2021 HYDROGEOLOGICAL CHARACTERIZATION REASSESSMENT

GOLDEN REFUSE DISPOSAL FACILITY (OC -17006)

350 GOLDEN-DONALD UPPER ROAD, GOLDEN, BC

Prepared By:
Ecoscape Environmental Consultants Ltd.

Prepared For:
Columbia Shuswap Regional District
October 2021

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Version Control and Revision History				
Version	**Date**	**Prepared By**	**Reviewed By**	**Notes/Revisions**
Version A	August 13, 2021	MPS	LR	Draft for Internal Review
Version 0	August 16, 2021	MPS	LR	Draft for Client Review
Version 1	October 12, 2021	MPS	LR	Final Report

ACRONYMS AND ABBREVIATIONS

BCAWQG	BC Approved Water Quality Guidelines
BC GWPR	BC Groundwater Protection Regulation
BCWWQG	BC Working Water Quality Guidelines
CALA	Canadian Association for Laboratory Accreditation
CARO	Caro Analytical Services, Kelowna, BC
CaCO3	Calcium Carbonate
CCME	Canadian Council of Ministers of the Environment
CFU	Colony Forming Unit
CSR	BC Contaminated Sites Regulation
CSR AW CSR	Freshwater Aquatic Water numerical standard
CSR DW CSR	Drinking Water numerical standard
CSR IW	CSR Irrigation Water numerical standard
CSRD	Columbia Shuswap Regional District
DO	Dissolved Oxygen
DOC	Dissolved Organic Carbon
DW	Drinking Water numerical standard
EC	Electrical Conductivity
EMA	Environmental Management Act
EMP	Environmental Management Plan
ENV	BC Ministry of Environment and Climate Change Strategy
GCDWQ AO	Guideline for Canadian Drinking Water Quality Aesthetic Objective
GCDWQ MAC	Guideline for Canadian Drinking Water Quality Maximum Acceptable Concentration
GSC	Geological Survey of Canada
HCR	Hydrogeological Characterization Report
IDF	Interior Douglas Fir
LEL	Lower Explosive Limit
LWMP	Liquid Waste Management Plan
m asl	Meters Above Sea Level
m bgs	Meters Below Ground Surface
m btoc	Meters Below Top of Casing
mg/L	Milligrams per Litre
MPN	Most Probable Number
N	Nitrogen
OC	Operational Certificate
ORP	Oxidation-reduction Potential
QA/QC	Quality Assurance/Quality Control
PAH	Polycyclic Aromatic Hydrocarbon
RDF	Refuse Disposal Facility
RPD	Relative Percent Difference
SD	Standard Deviation
SHA	Sperling Hansen Associates
STN ID	Climate Station ID
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
UEL	Upper Explosive Limit
US GPM	US Gallons Per Minute
VOC	Volatile Organic Compound
WRA	Water Resource Atlas
WTN	Well Tag Number
WWAL	Western Water Associates Ltd.

1.0 INTRODUCTION

The Columbia Shuswap Regional District (CSRD) retained Ecoscape Environmental Consultants Ltd. (Ecoscape) to reassess recommendations made in the *2018 Hydrogeological Characterization Report, Golden Refuse and Disposal Facility* (RDF, the Site) completed by Western Water Associated Ltd. (WWAL).

The Site has operated as a natural attenuation landfill since the early 1970s. The operating permit was transferred to the CSRD in the late 1970s, and the Site now operates under Operational Certificate (OC) 17006, issued by Ministry of Environment and Climate Change Strategy (ENV) on May 5, 2003, and most recently amended on June 30, 2021. A copy of the OC is provided in Appendix A.

This report does not constitute a 5-year updated Hydrogeological Characterization Report (HCR). HCRs, as stipulated by ENV's *Landfill Criteria for Municipal Solid Waste* (ENV, 2016) require more technical data and assessment than what is presented in this study. A 5-year update of the 2018 HCR will be submitted to ENV in 2023.

2.0 OBJECTIVE AND WORK SCOPE

We understand that ENV has requested the CSRD provide an update of hydrogeochemical data collected at onsite and near-site monitoring wells since 2018 (particularly monitoring wells MW18-10 and MW18-11) to help decide whether additional down-gradient monitor wells are necessary. This request was based on recommendations number 3 and 4 in the 2018 HCR, which stated the following:

> ***R3 Continued Sampling of New Monitoring Wells***
>
> *Continue to monitor newly added monitoring wells MW18-10 and MW18-11, located at the south property boundary and southwest corner of the site, respectively. MW18-10 was only sampled three times in 2018 and additional sampling at this location should occur prior to making further decisions about drilling. At MW18-11, only development water was collected during drilling of the monitoring well in 2018. If the land owner agrees, add Well ID 22653 to the annual monitoring program.*
>
> *Prior to determining an off-site location to explore for drilling, 2-years more years of water level and aquifer geochemical data should be gathered. Variation in groundwater flow direction within the bedrock aquifer should be determined and the trend of chloride and nitrate concentration overtime should be assessed. Therefore, the site would continue to be operated as a monitored natural attenuation site for at least the next two-years.*

R4 Potential Off-Site Migration of Landfill Leachate within the Bedrock Aquifer

Exploring contaminant migration within the bedrock aquifers where the bedrock surface potentially lies deep below sand and gravel deposits, like what sits above the Town of Golden, can require over 400 feet of casing to even reach the bedrock surface. This sort of exploration for contamination within a bedrock aquifer can be costly and there is always potential of intercepting unaffected fracture zones. Hence the recommendation to assess water quality over the next two-years prior to initiation another extensive drilling program. Now that groundwater flow direction within the bedrock aquifer has been established, we have a better sense of where contaminant migration within the bedrock facture zones could potentially be occurring. As was noted above, fracture flow within bedrock can be unpredictable.

After 2-years of further data collection from the monitoring network, if further exploration of the bedrock aquifer contamination downgradient of the site is deemed appropriate, the CSRD should secure a location hydraulically downgradient of the site. At this point in time, we recommend drilling at Pine Road and Golden Donald Upper Road, about 20 m southwest of MW18-10 (at 51°18'22.24" N / 116°57'14/61" W). Permission to drill can take some time if drilling is planned to occur on Ministry of Transportation right of way.

Further exploration within the valley bottom aquifer should only be pursued if a contaminant plume is identified within the bedrock aquifer at the above recommended drilling location. Based on concentrations of chloride and nitrate at Well ID 22653 we do not believe there is perceivable impact of landfill leachate associated parameters (i.e chloride and nitrate) within the valley bottom aquifer.

The objective of this report is to respond to the CSRD's above-referenced request, by providing an update on groundwater quality data collected over the past 2 years, summarizing hydrogeological and geochemical data collected at and near the Site to date, and providing recommendations to address potential offsite migration of leachate-impacted groundwater. In meeting this objective, Ecoscape undertook the following tasks:

- Reviewed the 2018 HCR;
- Entered historical groundwater quality data collected from onsite and near-site monitoring wells into a database (tabulated) and compared the data to applicable federal and provincial guidelines and standards to determine if exceedances were observed;
- Analyzed temporal and spatial groundwater quality trends to evaluate the potential for landfill leachate impacts on groundwater quality;
- Prepared geological cross-sections showing the lithology and structural features at and near the Site to better conceptualize local hydrostratigraphy;

- Identified the potential presence/absence of human and ecological receptors to leachate impacted groundwater; and,
- Prepared this report.

3.0 SITE DESCRIPTION

The Site is located approximately 2 km northeast and upslope of the Town of Golden(the Town) city centre (Figure 1). A Site description is provided in Table 1.

Table 1: Site Description

Topic	Details
Civic Address	350 Golden-Donald Upper Road, Golden, BC
Legal Description	Subdivision 12 of Section 18, Township 27, Range 21, West of the 5th Meridian, Kootenay District
Registered Site Owner	The Province of British Columbia
Latitude and Longitude (of Site centre)	51° 18' 31.0" N and 116° 57' 15.1" W
Approximate Site Area	17 hectares
Current Land Use	Natural Attenuation Landfill
Site Elevation	Approximately 925 m above sea level

The Site is mainly surrounded by undeveloped, forested land to the north, west and south with several rural residences to the east on Hietala Road. The nearest privately-owned residence is within 100 m of the landfill boundary to the east at a higher elevation of 964 m above sea level (m asl). The nearest residence downslope of the landfill is situated approximately 220 m southwest, at an elevation of 915 m asl.

The Mountain View Cemetery is situated at 216 Golden Donald Upper Rd, approximately 210 m south and hydraulically cross- to downgradient of the Site. Potential contaminants of concern associated with cemeteries include nitrate, ammonia, chemical oxygen demand, and select metals, which may have been released into the underlying aquifers near the Site. This potential should be considered when interpreting groundwater geochemistry in the area.

4.0 HISTORICAL AND CURRENT GROUNDWATER MONITORING PROGRAM

Kala Groundwater Consulting Ltd. (Kala) drilled and installed four (4) monitoring wells (MW95-01 through MW95-04) in 1995 to depths ranging from 18.3 to 30.5 m bgs (Figure 2). No groundwater was encountered during drilling, and these wells have since been decommissioned.

Three (3) on-site monitoring wells were installed in 2009 by Summit Environmental: MW09-6S (shallow), MW09-6D (deep), and MW09-7 to replace decommissioned wells

MW95-4 and MW95-3, respectively. MW09-7 has remained dry since installation and has thus never been sampled. Nested wells MW09-6S and MW09-6D are situated near the western Site boundary north of the site access. MW09-6S and MW09-6D repeatedly showed similar water chemistry, and MW09-6D sampling was discontinued in 2011 due to redundancy. It was sampled again in 2018 and 2020.

Monitoring well MW10-8 was installed by WWAL in 2010, approximately 150 m northwest and cross-gradient of the Site to evaluate potential offsite leachate migration. MW10-8 was not sampled in 2016 or 2017 but has been sampled consistently since.

Two (2) additional on-site wells, referenced in the 2018 HCR, were drilled by WWAL in 2018; MW18-10 and MW18-11. MW18-10 was installed on the southern Site boundary to replace MW95-02 (TH-2), which has been dry since it was installed in 1995. MW18-11 was installed immediately southwest of the Site to provide additional monitoring coverage along the Site boundary.

Domestic well DMW-1b, situated east of the Site, was introduced to the monitoring network in 2011 to replace upgradient monitoring location DMW-1, which was precluded from the monitoring network because filtration systems were installed prior to all the water outlets. DMW-4, situated east of the Site, was introduced to the monitoring network in 2013, and along with DMW-1b, provides background water quality data for the Site. Domestic well DMW-5 (approximately 740 m north of the Site) was introduced to the monitoring program in 2018; however, the well owners opted not to include their well in the 2019 program and subsequent years.

Town Wells #4 and #6 comprise two (2) of the Town's five (5) municipal water supply wells and are situated approximately 1.5 km and 2 km northwest of the Site (Figure 2). Town Well #6 was sampled in spring 2018, but was not sampled in summer or fall 2018 at which time work was completed in attempt to increase the well's yield. It has been sampled twice since spring 2019; however, turbidity levels have remained elevated in the well. As such, the town removed the well's pump in the fall of 2019 and deemed the Town Well #6 inoperable.

The Columbia Diesel well (WTN 116561) was added to the program in 2020 as DMW20-01.

The current monitoring network consists of four (4) groundwater monitoring wells, three (3) domestic supply wells and two (2) Town supply wells, as follows:

- Monitoring wells MW09-6S, -6D, MW10-8, MW18-10 and MW18-11
- Domestic supply wells DMW-1b, DMW-4, and DMW20-01; and
- Town Well #4 and Town Well #6.

Although not part of the monitoring program, samples have been collected and analyzed from the Town supply well MW15-01. This well serves as a sentry well for the Town Well #4, and the Town has permitted the use of its water quality data.

Table 2 below summarizes the monitoring network, and monitoring locations are shown on Figure 2. Well logs for current and past monitoring wells are provided in Appendix B.

Table 2: Summary of Golden RDF Monitoring Network

Monitoring ID	Location	Rationale	Well Depth (m btoc)	Top of Casing elevation (m asl)[1]	Ground Surface Elevation (m asl)[1]	Lithology
Landfill Monitoring Wells						
MW09-6S / -6D	West Site boundary, downgradient of the landfill.	Monitor potential offsite migration of leachate to the west	35.3 / 65.9	917.06 / 917.00	916.23	Gravel
MW10-08	300 m northwest and cross- to upgradient of the landfill	Monitor potential offsite migration of leachate to the northwest	26.3	919.60	919.70 (flush mount)	Bedrock
MW18-10	South Site boundary, cross- to downgradient of the landfill	Monitor potential offsite migration of leachate to the south	35.6	914.84	914.08	Bedrock
MW18-11	20 m southwest and downgradient of the Site	Monitor potential offsite migration of leachate to the southwest	146.3	908.53	907.73	Bedrock
Private Domestic Wells						
DMW-1b	Located approximately 200 m east and upgradient of the Site	Monitor background water quality	60	n/a	965[2]	Bedrock
DMW-4	130 m east and upgradient of the Site.	Monitor background water quality	120	n/a	970[2]	Presumably bedrock
DMW20-01	1.2 km west and downgradient of the Site	Monitor general downgradient impacts	26	n/a	790[2]	Overburden (Aquifer 456)
Town of Golden Supply Wells						
Town Well #4	1.5 km northwest and downgradient of the Site	Monitor general downgradient impacts	Unknown	n/a	800[2]	Unknown – presumably overburden (Aquifer 456)
Town Well #6	2 km northwest and downgradient of the Site	Monitor general downgradient impacts	Unknown	n/a	Unknown	Unknown – presumably overburden (Aquifer 456)

Notes:
1 = Elevations of ground surface and top of monitoring well casings were surveyed by Ecoscape in 2020 with a vertical accuracy of ± 0.01 m.
2 = Approximate ground surface elevations from Google Earth

5.0 SITE AND NEARBY SURROUNDING AREA ENVIRONMENT

5.1 Climate and Biogeoclimatic Zones

The Site is located within the Engelmann Spruce – Subalpine Fir dry cool woodland (ESSFdkw) forest subzone, where winters are typically long and cold and the summers cool and short (temperatures are above 10°C for only 0 to 2 months of the year) (Meidinger and Pojar, 1991).

Climate normal data from Environment Canada was used to complete this assessment. Based on data collected from the Golden Airport station (STN ID 1173210) between 1981 and 2010 the average annual total precipitation (rain and snow) was 466.8 mm with an average rainfall of 325.2 mm, suggesting the Site climate is relatively dry. The highest precipitation typically occurred between June and August (as rain), and again in November – January (as snow). The daily average temperatures for January and July were -7.9 °C and 17.3 °C, respectively.

5.2 Topography, Drainage and Nearby Watercourses

The portion of the Site east of the active landfill area slopes southeast from a topographic high of approximately 955 m asl, and levels out at approximately 925 m above sea level (m asl) for the remainder of the Site. The nearby surrounding area generally slopes southwest, and surface drainage at and near the Site is expected to mimic topography with flow towards the southwest. During freshet and heavy precipitation events, a gulley near the northeast boundary diverts surface runoff away from the landfill area, and no known surface water drainages lead away from the Site.

An unnamed provincially mapped watercourse traverses the Site from the northeast to the southwest; however, this watercourse is ephemeral, and only contains water during freshet and following heavy precipitation events (WWAL, 2019b). A drainage ditch has been constructed along the southern Site boundary at the toe of the active landfill face to collect and direct this watercourse to high permeability soils at the southwest Site corner, allowing discharge water to seep into the ground (WWAL, 2019b).

Hospital Creek is situated approximately 1.2 km north to northwest of the Site and flows southwest towards the Columbia River. The Kicking Horse River is approximately 1.3 km south to southwest and downslope of the Site, at an elevation of approximately 800 m asl, and flows northwest into the Columbia River. The Columbia River flows northwest, and at its nearest point is approximately 3 km from the Site.

Nearby watercourse locations with respect to the Site are shown on Figure 1.

5.3 Regional and Local Geology and Hydrogeology

According to Geological Survey of Canada (GSC), bedrock beneath the Site comprises metamorphosed limestone, limestone conglomerates and slate of the McKay Group, formed during the Cambrian to Ordovician periods (GSC, 1980). Bedrock is visible in outcrops near the northeast Site corner, and was encountered at the following depths during monitoring well drilling and installation:

- MW09-6D (western Site boundary) –34 m below ground surface (m bgs)
- MW10-08 (northwest of Site) – 15 m bgs
- MW18-10 (southern Site boundary) – 24 m bgs
- MW18-11 (southwest Site corner) – 116 m bgs

Based on this, the underlying bedrock surface steeply dips towards the southwest Site corner. Monitoring well locations are shown on Figure 2.

The Golden area is underlain by thick continuous glacial till blanket (GSC, 2014). Previous subsurface investigations at the Site (Kala, 1995; SHA, 2008; Summit, 2010b and 2011; and WWAL, 2019a) identified dense gravelly sand and silty ablation till along the sloped area to the east, with clean bedded sand and gravel alluvial deposits in the south central and western portions of the Site, and within the trench at the southwest Site corner. Overburden becomes increasingly thick towards the southwest, where the bedrock surface is over 115 m bgs (i.e., at MW18-11). Exposed sediments along the west side of Golden-Donald Road (immediately west of the Site) comprise dense, well-sorted sand and gravel with traces of silt and clay, and intermittent bedding.

Overburden permeability at the Site ranges from low to moderate. Low permeability silt-dominated deposits near the eastern side of the landfill limit surface water infiltration and groundwater recharge while silty sand and gravel located in the south-central section of the landfill is generally moderately permeable (SHA, 2008).

A localized, perched sand and gravel water-bearing unit was identified above the bedrock surface at MW09-6D. Saturated overburden was not encountered at nearby MW10-08, MW18-10 and MW18-11.

The Site and areas upslope of the Site are underlain by a poorly defined, but locally important bedrock aquifer. This aquifer is intercepted by monitoring wells MW09-06D, MW10-08, MW18-10, and MW18-11 and nearby domestic supply wells to the north, northeast and east. This bedrock aquifer is not mapped in the BC ENV's Water Resources Atlas (WRA).

According to the WRA, sand and gravel Aquifer 456 IIB was mapped approximately 50 m southwest of the Site, extending along the east side of the Columbia River and generally spanning the Town (Figure 1). The aquifer was mapped as unconfined to semi-confined, and was classified as highly productive, moderately vulnerable to contamination from surface sources and under moderate demand from local groundwater users. Based on available well records, the geometric mean static water level was 4.8 m bgs at the time of drilling (ENV, 2021).

Aquifer 456 IIB is likely recharged via mountain block recharge from surrounding upland areas, in which groundwater infiltrates bedrock, migrates downward, and then flows laterally through bedrock fractures (i.e., the unmapped bedrock aquifer below and near the Site) into the overburden deposits occurring along the Columbia River valley; however, some flows may also occur above and along the overburden-bedrock interface (e.g., MW09-6S). Based on the above, regional groundwater flow direction is expected to be laterally from the valley walls towards the valley centre, and then parallel to the Kicking Horse and Columbia Rivers, towards the west and northwest. Localized groundwater flow gradients contrary to that described above may be induced by well pumping and variability in the permeability and orientation of sand and gravel deposits and bedrock fractures.

5.3.1 Water Levels and Groundwater Flow Direction

Ecoscape manually measured static water levels within each monitoring well on March 24, May 20, August 24 and November 3, 2020. Ecoscape also installed electronic data loggers in the near-Site monitoring wells on May 20, 2020, to help better understand groundwater fluctuation at the Site.

Typical of most bedrock aquifers, seasonal groundwater level fluctuations recorded and measured at MW09-6S, MW09-6D, MW10-08 and MW18-10 were minimal (<0.5 m). Water levels at MW18-11 fluctuated by 0.8 m between March 2021 and March 2021, with the highest groundwater elevation recorded during the spring.

Ecoscape surveyed monitoring well elevations to a ± 0.01 m vertical accuracy in June 2020 to facilitate groundwater elevation and flow direction measurements at the Site. Groundwater elevations are generally highest at upgradient well MW10-08, and, following topography, decrease towards the southwest with lower groundwater elevations at MW09-6D, -6S, and MW18-10, followed by the lowest groundwater elevations observed at MW18-11 situated at the southwest corner of the landfill. Groundwater levels in MW18-11 were similar to those measured in the valley-bottom sand and gravel Aquifer 456. Based on this, groundwater flow through the unmapped bedrock aquifer below the Site is towards the southwest and Kicking Horse River, with an estimated hydraulic gradient of 0.5 m/m near the landfill. As discussed in Section 5.3, groundwater flow through Aquifer 456 is likely towards the west and northwest. Based on valley-bottom topography, the hydraulic gradient in Aquifer 456 is likely an order of magnitude less that that measured in the bedrock aquifer.

Elevations of the piezometric surface were consistently higher at MW09-6S compared to MW09-6D, indicating a downward hydraulic gradient between the perched sand and gravel water-bearing unit and unmapped bedrock aquifer at this location.

Water levels recorded in 2020 are summarized and plotted in Appendix C. Historical water levels measured between 2009 and 2019 are provided in Appendix D.

5.4 Hydraulic Conductivity

On May 19, 2020, Ecoscape performed single-well response tests (i.e., slug tests) at monitoring wells MW09-6S, -6D, MW10-08 and MW18-11 to obtain horizontal saturated hydraulic conductivity values (K), which are a measurement of the ability for water to flow through sediments or bedrock fractures.

Rising and/or falling head tests were conducted by inserting and/or removing a solid PVC slug of known volume into the monitoring wells and monitoring recovery response. MW18-11, which is outfitted with a built-in pump, was tested by drawing down the water to the pump intake and measuring the recovery. Manual water level measurements were collected during each test using an electric water tape, and electronic data loggers were installed in each well to record water levels at a 1 second interval. The level logger malfunctioned during the test completed at MW09-6D; however, manual measurements provide a reasonable estimate of the well's response during the slug test.

Water level response data was analyzed using the Hvorslev (1951) method and estimated K values are summarized in Table 3 below.

Table 3: Estimated K Values Based on Single Well Hydraulic Conductivity Testing

Monitoring Well	Aquifer Material	Geometric Mean K (m/sec)	Geometric Mean K (m/day)
MW09-6S	Sand and Gravel	3.98×10^{-5}	0.057
MW09-6D	Bedrock	2.58×10^{-8}	3.71×10^{-5}
MW10-08	Bedrock	9.21×10^{-8}	1.33×10^{-4}
MW18-11	Bedrock	5.85×10^{-7}	8.42×10^{-4}

As expected, the estimated K-value for the perched sand and gravel unit at MW09-6S was several orders of magnitude higher than those measured in the bedrock aquifer and estimates of K in bedrock were similar between the three (3) remaining wells. Importantly, estimated K-values were consistent with published K-values for sand and gravel and bedrock (Freeze and Cherry, 1979).

WWAL conducted hydraulic testing at bedrock monitoring well MW18-10 in 2018 and estimated K to be 2 x 10^{-6} m/sec. This estimate is slightly higher than estimated K-values values for remaining bedrock monitoring wells, validating the complexity of groundwater flow through bedrock aquifers, which is highly sensitive to factors such as fracture aperture, orientation, and density.

The single well response test results are summarized and plotted in Appendix E.

5.5 Discharge and Mass Flux Estimates

The 2018 HCR provided a reasonable estimate of contaminant loading from the bedrock aquifer underlying the Site into downgradient ENV-mapped sand and gravel Aquifer 456.

Specifically, based on available groundwater quality data, WWAL estimated that nitrate and chloride flowing through the bedrock aquifer below the Site represents less than 1% of that expected to flow through Aquifer 456, indicating additional non-landfill related chloride and nitrate sources are likely present in Aquifer 456.

This potential is supported by groundwater quality documented at DMW20-01 (WTN 116561 / Well ID 22653) in 2018 and 2020. DMW20-01 is situated hydraulically upgradient of, and closer to the Site than MW15-01 and Town Well #4; however, nitrate and chloride concentrations in samples collected from DMW20-01 have been at or near ambient conditions and are consistently lower than those documented in downgradient MW15-10 and Town Well #4.

Ongoing BC *Contaminated Sites Regulation* (CSR) Schedule 2 activities, including but not limited to welding and machine shops (C.6), appliance, equipment or engine repair (E.1), road salt storage (Activity E.7), petroleum product storage in above ground or underground tanks (Activity F.7), automotive, truck or other motor vehicle repair, salvage or wrecking (Activity G.2), and wood, pulp and paper products and related industries and activities (Activity I), have been observed near and upgradient of the Town supply wells and the Columbia Diesel well (DMW20-01). In our opinion, these potentially contaminating activities are more likely to be the cause of slightly elevated nitrate and chloride at Town Well #4 and MW15-01 than landfill leachate.

6.0 GROUNDWATER MONITORING PROGRAM RESULTS

The following section provides a short summary of the 2020 groundwater monitoring program results. Detailed methods and findings are included in the *2020 Annual Environmental Monitoring Report* (Ecoscape, 2021).

6.1 Site Observations

Monitoring well locations were readily accessible and in good condition in 2020. All wells exhibited reasonably good recharge rates and provided sufficient water to sample.

In May 2019, Mr. Glen Furey of Kicking Horse Water Services installed a permanent pump in the newly drilled MW18-11 to facilitate sampling. According to Mr. Furey, MW18-11 was not properly developed after it was drilled and installed in 2018, and the December 2018 sample was collected from a slurry of drill cuttings. The purpose of well development was to purge the well of residual fines and materials left in the well following drilling, and to restore natural groundwater flow and chemistry in and around the well. Based on this, the 2018 sample collected from MW18-11 was likely not representative of actual groundwater conditions near the well.

Ecoscape endeavoured to develop MW18-11 during the 2019 and 2020 sampling events; however, the well routinely ran dry after approximately one (1) well volume of water was purged. Water samples were collected after the well recovered to half a well volume, and we expect any residual fines and drilling-related materials to be removed from the well with continued purging during future sampling events.

Ecoscape staff did not observe signs of stressed vegetation, leachate breakout or ponding water at or near any of the monitoring locations during the 2020 sampling events.

6.2 2020 Analytical Results Relative to Applicable Standards and Guidelines

Ecoscape collected groundwater samples on March 24, May 20, August 24, and November 3, 2020.

During each sampling event, personnel collected samples from wells with sufficient groundwater for sampling and submitted them to Caro in Kelowna, BC for chemical analysis of the following parameters:

- Total Alkalinity (total as CaCO3);
- Anions (chloride, fluoride and sulfate);
- Electrical conductivity and pH;
- Dissolved Metals;
- Total Hardness (as CaCO3);
- Nutrients (Nitrate (as N), Nitrite (as N), and Ammonia (as N));
- Total Dissolved Solids (TDS);
- Turbidity;
- Volatile Organic Compounds (VOCs);

- Light and Heavy Extractable Petroleum Hydrocarbons (LEPH and HEPH) (May only); and
- Polycyclic Aromatic Hydrocarbons (PAH) (May only).

In addition, Ecoscape recorded pH, temperature, DO, ORP and specific conductance in the field.

The following standards and guidelines were applied to groundwater analytical data in order to protect current and potential future nearby domestic water supply sources:

- *Guidelines for Canadian Drinking Water Quality* Maximum Acceptable Concentration (health-based guideline) (GCDWQ MAC) and Aesthetic Objective (based on aesthetic considerations) (GCDWQ AO); and
- BC *CSR Drinking Water* (CSR DW) numerical standards.

Contrary to previous annual monitoring reports, Ecoscape only applied the *Guidelines for Canadian Drinking Water Quality* (GCDWQ) to domestic wells as the GCDWQ do not apply to groundwater samples collected from monitoring wells.

2020 groundwater chemistry results are provided in detail in Appendix C following the text, with exceedances from the quarterly sampling events summarized in Table 4 below.

Table 4: Summary of 2020 Water Quality Exceedances

Monitoring Location	Guideline or Standard	Exceeding Parameter
DMW-4	CSR DW	Lithium (dissolved), Strontium (dissolved)
	GCDWQ AO	Total dissolved solids
DMW-1b	CSR DW	Arsenic (dissolved) Lithium (dissolved)
	GCDWQ AO	Iron (dissolved), Total dissolved solids
	GCDWQ MAC	Arsenic (dissolved)
MW09-6S /-6D	CSR DW	Lithium (dissolved), Sodium(dissolved), Chloride, Nitrate (as N), Sulfate
MW10-8	CSR DW	Lithium (dissolved), Sodium(dissolved), Chloride, Tungsten (dissolved),
MW18-10	CSR DW	Lithium(dissolved), Sodium(dissolved), Chloride, Nitrate (as N)
MW18-11	CSR DW	Lithium (dissolved), Arsenic (dissolved)
Town Well #4	GCDWQ AO	Total dissolved solids

All other parameters analyzed by the laboratory were found at concentrations less than applicable guidelines and standards for the Site.

Dissolved lithium exceeded the BC CSR DW standard of 0.008 mg/L in samples from nearly all monitoring locations in 2020. ENV Protocol 9 stipulates a background lithium concentration of 0.096 mg/L in the Thompson-Okanagan region. While the Site is not within this mapped region, it is in close proximity. Lithium concentrations measured on and near the Site are below this value and are likely naturally elevated in the area given nearly ubiquitous exceedances of the CSR DW standard.

Background Water Quality

Background groundwater quality at the Site is represented by samples collected from domestic wells DMW-1b and DMW-4.

Consistent with previous years, dissolved arsenic concentrations exceeded the GCDWQ MAC guideline and CSR DW standard of 0.01 mg/L in all 2020 samples. Dissolved arsenic concentrations are generally orders of magnitude lower at remaining monitoring locations.

Dissolved strontium concentrations in samples from DMW-4 exceeded the CSR DW standard of 2.5 mg/L in 2020. Dissolved strontium has historically exceeded water quality criteria at this location.

Dissolved lithium exceeded the CSR DW standard of 0.008 mg/L in all 2020 samples collected from both DMW-1b and DMW-4, with maximum concentrations of 0.0254 mg/L and 0.0532 mg/L in May 2020, respectively. Given nearly monitoring network-wide exceedances, and a BC ENV background concentration of 0.096 mg/L in other regions of the province, it is likely that dissolved lithium is naturally elevated in the area.

Dissolved iron concentrations were detected above GCDWQ AO guideline of 0.3 mg/L in all 2020 samples from DMW-1b, which may be attributable to erosion and weathering of soil and minerals near the well.

Finally, total dissolved solids concentrations (TDS) exceeded the GCDWQ AO concentration of 500 mg/L in all 2020 samples from domestic wells DMW-1b and DMW-4. Samples from DMW-4 had TDS concentrations ranging from 727 mg/L (May) to 804 mg/L (August), while samples from DMW-1b had TDS concentrations ranging from 712 mg/L (May) to 739 mg/L (August).

Based on the above, elevated arsenic, iron, lithium, strontium and TDS concentrations likely occur naturally in groundwater at and near the Site, and are not necessarily attributable to ongoing landfilling activities.

Onsite and Near Site Monitoring Wells

Monitoring wells MW09-6S, -6D, MW18-10 and MW18-11 are situated on or immediately adjacent to the Site, cross- to downgradient of the landfill, and are thus used to monitor potential offsite migration of leachate-impacted groundwater.

Similar to 2019, the following parameters exceeded applicable standards on and immediately adjacent to the Site in 2020:

- chloride;
- dissolved sodium;
- sulfate;
- nitrate;
- dissolved lithium; and
- dissolved arsenic.

As discussed above dissolved lithium and arsenic may be naturally occurring in the area, based on measured background groundwater chemistry.

Downgradient wells MW09-6S and -6D continued to exhibit the greatest number of exceedances compared to remaining monitoring locations, suggesting ongoing leachate impacts at the western Site boundary. Chloride, nitrate, sulfate, dissolved lithium, and dissolved sodium concentrations exceeded provincial standards in 2020, with sulfate in samples from MW09-6S and -6D being the highest observed concentrations on and near the Site. Nitrate in samples from MW09-6S and -6D were also the highest observed on Site, until November 2020 when nitrate in the sample from MW18-10 rose to 67.9 mg/L (from 24.4 mg/L in August 2020), above the MW09-6S and -6D sample concentrations of 34.2 mg/L and 34.6 mg/L, respectively. MW09-6D (bedrock) was screened 30 m deeper than -6S (overburden-bedrock interface), which indicated leachate may have migrated 30+ m into bedrock at this location.

Groundwater samples from cross- to downgradient monitoring well MW18-10 exceeded applicable standards for chloride, nitrate, dissolved lithium and dissolved sodium concentrations, while dissolved lithium and dissolved arsenic concentrations (likely naturally occurring) exceeded in samples from downgradient monitoring well MW18-11.

Offsite Monitoring Wells

Monitoring well MW10-08, DMW20-01, and Town Wells #4 and #6 are situated well beyond the Site boundary.

Groundwater samples from cross- to upgradient monitoring well MW10-08 exceeded applicable standards for chloride (Figure 5), dissolved lithium, dissolved sodium (Figure 5), and dissolved tungsten during three or more sampling events, with chloride and sodium concentrations being the highest measured concentrations at any well in 2020. Dissolved tungsten concentrations have only been elevated in samples from MW10-08 since 2018, and samples from remaining monitoring locations have never shown a dissolved tungsten concentration above water quality criteria. Dissolved tungsten concentrations appear to have decreased in samples from MW10-08, exceeding the CSR standard of 0.003 mg/L in fall 2018 with a concentration of 0.006 mg/L, and decreasing to 0.0052 mg/L in August 2020, and below the standard in November 2020 at 0.0018 mg/L.

Samples from Town Well #4 were found to exceed the GCDWQ AO total dissolved solids (TDS) guideline of 500 mg/L during all four sampling events in 2020. Concentrations ranged from a high of 607 mg/L in March 2020, reducing to near guideline at 559 mg/L in November 2020. Ecoscape understands that there may have been maintenance and repair work completed on the well's pump in 2020, which could have temporarily increased TDS concentrations via disturbance. With further pumping of this well it is expected that the TDS concentrations will likely decrease.

Concentrations of remaining analyzed parameters were less than applicable guidelines and standards in groundwater collected from MW10-08, and Town Wells #4 and #6 in 2020.

Importantly, domestic monitoring well DMW20-01, added to the monitoring program in 2020 to monitor general downgradient impacts, had no exceedances of applicable guidelines and standards in its 2020 samples.

6.3 Mann Kendall Analysis of Water Quality Data from 2002 to 2020

Water quality trend analyses to date have generally been limited to a visual, qualitative review of historical time versus concentration plots. For reference, Ecoscape plotted time-series graphs of landfill leachate indicator parameters nitrate, chloride, sodium, sulphate, dissolved iron, dissolved manganese, dissolved boron, total alkalinity, hardness, and electrical conductivity at wells MW09-6S, MW09-6D, MW10-08, MW18-10, MW18-11, DMW-1b, DMW-4, Town Well #4, Town Well #6. These plots display changes in concentration over time between 2002 and 2020, and are shown in Appendix F.

Leachate indicator parameter concentrations have been consistently highest in samples collected from MW09-6S and -6D. Concentrations have also been elevated in samples from MW18-10, MW18-11 and MW10-08, but to a lesser degree than MW09-6S, and -6D, with the exception of sodium and chloride being highest in samples from MW10-08.

However, the visual review of graphs as a standalone process can result in human bias, often times made worse by the use of graph scales which affect visual interpretation. As such, we assessed the statistical significance of trends to determine whether changes over

time had occurred, particularly given that decision-making regarding further groundwater exploration downslope of the Site will heavily rely on water quality data collected over the past several years.

Ecoscape conducted Mann-Kendall trend analyses of all available groundwater quality data (2002 – 2020) for leachate indicator parameters nitrate, chloride, sodium, sulphate, dissolved iron, dissolved manganese, dissolved boron, total alkalinity, hardness, and electrical conductivity at wells MW09-6S, MW09-6D, MW10-08, MW18-10, MW18-11, DMW-1b, DMW-4, Town Well #4, Town Well #6. Mann-Kendall is a non-parametric regression analysis that is robust because it is easy to meet the assumptions needed for an accurate analysis and this test yields a result that is easy to interpret as either increasing, decreasing, or not changing (i.e., stable). The test produces a Tau-value, which gives the direction of the data (positive value = increasing; negative value = decreasing) and a p-value, which indicates whether the trend is statistically significant (p-value < 0.05). Tests were performed using the "Kendall" package version 2.2 in R software (McLeod, 2011).

