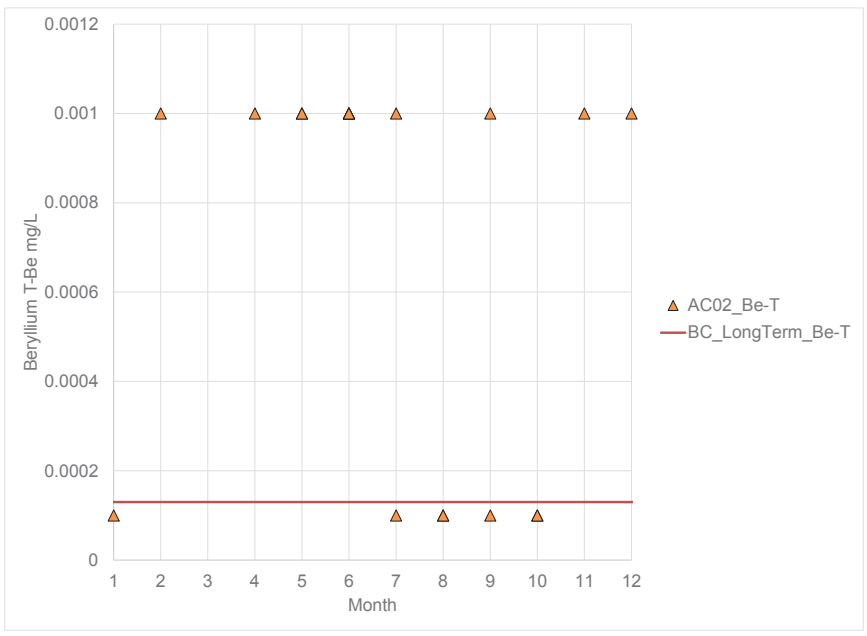
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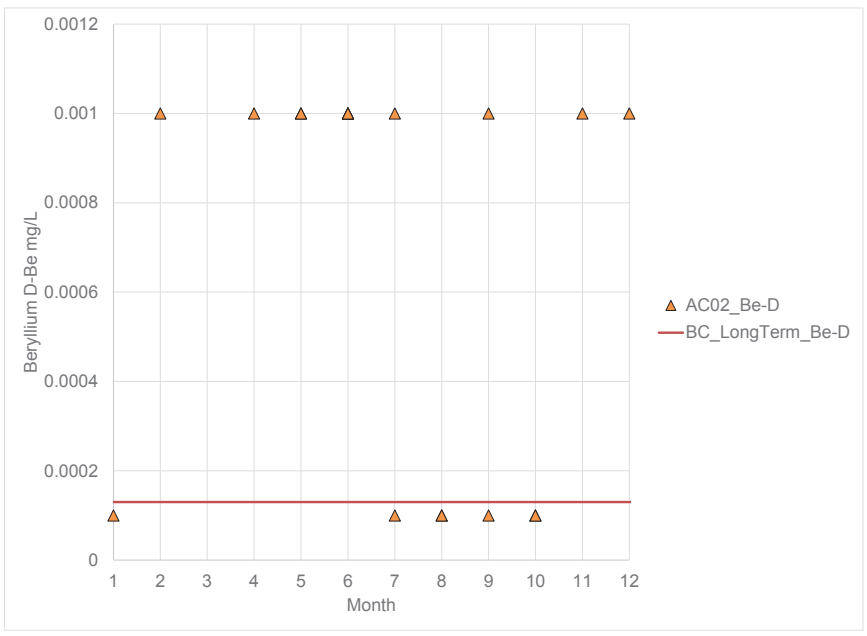


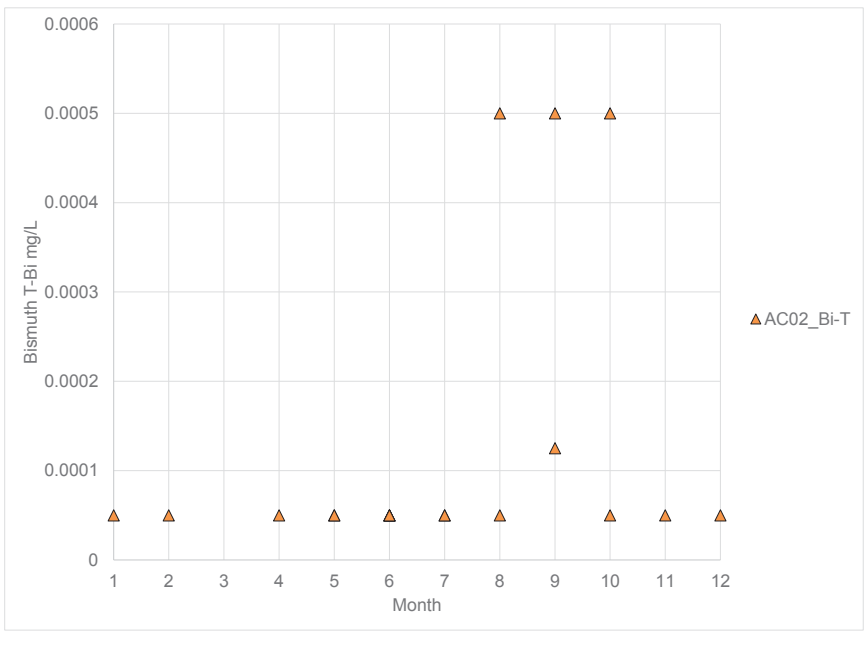


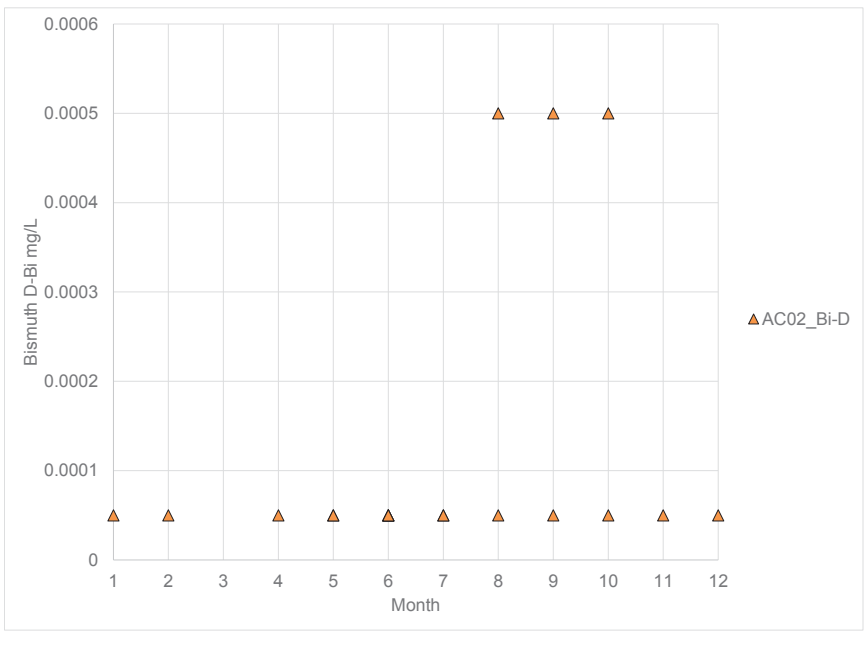






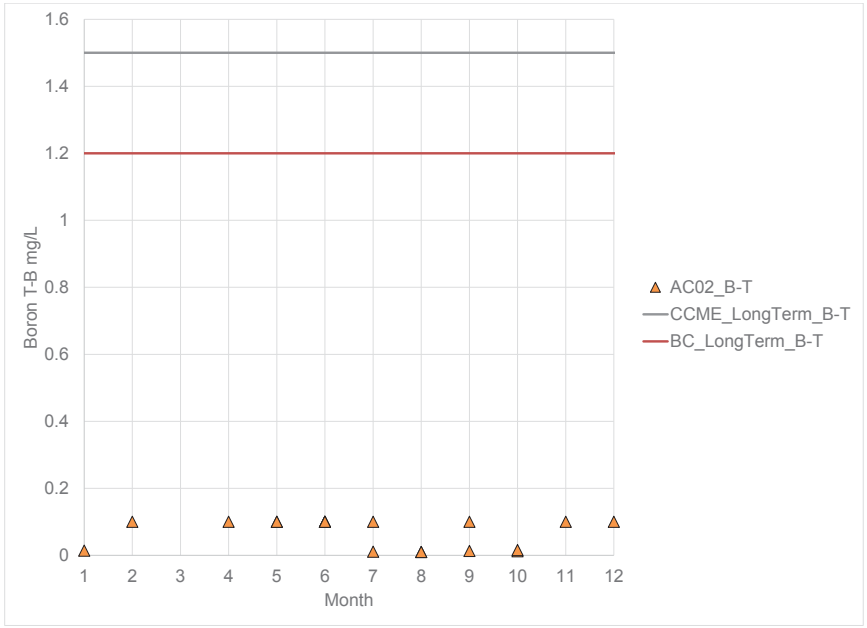


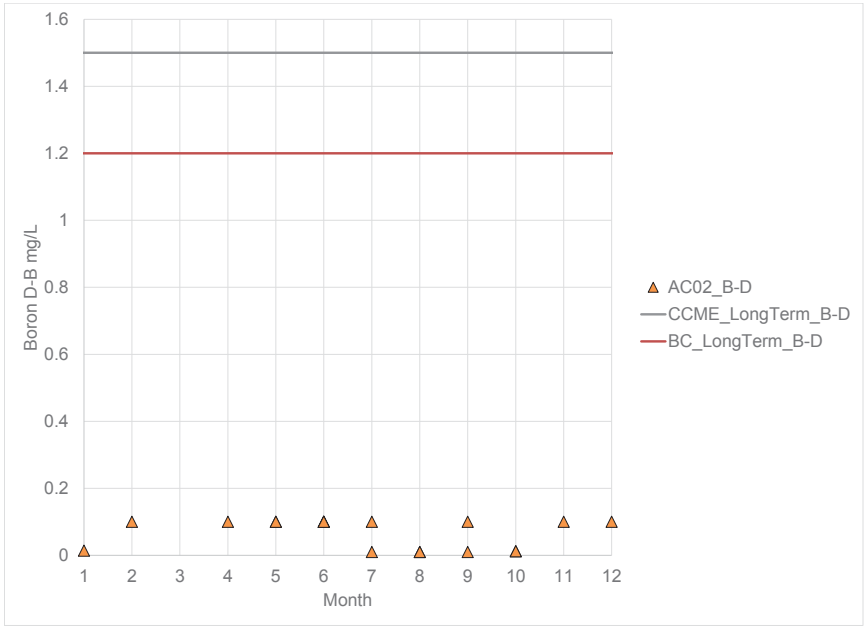


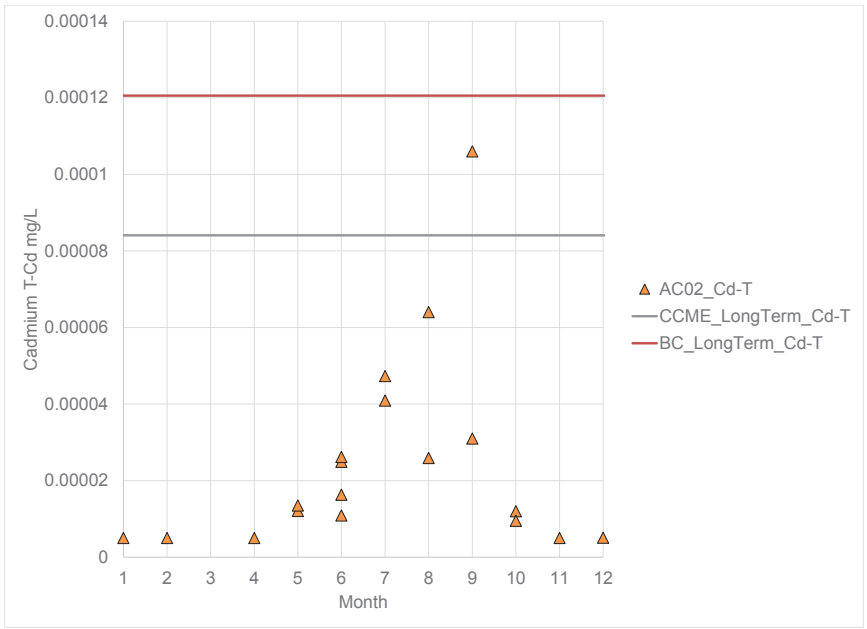


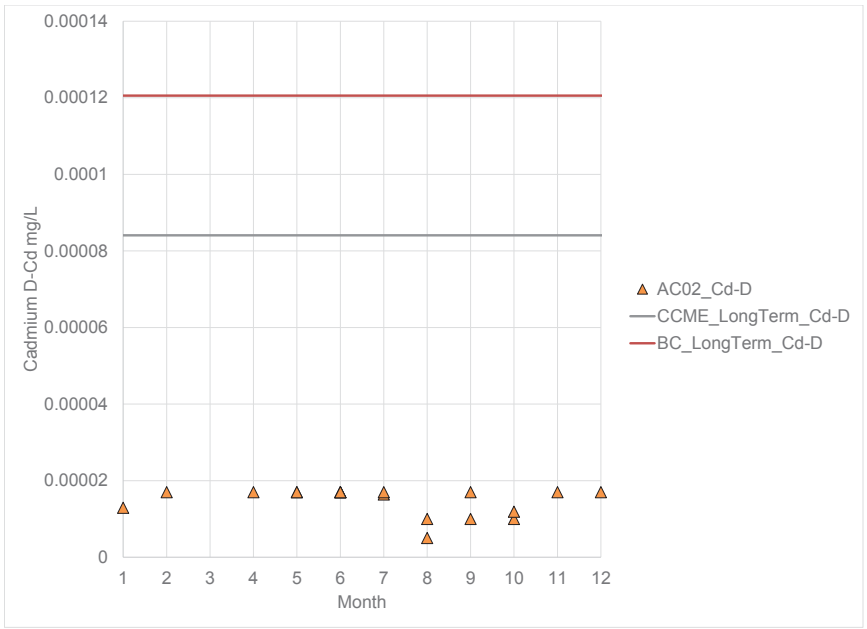
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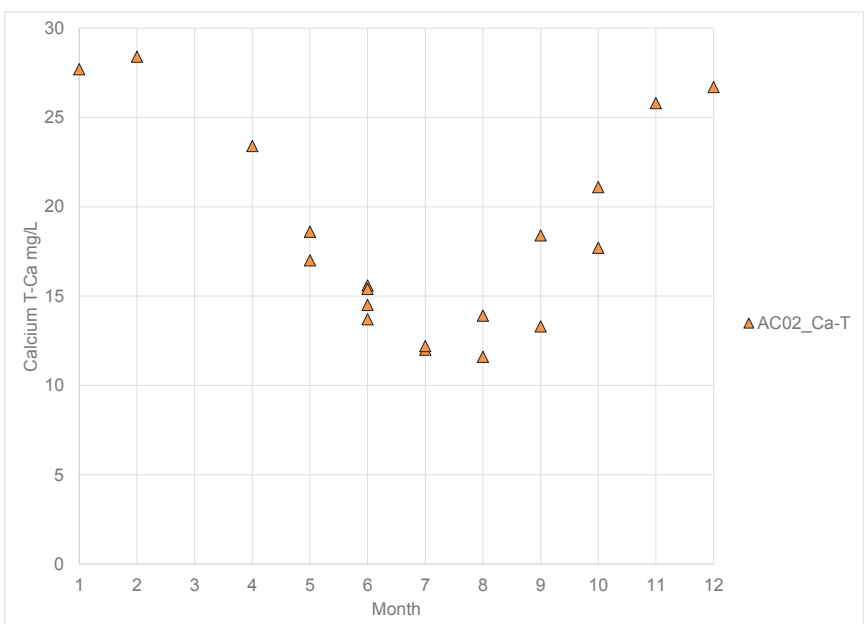
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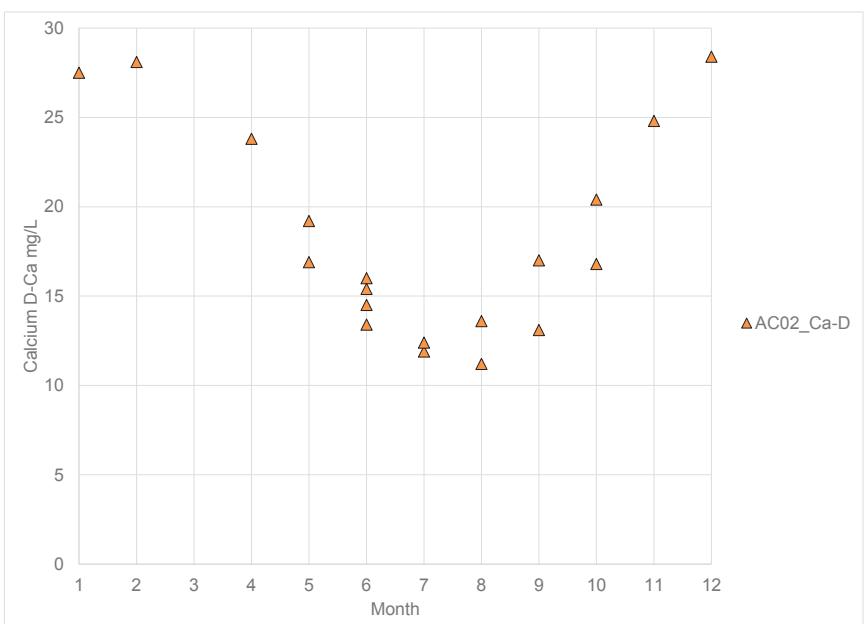


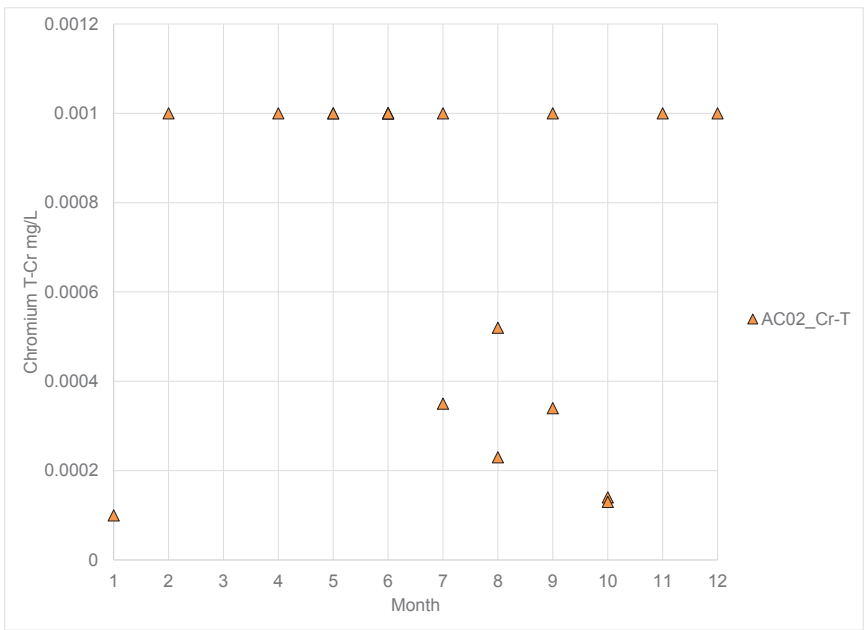


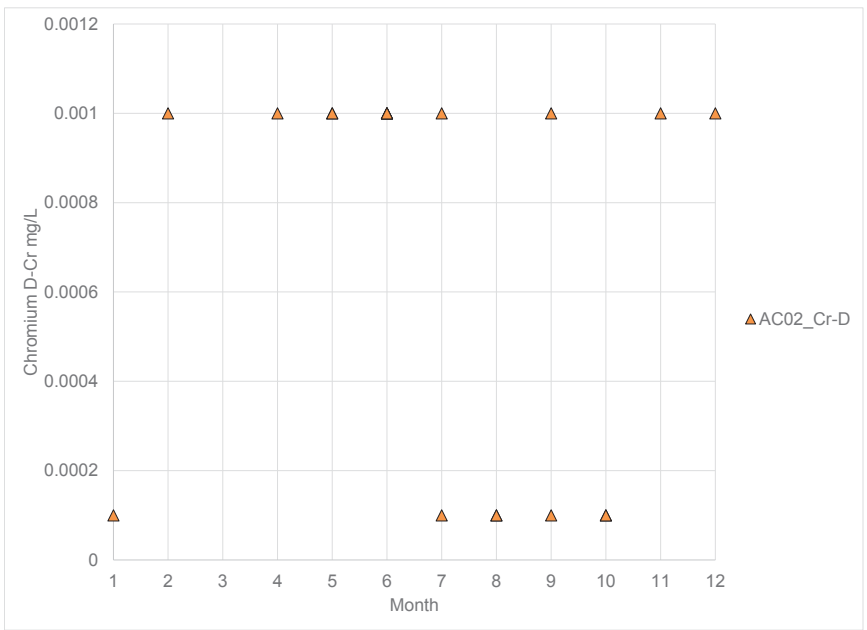






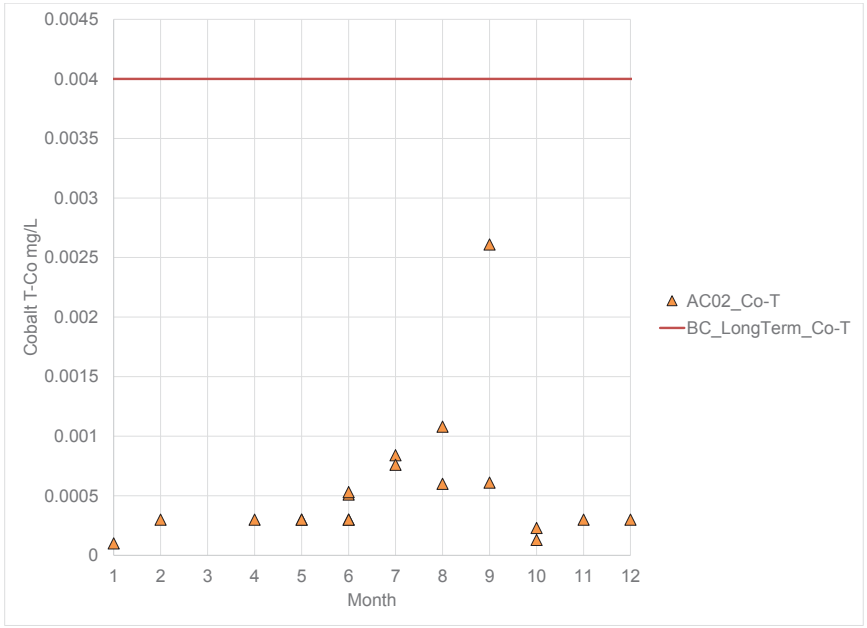


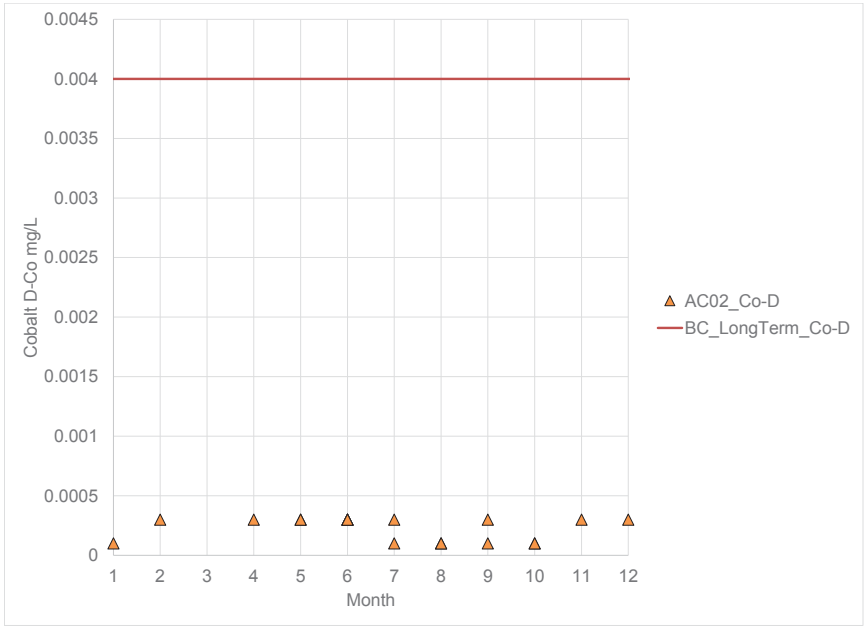


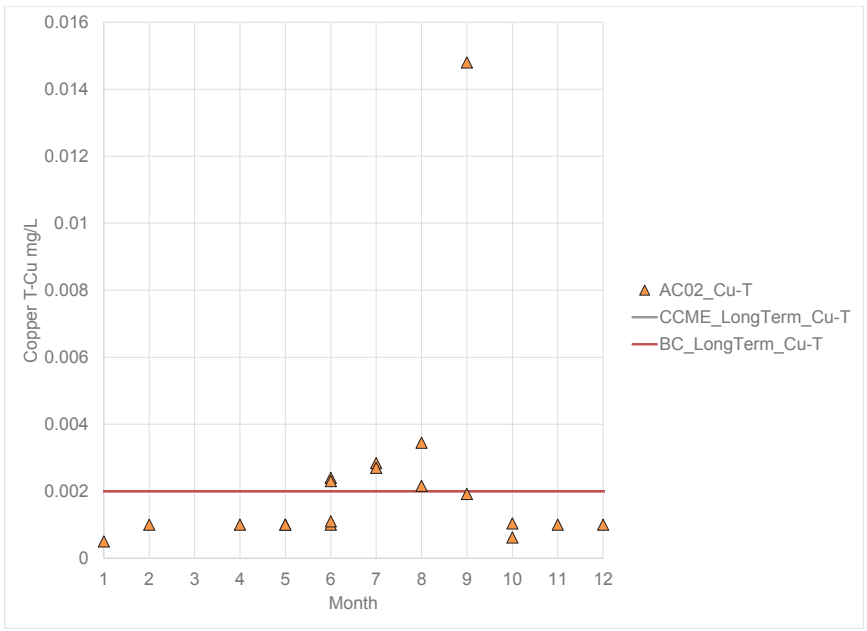


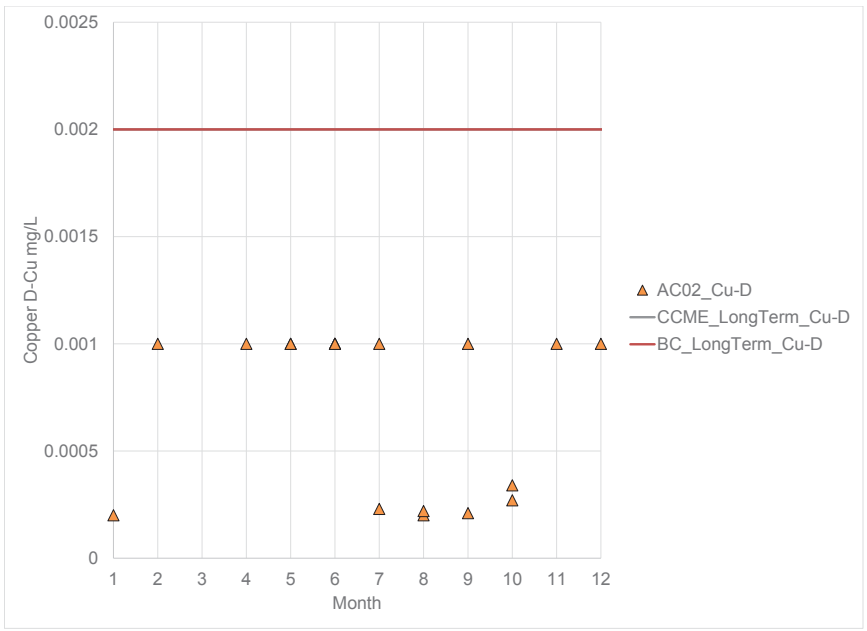
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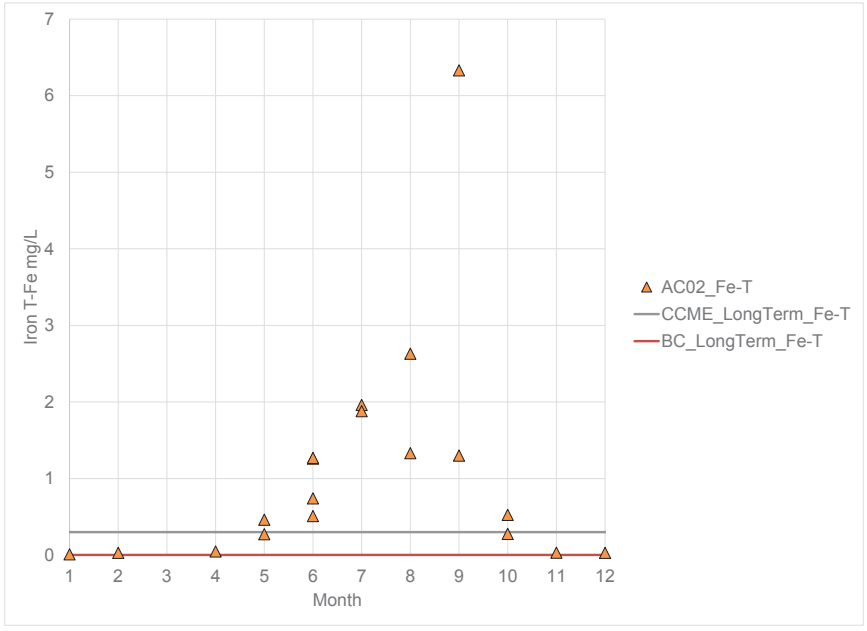
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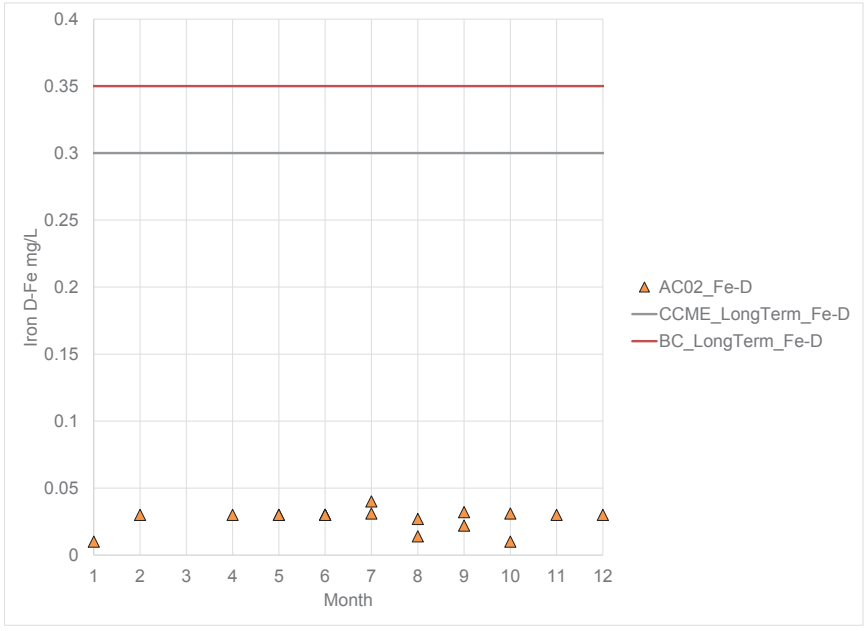


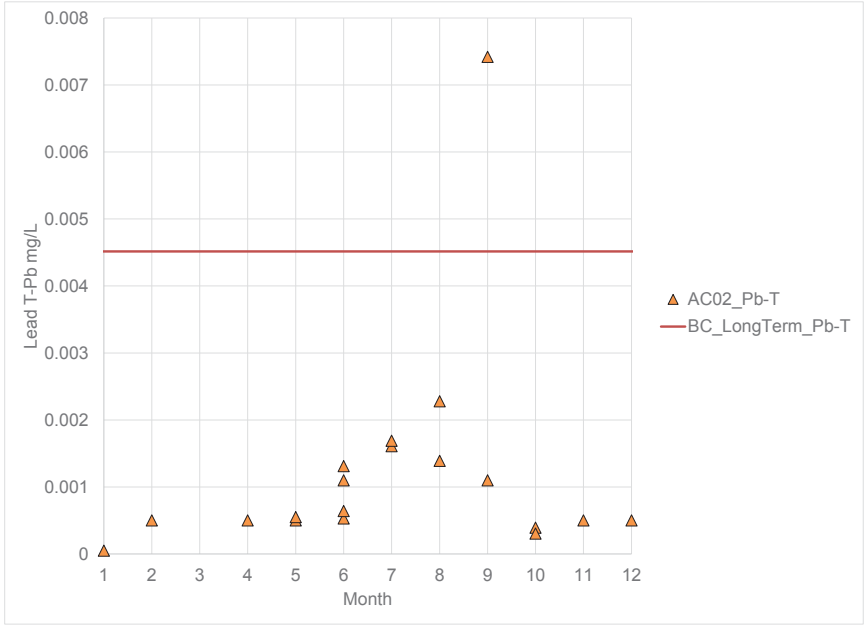


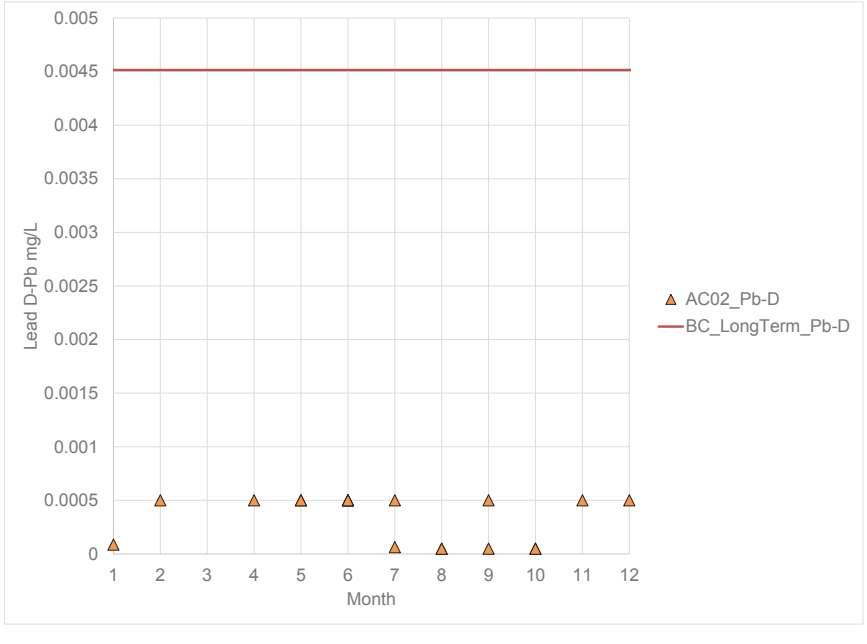






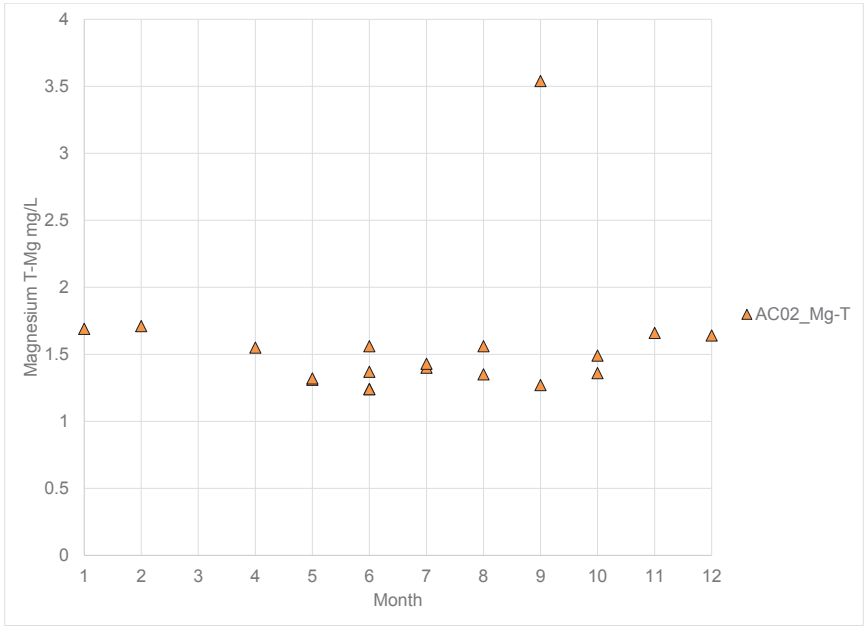


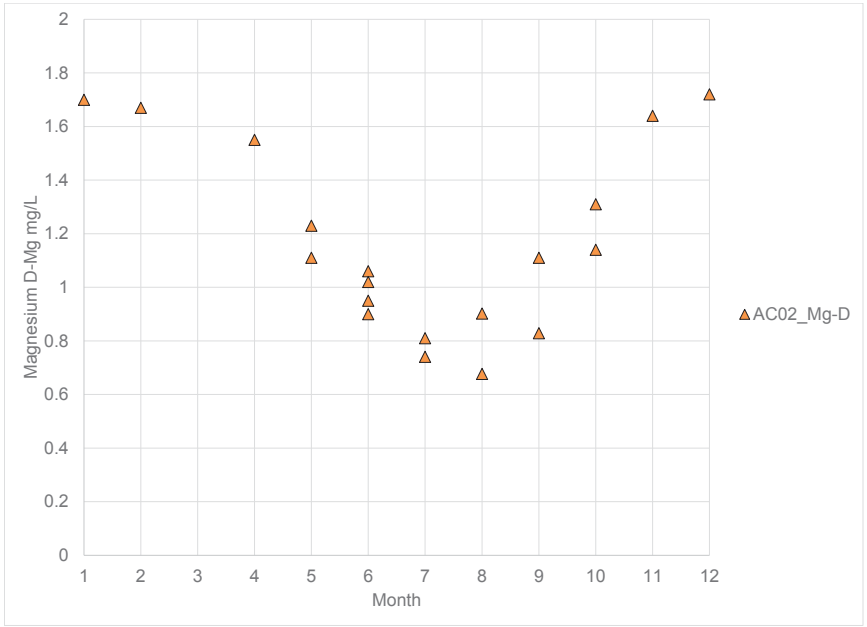


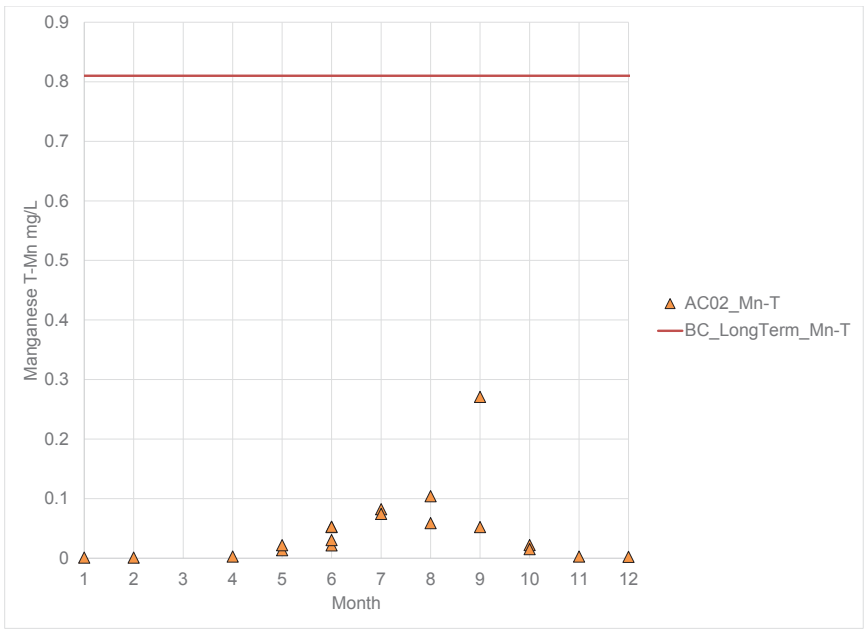


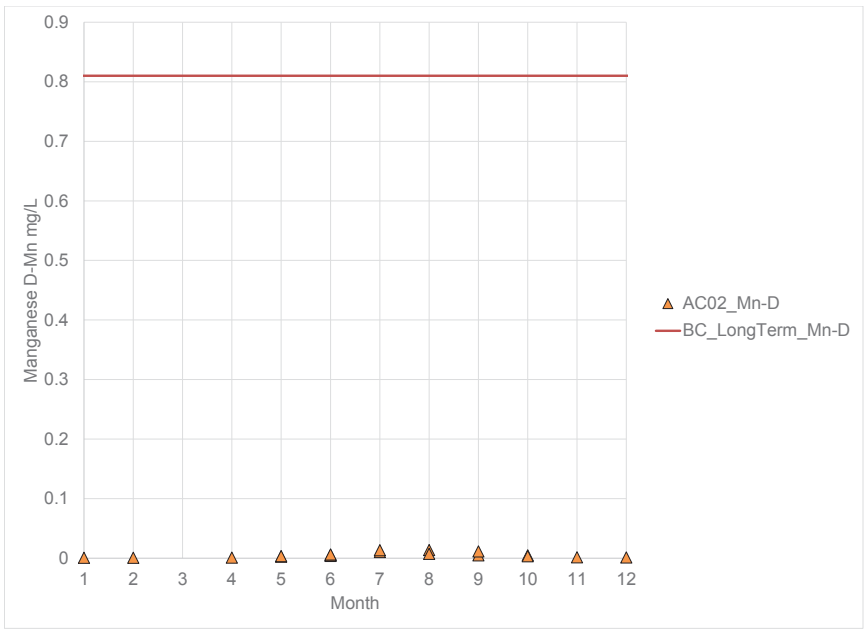
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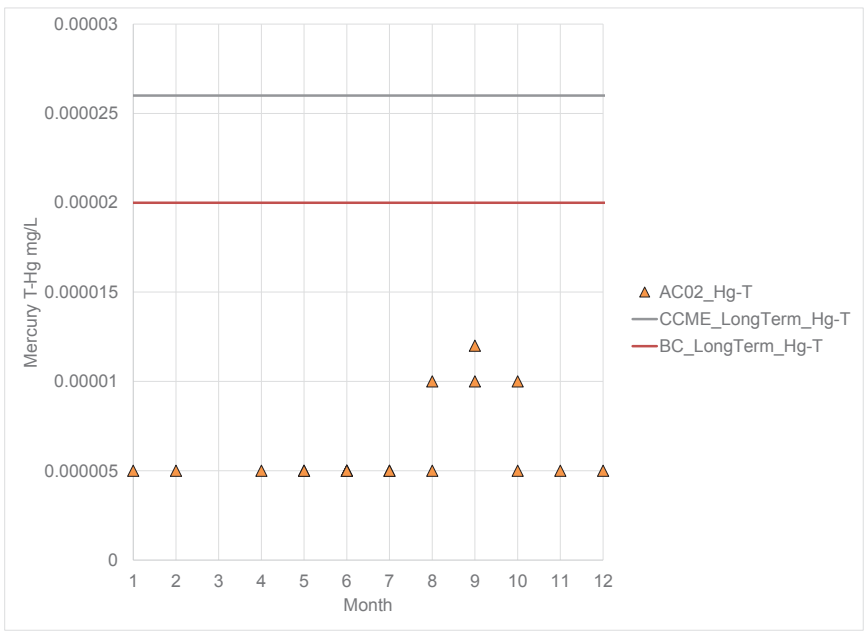
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

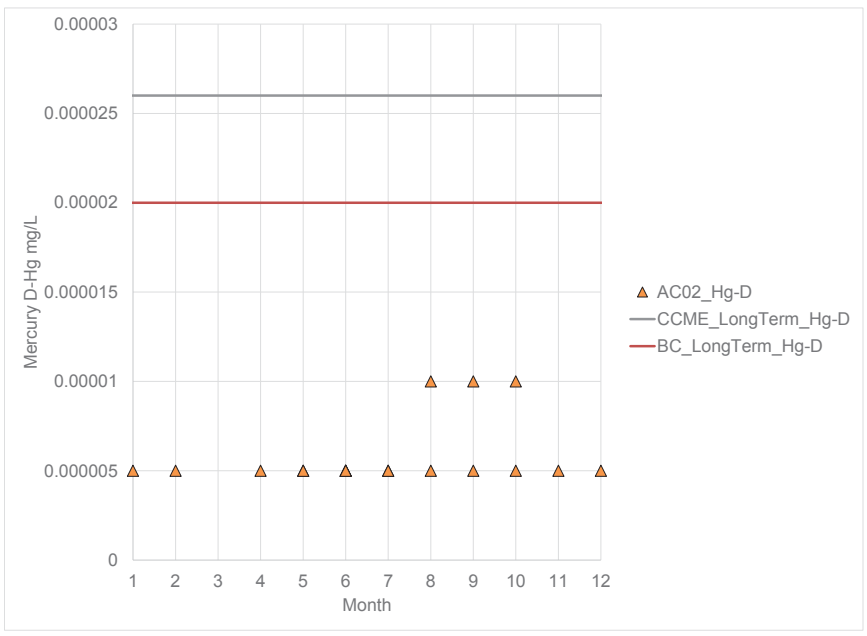


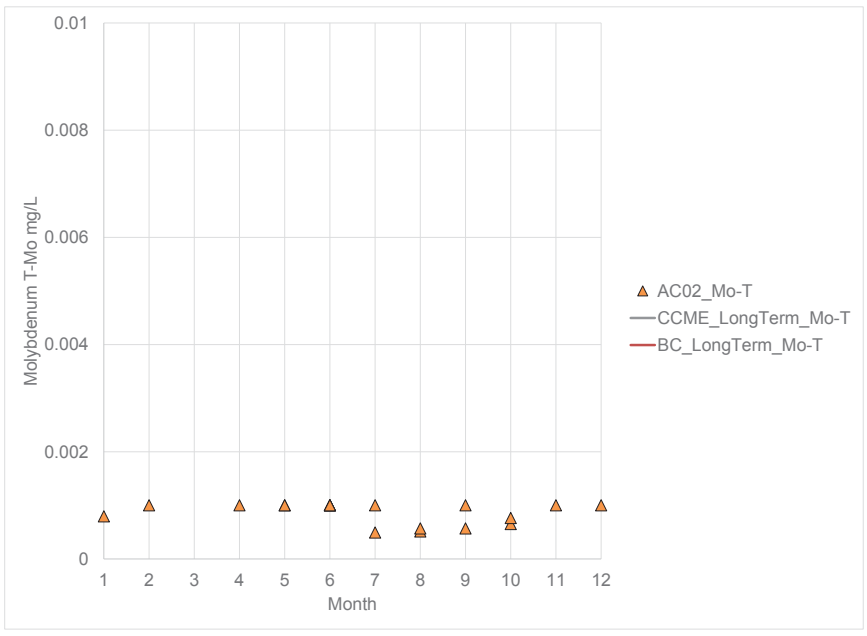


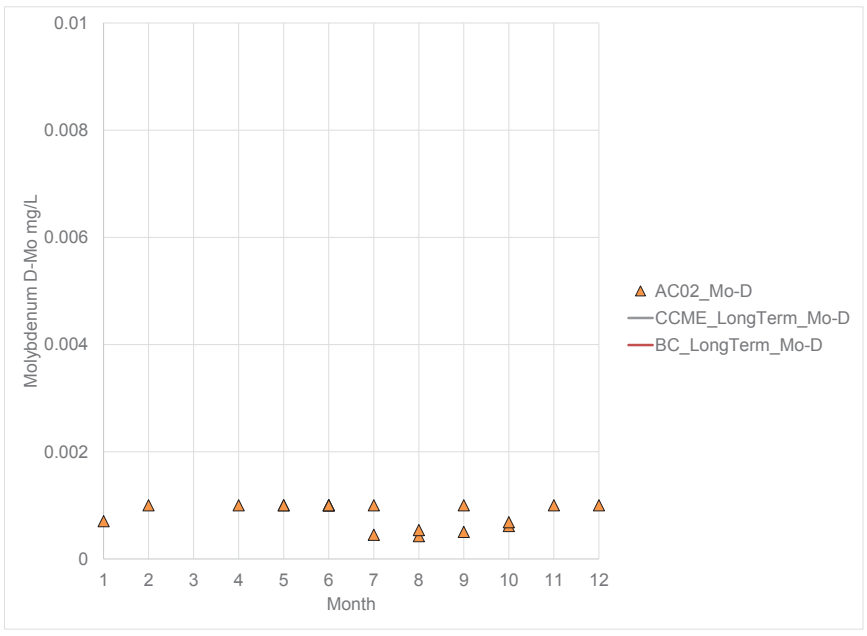






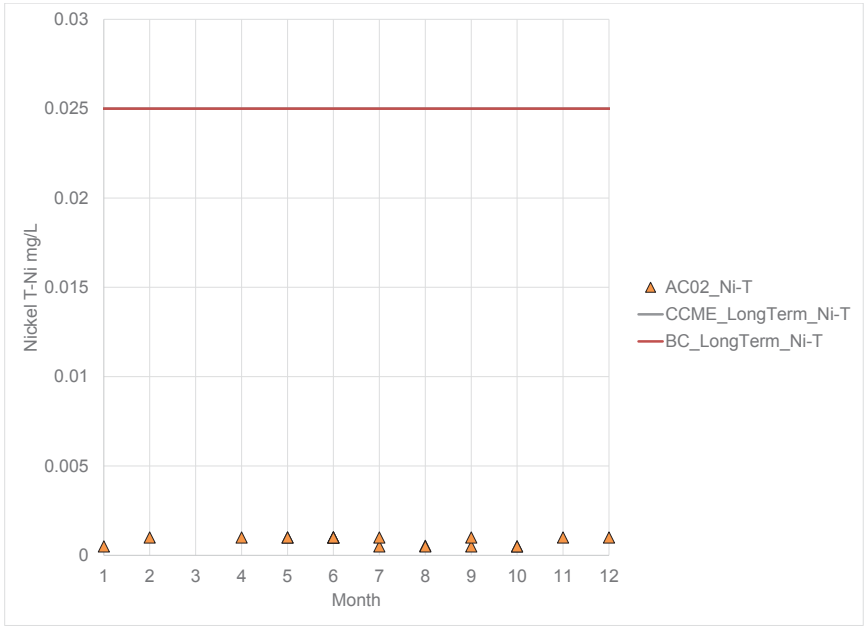


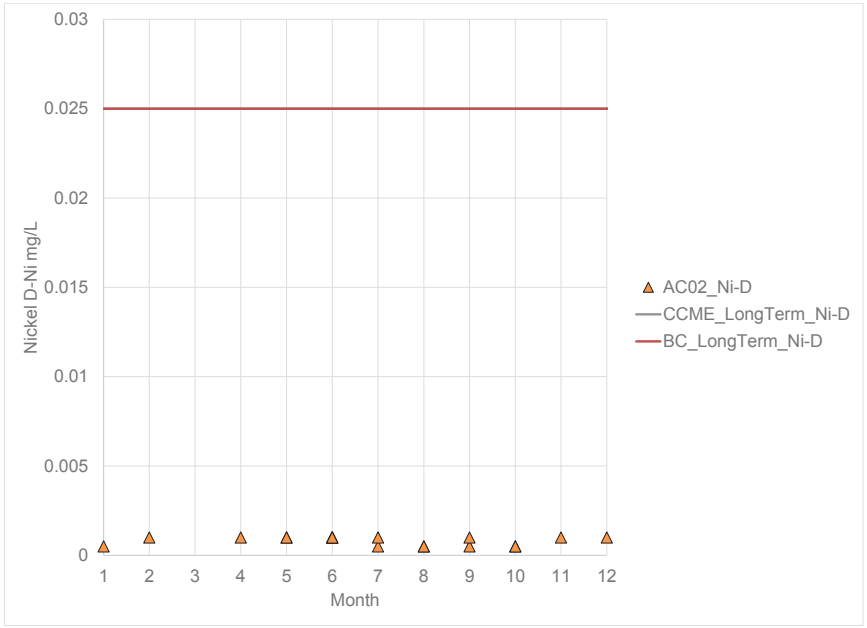


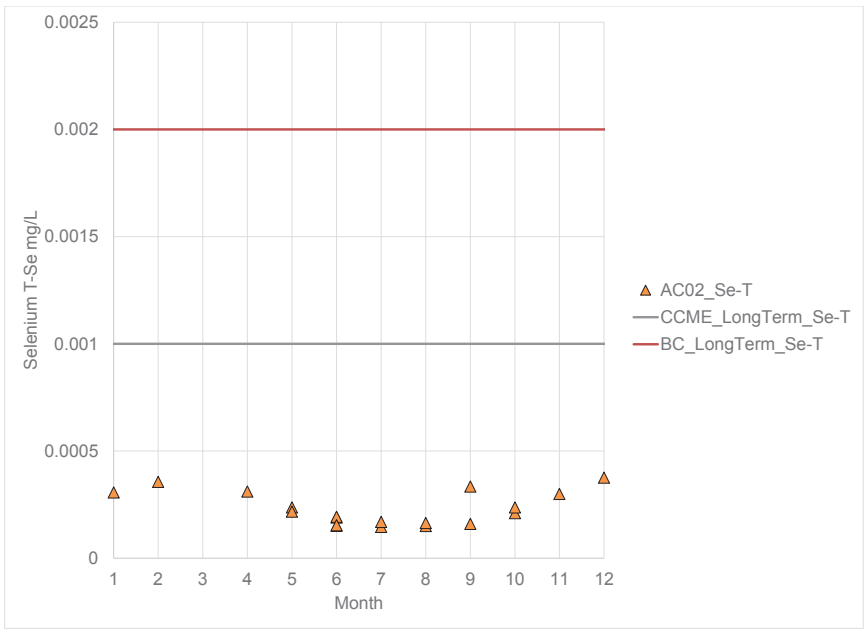


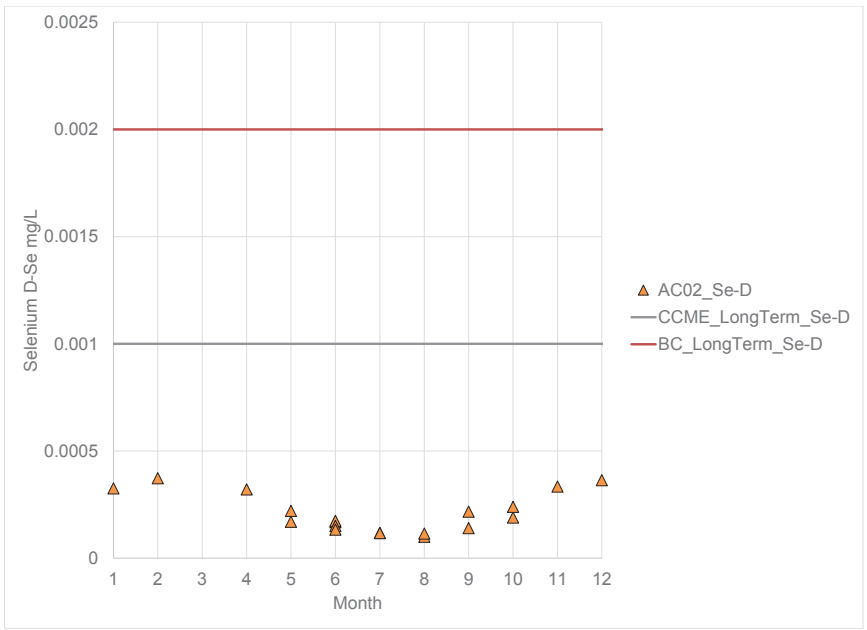
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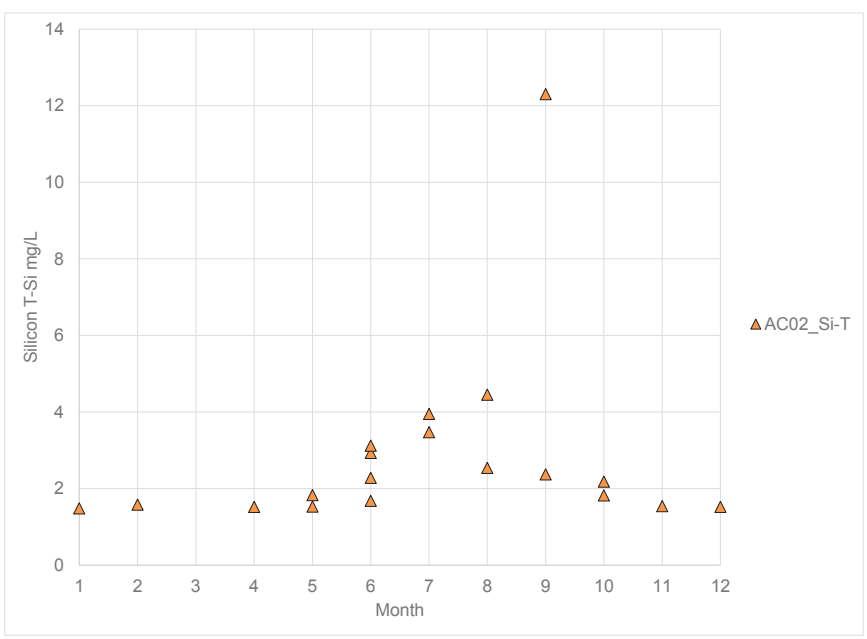
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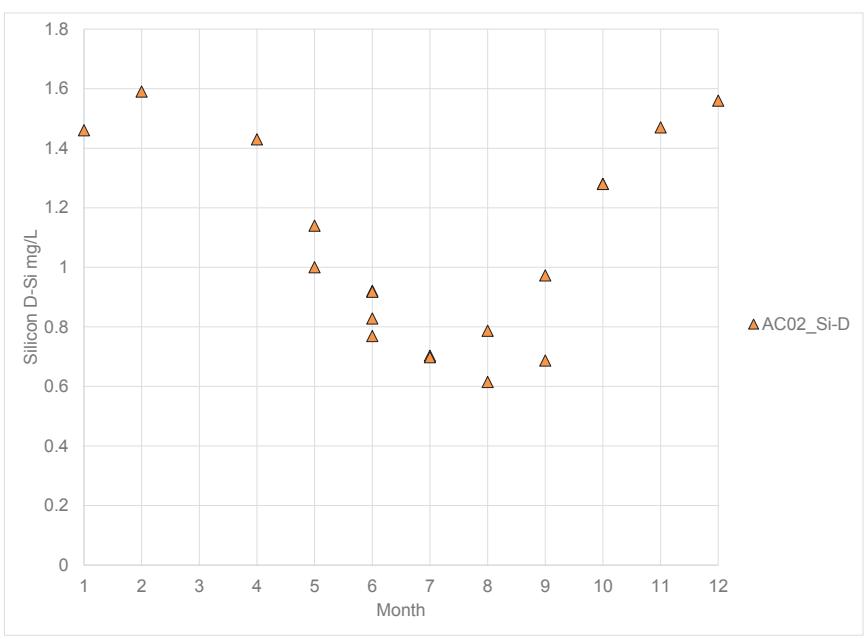


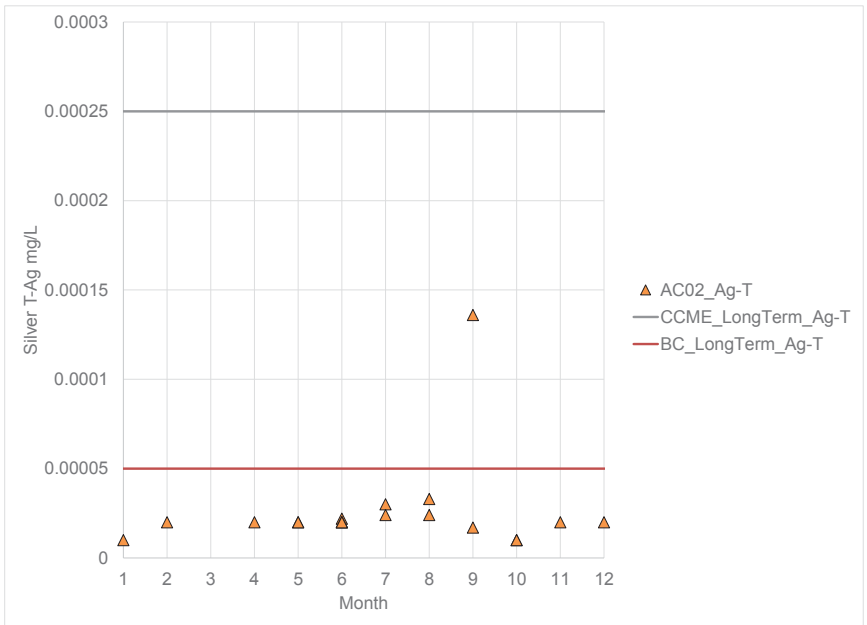


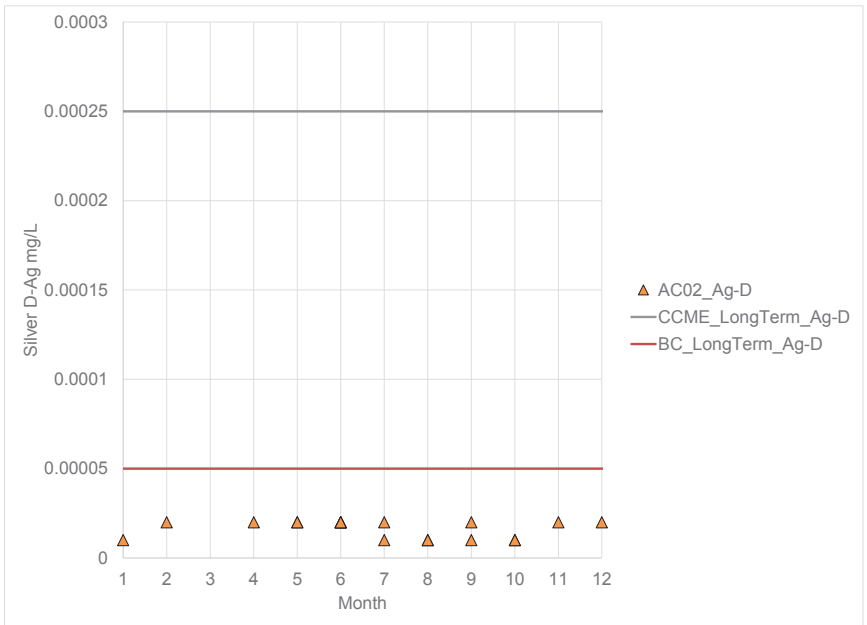






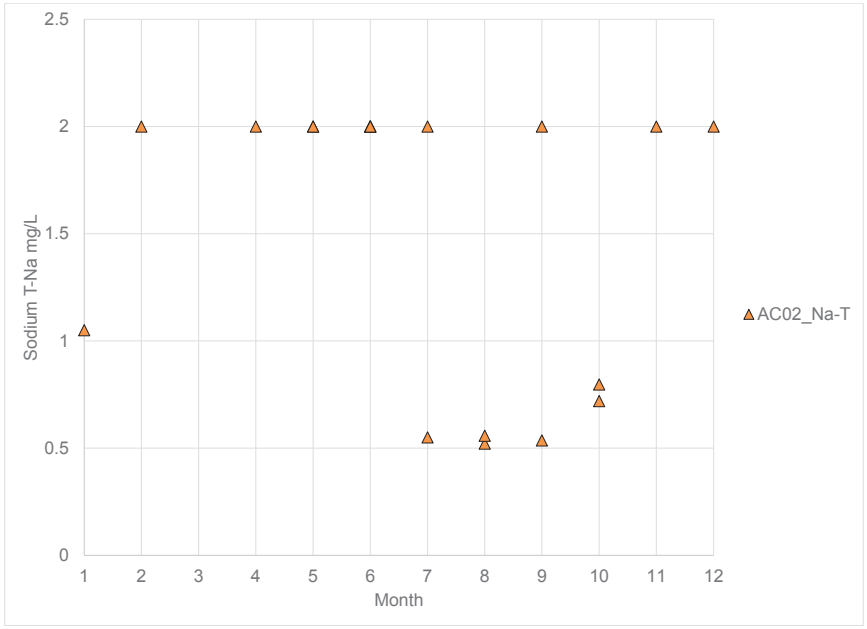


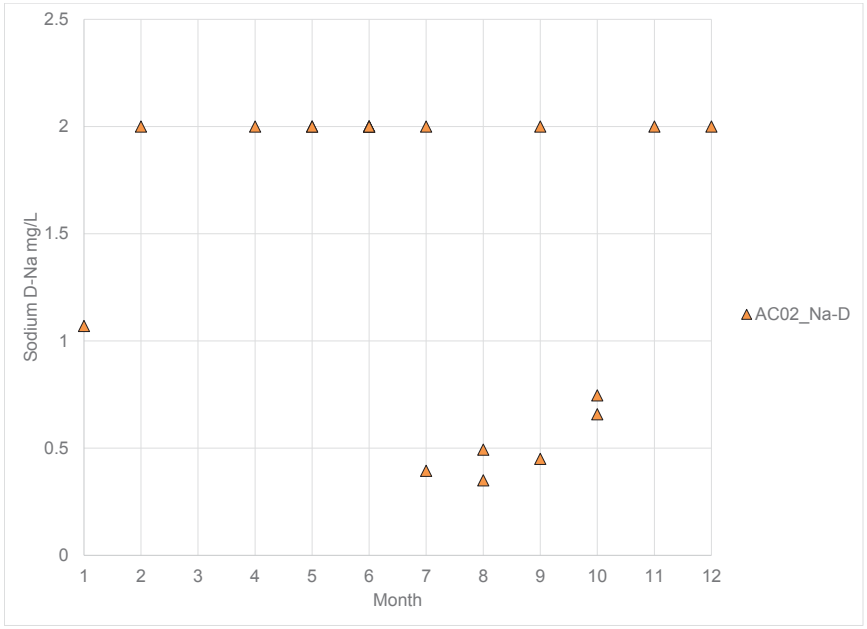


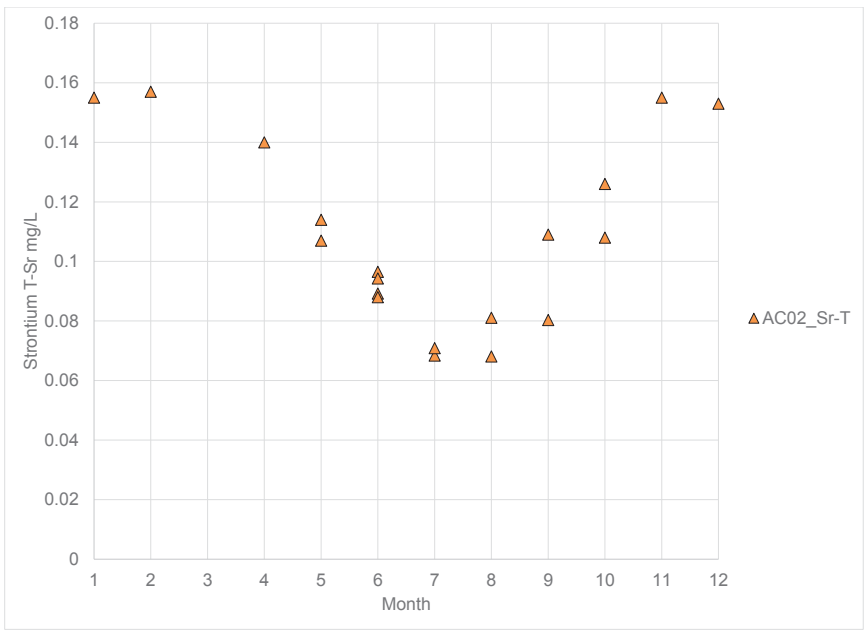


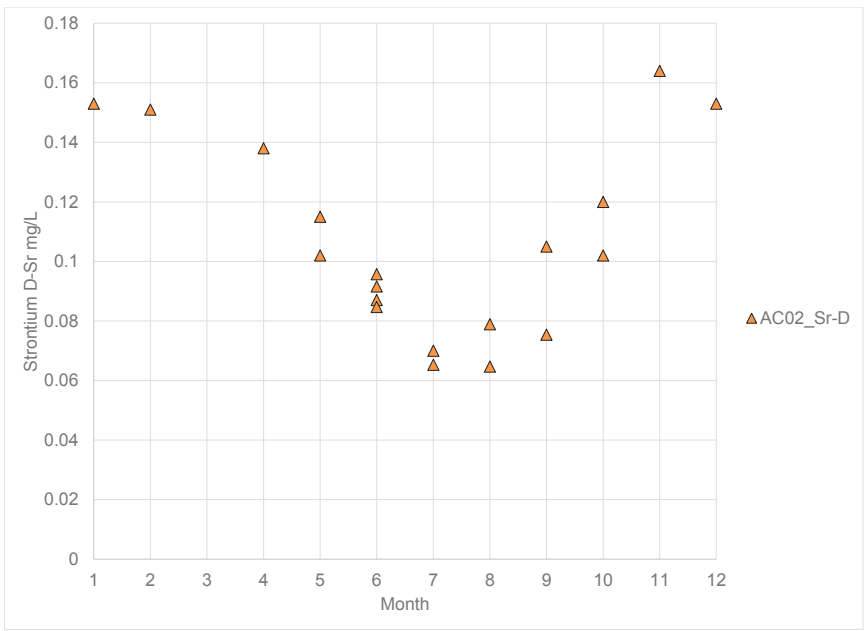
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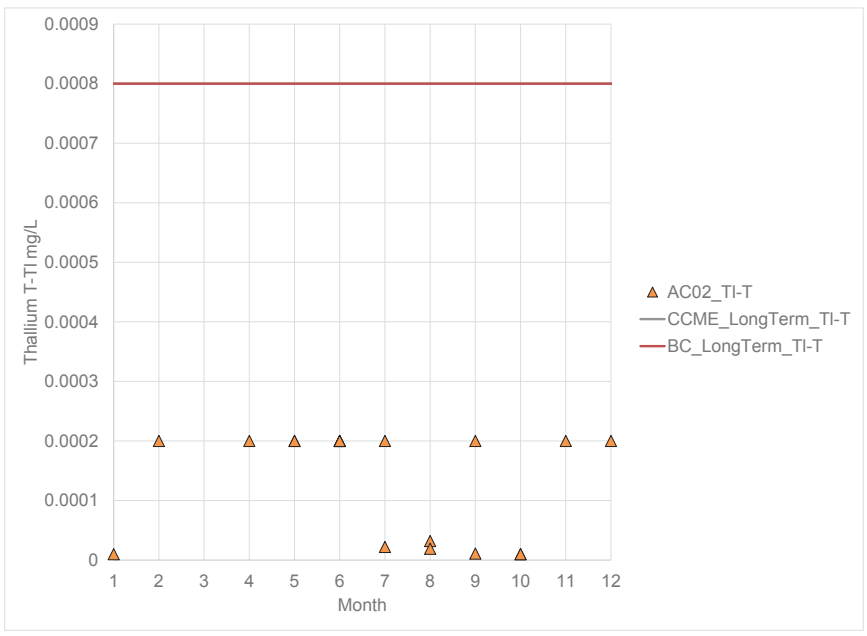
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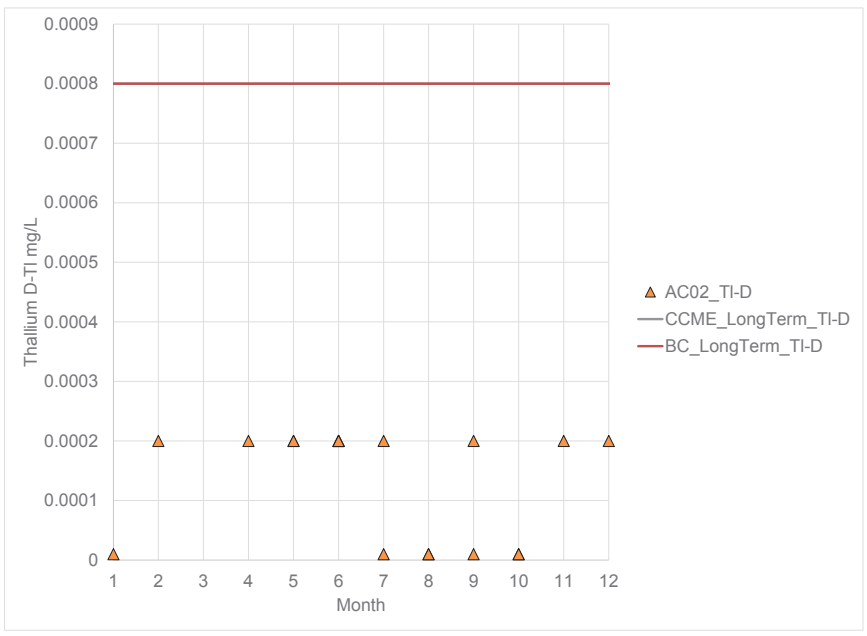


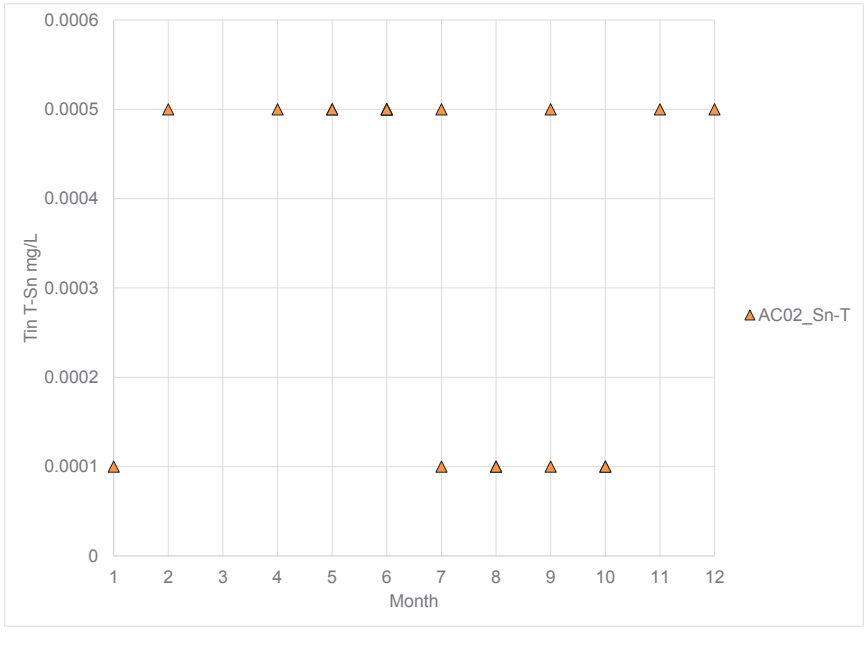


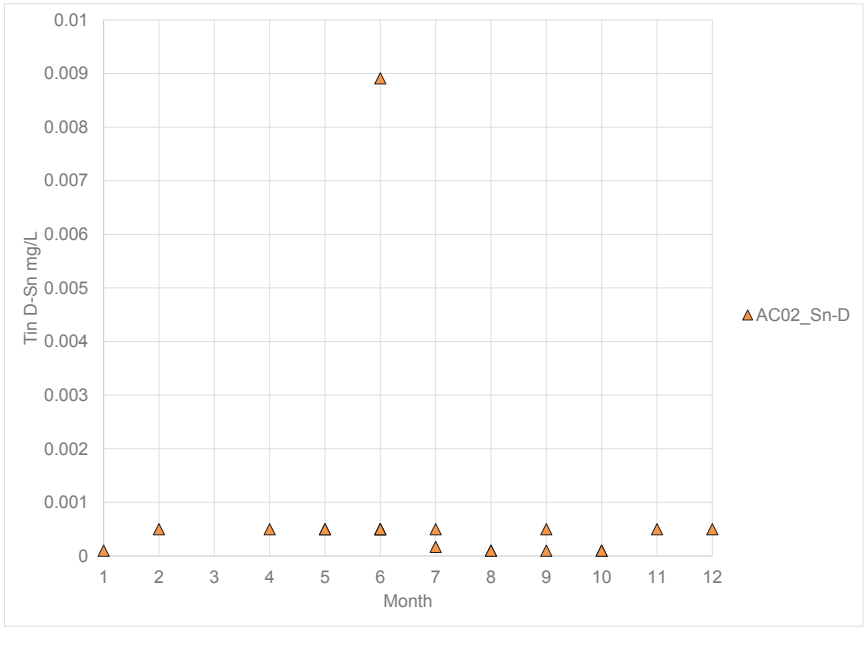






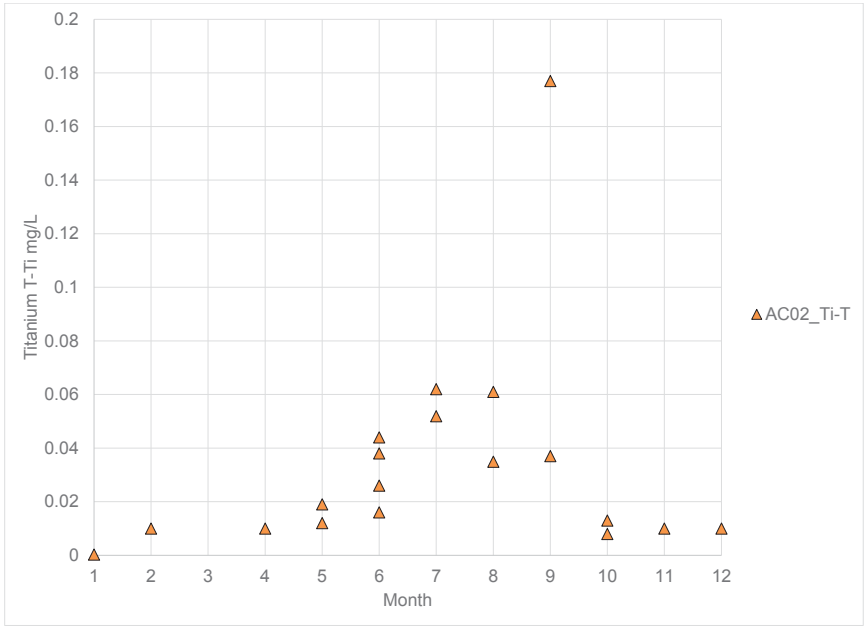


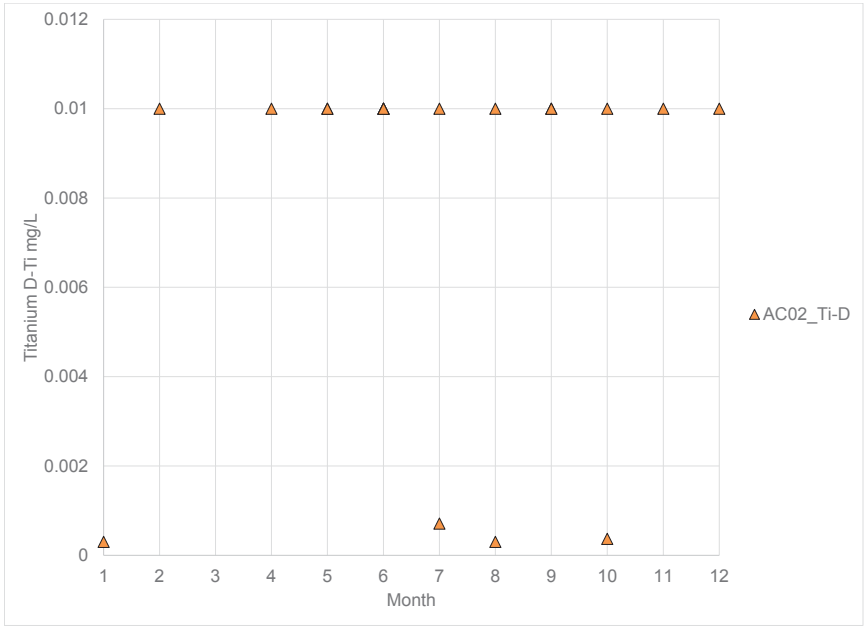


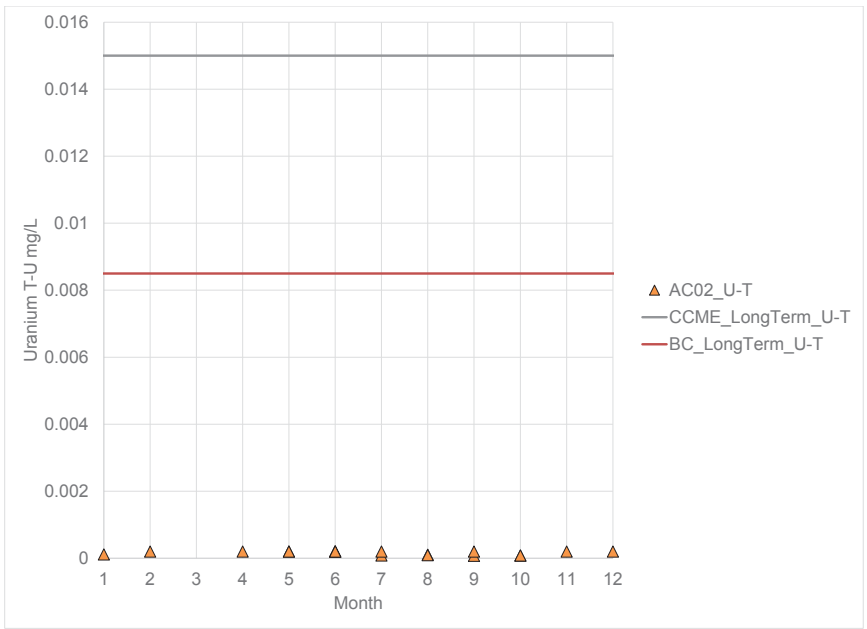


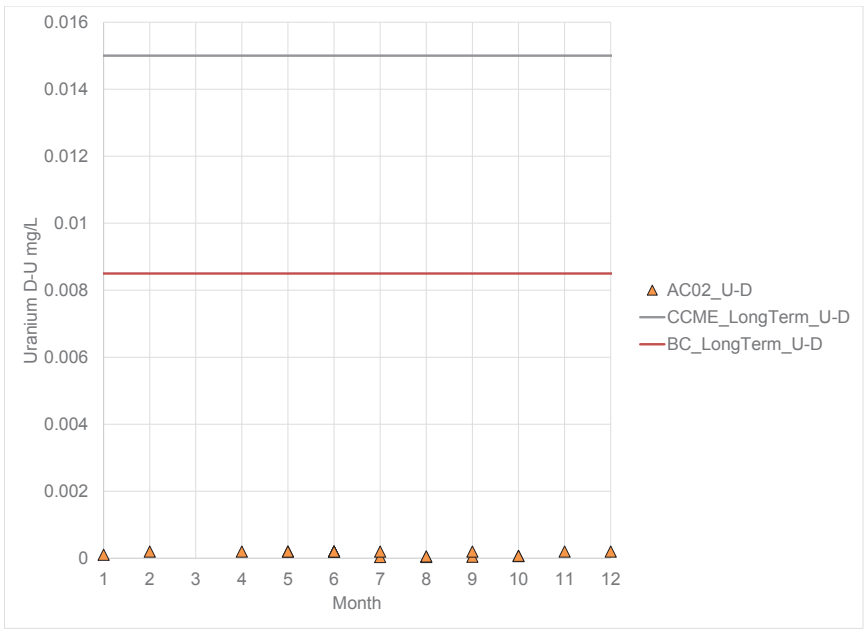
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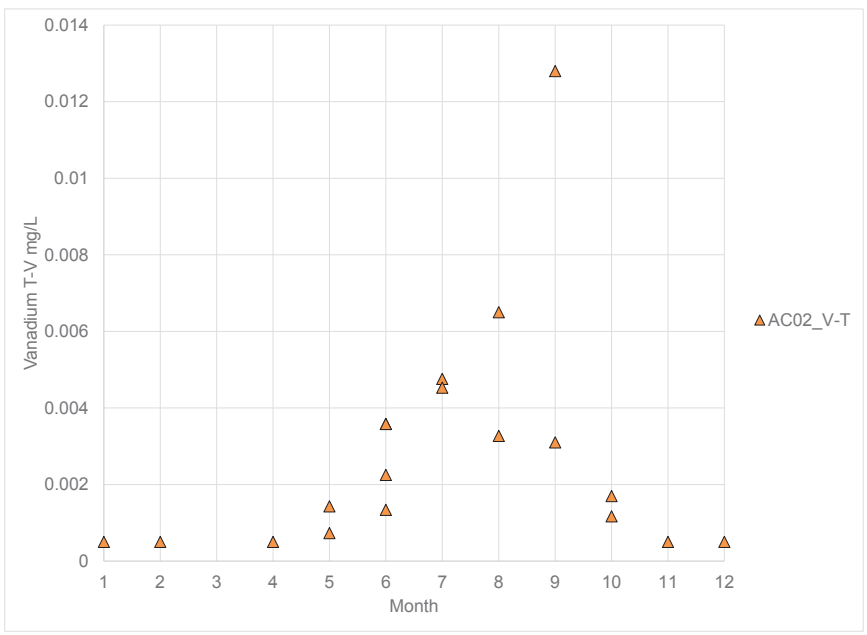
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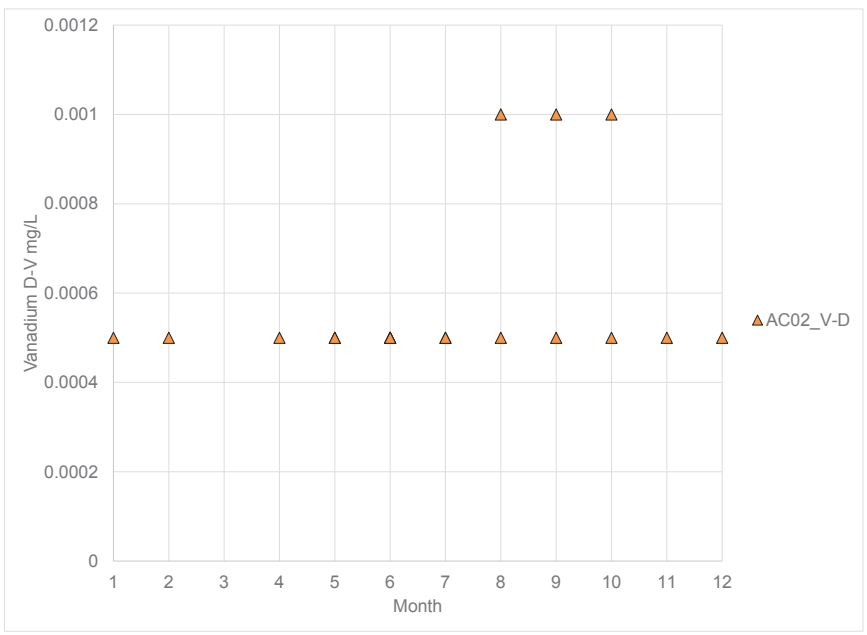


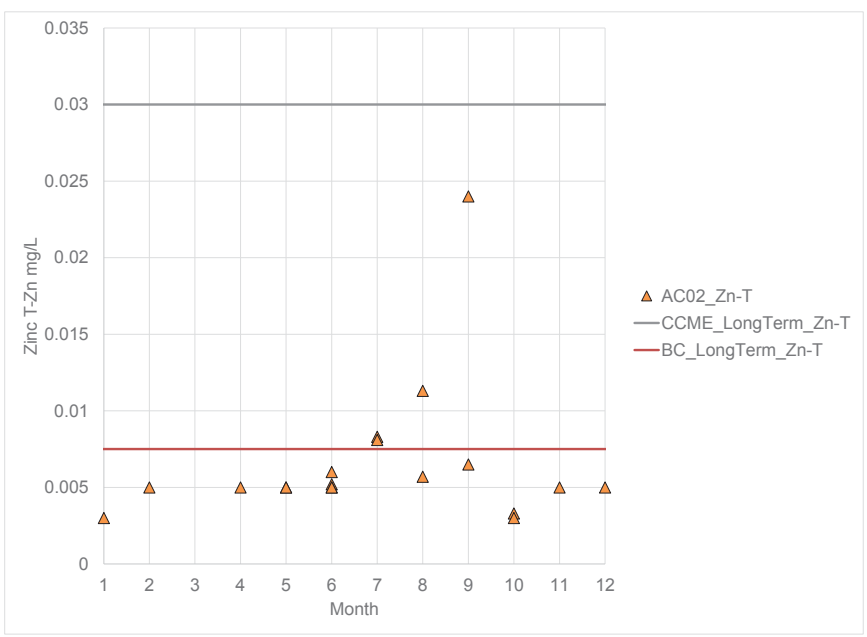


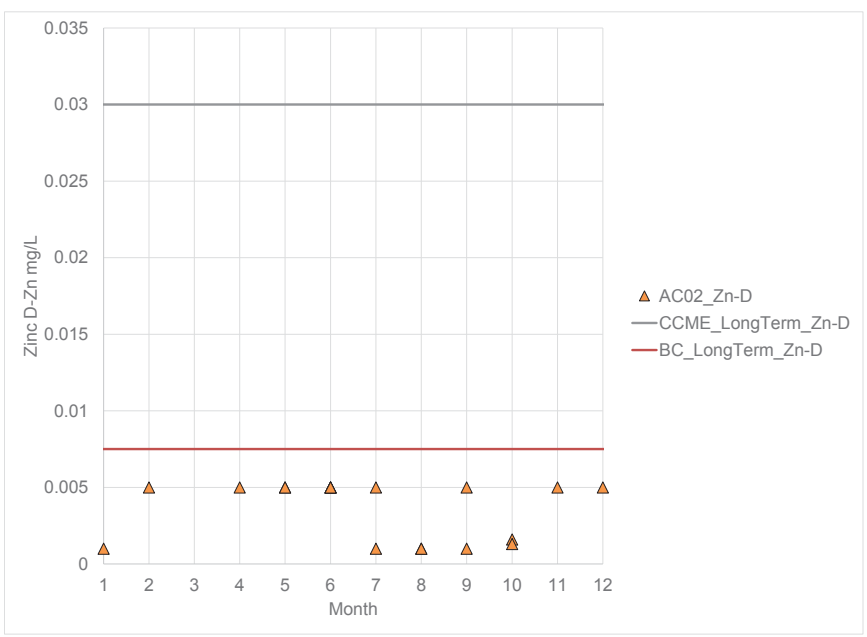






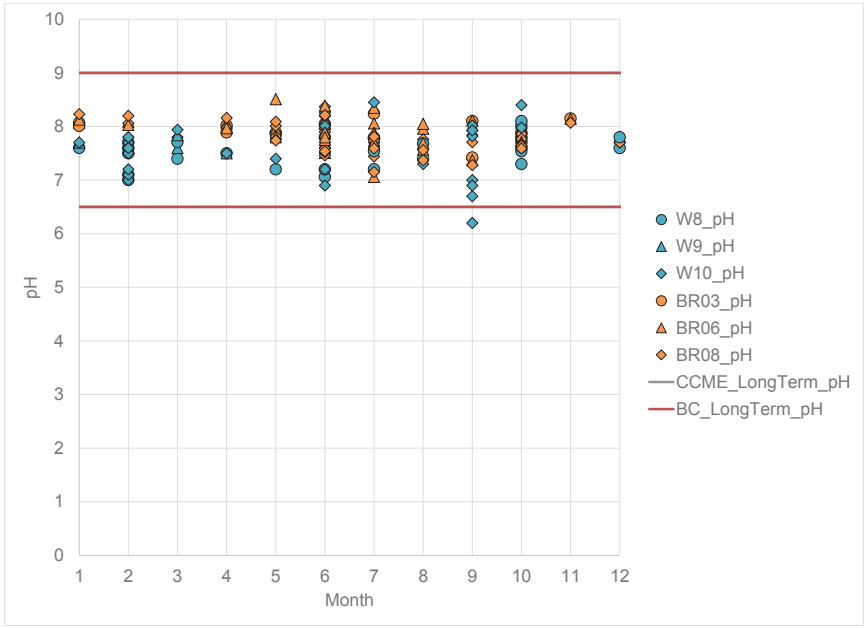


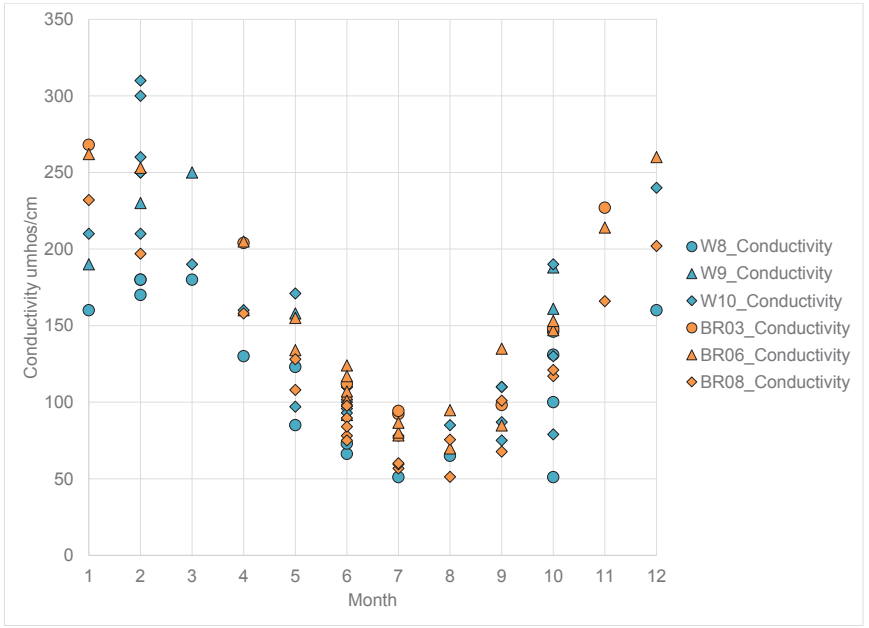


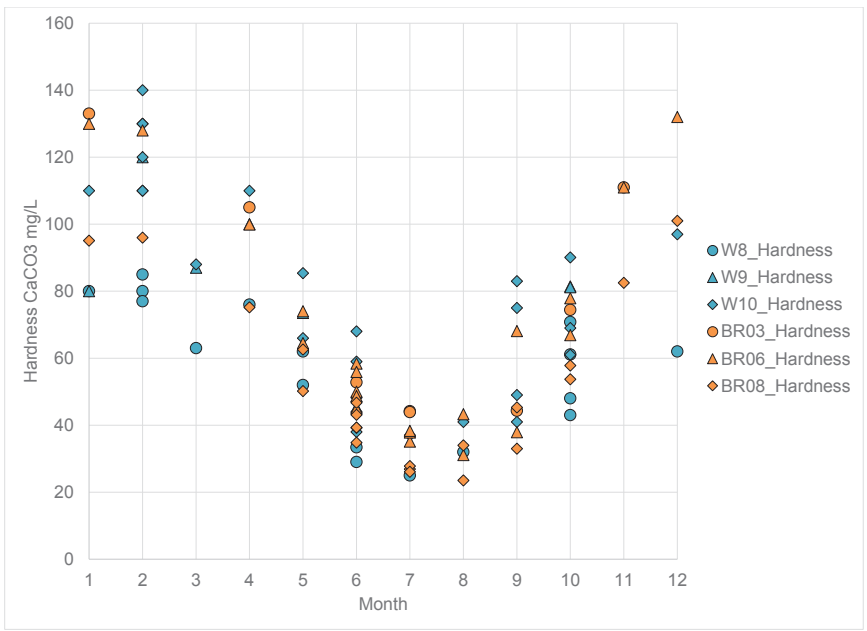


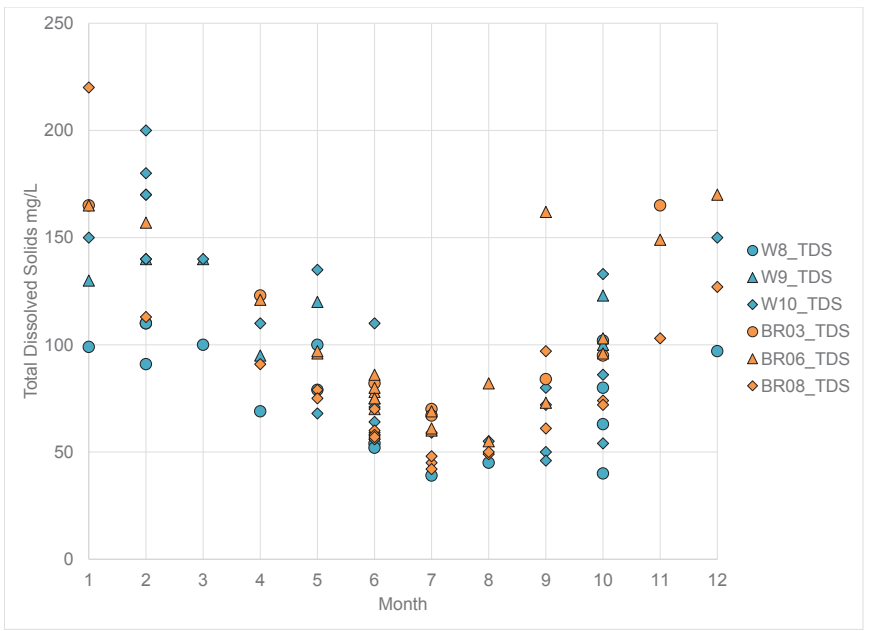
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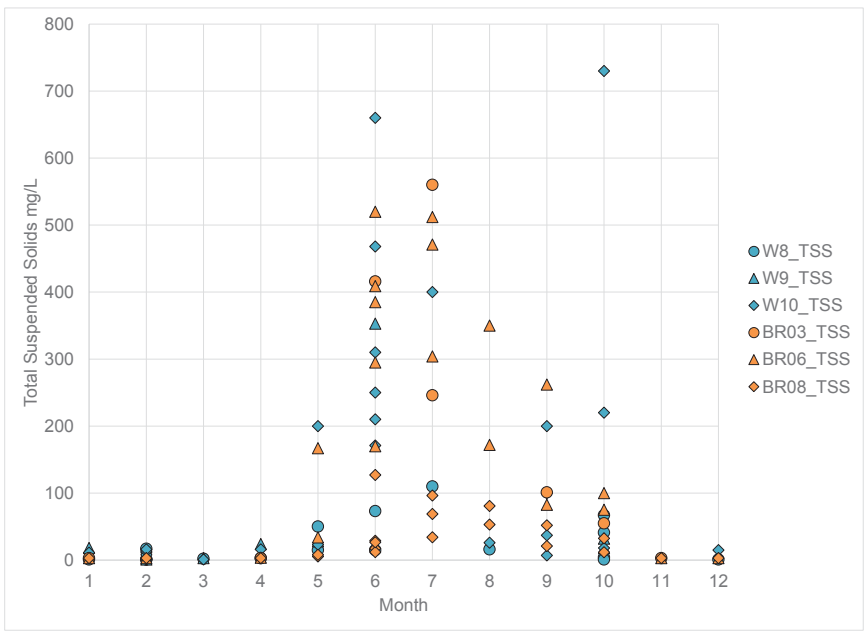
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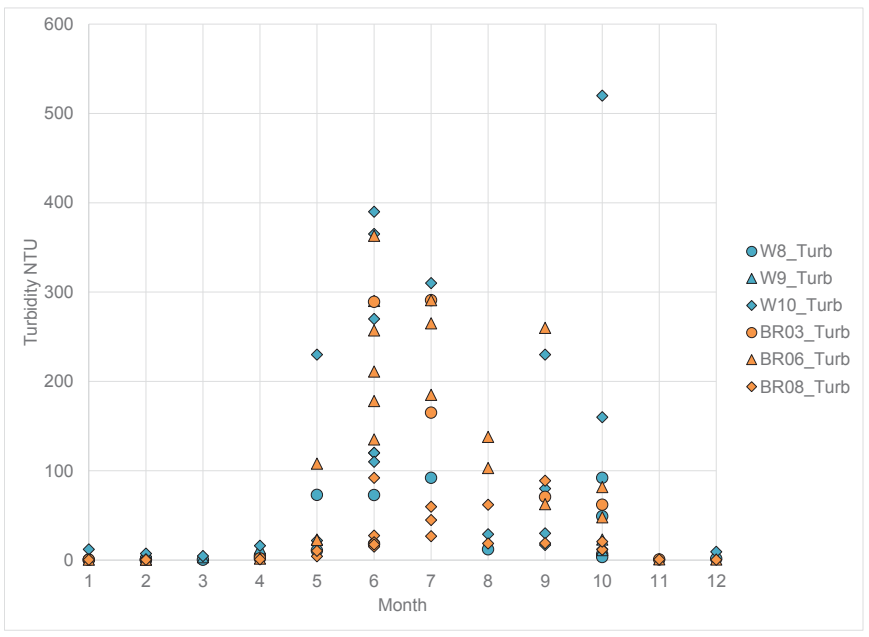


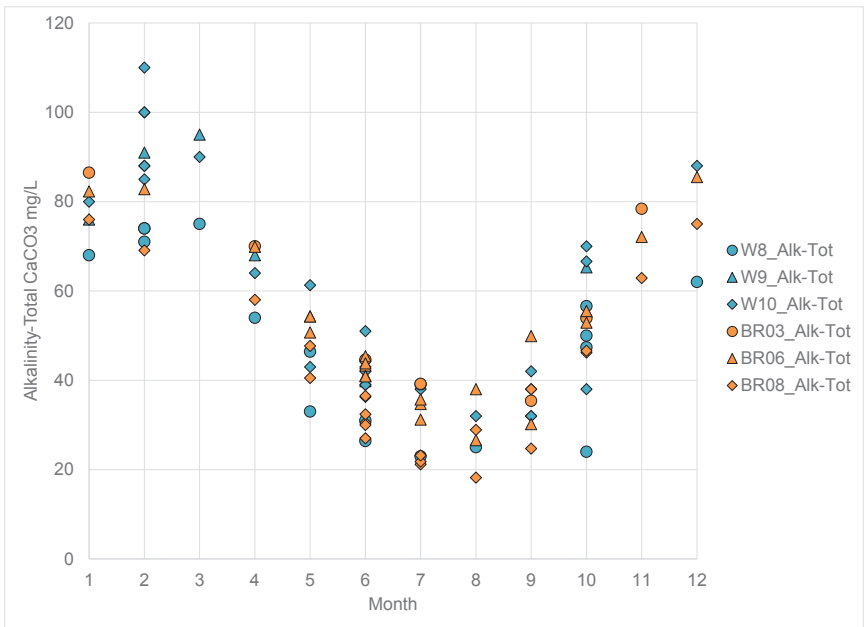


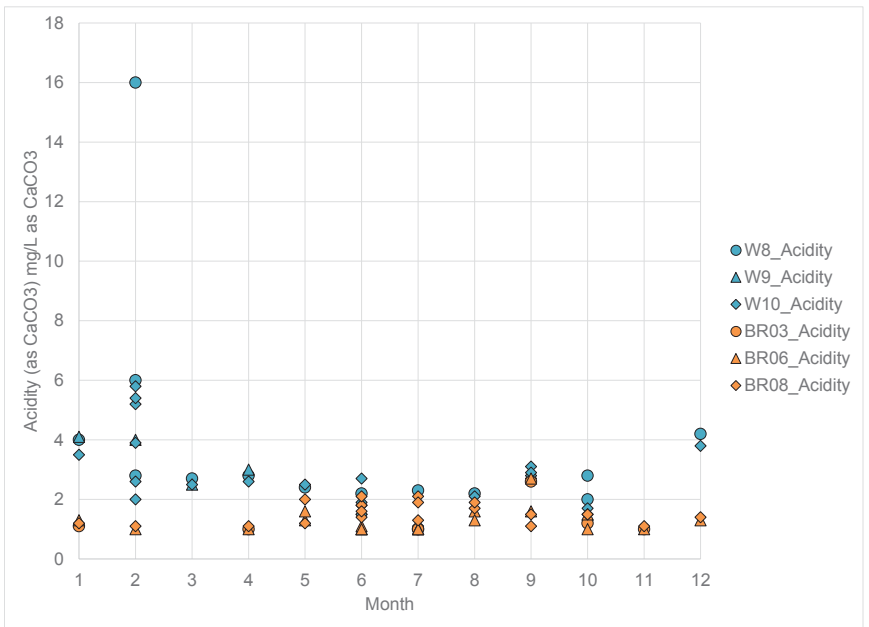






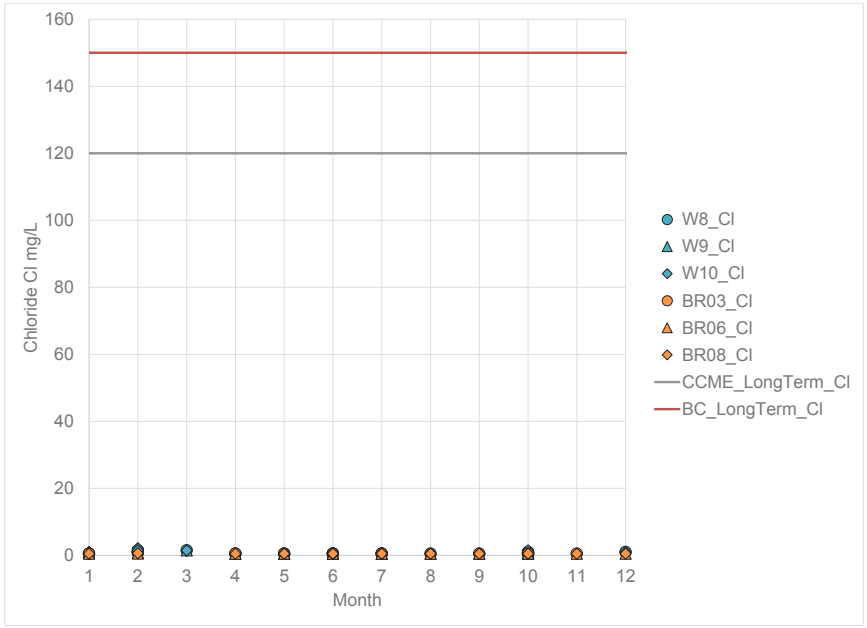


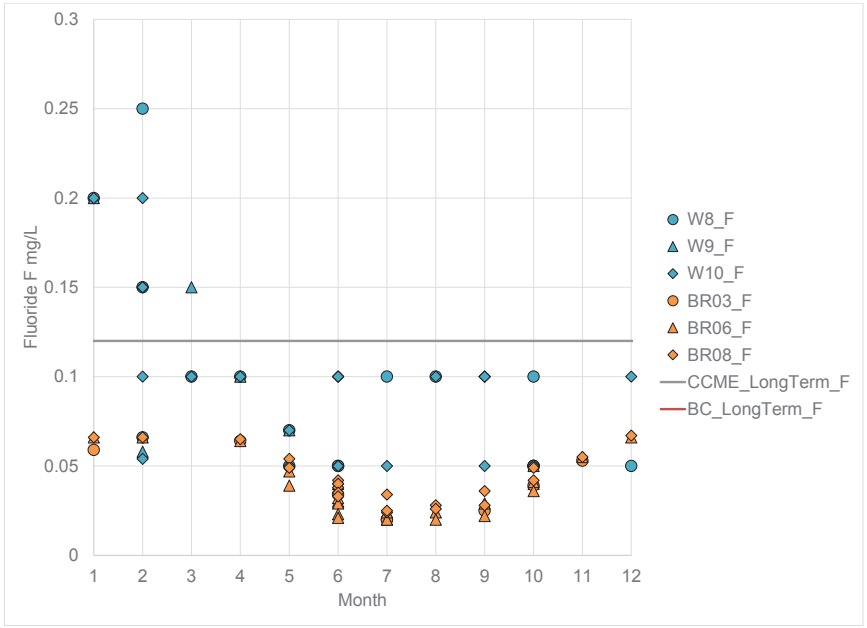


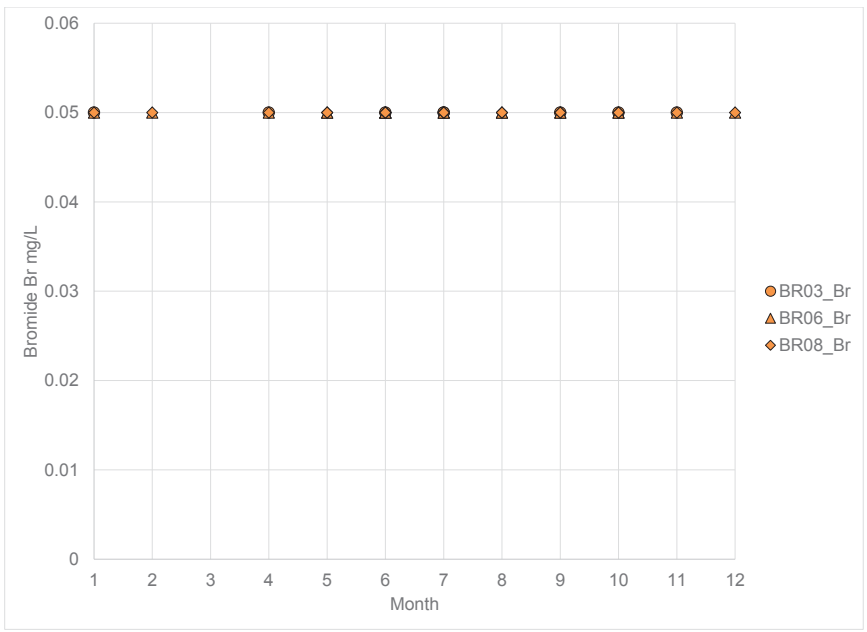


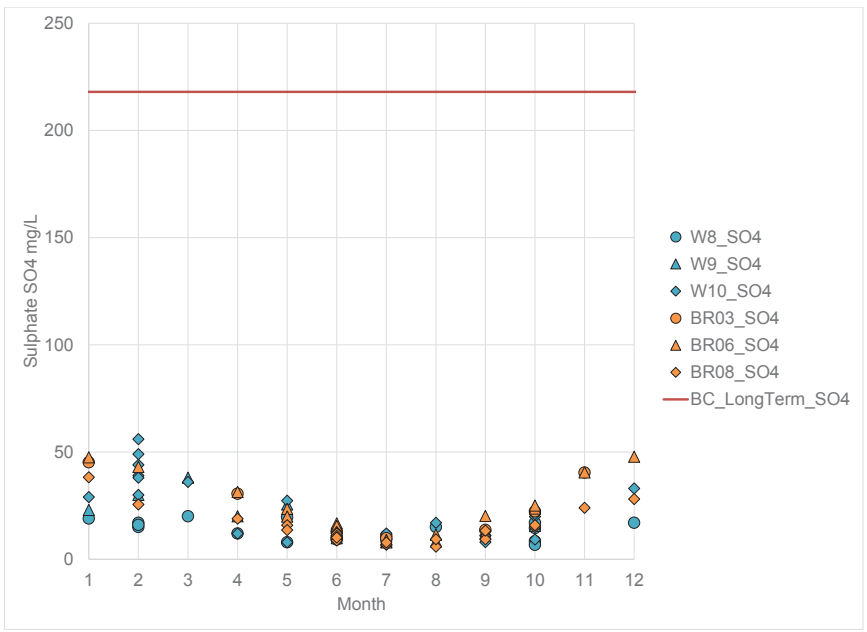
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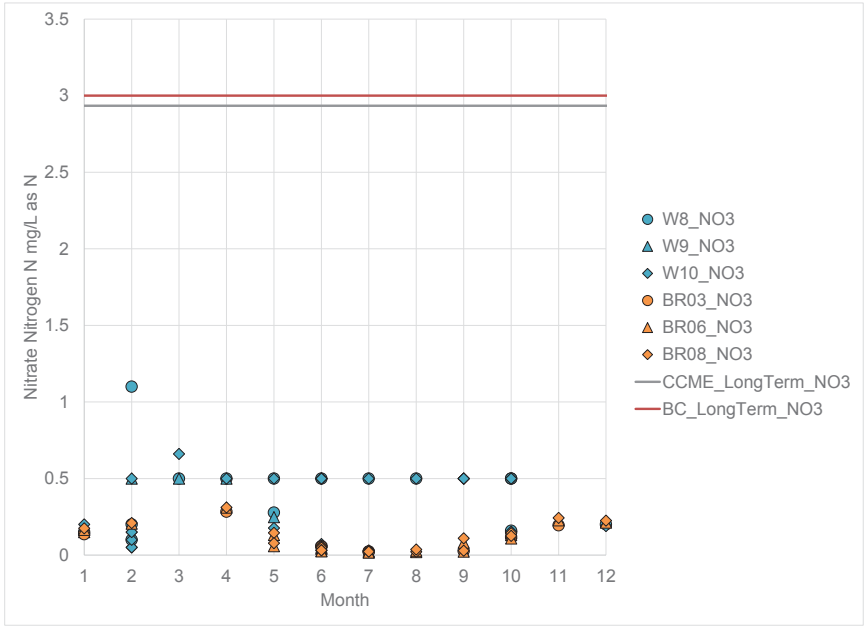
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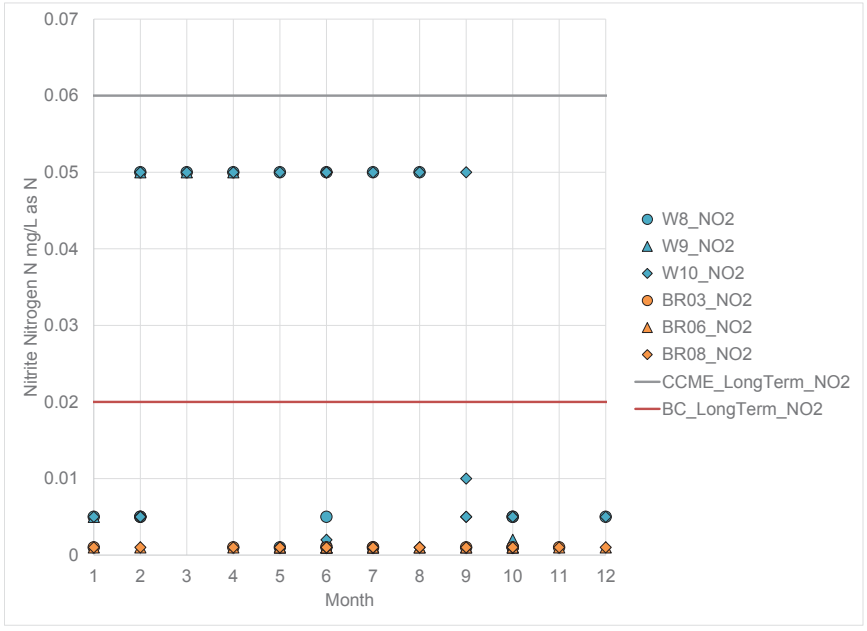


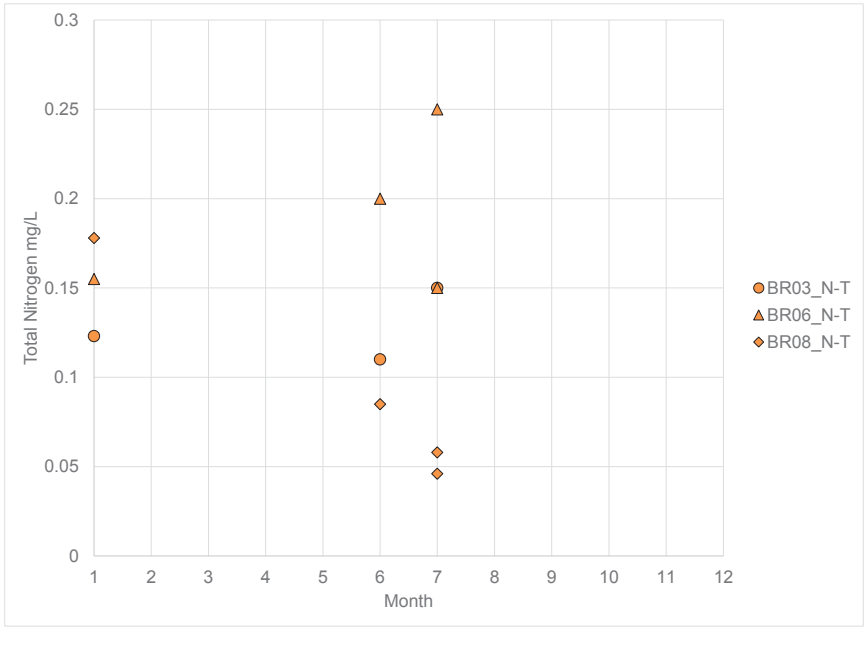


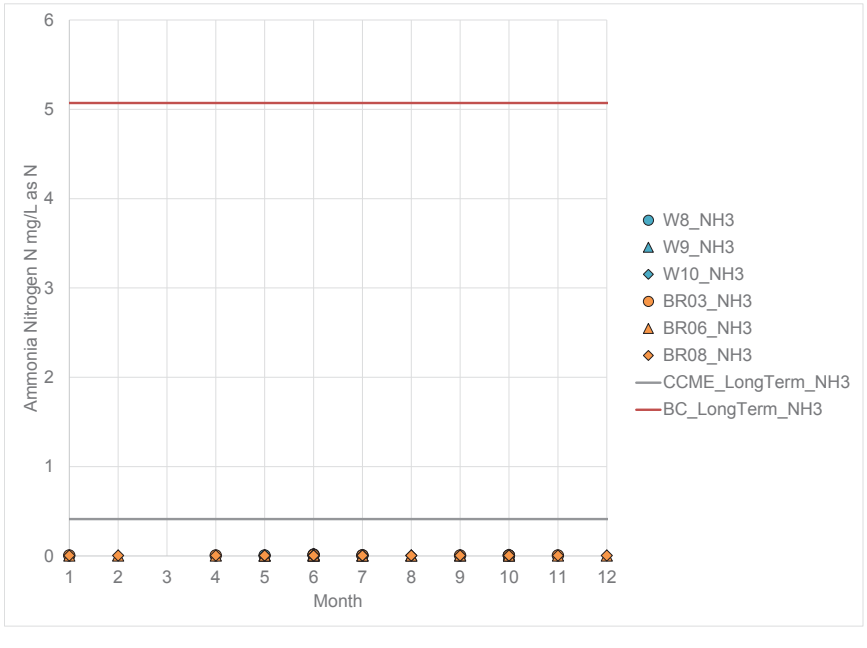






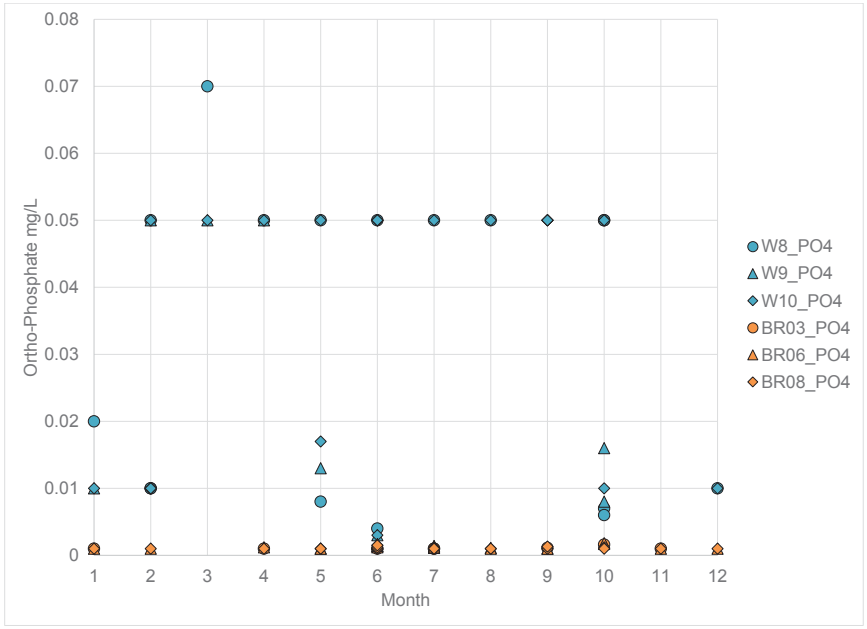


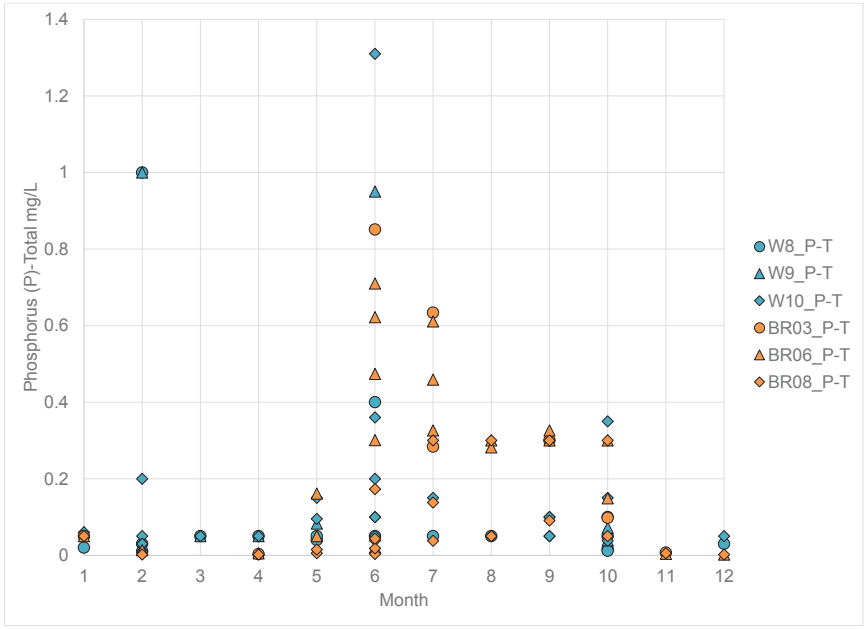


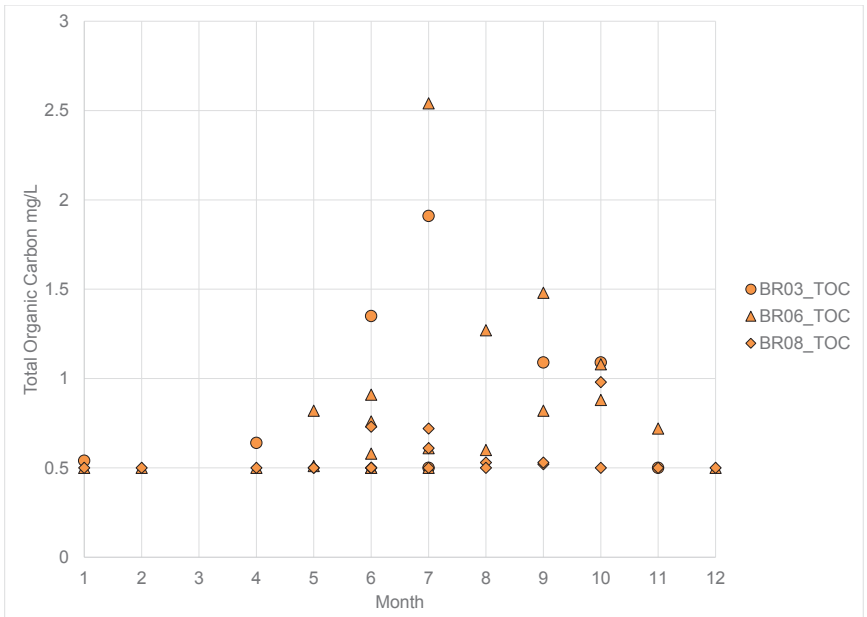


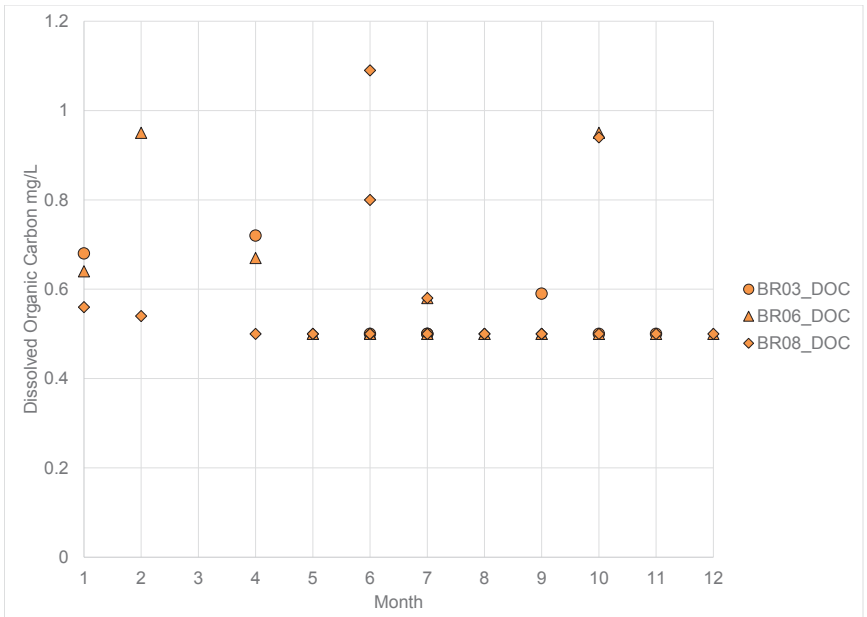
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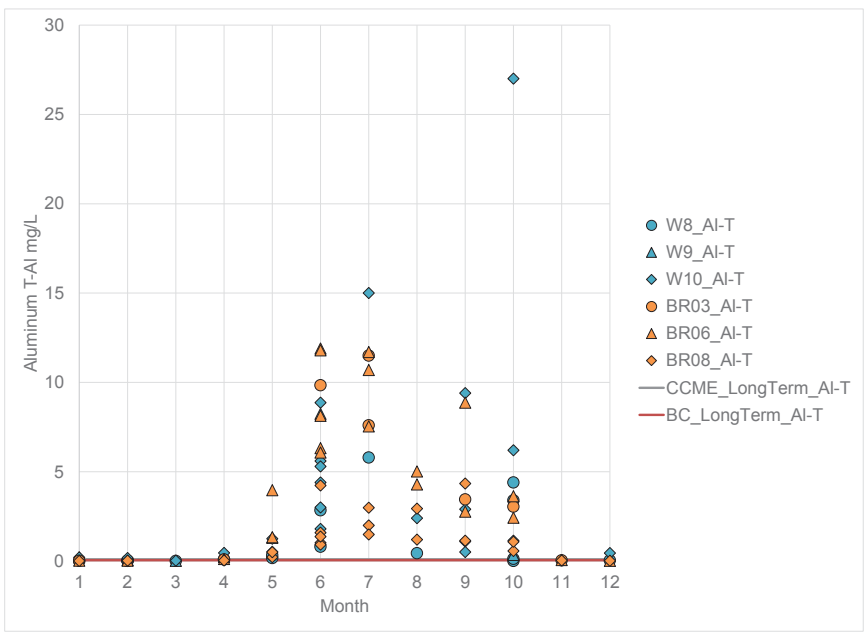
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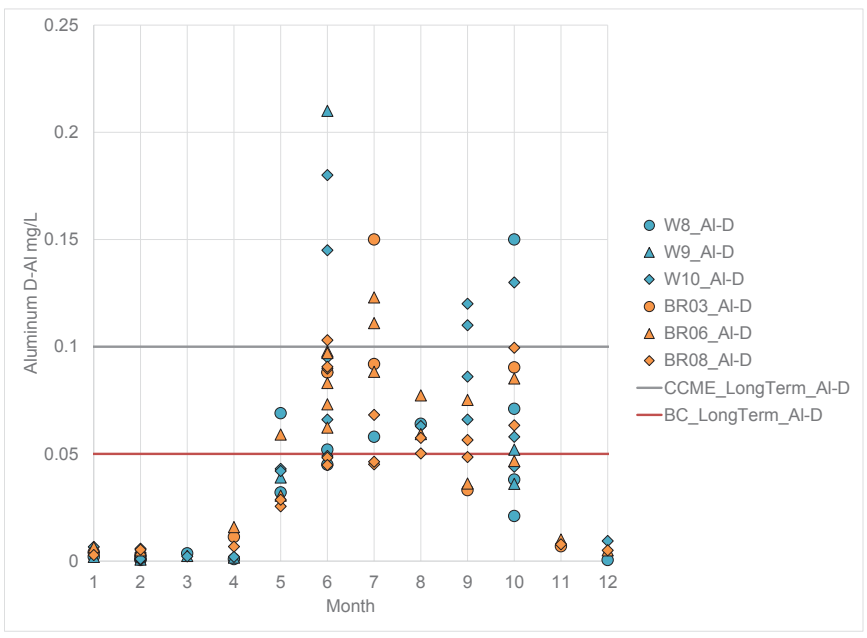


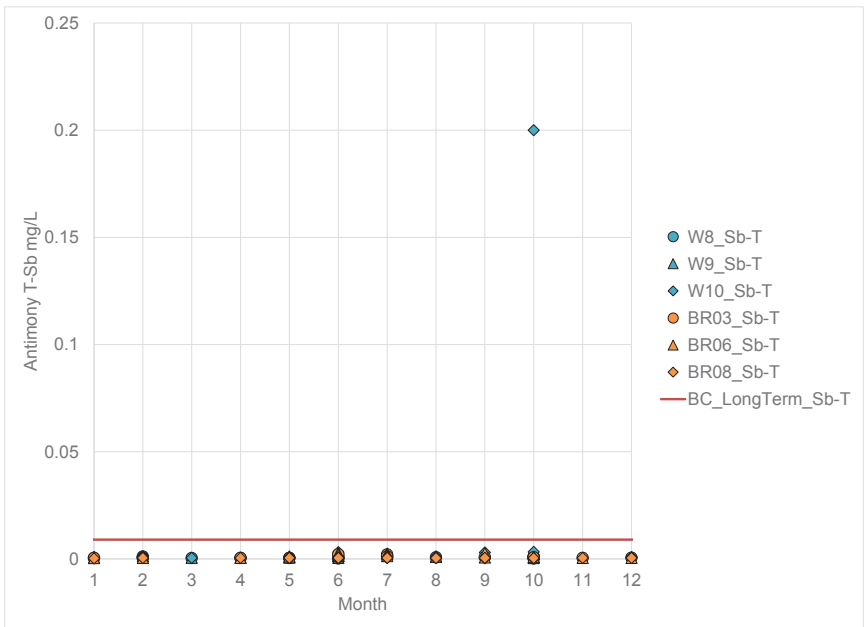


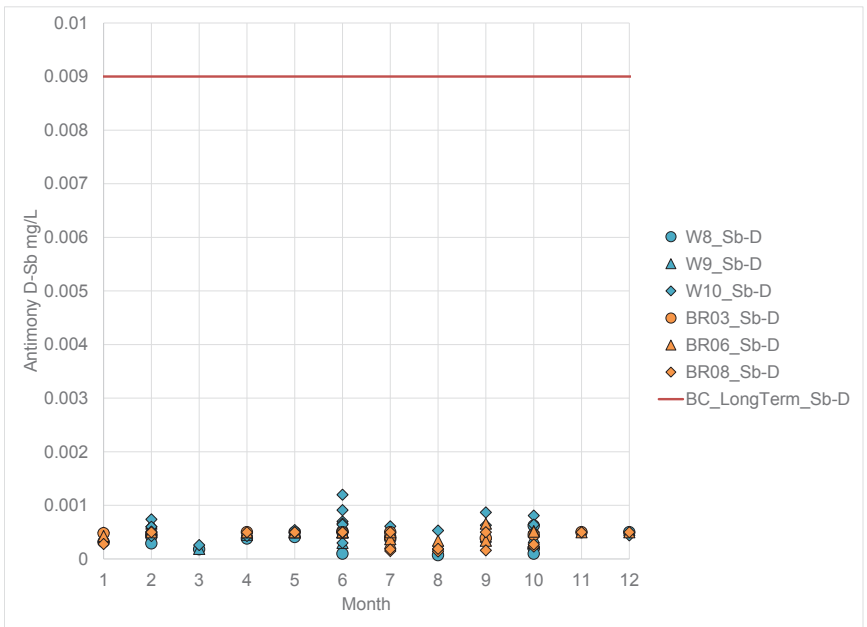






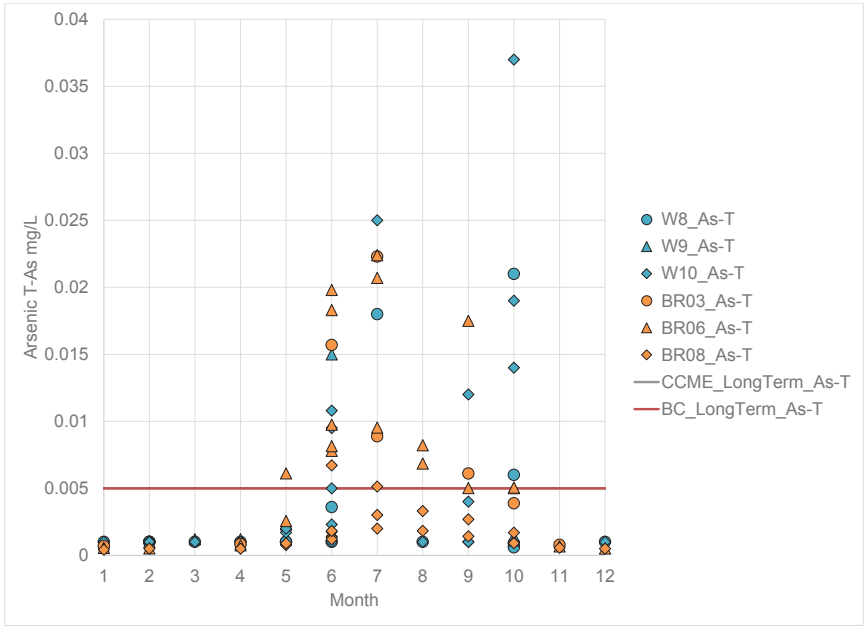


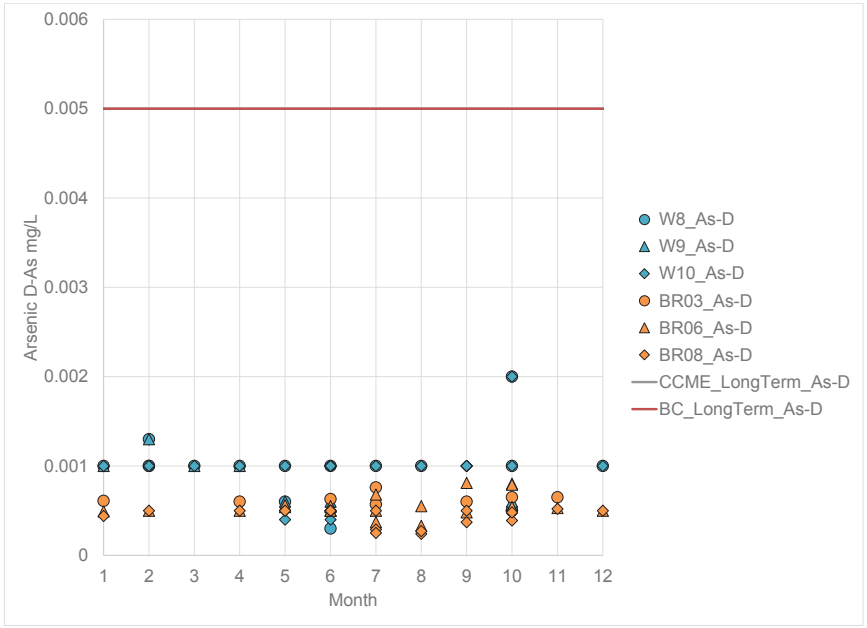


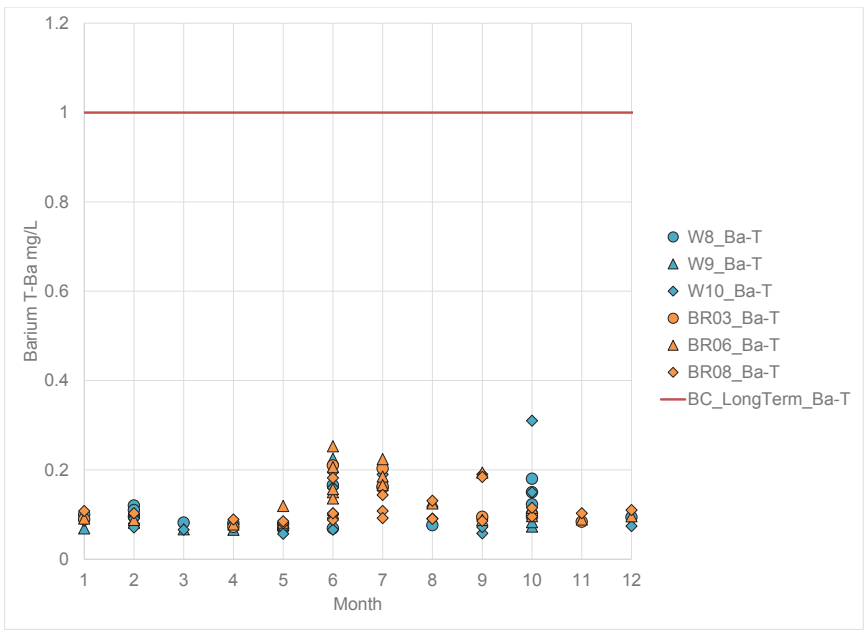


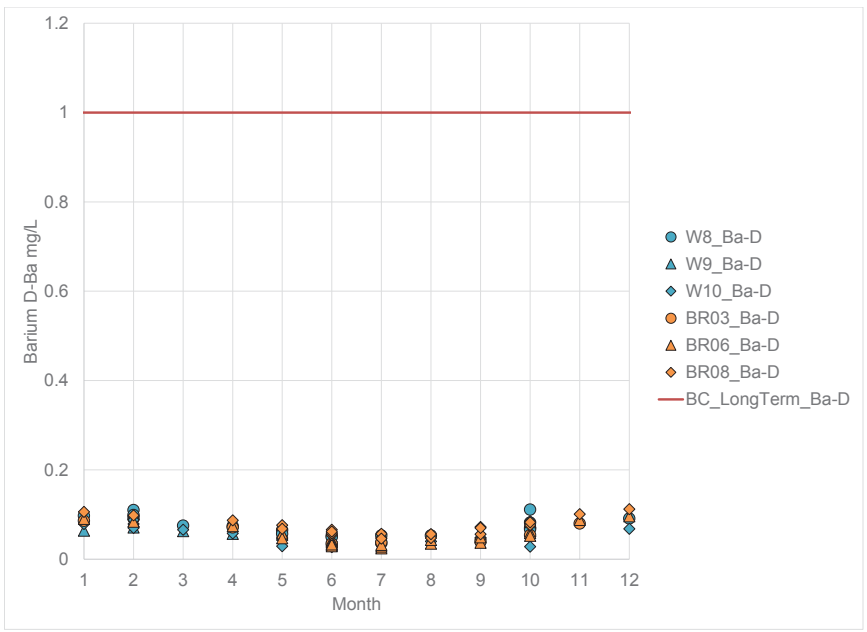
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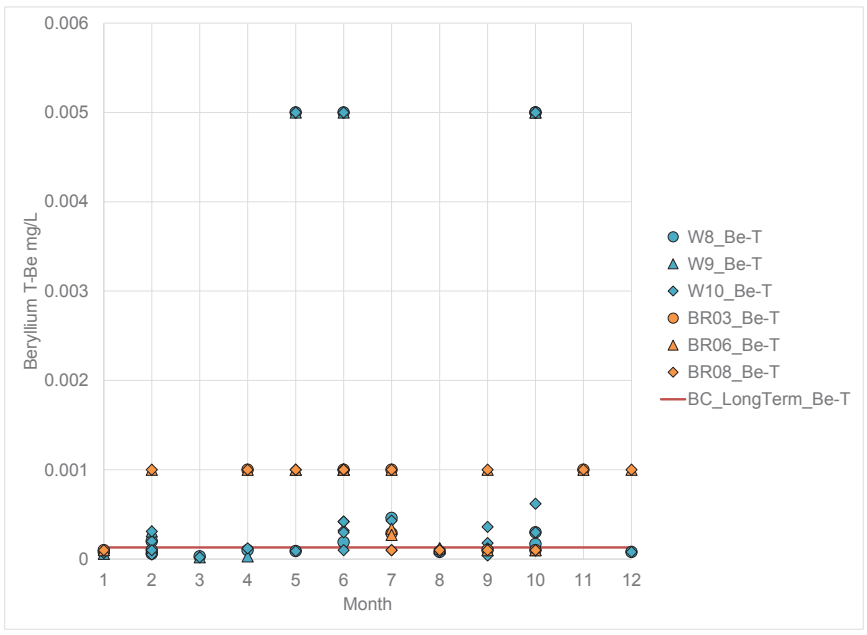
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

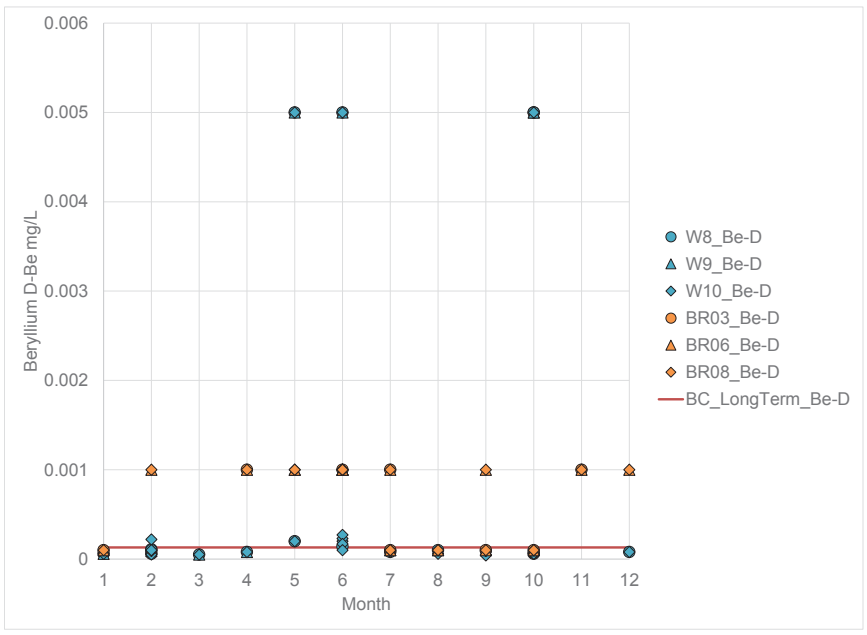


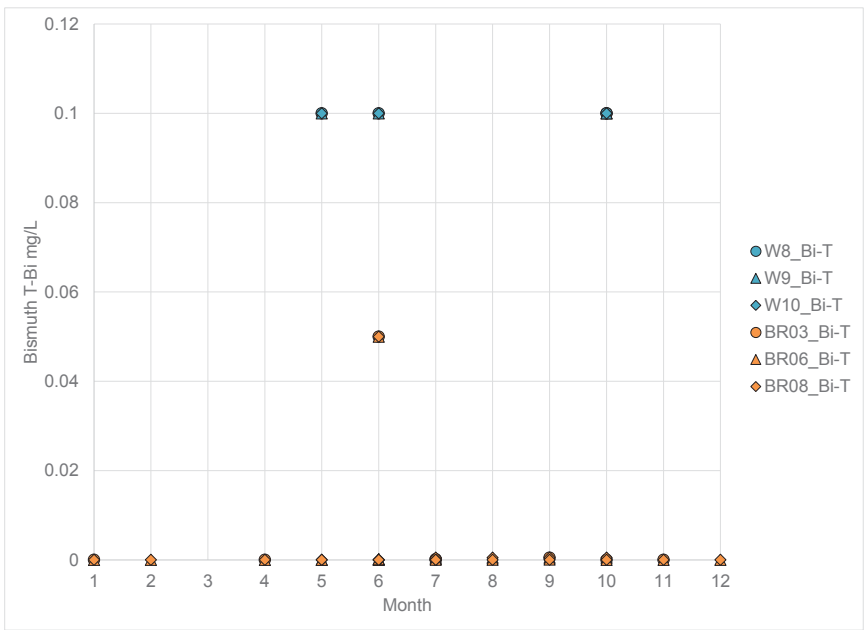


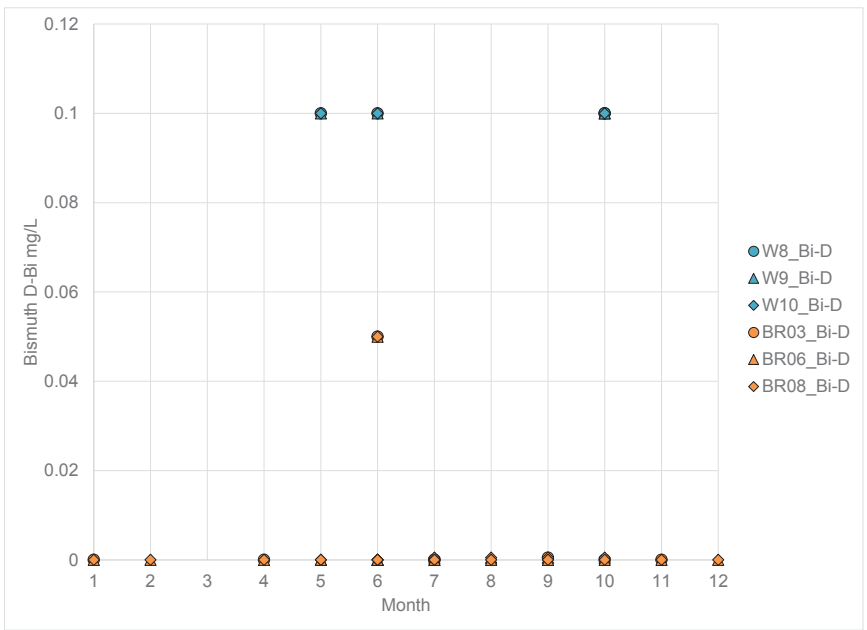






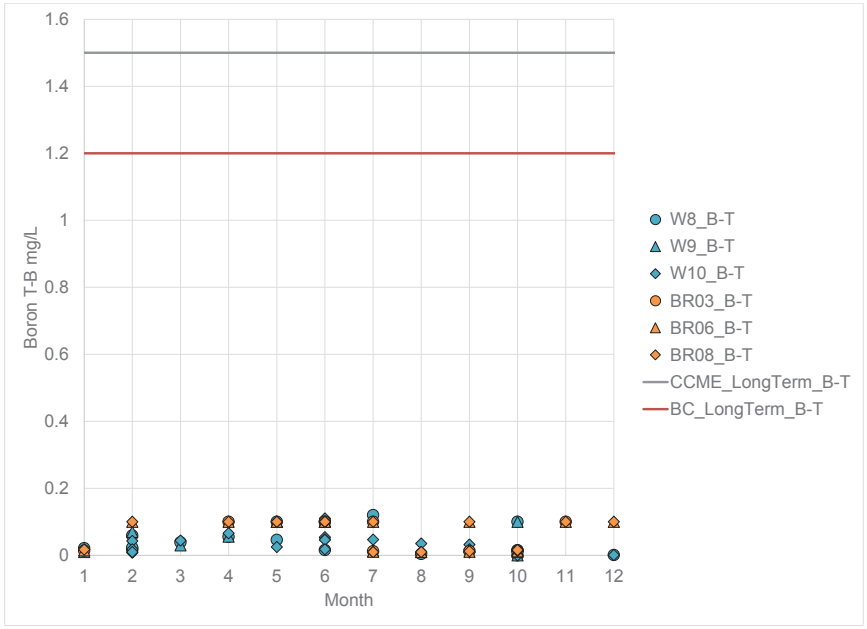


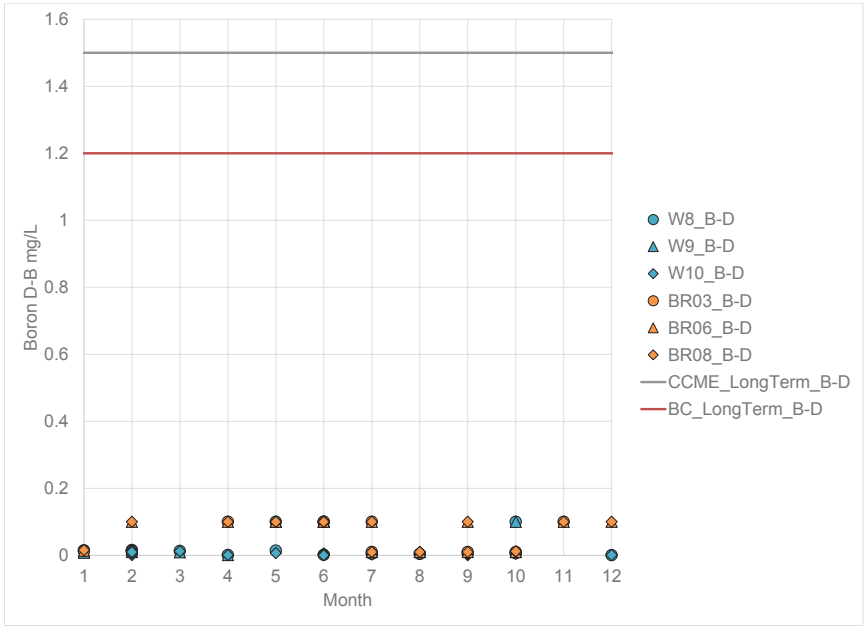


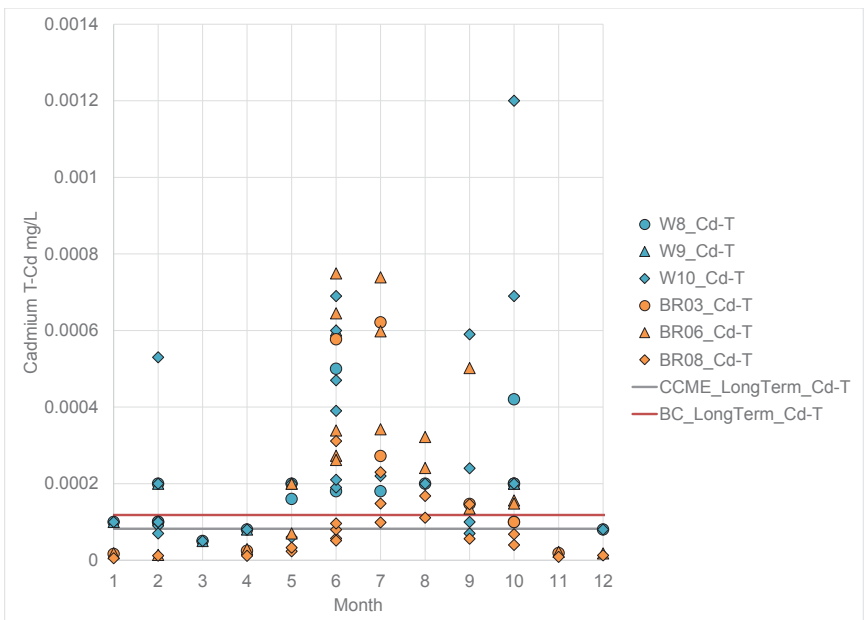


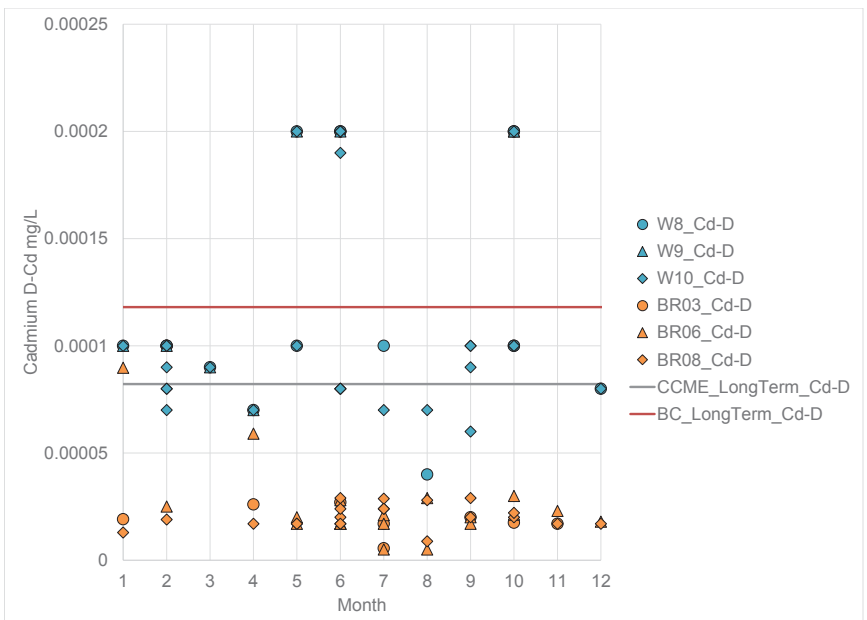
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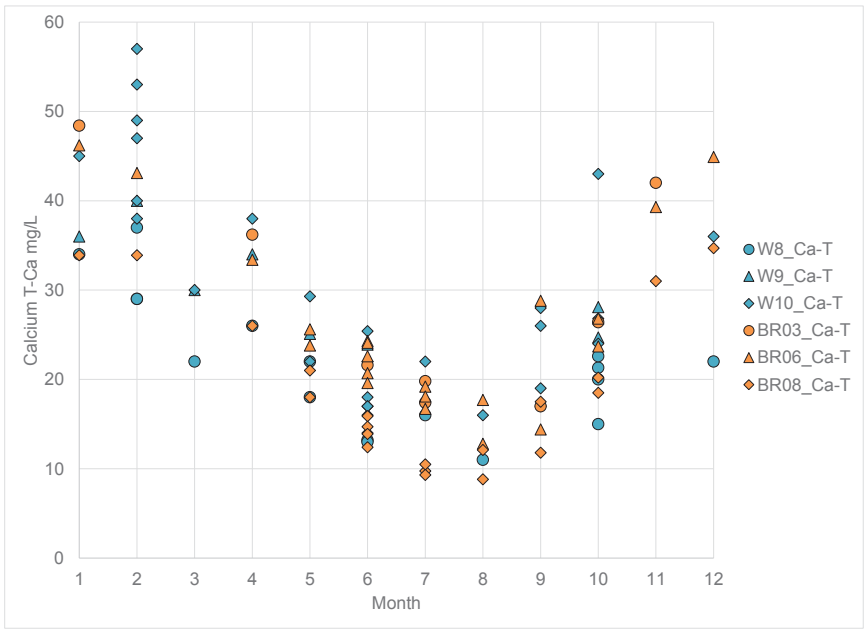
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

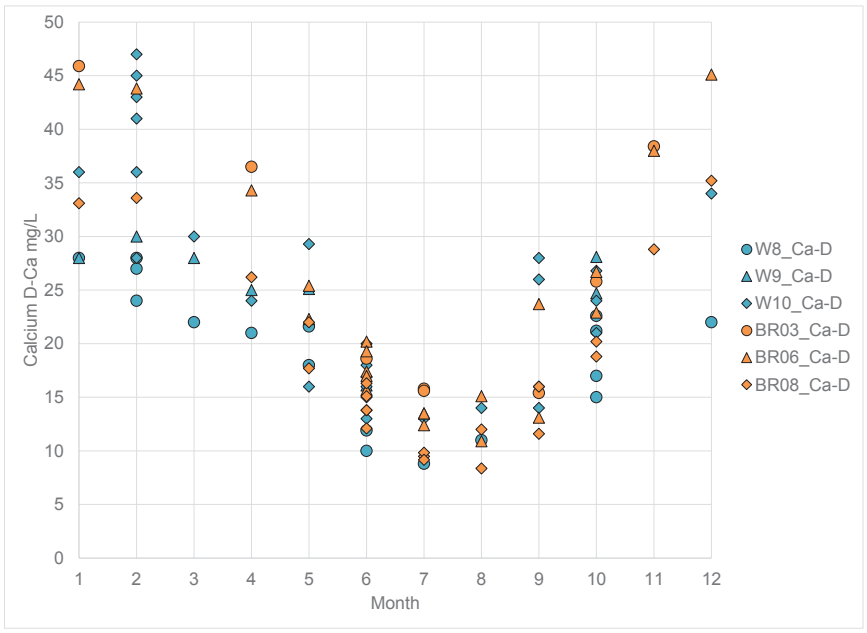


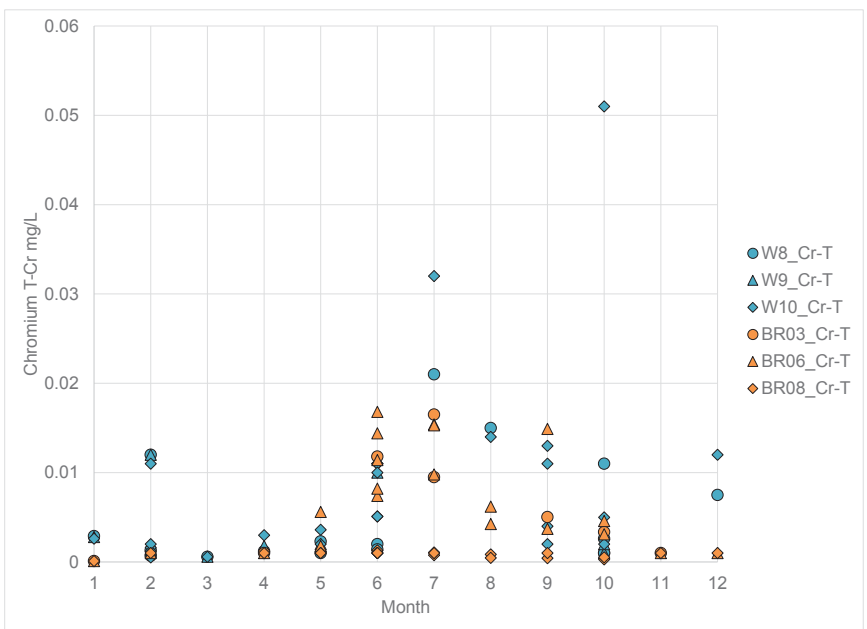


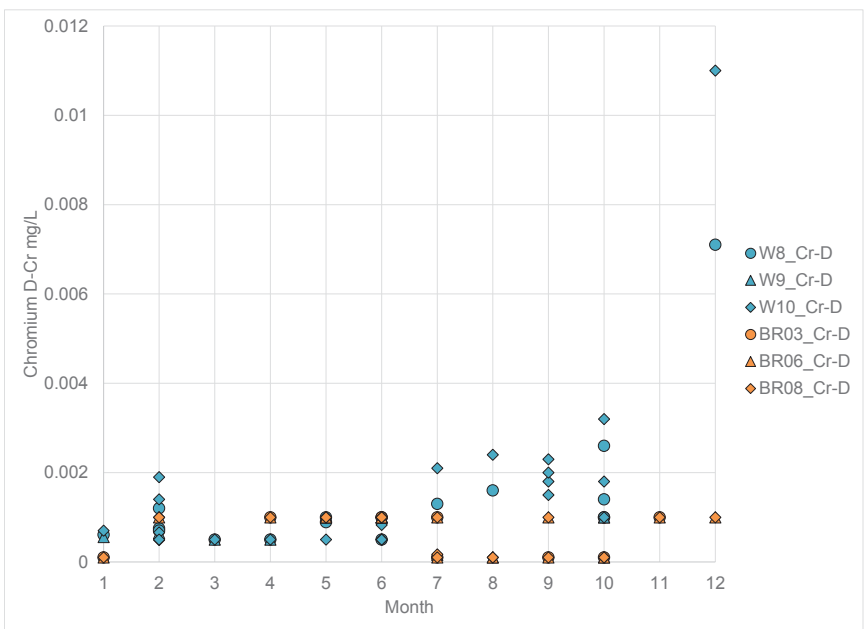






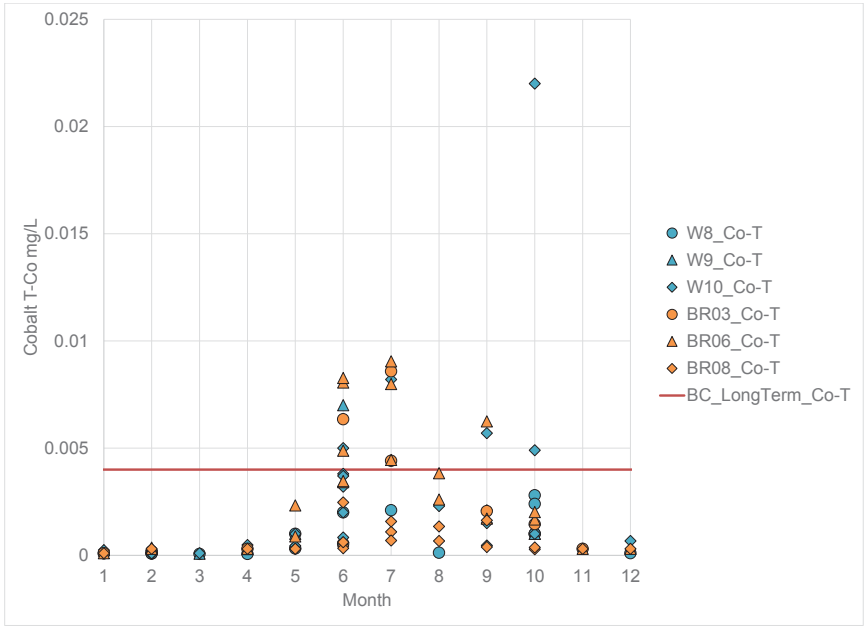


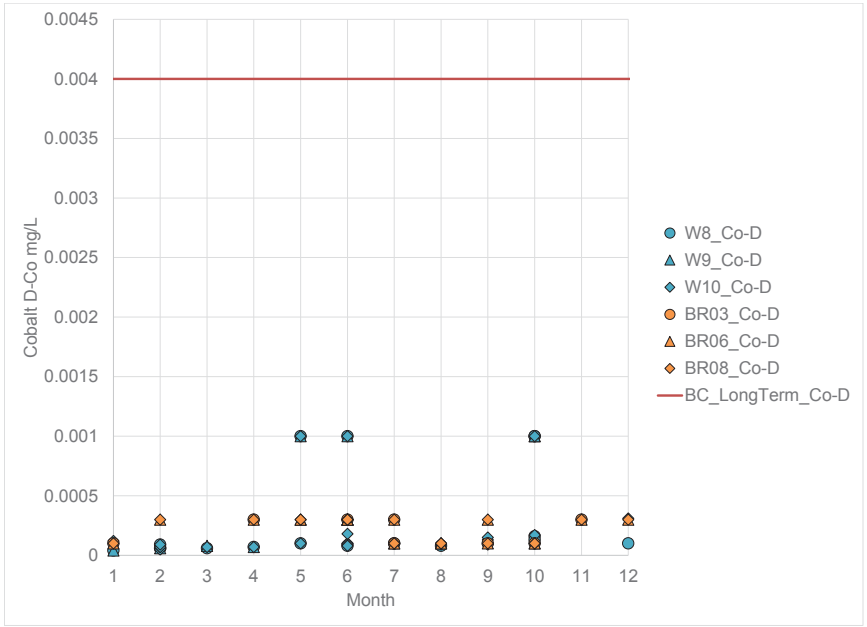


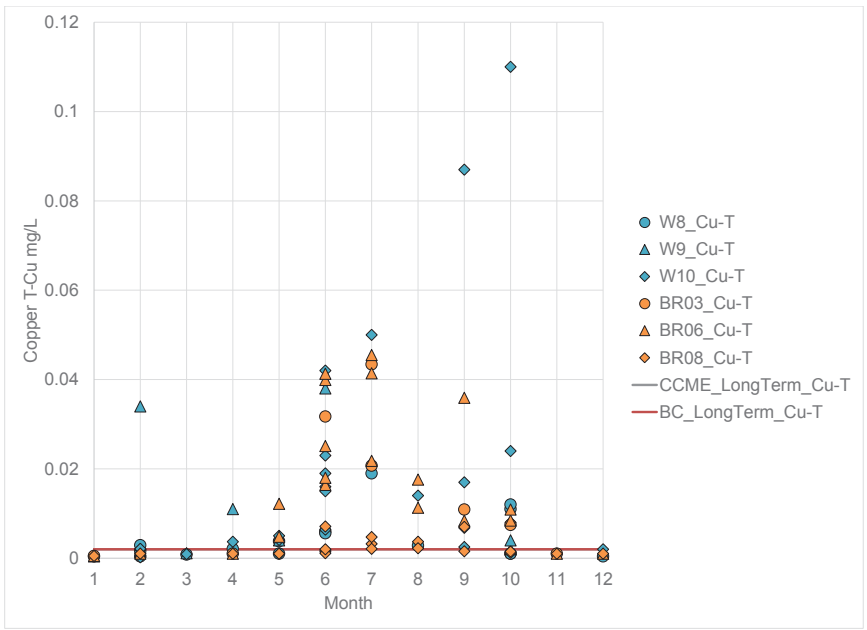


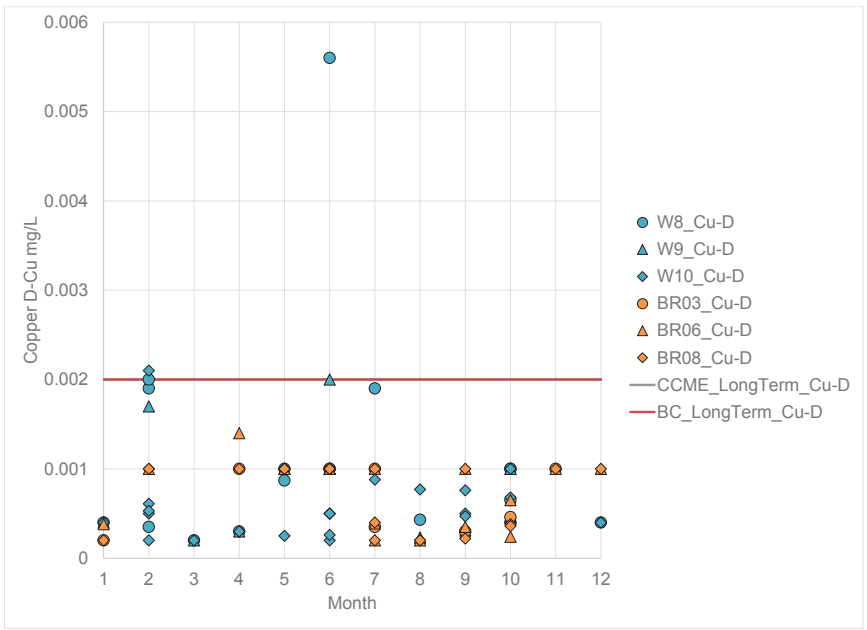
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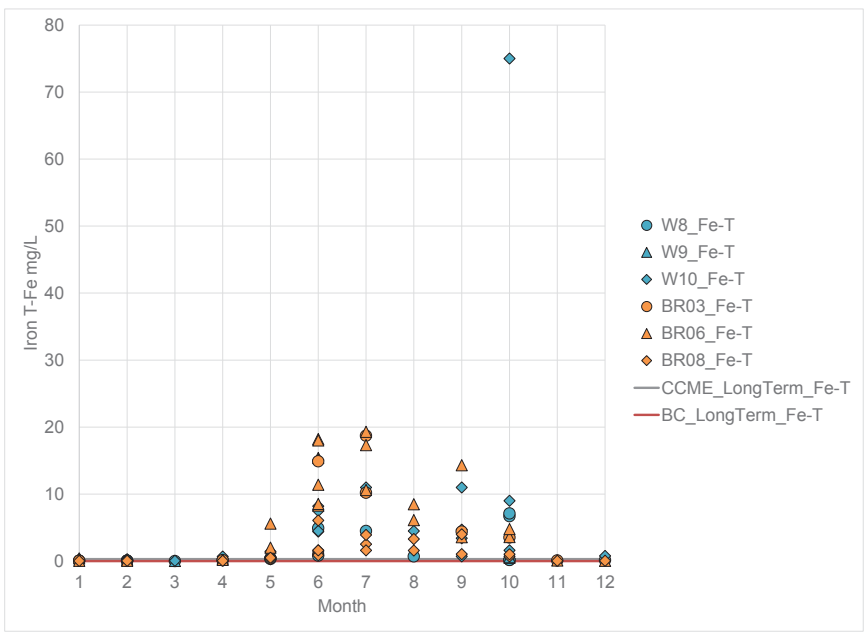
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

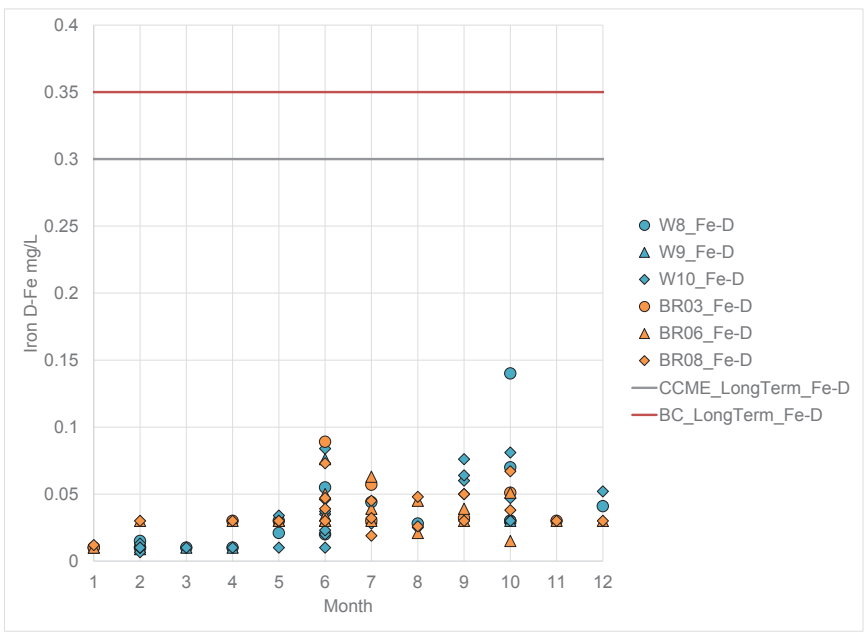


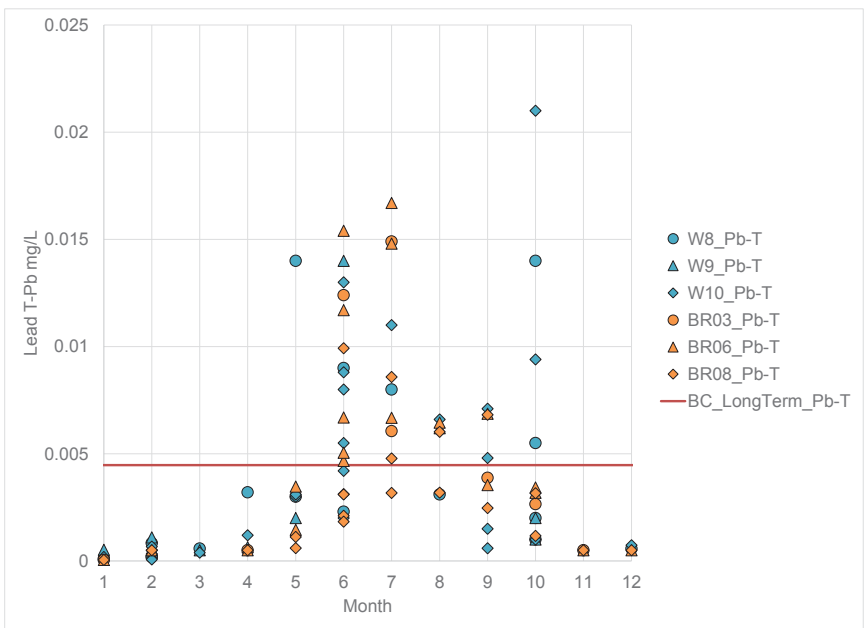


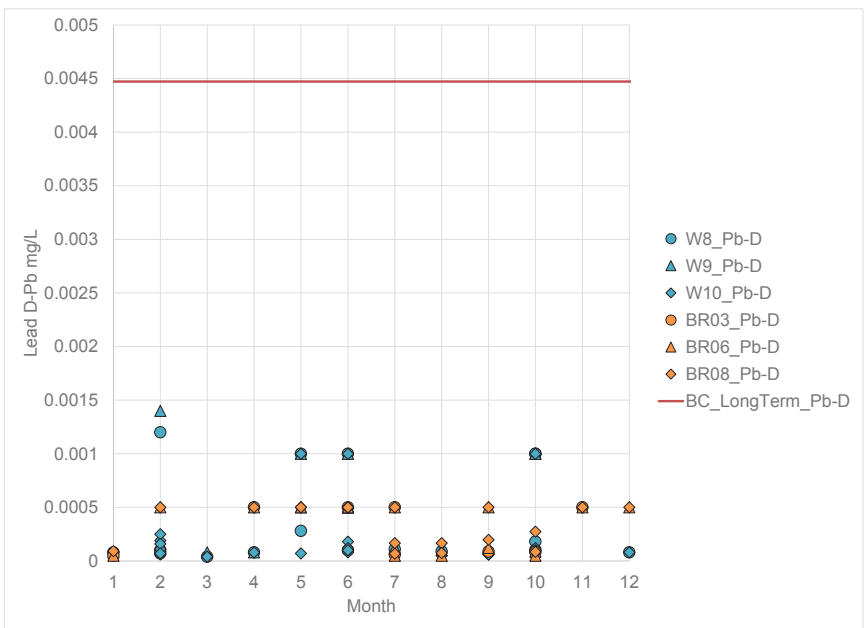






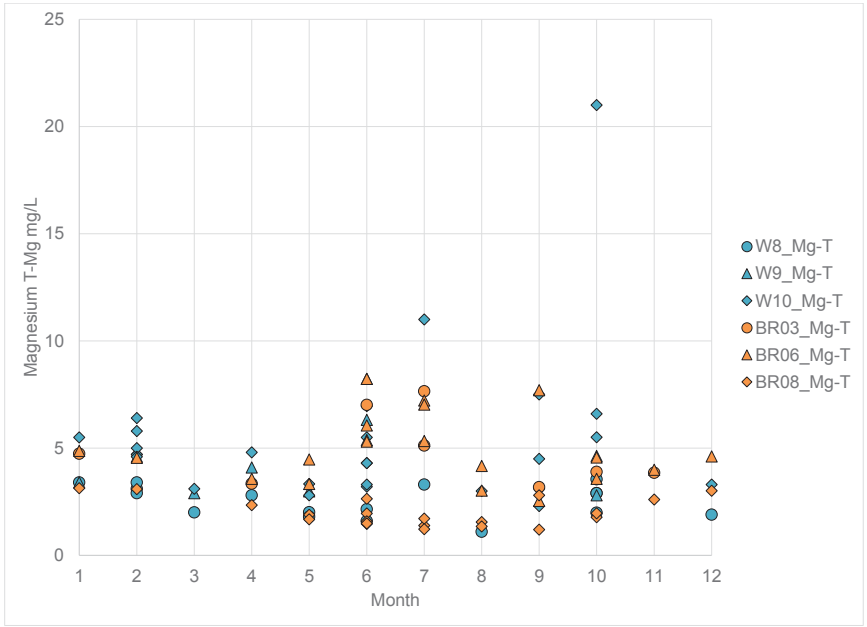


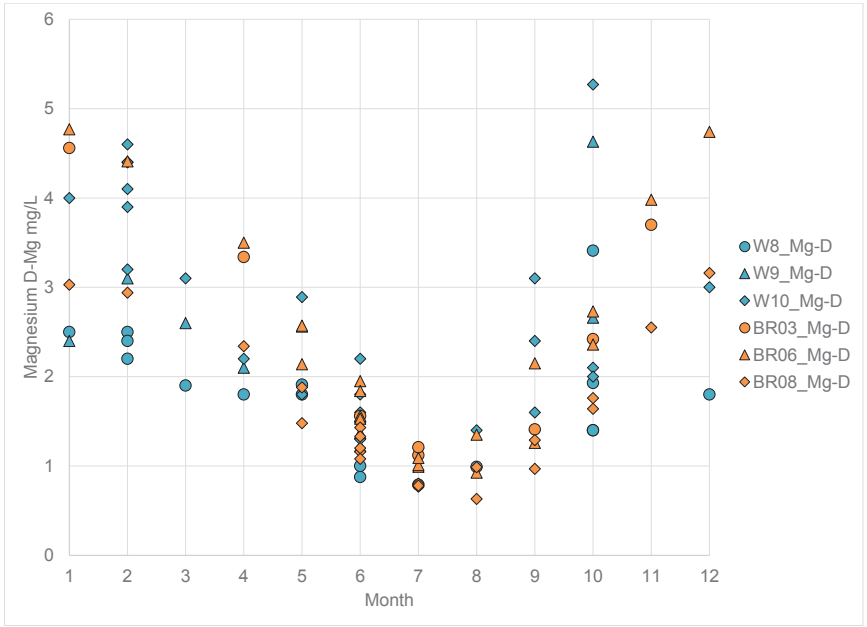


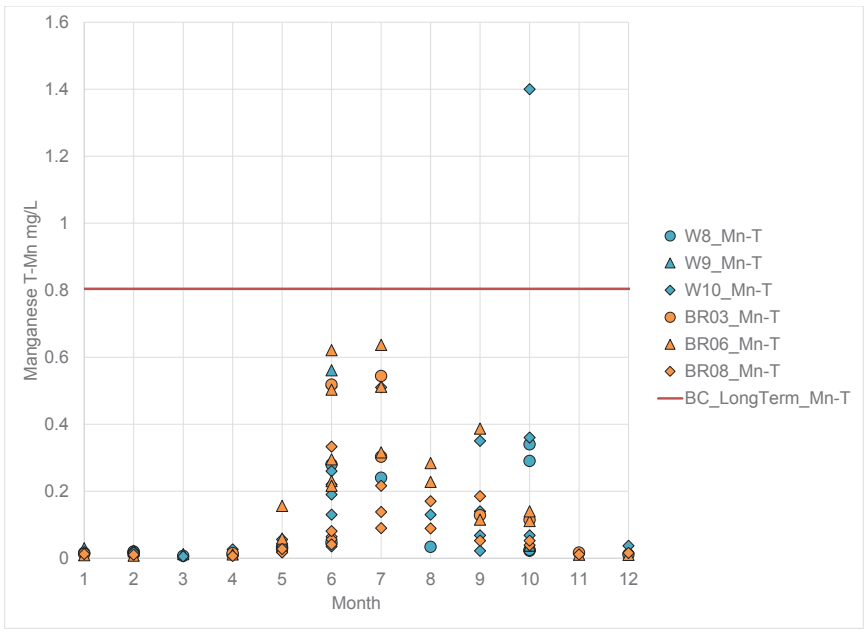


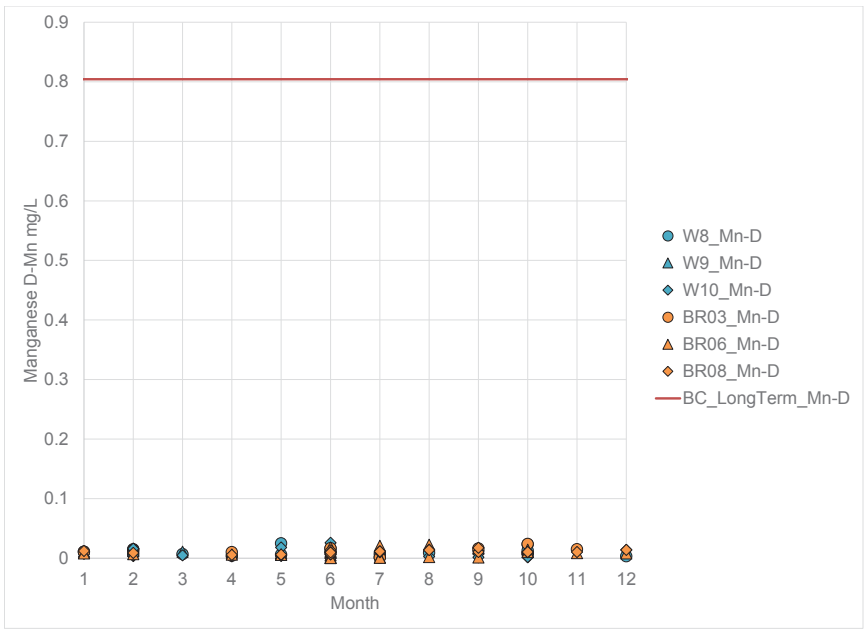
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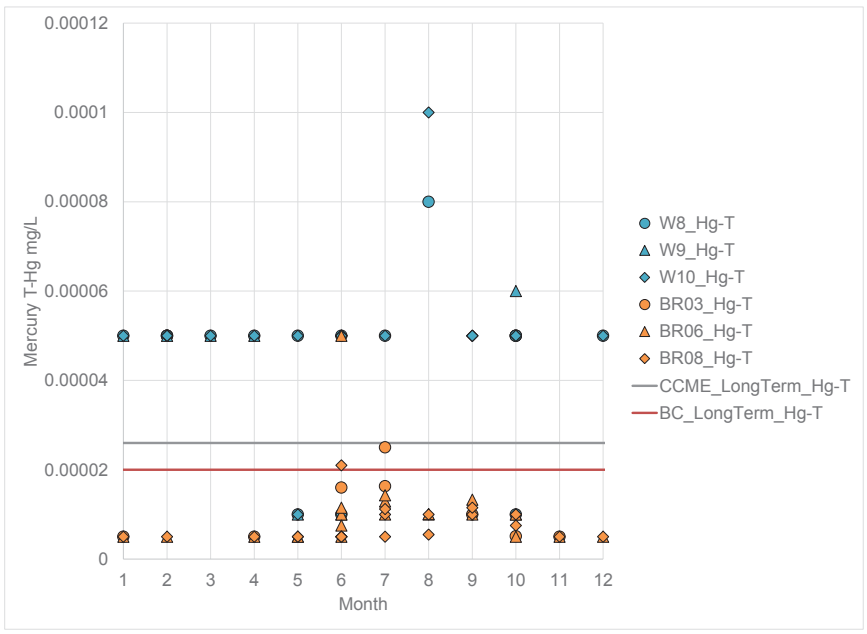
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

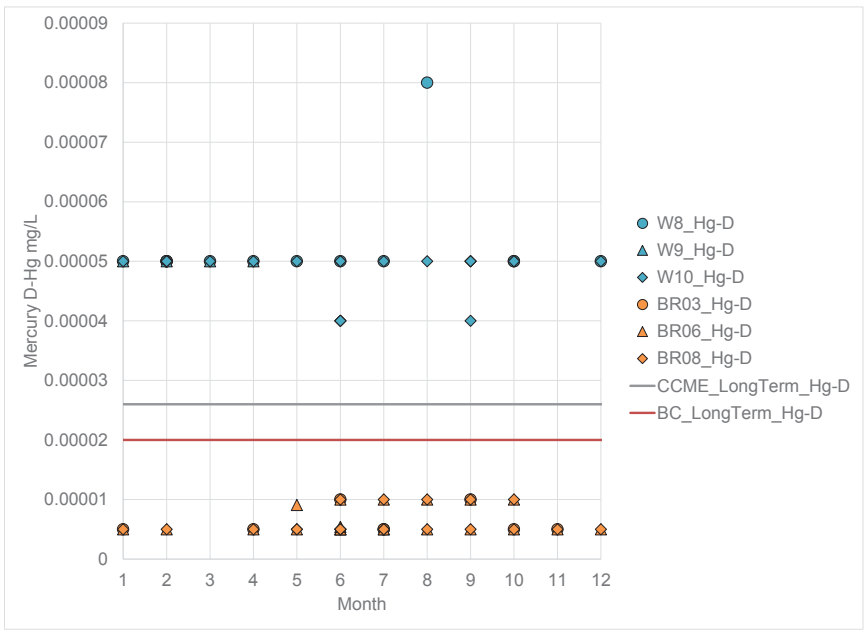


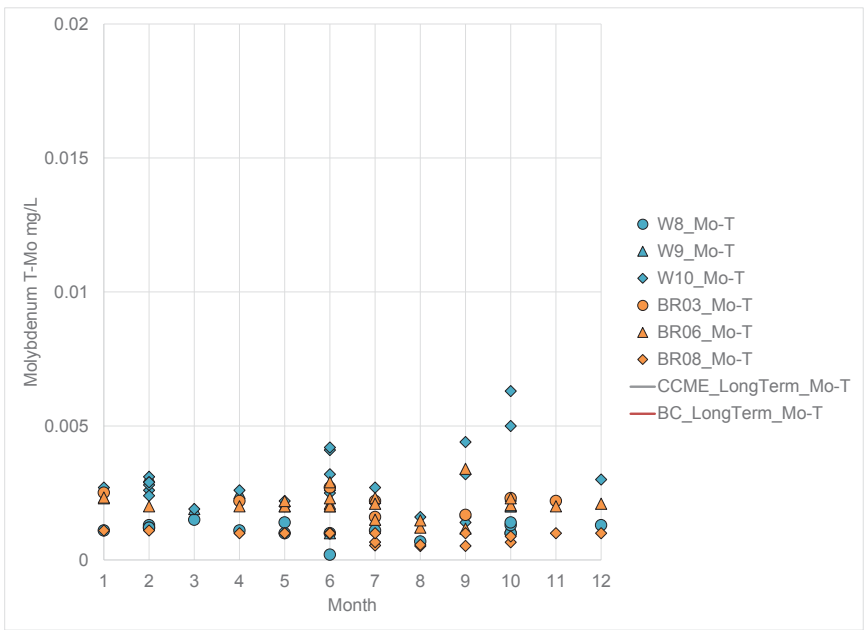


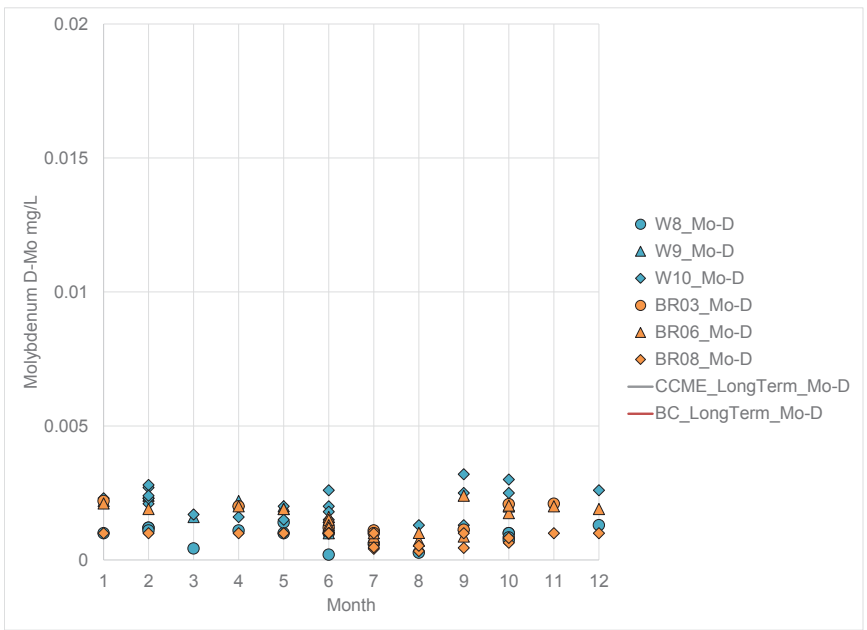




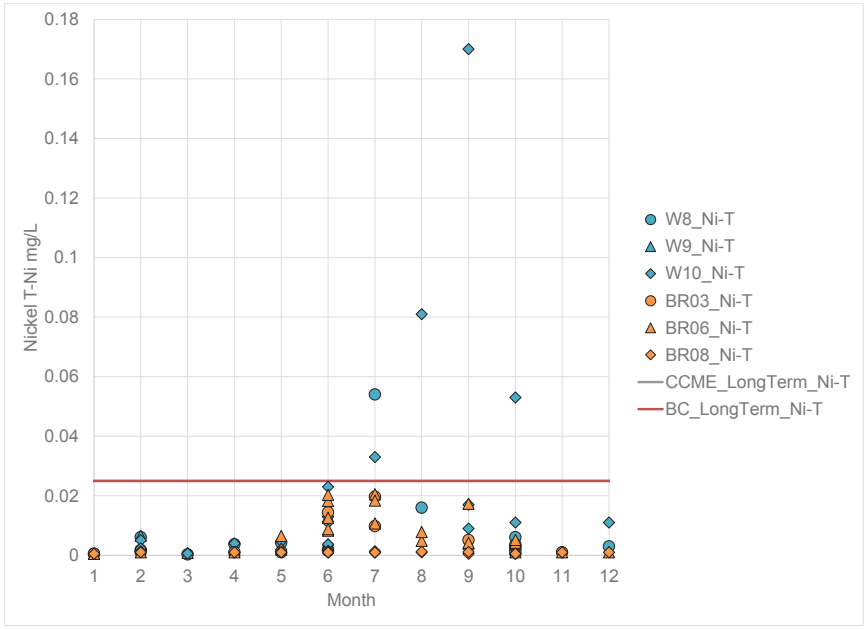


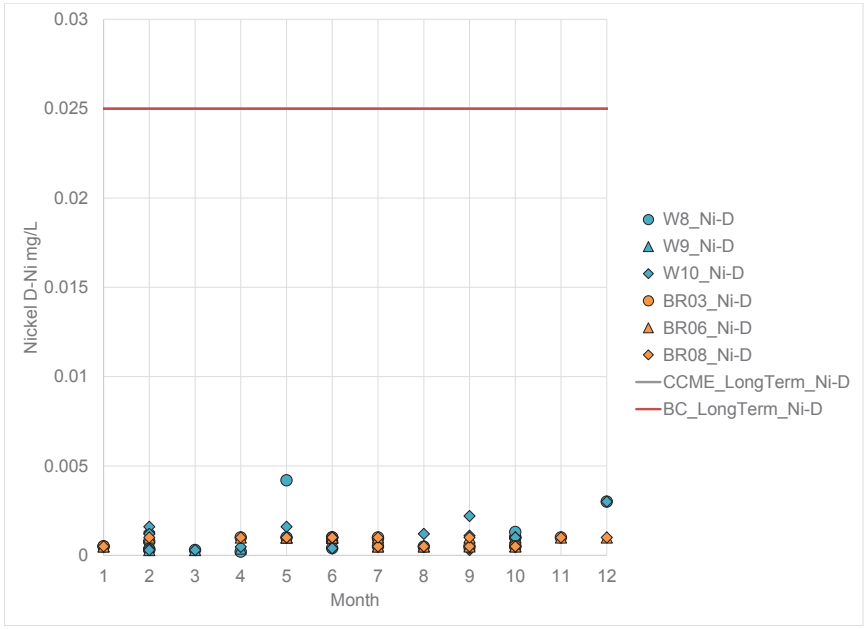


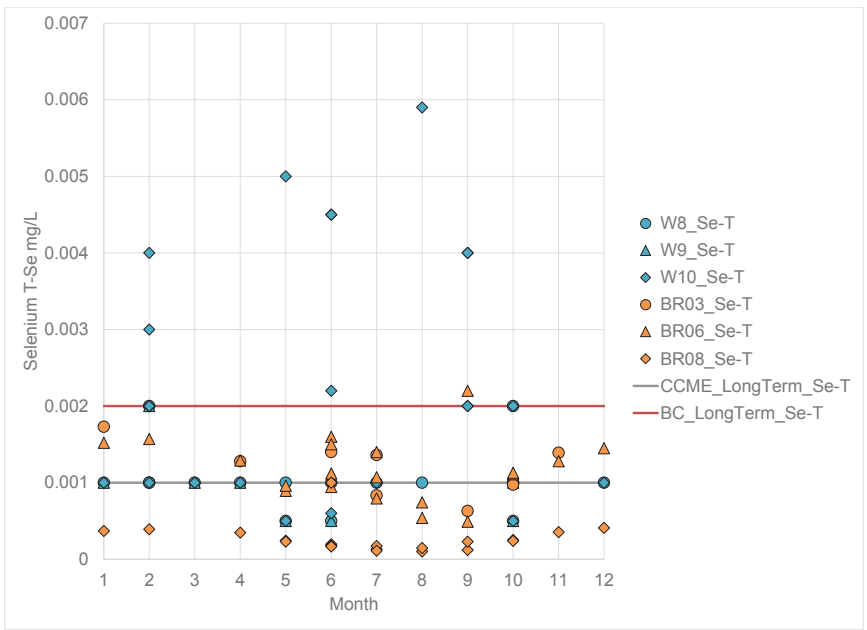


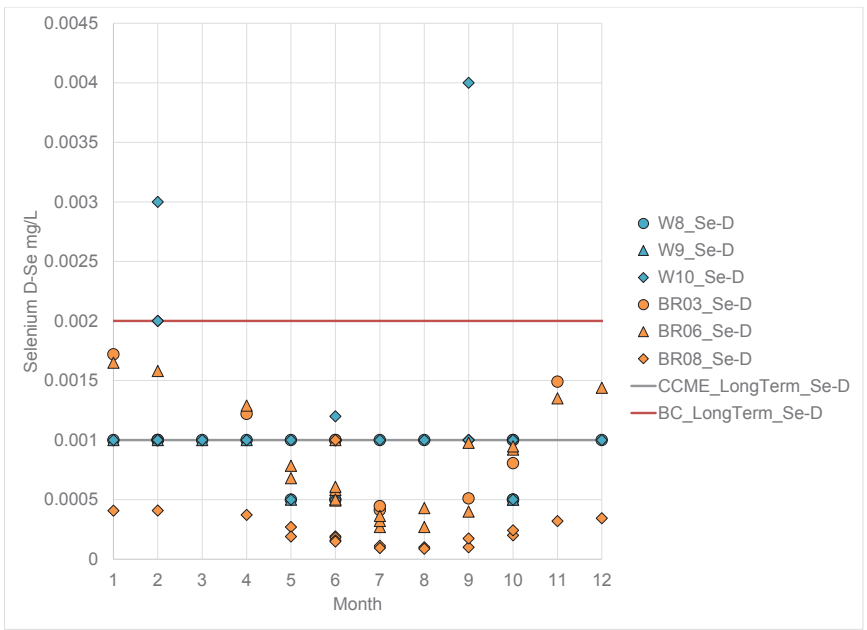


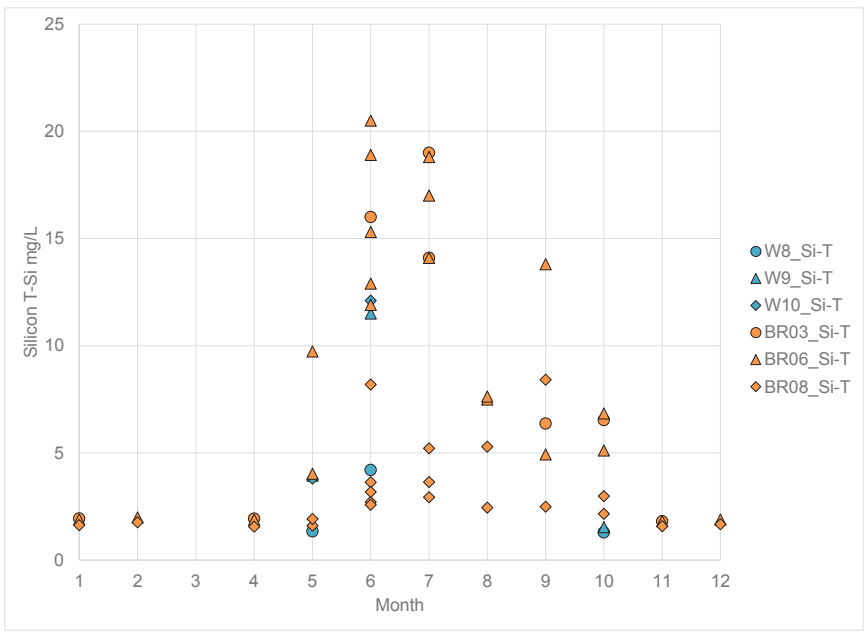
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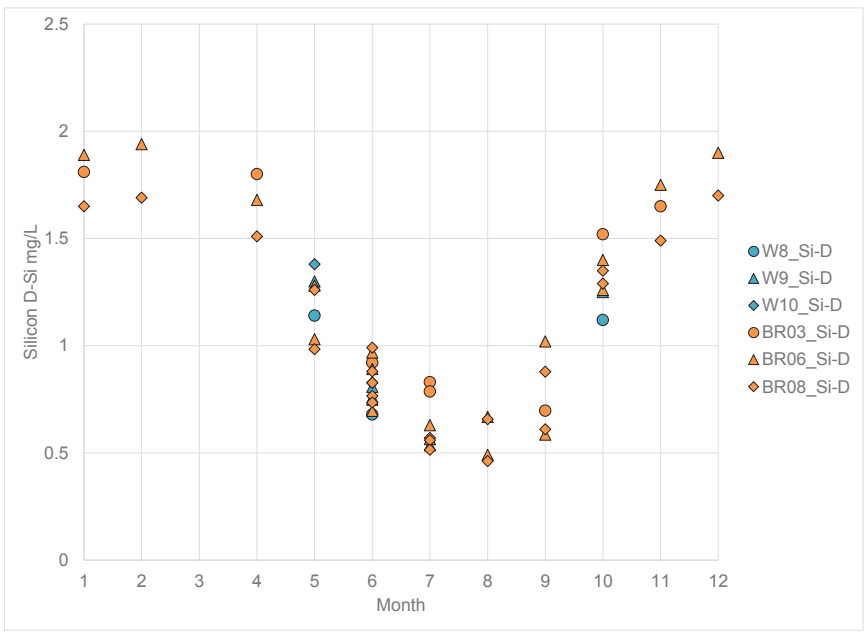


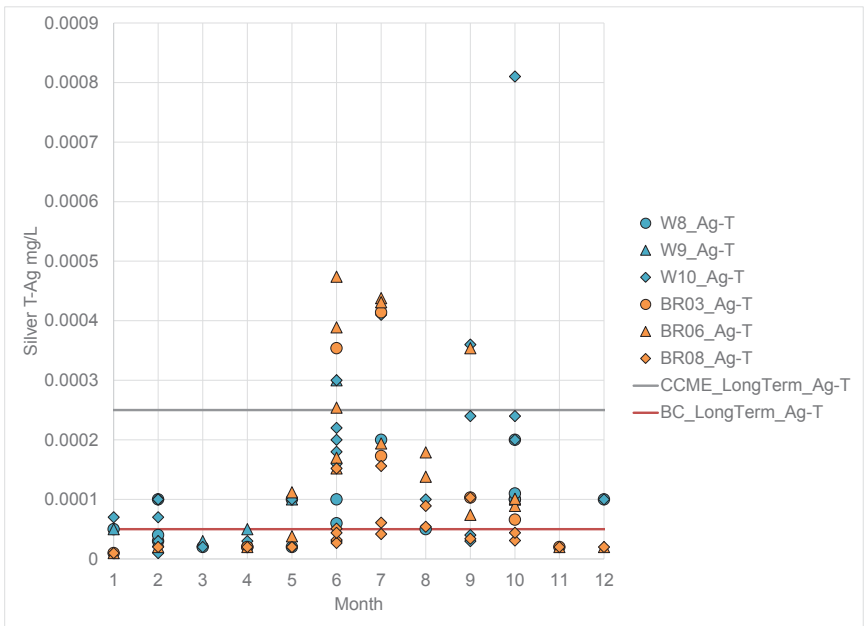


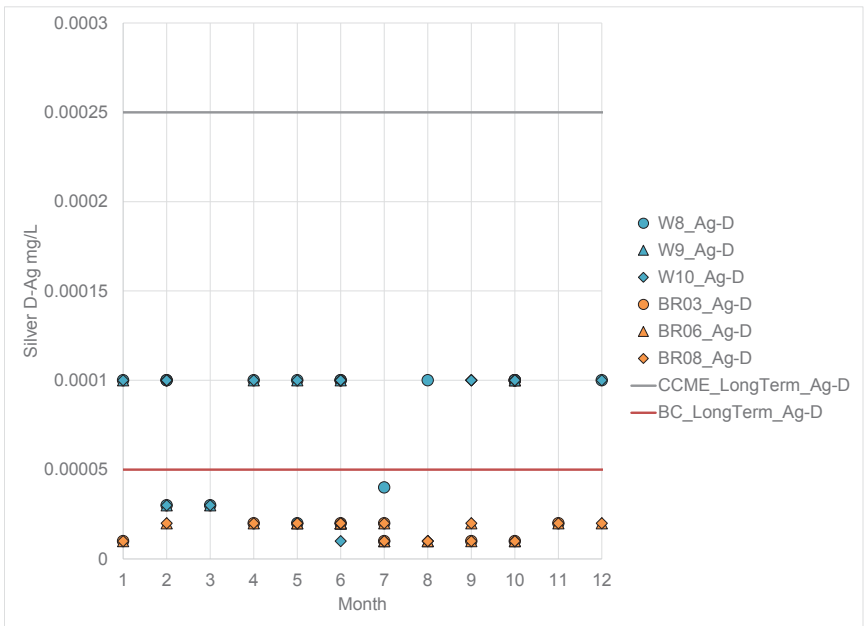






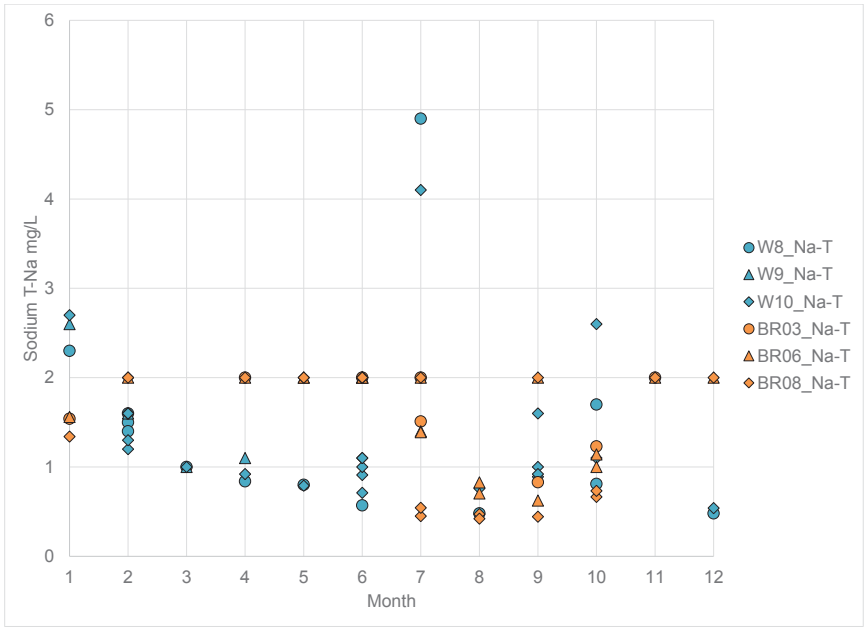


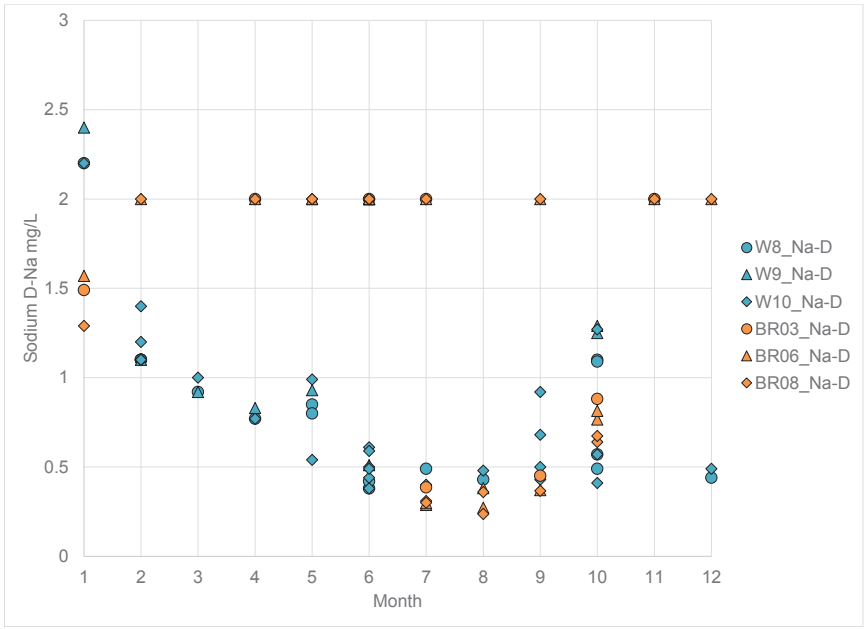


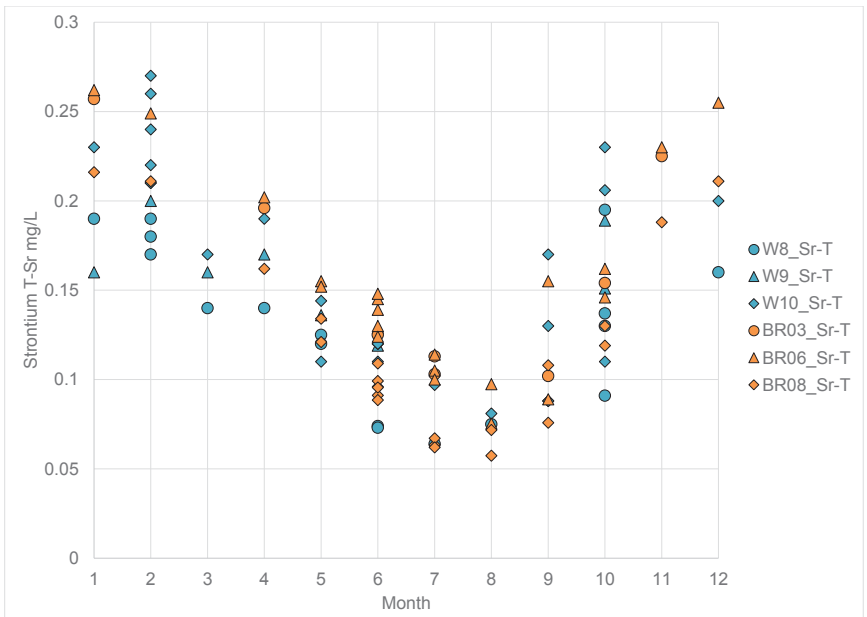


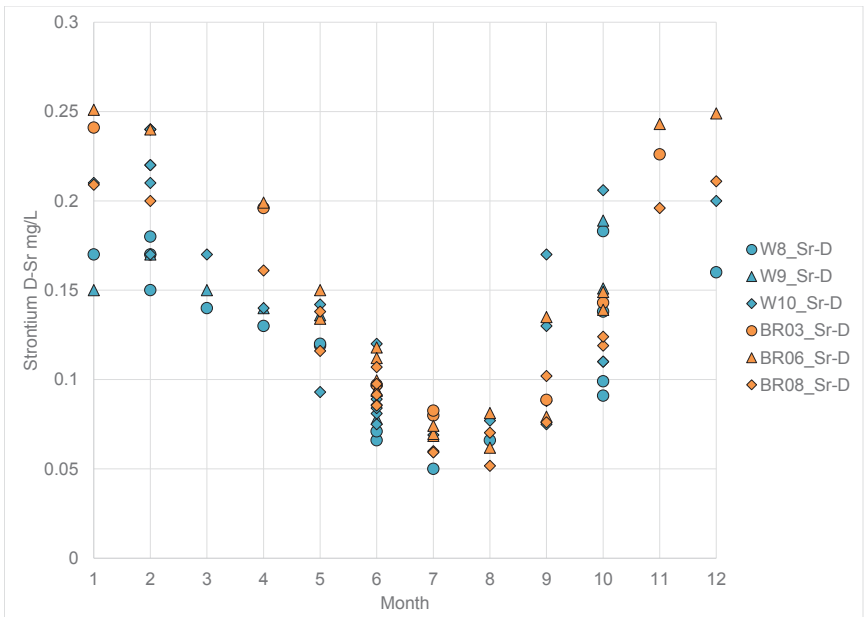
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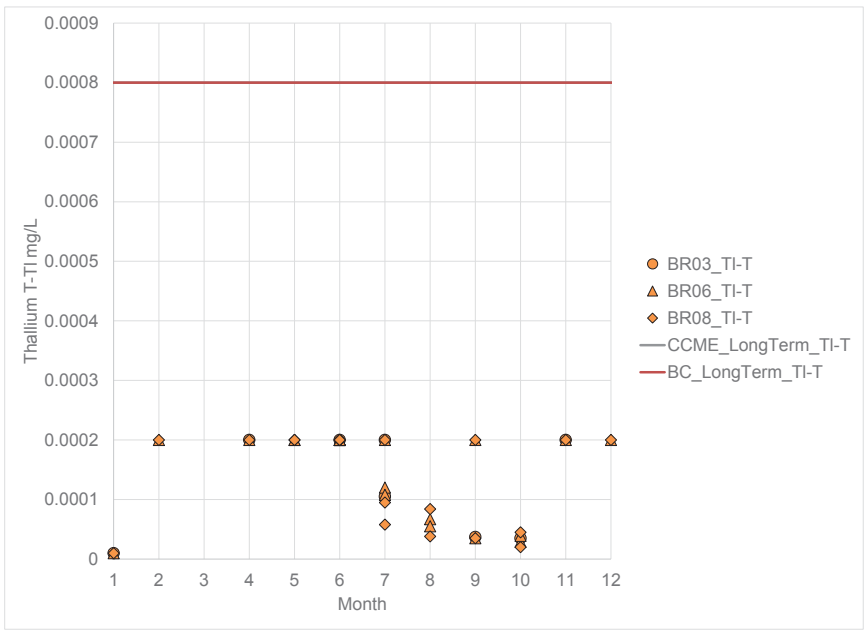
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

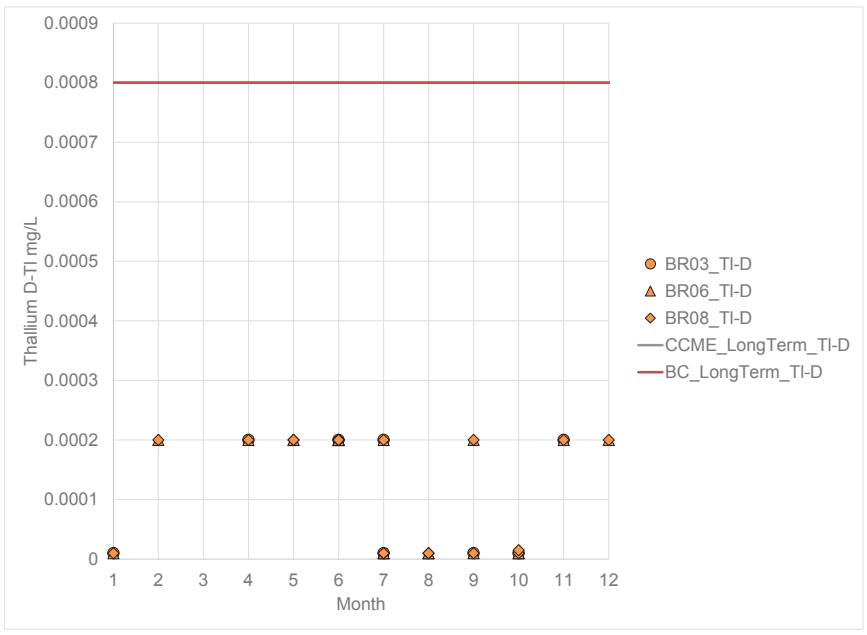


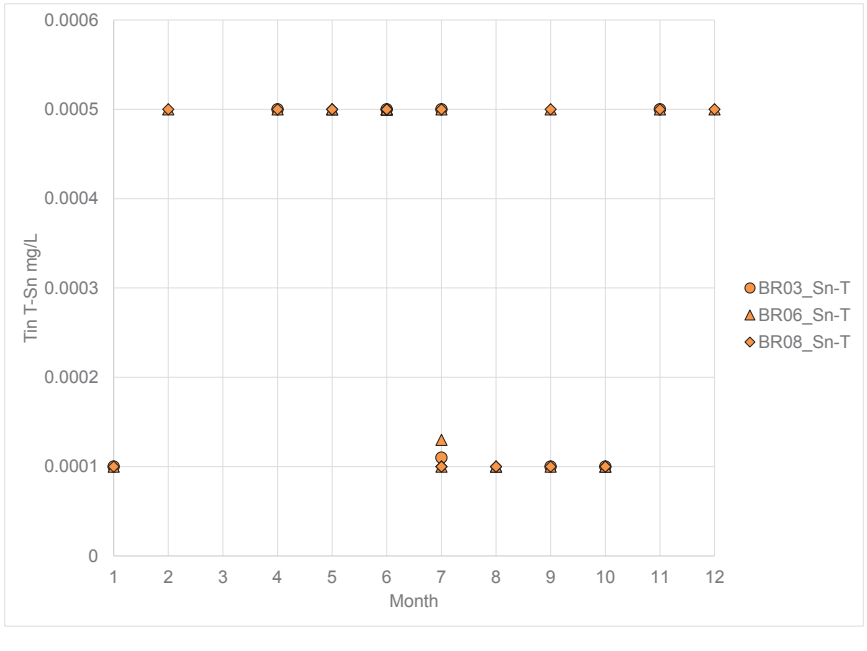


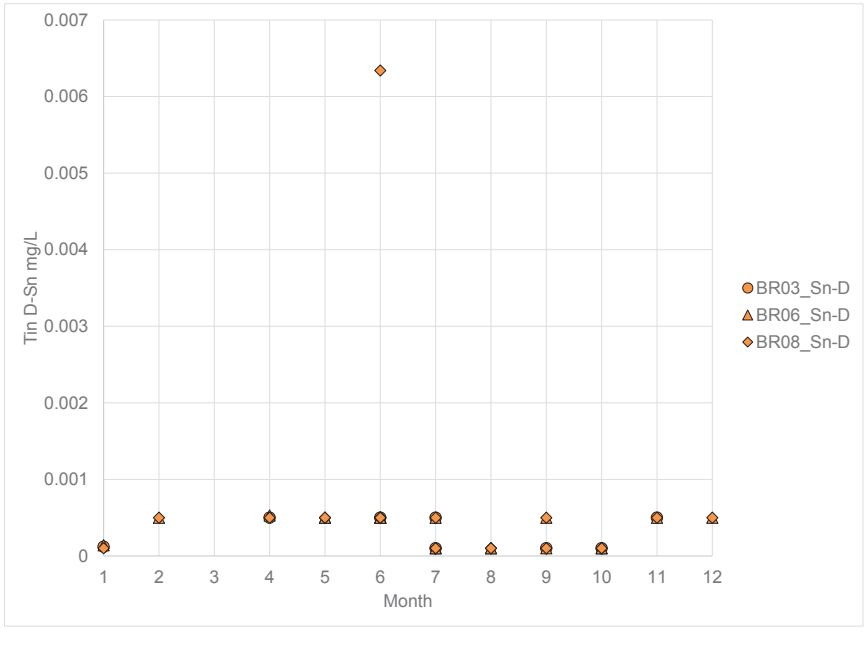






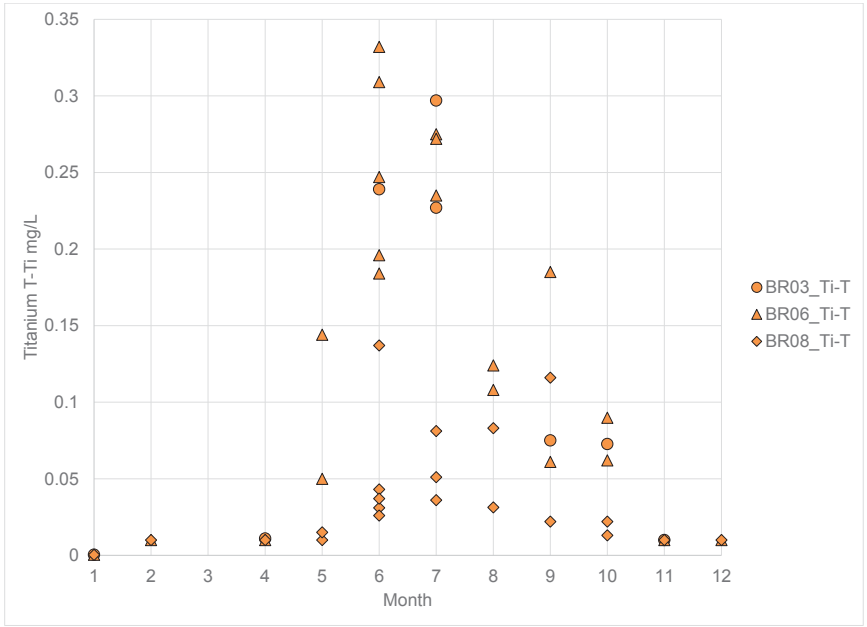


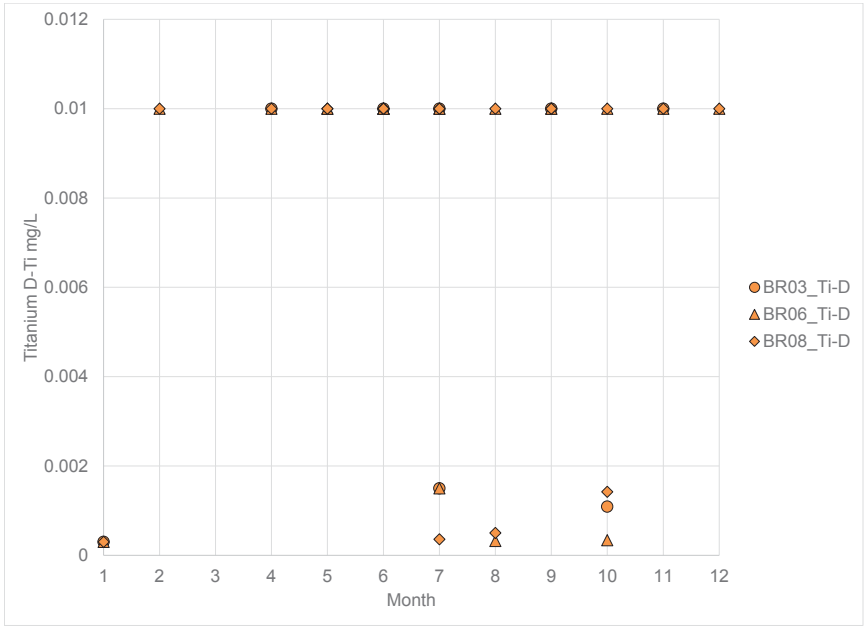


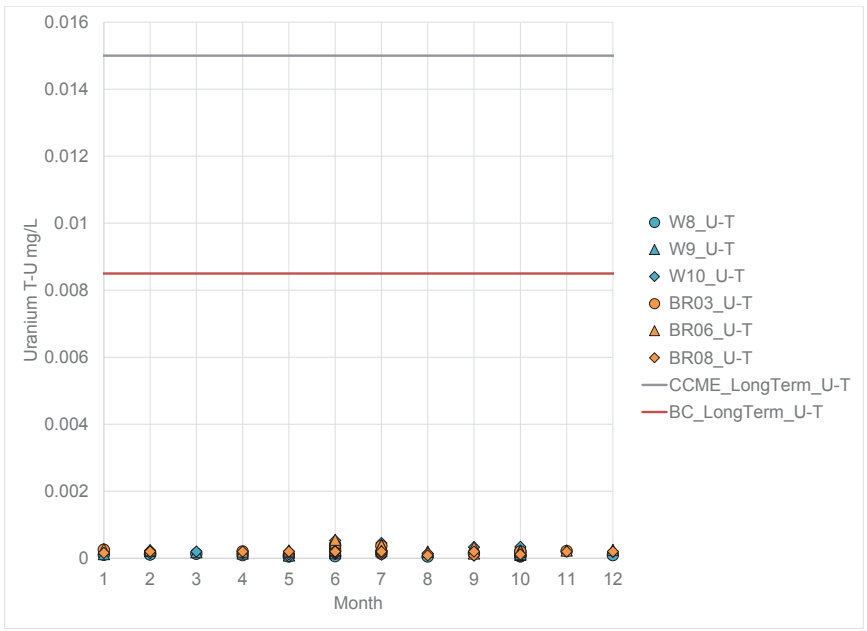


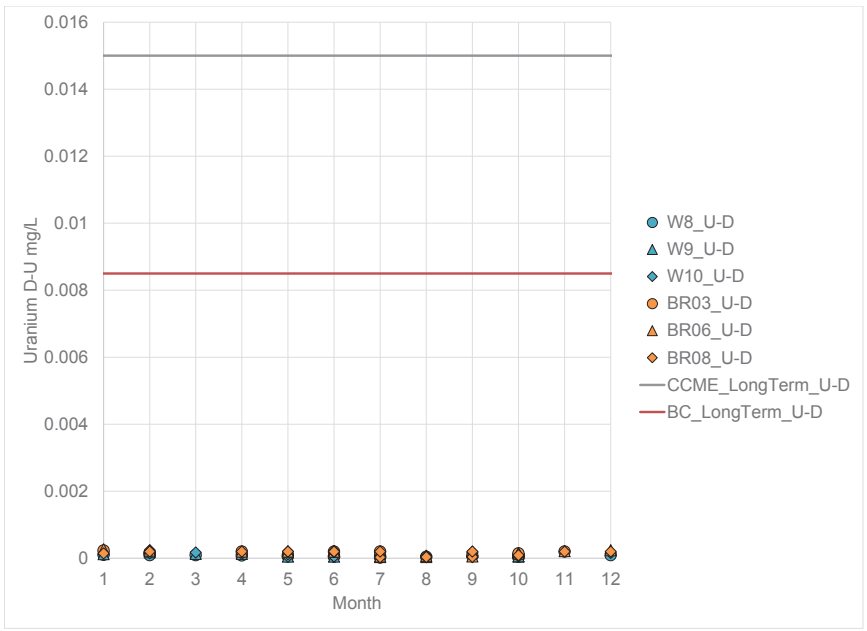
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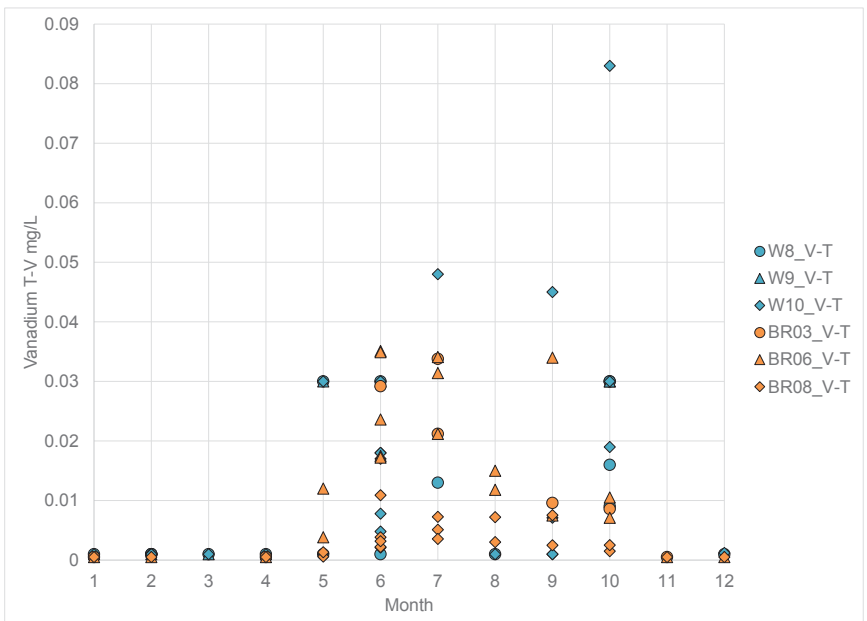
Appendix E-1: Surface Water Quality Results by Watershed, Monthly Basis

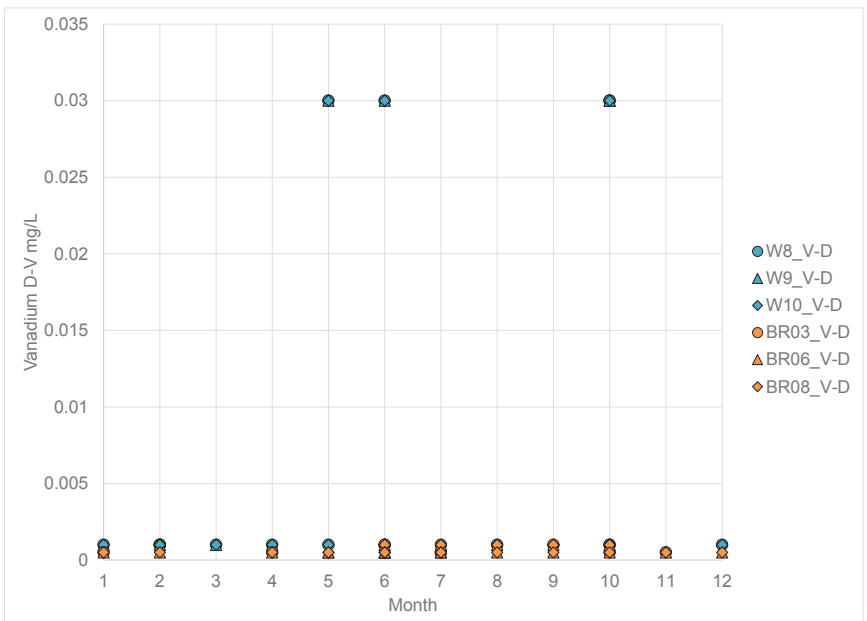


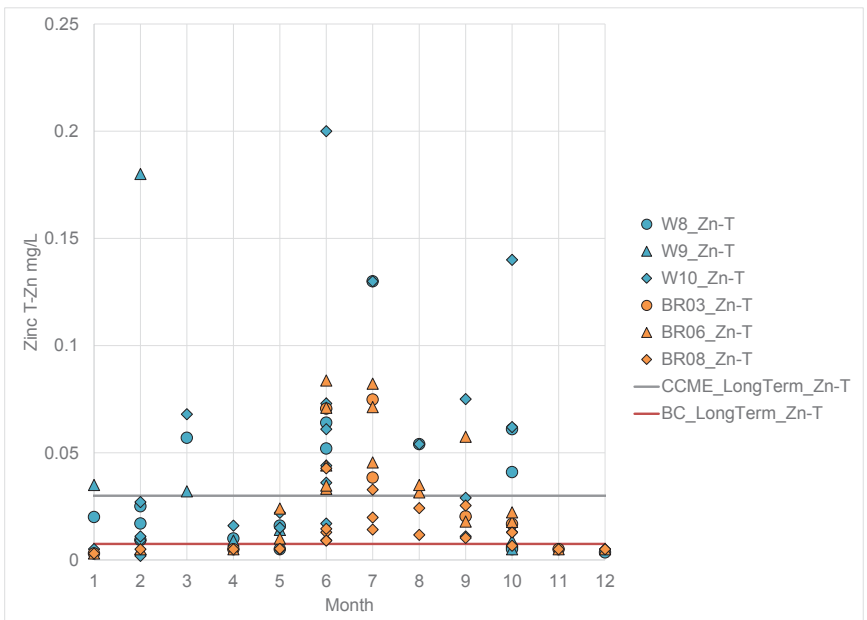


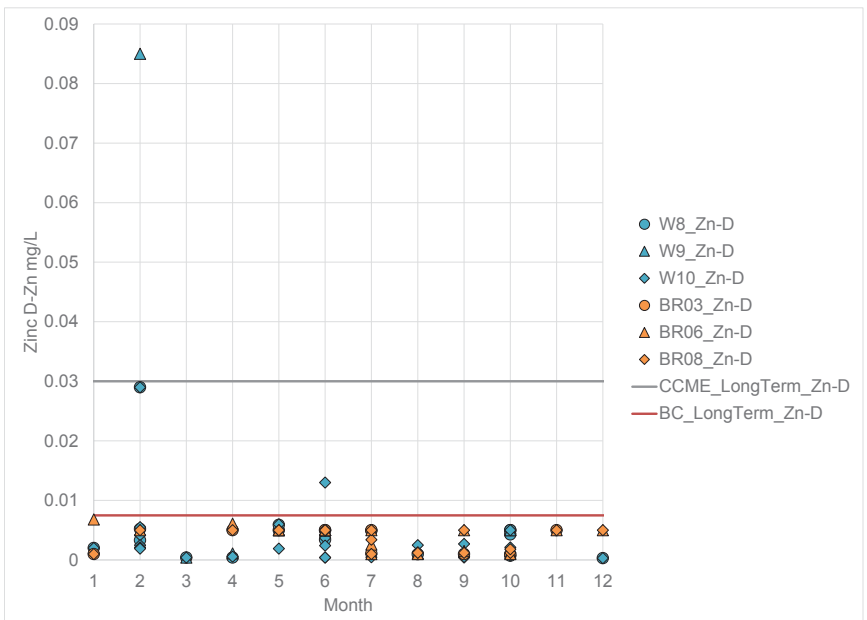










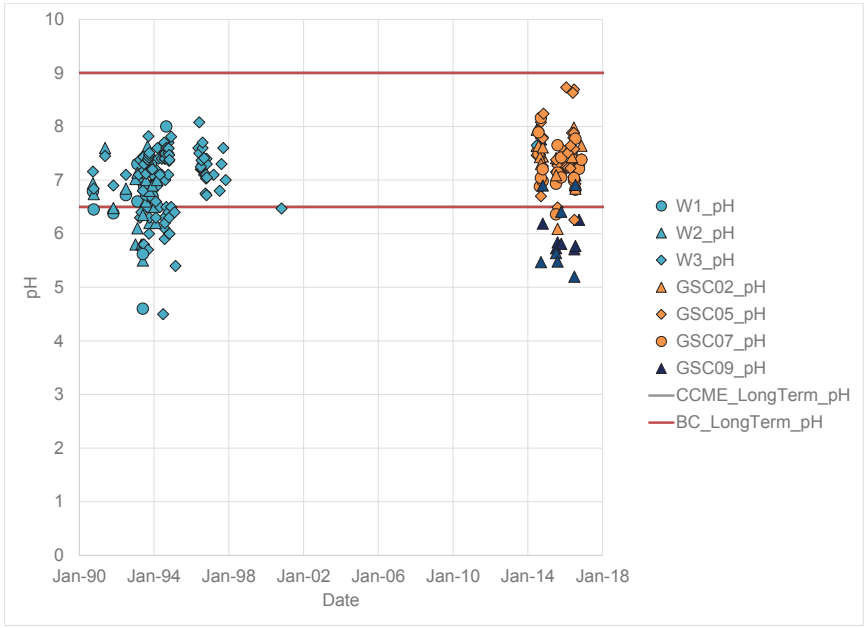


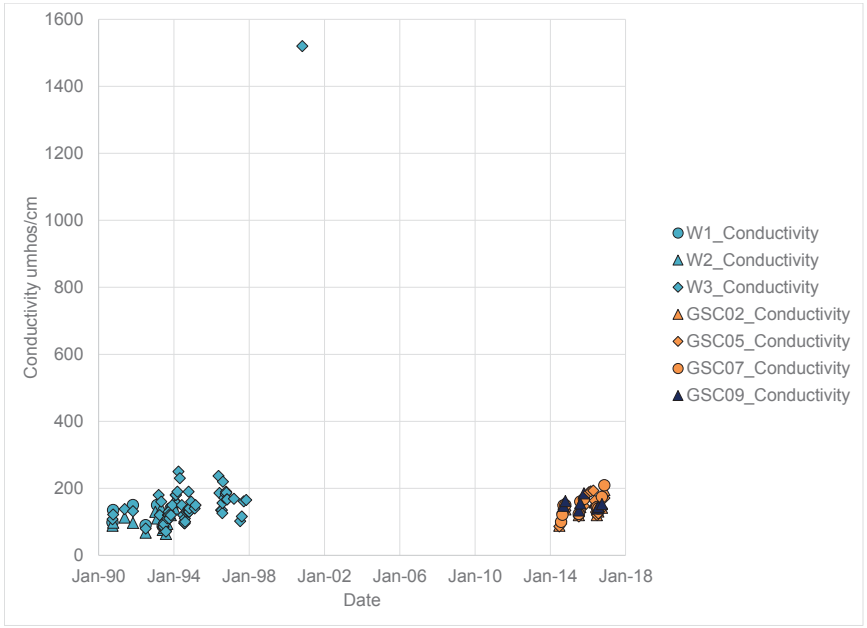
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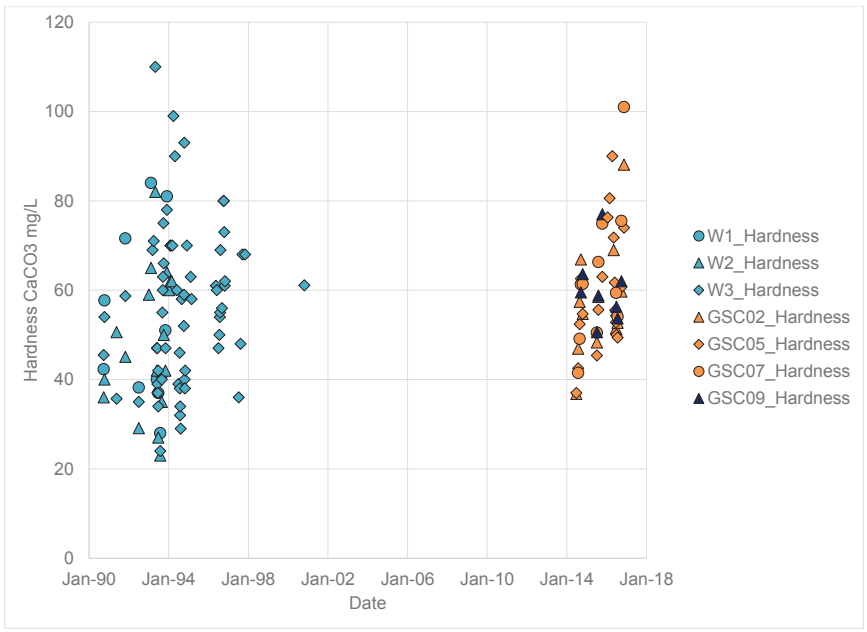
Appendix E - 2 – Time Series Surface Water Quality Plots

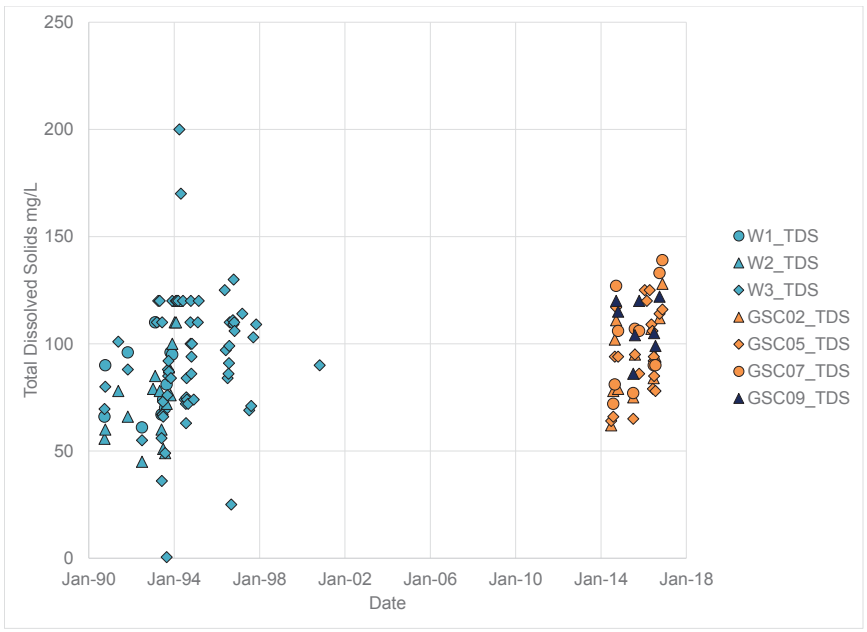
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

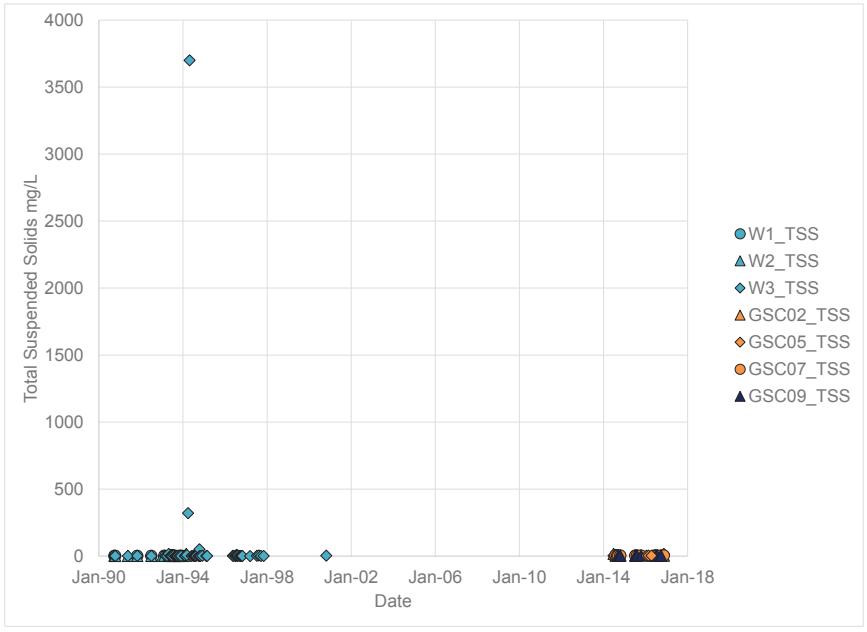
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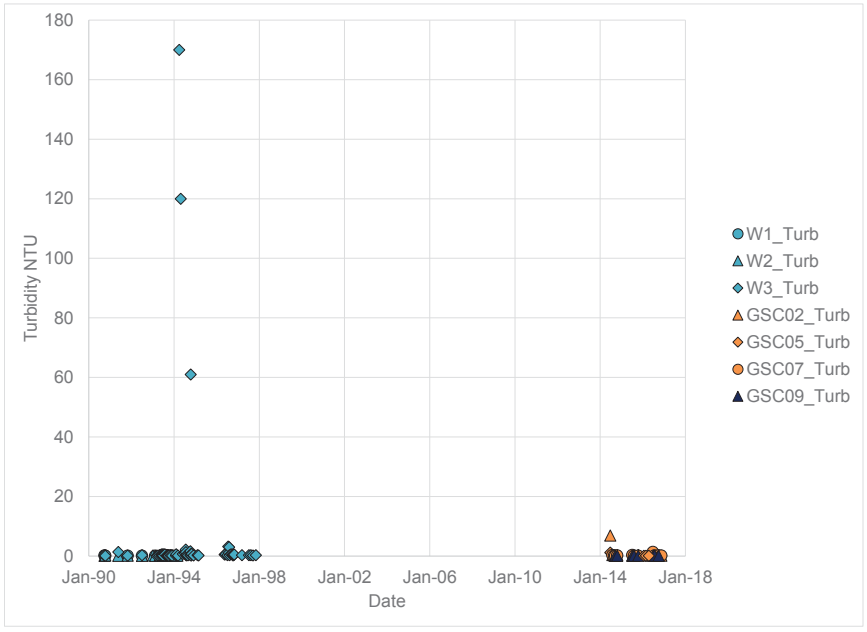


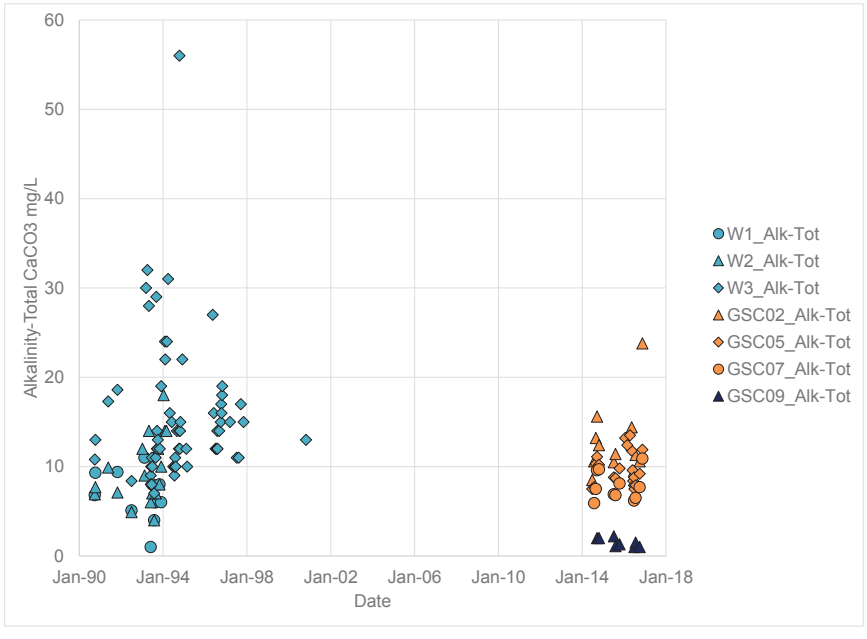


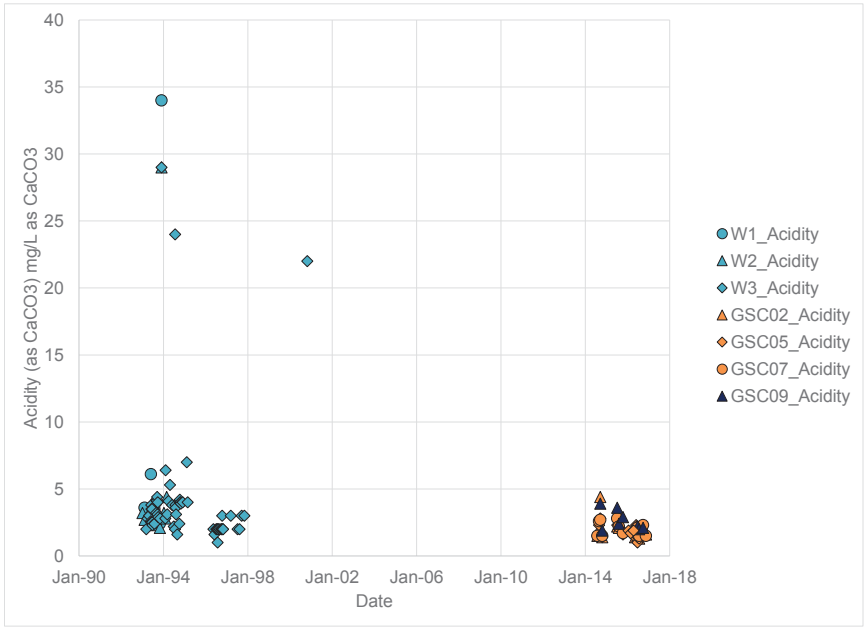






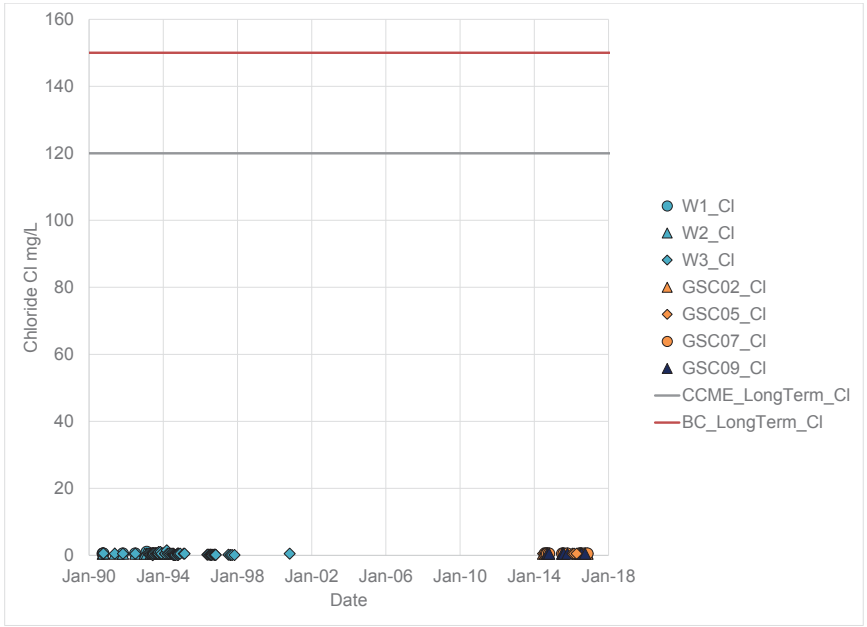


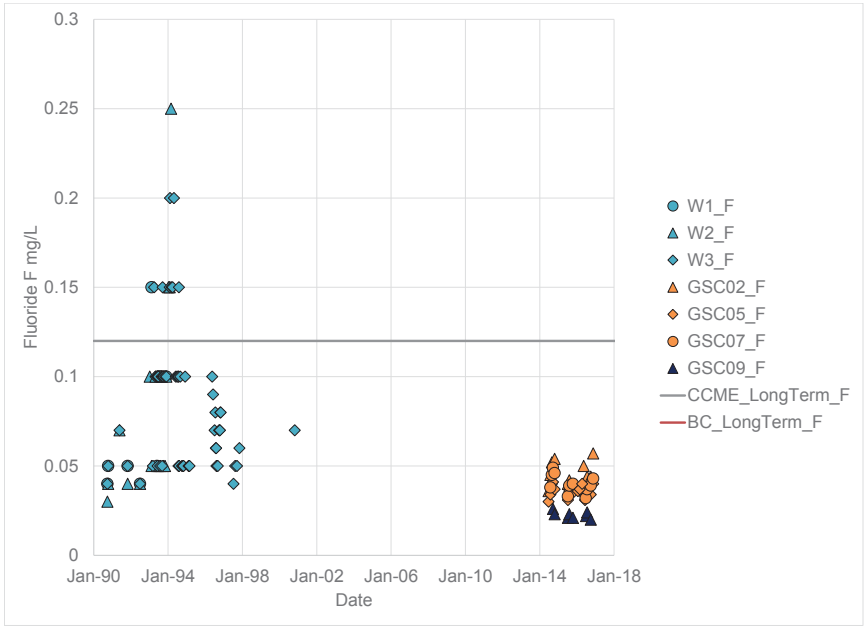


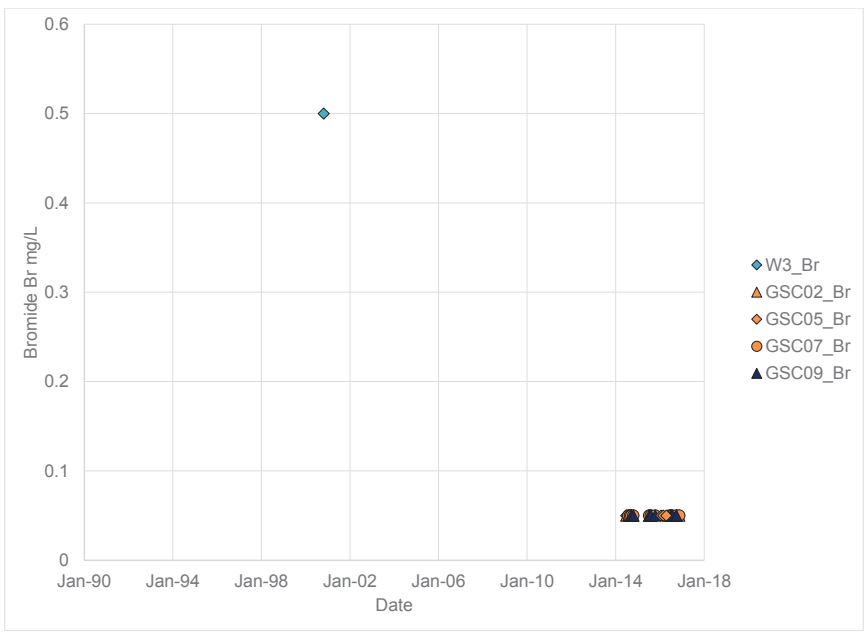


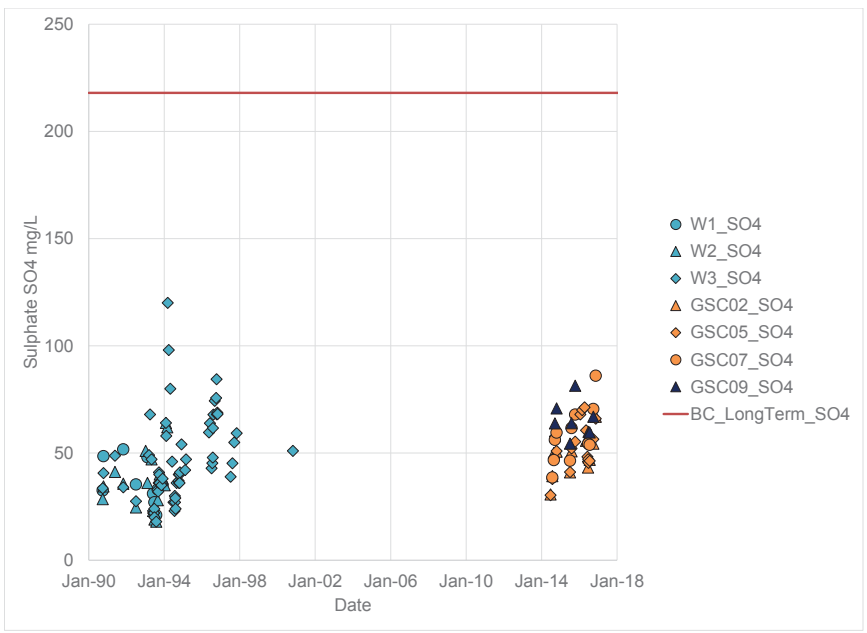
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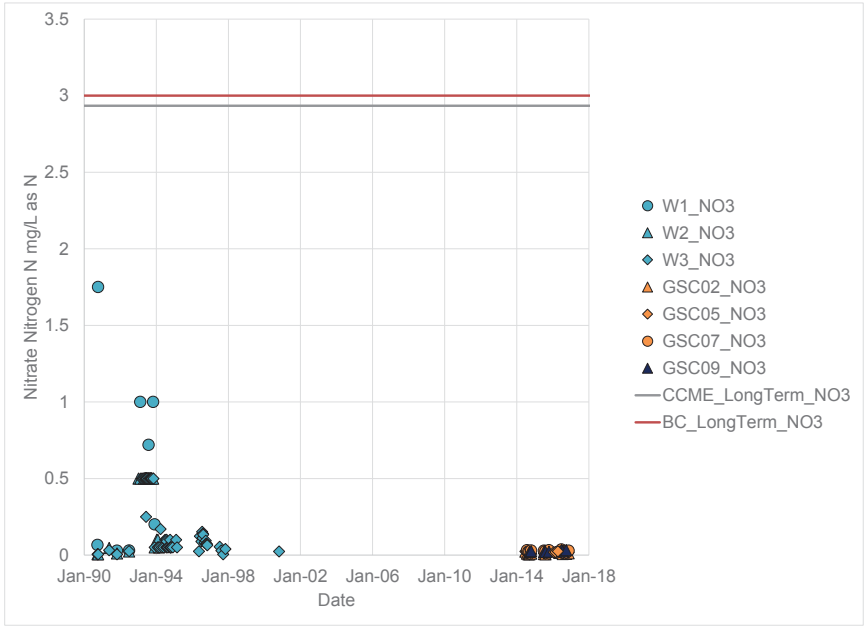
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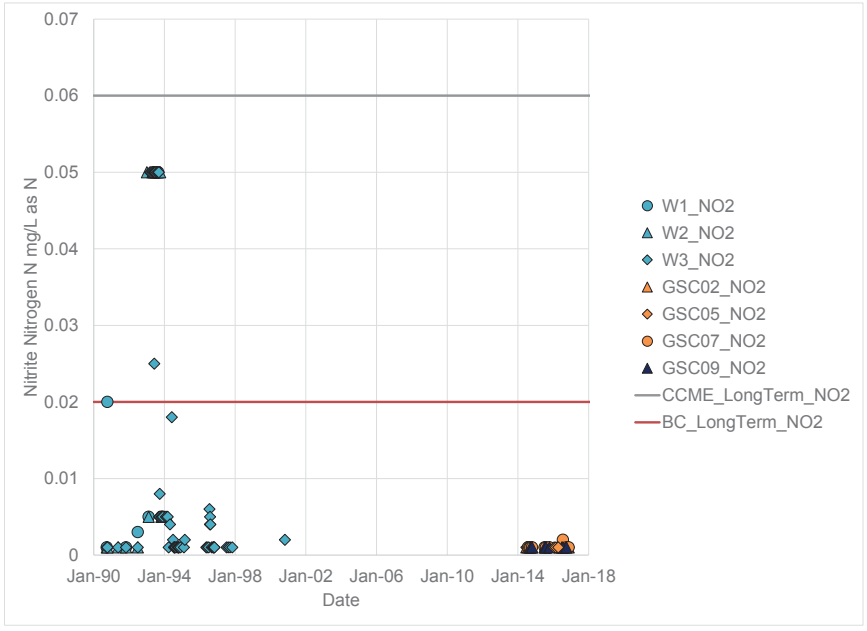


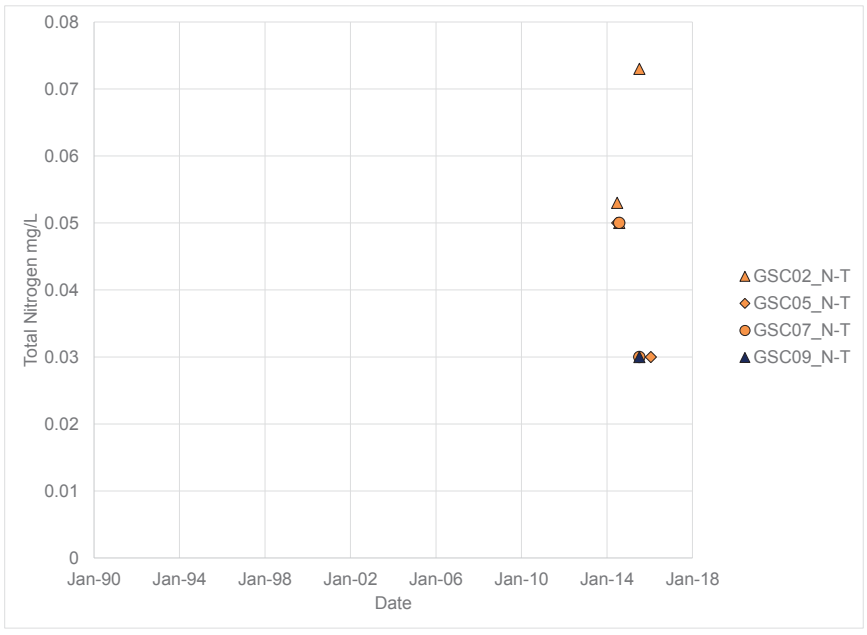


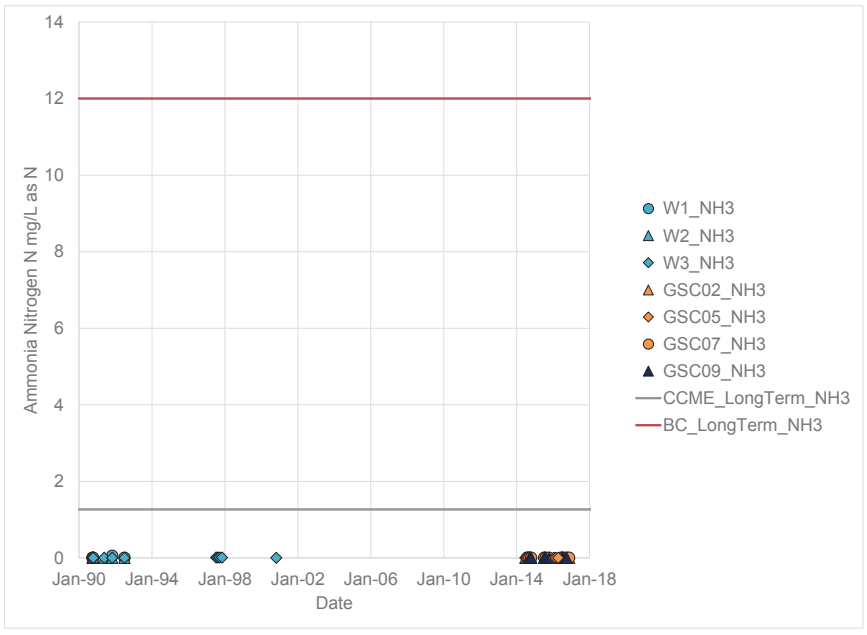




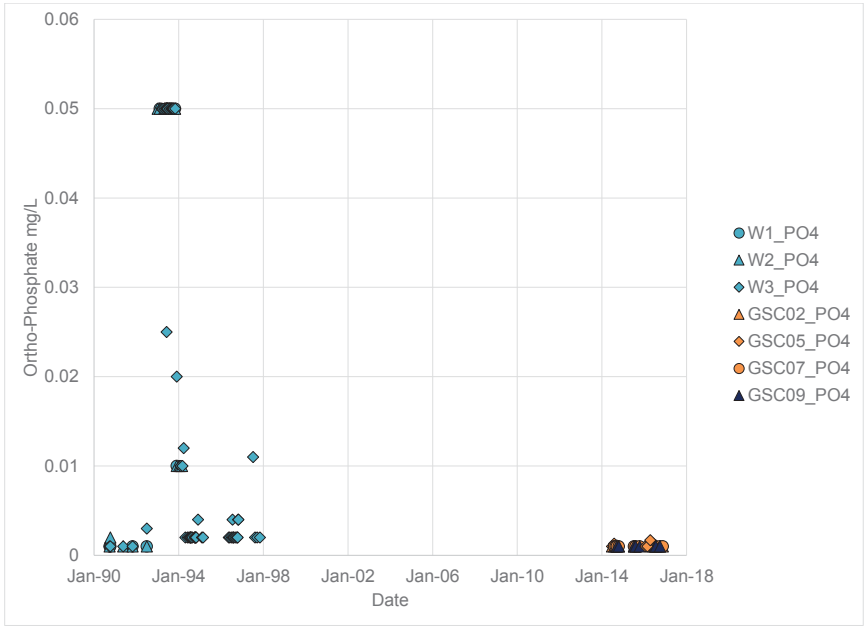


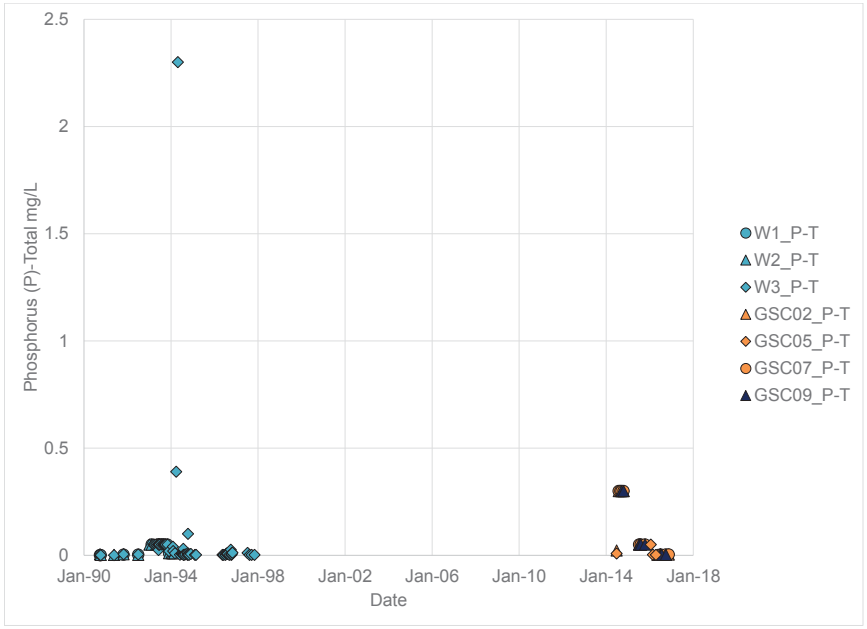


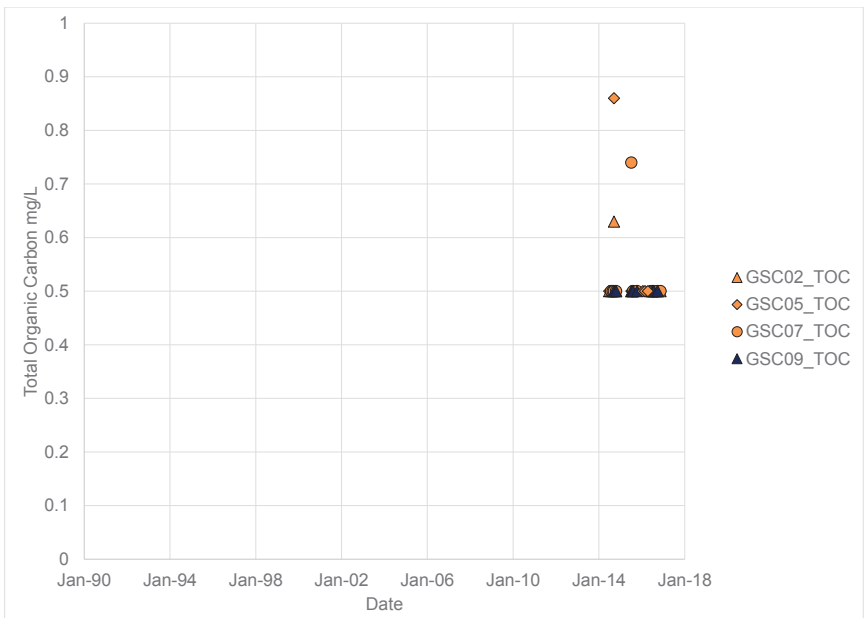


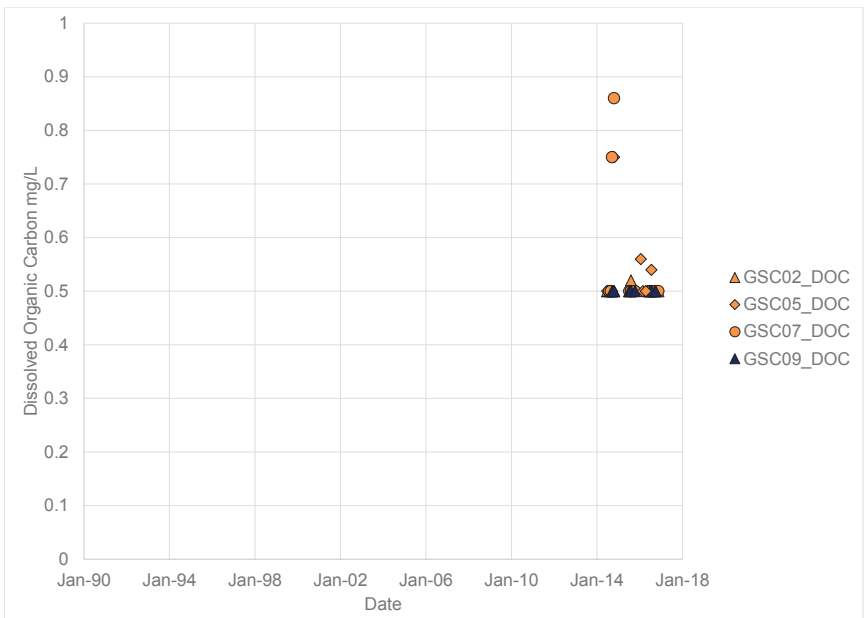


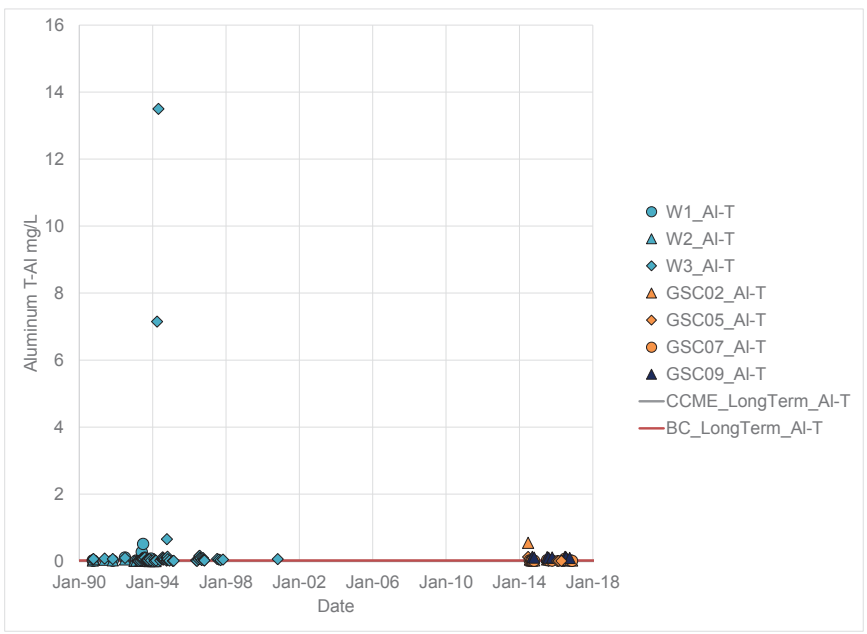
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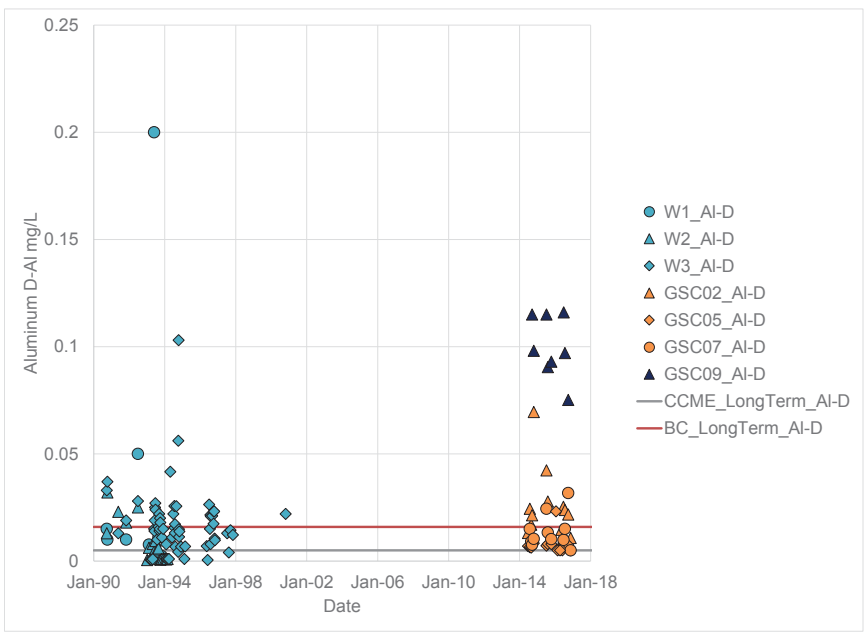


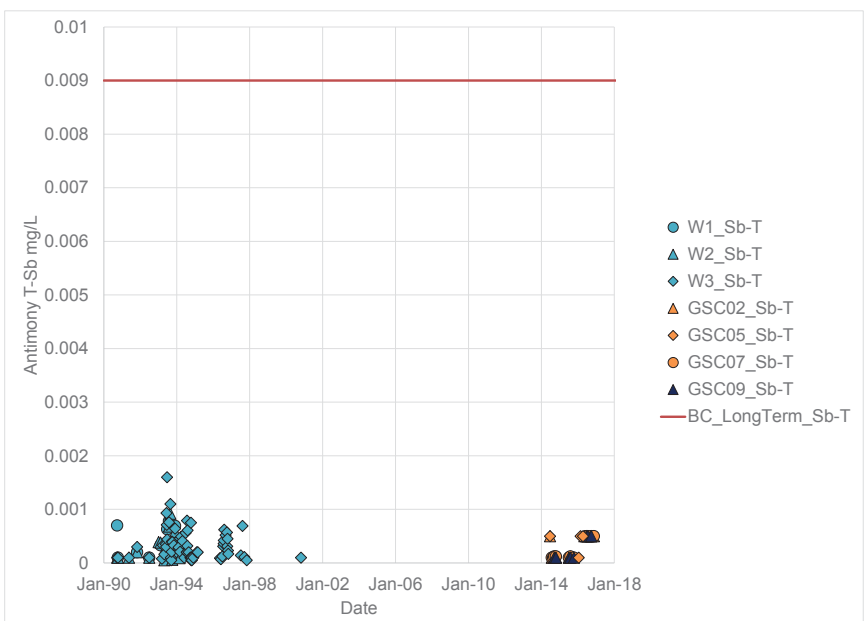


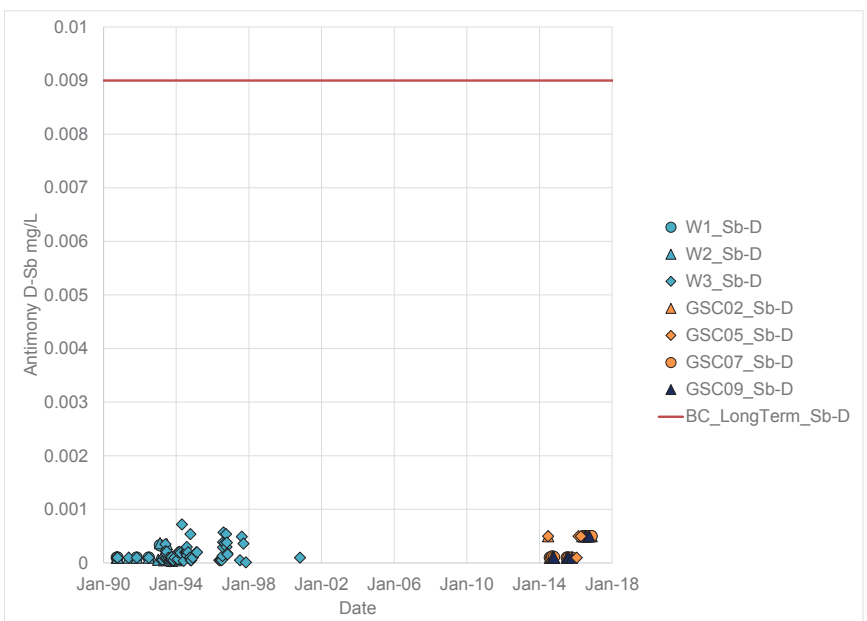






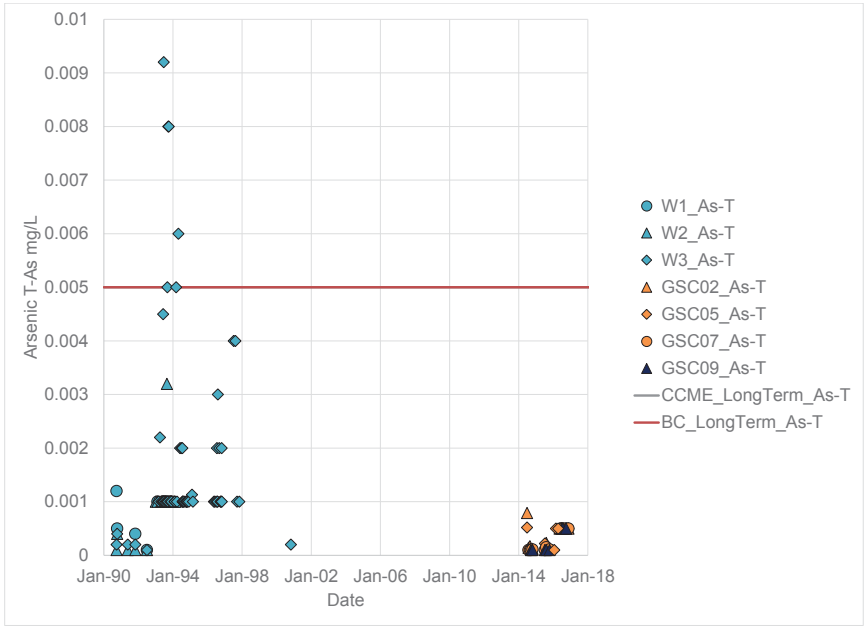


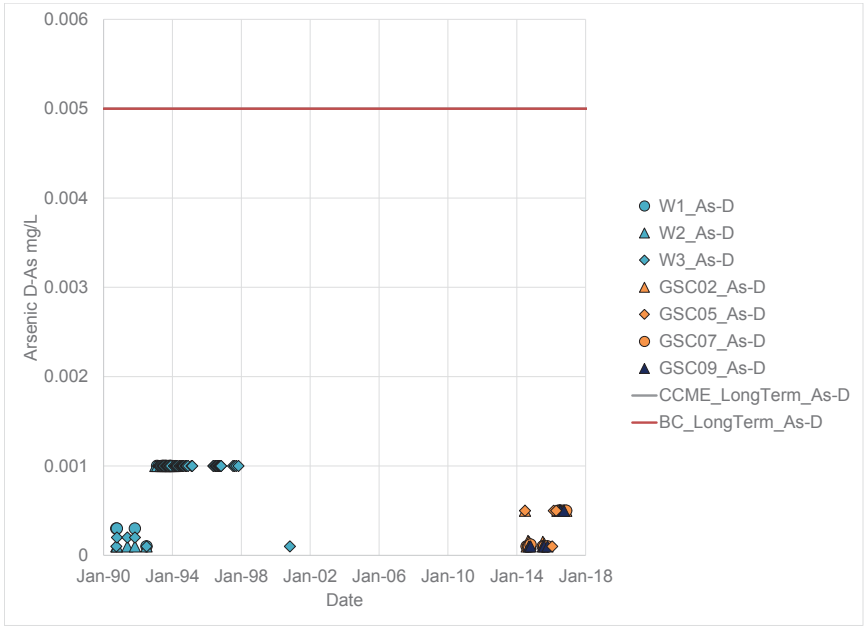


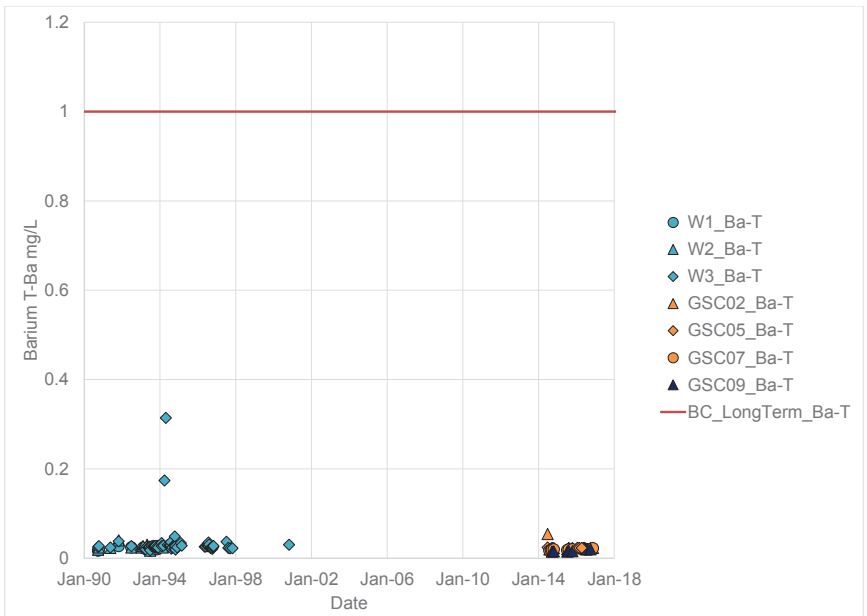


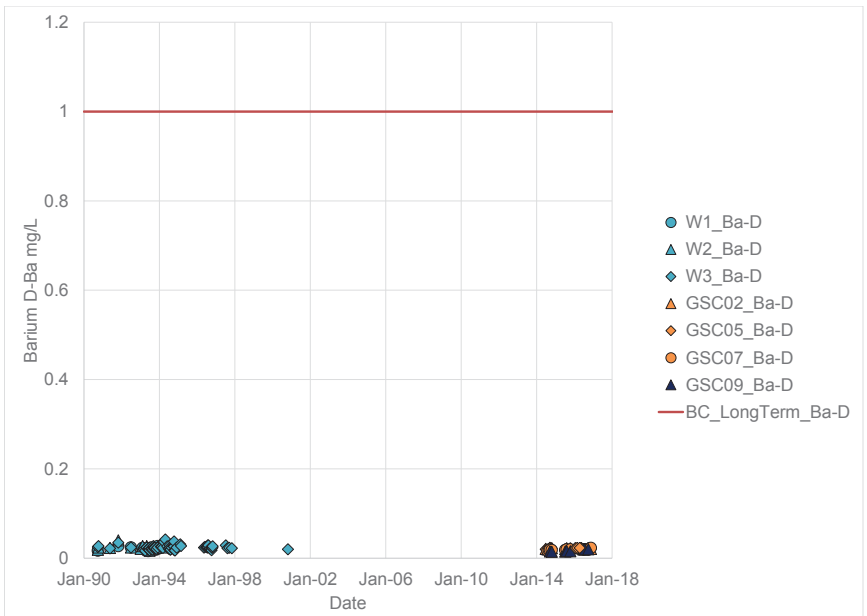
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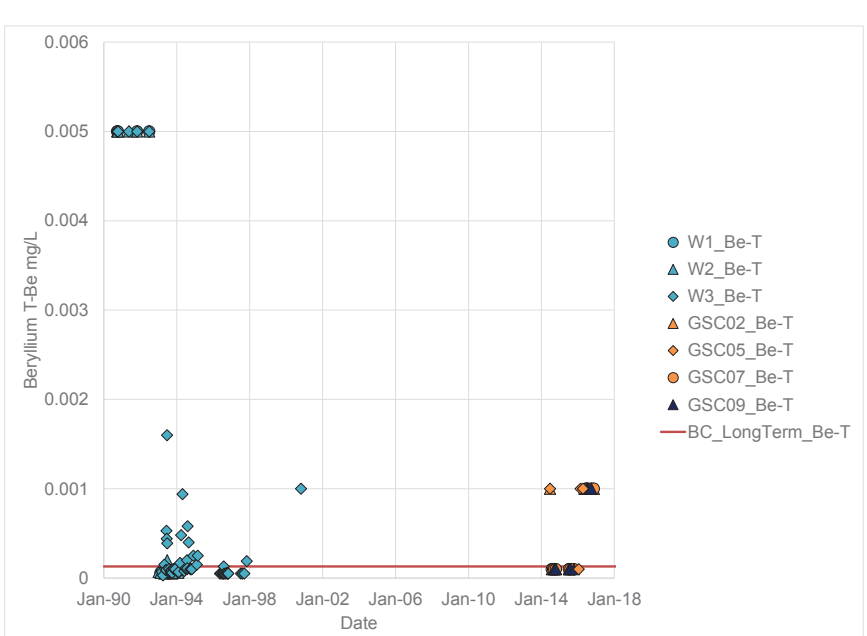
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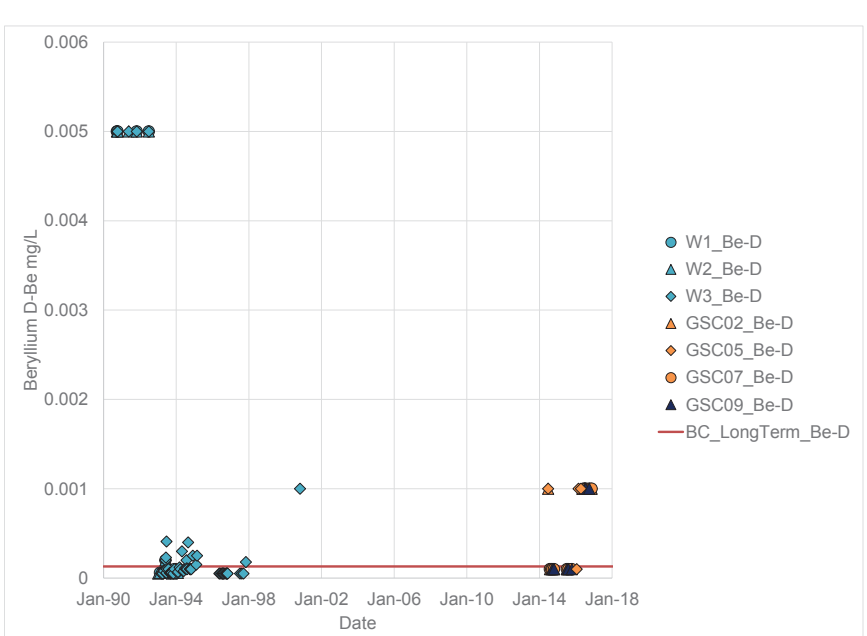


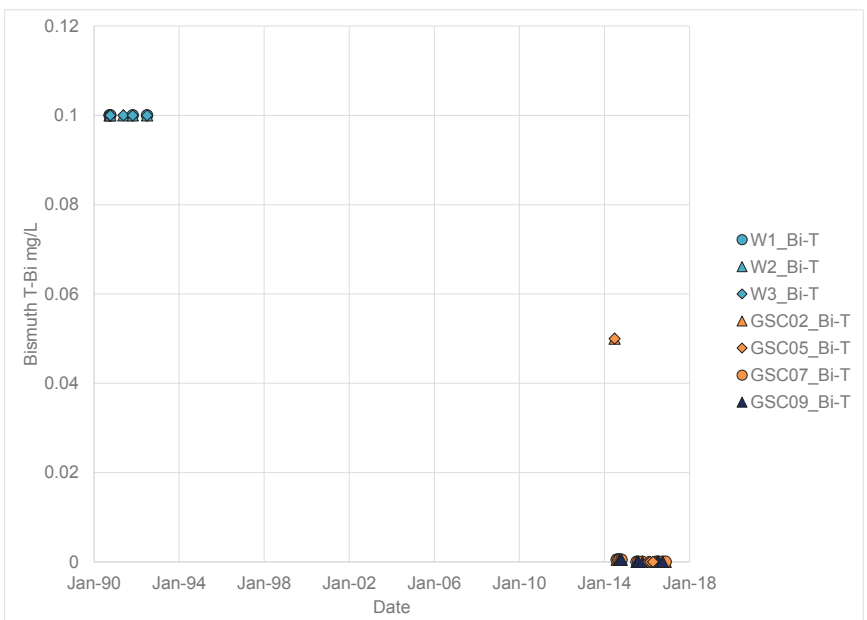


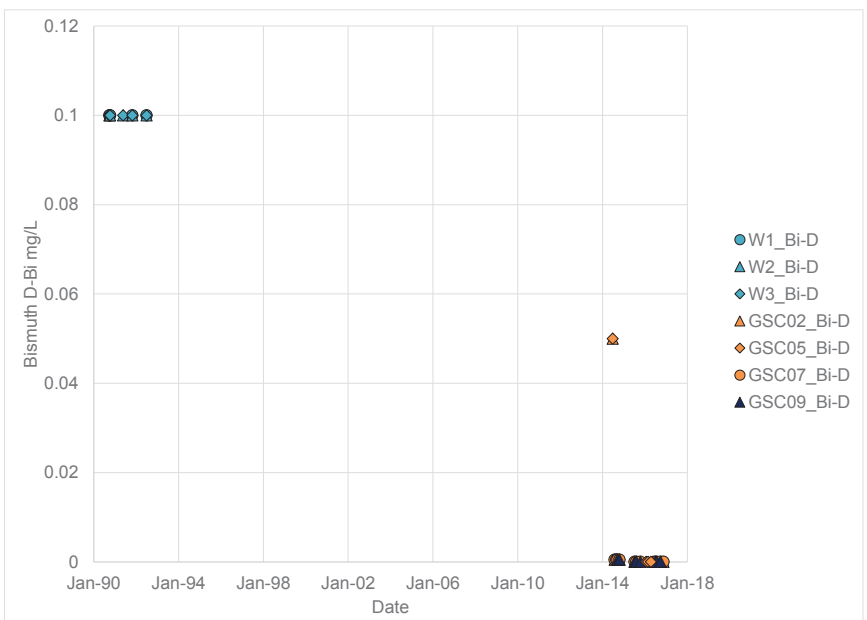




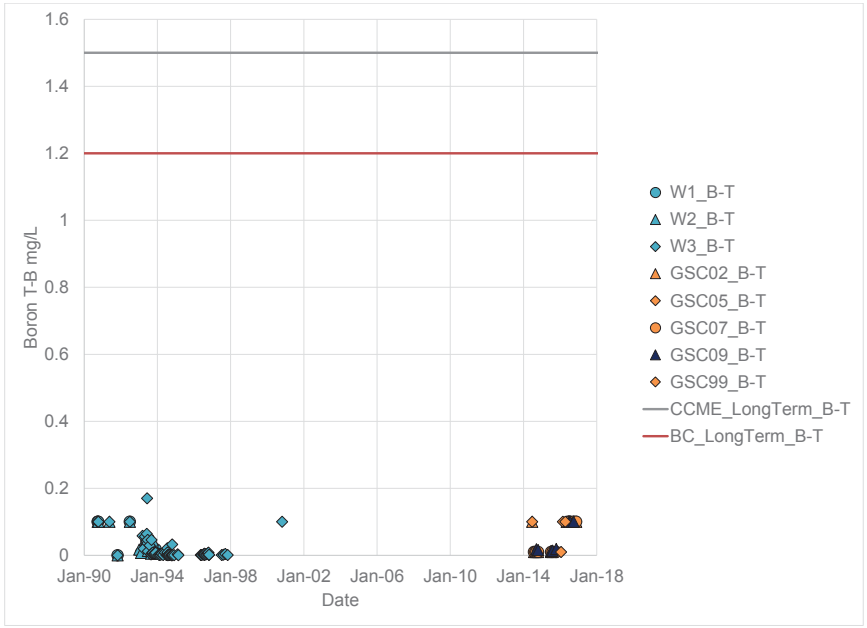


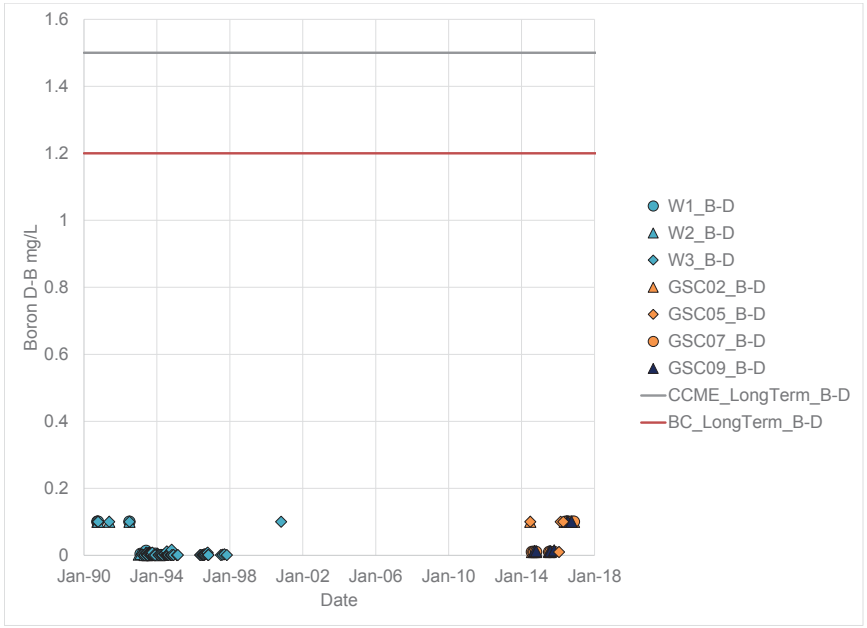


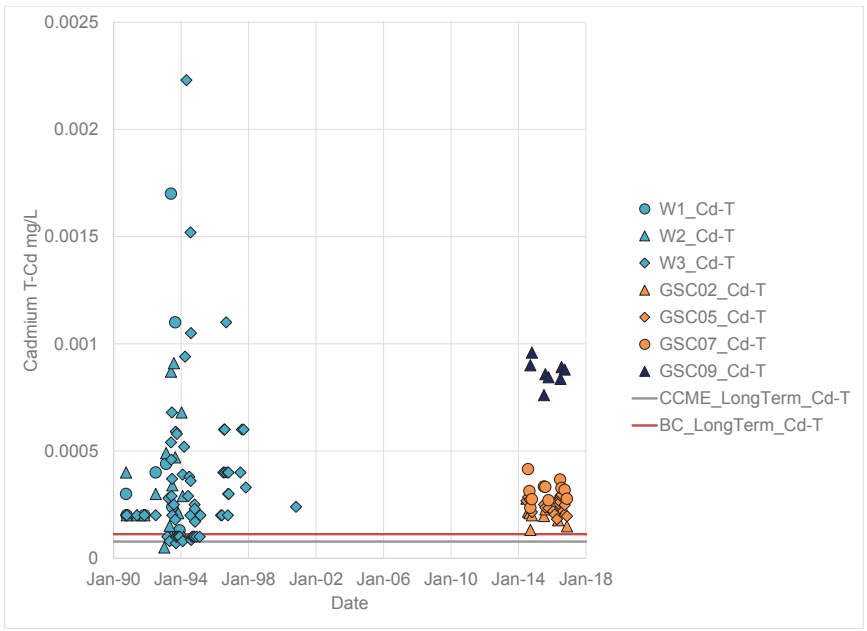


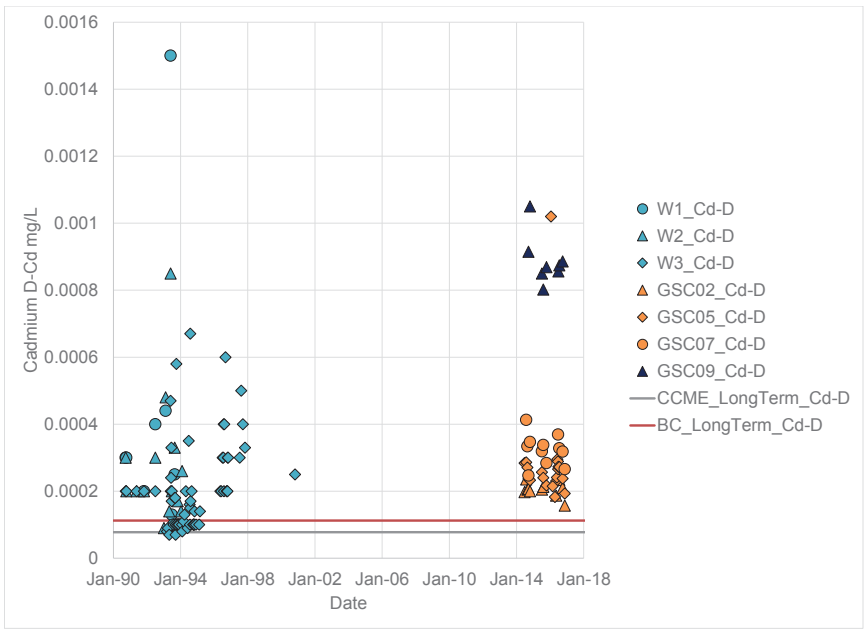


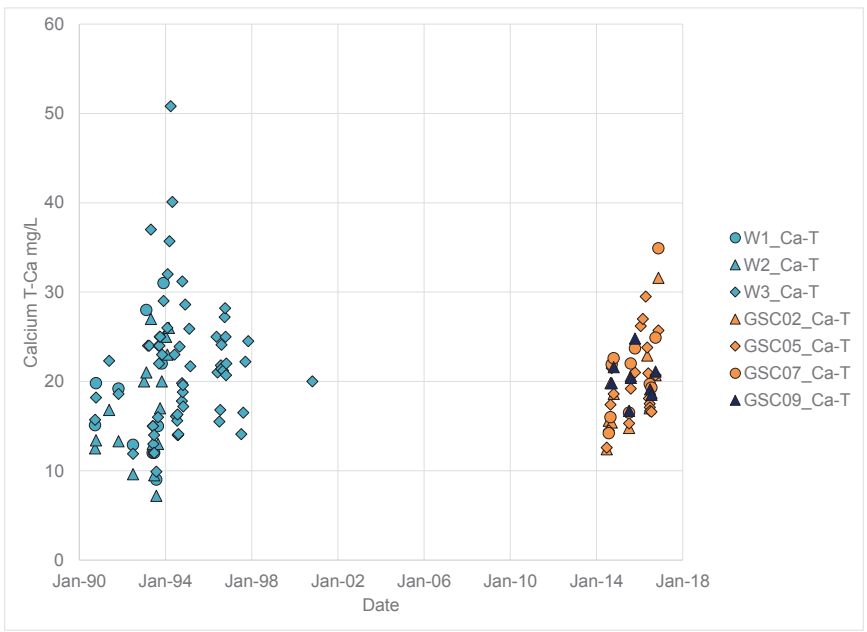
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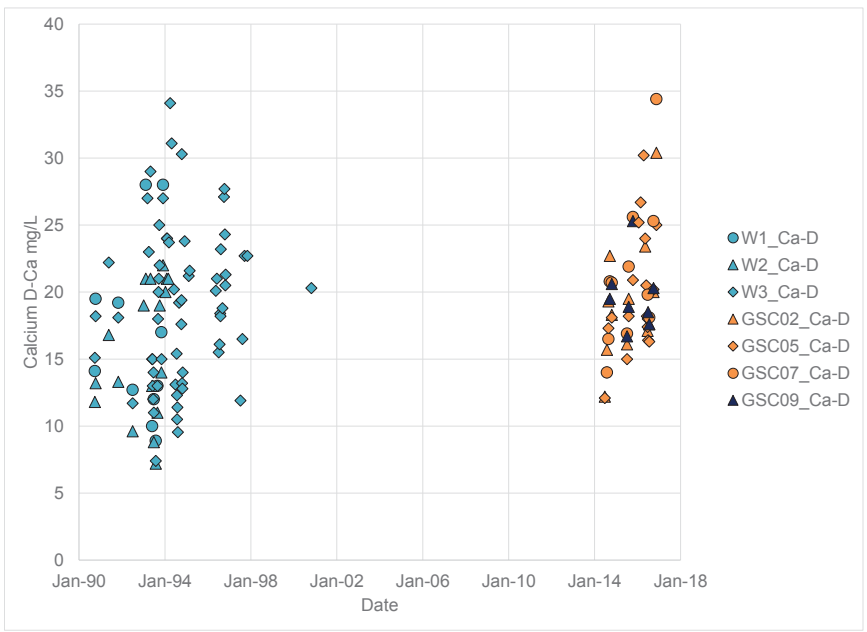