Table 5 summarizes parameters and locations for which the seasonal Mann-Kendall analyses identified a statistically significant trend. Remaining parameters were considered stable (p-value > 0.05). Water quality measures that had significant trends over time are graphed with locally weighted scatterplot smoothing (LOWESS) trend lines in Appendix G.

Table 5: Summary of Mann-Kendal Analyses (α = 0.05) and Water Quality Trends

Well ID	Analyte	Kendall's Tau	p-value	Trend
DMW-1b	Alkalinity	-0.344	0.00957	↓
	Boron, dissolved	0.547	0.000295	↑
	Nitrate (as N)	0.547	0.000274	↑
DMW-4	Alkalinity,	0.429	0.0375	↑
	Nitrate (as N)	-0.314	0.0469	↓
	Sulfate	-0.399	0.0103	↓
MW09-6D	Boron, dissolved	0.556	0.0476	↑
	Chloride	-0.556	0.0476	↓
	Electrical Conductivity	-0.648	0.0211	↓
MW09-6S	Alkalinity	0.640	0.000000119	↑
	Boron, dissolved	0.565	0.00000286	↑
	Chloride	-0.744	0.00000000136	↓
	Electrical Conductivity	-0.605	0.000000576	↓
	Manganese, dissolved	-0.326	0.00697	↓
	Nitrate (as N)	-0.696	0.0000000242	↓

Table 5: Summary of Mann-Kendal Analyses (α = 0.05) and Water Quality Trends				
Well ID	**Analyte**	**Kendall's Tau**	**p-value**	**Trend**
	Sulfate	-0.288	0.0193	↓
MW10-8	Chloride	-0.437	0.00481	↓
	Iron, dissolved	-0.684	0.0000275	↓
	Manganese, dissolved	-0.706	0.00000492	↓
	Nitrate (as N)	0.625	0.0000548	↑
MW18-10	Chloride	0.644	0.0123	↑
	Electrical Conductivity	0.539	0.0389	↑
	Nitrate (as N)	0.733	0.00421	↑
MW18-11	Electrical Conductivity	0.643	0.0416	↑
	Manganese, dissolved	-0.857	0.00443	↓
Town Well #4	Alkalinity,	0.526	0.00000393	↑
	Boron, dissolved	0.254	0.0456	↑
	Chloride	0.512	0.00000632	↑
	Electrical Conductivity	0.526	0.0000037	↑
	Hardness	0.611	0.0286	↑
	Hardness, dissolved	0.336	0.01720000000	↑
	Iron, dissolved	-0.580	0.00002710000	↓
	Manganese, dissolved	-0.334	0.01560000000	↓
	Nitrate (as N)	0.418	0.00025100000	↑
	Sulfate	0.278	0.01520000000	↑
Town Well #6	Alkalinity	0.632	0.00051900000	↑
	Chloride	0.794	0.00001050000	↑
	Electrical Conductivity	0.647	0.00033900000	↑
	Nitrate (as N)	0.524	0.00390000000	↑
	Sulfate	0.667	0.00024000000	↑

Notes: ↓ = decreasing
↑ = increasing

The landfill leachate plume generally appears to be stable or shrinking along the west Site boundary based on primarily stable (i.e., no detectable trends) and statistically significant decreasing concentrations of leachate indicator parameters at MW09-6S and -6D; however, this may change with ongoing landfill activities. Similarly, electrical conductivity was the

only parameter that demonstrated an increasing trend at MW18-11, while remaining parameters have been stable or decreasing since we started sampling the well in 2019.

On the contrary, concentrations of key leachate indicator parameters chloride, nitrate and electrical conductivity appear to be trending upwards at MW18-10, situated at the south Site boundary. Therefore, there is the ongoing concern that leachate-impacted groundwater is migrating offsite.

Leachate indicator parameters are also increasing at the Town Wells; however, concentrations are quite low and are likely not associated with landfill activities for reasons described in Section 5.5, 7.0 and 8.0.

7.0 PIPER DIAGRAM

A Piper diagram is a useful tool for characterizing groundwater chemistry and serves as a visual aid in differentiating between distinct water chemistry signatures and how these compare across monitoring locations. A Piper diagram shows relative percent of anions and cations in two ternary plots, which are then projected onto a central diamond plot. The major ions include Na^+, Ca^+, Mg^+, K^+, HCO_3^-, CO_3^{2-}, SO_4^- and Cl^-, which typically account for the vast majority of the total dissolved solids present in natural groundwater. This central diamond plot is where monitoring locations can be visually grouped into distinct hydrogeochemical categories commonly referred to as facies. We produced a Piper plot using the average results from the 2020 sampling data and present it in Appendix G.

Potable water sources including Town Wells #4 and #6, and domestic wells DMW-1b, DMW-4, and DMW20-01 plotted close to one another in the magnesium bicarbonate type. Monitoring wells MW18-10 and MW18-11 (at southern boundary of the Site) also plotted as magnesium bicarbonate type, however slightly further from the potable water sources. Downgradient well MW18-10 was almost on the border of the mixed-type which included monitoring wells MW09-6S and -6D (known to be impacted by leachate), indicating it was potentially impacted by landfill activity. MW18-11 was more offset from this mixed-type zone, suggesting it may have had little to no impact from landfill leachate. The isotope analysis discussed in Section 8 provided additional detail regarding groundwater chemistry at MW18-11. Upgradient well MW10-08 plotted on the border of the mixed type and sodium chloride type. Chloride and sodium were consistently elevated at this location since 2009, and since it was somewhat further on the Piper diagram from impacted wells MW09-6S and -6D (which plotted right on top of each other), we suspect the source of ions was not leachate related (and related to possibly road salt).

8.0 ISOTOPE ANALYSES

While the Piper diagram provides us with a visual of groundwater chemistry signatures based on chemistry alone, the isotope analysis provides more insight into the source of

groundwater recharge age and degree of leachate-related contamination at monitored locations.

Ecoscape submitted groundwater samples collected in August 2020 for isotope analysis: Oxygen-18 (^{18}O), Chlorine-37 (^{37}Cl), deuterium (^{2}H), and tritium (^{3}H). ^{18}O and ^{2}H are indicators of groundwater origin, ^{3}H is a leachate indicator parameter, and ^{37}Cl is useful in elucidating chloride sources. This concept is discussed in more detail below.

When expressed as ratios between two isotopes of a given element, the delta symbol is used. For example, $\delta^{18}O$ is calculated based on the ratio between the more common Oxygen-16 isotope and less common Oxygen-18 isotope. $\delta^{18}O$ and $\delta^{2}H$ are useful in differentiating between different water source-types: as these elements pass through the hydrologic cycle, they undergo unique fractionation through hydrologic processes such as precipitation and evaporation, wherein the characteristics of the environment for each process (such as moisture content, vapour pressure, humidity, temperature, and altitude) influence the fractionation process. In shallow groundwater regimes, $\delta^{18}O$ and $\delta^{2}H$ serve as tracers because their concentrations are determined by their unique fractionation developed during precipitation and by the amount of evaporation that occurs before the water penetrates the subsurface (Freeze and Cherry, 1979). Thus, different isotopic ratios are found in different water sources, making $\delta^{18}O$ and $\delta^{2}H$ useful tracers to determine source waters (University of Arizona, SAHRA).

Hydrogen has two stable isotopes, ^{1}H and ^{2}H (deuterium), and one radioactive isotope, ^{3}H (tritium). Large concentrations of tritium were created in the 1950s and 1960s due to atmospheric testing of nuclear weapons, which resulted in tritium entering groundwater systems via recharge due to the infiltration of precipitation. As such, groundwater with concentrations of tritium higher than 5 to 10 tritium units, is modern (or bomb tritium) water (Freeze and Cherry, 1979). Thus, tritium concentrations can be used to roughly age groundwater as pre- or post-1954. Tritium concentrations are also often elevated in municipal solid waste leachate, largely owing to gaseous tritium lighting devices used in some emergency exit signs, compasses, watches, and even novelty items, such as 'glow stick' key chains (Mutch and Mahoney, 2008). Tritium is useful for studying leachate impacts as it is not significantly affected by reactions in the environment other than radioactive decay (Freeze and Cherry, 1979).

Samples for the isotope analysis were taken August 24 and 25, 2020 and results are presented in Table 6 below. DUP A is a duplicate of the sample from MW09-6S.

Table 6: Isotope Analysis Results					
Analyte	**Oxygen-18 $\delta^{18}O$**	**Chlorine-37 $\delta^{37}Cl$**	**Deuterium $\delta^{2}H$**	**Tritium $\delta^{3}H$**	**Tritium $\delta^{3}H$**
Units	per mil[1]		per mil	TU[2]	pCi/L
DMW-1b	-19.88	0.31	-154.7	3.2	10.31
DMW-4	-20.15	0.11	-156.6	1.4	4.51
DMW20-01	-19.85	-0.16	-150.4	4.2	13.53
Town Well #4	-19.92	0.45	-152.5	1.9	6.12
Town Well #6	-19.77	0.22	-152.0	4.8	15.46
MW10-08	-19.23	0.43	-148.6	3.4	10.95
MW09-6D	-18.94	0.02	-150.1	157.6	507.63
MW09-6S	-19.04	0.34	-150.1	31.7	102.11
DUP A	-18.95	-0.20	-150.4	31.7	102.11
MW18-10	-19.22	0.02	-148.3	70.6	227.40
MW18-11	-20.72	0.20	-160.9	15.8	50.89

Notes:
1 = per mil is ‰ , or per thousand
2 = Tritium Units. 1 TU = 1 molecule of ^{3}H per 10^{18} molecules of ^{1}H

The oxygen-18 and deuterium results across all sampling locations indicated that all monitored locations were recharged by the same groundwater system, validating the conceptual understanding that the unmapped bedrock aquifer below the Site discharges to the valley-bottom sand and gravel Aquifer 456 IIB.

Potable water supply wells including the three (3) domestic wells and two (2) town wells all had low tritium concentrations, ranging from 1 to 5 TU. These tritium results were consistent with the measured low concentrations of leachate-indicator parameters at these wells, and indicated that they are not impacted by landfill activity.

The highest concentrations of tritium were found at MW09-6D at 157.6 TU. This well is thought to be the most leachate-impacted monitoring well along with MW09-06S. For the most part, groundwater chemistry at MW09-6S has been nearly identical to that measured in MW09-6D; however, tritium at MW09-6S was notably lower (31.7 TU). As discussed, MW09-6D was screened approximately 30 m below MW09-6S. As such, the elevated tritium in MW09-6D may have resulted from older groundwater that has not migrated through the flow system as quickly as the shallower groundwater, or deeper groundwater is more impacted by leachate. The tritium concentrations also infer the leachate plume has migrated vertically downwards and has exited the landfill, consistent with the downward hydraulic gradient measured between the nested wells.

MW18-10 had a relatively high tritium concentration of 70.6 TU, which was congruent with its position on the Piper plot (Figure 9) as on the border of the mixed type (where leachate-impacted wells were found) and magnesium bicarbonate (potable water sources) facies. MW18-10 was likely somewhat impacted by landfill leachate, though not as much as

MW09-6D. This was consistent with most other leachate-associated parameters, as highlighted in Figures 5 through 8. Tritium at MW18-11 was slightly elevated (15.8 TU) above background, suggesting it could be mildly impacted by landfill leachate, but not as much as MW09-6D and MW18-10.

Importantly, tritium concentrations were relatively low at MW10-08, which supported the notion that elevated chloride, sodium and electrical conductivity values at this well are not attributable to fracture-controlled leachate migration, but rather road salting.

Tritium concentrations were at or near background at the Town Wells and DMW20-01, indicating no landfill leachate impacts at these locations.

No obvious spatial trends in chlorine-37 results were observed. For example, similar concentrations were observed at background well DMW-1b (0.31) and downgradient well MW09-06S (0.34).

9.0 DISCUSSION OF LOCAL HYDROSTRATIGRAPHIC CONDITIONS AND CONCEPTUAL MODEL

A conceptual model involves collecting various lithology data, static water level data, and surface water data to assess the extent and depth of aquifer(s) and aquitard(s), and the groundwater flow direction below and near the Site.

Ecoscape used information presented in the onsite and near-site monitoring well logs, drillers logs provided in the WRA, ENV aquifer mapping, regional geological mapping, and surface elevation provided by Google Earth to generate cross-sections A-A' and B-B' (Figures 3 and 4, and shown in plan on Figure 2). These cross-sections conceptually illustrate hydrostratigraphy near the Site with respect to the Town, the Columbia River and the Kicking Horse River. These cross-sections, along with the information used to assemble them, indicate:

- The Site is underlain by a poorly defined, but locally important bedrock aquifer. This aquifer is intersected by monitoring wells MW09-06D, MW10-08, MW18-10, and MW18-11 and nearby domestic supply wells to the north, northeast and east.
- The bedrock aquifer below and near the Site comprises mudstone, siltstone, and shale of the McKay Group. These sedimentary rock-types are often highly fractured. Well depths for bedrock wells within 1 km of the Site are highly variable, ranging from approximately 30 to 180 m bgs. This indicates that groundwater flows through complex network of fractures, in which the presence, depth and number of water-bearing fractures may vary from one location to the next.
- Based on surveyed static water levels in on- and near-site bedrock monitoring wells, regional groundwater flow in the bedrock aquifer likely mimics topography, with groundwater flow towards the southwest from topographically elevated recharge areas.

- Single-well response testing conducted at monitoring wells MW09-6D, MW10-08, MW18-10 and MW18-11 indicated that bedrock hydraulic conductivity below and near the Site ranges from 2 x 10^{-6} m/sec to 2 x 10^{-8} m/sec. These estimates are consistent with industry-accepted hydraulic conductivity values for limestone (10^{-6} to 10^{-9} m/sec) (Freeze and Cherry, 1979).
- The unmapped bedrock aquifer is overlain by dense gravelly sand and silty ablation till throughout the east half of the Site, with clean bedded sand and gravel alluvial deposits in the south central and western portions of the Site, and within the trench at the southwest Site corner. A thin till layer overlying bedrock was noted in well logs for most nearby domestic supply wells. Overburden thickness becomes increasingly thick towards the southwest end of the Site, where overburden is over 115 m thick (i.e., at MW18-11).
- Overburden is generally unsaturated at, and near the Site and no sand and gravel aquifers are known to underlie the Site; however, some localized pockets of perched groundwater may occur in overburden such as that observed in MW09-6S.
- Elevations of the piezometric surface were consistently higher at MW09-6S compared to MW09-6D, indicating a downward hydraulic gradient between the perched sand and gravel water-bearing unit and unmapped bedrock aquifer at this location.
- Sand and gravel Aquifer 456 IIB was mapped approximately 50 m southwest of the Site, extending along the east side of the Columbia River and generally spanning the Town. The aquifer seems to lap up the steep bedrock surface identified near MW18-11, and is likely recharged via mountain block recharge from surrounding upland areas, in which groundwater infiltrates bedrock, migrates downward, and then flows laterally through bedrock fractures into the overburden deposits occurring along the Columbia River valley; however, some flows may also occur above and along the overburden-bedrock interface. The Kicking Horse and Columbia Rivers also likely provide recharge to Aquifer 456.
- The oxygen-18 and deuterium results across all sampling locations indicated that all monitored locations were recharged by the same groundwater system, validating the conceptual understanding that the unmapped bedrock aquifer below the Site discharges to the valley-bottom sand and gravel Aquifer 456.
- Groundwater elevation in bedrock monitoring well MW18-11, which was likely installed just north of Aquifer 456, is similar to those documented in wells screened in Aquifer 456. Static water level in Aquifer 456 is consistent with the Columbia River and Kicking Horse River elevations, indicating the aquifer is hydraulically connected to these waterbodies.
- The Kicking Horse River likely represents a regional groundwater divide, and as such, only wells between the Site and the river have the potential to be hydraulically connected to groundwater the flows beneath the landfill.

10.0 ASSESSMENT OF POTENTIAL RECEPTORS

The two primary receptors to consider when assessing potential impacts from leachate impacted groundwater are drinking water users, and aquatic habitat.

10.1 Drinking Water Users

We understand that many of the wells mapped within the northern portion of the Town (i.e., north of the Kicking Horse River) have been decommissioned and replaced with municipal service from the Town wells. The Town's Manager of Operations, Chris Cochran, A.Sc.T. is not aware of any residential properties drawing well water apart from the Town's municipal system. Some residential properties have private wells which remain unused or are used for irrigating (pers. comm., 2021).

The Town sources its water supply from the Aquifer 456, at the confluence of the Kicking Horse River and Columbia River. The municipal water supply is obtained from five (5) wells at locations shown on Figure 2. Golden Associates Ltd. (Golder) completed a *Groundwater at Risk of Containing Pathogens* (GARP) study of the five wells (Golder, 2018). The Golden Landfill was considered a potential source of viral contamination; however, it is not located within the estimated capture zones for each supply well, and is situated more than 300 m from the wells. Based on the study, no GARP hazards were considered to be present, and the Town's water supply wells were considered to be at low risk of containing pathogens, based on, location of likely or known viral sources, deep well intake depths (>15 m), and the notion that Aquifer 456 was not considered highly vulnerable at the time of the assessment.

The estimated 10-year time-of-travel capture zones for Town Wells 4 and 6 are situated approximately 830 m and 170 m southwest and downgradient of the Site, respectively. Remaining Town wells are beyond the Kicking Horse River, which represents a groundwater divide, and are thus not expected to be impacted by leachate migration.

Based on this, Town Wells 4 and 6 represent potential drinking water receptors in the area. Given the estimated groundwater travel times, and that the Golden landfill has been operating since the 1970s, we would expect that leachate impacted groundwater would have migrated to portions of the aquifer occupied by these wells if natural attenuation was not occurring. However, water quality in these wells has been monitored since 2002 and 2013, respectively, with no signs of leachate impacts (e.g., nitrate concentrations are typically less than 20% of the 10 mg/L CSR DW standard, and chloride concentrations have been less than half of the 250 mg/L CSR DW standard). With that being said, good water quality in the Town Wells thus far does not rule out the potential for future impacts.

Monitoring well MW15-1 and domestic well DMW20-01 serve as sentry wells for Town Well 4 and should continue to be monitored. **We recommend a that sentry well be established within the 5 year capture zone or the northwest portion of the 10 year capture zone for Town Well 6.**

10.2 Aquatic Habitat

Hospital Creek is situated approximately 1.2 km north to northwest of the Site and flows southwest towards the Columbia River. The Kicking Horse River is approximately 1.3 km south to southwest and downslope of the Site, at an elevation of approximately 800 m asl, and flows northwest into the Columbia River. The Columbia River flows northwest, and at its nearest point is approximately 3 km from the Site.

As part of the 2018 HCS, WWAL collected water quality samples from the Kicking Horse River and Hospital Creek. No exceedances of the BC *Approved Water Quality Guidelines* for freshwater aquatic life were noted.

Based on their distance from the Site, and 2018 water quality samples results, nearby waterbodies are not expected to be impacted by landfill operations.

11.0 SUMMARY AND CONCLUSIONS

Ecoscape reassessed recommendations made in the 2018 Hydrogeological Characterization of the Golden Refuse Disposal Facility (WWAL 2018). Based on our review and analysis of available hydrogeochemical data, the following conclusions are made:

- The Site is underlain by a poorly defined, but locally important bedrock aquifer;
- Sand and gravel Aquifer 456 IIB was mapped by ENV approximately 50 m southwest of the Site, and is likely recharged via mountain block recharge from the bedrock aquifer below the Site; however, some flows may also occur above and along the overburden-bedrock interface (e.g. MW09-6S);
- Based on groundwater quality data collected between 2002 and 2020, concentrations of leachate indicator parameters have been consistently elevated in samples from MW09-6D and -6S and to a lesser degree MW18-10 compared to other monitoring locations, suggesting leachate-impacted groundwater at and beyond the west and south Site boundaries. Samples from these three (3) monitoring wells also had elevated concentrations of tritium, which is an isotope indicative of landfill leachate impacts;
- Based on groundwater quality data collected thus far, elevated arsenic, iron, lithium, and strontium concentrations likely occur naturally in groundwater at and near the Site, and are not necessarily attributable to ongoing landfilling activities.
- Mann-Kendall trend analysis of groundwater quality data collected from MW09-6S and -6D indicate the landfill leachate plume is generally stable or shrinking along the west Site boundary; however, this may change with ongoing landfill activities.

Similarly, electrical conductivity was the only parameter that demonstrated an increasing trend at MW18-11, while remaining parameters have been stable or decreasing since we started sampling the well in 2019.

On the contrary, the Mann-Kendall trend analysis indicated that chloride, nitrate and electrical conductivity are trending upwards at MW18-10 (situated at the south Site boundary). Therefore, there is the ongoing concern that leachate-impacted groundwater is migrating offsite.

- The highest concentrations of tritium were found at MW09-6D at 157.6 TU. This well is thought to be the most leachate-impacted monitoring well along with MW09-06S. MW09-6D is screened approximately 30 m below MW09-6S, which indicates that the leachate plume has migrated vertically downwards, consistent with the downward hydraulic gradient measured between the nested wells;

  Tritium concentrations were relatively low at MW10-08, which suggests that elevated chloride, sodium and electrical conductivity values at this well are not attributable to fracture-controlled leachate migration, but rather road salting or some other source.

- Most leachate indicator parameter concentrations at MW18-11 were at or near background levels; however, tritium concentrations were slightly elevated above background, which means leachate impacts at this well cannot be ruled out;

- Similar ^{18}O and deuterium isotope results across all sampling locations indicated that all monitored locations were recharged by the same groundwater system. This validated the conceptual understanding that the unmapped bedrock aquifer below the Site discharges to the valley-bottom sand and gravel Aquifer 456 IIB;

- Drinking water users and aquatic habitat are the two primary receptors to consider when assessing potential impacts from leachate impacted groundwater.

  - Town Wells 4 and 6 represent key potential drinking water receptors in the area.
  - As part of the 2018 HCS, WWAL collected water quality samples from the Kicking Horse River and Hospital Creek. No exceedances of the BC *Approved Water Quality Guidelines* for freshwater aquatic life were noted. Based on their distance from the Site, and 2018 water quality samples results, nearby waterbodies are not expected to be impacted by landfill operations.

- In general, detailed groundwater level monitoring, isotope analysis, Mann-Kendall trend analysis, and updated geological cross-sections provide us with a better conceptual understanding of the local hydrogeological regime and the potential transport and fate of leachate-impacted groundwater at and near the Site.

However, given the inherently complex fracture-controlled groundwater flow system below the Site, and the limited monitoring well network, some data gaps remain.

12.0 RECOMMENDATIONS

Based on the hydrogeological assessment results and conclusions, the following recommendations are provided for discussion with ENV:

- Monitoring well MW15-1 and domestic well DMW20-01 serve as sentry wells for Town Well 4 and should continue to be monitored.

- Isotope analyses conducted in 2020 helped better understand leachate impacts in groundwater near the Site. Tritium should be analyzed during one or more future sampling events to help substantiate the inferences made from the 2020 isotope results.

- Consistent with Sections 57 and 60.1 of CSR, owners of parcels west and south of the Site, and the BC ENV, should be notified of potential offsite migration of leachate-impacted groundwater. These notices are called Notifications of Likely or Actual (NOMs).

- Options for assessing and delineating potential off-site migration of landfill leachate should be explored. First, a survey of drinking water wells should be conducted in the Granite Drive, Pine Drive, Quartz Crescent, and Deer Ridge Road area to confirm the absence of wells in the area, as communicated by the CSRD and Town of Golden. If previously undocumented domestic wells are encountered, then a monitoring well should be installed at the intersection of Pine Drive and Golden Donald Upper Road (i.e., the location recommended by WWAL in the 2018 HCR) to assess near-Site impacts.

- If no nearby domestic wells are identified during the survey, then delineating groundwater impacts in the bedrock aquifer downgradient of the Site may be unnecessary for the following reasons, in addition to the absence of drinking water receptors:
    - Drilling down to the bedrock aquifer through the substantially thick overlying sand and gravel deposits (as encountered at MW18-11) will be costly.
    - Drilling into the bedrock aquifer may result in penetrating unimpacted fracture zones, possibly exposing them to shallower leachate-impacted groundwater; and
    - Potentially localized groundwater impacts from the nearby Mountain View Cemetery (nitrate, ammonia, chemical oxygen demand, and select metals) may complicate groundwater geochemistry interpretation in the area.

Rather, acknowledging that groundwater from the bedrock aquifer discharges into Aquifer 456, a monitoring well should be installed at a lower elevation area near the Town of Golden Visitor Centre (Figure 2), within Aquifer 456. Installing a monitoring well at this location would be far more economical than the likely 100+ m deep monitoring well that would be required in upslope areas along Granite Drive, Pine Drive, Quartz Crescent, and Deer Ridge Road. Based on the well log for nearby decommissioned well WTN 119318, static water level in the area is approximately 11.6 mbgs. No lithology data was provided in the well log, but the decommissioned well was presumably completed in sand and gravel Aquifer 456. Similar to MW15-1 and DMW20-01, this new monitoring well would serve as a sentry well for Town Well 6.

- A Human Health and Ecological Risk Assessment (HHERA) should be considered if groundwater chemistry in the newly installed monitoring well(s) indicate a potential risk to downgradient drinking water receptors as a result of landfill activities.

13.0 LIMITATIONS

This report has been prepared by Ecoscape Environmental Consultants Ltd. (Ecoscape) for Columbia Shuswap Regional District (CSRD) and is intended for the sole and exclusive use of the CSRD. With the exception of the CSRD, copying or distribution of this report or use of or reliance on the information contained herein, in whole or in part, is not permitted without the express written permission of Ecoscape.

Nothing in this report is intended to constitute or provide a legal opinion. Revisions to the regulatory standards referred to in this report may be expected over time. As a result, modifications to the findings, conclusions and recommendations in this report may be necessary.

This report has been prepared for specific application to the Site and Site conditions present at the time work was completed. The conclusions and recommendations provided herein are based solely upon our professional judgment and the availability of information pertaining to environmental conditions and historic and present land use at the site with time available to consider data. Ecoscape has relied fully upon information provided or collected by other parties, and does not warranty data collected from third party sources used in this report.

This report has been prepared with the understanding that all available information on the past, present, and proposed conditions of the Site have been disclosed. If additional information becomes available that is inconsistent with the information provided herein Ecoscape should be contacted to reassess the conclusions provided in this report.

14.0 CLOSURE

We trust that this report satisfies your present requirements. Should you have any questions or comments, please contact the undersigned at your convenience.

Respectfully Submitted
Ecoscape Environmental Consultants Ltd.,

Written By:

Mike Schutten, M.A.Sc.
Groundwater Scientist
Direct Line: 778-940-1964

Reviewed By:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
October 12, 2021
K. L. RINGHAM
19604
GEOSCIENTIST

Lee Ringham, M.Sc., P.Geo.
Senior Hydrogeologist
Chinook Arch Geoscience Inc.
Direct Line: (403) 860-2925

Attachments: Figures
Appendices

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FIGURES

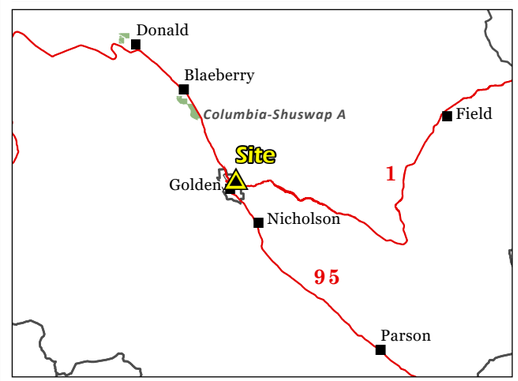
FIGURE 1
Site Location

Project:	Hydrogeological Characterization
Location:	CSRD
Project No.:	19-2850.06
Prepared for:	CSRD
Prepared by:	Ecoscape Environmental Consultants Ltd. Mike Schutten, M.A.Sc
Coordinate System:	NAD83-UTM Zone 11
Imagery:	ESRI World Imagery
Map Date:	August 12, 2021

LEGEND

- ENV-Mapped Aquifer
- Approximate RDF Boundary

Regional Location of Site



DISCLAIMER
The data displayed is for conceptual purposes only and should not be interpreted as a legal survey or for legal purposes. If discrepancies are found between the data portrayed in this report and that of a legal survey, the legal survey will supersede any data presented herein.

ECOSCAPE Environmental Consultants Ltd.

FIGURE 2
Hydrogeologically Significant Features

Project:	Hydrogeological Characterization
Location:	CSRD
Project No.:	19-2850.06
Prepared for:	CSRD
Prepared by:	Ecoscape Environmental Consultants Ltd. Mike Schutten, M.A.Sc
Coordinate System:	NAD83-UTM Zone 11
Imagery:	ESRI World Imagery
Map Date:	August 12, 2021

LEGEND

- Potential Future Monitoring Well
- Town Well
- Monitoring Well
- Sampled Domestic Well
- BC Well Database (WTN)
- Inferred GW Flow Direction
- Cross Section
- 1 Yr Time of Travel Capture Zone
- 2 Yr Time of Travel Capture Zone
- 5 Yr Time of Travel Capture Zone
- 10 yr Time of Travel Capture Zone
- Cadastre
- ENV Mapped Aquifer
- Approximate RDF Boundary

ECOSCAPE Environmental Consultants Ltd.

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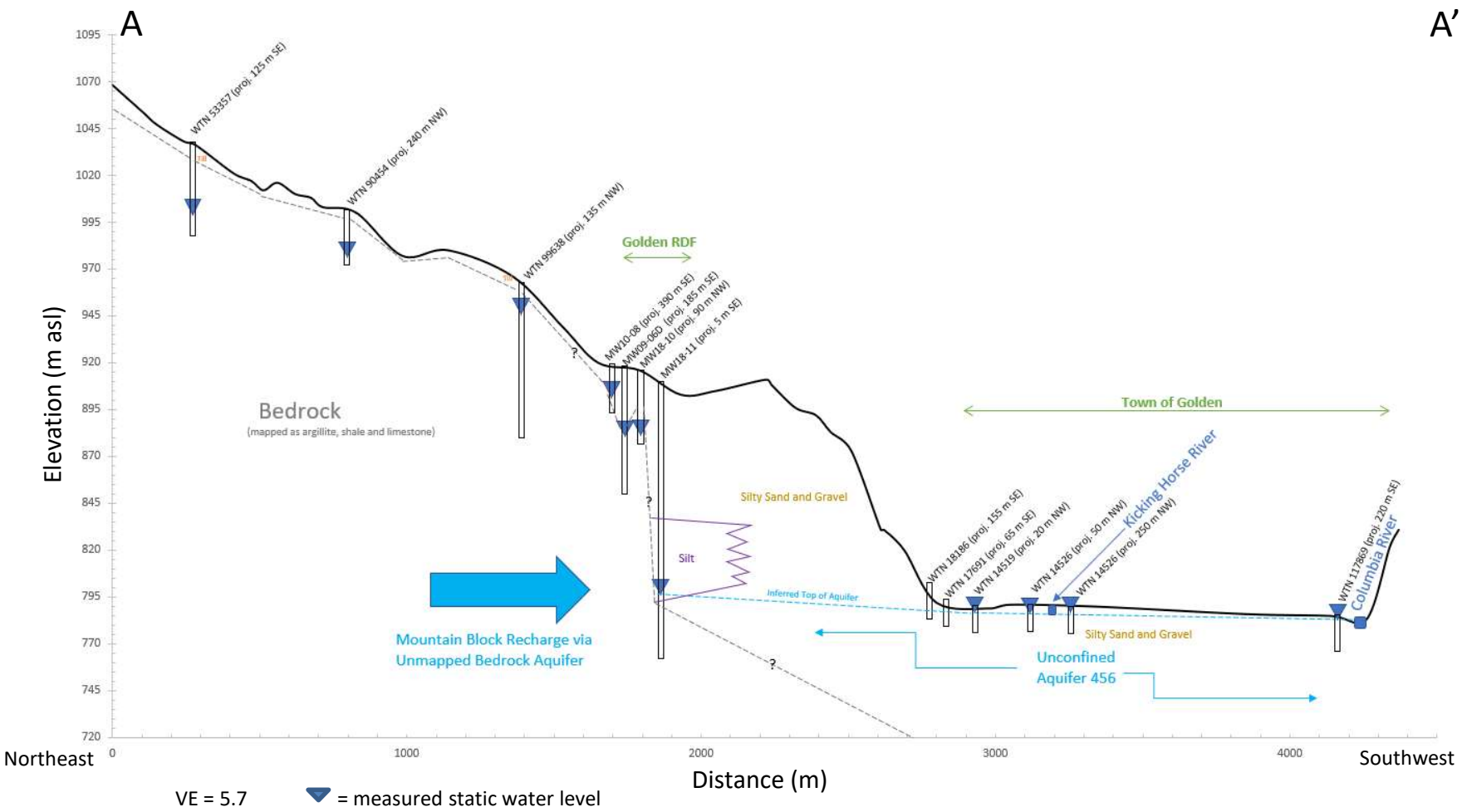
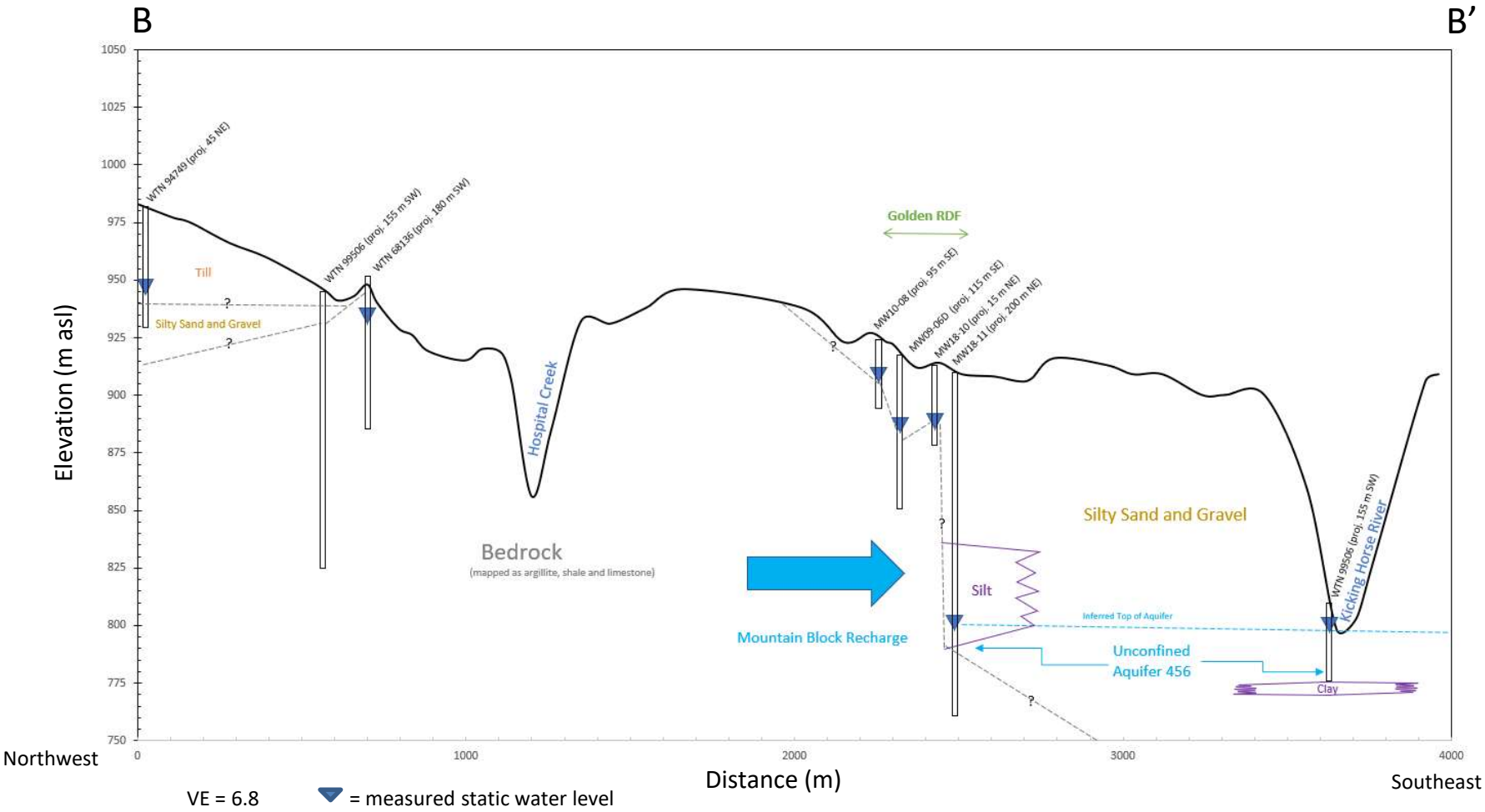
Meters



ECOSCAPE Environmental Consultants Ltd.	**NE to SW Conceptual Schematic Cross-section**	Project: Golden RDF Hydrogeological Reassessment
		Project No: 19-2850.06
Source: Google Earth and BC WRA	Client: CSRD	**Figure 3**



ECOSCAPE Environmental Consultants Ltd.	**NW to SE Conceptual Schematic Cross-section**	Project: Golden RDF Hydrogeological Reassessment
		Project No: 19-2850.06
Source: Google Earth and BC WRA	Client: CSRD	**Figure 4**

APPENDIX A OPERATIONAL CERTIFICATE

June 30, 2021

Tracking Number: 392781
Authorization Number: 17006

REGISTERED MAIL

Columbia Shuswap Regional District
Box 978
781 Marine Park Drive NE
Salmon Arm, BC V1E 4P1

Dear Operational Certificate Holder:

Enclosed is Amended Operational Certificate 17006 issued under the provisions of the *Environmental Management Act*. Your attention is respectfully directed to the terms and conditions outlined in the operational certificate. An annual fee will be determined according to the Permit Fees Regulation.

This operational certificate does not authorize entry upon, crossing over, or use for any purpose of private or Crown lands or works, unless and except as authorized by the owner of such lands or works. The responsibility for obtaining such authority rests with the operational certificate holder. It is also the responsibility of the operational certificate holder to ensure that all activities conducted under this authorization are carried out with regard to the rights of third parties, and comply with other applicable legislation that may be in force.

This decision may be appealed to the Environmental Appeal Board in accordance with Part 8 of the *Environmental Management Act*. An appeal must be delivered within 30 days from the date that notice of this decision is given. For further information, please contact the Environmental Appeal Board at (250) 387-3464.

...2

Ministry of Environment
Environmental Protection Division
401 - 333 Victoria St.
Nelson, BC V1L 4K3
Southern Interior Region - Kootenay
Telephone: (250) 354-6333
Facsimile: (250) 354-6332

Administration of this operational certificate will be carried out by staff from the Environmental Protection Division's Regional Operations Branch. Documents pertinent to the operational certificate are to be submitted by email or electronic transfer to the director, in accordance with the ministry Data & Report Submissions website at: http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions, or as further instructed.

If you have any questions or concerns, please contact Authorizations - South at Authorizations.South@gov.bc.ca.

Yours truly,

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South Region

MINISTRY OF ENVIRONMENT AND CLIMATE CHANGE STRATEGY

OPERATIONAL CERTIFICATE

17006

Under the Provisions of the Environmental Management Act

Columbia Shuswap Regional District

Box 978
781 Marine Park Drive NE
Salmon Arm, BC V1E 4P1

is authorized to manage waste and recyclable material from the Columbia Shuswap Regional District and environs at the Facility located near Golden, British Columbia, subject to the conditions listed below. Contravention of any of these conditions is a violation of the *Environmental Management Act* and may result in prosecution.

This Operational Certificate supersedes all previous versions of the Operational Certificate 17006 issued under the authority of the *Environmental Management Act.*

1. AUTHORIZED DISCHARGE REQUIREMENTS

1.1 Landfill

This section applies to the Landfill known as the GOLDEN LANDFILL. The site reference number for this discharge is E246600.

1.1.1 The maximum quantity of waste discharges must not exceed 7,050 tonnes per calendar year.

Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

1.1.2 The characteristics of the waste discharge to the Landfill must be:

(a) municipal solid waste,

(b) controlled waste consisting solely of animal carcasses, with special handling and control measures, as specified in the most recent Design, Operations and Closure Plan (DOCP), or,

(c) other waste as authorized in writing by the director,

(d) soil in which the concentrations of all substances are less than the lowest applicable industrial land use standard specified for those substances in

(i) the generic numerical soil standards,

(ii) the matrix numerical soil standards, or

(iii) a director's interim standard for soil,

referred to in section 41(1)(a) of the Contaminated Sites Regulation, B.C. Reg. 375/96,

but does not include:

(i) hazardous waste except as authorized pursuant to the Hazardous Waste Regulation, and,

(ii) waste and/or recyclable material prohibited in writing by the director.

1.1.3 The waste discharge is authorized to the landfill footprint of the Landfill approximately located as shown on Site Plan A.

1.1.4 The authorized works are a landfill footprint with a maximum area of 16 ha, final cover, and related appurtenances, approximately located as shown on Site Plan A.

1.1.5 The operational certificate holder must not discharge under this authorization unless the authorized works are complete and fully operational (excluding final cover in active landfilling areas), as per the most recent Design and Operations and Closure Plan, acknowledged under Section 2.4.

Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

1.2 Stormwater Management Works

This section applies to the to the management of stormwater from the Landfill.

1.2.1 The operational certificate holder must manage stormwater from the Landfill with the authorized works.

1.2.2 The authorized works are berms, french drains, ditches, perimeter road, perimeter ditches, culverts, sediment traps, stormwater pond, and related appurtenances, as specified in the most recent Design, Operations and Closure Plan (DOCP).

1.2.3 The operational certificate holder must not discharge under this authorization unless the authorized works are complete and fully operational.

1.3 Facility Entrance

This section applies to the Facility Entrance.

1.3.1 The authorized works are sign(s), gate, weigh scale, scale hut, waste and recyclable material drop-off and storage facilities, and related appurtenances approximately located as shown on Site Plan A.

1.3.2 The operational certificate holder must not discharge under this authorization unless the authorized works are complete and fully operational.

1.4 Location of Facility

This section applies to the location of the Facility.

1.4.1 The legal description of the location of the Landfill and Stormwater Management Works is Subdivision 12 of Section 18, Township 27, Range 21, West of the 5th Meridian, Kootenay District.

Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

2. DESIGN AND PERFORMANCE REQUIREMENTS

2.1 Glossary

Capitalized terms referred to in this authorization are defined in the Glossary below. Other terms used in this authorization have the same meaning as those defined in the *Environmental Management Act*, applicable regulations, and the Landfill Criteria;

"Attractant" means food or food waste, compost, carcass or part of an animal, fish, or other meat, or other waste or garbage, that could attract bears, birds, rodents, insects, vectors or wildlife, but does not include grass, leaves, weeds, branches and woodwaste;

"Electric Enclosure" means a bear-proof electric fence and electric gate(s), that surround the Facility;

"Facility" means the Golden landfill including all facilities and works on the Facility Site including the Landfill, Stormwater Management Works, Facility Entrance, and Electric Enclosure;

"Facility Entrance" means sign(s), gate, weigh scale, scale hut, waste and recyclable material drop-off and storage facilities;

"Facility Site" means the location of the Facility of this operational certificate;

"Facility Site Boundary" means the perimeter boundaries of the Facility Site;

"Landfill" means the authorized discharge site in section 1.1.4 of this operational certificate;

"Landfill Criteria" means the Landfill Criteria for Municipal Solid Waste Second Edition June 2016, as amended or replaced from time to time;

"Province" means Her Majesty the Queen in right of British Columbia;

"Regulatory Document" means any document that the operational certificate holder is required to cause to be prepared, prepare or submit to the director or the Province, pursuant to: (i) this authorization; (ii) any regulation made under the *Environmental Management Act* that regulates the Facility

described in this authorization or the discharge of waste from that Facility; or (iii) any order issued under the *Environmental Management Act* directed against the operational certificate holder that is related to the Facility described in this authorization or the discharge of waste from that Facility;

"Significant Works" means the Landfill, and Stormwater Management Works;

"Stormwater" means runoff from rainfall and snow melt.

"Stormwater Management Works" means the authorized works in section 1.2.2 of this operational certificate.

2.2 General Provisions

Where this Authorization provides that the director may require an action to be carried out, the operational certificate holder must carry out the action in accordance with the requirements of the director.

2.3 Use of Qualified Professional(s)

The operational certificate holder must cause a Qualified Professional to:

(a) Design and inspect the construction of the Facility,

(b) Certify documents related to the Facility including plans, specifications, drawings, construction reports, assessments, reviews, investigations, studies, surveys, programs, reports and as-built record drawings, and,

(c) Submit a completed Declaration of Competency and a Conflict of Interest Disclosure Statement with each document.

2.4 Design, Operation, and Closure Plan (DOCP)

(a) Receipt of the DOCP dated January 17, 2020, by Golder Associates Ltd., is acknowledged.

(b) The operational certificate holder must cause a Qualified Professional to certify and submit an updated DOCP for the Facility to the director, as necessary to keep the DOCP up to date, on or before December 31, 2025, and at least once every five years thereafter.

Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

(c) The updated DOCP must comply with the requirements of this operational certificate, and include the information specified in all the items listed in the Landfill Criteria Section 10.3 Design, Operations and Closure Plan, for the Facility, and, if a Water Quality Improvement Plan (WQIP) is required pursuant to section 3.5 of this operational certificate, conform with the most recent version of the WQIP.

(d) The operational certificate holder must carry out the most recent DOCP and design, construct, operate, inspect, maintain, monitor, and close the Facility, in compliance with most recent DOCP and this operational certificate.

2.4.1 **Stormwater Management Works**

The Operational Certificate Holder must provide an Implementation Schedule prepared by a Qualified Professional to the director for the design and implementation of the stormwater management works identified in the January 17, 2020 DOCP, Section 5.2 – Surface Water Management. The Implementation Schedule must be provided to the director at least 30 days prior to the commencement of construction of works or by August 31, 2021, whichever comes first.

The Operational Certificate Holder must then carry out the Implementation Schedule for the surface water management works and report on implementation progress in the Annual Report required under Section 5.1 until fully implemented.

2.5 **Construction Report(s)**

(a) The operational certificate holder must cause a Qualified Professional to:
(i) carry out inspections before and during the construction or modification of Significant Works, and,
(ii) certify construction report(s), on or before 30 days after the completion of construction or modification of Significant Works.

(b) The construction report(s) must demonstrate that the Significant Works have been constructed in accordance with this operational certificate and the most recent DOCP, describe any technical concerns that arose from the inspections and testing and how they were addressed, and include as-built record drawings of the constructed Significant Works, all the inspection and testing reports and results including geologic inspection report, quality

control and quality assurance testing, soil test data including field and laboratory data, as described in the Landfill Criteria section 10.2 Construction Report(s).

2.6 **Final Cover**

The operational certificate holder must ensure that:

(a) For final cover with a synthetic barrier layer:

(i) final cover slope grades for the Landfill are between 4% and 33%, and,

(ii) The final cover system includes from bottom to top a barrier layer consisting of a double sided textured geomembrane of minimum 1.0 mm thickness, or a geosynthetic clay liner, with hydraulic conductivity less than or equal to 1 x 10-7 cm/s, a drainage layer consisting of a non-woven geotextile or sand layer, a common fill layer of minimum 450 mm thickness, a topsoil layer of minimum 150 mm thickness, and vegetative cover.

(b) For final cover with a soil barrier layer:

(i) Final cover slope grades for the Landfill are between 10% and 33%, and,

(ii) The final cover system includes from bottom to top a soil barrier layer of minimum 600 mm thickness and hydraulic conductivity of less than or equal to 1 x 10-7 cm/s, a topsoil layer of minimum 150 mm thickness, and vegetative cover.

2.7 **Buffer Zone**

No new waste must be landfilled within 50 meters of the landfill site boundary.

2.7.1 **Screening**

The 30 meters closest to the landfill site boundary must be reserved for natural or landscaped screening (berm or vegetative screen).

2.8 Additional Requirements

The director may require the operational certificate holder to:

(a) Cause a Qualified Professional to certify and submit to the director additional, amended or improved documents of the Facility including plans, specifications, drawings, construction reports, assessments, reviews, investigations, studies, surveys, programs, reports and as-built record drawings.

(b) Carry out actions in accordance with the additional, amended or improved documents submitted, and additional actions as specified.

(c) Repair, alter, remove, improve or add to existing facilities and works, or construct new facilities and works, at the Facility.

3. OPERATING AND PERFORMANCE REQUIREMENTS

3.1 Multiple and/or Spare Works and Auxiliary Power Facilities

The operational certificate holder must provide and install multiple and/or spare works and auxiliary power facilities to ensure that the Facility is complete and fully operational as specified in this operational certificate, including during maintenance, breakdowns and electrical power outages.

3.2 Maintenance of the Facility

(a) The operational certificate holder must cause persons that are qualified and trained, to operate, regularly inspect, and maintain the Facility, in good working order. If components of the Facility have a manufacturer's recommended maintenance schedule, then those components must, at a minimum, be maintained in accordance with that schedule.

(b) The operational certificate holder must prepare documents of the qualification and training of the persons operating, inspecting and maintaining the Facility, and of Facility inspections, operation and maintenance.

3.3 Facility Manager and Operator Certification

(a) The operational certificate holder must ensure that at least one person responsible for the management of the Facility is certified, and maintains certification, by The Solid Waste Association of North America (SWANA) as a Manager of Landfill Operations, and at least one person responsible for the operation of the Facility has, within the preceding five years, successfully completed the SWANA Landfill Operations Basics course, on or before March 31, 2021, and at all times thereafter.

(b) The operational certificate holder must prepare documents of the SWANA certification and training of the person(s) responsible for the management and operation of the Facility.

3.4 Electric Enclosure

(a) The operational certificate holder must not allow a bear to access Attractants at the Facility or to enter the Electric Enclosure.

(b) The operational certificate holder must ensure that the Electric Enclosure are fully operational at all times bears may be present including April 15 – November 30 or otherwise specified by the director, except during temporary short-term periods during daylight, for maintenance, safety or operational reasons. If snow is present during the required operational period, any electrified strands above snow line must be isolated from the remainder of the system and energised.

(c) The operational certificate holder must operate the Electric Enclosure with a minimum voltage of 6,000 volts. The operational certificate holder must inspect the entire perimeter of the Electric Enclosure once per month including for evidence of bear activity (e.g. diggings, scat, etc.) and damage, and measure the voltage of the Electric Enclosure at a minimum of one point each day the Facility is open. If any measurements show a voltage of less than 6,000 volts, the operational certificate holder must immediately investigate the cause of the low voltage and immediately correct any issues that affect operation of the Electric Enclosure in accordance with the requirements of this authorization.

(d) The operational certificate holder must ensure that all gates are closed when the Facility is un-attended. The operational certificate holder may leave

a gate open while the Facility is continuously attended provided the gate is checked periodically for bear activity.

(e) The operational certificate holder must immediately report the presence of a bear within the Electric Enclosure, or any bear access to Attractants at the Facility, to the Conservation Officer Service, and immediately correct same.

(f) The operational certificate holder must prepare documents that demonstrate compliance with the preceding sub-sections including inspection logs, evidence of bear activity (e.g. diggings, scat, etc.), damage, voltage measurements, issues, causes, corrective actions, the presence of a bear within the Electric Enclosure, bear access to Attractants at the Facility, reports to the Conservation Officer Service.

3.5 **Water Quality Improvement Plan (WQIP)**

3.5.1 **Groundwater**

The operational certificate holder must include a WQIP in the Annual Operations and Monitoring Report required under section 5.4 of this operational certificate if the concentration of any substance in groundwater migrating from the Facility Site Boundary to a neighbouring site is greater than:

(a) the lowest Contaminated Sites Regulation Generic Numerical Water Standard, for the applicable water use(s), for that substance, or,

(b) if the local background concentration is greater than (a), the local background concentration of that substance.

3.5.1.1 The operational certificate holder must ensure that a Qualified Professional determines if the concentration of any substance in groundwater migrating from the Facility Site Boundary to a neighbouring site is greater than described in 3.5.1 (a) or (b).

3.5.1.2 The operational certificate holder must ensure that a Qualified Professional determines the applicable water use(s) in accordance with the latest approved version of Protocol 21 for Contaminated Sites, Water Use Determination.

3.5.1.3 If 3.5.1 (b) applies, the operational certificate must ensure that a Qualified Professional determines the local background

concentration of substance(s) in accordance with the latest approved version of Protocol 9 for Contaminated Sites, Determining Background Groundwater Quality or another method recommended by a Qualified Professional.

3.5.2 **Stormwater and Surface Water**

The operational certificate holder must include a WQIP in the Annual Operations and Monitoring Report required under section 5.4 of this operational certificate if the concentration of any substance in the stormwater or the surface water flowing from the Facility Site Boundary to a neighbouring site is of worse quality than:

(a) the applicable long-term average, short-term maximum, maximum allowable concentration, maximum acceptable concentration, or aesthetic objective, specified in the British Columbia Approved and Working Water Quality Guidelines, for the applicable water use(s), for that substance, or,

(b) if the local background concentration is of worse quality than (a), the local background concentration of that substance.

3.5.2.1 The operational certificate holder must ensure that a Qualified Professional determines if the concentration of any substance in the stormwater or the surface water flowing from the Facility Site Boundary to a neighbouring site is of worse quality than described in 3.5.2 (a) or (b).

3.5.2.2 The operational certificate holder must ensure that a Qualified Professional determines the applicable water use(s) and the applicable long-term average, short-term maximum, maximum allowable concentration, maximum acceptable concentration, and aesthetic objective, specified in the British Columbia Approved and Working Water Quality Guidelines, for the applicable water use(s), for substances.

3.5.2.3 If 3.5.2 (b) applies, the operational certificate holder must ensure that a Qualified Professional determines the local background concentration of substance(s).

3.5.3 **Plan and Implementation Schedule**

A WQIP must include a plan, details and implementation schedule to:

(a) investigate and determine the cause(s) of the water quality exceedances,
(b) investigate and determine the locations of the water quality exceedances at and beyond the Facility Site Boundary,
(c) assess and determine the environmental and human health impacts at and beyond the Facility Site Boundary,
(d) determine and carry out actions to improve water quality at and beyond the Facility Site Boundary,
(e) specify and carry out an environmental monitoring plan at and beyond the Facility Site Boundary, and,
(f) notify affected neighbouring site owners including a description of the WQIP.

3.5.4 **Implementation**

The operational certificate holder must implement the most recent WQIP.

3.6 **Water Quality Standards**

The operational certificate holder must ensure that groundwater migrating from the Facility Site Boundary to a neighbouring site, and stormwater and surface water flowing from the Facility Site Boundary to a neighbouring site, do not cause pollution, or adverse effects on human health, on a neighbouring site.

3.7 **Nuisance**

The operational certificate holder must ensure that the Facility does not cause a nuisance including with regard to birds, rodents, insects, odour, noise, dust, litter, vector and wildlife attraction.

3.7.1 **Litter, Birds, and Wildlife**

Litter fencing must be set up around the active face when waste is being deposited such that the spread of litter is minimized.

Daily cover must be adequate to prevent wildlife from accessing waste near the active face, after the landfill operating hours. Intermediate cover, of at

least 300 mm thickness, which may include the 150 mm required daily cover thickness, should be installed in areas not actively being filled to discourage wildlife from accessing the waste.

Records of litter collection efforts including photographs, must be kept on site for the past 2 years of operation. A summary of the collection efforts must also be included in the Annual Report required in Section 5.1.

The Operational Certificate holder must cause a Qualified Professional to conduct and certify an assessment of the issue of wildlife habituation within the landfill site boundary and litter dispersion at this landfill by August 31, 2021. The OC holder must carry out mitigating measures to address wildlife habituation and litter dispersion, assess their effectiveness and report on findings and ongoing recommendations, as applicable, in the Annual Report required in Section 5.4.

3.8 **Complaints**

The operational certificate holder must prepare documents of complaints with regard to matters relevant to this operational certificate, including environmental, bear, and nuisance complaints. These documents must include the source and nature of the complaint, actions, responses, and corresponding dates and times.

3.9 **Regulatory Documents**

(a) The operational certificate holder must retain all Regulatory Documents.

(b) The operational certificate holder must retain all Regulatory Documents for the last seven years at the Facility and such documents must be available for immediate inspection at the Facility by a director or an officer.

(c) If requested by a director or an officer, the operational certificate holder must submit the requested Regulatory Documents to the director or officer within 14 days of the request.

4. MONITORING REQUIREMENTS

4.1 Monitoring and Sampling Facilities

The operational certificate holder must install and maintain, measurement, monitoring and sampling facilities for waste, leachate, effluent, groundwater, stormwater, surface water and landfill gas, in compliance with, and including at locations specified in, the most recent DOCP and WQIP.

4.2 Monitoring and Sampling

The operational certificate holder must carry out measurement, monitoring and sampling of waste, leachate, effluent, groundwater, stormwater, surface water and landfill gas, in compliance with, and including at frequencies and for substances specified in, the most recent DOCP and WQIP.

4.3 Sampling Procedures

The operational certificate holder must carry out sampling in accordance with the procedures described in the "British Columbia Field Sampling Manual for Continuous Monitoring and the Collection of Air, Air-Emission, Water, Wastewater, Soil, Sediment, and Biological Samples, 2013 Edition (Permittee)" or most recent edition, or by alternative procedures as authorized by the director. A copy of the above manual is available on the Ministry web page at https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance.

4.4 Analytical Procedures

The operational certificate holder must carry out analyses in accordance with procedures described in the "British Columbia Laboratory Manual (2015 Permittee Edition)", or the most recent edition or by alternative procedures as authorized by the director. A copy of the above manual is available on the Ministry web page at https://www2.gov.bc.ca/gov/content/environment/research-monitoring-reporting/monitoring/laboratory-standards-quality-assurance.

4.5 Quality Assurance

(a) The operational certificate holder must obtain from the analytical laboratory(ies) their precision, accuracy and blank data for each sample set

submitted by the operational certificate holder and an evaluation of the data acceptability, based on criteria set by such laboratory.

(b) The operational certificate holder must prepare and submit for analysis by the analytical laboratory(ies) a duplicate sample for each parameter sampled at each monitoring site and each monitoring period.

(c) The operational certificate holder must submit samples to analytical laboratory(ies) that meet the definition of a qualified laboratory under the Environmental Data Quality Assurance Regulation.

4.6 Data Uploading

The operational certificate holder must cause the analytical laboratory(ies) to upload monitoring and analytical data required by this operational certificate, to the Ministry's Environmental Monitoring System (EMS) database, on or before 30 days after the data is available, or as further instructed by the director.

5. REPORTING REQUIREMENTS

5.1 Electronic Reporting

The operational certificate holder must submit all data required to be submitted under this section by email to the Ministry's Routine Environmental Reporting Submission Mailbox (RERSM) at Envauthorizationsreporting@gov.bc.ca or as otherwise instructed by the director. For guidelines on how to properly name the files and email subject lines or for more information visit the Ministry website: https://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/routine-environmental-reporting-submission-mailbox.

5.2 Non-compliance Notification

The operational certificate holder must immediately notify the director by email at EnvironmentalCompliance@gov.bc.ca, or as otherwise instructed by the director of any non-compliance with the requirements of this Authorization and must immediately take remedial action to remedy any effects of such non-compliance.

Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

Potential non-compliances include but are not limited to fires, or detection of surfacing leachate on the property.

5.3 Non-compliance Reporting

The operational certificate holder must, within 30 days of any non-compliance event, submit to the director a written report that includes, but is not necessarily limited to, the following:

(a) all relevant test results obtained by the operational certificate holder related to the non-compliance,

(b) an explanation of the most probable cause(s) of the non-compliance, and

(c) a description of remedial action planned and/or taken by the operational certificate holder to prevent similar non-compliance(s) in the future.

The operational certificate holder must submit all non-compliance reporting required to be submitted under this section by email to the Ministry's Compliance Reporting Submission Mailbox (CRSM) at EnvironmentalCompliance@gov.bc.ca or as otherwise instructed by the director. For guidelines on how to report a non-compliance or for more information visit the Ministry website: http://www2.gov.bc.ca/gov/content/environment/waste-management/waste-discharge-authorization/data-and-report-submissions/non-compliance-reporting-mailbox.

5.4 Annual Operations and Monitoring Report

(a) The operational certificate holder must cause a Qualified Professional to certify and submit an Annual Operations and Monitoring Report, for the preceding calendar year, to the director on or before March 31 of each year.

(b) The Annual Operations and Monitoring Report must include the following information:
Operations Report:

(i) Tonnages and categories of waste and recyclable material received at the Facility, and how they were managed,
(ii) Tonnages and categories of waste discharged to the Landfill,
(iii) Remaining volume and life of the Landfill;

(iv) Summary of DOCP implementation;
(v) Summary of screening/revegetation efforts;
(vi) Summary of construction report(s);
(vii) Summary of Electric Enclosure inspection logs, issues, causes, corrective actions, and reports to the Conservation Officer Service;
(viii) Summary of complaints and nuisances;
(ix) Summary of non-compliance notifications and non-compliance reporting;
(x) For the next calendar year, summary of planned DOCP implementation and construction of Significant Works,

Environmental Monitoring Plan Report:

(xi) Site plan(s), sampling locations, stormwater and surface water flow paths, groundwater elevations, gradients and flow directions;
(xii) Measurement, monitoring and sampling facilities, locations, frequencies, substances, sampling and analytical procedures, quality assurance and quality control;
(xiii) Data including laboratory analysis and quality assurance and quality control results;
(xiv) Data tabulation, trend analysis, graphs, diagrams, and interpretation;
(xv) Discussion and determinations required by section 3.5 of this operational certificate,
(xvi) Discussion and determination of compliance with section 3.6 of this operational certificate,
(xvii) Discussion and determination of compliance with section 3.7 of this operational certificate,
(xviii) Results, conclusions, recommendations and changes to the environmental monitoring plan.

Water Quality Improvement Plan (WQIP):

(xviii) If required by section 3.5 of this operational certificate, a WQIP, and implementation status, results, and a copy of any notification(s) to affected neighbouring site owner(s).

Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

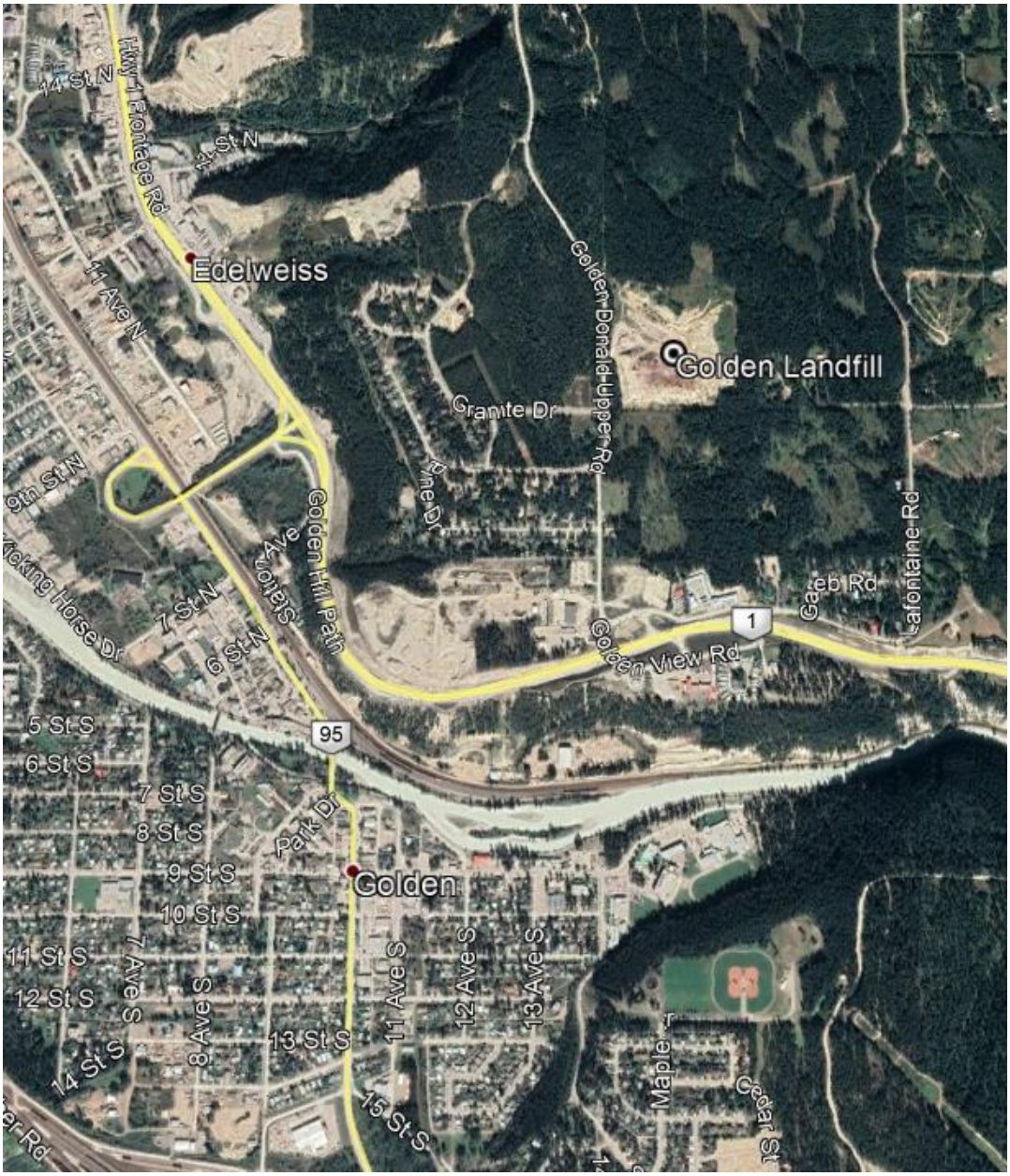
5.5 **Publication of Documents**

The Ministry of Environment and Climate Change Strategy publishes Regulatory Documents on its website for the purpose of research, public education and to provide transparency in the administration of environmental laws. The operational certificate holder acknowledges that the Province may publish any Regulatory Documents submitted by the operational certificate holder, excluding information that would be exempted from disclosure if the document was disclosed pursuant to a request under section 5 of the *Freedom of Information and Protection of Privacy Act*, and the operational certificate holder consents to such publication by the Province.

Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

Area Map



Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

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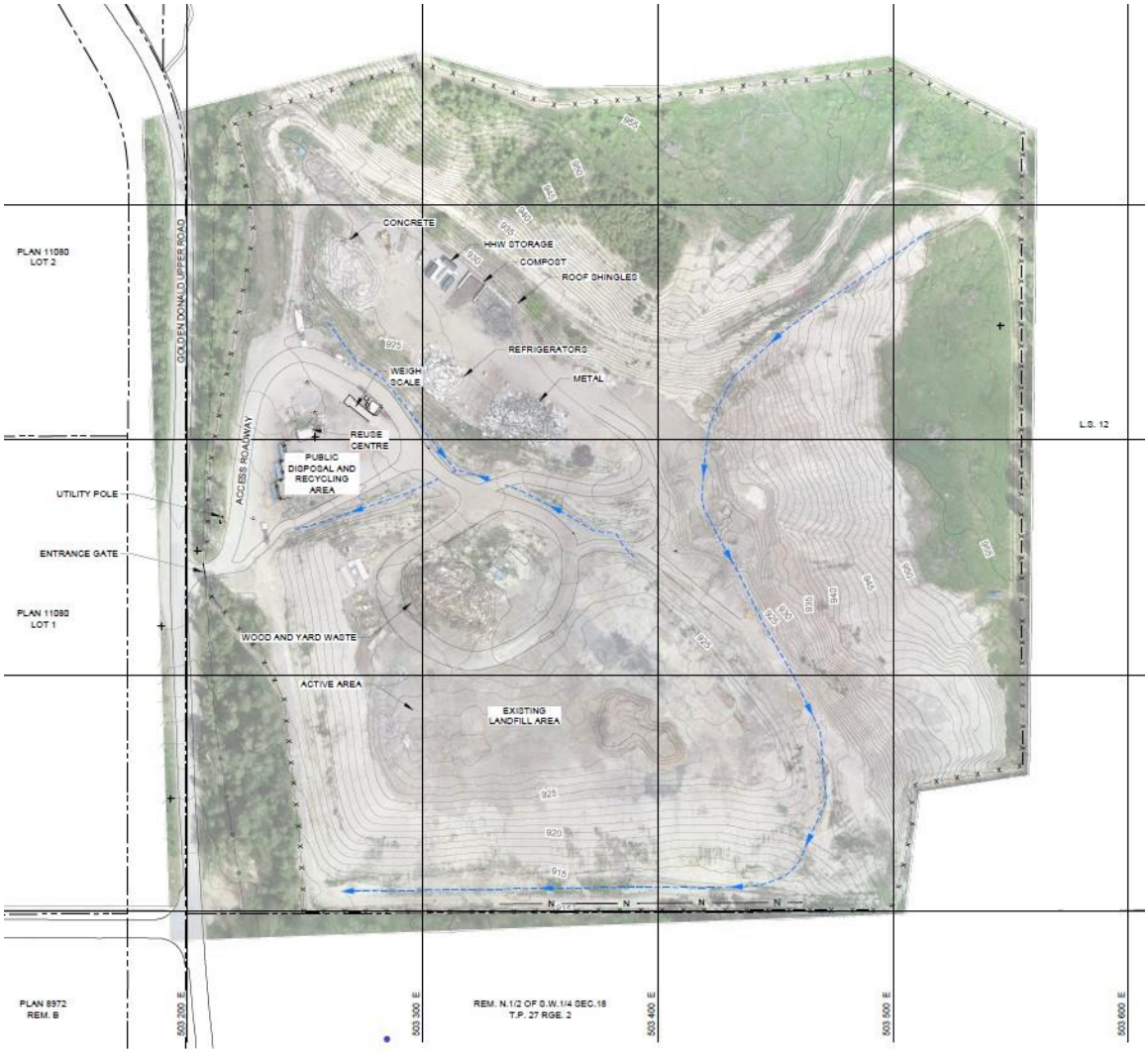
for Director, *Environmental Management Act*
Authorizations - South

Site Plan A



Date issued: May 5, 2003
Date amended: June 30, 2021
(most recent)

Carol Danyluk, P.Eng.
for Director, *Environmental Management Act*
Authorizations - South

APPENDIX B WELL LOGS

MODIFIED UNIFIED CLASSIFICATION SYSTEM FOR SOILS

MAJOR DIVISION			GROUP SYMBOL	GRAPH SYMBOL	COLOR CODE	TYPICAL DESCRIPTION	LABORATORY CLASSIFICATION CRITERIA
COARSE-GRAINED SOILS (MORE THAN HALF BY WEIGHT LARGER THAN 200 SIEVE)	GRAVELS (MORE THAN HALF COARSE GRAINS LARGER THAN NO 4 SIEVE)	CLEAN GRAVELS (LITTLE OR NO FINES)	GW		RED	WELL GRADED GRAVELS, LITTLE OR NO FINES	$C_U = \frac{D_{60}}{D_{10}} > 4$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1$ to 3
			GP		RED	POORLY GRADED GRAVELS, AND GRAVEL-SAND MIXTURES, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS
		DIRTY GRAVELS (WITH SOME FINES)	GM		YELLOW	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%: ATTERBERG LIMITS BELOW "A" LINE OR P.I. LESS THAN 4
			GC		YELLOW	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES	CONTENT OF FINES EXCEEDS 12%: ATTERBERG LIMITS ABOVE "A" LINE P.I. MORE THAN 7
	SANDS (MORE THAN HALF FINE GRAINS SMALLER THAN NO 4 SIEVE)	CLEAN SANDS (LITTLE OR NO FINES)	SW		RED	WELL GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES	$C_U = \frac{D_{60}}{D_{10}} > 6$ $C_C = \frac{(D_{30})^2}{D_{10} \times D_{60}} = 1$ to 3
			SP		RED	POORLY GRADED SANDS, LITTLE OR NO FINES	NOT MEETING ABOVE REQUIREMENTS
		DIRTY SANDS (WITH SOME FINES)	SM		YELLOW	SILTY SANDS, SAND-SILT MIXTURES	CONTENT OF FINES EXCEEDS 12%: ATTERBERG LIMITS BELOW "A" LINE P.I. LESS THAN 4
			SC		YELLOW	CLAYEY SANDS, SAND-CLAY MIXTURES	CONTENT OF FINES EXCEEDS 12%: ATTERBERG LIMITS ABOVE "A" LINE P.I. MORE THAN 7
FINE-GRAINED SOILS (MORE THAN HALF BY WEIGHT PASSES 200 SIEVE)	SILTS (BELOW "A" LINE NEGLIGIBLE ORGANIC CONTENT)	$W_L < 50\%$	ML		GREEN	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY SANDS OF SLIGHT PLASTICITY	CLASSIFICATION IS BASED UPON PLASTICITY CHART (see below)
		$W_L > 50\%$	MH		BLUE	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS	
	CLAYS (ABOVE "A" LINE ON PLASTICITY CHART NEGLIGIBLE ORGANIC CONTENT)	$W_L < 30\%$	CL		GREEN	INORGANIC CLAYS OF LOW PLASTICITY, GRAVELLY, SANDY, OR SILTY CLAYS, LEAN CLAYS	
		$30\% < W_L < 50\%$	CI		GREEN-BLUE	INORGANIC CLAYS OF MEDIUM PLASTICITY, SILTY CLAYS	
		$W_L > 50\%$	CH		BLUE	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS	
	ORGANIC SILTS & CLAYS (BELOW "A" LINE ON CHART)	$W_L < 50\%$	OL		GREEN	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY	WHENEVER THE NATURE OF THE FINE CONTENT HAS NOT BEEN DETERMINED, IT IS DESIGNATED BY THE LETTER "F", E.G. SF IS A MIXTURE OF SAND WITH SILT OR CLAY
		$W_L > 50\%$	OH		BLUE	ORGANIC CLAYS OF HIGH PLASTICITY	
HIGHLY ORGANIC SOILS			Pt		ORANGE	PEAT AND OTHER HIGHLY ORGANIC SOILS	STRONG COLOR OR ODOR, AND OFTEN FIBROUS TEXTURE

SPECIAL SYMBOLS

BEDROCK (Undifferentiated)

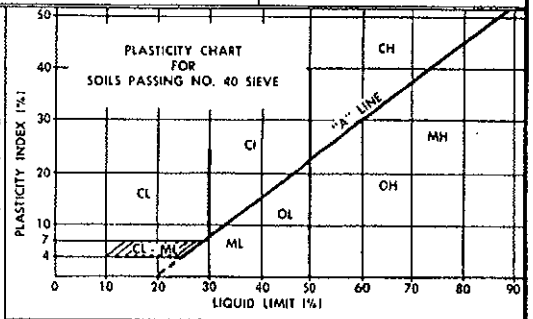
VOLCANIC ASH

SOIL COMPONENTS

FRACTION	U S STANDARD SIEVE SIZE		DEFINING RANGES OF PERCENTAGE BY WEIGHT OF MINOR COMPONENTS	
	PASSING	RETAINED	PERCENT	DESCRIPTOR
GRAVEL			50 - 35	and
coarse	76 mm	19 mm		
fine	19 mm	No 4	35 - 20	some
SAND				
coarse	4.75 mm	2.00 mm	20 - 10	little
medium	2.00 mm	425 μm		
fine	425 μm	75 μm	10 - 1	trace
SILT (non plastic) or CLAY (plastic)	75 μm			

OVERSIZE MATERIAL

Rounded or subrounded	Not rounded
COBBLES 76 mm to 203 mm	ROCK FRAGMENTS > 76 mm
BOULDERS > 203 mm	ROCKS > 0.76 cubic metre in volume



1. ALL SIEVE SIZES MENTIONED ON THIS CHART ARE U.S. STANDARD, A.S.T.M. E.11.
2. BOUNDARY CLASSIFICATIONS POSSESSING CHARACTERISTICS OF TWO GROUPS ARE GIVEN COMBINED GROUP SYMBOLS, E.G. GW-GC IS A WELL GRADED GRAVEL SAND MIXTURE WITH CLAY BINDER BETWEEN 5% AND 12%.