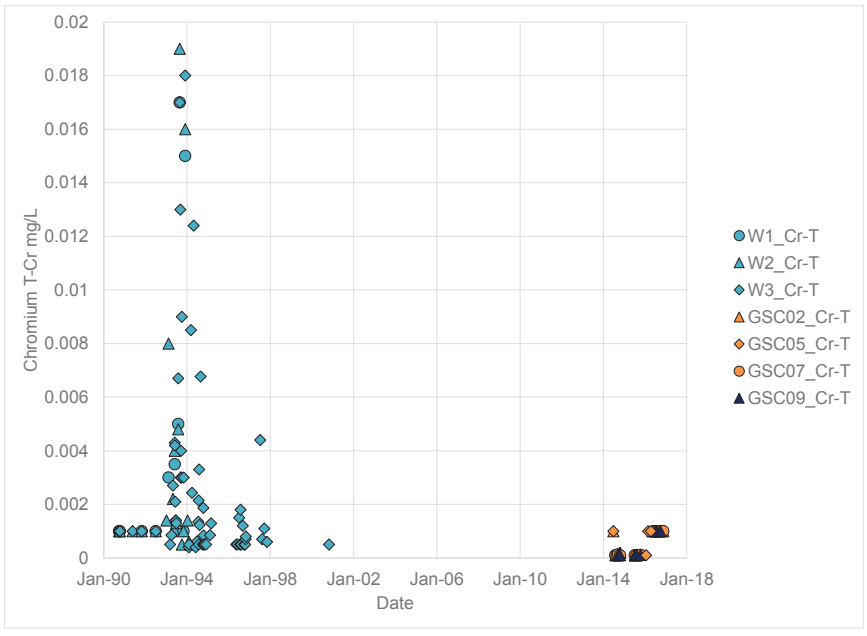


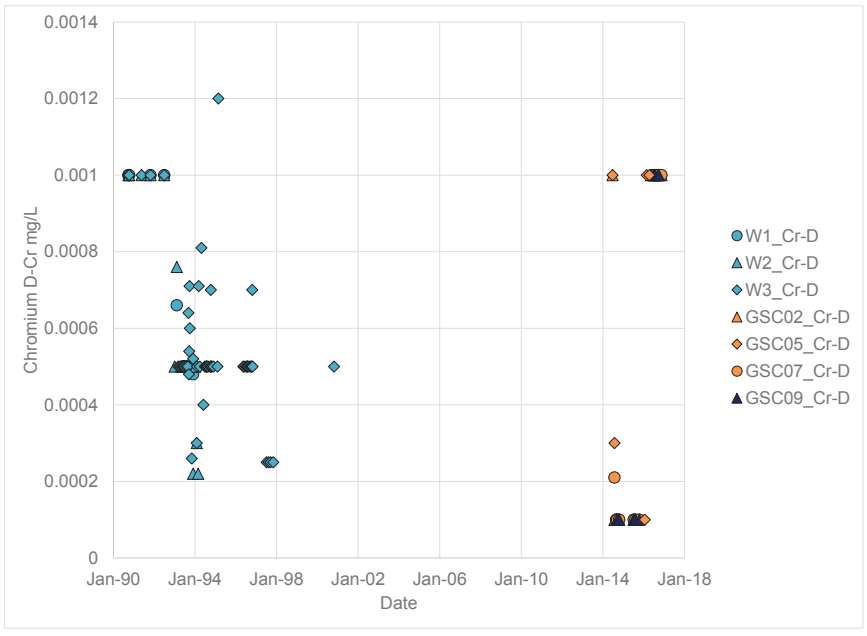




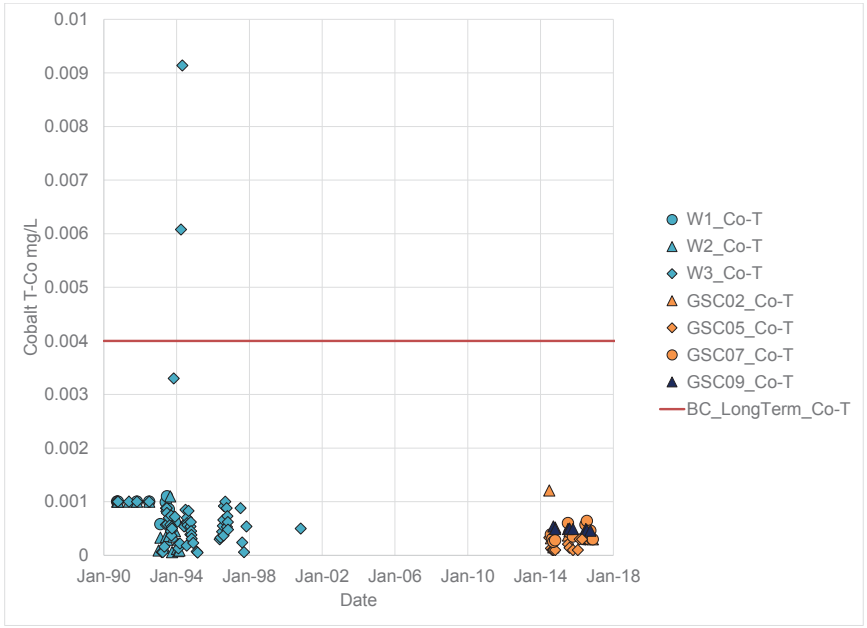


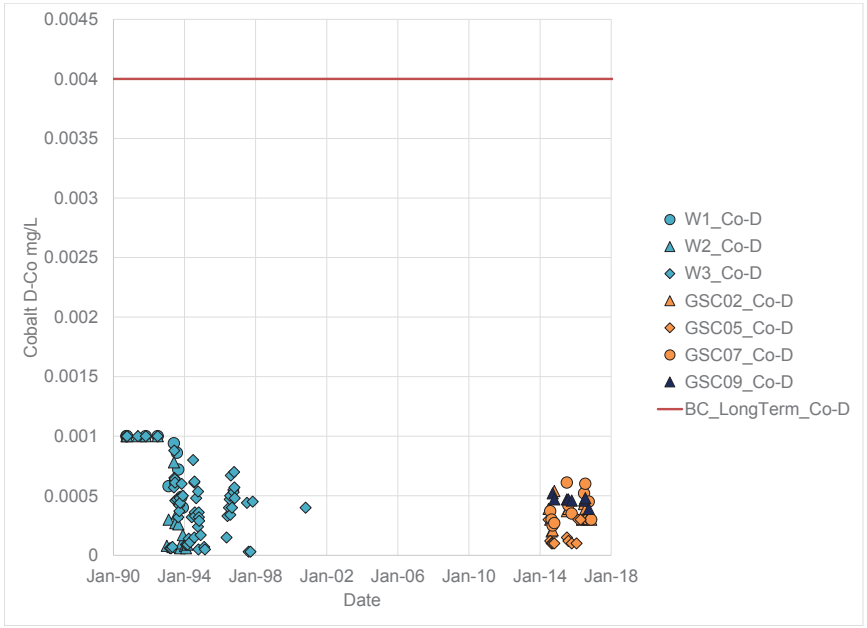


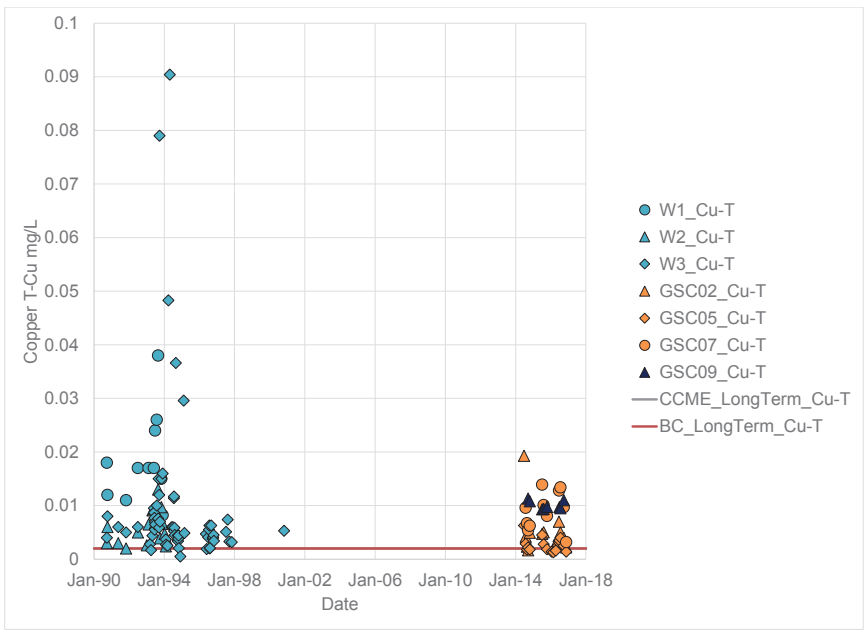


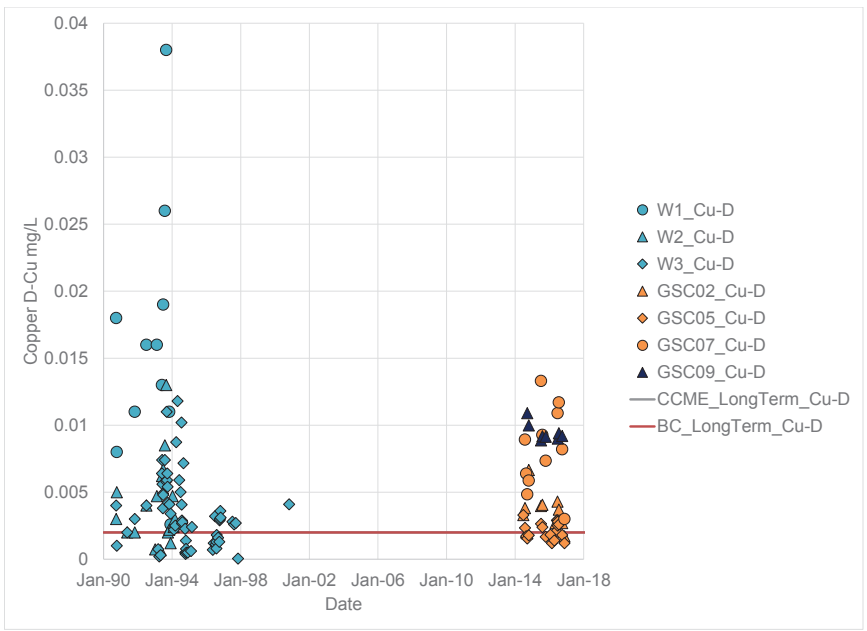


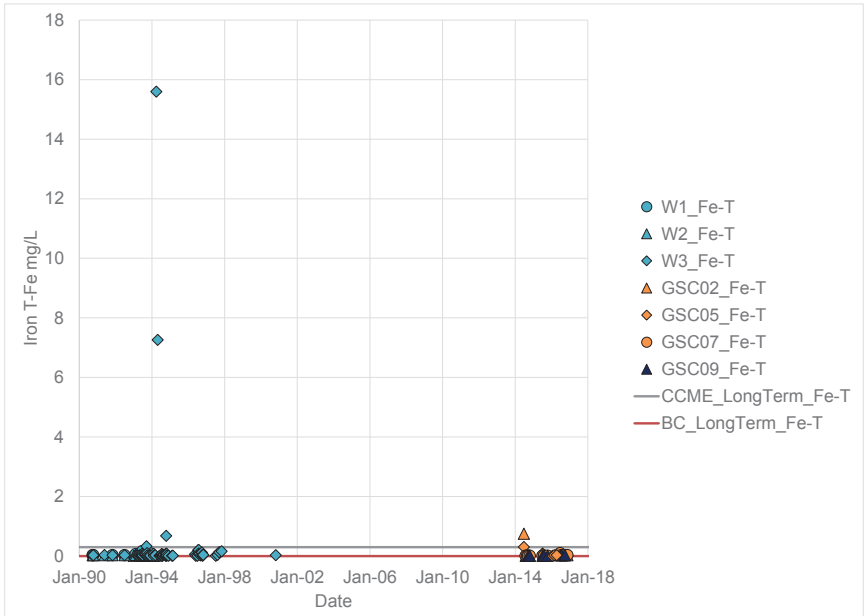
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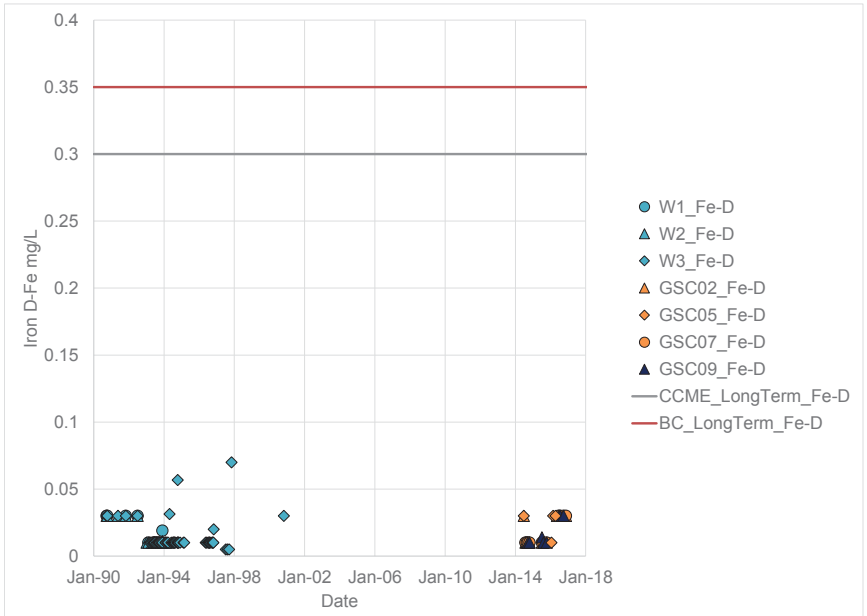


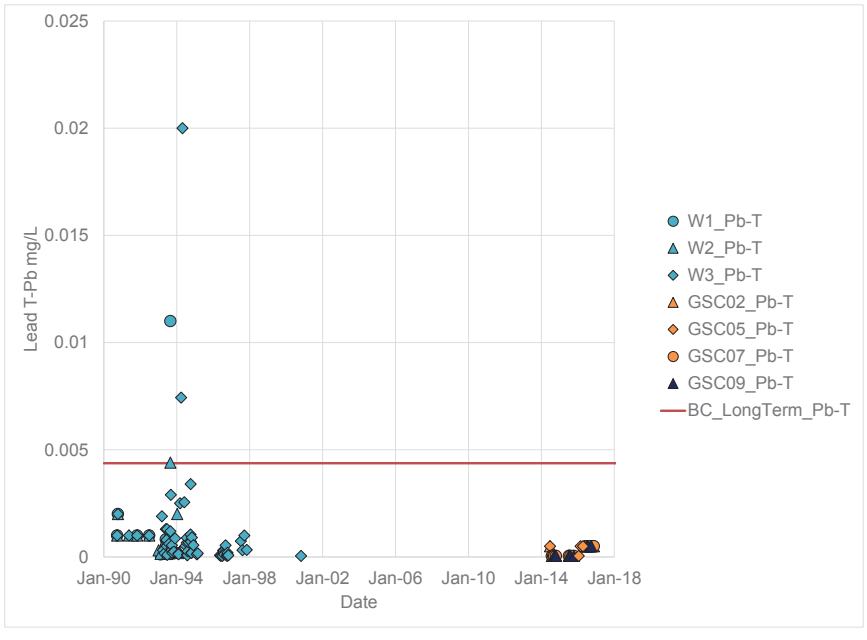


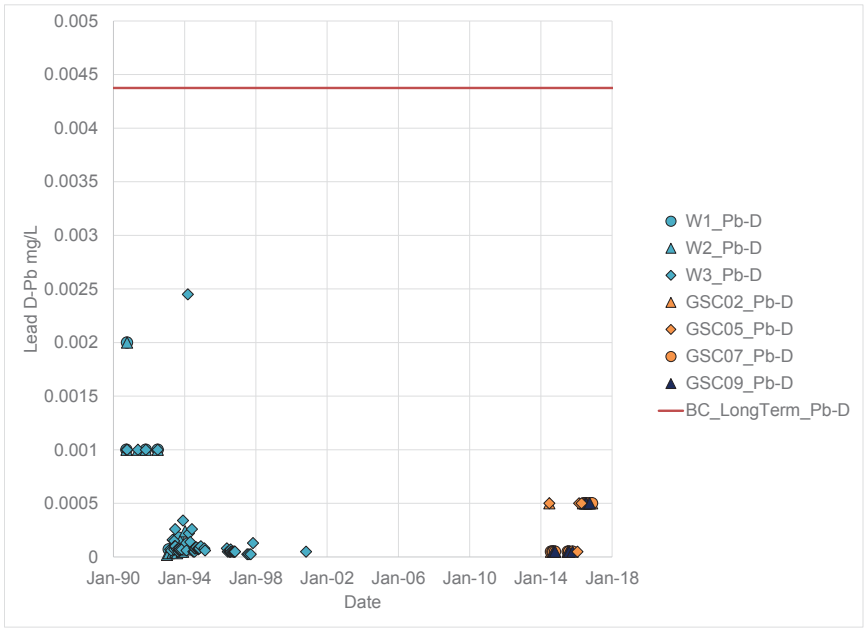




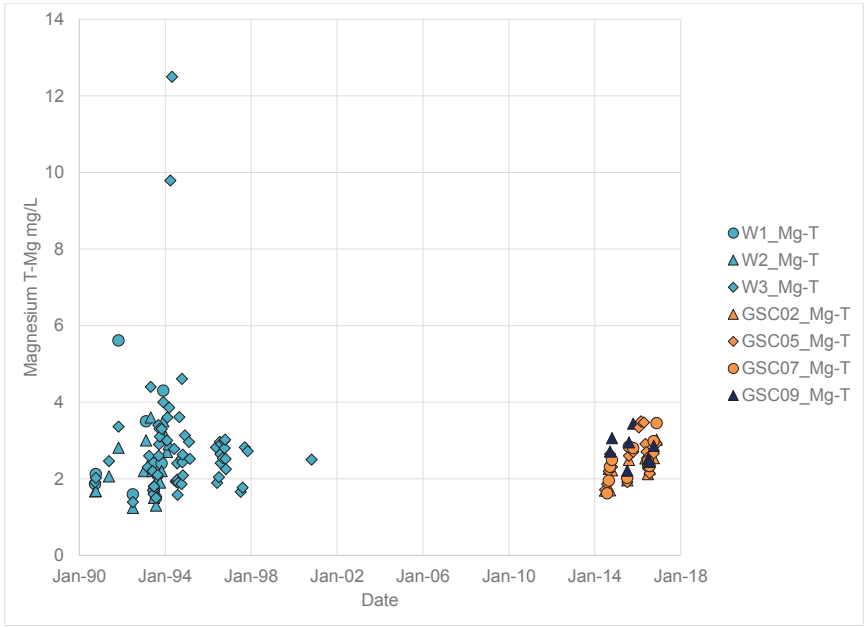


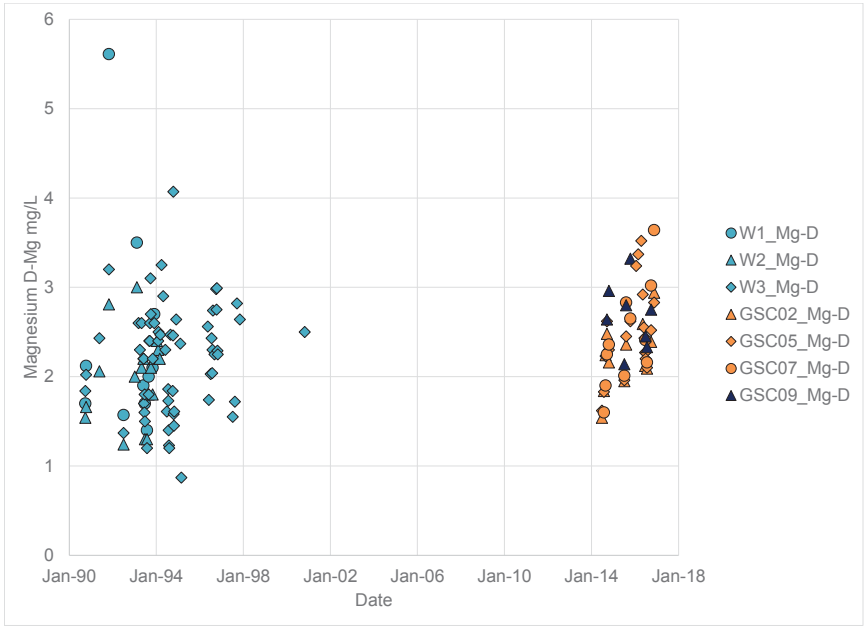


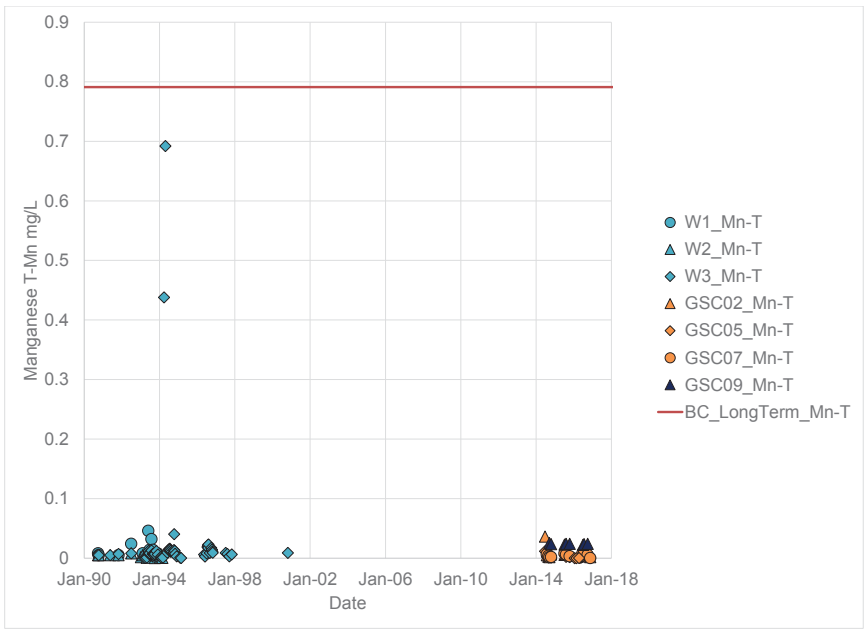


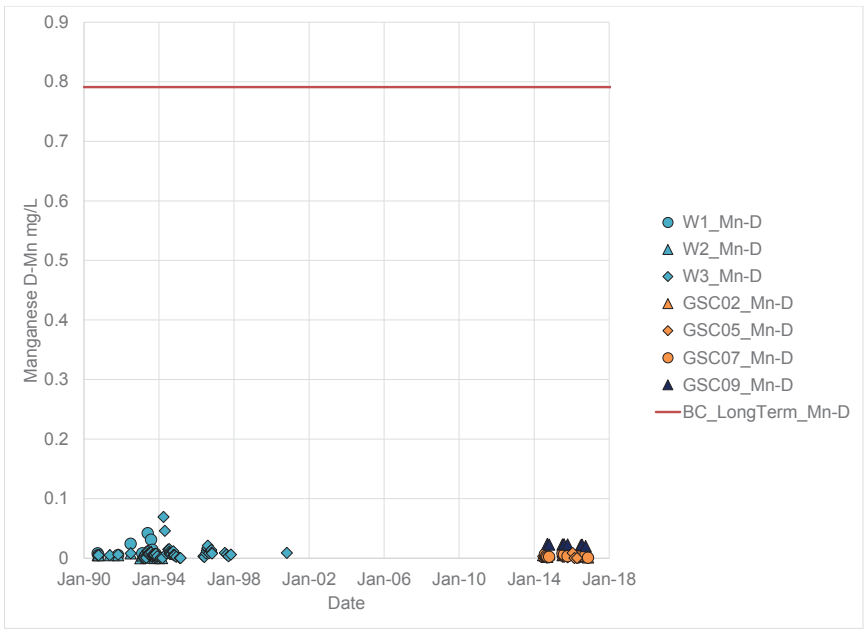


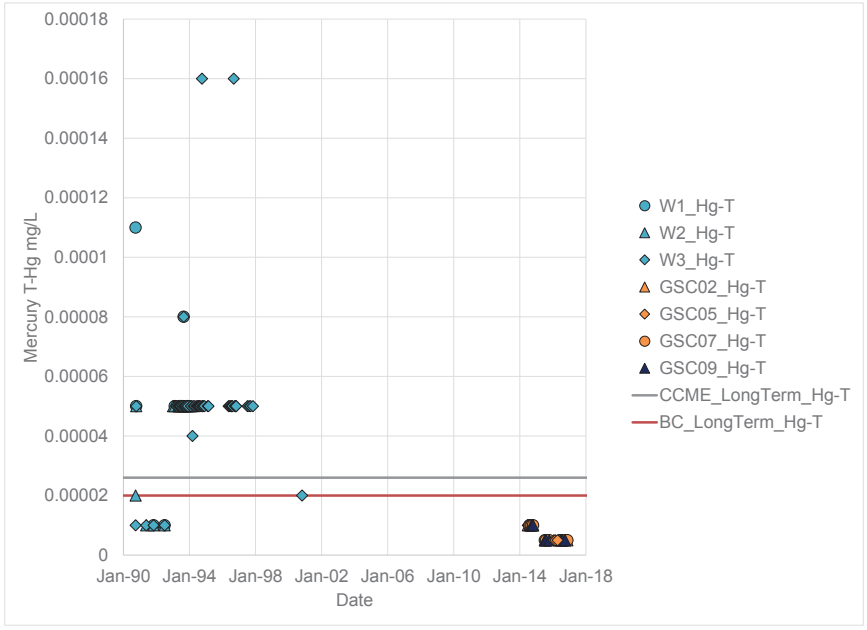
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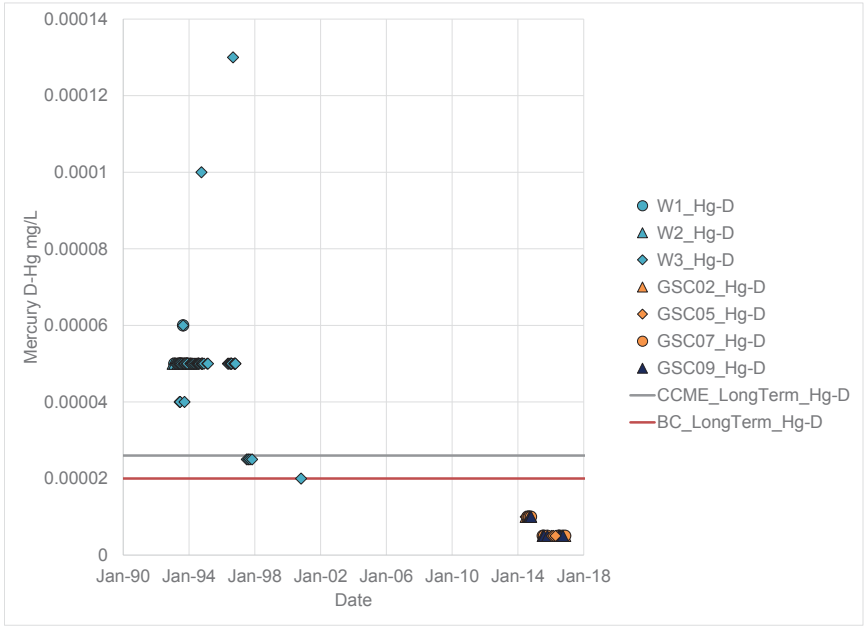


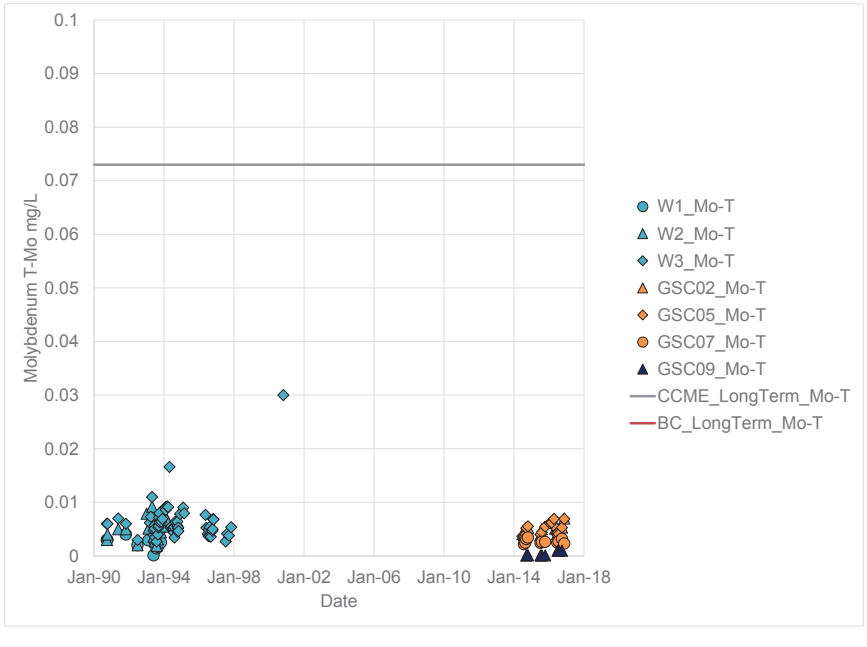


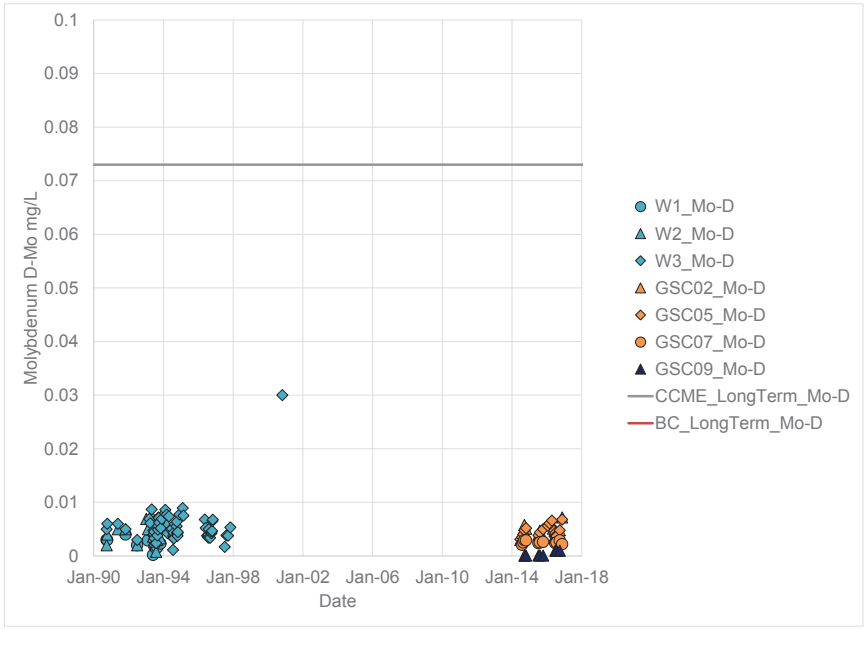




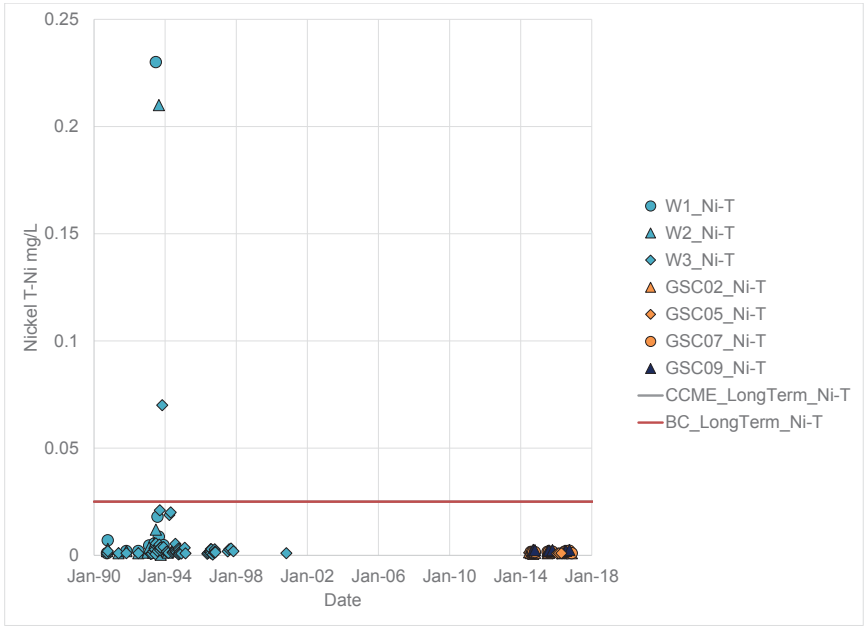


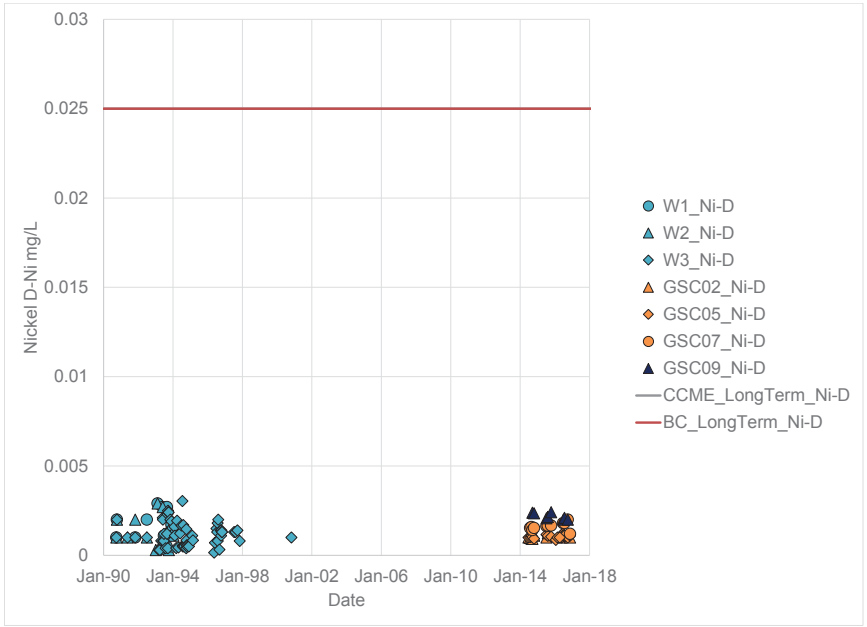


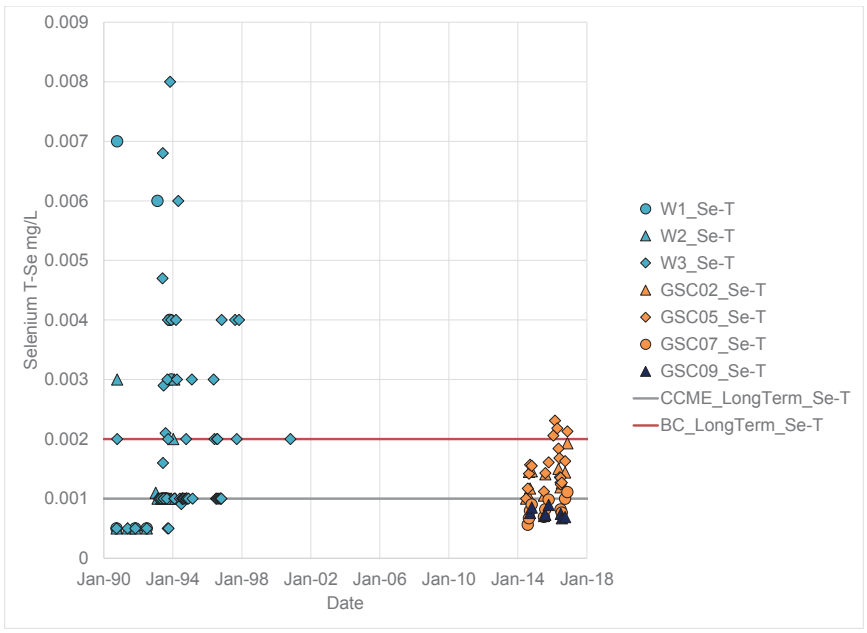


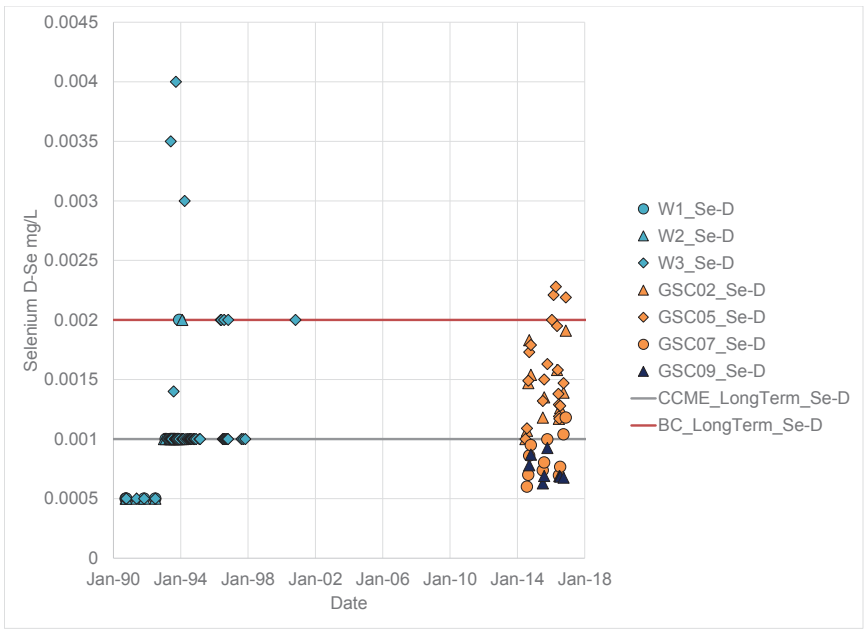


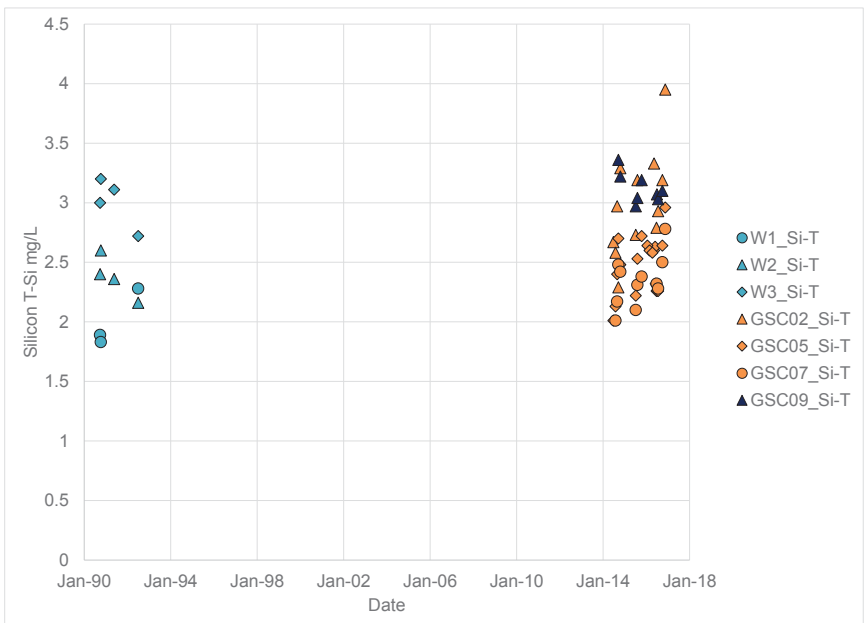
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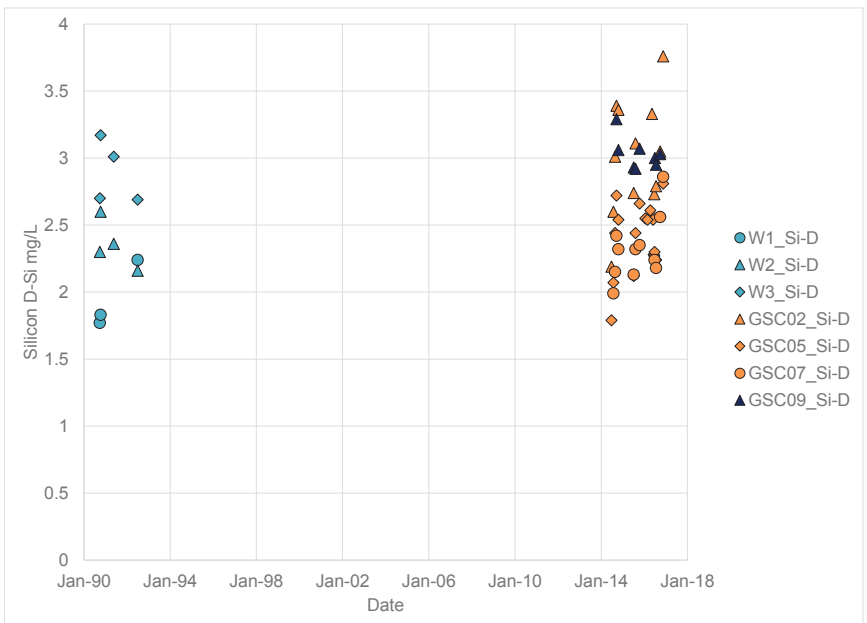


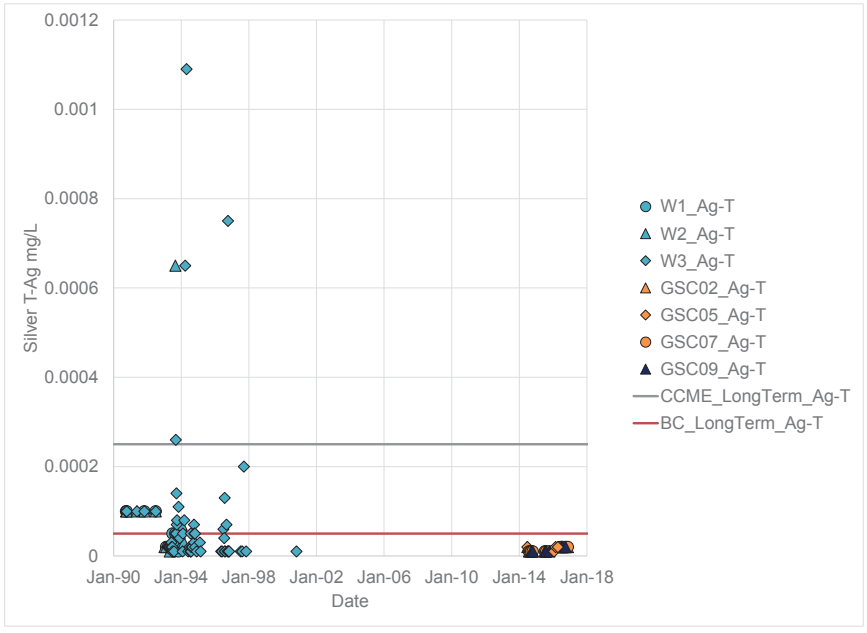


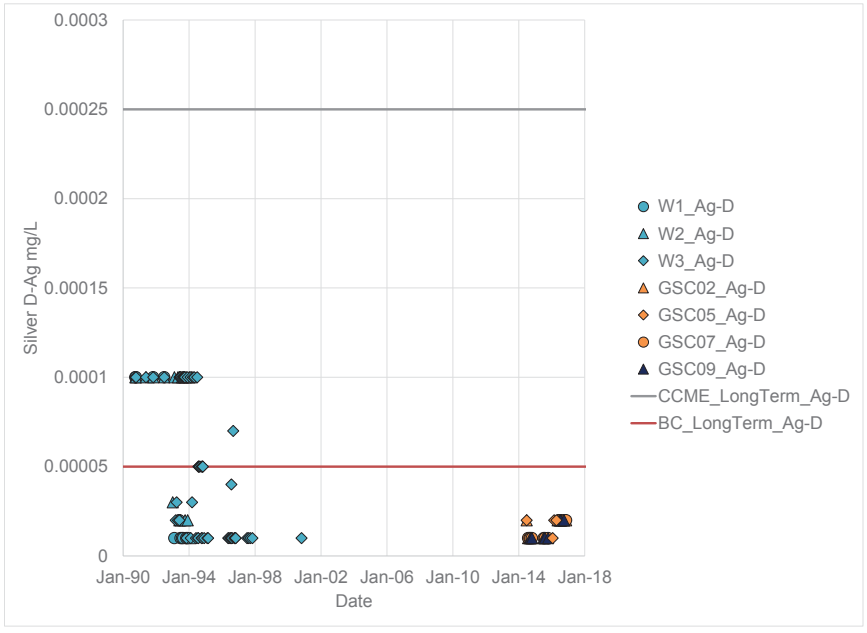




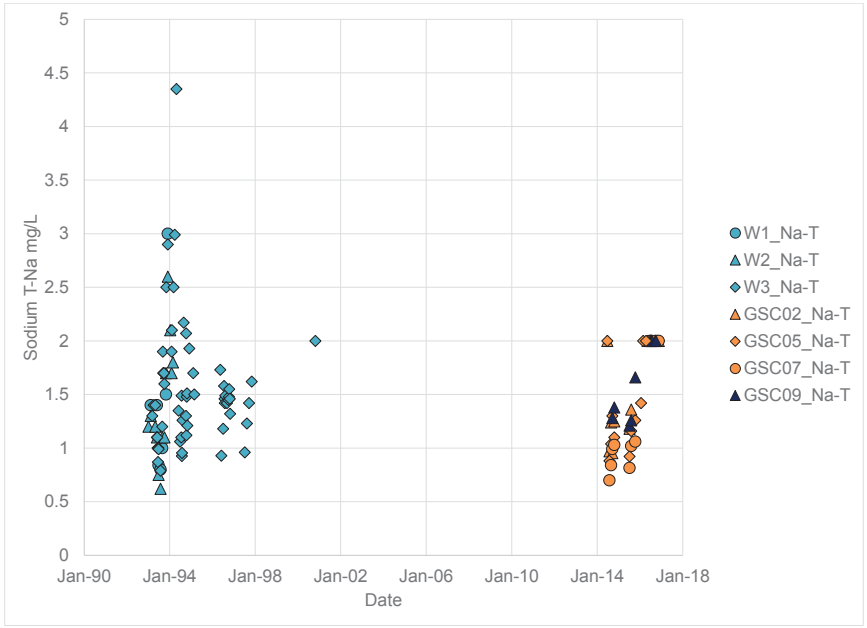


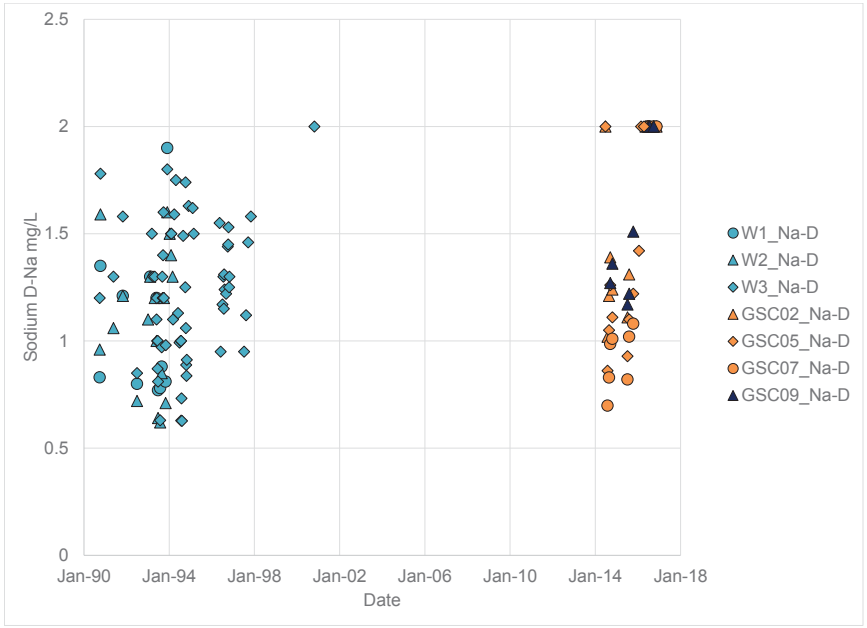




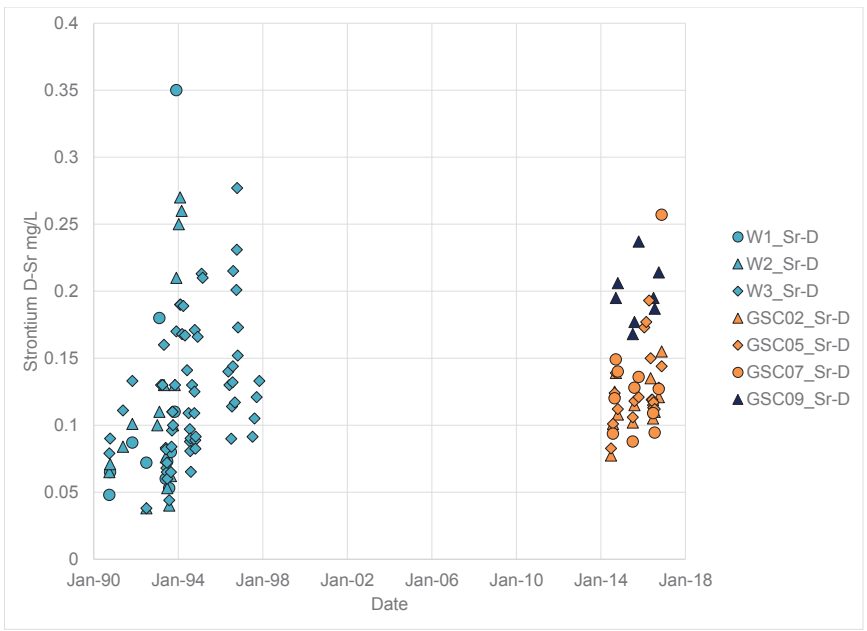


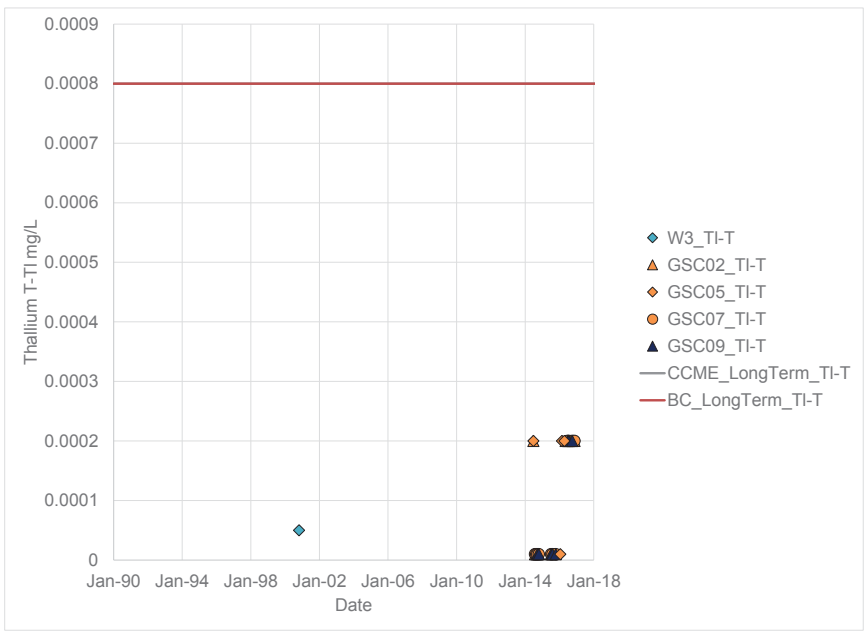
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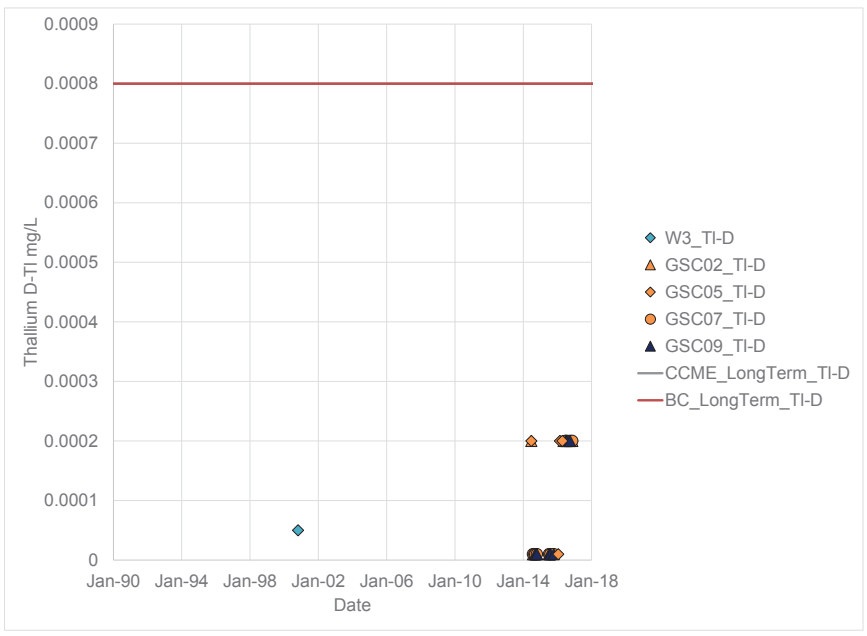


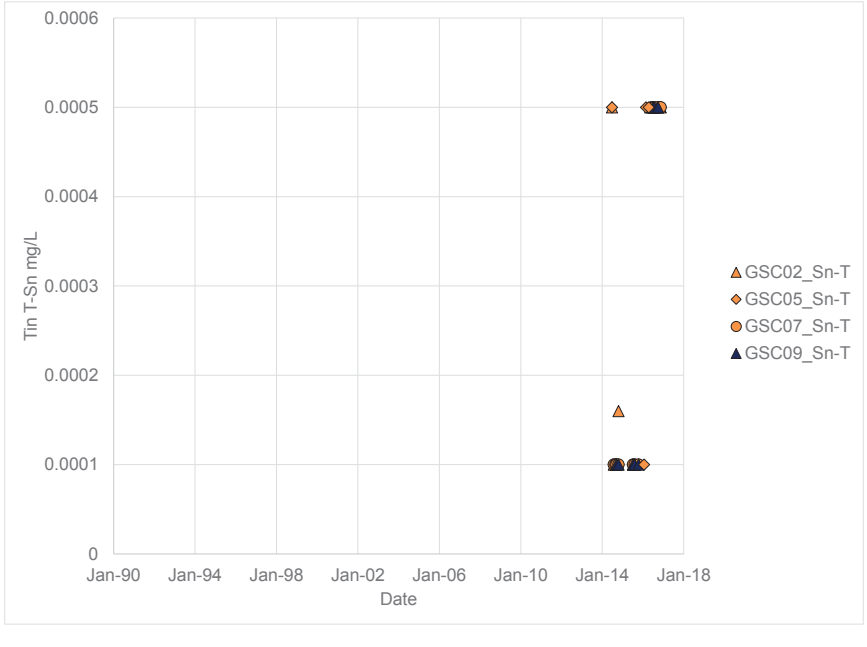


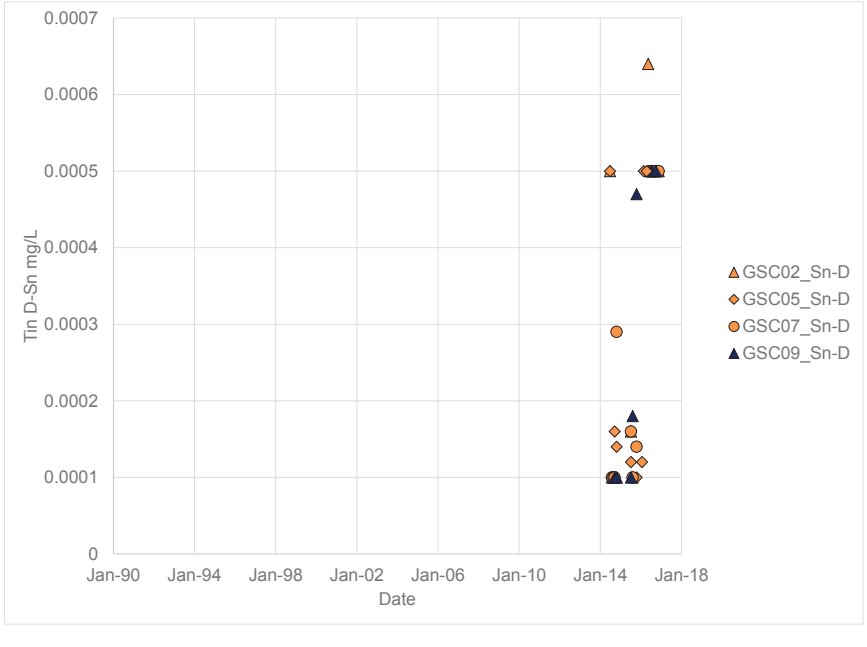




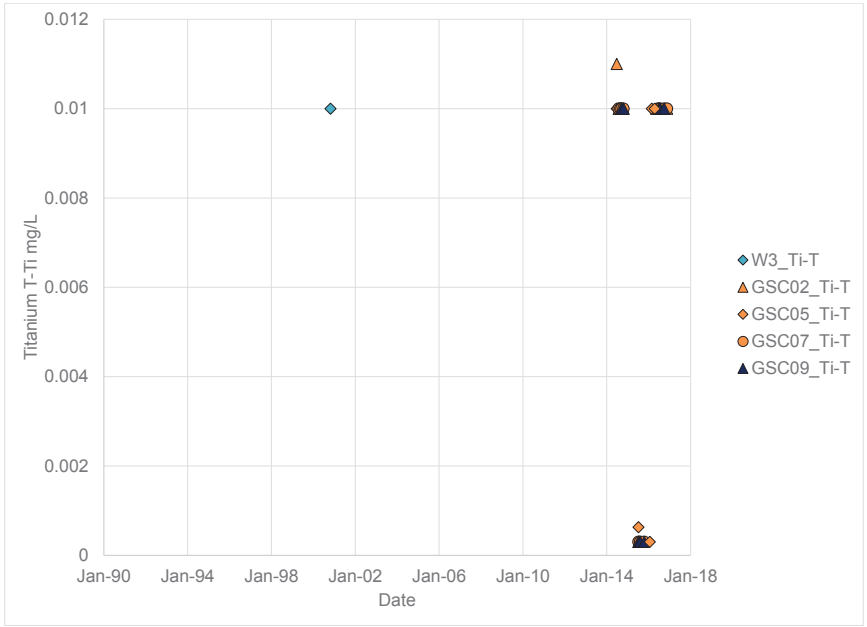


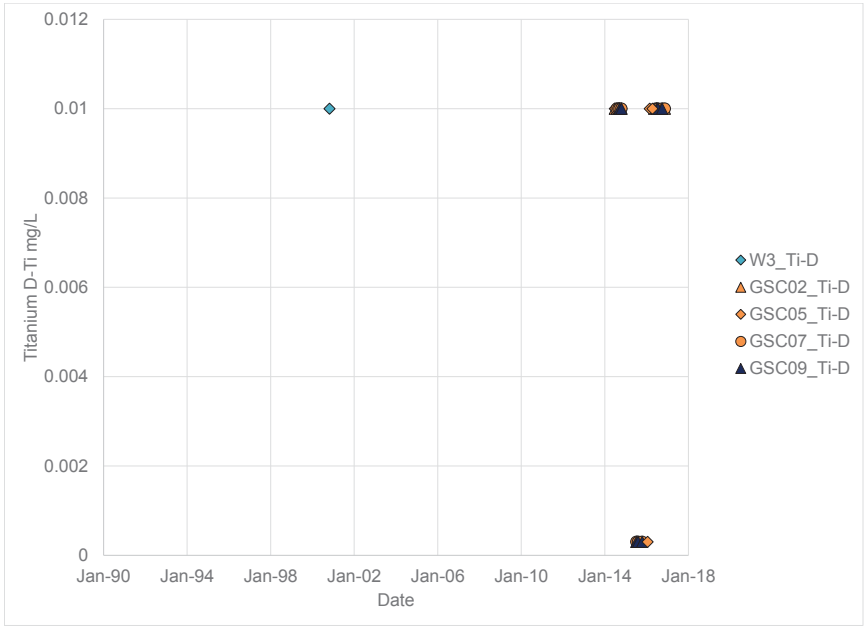


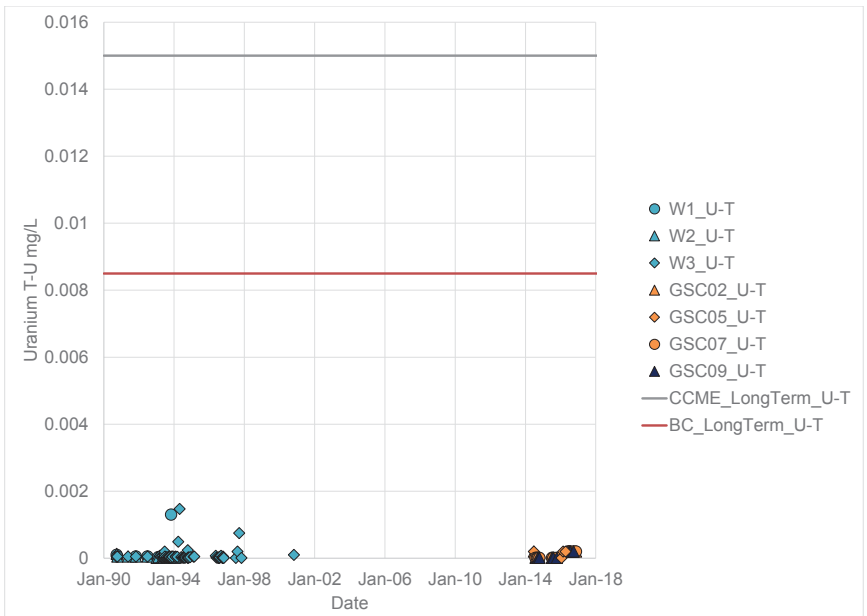


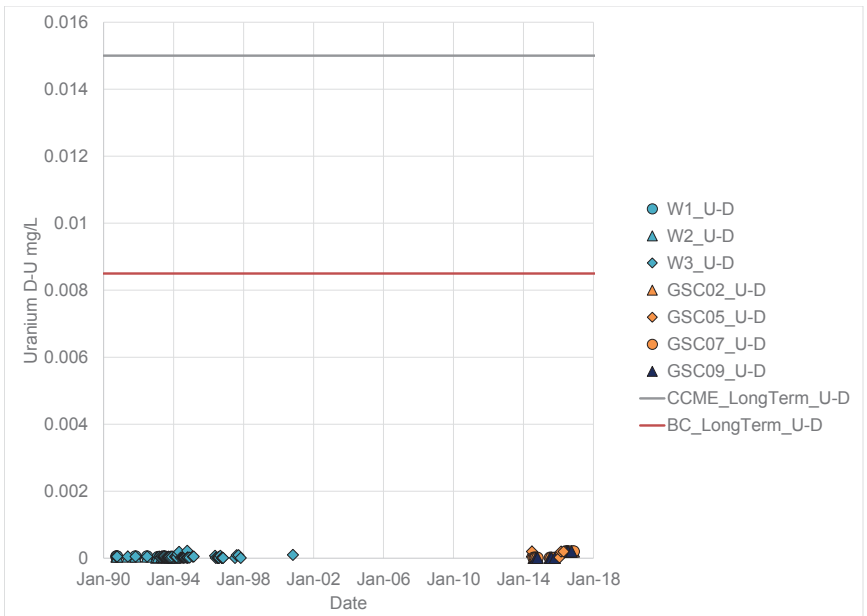


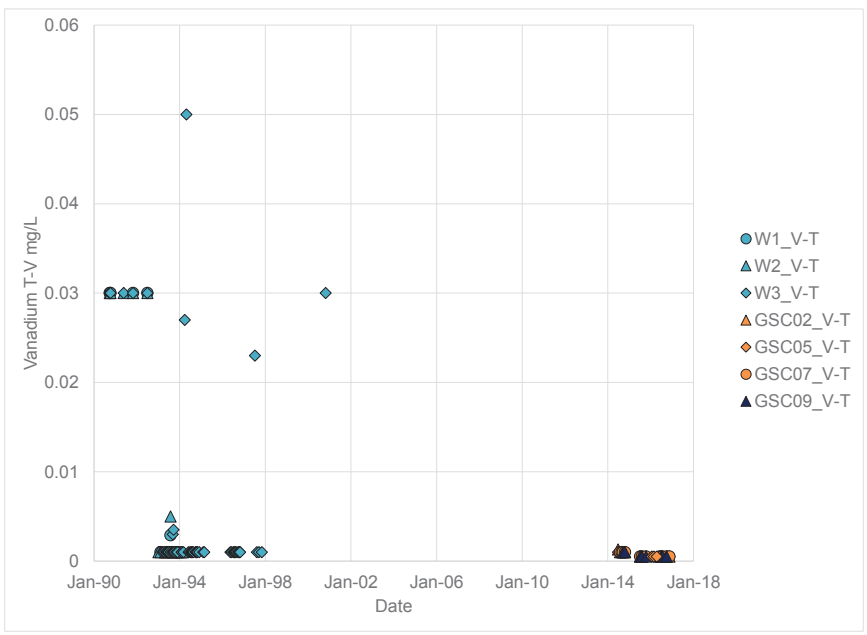
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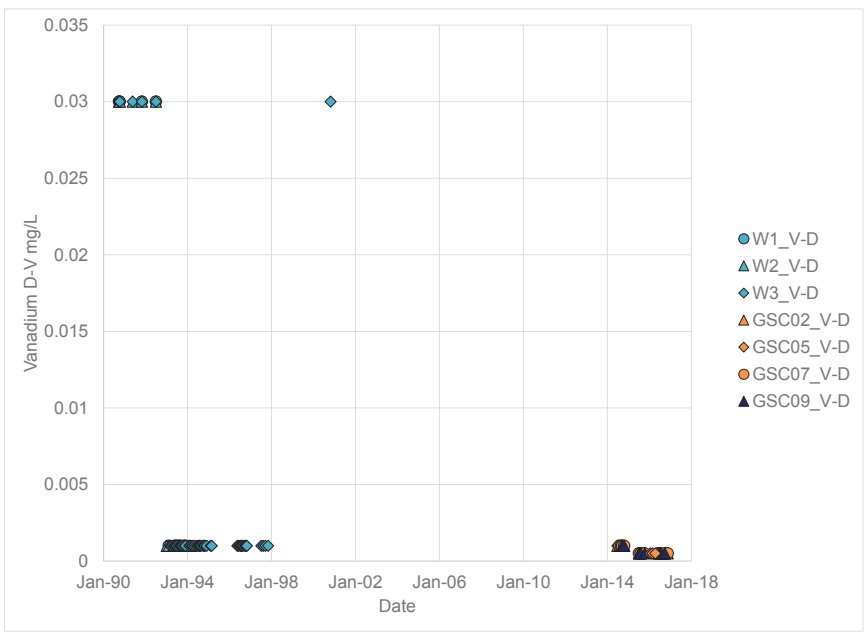


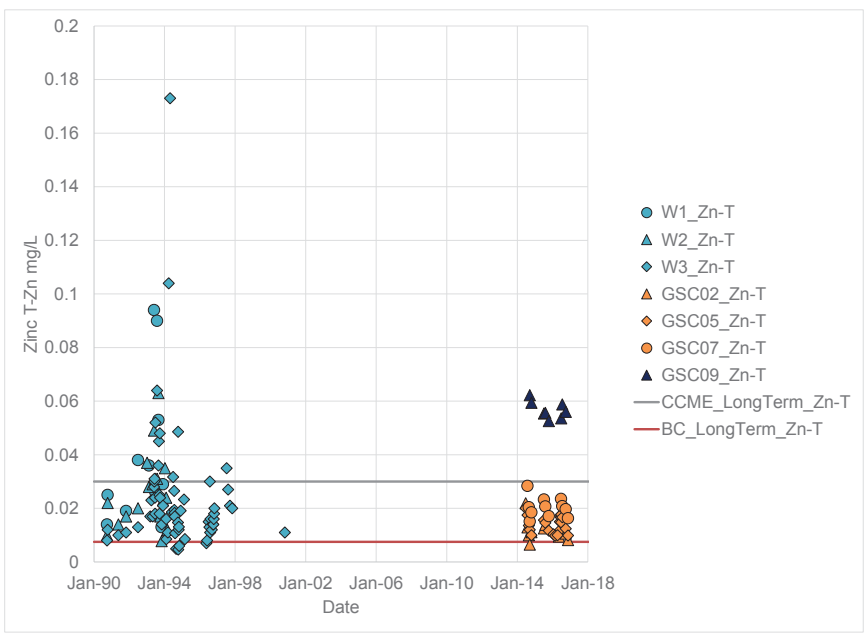


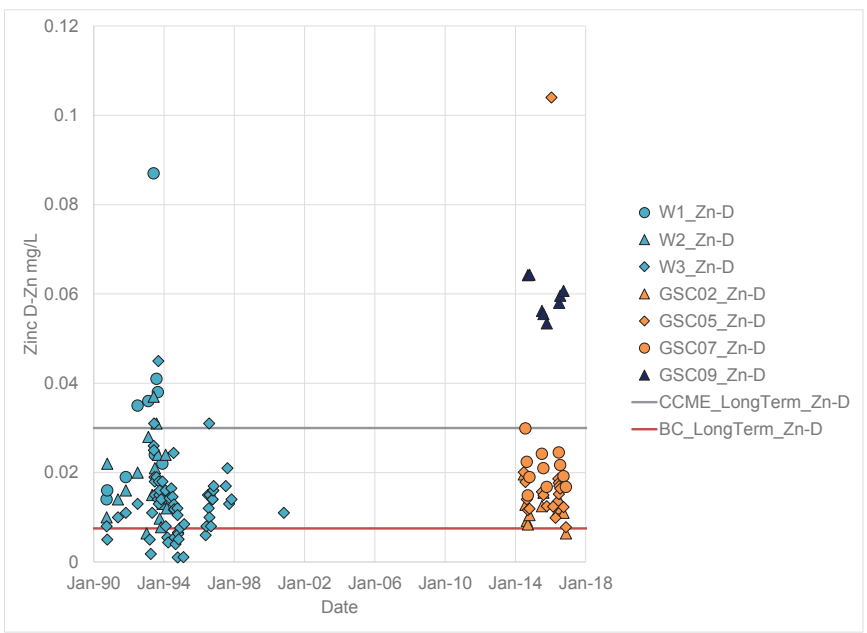








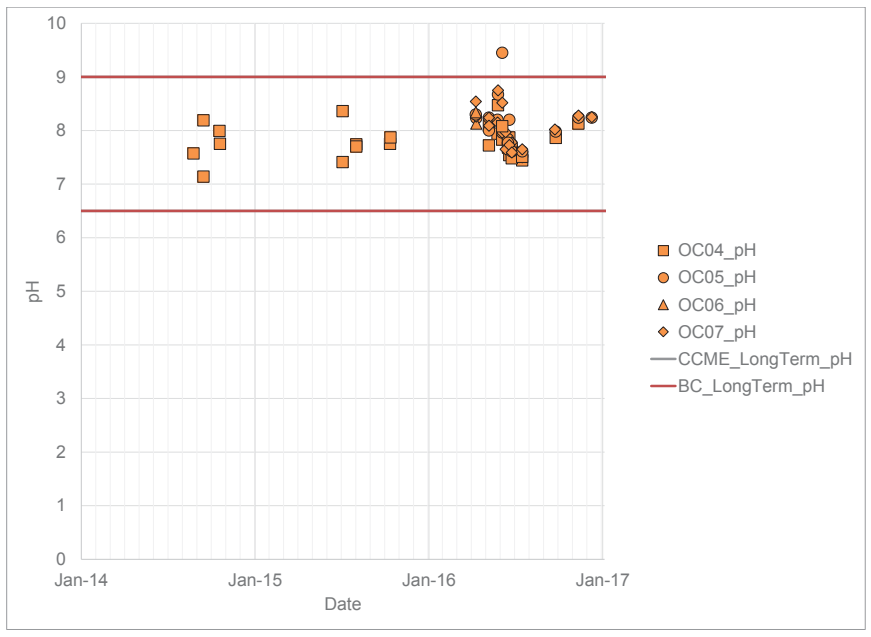


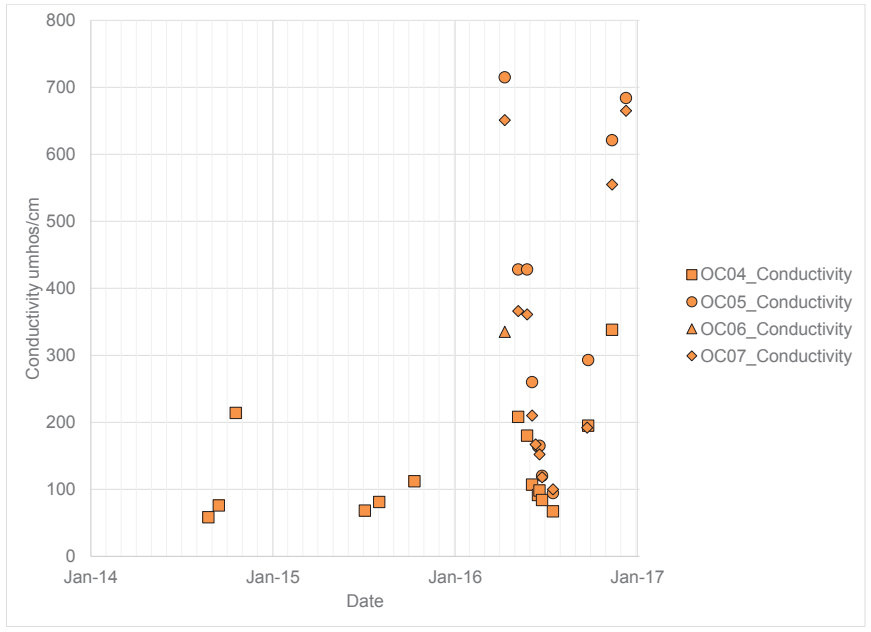


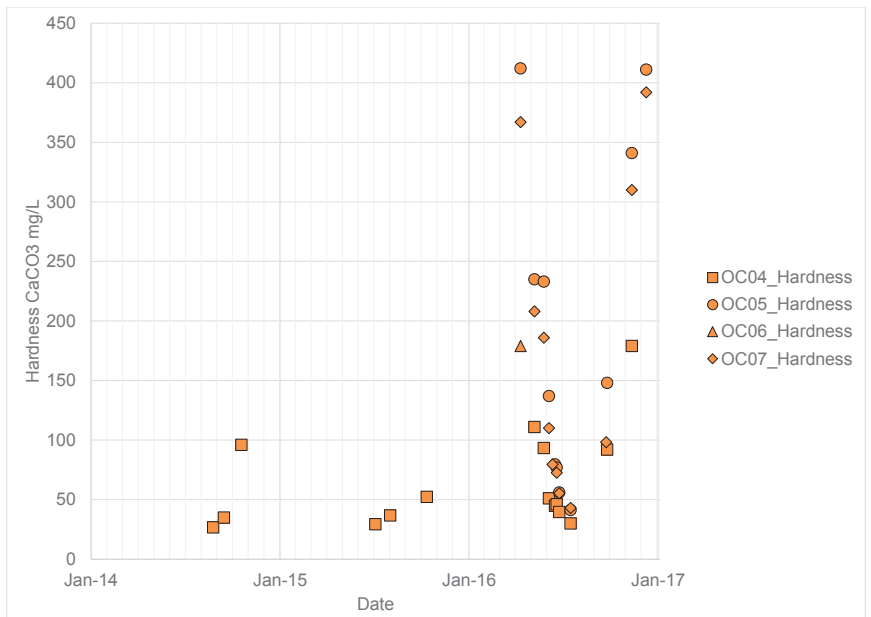
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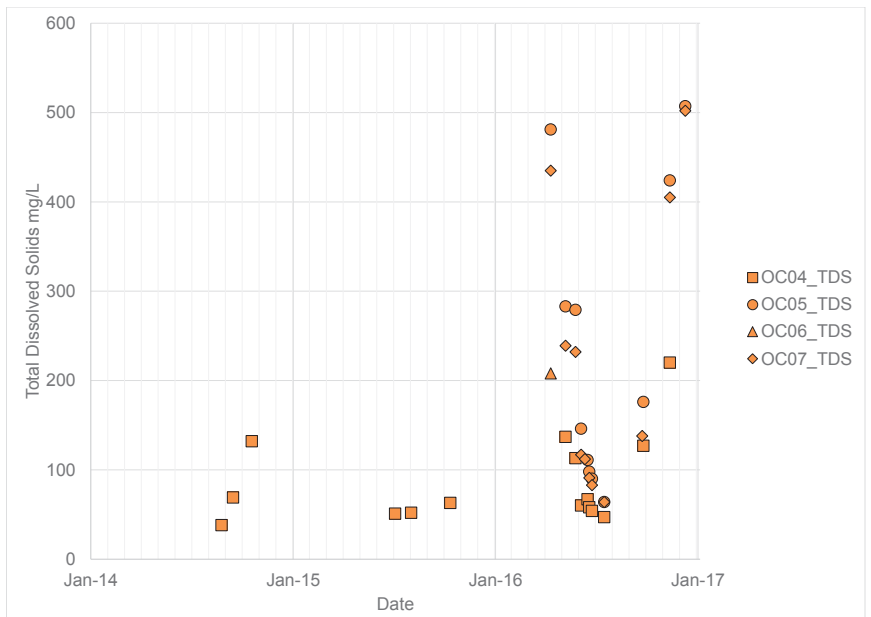
Otter Creek

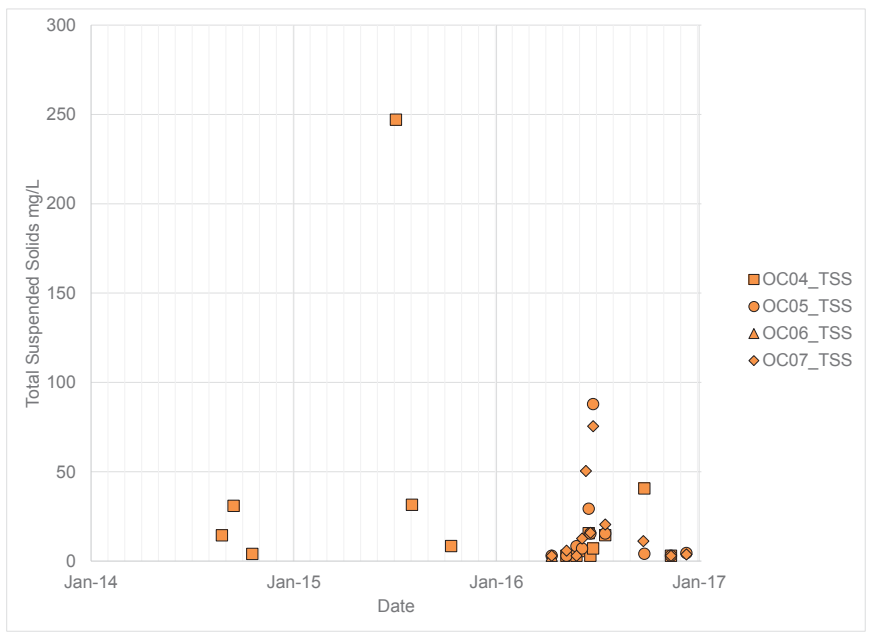
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

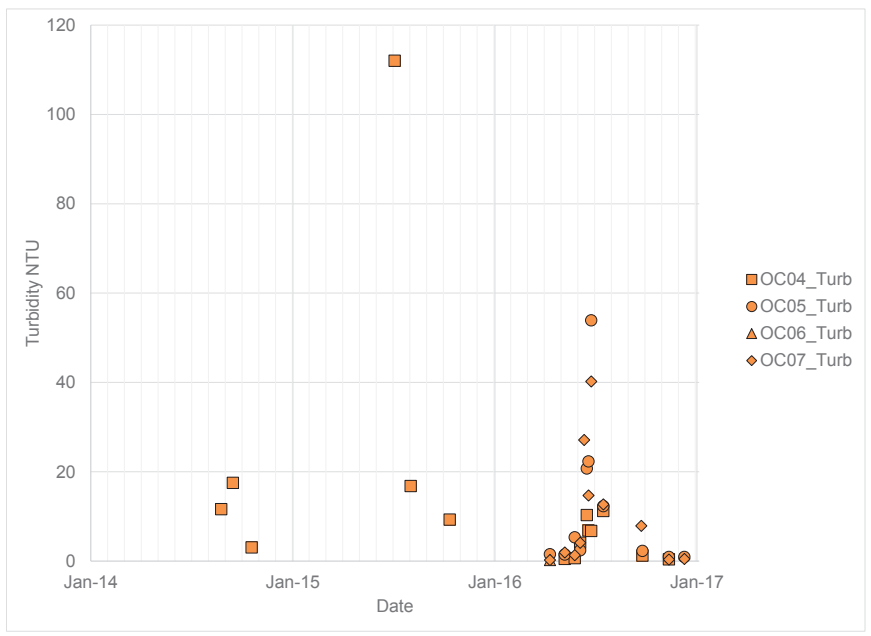


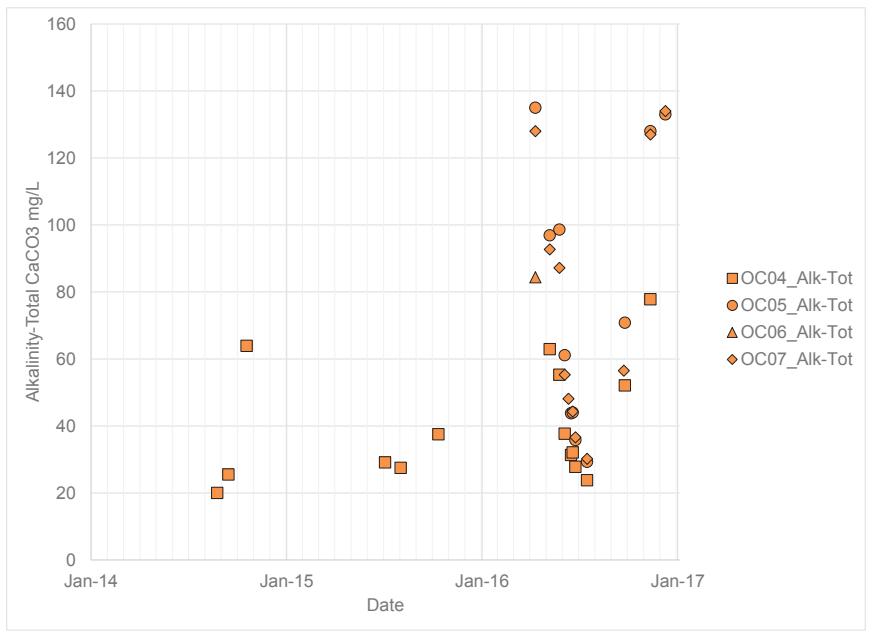


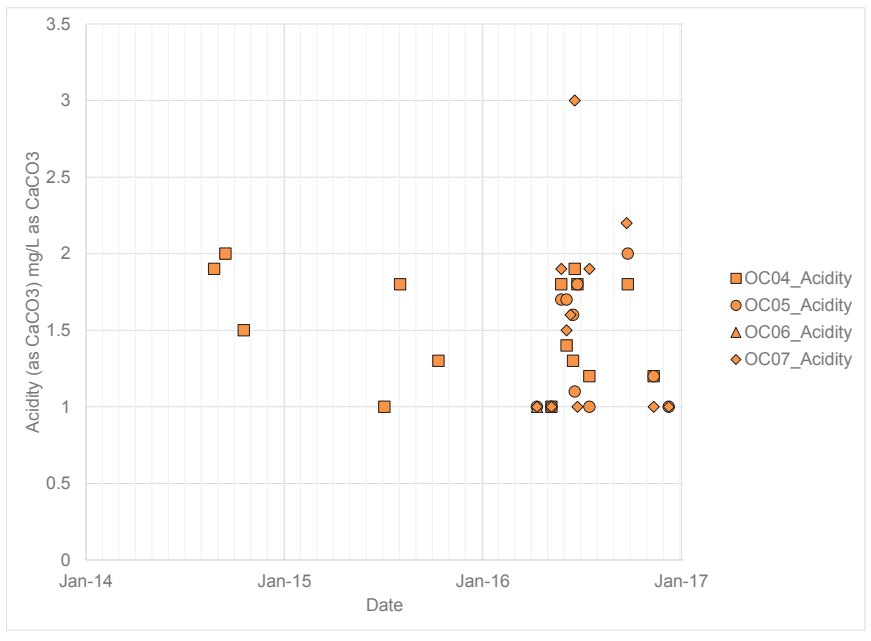




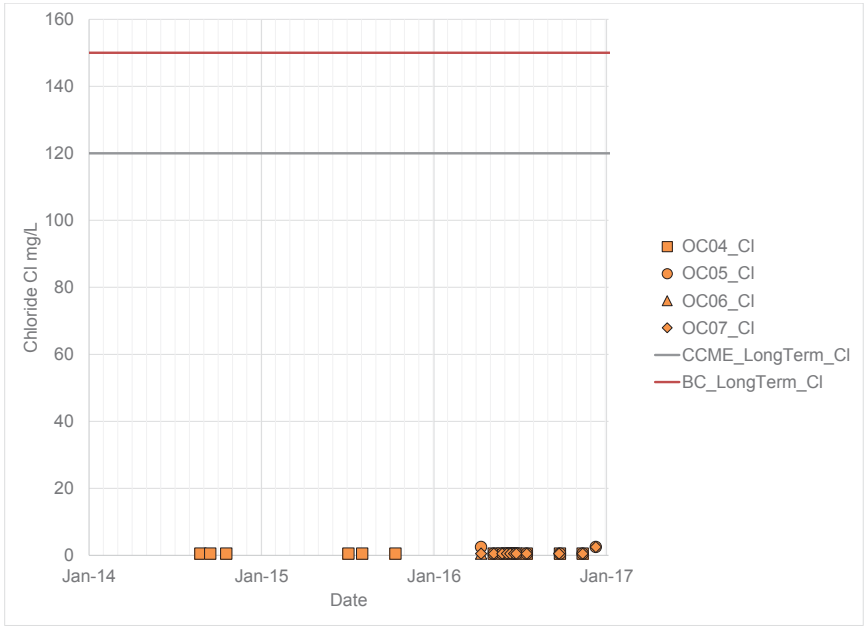


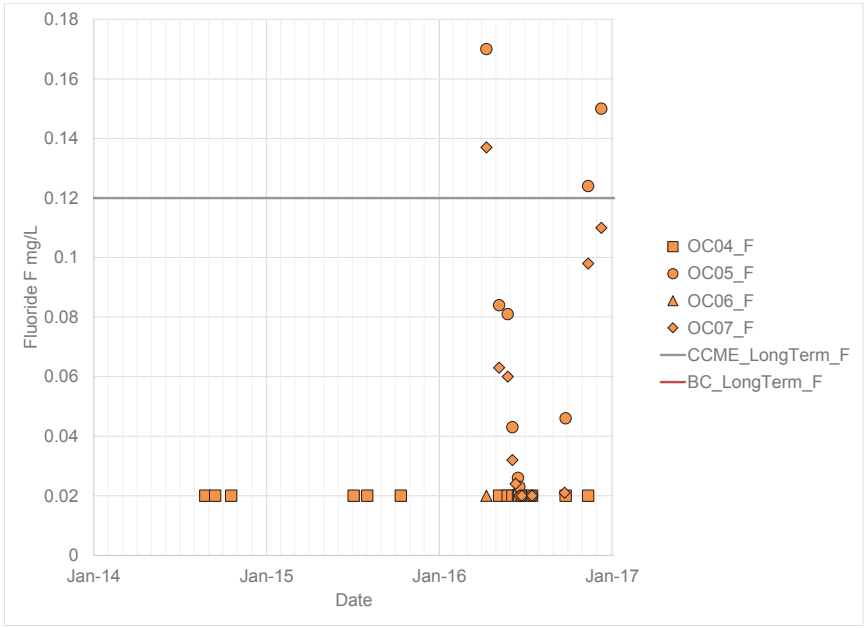


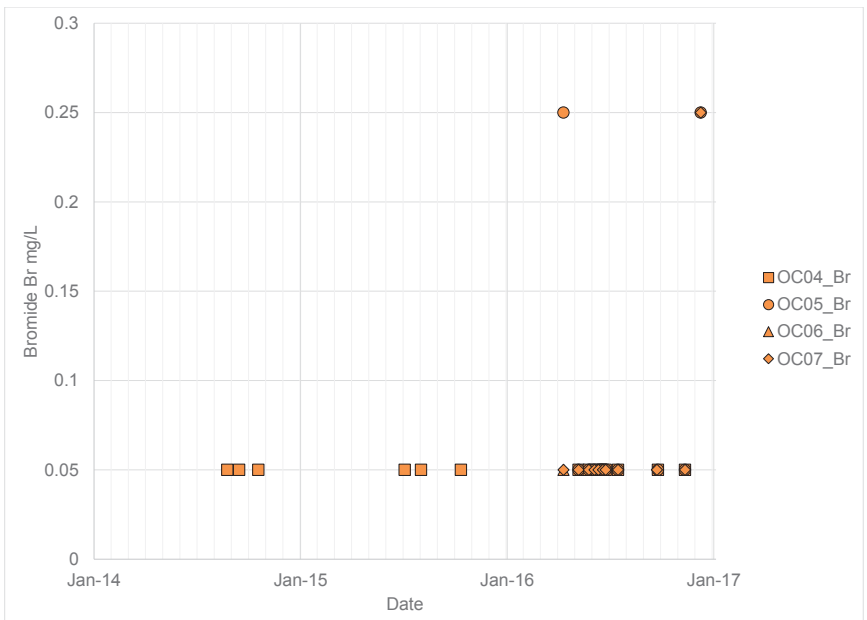


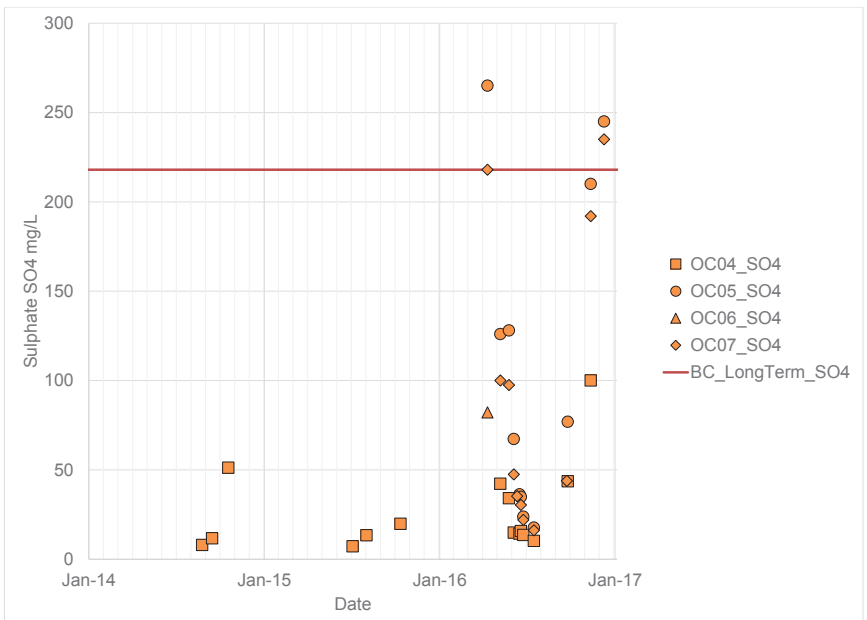


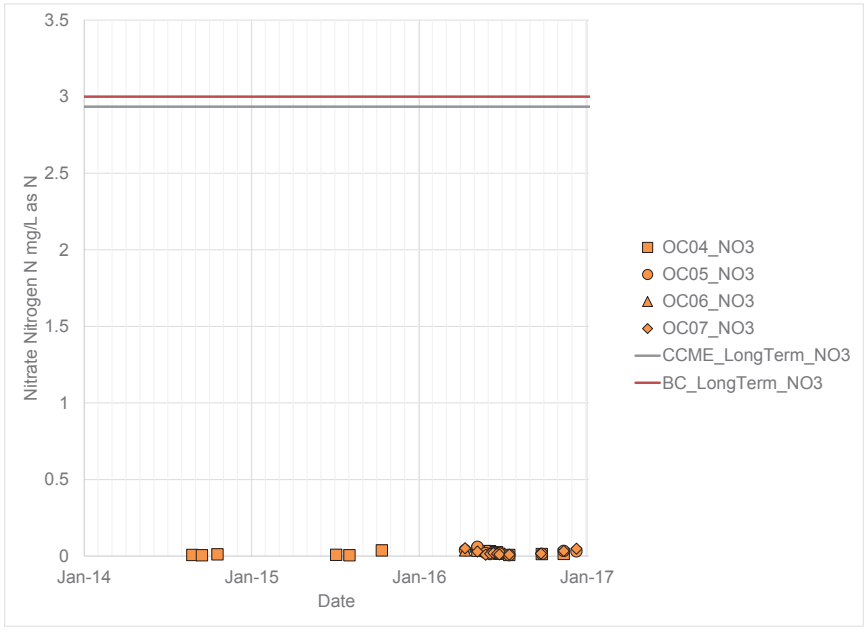
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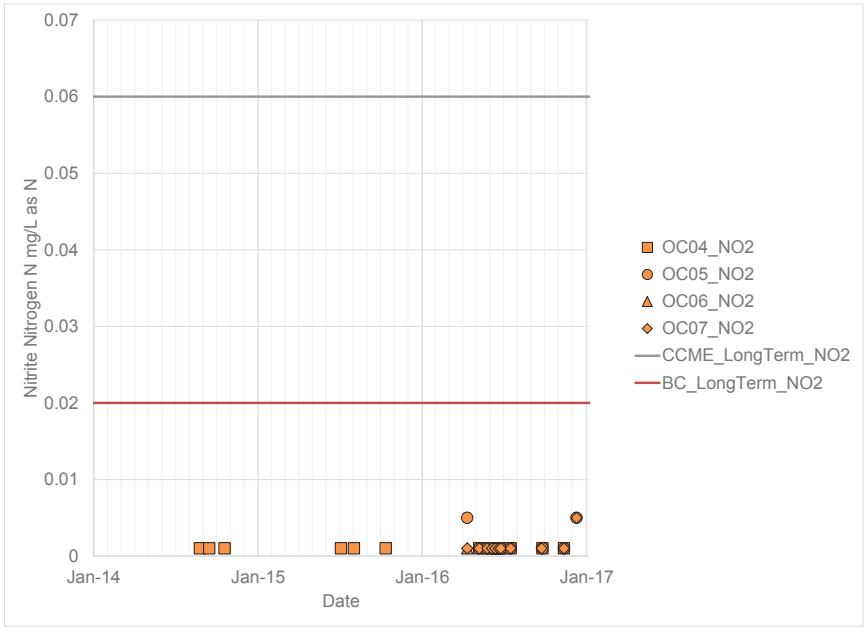


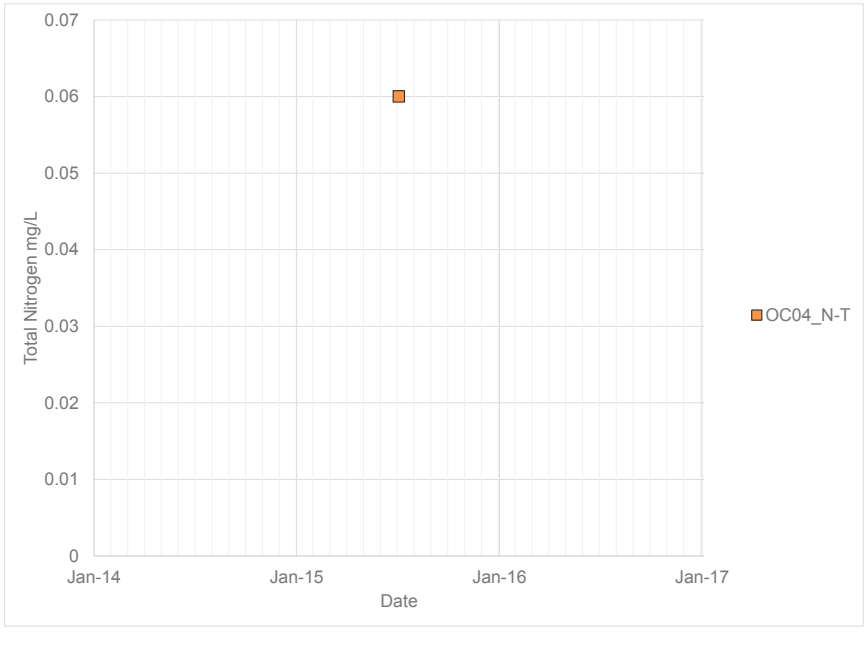


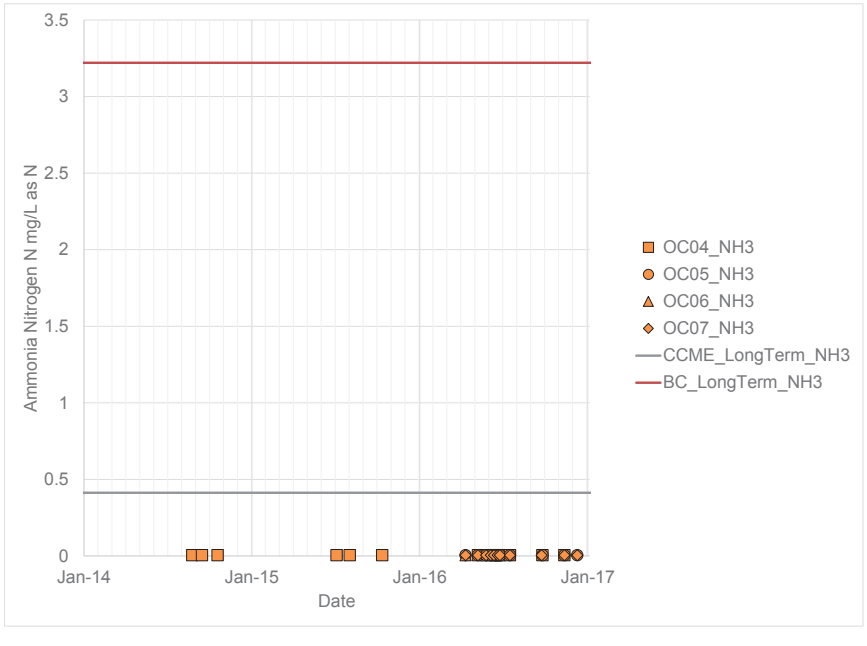




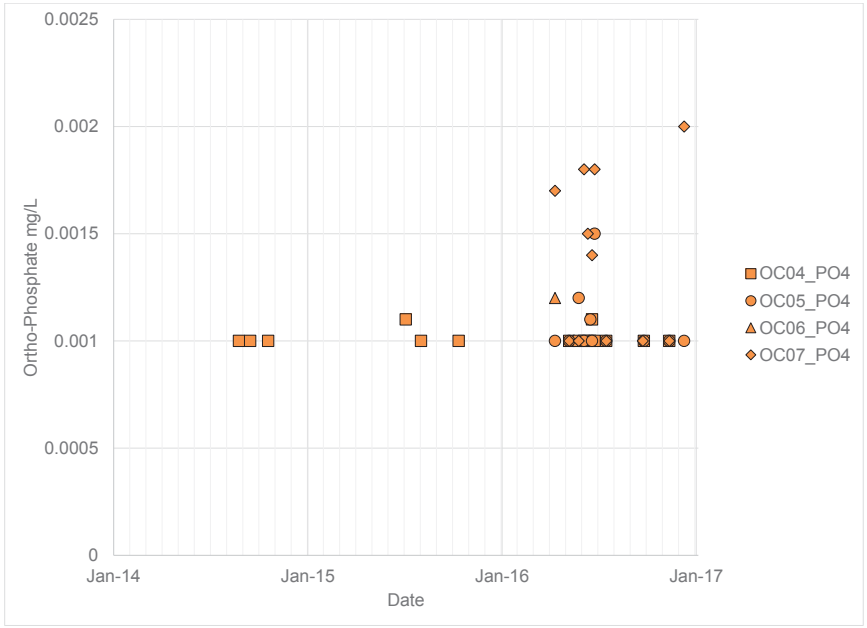


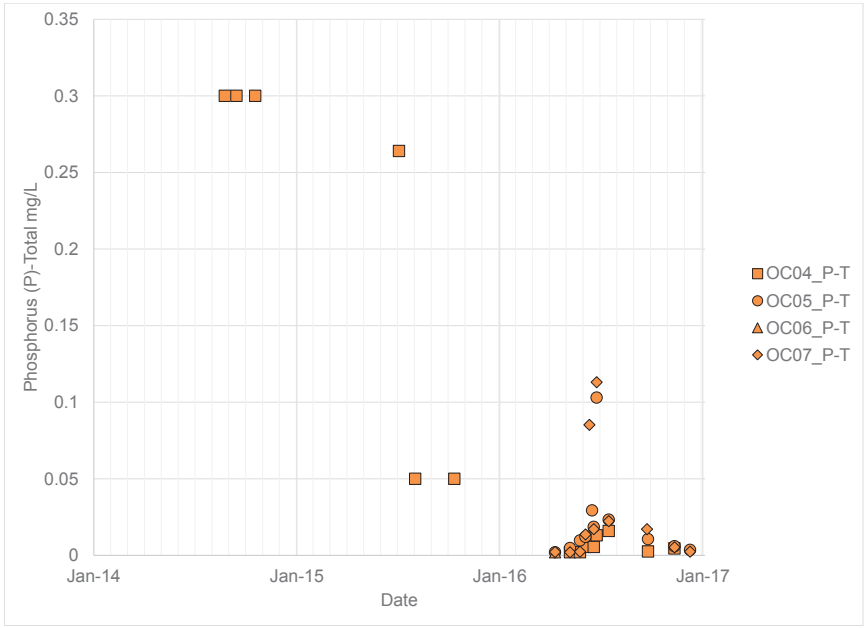


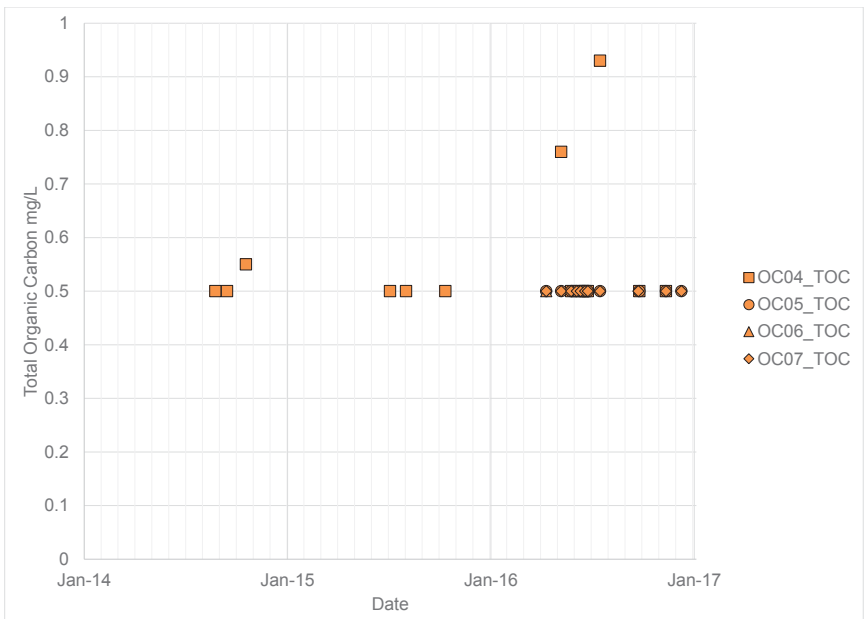


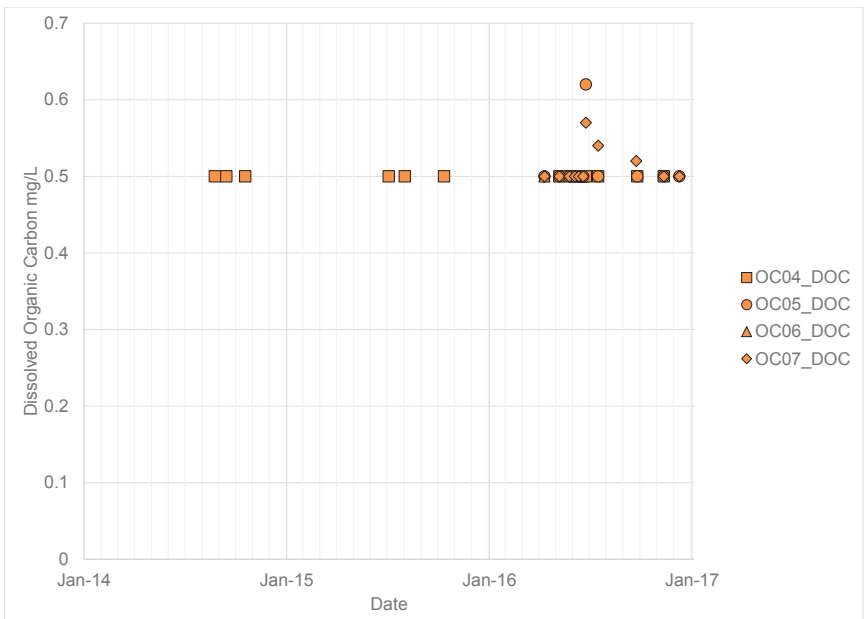


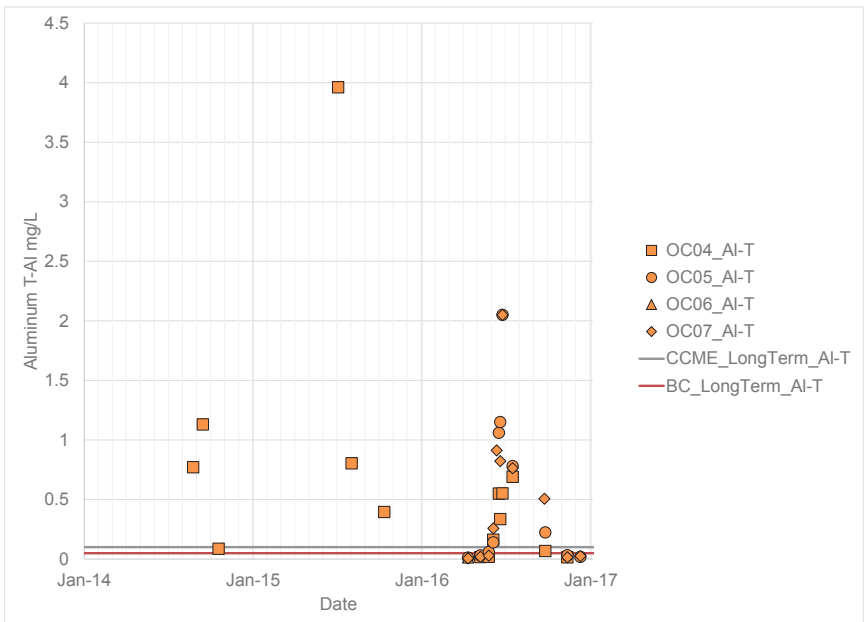
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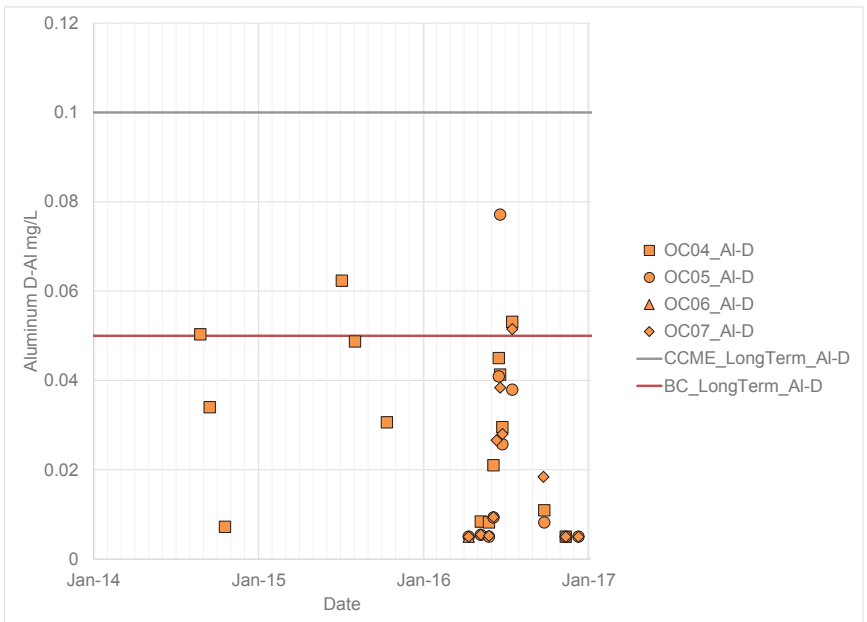


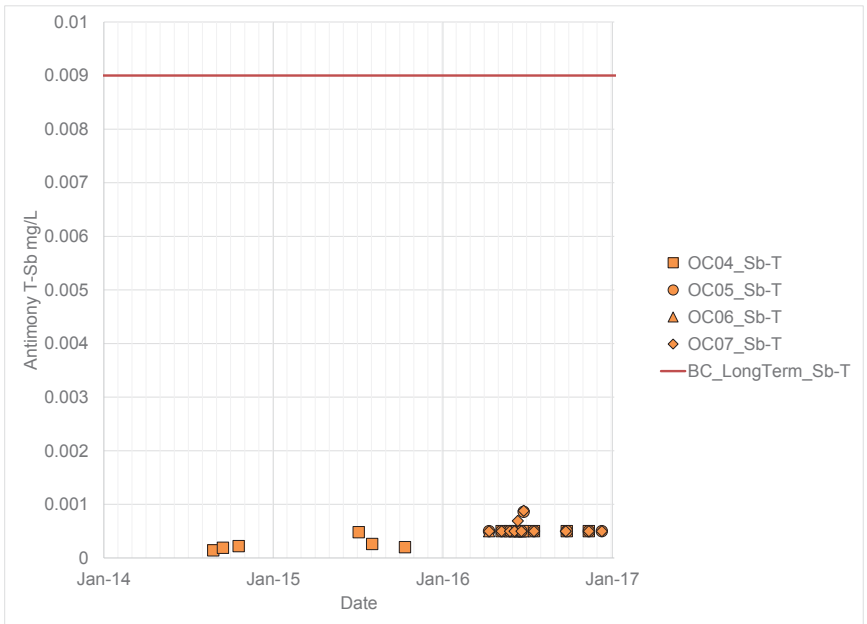


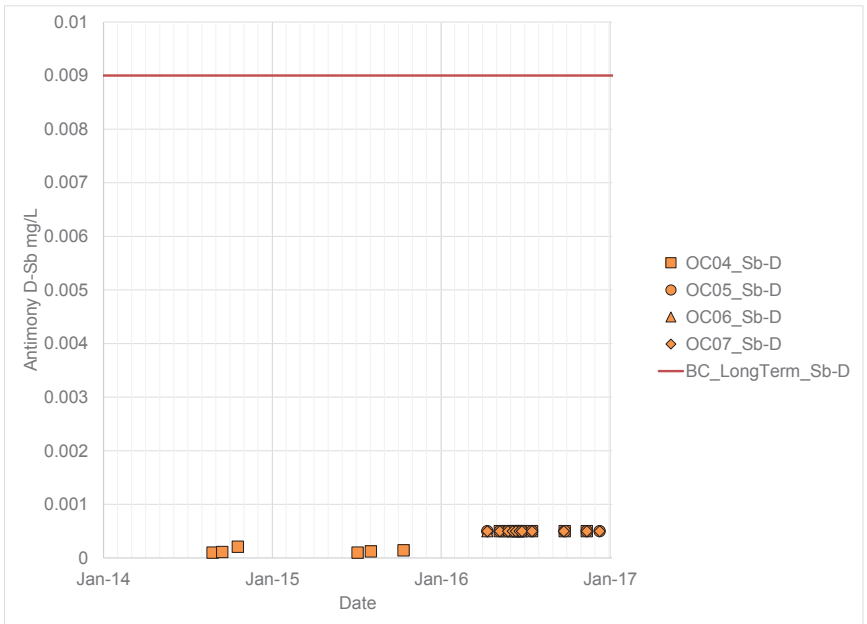




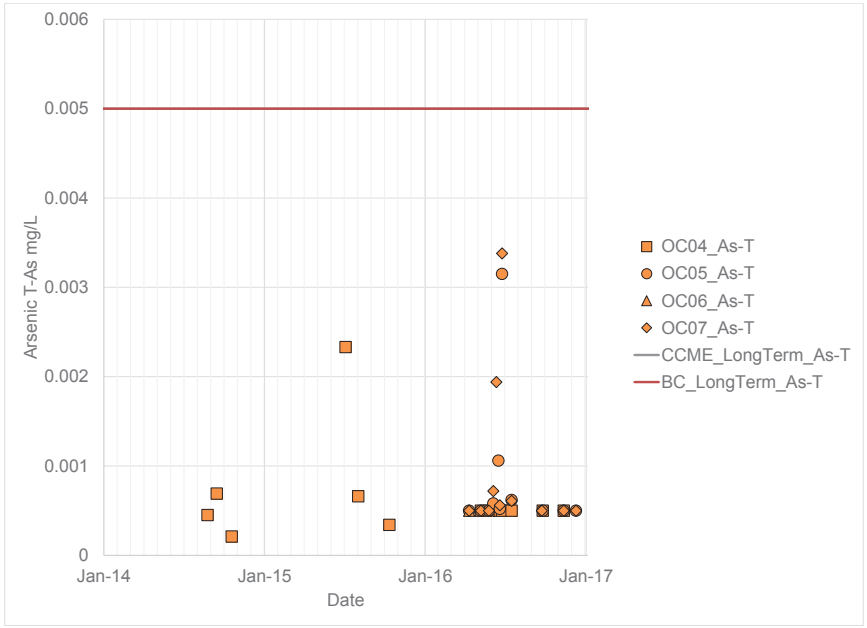


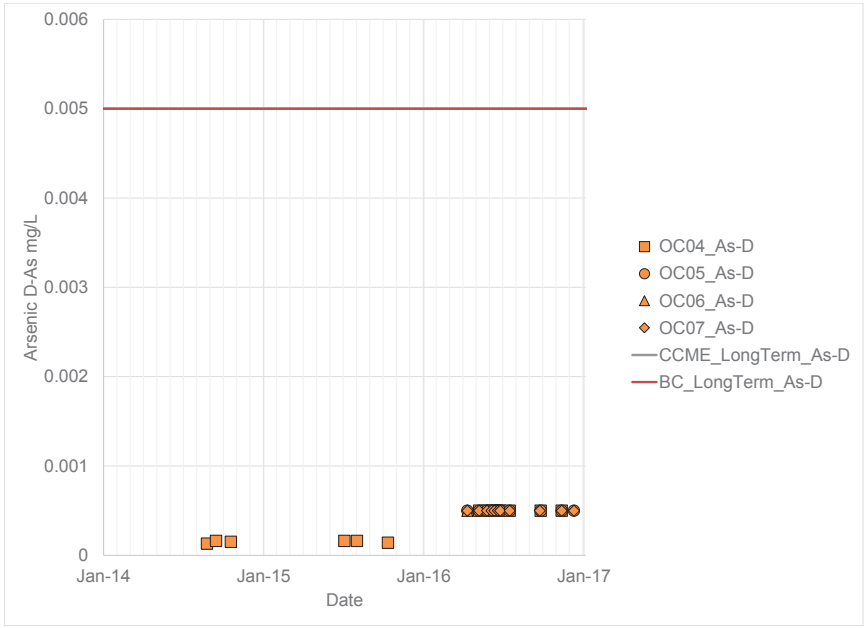


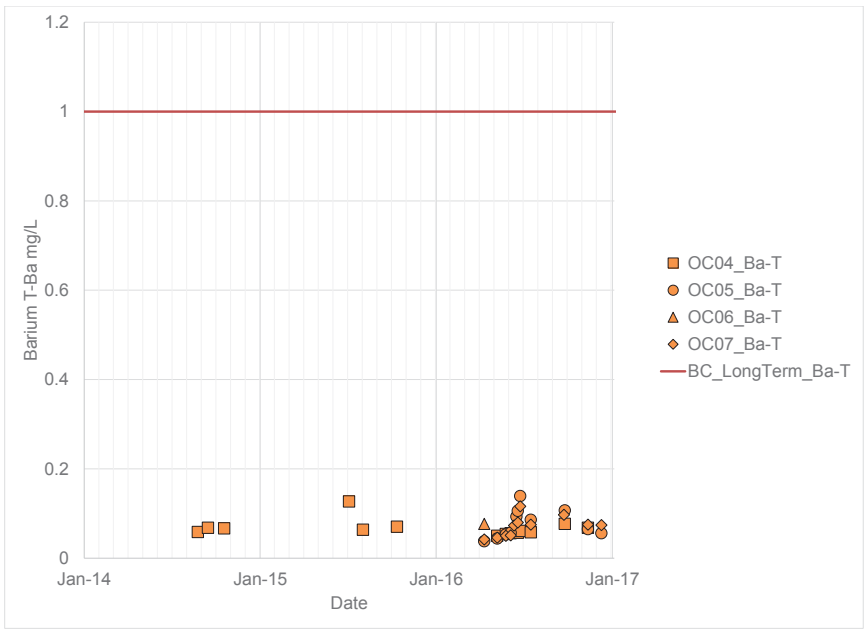


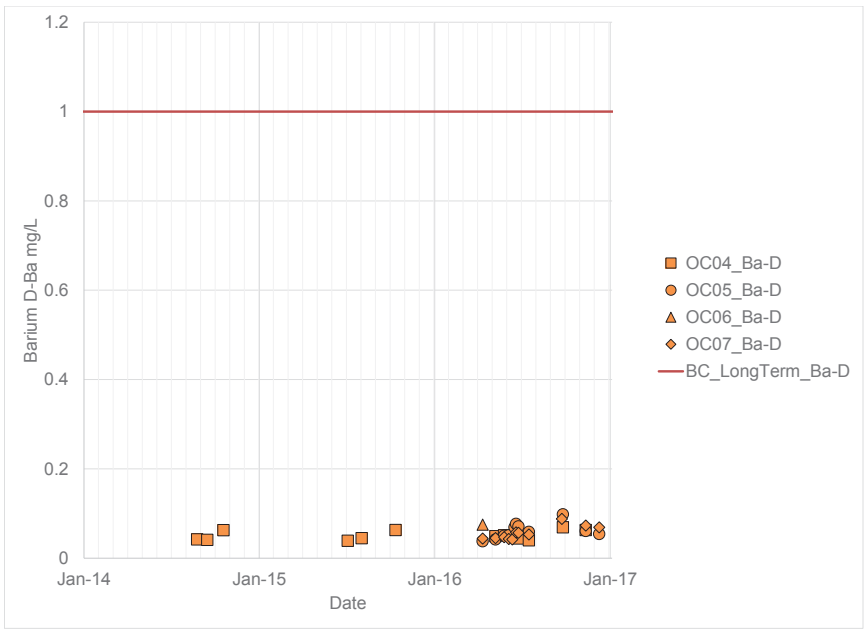


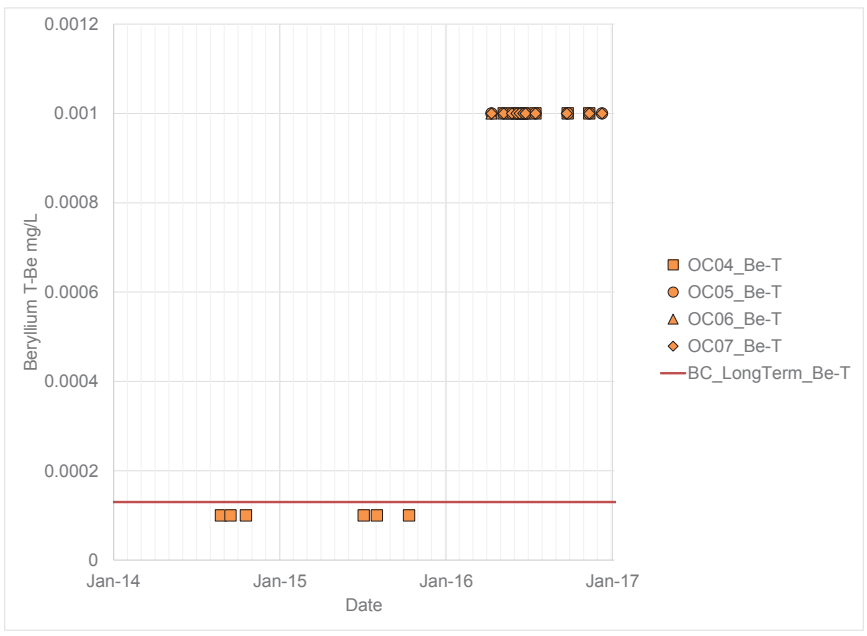
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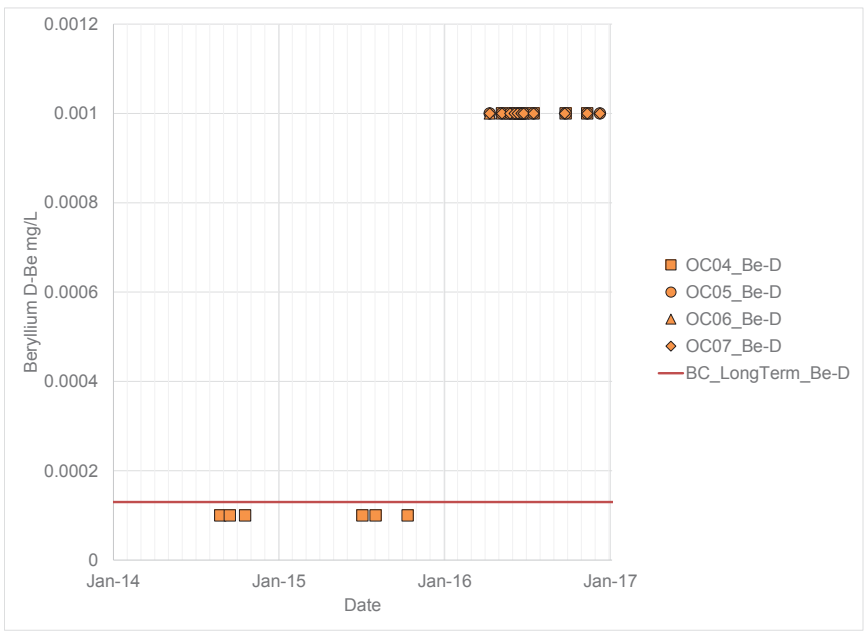


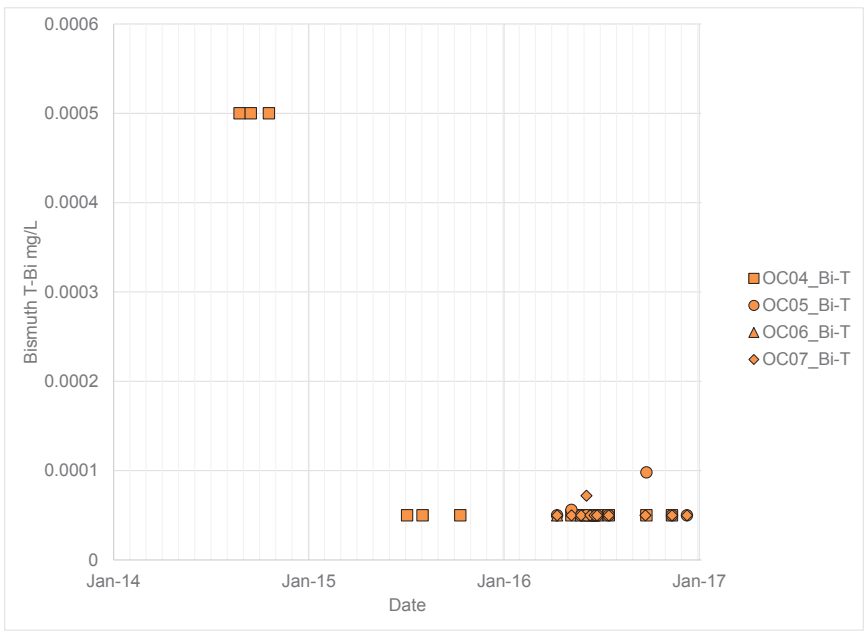


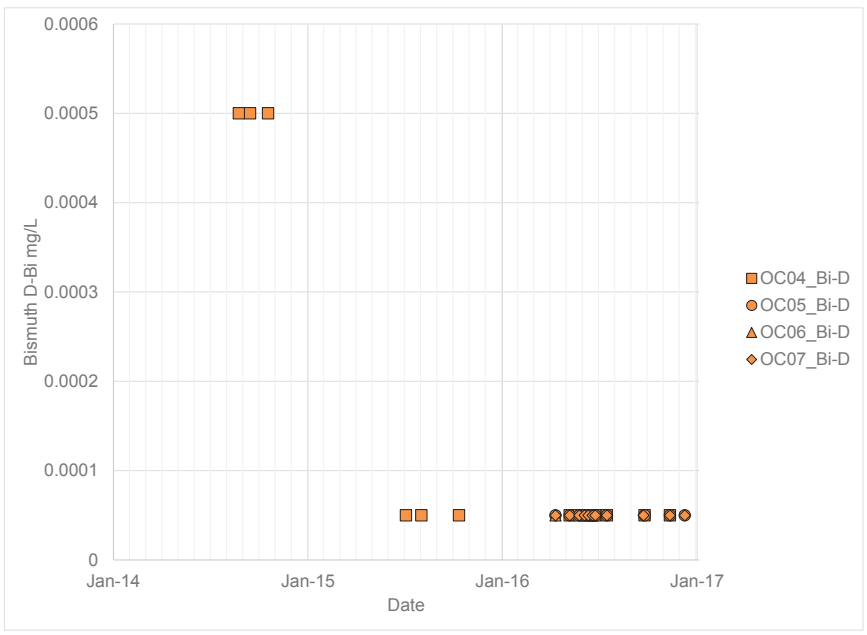




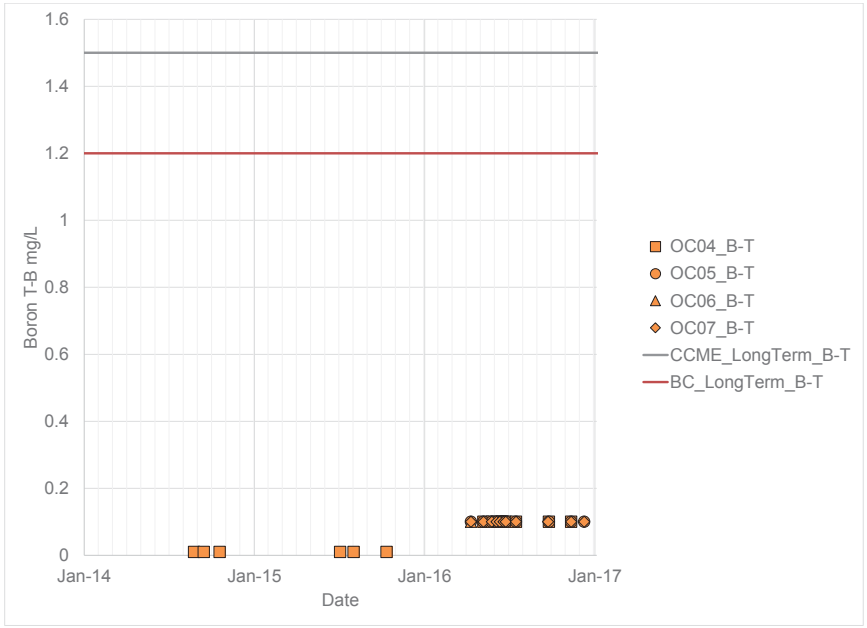


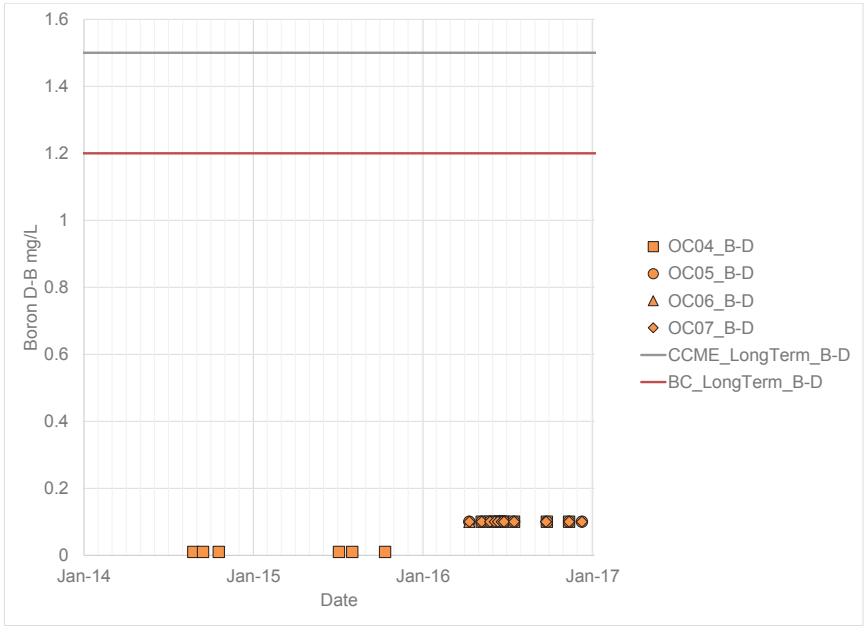


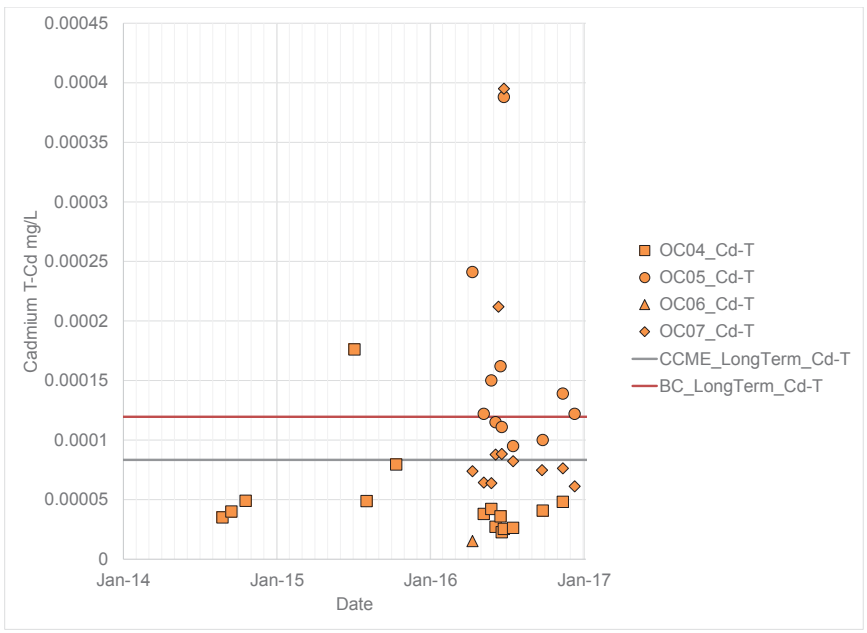


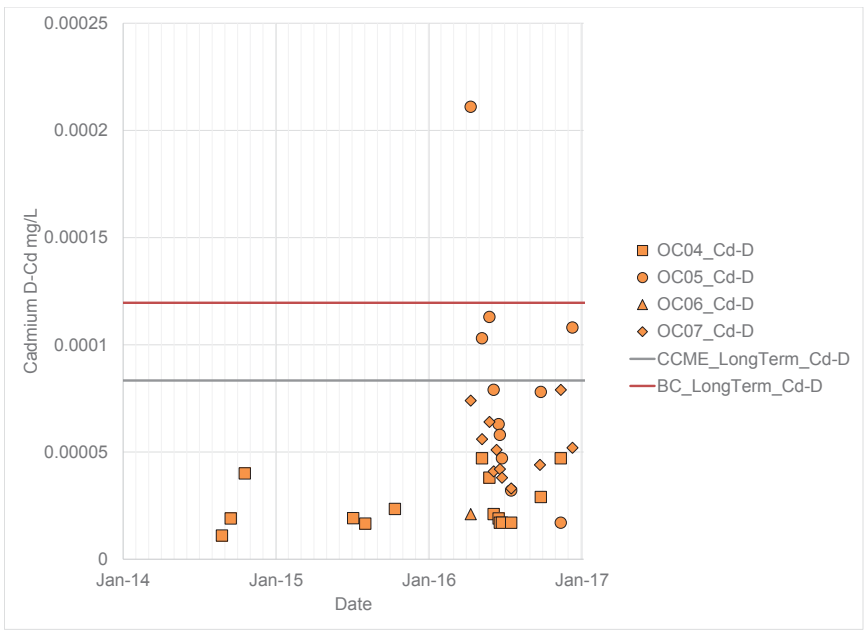


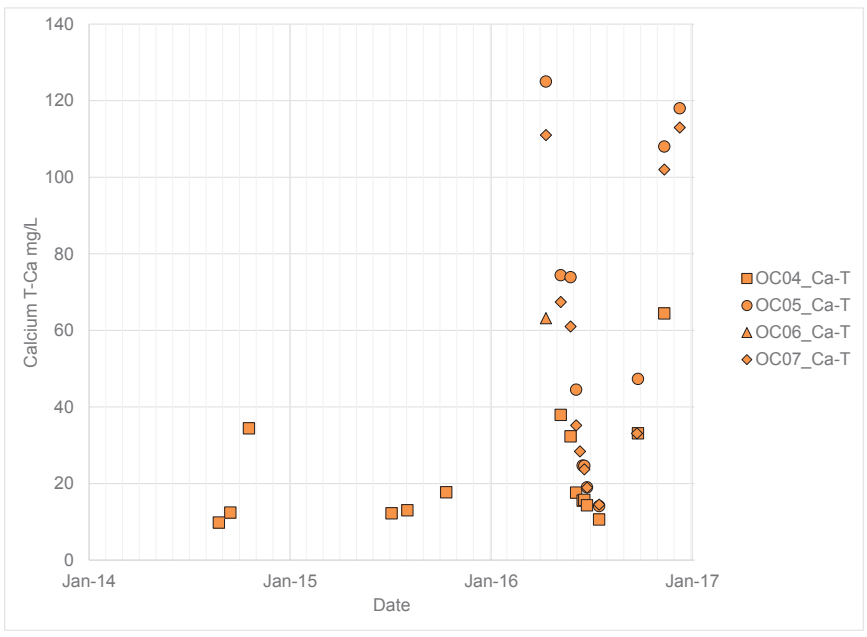
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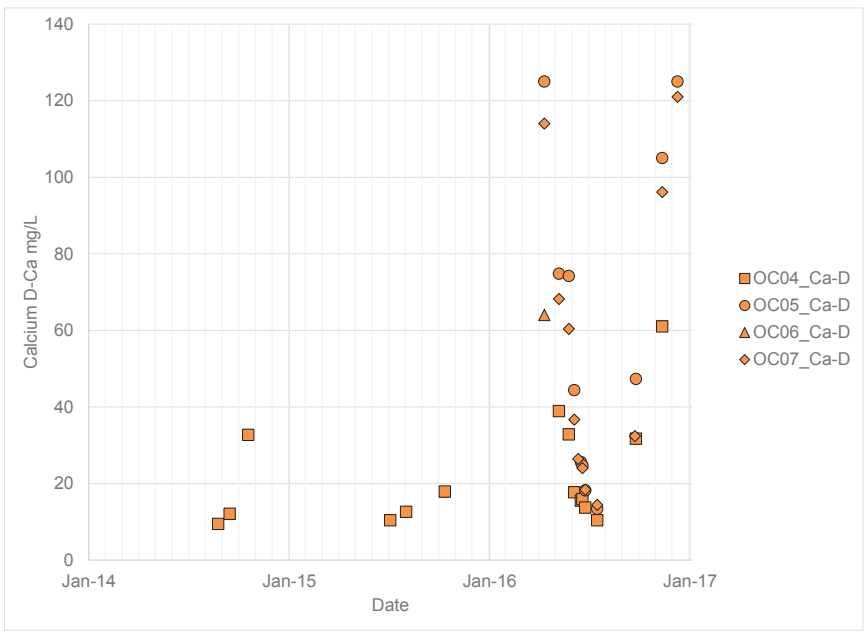


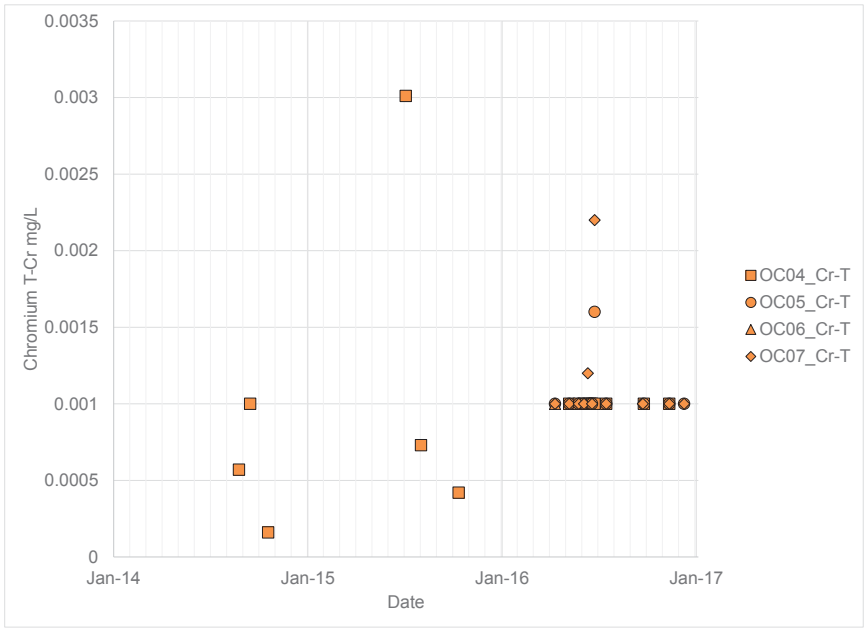


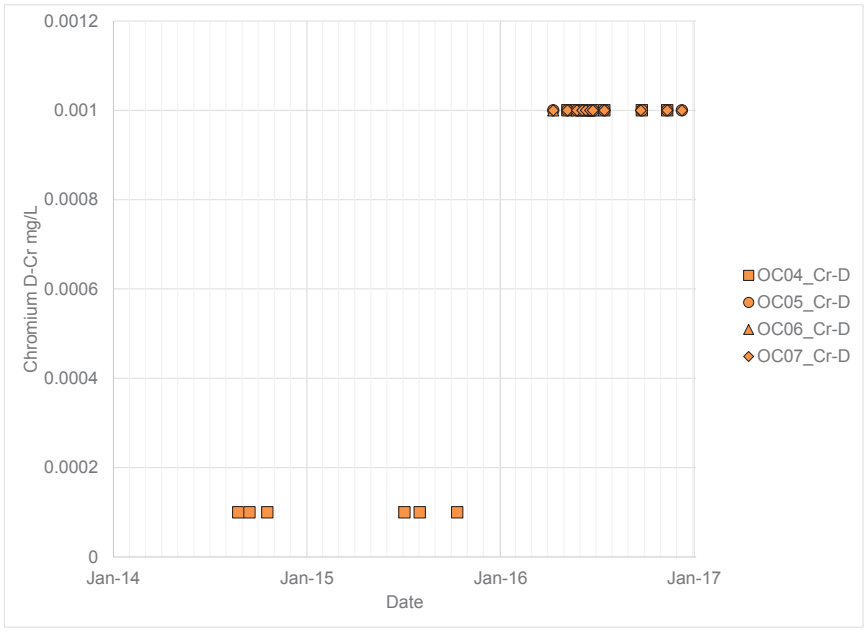




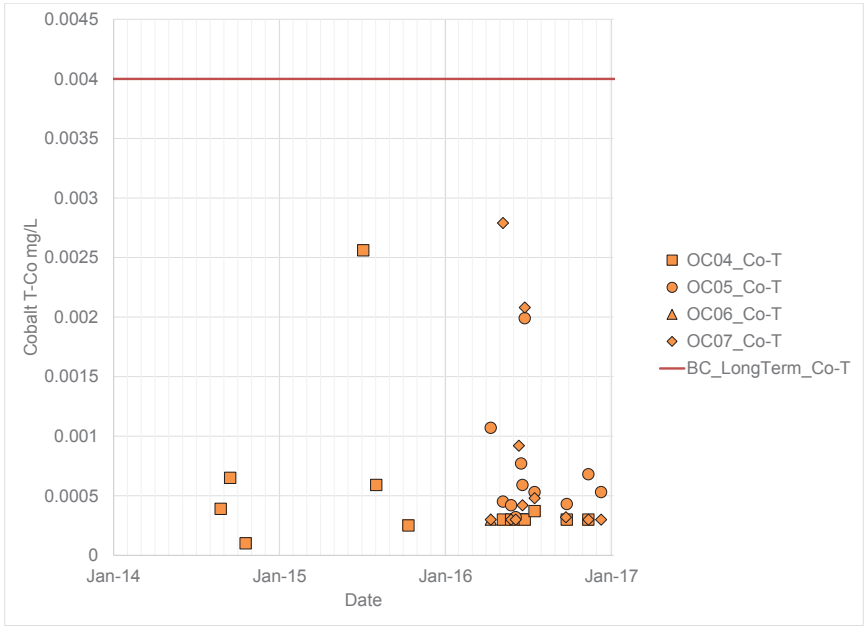


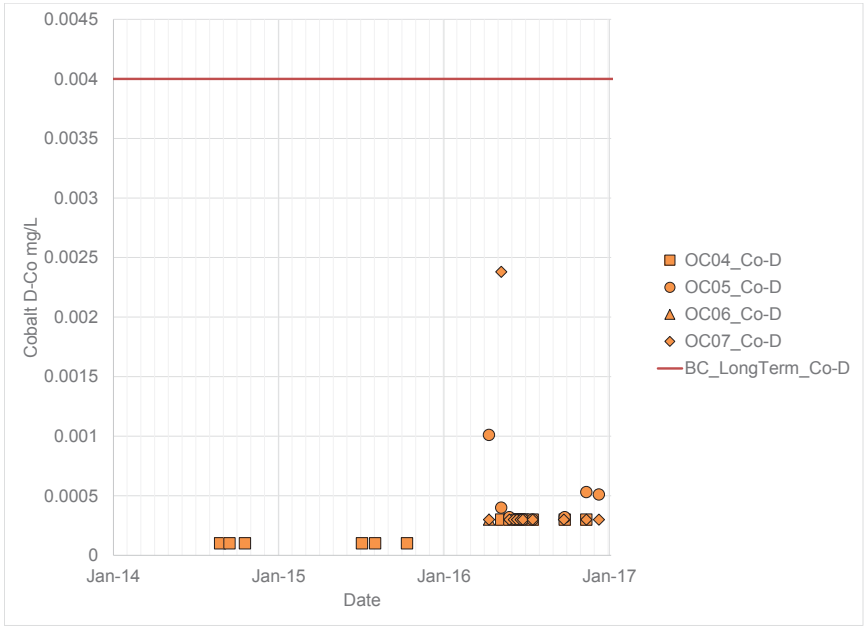


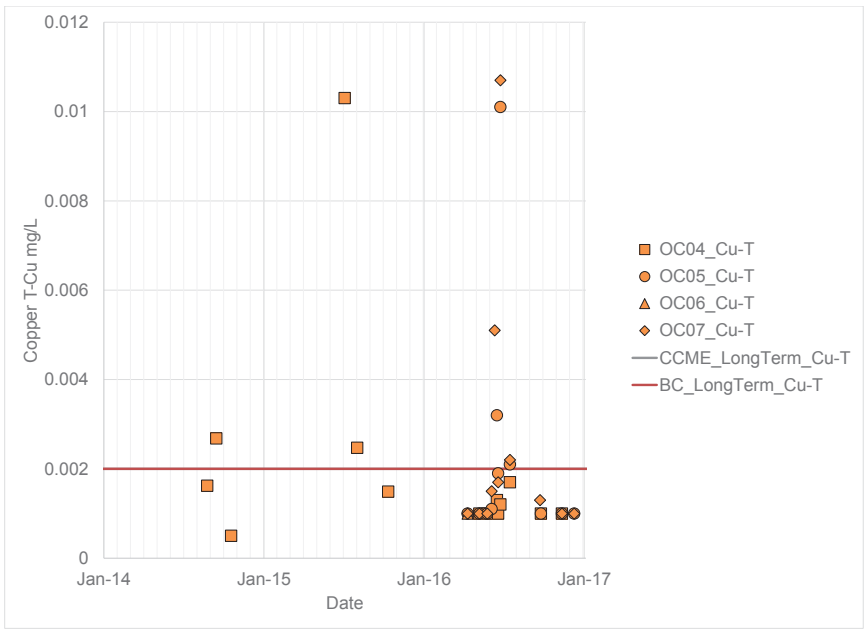


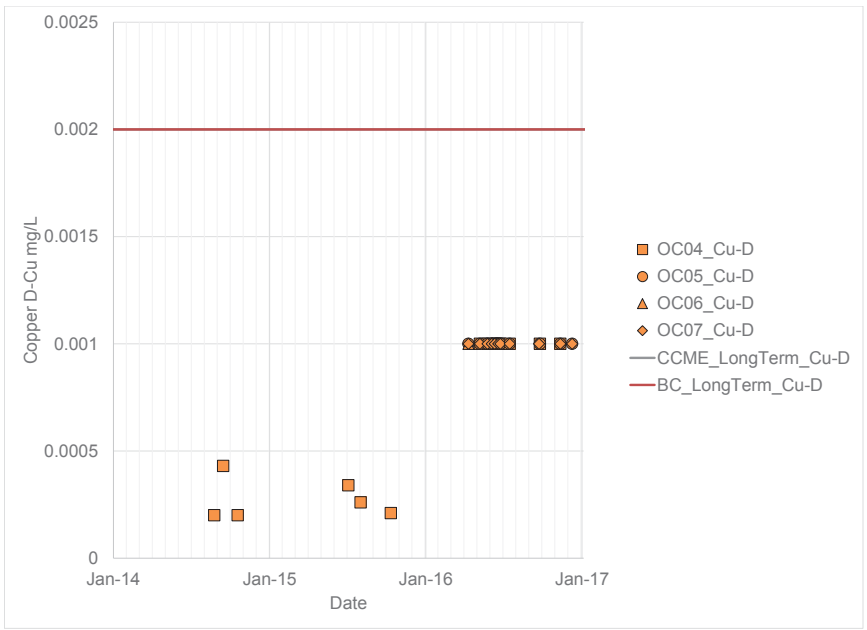


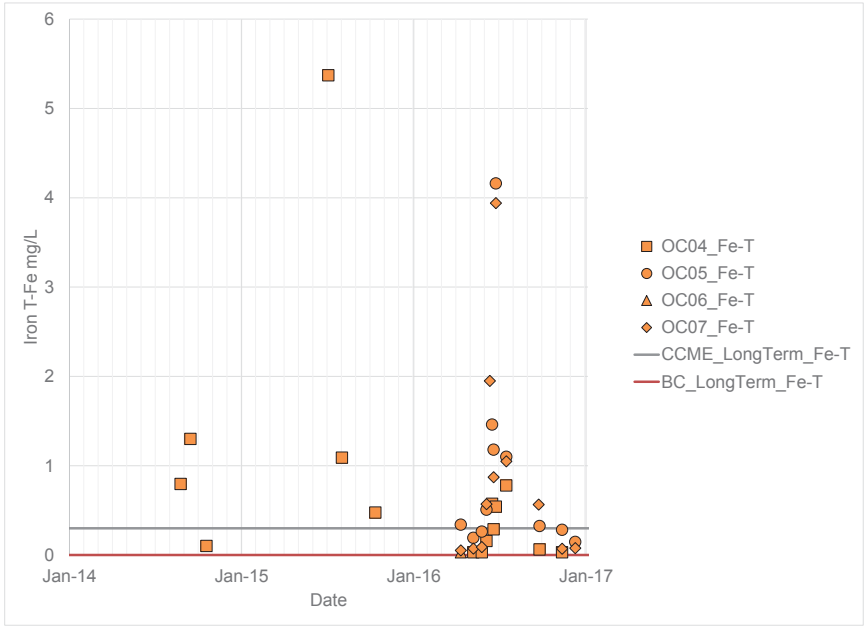
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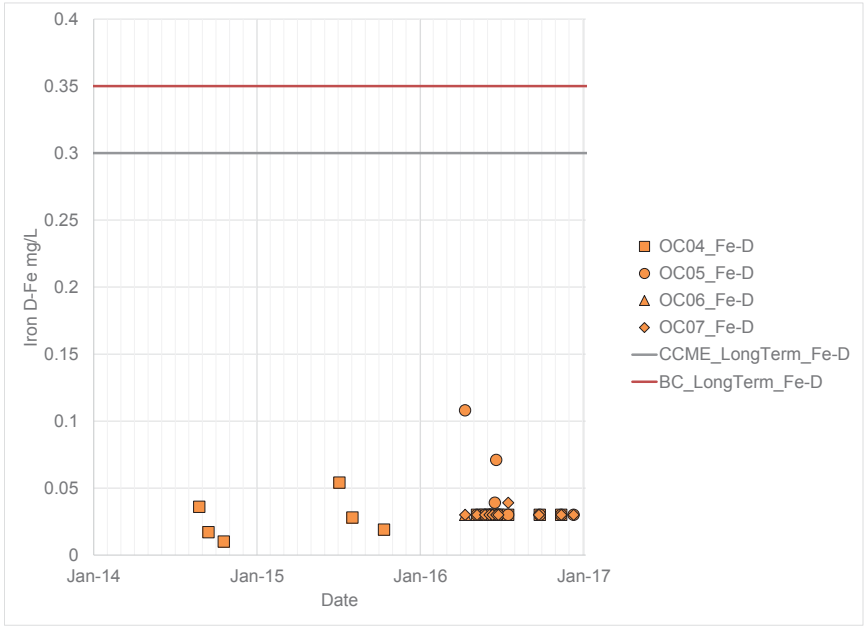


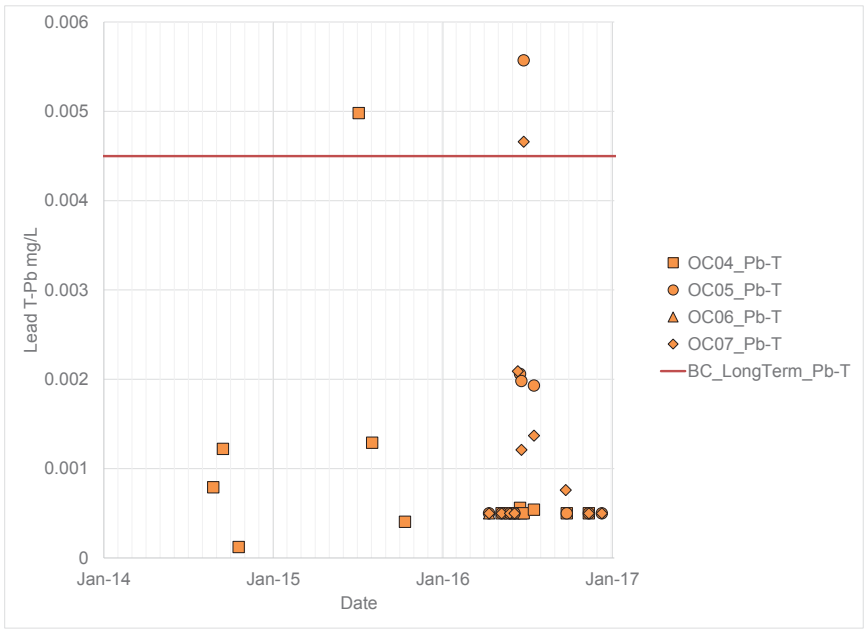


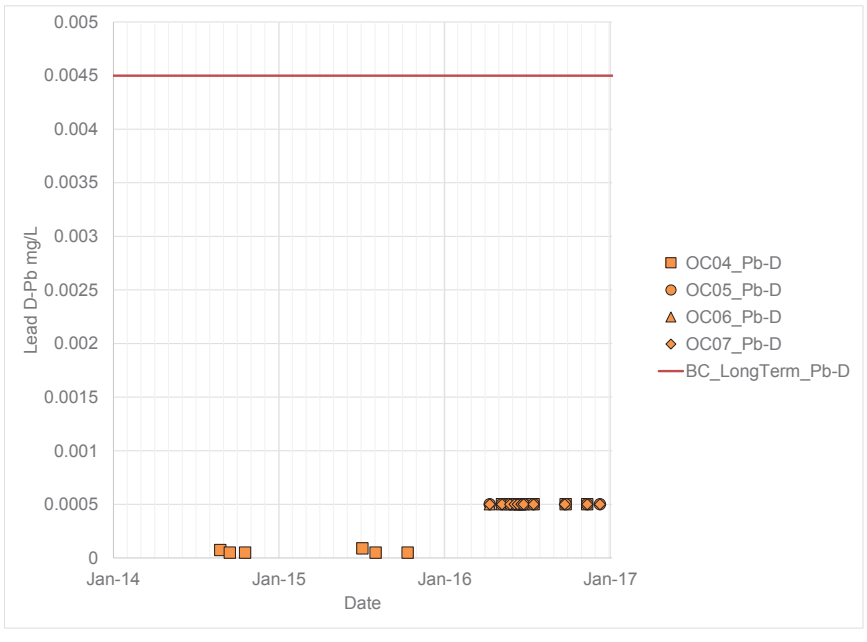




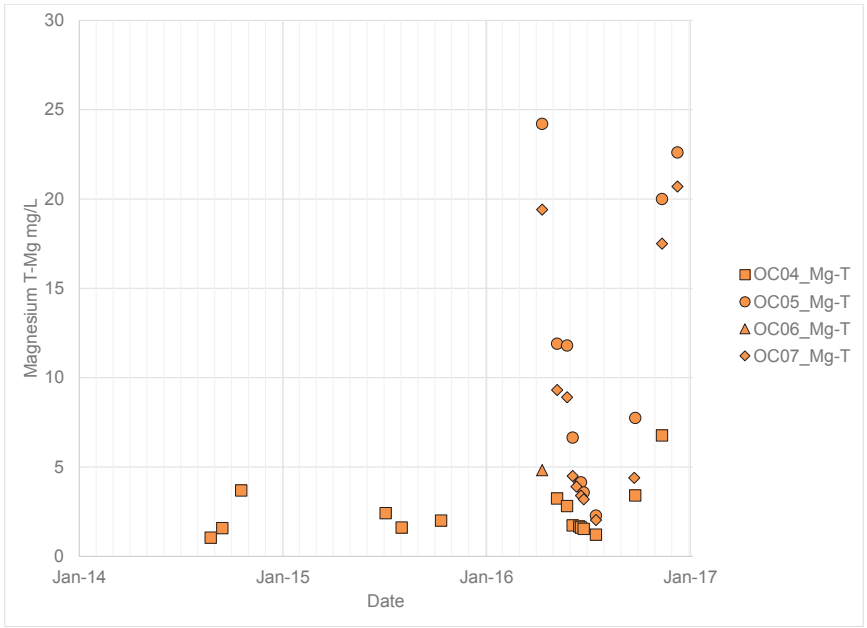


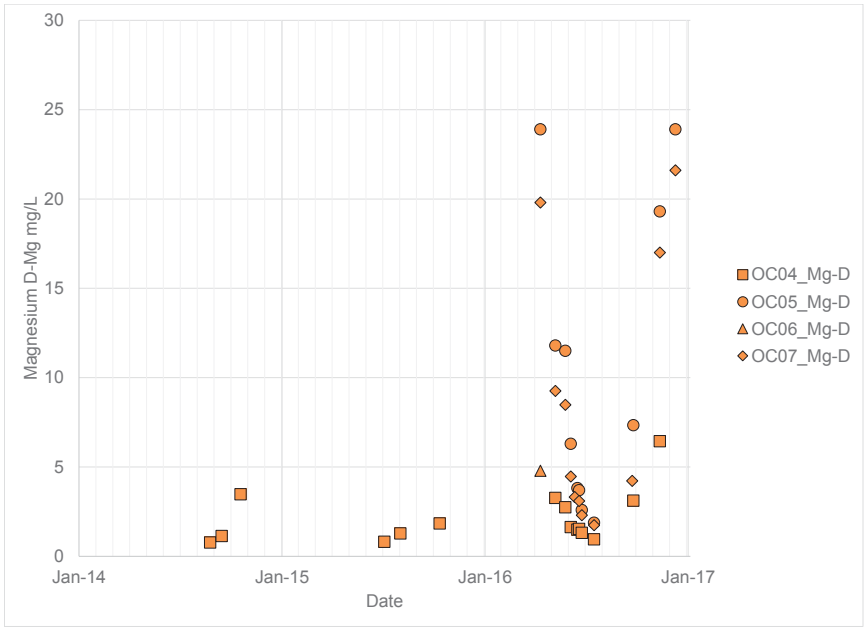


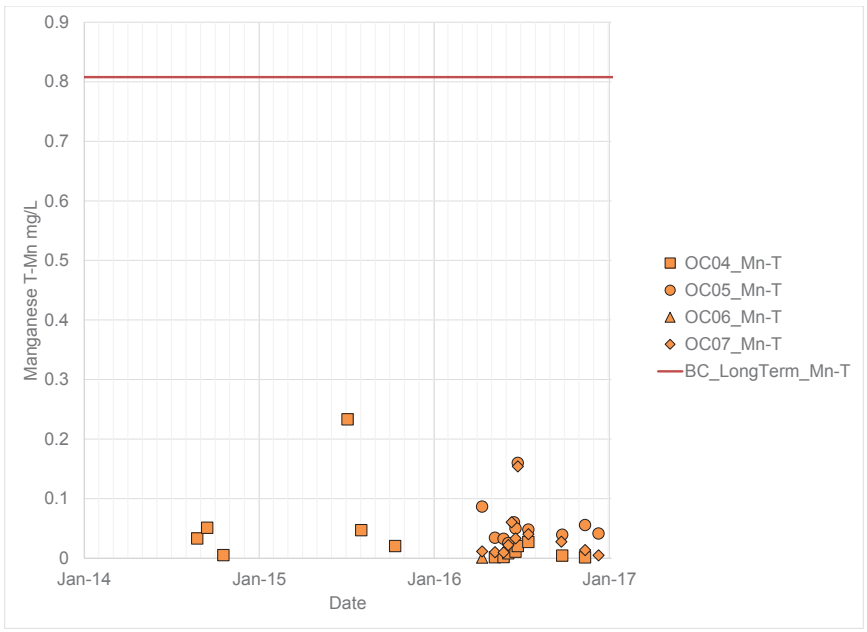


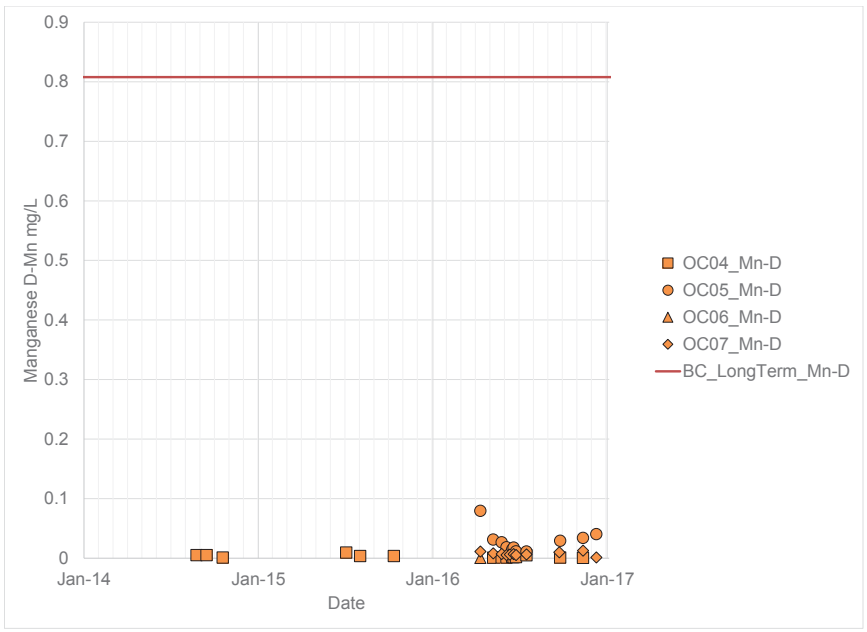


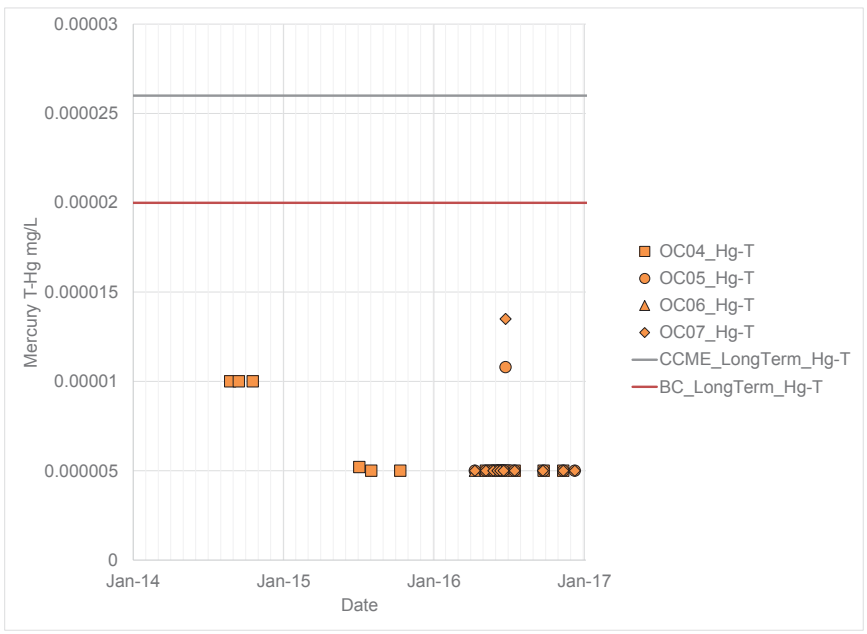
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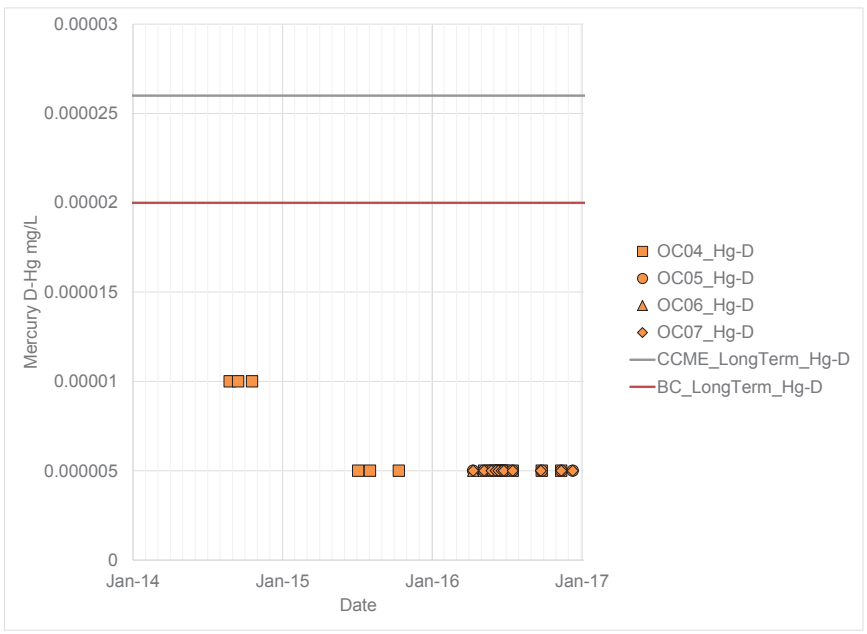


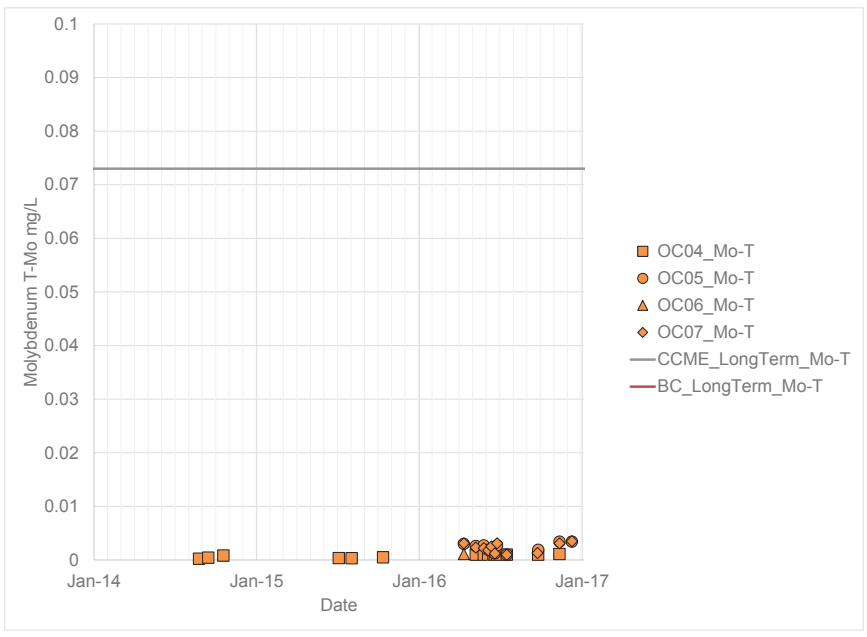


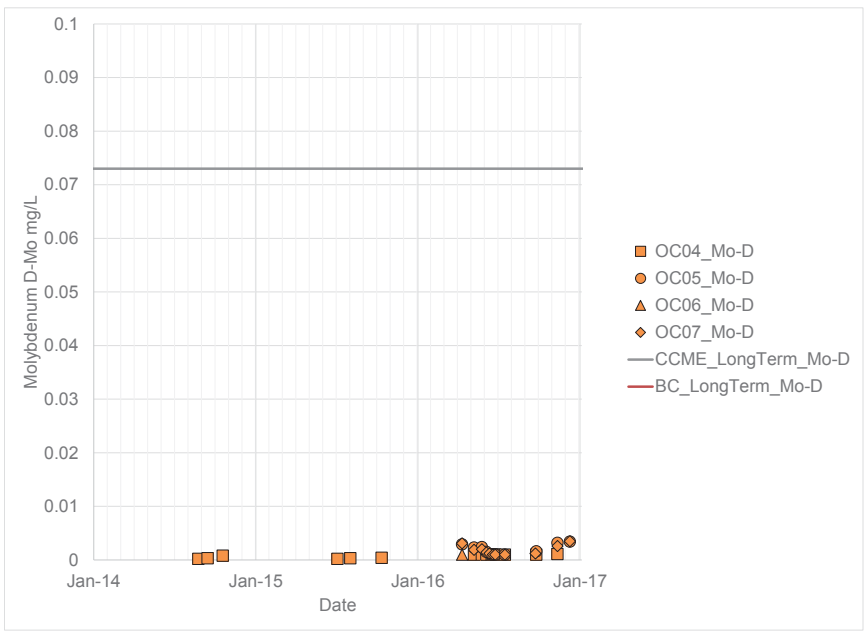




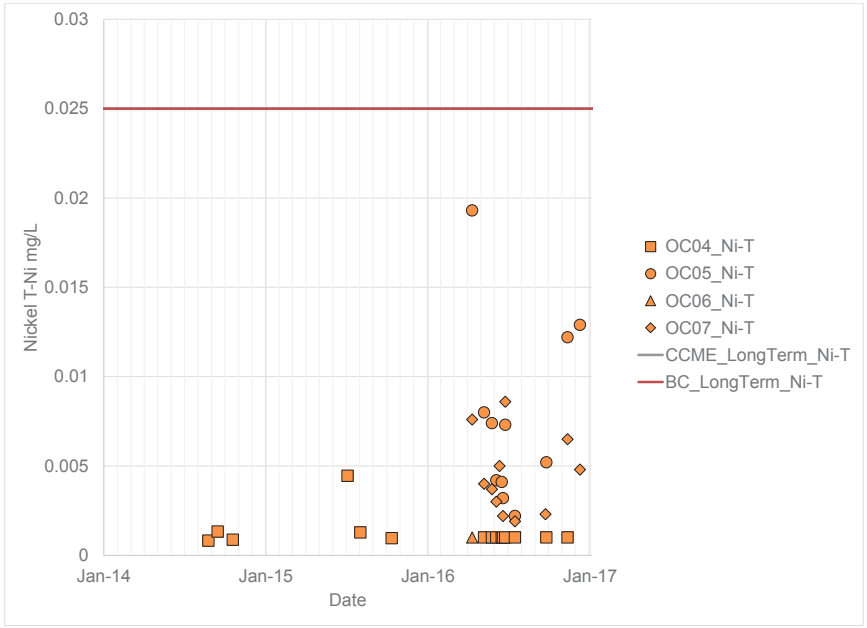


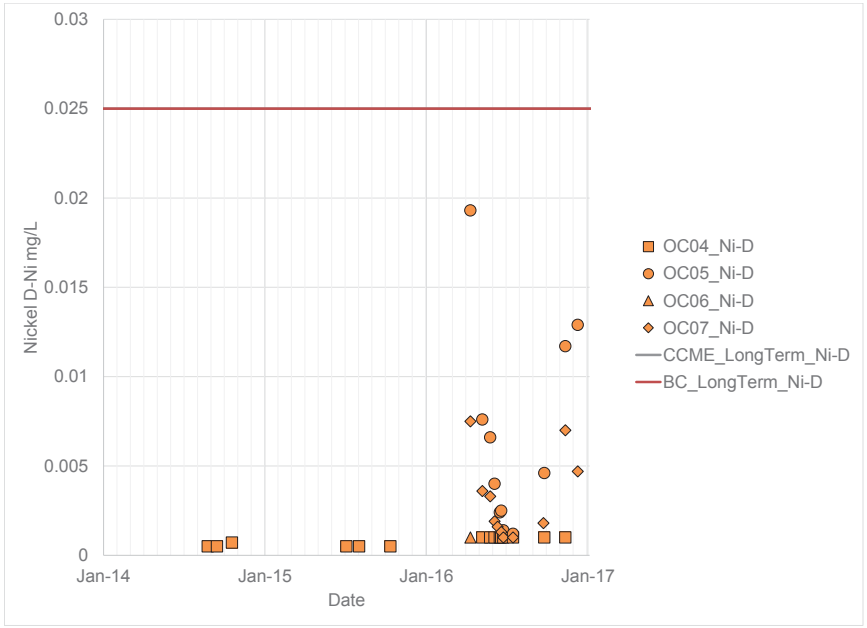


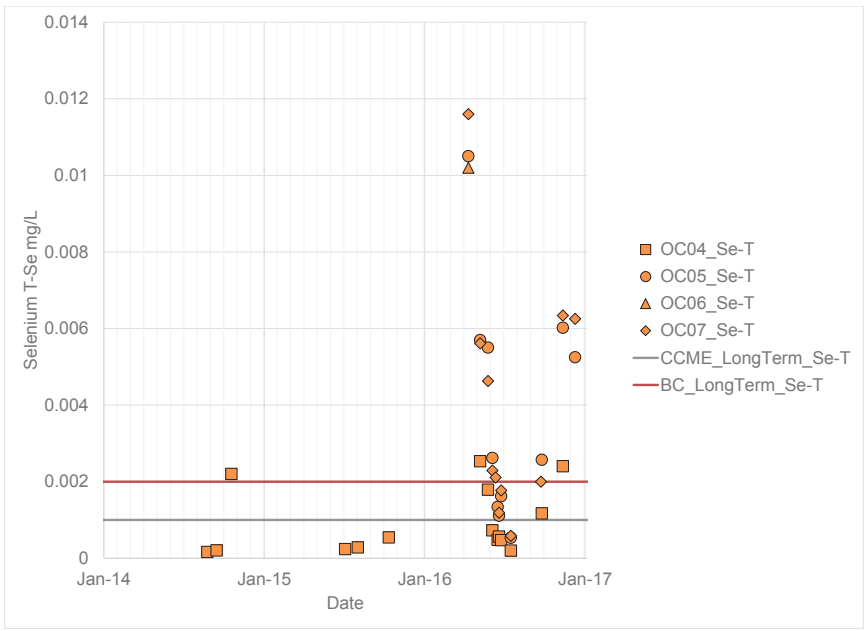


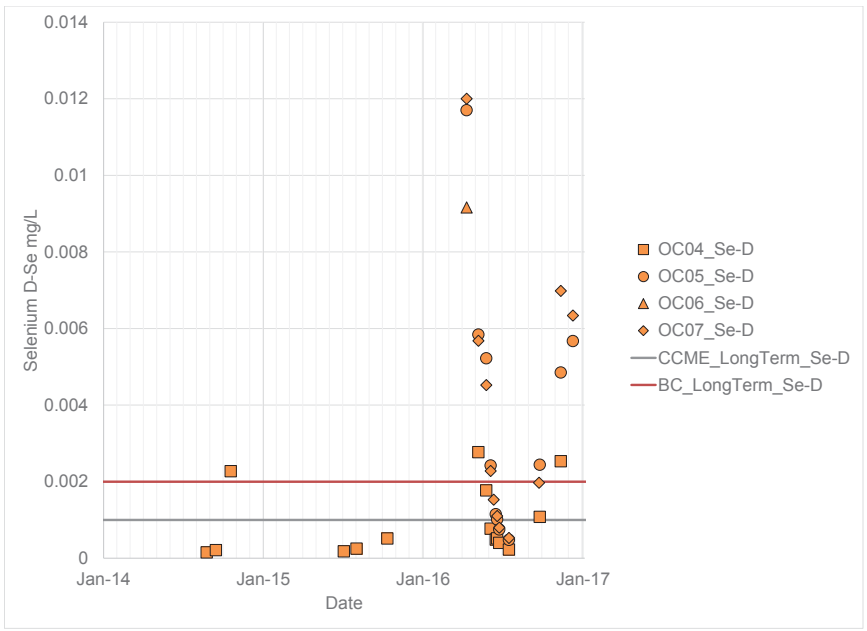


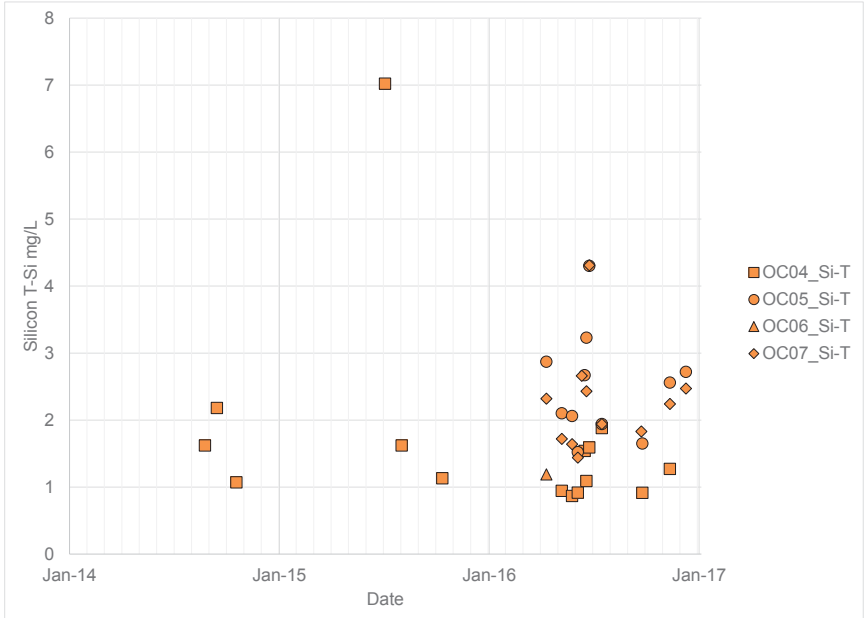
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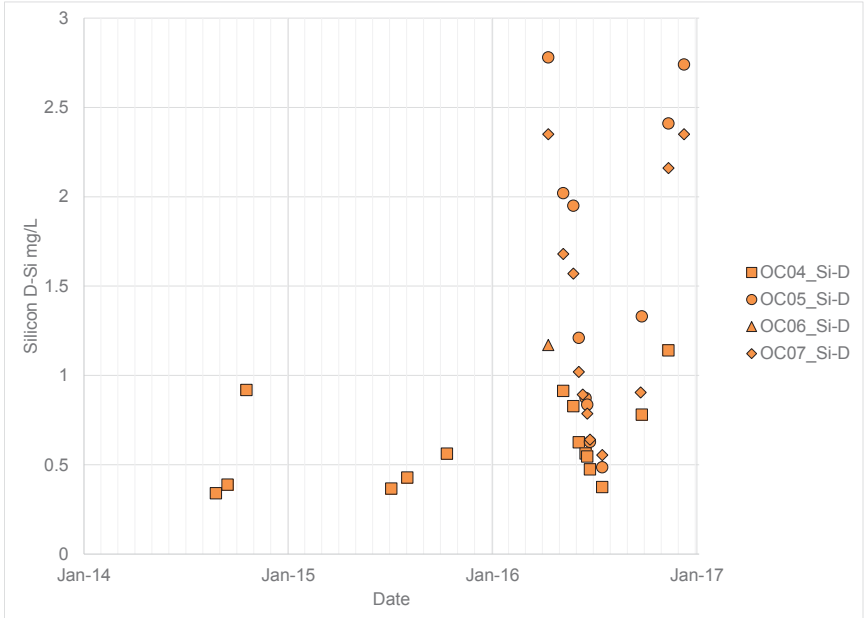


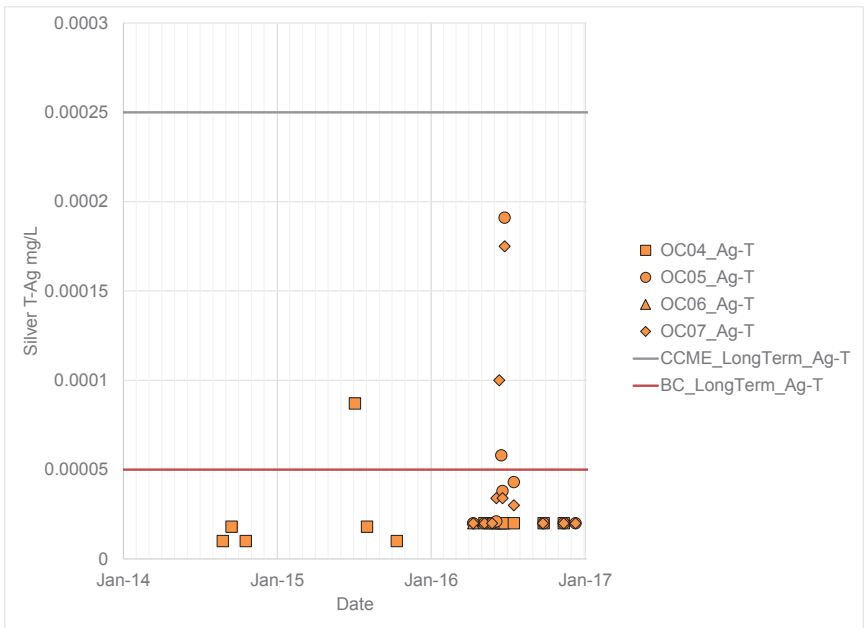


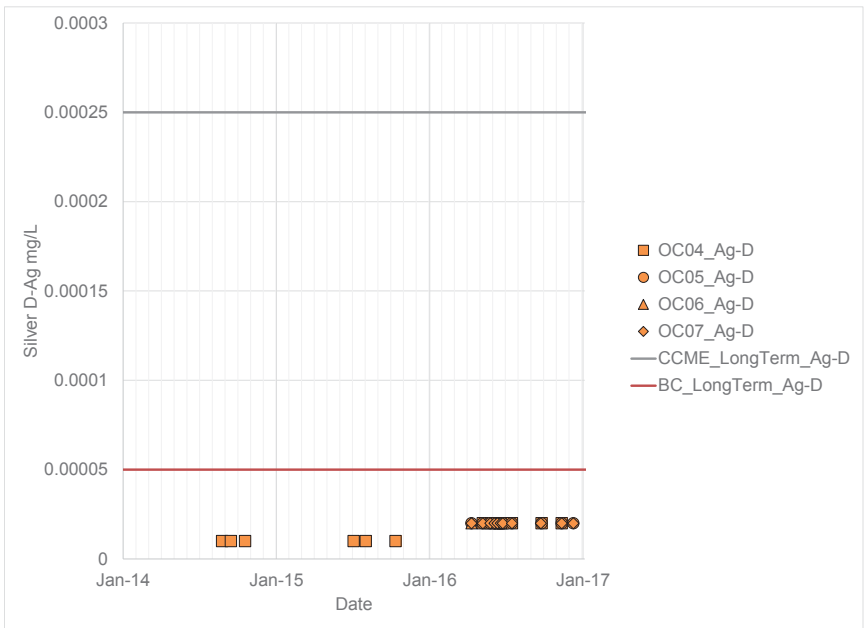




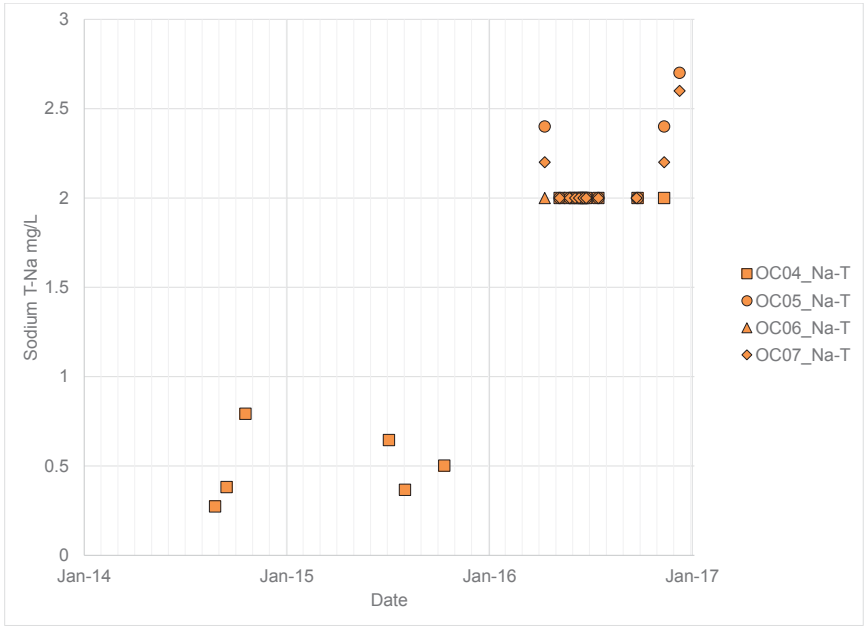


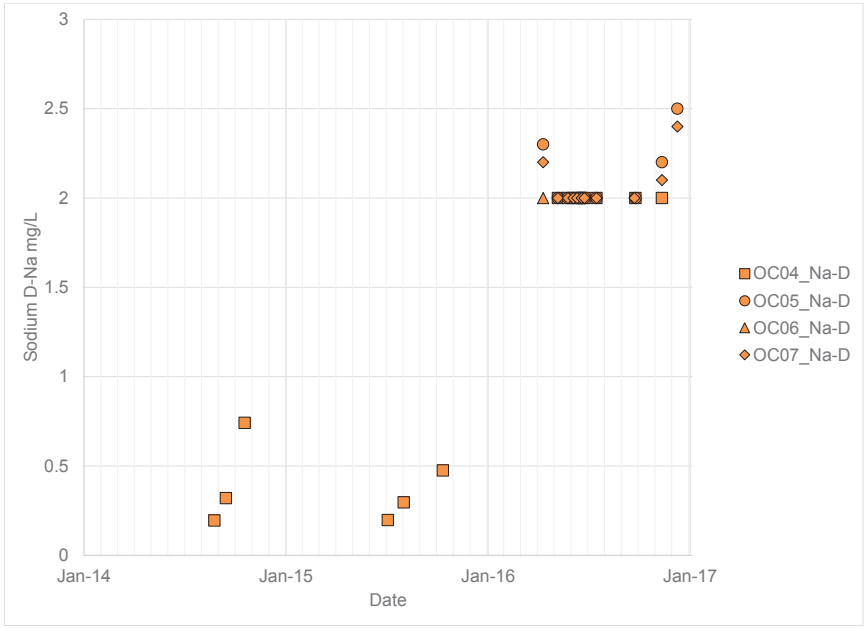


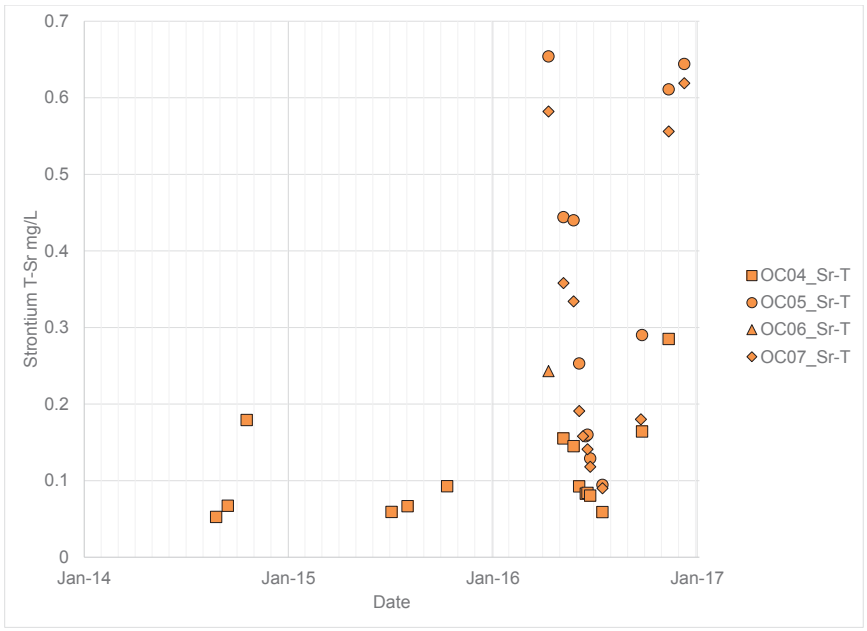


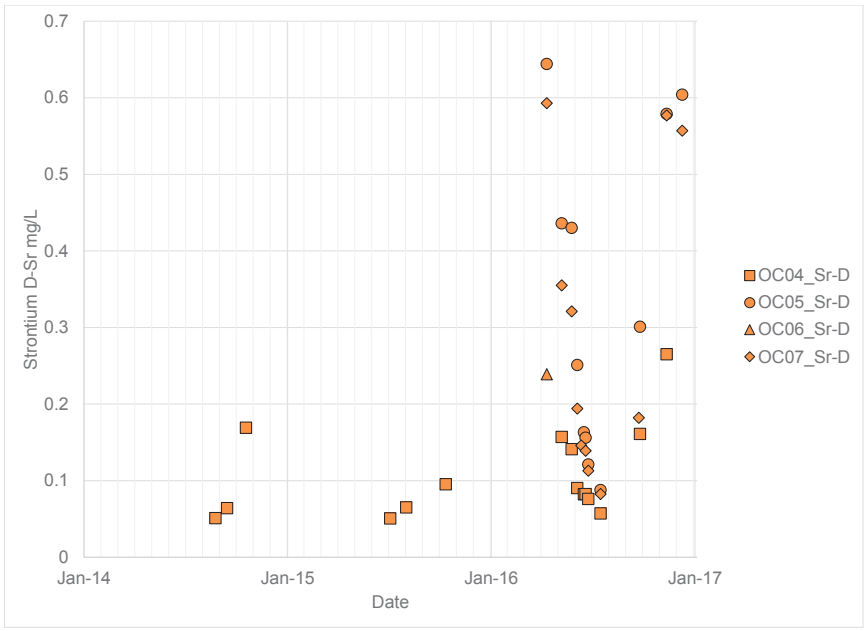


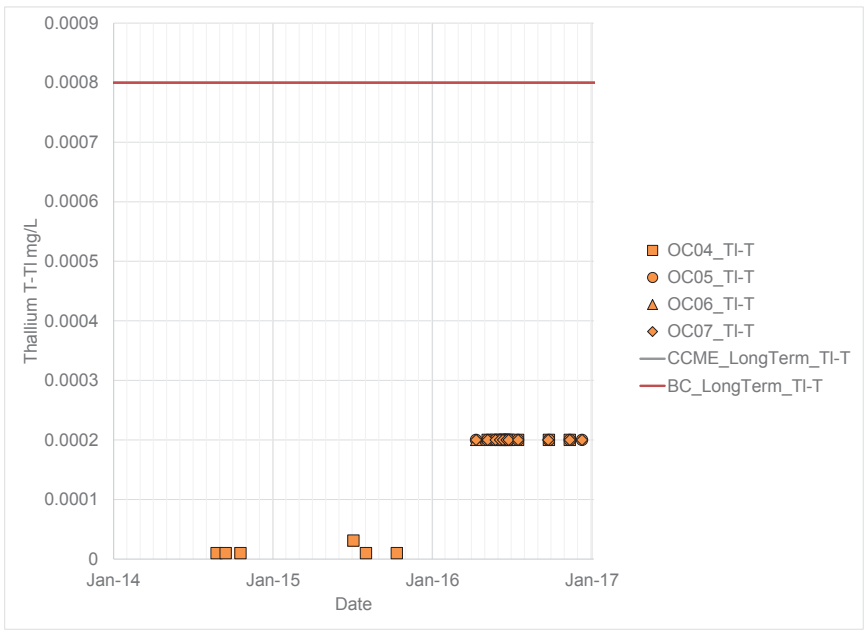
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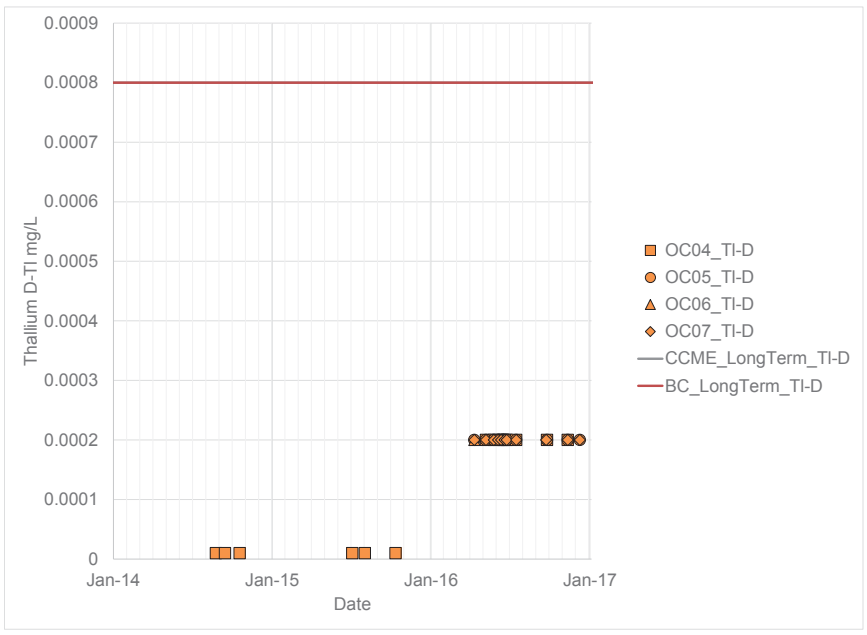


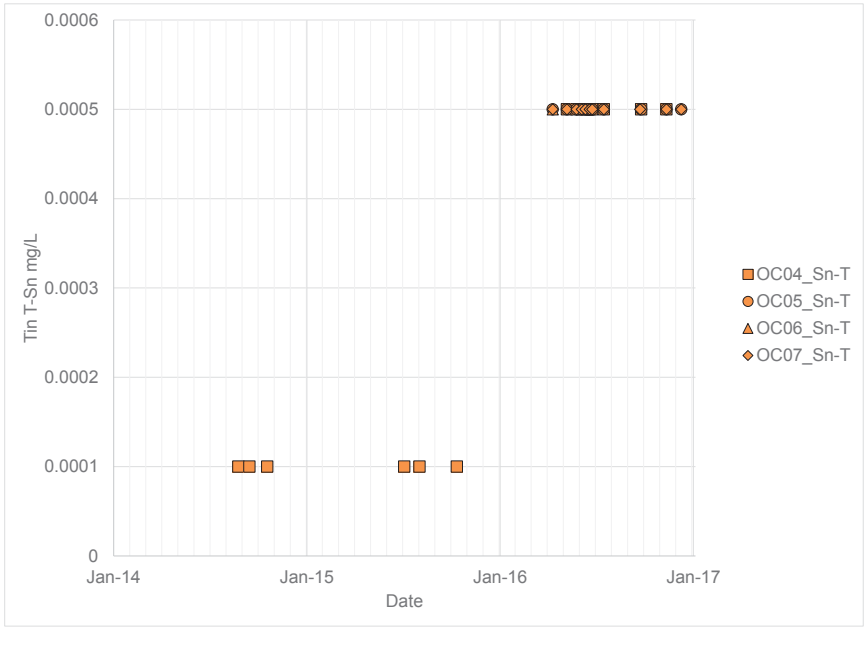


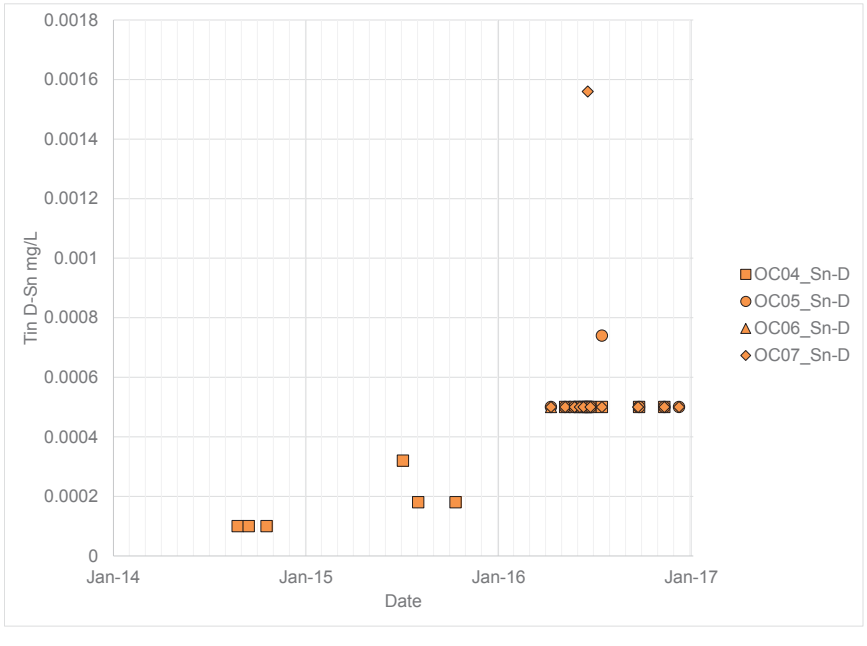






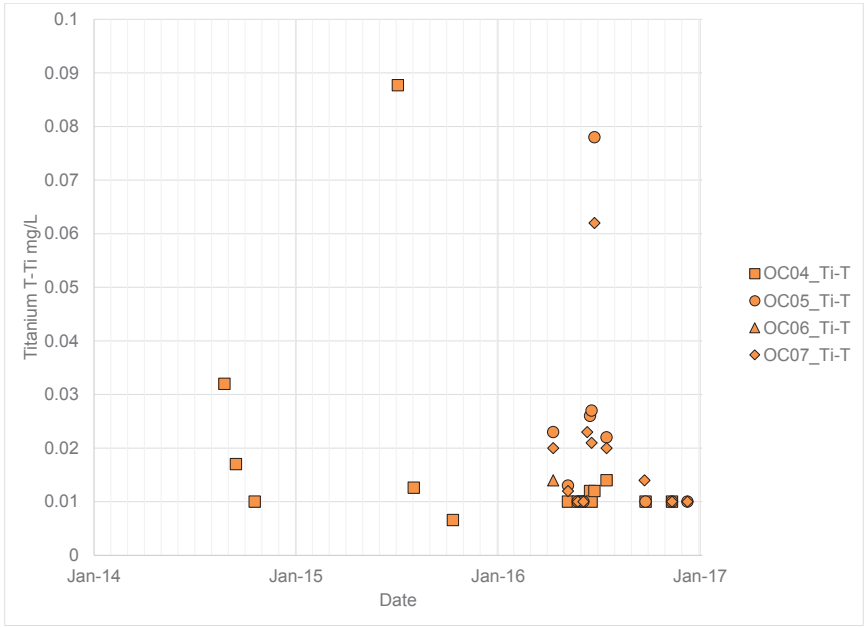


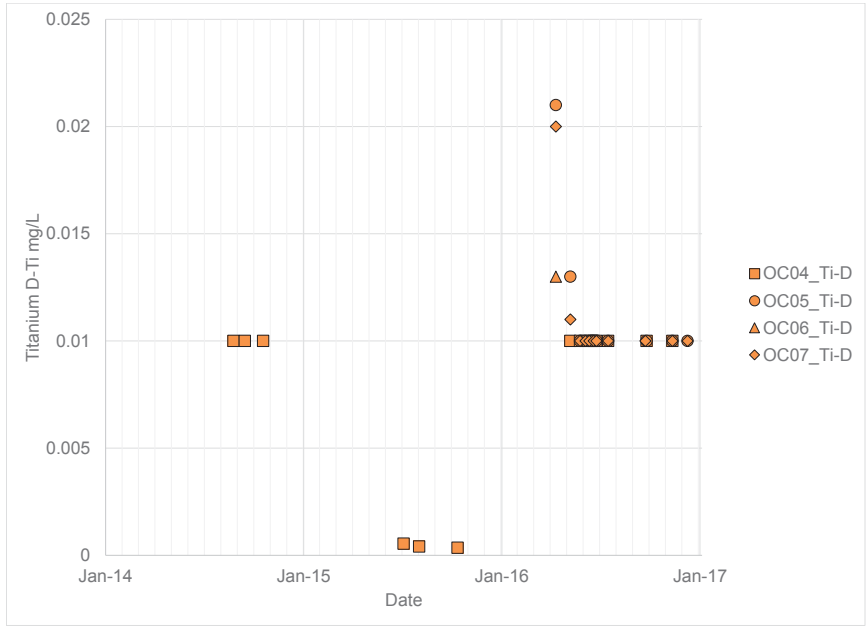


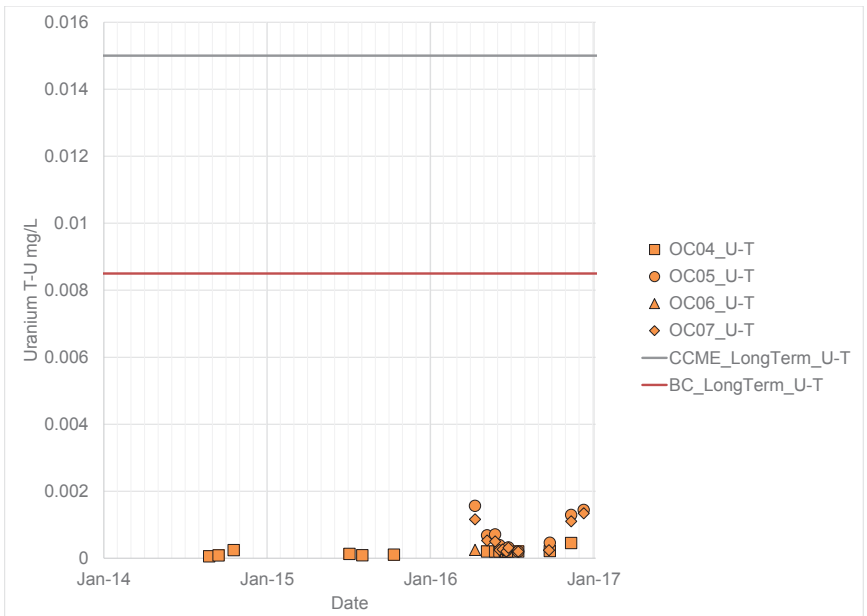


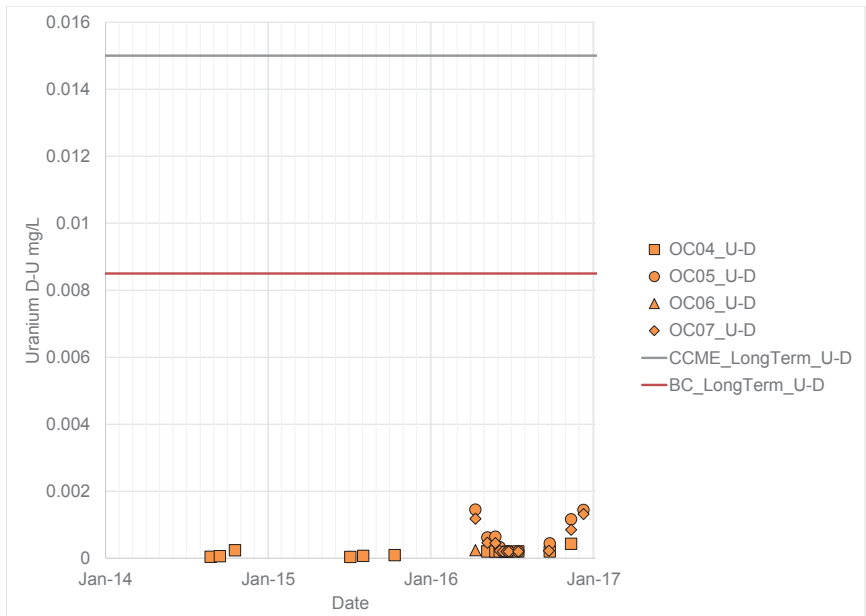
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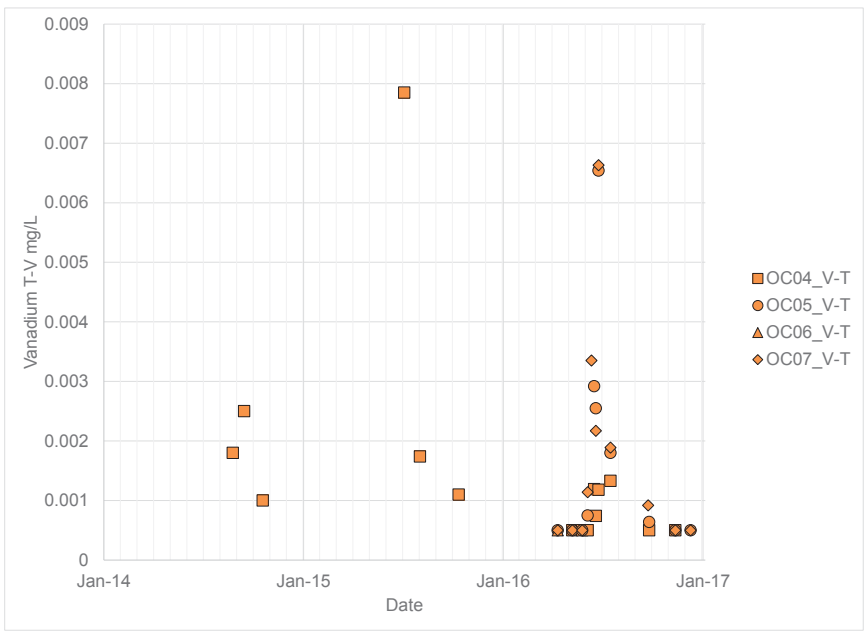
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

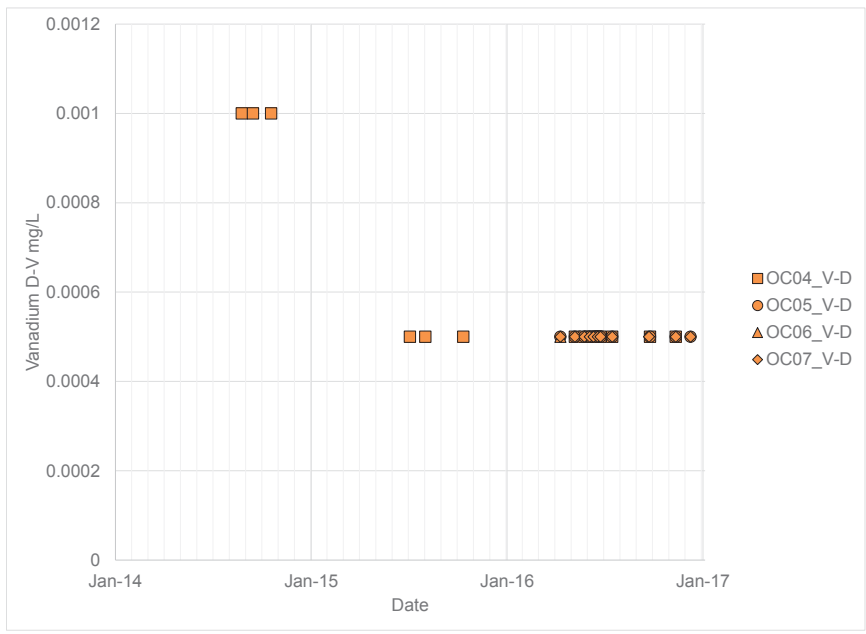


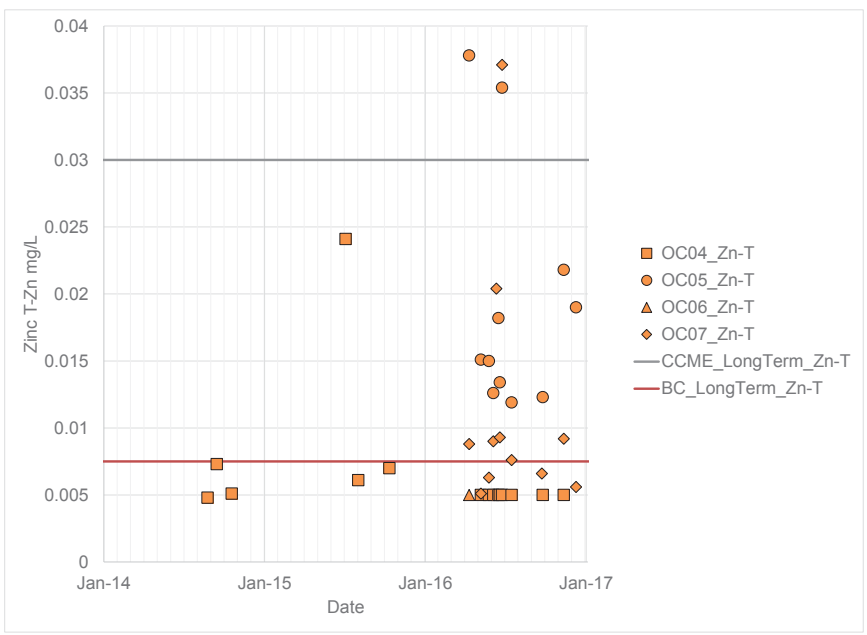


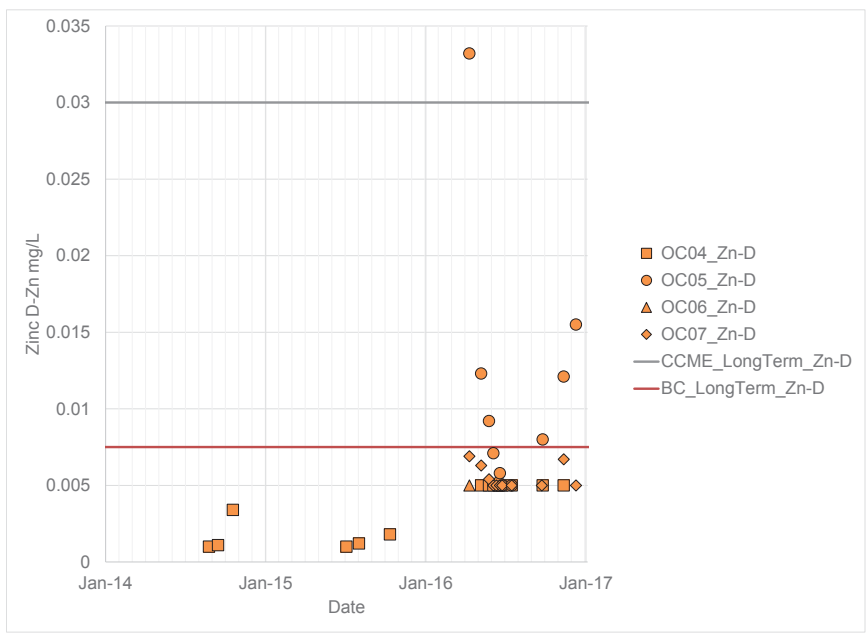








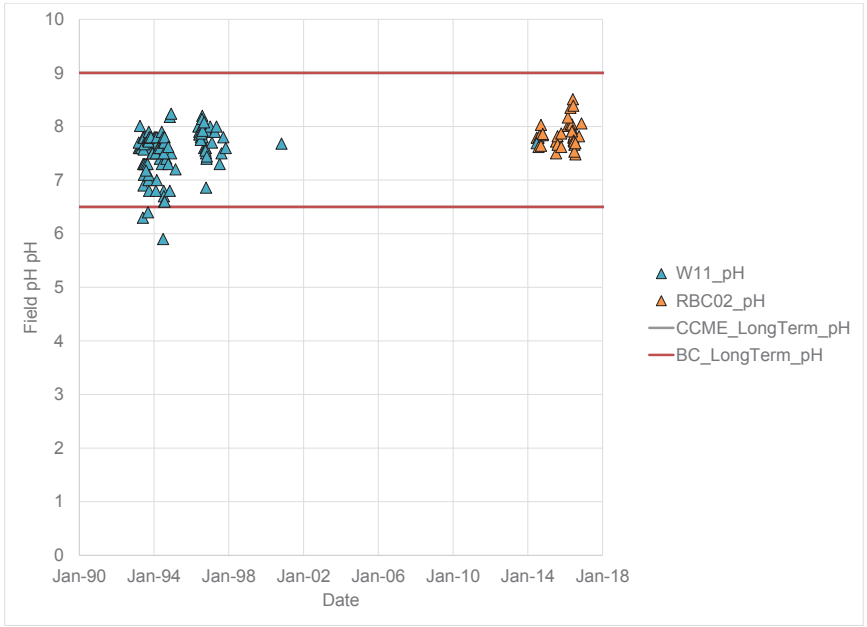


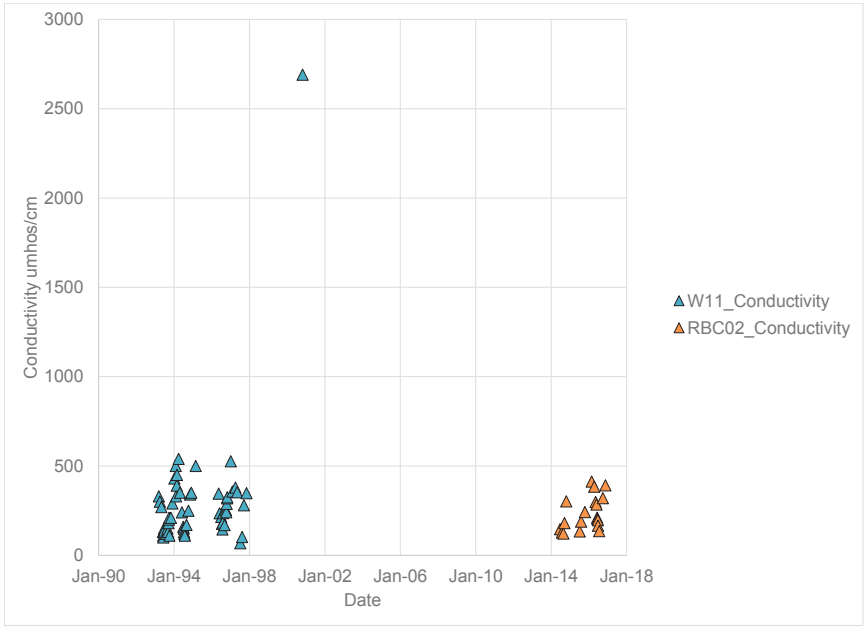


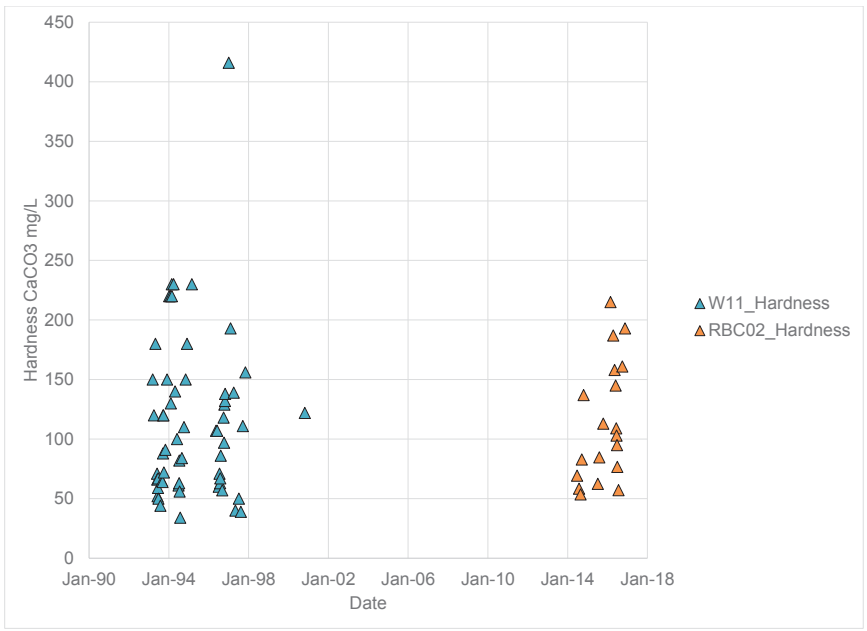
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Rio Blanco Creek

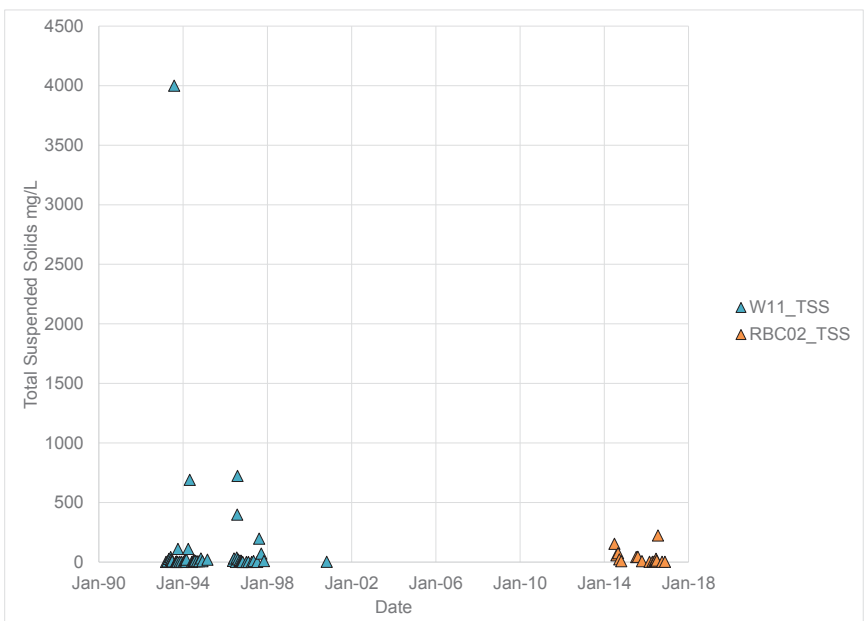
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

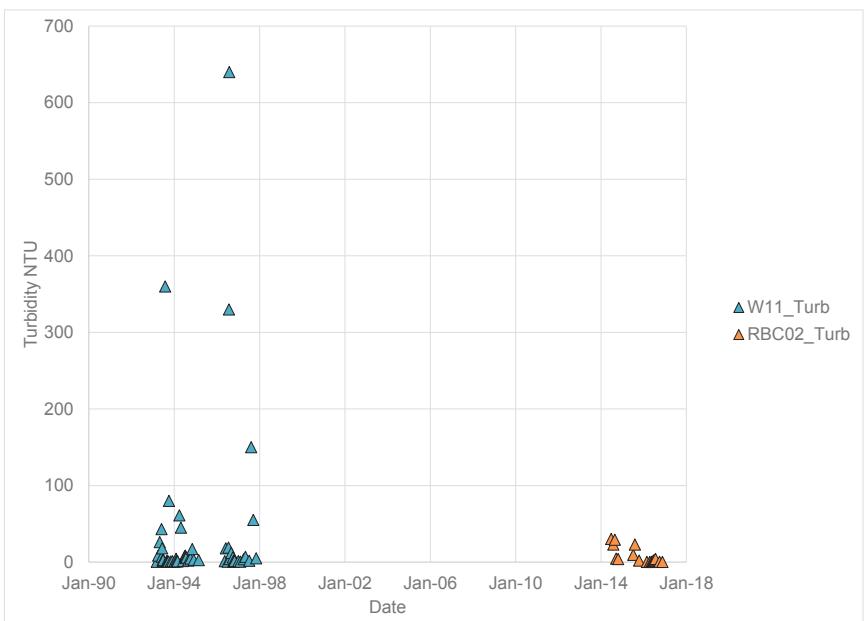


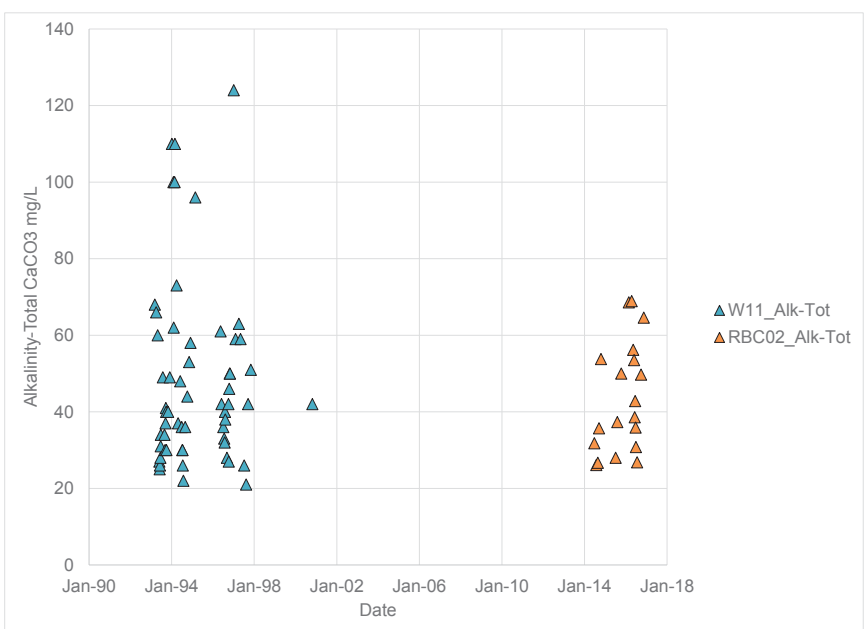


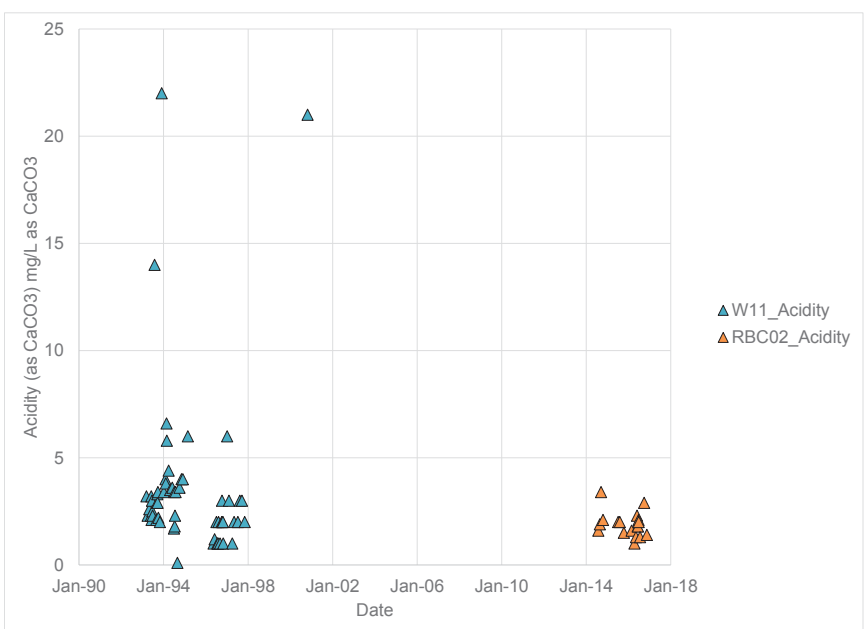






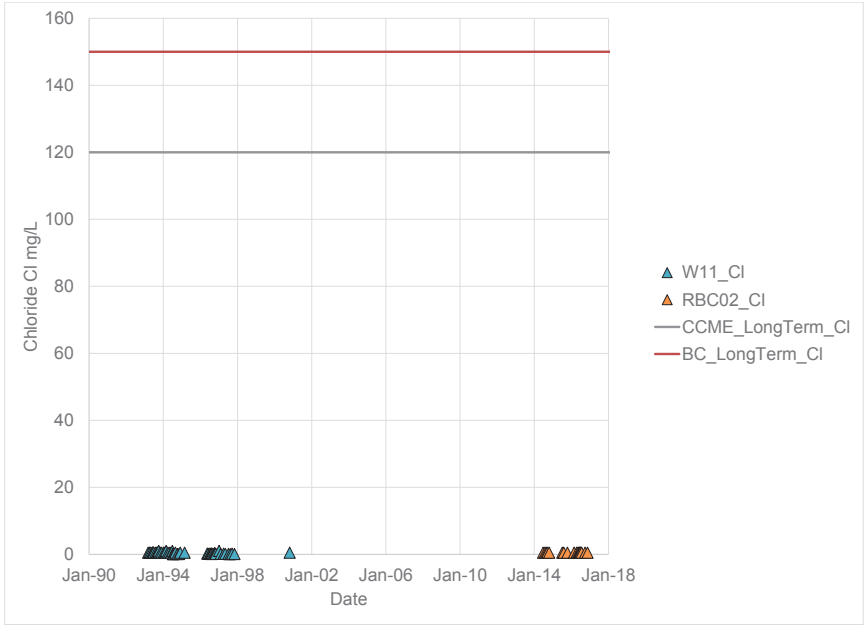


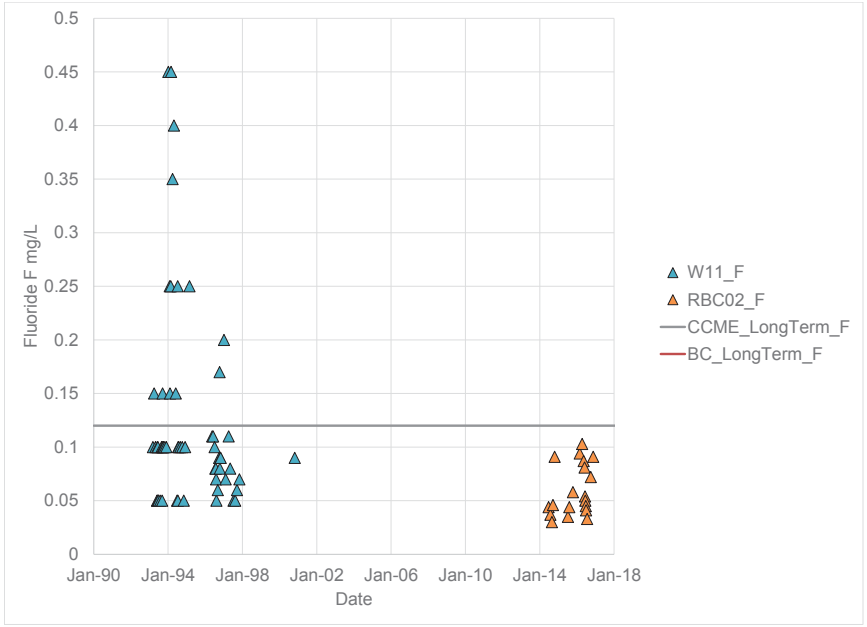


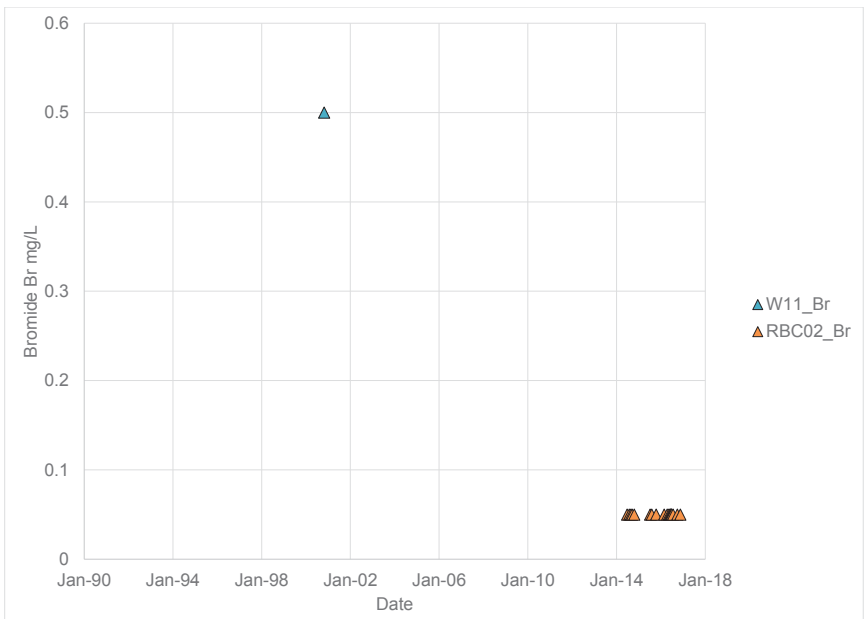


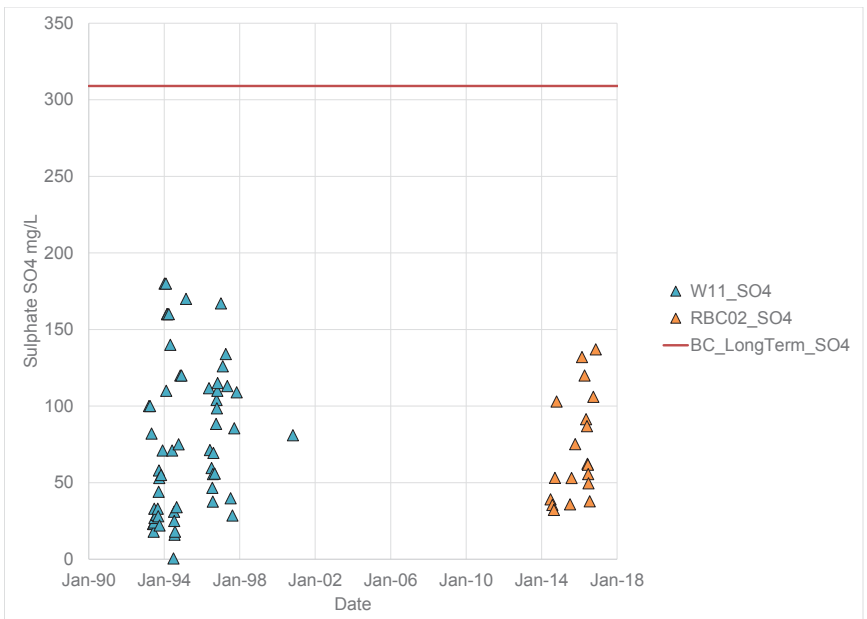
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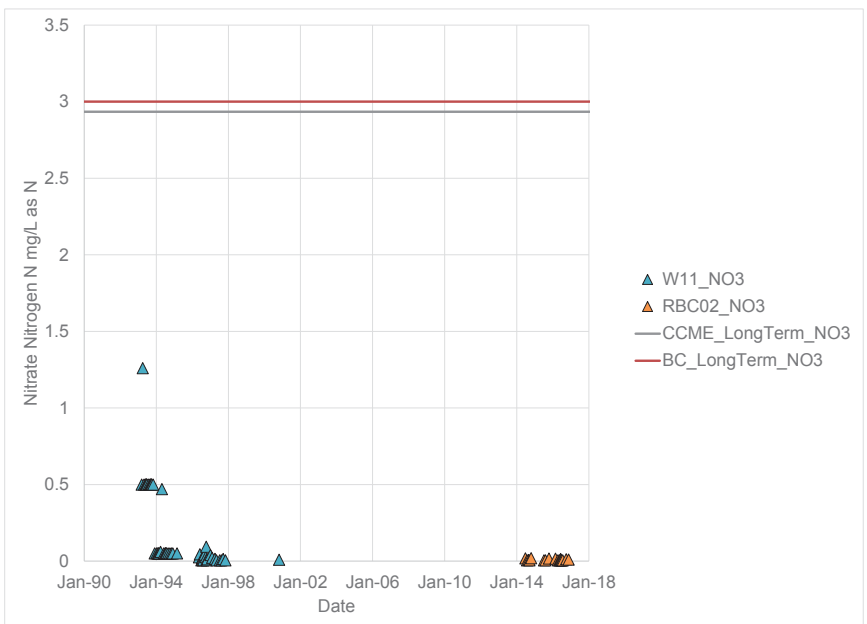
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

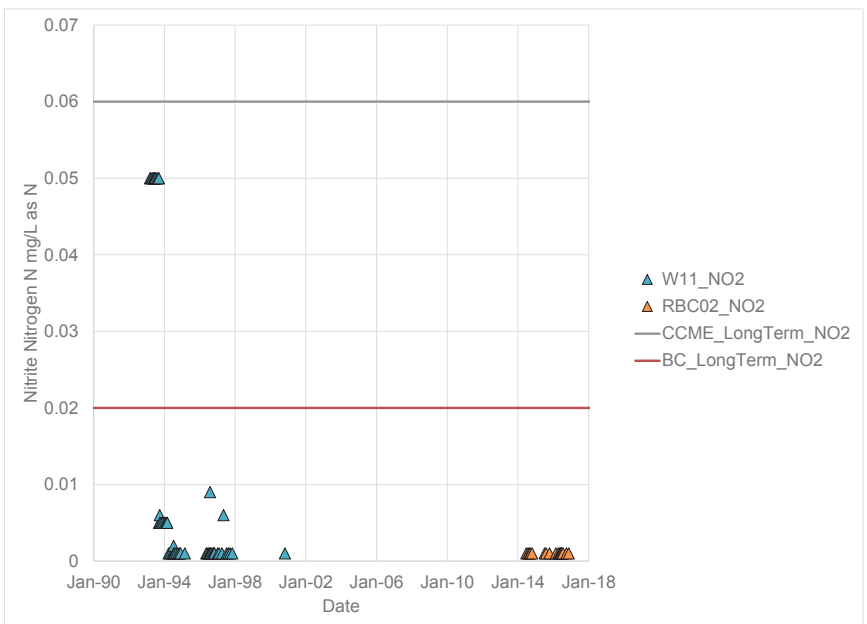


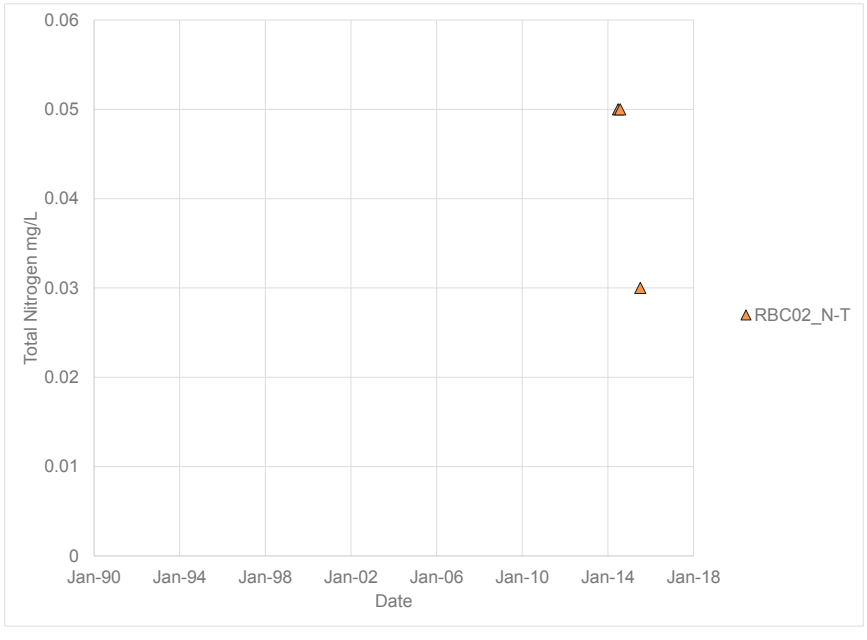


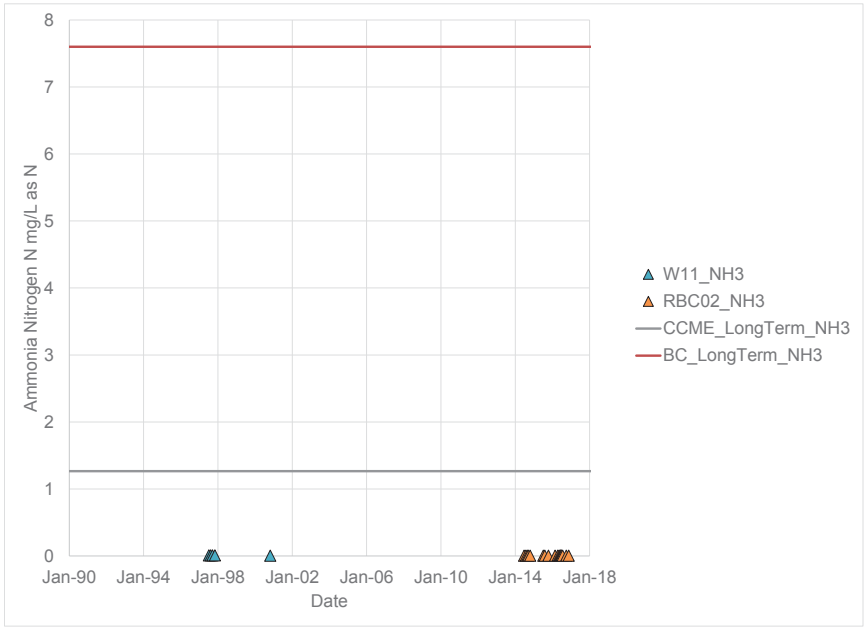




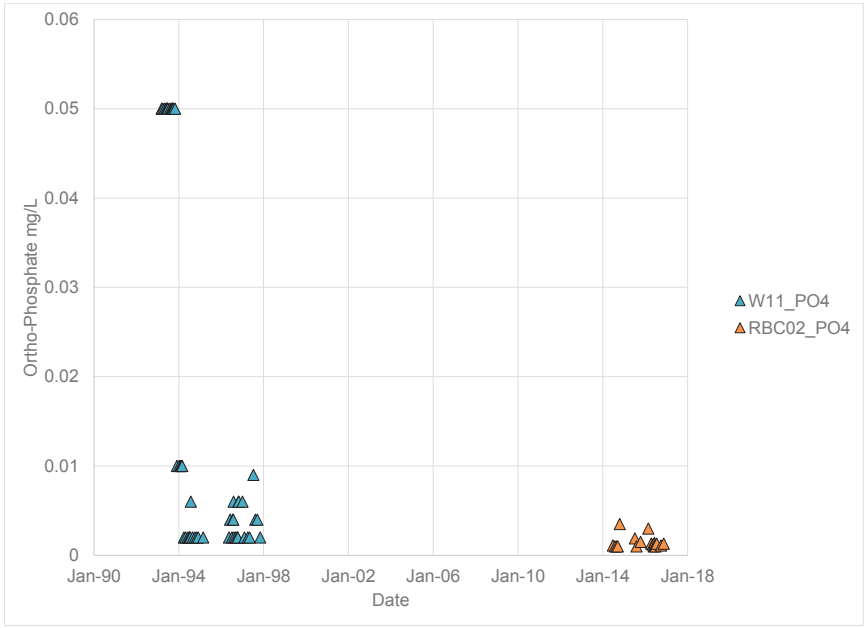


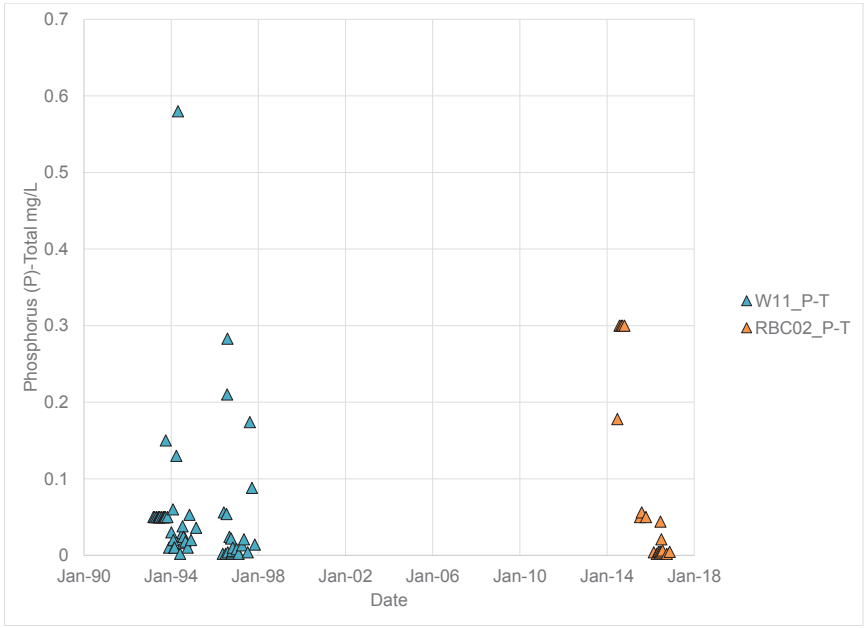


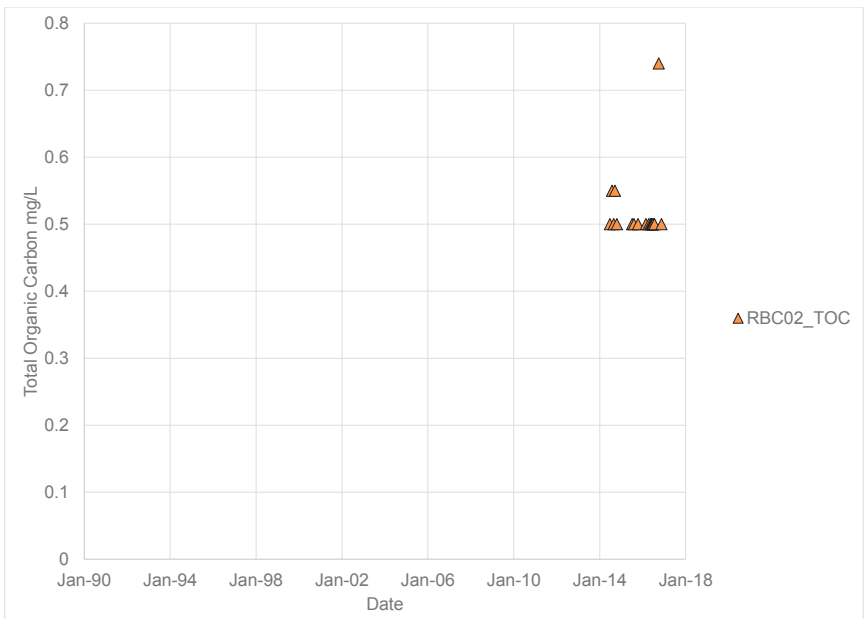


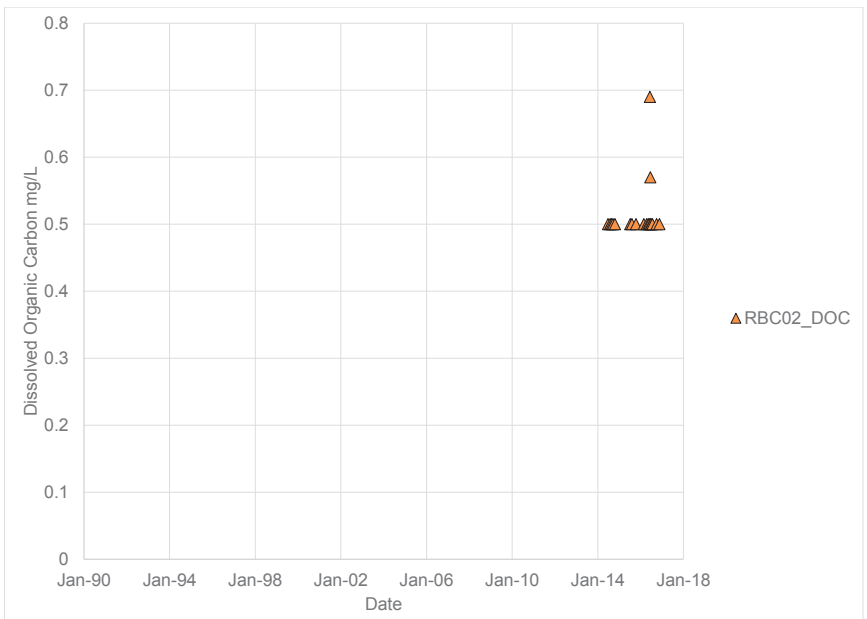


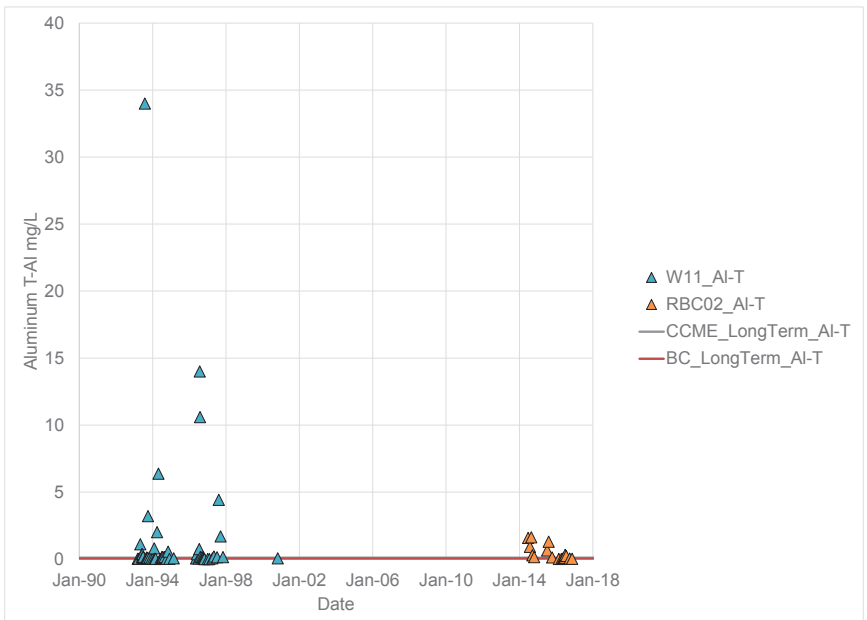
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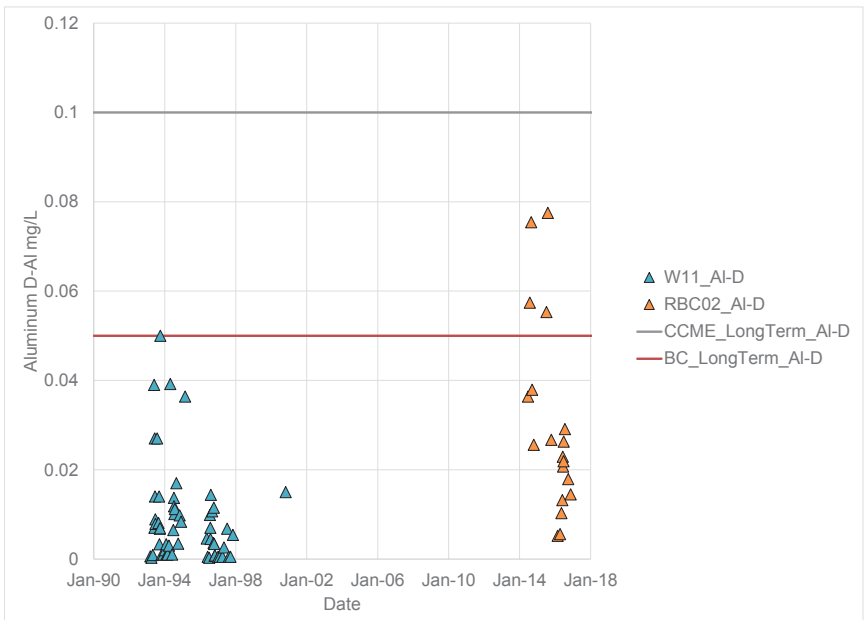


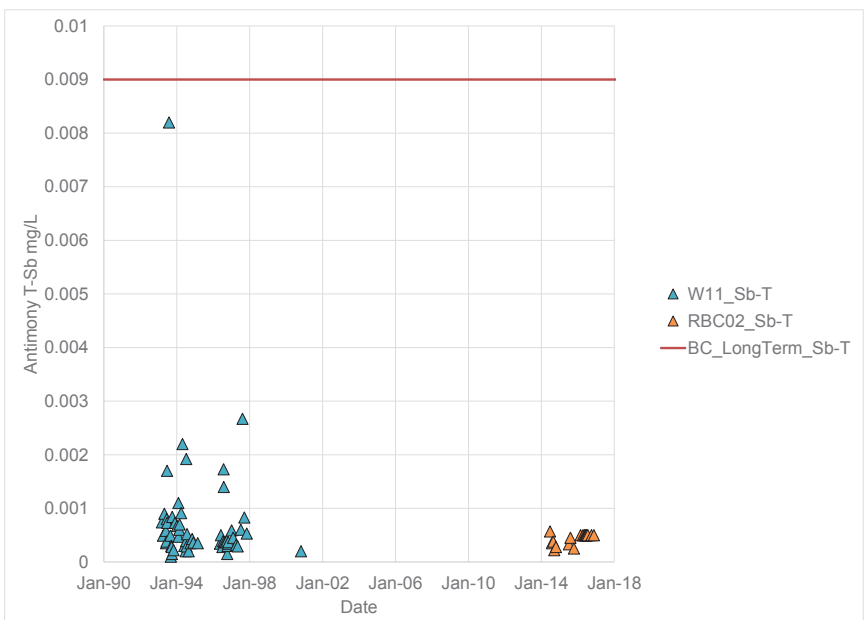


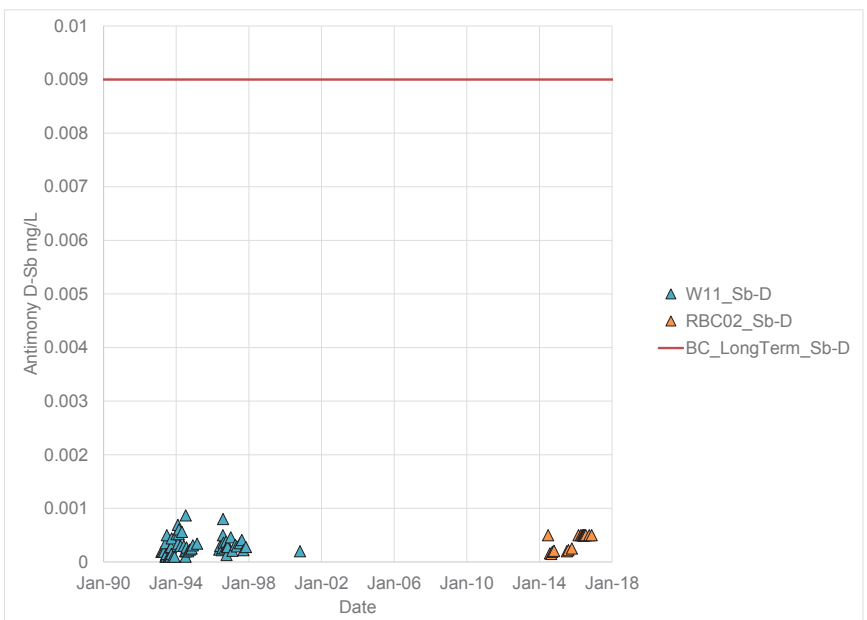




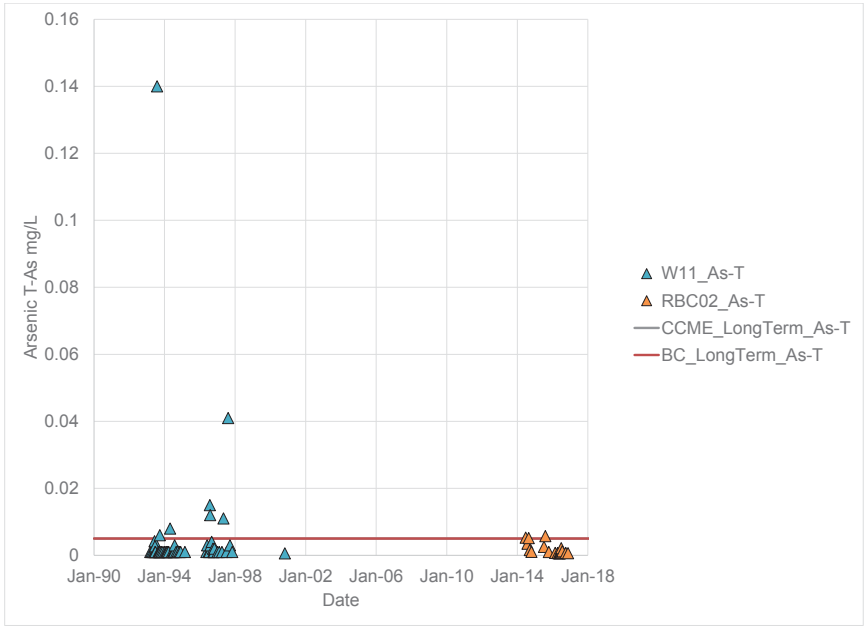


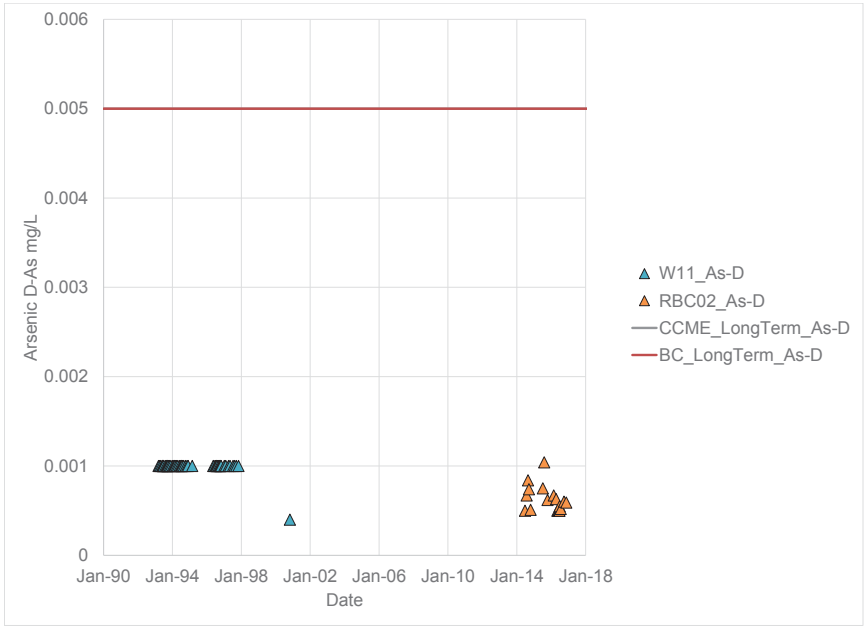


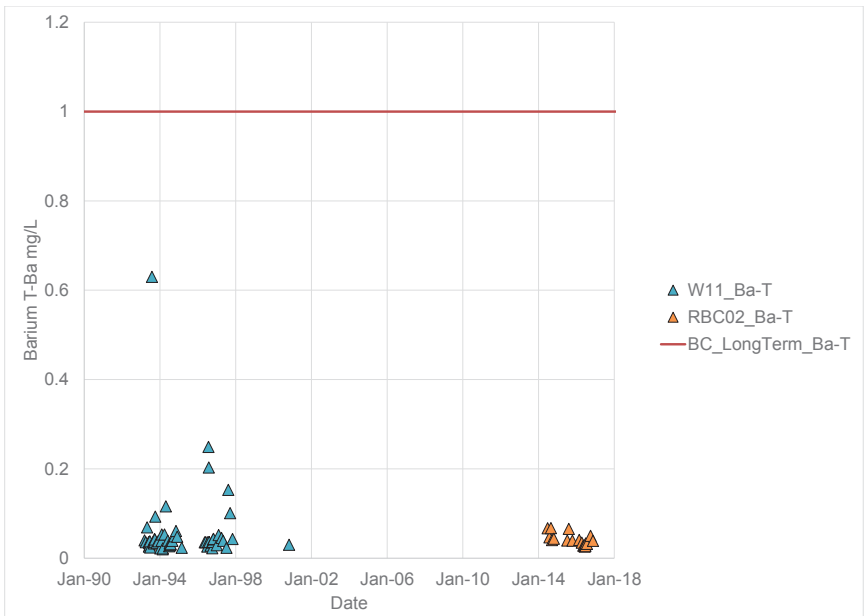


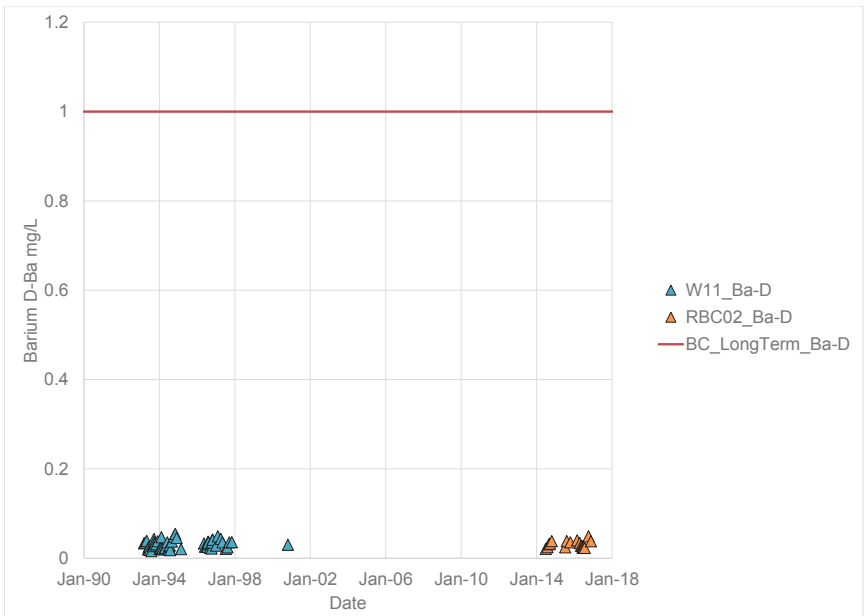


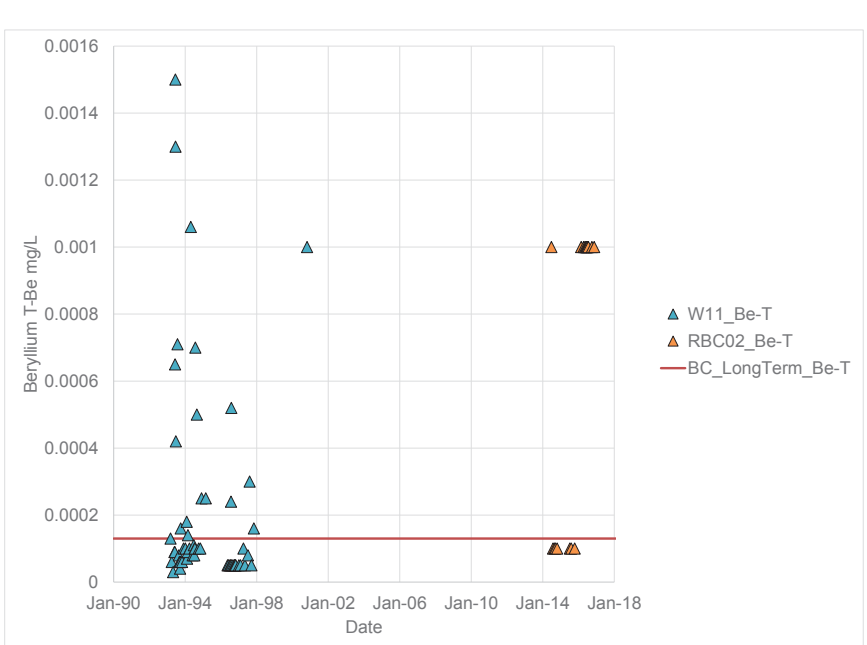
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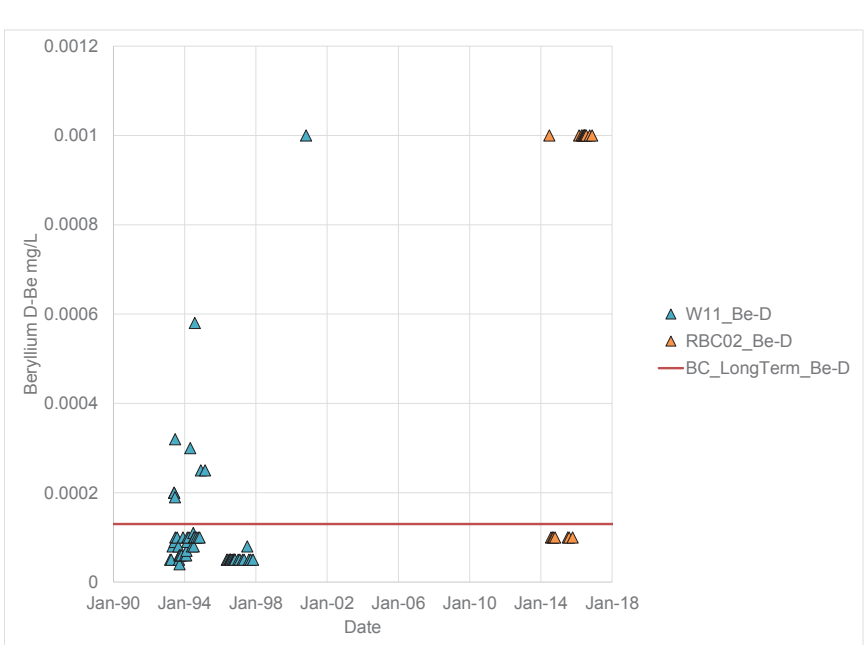


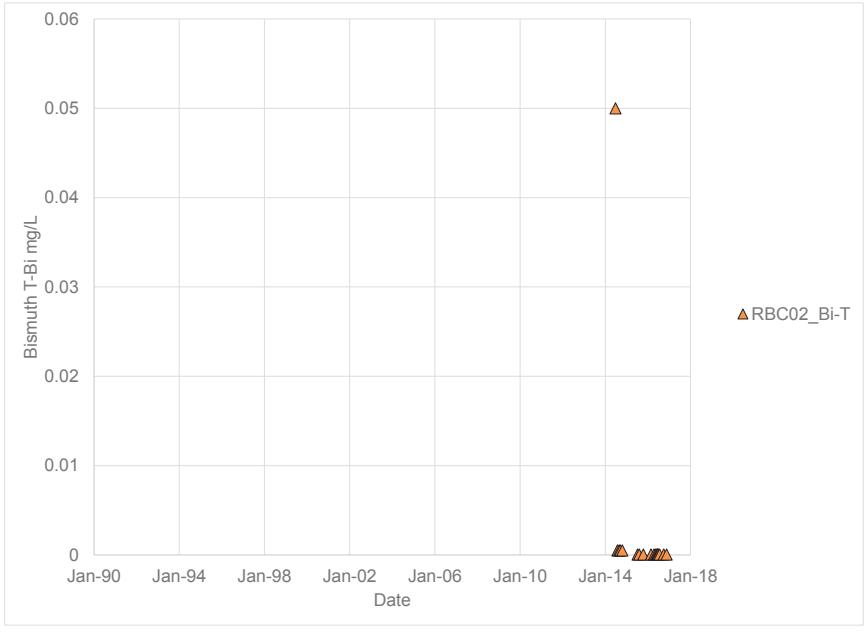


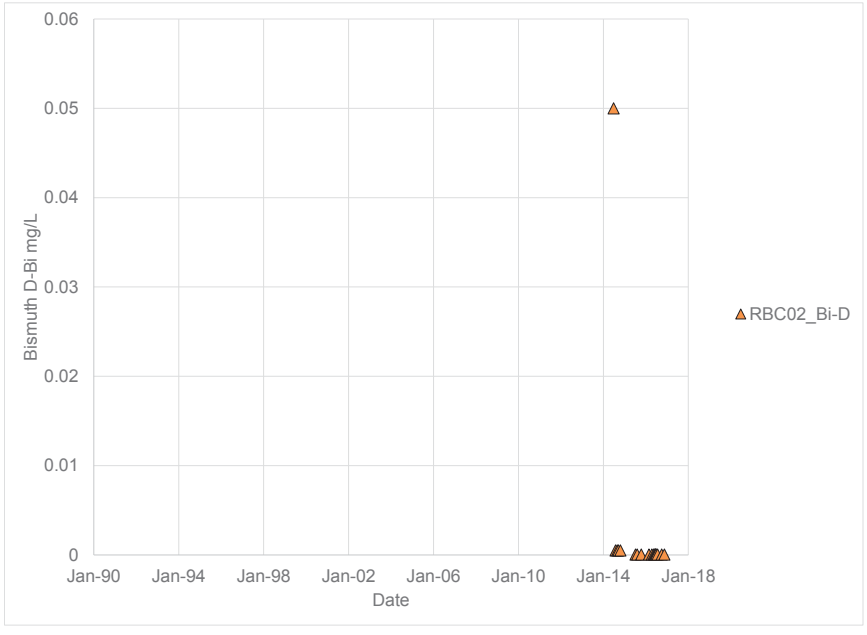






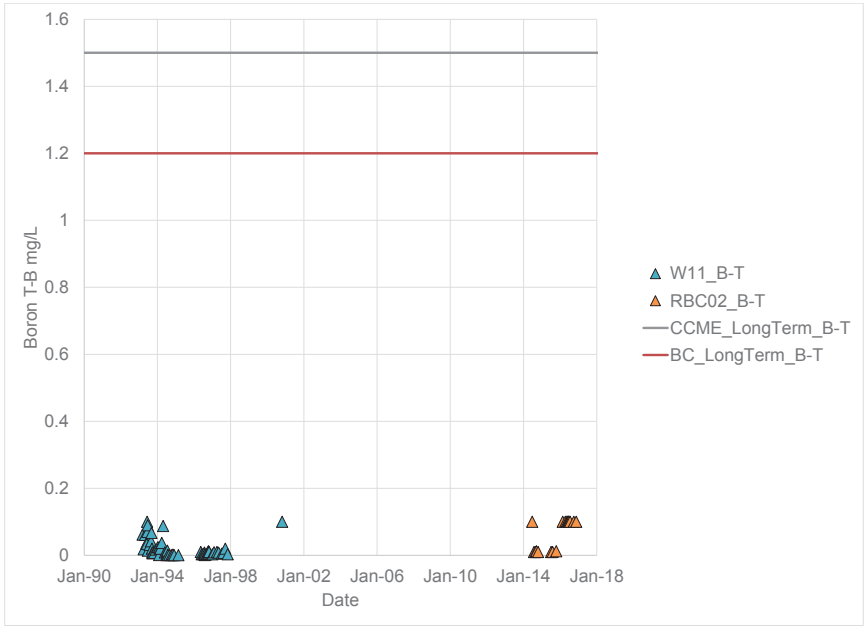


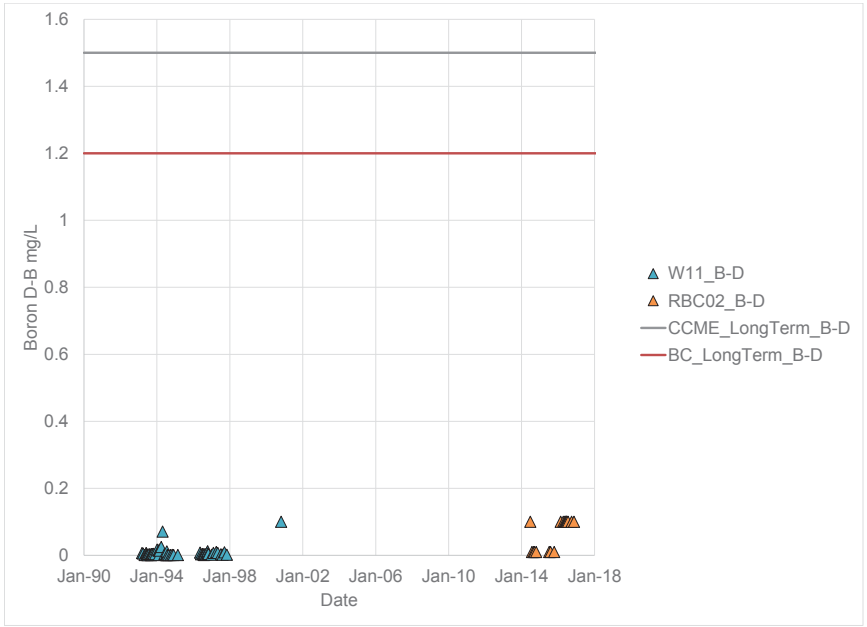


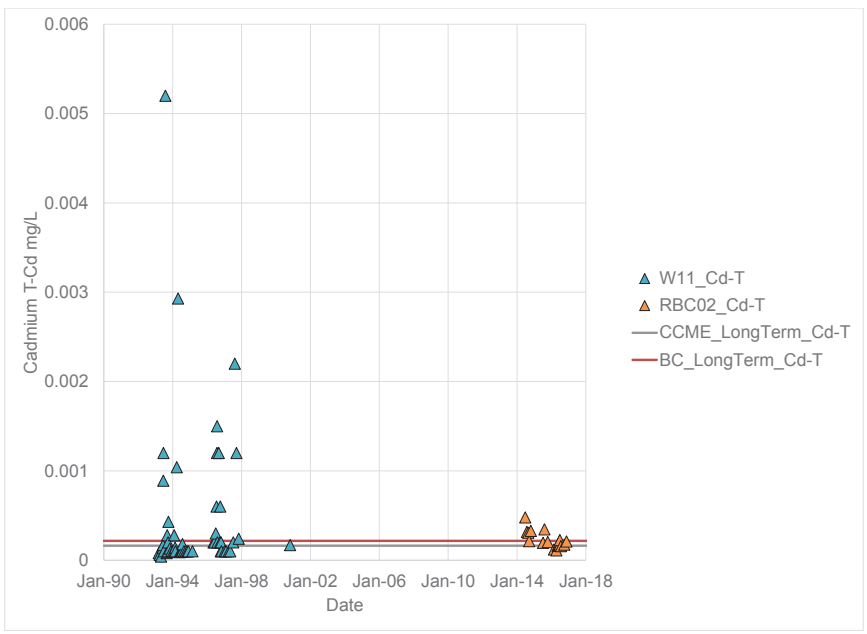


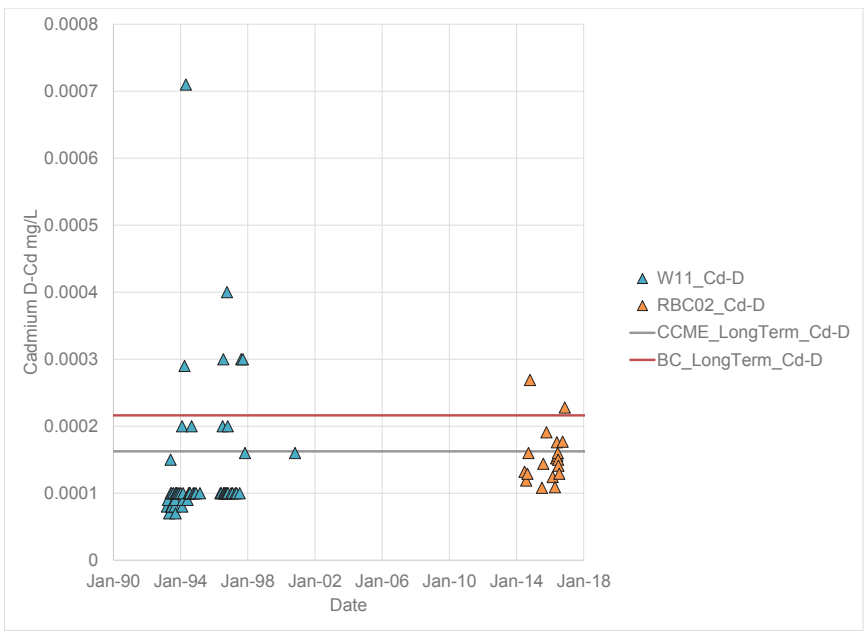
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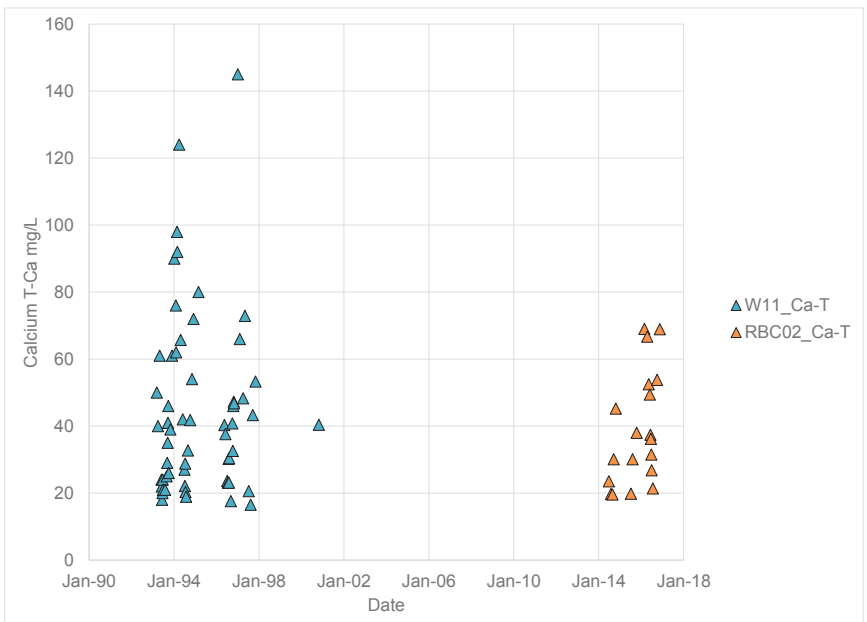
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

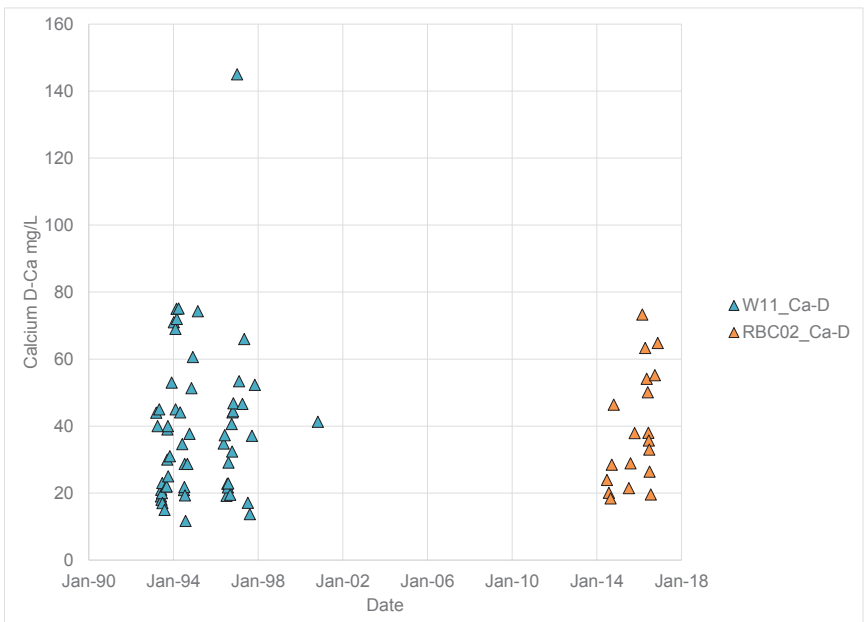


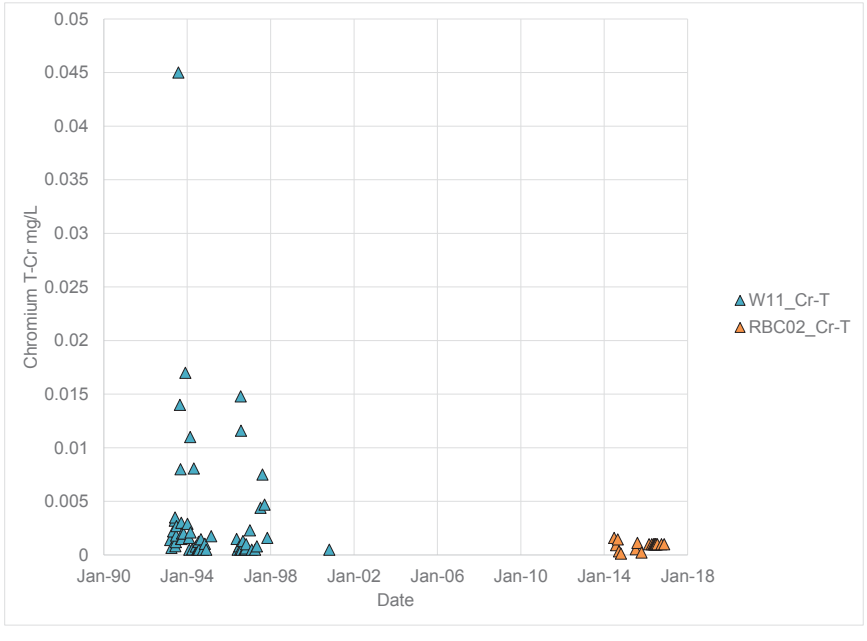


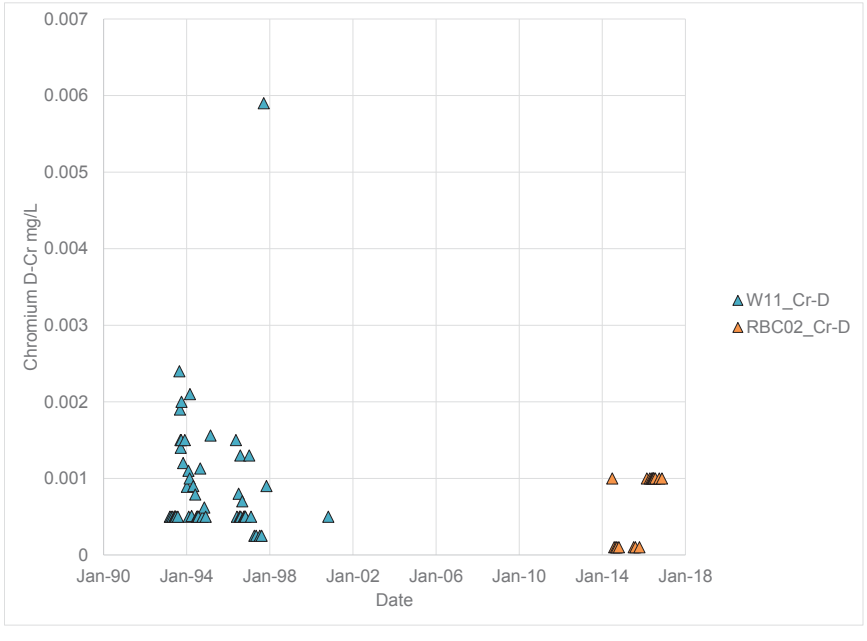






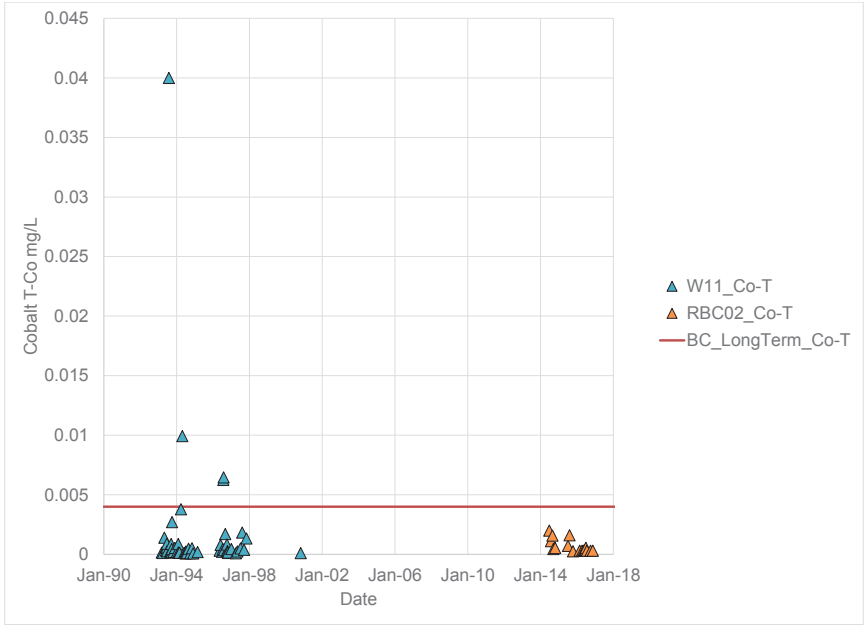


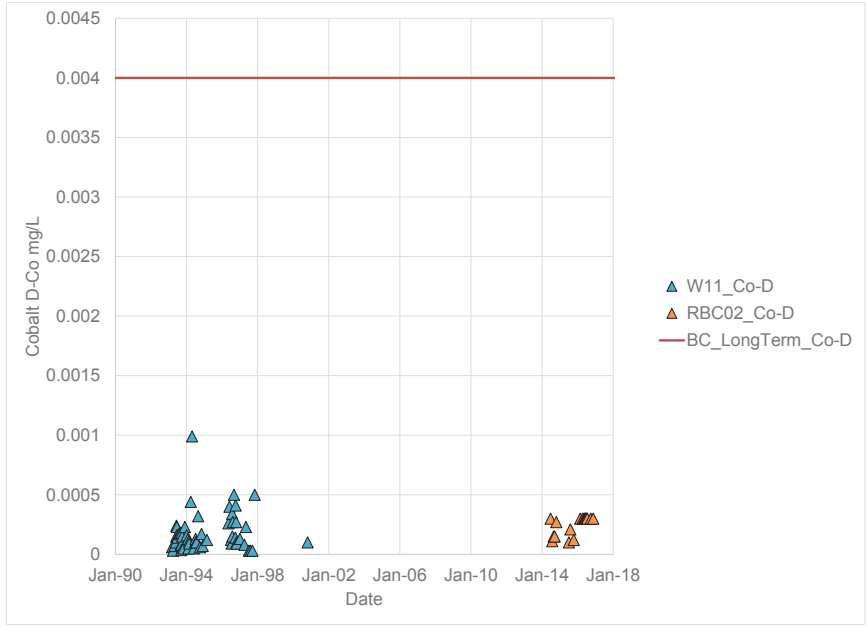


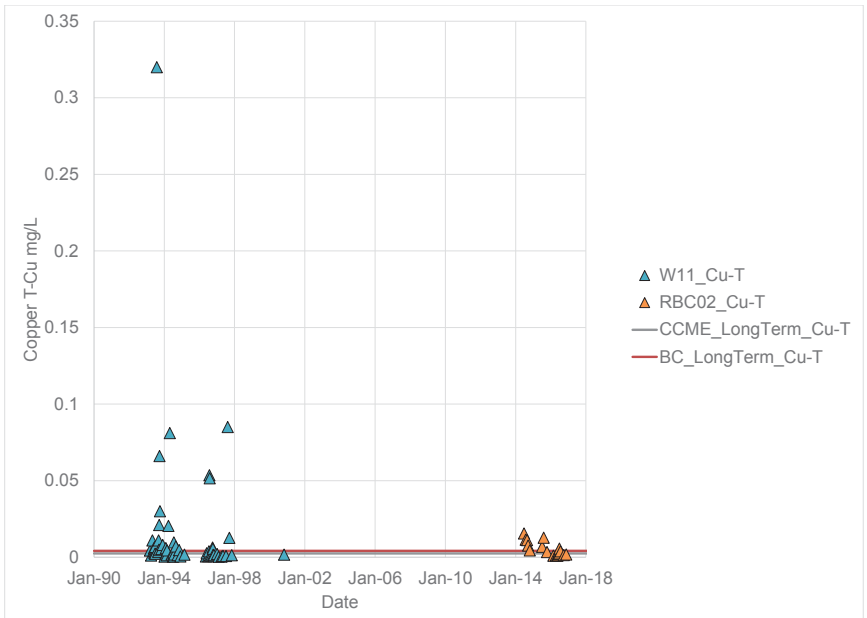


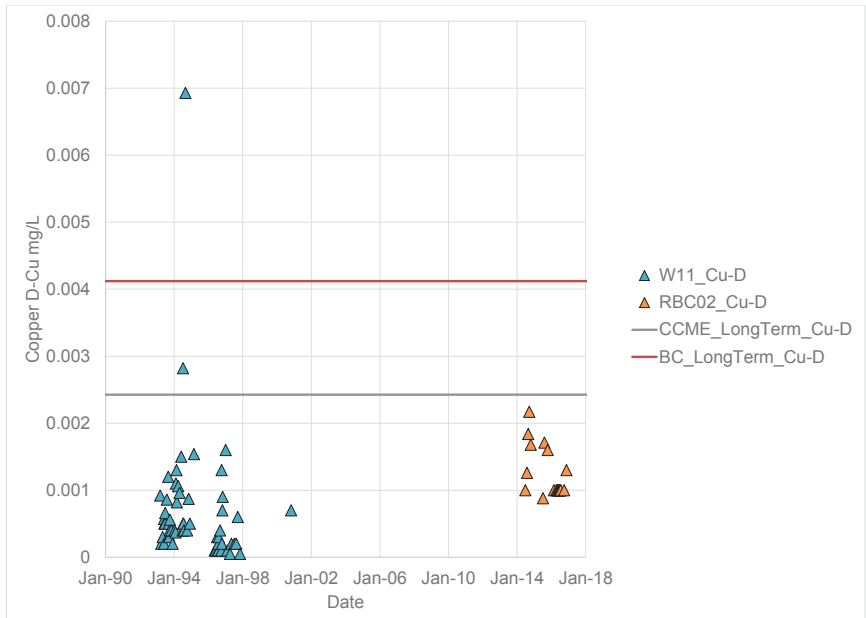
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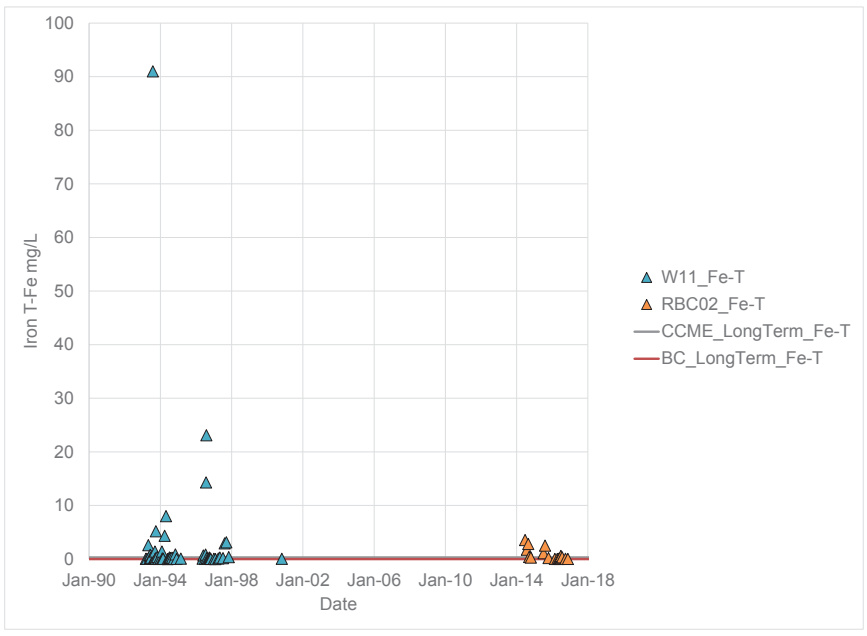
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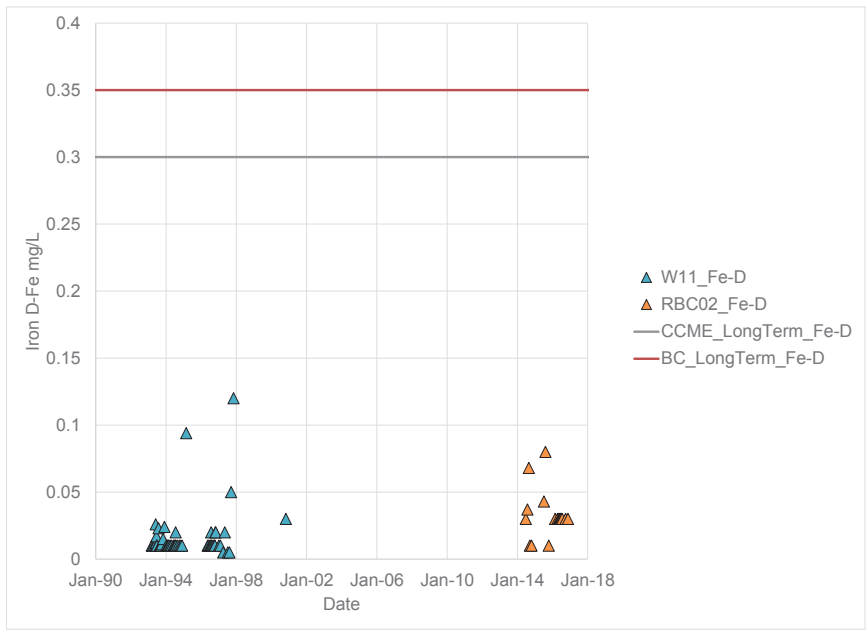