Kala Groundwater Consulting Ltd.
Vernon Kamloops

Testhole Log - TH95-01	
Depth (m)	**Soil Description**
0-5.8	**Silt**-and fine sand, little gravel fine to coarse, iso. cobbles, non-plastic, dense, yellow/brown, moist.
5.8-6.71	**Silt**-and sand fine to medium, some gravel fine to coarse, non-plastic, hard, grey, moist.
6.71-8.54	**Silt**-and fine sand, trace coarse sand, trace gravel, fine to coarse, iso. cobbles, non-plastic, gre/brown, hard, moist.
8.54-11.3	**Silt**-and fine sand, trace gravel, fine to coarse, non-plastic, iso. cobbles, grey, hard, moist.
11.3-14.9	**Silt**-some fine sand, trace gravel, fine to coarse, occ. cobbles, non-plastic, red/brown, hard, damp.
14.9-18.9	**Clay**-and silt, trace fine sand, trace fine gravel, iso. cobbles, low to none plastic, grey, hard, moist.
	End of TH95-01 at 18.9m - No groundwater seepage - Monitoring Well installed

Testhole Log - TH95-02	
Depth (m)	**Soil Description**
0-9.76	**Sand**-fine and silt, some gravel fine to coarse, occ. cobbles, dense, light brown, damp. *Upper 0.3m fill*
9.76-12.8	**Sand**-afine and silt, some gravel fine to coarse, iso. cobbles, dense, red/brown, moist.
12.8-15.5	**Sand**-fine, some silt, some gravel fine to coarse, occ. cobbles. dense, red/brown, moist.
15.5-16.5	**Silt**-some fine sand, trace gravel, fine to coarse, non-plastic, iso. grey/brown, cobbles, stiff, moist.
16.5-20.1	**Silt**-little fine sand, trace clay, trace gravel, fine to coarse, occ. cobbles, non-plastic, red/brown, hard, damp.
20.1-22.9	**Silt** - some sand, fine to coarse, trace gravel fine to coasre, iso. cobbles, grey, very hard, non-plastic,
	End of TH95-02 at 22.9m - No groundwater seepage - Monitoring Well installed

Testhole Log - TH95-03	
Depth (m)	**Soil Description**
0-8.54	**Silt**-some fine sand, some gravel, fine to coarse, iso. cobbles, non-plastic, red/brown, dense, damp
8.54-11.3	**Silt**-and fine sand, trace gravel, fine to coarse, non-plastic, iso. cobbles, grey, hard, moist
11.3-15.5	**Silt**-some fine sand, trace gravel, fine to coarse, non-plastic, grey/brown, hard, moist
15.5-18.3	**Sand**-fine and silt, some gravel fine to coarse, occ. cobbles, dense, light brown, damp.
	End of TH95-03at 18.3m - No groundwater seepage -Monltoring Well installed

Testhole Log - TH95-04	
Depth (m)	**Soil Description**
0-3.35	**Silt**-and fine sand, trace gravel fine to coarse, occ. cobbles, non-plastic, dense, yellow/brown, damp.
3.35-5.49	**Gravel**-fine to coarse, and silt, trace sand fine to coarse, occ. cobbles, light brown, moist.
5.49-11.0	**Silt**-and fine sand, trace coarse sand, trace gravel, fine to coarse, iso. cobbles, non-plastic, gre/brown, hard, moist.
11.0-12.8	**Sand**-fine to medium, and gravel, fine to coarse, iso. cobbles, trace silt, dense, red/brown, moist.
12.8-17.7	**Sand**- fine to medium, and silt, little gravel fine to coarse, iso. cobbles, brown, hard, moist.
17.7-30.48	**Sand** - fine and silt, trace gravel, fine to coarse, brown, hard, moist.
	End of TH95-04 at 26.2m - No groundwater seepage - Monitoring Well installed

Testhole Log - TH95-05	
Depth (m)	**Soil Description**
0-1.3	**Silt**-and fine sand, little gravel fine to coarse, iso. cobbles, non- plastic, dense, yellow/brown, moist.
1.3-3.1	**Waste**-municipal debris, paper,tin plastics,mixed with soil, damp.
3.1-3.4	**Sand**-fine to medium, some silt, little gravel, fine to coarse, compact, brown, moist.
3.4-5.1	**Waste**-municipal debris, paper,tin plastics,mixed with soil, damp.
5.1-5.4	**Sand**-fine to medium, some silt, little gravel, fine to coarse, compact, brown, moist.
5.4-6.2	**Waste**-municipal debris, paper,tin plastics,mixed with soil, damp.
6.2-7.1	**Sand**-fine to medium, some silt, little gravel, fine to coarse, compact, brown, moist.
	End of TH5 at 7.1m no groundwater-temporary installation

KALA GROUNDWATER CONSULTING LTD. TESTHOLE LOG

CLIENT:	RCP	PROJECT:	Hydrogeologial	TESTHOLE:	BH95-02
LOCATION:	Golden Landfill		Assessment - Golden BC	PROJECT NO:	KE95-057
DRILL RIG:	Becker Hammer	SURF ELV:	914.0m ASL	CO-ORDINATES:	

DEPTH (m) ELV. (m)	INDEX: 0 20 40 60 80 100 120 140	Plot	SOIL DESCRIPTION	Lab Test	SAMPLES		COMPLETION DETAILS
Grass					Depth (m)	N	Stickup 1.2m
	0-9.76		**Sand**-fine and silt, some gravel fine to coarse, occ. cobbles, dense, light brown, damp. *Upper 0.3m fill*		AR1 1.5		50mm dia. Solid pipe
2.0 912							
					AR2 3.0		Bentonite Grout
4.0 910							
					AR3 4.5		
6.0 908							Top 6.0m
					AR4 6.0		
					D1 6.5/6.95	50	
8.0 906							
					AR5 7.5		
	9.76-12.8		**Sand**-fine and silt, some gravel fine to coarse, iso. cobbles, dense, grey, moist.				
10.0 904							Sand
					AR6 10.0		
12.0 902							
					AR7 11.5		
	12.8-15.5		**Sand**-fine, some silt, some gravel fine to coarse, occ. cobbles. dense, red/brown, moist.		AR8 13.0		0.010"
14.0 900					D2 13.5/13.9	50	slotted
					AR9 14.0		pipe
	15.5-16.5		**Silt**-some fine sand, trace gravel, fine to coarse, non-plastic, iso. grey/brown, cobbles, stiff, moist.				
16.0 898					AR10 15.0		
	16.5-20.1		**Silt**-little fine sand, trace clay, trace gravel, fine to coarse, occ. cobbles,. non-plastic, red/brown, hard, damp				
18.0 896					AR11 16.5		
					AR12 18.0		
20.0 894							
	20.1-22.9		Silt - some sand, fine to coarse, trace gravel fine to coarse, iso.cobbles, grey, very hard, non-plastic, moist. *End of TH95-01 at 18.9m - No groundwater seepage Well installed*		D3 20/20.45	80	
22.0 892							Well base 22.9m

Prepared by: Paul Blackett	Reviewed by:	Figure:
Groundwater Depth: no groundwater	Borehole Depth: 22.9m below surface	Date: 10/9/95

KALA GROUNDWATER CONSULTING LTD. TESTHOLE LOG

CLIENT: RCP	PROJECT: Hydrogeologial	TESTHOLE:	BH95-03
LOCATION: Golden Landfill	Assessment - Golden BC	PROJECT NO:	KE95-057
DRILL RIG: Becker Hammer	SURF ELV: 908.5m ASL.	CO-ORDINATES:	

DEPTH (m) ELV. (m)	INDEX: METHANE %	Plot	SOIL DESCRIPTION	Lab Test	SAMPLES		COMPLETION DETAILS
	0 5 10 15 20				Depth (m)	N	Stickup 1.2m
Gravel							
	0-8.54		**Silt**-some fine sand, some gravel, fine to coarse, iso. cobbles, non-plastic, red/brown, dense, damp		AR1 1.5		50mm dia. Solid pipe
2.0 906.5							Bentonite Grout
					AR2 3.0		
					D1 3.5/3.95	50	
4.0 904.5							
					AR3 4.5		
6.0 902.5							Top 6.0m
					AR4 6.0		
					D2 6.5/6.95	50	
8.0 900.2							
	8.54-11.3		**Silt**-and fine sand, trace gravel, fine to coarse, non-plastic, iso. cobbles, grey, hard, moist.		AR5 7.5		
10.0 898.2							Sand
	11.3-15.5		**Silt**-some fine sand, trace gravel, fine to coarse, non-plastic, grey/brown, hard, moist		AR6 10.0		
12.0 896.2							
					AR7 11.5		
14.0 894.2					AR8 13.0		0.010" slotted pipe
					D3 13.5/13.9	50	
					AR9 14.0		
16.0 892.2	15.5-18.3		**Sand**-fine and silt, some gravel fine to coarse, occ. cobbles, dense, light brown, damp.		AR10 15.0		
					D4 16/16.45	75	
18.0 890.2					AR11 16.5		
					AR12 18.0		
			End of TH95-01 at 18.3m - No groundwater seepage Monitoring Well installed				18.3m
20.0 888.2							
22.0							

Prepared by: Paul Blackett	Reviewed by:	Figure: 3
Groundwater Depth: no groundwater	Borehole Depth: 18.3m below surface	Date: 10/9/95

KALA GROUNDWATER CONSULTING LTD. TESTHOLE LOG

CLIENT: RCP	PROJECT: Hydrogeologial	TESTHOLE:	BH95-04
LOCATION: Golden Landfill	Assessment - Golden BC	PROJECT NO:	KE95-057
DRILL RIG: Becker Hammer	SURF ELV: 916.9m ASL.	CO-ORDINATES:	

DEPTH (m) ELV. (m)	INDEX: METHANE %	Plot	SOIL DESCRIPTION	Lab Test	SAMPLES		COMPLETION DETAILS
	0 5 10 15 20				Depth (m)	N	Stickup 1.2m
Grass							
	0-3.35		Silt-and fine sand, trace gravel fine to coarse, occ. cobbles, non-plastic, dense, yellow/brown, damp.		AR1 1.5		50mm dia. Solid pipe
2.0 914.9							
					AR2 3.0		Bentonite Grout & backfill
					D! 3.5/3.95	35	
4.0 912.9	3.35-5.49		Gravel-fine to coarse, and silt, trace sand fine to coarse, occ. cobbles, light brown, moist.				
					AR3 4.5		
6.0 910.9	5.49-11.0		Silt-and fine sand, trace coarse sand, trace gravel, fine to coarse, iso. cobbles, non-plastic, grey/brown, hard, moist.				
					AR4 6.0		
					D2 6.5/6.95	50	
8.0 908.9							
					AR5 7.5		
10.0 906.9							Sand
					AR6 10.0		
	11.0-12.8		Sand-fine to medium, and gravel, fine to coarse, iso. cobbles, trace silt, dense, red/brown, moist.		D3 10/10.45	45	
12.0 904.9							
					AR7 11.5		
	12.8-17.7		Sand- fine to medium, and silt, little gravel fine to coarse, iso. cobbles, brown, hard, moist.				
14.0 902.9					AR8 13.0		0.010"
					D2 13.5/13.9	50	slotted
					AR9 14.0		pipe
16.0 900.2							
					AR10 15.0		
					D4 15/15.45	70	
					AR11 16.5		
18.0 898.2	17.7-30.48		Sand - fine and silt, trace gravel, fine to coarse, brown, hard, moist.				
					AR12 18.0		
					AR13 22.0		
20.0 896.2							
					AR 14 25.0		Top 20.0m
			End of TH95-01 at 30.48m - No groundwater seepage		AR15 27.5		
30.0 894.2			*Monitoring Well installed*		AR 16 30.0		Bot 30.5m

Prepared by: Paul Blackett	Reviewed by:	Figure:
Groundwater Depth: no groundwater	Borehole Depth: 30.5m below surface	Date: 10/9/95

Symbol Legend

Common Symbols


Sand


Silty Sand


Sandy Silt


Clayey Sand


Sand and Gravel


Gravel


Silt


Clayey Silt


Clay


Silty Clay


Sandy Silty Clay


Silty Sand and Gravel


Silty Gravel


Silty Clay and Gravel


Topsoil


Peat


Limestone


Shale

Well Symbols

Pipe and Screen

NONE None


Pipe


Double Walled Pipe


Sealed Pipe


Fine Screen


Coarse Screen


Slotted Screen


Slotted Screen

Top Fittings

NONE None


Cap


Flush-mounted Cap


Above-ground Cap


Connector


Reducer


Pipe Break


Packer

Bottom Fittings

NONE None


Cap


Cone


Screw-on Cap


Connector


Enlarger


Pipe Break


Packer

Packing and Backfill

NONE None


Bentonite

Clay

Silt

Cement

Sand

Sand and Gravel

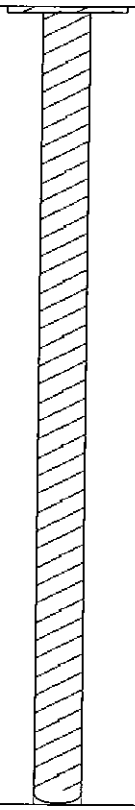
Gravel

Project No: 7130-010.01 | *Test Hole / Borehole I.D.:* TH3

Client: CSRD | *Well I.D.:* TH-3 (well closure)

Location: Golden, BC | *Location on site:* on Golden-Donald Upper Rd

Logged by/ Checked by: BRM/ MG | *Northing/ Easting/ Elevation:* 0

SUBSURFACE PROFILE			SAMPLE				
Depth (ft / m)	Symbol	Description	Type	I.D.	Flag for analysis	Well Details	Well Completion Details / Remarks
0 ft / 0 m		Ground Surface					
10 ft / 3 m						TH-3 was replaced by MW-7. TH-3 was decommissioned according to the Groundwater Protection Regulation. The surface casing was removed, the 2" piezometer was cut approximately 4" below ground surface and bentonite chips were poured into the casing. Bentonite was poured around the outer annulus of the piezometer to bring the hole to ground surface.	
20 ft / 6 m							
30 ft / 10 m							
40 ft / 12 m							
50 ft / 15 m							
60 ft / 18 m		End of Borehole					
70 ft / 20 m							

SUMMIT ENVIRONMENTAL CONSULTANTS LTD.

Contractor: JR Drilling
Operator(s): Jerry
Drill Method:
Ground conditions: bare

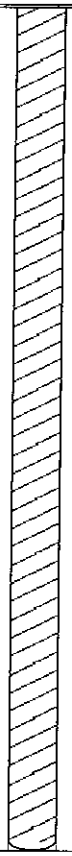
Date: April 20, 2009
Time:
Temperature: 10 degC
Sheet: 1 of 1

Project No: 7130-010.01 | *Test Hole / Borehole I.D.:* TH4

Client: CSRD | *Well I.D.:* TH-4 (well closure)

Location: Golden, BC | *Location on site:* near weight scale

Logged by/ Checked by: BRM/ MG | *Northing/ Easting/ Elevation:* 0

SUBSURFACE PROFILE			SAMPLE				
Depth	Symbol	Description	Type	I.D.	Flag for analysis	Well Details	Well Completion Details / Remarks
0 ft / 0 m		Ground Surface					
10 ft / 3 m						TH-4 was replaced by MW-6S. TH-4 was decommissioned according to the Groundwater Protection Regulation. The surface casing was removed, the 2" piezometer was cut approximately 4" below ground surface and bentonite chips were poured into the casing. Bentonite was poured around the outer annulus of the piezometer to bring the hole to ground surface.	
20 ft / 6 m							
30 ft / 10 m							
40 ft / 12 m							
50 ft / 15 m							
60 ft / 18 m							
70 ft / 20 m							
80 ft / 24 m							
90 ft / 27 m							
100 ft / 30 m							
110 ft		End of Borehole					

SUMMIT ENVIRONMENTAL CONSULTANTS LTD.

Contractor: JR Drilling

Operator(s): Jerry

Drill Method:

Ground conditions: bare

Date: April 20, 2009

Time:

Temperature: 10 degC

Sheet: 1 of 1

Project No: 7130-010.01

Client: CSRD

Location: Golden, BC

Logged by/ Checked by: BRM/ MG

Test Hole / Borehole I.D.: TH-6 (6")

Well I.D.: MW-6S, MW-6D, GP-6S, GP-6D

Location on site: near weight scale (replaces TH4)

Northing/ Easting/ Elevation: 0

SUBSURFACE PROFILE			SAMPLE				
Depth (ft / m)	Symbol	Description	Type	I.D.	Flag for analysis	Well Details	Well Completion Details / Remarks
0 / 0		Ground Surface					
0–10 / 0–3		Light brown, GRAVEL, w. sand, loose, dry					
10–30 / 3–10		Light brown, SILT w/ sand, trace gravel, loose, dry					
30–50 / 10–20		Grey, GRAVEL w/ sand and silt, loose, dry					
50–60 / 20–20		Grey, GRAVEL w/ sand and silt, loose, dry Note: larger gravel than above					
60–90 / 20–30		Light brown, (f.) SAND w/ silt and trace gravel, dense, moist					
90–100 / 30–30		Grey, (m.) SAND, w/ silt and gravel, dense, moist					
100–110 / 30–40		Grey, cemented GRAVEL, dense, dry					
110–120 / 40–40		Yellow, SILT w/ some angular gravel and m.-c. sand, dense, moist					
120–220 / 40–60		Black, Limestone bedrock					
220 / 60		End of Borehole				Casing height =	

<u>Configuration:</u>

- Two groundwater monitoring wells (each 2" diameter)
- Two gas monitoring probes (each 1" diameter)
- Schedule 40 PVC
- Gas piezos. are threaded
- 20/40 sand pack around each monitoring well

<u>Screen Assembly:</u>

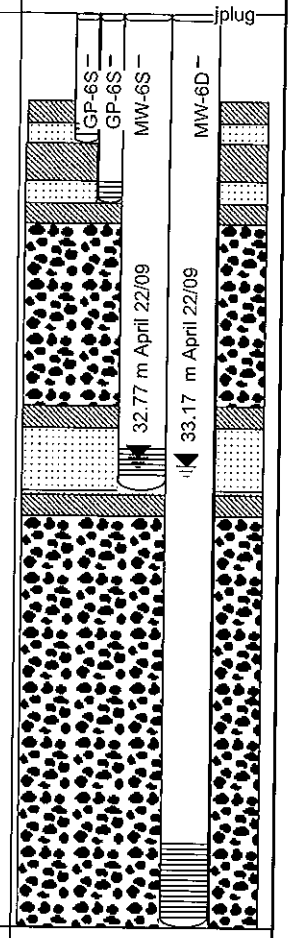
- No. 10 slot PVC

MW6D
-Screened in bedrock
- Screened btw 59.76 m (196 ft) and 65.85 (216 ft) bgs

MW6S
-Screened in surficial deposits (overburden)
-Screened btw 31.40 m (103 ft) and 34.45 m (113 ft) bgs

GP6D
-Screened btw 12.20 m (40 ft) and 16.77 m (55 ft) bgs

GP6S
-Screened btw 7.93 m (26 ft) and 9.45 m (31 ft) bgs



SUMMIT ENVIRONMENTAL CONSULTANTS LTD.

Contractor: JR Drilling Central Ltd.
Operator(s): Jerry Opper
Drill Method: Dual Air Rotary
Ground conditions: bare

Date: April 20, 2009
Time:
Temperature: 10 degC
Sheet: 1 of 1

Project No: 7130-010.01

Client: CSRD

Location: Golden, BC

Logged by/ Checked by: BRM/ MG

Test Hole / Borehole I.D.: TH-7 (6")

Well I.D.: MW-7, GP-7S, GP-7D (replaces TH3)

Location on site: Golden-Donald Upper Rd.

Northing/ Easting/ Elevation: 0

SUBSURFACE PROFILE			SAMPLE				
Depth (ft / m)	Symbol	Description	Type	I.D.	Flag for analysis	Well Details	Well Completion Details / Remarks
0 ft / 0 m		Ground Surface					
		Yellow/ brown, SILT, loose, damp					
		Grey, SILTand clay, dense, moist					
		Grey, SILT, dense, moist					
		Light brown, SILT w/ (f.) sand and gravel, loose, moist, fining upwards					
		Grey, cemented GRAVEL w/ sand and silt, dense, damp					
		Grey, SILT trace sand, dense, moist					
		Grey, GRAVEL w/ (m.) sand and silt, dense, moist					
		Grey, (f.-m.) SAND w/ silt, dense, moist, coarsening upward					
		Grey, cemented GRAVEL, dense, dry					
		Grey, (f.) angular GRAVEL w/ sand and silt, dense, dry,					
130 ft / 40 m		End of Borehole					

Configuration:

- One groundwater monitoring well (2" diameter)
- Two gas monitoring probes (each 1" diameter)
- Schedule 40 PVC
- Gas probes are threaded
- 20/40 sand pack around each monitoring well

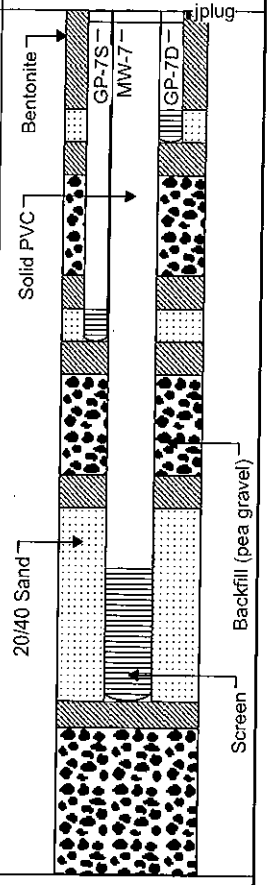
Screen Assembly:
- No. 10 slot PVC

MW-7
-Screened in the surficial deposits (overburden)
-Screened btw 25.6 m (84 ft) and 31.7 m (104 ft) bgs

GP-7D
-Screened btw 13.72 m (45 ft) and 15.24 m (50 ft) bgs

GP-7S
-Screened btw 4.5 m (15 ft) and 6.10 m (20 ft) bgs

Casing Height:
1.2 m (3.9 ft)



SUMMIT ENVIRONMENTAL CONSULTANTS LTD.

Contractor: JR Drilling Central Ltd.
Operator(s): Jerry Opper
Drill Method: Dual Air Rotary
Ground conditions: bare

Date: April 23, 2009
Time:
Temperature: 7 deg C
Sheet: 1 of 1

Project No: 2010-8835.010.006 ***Well I.D.: TH-8***

Client: CSRD ***First Water:*** n/a ***Ground Elevation:*** Approx. 915 m asl

Location: Golden Landfill ***Stabilized Water Level:*** 14 m btoc ***Top of Casing Elevation:*** flush mount

Location on site: 150 m NW of landfill on Golden Donald Upper Road ***Reviewed by:*** Tilman Roschinski

Logged by: Bryer Manwell

Subsurface Geology			Well Details and Notes	Well Construction
Depth (ft / m)	Symbol	Description		
-1		Ground Surface		
4 / 1		**SAND AND GRAVEL** Sand and gravel, trace fines, light brown.	Flush mount casing, well sealed with j-plug	
9 / 2				
14 / 5				
19 / 6				
24 / 7				
29 / 8				
34 / 10				
39 / 12				
44 / 13				
49 / 15		**CLAYEY TILL** Clay matrix, some gravel, trace sand, dense, wet.		
54 / 16		**REGOLITH**		

Flush mount casing

Oct 7 2010

bentonite grout

SUMMIT ENVIRONMENTAL CONSULTANTS INC.

A Member of the Associated Engineering Group of Companies

Contractor: Target Drilling Inc.

Drill Method: Coring

Boring Diameter/ Depth: 6 in / 27.3 m

Operator(s):

Date: Oct 5-7 2010

Project No: 2010-8835.010.006 ***Well I.D.: TH-8***

Client: CSRD ***First Water:*** n/a ***Ground Elevation:*** Approx. 915 m asl

Location: Golden Landfill ***Stabilized Water Level:*** 14 m btoc ***Top of Casing Elevation:*** flush mount

Location on site: 150 m NW of landfill on Golden Donald Upper Road ***Reviewed by:*** Tilman Roschinski

Logged by: Bryer Manwell

Subsurface Geology

Depth	Symbol	Description	Well Details and Notes	Well Construction
60		**SLATE BEDROCK** Slaty bedrock, in places phyllitic, grey, fractured, some fractures filled with clay.	1 m bentonite seal	Bentonite seal
65		**QUARTZ BEDROCK** Quartz, likely a large vein. Fluid mixing with sedimentary deposits on either end.		
70	21	**SLATE BEDROCK** Slaty bedrock, as above.	Screen depth: 67-87 ft (20.4 - 26.5 m)	
75		**QUARTZ BEDROCK** Quartz, as above.	Screen details: -10 slot PVC, 2 inch diameter -10/20 sand pack	10/20 sand
80		**SLATE BEDROCK** Slaty bedrock, as above		
85	26			
90		End of Borehole		
95				
100	31			
105				
110				

Contractor: Target Drilling Inc. **Operator(s):**

Drill Method: Coring **Date:** Oct 5-7 2010

Boring Diameter/ Depth: 6 in / 27.3 m

Project No: 2010-8835.010.006 | **Well I.D.:** BH9

Client: CSRD | **First Water:** n/a | **Ground Elevation:** Approx. 928 m asl

Location: Golden Landfill | **Stabilized Water Level:** n/a | **Top of Casing Elevation:** 0

Location on site: 5 m SE of landfill | **Reviewed by:** Tilman Roschinski

Logged by: Bryer Manwell

Subsurface Geology			Well Details and Notes	Well Construction
Depth (ft / m)	Symbol	Description		
0 ft / 0 m		Ground Surface		
0 – 15 ft / 0 – 5 m		**SILT** Silt, occasional cobbles, dry to moist, yellowish-grey.	No well installed.	Natural slough
15 – 50 ft / 5 – 15 m				
55 ft		End of Borehole		

SUMMIT ENVIRONMENTAL CONSULTANTS INC.
A Member of the Associated Engineering Group of Companies

Contractor: Target Drilling Inc.
Drill Method: Coring
Boring Diameter/ Depth: 6 in

Operator(s):
Date: Oct 8 2010

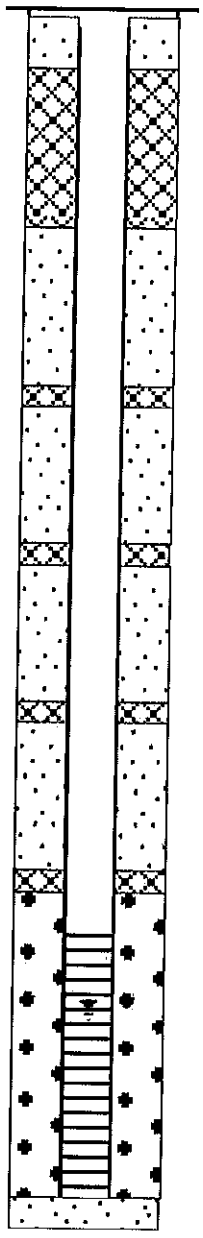
Sheet: 1 of 1

Monitoring Well ID: MW18-10

Project Number: 14-024-21 **Client:** CSRD

Project: Golden RDF Additional Drilling **Location:** Golden, BC

western water

Depth Below Ground Surface	Symbol	Lithology	Well Construction	Well Completion Details
ft / m		Ground Surface		Lockable steel wellcap with a 0.81 m (32") stick up
0 / 0		**Topsoil**		8" Steel casing from 0.81m (3 ft) above ground surface (ags) to 35.65 m (117 ft) below ground surface (bgs).
15		**Sand and gravel,** medium grained sand, sub angular gravel, moderately to poorly sorted, brown, dry.		Bentonite fill from 0 m (0 ft) to 6.1 m (20 ft) bgs, 10.7 m (35 ft) to 11.3 m (37 ft) bgs,15.2 m (50 ft) to 15.8 m (52 ft) bgs 19.8 m (65 ft) to 20.4 m (67 ft) bgs and from 24.7 m (81 ft) to 25.3 m (83 ft) bgs.
30				Natural fill from 6.1 m (20 ft) to 10.7 m (35 ft) bgs, 11.3 m (37 ft) to 15.2 m (50 ft) bgs, 15.8 m (52 ft) to 19.8 m (65 ft) bgs and from 20.4 m (67 ft) to 24.7 m (81 ft) bgs.
45		**Sand and gravel,** medium to coarse grained sand, sub angular gravel, grey, dry.		
15		**Sand and gravel,** medium grained sand, sub angular gravel, moderately sorted, brown, moist at 58 ft.		
60		**Sand and gravel,** with silt, fine to medium grained sand, sub angular gravel, moderately sorted, grey, moist.		
75		**Bedrock,** grey, mapped as argillite, shale and limestone, dry.		Sand pack with 10 filter sand from 25.3 m (83 ft) to 35 m (115 ft) bgs.
90				Water Level 28.53 m (94 ft) bgs June 25, 2018.
30				3 m (10 ft) length of threaded 10 slot screen from 32 m (105 ft) bgs to 35.1 m (115 ft) bgs.
105				0.3 m (1 ft) length sandpack from 35.4 m (116 ft) bgs to 35.7 m (117 ft) bgs.