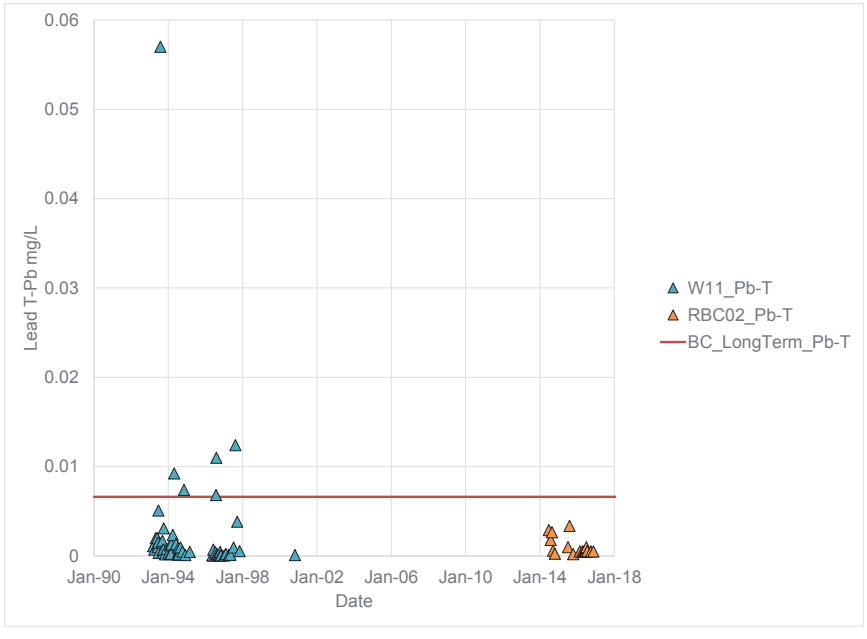


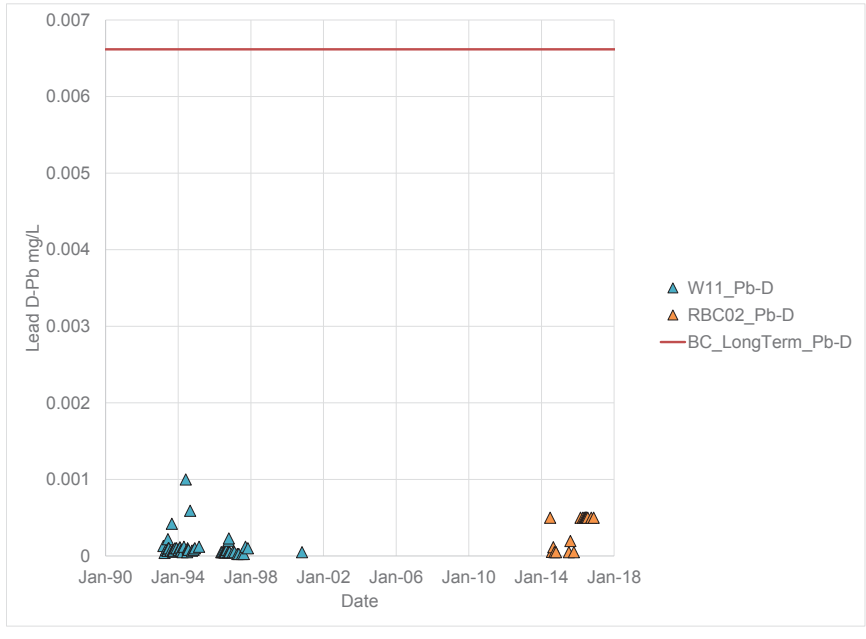




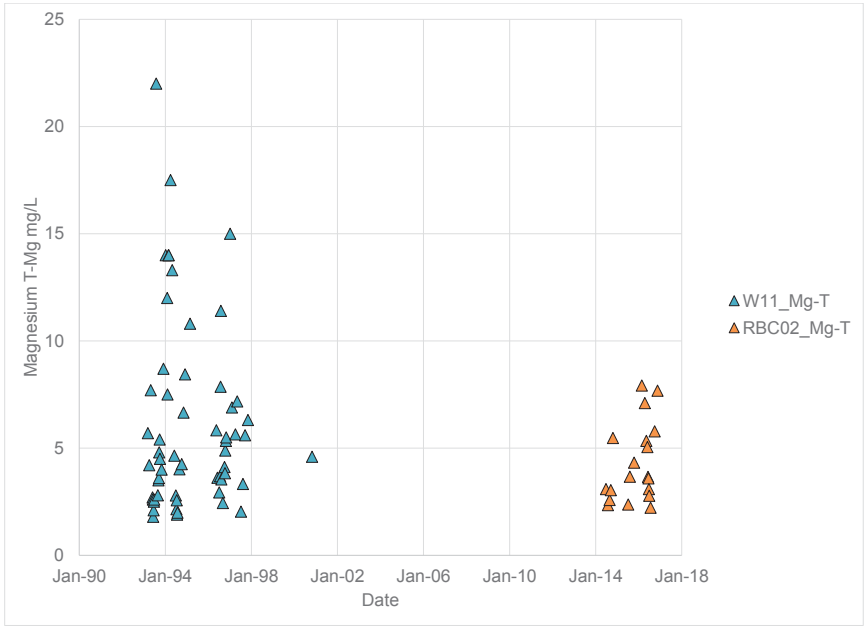


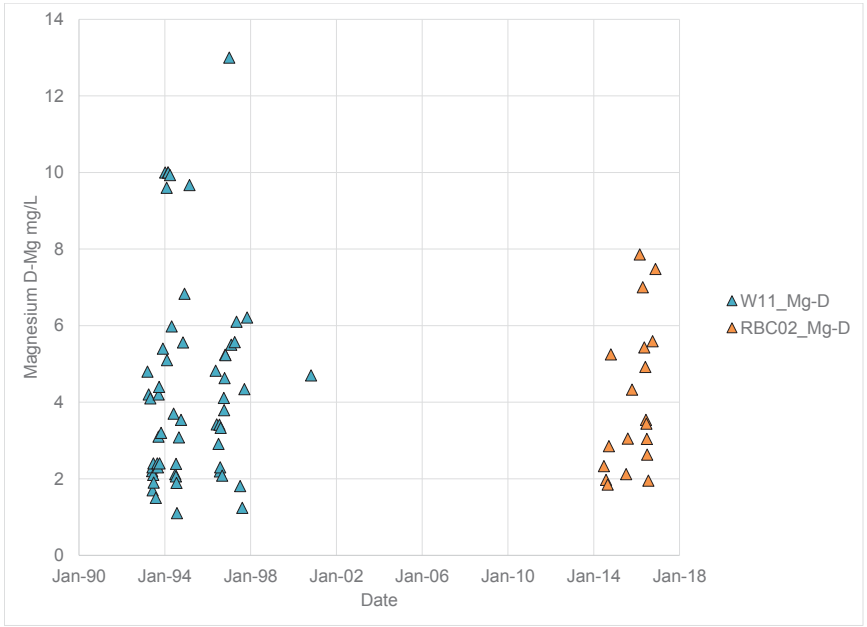


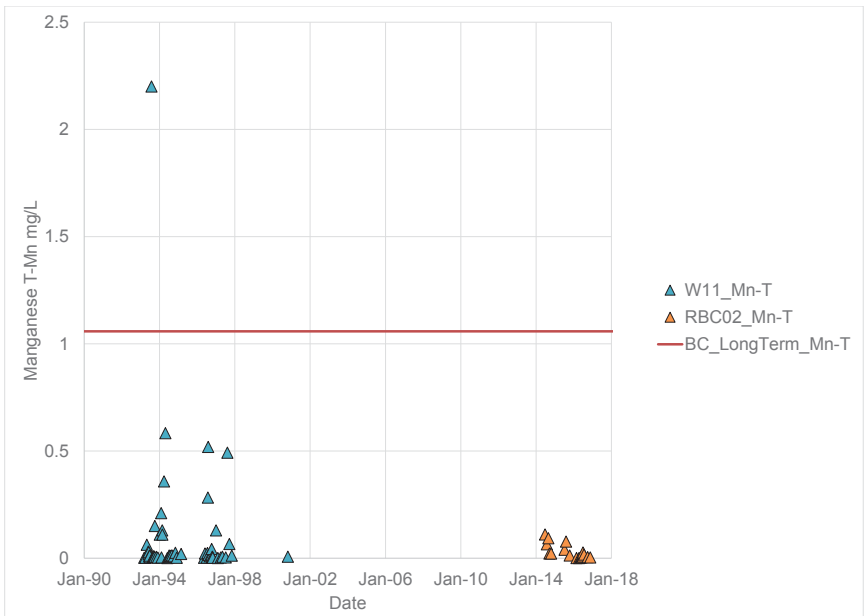


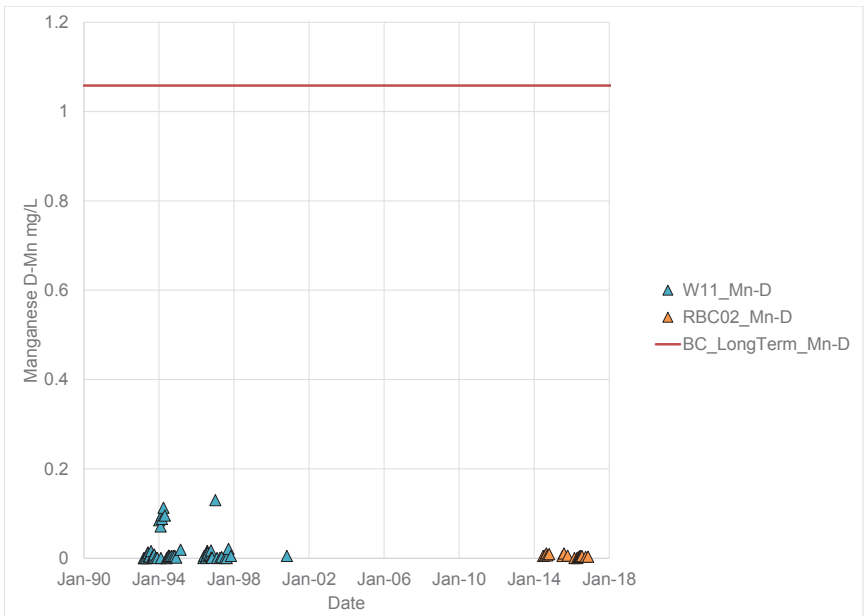


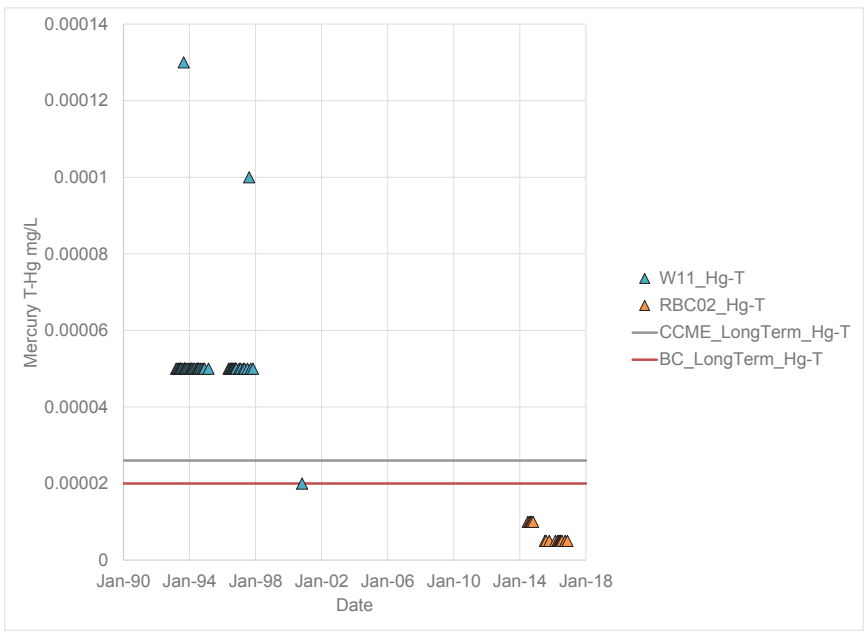
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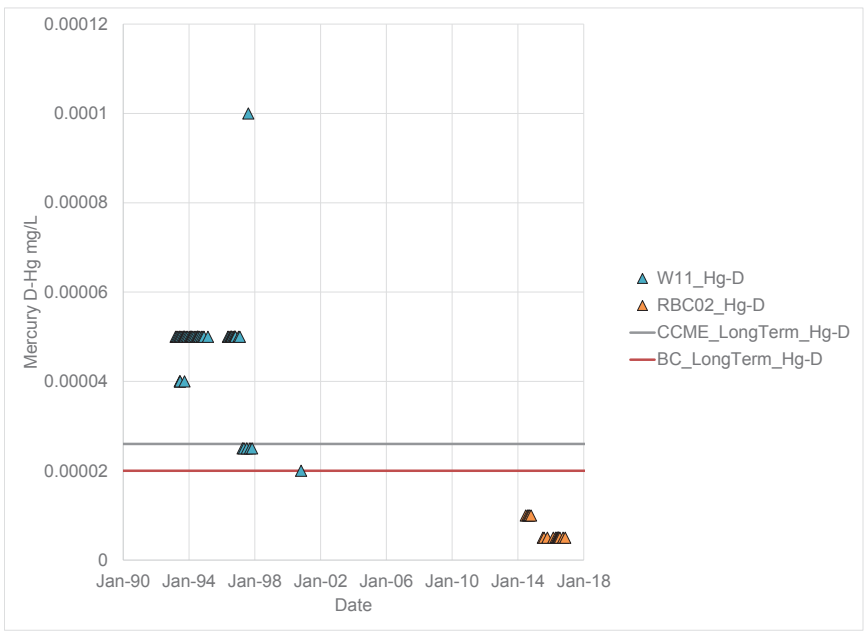


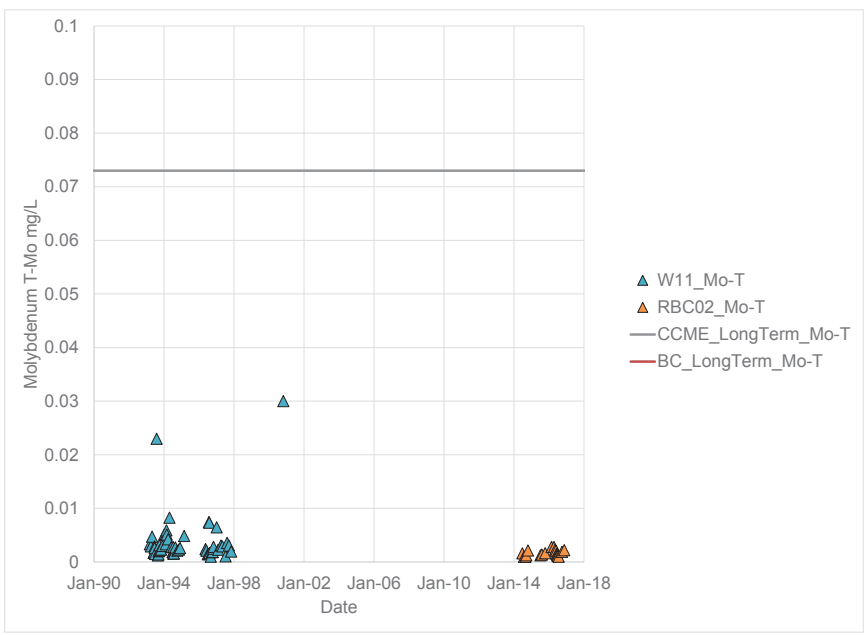


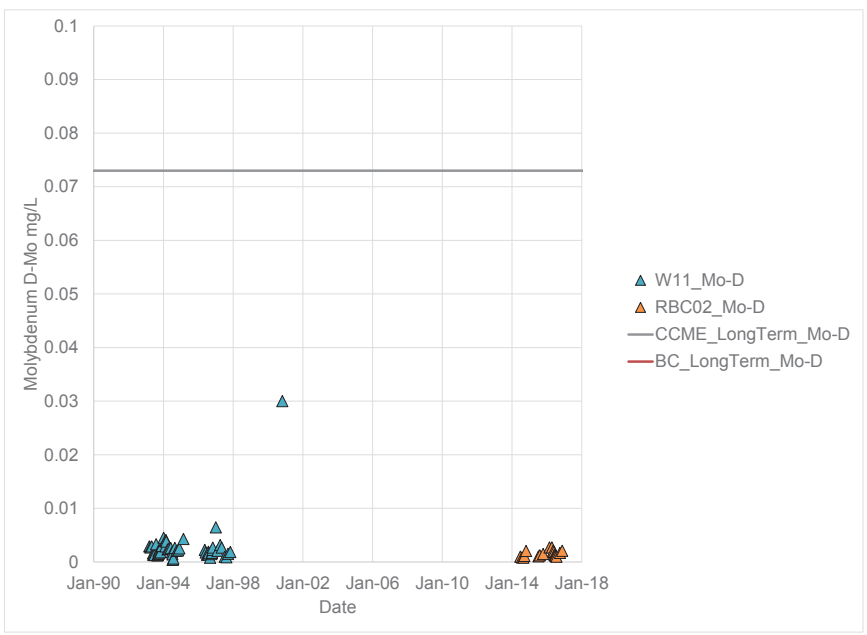




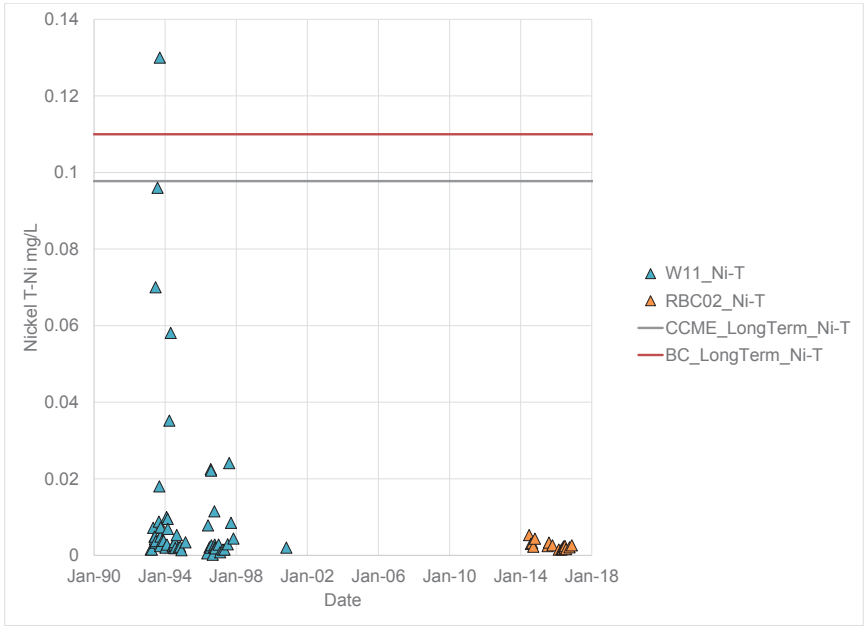


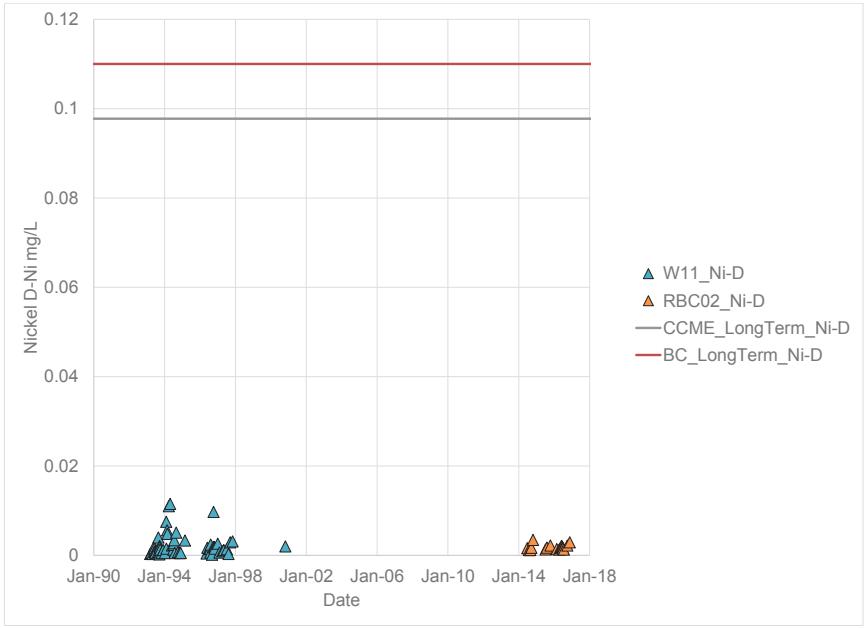


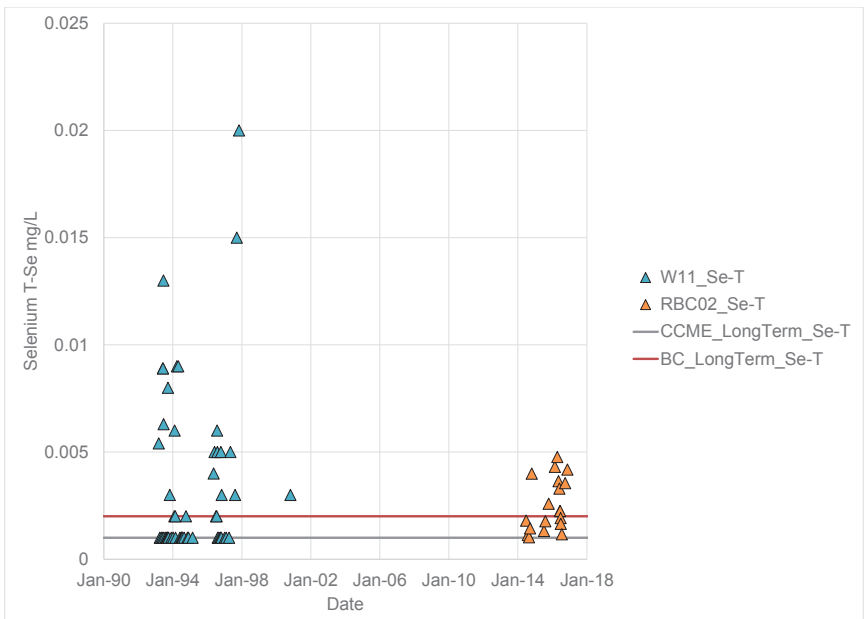


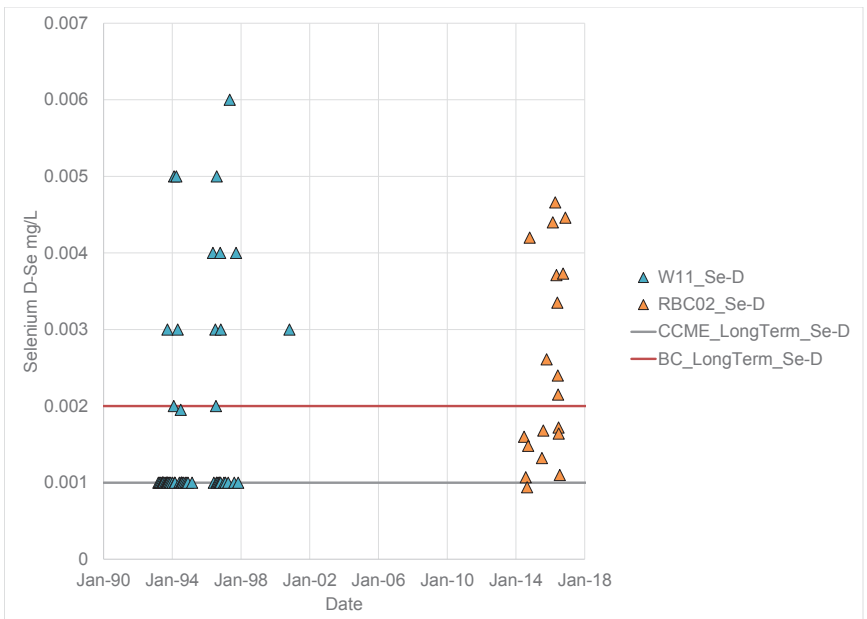


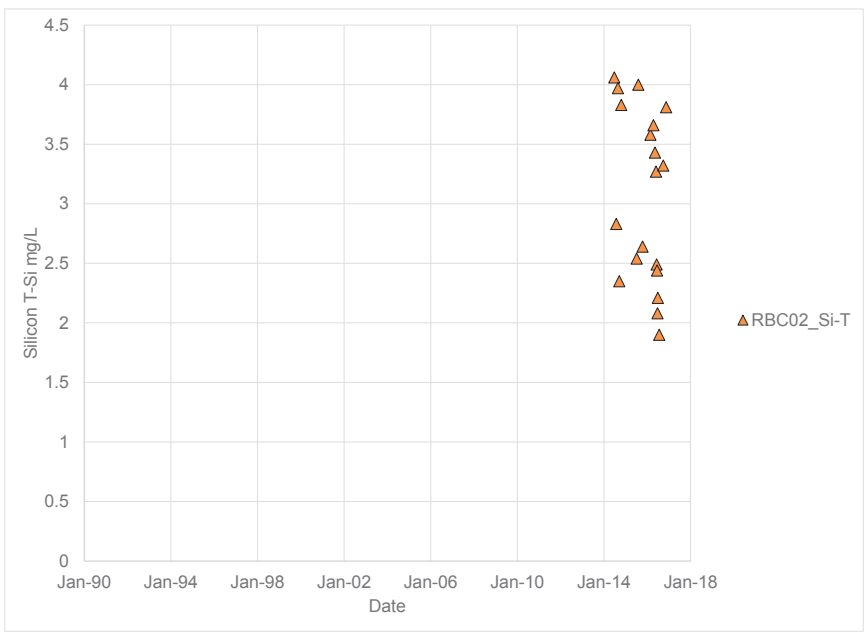
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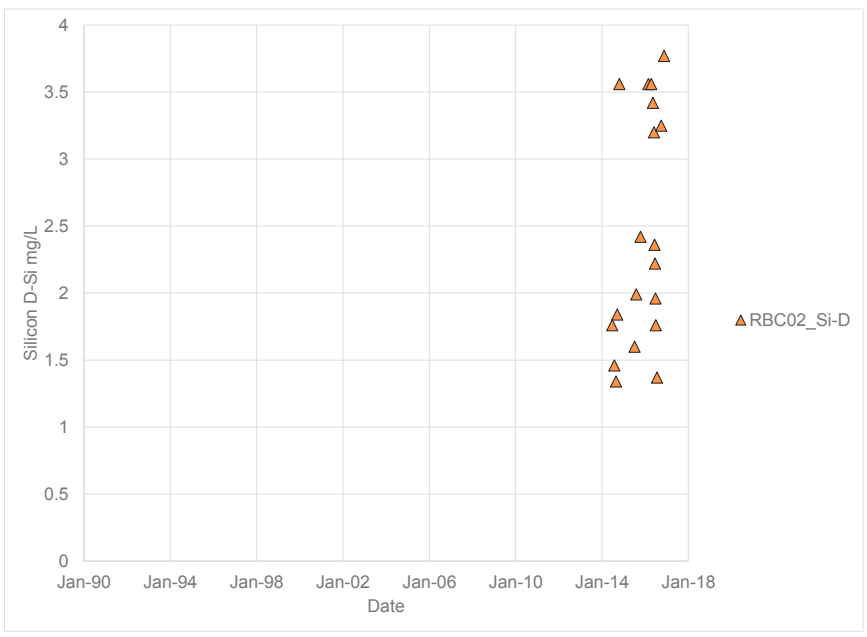


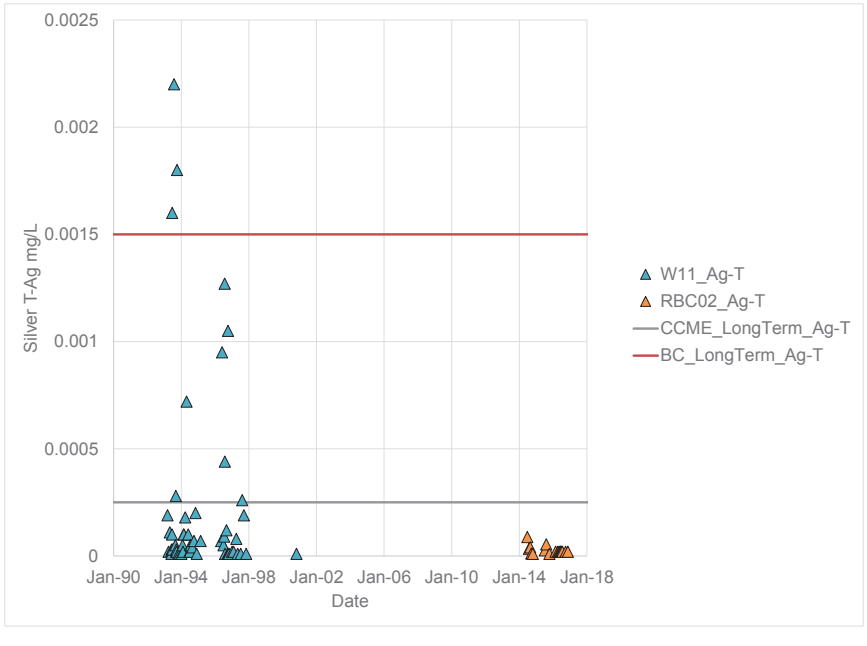


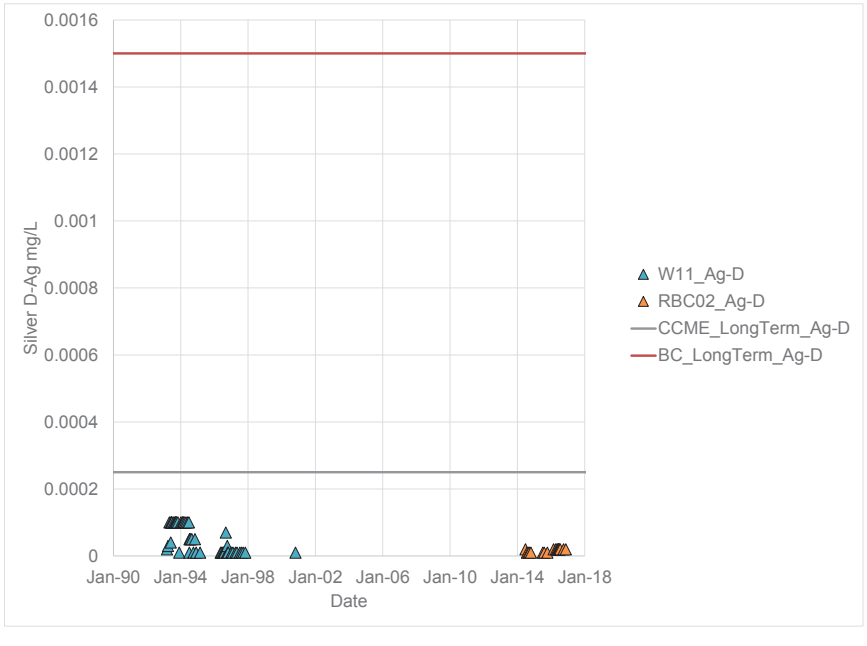




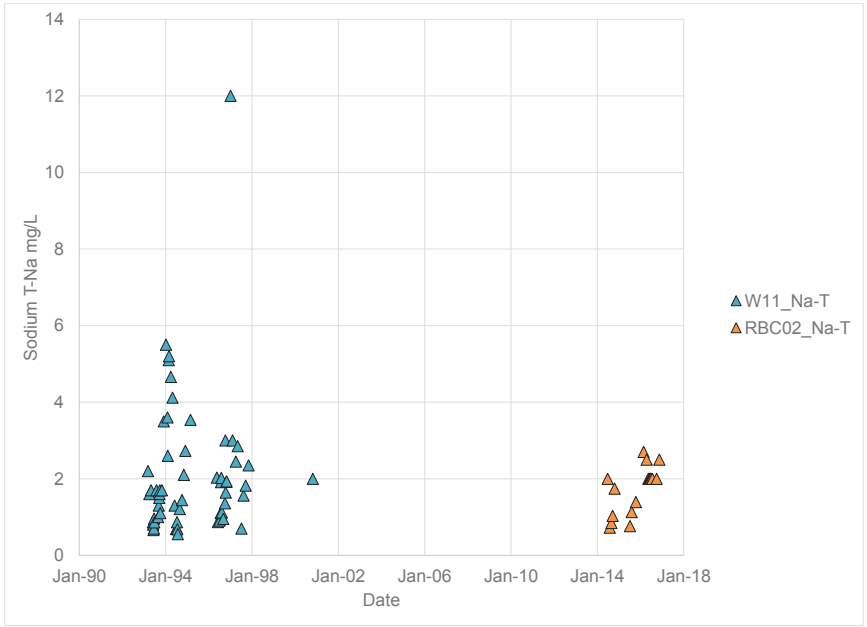


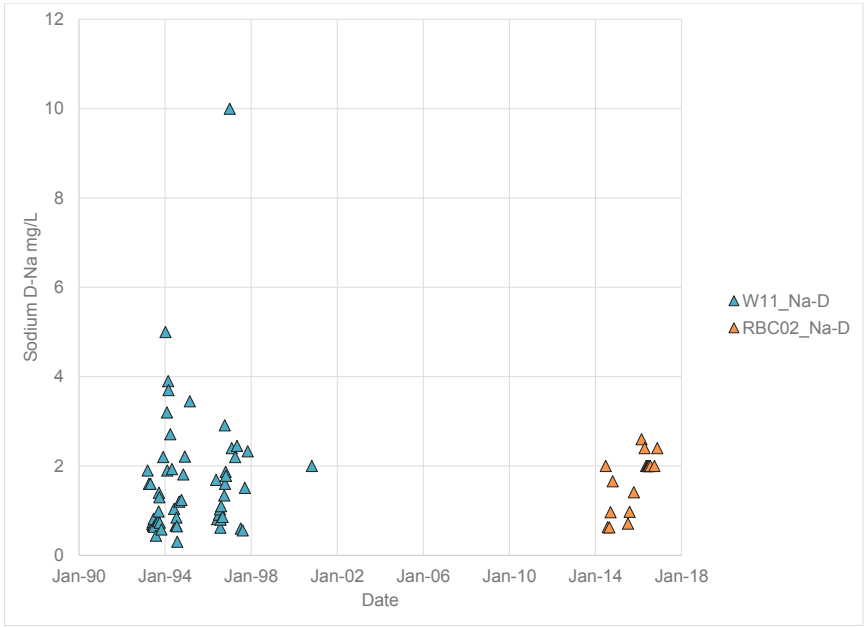


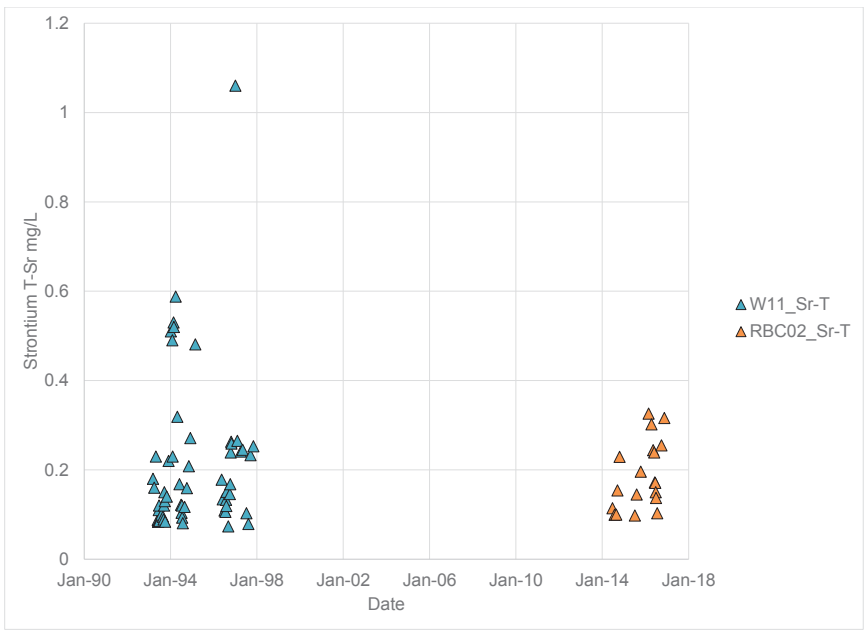


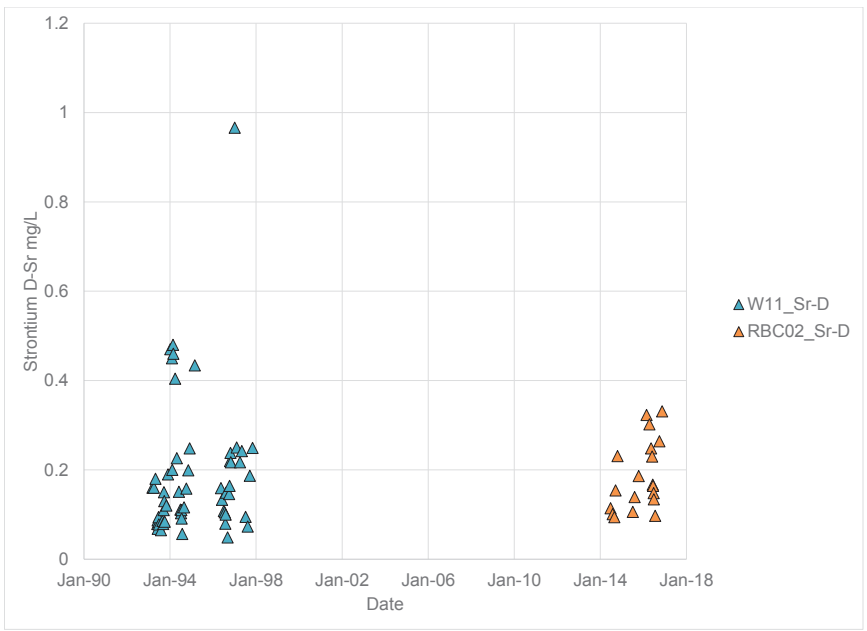


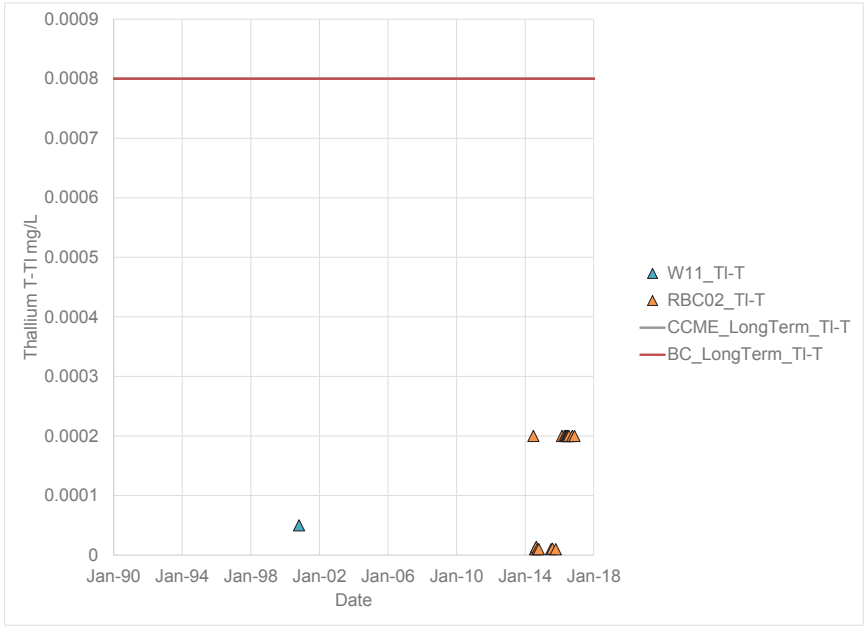
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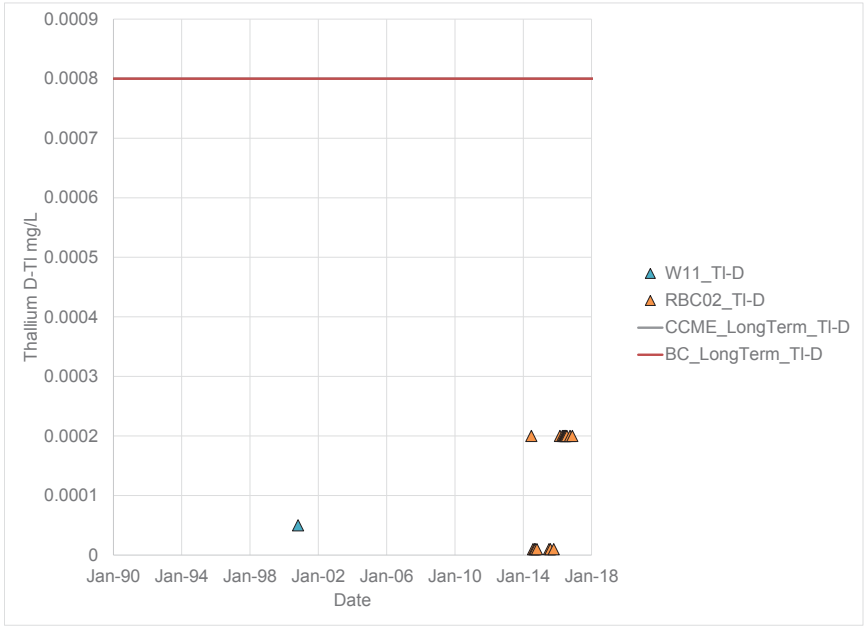


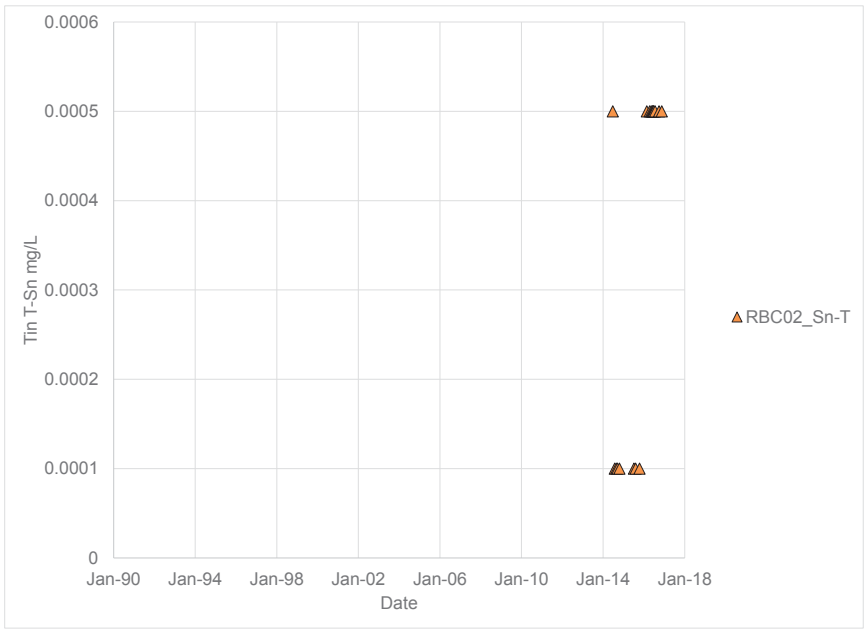


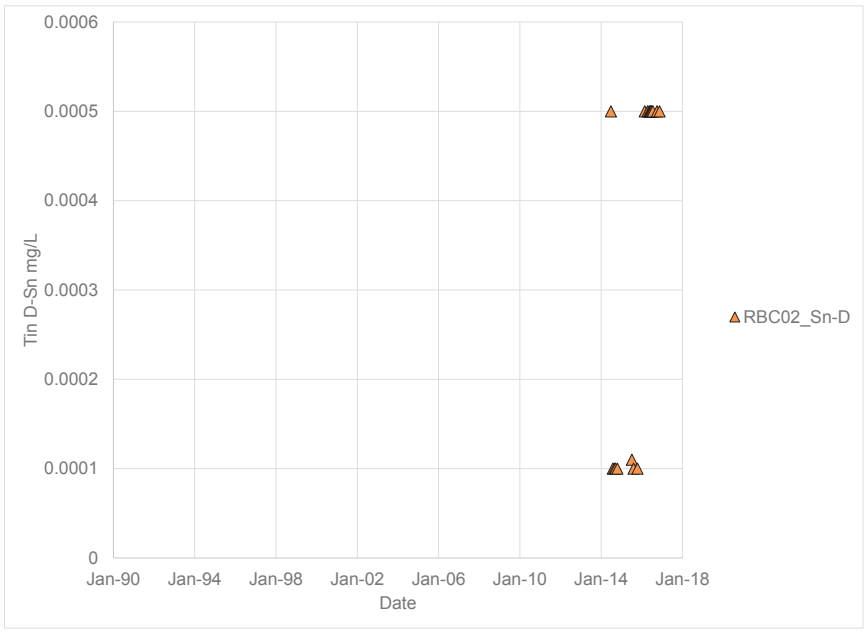




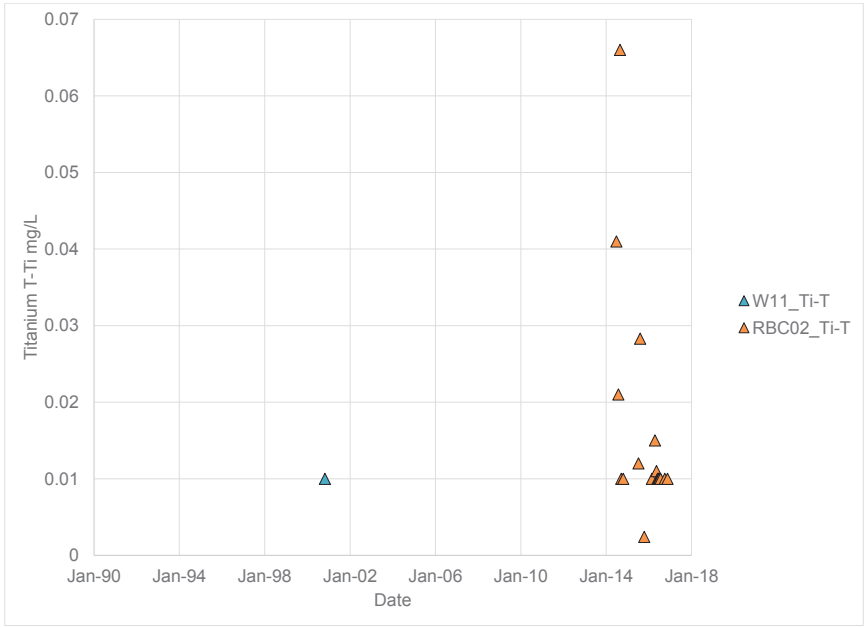


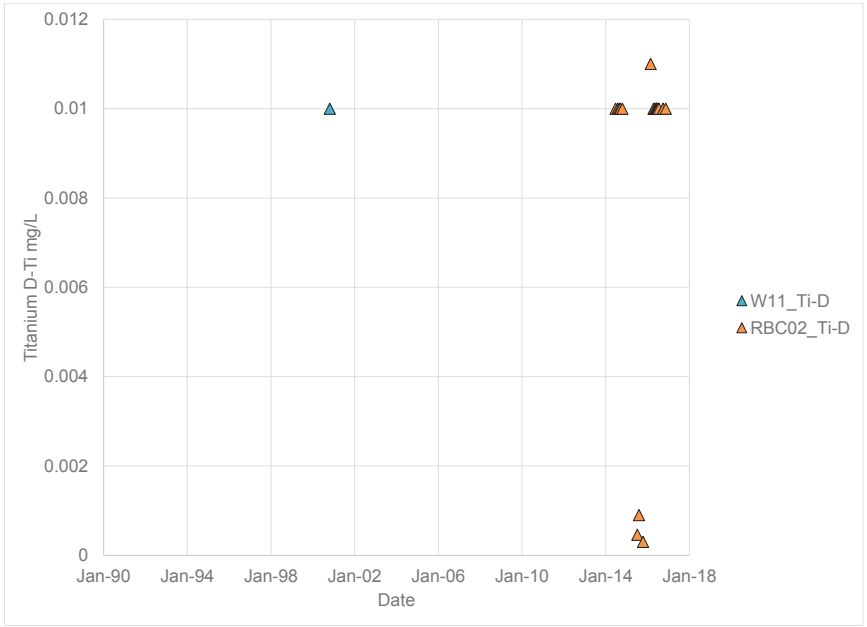


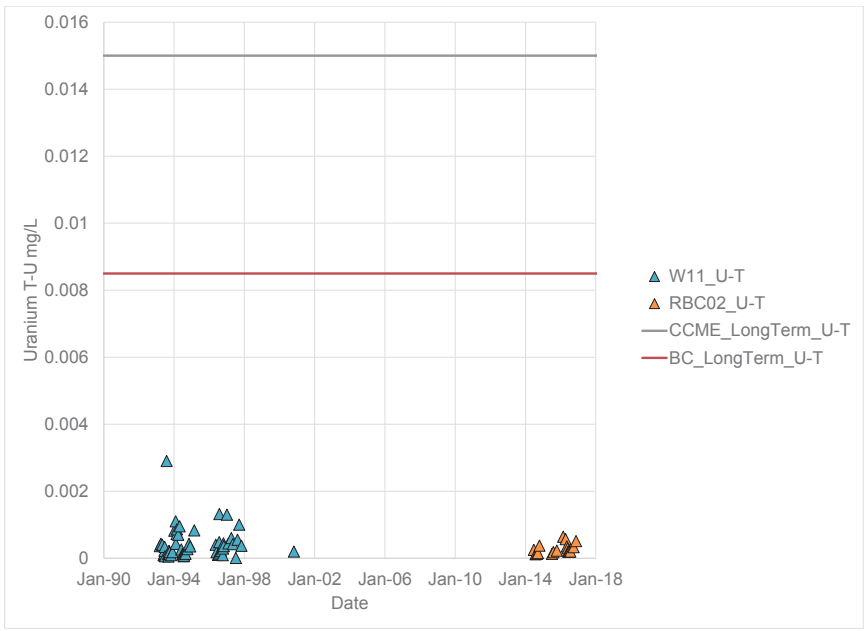


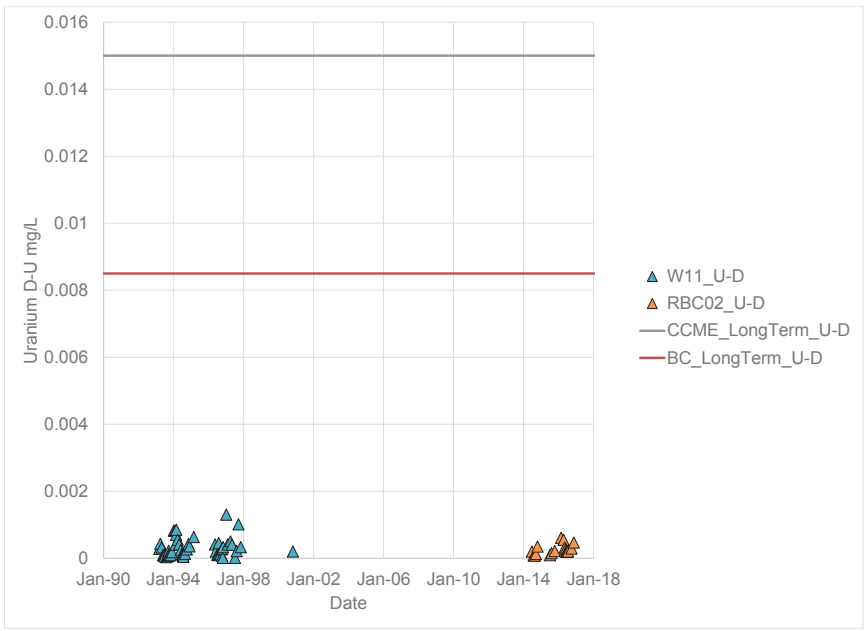


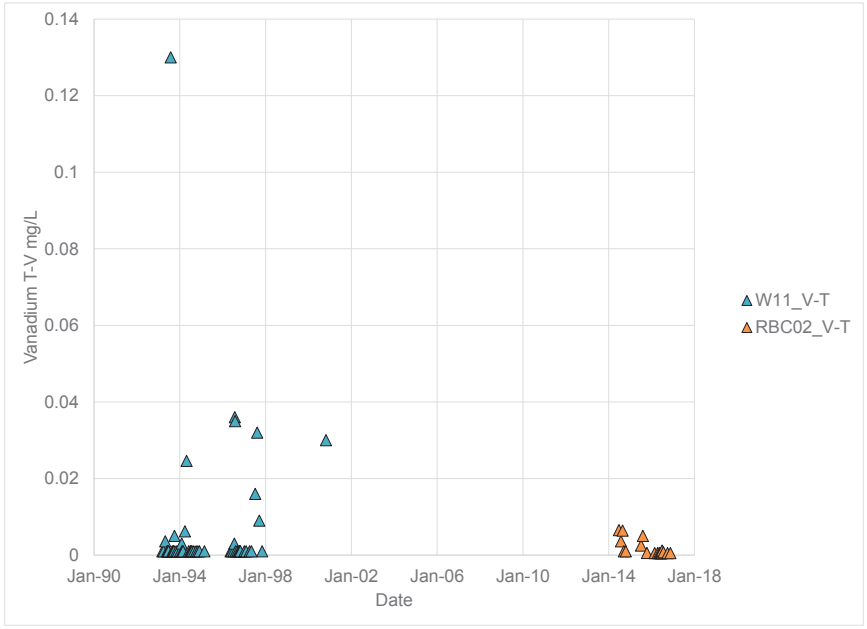
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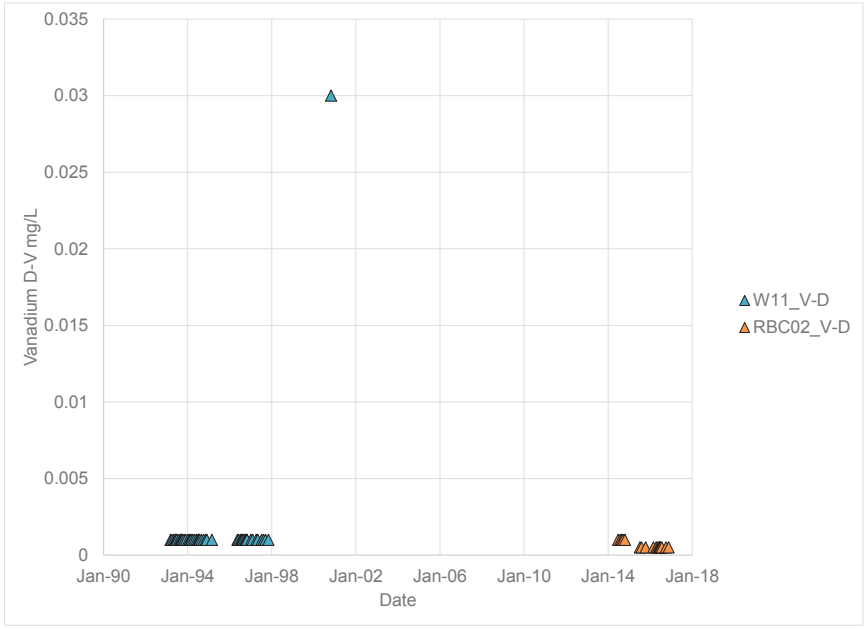


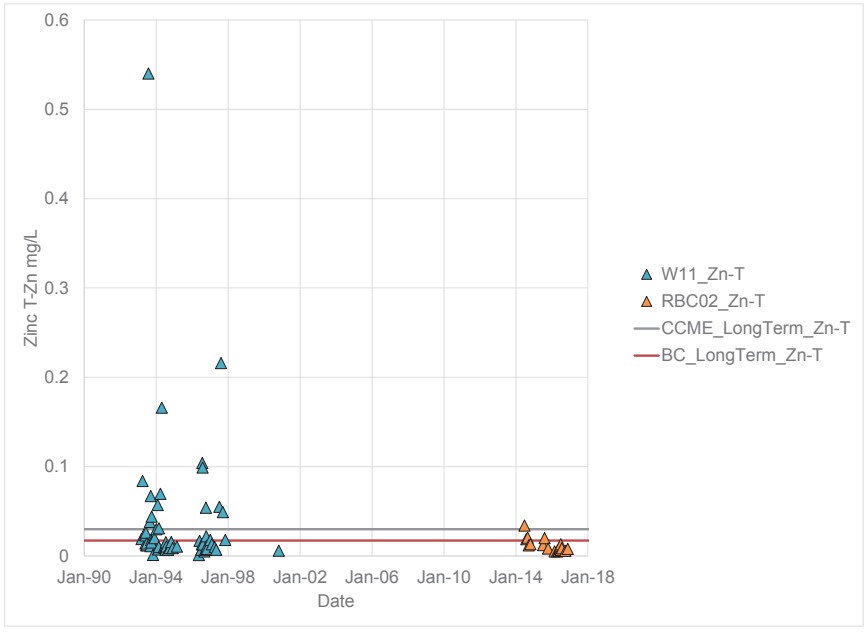


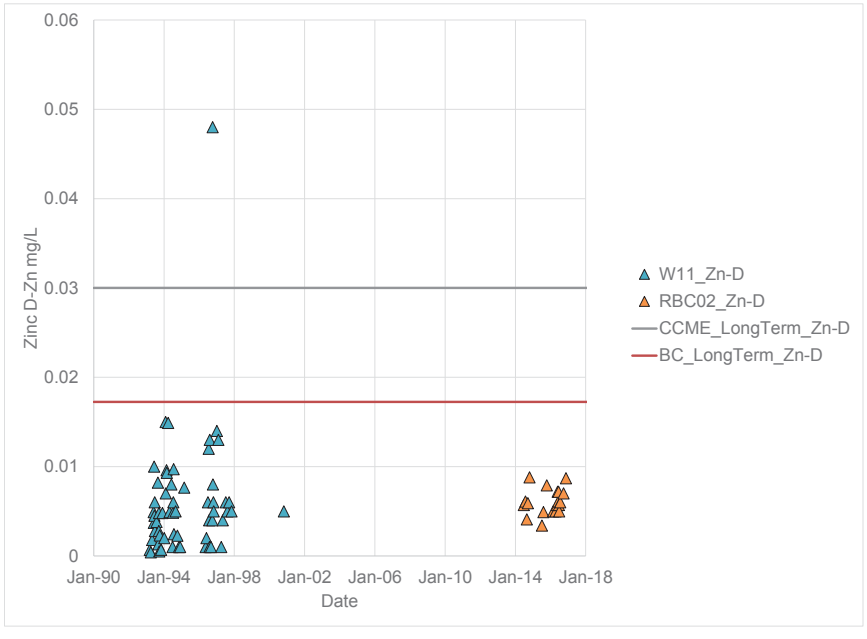








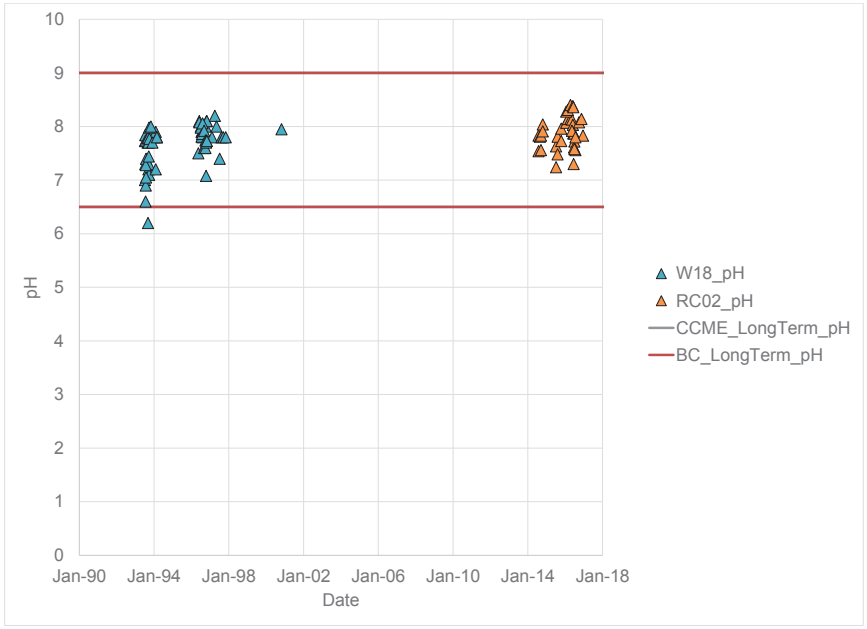


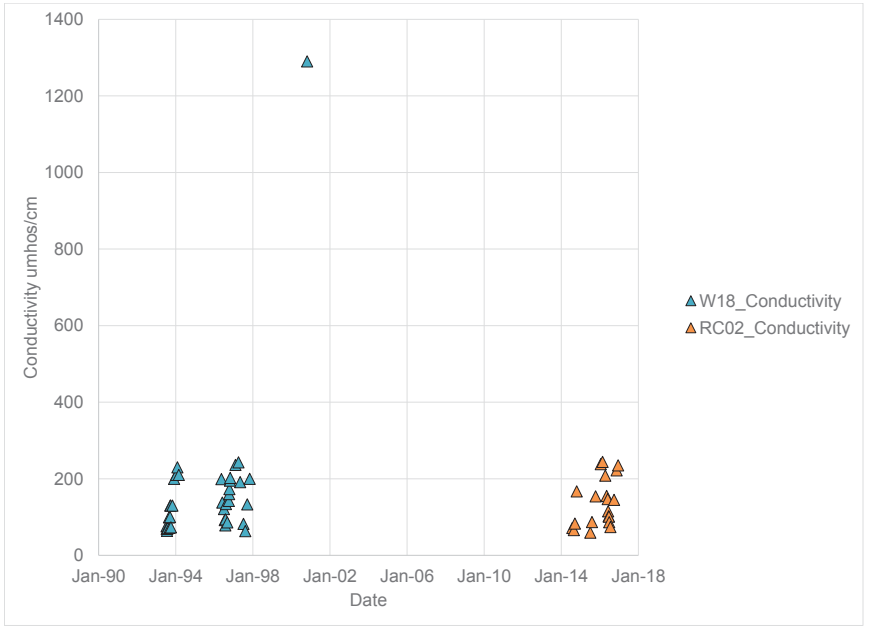


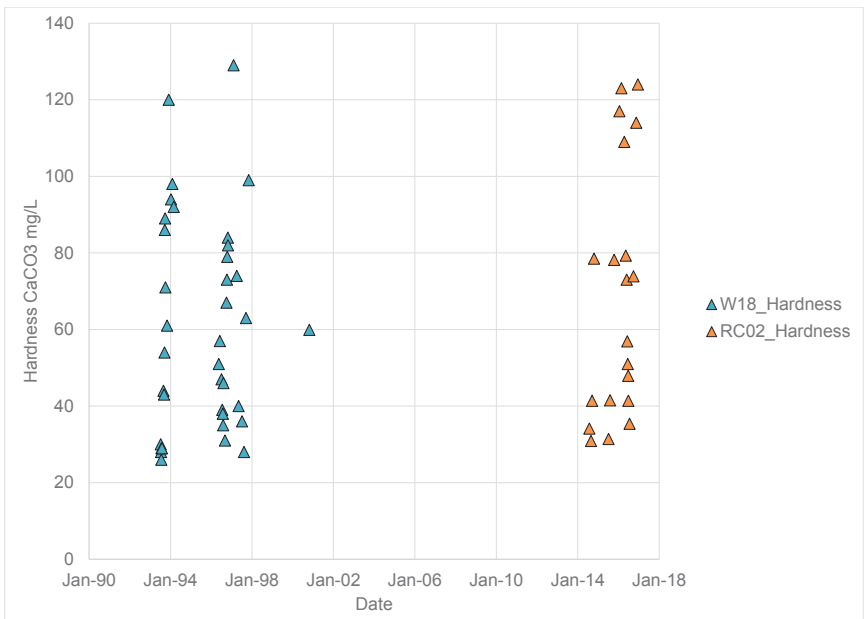
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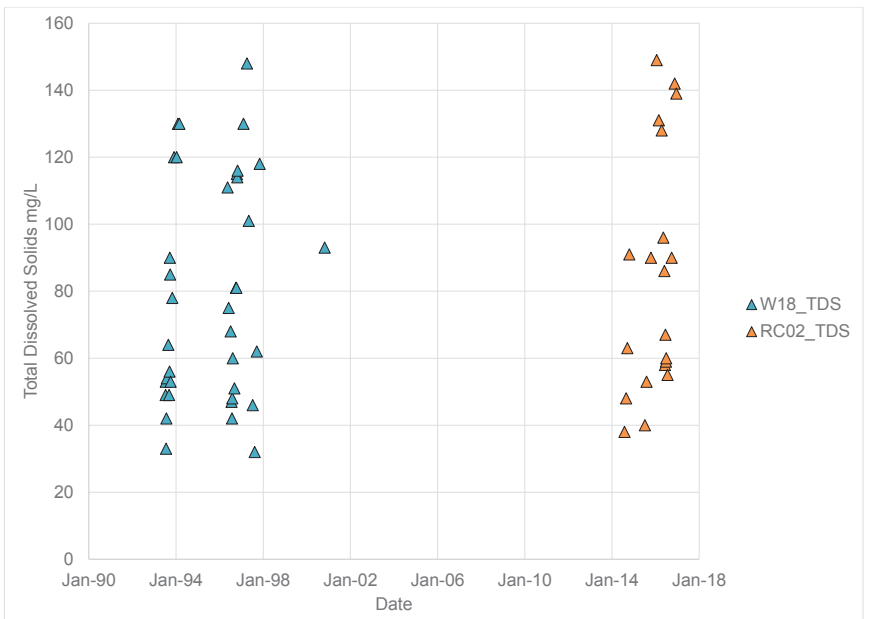
Roosevelt Creek

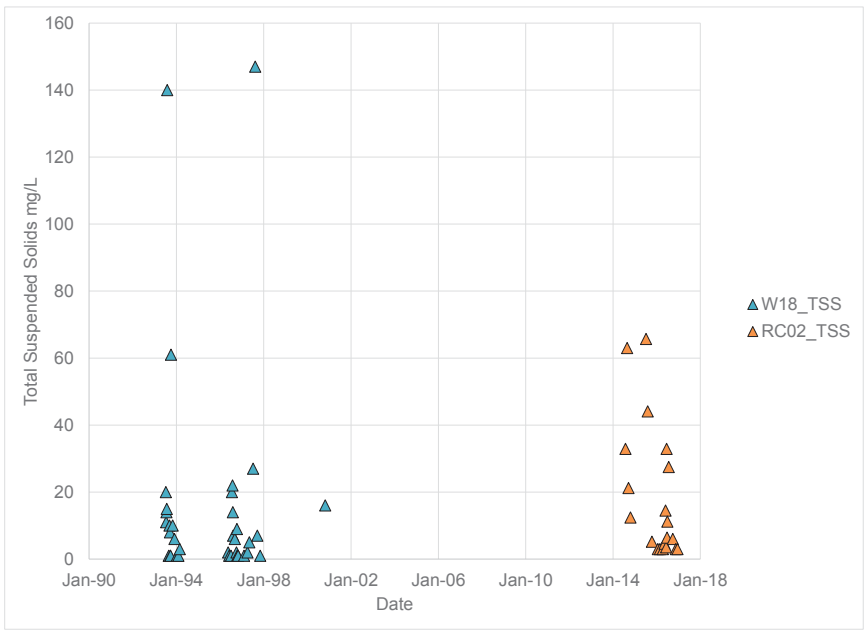
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

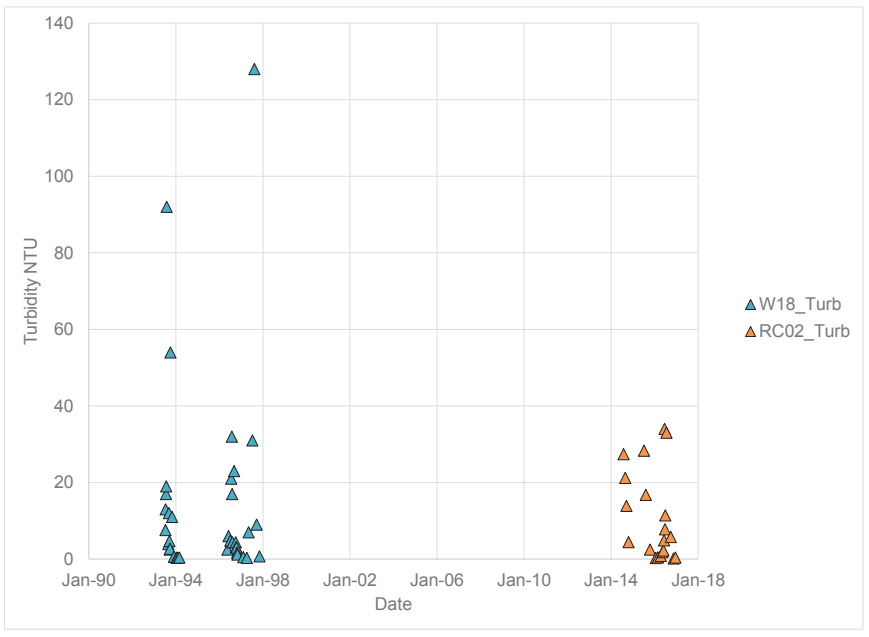


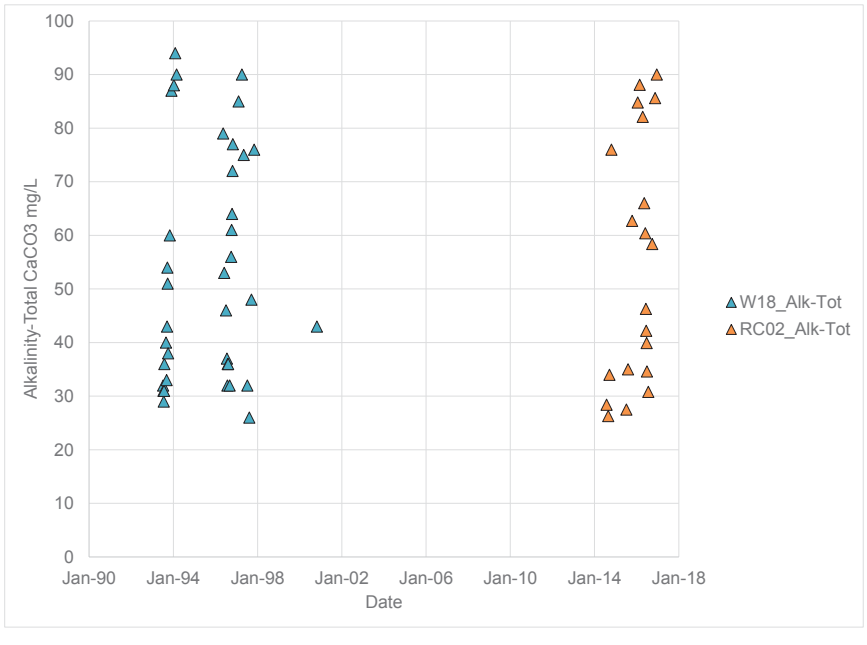


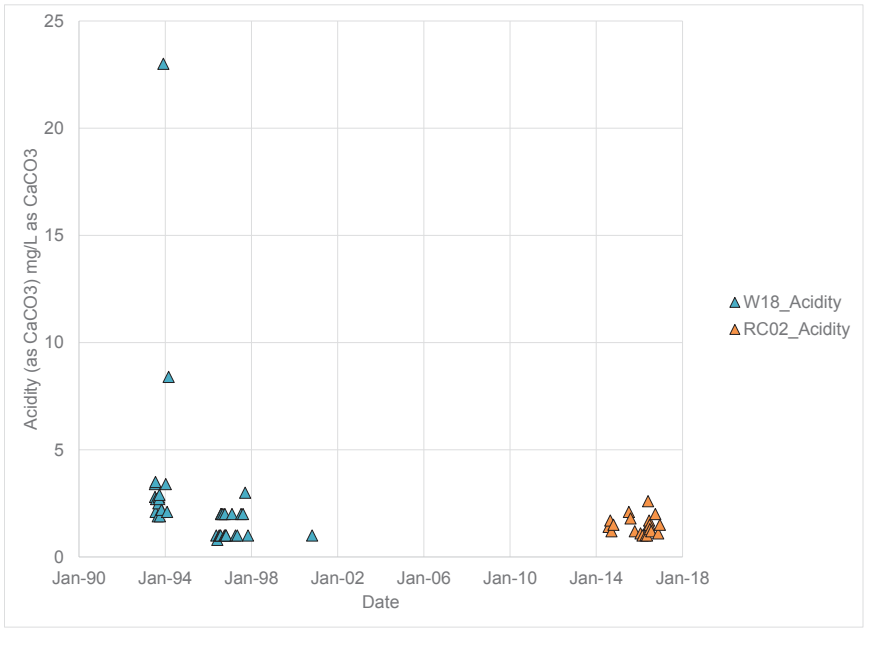






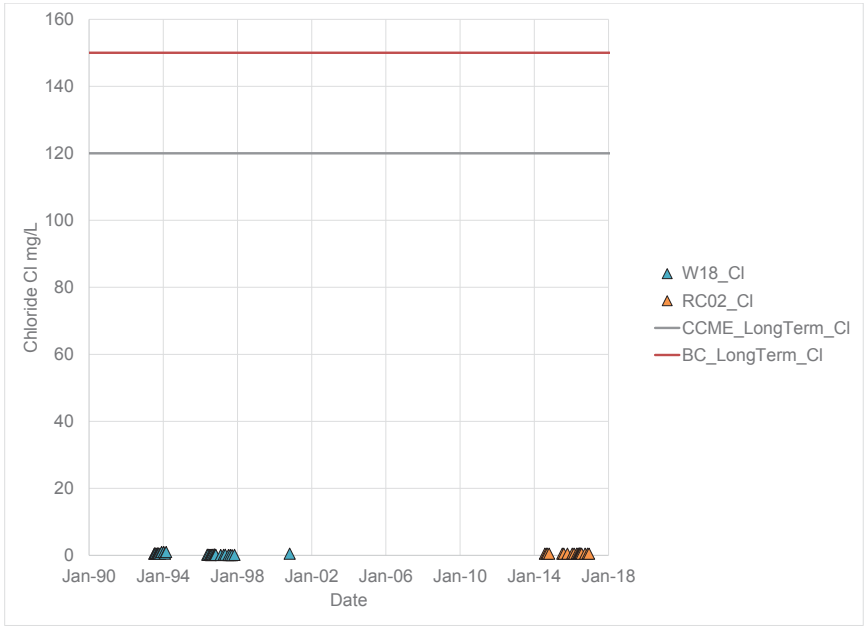


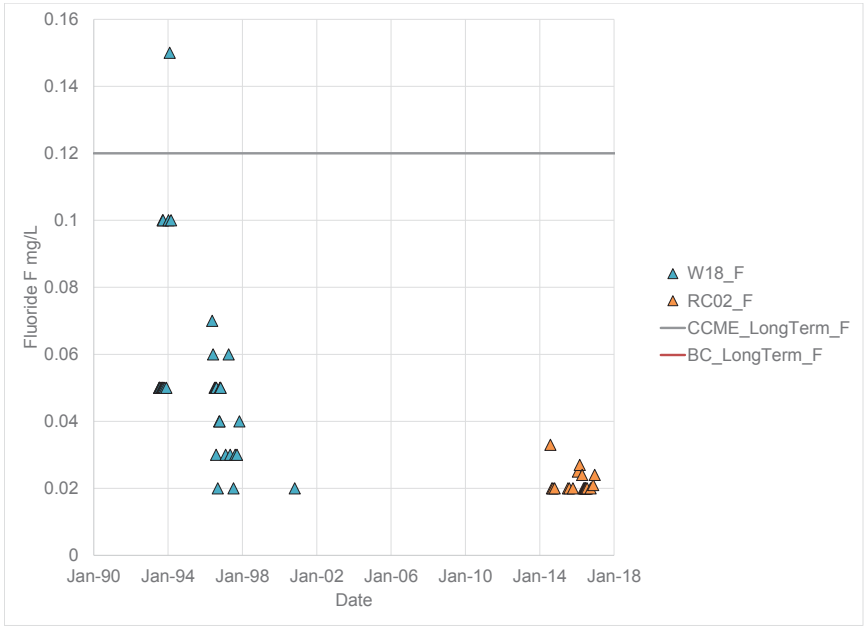


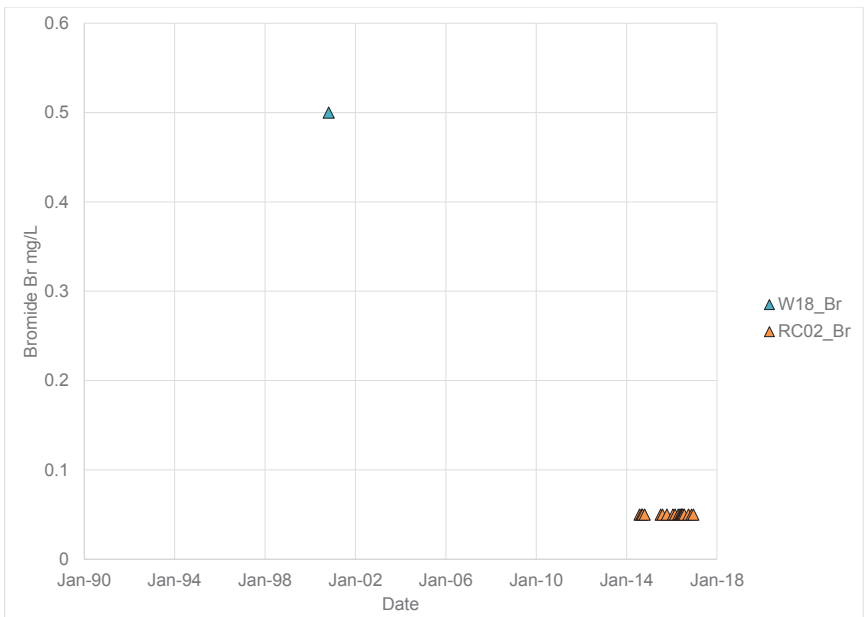


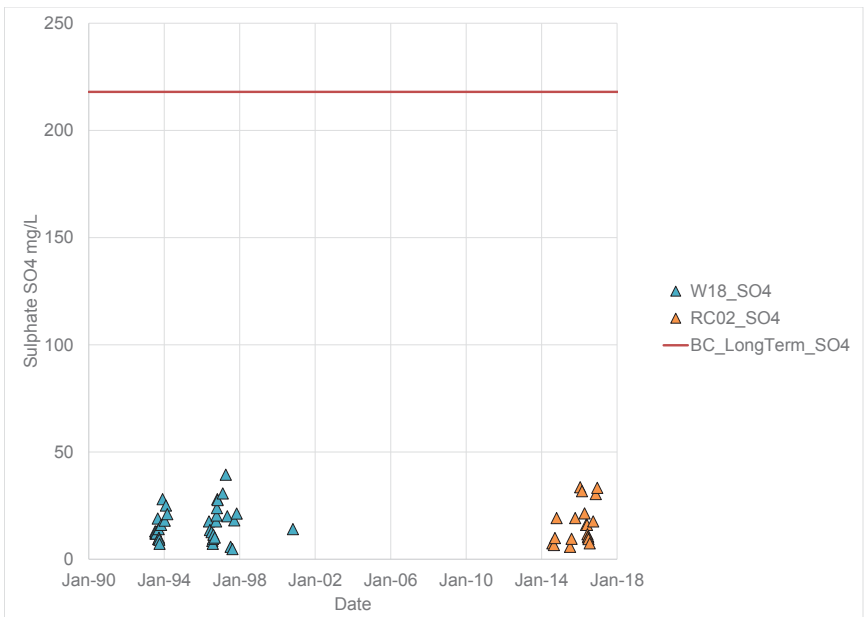
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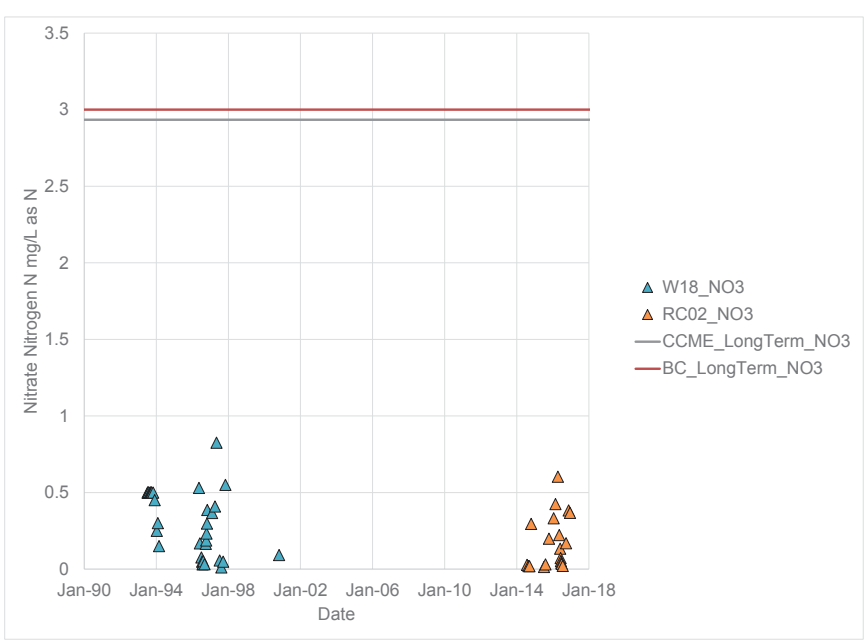
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

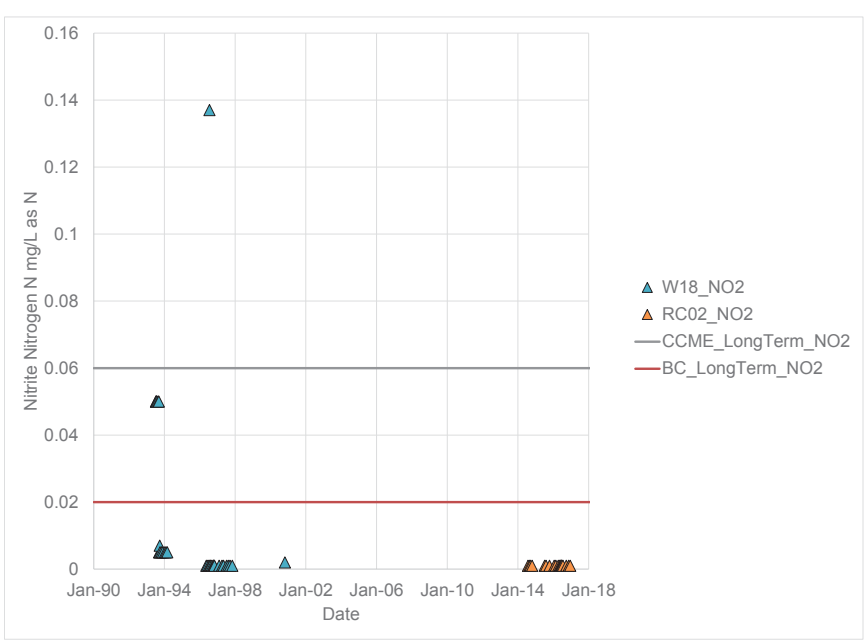


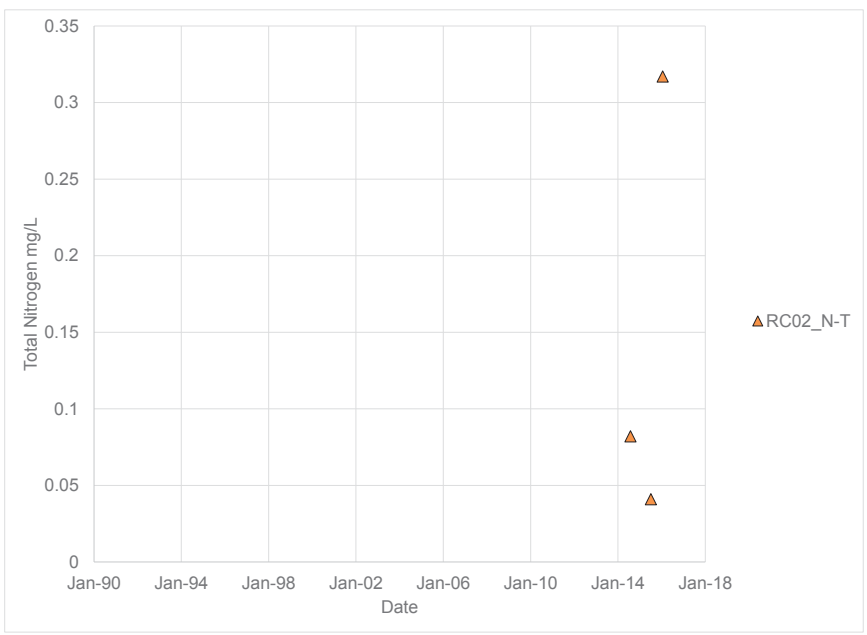


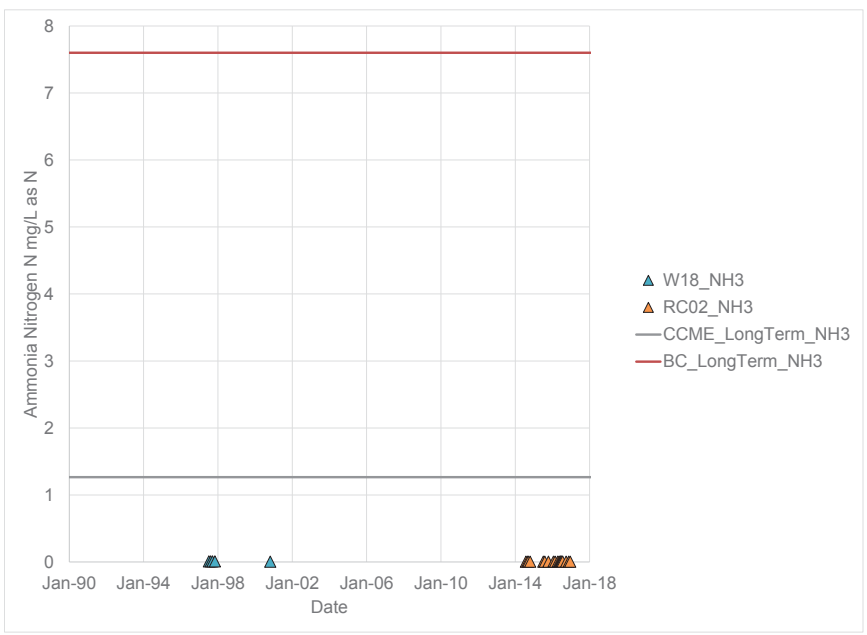






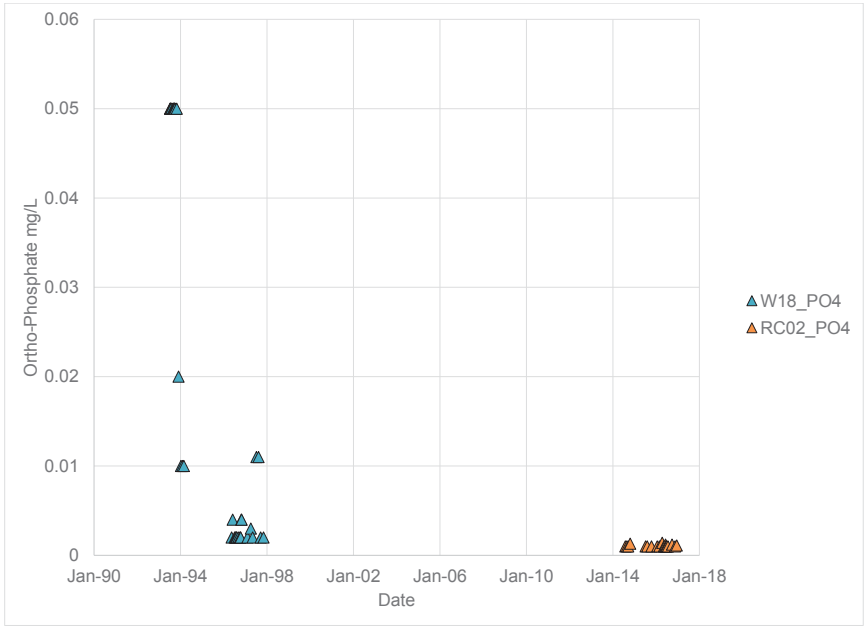


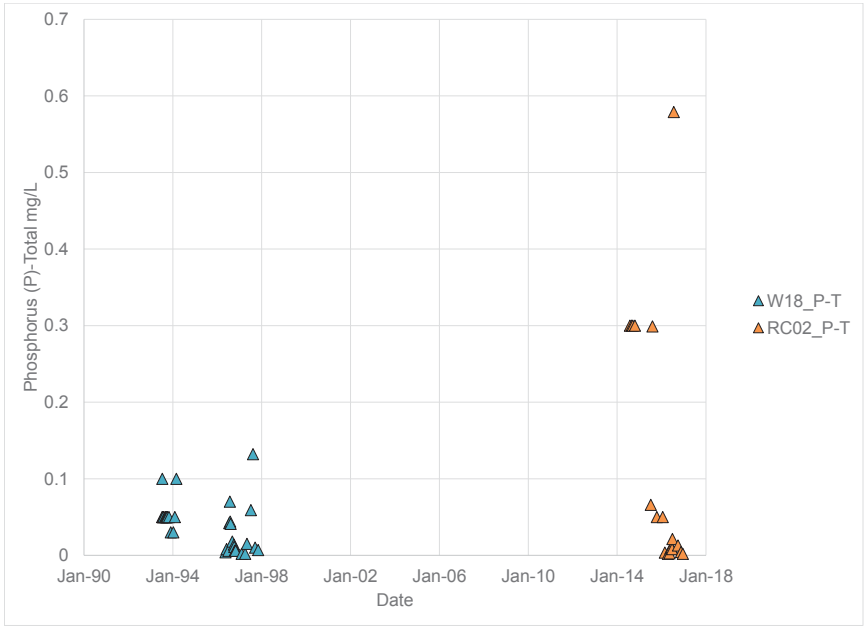


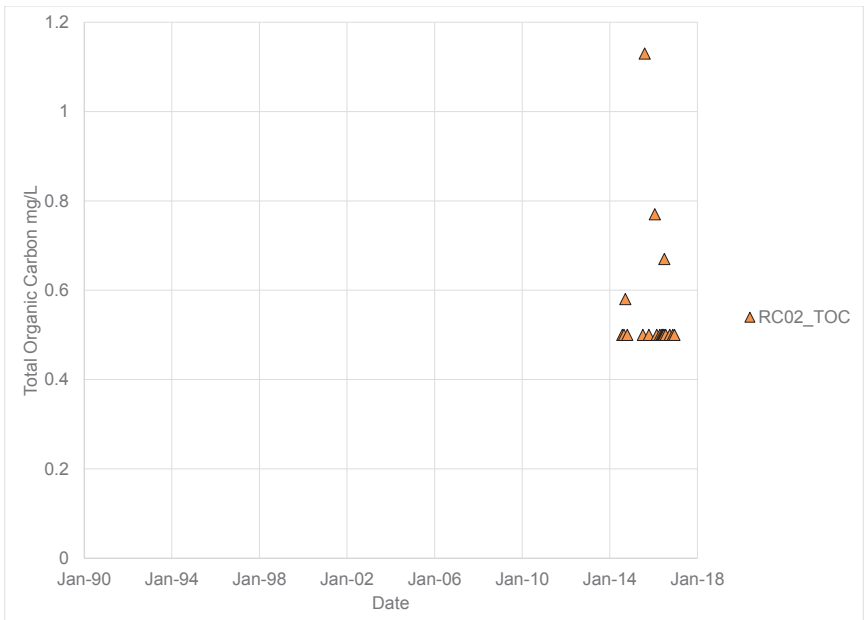


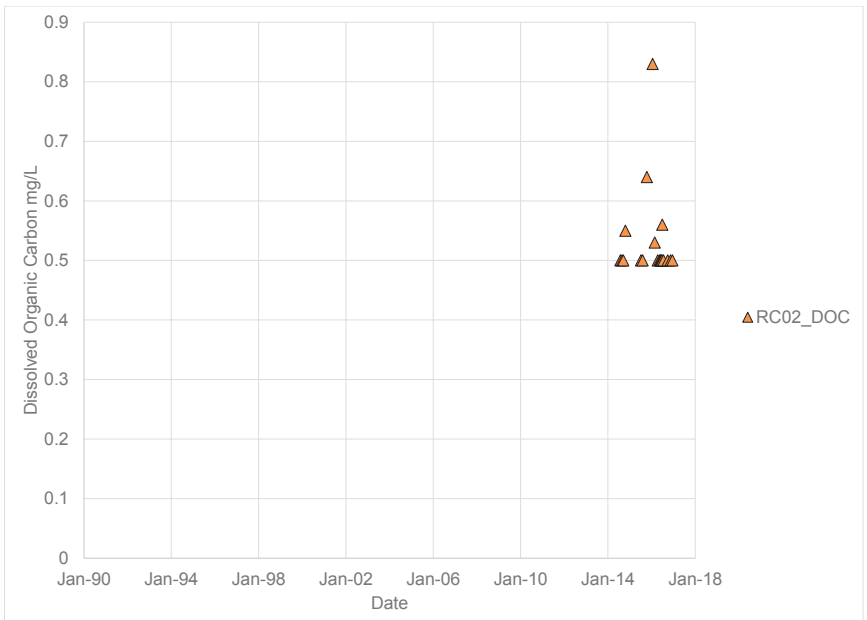
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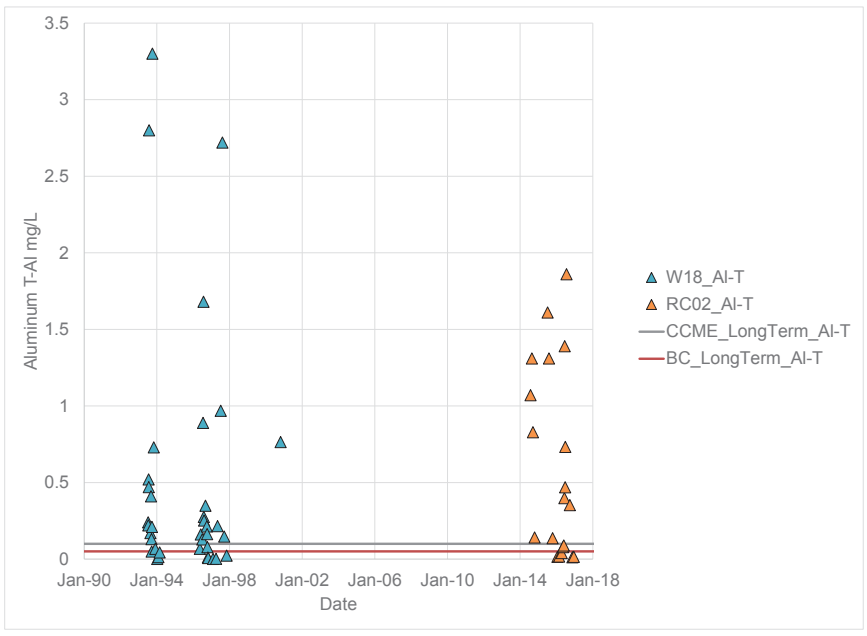
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

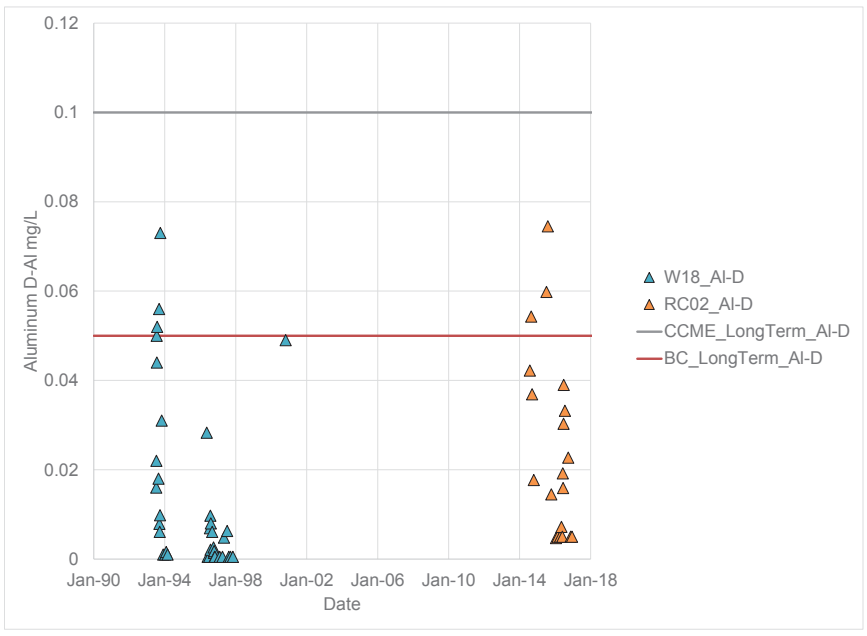


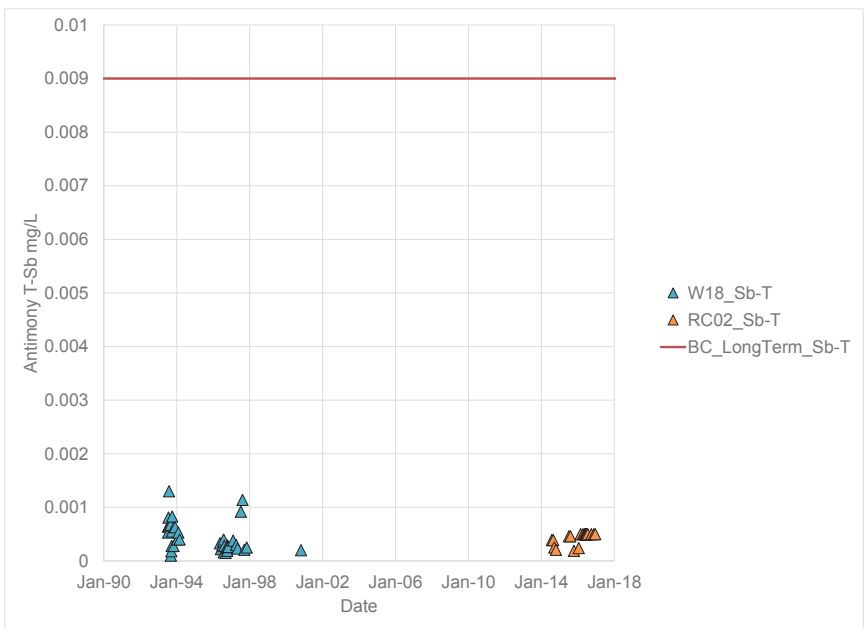


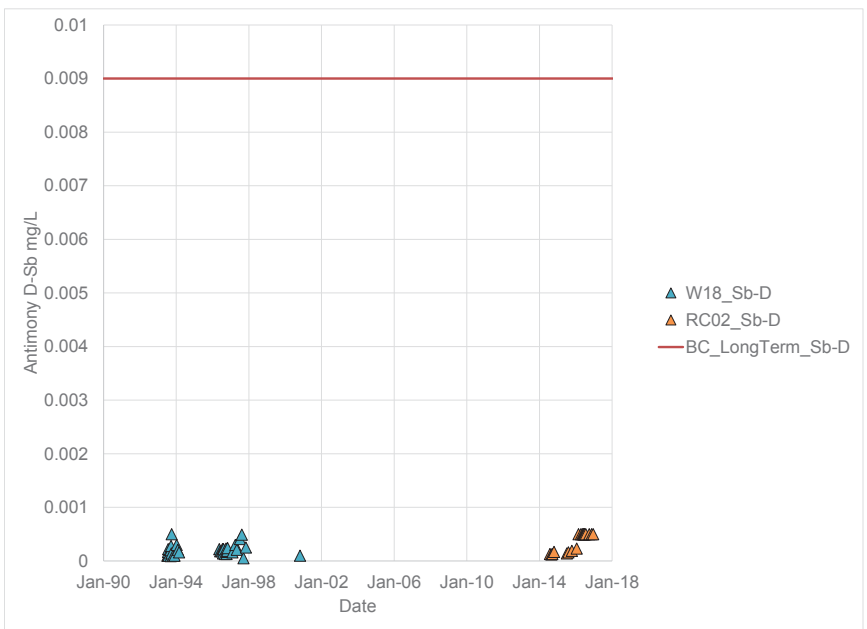






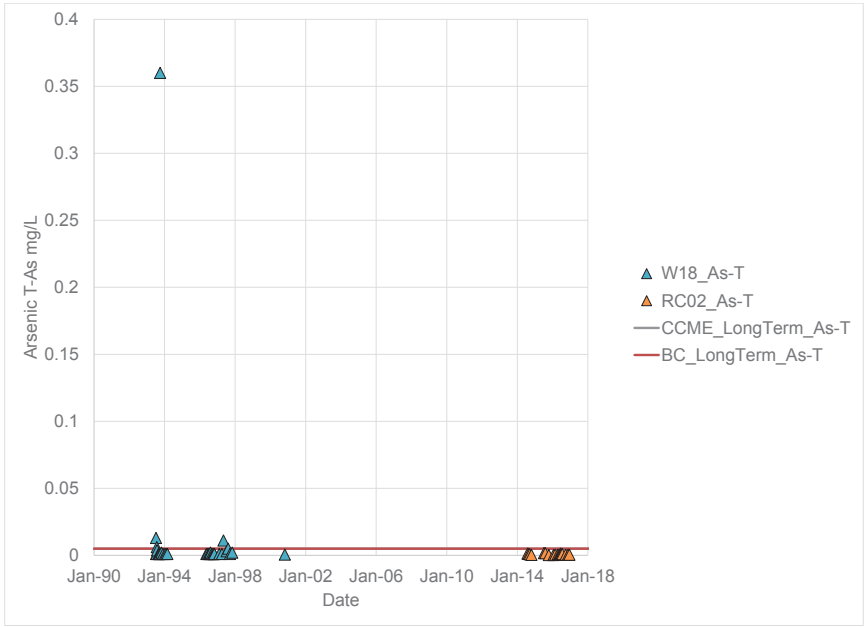


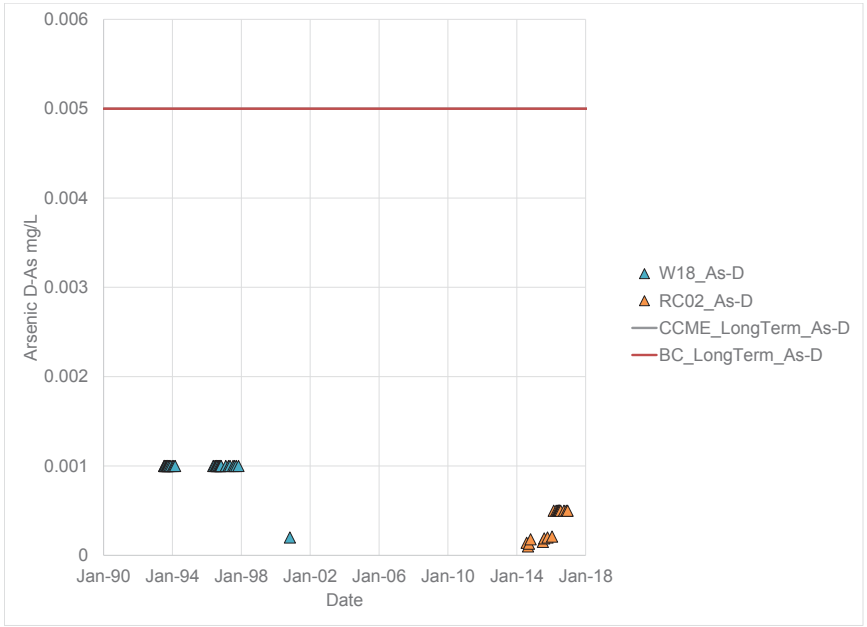


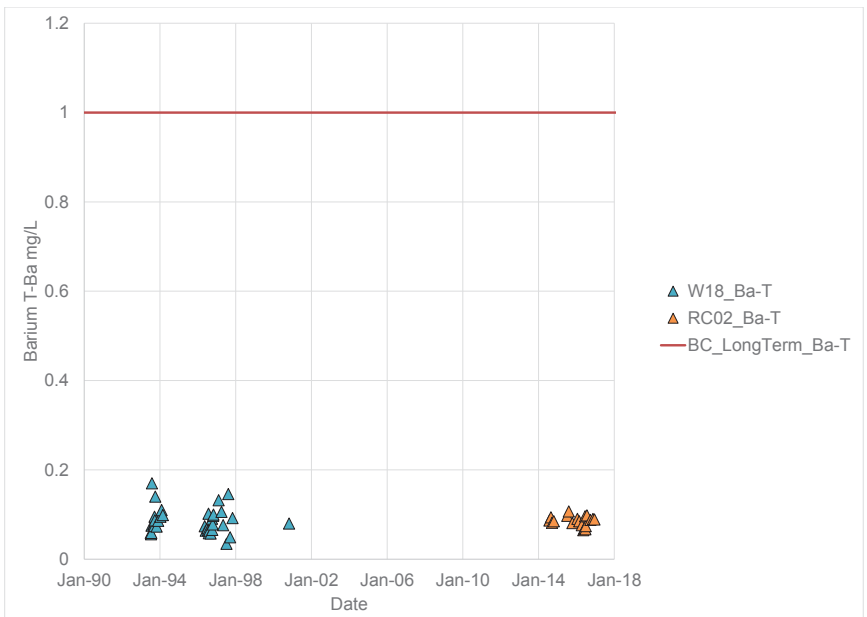


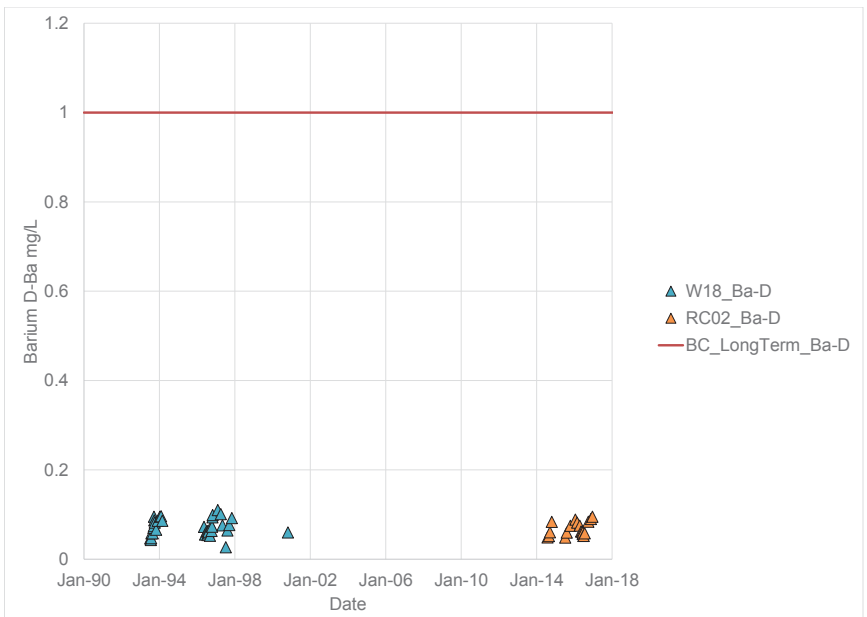
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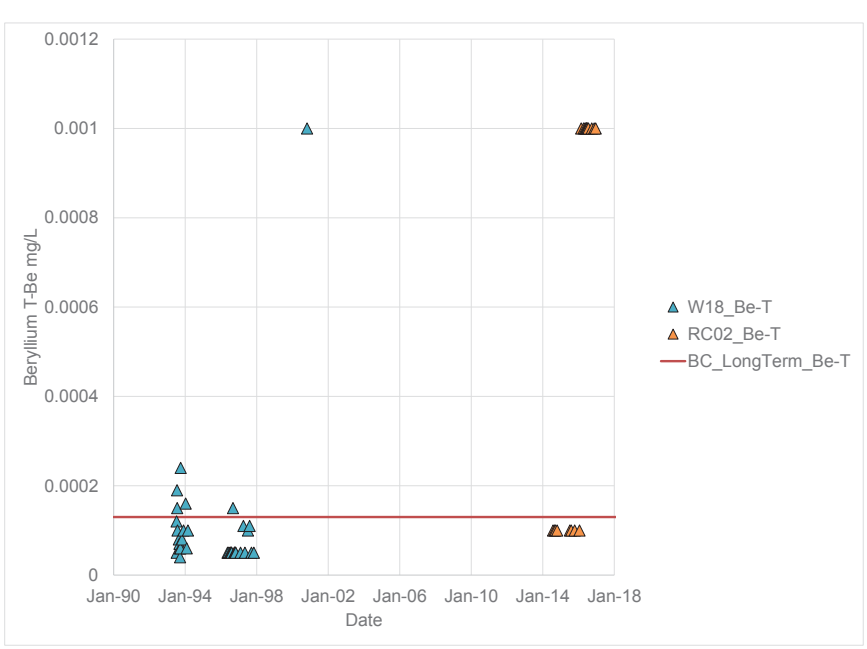
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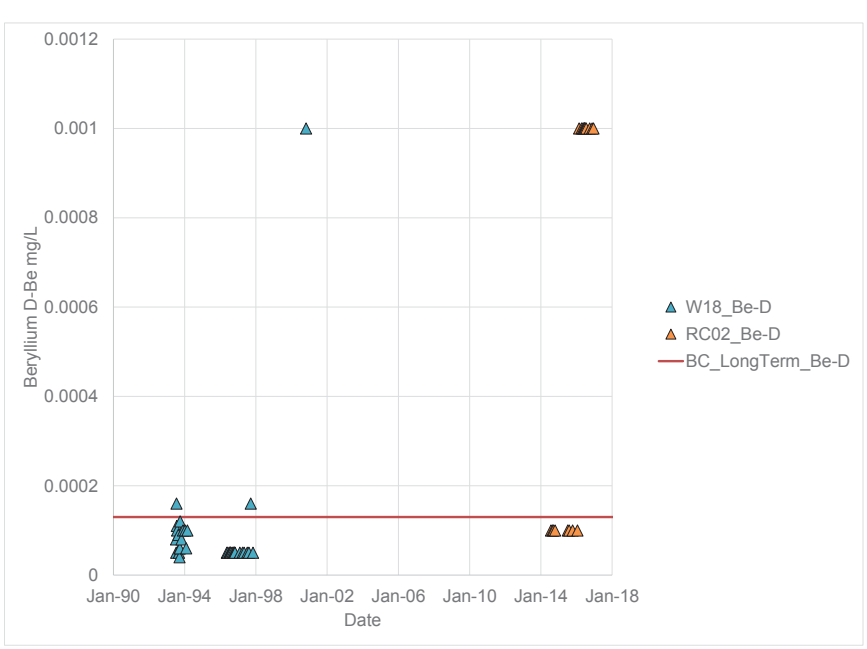


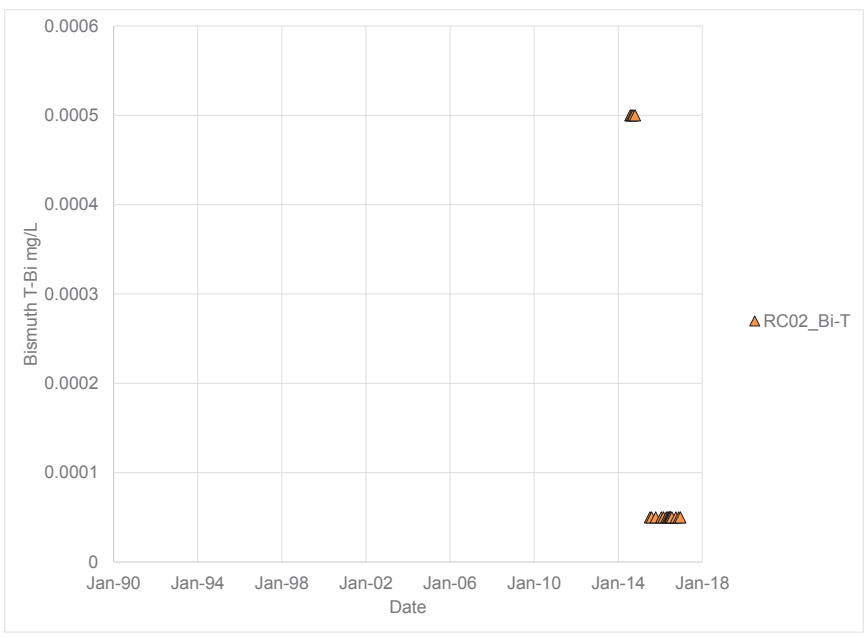


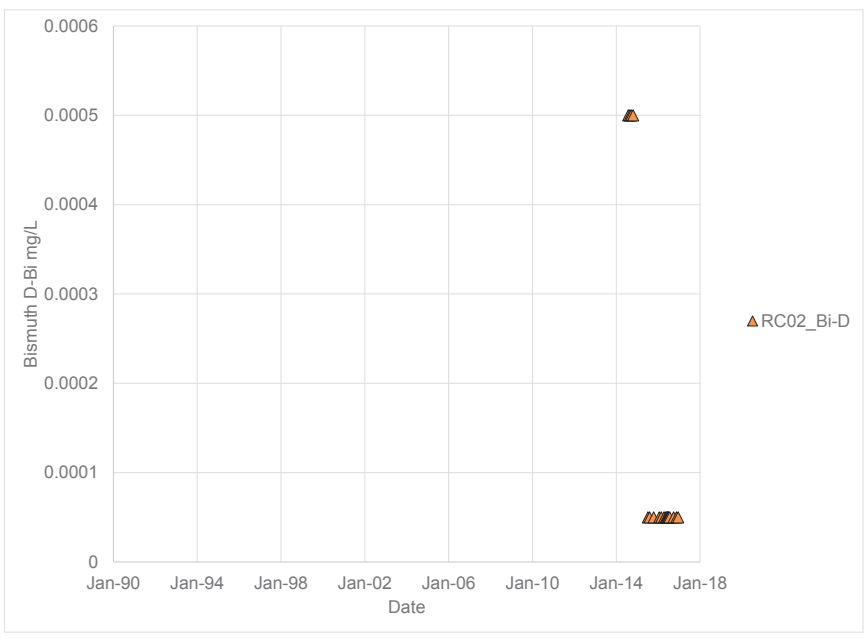




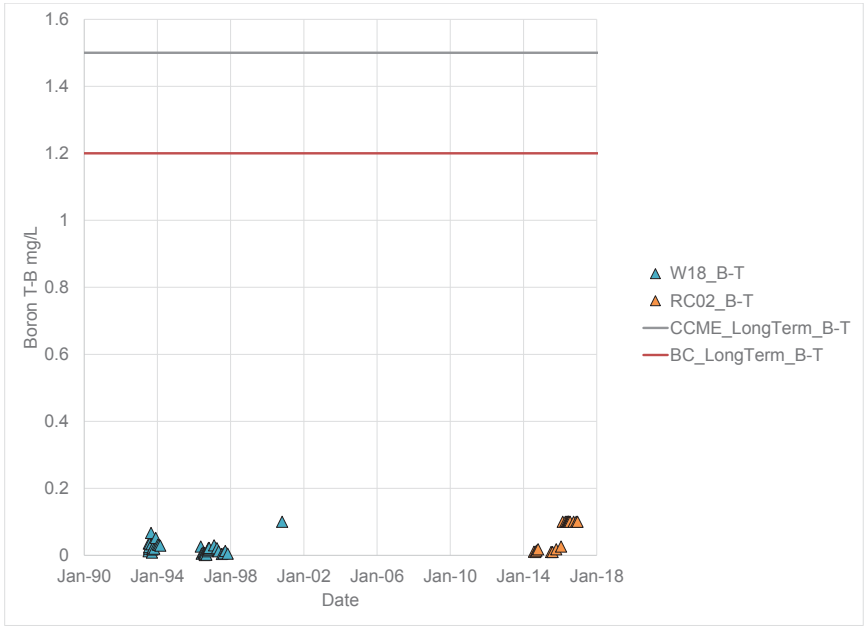


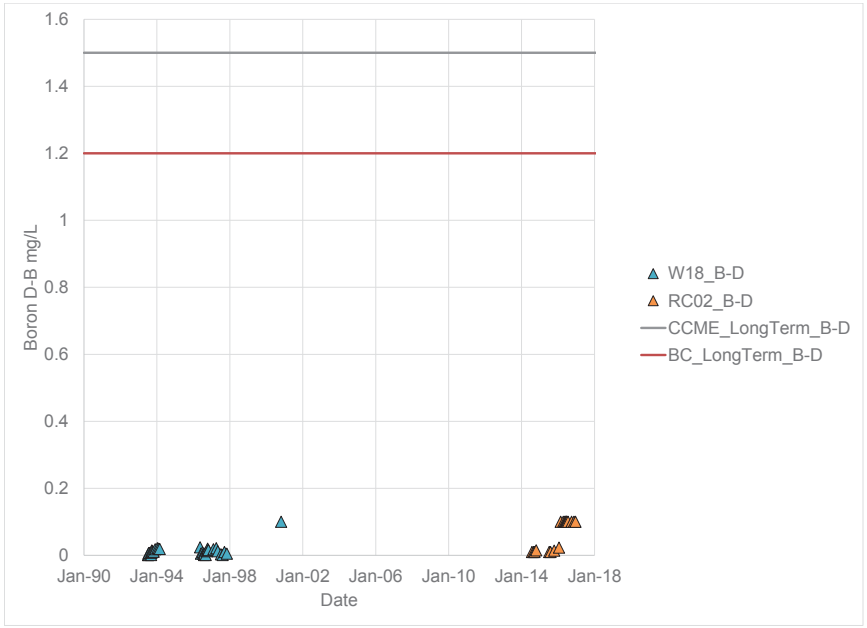


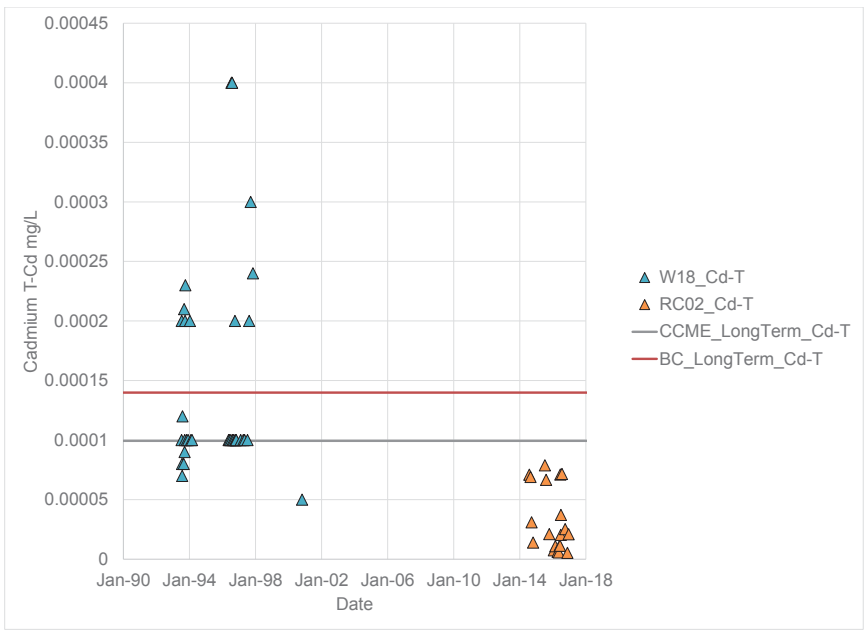


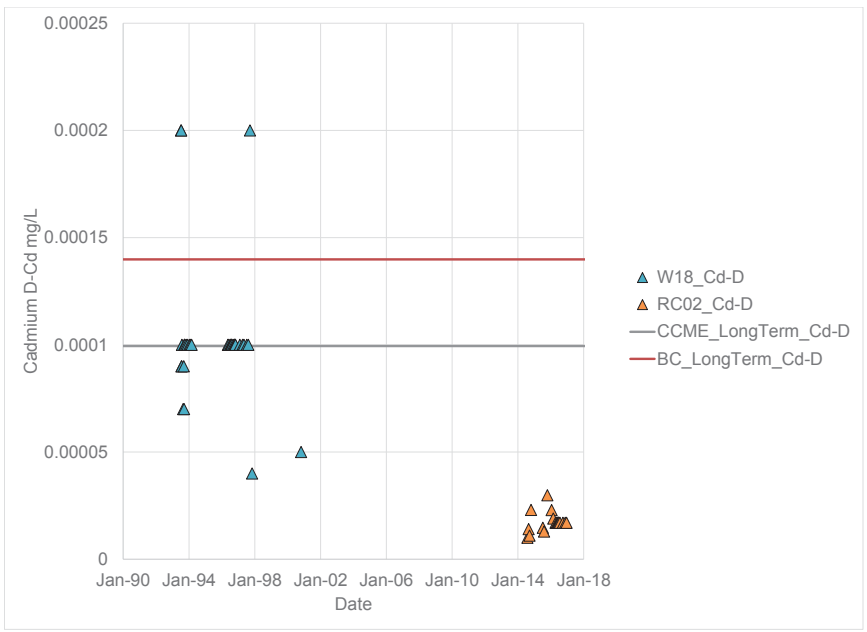


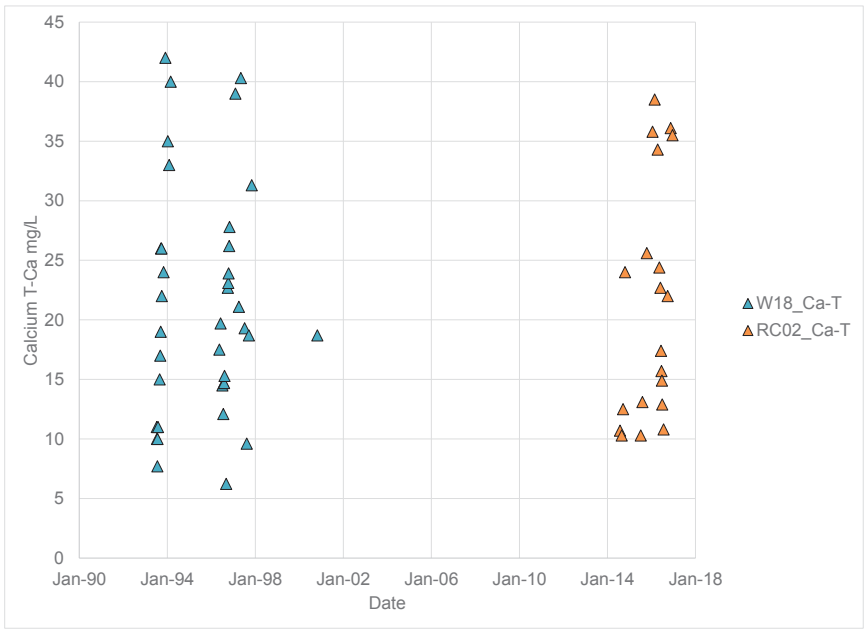
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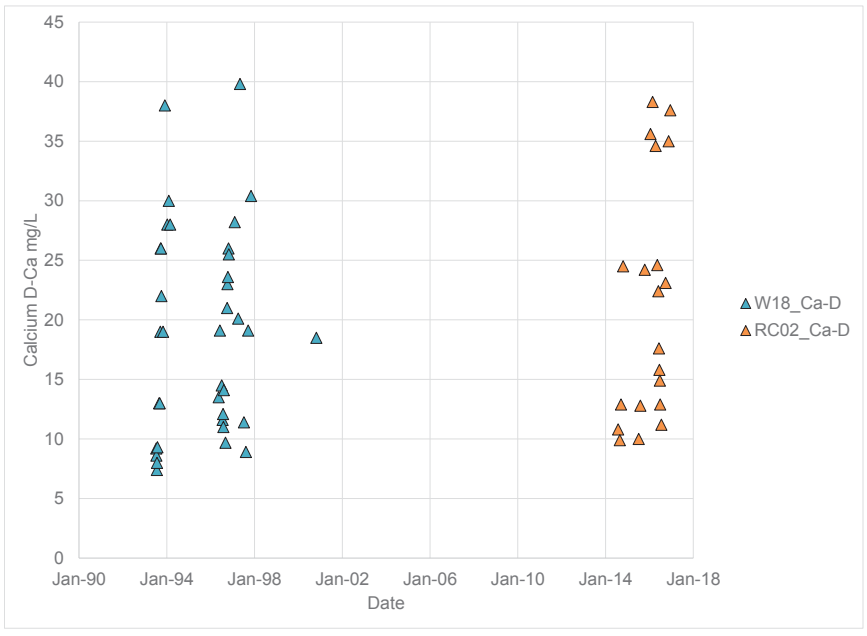


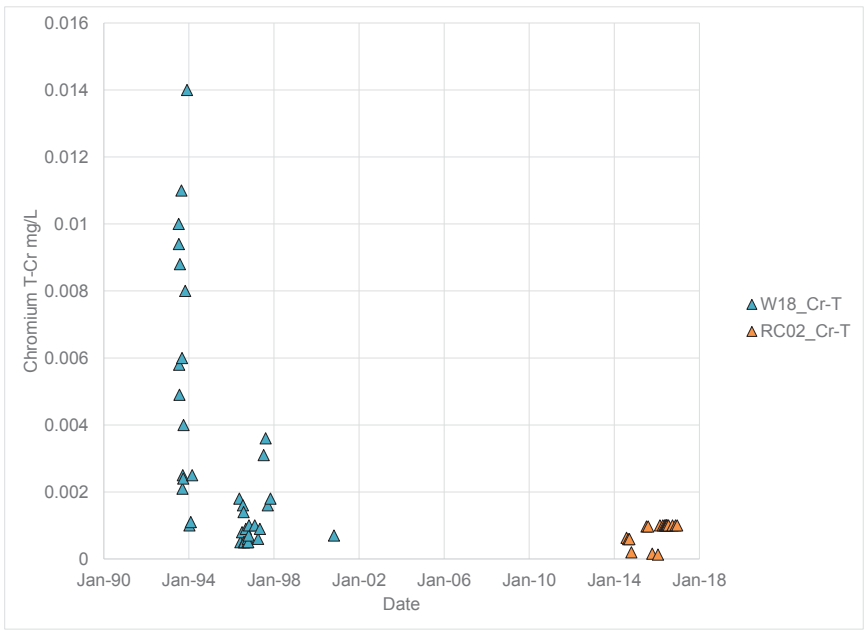


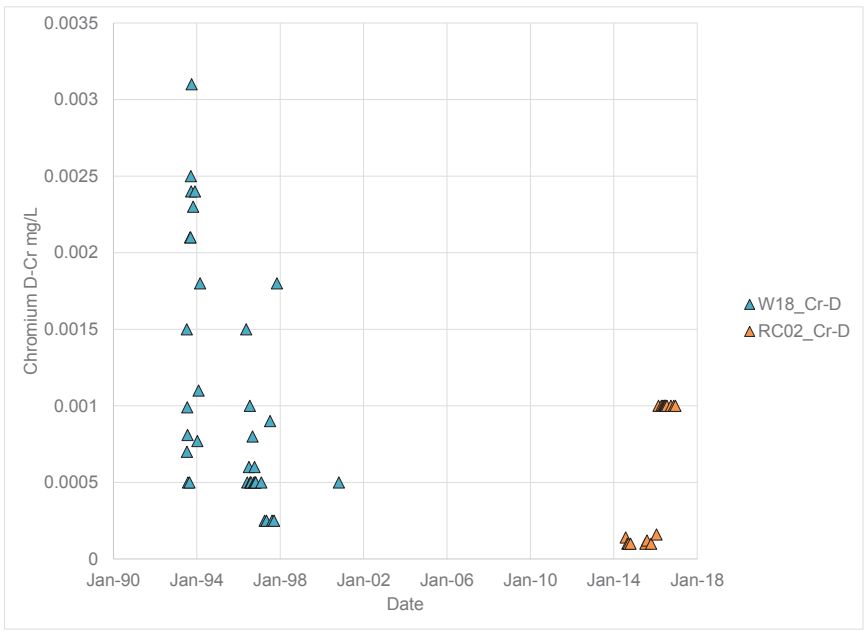




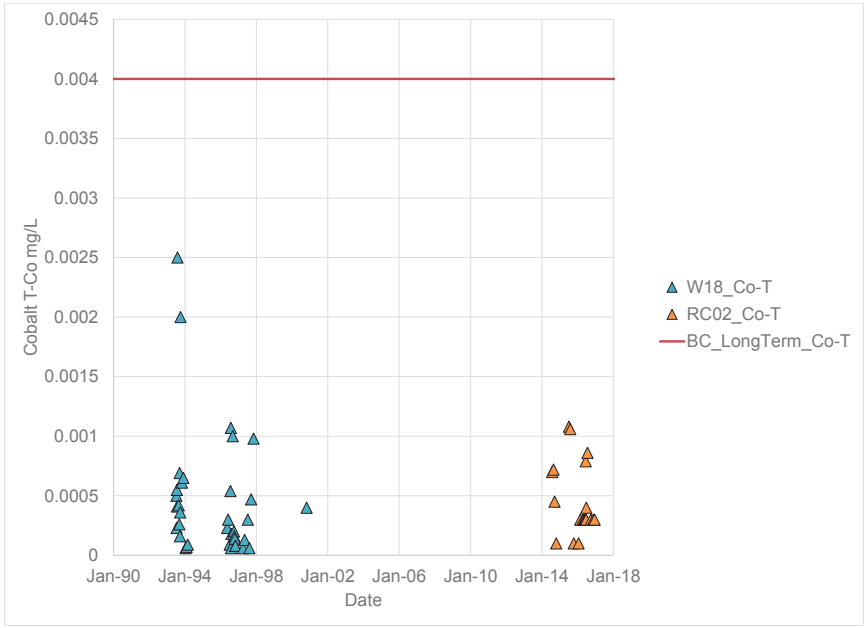


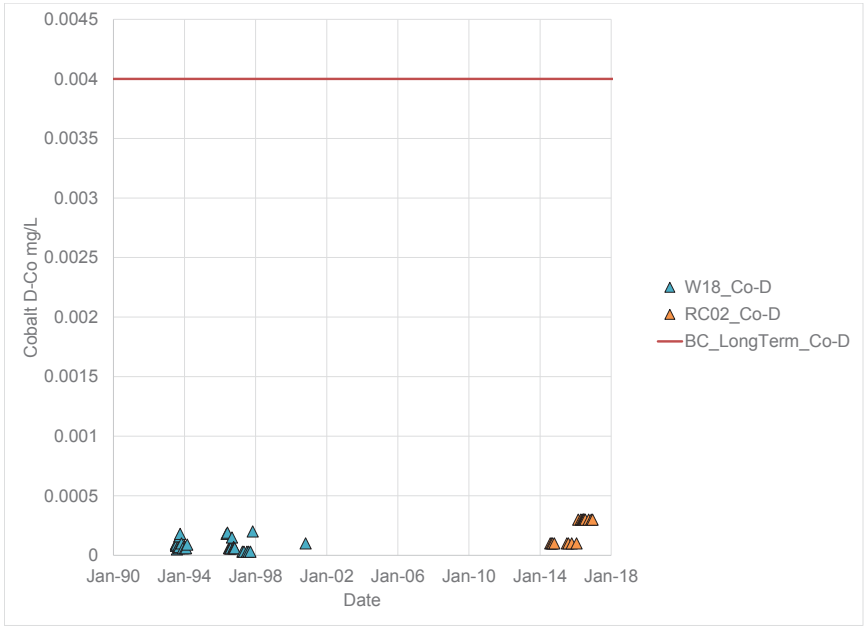


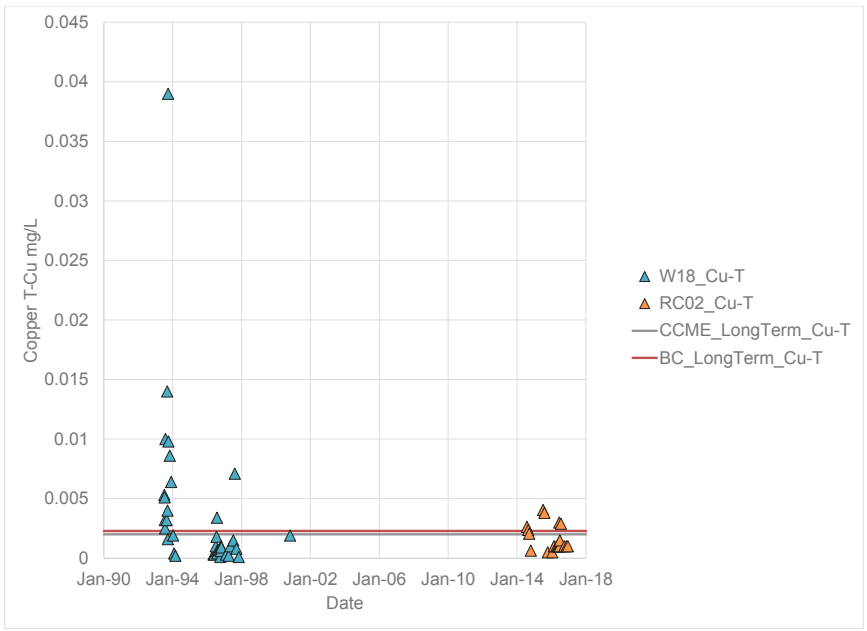


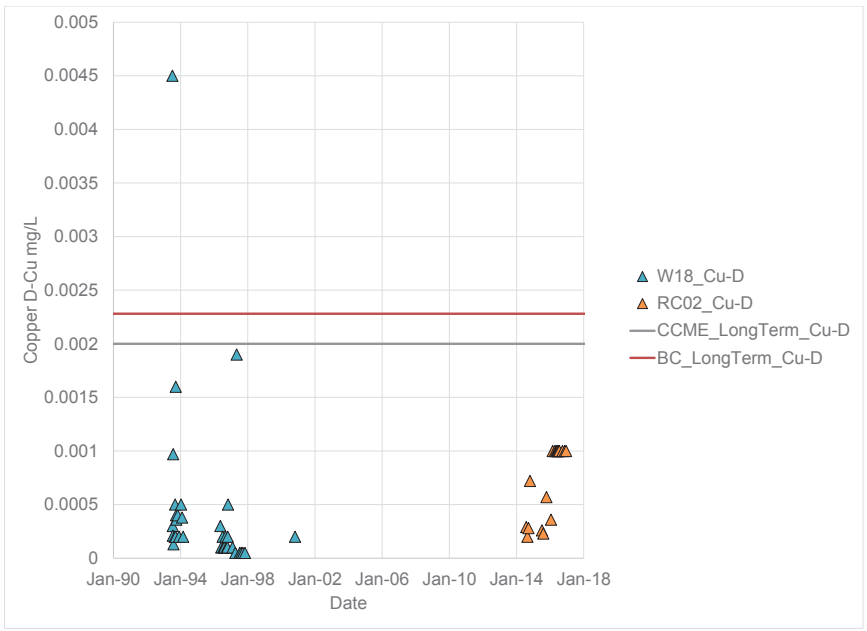


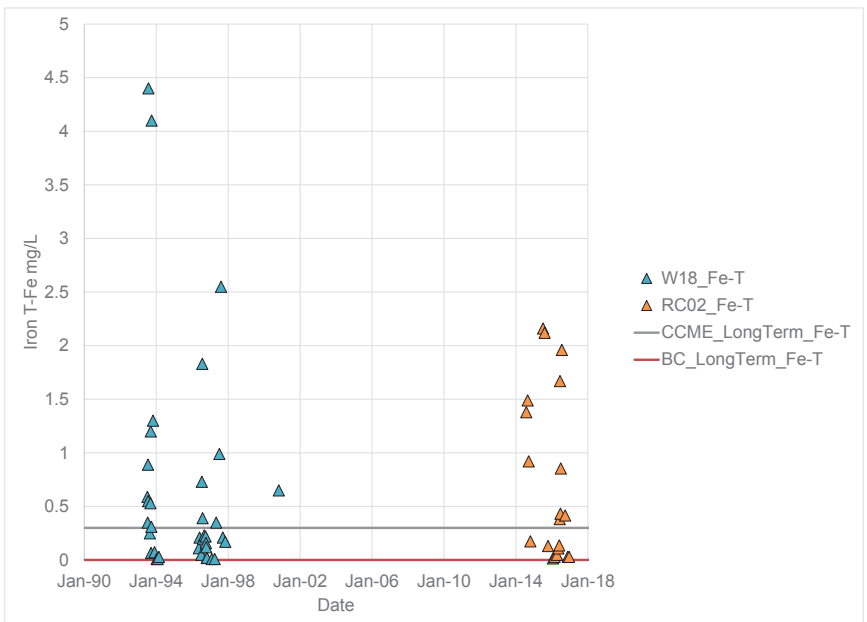
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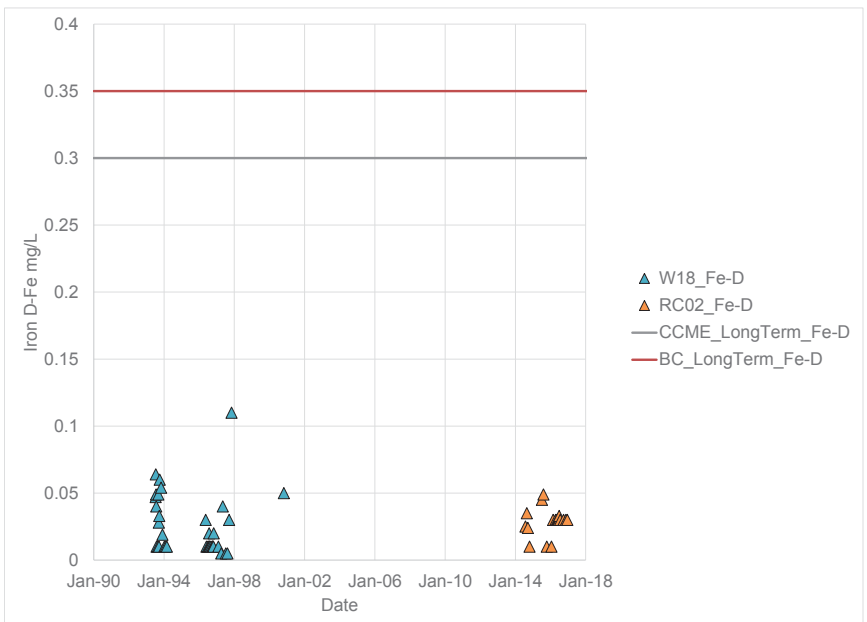


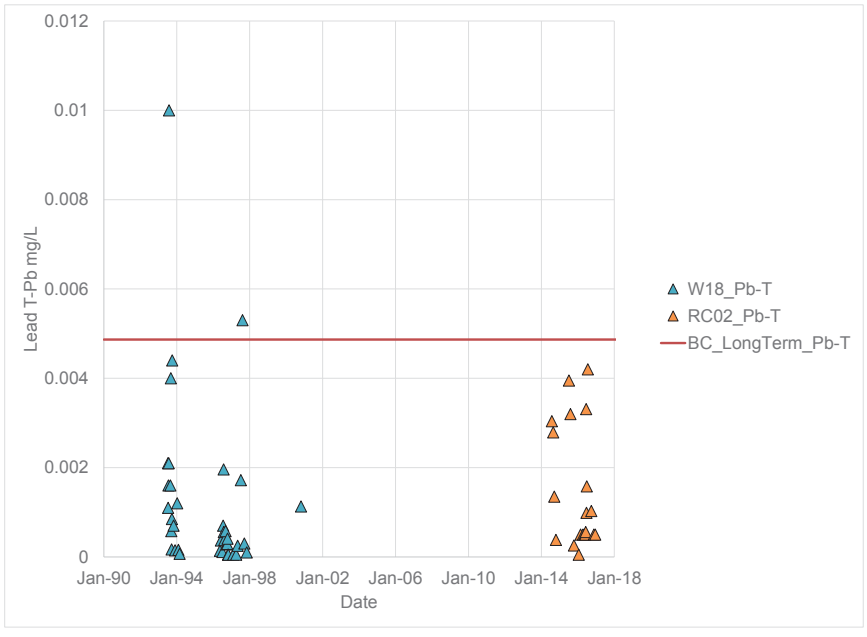


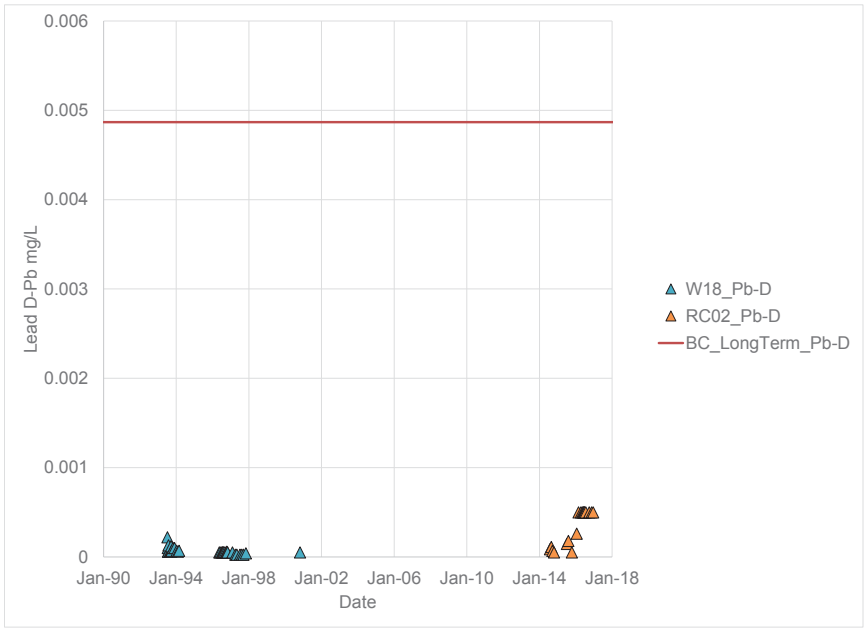




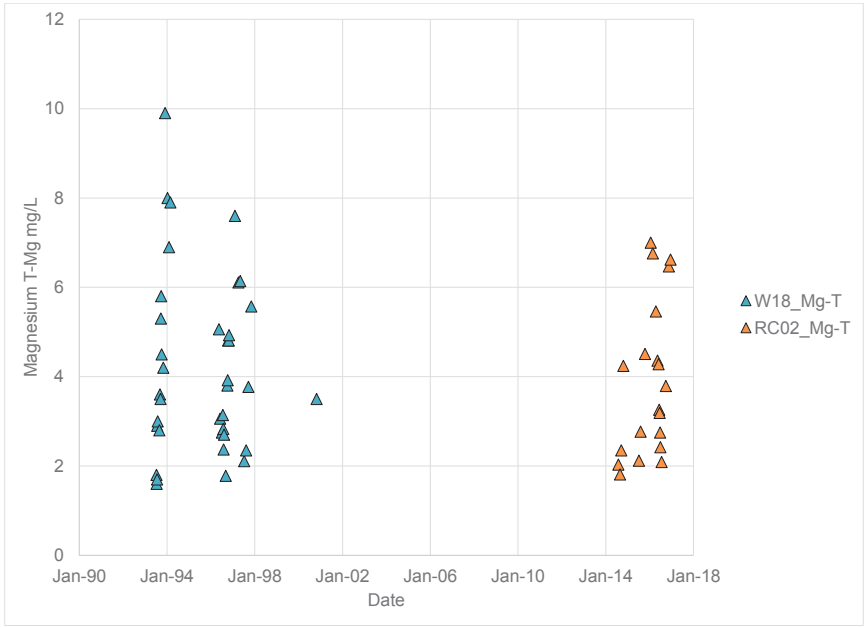


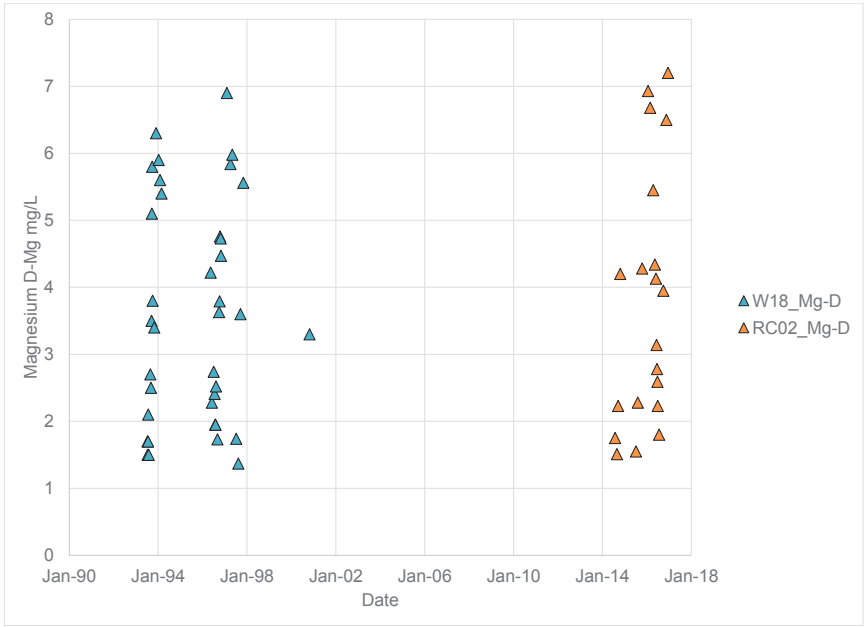


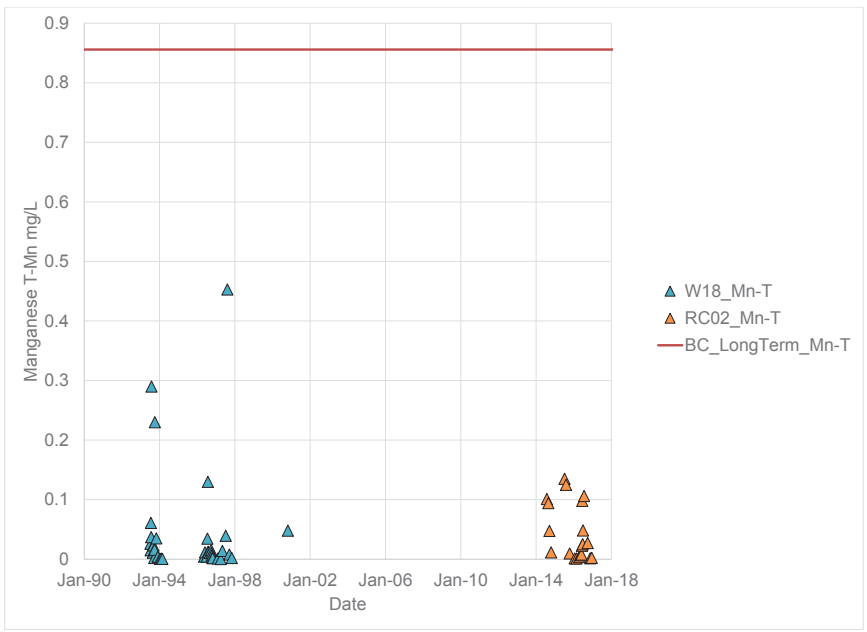


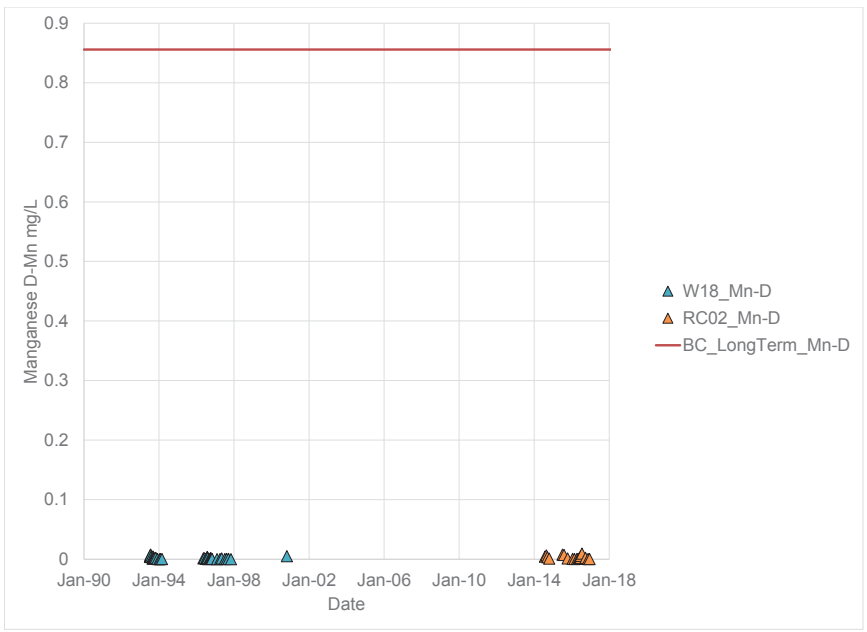


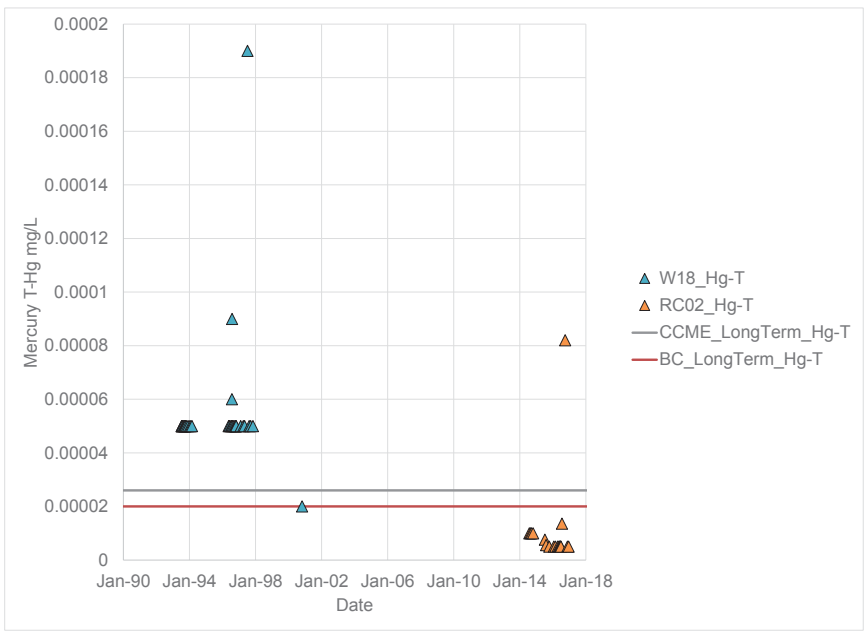
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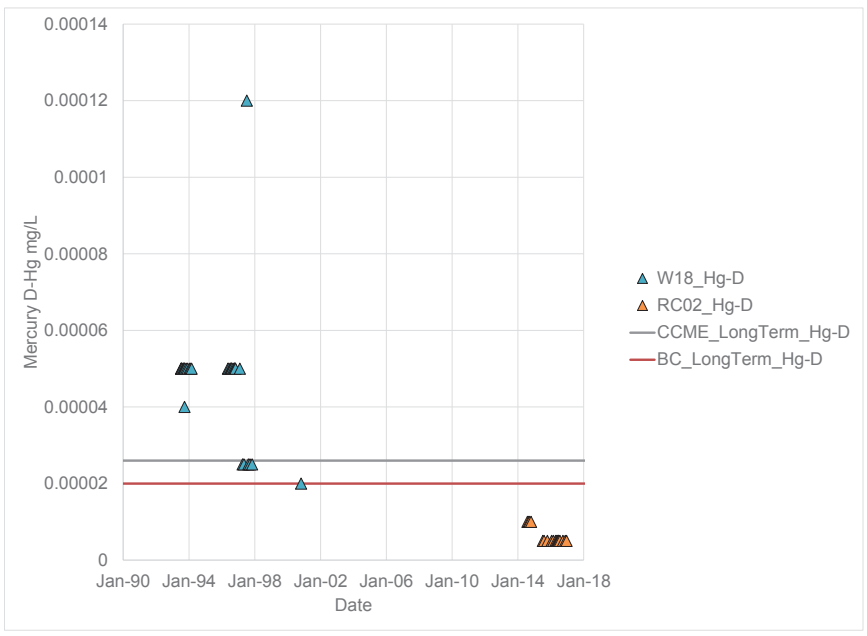


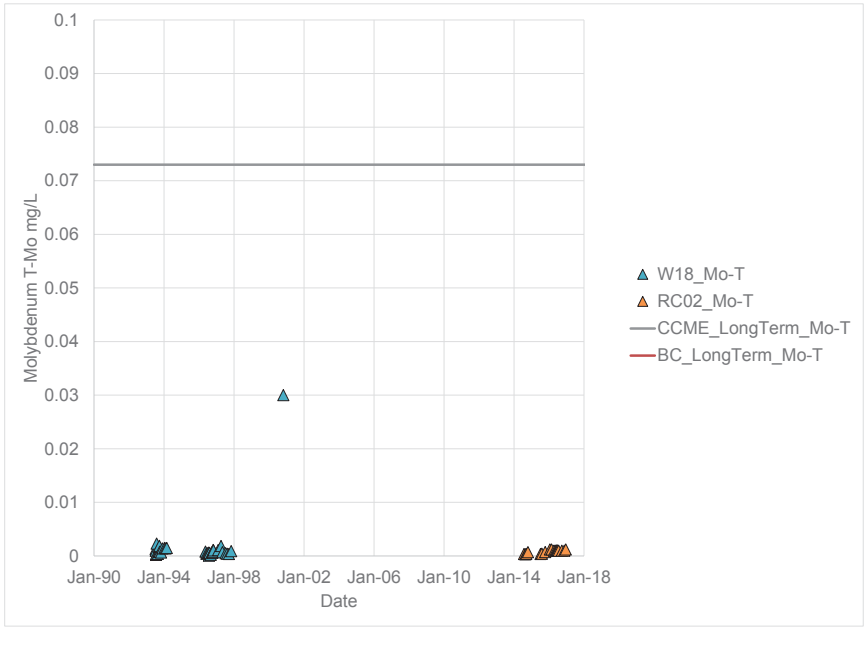


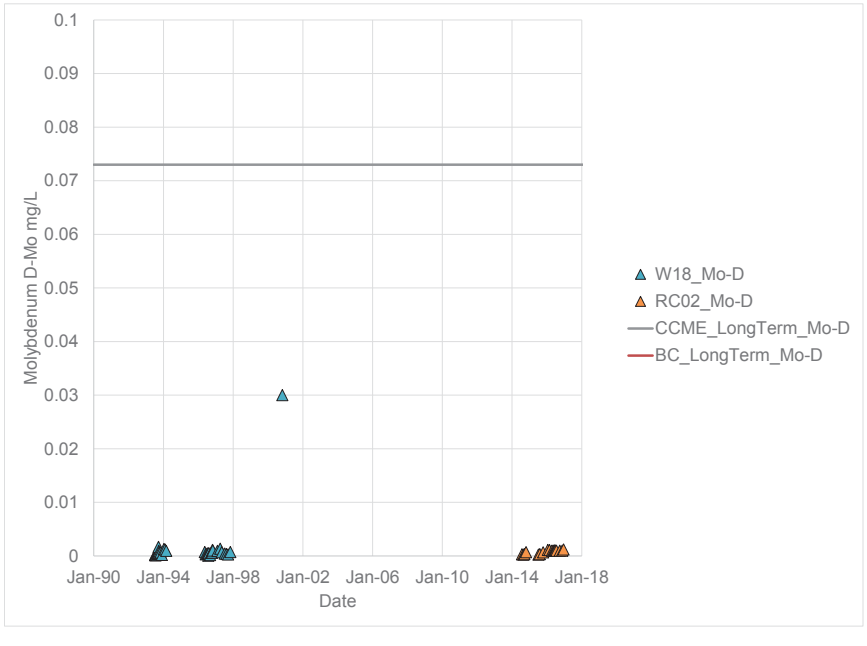




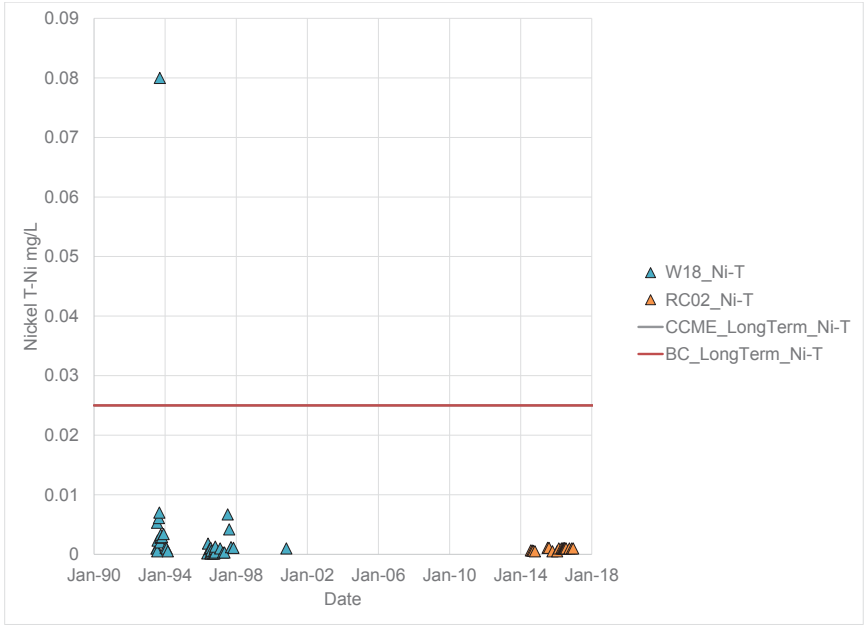


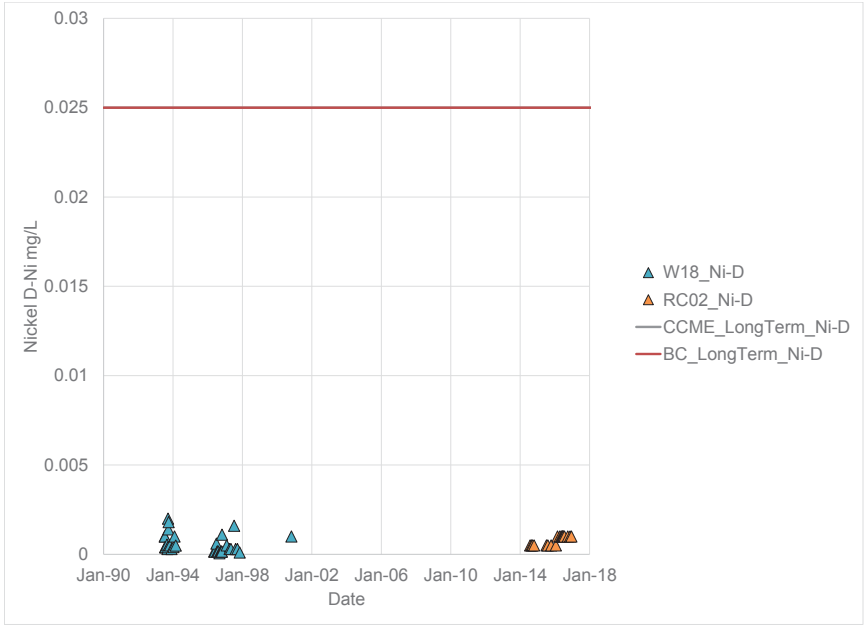


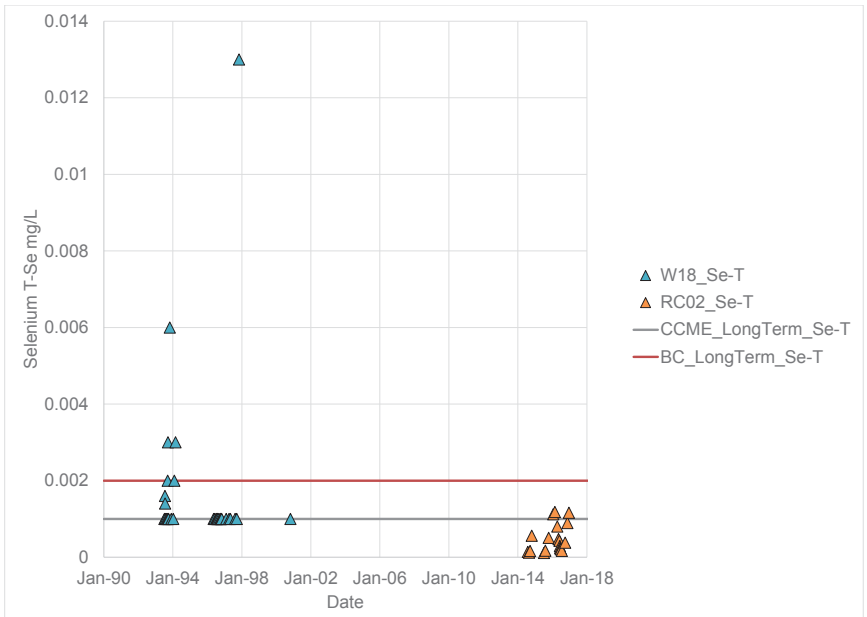


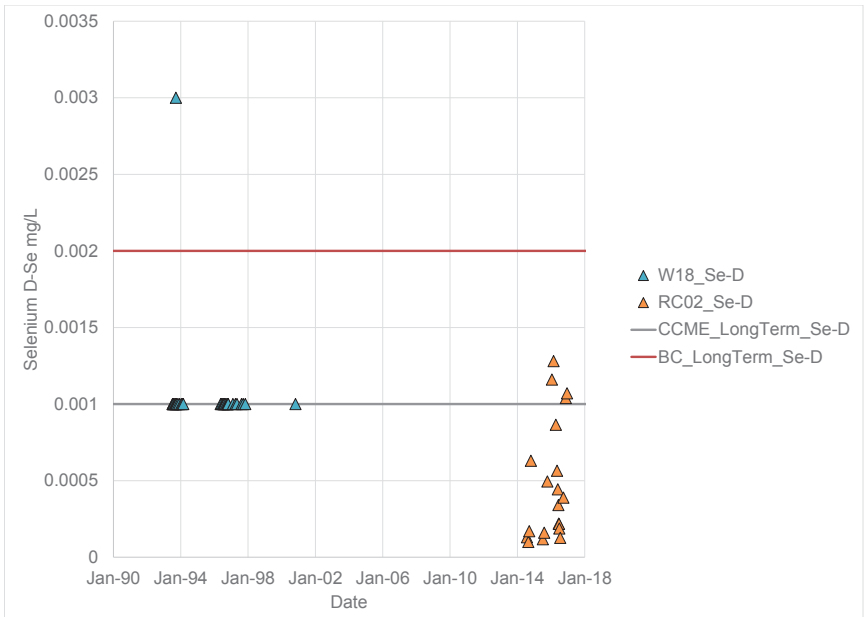


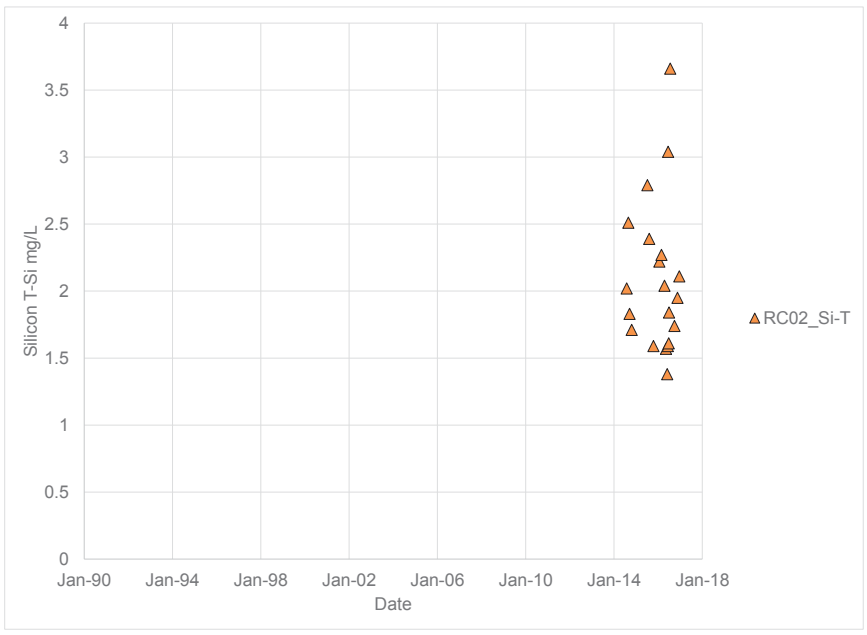
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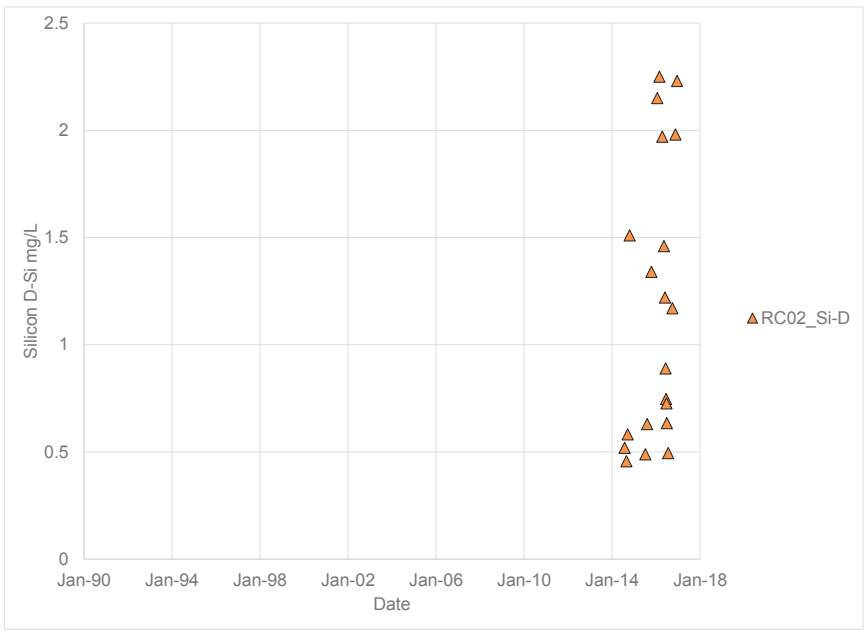


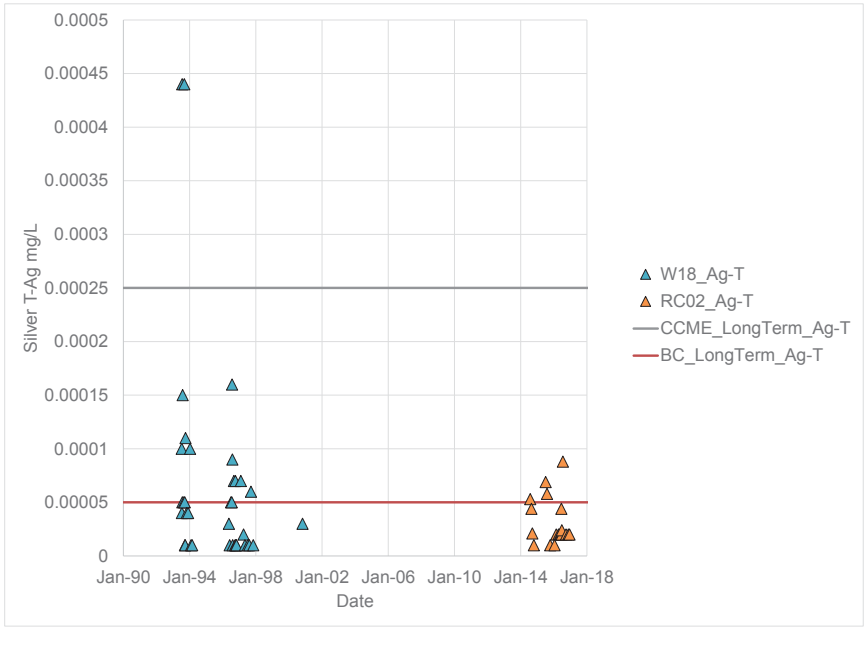


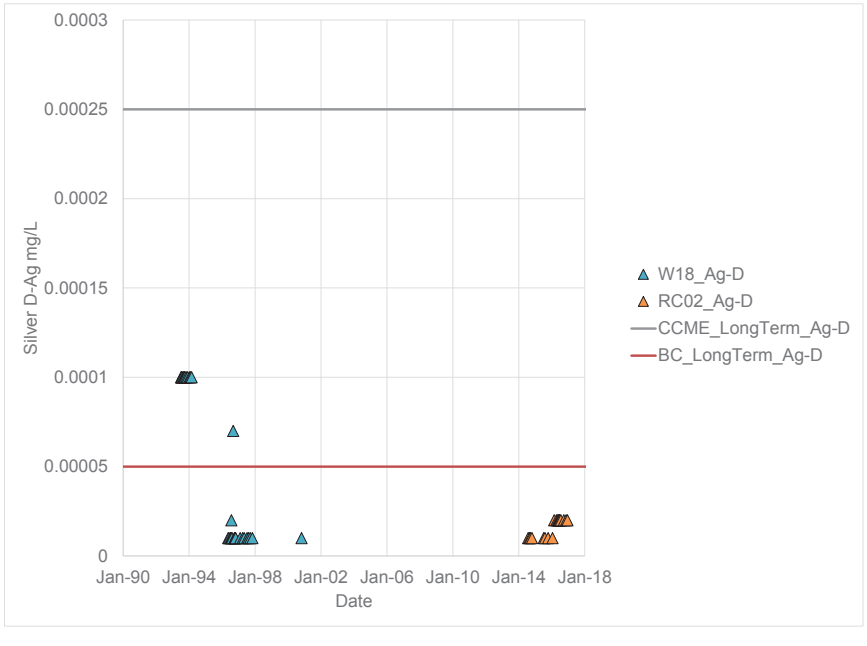




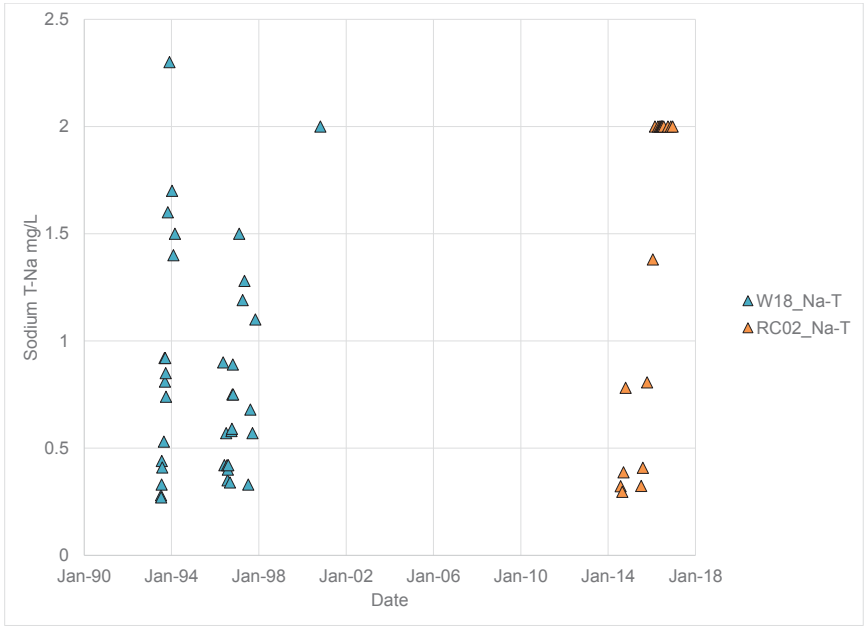


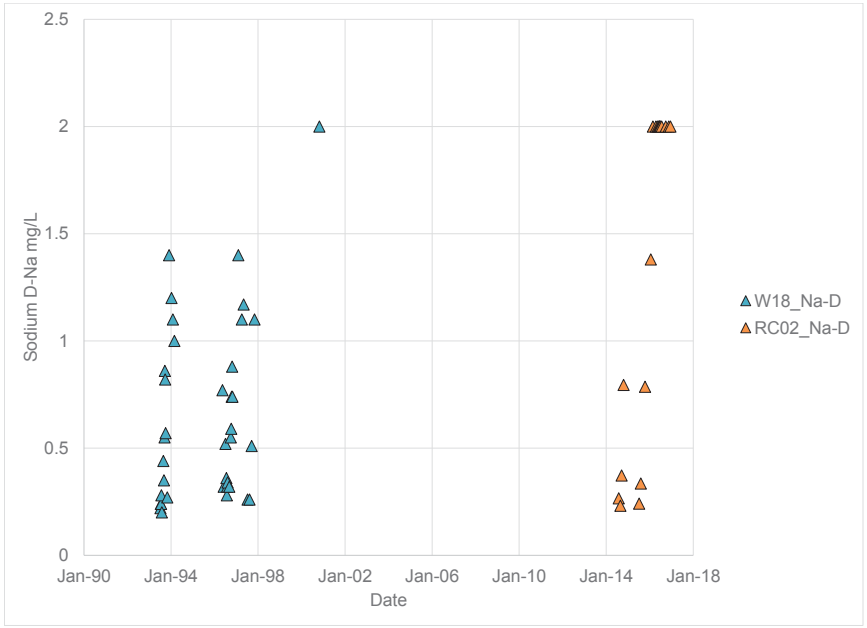


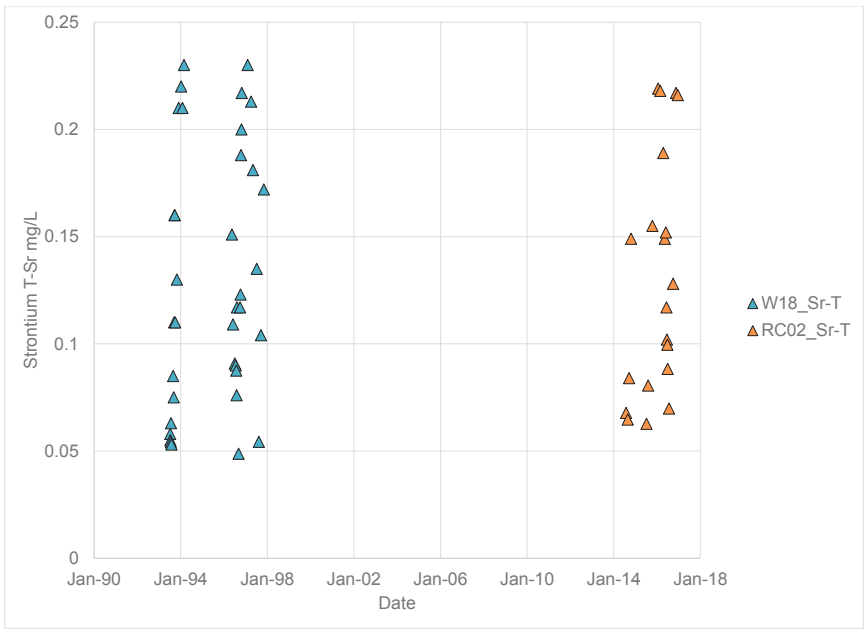


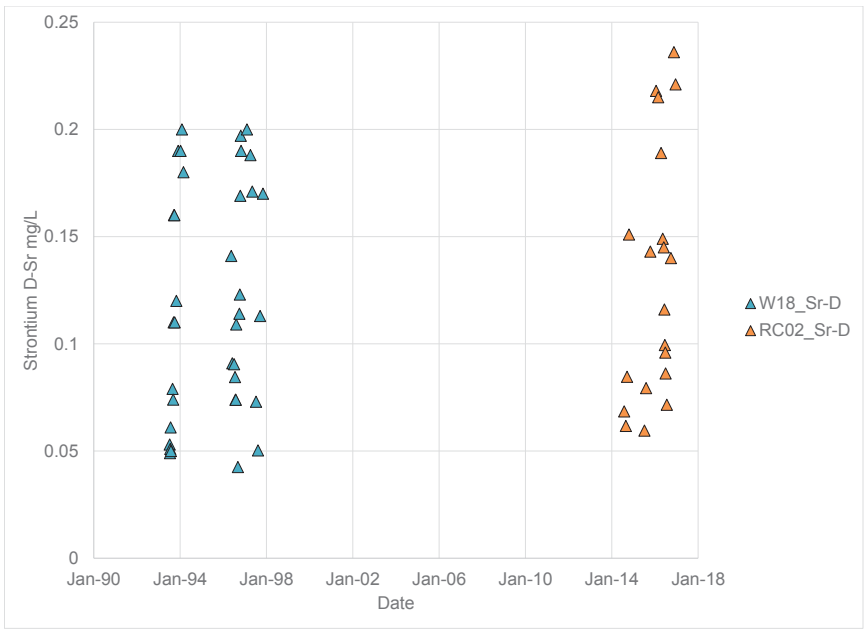


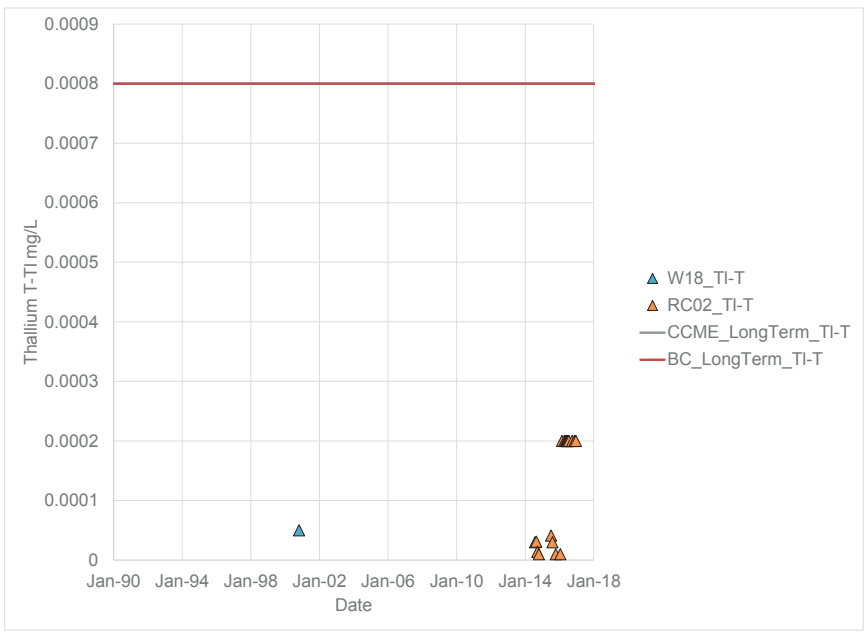
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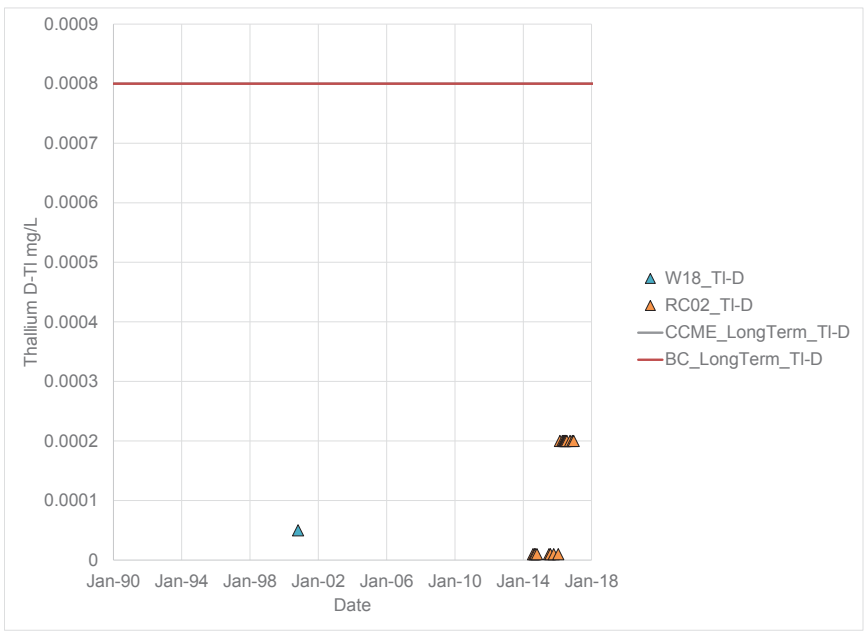


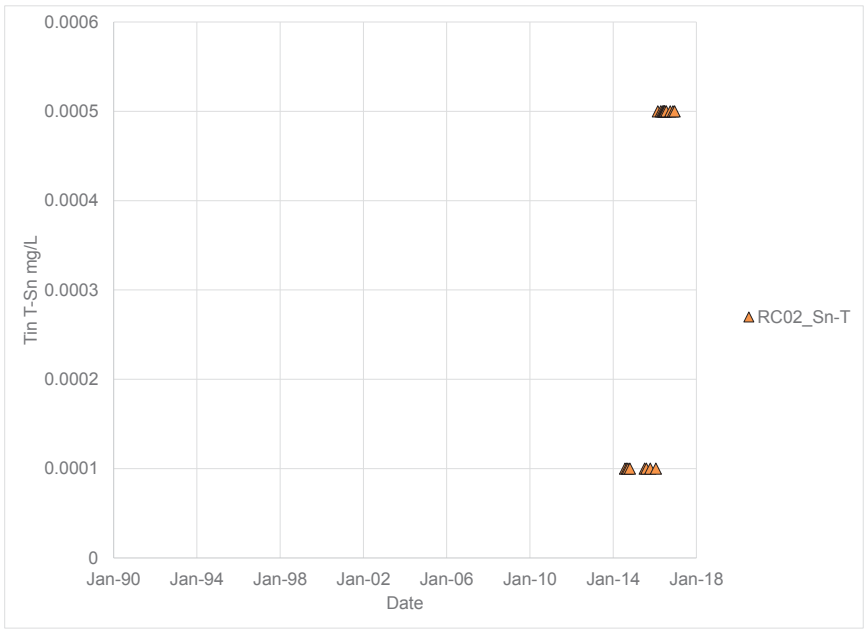


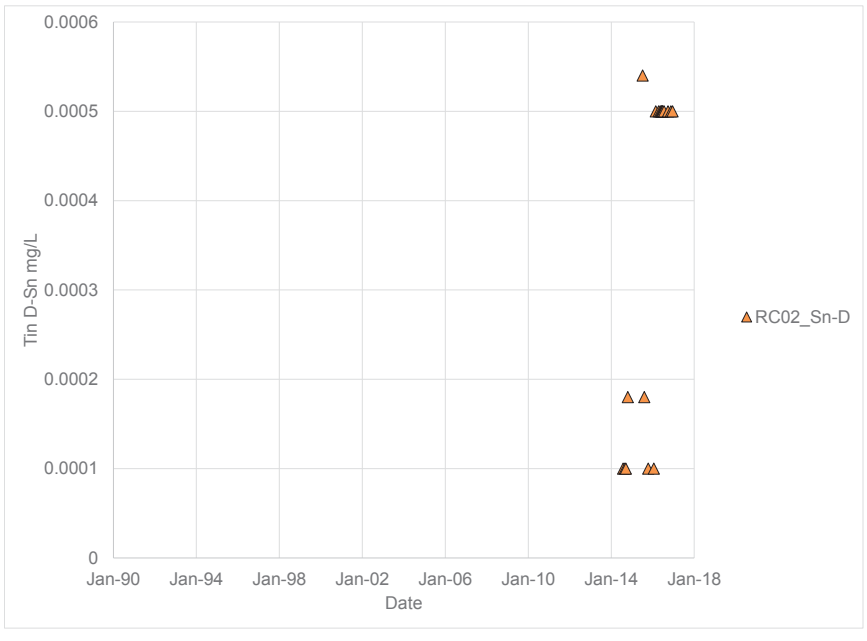




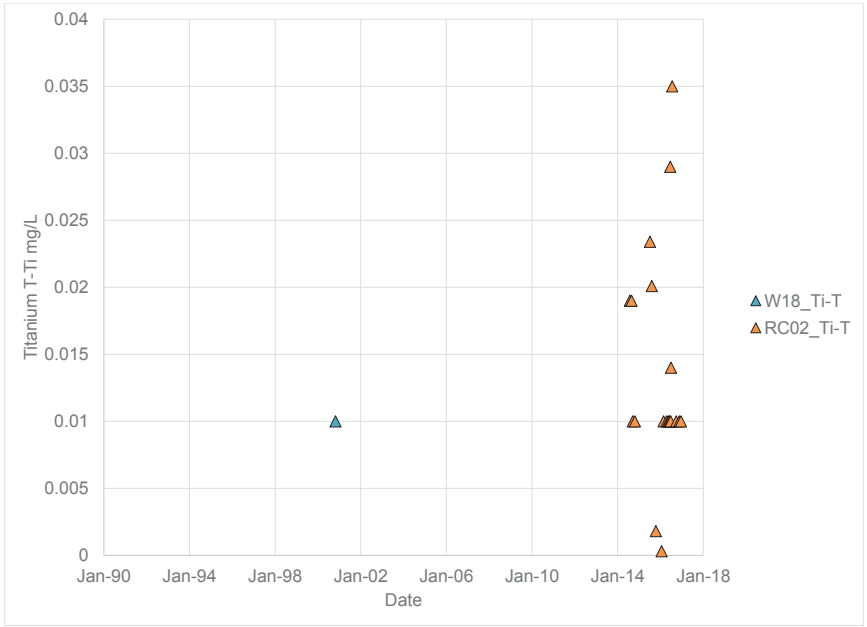


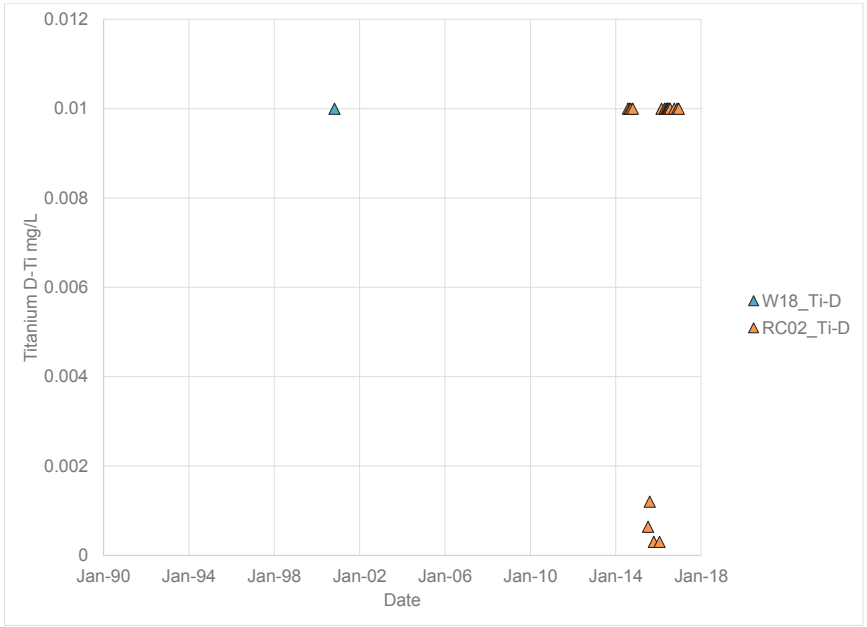


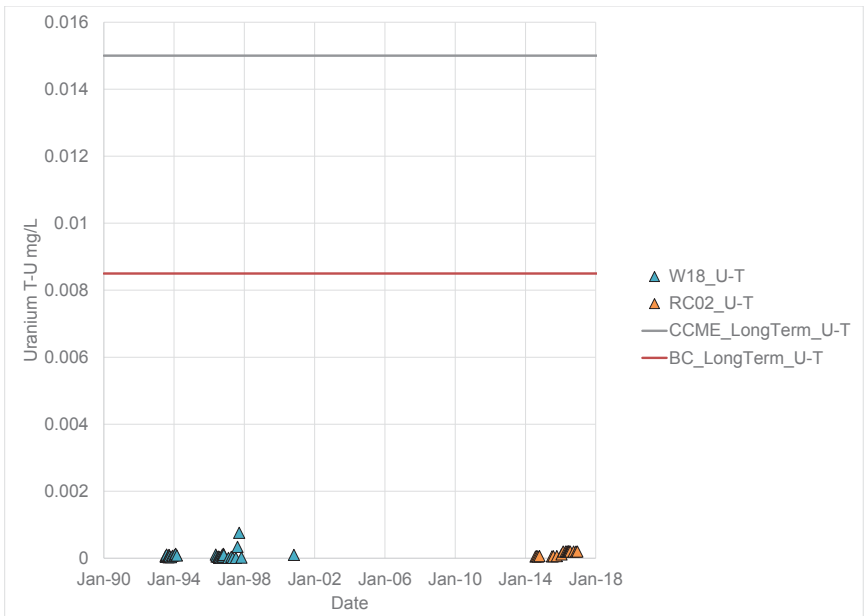


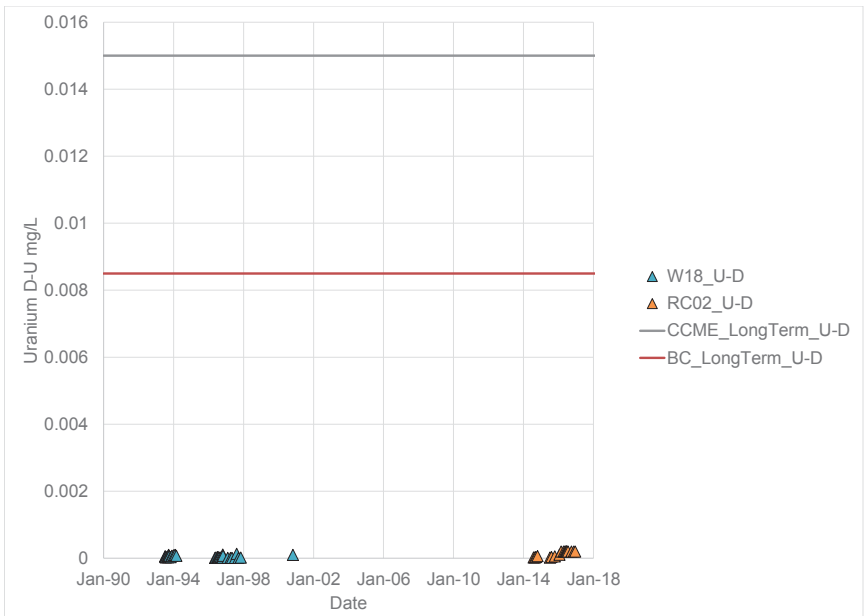


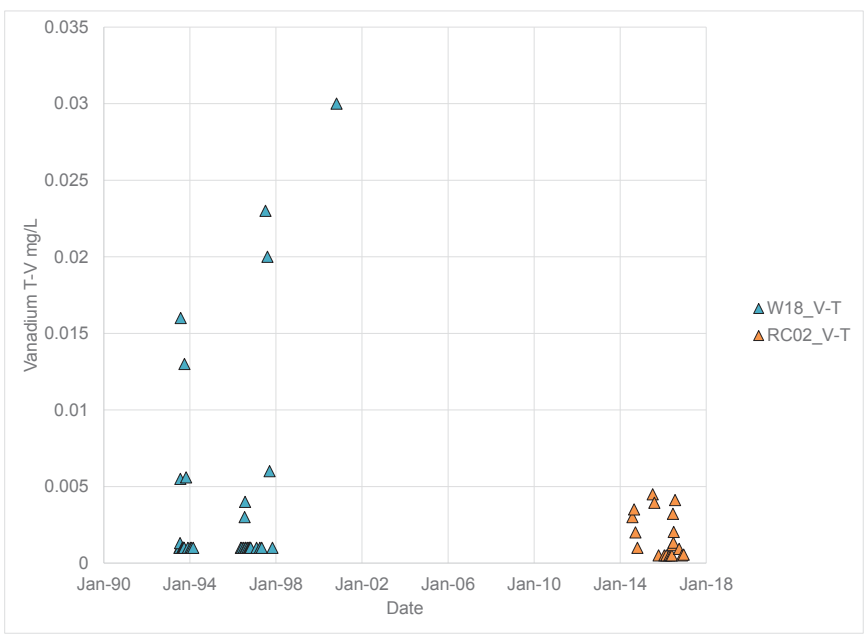
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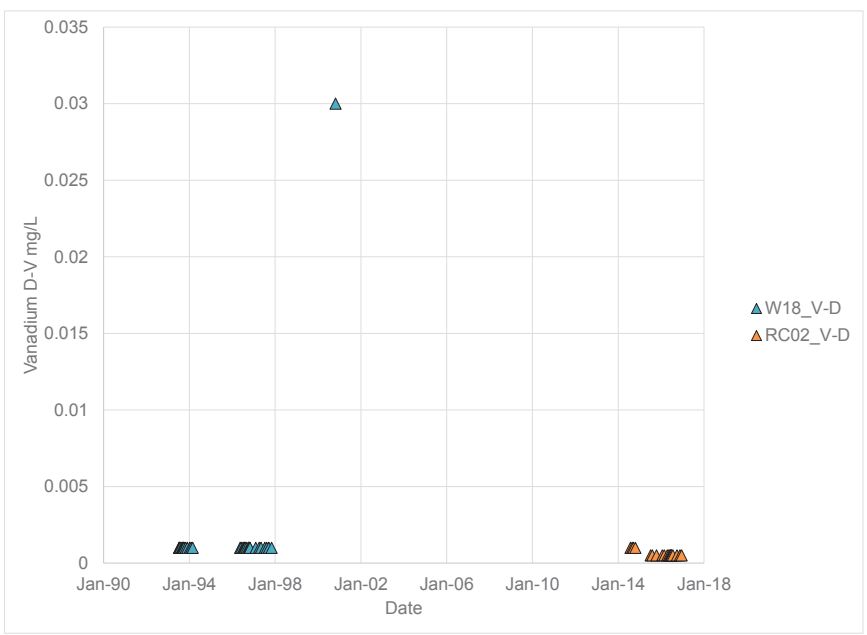


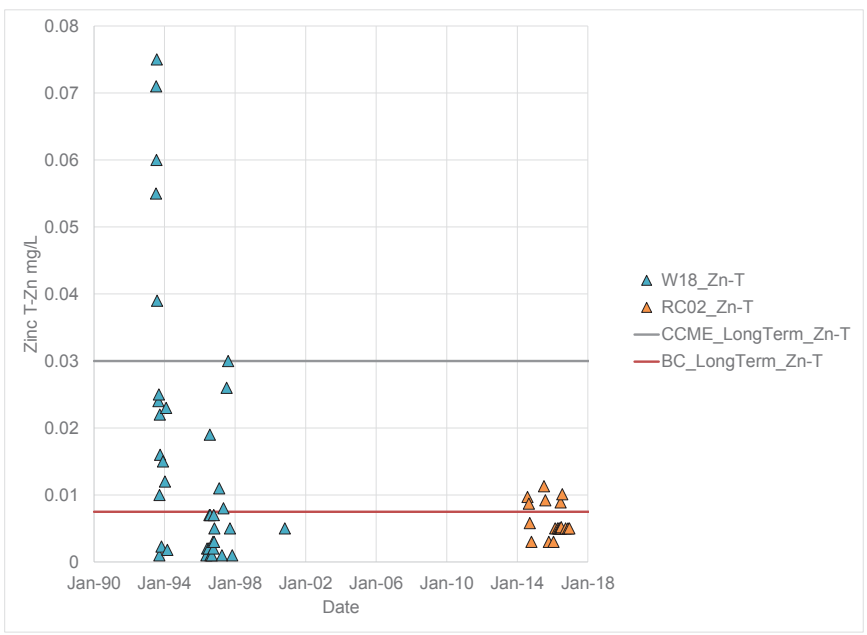


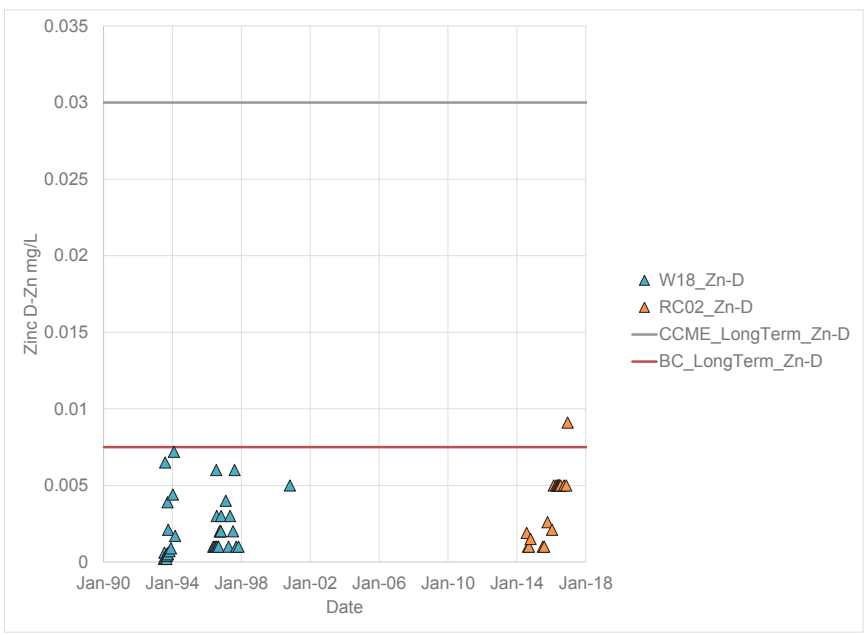






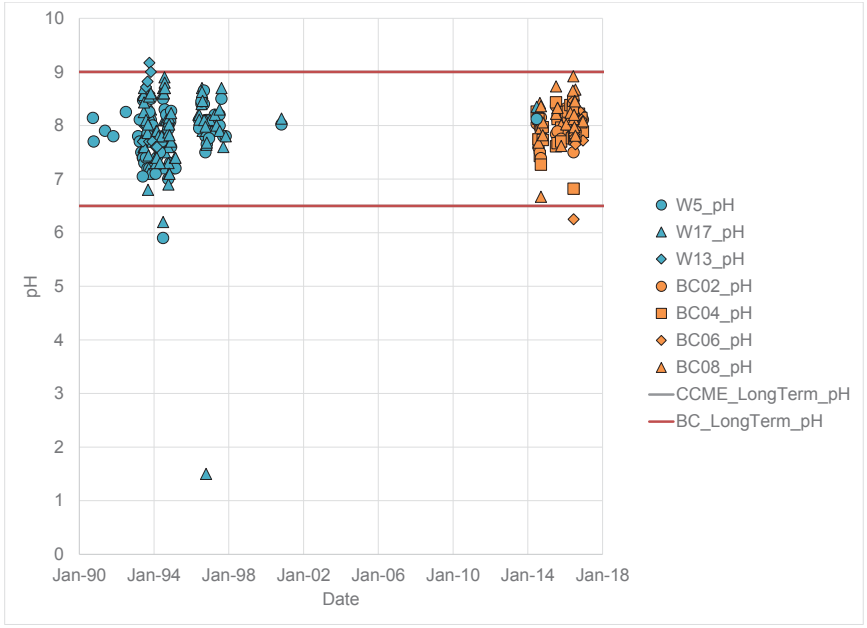


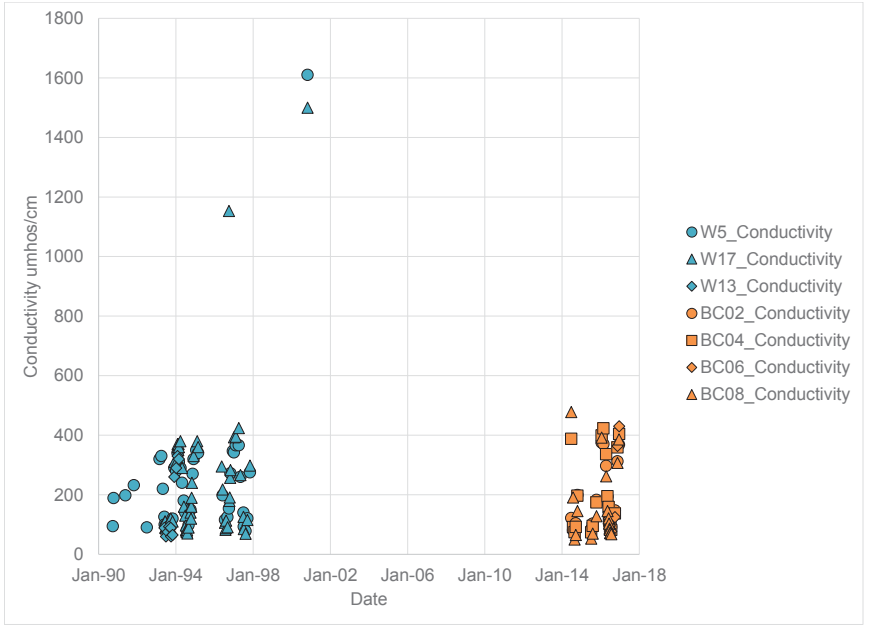


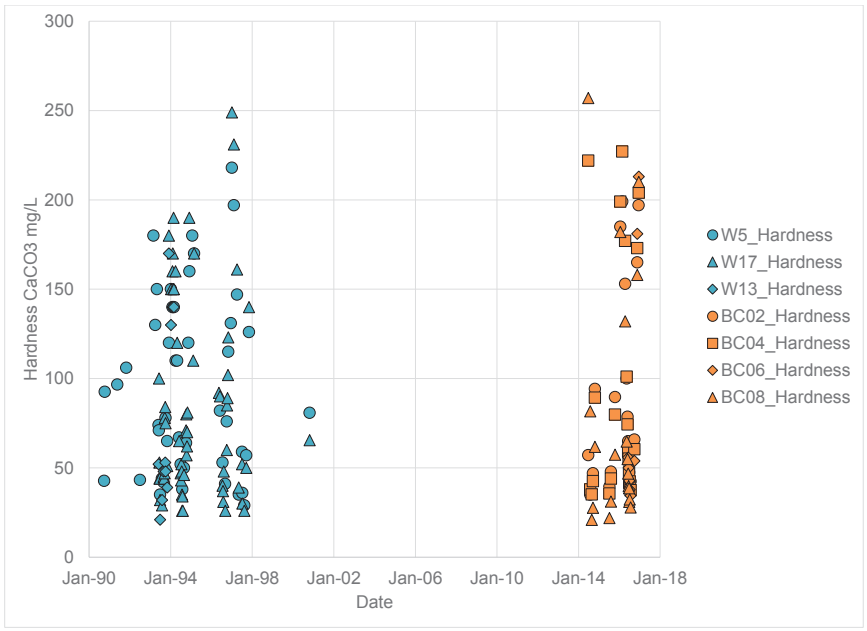


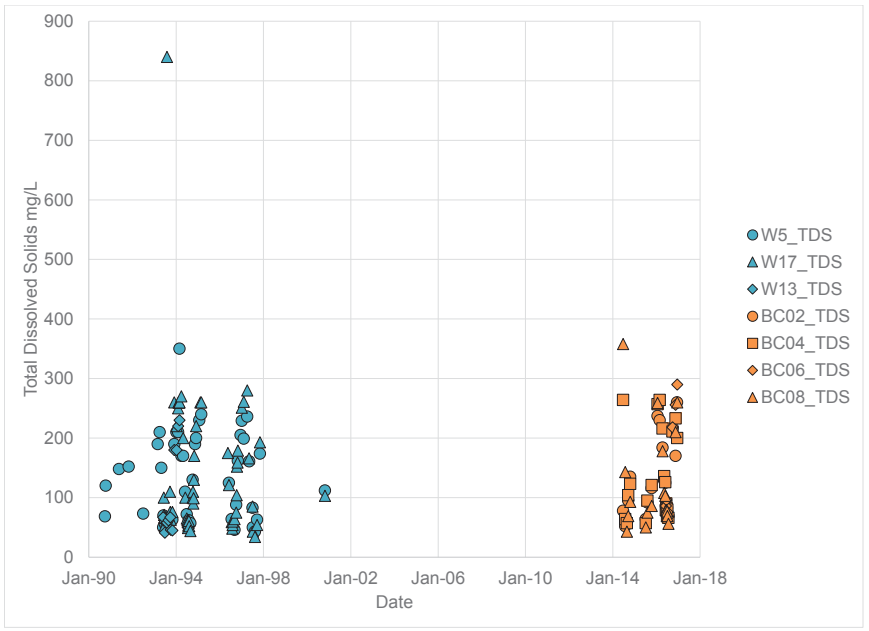
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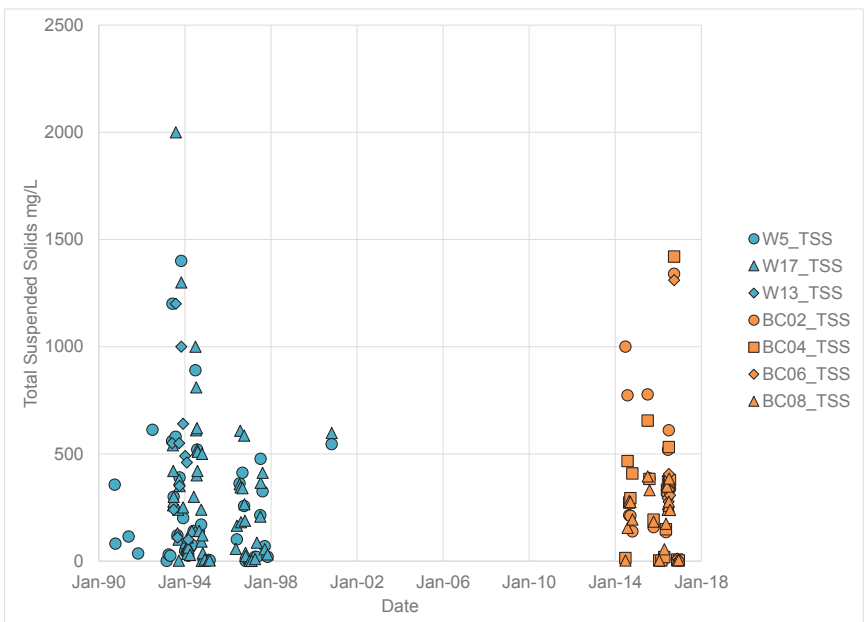
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

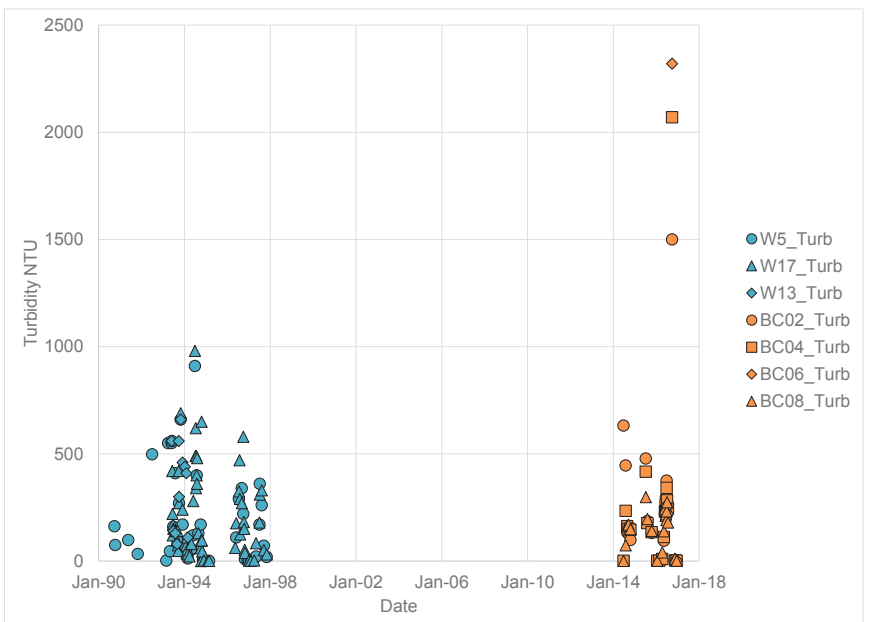


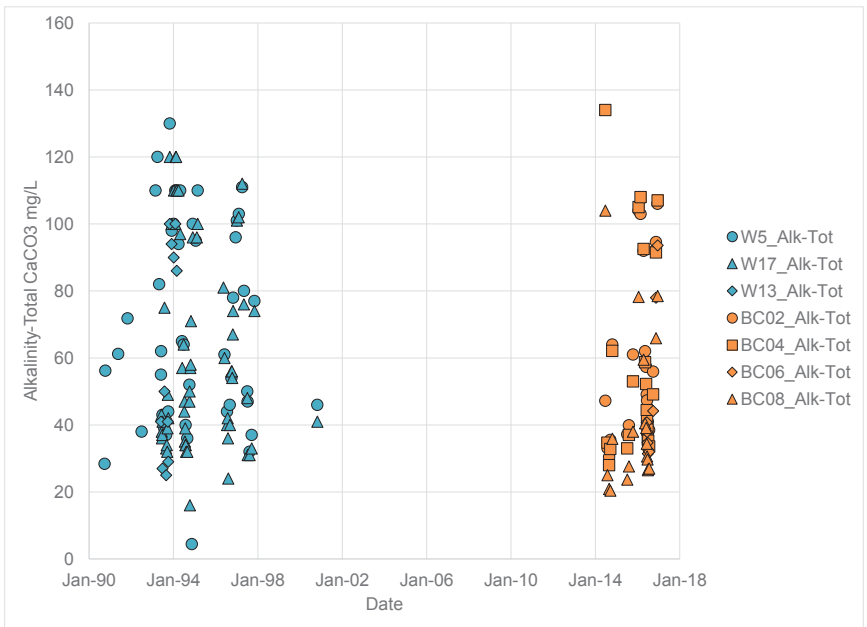


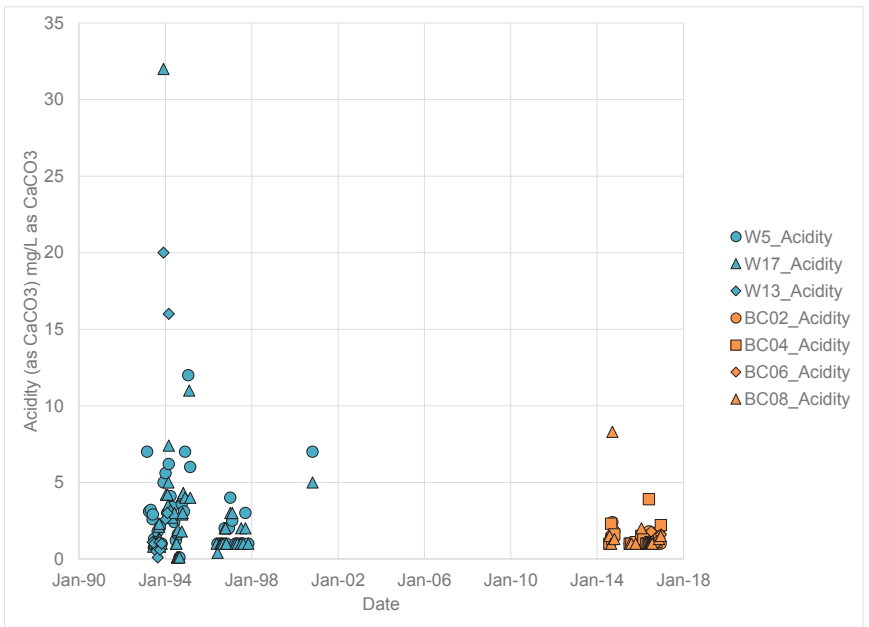






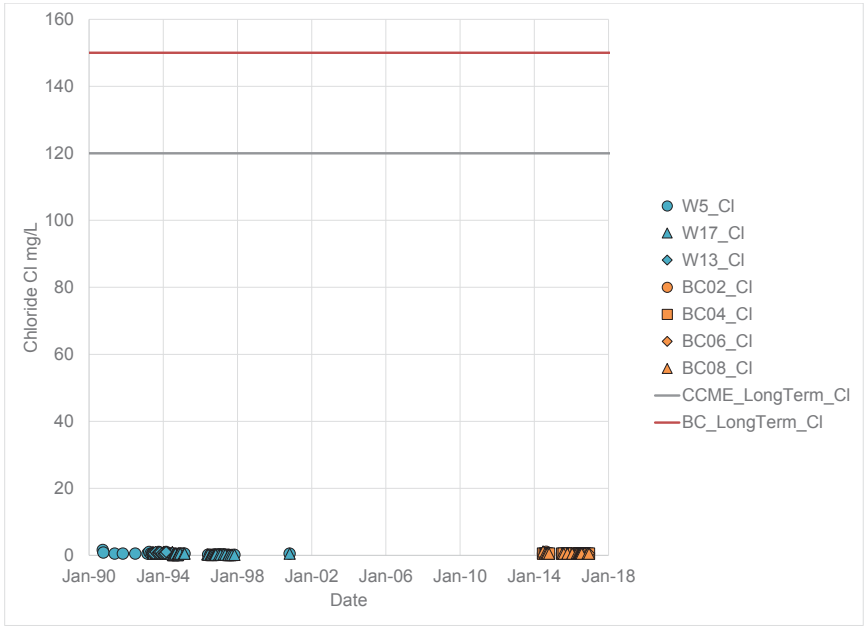


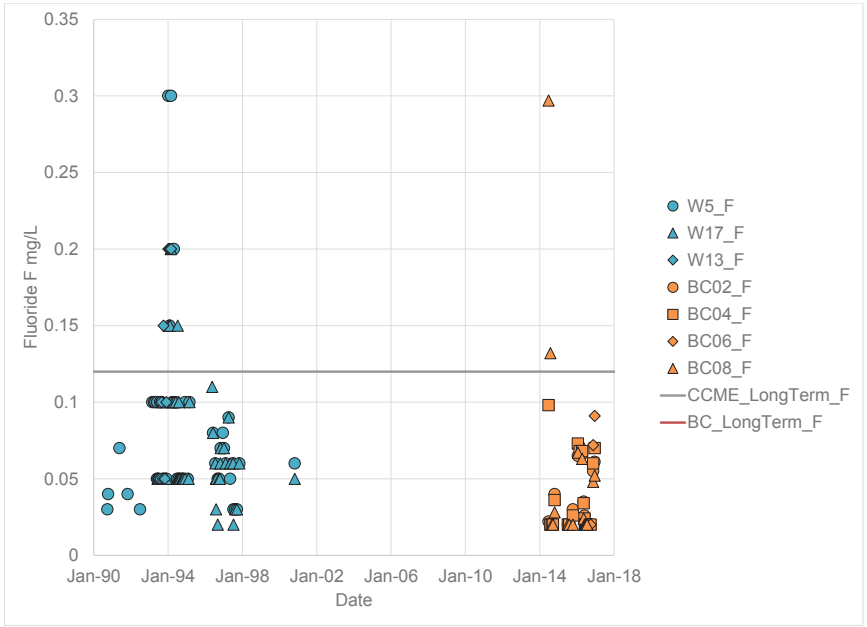


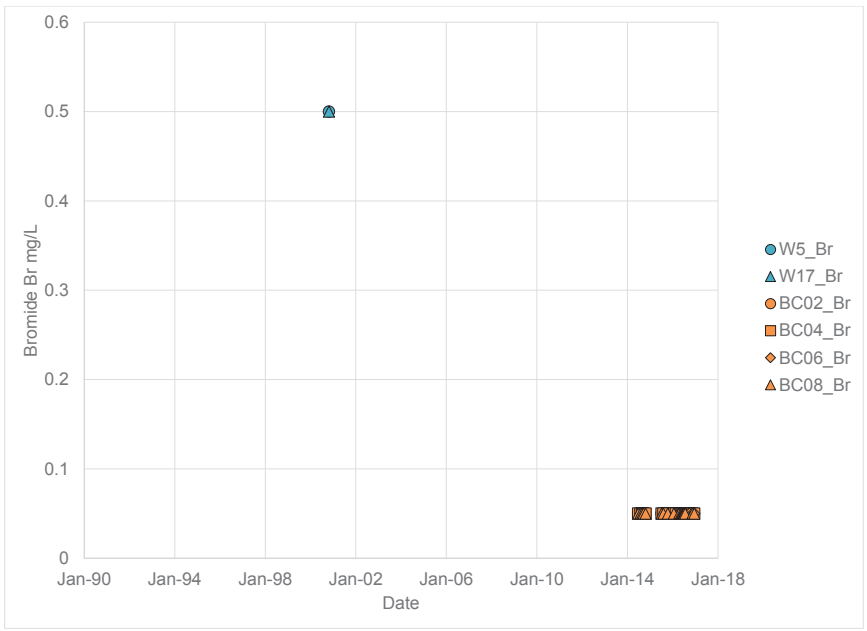


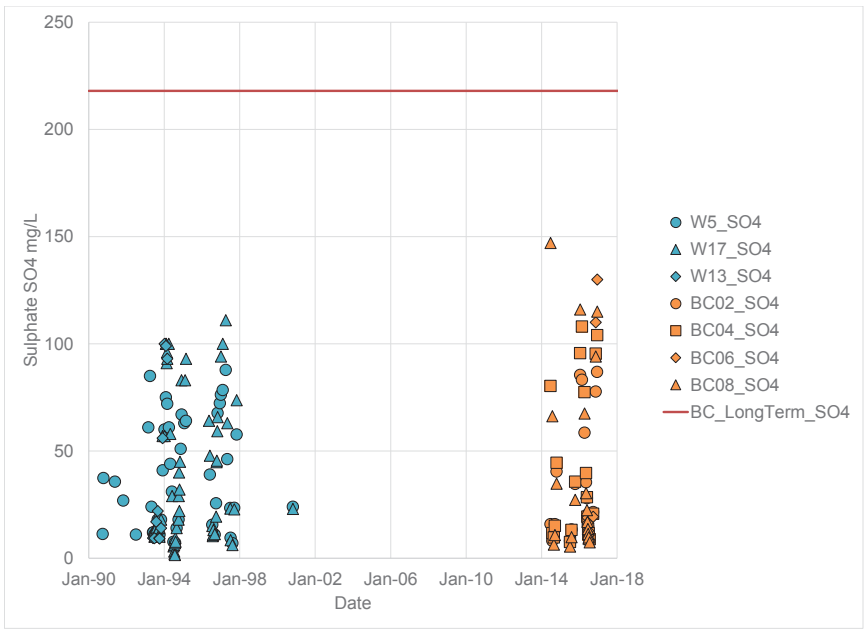
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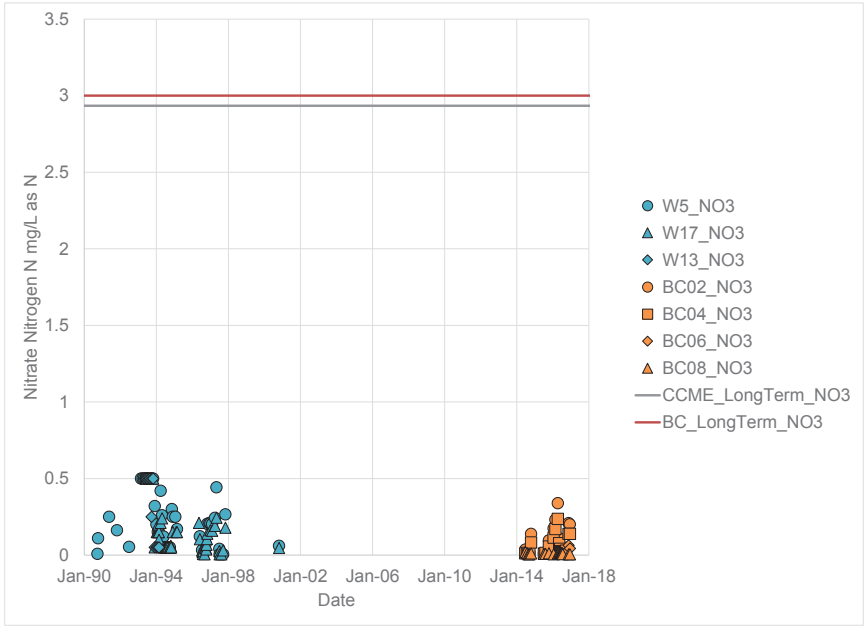
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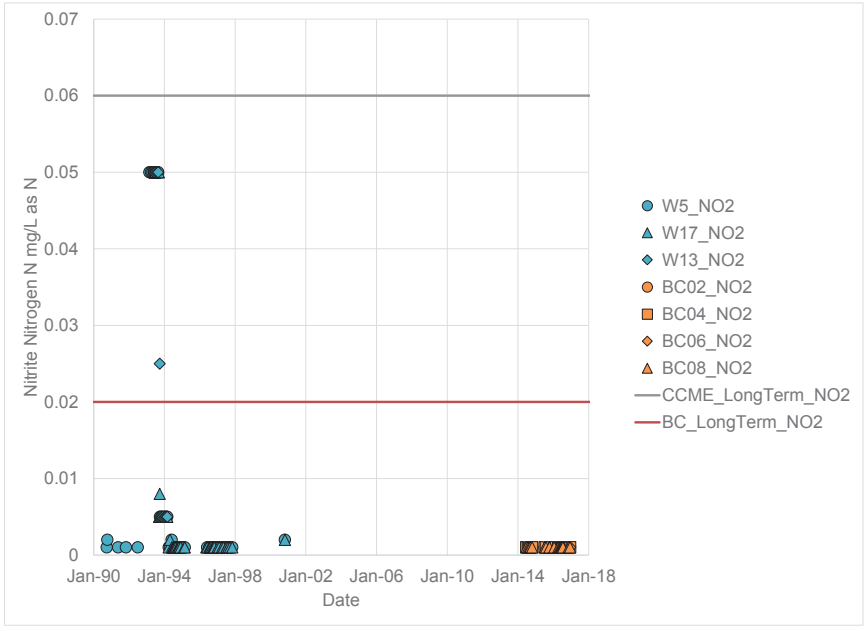


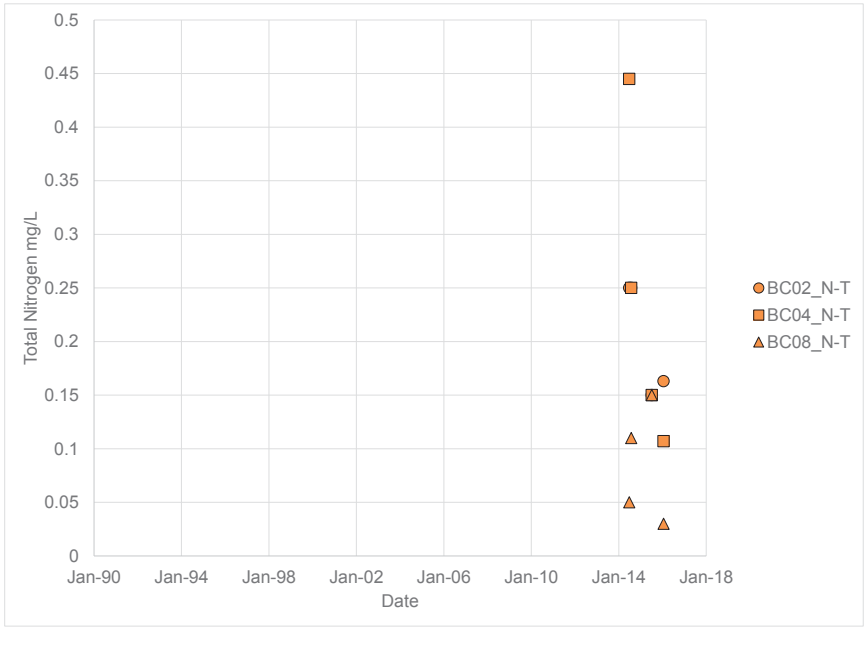


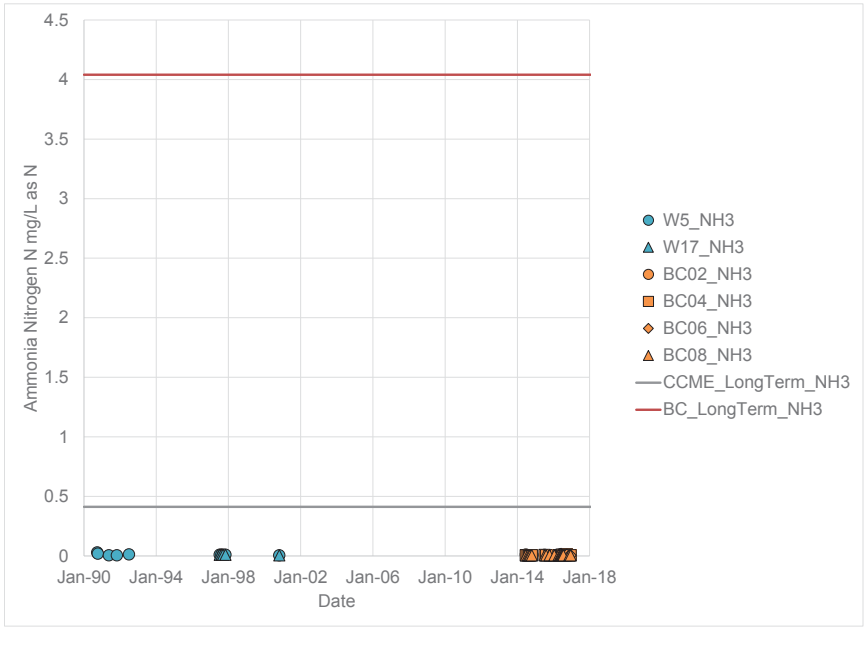




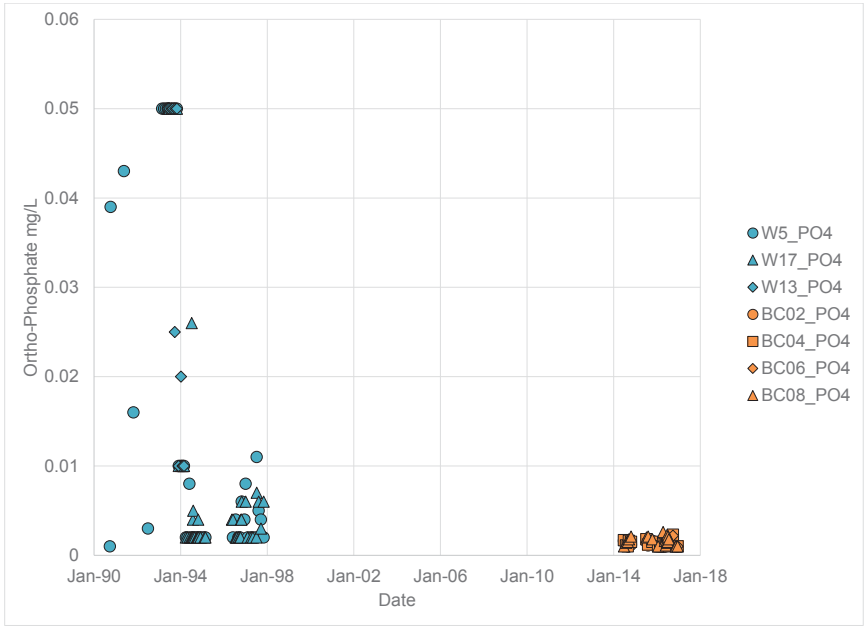


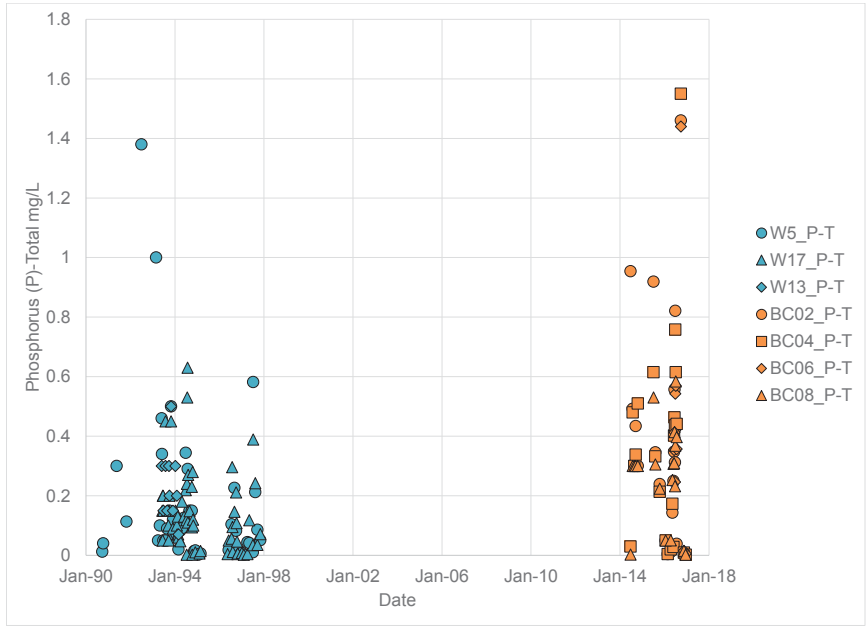


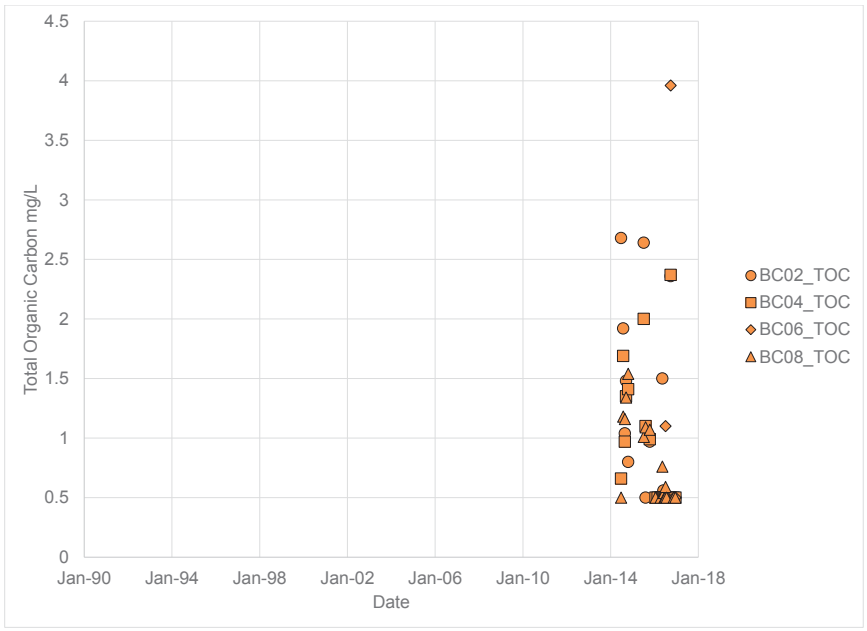


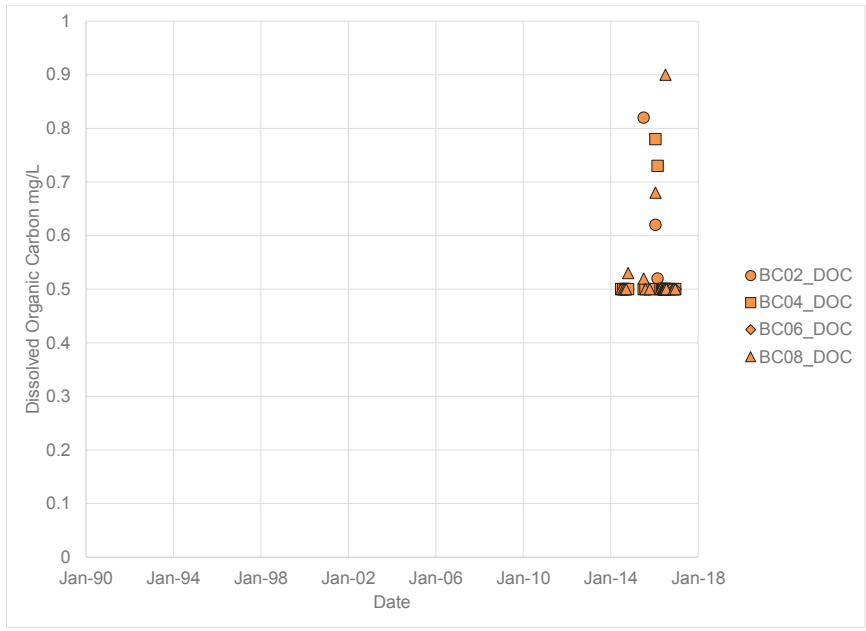


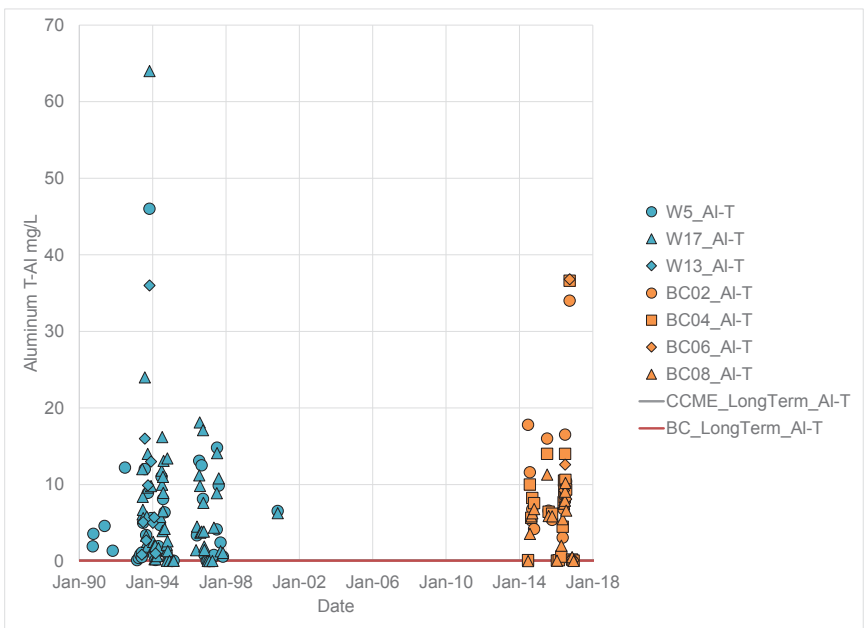
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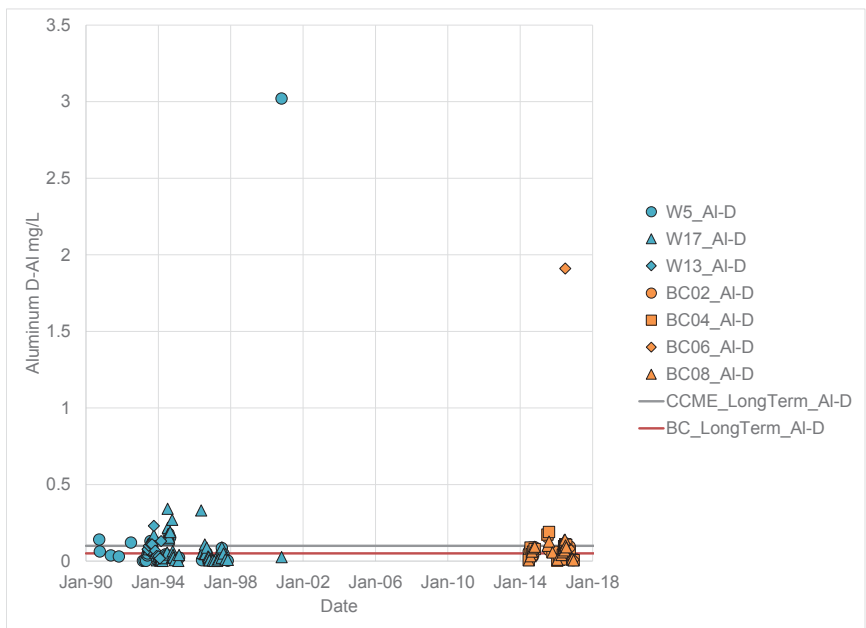


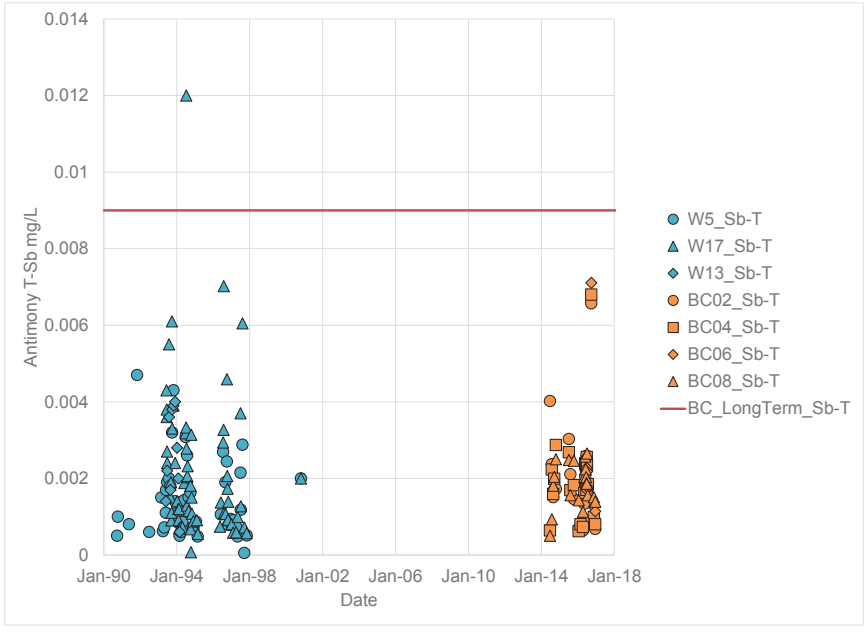


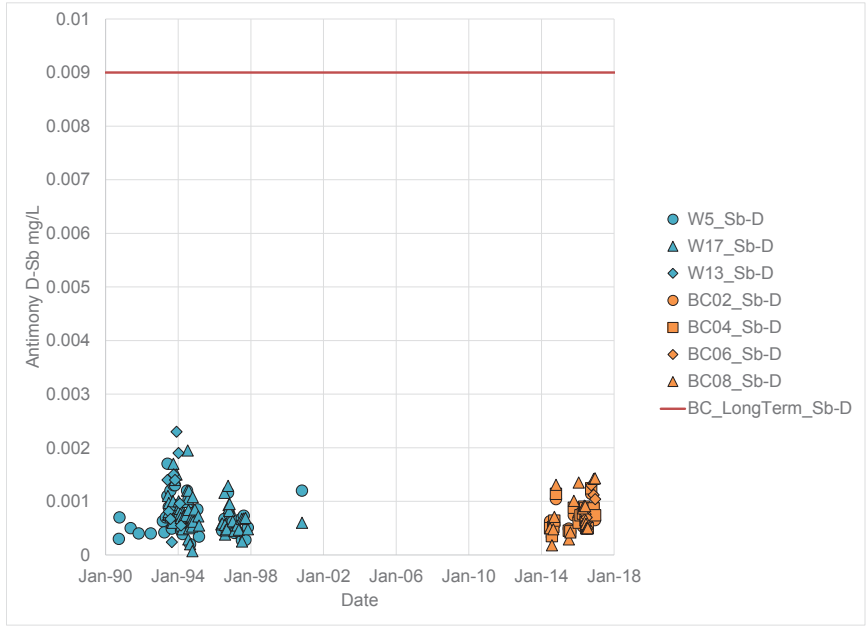






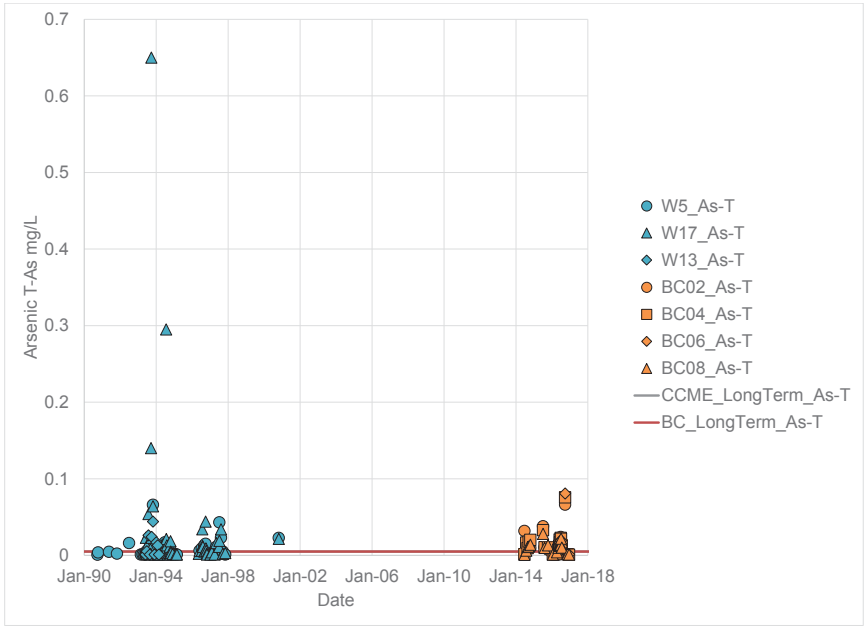


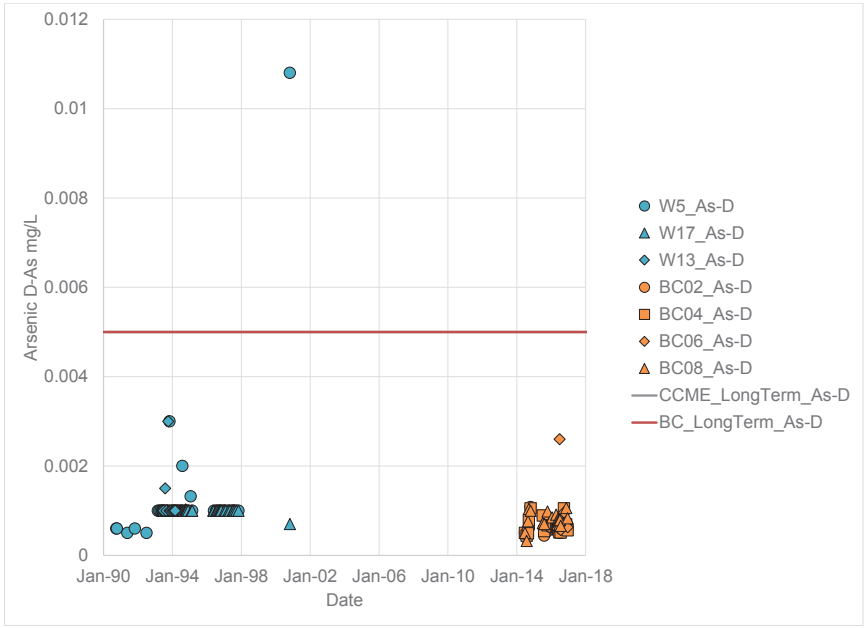


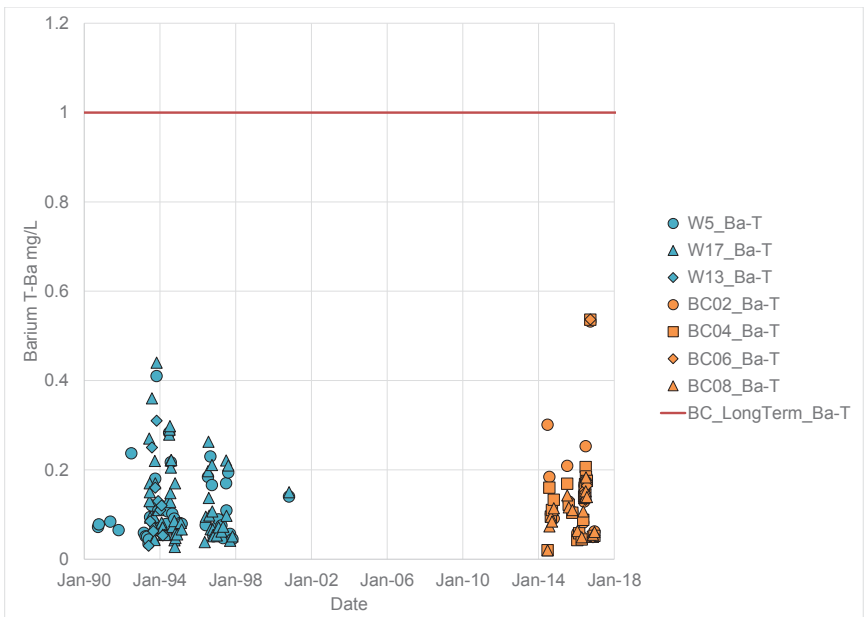


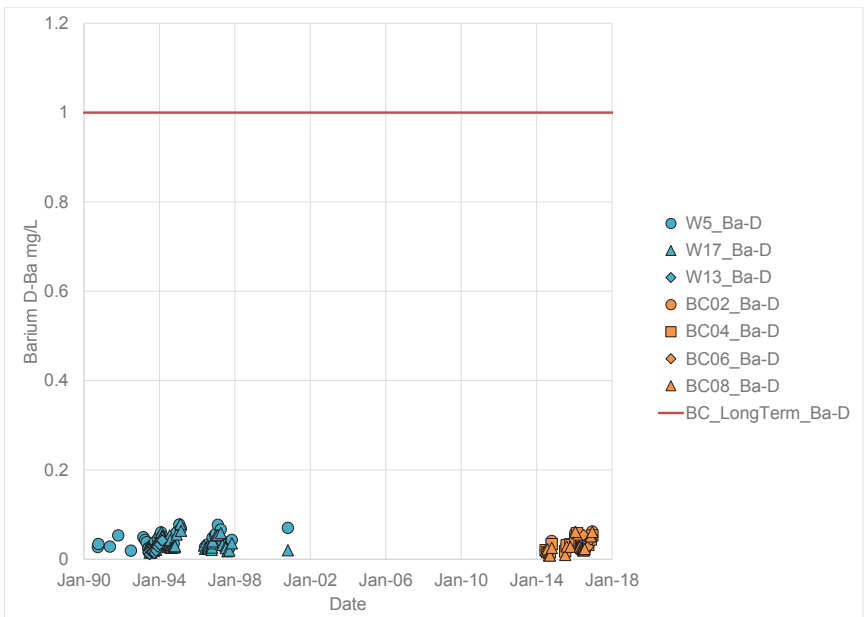
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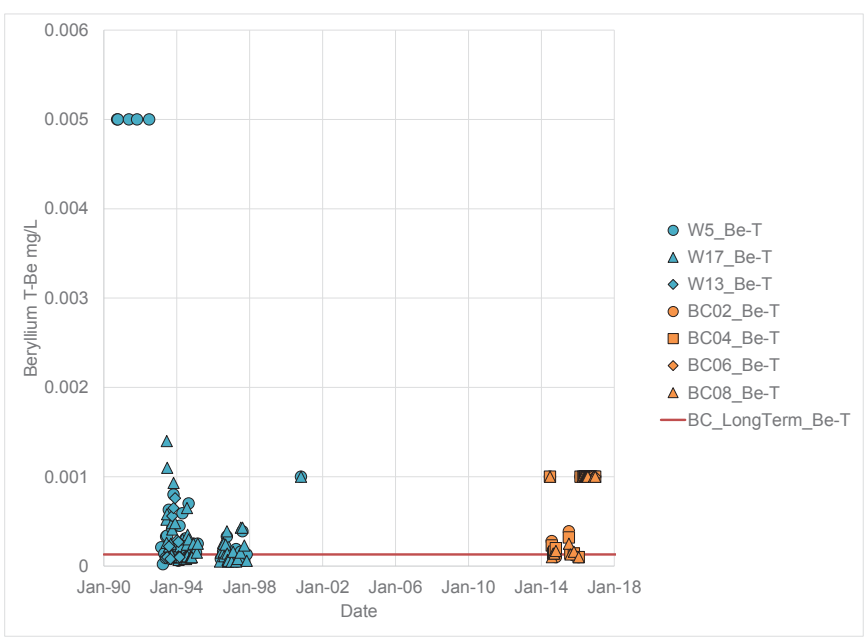
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

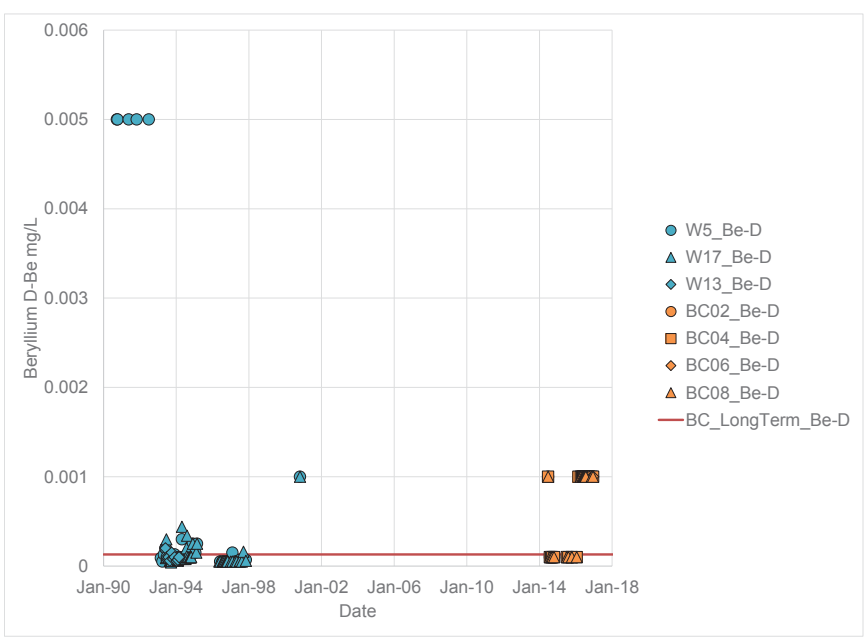


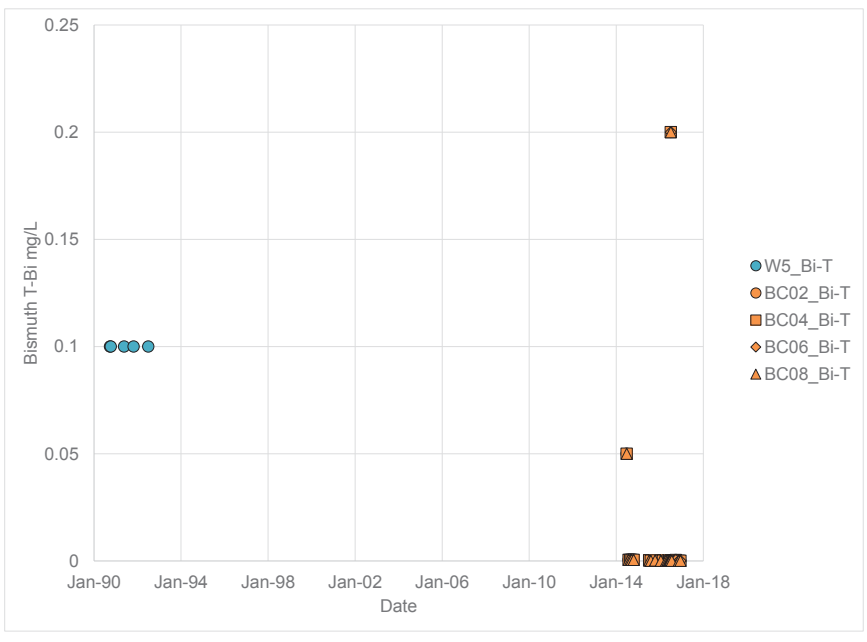


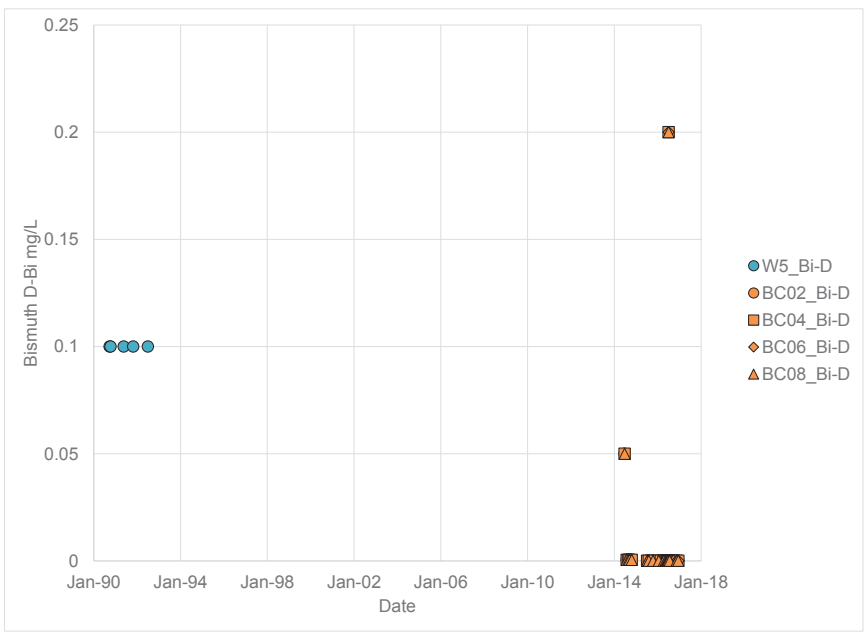




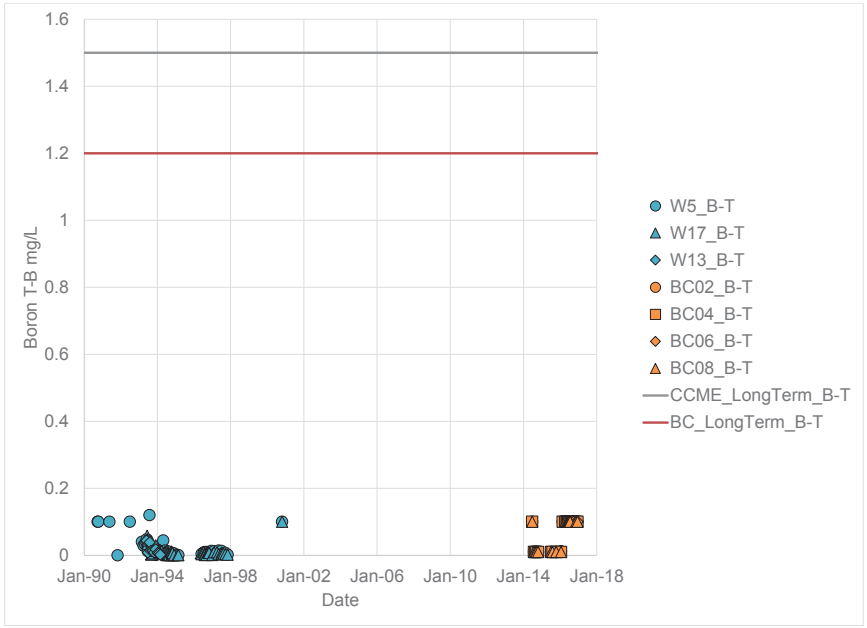


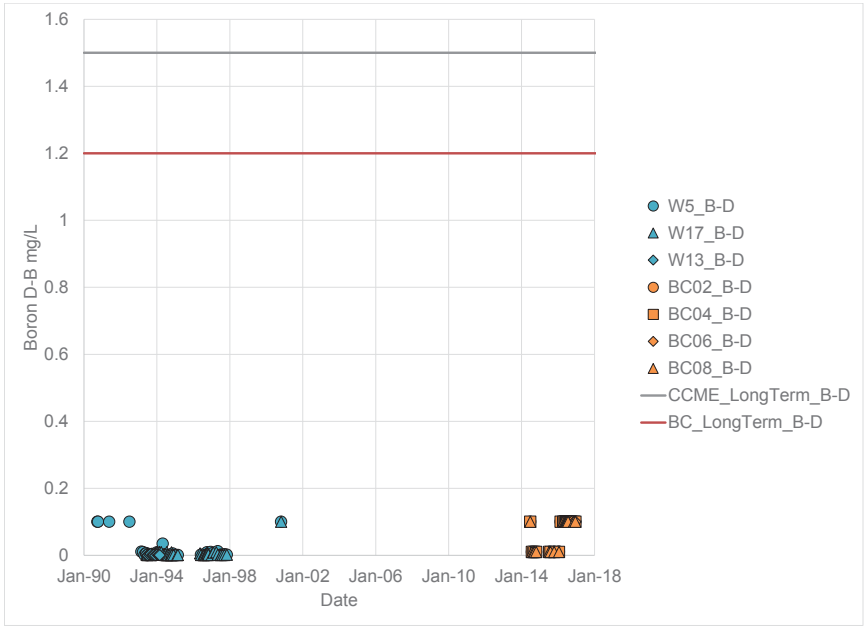


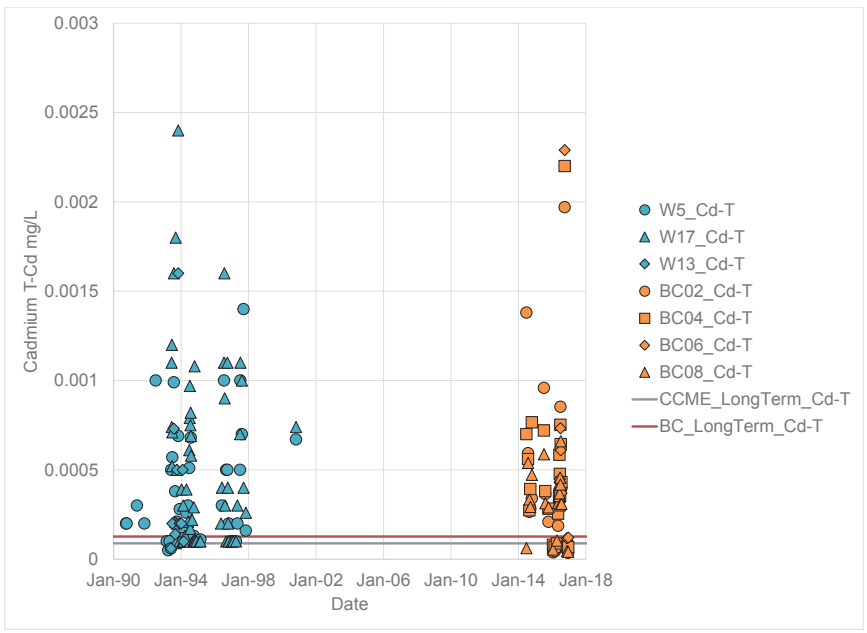


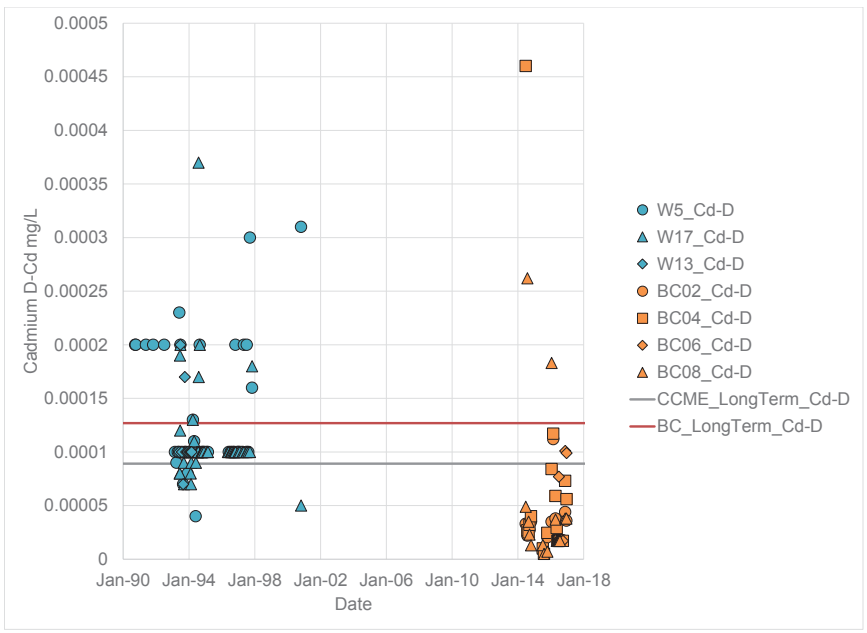


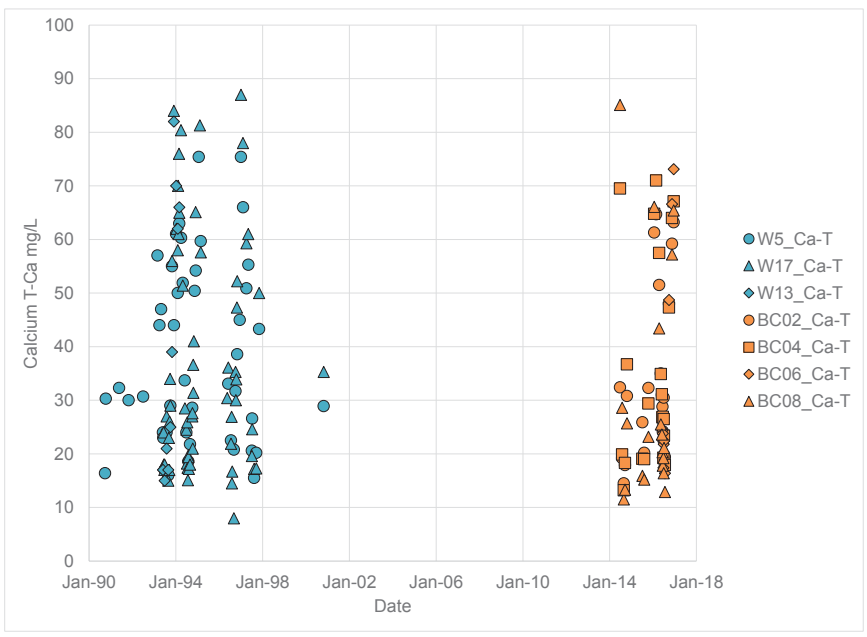
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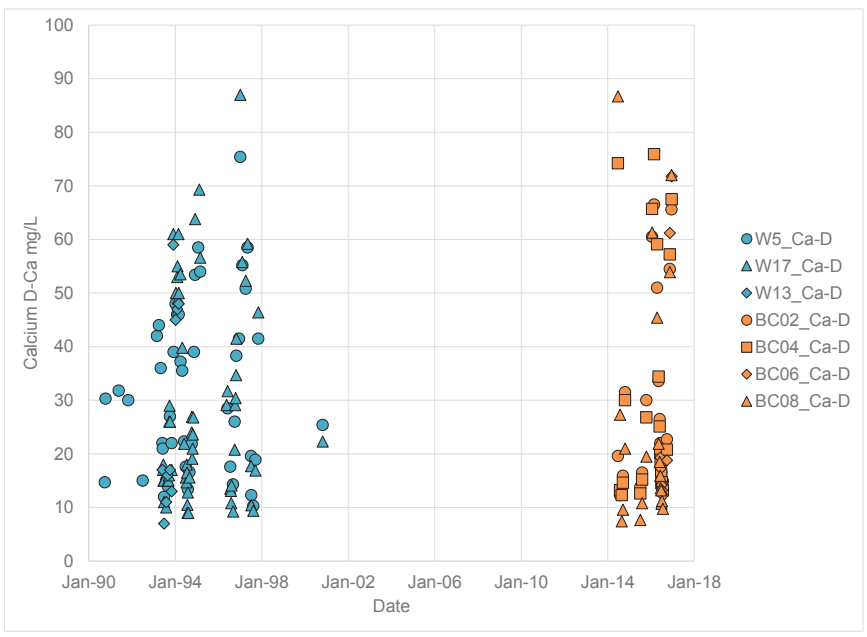


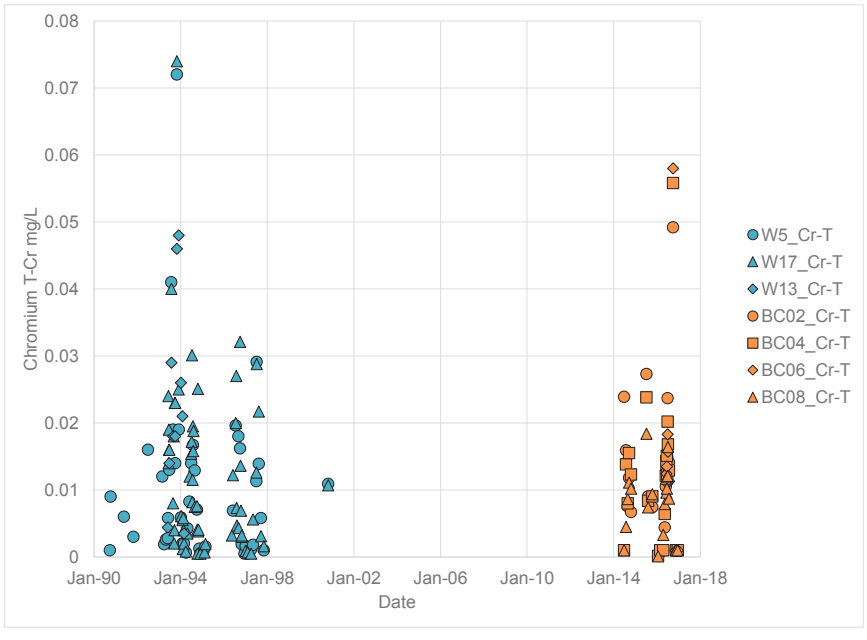


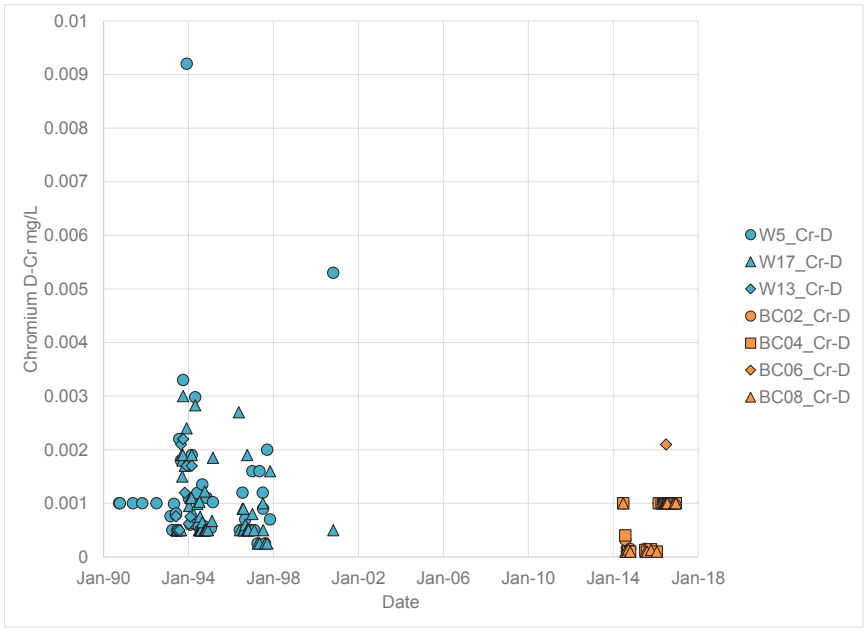




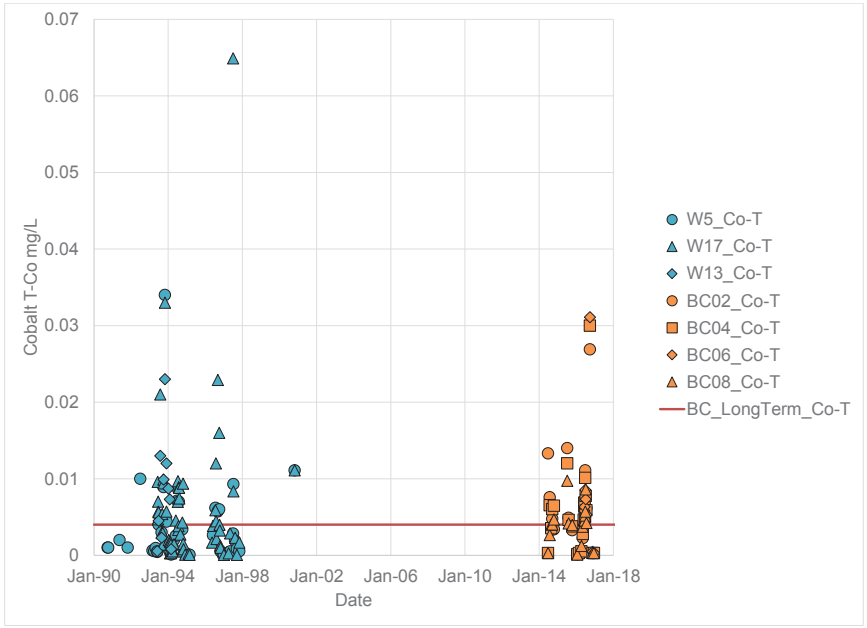


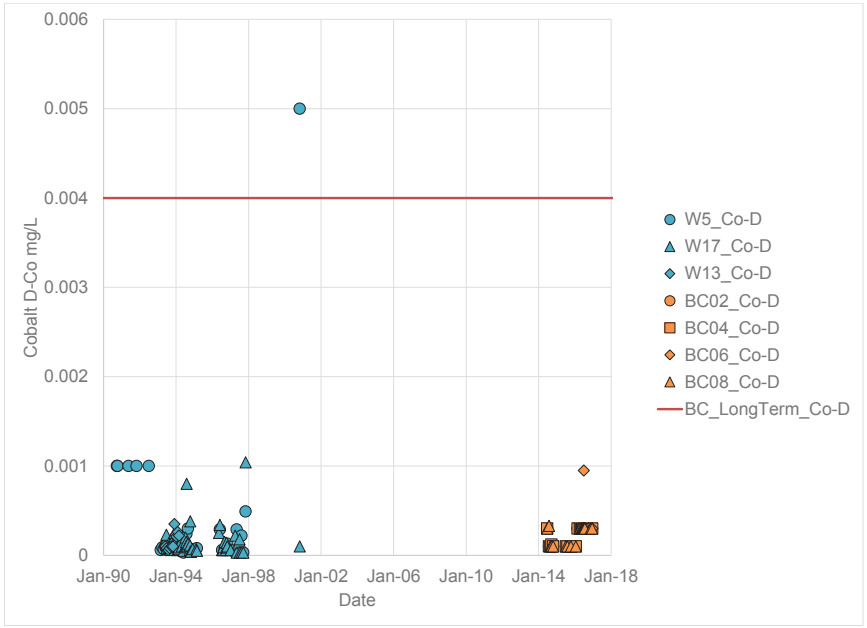


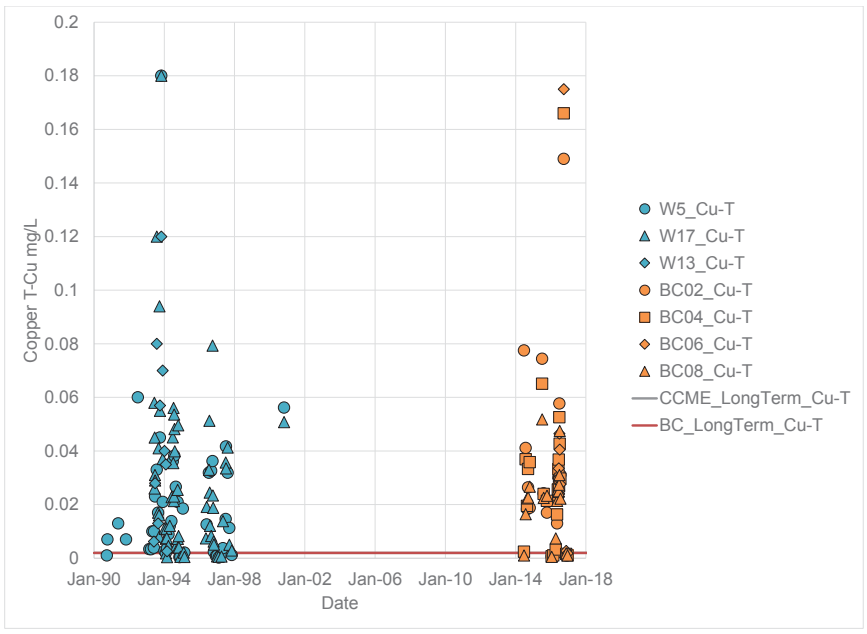


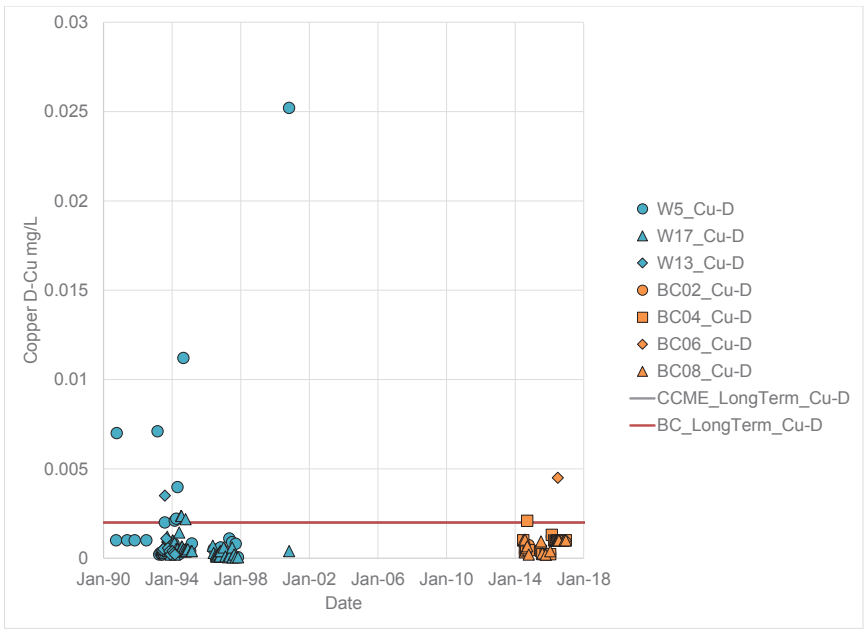


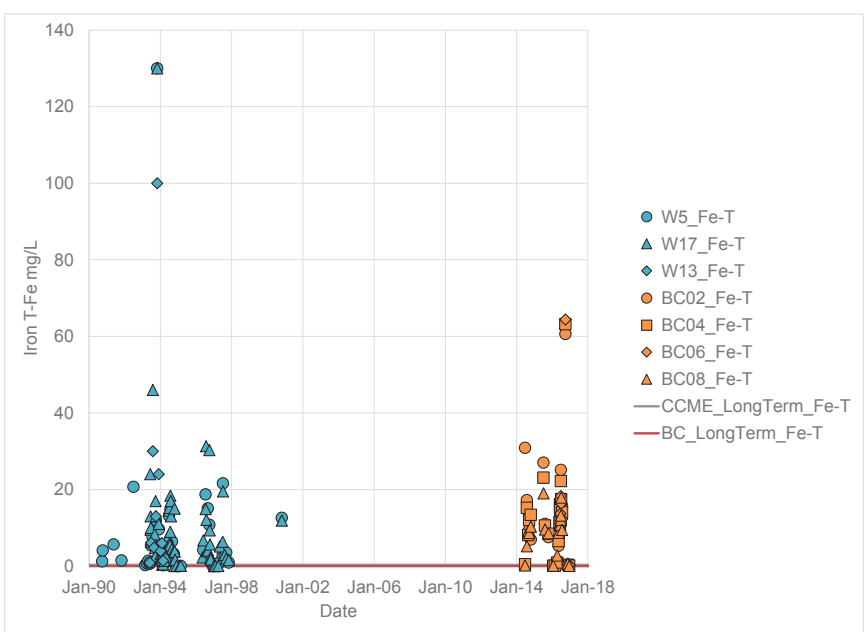
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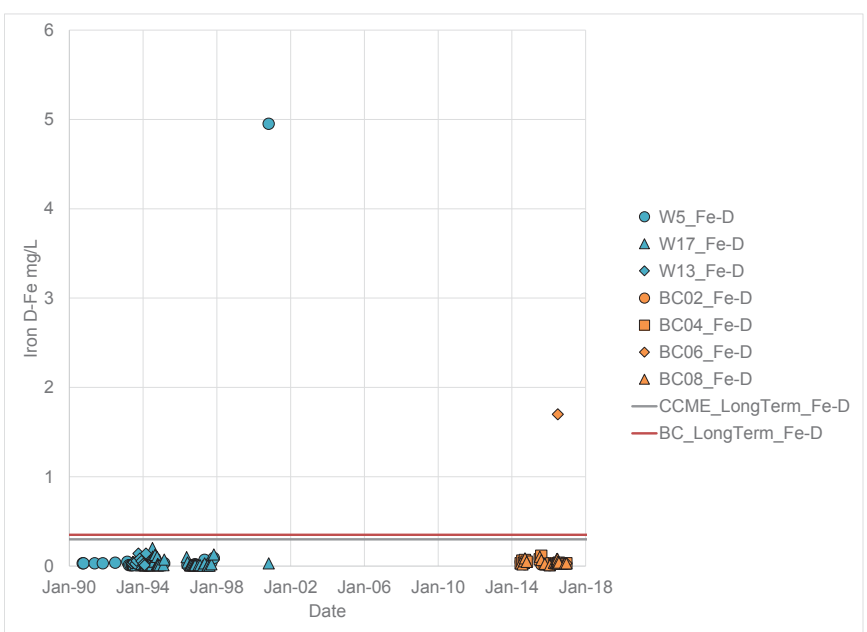


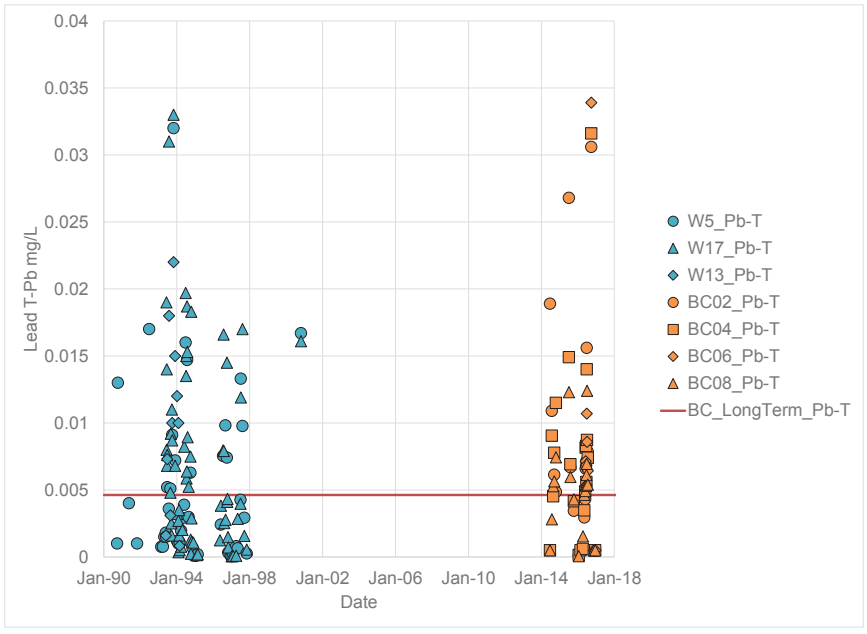


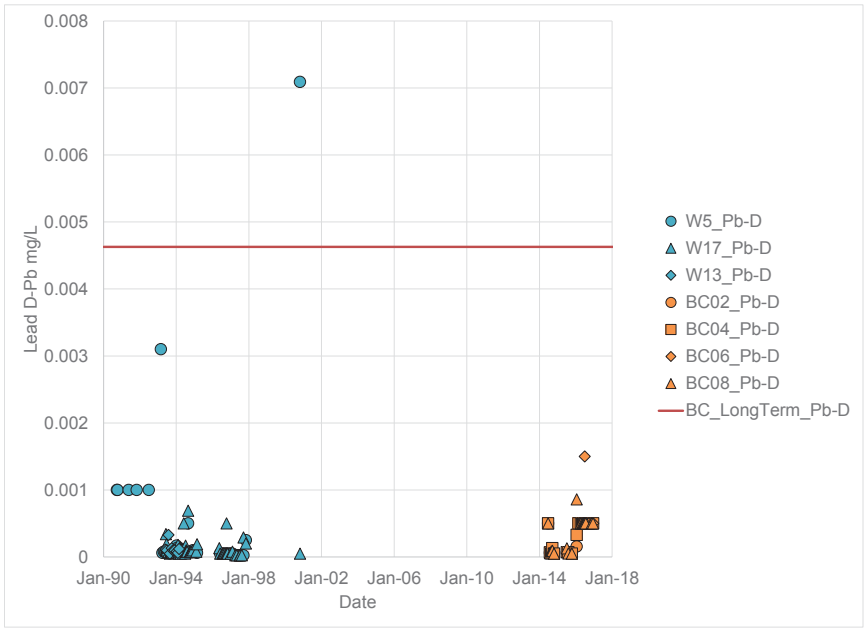






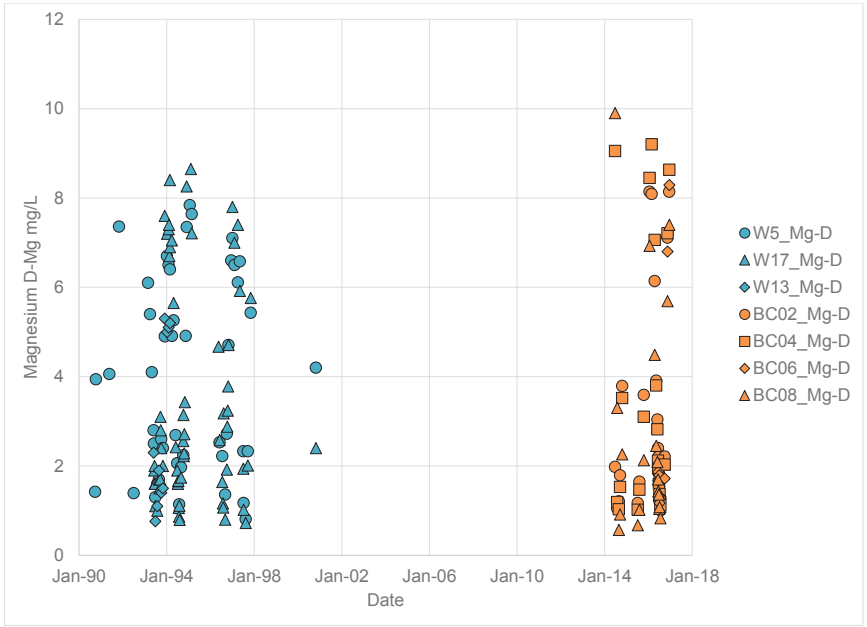


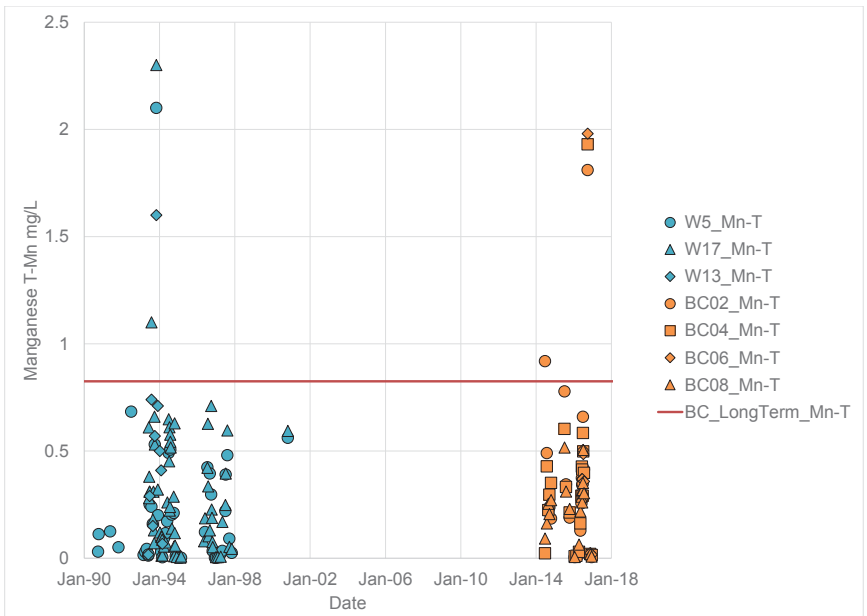


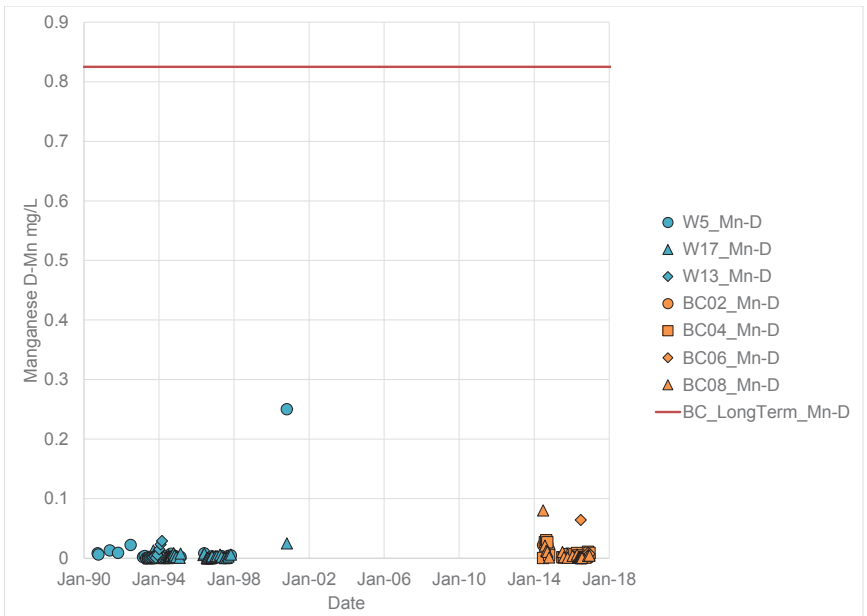


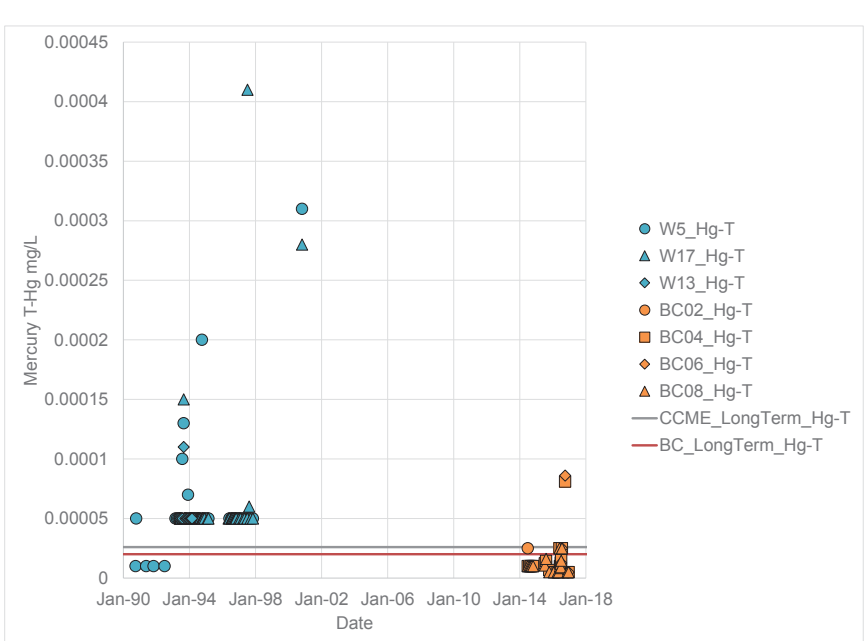
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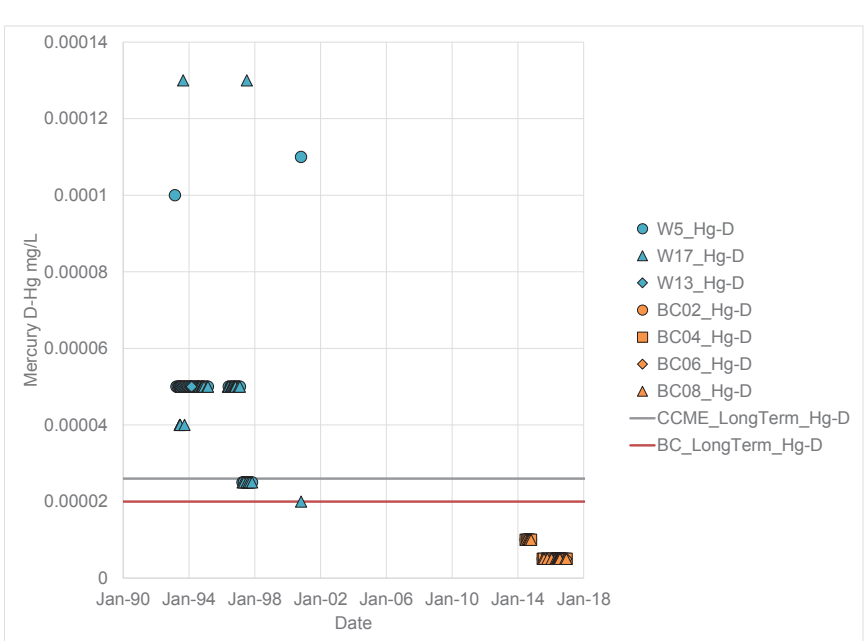


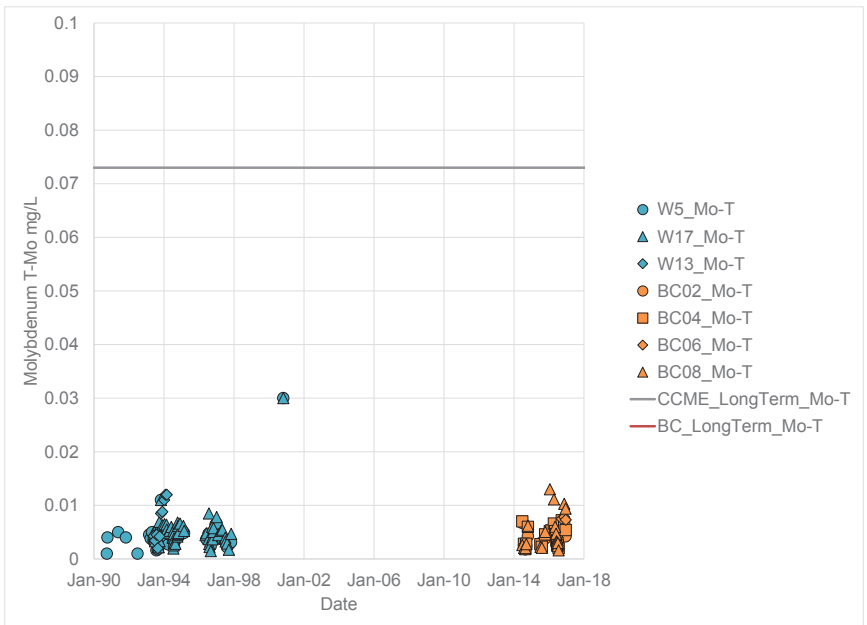


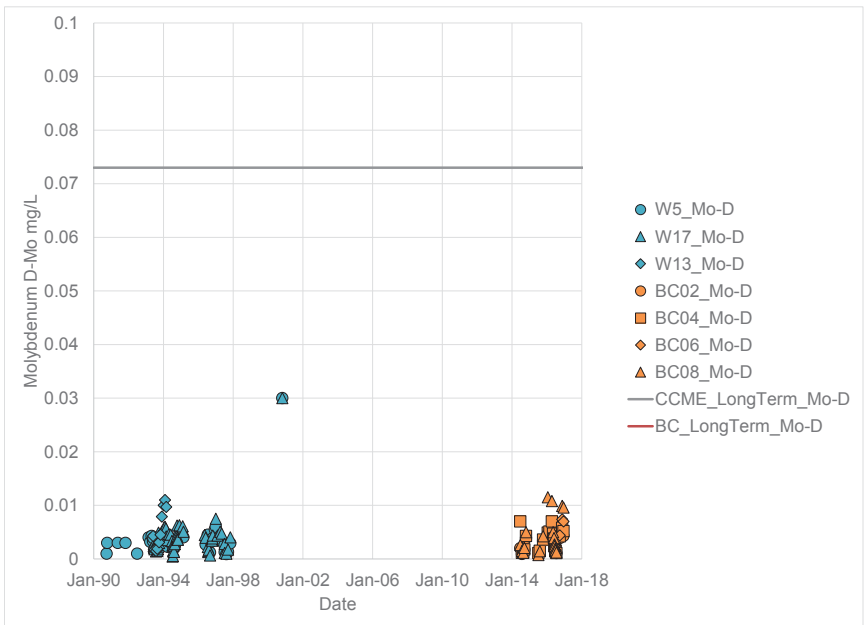




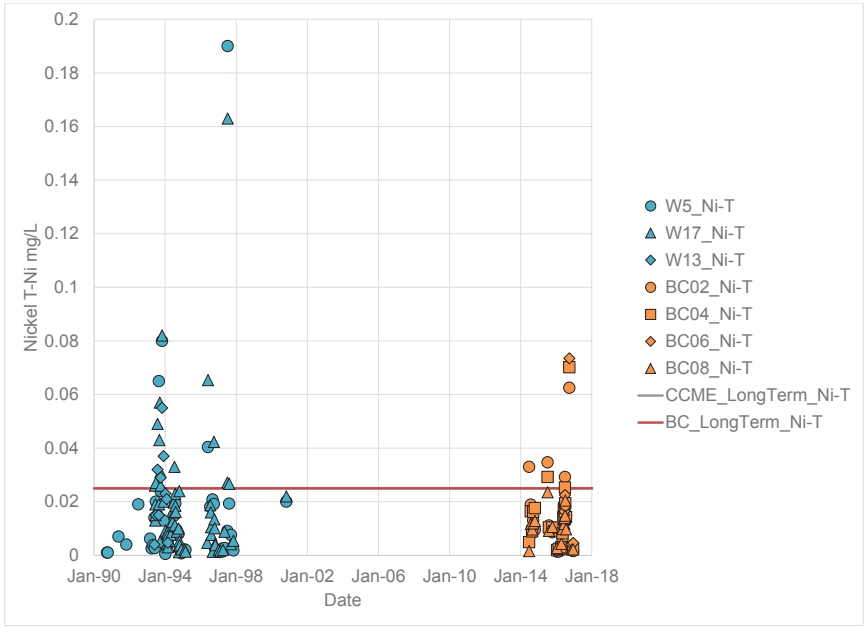


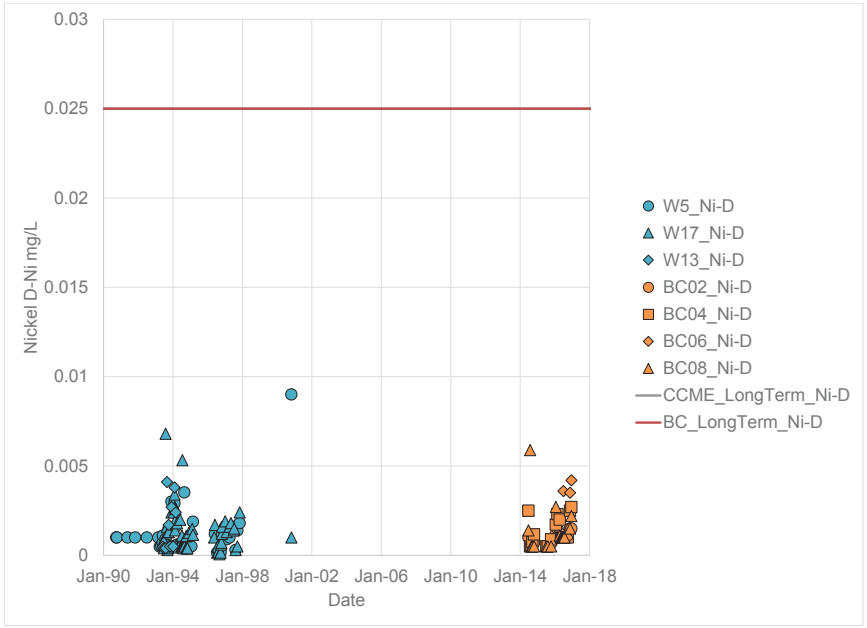


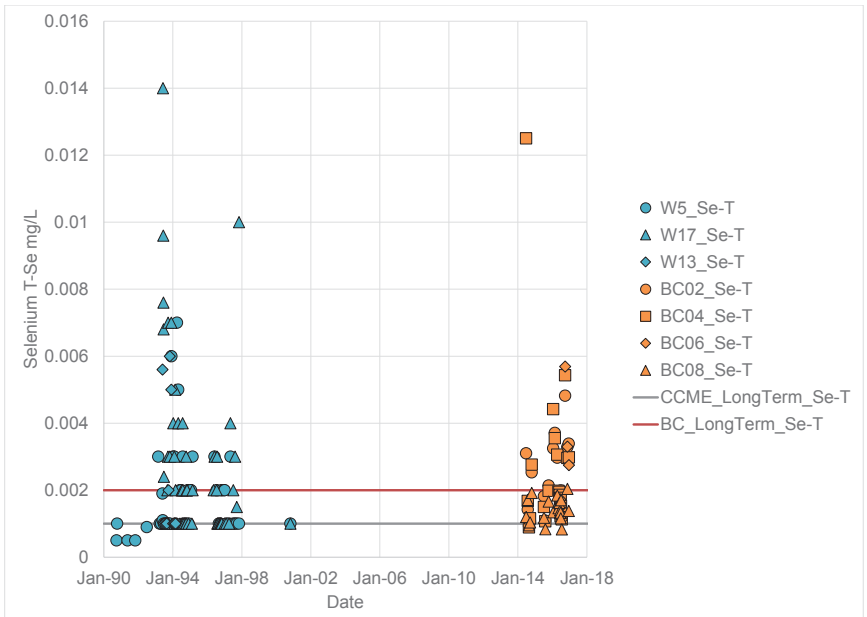


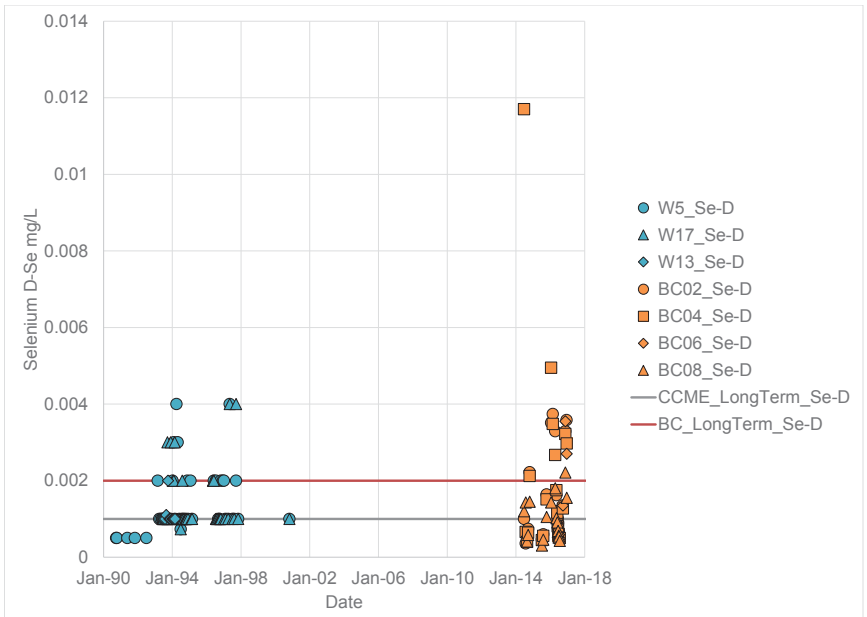


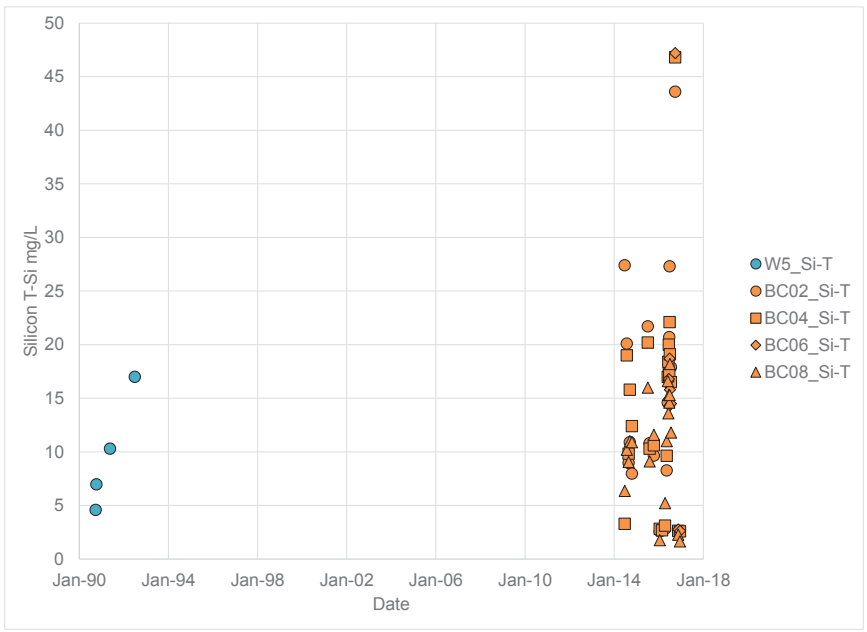
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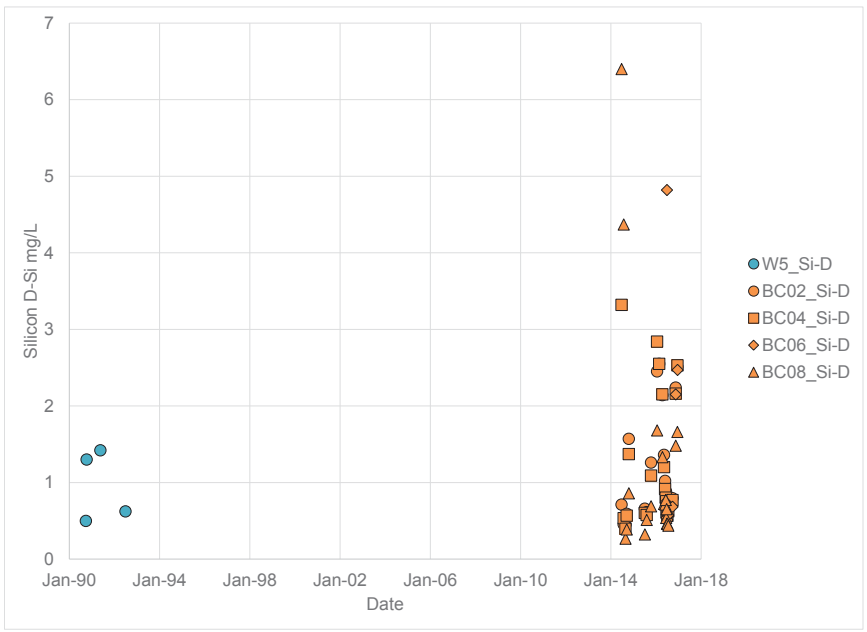