Coordinates: 503411.92 m E 5684049.84 m N 11 U

Static Water Level: 28.53 m June 26, 2018

Ground Elevation: 919 m above sea level (asl)

Total Borehole Depth: 35.65 m (117 ft) bgs

Drawn By: RA **Checked By:** BRM

Drilling Contractor: JR Drilling

Drilling Method: Dual Air Rotary

Date of Completion: June 25, 2018

Logged By: RA

Sheet: 1 of 1

Monitoring Well ID: MW18-11

Project Number: 14-024-21 **Client:** CSRD

Project: Golden RDF **Location:** Golden, BC

western water

Depth Below Ground Surface	Symbol	Lithology	Well Construction	Well Completion Details
ft / m		Ground Surface		Lockable steel wellcap with 1.1 m (35") stick up
0 – 0		Silt, with tracel gravel, loose, brown, dry.		
15		Silt, loose, grey, dry.		4.6 m (15 ft) length bentonite surface seal from 0 m (0 ft) bgs to 4.6 m (15 ft) below ground surface (bgs)
30				
45 – 15		Silt with gravel, coarsening downwards, loose, brown, dry.		
60		Gravel, with trace sand and silt, fine grained sand, sub angular to sub rounded gravel, angular silt, loose, brown, moist at 44.2 m (145 ft) bgs.		6" Steel casing from 1.1 m (3.5 ft) above ground surface (ags) to 115.8 m (380 ft) bgs
75				
90 – 30				
105				
120				5" Steel casing from 0 m (0 ft) bgs to 125 m (410 ft) bgs
135				
150 – 45				
165				
180				
195 – 60				
210				
225		Silt, loose, brown, dry.		
		Gravel, with trace silt, sub angular to rounded silt, loose, brown, dry.		
240		Gravel, with trace sand, fine grained sand, loose, brown, dry.		
75				

Coordinates: 503205.13 m E 5684006.34 m N 11 U

Static Water Level: 114 m (374 ft) December 6, 2018

Ground Elevation: 915 m above sea level (masl)

Total Borehole Depth: 115.8 m (380 ft)

Drawn By: RA **Checked By:** BRM

Drilling Contractor: JR Drilling Kamloops

Drilling Method: Dual Air Rotary

Date of Completion: December 3 - 6, 2018

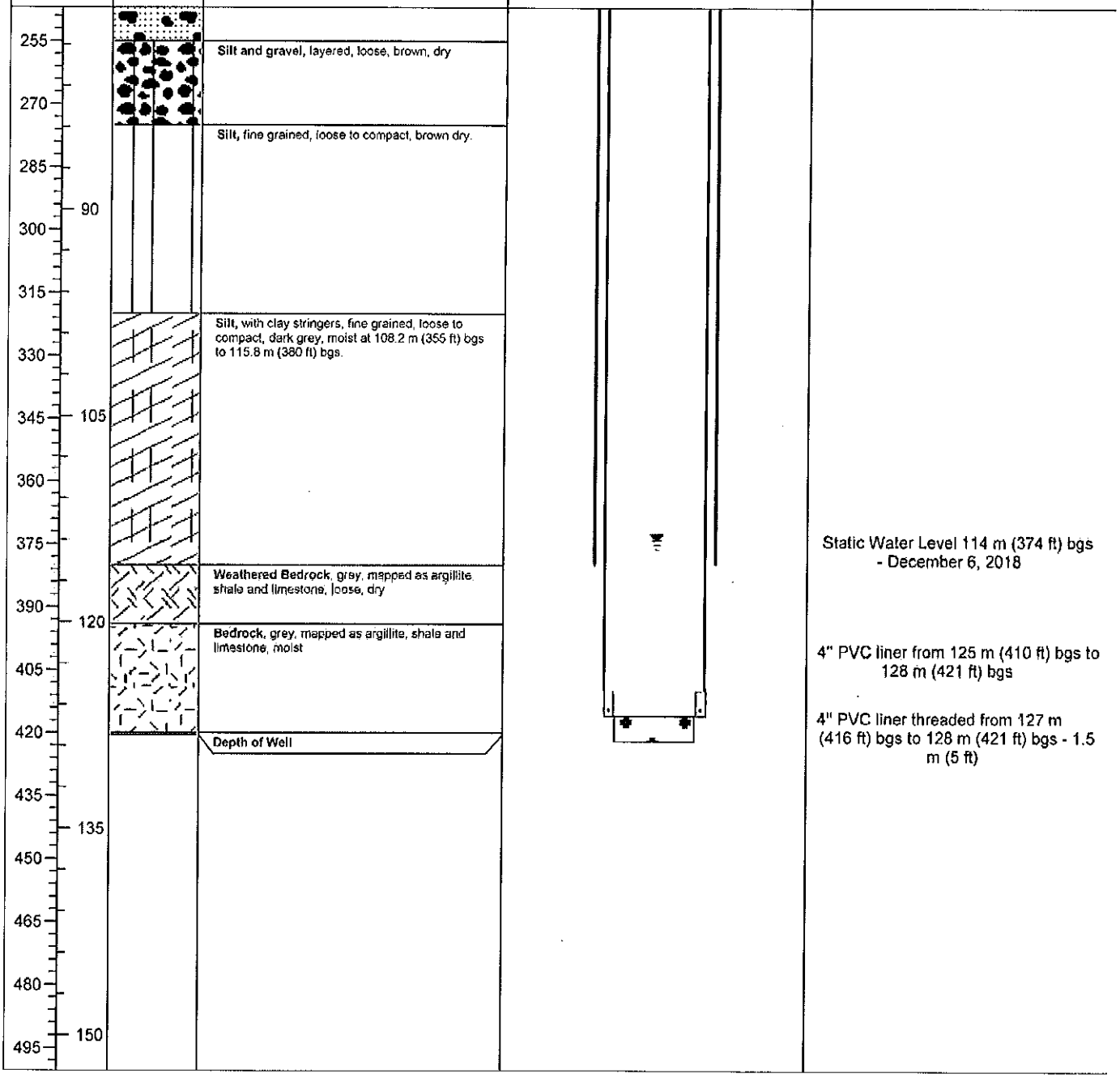
Logged By: RA/BRM

Monitoring Well ID: MW18-11

Project Number: 14-024-21 **Client:** CSRD

Project: Golden RDF **Location:** Golden, BC

western water



Coordinates: 503205.13 m E 5684006.34 m N 11 U

Static Water Level: 114 m (374 ft) December 6, 2018

Ground Elevation: 915 m above sea level (masl)

Total Borehole Depth: 115.8 m (380 ft)

Drawn By: RA **Checked By:** BRM

Drilling Contractor: JR Drilling Kamloops

Drilling Method: Dual Air Rotary

Date of Completion: December 3 - 6, 2018

Logged By: RA/BRM

BRITISH COLUMBIA

Report 1 - Detailed Well Record

Well Tag Number: 99638

Owner: KATS CONTRACTING

Address: 532 HIETALA ROAD

Area: GOLDEN

WELL LOCATION:
KOOTENAY Land District
District Lot: Plan: Lot:
Township: 27 Section: 18 Range: 21
Indian Reserve: Meridian: W5M Block: A
Quarter:
Island:
BCGS Number (NAD 27): 082N036121 Well:

Class of Well: Water supply
Subclass of Well: Domestic
Orientation of Well: Vertical
Status of Well: New
Well Use: Private Domestic
Observation Well Number:
Observation Well Status:
Construction Method:
Diameter: inches
Casing drive shoe: Y N
Well Depth: 276 feet
Elevation: feet (ASL)
Final Casing Stick Up: 6 inches
Well Cap Type: PLASTIC CAP
Bedrock Depth: 18 feet
Lithology Info Flag: N
File Info Flag: N
Sieve Info Flag: N
Screen Info Flag: N

Site Info Details:
Other Info Flag:
Other Info Details:

Construction Date: 2000-10-25 00:00:00.0

Driller: Owen's Drilling Ltd.
Well Identification Plate Number:
Plate Attached By:
Where Plate Attached:

PRODUCTION DATA AT TIME OF DRILLING:
Well Yield: 6 (Driller's Estimate) U.S. Gallons per Minute
Development Method: Air lifting
Pump Test Info Flag: N
Artesian Flow:
Artesian Pressure (ft):
Static Level: 50 feet

WATER QUALITY:
Character:
Colour:
Odour:
Well Disinfected: N
EMS ID:
Water Chemistry Info Flag: N
Field Chemistry Info Flag:
Site Info (SEAM):

Water Utility:
Water Supply System Name:
Water Supply System Well Name:

SURFACE SEAL:
Flag: N
Material:
Method:
Depth (ft):
Thickness (in):
Liner from To: feet

WELL CLOSURE INFORMATION:
Reason For Closure:
Method of Closure:
Closure Sealant Material:
Closure Backfill Material:
Details of Closure:

Screen from	to feet	Type	Slot Size

Casing from	to feet	Diameter	Material	Drive Shoe
0	36	6	Steel	Y
36	276	5.88	Open hole	N

GENERAL REMARKS:
260' OF PVC LINER. BOTTOM 40' PERFORATED. SHOE: 1X6" CARBIDE BOTTON. RECOMMENDED PUMP TYPE: SUB

LITHOLOGY INFORMATION:

From	0 to 18 Ft.	CLAY, GRAVEL, COBBLES		
From	18 to 36 Ft.	BEDROCK, BROKEN		
From	36 to 150 Ft.	2 Gallons per Minute	(U.S./Imperial)	bedrock
From	150 to 257 Ft.	2 Gallons per Minute	(U.S./Imperial)	bedrock
From	256 to 276 Ft.	1 Gallons per Minute	(U.S./Imperial)	bedrock

- Return to Main
- Return to Search Options
- Return to Search Criteria

BRITISH COLUMBIA
Ministry of Environment

☑ **Well Construction Report**
☐ **Well Closure Report**
☐ **Well Alteration Report**

Stamp company name/address/ phone/fax/e-mail here, if desired.

Ministry Well ID Plate Number: 22653
Ministry Well Tag Number: 116561
☐ Confirmation/alternative specs. attached
☐ Original well construction report attached

Red lettering indicates minimum mandatory information. **See reverse for notes & definitions of abbreviations.**

Owner name: WEIR CONSOLIDATED

Mailing address: Town GOLDEN Prov. BC Postal Code V0A 1H1

Well Location: Address: Street no. 911 Street name HAVEN Town

(or) **Legal description:** Lot 1 Plan PRP 36372 D.L. Block Sec. 13 Twp. 27 Rg. 22 Land District KOOTENAY

(or) **PID:** 027-963-371 (and) **Description of well location (attach sketch, if nec.):**

NAD 83: Zone: (see note 2) (and) **UTM Northing:** m **UTM Easting:** m (or) **Latitude (see note 3):** 51 18.389 **Longitude:** 116 58.252

Method of drilling: ☑ air rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ excavating ☐ other (specify):

Orientation of well: ☑ vertical ☐ horizontal Ground elevation: 2570 ft (asl) Method (see note 4):

Class of well (see note 5): **Sub-class of well:**

Water supply wells: indicate intended water use: ☐ private domestic ☐ water supply system ☐ irrigation ☑ commercial or industrial ☐ other (specify):

Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)

From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)	Water-bearing Estimated Flow (USgpm)	Observations (e.g., fractured, weathered, well sorted, silty wash), closure details
0	41	M	BR.	COARSE GRAVEL + SAND		
41	73	M	BR.	COBBLES + SAND		
73	82	S	BR	FINE GRAVEL + SAND		
82	84	S	GRY.	FINE SAND + CLAY	BLUE	
84	88		GRY	FINE SAND + CLAY	"	

Casing details

From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
0	26	8	STEEL	261	B

Screen details

From ft (bgl)	To ft (bgl)	Dia in	Type (see note 18)	Slot Size
83	73	8	40 INCH RISER PIPE	40

Surface seal: Type: BENTONITE Depth: 15 ft
Method of installation: ☑ Poured ☐ Pumped Thickness: 2 in
Backfill: Type: Depth: ft
Liner: ☐ PVC ☐ Other (specify):
Diameter: in Thickness: in
From: ft (bgl) To: ft (bgl) Perforated: From: ft (bgl) To: ft (bgl)

Intake: ☐ Screen ☐ Open bottom ☐ Uncased hole
Screen type: ☑ Telescope ☐ Pipe size
Screen material: ☑ Stainless steel ☐ Plastic ☐ Other (specify):
Screen opening: ☐ Continuous slot ☐ Slotted ☐ Perforated pipe
Screen bottom: ☑ Bail ☐ Plug ☐ Plate ☐ Other (specify):
Filter pack: From: ft To: ft Thickness: in
Type and size of material:

Developed by:

☑ Air lifting ☐ Surging ☐ Jetting ☐ Pumping ☐ Bailing
☐ Other (specify): Total duration: hrs
Notes:

Well yield estimated by:

☐ Pumping ☑ Air lifting ☐ Bailing ☐ Other (specify):
Rate: 225 PLUS USgpm Duration: hrs
SWL before test: 12 ft (btoc) Pumping water level: ft (btoc)

Obvious water quality characteristics:

☐ Fresh ☐ Salty ☐ Clear ☐ Cloudy ☐ Sediment ☐ Gas
Colour/odour: Water sample collected: ☐

Well driller (print clearly):

Name (first, last) (see note 19): GLEN R. SURREY
Registration no. (see note 20): WA1607250
Consultant (if applicable; name and company): K. H. WILSON

DECLARATION: Well construction, well alteration or well closure, as the case may be, has been done in accordance with the requirements in the *Water Act* and the Ground Water Protection Regulation.

Signature of Driller Responsible

Final well completion data:

Total depth drilled: 88 ft Finished well depth: 83 ft (bgl)
Final stick up: 33 in Depth to bedrock: ft (bgl)
SWL: 12 ft (btoc) Estimated well yield: USgpm
Artesian flow: USgpm, or Artesian pressure: ft
Type of well cap: Well disinfected: ☐ Yes ☑ No
Where well ID plate is attached:

Well closure information:

Reason for closure:
Method of closure: ☐ Poured ☐ Pumped
Sealant material: Backfill material:
Details of closure (see note 17):

Date of work (YYYY/MM/DD):

Started: 1805 24 **Completed:** 1805 25
Comments:

PLEASE NOTE: The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction, alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.

white: Customer copy
canary: Driller copy
pink: Ministry copy

Sheet ____ of ____

Landfill Gas Probe GP20-01D

PROJECT NUMBER 19-2850.03
PROJECT NAME Golden CSRD Landfill
CLIENT CSRD
ADDRESS 350 Golden Donald Upper Road, Golden, BC

DRILLING DATE July 21, 2020
CONTRACTOR On The Mark Locates Ltd.
EQUIPMENT MODEL Truck Mounted Auger Rig
BORING METHOD ODEX

FIELD SCREENING METHOD
LOGGED BY KT
CHECKED BY LMM

COMMENTS

Depth (m)	USCS Classification	Soil Description	Graphic Log	Sample ID	Sample Type	PID (ppmv)	Analysed	% Recovery	Water Level	Well Diagram
0	SC/GC	Brown, w>PL, CLAYEY GRAVEL, some to sandy, inferred cobbles and boulders, cohesive, hard. (TILL-LIKE)		SA1	SS		N			Stick Up
1										Bentonite
				SA2	SS		N			Cuttings
2										Bentonite Seal
										Cuttings
3				SA3	SS		N			
4										
	CL	Light brown, w<PL, SILTY CLAY, some gravel and sand, cohesive, very hard.		SA4	SS		N			Bentonite Seal
5										
		WEATHERED BEDROCK.								
6										
7										
8										25mm Slotted PVC Pipe and Filter Sand
9										
10										
		BEDROCK.								
11										Cuttings
12										
		End of Soil Vapour Probe.								
13										

Landfill Gas Probe GP20-01S

PROJECT NUMBER 19-2850.03
PROJECT NAME Golden CSRD Landfill
CLIENT CSRD
ADDRESS 350 Golden Donald Upper Road, Golden, BC

DRILLING DATE July 22, 2020
CONTRACTOR On The Mark Locates Ltd.
EQUIPMENT MODEL Truck Mounted Auger Rig
BORING METHOD ODEX

FIELD SCREENING METHOD
LOGGED BY KT
CHECKED BY LMM

COMMENTS

Depth (m)	USCS Classification	Soil Description	Graphic Log	Sample ID	Sample Type	PID (ppmv)	Analysed	% Recovery	Water Level	Well Diagram
0	SC/GC	Brown, w>PL, CLAYEY GRAVEL, some to sandy, inferred cobbles and boulders, cohesive, hard. (TILL-LIKE)								Stick Up
0.5										Bentonite
1										
1.5										
2										Cuttings
2.5										
3										
3.5										Bentonite Seal
4										
4.5	CL	Light Brown, w<PL, SILTY CLAY, some gravel and sand, cohesive, very hard.								
5										
5.5		WEATHERED BEDROCK.								25mm Slotted PVC Pipe and Filter Sand
6										
6.5										
7										
7.5		End of Soil Vapour Probe.								
8										
8.5										

Landfill Gas Probe GP20-02D

PROJECT NUMBER 19-2850.03
PROJECT NAME Golden CSRD Landfill
CLIENT CSRD
ADDRESS 350 Golden Donald Upper Road, Golden, BC

DRILLING DATE July 22, 2020
CONTRACTOR On The Mark Locates Ltd.
EQUIPMENT MODEL Truck Mounted Auger Rig
BORING METHOD ODEX

FIELD SCREENING METHOD
LOGGED BY KT
CHECKED BY LMM

COMMENTS

Depth (m)	USCS Classification	Soil Description	Graphic Log	Sample ID	Sample Type	PID (ppmv)	Analysed	% Recovery	Water Level	Well Diagram
0	OL	Dark brown, W<PL, ORGANIC CLAYEY SILT, rootlets.		SA1	SS		N			Stick Up
0.5	GC	Brown, w<PL, CLAYEY GRAVEL, some sand, inferred cobbles and boulders, cohesive, hard.								
1		grading to								
1.5		Brown, w~PL, gravelly SILTY CLAY, some sand, inferred cobbles and boulders, cohesive.		SA2	SS		N			
2										
2.5										
3				SA3	SS		N			Bentonite Seal
3.5										
4										
4.5		WEATHERED BEDROCK.								
5										
5.5										
6										
6.5										
7										
7.5										
8										25mm Slotted PVC Pipe and Filter Sand
8.5										
9										
9.5										
10		BEDROCK.								Cuttings
10.5										
		End of Soil Vapour Probe.								

Landfill Gas Probe GP20-02S

PROJECT NUMBER 19-2850.03
PROJECT NAME Golden CSRD Landfill
CLIENT CSRD
ADDRESS 350 Golden Donald Upper Road, Golden, BC

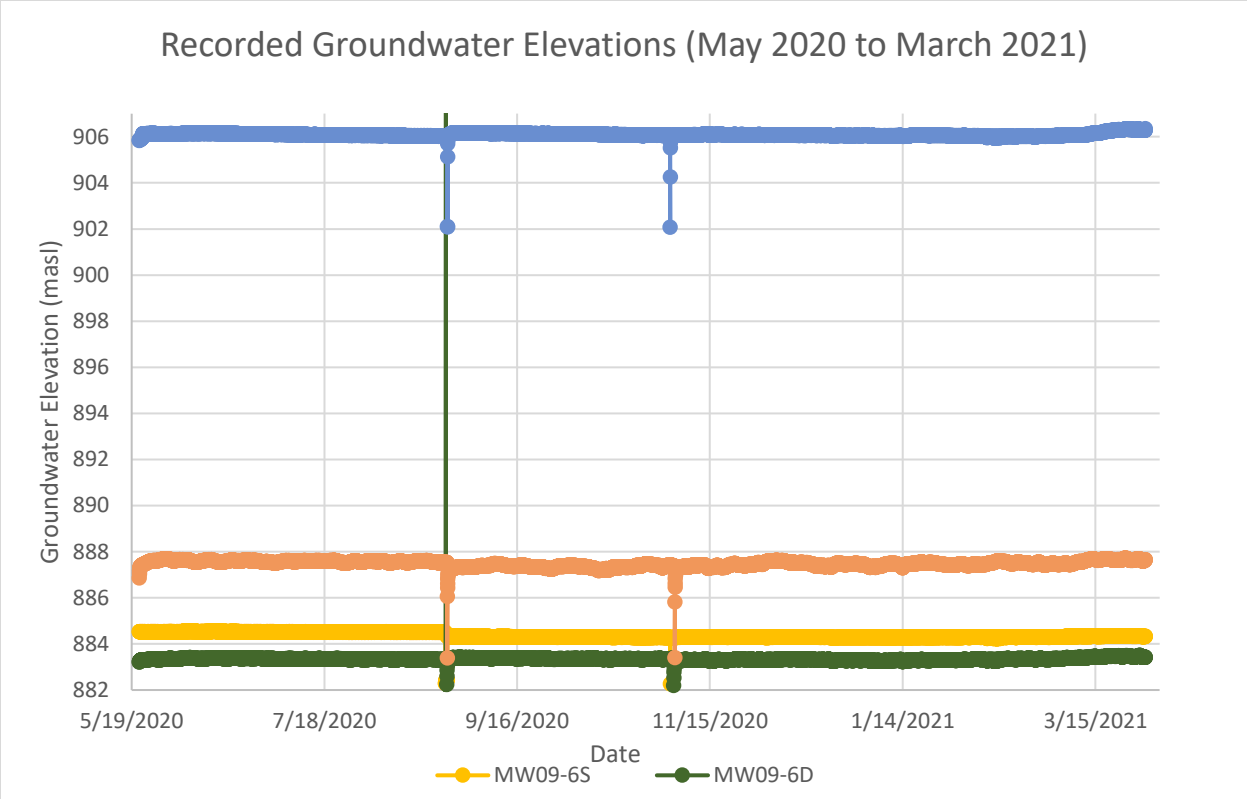
DRILLING DATE July 22, 2020
CONTRACTOR On The Mark Locates Ltd.
EQUIPMENT MODEL Truck Mounted Auger Rig
BORING METHOD ODEX

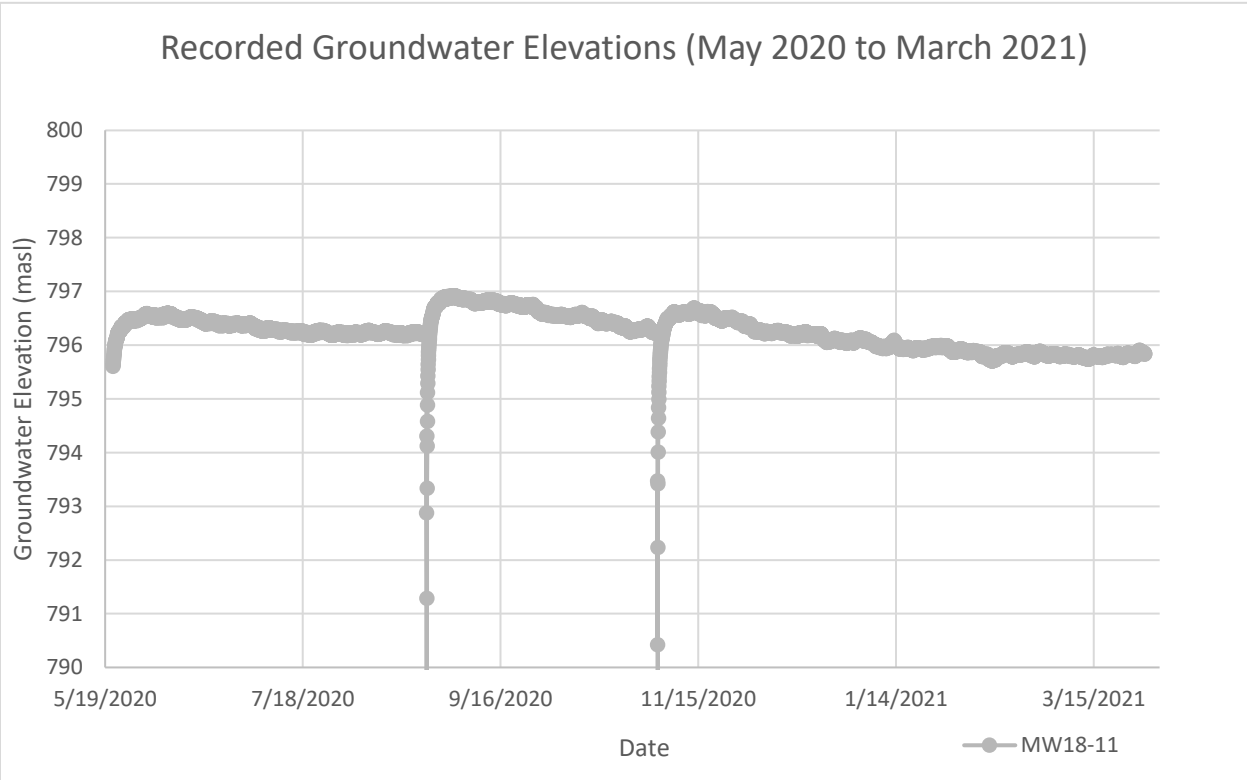
FIELD SCREENING METHOD
LOGGED BY KT
CHECKED BY LMM

COMMENTS

Depth (m)	USCS Classification	Soil Description	Graphic Log	Sample ID	Sample Type	PID (ppmv)	Analysed	% Recovery	Water Level	Well Diagram
0	OL	Dark brown, W<PL, ORGANIC CLAYEY SILT, rootlets.								Stick Up
0.5	GC	Brown, w<PL, CLAYEY GRAVEL, some sand, inferred cobbles and boulders, cohesive, hard.								
1		grading to								
1.5		Brown, w~PL, gravelly SILTY CLAY, some sand, inferred cobbles and boulders, cohesive.								Bentonite Seal
2										
2.5										
3										
3.5										
4										
4.5		WEATHERED BEDROCK.								25mm Slotted PVC Pipe and Filter Sand
5										
5.5										
6										
6.5										
7		End of Soil Vapour Probe.								
7.5										

APPENDIX C 2020 GROUNDWATER LEVELS AND WATER QUALITY DATA


Recorded Groundwater Elevations (May 2020 to March 2021)
Groundwater Elevation (masl)
906
904
902
900
898
896
894
892
890
888
886
884
882
5/19/2020
7/18/2020
9/16/2020
11/15/2020
1/14/2021
3/15/2021
Date
MW09-6S
MW09-6D


Recorded Groundwater Elevations (May 2020 to March 2021)
Groundwater Elevation (masl)
800
799
798
797
796
795
794
793
792
791
790
5/19/2020
7/18/2020
9/16/2020
11/15/2020
1/14/2021
3/15/2021
Date
MW18-11

Project Number: 19-2850

Mar/11/2021

				Sampling Location	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-4	DMW-4	DMW-4	DMW20-01	DMW20-01	DMW20-01	DUP A	DUP A	DUP A	DUP A	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6S	MW09-6S	MW09-6S	MW09-6S
				Date Sampled	2020-03-24	2020-05-20	2020-08-25	2020-11-03	2020-03-24	2020-05-20	2020-08-25	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03
				Lab Sample ID	0032091-06	0051806-07	0082459-07	20K0317-07	0032091-07	0051806-08	0082459-08	0051806-06	0082459-11	20K0317-10	0032091-09	0051806-10	0082459-10	20K0317-09	0032091-08	0051806-09	0082459-09	20K0317-08	0032091-01	0051806-01	0082459-01	20K0317-01
				Sample Type																				
Analyte	Unit	GCDWQ MAC	GCDWQ AO	CSR DW																				
Field Parameters																								
Depth to Water	m				-	-	-	-	-	-	-	-	-	-	-	-	-	-	33.71	33.765	34.788	33.862	32.495	32.531	32.535	32.584
Dissolved Oxygen	mg/L				1.86	2	3.29	3.57	3.7	5.15	2.83	10.06	8.87	9.45	-	-	-	-	1.84	3.92	3.6	3.21	1.45	2.26	2.07	3.68
Electrical Conductivity	µS/cm				881	1104	1331	1120	880	1194	1374	538	548	553	-	-	-	-	3000	3960	3911	3871	2955	3944	3864	3837
Elevation of Piezometric Surface	m				-	-	-	-	-	-	-	-	-	-	-	-	-	-	884.565	884.51	883.487	884.413	884.562	884.526	884.522	884.473
Oxidation reduction potential	mV				42.3	110.6	127.1	234	28.9	17.4	101	225.7	177.6	259.3	-	-	-	-	104.9	198.2	149.8	291.7	99	216.9	94	247.7
pH	pH Units				7.58	7.04	7.48	7.02	7.07	7.13	7.36	7.51	7.82	7.6	-	-	-	-	6.93	6.76	6.81	6.72	6.93	6.68	6.76	6.79
Temperature	°C				4.9	9	8.7	6.9	7.8	10.8	10.5	9.8	15.4	8.2	-	-	-	-	9.9	10.9	11	10.3	11.5	12.1	12.1	11.7
Anions																								
Chloride	mg/L		250	250	9.49	8.79	9.13	8.98	50.5	40.5	42.2	34.4	38.8	34.7	378	399	377	365	399	392	377	366	380	398	379	371
Fluoride	mg/L	1.5		1.5	0.72	0.76	0.91	0.47	1.25	1.47	1.35	0.16	0.12	<0.1	0.18	0.15	<0.1	<0.1	0.18	0.15	<0.1	<0.1	0.17	0.16	<0.1	<0.1
Nitrate (as N)	mg/L	10		10	0.334	0.666	0.112	0.489	<0.01	<0.01	<0.01	0.294	0.429	0.403	30.6	39.7	35	34.3	32.7	45	35.6	34.6	30.6	43.4	33.9	34.2
Nitrite (as N)	mg/L	1		1	<0.01	<0.01	<0.01	<0.01	<0.01	0.039	<0.01	0.05	<0.01	<0.01	<0.01	0.381	<0.01	<0.01	0.012	0.455	<0.01	<0.01	<0.01	0.48	<0.01	<0.01
Sulfate	mg/L		500	500	232	213	251	224	110	127	128	24.6	25.1	25	690	624	633	643	690	615	634	642	688	611	637	636
Dissolved Metals																								
Aluminum, dissolved	mg/L			9.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.5	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.481	<0.005
Antimony, dissolved	mg/L	0.006		0.006	<0.0002	<0.0002	<0.0002	0.00025	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00036	0.00029	0.00034	0.00029	<0.0002	<0.0002	0.00021	0.00023
Arsenic, dissolved	mg/L	0.01		0.01	0.00121	0.00104	0.00129	0.00117	0.047	0.0533	0.0525	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00073	<0.0005	0.00051	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00073	<0.0005
Barium, dissolved	mg/L	2		1	0.0155	0.0173	0.0158	0.0159	0.0219	0.0245	0.024	0.11	0.11	0.119	0.0458	0.0535	0.0617	0.0466	0.0503	0.0532	0.049	0.0457	0.0456	0.0551	0.0618	0.0509
Beryllium, dissolved	mg/L			0.008	<0.0001	<0.0001	<0.0001	0.00022	0.00013	0.00012	0.00012	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, dissolved	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron, dissolved	mg/L	5		5	0.394	0.289	0.448	0.352	0.185	0.19	0.145	0.0617	0.0505	0.0534	1.81	1.92	1.97	1.75	1.63	1.73	1.97	1.75	1.55	1.76	1.87	1.74
Cadmium, dissolved	mg/L	0.005		0.005	0.00001	<0.00001	0.000016	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000012	0.000038	0.000012	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Calcium, dissolved	mg/L				73.5	74.6	69.2	81.3	70.7	72.7	66.7	48.5	48.3	55.7	158	158	164	171	155	158	154	170	153	161	159	167
Chromium, dissolved	mg/L	0.05			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00094	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00091	<0.0005
Cobalt, dissolved	mg/L			0.02*	0.00069	0.00093	0.00068	0.00076	<0.0001	0.00029	<0.0001	<0.0001	0.00011	0.00015	0.00157	0.0016	0.0019	0.00165	0.0018	0.00179	0.00189	0.00178	0.00154	0.00157	0.00178	0.0017
Copper, dissolved	mg/L	2	1	1.5	0.00384	0.0212	0.00484	0.0109	<0.0004	<0.0004	<0.0004	<0.0004	0.00189	0.00052	0.00243	0.00242	0.00272	0.00225	0.00261	0.00298	0.0024	0.0022	0.0022	0.00247	0.00279	0.00262
Iron, dissolved	mg/L		0.3	6.5	<0.01	<0.01	0.014	<0.01	0.394	0.669	0.776	0.103	<0.01	<0.01	<0.01	<0.01	0.767	<0.01	0.011	<0.01	<0.01	<0.01	<0.01	<0.01	0.636	<0.01
Lead, dissolved	mg/L	0.005		0.01	<0.0002	0.00023	0.00047	0.00021	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00086	0.00024	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00087	<0.0002
Lithium, dissolved	mg/L			0.008	0.0532	0.0397	0.0529	0.045	0.0254	0.0248	0.0245	0.00137	0.00123	0.0017	0.04	0.0426	0.0415	0.0401	0.04	0.0428	0.0416	0.0404	0.0401	0.0449	0.0405	0.0404
Magnesium, dissolved	mg/L				91.2	88	100	95.8	102	109	114	28.1	30.3	30.3	258	256	274	269	257	249	271	263	255	254	268	268
Manganese, dissolved	mg/L	0.12	0.02	1.5	0.00377	0.00261	0.00352	0.00276	0.00448	0.0153	0.00574	0.0194	0.0087	0.0101	0.0789	0.0693	0.11	0.0961	0.113	0.108	0.109	0.111	0.0789	0.0685	0.103	0.0968
Mercury, dissolved	mg/L	0.001		0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum, dissolved	mg/L			0.25	0.00058	0.00087	0.00053	0.00073	0.00035	0.00027	0.00025	0.00073	0.00077	0.00075	0.00036	0.00028	0.00023	0.00032	0.00034	0.00036	0.00032	0.0003	0.00032	0.00033	0.00018	0.00034
Nickel, dissolved	mg/L			0.08	0.00169	0.0014	0.00124	0.00154	0.00197	0.00182	0.00181	<0.0004	0.00052	<0.0004	0.0117	0.0114	0.0129	0.0125	0.0121	0.0121	0.0131	0.0129	0.0111	0.0114	0.0125	0.0125
Phosphorus, dissolved	mg/L				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium, dissolved	mg/L				8.87	6.87	8.94	8.64	4.79	4.82	4.71	1.01	1.09	1.23	162	177	165	169	166	173	169	168	159	175	161	168
Selenium, dissolved	mg/L	0.05		0.01	<0.0005	0.00058	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silicon, dissolved	mg/L				7.2	7.9	6.5	6.5	8.2	8.8	7.5	4	3.1	3.5	12.5	14.1	13.2	11.6	12.2	13.5	12	11.6	12	13.8	12.5	11.8
Silver, dissolved	mg/L			0.02	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium, dissolved	mg/L		200	200	48.3	33.5	50.1	41.8	28	25.3	27.4	17.9	20.9	21.1	271	265	282	287	278	268	294	286	266	263	275	286
Strontium, dissolved	mg/L	7		2.5	4.95	3.96	5.33	4.76	1.73	1.75	1.82	0.329	0.343	0.342	1.58	1.67	1.73	1.57	1.54	1.6	1.68	1.57	1.52	1.69	1.67	1.59
Sulfur, dissolved	mg/L				85.7	76.8	93.6	82.7	43	48.1	51.3	8.1	10.5	8.6	253	234	256	234	252	224	253	227	246	231	248	234
Tellurium, dissolved	mg/L				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Thallium, dissolved	mg/L				<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.000055	0.000035	0.00006	0.000049	0.000055	0.000041	0.000063	0.000055	0.000055	0.000037	0.000057	0.000054
Thorium, dissolved	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00035	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00032	<0.0001
Tin, dissolved	mg/L			2.5	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	0.00021	<0.0002	0.00063	0.00039	0.00095	<0.0002	<0.0002	0.00021	0.00023	<0.0002
Titanium, dissolved	mg/L				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0304	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0318	<0.005
Tungsten, dissolved	mg/L			0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium, dissolved	mg/L	0.02		0.02	0.000917	0.00155	0.000947	0.00146	0.000086	0.000161	0.000101	0.000648	0.000669	0.000721	0.00721	0.00691	0.00698	0.00757	0.00728	0.00718	0.00723	0.00759	0.00725	0.00737	0.00687	0.00755
Vanadium, dissolved	mg/L			0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, dissolved	mg/L		5	3	0.0282	0.0262	0.041	0.0245	<0.004	0.0065	<0.004	<0.004	0.0102	<0.004	<0.004	<0.004	<0.004	<0.004	0.0062	0.0089	0.0049	<0.004	<0.004	<0.004	<0.004	<0.004
Zirconium, dissolved	mg/L				0.00057	0.00047	0.00064	0.00052	0.00173	0.00155	0.00143	<0.0001	<0.0001	<0.0001	0.00016	0.00014	0.00052	0.00015	0.00019	0.00018	0.00021	0.00017	0.00015	0.00016	0.00051	0.00016
General Parameters																								

				Sampling Location	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-4	DMW-4	DMW-4	DMW20-01	DMW20-01	DMW20-01	DUP A	DUP A	DUP A	DUP A	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6S	MW09-6S	MW09-6S	MW09-6S
				Date Sampled	2020-03-24	2020-05-20	2020-08-25	2020-11-03	2020-03-24	2020-05-20	2020-08-25	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03
				Lab Sample ID	0032091-06	0051806-07	0082459-07	20K0317-07	0032091-07	0051806-08	0082459-08	0051806-06	0082459-11	20K0317-10	0032091-09	0051806-10	0082459-10	20K0317-09	0032091-08	0051806-09	0082459-09	20K0317-08	0032091-01	0051806-01	0082459-01	20K0317-01
				Sample Type																					
Analyte	Unit	GCDWQ MAC	GCDWQ AO	CSR DW																					
Alkalinity, Bicarbonate (as CaCO3)	mg/L				443	431	449	429	500	516	465	233	220	195	965	952	948	954	958	934	947	946	975	944	949	942
Alkalinity, Carbonate (as CaCO3)	mg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Total (as CaCO3)	mg/L				443	431	449	429	500	516	465	233	220	195	965	952	948	954	958	934	947	946	975	944	949	942
Ammonia, Total (as N)	mg/L				0.721	0.161	0.861	0.481	0.215	0.206	0.223	<0.05	<0.05	<0.05	1.1	1.44	1.77	1.64	1.24	1.53	1.85	1.9	1.32	1.53	1.71	1.61
Bicarbonate (HCO3)	mg/L				540	525	548	523	610	629	567	284	269	238	1180	1160	1160	1160	1170	1140	1160	1150	1190	1150	1160	1150
Carbonate (CO3)	mg/L				<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Electrical Conductivity	µS/cm				1090	1060	1230	1180	1110	1150	1220	530	576	568	3850	3940	4010	4000	3820	3960	4050	4050	3990	3910	3940	3970
Hardness, Total (as CaCO3)	mg/L				560	549	586	598	596	630	634	237	246	264	1460	1450	1540	1540	1450	1420	1500	1510	1430	1450	1500	1520
Hydroxide (OH)	mg/L				<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
pH	pH Units				7.9	8.03	7.95	8.08	7.9	8.02	7.98	8.14	8.22	8.23	7.63	7.8	7.79	7.81	7.65	7.71	7.77	7.89	7.69	7.73	7.71	7.89
Total dissolved solids	mg/L		500		784	727	804	758	726	712	739	293	308	302	2660	2550	2630	2520	2730	2500	2720	2460	2630	2590	2730	2550
Turbidity	NTU				0.12	0.14	0.16	0.31	4.84	4.9	8.59	5.04	0.74	1.75	35.7	24.8	51.3	184	25.2	46.5	5.82	13.2	37.9	19	60.4	170
Volatile Organic Compounds (VOC)																										
1,1-Dichloroethane	µg/L			30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethylene	µg/L	14		14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	µg/L			8000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/L			3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L			0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane	µg/L			0.5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene	µg/L	200	3	200	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	µg/L	5		5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	µg/L			4.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropene (cis + trans)	µg/L			1.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	µg/L	5	1	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	µg/L	5		5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L			100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	µg/L			100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	2		2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L			80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	µg/L				<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chloroform	µg/L	100		100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethylene	µg/L			8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	µg/L			100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	µg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichloromethane	µg/L	50		50	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Ethylbenzene	µg/L	140	1.6	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether	µg/L		15	95	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L			800	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	µg/L	10		30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	60	24	60	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethylene	µg/L			80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethylene	µg/L			5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	µg/L			1000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	2		2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes (total)	µg/L	90	20	90	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Polycyclic Aromatic Hydrocarbons (PAH)																										
1-Methylnaphthalene	µg/L			5.5	-	<0.1	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-
2-Chloronaphthalene	µg/L			300	-	<0.1	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-
2-Methylnaphthalene	µg/L			15	-	<0.1	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-
Acenaphthene	µg/L			250	-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
Acenaphthylene	µg/L				-	<0.2	-	-	-	<0.2	-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-
Acridine	µg/L				-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-

				Sampling Location	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-4	DMW-4	DMW-4	DMW20-01	DMW20-01	DMW20-01	DUP A	DUP A	DUP A	DUP A	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6S	MW09-6S	MW09-6S	MW09-6S
				Date Sampled	2020-03-24	2020-05-20	2020-08-25	2020-11-03	2020-03-24	2020-05-20	2020-08-25	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03
				Lab Sample ID	0032091-06	0051806-07	0082459-07	20K0317-07	0032091-07	0051806-08	0082459-08	0051806-06	0082459-11	20K0317-10	0032091-09	0051806-10	0082459-10	20K0317-09	0032091-08	0051806-09	0082459-09	20K0317-08	0032091-01	0051806-01	0082459-01	20K0317-01
				Sample Type																						
Analyte	Unit	GCDWQ MAC	GCDWQ AO	CSR DW																						
Anthracene	µg/L			1000	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-
Benz(a)anthracene	µg/L			0.07	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-
Benzo(a)pyrene	µg/L	0.04		0.01	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-
Benzo(b+j)fluoranthene	µg/L			0.07	-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
Benzo(g,h,i)perylene	µg/L				-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
Benzo(k)fluoranthene	µg/L				-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
Chrysene	µg/L			7	-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
Dibenz(a,h)anthracene	µg/L			0.01	-	<0.01	-	-	-	<0.01	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-
Fluoranthene	µg/L			150	-	<0.03	-	-	-	<0.03	-	<0.03	-	-	-	<0.03	-	-	-	<0.03	-	-	-	<0.03	-	-
Fluorene	µg/L			150	-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
Indeno(1,2,3-cd)pyrene	µg/L				-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
Naphthalene	µg/L			80	-	<0.2	-	-	-	<0.2	-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-
Phenanthrene	µg/L				-	<0.1	-	-	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-
Pyrene	µg/L			100	-	<0.02	-	-	-	<0.02	-	<0.02	-	-	-	<0.02	-	-	-	<0.02	-	-	-	<0.02	-	-
Quinoline	µg/L			0.05	-	<0.05	-	-	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-
BCMOE Aggregate Hydrocarbons																										
EPHw10-19	µg/L			5000	-	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
EPHw19-32	µg/L				-	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
HEPHw	µg/L				-	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
LEPHw	µg/L			15000	-	<250	-	-	-	<250	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-
VHw (6-10)	µg/L				-	<100	<100	-	-	<100	<100	<100	<100	-	-	<100	<100	-	-	<100	<100	-	-	<100	<100	-
VPHw	µg/L				-	<100	<100	-	-	<100	<100	<100	<100	-	-	<100	<100	-	-	<100	<100	-	-	<100	<100	-

				Sampling Location	MW10-8	MW10-8	MW10-8	MW10-8	MW18-10	MW18-10	MW18-10	MW18-10	MW18-11	MW18-11	MW18-11	MW18-11	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #6	Town Well #6
				Date Sampled	2020-03-24	2020-05-20	2020-08-25	2020-11-03	2020-03-25	2020-05-20	2020-08-25	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-25	2020-05-20	2020-08-24	2020-11-03	2020-08-24	2020-11-03
				Lab Sample ID	0032091-02	0051806-02	0082459-02	20K0317-02	0032091-03	0051806-03	0082459-03	20K0317-03	0032091-04	0051806-04	0082459-04	20K0317-04	0032091-05	0051806-05	0082459-05	20K0317-05	0082459-06	20K0317-06
				Sample Type																		
Analyte	Unit	GCDWQ MAC	GCDWQ AO	CSR DW																		
Field Parameters																						
Depth to Water	m				13.825	13.757	13.872	13.948	27.905	27.975	28.045	28.059	113.047	112.33	112.212	112.278	-	-	-	-	-	-
Dissolved Oxygen	mg/L				5.92	10.89	9.53	7.45	1.81	4.64	6.7	2.54	2.06	2.63	2.88	2.51	4.4	4.56	4.27	5.81	4.68	2.79
Electrical Conductivity	µS/cm				2177	2635	2739	2794	2195	2446	2637	3174	1165	1436	1556	1533	781	1007	996	996	892	895
Elevation of Piezometric Surface	m				905.773	905.841	905.726	905.65	886.932	886.862	886.792	886.778	795.479	796.196	796.314	796.248	-	-	-	-	-	-
Oxidation reduction potential	mV				-61.6	171.9	168.3	244.1	80.1	164.9	147.9	277.1	-74.3	-89.4	-20.3	106.3	96.2	264.8	179.8	277.4	193.2	237
pH	pH Units				7.5	7.28	7.34	7.01	7.18	7.01	7.11	6.96	7.76	7.17	7.26	7.06	7.45	6.96	7.13	6.97	6.85	6.88
Temperature	°C				6.8	8.8	8.5	7.04	9.7	13.8	13.9	12.9	9.6	9.8	10.4	8.4	8.3	9.4	10.9	8.7	10.4	9
Anions																						
Chloride	mg/L		250	250	629	555	597	558	356	342	350	376	113	60.6	71.4	84.1	99	96.5	94	92.5	60.4	60.2
Fluoride	mg/L	1.5		1.5	0.18	0.27	0.2	<0.1	<0.1	0.31	0.14	<0.1	0.77	0.96	0.74	0.49	<0.1	<0.1	0.11	<0.1	<0.1	<0.1
Nitrate (as N)	mg/L	10		10	0.858	1.19	1.01	1.08	40	21.3	24.4	67.9	<0.01	0.022	<0.01	<0.01	1.55	1.5	1.46	1.5	1.26	1.03
Nitrite (as N)	mg/L	1		1	<0.01	0.478	<0.01	<0.01	<0.01	0.388	<0.01	<0.01	<0.01	0.061	<0.01	<0.01	<0.01	0.122	<0.01	<0.01	<0.01	0.012
Sulfate	mg/L		500	500	50.8	44.9	51.4	49.7	71.4	71.1	68.2	78.9	32	116	88.3	105	42.1	43	42.1	40.7	34.2	37.9
Dissolved Metals																						
Aluminum, dissolved	mg/L			9.5	<0.005	<0.005	<0.005	<0.005	<0.005	0.0102	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Antimony, dissolved	mg/L	0.006		0.006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00021	0.0002	0.00218	<0.0002	0.00139	0.00048	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Arsenic, dissolved	mg/L	0.01		0.01	0.00383	0.00439	0.00518	0.00432	0.00104	0.00107	0.00133	0.0014	0.00599	0.0358	0.011	0.0208	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Barium, dissolved	mg/L	2		1	0.178	0.2	0.196	0.2	0.303	0.277	0.311	0.353	0.0154	0.0338	0.0082	0.0266	0.216	0.218	0.217	0.224	0.191	0.196
Beryllium, dissolved	mg/L			0.008	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.00031
Bismuth, dissolved	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Boron, dissolved	mg/L	5		5	0.228	0.256	<0.05	<0.05	0.43	0.223	0.401	0.708	0.284	0.325	0.262	0.261	0.0912	0.104	<0.05	<0.05	<0.05	<0.05
Cadmium, dissolved	mg/L	0.005		0.005	0.000011	<0.00001	<0.00001	0.000012	0.000028	0.00002	0.000023	0.000039	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000011
Calcium, dissolved	mg/L				84	94.2	86.2	102	99	72.7	94.7	122	36.1	59.2	40.3	59.3	93.9	92.2	87.4	104	98.4	116
Chromium, dissolved	mg/L	0.05			0.00059	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00059	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Cobalt, dissolved	mg/L			0.02*	0.0003	<0.0001	<0.0001	<0.0001	0.00473	0.00468	0.00523	0.005	0.00016	0.00048	0.00026	0.00015	<0.0001	<0.0001	<0.0001	<0.0001	0.00021	0.00028
Copper, dissolved	mg/L	2	1	1.5	0.00164	0.00126	0.00119	0.00125	0.00155	0.0011	0.00121	0.00923	<0.0004	<0.0004	<0.0004	<0.0004	0.00216	0.0127	0.00191	0.00301	<0.0004	0.0141
Iron, dissolved	mg/L		0.3	6.5	<0.01	<0.01	<0.01	<0.01	<0.01	0.049	<0.01	<0.01	0.052	2.28	0.151	0.64	<0.01	<0.01	<0.01	<0.01	0.137	0.119
Lead, dissolved	mg/L	0.005		0.01	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00123	<0.0002	0.00021	<0.0002	<0.0002
Lithium, dissolved	mg/L			0.008	0.0185	0.0199	0.0193	0.0202	0.0224	0.015	0.021	0.0249	0.0271	0.0229	0.0234	0.0245	0.00242	0.00193	0.00171	0.00241	0.00133	0.00191
Magnesium, dissolved	mg/L				103	105	118	124	195	149	202	204	143	107	127	130	43.6	40.2	42.8	44	35.5	36
Manganese, dissolved	mg/L	0.12	0.02	1.5	0.00914	0.00098	0.0009	0.00037	0.174	0.149	0.167	0.198	0.0605	0.0301	0.0309	0.0286	<0.0002	<0.0002	<0.0002	<0.0002	0.0287	0.043
Mercury, dissolved	mg/L	0.001		0.001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Molybdenum, dissolved	mg/L			0.25	0.00131	0.00069	0.00063	0.00043	0.00108	0.00076	0.00111	0.00109	0.00193	0.00061	0.00212	0.00098	0.00018	0.00018	0.00018	0.00021	0.00102	0.00116
Nickel, dissolved	mg/L			0.08	0.00105	0.00089	0.00095	0.00136	0.0401	0.0338	0.0434	0.0447	0.0103	0.00474	0.0068	0.00745	<0.0004	<0.0004	<0.0004	<0.0004	0.0008	0.00154
Phosphorus, dissolved	mg/L				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Potassium, dissolved	mg/L				5.83	5.77	5.67	6.26	28.9	16.4	27.7	45.4	4.81	7.86	6.46	6.82	1.97	1.87	1.82	2.14	1.18	1.34
Selenium, dissolved	mg/L	0.05		0.01	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Silicon, dissolved	mg/L				8.9	10.8	9.1	9.1	10.4	7.3	9.7	10.5	4.3	4.7	3.2	3.8	5.4	5.6	4.5	5.2	4.6	5.1
Silver, dissolved	mg/L			0.02	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Sodium, dissolved	mg/L		200	200	303	296	324	334	185	127	183	239	106	104	112	113	59.4	55.4	57.8	60.4	33.5	34.8
Strontium, dissolved	mg/L	7		2.5	1.18	1.23	1.32	1.33	1.42	1.15	1.56	1.57	0.481	1.02	0.644	0.856	0.481	0.465	0.473	0.487	0.368	0.383
Sulfur, dissolved	mg/L				18.8	15.3	21.3	18.4	29.8	20.4	30.7	29.1	20	41.5	36.2	37.2	17	13.6	15.9	15.3	12.3	14.5
Tellurium, dissolved	mg/L				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Thallium, dissolved	mg/L				<0.00002	<0.00002	<0.00002	<0.00002	0.000099	0.000075	0.000103	0.000127	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002
Thorium, dissolved	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Tin, dissolved	mg/L			2.5	0.0003	<0.0002	0.00021	<0.0002	0.0003	0.00025	0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Titanium, dissolved	mg/L				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Tungsten, dissolved	mg/L			0.003	0.0119	0.0047	0.0052	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Uranium, dissolved	mg/L	0.02		0.02	0.00192	0.00229	0.00206	0.00231	0.00399	0.00324	0.00367	0.0044	0.000068	0.000084	0.000055	0.000068	0.00128	0.00128	0.00121	0.00133	0.00141	0.00155
Vanadium, dissolved	mg/L			0.02	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc, dissolved	mg/L		5	3	0.0055	<0.004	<0.004	<0.004	0.0103	<0.004	<0.004	0.0087	0.0069	0.0132	0.0064	0.015	<0.004	0.0359	0.0044	0.0053	<0.004	<0.004
Zirconium, dissolved	mg/L				<0.0001	<0.0001	<0.0001	<0.0001	0.00025	0.00013	0.00022	0.00026	<0.0001	0.00014	0.00011	0.00018	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
General Parameters																						

				Sampling Location	MW10-8	MW10-8	MW10-8	MW10-8	MW18-10	MW18-10	MW18-10	MW18-10	MW18-11	MW18-11	MW18-11	MW18-11	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #6	Town Well #6
				Date Sampled	2020-03-24	2020-05-20	2020-08-25	2020-11-03	2020-03-25	2020-05-20	2020-08-25	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-25	2020-05-20	2020-08-24	2020-11-03	2020-08-24	2020-11-03
				Lab Sample ID	0032091-02	0051806-02	0082459-02	20K0317-02	0032091-03	0051806-03	0082459-03	20K0317-03	0032091-04	0051806-04	0082459-04	20K0317-04	0032091-05	0051806-05	0082459-05	20K0317-05	0082459-06	20K0317-06
				Sample Type																		
Analyte	Unit	GCDWQ MAC	GCDWQ AO	CSR DW																		
Alkalinity, Bicarbonate (as CaCO3)	mg/L				530	511	501	518	806	729	713	856	716	648	648	671	374	365	356	358	358	363
Alkalinity, Carbonate (as CaCO3)	mg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Alkalinity, Total (as CaCO3)	mg/L				530	511	501	518	806	729	713	856	716	648	648	671	374	365	356	358	358	363
Ammonia, Total (as N)	mg/L				0.099	<0.05	<0.05	0.056	1.44	1.68	1.73	2.6	0.191	0.257	0.447	0.361	<0.02	<0.05	<0.05	<0.05	<0.05	0.117
Bicarbonate (HCO3)	mg/L				646	623	611	632	983	889	870	1040	874	791	790	819	456	446	434	437	437	443
Carbonate (CO3)	mg/L				<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6	<0.6
Electrical Conductivity	µS/cm				2700	2590	2830	2880	2770	2420	2560	3240	1460	1390	1460	1580	945	997	1040	1040	917	857
Hardness, Total (as CaCO3)	mg/L				634	669	701	766	1050	796	1070	1150	680	589	624	684	414	396	395	441	392	437
Hydroxide (OH)	mg/L				<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34	<0.34
pH	pH Units				7.95	7.98	8.05	8.09	7.81	7.9	7.97	7.89	8.25	7.93	8.13	8.06	7.98	7.93	7.98	8.04	7.94	7.93
Total dissolved solids	mg/L		500		1550	1290	1560	1460	1550	1310	1390	1820	850	849	849	899	607	562	579	559	520	507
Turbidity	NTU				41.5	3.48	83.7	230	65.8	73.2	114	172	52.4	112	45.1	37	0.12	<0.1	<0.1	0.23	23.6	171
Volatile Organic Compounds (VOC)																						
1,1-Dichloroethane	µg/L			30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1-Dichloroethylene	µg/L	14		14	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,1-Trichloroethane	µg/L			8000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2-Trichloroethane	µg/L			3	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	µg/L			0.8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane	µg/L			0.5	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
1,2-Dichlorobenzene	µg/L	200	3	200	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	µg/L	5		5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,2-Dichloropropane	µg/L			4.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichlorobenzene	µg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,3-Dichloropropene (cis + trans)	µg/L			1.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	µg/L	5	1	5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Benzene	µg/L	5		5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	µg/L			100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Bromoform	µg/L			100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Carbon tetrachloride	µg/L	2		2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	µg/L			80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chloroethane	µg/L				<2	<2	<2	<2	<2	<2	<2	<2	<2	<6	<2	<2	<2	<2	<2	<2	<2	<2
Chloroform	µg/L	100		100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
cis-1,2-Dichloroethylene	µg/L			8	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromochloromethane	µg/L			100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dibromomethane	µg/L				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Dichloromethane	µg/L	50		50	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3	<3
Ethylbenzene	µg/L	140	1.6	140	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Methyl tert-butyl ether	µg/L		15	95	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Styrene	µg/L			800	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Tetrachloroethylene	µg/L	10		30	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	60	24	60	<1	<1	<1	<1	<1	<1	<1	<1	8.8	<1	<1	<1	<1	<1	<1	<1	<1	<1
trans-1,2-Dichloroethylene	µg/L			80	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichloroethylene	µg/L			5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Trichlorofluoromethane	µg/L			1000	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Vinyl chloride	µg/L	2		2	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Xylenes (total)	µg/L	90	20	90	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Polycyclic Aromatic Hydrocarbons (PAH)																						
1-Methylnaphthalene	µg/L			5.5	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-
2-Chloronaphthalene	µg/L			300	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-
2-Methylnaphthalene	µg/L			15	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-
Acenaphthene	µg/L			250	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
Acenaphthylene	µg/L				-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-	-	-
Acridine	µg/L				-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-

				Sampling Location	MW10-8	MW10-8	MW10-8	MW10-8	MW18-10	MW18-10	MW18-10	MW18-10	MW18-11	MW18-11	MW18-11	MW18-11	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #6	Town Well #6
				Date Sampled	2020-03-24	2020-05-20	2020-08-25	2020-11-03	2020-03-25	2020-05-20	2020-08-25	2020-11-03	2020-03-24	2020-05-20	2020-08-24	2020-11-03	2020-03-25	2020-05-20	2020-08-24	2020-11-03	2020-08-24	2020-11-03
				Lab Sample ID	0032091-02	0051806-02	0082459-02	20K0317-02	0032091-03	0051806-03	0082459-03	20K0317-03	0032091-04	0051806-04	0082459-04	20K0317-04	0032091-05	0051806-05	0082459-05	20K0317-05	0082459-06	20K0317-06
				Sample Type																		
Analyte	Unit	GCDWQ MAC	GCDWQ AO	CSR DW																		
Anthracene	µg/L			1000	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-
Benz(a)anthracene	µg/L			0.07	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-
Benzo(a)pyrene	µg/L	0.04		0.01	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-
Benzo(b+j)fluoranthene	µg/L			0.07	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
Benzo(g,h,i)perylene	µg/L				-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
Benzo(k)fluoranthene	µg/L				-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
Chrysene	µg/L			7	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
Dibenz(a,h)anthracene	µg/L			0.01	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	<0.01	-	-	-	-
Fluoranthene	µg/L			150	-	<0.03	-	-	-	<0.03	-	-	-	<0.03	-	-	-	<0.03	-	-	-	-
Fluorene	µg/L			150	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
Indeno(1,2,3-cd)pyrene	µg/L				-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
Naphthalene	µg/L			80	-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-	-	<0.2	-	-	-	-
Phenanthrene	µg/L				-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	<0.1	-	-	-	-
Pyrene	µg/L			100	-	<0.02	-	-	-	<0.02	-	-	-	<0.02	-	-	-	<0.02	-	-	-	-
Quinoline	µg/L			0.05	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	<0.05	-	-	-	-
BCMOE Aggregate Hydrocarbons																						
EPHw10-19	µg/L			5000	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-
EPHw19-32	µg/L				-	<250	-	-	-	<250	-	-	-	313	-	-	-	<250	-	-	-	-
HEPHw	µg/L				-	<250	-	-	-	<250	-	-	-	313	-	-	-	<250	-	-	-	-
LEPHw	µg/L			15000	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	<250	-	-	-	-
VHw (6-10)	µg/L				-	<100	<100	-	-	<100	<100	-	-	<100	<100	-	-	<100	<100	-	<100	-
VPHw	µg/L				-	<100	<100	-	-	<100	<100	-	-	<100	<100	-	-	<100	<100	-	<100	-

Notes:	<	Less than reported detection limit
	>	Greater than reported upper detection limit
	-	Not Sampled
		No Guideline or Standard
	*	Province-wide Interim Background Concentration per ENV Protocol 9
	GCDWQ AO	Guidelines for Canadian Drinking Water Quality - Aesthetic Objectives
	GCDWQ MAC	Guidelines for Canadian Drinking Water Quality - Maximum Acceptable Concentrations
	CSR DW	BC Contaminated Sites Regulation, Schedule 3.2 Generic Numerical Water Standards for Drinking Water
	20	Highlighted Value Exceeds GCDWQ MAC
	20	Highlighted Value Exceeds GCDWQ AO
	20	Red text Value Exceeds CSR DW

APPENDIX D HISTORICAL WATER QUALITY DATA

Sampling Location		DMW-1	DMW-1	DMW-1	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b
Date Sampled		2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29
Lab Sample ID		K0B0397-04	K0F0788-01	K0K0729-04	K1E0403-05	K1H0536-03	K1J0685-03	2051369-01	2081484-03	2111131-03	3051354-03	3081378-03	3110772-03	4060249-03	4081094-03	4110161-03	5051773-04	5081710-02	5110693-01	6050336-02	6081698-02	6111141-04	7040434-07	7090074-04
Sample Type								Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	-	-	-	-	-	9.89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.29	0.59	1.98	1.21	2.34	0.34	0.01	4.73	-	-	2.53
Electrical Conductivity	µS/cm	1120	1220	1150	1220	1000	1150	1170	1140	1070	870	750	1040	1075	1030	1118	1021	1142	1155	1134	1201	1127	1113	1128
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxidation reduction potential	mV	-	61	-18	-199	40	162	99	44	-12	124	8	19	-41	-86	-65	-28	-26	53	-35	97	29	83	17
pH	pH Units	7.31	7.28	7.3	7.4	7.31	7.23	7.15	7.54	7.4	7.36	7.22	7.16	7.3	7.3	7	7.5	7.2	6.3	7.3	7.3	7.4	7.7	7.4
Temperature	°C	6.5	9.9	6.2	8.8	9.5	6.1	8.2	10	8	8.7	7.7	8	7.8	9.1	8.2	9.8	8.5	8	8.1	7.9	9.1	6.8	9.6
Anions																								
Bromide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	26.8	23.3	30.1	26	27.7	32.7	28.4	32.2	35.7	38.9	40.9	41.1	35.8	39.7	40.1	39.7	42.4	51.7	38.7	47.1	50.4	42.1	12.4
Fluoride	mg/L	-	-	-	-	-	-	1.1	0.81	1.05	1.23	1.31	1.02	1.13	0.84	1.15	1.25	1.28	1.31	1.28	1.28	1.25	1.25	0.73
Nitrate (as N)	mg/L	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.199	0.397	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.175
Nitrite (as N)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	<0.010
Sulfate	mg/L	208	213	91.7	137	133	124	144	127	123	121	129	117	135	127	122	133	114	116	129	124	124	126	252
Metals																								
Aluminum, dissolved	mg/L	<0.005	0.007	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.0050
Aluminum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005	<0.005	<0.05	<0.005	-	-	0.005	-
Antimony, dissolved	mg/L	0.0002	0.0002	<0.0001	0.0002	0.0002	<0.0020	0.0001	0.0002	0.0004	0.0004	0.0004	0.0005	0.0003	0.0003	0.0002	-	-	-	-	<0.0001	<0.0001	-	<0.00020
Antimony, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	0.0003	-
Arsenic, dissolved	mg/L	0.0043	0.007	0.0389	0.026	0.0362	0.0285	0.0196	0.0419	0.0392	0.0388	0.0397	0.0382	0.0351	0.0378	0.0436	-	-	-	-	0.0421	0.0407	-	0.00124
Arsenic, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0236	0.0489	0.042	0.0375	-	-	0.0326	-
Barium, dissolved	mg/L	0.0236	0.023	0.0269	0.0242	0.022	0.021	0.024	0.023	0.022	0.023	0.023	0.023	0.024	0.024	0.026	-	-	-	-	0.025	0.024	-	0.0149
Barium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.022	0.026	<0.05	0.024	-	-	0.025	-
Beryllium, dissolved	mg/L	<0.0001	<0.0001	0.0001	0.0001	<0.0001	0.0001	0.0001	<0.0001	0.0001	0.0001	<0.0001	0.0001	0.0002	0.0001	0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010
Beryllium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	0.0001	<0.001	0.0001	-	-	<0.0001	-
Bismuth, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010
Bismuth, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-
Boron, dissolved	mg/L	0.171	0.233	0.174	0.143	0.135	0.104	0.138	0.137	0.133	0.145	0.166	0.158	0.153	0.138	0.134	-	-	-	-	0.191	0.172	-	0.386
Boron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.146	0.139	0.14	0.146	-	-	0.137	-
Cadmium, dissolved	mg/L	0.00002	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00003	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	<0.00001	0.00001	0.00001	-	-	-	-	0.00003	0.00001	-	<0.000010
Cadmium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	<0.00001	<0.0001	<0.00001	-	-	<0.00001	-
Calcium, dissolved	mg/L	73.9	70.9	73.5	71.9	63.2	65.9	61.2	63.9	64	68.7	71.8	73.4	74	73.1	70.5	-	-	-	-	74.5	70.8	-	75.4
Calcium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	74.3	75.8	75.1	79.2	-	-	77.3	-
Chromium, dissolved	mg/L	0.0146	0.0014	0.0009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	-	<0.00050
Chromium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.005	<0.0005	-	-	<0.0005	-
Cobalt, dissolved	mg/L	0.00063	0.00075	0.00012	0.00011	0.00009	<0.00005	0.00017	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00013	0.00012	0.00008	-	-	-	-	0.00007	<0.00005	-	0.00075
Cobalt, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00014	<0.00005	<0.0005	<0.00005	-	-	0.0005	-
Copper, dissolved	mg/L	0.0297	0.0392	0.0004	0.0006	0.0008	0.002	0.0002	0.0002	0.0014	0.0004	<0.0002	<0.0002	0.0007	<0.0002	0.0004	-	-	-	-	0.0004	0.0185	-	0.00361
Copper, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0078	0.0009	<0.002	0.0003	-	-	0.0079	-
Iron, dissolved	mg/L	0.053	0.26	0.418	0.145	0.28	0.11	0.19	0.35	0.27	0.318	0.294	0.345	0.351	0.378	0.404	-	-	-	-	0.239	0.368	-	0.014
Iron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.23	0.38	0.42	0.55	-	-	0.43	-
Lead, dissolved	mg/L	0.0001	0.0004	<0.0001	0.0002	0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0003	0.0002	<0.0001	-	-	-	-	<0.0001	0.0003	-	<0.00020
Lead, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0022	0.0003	<0.001	0.0003	-	-	0.0002	-
Lithium, dissolved	mg/L	0.0232	0.031	0.026	0.0238	0.0218	0.0209	0.0196	0.0228	0.0227	0.0251	0.0251	0.0259	0.0264	0.0252	0.0252	-	-	-	-	0.0222	0.024	-	0.0477
Lithium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0243	0.0244	0.026	0.0265	-	-	0.0236	-
Magnesium, dissolved	mg/L	96.7	92.5	104	116	104	94.7	122	111	104	111	113	111	123	114	104	-	-	-	-	124	113	-	98.8
Magnesium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	112	119	111	122	-	-	117	-
Manganese, dissolved	mg/L	0.0022	0.0032	0.0042	0.0039	0.004	0.0039	0.005	0.0041	0.0037	0.004	0.0039	0.0039	0.0054	0.0158	0.0048	-	-	-	-	0.0046	0.0041	-	0.00401
Manganese, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0047	0.0046	0.005	0.0057	-	-	0.011	-
Mercury, dissolved	mg/L	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	0.00033	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-	<0.00002	<0.00002	-	<0.000010
Mercury, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00002	-	<0.00002	<0.00002	-	-	<0.00002	-

Sampling Location		DMW-1	DMW-1	DMW-1	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b
Date Sampled		2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29
Lab Sample ID		K0B0397-04	K0F0788-01	K0K0729-04	K1E0403-05	K1H0536-03	K1J0685-03	2051369-01	2081484-03	2111131-03	3051354-03	3081378-03	3110772-03	4060249-03	4081094-03	4110161-03	5051773-04	5081710-02	5110693-01	6050336-02	6081698-02	6111141-04	7040434-07	7090074-04
Sample Type								Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Molybdenum, dissolved	mg/L	0.0011	0.0008	0.0004	0.0003	0.0004	0.0017	0.0006	0.0004	0.0004	0.0004	0.0002	0.0004	0.0003	0.0004	0.0004	-	-	-	-	0.0004	0.0004	-	0.00058
Molybdenum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0004	0.0004	<0.001	0.0003	-	-	0.0003	-
Nickel, dissolved	mg/L	0.0034	0.0046	0.0036	0.0011	0.0014	0.0011	<0.0002	0.0014	0.0012	0.0014	0.0015	0.0016	0.0012	0.0021	0.0016	-	-	-	-	0.0017	0.0022	-	0.00115
Nickel, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0006	0.0026	<0.002	0.0016	-	-	0.002	-
Phosphorus, dissolved	mg/L	<0.020	<0.020	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.04	<0.02	-	-	-	-	<0.02	0.24	-	<0.050
Phosphorus, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	0.08	<0.2	<0.02	-	-	<0.05	-
Potassium, dissolved	mg/L	6.64	9.66	4.75	4.72	4.85	4.24	5.17	5.08	4.72	5.11	5.31	4.86	4.76	5.06	4.94	-	-	-	-	5.62	5.2	-	8.08
Potassium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.93	5.94	5.1	5.1	-	-	4.73	-
Selenium, dissolved	mg/L	0.0005	<0.0003	<0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	-	<0.00050
Selenium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.005	<0.0005	-	-	<0.0005	-
Silicon, dissolved	mg/L	10.4	6.09	4.55	7.93	8	7.3	7.6	7.9	8	7.9	8	7.4	7.4	8	8.4	-	-	-	-	8	8.3	-	6.4
Silicon, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9	9	8	8.3	-	-	7.5	-
Silver, dissolved	mg/L	<0.00005	<0.00005	<0.00005	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-	<0.00005	<0.00005	-	<0.000050
Silver, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00005	0.00163	<0.0005	<0.00005	-	-	<0.00005	-
Sodium, dissolved	mg/L	25.8	23.7	26.6	25.4	25.1	25.3	23.5	29.6	27.4	29.1	30.4	29.7	25.4	28.4	30.1	-	-	-	-	32.8	29.8	-	47.5
Sodium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26.9	33.2	29.7	28.7	-	-	26.3	-
Strontium, dissolved	mg/L	3.07	3.89	1.88	1.8	1.69	1.62	1.69	1.72	1.67	1.76	1.74	1.7	1.81	1.76	1.71	-	-	-	-	1.96	1.79	-	4.33
Strontium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.68	1.99	1.74	1.82	-	-	1.78	-
Sulfur, dissolved	mg/L	-	-	-	-	-	-	55	50	46	46	45	37	52	46	47	-	-	-	-	52	44	-	80.3
Sulfur, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46	51	37	45	-	-	43	-
Tellurium, dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	<0.0002	<0.0002	-	<0.00050
Tellurium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	<0.002	<0.0002	-	-	<0.0002	-
Thallium, dissolved	mg/L	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	0.00004	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-	<0.00002	<0.00002	-	<0.000020
Thallium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00002	<0.00002	<0.0002	<0.00002	-	-	<0.00002	-
Thorium, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010
Thorium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-
Tin, dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	<0.0002	0.0003	-	-	-	-	0.0002	<0.0002	-	<0.00020
Tin, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0004	<0.0002	<0.002	<0.0002	-	-	<0.0002	-
Titanium, dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.0050
Titanium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.05	<0.005	-	-	<0.005	-
Tungsten, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tungsten, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium, dissolved	mg/L	0.00173	0.00165	0.00008	0.00013	0.00011	0.00009	0.00014	0.00007	0.00009	0.00009	0.00007	0.00008	0.00014	0.00014	0.00009	-	-	-	-	0.00005	0.00007	-	0.00103
Uranium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00011	0.00007	<0.0002	0.00013	-	-	0.0002	-
Vanadium, dissolved	mg/L	0.0055	0.0028	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	<0.001	<0.001	-	<0.0010
Vanadium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.01	<0.001	-	-	<0.001	-
Zinc, dissolved	mg/L	0.0096	0.0193	0.0097	0.0321	0.005	0.01	0.009	<0.004	0.005	<0.004	<0.004	<0.004	<0.004	<0.004	0.005	-	-	-	-	<0.004	0.067	-	0.038
Zinc, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	<0.004	<0.04	<0.004	-	-	0.017	-
Zirconium, dissolved	mg/L	0.0006	0.0004	0.002	0.0015	0.0013	0.0011	0.0011	0.0013	0.0014	0.0011	0.001	0.0011	0.0012	0.0012	0.0015	-	-	-	-	0.0019	0.0015	-	0.00056
Zirconium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0012	0.0019	0.001	0.0014	-	-	0.0012	-
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	481	482	480	504	432
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	444	453	475	509	509	495	486	480	512	497	463	479	499	479	478	490	478	500	481	482	480	504	432
Ammonia, Total (as N)	mg/L	0.65	0.76	0.29	0.2	0.26	0.26	0.155	0.263	0.031	0.274	0.274	0.295	0.261	0.28	0.24	0.234	0.21	0.276	0.196	0.251	0.228	0.239	0.758
Bicarbonate (HCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	587	588	586	614	527
Carbonate (CO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<0.6	<0.6	<0.600	<0.600
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	1130	1140	1090	1120	1090	1100	1150	1120	1120	1110	1140	1150	1160	1140	1160	1150	1120	<2	1170	1160	1180	1140	1170
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		DMW-1	DMW-1	DMW-1	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b
Date Sampled		2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29
Lab Sample ID		K0B0397-04	K0F0788-01	K0K0729-04	K1E0403-05	K1H0536-03	K1J0685-03	2051369-01	2081484-03	2111131-03	3051354-03	3081378-03	3110772-03	4060249-03	4081094-03	4110161-03	5051773-04	5081710-02	5110693-01	6050336-02	6081698-02	6111141-04	7040434-07	7090074-04
Sample Type								Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	649	678	645	-	-	-	-	-
Hydroxide (OH)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<0.3	<0.3	<0.340	<0.340
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	7.73	7.89	7.69	7.84	7.79	7.79	7.86	7.85	7.09	7.78	7.86	7.86	7.89	7.66	7.81	7.74	7.7	7.63	7.6	7.73	7.89	7.67	7.92
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	0.8	0.5	3.6	2	3.4	1.8	1.6	3	3.4	3	3.4	3.2	4.3	3.7	4.3	1.5	3	4.5	4.8	1.68	1.49	2.4	0.63
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
Benzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-