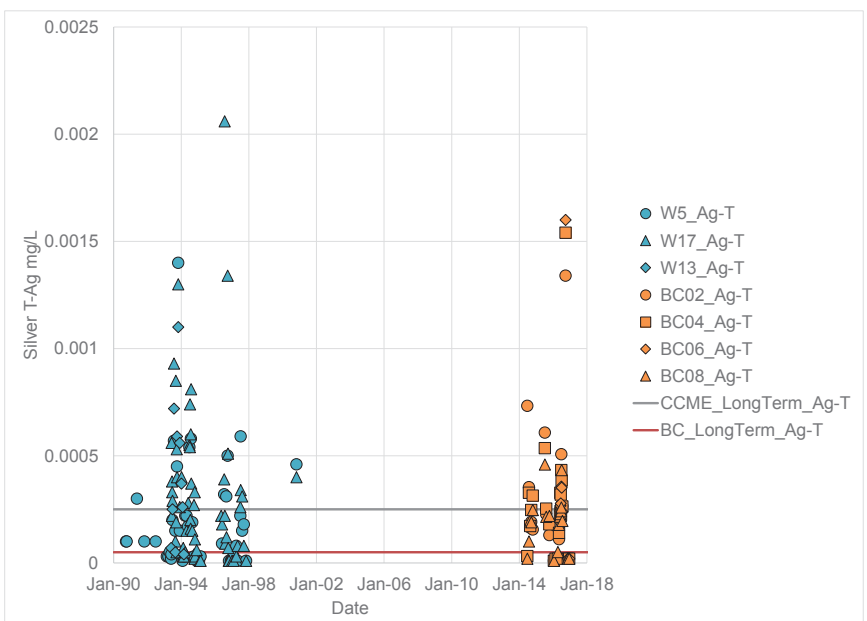


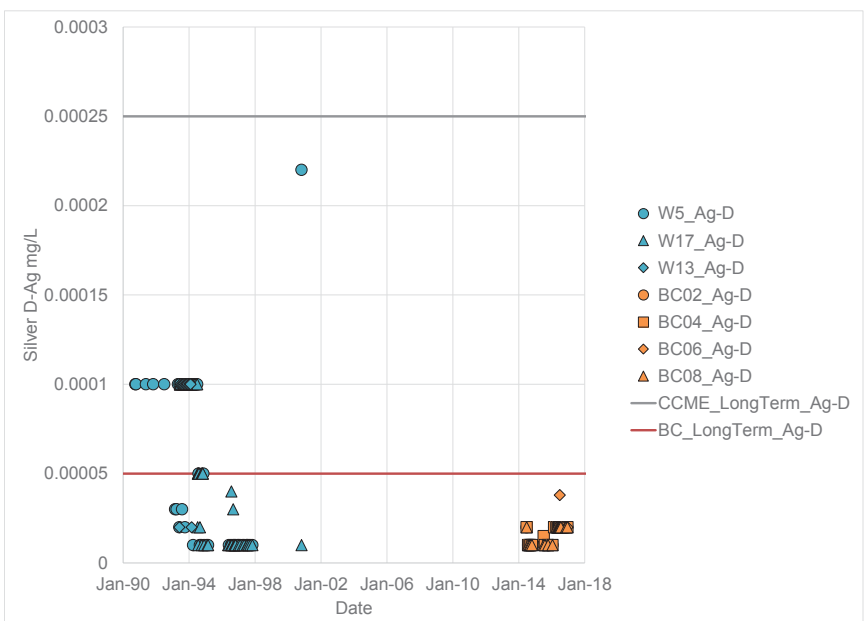






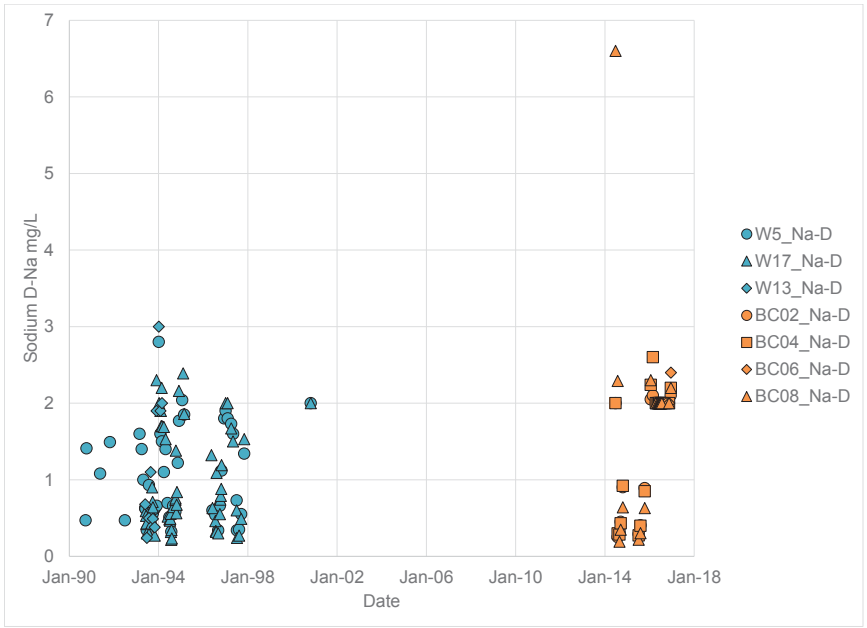




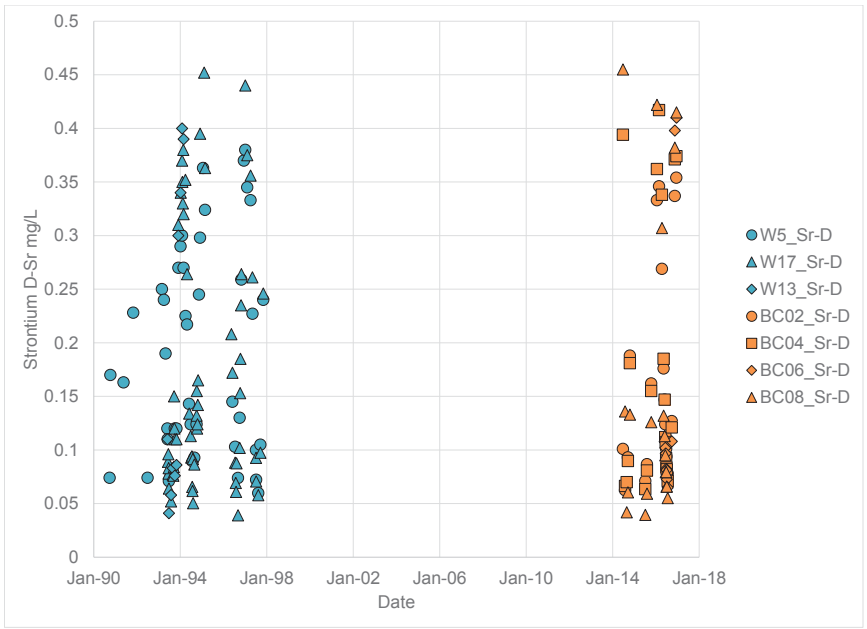


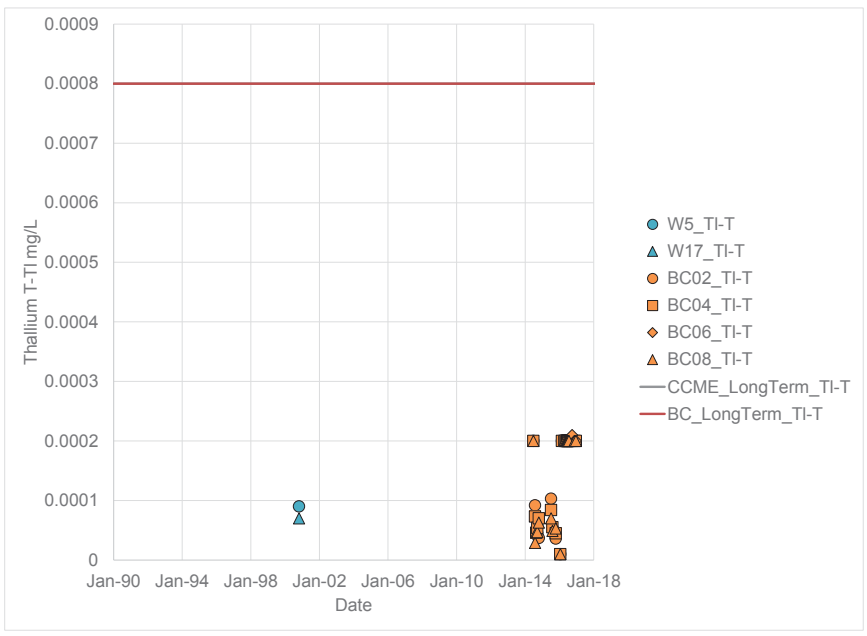
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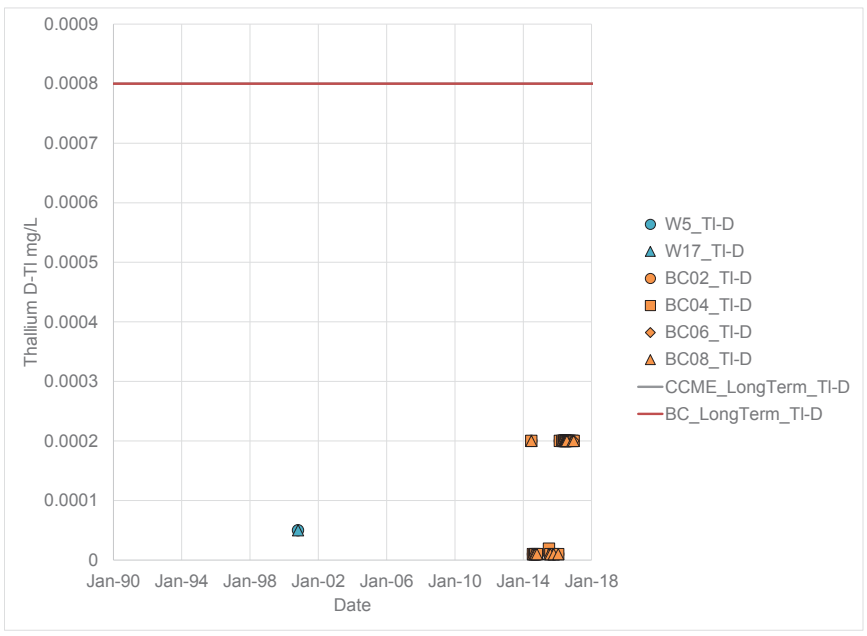


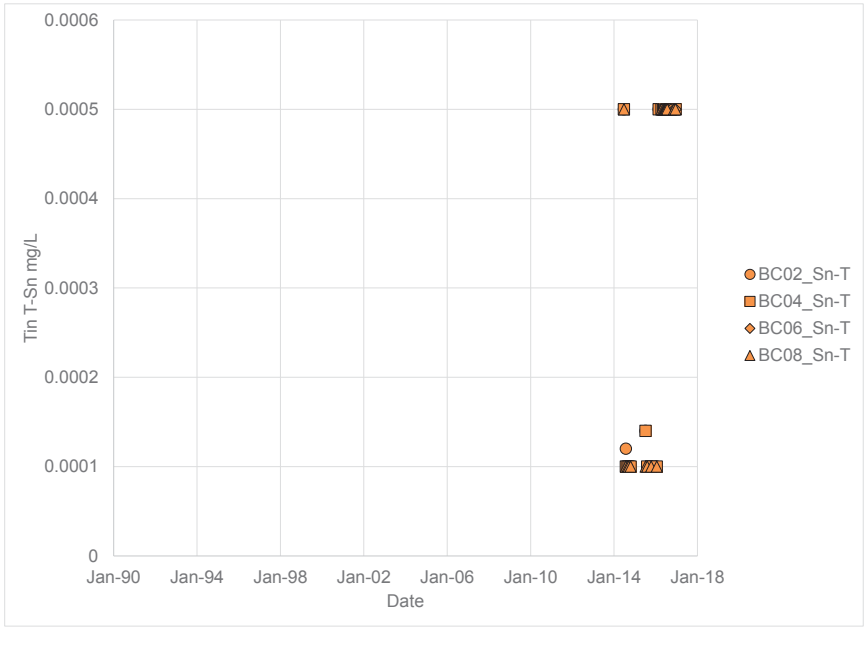


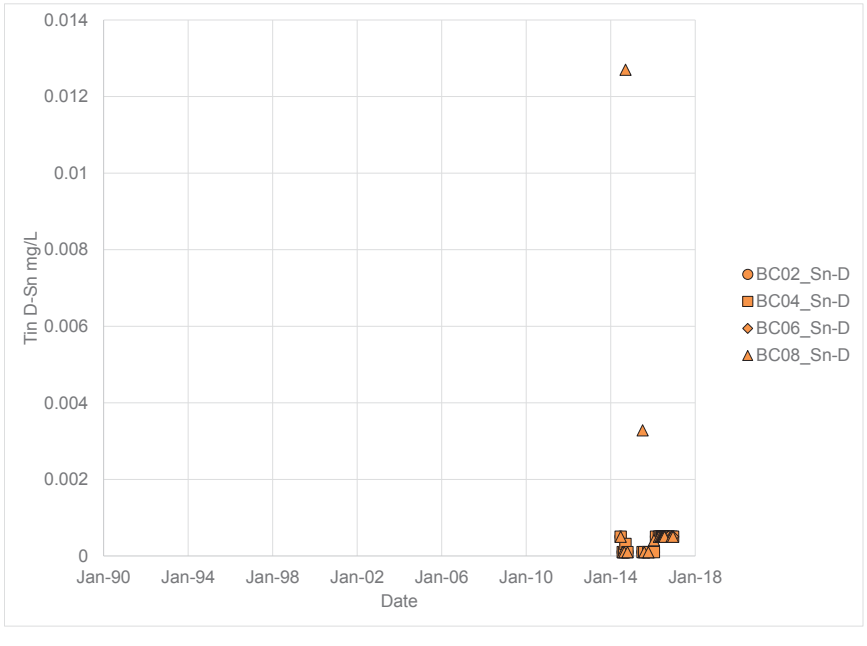






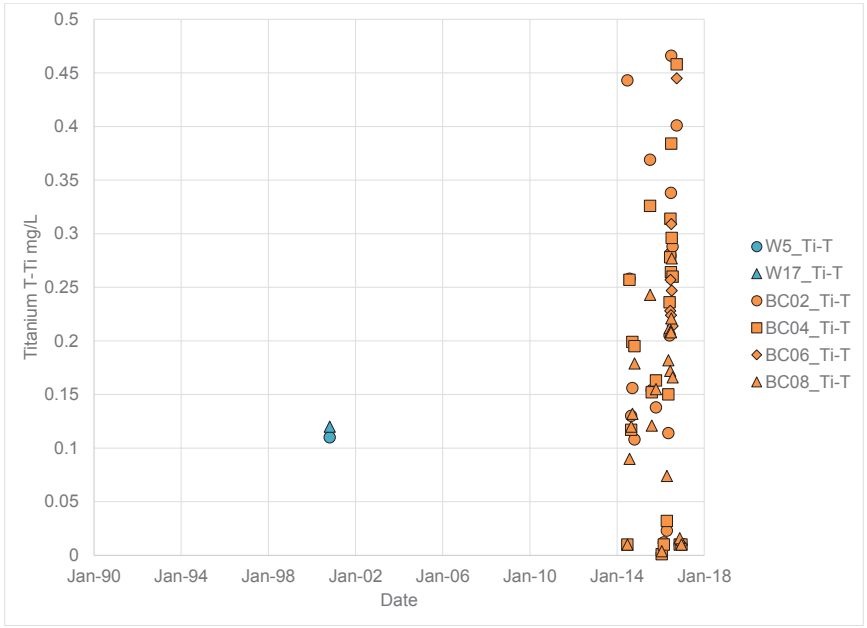


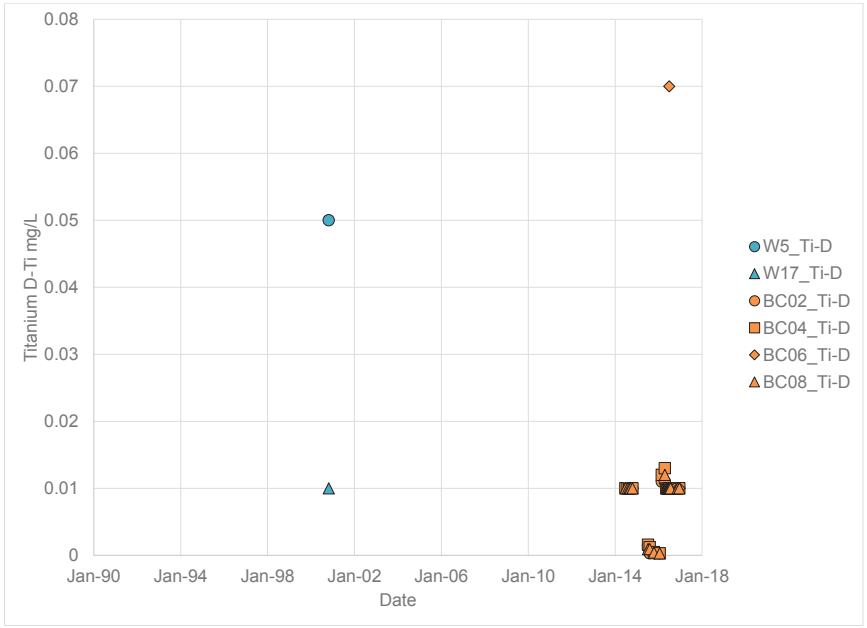


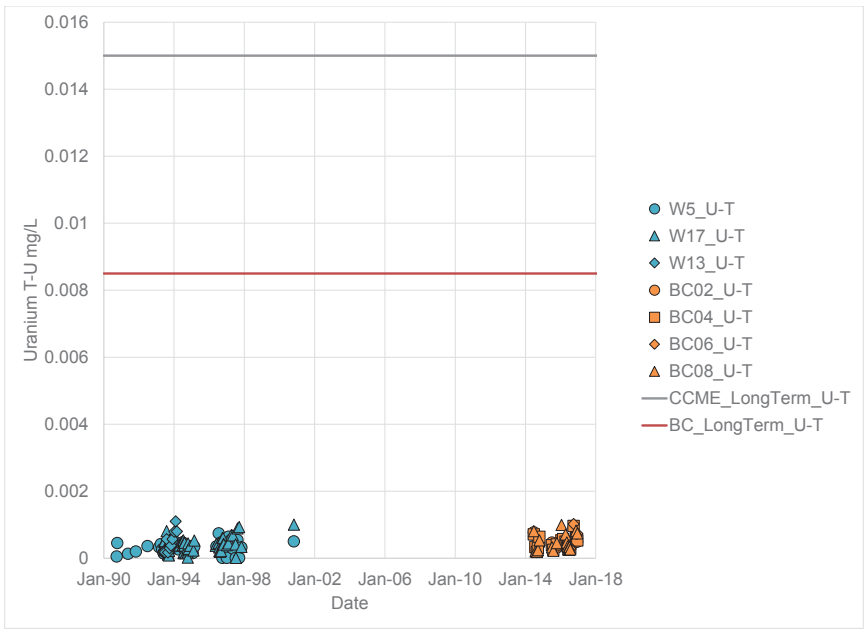


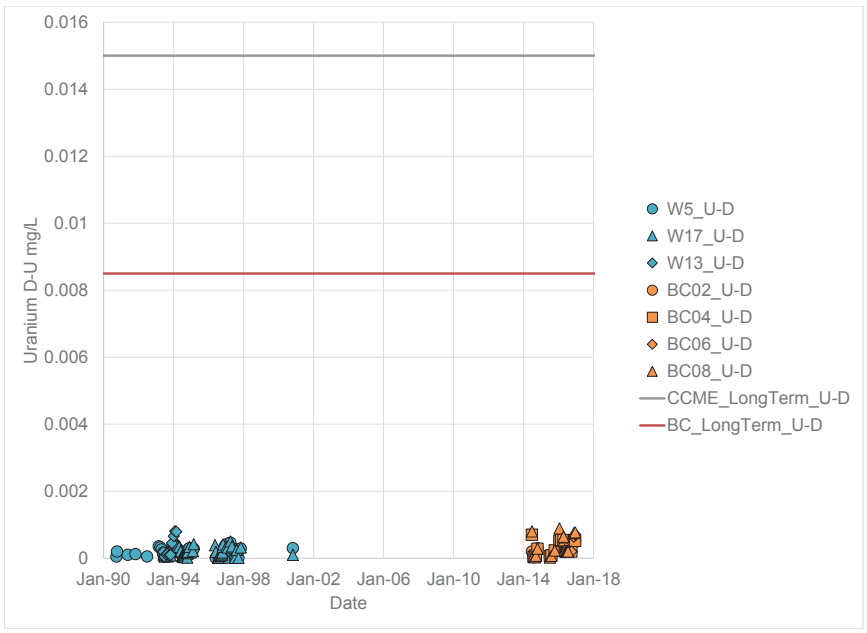
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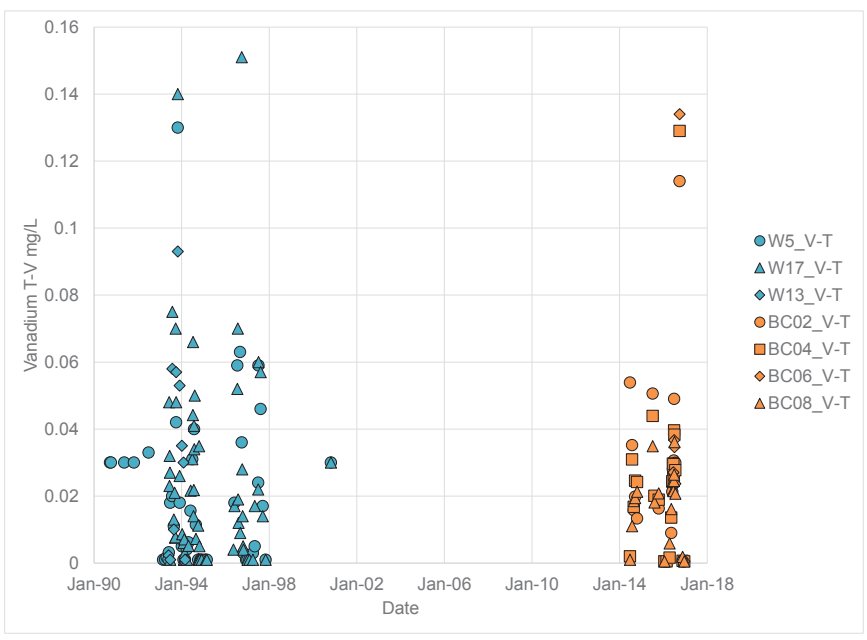
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

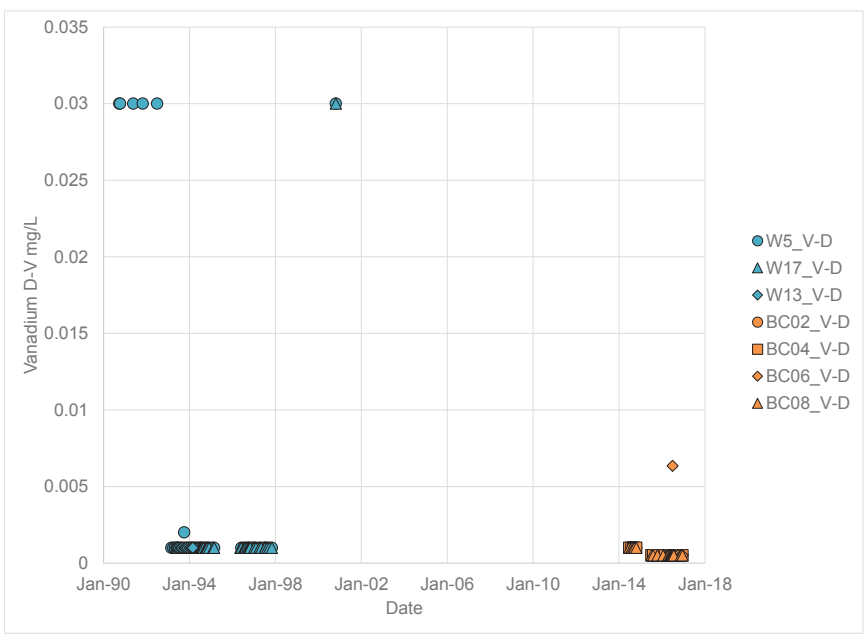


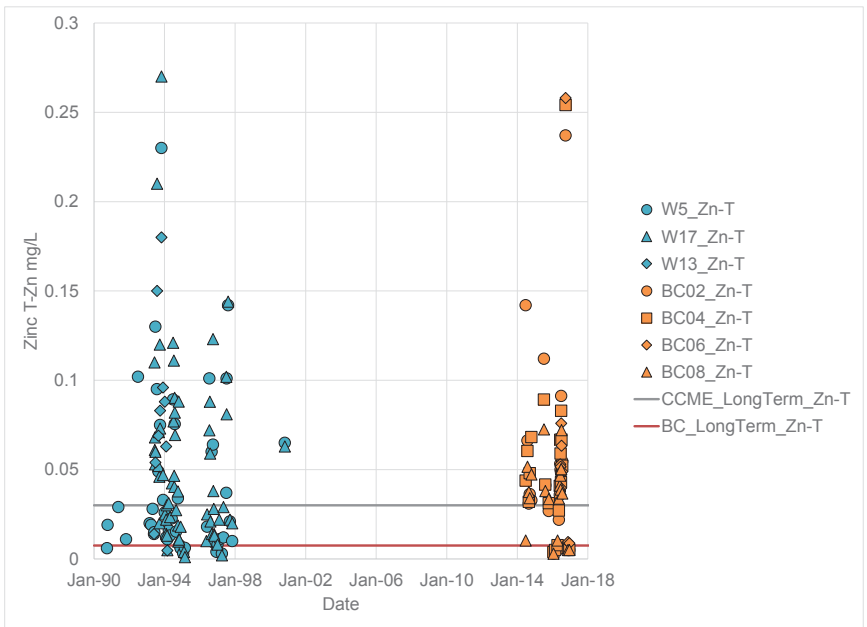


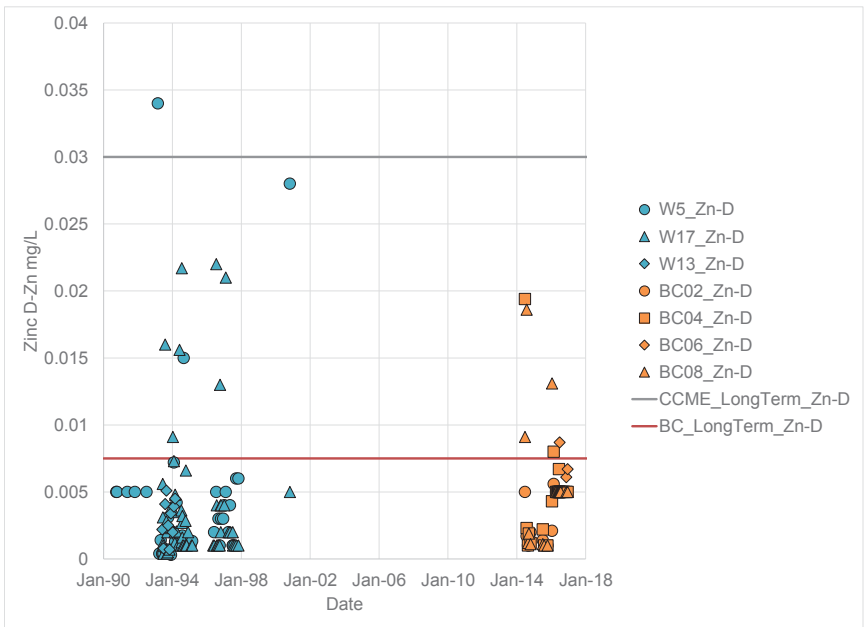








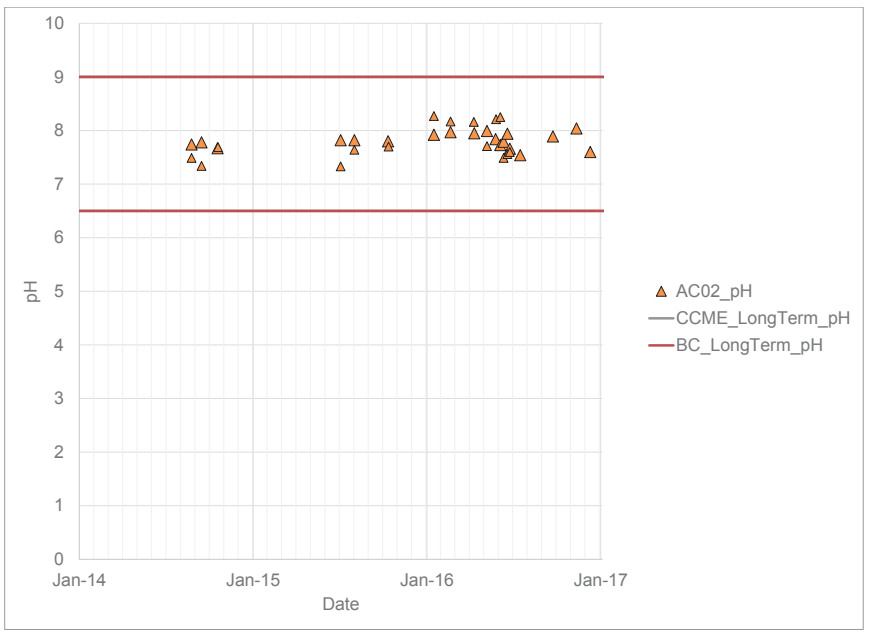


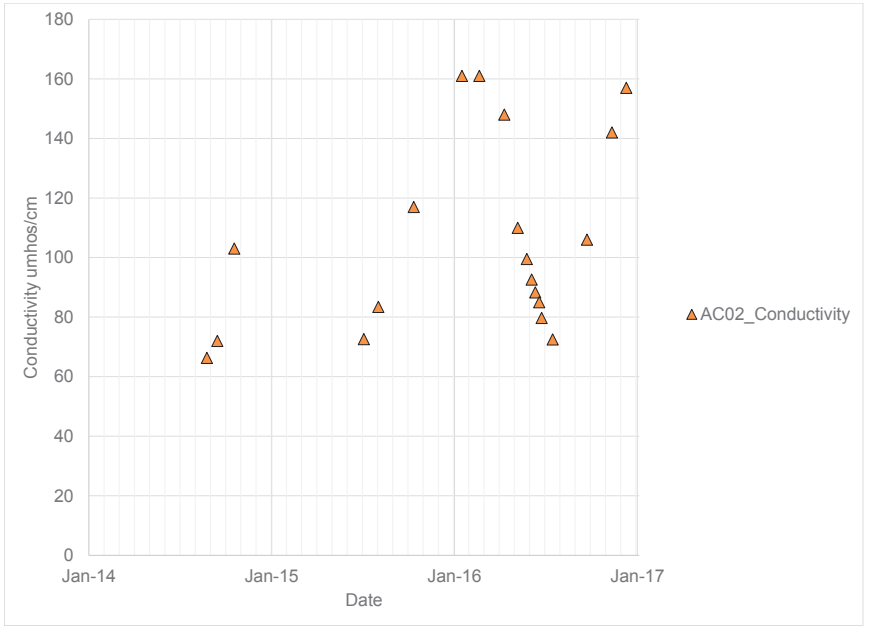


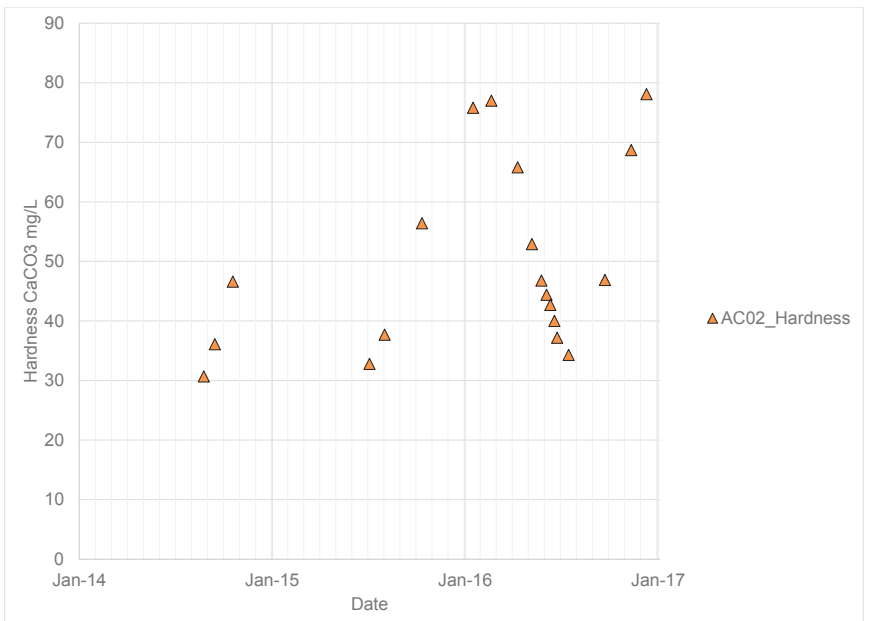
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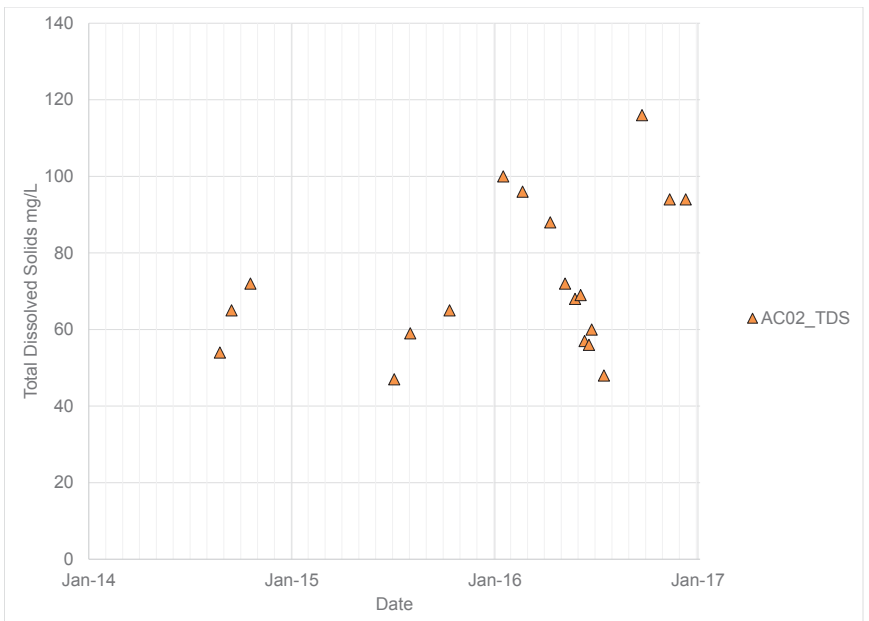
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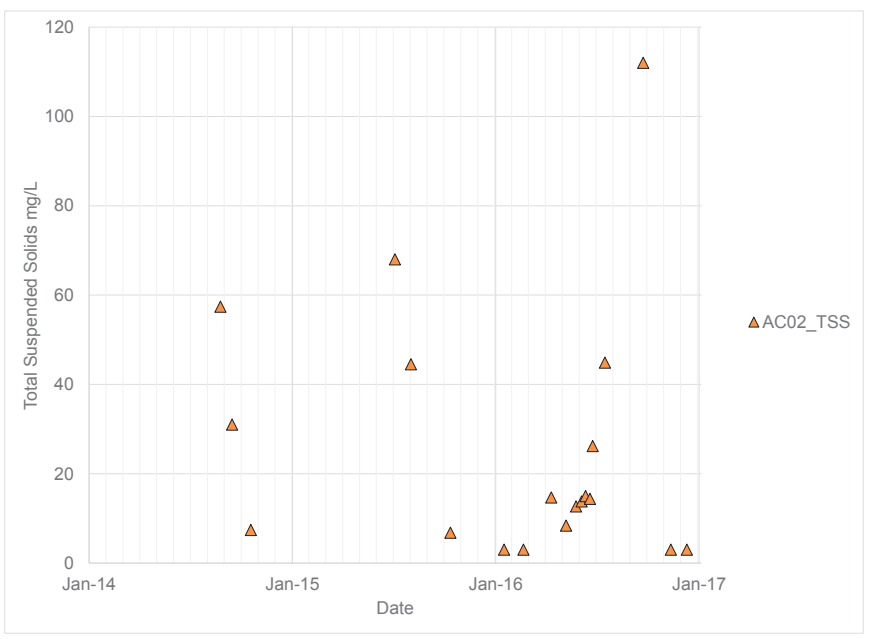
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

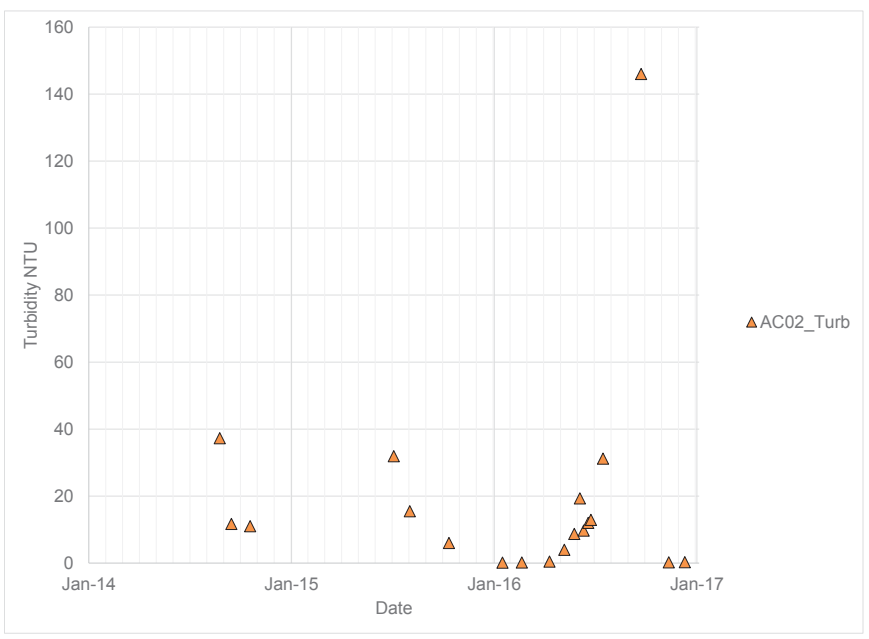


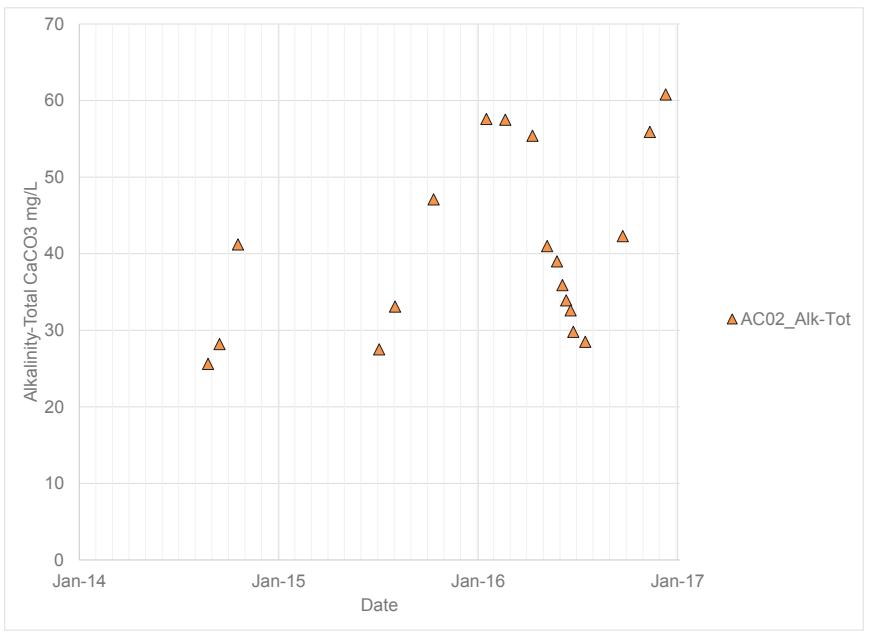


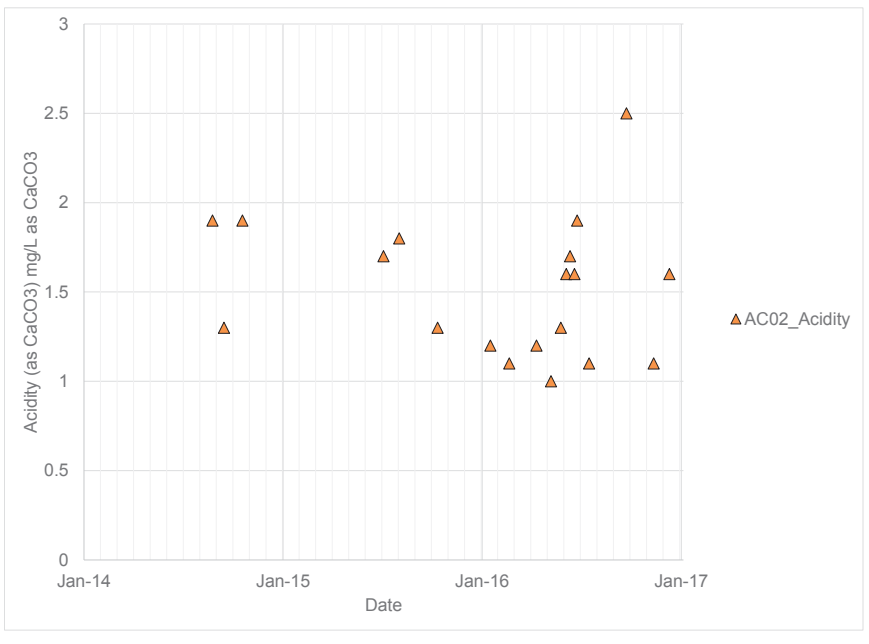




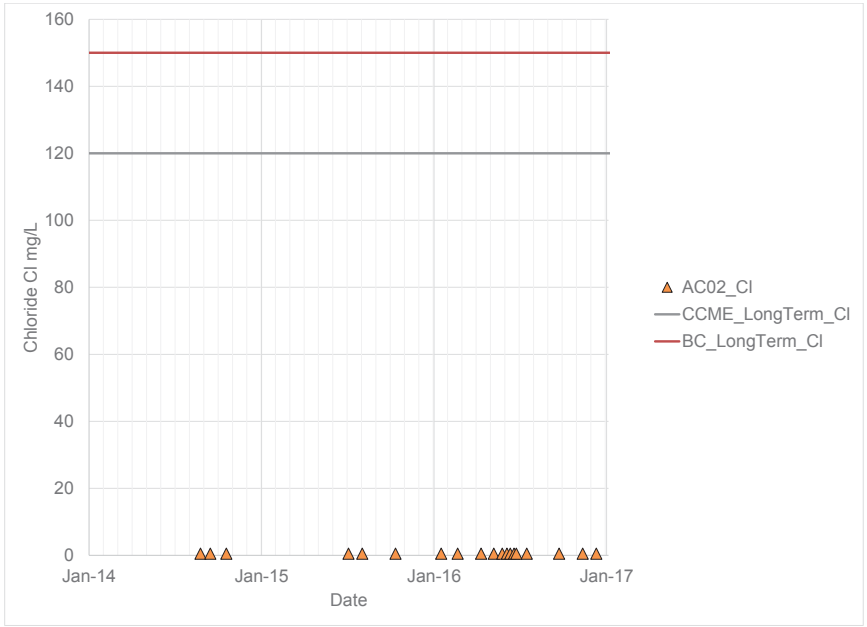


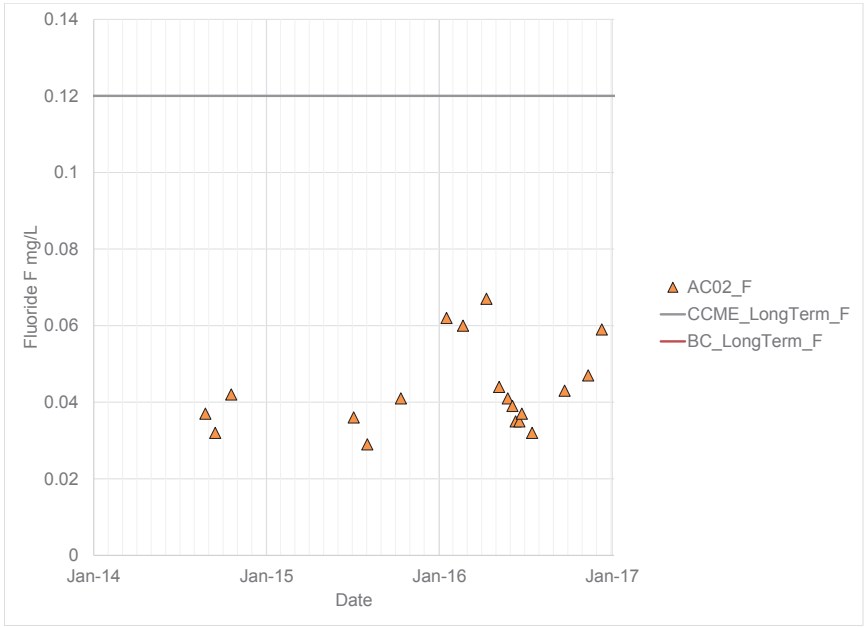


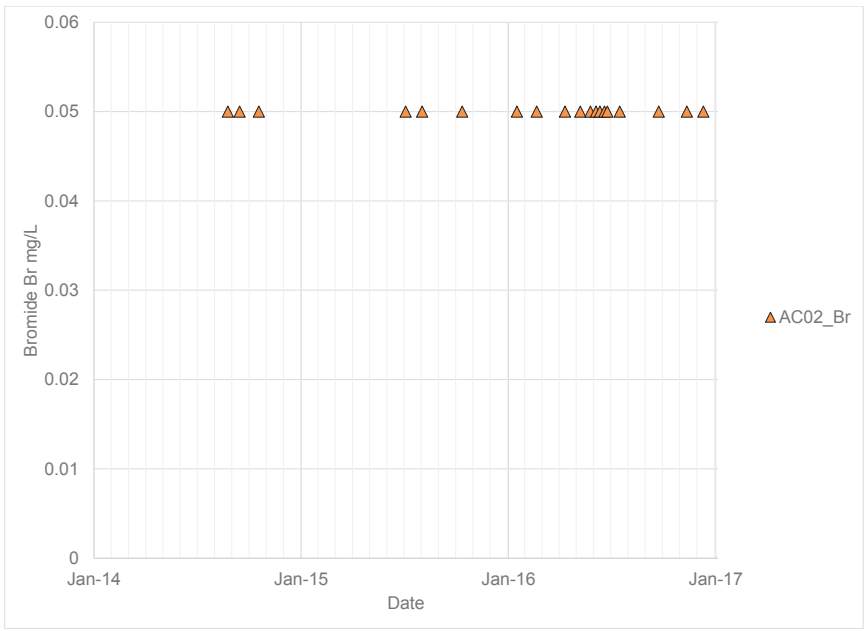




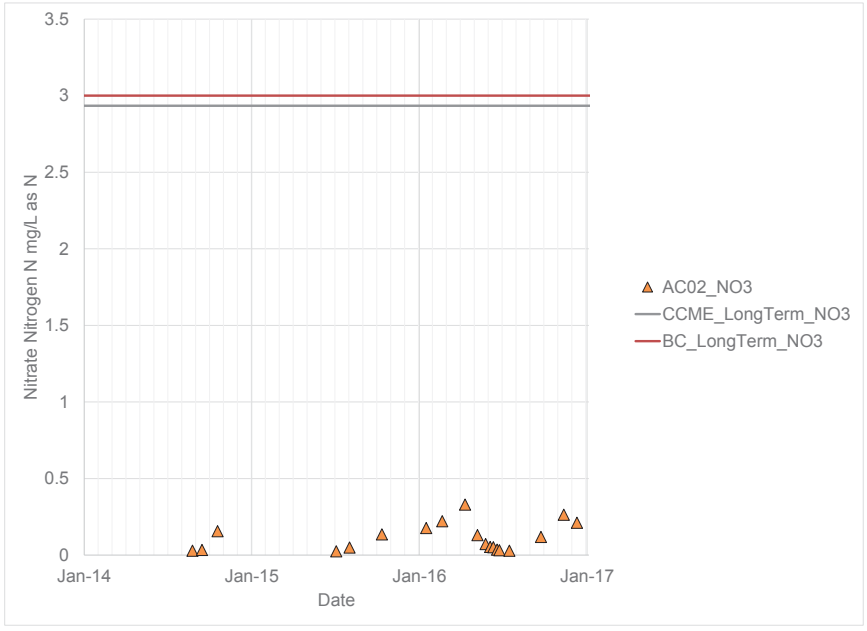
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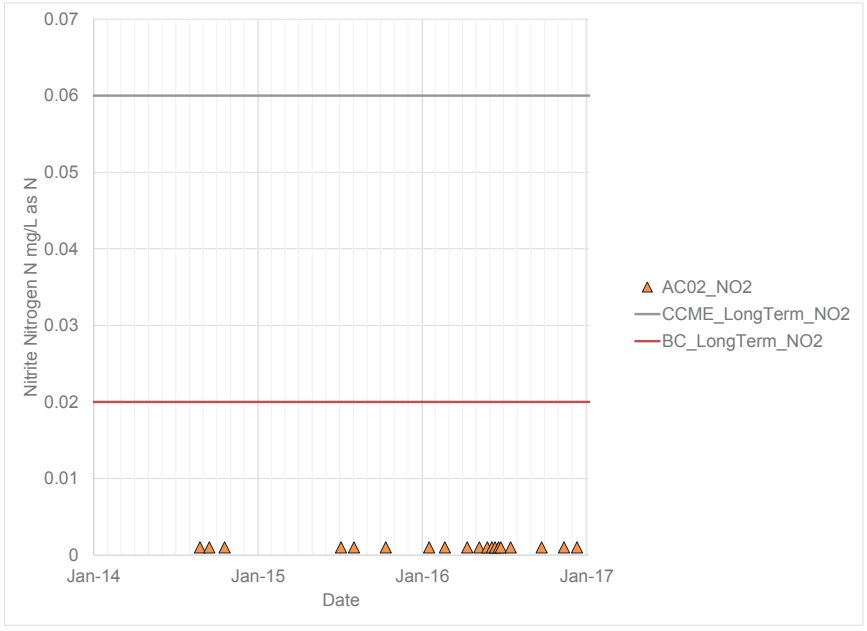


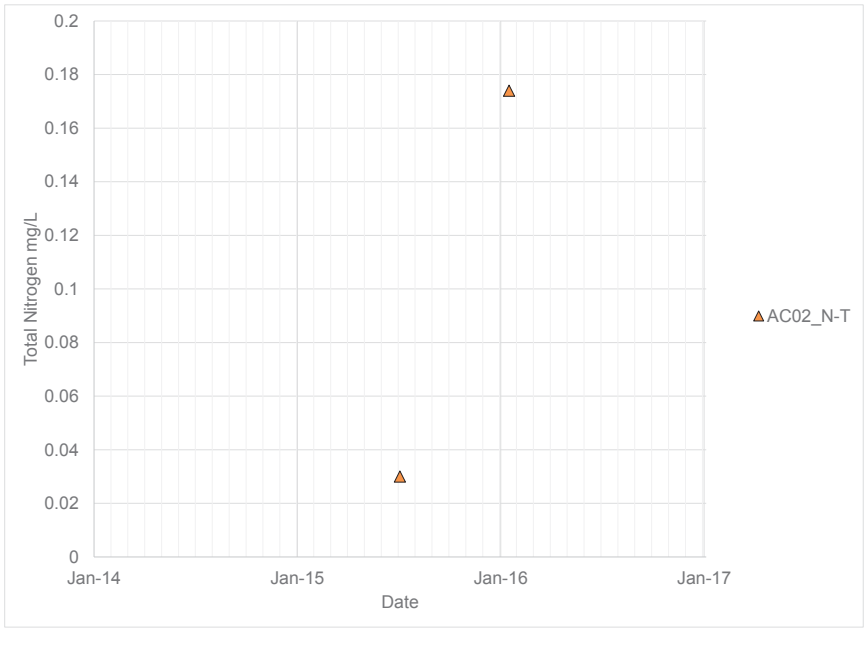


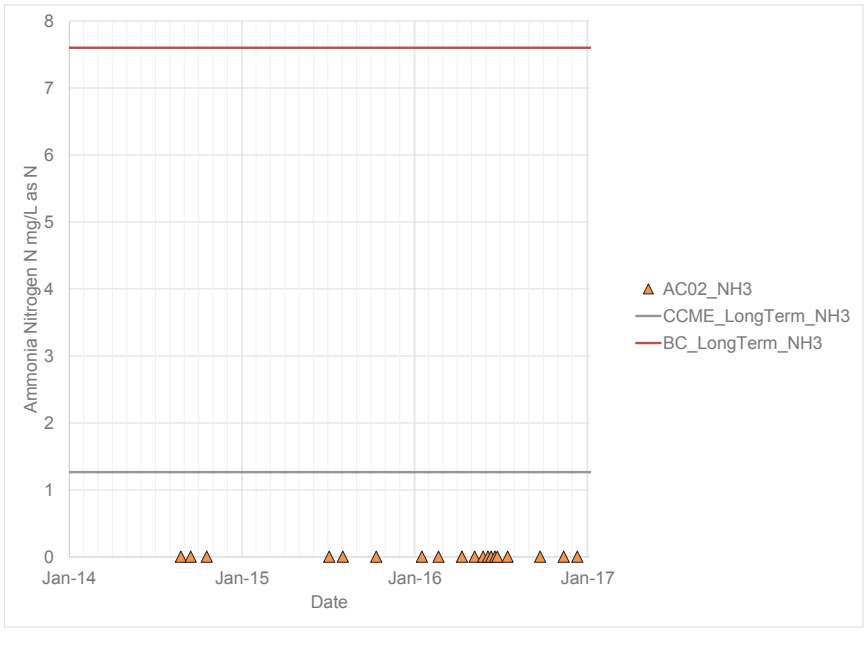






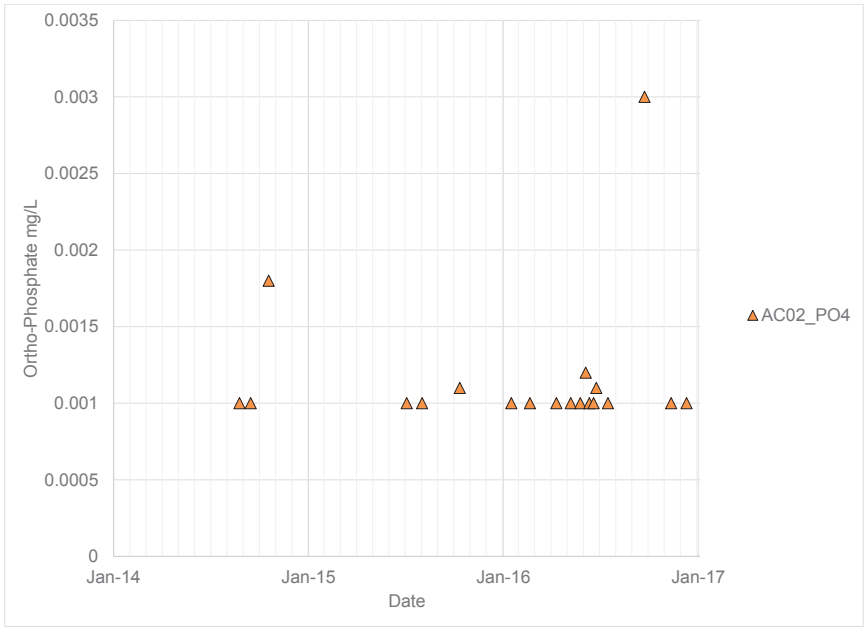


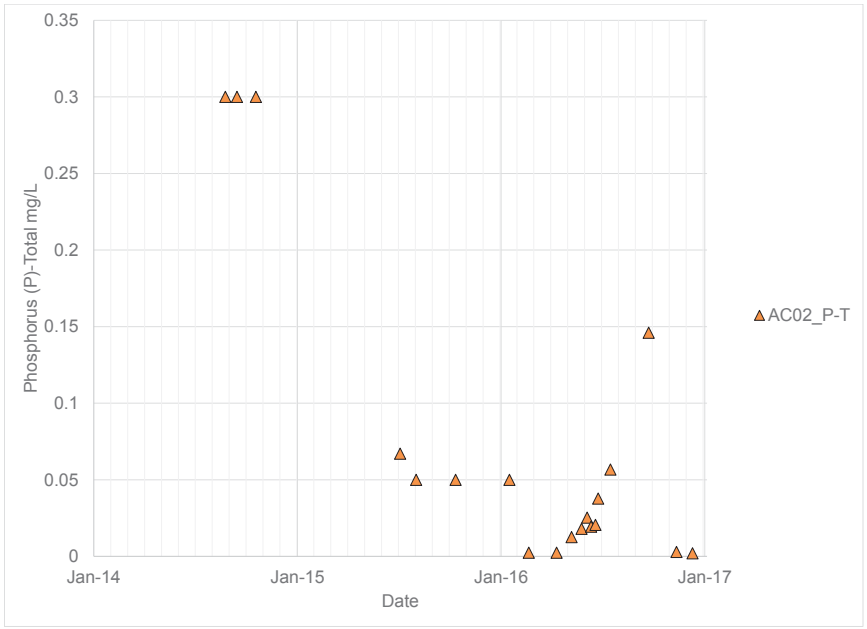


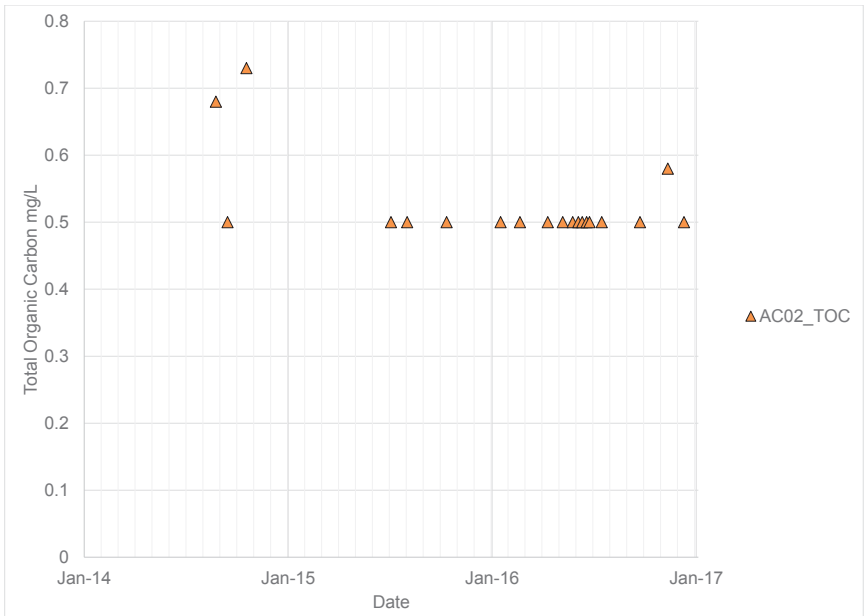


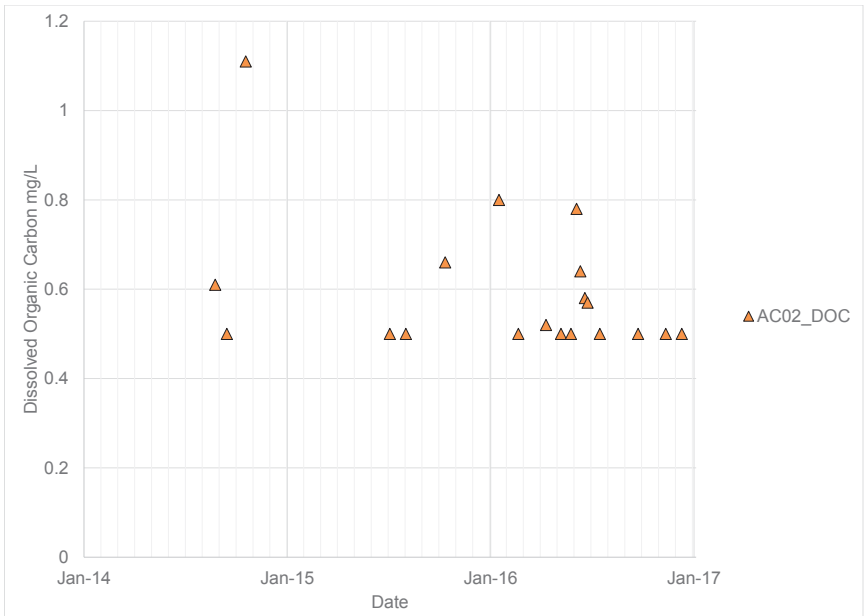
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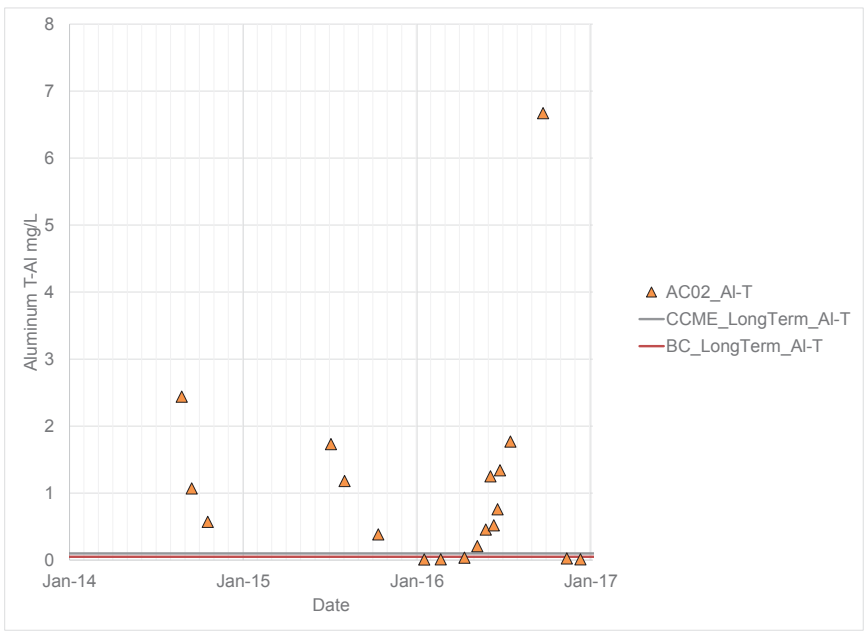
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

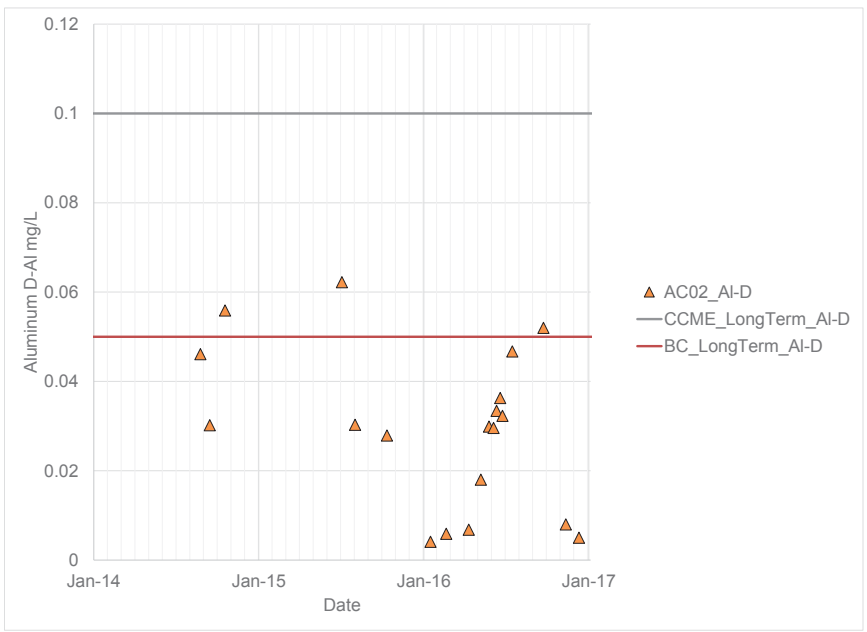


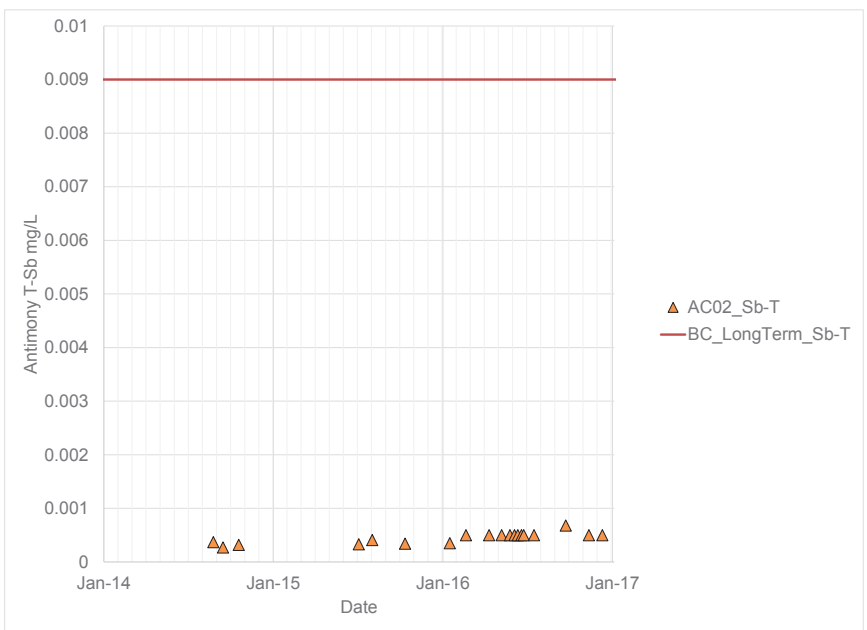


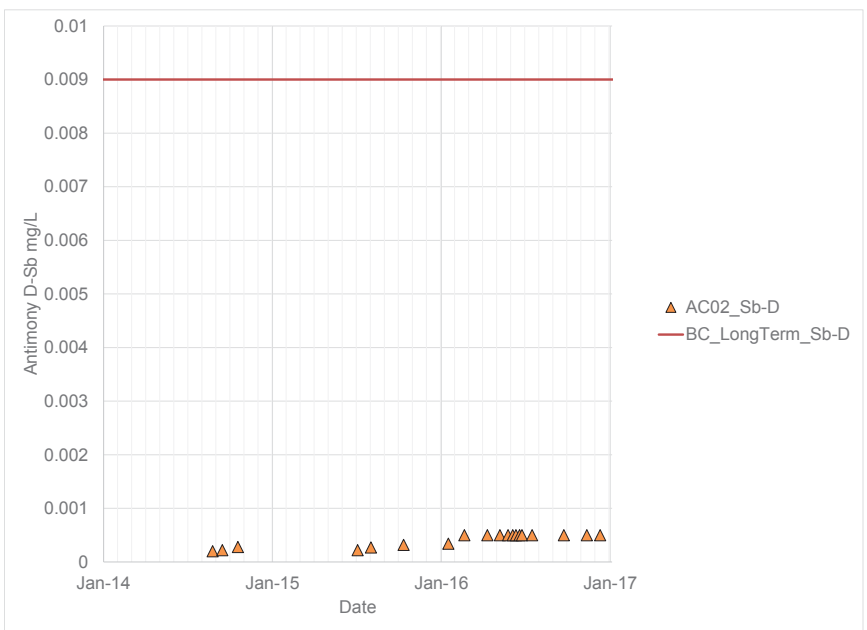






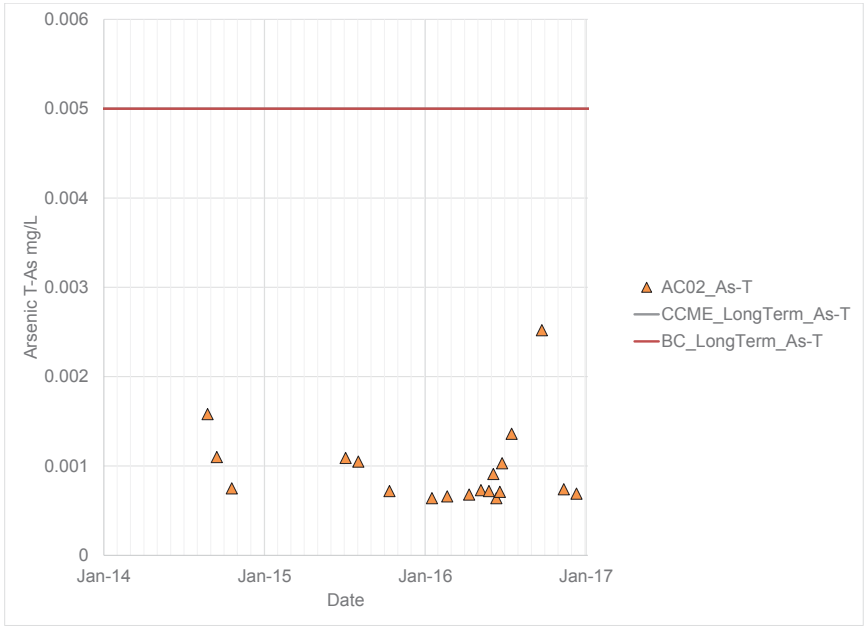


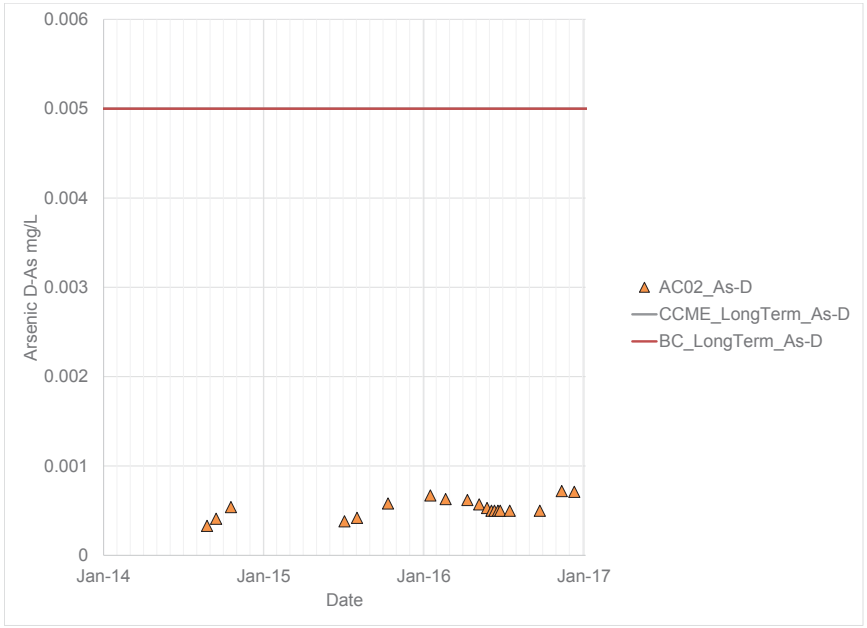


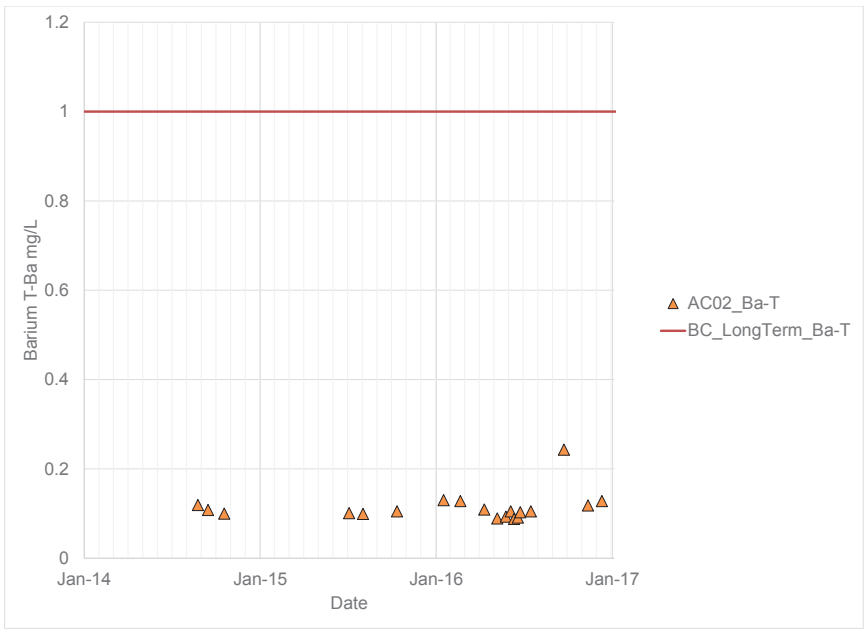


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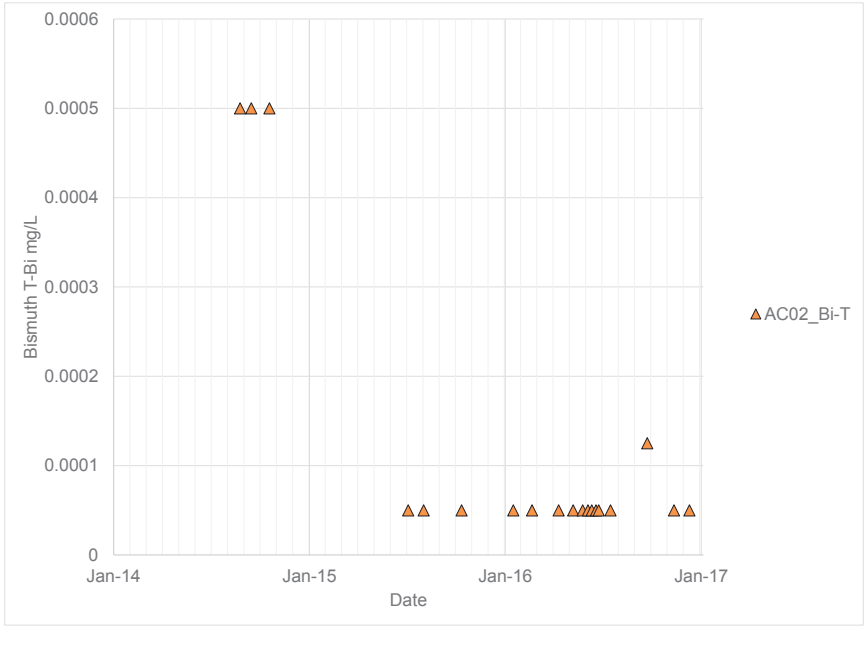


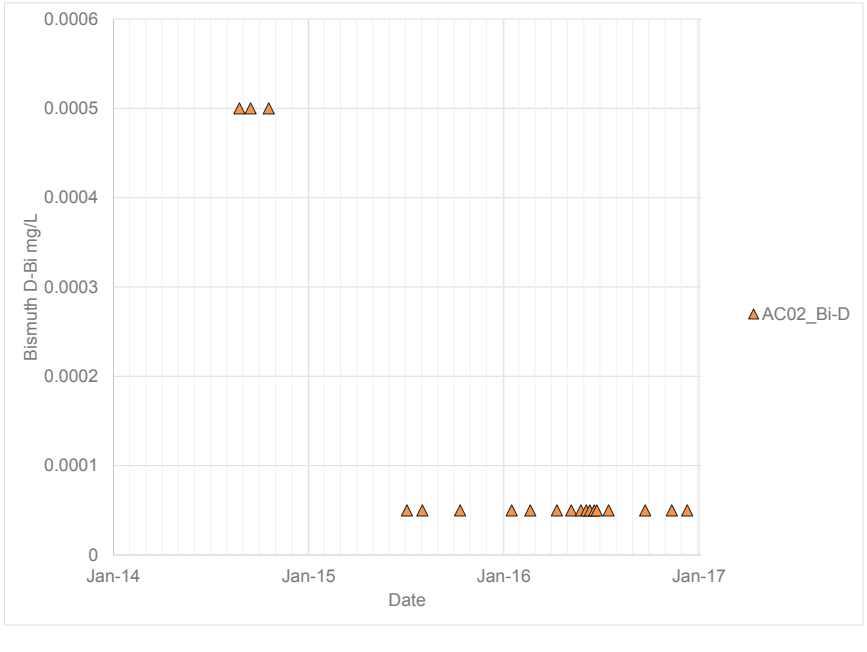




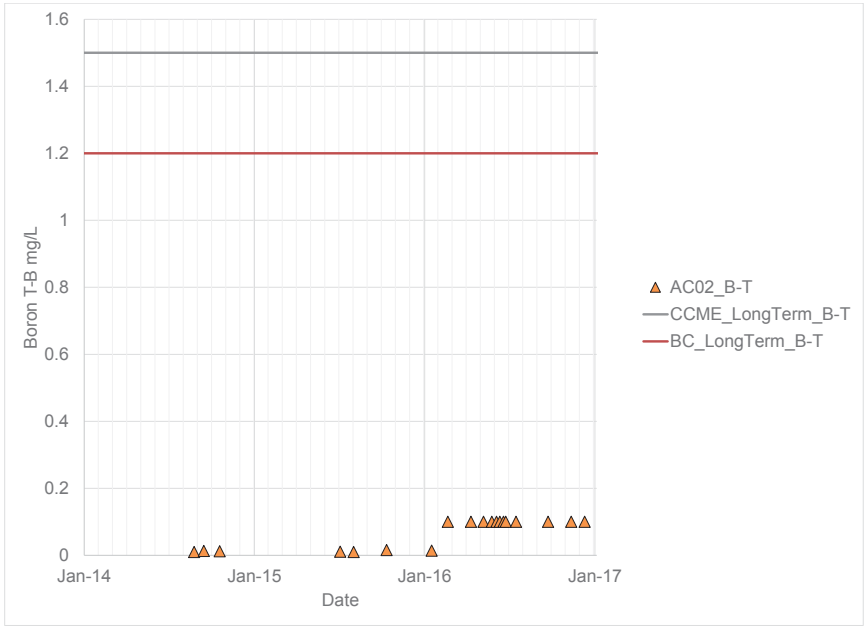


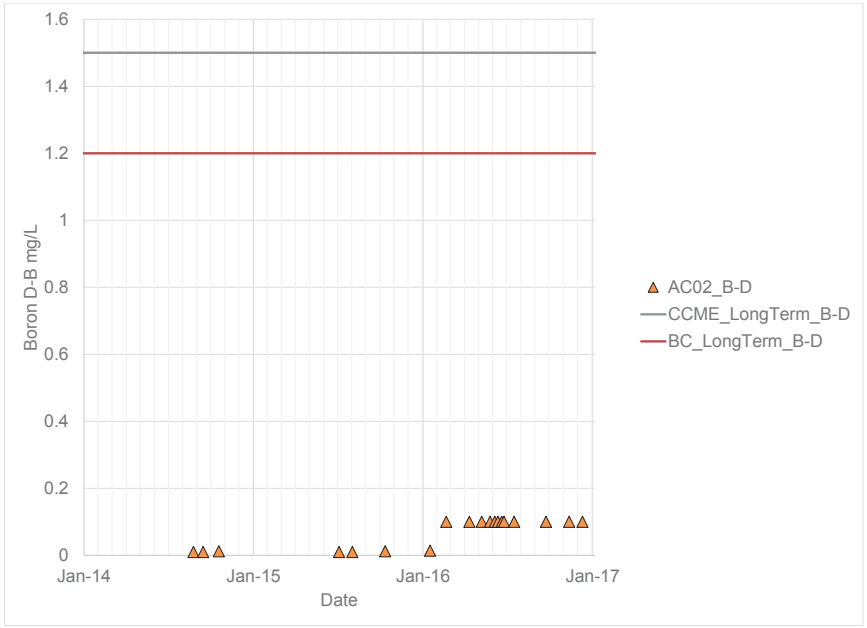


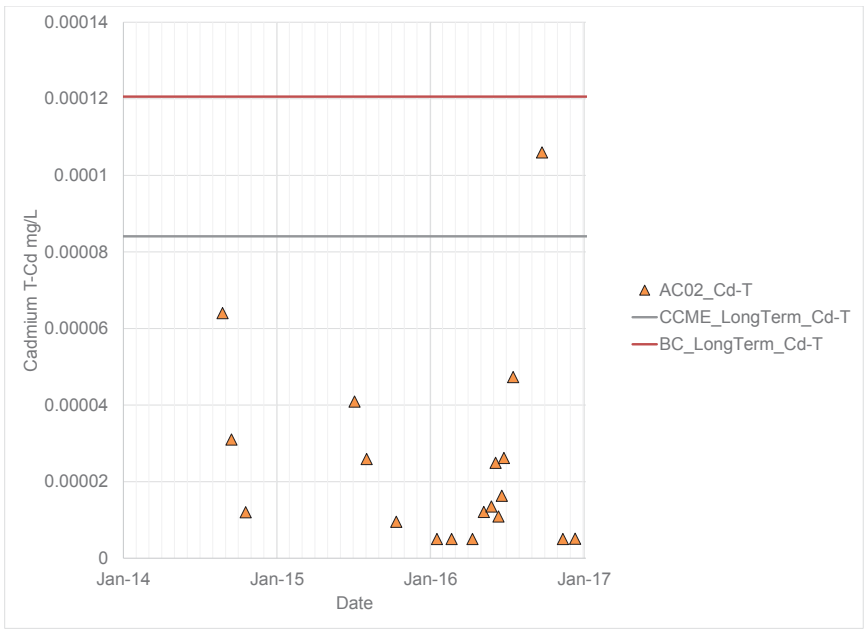


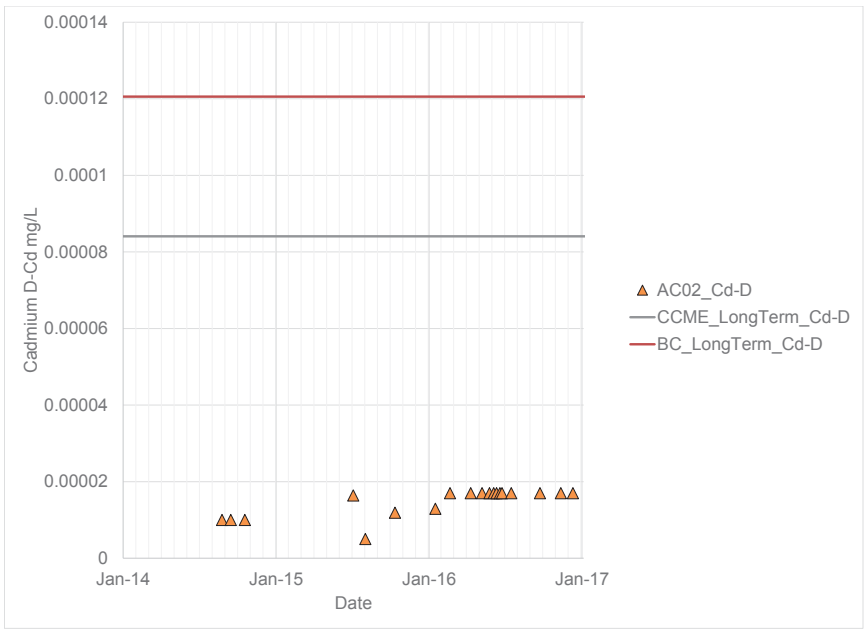


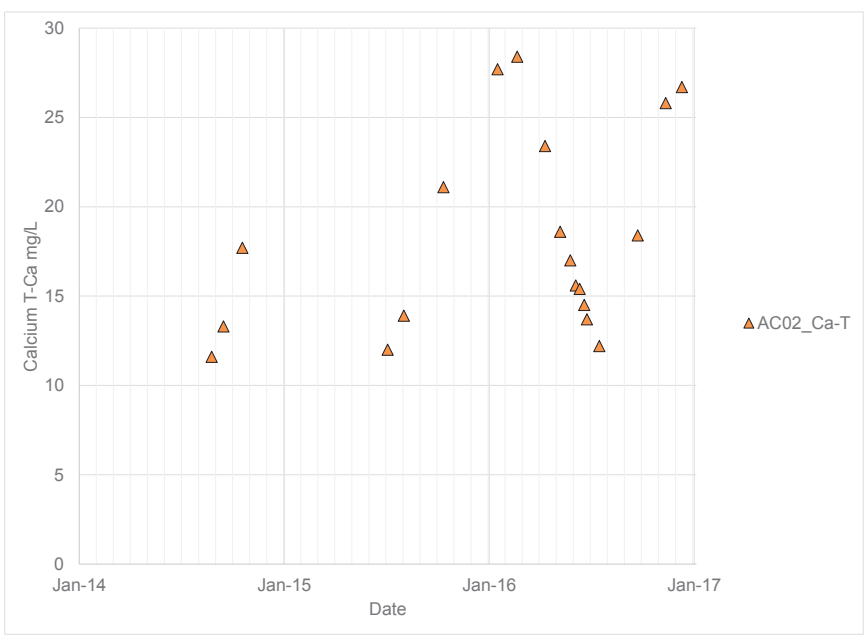
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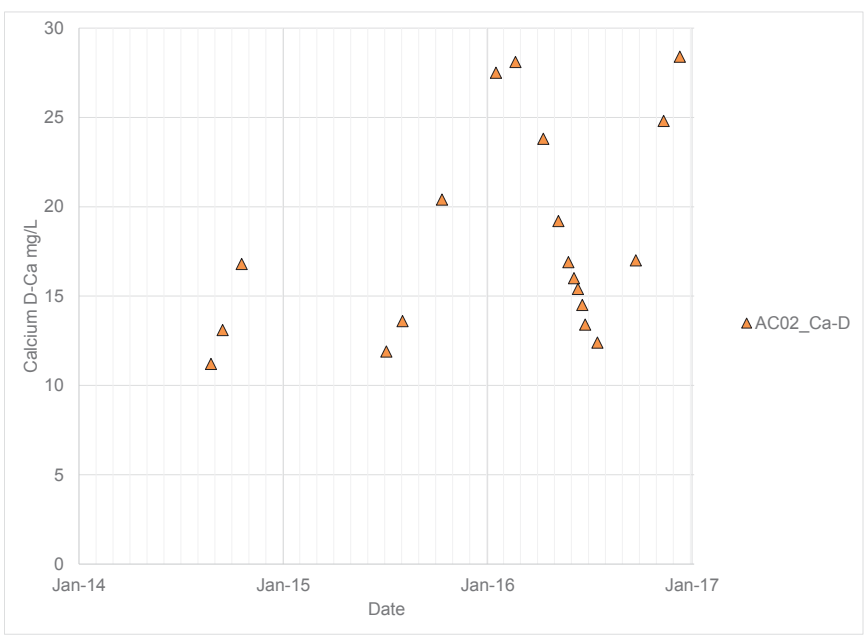


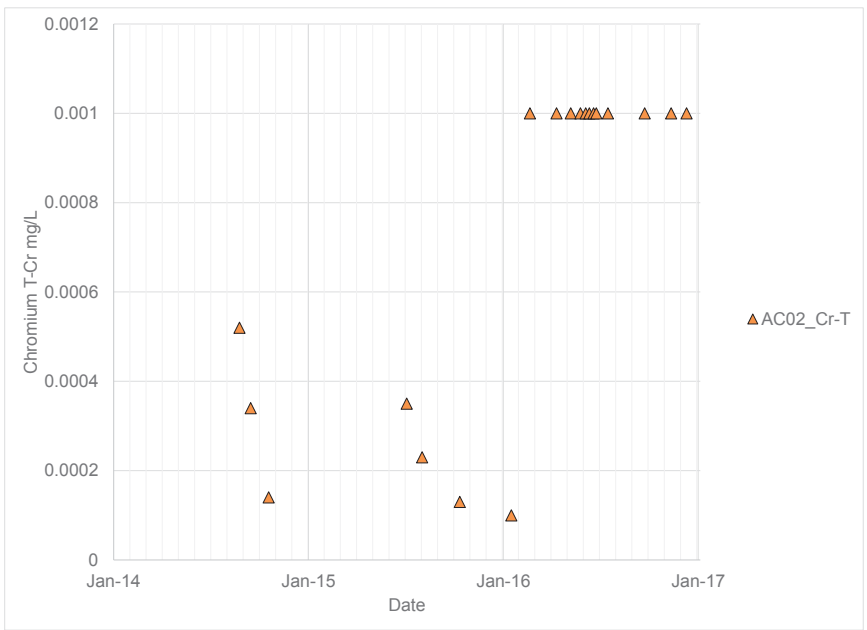


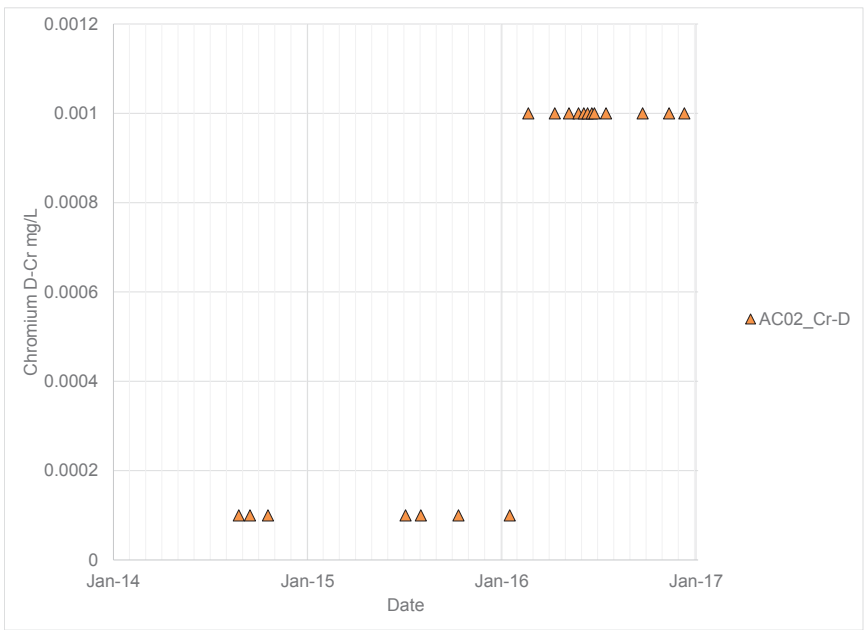




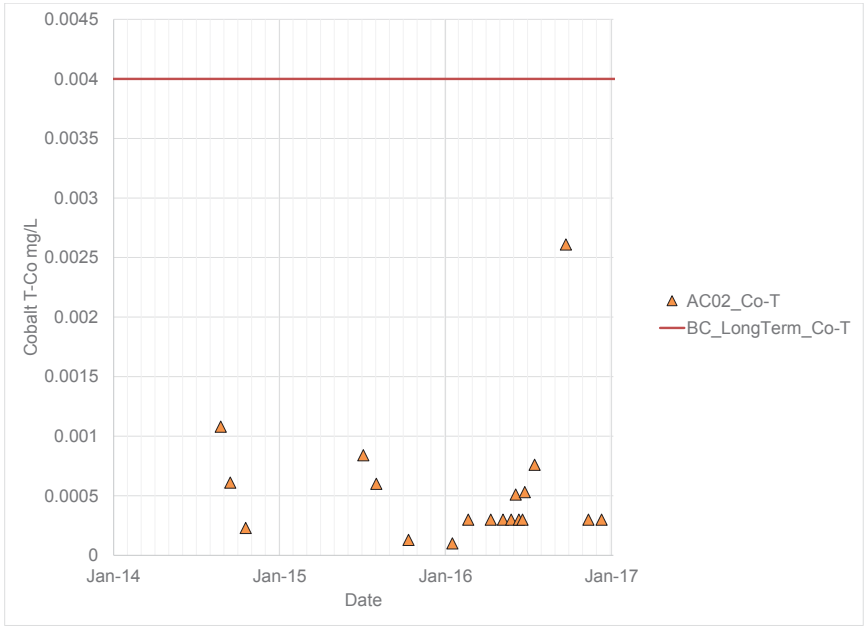


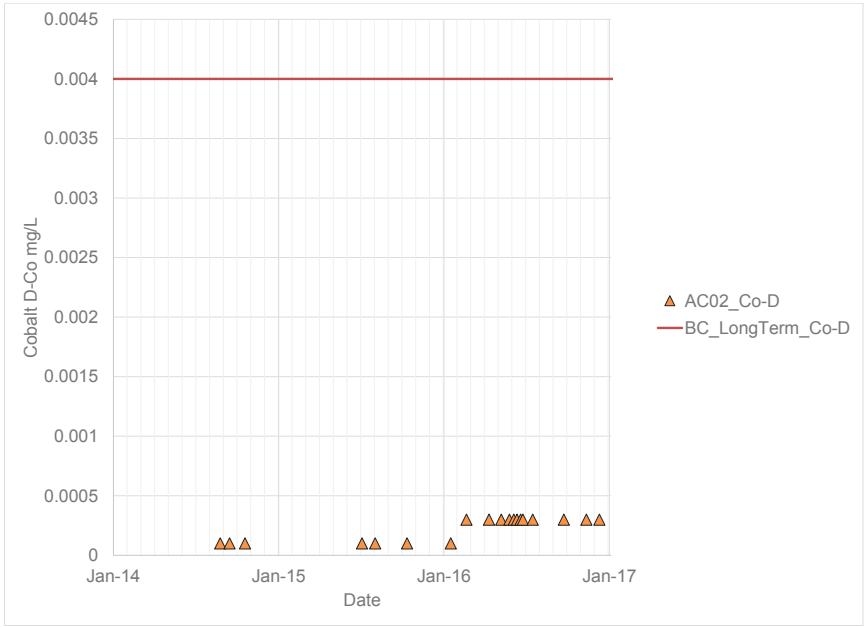


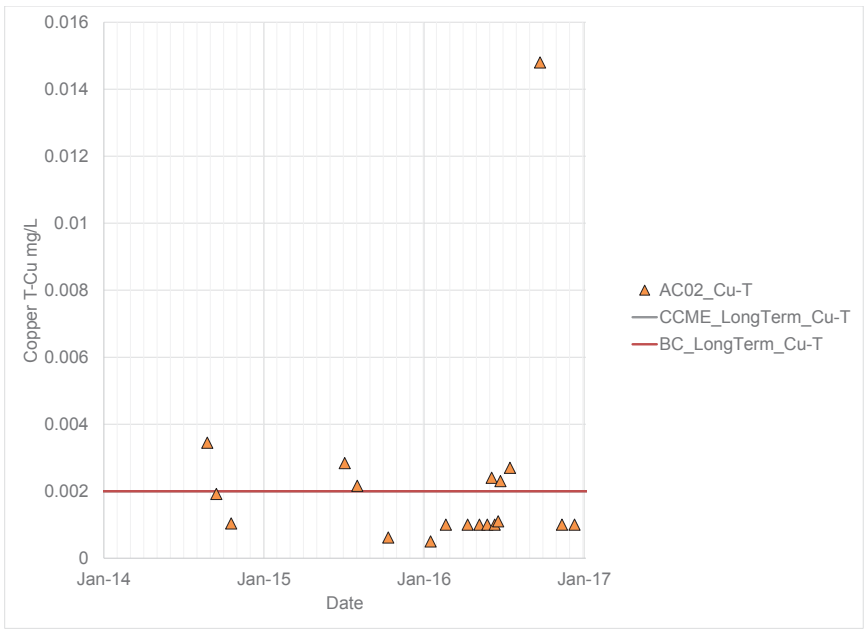


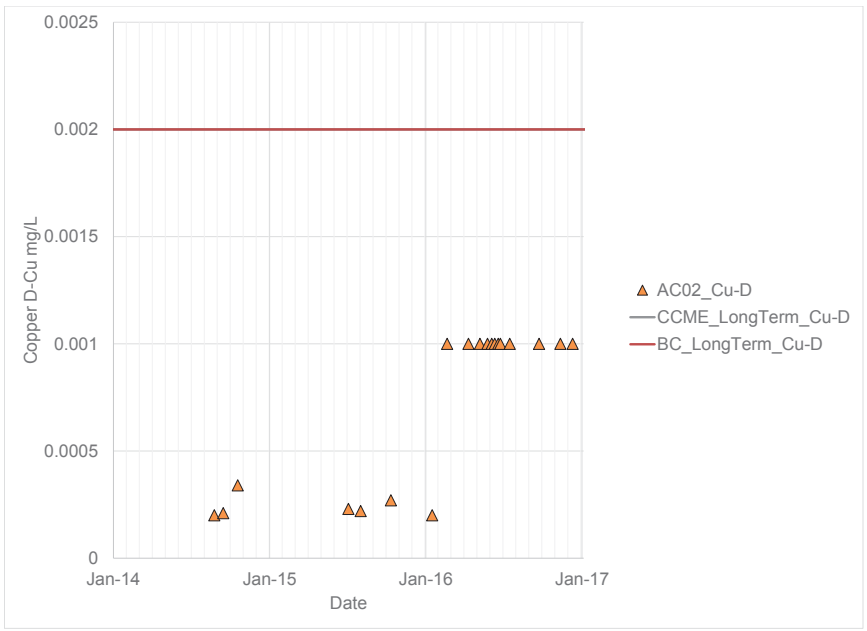


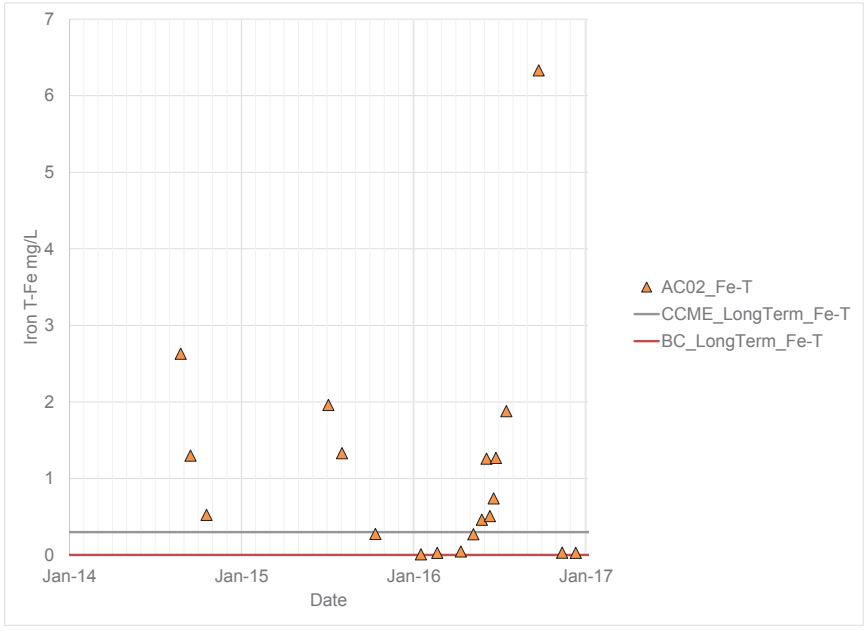
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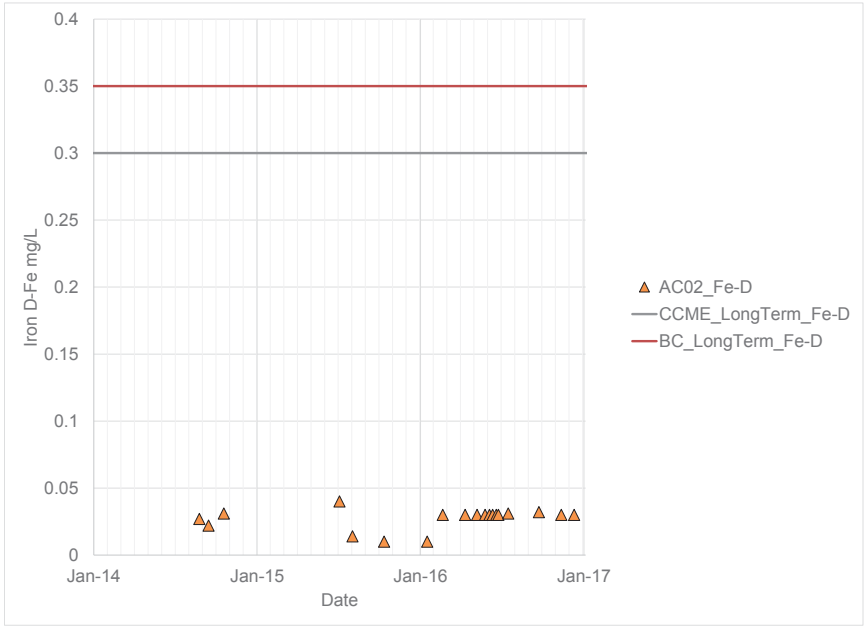


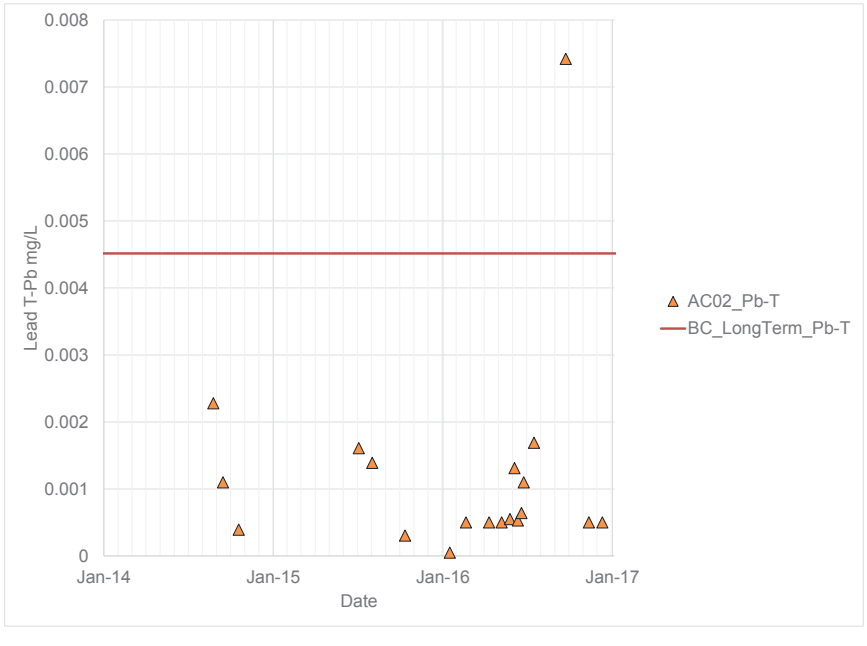


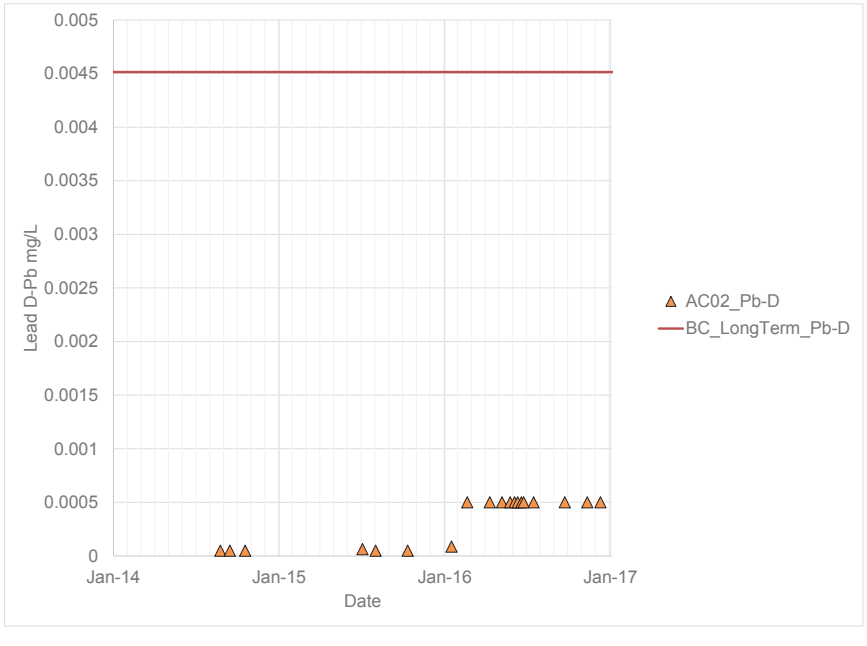




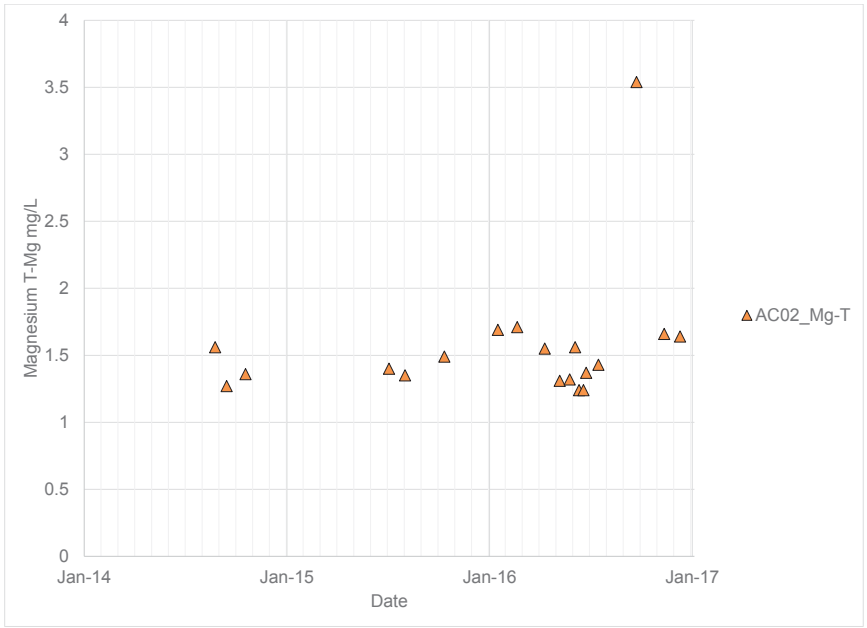


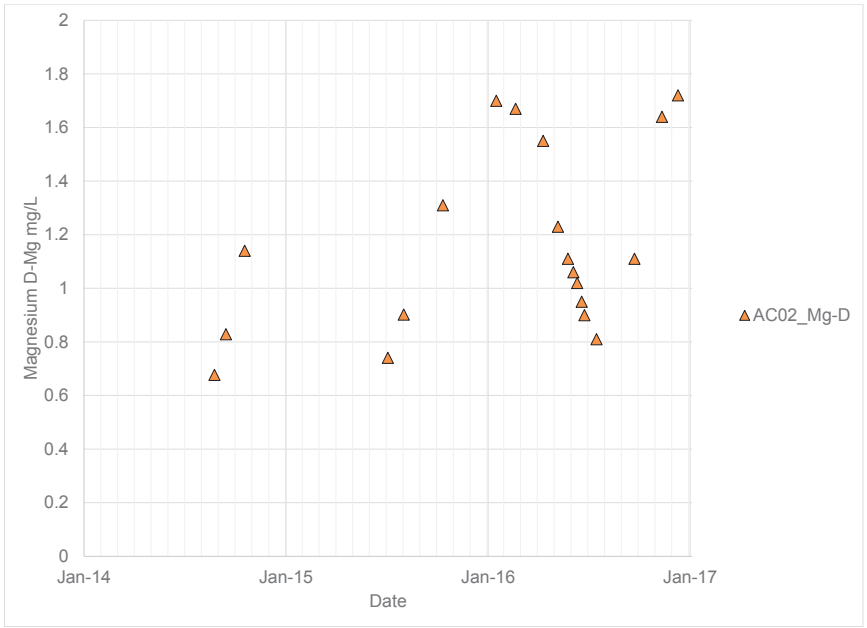


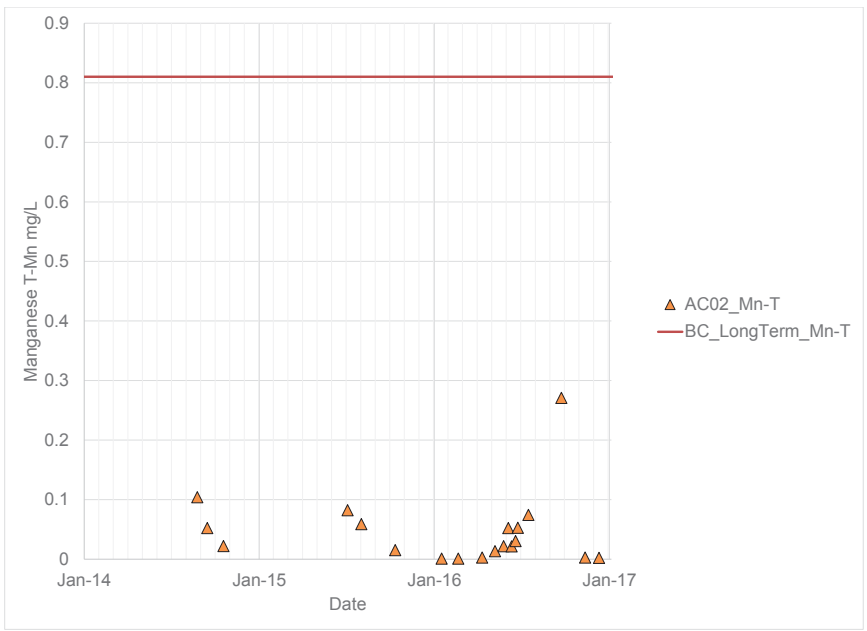


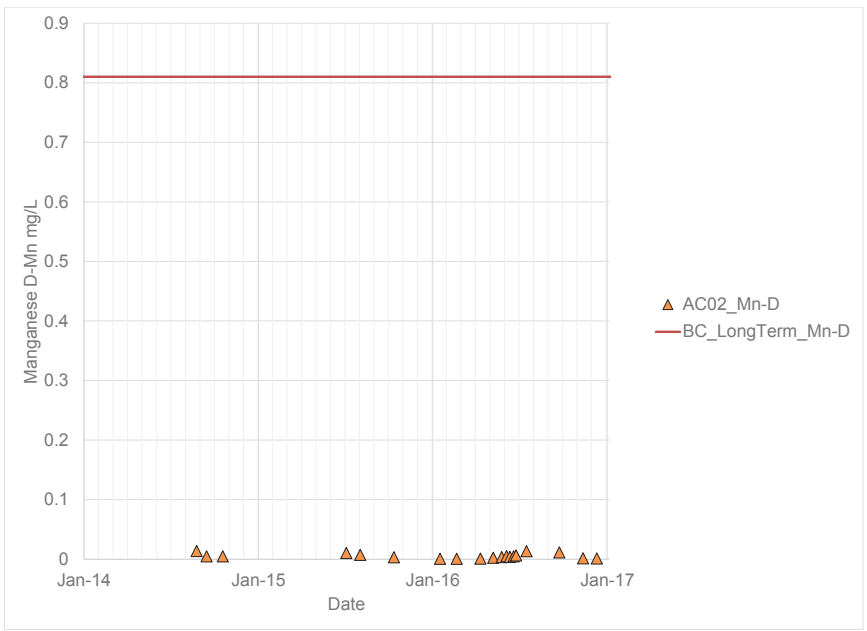


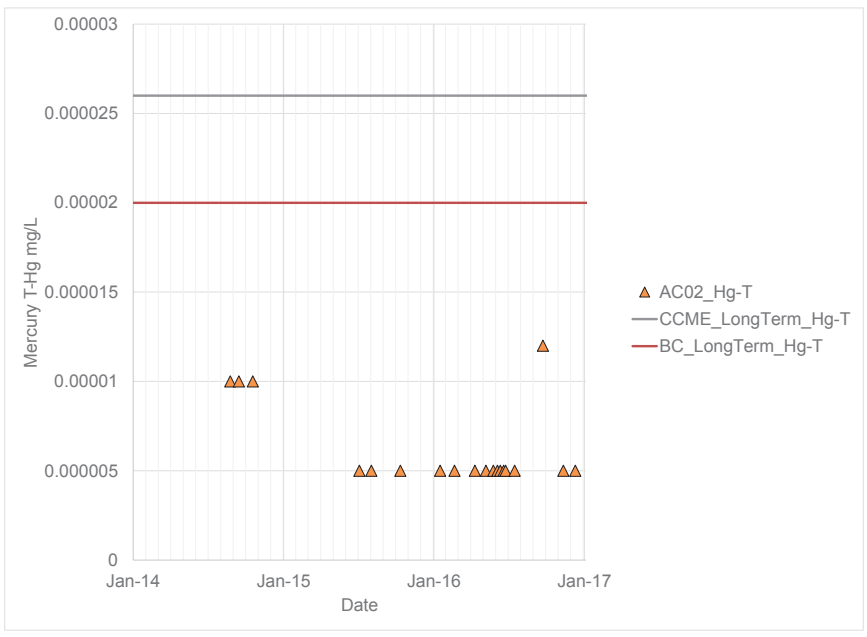
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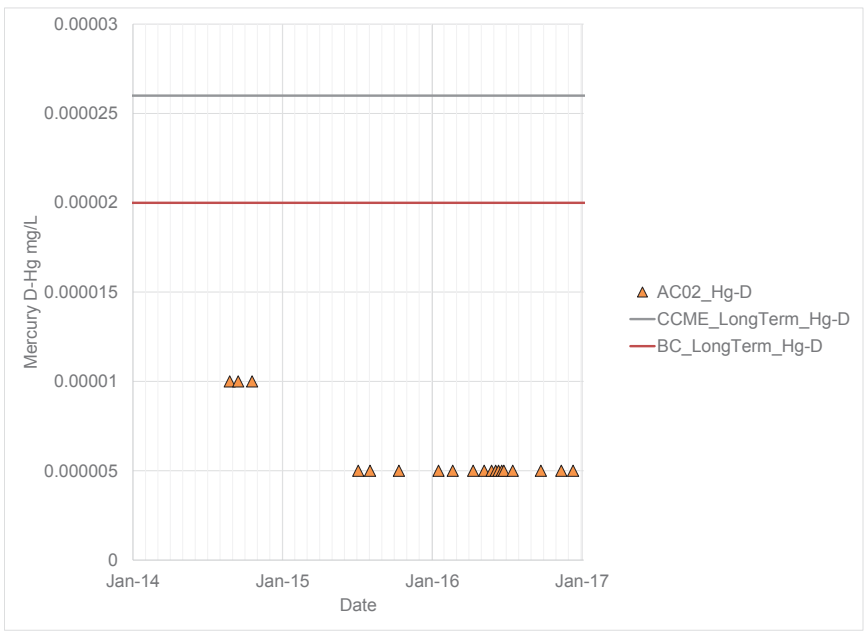


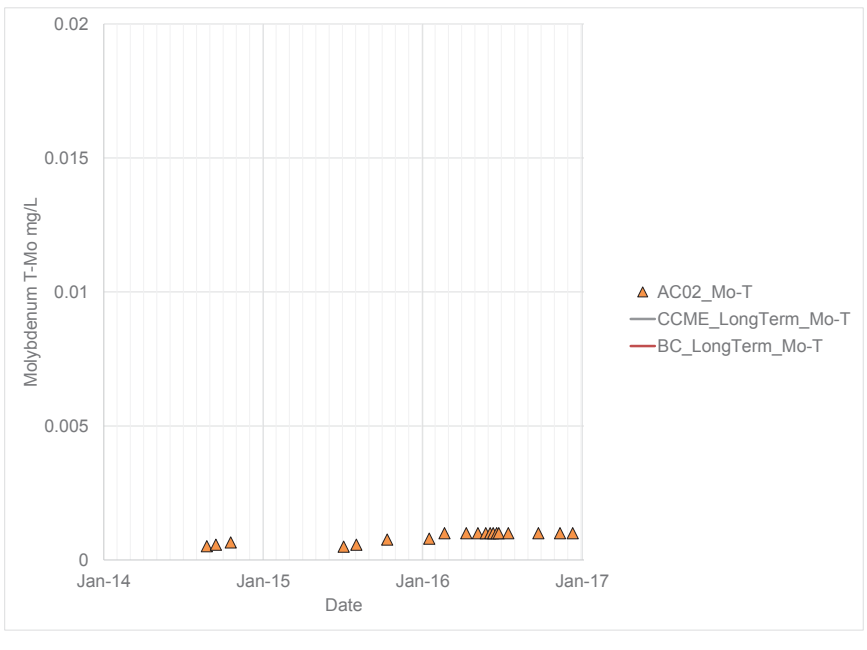


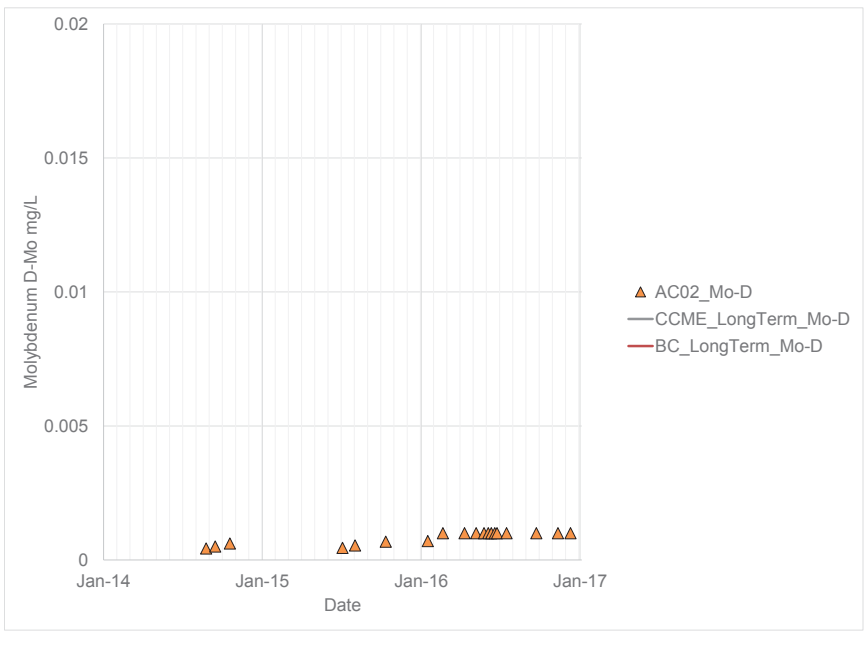




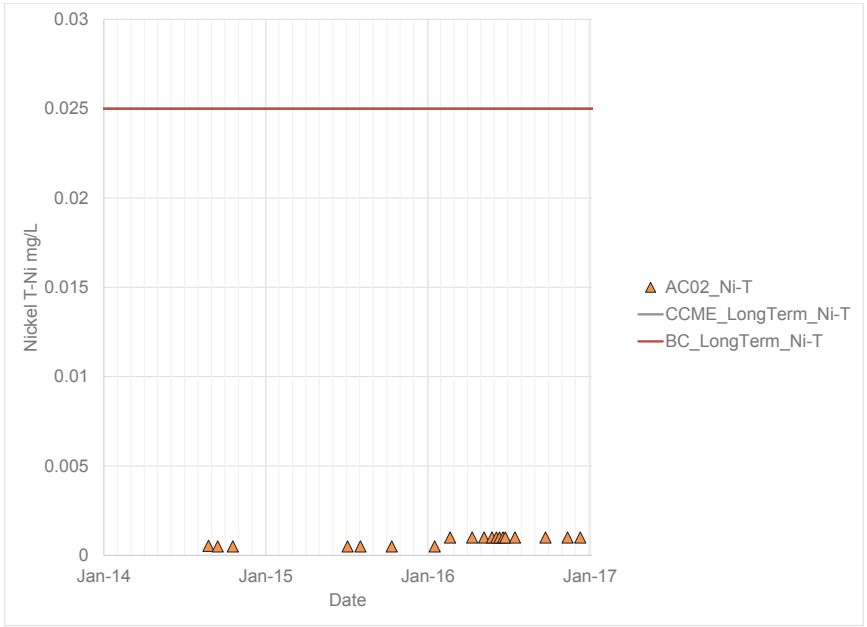


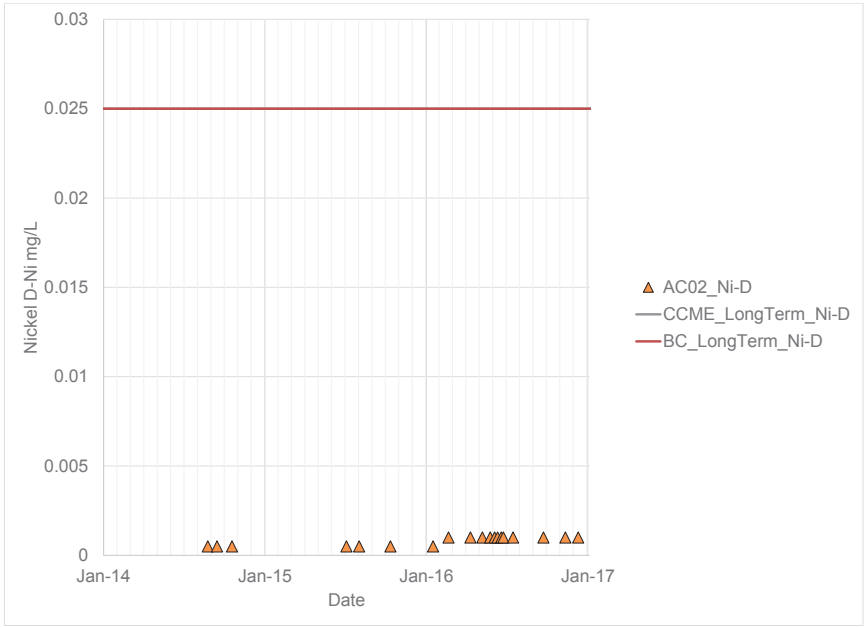


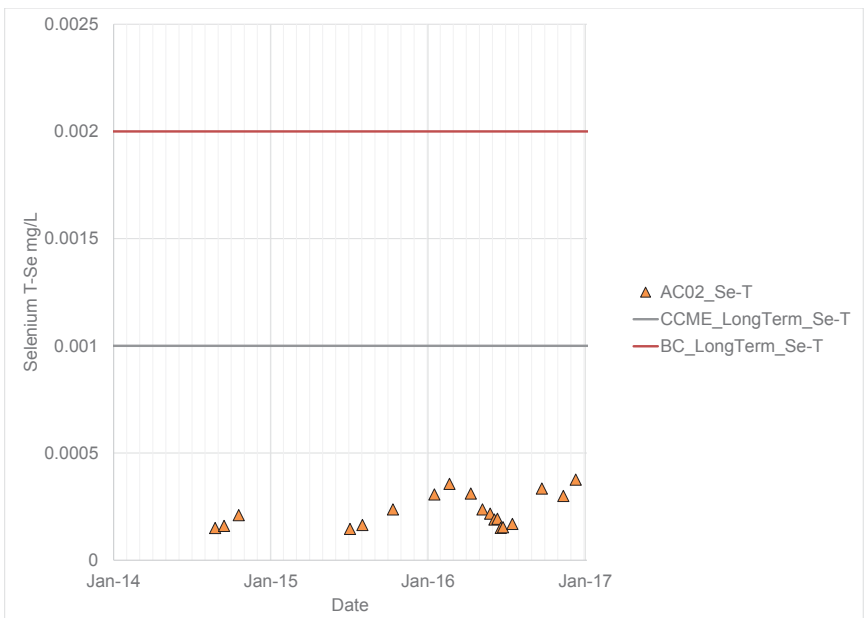


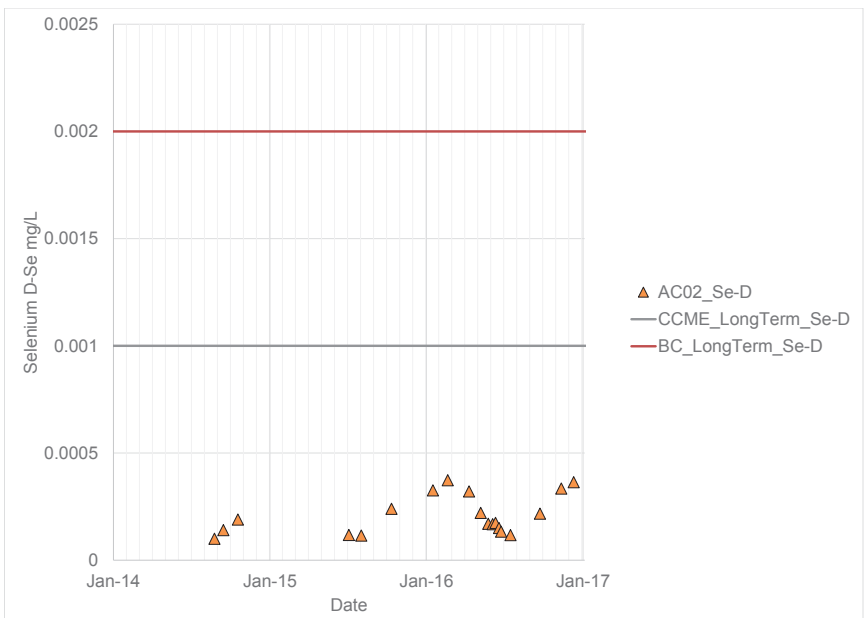


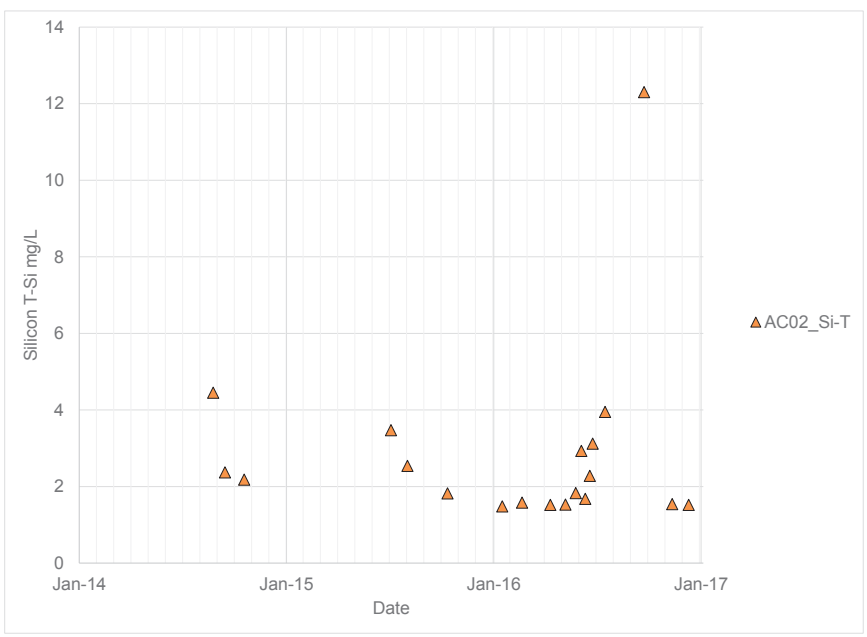
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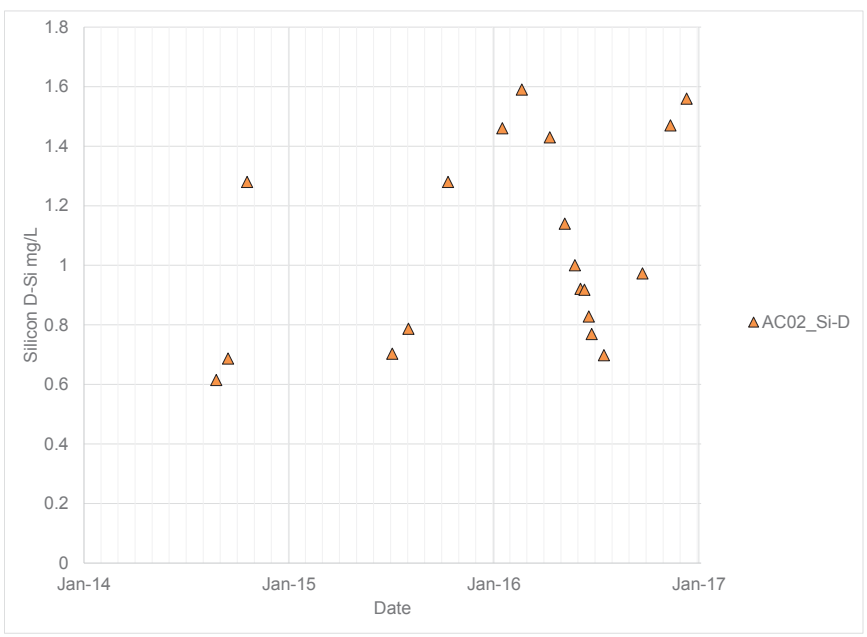


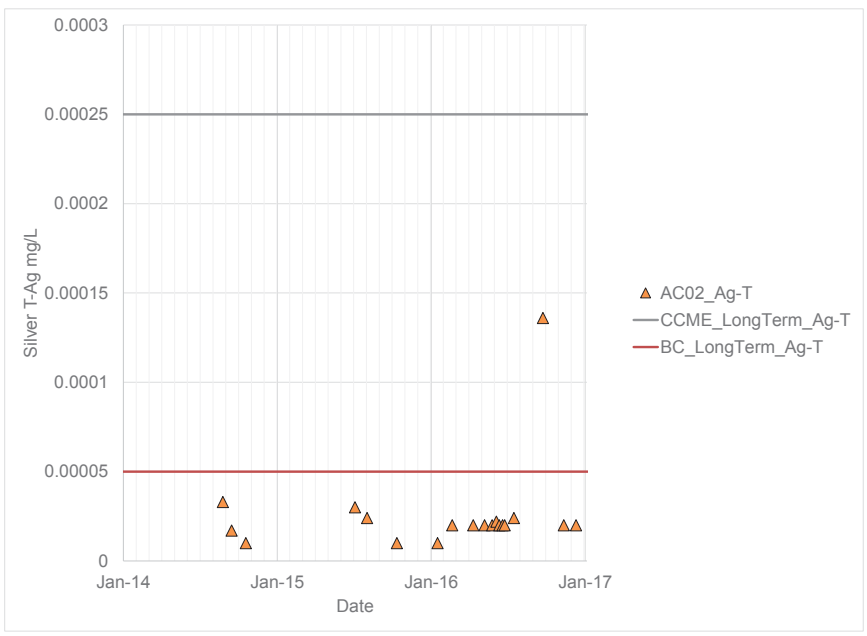


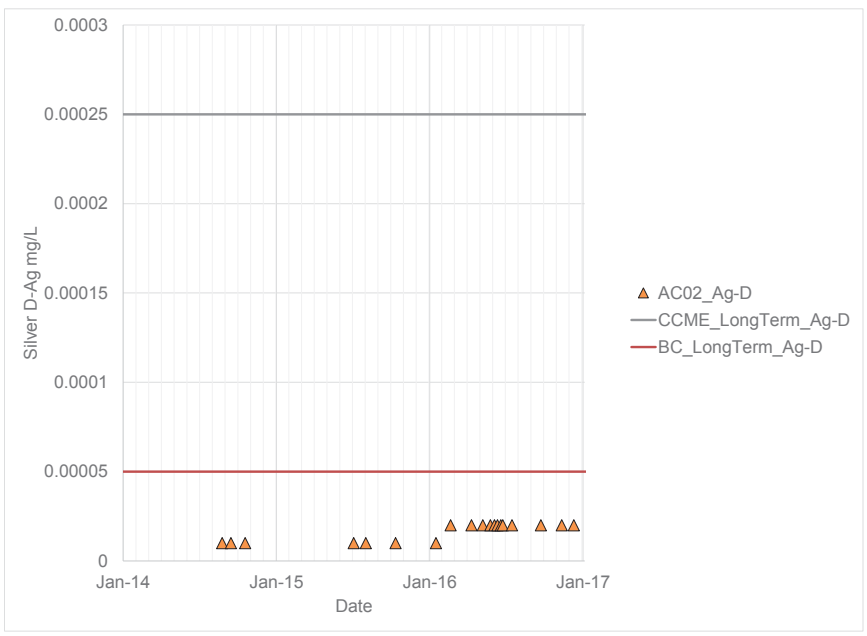




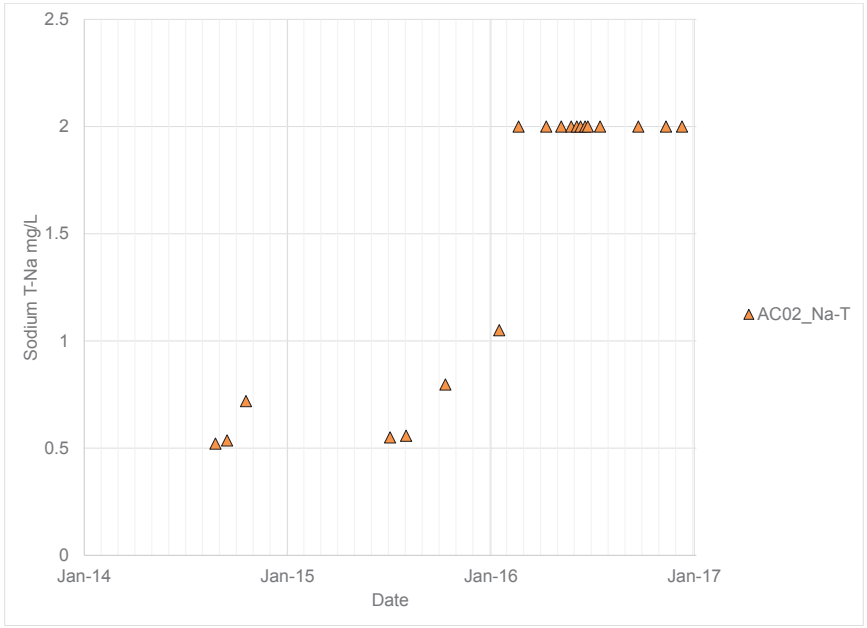


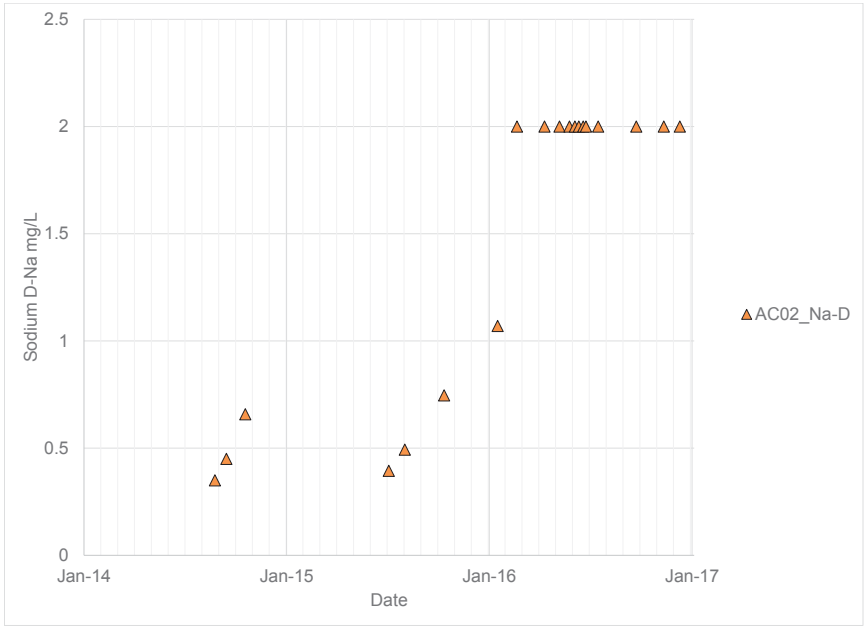


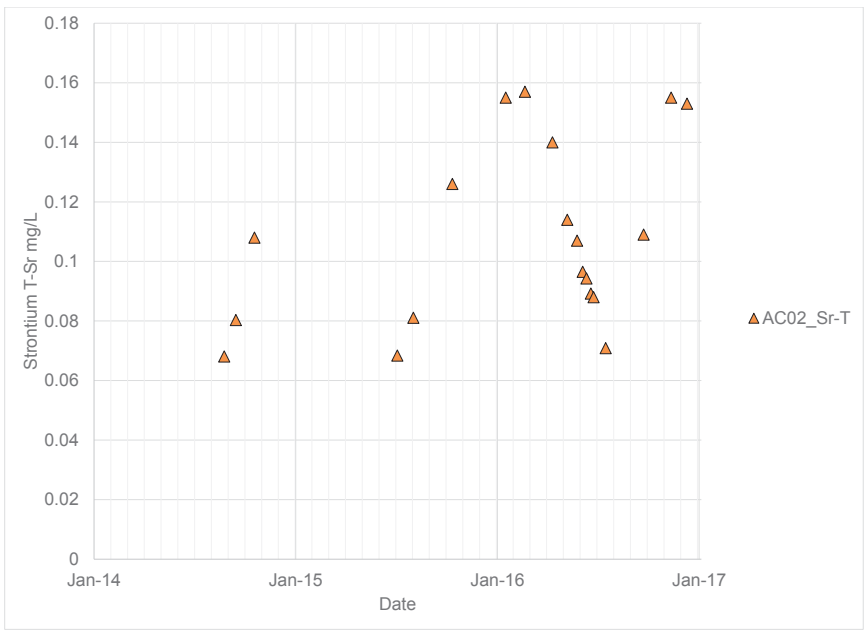


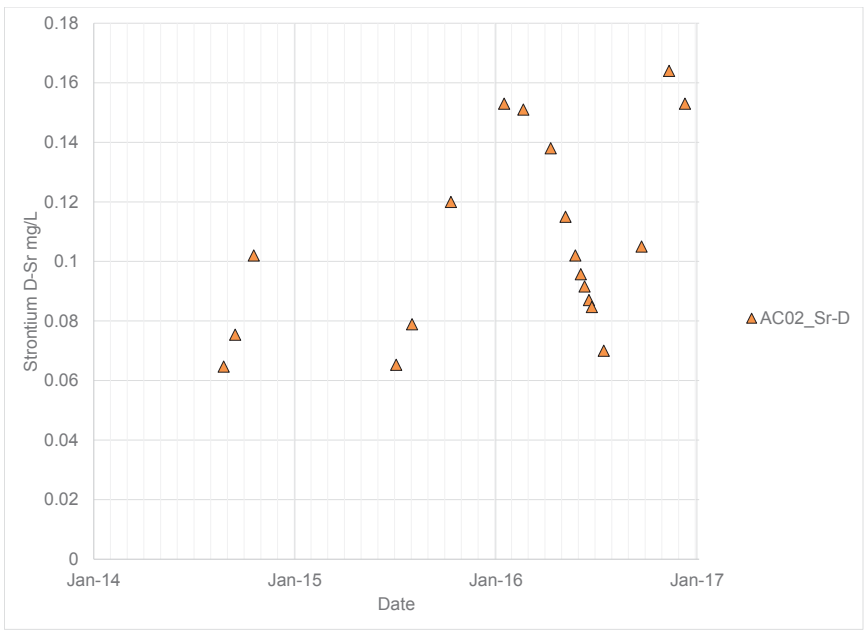


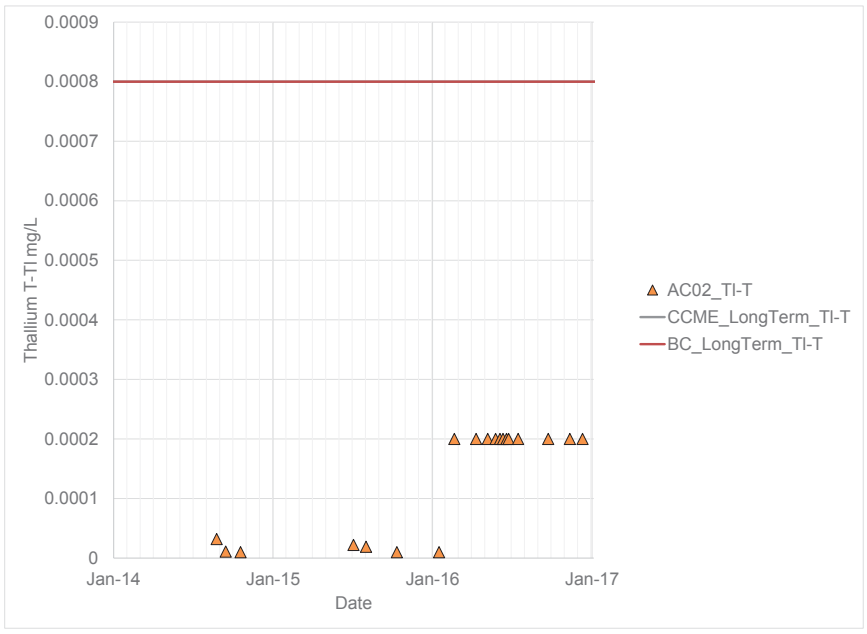
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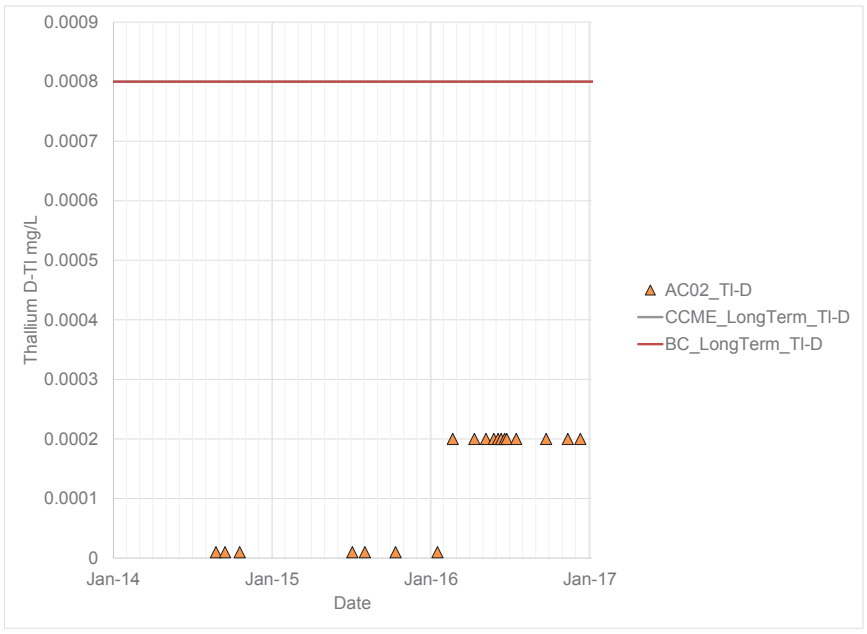


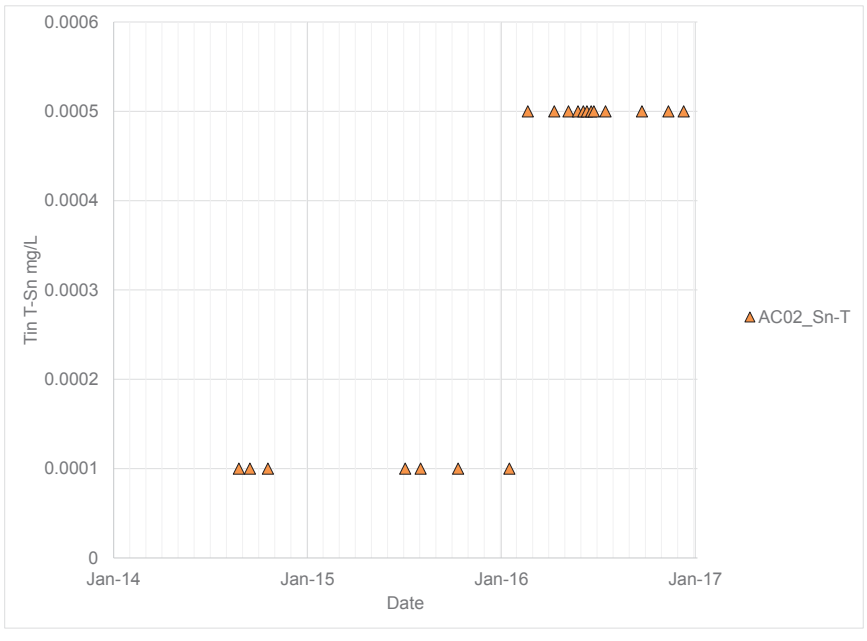


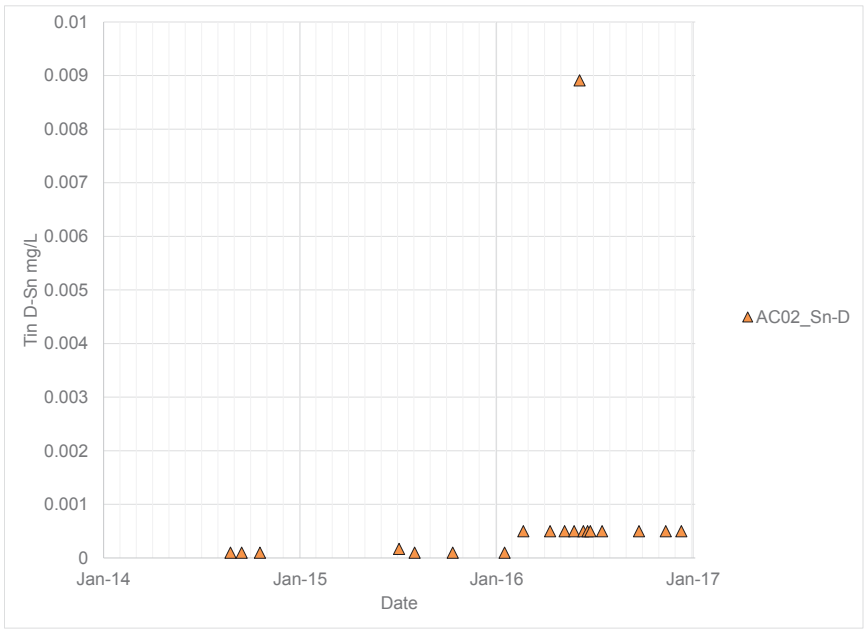




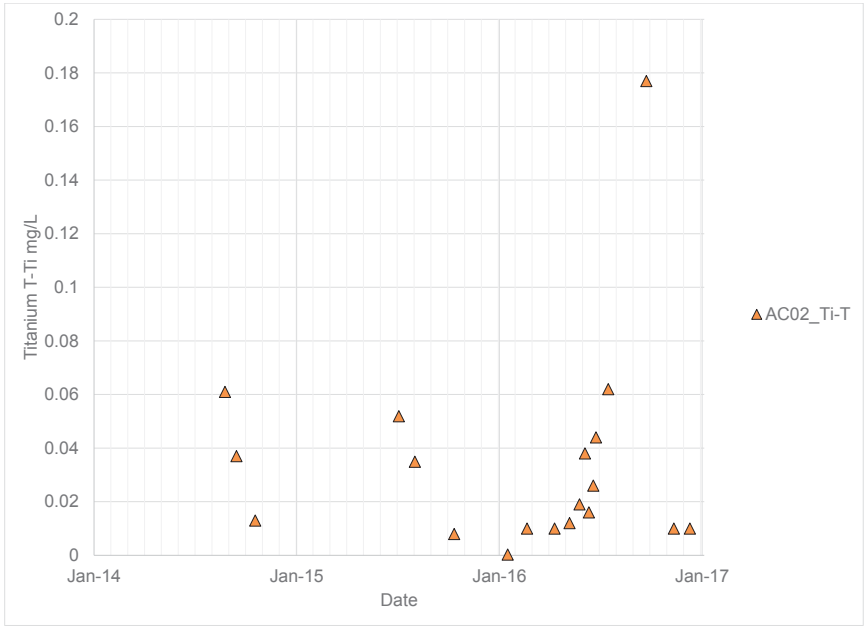


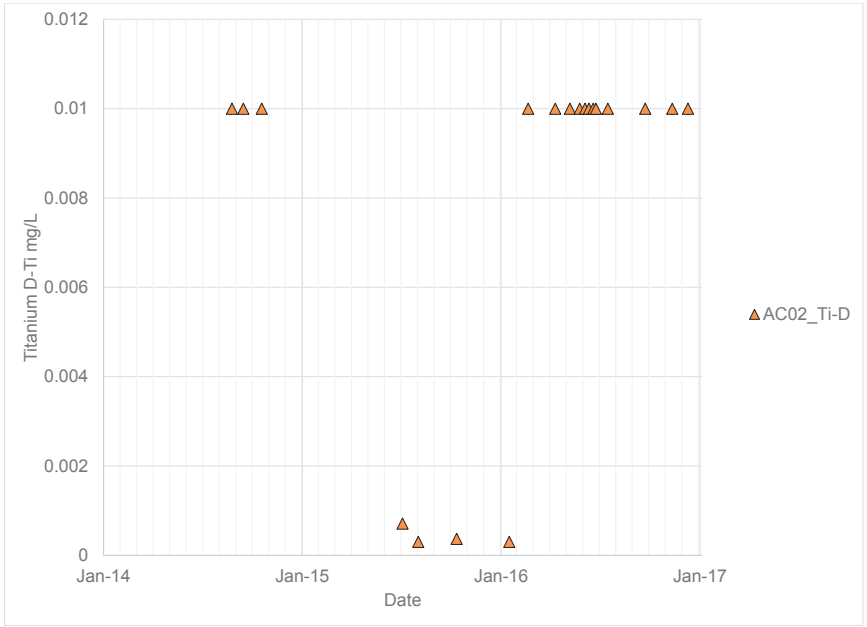


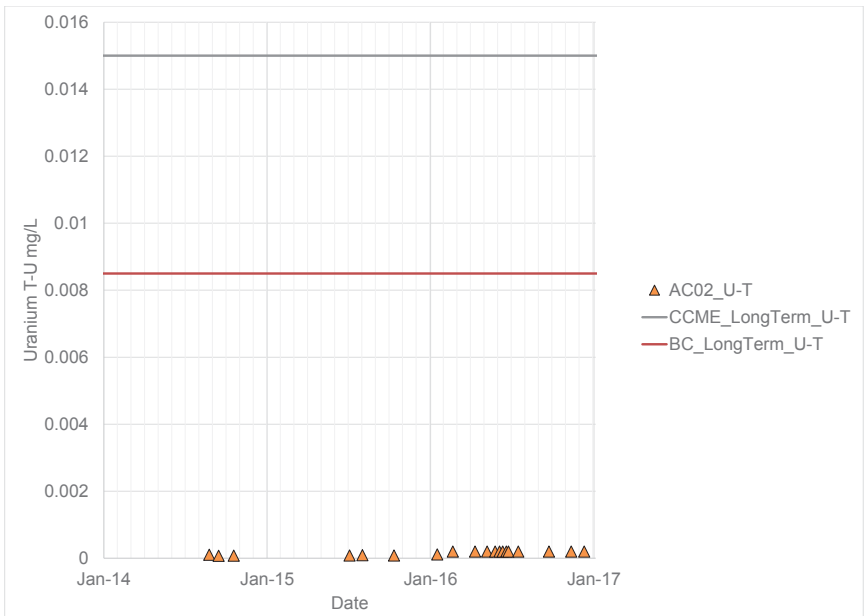


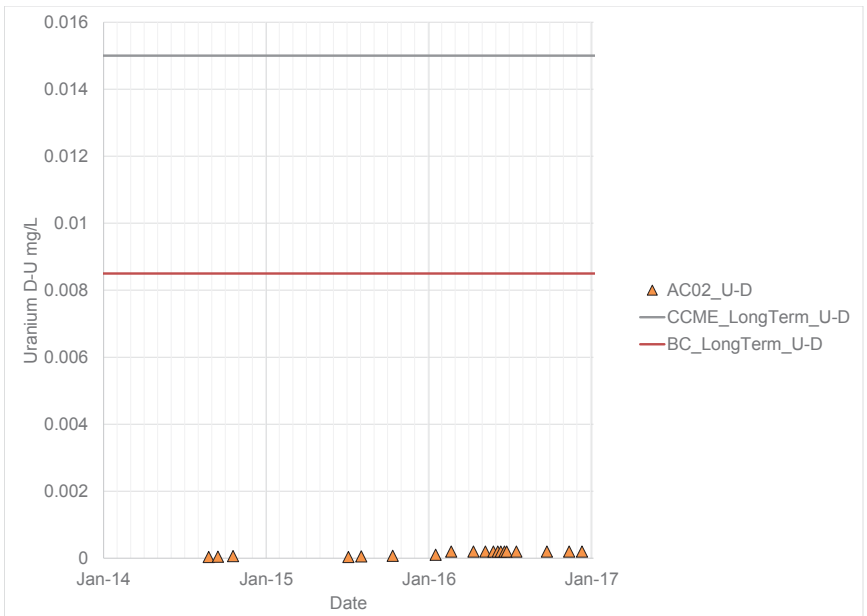


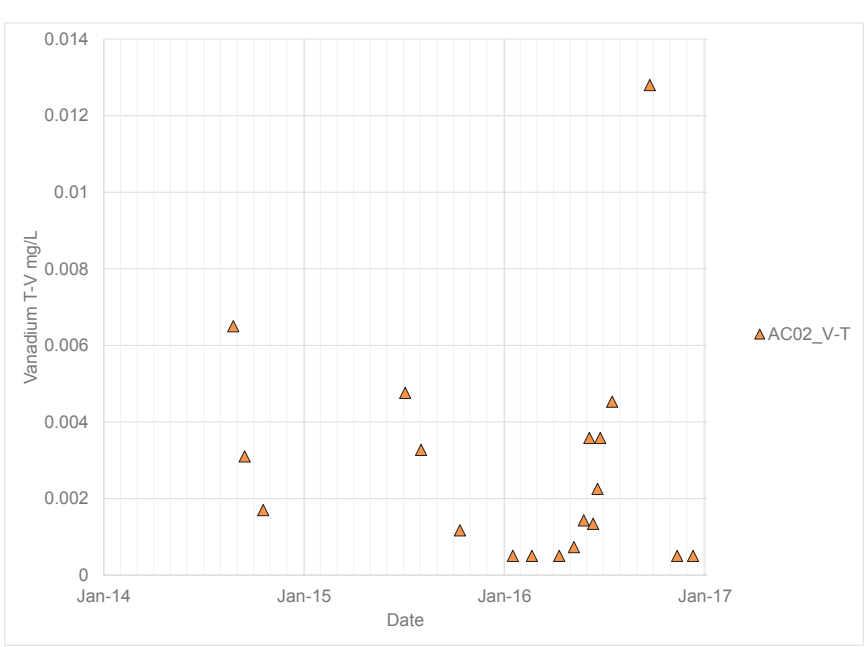
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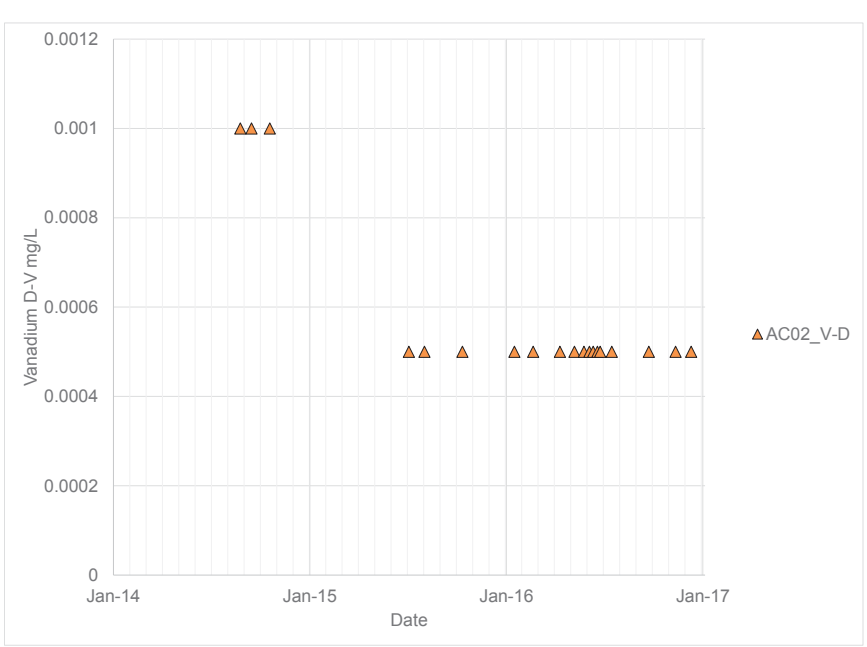


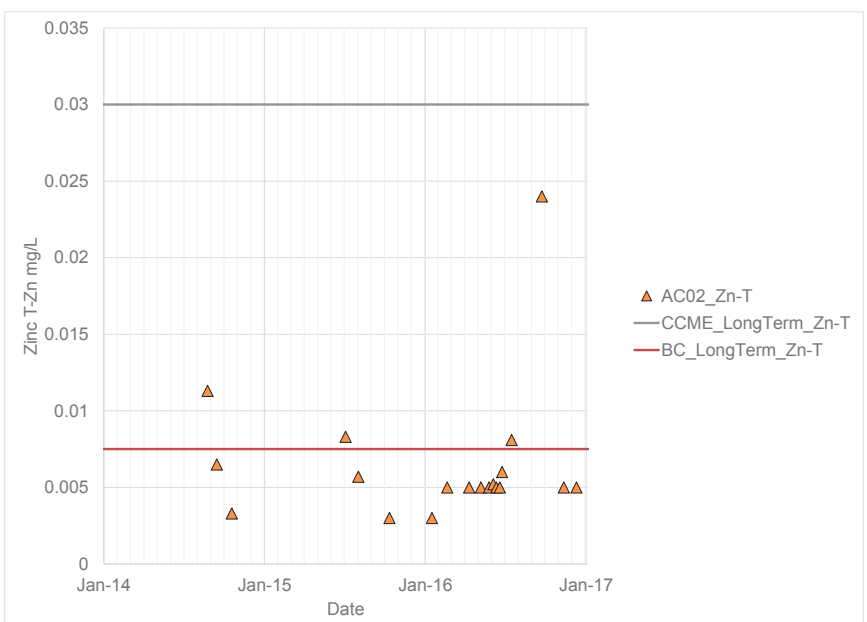


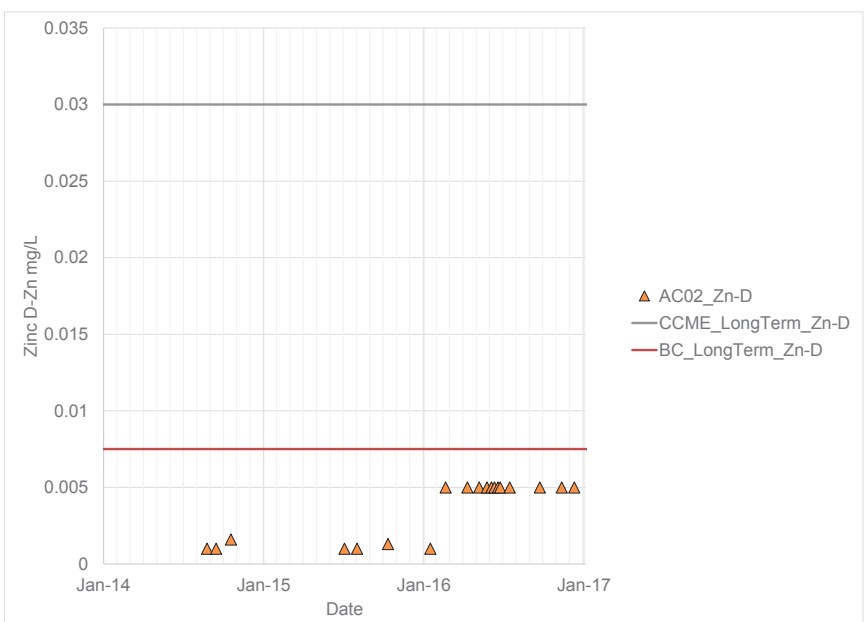






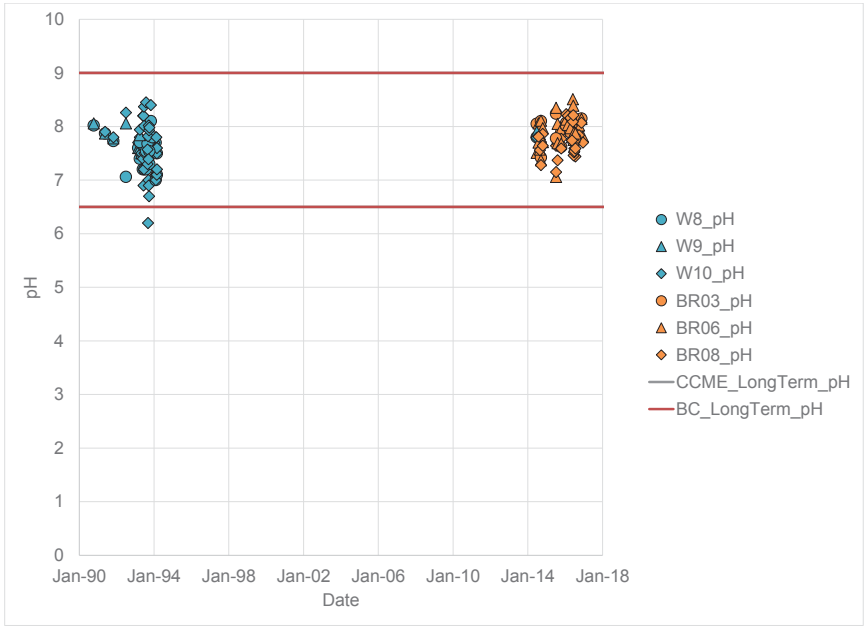


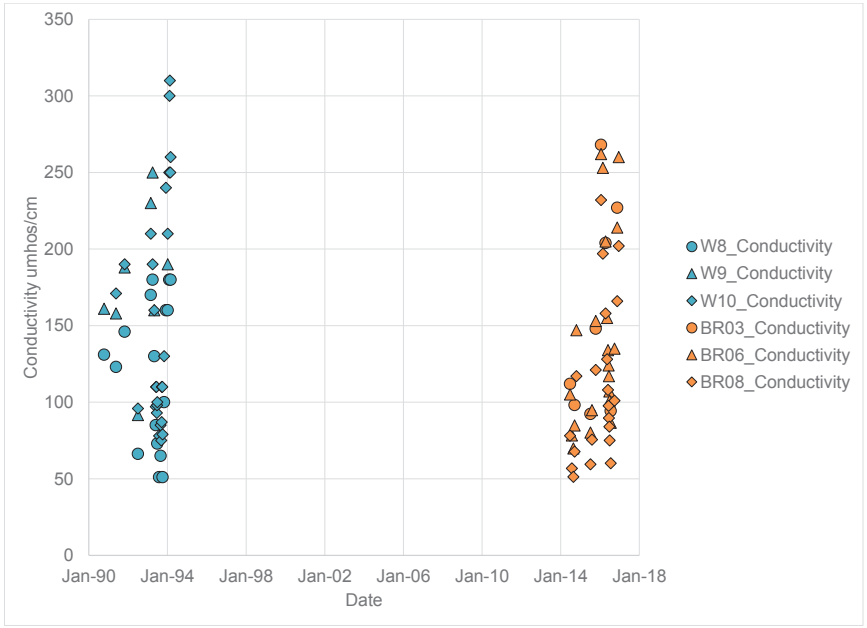


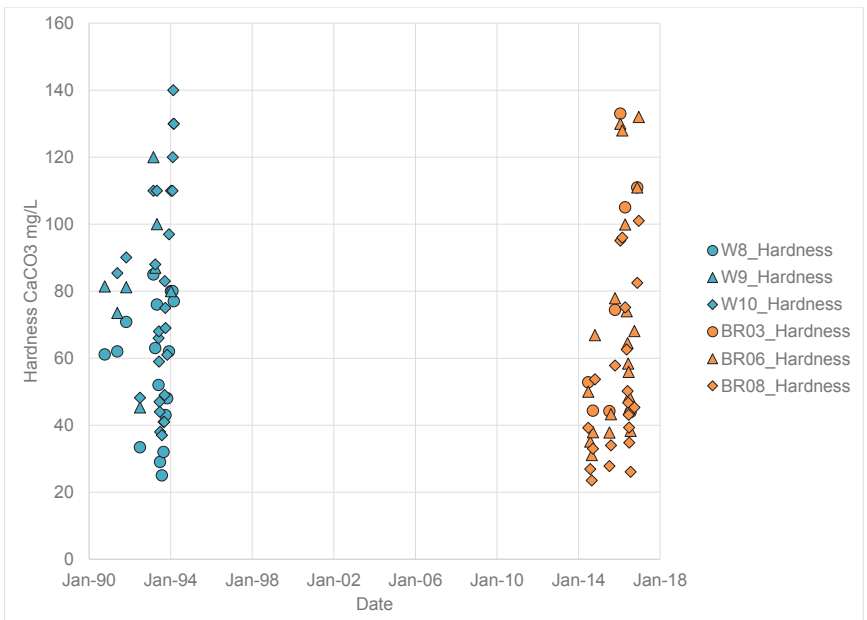


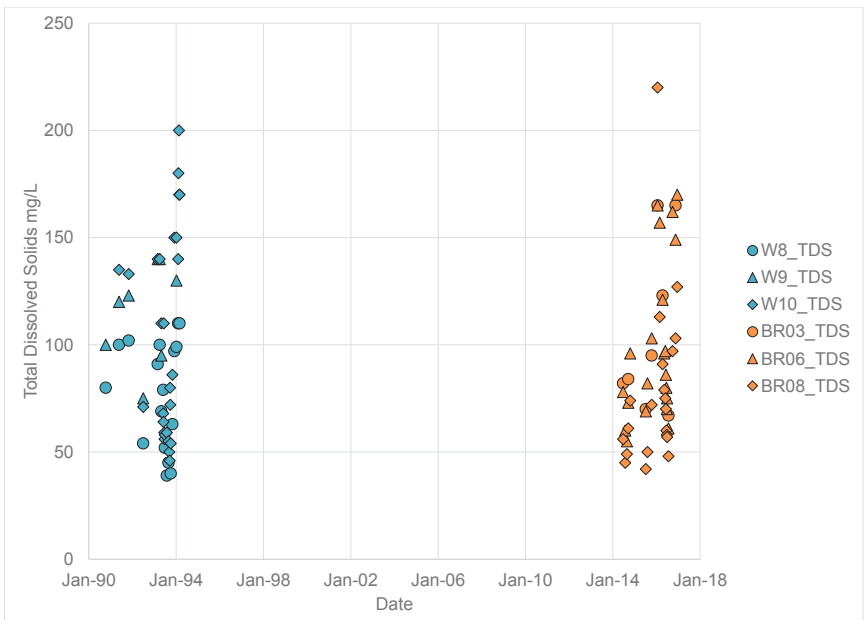
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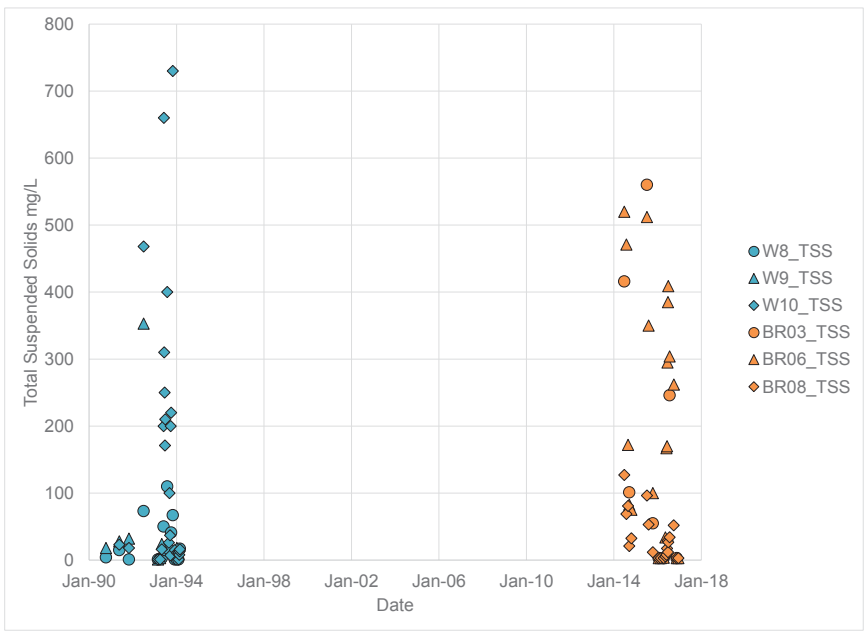
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

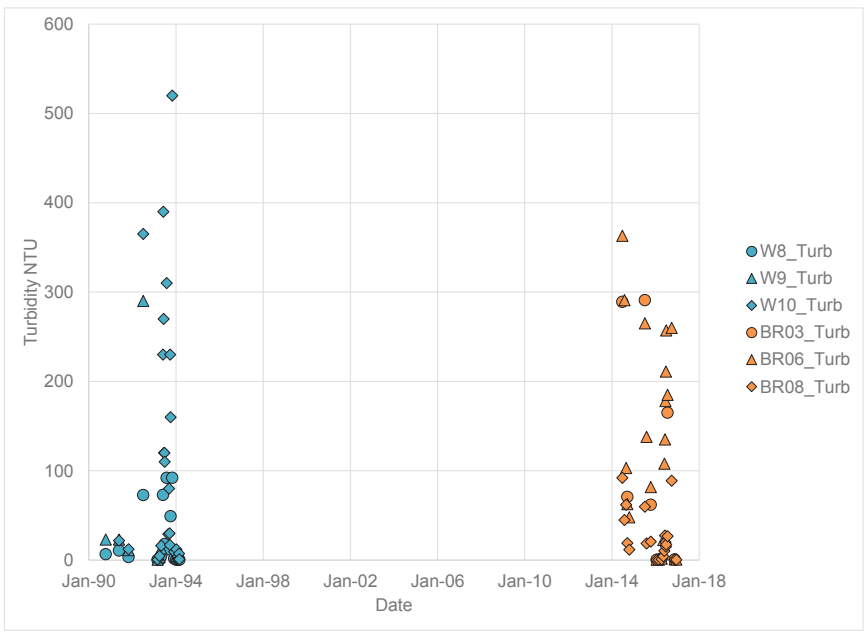


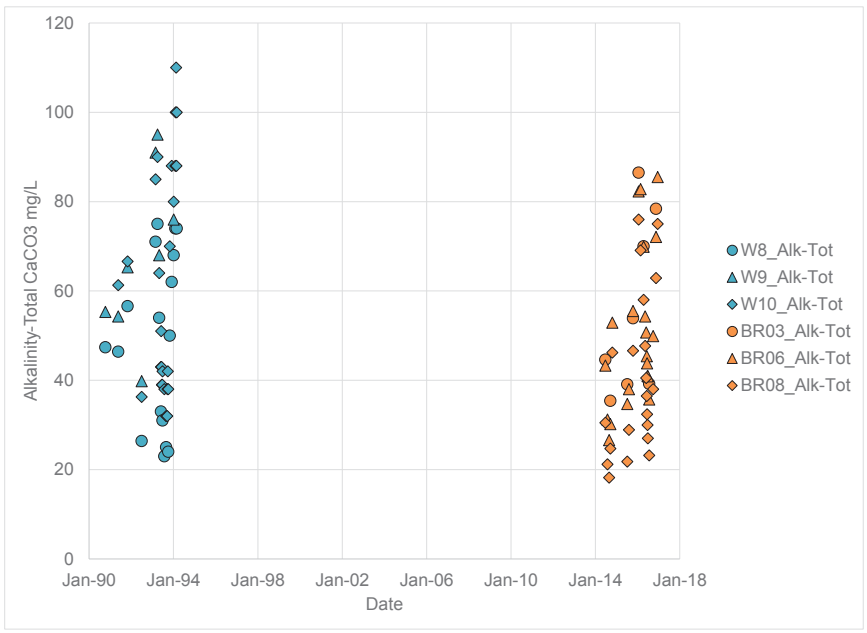


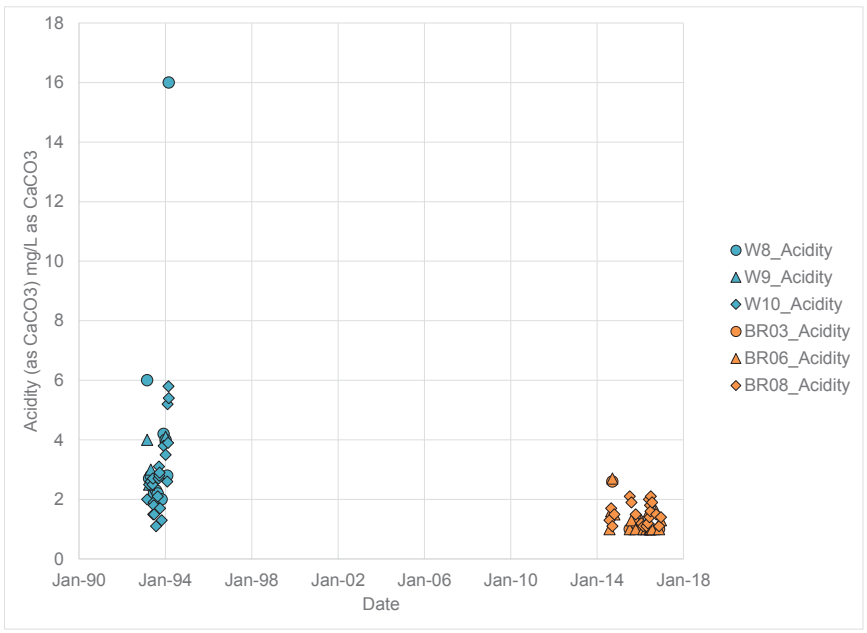






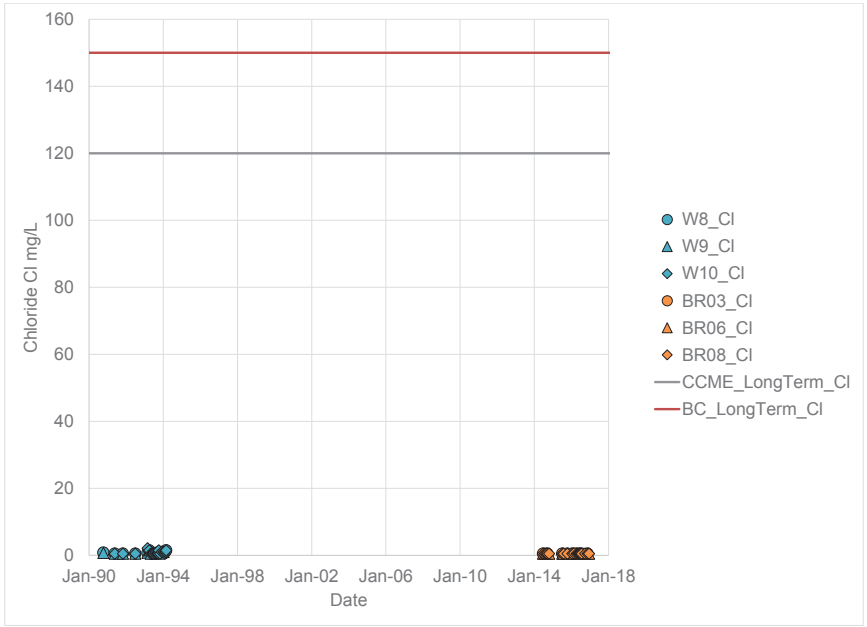


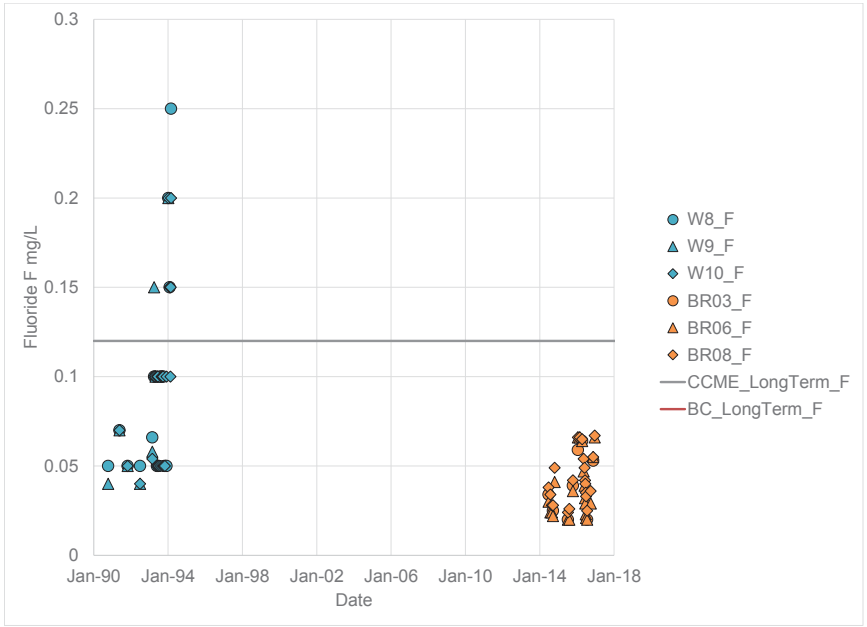


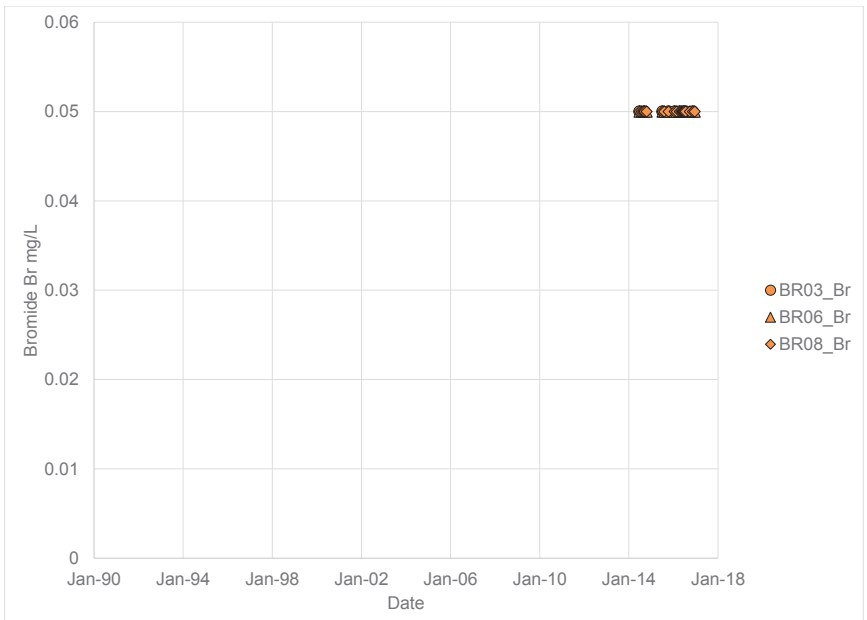


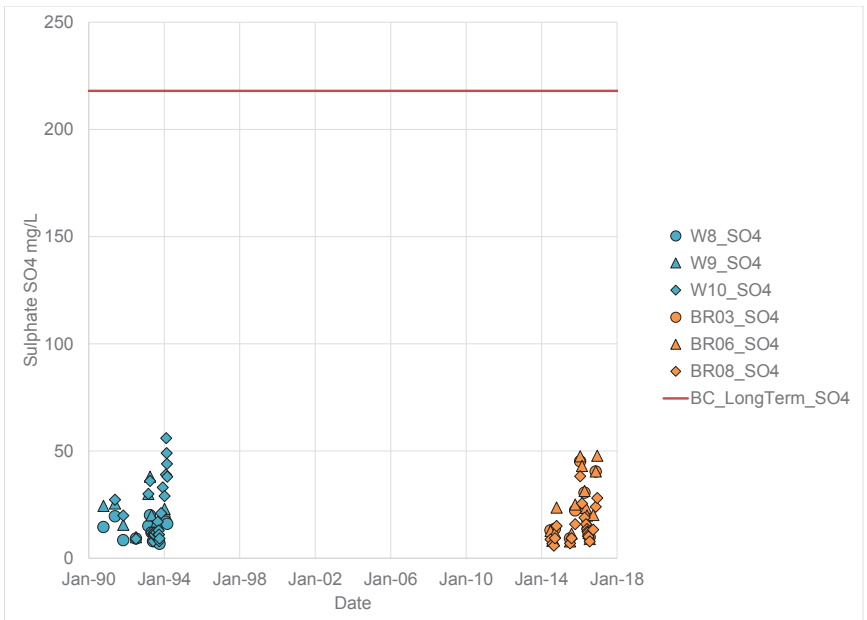
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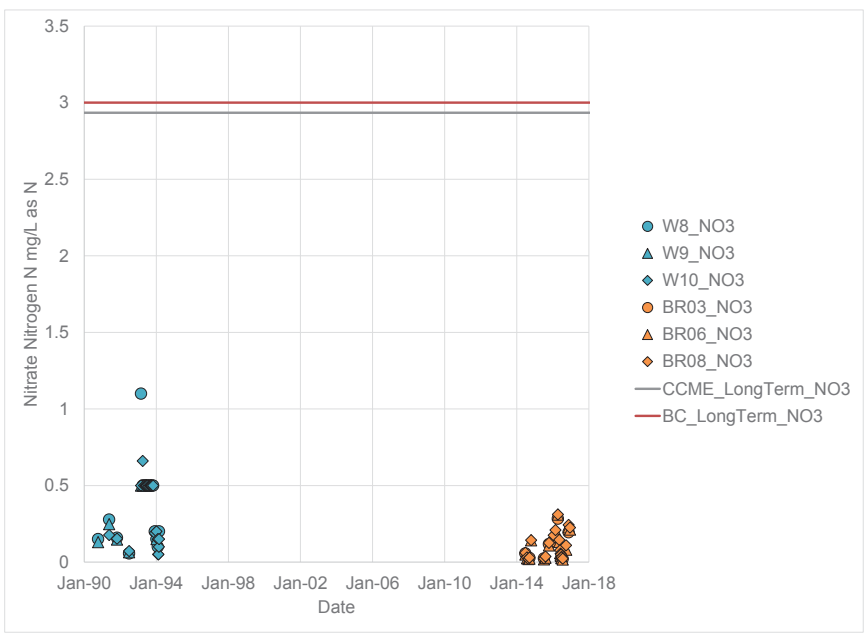
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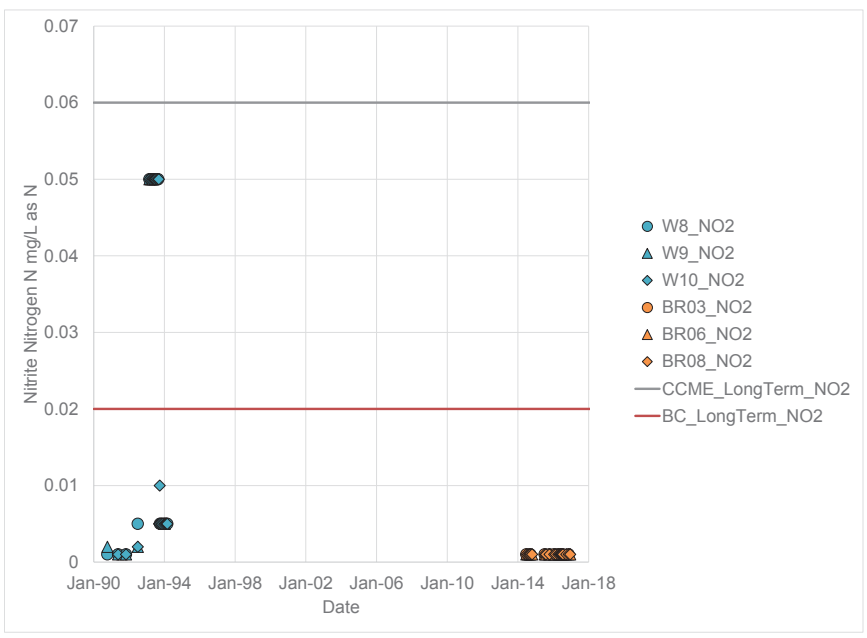


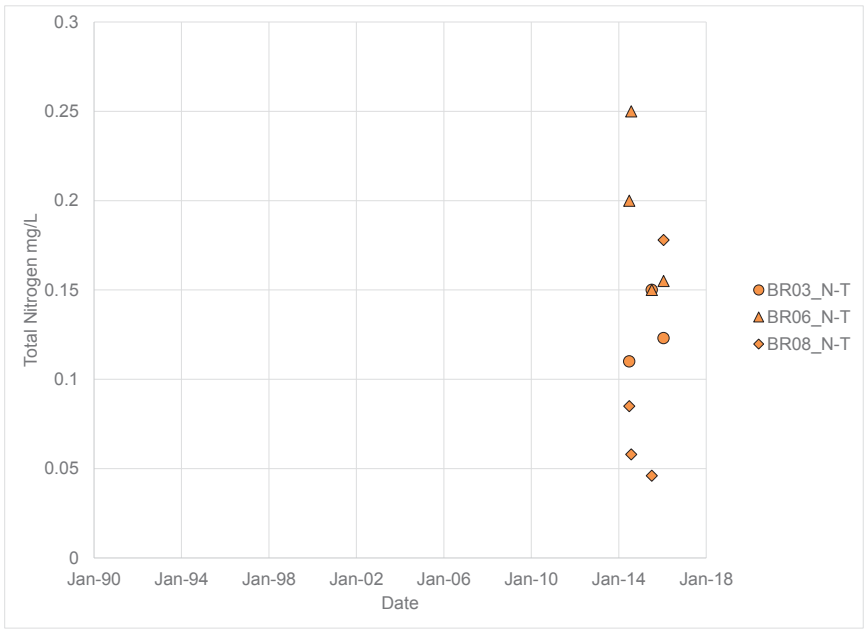


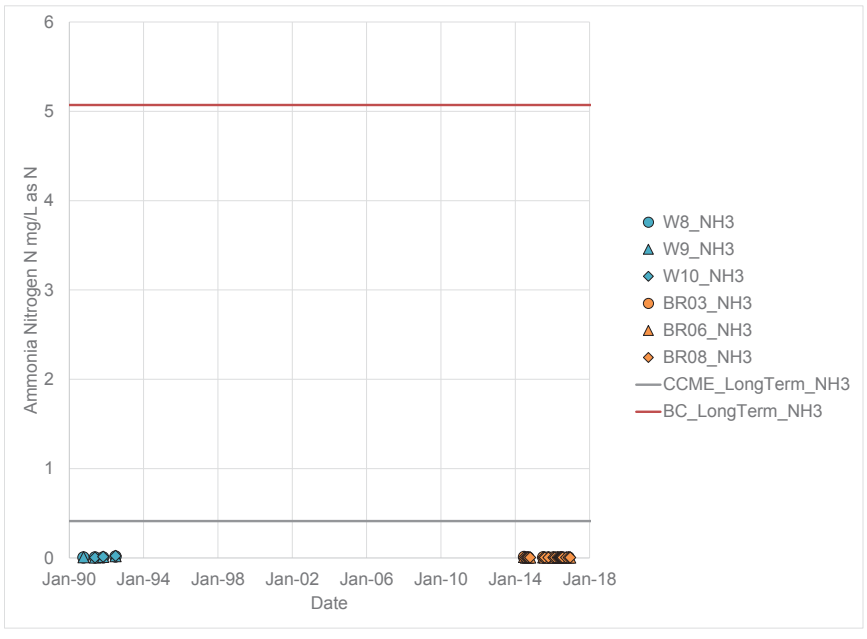




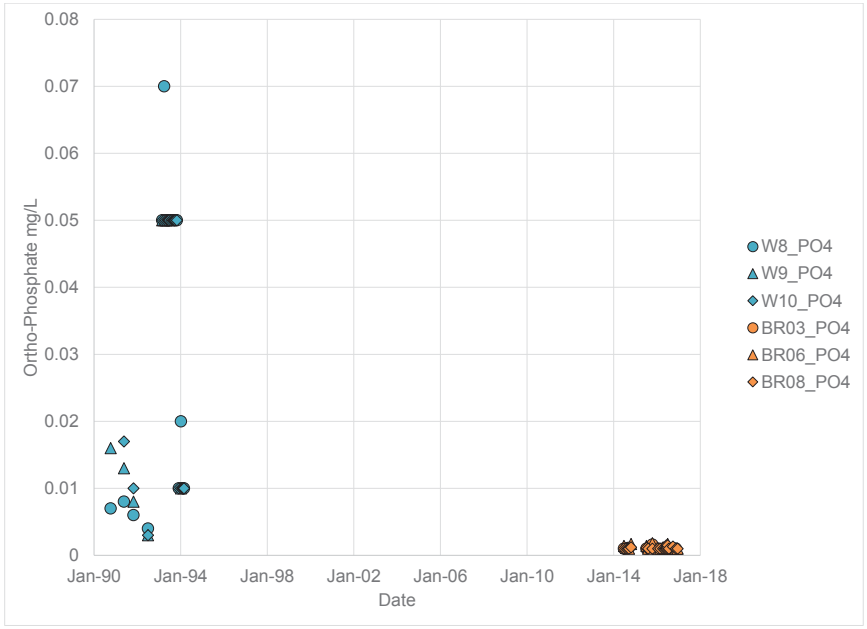


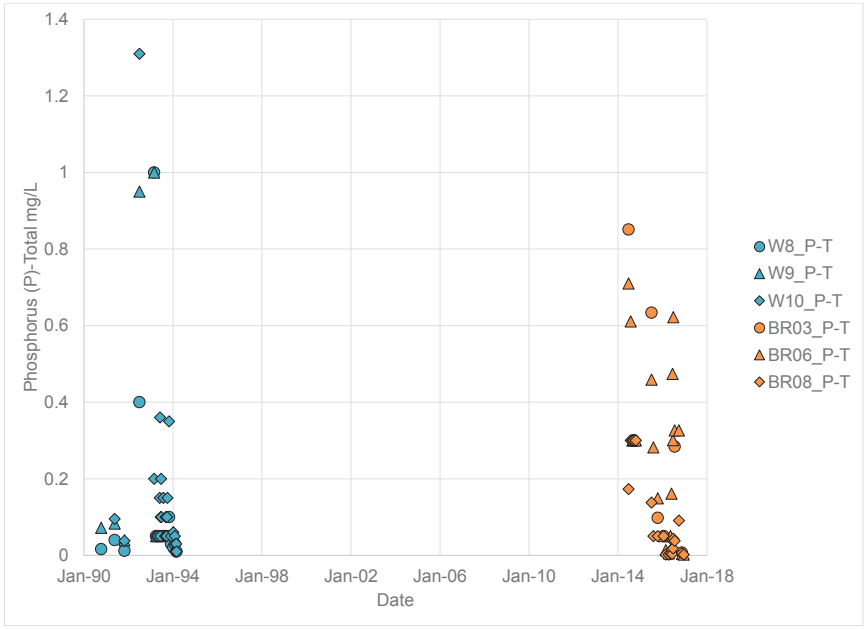


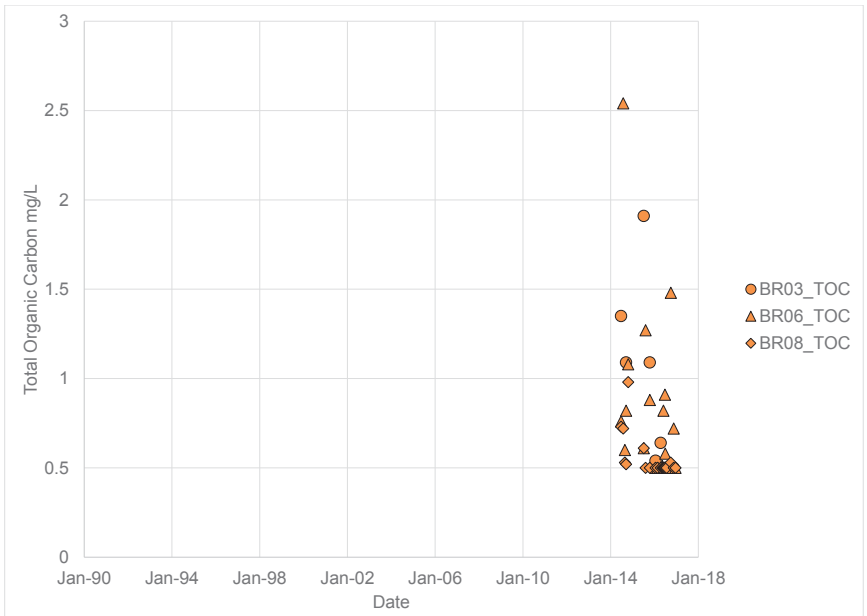


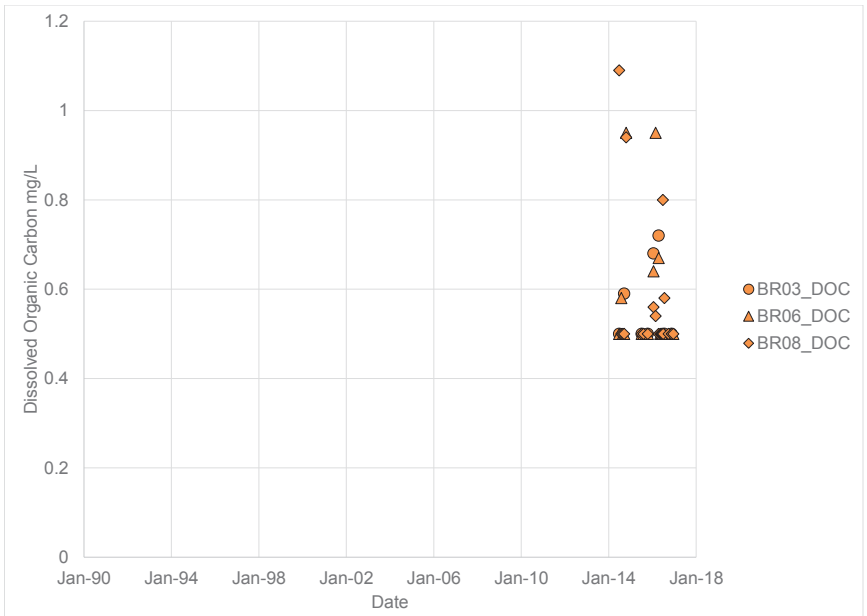


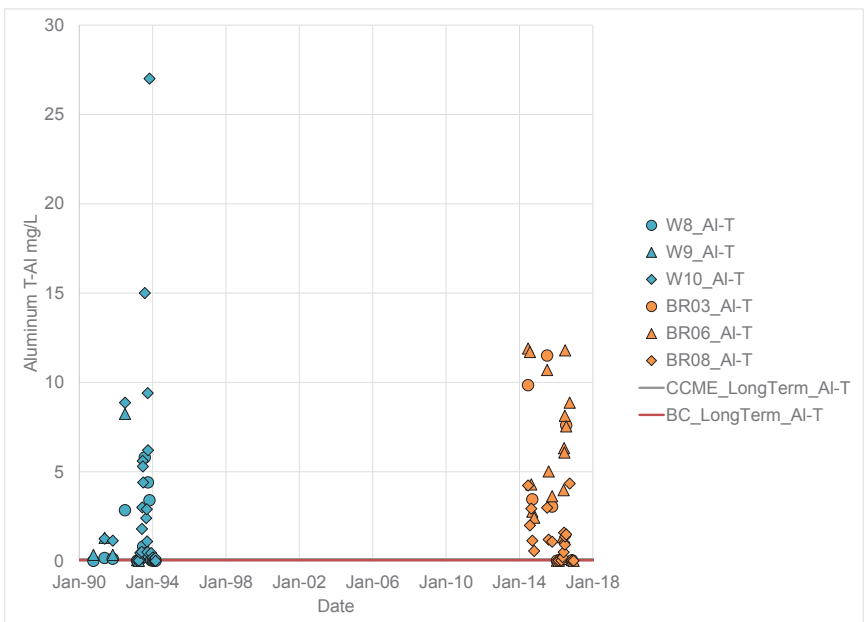
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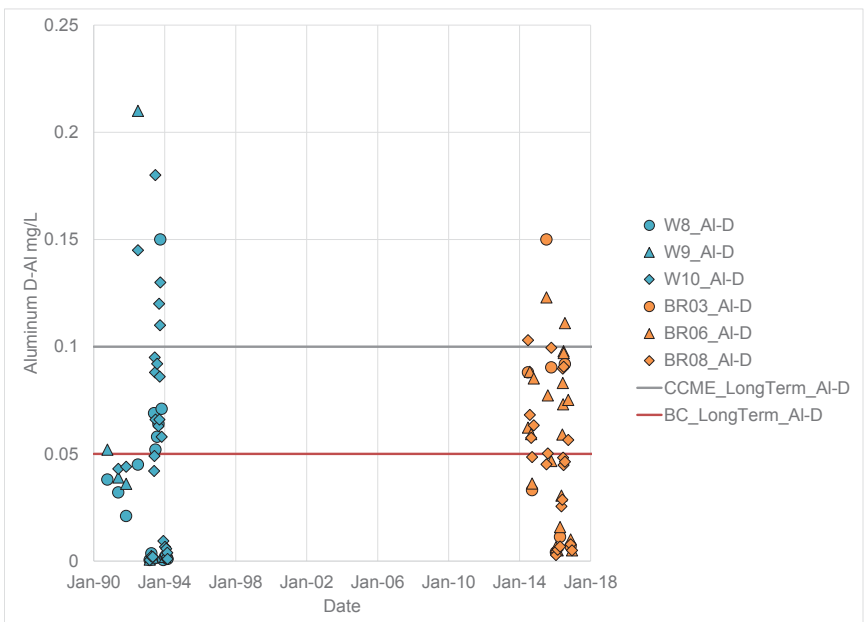


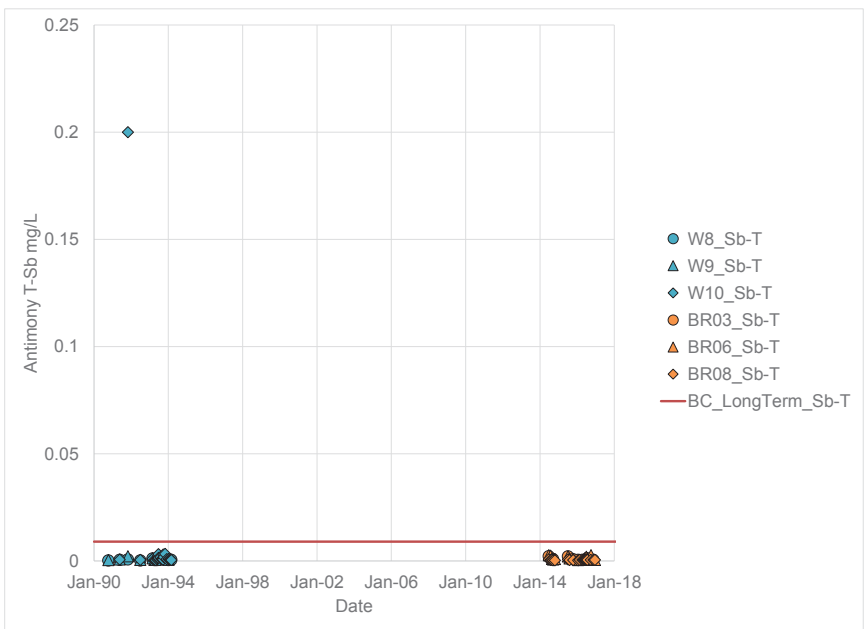


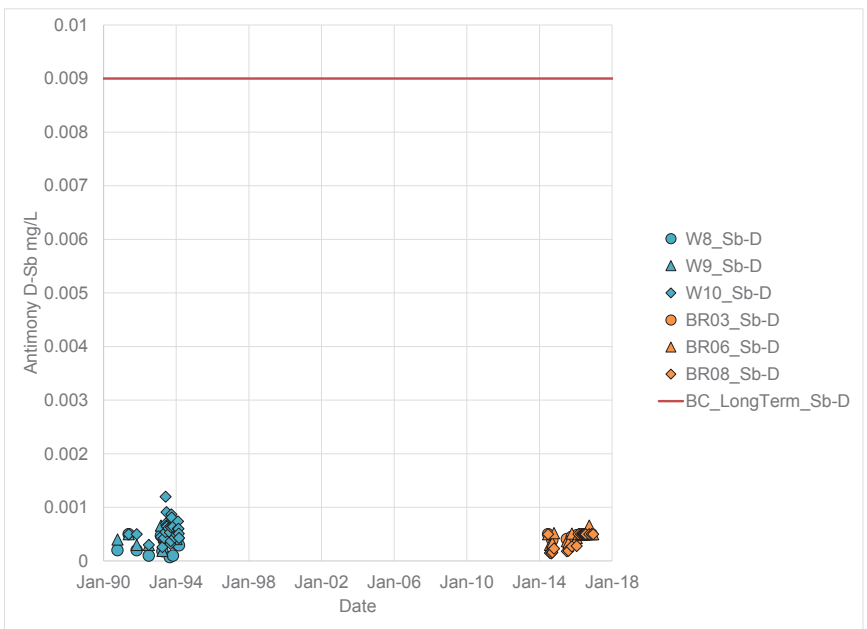




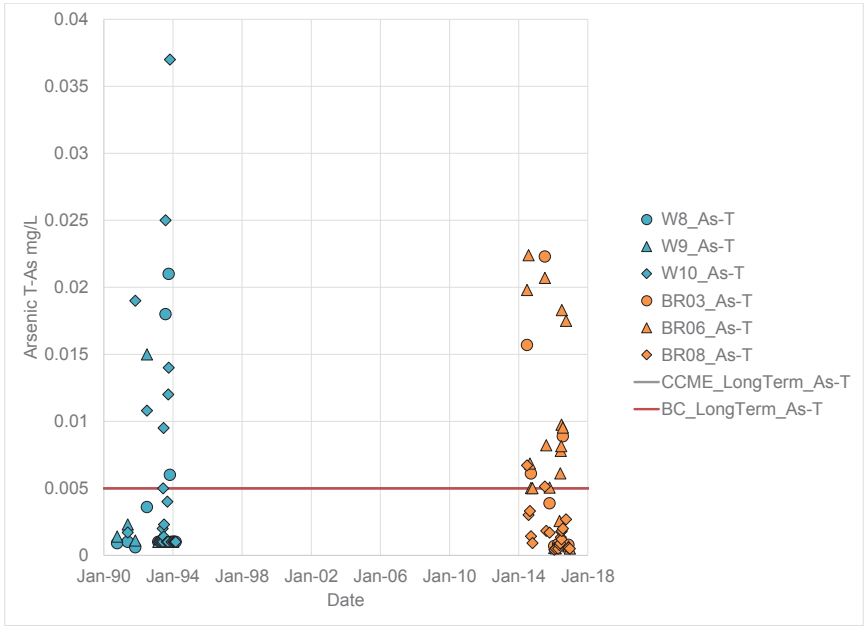


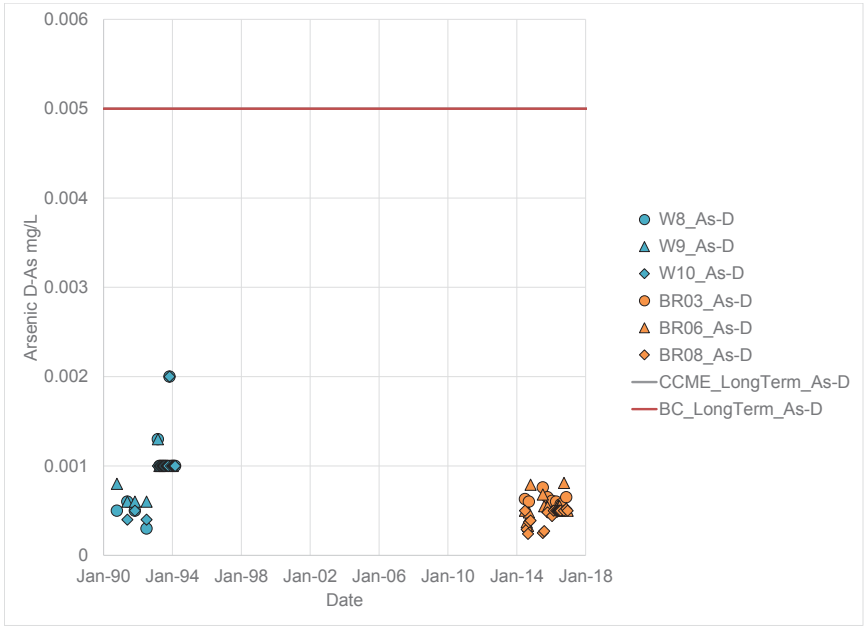


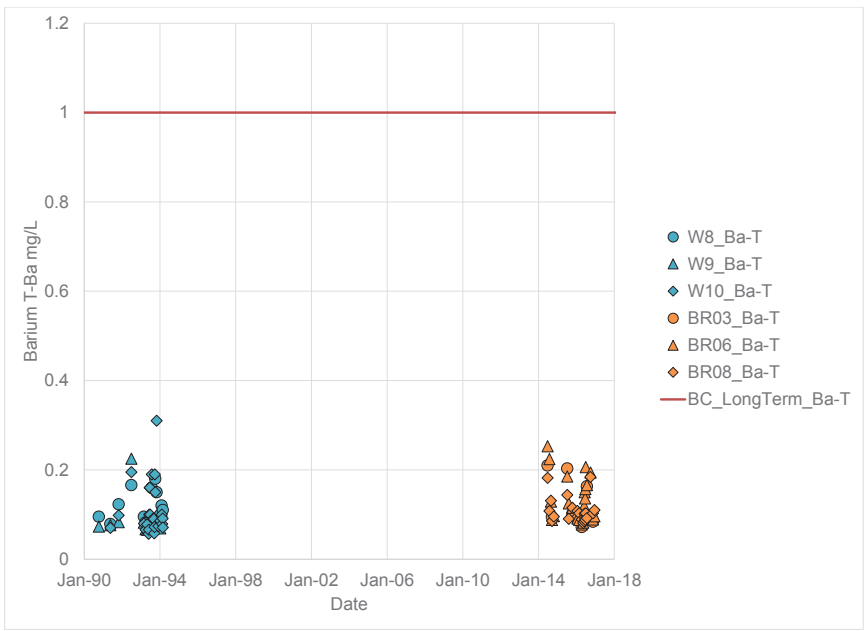


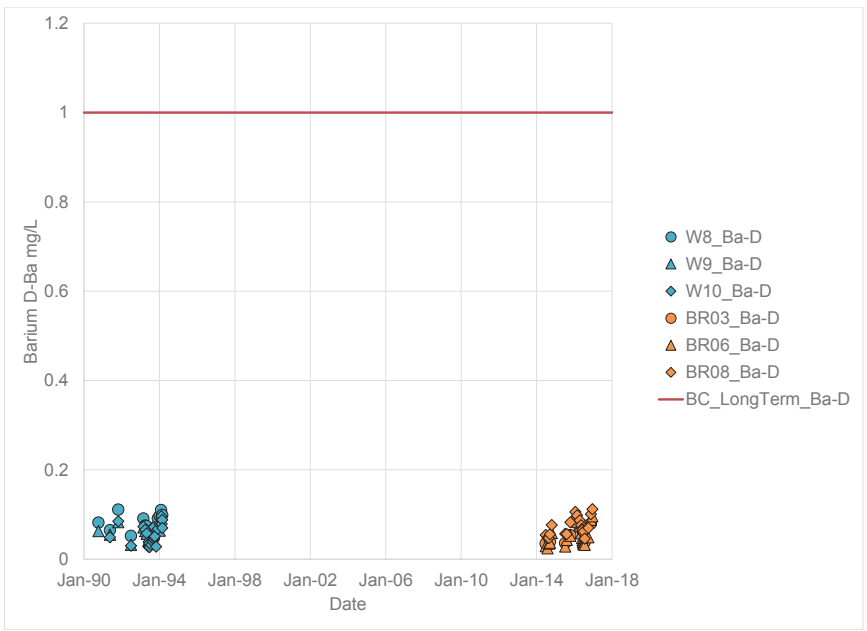


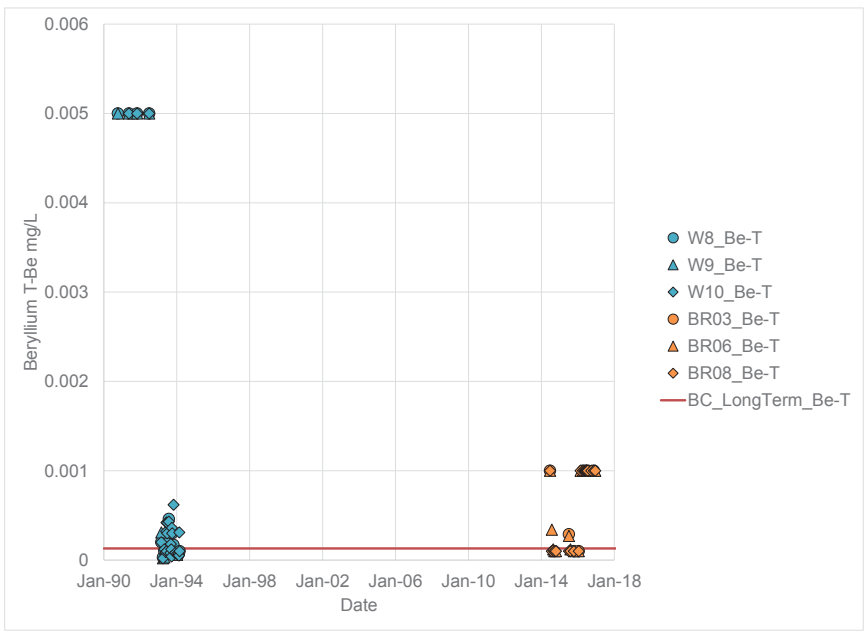
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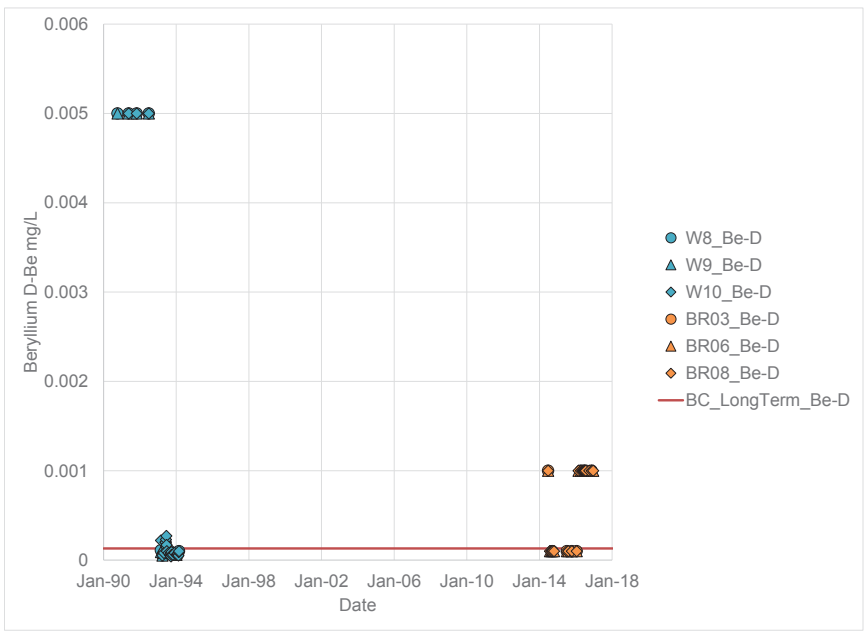


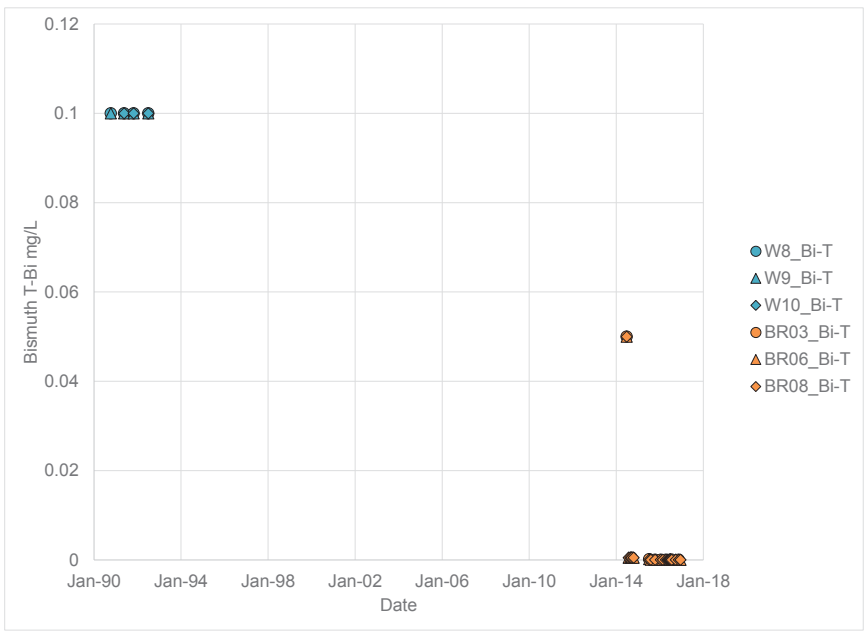


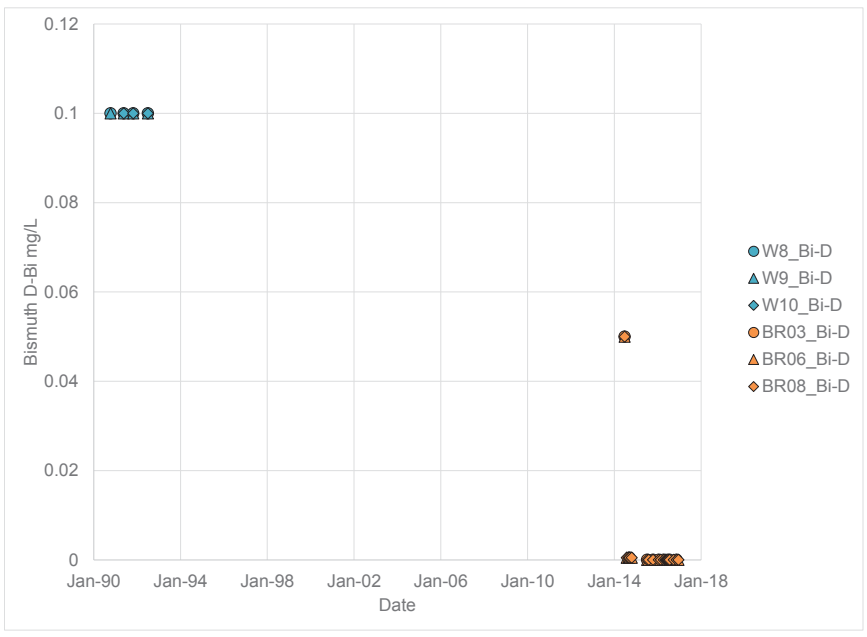




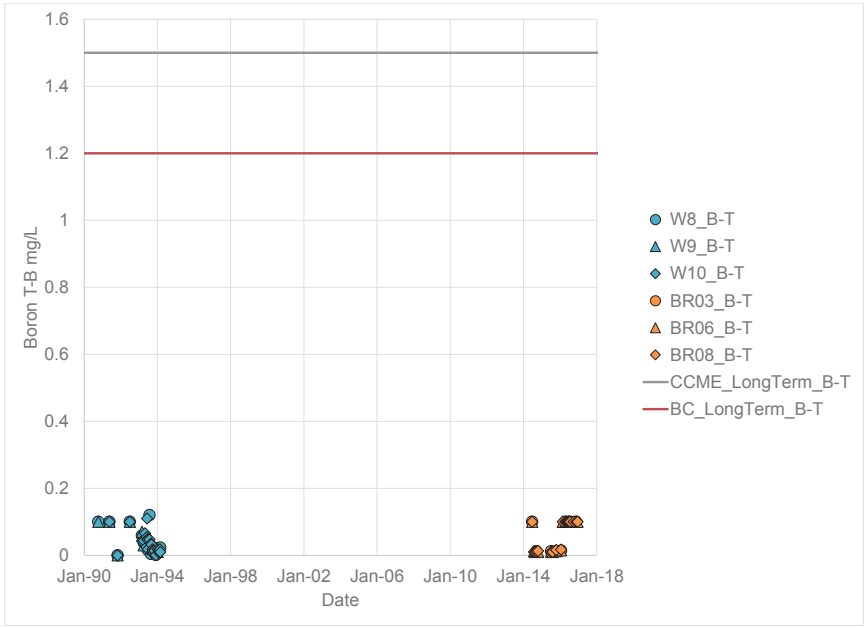


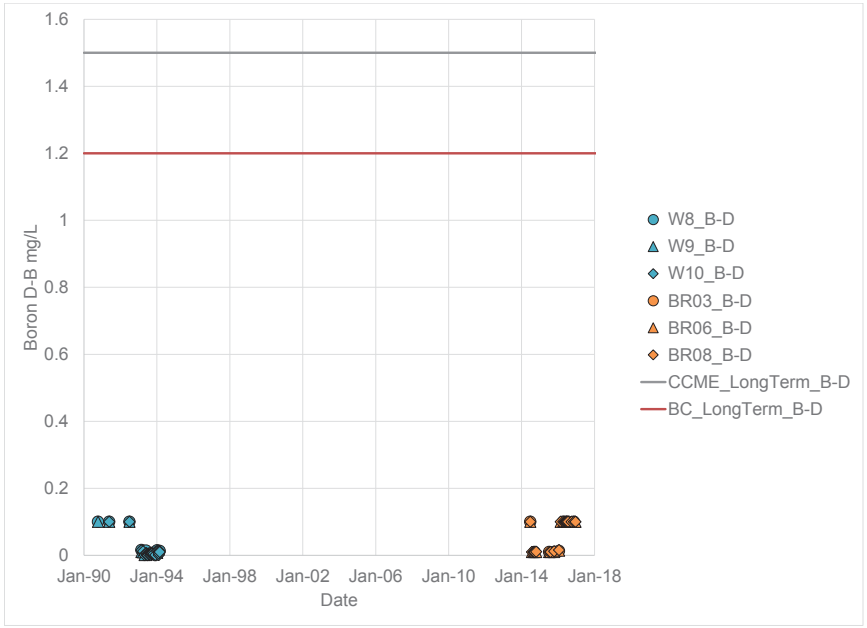


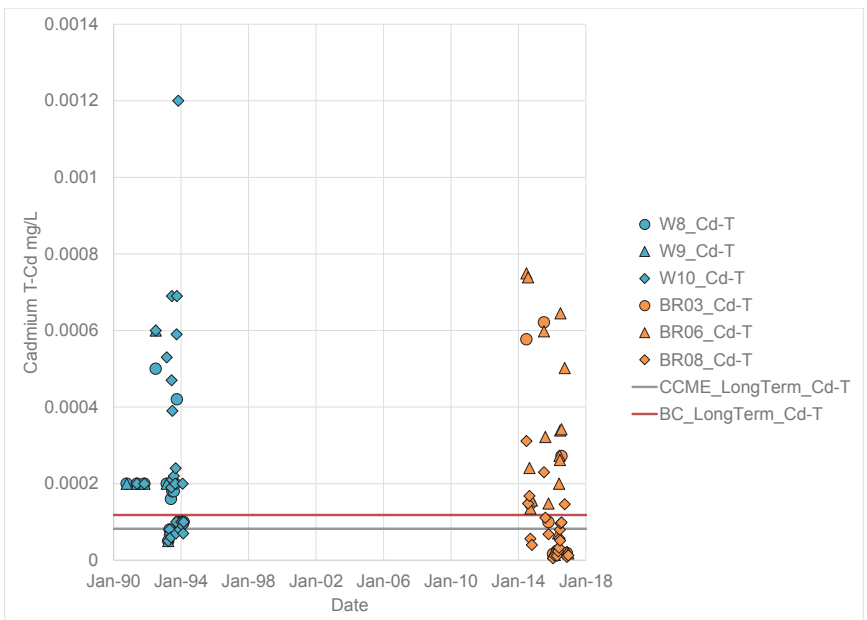


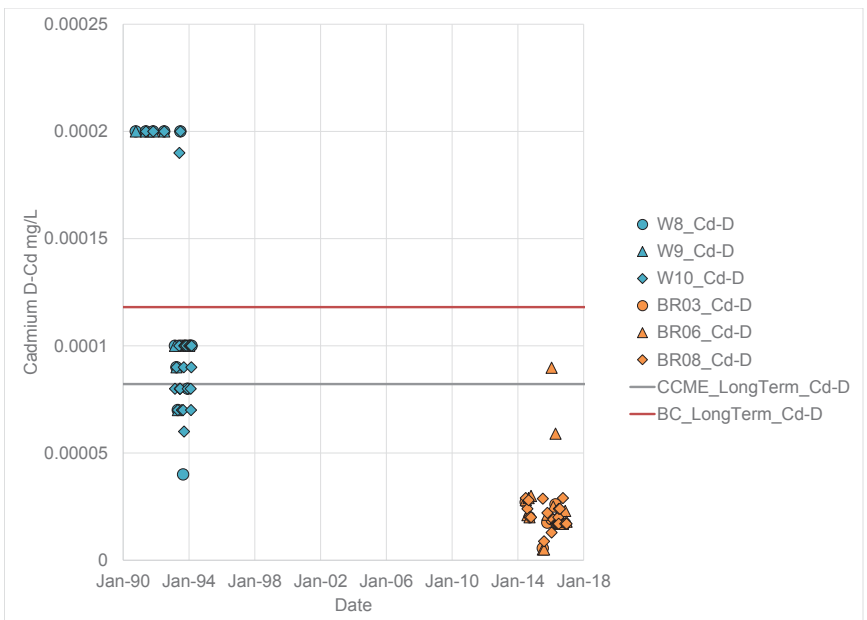


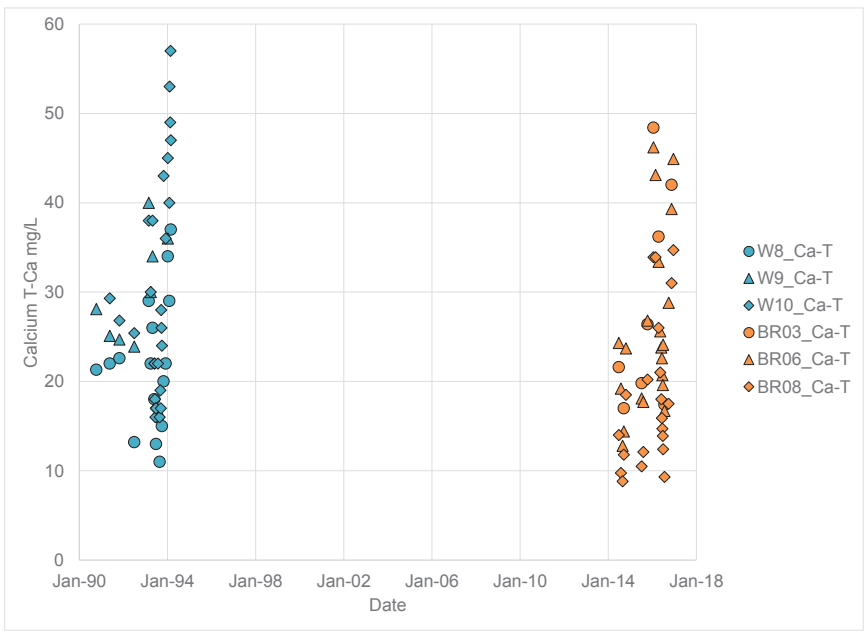
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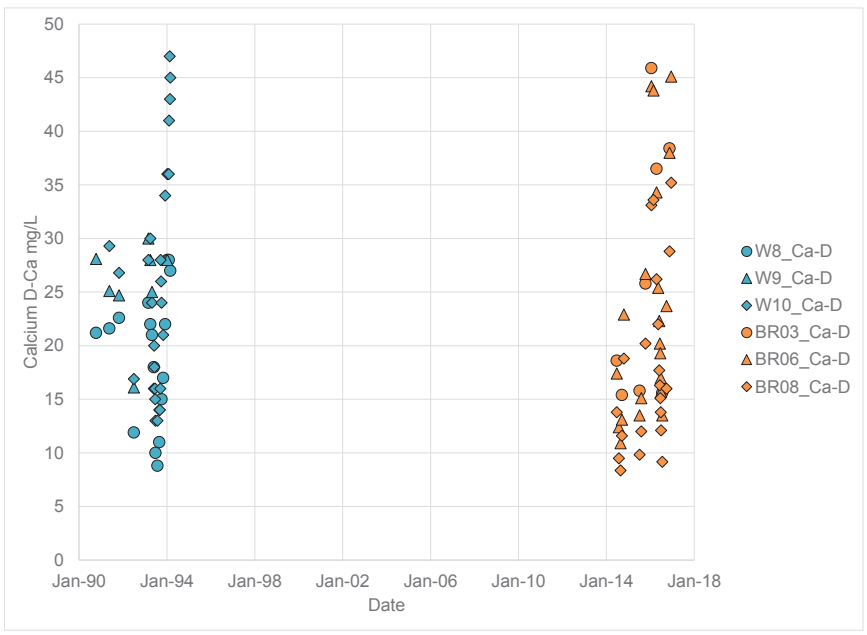


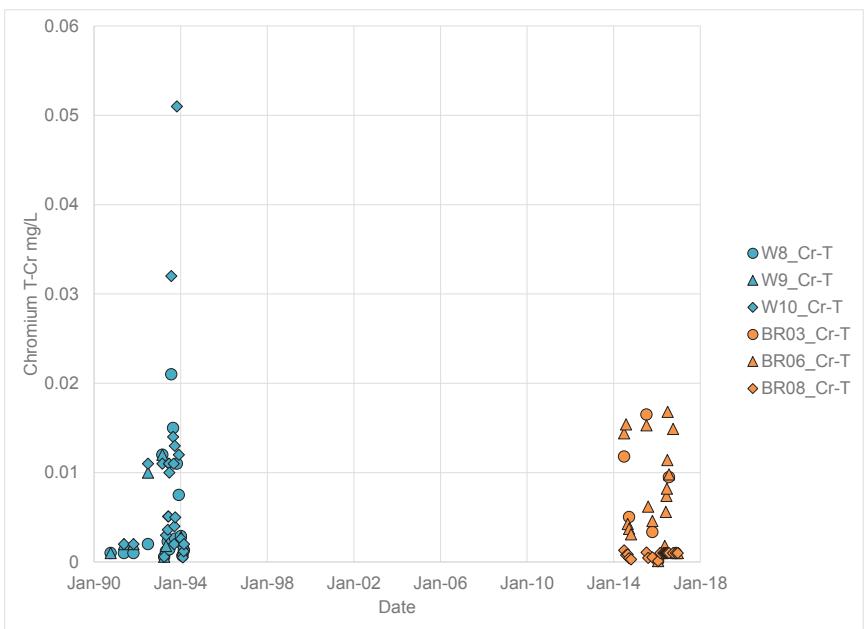


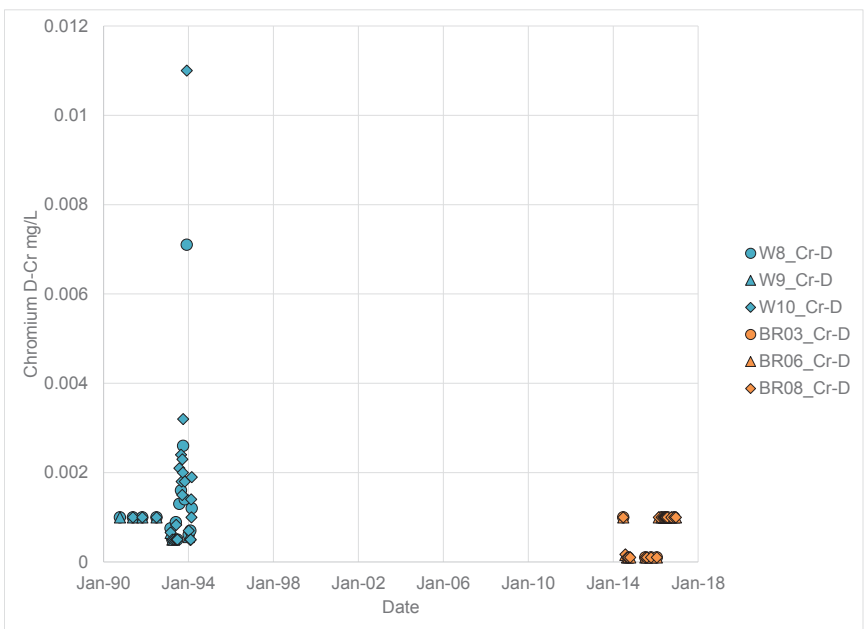






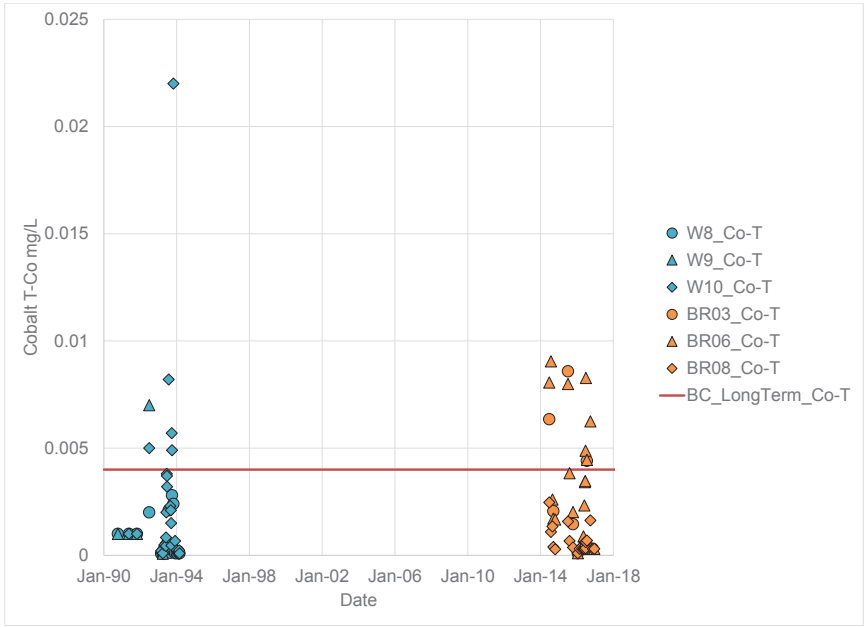


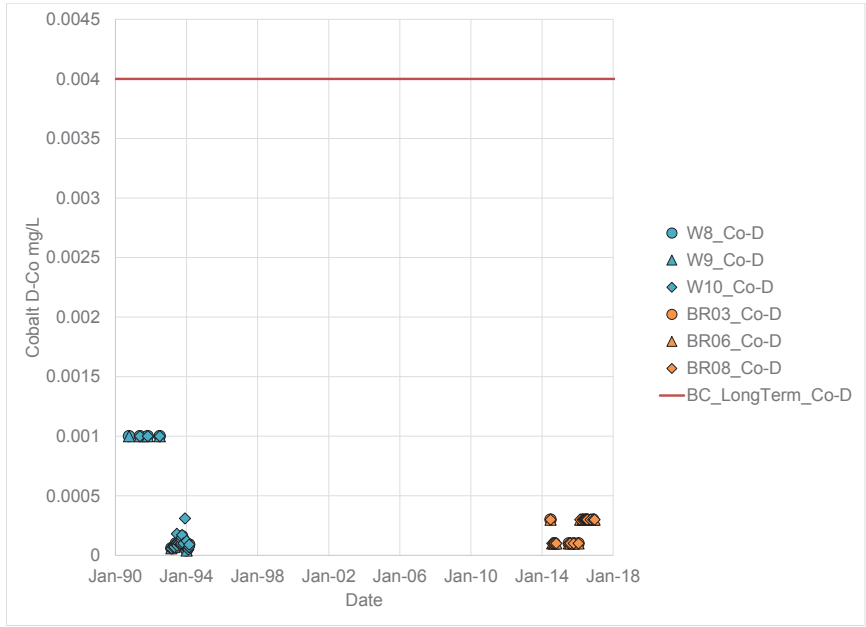


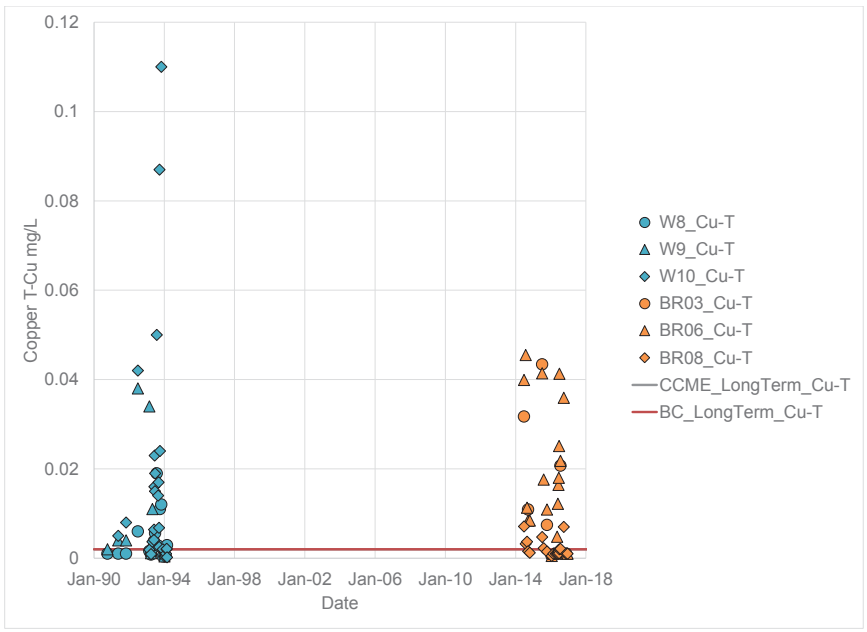


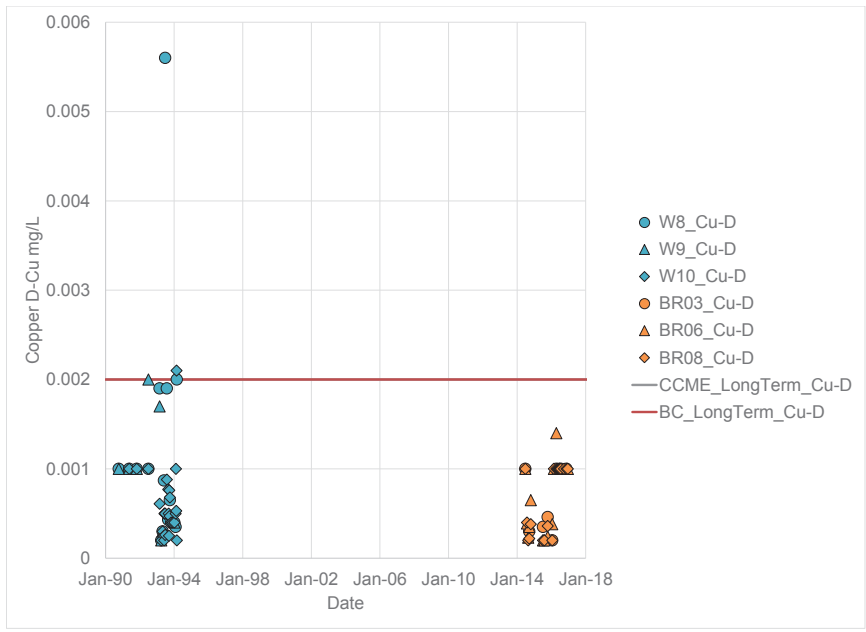
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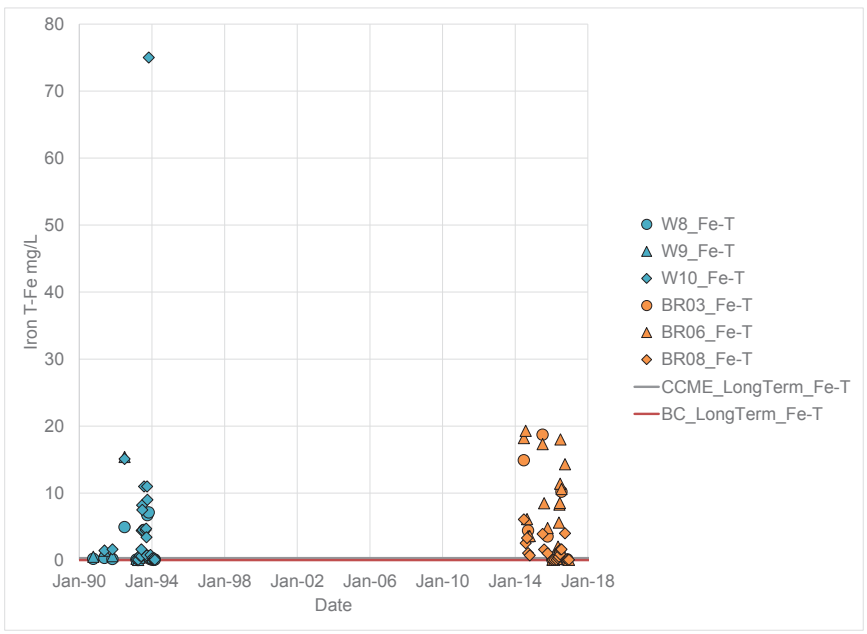
Appendix E-2: Surface Water Quality Results by Watershed, Time Series

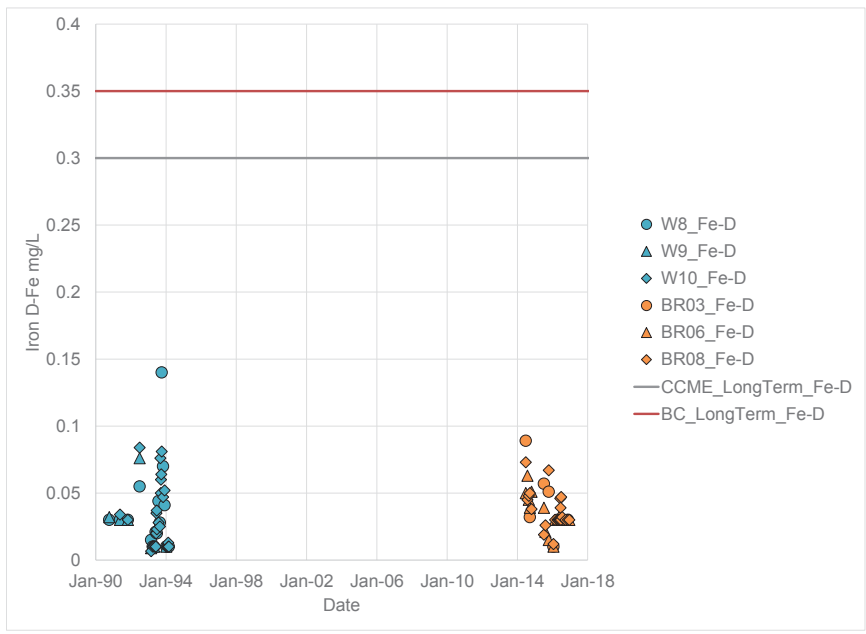


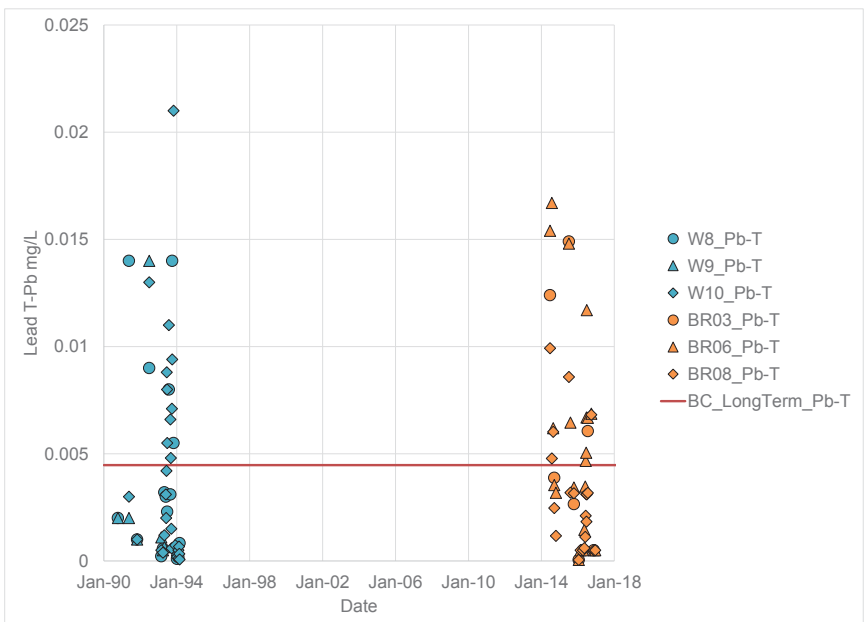


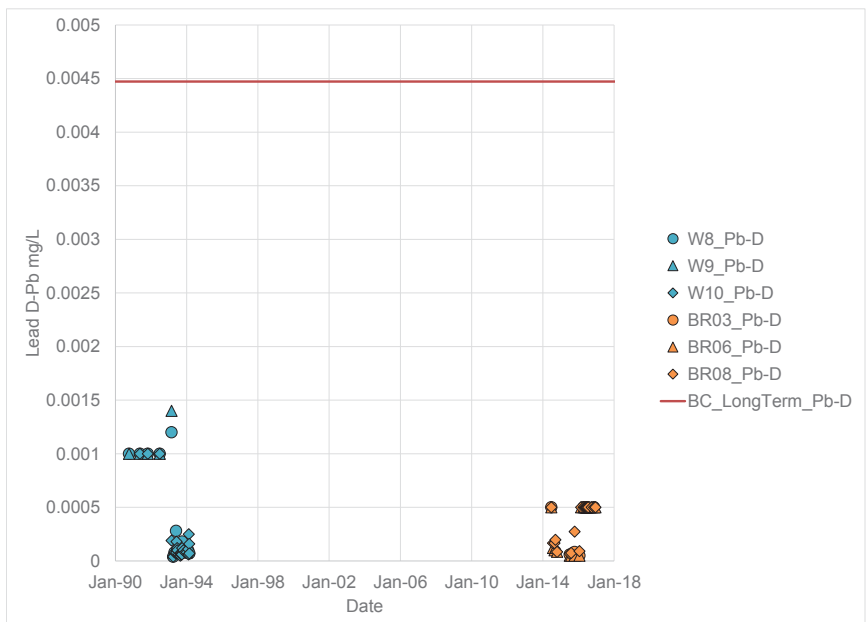




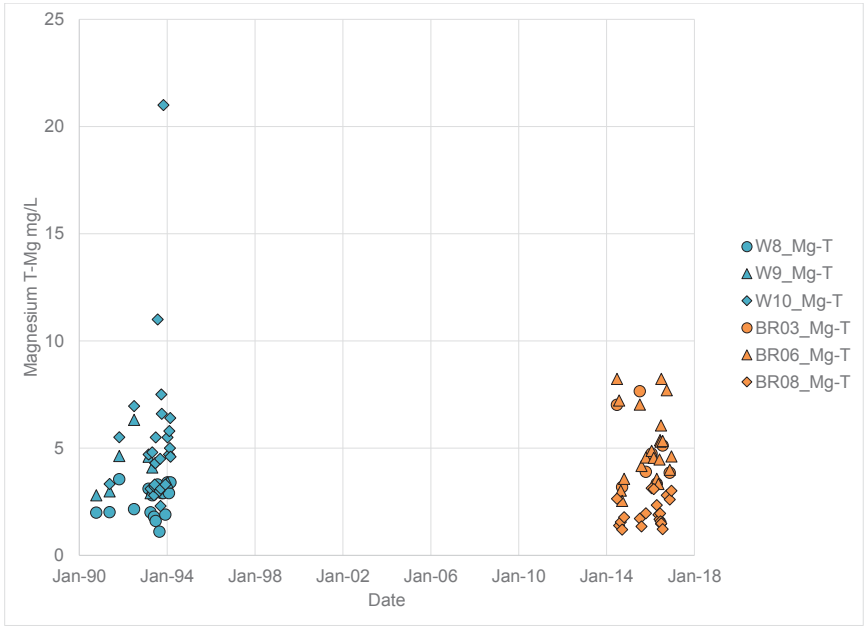


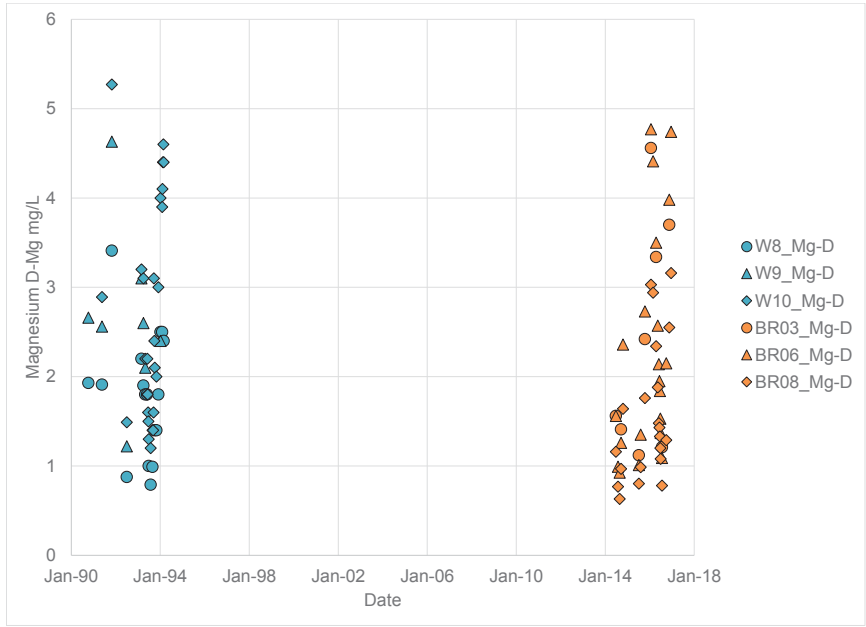


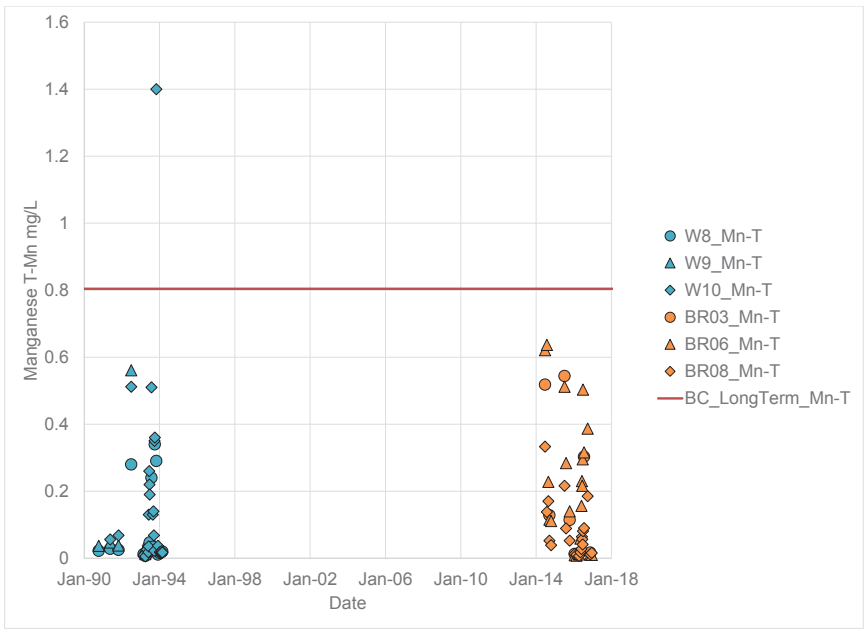


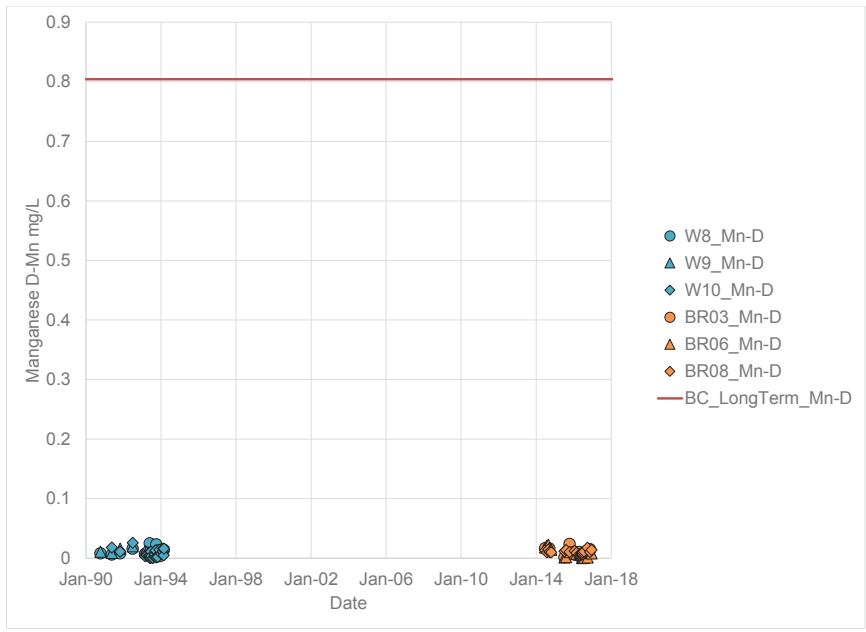


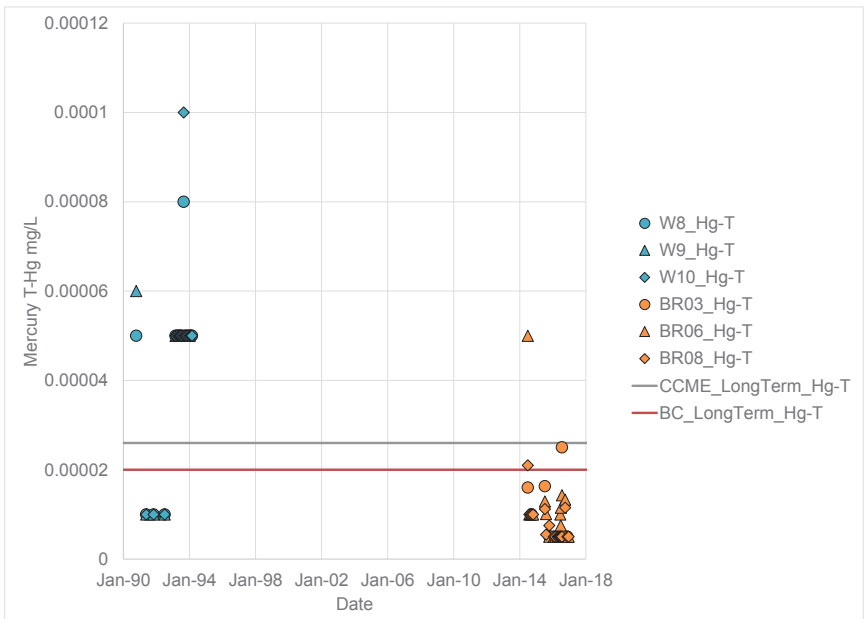
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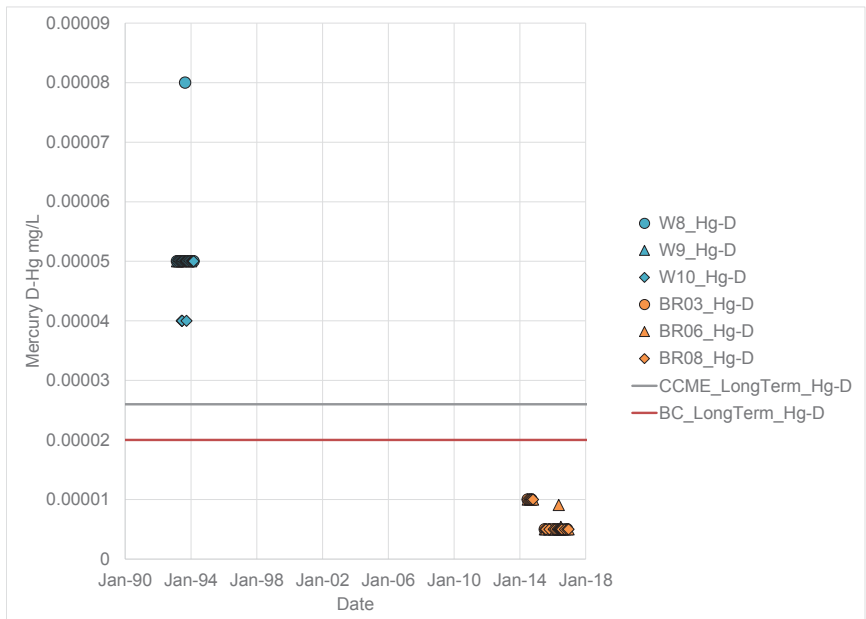


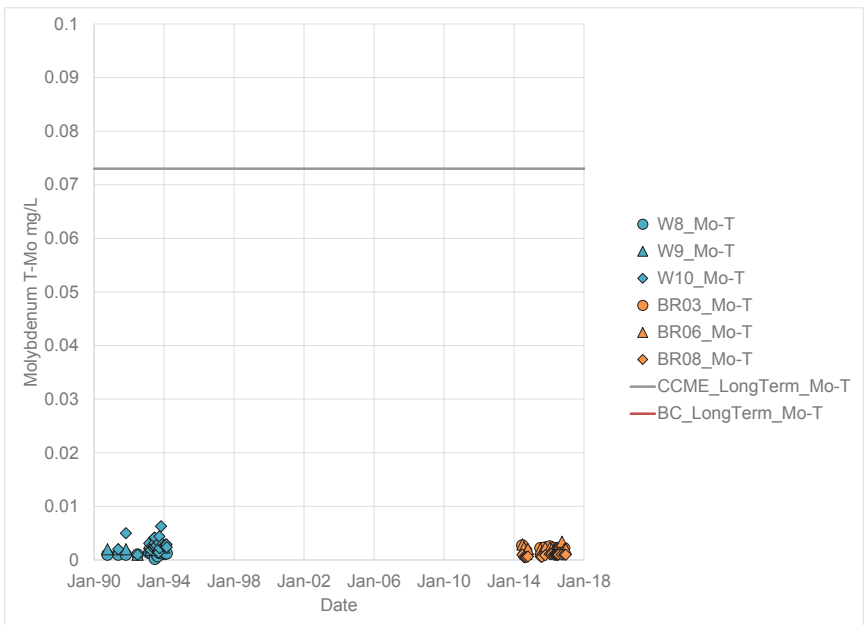


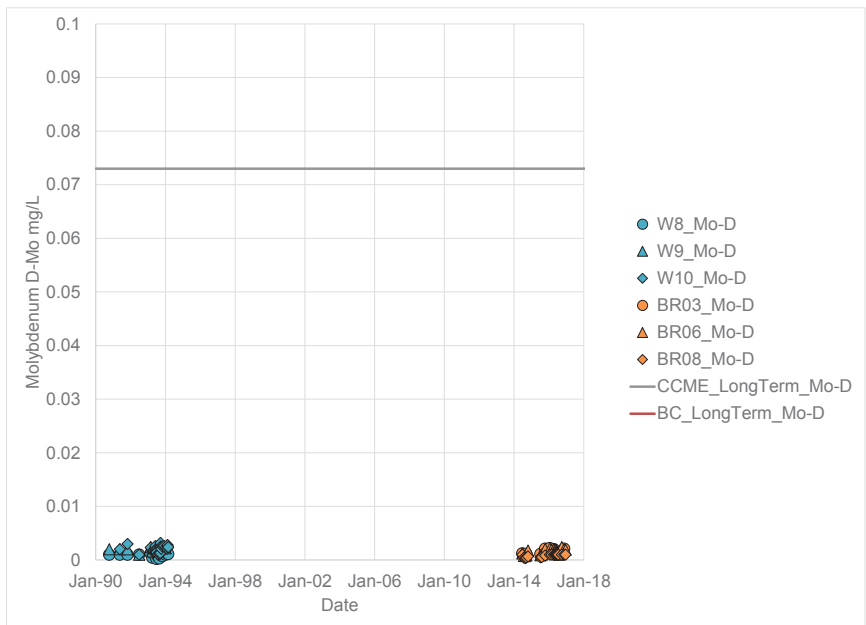




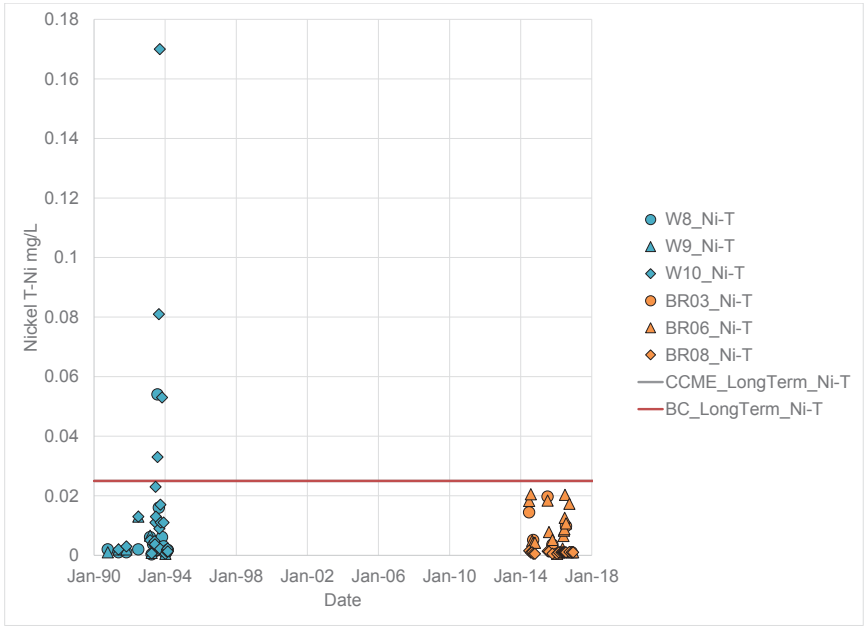


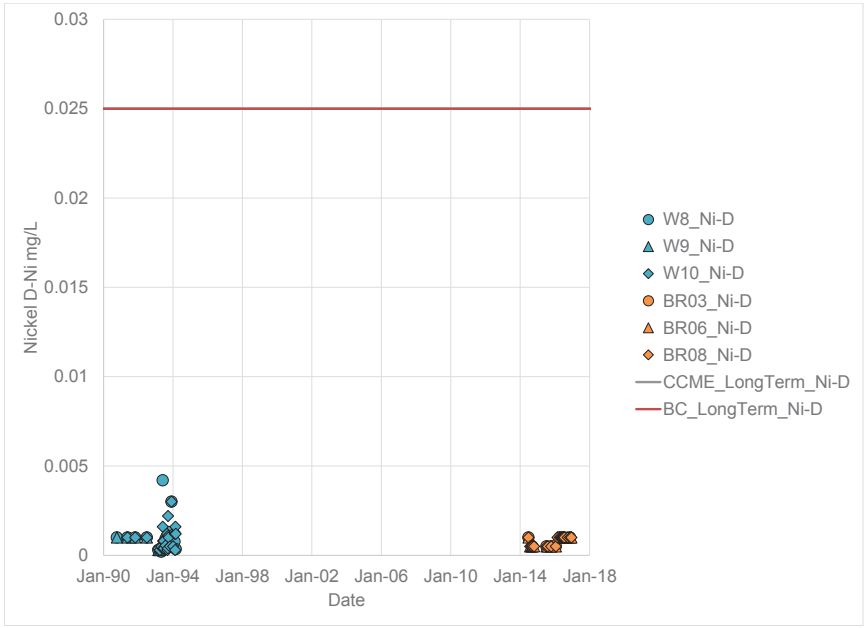


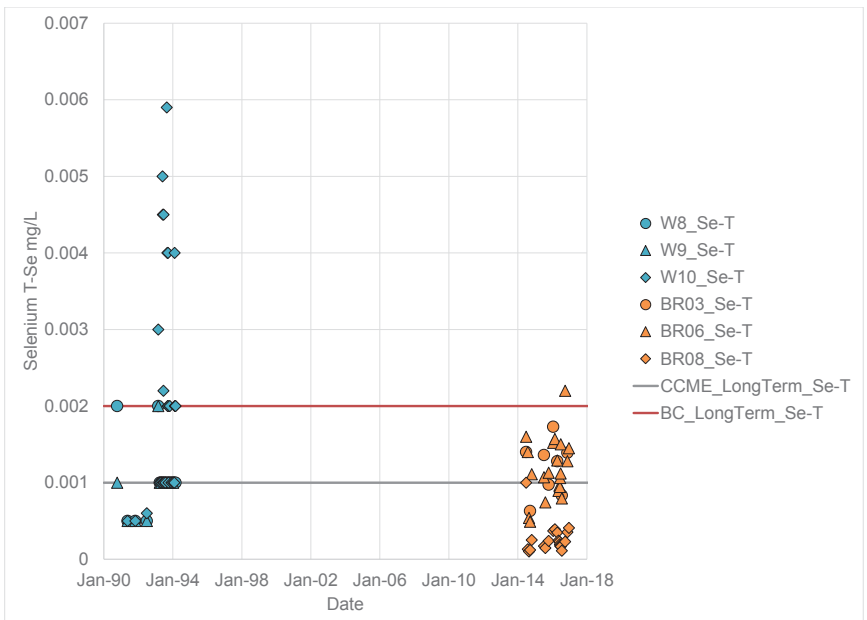


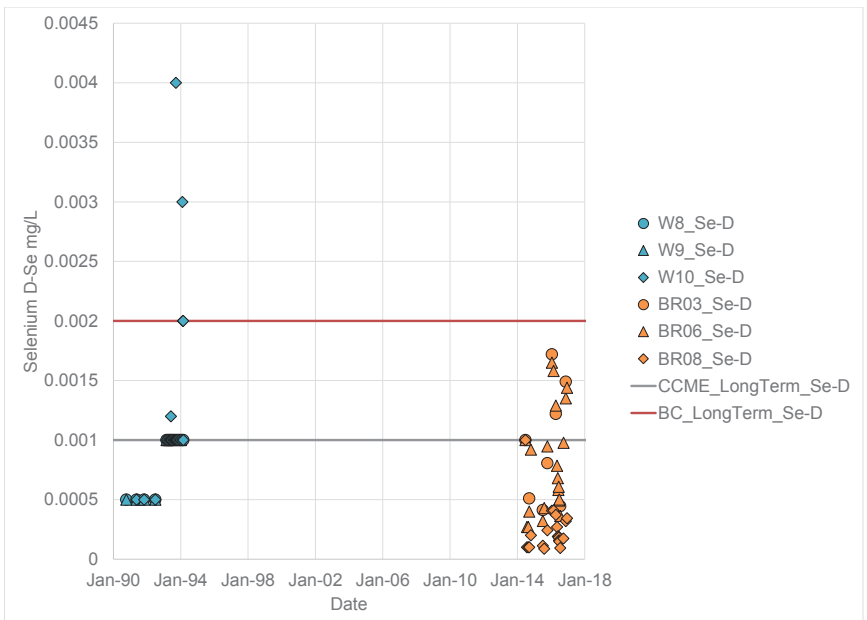


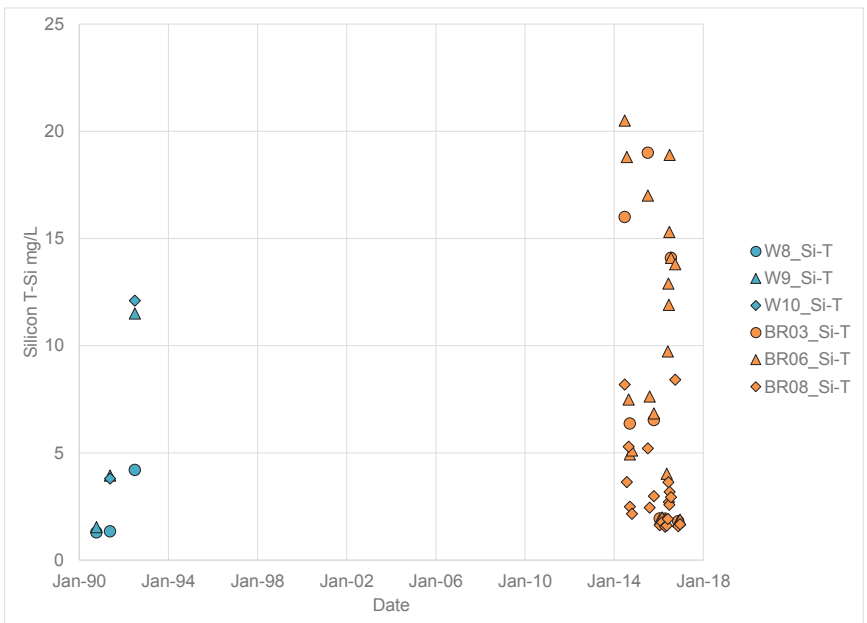
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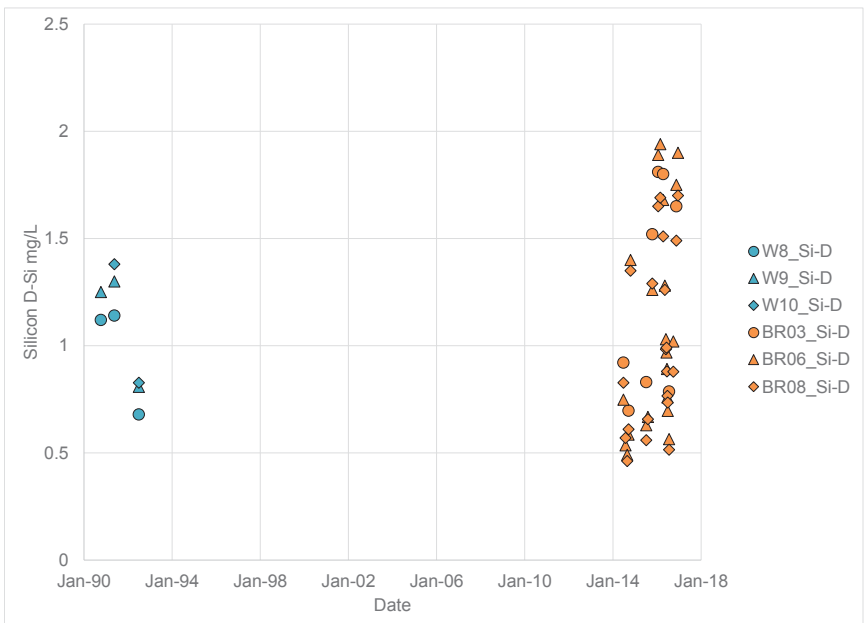


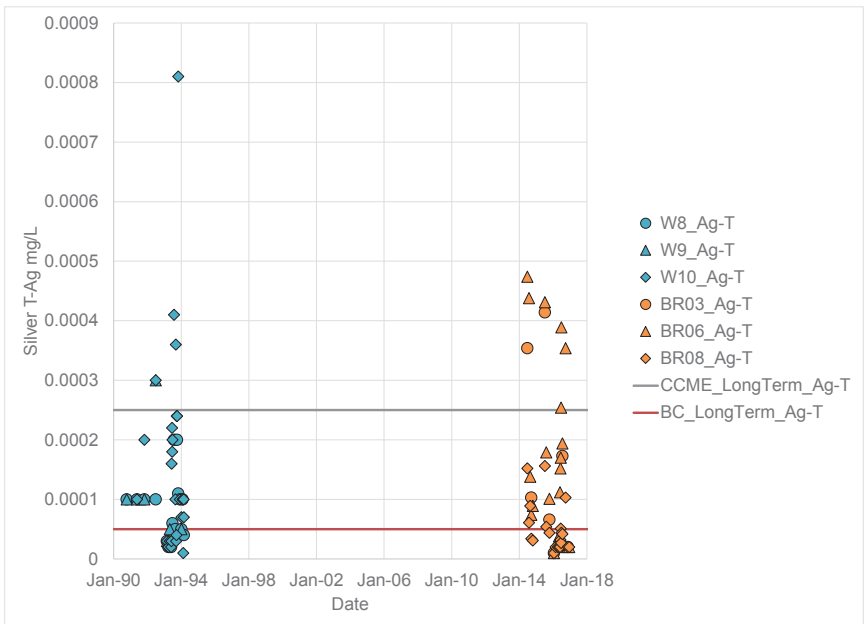


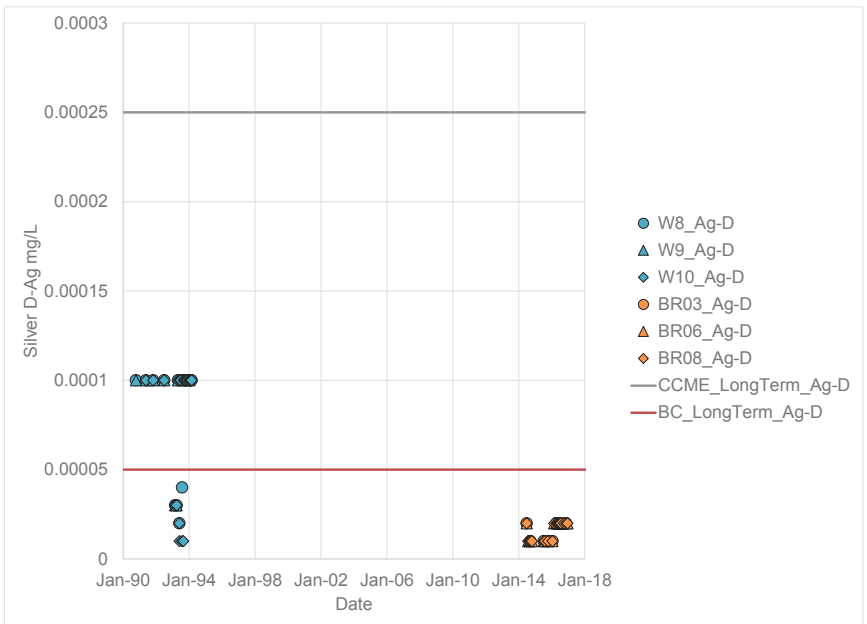




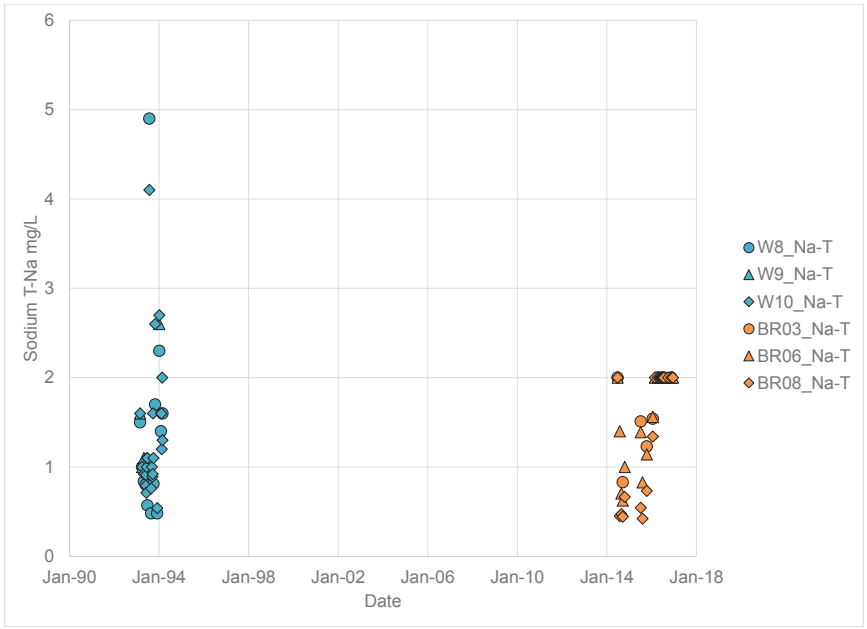


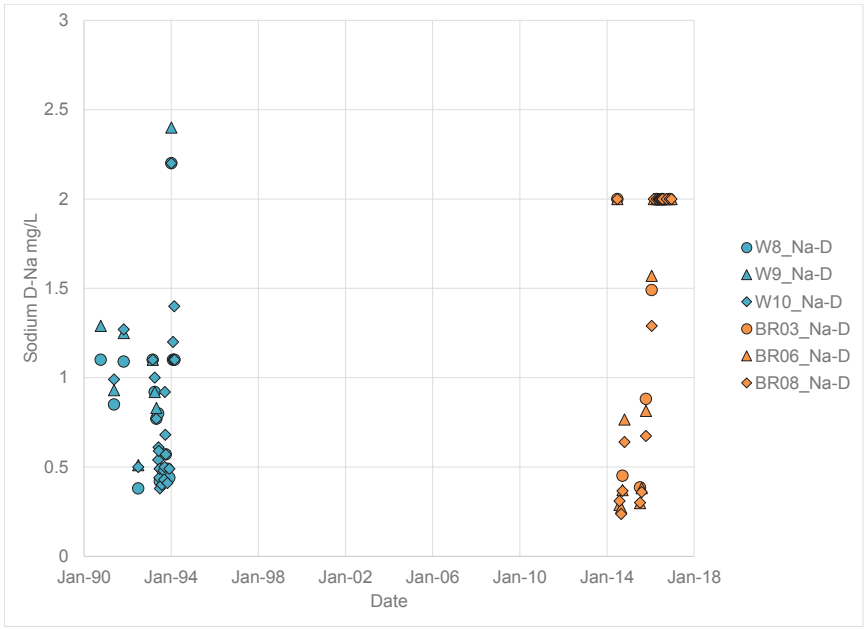


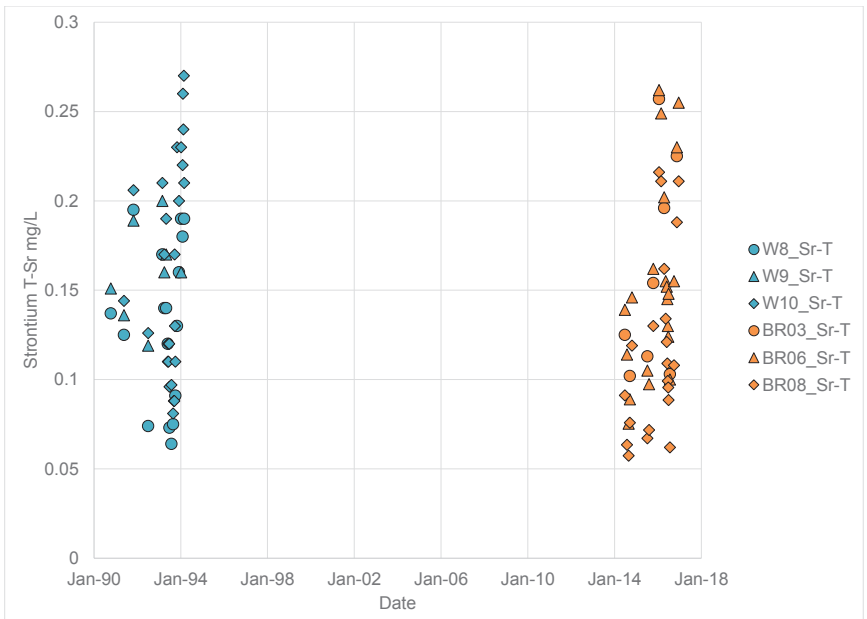


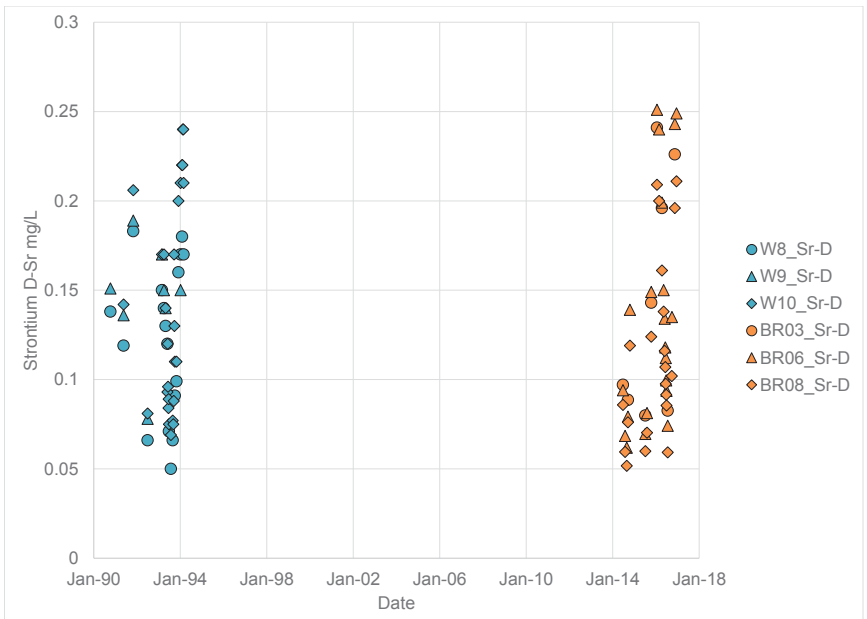


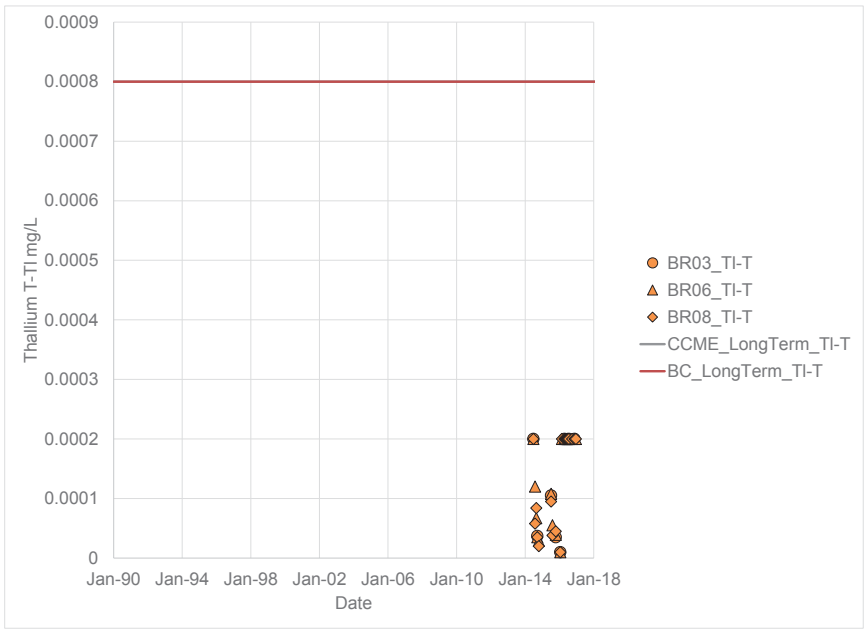
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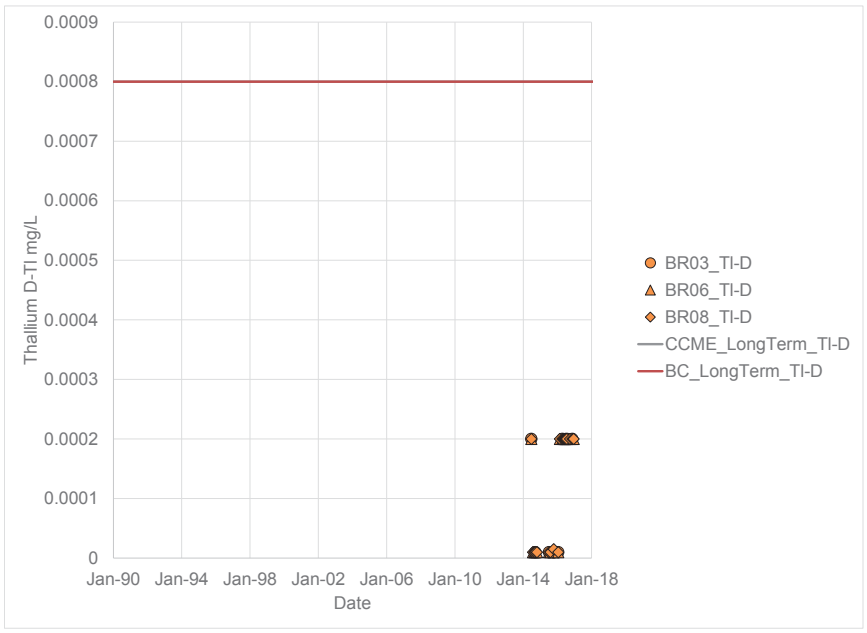


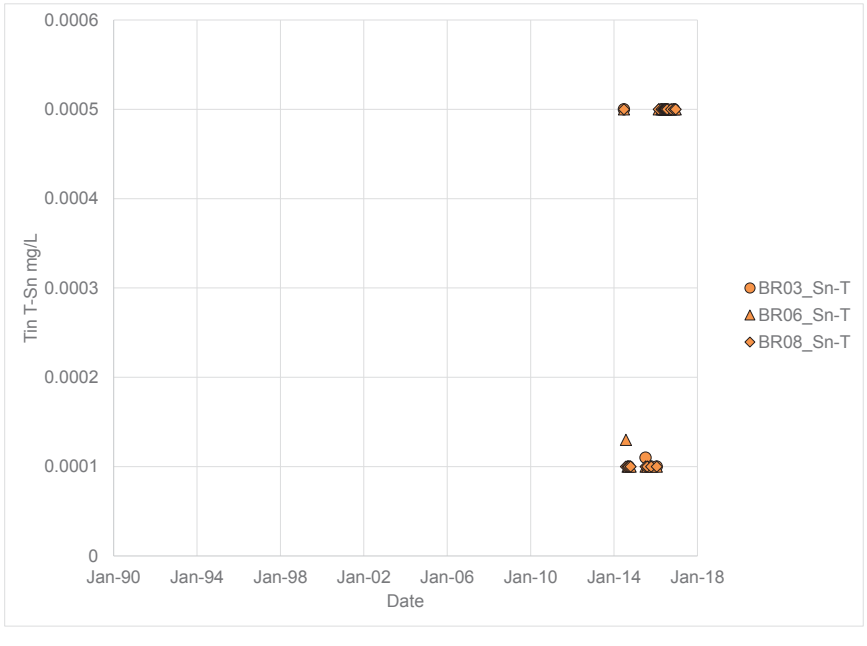


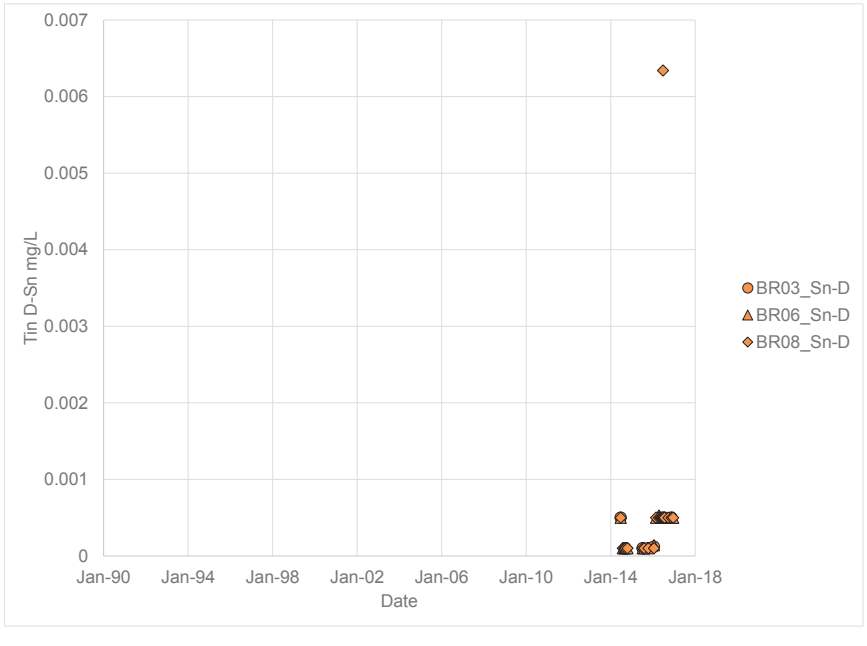




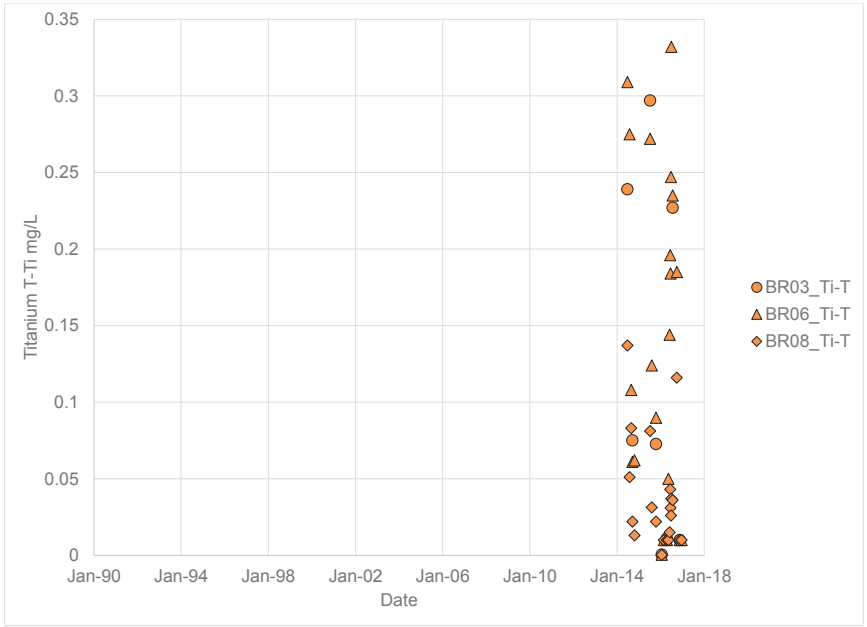


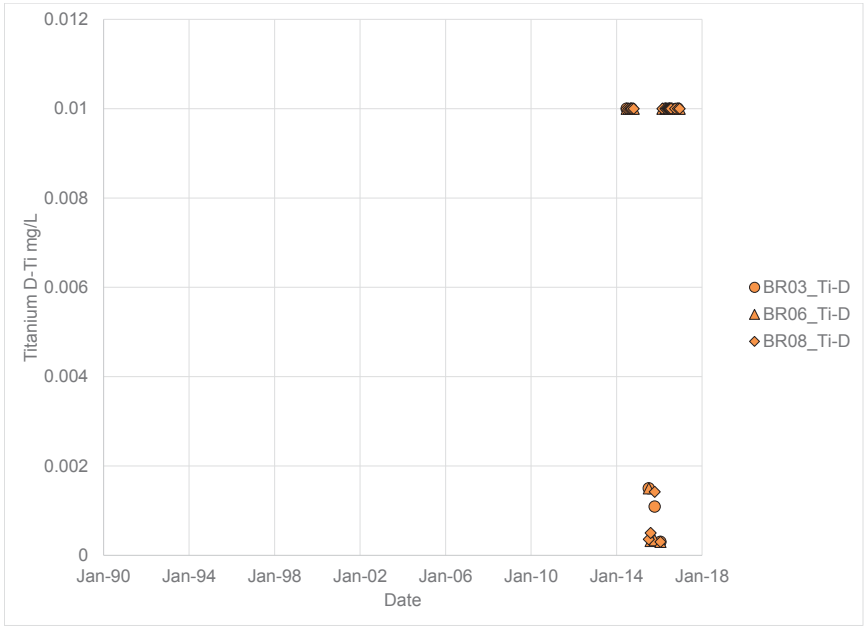


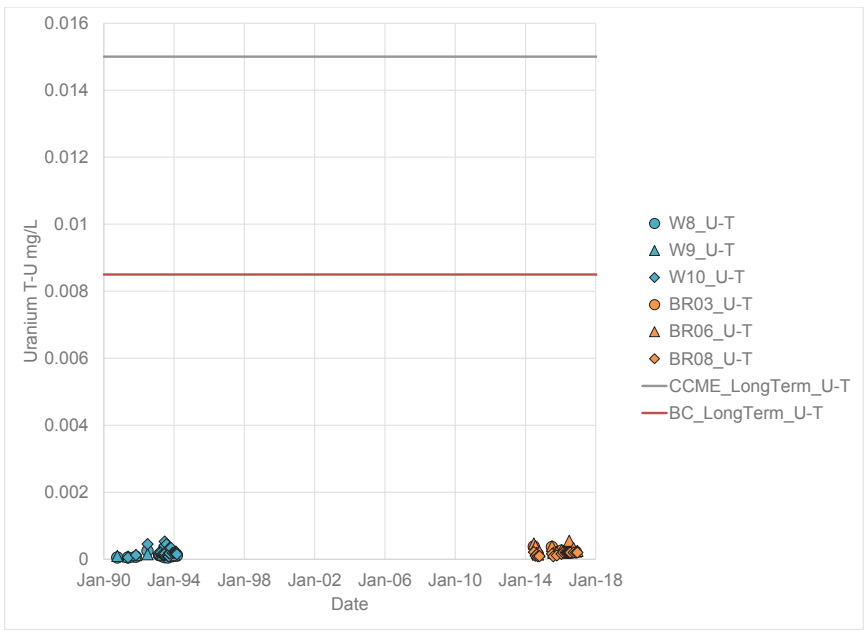


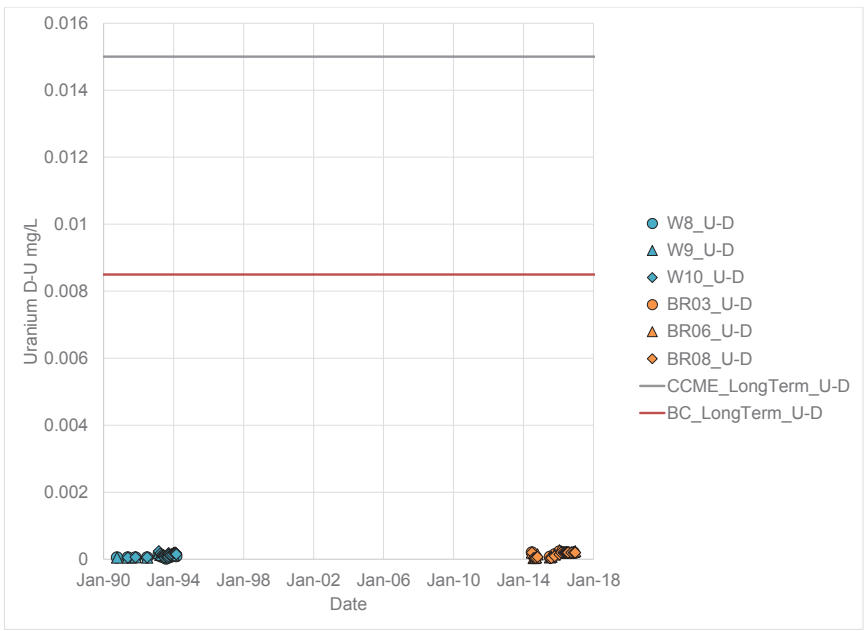


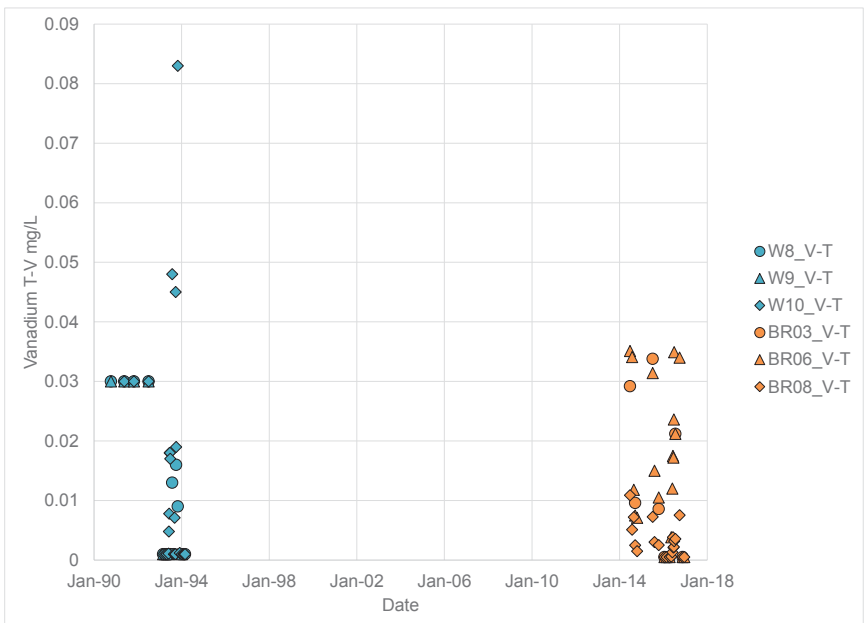
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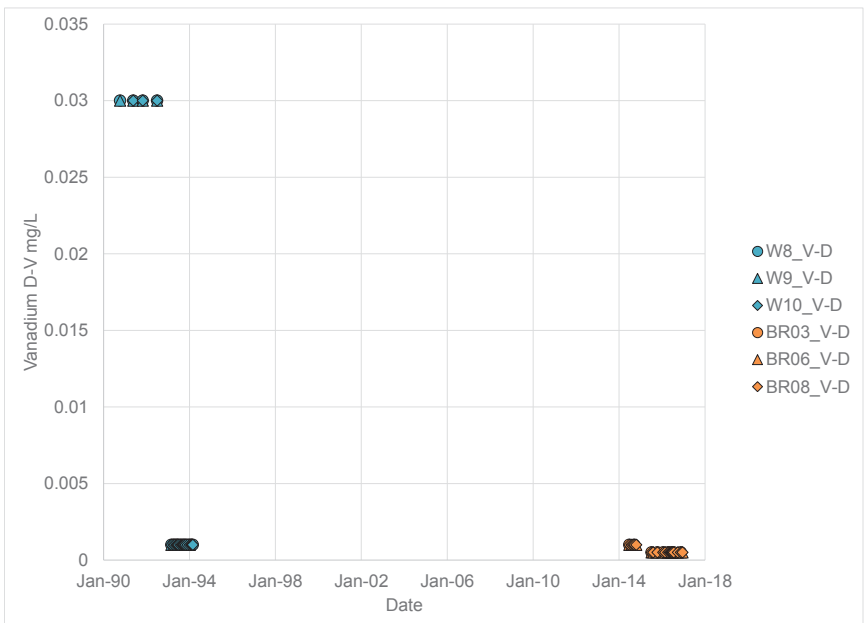


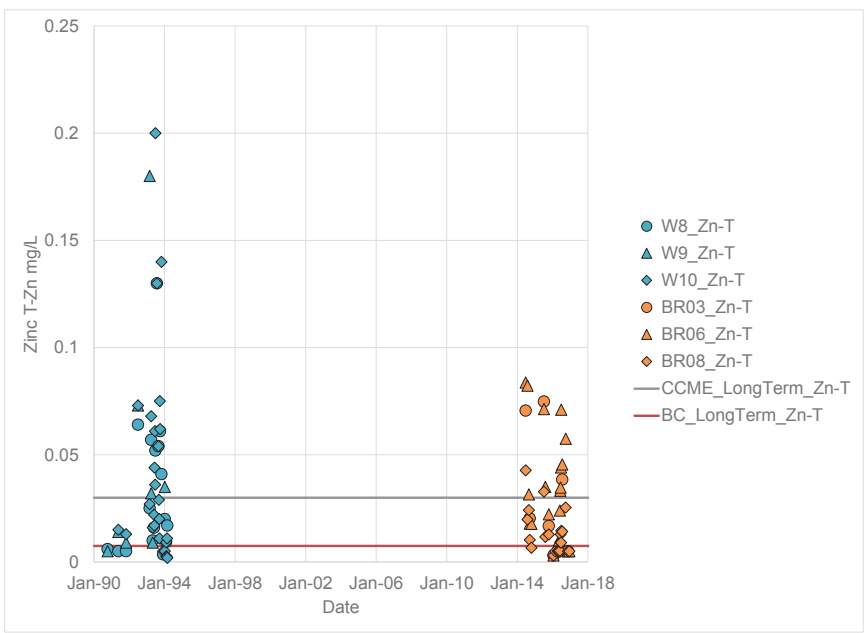


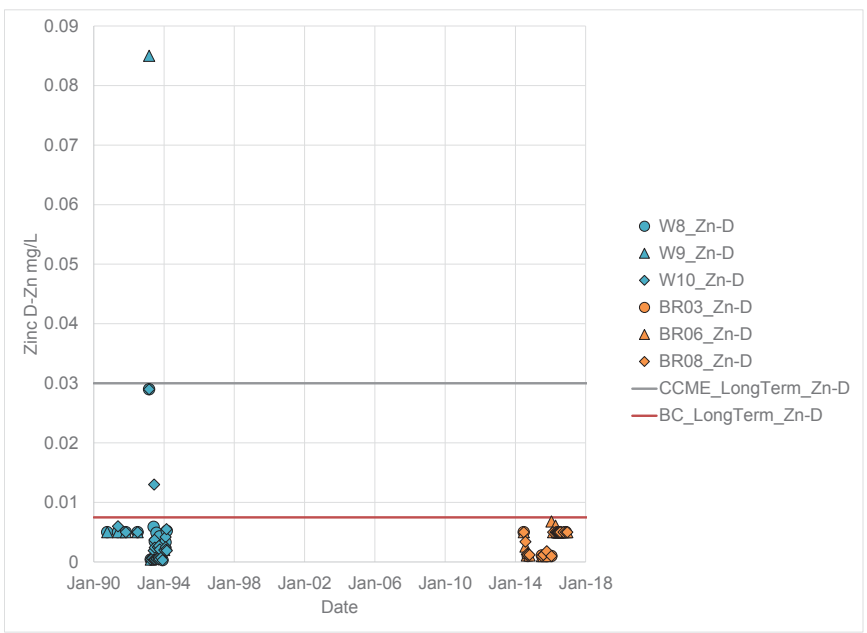








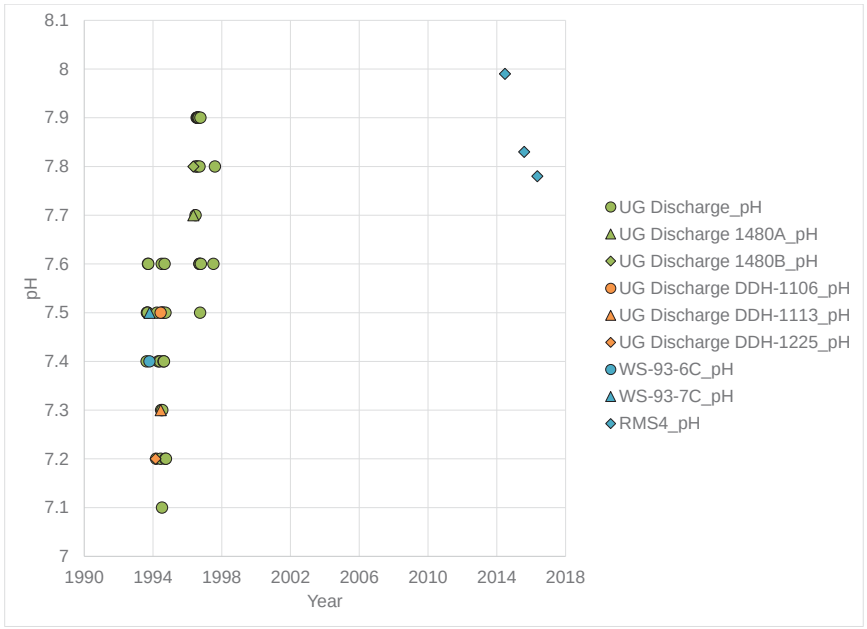


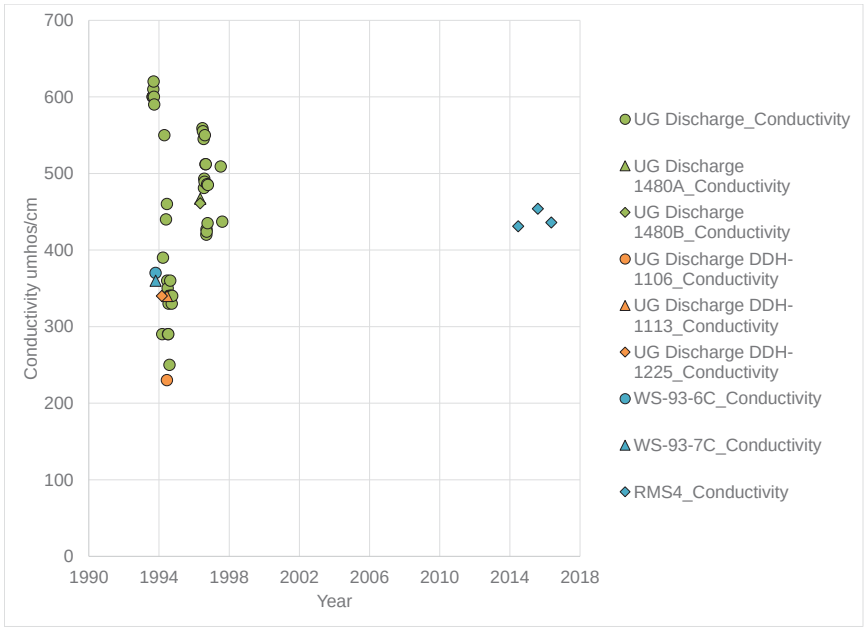


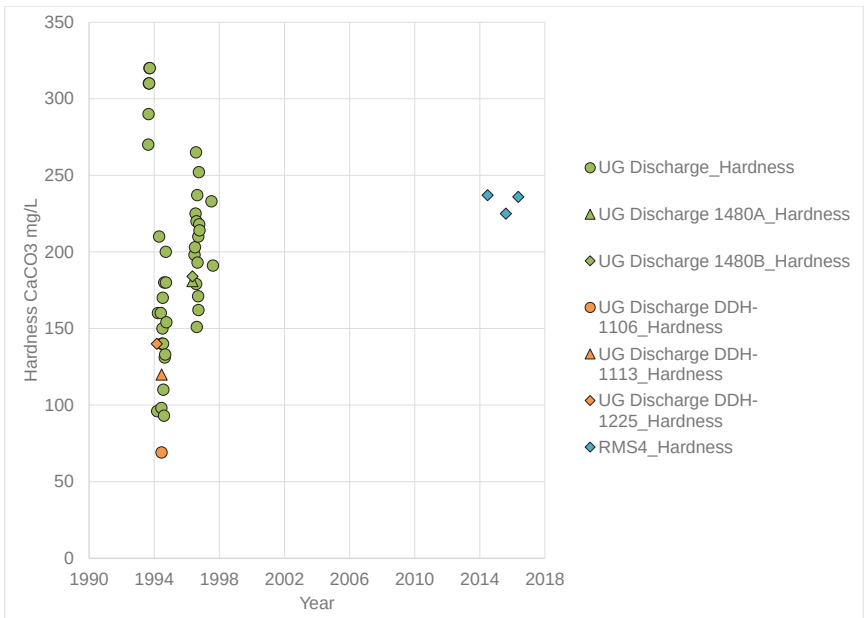
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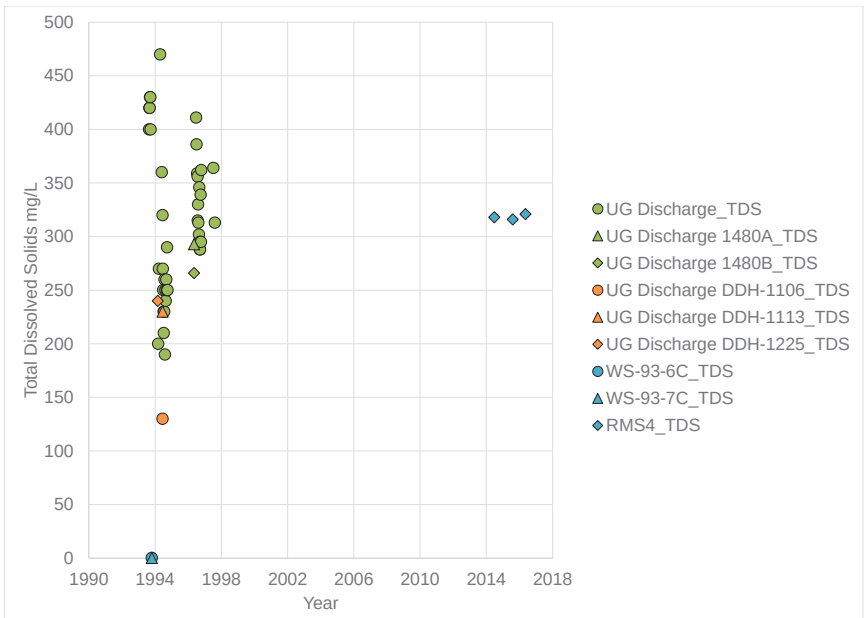
Appendix F – Groundwater Quality Data Plots

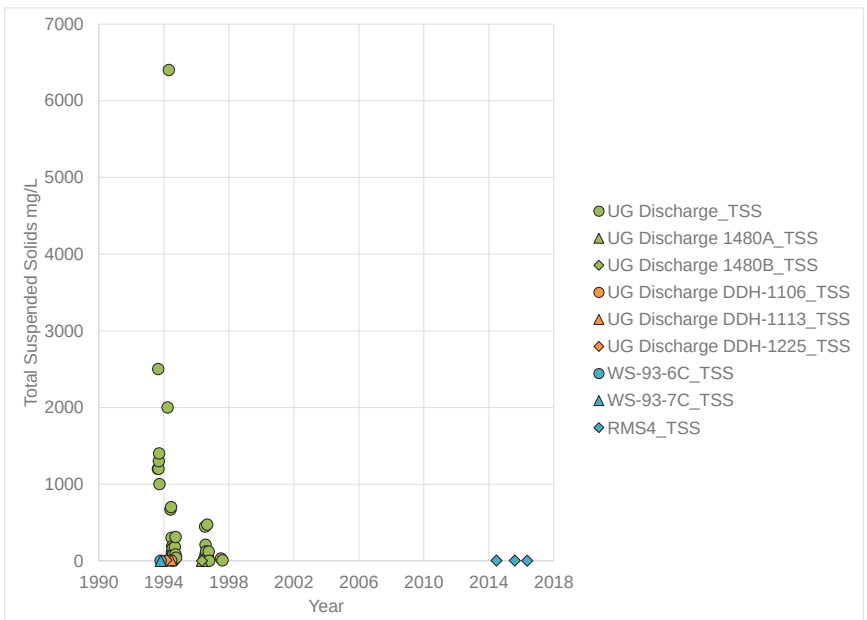
Appendix F - Groundwater Quality Data Plots
Underground Decline

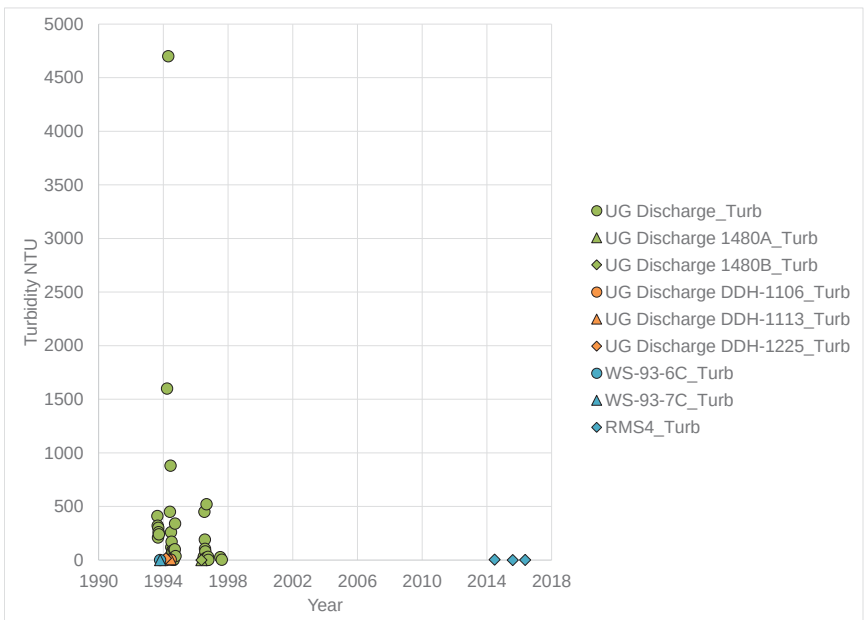


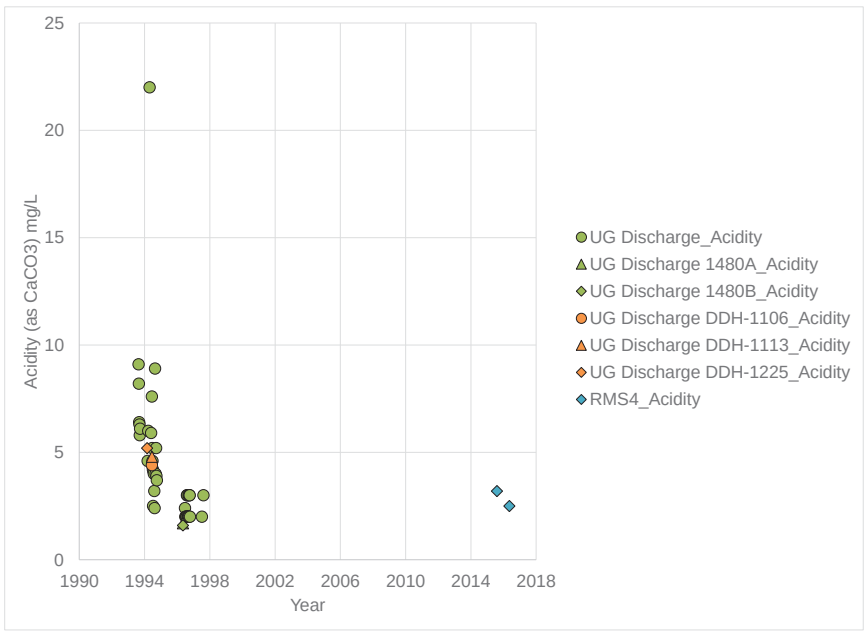


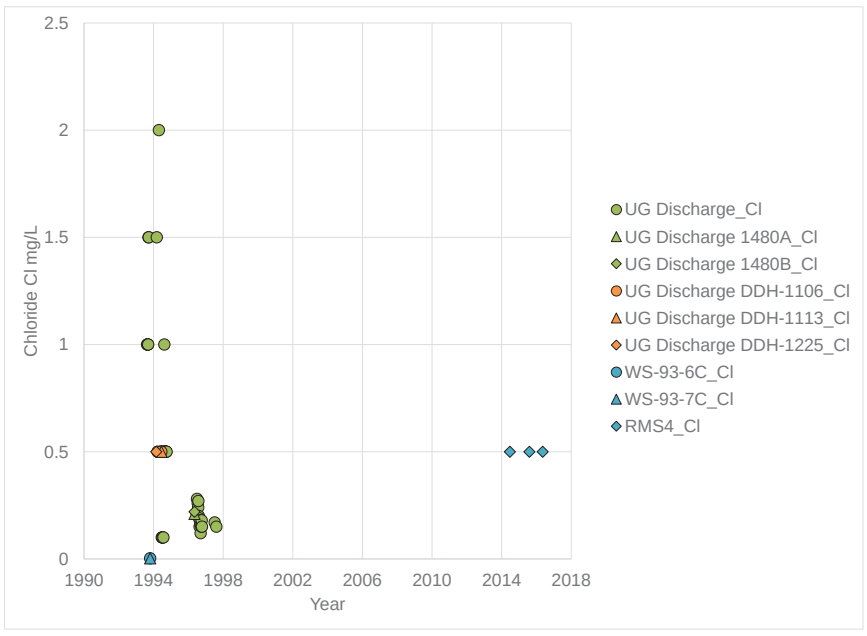




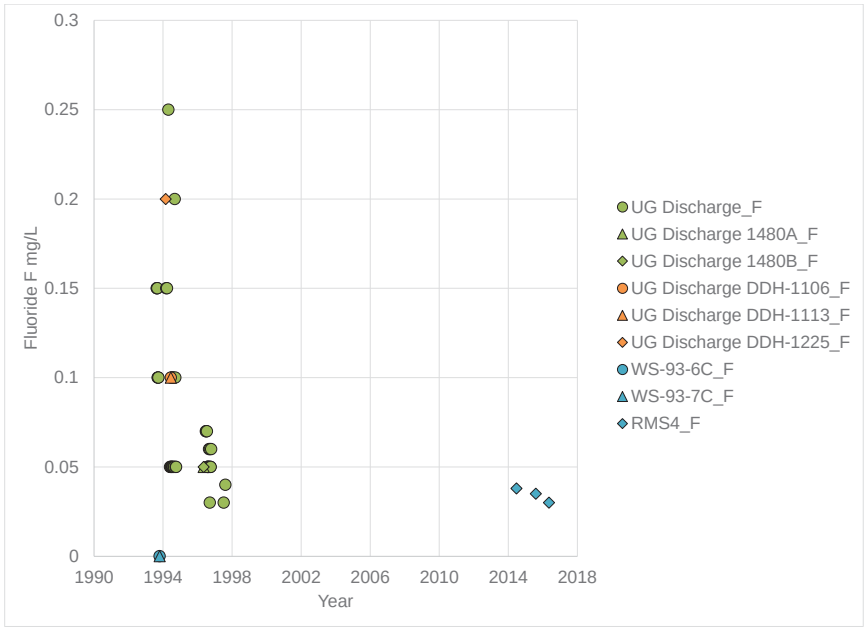


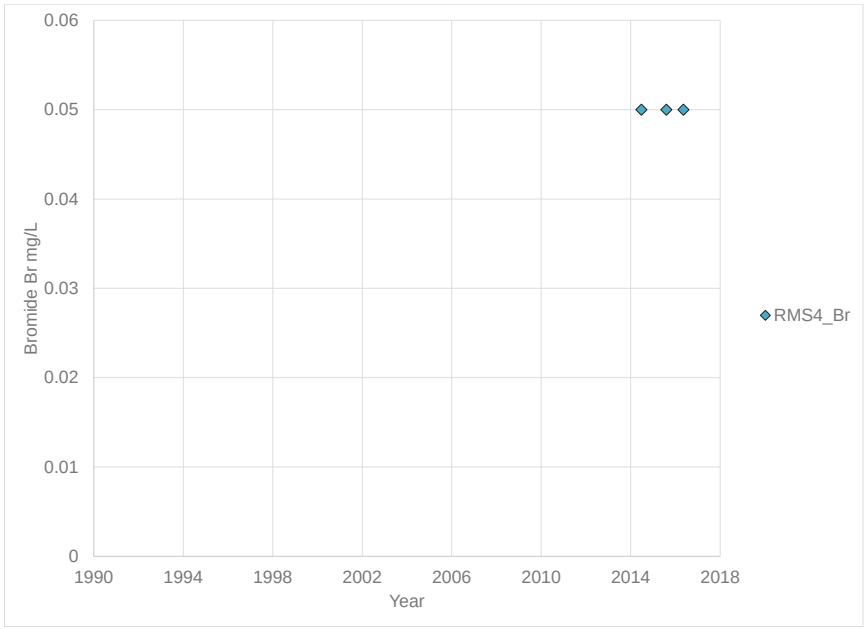


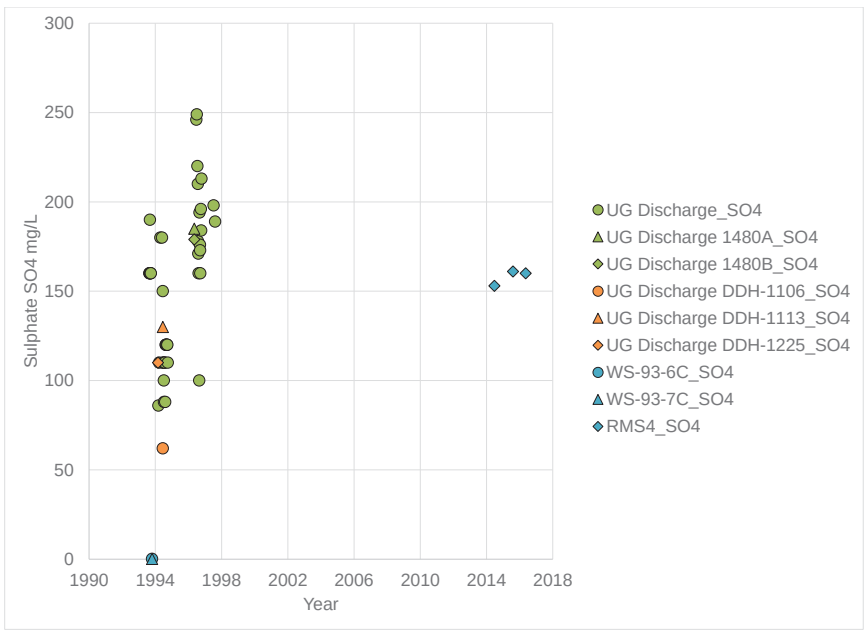


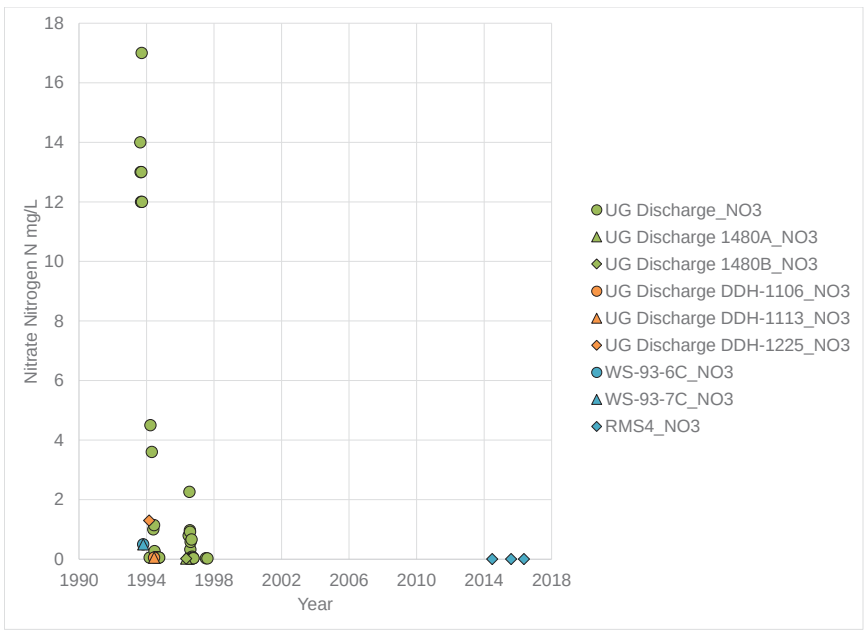


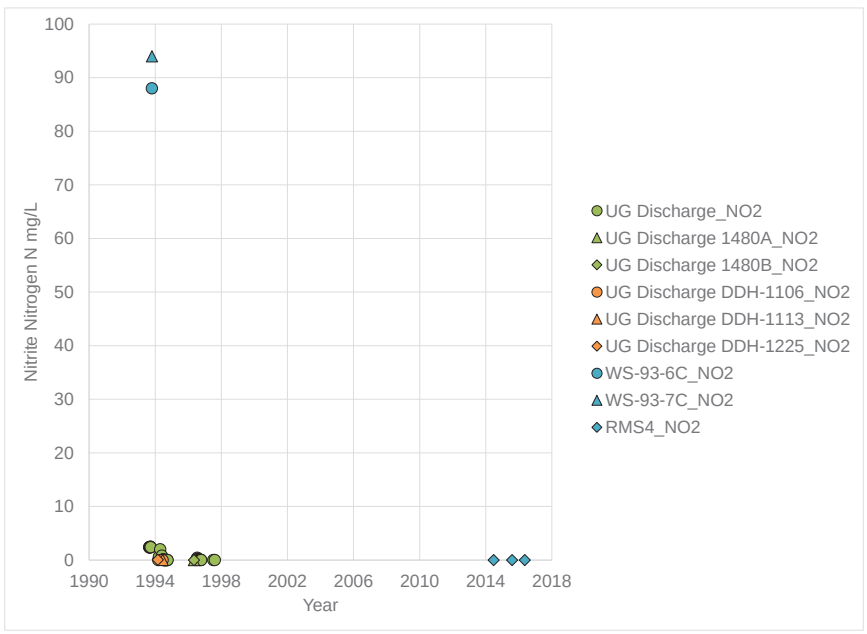
Appendix F - Groundwater Quality Data Plots
Underground Decline

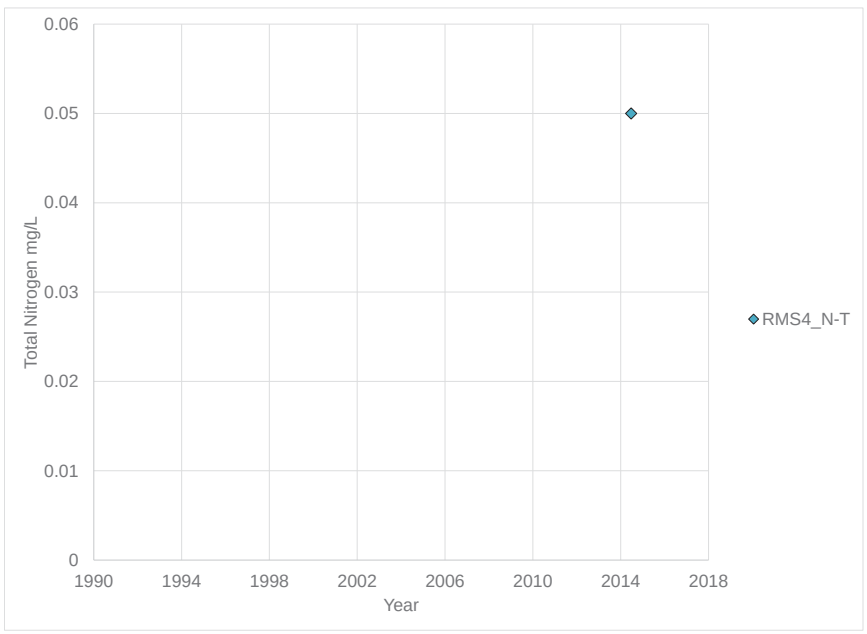


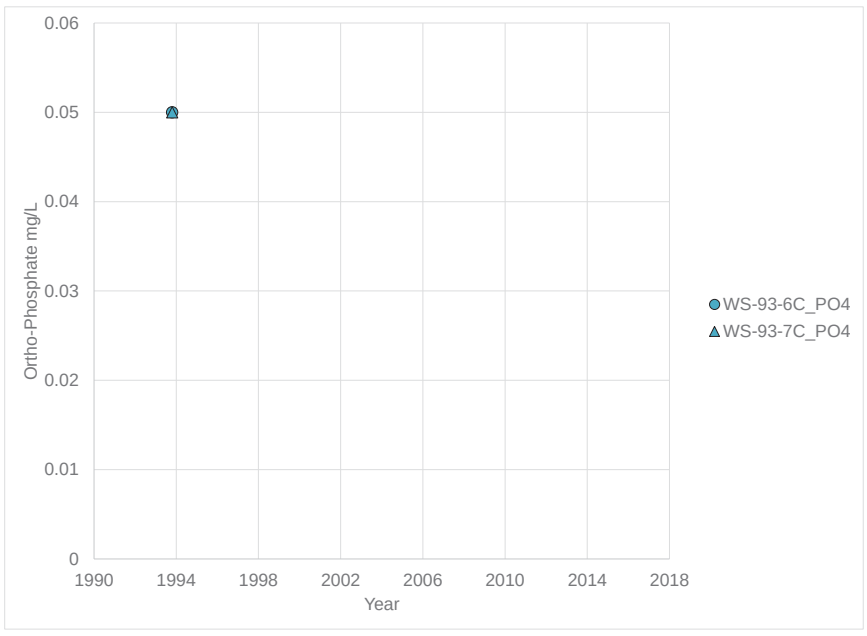


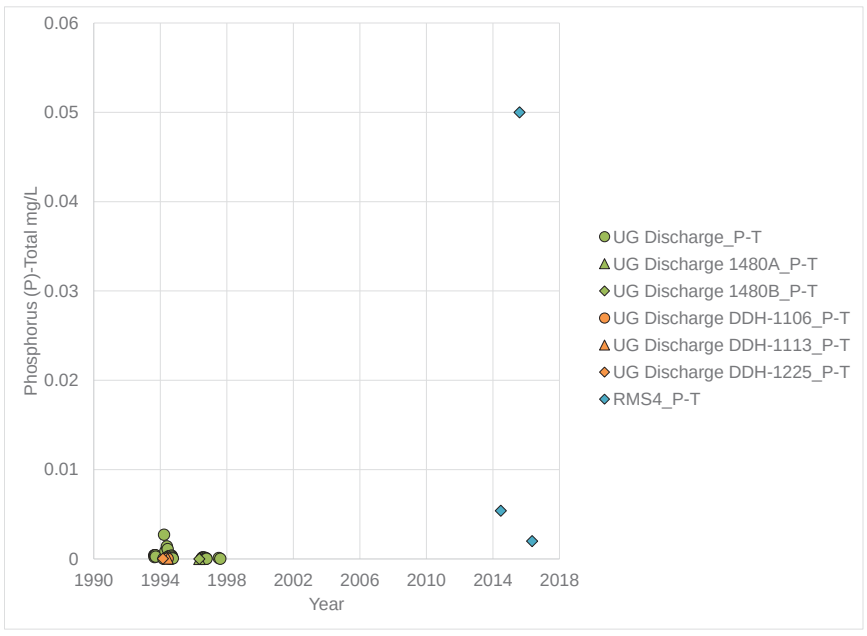




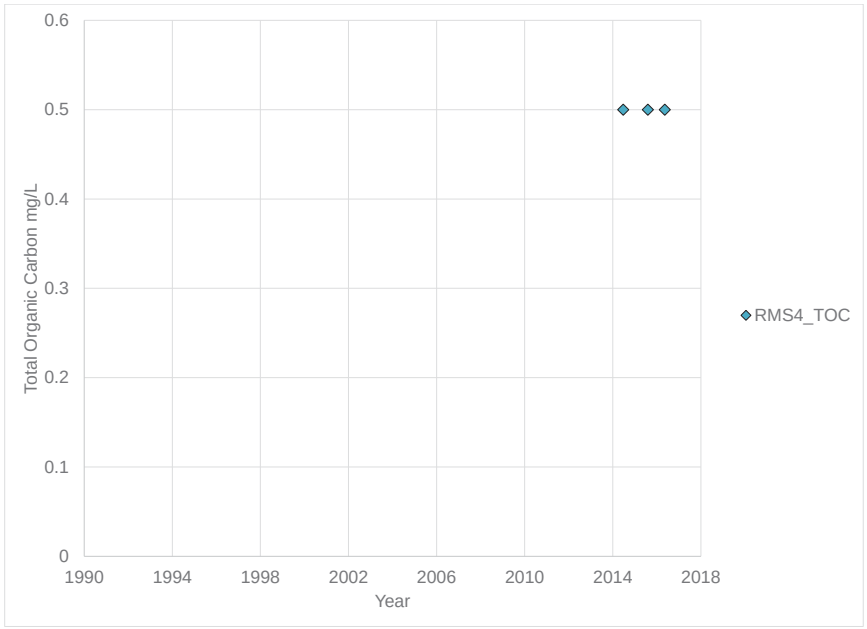


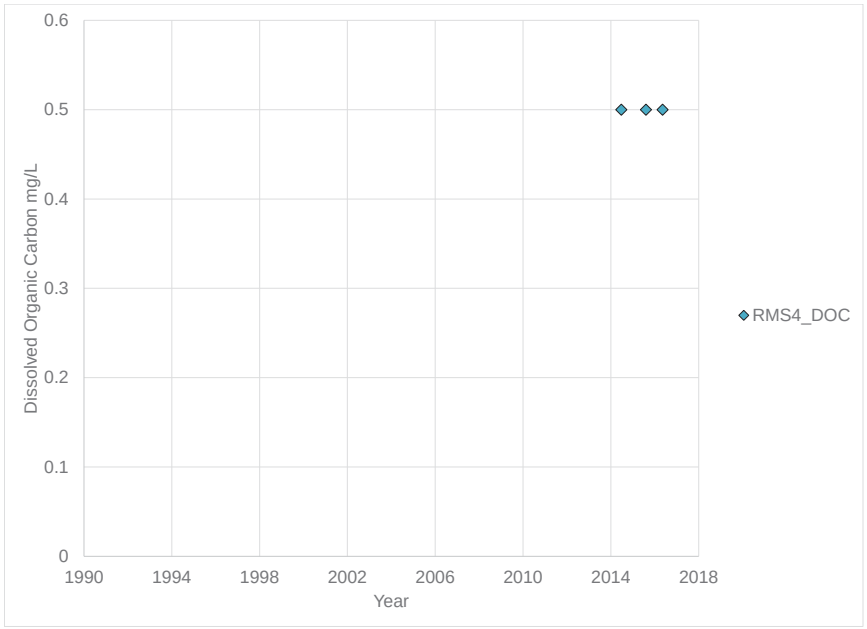


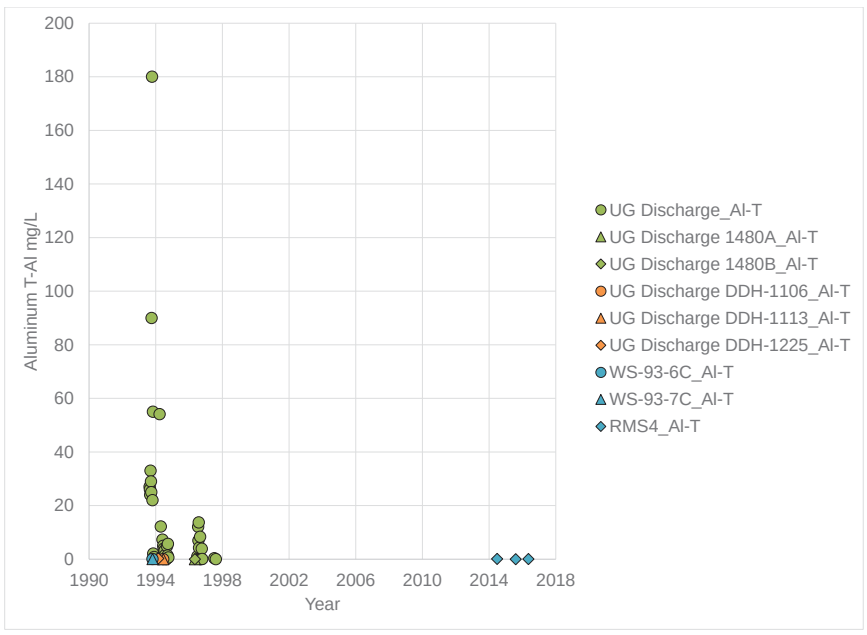


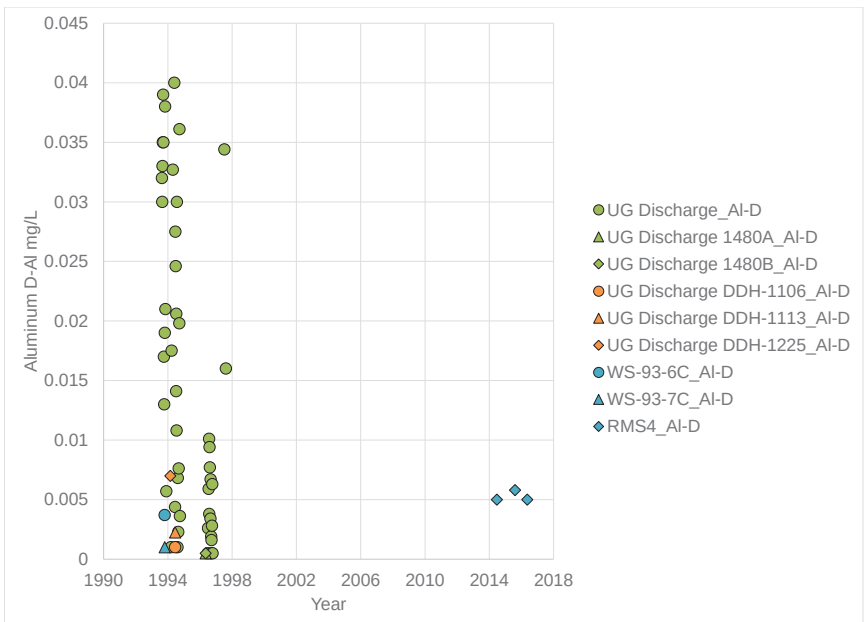


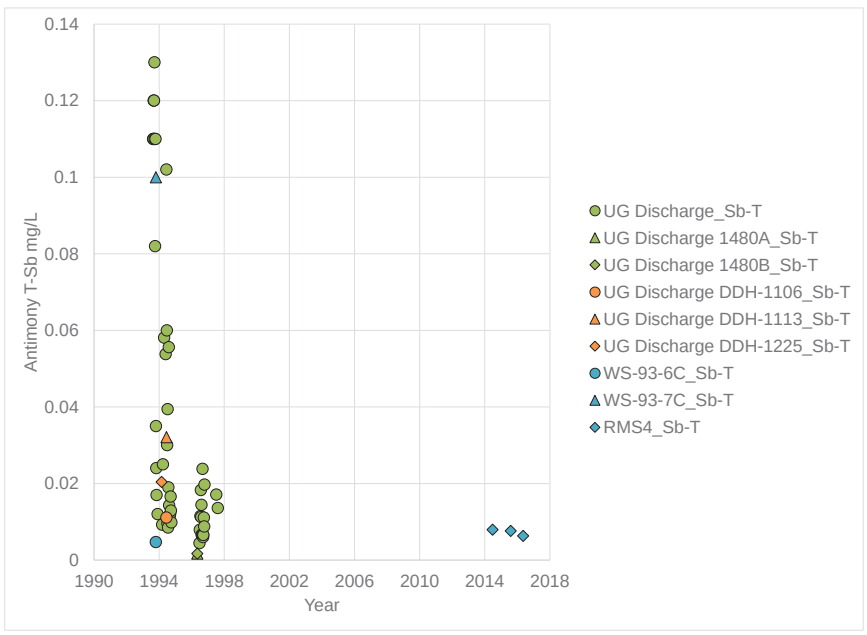
Appendix F - Groundwater Quality Data Plots
Underground Decline

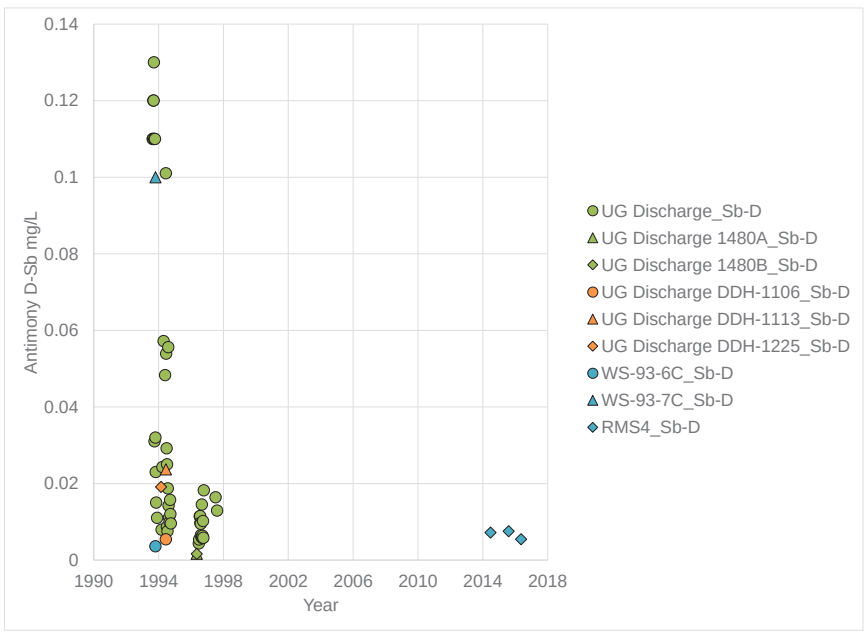


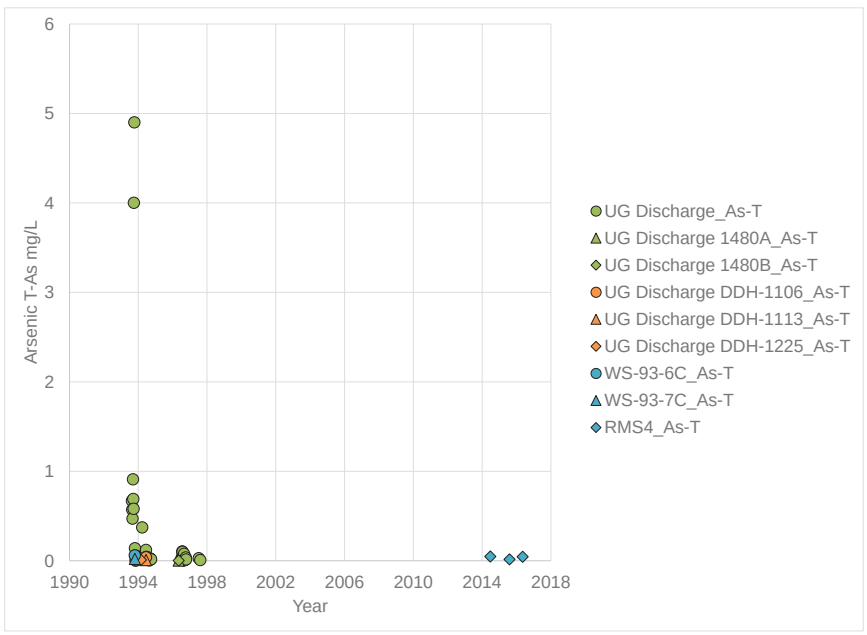


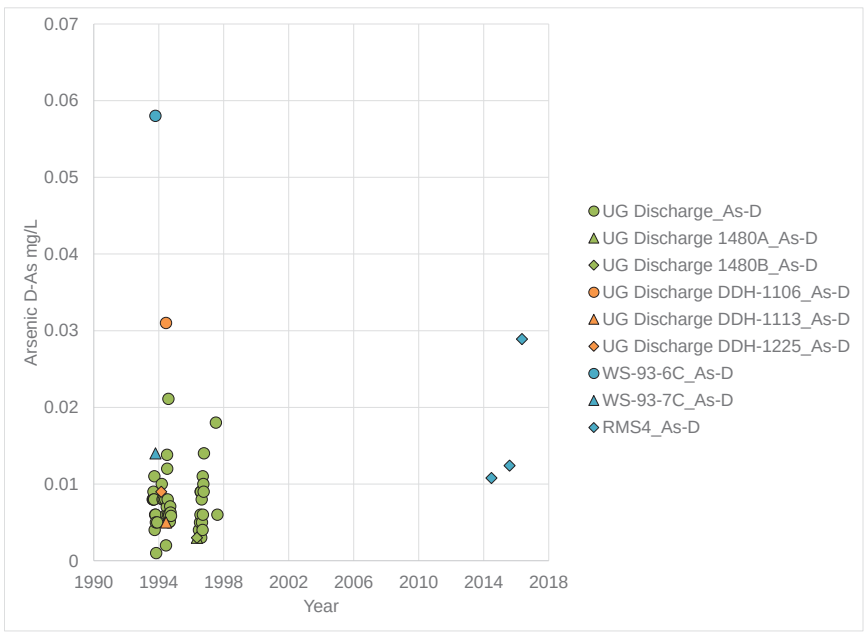




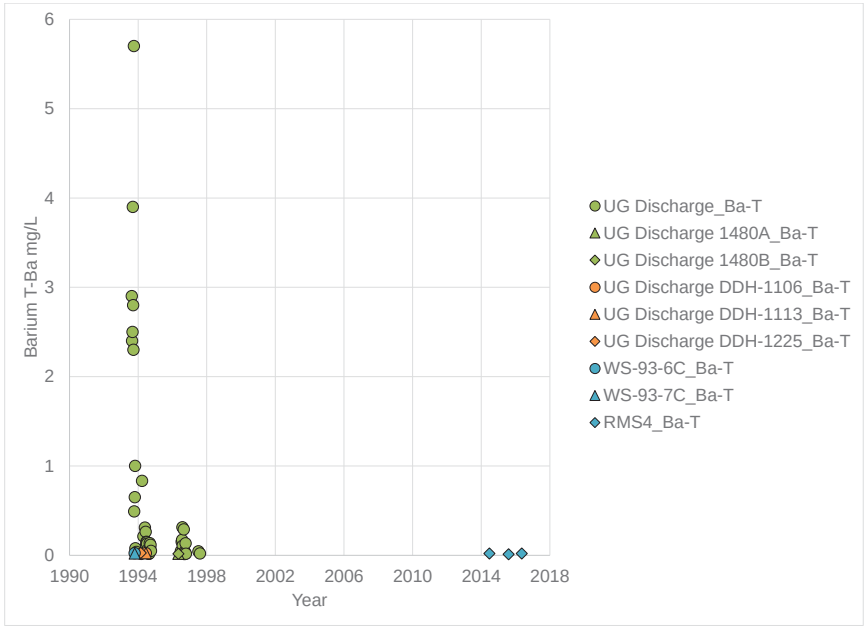


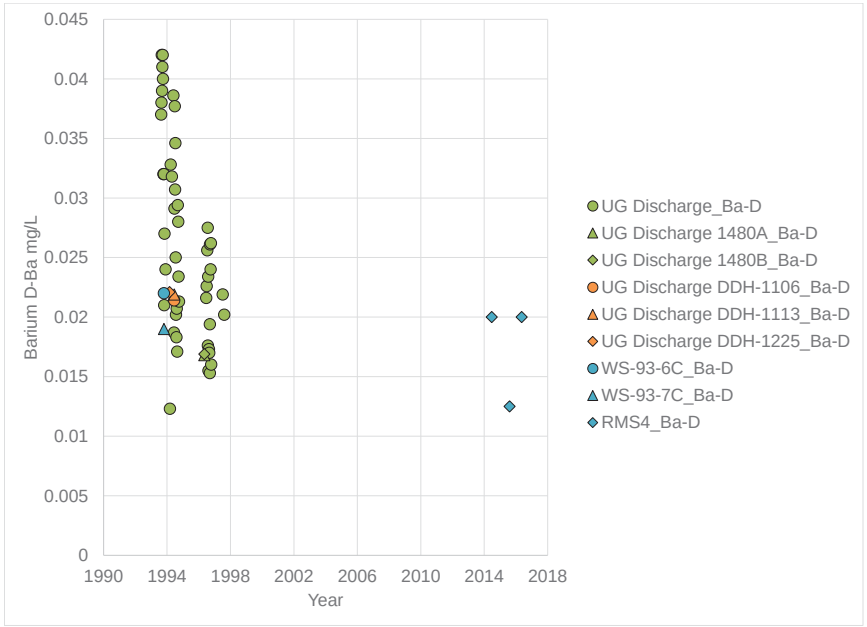


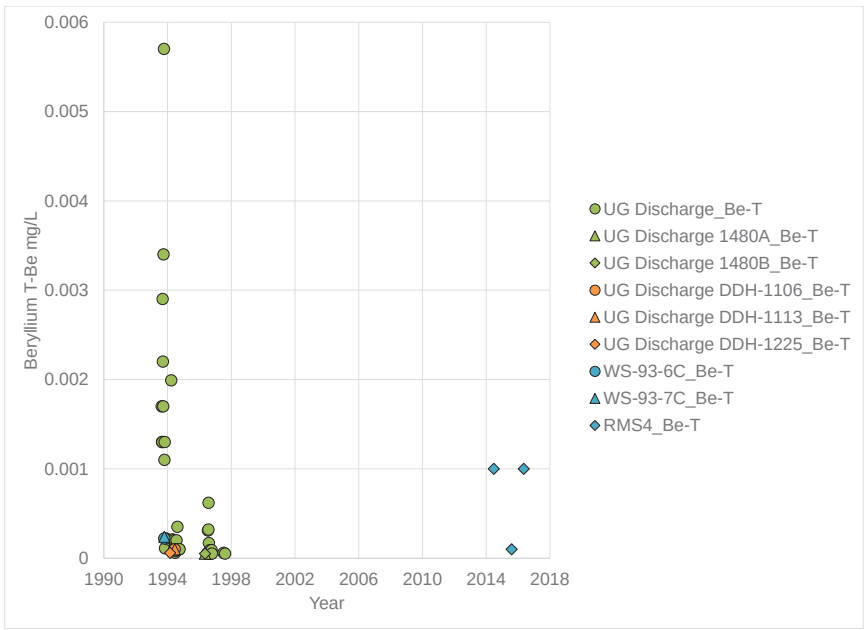


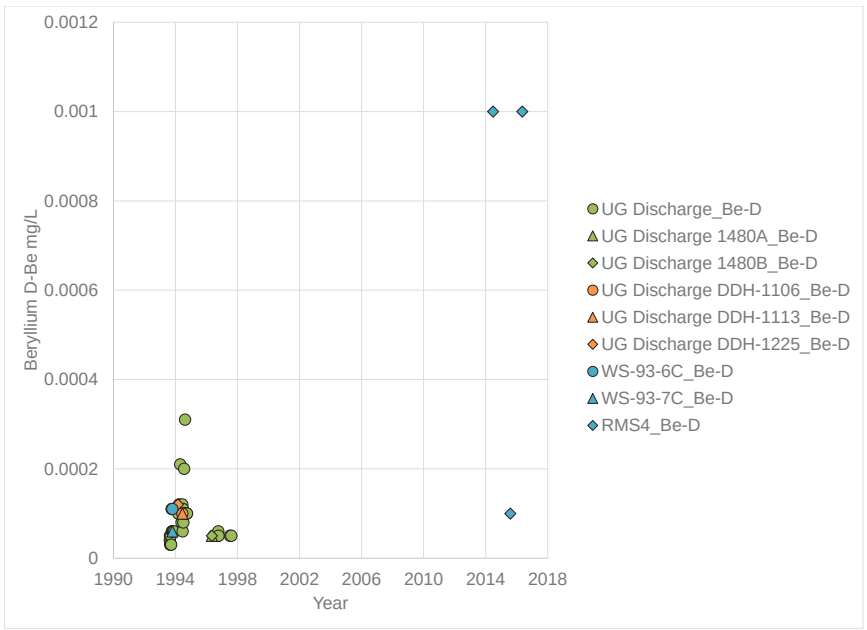


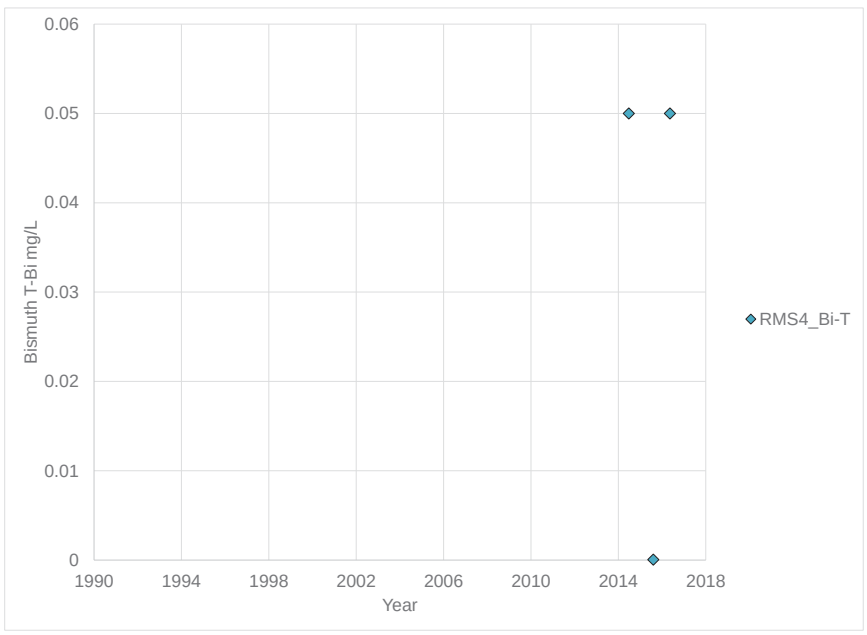
Appendix F - Groundwater Quality Data Plots
Underground Decline

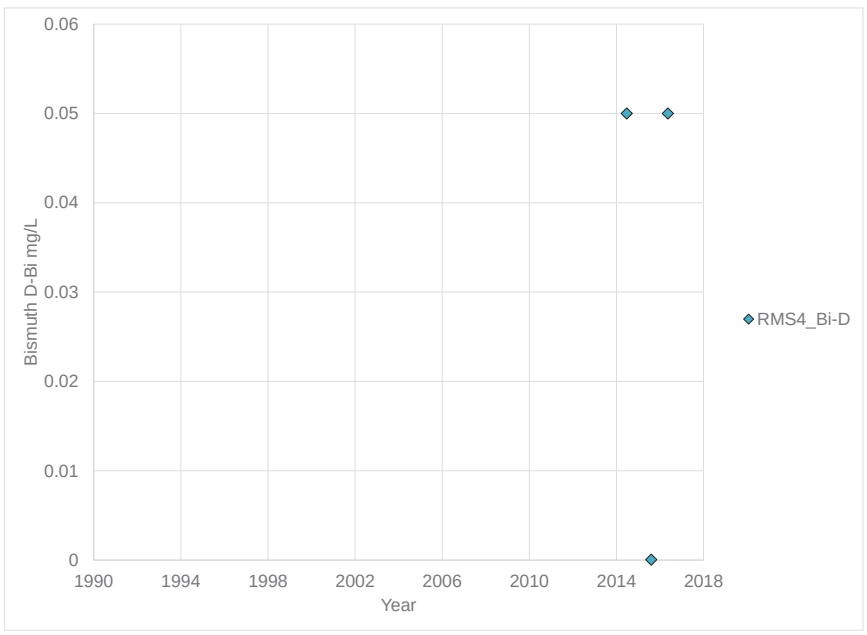


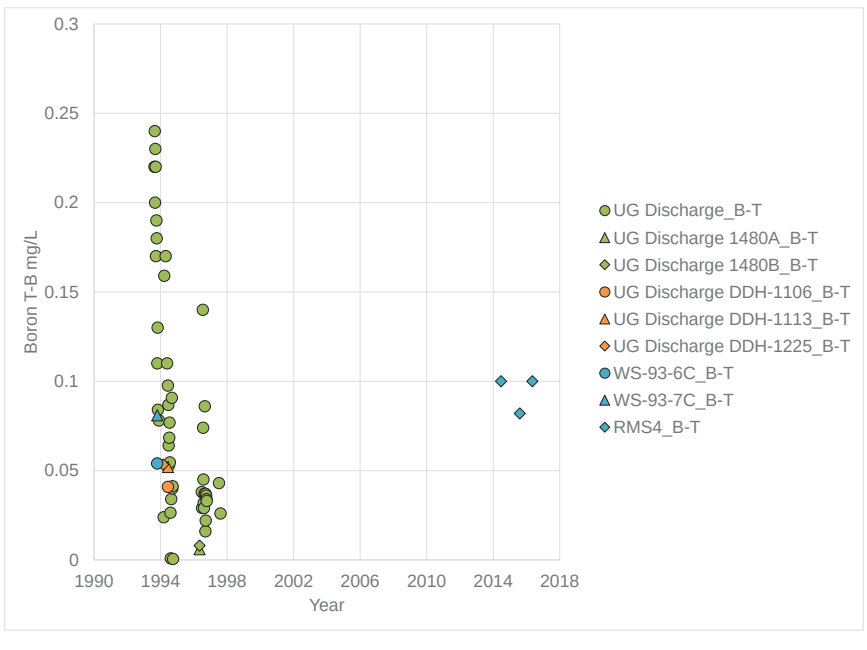


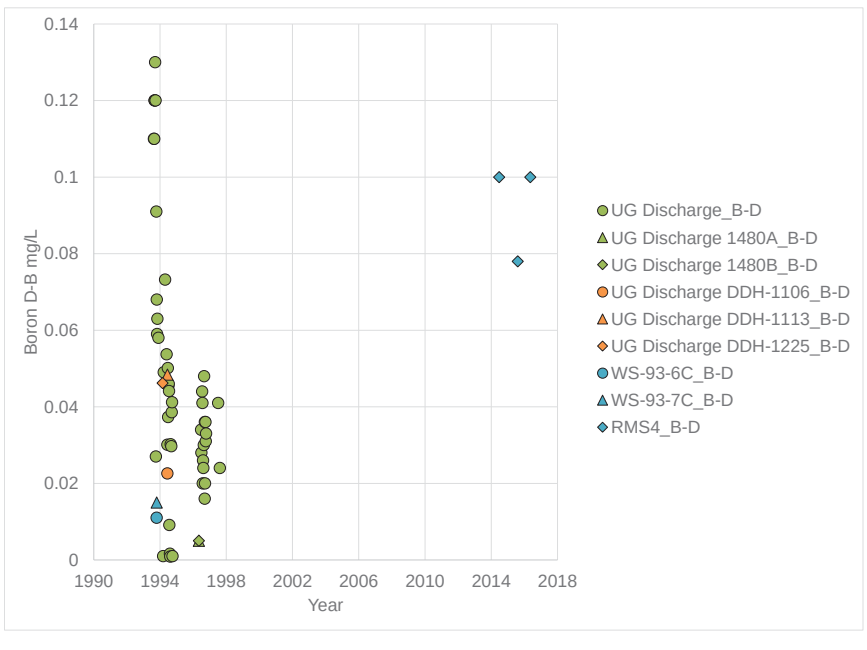


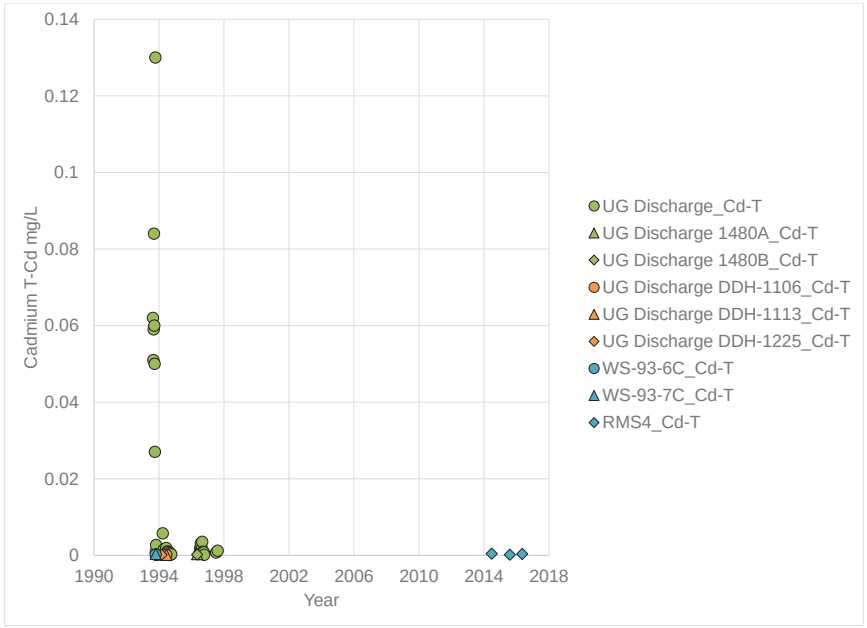


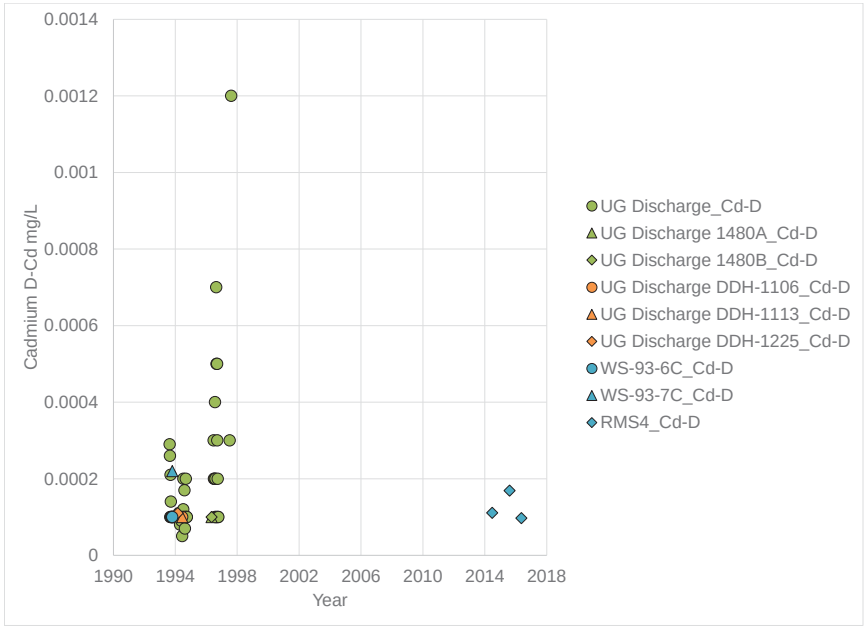


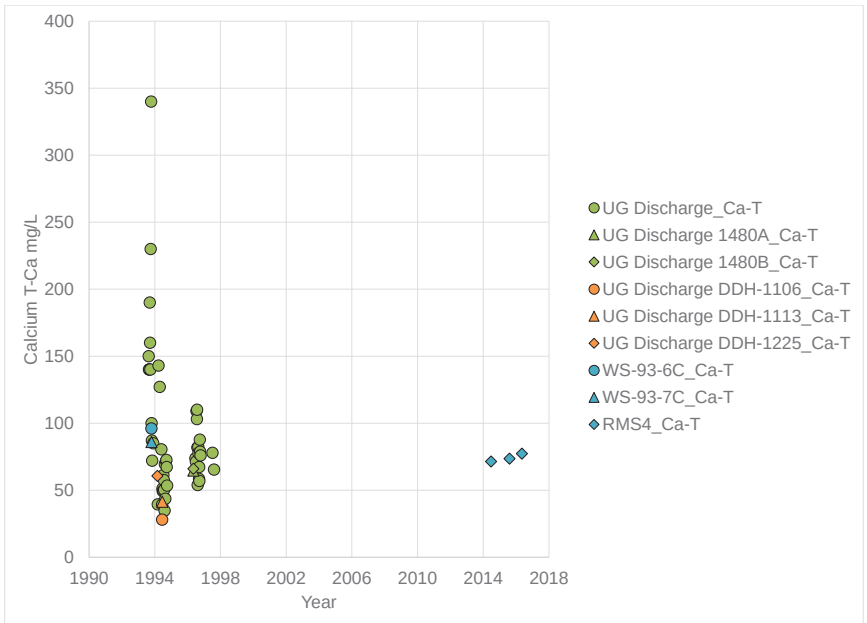


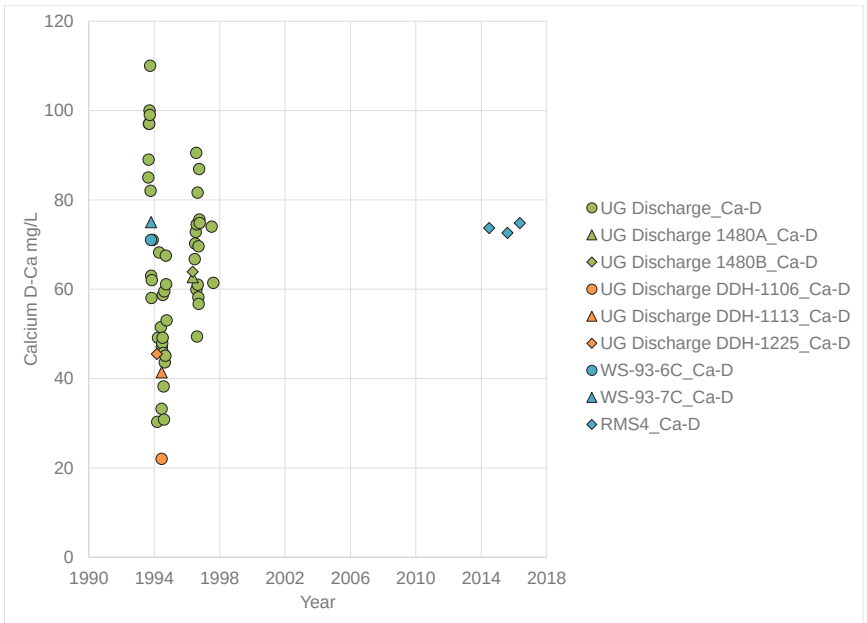


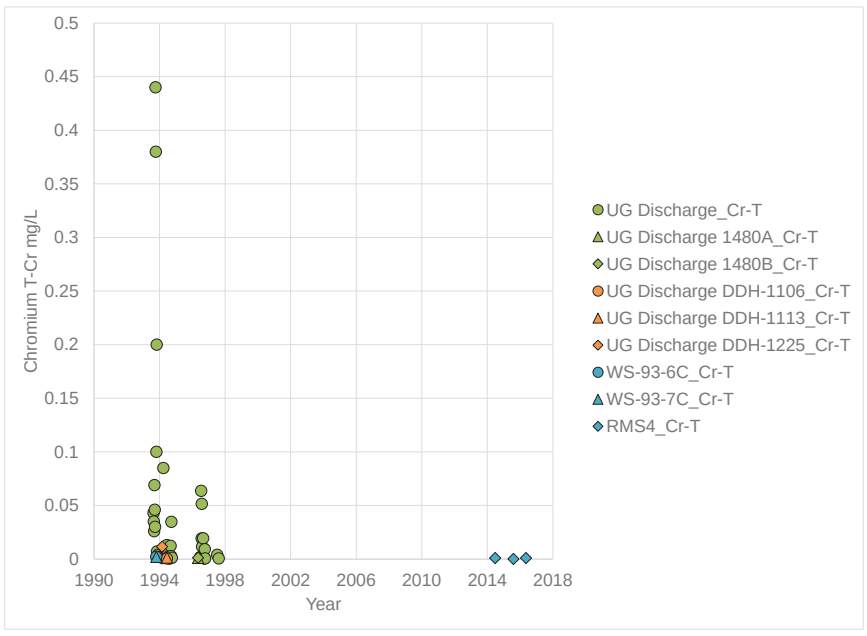


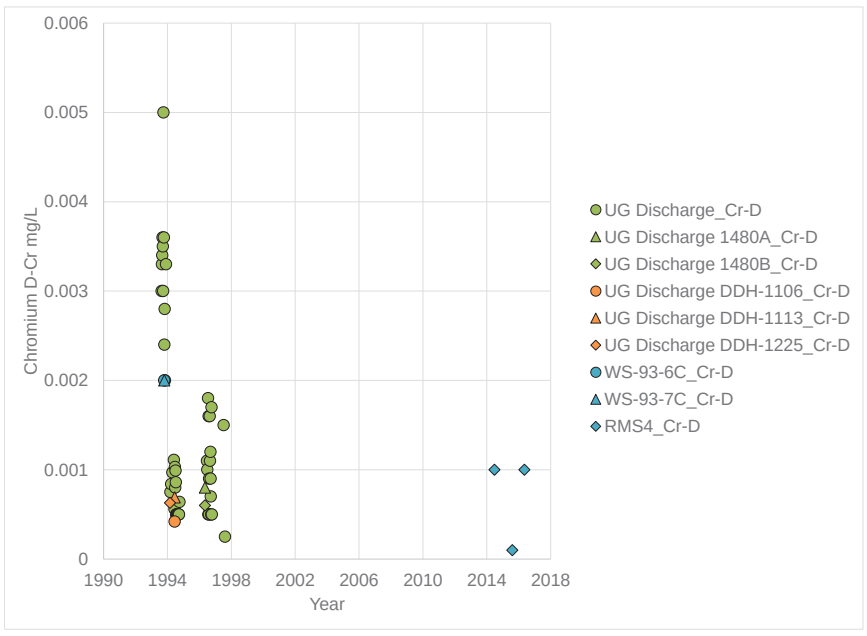

Cadmium T-Cd mg/L
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Cd-T
UG Discharge 1480A_Cd-T
UG Discharge 1480B_Cd-T
UG Discharge DDH-1106_Cd-T
UG Discharge DDH-1113_Cd-T
UG Discharge DDH-1225_Cd-T
WS-93-6C_Cd-T
WS-93-7C_Cd-T
RMS4_Cd-T

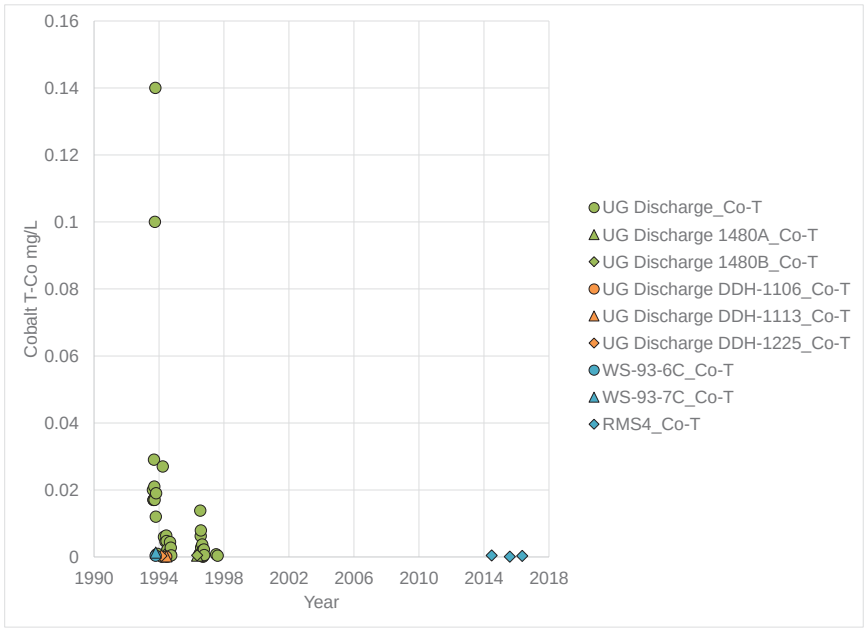

Cadmium D-Cd mg/L
0.0014
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Cd-D
UG Discharge 1480A_Cd-D
UG Discharge 1480B_Cd-D
UG Discharge DDH-1106_Cd-D
UG Discharge DDH-1113_Cd-D
UG Discharge DDH-1225_Cd-D
WS-93-6C_Cd-D
WS-93-7C_Cd-D
RMS4_Cd-D

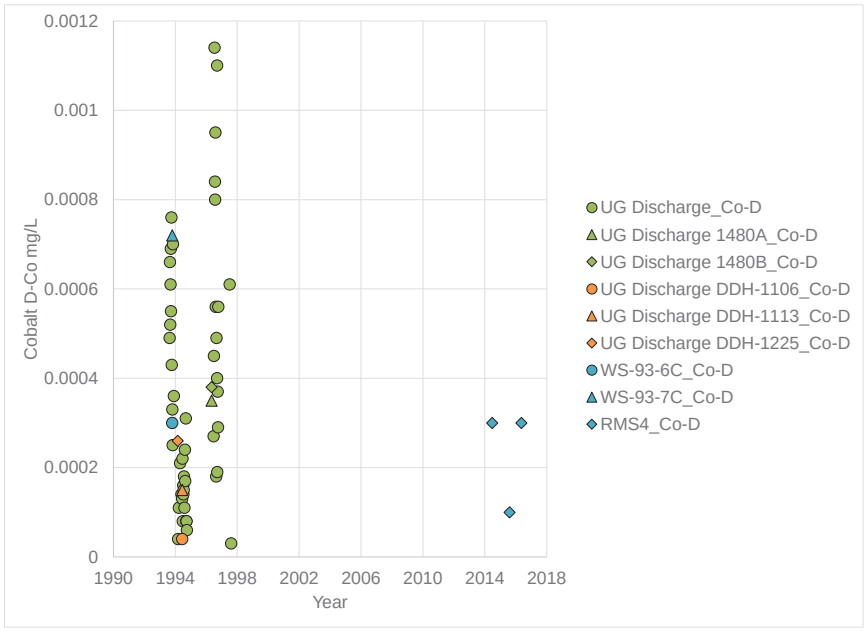

Calcium T-Ca mg/L
400
350
300
250
200
150
100
50
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Ca-T
UG Discharge 1480A_Ca-T
UG Discharge 1480B_Ca-T
UG Discharge DDH-1106_Ca-T
UG Discharge DDH-1113_Ca-T
UG Discharge DDH-1225_Ca-T
WS-93-6C_Ca-T
WS-93-7C_Ca-T
RMS4_Ca-T


Calcium D-Ca mg/L
120
100
80
60
40
20
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Ca-D
UG Discharge 1480A_Ca-D
UG Discharge 1480B_Ca-D
UG Discharge DDH-1106_Ca-D
UG Discharge DDH-1113_Ca-D
UG Discharge DDH-1225_Ca-D
WS-93-6C_Ca-D
WS-93-7C_Ca-D
RMS4_Ca-D

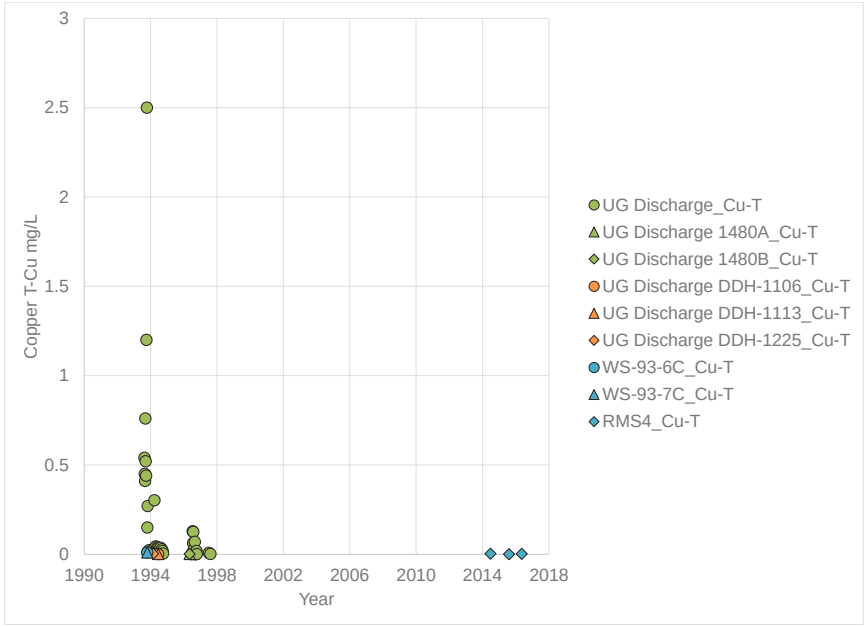

Chromium T-Cr mg/L
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0.15
0.1
0.05
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Cr-T
UG Discharge 1480A_Cr-T
UG Discharge 1480B_Cr-T
UG Discharge DDH-1106_Cr-T
UG Discharge DDH-1113_Cr-T
UG Discharge DDH-1225_Cr-T
WS-93-6C_Cr-T
WS-93-7C_Cr-T
RMS4_Cr-T

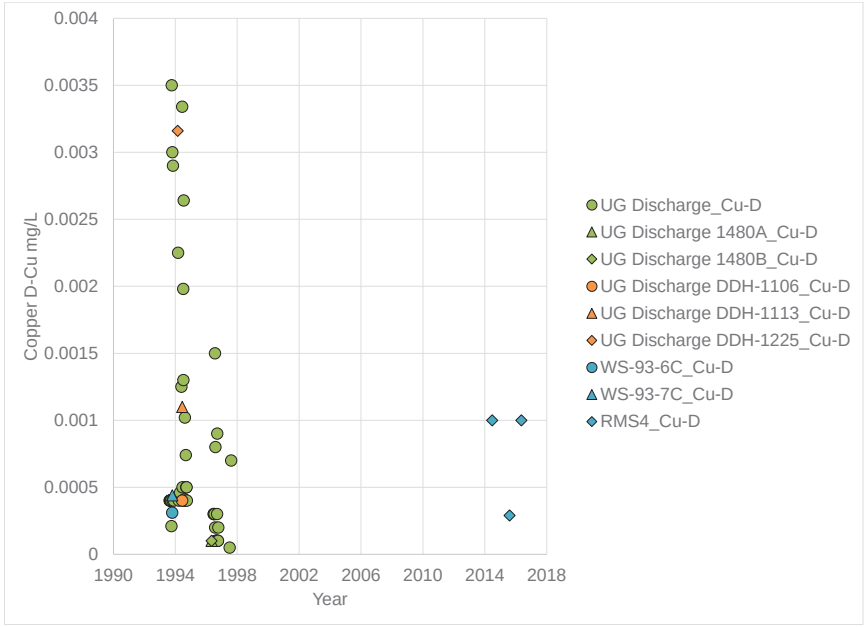

Chromium D-Cr mg/L
0.006
0.005
0.004
0.003
0.002
0.001
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Cr-D
UG Discharge 1480A_Cr-D
UG Discharge 1480B_Cr-D
UG Discharge DDH-1106_Cr-D
UG Discharge DDH-1113_Cr-D
UG Discharge DDH-1225_Cr-D
WS-93-6C_Cr-D
WS-93-7C_Cr-D
RMS4_Cr-D

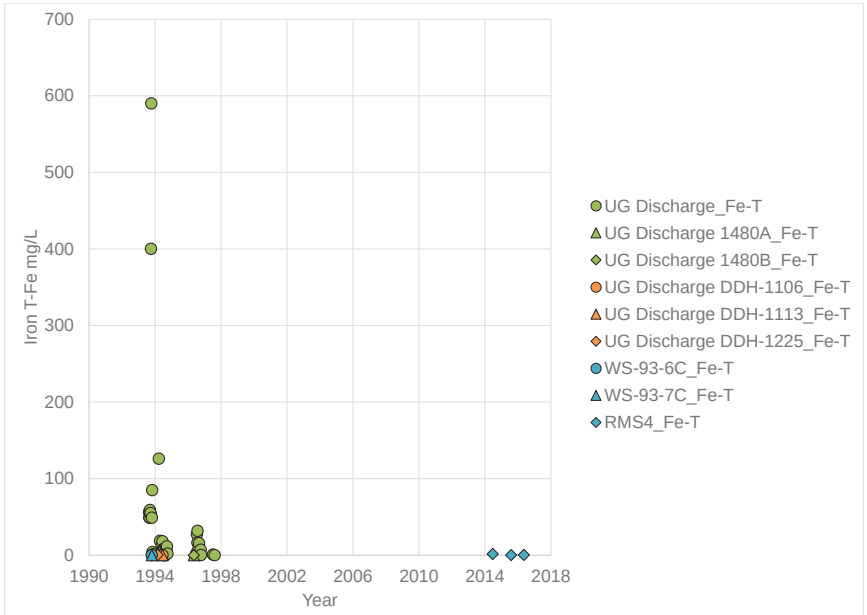

Cobalt T-Co mg/L
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Co-T
UG Discharge 1480A_Co-T
UG Discharge 1480B_Co-T
UG Discharge DDH-1106_Co-T
UG Discharge DDH-1113_Co-T
UG Discharge DDH-1225_Co-T
WS-93-6C_Co-T
WS-93-7C_Co-T
RMS4_Co-T

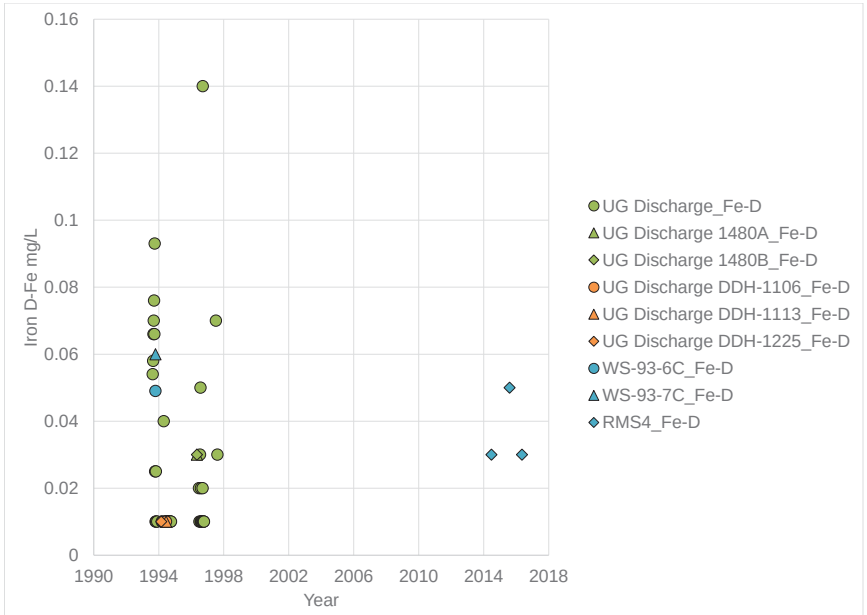

Cobalt D-Co mg/L
0.0012
0.001
0.0008
0.0006
0.0004
0.0002
0
1990
1994
1998
2002
2006
2010
2014
2018
Year
UG Discharge_Co-D
UG Discharge 1480A_Co-D
UG Discharge 1480B_Co-D
UG Discharge DDH-1106_Co-D
UG Discharge DDH-1113_Co-D
UG Discharge DDH-1225_Co-D
WS-93-6C_Co-D
WS-93-7C_Co-D
RMS4_Co-D

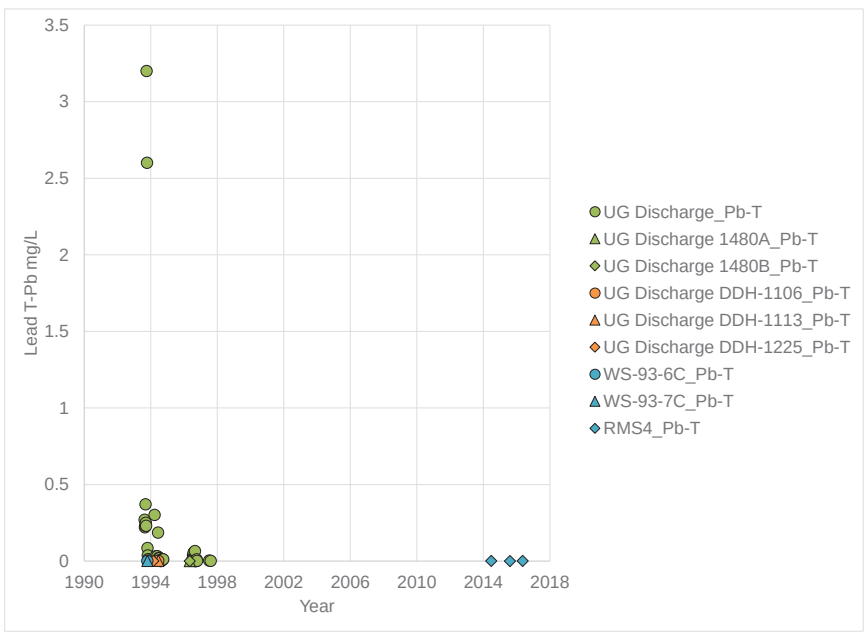
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Underground Decline

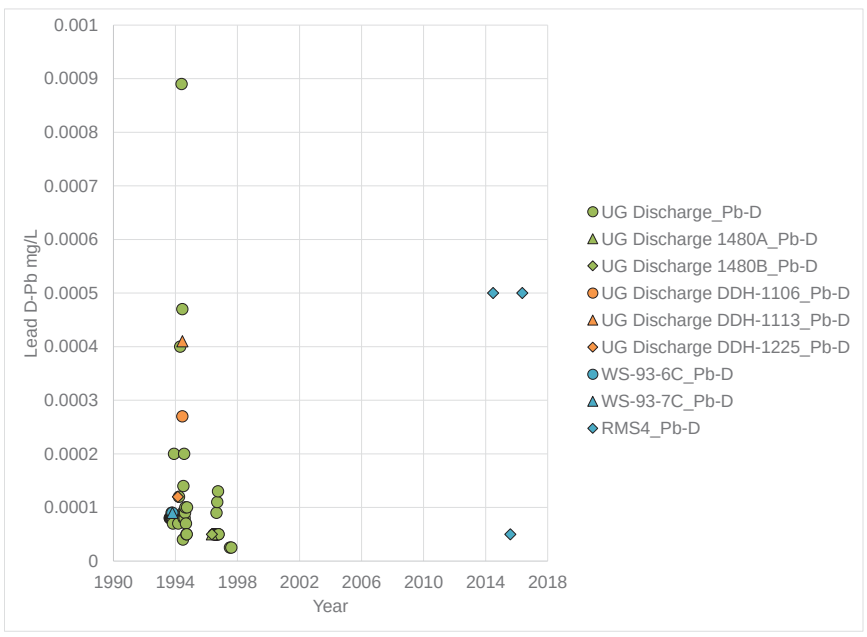


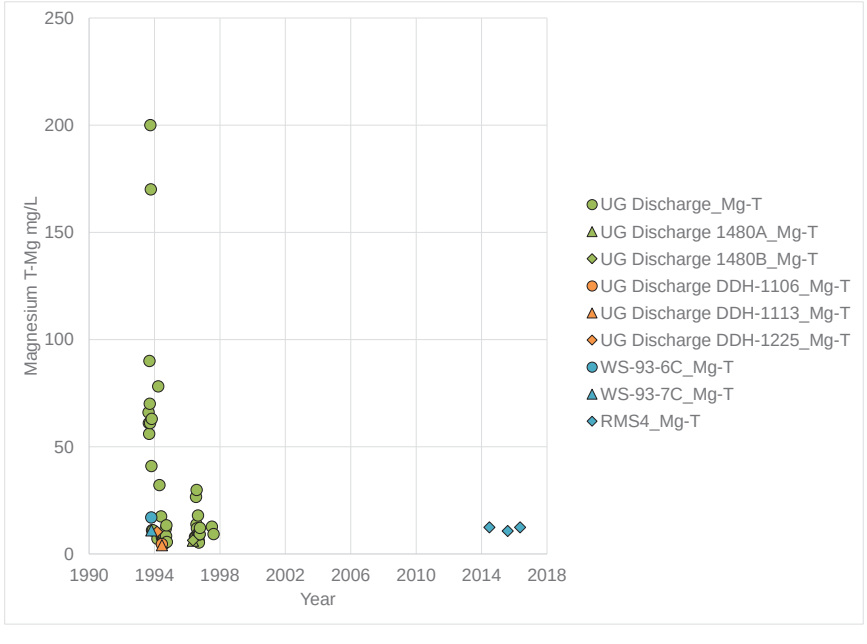


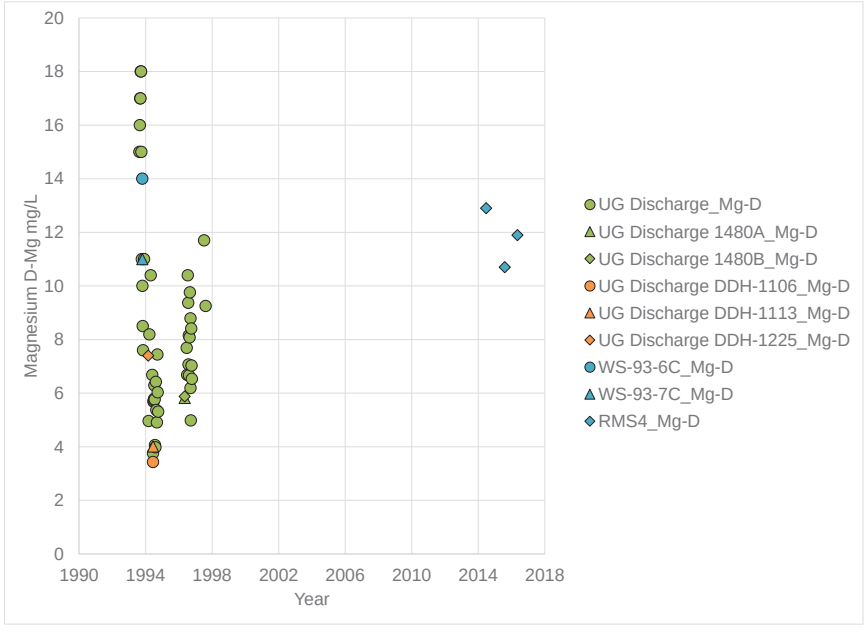




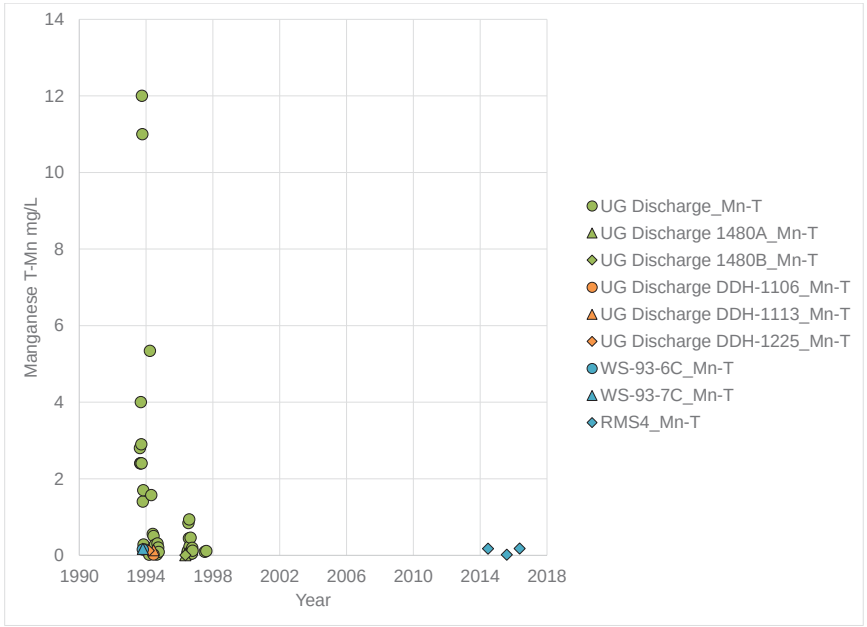


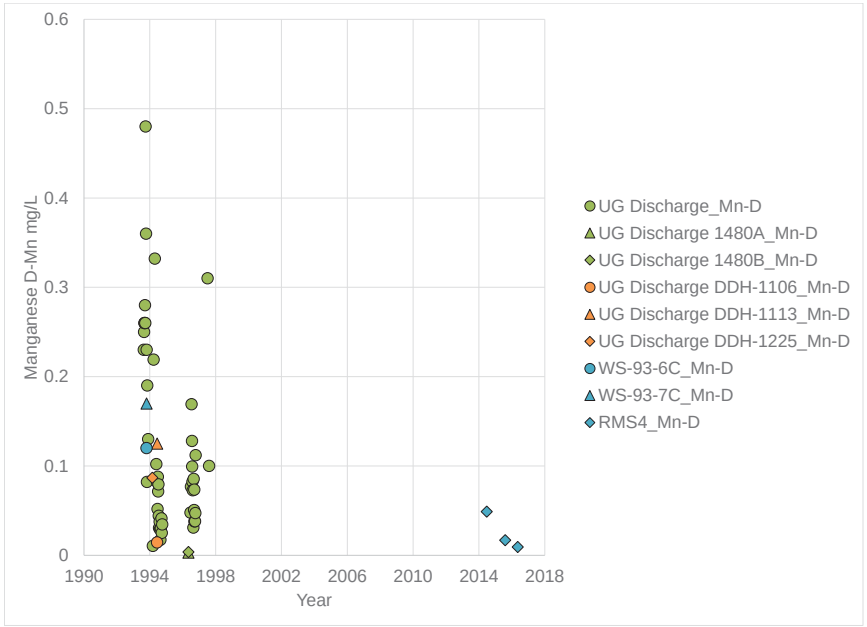


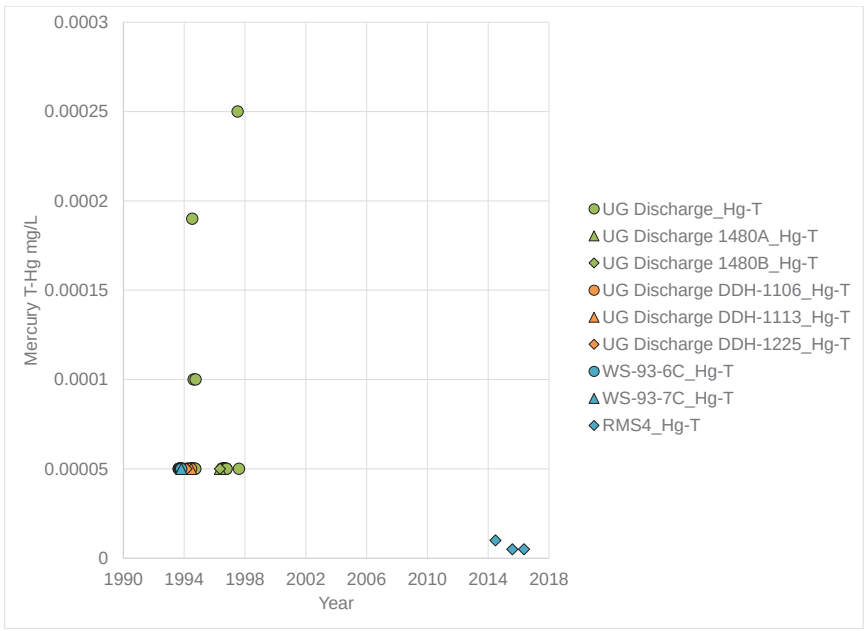


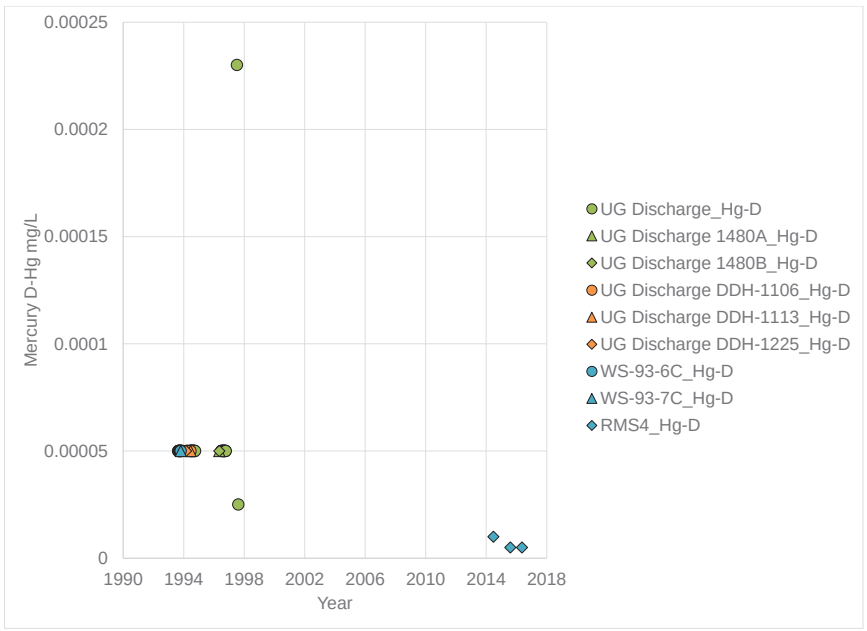


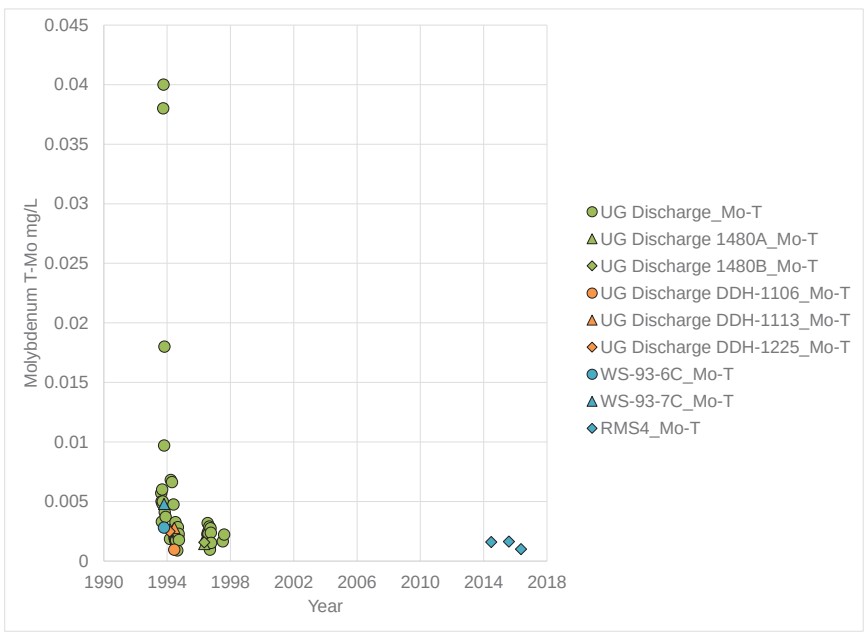
Appendix F - Groundwater Quality Data Plots
Underground Decline

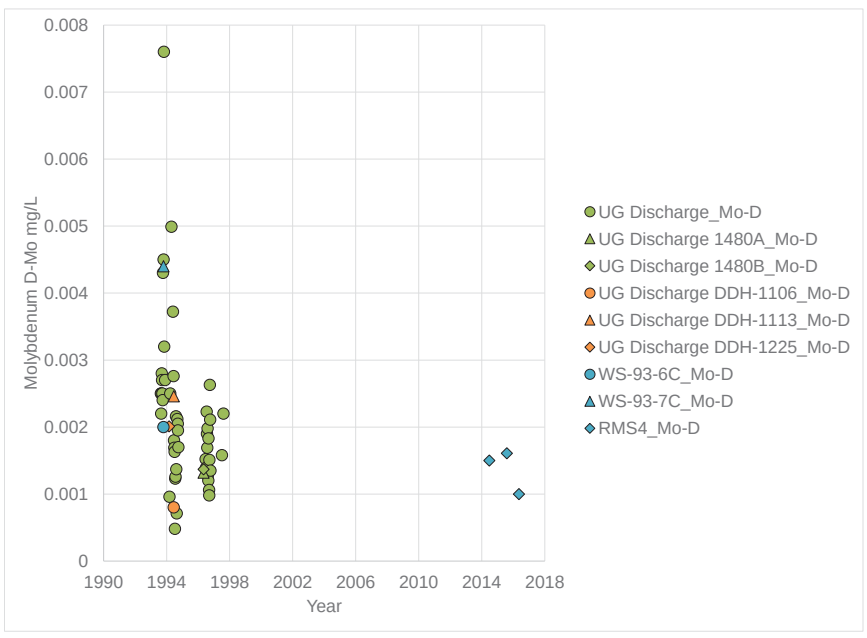


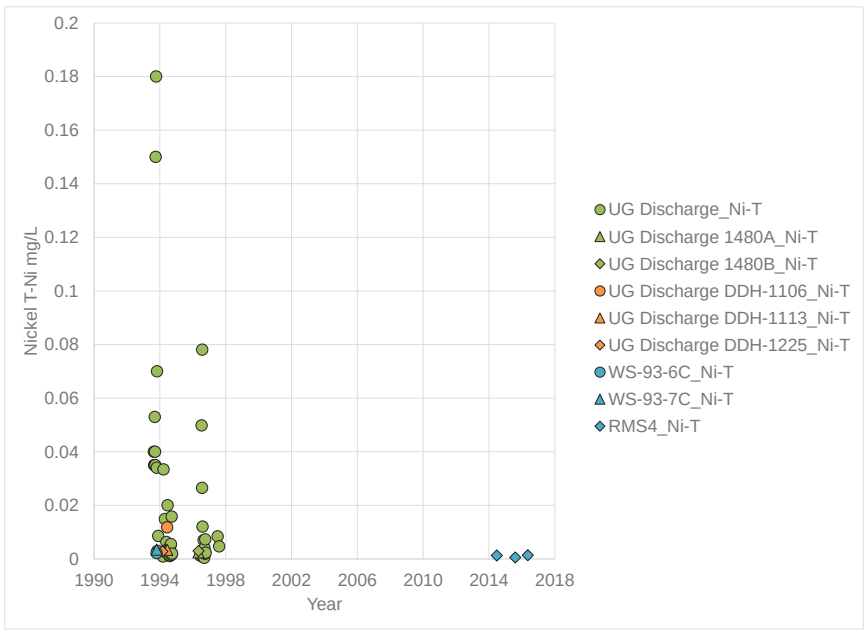


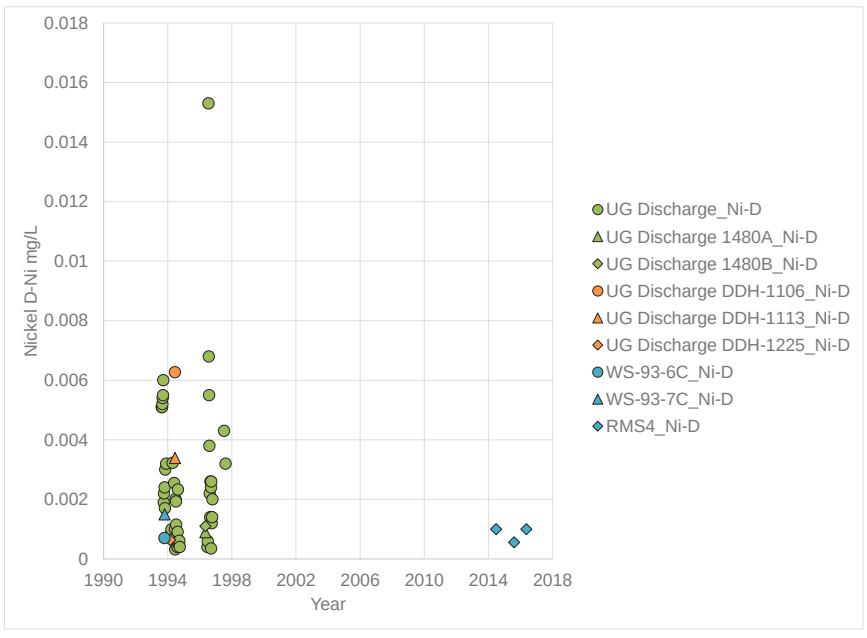




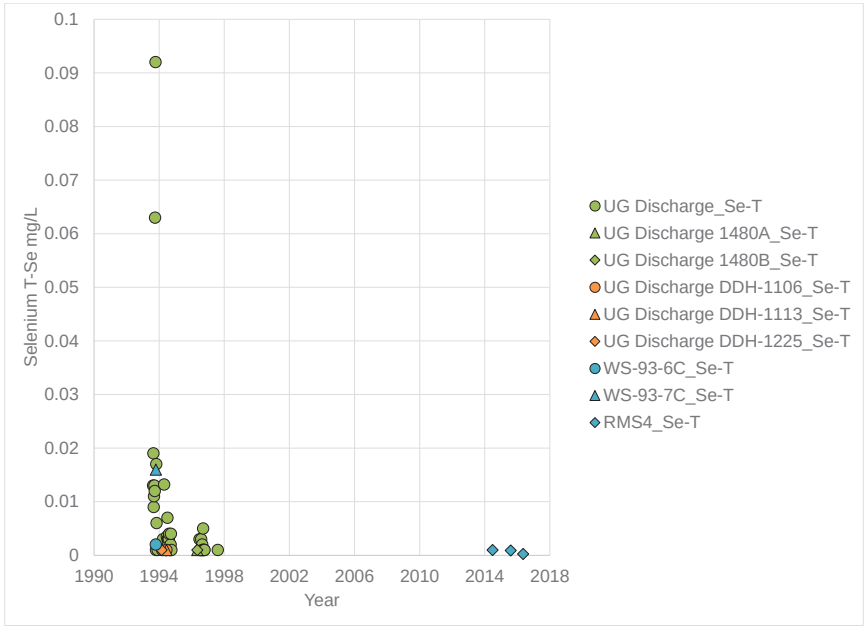


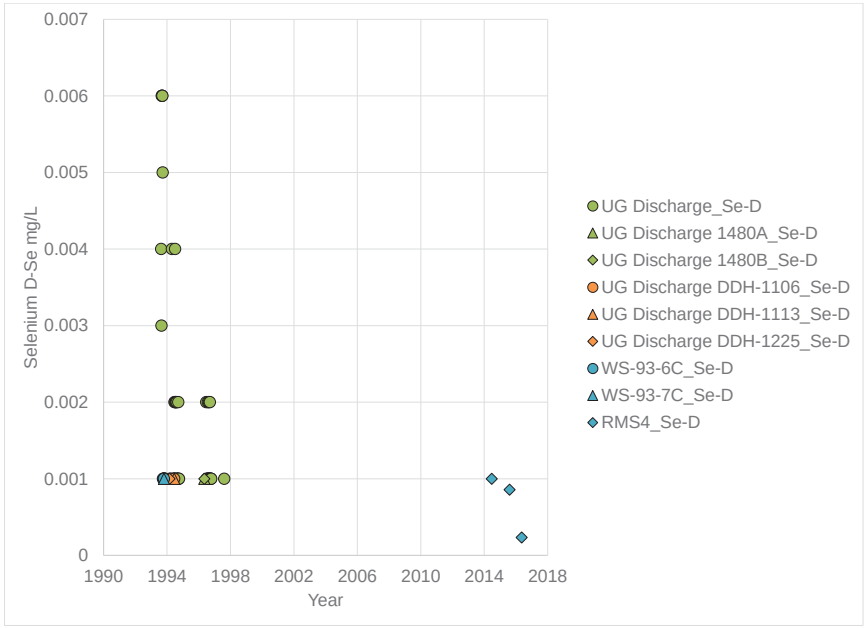


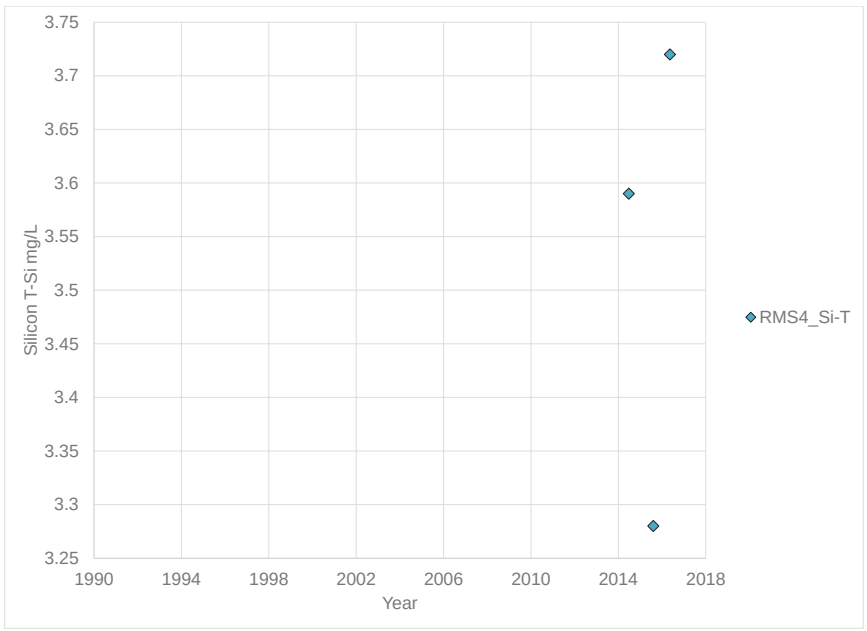


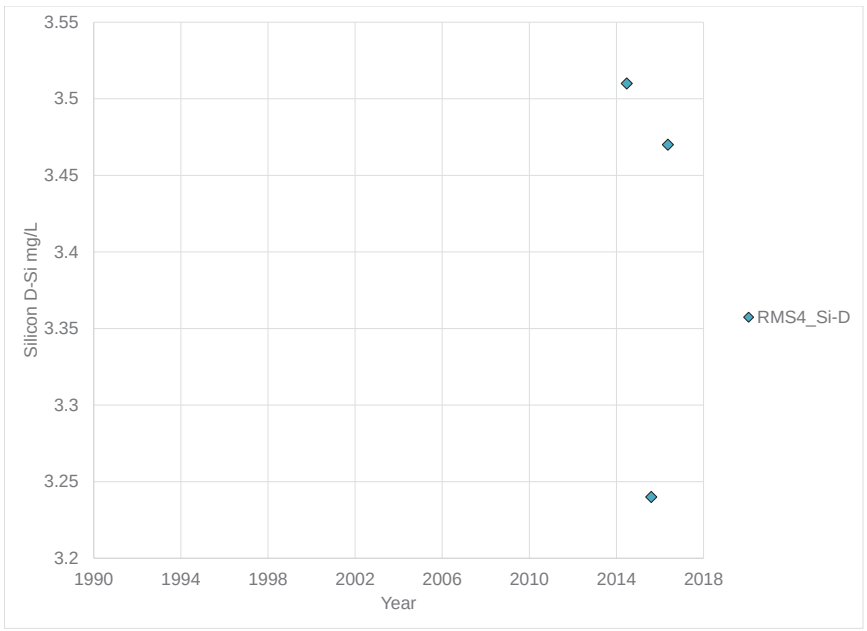


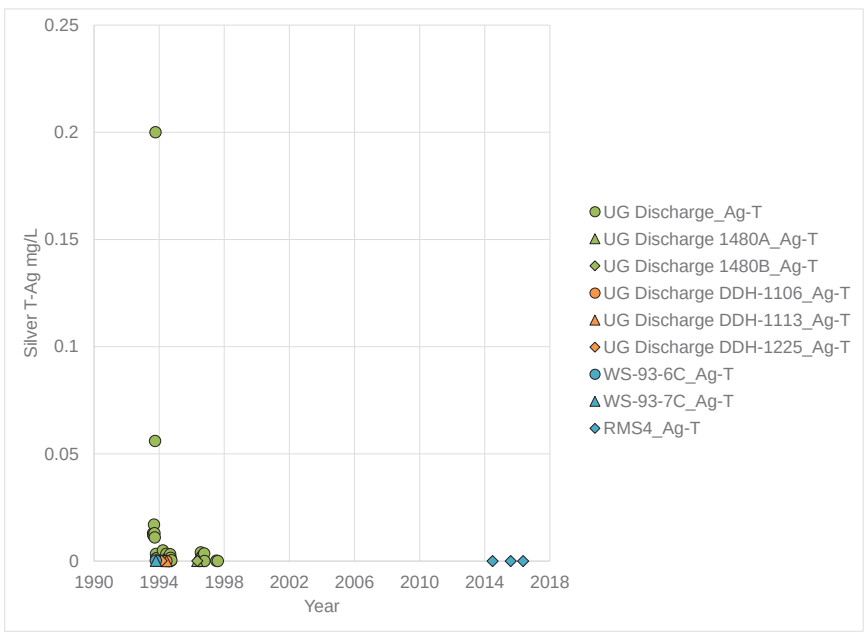
Appendix F - Groundwater Quality Data Plots
Underground Decline

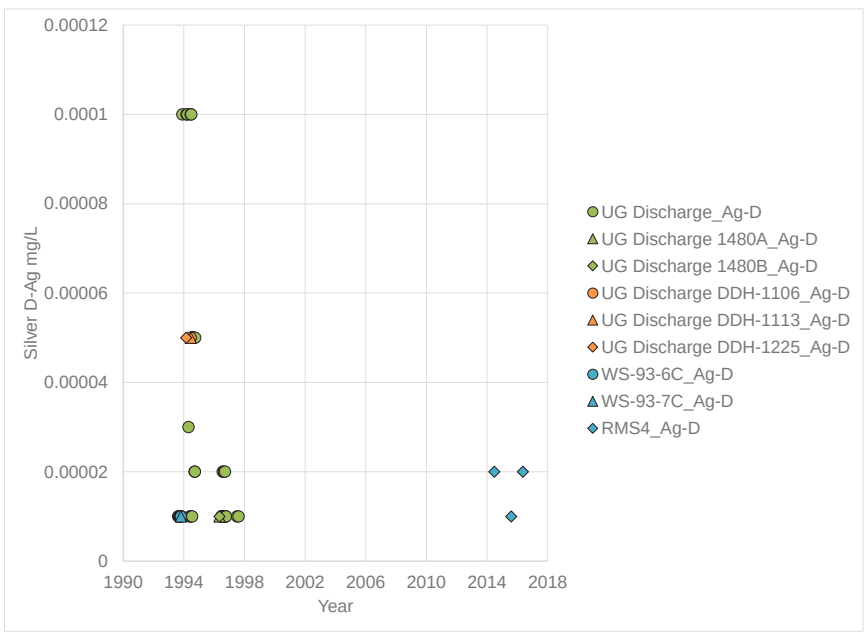


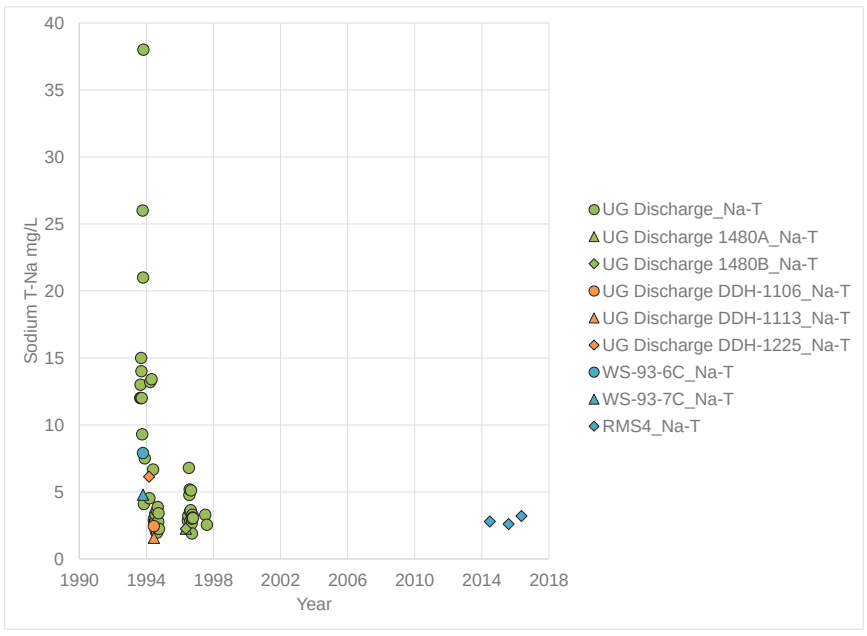


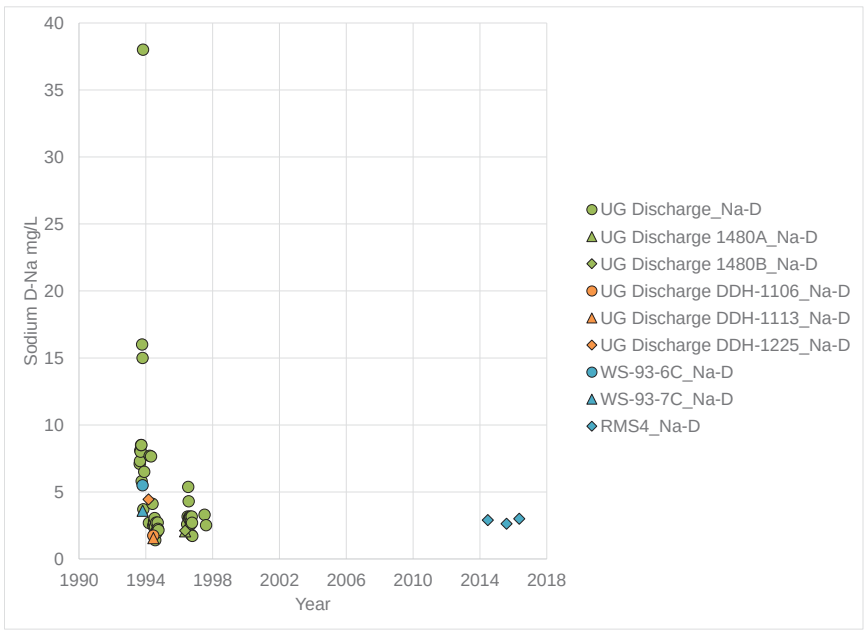




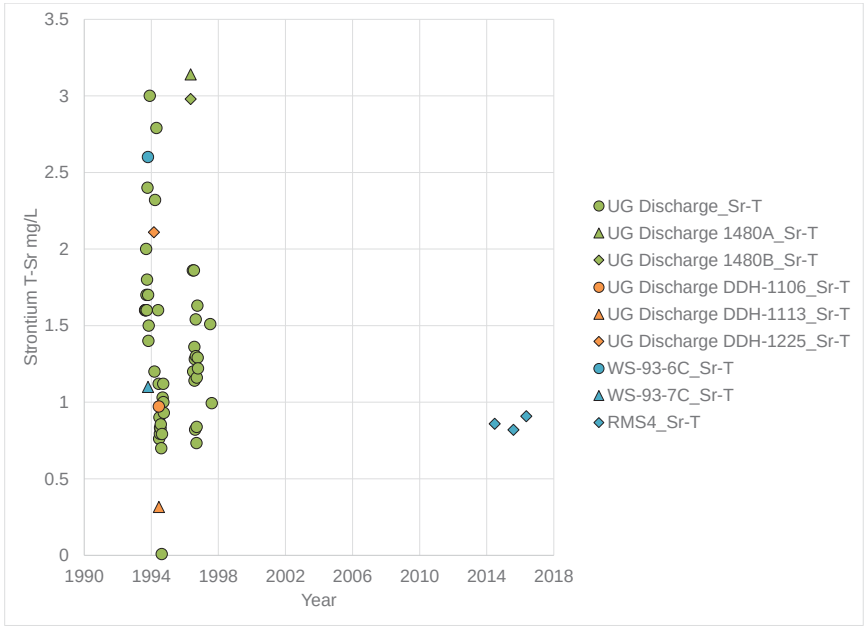


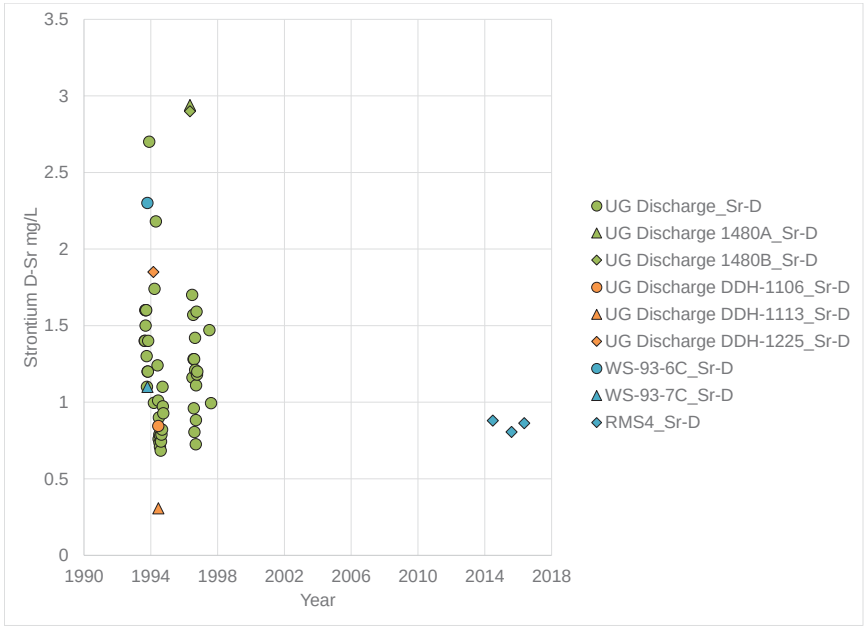


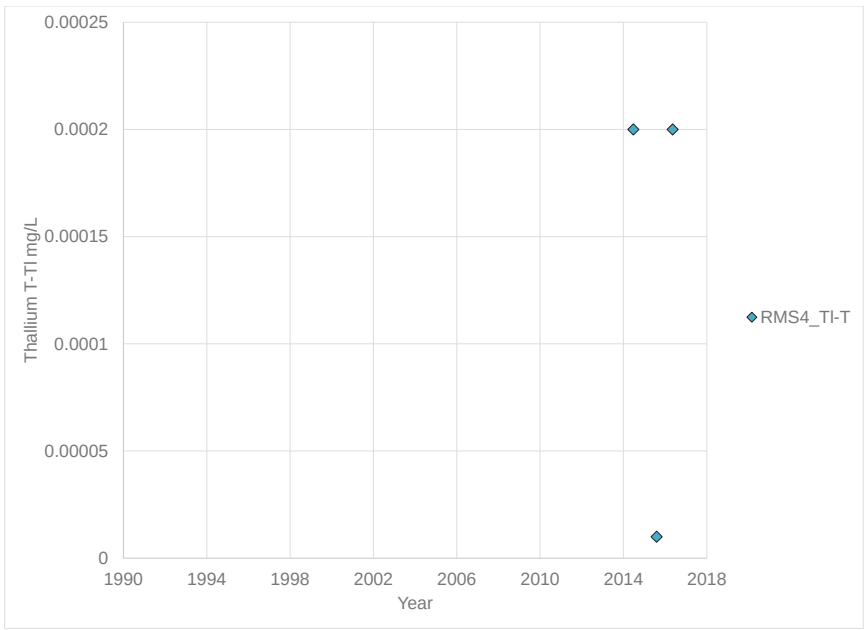


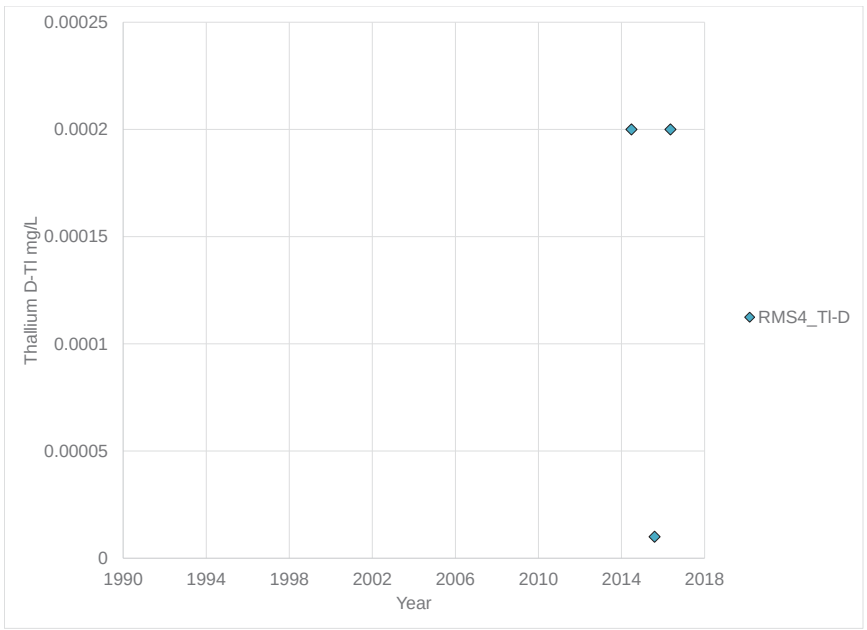


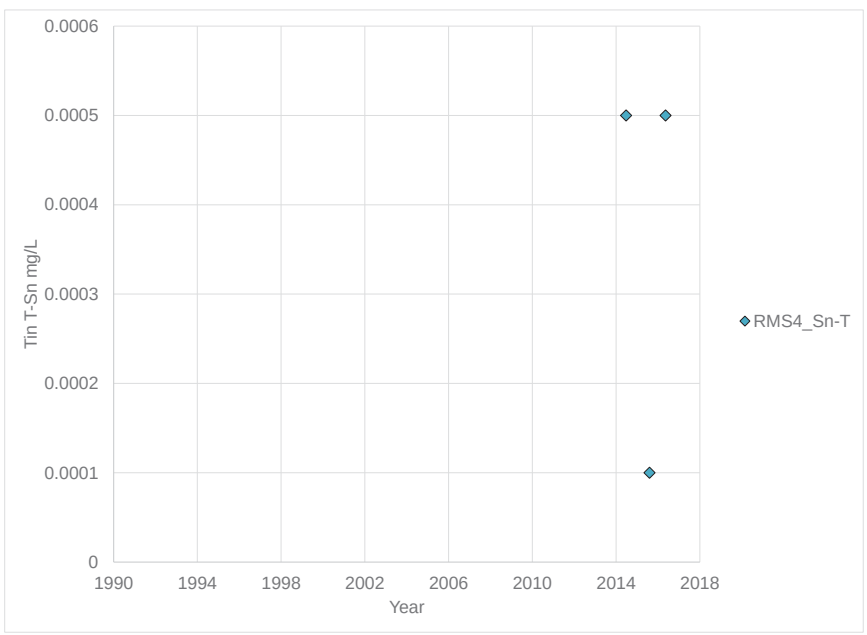
Appendix F - Groundwater Quality Data Plots
Underground Decline

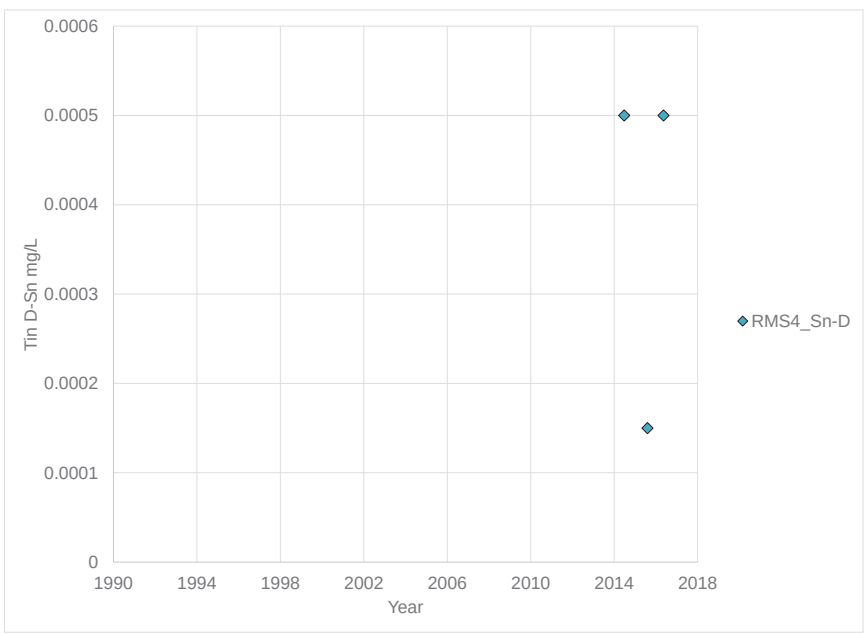


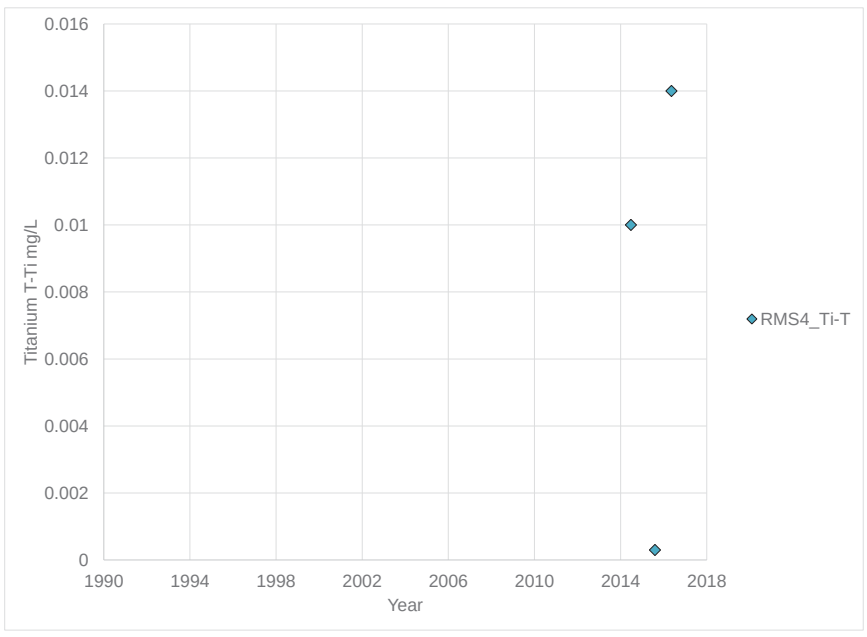


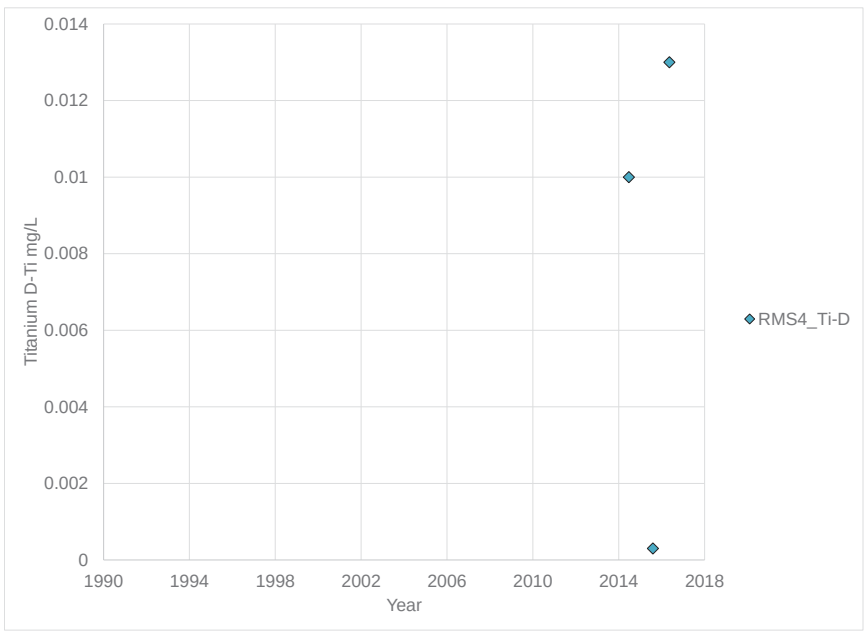




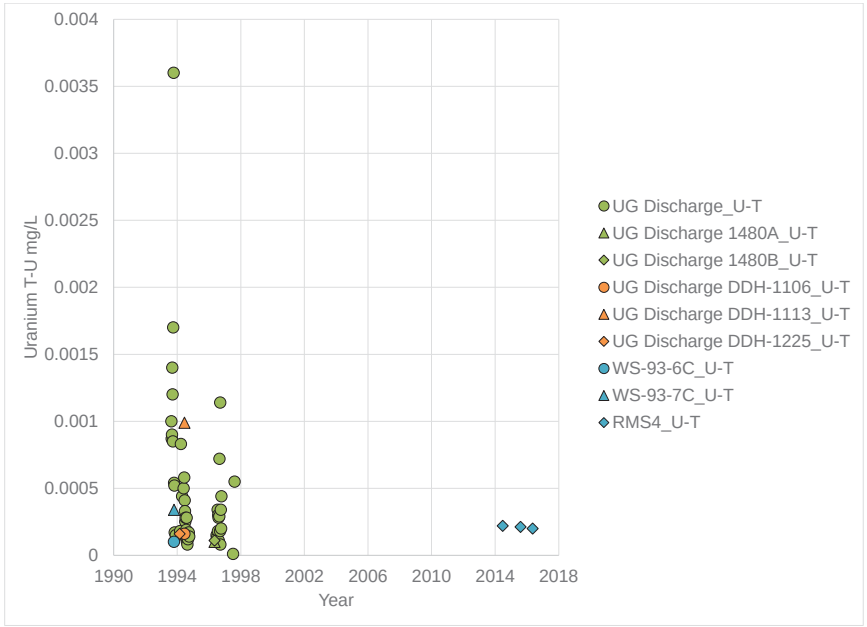


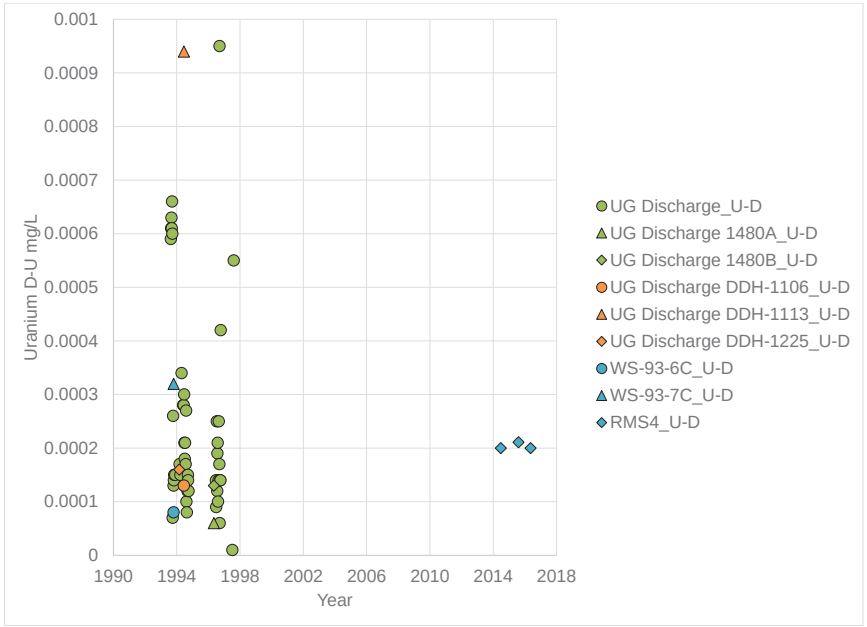


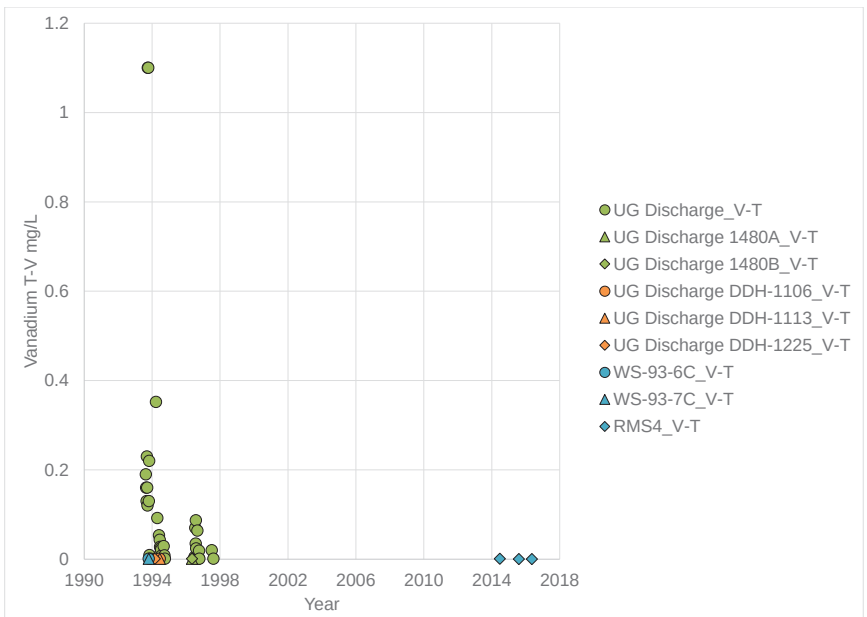


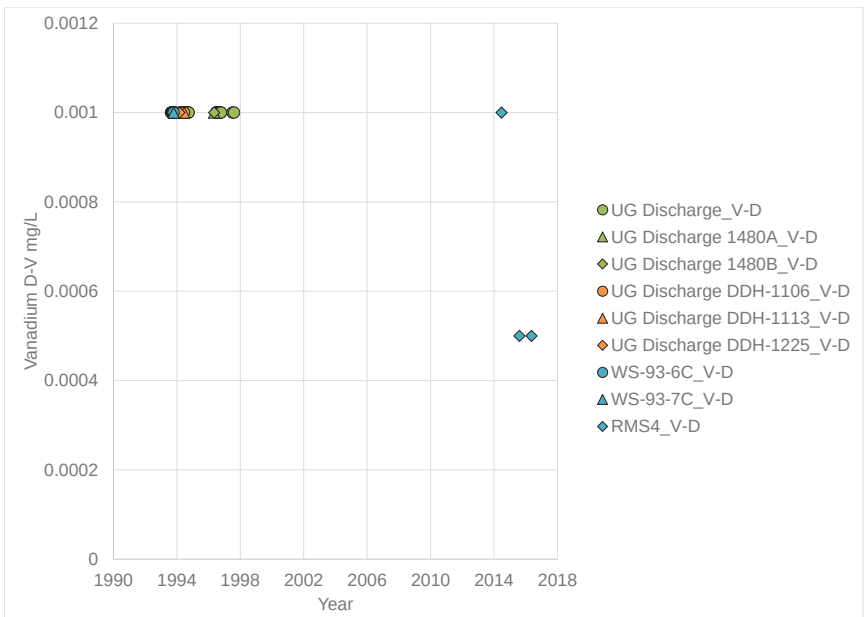


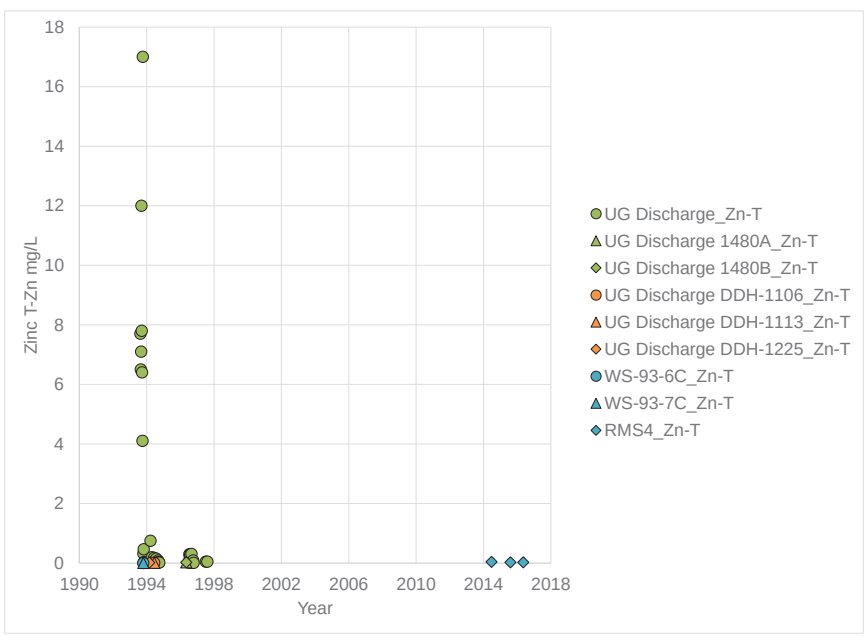
Appendix F - Groundwater Quality Data Plots
Underground Decline

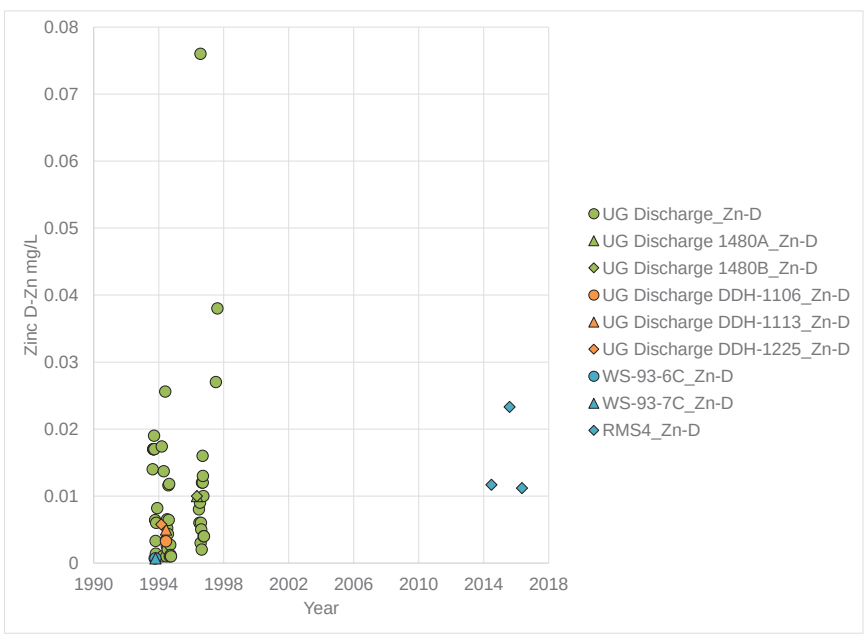






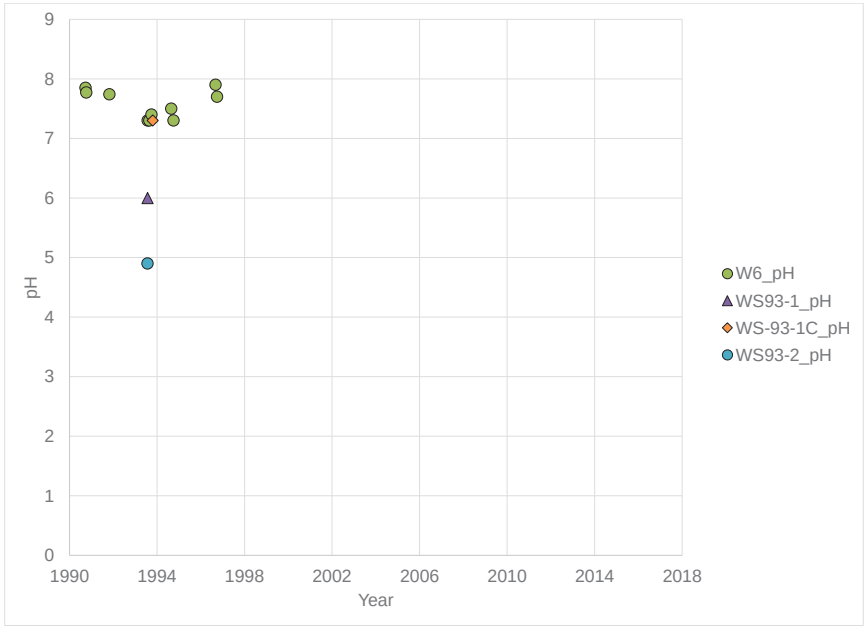


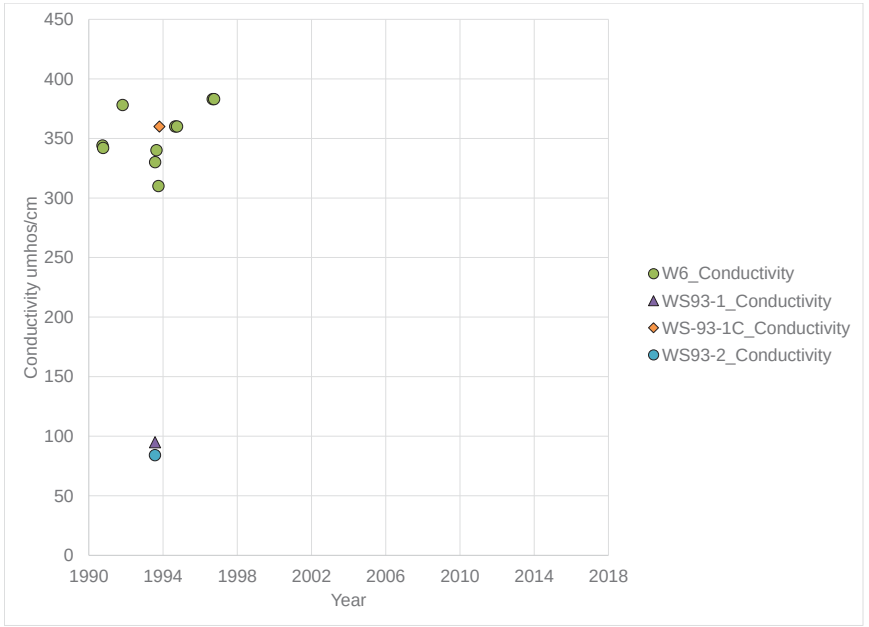


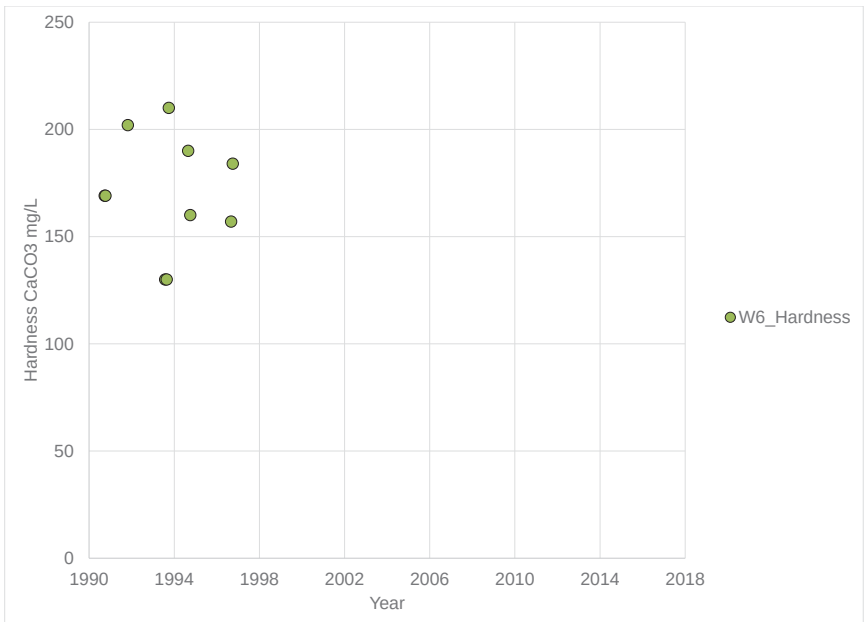


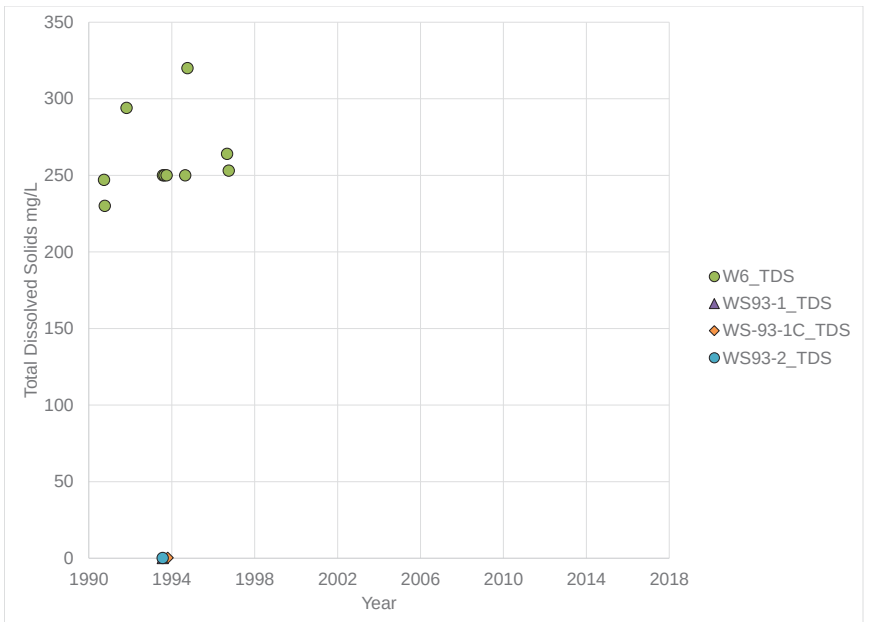
Upper Cirque

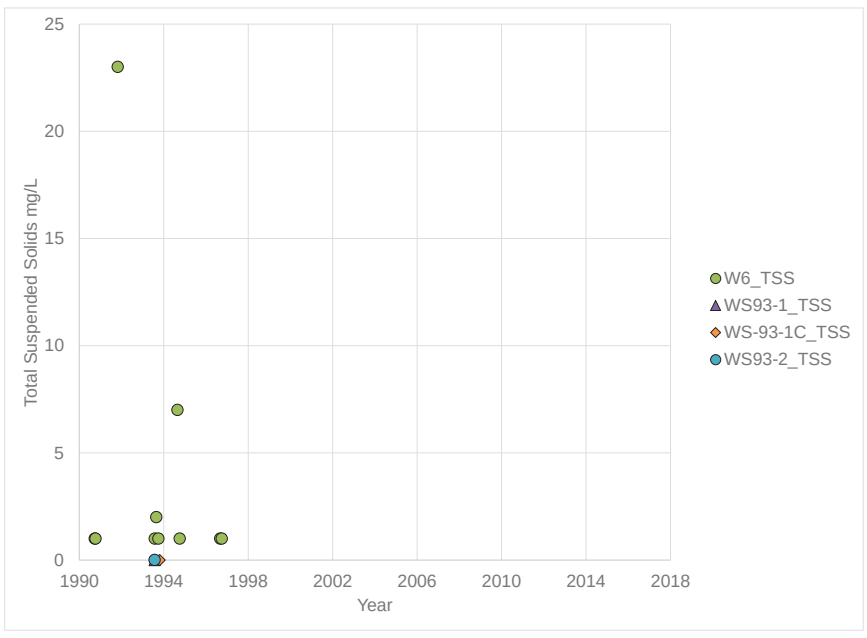
Appendix F - Groundwater Quality Data Plots
Upper Cirque

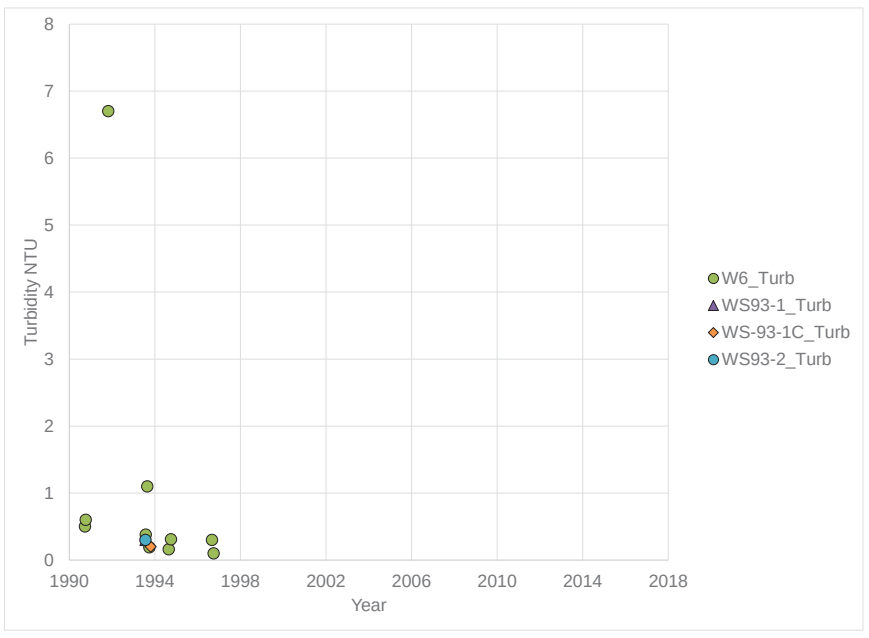


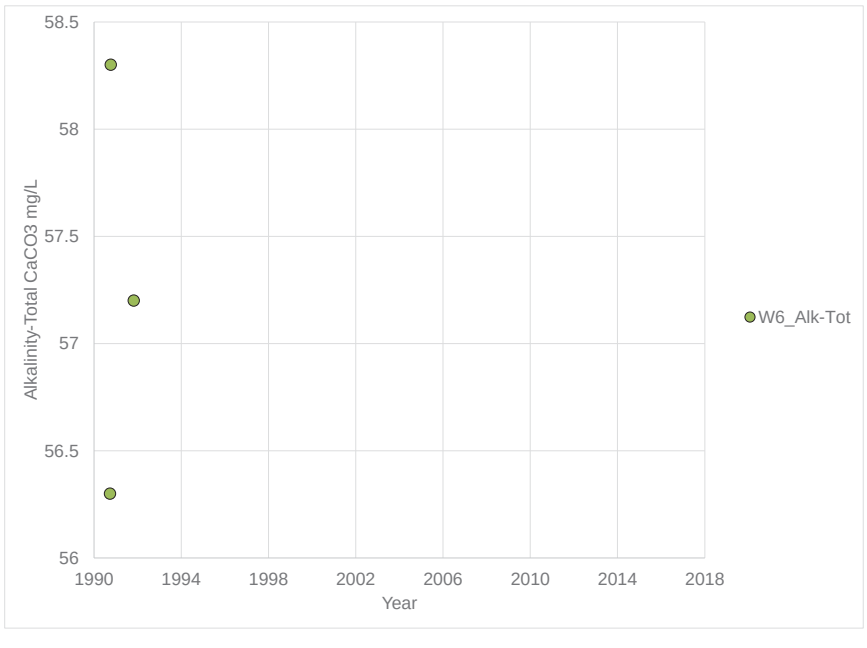


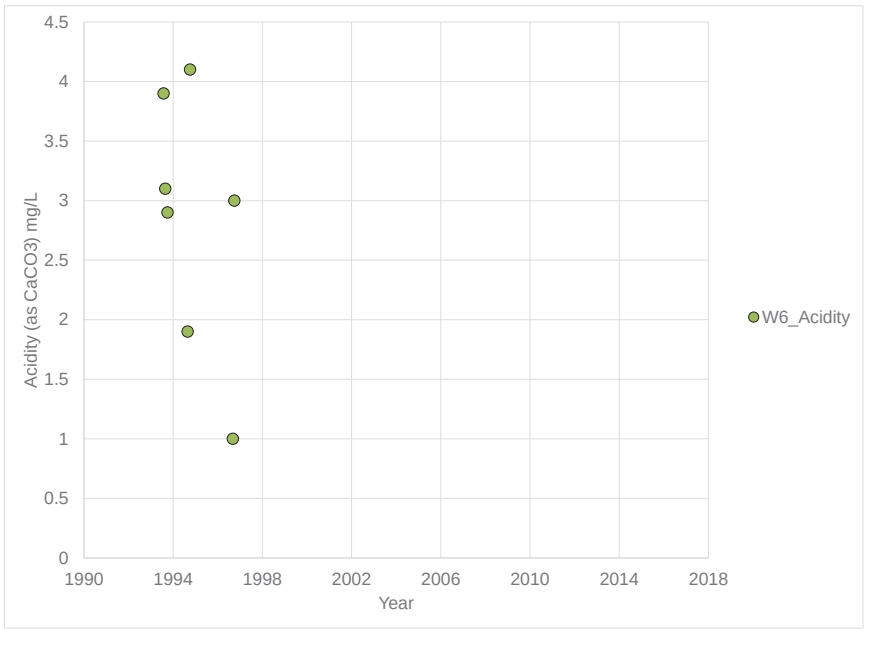




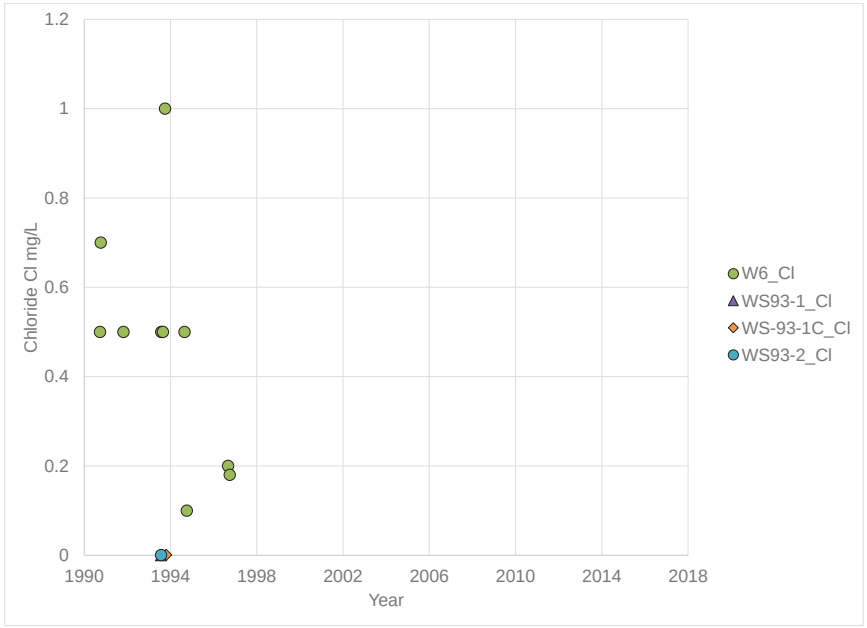


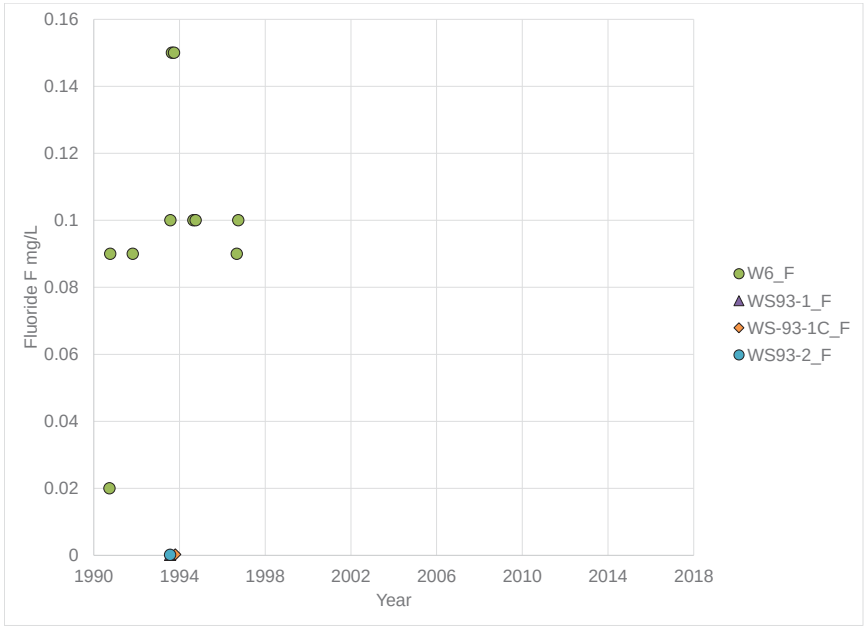


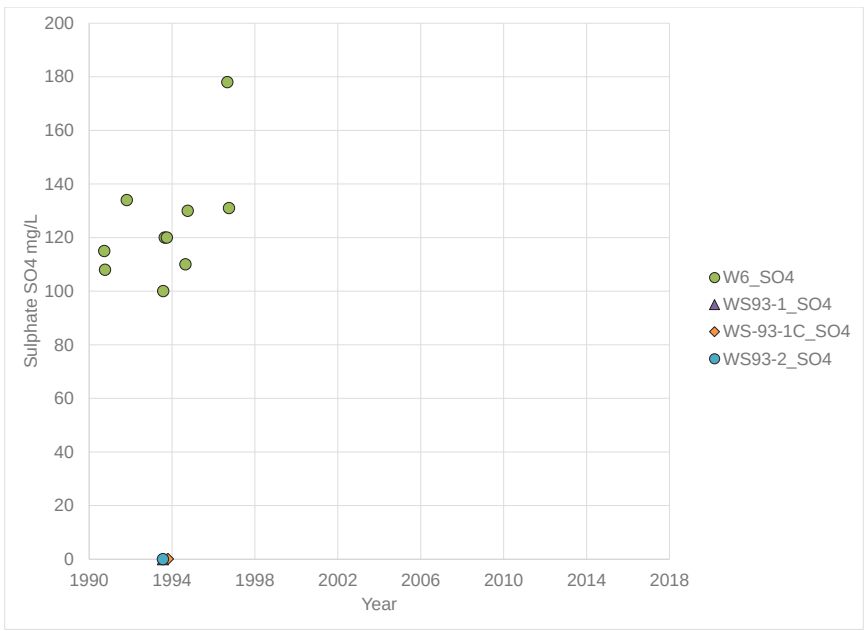


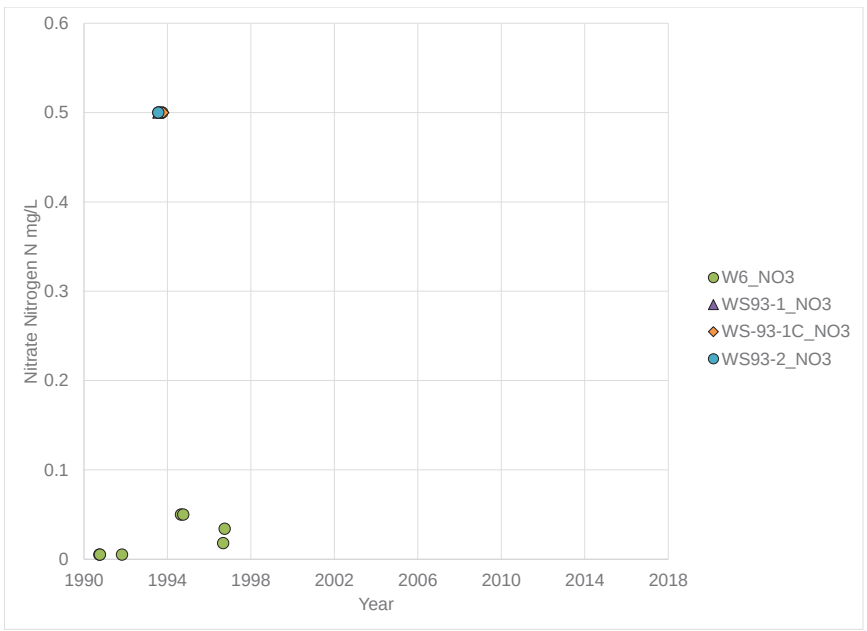


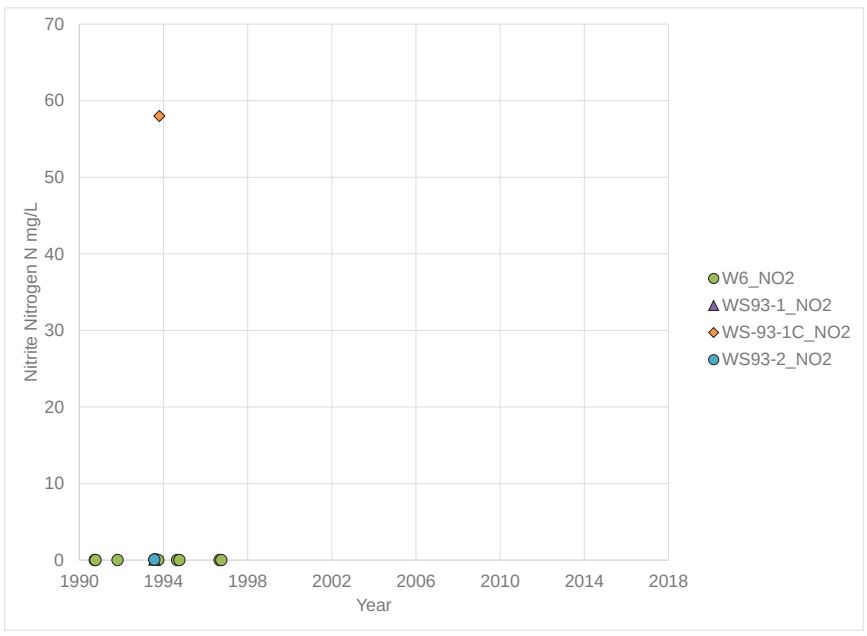
Appendix F - Groundwater Quality Data Plots
Upper Cirque

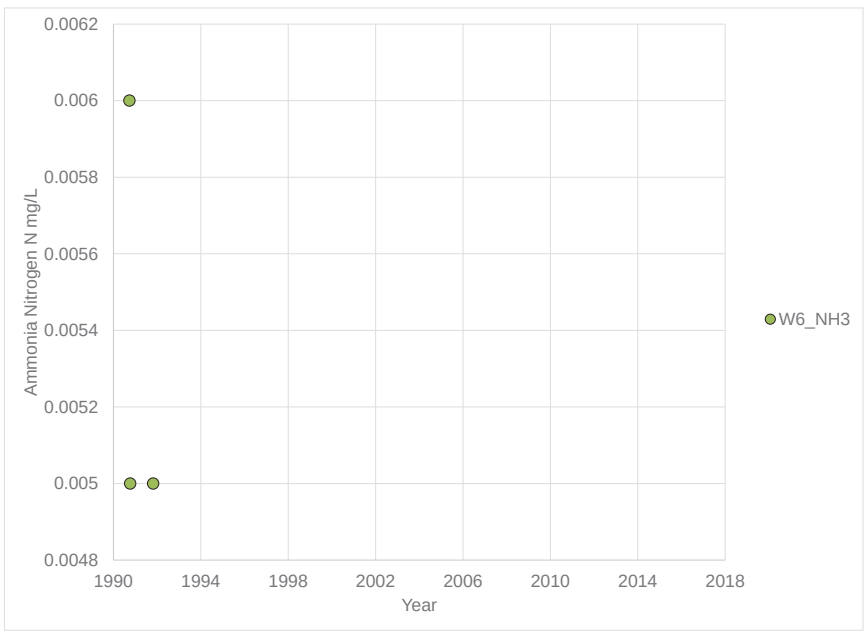


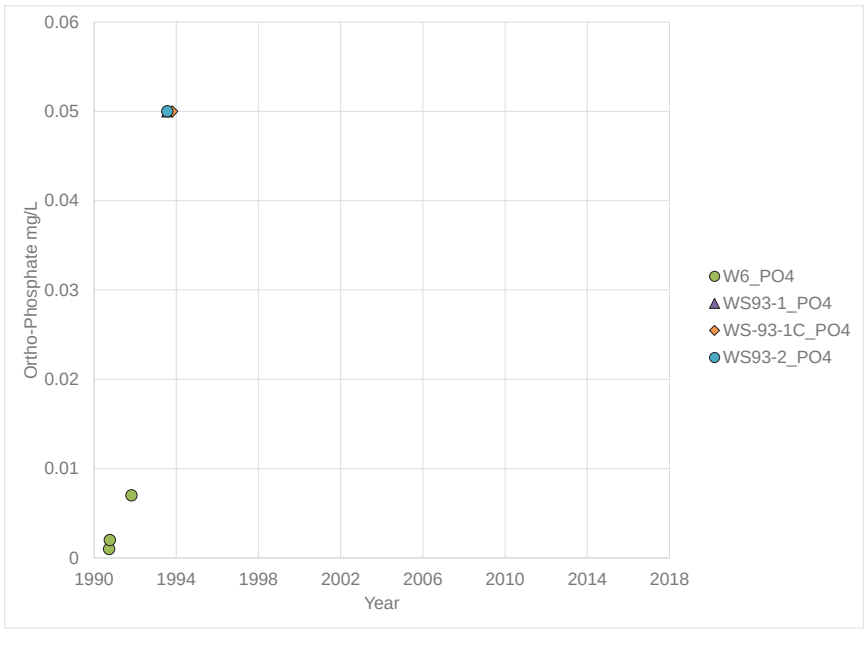


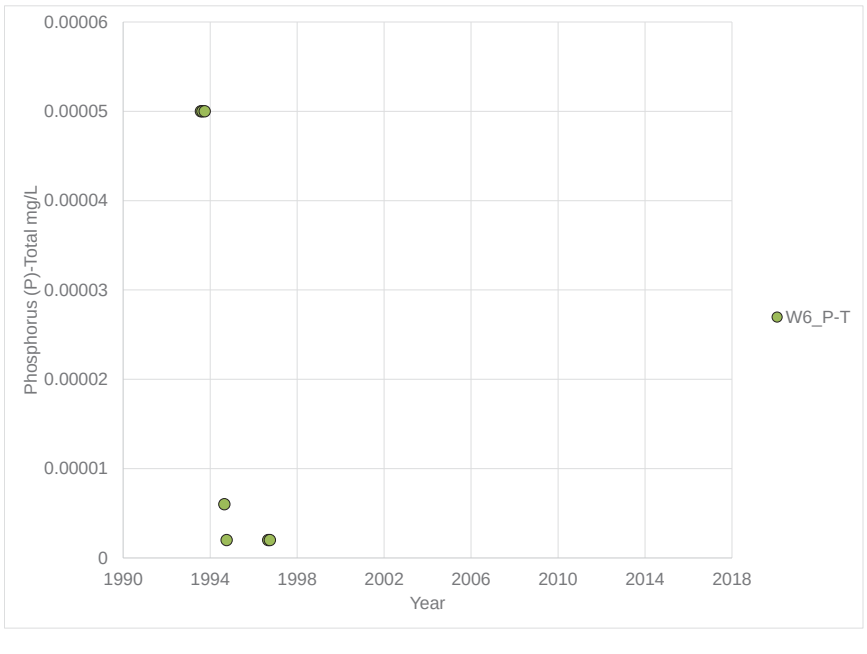




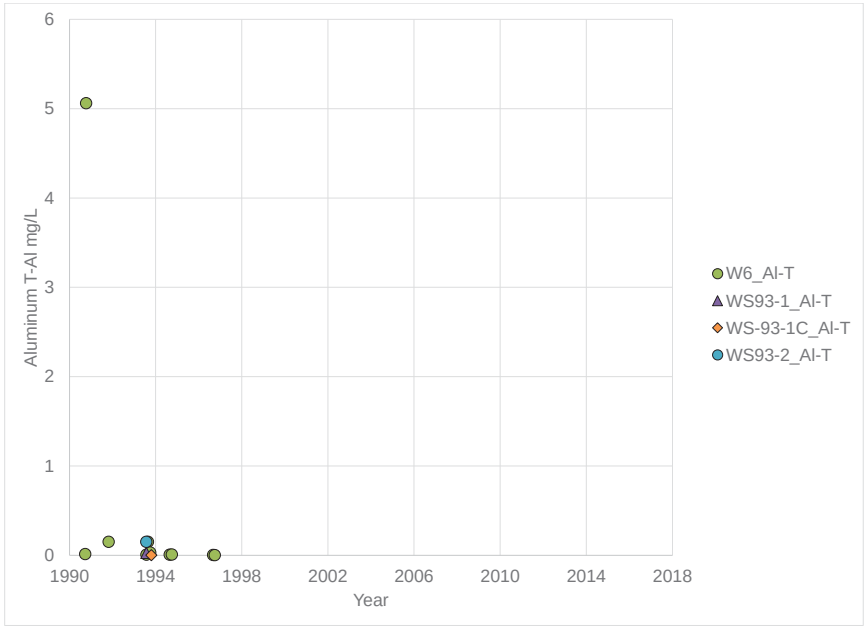


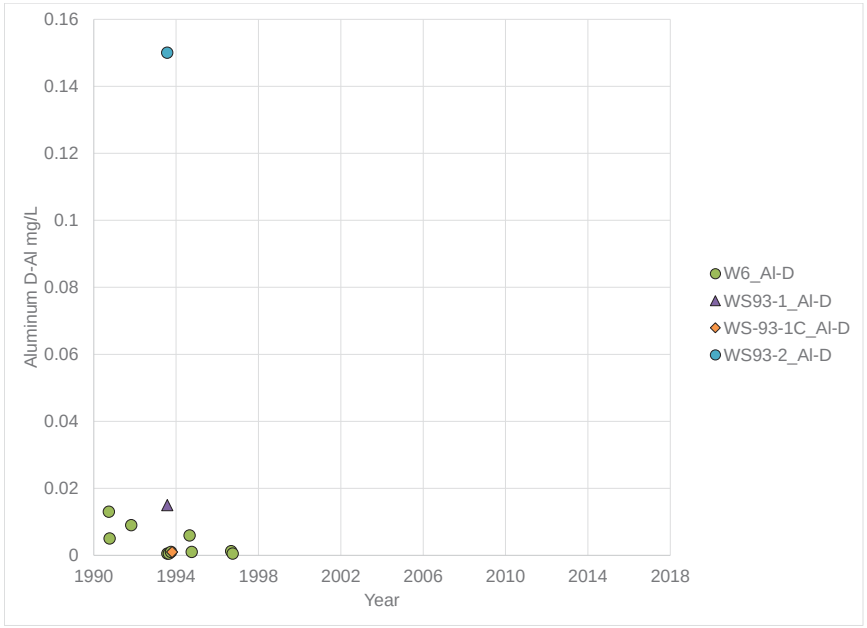


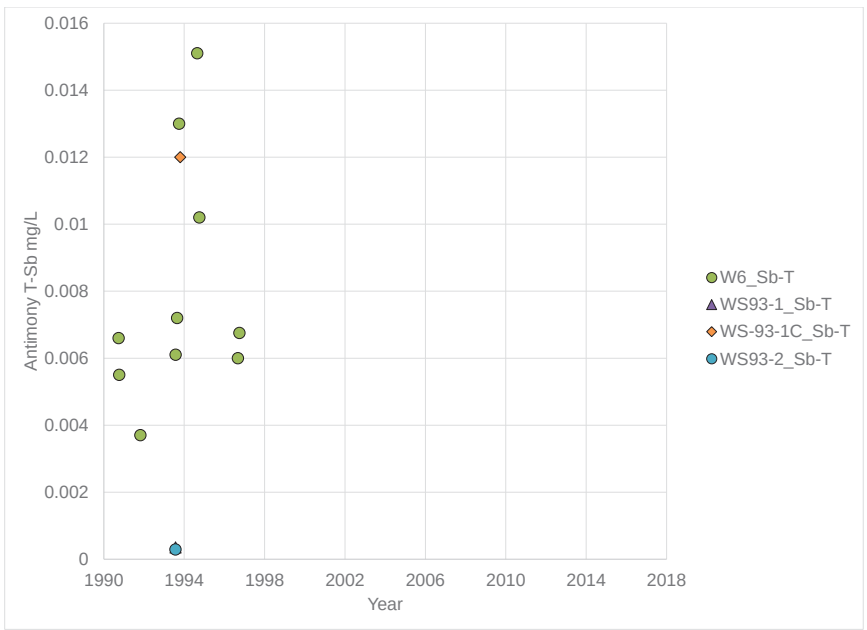


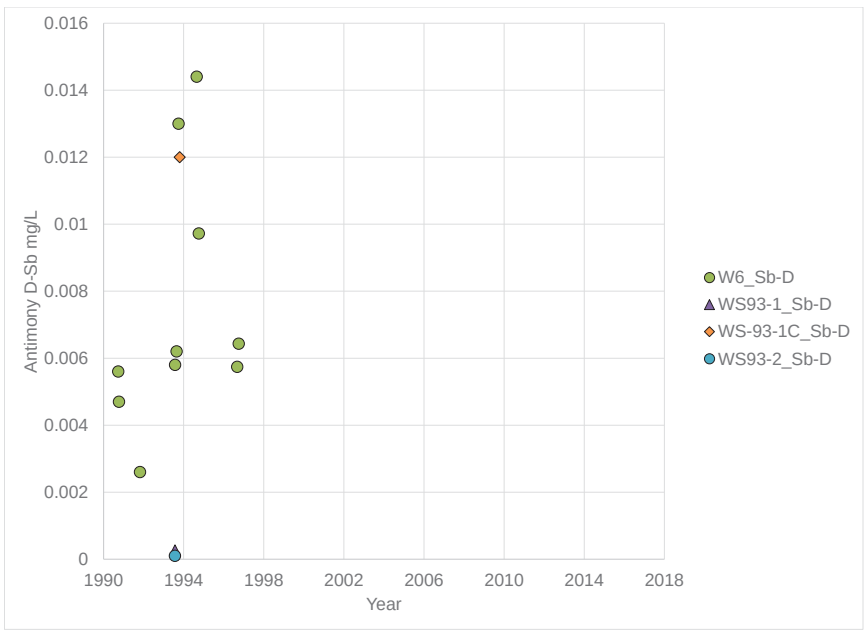


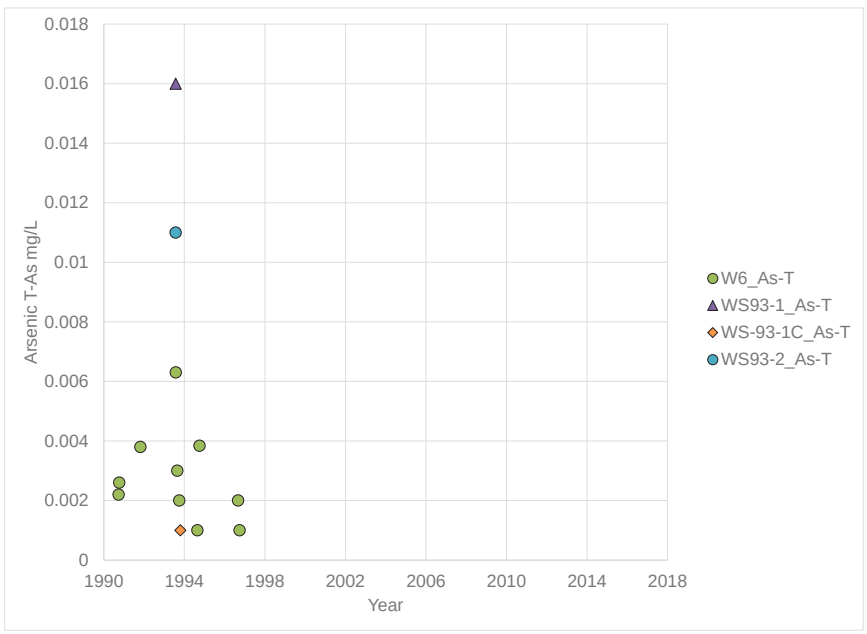
Appendix F - Groundwater Quality Data Plots
Upper Cirque

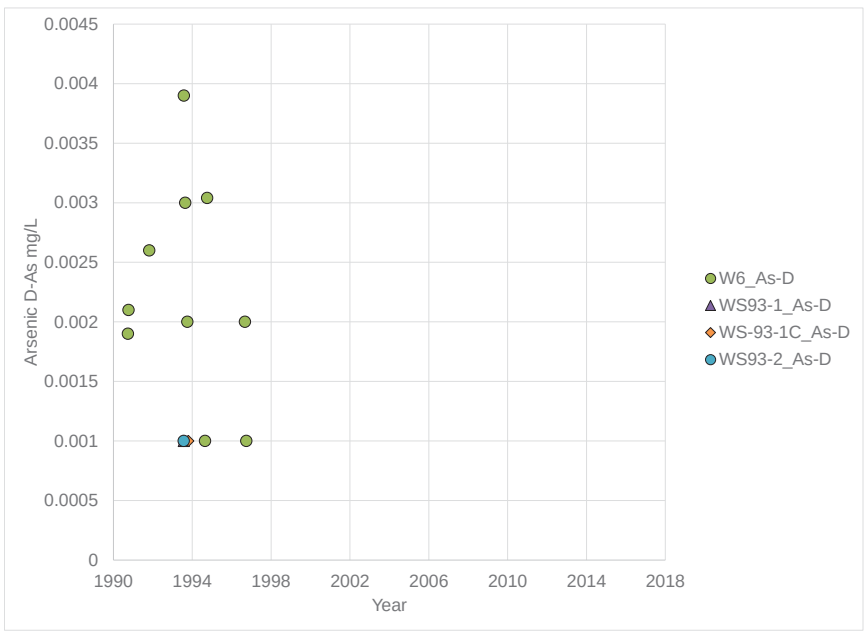


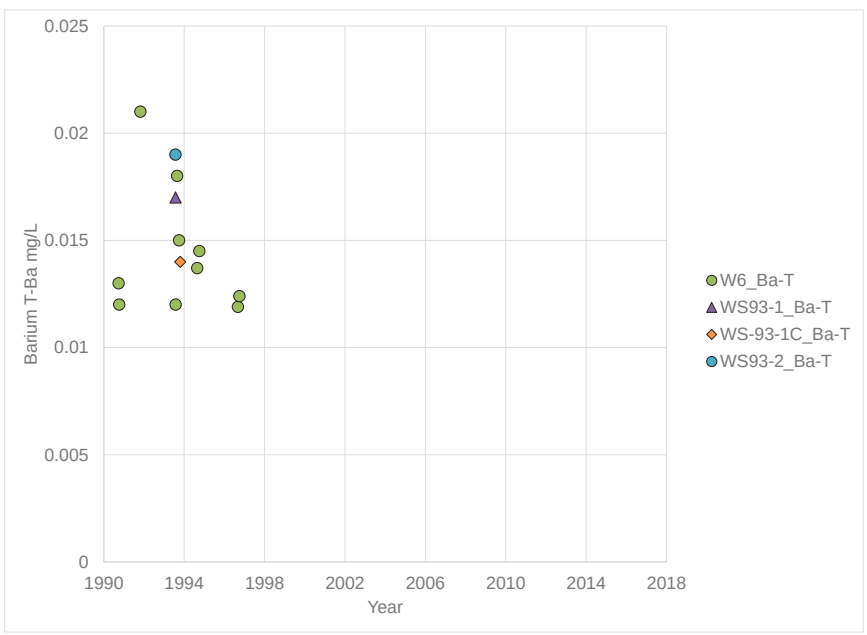


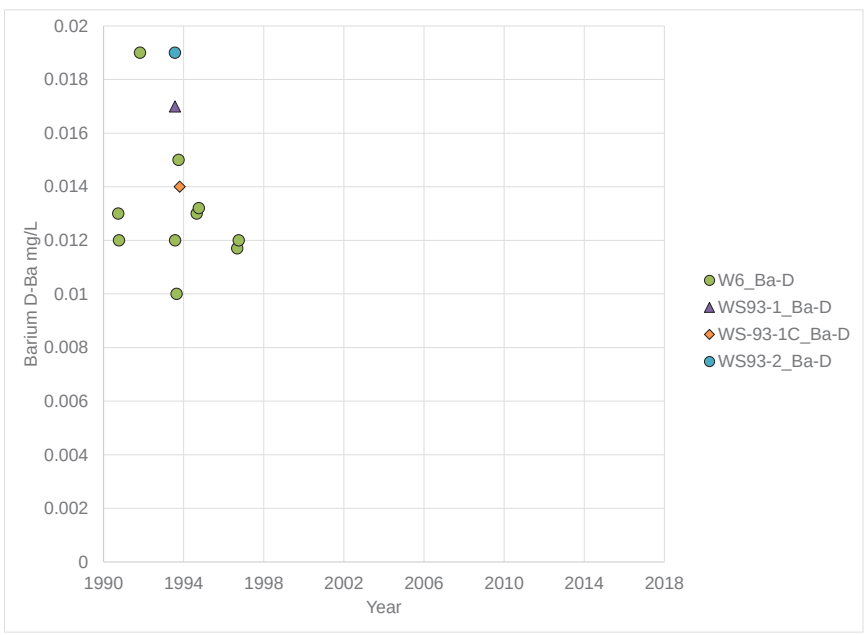




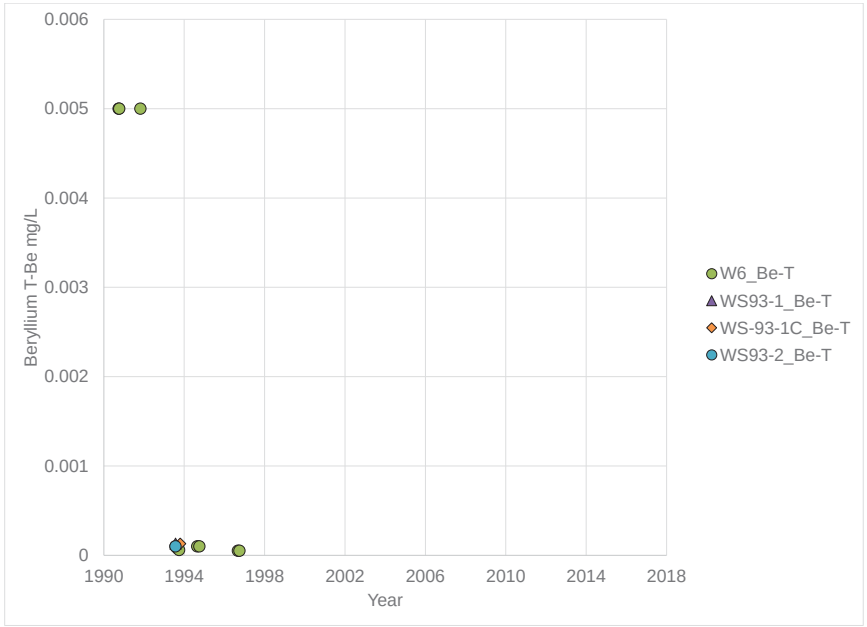


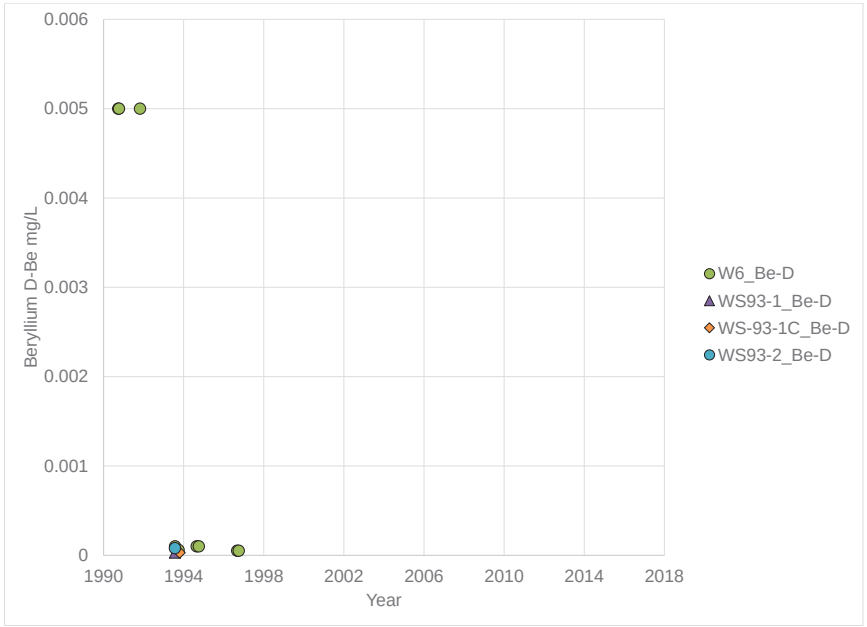


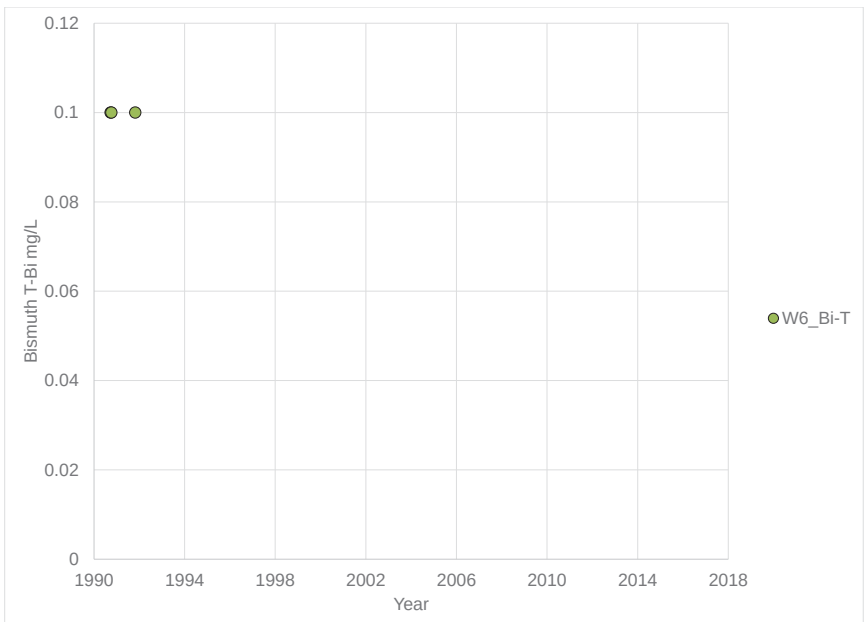


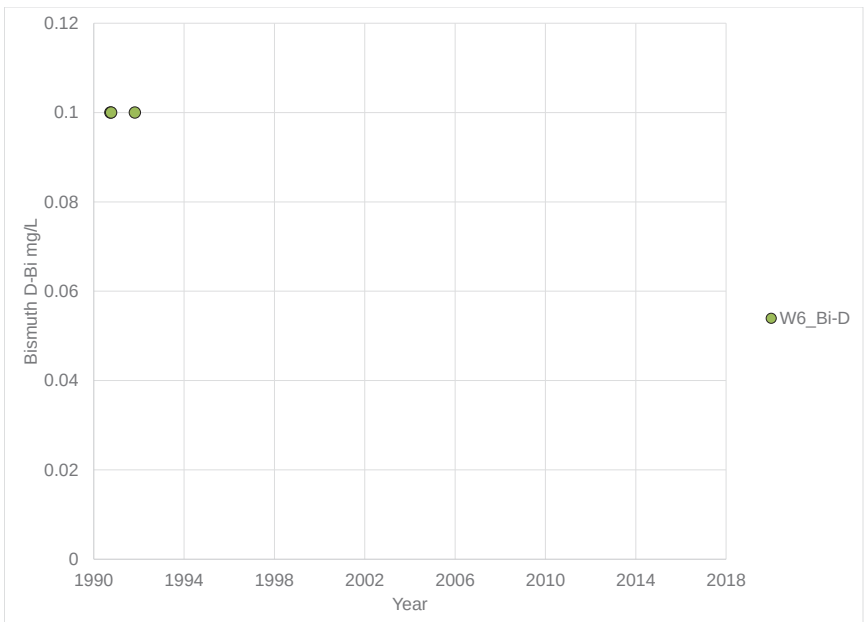


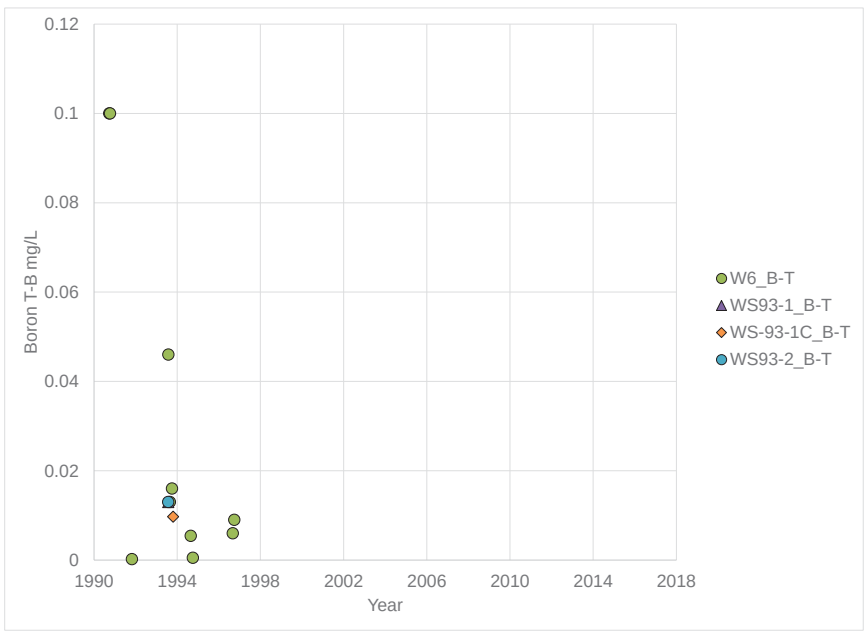
Appendix F - Groundwater Quality Data Plots
Upper Cirque

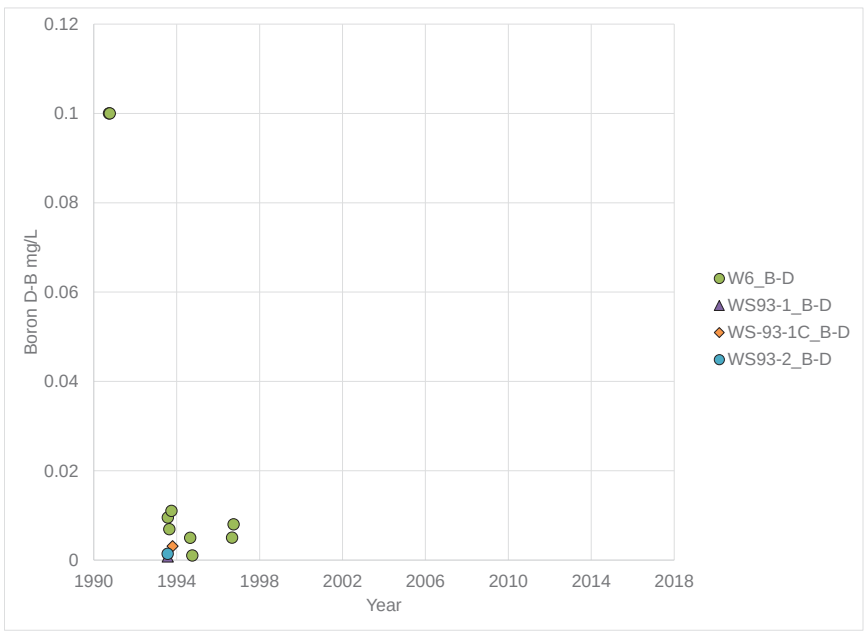


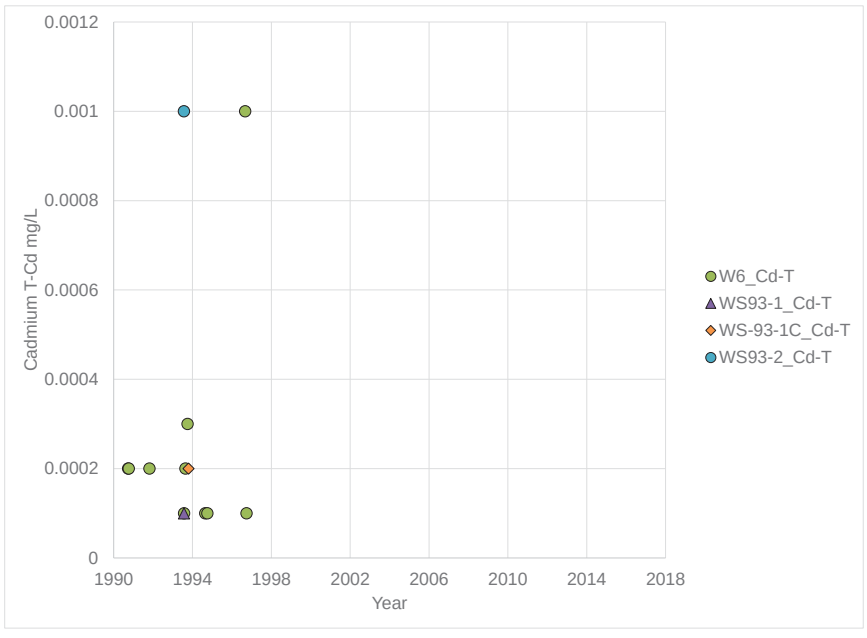


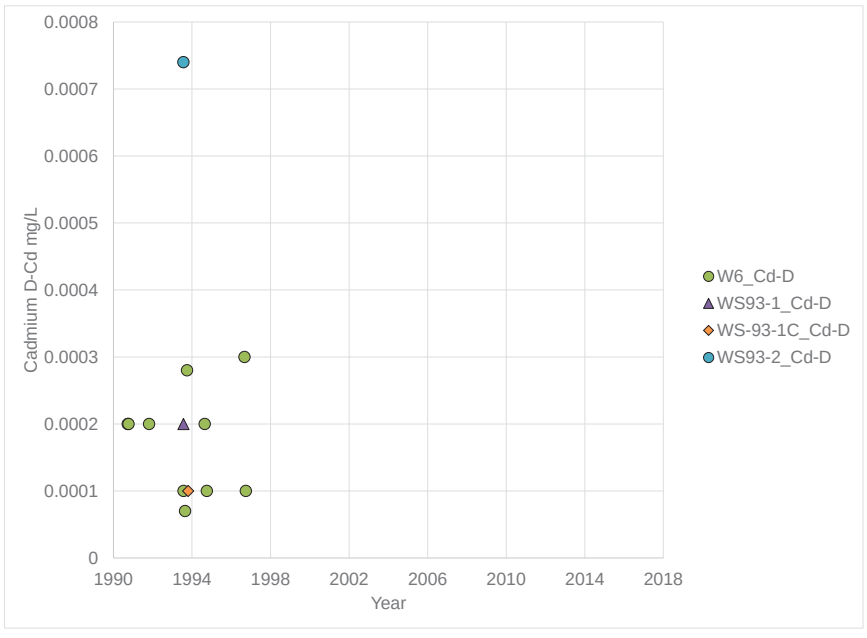




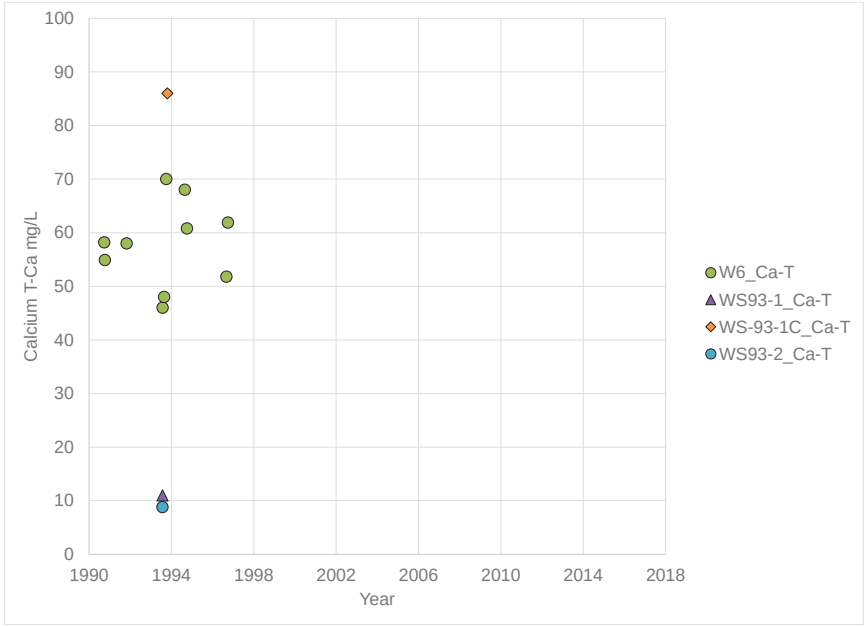


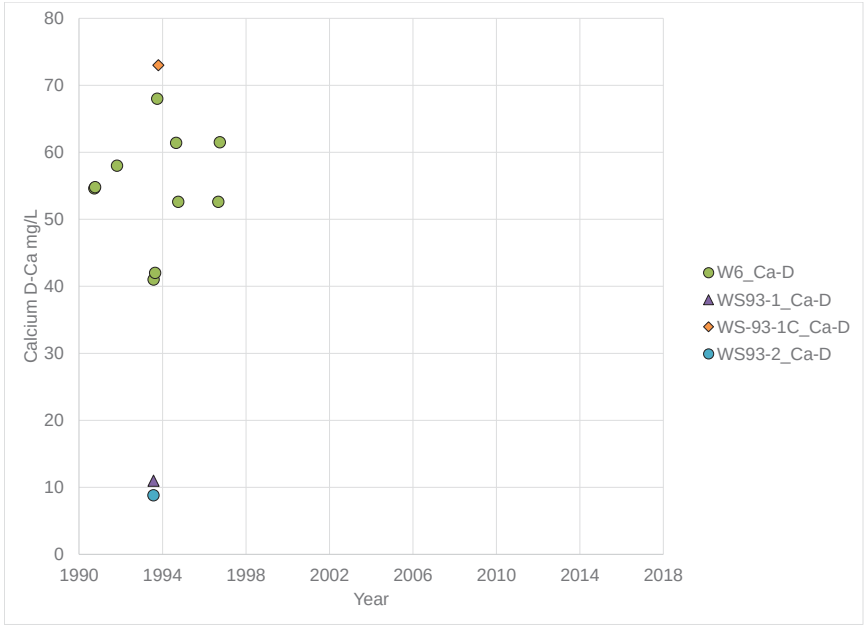


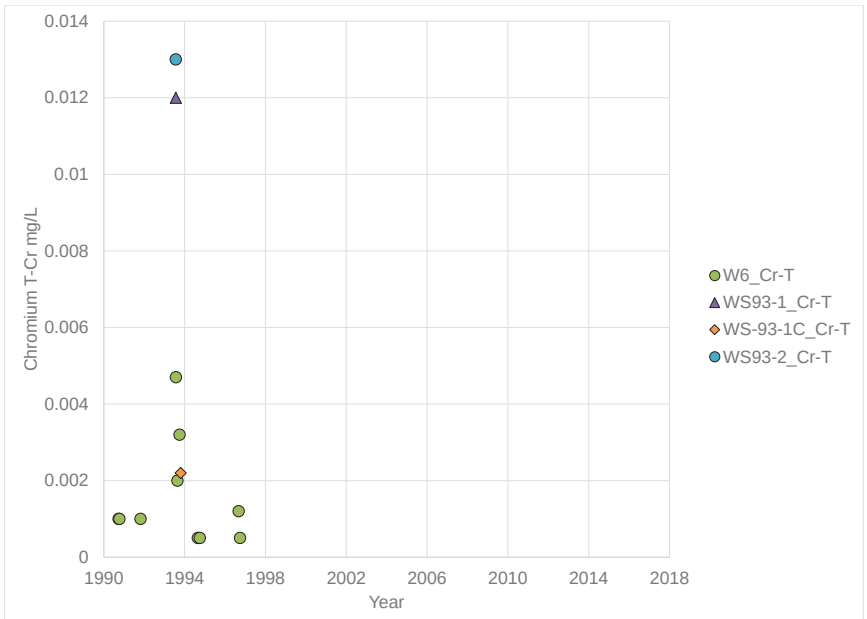


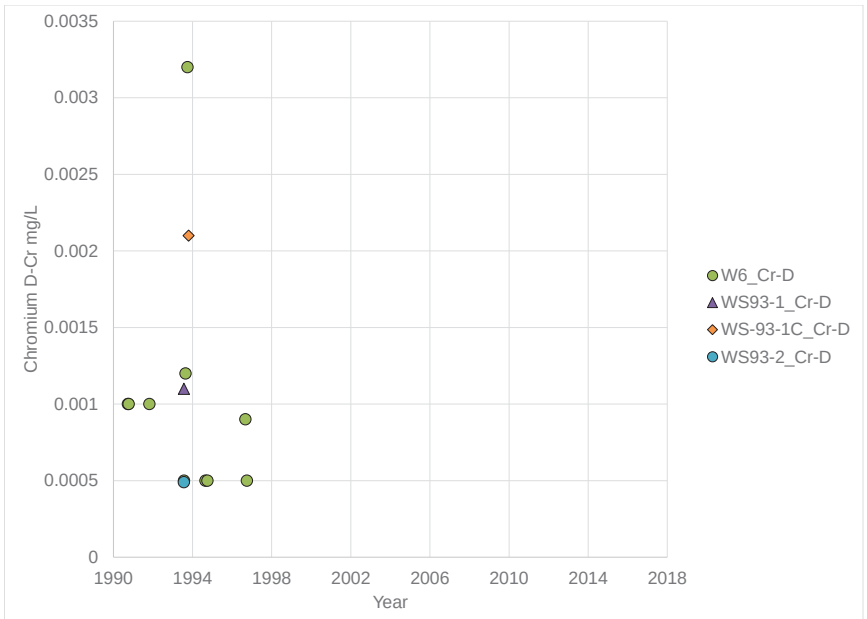


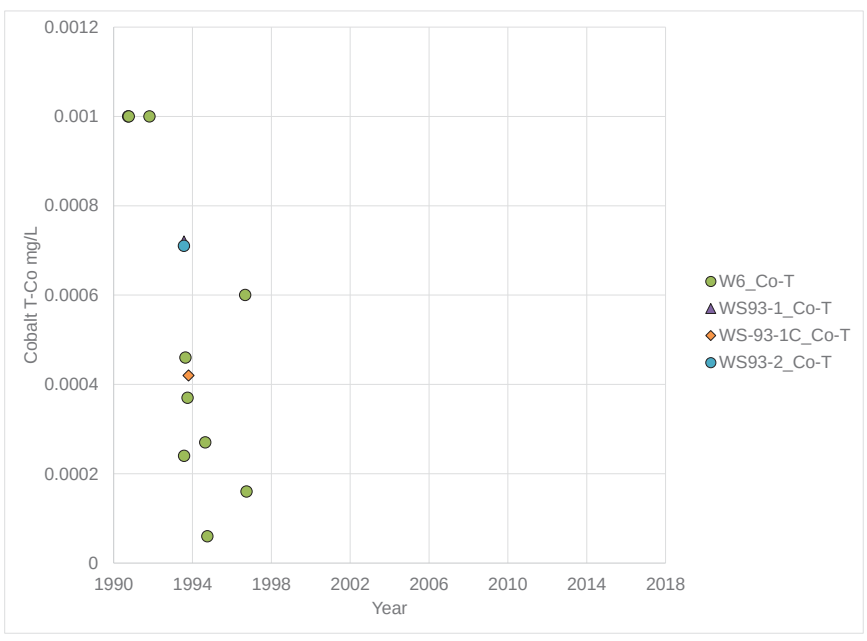
Appendix F - Groundwater Quality Data Plots
Upper Cirque

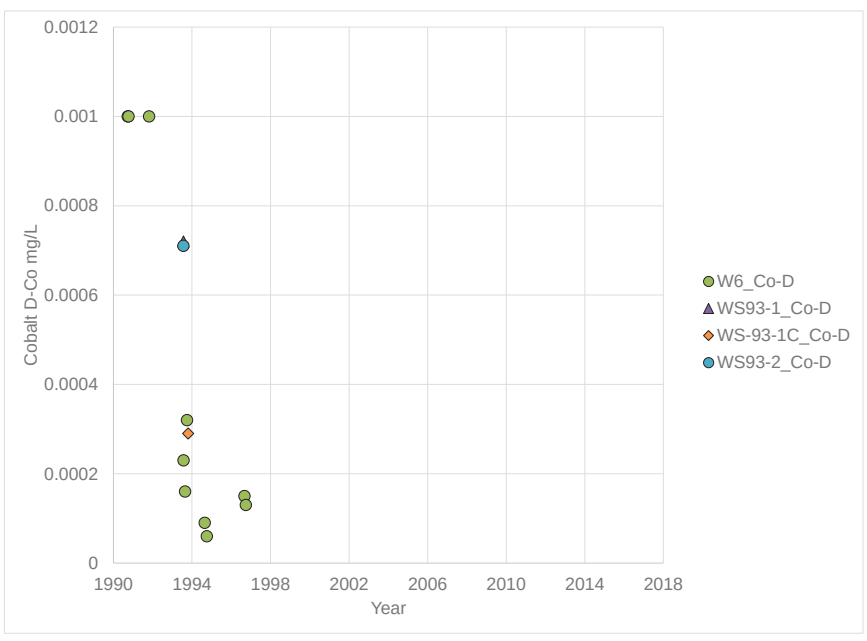


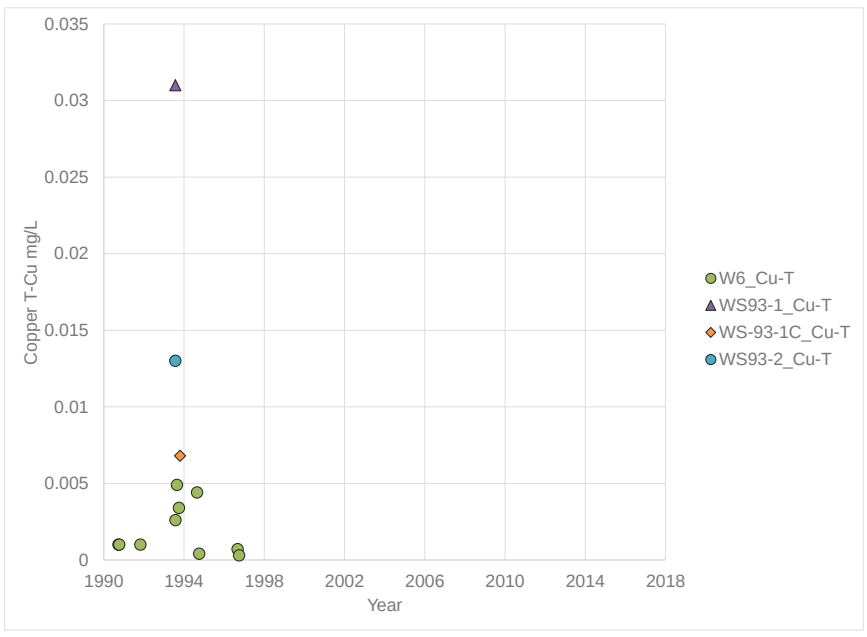


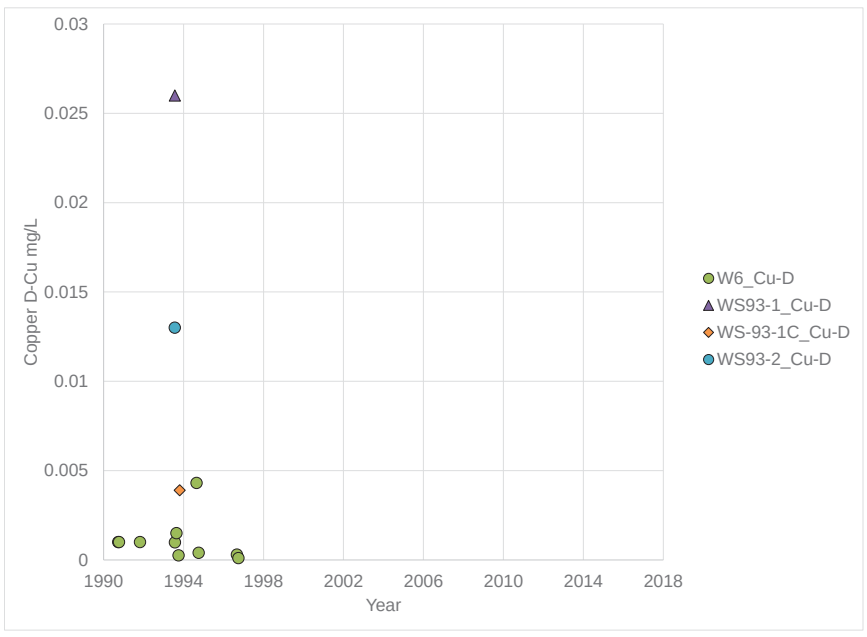




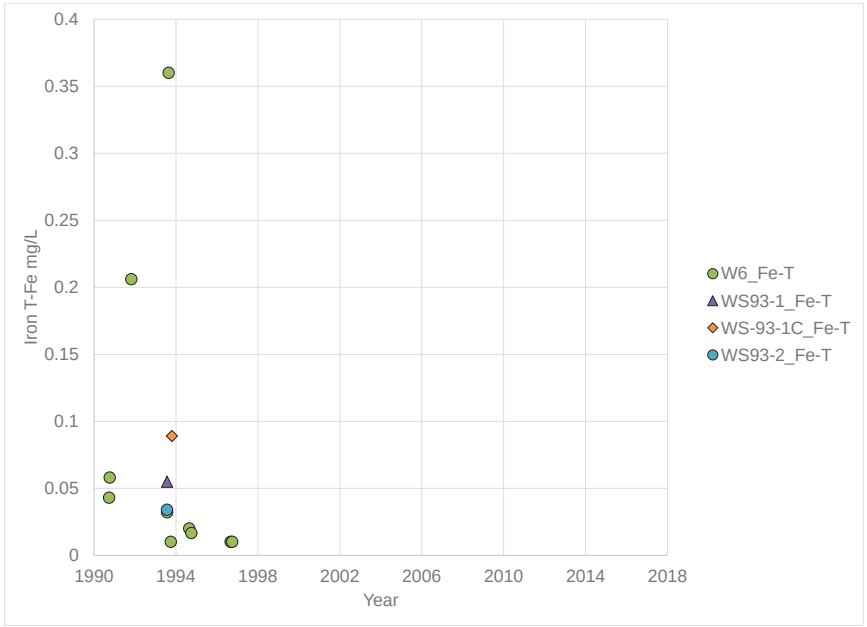


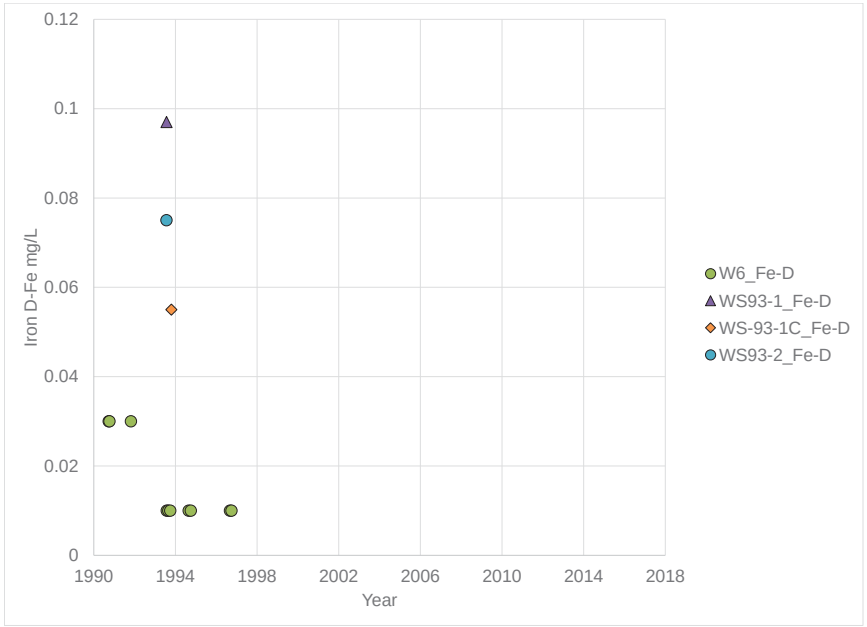


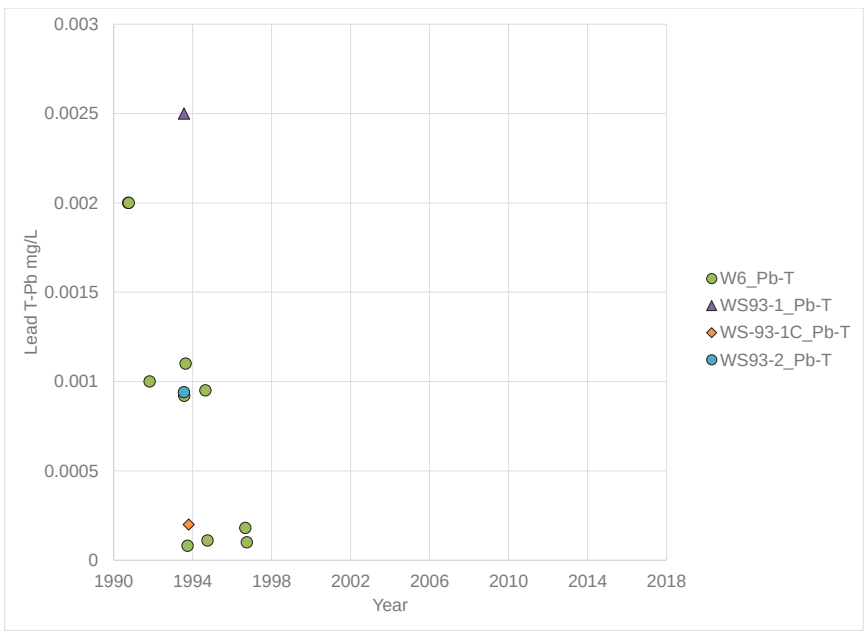


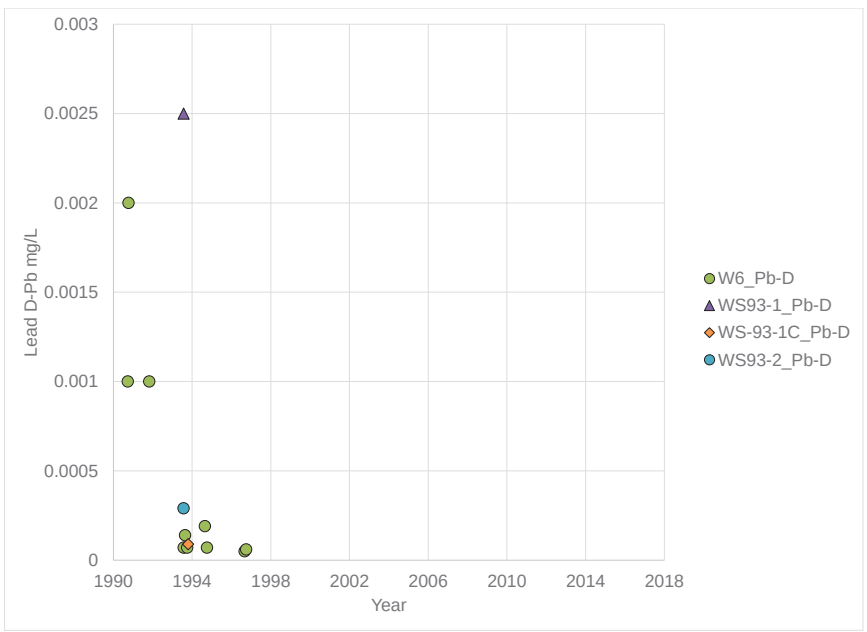


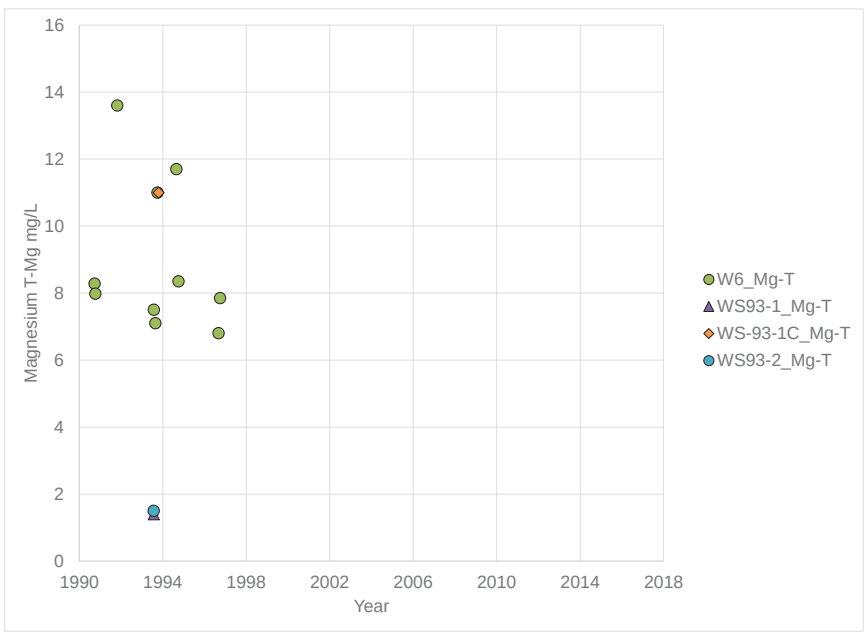
Appendix F - Groundwater Quality Data Plots
Upper Cirque

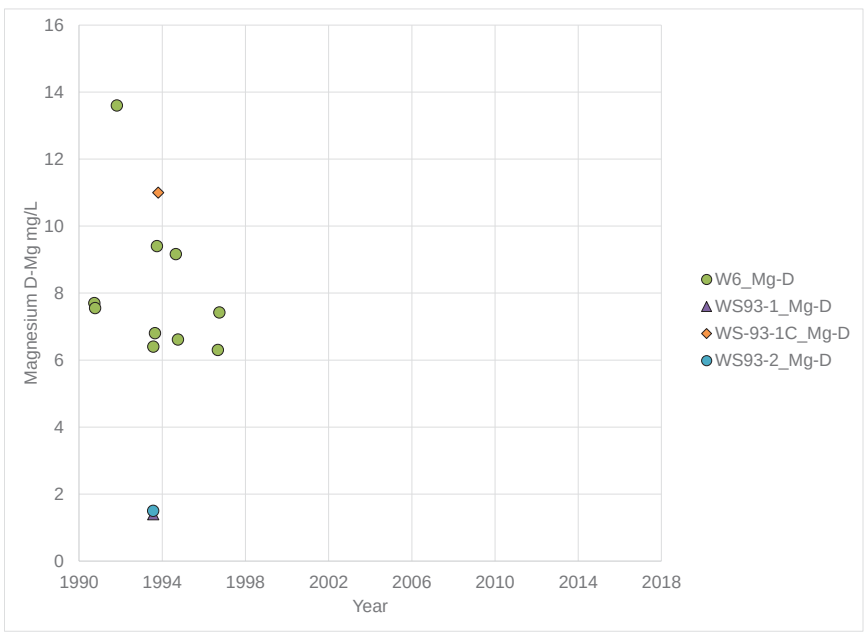


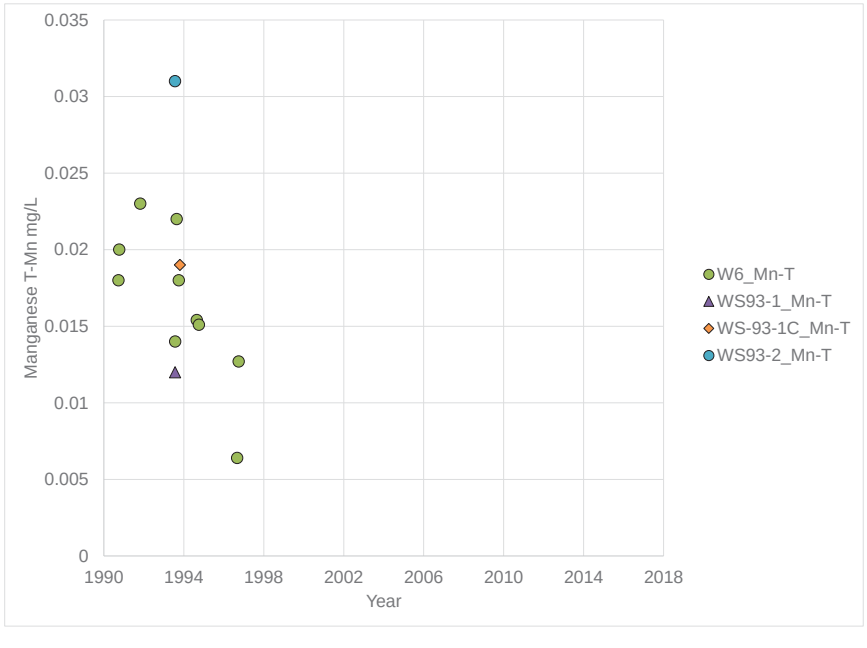


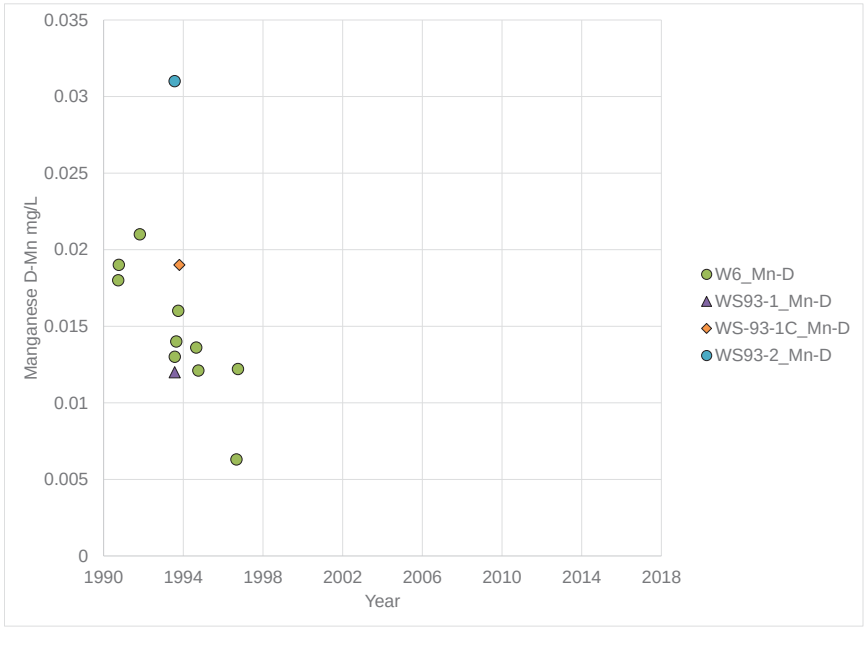




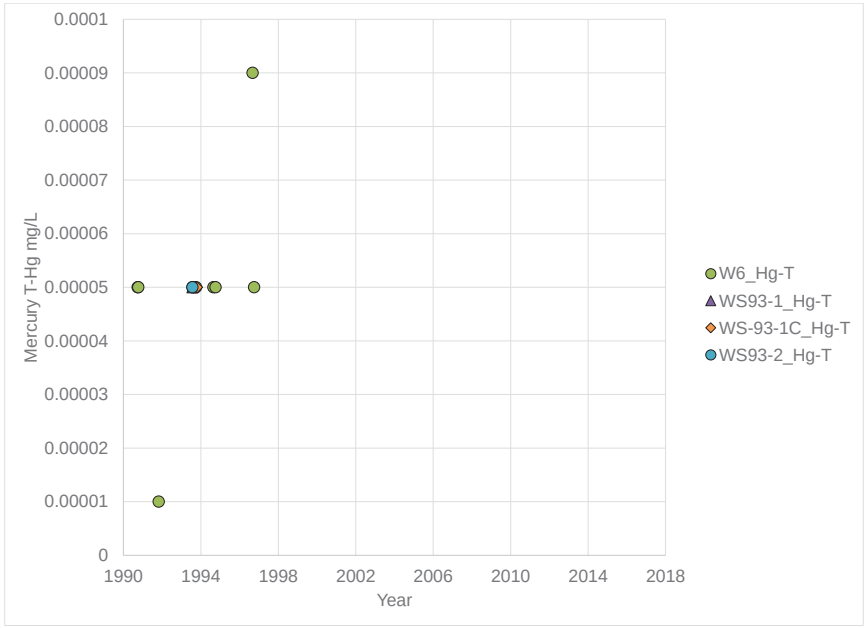


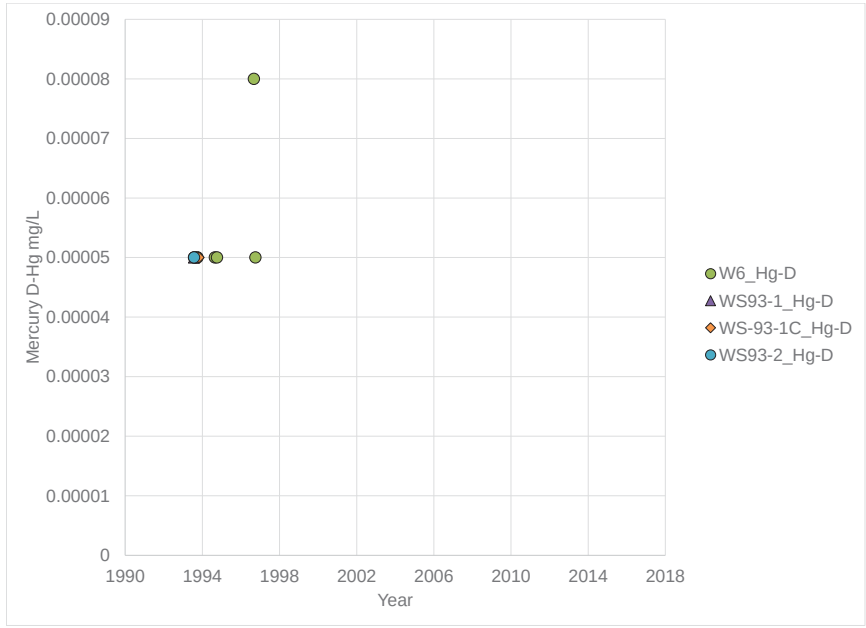


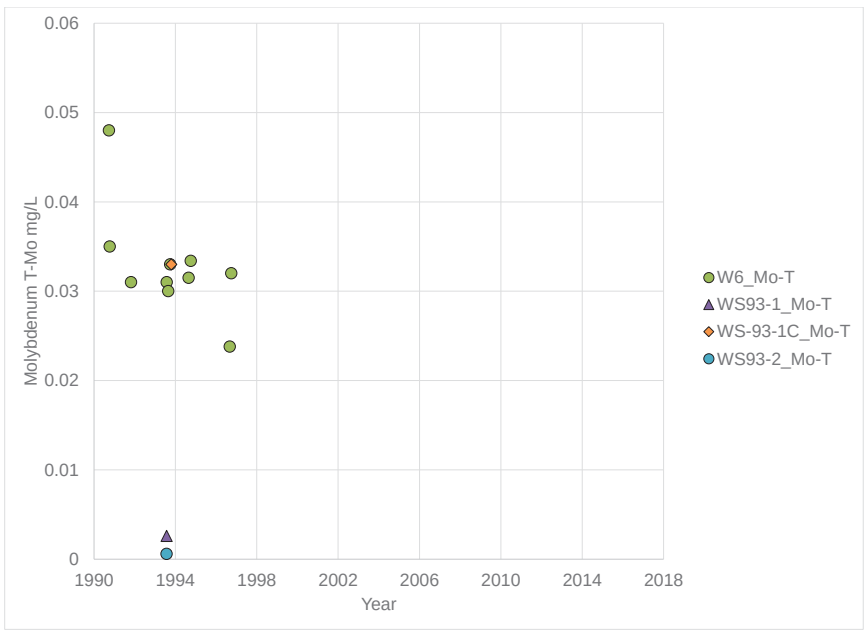


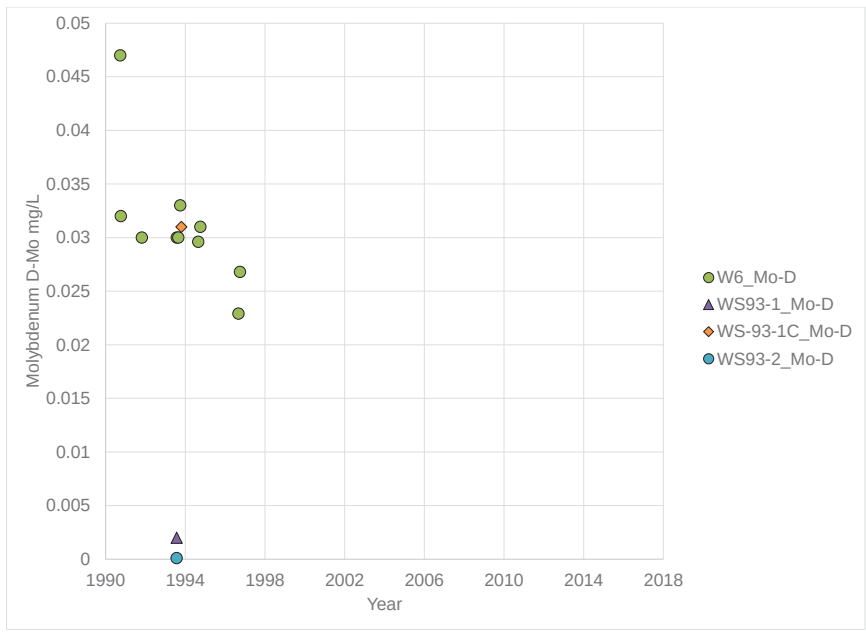


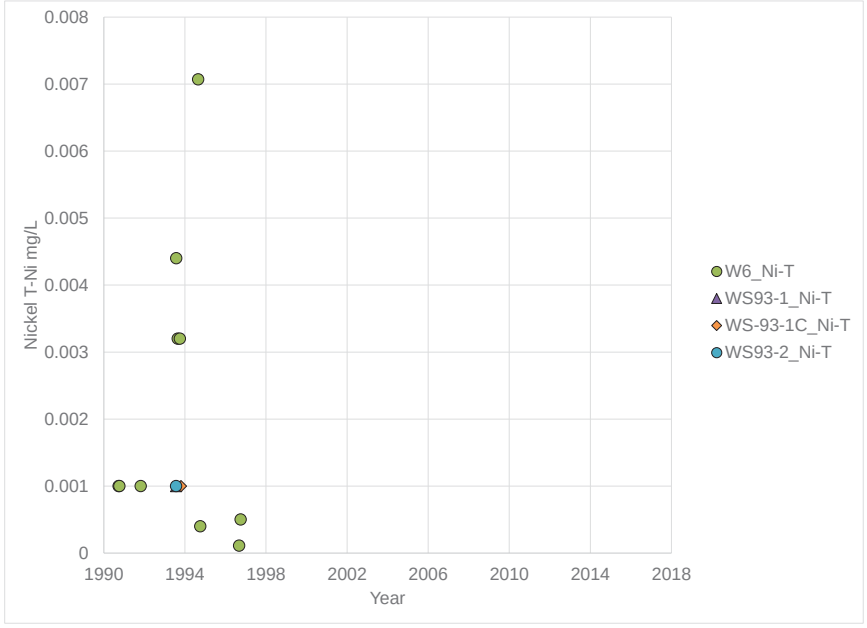
Appendix F - Groundwater Quality Data Plots
Upper Cirque

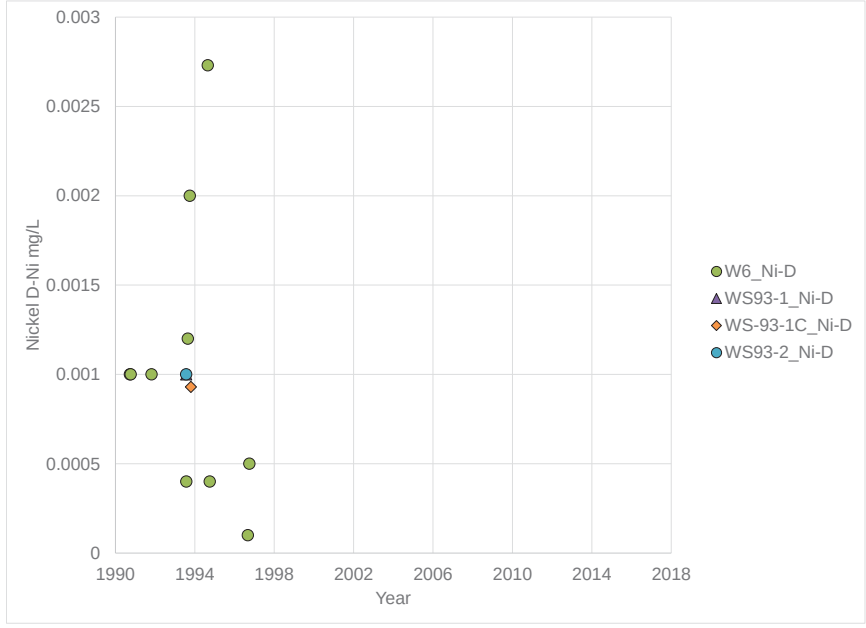


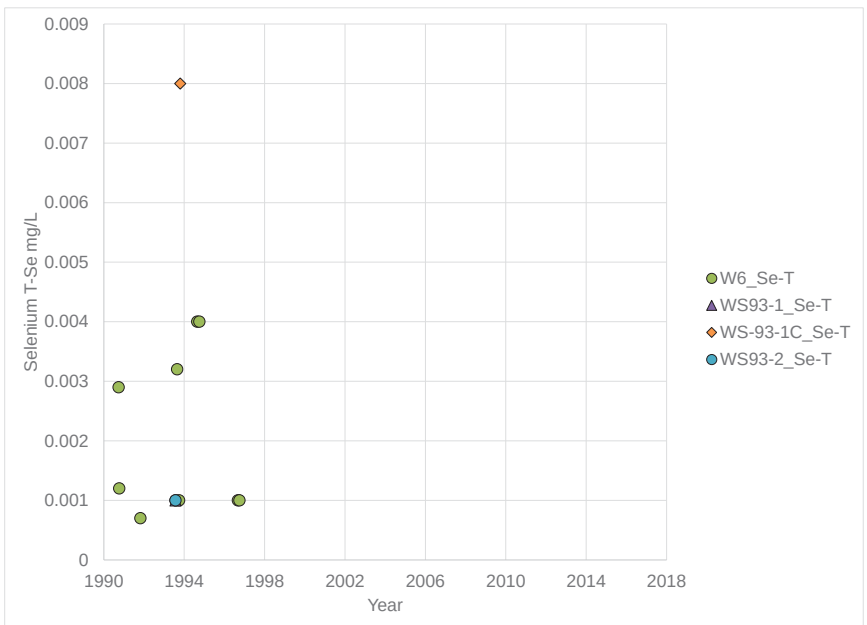


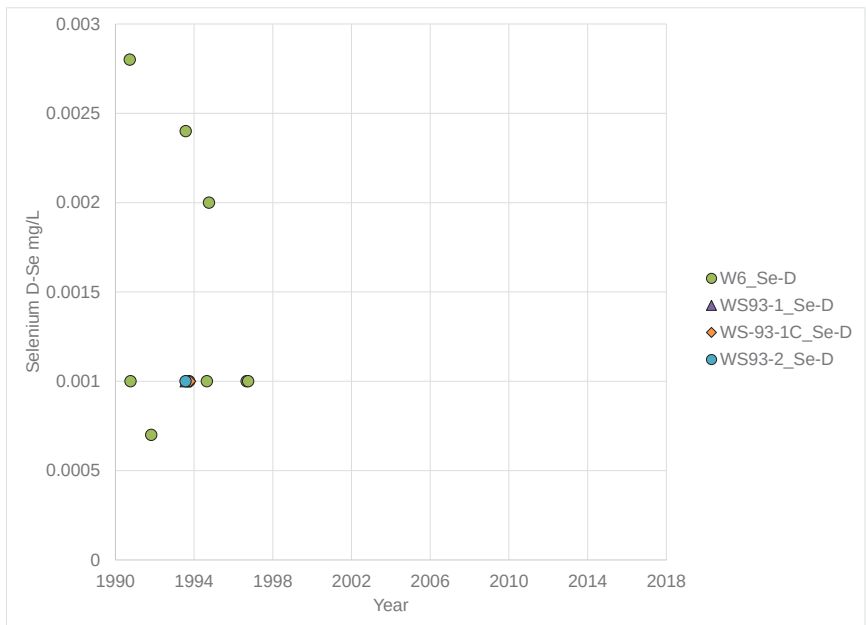




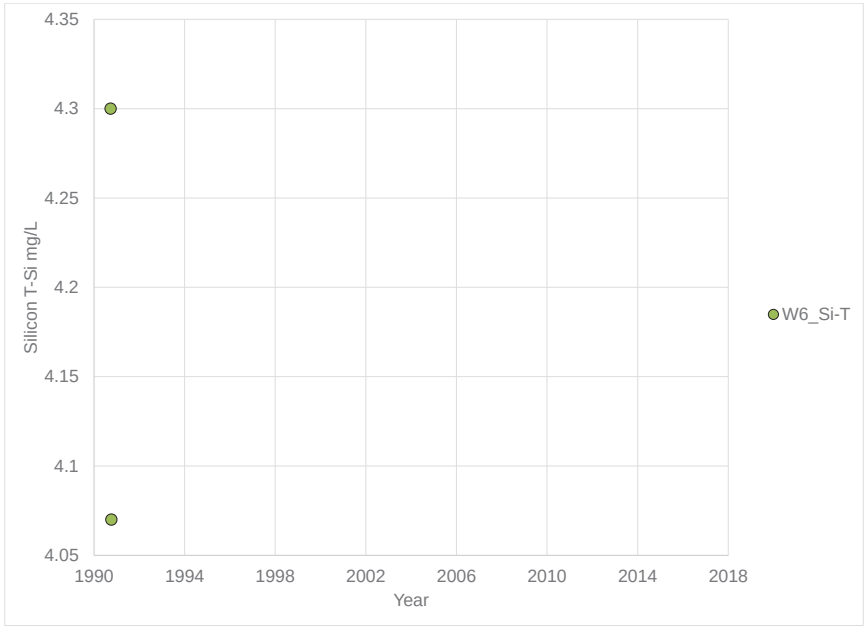


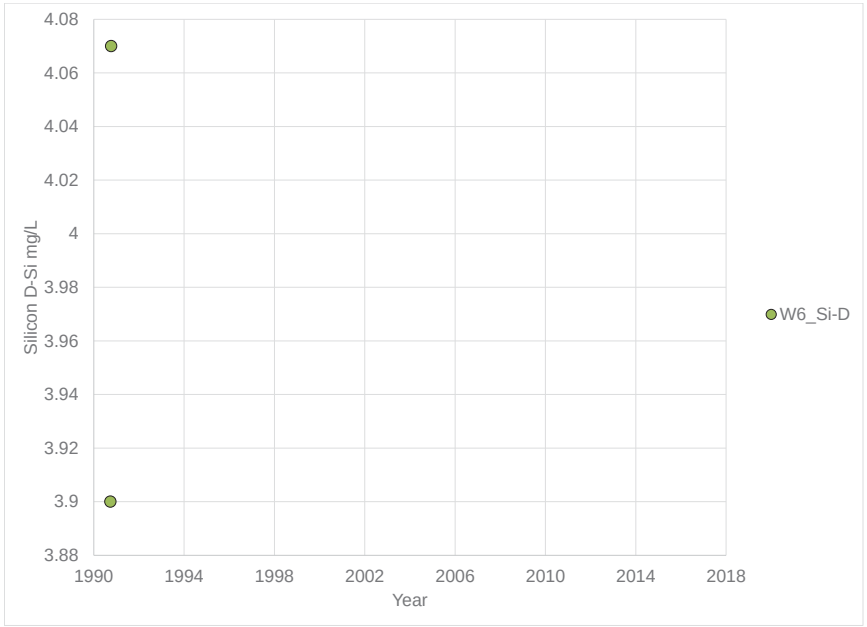


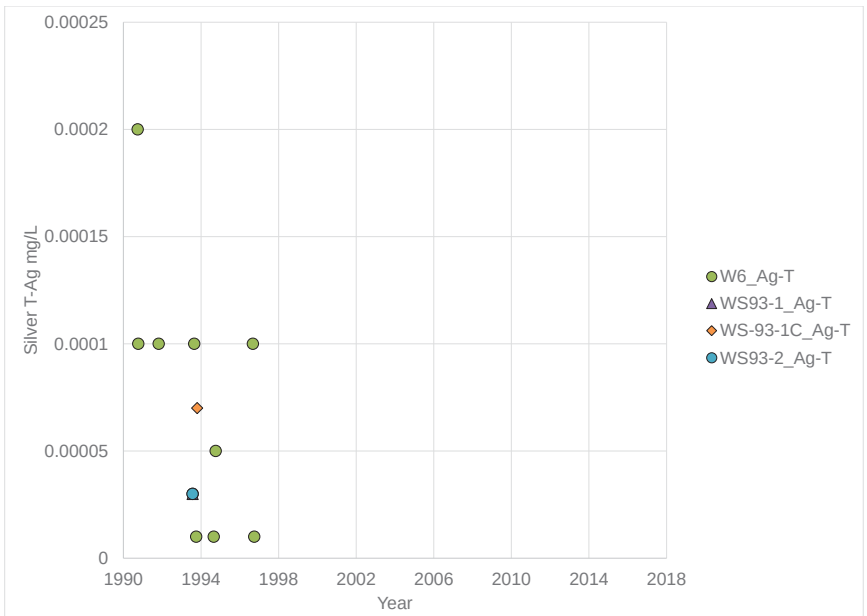


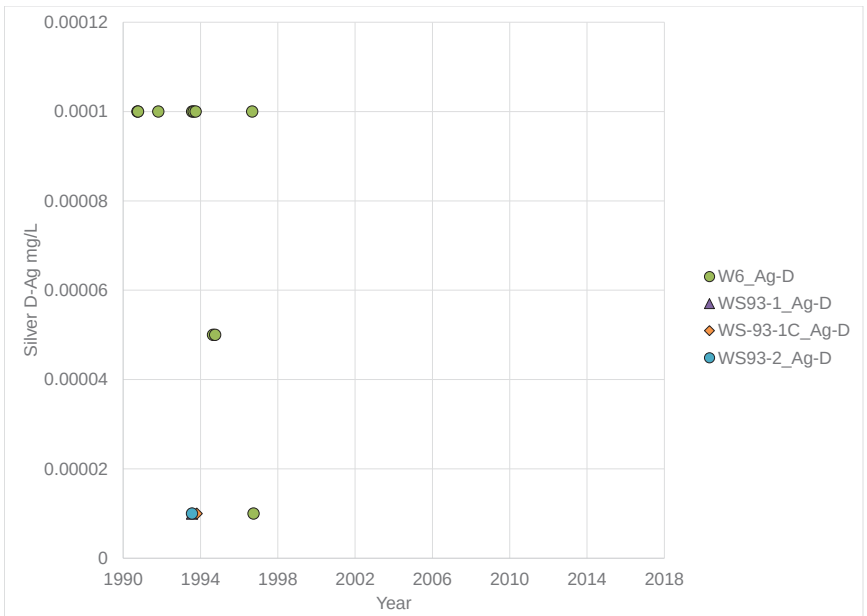


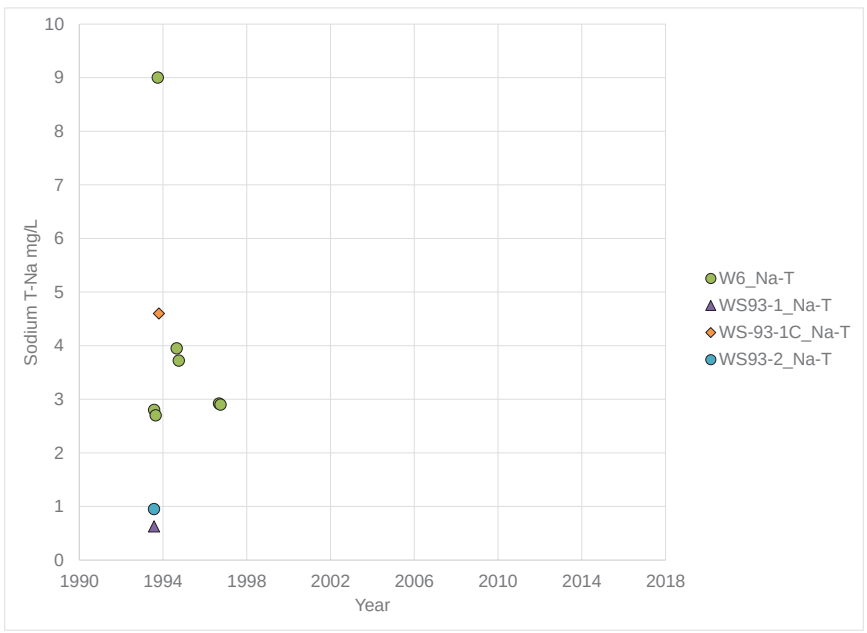
Appendix F - Groundwater Quality Data Plots
Upper Cirque

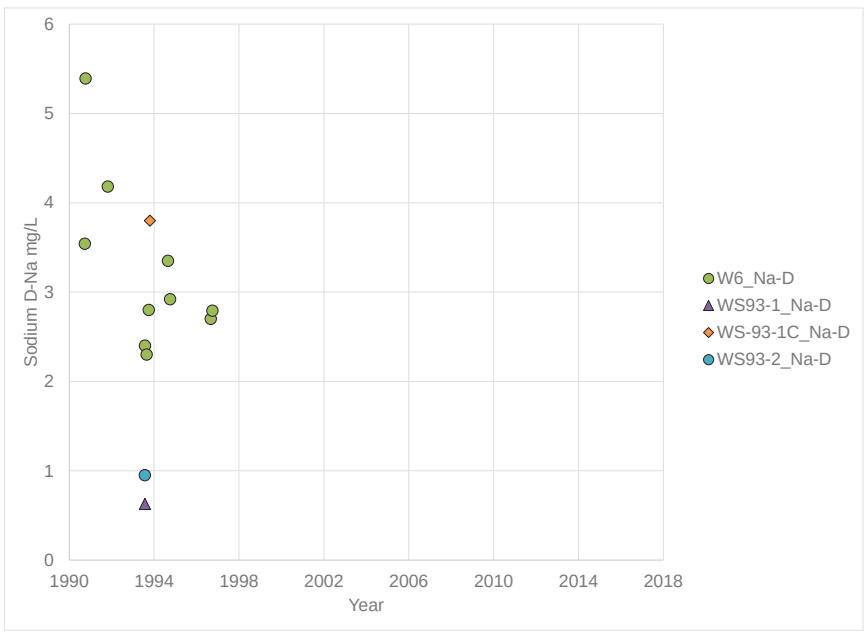


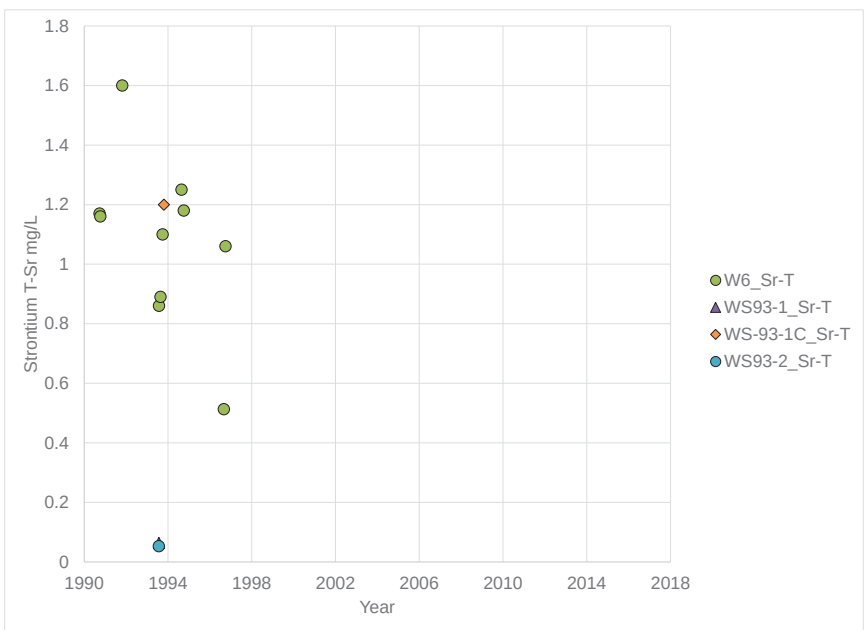


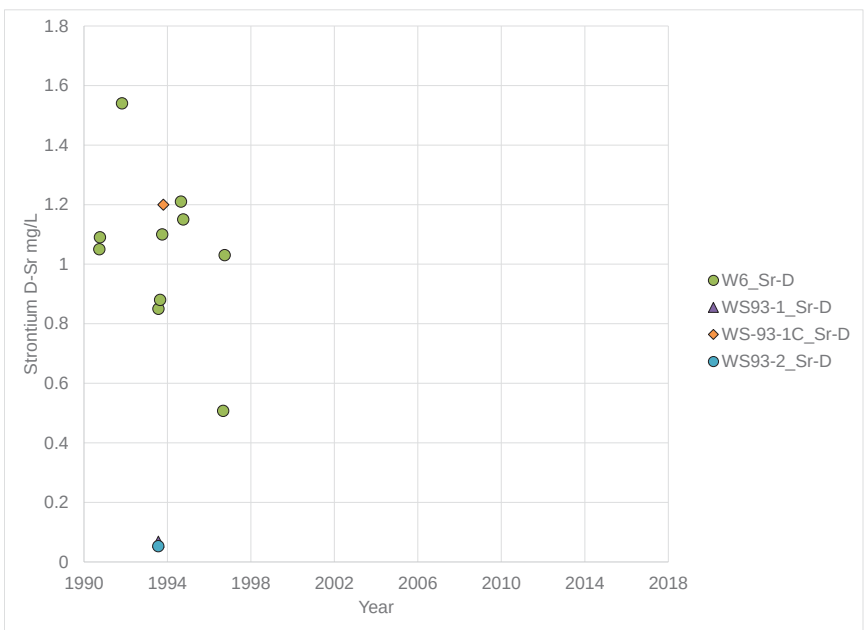




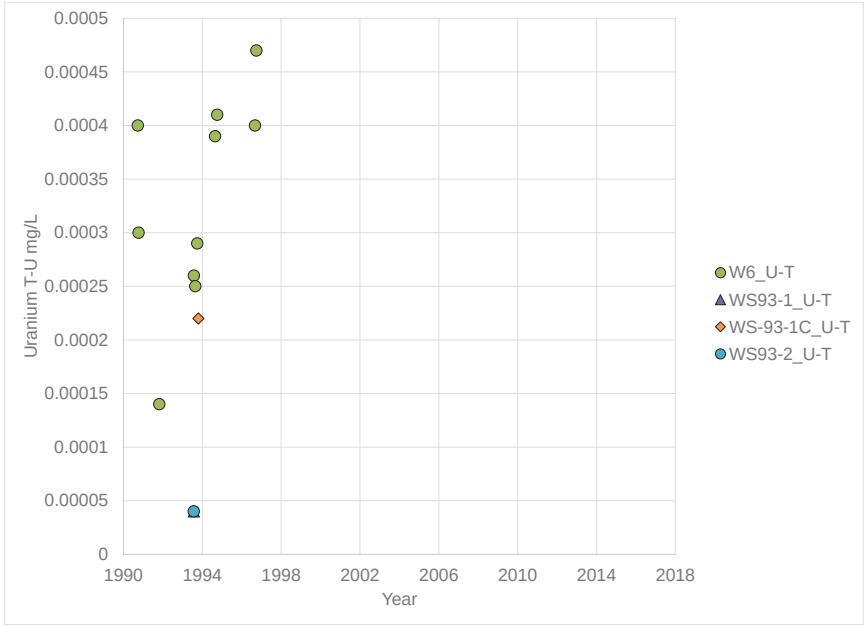


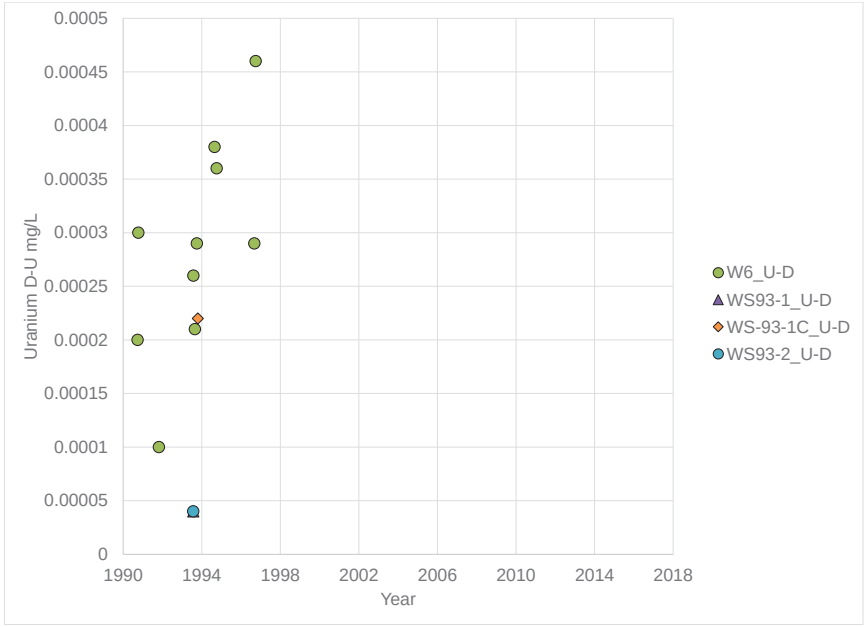


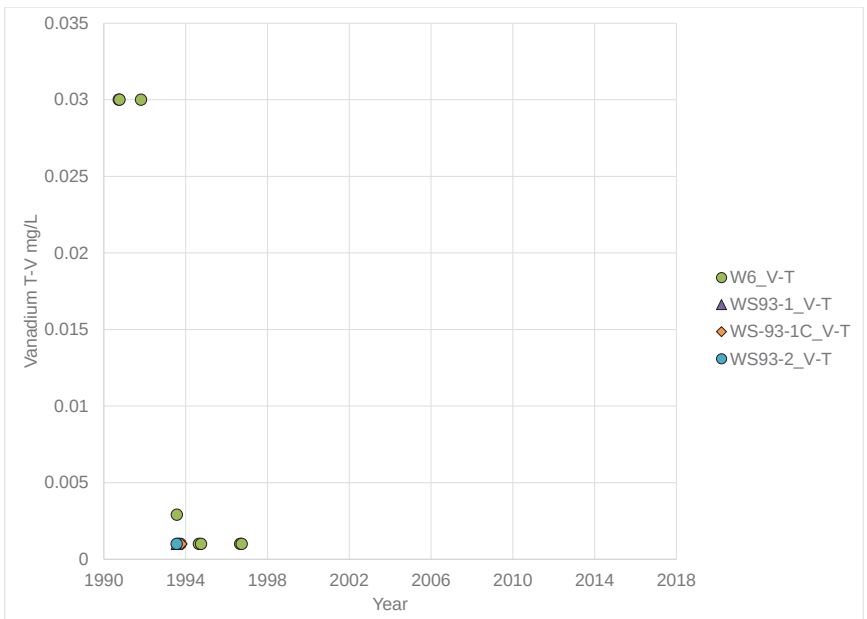


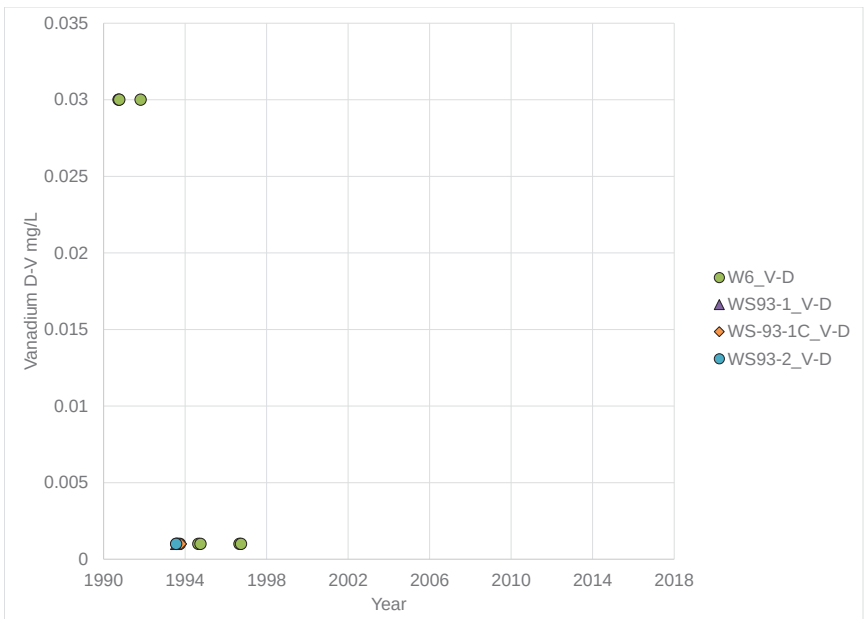


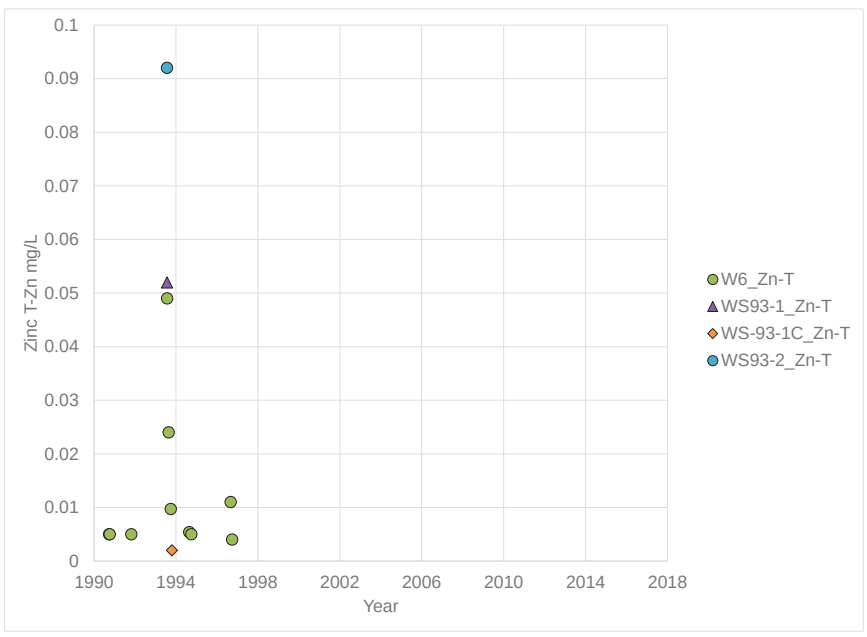
Appendix F - Groundwater Quality Data Plots
Upper Cirque

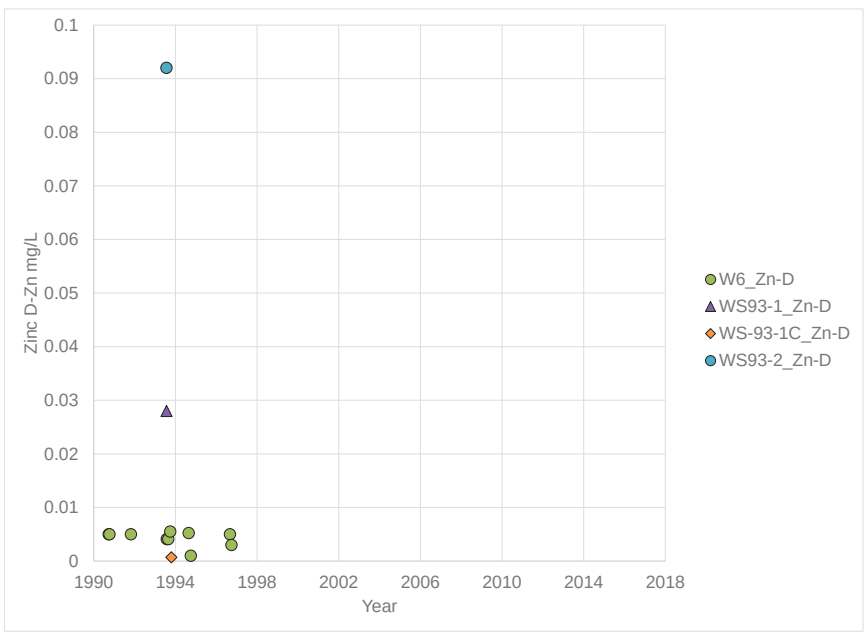






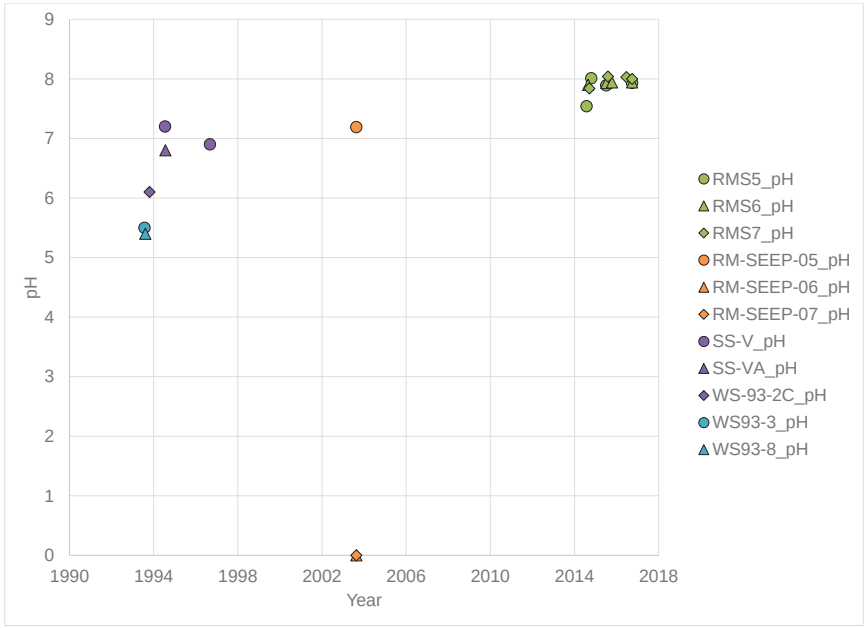


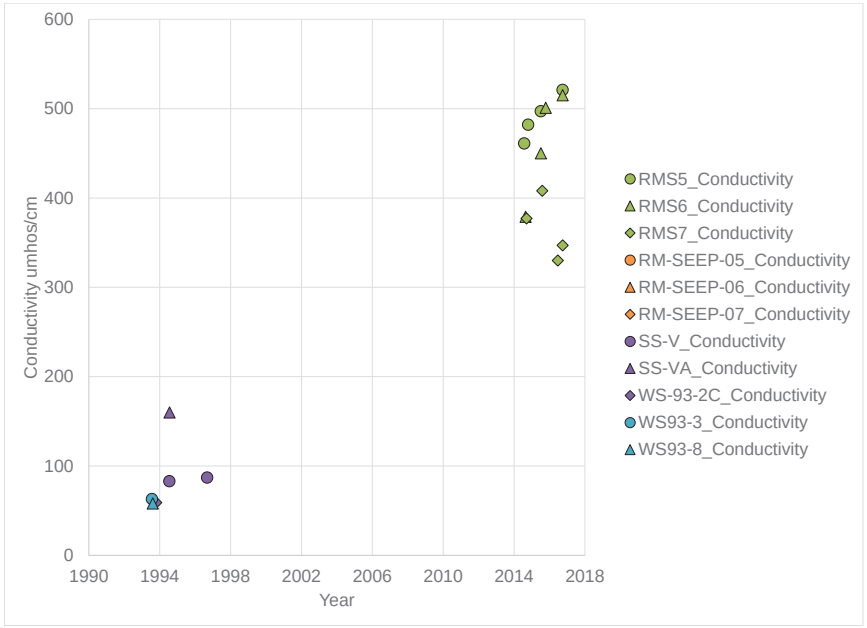


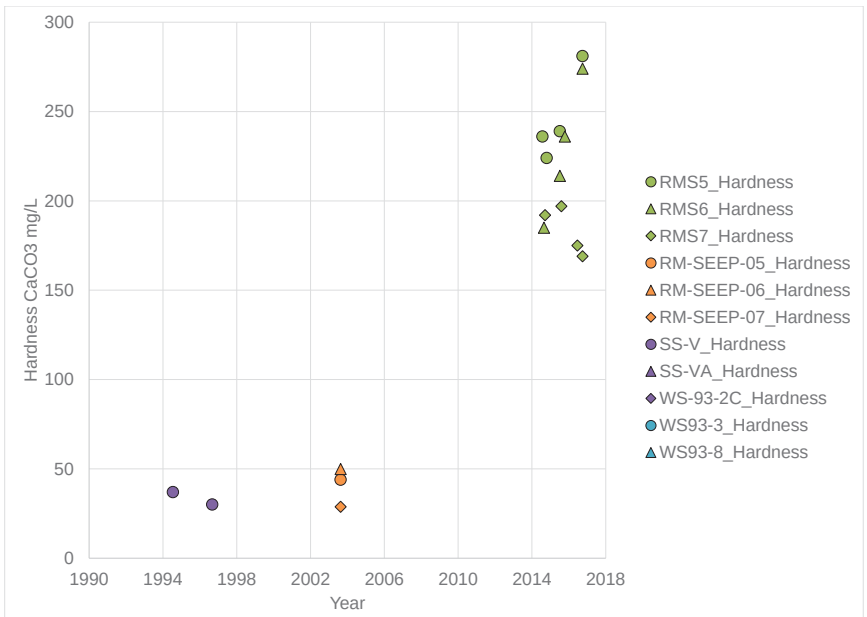


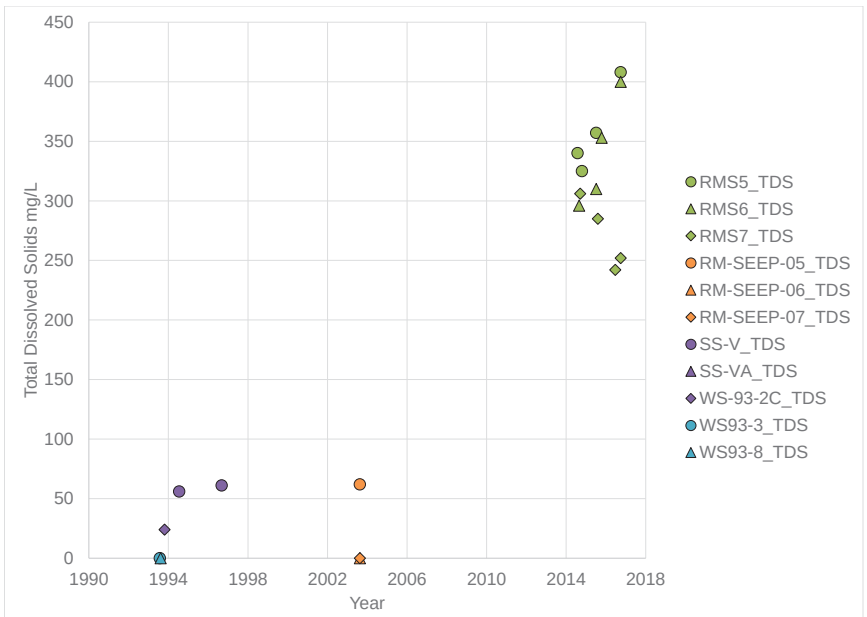
Middle Cirque

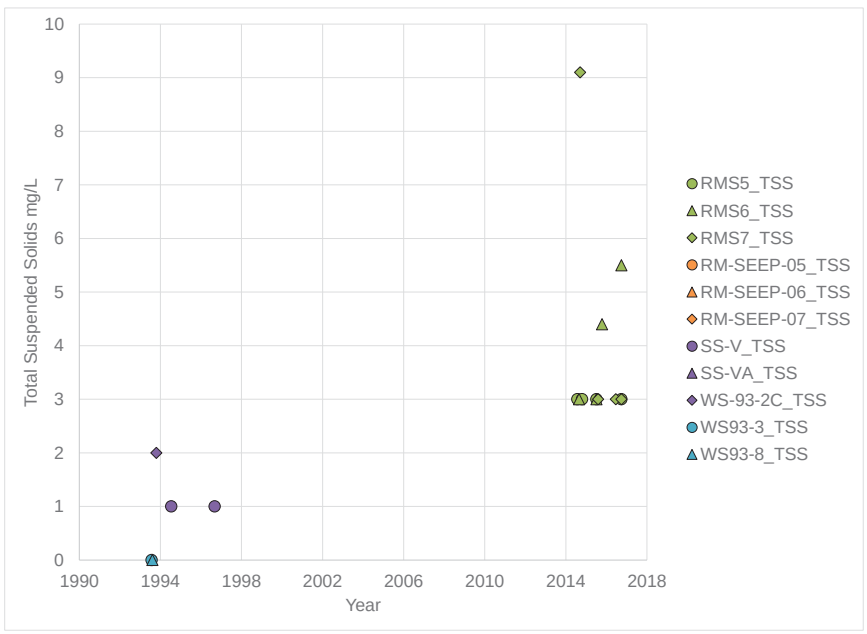
Appendix F - Groundwater Quality Data Plots
Middle Cirque

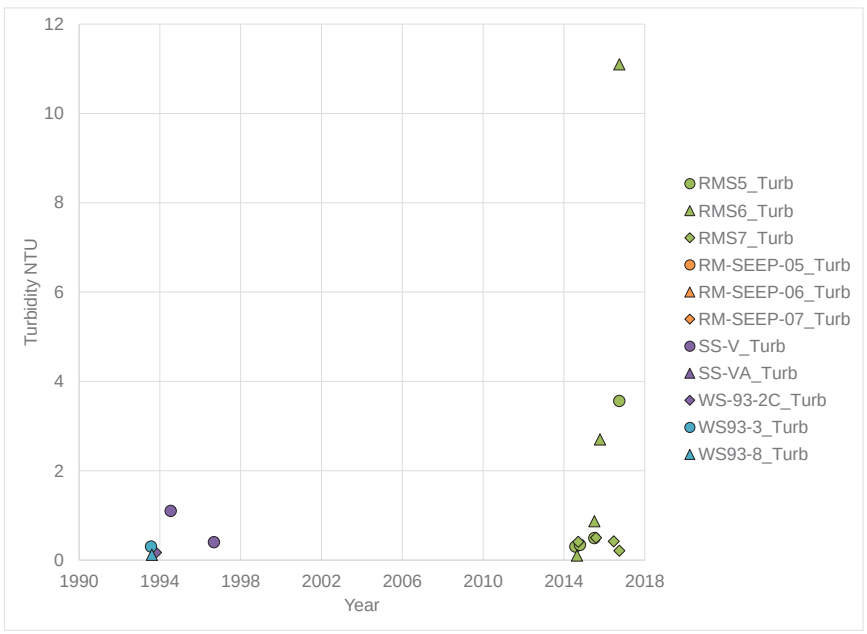


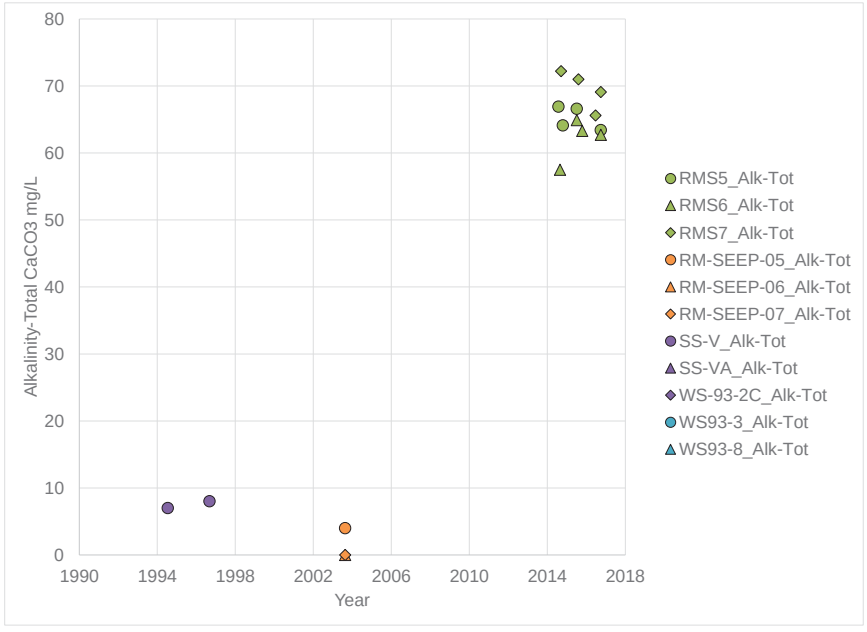


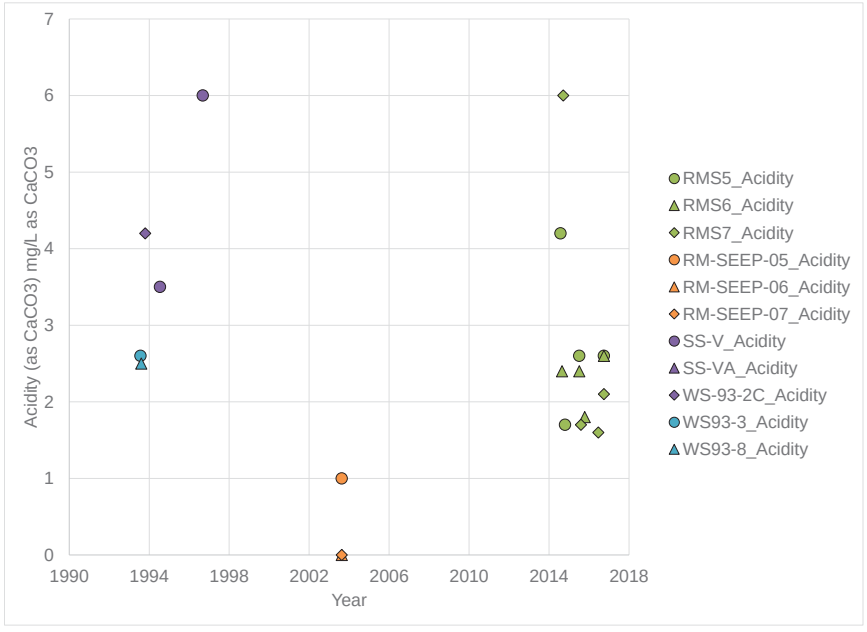




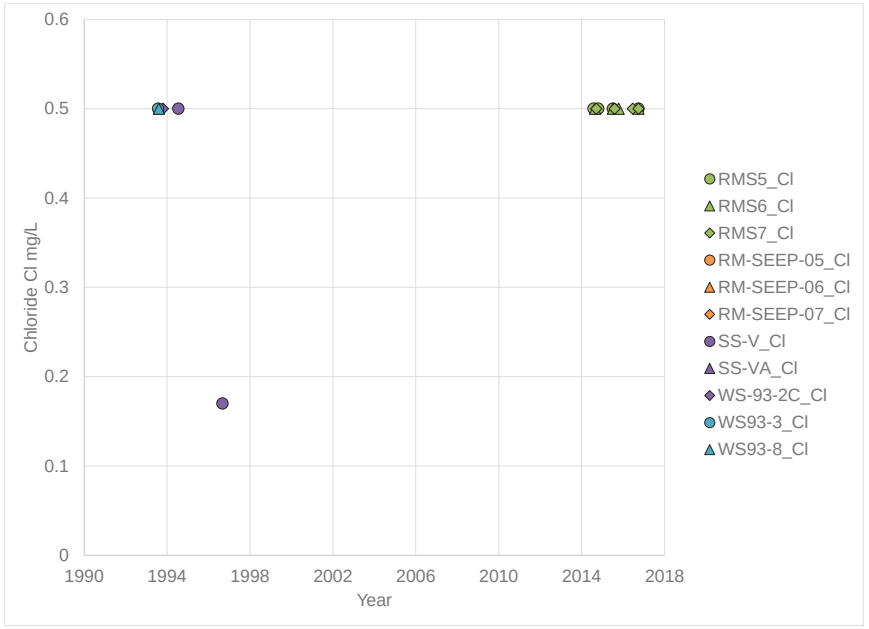


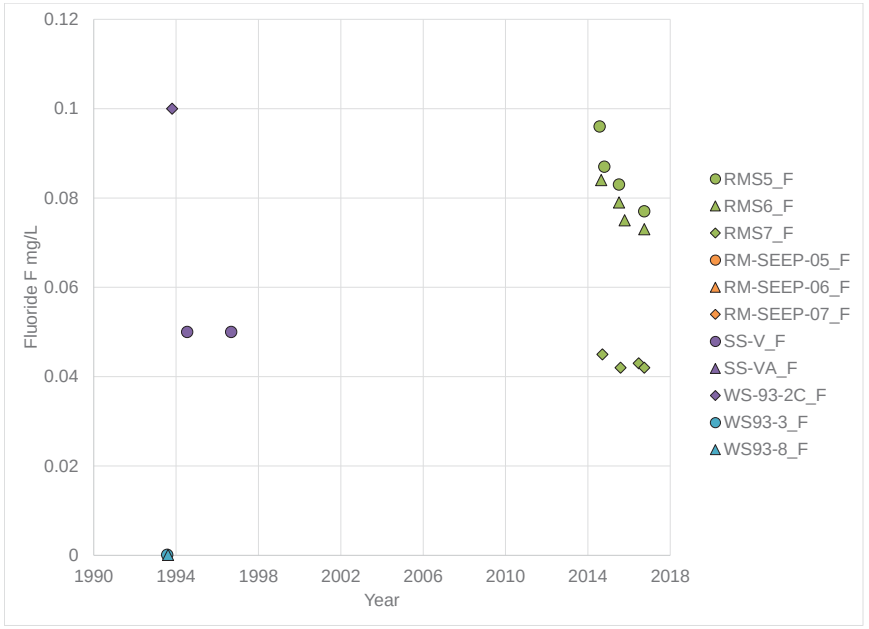


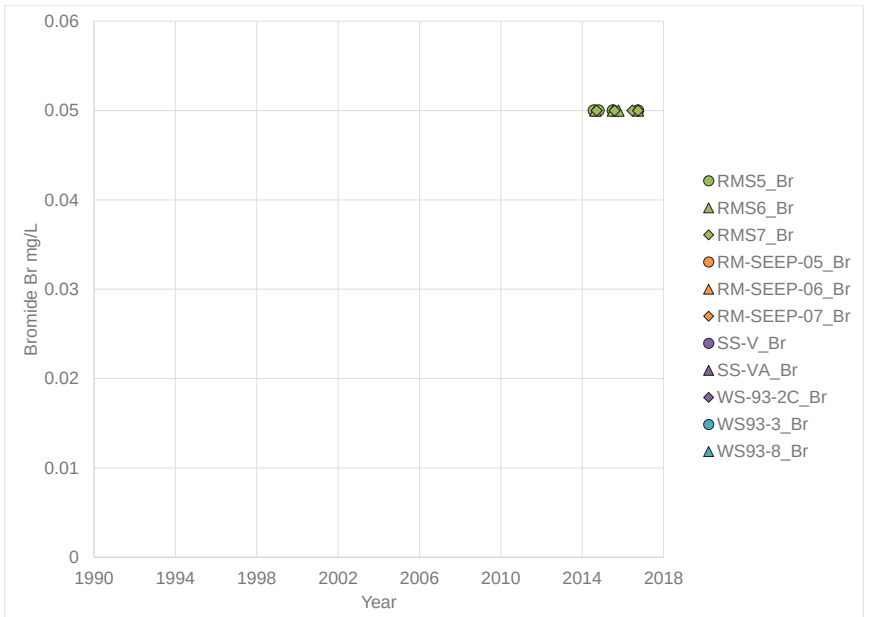


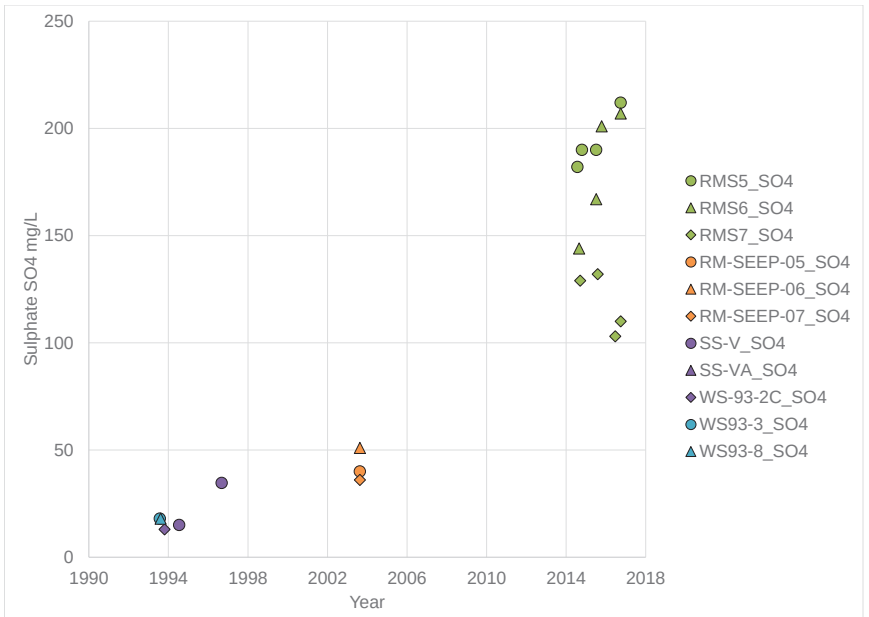


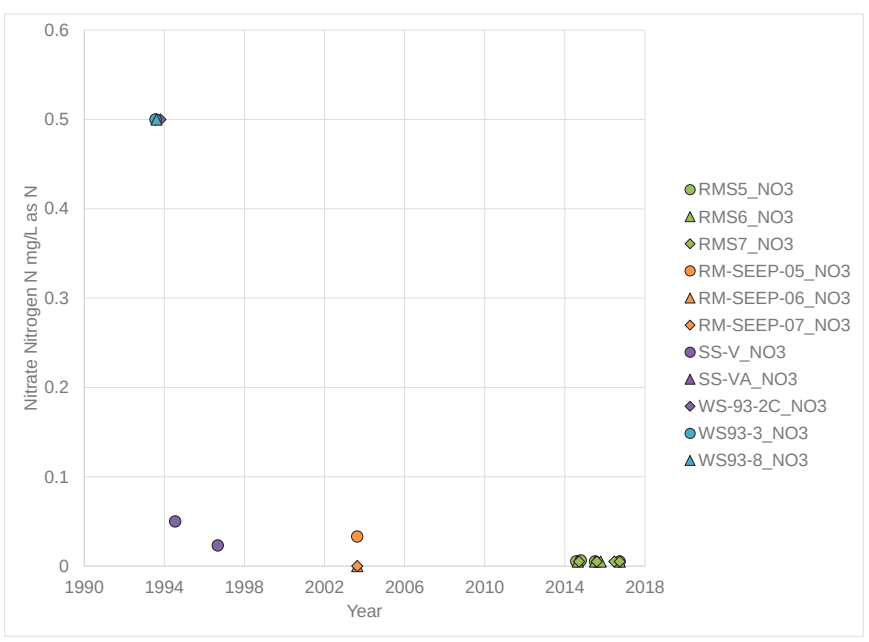
Appendix F - Groundwater Quality Data Plots
Middle Cirque