Sampling Location		DMW-1	DMW-1	DMW-1	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b
Date Sampled		2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29
Lab Sample ID		K0B0397-04	K0F0788-01	K0K0729-04	K1E0403-05	K1H0536-03	K1J0685-03	2051369-01	2081484-03	2111131-03	3051354-03	3081378-03	3110772-03	4060249-03	4081094-03	4110161-03	5051773-04	5081710-02	5110693-01	6050336-02	6081698-02	6111141-04	7040434-07	7090074-04
Sample Type								Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
Carbon tetrachloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Chloroform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	-
Dichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Methyl tert-butyl ether	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4
Date Sampled		2017-11-20	2018-06-26	2018-09-11	2019-05-29	2019-08-13	2019-10-29	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11
Lab Sample ID		7111886-05	8062674-02	8090975-04	9052874-07	9081278-07	N000444-06	3051354-05	3081378-04	3110772-04	4060249-04	4081094-04	4110161-04	5051773-03	5081710-03	5110693-02	6050336-03	6081698-03	6111141-05	7040434-06	7090074-03	7111886-06	8062674-03	8090975-05
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	4.67	-	0.32	3.45	2.75	2.49	-	-	-	2.33	0.3	3.22	2.98	2.04	0.4	0	9.12	4.63	-	0.54	4.21	-	4.34
Electrical Conductivity	µS/cm	1137	1033	1189	1056	987	1006	900	1130	1100	914	1062	953	922	1043	1109	1271	1139	790	927	1159	1187	1214	1232
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxidation reduction potential	mV	-	-161	-182	-33.7	-16	161.7	235	68	204	78	77	-8	69	-5	37	80	206	152	235	-47	-	96	72
pH	pH Units	7.3	7.34	7.28	7.3	7.26	7.47	7.25	7.16	7.11	7.3	7.1	7.1	7.5	7.3	6.3	7.1	7.3	7.3	7.6	7.4	7.2	7.42	7.23
Temperature	°C	7.9	8	7.8	8.8	11	6.4	8.7	7.8	7.2	7.9	8.6	8.2	9	8.2	8	8.5	8.2	7.7	7.8	9.5	8	7.9	7.9
Anions																								
Bromide	mg/L	<0.10	<0.10	<0.10	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	52.8	92.2	52.3	11.3	10.4	8.8	22.4	16.2	16.9	20.6	19.7	17.4	12.1	13.2	15.7	15.7	15.1	14.5	12.8	46.5	11.7	11.8	12.6
Fluoride	mg/L	1.3	1.35	1.38	0.83	0.47	0.63	0.48	0.61	0.52	0.28	0.32	0.42	0.89	0.74	0.48	0.69	0.49	0.42	0.34	1.45	0.79	0.71	0.72
Nitrate (as N)	mg/L	<0.010	<0.010	<0.100	0.522	0.712	0.756	0.181	0.135	<0.010	0.647	0.443	0.602	0.53	0.414	0.725	0.488	0.479	0.511	0.494	0.012	0.138	0.243	0.048
Nitrite (as N)	mg/L	<0.010	<0.010	<0.100	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.336
Sulfate	mg/L	108	117	119	246	191	175	236	270	268	150	250	213	275	232	196	263	223	135	153	122	246	238	252
Metals																								
Aluminum, dissolved	mg/L	-	0.0202	<0.0050	0.0141	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.0050	-	0.0128	<0.0050
Aluminum, total	mg/L	<0.0050	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.05	<0.005	-	-	<0.005	-	<0.0050	-	-
Antimony, dissolved	mg/L	-	<0.00020	<0.00020	<0.0002	<0.0002	<0.0002	0.0004	0.0005	0.0005	0.0004	0.0004	0.0003	-	-	-	-	<0.0001	0.0002	-	<0.00020	-	<0.00020	<0.00020
Antimony, total	mg/L	<0.00020	-	-	-	-	-	-	-	-	-	-	-	0.0002	0.0003	<0.001	0.0002	-	-	0.0001	-	<0.00020	-	-
Arsenic, dissolved	mg/L	-	0.0434	0.0411	0.00107	0.0011	0.00082	0.0013	0.0013	0.0014	0.0012	0.0014	0.0013	-	-	-	-	0.001	0.0009	-	0.0421	-	0.00124	0.00137
Arsenic, total	mg/L	0.0476	-	-	-	-	-	-	-	-	-	-	-	0.0014	0.0018	<0.005	<0.0005	-	-	0.001	-	0.00149	-	-
Barium, dissolved	mg/L	-	0.0225	0.0222	0.0167	0.014	0.0152	0.015	0.014	0.015	0.015	0.017	0.017	-	-	-	-	0.017	0.015	-	0.0223	-	0.0159	0.0155
Barium, total	mg/L	0.0246	-	-	-	-	-	-	-	-	-	-	-	0.017	0.016	<0.05	0.019	-	-	0.016	-	0.0165	-	-
Beryllium, dissolved	mg/L	-	0.00011	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	0.00011	-	<0.00010	<0.00010
Beryllium, total	mg/L	0.00011	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00010	-	-
Bismuth, dissolved	mg/L	-	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010	-	<0.00010	<0.00010
Bismuth, total	mg/L	<0.00010	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00010	-	-
Boron, dissolved	mg/L	-	0.156	0.134	0.321	0.204	0.275	0.263	0.415	0.465	0.07	0.286	0.218	-	-	-	-	0.267	0.092	-	0.148	-	0.355	0.336
Boron, total	mg/L	0.101	-	-	-	-	-	-	-	-	-	-	-	0.659	0.392	0.2	0.444	-	-	0.106	-	0.386	-	-
Cadmium, dissolved	mg/L	-	<0.000010	<0.000010	0.000011	<0.00001	0.000011	0.00002	0.00003	<0.00001	0.00002	0.00001	0.00002	-	-	-	-	0.00003	0.00001	-	<0.000010	-	0.000014	0.000015
Cadmium, total	mg/L	<0.000010	-	-	-	-	-	-	-	-	-	-	-	0.00001	<0.00001	<0.0001	<0.00001	-	-	<0.00001	-	<0.000010	-	-
Calcium, dissolved	mg/L	-	71.2	70.8	75.7	74.4	69.6	78.2	80.7	82.5	75.1	86.4	79.9	-	-	-	-	77.8	68.9	-	70.7	-	74.9	78.6
Calcium, total	mg/L	65.9	-	-	-	-	-	-	-	-	-	-	-	79	81.9	81.6	97	-	-	73.2	-	76.1	-	-
Chromium, dissolved	mg/L	-	<0.00050	<0.00050	0.00108	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	-	<0.00050	-	<0.00050	<0.00050
Chromium, total	mg/L	<0.00050	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.005	<0.0005	-	-	<0.0005	-	<0.00050	-	-
Cobalt, dissolved	mg/L	-	0.00011	<0.00010	0.00108	0.00077	0.00082	0.00084	0.00075	0.00059	0.00126	0.00133	0.00106	-	-	-	-	0.00091	0.00088	-	<0.00010	-	0.0008	0.00112
Cobalt, total	mg/L	<0.00010	-	-	-	-	-	-	-	-	-	-	-	0.00079	0.00083	0.0009	0.00125	-	-	0.00077	-	0.00068	-	-
Copper, dissolved	mg/L	-	0.00069	<0.00040	0.006	0.015	0.0264	0.0036	0.003	0.0024	0.0668	0.006	0.0065	-	-	-	-	0.0043	0.0593	-	0.00044	-	0.00594	0.0263
Copper, total	mg/L	0.00073	-	-	-	-	-	-	-	-	-	-	-	0.01	0.0027	0.006	0.0071	-	-	0.0394	-	0.00181	-	-
Iron, dissolved	mg/L	-	0.381	<0.010	0.122	<0.01	0.011	0.014	0.014	0.013	0.011	0.021	0.014	-	-	-	-	0.011	<0.010	-	0.575	-	0.039	<0.010
Iron, total	mg/L	0.437	-	-	-	-	-	-	-	-	-	-	-	0.04	0.02	<0.10	0.01	-	-	0.03	-	0.037	-	-
Lead, dissolved	mg/L	-	<0.00020	<0.00020	0.0003	0.00026	0.00034	0.0003	0.0004	0.0002	0.0003	0.0002	0.0003	-	-	-	-	<0.0001	0.0004	-	<0.00020	-	0.00028	<0.00020
Lead, total	mg/L	<0.00020	-	-	-	-	-	-	-	-	-	-	-	0.0004	0.0003	<0.001	0.0003	-	-	0.0002	-	<0.00020	-	-
Lithium, dissolved	mg/L	-	0.024	0.0245	0.0455	0.0301	0.0344	0.0347	0.0478	0.0516	0.0178	0.0385	0.0317	-	-	-	-	0.0285	0.0173	-	0.0245	-	0.0456	0.0443
Lithium, total	mg/L	0.0217	-	-	-	-	-	-	-	-	-	-	-	0.0696	0.0462	0.03	0.0547	-	-	0.0192	-	0.0508	-	-
Magnesium, dissolved	mg/L	-	106	106	92.7	87.4	91	103	107	106	93	102	93.3	-	-	-	-	105	85	-	115	-	93.5	94.7
Magnesium, total	mg/L	101	-	-	-	-	-	-	-	-	-	-	-	102	98.6	93.1	119	-	-	80.5	-	91.1	-	-
Manganese, dissolved	mg/L	-	0.00808	0.00389	0.00366	0.00275	0.00242	0.0039	0.0042	0.004	0.0021	0.0127	0.0043	-	-	-	-	0.0039	0.0015	-	0.00535	-	0.00585	0.00658
Manganese, total	mg/L	0.00419	-	-	-	-	-	-	-	-	-	-	-	0.0048	0.0037	0.004	0.0061	-	-	0.0017	-	0.00377	-	-
Mercury, dissolved	mg/L	-	<0.000010	<0.000040	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-	<0.00002	<0.00002	-	<0.000010	-	<0.000010	<0.000040
Mercury, total	mg/L	<0.000010	-	-	-	-	-	-	-	-	-	-	-	<0.00002	-	<0.00002	<0.00002	-	-	<0.00002	-	<0.000010	-	-

Sampling Location		DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4
Date Sampled		2017-11-20	2018-06-26	2018-09-11	2019-05-29	2019-08-13	2019-10-29	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11
Lab Sample ID		7111886-05	8062674-02	8090975-04	9052874-07	9081278-07	N000444-06	3051354-05	3081378-04	3110772-04	4060249-04	4081094-04	4110161-04	5051773-03	5081710-03	5110693-02	6050336-03	6081698-03	6111141-05	7040434-06	7090074-03	7111886-06	8062674-03	8090975-05
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Molybdenum, dissolved	mg/L	-	0.00027	0.00036	0.00082	0.00105	0.00097	0.0008	0.0004	0.0006	0.0014	0.0008	0.001	-	-	-	-	0.001	0.0012	-	0.00031	-	0.00062	0.00079
Molybdenum, total	mg/L	0.00035	-	-	-	-	-	-	-	-	-	-	-	0.0006	0.0007	0.001	0.0009	-	-	0.0014	-	0.00049	-	-
Nickel, dissolved	mg/L	-	0.00199	0.00201	0.00205	0.00146	0.00148	0.0018	0.0015	0.0012	0.0027	0.0026	0.0019	-	-	-	-	0.0014	0.0017	-	0.00179	-	0.00127	0.00132
Nickel, total	mg/L	0.00204	-	-	-	-	-	-	-	-	-	-	-	<0.0002	0.0025	<0.002	0.0018	-	-	0.0017	-	0.00105	-	-
Phosphorus, dissolved	mg/L	-	<0.050	<0.050	<0.05	<0.05	<0.05	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	-	-	-	-	<0.02	<0.02	-	<0.050	-	<0.050	<0.050
Phosphorus, total	mg/L	<0.050	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.02	<0.2	<0.02	-	-	<0.05	-	<0.050	-	-
Potassium, dissolved	mg/L	-	5.15	4.79	7.19	5.75	5.72	7.63	9.49	9.36	3.66	7.73	6.8	-	-	-	-	7.23	4.01	-	4.69	-	8.51	8.04
Potassium, total	mg/L	4.63	-	-	-	-	-	-	-	-	-	-	-	11.7	9.42	6.2	9.74	-	-	4.15	-	8.59	-	-
Selenium, dissolved	mg/L	-	<0.00050	<0.00050	<0.0005	0.00056	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	0.0007	0.0007	-	-	-	-	0.0005	0.0007	-	<0.00050	-	<0.00050	<0.00050
Selenium, total	mg/L	<0.00050	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.005	<0.0005	-	-	0.0006	-	<0.00050	-	-
Silicon, dissolved	mg/L	-	7.7	7.6	6.3	7.2	7.9	7.2	7	6.6	7.4	7.3	7.9	-	-	-	-	6.8	7.6	-	7.2	-	6.8	6.5
Silicon, total	mg/L	7.6	-	-	-	-	-	-	-	-	-	-	-	7	7.2	7	8.1	-	-	7.3	-	6.4	-	-
Silver, dissolved	mg/L	-	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-	<0.00005	<0.00005	-	<0.000050	-	<0.000050	<0.000050
Silver, total	mg/L	<0.000050	-	-	-	-	-	-	-	-	-	-	-	0.00005	0.00129	<0.0005	<0.00005	-	-	<0.00005	-	<0.000050	-	-
Sodium, dissolved	mg/L	-	29.2	28.8	39.4	26.2	29.9	34.2	48.8	51	20.2	34.8	31.6	-	-	-	-	33.4	17	-	27.9	-	44.6	41.2
Sodium, total	mg/L	26.9	-	-	-	-	-	-	-	-	-	-	-	70.3	46.9	27.2	50	-	-	21.1	-	46.4	-	-
Strontium, dissolved	mg/L	-	1.66	1.76	4.26	3.49	3.11	4.26	5.03	5.11	2.07	4.53	3.8	-	-	-	-	4.11	2.09	-	1.59	-	4.49	4.8
Strontium, total	mg/L	1.85	-	-	-	-	-	-	-	-	-	-	-	6.04	5.09	3.55	5.47	-	-	2.3	-	5.49	-	-
Sulfur, dissolved	mg/L	-	44.1	41.4	82.7	70.7	71.2	80	95	88	58	87	80	-	-	-	-	83	48	-	43	-	85.5	86.6
Sulfur, total	mg/L	42.6	-	-	-	-	-	-	-	-	-	-	-	98	87	67	98	-	-	46	-	88.3	-	-
Tellurium, dissolved	mg/L	-	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	<0.0002	<0.0002	-	<0.00050	-	<0.00050	<0.00050
Tellurium, total	mg/L	<0.00050	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	<0.002	<0.0002	-	-	<0.0002	-	<0.00050	-	-
Thallium, dissolved	mg/L	-	<0.000020	<0.000020	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-	<0.00002	<0.00002	-	<0.000020	-	<0.000020	<0.000020
Thallium, total	mg/L	<0.000020	-	-	-	-	-	-	-	-	-	-	-	<0.00002	<0.00002	<0.0002	<0.00002	-	-	<0.00002	-	<0.000020	-	-
Thorium, dissolved	mg/L	-	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010	-	<0.00010	<0.00010
Thorium, total	mg/L	<0.00010	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00010	-	-
Tin, dissolved	mg/L	-	<0.00020	<0.00020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	<0.0002	<0.0002	-	<0.00020	-	<0.00020	<0.00020
Tin, total	mg/L	<0.00020	-	-	-	-	-	-	-	-	-	-	-	0.0003	<0.0002	<0.002	<0.0002	-	-	<0.0002	-	<0.00020	-	-
Titanium, dissolved	mg/L	-	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.0050	-	<0.0050	<0.0050
Titanium, total	mg/L	<0.0050	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.05	<0.005	-	-	<0.005	-	<0.0050	-	-
Tungsten, dissolved	mg/L	-	<0.0010	<0.0010	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010
Tungsten, total	mg/L	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-
Uranium, dissolved	mg/L	-	0.00011	0.000071	0.00141	0.00178	0.00155	0.00155	0.00115	0.001	0.00262	0.00152	0.00175	-	-	-	-	0.00158	0.00206	-	0.000121	-	0.000954	0.00118
Uranium, total	mg/L	0.000068	-	-	-	-	-	-	-	-	-	-	-	0.00051	0.00108	0.0017	0.00134	-	-	0.00225	-	0.000895	-	-
Vanadium, dissolved	mg/L	-	<0.0010	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	<0.001	<0.001	-	<0.0010	-	<0.0010	<0.0010
Vanadium, total	mg/L	<0.0010	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.01	<0.001	-	-	<0.001	-	<0.0010	-	-
Zinc, dissolved	mg/L	-	0.0066	<0.0040	0.037	0.0276	0.0435	0.029	0.046	0.019	0.045	0.028	0.032	-	-	-	-	0.015	0.022	-	0.0061	-	0.0431	0.055
Zinc, total	mg/L	0.0084	-	-	-	-	-	-	-	-	-	-	-	0.03	0.03	<0.04	0.018	-	-	0.024	-	0.0185	-	-
Zirconium, dissolved	mg/L	-	0.00155	0.00167	0.0005	0.00042	0.00034	0.0007	0.0007	0.0007	0.0004	0.0006	0.0006	-	-	-	-	0.0005	0.0003	-	0.0014	-	0.00057	0.00047
Zirconium, total	mg/L	0.00161	-	-	-	-	-	-	-	-	-	-	-	0.0007	0.0008	<0.001	0.0008	-	-	0.0004	-	0.00058	-	-
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	481	477	522	435	401	415	-	-	-	-	-	-	-	-	-	419	410	396	399	489	439	409	452
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1	<1	<1	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1	<1	<1	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1	<1	<1	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	481	477	522	435	401	415	437	427	435	392	399	416	430	429	422	419	410	396	399	489	439	409	452
Ammonia, Total (as N)	mg/L	0.262	0.248	0.249	0.531	0.055	0.028	0.596	0.952	1.07	0.028	0.814	0.341	1.26	0.816	0.283	0.814	0.336	0.036	0.024	0.216	1.06	0.758	0.849
Bicarbonate (HCO3)	mg/L	587	582	637	531	489	506	-	-	-	-	-	-	-	-	-	511	500	483	486	596	536	499	552
Carbonate (CO3)	mg/L	<0.600	<0.600	<0.600	<0.6	<0.6	<0.6	-	-	-	-	-	-	-	-	-	<1	<0.6	<0.6	<0.600	<0.600	<0.600	<0.600	<0.600
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	1170	1150	1180	1150	1030	982	1160	1220	1230	979	1170	1120	1220	1130	1090	1210	1100	951	955	1160	1190	1140	1180
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4
Date Sampled		2017-11-20	2018-06-26	2018-09-11	2019-05-29	2019-08-13	2019-10-29	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11
Lab Sample ID		7111886-05	8062674-02	8090975-04	9052874-07	9081278-07	N000444-06	3051354-05	3081378-04	3110772-04	4060249-04	4081094-04	4110161-04	5051773-03	5081710-03	5110693-02	6050336-03	6081698-03	6111141-05	7040434-06	7090074-03	7111886-06	8062674-03	8090975-05
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	582	-	-	571	546	549	-	-	-	-	-	-	619	611	587	-	-	-	-	-	565	-	-
Hydroxide (OH)	mg/L	<0.340	<0.340	<0.340	<0.34	<0.34	<0.34	-	-	-	-	-	-	-	-	-	<1	<0.3	<0.3	<0.340	<0.340	<0.340	<0.340	<0.340
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	7.86	7.8	7.79	7.96	7.9	8.04	7.76	7.84	7.77	7.9	7.64	7.81	7.79	7.74	7.72	7.66	7.72	7.87	7.76	7.87	7.95	7.89	7.8
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	5.34	4.61	-	0.27	0.27	0.18	0.2	0.2	0.3	5.5	0.2	0.2	0.5	0.2	0.2	0.2	0.3	0.24	0.25	7.35	0.37	0.32	-
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	-	<0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.0003
1,2-Dibromoethane	µg/L	-	-	-	<0.3	-	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
1,2-Dichloropropane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	<0.0005
Benzene	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Bromodichloromethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010