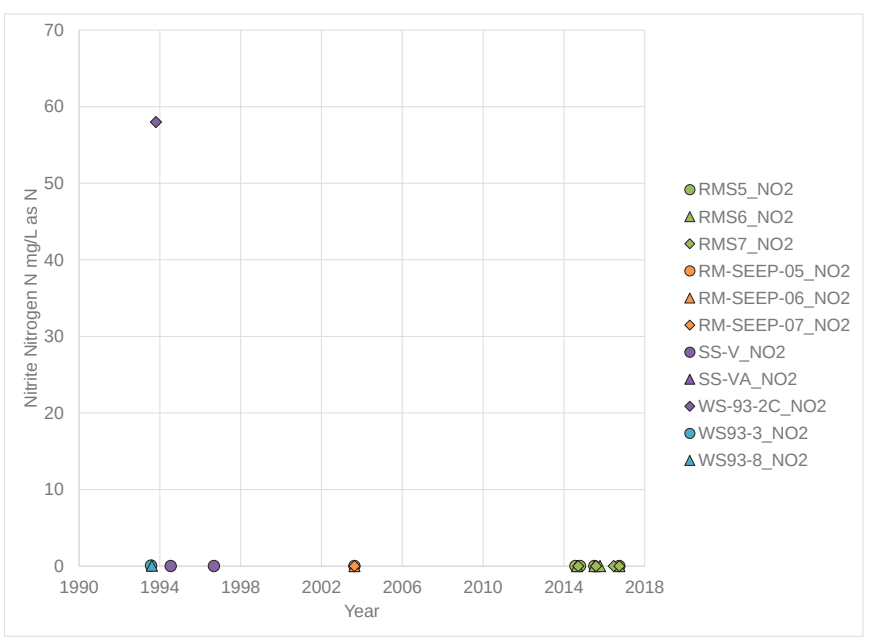


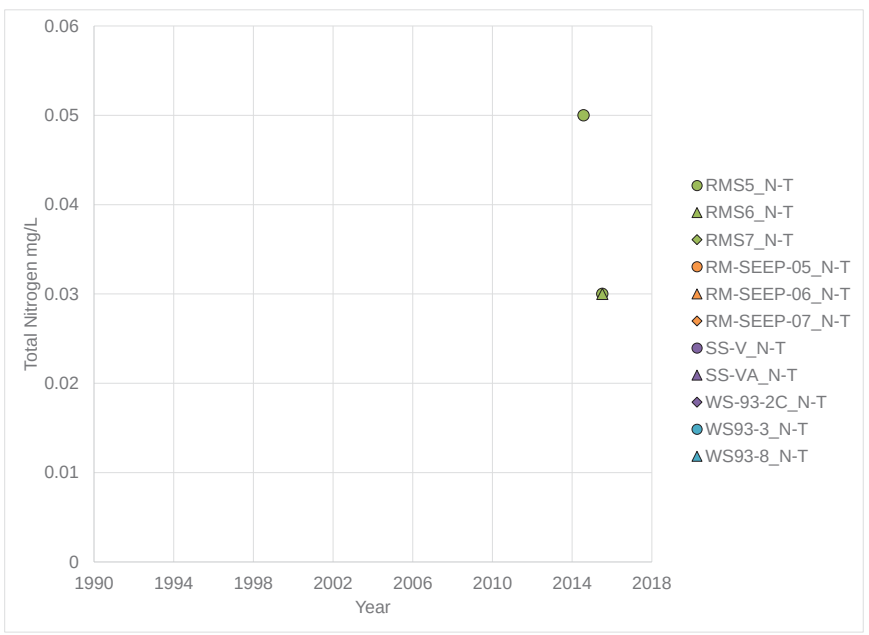


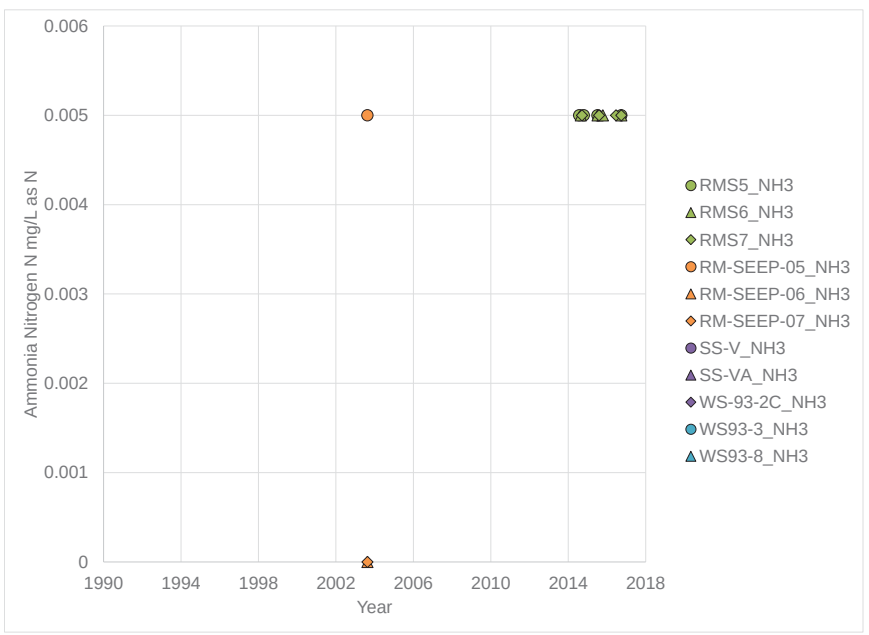




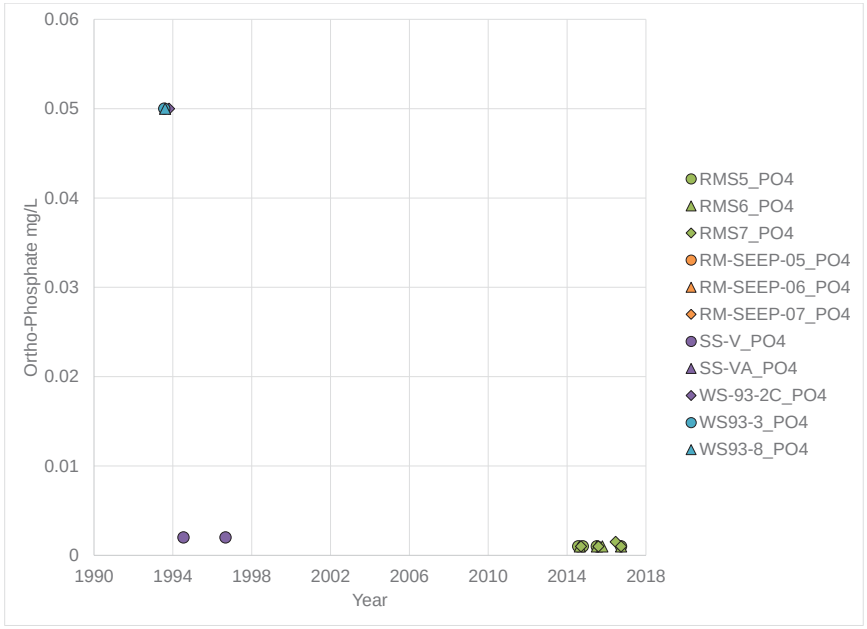


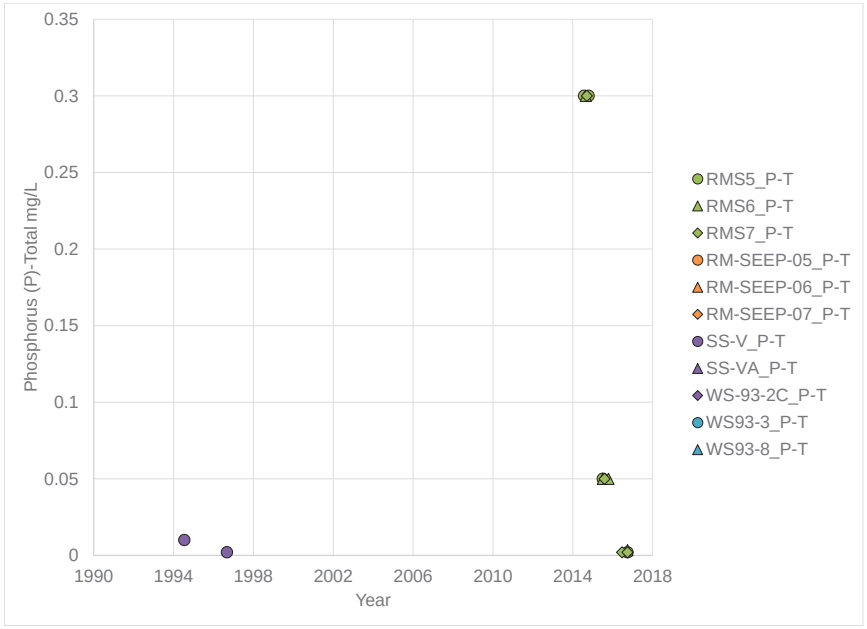


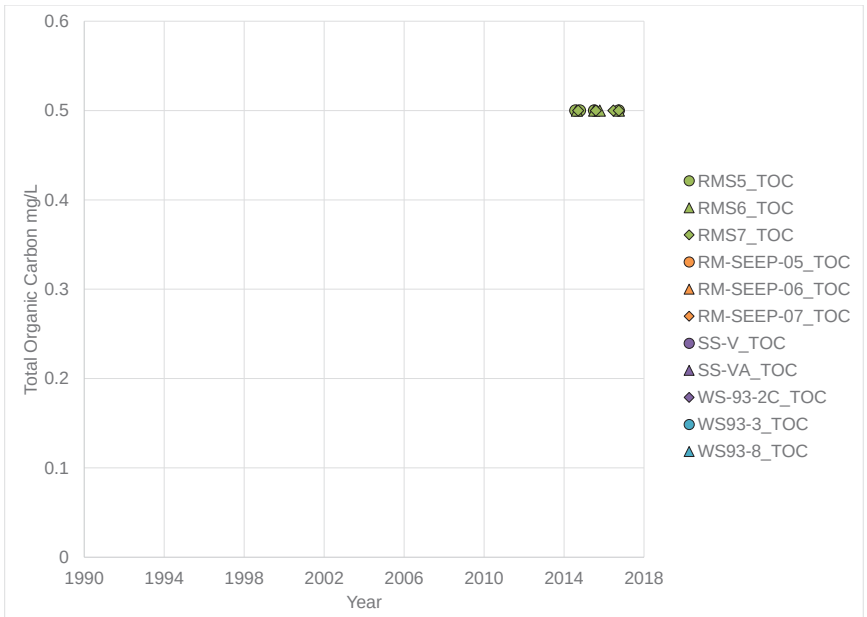


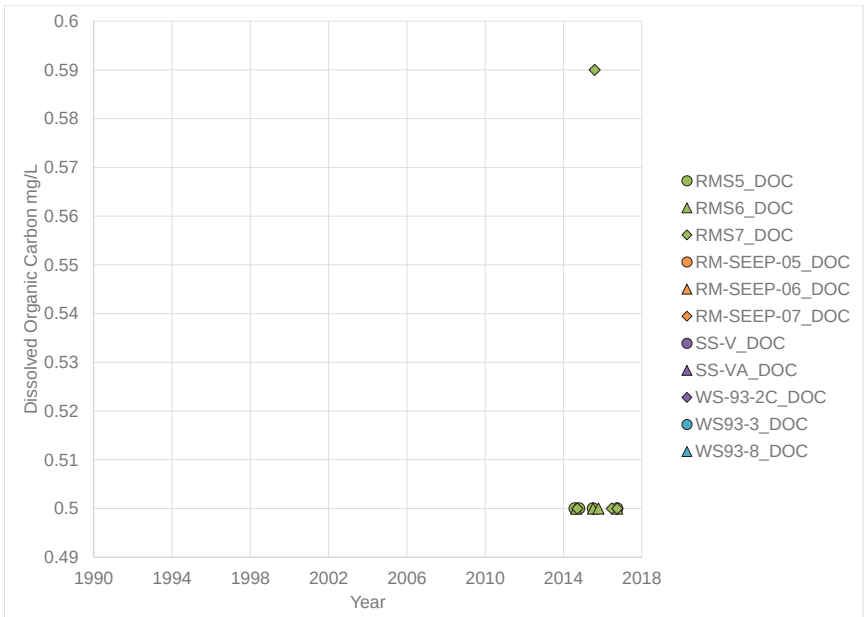


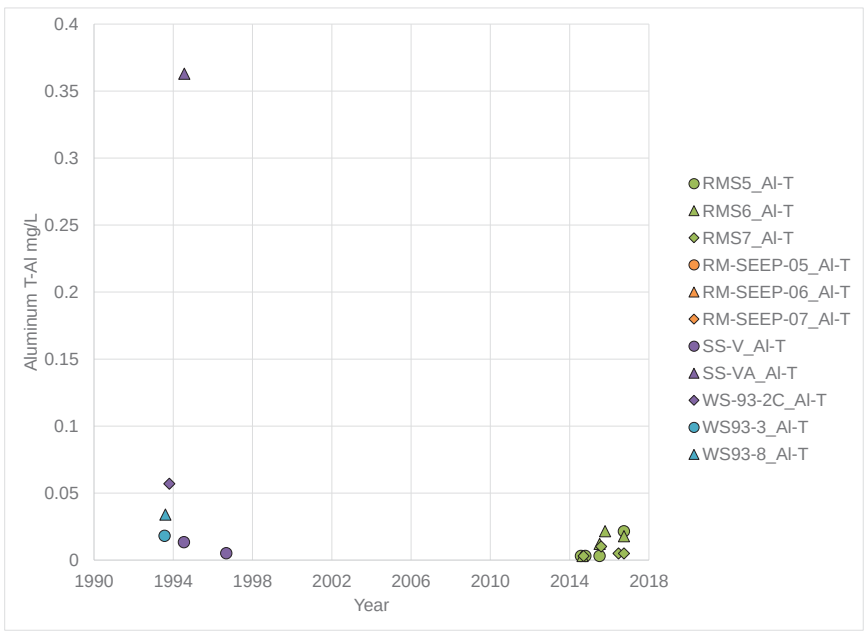
Appendix F - Groundwater Quality Data Plots
Middle Cirque

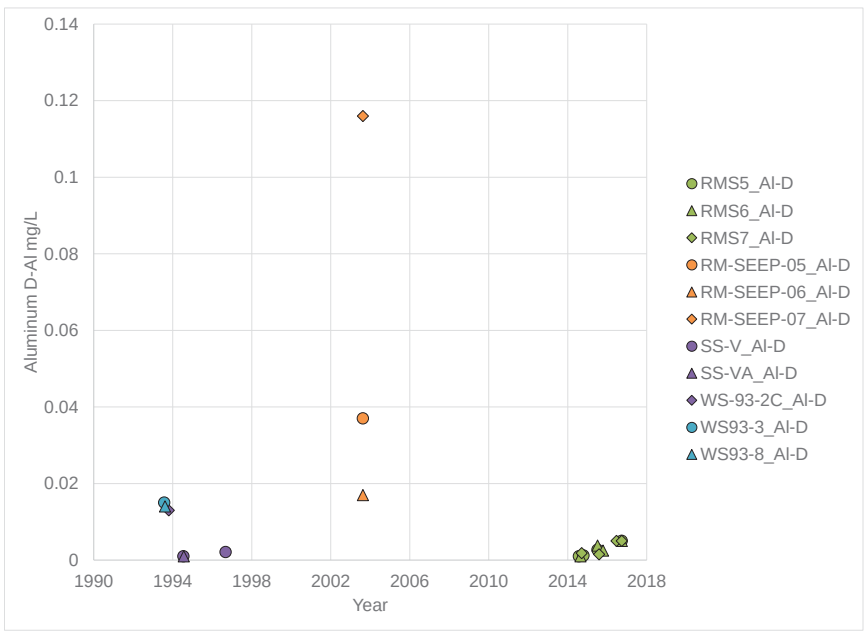


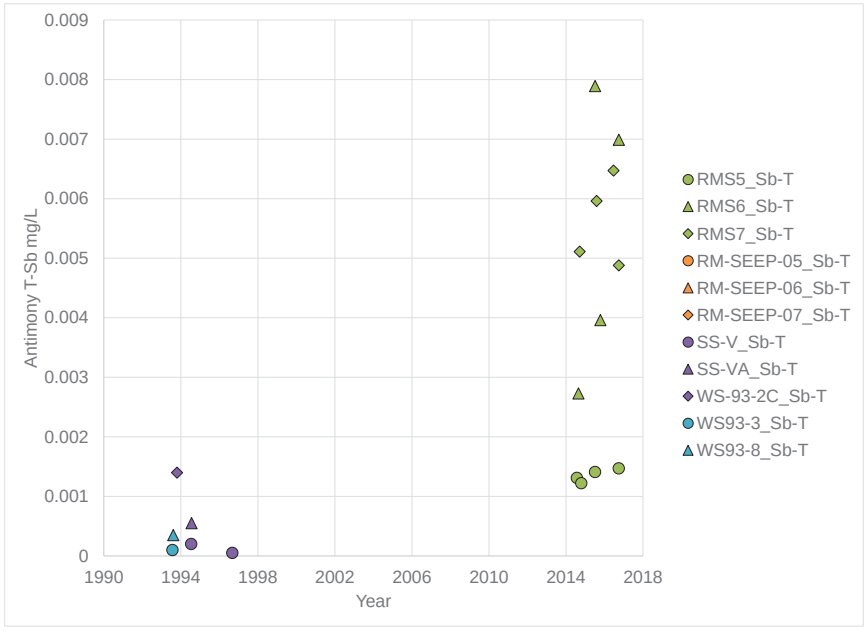


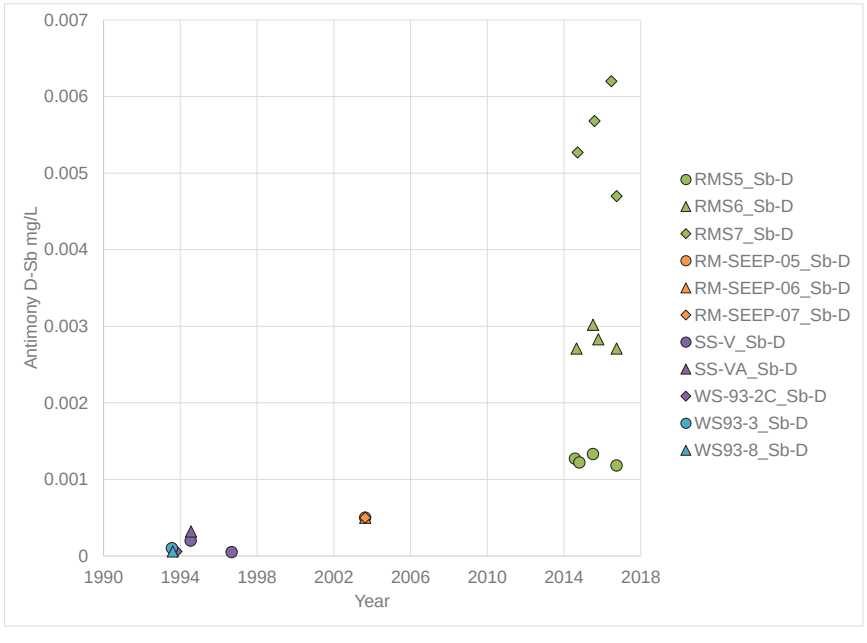




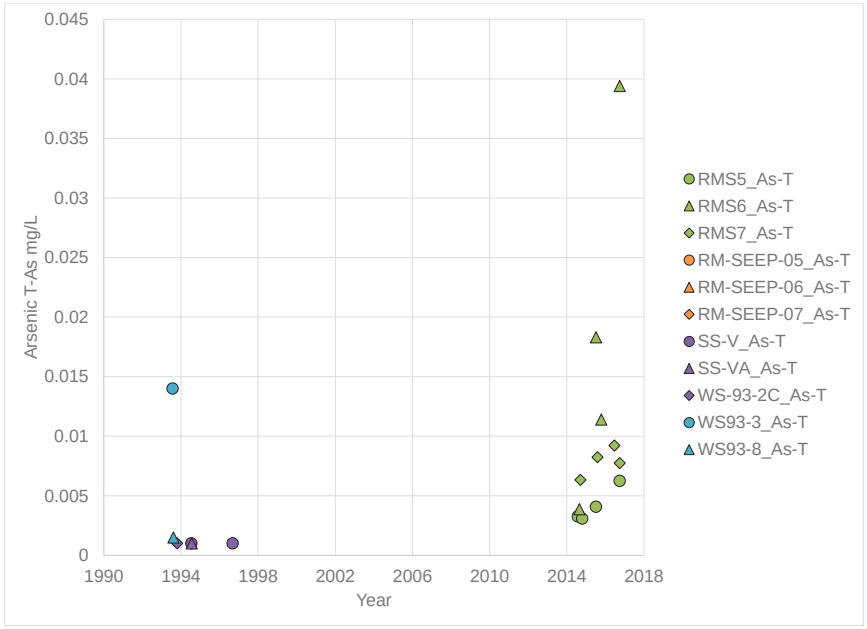


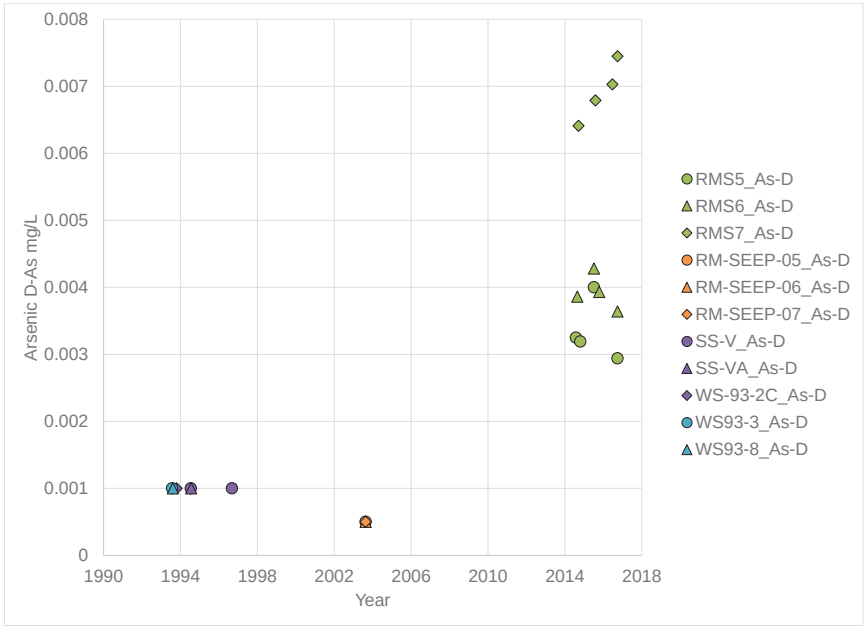


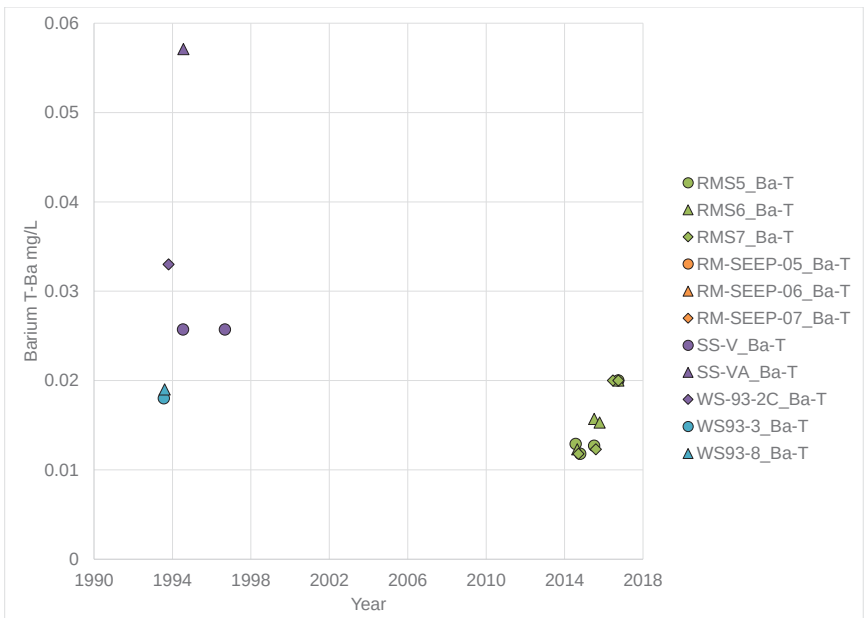


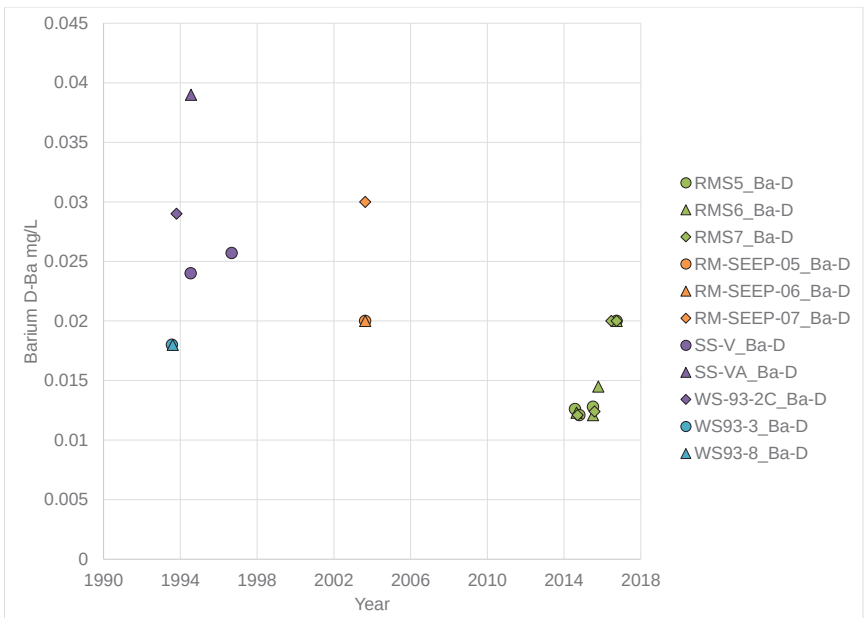


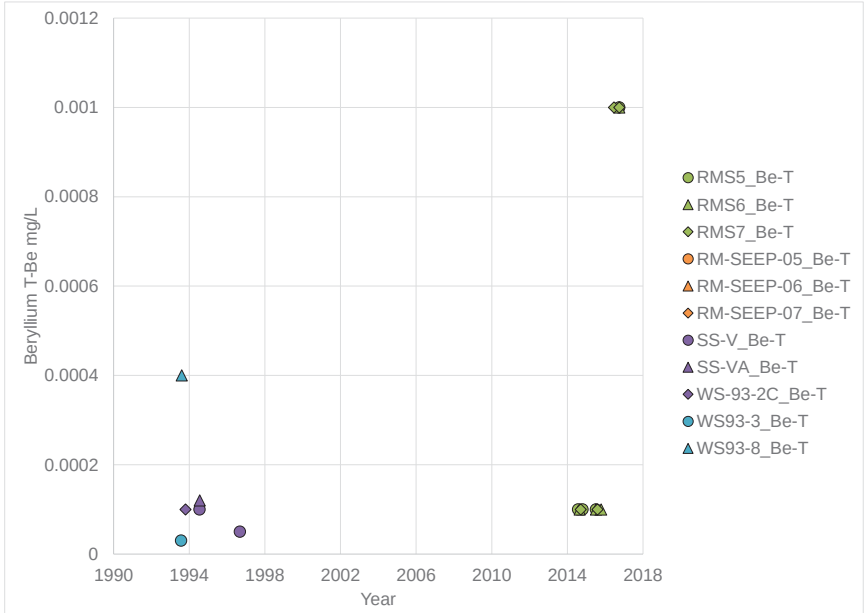
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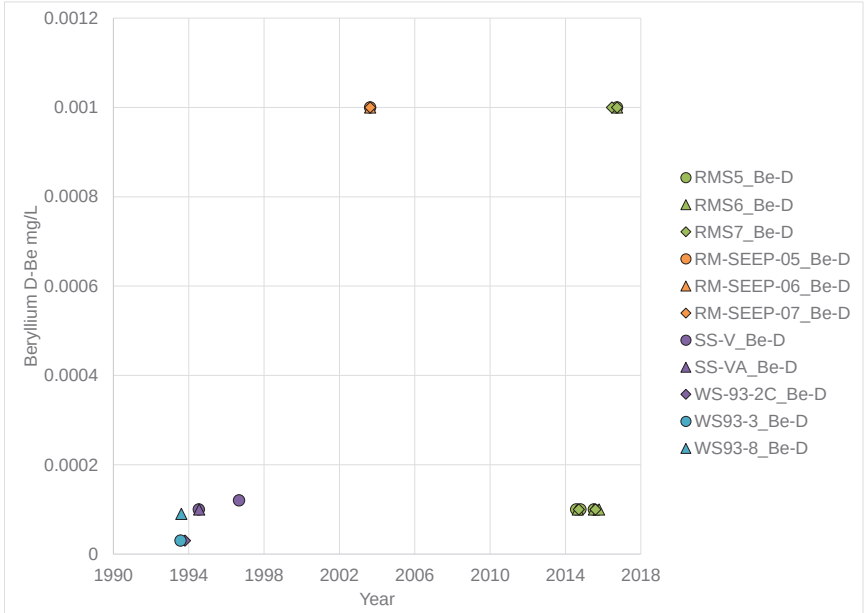


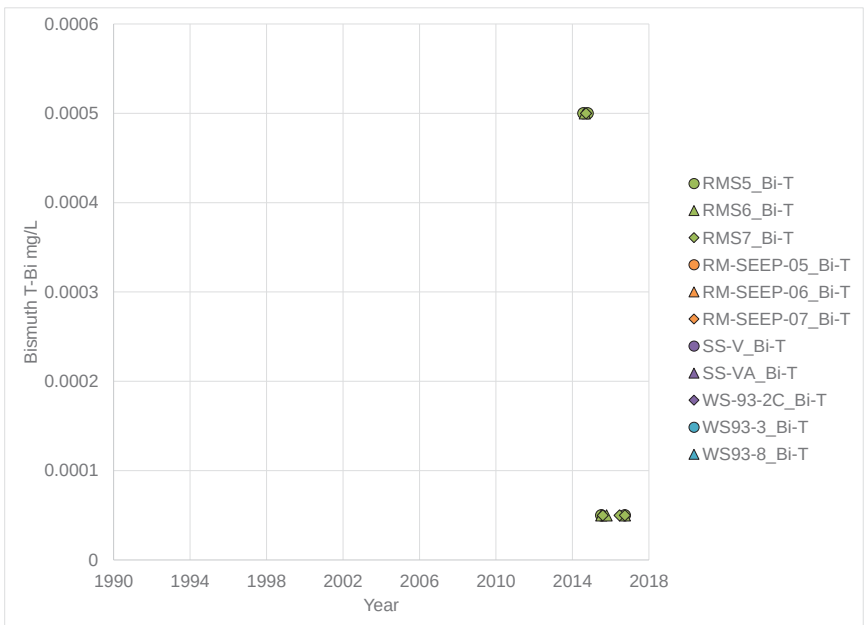


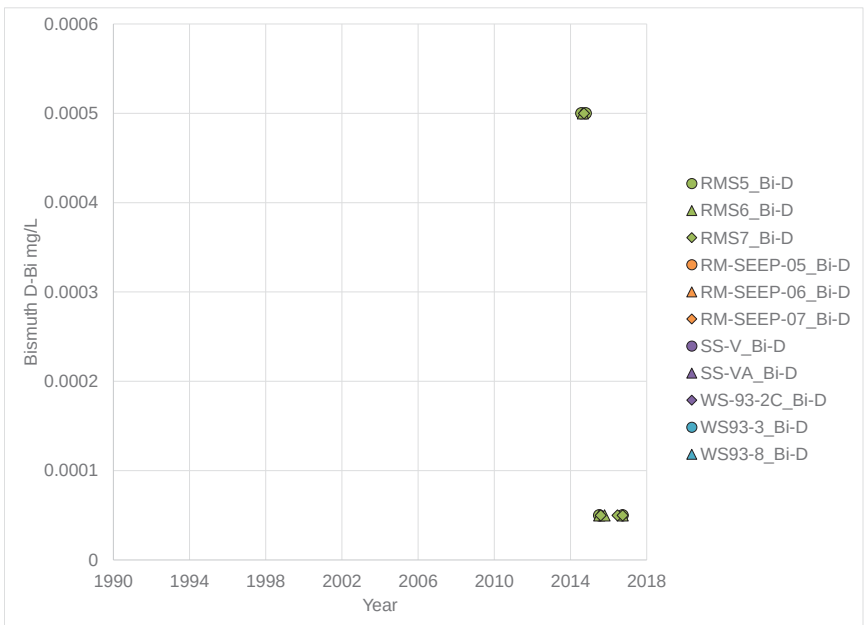




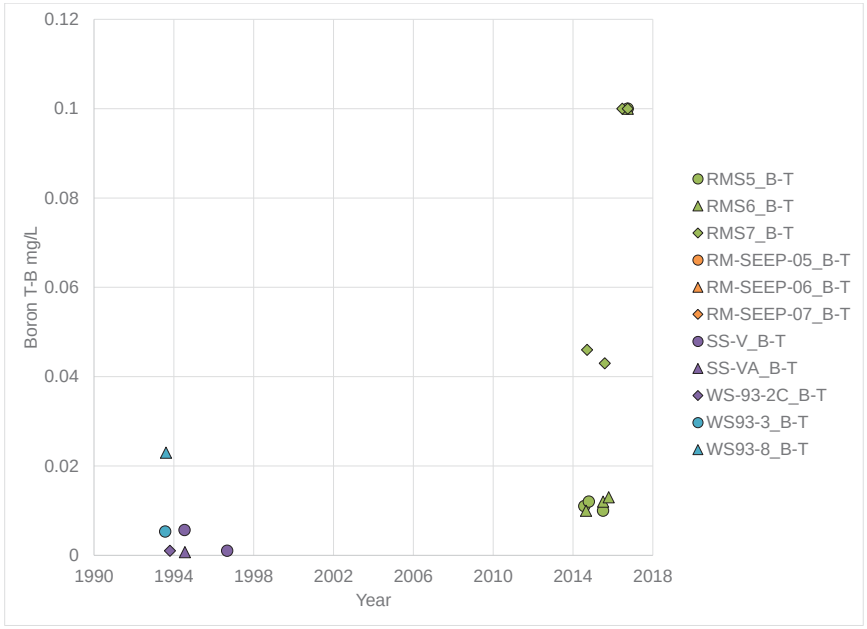


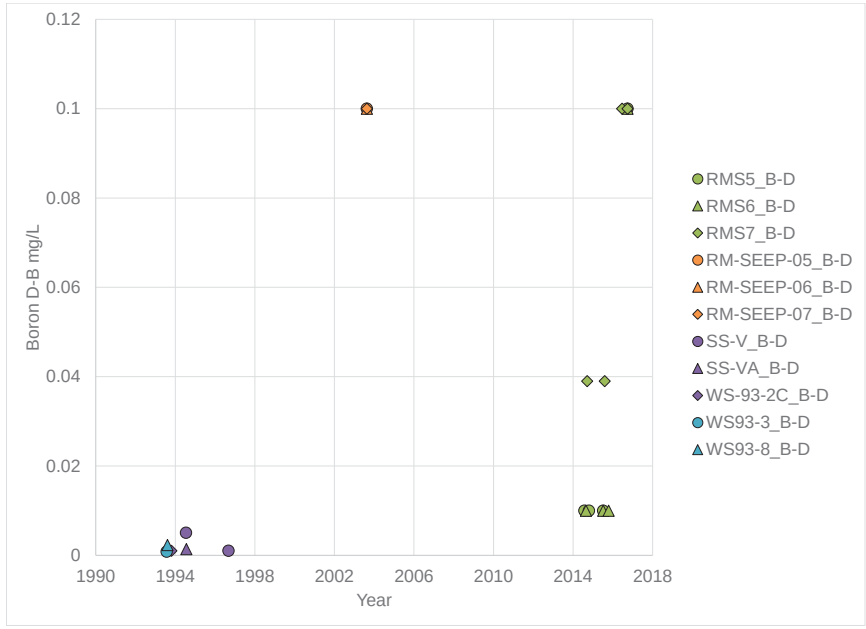


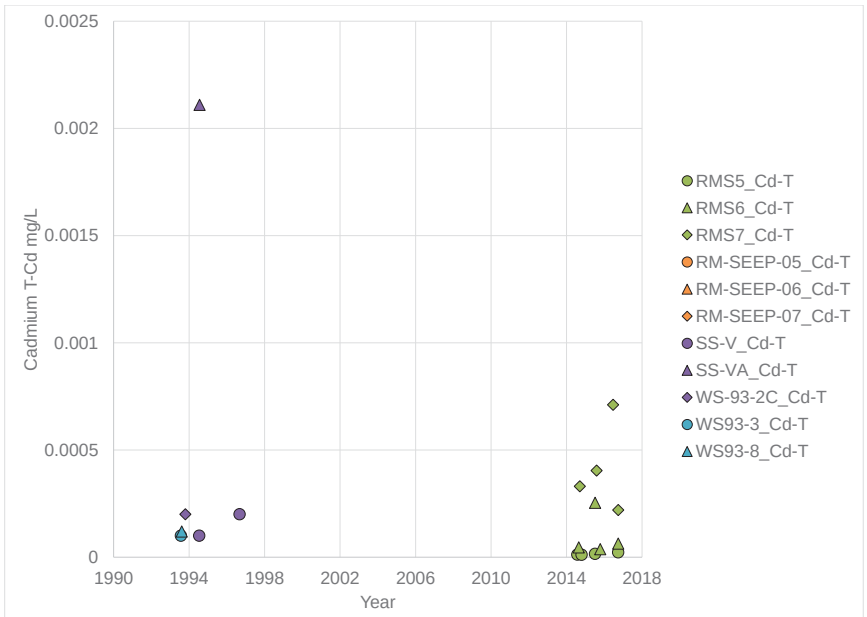


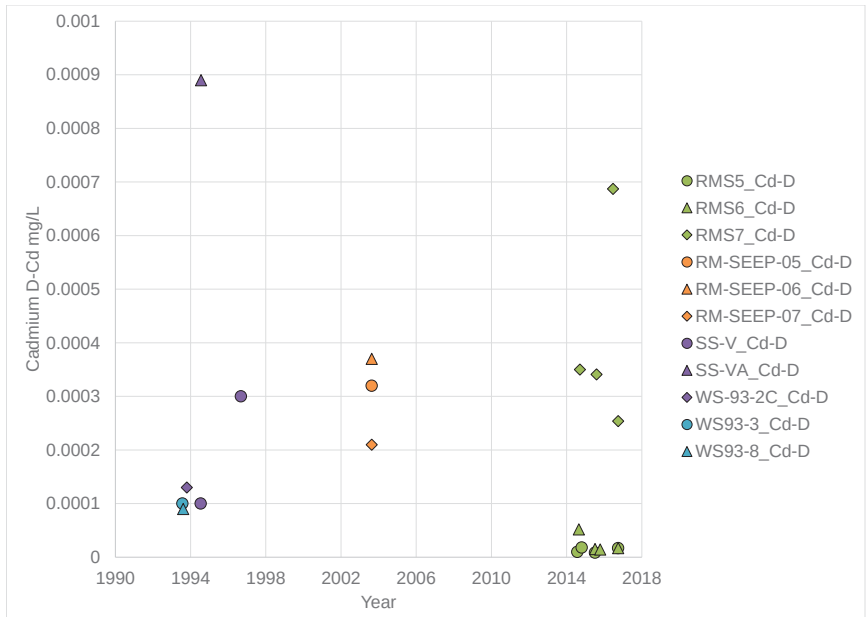


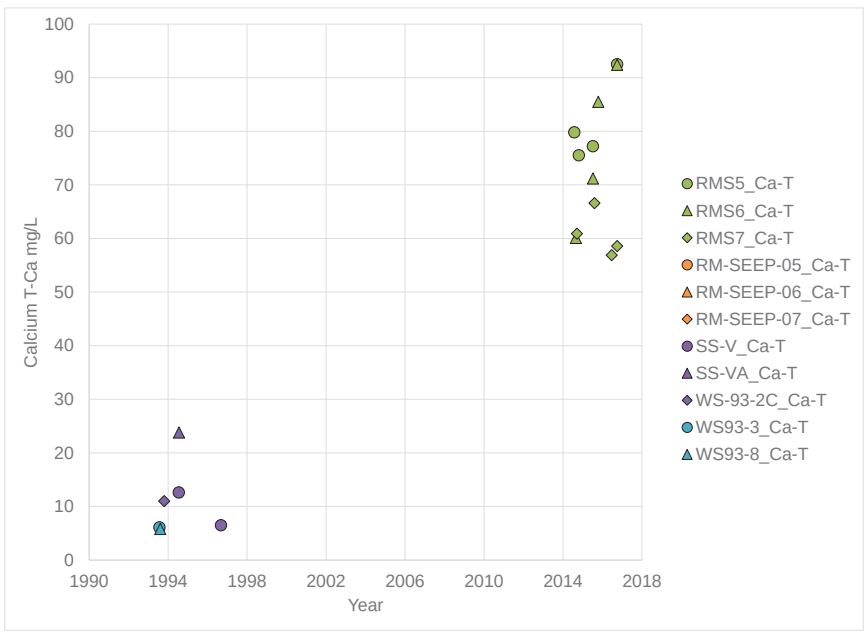
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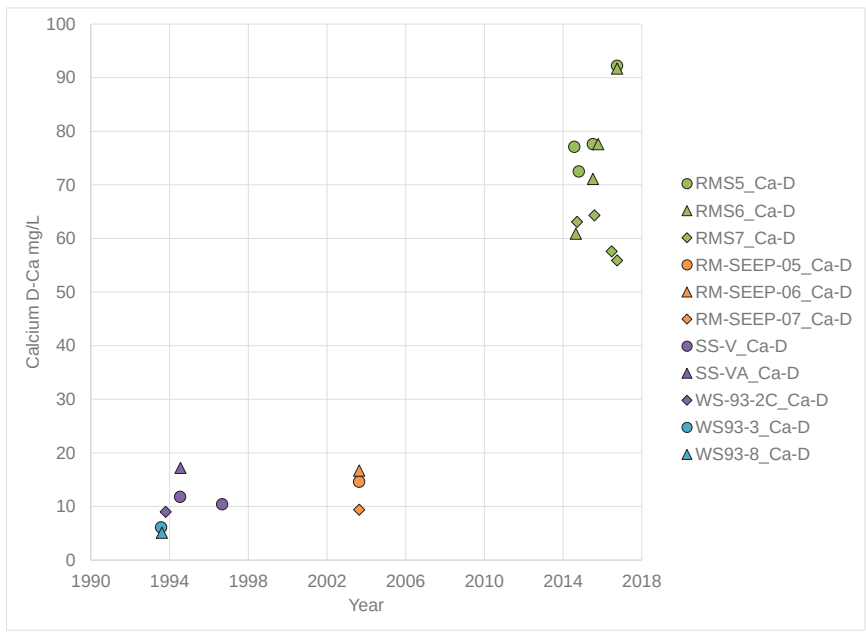


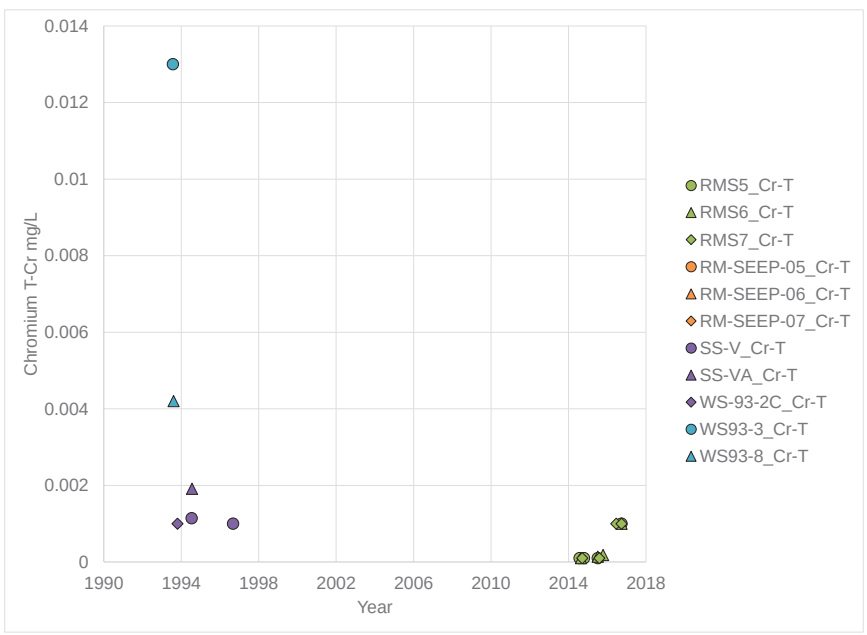


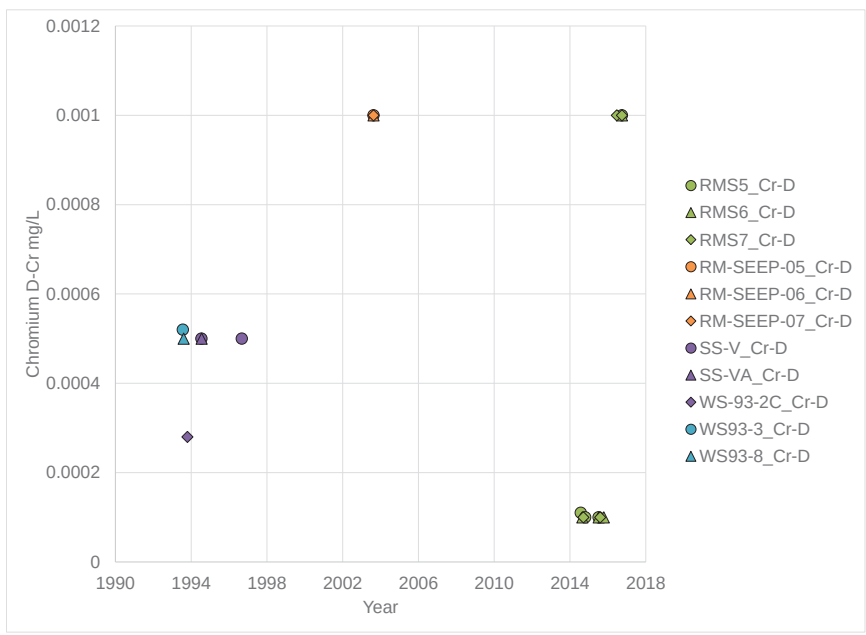




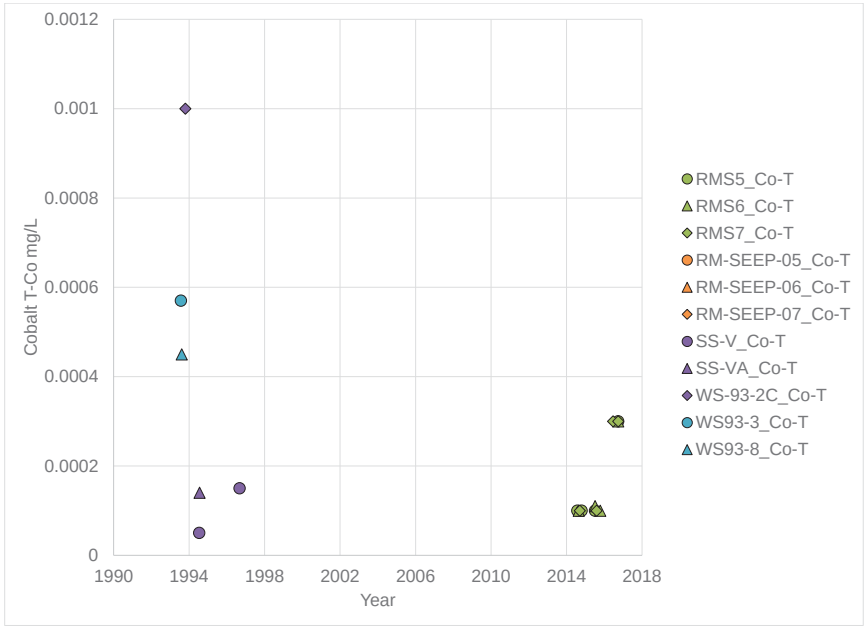


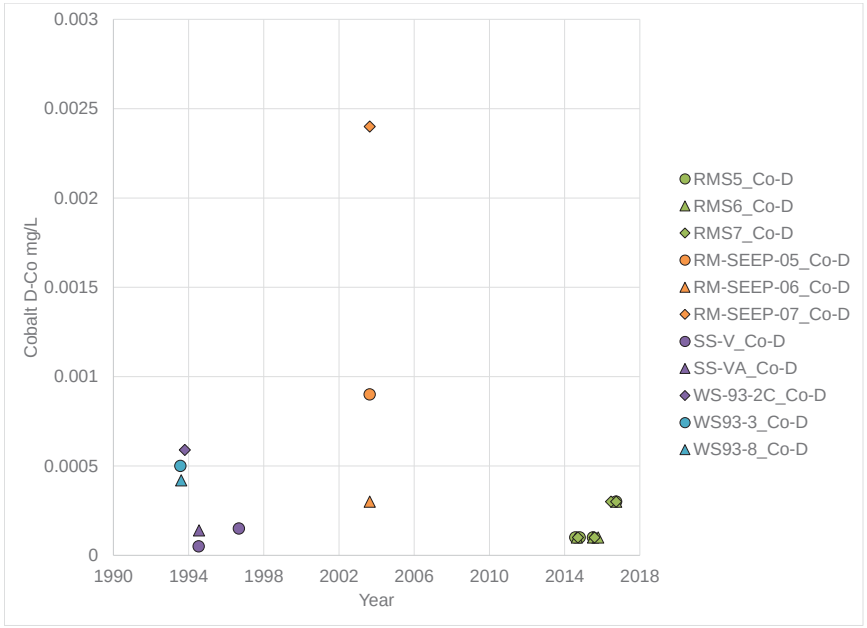


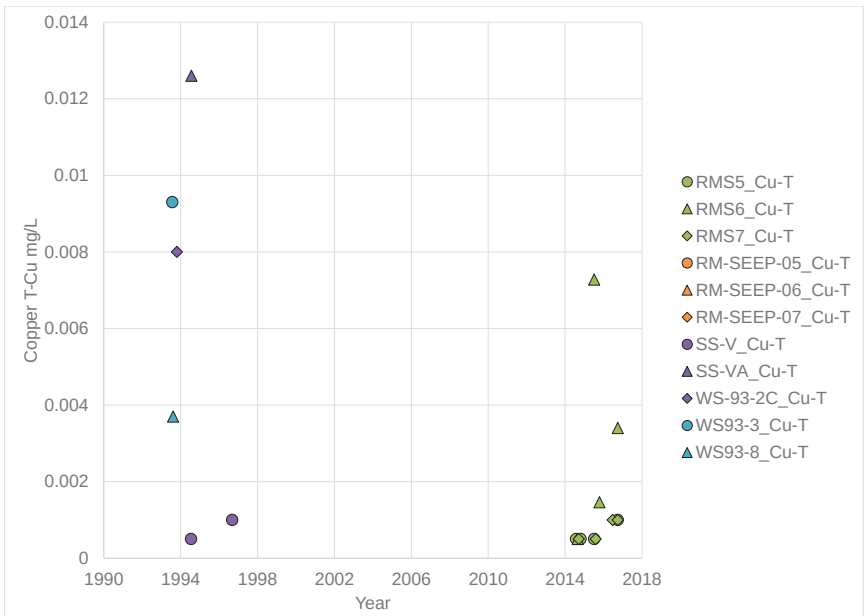


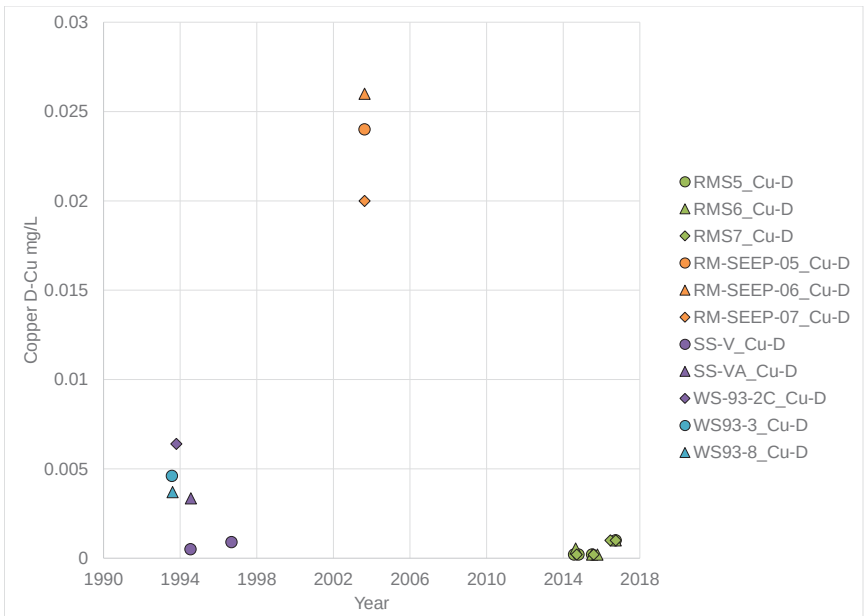


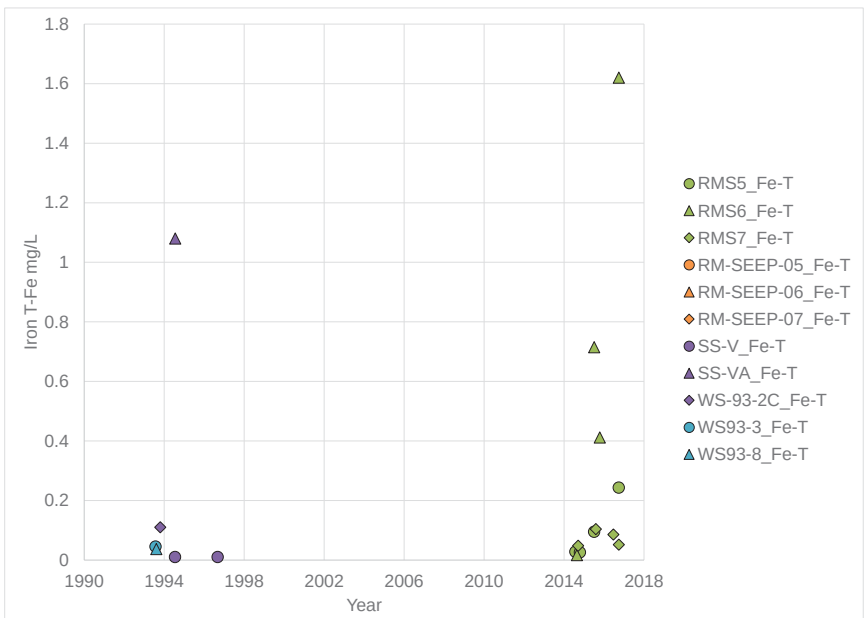
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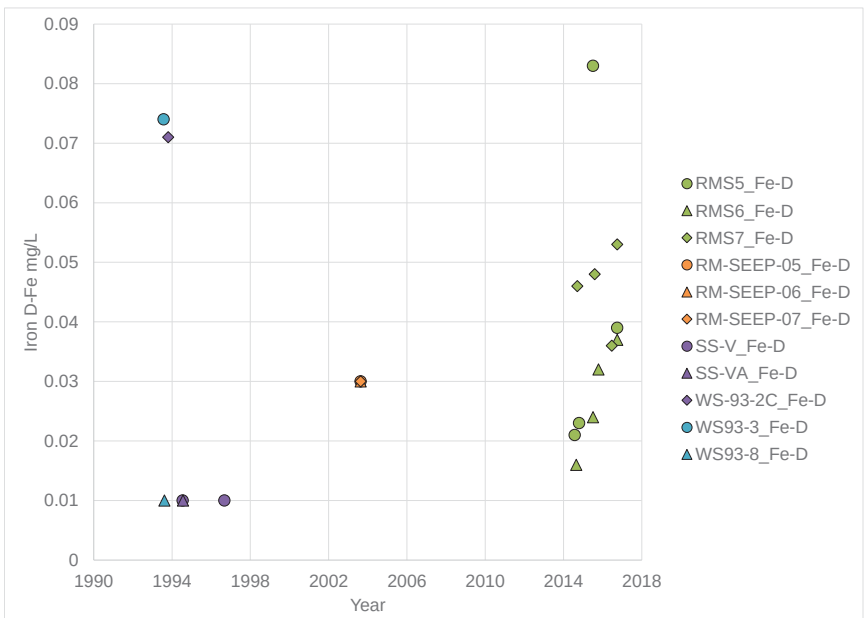


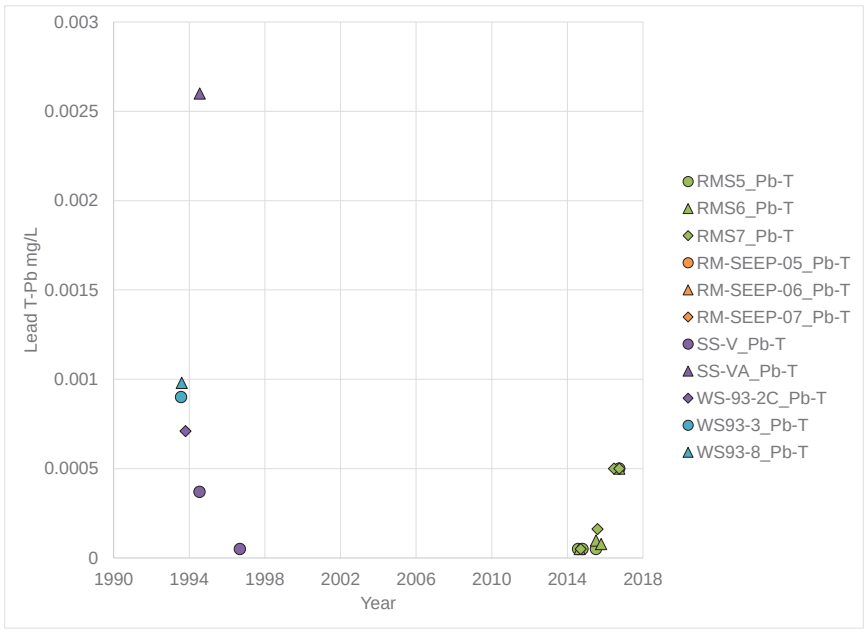


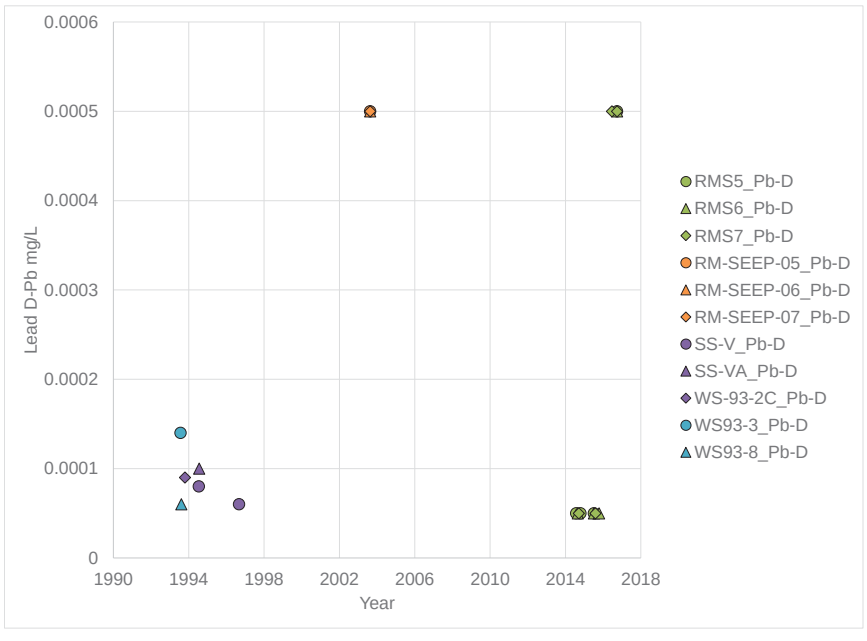




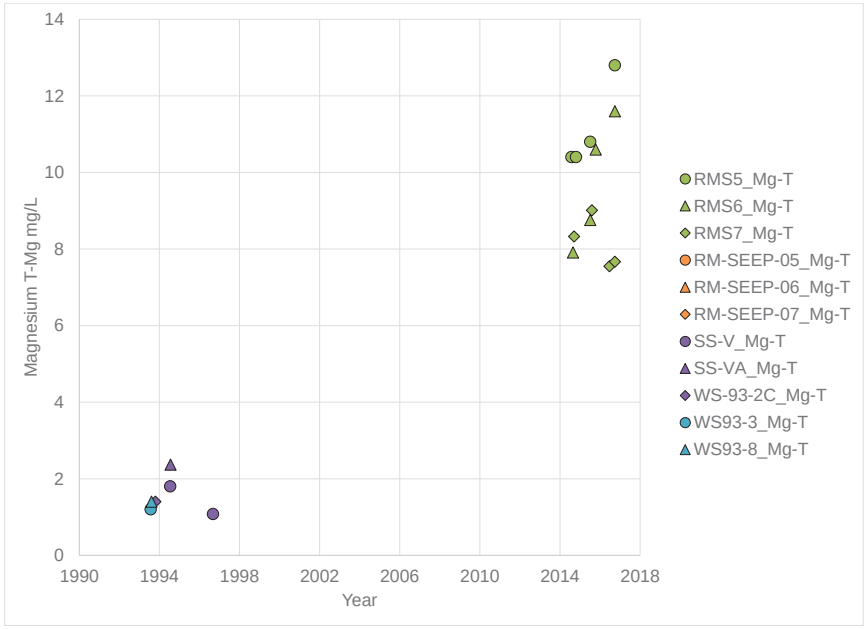


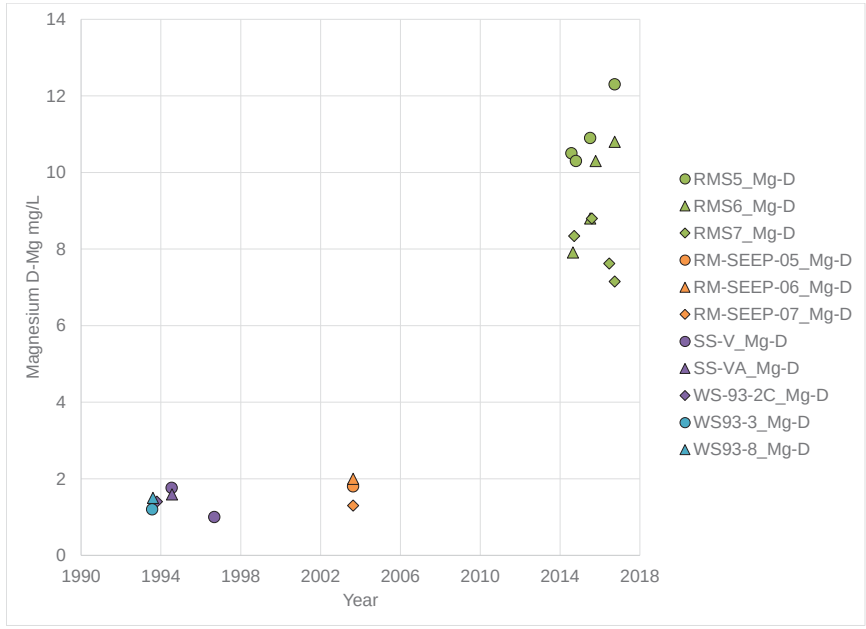


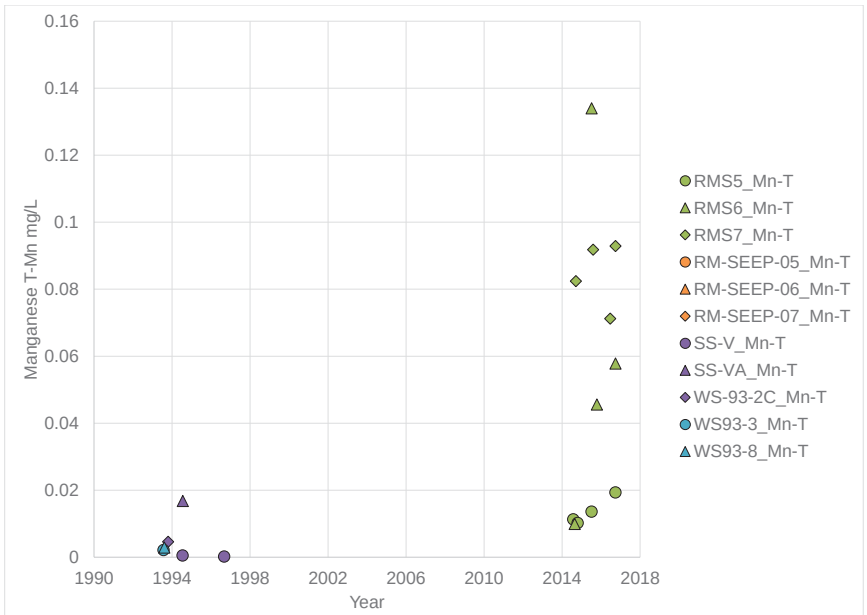


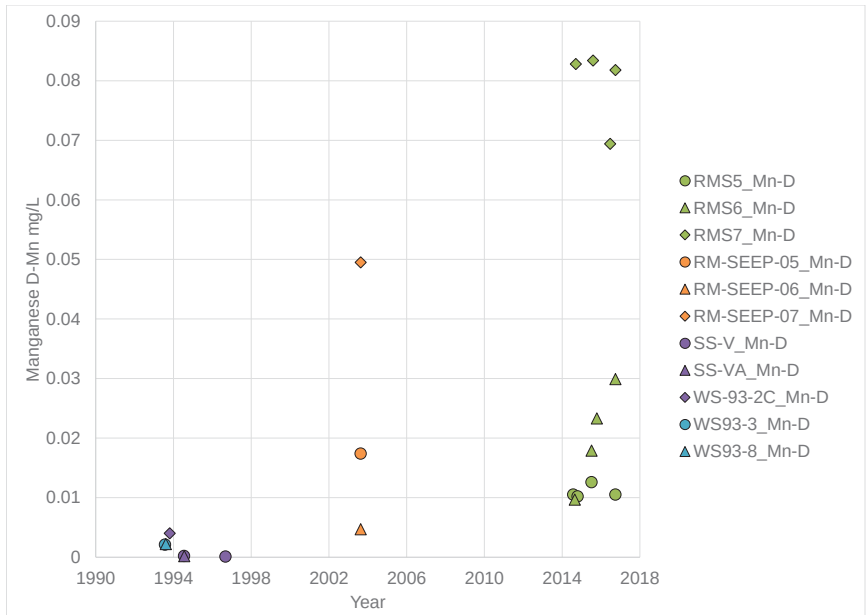


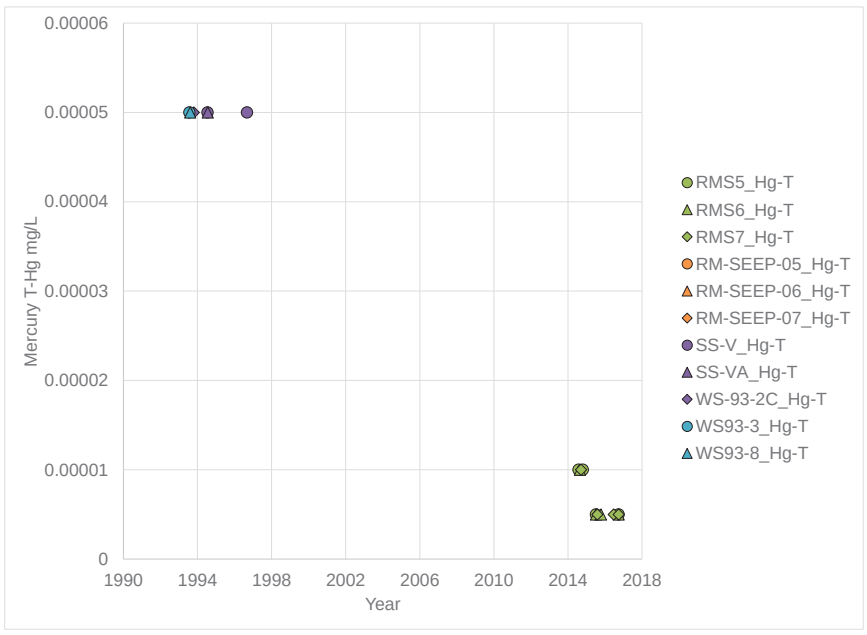
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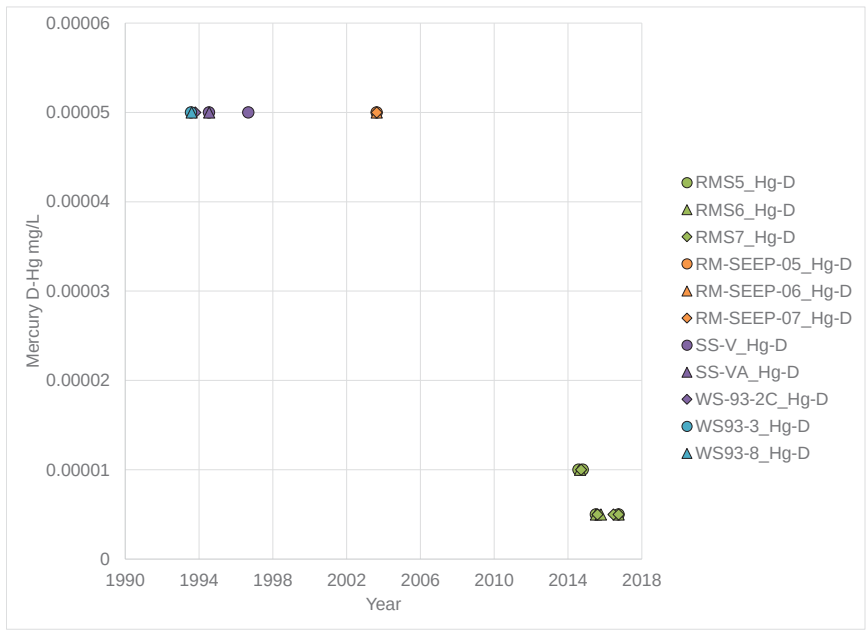


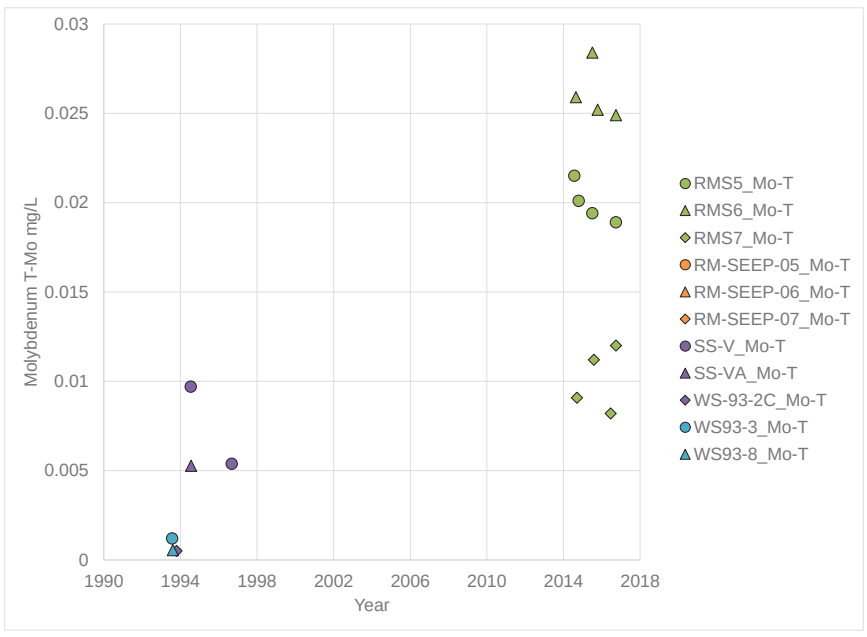


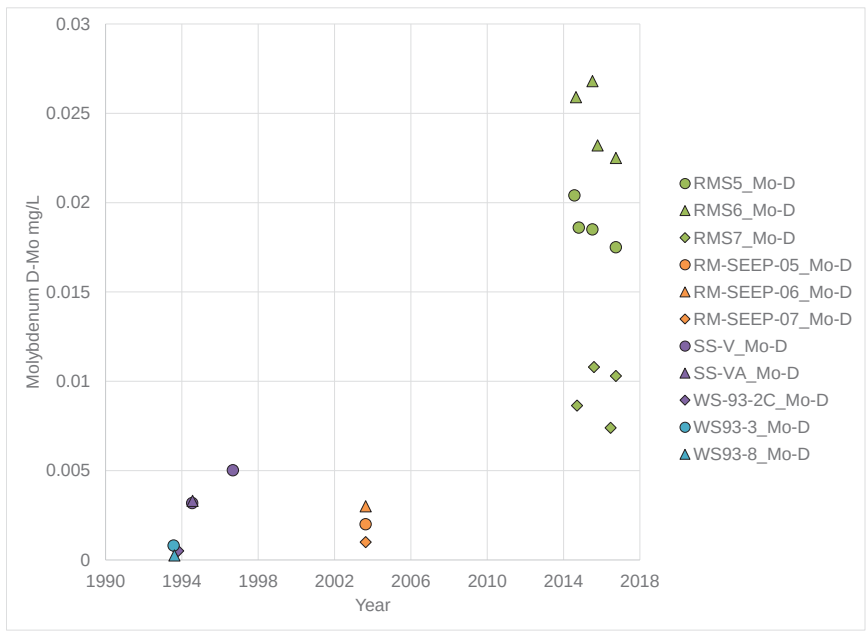




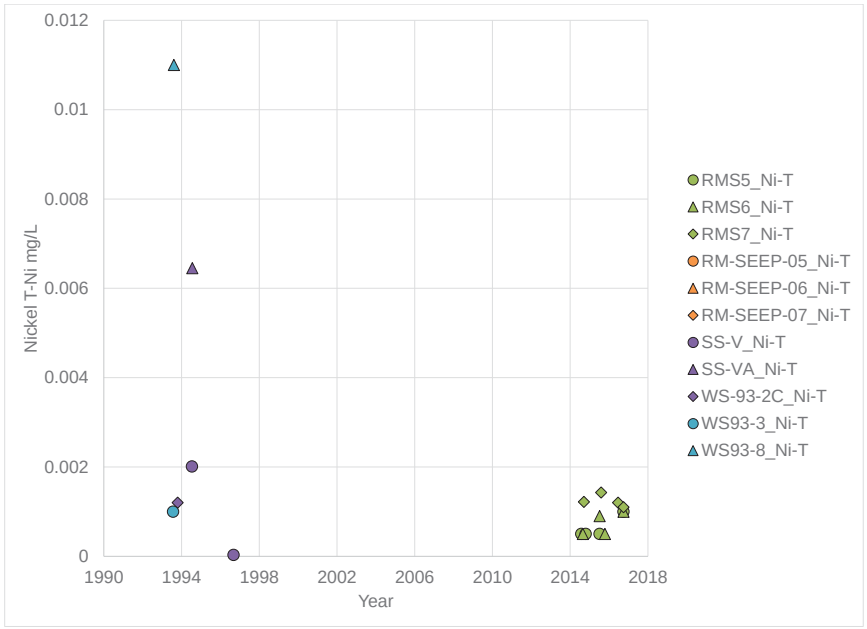


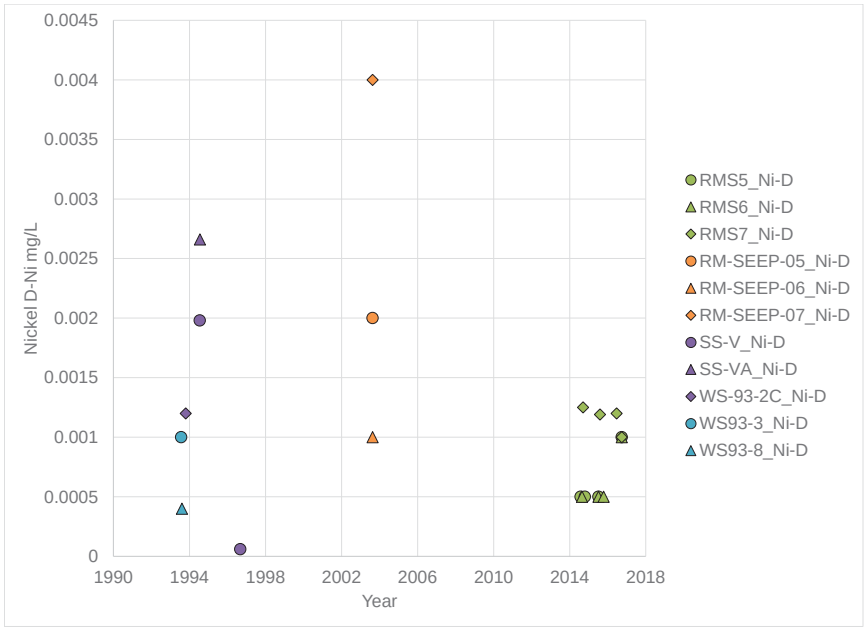




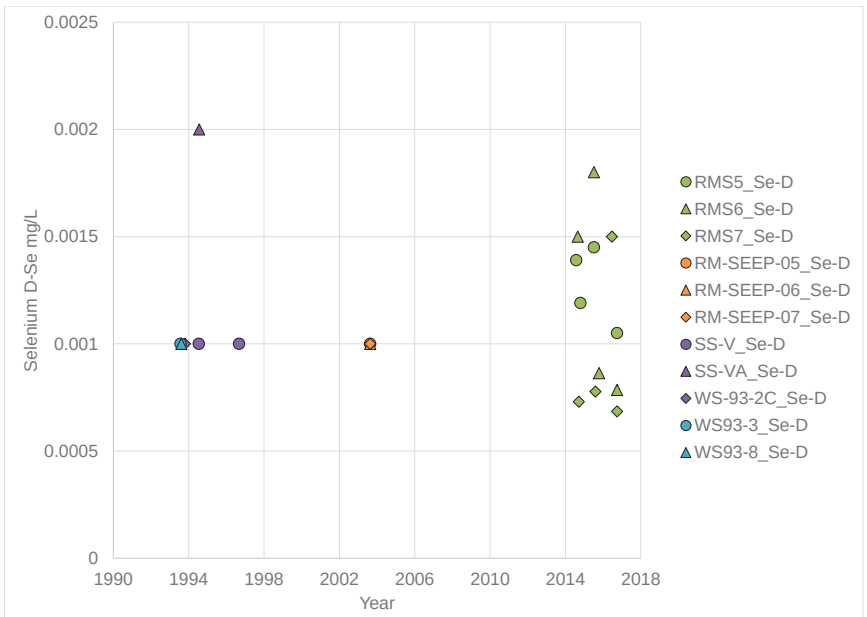


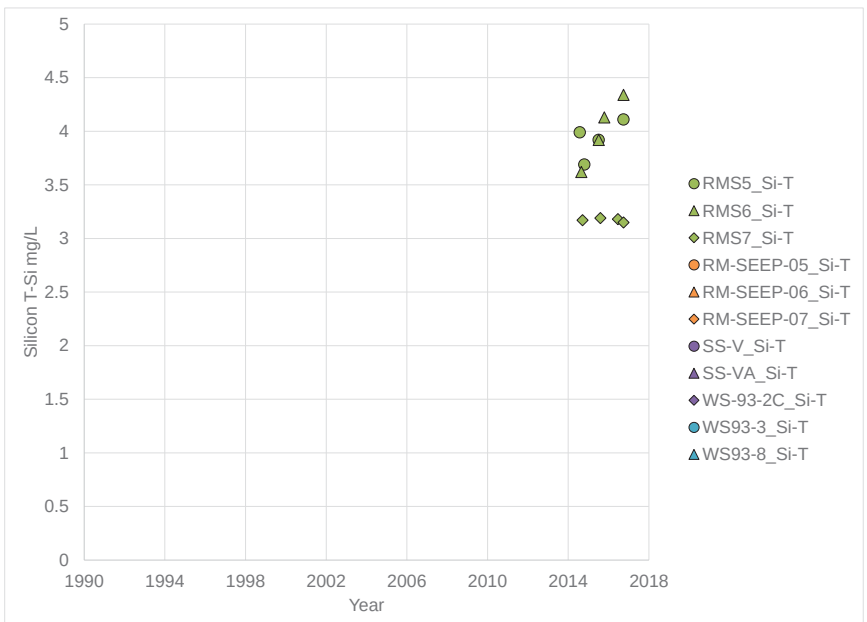
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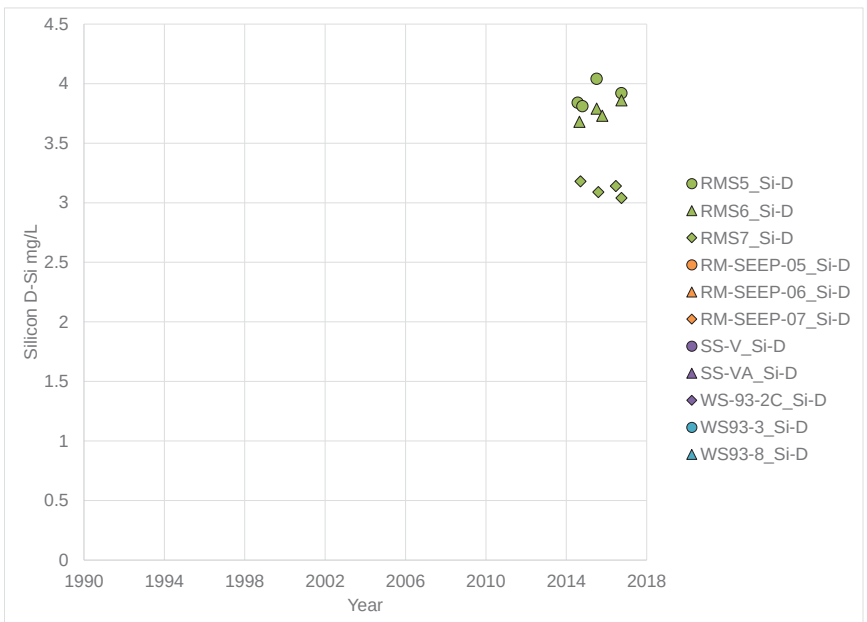


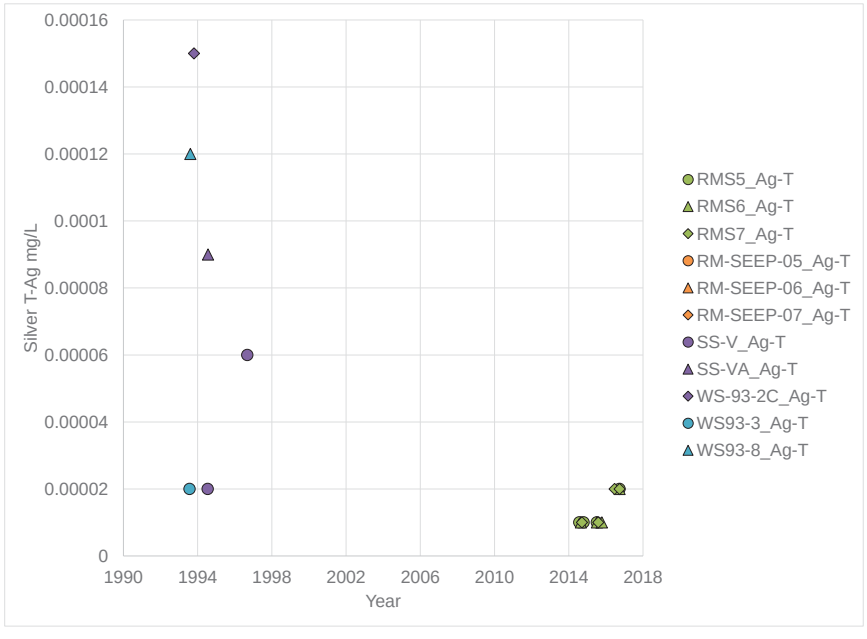


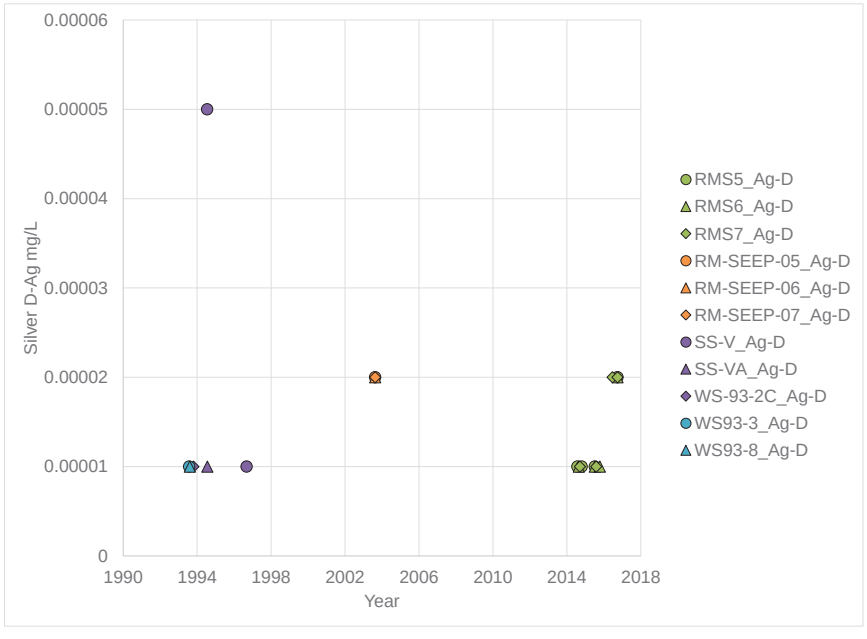




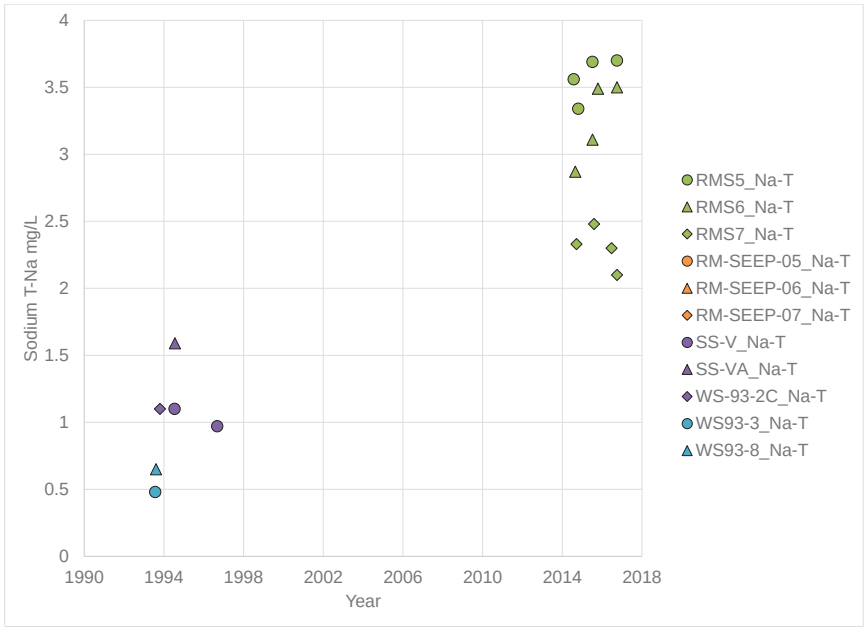


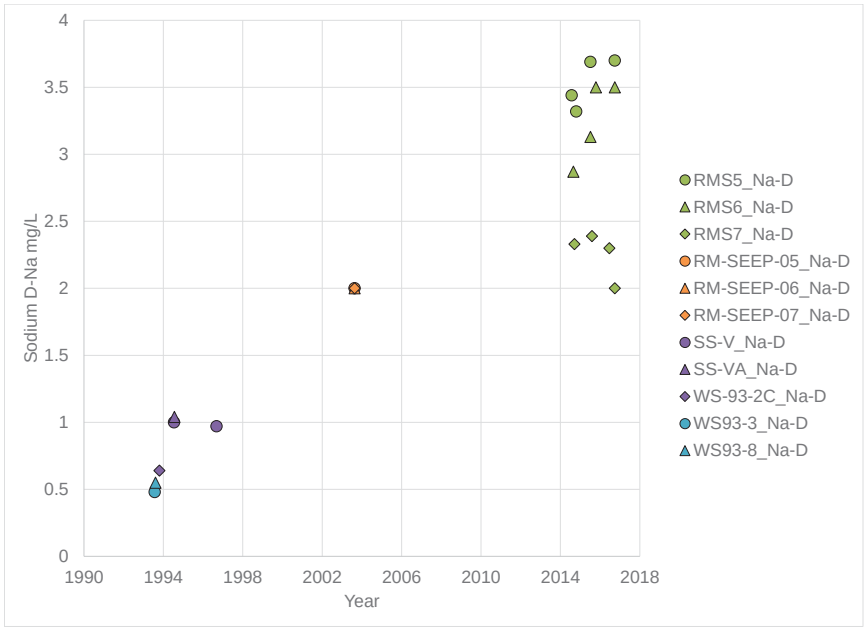


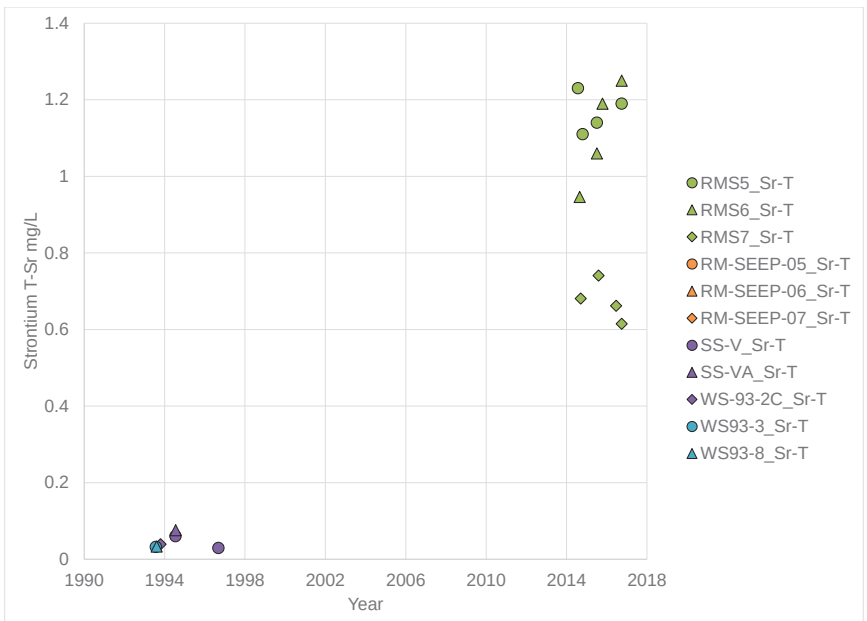


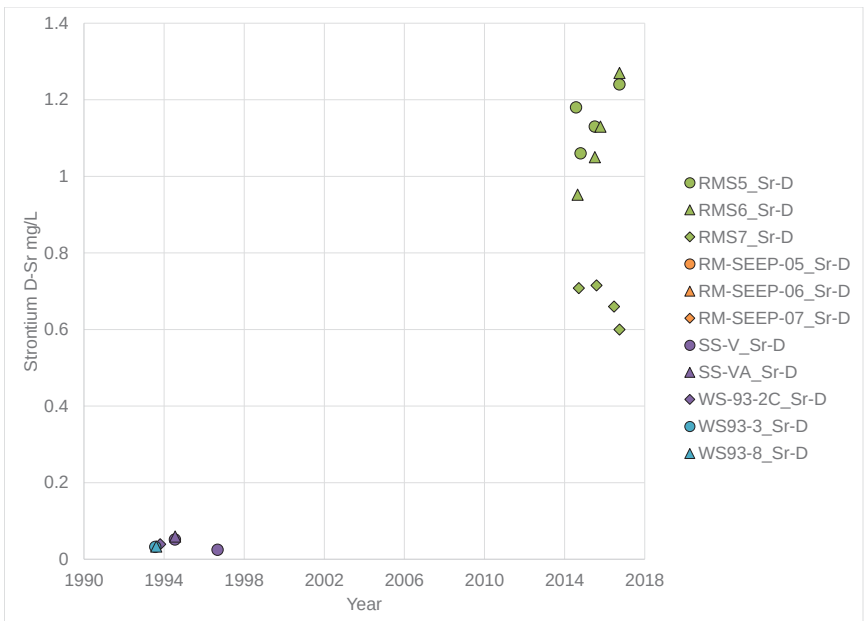


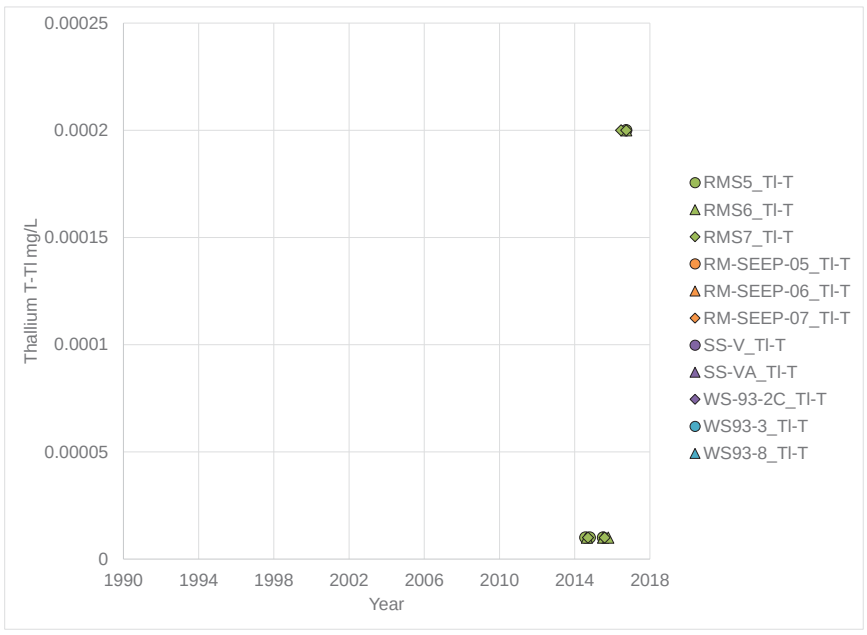
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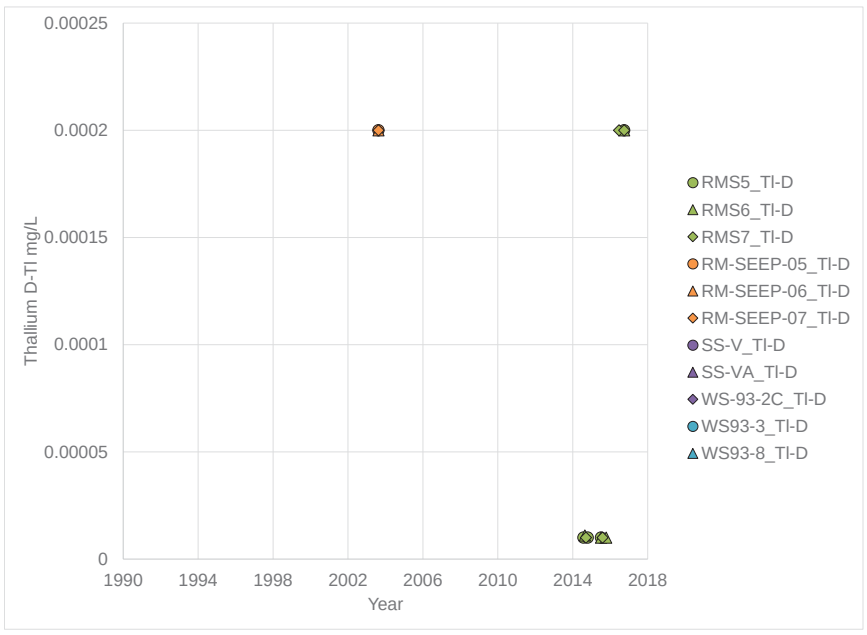


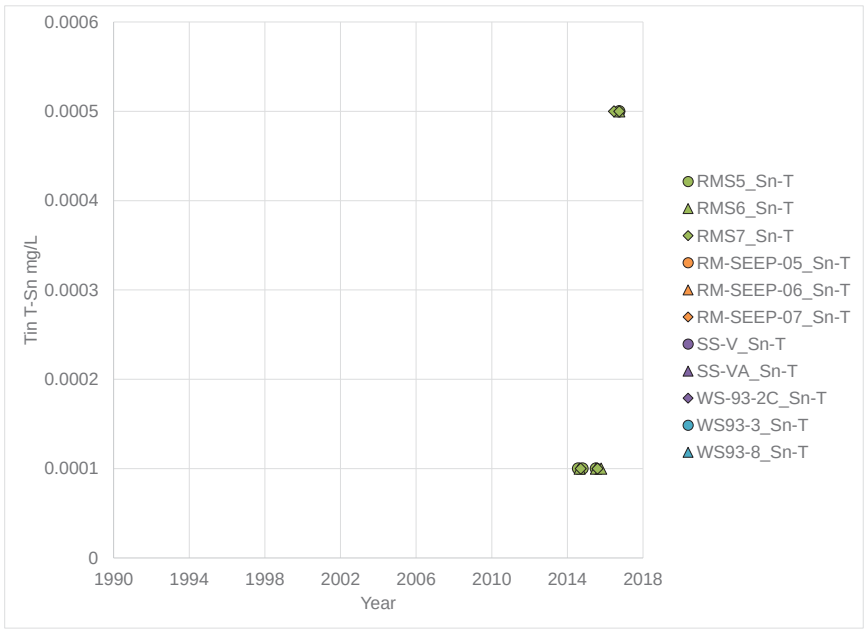


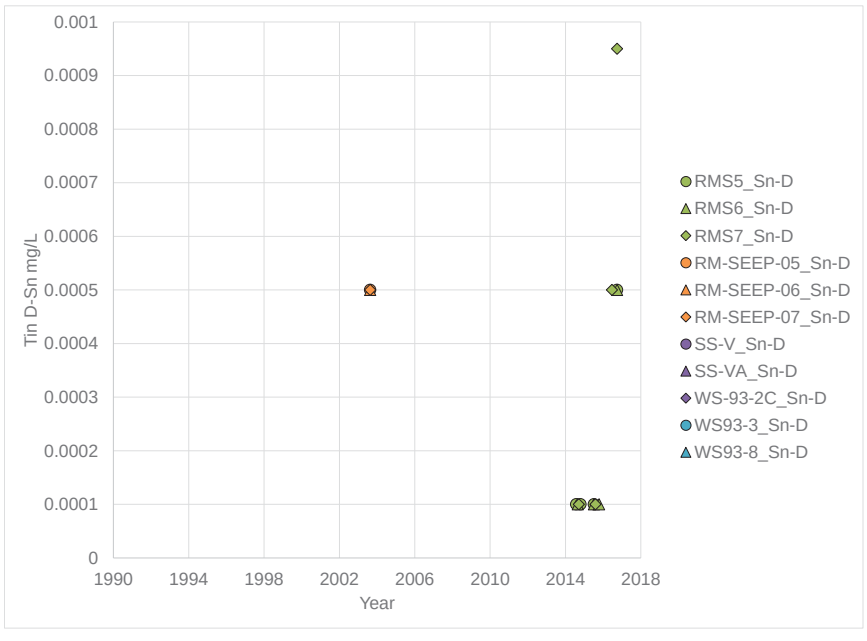




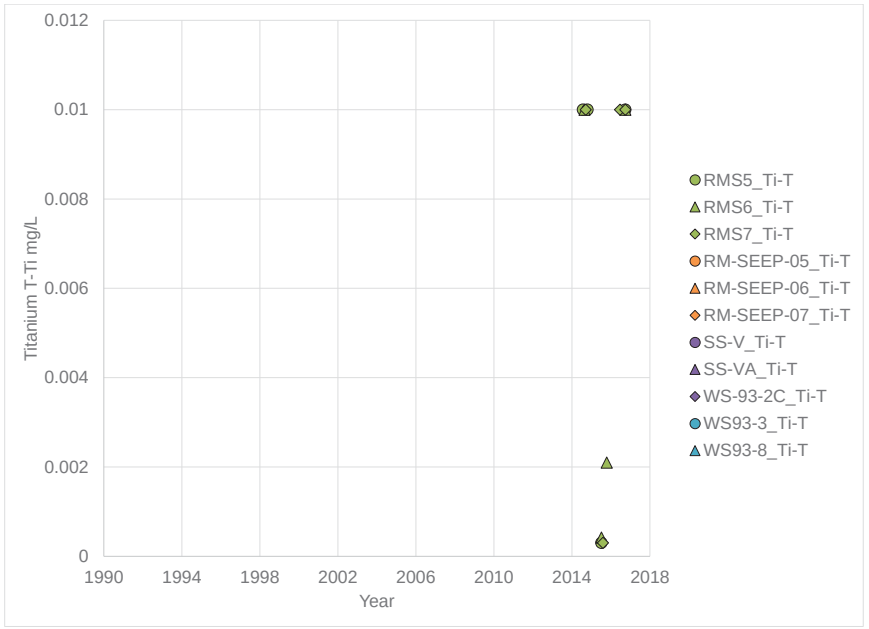


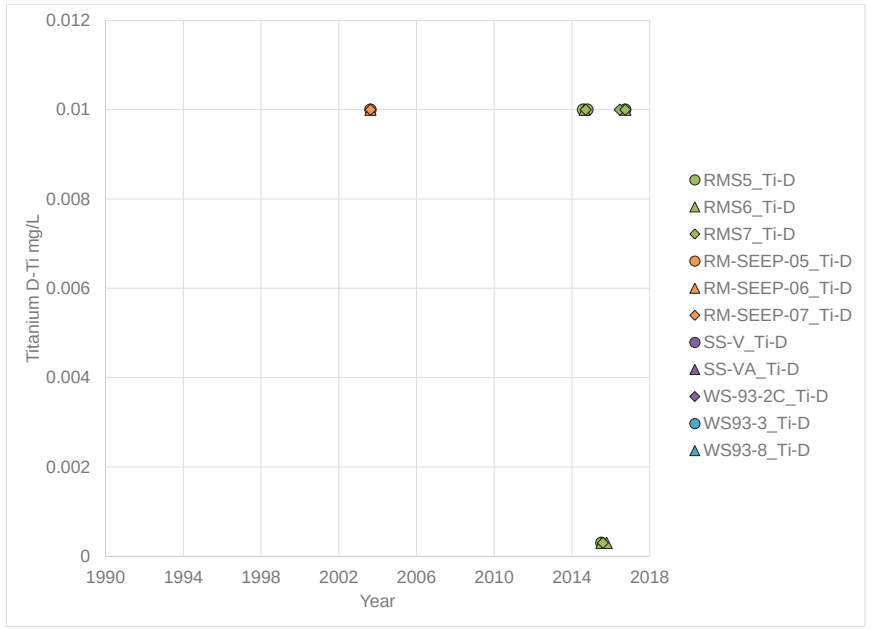


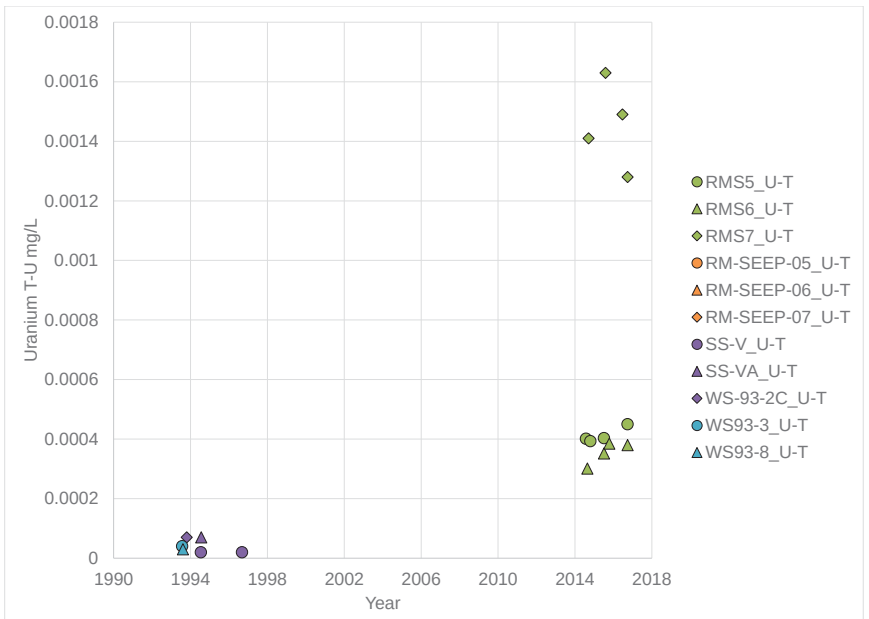


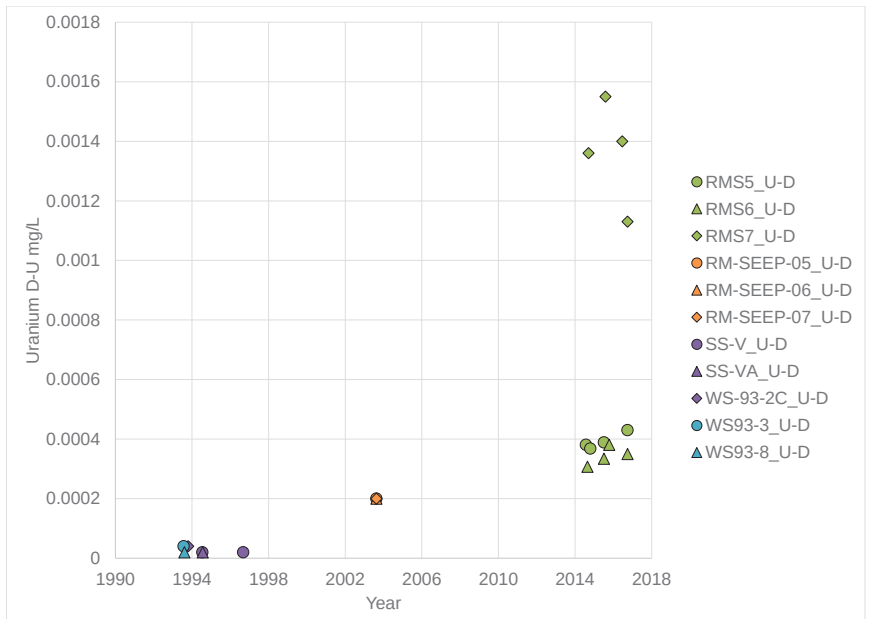


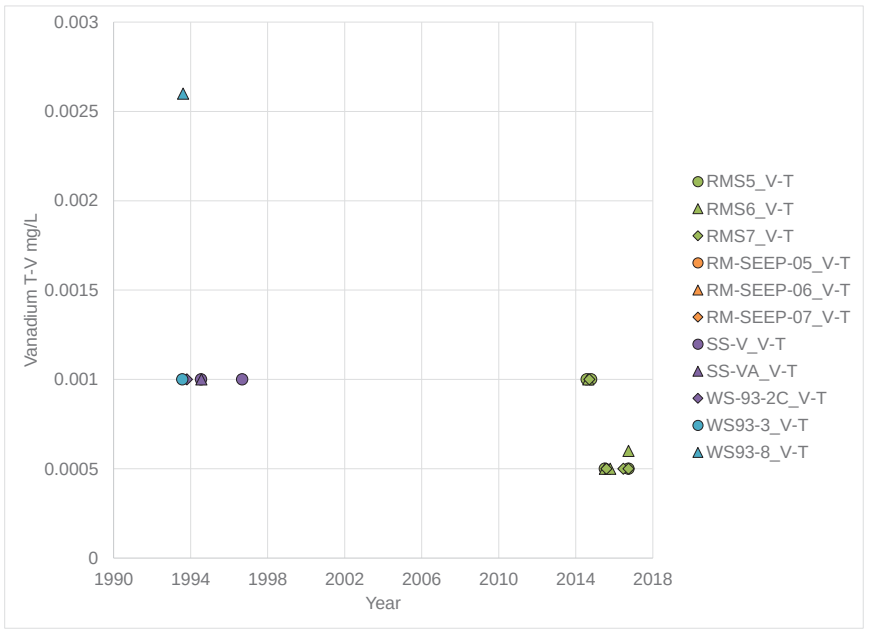
Appendix F - Groundwater Quality Data Plots
Middle Cirque

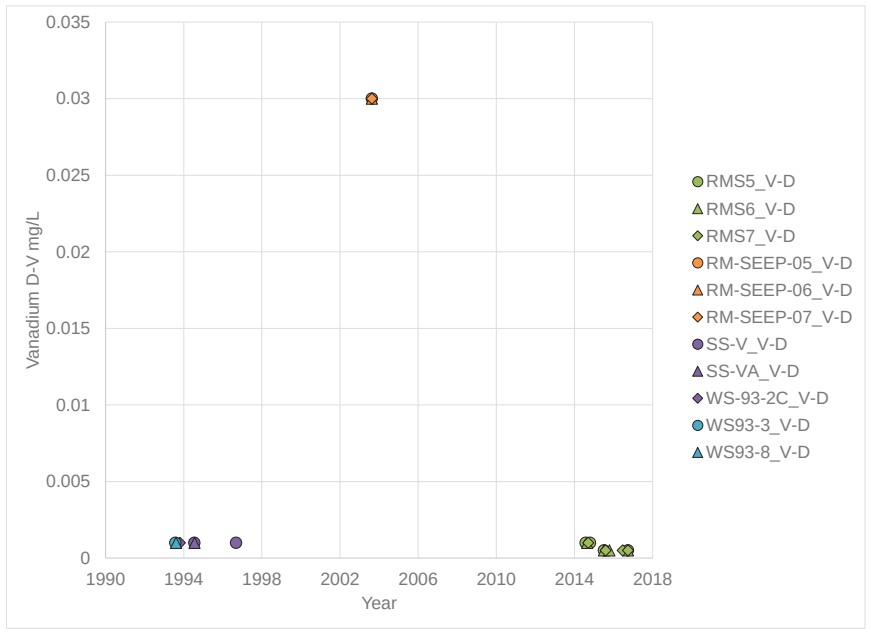


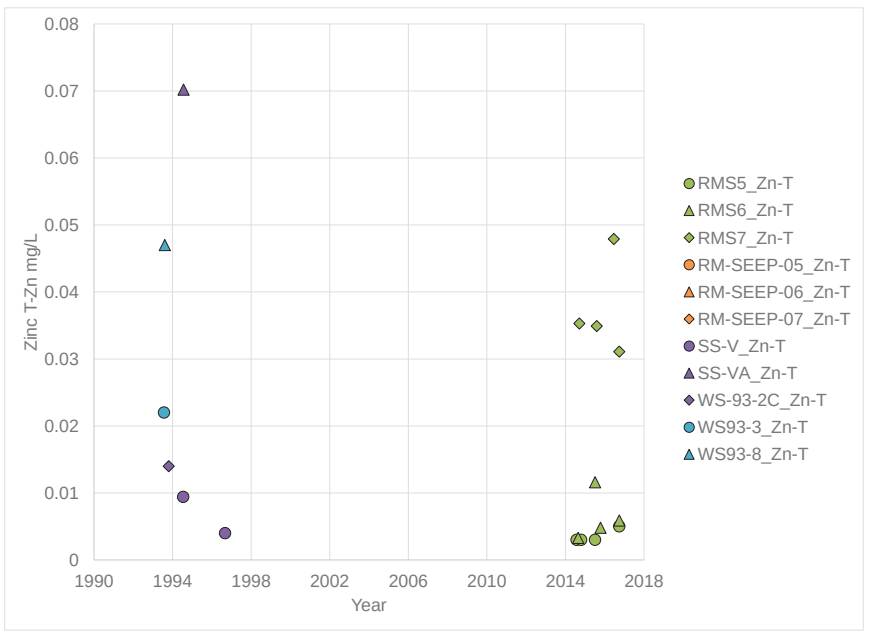


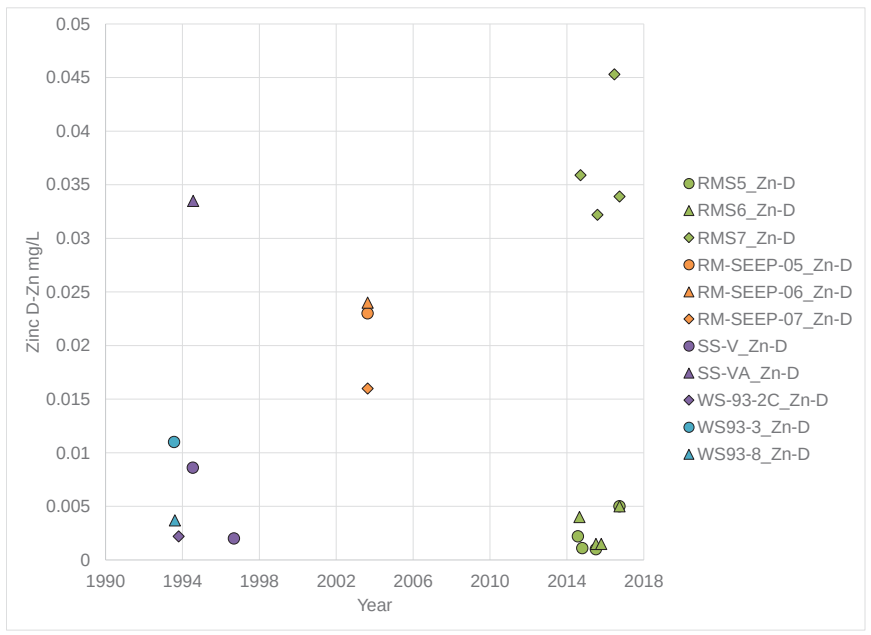






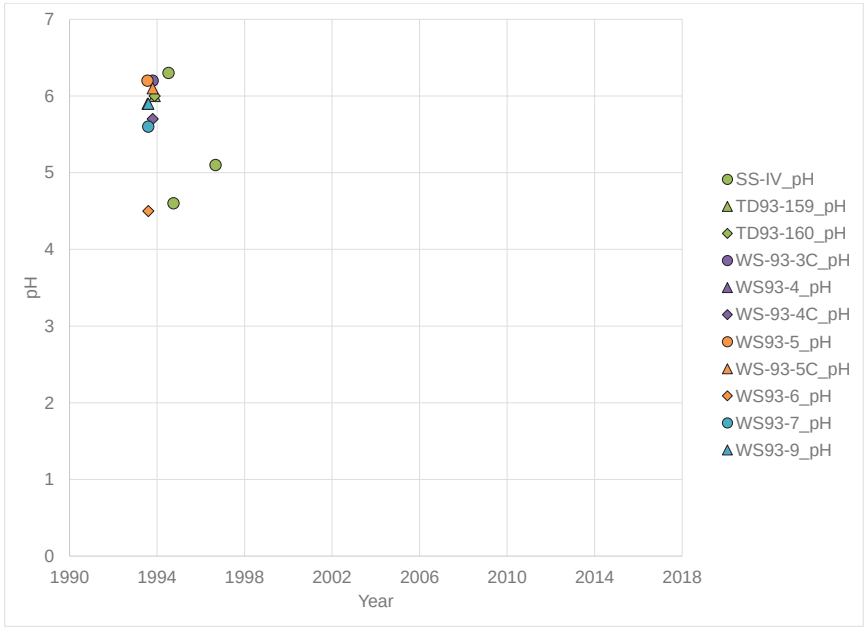


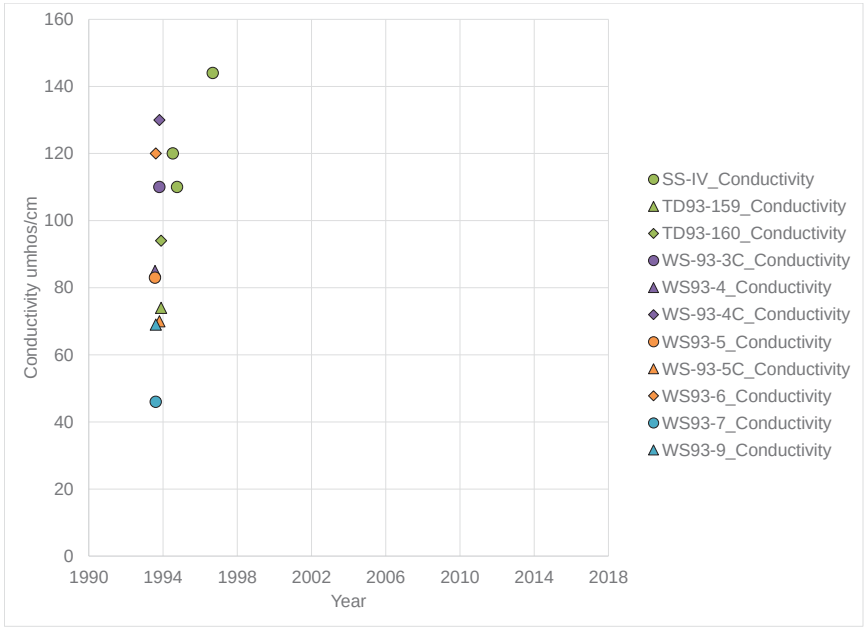


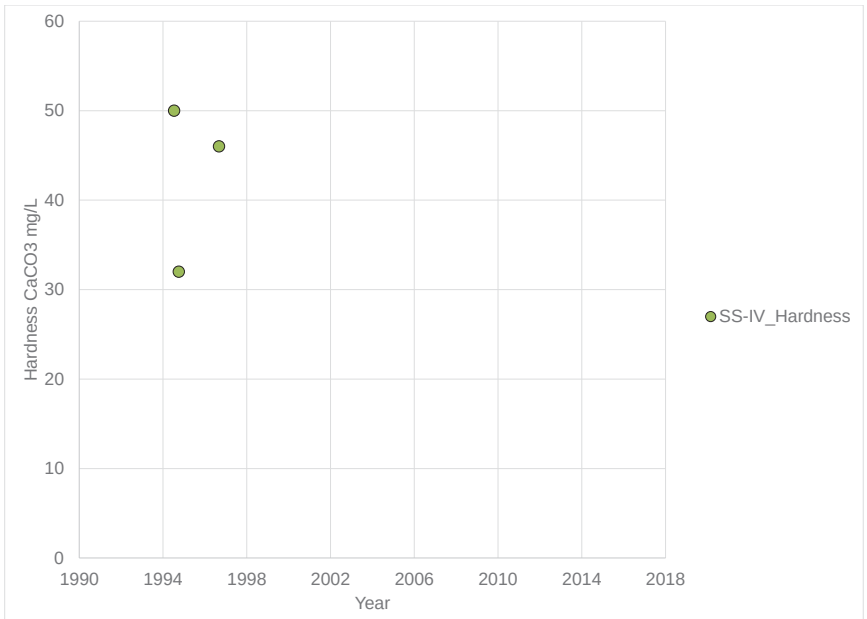


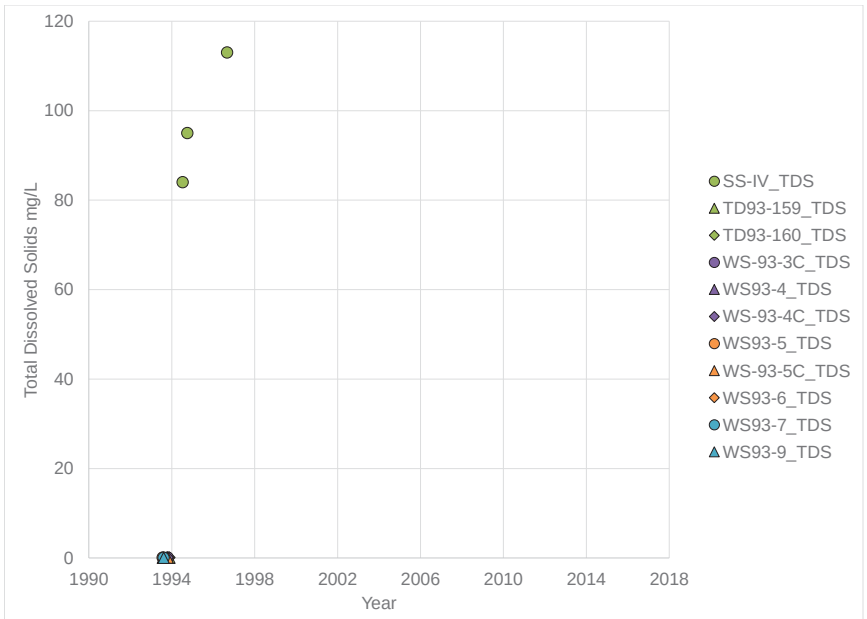
Lower Cirque

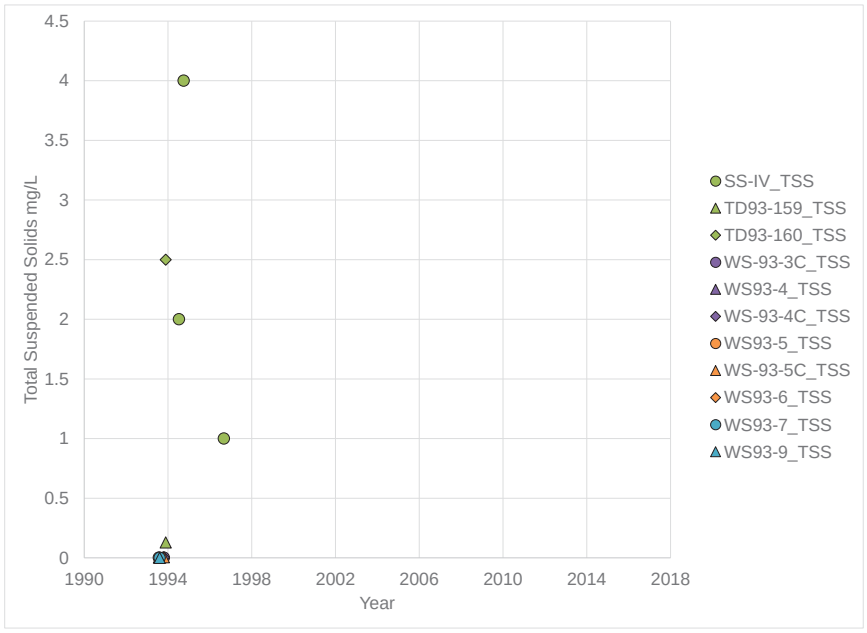
Appendix F - Groundwater Quality Data Plots
Lower Cirque

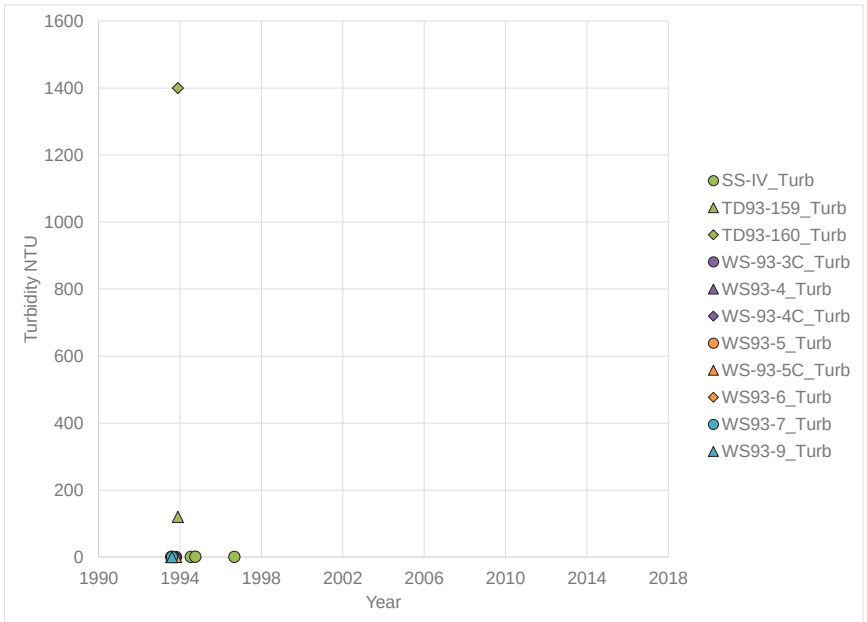


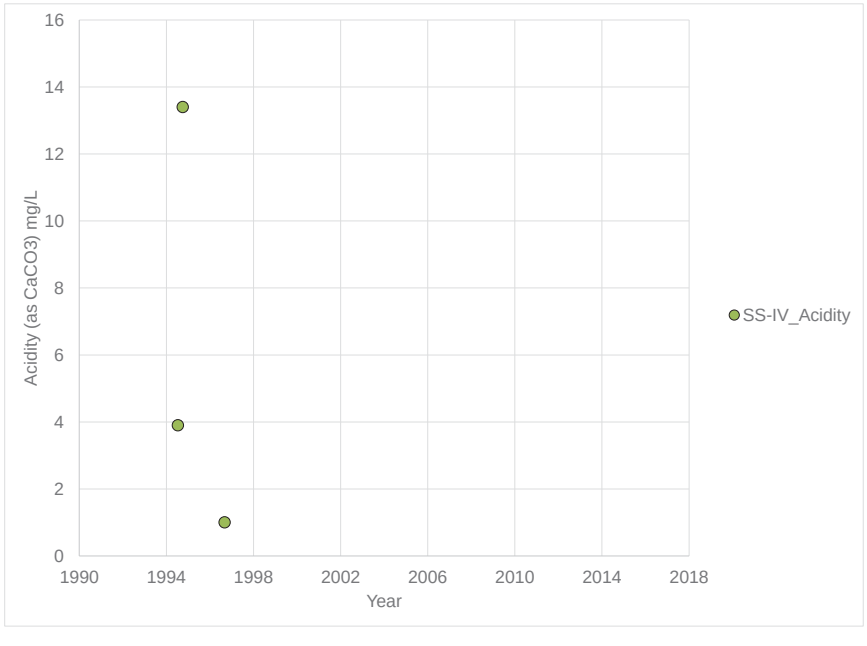


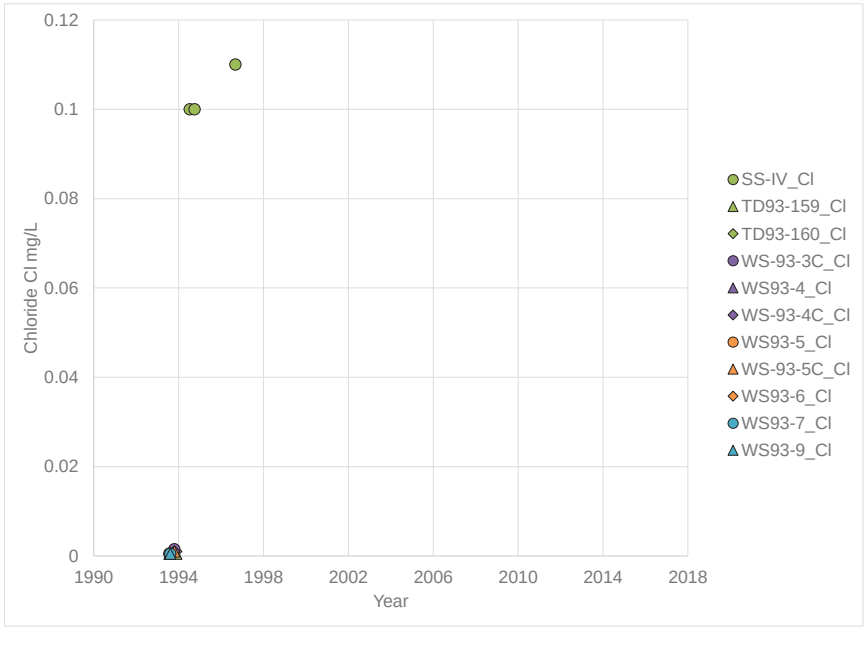




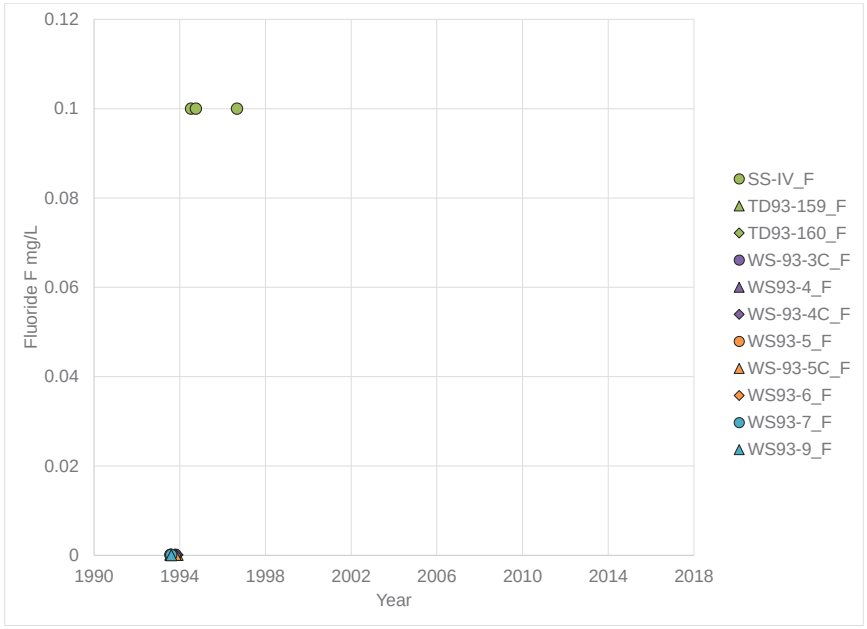


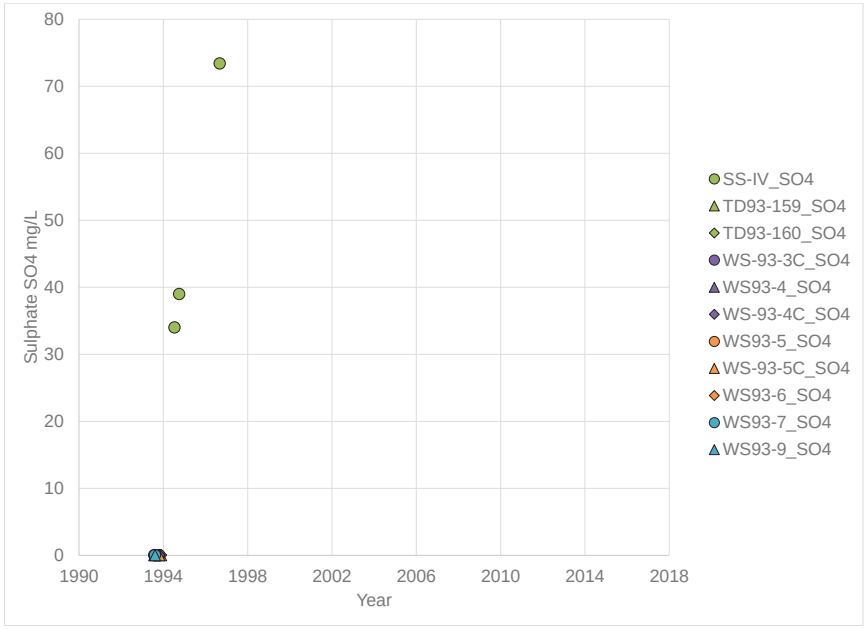


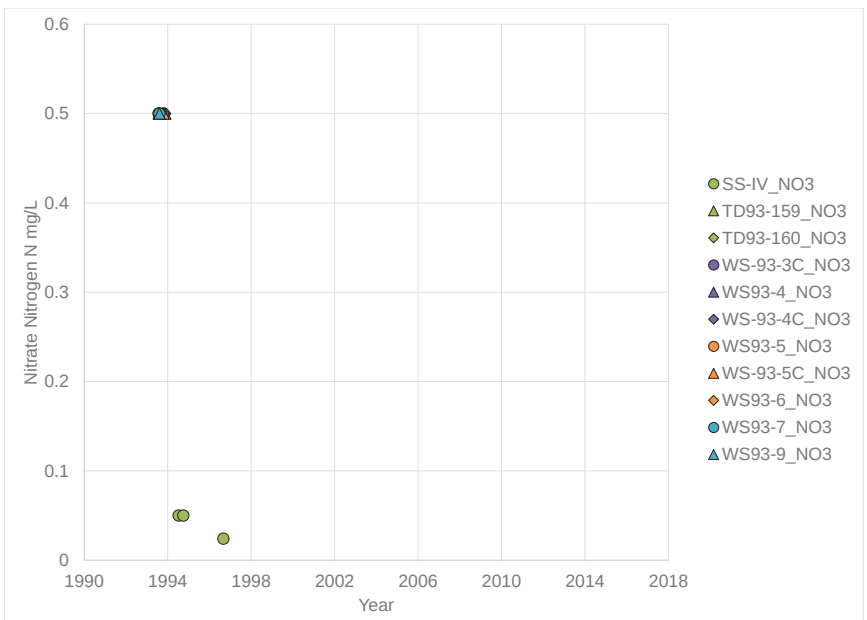


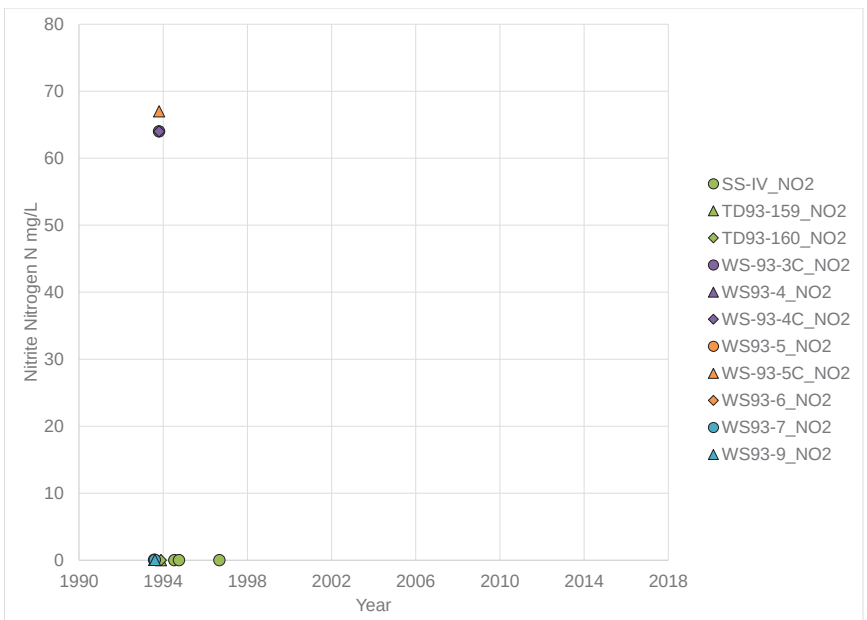


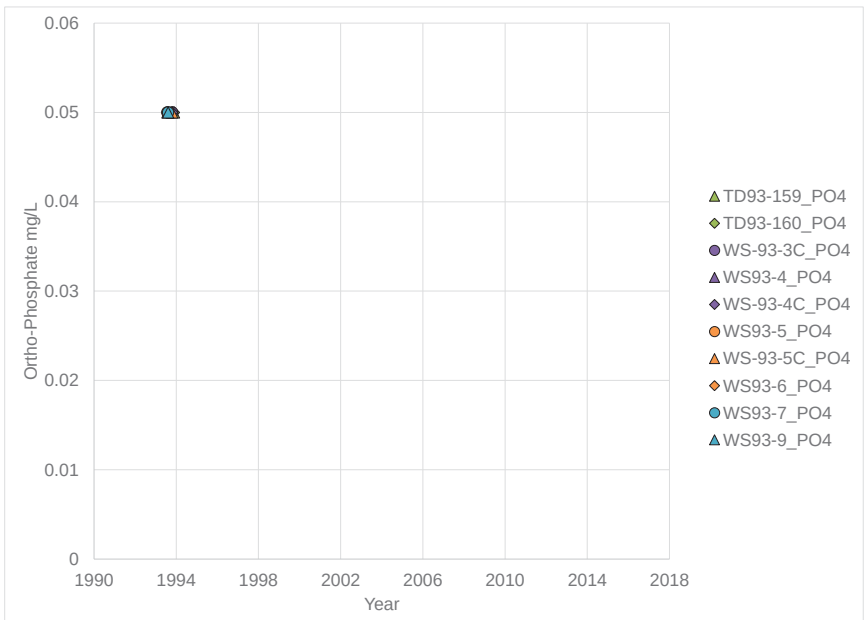
Appendix F - Groundwater Quality Data Plots
Lower Cirque

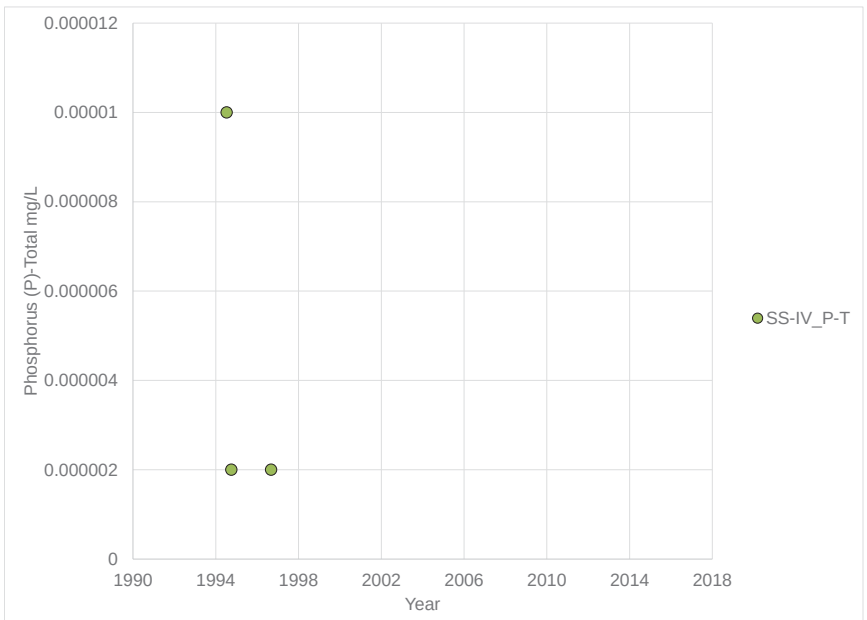


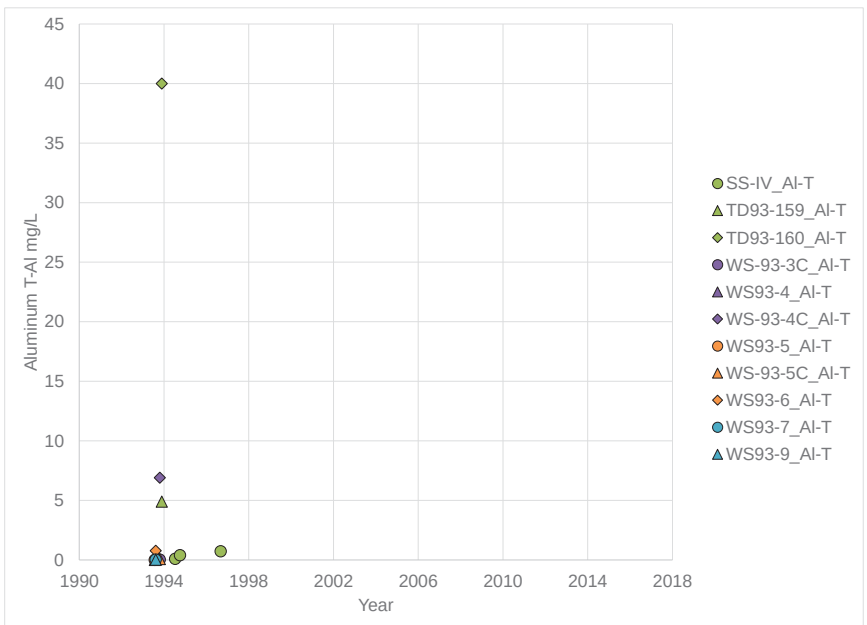


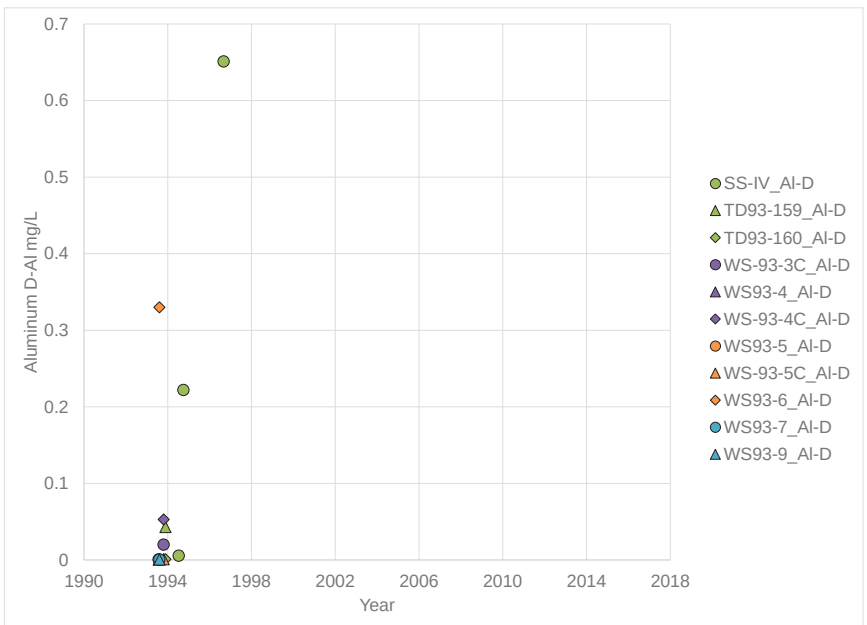




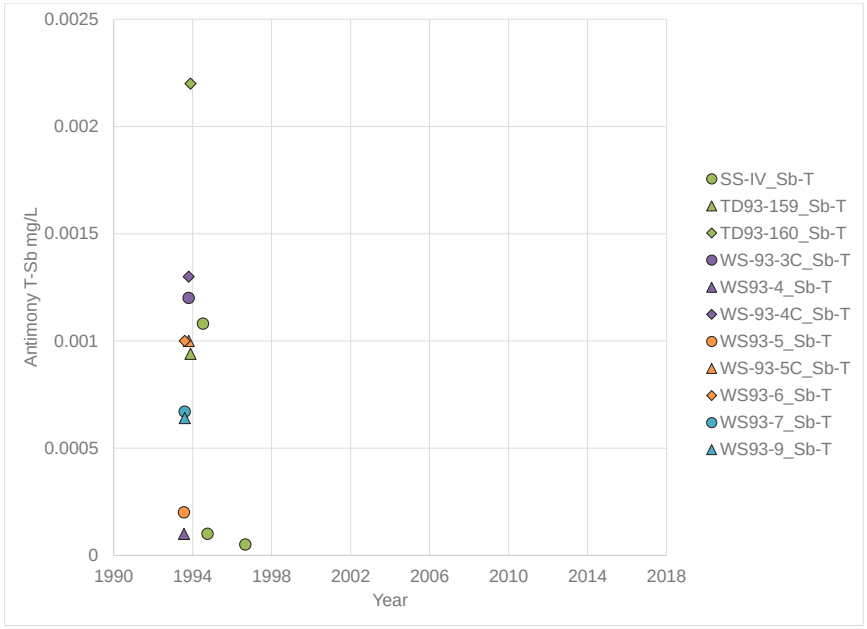


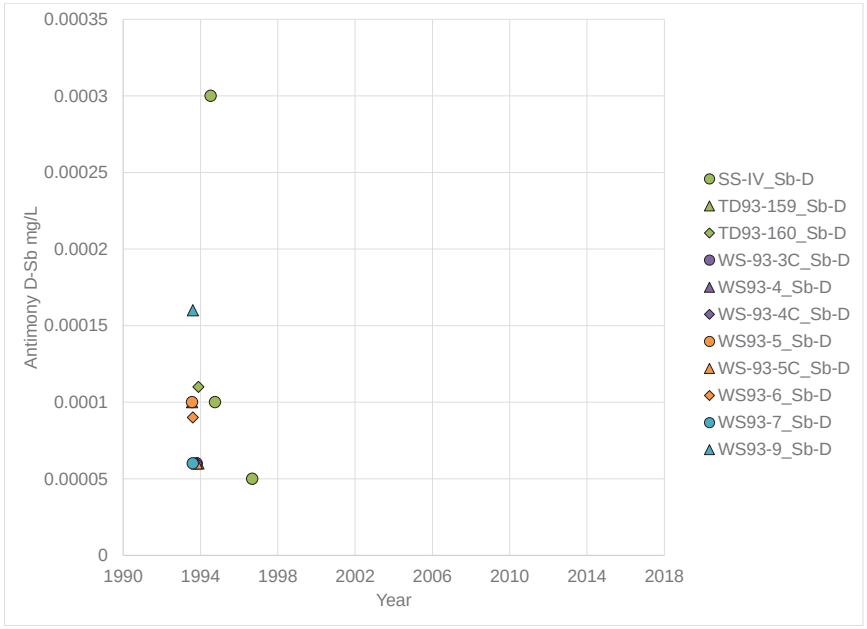


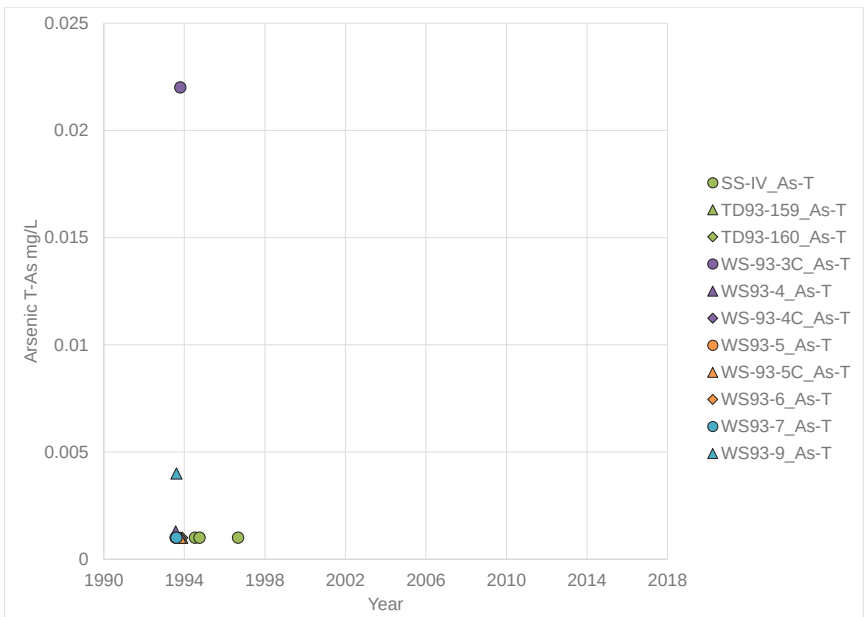


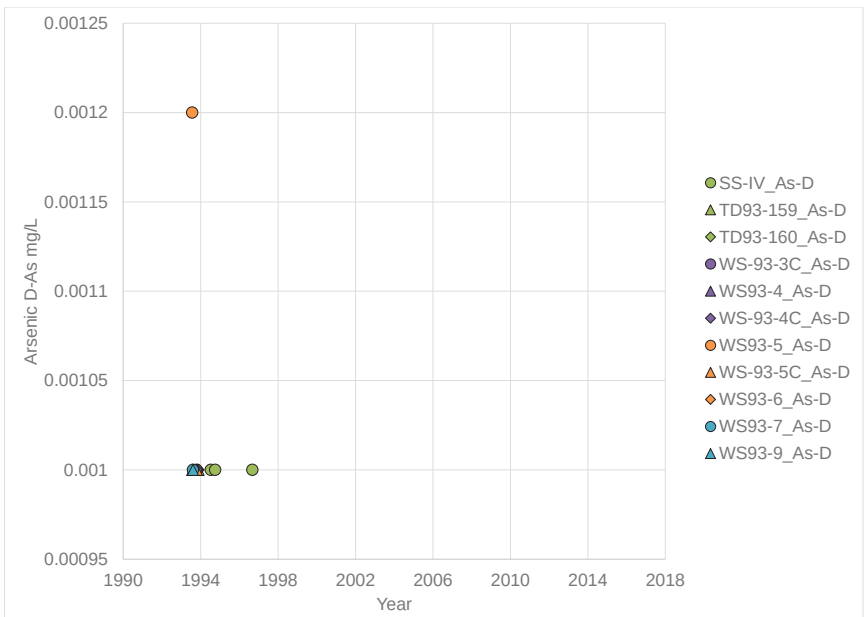


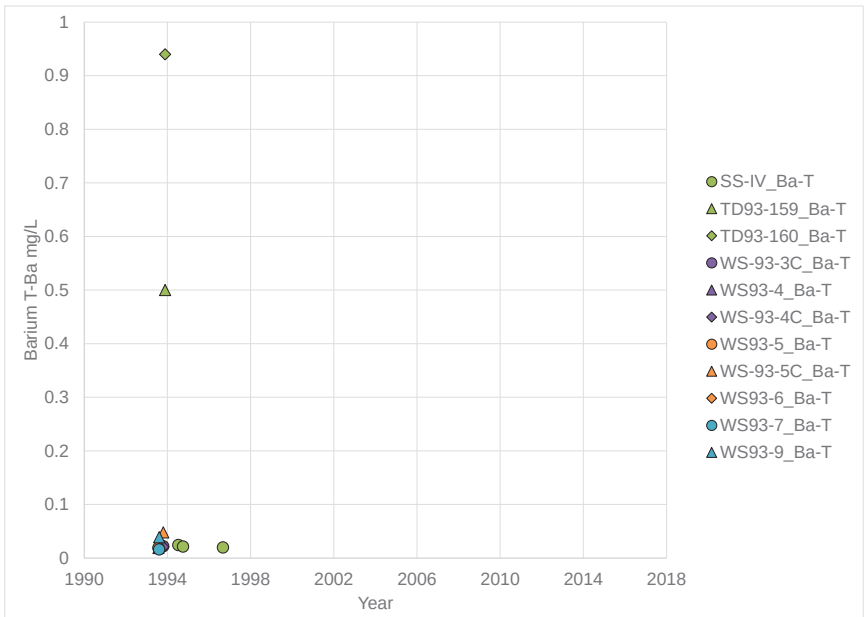
Appendix F - Groundwater Quality Data Plots
Lower Cirque

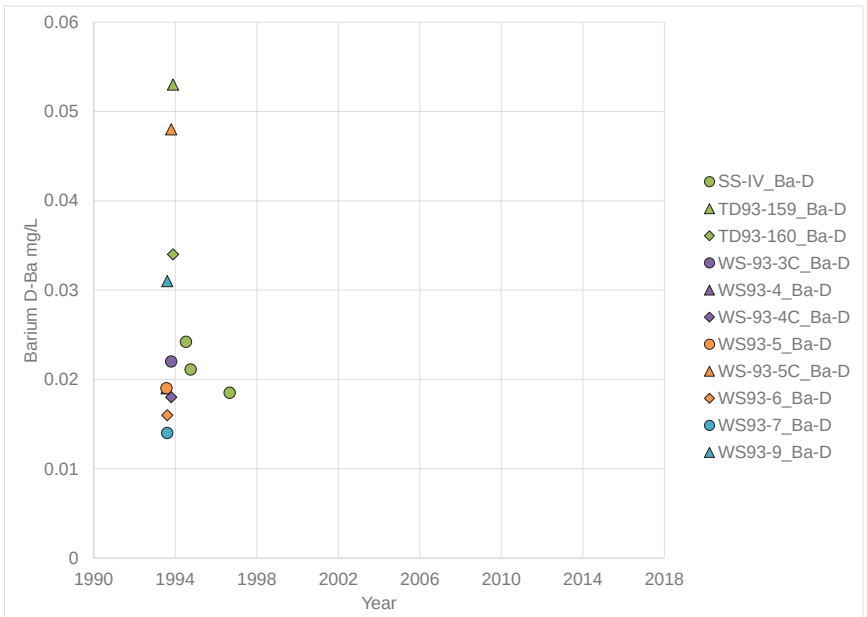


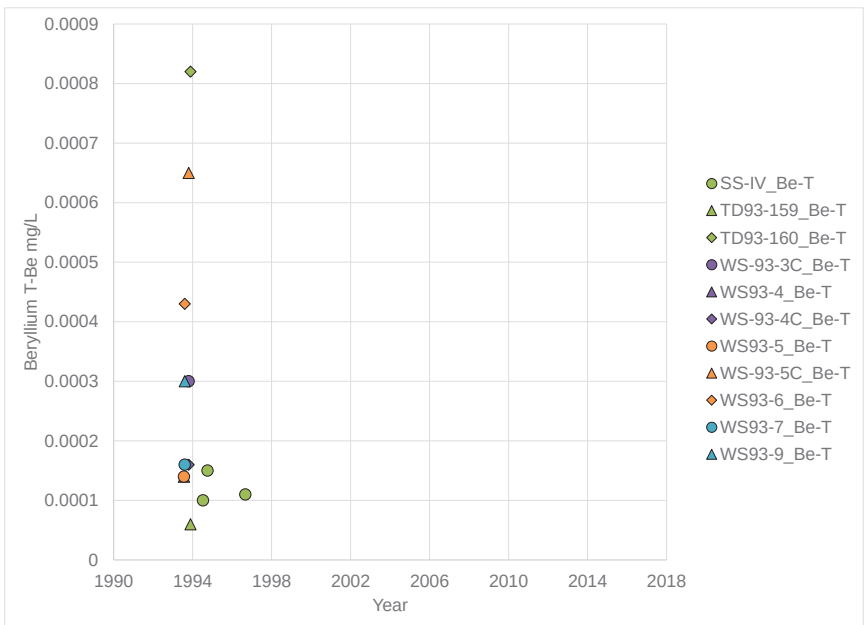


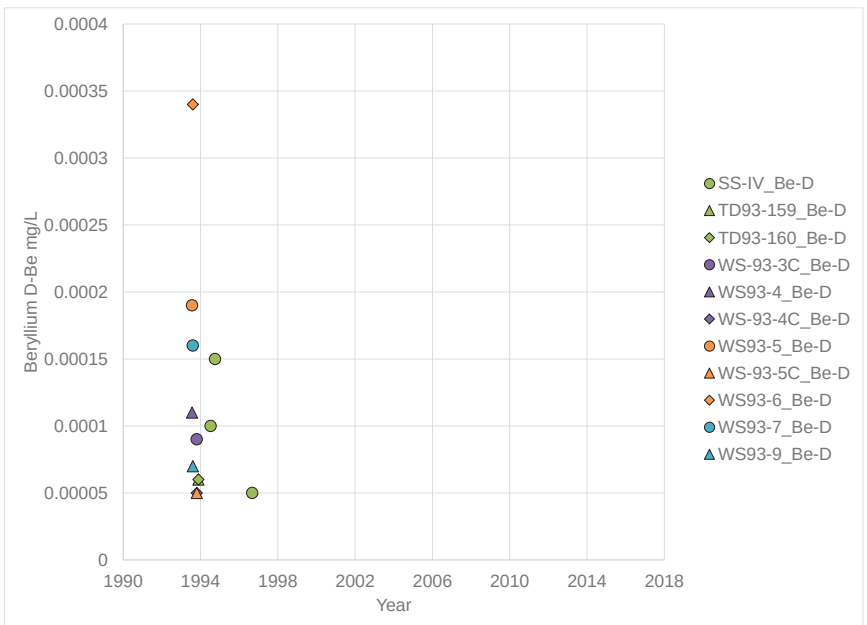




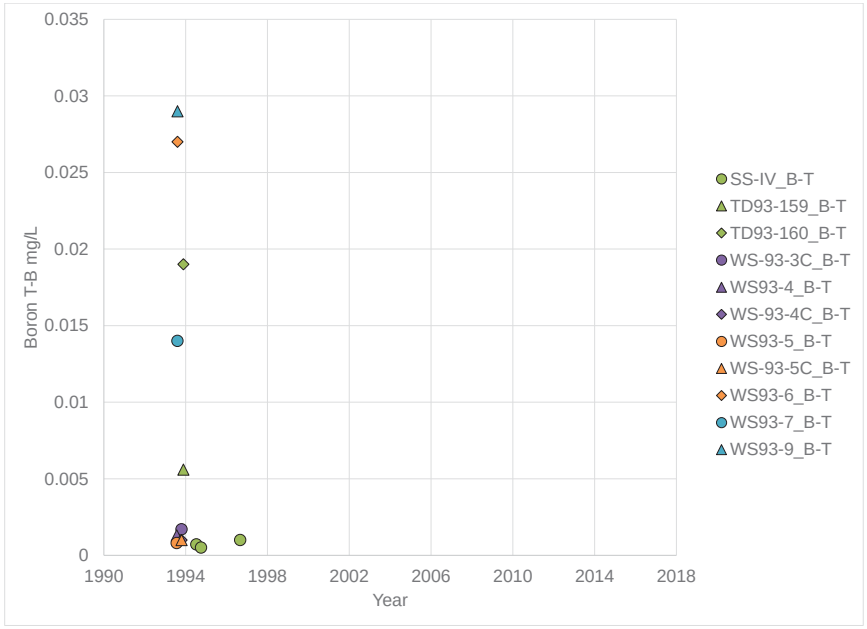


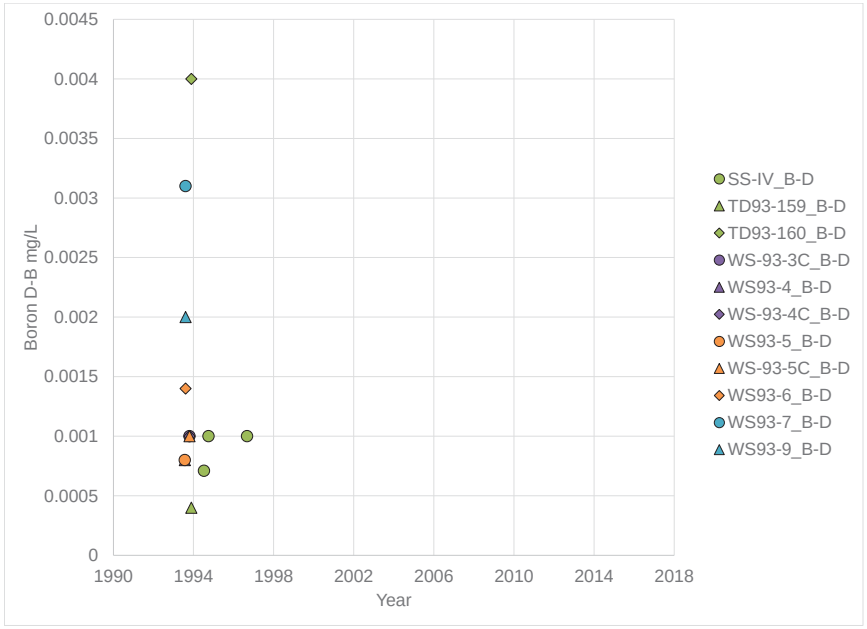


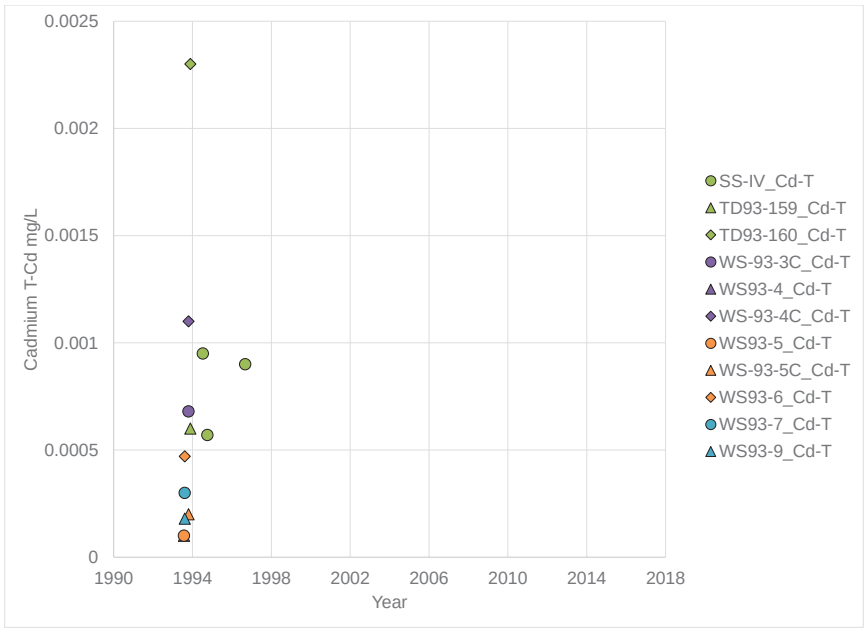


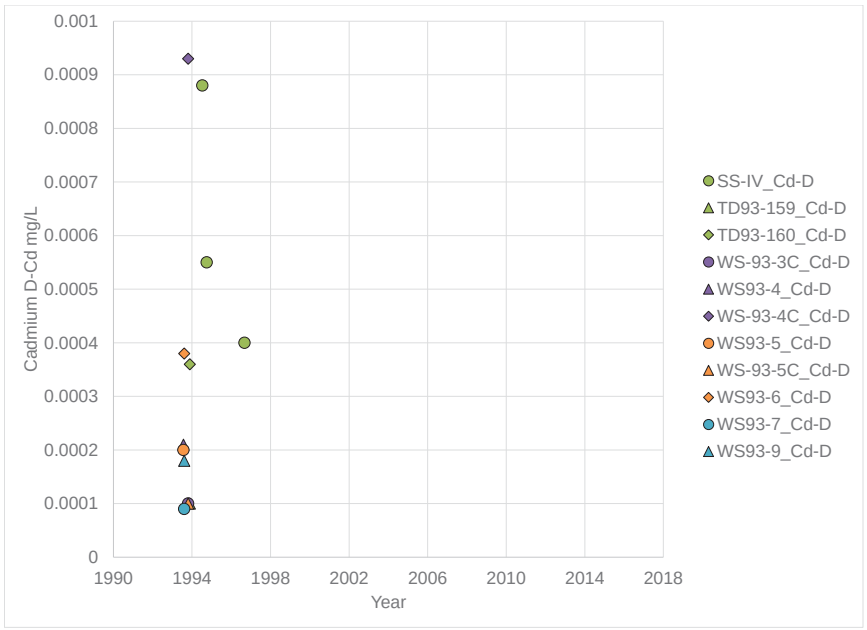


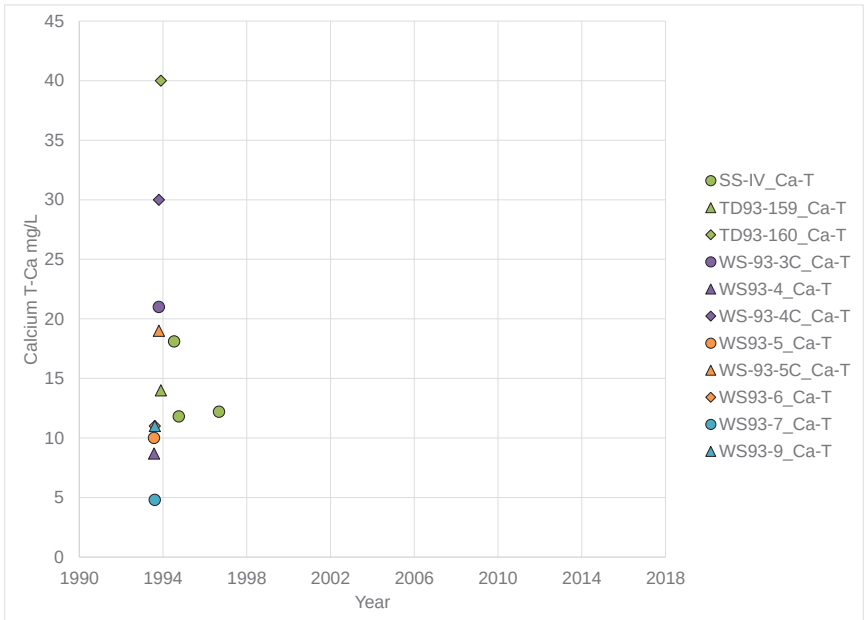
Appendix F - Groundwater Quality Data Plots
Lower Cirque

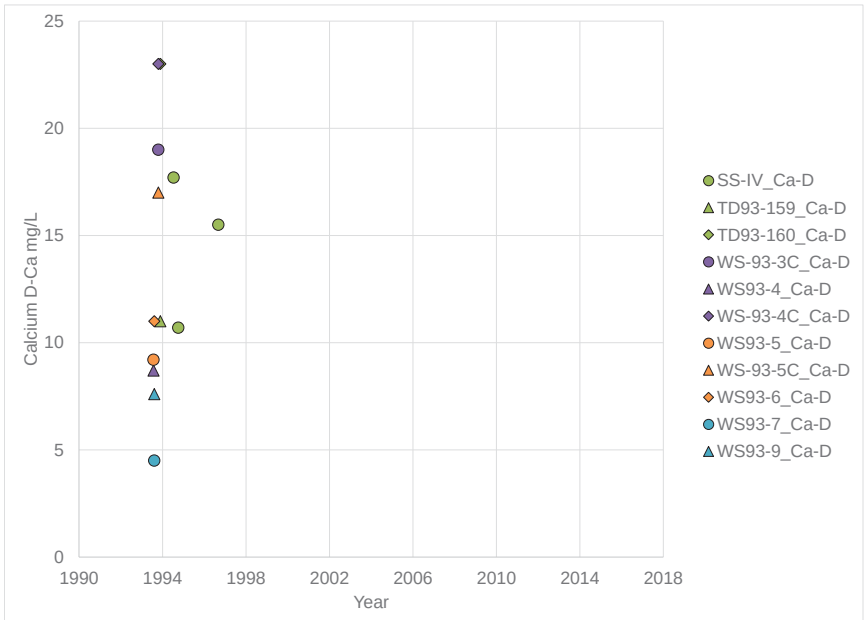


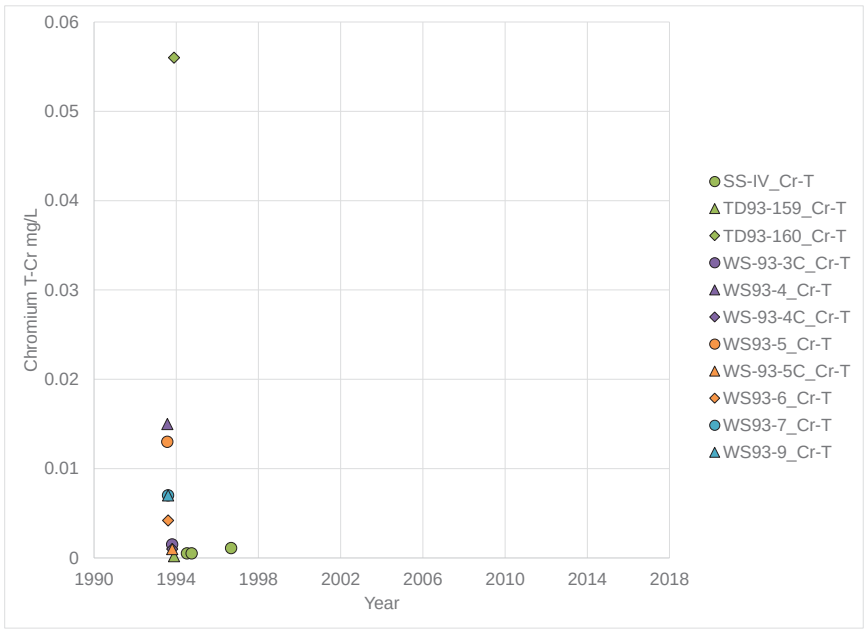


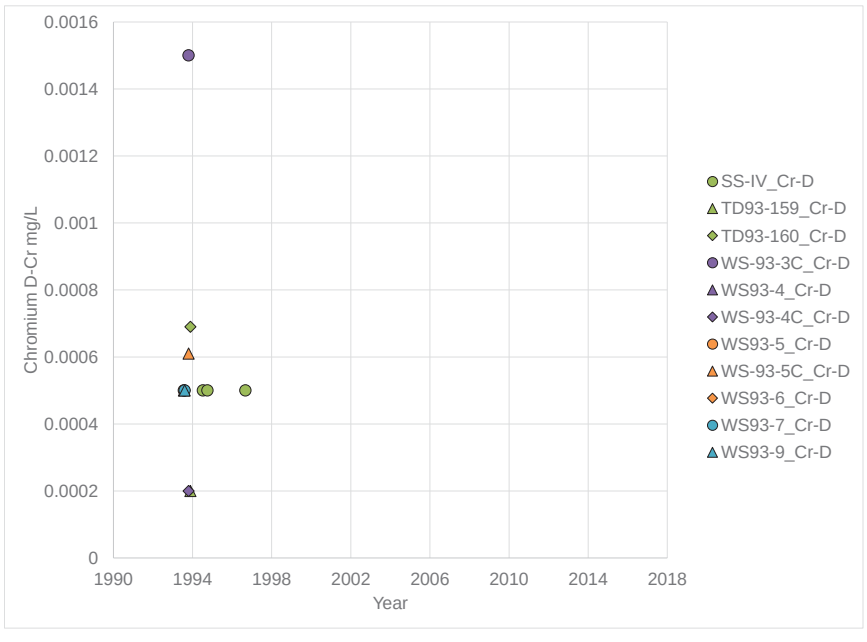




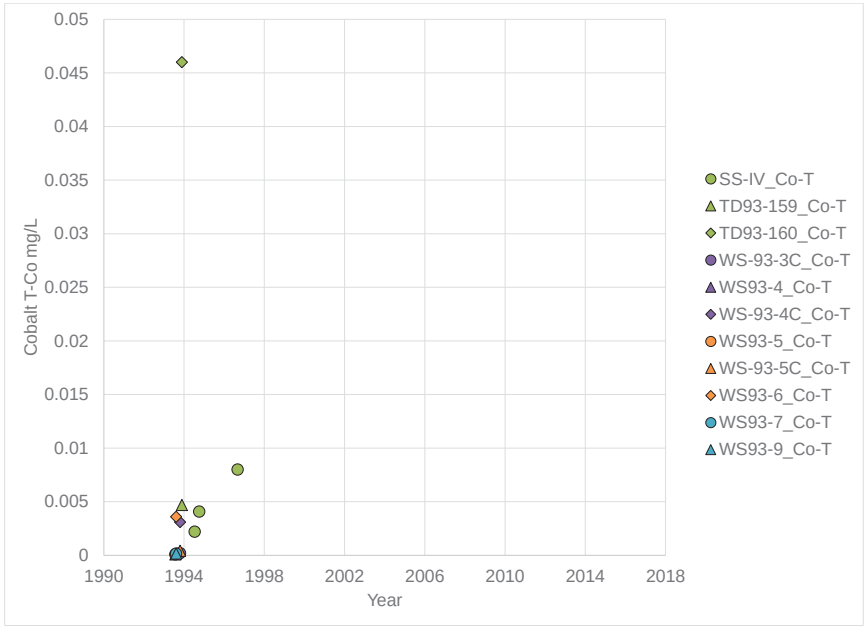


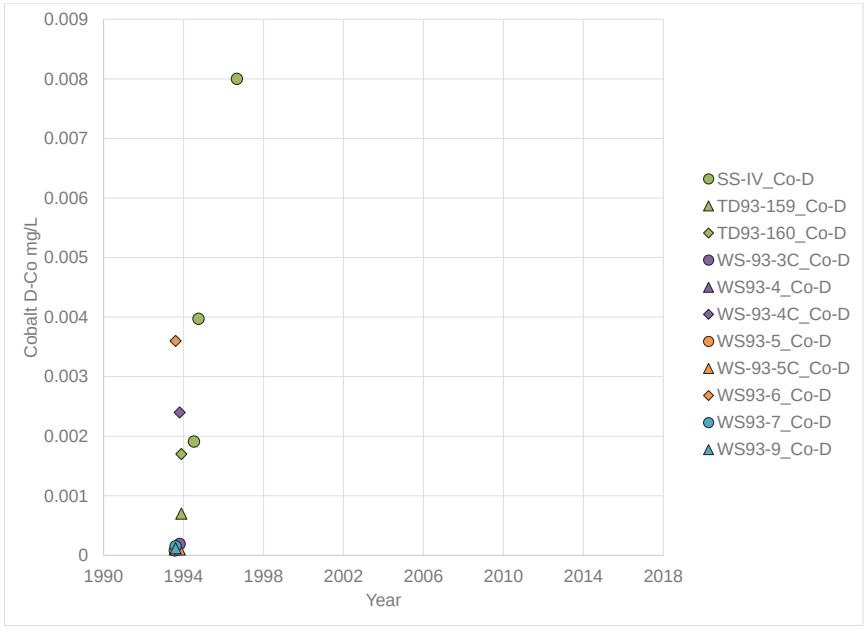


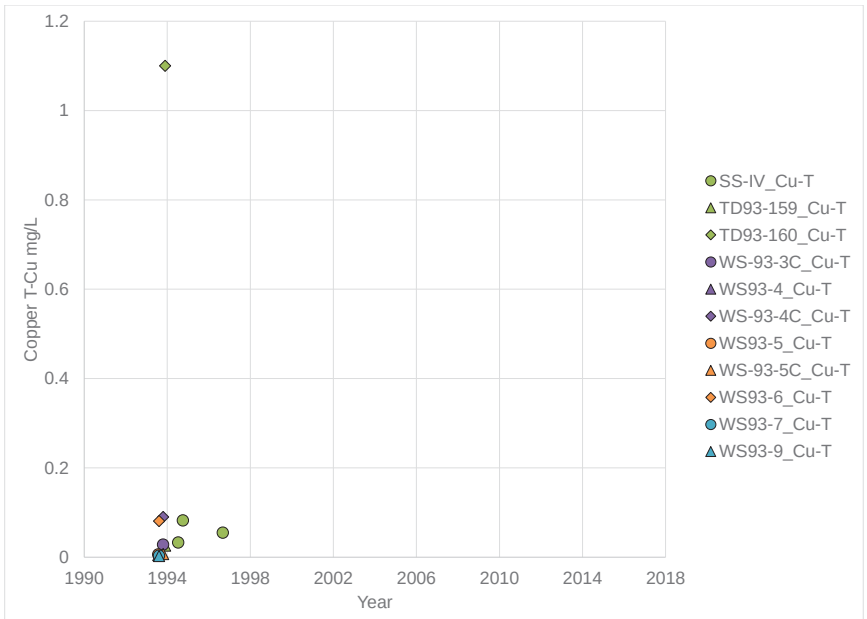


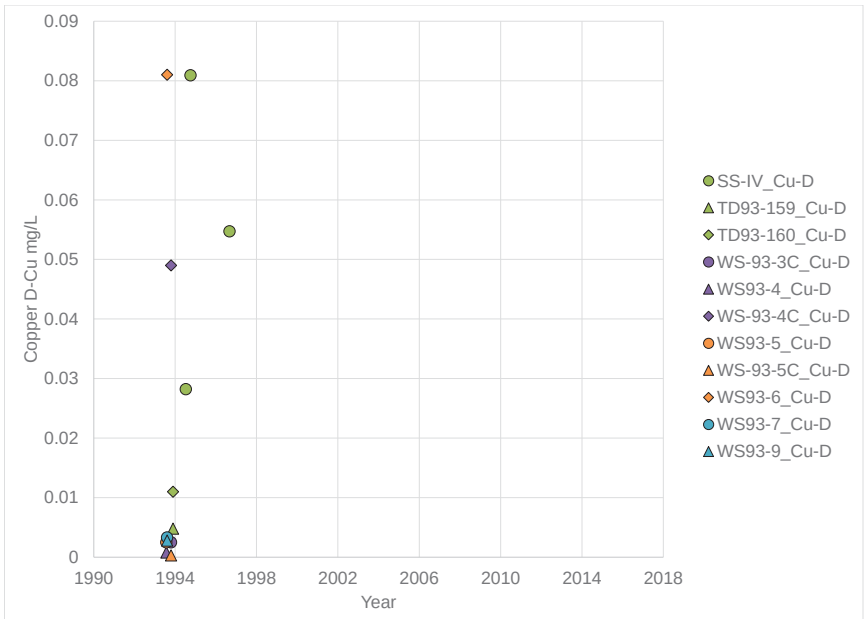


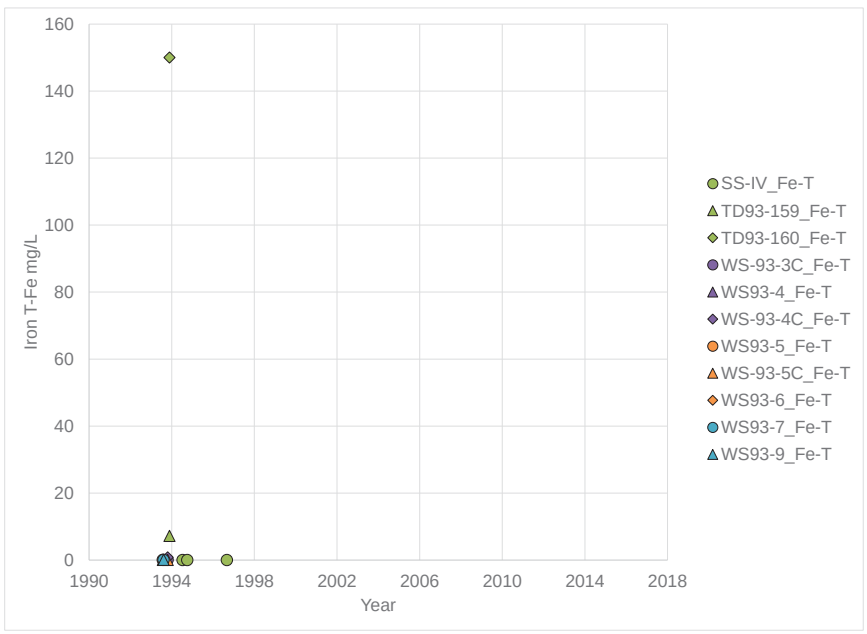
Appendix F - Groundwater Quality Data Plots
Lower Cirque

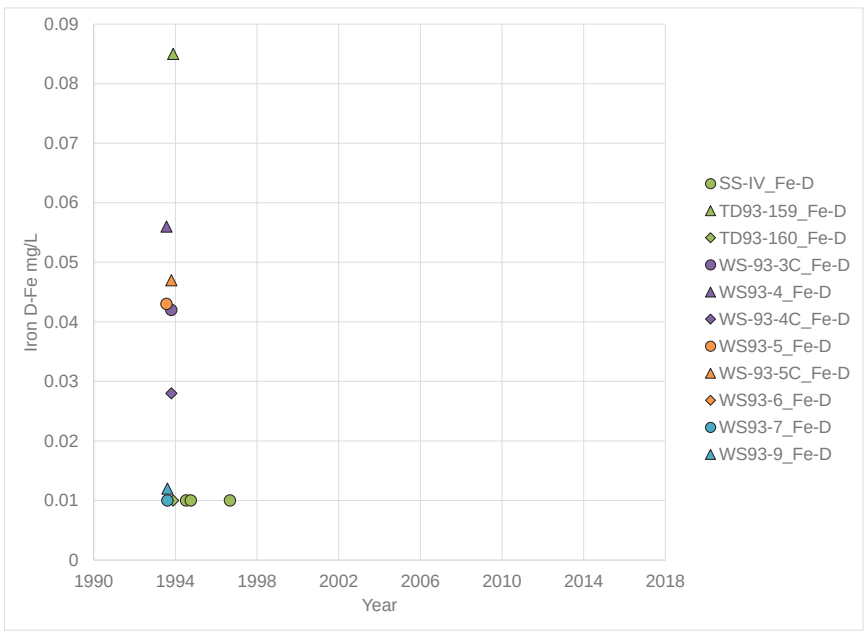


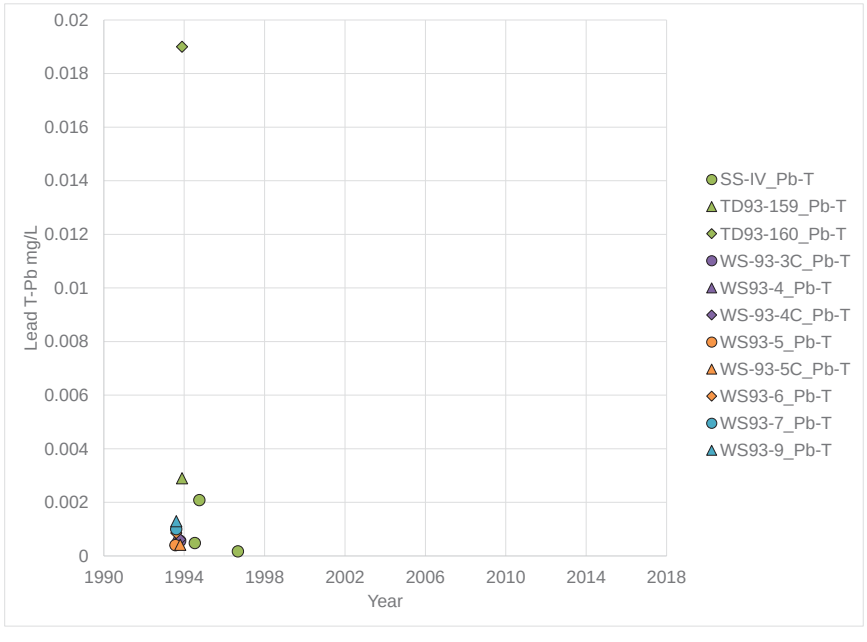


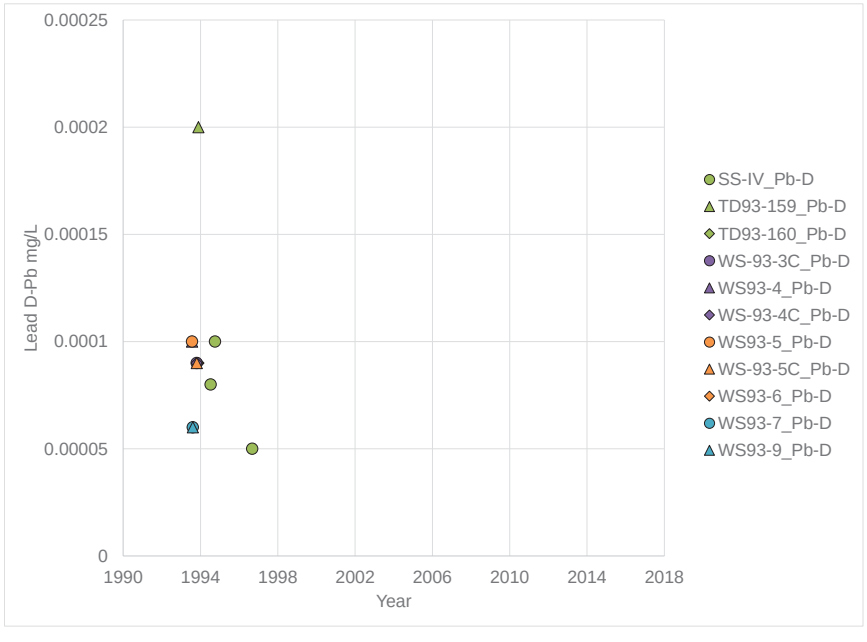




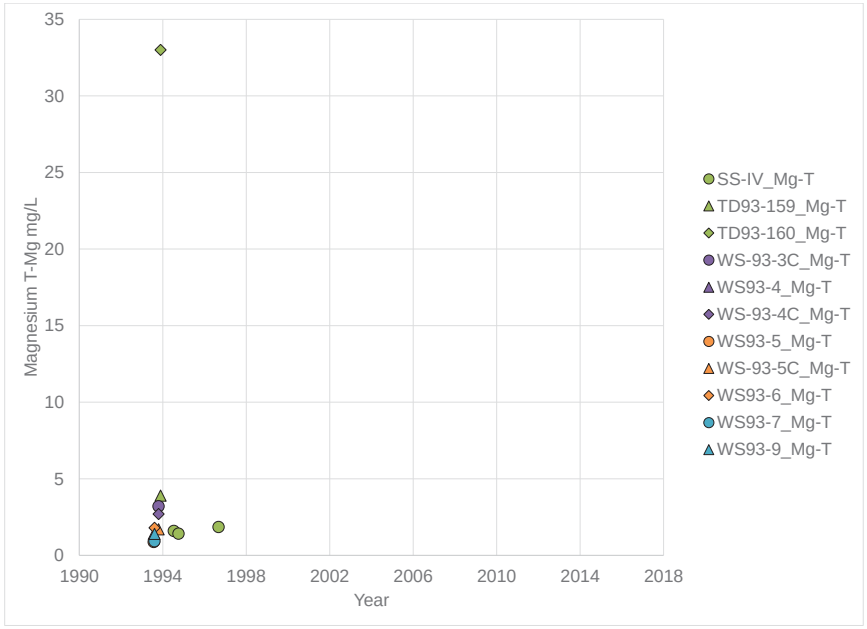


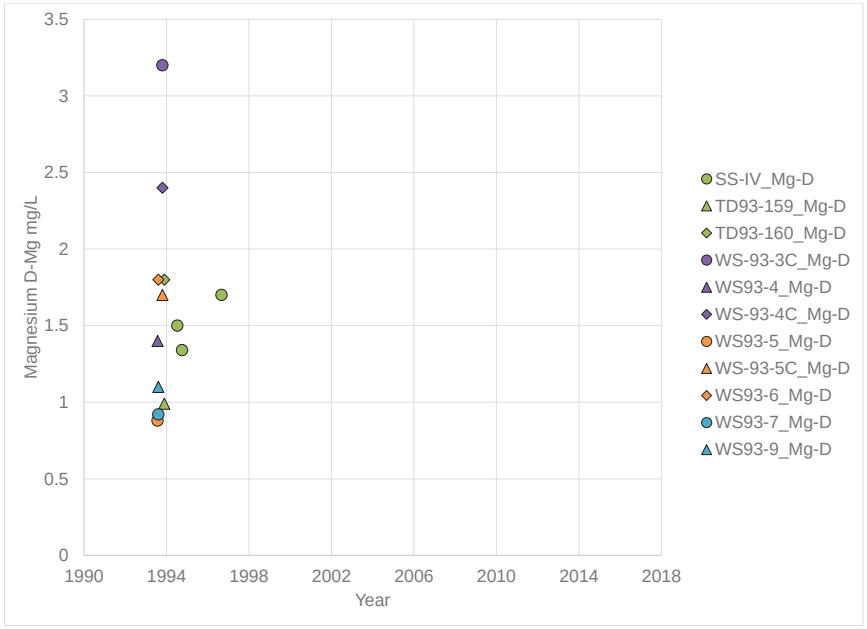


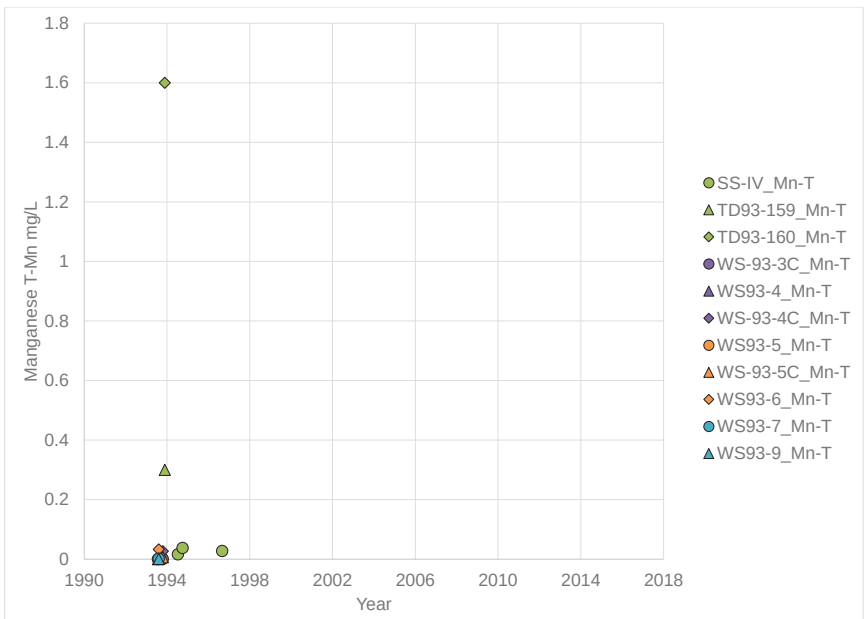


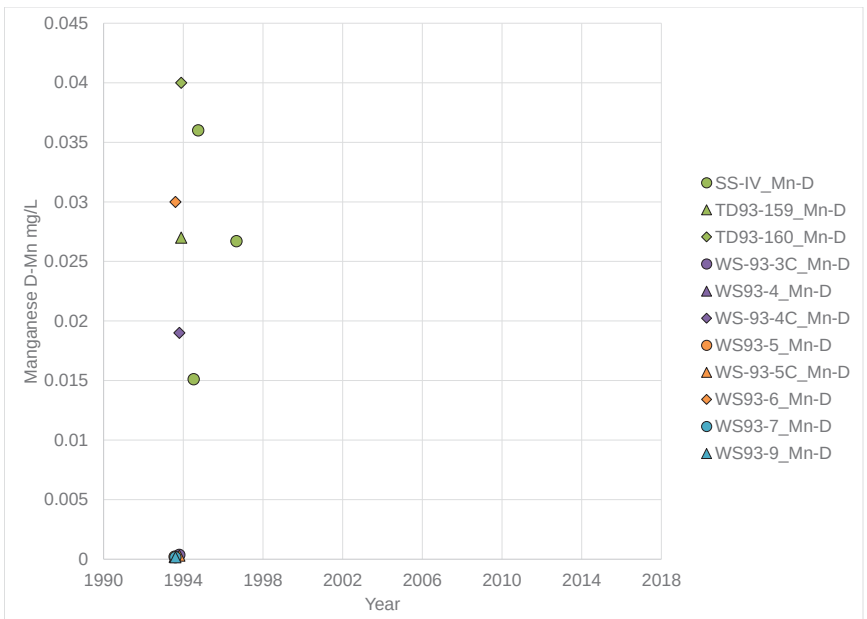


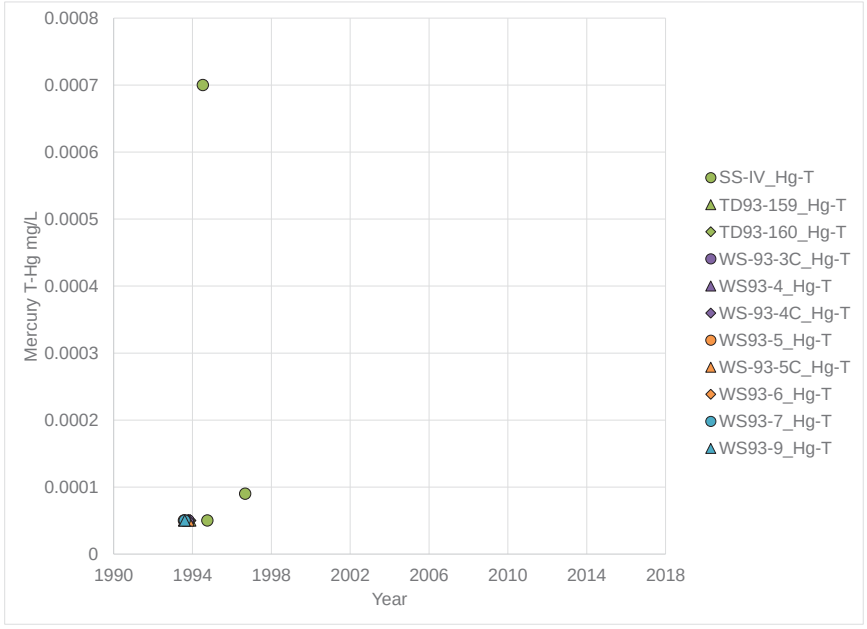
Appendix F - Groundwater Quality Data Plots
Lower Cirque

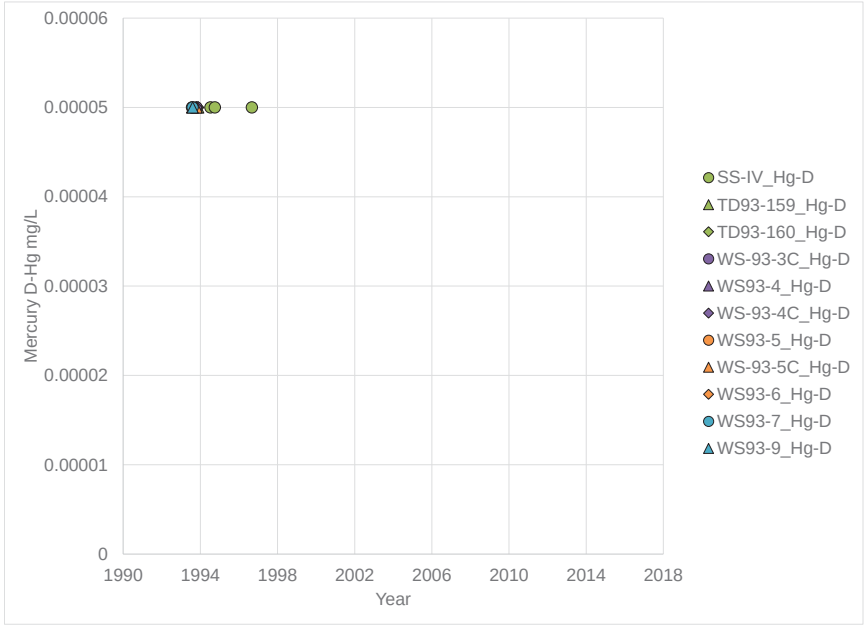


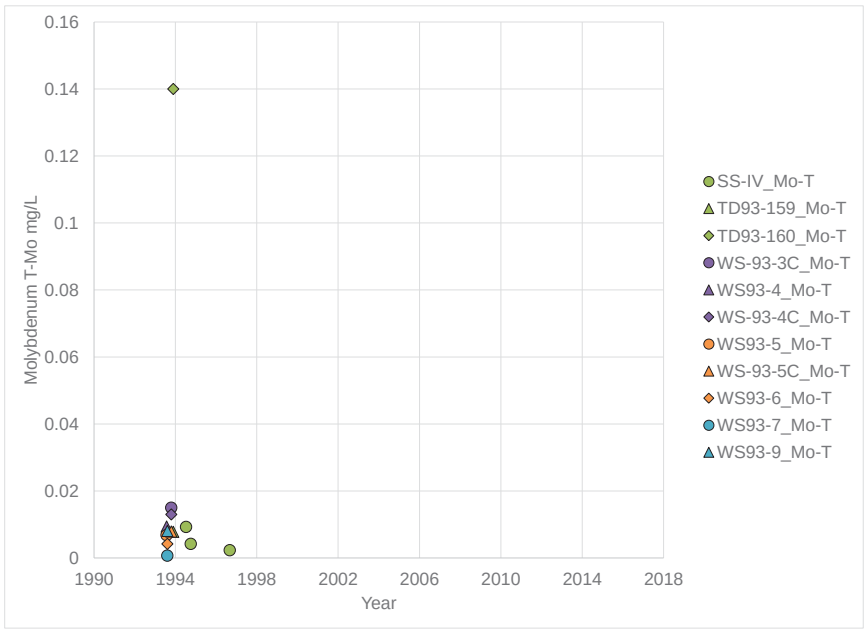


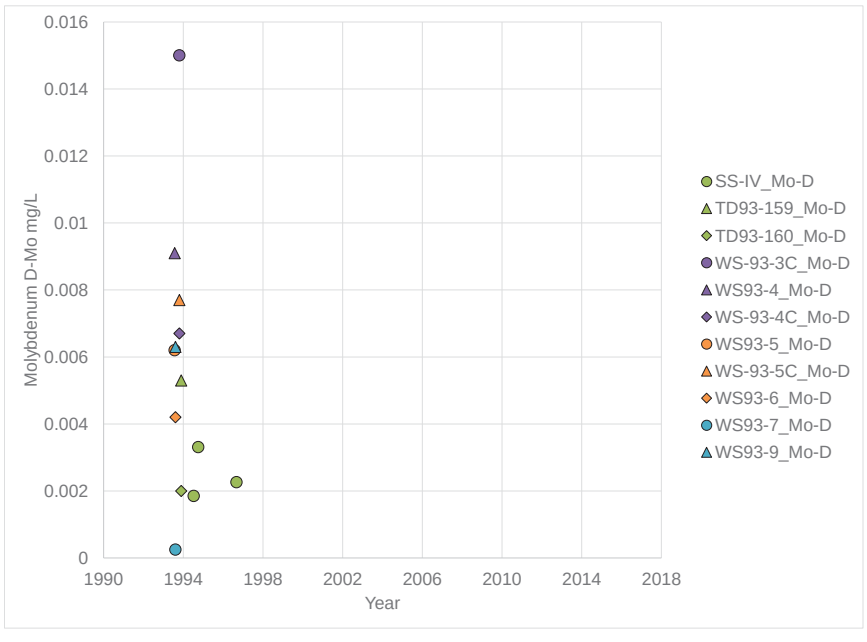




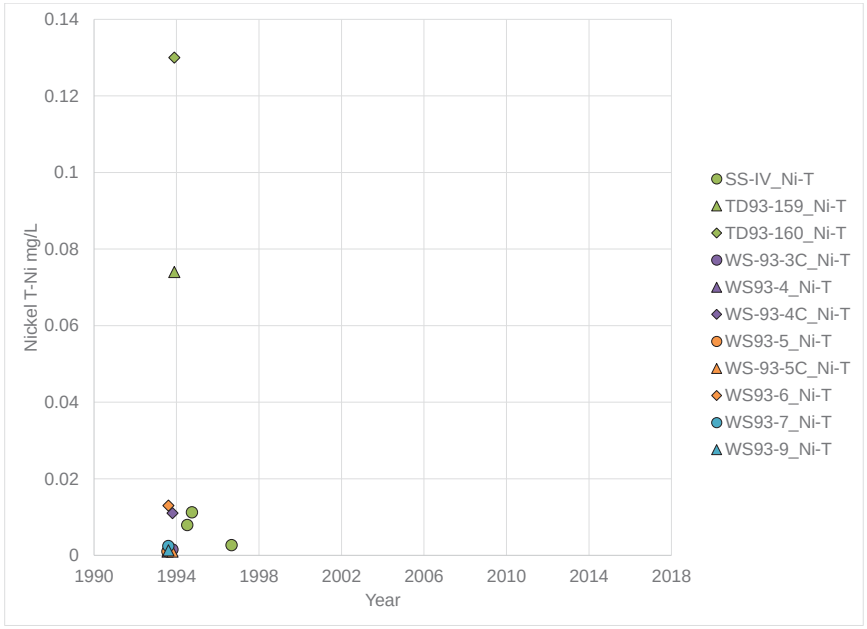


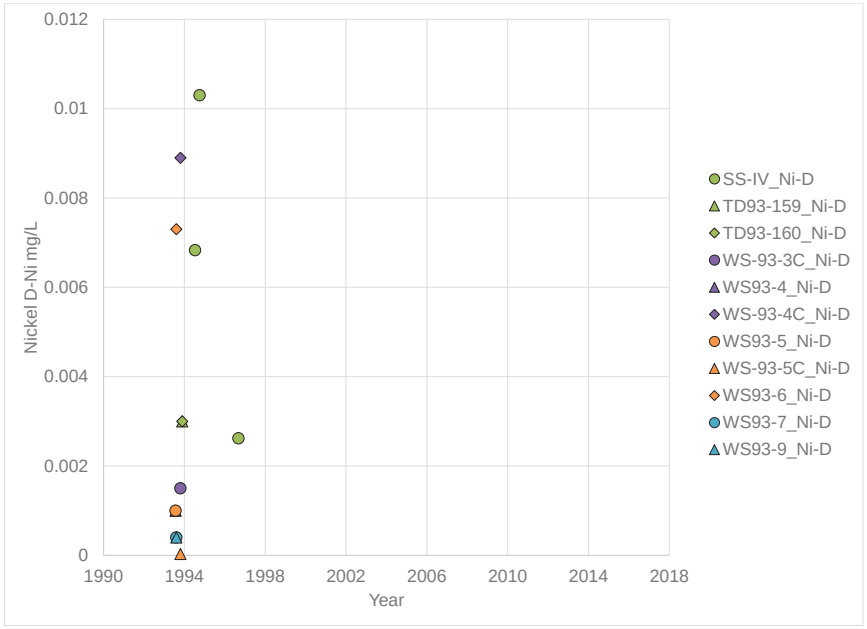


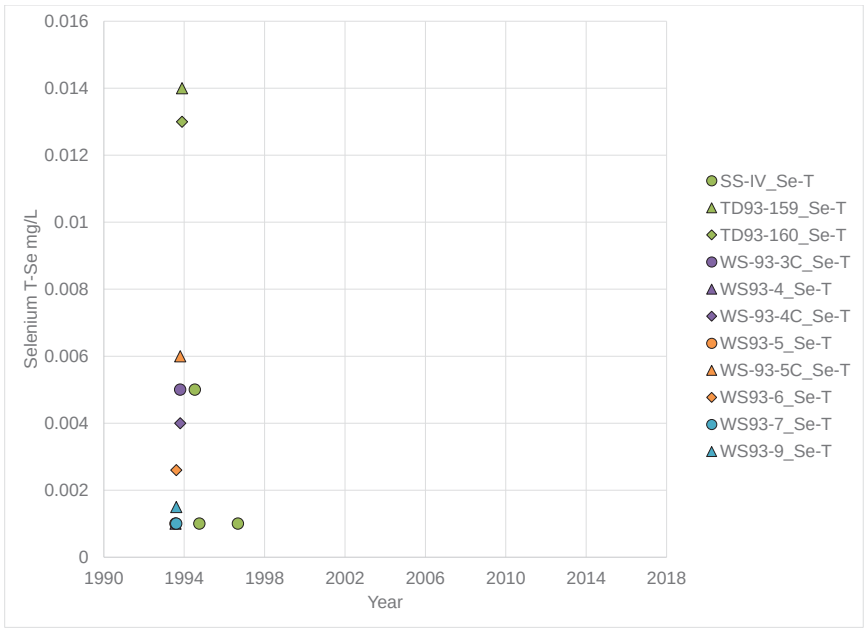


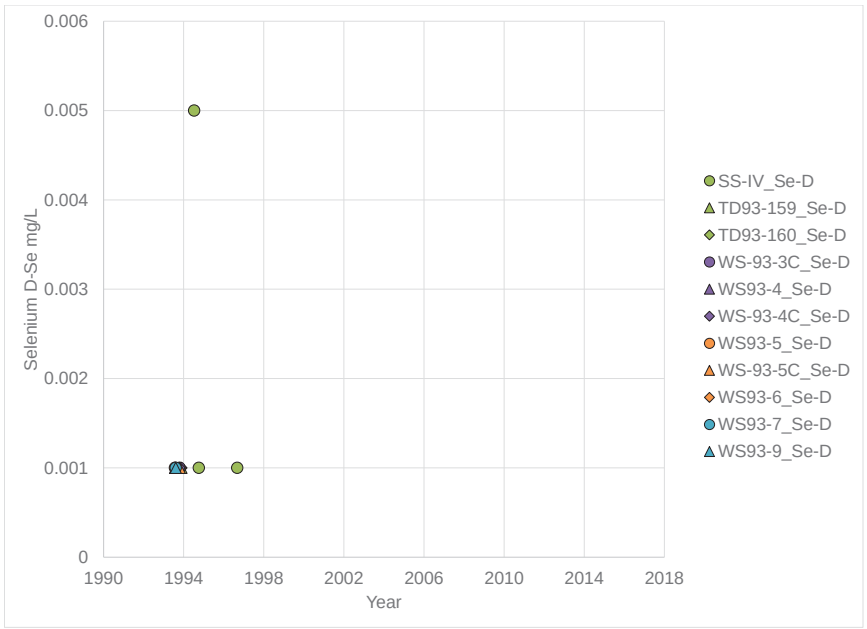


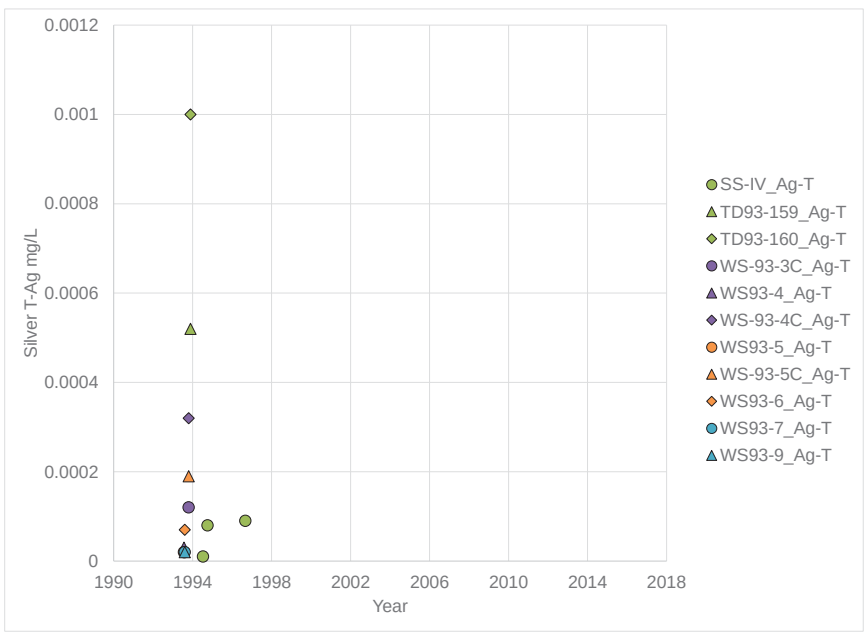
Appendix F - Groundwater Quality Data Plots
Lower Cirque

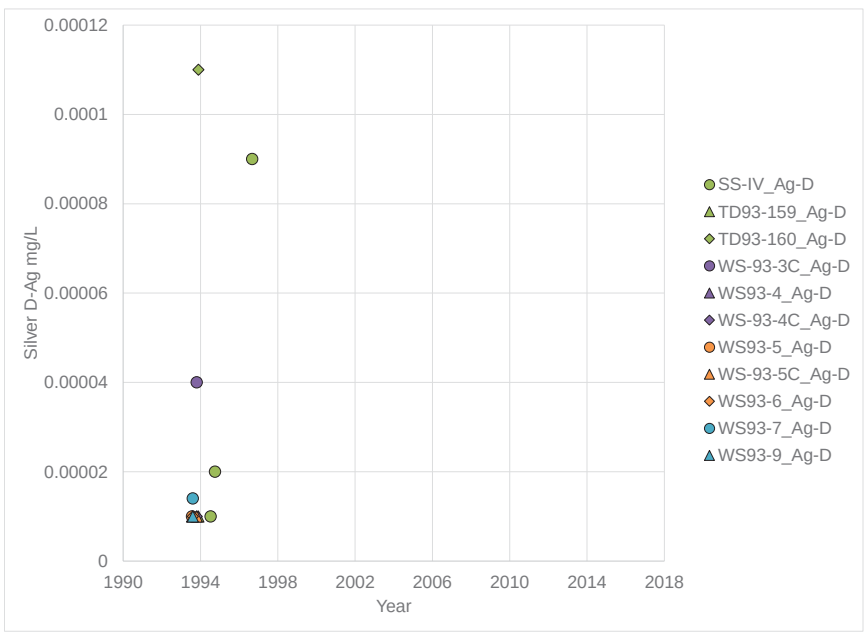


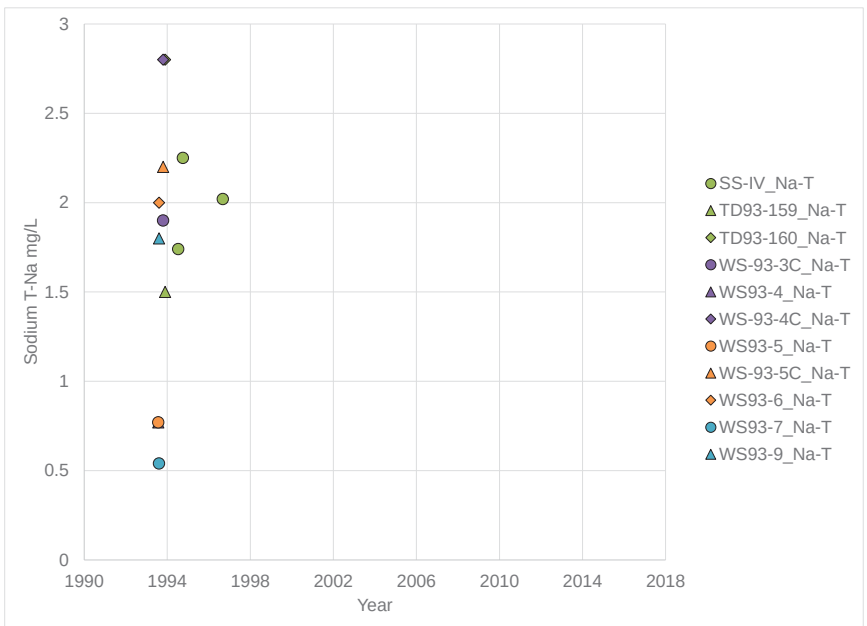


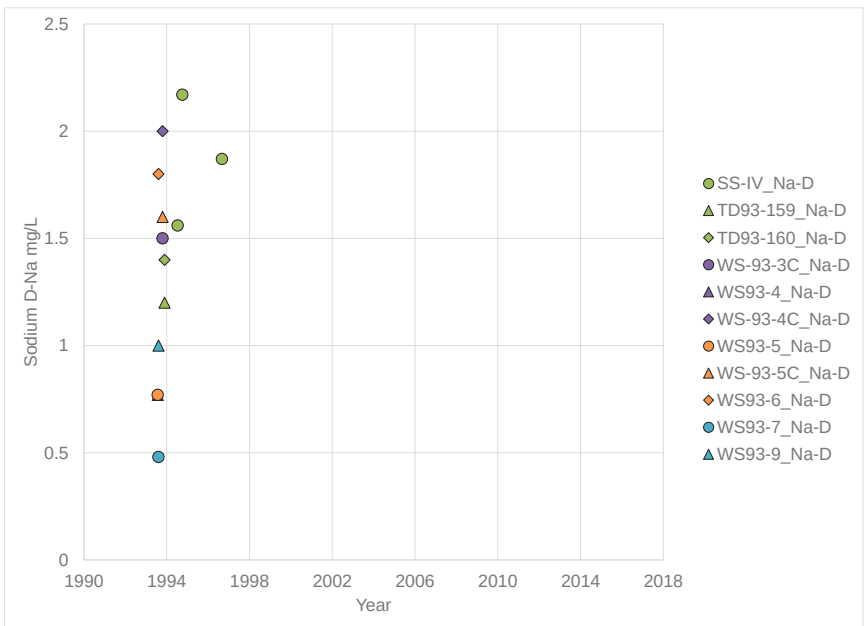




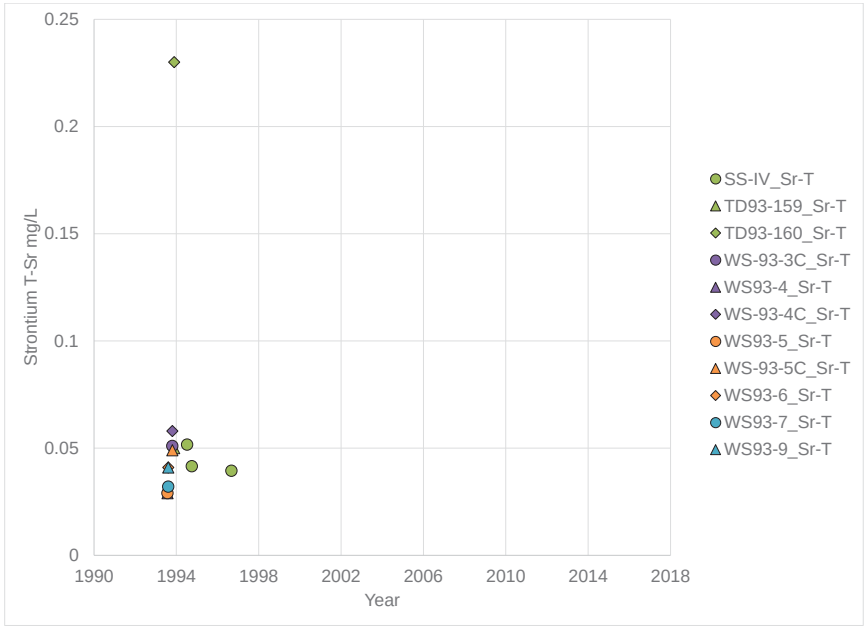


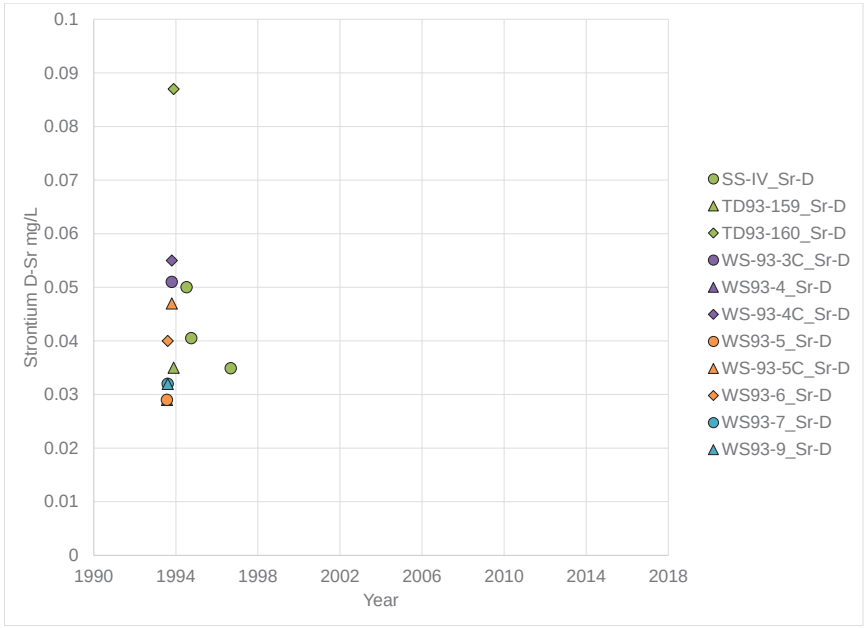


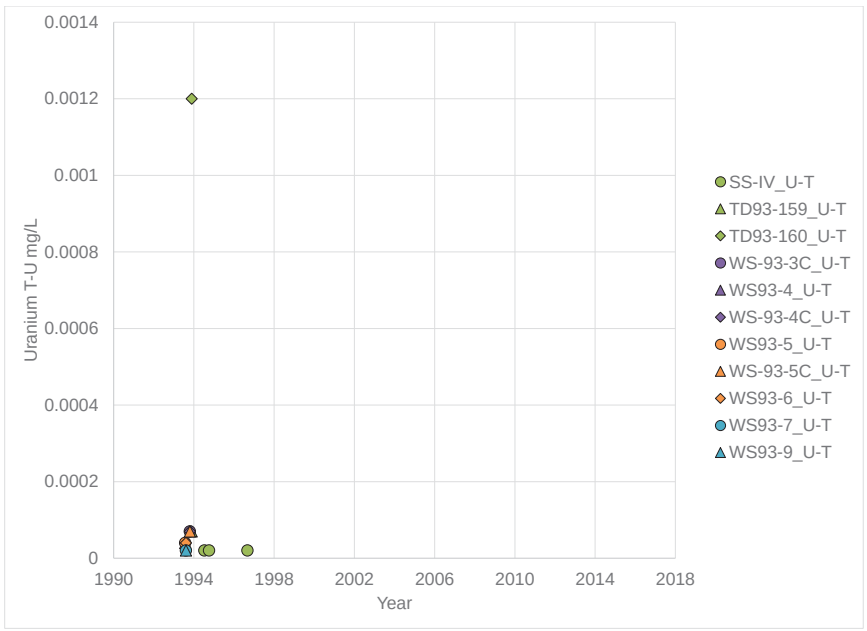


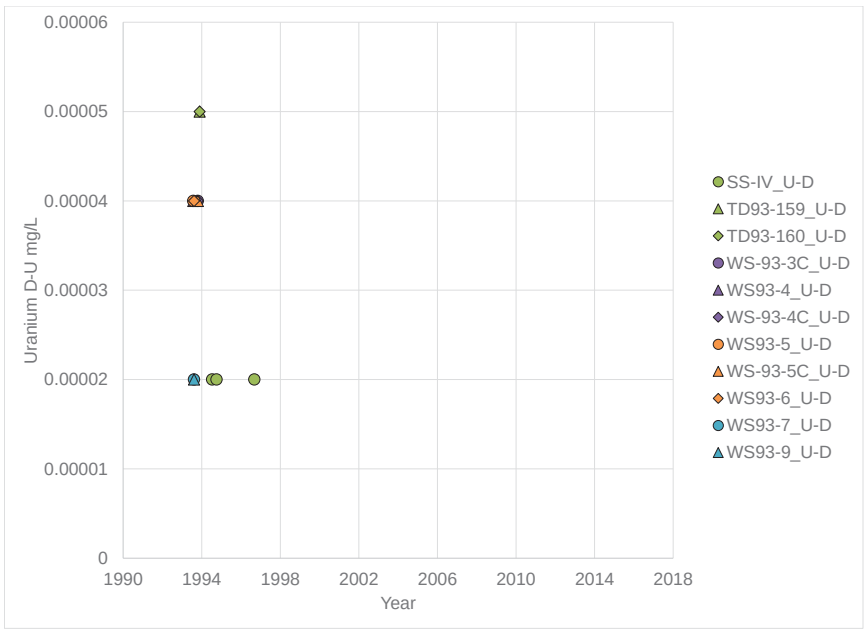


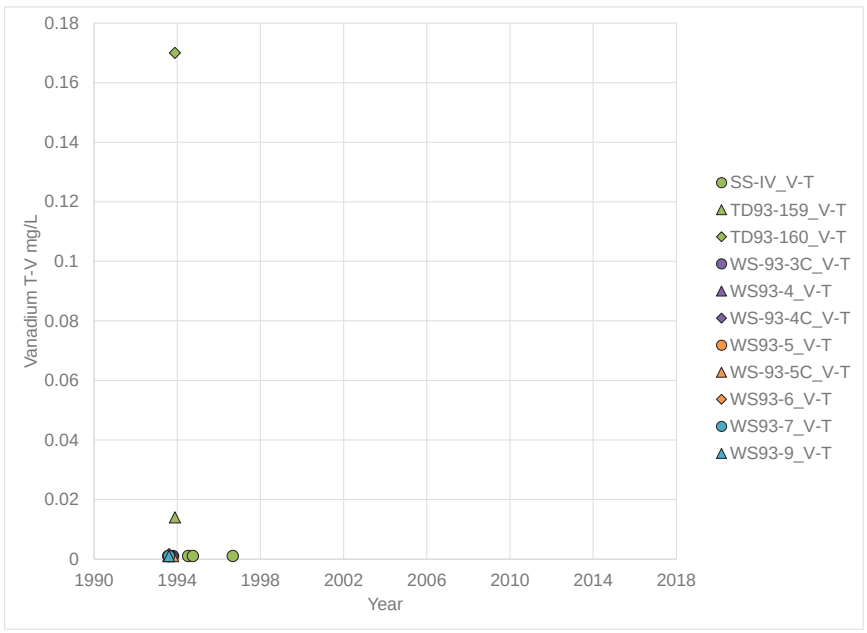
Appendix F - Groundwater Quality Data Plots
Lower Cirque

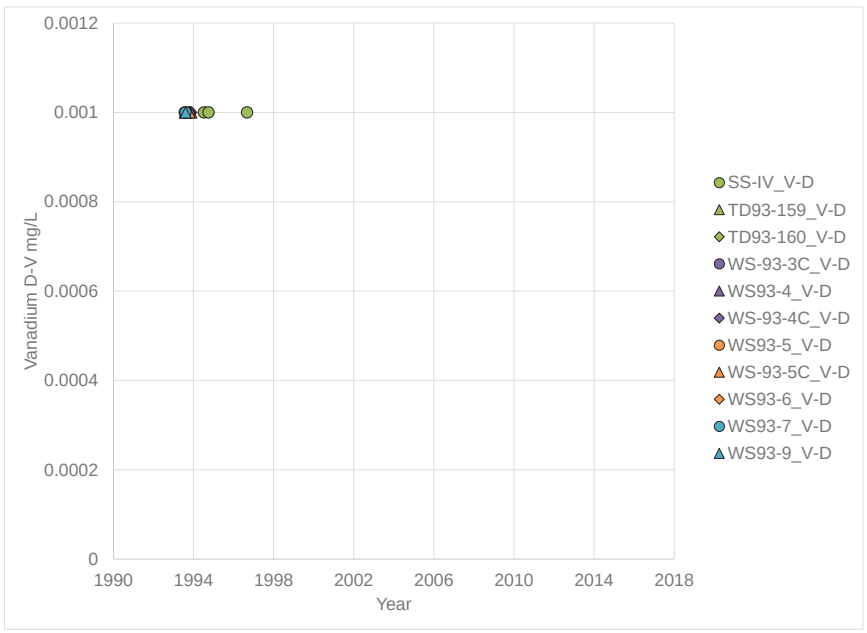


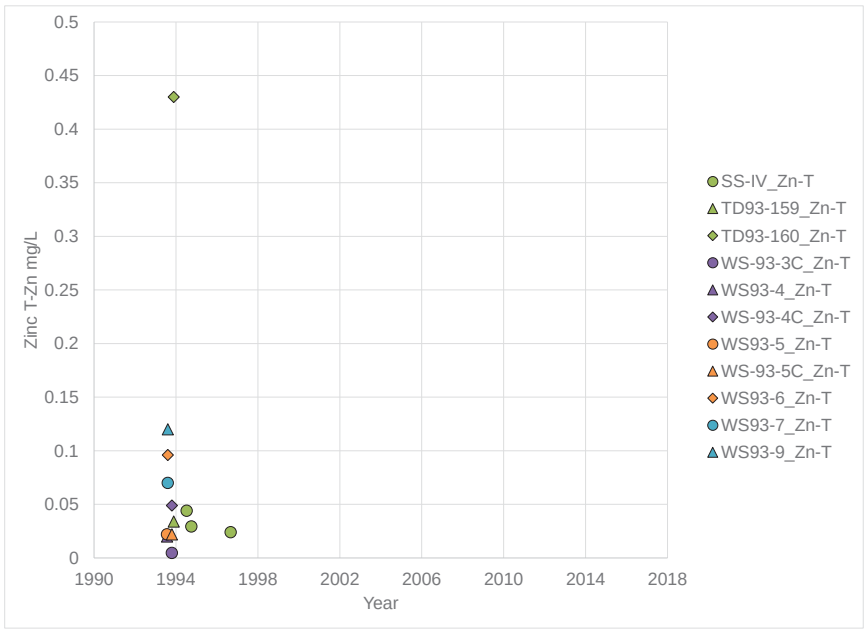


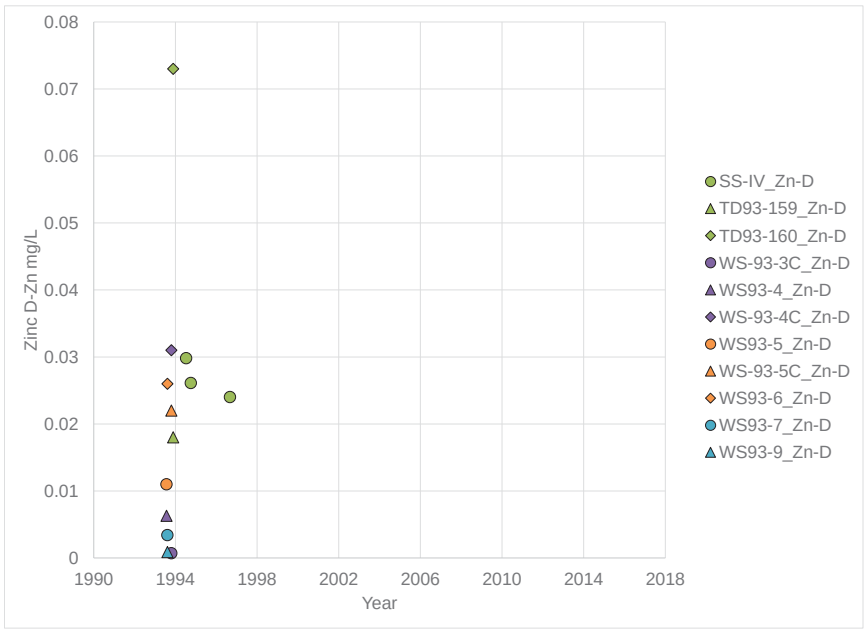




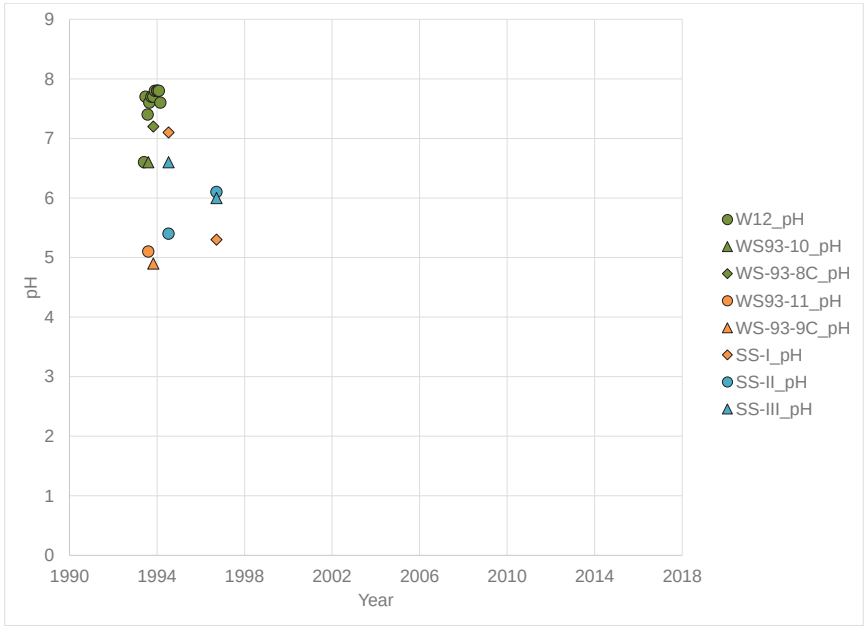


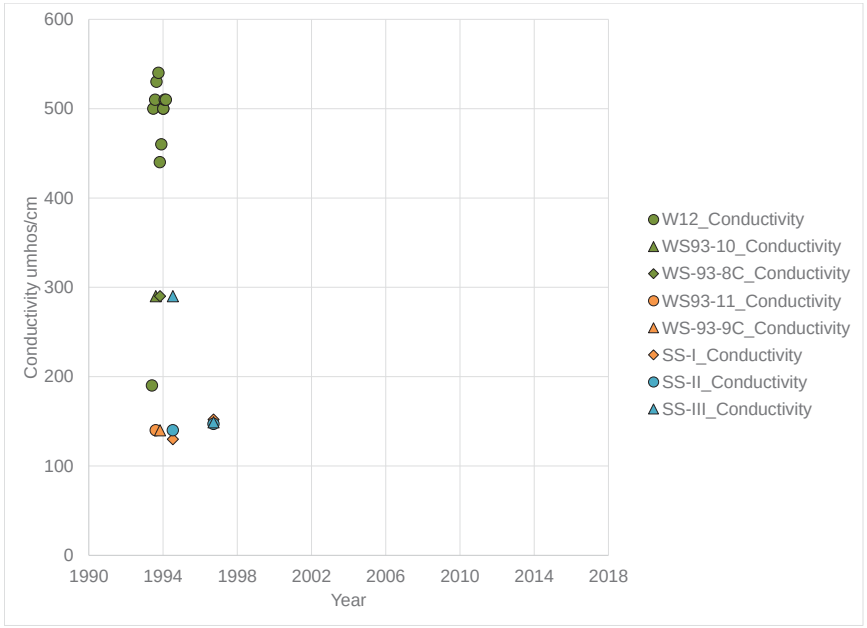


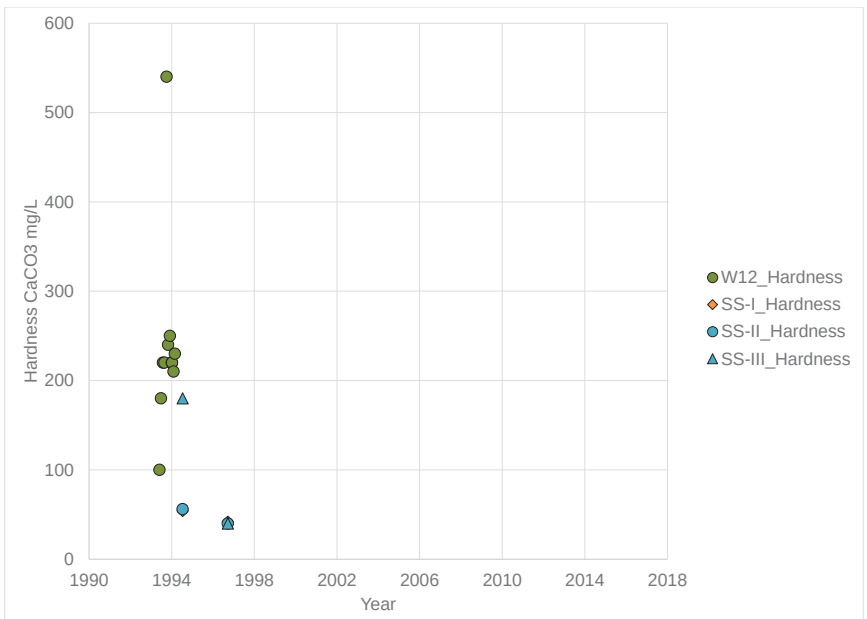


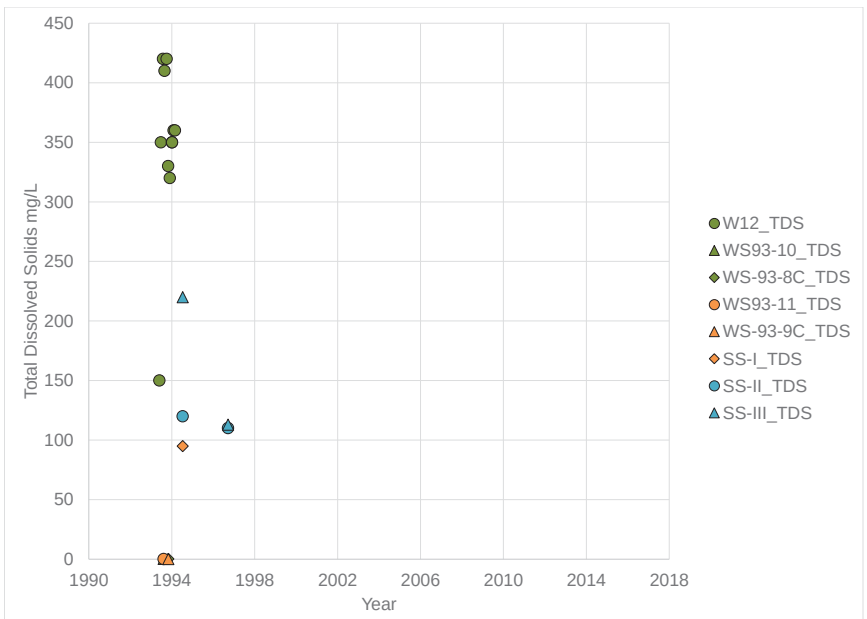


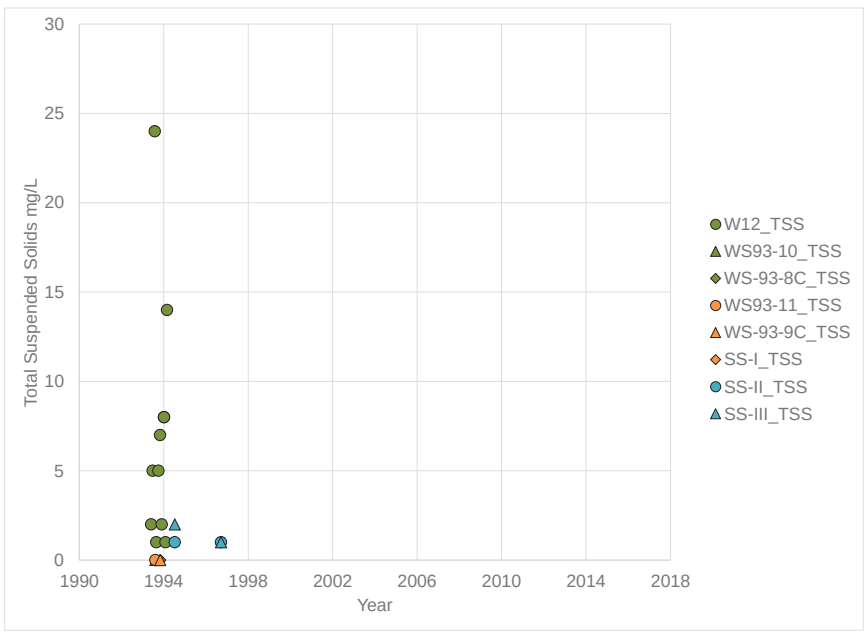
Appendix F - Groundwater Quality Data Plots
Rio Blanco Bitter Creek Valley

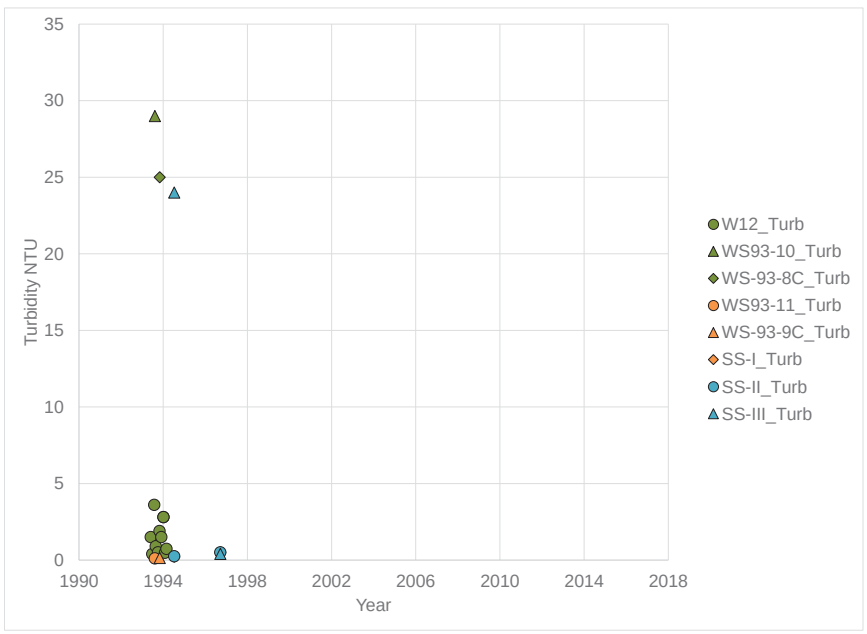


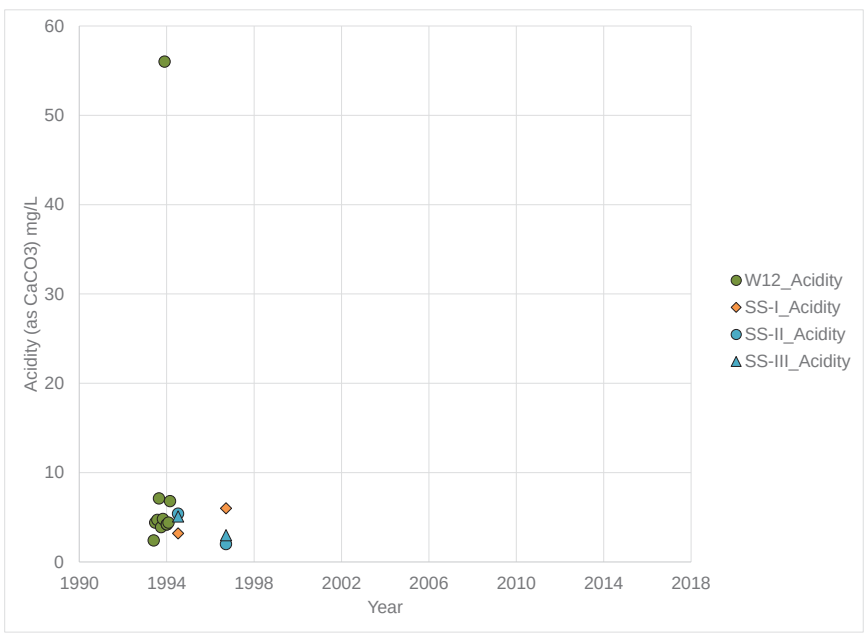


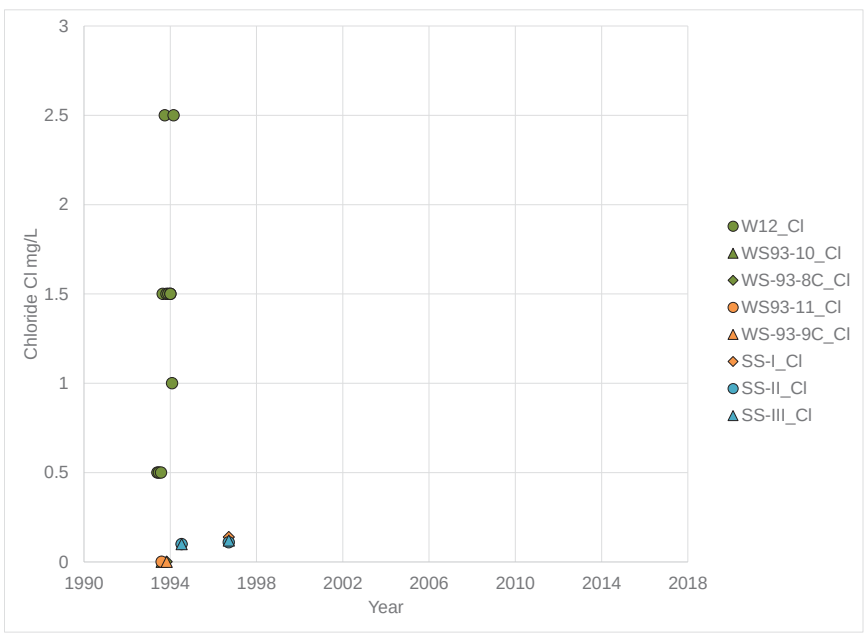




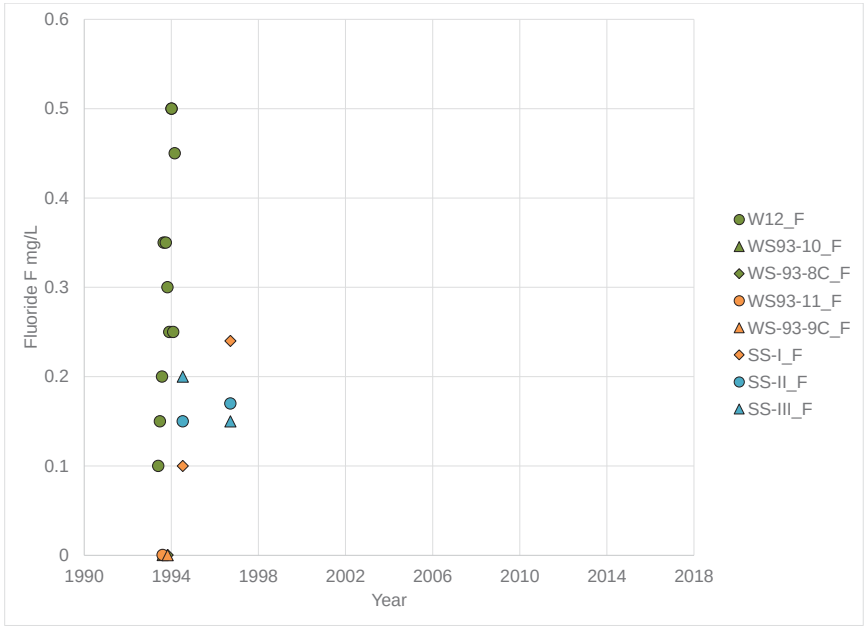


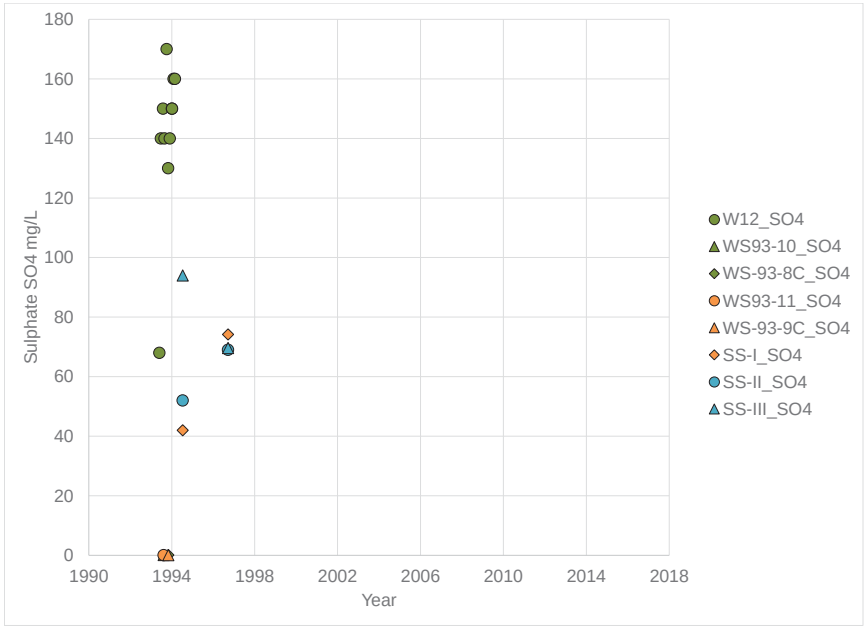


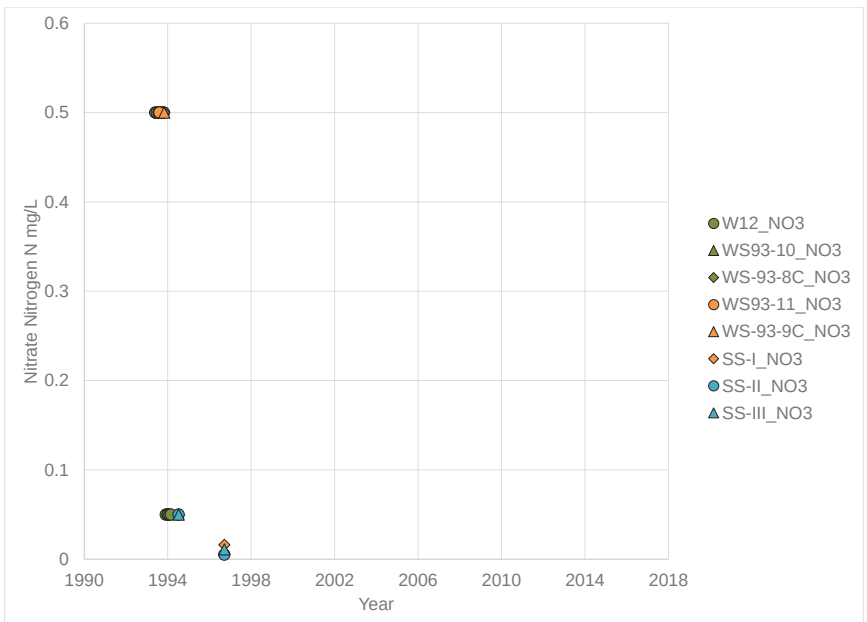


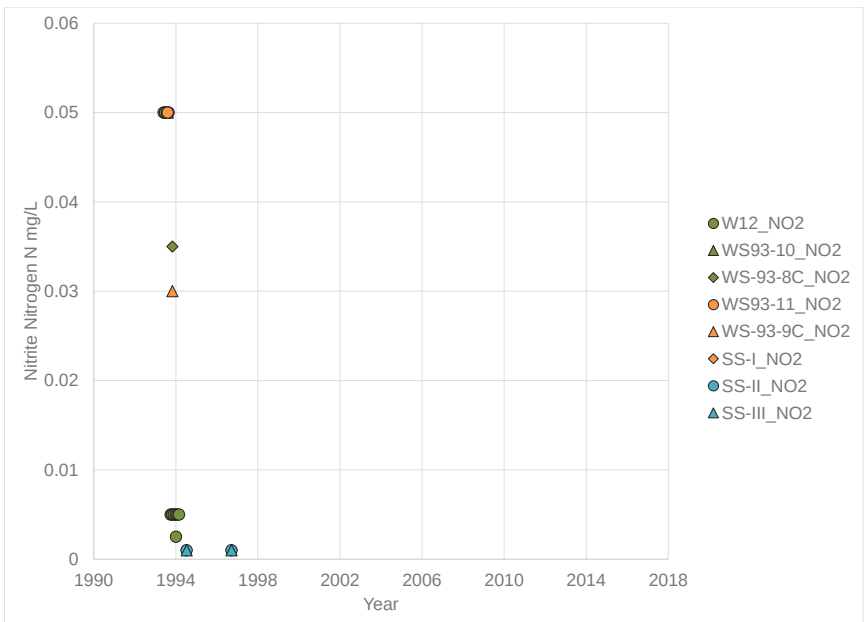


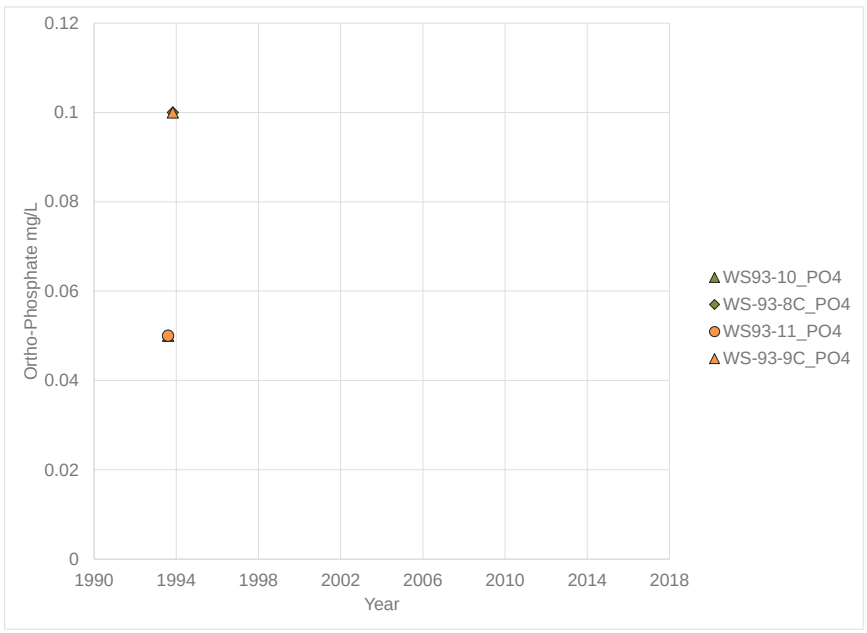
Appendix F - Groundwater Quality Data Plots
Rio Blanco Bitter Creek Valley

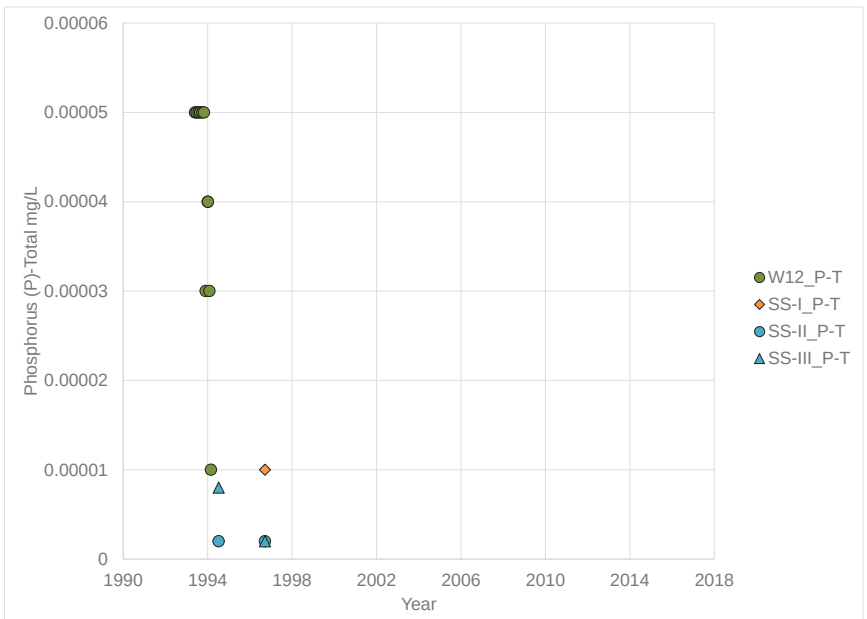


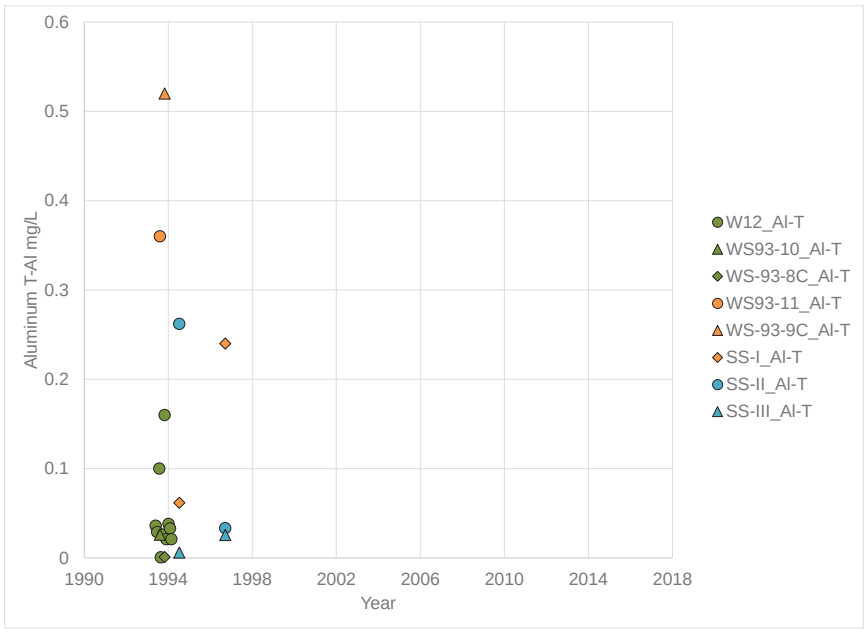


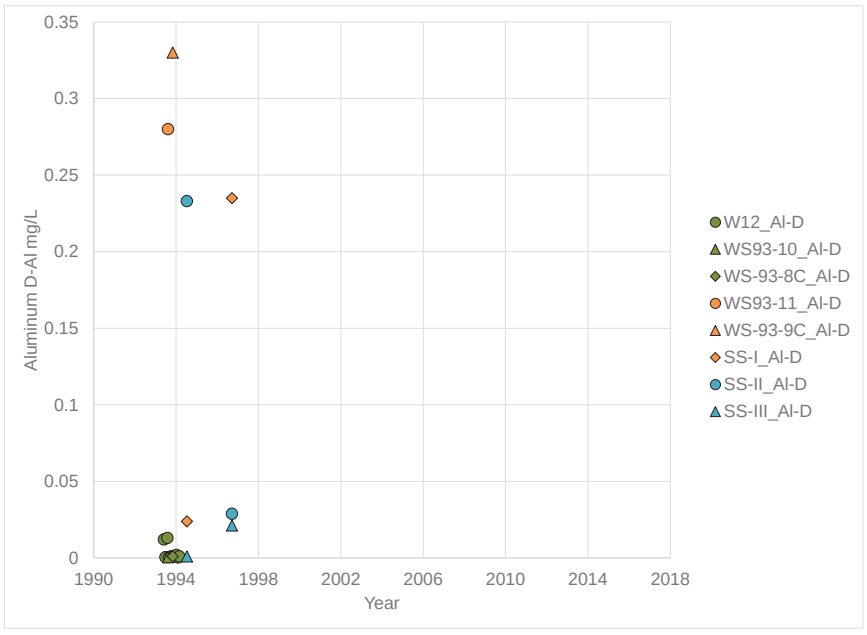




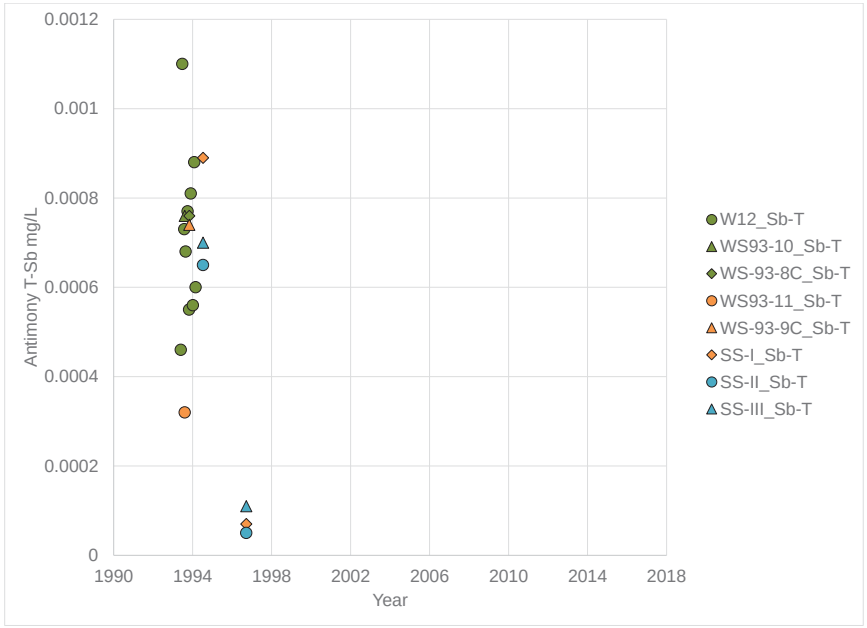


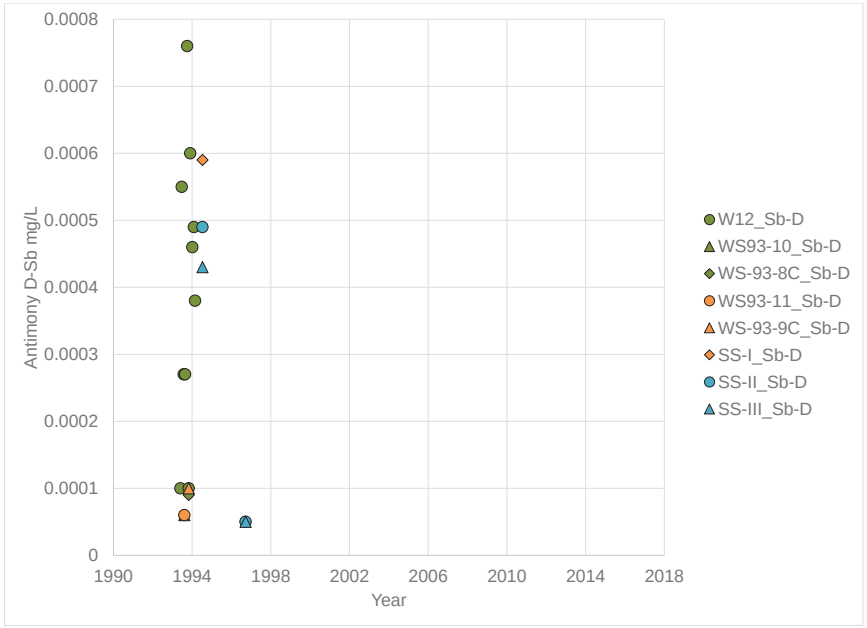


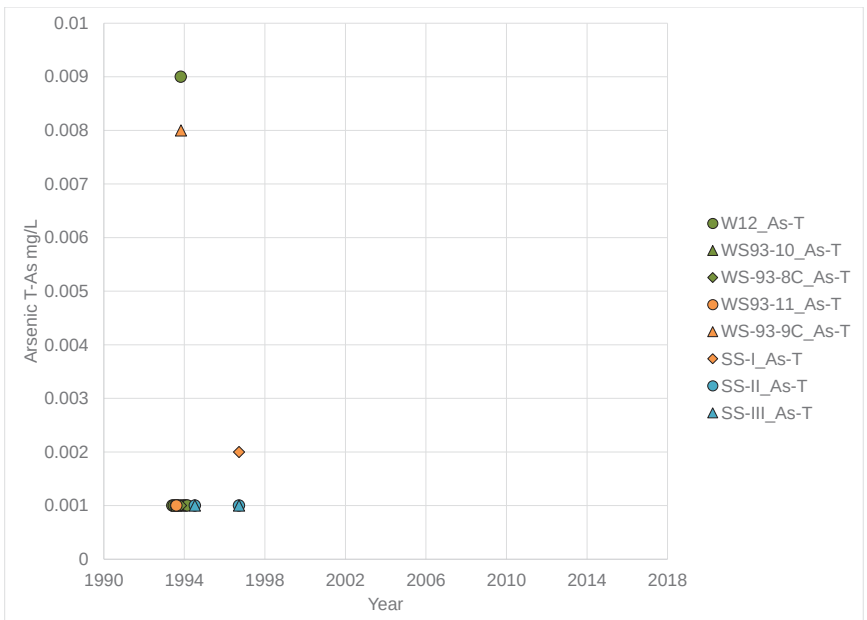


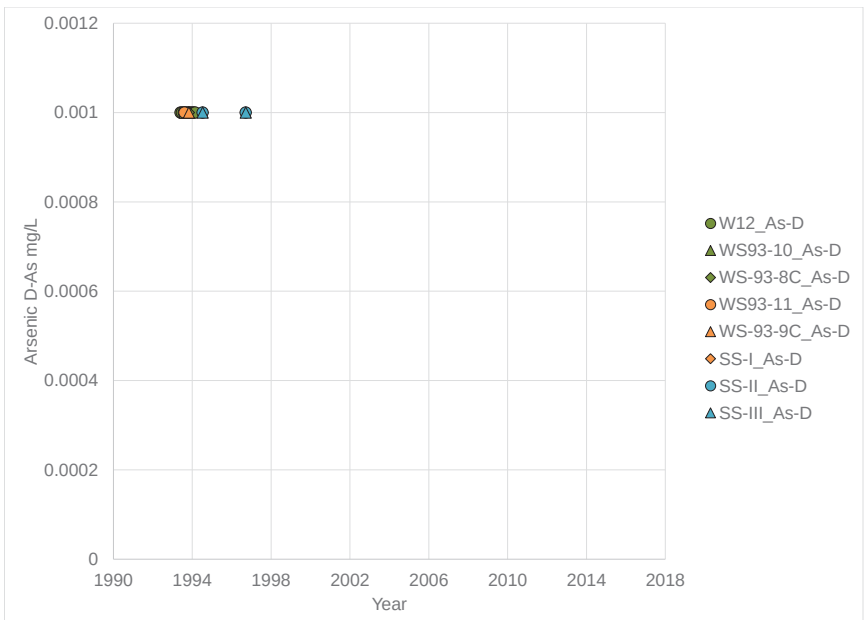


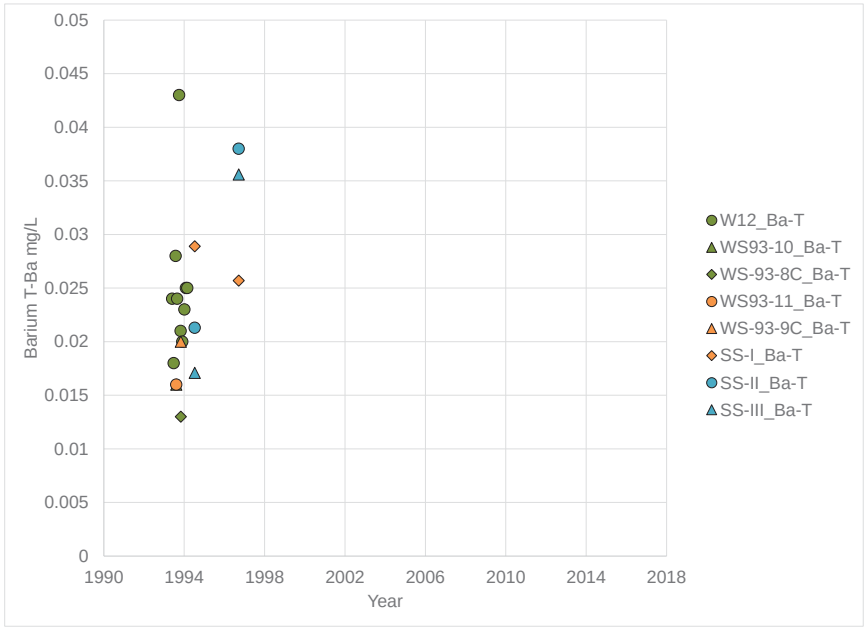
Appendix F - Groundwater Quality Data Plots
Rio Blanco Bitter Creek Valley

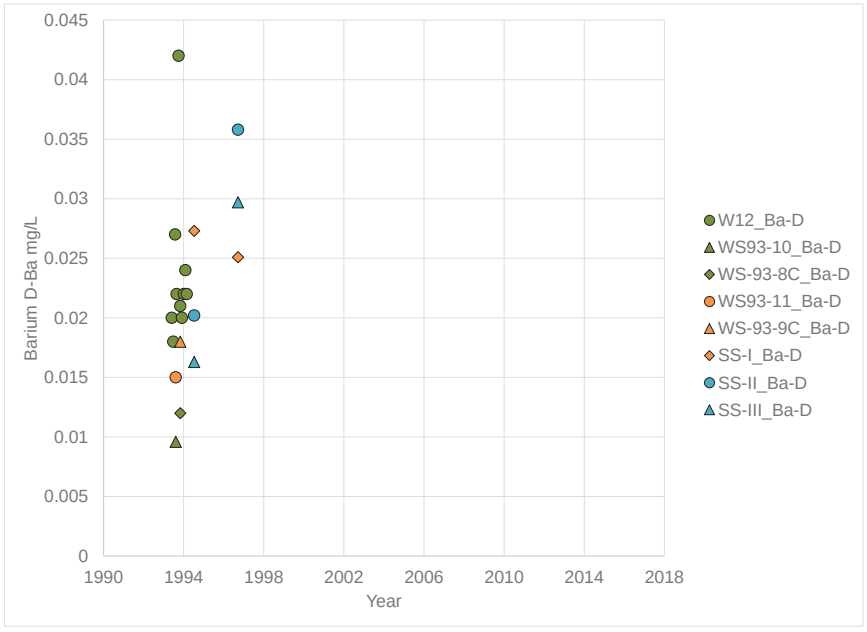


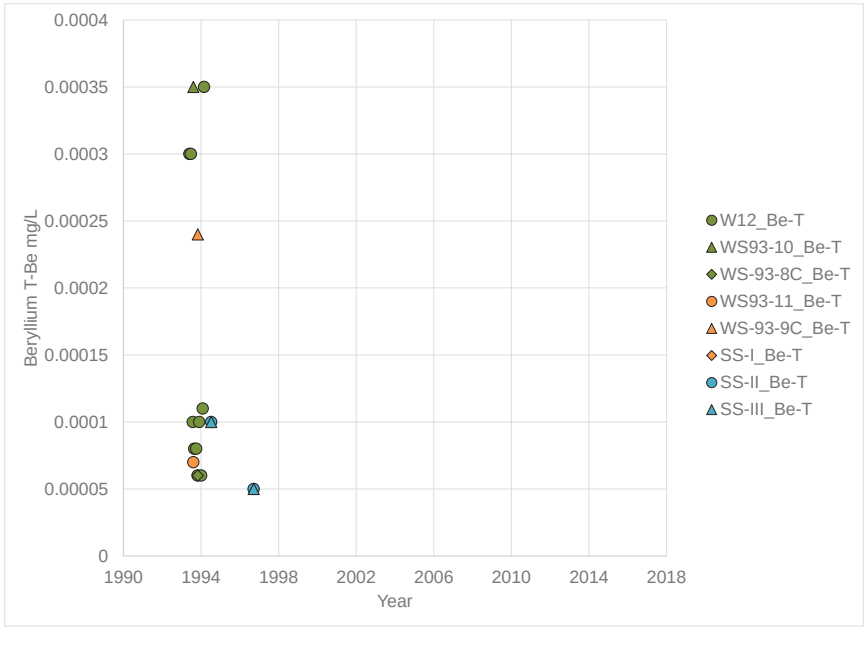


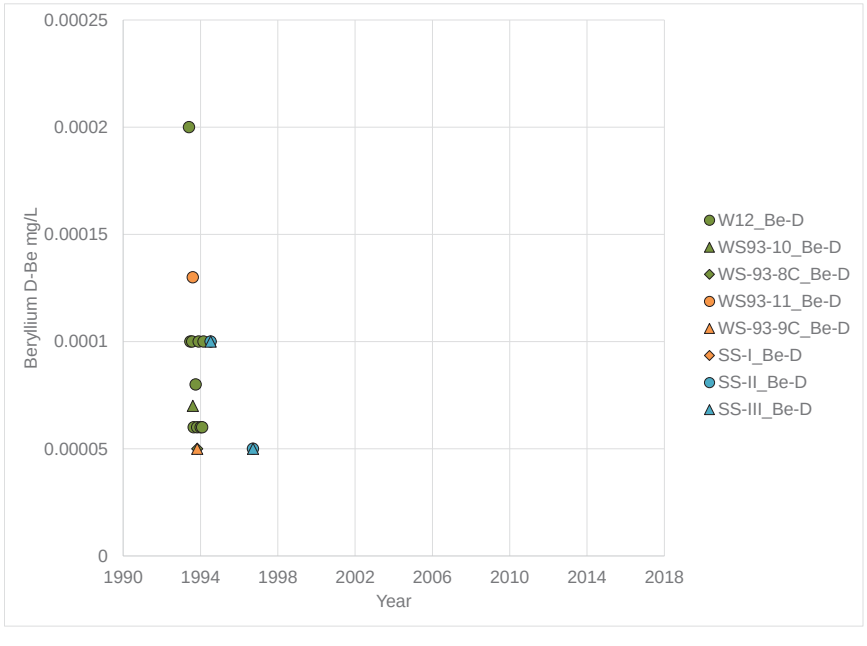




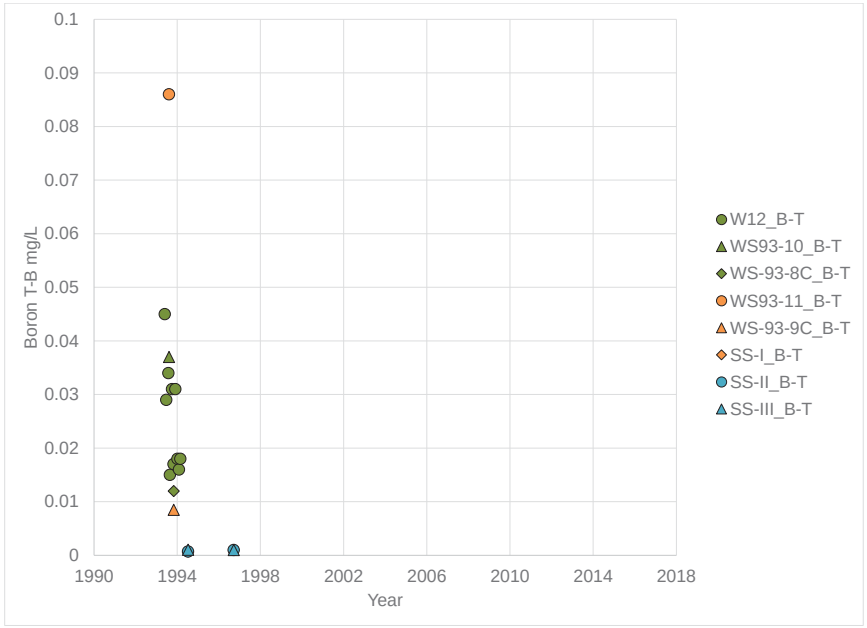


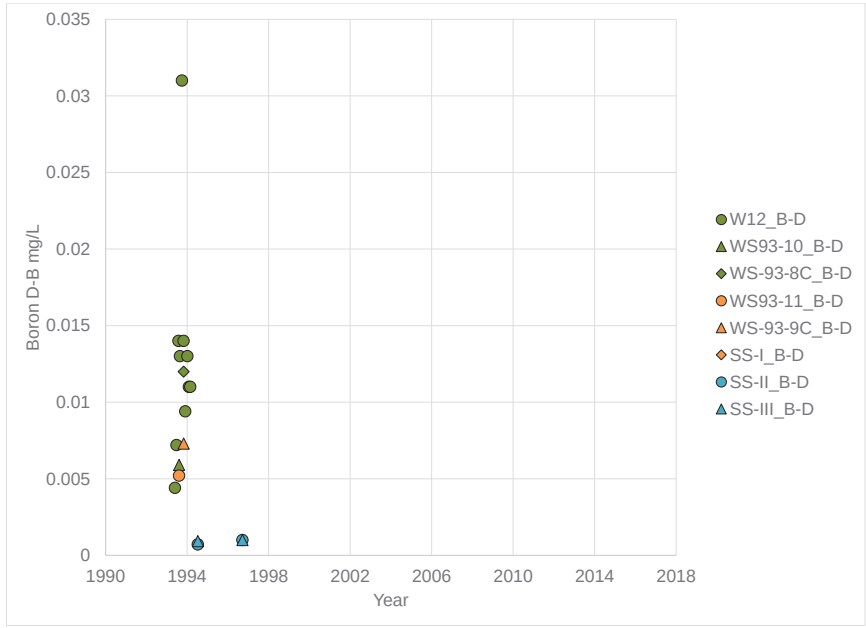


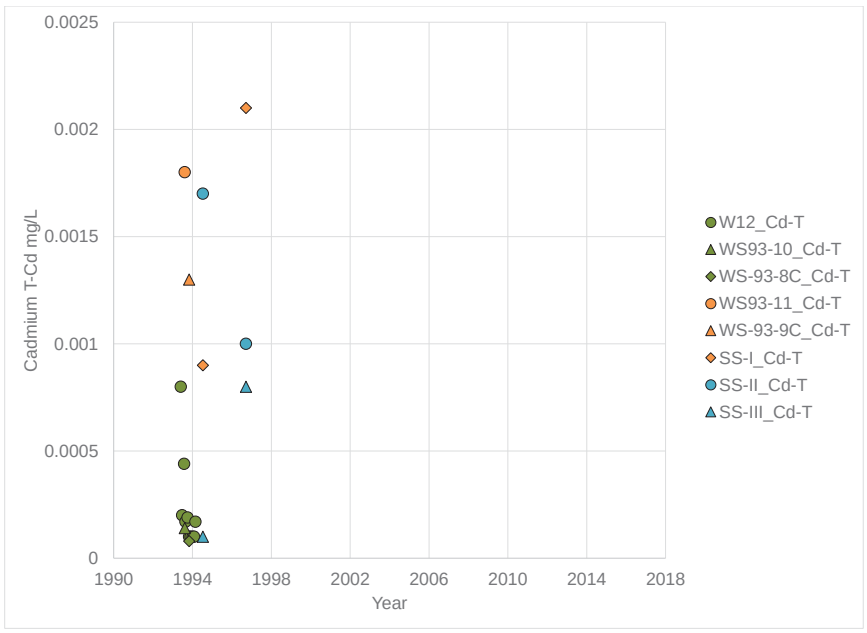


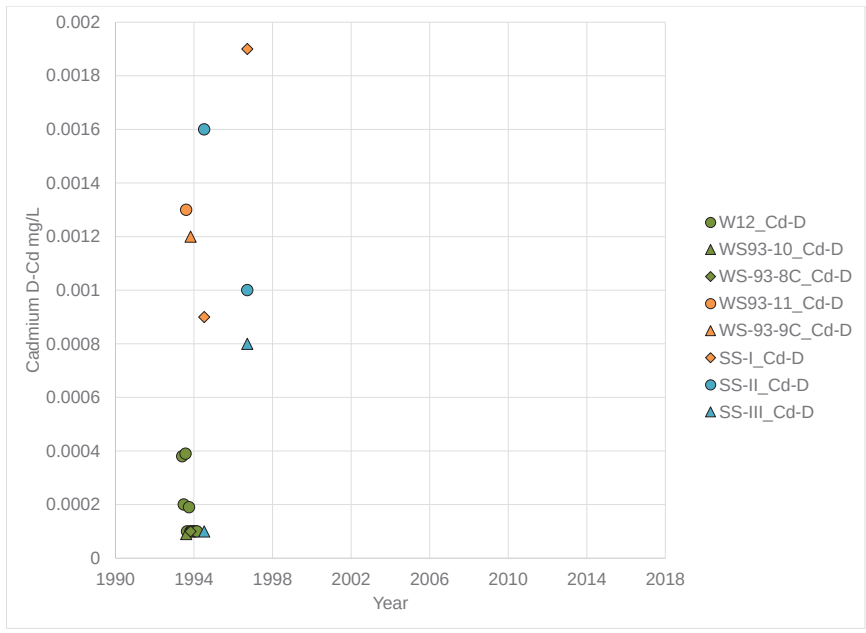


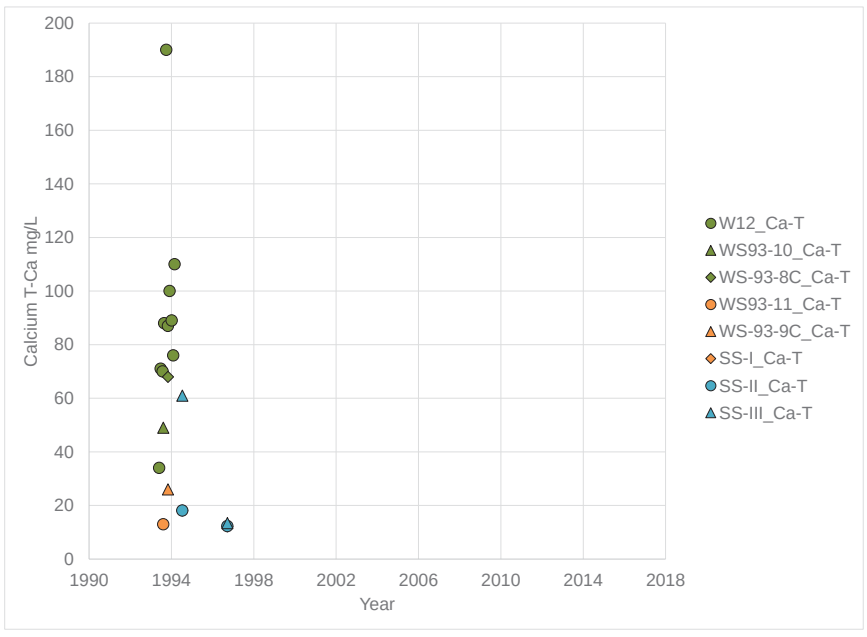
Appendix F - Groundwater Quality Data Plots
Rio Blanco Bitter Creek Valley

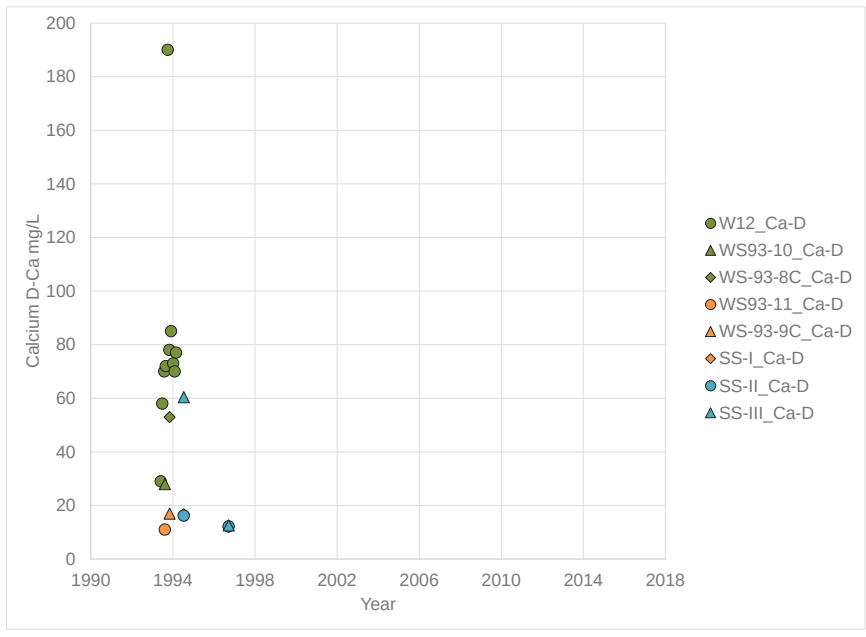


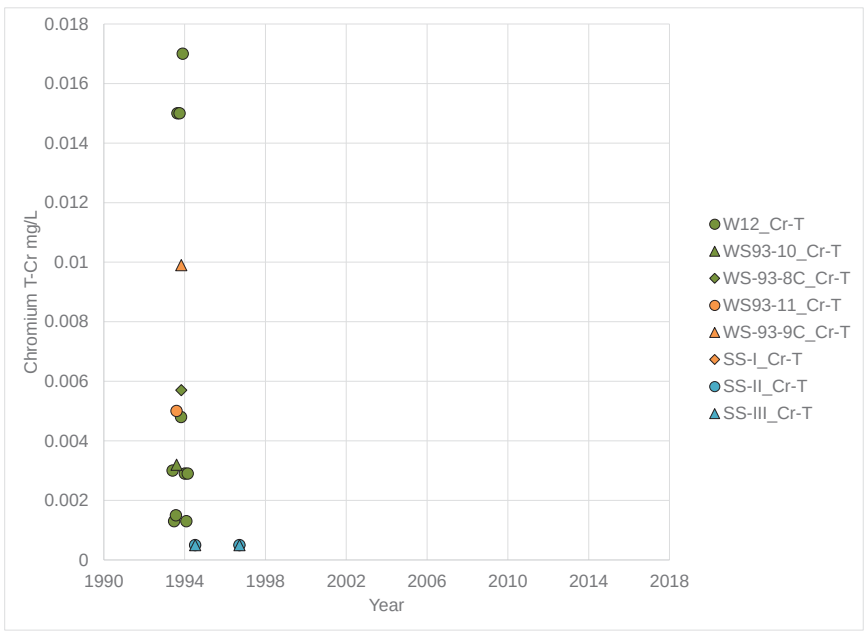


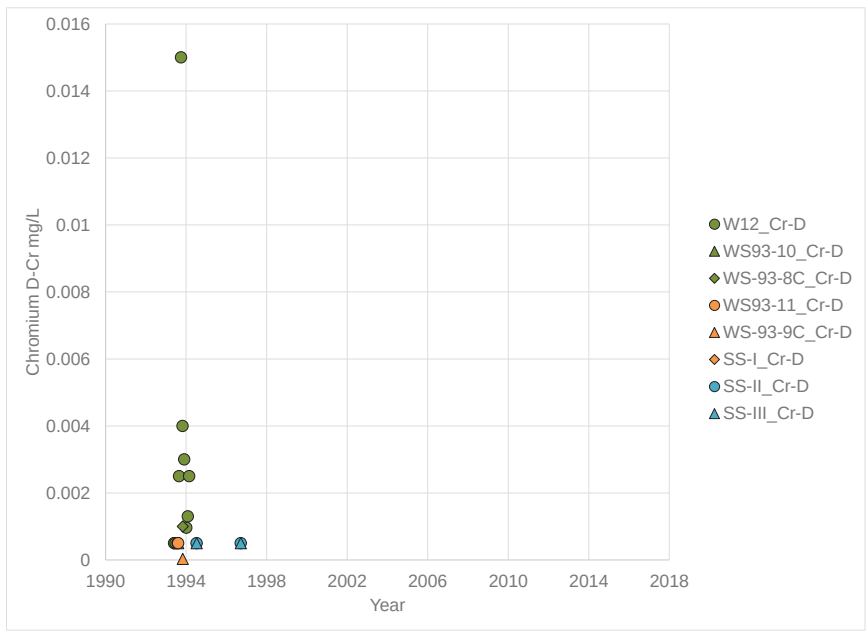




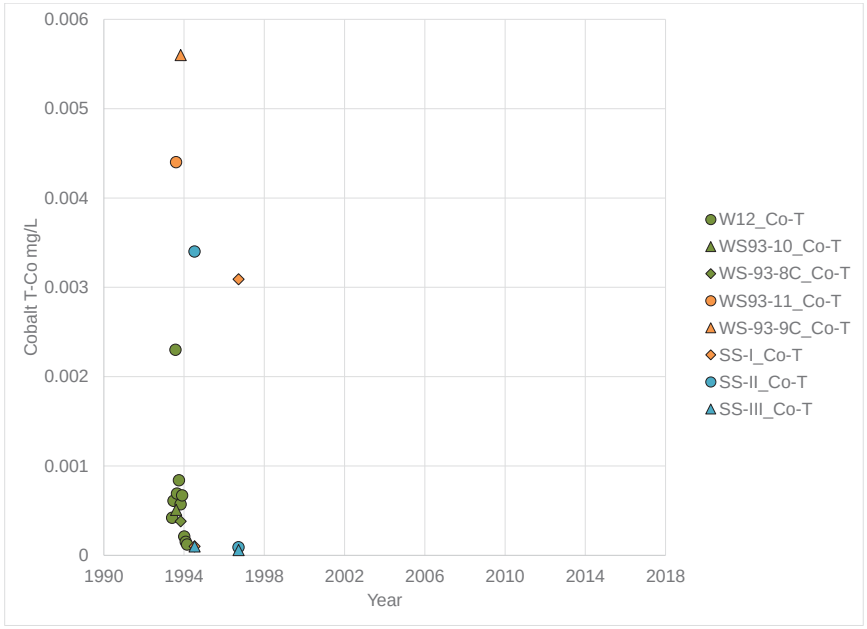


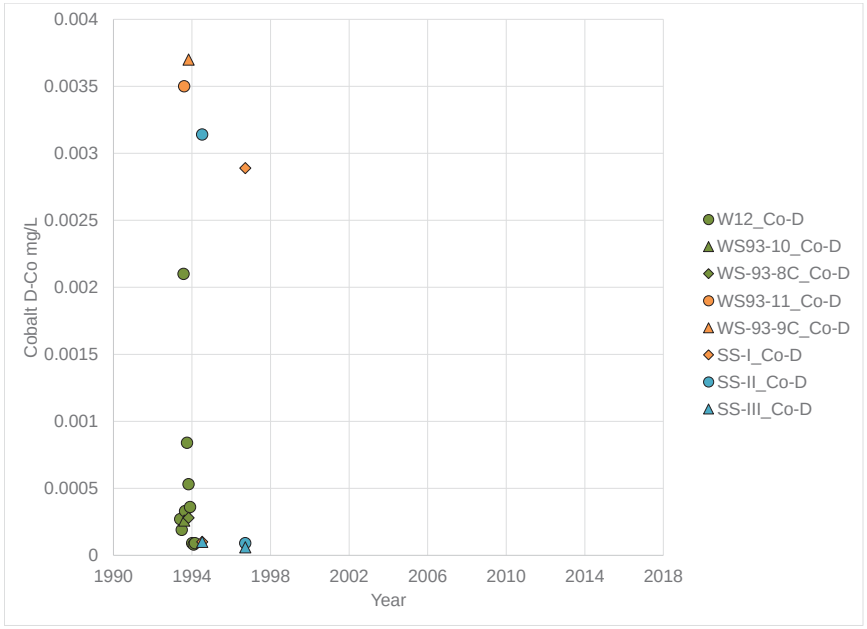


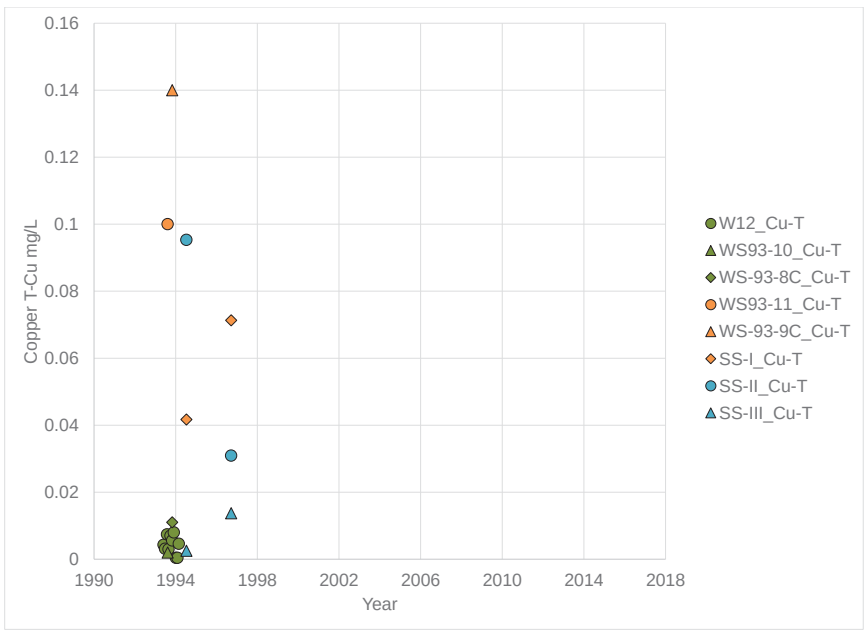


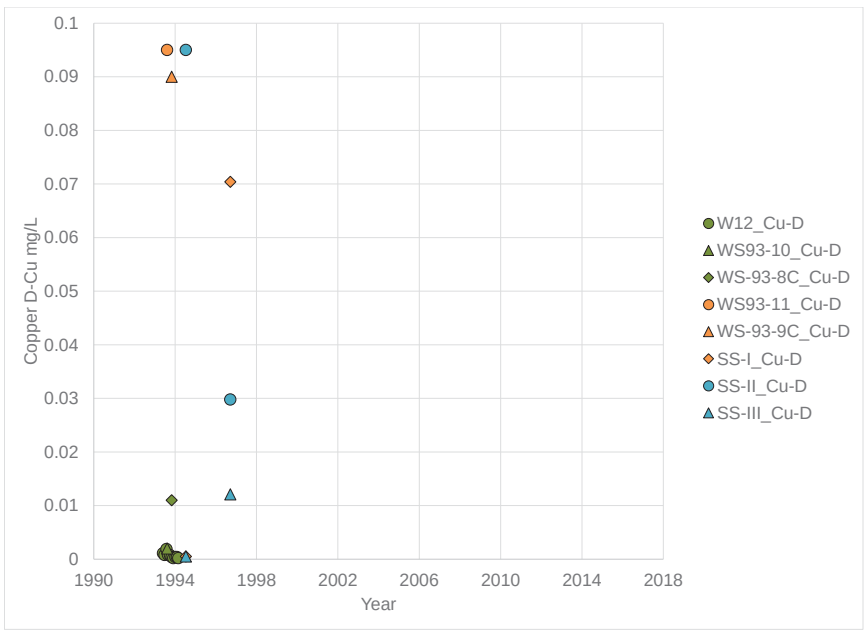


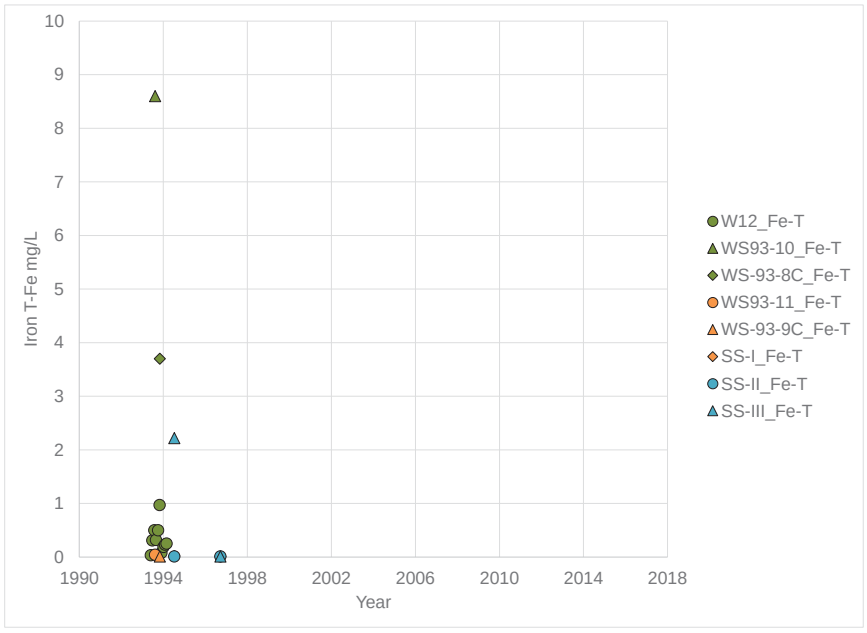
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Rio Blanco Bitter Creek Valley

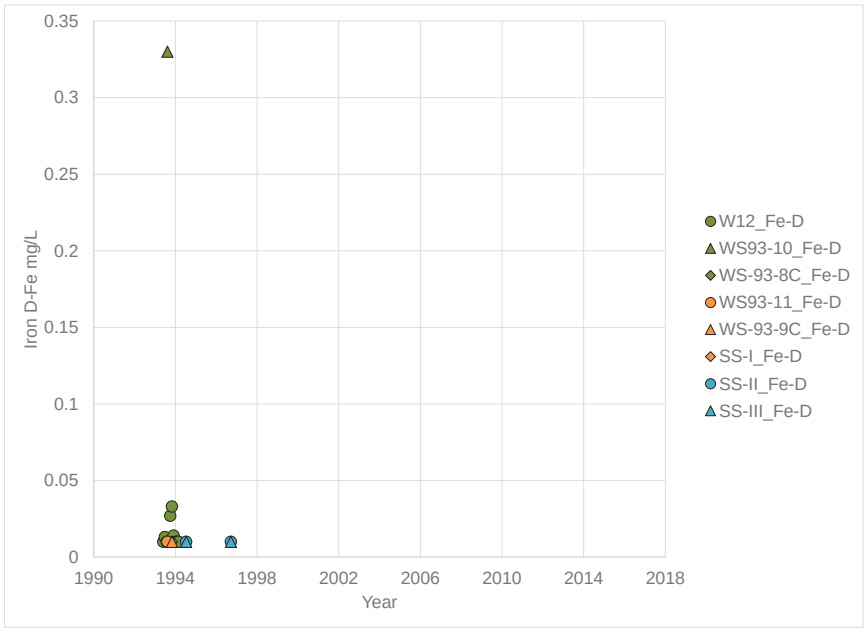


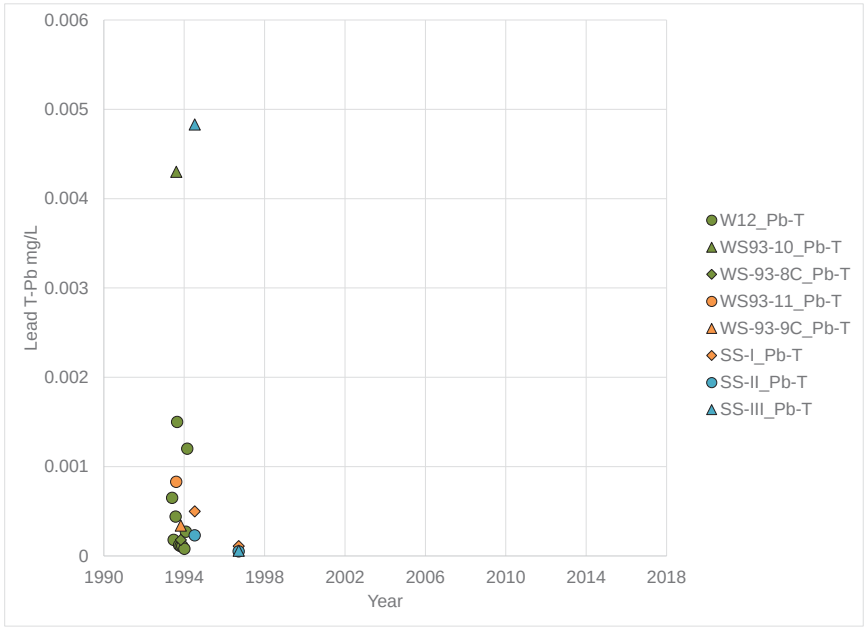


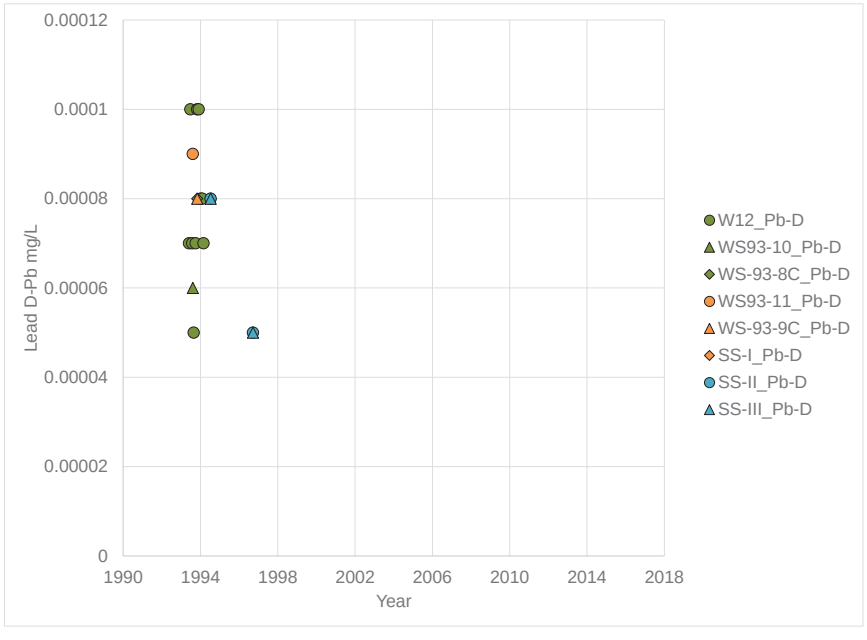


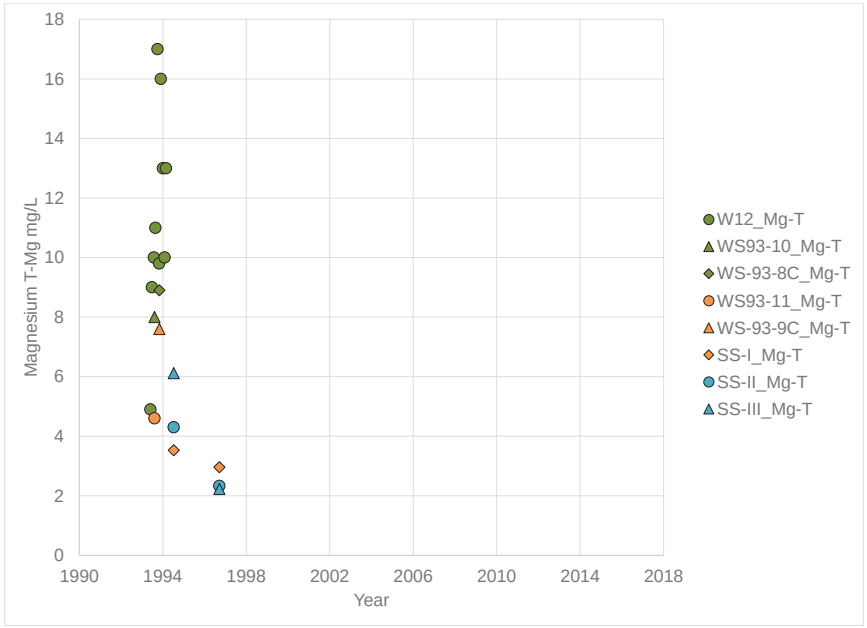


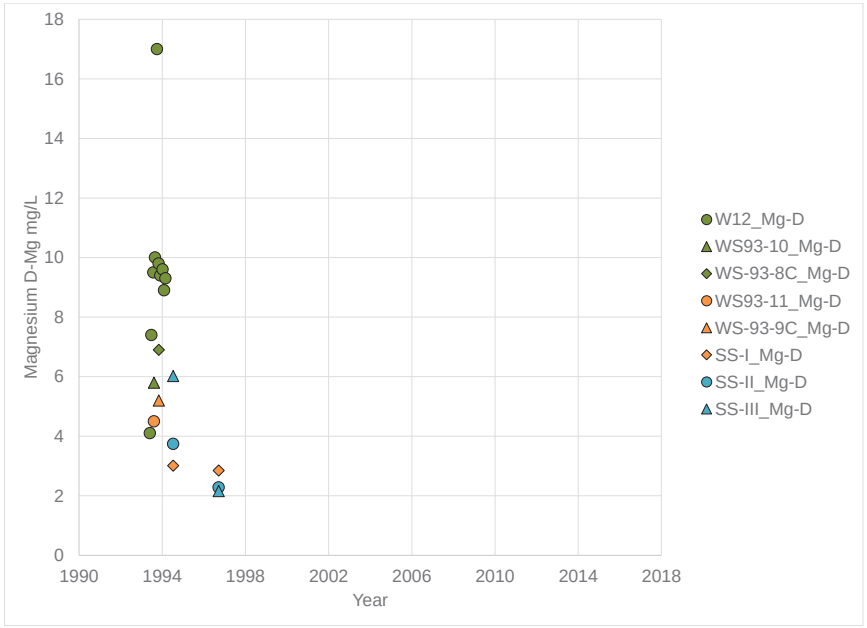


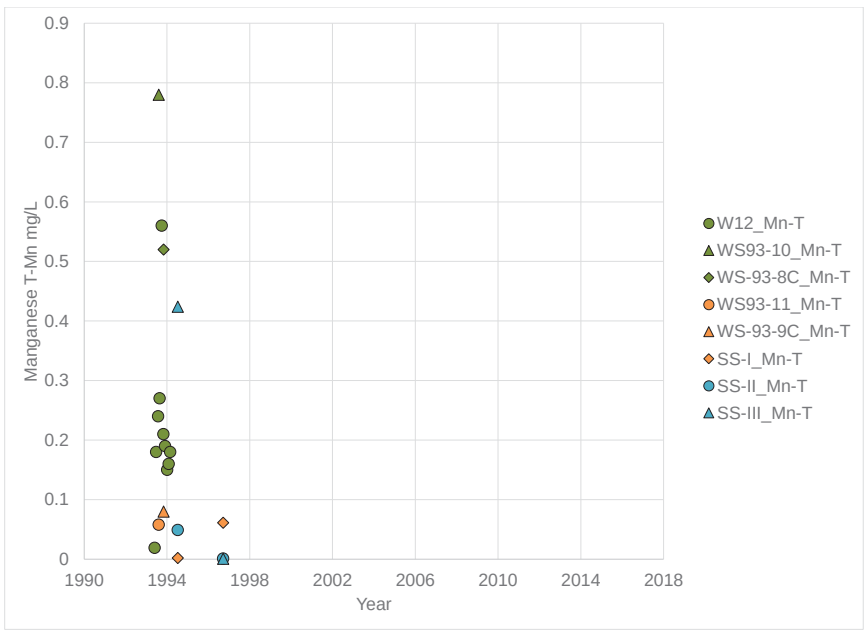


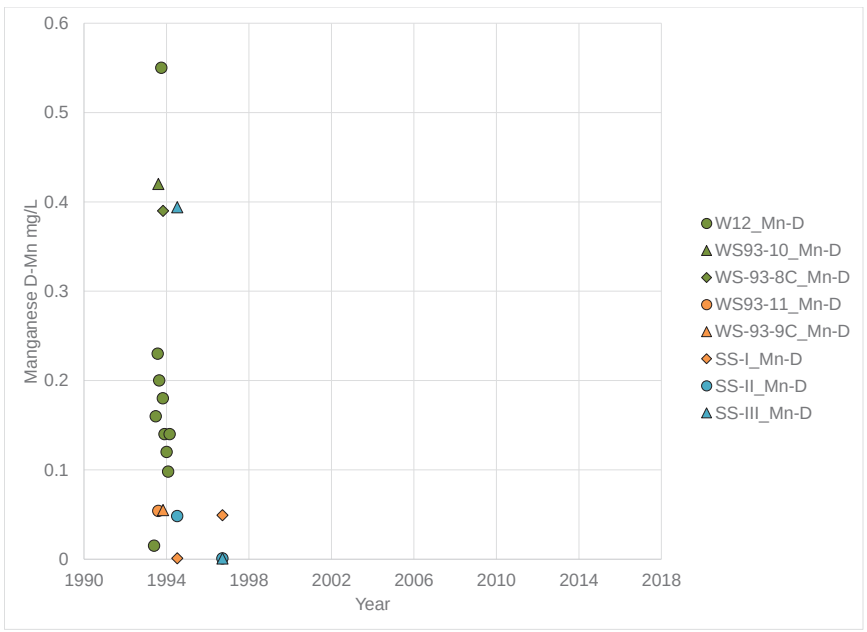


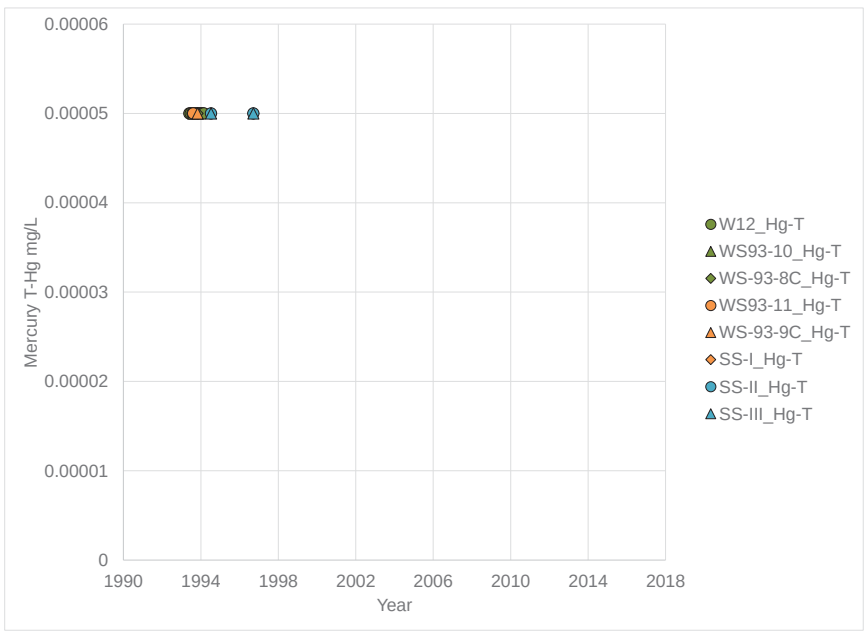


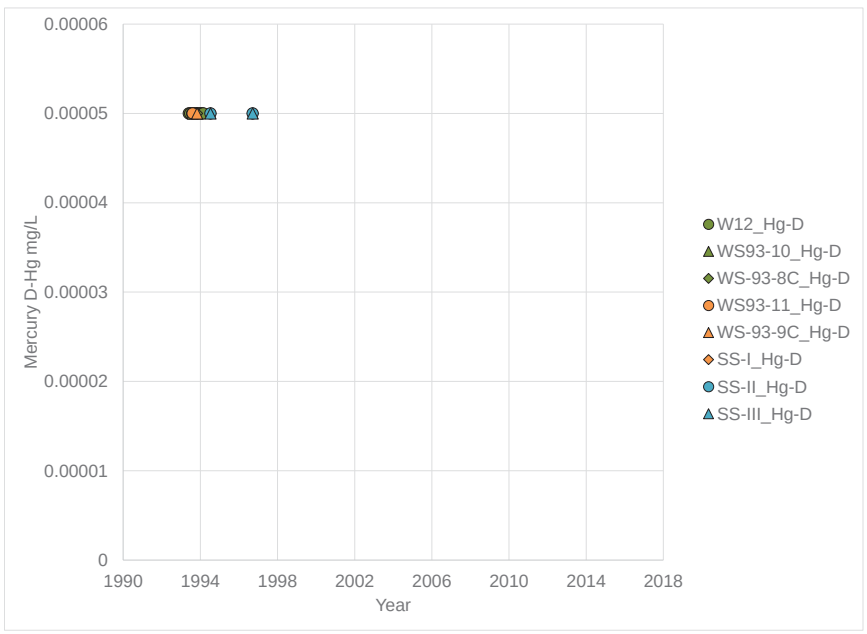

Magnesium T-Mg mg/L
Year
W12_Mg-T
WS93-10_Mg-T
WS-93-8C_Mg-T
WS93-11_Mg-T
WS-93-9C_Mg-T
SS-I_Mg-T
SS-II_Mg-T
SS-III_Mg-T

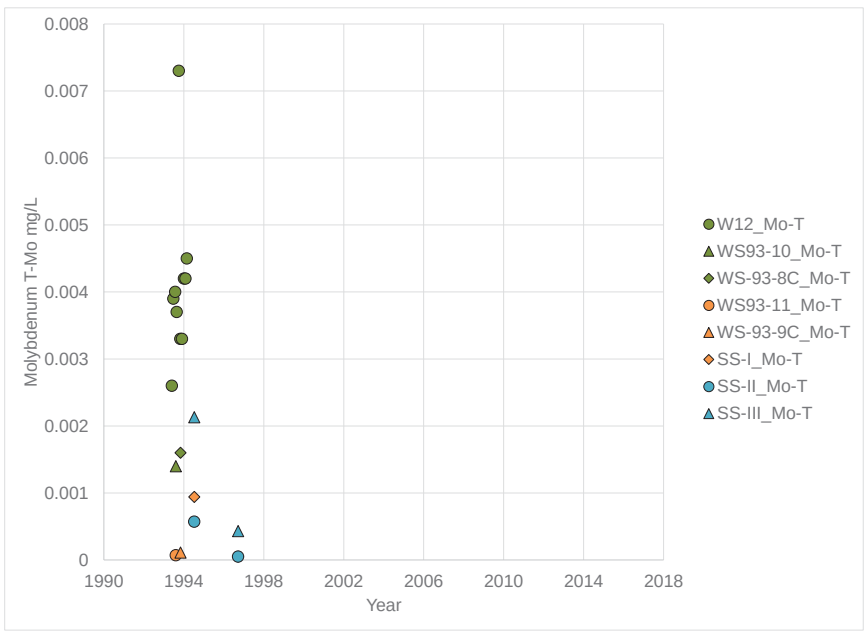

Magnesium D-Mg mg/L
Year
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WS93-10_Mg-D
WS-93-8C_Mg-D
WS93-11_Mg-D
WS-93-9C_Mg-D
SS-I_Mg-D
SS-II_Mg-D
SS-III_Mg-D

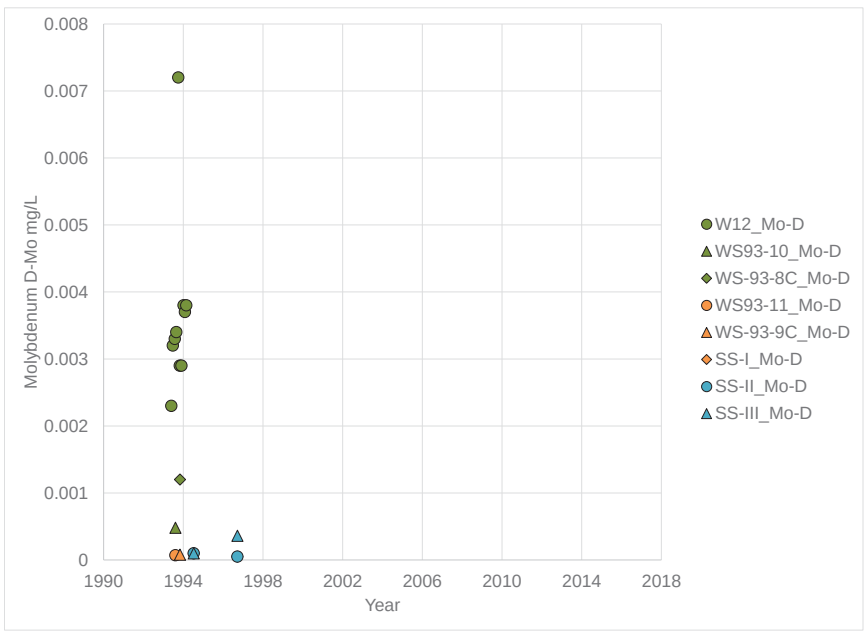

Manganese T-Mn mg/L
Year
W12_Mn-T
WS93-10_Mn-T
WS-93-8C_Mn-T
WS93-11_Mn-T
WS-93-9C_Mn-T
SS-I_Mn-T
SS-II_Mn-T
SS-III_Mn-T


Manganese D-Mn mg/L
Year
W12_Mn-D
WS93-10_Mn-D
WS-93-8C_Mn-D
WS93-11_Mn-D
WS-93-9C_Mn-D
SS-I_Mn-D
SS-II_Mn-D
SS-III_Mn-D

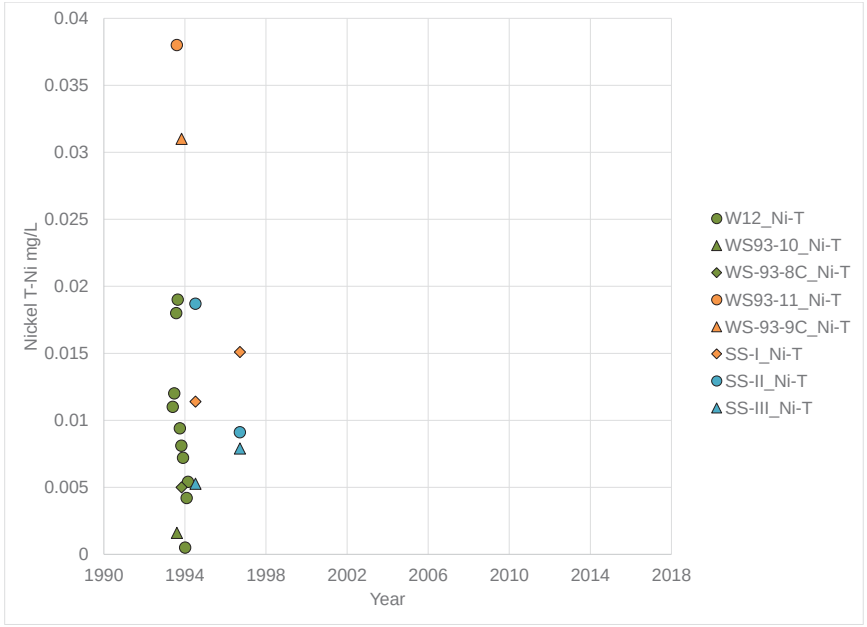

Mercury T-Hg mg/L
Year
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WS93-10_Hg-T
WS-93-8C_Hg-T
WS93-11_Hg-T
WS-93-9C_Hg-T
SS-I_Hg-T
SS-II_Hg-T
SS-III_Hg-T

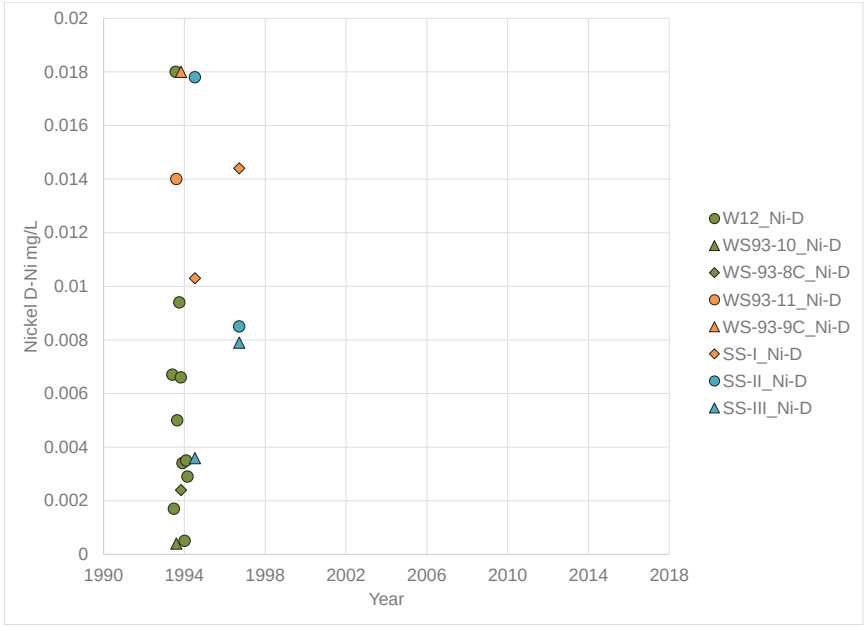

Mercury D-Hg mg/L
Year
W12_Hg-D
WS93-10_Hg-D
WS-93-8C_Hg-D
WS93-11_Hg-D
WS-93-9C_Hg-D
SS-I_Hg-D
SS-II_Hg-D
SS-III_Hg-D

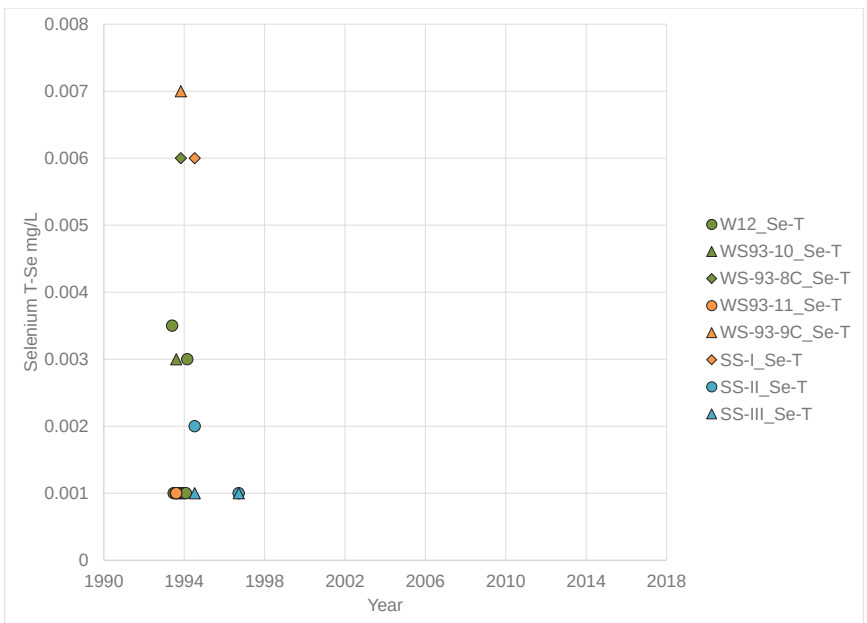

Molybdenum T-Mo mg/L
Year
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WS93-10_Mo-T
WS-93-8C_Mo-T
WS93-11_Mo-T
WS-93-9C_Mo-T
SS-I_Mo-T
SS-II_Mo-T
SS-III_Mo-T

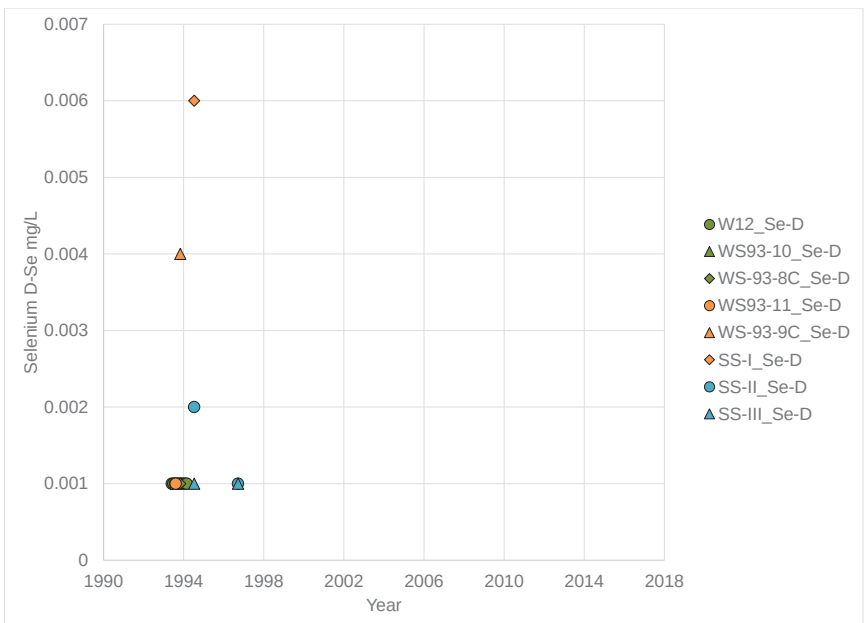

Molybdenum D-Mo mg/L
Year
W12_Mo-D
WS93-10_Mo-D
WS-93-8C_Mo-D
WS93-11_Mo-D
WS-93-9C_Mo-D
SS-I_Mo-D
SS-II_Mo-D
SS-III_Mo-D

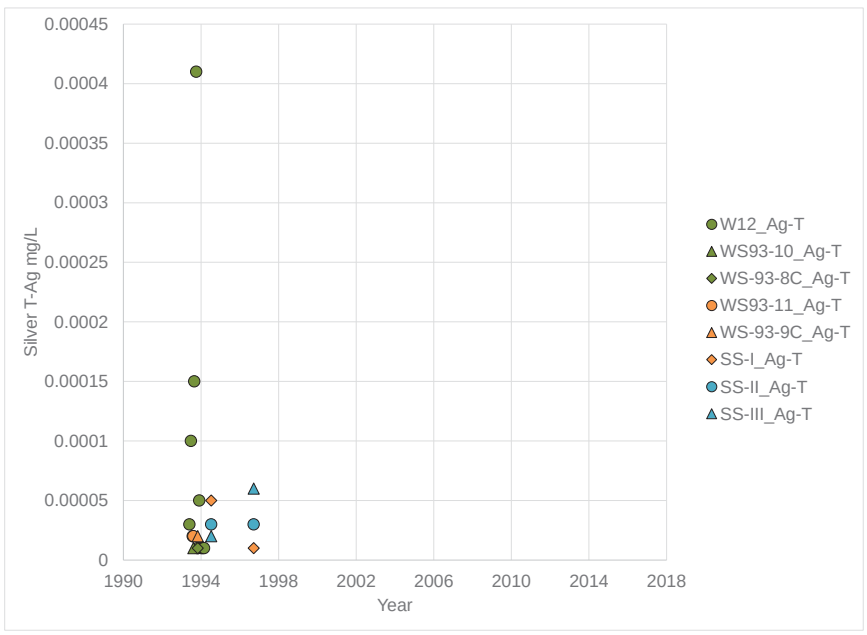
Appendix F - Groundwater Quality Data Plots
Rio Blanco Bitter Creek Valley

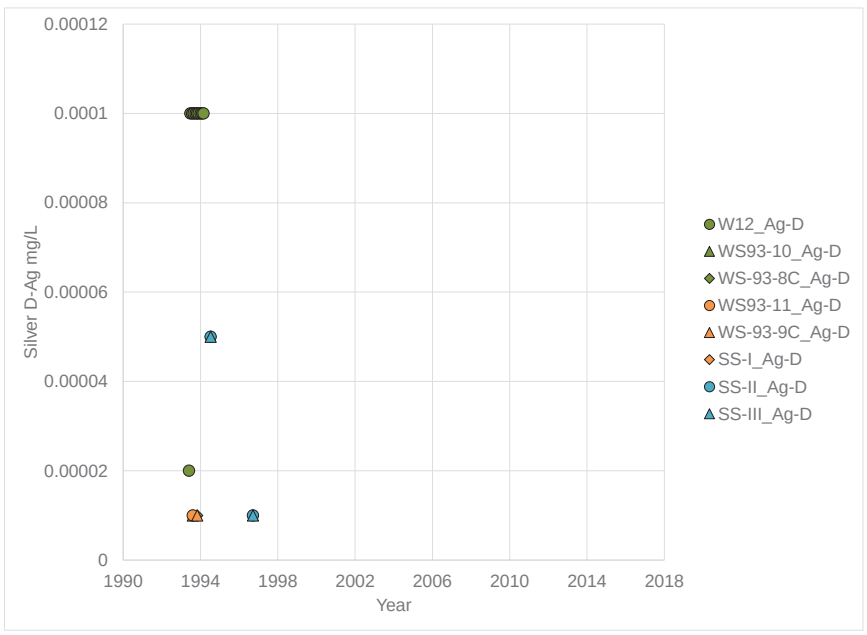


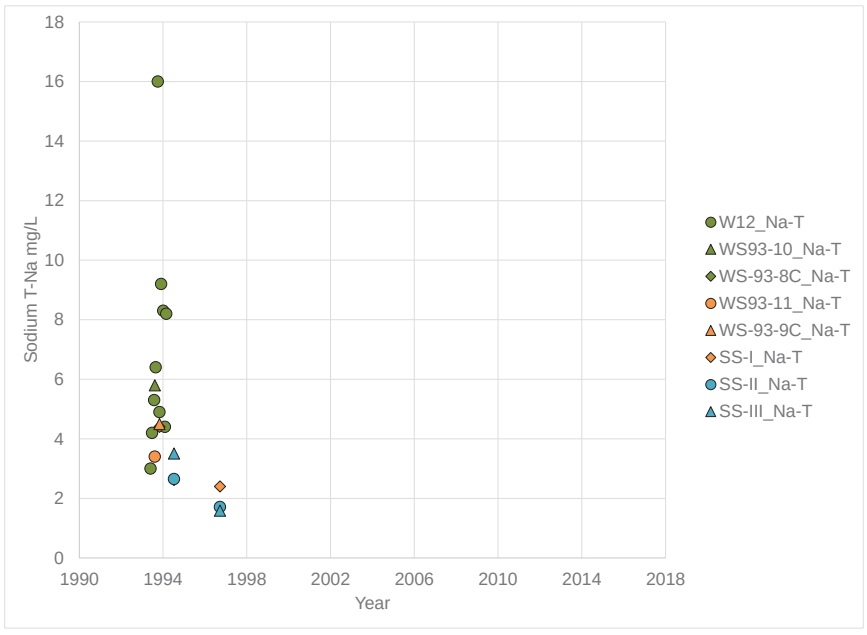


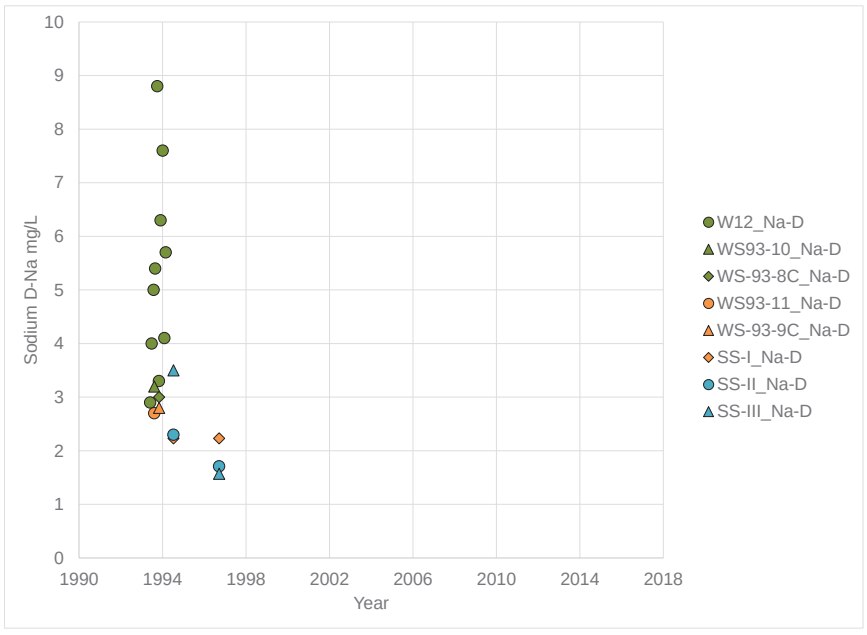




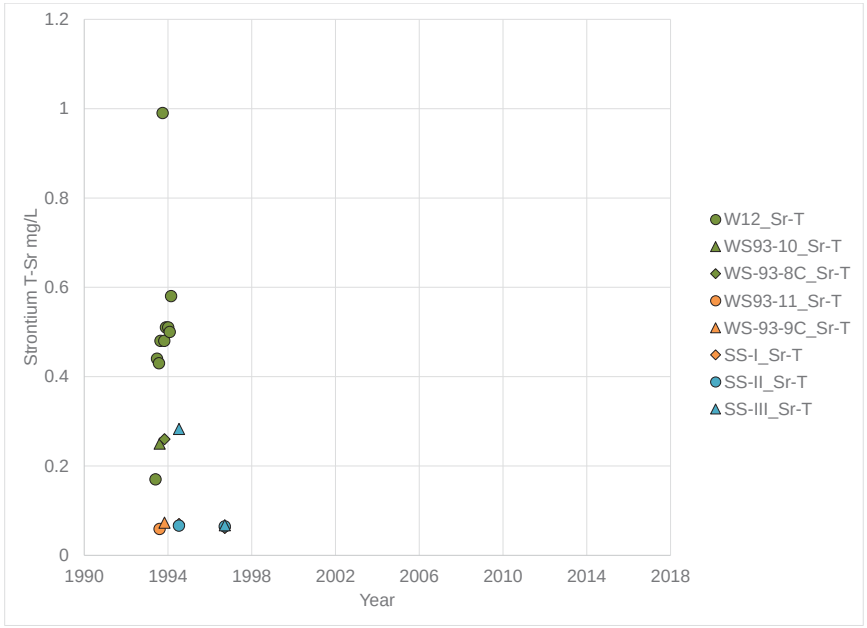


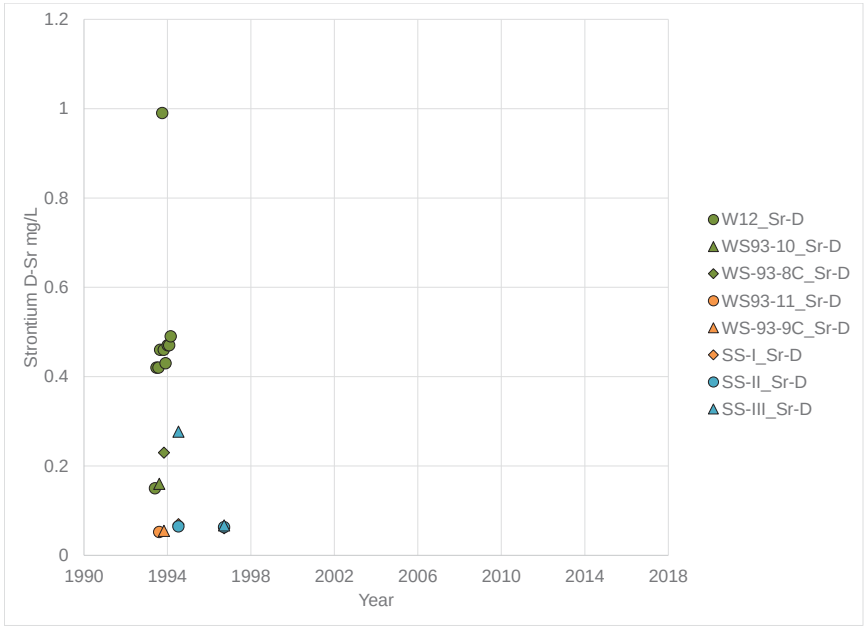


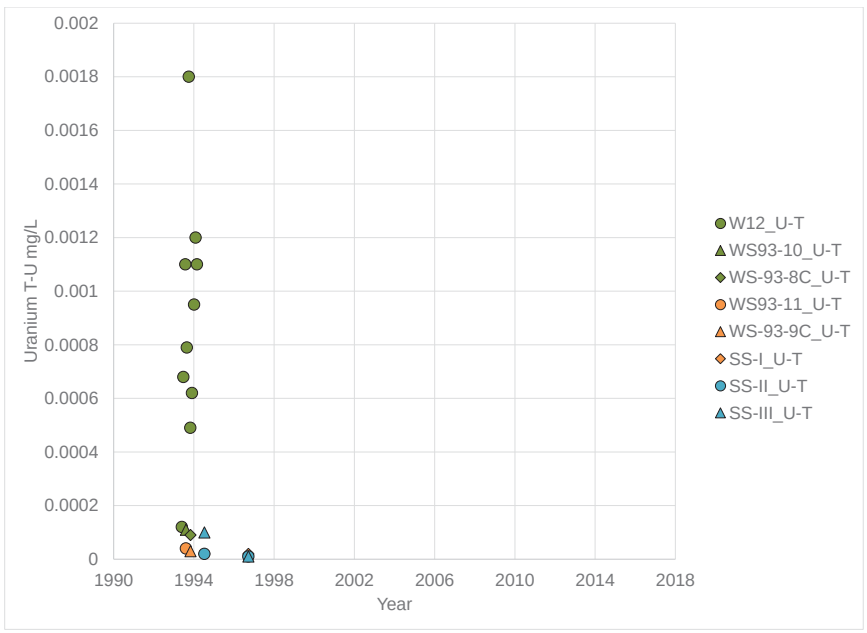


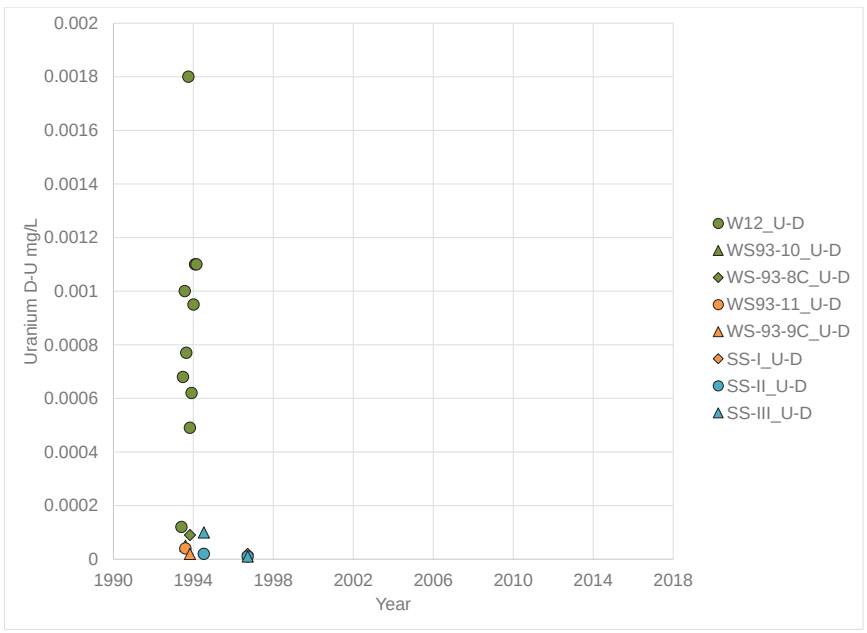


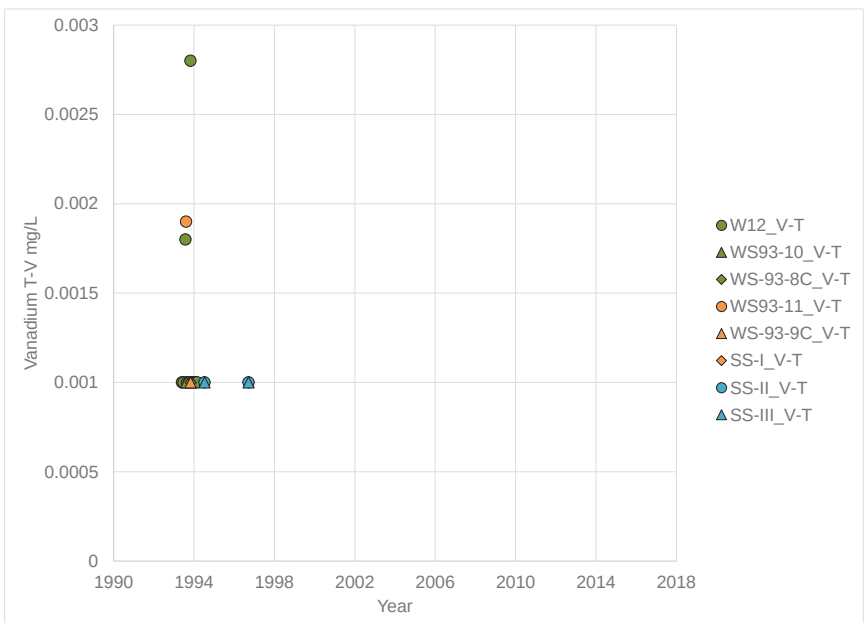
Appendix F - Groundwater Quality Data Plots
Rio Blanco Bitter Creek Valley

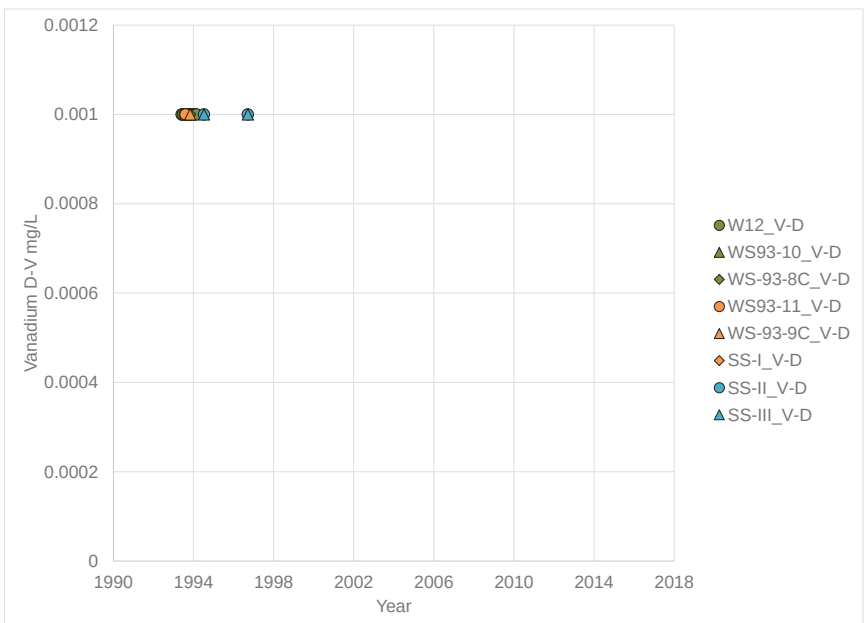


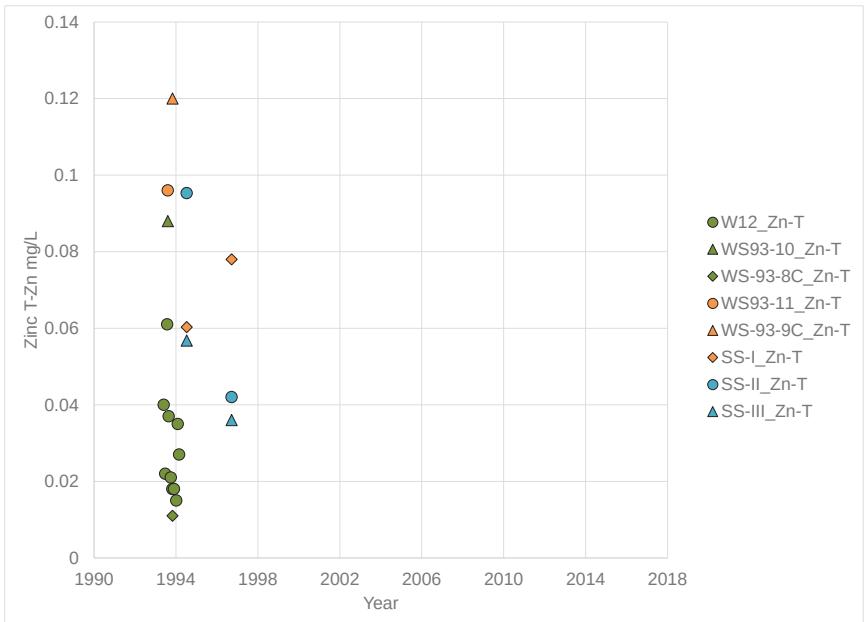


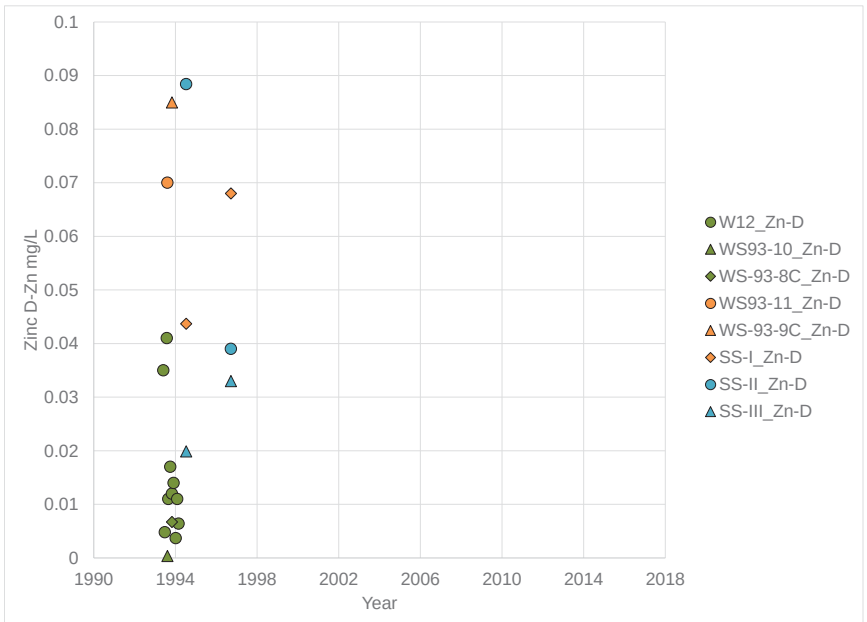












Appendix G – Summary Statistics

American Creek	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.16	0.0932	8.01	8.04	8.07	8.16	8.17	8.17	8.23	8.25	8.27	5
Conductivity	154	8.47	142	143	144	148	157	161	161	161	161	5
Hardness CaCO3	73.1	5.48	65.8	66.4	67	68.7	75.8	77	77.7	77.9	78.1	5
Total Dissolved Solids	94.4	4.34	88	89.2	90.4	94	94	96	98.4	99.2	100	5
Total Suspended Solids	5.34	5.23	3	3	3	3	3	3	10	12.4	14.7	5
Turbidity	0.254	0.109	0.15	0.156	0.162	0.18	0.24	0.27	0.366	0.398	0.43	5
Alkalinity-Total CaCO3	57.4	2.11	55.4	55.5	55.6	55.9	57.5	57.6	59.5	60.2	60.8	5
Acidity (as CaCO3)	1.24	0.207	1.1	1.1	1.1	1.1	1.2	1.2	1.44	1.52	1.6	5
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.059	0.00738	0.047	0.0494	0.0518	0.059	0.06	0.062	0.065	0.066	0.067	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	18.8	1.62	16.3	16.7	17.1	18.3	19.3	19.7	20.2	20.3	20.5	5
Nitrate Nitrogen N	0.241	0.0588	0.177	0.184	0.191	0.211	0.221	0.264	0.304	0.317	0.33	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	0.174	N/A	0.174	0.174	0.174	0.174	0.174	0.174	0.174	0.174	0.174	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Phosphorus (P)-Total	0.0119	0.0213	0.002	0.00208	0.00216	0.0024	0.0024	0.0029	0.0312	0.0406	0.05	5
Total Organic Carbon	0.516	0.0358	0.5	0.5	0.5	0.5	0.5	0.5	0.548	0.564	0.58	5
Dissolved Organic Carbon	0.564	0.132	0.5	0.5	0.5	0.5	0.5	0.52	0.688	0.744	0.8	5
Aluminum T-Al	0.0182	0.0115	0.0079	0.00852	0.00914	0.011	0.0117	0.0253	0.0311	0.0331	0.035	5
Aluminum D-Al	0.00596	0.00152	0.0041	0.00428	0.00446	0.005	0.0059	0.0068	0.00752	0.00776	0.008	5
Antimony T-Sb	0.00047	0.0000671	0.00035	0.00038	0.00041	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Antimony D-Sb	0.000468	0.0000716	0.00034	0.000372	0.000404	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Arsenic T-As	0.000682	0.0000377	0.00064	0.000644	0.000648	0.00066	0.00068	0.00069	0.00072	0.00073	0.00074	5
Arsenic D-As	0.00067	0.0000453	0.00062	0.000622	0.000624	0.00063	0.00067	0.00071	0.000716	0.000718	0.00072	5
Barium T-Ba	0.123	0.00893	0.109	0.111	0.113	0.118	0.128	0.128	0.129	0.13	0.13	5
Barium D-Ba	0.12	0.011	0.103	0.106	0.109	0.117	0.121	0.129	0.13	0.13	0.13	5
Beryllium T-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Boron T-B	0.0828	0.0385	0.014	0.0312	0.0484	0.1	0.1	0.1	0.1	0.1	0.1	5
Boron D-B	0.0828	0.0385	0.014	0.0312	0.0484	0.1	0.1	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.00000502	4.47E-08	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000506	0.00000508	0.0000051	5
Cadmium D-Cd	0.0000162	0.00000183	0.0000129	0.0000137	0.0000145	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	5
Calcium T-Ca	26.4	1.95	23.4	23.9	24.4	25.8	26.7	27.7	28.1	28.3	28.4	5
Calcium D-Ca	26.5	2.08	23.8	24	24.2	24.8	27.5	28.1	28.3	28.3	28.4	5
Chromium T-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.00026	0.0000894	0.0001	0.00014	0.00018	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	5
Cobalt D-Co	0.00026	0.0000894	0.0001	0.00014	0.00018	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	5
Copper T-Cu	0.0009	0.000224	0.0005	0.0006	0.0007	0.001	0.001	0.001	0.001	0.001	0.001	5
Copper D-Cu	0.00084	0.000358	0.0002	0.00036	0.00052	0.001	0.001	0.001	0.001	0.001	0.001	5
Iron T-Fe	0.0298	0.0135	0.01	0.014	0.018	0.03	0.03	0.031	0.0412	0.0446	0.048	5
Iron D-Fe	0.026	0.00894	0.01	0.014	0.018	0.03	0.03	0.03	0.03	0.03	0.03	5
Lead T-Pb	0.00041	0.000201	0.00005	0.00014	0.00023	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Lead D-Pb	0.000417	0.000185	0.000087	0.00017	0.000252	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Magnesium T-Mg	1.65	0.062	1.55	1.57	1.59	1.64	1.66	1.69	1.7	1.71	1.71	5
Magnesium D-Mg	1.66	0.0666	1.55	1.57	1.59	1.64	1.67	1.7	1.71	1.72	1.72	5
Manganese T-Mn	0.00198	0.000967	0.00093	0.000938	0.000946	0.00097	0.00227	0.00284	0.00286	0.00286	0.00287	5
Manganese D-Mn	0.00102	0.000352	0.00068	0.000682	0.000684	0.00069	0.00099	0.00122	0.00139	0.00144	0.0015	5
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Molybdenum T-Mo	0.000959	0.0000917	0.000795	0.000836	0.000877	0.001	0.001	0.001	0.001	0.001	0.001	5
Molybdenum D-Mo	0.000941	0.000131	0.000706	0.000765	0.000824	0.001	0.001	0.001	0.001	0.001	0.001	5
Nickel T-Ni	0.0009	0.000224	0.0005	0.0006	0.0007	0.001	0.001	0.001	0.001	0.001	0.001	5
Nickel D-Ni	0.0009	0.000224	0.0005	0.0006	0.0007	0.001	0.001	0.001	0.001	0.001	0.001	5
Selenium T-Se	0.00033	0.0000338	0.0003	0.000301	0.000303	0.000307	0.000311	0.000356	0.000368	0.000372	0.000376	5
Selenium D-Se	0.000344	0.0000234	0.000321	0.000322	0.000323	0.000326	0.000334	0.000364	0.000369	0.000371	0.000373	5
Silicon T-Si	1.53	0.0363	1.48	1.49	1.5	1.52	1.52	1.54	1.56	1.57	1.58	5
Silicon D-Si	1.5	0.0691	1.43	1.44	1.44	1.46	1.47	1.56	1.58	1.58	1.59	5
Silver T-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.81	0.425	1.05	1.24	1.43	2	2	2	2	2	2	5
Sodium D-Na	1.81	0.416	1.07	1.26	1.44	2	2	2	2	2	2	5
Strontium T-Sr	0.152	0.00686	0.14	0.143	0.145	0.153	0.155	0.155	0.156	0.157	0.157	5
Strontium D-Sr	0.152	0.00926	0.138	0.141	0.143	0.151	0.153	0.153	0.16	0.162	0.164	5
Thallium T-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000183	0.0000389	0.000113	0.00013	0.000148	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Uranium D-U	0.000181	0.0000425	0.000105	0.000124	0.000143	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Zinc T-Zn	0.0046	0.000894	0.003	0.0034	0.0038	0.005	0.005	0.005	0.005	0.005	0.005	5
Zinc D-Zn	0.0042	0.00179	0.001	0.0018	0.0026	0.005	0.005	0.005	0.005	0.005	0.005	5

Lower Bitter Creek (BC02)	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.88	0.403	7.1	7.27	7.41	7.67	7.9	8.17	8.32	8.36	8.4	12
Conductivity	320	43.3	220	240	275	290	320	350	368	370	375	21
Hardness CaCO3	158	30.8	110	110	120	140	153	180	197	199	218	21
Total Dissolved Solids	211	43	150	170	170	184	205	230	240	260	350	21
Total Suspended Solids	26.3	45.2	1	1	1	3	7	25	63	75	200	21
Turbidity	21.5	38.7	0.4	0.6	0.7	1.36	2.7	28	47	56	170	21
Alkalinity-Total CaCO3	100	9.27	77	82	92	95	101	110	110	110	111	21
Acidity (as CaCO3)	3.72	2.86	1	1	1	1	3.2	5.6	7	7	12	21
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0636	0.00598	0.055	0.0562	0.0574	0.061	0.065	0.066	0.069	0.07	0.071	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	66.5	16.2	24	41	44	60	67	77.7	85.5	86.9	87.8	21
Nitrate Nitrogen N	0.23	0.064	0.174	0.179	0.184	0.2	0.208	0.231	0.296	0.317	0.339	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	0.163	N/A	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	0.163	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Phosphorus (P)-Total	0.0146	0.0201	0.0024	0.00272	0.00304	0.004	0.0054	0.0114	0.0346	0.0423	0.05	5
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Dissolved Organic Carbon	0.528	0.0522	0.5	0.5	0.5	0.5	0.5	0.52	0.58	0.6	0.62	5
Aluminum T-Al	0.664	1.27	0.0015	0.0084	0.011	0.0299	0.12	0.75	1.6	1.94	5.6	21
Aluminum D-Al	0.00783	0.00781	0.0005	0.0009	0.0009	0.0024	0.0043	0.011	0.021	0.0223	0.026	21
Antimony T-Sb	0.000807	0.000263	0.00048	0.0005	0.00051	0.00068	0.00074	0.00087	0.0011	0.0014	0.0015	21
Antimony D-Sb	0.00062	0.000146	0.00034	0.00039	0.00041	0.00053	0.00064	0.00069	0.00074	0.00085	0.00093	21
Arsenic T-As	0.000868	0.000185	0.0007	0.000714	0.000728	0.00077	0.00083	0.00086	0.00105	0.00112	0.00118	5
Arsenic D-As	0.000614	0.0000483	0.00056	0.000566	0.000572	0.00059	0.00059	0.00066	0.000666	0.000668	0.00067	5
Barium T-Ba	0.0661	0.0154	0.0451	0.049	0.05	0.057	0.0604	0.0756	0.0804	0.0891	0.11	21
Barium D-Ba	0.0545	0.0119	0.0332	0.038	0.0414	0.045	0.054	0.06	0.0686	0.077	0.0775	21
Beryllium T-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.0000512	0.00000268	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0000536	0.0000548	0.000056	5
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Boron T-B	0.0824	0.0394	0.012	0.0296	0.0472	0.1	0.1	0.1	0.1	0.1	0.1	5
Boron D-B	0.0822	0.0398	0.011	0.0288	0.0466	0.1	0.1	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000111	0.0000615	0.0000354	0.0000382	0.0000541	0.0001	0.0001	0.000103	0.00017	0.000261	0.00028	20
Cadmium D-Cd	0.0000917	0.0000315	0.000035	0.000036	0.0000378	0.000095	0.0001	0.0001	0.000112	0.000132	0.00016	20
Calcium T-Ca	57.3	9.21	43.3	44	45	50.9	59.2	63	66	75.4	75.4	21
Calcium D-Ca	50.4	10.8	35.5	36	37.2	41.5	50.8	55.2	65.6	66.5	75.4	21
Chromium T-Cr	0.000826	0.000389	0.00013	0.000304	0.000478	0.001	0.001	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000661	0.001	0.00007	0.00007	0.00007	0.000095	0.0003	0.00071	0.00117	0.00214	0.0044	20
Cobalt D-Co	0.000145	0.000123	0.00003	0.0000585	0.00006	0.0000675	0.000095	0.00018	0.0003	0.00031	0.00049	20
Copper T-Cu	0.00457	0.0062	0.0002	0.000485	0.000599	0.000975	0.00175	0.00493	0.0127	0.0186	0.021	20
Copper D-Cu	0.000863	0.000951	0.00005	0.00005	0.000095	0.000285	0.0005	0.001	0.00211	0.0023	0.00398	20
Iron T-Fe	1.08	2.17	0.01	0.01	0.0109	0.0351	0.21	1	2.7	3.39	9.6	21
Iron D-Fe	0.0276	0.0267	0.005	0.01	0.01	0.01	0.01	0.03	0.061	0.09	0.1	21
Lead T-Pb	0.00104	0.00163	0.00005	0.0000785	0.000098	0.000164	0.0005	0.00113	0.00205	0.00311	0.0072	20
Lead D-Pb	0.000177	0.000174	0.000025	0.0000488	0.00005	0.0000575	0.00009	0.00019	0.0005	0.0005	0.0005	20
Magnesium T-Mg	8.05	1.16	5.88	6.47	6.73	7.35	8	8.66	9.1	10	10.6	21
Magnesium D-Mg	6.53	1.15	4.1	4.9	4.91	6.1	6.5	7.35	8.09	8.14	8.14	21
Manganese T-Mn	0.0315	0.0496	0.00185	0.002	0.00218	0.0035	0.0106	0.029	0.0926	0.116	0.2	21
Manganese D-Mn	0.00165	0.00133	0.00005	0.00021	0.00026	0.0007	0.0013	0.0024	0.00355	0.00452	0.0046	21
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Molybdenum T-Mo	0.00461	0.000867	0.00272	0.00311	0.00386	0.0044	0.00453	0.00486	0.00528	0.0064	0.0066	21
Molybdenum D-Mo	0.00407	0.000829	0.00225	0.0029	0.00321	0.0035	0.00418	0.0043	0.00493	0.0055	0.006	21
Nickel T-Ni	0.0032	0.003	0.00051	0.00076	0.0012	0.0014	0.0019	0.0037	0.00676	0.0079	0.013	21
Nickel D-Ni	0.00129	0.000723	0.00044	0.0005	0.0005	0.0006	0.0012	0.0016	0.00188	0.0029	0.003	21
Selenium T-Se	0.00332	0.000267	0.00297	0.00303	0.00308	0.00325	0.00329	0.00339	0.00358	0.00365	0.00371	5
Selenium D-Se	0.00348	0.000194	0.00329	0.00329	0.00329	0.00329	0.00351	0.00358	0.00368	0.00371	0.00374	5
Silicon T-Si	2.61	0.129	2.47	2.48	2.49	2.52	2.59	2.66	2.74	2.77	2.8	5
Silicon D-Si	2.38	0.179	2.14	2.16	2.18	2.24	2.45	2.51	2.53	2.54	2.55	5
Silver T-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	2.03	0.509	1	1.2	1.43	1.89	2	2.2	2.54	3.1	3.2	21
Sodium D-Na	1.72	0.46	0.66	1	1.1	1.5	1.8	2	2.1	2.1	2.8	21
Strontium T-Sr	0.327	0.0464	0.24	0.24	0.281	0.3	0.32	0.351	0.38	0.385	0.436	21
Strontium D-Sr	0.3	0.0548	0.19	0.217	0.225	0.269	0.3	0.345	0.363	0.37	0.38	21
Thallium T-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.0113	0.00775	0.00133	0.00306	0.0048	0.01	0.01	0.012	0.0186	0.0208	0.023	5
Titanium D-Ti	0.00846	0.00459	0.0003	0.00224	0.00418	0.01	0.01	0.011	0.011	0.011	0.011	5
Uranium T-U	0.000479	0.0000396	0.00041	0.000426	0.000442	0.00049	0.00049	0.000497	0.000505	0.000507	0.00051	5
Uranium D-U	0.000461	0.000054	0.00037	0.000388	0.000406	0.00046	0.00048	0.000486	0.0005	0.000505	0.00051	5
Vanadium T-V	0.00062	0.000268	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00086	0.00098	0.0011	5
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Zinc T-Zn	0.0107	0.0088	0.003	0.003	0.00311	0.005	0.0071	0.0123	0.0262	0.0283	0.033	20
Zinc D-Zn	0.00321	0.00204	0.0003	0.000965	0.001	0.00138	0.00255	0.005	0.00564	0.00606	0.0072	20

Middle Bitter Creek (BC04)	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.86	0.384	7.3	7.3	7.33	7.48	7.9	8.2	8.26	8.3	8.38	14
Conductivity	362	38.8	290	298	310	336	360	393	404	423	424	21
Hardness CaCO3	174	34.8	110	120	140	150	170	190	227	231	249	21
Total Dissolved Solids	245	25.7	193	200	200	220	260	260	264	270	280	21
Total Suspended Solids	44.8	61.7	1	1	3	3	18.2	64	110	140	250	21
Turbidity	37.5	57.2	0.6	0.8	1.1	1.85	9.53	54	82	110	240	21
Alkalinity-Total CaCO3	103	10.4	74	91.5	92.5	97	102	110	112	120	120	21
Acidity (as CaCO3)	4.75	6.67	1	1	1	1.7	3	4.2	7.4	11	32	21
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0678	0.00482	0.06	0.0616	0.0632	0.068	0.068	0.07	0.0718	0.0724	0.073	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	89.1	16.1	57	57	58	83	94.1	100	104	108	111	21
Nitrate Nitrogen N	0.159	0.0473	0.114	0.119	0.124	0.138	0.138	0.17	0.21	0.223	0.236	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	0.107	N/A	0.107	0.107	0.107	0.107	0.107	0.107	0.107	0.107	0.107	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.00106	0.000134	0.001	0.001	0.001	0.001	0.001	0.001	0.00118	0.00124	0.0013	5
Phosphorus (P)-Total	0.017	0.0197	0.002	0.00246	0.00292	0.0043	0.0091	0.0197	0.0379	0.0439	0.05	5
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Dissolved Organic Carbon	0.602	0.141	0.5	0.5	0.5	0.5	0.5	0.73	0.76	0.77	0.78	5
Aluminum T-Al	1.11	2.16	0.0025	0.0133	0.018	0.0439	0.24	1.69	2	2.5	9.8	21
Aluminum D-Al	0.00922	0.00944	0.0005	0.0005	0.001	0.0033	0.0067	0.011	0.0192	0.027	0.0394	21
Antimony T-Sb	0.000895	0.000412	0.00055	0.00057	0.00058	0.0007	0.0008	0.00091	0.0012	0.0014	0.0024	21
Antimony D-Sb	0.000736	0.000233	0.00045	0.00048	0.00048	0.00055	0.00072	0.00085	0.00093	0.001	0.0015	21
Arsenic T-As	0.00107	0.000354	0.00072	0.000758	0.000796	0.00091	0.00095	0.00111	0.00143	0.00154	0.00165	5
Arsenic D-As	0.00063	0.000051	0.00056	0.000568	0.000576	0.0006	0.00064	0.00066	0.000678	0.000684	0.00069	5
Barium T-Ba	0.063	0.0155	0.0426	0.044	0.05	0.053	0.058	0.071	0.0812	0.082	0.11	21
Barium D-Ba	0.0508	0.0105	0.0354	0.0356	0.037	0.0432	0.053	0.056	0.061	0.0635	0.0788	21
Beryllium T-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Boron T-B	0.082	0.0402	0.01	0.028	0.046	0.1	0.1	0.1	0.1	0.1	0.1	5
Boron D-B	0.082	0.0402	0.01	0.028	0.046	0.1	0.1	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000148	0.000102	0.0000675	0.0000739	0.0000798	0.0001	0.0001	0.000143	0.000309	0.00039	0.00039	20
Cadmium D-Cd	0.0000966	0.0000263	0.000056	0.0000589	0.0000689	0.0000831	0.0001	0.0001	0.000112	0.000133	0.00018	20
Calcium T-Ca	67.2	10.6	50	51.4	57.5	59.3	65	76	81.3	84	87	21
Calcium D-Ca	58.5	10.6	39.8	46.4	49	52.3	56.6	63.8	69.3	75.9	87	21
Chromium T-Cr	0.000832	0.000376	0.00016	0.000328	0.000496	0.001	0.001	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000946	0.00131	0.00005	0.0000595	0.000069	0.00024	0.0003	0.0015	0.00182	0.00218	0.0057	20
Cobalt D-Co	0.000194	0.00022	0.00005	0.0000595	0.00006	0.00007	0.0001	0.000263	0.0003	0.000337	0.00104	20
Copper T-Cu	0.00514	0.00827	0.0004	0.00047	0.0005	0.00067	0.0018	0.0073	0.011	0.0121	0.037	21
Copper D-Cu	0.000564	0.000371	0.00005	0.00005	0.0001	0.00022	0.0005	0.00096	0.001	0.001	0.0013	21
Iron T-Fe	1.54	2.54	0.01	0.01	0.0202	0.0845	0.356	2.45	3.2	4.4	11	21
Iron D-Fe	0.024	0.0287	0.005	0.01	0.01	0.01	0.01	0.03	0.032	0.072	0.13	21
Lead T-Pb	0.00123	0.00165	0.00005	0.00007	0.00009	0.00019	0.00051	0.0016	0.0032	0.0035	0.0068	21
Lead D-Pb	0.000191	0.000168	0.000025	0.00005	0.00005	0.00008	0.00012	0.0002	0.0005	0.0005	0.0005	21
Magnesium T-Mg	9.69	3.17	6.19	7.22	7.41	8.3	8.99	10	11.2	12	22	21
Magnesium D-Mg	7.47	0.902	5.65	5.76	6.7	7.05	7.3	8.26	8.63	8.65	9.2	21
Manganese T-Mn	0.0495	0.0725	0.00266	0.0049	0.0049	0.00802	0.0146	0.073	0.1	0.12	0.32	21
Manganese D-Mn	0.00445	0.00298	0.0002	0.00054	0.00073	0.00254	0.0041	0.0062	0.00866	0.00886	0.0107	21
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Molybdenum T-Mo	0.00577	0.00081	0.00445	0.00469	0.00491	0.00524	0.0055	0.0064	0.00659	0.0066	0.0078	21
Molybdenum D-Mo	0.00533	0.000952	0.00352	0.00404	0.0042	0.0049	0.0052	0.0058	0.00628	0.007	0.0075	21
Nickel T-Ni	0.00489	0.00431	0.00133	0.0016	0.00194	0.0021	0.003	0.0072	0.0085	0.0092	0.02	21
Nickel D-Ni	0.00197	0.000679	0.00044	0.00115	0.00126	0.00147	0.002	0.0024	0.0027	0.0027	0.0034	21
Selenium T-Se	0.00339	0.000622	0.00296	0.00296	0.00297	0.00298	0.00306	0.00355	0.00407	0.00425	0.00442	5
Selenium D-Se	0.00346	0.000886	0.00267	0.00273	0.00279	0.00297	0.00322	0.00348	0.00436	0.00466	0.00495	5
Silicon T-Si	2.77	0.212	2.58	2.59	2.6	2.64	2.68	2.82	2.99	3.05	3.11	5
Silicon D-Si	2.45	0.293	2.15	2.15	2.15	2.16	2.53	2.55	2.72	2.78	2.84	5
Silver T-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	2.48	0.674	1.61	1.92	1.98	2.2	2.4	2.56	2.94	3	5	21
Sodium D-Na	1.98	0.285	1.53	1.53	1.67	1.7	2	2.2	2.3	2.39	2.6	21
Strontium T-Sr	0.387	0.0501	0.253	0.313	0.33	0.37	0.385	0.407	0.453	0.466	0.472	21
Strontium D-Sr	0.357	0.0493	0.246	0.264	0.31	0.338	0.362	0.375	0.417	0.44	0.452	21
Thallium T-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.0126	0.0115	0.00096	0.00277	0.00458	0.01	0.01	0.01	0.0232	0.0276	0.032	5
Titanium D-Ti	0.00906	0.00507	0.0003	0.00224	0.00418	0.01	0.01	0.012	0.0126	0.0128	0.013	5
Uranium T-U	0.00054	0.0000361	0.00049	0.000498	0.000506	0.000529	0.00053	0.00057	0.000576	0.000578	0.00058	5
Uranium D-U	0.000525	0.0000141	0.00051	0.000511	0.000512	0.000515	0.00052	0.00054	0.00054	0.00054	0.00054	5
Vanadium T-V	0.000756	0.000488	0.0005	0.0005	0.0005	0.0005	0.0005	0.00066	0.00124	0.00143	0.00162	5
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Zinc T-Zn	0.0149	0.0121	0.001	0.002	0.0039	0.005	0.013	0.022	0.03	0.0312	0.047	21
Zinc D-Zn	0.00448	0.00448	0.001	0.001	0.001	0.002	0.0038	0.005	0.008	0.0091	0.021	21

Middle Bitter Creek (BC06)	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.15	0.184	8.02	8.03	8.05	8.09	8.15	8.22	8.25	8.27	8.28	2
Conductivity	397	46.7	364	367	371	381	397	414	423	427	430	2
Hardness CaCO3	197	22.6	181	183	184	189	197	205	210	211	213	2
Total Dissolved Solids	273	24	256	258	259	265	273	282	287	288	290	2
Total Suspended Solids	9.05	4.6	5.8	6.13	6.45	7.43	9.05	10.7	11.7	12	12.3	2
Turbidity	4.21	1.3	3.29	3.38	3.47	3.75	4.21	4.67	4.95	5.04	5.13	2
Alkalinity-Total CaCO3	85.8	11	78	78.8	79.6	81.9	85.8	89.7	92	92.8	93.6	2
Acidity (as CaCO3)	1.45	0.212	1.3	1.32	1.33	1.38	1.45	1.53	1.57	1.59	1.6	2
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2
Fluoride F	0.0815	0.0134	0.072	0.073	0.0739	0.0768	0.0815	0.0863	0.0891	0.0901	0.091	2
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	2
Sulphate SO4	120	14.1	110	111	112	115	120	125	128	129	130	2
Nitrate Nitrogen N	0.053	0.0141	0.043	0.044	0.045	0.048	0.053	0.0579	0.0609	0.0619	0.0629	2
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	2
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Phosphorus (P)-Total	0.01	0.00636	0.0055	0.00595	0.0064	0.00775	0.01	0.0123	0.0136	0.0141	0.0145	2
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2
Aluminum T-Al	0.222	0.186	0.0901	0.103	0.116	0.156	0.222	0.287	0.327	0.34	0.353	2
Aluminum D-Al	0.0115	0.00318	0.0092	0.00943	0.00965	0.0103	0.0115	0.0126	0.0133	0.0135	0.0137	2
Antimony T-Sb	0.0012	0.0000778	0.00114	0.00115	0.00115	0.00117	0.0012	0.00122	0.00124	0.00124	0.00125	2
Antimony D-Sb	0.00108	0.0000566	0.00104	0.00104	0.00105	0.00106	0.00108	0.0011	0.00111	0.00112	0.00112	2
Arsenic T-As	0.0013	0.000417	0.001	0.00103	0.00106	0.00115	0.0013	0.00144	0.00153	0.00156	0.00159	2
Arsenic D-As	0.00068	0.0000707	0.00063	0.000635	0.00064	0.000655	0.00068	0.000705	0.00072	0.000725	0.00073	2
Barium T-Ba	0.051	0.00283	0.049	0.0492	0.0494	0.05	0.051	0.052	0.0526	0.0528	0.053	2
Barium D-Ba	0.048	0.00566	0.044	0.0444	0.0448	0.046	0.048	0.05	0.0512	0.0516	0.052	2
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	2
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	2
Boron T-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2
Boron D-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2
Cadmium T-Cd	0.00012	0.00000212	0.000118	0.000118	0.000118	0.000119	0.00012	0.00012	0.000121	0.000121	0.000121	2
Cadmium D-Cd	0.0001	0.00000141	0.000099	0.0000991	0.0000992	0.0000995	0.0001	0.000101	0.000101	0.000101	0.000101	2
Calcium T-Ca	69.9	4.6	66.6	66.9	67.3	68.2	69.9	71.5	72.5	72.8	73.1	2
Calcium D-Ca	66.5	7.5	61.2	61.7	62.3	63.9	66.5	69.2	70.7	71.3	71.8	2
Chromium T-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Cobalt T-Co	0.000375	0.000106	0.0003	0.000308	0.000315	0.000338	0.000375	0.000413	0.000435	0.000443	0.00045	2
Cobalt D-Co	0.0003	N/A	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	2
Copper T-Cu	0.00225	0.000636	0.0018	0.00185	0.00189	0.00203	0.00225	0.00248	0.00261	0.00266	0.0027	2
Copper D-Cu	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Iron T-Fe	0.414	0.278	0.217	0.237	0.256	0.315	0.414	0.512	0.571	0.59	0.61	2
Iron D-Fe	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	2
Lead T-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Lead D-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Magnesium T-Mg	7.66	0.771	7.11	7.16	7.22	7.38	7.66	7.93	8.09	8.15	8.2	2
Magnesium D-Mg	7.55	1.05	6.8	6.87	6.95	7.17	7.55	7.92	8.14	8.22	8.29	2
Manganese T-Mn	0.0203	0.0053	0.0165	0.0169	0.0173	0.0184	0.0203	0.0221	0.0233	0.0236	0.024	2
Manganese D-Mn	0.00804	0.00121	0.00718	0.00727	0.00735	0.00761	0.00804	0.00846	0.00872	0.0088	0.00889	2
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	2
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	2
Molybdenum T-Mo	0.00755	0.000354	0.0073	0.00733	0.00735	0.00743	0.00755	0.00768	0.00775	0.00778	0.0078	2
Molybdenum D-Mo	0.0072	0.000283	0.007	0.00702	0.00704	0.0071	0.0072	0.0073	0.00736	0.00738	0.0074	2
Nickel T-Ni	0.00435	0.000354	0.0041	0.00413	0.00415	0.00423	0.00435	0.00448	0.00455	0.00458	0.0046	2
Nickel D-Ni	0.00385	0.000495	0.0035	0.00354	0.00357	0.00368	0.00385	0.00403	0.00413	0.00417	0.0042	2
Selenium T-Se	0.00303	0.000389	0.00275	0.00278	0.00281	0.00289	0.00303	0.00316	0.00325	0.00327	0.0033	2
Selenium D-Se	0.00313	0.000601	0.0027	0.00274	0.00279	0.00291	0.00313	0.00334	0.00347	0.00351	0.00355	2
Silicon T-Si	2.7	0.099	2.63	2.64	2.64	2.67	2.7	2.74	2.76	2.76	2.77	2
Silicon D-Si	2.31	0.226	2.15	2.17	2.18	2.23	2.31	2.39	2.44	2.45	2.47	2
Silver T-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	2
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	2
Sodium T-Na	2.3	0.283	2.1	2.12	2.14	2.2	2.3	2.4	2.46	2.48	2.5	2
Sodium D-Na	2.2	0.283	2	2.02	2.04	2.1	2.2	2.3	2.36	2.38	2.4	2
Strontium T-Sr	0.407	0.0339	0.383	0.385	0.388	0.395	0.407	0.419	0.426	0.429	0.431	2
Strontium D-Sr	0.404	0.00849	0.398	0.399	0.399	0.401	0.404	0.407	0.409	0.409	0.41	2
Thallium T-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	2
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	2
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Titanium T-Ti	0.011	0.00141	0.01	0.0101	0.0102	0.0105	0.011	0.0115	0.0118	0.0119	0.012	2
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	2
Uranium T-U	0.00073	N/A	0.00073	0.00073	0.00073	0.00073	0.00073	0.00073	0.00073	0.00073	0.00073	2
Uranium D-U	0.000675	0.0000495	0.00064	0.000644	0.000647	0.000658	0.000675	0.000693	0.000703	0.000707	0.00071	2
Vanadium T-V	0.00088	0.000537	0.0005	0.000538	0.000576	0.00069	0.00088	0.00107	0.00118	0.00122	0.00126	2
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Zinc T-Zn	0.00915	0.000495	0.0088	0.00884	0.00887	0.00898	0.00915	0.00933	0.00943	0.00947	0.0095	2
Zinc D-Zn	0.0064	0.000424	0.0061	0.00613	0.00616	0.00625	0.0064	0.00655	0.00664	0.00667	0.0067	2

Upper Bitter Creek (BC08)	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.91	0.275	7.6	7.6	7.6	7.65	8.02	8.11	8.22	8.23	8.24	7
Conductivity	318	50.2	260	261	261	283	314	344	388	390	392	8
Hardness CaCO3	158	28.1	130	131	131	138	149	173	190	200	210	8
Total Dissolved Solids	215	33.9	178	179	179	180	215	237	259	260	260	8
Total Suspended Solids	219	264	3	3	3	3.68	77.4	468	535	588	640	8
Turbidity	184	212	1.13	1.22	1.31	9.05	75.1	418	446	453	460	8
Alkalinity-Total CaCO3	81.5	13.8	59.5	61.7	64	75.1	82.3	91	95.8	97.9	100	8
Acidity (as CaCO3)	5.93	7.56	1	1.11	1.21	1.45	2.3	6.25	17.2	18.6	20	8
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.0575	0.00896	0.048	0.0486	0.0492	0.051	0.0575	0.064	0.0658	0.0664	0.067	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	92.6	21.1	56	60	64.1	86.6	96.6	104	115	116	116	8
Nitrate Nitrogen N	0.00598	0.00195	0.005	0.005	0.005	0.005	0.005	0.00598	0.00773	0.00832	0.0089	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.0014	0.0008	0.001	0.001	0.001	0.001	0.001	0.0014	0.00212	0.00236	0.0026	4
Phosphorus (P)-Total	0.0294	0.0246	0.002	0.00398	0.00596	0.0119	0.0326	0.0501	0.0501	0.0502	0.0502	4
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Dissolved Organic Carbon	0.545	0.09	0.5	0.5	0.5	0.5	0.5	0.545	0.626	0.653	0.68	4
Aluminum T-Al	3.41	4.45	0.0275	0.0365	0.0456	0.398	1.51	5.18	7.89	10.4	13	8
Aluminum D-Al	0.0353	0.0402	0.005	0.00633	0.00766	0.014	0.0245	0.0355	0.0669	0.0984	0.13	8
Antimony T-Sb	0.00186	0.00108	0.0006	0.000786	0.000971	0.00133	0.00147	0.0022	0.00316	0.00358	0.004	8
Antimony D-Sb	0.00135	0.000566	0.00055	0.000662	0.000774	0.000938	0.00139	0.00155	0.00202	0.00216	0.0023	8
Arsenic T-As	0.00191	0.00142	0.0009	0.000911	0.000921	0.000953	0.00139	0.00234	0.0033	0.00362	0.00394	4
Arsenic D-As	0.000913	0.000104	0.00083	0.000833	0.000836	0.000845	0.00088	0.000948	0.00102	0.00104	0.00106	4
Barium T-Ba	0.0801	0.0337	0.049	0.0504	0.0518	0.0545	0.0619	0.113	0.123	0.127	0.13	8
Barium D-Ba	0.0434	0.0135	0.028	0.028	0.028	0.0318	0.0425	0.0535	0.0611	0.0611	0.0612	8
Beryllium T-Be	0.000775	0.00045	0.0001	0.000235	0.00037	0.000775	0.001	0.001	0.001	0.001	0.001	4
Beryllium D-Be	0.000775	0.00045	0.0001	0.000235	0.00037	0.000775	0.001	0.001	0.001	0.001	0.001	4
Bismuth T-Bi	0.000053	0.000006	0.00005	0.00005	0.00005	0.00005	0.00005	0.000053	0.0000584	0.0000602	0.000062	4
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	4
Boron T-B	0.0775	0.045	0.01	0.0235	0.037	0.0775	0.1	0.1	0.1	0.1	0.1	4
Boron D-B	0.0775	0.045	0.01	0.0235	0.037	0.0775	0.1	0.1	0.1	0.1	0.1	4
Cadmium T-Cd	0.00017	0.000159	0.0000414	0.0000425	0.0000435	0.0000725	0.000104	0.0002	0.00032	0.00041	0.0005	7
Cadmium D-Cd	0.0000733	0.0000333	0.000037	0.0000373	0.0000376	0.000038	0.0001	0.0001	0.0001	0.0001	0.0001	7
Calcium T-Ca	64	11	43.4	48.2	53.1	60.8	65.7	67.1	73.6	77.8	82	8
Calcium D-Ca	54	9.58	45	45.1	45.3	46.6	51	59.6	64.5	68.3	72	8
Chromium T-Cr	0.00135	0.00137	0.0001	0.000235	0.00037	0.000775	0.001	0.00158	0.00261	0.00296	0.0033	4
Chromium D-Cr	0.000775	0.00045	0.0001	0.000235	0.00037	0.000775	0.001	0.001	0.001	0.001	0.001	4
Cobalt T-Co	0.00384	0.00474	0.0001	0.00017	0.00024	0.000315	0.00102	0.00765	0.00969	0.0108	0.012	8
Cobalt D-Co	0.000255	0.0000778	0.0001	0.000139	0.000177	0.000218	0.00028	0.0003	0.000315	0.000333	0.00035	8
Copper T-Cu	0.0198	0.0258	0.0005	0.000675	0.00085	0.0016	0.005	0.0363	0.049	0.0595	0.07	8
Copper D-Cu	0.000561	0.000371	0.0002	0.0002	0.0002	0.000275	0.000395	0.001	0.001	0.001	0.001	8
Iron T-Fe	4.86	8.01	0.044	0.0538	0.0636	0.524	2.08	4.43	11.4	17.7	24	8
Iron D-Fe	0.042	0.0423	0.01	0.01	0.01	0.0198	0.03	0.0418	0.0812	0.111	0.14	8
Lead T-Pb	0.00577	0.00632	0.0005	0.0005	0.0005	0.00067	0.00154	0.011	0.0132	0.0141	0.015	7
Lead D-Pb	0.000266	0.00022	0.00006	0.000066	0.000072	0.00009	0.00012	0.0005	0.0005	0.0005	0.0005	7
Magnesium T-Mg	11.4	8.33	5.37	5.53	5.69	6.54	7.58	13	20.2	25.1	30	8
Magnesium D-Mg	5.64	1.01	4.49	4.67	4.85	5.08	5.25	6	7.07	7.24	7.4	8
Manganese T-Mn	0.223	0.276	0.00549	0.00617	0.00684	0.0161	0.0651	0.433	0.563	0.637	0.71	8
Manganese D-Mn	0.0114	0.00987	0.00375	0.00383	0.00391	0.00424	0.00587	0.017	0.0248	0.0269	0.029	8
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	4
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	4
Molybdenum T-Mo	0.011	0.00141	0.0088	0.00901	0.00922	0.0101	0.0111	0.012	0.0123	0.0127	0.013	8
Molybdenum D-Mo	0.01	0.0011	0.0079	0.0085	0.00909	0.00967	0.00995	0.0109	0.0112	0.0113	0.0115	8
Nickel T-Ni	0.0121	0.0132	0.0022	0.0022	0.0022	0.0026	0.0045	0.0215	0.0272	0.0321	0.037	8
Nickel D-Ni	0.00211	0.00104	0.0005	0.00071	0.00092	0.0014	0.0023	0.0027	0.00304	0.00342	0.0038	8
Selenium T-Se	0.00165	0.000345	0.00134	0.00135	0.00135	0.00137	0.00161	0.00189	0.00198	0.00201	0.00204	4
Selenium D-Se	0.00175	0.000345	0.00143	0.00145	0.00147	0.00152	0.00168	0.0019	0.00209	0.00215	0.00221	4
Silicon T-Si	2.73	1.69	1.65	1.67	1.68	1.73	2.02	3.01	4.34	4.78	5.22	4
Silicon D-Si	1.54	0.165	1.33	1.35	1.38	1.44	1.57	1.67	1.67	1.68	1.68	4
Silver T-Ag	0.0000253	0.0000178	0.00001	0.0000115	0.000013	0.0000175	0.00002	0.0000278	0.0000417	0.0000464	0.000051	4
Silver D-Ag	0.0000175	0.000005	0.00001	0.0000115	0.000013	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	4
Sodium T-Na	2.92	1.09	2	2	2	2.08	2.57	3.3	4.41	4.66	4.9	8
Sodium D-Na	2.16	0.366	1.9	1.9	1.9	1.98	2	2.23	2.51	2.76	3	8
Strontium T-Sr	0.421	0.0609	0.296	0.319	0.342	0.415	0.44	0.458	0.47	0.47	0.47	8
Strontium D-Sr	0.37	0.0477	0.3	0.302	0.305	0.332	0.386	0.404	0.417	0.42	0.422	8
Thallium T-Tl	0.000153	0.000095	0.00001	0.0000385	0.000067	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	4
Thallium D-Tl	0.000153	0.000095	0.00001	0.0000385	0.000067	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	4
Tin T-Sn	0.0004	0.0002	0.0001	0.00016	0.00022	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	4
Tin D-Sn	0.000478	0.000045	0.00041	0.000424	0.000437	0.000478	0.0005	0.0005	0.0005	0.0005	0.0005	4
Titanium T-Ti	0.026	0.0324	0.0038	0.00473	0.00566	0.00845	0.013	0.0305	0.0566	0.0653	0.074	4
Titanium D-Ti	0.00808	0.00527	0.0003	0.00176	0.00321	0.00758	0.01	0.0105	0.0114	0.0117	0.012	4
Uranium T-U	0.000816	0.000127	0.00071	0.000715	0.000719	0.000733	0.00078	0.000864	0.000942	0.000968	0.000994	4
Uranium D-U	0.000763	0.000103	0.00064	0.000657	0.000673	0.000723	0.00076	0.0008	0.000855	0.000873	0.000891	4
Vanadium T-V	0.00218	0.00254	0.0005	0.0005	0.0005	0.0005	0.00118	0.00285	0.00466	0.00526	0.00586	4
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	4
Zinc T-Zn	0.0344	0.0408	0.003	0.00359	0.00419	0.00492	0.00765	0.0693	0.0904	0.0932	0.096	8
Zinc D-Zn	0.00524	0.00334	0.002	0.00249	0.00298	0.00378	0.00475	0.005	0.00743	0.0103	0.0131	8

ar River D/S of Bitter Creek confluer	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.66	0.453	7	7.05	7.1	7.15	7.94	8	8.04	8.09	8.13	11
Conductivity	238	40.3	160	181	196	210	250	260	285	303	310	15
Hardness CaCO3	116	15	88	94.3	98.2	110	111	130	131	134	140	15
Total Dissolved Solids	154	22.9	110	118	129	140	150	170	176	186	200	15
Total Suspended Solids	7.23	5.85	1	1	1	3	3.5	12	15.6	16	16	15
Turbidity	4.01	4.94	0.26	0.393	0.45	0.71	1	5.95	10.9	13.2	16	15
Alkalinity-Total CaCO3	85.7	11.9	64	68.1	70.8	81.2	85.5	89	100	103	110	15
Acidity (as CaCO3)	2.86	1.67	1	1	1	1.3	2.6	3.85	5.32	5.52	5.8	15
Chloride Cl	0.506	0.0134	0.5	0.5	0.5	0.5	0.5	0.5	0.518	0.524	0.53	5
Fluoride F	0.0634	0.00477	0.055	0.0568	0.0586	0.064	0.066	0.066	0.066	0.066	0.066	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	38.4	10.7	12	23.9	29.4	32.2	39	45.8	48.5	51.1	56	15
Nitrate Nitrogen N	0.224	0.0534	0.165	0.173	0.181	0.205	0.212	0.227	0.277	0.293	0.31	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	0.155	N/A	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	0.155	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.00104	0.0000894	0.001	0.001	0.001	0.001	0.001	0.001	0.00112	0.00116	0.0012	5
Phosphorus (P)-Total	0.0149	0.0201	0.002	0.00242	0.00284	0.0041	0.005	0.0136	0.0354	0.0427	0.05	5
Total Organic Carbon	0.544	0.0984	0.5	0.5	0.5	0.5	0.5	0.5	0.632	0.676	0.72	5
Dissolved Organic Carbon	0.652	0.184	0.5	0.5	0.5	0.5	0.64	0.67	0.838	0.894	0.95	5
Aluminum T-Al	0.118	0.149	0.001	0.0087	0.0141	0.0221	0.048	0.145	0.35	0.453	0.46	15
Aluminum D-Al	0.00513	0.00421	0.0005	0.00085	0.001	0.002	0.005	0.00655	0.00982	0.0118	0.0159	15
Antimony T-Sb	0.000621	0.00019	0.00044	0.000447	0.00045	0.00049	0.0005	0.000775	0.000874	0.000937	0.001	15
Antimony D-Sb	0.000492	0.000105	0.00026	0.000379	0.00043	0.000435	0.0005	0.000505	0.0006	0.000642	0.00074	15
Arsenic T-As	0.000598	0.000102	0.00051	0.000512	0.000514	0.00052	0.00055	0.00067	0.000712	0.000726	0.00074	5
Arsenic D-As	0.000504	0.0000152	0.00049	0.000492	0.000494	0.0005	0.0005	0.0005	0.000518	0.000524	0.00053	5
Barium T-Ba	0.0842	0.00997	0.066	0.0695	0.0722	0.078	0.086	0.091	0.096	0.0972	0.1	15
Barium D-Ba	0.0799	0.0115	0.058	0.0636	0.0668	0.0715	0.079	0.0885	0.0938	0.096	0.096	15
Beryllium T-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Boron T-B	0.083	0.038	0.015	0.032	0.049	0.1	0.1	0.1	0.1	0.1	0.1	5
Boron D-B	0.0828	0.0385	0.014	0.0312	0.0484	0.1	0.1	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000112	0.000135	0.0000138	0.0000162	0.0000186	0.00005	0.00008	0.0001	0.00018	0.000332	0.00053	13
Cadmium D-Cd	0.0000712	0.0000299	0.000018	0.000021	0.0000234	0.00007	0.00008	0.00009	0.0001	0.0001	0.0001	13
Calcium T-Ca	42.7	7.3	30	32.4	34.4	38	43.1	46.6	51.4	54.2	57	15
Calcium D-Ca	38	6.99	24	26.8	28.8	34.2	38	44	45.1	45.7	47	15
Chromium T-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000242	0.000164	0.00007	0.000084	0.000094	0.000105	0.00023	0.0003	0.000408	0.000537	0.00067	15
Cobalt D-Co	0.000151	0.000112	0.00005	0.000057	0.00006	0.00007	0.00009	0.0003	0.0003	0.000303	0.00031	15
Copper T-Cu	0.00128	0.000912	0.0002	0.00034	0.00044	0.000705	0.001	0.00195	0.00206	0.00258	0.0037	15
Copper D-Cu	0.000735	0.000522	0.0002	0.0002	0.00024	0.00039	0.00053	0.001	0.00124	0.00161	0.0021	15
Iron T-Fe	0.186	0.232	0.01	0.0268	0.0348	0.037	0.098	0.216	0.51	0.7	0.77	15
Iron D-Fe	0.0181	0.0131	0.0066	0.00898	0.01	0.01	0.01	0.03	0.03	0.0366	0.052	15
Lead T-Pb	0.000449	0.000294	0.00005	0.000064	0.00009	0.000255	0.0005	0.0005	0.000706	0.000871	0.0012	15
Lead D-Pb	0.000211	0.000189	0.00004	0.000047	0.000054	0.000075	0.00011	0.000375	0.0005	0.0005	0.0005	15
Magnesium T-Mg	4.63	0.892	3.1	3.24	3.41	4.27	4.7	4.94	5.68	5.98	6.4	15
Magnesium D-Mg	3.89	0.744	2.2	2.76	3.04	3.35	4	4.41	4.68	4.75	4.77	15
Manganese T-Mn	0.0153	0.00815	0.0052	0.00699	0.00824	0.0096	0.016	0.0175	0.024	0.0293	0.037	15
Manganese D-Mn	0.00859	0.00423	0.003	0.00335	0.00398	0.00537	0.00802	0.011	0.0152	0.016	0.016	15
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Molybdenum T-Mo	0.00249	0.000413	0.0019	0.00197	0.002	0.00205	0.0026	0.00285	0.00296	0.00303	0.0031	15
Molybdenum D-Mo	0.00218	0.000351	0.0016	0.00167	0.00178	0.00195	0.00211	0.00235	0.00266	0.00273	0.0028	15
Nickel T-Ni	0.00226	0.00274	0.0005	0.0005	0.000548	0.001	0.0013	0.0021	0.00466	0.00687	0.011	15
Nickel D-Ni	0.000983	0.00069	0.0003	0.0003	0.000332	0.000485	0.001	0.0012	0.00148	0.00202	0.003	15
Selenium T-Se	0.00142	0.000132	0.00128	0.00128	0.00128	0.00129	0.00145	0.00152	0.00155	0.00156	0.00157	5
Selenium D-Se	0.00146	0.000152	0.00129	0.0013	0.00131	0.00135	0.00144	0.00158	0.00162	0.00164	0.00165	5
Silicon T-Si	1.9	0.0639	1.81	1.83	1.84	1.89	1.89	1.9	1.95	1.97	1.99	5
Silicon D-Si	1.83	0.111	1.68	1.69	1.71	1.75	1.89	1.9	1.92	1.93	1.94	5
Silver T-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.6	0.548	0.54	0.806	0.952	1.25	1.6	2	2	2.21	2.7	15
Sodium D-Na	1.4	0.527	0.49	0.686	0.862	1.1	1.2	2	2	2.06	2.2	15
Strontium T-Sr	0.227	0.0295	0.17	0.184	0.194	0.206	0.23	0.252	0.261	0.264	0.27	15
Strontium D-Sr	0.213	0.0331	0.14	0.161	0.17	0.2	0.22	0.24	0.247	0.25	0.251	15
Thallium T-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.000434	0.000165	0.00014	0.000212	0.000284	0.0005	0.0005	0.0005	0.000518	0.000524	0.00053	5
Titanium T-Ti	0.00808	0.00428	0.00042	0.00234	0.00425	0.01	0.01	0.01	0.01	0.01	0.01	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000238	0.0000259	0.0002	0.000206	0.000212	0.00023	0.00024	0.00025	0.000262	0.000266	0.00027	5
Uranium D-U	0.000229	0.0000252	0.0002	0.000202	0.000204	0.00021	0.00023	0.00024	0.000254	0.000259	0.000264	5
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Zinc T-Zn	0.0114	0.017	0.0019	0.00232	0.00258	0.004	0.005	0.0101	0.0226	0.0393	0.068	15
Zinc D-Zn	0.00509	0.00696	0.0003	0.00037	0.000464	0.00195	0.0042	0.00525	0.00652	0.0135	0.029	15

ar River U/S of Bitter Creek confluer	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.79	0.456	7	7.04	7.08	7.71	7.96	8.16	8.21	8.22	8.23	9
Conductivity	176	25.9	130	145	158	160	175	184	202	216	232	12
Hardness CaCO3	81.1	12.1	62	62.6	64.2	75.8	80	87.5	95.9	98.3	101	12
Total Dissolved Solids	111	37.2	69	81.1	91	95.5	102	111	126	169	220	12
Total Suspended Solids	3.42	4.38	1	1	1	1	3	3	3	9.3	17	12
Turbidity	0.862	1.23	0.24	0.257	0.273	0.3	0.395	0.735	1.44	2.9	4.6	12
Alkalinity-Total CaCO3	68.3	7.39	54	56.2	58.4	62.7	70.1	74.3	75	75.5	76	12
Acidity (as CaCO3)	3.7	4.17	1.1	1.1	1.1	1.18	2.75	4.05	5.82	10.5	16	12
Chloride Cl	0.524	0.0537	0.5	0.5	0.5	0.5	0.5	0.5	0.572	0.596	0.62	5
Fluoride F	0.0638	0.00497	0.055	0.057	0.059	0.065	0.066	0.066	0.0666	0.0668	0.067	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	20.9	7.13	12	13.7	15.1	16.8	19	24.4	27.8	32.6	38.2	12
Nitrate Nitrogen N	0.233	0.0505	0.175	0.182	0.189	0.209	0.225	0.243	0.284	0.297	0.311	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	0.178	N/A	0.178	0.178	0.178	0.178	0.178	0.178	0.178	0.178	0.178	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Phosphorus (P)-Total	0.0123	0.0211	0.002	0.002	0.002	0.002	0.002	0.0054	0.0322	0.0411	0.05	5
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Dissolved Organic Carbon	0.52	0.0283	0.5	0.5	0.5	0.5	0.5	0.54	0.552	0.556	0.56	5
Aluminum T-Al	0.0269	0.0247	0.0065	0.00749	0.00867	0.0128	0.02	0.031	0.0436	0.0684	0.097	12
Aluminum D-Al	0.00323	0.0025	0.0005	0.0005	0.00054	0.000975	0.0027	0.00508	0.00665	0.00725	0.0078	12
Antimony T-Sb	0.000523	0.000197	0.0003	0.000355	0.000402	0.00042	0.0005	0.000513	0.000586	0.00082	0.0011	12
Antimony D-Sb	0.000403	0.000112	0.00018	0.000235	0.000281	0.000313	0.000445	0.0005	0.0005	0.0005	0.0005	12
Arsenic T-As	0.000496	0.0000498	0.00042	0.000436	0.000452	0.0005	0.0005	0.0005	0.000536	0.000548	0.00056	5
Arsenic D-As	0.000492	0.0000303	0.00044	0.000452	0.000464	0.0005	0.0005	0.0005	0.000512	0.000516	0.00052	5
Barium T-Ba	0.0996	0.0119	0.081	0.0816	0.0827	0.0928	0.102	0.109	0.11	0.115	0.12	12
Barium D-Ba	0.0951	0.0122	0.074	0.0746	0.0762	0.09	0.0975	0.102	0.11	0.111	0.112	12
Beryllium T-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Boron T-B	0.0834	0.0371	0.017	0.0336	0.0502	0.1	0.1	0.1	0.1	0.1	0.1	5
Boron D-B	0.0832	0.0376	0.016	0.0328	0.0496	0.1	0.1	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.0000633	0.0000586	0.000005	0.00000693	0.0000088	0.0000117	0.000065	0.0001	0.0001	0.000145	0.0002	12
Cadmium D-Cd	0.0000602	0.0000396	0.0000129	0.0000152	0.000017	0.000017	0.000075	0.0001	0.0001	0.0001	0.0001	12
Calcium T-Ca	29.9	5.05	22	22	22.4	26	30	33.9	34.6	35.7	37	12
Calcium D-Ca	27.4	4.74	21	21.6	22	23.5	27.5	29.9	33.6	34.3	35.2	12
Chromium T-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000164	0.000106	0.00006	0.00006	0.000062	0.0000875	0.0001	0.0003	0.0003	0.0003	0.0003	12
Cobalt D-Co	0.000148	0.000113	0.00004	0.000051	0.00006	0.00006	0.000095	0.0003	0.0003	0.0003	0.0003	12
Copper T-Cu	0.00109	0.000766	0.0004	0.0004	0.0004	0.000475	0.001	0.00115	0.00205	0.00246	0.0029	12
Copper D-Cu	0.000813	0.000625	0.0002	0.0002	0.00021	0.000338	0.0007	0.001	0.00181	0.00195	0.002	12
Iron T-Fe	0.0608	0.0433	0.005	0.0182	0.0291	0.0368	0.0535	0.0618	0.124	0.144	0.16	12
Iron D-Fe	0.0198	0.0114	0.01	0.01	0.01	0.01	0.0135	0.03	0.03	0.035	0.041	12
Lead T-Pb	0.000683	0.000866	0.00005	0.000075	0.0001	0.00034	0.0005	0.000575	0.00083	0.00202	0.0032	11
Lead D-Pb	0.000231	0.000214	0.00004	0.000055	0.00007	0.00008	0.000092	0.0005	0.0005	0.0005	0.0005	11
Magnesium T-Mg	2.81	0.501	1.9	1.96	2.03	2.54	2.96	3.11	3.37	3.4	3.4	12
Magnesium D-Mg	2.43	0.459	1.8	1.8	1.81	2.13	2.45	2.65	3.02	3.09	3.16	12
Manganese T-Mn	0.0127	0.0041	0.00675	0.00678	0.00717	0.0109	0.0118	0.0159	0.0178	0.0189	0.02	12
Manganese D-Mn	0.00936	0.00399	0.0034	0.00379	0.00424	0.00648	0.00963	0.0126	0.014	0.0145	0.015	12
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Molybdenum T-Mo	0.00116	0.000151	0.001	0.001	0.001	0.00108	0.0011	0.00123	0.0013	0.00139	0.0015	12
Molybdenum D-Mo	0.00103	0.000214	0.00043	0.000742	0.000997	0.001	0.001	0.00113	0.0012	0.00125	0.0013	12
Nickel T-Ni	0.00175	0.00171	0.00029	0.000406	0.0005	0.000875	0.001	0.0021	0.00363	0.00478	0.0061	12
Nickel D-Ni	0.000827	0.000753	0.0002	0.000255	0.0003	0.000338	0.000635	0.001	0.001	0.0019	0.003	12
Selenium T-Se	0.000374	0.0000257	0.000348	0.000349	0.00035	0.000353	0.00037	0.000391	0.000402	0.000405	0.000409	5
Selenium D-Se	0.000371	0.0000392	0.00032	0.000325	0.00033	0.000344	0.000372	0.000408	0.000409	0.000409	0.000409	5
Silicon T-Si	1.64	0.0797	1.56	1.56	1.57	1.58	1.63	1.67	1.72	1.74	1.76	5
Silicon D-Si	1.61	0.101	1.49	1.49	1.5	1.51	1.65	1.69	1.7	1.7	1.7	5
Silver T-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.54	0.555	0.48	0.678	0.856	1.26	1.55	2	2	2.14	2.3	12
Sodium D-Na	1.41	0.596	0.44	0.622	0.785	1.06	1.2	2	2	2.09	2.2	12
Strontium T-Sr	0.18	0.0261	0.14	0.14	0.142	0.162	0.184	0.195	0.211	0.213	0.216	12
Strontium D-Sr	0.173	0.0267	0.13	0.136	0.141	0.158	0.17	0.197	0.208	0.21	0.211	12
Thallium T-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000191	0.0000192	0.000157	0.000166	0.000174	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Uranium D-U	0.000189	0.0000246	0.000145	0.000156	0.000167	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Zinc T-Zn	0.0137	0.0154	0.003	0.00328	0.00365	0.005	0.00715	0.0178	0.0245	0.0394	0.057	12
Zinc D-Zn	0.00513	0.00779	0.0003	0.000355	0.0004	0.00085	0.00415	0.005	0.00518	0.0159	0.029	12

GoldSlide Creek	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.34	0.567	6.3	6.54	6.84	7.1	7.2	7.51	7.98	8.34	8.73	17
Conductivity	166	34.5	110	120	121	143	163	186	195	228	250	22
Hardness CaCO3	73.5	15.1	47	58	59	63	70	80.6	90	99	110	21
Total Dissolved Solids	117	27.3	74	79.3	84.1	110	120	120	128	168	200	22
Total Suspended Solids	3.84	5.36	0.5	0.975	1	1	1.5	3	15.4	16.1	17	20
Turbidity	0.196	0.116	0.1	0.1	0.1	0.11	0.18	0.2	0.3	0.315	0.6	20
Alkalinity-Total CaCO3	18.4	7.15	9	10.1	12	12.6	15.5	23.4	29.8	31	32	22
Acidity (as CaCO3)	4.55	5.64	1.6	1.71	1.9	2.73	3.1	4.08	6.29	6.97	29	22
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.0425	0.00981	0.036	0.0362	0.0363	0.0368	0.0385	0.0443	0.0519	0.0545	0.057	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	57.1	16.3	35	35	36	47	58	68	71.3	80	98	21
Nitrate Nitrogen N	0.0201	0.00342	0.0169	0.0172	0.0175	0.0183	0.0193	0.021	0.0233	0.0241	0.0249	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.00118	0.00035	0.001	0.001	0.001	0.001	0.001	0.00118	0.00149	0.0016	0.0017	4
Phosphorus (P)-Total	0.0147	0.0235	0.002	0.00209	0.00218	0.00245	0.00345	0.0157	0.0363	0.0431	0.05	4
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Dissolved Organic Carbon	0.515	0.03	0.5	0.5	0.5	0.5	0.5	0.515	0.542	0.551	0.56	4
Aluminum T-Al	0.0155	0.0176	0.001	0.001	0.00164	0.005	0.0094	0.017	0.0458	0.0528	0.06	19
Aluminum D-Al	0.00791	0.00971	0.00052	0.0006	0.00062	0.001	0.0062	0.0108	0.015	0.0232	0.0417	21
Antimony T-Sb	0.000296	0.000171	0.00005	0.00008	0.00009	0.00016	0.00029	0.00041	0.0005	0.0005	0.00064	21
Antimony D-Sb	0.000202	0.000197	0.00001	0.00005	0.00005	0.00006	0.0001	0.0002	0.0005	0.0005	0.00072	21
Arsenic T-As	0.0004	0.0002	0.0001	0.00016	0.00022	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	4
Arsenic D-As	0.0004	0.0002	0.0001	0.00016	0.00022	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	4
Barium T-Ba	0.0465	0.0694	0.02	0.02	0.0225	0.023	0.025	0.03	0.034	0.174	0.314	21
Barium D-Ba	0.0256	0.00576	0.017	0.019	0.021	0.0225	0.024	0.0273	0.0311	0.0365	0.0419	21
Beryllium T-Be	0.000775	0.00045	0.0001	0.000235	0.00037	0.000775	0.001	0.001	0.001	0.001	0.001	4
Beryllium D-Be	0.000775	0.00045	0.0001	0.000235	0.00037	0.000775	0.001	0.001	0.001	0.001	0.001	4
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	4
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	4
Boron T-B	0.0775	0.045	0.01	0.0235	0.037	0.0775	0.1	0.1	0.1	0.1	0.1	4
Boron D-B	0.0775	0.045	0.01	0.0235	0.037	0.0775	0.1	0.1	0.1	0.1	0.1	4
Cadmium T-Cd	0.00035	0.000497	0.00005	0.0000785	0.000098	0.0001	0.000189	0.000345	0.000706	0.001	0.00223	20
Cadmium D-Cd	0.000163	0.0001	0.00008	0.00008	0.000089	0.0001	0.000135	0.000195	0.000267	0.000338	0.00048	20
Calcium T-Ca	28.2	7.16	20	21	21.7	24	26	29.5	37	40.1	50.8	21
Calcium D-Ca	24.6	4.65	15	19	20	21.2	24	27	30.4	31.1	34.1	21
Chromium T-Cr	0.000775	0.00045	0.0001	0.000235	0.00037	0.000775	0.001	0.001	0.001	0.001	0.001	4
Chromium D-Cr	0.000775	0.00045	0.0001	0.000235	0.00037	0.000775	0.001	0.001	0.001	0.001	0.001	4
Cobalt T-Co	0.00107	0.00233	0.00005	0.00006	0.00006	0.00009	0.00021	0.00033	0.0033	0.00608	0.00914	21
Cobalt D-Co	0.000191	0.000163	0.00005	0.00006	0.00006	0.00008	0.0001	0.0003	0.00045	0.0005	0.0006	21
Copper T-Cu	0.012	0.0213	0.0005	0.0013	0.0014	0.0022	0.0035	0.0091	0.0296	0.0483	0.0904	21
Copper D-Cu	0.00272	0.00292	0.00005	0.0002	0.0005	0.00073	0.00183	0.0034	0.0047	0.00873	0.0118	21
Iron T-Fe	0.0293	0.0358	0.01	0.01	0.01	0.01	0.018	0.03	0.0472	0.088	0.16	19
Iron D-Fe	0.0168	0.0147	0.01	0.01	0.01	0.01	0.01	0.011	0.03	0.0314	0.07	21
Lead T-Pb	0.00177	0.00447	0.00005	0.00012	0.00013	0.00018	0.00033	0.00065	0.002	0.00743	0.02	21
Lead D-Pb	0.000168	0.000158	0.00002	0.000035	0.00005	0.00006	0.0001	0.00022	0.0005	0.0005	0.0005	21
Magnesium T-Mg	3.87	2.51	2.2	2.3	2.52	2.9	3.1	3.5	4.4	9.79	12.5	21
Magnesium D-Mg	2.6	0.572	0.87	2	2.2	2.37	2.6	2.94	3.25	3.37	3.52	21
Manganese T-Mn	0.00242	0.00314	0.00012	0.000137	0.000189	0.00035	0.000955	0.00291	0.00623	0.00715	0.012	18
Manganese D-Mn	0.0072	0.0178	0.0001	0.0001	0.0001	0.000183	0.000595	0.0037	0.0115	0.0471	0.0692	20
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	4
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	4
Molybdenum T-Mo	0.00782	0.00246	0.0051	0.00536	0.00615	0.0064	0.007	0.0086	0.00914	0.011	0.0166	21
Molybdenum D-Mo	0.00673	0.00128	0.00422	0.005	0.0052	0.0061	0.0069	0.00752	0.0086	0.0087	0.00894	21
Nickel T-Ni	0.00663	0.0155	0.00062	0.00081	0.00084	0.001	0.0016	0.00353	0.0188	0.02	0.07	21
Nickel D-Ni	0.0011	0.00066	0.0003	0.0003	0.0003	0.0008	0.001	0.0013	0.00194	0.002	0.0029	21
Selenium T-Se	0.00217	0.000106	0.00206	0.00207	0.00208	0.00211	0.00216	0.00221	0.00227	0.00229	0.00231	4
Selenium D-Se	0.00217	0.00012	0.002	0.00203	0.00206	0.00214	0.0022	0.00223	0.00226	0.00227	0.00228	4
Silicon T-Si	2.94	0.672	2.58	2.58	2.59	2.6	2.62	2.97	3.56	3.75	3.95	4
Silicon D-Si	2.87	0.597	2.54	2.54	2.54	2.55	2.58	2.9	3.42	3.59	3.76	4
Silver T-Ag	0.0000175	0.000005	0.00001	0.0000115	0.000013	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	4
Silver D-Ag	0.0000175	0.000005	0.00001	0.0000115	0.000013	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	4
Sodium T-Na	1.97	0.734	1.2	1.3	1.3	1.42	1.9	2.1	2.9	2.99	4.35	21
Sodium D-Na	1.53	0.276	0.98	1.1	1.3	1.3	1.5	1.63	2	2	2	21
Strontium T-Sr	0.19	0.0547	0.11	0.11	0.11	0.15	0.185	0.234	0.27	0.27	0.28	21
Strontium D-Sr	0.177	0.0474	0.1	0.11	0.13	0.133	0.173	0.21	0.25	0.26	0.27	21
Thallium T-Tl	0.000153	0.000095	0.00001	0.0000385	0.000067	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	4
Thallium D-Tl	0.000153	0.000095	0.00001	0.0000385	0.000067	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	4
Tin T-Sn	0.0004	0.0002	0.0001	0.00016	0.00022	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	4
Tin D-Sn	0.000405	0.00019	0.00012	0.000177	0.000234	0.000405	0.0005	0.0005	0.0005	0.0005	0.0005	4
Titanium T-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Titanium D-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.000153	0.000095	0.00001	0.0000385	0.000067	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	4
Uranium D-U	0.000155	0.0000895	0.000021	0.0000479	0.0000747	0.000155	0.0002	0.0002	0.0002	0.0002	0.0002	4
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	4
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	4
Zinc T-Zn	0.0314	0.0392	0.0085	0.0085	0.00967	0.0115	0.0215	0.0283	0.0437	0.107	0.173	20
Zinc D-Zn	0.0114	0.00685	0.00109	0.00176	0.00412	0.0073	0.011	0.0145	0.0186	0.0242	0.028	20

Otter Creek	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.31	0.201	8.17	8.18	8.18	8.2	8.22	8.38	8.48	8.51	8.54	3
Conductivity	673	47.9	621	627	634	653	684	700	709	712	715	3
Hardness CaCO3	388	40.7	341	348	355	376	411	412	412	412	412	3
Total Dissolved Solids	471	42.5	424	430	435	453	481	494	502	504	507	3
Total Suspended Solids	3.5	0.866	3	3	3	3	3	3.75	4.2	4.35	4.5	3
Turbidity	1.11	0.364	0.9	0.9	0.9	0.9	0.9	1.22	1.4	1.47	1.53	3
Alkalinity-Total CaCO3	132	3.79	128	129	129	131	134	135	135	135	135	3
Acidity (as CaCO3)	1.07	0.115	1	1	1	1	1	1.1	1.16	1.18	1.2	3
Chloride Cl	1.83	1.15	0.5	0.7	0.9	1.5	2.5	2.5	2.5	2.5	2.5	3
Fluoride F	0.148	0.0231	0.124	0.127	0.129	0.137	0.15	0.16	0.166	0.168	0.17	3
Bromide Br	0.183	0.115	0.05	0.07	0.09	0.15	0.25	0.25	0.25	0.25	0.25	3
Sulphate SO4	240	27.8	210	214	217	228	245	255	261	263	265	3
Nitrate Nitrogen N	0.0443	0.00904	0.034	0.0354	0.0368	0.041	0.048	0.0495	0.0503	0.0506	0.0509	3
Nitrite Nitrogen N	0.00367	0.00231	0.001	0.0014	0.0018	0.003	0.005	0.005	0.005	0.005	0.005	3
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	3
Ortho-Phosphate	0.00157	0.000513	0.001	0.00107	0.00114	0.00135	0.0017	0.00185	0.00194	0.00197	0.002	3
Phosphorus (P)-Total	0.0039	0.00187	0.0022	0.00234	0.00248	0.0029	0.0036	0.00475	0.00544	0.00567	0.0059	3
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Aluminum T-Al	0.0237	0.00864	0.0143	0.0154	0.0165	0.0199	0.0255	0.0284	0.0301	0.0307	0.0313	3
Aluminum D-Al	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	3
Antimony T-Sb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Antimony D-Sb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Arsenic T-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Arsenic D-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Barium T-Ba	0.0753	0.00153	0.074	0.0741	0.0742	0.0745	0.075	0.076	0.0766	0.0768	0.077	3
Barium D-Ba	0.0723	0.00306	0.069	0.0694	0.0698	0.071	0.073	0.074	0.0746	0.0748	0.075	3
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	3
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	3
Boron T-B	0.1	1.7E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3
Boron D-B	0.1	1.7E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3
Cadmium T-Cd	0.000167	0.0000644	0.000122	0.000124	0.000125	0.000131	0.000139	0.00019	0.000221	0.000231	0.000241	3
Cadmium D-Cd	0.000133	0.0000694	0.000079	0.0000819	0.0000848	0.0000935	0.000108	0.00016	0.00019	0.000201	0.000211	3
Calcium T-Ca	117	8.54	108	109	110	113	118	122	124	124	125	3
Calcium D-Ca	118	11.5	105	107	109	115	125	125	125	125	125	3
Chromium T-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Cobalt T-Co	0.00076	0.000279	0.00053	0.000545	0.00056	0.000605	0.00068	0.000875	0.000992	0.00103	0.00107	3
Cobalt D-Co	0.000683	0.000283	0.00051	0.000512	0.000514	0.00052	0.00053	0.00077	0.000914	0.000962	0.00101	3
Copper T-Cu	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Copper D-Cu	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Iron T-Fe	0.256	0.099	0.147	0.161	0.174	0.215	0.282	0.311	0.328	0.334	0.34	3
Iron D-Fe	0.056	0.045	0.03	0.03	0.03	0.03	0.03	0.069	0.0924	0.1	0.108	3
Lead T-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Lead D-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Magnesium T-Mg	22.3	2.12	20	20.3	20.5	21.3	22.6	23.4	23.9	24	24.2	3
Magnesium D-Mg	22.4	2.66	19.3	19.8	20.2	21.6	23.9	23.9	23.9	23.9	23.9	3
Manganese T-Mn	0.0612	0.0231	0.0414	0.0428	0.0442	0.0485	0.0556	0.0711	0.0803	0.0834	0.0865	3
Manganese D-Mn	0.0513	0.0245	0.0341	0.0347	0.0354	0.0373	0.0404	0.0599	0.0716	0.0755	0.0794	3
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	3
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	3
Molybdenum T-Mo	0.00333	0.000208	0.0031	0.00313	0.00316	0.00325	0.0034	0.00345	0.00348	0.00349	0.0035	3
Molybdenum D-Mo	0.00327	0.000208	0.0031	0.00311	0.00312	0.00315	0.0032	0.00335	0.00344	0.00347	0.0035	3
Nickel T-Ni	0.0148	0.00391	0.0122	0.0123	0.0123	0.0126	0.0129	0.0161	0.018	0.0187	0.0193	3
Nickel D-Ni	0.0146	0.00409	0.0117	0.0118	0.0119	0.0123	0.0129	0.0161	0.018	0.0187	0.0193	3
Selenium T-Se	0.00806	0.00306	0.00625	0.00626	0.00627	0.0063	0.00634	0.00897	0.0105	0.0111	0.0116	3
Selenium D-Se	0.00844	0.0031	0.00634	0.0064	0.00647	0.00666	0.00698	0.00949	0.011	0.0115	0.012	3
Silicon T-Si	2.72	0.155	2.56	2.58	2.59	2.64	2.72	2.8	2.84	2.86	2.87	3
Silicon D-Si	2.64	0.203	2.41	2.44	2.48	2.58	2.74	2.76	2.77	2.78	2.78	3
Silver T-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	3
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	3
Sodium T-Na	2.5	0.173	2.4	2.4	2.4	2.4	2.4	2.55	2.64	2.67	2.7	3
Sodium D-Na	2.33	0.153	2.2	2.21	2.22	2.25	2.3	2.4	2.46	2.48	2.5	3
Strontium T-Sr	0.636	0.0225	0.611	0.614	0.618	0.628	0.644	0.649	0.652	0.653	0.654	3
Strontium D-Sr	0.609	0.0328	0.579	0.582	0.584	0.592	0.604	0.624	0.636	0.64	0.644	3
Thallium T-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	3
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	3
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Titanium T-Ti	0.0143	0.00751	0.01	0.01	0.01	0.01	0.01	0.0165	0.0204	0.0217	0.023	3
Titanium D-Ti	0.0137	0.00635	0.01	0.01	0.01	0.01	0.01	0.0155	0.0188	0.0199	0.021	3
Uranium T-U	0.00143	0.000135	0.00129	0.00131	0.00132	0.00137	0.00144	0.0015	0.00154	0.00155	0.00156	3
Uranium D-U	0.00135	0.000165	0.00116	0.00119	0.00122	0.0013	0.00144	0.00145	0.00145	0.00145	0.00145	3
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Zinc T-Zn	0.0262	0.0101	0.019	0.0193	0.0196	0.0204	0.0218	0.0298	0.0346	0.0362	0.0378	3
Zinc D-Zn	0.0203	0.0113	0.0121	0.0124	0.0128	0.0138	0.0155	0.0244	0.0297	0.0314	0.0332	3

Rio Blanco Creek	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.75	0.464	6.8	6.93	7.15	7.53	7.75	8.16	8.22	8.28	8.35	14
Conductivity	389	77.2	270	290	300	340	379	430	500	526	540	21
Hardness CaCO3	193	62.8	120	130	139	150	187	220	230	230	416	21
Total Dissolved Solids	281	66.6	190	200	200	238	260	350	360	379	420	21
Total Suspended Solids	45.9	150	1	1	1	2	5	20	31	110	690	21
Turbidity	8.75	16.2	0.14	0.17	0.25	0.6	1.3	5	26	45	61	21
Alkalinity-Total CaCO3	73.4	23.5	37	49	51	59	66	96	110	110	124	21
Acidity (as CaCO3)	4.36	4.37	1	1	1.4	2.3	3.5	4.4	6	6.6	22	21
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Fluoride F	0.096	0.00624	0.091	0.0913	0.0916	0.0925	0.094	0.0985	0.101	0.102	0.103	3
Bromide Br	0.05	8.5E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	3
Sulphate SO4	132	31.2	71	82	100	110	132	160	170	180	180	21
Nitrate Nitrogen N	0.0102	0.0053	0.005	0.00551	0.00602	0.00755	0.0101	0.0129	0.0145	0.0151	0.0156	3
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	3
Ortho-Phosphate	0.00187	0.000981	0.0013	0.0013	0.0013	0.0013	0.0013	0.00215	0.00266	0.00283	0.003	3
Phosphorus (P)-Total	0.00347	0.00131	0.002	0.00219	0.00238	0.00295	0.0039	0.0042	0.00438	0.00444	0.0045	3
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Aluminum T-Al	0.539	1.43	0.0005	0.0042	0.012	0.017	0.0268	0.145	1.1	2.01	6.37	21
Aluminum D-Al	0.00667	0.011	0.0003	0.0005	0.0005	0.0009	0.002	0.0056	0.0145	0.0364	0.0392	21
Antimony T-Sb	0.000669	0.000404	0.00032	0.00035	0.00036	0.00047	0.00053	0.00073	0.00091	0.0011	0.0022	21
Antimony D-Sb	0.000375	0.000163	0.0001	0.00019	0.00019	0.00025	0.00034	0.0005	0.00056	0.00061	0.00069	21
Arsenic T-As	0.00068	0.00003	0.00065	0.000653	0.000656	0.000665	0.00068	0.000695	0.000704	0.000707	0.00071	3
Arsenic D-As	0.00063	0.00004	0.00059	0.000594	0.000598	0.00061	0.00063	0.00065	0.000662	0.000666	0.00067	3
Barium T-Ba	0.044	0.021	0.02	0.022	0.022	0.035	0.04	0.0517	0.0608	0.069	0.116	21
Barium D-Ba	0.0337	0.0108	0.0199	0.02	0.0202	0.0229	0.035	0.04	0.047	0.049	0.0545	21
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	3
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	3
Boron T-B	0.1	1.7E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3
Boron D-B	0.1	1.7E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3
Cadmium T-Cd	0.000298	0.000638	0.00004	0.00006	0.00008	0.0001	0.0001	0.00014	0.00028	0.00104	0.00293	21
Cadmium D-Cd	0.000149	0.00014	0.00007	0.00008	0.00008	0.0001	0.0001	0.000124	0.000228	0.00029	0.00071	21
Calcium T-Ca	73.5	25.2	40	48.3	50	61	66.7	80	98	124	145	21
Calcium D-Ca	62.8	22.4	40	44	44.1	46.6	60.6	72	75	75.1	145	21
Chromium T-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Cobalt T-Co	0.00105	0.00226	0.00007	0.000089	0.000108	0.000145	0.0003	0.000613	0.00164	0.00409	0.00993	20
Cobalt D-Co	0.000217	0.000224	0.00003	0.000049	0.000059	0.0000775	0.00013	0.0003	0.000446	0.000525	0.00099	20
Copper T-Cu	0.00738	0.0175	0.0003	0.0004	0.0004	0.001	0.0018	0.0046	0.011	0.0204	0.0811	21
Copper D-Cu	0.000745	0.000496	0.00005	0.00005	0.0001	0.0003	0.00087	0.00106	0.0013	0.00154	0.0016	21
Iron T-Fe	0.88	1.95	0.01	0.0219	0.03	0.038	0.08	0.36	2.6	4.33	8.01	21
Iron D-Fe	0.0225	0.0294	0.005	0.01	0.01	0.01	0.01	0.024	0.03	0.094	0.12	21
Lead T-Pb	0.00142	0.00239	0.00005	0.0001	0.00014	0.00024	0.0005	0.0012	0.00236	0.0074	0.00924	21
Lead D-Pb	0.000142	0.000152	0.000025	0.00004	0.00005	0.00007	0.0001	0.00012	0.0005	0.0005	0.0005	21
Magnesium T-Mg	9.57	3.74	4.2	5.64	5.7	6.9	7.92	13.3	14	15	17.5	21
Magnesium D-Mg	7.32	2.45	4.1	4.2	4.8	5.5	6.83	9.67	10	10	13	21
Manganese T-Mn	0.0845	0.146	0.0007	0.00086	0.00089	0.0023	0.0123	0.11	0.21	0.358	0.583	21
Manganese D-Mn	0.0341	0.0469	0.00005	0.00016	0.00017	0.0004	0.00338	0.085	0.096	0.113	0.13	21
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	3
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	3
Molybdenum T-Mo	0.00391	0.00165	0.00194	0.0022	0.00228	0.0028	0.0033	0.0051	0.0059	0.00645	0.00826	21
Molybdenum D-Mo	0.00312	0.00107	0.00186	0.00208	0.0021	0.00245	0.0029	0.0038	0.0043	0.0045	0.00645	21
Nickel T-Ni	0.00765	0.0137	0.0008	0.00133	0.0015	0.0015	0.0028	0.0069	0.01	0.0352	0.0581	21
Nickel D-Ni	0.00295	0.00337	0.0003	0.0003	0.0005	0.00055	0.0014	0.00332	0.0075	0.011	0.0115	21
Selenium T-Se	0.00442	0.00031	0.00418	0.00419	0.00421	0.00425	0.00431	0.00454	0.00468	0.00472	0.00477	3
Selenium D-Se	0.00451	0.000136	0.0044	0.00441	0.00441	0.00443	0.00446	0.00456	0.00462	0.00464	0.00466	3
Silicon T-Si	3.68	0.117	3.58	3.59	3.6	3.62	3.66	3.74	3.78	3.8	3.81	3
Silicon D-Si	3.63	0.121	3.56	3.56	3.56	3.56	3.56	3.67	3.73	3.75	3.77	3
Silver T-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	3
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	3
Sodium T-Na	3.6	2.24	1.6	1.7	2.1	2.45	2.73	4.12	5.2	5.5	12	21
Sodium D-Na	2.93	1.83	1.6	1.6	1.81	1.93	2.4	3.2	3.9	5	10	21
Strontium T-Sr	0.367	0.206	0.16	0.18	0.208	0.23	0.302	0.49	0.53	0.588	1.06	21
Strontium D-Sr	0.329	0.183	0.16	0.16	0.18	0.2	0.25	0.434	0.47	0.48	0.966	21
Thallium T-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	3
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	3
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Titanium T-Ti	0.0117	0.00289	0.01	0.01	0.01	0.01	0.01	0.0125	0.014	0.0145	0.015	3
Titanium D-Ti	0.0103	0.000577	0.01	0.01	0.01	0.01	0.01	0.0105	0.0108	0.0109	0.011	3
Uranium T-U	0.000573	0.0000651	0.00051	0.000516	0.000522	0.00054	0.00057	0.000605	0.000626	0.000633	0.00064	3
Uranium D-U	0.000543	0.0000702	0.00047	0.000478	0.000486	0.00051	0.00055	0.00058	0.000598	0.000604	0.00061	3
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Zinc T-Zn	0.03	0.0378	0.005	0.005	0.0072	0.01	0.018	0.03	0.0695	0.084	0.166	21
Zinc D-Zn	0.00627	0.0049	0.0004	0.00067	0.001	0.0018	0.005	0.0093	0.014	0.0149	0.015	21

Roosevelt Creek	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.99	0.402	7.2	7.38	7.55	7.78	8.12	8.29	8.34	8.37	8.4	8
Conductivity	221	16.2	200	200	200	209	222	236	238	241	244	11
Hardness CaCO3	111	13.2	92	93	94	98.5	114	122	124	127	129	11
Total Dissolved Solids	131	9.65	118	119	120	124	130	135	142	146	149	11
Total Suspended Solids	2.55	1.51	1	1	1	1	3	3	3	4.5	6	11
Turbidity	0.454	0.189	0.16	0.225	0.29	0.35	0.41	0.545	0.7	0.76	0.82	11
Alkalinity-Total CaCO3	86.4	4.7	76	79.1	82.1	84.9	87	89.1	90	92	94	11
Acidity (as CaCO3)	4.15	6.62	1	1	1	1.05	1.5	2.75	8.4	15.7	23	11
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0242	0.00217	0.021	0.0216	0.0222	0.024	0.024	0.025	0.0262	0.0266	0.027	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	26.8	5.62	18	19.5	21	21.4	28	31.2	33.3	33.5	33.6	11
Nitrate Nitrogen N	0.422	0.107	0.332	0.339	0.346	0.367	0.383	0.425	0.532	0.567	0.603	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	0.317	N/A	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.0011	0.000173	0.001	0.001	0.001	0.001	0.001	0.0011	0.00128	0.00134	0.0014	5
Phosphorus (P)-Total	0.0124	0.021	0.002	0.002	0.002	0.002	0.0036	0.0044	0.0318	0.0409	0.05	5
Total Organic Carbon	0.554	0.121	0.5	0.5	0.5	0.5	0.5	0.5	0.662	0.716	0.77	5
Dissolved Organic Carbon	0.572	0.145	0.5	0.5	0.5	0.5	0.5	0.53	0.71	0.77	0.83	5
Aluminum T-Al	0.0222	0.02	0.0005	0.00075	0.001	0.0125	0.0147	0.031	0.043	0.055	0.067	11
Aluminum D-Al	0.00275	0.00211	0.0005	0.0005	0.0005	0.001	0.0016	0.005	0.005	0.005	0.005	11
Antimony T-Sb	0.000439	0.000119	0.00024	0.000245	0.00025	0.00039	0.0005	0.0005	0.00053	0.00058	0.00063	11
Antimony D-Sb	0.00031	0.000159	0.0001	0.00013	0.00016	0.000185	0.00025	0.0005	0.0005	0.0005	0.0005	11
Arsenic T-As	0.000444	0.000125	0.00022	0.000276	0.000332	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Arsenic D-As	0.000442	0.00013	0.00021	0.000268	0.000326	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Barium T-Ba	0.0949	0.015	0.076	0.0805	0.085	0.0875	0.0903	0.097	0.11	0.121	0.132	11
Barium D-Ba	0.0905	0.009	0.075	0.0785	0.082	0.086	0.09	0.095	0.096	0.103	0.11	11
Beryllium T-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00082	0.000402	0.0001	0.00028	0.00046	0.001	0.001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	5
Boron T-B	0.0852	0.0331	0.026	0.0408	0.0556	0.1	0.1	0.1	0.1	0.1	0.1	5
Boron D-B	0.0846	0.0344	0.023	0.0384	0.0538	0.1	0.1	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000081	0.0000813	0.0000053	0.00000575	0.0000062	0.0000092	0.0001	0.0001	0.0002	0.00022	0.00024	11
Cadmium D-Cd	0.0000575	0.0000412	0.000017	0.000017	0.000017	0.000018	0.00004	0.0001	0.0001	0.0001	0.0001	11
Calcium T-Ca	36.4	3.17	31.3	32.2	33	34.7	35.8	38.8	40	41	42	11
Calcium D-Ca	33.1	4.2	28	28	28	29.1	34.6	36.6	38	38.2	38.3	11
Chromium T-Cr	0.000826	0.000389	0.00013	0.000304	0.000478	0.001	0.001	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.000832	0.000376	0.00016	0.000328	0.000496	0.001	0.001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000315	0.000294	0.00006	0.0000645	0.000069	0.0000925	0.0003	0.0003	0.000683	0.000832	0.00098	10
Cobalt D-Co	0.000177	0.000113	0.00006	0.00006	0.00006	0.0000675	0.00015	0.0003	0.0003	0.0003	0.0003	10
Copper T-Cu	0.00125	0.00178	0.0001	0.00015	0.0002	0.000345	0.001	0.001	0.0019	0.00415	0.0064	11
Copper D-Cu	0.000526	0.000396	0.00005	0.000075	0.0001	0.0002	0.00038	0.001	0.001	0.001	0.001	11
Iron T-Fe	0.0418	0.0467	0.01	0.01	0.01	0.013	0.03	0.04	0.074	0.122	0.17	11
Iron D-Fe	0.0272	0.029	0.01	0.01	0.01	0.01	0.019	0.03	0.03	0.07	0.11	11
Lead T-Pb	0.000344	0.000348	0.00005	0.00005	0.00005	0.000085	0.00016	0.0005	0.0005	0.00085	0.0012	11
Lead D-Pb	0.000241	0.000214	0.00004	0.000045	0.00005	0.000065	0.0001	0.0005	0.0005	0.0005	0.0005	11
Magnesium T-Mg	7.11	1.24	5.46	5.52	5.57	6.55	6.9	7.75	8	8.95	9.9	11
Magnesium D-Mg	6.22	0.664	5.4	5.43	5.45	5.58	6.3	6.79	6.93	7.07	7.2	11
Manganese T-Mn	0.00177	0.00112	0.0006	0.000665	0.00073	0.00106	0.0013	0.00219	0.00354	0.00377	0.004	11
Manganese D-Mn	0.000252	0.000147	0.00005	0.000075	0.0001	0.00014	0.00022	0.00034	0.0004	0.000465	0.00053	11
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	5
Molybdenum T-Mo	0.00122	0.000208	0.00091	0.000955	0.001	0.00105	0.0012	0.0014	0.0015	0.0015	0.0015	11
Molybdenum D-Mo	0.00098	0.000302	0.0002	0.000465	0.00073	0.000955	0.001	0.00117	0.0012	0.00125	0.0013	11
Nickel T-Ni	0.00115	0.000778	0.0005	0.0005	0.0005	0.001	0.001	0.00105	0.0011	0.00225	0.0034	11
Nickel D-Ni	0.000664	0.000341	0.0001	0.0002	0.0003	0.00045	0.0005	0.001	0.001	0.001	0.001	11
Selenium T-Se	0.00103	0.000172	0.000801	0.000819	0.000837	0.000892	0.00112	0.00116	0.00117	0.00118	0.00118	5
Selenium D-Se	0.00108	0.000154	0.000865	0.0009	0.000935	0.00104	0.00107	0.00116	0.00123	0.00126	0.00128	5
Silicon T-Si	2.12	0.13	1.95	1.97	1.99	2.04	2.11	2.22	2.25	2.26	2.27	5
Silicon D-Si	2.12	0.134	1.97	1.97	1.97	1.98	2.15	2.23	2.24	2.25	2.25	5
Silver T-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000018	0.00000447	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.72	0.367	1.1	1.24	1.38	1.45	1.7	2	2	2.15	2.3	11
Sodium D-Na	1.51	0.412	1	1.05	1.1	1.15	1.4	2	2	2	2	11
Strontium T-Sr	0.212	0.0172	0.172	0.181	0.189	0.21	0.217	0.22	0.23	0.23	0.23	11
Strontium D-Sr	0.201	0.0197	0.17	0.175	0.18	0.19	0.2	0.217	0.221	0.229	0.236	11
Thallium T-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000162	0.000085	0.00001	0.000048	0.000086	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000182	0.0000398	0.000111	0.000129	0.000147	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Uranium D-U	0.00018	0.0000438	0.000102	0.000122	0.000141	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	5
Vanadium T-V	0.00051	0.0000224	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00053	0.00054	0.00055	5
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Zinc T-Zn	0.00789	0.00669	0.001	0.0014	0.0018	0.004	0.005	0.0115	0.015	0.019	0.023	11
Zinc D-Zn	0.00413	0.00258	0.00089	0.000945	0.001	0.0019	0.0044	0.005	0.0072	0.00815	0.0091	11

GSC09	Winter Low Flow											
	Mean	Std. Dev.	Minimum	5th Perc	10th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Conductivity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Hardness CaCO3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Dissolved Solids	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Suspended Solids	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Turbidity	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alkalinity-Total CaCO3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Acidity (as CaCO3)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chloride Cl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Fluoride F	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bromide Br	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sulphate SO4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrate Nitrogen N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nitrite Nitrogen N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ortho-Phosphate	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Phosphorus (P)-Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Organic Carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dissolved Organic Carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aluminum T-Al	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Aluminum D-Al	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Antimony T-Sb	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Antimony D-Sb	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic T-As	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Arsenic D-As	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium T-Ba	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Barium D-Ba	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium T-Be	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Beryllium D-Be	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bismuth T-Bi	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bismuth D-Bi	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boron T-B	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Boron D-B	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium T-Cd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cadmium D-Cd	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Calcium T-Ca	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Calcium D-Ca	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium T-Cr	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chromium D-Cr	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt T-Co	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Cobalt D-Co	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper T-Cu	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Copper D-Cu	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron T-Fe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Iron D-Fe	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead T-Pb	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lead D-Pb	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Magnesium T-Mg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Magnesium D-Mg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese T-Mn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Manganese D-Mn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury T-Hg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mercury D-Hg	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molybdenum T-Mo	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Molybdenum D-Mo	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel T-Ni	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Nickel D-Ni	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium T-Se	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Selenium D-Se	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silicon T-Si	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silicon D-Si	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silver T-Ag	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Silver D-Ag	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sodium T-Na	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sodium D-Na	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Strontium T-Sr	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Strontium D-Sr	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thallium T-Tl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Thallium D-Tl	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tin T-Sn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tin D-Sn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Titanium T-Ti	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Titanium D-Ti	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uranium T-U	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Uranium D-U	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium T-V	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Vanadium D-V	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc T-Zn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Zinc D-Zn	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

American Creek	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.85	0.337	7.49	7.51	7.53	7.58	7.71	8.19	8.23	8.24	8.25	7
Conductivity	100	23.2	79.7	81.3	82.9	86.7	92.6	105	125	137	148	7
Hardness CaCO3	47.1	9.65	37.2	38	38.9	41.4	44.4	49.9	58.1	61.9	65.8	7
Total Dissolved Solids	67.1	11.1	56	56.3	56.6	58.5	68	70.5	78.4	83.2	88	7
Total Suspended Solids	15	5.42	8.4	9.69	11	13.3	14.4	14.9	19.5	22.8	26.2	7
Turbidity	9.57	6.16	0.43	1.49	2.55	6.34	9.69	12.5	15.5	17.4	19.3	7
Alkalinity-Total CaCO3	38.2	8.47	29.8	30.6	31.5	33.3	35.9	40	46.8	51.1	55.4	7
Acidity (as CaCO3)	1.47	0.315	1	1.06	1.12	1.25	1.6	1.65	1.78	1.84	1.9	7
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	7
Fluoride F	0.0426	0.0113	0.035	0.035	0.035	0.036	0.039	0.0425	0.0532	0.0601	0.067	7
Bromide Br	0.05	7.49E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	7
Sulphate SO4	11.7	2.26	9.86	9.88	9.89	10.3	10.9	12.1	14.1	15.2	16.3	7
Nitrate Nitrogen N	0.101	0.106	0.032	0.033	0.034	0.0432	0.0531	0.101	0.21	0.27	0.33	7
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	7
Ortho-Phosphate	0.00104	0.0000787	0.001	0.001	0.001	0.001	0.001	0.00105	0.00114	0.00117	0.0012	7
Phosphorus (P)-Total	0.0194	0.0109	0.0024	0.00543	0.00846	0.0153	0.0193	0.0229	0.0303	0.034	0.0377	7
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	7
Dissolved Organic Carbon	0.584	0.1	0.5	0.5	0.5	0.51	0.57	0.61	0.696	0.738	0.78	7
Aluminum T-Al	0.652	0.496	0.035	0.0869	0.139	0.332	0.52	1	1.29	1.31	1.34	7
Aluminum D-Al	0.0266	0.0105	0.0068	0.0102	0.0135	0.0238	0.0299	0.0329	0.0346	0.0354	0.0363	7
Antimony T-Sb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Antimony D-Sb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Arsenic T-As	0.000774	0.000141	0.00064	0.000652	0.000664	0.000695	0.00072	0.00082	0.000958	0.000994	0.00103	7
Arsenic D-As	0.000531	0.0000471	0.0005	0.0005	0.0005	0.0005	0.0005	0.00055	0.00059	0.000605	0.00062	7
Barium T-Ba	0.0969	0.00857	0.088	0.0883	0.0886	0.09	0.093	0.104	0.107	0.108	0.109	7
Barium D-Ba	0.0769	0.0126	0.066	0.0666	0.0672	0.0695	0.073	0.0785	0.0904	0.0967	0.103	7
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Bismuth T-Bi	0.00005	7.32E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	7
Bismuth D-Bi	0.00005	7.32E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	7
Boron T-B	0.1	1.5E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7
Boron D-B	0.1	1.5E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7
Cadmium T-Cd	0.0000156	0.00000764	0.000005	0.00000677	0.00000854	0.0000115	0.0000135	0.0000206	0.0000254	0.0000258	0.0000262	7
Cadmium D-Cd	0.000017	3.66E-21	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	7
Calcium T-Ca	16.9	3.29	13.7	13.9	14.2	15	15.6	17.8	20.5	22	23.4	7
Calcium D-Ca	17	3.51	13.4	13.7	14.1	15	16	18.1	21	22.4	23.8	7
Chromium T-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Cobalt T-Co	0.000363	0.000108	0.0003	0.0003	0.0003	0.0003	0.0003	0.000405	0.000518	0.000524	0.00053	7
Cobalt D-Co	0.0003	N/A	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	7
Copper T-Cu	0.0014	0.000651	0.001	0.001	0.001	0.001	0.001	0.0017	0.00234	0.00237	0.0024	7
Copper D-Cu	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Iron T-Fe	0.652	0.47	0.048	0.116	0.183	0.368	0.51	1	1.26	1.27	1.27	7
Iron D-Fe	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	7
Lead T-Pb	0.000733	0.000332	0.0005	0.0005	0.0005	0.000515	0.00055	0.00087	0.00118	0.00125	0.00131	7
Lead D-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Magnesium T-Mg	1.37	0.134	1.24	1.24	1.24	1.28	1.32	1.46	1.55	1.56	1.56	7
Magnesium D-Mg	1.12	0.219	0.9	0.915	0.93	0.985	1.06	1.17	1.36	1.45	1.55	7
Manganese T-Mn	0.0279	0.0188	0.00287	0.00606	0.00925	0.0176	0.0219	0.0413	0.0524	0.0526	0.0527	7
Manganese D-Mn	0.00385	0.00177	0.00099	0.00143	0.00186	0.00301	0.00375	0.00491	0.00558	0.00598	0.00637	7
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	7
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	7
Molybdenum T-Mo	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Molybdenum D-Mo	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Nickel T-Ni	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Nickel D-Ni	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Selenium T-Se	0.000208	0.0000551	0.000151	0.000152	0.000153	0.000172	0.000193	0.000227	0.000267	0.000289	0.000311	7
Selenium D-Se	0.000191	0.0000634	0.000133	0.000138	0.000143	0.000159	0.00017	0.000198	0.000261	0.000291	0.000321	7
Silicon T-Si	2.13	0.667	1.52	1.52	1.53	1.61	1.83	2.61	3.01	3.06	3.12	7
Silicon D-Si	1	0.224	0.769	0.787	0.804	0.873	0.921	1.07	1.26	1.34	1.43	7
Silver T-Ag	0.0000203	0.000000756	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0000208	0.0000214	0.000022	7
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	7
Sodium T-Na	2	N/A	2	2	2	2	2	2	2	2	2	7
Sodium D-Na	2	N/A	2	2	2	2	2	2	2	2	2	7
Strontium T-Sr	0.104	0.0184	0.088	0.0884	0.0887	0.0918	0.0965	0.111	0.124	0.132	0.14	7
Strontium D-Sr	0.102	0.0189	0.0847	0.0854	0.0861	0.0893	0.0957	0.109	0.124	0.131	0.138	7
Thallium T-Tl	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Thallium D-Tl	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Titanium T-Ti	0.0236	0.0131	0.01	0.0106	0.0112	0.014	0.019	0.032	0.0404	0.0422	0.044	7
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	7
Uranium T-U	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Uranium D-U	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Vanadium T-V	0.00192	0.00127	0.0005	0.000569	0.000638	0.00104	0.00143	0.00292	0.00358	0.00358	0.00358	7
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Zinc T-Zn	0.00517	0.000373	0.005	0.005	0.005	0.005	0.005	0.0051	0.00552	0.00576	0.006	7
Zinc D-Zn	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	7

Lower Bitter Creek (BC02)	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.99	0.447	7.05	7.37	7.5	7.75	7.95	8.44	8.49	8.5	8.5	15
Conductivity	174	74.1	90.5	97.6	99.8	120	154	204	264	300	366	20
Hardness CaCO3	78.8	36.8	35	35	42.4	52.5	69	97.5	147	150	153	20
Total Dissolved Solids	114	49.1	50	55.7	68.6	76.8	99.5	149	171	187	236	20
Total Suspended Solids	368	353	9.5	18.5	19.9	94.5	313	573	901	1010	1200	20
Turbidity	263	250	4.84	10.7	20	84.7	191	406	567	646	910	20
Alkalinity-Total CaCO3	63.6	21.4	38	40.9	42.8	47.3	61.1	68.8	93.8	110	111	20
Acidity (as CaCO3)	1.65	0.877	1	1	1	1	1.2	2.4	3.02	3.24	3.4	17
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0286	0.016	0.02	0.02	0.02	0.02	0.021	0.0283	0.0443	0.0552	0.066	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	28.2	20	7.6	10.8	11	12	22.2	36.5	47.4	60	87.8	20
Nitrate Nitrogen N	0.0804	0.108	0.0166	0.0186	0.0206	0.0291	0.035	0.0684	0.178	0.259	0.339	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.25	N/A	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1
Ammonia Nitrogen N	0.00791	0.00379	0.005	0.005	0.005	0.005	0.0061	0.00995	0.0128	0.0139	0.0149	8
Ortho-Phosphate	0.00135	0.000316	0.001	0.001	0.001	0.001	0.0014	0.00163	0.0017	0.0017	0.0017	8
Phosphorus (P)-Total	0.425	0.328	0.0114	0.0575	0.104	0.223	0.33	0.623	0.861	0.907	0.954	8
Total Organic Carbon	0.905	0.797	0.5	0.5	0.5	0.5	0.5	0.795	1.85	2.27	2.68	8
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Aluminum T-Al	6.01	5.46	0.31	0.411	0.51	1.04	4.64	9.98	12.6	16.6	17.8	20
Aluminum D-Al	0.049	0.0382	0.0005	0.00088	0.00414	0.0139	0.0418	0.0746	0.105	0.116	0.12	20
Antimony T-Sb	0.00155	0.000928	0.00048	0.000594	0.000636	0.000785	0.00139	0.00194	0.00264	0.00313	0.00402	20
Antimony D-Sb	0.000703	0.000313	0.0004	0.000419	0.000447	0.000523	0.000625	0.000718	0.00111	0.00123	0.0017	20
Arsenic T-As	0.0141	0.00973	0.00118	0.00268	0.00418	0.00977	0.0126	0.0164	0.0262	0.029	0.0318	8
Arsenic D-As	0.000551	0.0000436	0.0005	0.0005	0.0005	0.00053	0.000545	0.000568	0.000602	0.000616	0.00063	8
Barium T-Ba	0.126	0.0841	0.035	0.0436	0.0467	0.0692	0.089	0.167	0.256	0.284	0.301	20
Barium D-Ba	0.031	0.0109	0.019	0.019	0.0199	0.0248	0.0275	0.0343	0.0415	0.0432	0.0665	20
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00635	0.0176	0.000056	0.0000606	0.0000651	0.0000915	0.000102	0.000146	0.0152	0.0326	0.05	8
Bismuth D-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000406	0.000335	0.0000575	0.0000599	0.000096	0.000197	0.0003	0.000503	0.000868	0.00102	0.00138	20
Cadmium D-Cd	0.000093	0.0000755	0.000017	0.000017	0.000017	0.0000215	0.0001	0.000133	0.0002	0.000202	0.00023	20
Calcium T-Ca	33.9	11.3	17	22.3	23	24.2	31.7	38	51.5	52.1	55.3	20
Calcium D-Ca	27.9	13	12	14.9	16.4	19.2	22.2	34.1	50.8	51.4	58.5	20
Chromium T-Cr	0.0131	0.00812	0.001	0.00219	0.00338	0.00898	0.0133	0.0171	0.0238	0.0238	0.0239	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.00409	0.00384	0.0003	0.000376	0.000425	0.000843	0.00259	0.00588	0.0101	0.0112	0.0133	20
Cobalt D-Co	0.000278	0.000271	0.00003	0.00003	0.000057	0.000095	0.000295	0.0003	0.00037	0.001	0.001	20
Copper T-Cu	0.0232	0.021	0.0017	0.0018	0.00351	0.01	0.0134	0.0305	0.0579	0.0609	0.0775	20
Copper D-Cu	0.000863	0.000823	0.00005	0.000193	0.000209	0.0003	0.001	0.001	0.00101	0.00124	0.00398	20
Iron T-Fe	8.83	8.82	0.462	0.527	0.575	1.31	5.52	13.9	21.1	25.4	30.9	20
Iron D-Fe	0.0293	0.0226	0.005	0.00975	0.01	0.01	0.03	0.03	0.0484	0.0715	0.1	20
Lead T-Pb	0.00602	0.00594	0.0005	0.000633	0.000784	0.00173	0.00395	0.00691	0.0161	0.0171	0.0189	20
Lead D-Pb	0.000335	0.000309	0.000025	0.000025	0.0000475	0.00007	0.00031	0.0005	0.00055	0.001	0.001	20
Magnesium T-Mg	7.38	2.39	3.2	3.49	5.1	6.26	6.87	8.38	9.76	11.6	13.3	20
Magnesium D-Mg	3.22	1.66	1.3	1.39	1.53	2.04	2.61	4.07	6.11	6.16	6.58	20
Manganese T-Mn	0.256	0.259	0.012	0.0164	0.017	0.0408	0.15	0.354	0.661	0.695	0.919	20
Manganese D-Mn	0.00446	0.00674	0.00005	0.000202	0.000219	0.000435	0.00176	0.0039	0.0139	0.0218	0.022	20
Mercury T-Hg	0.0000147	0.00000893	0.000005	0.000005	0.000005	8.53E-06	0.0000113	0.000025	0.000025	0.000025	0.000025	8
Mercury D-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Molybdenum T-Mo	0.00393	0.00119	0.001	0.00252	0.00287	0.00328	0.00396	0.00451	0.00504	0.00547	0.0067	20
Molybdenum D-Mo	0.00293	0.000956	0.001	0.00148	0.00168	0.00208	0.00326	0.00369	0.00393	0.00421	0.0043	20
Nickel T-Ni	0.0136	0.0107	0.0019	0.00257	0.00269	0.00545	0.0133	0.0167	0.0296	0.0334	0.0404	20
Nickel D-Ni	0.00091	0.000286	0.0004	0.000438	0.000494	0.000683	0.001	0.001	0.0012	0.00122	0.0015	20
Selenium T-Se	0.00207	0.00062	0.00143	0.00149	0.00155	0.00172	0.00187	0.00224	0.00301	0.00305	0.0031	8
Selenium D-Se	0.00129	0.000862	0.000649	0.000665	0.000682	0.000838	0.00101	0.00131	0.00212	0.00271	0.00329	8
Silicon T-Si	16.5	7.86	2.8	5.26	7.72	11.4	17.4	20.2	27.3	27.4	27.4	10
Silicon D-Si	1.05	0.473	0.622	0.655	0.688	0.713	0.881	1.28	1.49	1.82	2.14	10
Silver T-Ag	0.000293	0.000227	0.00002	0.0000519	0.0000837	0.000177	0.000255	0.000325	0.000575	0.000654	0.000733	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.76	0.592	0.8	0.834	1.02	1.29	1.97	2	2.29	2.59	3.1	18
Sodium D-Na	1.33	0.662	0.34	0.464	0.507	0.628	1.5	2	2	2	2	20
Strontium T-Sr	0.187	0.0641	0.095	0.109	0.119	0.148	0.174	0.202	0.284	0.309	0.338	20
Strontium D-Sr	0.152	0.0672	0.071	0.0739	0.0919	0.108	0.134	0.18	0.231	0.272	0.333	20
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.269	0.152	0.023	0.0549	0.0867	0.182	0.28	0.364	0.45	0.458	0.466	8
Titanium D-Ti	0.0101	0.000354	0.01	0.01	0.01	0.01	0.01	0.01	0.0103	0.0107	0.011	8
Uranium T-U	0.000408	0.000159	0.00029	0.000294	0.000297	0.000315	0.000345	0.000428	0.000567	0.000669	0.00077	8
Uranium D-U	0.000228	0.0000602	0.0002	0.0002	0.0002	0.0002	0.0002	0.000213	0.000286	0.000328	0.00037	8
Vanadium T-V	0.0274	0.0179	0.0011	0.00385	0.0066	0.0182	0.0271	0.0352	0.0505	0.0522	0.0539	8
Vanadium D-V	0.000563	0.000177	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00065	0.000825	0.001	8
Zinc T-Zn	0.0462	0.0422	0.003	0.0049	0.0113	0.0148	0.0285	0.0622	0.105	0.131	0.142	20
Zinc D-Zn	0.00322	0.00197	0.0004	0.0004	0.0004	0.00134	0.0045	0.005	0.005	0.005	0.005	20

Middle Bitter Creek (BC04)	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.09	0.522	6.82	7.18	7.53	7.78	8.29	8.44	8.64	8.7	8.7	16
Conductivity	184	107	87	88.8	90.6	108	130	242	346	392	424	19
Hardness CaCO3	82.8	53.1	32	38.3	41.1	45.5	59.1	101	164	182	222	19
Total Dissolved Solids	124	69.6	53	63.8	65.8	70	100	151	226	266	280	19
Total Suspended Solids	295	234	9	13.7	17.4	144	300	367	534	586	1000	19
Turbidity	216	217	1.24	2.46	8.14	97.5	176	248	357	476	980	19
Alkalinity-Total CaCO3	61	28.7	35.6	36	36.8	39.8	52.2	70	100	114	134	19
Acidity (as CaCO3)	1.34	0.895	0.4	0.74	0.94	1	1	1.1	2.79	3.14	3.9	18
Chloride Cl	0.504	0.0106	0.5	0.5	0.5	0.5	0.5	0.5	0.509	0.52	0.53	8
Fluoride F	0.038	0.0293	0.02	0.02	0.02	0.02	0.022	0.0425	0.077	0.0875	0.098	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	34.8	30.1	5.5	9.55	10.8	12.5	19.4	52.9	78	83.4	111	19
Nitrate Nitrogen N	0.0557	0.0758	0.0107	0.0118	0.0129	0.0173	0.0248	0.0493	0.124	0.18	0.236	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.445	N/A	0.445	0.445	0.445	0.445	0.445	0.445	0.445	0.445	0.445	1
Ammonia Nitrogen N	0.0062	0.00176	0.005	0.005	0.005	0.005	0.005	0.00738	0.00853	0.00892	0.0093	8
Ortho-Phosphate	0.00148	0.000255	0.001	0.00111	0.00121	0.0013	0.00155	0.0017	0.0017	0.0017	0.0017	8
Phosphorus (P)-Total	0.289	0.269	0.0197	0.0226	0.0254	0.0291	0.288	0.443	0.552	0.655	0.758	8
Total Organic Carbon	0.52	0.0566	0.5	0.5	0.5	0.5	0.5	0.5	0.548	0.604	0.66	8
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Aluminum T-Al	6.41	4.09	0.0133	0.0994	0.474	4.43	6.1	8.8	11.8	12.2	14	19
Aluminum D-Al	0.0604	0.0385	0.0005	0.00635	0.0102	0.0294	0.056	0.0924	0.11	0.11	0.11	19
Antimony T-Sb	0.0021	0.00112	0.00059	0.000635	0.000704	0.00118	0.00234	0.00263	0.00364	0.00385	0.0043	19
Antimony D-Sb	0.000735	0.000205	0.00047	0.000497	0.0005	0.00057	0.00073	0.000835	0.000996	0.00111	0.0012	19
Arsenic T-As	0.0118	0.00805	0.0013	0.00142	0.00155	0.00599	0.0119	0.0179	0.0212	0.0219	0.0227	8
Arsenic D-As	0.000593	0.0000669	0.0005	0.000504	0.000507	0.000548	0.000605	0.000625	0.000658	0.000679	0.0007	8
Barium T-Ba	0.13	0.0706	0.02	0.0416	0.0522	0.0804	0.131	0.164	0.219	0.271	0.279	19
Barium D-Ba	0.0278	0.00918	0.015	0.0195	0.0216	0.023	0.027	0.03	0.0359	0.0392	0.0586	19
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00636	0.0176	0.00005	0.0000605	0.000071	0.0000913	0.000117	0.000199	0.0152	0.0326	0.05	8
Bismuth D-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000518	0.000303	0.0000877	0.0000988	0.000188	0.000324	0.000477	0.000705	0.000822	0.00111	0.0012	19
Cadmium D-Cd	0.0001	0.000103	0.000017	0.000017	0.000017	0.000023	0.00009	0.000105	0.000192	0.000226	0.00046	19
Calcium T-Ca	34.1	16.9	17	17.9	18	21.7	26.9	43.8	59.6	61.9	69.5	19
Calcium D-Ca	29.4	18.8	11	14.2	14.9	16	20.2	37.1	59.1	60.7	74.2	19
Chromium T-Cr	0.0103	0.00689	0.001	0.001	0.001	0.00505	0.0122	0.0145	0.0166	0.0184	0.0202	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.00483	0.00302	0.00026	0.000296	0.000468	0.00282	0.0047	0.00688	0.00922	0.00965	0.0101	19
Cobalt D-Co	0.000213	0.000103	0.00003	0.000048	0.000074	0.00011	0.00023	0.0003	0.0003	0.000304	0.00034	19
Copper T-Cu	0.0263	0.0165	0.0006	0.00222	0.00304	0.0151	0.026	0.035	0.0466	0.0531	0.058	19
Copper D-Cu	0.000689	0.000384	0.00005	0.000095	0.00026	0.00045	0.0005	0.001	0.001	0.00104	0.00144	19
Iron T-Fe	9.71	6.85	0.04	0.417	0.817	5.72	9.5	13.8	17.3	22.4	24	19
Iron D-Fe	0.0276	0.0119	0.005	0.0095	0.01	0.023	0.03	0.03	0.041	0.0453	0.048	19
Lead T-Pb	0.00724	0.00582	0.00009	0.000459	0.00058	0.00316	0.0068	0.00825	0.015	0.0191	0.0197	19
Lead D-Pb	0.000297	0.000209	0.000025	0.000025	0.000045	0.0001	0.00034	0.0005	0.0005	0.0005	0.0005	19
Magnesium T-Mg	7.75	1.69	5.4	5.85	6.21	6.45	7.41	8.58	10	10.3	12	19
Magnesium D-Mg	3.36	2.41	1.1	1.31	1.55	1.75	2.12	4.73	7.13	7.57	9.05	19
Manganese T-Mn	0.287	0.193	0.0072	0.0211	0.0285	0.166	0.291	0.397	0.589	0.614	0.648	19
Manganese D-Mn	0.00191	0.00274	0.0002	0.000281	0.000298	0.0003	0.00036	0.00209	0.0063	0.00798	0.00866	19
Mercury T-Hg	0.000011	0.00000629	0.000005	0.000005	0.000005	8.68E-06	0.00001	0.0000108	0.0000167	0.0000208	0.000025	8
Mercury D-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Molybdenum T-Mo	0.00465	0.00121	0.0025	0.00295	0.00324	0.00374	0.00479	0.00524	0.0061	0.00664	0.007	19
Molybdenum D-Mo	0.00358	0.00168	0.0015	0.00168	0.00178	0.00225	0.00335	0.00467	0.00547	0.007	0.007	19
Nickel T-Ni	0.0169	0.0139	0.002	0.0029	0.00452	0.0085	0.0142	0.0194	0.0262	0.0308	0.0654	19
Nickel D-Ni	0.00116	0.000591	0.0004	0.000436	0.000488	0.0008	0.001	0.00165	0.00199	0.00205	0.0025	19
Selenium T-Se	0.00326	0.00377	0.00122	0.00141	0.0016	0.00177	0.00191	0.00225	0.00589	0.0092	0.0125	8
Selenium D-Se	0.00251	0.00378	0.000562	0.000577	0.000591	0.000749	0.000984	0.00198	0.00538	0.00854	0.0117	8
Silicon T-Si	13.8	7.49	3.11	3.17	3.23	8.04	17.1	18.8	20.6	21.4	22.1	8
Silicon D-Si	1.29	0.962	0.597	0.603	0.608	0.72	0.858	1.44	2.5	2.91	3.32	8
Silver T-Ag	0.000214	0.000145	0.00002	0.0000242	0.0000284	0.000113	0.00022	0.000321	0.000359	0.000396	0.000433	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.74	0.482	1	1.09	1.18	1.3	2	2	2.01	2.15	2.94	19
Sodium D-Na	1.29	0.727	0.3	0.408	0.428	0.525	1.53	2	2	2	2	19
Strontium T-Sr	0.202	0.0895	0.1	0.118	0.12	0.144	0.169	0.234	0.339	0.375	0.395	19
Strontium D-Sr	0.167	0.104	0.064	0.0766	0.082	0.0907	0.113	0.223	0.342	0.36	0.394	19
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.209	0.133	0.01	0.0177	0.0254	0.121	0.25	0.287	0.335	0.36	0.384	8
Titanium D-Ti	0.0104	0.00106	0.01	0.01	0.01	0.01	0.01	0.01	0.0109	0.012	0.013	8
Uranium T-U	0.000413	0.000139	0.00025	0.000278	0.000306	0.000338	0.00038	0.000438	0.000556	0.000633	0.00071	8
Uranium D-U	0.000315	0.000195	0.0002	0.0002	0.0002	0.0002	0.0002	0.000345	0.000588	0.000644	0.0007	8
Vanadium T-V	0.0207	0.0137	0.00162	0.00175	0.00189	0.0107	0.0249	0.0296	0.0327	0.0361	0.0396	8
Vanadium D-V	0.000563	0.000177	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00065	0.000825	0.001	8
Zinc T-Zn	0.0508	0.031	0.002	0.00713	0.0203	0.0281	0.0438	0.0639	0.0883	0.111	0.121	19
Zinc D-Zn	0.00474	0.00496	0.0004	0.00094	0.001	0.0011	0.005	0.005	0.00848	0.016	0.0194	19

Middle Bitter Creek (BC06)	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.57	0.936	6.25	6.47	6.7	7.37	7.79	7.99	8.27	8.37	8.46	4
Conductivity	102	15.2	84.1	85.9	87.7	93.2	101	110	116	118	120	4
Hardness CaCO3	47.7	6.46	42.2	42.3	42.4	42.7	46.4	51.5	54.1	54.9	55.8	4
Total Dissolved Solids	81.3	12.3	68	69.1	70.1	73.3	80.5	88.5	93	94.5	96	4
Total Suspended Solids	325	57.4	277	279	282	289	309	345	382	394	406	4
Turbidity	241	18.9	219	221	223	229	241	252	258	260	262	4
Alkalinity-Total CaCO3	36.2	4.06	31.4	31.9	32.4	33.9	36.3	38.6	39.9	40.4	40.8	4
Acidity (as CaCO3)	1	N/A	1	1	1	1	1	1	1	1	1	4
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	14.8	3.71	10.7	11	11.3	12.3	14.7	17.1	18.3	18.6	19	4
Nitrate Nitrogen N	0.0142	0.00173	0.0131	0.0132	0.0132	0.0134	0.0135	0.0143	0.0158	0.0163	0.0168	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.00643	0.00179	0.005	0.005	0.005	0.005	0.006	0.00743	0.00819	0.00845	0.0087	4
Ortho-Phosphate	0.00165	0.000311	0.0013	0.00133	0.00136	0.00145	0.00165	0.00185	0.00194	0.00197	0.002	4
Phosphorus (P)-Total	0.389	0.124	0.246	0.262	0.278	0.327	0.384	0.446	0.504	0.524	0.543	4
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	9.45	2.2	7.64	7.74	7.84	8.15	8.78	10.1	11.6	12.1	12.6	4
Aluminum D-Al	0.542	0.912	0.0796	0.0804	0.0812	0.0837	0.0888	0.547	1.36	1.64	1.91	4
Antimony T-Sb	0.00217	0.000342	0.00171	0.00178	0.00185	0.00206	0.00223	0.00234	0.00245	0.00249	0.00253	4
Antimony D-Sb	0.000645	0.000106	0.00052	0.000532	0.000544	0.00058	0.00065	0.000715	0.000742	0.000751	0.00076	4
Arsenic T-As	0.0154	0.00394	0.0102	0.0109	0.0117	0.0139	0.0158	0.0172	0.0187	0.0192	0.0197	4
Arsenic D-As	0.00112	0.000987	0.0006	0.000602	0.000603	0.000608	0.00064	0.00115	0.00202	0.00231	0.0026	4
Barium T-Ba	0.154	0.0191	0.133	0.135	0.138	0.145	0.152	0.161	0.172	0.175	0.179	4
Barium D-Ba	0.0303	0.0158	0.022	0.022	0.022	0.022	0.0225	0.0308	0.0447	0.0494	0.054	4
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Bismuth T-Bi	0.000146	0.0000649	0.000074	0.000079	0.0000839	0.0000988	0.000153	0.0002	0.000201	0.000202	0.000202	4
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	4
Boron T-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4
Boron D-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	4
Cadmium T-Cd	0.000484	0.000175	0.000322	0.000339	0.000355	0.000405	0.00044	0.000519	0.000648	0.00069	0.000733	4
Cadmium D-Cd	0.000032	0.00003	0.000017	0.000017	0.000017	0.000017	0.000017	0.000032	0.000059	0.000068	0.000077	4
Calcium T-Ca	21.9	3.17	17.4	18.1	18.7	20.7	22.8	24	24.2	24.3	24.4	4
Calcium D-Ca	16.4	2.38	14.2	14.3	14.4	14.6	16	17.8	18.7	19	19.3	4
Chromium T-Cr	0.0138	0.00317	0.011	0.0112	0.0114	0.0121	0.013	0.0147	0.0169	0.0176	0.0183	4
Chromium D-Cr	0.00128	0.00055	0.001	0.001	0.001	0.001	0.001	0.00128	0.00177	0.00194	0.0021	4
Cobalt T-Co	0.00629	0.0017	0.00445	0.00466	0.00486	0.00549	0.00609	0.00689	0.00788	0.00821	0.00854	4
Cobalt D-Co	0.000463	0.000325	0.0003	0.0003	0.0003	0.0003	0.0003	0.000463	0.000755	0.000853	0.00095	4
Copper T-Cu	0.0335	0.00954	0.024	0.0249	0.0257	0.0284	0.0317	0.0368	0.0426	0.0446	0.0465	4
Copper D-Cu	0.00188	0.00175	0.001	0.001	0.001	0.001	0.001	0.00188	0.00345	0.00398	0.0045	4
Iron T-Fe	14	3.26	10.4	10.9	11.3	12.7	13.6	14.9	16.9	17.6	18.3	4
Iron D-Fe	0.0307	0.00115	0.03	0.03	0.03	0.03	0.03	0.031	0.0316	0.0318	0.032	3
Lead T-Pb	0.00752	0.00226	0.00536	0.00559	0.00581	0.00649	0.007	0.00803	0.00963	0.0102	0.0107	4
Lead D-Pb	0.00075	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00075	0.0012	0.00135	0.0015	4
Magnesium T-Mg	7.06	1.13	5.52	5.78	6.03	6.8	7.25	7.52	7.95	8.09	8.23	4
Magnesium D-Mg	1.67	0.233	1.34	1.39	1.44	1.59	1.73	1.81	1.85	1.86	1.87	4
Manganese T-Mn	0.379	0.0946	0.274	0.288	0.303	0.345	0.369	0.403	0.464	0.484	0.504	4
Manganese D-Mn	0.0165	0.0318	0.00024	0.000309	0.000378	0.000585	0.00071	0.0166	0.0452	0.0547	0.0642	4
Mercury T-Hg	0.00000948	0.00000113	0.0000084	0.00000848	0.00000855	8.78E-06	9.25E-06	0.00000995	0.0000106	0.0000108	0.000011	4
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	4
Molybdenum T-Mo	0.00298	0.000457	0.0024	0.00248	0.00255	0.00278	0.003	0.0032	0.00338	0.00344	0.0035	4
Molybdenum D-Mo	0.002	0.000476	0.0015	0.00153	0.00156	0.00165	0.002	0.00235	0.00244	0.00247	0.0025	4
Nickel T-Ni	0.0164	0.00452	0.0117	0.0122	0.0127	0.0142	0.0157	0.0179	0.0207	0.0216	0.0225	4
Nickel D-Ni	0.00165	0.0013	0.001	0.001	0.001	0.001	0.001	0.00165	0.00282	0.00321	0.0036	4
Selenium T-Se	0.00156	0.000242	0.00121	0.00127	0.00133	0.0015	0.00166	0.00172	0.00172	0.00173	0.00173	4
Selenium D-Se	0.000771	0.000106	0.000659	0.000666	0.000673	0.000694	0.00077	0.000847	0.000869	0.000877	0.000884	4
Silicon T-Si	16.6	1.8	14.3	14.6	15	16	16.7	17.3	18.1	18.4	18.7	4
Silicon D-Si	1.7	2.08	0.54	0.566	0.592	0.669	0.727	1.76	3.6	4.21	4.82	4
Silver T-Ag	0.000274	0.0000659	0.000195	0.000206	0.000217	0.000249	0.000273	0.000298	0.000333	0.000344	0.000356	4
Silver D-Ag	0.0000245	0.000009	0.00002	0.00002	0.00002	0.00002	0.00002	0.0000245	0.0000326	0.0000353	0.000038	4
Sodium T-Na	2	N/A	2	2	2	2	2	2	2	2	2	4
Sodium D-Na	2	N/A	2	2	2	2	2	2	2	2	2	4
Strontium T-Sr	0.129	0.0165	0.105	0.109	0.112	0.123	0.134	0.14	0.14	0.141	0.141	4
Strontium D-Sr	0.0906	0.0104	0.0813	0.0815	0.0816	0.0821	0.0895	0.098	0.1	0.101	0.102	4
Thallium T-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	4
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	4
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	4
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	4
Titanium T-Ti	0.255	0.0392	0.224	0.225	0.225	0.227	0.243	0.27	0.293	0.301	0.309	4
Titanium D-Ti	0.025	0.03	0.01	0.01	0.01	0.01	0.01	0.025	0.052	0.061	0.07	4
Uranium T-U	0.00031	0.0000455	0.00025	0.000258	0.000265	0.000288	0.00032	0.000343	0.000347	0.000349	0.00035	4
Uranium D-U	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	4
Vanadium T-V	0.0285	0.0058	0.0231	0.0237	0.0242	0.026	0.027	0.0295	0.0338	0.0353	0.0367	4
Vanadium D-V	0.00196	0.00293	0.0005	0.0005	0.0005	0.0005	0.0005	0.00196	0.0046	0.00547	0.00635	4
Zinc T-Zn	0.0551	0.0151	0.0397	0.0415	0.0433	0.0486	0.0523	0.0587	0.069	0.0725	0.0759	4
Zinc D-Zn	0.00593	0.00185	0.005	0.005	0.005	0.005	0.005	0.00593	0.00759	0.00815	0.0087	4

Upper Bitter Creek (BC08)	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.35	0.36	7.97	8.01	8.05	8.14	8.22	8.55	8.79	8.85	8.92	6
Conductivity	150	129	60	65	70.1	83.3	96	139	284	381	478	10
Hardness CaCO3	73.8	71.2	21	25.5	30	38.9	49.4	62.3	145	201	257	10
Total Dissolved Solids	116	92.6	41	52.7	64.4	71	79	107	196	277	358	10
Total Suspended Solids	241	151	3	26.3	49.5	190	249	275	368	459	550	10
Turbidity	198	151	0.54	18.3	36.1	139	201	229	276	418	560	10
Alkalinity-Total CaCO3	43.2	23.5	26.5	26.7	27	29.9	36.8	40.9	64	84	104	10
Acidity (as CaCO3)	1.01	0.0333	1	1	1	1	1	1	1.02	1.06	1.1	9
Chloride Cl	0.585	0.24	0.5	0.5	0.5	0.5	0.5	0.5	0.704	0.942	1.18	8
Fluoride F	0.0605	0.0967	0.02	0.02	0.02	0.02	0.02	0.0338	0.133	0.215	0.297	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	33.7	43.6	9.14	9.21	9.28	9.88	15.3	28.3	75.5	111	147	10
Nitrate Nitrogen N	0.0127	0.00353	0.0089	0.00932	0.00974	0.0101	0.0121	0.0142	0.0164	0.0179	0.0194	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1
Ammonia Nitrogen N	0.00631	0.00371	0.005	0.005	0.005	0.005	0.005	0.005	0.00815	0.0118	0.0155	8
Ortho-Phosphate	0.00164	0.000553	0.001	0.00104	0.00107	0.00133	0.00155	0.00178	0.00239	0.0025	0.0026	8
Phosphorus (P)-Total	0.242	0.146	0.0024	0.0191	0.0359	0.187	0.28	0.324	0.382	0.398	0.414	8
Total Organic Carbon	0.543	0.0897	0.5	0.5	0.5	0.5	0.5	0.54	0.606	0.683	0.76	8
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Aluminum T-Al	5.33	3.28	0.0085	0.374	0.739	2.78	6.49	7.79	8.06	8.57	9.07	10
Aluminum D-Al	0.0805	0.0411	0.005	0.0207	0.0363	0.0604	0.0816	0.0984	0.136	0.138	0.14	10
Antimony T-Sb	0.00179	0.000611	0.0005	0.000784	0.00107	0.00152	0.00196	0.00216	0.00227	0.00242	0.00257	10
Antimony D-Sb	0.000764	0.000283	0.0005	0.0005	0.0005	0.00052	0.00073	0.0009	0.000968	0.00118	0.0014	10
Arsenic T-As	0.00995	0.005	0.0005	0.0017	0.00291	0.00845	0.0125	0.0132	0.0135	0.0137	0.0139	8
Arsenic D-As	0.000748	0.000124	0.0005	0.000567	0.000633	0.00069	0.000775	0.000815	0.000854	0.000882	0.00091	8
Barium T-Ba	0.0999	0.0505	0.02	0.0245	0.029	0.058	0.122	0.14	0.141	0.147	0.152	10
Barium D-Ba	0.0209	0.00498	0.011	0.0128	0.0146	0.02	0.021	0.024	0.0253	0.0267	0.028	10
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00634	0.0176	0.000062	0.0000645	0.0000669	0.000075	0.0000925	0.000156	0.0151	0.0326	0.05	8
Bismuth D-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000264	0.000147	0.00006	0.0000609	0.0000618	0.000128	0.000308	0.000364	0.000422	0.000439	0.000456	10
Cadmium D-Cd	0.0000488	0.0000593	0.000017	0.000017	0.000017	0.000017	0.000017	0.000046	0.00011	0.000155	0.0002	10
Calcium T-Ca	28.3	21.6	15	15.6	16.3	17.2	19.8	25	47.6	66.3	85.1	10
Calcium D-Ca	25	24.1	7	8.67	10.3	13.3	16.5	21.1	49.5	68.1	86.7	10
Chromium T-Cr	0.00848	0.0042	0.001	0.00181	0.00261	0.00675	0.0099	0.0118	0.012	0.0121	0.0121	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.0035	0.00201	0.0003	0.000417	0.000534	0.00186	0.00454	0.00461	0.00525	0.00548	0.00571	10
Cobalt D-Co	0.000258	0.0000887	0.00008	0.000089	0.000098	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	10
Copper T-Cu	0.0198	0.0107	0.001	0.00334	0.00568	0.0109	0.0249	0.027	0.0283	0.0297	0.031	10
Copper D-Cu	0.000897	0.000218	0.00045	0.000482	0.000513	0.001	0.001	0.001	0.001	0.001	0.001	10
Iron T-Fe	7.67	4.86	0.165	0.482	0.8	3.6	9.7	11.1	12.2	12.7	13.2	10
Iron D-Fe	0.0422	0.0199	0.028	0.0289	0.0298	0.03	0.0335	0.0403	0.0774	0.0792	0.081	10
Lead T-Pb	0.00443	0.00238	0.0005	0.000968	0.00144	0.00236	0.00512	0.00593	0.00699	0.00714	0.0073	10
Lead D-Pb	0.000421	0.000167	0.0001	0.000105	0.000109	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	10
Magnesium T-Mg	5.95	1.76	2.6	3.85	5.09	5.48	5.86	6.08	7.05	8.45	9.85	10
Magnesium D-Mg	2.75	2.72	0.76	0.886	1.01	1.38	1.9	2.41	5.03	7.47	9.9	10
Manganese T-Mn	0.221	0.12	0.017	0.0378	0.0586	0.123	0.274	0.31	0.322	0.337	0.351	10
Manganese D-Mn	0.00946	0.0249	0.00044	0.000458	0.000476	0.000685	0.000995	0.00209	0.0135	0.0468	0.0802	10
Mercury T-Hg	0.0000106	0.00000632	0.000005	0.000005	0.000005	7.55E-06	9.55E-06	0.0000105	0.0000159	0.0000205	0.000025	8
Mercury D-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Molybdenum T-Mo	0.00436	0.00262	0.0024	0.00249	0.00258	0.0028	0.00335	0.0046	0.00651	0.00881	0.0111	10
Molybdenum D-Mo	0.00367	0.00277	0.0014	0.00154	0.00167	0.00203	0.00265	0.0042	0.00558	0.00819	0.0108	10
Nickel T-Ni	0.0101	0.00496	0.0016	0.00268	0.00376	0.00568	0.0118	0.0138	0.0148	0.0149	0.015	10
Nickel D-Ni	0.000937	0.000293	0.0004	0.000432	0.000463	0.001	0.001	0.001	0.00113	0.00127	0.0014	10
Selenium T-Se	0.00142	0.000224	0.00116	0.00117	0.00119	0.00129	0.00137	0.0015	0.00169	0.00176	0.00184	8
Selenium D-Se	0.000919	0.000428	0.000514	0.00053	0.000546	0.000636	0.000799	0.00107	0.00138	0.00159	0.0018	8
Silicon T-Si	12.2	4.32	5.22	5.62	6.02	9.84	14.1	15.3	15.7	16.1	16.6	8
Silicon D-Si	1.45	2.02	0.463	0.489	0.515	0.623	0.717	0.912	2.85	4.63	6.4	8
Silver T-Ag	0.00018	0.0000927	0.00002	0.0000309	0.0000417	0.000146	0.000222	0.000242	0.00025	0.000254	0.000259	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	2.22	1.62	0.73	0.784	0.838	2	2	2	2.46	4.53	6.6	10
Sodium D-Na	2.15	1.69	0.24	0.438	0.636	2	2	2	2.46	4.53	6.6	10
Strontium T-Sr	0.175	0.124	0.072	0.0836	0.0952	0.108	0.123	0.157	0.329	0.394	0.459	9
Strontium D-Sr	0.152	0.138	0.041	0.0509	0.0608	0.0793	0.095	0.132	0.337	0.396	0.455	9
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.161	0.0771	0.01	0.0324	0.0548	0.148	0.195	0.21	0.215	0.218	0.221	8
Titanium D-Ti	0.0103	0.000707	0.01	0.01	0.01	0.01	0.01	0.01	0.0106	0.0113	0.012	8
Uranium T-U	0.000423	0.000223	0.00025	0.00025	0.00025	0.000258	0.000315	0.00053	0.00074	0.000775	0.00081	8
Uranium D-U	0.000335	0.000242	0.0002	0.0002	0.0002	0.0002	0.0002	0.00034	0.000688	0.000744	0.0008	8
Vanadium T-V	0.0177	0.00939	0.001	0.0027	0.0044	0.0135	0.0216	0.0244	0.0251	0.0257	0.0264	8
Vanadium D-V	0.000563	0.000177	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00065	0.000825	0.001	8
Zinc T-Zn	0.0349	0.0172	0.0103	0.0103	0.0103	0.019	0.04	0.0492	0.0507	0.0523	0.054	10
Zinc D-Zn	0.00471	0.00215	0.00079	0.00142	0.00206	0.005	0.005	0.005	0.00541	0.00726	0.0091	10

ar River D/S of Bitter Creek confluer	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.06	0.268	7.75	7.77	7.79	7.8	7.99	8.24	8.39	8.44	8.51	12
Conductivity	123	32.1	93	95.3	96.6	100	110	134	164	178	205	17
Hardness CaCO3	62.5	20.1	38	42.8	44.6	48.2	58.4	68	91.2	102	110	17
Total Dissolved Solids	84.4	23.6	56	57.6	58.6	68	78	97	114	124	135	17
Total Suspended Solids	252	190	3.5	13.5	20.2	167	210	385	489	548	660	17
Turbidity	172	126	1.75	13.2	19.5	108	135	257	364	370	390	17
Alkalinity-Total CaCO3	47.5	9.67	36.3	38.5	39	41	43.3	51	62.4	65.2	69.9	17
Acidity (as CaCO3)	1.61	0.617	1	1	1	1.03	1.5	1.88	2.57	2.64	2.7	14
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0356	0.0142	0.021	0.0217	0.0224	0.0275	0.031	0.041	0.0521	0.0581	0.064	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	15.1	6.63	7.9	8.78	10.2	11	12	16.7	25	28.1	31.4	17
Nitrate Nitrogen N	0.0856	0.0967	0.0246	0.0254	0.0263	0.0362	0.0471	0.0767	0.185	0.247	0.31	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.2	N/A	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	1
Ammonia Nitrogen N	0.00614	0.00235	0.005	0.005	0.005	0.005	0.005	0.00608	0.00795	0.00988	0.0118	8
Ortho-Phosphate	0.00128	0.000231	0.001	0.001	0.001	0.00115	0.00125	0.0014	0.00149	0.0016	0.0017	8
Phosphorus (P)-Total	0.293	0.28	0.005	0.0104	0.0159	0.0429	0.231	0.511	0.648	0.679	0.71	8
Total Organic Carbon	0.635	0.169	0.5	0.5	0.5	0.5	0.545	0.775	0.847	0.879	0.91	8
Dissolved Organic Carbon	0.521	0.0601	0.5	0.5	0.5	0.5	0.5	0.5	0.551	0.611	0.67	8
Aluminum T-Al	4.76	3.78	0.116	0.391	0.496	1.34	4.4	6.32	10	11.8	11.9	17
Aluminum D-Al	0.0723	0.0444	0.002	0.0131	0.0247	0.043	0.066	0.095	0.117	0.152	0.18	17
Antimony T-Sb	0.00139	0.000817	0.00044	0.000488	0.0005	0.0007	0.0013	0.0017	0.00258	0.00279	0.0032	17
Antimony D-Sb	0.000581	0.000206	0.0003	0.000404	0.000472	0.0005	0.0005	0.00064	0.000784	0.000968	0.0012	17
Arsenic T-As	0.00915	0.0068	0.00074	0.00138	0.00201	0.00523	0.00798	0.0119	0.0188	0.0193	0.0198	8
Arsenic D-As	0.000524	0.0000262	0.0005	0.0005	0.0005	0.0005	0.00052	0.000543	0.000553	0.000557	0.00056	8
Barium T-Ba	0.127	0.0563	0.057	0.0642	0.0684	0.078	0.119	0.16	0.199	0.215	0.253	17
Barium D-Ba	0.0402	0.0131	0.027	0.0278	0.0286	0.03	0.035	0.047	0.058	0.0612	0.074	17
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00632	0.0176	0.00005	0.00005	0.00005	0.00005	0.0000685	0.000135	0.0151	0.0326	0.05	8
Bismuth D-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000339	0.000228	0.00006	0.0000674	0.0000749	0.000198	0.000268	0.000503	0.000668	0.000705	0.000749	16
Cadmium D-Cd	0.0000833	0.0000738	0.000017	0.000017	0.000017	0.000017	0.000075	0.000123	0.0002	0.0002	0.0002	16
Calcium T-Ca	23.5	5.86	16	16.8	17	19.6	22.6	25.4	30.9	34.3	38	17
Calcium D-Ca	20	5.57	13	14.6	15.4	16	18	22.3	27	30.3	34.3	17
Chromium T-Cr	0.00833	0.00564	0.001	0.00128	0.00156	0.00465	0.0078	0.0122	0.0151	0.016	0.0168	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.00306	0.00247	0.0003	0.000412	0.000464	0.00088	0.0032	0.0038	0.00622	0.0081	0.00827	17
Cobalt D-Co	0.000301	0.000281	0.00007	0.000078	0.000086	0.0001	0.0003	0.0003	0.00058	0.001	0.001	17
Copper T-Cu	0.0172	0.0134	0.001	0.00316	0.00394	0.005	0.016	0.023	0.0405	0.0414	0.042	17
Copper D-Cu	0.000759	0.000368	0.0002	0.00024	0.000256	0.0005	0.001	0.001	0.001	0.00108	0.0014	17
Iron T-Fe	6.83	5.94	0.171	0.506	0.638	1.6	5.59	8.52	16.3	18	18.2	17
Iron D-Fe	0.031	0.0172	0.01	0.01	0.01	0.023	0.03	0.034	0.0422	0.0568	0.084	17
Lead T-Pb	0.00575	0.00434	0.0005	0.00106	0.00135	0.003	0.00467	0.008	0.0122	0.0135	0.0154	17
Lead D-Pb	0.000396	0.000298	0.00007	0.000078	0.00008	0.0001	0.0005	0.0005	0.0007	0.001	0.001	17
Magnesium T-Mg	4.89	1.7	2.8	3.12	3.26	3.33	4.47	5.5	7.47	8.23	8.23	17
Magnesium D-Mg	1.96	0.587	1.3	1.36	1.44	1.53	1.8	2.2	2.7	3.01	3.5	17
Manganese T-Mn	0.208	0.186	0.0115	0.0167	0.0228	0.056	0.19	0.26	0.507	0.534	0.621	17
Manganese D-Mn	0.00641	0.00757	0.0003	0.000316	0.000332	0.00063	0.0039	0.00625	0.018	0.0197	0.026	17
Mercury T-Hg	0.0000124	0.0000154	0.000005	0.000005	0.000005	0.000005	6.25E-06	0.0000104	0.0000231	0.0000365	0.00005	8
Mercury D-Hg	0.00000619	0.00000209	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000633	0.00000937	0.00000969	0.00001	8
Molybdenum T-Mo	0.00246	0.00079	0.001	0.0018	0.002	0.002	0.0022	0.0026	0.00356	0.00412	0.0042	17
Molybdenum D-Mo	0.00165	0.000395	0.001	0.00116	0.0012	0.0014	0.0016	0.0019	0.002	0.00212	0.0026	17
Nickel T-Ni	0.00918	0.00673	0.001	0.0018	0.00218	0.0037	0.0083	0.013	0.0191	0.0208	0.023	17
Nickel D-Ni	0.000898	0.000287	0.00039	0.000398	0.000442	0.0008	0.001	0.001	0.001	0.00112	0.0016	17
Selenium T-Se	0.00117	0.000266	0.000892	0.00091	0.000928	0.000955	0.00109	0.00134	0.00153	0.00157	0.0016	8
Selenium D-Se	0.000742	0.000277	0.000492	0.000495	0.000498	0.000561	0.000644	0.000838	0.00109	0.00119	0.00129	8
Silicon T-Si	11.1	6.34	1.89	2.75	3.61	5.46	12	14.7	19.1	19.8	20.5	10
Silicon D-Si	1.03	0.323	0.696	0.719	0.743	0.776	0.93	1.22	1.41	1.55	1.68	10
Silver T-Ag	0.000201	0.000162	0.00002	0.0000263	0.0000326	0.0000935	0.000161	0.000288	0.000415	0.000444	0.000474	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.5	0.56	0.71	0.766	0.838	0.96	2	2	2	2	2	15
Sodium D-Na	1.25	0.737	0.38	0.428	0.47	0.54	0.99	2	2	2	2	17
Strontium T-Sr	0.137	0.0276	0.096	0.107	0.11	0.12	0.13	0.148	0.169	0.192	0.202	17
Strontium D-Sr	0.113	0.032	0.075	0.0798	0.0828	0.093	0.0995	0.134	0.145	0.16	0.199	17
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.000504	0.0000106	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.000509	0.00052	0.00053	8
Titanium T-Ti	0.184	0.114	0.01	0.024	0.038	0.121	0.19	0.263	0.316	0.324	0.332	8
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000294	0.000136	0.0002	0.0002	0.0002	0.000208	0.000235	0.000305	0.000494	0.000522	0.00055	8
Uranium D-U	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.0181	0.0128	0.0005	0.00167	0.00284	0.00996	0.0174	0.0264	0.035	0.035	0.0351	8
Vanadium D-V	0.000563	0.000177	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00065	0.000825	0.001	8
Zinc T-Zn	0.0465	0.046	0.005	0.009	0.013	0.017	0.0347	0.061	0.0773	0.107	0.2	17
Zinc D-Zn	0.00438	0.00296	0.0004	0.0004	0.000496	0.0024	0.005	0.005	0.00604	0.00748	0.013	17

ar River U/S of Bitter Creek conflue	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.82	0.304	7.46	7.48	7.5	7.54	7.77	8.11	8.18	8.19	8.21	8
Conductivity	99.7	27.7	66.2	70.3	73.4	78.1	89.6	123	130	141	158	13
Hardness CaCO3	49.5	15.4	29	31.6	33.7	39.2	46.7	62	72.7	75.5	76	13
Total Dissolved Solids	69.2	15	52	53.2	54.4	57	69	79	88.6	94.6	100	13
Total Suspended Solids	29.6	35.5	3	3	3.48	8	15	28.8	68.4	94.6	127	13
Turbidity	28.2	30.3	0.87	2.87	4.29	10.3	17.5	27.5	72.9	80.6	92.1	13
Alkalinity-Total CaCO3	38	10.4	26.4	26.8	27.6	30.5	33	46.4	52.7	55.6	58	13
Acidity (as CaCO3)	1.86	0.544	1.1	1.15	1.19	1.45	1.9	2.18	2.44	2.62	2.8	10
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0445	0.0108	0.033	0.0337	0.0344	0.0373	0.041	0.0503	0.0573	0.0612	0.065	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	12.4	3.7	7.9	8.39	8.81	10	11.9	13.6	18.3	19.1	19.5	13
Nitrate Nitrogen N	0.0954	0.0943	0.0313	0.0319	0.0324	0.0442	0.0585	0.0945	0.195	0.253	0.311	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.085	N/A	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	8
Ortho-Phosphate	0.00115	0.000227	0.001	0.001	0.001	0.001	0.001	0.00128	0.0015	0.0015	0.0015	8
Phosphorus (P)-Total	0.0375	0.0569	0.002	0.0026	0.00319	0.00513	0.0166	0.0399	0.0824	0.128	0.173	8
Total Organic Carbon	0.529	0.0813	0.5	0.5	0.5	0.5	0.5	0.5	0.569	0.65	0.73	8
Dissolved Organic Carbon	0.611	0.22	0.5	0.5	0.5	0.5	0.5	0.575	0.887	0.989	1.09	8
Aluminum T-Al	1.09	1.23	0.0309	0.0706	0.111	0.223	0.8	1.37	2.59	3.4	4.23	13
Aluminum D-Al	0.0489	0.0318	0.0009	0.00444	0.0105	0.0286	0.045	0.069	0.0904	0.0956	0.103	13
Antimony T-Sb	0.000509	0.000148	0.0002	0.000332	0.000422	0.0005	0.0005	0.0005	0.000724	0.000784	0.00079	13
Antimony D-Sb	0.000455	0.000114	0.0001	0.000268	0.000386	0.0005	0.0005	0.0005	0.0005	0.000508	0.00052	13
Arsenic T-As	0.00187	0.00201	0.0005	0.000595	0.000689	0.00086	0.00127	0.00178	0.00329	0.005	0.00671	8
Arsenic D-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Barium T-Ba	0.0988	0.0351	0.068	0.0686	0.071	0.081	0.088	0.102	0.153	0.172	0.182	13
Barium D-Ba	0.0636	0.0107	0.049	0.0508	0.0524	0.057	0.062	0.068	0.0756	0.0804	0.087	13
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Bismuth D-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000137	0.000138	0.0000115	0.0000186	0.0000252	0.0000514	0.00008	0.00018	0.000289	0.000387	0.0005	13
Cadmium D-Cd	0.0000714	0.0000774	0.000017	0.000017	0.000017	0.000017	0.000024	0.0001	0.0002	0.0002	0.0002	13
Calcium T-Ca	17.5	4.81	12.4	12.8	13	13.9	15.9	21	25.2	26	26	13
Calcium D-Ca	16.9	4.76	10	11.1	11.9	13.8	16.3	21	21.9	23.7	26.2	13
Chromium T-Cr	0.00104	0.000106	0.001	0.001	0.001	0.001	0.001	0.001	0.00109	0.0012	0.0013	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.000713	0.000718	0.00006	0.000204	0.0003	0.0003	0.00044	0.00061	0.0018	0.00219	0.00247	13
Cobalt D-Co	0.000358	0.0003	0.00007	0.000076	0.000084	0.0003	0.0003	0.0003	0.00086	0.001	0.001	13
Copper T-Cu	0.00269	0.00218	0.001	0.001	0.001	0.001	0.0018	0.0038	0.00592	0.00644	0.0071	13
Copper D-Cu	0.00129	0.00131	0.0003	0.000642	0.000896	0.001	0.001	0.001	0.001	0.00284	0.0056	13
Iron T-Fe	1.43	1.88	0.044	0.114	0.182	0.32	0.82	1.4	4.26	5.39	6.07	13
Iron D-Fe	0.0355	0.0166	0.01	0.016	0.0202	0.03	0.03	0.046	0.0534	0.0622	0.073	13
Lead T-Pb	0.00414	0.00415	0.0005	0.00056	0.000704	0.00183	0.003	0.0032	0.00974	0.0116	0.014	13
Lead D-Pb	0.000497	0.000272	0.00008	0.000092	0.000136	0.0005	0.0005	0.0005	0.0009	0.001	0.001	13
Magnesium T-Mg	1.95	0.427	1.47	1.48	1.51	1.6	1.89	2.15	2.58	2.7	2.8	13
Magnesium D-Mg	1.48	0.433	0.876	0.95	1.02	1.16	1.43	1.8	1.9	2.08	2.34	13
Manganese T-Mn	0.079	0.104	0.00675	0.0093	0.0123	0.0275	0.041	0.0642	0.24	0.301	0.333	13
Manganese D-Mn	0.00942	0.00581	0.0041	0.00455	0.00498	0.006	0.00652	0.00997	0.0154	0.0196	0.025	13
Mercury T-Hg	0.000007	0.00000566	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000098	0.0000154	0.000021	8
Mercury D-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Molybdenum T-Mo	0.000977	0.000259	0.0002	0.00068	0.001	0.001	0.001	0.001	0.00108	0.00122	0.0014	13
Molybdenum D-Mo	0.000977	0.000259	0.0002	0.00068	0.001	0.001	0.001	0.001	0.00108	0.00122	0.0014	13
Nickel T-Ni	0.00161	0.00109	0.001	0.001	0.001	0.001	0.001	0.0015	0.00336	0.0039	0.0042	13
Nickel D-Ni	0.00114	0.000957	0.0002	0.00032	0.00052	0.001	0.001	0.001	0.001	0.00228	0.0042	13
Selenium T-Se	0.000316	0.000283	0.000165	0.000168	0.000171	0.000175	0.000212	0.000269	0.000544	0.000772	0.001	8
Selenium D-Se	0.000314	0.000287	0.000148	0.000152	0.000156	0.000176	0.000192	0.000296	0.00056	0.00078	0.001	8
Silicon T-Si	3.09	2.03	1.34	1.44	1.54	1.69	2.65	3.52	4.6	6.39	8.19	10
Silicon D-Si	0.977	0.261	0.679	0.704	0.729	0.781	0.932	1.1	1.29	1.4	1.51	10
Silver T-Ag	0.0000458	0.0000445	0.00002	0.00002	0.00002	0.00002	0.0000295	0.0000458	0.0000813	0.000117	0.000152	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.66	0.594	0.57	0.685	0.8	1.42	2	2	2	2	2	11
Sodium D-Na	1.48	0.699	0.38	0.404	0.49	0.8	2	2	2	2	2	13
Strontium T-Sr	0.11	0.0265	0.073	0.0736	0.0769	0.0911	0.109	0.125	0.139	0.149	0.162	13
Strontium D-Sr	0.107	0.0274	0.066	0.069	0.0739	0.0858	0.107	0.12	0.136	0.147	0.161	13
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Titanium T-Ti	0.0386	0.0416	0.01	0.01	0.01	0.0138	0.0285	0.0385	0.0712	0.104	0.137	8
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000201	0.00000354	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.000203	0.000207	0.00021	8
Uranium D-U	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.00308	0.00337	0.0005	0.000532	0.000563	0.00115	0.00216	0.00335	0.00596	0.00843	0.0109	8
Vanadium D-V	0.000563	0.000177	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00065	0.000825	0.001	8
Zinc T-Zn	0.0193	0.02	0.005	0.005	0.005	0.0052	0.01	0.016	0.0501	0.0568	0.064	13
Zinc D-Zn	0.00459	0.00137	0.0004	0.0022	0.00372	0.005	0.005	0.005	0.005	0.00536	0.0059	13

GoldSlide Creek	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.5	0.514	6.26	6.75	7.04	7.24	7.44	7.84	8	8.14	8.63	19
Conductivity	131	45.8	79.9	82.3	84.3	90.3	122	153	191	224	237	24
Hardness CaCO3	55.5	19.6	34	35.3	37	39	51.7	61.2	84.5	90	110	24
Total Dissolved Solids	92.3	30	36	55.8	61.2	67	93	113	124	125	170	24
Total Suspended Solids	3.05	4.4	0.5	1	1	1	1	3	3.24	14.7	17.3	23
Turbidity	0.674	1.4	0.1	0.112	0.13	0.165	0.3	0.55	1.02	1.36	6.9	23
Alkalinity-Total CaCO3	13.1	6.86	7.5	8	8	8.48	10	15.3	24.1	27.9	32	24
Acidity (as CaCO3)	2.54	1.03	1	1.4	1.4	1.9	2.3	3.2	3.8	3.8	5.3	21
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.037	0.00644	0.031	0.0314	0.0317	0.032	0.035	0.0403	0.0437	0.0469	0.05	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	42.8	18.4	20	22	22	23.8	46	55.5	66.8	70.8	80	24
Nitrate Nitrogen N	0.0212	0.003	0.0178	0.0178	0.0178	0.0185	0.0211	0.0238	0.0243	0.0246	0.0249	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.053	N/A	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	8
Ortho-Phosphate	0.00114	0.00025	0.001	0.001	0.001	0.001	0.001	0.00115	0.00142	0.00156	0.0017	8
Phosphorus (P)-Total	0.0051	0.00731	0.002	0.002	0.002	0.002	0.002	0.00308	0.0109	0.0169	0.0229	8
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Aluminum T-Al	0.0645	0.112	0.005	0.00521	0.00561	0.0156	0.0295	0.073	0.0933	0.103	0.546	22
Aluminum D-Al	0.0152	0.0104	0.0005	0.00106	0.005	0.00675	0.014	0.0235	0.0267	0.0279	0.0417	23
Antimony T-Sb	0.000446	0.000332	0.00007	0.000091	0.0001	0.00023	0.0005	0.0005	0.00068	0.000908	0.0016	23
Antimony D-Sb	0.000292	0.000211	0.00004	0.00005	0.000052	0.0001	0.00022	0.0005	0.0005	0.0005	0.00072	23
Arsenic T-As	0.000536	0.000103	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.000587	0.000689	0.00079	8
Arsenic D-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Barium T-Ba	0.0378	0.0606	0.018	0.02	0.02	0.0225	0.024	0.0265	0.03	0.0516	0.314	23
Barium D-Ba	0.0227	0.00486	0.017	0.0182	0.02	0.02	0.0213	0.0233	0.0265	0.027	0.0419	23
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Bismuth D-Bi	0.00629	0.0177	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.015	0.0325	0.05	8
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000404	0.00043	0.00015	0.000184	0.0002	0.00024	0.000282	0.000355	0.000636	0.000851	0.00223	23
Cadmium D-Cd	0.000253	0.000147	0.00009	0.000095	0.000146	0.0002	0.00023	0.000287	0.000324	0.000348	0.00085	23
Calcium T-Ca	19.9	7.63	11.9	12	12.1	14.5	17.5	23.4	28.6	36.3	40.1	23
Calcium D-Ca	18.6	5.95	11	11.7	12	13.6	18	21.6	28	30.1	31.1	23
Chromium T-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.000931	0.00182	0.00006	0.000174	0.0003	0.0003	0.00054	0.000865	0.001	0.00119	0.00914	23
Cobalt D-Co	0.000456	0.000286	0.00006	0.000074	0.000118	0.0003	0.00033	0.000645	0.000864	0.000988	0.001	23
Copper T-Cu	0.00958	0.018	0.0016	0.00172	0.00202	0.00335	0.00597	0.00735	0.00942	0.0183	0.0904	23
Copper D-Cu	0.00384	0.00269	0.0002	0.000673	0.0008	0.00205	0.0033	0.00531	0.00664	0.00733	0.0118	23
Iron T-Fe	0.0614	0.155	0.01	0.01	0.01	0.0185	0.03	0.033	0.0581	0.0752	0.751	22
Iron D-Fe	0.0196	0.0103	0.01	0.01	0.01	0.01	0.01	0.03	0.03	0.03	0.0314	23
Lead T-Pb	0.00152	0.00406	0.00005	0.000086	0.000176	0.0005	0.0005	0.0009	0.0013	0.00243	0.02	23
Lead D-Pb	0.00033	0.000282	0.00005	0.000051	0.000062	0.0001	0.00026	0.0005	0.0005	0.00095	0.001	23
Magnesium T-Mg	2.8	2.22	1.39	1.61	1.7	1.85	2.29	2.74	3.36	4.31	12.5	23
Magnesium D-Mg	2.2	0.528	1.37	1.51	1.6	1.72	2.27	2.49	2.84	2.92	3.52	23
Manganese T-Mn	0.00723	0.00759	0.00014	0.000312	0.00111	0.00297	0.0065	0.00823	0.0119	0.0145	0.0363	22
Manganese D-Mn	0.00711	0.00929	0.0001	0.000222	0.000886	0.00263	0.0051	0.008	0.0118	0.0143	0.0459	23
Mercury T-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Mercury D-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Molybdenum T-Mo	0.00584	0.00291	0.003	0.00354	0.0039	0.0042	0.00515	0.0063	0.00759	0.0107	0.0166	23
Molybdenum D-Mo	0.00489	0.00146	0.003	0.00312	0.00338	0.00385	0.0047	0.00561	0.00675	0.00733	0.0087	23
Nickel T-Ni	0.00289	0.00449	0.00054	0.000711	0.000848	0.001	0.0011	0.00215	0.0055	0.0114	0.02	23
Nickel D-Ni	0.00105	0.000533	0.00015	0.000314	0.000492	0.0008	0.001	0.0012	0.00158	0.00197	0.0027	23
Selenium T-Se	0.00149	0.000382	0.001	0.00108	0.00117	0.00126	0.00136	0.00172	0.00194	0.00206	0.00218	8
Selenium D-Se	0.00148	0.000435	0.001	0.00106	0.00112	0.00119	0.00134	0.00167	0.00205	0.00216	0.00228	8
Silicon T-Si	2.67	0.352	2.26	2.26	2.26	2.39	2.65	2.77	3.13	3.23	3.33	10
Silicon D-Si	2.59	0.368	2.19	2.21	2.24	2.29	2.58	2.72	3.04	3.19	3.33	10
Silver T-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.63	0.77	0.87	0.93	0.99	1.06	1.4	2	2	2	4.35	21
Sodium D-Na	1.44	0.469	0.81	0.852	0.886	1	1.3	2	2	2	2	23
Strontium T-Sr	0.12	0.0447	0.047	0.0641	0.0744	0.0849	0.118	0.142	0.176	0.192	0.234	23
Strontium D-Sr	0.112	0.0383	0.038	0.0605	0.0656	0.0824	0.115	0.135	0.158	0.166	0.193	23
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.000518	0.0000495	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.000542	0.000591	0.00064	8
Titanium T-Ti	0.0101	0.000354	0.01	0.01	0.01	0.01	0.01	0.01	0.0103	0.0107	0.011	8
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Uranium D-U	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.0006	0.000283	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00074	0.00102	0.0013	8
Vanadium D-V	0.000563	0.000177	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00065	0.000825	0.001	8
Zinc T-Zn	0.0284	0.0335	0.007	0.0082	0.0103	0.0149	0.0186	0.0295	0.0455	0.0517	0.173	23
Zinc D-Zn	0.0168	0.00752	0.0018	0.0062	0.00838	0.0138	0.0165	0.0195	0.0242	0.0304	0.037	23

Otter Creek	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.2	0.66	7.61	7.62	7.64	7.71	7.93	8.59	8.96	9.21	9.45	8
Conductivity	306	205	120	135	151	165	214	428	514	615	715	8
Hardness CaCO3	164	123	56	63.3	70.6	78.9	108	234	288	350	412	8
Total Dissolved Solids	200	138	90	92.8	95.6	108	129	280	342	412	481	8
Total Suspended Solids	26.6	29.2	3	3.98	4.96	7.68	14.2	34.6	61.6	74.7	87.8	8
Turbidity	17.1	18	1.53	1.67	1.8	3.56	13	23.5	35.1	44.5	53.9	8
Alkalinity-Total CaCO3	70.6	35.4	36.6	39.1	41.6	44.2	54.6	97.3	110	122	135	8
Acidity (as CaCO3)	1.7	0.626	1	1	1	1.45	1.65	1.83	2.23	2.62	3	8
Chloride Cl	0.75	0.707	0.5	0.5	0.5	0.5	0.5	0.5	1.1	1.8	2.5	8
Fluoride F	0.0589	0.0518	0.02	0.0211	0.0221	0.0238	0.0345	0.0818	0.11	0.14	0.17	8
Bromide Br	0.075	0.0707	0.05	0.05	0.05	0.05	0.05	0.05	0.11	0.18	0.25	8
Sulphate SO4	89.6	82.1	23.8	27.7	31.6	35.2	51.8	127	169	217	265	8
Nitrate Nitrogen N	0.0327	0.0151	0.017	0.0184	0.0199	0.0234	0.0282	0.0369	0.0536	0.0568	0.0599	8
Nitrite Nitrogen N	0.0015	0.00141	0.001	0.001	0.001	0.001	0.001	0.001	0.0022	0.0036	0.005	8
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	8
Ortho-Phosphate	0.00144	0.000316	0.001	0.00104	0.00107	0.00118	0.00145	0.00173	0.0018	0.0018	0.0018	8
Phosphorus (P)-Total	0.0345	0.0414	0.0022	0.00308	0.00395	0.00845	0.0161	0.0433	0.0935	0.103	0.113	8
Total Organic Carbon	0.533	0.0919	0.5	0.5	0.5	0.5	0.5	0.5	0.578	0.669	0.76	8
Dissolved Organic Carbon	0.515	0.0424	0.5	0.5	0.5	0.5	0.5	0.5	0.536	0.578	0.62	8
Aluminum T-Al	0.692	0.729	0.0143	0.02	0.0258	0.0515	0.586	1.08	1.42	1.74	2.05	8
Aluminum D-Al	0.0276	0.0241	0.005	0.00612	0.00724	0.00835	0.0238	0.0334	0.0546	0.0659	0.0771	8
Antimony T-Sb	0.000571	0.000141	0.0005	0.0005	0.0005	0.0005	0.0005	0.000548	0.000747	0.000814	0.00088	8
Antimony D-Sb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Arsenic T-As	0.00115	0.00103	0.0005	0.0005	0.0005	0.0005	0.00064	0.00128	0.00237	0.00288	0.00338	8
Arsenic D-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Barium T-Ba	0.0811	0.0304	0.05	0.0514	0.0528	0.0563	0.075	0.0963	0.116	0.127	0.139	8
Barium D-Ba	0.0606	0.0137	0.042	0.0445	0.0469	0.0505	0.06	0.072	0.0756	0.0763	0.077	8
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.0000535	0.00000776	0.00005	0.00005	0.00005	0.00005	0.00005	0.0000515	0.0000608	0.0000664	0.000072	8
Bismuth D-Bi	0.00005	7.24E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	8
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000189	0.0000956	0.000111	0.000112	0.000114	0.00012	0.000156	0.000219	0.000287	0.000341	0.000395	8
Cadmium D-Cd	0.0000906	0.0000542	0.000047	0.0000484	0.0000498	0.0000563	0.000071	0.000106	0.000142	0.000177	0.000211	8
Calcium T-Ca	51.8	36.9	19	21	22.9	24.7	36.5	74	89.6	107	125	8
Calcium D-Ca	51.7	37.1	18.4	20.6	22.8	25.4	35.4	74.4	89.9	107	125	8
Chromium T-Cr	0.00118	0.00042	0.001	0.001	0.001	0.001	0.001	0.00105	0.0015	0.00185	0.0022	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.00112	0.000869	0.00032	0.000355	0.00039	0.000548	0.000845	0.00132	0.00229	0.00254	0.00279	8
Cobalt D-Co	0.000651	0.000741	0.0003	0.0003	0.0003	0.0003	0.0003	0.000493	0.00142	0.0019	0.00238	8
Copper T-Cu	0.00318	0.00336	0.001	0.001	0.001	0.001	0.0017	0.00368	0.00678	0.00874	0.0107	8
Copper D-Cu	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Iron T-Fe	1.26	1.33	0.193	0.218	0.242	0.321	0.875	1.58	2.61	3.39	4.16	8
Iron D-Fe	0.046	0.0288	0.03	0.03	0.03	0.03	0.03	0.047	0.0821	0.0951	0.108	8
Lead T-Pb	0.00171	0.00174	0.0005	0.0005	0.0005	0.0005	0.00124	0.00207	0.00313	0.00435	0.00557	8
Lead D-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Magnesium T-Mg	8.78	7.13	3.57	3.69	3.8	4.02	5.39	11.8	15.6	19.9	24.2	8
Magnesium D-Mg	8.37	7.26	2.59	2.85	3.1	3.61	5.06	11.6	15.4	19.7	23.9	8
Manganese T-Mn	0.0636	0.0436	0.0253	0.0278	0.0303	0.0339	0.0551	0.0669	0.109	0.134	0.16	8
Manganese D-Mn	0.0257	0.0231	0.00602	0.00794	0.00986	0.0138	0.018	0.0278	0.0457	0.0625	0.0794	8
Mercury T-Hg	0.00000606	0.00000301	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000755	0.0000105	0.0000135	8
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	8
Molybdenum T-Mo	0.00233	0.000715	0.0012	0.00131	0.00141	0.0018	0.00255	0.0028	0.0031	0.0031	0.0031	8
Molybdenum D-Mo	0.00169	0.000808	0.001	0.001	0.001	0.001	0.00135	0.00233	0.00261	0.00286	0.0031	8
Nickel T-Ni	0.00748	0.00518	0.0032	0.00352	0.00383	0.00418	0.0062	0.00815	0.0118	0.0156	0.0193	8
Nickel D-Ni	0.00568	0.00596	0.0014	0.00147	0.00154	0.0022	0.00325	0.00685	0.0111	0.0152	0.0193	8
Selenium T-Se	0.00398	0.00355	0.00119	0.00124	0.0013	0.00166	0.00237	0.00555	0.00747	0.00954	0.0116	8
Selenium D-Se	0.00376	0.00385	0.000796	0.000902	0.00101	0.00114	0.00198	0.00538	0.00769	0.00984	0.012	8
Silicon T-Si	2.68	0.85	1.52	1.71	1.9	2.09	2.67	2.96	3.55	3.93	4.31	8
Silicon D-Si	1.4	0.761	0.641	0.709	0.778	0.864	1.05	1.97	2.25	2.51	2.78	8
Silver T-Ag	0.0000601	0.0000594	0.00002	0.00002	0.00002	0.00002	0.000036	0.0000685	0.000127	0.000159	0.000191	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	2.05	0.141	2	2	2	2	2	2	2.12	2.26	2.4	8
Sodium D-Na	2.04	0.106	2	2	2	2	2	2	2.09	2.2	2.3	8
Strontium T-Sr	0.3	0.192	0.129	0.139	0.149	0.158	0.207	0.441	0.507	0.581	0.654	8
Strontium D-Sr	0.293	0.189	0.121	0.13	0.139	0.154	0.207	0.432	0.498	0.571	0.644	8
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.0263	0.0221	0.01	0.01	0.01	0.0123	0.023	0.0263	0.0423	0.0602	0.078	8
Titanium D-Ti	0.0118	0.00388	0.01	0.01	0.01	0.01	0.01	0.0108	0.0154	0.0182	0.021	8
Uranium T-U	0.00055	0.00045	0.00023	0.000237	0.000244	0.000258	0.000355	0.000688	0.000965	0.00126	0.00156	8
Uranium D-U	0.00048	0.000435	0.0002	0.0002	0.0002	0.0002	0.000265	0.000625	0.000883	0.00117	0.00145	8
Vanadium T-V	0.00226	0.00212	0.0005	0.0005	0.0005	0.0005	0.00185	0.00303	0.00433	0.00548	0.00663	8
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Zinc T-Zn	0.0212	0.0103	0.0126	0.0129	0.0132	0.0146	0.0167	0.0246	0.0373	0.0376	0.0378	8
Zinc D-Zn	0.0104	0.00958	0.005	0.005	0.005	0.00515	0.00645	0.00998	0.0186	0.0259	0.0332	8

Rio Blanco Creek	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.88	0.298	7.53	7.56	7.59	7.69	7.8	7.94	8.37	8.42	8.51	16
Conductivity	227	91.9	100	110	130	146	211	299	353	379	384	21
Hardness CaCO3	102	43.4	40	50	52	67	100	139	158	180	187	21
Total Dissolved Solids	150	62.7	72	72	87	100	133	194	256	260	260	21
Total Suspended Solids	50.9	150	1	1	1	3	6	27	42	153	690	21
Turbidity	10.5	14.1	0.17	0.29	0.34	1.41	2.56	18	30.3	43	45	21
Alkalinity-Total CaCO3	43.1	14.4	25	26	27	31	38.6	56.2	63	66	68.9	21
Acidity (as CaCO3)	2.2	0.75	1	1	1.18	1.8	2.2	2.53	3.23	3.51	3.6	20
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0631	0.0237	0.041	0.0421	0.0431	0.0448	0.052	0.0825	0.0918	0.0974	0.103	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	67.9	38.2	18	23	23	33	62.3	91.4	120	134	140	21
Nitrate Nitrogen N	0.00821	0.00488	0.005	0.005	0.005	0.005	0.00515	0.0103	0.015	0.0161	0.0173	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	8
Ortho-Phosphate	0.00116	0.000141	0.001	0.001	0.001	0.00108	0.00115	0.00123	0.00133	0.00137	0.0014	8
Phosphorus (P)-Total	0.0326	0.0605	0.002	0.00211	0.00221	0.00358	0.00475	0.0268	0.0842	0.131	0.178	8
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Dissolved Organic Carbon	0.533	0.0682	0.5	0.5	0.5	0.5	0.5	0.518	0.606	0.648	0.69	8
Aluminum T-Al	0.553	1.39	0.0072	0.012	0.0241	0.058	0.121	0.359	1.1	1.58	6.37	21
Aluminum D-Al	0.0146	0.0132	0.0003	0.0005	0.0005	0.0026	0.0103	0.0229	0.0364	0.039	0.0392	21
Antimony T-Sb	0.000648	0.000466	0.00029	0.0003	0.00032	0.00049	0.0005	0.00058	0.0009	0.0017	0.0022	21
Antimony D-Sb	0.000356	0.000161	0.0001	0.0001	0.00013	0.00019	0.00035	0.0005	0.0005	0.0005	0.00056	21
Arsenic T-As	0.00149	0.00162	0.00057	0.000581	0.000591	0.00066	0.00082	0.00127	0.00309	0.00419	0.00529	8
Arsenic D-As	0.000523	0.0000468	0.0005	0.0005	0.0005	0.0005	0.0005	0.000513	0.000574	0.000602	0.00063	8
Barium T-Ba	0.0401	0.0211	0.024	0.026	0.026	0.028	0.035	0.039	0.067	0.069	0.116	21
Barium D-Ba	0.0275	0.00682	0.019	0.02	0.02	0.023	0.025	0.034	0.0356	0.039	0.0434	21
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00005	7.32E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	7
Bismuth D-Bi	0.00005	7.32E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	7
Boron T-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.1	1.48E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000375	0.000651	0.00004	0.00006	0.00009	0.0001	0.00017	0.000206	0.00089	0.0012	0.00293	21
Cadmium D-Cd	0.000144	0.000134	0.00007	0.00008	0.00008	0.00009	0.0001	0.00015	0.00016	0.000176	0.00071	21
Calcium T-Ca	39.1	17.1	18	20	21	24	37.4	49.4	65.7	66.7	72.9	21
Calcium D-Ca	36	14.7	17	18	19	23	35.7	45	54.1	63.3	66	21
Chromium T-Cr	0.00108	0.000212	0.001	0.001	0.001	0.001	0.001	0.001	0.00118	0.00139	0.0016	8
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.000966	0.0021	0.00009	0.00011	0.00013	0.0003	0.0003	0.00063	0.0014	0.00199	0.00993	21
Cobalt D-Co	0.000251	0.000199	0.00003	0.00005	0.00007	0.00014	0.00024	0.0003	0.0003	0.0004	0.00099	21
Copper T-Cu	0.00742	0.0173	0.0004	0.0009	0.001	0.0013	0.0025	0.0056	0.011	0.0155	0.0811	21
Copper D-Cu	0.000678	0.000403	0.00005	0.0001	0.0002	0.0003	0.00066	0.001	0.001	0.001	0.0015	21
Iron T-Fe	0.894	1.86	0.01	0.03	0.033	0.1	0.23	0.65	2.6	3.54	8.01	21
Iron D-Fe	0.019	0.00979	0.005	0.01	0.01	0.01	0.017	0.03	0.03	0.03	0.03	21
Lead T-Pb	0.00154	0.0021	0.00014	0.00014	0.00034	0.0005	0.00071	0.0015	0.00289	0.0051	0.00924	21
Lead D-Pb	0.000286	0.000265	0.000025	0.000025	0.00004	0.00007	0.00012	0.0005	0.0005	0.0005	0.001	21
Magnesium T-Mg	4.49	2.65	1.8	2.1	2.5	2.7	3.62	5.34	7.18	7.7	13.3	21
Magnesium D-Mg	3.71	1.57	1.7	1.9	2.1	2.33	3.44	4.92	5.98	6.1	7	21
Manganese T-Mn	0.0458	0.126	0.00053	0.00089	0.0023	0.00454	0.01	0.0269	0.063	0.111	0.583	21
Manganese D-Mn	0.00849	0.0203	0.00005	0.0001	0.00046	0.0019	0.00391	0.00515	0.012	0.013	0.0953	21
Mercury T-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Mercury D-Hg	0.00000563	0.00000177	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000065	0.00000825	0.00001	8
Molybdenum T-Mo	0.00253	0.00155	0.0011	0.0013	0.0015	0.0016	0.00211	0.0029	0.00308	0.0047	0.00826	21
Molybdenum D-Mo	0.00189	0.000676	0.001	0.0011	0.0013	0.0013	0.0016	0.00259	0.0027	0.0029	0.00316	21
Nickel T-Ni	0.00907	0.0185	0.0015	0.0015	0.0015	0.0019	0.0024	0.0049	0.0078	0.0581	0.07	21
Nickel D-Ni	0.00184	0.00229	0.0003	0.00051	0.00055	0.0008	0.0015	0.0019	0.0021	0.00221	0.0115	21
Selenium T-Se	0.0027	0.0011	0.00165	0.0017	0.00176	0.00189	0.00225	0.00338	0.00398	0.00437	0.00477	8
Selenium D-Se	0.00265	0.00113	0.0016	0.00161	0.00163	0.0017	0.00228	0.00344	0.004	0.00433	0.00466	8
Silicon T-Si	2.96	0.741	2.08	2.13	2.17	2.38	2.88	3.49	3.78	3.92	4.06	8
Silicon D-Si	2.53	0.75	1.76	1.76	1.76	1.91	2.29	3.26	3.46	3.51	3.56	8
Silver T-Ag	0.0000285	0.000024	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.0000404	0.0000642	0.000088	8
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.73	0.858	0.66	0.7	0.8	0.87	2	2	2.5	2.85	4.12	21
Sodium D-Na	1.54	0.656	0.64	0.66	0.68	0.81	1.93	2	2.2	2.4	2.45	21
Strontium T-Sr	0.171	0.0724	0.084	0.084	0.086	0.114	0.16	0.239	0.245	0.302	0.319	21
Strontium D-Sr	0.157	0.0665	0.068	0.078	0.079	0.094	0.151	0.217	0.242	0.248	0.302	21
Thallium T-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.0002	2.9E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.0146	0.0108	0.01	0.01	0.01	0.01	0.01	0.012	0.0228	0.0319	0.041	8
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000284	0.000129	0.0002	0.0002	0.0002	0.0002	0.000225	0.000313	0.000416	0.000493	0.00057	8
Uranium D-U	0.000268	0.000123	0.0002	0.0002	0.0002	0.0002	0.0002	0.000283	0.000389	0.00047	0.00055	8
Vanadium T-V	0.00134	0.0021	0.0005	0.0005	0.0005	0.0005	0.0005	0.000675	0.00279	0.00465	0.0065	8
Vanadium D-V	0.000563	0.000177	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00065	0.000825	0.001	8
Zinc T-Zn	0.0243	0.0367	0.005	0.0055	0.0068	0.0083	0.012	0.023	0.0341	0.084	0.166	21
Zinc D-Zn	0.00484	0.00236	0.0004	0.001	0.0018	0.0037	0.005	0.006	0.0072	0.008	0.01	21

Roosevelt Creek	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.95	0.422	7.3	7.4	7.5	7.6	8	8.37	8.39	8.39	8.4	8
Conductivity	138	41.7	86.6	92.4	98.1	102	138	155	194	201	208	9
Hardness CaCO3	61.7	22.1	40	40.6	41.1	47.9	56.9	73	85.2	97.1	109	9
Total Dissolved Solids	81.1	23.8	58	58.4	58.8	60	75	96	106	117	128	9
Total Suspended Solids	9.12	9.86	1	1.8	2.6	3.5	5	11.2	18.2	25.5	32.9	9
Turbidity	8.44	10.1	0.82	1.21	1.6	2.24	6	7.79	15.9	25	34	9
Alkalinity-Total CaCO3	55.5	16.5	34.6	36.7	38.8	42.2	53	66	76.4	79.3	82.1	9
Acidity (as CaCO3)	1.38	0.547	0.8	0.88	0.96	1	1.3	1.5	1.88	2.24	2.6	9
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	7
Fluoride F	0.0206	0.00151	0.02	0.02	0.02	0.02	0.02	0.02	0.0216	0.0228	0.024	7
Bromide Br	0.05	7.49E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	7
Sulphate SO4	14.3	4.36	9.39	9.71	10	10.5	13.6	16	20.3	20.8	21.4	9
Nitrate Nitrogen N	0.165	0.204	0.0336	0.0356	0.0376	0.0465	0.0718	0.178	0.374	0.489	0.603	7
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	7
Ortho-Phosphate	0.00109	0.000157	0.001	0.001	0.001	0.001	0.001	0.0011	0.00128	0.00134	0.0014	7
Phosphorus (P)-Total	0.00894	0.00643	0.002	0.00215	0.0023	0.00525	0.0091	0.0098	0.0148	0.0181	0.0214	7
Total Organic Carbon	0.524	0.0643	0.5	0.5	0.5	0.5	0.5	0.5	0.568	0.619	0.67	7
Dissolved Organic Carbon	0.509	0.0227	0.5	0.5	0.5	0.5	0.5	0.5	0.524	0.542	0.56	7
Aluminum T-Al	0.397	0.436	0.0394	0.0549	0.0704	0.0891	0.215	0.469	0.864	1.13	1.39	9
Aluminum D-Al	0.0141	0.0132	0.0005	0.00222	0.00394	0.005	0.0072	0.0192	0.032	0.0355	0.039	9
Antimony T-Sb	0.000439	0.000121	0.00022	0.000224	0.000228	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	9
Antimony D-Sb	0.000432	0.000135	0.00018	0.000192	0.000204	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	9
Arsenic T-As	0.00064	0.000292	0.0005	0.0005	0.0005	0.0005	0.0005	0.0006	0.000932	0.00111	0.00128	7
Arsenic D-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Barium T-Ba	0.0728	0.00983	0.0639	0.0643	0.0648	0.067	0.069	0.076	0.0802	0.0881	0.096	9
Barium D-Ba	0.0612	0.00887	0.052	0.052	0.052	0.0552	0.06	0.062	0.0752	0.0755	0.0758	9
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Bismuth T-Bi	0.00005	7.32E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	7
Bismuth D-Bi	0.00005	7.32E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	7
Boron T-B	0.1	1.5E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7
Boron D-B	0.1	1.5E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	7
Cadmium T-Cd	0.0000404	0.0000396	0.0000057	0.0000059	0.0000061	0.0000113	0.0000204	0.0000711	0.0001	0.0001	0.0001	9
Cadmium D-Cd	0.0000354	0.0000366	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.0001	0.0001	0.0001	9
Calcium T-Ca	22.5	9.29	12.9	13.7	14.5	15.7	19.7	24.4	35.5	37.9	40.3	9
Calcium D-Ca	22.4	9.22	12.9	13.7	14.5	15.8	19.1	24.6	35.6	37.7	39.8	9
Chromium T-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Cobalt T-Co	0.000347	0.00018	0.00013	0.000198	0.000266	0.0003	0.0003	0.0003	0.000478	0.000634	0.00079	9
Cobalt D-Co	0.000258	0.0000928	0.00003	0.000094	0.000158	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	9
Copper T-Cu	0.00123	0.000787	0.0003	0.000545	0.00079	0.001	0.001	0.00113	0.00195	0.00248	0.003	8
Copper D-Cu	0.000888	0.000318	0.0001	0.000415	0.00073	0.001	0.001	0.001	0.001	0.001	0.001	8
Iron T-Fe	0.466	0.512	0.05	0.0736	0.0972	0.137	0.35	0.433	1.02	1.34	1.67	9
Iron D-Fe	0.0292	0.00793	0.01	0.018	0.026	0.03	0.03	0.03	0.0344	0.0372	0.04	9
Lead T-Pb	0.000951	0.000972	0.00025	0.000298	0.000346	0.0005	0.0005	0.00099	0.00193	0.00262	0.00331	9
Lead D-Pb	0.000397	0.000204	0.000025	0.000035	0.000045	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	9
Magnesium T-Mg	3.88	1.27	2.42	2.55	2.68	3.06	3.26	4.36	5.6	5.87	6.14	9
Magnesium D-Mg	3.66	1.39	2.23	2.25	2.27	2.59	3.14	4.34	5.56	5.77	5.98	9
Manganese T-Mn	0.0264	0.0301	0.00354	0.00472	0.00589	0.00796	0.0139	0.0251	0.0582	0.0781	0.0979	9
Manganese D-Mn	0.00177	0.00157	0.00053	0.000602	0.000674	0.00079	0.00136	0.00191	0.00287	0.00428	0.00568	9
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	7
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	7
Molybdenum T-Mo	0.000901	0.000209	0.00041	0.000526	0.000642	0.001	0.001	0.001	0.001	0.001	0.001	9
Molybdenum D-Mo	0.000889	0.000242	0.0003	0.00046	0.00062	0.001	0.001	0.001	0.001	0.001	0.001	9
Nickel T-Ni	0.00101	0.000376	0.0003	0.00058	0.00086	0.001	0.001	0.001	0.00116	0.00148	0.0018	9
Nickel D-Ni	0.000828	0.000344	0.00015	0.00021	0.00027	0.001	0.001	0.001	0.001	0.001	0.001	9
Selenium T-Se	0.000382	0.000212	0.000206	0.000211	0.000216	0.000234	0.000294	0.000453	0.000604	0.000703	0.000801	7
Selenium D-Se	0.000405	0.000245	0.000188	0.000197	0.000205	0.000218	0.000341	0.000504	0.000685	0.000775	0.000865	7
Silicon T-Si	1.87	0.559	1.38	1.44	1.49	1.58	1.61	1.94	2.44	2.74	3.04	7
Silicon D-Si	1.09	0.488	0.634	0.662	0.689	0.737	0.889	1.34	1.66	1.82	1.97	7
Silver T-Ag	0.000024	0.00000894	0.00002	0.00002	0.00002	0.00002	0.00002	0.000022	0.000032	0.000038	0.000044	7
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	7
Sodium T-Na	1.74	0.551	0.42	0.764	1.11	2	2	2	2	2	2	9
Sodium D-Na	1.72	0.593	0.32	0.66	1	2	2	2	2	2	2	9
Strontium T-Sr	0.132	0.037	0.0883	0.0928	0.0973	0.102	0.117	0.152	0.183	0.186	0.189	9
Strontium D-Sr	0.127	0.0378	0.0862	0.0881	0.09	0.0959	0.116	0.149	0.175	0.182	0.189	9
Thallium T-Tl	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Thallium D-Tl	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Titanium T-Ti	0.0133	0.00709	0.01	0.01	0.01	0.01	0.01	0.012	0.02	0.0245	0.029	7
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	7
Uranium T-U	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Uranium D-U	0.0002	2.93E-20	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Vanadium T-V	0.00132	0.00101	0.0005	0.0005	0.0005	0.0005	0.00117	0.00168	0.00251	0.00286	0.00322	7
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Zinc T-Zn	0.00546	0.00198	0.002	0.0032	0.0044	0.005	0.005	0.0052	0.00818	0.00854	0.0089	9
Zinc D-Zn	0.00433	0.00141	0.001	0.0018	0.0026	0.005	0.005	0.005	0.005	0.005	0.005	9

GSC09	Spring Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	5.2	N/A	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	1
Conductivity	140	N/A	140	140	140	140	140	140	140	140	140	1
Hardness CaCO3	56.3	N/A	56.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3	56.3	1
Total Dissolved Solids	105	N/A	105	105	105	105	105	105	105	105	105	1
Total Suspended Solids	3	N/A	3	3	3	3	3	3	3	3	3	1
Turbidity	0.15	N/A	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15	1
Alkalinity-Total CaCO3	1	N/A	1	1	1	1	1	1	1	1	1	1
Acidity (as CaCO3)	2.2	N/A	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	1
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
Fluoride F	0.022	N/A	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	0.022	1
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1
Sulphate SO4	59.9	N/A	59.9	59.9	59.9	59.9	59.9	59.9	59.9	59.9	59.9	1
Nitrate Nitrogen N	0.0336	N/A	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336	0.0336	1
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Phosphorus (P)-Total	0.0023	N/A	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023	0.0023	1
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
Aluminum T-Al	0.126	N/A	0.126	0.126	0.126	0.126	0.126	0.126	0.126	0.126	0.126	1
Aluminum D-Al	0.116	N/A	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116	1
Antimony T-Sb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Antimony D-Sb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Arsenic T-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Arsenic D-As	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Barium T-Ba	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1
Barium D-Ba	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	1
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	1
Boron T-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1
Boron D-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1
Cadmium T-Cd	0.000836	N/A	0.000836	0.000836	0.000836	0.000836	0.000836	0.000836	0.000836	0.000836	0.000836	1
Cadmium D-Cd	0.000856	N/A	0.000856	0.000856	0.000856	0.000856	0.000856	0.000856	0.000856	0.000856	0.000856	1
Calcium T-Ca	19.1	N/A	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1	1
Calcium D-Ca	18.5	N/A	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	18.5	1
Chromium T-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Cobalt T-Co	0.00049	N/A	0.00049	0.00049	0.00049	0.00049	0.00049	0.00049	0.00049	0.00049	0.00049	1
Cobalt D-Co	0.00046	N/A	0.00046	0.00046	0.00046	0.00046	0.00046	0.00046	0.00046	0.00046	0.00046	1
Copper T-Cu	0.0097	N/A	0.0097	0.0097	0.0097	0.0097	0.0097	0.0097	0.0097	0.0097	0.0097	1
Copper D-Cu	0.009	N/A	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	1
Iron T-Fe	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1
Iron D-Fe	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1
Lead T-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Lead D-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Magnesium T-Mg	2.52	N/A	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	1
Magnesium D-Mg	2.45	N/A	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	2.45	1
Manganese T-Mn	0.0223	N/A	0.0223	0.0223	0.0223	0.0223	0.0223	0.0223	0.0223	0.0223	0.0223	1
Manganese D-Mn	0.0216	N/A	0.0216	0.0216	0.0216	0.0216	0.0216	0.0216	0.0216	0.0216	0.0216	1
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	1
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	1
Molybdenum T-Mo	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Molybdenum D-Mo	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Nickel T-Ni	0.0021	N/A	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	0.0021	1
Nickel D-Ni	0.002	N/A	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	1
Selenium T-Se	0.000743	N/A	0.000743	0.000743	0.000743	0.000743	0.000743	0.000743	0.000743	0.000743	0.000743	1
Selenium D-Se	0.000689	N/A	0.000689	0.000689	0.000689	0.000689	0.000689	0.000689	0.000689	0.000689	0.000689	1
Silicon T-Si	3.07	N/A	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07	1
Silicon D-Si	3	N/A	3	3	3	3	3	3	3	3	3	1
Silver T-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	1
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	1
Sodium T-Na	2	N/A	2	2	2	2	2	2	2	2	2	1
Sodium D-Na	2	N/A	2	2	2	2	2	2	2	2	2	1
Strontium T-Sr	0.204	N/A	0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204	0.204	1
Strontium D-Sr	0.195	N/A	0.195	0.195	0.195	0.195	0.195	0.195	0.195	0.195	0.195	1
Thallium T-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	1
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	1
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Titanium T-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1
Uranium T-U	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	1
Uranium D-U	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	1
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Zinc T-Zn	0.0536	N/A	0.0536	0.0536	0.0536	0.0536	0.0536	0.0536	0.0536	0.0536	0.0536	1
Zinc D-Zn	0.058	N/A	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	1

American Creek	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.67	0.319	7.33	7.37	7.41	7.51	7.58	7.72	8.01	8.13	8.25	6
Conductivity	81.8	8.3	72.5	72.5	72.6	74.4	82.4	87.5	90.5	91.5	92.6	6
Hardness CaCO3	38.6	4.62	32.8	33.2	33.6	35	38.6	42	43.6	44	44.4	6
Total Dissolved Solids	56.2	8.13	47	47.3	47.5	50	56.5	59.3	64.5	66.8	69	6
Total Suspended Solids	30.4	22	13.8	14	14.1	14.6	20.6	40.2	56.5	62.2	68	6
Turbidity	19.5	9.87	9.69	10.3	10.8	12.2	16.1	28.2	31.6	31.7	31.9	6
Alkalinity-Total CaCO3	31.4	3.29	27.5	27.8	28	28.8	31.2	33.6	34.9	35.4	35.9	6
Acidity (as CaCO3)	1.6	0.268	1.1	1.23	1.35	1.6	1.65	1.7	1.8	1.85	1.9	6
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	6
Fluoride F	0.0357	0.00234	0.032	0.0328	0.0335	0.035	0.0355	0.0368	0.038	0.0385	0.039	6
Bromide Br	0.05	7.6E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	6
Sulphate SO4	9.55	1.26	7.75	7.89	8.02	8.68	9.89	10.4	10.8	10.8	10.9	6
Nitrate Nitrogen N	0.0375	0.0118	0.0249	0.0259	0.0269	0.0296	0.0337	0.0471	0.0521	0.0526	0.0531	6
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	6
Total Nitrogen	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	6
Ortho-Phosphate	0.00105	0.0000837	0.001	0.001	0.001	0.001	0.001	0.00108	0.00115	0.00118	0.0012	6
Phosphorus (P)-Total	0.0378	0.02	0.0193	0.0196	0.0199	0.0217	0.0315	0.052	0.0619	0.0644	0.067	6
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	6
Dissolved Organic Carbon	0.595	0.105	0.5	0.5	0.5	0.518	0.575	0.625	0.71	0.745	0.78	6
Aluminum T-Al	1.23	0.506	0.52	0.58	0.64	0.882	1.3	1.63	1.75	1.76	1.77	6
Aluminum D-Al	0.0401	0.0123	0.0296	0.0303	0.031	0.0326	0.0349	0.0441	0.0545	0.0583	0.0622	6
Antimony T-Sb	0.000472	0.0000694	0.00033	0.000373	0.000415	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Antimony D-Sb	0.000453	0.000114	0.00022	0.00029	0.00036	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Arsenic T-As	0.000957	0.000264	0.00064	0.000658	0.000675	0.00076	0.00097	0.00108	0.00123	0.00129	0.00136	6
Arsenic D-As	0.00048	0.000049	0.00038	0.00041	0.00044	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Barium T-Ba	0.0988	0.00744	0.088	0.0888	0.0895	0.0935	0.102	0.105	0.105	0.105	0.105	6
Barium D-Ba	0.0673	0.00527	0.0578	0.0599	0.0619	0.0665	0.068	0.0703	0.072	0.0725	0.073	6
Beryllium T-Be	0.00085	0.000367	0.0001	0.000325	0.00055	0.001	0.001	0.001	0.001	0.001	0.001	6
Beryllium D-Be	0.00085	0.000367	0.0001	0.000325	0.00055	0.001	0.001	0.001	0.001	0.001	0.001	6
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	6
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	6
Boron T-B	0.0852	0.0363	0.011	0.0333	0.0555	0.1	0.1	0.1	0.1	0.1	0.1	6
Boron D-B	0.085	0.0367	0.01	0.0325	0.055	0.1	0.1	0.1	0.1	0.1	0.1	6
Cadmium T-Cd	0.0000278	0.000014	0.0000109	0.0000123	0.0000136	0.0000185	0.0000256	0.0000372	0.0000441	0.0000457	0.0000473	6
Cadmium D-Cd	0.0000169	0.000000245	0.0000164	0.0000166	0.0000167	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	6
Calcium T-Ca	13.9	1.55	12	12.1	12.1	12.6	14.1	15.2	15.5	15.6	15.6	6
Calcium D-Ca	13.9	1.64	11.9	12	12.2	12.7	14	15.2	15.7	15.9	16	6
Chromium T-Cr	0.000892	0.000265	0.00035	0.000513	0.000675	0.001	0.001	0.001	0.001	0.001	0.001	6
Chromium D-Cr	0.00085	0.000367	0.0001	0.000325	0.00055	0.001	0.001	0.001	0.001	0.001	0.001	6
Cobalt T-Co	0.00054	0.000226	0.0003	0.0003	0.0003	0.000353	0.00052	0.000703	0.0008	0.00082	0.00084	6
Cobalt D-Co	0.000267	0.0000816	0.0001	0.00015	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	6
Copper T-Cu	0.00206	0.000805	0.001	0.00103	0.00105	0.0014	0.00235	0.00263	0.00277	0.00281	0.00284	6
Copper D-Cu	0.000872	0.000314	0.00023	0.000423	0.000615	0.001	0.001	0.001	0.001	0.001	0.001	6
Iron T-Fe	1.27	0.584	0.51	0.568	0.625	0.87	1.27	1.73	1.92	1.94	1.96	6
Iron D-Fe	0.0318	0.00402	0.03	0.03	0.03	0.03	0.03	0.0308	0.0355	0.0378	0.04	6
Lead T-Pb	0.00115	0.000485	0.00053	0.000558	0.000585	0.000755	0.00121	0.00154	0.00165	0.00167	0.00169	6
Lead D-Pb	0.000427	0.000178	0.000064	0.000173	0.000282	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Magnesium T-Mg	1.37	0.122	1.24	1.24	1.24	1.27	1.39	1.42	1.5	1.53	1.56	6
Magnesium D-Mg	0.914	0.122	0.741	0.758	0.776	0.833	0.925	1	1.04	1.05	1.06	6
Manganese T-Mn	0.0522	0.0237	0.0216	0.0238	0.026	0.0359	0.0525	0.0689	0.0783	0.0802	0.0822	6
Manganese D-Mn	0.00731	0.00382	0.00375	0.004	0.00425	0.00483	0.00572	0.00939	0.012	0.0127	0.0135	6
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	6
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	6
Molybdenum T-Mo	0.000916	0.000207	0.000494	0.000621	0.000747	0.001	0.001	0.001	0.001	0.001	0.001	6
Molybdenum D-Mo	0.000909	0.000224	0.000451	0.000588	0.000726	0.001	0.001	0.001	0.001	0.001	0.001	6
Nickel T-Ni	0.000917	0.000204	0.0005	0.000625	0.00075	0.001	0.001	0.001	0.001	0.001	0.001	6
Nickel D-Ni	0.000917	0.000204	0.0005	0.000625	0.00075	0.001	0.001	0.001	0.001	0.001	0.001	6
Selenium T-Se	0.000167	0.0000204	0.000146	0.000147	0.000149	0.000152	0.000162	0.000185	0.000192	0.000192	0.000193	6
Selenium D-Se	0.000143	0.0000246	0.000117	0.000117	0.000118	0.000122	0.000142	0.000164	0.000171	0.000173	0.000174	6
Silicon T-Si	2.91	0.818	1.68	1.83	1.98	2.44	3.03	3.38	3.71	3.83	3.95	6
Silicon D-Si	0.806	0.0999	0.698	0.699	0.701	0.72	0.799	0.896	0.92	0.92	0.921	6
Silver T-Ag	0.0000227	0.00000393	0.00002	0.00002	0.00002	0.00002	0.000021	0.0000235	0.000027	0.0000285	0.00003	6
Silver D-Ag	0.0000183	0.00000408	0.00001	0.0000125	0.000015	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	6
Sodium T-Na	1.76	0.592	0.55	0.913	1.28	2	2	2	2	2	2	6
Sodium D-Na	1.73	0.656	0.394	0.796	1.2	2	2	2	2	2	2	6
Strontium T-Sr	0.0846	0.012	0.0684	0.069	0.0697	0.0752	0.0886	0.093	0.0954	0.096	0.0965	6
Strontium D-Sr	0.0824	0.0121	0.0653	0.0665	0.0677	0.0737	0.0859	0.0905	0.0937	0.0947	0.0957	6
Thallium T-Tl	0.00017	0.0000727	0.000022	0.0000665	0.000111	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	6
Thallium D-Tl	0.000168	0.0000776	0.00001	0.0000575	0.000105	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	6
Tin T-Sn	0.00042	0.000179	0.0001	0.00018	0.00026	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.000434	0.000148	0.00017	0.000236	0.000302	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.0397	0.0168	0.016	0.0185	0.021	0.029	0.041	0.0499	0.057	0.0595	0.062	6
Titanium D-Ti	0.00845	0.00379	0.00071	0.00303	0.00536	0.01	0.01	0.01	0.01	0.01	0.01	6
Uranium T-U	0.00018	0.0000486	0.000081	0.000111	0.000141	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	6
Uranium D-U	0.000173	0.0000665	0.000037	0.0000778	0.000119	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	6
Vanadium T-V	0.00334	0.00132	0.00134	0.00157	0.0018	0.00258	0.00358	0.00429	0.00465	0.0047	0.00476	6
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Zinc T-Zn	0.00627	0.00154	0.005	0.005	0.005	0.00505	0.0056	0.00758	0.0082	0.00825	0.0083	6
Zinc D-Zn	0.00433	0.00163	0.001	0.002	0.003	0.005	0.005	0.005	0.005	0.005	0.005	6

Lower Bitter Creek (BC02)	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.12	0.363	7.5	7.56	7.67	7.85	8.12	8.48	8.5	8.51	8.52	15
Conductivity	111	29.7	80	80.7	80.9	90.7	103	122	140	149	198	18
Hardness CaCO3	50.6	13.2	35	35	35.7	40.2	49.8	58.5	66.7	72.7	82	18
Total Dissolved Solids	72.7	17.8	50	51.7	52	62.5	71	82.3	86.9	94.4	125	18
Total Suspended Solids	554	287	101	197	274	343	520	733	923	1030	1200	18
Turbidity	381	194	110	153	167	251	368	470	582	674	910	18
Alkalinity-Total CaCO3	45.8	8.84	33.1	36.6	37.8	39.3	43.8	48.7	61.3	62.3	64	18
Acidity (as CaCO3)	1.19	0.487	0.9	0.975	1	1	1	1.13	1.45	1.93	2.9	16
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0203	0.000707	0.02	0.02	0.02	0.02	0.02	0.02	0.0206	0.0213	0.022	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	14.1	7.67	7.2	7.54	7.92	9.42	12	15.8	21.2	25.7	39	18
Nitrate Nitrogen N	0.0223	0.0102	0.0113	0.0118	0.0122	0.0137	0.0195	0.032	0.0346	0.0353	0.036	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.217	0.0577	0.15	0.16	0.17	0.2	0.25	0.25	0.25	0.25	0.25	3
Ammonia Nitrogen N	0.0085	0.00346	0.005	0.005	0.005	0.00605	0.00775	0.00995	0.0128	0.0139	0.0149	8
Ortho-Phosphate	0.0015	0.00016	0.0013	0.0013	0.0013	0.00138	0.0015	0.00163	0.0017	0.0017	0.0017	8
Phosphorus (P)-Total	0.555	0.324	0.0385	0.134	0.23	0.339	0.525	0.846	0.93	0.942	0.954	8
Total Organic Carbon	1.22	1.02	0.5	0.5	0.5	0.5	0.5	2.1	2.65	2.67	2.68	8
Dissolved Organic Carbon	0.54	0.113	0.5	0.5	0.5	0.5	0.5	0.5	0.596	0.708	0.82	8
Aluminum T-Al	10.4	4.66	1.1	3.01	3.9	8.4	10.7	12.9	16.2	16.7	17.8	18
Aluminum D-Al	0.0875	0.0438	0.0045	0.033	0.0402	0.0547	0.0863	0.113	0.138	0.159	0.179	18
Antimony T-Sb	0.00215	0.000806	0.0006	0.000991	0.00114	0.00175	0.00208	0.0026	0.00305	0.00322	0.00402	18
Antimony D-Sb	0.000707	0.000367	0.00027	0.00033	0.000382	0.000493	0.000595	0.000838	0.0012	0.00128	0.0017	18
Arsenic T-As	0.0205	0.00986	0.012	0.0122	0.0124	0.013	0.0164	0.0258	0.0337	0.0358	0.038	8
Arsenic D-As	0.00056	0.000142	0.00039	0.000429	0.000467	0.0005	0.00052	0.00057	0.000702	0.000786	0.00087	8
Barium T-Ba	0.176	0.0693	0.044	0.0714	0.0887	0.131	0.179	0.215	0.262	0.286	0.301	18
Barium D-Ba	0.0263	0.0058	0.0159	0.0185	0.019	0.021	0.0269	0.0305	0.0322	0.0332	0.0379	18
Beryllium T-Be	0.000834	0.000309	0.00028	0.000319	0.000357	0.000848	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00643	0.0176	0.000078	0.0000854	0.0000927	0.000101	0.000182	0.000351	0.0154	0.0327	0.05	8
Bismuth D-Bi	0.00635	0.0176	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.0154	0.0327	0.05	8
Boron T-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000688	0.000306	0.0003	0.000371	0.000385	0.000424	0.000582	0.000982	0.001	0.00106	0.00138	18
Cadmium D-Cd	0.0000876	0.0000758	0.0000075	0.0000156	0.000017	0.000017	0.0001	0.0001	0.0002	0.000205	0.00023	18
Calcium T-Ca	24.6	4.89	17	18.4	19	21.1	24	28.3	31.2	32.5	33.1	18
Calcium D-Ca	17.2	4.22	12	12.3	12.3	14.1	17.1	19.6	21.3	23	28.5	18
Chromium T-Cr	0.0183	0.0057	0.0131	0.0132	0.0133	0.0139	0.0154	0.0238	0.0249	0.0261	0.0273	8
Chromium D-Cr	0.000809	0.000357	0.00015	0.00021	0.000269	0.00083	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.00688	0.00358	0.00052	0.00231	0.00278	0.0049	0.00618	0.00887	0.0118	0.0134	0.014	18
Cobalt D-Co	0.000224	0.000222	0.00003	0.0000555	0.00006	0.000085	0.00017	0.0003	0.0003	0.000405	0.001	18
Copper T-Cu	0.0375	0.0192	0.01	0.0122	0.014	0.0301	0.0324	0.0416	0.0643	0.0749	0.0775	18
Copper D-Cu	0.000707	0.000475	0.0001	0.000185	0.000207	0.000333	0.0007	0.001	0.001	0.00115	0.002	18
Iron T-Fe	14.9	8.44	0.91	2.53	3.77	8.9	14.7	20.2	25.7	27.6	30.9	18
Iron D-Fe	0.0301	0.0237	0.005	0.005	0.0085	0.01	0.03	0.036	0.0632	0.0806	0.084	18
Lead T-Pb	0.0103	0.00676	0.0015	0.00227	0.00324	0.00555	0.00769	0.0154	0.0176	0.0201	0.0268	18
Lead D-Pb	0.000258	0.000282	0.000025	0.000025	0.0000425	0.0000525	0.000075	0.0005	0.0005	0.000575	0.001	18
Magnesium T-Mg	8.32	2.58	3.2	4.85	5.24	7.01	8.04	10	11.6	12.1	13.3	18
Magnesium D-Mg	1.76	0.524	1.05	1.13	1.16	1.29	1.72	2.22	2.43	2.5	2.53	18
Manganese T-Mn	0.426	0.228	0.017	0.106	0.191	0.273	0.402	0.502	0.712	0.799	0.919	18
Manganese D-Mn	0.00518	0.00917	0.00005	0.0000925	0.000226	0.000305	0.00091	0.00227	0.0219	0.0231	0.0295	18
Mercury T-Hg	0.0000164	0.00000725	0.0000097	0.00000981	0.00000991	0.00001	0.0000134	0.000025	0.000025	0.000025	0.000025	8
Mercury D-Hg	0.00000625	0.00000231	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000625	0.00001	0.00001	0.00001	8
Molybdenum T-Mo	0.00316	0.00125	0.001	0.00151	0.00188	0.00255	0.00312	0.0036	0.00421	0.00497	0.0067	18
Molybdenum D-Mo	0.0021	0.00104	0.000932	0.00099	0.00107	0.00133	0.00187	0.00253	0.00377	0.00399	0.00452	18
Nickel T-Ni	0.0292	0.0412	0.0027	0.00814	0.013	0.015	0.0185	0.0269	0.0364	0.0628	0.19	18
Nickel D-Ni	0.000881	0.000383	0.00015	0.000363	0.00047	0.0005	0.001	0.001	0.00129	0.00152	0.0016	18
Selenium T-Se	0.00179	0.000587	0.0012	0.00128	0.00135	0.00143	0.00168	0.00186	0.00232	0.00271	0.0031	8
Selenium D-Se	0.000693	0.000251	0.00036	0.000395	0.000429	0.000479	0.000673	0.000914	0.001	0.00101	0.00101	8
Silicon T-Si	20.9	3.95	17	17.3	17.6	17.9	20.1	21.7	27.3	27.4	27.4	9
Silicon D-Si	0.698	0.131	0.452	0.52	0.588	0.658	0.695	0.72	0.876	0.883	0.889	9
Silver T-Ag	0.000405	0.000188	0.000251	0.000254	0.000257	0.000263	0.000309	0.000532	0.000646	0.000689	0.000733	8
Silver D-Ag	0.0000175	0.00000463	0.00001	0.00001	0.00001	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	2.02	1.21	0.84	1.05	1.15	1.39	1.91	2.1	2.72	3.69	6.2	17
Sodium D-Na	0.997	0.748	0.25	0.284	0.312	0.373	0.61	2	2	2	2	18
Strontium T-Sr	0.135	0.0279	0.095	0.095	0.103	0.111	0.141	0.158	0.17	0.174	0.179	18
Strontium D-Sr	0.095	0.0226	0.0625	0.0697	0.0711	0.0748	0.097	0.108	0.124	0.127	0.145	18
Thallium T-Tl	0.000174	0.0000475	0.000092	0.0000959	0.0000997	0.000176	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.000153	0.000088	0.00001	0.00001	0.00001	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.000408	0.000171	0.00012	0.000127	0.000134	0.00041	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.0004	0.000185	0.0001	0.0001	0.0001	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.34	0.0792	0.258	0.265	0.273	0.281	0.313	0.388	0.45	0.458	0.466	8
Titanium D-Ti	0.00894	0.00301	0.0015	0.00448	0.00745	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000413	0.000163	0.00029	0.000294	0.000297	0.0003	0.00035	0.000468	0.000567	0.000669	0.00077	8
Uranium D-U	0.00016	0.0000752	0.000027	0.0000347	0.0000424	0.000162	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.0379	0.0114	0.0262	0.0268	0.0274	0.0294	0.0329	0.0494	0.0516	0.0527	0.0539	8
Vanadium D-V	0.000625	0.000231	0.0005	0.0005	0.0005	0.0005	0.0005	0.000625	0.001	0.001	0.001	8
Zinc T-Zn	0.0768	0.0363	0.015	0.0176	0.0313	0.0507	0.0824	0.101	0.117	0.132	0.142	18
Zinc D-Zn	0.00285	0.00202	0.0004	0.0004	0.000631	0.001	0.00187	0.005	0.005	0.005	0.005	18

Middle Bitter Creek (BC04)	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.22	0.512	6.82	7.62	7.74	7.8	8.35	8.62	8.7	8.79	8.9	23
Conductivity	113	63	73.7	75.3	76.6	82.5	93	112	142	201	388	27
Hardness CaCO3	53.5	37.6	26	29.3	31.2	37.3	44	52.5	75	97	222	27
Total Dissolved Solids	77.3	42.2	43	48.3	51	57.5	66	81.5	100	116	264	26
Total Suspended Solids	490	363	14.2	178	239	314	377	574	717	943	2000	27
Turbidity	316	190	1.24	126	146	200	280	409	490	581	980	27
Alkalinity-Total CaCO3	46	20.4	31	33.2	33.8	35.5	40	45.7	61.6	71.7	134	27
Acidity (as CaCO3)	1.03	0.583	0.1	0.1	0.25	1	1	1.08	1.45	1.95	3	26
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	9
Fluoride F	0.0287	0.026	0.02	0.02	0.02	0.02	0.02	0.02	0.0356	0.0668	0.098	9
Bromide Br	0.05	7.36E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	9
Sulphate SO4	15.3	15.9	1.5	2.33	4.54	7.96	11.7	14.5	25.5	42.2	80.3	27
Nitrate Nitrogen N	0.016	0.00568	0.0102	0.0104	0.0106	0.0109	0.0139	0.0184	0.0247	0.0248	0.025	9
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	9
Total Nitrogen	0.282	0.15	0.15	0.16	0.17	0.2	0.25	0.348	0.406	0.426	0.445	3
Ammonia Nitrogen N	0.00662	0.00162	0.005	0.005	0.005	0.0052	0.0058	0.0082	0.00842	0.00886	0.0093	9
Ortho-Phosphate	0.00153	0.000229	0.0011	0.00118	0.00126	0.0014	0.0016	0.0017	0.00172	0.00176	0.0018	9
Phosphorus (P)-Total	0.471	0.202	0.0295	0.179	0.328	0.436	0.463	0.615	0.644	0.701	0.758	9
Total Organic Carbon	0.817	0.59	0.5	0.5	0.5	0.5	0.5	0.66	1.75	1.88	2	9
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	9
Aluminum T-Al	10	4.83	0.109	4.09	5.16	6.61	9.97	11.9	14.9	17.5	24	27
Aluminum D-Al	0.108	0.0674	0.007	0.028	0.0444	0.0787	0.0965	0.115	0.176	0.205	0.342	27
Antimony T-Sb	0.00296	0.00208	0.00064	0.00128	0.00134	0.00196	0.00256	0.0033	0.004	0.00514	0.012	27
Antimony D-Sb	0.00074	0.000353	0.00025	0.000308	0.00041	0.0005	0.00067	0.000905	0.00112	0.00119	0.00195	27
Arsenic T-As	0.0174	0.00871	0.0013	0.00538	0.00946	0.0129	0.017	0.0215	0.0247	0.0288	0.0328	9
Arsenic D-As	0.000596	0.000136	0.00044	0.000464	0.000488	0.00051	0.00056	0.00064	0.000738	0.000814	0.00089	9
Barium T-Ba	0.183	0.0751	0.02	0.0936	0.0964	0.138	0.169	0.221	0.283	0.296	0.36	27
Barium D-Ba	0.0256	0.00751	0.015	0.0152	0.0165	0.0225	0.0247	0.0284	0.0315	0.0342	0.0532	27
Beryllium T-Be	0.000839	0.00032	0.00023	0.000266	0.000302	0.001	0.001	0.001	0.001	0.001	0.001	9
Beryllium D-Be	0.0008	0.000397	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	9
Bismuth T-Bi	0.0279	0.0666	0.000074	0.0000824	0.0000908	0.000115	0.00026	0.0005	0.08	0.14	0.2	9
Bismuth D-Bi	0.0279	0.0666	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.08	0.14	0.2	9
Boron T-B	0.08	0.0397	0.01	0.01	0.01	0.1	0.1	0.1	0.1	0.1	0.1	9
Boron D-B	0.08	0.0397	0.01	0.01	0.01	0.1	0.1	0.1	0.1	0.1	0.1	9
Cadmium T-Cd	0.000752	0.000357	0.00017	0.000253	0.000381	0.00054	0.00071	0.000895	0.00114	0.00148	0.0016	27
Cadmium D-Cd	0.0000948	0.0000884	0.00001	0.000017	0.000017	0.000022	0.0001	0.0001	0.000148	0.000197	0.00046	27
Calcium T-Ca	24.1	10.3	15.1	17.1	17.7	18.1	21.9	26.7	27.6	33.8	69.5	27
Calcium D-Ca	17.6	12.2	9	10.1	10.5	13.2	15	17.9	20.9	28.8	74.2	27
Chromium T-Cr	0.0145	0.00627	0.001	0.00552	0.01	0.0129	0.0143	0.0168	0.0209	0.0224	0.0238	9
Chromium D-Cr	0.000837	0.000331	0.00013	0.000238	0.000346	0.001	0.001	0.001	0.001	0.001	0.001	9
Cobalt T-Co	0.00949	0.0117	0.0003	0.00347	0.00384	0.00528	0.00692	0.00936	0.012	0.0183	0.0649	27
Cobalt D-Co	0.000171	0.0001	0.00003	0.000053	0.00006	0.000095	0.00015	0.0003	0.0003	0.0003	0.00034	27
Copper T-Cu	0.0395	0.0213	0.0024	0.0198	0.0222	0.0279	0.0355	0.0482	0.0569	0.063	0.12	27
Copper D-Cu	0.00073	0.000582	0.00005	0.00013	0.00026	0.000365	0.0005	0.001	0.00118	0.00208	0.00237	27
Iron T-Fe	14.8	9.25	0.459	5.63	6.22	8.27	14.5	18	23.5	29.1	46	27
Iron D-Fe	0.0423	0.0409	0.005	0.0065	0.01	0.0155	0.03	0.049	0.081	0.102	0.202	27
Lead T-Pb	0.0109	0.00641	0.0005	0.00387	0.00495	0.0071	0.00828	0.0145	0.0188	0.0195	0.031	27
Lead D-Pb	0.000216	0.000197	0.000025	0.0000325	0.00005	0.000069	0.0001	0.0005	0.0005	0.0005	0.0005	27
Magnesium T-Mg	8.31	2.94	3.73	5.41	5.67	6.43	7.94	10.1	11.8	12.2	18	27
Magnesium D-Mg	1.83	1.51	0.865	1.01	1.02	1.14	1.6	1.92	2.24	2.53	9.05	27
Manganese T-Mn	0.427	0.208	0.0227	0.197	0.232	0.286	0.413	0.58	0.617	0.642	1.1	27
Manganese D-Mn	0.00207	0.00527	0.0001	0.000115	0.00018	0.0003	0.00034	0.00138	0.0036	0.00702	0.027	27
Mercury T-Hg	0.0000128	0.00000493	0.0000099	0.00000994	0.00000998	0.00001	0.00001	0.0000131	0.0000172	0.0000211	0.000025	9
Mercury D-Hg	0.00000611	0.0000022	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	9
Molybdenum T-Mo	0.00403	0.00151	0.00194	0.00215	0.00252	0.00291	0.00395	0.0049	0.00554	0.00669	0.0085	27
Molybdenum D-Mo	0.00216	0.00136	0.00046	0.000719	0.0011	0.00136	0.0018	0.00245	0.00359	0.00436	0.007	27
Nickel T-Ni	0.0268	0.0299	0.0049	0.011	0.0119	0.0146	0.0187	0.0265	0.0394	0.0605	0.163	27
Nickel D-Ni	0.00132	0.00148	0.00015	0.00043	0.0005	0.0005	0.001	0.00125	0.00219	0.00447	0.0068	27
Selenium T-Se	0.00277	0.00366	0.00113	0.00117	0.0012	0.0015	0.00168	0.00177	0.00399	0.00824	0.0125	9
Selenium D-Se	0.00185	0.0037	0.000445	0.000467	0.000488	0.000536	0.000604	0.000797	0.00299	0.00734	0.0117	9
Silicon T-Si	17.3	5.51	3.28	8.57	13.9	17.2	19	20	20.6	21.3	22.1	9
Silicon D-Si	0.934	0.899	0.533	0.545	0.556	0.597	0.613	0.755	1.31	2.31	3.32	9
Silver T-Ag	0.000316	0.000141	0.000032	0.000108	0.000185	0.000263	0.000327	0.000384	0.000453	0.000494	0.000535	9
Silver D-Ag	0.0000183	0.00000354	0.00001	0.000012	0.000014	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	9
Sodium T-Na	1.62	0.447	0.778	1.03	1.1	1.28	1.58	2	2.06	2.2	2.62	27
Sodium D-Na	0.831	0.713	0.216	0.25	0.283	0.324	0.489	1.32	2	2	2	27
Strontium T-Sr	0.141	0.0525	0.0956	0.102	0.106	0.114	0.129	0.158	0.173	0.183	0.373	27
Strontium D-Sr	0.0993	0.064	0.052	0.0623	0.0638	0.07	0.0882	0.095	0.121	0.161	0.394	27
Thallium T-Tl	0.000173	0.0000536	0.000073	0.0000774	0.0000818	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	9
Thallium D-Tl	0.000159	0.0000818	0.00001	0.0000136	0.0000172	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	9
Tin T-Sn	0.000416	0.000168	0.0001	0.000116	0.000132	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	9
Tin D-Sn	0.000411	0.000176	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	9
Titanium T-Ti	0.265	0.104	0.01	0.109	0.208	0.26	0.278	0.314	0.338	0.361	0.384	9
Titanium D-Ti	0.00906	0.00281	0.00157	0.00494	0.00831	0.01	0.01	0.01	0.01	0.01	0.01	9
Uranium T-U	0.000377	0.000134	0.00025	0.000266	0.000282	0.00033	0.000335	0.000384	0.000478	0.000594	0.00071	9
Uranium D-U	0.000221	0.000191	0.000037	0.0000446	0.0000522	0.0002	0.0002	0.0002	0.0003	0.0005	0.0007	9
Vanadium T-V	0.0297	0.0121	0.002	0.0114	0.0207	0.0277	0.0297	0.0383	0.0405	0.0422	0.0439	9
Vanadium D-V	0.000611	0.00022	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	9
Zinc T-Zn	0.0749	0.0361	0.025	0.041	0.0427	0.0526	0.0668	0.0886	0.11	0.118	0.21	27
Zinc D-Zn	0.00594	0.00665	0.0004	0.001	0.001	0.00143	0.00362	0.0053	0.0174	0.021	0.022	27

Middle Bitter Creek (BC06)	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.62	0.73	6.25	6.6	6.95	7.67	7.76	7.82	8.15	8.3	8.46	6
Conductivity	94.6	16.1	77.1	78.9	80.6	84.2	90.3	104	113	117	120	6
Hardness CaCO3	43.8	7.88	34.4	35.3	36.1	38.9	42.5	48.2	52.9	54.4	55.8	6
Total Dissolved Solids	78.2	11	68	68	68	69.8	75.5	83.5	91	93.5	96	6
Total Suspended Solids	323	45.3	277	281	285	297	316	330	369	388	406	6
Turbidity	239	17.7	219	219	220	223	241	250	256	259	262	6
Alkalinity-Total CaCO3	34.9	3.75	31.4	31.6	31.7	32.1	33.6	37.1	39.4	40.1	40.8	6
Acidity (as CaCO3)	1.13	0.327	1	1	1	1	1	1	1.4	1.6	1.8	6
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	6
Fluoride F	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	6
Bromide Br	0.05	7.6E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	6
Sulphate SO4	13.1	3.98	8.4	8.98	9.55	10.8	11.9	15.6	17.8	18.4	19	6
Nitrate Nitrogen N	0.0125	0.00317	0.0073	0.00823	0.00915	0.0115	0.0133	0.0135	0.0152	0.016	0.0168	6
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	6
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.00608	0.0015	0.005	0.005	0.005	0.005	0.0054	0.0067	0.00785	0.00828	0.0087	6
Ortho-Phosphate	0.00172	0.000264	0.0013	0.00135	0.0014	0.00158	0.0018	0.00188	0.00195	0.00198	0.002	6
Phosphorus (P)-Total	0.414	0.123	0.246	0.273	0.3	0.355	0.385	0.511	0.556	0.563	0.569	6
Total Organic Carbon	0.6	0.245	0.5	0.5	0.5	0.5	0.5	0.5	0.8	0.95	1.1	6
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	6
Aluminum T-Al	9.27	1.8	7.64	7.75	7.87	8.15	8.78	9.62	11.2	11.9	12.6	6
Aluminum D-Al	0.391	0.744	0.0758	0.0768	0.0777	0.081	0.0888	0.1	1.01	1.46	1.91	6
Antimony T-Sb	0.00211	0.000314	0.00171	0.00172	0.00174	0.00187	0.00218	0.00225	0.0024	0.00247	0.00253	6
Antimony D-Sb	0.000597	0.000111	0.0005	0.0005	0.0005	0.000505	0.00056	0.000675	0.00073	0.000745	0.00076	6
Arsenic T-As	0.0154	0.00387	0.0102	0.0106	0.011	0.0126	0.0158	0.0185	0.0195	0.0196	0.0197	6
Arsenic D-As	0.000955	0.000807	0.00057	0.000578	0.000585	0.000603	0.00064	0.000678	0.00164	0.00212	0.0026	6
Barium T-Ba	0.16	0.0174	0.133	0.137	0.141	0.151	0.16	0.173	0.178	0.178	0.179	6
Barium D-Ba	0.0283	0.0128	0.021	0.0213	0.0215	0.022	0.0225	0.0268	0.041	0.0475	0.054	6
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	6
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	6
Bismuth T-Bi	0.0334	0.0816	0.000074	0.0000763	0.0000785	0.000089	0.000153	0.000201	0.1	0.15	0.2	6
Bismuth D-Bi	0.0334	0.0816	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.1	0.15	0.2	6
Boron T-B	0.1	1.52E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	6
Boron D-B	0.1	1.52E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	6
Cadmium T-Cd	0.000486	0.000156	0.000322	0.000334	0.000346	0.000386	0.00044	0.00057	0.000672	0.000702	0.000733	6
Cadmium D-Cd	0.000027	0.0000245	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.000047	0.000062	0.000077	6
Calcium T-Ca	21	3.35	16.4	16.7	16.9	18.5	22.1	23.5	24.1	24.3	24.4	6
Calcium D-Ca	15.2	2.66	12.2	12.5	12.7	13.5	14.5	16.7	18.3	18.8	19.3	6
Chromium T-Cr	0.0137	0.00283	0.011	0.0111	0.0112	0.0116	0.013	0.0152	0.017	0.0177	0.0183	6
Chromium D-Cr	0.00118	0.000449	0.001	0.001	0.001	0.001	0.001	0.001	0.00155	0.00183	0.0021	6
Cobalt T-Co	0.0063	0.00146	0.00445	0.00467	0.00488	0.00544	0.00609	0.00708	0.00793	0.00824	0.00854	6
Cobalt D-Co	0.000408	0.000265	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.000625	0.000788	0.00095	6
Copper T-Cu	0.0337	0.00845	0.024	0.0249	0.0258	0.0282	0.0317	0.0388	0.0435	0.045	0.0465	6
Copper D-Cu	0.00158	0.00143	0.001	0.001	0.001	0.001	0.001	0.001	0.00275	0.00363	0.0045	6
Iron T-Fe	14.1	2.84	10.4	10.9	11.4	12.6	13.6	15.7	17.4	17.8	18.3	6
Iron D-Fe	0.032	0.00346	0.03	0.03	0.03	0.03	0.03	0.032	0.0356	0.0368	0.038	5
Lead T-Pb	0.00751	0.00188	0.00536	0.00563	0.0059	0.00654	0.007	0.00823	0.00965	0.0102	0.0107	6
Lead D-Pb	0.000667	0.000408	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.00125	0.0015	6
Magnesium T-Mg	6.85	1.08	5.52	5.53	5.55	5.98	7.25	7.3	7.77	8	8.23	6
Magnesium D-Mg	1.47	0.366	0.96	1.01	1.07	1.21	1.51	1.76	1.83	1.85	1.87	6
Manganese T-Mn	0.393	0.0866	0.274	0.295	0.316	0.361	0.369	0.457	0.495	0.5	0.504	6
Manganese D-Mn	0.0111	0.026	0.00024	0.000255	0.00027	0.000335	0.00057	0.000715	0.0325	0.0483	0.0642	6
Mercury T-Hg	0.0000126	0.00000627	0.0000084	0.00000853	0.00000865	9.08E-06	0.0000103	0.0000123	0.0000189	0.0000219	0.000025	6
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	6
Molybdenum T-Mo	0.0027	0.000597	0.0018	0.00195	0.0021	0.00243	0.0027	0.00305	0.0033	0.0034	0.0035	6
Molybdenum D-Mo	0.00177	0.000532	0.0011	0.0012	0.0013	0.0015	0.0016	0.00215	0.0024	0.00245	0.0025	6
Nickel T-Ni	0.0161	0.00396	0.0117	0.0119	0.0122	0.0132	0.0157	0.0178	0.0204	0.0214	0.0225	6
Nickel D-Ni	0.00143	0.00106	0.001	0.001	0.001	0.001	0.001	0.001	0.0023	0.00295	0.0036	6
Selenium T-Se	0.00148	0.000255	0.00113	0.00115	0.00117	0.00129	0.00156	0.00168	0.00172	0.00173	0.00173	6
Selenium D-Se	0.000693	0.00015	0.000484	0.000511	0.000537	0.000607	0.000682	0.000802	0.000859	0.000872	0.000884	6
Silicon T-Si	16.1	1.64	14.3	14.4	14.4	14.8	16.2	16.8	17.8	18.2	18.7	6
Silicon D-Si	1.32	1.72	0.512	0.519	0.526	0.549	0.643	0.735	2.78	3.8	4.82	6
Silver T-Ag	0.000281	0.0000631	0.000195	0.000206	0.000217	0.000246	0.000273	0.000333	0.000354	0.000355	0.000356	6
Silver D-Ag	0.000023	0.00000735	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.000029	0.0000335	0.000038	6
Sodium T-Na	2	N/A	2	2	2	2	2	2	2	2	2	6
Sodium D-Na	2	N/A	2	2	2	2	2	2	2	2	2	6
Strontium T-Sr	0.123	0.0184	0.0956	0.098	0.1	0.11	0.128	0.137	0.14	0.141	0.141	6
Strontium D-Sr	0.0833	0.014	0.0649	0.0669	0.0688	0.0749	0.0818	0.0931	0.0994	0.101	0.102	6
Thallium T-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	6
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	6
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	6
Titanium T-Ti	0.247	0.0344	0.214	0.217	0.219	0.225	0.238	0.255	0.283	0.296	0.309	6
Titanium D-Ti	0.02	0.0245	0.01	0.01	0.01	0.01	0.01	0.01	0.04	0.055	0.07	6
Uranium T-U	0.000305	0.0000362	0.00025	0.00026	0.00027	0.000293	0.0003	0.00033	0.000345	0.000348	0.00035	6
Uranium D-U	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	6
Vanadium T-V	0.0287	0.00567	0.0231	0.0233	0.0234	0.0245	0.027	0.0327	0.0357	0.0362	0.0367	6
Vanadium D-V	0.00148	0.00239	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.00343	0.00489	0.00635	6
Zinc T-Zn	0.0554	0.0126	0.0397	0.042	0.0443	0.0496	0.0523	0.0608	0.0697	0.0728	0.0759	6
Zinc D-Zn	0.00562	0.00151	0.005	0.005	0.005	0.005	0.005	0.005	0.00685	0.00778	0.0087	6

Upper Bitter Creek (BC08)	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.26	0.39	7.68	7.74	7.8	8.01	8.21	8.46	8.74	8.83	8.92	10
Conductivity	122	124	53	56.5	60	69.4	75	94.6	191	335	478	11
Hardness CaCO3	57.3	68.3	21	21.5	21.9	29.4	32.3	43.3	81.7	169	257	11
Total Dissolved Solids	98.1	90.2	41	45.5	50	57	69	79	143	251	358	11
Total Suspended Solids	332	306	3	79	155	239	258	331	395	798	1200	11
Turbidity	177	86.9	0.54	36.9	73.3	135	191	225	274	286	298	11
Alkalinity-Total CaCO3	36.8	23.4	23.7	24.4	25	26.7	27	32.5	50	77	104	11
Acidity (as CaCO3)	1	0.236	0.5	0.725	0.95	1	1	1	1.05	1.28	1.5	10
Chloride Cl	0.576	0.227	0.5	0.5	0.5	0.5	0.5	0.5	0.636	0.908	1.18	9
Fluoride F	0.0632	0.0952	0.02	0.02	0.02	0.02	0.02	0.02	0.165	0.231	0.297	9
Bromide Br	0.05	7.36E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	9
Sulphate SO4	28.5	42.8	5.43	6.43	7.43	9.22	11.3	17	66.2	107	147	11
Nitrate Nitrogen N	0.0112	0.00383	0.0063	0.00698	0.00766	0.0099	0.0101	0.0133	0.0149	0.0172	0.0194	9
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	9
Total Nitrogen	0.103	0.0503	0.05	0.056	0.062	0.08	0.11	0.13	0.142	0.146	0.15	3
Ammonia Nitrogen N	0.00623	0.00348	0.005	0.005	0.005	0.005	0.005	0.005	0.00758	0.0115	0.0155	9
Ortho-Phosphate	0.00168	0.000409	0.001	0.00116	0.00132	0.0014	0.0016	0.002	0.00214	0.00222	0.0023	9
Phosphorus (P)-Total	0.348	0.171	0.0024	0.0942	0.186	0.3	0.368	0.414	0.541	0.562	0.584	9
Total Organic Carbon	0.647	0.259	0.5	0.5	0.5	0.5	0.5	0.59	1.04	1.11	1.18	9
Dissolved Organic Carbon	0.547	0.133	0.5	0.5	0.5	0.5	0.5	0.5	0.596	0.748	0.9	9
Aluminum T-Al	7.74	4.18	0.0085	1.78	3.55	5.85	7.88	9.64	11.3	13.7	16	11
Aluminum D-Al	0.089	0.0405	0.005	0.0185	0.0319	0.0802	0.0998	0.107	0.136	0.138	0.14	11
Antimony T-Sb	0.00199	0.000833	0.0005	0.000715	0.00093	0.00171	0.00203	0.00236	0.00265	0.00313	0.0036	11
Antimony D-Sb	0.000516	0.000172	0.00018	0.000235	0.00029	0.0005	0.0005	0.000615	0.00067	0.00074	0.00081	11
Arsenic T-As	0.0132	0.00802	0.0005	0.00273	0.00496	0.01	0.0131	0.0139	0.023	0.0255	0.028	9
Arsenic D-As	0.000671	0.000162	0.00032	0.000392	0.000464	0.00066	0.00072	0.00079	0.000794	0.000802	0.00081	9
Barium T-Ba	0.133	0.0595	0.02	0.0467	0.0733	0.112	0.14	0.148	0.183	0.217	0.25	11
Barium D-Ba	0.0189	0.00479	0.0094	0.0102	0.011	0.018	0.02	0.0221	0.023	0.0235	0.024	11
Beryllium T-Be	0.000817	0.000366	0.0001	0.00016	0.00022	0.001	0.001	0.001	0.001	0.001	0.001	9
Beryllium D-Be	0.0008	0.000397	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	9
Bismuth T-Bi	0.0279	0.0666	0.000053	0.0000626	0.0000722	0.000078	0.000141	0.0005	0.08	0.14	0.2	9
Bismuth D-Bi	0.0279	0.0666	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.08	0.14	0.2	9
Boron T-B	0.08	0.0397	0.01	0.01	0.01	0.1	0.1	0.1	0.1	0.1	0.1	9
Boron D-B	0.08	0.0397	0.01	0.01	0.01	0.1	0.1	0.1	0.1	0.1	0.1	9
Cadmium T-Cd	0.000421	0.000201	0.000062	0.000131	0.0002	0.000306	0.000418	0.000563	0.00066	0.000695	0.00073	11
Cadmium D-Cd	0.000066	0.0000866	0.0000131	0.0000151	0.000017	0.000017	0.000017	0.0000745	0.0002	0.000231	0.000262	11
Calcium T-Ca	24.8	20.4	12.9	14	15	16.2	19.2	21.1	28.6	56.9	85.1	11
Calcium D-Ca	19.5	23	7	7.33	7.66	10.2	11.2	14.8	27.3	57	86.7	11
Chromium T-Cr	0.0103	0.00539	0.001	0.0024	0.00379	0.0087	0.0102	0.0121	0.0168	0.0176	0.0184	9
Chromium D-Cr	0.0008	0.000397	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	9
Cobalt T-Co	0.00573	0.00351	0.0003	0.00147	0.00264	0.00437	0.00457	0.00716	0.00974	0.0114	0.013	11
Cobalt D-Co	0.000243	0.000105	0.00006	0.00007	0.00008	0.0002	0.0003	0.0003	0.0003	0.000315	0.00033	11
Copper T-Cu	0.0323	0.0209	0.001	0.0087	0.0164	0.0235	0.0274	0.0393	0.0518	0.0659	0.08	11
Copper D-Cu	0.00118	0.000782	0.00052	0.00073	0.00094	0.001	0.001	0.001	0.00104	0.00227	0.0035	11
Iron T-Fe	12.3	7.99	0.165	2.67	5.18	7.77	11.1	15.6	19	24.5	30	11
Iron D-Fe	0.0482	0.0277	0.018	0.022	0.026	0.03	0.039	0.065	0.081	0.093	0.105	11
Lead T-Pb	0.0075	0.00494	0.0005	0.00166	0.00281	0.00535	0.00611	0.0098	0.0124	0.0152	0.018	11
Lead D-Pb	0.000374	0.000187	0.000056	0.000078	0.0001	0.000229	0.0005	0.0005	0.0005	0.0005	0.0005	11
Magnesium T-Mg	6.86	2.32	4.18	4.56	4.93	5.56	5.97	7.73	9.85	10.9	12	11
Magnesium D-Mg	2.11	2.68	0.673	0.717	0.76	0.935	1.1	1.57	3.3	6.6	9.9	11
Manganese T-Mn	0.35	0.179	0.0918	0.127	0.162	0.275	0.316	0.428	0.516	0.628	0.74	11
Manganese D-Mn	0.011	0.0238	0.00044	0.00046	0.00048	0.00077	0.0018	0.00624	0.021	0.0506	0.0802	11
Mercury T-Hg	0.0000122	0.00000514	0.0000084	0.00000868	0.00000896	0.00001	0.00001	0.000012	0.0000167	0.0000208	0.000025	9
Mercury D-Hg	0.00000611	0.0000022	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	9
Molybdenum T-Mo	0.00281	0.000782	0.0016	0.00183	0.00206	0.00233	0.0027	0.0032	0.0034	0.00395	0.0045	11
Molybdenum D-Mo	0.00175	0.000609	0.000719	0.00096	0.0012	0.00145	0.0016	0.00215	0.0026	0.00265	0.0027	11
Nickel T-Ni	0.0151	0.00794	0.0016	0.00565	0.0097	0.0117	0.0139	0.0177	0.0235	0.0278	0.032	11
Nickel D-Ni	0.00133	0.00155	0.0004	0.0004	0.0004	0.00075	0.001	0.001	0.0014	0.00365	0.00589	11
Selenium T-Se	0.00131	0.000274	0.00083	0.000962	0.00109	0.00118	0.00132	0.0014	0.0017	0.00171	0.00171	9
Selenium D-Se	0.000702	0.00037	0.000303	0.000352	0.000401	0.000514	0.000559	0.000687	0.00125	0.00134	0.00143	9
Silicon T-Si	13.5	3.55	6.36	7.9	9.43	11.8	14.6	15.3	16.4	17.3	18.2	9
Silicon D-Si	1.6	2.21	0.322	0.368	0.414	0.462	0.537	0.773	4.78	5.59	6.4	9
Silver T-Ag	0.000242	0.000139	0.00002	0.000052	0.000084	0.000196	0.000241	0.000259	0.000438	0.000449	0.000459	9
Silver D-Ag	0.0000178	0.00000441	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	9
Sodium T-Na	2.25	1.51	0.85	1.04	1.23	1.8	2	2	2.5	4.55	6.6	11
Sodium D-Na	1.99	1.73	0.217	0.229	0.24	1.25	2	2	2.29	4.45	6.6	11
Strontium T-Sr	0.137	0.109	0.072	0.0734	0.0747	0.0945	0.108	0.122	0.147	0.303	0.459	11
Strontium D-Sr	0.106	0.119	0.0395	0.0403	0.041	0.0566	0.0659	0.0872	0.136	0.296	0.455	11
Thallium T-Tl	0.000167	0.0000672	0.000029	0.0000454	0.0000618	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	9
Thallium D-Tl	0.000158	0.0000838	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	9
Tin T-Sn	0.00045	0.000141	0.0001	0.00024	0.00038	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.00045	0.000141	0.0001	0.00024	0.00038	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.177	0.0821	0.01	0.042	0.074	0.166	0.208	0.221	0.25	0.263	0.277	9
Titanium D-Ti	0.00899	0.00302	0.00093	0.00456	0.00819	0.01	0.01	0.01	0.01	0.01	0.01	9
Uranium T-U	0.000331	0.000184	0.000204	0.000222	0.000241	0.00025	0.00026	0.000327	0.000434	0.000622	0.00081	9
Uranium D-U	0.000233	0.000223	0.00002	0.0000432	0.0000664	0.0002	0.0002	0.0002	0.00032	0.00056	0.0008	9
Vanadium T-V	0.022	0.0109	0.001	0.005	0.009	0.0207	0.0217	0.0264	0.0351	0.0356	0.0361	9
Vanadium D-V	0.000611	0.00022	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	9
Zinc T-Zn	0.0575	0.035	0.0103	0.0235	0.0366	0.0427	0.0503	0.0631	0.0725	0.111	0.15	11
Zinc D-Zn	0.00579	0.00478	0.00079	0.000945	0.0011	0.00455	0.005	0.005	0.0091	0.0139	0.0186	11

ar River D/S of Bitter Creek confluer	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.96	0.376	7.06	7.44	7.71	7.79	7.89	8.2	8.39	8.41	8.45	13
Conductivity	98.9	13.9	78	78.2	79.1	89.8	100	109	114	119	124	15
Hardness CaCO3	47.4	9.64	35.1	36.4	37.3	38.2	47	53	58.8	61.7	68	15
Total Dissolved Solids	70.4	14.3	56	57.4	58.4	59.5	69	76.5	83.6	93.2	110	15
Total Suspended Solids	369	142	170	171	187	273	385	470	517	562	660	15
Turbidity	238	95.2	110	117	120	157	257	301	364	373	390	15
Alkalinity-Total CaCO3	40.3	4.88	31.2	33.7	35.1	37.2	40.9	43.2	44.8	47.1	51	15
Acidity (as CaCO3)	1.35	0.519	1	1	1	1	1.1	1.5	1.88	2.22	2.7	13
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0249	0.00479	0.02	0.02	0.02	0.0208	0.0235	0.0293	0.0306	0.0313	0.032	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	11.5	2.46	7.82	8	8.44	10	11.7	12.3	14.4	15.9	16.7	15
Nitrate Nitrogen N	0.0305	0.0124	0.0167	0.0169	0.0172	0.0228	0.0261	0.0405	0.046	0.0478	0.0496	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.2	0.05	0.15	0.155	0.16	0.175	0.2	0.225	0.24	0.245	0.25	3
Ammonia Nitrogen N	0.00634	0.0023	0.005	0.005	0.005	0.005	0.0055	0.00638	0.00816	0.00998	0.0118	8
Ortho-Phosphate	0.00134	0.000185	0.0011	0.00114	0.00117	0.0012	0.00135	0.0014	0.00149	0.0016	0.0017	8
Phosphorus (P)-Total	0.44	0.222	0.0205	0.119	0.217	0.32	0.467	0.614	0.648	0.679	0.71	8
Total Organic Carbon	0.863	0.693	0.5	0.5	0.5	0.5	0.595	0.798	1.4	1.97	2.54	8
Dissolved Organic Carbon	0.51	0.0283	0.5	0.5	0.5	0.5	0.5	0.5	0.524	0.552	0.58	8
Aluminum T-Al	7.88	3.74	1.8	2.64	3.56	5.45	7.54	11.2	11.9	12.8	15	15
Aluminum D-Al	0.0967	0.0333	0.049	0.0583	0.0638	0.0781	0.092	0.104	0.136	0.156	0.18	15
Antimony T-Sb	0.0018	0.000699	0.0005	0.00099	0.00124	0.00135	0.0017	0.00229	0.00261	0.00284	0.0032	15
Antimony D-Sb	0.000579	0.000233	0.0003	0.0003	0.000328	0.0005	0.0005	0.00065	0.000826	0.000997	0.0012	15
Arsenic T-As	0.0146	0.00628	0.0078	0.00792	0.00805	0.00919	0.014	0.02	0.0212	0.0218	0.0224	8
Arsenic D-As	0.000518	0.0000853	0.00037	0.000416	0.000461	0.0005	0.0005	0.000543	0.000589	0.000635	0.00068	8
Barium T-Ba	0.163	0.0494	0.066	0.0898	0.1	0.143	0.16	0.193	0.217	0.233	0.253	15
Barium D-Ba	0.0324	0.00485	0.0242	0.0262	0.0274	0.0288	0.032	0.035	0.0386	0.0399	0.042	15
Beryllium T-Be	0.000826	0.000322	0.00027	0.000295	0.000319	0.000835	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.0064	0.0176	0.000057	0.0000609	0.0000647	0.0000688	0.000142	0.000285	0.0154	0.0327	0.05	8
Bismuth D-Bi	0.00635	0.0176	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.0154	0.0327	0.05	8
Boron T-B	0.0779	0.041	0.011	0.0114	0.0117	0.078	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000448	0.000205	0.00019	0.000204	0.000214	0.000268	0.00039	0.000623	0.000719	0.000742	0.000749	15
Cadmium D-Cd	0.0000693	0.0000712	0.000005	0.0000134	0.000017	0.000017	0.000028	0.00008	0.000196	0.0002	0.0002	15
Calcium T-Ca	20.2	3.08	16	16.5	16.8	17.5	19.6	22.3	24.2	24.6	25.4	15
Calcium D-Ca	16.1	2.63	12.4	12.8	13	13.5	16	17.7	19.7	20.1	20.2	15
Chromium T-Cr	0.0123	0.00361	0.0074	0.00768	0.00796	0.0094	0.0129	0.0153	0.0158	0.0163	0.0168	8
Chromium D-Cr	0.000783	0.000403	0.0001	0.000121	0.000142	0.00079	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.00509	0.00258	0.00083	0.00165	0.00248	0.00344	0.00445	0.00803	0.00824	0.0085	0.00905	15
Cobalt D-Co	0.000243	0.000231	0.00008	0.000087	0.000094	0.0001	0.00018	0.0003	0.0003	0.00051	0.001	15
Copper T-Cu	0.0281	0.0138	0.0064	0.0124	0.0154	0.0172	0.023	0.0414	0.0441	0.0469	0.05	15
Copper D-Cu	0.000695	0.000335	0.0002	0.0002	0.000224	0.000445	0.00088	0.001	0.001	0.001	0.001	15
Iron T-Fe	10.9	5.57	1.6	3.56	4.44	7.85	10.6	16.2	18.1	18.5	19.3	15
Iron D-Fe	0.0362	0.018	0.01	0.017	0.0212	0.029	0.03	0.038	0.0578	0.0693	0.084	15
Lead T-Pb	0.00895	0.00456	0.002	0.00354	0.00439	0.00528	0.008	0.0124	0.0152	0.0158	0.0167	15
Lead D-Pb	0.000321	0.000274	0.00005	0.000057	0.000068	0.0001	0.00018	0.0005	0.0005	0.00065	0.001	15
Magnesium T-Mg	6.09	2.08	3.2	3.27	3.7	4.8	5.5	7.13	8.23	9.06	11	15
Magnesium D-Mg	1.5	0.351	0.992	1	1.04	1.25	1.5	1.7	1.91	2.03	2.2	15
Manganese T-Mn	0.346	0.187	0.035	0.102	0.154	0.218	0.295	0.511	0.577	0.626	0.637	15
Manganese D-Mn	0.00595	0.0087	0.0003	0.0003	0.000308	0.000445	0.00087	0.00789	0.0197	0.0223	0.026	15
Mercury T-Hg	0.0000152	0.0000144	0.000005	0.00000588	0.00000675	9.38E-06	0.0000108	0.0000133	0.000025	0.0000375	0.00005	8
Mercury D-Hg	0.0000063	0.00000229	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000655	0.00001	0.00001	0.00001	8
Molybdenum T-Mo	0.0025	0.000857	0.001	0.00135	0.0017	0.00205	0.00232	0.0028	0.00374	0.00413	0.0042	15
Molybdenum D-Mo	0.00139	0.000479	0.000761	0.000838	0.000923	0.00105	0.0013	0.00155	0.00192	0.00218	0.0026	15
Nickel T-Ni	0.0145	0.00782	0.0035	0.00364	0.00554	0.00975	0.013	0.0194	0.022	0.026	0.033	15
Nickel D-Ni	0.000783	0.000246	0.00039	0.000397	0.00044	0.000525	0.0008	0.001	0.001	0.001	0.001	15
Selenium T-Se	0.00119	0.000283	0.000794	0.000847	0.000899	0.00103	0.0011	0.00143	0.00153	0.00157	0.0016	8
Selenium D-Se	0.000517	0.00023	0.00027	0.000288	0.000306	0.000353	0.000497	0.000588	0.000726	0.000863	0.001	8
Silicon T-Si	15.7	3.21	11.9	12	12.1	12.9	15.3	18.8	19.2	19.9	20.5	9
Silicon D-Si	0.735	0.146	0.535	0.547	0.558	0.629	0.748	0.827	0.906	0.937	0.968	9
Silver T-Ag	0.000313	0.000134	0.000152	0.000158	0.000165	0.000188	0.000322	0.000433	0.000449	0.000461	0.000474	8
Silver D-Ag	0.0000175	0.00000463	0.00001	0.00001	0.00001	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.69	0.846	0.71	0.84	0.937	1.1	1.7	2	2	2.74	4.1	14
Sodium D-Na	1.07	0.794	0.288	0.295	0.331	0.42	0.59	2	2	2	2	15
Strontium T-Sr	0.12	0.0164	0.096	0.0967	0.0982	0.108	0.12	0.128	0.143	0.146	0.148	15
Strontium D-Sr	0.0896	0.0174	0.0685	0.0689	0.0692	0.0746	0.089	0.0978	0.116	0.119	0.12	15
Thallium T-Tl	0.000179	0.0000399	0.000108	0.000112	0.000116	0.00018	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.000153	0.000088	0.00001	0.00001	0.00001	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.000404	0.000178	0.0001	0.000111	0.000121	0.000408	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.0004	0.000185	0.0001	0.0001	0.0001	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.256	0.0514	0.184	0.188	0.192	0.225	0.26	0.284	0.316	0.324	0.332	8
Titanium D-Ti	0.00894	0.00301	0.0015	0.00448	0.00745	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000338	0.000129	0.00021	0.00021	0.00021	0.000233	0.000318	0.000408	0.000494	0.000522	0.00055	8
Uranium D-U	0.000161	0.0000721	0.000036	0.000042	0.0000479	0.000163	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.0269	0.00783	0.0172	0.0173	0.0174	0.0203	0.0275	0.0343	0.035	0.035	0.0351	8
Vanadium D-V	0.000625	0.000231	0.0005	0.0005	0.0005	0.0005	0.0005	0.000625	0.001	0.001	0.001	8
Zinc T-Zn	0.0684	0.0458	0.017	0.0283	0.0338	0.04	0.061	0.0776	0.111	0.151	0.2	15
Zinc D-Zn	0.00393	0.00316	0.0004	0.0004	0.000424	0.0017	0.005	0.005	0.005	0.0074	0.013	15

ar River U/S of Bitter Creek conflue	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.62	0.293	7.15	7.27	7.4	7.52	7.54	7.8	7.89	8.05	8.21	9
Conductivity	71.9	14.7	51	53.9	56.8	59.8	73	81.1	89.6	93.6	97.6	11
Hardness CaCO3	33.8	7.46	25	25.6	26.1	27.4	33.4	39.3	43.1	44.9	46.7	11
Total Dissolved Solids	52.8	8.92	39	40.5	42	46.5	54	57.5	60	65	70	11
Total Suspended Solids	55.4	41.5	12	13.5	15	22	34	84.7	110	119	127	11
Turbidity	44.2	30.1	15.1	16.3	17.5	19	27.5	66.3	92	92.1	92.1	11
Alkalinity-Total CaCO3	27.5	4.95	21.2	21.5	21.8	23.1	27	30.8	32.4	34.5	36.5	11
Acidity (as CaCO3)	1.86	0.357	1.3	1.34	1.38	1.6	1.9	2.1	2.22	2.26	2.3	9
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0339	0.00653	0.024	0.0244	0.0247	0.031	0.0345	0.0385	0.0406	0.0413	0.042	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	9.61	1.92	6.78	6.86	6.93	8.26	10	10.9	11.9	12.2	12.5	11
Nitrate Nitrogen N	0.0383	0.0147	0.0223	0.023	0.0237	0.0288	0.0321	0.0499	0.0573	0.0594	0.0615	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.063	0.02	0.046	0.0472	0.0484	0.052	0.058	0.0715	0.0796	0.0823	0.085	3
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	8
Ortho-Phosphate	0.00116	0.00022	0.001	0.001	0.001	0.001	0.00105	0.00128	0.0015	0.0015	0.0015	8
Phosphorus (P)-Total	0.0941	0.102	0.0037	0.00878	0.0139	0.033	0.0411	0.147	0.211	0.256	0.3	8
Total Organic Carbon	0.57	0.103	0.5	0.5	0.5	0.5	0.5	0.638	0.723	0.727	0.73	8
Dissolved Organic Carbon	0.621	0.216	0.5	0.5	0.5	0.5	0.5	0.635	0.887	0.989	1.09	8
Aluminum T-Al	2.28	1.57	0.8	0.861	0.921	1.2	1.59	2.92	4.23	5.02	5.8	11
Aluminum D-Al	0.0628	0.0217	0.0448	0.0449	0.045	0.0457	0.052	0.079	0.0906	0.0968	0.103	11
Antimony T-Sb	0.000595	0.000236	0.0002	0.000335	0.00047	0.0005	0.0005	0.000745	0.00079	0.000945	0.0011	11
Antimony D-Sb	0.000393	0.000166	0.0001	0.000125	0.00015	0.000275	0.0005	0.0005	0.0005	0.00051	0.00052	11
Arsenic T-As	0.00287	0.002	0.0012	0.00125	0.0013	0.00166	0.00191	0.00354	0.0056	0.00616	0.00671	8
Arsenic D-As	0.000443	0.000107	0.00025	0.000264	0.000278	0.000448	0.0005	0.0005	0.0005	0.0005	0.0005	8
Barium T-Ba	0.119	0.0375	0.069	0.0785	0.088	0.092	0.103	0.152	0.166	0.174	0.182	11
Barium D-Ba	0.0549	0.00619	0.046	0.0469	0.0477	0.0505	0.054	0.0585	0.062	0.064	0.066	11
Beryllium T-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00635	0.0176	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.0154	0.0327	0.05	8
Bismuth D-Bi	0.00635	0.0176	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.0154	0.0327	0.05	8
Boron T-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000176	0.000134	0.0000514	0.0000542	0.000057	0.0000879	0.000148	0.000205	0.000311	0.000406	0.0005	11
Cadmium D-Cd	0.0000622	0.000072	0.000017	0.000017	0.000017	0.000022	0.000024	0.0000645	0.0002	0.0002	0.0002	11
Calcium T-Ca	13	2.3	9.31	9.53	9.75	11.5	13.2	14.4	15.9	16	16	11
Calcium D-Ca	11.8	2.6	8.8	8.99	9.17	9.66	11.9	13.8	15.1	15.7	16.3	11
Chromium T-Cr	0.00102	0.000147	0.00076	0.000844	0.000928	0.001	0.001	0.00102	0.00114	0.00122	0.0013	8
Chromium D-Cr	0.000784	0.000401	0.0001	0.000125	0.000149	0.000793	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.00113	0.000769	0.00033	0.000385	0.00044	0.00057	0.00069	0.00179	0.0021	0.00229	0.00247	11
Cobalt D-Co	0.000289	0.000256	0.00008	0.00009	0.0001	0.0001	0.0003	0.0003	0.0003	0.00065	0.001	11
Copper T-Cu	0.00492	0.0051	0.0011	0.0013	0.0015	0.0019	0.00322	0.0058	0.0071	0.0131	0.019	11
Copper D-Cu	0.00137	0.00146	0.0002	0.0003	0.0004	0.001	0.001	0.001	0.0019	0.00375	0.0056	11
Iron T-Fe	2.67	1.85	0.82	0.854	0.887	1.29	1.6	4.21	4.93	5.5	6.07	11
Iron D-Fe	0.0409	0.0156	0.019	0.0195	0.02	0.031	0.044	0.0465	0.055	0.064	0.073	11
Lead T-Pb	0.00508	0.00313	0.00183	0.00197	0.00211	0.0027	0.00317	0.00829	0.009	0.00946	0.00992	11
Lead D-Pb	0.000404	0.000276	0.000067	0.0000835	0.0001	0.000138	0.0005	0.0005	0.0005	0.00075	0.001	11
Magnesium T-Mg	1.86	0.621	1.22	1.31	1.39	1.48	1.6	2.05	2.64	2.97	3.3	11
Magnesium D-Mg	1.02	0.237	0.768	0.774	0.78	0.797	1	1.18	1.33	1.38	1.43	11
Manganese T-Mn	0.144	0.105	0.041	0.044	0.047	0.0604	0.0899	0.228	0.28	0.307	0.333	11
Manganese D-Mn	0.0101	0.00291	0.00647	0.0065	0.00652	0.0082	0.00982	0.0116	0.0131	0.0146	0.016	11
Mercury T-Hg	0.0000084	0.00000569	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000103	0.0000141	0.0000176	0.000021	8
Mercury D-Hg	0.00000625	0.00000231	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000625	0.00001	0.00001	0.00001	8
Molybdenum T-Mo	0.000864	0.000277	0.0002	0.000372	0.000544	0.000832	0.001	0.001	0.001	0.00105	0.0011	11
Molybdenum D-Mo	0.000791	0.000305	0.0002	0.00031	0.00042	0.000541	0.001	0.001	0.001	0.001	0.001	11
Nickel T-Ni	0.00603	0.0159	0.00092	0.00096	0.001	0.001	0.001	0.0015	0.002	0.028	0.054	11
Nickel D-Ni	0.000848	0.000247	0.0004	0.00045	0.0005	0.000715	0.001	0.001	0.001	0.001	0.001	11
Selenium T-Se	0.000265	0.000298	0.000111	0.000118	0.000124	0.000156	0.000173	0.00018	0.000437	0.000718	0.001	8
Selenium D-Se	0.000248	0.000306	0.000094	0.0000961	0.0000982	0.00011	0.000154	0.000184	0.000434	0.000717	0.001	8
Silicon T-Si	4.03	1.76	2.58	2.63	2.68	2.93	3.63	4.2	5.81	7	8.19	9
Silicon D-Si	0.725	0.16	0.515	0.533	0.55	0.57	0.735	0.827	0.902	0.947	0.991	9
Silver T-Ag	0.0000706	0.0000525	0.000027	0.0000288	0.0000305	0.0000395	0.0000475	0.0000838	0.000153	0.000155	0.000156	8
Silver D-Ag	0.0000175	0.00000463	0.00001	0.00001	0.00001	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.85	1.28	0.451	0.493	0.535	0.928	2	2	2.29	3.6	4.9	10
Sodium D-Na	1.26	0.847	0.3	0.305	0.31	0.4	2	2	2	2	2	11
Strontium T-Sr	0.0806	0.0166	0.062	0.0628	0.0635	0.0656	0.074	0.0933	0.0992	0.104	0.109	11
Strontium D-Sr	0.0757	0.0186	0.05	0.0546	0.0592	0.0597	0.071	0.0887	0.0976	0.102	0.107	11
Thallium T-Tl	0.000169	0.000058	0.000058	0.000071	0.0000839	0.000174	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.000153	0.000088	0.00001	0.00001	0.00001	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.000386	0.000195	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	7
Tin D-Sn	0.000386	0.000195	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	7
Titanium T-Ti	0.0553	0.0372	0.026	0.0278	0.0295	0.0348	0.04	0.0586	0.0979	0.117	0.137	8
Titanium D-Ti	0.0088	0.00341	0.00036	0.00373	0.00711	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000184	0.0000361	0.000104	0.000122	0.00014	0.000189	0.0002	0.0002	0.000203	0.000207	0.00021	8
Uranium D-U	0.000157	0.0000796	0.000026	0.0000274	0.0000288	0.000158	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.00477	0.00299	0.0021	0.00214	0.00218	0.00294	0.0037	0.00564	0.00836	0.00963	0.0109	8
Vanadium D-V	0.000625	0.000231	0.0005	0.0005	0.0005	0.0005	0.0005	0.000625	0.001	0.001	0.001	8
Zinc T-Zn	0.0365	0.0362	0.009	0.0091	0.0092	0.0136	0.0198	0.0474	0.064	0.097	0.13	11
Zinc D-Zn	0.00434	0.00128	0.001	0.0022	0.0034	0.00415	0.005	0.005	0.005	0.005	0.005	11

GoldSlide Creek	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.48	0.39	6.26	7.12	7.17	7.32	7.44	7.76	7.94	7.98	8.08	22
Conductivity	111	26.2	71	80.4	83.5	91.5	106	128	136	147	186	26
Hardness CaCO3	44.4	9.27	24	32.5	34.5	37	46.5	52	54.9	58.9	60	26
Total Dissolved Solids	77.5	18.2	36	50.5	59	67	75	89.8	95.5	107	120	26
Total Suspended Solids	2.79	3.5	0.5	1	1	1	1.5	3	4.7	8.25	17.3	26
Turbidity	0.859	1.42	0.1	0.138	0.165	0.2	0.33	0.715	1.75	2.95	6.9	26
Alkalinity-Total CaCO3	10.1	2.14	7	7.63	8	8.43	10	11	12	14.3	16	26
Acidity (as CaCO3)	3.18	4.52	1	1.05	1.33	1.58	2.2	2.9	3.8	3.8	24	24
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0376	0.00563	0.031	0.0314	0.0317	0.032	0.038	0.0418	0.0443	0.0447	0.045	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	35.2	12.2	18	20.5	22	23.3	34.8	45.9	47.5	48.1	63.9	26
Nitrate Nitrogen N	0.0177	0.00469	0.0112	0.012	0.0128	0.0139	0.0178	0.0206	0.0238	0.024	0.0241	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.0587	0.0125	0.05	0.0503	0.0506	0.0515	0.053	0.063	0.069	0.071	0.073	3
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	8
Ortho-Phosphate	0.0011	0.000131	0.001	0.001	0.001	0.001	0.00105	0.00115	0.0013	0.0013	0.0013	8
Phosphorus (P)-Total	0.0484	0.103	0.002	0.002	0.002	0.00215	0.00405	0.0297	0.125	0.213	0.3	8
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Dissolved Organic Carbon	0.505	0.0141	0.5	0.5	0.5	0.5	0.5	0.5	0.512	0.526	0.54	8
Aluminum T-Al	0.0835	0.104	0.0054	0.0148	0.0162	0.0447	0.0623	0.095	0.136	0.158	0.546	25
Aluminum D-Al	0.0184	0.00923	0.0005	0.00642	0.00682	0.013	0.019	0.025	0.0268	0.0278	0.0423	25
Antimony T-Sb	0.000436	0.000346	0.00007	0.0001	0.0001	0.00014	0.00044	0.0005	0.000778	0.000902	0.0016	25
Antimony D-Sb	0.00023	0.000172	0.00004	0.00005	0.00005	0.0001	0.0002	0.00035	0.0005	0.0005	0.0005	25
Arsenic T-As	0.000456	0.000199	0.00014	0.000168	0.000196	0.00043	0.0005	0.0005	0.000587	0.000689	0.00079	8
Arsenic D-As	0.000406	0.000174	0.0001	0.000118	0.000135	0.000413	0.0005	0.0005	0.0005	0.0005	0.0005	8
Barium T-Ba	0.0265	0.00746	0.018	0.0198	0.02	0.021	0.026	0.0287	0.033	0.0366	0.054	25
Barium D-Ba	0.0225	0.00319	0.018	0.0196	0.0198	0.02	0.021	0.024	0.0279	0.0287	0.0289	25
Beryllium T-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.00635	0.0176	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.0154	0.0327	0.05	8
Bismuth D-Bi	0.00635	0.0176	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.0154	0.0327	0.05	8
Boron T-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000421	0.000282	0.0002	0.00021	0.000255	0.000282	0.0003	0.0004	0.000648	0.000864	0.00152	25
Cadmium D-Cd	0.000244	0.0000812	0.00009	0.0001	0.00012	0.0002	0.000272	0.0003	0.000318	0.000346	0.0004	25
Calcium T-Ca	15.7	3.18	9.9	11.9	12	14	15.6	17.1	20.1	21.6	23	25
Calcium D-Ca	14.8	3.28	7.4	10.6	11.3	12.2	15.4	17.4	18.3	19.8	21	25
Chromium T-Cr	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Chromium D-Cr	0.0008	0.000374	0.0001	0.00017	0.00024	0.000825	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.000604	0.000264	0.00018	0.0003	0.0003	0.00037	0.00058	0.00082	0.00088	0.000976	0.00121	25
Cobalt D-Co	0.000485	0.000201	0.00015	0.0003	0.0003	0.00033	0.00044	0.00061	0.00074	0.000864	0.001	25
Copper T-Cu	0.00659	0.00359	0.0019	0.00314	0.00338	0.00473	0.00594	0.007	0.0108	0.0116	0.0193	25
Copper D-Cu	0.00423	0.0022	0.0011	0.00122	0.00178	0.00289	0.00381	0.00501	0.00712	0.00828	0.0102	25
Iron T-Fe	0.0749	0.151	0.01	0.01	0.01	0.01	0.03	0.07	0.155	0.208	0.751	25
Iron D-Fe	0.0154	0.00935	0.005	0.01	0.01	0.01	0.01	0.03	0.03	0.03	0.03	25
Lead T-Pb	0.000575	0.000521	0.00005	0.00005	0.0000568	0.00028	0.0005	0.00074	0.000956	0.00124	0.00255	25
Lead D-Pb	0.000222	0.000248	0.000025	0.00005	0.00005	0.00005	0.00008	0.0005	0.0005	0.0005	0.001	25
Magnesium T-Mg	2.06	0.402	1.39	1.52	1.62	1.8	1.96	2.29	2.6	2.75	2.96	25
Magnesium D-Mg	1.87	0.34	1.3	1.38	1.44	1.61	1.84	2.2	2.29	2.4	2.43	25
Manganese T-Mn	0.0104	0.00732	0.00286	0.00297	0.00324	0.00598	0.0081	0.013	0.0177	0.0212	0.0363	25
Manganese D-Mn	0.0079	0.00392	0.002	0.00252	0.00304	0.0051	0.00792	0.0108	0.0136	0.0152	0.0157	25
Mercury T-Hg	0.00000625	0.00000231	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000625	0.00001	0.00001	0.00001	8
Mercury D-Hg	0.00000625	0.00000231	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000625	0.00001	0.00001	0.00001	8
Molybdenum T-Mo	0.00432	0.000797	0.0027	0.00278	0.0032	0.00396	0.0043	0.00486	0.00521	0.00548	0.0057	25
Molybdenum D-Mo	0.00371	0.000948	0.00114	0.00182	0.00264	0.00337	0.0038	0.004	0.00484	0.00505	0.00521	25
Nickel T-Ni	0.0022	0.00224	0.00054	0.001	0.00104	0.0011	0.0015	0.0025	0.00303	0.00438	0.012	25
Nickel D-Ni	0.00118	0.000546	0.0004	0.000508	0.000604	0.0008	0.0011	0.0013	0.00175	0.00196	0.00304	25
Selenium T-Se	0.00122	0.000121	0.001	0.00104	0.00108	0.00116	0.00126	0.00129	0.00135	0.00136	0.00136	8
Selenium D-Se	0.00122	0.000127	0.001	0.00103	0.00106	0.00115	0.00124	0.0013	0.00134	0.00136	0.00138	8
Silicon T-Si	2.58	0.247	2.26	2.26	2.26	2.32	2.67	2.73	2.82	2.87	2.93	9
Silicon D-Si	2.51	0.248	2.19	2.21	2.23	2.28	2.6	2.73	2.75	2.77	2.79	9
Silver T-Ag	0.0000175	0.00000463	0.00001	0.00001	0.00001	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	8
Silver D-Ag	0.0000175	0.00000463	0.00001	0.00001	0.00001	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.33	0.44	0.79	0.879	0.928	0.985	1.14	1.69	2	2	2	24
Sodium D-Na	1.23	0.467	0.628	0.666	0.826	0.95	1.02	1.3	2	2	2	25
Strontium T-Sr	0.102	0.0282	0.047	0.0518	0.0674	0.0867	0.103	0.118	0.129	0.153	0.16	25
Strontium D-Sr	0.0947	0.0269	0.038	0.0472	0.062	0.0807	0.097	0.114	0.126	0.132	0.141	25
Thallium T-Tl	0.000153	0.000088	0.00001	0.00001	0.00001	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.000153	0.000088	0.00001	0.00001	0.00001	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0004	0.000185	0.0001	0.0001	0.0001	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.000408	0.000172	0.0001	0.000121	0.000142	0.000415	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.00895	0.00338	0.00063	0.00391	0.00719	0.01	0.01	0.01	0.0103	0.0107	0.011	8
Titanium D-Ti	0.00879	0.00343	0.0003	0.0037	0.00709	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000153	0.0000866	0.000013	0.000013	0.000013	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Uranium D-U	0.000153	0.0000875	0.000011	0.000011	0.000011	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.000663	0.000311	0.0005	0.0005	0.0005	0.0005	0.0005	0.000625	0.00109	0.0012	0.0013	8
Vanadium D-V	0.000625	0.000231	0.0005	0.0005	0.0005	0.0005	0.0005	0.000625	0.001	0.001	0.001	8
Zinc T-Zn	0.0237	0.0124	0.008	0.0134	0.0149	0.0167	0.0186	0.03	0.0337	0.0486	0.064	25
Zinc D-Zn	0.0187	0.00594	0.008	0.0118	0.0124	0.0152	0.0177	0.0201	0.0286	0.031	0.031	25

Otter Creek	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.9	0.695	7.41	7.47	7.53	7.63	7.65	7.75	8.44	8.95	9.45	7
Conductivity	149	61.8	68.2	77.7	87.3	110	164	166	204	232	260	7
Hardness CaCO3	71.6	34.8	29.3	33.4	37.5	49.5	76.9	79.6	103	120	137	7
Total Dissolved Solids	96	31.8	51	54.9	58.8	77	98	112	126	136	146	7
Total Suspended Solids	66.2	83.9	12.6	13.6	14.5	18.2	29.3	69.1	151	199	247	7
Turbidity	36.1	36.9	4.1	6.68	9.26	16.7	22.3	40.5	77.1	94.6	112	7
Alkalinity-Total CaCO3	41.9	11.1	29.1	29.4	29.8	33.4	43.8	46.2	53.3	57.2	61.1	7
Acidity (as CaCO3)	1.8	0.603	1	1.18	1.36	1.6	1.7	1.85	2.34	2.67	3	7
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	7
Fluoride F	0.0251	0.00821	0.02	0.02	0.02	0.02	0.023	0.025	0.0328	0.0379	0.043	7
Bromide Br	0.05	7.49E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	7
Sulphate SO4	31.8	19	7.23	10.4	13.5	20.8	34.9	35.8	48.7	58	67.3	7
Nitrate Nitrogen N	0.0196	0.00835	0.0083	0.00881	0.00932	0.0135	0.0211	0.0246	0.0276	0.0295	0.0314	7
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Total Nitrogen	0.06	N/A	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	7
Ortho-Phosphate	0.00139	0.000334	0.001	0.00103	0.00106	0.0011	0.0014	0.00165	0.0018	0.0018	0.0018	7
Phosphorus (P)-Total	0.0781	0.0903	0.0136	0.0151	0.0166	0.021	0.0293	0.0991	0.173	0.219	0.264	7
Total Organic Carbon	0.561	0.163	0.5	0.5	0.5	0.5	0.5	0.5	0.672	0.801	0.93	7
Dissolved Organic Carbon	0.523	0.0454	0.5	0.5	0.5	0.5	0.5	0.52	0.572	0.596	0.62	7
Aluminum T-Al	1.45	1.23	0.258	0.415	0.571	0.847	1.06	1.6	2.81	3.39	3.96	7
Aluminum D-Al	0.0449	0.0206	0.021	0.0227	0.0244	0.0281	0.045	0.0577	0.0682	0.0727	0.0771	7
Antimony T-Sb	0.000579	0.000151	0.00048	0.000486	0.000492	0.0005	0.0005	0.000595	0.000766	0.000823	0.00088	7
Antimony D-Sb	0.000443	0.000151	0.0001	0.00022	0.00034	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Arsenic T-As	0.00152	0.00107	0.00056	0.000578	0.000596	0.00067	0.00106	0.00214	0.00275	0.00307	0.00338	7
Arsenic D-As	0.000451	0.000129	0.00016	0.000262	0.000364	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Barium T-Ba	0.0973	0.029	0.057	0.0618	0.0666	0.0795	0.093	0.117	0.132	0.135	0.139	7
Barium D-Ba	0.0583	0.0148	0.039	0.0399	0.0408	0.0465	0.059	0.07	0.0734	0.0752	0.077	7
Beryllium T-Be	0.000871	0.00034	0.0001	0.00037	0.00064	0.001	0.001	0.001	0.001	0.001	0.001	7
Beryllium D-Be	0.000871	0.00034	0.0001	0.00037	0.00064	0.001	0.001	0.001	0.001	0.001	0.001	7
Bismuth T-Bi	0.0000531	0.00000832	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.0000588	0.0000654	0.000072	7
Bismuth D-Bi	0.00005	7.32E-21	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	7
Boron T-B	0.0871	0.034	0.01	0.037	0.064	0.1	0.1	0.1	0.1	0.1	0.1	7
Boron D-B	0.0871	0.034	0.01	0.037	0.064	0.1	0.1	0.1	0.1	0.1	0.1	7
Cadmium T-Cd	0.000181	0.000103	0.0000949	0.0000997	0.000105	0.000113	0.000162	0.000194	0.000285	0.00034	0.000395	7
Cadmium D-Cd	0.00005	0.0000197	0.0000191	0.0000233	0.0000274	0.00004	0.000051	0.0000605	0.0000694	0.0000742	0.000079	7
Calcium T-Ca	24	10.8	12.2	12.9	13.6	16.8	24.6	26.6	34.8	39.7	44.5	7
Calcium D-Ca	23.5	11	10.4	11.6	12.8	16.4	24.7	26	33.6	39	44.4	7
Chromium T-Cr	0.00149	0.000802	0.001	0.001	0.001	0.001	0.001	0.0017	0.00252	0.00277	0.00301	7
Chromium D-Cr	0.000871	0.00034	0.0001	0.00037	0.00064	0.001	0.001	0.001	0.001	0.001	0.001	7
Cobalt T-Co	0.00111	0.000859	0.00032	0.000383	0.000446	0.00056	0.00077	0.0015	0.00227	0.00242	0.00256	7
Cobalt D-Co	0.000271	0.0000756	0.0001	0.00016	0.00022	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	7
Copper T-Cu	0.00499	0.00395	0.0015	0.00162	0.00174	0.00205	0.0032	0.0077	0.0105	0.0106	0.0107	7
Copper D-Cu	0.000906	0.000249	0.00034	0.000538	0.000736	0.001	0.001	0.001	0.001	0.001	0.001	7
Iron T-Fe	2.26	1.8	0.57	0.729	0.888	1.14	1.46	3.06	4.64	5.01	5.37	7
Iron D-Fe	0.0419	0.0155	0.03	0.03	0.03	0.03	0.039	0.0465	0.0608	0.0659	0.071	7
Lead T-Pb	0.00273	0.00183	0.0005	0.000929	0.00136	0.00196	0.00206	0.00354	0.00522	0.00539	0.00557	7
Lead D-Pb	0.000441	0.000155	0.000089	0.000212	0.000336	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Magnesium T-Mg	3.86	1.45	2.28	2.32	2.36	2.99	3.9	4.1	5.14	5.89	6.64	7
Magnesium D-Mg	3.2	1.74	0.815	1.13	1.45	2.24	3.32	3.76	4.81	5.56	6.3	7
Manganese T-Mn	0.091	0.076	0.0253	0.0321	0.039	0.049	0.0602	0.11	0.189	0.211	0.233	7
Manganese D-Mn	0.0126	0.00448	0.00602	0.007	0.00797	0.0102	0.0115	0.0162	0.0179	0.0181	0.0183	7
Mercury T-Hg	0.00000624	0.0000032	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000051	0.00000852	0.000011	0.0000135	7
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	7
Molybdenum T-Mo	0.00165	0.000935	0.000343	0.00054	0.000737	0.0011	0.0015	0.0022	0.00274	0.00292	0.0031	7
Molybdenum D-Mo	0.000986	0.000392	0.000203	0.000442	0.000681	0.001	0.001	0.0011	0.00132	0.00141	0.0015	7
Nickel T-Ni	0.00454	0.00201	0.0022	0.0025	0.0028	0.00365	0.0042	0.00473	0.00644	0.00752	0.0086	7
Nickel D-Ni	0.00194	0.00114	0.0005	0.00071	0.00092	0.0013	0.0016	0.00245	0.0031	0.00355	0.004	7
Selenium T-Se	0.00141	0.000837	0.000235	0.00034	0.000444	0.000887	0.00134	0.00194	0.00231	0.00247	0.00262	7
Selenium D-Se	0.0011	0.00073	0.000177	0.000283	0.000389	0.000664	0.0011	0.00134	0.00189	0.00215	0.00242	7
Silicon T-Si	3.34	1.86	1.52	1.65	1.77	2.3	2.67	3.77	5.39	6.21	7.02	7
Silicon D-Si	0.768	0.274	0.366	0.422	0.479	0.598	0.836	0.883	1.02	1.11	1.21	7
Silver T-Ag	0.0000787	0.0000555	0.000034	0.0000352	0.0000364	0.0000405	0.000058	0.0000935	0.000136	0.000164	0.000191	7
Silver D-Ag	0.0000186	0.00000378	0.00001	0.000013	0.000016	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	7
Sodium T-Na	1.81	0.512	0.645	1.05	1.46	2	2	2	2	2	2	7
Sodium D-Na	1.74	0.681	0.197	0.738	1.28	2	2	2	2	2	2	7
Strontium T-Sr	0.144	0.0612	0.059	0.0696	0.0802	0.112	0.158	0.159	0.197	0.225	0.253	7
Strontium D-Sr	0.139	0.0636	0.0505	0.0616	0.0728	0.104	0.146	0.16	0.198	0.225	0.251	7
Thallium T-Tl	0.000176	0.0000639	0.000031	0.0000817	0.000132	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Thallium D-Tl	0.000173	0.0000718	0.00001	0.000067	0.000124	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	7
Tin T-Sn	0.000443	0.000151	0.0001	0.00022	0.00034	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Tin D-Sn	0.000509	0.000122	0.00032	0.000374	0.000428	0.0005	0.0005	0.0005	0.000596	0.000668	0.00074	7
Titanium T-Ti	0.0391	0.0305	0.01	0.0136	0.0172	0.0225	0.026	0.0525	0.0819	0.0848	0.0877	7
Titanium D-Ti	0.00865	0.00358	0.00054	0.00338	0.00622	0.01	0.01	0.01	0.01	0.01	0.01	7
Uranium T-U	0.000254	0.0000839	0.000128	0.00015	0.000171	0.000215	0.00025	0.00029	0.000348	0.000369	0.00039	7
Uranium D-U	0.000195	0.0000856	0.000035	0.0000845	0.000134	0.0002	0.0002	0.0002	0.000252	0.000291	0.00033	7
Vanadium T-V	0.00376	0.00251	0.00114	0.00137	0.00159	0.00222	0.00292	0.00499	0.00712	0.00748	0.00785	7
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	7
Zinc T-Zn	0.0197	0.00891	0.0119	0.0121	0.0123	0.013	0.0182	0.0223	0.0293	0.0332	0.0371	7
Zinc D-Zn	0.00487	0.00187	0.001	0.0022	0.0034	0.005	0.005	0.0055	0.00632	0.00671	0.0071	7

Rio Blanco Creek	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.76	0.212	7.5	7.5	7.53	7.66	7.71	7.81	7.92	8.15	8.39	20
Conductivity	151	43.6	68	101	110	129	143	174	210	234	240	22
Hardness CaCO3	70.5	20.6	34	50	50.2	57.4	64.5	80.7	103	107	109	22
Total Dissolved Solids	101	28.6	42	71.1	72	85.3	97	114	137	147	170	22
Total Suspended Solids	49.5	94.4	1	1	1.3	5.25	14	36	143	220	398	22
Turbidity	22.8	69.1	0.56	1.31	1.42	2.01	5.9	15.9	22.5	29.9	330	22
Alkalinity-Total CaCO3	31.5	6.52	22	25.1	26	26.3	30.4	33.8	41.7	42.8	48	22
Acidity (as CaCO3)	2.16	0.782	1	1	1.2	1.8	2	2.5	3.4	3.4	3.6	21
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	8
Fluoride F	0.0424	0.00733	0.033	0.0337	0.0344	0.0365	0.0425	0.0463	0.0512	0.0526	0.054	8
Bromide Br	0.05	7.42E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	8
Sulphate SO4	39	16.8	16	18	18.5	25.5	36.7	48.9	62.2	70.6	71.3	22
Nitrate Nitrogen N	0.00821	0.00488	0.005	0.005	0.005	0.005	0.00515	0.0103	0.015	0.0161	0.0173	8
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	8
Total Nitrogen	0.0433	0.0115	0.03	0.032	0.034	0.04	0.05	0.05	0.05	0.05	0.05	3
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	8
Ortho-Phosphate	0.00125	0.000298	0.001	0.001	0.001	0.00108	0.00115	0.00133	0.00155	0.00173	0.0019	8
Phosphorus (P)-Total	0.076	0.107	0.004	0.00432	0.00463	0.00595	0.0325	0.082	0.215	0.257	0.3	8
Total Organic Carbon	0.506	0.0177	0.5	0.5	0.5	0.5	0.5	0.5	0.515	0.533	0.55	8
Dissolved Organic Carbon	0.533	0.0682	0.5	0.5	0.5	0.5	0.5	0.518	0.606	0.648	0.69	8
Aluminum T-Al	0.937	2.94	0.0072	0.0686	0.08	0.112	0.157	0.36	0.893	1.55	14	22
Aluminum D-Al	0.0185	0.0154	0.0005	0.00129	0.00682	0.00815	0.0128	0.0255	0.0357	0.0544	0.0574	22
Antimony T-Sb	0.000652	0.000479	0.00029	0.000302	0.000332	0.000383	0.0005	0.000593	0.00161	0.00173	0.00192	22
Antimony D-Sb	0.000352	0.000191	0.0001	0.000102	0.000132	0.0002	0.000325	0.0005	0.0005	0.0005	0.00087	22
Arsenic T-As	0.00216	0.00158	0.00076	0.000802	0.000844	0.000955	0.00167	0.00276	0.00401	0.00465	0.00529	8
Arsenic D-As	0.000561	0.0000958	0.0005	0.0005	0.0005	0.0005	0.00051	0.00058	0.000694	0.000722	0.00075	8
Barium T-Ba	0.0436	0.0468	0.0235	0.0241	0.026	0.0291	0.0325	0.0376	0.0459	0.066	0.249	22
Barium D-Ba	0.0247	0.00397	0.0181	0.0191	0.0201	0.023	0.0249	0.0258	0.0287	0.0314	0.0356	22
Beryllium T-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Beryllium D-Be	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Bismuth T-Bi	0.000114	0.00017	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00023	0.000365	0.0005	7
Bismuth D-Bi	0.000114	0.00017	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00023	0.000365	0.0005	7
Boron T-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Boron D-B	0.0775	0.0417	0.01	0.01	0.01	0.0775	0.1	0.1	0.1	0.1	0.1	8
Cadmium T-Cd	0.000328	0.00034	0.00009	0.0001	0.0001	0.000145	0.000189	0.000293	0.000861	0.00118	0.0012	22
Cadmium D-Cd	0.000119	0.000047	0.00008	0.00008	0.000081	0.0001	0.0001	0.000131	0.000155	0.00016	0.0003	22
Calcium T-Ca	25.7	7.12	18	18.9	19.7	20.4	22.6	29.9	37.3	37.6	42	22
Calcium D-Ca	24.2	7.29	11.7	17	17.2	19.7	21.8	28.1	35.6	37.2	38	22
Chromium T-Cr	0.00101	0.000288	0.00054	0.00067	0.000799	0.000978	0.001	0.001	0.00118	0.00139	0.0016	8
Chromium D-Cr	0.000775	0.000417	0.0001	0.0001	0.0001	0.000775	0.001	0.001	0.001	0.001	0.001	8
Cobalt T-Co	0.000771	0.00129	0.0001	0.000121	0.00013	0.00027	0.00039	0.00069	0.00109	0.00195	0.00624	22
Cobalt D-Co	0.000194	0.000108	0.00003	0.000052	0.000091	0.0001	0.000155	0.0003	0.0003	0.000338	0.0004	22
Copper T-Cu	0.0067	0.0111	0.0005	0.00085	0.00179	0.00235	0.0033	0.00642	0.0113	0.0153	0.0535	22
Copper D-Cu	0.00076	0.00061	0.0001	0.0001	0.00011	0.000425	0.00058	0.001	0.00123	0.00149	0.00282	22
Iron T-Fe	1.19	3.03	0.01	0.0996	0.121	0.161	0.252	0.753	1.68	3.45	14.3	22
Iron D-Fe	0.0193	0.0111	0.005	0.01	0.01	0.01	0.0145	0.03	0.03	0.0367	0.043	22
Lead T-Pb	0.00135	0.00164	0.00015	0.000187	0.000313	0.0005	0.000925	0.00135	0.00278	0.00499	0.00682	22
Lead D-Pb	0.000237	0.000258	0.000025	0.00005	0.00005	0.000058	0.0001	0.0005	0.0005	0.0005	0.001	22
Magnesium T-Mg	2.96	1.32	1.8	1.9	2	2.17	2.59	3.47	3.69	4.6	7.86	22
Magnesium D-Mg	2.43	0.702	1.1	1.71	1.82	1.96	2.25	2.94	3.44	3.54	3.7	22
Manganese T-Mn	0.0333	0.0609	0.00053	0.00368	0.00525	0.00888	0.0129	0.0261	0.0622	0.109	0.283	22
Manganese D-Mn	0.00527	0.00386	0.0001	0.00038	0.00194	0.00383	0.00444	0.00565	0.0114	0.013	0.0162	22
Mercury T-Hg	0.00000625	0.00000231	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000625	0.00001	0.00001	0.00001	8
Mercury D-Hg	0.00000625	0.00000231	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000625	0.00001	0.00001	0.00001	8
Molybdenum T-Mo	0.00196	0.00136	0.00099	0.001	0.00104	0.00134	0.00156	0.00203	0.00277	0.00289	0.00745	22
Molybdenum D-Mo	0.00123	0.000464	0.00039	0.00047	0.000678	0.001	0.0013	0.0014	0.00158	0.00178	0.00259	22
Nickel T-Ni	0.00706	0.0147	0.0016	0.0019	0.00191	0.0023	0.00286	0.00408	0.00755	0.0218	0.07	22
Nickel D-Ni	0.00155	0.000702	0.0005	0.000525	0.0008	0.00122	0.0015	0.00185	0.00233	0.0027	0.00339	22
Selenium T-Se	0.00168	0.000449	0.00113	0.00114	0.00115	0.00128	0.00173	0.002	0.00224	0.00225	0.00225	8
Selenium D-Se	0.00163	0.000473	0.00107	0.00108	0.00109	0.00127	0.00162	0.00183	0.00223	0.00231	0.0024	8
Silicon T-Si	2.57	0.669	1.9	1.96	2.03	2.18	2.47	2.61	3.2	3.63	4.06	8
Silicon D-Si	1.81	0.35	1.37	1.4	1.43	1.57	1.76	2.03	2.26	2.31	2.36	8
Silver T-Ag	0.000031	0.0000236	0.00002	0.00002	0.00002	0.00002	0.00002	0.000028	0.0000502	0.0000691	0.000088	8
Silver D-Ag	0.0000175	0.00000463	0.00001	0.00001	0.00001	0.0000175	0.00002	0.00002	0.00002	0.00002	0.00002	8
Sodium T-Na	1.19	0.58	0.554	0.661	0.68	0.712	0.867	1.98	2	2	2	22
Sodium D-Na	1.07	0.603	0.305	0.601	0.621	0.653	0.775	1.76	2	2	2	22
Strontium T-Sr	0.117	0.0285	0.0804	0.084	0.0842	0.0982	0.108	0.134	0.166	0.171	0.172	22
Strontium D-Sr	0.107	0.0303	0.0566	0.0685	0.0782	0.088	0.102	0.128	0.151	0.163	0.167	22
Thallium T-Tl	0.000153	0.000088	0.00001	0.00001	0.00001	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Thallium D-Tl	0.000153	0.000088	0.00001	0.00001	0.00001	0.000153	0.0002	0.0002	0.0002	0.0002	0.0002	8
Tin T-Sn	0.0004	0.000185	0.0001	0.0001	0.0001	0.0004	0.0005	0.0005	0.0005	0.0005	0.0005	8
Tin D-Sn	0.000401	0.000183	0.0001	0.000104	0.000107	0.000403	0.0005	0.0005	0.0005	0.0005	0.0005	8
Titanium T-Ti	0.0155	0.011	0.01	0.01	0.01	0.01	0.01	0.0143	0.027	0.034	0.041	8
Titanium D-Ti	0.00881	0.00337	0.00046	0.0038	0.00714	0.01	0.01	0.01	0.01	0.01	0.01	8
Uranium T-U	0.000188	0.0000422	0.000118	0.000123	0.000129	0.000183	0.0002	0.0002	0.000215	0.000233	0.00025	8
Uranium D-U	0.000171	0.000053	0.000082	0.0000845	0.0000869	0.000172	0.0002	0.0002	0.0002	0.0002	0.0002	8
Vanadium T-V	0.002	0.00214	0.0005	0.0005	0.0005	0.0005	0.000975	0.00275	0.00447	0.00549	0.0065	8
Vanadium D-V	0.000625	0.000231	0.0005	0.0005	0.0005	0.0005	0.0005	0.000625	0.001	0.001	0.001	8
Zinc T-Zn	0.02	0.0217	0.0068	0.00696	0.00833	0.00988	0.0126	0.0184	0.0333	0.054	0.104	22
Zinc D-Zn	0.00578	0.00249	0.002	0.00245	0.00286	0.00413	0.00585	0.0061	0.00954	0.00999	0.012	22

Roosevelt Creek	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.68	0.34	7.05	7.19	7.26	7.48	7.74	7.85	8.03	8.15	8.36	16
Conductivity	86.4	22.1	59.4	63.1	67	71	78	101	117	124	138	17
Hardness CaCO3	38.7	10	26	27.6	28.6	30	36	47	53.4	56.9	57	17
Total Dissolved Solids	52.1	11.6	33	37	39.2	42	53	59	67.4	69.4	75	17
Total Suspended Solids	26.5	33.2	1	1	2.5	11	20	27.5	46	80.6	140	17
Turbidity	23	20.7	4.8	4.89	5.56	7.79	19	31	33.4	45.6	92	17
Alkalinity-Total CaCO3	35.8	7.31	27.5	28.2	28.8	31	32	39.9	46.1	47.6	53	17
Acidity (as CaCO3)	1.82	0.842	0.8	0.96	1	1.2	1.5	2.1	3.04	3.42	3.5	17
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	7
Fluoride F	0.0219	0.00491	0.02	0.02	0.02	0.02	0.02	0.02	0.0252	0.0291	0.033	7
Bromide Br	0.05	7.49E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	7
Sulphate SO4	10.1	2.64	5.78	5.8	6.64	7.41	10.5	12	13	13.1	13.6	17
Nitrate Nitrogen N	0.0373	0.0198	0.0143	0.0162	0.0181	0.0241	0.0336	0.0465	0.0603	0.066	0.0718	7
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	7
Total Nitrogen	0.0615	0.029	0.041	0.0431	0.0451	0.0513	0.0615	0.0718	0.0779	0.08	0.082	2
Ammonia Nitrogen N	0.0054	0.00106	0.005	0.005	0.005	0.005	0.005	0.005	0.00612	0.00696	0.0078	7
Ortho-Phosphate	0.00103	0.0000756	0.001	0.001	0.001	0.001	0.001	0.001	0.00108	0.00114	0.0012	7
Phosphorus (P)-Total	0.142	0.22	0.008	0.00833	0.00866	0.00975	0.0214	0.183	0.412	0.495	0.579	7
Total Organic Carbon	0.524	0.0643	0.5	0.5	0.5	0.5	0.5	0.5	0.568	0.619	0.67	7
Dissolved Organic Carbon	0.509	0.0227	0.5	0.5	0.5	0.5	0.5	0.5	0.524	0.542	0.56	7
Aluminum T-Al	0.918	0.739	0.128	0.154	0.196	0.398	0.733	1.39	1.75	2.05	2.8	17
Aluminum D-Al	0.0263	0.019	0.0005	0.0005	0.00398	0.0097	0.022	0.0422	0.0508	0.0536	0.0598	17
Antimony T-Sb	0.000557	0.000258	0.00022	0.000276	0.000332	0.0004	0.0005	0.00064	0.000854	0.000996	0.0013	17
Antimony D-Sb	0.000275	0.000166	0.0001	0.0001	0.0001	0.00014	0.00022	0.0005	0.0005	0.0005	0.0005	17
Arsenic T-As	0.000973	0.000447	0.0005	0.0005	0.0005	0.0006	0.00091	0.00126	0.00144	0.00157	0.00169	7
Arsenic D-As	0.000399	0.000173	0.00014	0.000143	0.000146	0.000325	0.0005	0.0005	0.0005	0.0005	0.0005	7
Barium T-Ba	0.0789	0.0296	0.0344	0.0517	0.0578	0.0639	0.0691	0.096	0.0996	0.116	0.17	17
Barium D-Ba	0.0517	0.00871	0.0269	0.0398	0.0448	0.047	0.052	0.058	0.0609	0.0623	0.0628	17
Beryllium T-Be	0.000743	0.000439	0.0001	0.0001	0.0001	0.00055	0.001	0.001	0.001	0.001	0.001	7
Beryllium D-Be	0.000743	0.000439	0.0001	0.0001	0.0001	0.00055	0.001	0.001	0.001	0.001	0.001	7
Bismuth T-Bi	0.000114	0.00017	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00023	0.000365	0.0005	7
Bismuth D-Bi	0.000114	0.00017	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00023	0.000365	0.0005	7
Boron T-B	0.0744	0.0437	0.01	0.0103	0.0106	0.0555	0.1	0.1	0.1	0.1	0.1	7
Boron D-B	0.0743	0.0439	0.01	0.01	0.01	0.055	0.1	0.1	0.1	0.1	0.1	7
Cadmium T-Cd	0.000119	0.000114	0.0000113	0.0000186	0.0000305	0.000071	0.00008	0.0001	0.00028	0.0004	0.0004	17
Cadmium D-Cd	0.0000759	0.0000613	0.00001	0.0000138	0.0000161	0.000017	0.00009	0.0001	0.00014	0.0002	0.0002	17
Calcium T-Ca	13.1	3.47	7.7	9.54	10	10.7	12.1	14.9	18.2	19.4	19.7	17
Calcium D-Ca	12	3.37	7.4	7.88	8.36	9.3	11.4	14.5	16.5	17.9	19.1	17
Chromium T-Cr	0.000943	0.000138	0.00063	0.000732	0.000834	0.000985	0.001	0.001	0.001	0.001	0.001	7
Chromium D-Cr	0.000749	0.00043	0.0001	0.000112	0.000124	0.00057	0.001	0.001	0.001	0.001	0.001	7
Cobalt T-Co	0.000642	0.000559	0.00009	0.000202	0.000272	0.0003	0.0005	0.00079	0.00107	0.00136	0.0025	17
Cobalt D-Co	0.000148	0.000107	0.00003	0.000046	0.000056	0.00006	0.0001	0.0003	0.0003	0.0003	0.0003	17
Copper T-Cu	0.00295	0.00231	0.0003	0.00086	0.001	0.0015	0.00264	0.0034	0.00518	0.00624	0.01	17
Copper D-Cu	0.000718	0.00105	0.00005	0.00009	0.0001	0.00013	0.00029	0.001	0.001	0.0017	0.0045	17
Iron T-Fe	1.14	1.06	0.05	0.178	0.294	0.433	0.855	1.67	2.04	2.61	4.4	17
Iron D-Fe	0.0287	0.0167	0.005	0.009	0.01	0.01	0.03	0.04	0.0478	0.052	0.064	17
Lead T-Pb	0.00232	0.00232	0.00011	0.000318	0.000484	0.00099	0.00172	0.00304	0.00405	0.00536	0.01	17
Lead D-Pb	0.000207	0.0002	0.000025	0.000045	0.00005	0.00005	0.0001	0.0005	0.0005	0.0005	0.0005	17
Magnesium T-Mg	2.51	0.562	1.6	1.68	1.76	2.09	2.75	3	3.16	3.2	3.26	17
Magnesium D-Mg	2.09	0.503	1.5	1.5	1.53	1.7	1.95	2.41	2.76	2.85	3.14	17
Manganese T-Mn	0.0697	0.0707	0.0042	0.01	0.0136	0.0251	0.0393	0.101	0.132	0.166	0.29	17
Manganese D-Mn	0.00401	0.00275	0.0003	0.0007	0.00114	0.0018	0.0037	0.00568	0.00765	0.00806	0.00951	17
Mercury T-Hg	0.00000731	0.00000337	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000088	0.0000114	0.0000125	0.0000136	7
Mercury D-Hg	0.00000571	0.00000189	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000007	0.0000085	0.00001	7
Molybdenum T-Mo	0.000765	0.000534	0.00005	0.000162	0.000291	0.00038	0.00062	0.001	0.00112	0.0015	0.0023	17
Molybdenum D-Mo	0.00048	0.000364	0.00005	0.00009	0.000142	0.0002	0.000316	0.001	0.001	0.001	0.001	17
Nickel T-Ni	0.00162	0.00173	0.00015	0.000446	0.000604	0.001	0.001	0.0011	0.0035	0.00558	0.0067	17
Nickel D-Ni	0.000697	0.000411	0.00015	0.00015	0.00015	0.0004	0.0006	0.001	0.001	0.00112	0.0016	17
Selenium T-Se	0.000198	0.000063	0.000112	0.00012	0.000129	0.000154	0.000206	0.000234	0.000265	0.000279	0.000294	7
Selenium D-Se	0.000191	0.0000789	0.000117	0.00012	0.000122	0.000128	0.000188	0.000218	0.000268	0.000304	0.000341	7
Silicon T-Si	2.36	0.804	1.59	1.6	1.6	1.73	2.02	2.92	3.29	3.47	3.66	7
Silicon D-Si	0.643	0.153	0.489	0.491	0.492	0.507	0.634	0.737	0.804	0.846	0.889	7
Silver T-Ag	0.0000454	0.0000264	0.00002	0.00002	0.00002	0.000022	0.000044	0.000061	0.0000766	0.0000823	0.000088	7
Silver D-Ag	0.0000171	0.00000488	0.00001	0.00001	0.00001	0.000015	0.00002	0.00002	0.00002	0.00002	0.00002	7
Sodium T-Na	0.851	0.768	0.27	0.278	0.305	0.33	0.42	2	2	2	2	17
Sodium D-Na	0.79	0.808	0.2	0.216	0.232	0.241	0.28	2	2	2	2	17
Strontium T-Sr	0.0825	0.0246	0.053	0.0538	0.0546	0.0627	0.0875	0.0996	0.112	0.121	0.135	17
Strontium D-Sr	0.0749	0.0198	0.049	0.0498	0.0506	0.0595	0.073	0.0905	0.0973	0.103	0.116	17
Thallium T-Tl	0.000153	0.0000803	0.00003	0.0000333	0.0000366	0.000121	0.0002	0.0002	0.0002	0.0002	0.0002	7
Thallium D-Tl	0.000146	0.0000927	0.00001	0.00001	0.00001	0.000105	0.0002	0.0002	0.0002	0.0002	0.0002	7
Tin T-Sn	0.000386	0.000195	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	7
Tin D-Sn	0.000449	0.000154	0.0001	0.00022	0.00034	0.0005	0.0005	0.0005	0.000516	0.000528	0.00054	7
Titanium T-Ti	0.0201	0.00961	0.01	0.01	0.01	0.012	0.019	0.0262	0.0314	0.0332	0.035	7
Titanium D-Ti	0.00866	0.00354	0.00064	0.00345	0.00626	0.01	0.01	0.01	0.01	0.01	0.01	7
Uranium T-U	0.000157	0.000073	0.000049	0.0000499	0.0000508	0.000126	0.0002	0.0002	0.0002	0.0002	0.0002	7
Uranium D-U	0.000149	0.0000874	0.000018	0.0000198	0.0000216	0.000112	0.0002	0.0002	0.0002	0.0002	0.0002	7
Vanadium T-V	0.00277	0.0013	0.00117	0.00122	0.00127	0.00168	0.003	0.00367	0.00427	0.00438	0.00449	7
Vanadium D-V	0.000571	0.000189	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0007	0.00085	0.001	7
Zinc T-Zn	0.0242	0.0255	0.002	0.002	0.0038	0.0052	0.0101	0.039	0.0644	0.0718	0.075	17
Zinc D-Zn	0.00287	0.00228	0.0002	0.00028	0.0003	0.001	0.002	0.005	0.0054	0.0061	0.0065	17

GSC09	Freshet											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	5.92	0.888	5.2	5.24	5.29	5.42	5.64	6.28	6.66	6.78	6.91	3
Conductivity	140	5.51	134	135	135	137	140	143	144	145	145	3
Hardness CaCO3	53.5	2.85	50.6	50.9	51.2	52.2	53.7	55	55.8	56	56.3	3
Total Dissolved Solids	96.7	9.71	86	87.3	88.6	92.5	99	102	104	104	105	3
Total Suspended Solids	3	N/A	3	3	3	3	3	3	3	3	3	3
Turbidity	0.13	0.0265	0.1	0.104	0.108	0.12	0.14	0.145	0.148	0.149	0.15	3
Alkalinity-Total CaCO3	1.57	0.603	1	1.05	1.1	1.25	1.5	1.85	2.06	2.13	2.2	3
Acidity (as CaCO3)	2.6	0.872	2	2.02	2.04	2.1	2.2	2.9	3.32	3.46	3.6	3
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Fluoride F	0.0223	0.00153	0.021	0.0211	0.0212	0.0215	0.022	0.023	0.0236	0.0238	0.024	3
Bromide Br	0.05	8.5E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	3
Sulphate SO4	58	3.09	54.4	54.9	55.4	57	59.6	59.8	59.8	59.9	59.9	3
Nitrate Nitrogen N	0.0265	0.00641	0.0211	0.0215	0.0219	0.023	0.0249	0.0293	0.0319	0.0327	0.0336	3
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Total Nitrogen	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	3
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Phosphorus (P)-Total	0.0181	0.0276	0.002	0.00203	0.00206	0.00215	0.0023	0.0262	0.0405	0.0452	0.05	3
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Aluminum T-Al	0.117	0.0085	0.109	0.11	0.111	0.113	0.117	0.122	0.124	0.125	0.126	3
Aluminum D-Al	0.109	0.0107	0.097	0.0988	0.101	0.106	0.115	0.116	0.116	0.116	0.116	3
Antimony T-Sb	0.000367	0.000231	0.0001	0.00014	0.00018	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	3
Antimony D-Sb	0.000367	0.000231	0.0001	0.00014	0.00018	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	3
Arsenic T-As	0.000367	0.000231	0.0001	0.00014	0.00018	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	3
Arsenic D-As	0.000367	0.000231	0.0001	0.00014	0.00018	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	3
Barium T-Ba	0.0183	0.00289	0.015	0.0155	0.016	0.0175	0.02	0.02	0.02	0.02	0.02	3
Barium D-Ba	0.0183	0.00289	0.015	0.0155	0.016	0.0175	0.02	0.02	0.02	0.02	0.02	3
Beryllium T-Be	0.0007	0.00052	0.0001	0.00019	0.00028	0.00055	0.001	0.001	0.001	0.001	0.001	3
Beryllium D-Be	0.0007	0.00052	0.0001	0.00019	0.00028	0.00055	0.001	0.001	0.001	0.001	0.001	3
Bismuth T-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	3
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	3
Boron T-B	0.071	0.0502	0.013	0.0217	0.0304	0.0565	0.1	0.1	0.1	0.1	0.1	3
Boron D-B	0.0707	0.0508	0.012	0.0208	0.0296	0.056	0.1	0.1	0.1	0.1	0.1	3
Cadmium T-Cd	0.000829	0.0000653	0.000761	0.000769	0.000776	0.000799	0.000836	0.000864	0.00088	0.000886	0.000891	3
Cadmium D-Cd	0.00086	0.0000125	0.00085	0.000851	0.000851	0.000853	0.000856	0.000865	0.00087	0.000872	0.000874	3
Calcium T-Ca	18.1	1.25	16.7	16.9	17.1	17.6	18.5	18.8	19	19	19.1	3
Calcium D-Ca	17.6	0.9	16.7	16.8	16.9	17.2	17.6	18.1	18.3	18.4	18.5	3
Chromium T-Cr	0.0007	0.00052	0.0001	0.00019	0.00028	0.00055	0.001	0.001	0.001	0.001	0.001	3
Chromium D-Cr	0.0007	0.00052	0.0001	0.00019	0.00028	0.00055	0.001	0.001	0.001	0.001	0.001	3
Cobalt T-Co	0.000483	0.0000115	0.00047	0.000472	0.000474	0.00048	0.00049	0.00049	0.00049	0.00049	0.00049	3
Cobalt D-Co	0.00047	0.00001	0.00046	0.000461	0.000462	0.000465	0.00047	0.000475	0.000478	0.000479	0.00048	3
Copper T-Cu	0.00951	0.00019	0.00932	0.00934	0.00936	0.00941	0.0095	0.0096	0.00966	0.00968	0.0097	3
Copper D-Cu	0.00909	0.000276	0.00887	0.00888	0.0089	0.00894	0.009	0.0092	0.00932	0.00936	0.0094	3
Iron T-Fe	0.0233	0.0115	0.01	0.012	0.014	0.02	0.03	0.03	0.03	0.03	0.03	3
Iron D-Fe	0.0247	0.00924	0.014	0.0156	0.0172	0.022	0.03	0.03	0.03	0.03	0.03	3
Lead T-Pb	0.00035	0.00026	0.00005	0.000095	0.00014	0.000275	0.0005	0.0005	0.0005	0.0005	0.0005	3
Lead D-Pb	0.00035	0.00026	0.00005	0.000095	0.00014	0.000275	0.0005	0.0005	0.0005	0.0005	0.0005	3
Magnesium T-Mg	2.39	0.161	2.21	2.23	2.26	2.33	2.44	2.48	2.5	2.51	2.52	3
Magnesium D-Mg	2.31	0.156	2.14	2.16	2.18	2.24	2.33	2.39	2.43	2.44	2.45	3
Manganese T-Mn	0.0229	0.000603	0.0223	0.0224	0.0224	0.0226	0.0228	0.0232	0.0234	0.0234	0.0235	3
Manganese D-Mn	0.0225	0.000781	0.0216	0.0217	0.0219	0.0223	0.0229	0.023	0.023	0.023	0.023	3
Mercury T-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	3
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	3
Molybdenum T-Mo	0.000693	0.000531	0.00008	0.000172	0.000264	0.00054	0.001	0.001	0.001	0.001	0.001	3
Molybdenum D-Mo	0.000691	0.000535	0.000074	0.000167	0.000259	0.000537	0.001	0.001	0.001	0.001	0.001	3
Nickel T-Ni	0.00209	0.0000231	0.00206	0.00206	0.00207	0.00208	0.0021	0.0021	0.0021	0.0021	0.0021	3
Nickel D-Ni	0.00206	0.0000513	0.002	0.00201	0.00201	0.00204	0.00207	0.00209	0.00209	0.0021	0.0021	3
Selenium T-Se	0.000707	0.000037	0.000669	0.000673	0.000677	0.000689	0.000708	0.000726	0.000736	0.00074	0.000743	3
Selenium D-Se	0.000668	0.0000344	0.000628	0.000634	0.00064	0.000657	0.000686	0.000688	0.000688	0.000689	0.000689	3
Silicon T-Si	3.02	0.0503	2.97	2.98	2.98	3	3.03	3.05	3.06	3.07	3.07	3
Silicon D-Si	2.96	0.0361	2.93	2.93	2.93	2.94	2.95	2.98	2.99	3	3	3
Silver T-Ag	0.0000167	0.00000577	0.00001	0.000011	0.000012	0.000015	0.00002	0.00002	0.00002	0.00002	0.00002	3
Silver D-Ag	0.0000167	0.00000577	0.00001	0.000011	0.000012	0.000015	0.00002	0.00002	0.00002	0.00002	0.00002	3
Sodium T-Na	1.74	0.456	1.21	1.29	1.37	1.61	2	2	2	2	2	3
Sodium D-Na	1.72	0.479	1.17	1.25	1.34	1.59	2	2	2	2	2	3
Strontium T-Sr	0.19	0.0178	0.17	0.173	0.175	0.183	0.196	0.2	0.202	0.203	0.204	3
Strontium D-Sr	0.183	0.0139	0.168	0.17	0.172	0.178	0.187	0.191	0.193	0.194	0.195	3
Thallium T-Tl	0.000137	0.00011	0.00001	0.000029	0.000048	0.000105	0.0002	0.0002	0.0002	0.0002	0.0002	3
Thallium D-Tl	0.000137	0.00011	0.00001	0.000029	0.000048	0.000105	0.0002	0.0002	0.0002	0.0002	0.0002	3
Tin T-Sn	0.000367	0.000231	0.0001	0.00014	0.00018	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	3
Tin D-Sn	0.000367	0.000231	0.0001	0.00014	0.00018	0.0003	0.0005	0.0005	0.0005	0.0005	0.0005	3
Titanium T-Ti	0.00677	0.0056	0.0003	0.00127	0.00224	0.00515	0.01	0.01	0.01	0.01	0.01	3
Titanium D-Ti	0.00677	0.0056	0.0003	0.00127	0.00224	0.00515	0.01	0.01	0.01	0.01	0.01	3
Uranium T-U	0.000137	0.00011	0.00001	0.000029	0.000048	0.000105	0.0002	0.0002	0.0002	0.0002	0.0002	3
Uranium D-U	0.000137	0.00011	0.00001	0.000029	0.000048	0.000105	0.0002	0.0002	0.0002	0.0002	0.0002	3
Vanadium T-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	3
Zinc T-Zn	0.0559	0.00264	0.0536	0.0538	0.054	0.0545	0.0554	0.0571	0.0581	0.0585	0.0588	3
Zinc D-Zn	0.0579	0.0017	0.0562	0.0564	0.0566	0.0571	0.058	0.0588	0.0593	0.0594	0.0596	3

American Creek	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.52	0.139	7.34	7.36	7.39	7.45	7.56	7.63	7.63	7.64	7.64	4
Conductivity	81.9	17.6	66.3	67.2	68	70.6	77.7	89.1	99.2	103	106	4
Hardness CaCO3	37.9	6.74	30.7	31.5	32.3	34.8	36.9	40	44.1	45.5	46.9	4
Total Dissolved Solids	73.5	28.7	54	54.8	55.5	57.8	62	77.8	101	108	116	4
Total Suspended Solids	61.2	35.5	31	33	35.1	41.1	51	71.1	95.6	104	112	4
Turbidity	52.6	63.3	11.7	12.3	12.8	14.6	26.4	64.5	113	130	146	4
Alkalinity-Total CaCO3	32.3	7.36	25.6	26	26.4	27.6	30.7	35.4	39.5	40.9	42.3	4
Acidity (as CaCO3)	1.88	0.492	1.3	1.38	1.45	1.68	1.85	2.05	2.32	2.41	2.5	4
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.0353	0.00613	0.029	0.0295	0.0299	0.0313	0.0345	0.0385	0.0412	0.0421	0.043	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	9.43	2.09	7.3	7.55	7.81	8.57	9.05	9.91	11.3	11.8	12.3	4
Nitrate Nitrogen N	0.0572	0.0415	0.0282	0.029	0.0298	0.0322	0.0413	0.0663	0.0973	0.108	0.118	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.0015	0.001	0.001	0.001	0.001	0.001	0.001	0.0015	0.0024	0.0027	0.003	4
Phosphorus (P)-Total	0.199	0.123	0.05	0.0644	0.0788	0.122	0.223	0.3	0.3	0.3	0.3	4
Total Organic Carbon	0.545	0.09	0.5	0.5	0.5	0.5	0.5	0.545	0.626	0.653	0.68	4
Dissolved Organic Carbon	0.528	0.055	0.5	0.5	0.5	0.5	0.5	0.528	0.577	0.594	0.61	4
Aluminum T-Al	2.84	2.63	1.07	1.09	1.1	1.15	1.81	3.5	5.4	6.04	6.67	4
Aluminum D-Al	0.0397	0.0111	0.0302	0.0302	0.0302	0.0303	0.0382	0.0476	0.0502	0.0511	0.052	4
Antimony T-Sb	0.000433	0.000175	0.00027	0.000285	0.0003	0.000345	0.00039	0.000478	0.000599	0.00064	0.00068	4
Antimony D-Sb	0.000298	0.000138	0.0002	0.000203	0.000206	0.000215	0.000245	0.000328	0.000431	0.000466	0.0005	4
Arsenic T-As	0.00156	0.000682	0.00105	0.00106	0.00107	0.00109	0.00134	0.00182	0.00224	0.00238	0.00252	4
Arsenic D-As	0.000415	0.0000695	0.00033	0.000342	0.000354	0.00039	0.000415	0.00044	0.000476	0.000488	0.0005	4
Barium T-Ba	0.142	0.0676	0.0991	0.1	0.102	0.106	0.114	0.15	0.206	0.224	0.243	4
Barium D-Ba	0.0683	0.00889	0.0575	0.0589	0.0602	0.0643	0.0684	0.0723	0.0763	0.0777	0.079	4
Beryllium T-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000294	0.00024	0.00005	0.0000613	0.0000725	0.000106	0.000313	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0333	0.0445	0.01	0.01	0.01	0.01	0.0115	0.0348	0.0739	0.087	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.0000567	0.0000369	0.0000259	0.0000267	0.0000274	0.0000297	0.0000475	0.0000745	0.0000934	0.0000997	0.000106	4
Cadmium D-Cd	0.0000105	0.00000493	0.000005	0.00000575	0.0000065	0.00000875	0.00001	0.0000118	0.0000149	0.000016	0.000017	4
Calcium T-Ca	14.3	2.9	11.6	11.9	12.1	12.9	13.6	15	17.1	17.7	18.4	4
Calcium D-Ca	13.7	2.42	11.2	11.5	11.8	12.6	13.4	14.5	16	16.5	17	4
Chromium T-Cr	0.000523	0.00034	0.00023	0.000247	0.000263	0.000313	0.00043	0.00064	0.000856	0.000928	0.001	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.00123	0.00095	0.0006	0.000602	0.000603	0.000608	0.000845	0.00146	0.00215	0.00238	0.00261	4
Cobalt D-Co	0.00015	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.00015	0.00024	0.00027	0.0003	4
Copper T-Cu	0.00558	0.00618	0.00192	0.00196	0.00199	0.0021	0.00281	0.00629	0.0114	0.0131	0.0148	4
Copper D-Cu	0.000408	0.000395	0.0002	0.000202	0.000203	0.000208	0.000215	0.000415	0.000766	0.000883	0.001	4
Iron T-Fe	2.9	2.37	1.3	1.3	1.31	1.32	1.98	3.56	5.22	5.78	6.33	4
Iron D-Fe	0.0238	0.00768	0.014	0.0152	0.0164	0.02	0.0245	0.0283	0.0305	0.0313	0.032	4
Lead T-Pb	0.00305	0.00296	0.0011	0.00114	0.00119	0.00132	0.00184	0.00357	0.00588	0.00665	0.00742	4
Lead D-Pb	0.000163	0.000225	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.000365	0.000433	0.0005	4
Magnesium T-Mg	1.93	1.08	1.27	1.28	1.29	1.33	1.46	2.06	2.95	3.24	3.54	4
Magnesium D-Mg	0.88	0.18	0.677	0.7	0.723	0.791	0.866	0.954	1.05	1.08	1.11	4
Manganese T-Mn	0.122	0.102	0.0522	0.0532	0.0542	0.0572	0.0815	0.146	0.221	0.246	0.271	4
Manganese D-Mn	0.00936	0.00398	0.00488	0.00525	0.00563	0.00675	0.00944	0.0121	0.013	0.0134	0.0137	4
Mercury T-Hg	0.00000925	0.00000299	0.000005	0.00000575	0.0000065	0.00000875	0.00001	0.0000105	0.0000114	0.0000117	0.000012	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.000664	0.000226	0.000514	0.000522	0.000531	0.000555	0.00057	0.000678	0.000871	0.000936	0.001	4
Molybdenum D-Mo	0.000617	0.00026	0.000426	0.000438	0.000449	0.000485	0.000522	0.000654	0.000862	0.000931	0.001	4
Nickel T-Ni	0.000633	0.000245	0.0005	0.0005	0.0005	0.0005	0.000515	0.000648	0.000859	0.00093	0.001	4
Nickel D-Ni	0.000625	0.00025	0.0005	0.0005	0.0005	0.0005	0.0005	0.000625	0.00085	0.000925	0.001	4
Selenium T-Se	0.000202	0.0000882	0.00015	0.000152	0.000153	0.000158	0.000162	0.000207	0.000283	0.000309	0.000334	4
Selenium D-Se	0.000143	0.000052	0.0001	0.000102	0.000105	0.000111	0.000128	0.000159	0.000194	0.000205	0.000217	4
Silicon T-Si	5.42	4.69	2.37	2.4	2.42	2.5	3.5	6.41	9.95	11.1	12.3	4
Silicon D-Si	0.766	0.155	0.615	0.626	0.637	0.669	0.737	0.834	0.917	0.945	0.973	4
Silver T-Ag	0.0000525	0.0000561	0.000017	0.0000181	0.0000191	0.0000223	0.0000285	0.0000588	0.000105	0.000121	0.000136	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	0.904	0.731	0.521	0.523	0.526	0.532	0.547	0.919	1.57	1.78	2	4
Sodium D-Na	0.823	0.787	0.35	0.365	0.38	0.425	0.472	0.87	1.55	1.77	2	4
Strontium T-Sr	0.0846	0.0173	0.0681	0.0699	0.0718	0.0773	0.0807	0.0881	0.101	0.105	0.109	4
Strontium D-Sr	0.081	0.0171	0.0647	0.0663	0.0679	0.0727	0.0772	0.0854	0.0972	0.101	0.105	4
Thallium T-Tl	0.0000655	0.0000901	0.000011	0.0000122	0.0000134	0.000017	0.0000255	0.000074	0.00015	0.000175	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Titanium T-Ti	0.0775	0.0674	0.0349	0.0352	0.0355	0.0365	0.049	0.09	0.142	0.16	0.177	4
Titanium D-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.000116	0.0000573	0.000072	0.0000747	0.0000774	0.0000855	0.000096	0.000127	0.000171	0.000185	0.0002	4
Uranium D-U	0.000084	0.0000777	0.000036	0.0000374	0.0000387	0.0000428	0.00005	0.0000913	0.000157	0.000178	0.0002	4
Vanadium T-V	0.00642	0.00453	0.0031	0.00313	0.00315	0.00323	0.00489	0.00808	0.0109	0.0119	0.0128	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0119	0.00845	0.0057	0.00582	0.00594	0.0063	0.0089	0.0145	0.0202	0.0221	0.024	4
Zinc D-Zn	0.002	0.002	0.001	0.001	0.001	0.001	0.001	0.002	0.0038	0.0044	0.005	4

Lower Bitter Creek (BC02)	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.9	0.424	7.39	7.42	7.46	7.67	7.85	8.05	8.38	8.52	8.65	7
Conductivity	105	20.5	78	80.7	83.5	95.3	101	117	127	137	147	10
Hardness CaCO3	45.9	10.4	29	32.2	35.4	41.3	44.9	49.5	57.9	61.8	65.8	10
Total Dissolved Solids	80.5	50.9	43	44.4	45.7	56.3	65	86.1	107	162	217	10
Total Suspended Solids	357	365	69	92	115	158	270	379	505	922	1340	10
Turbidity	301	429	71	84.1	97.1	129	148	242	456	978	1500	10
Alkalinity-Total CaCO3	37.8	8.07	28.4	29.3	30.2	32.9	36.5	39.2	47	51.4	55.9	10
Acidity (as CaCO3)	1.49	0.857	0.1	0.46	0.82	1	1.5	1.8	2.52	2.76	3	9
Chloride Cl	0.633	0.265	0.5	0.5	0.5	0.5	0.5	0.633	0.871	0.951	1.03	4
Fluoride F	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	14.6	5.19	7	8.44	9.88	11.1	13.7	17.5	21.7	22.6	23.5	10
Nitrate Nitrogen N	0.024	0.0156	0.0146	0.0148	0.015	0.0156	0.0171	0.0255	0.0385	0.0429	0.0472	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.00648	0.00295	0.005	0.005	0.005	0.005	0.005	0.00648	0.00913	0.01	0.0109	4
Ortho-Phosphate	0.00125	0.000436	0.001	0.001	0.001	0.001	0.00105	0.0013	0.00166	0.00178	0.0019	4
Phosphorus (P)-Total	0.635	0.553	0.3	0.307	0.314	0.335	0.39	0.691	1.15	1.31	1.46	4
Total Organic Carbon	1.35	0.786	0.5	0.581	0.662	0.905	1.26	1.7	2.1	2.23	2.36	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	8.91	9.39	1.91	2.14	2.36	3.88	6.47	9.08	14.7	24.3	34	10
Aluminum D-Al	0.0712	0.0455	0.0105	0.0198	0.029	0.0477	0.0566	0.0885	0.141	0.147	0.153	10
Antimony T-Sb	0.00228	0.00173	0.0005	0.000904	0.00131	0.00151	0.0018	0.00211	0.00362	0.00509	0.00657	9
Antimony D-Sb	0.000528	0.000274	0.0002	0.00024	0.00028	0.00043	0.00045	0.00056	0.000812	0.000976	0.00114	9
Arsenic T-As	0.0249	0.0276	0.00883	0.00908	0.00933	0.0101	0.0124	0.0272	0.0505	0.0583	0.0661	4
Arsenic D-As	0.000558	0.000139	0.00044	0.000442	0.000443	0.000448	0.00053	0.00064	0.000694	0.000712	0.00073	4
Barium T-Ba	0.16	0.141	0.0564	0.0634	0.0704	0.0875	0.102	0.178	0.26	0.396	0.532	10
Barium D-Ba	0.0263	0.00572	0.0191	0.0196	0.0201	0.0217	0.0251	0.0313	0.0336	0.0343	0.035	10
Beryllium T-Be	0.00035	0.000433	0.00013	0.00013	0.00013	0.00013	0.000135	0.000355	0.000742	0.000871	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000376	0.000192	0.000095	0.000142	0.00019	0.000331	0.000455	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0328	0.0448	0.01	0.01	0.01	0.01	0.0105	0.0333	0.0733	0.0867	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000616	0.000602	0.0001	0.000145	0.00019	0.000269	0.000373	0.00065	0.00146	0.00171	0.00197	10
Cadmium D-Cd	0.000105	0.0000982	0.000005	0.0000104	0.0000158	0.0000278	0.000085	0.000175	0.00021	0.000255	0.0003	10
Calcium T-Ca	21.1	9.77	14.5	15	15.4	16.1	19.1	20.7	24.4	36.2	48	10
Calcium D-Ca	15.6	3.43	10.3	11.3	12.3	14.1	15.3	16.6	19.3	21	22.7	10
Chromium T-Cr	0.0194	0.02	0.00754	0.00776	0.00798	0.00865	0.0104	0.0212	0.038	0.0436	0.0492	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.00558	0.00767	0.00084	0.000912	0.000984	0.00217	0.00341	0.00486	0.00784	0.0174	0.0269	10
Cobalt D-Co	0.000231	0.000287	0.00003	0.0000435	0.000057	0.0001	0.0001	0.00028	0.00037	0.000685	0.001	10
Copper T-Cu	0.0338	0.0416	0.001	0.00564	0.0103	0.0173	0.0253	0.0306	0.0442	0.0966	0.149	10
Copper D-Cu	0.00155	0.00341	0.00005	0.0000725	0.000095	0.00023	0.000435	0.00095	0.00202	0.00661	0.0112	10
Iron T-Fe	12.4	17.4	1.21	1.98	2.75	4.12	7.09	10.6	19.7	40.1	60.6	10
Iron D-Fe	0.0291	0.0246	0.005	0.00725	0.0095	0.0118	0.0255	0.036	0.045	0.0675	0.09	10
Lead T-Pb	0.00796	0.00845	0.001	0.00186	0.00273	0.00339	0.00562	0.009	0.0119	0.0212	0.0306	10
Lead D-Pb	0.00023	0.000331	0.000025	0.000025	0.000025	0.00005	0.00005	0.000388	0.00055	0.000775	0.001	10
Magnesium T-Mg	7.06	6.37	2.12	2.84	3.55	4.03	5.51	6.6	9.83	17.2	24.5	10
Magnesium D-Mg	1.64	0.464	0.809	0.989	1.17	1.38	1.68	1.93	2.22	2.28	2.33	10
Manganese T-Mn	0.397	0.515	0.03	0.0575	0.0851	0.171	0.227	0.382	0.613	1.21	1.81	10
Manganese D-Mn	0.00736	0.0101	0.0001	0.00028	0.00046	0.000743	0.00246	0.00784	0.0235	0.0259	0.0282	10
Mercury T-Hg	0.00000968	0.00000357	0.000005	0.00000575	0.0000065	8.75E-06	0.00001	0.0000109	0.0000126	0.0000131	0.0000137	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.00267	0.00159	0.001	0.00136	0.00171	0.00188	0.0023	0.00263	0.00381	0.00531	0.0068	10
Molybdenum D-Mo	0.00166	0.000897	0.00089	0.00094	0.000989	0.00113	0.00137	0.0017	0.00251	0.00321	0.0039	10
Nickel T-Ni	0.0218	0.0228	0.001	0.00397	0.00694	0.00857	0.0121	0.0204	0.0628	0.0639	0.065	10
Nickel D-Ni	0.000954	0.000974	0.00015	0.000218	0.000285	0.0005	0.000585	0.001	0.00161	0.00257	0.00352	10
Selenium T-Se	0.00198	0.00189	0.00094	0.00096	0.000979	0.00104	0.00108	0.00202	0.0037	0.00426	0.00482	4
Selenium D-Se	0.000787	0.000393	0.00046	0.00048	0.000501	0.000562	0.000668	0.000893	0.00117	0.00126	0.00135	4
Silicon T-Si	15.8	15.8	4.59	5.47	6.34	8.97	10.8	10.9	30.5	37.1	43.6	5
Silicon D-Si	0.589	0.132	0.451	0.46	0.47	0.498	0.591	0.612	0.721	0.758	0.794	5
Silver T-Ag	0.000481	0.000574	0.000164	0.000168	0.000172	0.000184	0.000209	0.000505	0.00101	0.00117	0.00134	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	1.48	0.724	0.8	0.82	0.84	0.91	1.08	2.11	2.31	2.56	2.8	9
Sodium D-Na	0.596	0.504	0.305	0.321	0.337	0.364	0.441	0.53	0.791	1.4	2	10
Strontium T-Sr	0.114	0.0465	0.0846	0.0852	0.0859	0.0909	0.105	0.11	0.125	0.184	0.243	10
Strontium D-Sr	0.0862	0.0195	0.0598	0.0641	0.0684	0.0739	0.0834	0.093	0.107	0.117	0.127	10
Thallium T-Tl	0.0000855	0.0000765	0.000043	0.0000433	0.0000436	0.0000445	0.0000495	0.0000905	0.000156	0.000178	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.000208	0.000196	0.0001	0.0001	0.0001	0.0001	0.000115	0.000223	0.000389	0.000445	0.0005	4
Titanium T-Ti	0.21	0.128	0.13	0.134	0.137	0.148	0.155	0.217	0.328	0.364	0.401	4
Titanium D-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.000401	0.000341	0.000185	0.000195	0.000205	0.000235	0.000254	0.00042	0.000714	0.000812	0.00091	4
Uranium D-U	0.000103	0.0000674	0.000044	0.00005	0.000056	0.000074	0.000084	0.000113	0.000165	0.000183	0.0002	4
Vanadium T-V	0.0424	0.0478	0.0158	0.0164	0.017	0.0188	0.0199	0.0434	0.0858	0.0999	0.114	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0639	0.0717	0.006	0.0102	0.0144	0.0235	0.0388	0.0573	0.152	0.194	0.237	10
Zinc D-Zn	0.00385	0.00443	0.00045	0.000698	0.000945	0.001	0.002	0.005	0.0069	0.011	0.015	10

Middle Bitter Creek (BC04)	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.02	0.446	7.27	7.36	7.44	7.77	8.02	8.28	8.54	8.62	8.7	11
Conductivity	93.3	19	69	69.8	72.2	80.8	90.5	100	118	124	137	16
Hardness CaCO3	43.1	14.7	26	26	26	33.3	44	47.3	55.2	66.3	84	16
Total Dissolved Solids	70.6	41.4	34	41.5	47	52	58.5	67	99.5	131	211	16
Total Suspended Solids	351	313	55	88.8	115	171	317	390	465	738	1420	16
Turbidity	333	481	51	67.5	84	129	170	338	450	878	2070	16
Alkalinity-Total CaCO3	34.8	6.59	24	27	29.5	32	33	36.3	44.5	49	49.1	16
Acidity (as CaCO3)	1.22	0.624	0.1	0.1	0.55	1	1.05	1.45	2.05	2.15	2.3	16
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	13.2	4.64	6.1	7.3	8.55	10.6	12.6	14.3	20.4	21.2	22.8	16
Nitrate Nitrogen N	0.0171	0.00808	0.0118	0.0121	0.0123	0.0131	0.0137	0.0176	0.0245	0.0268	0.0291	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.00693	0.00352	0.005	0.005	0.005	0.005	0.00525	0.00718	0.0102	0.0112	0.0122	4
Ortho-Phosphate	0.00153	0.000574	0.001	0.00103	0.00106	0.00115	0.0014	0.00178	0.00209	0.0022	0.0023	4
Phosphorus (P)-Total	0.63	0.614	0.3	0.305	0.31	0.324	0.335	0.641	1.19	1.37	1.55	4
Total Organic Carbon	1.45	0.635	0.97	0.99	1.01	1.07	1.23	1.61	2.06	2.22	2.37	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	8.64	8.35	1.29	2.2	2.9	3.82	6.12	10.1	13.6	19.7	36.6	16
Aluminum D-Al	0.0931	0.0542	0.0104	0.0356	0.0449	0.0485	0.084	0.133	0.172	0.19	0.19	16
Antimony T-Sb	0.00275	0.00229	0.00072	0.000855	0.000985	0.00114	0.0018	0.00325	0.00645	0.00686	0.00702	16
Antimony D-Sb	0.000701	0.000382	0.0002	0.000335	0.00041	0.000475	0.000605	0.000738	0.00122	0.00136	0.0017	16
Arsenic T-As	0.0283	0.0318	0.00919	0.00939	0.00958	0.0102	0.0142	0.0323	0.0583	0.0669	0.0756	4
Arsenic D-As	0.000718	0.000258	0.00049	0.000498	0.000505	0.000528	0.000665	0.000855	0.000972	0.00101	0.00105	4
Barium T-Ba	0.147	0.121	0.0414	0.0441	0.056	0.0736	0.104	0.206	0.221	0.301	0.536	16
Barium D-Ba	0.0247	0.00718	0.015	0.0151	0.0163	0.0192	0.024	0.0293	0.0314	0.0346	0.0425	16
Beryllium T-Be	0.00036	0.000427	0.00014	0.00014	0.00014	0.00014	0.00015	0.00037	0.000748	0.000874	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000381	0.000188	0.000104	0.000151	0.000199	0.000341	0.00046	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000609	0.000608	0.00009	0.0000975	0.00015	0.000218	0.000387	0.000743	0.0014	0.0019	0.0022	16
Cadmium D-Cd	0.000105	0.0000874	0.000005	0.000014	0.000021	0.0000605	0.0001	0.0001	0.000185	0.000243	0.00037	16
Calcium T-Ca	19.7	9.11	7.97	11.9	13.9	16.3	17.3	19.1	28.5	37.3	47.3	16
Calcium D-Ca	14.7	4.93	8.97	9.19	9.32	11.9	14.8	15.7	18.9	22.9	29	16
Chromium T-Cr	0.0219	0.0229	0.00799	0.00805	0.00811	0.00828	0.0119	0.0256	0.0437	0.0498	0.0558	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.00725	0.00803	0.00006	0.00161	0.00222	0.00285	0.00454	0.00777	0.0164	0.0247	0.03	16
Cobalt D-Co	0.00015	0.000184	0.00003	0.00003	0.000045	0.000075	0.0001	0.000135	0.000225	0.000425	0.0008	16
Copper T-Cu	0.0372	0.0409	0.0044	0.00485	0.00665	0.015	0.0243	0.0411	0.0711	0.112	0.166	16
Copper D-Cu	0.000506	0.000492	0.00005	0.0000875	0.0001	0.0002	0.000415	0.00061	0.000825	0.00127	0.00209	16
Iron T-Fe	11.9	14.5	1.96	2.7	3.4	4.4	8.2	12.3	17	28.6	63.2	16
Iron D-Fe	0.0468	0.036	0.005	0.00875	0.01	0.0175	0.0395	0.062	0.0945	0.118	0.126	16
Lead T-Pb	0.00872	0.00755	0.00157	0.00227	0.00252	0.00409	0.00735	0.00965	0.0162	0.0207	0.0316	16
Lead D-Pb	0.000144	0.000189	0.000025	0.0000438	0.00005	0.00005	0.000065	0.0000925	0.000395	0.000548	0.00069	16
Magnesium T-Mg	7.05	5.52	2.61	2.8	3.09	3.83	5.61	7.52	10.8	16	25.1	16
Magnesium D-Mg	1.57	0.696	0.725	0.776	0.796	1.06	1.52	1.81	2.42	2.9	3.18	16
Manganese T-Mn	0.405	0.448	0.053	0.0898	0.116	0.136	0.303	0.523	0.628	0.978	1.93	16
Manganese D-Mn	0.00525	0.00954	0.0001	0.0001	0.00015	0.000545	0.00095	0.00296	0.0198	0.0275	0.03	16
Mercury T-Hg	0.0000288	0.0000348	0.00001	0.00001	0.00001	0.00001	0.0000122	0.000031	0.000061	0.000071	0.000081	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.00307	0.00166	0.00147	0.00166	0.00177	0.0022	0.0028	0.00293	0.00537	0.00698	0.0072	16
Molybdenum D-Mo	0.00199	0.00102	0.00066	0.0009	0.00113	0.00146	0.00173	0.00228	0.00348	0.00423	0.0043	16
Nickel T-Ni	0.0218	0.0196	0.00131	0.0034	0.00585	0.00888	0.0162	0.0278	0.05	0.0603	0.0702	16
Nickel D-Ni	0.000582	0.000403	0.00006	0.000165	0.00025	0.000375	0.0005	0.000563	0.00115	0.00138	0.0016	16
Selenium T-Se	0.00214	0.0022	0.00089	0.000917	0.000944	0.00103	0.00112	0.00223	0.00415	0.00479	0.00543	4
Selenium D-Se	0.000716	0.000382	0.0004	0.000423	0.000447	0.000516	0.000598	0.000798	0.00108	0.00118	0.00127	4
Silicon T-Si	20.7	17.6	9.83	9.9	9.97	10.2	13.1	23.6	37.5	42.2	46.8	4
Silicon D-Si	0.577	0.154	0.394	0.42	0.446	0.524	0.571	0.624	0.712	0.742	0.771	4
Silver T-Ag	0.000553	0.000659	0.000172	0.000183	0.000195	0.000228	0.00025	0.000575	0.00115	0.00135	0.00154	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	1.36	0.69	0.58	0.61	0.66	0.94	1.14	1.65	2.41	2.51	2.8	16
Sodium D-Na	0.567	0.439	0.233	0.261	0.277	0.315	0.431	0.589	0.9	1.32	2	16
Strontium T-Sr	0.105	0.0396	0.0513	0.0718	0.0789	0.0867	0.1	0.107	0.131	0.163	0.233	16
Strontium D-Sr	0.0806	0.0223	0.039	0.0475	0.054	0.0677	0.0824	0.0902	0.109	0.12	0.121	16
Thallium T-Tl	0.0000888	0.0000743	0.000046	0.0000472	0.0000484	0.000052	0.0000545	0.0000913	0.000157	0.000178	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.000253	0.000192	0.0001	0.0001	0.0001	0.0001	0.000205	0.000358	0.000443	0.000472	0.0005	4
Titanium T-Ti	0.232	0.155	0.117	0.122	0.128	0.143	0.176	0.264	0.38	0.419	0.458	4
Titanium D-Ti	0.0078	0.0044	0.0012	0.00252	0.00384	0.0078	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.000421	0.000362	0.000183	0.000193	0.000203	0.000233	0.000271	0.00046	0.00076	0.00086	0.00096	4
Uranium D-U	0.000099	0.0000695	0.000041	0.0000463	0.0000515	0.0000673	0.0000775	0.000109	0.000164	0.000182	0.0002	4
Vanadium T-V	0.0476	0.0543	0.0168	0.0173	0.0178	0.0193	0.0224	0.0507	0.0977	0.113	0.129	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0689	0.0608	0.014	0.0193	0.0215	0.0308	0.05	0.0737	0.132	0.172	0.254	16
Zinc D-Zn	0.00155	0.0012	0.0004	0.000475	0.00075	0.001	0.001	0.00193	0.003	0.00365	0.005	16

Middle Bitter Creek (BC06)	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.17	N/A	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	8.17	1
Conductivity	125	N/A	125	125	125	125	125	125	125	125	125	1
Hardness CaCO3	53.9	N/A	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	53.9	1
Total Dissolved Solids	218	N/A	218	218	218	218	218	218	218	218	218	1
Total Suspended Solids	1310	N/A	1310	1310	1310	1310	1310	1310	1310	1310	1310	1
Turbidity	2320	N/A	2320	2320	2320	2320	2320	2320	2320	2320	2320	1
Alkalinity-Total CaCO3	44.2	N/A	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2	1
Acidity (as CaCO3)	1	N/A	1	1	1	1	1	1	1	1	1	1
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
Fluoride F	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	1
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1
Sulphate SO4	19.3	N/A	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	19.3	1
Nitrate Nitrogen N	0.0159	N/A	0.0159	0.0159	0.0159	0.0159	0.0159	0.0159	0.0159	0.0159	0.0159	1
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.0116	N/A	0.0116	0.0116	0.0116	0.0116	0.0116	0.0116	0.0116	0.0116	0.0116	1
Ortho-Phosphate	0.0022	N/A	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	0.0022	1
Phosphorus (P)-Total	1.44	N/A	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1.44	1
Total Organic Carbon	3.96	N/A	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	1
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1
Aluminum T-Al	36.8	N/A	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	36.8	1
Aluminum D-Al	0.0804	N/A	0.0804	0.0804	0.0804	0.0804	0.0804	0.0804	0.0804	0.0804	0.0804	1
Antimony T-Sb	0.00711	N/A	0.00711	0.00711	0.00711	0.00711	0.00711	0.00711	0.00711	0.00711	0.00711	1
Antimony D-Sb	0.0013	N/A	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	0.0013	1
Arsenic T-As	0.0808	N/A	0.0808	0.0808	0.0808	0.0808	0.0808	0.0808	0.0808	0.0808	0.0808	1
Arsenic D-As	0.00096	N/A	0.00096	0.00096	0.00096	0.00096	0.00096	0.00096	0.00096	0.00096	0.00096	1
Barium T-Ba	0.537	N/A	0.537	0.537	0.537	0.537	0.537	0.537	0.537	0.537	0.537	1
Barium D-Ba	0.028	N/A	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	1
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Bismuth T-Bi	0.00045	N/A	0.00045	0.00045	0.00045	0.00045	0.00045	0.00045	0.00045	0.00045	0.00045	1
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	1
Boron T-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1
Boron D-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	1
Cadmium T-Cd	0.00229	N/A	0.00229	0.00229	0.00229	0.00229	0.00229	0.00229	0.00229	0.00229	0.00229	1
Cadmium D-Cd	0.000017	N/A	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	0.000017	1
Calcium T-Ca	48.7	N/A	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	48.7	1
Calcium D-Ca	18.8	N/A	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	1
Chromium T-Cr	0.058	N/A	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058	1
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Cobalt T-Co	0.0311	N/A	0.0311	0.0311	0.0311	0.0311	0.0311	0.0311	0.0311	0.0311	0.0311	1
Cobalt D-Co	0.0003	N/A	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	1
Copper T-Cu	0.175	N/A	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	0.175	1
Copper D-Cu	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Iron T-Fe	64.4	N/A	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	64.4	1
Iron D-Fe	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1
Lead T-Pb	0.0339	N/A	0.0339	0.0339	0.0339	0.0339	0.0339	0.0339	0.0339	0.0339	0.0339	1
Lead D-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Magnesium T-Mg	25.2	N/A	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	25.2	1
Magnesium D-Mg	1.72	N/A	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1.72	1
Manganese T-Mn	1.98	N/A	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1.98	1
Manganese D-Mn	0.00142	N/A	0.00142	0.00142	0.00142	0.00142	0.00142	0.00142	0.00142	0.00142	0.00142	1
Mercury T-Hg	0.000086	N/A	0.000086	0.000086	0.000086	0.000086	0.000086	0.000086	0.000086	0.000086	0.000086	1
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	1
Molybdenum T-Mo	0.0075	N/A	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	0.0075	1
Molybdenum D-Mo	0.0044	N/A	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	0.0044	1
Nickel T-Ni	0.0735	N/A	0.0735	0.0735	0.0735	0.0735	0.0735	0.0735	0.0735	0.0735	0.0735	1
Nickel D-Ni	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	1
Selenium T-Se	0.00569	N/A	0.00569	0.00569	0.00569	0.00569	0.00569	0.00569	0.00569	0.00569	0.00569	1
Selenium D-Se	0.00135	N/A	0.00135	0.00135	0.00135	0.00135	0.00135	0.00135	0.00135	0.00135	0.00135	1
Silicon T-Si	47.2	N/A	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	47.2	1
Silicon D-Si	0.683	N/A	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	0.683	1
Silver T-Ag	0.0016	N/A	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	0.0016	1
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	1
Sodium T-Na	2.7	N/A	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	1
Sodium D-Na	2	N/A	2	2	2	2	2	2	2	2	2	1
Strontium T-Sr	0.231	N/A	0.231	0.231	0.231	0.231	0.231	0.231	0.231	0.231	0.231	1
Strontium D-Sr	0.108	N/A	0.108	0.108	0.108	0.108	0.108	0.108	0.108	0.108	0.108	1
Thallium T-Tl	0.00021	N/A	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	0.00021	1
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	1
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Titanium T-Ti	0.445	N/A	0.445	0.445	0.445	0.445	0.445	0.445	0.445	0.445	0.445	1
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1
Uranium T-U	0.00102	N/A	0.00102	0.00102	0.00102	0.00102	0.00102	0.00102	0.00102	0.00102	0.00102	1
Uranium D-U	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	1
Vanadium T-V	0.134	N/A	0.134	0.134	0.134	0.134	0.134	0.134	0.134	0.134	0.134	1
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	1
Zinc T-Zn	0.258	N/A	0.258	0.258	0.258	0.258	0.258	0.258	0.258	0.258	0.258	1
Zinc D-Zn	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	1

Upper Bitter Creek (BC08)	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.52	0.225	8.33	8.33	8.34	8.35	8.46	8.62	8.74	8.78	8.82	4
Conductivity	75.2	16.8	49.5	53.4	57.2	66	77.3	88.1	91	92	93	6
Hardness CaCO3	36.6	12.3	20.9	22.6	24.3	28.6	34.9	45.7	50.5	51.8	53	6
Total Dissolved Solids	77.8	37.5	43	47.8	52.5	63.3	68	73.5	113	132	151	6
Total Suspended Solids	368	202	110	151	193	276	306	495	606	634	662	6
Turbidity	309	248	80	101	122	166	183	469	622	652	683	6
Alkalinity-Total CaCO3	28.2	8.04	20.4	20.5	20.7	21.9	26.3	32.5	37.6	39.3	41	6
Acidity (as CaCO3)	2.08	3.07	0.1	0.325	0.55	1	1	1.08	4.7	6.5	8.3	6
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	12.2	5.51	6.37	7.13	7.89	9.5	10.3	13.7	18.4	20.2	22	6
Nitrate Nitrogen N	0.0072	0.00274	0.005	0.00506	0.00512	0.0053	0.0064	0.0083	0.00992	0.0105	0.011	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.0062	0.00233	0.005	0.005	0.005	0.005	0.00505	0.00625	0.00832	0.00901	0.0097	4
Ortho-Phosphate	0.00198	0.000427	0.0015	0.00155	0.00159	0.00173	0.00195	0.0022	0.00238	0.00244	0.0025	4
Phosphorus (P)-Total	0.409	0.215	0.3	0.3	0.3	0.3	0.303	0.412	0.603	0.667	0.731	4
Total Organic Carbon	1.27	0.185	1.09	1.1	1.11	1.14	1.25	1.38	1.45	1.48	1.5	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	7.57	5.57	2.7	3.33	3.96	5.84	5.89	6.24	12.8	15	17.2	5
Aluminum D-Al	0.0917	0.0264	0.0619	0.0647	0.0675	0.076	0.0838	0.11	0.12	0.124	0.127	5
Antimony T-Sb	0.00179	0.000177	0.00156	0.00159	0.00162	0.0017	0.00181	0.00183	0.00196	0.002	0.00204	5
Antimony D-Sb	0.00064	0.000431	0.00024	0.000276	0.000312	0.00042	0.00048	0.00071	0.00109	0.00122	0.00135	5
Arsenic T-As	0.0114	0.00167	0.00961	0.00979	0.00997	0.0105	0.0112	0.012	0.013	0.0133	0.0136	4
Arsenic D-As	0.000893	0.00019	0.0007	0.000709	0.000718	0.000745	0.0009	0.00105	0.00106	0.00107	0.00107	4
Barium T-Ba	0.108	0.046	0.063	0.0672	0.0715	0.0842	0.095	0.116	0.156	0.17	0.183	5
Barium D-Ba	0.0162	0.00846	0.00828	0.00832	0.00835	0.00846	0.016	0.02	0.025	0.0267	0.0284	5
Beryllium T-Be	0.000353	0.000432	0.00013	0.000132	0.000133	0.000138	0.00014	0.000355	0.000742	0.000871	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000285	0.000249	0.00005	0.000056	0.000062	0.00008	0.000295	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000394	0.000288	0.00014	0.000171	0.000201	0.000293	0.000313	0.000334	0.000669	0.00078	0.000892	5
Cadmium D-Cd	0.00003	0.0000248	0.000005	0.0000074	0.0000098	0.000017	0.000023	0.000035	0.000056	0.000063	0.00007	5
Calcium T-Ca	16.8	6.02	11.5	11.9	12.2	13.3	15.2	17	22.9	24.9	26.9	5
Calcium D-Ca	11.4	3.32	7.43	7.86	8.3	9.6	10.8	13.3	14.9	15.5	16	5
Chromium T-Cr	0.00819	0.00231	0.0056	0.00587	0.00614	0.00695	0.00802	0.00926	0.0104	0.0107	0.0111	4
Chromium D-Cr	0.000335	0.000444	0.0001	0.0001	0.0001	0.0001	0.00012	0.000355	0.000742	0.000871	0.001	4
Cobalt T-Co	0.0044	0.0019	0.0023	0.00264	0.00298	0.004	0.00402	0.00417	0.00617	0.00683	0.0075	5
Cobalt D-Co	0.000136	0.0000921	0.00008	0.000084	0.000088	0.0001	0.0001	0.0001	0.00022	0.00026	0.0003	5
Copper T-Cu	0.0254	0.0125	0.013	0.0149	0.0167	0.0223	0.0225	0.0226	0.037	0.0418	0.0466	5
Copper D-Cu	0.00072	0.000337	0.00027	0.000328	0.000386	0.00056	0.00067	0.001	0.00106	0.00108	0.0011	5
Iron T-Fe	8.25	1.96	4.8	5.57	6.34	8.64	9.12	9.15	9.39	9.47	9.55	5
Iron D-Fe	0.0646	0.0135	0.054	0.0542	0.0544	0.055	0.06	0.067	0.079	0.083	0.087	5
Lead T-Pb	0.00618	0.00287	0.0031	0.00354	0.00397	0.00528	0.00564	0.00597	0.00893	0.00991	0.0109	5
Lead D-Pb	0.000155	0.000194	0.00005	0.0000504	0.0000508	0.000052	0.000082	0.000093	0.000337	0.000419	0.0005	5
Magnesium T-Mg	4.08	0.432	3.4	3.5	3.6	3.9	4.31	4.38	4.4	4.4	4.41	5
Magnesium D-Mg	1.14	0.499	0.57	0.639	0.707	0.913	1.02	1.3	1.66	1.78	1.9	5
Manganese T-Mn	0.294	0.155	0.15	0.161	0.172	0.206	0.254	0.311	0.454	0.502	0.55	5
Manganese D-Mn	0.00535	0.00568	0.00036	0.000622	0.000884	0.00167	0.0017	0.0106	0.0117	0.012	0.0124	5
Mercury T-Hg	0.0000243	0.0000247	0.00001	0.00001	0.00001	0.00001	0.0000131	0.0000273	0.0000475	0.0000543	0.000061	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.00222	0.000317	0.002	0.00201	0.00201	0.00203	0.0021	0.0022	0.00254	0.00266	0.00277	5
Molybdenum D-Mo	0.00219	0.00129	0.00116	0.00122	0.00127	0.00144	0.0019	0.00207	0.00347	0.00393	0.0044	5
Nickel T-Ni	0.0124	0.00314	0.00914	0.00925	0.00935	0.00967	0.0119	0.015	0.0157	0.016	0.0162	5
Nickel D-Ni	0.00132	0.00157	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.00286	0.00348	0.0041	5
Selenium T-Se	0.000941	0.000103	0.000834	0.000846	0.000857	0.000892	0.00095	0.000995	0.00102	0.00103	0.00104	3
Selenium D-Se	0.000483	0.0000876	0.00041	0.000415	0.00042	0.000434	0.000458	0.000519	0.000556	0.000568	0.00058	3
Silicon T-Si	9.84	0.937	9.05	9.06	9.07	9.1	9.66	10.4	10.8	10.9	11	4
Silicon D-Si	0.453	0.163	0.267	0.285	0.303	0.357	0.45	0.546	0.606	0.626	0.646	4
Silver T-Ag	0.000201	0.0000104	0.00019	0.000191	0.000192	0.000196	0.000199	0.000204	0.000211	0.000213	0.000215	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	1.15	0.501	0.758	0.78	0.801	0.866	0.94	1.2	1.68	1.84	2	5
Sodium D-Na	0.788	0.767	0.191	0.213	0.236	0.303	0.348	1.1	1.64	1.82	2	5
Strontium T-Sr	0.0902	0.0262	0.0663	0.069	0.0717	0.0798	0.0841	0.086	0.115	0.125	0.135	5
Strontium D-Sr	0.065	0.0169	0.0419	0.0454	0.0489	0.0593	0.0605	0.0802	0.0819	0.0824	0.083	5
Thallium T-Tl	0.0000858	0.0000762	0.000047	0.000047	0.000047	0.000047	0.000048	0.0000868	0.000155	0.000177	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.000233	0.000231	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.00042	0.00046	0.0005	3
Tin D-Sn	0.000233	0.000231	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.00042	0.00046	0.0005	3
Titanium T-Ti	0.122	0.0075	0.114	0.115	0.116	0.119	0.121	0.124	0.129	0.13	0.132	4
Titanium D-Ti	0.00773	0.00454	0.00093	0.00229	0.00365	0.00773	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.00026	0.0000884	0.000194	0.000198	0.000202	0.000213	0.000228	0.000275	0.000344	0.000367	0.00039	4
Uranium D-U	0.0000923	0.0000744	0.000029	0.0000347	0.0000404	0.0000575	0.00007	0.000105	0.000162	0.000181	0.0002	4
Vanadium T-V	0.0177	0.00201	0.0148	0.0153	0.0158	0.0173	0.0183	0.0187	0.0191	0.0193	0.0194	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.049	0.0173	0.034	0.0347	0.0354	0.0375	0.038	0.0667	0.0681	0.0685	0.069	5
Zinc D-Zn	0.00284	0.00205	0.001	0.00104	0.00108	0.0012	0.0019	0.005	0.00506	0.00508	0.0051	5

ar River D/S of Bitter Creek confluer	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.62	0.216	7.37	7.38	7.38	7.48	7.57	7.76	7.88	7.92	7.96	7
Conductivity	90.2	21.4	69.8	71.4	72.9	79.9	85	90.9	111	123	135	7
Hardness CaCO3	44.5	11.7	31.1	33.1	35.2	39.5	41	46.2	56.6	62.4	68.1	7
Total Dissolved Solids	74.7	40.6	46	47.2	48.4	52.5	55	77.5	114	138	162	7
Total Suspended Solids	147	121	26	29.3	32.6	59.8	100	217	297	324	350	7
Turbidity	100	80.4	29	29.3	29.6	46.3	80	121	187	223	260	7
Alkalinity-Total CaCO3	34.4	7.63	26.6	27.7	28.8	31.1	32	35	42.8	46.3	49.9	7
Acidity (as CaCO3)	2.16	0.688	1.3	1.39	1.48	1.6	2.1	2.7	2.86	2.98	3.1	7
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.0238	0.00386	0.02	0.0203	0.0206	0.0215	0.023	0.0253	0.0275	0.0283	0.029	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	13.2	4.04	8.24	9.07	9.9	11.2	11.9	15	18.3	19.2	20.2	7
Nitrate Nitrogen N	0.0382	0.0288	0.0202	0.0206	0.021	0.0221	0.0258	0.042	0.0654	0.0733	0.0811	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.00525	0.0005	0.005	0.005	0.005	0.005	0.005	0.00525	0.0057	0.00585	0.006	4
Ortho-Phosphate	0.00103	0.00005	0.001	0.001	0.001	0.001	0.001	0.00103	0.00107	0.00109	0.0011	4
Phosphorus (P)-Total	0.302	0.0181	0.282	0.285	0.287	0.296	0.3	0.307	0.318	0.322	0.326	4
Total Organic Carbon	1.04	0.404	0.6	0.633	0.666	0.765	1.05	1.32	1.42	1.45	1.48	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	3.91	2.53	1.1	1.49	1.88	2.59	2.9	4.66	6.56	7.72	8.87	7
Aluminum D-Al	0.071	0.0255	0.0362	0.0431	0.05	0.0611	0.066	0.0763	0.0944	0.107	0.12	7
Antimony T-Sb	0.00114	0.000696	0.00067	0.000679	0.000688	0.000715	0.001	0.00112	0.0018	0.00222	0.00265	7
Antimony D-Sb	0.000404	0.000139	0.00027	0.000285	0.0003	0.00033	0.00034	0.00045	0.000582	0.000621	0.00066	7
Arsenic T-As	0.0094	0.00556	0.00502	0.00529	0.00557	0.00639	0.00753	0.0105	0.0147	0.0161	0.0175	4
Arsenic D-As	0.000543	0.000201	0.00033	0.000353	0.000375	0.000443	0.000515	0.000615	0.000732	0.000771	0.00081	4
Barium T-Ba	0.111	0.0439	0.058	0.067	0.0761	0.0891	0.091	0.127	0.155	0.175	0.194	7
Barium D-Ba	0.0422	0.00514	0.035	0.0356	0.0361	0.0385	0.0434	0.0455	0.0478	0.0484	0.049	7
Beryllium T-Be	0.000335	0.000443	0.0001	0.000103	0.000106	0.000115	0.00012	0.00034	0.000736	0.000868	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000295	0.000238	0.000075	0.0000792	0.0000834	0.000096	0.000302	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0328	0.0448	0.01	0.01	0.01	0.01	0.0105	0.0333	0.0733	0.0867	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000244	0.00014	0.00007	0.0000895	0.000109	0.000168	0.00024	0.000282	0.000394	0.000448	0.000502	7
Cadmium D-Cd	0.0000416	0.0000318	0.000005	0.0000086	0.0000122	0.0000185	0.000029	0.000065	0.000078	0.000084	0.00009	7
Calcium T-Ca	18	5.21	12.8	13.3	13.8	15.2	17	18.4	22.9	25.9	28.8	7
Calcium D-Ca	15.3	4.05	10.9	11.6	12.2	13.6	14	15.6	19.1	21.4	23.7	7
Chromium T-Cr	0.00727	0.0052	0.00371	0.00379	0.00387	0.00412	0.00523	0.00838	0.0123	0.0136	0.0149	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.0029	0.00166	0.0015	0.00156	0.00163	0.00191	0.0023	0.00322	0.0048	0.00552	0.00625	7
Cobalt D-Co	0.000126	0.000077	0.00009	0.00009	0.00009	0.000095	0.0001	0.0001	0.00018	0.00024	0.0003	7
Copper T-Cu	0.0159	0.00973	0.0068	0.00727	0.00775	0.00984	0.014	0.0173	0.0249	0.0304	0.0359	7
Copper D-Cu	0.000471	0.000307	0.0002	0.000209	0.000218	0.00024	0.00035	0.000635	0.000862	0.000931	0.001	7
Iron T-Fe	6.44	3.88	3.4	3.45	3.5	4.03	4.7	7.3	10.8	12.6	14.3	7
Iron D-Fe	0.0409	0.0187	0.021	0.0222	0.0234	0.0275	0.039	0.0475	0.0604	0.0682	0.076	7
Lead T-Pb	0.00514	0.00199	0.0015	0.00211	0.00272	0.00417	0.00619	0.00653	0.00671	0.00679	0.00687	7
Lead D-Pb	0.000136	0.000163	0.00005	0.00005	0.00005	0.000055	0.00007	0.000112	0.000274	0.000387	0.0005	7
Magnesium T-Mg	3.89	1.86	2.3	2.37	2.44	2.77	3.02	4.34	5.78	6.74	7.7	7
Magnesium D-Mg	1.44	0.374	0.926	1.03	1.13	1.31	1.4	1.5	1.82	1.99	2.15	7
Manganese T-Mn	0.193	0.112	0.068	0.0821	0.0962	0.123	0.14	0.256	0.325	0.356	0.387	7
Manganese D-Mn	0.00918	0.00818	0.00135	0.00154	0.00173	0.00234	0.007	0.0144	0.019	0.0208	0.0225	7
Mercury T-Hg	0.0000109	0.00000163	0.00001	0.00001	0.00001	0.00001	0.0000101	0.0000109	0.0000123	0.0000128	0.0000133	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.00169	0.000771	0.00117	0.00118	0.00119	0.00131	0.00148	0.0016	0.00232	0.00286	0.0034	7
Molybdenum D-Mo	0.00124	0.000552	0.000719	0.000766	0.000814	0.000944	0.0011	0.0013	0.00174	0.00207	0.0024	7
Nickel T-Ni	0.042	0.0627	0.00423	0.00443	0.00462	0.00636	0.009	0.0492	0.117	0.143	0.17	7
Nickel D-Ni	0.000629	0.000335	0.0003	0.00033	0.00036	0.00045	0.0005	0.00075	0.00108	0.00114	0.0012	7
Selenium T-Se	0.000993	0.000812	0.00049	0.000498	0.000505	0.000528	0.000641	0.00111	0.00176	0.00198	0.0022	4
Selenium D-Se	0.000519	0.000314	0.00027	0.00029	0.000309	0.000368	0.000415	0.000566	0.000813	0.000896	0.000978	4
Silicon T-Si	8.46	3.77	4.93	5.31	5.7	6.85	7.56	9.17	11.9	12.9	13.8	4
Silicon D-Si	0.691	0.231	0.491	0.505	0.519	0.562	0.627	0.756	0.914	0.967	1.02	4
Silver T-Ag	0.000186	0.00012	0.000074	0.0000836	0.0000932	0.000122	0.000159	0.000223	0.000302	0.000328	0.000354	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	0.972	0.469	0.625	0.649	0.672	0.732	0.827	0.945	1.4	1.7	2	7
Sodium D-Na	0.634	0.607	0.272	0.302	0.331	0.377	0.43	0.49	1.1	1.55	2	7
Strontium T-Sr	0.0962	0.0268	0.0753	0.077	0.0787	0.0845	0.088	0.0932	0.12	0.138	0.155	7
Strontium D-Sr	0.0853	0.0233	0.0619	0.0658	0.0698	0.076	0.0792	0.0846	0.107	0.121	0.135	7
Thallium T-Tl	0.0000893	0.000075	0.000035	0.000038	0.000041	0.00005	0.000061	0.0001	0.00016	0.00018	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Titanium T-Ti	0.12	0.0512	0.061	0.0681	0.0751	0.0963	0.116	0.139	0.167	0.176	0.185	4
Titanium D-Ti	0.00758	0.00484	0.00032	0.00177	0.00322	0.00758	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.000212	0.0000823	0.000138	0.000146	0.000153	0.000176	0.000191	0.000227	0.000289	0.000309	0.00033	4
Uranium D-U	0.000091	0.0000743	0.000036	0.0000387	0.0000414	0.0000495	0.000064	0.000106	0.000162	0.000181	0.0002	4
Vanadium T-V	0.0171	0.0117	0.0075	0.00815	0.00879	0.0107	0.0134	0.0198	0.0283	0.0312	0.034	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.035	0.0155	0.0179	0.0185	0.0192	0.0245	0.0315	0.0445	0.0554	0.0565	0.0575	7
Zinc D-Zn	0.00176	0.00158	0.0004	0.000517	0.000634	0.000895	0.0011	0.002	0.0035	0.00425	0.005	7

ar River U/S of Bitter Creek conflue	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.52	0.187	7.28	7.3	7.32	7.37	7.56	7.68	7.69	7.7	7.7	5
Conductivity	72.1	18.4	51.2	54	56.7	65	67.7	75.5	90.8	95.9	101	5
Hardness CaCO3	33.6	7.78	23.5	25.2	26.9	32	33	34	40.8	43	45.3	5
Total Dissolved Solids	60.4	21.3	45	45.8	46.6	49	50	61	82.6	89.8	97	5
Total Suspended Solids	44.5	26.5	16	17	18	20.9	52	53.1	69.7	75.2	80.7	5
Turbidity	40.1	33.8	12	13.3	14.6	18.6	18.9	61.9	78.1	83.5	88.9	5
Alkalinity-Total CaCO3	27	7.27	18.2	19.5	20.8	24.7	25	28.9	34.4	36.2	38	5
Acidity (as CaCO3)	1.68	0.415	1.1	1.18	1.26	1.5	1.7	1.9	2.08	2.14	2.2	5
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.0295	0.00443	0.026	0.0263	0.0266	0.0275	0.028	0.03	0.0336	0.0348	0.036	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	10.6	3.63	5.84	6.53	7.22	9.29	9.34	13.3	14.3	14.7	15	5
Nitrate Nitrogen N	0.0492	0.041	0.0219	0.0229	0.0239	0.0269	0.0325	0.0547	0.0879	0.0989	0.11	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.00108	0.00015	0.001	0.001	0.001	0.001	0.001	0.00108	0.00121	0.00126	0.0013	4
Phosphorus (P)-Total	0.185	0.134	0.05	0.0562	0.0623	0.0808	0.196	0.3	0.3	0.3	0.3	4
Total Organic Carbon	0.52	0.0141	0.5	0.503	0.506	0.515	0.525	0.53	0.53	0.53	0.53	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	2.01	1.59	0.44	0.58	0.72	1.14	1.2	2.94	3.78	4.06	4.34	5
Aluminum D-Al	0.0553	0.00621	0.0485	0.0488	0.0492	0.0502	0.0565	0.0575	0.0614	0.0627	0.064	5
Antimony T-Sb	0.0005	0.000174	0.00031	0.000332	0.000354	0.00042	0.00048	0.00051	0.000672	0.000726	0.00078	5
Antimony D-Sb	0.000212	0.000167	0.00007	0.000084	0.000098	0.00014	0.00016	0.00019	0.000376	0.000438	0.0005	5
Arsenic T-As	0.00231	0.00085	0.00142	0.00148	0.00154	0.00173	0.00226	0.00285	0.00312	0.00322	0.00331	4
Arsenic D-As	0.000345	0.000117	0.00024	0.000245	0.000249	0.000263	0.00032	0.000403	0.000461	0.000481	0.0005	4
Barium T-Ba	0.113	0.0447	0.076	0.0779	0.0798	0.0855	0.0904	0.131	0.163	0.173	0.184	5
Barium D-Ba	0.0565	0.00831	0.0475	0.0486	0.0497	0.053	0.0557	0.0563	0.0645	0.0673	0.07	5
Beryllium T-Be	0.000328	0.000448	0.0001	0.0001	0.0001	0.0001	0.000105	0.000333	0.000733	0.000867	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.033	0.0447	0.01	0.01	0.01	0.01	0.011	0.034	0.0736	0.0868	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000136	0.0000553	0.000056	0.000067	0.000078	0.000111	0.000146	0.000168	0.000187	0.000194	0.0002	5
Cadmium D-Cd	0.0000252	0.0000116	0.0000088	0.000011	0.0000133	0.00002	0.000028	0.000029	0.0000356	0.0000378	0.00004	5
Calcium T-Ca	12.2	3.21	8.82	9.26	9.69	11	11.8	12.1	15.3	16.4	17.5	5
Calcium D-Ca	11.8	2.75	8.36	8.89	9.42	11	11.6	12	14.4	15.2	16	5
Chromium T-Cr	0.000678	0.000288	0.00042	0.000425	0.000429	0.000443	0.000645	0.00088	0.000952	0.000976	0.001	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.000832	0.000639	0.00012	0.000174	0.000228	0.00039	0.00067	0.00135	0.00152	0.00157	0.00163	5
Cobalt D-Co	0.000136	0.0000921	0.00008	0.000084	0.000088	0.0001	0.0001	0.0001	0.00022	0.00026	0.0003	5
Copper T-Cu	0.00346	0.00213	0.00154	0.00168	0.00182	0.00225	0.0028	0.00369	0.00568	0.00634	0.007	5
Copper D-Cu	0.00041	0.000344	0.0002	0.0002	0.0002	0.0002	0.00022	0.00043	0.000772	0.000886	0.001	5
Iron T-Fe	2.12	1.45	0.7	0.768	0.836	1.04	1.59	3.3	3.71	3.85	3.99	5
Iron D-Fe	0.0364	0.0116	0.026	0.0264	0.0268	0.028	0.03	0.048	0.0492	0.0496	0.05	5
Lead T-Pb	0.00432	0.00196	0.00247	0.0026	0.00272	0.0031	0.00319	0.00602	0.0065	0.00666	0.00682	5
Lead D-Pb	0.000206	0.000172	0.000075	0.000078	0.000081	0.00009	0.000167	0.000197	0.000379	0.000439	0.0005	5
Magnesium T-Mg	1.6	0.692	1.1	1.12	1.14	1.2	1.35	1.55	2.3	2.55	2.8	5
Magnesium D-Mg	0.973	0.233	0.632	0.699	0.766	0.968	0.987	0.99	1.17	1.23	1.29	5
Manganese T-Mn	0.106	0.0684	0.034	0.0377	0.0413	0.0523	0.0887	0.17	0.179	0.182	0.185	5
Manganese D-Mn	0.0131	0.00328	0.0092	0.00946	0.00972	0.0105	0.0138	0.0145	0.0162	0.0168	0.0174	5
Mercury T-Hg	0.00000925	0.0000026	0.0000055	0.00000618	0.00000685	8.88E-06	0.00001	0.0000104	0.0000111	0.0000113	0.0000115	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.000659	0.000203	0.000519	0.00052	0.00052	0.000522	0.000566	0.00069	0.000876	0.000938	0.001	5
Molybdenum D-Mo	0.000517	0.000288	0.00027	0.000282	0.000295	0.000332	0.000452	0.000529	0.000812	0.000906	0.001	5
Nickel T-Ni	0.00397	0.00673	0.0005	0.000604	0.000708	0.00102	0.0011	0.00121	0.0101	0.013	0.016	5
Nickel D-Ni	0.000596	0.000226	0.00048	0.000484	0.000488	0.0005	0.0005	0.0005	0.0008	0.0009	0.001	5
Selenium T-Se	0.000149	0.0000572	0.0001	0.000103	0.000106	0.000115	0.000133	0.000167	0.000205	0.000217	0.00023	4
Selenium D-Se	0.000116	0.0000394	0.000088	0.0000898	0.0000916	0.000097	0.0001	0.000119	0.000152	0.000163	0.000174	4
Silicon T-Si	4.66	2.83	2.45	2.46	2.46	2.48	3.89	6.07	7.47	7.94	8.41	4
Silicon D-Si	0.652	0.173	0.462	0.484	0.506	0.573	0.634	0.713	0.812	0.846	0.879	4
Silver T-Ag	0.00007	0.0000316	0.000034	0.000037	0.00004	0.000049	0.0000715	0.0000925	0.0000988	0.000101	0.000103	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	0.764	0.692	0.422	0.426	0.431	0.444	0.472	0.48	1.39	1.7	2	5
Sodium D-Na	0.679	0.742	0.237	0.262	0.286	0.36	0.366	0.43	1.37	1.69	2	5
Strontium T-Sr	0.0776	0.0185	0.0574	0.0603	0.0632	0.0718	0.075	0.0758	0.0951	0.102	0.108	5
Strontium D-Sr	0.0732	0.0184	0.0517	0.0546	0.0574	0.066	0.0702	0.0761	0.0916	0.0968	0.102	5
Thallium T-Tl	0.0000893	0.0000772	0.000035	0.0000355	0.0000359	0.0000373	0.000061	0.000113	0.000165	0.000183	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Titanium T-Ti	0.0631	0.0443	0.022	0.0234	0.0248	0.029	0.0572	0.0913	0.106	0.111	0.116	4
Titanium D-Ti	0.00763	0.00475	0.0005	0.00193	0.00335	0.00763	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.000128	0.0000555	0.000084	0.0000842	0.0000843	0.0000848	0.000115	0.000158	0.000183	0.000192	0.0002	4
Uranium D-U	0.000076	0.0000829	0.000026	0.0000278	0.0000296	0.000035	0.000039	0.00008	0.000152	0.000176	0.0002	4
Vanadium T-V	0.00506	0.00267	0.0025	0.00258	0.00265	0.00288	0.00511	0.00728	0.00743	0.00748	0.00753	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0251	0.0176	0.0103	0.0106	0.0109	0.0117	0.0242	0.0254	0.0426	0.0483	0.054	5
Zinc D-Zn	0.00193	0.00172	0.00096	0.00101	0.00106	0.0012	0.0012	0.0013	0.00352	0.00426	0.005	5

GoldSlide Creek	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.46	0.341	6.49	6.98	7.32	7.4	7.47	7.63	7.8	7.84	7.88	13
Conductivity	134	28.5	100	106	109	116	130	144	158	173	220	17
Hardness CaCO3	55.2	12.4	29	33	37.6	48	58	62.6	68.4	70.2	75	17
Total Dissolved Solids	89.6	15.9	69.6	70.7	71.6	74	88	102	112	115	117	17
Total Suspended Solids	2.19	1.4	1	1	1	1	1	3	4.08	4.36	5	17
Turbidity	0.376	0.68	0.1	0.1	0.118	0.15	0.2	0.3	0.314	0.856	3	17
Alkalinity-Total CaCO3	13.2	4.44	10	10.5	10.7	11	12	14	15.2	19.4	29	17
Acidity (as CaCO3)	2.85	0.857	1.6	1.9	2	2.08	2.9	3.3	4.05	4.18	4.4	16
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.0448	0.00499	0.041	0.0412	0.0413	0.0418	0.043	0.046	0.0496	0.0508	0.052	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	44.1	12.7	24	28	30.8	33.6	41	54.9	59.3	62.9	67.9	17
Nitrate Nitrogen N	0.00838	0.00227	0.005	0.00562	0.00623	0.00808	0.0093	0.0096	0.00978	0.00984	0.0099	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.00103	0.00005	0.001	0.001	0.001	0.001	0.001	0.00103	0.00107	0.00109	0.0011	4
Phosphorus (P)-Total	0.163	0.159	0.0023	0.00946	0.0166	0.0381	0.175	0.3	0.3	0.3	0.3	4
Total Organic Carbon	0.59	0.18	0.5	0.5	0.5	0.5	0.5	0.59	0.752	0.806	0.86	4
Dissolved Organic Carbon	0.505	0.01	0.5	0.5	0.5	0.5	0.5	0.505	0.514	0.517	0.52	4
Aluminum T-Al	0.044	0.0224	0.0148	0.0158	0.0178	0.0285	0.043	0.0527	0.073	0.0847	0.0974	17
Aluminum D-Al	0.0171	0.00786	0.004	0.00616	0.00712	0.014	0.017	0.0217	0.0265	0.0288	0.033	17
Antimony T-Sb	0.000353	0.000293	0.00005	0.0000875	0.0001	0.0001	0.000265	0.000528	0.000655	0.000793	0.0011	16
Antimony D-Sb	0.000209	0.000179	0.00005	0.0000575	0.000065	0.000095	0.0001	0.000323	0.000495	0.000518	0.00057	16
Arsenic T-As	0.000255	0.000169	0.00012	0.000128	0.000135	0.000158	0.0002	0.000298	0.000419	0.00046	0.0005	4
Arsenic D-As	0.000223	0.000187	0.0001	0.000105	0.000109	0.000123	0.000145	0.000245	0.000398	0.000449	0.0005	4
Barium T-Ba	0.0254	0.00384	0.0211	0.0212	0.0216	0.023	0.025	0.027	0.0291	0.0319	0.0363	17
Barium D-Ba	0.023	0.00248	0.0192	0.0194	0.0198	0.022	0.0226	0.024	0.0258	0.0273	0.0287	17
Beryllium T-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000362	0.000266	0.00007	0.000082	0.000094	0.0001	0.000273	0.00059	0.0006	0.00069	0.00105	17
Cadmium D-Cd	0.000271	0.000154	0.00007	0.000094	0.0001	0.00018	0.000238	0.00033	0.00044	0.000534	0.00067	17
Calcium T-Ca	20.3	3.7	14	14.1	15.1	16.5	21.4	23.9	24	24.3	25	17
Calcium D-Ca	18.4	4.16	9.55	11	12.4	16.5	19.3	20.8	22.9	23.6	25	17
Chromium T-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.000525	0.000308	0.00006	0.000092	0.000166	0.00037	0.00045	0.00074	0.000952	0.00102	0.0011	17
Cobalt D-Co	0.000371	0.000231	0.00003	0.00003	0.000072	0.00032	0.00036	0.00043	0.000556	0.000736	0.001	17
Copper T-Cu	0.012	0.0192	0.002	0.00208	0.00217	0.0033	0.00501	0.012	0.0236	0.0451	0.079	17
Copper D-Cu	0.0045	0.00336	0.0008	0.0014	0.0017	0.0026	0.00276	0.0059	0.0087	0.0114	0.013	17
Iron T-Fe	0.0726	0.0803	0.01	0.01	0.01	0.02	0.04	0.1	0.138	0.186	0.33	17
Iron D-Fe	0.0118	0.00706	0.005	0.005	0.008	0.01	0.01	0.01	0.018	0.03	0.03	17
Lead T-Pb	0.000754	0.00116	0.00005	0.00005	0.00005	0.00012	0.00032	0.00067	0.00176	0.0032	0.0044	17
Lead D-Pb	0.000142	0.000246	0.000025	0.000025	0.00004	0.00005	0.00007	0.00008	0.000254	0.0006	0.001	17
Magnesium T-Mg	2.55	0.584	1.58	1.73	1.84	2.1	2.6	2.9	3.34	3.44	3.61	17
Magnesium D-Mg	2.26	0.533	1.2	1.22	1.52	1.84	2.4	2.6	2.77	2.88	3.1	17
Manganese T-Mn	0.00817	0.00552	0.00145	0.00232	0.00288	0.00545	0.00648	0.0112	0.0146	0.0184	0.023	17
Manganese D-Mn	0.00667	0.00505	0.000986	0.00203	0.0029	0.0047	0.00562	0.00679	0.0119	0.0179	0.0211	17
Mercury T-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.00523	0.00123	0.00344	0.00362	0.00376	0.00416	0.0053	0.0056	0.00672	0.00736	0.008	17
Molybdenum D-Mo	0.00485	0.00113	0.00326	0.00339	0.00364	0.00383	0.0048	0.00501	0.00642	0.00712	0.0072	17
Nickel T-Ni	0.0157	0.0503	0.0009	0.00104	0.00108	0.0013	0.0025	0.0036	0.0116	0.0588	0.21	17
Nickel D-Ni	0.00133	0.000656	0.0004	0.00048	0.0005	0.001	0.00124	0.00169	0.00234	0.00242	0.0025	17
Selenium T-Se	0.00152	0.0000959	0.00143	0.00143	0.00144	0.00145	0.00151	0.00159	0.00161	0.00162	0.00163	4
Selenium D-Se	0.00155	0.000122	0.00147	0.00147	0.00148	0.00149	0.0015	0.00156	0.00166	0.0017	0.00173	4
Silicon T-Si	3.01	0.202	2.7	2.75	2.81	2.97	3	3.19	3.19	3.19	3.19	5
Silicon D-Si	2.92	0.193	2.7	2.7	2.71	2.72	3.01	3.05	3.09	3.1	3.11	5
Silver T-Ag	0.0000128	0.00000486	0.00001	0.00001	0.00001	0.00001	0.0000105	0.0000133	0.0000173	0.0000187	0.00002	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	1.5	0.33	0.955	1.14	1.22	1.26	1.42	1.7	1.95	2.04	2.17	16
Sodium D-Na	1.26	0.314	0.627	0.711	0.875	1.2	1.26	1.4	1.53	1.68	2	17
Strontium T-Sr	0.117	0.0346	0.075	0.076	0.0817	0.095	0.111	0.129	0.144	0.168	0.218	16
Strontium D-Sr	0.113	0.0367	0.065	0.0652	0.0721	0.0887	0.11	0.129	0.142	0.162	0.215	16
Thallium T-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.000215	0.000192	0.0001	0.0001	0.0001	0.0001	0.00013	0.000245	0.000398	0.000449	0.0005	4
Titanium T-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Titanium D-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.0000618	0.0000922	0.000014	0.0000143	0.0000146	0.0000155	0.0000165	0.0000628	0.000145	0.000173	0.0002	4
Uranium D-U	0.0000603	0.0000932	0.00001	0.0000106	0.0000112	0.000013	0.0000155	0.0000628	0.000145	0.000173	0.0002	4
Vanadium T-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0217	0.0158	0.00491	0.00898	0.0104	0.012	0.016	0.025	0.0462	0.051	0.063	17
Zinc D-Zn	0.0152	0.0091	0.004	0.00518	0.00819	0.0116	0.013	0.0155	0.0222	0.0282	0.045	17

Otter Creek	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.64	0.345	7.14	7.22	7.31	7.56	7.77	7.85	7.88	7.88	7.89	4
Conductivity	140	100	58.3	61.8	65.3	75.9	81.1	192	253	273	293	5
Hardness CaCO3	68.9	52.7	26.7	28.3	30	34.9	36.7	98.2	128	138	148	5
Total Dissolved Solids	94.6	59.5	38	40.8	43.6	52	69	138	161	168	176	5
Total Suspended Solids	25.7	12.5	11.2	11.8	12.5	14.4	30.9	31.5	37	38.8	40.6	5
Turbidity	11.2	6.36	2.27	3.39	4.51	7.87	11.6	16.8	17.2	17.4	17.5	5
Alkalinity-Total CaCO3	40.1	22.3	20	21.1	22.2	25.5	27.5	56.5	65.1	67.9	70.8	5
Acidity (as CaCO3)	1.98	0.148	1.8	1.82	1.84	1.9	2	2	2.12	2.16	2.2	5
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0254	0.0115	0.02	0.02	0.02	0.02	0.02	0.021	0.036	0.041	0.046	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	30.8	29.5	7.98	8.72	9.47	11.7	13.4	43.8	63.7	70.3	76.9	5
Nitrate Nitrogen N	0.00948	0.00541	0.005	0.005	0.005	0.005	0.0068	0.0143	0.0155	0.0159	0.0163	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Phosphorus (P)-Total	0.136	0.151	0.0106	0.0119	0.0132	0.0171	0.05	0.3	0.3	0.3	0.3	5
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Dissolved Organic Carbon	0.504	0.00894	0.5	0.5	0.5	0.5	0.5	0.5	0.512	0.516	0.52	5
Aluminum T-Al	0.687	0.341	0.224	0.281	0.337	0.507	0.771	0.804	1	1.06	1.13	5
Aluminum D-Al	0.0325	0.0177	0.0109	0.0124	0.0139	0.0184	0.034	0.0487	0.0497	0.05	0.0503	5
Antimony T-Sb	0.000318	0.000172	0.00014	0.00015	0.00016	0.00019	0.00026	0.0005	0.0005	0.0005	0.0005	5
Antimony D-Sb	0.000266	0.000214	0.0001	0.000102	0.000104	0.00011	0.00012	0.0005	0.0005	0.0005	0.0005	5
Arsenic T-As	0.00056	0.000107	0.00045	0.00046	0.00047	0.0005	0.0005	0.00066	0.000678	0.000684	0.00069	5
Arsenic D-As	0.00029	0.000192	0.00013	0.000136	0.000142	0.00016	0.00016	0.0005	0.0005	0.0005	0.0005	5
Barium T-Ba	0.0788	0.0217	0.0584	0.0595	0.0605	0.0637	0.068	0.097	0.103	0.105	0.107	5
Barium D-Ba	0.0627	0.0279	0.0408	0.0411	0.0413	0.0421	0.0447	0.088	0.094	0.096	0.098	5
Beryllium T-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00024	0.000239	0.00005	0.00005	0.00005	0.00005	0.000098	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Boron D-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.0000597	0.0000272	0.000035	0.000036	0.000037	0.00004	0.0000487	0.0000747	0.0000899	0.0000949	0.0001	5
Cadmium D-Cd	0.0000337	0.0000278	0.000011	0.0000121	0.0000132	0.0000166	0.000019	0.000044	0.0000644	0.0000712	0.000078	5
Calcium T-Ca	23.1	16.4	9.79	10.3	10.8	12.4	13	33.1	41.6	44.5	47.3	5
Calcium D-Ca	22.8	16.5	9.43	9.96	10.5	12.1	12.6	32.4	41.3	44.3	47.3	5
Chromium T-Cr	0.00086	0.0002	0.00057	0.000602	0.000634	0.00073	0.001	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000476	0.000139	0.00032	0.000334	0.000348	0.00039	0.00043	0.00059	0.000626	0.000638	0.00065	5
Cobalt D-Co	0.000184	0.000115	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.000312	0.000316	0.00032	5
Copper T-Cu	0.00181	0.000732	0.001	0.00106	0.00112	0.0013	0.00162	0.00247	0.0026	0.00264	0.00268	5
Copper D-Cu	0.000578	0.000394	0.0002	0.000212	0.000224	0.00026	0.00043	0.001	0.001	0.001	0.001	5
Iron T-Fe	0.815	0.392	0.325	0.373	0.421	0.566	0.795	1.09	1.22	1.26	1.3	5
Iron D-Fe	0.0282	0.00694	0.017	0.0192	0.0214	0.028	0.03	0.03	0.0336	0.0348	0.036	5
Lead T-Pb	0.000912	0.000334	0.0005	0.000552	0.000604	0.00076	0.00079	0.00122	0.00126	0.00128	0.00129	5
Lead D-Pb	0.000235	0.000242	0.00005	0.00005	0.00005	0.00005	0.000073	0.0005	0.0005	0.0005	0.0005	5
Magnesium T-Mg	3.27	2.82	1.04	1.15	1.25	1.57	1.61	4.39	6.4	7.07	7.74	5
Magnesium D-Mg	2.95	2.82	0.772	0.844	0.915	1.13	1.28	4.22	6.09	6.72	7.34	5
Manganese T-Mn	0.0395	0.00962	0.0276	0.0287	0.0297	0.0329	0.0394	0.0469	0.0493	0.0501	0.0509	5
Manganese D-Mn	0.0106	0.0107	0.00365	0.00393	0.00421	0.00505	0.00519	0.00993	0.0215	0.0253	0.0292	5
Mercury T-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.000833	0.000734	0.000233	0.000251	0.000269	0.000322	0.000409	0.0013	0.00166	0.00178	0.0019	5
Molybdenum D-Mo	0.000722	0.000636	0.000208	0.000226	0.000243	0.000296	0.000304	0.0012	0.00144	0.00152	0.0016	5
Nickel T-Ni	0.00219	0.00177	0.00082	0.000912	0.001	0.00128	0.00133	0.0023	0.00404	0.00462	0.0052	5
Nickel D-Ni	0.00158	0.00178	0.0005	0.0005	0.0005	0.0005	0.0005	0.0018	0.00348	0.00404	0.0046	5
Selenium T-Se	0.00104	0.00115	0.00016	0.000168	0.000176	0.0002	0.000281	0.002	0.00234	0.00246	0.00257	5
Selenium D-Se	0.001	0.00111	0.00015	0.000162	0.000174	0.00021	0.000248	0.00197	0.00225	0.00235	0.00244	5
Silicon T-Si	1.78	0.24	1.62	1.62	1.62	1.62	1.65	1.83	2.04	2.11	2.18	5
Silicon D-Si	0.678	0.429	0.34	0.35	0.359	0.388	0.428	0.905	1.16	1.25	1.33	5
Silver T-Ag	0.0000172	0.00000415	0.00001	0.0000116	0.0000132	0.000018	0.000018	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1	0.91	0.273	0.292	0.31	0.366	0.382	2	2	2	2	5
Sodium D-Na	0.962	0.949	0.195	0.215	0.235	0.296	0.32	2	2	2	2	5
Strontium T-Sr	0.131	0.103	0.0525	0.0553	0.0581	0.0666	0.0672	0.18	0.246	0.268	0.29	5
Strontium D-Sr	0.133	0.108	0.0509	0.0535	0.0561	0.064	0.065	0.182	0.253	0.277	0.301	5
Thallium T-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.000276	0.000207	0.0001	0.0001	0.0001	0.0001	0.00018	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.0171	0.00869	0.01	0.0105	0.011	0.0126	0.014	0.017	0.026	0.029	0.032	5
Titanium D-Ti	0.00808	0.00429	0.00041	0.00233	0.00425	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000184	0.000171	0.000054	0.0000596	0.0000652	0.000082	0.000085	0.00024	0.000372	0.000416	0.00046	5
Uranium D-U	0.000165	0.00017	0.000039	0.0000428	0.0000466	0.000058	0.000067	0.00022	0.000352	0.000396	0.00044	5
Vanadium T-V	0.00152	0.000745	0.00064	0.000696	0.000752	0.00092	0.00174	0.0018	0.00222	0.00236	0.0025	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.00742	0.00288	0.0048	0.00506	0.00532	0.0061	0.0066	0.0073	0.0103	0.0113	0.0123	5
Zinc D-Zn	0.00326	0.00314	0.001	0.00102	0.00104	0.0011	0.0012	0.005	0.0068	0.0074	0.008	5

Rio Blanco Creek	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.81	0.137	7.64	7.65	7.66	7.73	7.79	7.91	7.94	8.01	8.08	10
Conductivity	188	57.5	102	116	125	160	180	205	262	292	320	15
Hardness CaCO3	85.5	31.6	39	49.2	55	64.5	84	99.5	120	132	161	15
Total Dissolved Solids	122	38.4	56	74.2	82.4	105	120	137	161	182	216	15
Total Suspended Solids	79.3	186	1	1	1	2.5	12	57.4	148	355	724	15
Turbidity	61.6	165	0.35	0.357	0.416	0.81	4	26.1	112	297	640	15
Alkalinity-Total CaCO3	35.8	7.08	21	25	27.2	32	37	40	41.6	44.3	49.7	15
Acidity (as CaCO3)	2.33	1	0.1	0.73	1	1.95	2.9	3	3.36	3.4	3.4	15
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.048	0.0175	0.03	0.0321	0.0342	0.0405	0.045	0.0525	0.0642	0.0681	0.072	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	52.6	21.8	28	28.4	30	33.5	53	57	79.1	91.7	106	15
Nitrate Nitrogen N	0.00698	0.00303	0.005	0.005	0.005	0.005	0.00575	0.00773	0.00993	0.0107	0.0114	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.00103	0.00005	0.001	0.001	0.001	0.001	0.001	0.00103	0.00107	0.00109	0.0011	4
Phosphorus (P)-Total	0.165	0.158	0.002	0.0101	0.0182	0.0425	0.178	0.3	0.3	0.3	0.3	4
Total Organic Carbon	0.573	0.114	0.5	0.5	0.5	0.5	0.525	0.598	0.683	0.712	0.74	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	1.38	2.81	0.02	0.0319	0.0394	0.0685	0.156	1.47	3.33	6.27	10.6	15
Aluminum D-Al	0.0197	0.0248	0.0005	0.0005	0.00162	0.00565	0.0107	0.0175	0.0604	0.076	0.0775	15
Antimony T-Sb	0.000581	0.000661	0.0001	0.000135	0.00017	0.00025	0.00037	0.000495	0.00117	0.00178	0.00267	15
Antimony D-Sb	0.000281	0.000181	0.0001	0.000114	0.000132	0.00017	0.00022	0.00032	0.000464	0.00059	0.0008	15
Arsenic T-As	0.00329	0.00253	0.0007	0.000829	0.000958	0.00135	0.00335	0.00529	0.00557	0.00566	0.00575	4
Arsenic D-As	0.000805	0.000185	0.0006	0.000621	0.000642	0.000705	0.00079	0.00089	0.00098	0.00101	0.00104	4
Barium T-Ba	0.065	0.0503	0.0281	0.0315	0.0342	0.037	0.042	0.0665	0.132	0.168	0.203	15
Barium D-Ba	0.0344	0.0067	0.0234	0.024	0.0254	0.0311	0.0352	0.0371	0.041	0.0448	0.049	15
Beryllium T-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.033	0.0447	0.01	0.01	0.01	0.01	0.011	0.034	0.0736	0.0868	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000546	0.000654	0.00008	0.000087	0.000094	0.000138	0.000214	0.000773	0.00138	0.00171	0.0022	15
Cadmium D-Cd	0.000143	0.0000735	0.00007	0.000077	0.000084	0.0001	0.0001	0.000169	0.00026	0.0003	0.0003	15
Calcium T-Ca	31.5	10.8	16.5	17.3	18.4	24.1	30.1	38	44.9	48.3	53.8	15
Calcium D-Ca	29	10.5	13.7	17	18.8	22	28.7	33.6	39.6	44.6	55.2	15
Chromium T-Cr	0.00098	0.000467	0.00034	0.000439	0.000538	0.000835	0.00107	0.00121	0.00135	0.0014	0.00145	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.00114	0.00159	0.00014	0.000203	0.000242	0.000325	0.00045	0.00159	0.00178	0.00322	0.00646	15
Cobalt D-Co	0.000178	0.000129	0.00003	0.00003	0.000032	0.00008	0.00015	0.00024	0.000312	0.000374	0.0005	15
Copper T-Cu	0.0198	0.026	0.001	0.00107	0.00122	0.00425	0.011	0.0169	0.0602	0.0717	0.085	15
Copper D-Cu	0.0012	0.00171	0.0002	0.0002	0.00024	0.00031	0.0005	0.00146	0.00204	0.0036	0.00693	15
Iron T-Fe	2.5	5.82	0.037	0.0566	0.087	0.145	0.26	2.67	3.05	9.11	23.1	15
Iron D-Fe	0.0222	0.024	0.005	0.0085	0.01	0.01	0.01	0.02	0.0608	0.0716	0.08	15
Lead T-Pb	0.0027	0.00384	0.00017	0.00017	0.000246	0.000545	0.00096	0.00301	0.00814	0.0114	0.0124	15
Lead D-Pb	0.000163	0.000184	0.000025	0.0000425	0.00005	0.000055	0.00007	0.000158	0.000468	0.000527	0.00059	15
Magnesium T-Mg	4.37	2.22	2.44	2.54	2.67	3.19	3.6	5.1	5.71	7.47	11.4	15
Magnesium D-Mg	3.07	1.15	1.24	1.67	1.94	2.3	3.05	3.77	4.38	4.76	5.59	15
Manganese T-Mn	0.0896	0.171	0.0037	0.00464	0.00522	0.0067	0.0135	0.0721	0.332	0.5	0.519	15
Manganese D-Mn	0.00665	0.00582	0.0005	0.00092	0.0011	0.0021	0.00458	0.0106	0.0127	0.0158	0.021	15
Mercury T-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.00231	0.00162	0.000949	0.000978	0.00107	0.00131	0.0019	0.0029	0.00337	0.00469	0.00734	15
Molybdenum D-Mo	0.00148	0.000518	0.00078	0.000798	0.000831	0.00116	0.0015	0.0018	0.00203	0.00226	0.00262	15
Nickel T-Ni	0.0158	0.0325	0.00016	0.00152	0.00216	0.0025	0.0049	0.0134	0.0233	0.0559	0.13	15
Nickel D-Ni	0.00179	0.00142	0.00012	0.000176	0.00024	0.000605	0.00173	0.0023	0.00356	0.00432	0.00507	15
Selenium T-Se	0.00195	0.00111	0.00102	0.00108	0.00115	0.00134	0.00161	0.00222	0.00302	0.00328	0.00355	4
Selenium D-Se	0.00196	0.00122	0.00094	0.00102	0.0011	0.00135	0.00158	0.00219	0.00312	0.00342	0.00373	4
Silicon T-Si	3.41	0.773	2.35	2.5	2.64	3.08	3.65	3.98	3.99	4	4	4
Silicon D-Si	2.11	0.812	1.34	1.42	1.49	1.72	1.92	2.31	2.87	3.06	3.25	4
Silver T-Ag	0.0000313	0.0000194	0.000011	0.0000124	0.0000137	0.0000178	0.00003	0.0000435	0.0000498	0.0000519	0.000054	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	1.39	0.386	0.846	0.919	0.97	1.08	1.3	1.65	1.93	2.01	2.02	15
Sodium D-Na	1.05	0.38	0.56	0.606	0.68	0.79	0.976	1.25	1.47	1.66	2	15
Strontium T-Sr	0.134	0.0519	0.0734	0.0773	0.0829	0.0975	0.12	0.151	0.201	0.24	0.255	15
Strontium D-Sr	0.125	0.0531	0.0489	0.0658	0.0755	0.0901	0.116	0.15	0.174	0.21	0.264	15
Thallium T-Tl	0.0000588	0.0000942	0.00001	0.0000102	0.0000103	0.0000108	0.0000125	0.0000605	0.000144	0.000172	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Titanium T-Ti	0.0286	0.0264	0.01	0.01	0.01	0.01	0.0192	0.0377	0.0547	0.0603	0.066	4
Titanium D-Ti	0.00773	0.00455	0.0009	0.00227	0.00363	0.00773	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.0002	0.0000894	0.000132	0.000135	0.000139	0.000149	0.000168	0.000219	0.000286	0.000308	0.00033	4
Uranium D-U	0.000161	0.0000919	0.000075	0.0000827	0.0000903	0.000113	0.000139	0.000186	0.000248	0.000269	0.00029	4
Vanadium T-V	0.00323	0.00292	0.0005	0.000575	0.00065	0.000875	0.00301	0.00536	0.00598	0.00619	0.0064	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0397	0.0554	0.005	0.00549	0.00622	0.0115	0.018	0.0435	0.0862	0.134	0.216	15
Zinc D-Zn	0.0047	0.00328	0.0005	0.00085	0.001	0.00205	0.0049	0.00595	0.00772	0.00964	0.013	15

Roosevelt Creek	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.73	0.205	7.44	7.46	7.47	7.56	7.78	7.83	7.95	8	8.06	9
Conductivity	99.4	27.7	63	64.7	67	82.8	94	130	134	138	145	13
Hardness CaCO3	47.5	17.4	28	29.7	30.9	35	43	54	71.7	78.7	86	13
Total Dissolved Solids	58.9	16.2	32	41.6	48	49	56	63	84.8	90	90	13
Total Suspended Solids	25.8	40.7	1	1	2	6	8	21.2	59.2	96.6	147	13
Turbidity	20.2	33.1	2.5	3.34	4	4.7	12	17	22.6	65	128	13
Alkalinity-Total CaCO3	38.6	9.88	26	26.2	27.4	33	36	43	52.8	55.8	58.4	13
Acidity (as CaCO3)	2.12	0.497	1.2	1.5	1.72	1.9	2	2.5	2.78	2.88	3	13
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.02	N/A	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	11.5	4.4	4.7	5.88	7.21	9.49	10	14	18	18.5	19	13
Nitrate Nitrogen N	0.0594	0.0733	0.0183	0.0185	0.0186	0.0191	0.0252	0.0654	0.128	0.148	0.169	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.00105	0.0001	0.001	0.001	0.001	0.001	0.001	0.00105	0.00114	0.00117	0.0012	4
Phosphorus (P)-Total	0.228	0.143	0.0128	0.0557	0.0987	0.227	0.3	0.3	0.3	0.3	0.3	4
Total Organic Carbon	0.678	0.304	0.5	0.5	0.5	0.5	0.54	0.718	0.965	1.05	1.13	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	0.639	0.755	0.049	0.0976	0.133	0.17	0.348	0.828	1.31	1.87	2.72	13
Aluminum D-Al	0.0226	0.0249	0.0005	0.0005	0.00082	0.0061	0.008	0.0369	0.0557	0.0634	0.0745	13
Antimony T-Sb	0.000367	0.000284	0.0001	0.00013	0.000152	0.00018	0.00028	0.00046	0.000636	0.000858	0.00114	13
Antimony D-Sb	0.000209	0.00014	0.00005	0.000074	0.000096	0.00013	0.00016	0.00022	0.000448	0.000494	0.0005	13
Arsenic T-As	0.000973	0.000487	0.0005	0.000536	0.000572	0.00068	0.00088	0.00117	0.00145	0.00154	0.00163	4
Arsenic D-As	0.00023	0.000184	0.0001	0.000105	0.000109	0.000123	0.00016	0.000268	0.000407	0.000454	0.0005	4
Barium T-Ba	0.0851	0.0244	0.0577	0.058	0.0588	0.0715	0.0799	0.094	0.106	0.125	0.146	12
Barium D-Ba	0.0657	0.013	0.0517	0.0521	0.0529	0.0579	0.0609	0.071	0.083	0.089	0.095	12
Beryllium T-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0335	0.0444	0.01	0.01	0.01	0.01	0.012	0.0355	0.0742	0.0871	0.1	4
Boron D-B	0.0325	0.045	0.01	0.01	0.01	0.01	0.01	0.0325	0.073	0.0865	0.1	4
Cadmium T-Cd	0.000136	0.000111	0.0000253	0.0000287	0.0000381	0.000069	0.0001	0.0002	0.000282	0.00034	0.0004	13
Cadmium D-Cd	0.0000758	0.0000533	0.000011	0.0000121	0.0000131	0.000017	0.00009	0.0001	0.0001	0.00014	0.0002	13
Calcium T-Ca	16.1	4.77	9.61	9.99	10.5	13	15.2	18.8	21.7	23.8	26	12
Calcium D-Ca	15.2	5.36	8.91	9.45	10	12.4	13	19	22.7	24.4	26	12
Chromium T-Cr	0.000788	0.000228	0.00059	0.00059	0.00059	0.00059	0.00078	0.000978	0.000991	0.000996	0.001	4
Chromium D-Cr	0.00033	0.000447	0.0001	0.0001	0.0001	0.0001	0.00011	0.00034	0.000736	0.000868	0.001	4
Cobalt T-Co	0.000448	0.000332	0.00006	0.00006	0.00008	0.00018	0.00042	0.00069	0.000944	0.00102	0.00106	13
Cobalt D-Co	0.0001	0.0000719	0.00003	0.00003	0.000036	0.00006	0.00008	0.0001	0.000158	0.000216	0.0003	13
Copper T-Cu	0.0032	0.00375	0.0004	0.00052	0.00062	0.0008	0.00206	0.00381	0.00648	0.00986	0.014	13
Copper D-Cu	0.000362	0.000449	0.00005	0.00005	0.00006	0.0001	0.0002	0.00028	0.0009	0.00124	0.0016	13
Iron T-Fe	0.813	0.802	0.066	0.146	0.202	0.23	0.416	1.2	1.99	2.29	2.55	13
Iron D-Fe	0.0231	0.0152	0.005	0.008	0.01	0.01	0.024	0.03	0.0462	0.049	0.049	13
Lead T-Pb	0.00168	0.00164	0.00017	0.000248	0.000316	0.00056	0.00103	0.00279	0.00384	0.00452	0.0053	13
Lead D-Pb	0.000105	0.000126	0.000025	0.000025	0.00003	0.00005	0.00006	0.000112	0.000167	0.000307	0.0005	13
Magnesium T-Mg	2.99	0.977	1.78	1.8	1.92	2.35	2.77	3.6	3.79	4.39	5.3	13
Magnesium D-Mg	2.69	1.08	1.37	1.45	1.55	1.95	2.5	3.5	3.88	4.41	5.1	13
Manganese T-Mn	0.0647	0.122	0.0021	0.00558	0.00844	0.011	0.015	0.0475	0.119	0.256	0.453	13
Manganese D-Mn	0.00256	0.00229	0.0002	0.0002	0.00024	0.0005	0.0021	0.00339	0.00608	0.0067	0.00708	13
Mercury T-Hg	0.0000269	0.0000368	0.0000056	0.00000626	0.00000692	0.0000089	0.00001	0.000028	0.0000604	0.0000712	0.000082	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.0006	0.000398	0.00022	0.000282	0.00033	0.000384	0.00041	0.00077	0.00096	0.00128	0.0017	13
Molybdenum D-Mo	0.000522	0.000408	0.00016	0.000219	0.000262	0.000333	0.0004	0.00051	0.00091	0.00128	0.0017	13
Nickel T-Ni	0.00805	0.0217	0.00012	0.000138	0.000236	0.0006	0.00109	0.0042	0.00682	0.0362	0.08	13
Nickel D-Ni	0.000515	0.000506	0.00006	0.000114	0.00015	0.0003	0.0004	0.0005	0.000908	0.0014	0.002	13
Selenium T-Se	0.000207	0.000116	0.00012	0.000126	0.000132	0.00015	0.000166	0.000223	0.000316	0.000347	0.000378	4
Selenium D-Se	0.000205	0.000127	0.0001	0.000109	0.000118	0.000145	0.000165	0.000225	0.000323	0.000356	0.000389	4
Silicon T-Si	2.12	0.389	1.74	1.75	1.77	1.81	2.11	2.42	2.47	2.49	2.51	4
Silicon D-Si	0.71	0.316	0.456	0.475	0.494	0.551	0.606	0.765	1.01	1.09	1.17	4
Silver T-Ag	0.0000358	0.0000185	0.00002	0.0000202	0.0000203	0.0000208	0.0000325	0.0000475	0.0000538	0.0000559	0.000058	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	0.668	0.454	0.296	0.322	0.349	0.4	0.53	0.81	0.92	1.35	2	13
Sodium D-Na	0.53	0.471	0.231	0.248	0.272	0.32	0.35	0.51	0.798	1.32	2	13
Strontium T-Sr	0.0913	0.0314	0.0487	0.0521	0.0564	0.075	0.084	0.11	0.126	0.141	0.16	13
Strontium D-Sr	0.0906	0.0343	0.0425	0.0472	0.0526	0.0739	0.0793	0.11	0.135	0.148	0.16	13
Thallium T-Tl	0.0000688	0.0000878	0.000014	0.0000164	0.0000188	0.000026	0.0000305	0.0000733	0.000149	0.000175	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.00022	0.00019	0.0001	0.0001	0.0001	0.0001	0.00014	0.00026	0.000404	0.000452	0.0005	4
Titanium T-Ti	0.0148	0.00553	0.01	0.01	0.01	0.01	0.0145	0.0193	0.0198	0.0199	0.0201	4
Titanium D-Ti	0.0078	0.0044	0.0012	0.00252	0.00384	0.0078	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.0000923	0.0000721	0.000048	0.0000498	0.0000516	0.000057	0.0000605	0.0000958	0.000158	0.000179	0.0002	4
Uranium D-U	0.0000733	0.0000846	0.000024	0.0000255	0.000027	0.0000315	0.0000345	0.0000763	0.000151	0.000175	0.0002	4
Vanadium T-V	0.00259	0.00138	0.00093	0.00109	0.00125	0.00173	0.00275	0.00361	0.00381	0.00387	0.00394	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0102	0.00976	0.001	0.001	0.001	0.005	0.007	0.01	0.0248	0.027	0.03	13
Zinc D-Zn	0.00177	0.00189	0.0002	0.00032	0.000434	0.001	0.001	0.001	0.00478	0.0054	0.006	13

GSC09	Summer											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	6.16	1.18	5.47	5.47	5.47	5.48	5.48	6.5	7.11	7.32	7.52	3
Conductivity	152	3.61	148	149	149	151	153	154	155	155	155	3
Hardness CaCO3	60.1	1.68	58.8	58.9	58.9	59.2	59.5	60.8	61.5	61.8	62	3
Total Dissolved Solids	115	9.87	104	106	107	112	120	121	122	122	122	3
Total Suspended Solids	3.3	0.52	3	3	3	3	3	3.45	3.72	3.81	3.9	3
Turbidity	0.1	1.7E-17	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	3
Alkalinity-Total CaCO3	1.37	0.551	1	1.01	1.02	1.05	1.1	1.55	1.82	1.91	2	3
Acidity (as CaCO3)	2.8	0.964	2.1	2.13	2.16	2.25	2.4	3.15	3.6	3.75	3.9	3
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Fluoride F	0.023	0.003	0.02	0.0203	0.0206	0.0215	0.023	0.0245	0.0254	0.0257	0.026	3
Bromide Br	0.05	8.5E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	3
Sulphate SO4	64.9	1.76	63.8	63.8	63.8	63.9	63.9	65.4	66.3	66.6	66.9	3
Nitrate Nitrogen N	0.0249	0.00648	0.0208	0.0209	0.021	0.0212	0.0216	0.027	0.0302	0.0313	0.0324	3
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	3
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	3
Phosphorus (P)-Total	0.117	0.16	0.002	0.0068	0.0116	0.026	0.05	0.175	0.25	0.275	0.3	3
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	3
Aluminum T-Al	0.107	0.0158	0.0968	0.097	0.0971	0.0977	0.0985	0.112	0.12	0.122	0.125	3
Aluminum D-Al	0.0936	0.0201	0.0752	0.0767	0.0783	0.0829	0.0905	0.103	0.11	0.113	0.115	3
Antimony T-Sb	0.000233	0.000231	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.00042	0.00046	0.0005	3
Antimony D-Sb	0.000233	0.000231	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.00042	0.00046	0.0005	3
Arsenic T-As	0.000233	0.000231	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.00042	0.00046	0.0005	3
Arsenic D-As	0.000233	0.000231	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.00042	0.00046	0.0005	3
Barium T-Ba	0.017	0.00265	0.015	0.0151	0.0152	0.0155	0.016	0.018	0.0192	0.0196	0.02	3
Barium D-Ba	0.017	0.00259	0.0152	0.0153	0.0153	0.0156	0.0159	0.018	0.0192	0.0196	0.02	3
Beryllium T-Be	0.0004	0.00052	0.0001	0.0001	0.0001	0.0001	0.0001	0.00055	0.00082	0.00091	0.001	3
Beryllium D-Be	0.0004	0.00052	0.0001	0.0001	0.0001	0.0001	0.0001	0.00055	0.00082	0.00091	0.001	3
Bismuth T-Bi	0.0002	0.00026	0.00005	0.00005	0.00005	0.00005	0.00005	0.000275	0.00041	0.000455	0.0005	3
Bismuth D-Bi	0.0002	0.00026	0.00005	0.00005	0.00005	0.00005	0.00005	0.000275	0.00041	0.000455	0.0005	3
Boron T-B	0.044	0.0485	0.014	0.0144	0.0148	0.016	0.018	0.059	0.0836	0.0918	0.1	3
Boron D-B	0.0417	0.0505	0.012	0.0121	0.0122	0.0125	0.013	0.0565	0.0826	0.0913	0.1	3
Cadmium T-Cd	0.000879	0.000021	0.000858	0.00086	0.000862	0.000869	0.00088	0.00089	0.000896	0.000898	0.0009	3
Cadmium D-Cd	0.000868	0.0000587	0.000802	0.00081	0.000819	0.000844	0.000886	0.000901	0.000909	0.000912	0.000915	3
Calcium T-Ca	20.4	0.651	19.8	19.9	19.9	20.1	20.4	20.8	21	21	21.1	3
Calcium D-Ca	19.6	0.702	18.9	19	19	19.2	19.5	19.9	20.1	20.2	20.3	3
Chromium T-Cr	0.0004	0.00052	0.0001	0.0001	0.0001	0.0001	0.0001	0.00055	0.00082	0.00091	0.001	3
Chromium D-Cr	0.0004	0.00052	0.0001	0.0001	0.0001	0.0001	0.0001	0.00055	0.00082	0.00091	0.001	3
Cobalt T-Co	0.0005	0.00004	0.00046	0.000464	0.000468	0.00048	0.0005	0.00052	0.000532	0.000536	0.00054	3
Cobalt D-Co	0.00046	0.0000656	0.00039	0.000398	0.000406	0.00043	0.00047	0.000495	0.00051	0.000515	0.00052	3
Copper T-Cu	0.0106	0.00104	0.00936	0.00952	0.00969	0.0102	0.011	0.0112	0.0112	0.0113	0.0113	3
Copper D-Cu	0.00976	0.00099	0.00917	0.00917	0.00918	0.00919	0.0092	0.0101	0.0106	0.0107	0.0109	3
Iron T-Fe	0.0167	0.0115	0.01	0.01	0.01	0.01	0.01	0.02	0.026	0.028	0.03	3
Iron D-Fe	0.0167	0.0115	0.01	0.01	0.01	0.01	0.01	0.02	0.026	0.028	0.03	3
Lead T-Pb	0.0002	0.00026	0.00005	0.00005	0.00005	0.00005	0.00005	0.000275	0.00041	0.000455	0.0005	3
Lead D-Pb	0.0002	0.00026	0.00005	0.00005	0.00005	0.00005	0.00005	0.000275	0.00041	0.000455	0.0005	3
Magnesium T-Mg	2.84	0.121	2.71	2.73	2.74	2.79	2.86	2.91	2.93	2.94	2.95	3
Magnesium D-Mg	2.73	0.0819	2.64	2.65	2.66	2.7	2.75	2.78	2.79	2.8	2.8	3
Manganese T-Mn	0.0245	0.000666	0.0241	0.0241	0.0241	0.0242	0.0242	0.0248	0.0251	0.0252	0.0253	3
Manganese D-Mn	0.0226	0.00197	0.0204	0.0207	0.021	0.0219	0.0234	0.0238	0.024	0.024	0.0241	3
Mercury T-Hg	0.00000667	0.00000289	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000075	0.000009	0.0000095	0.00001	3
Mercury D-Hg	0.00000667	0.00000289	0.000005	0.000005	0.000005	0.000005	0.000005	0.0000075	0.000009	0.0000095	0.00001	3
Molybdenum T-Mo	0.000399	0.000521	0.000074	0.0000788	0.0000836	0.000098	0.000122	0.000561	0.000824	0.000912	0.001	3
Molybdenum D-Mo	0.000387	0.000532	0.000054	0.0000592	0.0000644	0.00008	0.000106	0.000553	0.000821	0.000911	0.001	3
Nickel T-Ni	0.00243	0.000133	0.00228	0.0023	0.00232	0.00239	0.0025	0.00251	0.00252	0.00252	0.00252	3
Nickel D-Ni	0.00218	0.000197	0.002	0.00202	0.00203	0.00208	0.00215	0.00227	0.00234	0.00237	0.00239	3
Selenium T-Se	0.000726	0.0000351	0.00069	0.000694	0.000698	0.00071	0.000729	0.000745	0.000754	0.000757	0.00076	3
Selenium D-Se	0.000716	0.0000562	0.000676	0.000678	0.000679	0.000684	0.000691	0.000736	0.000762	0.000771	0.00078	3
Silicon T-Si	3.17	0.17	3.04	3.05	3.05	3.07	3.1	3.23	3.31	3.33	3.36	3
Silicon D-Si	3.08	0.19	2.92	2.93	2.94	2.98	3.03	3.16	3.24	3.26	3.29	3
Silver T-Ag	0.0000133	0.00000577	0.00001	0.00001	0.00001	0.00001	0.00001	0.000015	0.000018	0.000019	0.00002	3
Silver D-Ag	0.0000133	0.00000577	0.00001	0.00001	0.00001	0.00001	0.00001	0.000015	0.000018	0.000019	0.00002	3
Sodium T-Na	1.51	0.422	1.26	1.26	1.26	1.27	1.28	1.64	1.86	1.93	2	3
Sodium D-Na	1.5	0.437	1.22	1.23	1.23	1.25	1.27	1.64	1.85	1.93	2	3
Strontium T-Sr	0.2	0.011	0.189	0.19	0.191	0.195	0.2	0.206	0.209	0.21	0.211	3
Strontium D-Sr	0.195	0.0185	0.177	0.179	0.181	0.186	0.195	0.205	0.21	0.212	0.214	3
Thallium T-Tl	0.0000733	0.00011	0.00001	0.00001	0.00001	0.00001	0.00001	0.000105	0.000162	0.000181	0.0002	3
Thallium D-Tl	0.0000733	0.00011	0.00001	0.00001	0.00001	0.00001	0.00001	0.000105	0.000162	0.000181	0.0002	3
Tin T-Sn	0.000233	0.000231	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.00042	0.00046	0.0005	3
Tin D-Sn	0.00026	0.000212	0.0001	0.000108	0.000116	0.00014	0.00018	0.00034	0.000436	0.000468	0.0005	3
Titanium T-Ti	0.00677	0.0056	0.0003	0.00127	0.00224	0.00515	0.01	0.01	0.01	0.01	0.01	3
Titanium D-Ti	0.00677	0.0056	0.0003	0.00127	0.00224	0.00515	0.01	0.01	0.01	0.01	0.01	3
Uranium T-U	0.0000733	0.00011	0.00001	0.00001	0.00001	0.00001	0.00001	0.000105	0.000162	0.000181	0.0002	3
Uranium D-U	0.0000733	0.00011	0.00001	0.00001	0.00001	0.00001	0.00001	0.000105	0.000162	0.000181	0.0002	3
Vanadium T-V	0.000667	0.000289	0.0005	0.0005	0.0005	0.0005	0.0005	0.00075	0.0009	0.00095	0.001	3
Vanadium D-V	0.000667	0.000289	0.0005	0.0005	0.0005	0.0005	0.0005	0.00075	0.0009	0.00095	0.001	3
Zinc T-Zn	0.0579	0.0037	0.0556	0.0556	0.0557	0.0558	0.056	0.0591	0.061	0.0616	0.0622	3
Zinc D-Zn	0.0601	0.00438	0.0555	0.056	0.0565	0.0581	0.0607	0.0625	0.0635	0.0639	0.0642	3

American Creek	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.67	0.239	7.34	7.4	7.45	7.62	7.69	7.7	7.89	7.95	8.01	5
Conductivity	108	25.3	72	78.2	84.4	103	106	117	132	137	142	5
Hardness CaCO3	50.9	12.3	36.1	38.2	40.3	46.6	46.9	56.4	63.8	66.2	68.7	5
Total Dissolved Solids	82.4	22.2	65	65	65	65	72	94	107	112	116	5
Total Suspended Solids	32	46	3	3.76	4.52	6.8	7.4	31	79.6	95.8	112	5
Turbidity	35	62.2	0.24	1.39	2.54	6	11	11.7	92.3	119	146	5
Alkalinity-Total CaCO3	42.9	10.1	28.2	30.8	33.4	41.2	42.3	47.1	52.4	54.1	55.9	5
Acidity (as CaCO3)	1.62	0.576	1.1	1.14	1.18	1.3	1.3	1.9	2.26	2.38	2.5	5
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.041	0.00552	0.032	0.0338	0.0356	0.041	0.042	0.043	0.0454	0.0462	0.047	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	13.1	3.35	9.11	9.73	10.3	12.2	12.3	13.7	16.5	17.4	18.3	5
Nitrate Nitrogen N	0.141	0.0829	0.0335	0.0504	0.0673	0.118	0.135	0.156	0.221	0.242	0.264	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.00158	0.000861	0.001	0.001	0.001	0.001	0.0011	0.0018	0.00252	0.00276	0.003	5
Phosphorus (P)-Total	0.16	0.138	0.0029	0.0123	0.0217	0.05	0.146	0.3	0.3	0.3	0.3	5
Total Organic Carbon	0.562	0.1	0.5	0.5	0.5	0.5	0.5	0.58	0.67	0.7	0.73	5
Dissolved Organic Carbon	0.654	0.264	0.5	0.5	0.5	0.5	0.5	0.66	0.93	1.02	1.11	5
Aluminum T-Al	1.74	2.78	0.0253	0.097	0.169	0.384	0.571	1.07	4.43	5.55	6.67	5
Aluminum D-Al	0.0348	0.0195	0.008	0.012	0.016	0.0279	0.0302	0.052	0.0543	0.0551	0.0559	5
Antimony T-Sb	0.000422	0.000168	0.00027	0.00028	0.00029	0.00032	0.00034	0.0005	0.000608	0.000644	0.00068	5
Antimony D-Sb	0.000364	0.000129	0.00022	0.000232	0.000244	0.00028	0.00032	0.0005	0.0005	0.0005	0.0005	5
Arsenic T-As	0.00117	0.000773	0.00072	0.000724	0.000728	0.00074	0.00075	0.0011	0.00195	0.00224	0.00252	5
Arsenic D-As	0.00055	0.000114	0.00041	0.000428	0.000446	0.0005	0.00054	0.00058	0.000664	0.000692	0.00072	5
Barium T-Ba	0.135	0.0608	0.1	0.101	0.102	0.105	0.108	0.118	0.193	0.218	0.243	5
Barium D-Ba	0.0885	0.0189	0.0666	0.0691	0.0716	0.079	0.0853	0.0945	0.108	0.113	0.117	5
Beryllium T-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.000245	0.000235	0.00005	0.00005	0.00005	0.00005	0.000125	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.0482	0.0473	0.012	0.0122	0.0124	0.013	0.016	0.1	0.1	0.1	0.1	5
Boron D-B	0.0468	0.0486	0.01	0.0104	0.0108	0.012	0.012	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.0000327	0.0000422	0.000005	0.0000059	0.0000068	0.0000095	0.000012	0.000031	0.000076	0.000091	0.000106	5
Cadmium D-Cd	0.0000132	0.00000357	0.00001	0.00001	0.00001	0.00001	0.0000119	0.000017	0.000017	0.000017	0.000017	5
Calcium T-Ca	19.3	4.61	13.3	14.2	15.1	17.7	18.4	21.1	23.9	24.9	25.8	5
Calcium D-Ca	18.4	4.4	13.1	13.8	14.6	16.8	17	20.4	23	23.9	24.8	5
Chromium T-Cr	0.000522	0.000444	0.00013	0.000132	0.000134	0.00014	0.00034	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000776	0.00104	0.00013	0.00015	0.00017	0.00023	0.0003	0.00061	0.00181	0.00221	0.00261	5
Cobalt D-Co	0.00018	0.00011	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.0003	0.0003	0.0003	5
Copper T-Cu	0.00388	0.00613	0.00062	0.000696	0.000772	0.001	0.00104	0.00192	0.00965	0.0122	0.0148	5
Copper D-Cu	0.000564	0.000401	0.00021	0.000222	0.000234	0.00027	0.00034	0.001	0.001	0.001	0.001	5
Iron T-Fe	1.69	2.64	0.031	0.08	0.129	0.276	0.525	1.3	4.32	5.32	6.33	5
Iron D-Fe	0.025	0.00927	0.01	0.0124	0.0148	0.022	0.03	0.031	0.0316	0.0318	0.032	5
Lead T-Pb	0.00194	0.00308	0.000305	0.000322	0.00034	0.000392	0.0005	0.0011	0.00489	0.00616	0.00742	5
Lead D-Pb	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Magnesium T-Mg	1.86	0.948	1.27	1.29	1.31	1.36	1.49	1.66	2.79	3.16	3.54	5
Magnesium D-Mg	1.21	0.298	0.829	0.885	0.941	1.11	1.14	1.31	1.51	1.57	1.64	5
Manganese T-Mn	0.0726	0.112	0.00284	0.00531	0.00778	0.0152	0.022	0.0522	0.183	0.227	0.271	5
Manganese D-Mn	0.00521	0.00377	0.0015	0.00188	0.00225	0.00338	0.00477	0.00488	0.00885	0.0102	0.0115	5
Mercury T-Hg	0.0000084	0.00000321	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.0000112	0.0000116	0.000012	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.000797	0.000197	0.000571	0.000587	0.000603	0.000652	0.000763	0.001	0.001	0.001	0.001	5
Molybdenum D-Mo	0.000761	0.000228	0.000504	0.000526	0.000549	0.000616	0.000684	0.001	0.001	0.001	0.001	5
Nickel T-Ni	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Nickel D-Ni	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Selenium T-Se	0.000248	0.0000697	0.00016	0.00017	0.00018	0.00021	0.000237	0.0003	0.00032	0.000327	0.000334	5
Selenium D-Se	0.000224	0.0000718	0.00014	0.00015	0.00016	0.00019	0.000217	0.00024	0.000296	0.000315	0.000334	5
Silicon T-Si	4.04	4.63	1.54	1.6	1.65	1.82	2.18	2.37	8.33	10.3	12.3	5
Silicon D-Si	1.14	0.309	0.687	0.744	0.801	0.973	1.28	1.28	1.39	1.43	1.47	5
Silver T-Ag	0.0000386	0.0000546	0.00001	0.00001	0.00001	0.00001	0.000017	0.00002	0.0000896	0.000113	0.000136	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.21	0.727	0.536	0.573	0.609	0.719	0.797	2	2	2	2	5
Sodium D-Na	1.17	0.765	0.45	0.492	0.533	0.658	0.746	2	2	2	2	5
Strontium T-Sr	0.116	0.0274	0.0803	0.0858	0.0914	0.108	0.109	0.126	0.143	0.149	0.155	5
Strontium D-Sr	0.113	0.0326	0.0754	0.0807	0.086	0.102	0.105	0.12	0.146	0.155	0.164	5
Thallium T-Tl	0.0000862	0.000104	0.00001	0.00001	0.00001	0.00001	0.000011	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.049	0.0725	0.00796	0.00837	0.00878	0.01	0.013	0.037	0.121	0.149	0.177	5
Titanium D-Ti	0.00807	0.00431	0.00037	0.0023	0.00422	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000126	0.000068	0.000072	0.0000728	0.0000736	0.000076	0.00008	0.0002	0.0002	0.0002	0.0002	5
Uranium D-U	0.000116	0.0000771	0.000045	0.0000488	0.0000526	0.000064	0.000072	0.0002	0.0002	0.0002	0.0002	5
Vanadium T-V	0.00385	0.00509	0.0005	0.000634	0.000768	0.00117	0.0017	0.0031	0.00892	0.0109	0.0128	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.00836	0.00886	0.003	0.00306	0.00312	0.0033	0.005	0.0065	0.017	0.0205	0.024	5
Zinc D-Zn	0.00278	0.00204	0.001	0.00106	0.00112	0.0013	0.0016	0.005	0.005	0.005	0.005	5

Lower Bitter Creek (BC02)	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.89	0.376	7.39	7.44	7.49	7.68	7.8	8.09	8.29	8.47	8.65	10
Conductivity	177	69.3	94.4	95.5	99.2	123	154	216	274	286	312	15
Hardness CaCO3	83.8	33.1	41	42.3	44.9	62.3	79.4	97.2	121	136	165	16
Total Dissolved Solids	120	47.4	46	58.8	65.5	83.1	118	155	172	185	217	16
Total Suspended Solids	262	331	1	3.18	12	60.5	164	365	479	744	1340	16
Turbidity	215	369	1.26	6.75	13.1	51.9	129	195	312	688	1500	15
Alkalinity-Total CaCO3	56.3	17.6	28.4	33.7	36.3	45.5	55	66	77.5	82.2	94.6	16
Acidity (as CaCO3)	2.19	1.67	1	1	1	1	1.8	2.4	3.48	4.96	7	13
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.033	0.0148	0.02	0.02	0.02	0.02	0.03	0.04	0.049	0.052	0.055	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	31.5	20.3	11	11	11.2	17.5	24.8	38.2	62.7	70.2	77.7	16
Nitrate Nitrogen N	0.101	0.0758	0.0159	0.0222	0.0284	0.0472	0.0959	0.138	0.18	0.194	0.208	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.00618	0.00264	0.005	0.005	0.005	0.005	0.005	0.005	0.00854	0.00972	0.0109	5
Ortho-Phosphate	0.00134	0.000397	0.001	0.001	0.001	0.001	0.0012	0.0016	0.00178	0.00184	0.0019	5
Phosphorus (P)-Total	0.488	0.565	0.0054	0.0521	0.0988	0.239	0.3	0.434	1.05	1.25	1.46	5
Total Organic Carbon	1.22	0.729	0.5	0.56	0.62	0.8	0.97	1.48	2.01	2.18	2.36	5
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Aluminum T-Al	6.14	8.23	0.0964	0.457	0.7	1.29	3.87	7.12	10.7	17.9	34	16
Aluminum D-Al	0.0507	0.0447	0.0024	0.00352	0.00512	0.0159	0.0311	0.076	0.116	0.133	0.14	15
Antimony T-Sb	0.00206	0.00166	0.0005	0.000507	0.000618	0.0009	0.00171	0.00222	0.0041	0.00526	0.00657	15
Antimony D-Sb	0.000765	0.000323	0.0003	0.00037	0.00042	0.000535	0.0007	0.00109	0.00118	0.00123	0.0013	15
Arsenic T-As	0.0197	0.0264	0.00086	0.00216	0.00346	0.00737	0.00974	0.0142	0.0453	0.0557	0.0661	5
Arsenic D-As	0.00071	0.000218	0.00054	0.00055	0.00056	0.00059	0.00061	0.00073	0.00094	0.00101	0.00108	5
Barium T-Ba	0.129	0.12	0.0451	0.0496	0.053	0.0629	0.0908	0.147	0.205	0.306	0.532	16
Barium D-Ba	0.0381	0.0128	0.0206	0.0238	0.025	0.0295	0.0347	0.0441	0.053	0.0573	0.07	16
Beryllium T-Be	0.00047	0.000484	0.0001	0.000104	0.000108	0.00012	0.00013	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.000308	0.000225	0.00005	0.000056	0.000062	0.00008	0.00041	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.0462	0.0491	0.01	0.01	0.01	0.01	0.011	0.1	0.1	0.1	0.1	5
Boron D-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000452	0.000517	0.0000558	0.000111	0.000145	0.0002	0.00021	0.0005	0.00104	0.00154	0.00197	16
Cadmium D-Cd	0.000132	0.0000956	0.000017	0.0000196	0.0000238	0.0000418	0.0001	0.0002	0.00025	0.000303	0.00031	16
Calcium T-Ca	31.6	11.3	16.4	17.5	19.1	26.7	30.2	33.9	45.7	50.8	59.2	16
Calcium D-Ca	27.7	10.6	14.3	14.6	15.3	21.2	26.5	30.6	39.9	44.8	54.5	16
Chromium T-Cr	0.0152	0.0194	0.001	0.00214	0.00328	0.0067	0.00742	0.0118	0.0342	0.0417	0.0492	5
Chromium D-Cr	0.00047	0.000484	0.0001	0.0001	0.0001	0.0001	0.00015	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.00491	0.00668	0.0003	0.00048	0.00054	0.00096	0.00332	0.00579	0.01	0.0151	0.0269	16
Cobalt D-Co	0.000618	0.00122	0.00003	0.0000525	0.00006	0.00009	0.00014	0.000618	0.001	0.002	0.005	16
Copper T-Cu	0.0271	0.0366	0.001	0.001	0.0011	0.00583	0.0179	0.0335	0.0506	0.0794	0.149	16
Copper D-Cu	0.00251	0.00627	0.00005	0.0000875	0.0001	0.00029	0.000685	0.001	0.004	0.0116	0.0252	16
Iron T-Fe	9.41	14.5	0.165	0.724	0.95	1.41	5.48	11.1	13.9	26.5	60.6	16
Iron D-Fe	0.0329	0.02	0.01	0.01	0.0124	0.0205	0.03	0.0401	0.0498	0.0655	0.09	15
Lead T-Pb	0.00708	0.00791	0.00026	0.000313	0.000415	0.001	0.0055	0.00928	0.0149	0.0202	0.0306	16
Lead D-Pb	0.000739	0.00173	0.000025	0.0000438	0.00005	0.00005	0.000071	0.000625	0.001	0.00252	0.00709	16
Magnesium T-Mg	7.45	4.96	2.12	3.31	4.23	5.58	6.34	7.74	9.6	14.4	24.5	16
Magnesium D-Mg	3.55	1.86	1.36	1.41	1.61	2.23	3.16	4.33	6.27	7.17	7.36	16
Manganese T-Mn	0.298	0.439	0.0106	0.0213	0.0274	0.0466	0.187	0.322	0.546	0.873	1.81	16
Manganese D-Mn	0.0212	0.0613	0.0001	0.0001	0.000655	0.00184	0.00456	0.00825	0.0187	0.0798	0.25	16
Mercury T-Hg	0.00000748	0.0000025	0.000005	0.000005	0.000005	0.000005	0.0000074	0.00001	0.00001	0.00001	0.00001	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.00533	0.0067	0.001	0.00204	0.00241	0.003	0.00394	0.00429	0.0058	0.0126	0.03	16
Molybdenum D-Mo	0.00454	0.00687	0.001	0.00115	0.00125	0.0026	0.00309	0.00387	0.0041	0.0107	0.03	16
Nickel T-Ni	0.0128	0.0154	0.001	0.001	0.0014	0.0022	0.00829	0.0193	0.0224	0.0336	0.0625	16
Nickel D-Ni	0.00144	0.00207	0.00015	0.00015	0.000275	0.000643	0.001	0.00143	0.00165	0.0036	0.009	16
Selenium T-Se	0.00277	0.0014	0.00107	0.00128	0.0015	0.00214	0.00253	0.00329	0.00421	0.00451	0.00482	5
Selenium D-Se	0.00185	0.000967	0.00074	0.000862	0.000984	0.00135	0.00164	0.00222	0.00286	0.00308	0.00329	5
Silicon T-Si	12.3	14.1	2.47	3.11	3.74	5.78	7.97	10.3	24	33.8	43.6	7
Silicon D-Si	1.18	0.613	0.498	0.526	0.554	0.693	1.26	1.44	1.84	2.04	2.24	7
Silver T-Ag	0.000367	0.000547	0.00002	0.000042	0.000064	0.00013	0.000156	0.000191	0.00088	0.00111	0.00134	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.64	0.672	0.8	0.968	1.08	1.12	1.47	2	2.68	2.88	3	13
Sodium D-Na	1.05	0.59	0.34	0.423	0.461	0.558	0.897	1.43	2	2	2	16
Strontium T-Sr	0.178	0.0706	0.086	0.0935	0.0992	0.116	0.17	0.234	0.256	0.283	0.326	15
Strontium D-Sr	0.162	0.0757	0.0739	0.074	0.0816	0.113	0.13	0.208	0.251	0.282	0.337	15
Thallium T-Tl	0.000104	0.0000881	0.000036	0.0000362	0.0000364	0.000037	0.000045	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.000266	0.000214	0.0001	0.0001	0.0001	0.0001	0.00013	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.163	0.145	0.01	0.0296	0.0492	0.108	0.138	0.156	0.303	0.352	0.401	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000476	0.000259	0.000252	0.000265	0.000277	0.000315	0.000413	0.00049	0.000742	0.000826	0.00091	5
Uranium D-U	0.00025	0.00014	0.000084	0.000107	0.00013	0.0002	0.000207	0.0003	0.000396	0.000428	0.00046	5
Vanadium T-V	0.0328	0.046	0.0005	0.00306	0.00562	0.0133	0.0163	0.0198	0.0763	0.0952	0.114	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.0445	0.0563	0.005	0.00575	0.0075	0.0108	0.0298	0.061	0.07	0.116	0.237	16
Zinc D-Zn	0.00501	0.00641	0.001	0.001	0.001	0.00175	0.00405	0.005	0.006	0.0115	0.028	16

Middle Bitter Creek (BC04)	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.57	1.46	1.5	6.98	7.42	7.7	7.93	8.08	8.11	8.17	8.54	20
Conductivity	177	80.5	80	85.1	87	118	160	219	295	309	359	23
Hardness CaCO3	81.5	37.9	26	42.9	45.2	60	75	89	133	166	180	25
Total Dissolved Solids	123	58.2	50	52.4	57.6	76	104	159	204	229	260	25
Total Suspended Solids	270	298	1	10.3	26.2	55	240	350	551	595	1420	25
Turbidity	248	423	0.3	7.2	33.1	51.8	138	248	532	640	2070	24
Alkalinity-Total CaCO3	53.6	19.1	16	32.2	32.9	41	53	62.1	74	88	100	25
Acidity (as CaCO3)	3.26	6.1	0.8	1	1	1.1	1.8	2.9	4.26	4.86	32	25
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0324	0.0168	0.02	0.02	0.02	0.02	0.026	0.036	0.0504	0.0552	0.06	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	34.7	22.3	10	11	11.5	18	29	45	63.2	72.1	95.4	25
Nitrate Nitrogen N	0.0636	0.0491	0.0135	0.0166	0.0197	0.0291	0.0553	0.0823	0.116	0.127	0.138	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.00644	0.00322	0.005	0.005	0.005	0.005	0.005	0.005	0.00932	0.0108	0.0122	5
Ortho-Phosphate	0.00158	0.000466	0.001	0.0011	0.0012	0.0015	0.0015	0.0016	0.00202	0.00216	0.0023	5
Phosphorus (P)-Total	0.524	0.602	0.0091	0.0499	0.0907	0.213	0.338	0.51	1.13	1.34	1.55	5
Total Organic Carbon	1.32	0.688	0.5	0.598	0.696	0.99	1.35	1.41	1.99	2.18	2.37	5
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Aluminum T-Al	6.63	7.78	0.0345	0.364	1.15	1.47	3.85	8.23	13.8	16.5	36.6	25
Aluminum D-Al	0.0574	0.0619	0.0045	0.00476	0.00596	0.0164	0.031	0.0783	0.122	0.162	0.27	25
Antimony T-Sb	0.0021	0.00165	0.00007	0.00059	0.00069	0.00099	0.00181	0.0024	0.00407	0.0058	0.0068	25
Antimony D-Sb	0.000871	0.000373	0.00007	0.00048	0.0005	0.00062	0.00087	0.00108	0.00142	0.0015	0.0017	25
Arsenic T-As	0.025	0.0293	0.00111	0.00293	0.00475	0.0102	0.0179	0.0201	0.0534	0.0645	0.0756	5
Arsenic D-As	0.00085	0.000188	0.00067	0.000674	0.000678	0.00069	0.00079	0.00105	0.00105	0.00105	0.00105	5
Barium T-Ba	0.112	0.104	0.0274	0.0416	0.0433	0.0511	0.0854	0.133	0.195	0.218	0.536	25
Barium D-Ba	0.0287	0.00727	0.0151	0.019	0.0195	0.0235	0.0284	0.032	0.0382	0.0416	0.044	25
Beryllium T-Be	0.0005	0.000457	0.00014	0.000144	0.000148	0.00016	0.0002	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00033	0.000204	0.00005	0.0000758	0.000102	0.000179	0.00042	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Boron D-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000463	0.000554	0.0000742	0.000092	0.0001	0.0001	0.00026	0.0005	0.00109	0.00166	0.0022	25
Cadmium D-Cd	0.0000871	0.0000337	0.000017	0.0000261	0.0000352	0.000073	0.0001	0.0001	0.0001	0.0001	0.00018	25
Calcium T-Ca	35.1	16.2	7.97	17.1	17.7	27	33.9	41	51.3	61.6	84	25
Calcium D-Ca	27.6	12.6	9.26	14.7	15.4	20.8	26	30	44.4	55	61	25
Chromium T-Cr	0.0187	0.0214	0.001	0.0026	0.00421	0.00902	0.0123	0.0155	0.0397	0.0477	0.0558	5
Chromium D-Cr	0.000468	0.000486	0.0001	0.0001	0.0001	0.0001	0.00014	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.00633	0.00733	0.00006	0.000342	0.000622	0.00127	0.00398	0.00936	0.014	0.0215	0.03	25
Cobalt D-Co	0.000163	0.000204	0.00003	0.00004	0.00004	0.00006	0.0001	0.00015	0.0003	0.000364	0.00104	25
Copper T-Cu	0.032	0.0372	0.0016	0.00312	0.00402	0.0062	0.0214	0.041	0.0696	0.0911	0.166	25
Copper D-Cu	0.000524	0.000543	0.00005	0.00006	0.0001	0.0002	0.0004	0.0005	0.001	0.00187	0.00218	25
Iron T-Fe	9.83	13.1	0.01	0.557	1.44	1.96	5.63	12	16.2	27.6	63.2	25
Iron D-Fe	0.0359	0.0326	0.01	0.01	0.01	0.01	0.0251	0.049	0.0776	0.0992	0.13	25
Lead T-Pb	0.00685	0.00733	0.00024	0.00051	0.000614	0.00148	0.00415	0.0092	0.0155	0.0179	0.0316	25
Lead D-Pb	0.000134	0.000148	0.00005	0.00005	0.00005	0.00005	0.00007	0.0001	0.000416	0.0005	0.0005	25
Magnesium T-Mg	8.42	5.46	2.53	2.66	3.28	6.15	6.69	8.6	13.1	20.2	25.1	25
Magnesium D-Mg	3.09	1.67	0.798	1.51	1.6	2.03	2.71	3.43	5.34	6.92	7.6	25
Manganese T-Mn	0.32	0.4	0.00908	0.0247	0.047	0.0585	0.213	0.351	0.648	0.7	1.93	25
Manganese D-Mn	0.00526	0.00706	0.0001	0.00014	0.00034	0.00092	0.0027	0.0062	0.0121	0.0226	0.0266	25
Mercury T-Hg	0.0000225	0.0000328	0.000005	0.00000534	0.00000568	0.0000067	0.00001	0.00001	0.0000526	0.0000668	0.000081	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.00569	0.00532	0.00147	0.00182	0.00245	0.00367	0.00469	0.00616	0.00686	0.00714	0.03	25
Molybdenum D-Mo	0.00469	0.00542	0.00066	0.00175	0.00178	0.00342	0.00384	0.0043	0.00552	0.00614	0.03	25
Nickel T-Ni	0.0179	0.0183	0.00118	0.00161	0.00313	0.0041	0.0104	0.0239	0.0427	0.0542	0.0702	25
Nickel D-Ni	0.000959	0.000684	0.00006	0.00018	0.00034	0.0004	0.00089	0.0012	0.00208	0.0024	0.0025	25
Selenium T-Se	0.00286	0.0016	0.00116	0.00132	0.00149	0.00198	0.00276	0.00296	0.00444	0.00494	0.00543	5
Selenium D-Se	0.00175	0.000977	0.00064	0.000766	0.000892	0.00127	0.00151	0.00212	0.00278	0.003	0.00322	5
Silicon T-Si	17.6	17	2.64	4.23	5.82	10.6	12.4	15.8	34.4	40.6	46.8	5
Silicon D-Si	1.19	0.622	0.567	0.608	0.649	0.771	1.09	1.37	1.84	2	2.16	5
Silver T-Ag	0.00046	0.000613	0.00002	0.000052	0.000084	0.00018	0.000247	0.000314	0.00105	0.00129	0.00154	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.61	0.863	0.58	0.682	0.945	1.1	1.5	1.7	2.1	2.66	5	25
Sodium D-Na	0.97	0.568	0.3	0.43	0.455	0.562	0.757	1.19	2	2	2.3	25
Strontium T-Sr	0.196	0.0991	0.0513	0.0904	0.0995	0.12	0.173	0.235	0.358	0.386	0.43	24
Strontium D-Sr	0.157	0.0784	0.039	0.0772	0.0857	0.108	0.137	0.182	0.259	0.303	0.371	24
Thallium T-Tl	0.000114	0.0000792	0.000045	0.0000468	0.0000486	0.000054	0.00007	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.000302	0.0002	0.0001	0.0001	0.0001	0.0001	0.00031	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.205	0.161	0.01	0.0406	0.0712	0.163	0.195	0.199	0.354	0.406	0.458	5
Titanium D-Ti	0.0081	0.00426	0.00048	0.00238	0.00429	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000576	0.000254	0.000293	0.000317	0.00034	0.000411	0.00058	0.000638	0.000831	0.000896	0.00096	5
Uranium D-U	0.000259	0.000159	0.000076	0.000101	0.000126	0.0002	0.000228	0.00028	0.000418	0.000464	0.00051	5
Vanadium T-V	0.0395	0.051	0.00066	0.00431	0.00796	0.0189	0.0242	0.0246	0.0872	0.108	0.129	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.051	0.0537	0.0058	0.00992	0.0109	0.014	0.0378	0.0682	0.107	0.122	0.254	25
Zinc D-Zn	0.00275	0.00275	0.0004	0.0006	0.001	0.001	0.0019	0.004	0.005	0.00628	0.013	25

Middle Bitter Creek (BC06)	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.1	0.106	8.02	8.03	8.04	8.06	8.1	8.13	8.16	8.16	8.17	2
Conductivity	245	169	125	137	149	185	245	304	340	352	364	2
Hardness CaCO3	117	89.9	53.9	60.3	66.6	85.7	117	149	168	175	181	2
Total Dissolved Solids	237	26.9	218	220	222	228	237	247	252	254	256	2
Total Suspended Solids	661	918	12.3	77.2	142	337	661	986	1180	1250	1310	2
Turbidity	1160	1640	5.13	121	237	584	1160	1740	2090	2200	2320	2
Alkalinity-Total CaCO3	61.1	23.9	44.2	45.9	47.6	52.7	61.1	69.6	74.6	76.3	78	2
Acidity (as CaCO3)	1.15	0.212	1	1.02	1.03	1.08	1.15	1.23	1.27	1.29	1.3	2
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2
Fluoride F	0.046	0.0368	0.02	0.0226	0.0252	0.033	0.046	0.059	0.0668	0.0694	0.072	2
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	2
Sulphate SO4	64.7	64.1	19.3	23.8	28.4	42	64.7	87.3	101	105	110	2
Nitrate Nitrogen N	0.0394	0.0332	0.0159	0.0183	0.0206	0.0277	0.0394	0.0512	0.0582	0.0606	0.0629	2
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.0083	0.00467	0.005	0.00533	0.00566	0.00665	0.0083	0.00995	0.0109	0.0113	0.0116	2
Ortho-Phosphate	0.0016	0.000849	0.001	0.00106	0.00112	0.0013	0.0016	0.0019	0.00208	0.00214	0.0022	2
Phosphorus (P)-Total	0.727	1.01	0.0145	0.0858	0.157	0.371	0.727	1.08	1.3	1.37	1.44	2
Total Organic Carbon	2.23	2.45	0.5	0.673	0.846	1.37	2.23	3.1	3.61	3.79	3.96	2
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	2
Aluminum T-Al	18.6	25.8	0.353	2.18	4	9.46	18.6	27.7	33.2	35	36.8	2
Aluminum D-Al	0.0471	0.0472	0.0137	0.017	0.0204	0.0304	0.0471	0.0637	0.0737	0.0771	0.0804	2
Antimony T-Sb	0.00418	0.00414	0.00125	0.00154	0.00184	0.00272	0.00418	0.00565	0.00652	0.00682	0.00711	2
Antimony D-Sb	0.00121	0.000127	0.00112	0.00113	0.00114	0.00117	0.00121	0.00126	0.00128	0.00129	0.0013	2
Arsenic T-As	0.0412	0.056	0.00159	0.00555	0.00951	0.0214	0.0412	0.061	0.0729	0.0768	0.0808	2
Arsenic D-As	0.000845	0.000163	0.00073	0.000742	0.000753	0.000788	0.000845	0.000903	0.000937	0.000949	0.00096	2
Barium T-Ba	0.293	0.345	0.049	0.0734	0.0978	0.171	0.293	0.415	0.488	0.513	0.537	2
Barium D-Ba	0.036	0.0113	0.028	0.0288	0.0296	0.032	0.036	0.04	0.0424	0.0432	0.044	2
Beryllium T-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Beryllium D-Be	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Bismuth T-Bi	0.00025	0.000283	0.00005	0.00007	0.00009	0.00015	0.00025	0.00035	0.00041	0.00043	0.00045	2
Bismuth D-Bi	0.00005	N/A	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	2
Boron T-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2
Boron D-B	0.1	N/A	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	2
Cadmium T-Cd	0.0012	0.00154	0.000118	0.000227	0.000335	0.000661	0.0012	0.00175	0.00207	0.00218	0.00229	2
Cadmium D-Cd	0.000059	0.0000594	0.000017	0.0000212	0.0000254	0.000038	0.000059	0.00008	0.0000926	0.0000968	0.000101	2
Calcium T-Ca	57.7	12.7	48.7	49.6	50.5	53.2	57.7	62.1	64.8	65.7	66.6	2
Calcium D-Ca	40	30	18.8	20.9	23	29.4	40	50.6	57	59.1	61.2	2
Chromium T-Cr	0.0295	0.0403	0.001	0.00385	0.0067	0.0153	0.0295	0.0438	0.0523	0.0552	0.058	2
Chromium D-Cr	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Cobalt T-Co	0.0158	0.0217	0.00045	0.00198	0.00352	0.00811	0.0158	0.0234	0.028	0.0296	0.0311	2
Cobalt D-Co	0.0003	N/A	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	2
Copper T-Cu	0.0889	0.122	0.0027	0.0113	0.0199	0.0458	0.0889	0.132	0.158	0.166	0.175	2
Copper D-Cu	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	2
Iron T-Fe	32.5	45.1	0.61	3.8	6.99	16.6	32.5	48.5	58	61.2	64.4	2
Iron D-Fe	0.03	N/A	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	2
Lead T-Pb	0.0172	0.0236	0.0005	0.00217	0.00384	0.00885	0.0172	0.0256	0.0306	0.0322	0.0339	2
Lead D-Pb	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Magnesium T-Mg	16.2	12.8	7.11	8.01	8.92	11.6	16.2	20.7	23.4	24.3	25.2	2
Magnesium D-Mg	4.26	3.59	1.72	1.97	2.23	2.99	4.26	5.53	6.29	6.55	6.8	2
Manganese T-Mn	1	1.38	0.024	0.122	0.22	0.513	1	1.49	1.78	1.88	1.98	2
Manganese D-Mn	0.00516	0.00528	0.00142	0.00179	0.00217	0.00329	0.00516	0.00702	0.00814	0.00852	0.00889	2
Mercury T-Hg	0.0000455	0.0000573	0.000005	0.00000905	0.0000131	0.0000253	0.0000455	0.0000658	0.0000779	0.000082	0.000086	2
Mercury D-Hg	0.000005	N/A	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	0.000005	2
Molybdenum T-Mo	0.00765	0.000212	0.0075	0.00752	0.00753	0.00758	0.00765	0.00773	0.00777	0.00779	0.0078	2
Molybdenum D-Mo	0.0059	0.00212	0.0044	0.00455	0.0047	0.00515	0.0059	0.00665	0.0071	0.00725	0.0074	2
Nickel T-Ni	0.0388	0.0491	0.0041	0.00757	0.011	0.0215	0.0388	0.0562	0.0666	0.07	0.0735	2
Nickel D-Ni	0.00225	0.00177	0.001	0.00113	0.00125	0.00163	0.00225	0.00288	0.00325	0.00338	0.0035	2
Selenium T-Se	0.0045	0.00169	0.0033	0.00342	0.00354	0.0039	0.0045	0.00509	0.00545	0.00557	0.00569	2
Selenium D-Se	0.00245	0.00156	0.00135	0.00146	0.00157	0.0019	0.00245	0.003	0.00333	0.00344	0.00355	2
Silicon T-Si	25	31.4	2.77	4.99	7.21	13.9	25	36.1	42.8	45	47.2	2
Silicon D-Si	1.42	1.04	0.683	0.756	0.83	1.05	1.42	1.78	2	2.08	2.15	2
Silver T-Ag	0.00081	0.00112	0.00002	0.000099	0.000178	0.000415	0.00081	0.00121	0.00144	0.00152	0.0016	2
Silver D-Ag	0.00002	N/A	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	0.00002	2
Sodium T-Na	2.4	0.424	2.1	2.13	2.16	2.25	2.4	2.55	2.64	2.67	2.7	2
Sodium D-Na	2	N/A	2	2	2	2	2	2	2	2	2	2
Strontium T-Sr	0.307	0.107	0.231	0.239	0.246	0.269	0.307	0.345	0.368	0.375	0.383	2
Strontium D-Sr	0.253	0.205	0.108	0.123	0.137	0.181	0.253	0.326	0.369	0.384	0.398	2
Thallium T-Tl	0.000205	0.00000707	0.0002	0.000201	0.000201	0.000203	0.000205	0.000208	0.000209	0.00021	0.00021	2
Thallium D-Tl	0.0002	N/A	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002	2
Tin T-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Tin D-Sn	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Titanium T-Ti	0.229	0.306	0.012	0.0337	0.0553	0.12	0.229	0.337	0.402	0.423	0.445	2
Titanium D-Ti	0.01	N/A	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	2
Uranium T-U	0.000875	0.000205	0.00073	0.000745	0.000759	0.000803	0.000875	0.000948	0.000991	0.00101	0.00102	2
Uranium D-U	0.00042	0.000311	0.0002	0.000222	0.000244	0.00031	0.00042	0.00053	0.000596	0.000618	0.00064	2
Vanadium T-V	0.0676	0.0939	0.00126	0.0079	0.0145	0.0344	0.0676	0.101	0.121	0.127	0.134	2
Vanadium D-V	0.0005	N/A	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	0.0005	2
Zinc T-Zn	0.134	0.176	0.0095	0.0219	0.0344	0.0716	0.134	0.196	0.233	0.246	0.258	2
Zinc D-Zn	0.00555	0.000778	0.005	0.00506	0.00511	0.00528	0.00555	0.00583	0.00599	0.00605	0.0061	2

Upper Bitter Creek (BC08)	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	8.28	0.591	7.62	7.65	7.68	7.79	8.19	8.66	9.05	9.11	9.17	8
Conductivity	134	90.4	60	62	63.9	65	89	145	269	288	307	9
Hardness CaCO3	72.6	52.9	27.7	32.1	36.4	39	53	61.8	160	165	170	9
Total Dissolved Solids	105	60.3	45	45.4	45.8	67	86	151	186	198	210	9
Total Suspended Solids	429	309	3	75.4	148	194	350	640	730	865	1000	9
Turbidity	348	249	11.6	63.4	115	149	300	560	665	674	683	9
Alkalinity-Total CaCO3	50.9	28.9	20.4	23.8	27.3	34.1	38	65.9	95.2	97.6	100	9
Acidity (as CaCO3)	3.96	6.48	0.6	0.76	0.92	1	1.1	1.3	10.6	15.3	20	9
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0272	0.0121	0.02	0.02	0.02	0.02	0.02	0.028	0.04	0.044	0.048	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	30	28.6	9.2	9.28	9.36	10.8	14.7	34.8	63.6	78.9	94.1	9
Nitrate Nitrogen N	0.00874	0.00343	0.005	0.005	0.005	0.005	0.011	0.011	0.0114	0.0116	0.0117	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.0063	0.00205	0.005	0.005	0.005	0.005	0.005	0.0068	0.00854	0.00912	0.0097	5
Ortho-Phosphate	0.00184	0.00055	0.001	0.00116	0.00132	0.0018	0.0018	0.0021	0.00234	0.00242	0.0025	5
Phosphorus (P)-Total	0.314	0.261	0.0152	0.057	0.0987	0.224	0.3	0.3	0.559	0.645	0.731	5
Total Organic Carbon	1.19	0.428	0.5	0.614	0.728	1.07	1.34	1.5	1.52	1.53	1.54	5
Dissolved Organic Carbon	0.506	0.0134	0.5	0.5	0.5	0.5	0.5	0.5	0.518	0.524	0.53	5
Aluminum T-Al	11.9	10.9	0.513	2.38	4.24	6.14	8.35	14.1	22.8	29.4	36	8
Aluminum D-Al	0.0823	0.0651	0.0157	0.0221	0.0285	0.0509	0.072	0.0864	0.135	0.182	0.23	8
Antimony T-Sb	0.00276	0.001	0.00151	0.00162	0.00173	0.00199	0.00248	0.00383	0.00393	0.00397	0.004	8
Antimony D-Sb	0.00138	0.000456	0.00071	0.000815	0.00092	0.00124	0.00138	0.00144	0.00174	0.00202	0.0023	8
Arsenic T-As	0.0108	0.00509	0.00181	0.00375	0.00569	0.0115	0.0131	0.0136	0.0137	0.0138	0.0138	5
Arsenic D-As	0.00103	0.0000387	0.00098	0.000984	0.000988	0.001	0.00104	0.00106	0.00107	0.00107	0.00107	5
Barium T-Ba	0.143	0.0784	0.055	0.0652	0.0754	0.104	0.122	0.166	0.221	0.266	0.31	8
Barium D-Ba	0.0242	0.0128	0.00828	0.0103	0.0123	0.0178	0.0227	0.0278	0.0349	0.043	0.051	8
Beryllium T-Be	0.000494	0.000462	0.00014	0.000144	0.000148	0.00016	0.00017	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.000257	0.000228	0.00005	0.00005	0.00005	0.00005	0.000186	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Boron D-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000536	0.000498	0.0000449	0.0000992	0.000153	0.000268	0.000383	0.000598	0.0011	0.00135	0.0016	8
Cadmium D-Cd	0.0000585	0.0000586	0.000007	0.0000091	0.0000112	0.000016	0.0000305	0.0001	0.000121	0.000146	0.00017	8
Calcium T-Ca	36.5	22.6	13.3	16.8	20.2	24.6	26.3	43.6	64.6	73.3	82	8
Calcium D-Ca	25.8	19.3	9.6	10.8	12	13.2	18.3	29.2	55.4	57.2	59	8
Chromium T-Cr	0.00745	0.00417	0.001	0.00192	0.00284	0.0056	0.00936	0.0102	0.0107	0.0109	0.0111	5
Chromium D-Cr	0.000474	0.00048	0.0001	0.000106	0.000112	0.00013	0.00014	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.00817	0.00704	0.00032	0.00159	0.00286	0.004	0.00609	0.0104	0.0153	0.0192	0.023	8
Cobalt D-Co	0.000181	0.000113	0.0001	0.0001	0.0001	0.0001	0.0001	0.0003	0.000315	0.000333	0.00035	8
Copper T-Cu	0.046	0.037	0.0018	0.00908	0.0164	0.0231	0.0367	0.0603	0.085	0.103	0.12	8
Copper D-Cu	0.00053	0.000339	0.0002	0.0002	0.0002	0.0002	0.000485	0.000753	0.001	0.001	0.001	8
Iron T-Fe	21.8	32.3	0.674	3.43	6.19	8.62	9.73	15.8	46.8	73.4	100	8
Iron D-Fe	0.0656	0.0373	0.025	0.0268	0.0285	0.0435	0.0555	0.0848	0.103	0.121	0.14	8
Lead T-Pb	0.00947	0.00672	0.0005	0.00183	0.00316	0.00531	0.00872	0.0119	0.0171	0.0196	0.022	8
Lead D-Pb	0.00019	0.000193	0.00005	0.00005	0.00005	0.0000823	0.0001	0.000223	0.0005	0.0005	0.0005	8
Magnesium T-Mg	11.4	9.83	4.38	4.39	4.4	5.2	5.81	14.8	25.1	27.6	30	8
Magnesium D-Mg	2.56	1.87	0.913	1.05	1.18	1.38	1.82	3.02	5.42	5.55	5.69	8
Manganese T-Mn	0.52	0.493	0.019	0.0845	0.15	0.224	0.411	0.605	0.977	1.29	1.6	8
Manganese D-Mn	0.00324	0.00353	0.00036	0.000392	0.000423	0.000653	0.00216	0.00424	0.00717	0.00889	0.0106	8
Mercury T-Hg	0.0000182	0.0000241	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.0000406	0.0000508	0.000061	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.006	0.00297	0.0022	0.0024	0.0026	0.00384	0.00564	0.00858	0.00925	0.00978	0.0103	8
Molybdenum D-Mo	0.00514	0.00255	0.00207	0.00243	0.00279	0.00395	0.00445	0.00573	0.0085	0.0092	0.0099	8
Nickel T-Ni	0.0218	0.0173	0.0022	0.00514	0.00808	0.0116	0.0145	0.031	0.0424	0.0487	0.055	8
Nickel D-Ni	0.00111	0.000804	0.0005	0.0005	0.0005	0.0005	0.00075	0.00155	0.002	0.00235	0.0027	8
Selenium T-Se	0.00167	0.000446	0.00104	0.00113	0.00123	0.00151	0.00179	0.00195	0.002	0.00202	0.00204	4
Selenium D-Se	0.00132	0.00069	0.00058	0.000651	0.000721	0.000933	0.00125	0.00164	0.00198	0.0021	0.00221	4
Silicon T-Si	9.19	3.9	2.27	3.86	5.44	10.2	10.9	11	11.4	11.5	11.6	5
Silicon D-Si	0.812	0.41	0.387	0.439	0.491	0.646	0.69	0.859	1.23	1.36	1.48	5
Silver T-Ag	0.000175	0.0000894	0.00002	0.000054	0.000088	0.00019	0.0002	0.000219	0.000236	0.000241	0.000247	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	2.03	1.23	0.94	1.04	1.14	1.33	1.85	2.03	2.94	3.92	4.9	8
Sodium D-Na	1.05	0.768	0.348	0.359	0.37	0.463	0.634	1.93	2	2	2	8
Strontium T-Sr	0.203	0.129	0.0841	0.0883	0.0924	0.125	0.153	0.24	0.385	0.412	0.44	8
Strontium D-Sr	0.155	0.119	0.0605	0.0659	0.0714	0.0792	0.106	0.175	0.325	0.353	0.382	8
Thallium T-Tl	0.000113	0.00008	0.000047	0.0000482	0.0000494	0.000053	0.000063	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.0003	0.000231	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0005	0.0005	4
Tin D-Sn	0.0003	0.000231	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0005	0.0005	4
Titanium T-Ti	0.119	0.0626	0.016	0.0356	0.0552	0.114	0.132	0.155	0.169	0.174	0.179	5
Titanium D-Ti	0.00808	0.00429	0.00041	0.00233	0.00425	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000487	0.000216	0.000237	0.000268	0.000298	0.00039	0.000453	0.000534	0.000706	0.000763	0.00082	5
Uranium D-U	0.000308	0.000259	0.000073	0.0000984	0.000124	0.0002	0.00023	0.000286	0.000564	0.000657	0.00075	5
Vanadium T-V	0.0156	0.00812	0.00185	0.00444	0.00703	0.0148	0.0194	0.0208	0.0211	0.0212	0.0213	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.0682	0.0538	0.005	0.015	0.025	0.0339	0.057	0.0863	0.121	0.151	0.18	8
Zinc D-Zn	0.00258	0.00174	0.0007	0.000805	0.00091	0.00108	0.0022	0.0038	0.005	0.005	0.005	8

ar River D/S of Bitter Creek confluer	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.82	0.326	7.37	7.38	7.39	7.68	7.82	7.98	8.11	8.26	8.4	9
Conductivity	129	48.3	75	76.8	78.6	85.4	133	152	192	203	214	10
Hardness CaCO3	67.2	22.3	37.9	39.3	40.7	52	67.5	75.7	92.2	102	111	10
Total Dissolved Solids	95.2	41.6	46	47.8	49.6	58.8	91	126	150	156	162	10
Total Suspended Solids	163	216	3	9.75	16.5	46.5	91.3	190	309	519	730	10
Turbidity	126	159	0.89	5.98	11.1	34.5	71.3	140	286	403	520	10
Alkalinity-Total CaCO3	49.9	16.3	30.2	31	31.8	33.5	51.4	63.8	70.2	71.2	72.1	10
Acidity (as CaCO3)	1.84	0.788	1	1	1	1.3	1.6	2.7	2.78	2.94	3.1	9
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0366	0.0125	0.022	0.0234	0.0248	0.029	0.036	0.041	0.0494	0.0522	0.055	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	19.5	9.25	9.2	10	10.8	12.2	20.1	23	26.6	33.5	40.5	10
Nitrate Nitrogen N	0.116	0.0758	0.0227	0.0344	0.0461	0.0811	0.109	0.142	0.193	0.21	0.227	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.0052	0.000447	0.005	0.005	0.005	0.005	0.005	0.005	0.0056	0.0058	0.006	5
Ortho-Phosphate	0.0013	0.000412	0.001	0.001	0.001	0.001	0.001	0.0017	0.00176	0.00178	0.0018	5
Phosphorus (P)-Total	0.216	0.137	0.0041	0.0331	0.0621	0.149	0.3	0.3	0.316	0.321	0.326	5
Total Organic Carbon	0.996	0.301	0.72	0.74	0.76	0.82	0.88	1.08	1.32	1.4	1.48	5
Dissolved Organic Carbon	0.59	0.201	0.5	0.5	0.5	0.5	0.5	0.5	0.77	0.86	0.95	5
Aluminum T-Al	5.61	7.95	0.0594	0.528	0.996	1.46	2.84	5.56	10.7	18.8	27	10
Aluminum D-Al	0.0671	0.0371	0.0101	0.0218	0.0336	0.0447	0.062	0.0827	0.121	0.126	0.13	10
Antimony T-Sb	0.0212	0.0628	0.0005	0.000577	0.000653	0.000708	0.000955	0.00244	0.023	0.111	0.2	10
Antimony D-Sb	0.000517	0.000154	0.00032	0.000329	0.000338	0.000403	0.000505	0.00061	0.000675	0.000743	0.00081	10
Arsenic T-As	0.00665	0.00635	0.00067	0.00154	0.00241	0.00501	0.00502	0.00506	0.0125	0.015	0.0175	5
Arsenic D-As	0.00063	0.000157	0.00048	0.00049	0.0005	0.00053	0.00054	0.00079	0.000802	0.000806	0.00081	5
Barium T-Ba	0.129	0.0742	0.058	0.0715	0.0851	0.0893	0.0972	0.141	0.206	0.258	0.31	10
Barium D-Ba	0.054	0.0191	0.028	0.032	0.036	0.0448	0.05	0.0569	0.0853	0.0867	0.088	10
Beryllium T-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.000241	0.000238	0.00005	0.00005	0.00005	0.00005	0.000103	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.0468	0.0486	0.011	0.011	0.011	0.011	0.012	0.1	0.1	0.1	0.1	5
Boron D-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000336	0.000366	0.0000219	0.0000435	0.0000652	0.000138	0.000178	0.000437	0.000741	0.00097	0.0012	10
Cadmium D-Cd	0.0000661	0.0000583	0.000017	0.0000184	0.0000197	0.0000217	0.000045	0.0000975	0.00011	0.000155	0.0002	10
Calcium T-Ca	26.3	9.12	14.4	15.6	16.7	20.2	25.4	28.3	39.7	41.3	43	10
Calcium D-Ca	22.6	7.34	13.1	13.5	13.9	17.3	23.3	26	27.9	33	38	10
Chromium T-Cr	0.00546	0.00544	0.001	0.00142	0.00184	0.00309	0.00371	0.00459	0.0108	0.0128	0.0149	5
Chromium D-Cr	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.00435	0.00646	0.0003	0.000615	0.00093	0.00154	0.00187	0.0042	0.00783	0.0149	0.022	10
Cobalt D-Co	0.000236	0.000281	0.00009	0.0000945	0.000099	0.0001	0.0001	0.000268	0.00037	0.000685	0.001	10
Copper T-Cu	0.023	0.0322	0.001	0.00361	0.00622	0.0081	0.00967	0.0223	0.0433	0.0767	0.11	10
Copper D-Cu	0.000607	0.000308	0.00024	0.000245	0.000249	0.000363	0.000575	0.00092	0.001	0.001	0.001	10
Iron T-Fe	12	22.5	0.089	0.769	1.45	3.44	4.15	7.95	20.4	47.7	75	10
Iron D-Fe	0.0449	0.0209	0.015	0.0218	0.0285	0.03	0.043	0.0508	0.0765	0.0788	0.081	10
Lead T-Pb	0.00552	0.00608	0.0005	0.000725	0.00095	0.00192	0.00349	0.00635	0.0106	0.0158	0.021	10
Lead D-Pb	0.000261	0.000312	0.00005	0.0000545	0.000059	0.000074	0.00011	0.000406	0.00055	0.000775	0.001	10
Magnesium T-Mg	6.23	5.46	2.3	2.41	2.52	3.68	4.53	6.33	9.03	15	21	10
Magnesium D-Mg	2.49	1.25	1.26	1.32	1.39	1.7	2.13	2.64	4.11	4.69	5.27	10
Manganese T-Mn	0.28	0.412	0.0106	0.0364	0.0623	0.0788	0.128	0.305	0.488	0.944	1.4	10
Manganese D-Mn	0.0085	0.00542	0.00135	0.00146	0.00158	0.00333	0.0095	0.0118	0.0145	0.0156	0.0167	10
Mercury T-Hg	0.00000866	0.0000036	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.000012	0.0000126	0.0000133	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.00274	0.00168	0.00117	0.00127	0.00138	0.0017	0.00213	0.00313	0.00513	0.00572	0.0063	10
Molybdenum D-Mo	0.00191	0.000663	0.000877	0.000977	0.00108	0.00141	0.00202	0.00233	0.00255	0.00278	0.003	10
Nickel T-Ni	0.0278	0.0522	0.001	0.0019	0.0028	0.00421	0.0071	0.0157	0.0647	0.117	0.17	10
Nickel D-Ni	0.000671	0.00029	0.0003	0.000345	0.00039	0.0005	0.000505	0.001	0.001	0.001	0.001	10
Selenium T-Se	0.00124	0.000615	0.00049	0.000614	0.000738	0.00111	0.00113	0.00128	0.00183	0.00202	0.0022	5
Selenium D-Se	0.000919	0.000339	0.0004	0.000504	0.000608	0.00092	0.000947	0.000978	0.0012	0.00128	0.00135	5
Silicon T-Si	6.5	4.47	1.81	2.43	3.06	4.93	5.11	6.84	11	12.4	13.8	5
Silicon D-Si	1.2	0.435	0.585	0.672	0.759	1.02	1.26	1.4	1.61	1.68	1.75	5
Silver T-Ag	0.000128	0.00013	0.00002	0.0000308	0.0000416	0.000074	0.000089	0.000101	0.000253	0.000303	0.000354	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.37	0.661	0.625	0.731	0.837	1	1.1	2	2.12	2.36	2.6	9
Sodium D-Na	0.913	0.632	0.371	0.389	0.406	0.448	0.668	1.16	2	2	2	10
Strontium T-Sr	0.15	0.0569	0.088	0.088	0.088	0.0942	0.151	0.195	0.23	0.23	0.23	10
Strontium D-Sr	0.133	0.0548	0.075	0.0769	0.0788	0.0935	0.123	0.147	0.21	0.226	0.243	10
Thallium T-Tl	0.000101	0.0000908	0.000029	0.0000302	0.0000314	0.000035	0.000039	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.0816	0.0646	0.01	0.0202	0.0304	0.061	0.062	0.0898	0.147	0.166	0.185	5
Titanium D-Ti	0.00807	0.00432	0.00034	0.00227	0.0042	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000228	0.0000684	0.000138	0.000153	0.000168	0.000213	0.00023	0.00023	0.00029	0.00031	0.00033	5
Uranium D-U	0.00015	0.0000621	0.000054	0.0000714	0.0000888	0.000141	0.000144	0.0002	0.000206	0.000208	0.00021	5
Vanadium T-V	0.0119	0.0129	0.0005	0.00182	0.00314	0.0071	0.0075	0.0105	0.0246	0.0293	0.034	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.0384	0.0402	0.005	0.0086	0.0122	0.0178	0.0211	0.0504	0.0698	0.105	0.14	10
Zinc D-Zn	0.00226	0.00195	0.0004	0.000535	0.00067	0.000843	0.0013	0.00428	0.005	0.005	0.005	10

ar River U/S of Bitter Creek conflue	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.69	0.272	7.28	7.36	7.44	7.57	7.64	7.83	8.02	8.06	8.1	7
Conductivity	111	36.2	51	57.7	64.4	100	117	131	150	158	166	9
Hardness CaCO3	55	15.1	33	37	41	45.3	53.7	61.1	73.1	77.8	82.5	9
Total Dissolved Solids	76.9	21.1	40	48.4	56.8	63	74	97	102	103	103	9
Total Suspended Solids	25.9	23.7	1	1.8	2.6	4	20.9	41	55	61	67	9
Turbidity	32.4	35.9	0.69	1.73	2.78	6.6	18.9	49	89.5	90.8	92	9
Alkalinity-Total CaCO3	44	13.2	24	24.3	24.6	38	46.6	50	57.9	60.4	62.9	9
Acidity (as CaCO3)	1.64	0.594	1.1	1.1	1.1	1.3	1.5	1.75	2.32	2.56	2.8	7
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.042	0.0106	0.028	0.0296	0.0312	0.036	0.042	0.049	0.0526	0.0538	0.055	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	13.8	5.25	6.7	7.38	8.06	9.29	14.5	15.9	18.4	21.2	24	9
Nitrate Nitrogen N	0.13	0.0769	0.0286	0.0449	0.0612	0.11	0.125	0.143	0.203	0.223	0.243	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.0011	0.000141	0.001	0.001	0.001	0.001	0.001	0.0012	0.00126	0.00128	0.0013	5
Phosphorus (P)-Total	0.149	0.141	0.0054	0.0143	0.0232	0.05	0.091	0.3	0.3	0.3	0.3	5
Total Organic Carbon	0.606	0.209	0.5	0.5	0.5	0.5	0.52	0.53	0.8	0.89	0.98	5
Dissolved Organic Carbon	0.588	0.197	0.5	0.5	0.5	0.5	0.5	0.5	0.764	0.852	0.94	5
Aluminum T-Al	1.68	1.85	0.005	0.0155	0.026	0.125	1.08	3.4	4.35	4.38	4.4	9
Aluminum D-Al	0.0617	0.0428	0.0078	0.0131	0.0184	0.038	0.0565	0.071	0.11	0.13	0.15	9
Antimony T-Sb	0.000547	0.00031	0.0002	0.000236	0.000272	0.00031	0.0005	0.0007	0.000872	0.00104	0.0012	9
Antimony D-Sb	0.000309	0.000183	0.0001	0.000124	0.000148	0.0002	0.00023	0.0005	0.000524	0.000572	0.00062	9
Arsenic T-As	0.00145	0.000818	0.00056	0.00063	0.0007	0.00091	0.00142	0.00169	0.00229	0.00249	0.00269	5
Arsenic D-As	0.000452	0.0000676	0.00037	0.000374	0.000378	0.00039	0.00048	0.0005	0.000512	0.000516	0.00052	5
Barium T-Ba	0.126	0.0371	0.0855	0.0893	0.0931	0.0956	0.115	0.15	0.181	0.182	0.184	9
Barium D-Ba	0.0795	0.0173	0.0557	0.0602	0.0647	0.07	0.0765	0.0826	0.103	0.107	0.111	9
Beryllium T-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.0482	0.0473	0.012	0.0122	0.0124	0.013	0.016	0.1	0.1	0.1	0.1	5
Boron D-B	0.0466	0.0488	0.01	0.0102	0.0104	0.011	0.012	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000138	0.000126	0.0000085	0.0000211	0.0000337	0.000056	0.0001	0.0002	0.000244	0.000332	0.00042	9
Cadmium D-Cd	0.0000787	0.0000764	0.000017	0.0000182	0.0000194	0.00002	0.000029	0.0001	0.0002	0.0002	0.0002	9
Calcium T-Ca	19.8	5.36	11.8	13.1	14.4	17.5	20	21.3	24.3	27.6	31	9
Calcium D-Ca	19	4.99	11.6	13	14.3	16	18.8	21.2	23.8	26.3	28.8	9
Chromium T-Cr	0.000644	0.000336	0.00028	0.000308	0.000336	0.00042	0.00052	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.00113	0.00095	0.00028	0.000288	0.000296	0.00037	0.001	0.00163	0.00248	0.00264	0.0028	9
Cobalt D-Co	0.000354	0.000374	0.0001	0.0001	0.0001	0.0001	0.00016	0.0003	0.001	0.001	0.001	9
Copper T-Cu	0.00414	0.0046	0.001	0.001	0.001	0.001	0.00149	0.007	0.0112	0.0116	0.012	9
Copper D-Cu	0.000668	0.000334	0.00022	0.000276	0.000332	0.00038	0.00065	0.001	0.001	0.001	0.001	9
Iron T-Fe	2.32	2.86	0.056	0.0924	0.129	0.171	1.02	3.99	6.78	6.94	7.1	9
Iron D-Fe	0.0539	0.0361	0.03	0.03	0.03	0.03	0.038	0.067	0.084	0.112	0.14	9
Lead T-Pb	0.00407	0.00428	0.0005	0.0007	0.0009	0.00117	0.00247	0.0055	0.00826	0.0111	0.014	9
Lead D-Pb	0.000426	0.000359	0.000085	0.000091	0.000097	0.00018	0.000273	0.0005	0.001	0.001	0.001	9
Magnesium T-Mg	2.41	0.725	1.2	1.43	1.66	1.96	2.6	2.9	3.03	3.29	3.55	9
Magnesium D-Mg	1.82	0.747	0.968	1.1	1.23	1.4	1.64	1.93	2.72	3.07	3.41	9
Manganese T-Mn	0.113	0.126	0.0115	0.0157	0.0199	0.025	0.0523	0.185	0.3	0.32	0.34	9
Manganese D-Mn	0.0123	0.00493	0.008	0.008	0.008	0.0099	0.0104	0.013	0.0185	0.0208	0.023	9
Mercury T-Hg	0.0000088	0.00000256	0.000005	0.0000055	0.000006	0.0000075	0.00001	0.00001	0.0000109	0.0000112	0.0000115	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.000974	0.000274	0.000522	0.000577	0.000632	0.000882	0.001	0.001	0.00132	0.00136	0.0014	9
Molybdenum D-Mo	0.000833	0.000194	0.000452	0.000528	0.000605	0.00074	0.00084	0.001	0.001	0.001	0.001	9
Nickel T-Ni	0.00176	0.00184	0.0005	0.0005	0.0005	0.00054	0.001	0.002	0.0037	0.0049	0.0061	9
Nickel D-Ni	0.000811	0.00031	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.00106	0.00118	0.0013	9
Selenium T-Se	0.000238	0.0000827	0.00012	0.000142	0.000164	0.00023	0.000239	0.00025	0.000312	0.000332	0.000353	5
Selenium D-Se	0.000207	0.0000815	0.0001	0.000115	0.00013	0.000174	0.0002	0.000242	0.000289	0.000304	0.00032	5
Silicon T-Si	3.15	2.65	1.29	1.36	1.44	1.73	2.33	2.86	5.7	7.05	8.41	6
Silicon D-Si	1.12	0.328	0.61	0.677	0.745	0.939	1.21	1.34	1.42	1.46	1.49	6
Silver T-Ag	0.0000464	0.0000328	0.00002	0.0000222	0.0000244	0.000031	0.000034	0.000044	0.0000794	0.0000912	0.000103	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.19	0.678	0.444	0.51	0.577	0.699	0.81	1.85	2	2	2	7
Sodium D-Na	0.992	0.623	0.366	0.416	0.465	0.57	0.674	1.1	2	2	2	9
Strontium T-Sr	0.13	0.0398	0.0758	0.0819	0.088	0.108	0.13	0.137	0.189	0.192	0.195	9
Strontium D-Sr	0.125	0.0409	0.0761	0.0821	0.088	0.099	0.119	0.138	0.186	0.191	0.196	9
Thallium T-Tl	0.0001	0.0000917	0.00002	0.000023	0.000026	0.000035	0.000045	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000087	0.000103	0.00001	0.00001	0.00001	0.00001	0.000015	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.0366	0.0447	0.01	0.0106	0.0112	0.013	0.022	0.022	0.0784	0.0972	0.116	5
Titanium D-Ti	0.00828	0.00384	0.00142	0.00314	0.00485	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000138	0.0000581	0.000084	0.0000852	0.0000864	0.00009	0.000114	0.0002	0.0002	0.0002	0.0002	5
Uranium D-U	0.00012	0.0000755	0.00004	0.0000456	0.0000512	0.000068	0.00009	0.0002	0.0002	0.0002	0.0002	5
Vanadium T-V	0.00291	0.00271	0.0005	0.0007	0.0009	0.0015	0.0025	0.00251	0.00552	0.00653	0.00753	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.0192	0.0197	0.005	0.005	0.005	0.006	0.0103	0.0254	0.045	0.053	0.061	9
Zinc D-Zn	0.00324	0.00195	0.0007	0.0009	0.0011	0.0012	0.0043	0.005	0.005	0.005	0.005	9

GoldSlide Creek	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.41	0.351	6.72	6.77	6.94	7.25	7.42	7.6	7.81	7.86	8.24	27
Conductivity	144	25.7	108	115	120	124	139	164	187	190	195	30
Hardness CaCO3	61.3	13.8	38	41	42	53	61	68	80	84.1	93	31
Total Dissolved Solids	98.4	15.9	69.6	76	80	86.5	94	110	120	124	130	31
Total Suspended Solids	3.48	9.2	1	1	1	1	1	2	3	9.4	51	31
Turbidity	0.323	0.307	0.1	0.1	0.108	0.15	0.2	0.38	0.54	0.778	1.6	29
Alkalinity-Total CaCO3	15.9	8.55	8	10.2	10.8	12	14	17	19	26.4	56	31
Acidity (as CaCO3)	4.53	6.07	1.4	1.6	1.88	2.08	3	4	4.26	15.8	29	28
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0462	0.00915	0.035	0.0362	0.0374	0.041	0.044	0.054	0.0558	0.0564	0.057	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	48.1	14.4	32	34.3	35.7	36	40.6	57.1	68.2	72.3	84.4	31
Nitrate Nitrogen N	0.00974	0.00446	0.005	0.00546	0.00592	0.0073	0.0096	0.0099	0.0141	0.0155	0.0169	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.00102	0.0000447	0.001	0.001	0.001	0.001	0.001	0.001	0.00106	0.00108	0.0011	5
Phosphorus (P)-Total	0.131	0.155	0.0023	0.0027	0.0031	0.0043	0.05	0.3	0.3	0.3	0.3	5
Total Organic Carbon	0.572	0.161	0.5	0.5	0.5	0.5	0.5	0.5	0.716	0.788	0.86	5
Dissolved Organic Carbon	0.55	0.112	0.5	0.5	0.5	0.5	0.5	0.5	0.65	0.7	0.75	5
Aluminum T-Al	0.0596	0.114	0.001	0.0068	0.0113	0.0185	0.0396	0.0588	0.0915	0.113	0.653	31
Aluminum D-Al	0.0193	0.019	0.0006	0.00266	0.0074	0.0107	0.0149	0.0219	0.033	0.0465	0.103	31
Antimony T-Sb	0.000242	0.000199	0.00005	0.00005	0.00005	0.0001	0.000135	0.000375	0.000507	0.000609	0.00075	30
Antimony D-Sb	0.000162	0.00016	0.00001	0.0000445	0.00005	0.0000725	0.0001	0.000148	0.0005	0.000522	0.00054	30
Arsenic T-As	0.000268	0.000212	0.0001	0.000104	0.000108	0.00012	0.00012	0.0005	0.0005	0.0005	0.0005	5
Arsenic D-As	0.000266	0.000214	0.0001	0.0001	0.0001	0.0001	0.00013	0.0005	0.0005	0.0005	0.0005	5
Barium T-Ba	0.026	0.00564	0.0194	0.0215	0.022	0.0227	0.025	0.027	0.0297	0.035	0.0489	31
Barium D-Ba	0.0238	0.00483	0.0172	0.018	0.0184	0.022	0.023	0.0255	0.027	0.0327	0.04	31
Beryllium T-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Boron D-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000245	0.000148	0.00007	0.0001	0.0001	0.0001	0.000215	0.0003	0.0004	0.000585	0.0006	31
Cadmium D-Cd	0.000198	0.00011	0.00007	0.000095	0.0001	0.0001	0.0002	0.000238	0.0003	0.000365	0.00058	31
Calcium T-Ca	22.2	4.12	15.7	17.1	17.8	19.2	21.5	24.8	28.2	30.1	31.6	31
Calcium D-Ca	20.5	4.73	12.8	13.6	14	18.1	20.3	22.7	27.1	29	30.4	31
Chromium T-Cr	0.000478	0.000478	0.0001	0.0001	0.0001	0.0001	0.00019	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000595	0.000563	0.00006	0.00008	0.0001	0.000375	0.0005	0.00067	0.001	0.001	0.0033	31
Cobalt D-Co	0.000429	0.00026	0.00003	0.000055	0.0001	0.000295	0.00043	0.000538	0.0007	0.001	0.001	31
Copper T-Cu	0.00793	0.0138	0.0018	0.00196	0.0022	0.00338	0.004	0.00645	0.015	0.0155	0.079	31
Copper D-Cu	0.00299	0.00221	0.00005	0.00044	0.0005	0.00161	0.0027	0.00405	0.0054	0.00615	0.011	31
Iron T-Fe	0.0745	0.13	0.01	0.01	0.01	0.0195	0.03	0.0781	0.13	0.245	0.682	31
Iron D-Fe	0.0175	0.0148	0.005	0.01	0.01	0.01	0.01	0.025	0.03	0.0434	0.07	31
Lead T-Pb	0.000633	0.000804	0.00005	0.00005	0.00005	0.00015	0.00033	0.00089	0.00105	0.00245	0.0034	31
Lead D-Pb	0.000227	0.000414	0.000025	0.00005	0.00005	0.00005	0.00007	0.000105	0.0005	0.001	0.002	31
Magnesium T-Mg	2.74	0.607	1.86	1.91	2.02	2.37	2.66	3.02	3.36	3.7	4.61	31
Magnesium D-Mg	2.46	0.546	1.45	1.6	1.8	2.15	2.5	2.73	2.99	3.15	4.07	31
Manganese T-Mn	0.00846	0.00715	0.00021	0.0016	0.00179	0.00523	0.0069	0.0106	0.0136	0.0158	0.0403	31
Manganese D-Mn	0.00599	0.0034	0.00017	0.00111	0.00145	0.00413	0.00518	0.0078	0.0116	0.0122	0.0136	31
Mercury T-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.00649	0.00446	0.00382	0.00447	0.00465	0.00516	0.0056	0.0064	0.007	0.0076	0.03	31
Molybdenum D-Mo	0.00615	0.00456	0.0033	0.00377	0.00417	0.00461	0.0052	0.00646	0.0071	0.0072	0.03	31
Nickel T-Ni	0.00483	0.0126	0.0003	0.000575	0.001	0.00125	0.0019	0.0031	0.0038	0.013	0.07	31
Nickel D-Ni	0.00126	0.000651	0.0003	0.0004	0.00047	0.00082	0.0011	0.00168	0.0023	0.0024	0.0025	31
Selenium T-Se	0.0017	0.000244	0.00155	0.00155	0.00156	0.00157	0.00161	0.00163	0.00193	0.00203	0.00213	5
Selenium D-Se	0.00176	0.000268	0.00147	0.0015	0.00153	0.00163	0.00173	0.00179	0.00203	0.00211	0.00219	5
Silicon T-Si	3.15	0.423	2.7	2.71	2.71	2.86	3.19	3.25	3.55	3.75	3.95	7
Silicon D-Si	3.06	0.408	2.66	2.67	2.68	2.71	3.05	3.27	3.52	3.64	3.76	7
Silver T-Ag	0.0000142	0.00000531	0.00001	0.00001	0.00001	0.00001	0.000011	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.63	0.411	1.1	1.15	1.24	1.32	1.53	1.75	2.02	2.35	2.9	28
Sodium D-Na	1.37	0.341	0.71	0.863	0.912	1.2	1.3	1.58	1.8	2	2	31
Strontium T-Sr	0.142	0.0508	0.087	0.0914	0.0952	0.11	0.126	0.161	0.212	0.24	0.29	29
Strontium D-Sr	0.133	0.0478	0.079	0.0831	0.0878	0.1	0.125	0.152	0.203	0.223	0.277	29
Thallium T-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.000272	0.00021	0.0001	0.0001	0.0001	0.0001	0.00016	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00028	0.000202	0.0001	0.000108	0.000116	0.00014	0.00016	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.0000874	0.000103	0.00001	0.0000106	0.0000112	0.000013	0.000014	0.0002	0.0002	0.0002	0.0002	5
Uranium D-U	0.000087	0.000103	0.00001	0.00001	0.00001	0.00001	0.000015	0.0002	0.0002	0.0002	0.0002	5
Vanadium T-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.0181	0.0109	0.0046	0.0069	0.0099	0.0119	0.0147	0.0205	0.025	0.0465	0.0486	31
Zinc D-Zn	0.0135	0.00728	0.001	0.0057	0.0066	0.0103	0.013	0.016	0.018	0.02	0.045	31

Otter Creek	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.78	0.342	7.14	7.29	7.45	7.77	7.86	7.89	8.03	8.1	8.17	6
Conductivity	251	197	75.9	84.9	94	132	203	273	457	539	621	6
Hardness CaCO3	128	111	34.9	39.3	43.6	63.2	97.1	136	245	293	341	6
Total Dissolved Solids	167	133	63	64.5	66	84.8	135	167	300	362	424	6
Total Suspended Solids	16.4	15.6	3	3.25	3.5	5.1	9.8	26	35.8	38.2	40.6	6
Turbidity	6.81	6.18	0.9	1.24	1.59	2.46	5.46	8.93	13.4	15.4	17.5	6
Alkalinity-Total CaCO3	63.7	35.7	25.5	28.5	31.5	42.3	60.2	69.1	99.4	114	128	6
Acidity (as CaCO3)	1.7	0.42	1.2	1.23	1.25	1.35	1.75	2	2.1	2.15	2.2	6
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	6
Fluoride F	0.0418	0.0416	0.02	0.02	0.02	0.02	0.0205	0.0398	0.085	0.105	0.124	6
Bromide Br	0.05	7.6E-18	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	6
Sulphate SO4	68.9	72.9	11.7	13.7	15.8	25.8	47.5	70.5	143	177	210	6
Nitrate Nitrogen N	0.0196	0.0129	0.005	0.00658	0.00815	0.0121	0.0153	0.0296	0.0355	0.0362	0.0369	6
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	6
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	6
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	6
Phosphorus (P)-Total	0.114	0.145	0.0059	0.00708	0.00825	0.0122	0.0336	0.238	0.3	0.3	0.3	6
Total Organic Carbon	0.508	0.0204	0.5	0.5	0.5	0.5	0.5	0.5	0.525	0.538	0.55	6
Dissolved Organic Carbon	0.503	0.00816	0.5	0.5	0.5	0.5	0.5	0.5	0.51	0.515	0.52	6
Aluminum T-Al	0.396	0.402	0.0313	0.045	0.0587	0.121	0.31	0.479	0.819	0.974	1.13	6
Aluminum D-Al	0.0177	0.0123	0.005	0.00555	0.0061	0.00813	0.0147	0.0276	0.0323	0.0332	0.034	6
Antimony T-Sb	0.000352	0.000163	0.00019	0.000193	0.000195	0.000205	0.00036	0.0005	0.0005	0.0005	0.0005	6
Antimony D-Sb	0.000327	0.000193	0.00011	0.000118	0.000125	0.000158	0.000355	0.0005	0.0005	0.0005	0.0005	6
Arsenic T-As	0.000457	0.000164	0.00021	0.000243	0.000275	0.00038	0.0005	0.0005	0.000595	0.000643	0.00069	6
Arsenic D-As	0.000325	0.000192	0.00014	0.000143	0.000145	0.000153	0.00033	0.0005	0.0005	0.0005	0.0005	6
Barium T-Ba	0.0807	0.0171	0.0666	0.067	0.0673	0.0686	0.0727	0.0915	0.102	0.105	0.107	6
Barium D-Ba	0.0709	0.0204	0.0408	0.0462	0.0517	0.0626	0.0679	0.0843	0.093	0.0955	0.098	6
Beryllium T-Be	0.00055	0.000493	0.0001	0.0001	0.0001	0.0001	0.00055	0.001	0.001	0.001	0.001	6
Beryllium D-Be	0.00055	0.000493	0.0001	0.0001	0.0001	0.0001	0.00055	0.001	0.001	0.001	0.001	6
Bismuth T-Bi	0.000208	0.000227	0.00005	0.00005	0.00005	0.00005	0.000074	0.0004	0.0005	0.0005	0.0005	6
Bismuth D-Bi	0.0002	0.000232	0.00005	0.00005	0.00005	0.00005	0.00005	0.000388	0.0005	0.0005	0.0005	6
Boron T-B	0.055	0.0493	0.01	0.01	0.01	0.01	0.055	0.1	0.1	0.1	0.1	6
Boron D-B	0.055	0.0493	0.01	0.01	0.01	0.01	0.055	0.1	0.1	0.1	0.1	6
Cadmium T-Cd	0.0000804	0.000036	0.00004	0.0000423	0.0000445	0.0000554	0.0000771	0.0000949	0.00012	0.000129	0.000139	6
Cadmium D-Cd	0.0000472	0.000026	0.000019	0.0000201	0.0000212	0.0000276	0.000042	0.0000695	0.0000785	0.0000788	0.000079	6
Calcium T-Ca	42.2	34.6	12.4	13.7	15.1	21.6	33.8	44.1	77.7	92.8	108	6
Calcium D-Ca	41.2	33.6	12.1	13.6	15	21.5	32.6	43.7	76.2	90.6	105	6
Chromium T-Cr	0.000763	0.000376	0.00016	0.000225	0.00029	0.000565	0.001	0.001	0.001	0.001	0.001	6
Chromium D-Cr	0.00055	0.000493	0.0001	0.0001	0.0001	0.0001	0.00055	0.001	0.001	0.001	0.001	6
Cobalt T-Co	0.000405	0.000228	0.0001	0.000138	0.000175	0.000268	0.000375	0.000595	0.000665	0.000673	0.00068	6
Cobalt D-Co	0.000242	0.000175	0.0001	0.0001	0.0001	0.0001	0.0002	0.000315	0.000425	0.000478	0.00053	6
Copper T-Cu	0.00133	0.000742	0.0005	0.000625	0.00075	0.001	0.00115	0.00144	0.00209	0.00238	0.00268	6
Copper D-Cu	0.00064	0.000403	0.0002	0.000203	0.000205	0.000265	0.000715	0.001	0.001	0.001	0.001	6
Iron T-Fe	0.508	0.42	0.101	0.146	0.192	0.293	0.401	0.544	0.933	1.12	1.3	6
Iron D-Fe	0.0227	0.00857	0.01	0.0118	0.0135	0.0175	0.0245	0.03	0.03	0.03	0.03	6
Lead T-Pb	0.000584	0.000373	0.000121	0.000192	0.000263	0.000428	0.0005	0.000695	0.00099	0.00111	0.00122	6
Lead D-Pb	0.000275	0.000246	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	6
Magnesium T-Mg	6.56	6.94	1.57	1.68	1.79	2.42	4.04	6.9	13.9	16.9	20	6
Magnesium D-Mg	6.22	6.77	1.13	1.31	1.49	2.25	3.85	6.56	13.3	16.3	19.3	6
Manganese T-Mn	0.0331	0.0192	0.00504	0.00883	0.0126	0.0221	0.0335	0.048	0.0533	0.0544	0.0556	6
Manganese D-Mn	0.0138	0.0142	0.00108	0.00167	0.00226	0.00388	0.00756	0.0244	0.0317	0.0329	0.0341	6
Mercury T-Hg	0.00000667	0.00000258	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000875	0.00001	0.00001	0.00001	6
Mercury D-Hg	0.00000667	0.00000258	0.000005	0.000005	0.000005	0.000005	0.000005	0.00000875	0.00001	0.00001	0.00001	6
Molybdenum T-Mo	0.00138	0.00113	0.000409	0.000428	0.000448	0.000568	0.00106	0.00175	0.00265	0.00303	0.0034	6
Molybdenum D-Mo	0.00125	0.00107	0.000296	0.000323	0.000349	0.000499	0.000994	0.0015	0.0024	0.0028	0.0032	6
Nickel T-Ni	0.00381	0.00442	0.00087	0.000893	0.000915	0.00105	0.00182	0.00448	0.0087	0.0105	0.0122	6
Nickel D-Ni	0.0033	0.0044	0.0005	0.0005	0.0005	0.000553	0.00126	0.0039	0.00815	0.00993	0.0117	6
Selenium T-Se	0.00231	0.00219	0.0002	0.000285	0.000371	0.000906	0.0021	0.00248	0.00446	0.0054	0.00634	6
Selenium D-Se	0.0024	0.00243	0.00021	0.000286	0.000362	0.000878	0.00212	0.0024	0.00471	0.00585	0.00698	6
Silicon T-Si	1.74	0.584	1.07	1.09	1.1	1.26	1.74	2.09	2.37	2.47	2.56	6
Silicon D-Si	1.09	0.726	0.388	0.432	0.475	0.648	0.912	1.23	1.87	2.14	2.41	6
Silver T-Ag	0.0000163	0.00000497	0.00001	0.00001	0.00001	0.000012	0.000019	0.00002	0.00002	0.00002	0.00002	6
Silver D-Ag	0.000015	0.00000548	0.00001	0.00001	0.00001	0.00001	0.000015	0.00002	0.00002	0.00002	0.00002	6
Sodium T-Na	1.35	0.885	0.382	0.412	0.442	0.575	1.4	2	2.2	2.3	2.4	6
Sodium D-Na	1.29	0.865	0.32	0.359	0.398	0.542	1.37	2	2.1	2.15	2.2	6
Strontium T-Sr	0.237	0.199	0.0672	0.0736	0.0799	0.114	0.18	0.263	0.451	0.531	0.611	6
Strontium D-Sr	0.232	0.189	0.064	0.0718	0.0796	0.114	0.176	0.271	0.44	0.51	0.579	6
Thallium T-Tl	0.000105	0.000104	0.00001	0.00001	0.00001	0.00001	0.000105	0.0002	0.0002	0.0002	0.0002	6
Thallium D-Tl	0.000105	0.000104	0.00001	0.00001	0.00001	0.00001	0.000105	0.0002	0.0002	0.0002	0.0002	6
Tin T-Sn	0.0003	0.000219	0.0001	0.0001	0.0001	0.0001	0.0003	0.0005	0.0005	0.0005	0.0005	6
Tin D-Sn	0.000313	0.000207	0.0001	0.0001	0.0001	0.00012	0.00034	0.0005	0.0005	0.0005	0.0005	6
Titanium T-Ti	0.0113	0.00366	0.00658	0.00744	0.00829	0.01	0.01	0.013	0.0155	0.0163	0.017	6
Titanium D-Ti	0.00839	0.00394	0.00035	0.00276	0.00518	0.01	0.01	0.01	0.01	0.01	0.01	6
Uranium T-U	0.000403	0.000455	0.000082	0.0000875	0.000093	0.000138	0.000241	0.000405	0.000875	0.00108	0.00129	6
Uranium D-U	0.000367	0.000411	0.000058	0.0000663	0.0000745	0.000123	0.000228	0.000389	0.0008	0.00098	0.00116	6
Vanadium T-V	0.00111	0.000717	0.0005	0.000535	0.00057	0.00071	0.00096	0.00108	0.0018	0.00215	0.0025	6
Vanadium D-V	0.000667	0.000258	0.0005	0.0005	0.0005	0.0005	0.0005	0.000875	0.001	0.001	0.001	6
Zinc T-Zn	0.01	0.00627	0.0051	0.00548	0.00585	0.0067	0.00715	0.0111	0.0171	0.0194	0.0218	6
Zinc D-Zn	0.00523	0.00417	0.0011	0.00128	0.00145	0.0022	0.0042	0.00725	0.0101	0.0111	0.0121	6

Rio Blanco Creek	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.71	0.3	6.86	7.35	7.43	7.59	7.74	7.88	8.09	8.12	8.18	19
Conductivity	360	513	110	134	171	205	254	320	346	388	2690	23
Hardness CaCO3	118	33.2	57	64.8	74.2	94	120	138	155	161	193	23
Total Dissolved Solids	173	52.2	76	85.6	111	140	168	205	234	249	281	23
Total Suspended Solids	14.1	25.9	1	1	1	2	5	10.5	29.4	67	110	23
Turbidity	9.05	19.7	0.14	0.351	0.374	0.523	1.5	4.9	16.5	53.1	80	22
Alkalinity-Total CaCO3	43.3	9.33	27	28.2	30	38.5	42	50	52.6	53.7	64.6	23
Acidity (as CaCO3)	4.11	5.55	1	1.04	1.42	2	2.9	3.35	3.92	19.3	22	23
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0716	0.02	0.046	0.0484	0.0508	0.058	0.072	0.091	0.091	0.091	0.091	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	80.3	30.7	22	29.6	45.8	55.5	81	105	114	120	137	23
Nitrate Nitrogen N	0.0124	0.00546	0.005	0.00602	0.00704	0.0101	0.0114	0.0167	0.0179	0.0183	0.0187	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.00168	0.00104	0.001	0.00102	0.00104	0.0011	0.0013	0.0015	0.0027	0.0031	0.0035	5
Phosphorus (P)-Total	0.131	0.155	0.002	0.0025	0.003	0.0045	0.05	0.3	0.3	0.3	0.3	5
Total Organic Carbon	0.558	0.104	0.5	0.5	0.5	0.5	0.5	0.55	0.664	0.702	0.74	5
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Aluminum T-Al	0.307	0.721	0.0029	0.00937	0.0134	0.0249	0.0981	0.145	0.497	1.58	3.2	23
Aluminum D-Al	0.0118	0.0128	0.0005	0.00071	0.00084	0.00335	0.0069	0.0148	0.0265	0.0368	0.05	23
Antimony T-Sb	0.000376	0.000203	0.0001	0.00015	0.00016	0.000235	0.00034	0.000465	0.00069	0.00082	0.00084	23
Antimony D-Sb	0.000256	0.000114	0.0001	0.0001	0.000106	0.000195	0.00025	0.00028	0.000428	0.000494	0.0005	23
Arsenic T-As	0.000992	0.000364	0.00065	0.00066	0.00067	0.0007	0.00099	0.00106	0.00136	0.00146	0.00156	5
Arsenic D-As	0.000612	0.0000829	0.00051	0.000526	0.000542	0.00059	0.0006	0.00062	0.000692	0.000716	0.00074	5
Barium T-Ba	0.0445	0.0184	0.0222	0.0283	0.0306	0.0356	0.0405	0.0435	0.0586	0.0898	0.101	23
Barium D-Ba	0.0365	0.00763	0.0216	0.0241	0.0302	0.032	0.0356	0.0398	0.0472	0.0489	0.0545	23
Beryllium T-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.0468	0.0486	0.01	0.0104	0.0108	0.012	0.012	0.1	0.1	0.1	0.1	5
Boron D-B	0.046	0.0493	0.01	0.01	0.01	0.01	0.01	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.00029	0.000311	0.00009	0.0001	0.0001	0.0001	0.0002	0.00026	0.000566	0.00114	0.0012	23
Cadmium D-Cd	0.000152	0.000082	0.00007	0.000091	0.0001	0.0001	0.0001	0.000184	0.000261	0.000297	0.0004	23
Calcium T-Ca	42.5	11.5	17.6	26.3	29.2	36.5	41.8	47.1	54	60.3	68.9	23
Calcium D-Ca	40	11.2	19.5	22.3	25.7	31.7	40	46.6	52.9	55	64.8	23
Chromium T-Cr	0.00054	0.000426	0.00013	0.00015	0.00017	0.00023	0.00034	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000552	0.000614	0.00009	0.000102	0.000124	0.000215	0.0003	0.00053	0.00124	0.00166	0.0027	23
Cobalt D-Co	0.000188	0.000139	0.00003	0.0000365	0.000052	0.000085	0.00015	0.00027	0.000388	0.000491	0.0005	23
Copper T-Cu	0.00882	0.0143	0.0007	0.00103	0.00132	0.0015	0.0046	0.00778	0.0193	0.0291	0.066	23
Copper D-Cu	0.000724	0.000557	0.00005	0.00011	0.0002	0.00036	0.00056	0.00095	0.00154	0.00167	0.00217	23
Iron T-Fe	0.593	1.21	0.02	0.0307	0.0372	0.05	0.197	0.375	1.3	2.95	5.2	23
Iron D-Fe	0.0209	0.0239	0.01	0.01	0.01	0.01	0.01	0.022	0.03	0.048	0.12	23
Lead T-Pb	0.000998	0.00169	0.00005	0.00007	0.000076	0.00019	0.00049	0.000675	0.00282	0.00377	0.0074	23
Lead D-Pb	0.00012	0.000129	0.00005	0.00005	0.00005	0.00005	0.00007	0.0001	0.000224	0.000473	0.0005	23
Magnesium T-Mg	4.97	1.45	2.44	3.09	3.52	4.06	4.8	5.55	6.59	7.58	8.7	23
Magnesium D-Mg	4.34	1.34	2.08	2.31	2.49	3.37	4.34	5.25	5.58	6.15	7.48	23
Manganese T-Mn	0.0195	0.0321	0.002	0.00275	0.0033	0.00547	0.00889	0.0176	0.0397	0.0642	0.15	23
Manganese D-Mn	0.00518	0.00516	0.0004	0.000601	0.00074	0.00115	0.005	0.00644	0.00896	0.0164	0.021	23
Mercury T-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.00333	0.00584	0.00099	0.00125	0.00145	0.00188	0.00212	0.00239	0.00306	0.0031	0.03	23
Molybdenum D-Mo	0.00182	0.000493	0.00078	0.00113	0.00132	0.00151	0.00176	0.0021	0.00225	0.00267	0.003	22
Nickel T-Ni	0.00973	0.0265	0.00016	0.00182	0.00201	0.0021	0.0026	0.00465	0.0109	0.0174	0.13	23
Nickel D-Ni	0.00201	0.00192	0.00012	0.00023	0.0005	0.00096	0.0018	0.0022	0.00306	0.00342	0.0097	23
Selenium T-Se	0.00315	0.00114	0.00144	0.00167	0.0019	0.00259	0.00355	0.00399	0.0041	0.00414	0.00418	5
Selenium D-Se	0.0033	0.00124	0.00148	0.00171	0.00193	0.00261	0.00373	0.0042	0.00436	0.00441	0.00446	5
Silicon T-Si	3.19	0.674	2.35	2.41	2.47	2.64	3.32	3.81	3.82	3.83	3.83	5
Silicon D-Si	2.97	0.813	1.84	1.96	2.07	2.42	3.25	3.56	3.69	3.73	3.77	5
Silver T-Ag	0.0000142	0.00000531	0.00001	0.00001	0.00001	0.00001	0.000011	0.00002	0.00002	0.00002	0.00002	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.81	0.605	0.95	1.04	1.14	1.42	1.7	2	2.47	2.95	3.5	23
Sodium D-Na	1.55	0.598	0.58	0.733	0.78	1.11	1.51	1.94	2.3	2.39	2.91	23
Strontium T-Sr	0.186	0.0666	0.0734	0.0843	0.0921	0.142	0.182	0.238	0.259	0.263	0.316	22
Strontium D-Sr	0.175	0.0671	0.0489	0.0793	0.0866	0.134	0.175	0.219	0.248	0.263	0.331	22
Thallium T-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.00848	0.0034	0.0024	0.00392	0.00544	0.01	0.01	0.01	0.01	0.01	0.01	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000319	0.000138	0.000154	0.000168	0.000182	0.000225	0.00033	0.000375	0.000456	0.000483	0.00051	5
Uranium D-U	0.000289	0.000131	0.000126	0.000144	0.000161	0.000214	0.00029	0.000346	0.00042	0.000445	0.00047	5
Vanadium T-V	0.000714	0.000263	0.0005	0.0005	0.0005	0.0005	0.00057	0.001	0.001	0.001	0.001	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.0186	0.0175	0.0011	0.00507	0.00576	0.008	0.0119	0.019	0.048	0.0535	0.067	23
Zinc D-Zn	0.00638	0.00945	0.0005	0.00073	0.001	0.00228	0.005	0.0065	0.00856	0.00879	0.048	23

Roosevelt Creek	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	7.73	0.235	7.08	7.35	7.5	7.7	7.74	7.85	7.96	8.03	8.1	16
Conductivity	146	47	72	72.9	80.8	115	145	184	200	204	222	19
Hardness CaCO3	72.9	22.4	31	40.9	42.8	60.7	73.5	82.5	101	114	120	20
Total Dissolved Solids	87.7	26.9	49	50.9	52.8	62.8	90	114	118	121	142	20
Total Suspended Solids	9.39	13.3	1	1	1	1.75	6	10	16.5	23.2	61	20
Turbidity	8.3	12.5	0.16	0.547	0.678	2.09	4.4	10	15.7	26.1	54	19
Alkalinity-Total CaCO3	58	17.4	32	33	33.9	43	59.2	73	77.9	85.7	87	20
Acidity (as CaCO3)	2.76	4.81	1	1	1	1	1.7	2.28	2.82	4	23	20
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	5
Fluoride F	0.0202	0.000447	0.02	0.02	0.02	0.02	0.02	0.02	0.0206	0.0208	0.021	5
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5
Sulphate SO4	18.1	6.95	7.2	9.29	9.81	13	17.9	21.9	28	28.1	30.4	20
Nitrate Nitrogen N	0.213	0.138	0.0183	0.0484	0.0786	0.169	0.198	0.295	0.348	0.365	0.383	5
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	5
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	5
Ortho-Phosphate	0.0011	0.000141	0.001	0.001	0.001	0.001	0.001	0.0012	0.00126	0.00128	0.0013	5
Phosphorus (P)-Total	0.133	0.153	0.0044	0.00608	0.00776	0.0128	0.05	0.3	0.3	0.3	0.3	5
Total Organic Carbon	0.516	0.0358	0.5	0.5	0.5	0.5	0.5	0.5	0.548	0.564	0.58	5
Dissolved Organic Carbon	0.538	0.061	0.5	0.5	0.5	0.5	0.5	0.55	0.604	0.622	0.64	5
Aluminum T-Al	0.395	0.731	0.0068	0.011	0.0118	0.0625	0.144	0.367	0.77	0.952	3.3	20
Aluminum D-Al	0.0167	0.0215	0.0005	0.0005	0.0005	0.0013	0.0061	0.0248	0.0497	0.0569	0.073	20
Antimony T-Sb	0.000301	0.000179	0.0001	0.000148	0.000177	0.000198	0.00025	0.000283	0.000513	0.00064	0.00083	20
Antimony D-Sb	0.000213	0.000138	0.00005	0.000088	0.000099	0.000123	0.00018	0.000243	0.0005	0.0005	0.0005	20
Arsenic T-As	0.000462	0.000189	0.00027	0.000276	0.000282	0.0003	0.0005	0.0005	0.000644	0.000692	0.00074	5
Arsenic D-As	0.000302	0.000183	0.00013	0.00014	0.00015	0.00018	0.0002	0.0005	0.0005	0.0005	0.0005	5
Barium T-Ba	0.0859	0.0169	0.0577	0.0649	0.0715	0.078	0.0851	0.0914	0.0976	0.104	0.14	19
Barium D-Ba	0.0775	0.0134	0.0524	0.0592	0.0602	0.068	0.0747	0.088	0.0939	0.0954	0.0989	19
Beryllium T-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Beryllium D-Be	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Bismuth T-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Bismuth D-Bi	0.00023	0.000246	0.00005	0.00005	0.00005	0.00005	0.00005	0.0005	0.0005	0.0005	0.0005	5
Boron T-B	0.05	0.0457	0.014	0.0148	0.0156	0.018	0.018	0.1	0.1	0.1	0.1	5
Boron D-B	0.0478	0.0477	0.01	0.0108	0.0116	0.014	0.015	0.1	0.1	0.1	0.1	5
Cadmium T-Cd	0.000111	0.0000833	0.0000053	0.0000136	0.0000204	0.0000453	0.0001	0.000125	0.000231	0.000243	0.0003	20
Cadmium D-Cd	0.0000774	0.0000456	0.000011	0.0000167	0.000017	0.0000375	0.0001	0.0001	0.0001	0.000105	0.0002	20
Calcium T-Ca	24.3	6.75	12.5	16.6	18.4	20.5	23.9	26.1	32.3	36.7	42	19
Calcium D-Ca	23.4	6.34	12.9	13	17.4	19.1	23.1	25.8	31.3	35.3	38	19
Chromium T-Cr	0.00059	0.00041	0.00016	0.000168	0.000176	0.0002	0.00059	0.001	0.001	0.001	0.001	5
Chromium D-Cr	0.00046	0.000493	0.0001	0.0001	0.0001	0.0001	0.0001	0.001	0.001	0.001	0.001	5
Cobalt T-Co	0.000457	0.000461	0.00008	0.00008	0.000098	0.000155	0.0003	0.00062	0.000982	0.00105	0.002	20
Cobalt D-Co	0.000116	0.0000774	0.00003	0.0000585	0.00006	0.00006	0.0001	0.000153	0.00021	0.0003	0.0003	20
Copper T-Cu	0.00282	0.00384	0.0001	0.0001	0.00046	0.000683	0.001	0.00255	0.00872	0.01	0.014	20
Copper D-Cu	0.000417	0.0004	0.00005	0.00005	0.000095	0.000175	0.00024	0.000518	0.001	0.00103	0.0016	20
Iron T-Fe	0.537	0.922	0.02	0.02	0.029	0.109	0.193	0.56	1.21	1.44	4.1	20
Iron D-Fe	0.0292	0.0252	0.01	0.01	0.01	0.01	0.022	0.0348	0.0546	0.0625	0.11	20
Lead T-Pb	0.000836	0.00121	0.00005	0.00005	0.000095	0.000235	0.000397	0.000783	0.00162	0.00402	0.0044	20
Lead D-Pb	0.000106	0.000137	0.000025	0.0000393	0.000049	0.00005	0.000055	0.0000775	0.000158	0.0005	0.0005	20
Magnesium T-Mg	4.46	1.65	1.78	2.32	3.39	3.73	4.22	4.84	5.66	6.64	9.9	20
Magnesium D-Mg	4.07	1.23	1.73	2.21	2.47	3.48	3.88	4.74	5.63	6.31	6.5	20
Manganese T-Mn	0.0255	0.0502	0.0015	0.00188	0.00199	0.00353	0.0104	0.0241	0.0476	0.0571	0.23	20
Manganese D-Mn	0.0016	0.00145	0.00005	0.000193	0.000218	0.000475	0.00115	0.0024	0.00351	0.00462	0.005	20
Mercury T-Hg	0.0000224	0.0000334	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.0000532	0.0000676	0.000082	5
Mercury D-Hg	0.000007	0.00000274	0.000005	0.000005	0.000005	0.000005	0.000005	0.00001	0.00001	0.00001	0.00001	5
Molybdenum T-Mo	0.00228	0.00653	0.00022	0.000353	0.000382	0.000682	0.000785	0.00101	0.00143	0.00312	0.03	20
Molybdenum D-Mo	0.00215	0.00656	0.00016	0.000198	0.000272	0.00053	0.00064	0.001	0.00119	0.00312	0.03	20
Nickel T-Ni	0.00543	0.0176	0.00012	0.000149	0.00015	0.0005	0.001	0.00223	0.00376	0.0107	0.08	20
Nickel D-Ni	0.000598	0.000554	0.00006	0.000098	0.000145	0.00015	0.00045	0.001	0.00117	0.00181	0.002	20
Selenium T-Se	0.000499	0.000268	0.00016	0.000204	0.000247	0.000378	0.000505	0.00056	0.000759	0.000826	0.000892	5
Selenium D-Se	0.000545	0.000324	0.00017	0.000214	0.000258	0.000389	0.000495	0.00063	0.000876	0.000958	0.00104	5
Silicon T-Si	1.76	0.135	1.59	1.61	1.64	1.71	1.74	1.83	1.9	1.93	1.95	5
Silicon D-Si	1.32	0.51	0.582	0.7	0.817	1.17	1.34	1.51	1.79	1.89	1.98	5
Silver T-Ag	0.0000162	0.00000567	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.0000206	0.0000208	0.000021	5
Silver D-Ag	0.000014	0.00000548	0.00001	0.00001	0.00001	0.00001	0.00001	0.00002	0.00002	0.00002	0.00002	5
Sodium T-Na	1.04	0.594	0.34	0.385	0.552	0.703	0.809	1.23	2	2.02	2.3	20
Sodium D-Na	0.869	0.557	0.27	0.318	0.347	0.54	0.74	0.935	2	2	2	20
Strontium T-Sr	0.142	0.0495	0.0487	0.0724	0.0822	0.11	0.13	0.18	0.211	0.217	0.217	19
Strontium D-Sr	0.139	0.0475	0.0425	0.0709	0.0825	0.112	0.14	0.17	0.191	0.201	0.236	19
Thallium T-Tl	0.0000868	0.000103	0.00001	0.00001	0.00001	0.00001	0.000014	0.0002	0.0002	0.0002	0.0002	5
Thallium D-Tl	0.000086	0.000104	0.00001	0.00001	0.00001	0.00001	0.00001	0.0002	0.0002	0.0002	0.0002	5
Tin T-Sn	0.00026	0.000219	0.0001	0.0001	0.0001	0.0001	0.0001	0.0005	0.0005	0.0005	0.0005	5
Tin D-Sn	0.000276	0.000207	0.0001	0.0001	0.0001	0.0001	0.00018	0.0005	0.0005	0.0005	0.0005	5
Titanium T-Ti	0.00836	0.00366	0.00181	0.00345	0.00509	0.01	0.01	0.01	0.01	0.01	0.01	5
Titanium D-Ti	0.00806	0.00434	0.0003	0.00224	0.00418	0.01	0.01	0.01	0.01	0.01	0.01	5
Uranium T-U	0.000115	0.0000782	0.000048	0.0000508	0.0000536	0.000062	0.000063	0.0002	0.0002	0.0002	0.0002	5
Uranium D-U	0.00011	0.0000825	0.000034	0.0000384	0.0000428	0.000056	0.000062	0.0002	0.0002	0.0002	0.0002	5
Vanadium T-V	0.000986	0.000613	0.0005	0.0005	0.0005	0.0005	0.00093	0.001	0.0016	0.0018	0.002	5
Vanadium D-V	0.0007	0.000274	0.0005	0.0005	0.0005	0.0005	0.0005	0.001	0.001	0.001	0.001	5
Zinc T-Zn	0.00616	0.00609	0.001	0.001	0.001	0.00283	0.005	0.0061	0.0151	0.0165	0.025	20
Zinc D-Zn	0.00213	0.00151	0.0004	0.000562	0.000687	0.001	0.002	0.0027	0.005	0.005	0.005	20

GSC09	Fall Shoulder Season											
	Mean	Std. Dev.	Minimum	5th Perc	5th Perc	25th Perc	Median	75th Perc	90th Perc	95th Perc	Maximum	Count
Field pH	6.58	0.865	5.47	5.61	5.75	6.18	6.66	7.06	7.33	7.43	7.52	4
Conductivity	162	16.4	148	149	150	152	158	168	178	182	185	4
Hardness CaCO3	65.5	7.83	59.5	59.9	60.3	61.4	62.8	67	73	75	77	4
Total Dissolved Solids	119	2.99	115	116	117	119	120	121	121	122	122	4
Total Suspended Solids	3	N/A	3	3	3	3	3	3	3	3	3	4
Turbidity	0.105	0.01	0.1	0.1	0.1	0.1	0.1	0.105	0.114	0.117	0.12	4
Alkalinity-Total CaCO3	1.58	0.506	1	1.05	1.09	1.23	1.65	2	2	2	2	4
Acidity (as CaCO3)	2.7	0.909	1.9	1.93	1.96	2.05	2.5	3.15	3.6	3.75	3.9	4
Chloride Cl	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Fluoride F	0.0225	0.00265	0.02	0.0202	0.0203	0.0208	0.022	0.0238	0.0251	0.0256	0.026	4
Bromide Br	0.05	N/A	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	4
Sulphate SO4	70.7	7.67	63.8	64.3	64.7	66.1	68.9	73.5	78.2	79.8	81.4	4
Nitrate Nitrogen N	0.0256	0.00478	0.0216	0.0218	0.0221	0.0227	0.0242	0.0271	0.0303	0.0313	0.0324	4
Nitrite Nitrogen N	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Total Nitrogen	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ammonia Nitrogen N	0.005	N/A	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	4
Ortho-Phosphate	0.001	N/A	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	4
Phosphorus (P)-Total	0.163	0.159	0.002	0.0092	0.0164	0.038	0.175	0.3	0.3	0.3	0.3	4
Total Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Dissolved Organic Carbon	0.5	N/A	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	4
Aluminum T-Al	0.108	0.012	0.0968	0.0979	0.099	0.102	0.106	0.112	0.12	0.122	0.125	4
Aluminum D-Al	0.0953	0.0164	0.0752	0.0779	0.0805	0.0886	0.0956	0.102	0.11	0.112	0.115	4
Antimony T-Sb	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Antimony D-Sb	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Arsenic T-As	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Arsenic D-As	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Barium T-Ba	0.0164	0.00241	0.015	0.015	0.0151	0.0152	0.0153	0.0166	0.0186	0.0193	0.02	4
Barium D-Ba	0.0163	0.00249	0.0146	0.0147	0.0148	0.0151	0.0153	0.0166	0.0186	0.0193	0.02	4
Beryllium T-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Beryllium D-Be	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Bismuth T-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Bismuth D-Bi	0.000275	0.00026	0.00005	0.00005	0.00005	0.00005	0.000275	0.0005	0.0005	0.0005	0.0005	4
Boron T-B	0.0383	0.0412	0.016	0.0163	0.0166	0.0175	0.0185	0.0393	0.0757	0.0879	0.1	4
Boron D-B	0.035	0.0434	0.012	0.0122	0.0123	0.0128	0.014	0.0363	0.0745	0.0873	0.1	4
Cadmium T-Cd	0.000896	0.0000481	0.000844	0.000849	0.000855	0.000871	0.00089	0.000915	0.000941	0.00095	0.000959	4
Cadmium D-Cd	0.00093	0.0000822	0.000869	0.000872	0.000874	0.000882	0.000901	0.000949	0.00101	0.00103	0.00105	4
Calcium T-Ca	21.8	2.12	19.8	20	20.2	20.8	21.4	22.4	23.8	24.3	24.8	4
Calcium D-Ca	21.4	2.62	19.5	19.6	19.7	20.1	20.5	21.8	23.9	24.6	25.3	4
Chromium T-Cr	0.000328	0.000448	0.0001	0.0001	0.0001	0.0001	0.000105	0.000333	0.000733	0.000867	0.001	4
Chromium D-Cr	0.000325	0.00045	0.0001	0.0001	0.0001	0.0001	0.0001	0.000325	0.00073	0.000865	0.001	4
Cobalt T-Co	0.000495	0.0000332	0.00046	0.000465	0.000469	0.000483	0.00049	0.000503	0.000525	0.000533	0.00054	4
Cobalt D-Co	0.00046	0.0000535	0.00039	0.000401	0.000411	0.000443	0.000465	0.000483	0.000505	0.000513	0.00052	4
Copper T-Cu	0.0107	0.000664	0.00977	0.00992	0.0101	0.0105	0.0109	0.0111	0.0112	0.0113	0.0113	4
Copper D-Cu	0.00981	0.000824	0.00914	0.00915	0.00916	0.00919	0.00959	0.0102	0.0106	0.0108	0.0109	4
Iron T-Fe	0.015	0.01	0.01	0.01	0.01	0.01	0.01	0.015	0.024	0.027	0.03	4
Iron D-Fe	0.015	0.01	0.01	0.01	0.01	0.01	0.01	0.015	0.024	0.027	0.03	4
Lead T-Pb	0.000163	0.000225	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.000365	0.000433	0.0005	4
Lead D-Pb	0.000163	0.000225	0.00005	0.00005	0.00005	0.00005	0.00005	0.000163	0.000365	0.000433	0.0005	4
Magnesium T-Mg	3.02	0.316	2.71	2.73	2.76	2.82	2.96	3.16	3.33	3.38	3.44	4
Magnesium D-Mg	2.92	0.299	2.64	2.66	2.67	2.72	2.86	3.05	3.21	3.27	3.32	4
Manganese T-Mn	0.0243	0.000704	0.0237	0.0237	0.0238	0.0239	0.0241	0.0244	0.0249	0.0251	0.0253	4
Manganese D-Mn	0.0227	0.00158	0.0204	0.0208	0.0212	0.0223	0.0231	0.0234	0.0238	0.024	0.0241	4
Mercury T-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Mercury D-Hg	0.0000075	0.00000289	0.000005	0.000005	0.000005	0.000005	0.0000075	0.00001	0.00001	0.00001	0.00001	4
Molybdenum T-Mo	0.000327	0.000449	0.000074	0.0000782	0.0000824	0.000095	0.000117	0.000348	0.000739	0.00087	0.001	4
Molybdenum D-Mo	0.000309	0.000461	0.000054	0.0000587	0.0000633	0.0000773	0.00009	0.000321	0.000729	0.000864	0.001	4
Nickel T-Ni	0.00247	0.0000499	0.00242	0.00242	0.00242	0.00243	0.00247	0.00251	0.00251	0.00252	0.00252	4
Nickel D-Ni	0.00229	0.000193	0.002	0.00205	0.00211	0.00226	0.00237	0.0024	0.0024	0.00241	0.00241	4
Selenium T-Se	0.000799	0.0000913	0.00069	0.000701	0.000711	0.000743	0.000805	0.000861	0.000881	0.000887	0.000894	4
Selenium D-Se	0.000813	0.000109	0.000676	0.000692	0.000707	0.000754	0.000825	0.000884	0.000909	0.000917	0.000925	4
Silicon T-Si	3.22	0.108	3.1	3.11	3.13	3.17	3.21	3.26	3.32	3.34	3.36	4
Silicon D-Si	3.11	0.12	3.03	3.03	3.04	3.05	3.07	3.13	3.22	3.26	3.29	4
Silver T-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Silver D-Ag	0.0000125	0.000005	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000125	0.000017	0.0000185	0.00002	4
Sodium T-Na	1.58	0.323	1.28	1.3	1.31	1.36	1.52	1.75	1.9	1.95	2	4
Sodium D-Na	1.54	0.325	1.27	1.28	1.3	1.34	1.44	1.63	1.85	1.93	2	4
Strontium T-Sr	0.216	0.0155	0.2	0.202	0.203	0.208	0.213	0.22	0.23	0.234	0.237	4
Strontium D-Sr	0.213	0.0178	0.195	0.197	0.198	0.203	0.21	0.22	0.23	0.234	0.237	4
Thallium T-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Thallium D-Tl	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Tin T-Sn	0.0002	0.0002	0.0001	0.0001	0.0001	0.0001	0.0001	0.0002	0.00038	0.00044	0.0005	4
Tin D-Sn	0.000293	0.000223	0.0001	0.0001	0.0001	0.0001	0.000285	0.000478	0.000491	0.000496	0.0005	4
Titanium T-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Titanium D-Ti	0.00758	0.00485	0.0003	0.00176	0.00321	0.00758	0.01	0.01	0.01	0.01	0.01	4
Uranium T-U	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Uranium D-U	0.0000575	0.000095	0.00001	0.00001	0.00001	0.00001	0.00001	0.0000575	0.000143	0.000172	0.0002	4
Vanadium T-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Vanadium D-V	0.00075	0.000289	0.0005	0.0005	0.0005	0.0005	0.00075	0.001	0.001	0.001	0.001	4
Zinc T-Zn	0.0576	0.00416	0.0526	0.0531	0.0536	0.0552	0.0577	0.0601	0.0614	0.0618	0.0622	4
Zinc D-Zn	0.0607	0.00512	0.0534	0.0545	0.0556	0.0589	0.0625	0.0642	0.0643	0.0643	0.0643	4

Appendix H – Water Quality Guidelines

Table H-1: CCME Surface Water Quality Guidelines

Analyte	Unit	CCME Water Quality Guideline[1]		
		Long Term		***Short Term***
pH	s.u.	6.5 – 9		6.5 – 9
Chloride	mg/L	120		640
Fluoride	mg/L	0.12		
Nitrate Nitrogen	mg/L	3		124
Nitrite Nitrogen	mg/L	0.06		
Ammonia Nitrogen	mg/L	Temperature and pH dependent; assumed 2-5°C		
Aluminum, total	mg/L	pH < 6.5	0.005	
		pH ≥ 6.5	0.1	
Arsenic, total	mg/L	0.005		
Boron, total	mg/L	1.5		29
Cadmium, total	µg/L	10^[0.83log(hardness)-2.46]		10^[1.016log(hardness)-1.71]
Copper, total	mg/L	Hardness < 82 mg/L	0.002	
		82 mg/L ≤ Hardness ≤ 180 mg/L	(0.2*e^[0.8545ln(hardness)-1.465])/1000	
		Hardness > 180 mg/L	0.004	
Iron, total	mg/L	0.3		
Lead, total	mg/L	(e^[1.273ln(hardness)-4.705])/1000		
Mercury, total	µg/L	0.026		
Molybdenum	µg/L	73		
Nickel, total	mg/L	Hardness < 60 mg/L	0.025	
		60 mg/L ≤ Hardness ≤ 180 mg/L	(e^[0.76ln(hardness)+1.06])/1000	
		Hardness > 180 mg/L	0.15	
Selenium, total	mg/L	0.001		
Silver, total	mg/L	0.00025		
Thallium, total	mg/L	0.0008		
Uranium, total	mg/L	0.015		0.033
Zinc, dissolved	mg/L	0.03		

Source: Compiled in text

Notes:

(1) Water quality guidelines that are dependent on pH or hardness were determined independently for each water quality monitoring station. The most conservative guideline was used for every sample collected

Table H-2: BC MOE Surface Water Quality Guidelines

Analyte	Unit	BC Water Quality Guideline[1]			
		Long Term		*Short Term*	
pH	s.u.	6.5 – 9		6.5 – 9	
Alkalinity[3]	mg/L	Ca-D < 4 mg/L	10		
		Ca-D 4-8 mg/L	10-20		
		Ca-D > 8 mg/L	> 20		
Chloride	mg/L	150		600	
Fluoride	mg/L			Hardness ≤ 10 mg/L	0.4
				Hardness > 10 mg/L	[-51.73+92.57 log10(hardness)]*0.01
Sulphate	mg/L	0 mg/L < Hardness ≤ 30 mg/L	128		
		30 mg/L < Hardness ≤ 75 mg/L	218		
		75 mg/L < Hardness ≤ 180 mg/L	309		
		180 mg/L < Hardness ≤ 250 mg/L	429		
Nitrate Nitrogen	mg/L as N	3		32.8	
Nitrite Nitrogen	mg/L as N	0.02		0.06	
Ammonia Nitrogen	mg/L as N	Temperature and pH dependent; assumed 15°C			
Aluminum, dissolved	mg/L	pH < 6.5	e^[1.6-3.327(median pH)+0.402(median pH)^2]	pH < 6.5	e^[1.209-2.426(pH)+ 0.286(pH)^2]
		pH ≥ 6.5	0.05	pH ≥ 6.5	0.1
Antimony, total[3]	mg/L	9			
Arsenic, total	mg/L	0.005			
Barium, total[3]	mg/L	1			
Beryllium, total[3]	mg/L	0.00013			
Boron, total	mg/L	1.2			
Cadmium, dissolved	mg/L	e^[0.736*ln(hardness)-4.943]/1000		e^[1.03*ln(hardness)-5.274]/1000	
Cobalt, total	mg/L	0.004		0.11	
Copper, total	mg/L	Hardness ≤ 50 mg/L	0.002	(0.094*hardness+2)/1000	
		Hardness > 50 mg/L	0.04*hardness		
Iron, total	mg/L	1			
Iron, dissolved	mg/L	0.35			
Lead, total	mg/L	Hardness ≤ 8 mg/L		Hardness ≤ 8 mg/L	0.003
		Hardness > 8 mg/L	(3.31+e^[1.273ln(hardness)-4.704)/1000	Hardness > 8 mg/L	(e^[1.273ln(hardness)-1.46])/1000
Manganese, total	mg/L	0.0044*hardness+0.605		0.01102*hardness+0.54	
Mercury, total[2]	mg/L	0.0001/(MeHg/total Hg)			
Molybdenum, total	mg/L	1		2	
Nickel, total[3]	mg/L	Hardness ≤ 60 mg/L	0.025		
		60 mg/L < Hardness ≤ 180 mg/L	0.11		
		Hardness > 180	0.15		
Selenium, total	mg/L	0.002			

Analyte	Unit	BC Water Quality Guideline[1]			
		Long Term		***Short Term***	
Silver, total	mg/L	Hardness ≤ 100 mg/L	0.00005	Hardness ≤ 100 mg/L	0.0001
		Hardness > 100 mg/L	0.0015	Hardness > 100 mg/L	0.003
Thallium, total [3]	mg/L	0.0008			
Uranium, total[3]	mg/L	0.0085			
Zinc, total	mg/L	Hardness ≤ 90 mg/L	0.0075	Hardness ≤ 90 mg/L	0.033
		Hardness > 90 mg/L	(7.5+0.75(hardness-90))/1000	Hardness > 90 mg/L	(33+0.75(hardness-90))/1000

Source: Compiled in text

Notes:

(1) Water quality guidelines that are dependent on pH or hardness were determined independently for each water quality monitoring station. The most conservative guideline was used for every sample collected.

(2) The BC water quality guideline is based on the proportion of methyl mercury to total mercury.

(3) The BC water quality guideline is a working guideline and has not yet been approved.

Table H-3: Groundwater Quality Guidelines

Analyte	Unit	BC CSR Guidelines	
Chloride	mg/L	1500	
Fluoride	mg/L	Hardness < 50 mg/L	2
	mg/L	Hardness ≥ 50 mg/L	3
Sulphate	mg/L	1000	
Nitrate Nitrogen	mg/L	400	
Nitrite Nitrogen	mg/L	Chloride < 2 mg/L	0.2
		2 mg/L ≤ Chloride < 4 mg/L	0.4
		4 mg/L ≤ Chloride < 6 mg/L	0.6
		6 mg/L ≤ Chloride < 8 mg/L	0.8
		8 mg/L ≤ Chloride < 10 mg/L	1
		Chloride ≥ 10 mg/L	2
Ammonia Nitrogen	mg/L	pH ≥ 8.5	3.31
		8.0 ≤ pH < 8.5	3.7
		7.5 ≤ pH < 8.0	11.3
		7.0 ≤ pH < 7.5	18.5
		pH < 7.0	18.4
Antimony, total	mg/L	0.2	
Arsenic, total	mg/L	0.05	
Barium, total	mg/L	10	
Beryllium, total	mg/L	0.053	
Boron, total	mg/L	50	
Cadmium, total	mg/L	Hardness < 30 mg/L	0.0001
		30 mg/L ≤ Hardness < 90 mg/L	0.0003
		90 mg/L ≤ Hardness < 150 mg/L	0.0005
		150 mg/L ≤ Hardness < 210 mg/L	0.0006
Chromium, total	mg/L	0.01	
		0.09	
Cobalt, total	mg/L	0.04	
Copper, total	mg/L	Hardness < 50 mg/L	0.02
		50 mg/L ≤ Hardness < 75 mg/L	0.03
		75 mg/L ≤ Hardness < 100 mg/L	0.04
		100 mg/L ≤ Hardness < 125 mg/L	0.05
		125 mg/L ≤ Hardness < 150 mg/L	0.06
		150 mg/L ≤ Hardness < 175 mg/L	0.07
		175 mg/L ≤ Hardness < 200 mg/L	0.08
		Hardness ≥ 200 mg/L	0.09
Lead, total	mg/L	Hardness < 50 mg/L	0.04
		50 mg/L ≤ Hardness < 100 mg/L	0.05
		100 mg/L ≤ Hardness < 200 mg/L	0.06
		200 mg/L ≤ Hardness < 300 mg/L	0.11
		Hardness ≥ 300 mg/L	0.16
Mercury, total	mg/L	0.001	
Molybdenum, total	mg/L	10	
Nickel, total	mg/L	Hardness < 60 mg/L	0.25
		60 mg/L ≤ Hardness < 120 mg/L	0.65
		120 mg/L ≤ Hardness < 180 mg/L	1.1
		Hardness ≥ 180 mg/L	1.5
Selenium, total	mg/L	0.01	
Silver, total		Hardness ≤ 100 mg/L	0.0005
		Hardness > 100 mg/L	0.015
Thallium, total	mg/L	0.003	
Titanium, total	mg/L	1	
Uranium, total	mg/L	3	
Zinc, total	mg/L	Hardness < 90 mg/L	0.075
		90 mg/L ≤ Hardness < 100 mg/L	0.15
		100 mg/L ≤ Hardness < 200 mg/L	0.9
		200 mg/L ≤ Hardness < 300 mg/L	1.65
		300 mg/L ≤ Hardness < 400 mg/L	2.4

Source: Compiled in text (BC CSR 2016)

Appendix I – Bromley Humps Groundwater Quality Results

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Memo

From:	Lee Christoffersen and Kaitlyn Kooy	**Client:**	IDM Mining
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Subject:	Bromley Humps Groundwater Quality Results	**Date:**	May 23, 2017

1 Introduction

Three monitoring wells (MW16-002, MW16-003, and MW16-004) were installed in the Bromley Humps area in August and September 2016 (Figure 3-2 in the report) to characterize baseline water quality.

Between installation and the end of December 2016 (the cut-off for baseline water quality monitoring), MW16-002 was sampled in September and MW16-004 was sampled in September and again in December. MW16-003 could not be sampled in September or December because it was dry, and MW16-002 was dry in December.

2 Groundwater Quality Results

The groundwater quality results for the Bromley Humps monitoring wells are provided in Table 1. All groundwater data were compared to the British Columbia Contaminated Sites Regulation (BC CSR) standards for the protection of aquatic life. These water quality guidelines are summarized in Appendix H. There were no exceedances in the Bromley Humps samples.

Table 1: Bromley Humps Groundwater Quality Results

Monitoring Location		**BC CSR**	**MW16-002**	**MW16-004**	**MW16-004**
Sampling Date			**28-Sep-16**	**27-Sep-16**	**13-Dec-16**
Field Parameters					
pH	pH units		7.38	7.29	7.44
Conductivity	uS/cm		250	233	366
Specific Conductivity	uS/cm		381	355	583
Dissolved Oxygen	mg/L		7.74	10.85	8.37
Dissolved Oxygen	%		66.6	93	68.7
ORP	mV		217.6	273.2	187.9
Turbidity	NTU		5.51	3.12	0.99
TDS	mg/L		246.1	231.4	379
Temperature	degC		7.2	7.0	5.4
Physical Parameters					
pH	pH units		7.99	7.89	7.74
Specific Conductance	uS/cm		361	344	570
Total Hardness	mg/L		205	194	335
Total dissolved solids	mg/L		269	242	406
Total suspended solids	mg/L		<3	3.7	<3

Monitoring Location		**BC CSR**	**MW16-002**	**MW16-004**	**MW16-004**
Sampling Date			**28-Sep-16**	**27-Sep-16**	**13-Dec-16**
Turbidity	NTU		4.66	4.22	0.71
Major Ions					
Total alkalinity	mg/L as Ca CO3		143	136	177
Alkalinity, Bicarbonate (as CaCO3)	mg/L as Ca CO3		143	136	177
Alkalinity, Carbonate (as CaCO3)	mg/L as Ca CO3		<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L as Ca CO3		<1	<1	<1
Acidity	mg/L		3.6	4.7	4.4
Chloride	mg/L	**1500**	<0.5	<0.5	<0.5
Fluoride	mg/L	**EQ1**	0.03	0.043	0.055
Bromide	mg/L		<0.05	<0.05	<0.05
Sulfate	mg/L	**1000**	58.6	44	134
Nutrients					
Nitrate Nitrogen	mg/L as N	**400**	0.317	2.12	0.741
Nitrite Nitrogen	mg/L as N	**EQ2**	<0.001	<0.001	<0.001
Ammonia Nitrogen	mg/L as N	**EQ3**	0.0076	0.0075	<0.005
Ortho phosphorus, dissolved	mg/L		0.0042	0.0046	0.0029
Phosphorus, total	mg/L		0.0085	0.0123	0.0055
Organics					
Total Organic Carbon	mg/L		3.35	7.7	1.97
Dissolved Organic Carbon	mg/L		3.16	7.73	1.66
Metals					
Aluminum, total	mg/L		0.128	0.137	0.0509
Aluminum, dissolved	mg/L		0.0132	0.0243	<0.005
Antimony, total	mg/L	**0.2**	0.00068	0.00069	<0.0005
Antimony, dissolved	mg/L	**0.2**	0.00069	0.00066	<0.0005
Arsenic, total	mg/L	**0.05**	<0.0005	0.00072	0.00088
Arsenic, dissolved	mg/L	**0.05**	<0.0005	0.0007	0.00089
Barium, total	mg/L	**10**	0.036	0.051	0.073
Barium, dissolved	mg/L	**10**	0.034	0.051	0.073
Beryllium, total	mg/L	**0.053**	<0.001	<0.001	<0.001
Beryllium, dissolved	mg/L	**0.053**	<0.001	<0.001	<0.001
Bismuth, total	mg/L		<0.00005	<0.00005	<0.00005
Bismuth, dissolved	mg/L		<0.00005	<0.00005	<0.00005
Boron, total	mg/L	**50**	<0.1	<0.1	<0.1
Boron, dissolved	mg/L	**50**	<0.1	<0.1	<0.1
Cadmium, total	mg/L		0.0000817	0.000108	0.0000411
Cadmium, dissolved	mg/L		0.000042	0.00014	0.000042
Calcium, total	mg/L		79.1	70.1	104
Calcium, dissolved	mg/L		77.9	71.7	117
Chromium, total	mg/L	**0.01**	<0.001	0.0019	<0.001
Chromium, dissolved	mg/L	**0.01**	<0.001	<0.001	<0.001
Chromium, hexavalent	mg/L		<0.001	<0.001	<0.001
Cobalt, total	mg/L	**0.04**	0.00048	0.00081	0.00057
Cobalt, dissolved	mg/L	**0.04**	0.00044	0.00063	0.00055
Copper, total	mg/L	**EQ4**	0.0046	0.0121	0.0023
Copper, dissolved	mg/L	**EQ4**	0.004	0.0113	0.0022
Iron, total	mg/L		0.213	0.18	0.05
Iron, dissolved	mg/L		<0.03	0.039	<0.03
Lead, total	mg/L	**EQ5**	<0.0005	<0.0005	<0.0005
Lead, dissolved	mg/L	**EQ5**	<0.0005	<0.0005	<0.0005
Magnesium, total	mg/L		2.63	3.64	9.69
Magnesium, dissolved	mg/L		2.48	3.6	10.6
Manganese, total	mg/L		0.0291	0.0172	0.00663
Manganese, dissolved	mg/L		0.0266	0.0137	0.00597
Mercury, total	mg/L	**0.001**	<0.000005	0.000006	<0.000005
Mercury, dissolved	mg/L	**0.001**	<0.000005	<0.000005	<0.000005
Molybdenum, total	mg/L	**10**	0.0017	0.0037	0.0065

Monitoring Location		BC CSR	MW16-002	MW16-004	MW16-004
Sampling Date			**28-Sep-16**	**27-Sep-16**	**13-Dec-16**
Molybdenum, dissolved	mg/L	**10**	0.0016	0.0032	0.0066
Nickel, total	mg/L	**EQ6**	0.0024	0.008	0.0055
Nickel, dissolved	mg/L	**EQ6**	0.0022	0.0069	0.0055
Potassium, total	mg/L		<2	5.4	7.3
Potassium, dissolved	mg/L		<2	5.5	7.9
Selenium, total	mg/L	**0.01**	0.00557	0.0036	0.00738
Selenium, dissolved	mg/L	**0.01**	0.00588	0.00362	0.00829
Silicon, total	mg/L		1.73	2.41	2.97
Silicon, dissolved	mg/L		1.5	2.12	3
Silver, total	mg/L	**EQ7**	<0.00002	0.000051	<0.00002
Silver, dissolved	mg/L	**EQ7**	<0.00002	<0.00002	<0.00002
Sodium, total	mg/L		<2	<2	<2
Sodium, dissolved	mg/L		<2	<2	<2
Strontium, total	mg/L		0.315	0.336	0.612
Strontium, dissolved	mg/L		0.313	0.349	0.599
Thallium, total	mg/L	**0.003**	<0.0002	<0.0002	<0.0002
Thallium, dissolved	mg/L	**0.003**	<0.0002	<0.0002	<0.0002
Tin, total	mg/L		<0.0005	<0.0005	<0.0005
Tin, dissolved	mg/L		<0.0005	<0.0005	<0.0005
Titanium, total	mg/L	**1**	<0.01	<0.01	<0.01
Titanium, dissolved	mg/L	**1**	<0.01	<0.01	<0.01
Uranium, total	mg/L	**3**	0.00032	0.00036	0.00086
Uranium, dissolved	mg/L	**3**	0.00032	0.00032	0.00084
Vanadium, total	mg/L		0.00059	0.00085	0.00062
Vanadium, dissolved	mg/L		<0.0005	<0.0005	<0.0005
Zinc, total	mg/L	**EQ8**	<0.005	<0.005	<0.005
Zinc, dissolved	mg/L	**EQ8**	<0.005	<0.005	<0.005

Source: \\VAN-SVR0\Projects\01_SITES\Red_Mountain_BC\!Library\Databases\Water_Quality\GW_Exceedances_ReportTable_REV05_KNK.xlsm

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