Sampling Location		DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-1b	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4	DMW-4
Date Sampled		2017-11-20	2018-06-26	2018-09-11	2019-05-29	2019-08-13	2019-10-29	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11
Lab Sample ID		7111886-05	8062674-02	8090975-04	9052874-07	9081278-07	N000444-06	3051354-05	3081378-04	3110772-04	4060249-04	4081094-04	4110161-04	5051773-03	5081710-03	5110693-02	6050336-03	6081698-03	6111141-05	7040434-06	7090074-03	7111886-06	8062674-03	8090975-05
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Bromoform	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	<0.0005
Carbon tetrachloride	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	-	<0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-	-	-	<0.0020
Chloroethane	µg/L	-	-	-	<2	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Chloroform	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Dibromochloromethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Dibromomethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	-	<0.0030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	-	-	-	<0.0030
Dichloromethane	µg/L	-	-	-	<3	-	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Ethylbenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Methyl tert-butyl ether	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Styrene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Toluene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Trichlorofluoromethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010
Vinyl chloride	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	<2	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		DMW-4	DMW-4	DMW-4	DMW-5	DMW-568	DMW-571	DMW-606	DUP	DUP A	DUP A	Hospital Creek	Kicking Horse	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2018-12-03	2019-05-29	2019-08-13	2018-06-25	2018-06-27	2018-06-27	2018-06-27	2019-10-29	2019-05-29	2019-08-13	2018-12-04	2018-06-27	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2018-12-03	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09
Lab Sample ID		8120636-04	9052874-08	9081278-08	8062668-01	8062808-02	8062808-03	8062808-01	N000444-07	9052874-09	9081278-09	8120636-06	8062805-03	K9E0816-03	K9K0184-01	K0B0397-02	K0F0788-04	8120636-01	K9E0816-02	K9K0184-02	K0B0397-01	K0F0788-03	K0K0729-01	K1E0403-03
Sample Type		Normal			Normal	Normal	Normal	Normal				Normal	Normal					Normal						
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	-	-	-	-	-	-	-	-	-	-	-	-	32.972	34	32.69	33.55	33.47	32.619	33	33.49	32.68	32.7	31.618
Dissolved Oxygen	mg/L	3.79	2.39	3.68	-	-	-	-	-	-	-	13.48	-	0.83	1.92	-	-	4.05	2.21	1.07	-	-	-	-
Electrical Conductivity	µS/cm	1000	1092	1129	1051	-	-	1895	-	-	-	360	220	6700	4700	4400	4300	3780	4600	4700	4400	4430	6600	4200
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxidation reduction potential	mV	152	-70.4	-12.3	220	-	-	-113	-	-	-	-	138	-	-	-	73	110	-	-	-	73	173	175
pH	pH Units	7.18	7.27	7.18	7.38	-	-	7.31	-	-	-	7.49	8.48	6.78	6.86	6.76	7.01	6.81	6.87	6.84	6.79	6.86	6.91	6.75
Temperature	°C	7.1	12	11.2	13.5	-	-	10.7	-	-	-	0.1	10.1	10.8	9.4	9.4	11.3	8.9	12.5	10.5	10.9	11.6	10	12.2
Anions																								
Bromide	mg/L	<0.10	-	-	-	-	-	-	-	-	-	<0.10	-	-	-	-	-	1.88	-	-	-	-	-	-
Chloride	mg/L	10.9	49.5	42.4	1.75	51.1	20	32.7	391	397	395	0.97	4.04	688	574	715	665	358	674	604	713	667	732	556
Fluoride	mg/L	0.62	1.64	1.22	2.45	0.51	0.81	6.83	0.11	0.15	0.19	<0.10	-	-	-	-	-	0.25	-	-	-	-	-	-
Nitrate (as N)	mg/L	0.402	<0.01	<0.01	0.109	0.673	<0.010	<0.010	32.1	36.9	33.1	0.052	0.096	62.6	56.4	67.7	61.4	27.2	62	60	66.9	62.3	55	53.2
Nitrite (as N)	mg/L	0.035	<0.01	<0.01	<0.010	<0.010	<0.010	0.011	<0.01	<0.01	0.161	<0.010	-	<0.01	<0.01	<0.01	0.03	<0.010	<0.01	<0.01	0.02	0.03	<0.01	<0.01
Sulfate	mg/L	215	126	122	72.9	98.2	120	123	702	721	704	28.9	-	788	783	945	873	582	781	824	925	861	781	606
Metals																								
Aluminum, dissolved	mg/L	<0.0050	<0.005	<0.005	-	-	-	-	<0.005	<0.005	<0.005	<0.0050	-	0.006	<0.005	0.23	<0.005	0.0101	0.012	<0.005	0.009	0.006	<0.005	<0.005
Aluminum, total	mg/L	<0.0050	-	-	<0.0050	0.0079	<0.0050	0.0173	-	-	-	0.0088	-	-	-	-	-	-	-	-	-	-	-	-
Antimony, dissolved	mg/L	<0.00020	<0.0002	<0.0002	-	-	-	-	<0.0002	0.00044	<0.0002	<0.00020	-	0.0003	0.0003	0.0005	0.0005	0.00191	0.0006	0.0002	0.0006	0.0004	0.001	0.0006
Antimony, total	mg/L	<0.00020	-	-	0.0006	0.00021	<0.00020	<0.00020	-	-	-	<0.00020	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, dissolved	mg/L	0.00146	0.0633	0.0414	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.00050	-	0.0104	0.0029	0.003	0.0048	0.00063	0.0033	0.0028	0.0021	0.0044	0.0057	<0.0005
Arsenic, total	mg/L	0.00161	-	-	0.0674	<0.00050	<0.00050	0.00239	-	-	-	<0.00050	-	-	-	-	-	-	-	-	-	-	-	-
Barium, dissolved	mg/L	0.0224	0.0242	0.0229	-	-	-	-	0.047	0.0512	0.0491	0.0555	-	0.101	0.0566	0.0822	0.062	0.0465	0.087	0.0566	0.0831	0.0676	0.074	0.0595
Barium, total	mg/L	0.0154	-	-	<0.0050	0.0953	0.0833	0.0253	-	-	-	0.0589	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium, dissolved	mg/L	<0.00010	0.00011	0.00011	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.00010	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Beryllium, total	mg/L	<0.00010	-	-	-	-	-	-	-	-	-	<0.00010	-	-	-	-	-	-	-	-	-	-	-	-
Bismuth, dissolved	mg/L	<0.00010	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.00010	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L	<0.00010	-	-	-	-	-	-	-	-	-	<0.00010	-	-	-	-	-	-	-	-	-	-	-	-
Boron, dissolved	mg/L	0.33	0.13	0.136	-	-	-	-	2.18	1.84	1.86	0.0091	-	1.12	1.05	1.28	1.08	1.95	1.09	0.921	1.24	1.14	1.48	1.31
Boron, total	mg/L	0.335	-	-	0.173	0.213	0.0545	0.961	-	-	-	0.0093	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium, dissolved	mg/L	<0.000010	<0.00001	<0.00001	-	-	-	-	<0.00001	<0.00001	<0.00001	<0.000010	-	0.00006	0.00001	0.00002	0.00002	<0.000010	0.00005	0.00003	0.00004	0.00002	0.00002	0.00018
Cadmium, total	mg/L	0.00001	-	-	<0.000010	<0.000010	<0.000010	0.000121	-	-	-	<0.000010	-	-	-	-	-	-	-	-	-	-	-	-
Calcium, dissolved	mg/L	67.9	70.7	71.2	-	-	-	-	158	170	164	53.2	-	235	197	217	186	164	220	192	215	191	212	194
Calcium, total	mg/L	68.6	-	-	0.27	91.9	95.6	34.4	-	-	-	52.4	-	-	-	-	-	-	-	-	-	-	-	-
Chromium, dissolved	mg/L	<0.00050	0.00088	<0.0005	-	-	-	-	<0.0005	0.00105	<0.0005	<0.00050	-	0.006	0.0065	0.0342	0.0109	<0.00050	0.004	0.0082	0.0341	0.0117	0.0019	<0.0005
Chromium, total	mg/L	<0.00050	-	-	<0.00050	0.00076	<0.00050	<0.00050	-	-	-	<0.00050	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt, dissolved	mg/L	0.00076	0.00029	<0.0001	-	-	-	-	0.00164	0.00167	0.00168	<0.00010	-	0.00298	0.00108	0.00151	0.00142	0.00164	0.00415	0.0022	0.00258	0.00228	0.0014	0.00124
Cobalt, total	mg/L	0.00075	-	-	<0.00010	0.00049	0.00445	0.00104	-	-	-	<0.00010	-	-	-	-	-	-	-	-	-	-	-	-
Copper, dissolved	mg/L	0.00315	<0.0004	<0.0004	-	-	-	-	0.00217	0.00247	0.00201	<0.00040	-	0.008	0.0055	0.0143	0.0097	0.00328	0.0091	0.0056	0.0157	0.0077	0.0048	0.0019
Copper, total	mg/L	0.00488	-	-	0.00841	0.0582	0.00719	0.00196	-	-	-	0.00323	-	-	-	-	-	-	-	-	-	-	-	-
Iron, dissolved	mg/L	0.06	0.672	0.409	-	-	-	-	<0.01	<0.01	<0.01	<0.010	-	0.23	0.204	0.402	0.396	<0.010	0.219	0.196	0.195	0.425	0.396	<0.010
Iron, total	mg/L	0.062	-	-	0.059	0.466	0.552	3.6	-	-	-	<0.010	-	-	-	-	-	-	-	-	-	-	-	-
Lead, dissolved	mg/L	0.00032	<0.0002	<0.0002	-	-	-	-	<0.0002	<0.0002	<0.0002	<0.00020	-	<0.0001	<0.0001	0.0002	<0.0001	0.00048	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Lead, total	mg/L	0.00078	-	-	0.00149	0.00124	<0.00020	0.00134	-	-	-	0.00096	-	-	-	-	-	-	-	-	-	-	-	-
Lithium, dissolved	mg/L	0.0429	0.0269	0.0249	-	-	-	-	0.0453	0.0458	0.0438	0.00102	-	0.0341	0.0359	0.054	0.0477	0.0443	0.0305	0.0278	0.0574	0.0488	0.042	0.0377
Lithium, total	mg/L	0.0435	-	-	-	-	-	-	-	-	-	0.00107	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium, dissolved	mg/L	92.6	106	107	-	-	-	-	295	275	272	17.5	-	292	310	308	263	297	299	314	310	269	286	285
Magnesium, total	mg/L	94.9	-	-	2.05	107	118	19.7	-	-	-	18.1	-	-	-	-	-	-	-	-	-	-	-	-
Manganese, dissolved	mg/L	0.00333	0.00864	0.0041	-	-	-	-	0.0898	0.0792	0.0888	<0.00020	-	0.242	0.0862	0.115	0.113	0.00199	0.518	0.212	0.168	0.191	0.108	0.0937
Manganese, total	mg/L	0.00392	-	-	0.00103	0.0225	0.36	0.017	-	-	-	0.00048	-	-	-	-	-	-	-	-	-	-	-	-
Mercury, dissolved	mg/L	<0.000010	<0.00001	<0.00001	-	-	-	-	<0.00001	<0.00001	<0.00001	<0.000040	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.000040	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002
Mercury, total	mg/L	<0.000040	-	-	<0.000010	<0.000010	<0.000010	<0.000010	-	-	-	<0.000010	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		DMW-4	DMW-4	DMW-4	DMW-5	DMW-568	DMW-571	DMW-606	DUP	DUP A	DUP A	Hospital Creek	Kicking Horse	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2018-12-03	2019-05-29	2019-08-13	2018-06-25	2018-06-27	2018-06-27	2018-06-27	2019-10-29	2019-05-29	2019-08-13	2018-12-04	2018-06-27	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2018-12-03	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09
Lab Sample ID		8120636-04	9052874-08	9081278-08	8062668-01	8062808-02	8062808-03	8062808-01	N000444-07	9052874-09	9081278-09	8120636-06	8062805-03	K9E0816-03	K9K0184-01	K0B0397-02	K0F0788-04	8120636-01	K9E0816-02	K9K0184-02	K0B0397-01	K0F0788-03	K0K0729-01	K1E0403-03
Sample Type		Normal			Normal	Normal	Normal	Normal				Normal	Normal					Normal						
Analyte	Unit																							
Molybdenum, dissolved	mg/L	0.00077	0.00037	0.00034	-	-	-	-	0.0003	0.00031	0.00032	0.00036	-	0.0006	0.0003	0.0003	0.0003	0.00047	0.0023	0.0009	0.0004	0.0006	0.0005	0.0003
Molybdenum, total	mg/L	0.0008	-	-	0.0009	0.00083	0.00107	0.00022	-	-	-	0.0004	-	-	-	-	-	-	-	-	-	-	-	-
Nickel, dissolved	mg/L	0.00116	0.0022	0.00217	-	-	-	-	0.0116	0.0114	0.0123	<0.00040	-	0.0163	0.0085	0.0112	0.0132	0.012	0.0148	0.0094	0.0115	0.0137	0.0154	0.007
Nickel, total	mg/L	0.00118	-	-	0.00076	0.0032	0.00347	0.00109	-	-	-	<0.00040	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, dissolved	mg/L	<0.050	<0.05	<0.05	-	-	-	-	<0.05	<0.05	<0.05	<0.050	-	0.039	<0.020	0.03	<0.020	<0.050	0.043	0.02	0.031	0.024	<0.020	<0.020
Phosphorus, total	mg/L	<0.050	-	-	-	-	-	-	-	-	-	<0.050	-	-	-	-	-	-	-	-	-	-	-	-
Potassium, dissolved	mg/L	7.11	4.62	4.68	-	-	-	-	173	171	176	0.47	-	131	149	153	147	186	109	133	153	146	157	167
Potassium, total	mg/L	7.38	-	-	1.07	8.26	10.6	14.5	-	-	-	0.45	-	-	-	-	-	-	-	-	-	-	-	-
Selenium, dissolved	mg/L	<0.00050	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.00050	-	<0.0003	<0.0003	<0.0003	0.0018	<0.00050	<0.0003	<0.0003	<0.0003	0.0006	0.0018	0.0006
Selenium, total	mg/L	<0.00050	-	-	<0.00050	<0.00050	<0.00050	<0.00050	-	-	-	<0.00050	-	-	-	-	-	-	-	-	-	-	-	-
Silicon, dissolved	mg/L	7	7.3	7.7	-	-	-	-	13.7	11.3	12.3	3.3	-	10	10.1	22.4	8.42	12.8	9.21	9.1	17.6	10.8	8.95	12.4
Silicon, total	mg/L	7.2	-	-	-	-	-	-	-	-	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-
Silver, dissolved	mg/L	<0.000050	<0.00005	<0.00005	-	-	-	-	<0.00005	<0.00005	<0.00005	<0.000050	-	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	0.00005	<0.00005	<0.00005	0.00006	0.00014	<0.00005
Silver, total	mg/L	<0.000050	-	-	-	-	-	-	-	-	-	<0.000050	-	-	-	-	-	-	-	-	-	-	-	-
Sodium, dissolved	mg/L	40.7	28.4	26.7	-	-	-	-	317	294	294	1.89	-	348	379	384	314	323	351	378	380	323	344	322
Sodium, total	mg/L	41.5	-	-	282	46.6	22.3	484	-	-	-	1.86	-	-	-	-	-	-	-	-	-	-	-	-
Strontium, dissolved	mg/L	4.1	1.73	1.76	-	-	-	-	1.56	1.69	1.66	0.174	-	2.53	2.21	2.04	2.04	1.75	2.42	2.09	2.07	2.12	2.25	1.95
Strontium, total	mg/L	4.14	-	-	0.0123	1.19	1.29	1.65	-	-	-	0.173	-	-	-	-	-	-	-	-	-	-	-	-
Sulfur, dissolved	mg/L	78.8	43.4	45.4	-	-	-	-	285	259	274	10.8	-	-	-	-	-	292	-	-	-	-	-	-
Sulfur, total	mg/L	81	-	-	-	-	-	-	-	-	-	10.1	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium, dissolved	mg/L	<0.00050	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.00050	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.00050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Tellurium, total	mg/L	<0.00050	-	-	-	-	-	-	-	-	-	<0.00050	-	-	-	-	-	-	-	-	-	-	-	-
Thallium, dissolved	mg/L	<0.000020	<0.00002	<0.00002	-	-	-	-	0.00006	0.000056	0.000061	<0.000020	-	0.00009	0.00006	0.00006	0.00007	0.000048	0.00008	0.00006	0.00007	0.00007	0.00007	0.00006
Thallium, total	mg/L	<0.000020	-	-	-	-	-	-	-	-	-	<0.000020	-	-	-	-	-	-	-	-	-	-	-	-
Thorium, dissolved	mg/L	<0.00010	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.00010	-	-	<0.0001	<0.0001	<0.0001	<0.00010	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Thorium, total	mg/L	<0.00010	-	-	-	-	-	-	-	-	-	<0.00010	-	-	-	-	-	-	-	-	-	-	-	-
Tin, dissolved	mg/L	<0.00020	<0.0002	<0.0002	-	-	-	-	<0.0002	0.00025	<0.0002	<0.00020	-	0.0002	0.0002	0.0002	0.0002	0.00151	0.0003	<0.0002	<0.0002	<0.0002	0.0002	<0.0002
Tin, total	mg/L	<0.00020	-	-	-	-	-	-	-	-	-	<0.00020	-	-	-	-	-	-	-	-	-	-	-	-
Titanium, dissolved	mg/L	<0.0050	<0.005	<0.005	-	-	-	-	<0.005	<0.005	<0.005	<0.0050	-	<0.005	0.006	0.017	0.008	<0.0050	<0.005	0.005	0.005	0.008	0.014	<0.005
Titanium, total	mg/L	<0.0050	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	-	-	-	-	-	-	-	-	-
Tungsten, dissolved	mg/L	<0.0010	<0.001	<0.001	-	-	-	-	<0.001	<0.001	<0.001	<0.0010	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Tungsten, total	mg/L	<0.0010	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-
Uranium, dissolved	mg/L	0.00134	0.000111	0.00014	-	-	-	-	0.00747	0.00771	0.00761	0.000797	-	0.00761	0.00751	0.00639	0.00741	0.00793	0.00886	0.00757	0.007	0.00757	0.0079	0.00607
Uranium, total	mg/L	0.00131	-	-	0.00141	0.00174	0.00277	0.000176	-	-	-	0.000856	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium, dissolved	mg/L	<0.0010	<0.001	<0.001	-	-	-	-	<0.001	<0.001	<0.001	<0.0010	-	0.0019	0.002	0.016	0.0062	<0.0010	0.0014	0.0026	0.0134	0.009	<0.0010	<0.001
Vanadium, total	mg/L	<0.0010	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-
Zinc, dissolved	mg/L	0.0189	0.0101	0.0045	-	-	-	-	<0.004	0.0047	<0.004	<0.0040	-	0.0063	0.0036	0.0086	0.0047	0.0057	0.0063	0.0029	0.0103	0.005	0.0044	0.004
Zinc, total	mg/L	0.0192	-	-	0.0153	0.0447	0.0671	1.27	-	-	-	0.0065	-	-	-	-	-	-	-	-	-	-	-	-
Zirconium, dissolved	mg/L	0.00053	0.00153	0.00162	-	-	-	-	0.00017	0.00015	0.00014	<0.00010	-	0.0008	0.0002	0.0004	0.0002	0.00021	0.001	0.0005	0.0003	0.0003	0.0002	0.0002
Zirconium, total	mg/L	0.00049	-	-	-	-	-	-	-	-	-	<0.00010	-	-	-	-	-	-	-	-	-	-	-	-
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	411	504	516	477	504	546	932	938	970	917	189	-	-	-	-	-	939	-	-	-	-	-	-
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	-	-	-	-	-	<1.0	-	-	-	-	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	-	-	-	-	-	<1.0	-	-	-	-	-	-
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1.0	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	-	-	-	-	-	<1.0	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	411	504	516	477	504	546	932	938	970	917	189	-	1380	762	768	787	939	1590	780	794	778	757	801
Ammonia, Total (as N)	mg/L	0.416	0.285	0.288	-	-	-	-	1	1.06	1.3	<0.020	-	0.29	0.08	0.3	0.09	0.79	0.54	0.26	0.44	0.26	0.13	0.2
Bicarbonate (HCO3)	mg/L	502	615	630	582	615	667	1140	1140	1180	1120	230	-	-	-	-	-	1150	-	-	-	-	-	-
Carbonate (CO3)	mg/L	<0.600	<0.6	<0.6	<0.600	<0.600	<0.600	<0.600	<0.6	<0.6	<0.6	<0.600	-	-	-	-	-	<0.600	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	1100	1160	1160	1020	1200	1190	2010	3860	4130	3970	382	-	5110	4820	4790	4720	789	5090	4840	4780	4680	4640	4250
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		DMW-4	DMW-4	DMW-4	DMW-5	DMW-568	DMW-571	DMW-606	DUP	DUP A	DUP A	Hospital Creek	Kicking Horse	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2018-12-03	2019-05-29	2019-08-13	2018-06-25	2018-06-27	2018-06-27	2018-06-27	2019-10-29	2019-05-29	2019-08-13	2018-12-04	2018-06-27	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2018-12-03	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09
Lab Sample ID		8120636-04	9052874-08	9081278-08	8062668-01	8062808-02	8062808-03	8062808-01	N000444-07	9052874-09	9081278-09	8120636-06	8062805-03	K9E0816-03	K9K0184-01	K0B0397-02	K0F0788-04	8120636-01	K9E0816-02	K9K0184-02	K0B0397-01	K0F0788-03	K0K0729-01	K1E0403-03
Sample Type		Normal			Normal	Normal	Normal	Normal				Normal	Normal					Normal						
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	-	612	619	9.13	671	726	167	1610	1560	1530	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydroxide (OH)	mg/L	<0.340	<0.34	<0.34	<0.340	<0.340	<0.340	<0.340	<0.34	<0.34	<0.34	<0.340	-	-	-	-	-	<0.340	-	-	-	-	-	-
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	7.83	7.99	7.96	7.88	7.89	7.97	8.02	7.73	7.61	7.66	8.21	-	7.4	7.28	7.32	7.55	7.32	7.4	7.29	7.49	7.57	7.35	7.5
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	<0.0020	-	-	-	-	-	-	-	-	-	<0.0020	-	-	-	-	-	0.163	-	-	-	-	-	-
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	0.58	6.97	3.56	0.11	2.38	1.96	42.6	114	222	235	0.83	-	-	9.1	1600	3500	176	2400	2900	830	1500	730	188
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	<1	<1	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	<0.5	-	-	-	-	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	<0.3	-	-	-	-	-	<0.3	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	<0.5	-	-	-	-	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	µg/L	-	<0.5	-	-	-	-	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		DMW-4	DMW-4	DMW-4	DMW-5	DMW-568	DMW-571	DMW-606	DUP	DUP A	DUP A	Hospital Creek	Kicking Horse	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6D	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2018-12-03	2019-05-29	2019-08-13	2018-06-25	2018-06-27	2018-06-27	2018-06-27	2019-10-29	2019-05-29	2019-08-13	2018-12-04	2018-06-27	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2018-12-03	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09
Lab Sample ID		8120636-04	9052874-08	9081278-08	8062668-01	8062808-02	8062808-03	8062808-01	N000444-07	9052874-09	9081278-09	8120636-06	8062805-03	K9E0816-03	K9K0184-01	K0B0397-02	K0F0788-04	8120636-01	K9E0816-02	K9K0184-02	K0B0397-01	K0F0788-03	K0K0729-01	K1E0403-03
Sample Type		Normal			Normal	Normal	Normal	Normal				Normal	Normal					Normal						
Analyte	Unit																							
Bromoform	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	<0.5	-	-	-	-	-	<0.5	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	µg/L	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	µg/L	-	<3	-	-	-	-	-	<3	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	<1	-	-	-	-	-	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	<2	-	-	-	-	-	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-10	2019-05-29
Lab Sample ID		K1H0536-02	K1J0685-01	2051369-03	2081484-01	2111131-01	3051354-01	3081378-01	3110772-01	4060249-06	4081094-06	4110161-06	5051773-06	5081710-04	5110693-03	6050336-01	6081698-01	6111141-03	7040434-03	7090074-01	7111886-01	8062674-01	8090975-01	9052874-01
Sample Type				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	32.625	32.625	32.59	32.605	32.624	32.629	32.64	32.651	32.6	32.61	32.6	32.67	32.78	32.74	32.76	32.59	32.57	-	32.56	32.68	32.73	32.47	32.588
Dissolved Oxygen	mg/L	-	-	-	-	-	-	-	-	0.28	1.56	1.07	1.36	1.74	0.95	0.46	0.43	1.98	-	1.17	0.6	-	3.51	2.06
Electrical Conductivity	µS/cm	3600	4000	4100	4600	480	3300	4900	3700	4240	4030	4610	4710	4550	4530	4700	4520	2270	4150	4120	3630	4260	4160	3759
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	885.687
Oxidation reduction potential	mV	67	167	135	210	164	231	228	-24	96	116	44	-7	-55	45	151	182	186	217	158	-	168	168	-4.3
pH	pH Units	6.87	6.73	6.86	6.97	6.9	6.87	6.63	6.64	4.8	7.3	6.7	6.5	6.7	6	6.7	6.7	7	7.3	7	7	7.03	7.02	6.89
Temperature	°C	12.4	11.1	11.2	12.5	12.2	12.4	12.1	12.2	13	13	12.3	14.1	12.8	12.5	12.5	13.5	12.2	11.8	12.6	12	13.1	11.6	11.7
Anions																								
Bromide	mg/L	-	-	-	-	-	-	-	-	-	-	-	0.47	1.09	1.48	0.13	2.81	1.14	0.88	2.16	2.84	0.38	<10.0	-
Chloride	mg/L	632	621	599	587	709	669	662	662	650	491	529	594	549	627	605	529	497	470	480	417	416	-	398
Fluoride	mg/L	-	-	0.11	0.31	0.14	0.12	0.14	<0.10	<0.10	0.11	0.25	0.14	0.1	0.23	0.17	0.16	0.33	0.14	<0.10	0.51	0.27	0.28	0.15
Nitrate (as N)	mg/L	66.5	56.3	-	54.6	59.1	62.3	54.5	54.7	52.1	41.8	48.9	38	34.1	33.3	44.1	37.7	40.1	42.3	35.3	32.6	31.3	-	33.8
Nitrite (as N)	mg/L	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	5.7	<0.010	<0.010	<0.010	<0.010	<0.01
Sulfate	mg/L	688	701	719	787	893	814	910	884	858	784	879	950	878	905	903	851	867	799	757	663	628	-	677
Metals																								
Aluminum, dissolved	mg/L	<0.005	<0.005	0.005	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	0.005	<0.005	0.024	0.859	<0.005	<0.005	0.007	0.006	0.0067	<0.0050	0.927	0.0081	<0.005
Aluminum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony, dissolved	mg/L	0.0004	<0.0020	0.0002	0.0009	0.0009	0.0009	0.0011	0.001	0.0003	0.0005	0.0003	0.0005	0.0005	0.0004	0.0006	<0.0001	0.0002	0.0001	<0.00020	<0.00020	0.00116	0.00076	0.00042
Antimony, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic, dissolved	mg/L	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.001	0.0034	<0.0005	<0.0005	0.0007	0.00055	<0.00050	0.00117	0.00067	<0.0005
Arsenic, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium, dissolved	mg/L	0.059	0.051	0.062	0.066	0.067	0.067	0.065	0.061	0.059	0.054	0.058	0.062	0.062	0.071	0.055	0.058	0.057	0.057	0.051	0.05	0.0748	0.0491	0.0515
Barium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0006	<0.0001	<0.0001	0.003	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001
Beryllium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bismuth, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001
Bismuth, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron, dissolved	mg/L	1.18	1.26	1.23	1.29	1.43	1.47	1.53	1.64	1.67	1.6	1.61	2.04	1.9	1.77	2.12	2.08	1.76	2.03	1.86	1.57	1.7	1.6	1.8
Boron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium, dissolved	mg/L	0.00001	0.00002	<0.00001	<0.00001	0.00002	0.00002	0.00003	0.00001	<0.00001	<0.00001	0.00001	0.00002	<0.00001	0.00003	<0.00001	0.00002	0.00003	<0.00001	<0.000010	<0.000010	0.000036	<0.000010	<0.00001
Cadmium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium, dissolved	mg/L	177	177	180	182	193	218	235	231	218	217	209	199	197	208	202	179	168	163	180	167	186	148	170
Calcium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium, dissolved	mg/L	<0.0005	<0.0005	<0.0005	0.0016	0.0006	0.0009	<0.0005	0.0066	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0017	0.0057	0.0008	<0.0005	0.0006	0.00063	<0.00050	0.00169	<0.00050	0.00093
Chromium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt, dissolved	mg/L	0.00116	0.00093	0.00136	0.00114	0.00108	0.00148	0.00128	0.00127	0.001	0.00118	0.00133	0.00141	0.00149	0.00204	0.00198	0.00164	0.00183	0.00164	0.00161	0.00164	0.00212	0.00162	0.00163
Cobalt, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper, dissolved	mg/L	0.0015	0.017	0.0009	0.0018	0.0016	0.0014	0.0021	0.0013	0.0169	0.0017	0.0018	0.0028	0.042	0.2	0.0065	0.0051	0.217	0.0028	0.00681	0.00211	0.00664	0.00312	0.00252
Copper, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, dissolved	mg/L	<0.01	<0.01	<0.01	0.02	0.01	0.028	<0.010	0.105	<0.010	0.012	0.011	0.011	0.062	1.21	0.609	0.021	0.02	<0.010	0.013	<0.010	1.43	0.046	<0.01
Iron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0006	<0.0001	<0.0001	<0.0001	0.0014	0.0039	<0.0001	<0.0001	<0.0001	<0.0001	<0.00020	<0.00020	0.00191	<0.00020	<0.0002
Lead, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithium, dissolved	mg/L	0.0364	0.0335	0.0361	0.0382	0.0395	0.045	0.0479	0.0486	0.052	0.0497	0.0501	0.0483	0.0513	0.0462	0.0519	0.0396	0.0438	0.0484	0.0452	0.042	0.045	0.0403	0.0448
Lithium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium, dissolved	mg/L	259	246	308	308	321	349	378	347	351	335	329	332	339	322	327	331	309	302	298	267	259	274	276
Magnesium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese, dissolved	mg/L	0.0894	0.0932	0.072	0.0683	0.0882	0.112	0.122	0.119	0.0908	0.121	0.132	0.0747	0.087	0.157	0.0791	0.0793	0.0731	0.0597	0.0887	0.0697	0.147	0.0262	0.0826
Manganese, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury, dissolved	mg/L	<0.00002	0.00005	<0.00002	0.00008	0.00004	0.00002	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.000010	0.000041	<0.000010	<0.000040	<0.00001
Mercury, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-10	2019-05-29
Lab Sample ID		K1H0536-02	K1J0685-01	2051369-03	2081484-01	2111131-01	3051354-01	3081378-01	3110772-01	4060249-06	4081094-06	4110161-06	5051773-06	5081710-04	5110693-03	6050336-01	6081698-01	6111141-03	7040434-03	7090074-01	7111886-01	8062674-01	8090975-01	9052874-01
Sample Type				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	
Analyte	Unit																							
Molybdenum, dissolved	mg/L	0.0003	0.0036	0.0003	0.0018	0.0005	0.0006	0.0003	0.0007	0.0003	0.0003	0.0003	0.0004	0.0004	0.0037	0.0003	0.0003	0.0012	0.0003	0.00031	0.00032	0.00027	0.00033	0.00036
Molybdenum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel, dissolved	mg/L	0.0067	0.0067	0.0073	0.008	0.008	0.0155	0.0097	0.0176	0.0078	0.0097	0.0103	0.0093	0.0109	0.0119	0.0139	0.0114	0.0116	0.011	0.0113	0.0116	0.0122	0.0123	0.0116
Nickel, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, dissolved	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.02	0.04	<0.02	<0.02	<0.02	<0.05	<0.050	<0.050	0.053	<0.050	<0.05
Phosphorus, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium, dissolved	mg/L	160	148	170	161	178	202	228	210	222	232	246	215	217	199	209	213	211	209	200	184	189	180	172
Potassium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium, dissolved	mg/L	0.0006	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	0.0006	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005
Selenium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silicon, dissolved	mg/L	11.5	10.2	12.2	11.4	11.9	11.9	12.5	11.1	12	12.3	13.7	12.7	12.7	12.9	13.3	11.2	12.1	12.6	11.6	11.2	13.8	11.3	11.3
Silicon, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver, dissolved	mg/L	0.00012	0.00009	<0.00005	<0.00005	0.00011	0.0001	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.000050	<0.000050	<0.00005
Silver, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium, dissolved	mg/L	298	290	346	362	375	409	444	407	372	385	428	385	394	375	359	366	347	343	334	285	261	297	294
Sodium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Strontium, dissolved	mg/L	1.88	1.74	1.91	2	2.11	2.18	2.28	2.1	2.15	2.06	2.04	1.92	2.05	1.9	1.95	1.84	1.76	1.74	1.62	1.73	1.65	1.65	1.7
Strontium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfur, dissolved	mg/L	-	-	266	298	339	359	405	366	337	340	398	343	362	342	281	336	312	284	268	273	266	257	263
Sulfur, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tellurium, dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005
Tellurium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium, dissolved	mg/L	0.00005	0.00006	0.00005	0.00005	0.00022	0.00005	0.00009	0.00007	0.00005	0.00007	0.00007	0.00007	0.00006	0.00007	0.00006	0.00006	0.00006	0.00006	<0.000020	0.000058	0.00006	0.000057	0.000061
Thallium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thorium, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	0.00067	<0.00010	<0.0001
Thorium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tin, dissolved	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0005	0.0013	<0.0002	0.0003	0.0003	<0.0002	0.00026	0.00023	0.00031	<0.00020	0.00028
Tin, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium, dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.038	0.014	<0.005	<0.005	<0.005	<0.0050	<0.0050	0.0525	<0.0050	<0.005
Titanium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tungsten, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.001
Tungsten, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium, dissolved	mg/L	0.00602	0.00607	0.0058	0.00698	0.00686	0.00779	0.00823	0.00765	0.00721	0.00777	0.00802	0.00729	0.00779	0.00804	0.00863	0.00753	0.00717	0.00734	0.00769	0.00796	0.00707	0.00763	0.00748
Uranium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium, dissolved	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002	<0.001	<0.001	<0.001	<0.0010	<0.0010	0.0013	<0.0010	<0.001
Vanadium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc, dissolved	mg/L	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.009	0.005	0.005	0.006	0.027	0.067	0.009	0.035	0.199	0.005	0.034	<0.0040	0.0229	0.0044	0.0048
Zinc, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zirconium, dissolved	mg/L	0.0001	0.0001	0.0001	0.0003	0.0001	0.0002	0.0002	0.0001	0.0001	0.0004	0.0004	0.0002	0.0001	0.0008	0.0002	0.0001	0.0001	0.0002	0.00014	0.00012	0.00083	0.00019	0.00014
Zirconium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	857	878	907	902	878	929	1050	1140	963
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1
Alkalinity, Total (as CaCO3)	mg/L	800	784	805	813	790	902	771	798	818	802	832	855	865	897	857	878	907	902	878	929	1050	1140	963
Ammonia, Total (as N)	mg/L	0.18	0.16	0.133	0.274	0.406	0.432	0.462	0.518	0.39	0.588	0.408	0.644	0.614	0.899	1.4	1.21	0.94	1.19	0.935	1.17	1.26	1.12	1.42
Bicarbonate (HCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1050	1070	1110	1100	1070	1130	1280	1390	1180
Carbonate (CO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<0.6	<0.6	<0.600	<0.600	<0.600	<0.600	<0.600	<0.6
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	4230	4320	4380	4670	5040	5020	5150	5220	4840	4750	4850	4640	4520	4570	4650	4480	4430	4350	4170	4190	4060	4070	3990
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-10	2019-05-29
Lab Sample ID		K1H0536-02	K1J0685-01	2051369-03	2081484-01	2111131-01	3051354-01	3081378-01	3110772-01	4060249-06	4081094-06	4110161-06	5051773-06	5081710-04	5110693-03	6050336-01	6081698-01	6111141-03	7040434-03	7090074-01	7111886-01	8062674-01	8090975-01	9052874-01
Sample Type				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1560
Hydroxide (OH)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<0.3	<0.3	<0.340	<0.340	<0.340	<0.340	<0.340	<0.34
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	7.39	7.35	7.45	7.35	6.96	7.4	7.46	7.36	7.65	7.39	7.49	7.37	7.34	7.3	7.55	7.42	7.68	7.42	7.6	7.51	7.39	7.45	7.61
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	79	155	437	267	32.2	448	163	84.6	3.7	47.2	196	6.9	1.6	205	1.6	1.89	220	1.03	46.9	387	2210	-	203
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	<0.0003	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.3
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	<0.0005	-
Benzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-

Sampling Location		MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S	MW09-6S
Date Sampled		2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-10	2019-05-29
Lab Sample ID		K1H0536-02	K1J0685-01	2051369-03	2081484-01	2111131-01	3051354-01	3081378-01	3110772-01	4060249-06	4081094-06	4110161-06	5051773-06	5081710-04	5110693-03	6050336-01	6081698-01	6111141-03	7040434-03	7090074-01	7111886-01	8062674-01	8090975-01	9052874-01
Sample Type				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	
Analyte	Unit																							
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	<0.0005	-
Carbon tetrachloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-	-	-	<0.0020	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Chloroform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	-	-	-	<0.0030	-
Dichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Methyl tert-butyl ether	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0066	-	-	-	<0.0010	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	<0.0010	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW09-6S	MW09-6S	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW15-01
Date Sampled		2019-08-13	2019-10-29	2010-11-16	2011-05-09	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2015-11-09
Lab Sample ID		9081278-01	N000444-01	K0K0729-02	K1E0403-01	K1E0403-04	K1H0536-01	K1J0685-02	2051369-04	2081484-02	2111131-02	3051354-02	3081378-05	3110772-05	4060249-05	4081094-05	4110161-05	5051773-05	8090975-03	8120636-03	9052874-02	9081278-02	N000444-02	5110701-01
Sample Type									Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal			Normal
Analyte	Unit																						
Field Parameters																							
Depth to Water	m	32.574	32.566	14.14	13.903	-	13.945	13.78	13.59	13.85	14.109	14.252	14.381	16.281	15.19	13.84	14.99	15.37	15.91	14.72	13.834	13.792	14.572	11.04
Dissolved Oxygen	mg/L	1.75	2.56	-	-	-	-	-	-	-	-	-	-	-	7.43	7.85	8.3	7.05	10.98	9.05	7.3	9.5	9.28	1.42
Electrical Conductivity	µS/cm	3660	3607	2100	2800	-	2700	3100	3200	3500	340	2200	3300	2700	2740	2770	3150	2960	2910	2700	2444	2850	2945	1056
Elevation of Piezometric Surface	m	885.701	885.709	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	906.334	906.376	905.596	-
Oxidation reduction potential	mV	-8.3	173	-138	2800	-	83	143	124	52	122	254	121	47	87	132	24	23	100	158	-17.1	42.1	175.3	50
pH	pH Units	6.72	7.04	8.44	7.85	-	7.51	7.33	7.43	7.54	7.6	7.4	7.37	7.23	3.1	7.3	7.4	7.3	7.57	7.23	7.5	7.47	7.59	6.5
Temperature	°C	11.9	11	5.9	8.7	-	8.1	6.9	7.9	8.4	7.1	8.9	8.6	7.5	8.1	9.5	7.5	9.7	8.3	6.8	7.9	9.1	6.4	9.3
Anions																								
Bromide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	-	-	-	<0.10
Chloride	mg/L	388	391	523	663	-	844	873	834	888	988	762	820	815	672	672	700	666	509	580	605	651	736	125
Fluoride	mg/L	0.18	0.11	-	-	-	-	-	0.12	0.13	0.12	0.23	0.24	0.25	0.27	0.13	0.26	0.26	0.28	0.22	0.29	0.22	0.2	<0.10
Nitrate (as N)	mg/L	33.6	31	0.22	<0.010	-	0.341	0.58	0.59	0.141	0.339	0.566	0.929	<0.010	0.206	1.11	0.723	0.695	0.94	0.778	0.942	0.89	1.22	1.19
Nitrite (as N)	mg/L	0.154	<0.01	<0.01	<0.01	-	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.010
Sulfate	mg/L	698	700	72.9	44.3	-	44.4	55.2	36.5	37.4	57.6	53.2	45.1	56.2	38.1	44.7	47.5	39.4	48.6	51.8	47.5	48.8	43.5	45.8
Metals																								
Aluminum, dissolved	mg/L	<0.005	<0.005	0.007	-	0.005	<0.005	<0.005	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.01	<0.005	<0.0050	<0.0050	<0.005	<0.005	<0.005	0.008
Aluminum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.455
Antimony, dissolved	mg/L	<0.0002	<0.0002	0.0008	0.0015	-	0.001	<0.0020	0.0003	0.0016	0.0009	0.0007	0.0004	0.0007	0.0003	0.0003	0.0013	0.0019	0.00028	0.00029	<0.0002	<0.0002	<0.0002	<0.0001
Antimony, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001
Arsenic, dissolved	mg/L	<0.0005	<0.0005	0.0107	0.0149	-	0.0061	0.0031	0.0028	0.0039	0.0024	0.0024	0.0029	0.0018	0.0024	0.0042	0.0016	0.0039	0.002	0.00204	0.00215	0.0022	0.00353	<0.0005
Arsenic, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005
Barium, dissolved	mg/L	0.051	0.047	0.125	0.257	-	0.246	0.195	0.255	0.271	0.25	0.227	0.239	0.257	0.192	0.235	0.242	0.212	0.174	0.199	0.19	0.208	0.223	0.154
Barium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.184
Beryllium, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001
Beryllium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0001
Bismuth, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001
Boron, dissolved	mg/L	1.85	2.22	0.093	0.034	-	0.028	0.027	0.031	0.017	0.024	0.025	0.051	0.041	0.031	0.035	0.024	0.02	0.0602	0.0413	0.0476	0.0574	0.196	0.029
Boron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.028
Cadmium, dissolved	mg/L	<0.00001	<0.00001	0.00009	0.00002	-	<0.00001	0.00008	<0.00001	<0.00001	0.00003	0.00004	0.00001	0.00002	0.00002	0.00003	0.00001	0.00004	<0.000010	<0.000010	<0.00001	0.000011	<0.00001	<0.00001
Cadmium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001
Calcium, dissolved	mg/L	163	156	73.8	-	90.6	103	100	102	107	110	107	120	128	103	116	116	101	84	93.3	94.8	100	103	97.5
Calcium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	118
Chromium, dissolved	mg/L	<0.0005	<0.0005	0.0025	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0007	<0.00050	<0.00050	0.00104	<0.0005	<0.0005	<0.0005
Chromium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0018
Cobalt, dissolved	mg/L	0.00165	0.00157	0.00537	0.0198	-	0.00674	0.00078	0.00219	0.00342	0.00264	0.00126	0.00127	0.00151	0.00111	0.00024	0.00096	0.00012	<0.00010	<0.00010	0.00092	0.00039	<0.0001	0.00007
Cobalt, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00062
Copper, dissolved	mg/L	0.00199	0.00229	0.0031	<0.0002	-	<0.0002	0.0054	<0.0002	0.001	0.001	0.0014	<0.0002	0.0012	0.0011	0.004	0.0008	0.0051	0.00086	<0.00040	0.00076	0.00067	0.00146	0.0019
Copper, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0281
Iron, dissolved	mg/L	<0.01	<0.01	0.347	3.01	-	1.87	0.02	0.12	0.15	0.03	0.011	0.038	0.012	0.111	0.015	0.049	0.015	<0.010	<0.010	0.013	0.011	<0.01	0.019
Iron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.07
Lead, dissolved	mg/L	<0.0002	0.00096	0.0002	<0.0001	-	<0.0001	0.0002	<0.0001	<0.0001	0.0007	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00020	0.00056	<0.0002	<0.0002	<0.0002	<0.0001
Lead, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0008
Lithium, dissolved	mg/L	0.0434	0.044	0.02	-	0.0248	0.0224	0.0193	0.0182	0.019	0.019	0.0203	0.022	0.0233	0.0223	0.0219	0.0212	0.0188	0.0198	0.0218	0.021	0.0217	0.0227	0.0049
Lithium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0061
Magnesium, dissolved	mg/L	268	292	96.5	160	-	144	130	139	129	139	139	151	155	132	132	130	117	120	128	115	125	125	48.5
Magnesium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	57.5
Manganese, dissolved	mg/L	0.0868	0.0864	0.219	0.492	-	0.349	0.035	0.0785	0.0546	0.172	0.0896	0.0336	0.0871	0.038	0.0049	0.027	0.0031	0.00139	0.00063	0.0174	0.0069	0.00106	0.0043
Manganese, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0238
Mercury, dissolved	mg/L	<0.00001	<0.00001	<0.00005	-	0.00002	0.00002	0.00008	0.00003	0.00006	0.00003	0.00002	<0.00002	<0.00002	<0.00002	0.00002	0.00002	<0.00002	<0.000040	<0.000040	<0.00001	<0.00001	<0.00001	<0.00002
Mercury, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00002

Sampling Location		MW09-6S	MW09-6S	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW15-01
Date Sampled		2019-08-13	2019-10-29	2010-11-16	2011-05-09	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2015-11-09
Lab Sample ID		9081278-01	N000444-01	K0K0729-02	K1E0403-01	K1E0403-04	K1H0536-01	K1J0685-02	2051369-04	2081484-02	2111131-02	3051354-02	3081378-05	3110772-05	4060249-05	4081094-05	4110161-05	5051773-05	8090975-03	8120636-03	9052874-02	9081278-02	N000444-02	5110701-01
Sample Type									Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal			Normal
Analyte	Unit																						
Molybdenum, dissolved	mg/L	0.00033	0.00029	0.0149	0.0046	-	0.0019	0.0046	0.0009	0.0024	0.0011	0.0007	0.0004	0.0007	0.0006	0.0004	0.0007	0.0006	0.00072	0.00061	0.00053	0.00056	0.00035	0.0003
Molybdenum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0008
Nickel, dissolved	mg/L	0.012	0.0115	0.0175	0.0277	-	0.0093	0.0099	0.006	0.0087	0.0077	0.0053	0.0048	0.006	0.0045	0.0032	0.0039	0.0007	0.00298	0.00318	0.00309	0.00287	0.00098	0.0006
Nickel, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0003
Phosphorus, dissolved	mg/L	<0.05	<0.05	<0.020	<0.020	-	<0.02	0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.02	<0.02	<0.02	<0.050	<0.050	<0.05	<0.05	<0.05	<0.02
Phosphorus, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.02
Potassium, dissolved	mg/L	173	168	8.58	6.79	-	6.33	6.51	7.89	7.23	6.55	6.53	6.9	6.64	6.05	6.82	6.66	6.34	5.61	5.93	5.65	5.87	6.26	2.42
Potassium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.67
Selenium, dissolved	mg/L	<0.0005	<0.0005	0.0005	0.0007	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.0005
Selenium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005
Silicon, dissolved	mg/L	12	13.2	4.21	10.1	-	9	8.1	10.3	9.6	9.7	9.4	9.6	9.1	9.2	9.9	10.4	10.4	8.8	9.8	8.6	9.2	10.6	4.8
Silicon, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.3
Silver, dissolved	mg/L	<0.00005	<0.00005	<0.00005	0.00007	-	0.00016	0.00006	<0.00005	<0.00005	0.00008	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005
Silver, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00005
Sodium, dissolved	mg/L	288	306	178	312	-	341	305	436	450	390	359	386	392	356	399	436	365	316	370	310	334	431	61
Sodium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	72.3
Strontium, dissolved	mg/L	1.7	1.54	1.03	1.66	-	1.6	1.49	1.53	1.6	1.64	1.52	1.61	1.64	1.43	1.52	1.56	1.35	1.3	1.44	1.29	1.45	1.31	0.542
Strontium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.634
Sulfur, dissolved	mg/L	271	277	-	-	-	-	-	19	17	23	21	20	18	18	17	20	16	17.2	20.2	17.1	19.1	17.5	17
Sulfur, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	21
Tellurium, dissolved	mg/L	<0.0005	<0.0005	<0.0002	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.0002
Tellurium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002
Thallium, dissolved	mg/L	0.000062	0.000061	<0.00002	<0.00002	-	<0.00002	0.00011	<0.00002	<0.00002	0.00003	0.00007	<0.00002	0.00008	<0.00002	0.00004	<0.00002	0.00002	0.000074	0.000062	<0.00002	0.000032	<0.00002	<0.00002
Thallium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00002
Thorium, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	-	<0.0001	0.0003	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001
Thorium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0001
Tin, dissolved	mg/L	<0.0002	<0.0002	0.001	<0.0002	-	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.00020	<0.00020	<0.0002	<0.0002	0.00029	<0.0002
Tin, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0004
Titanium, dissolved	mg/L	<0.005	<0.005	<0.005	<0.005	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005
Titanium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.005
Tungsten, dissolved	mg/L	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.006	0.0064	0.0043	0.0035	0.0012	-
Tungsten, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium, dissolved	mg/L	0.00775	0.00734	0.00216	-	0.00166	0.00196	0.00205	0.00173	0.00206	0.00206	0.00213	0.00218	0.00223	0.00205	0.0021	0.00227	0.00193	0.00231	0.00238	0.0023	0.00226	0.00218	0.00104
Uranium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0012
Vanadium, dissolved	mg/L	<0.001	<0.001	<0.0010	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.001	<0.001
Vanadium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
Zinc, dissolved	mg/L	<0.004	<0.004	0.0037	<0.0040	-	<0.004	0.007	0.008	0.008	<0.004	0.011	<0.004	<0.004	<0.004	0.005	0.012	0.008	<0.0040	<0.0040	<0.004	<0.004	<0.004	0.004
Zinc, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.012
Zirconium, dissolved	mg/L	0.00015	0.00016	0.0003	0.0002	-	0.0001	0.0002	0.0001	0.0002	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.0001	0.0025	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001
Zirconium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0003
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	915	1000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	797	1100	544	500	518	-
Alkalinity, Carbonate (as CaCO3)	mg/L	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1	<1	<1	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1	<1	<1	-
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1	<1	<1	-
Alkalinity, Total (as CaCO3)	mg/L	915	1000	425	459	-	462	446	515	768	731	619	516	598	514	476	592	492	797	1100	544	500	518	350
Ammonia, Total (as N)	mg/L	1.18	1.14	0.05	0.04	-	0.04	0.05	<0.020	0.1	0.026	0.034	0.02	1.24	0.118	0.023	0.03	<0.020	0.052	0.061	0.116	0.118	0.075	-
Bicarbonate (HCO3)	mg/L	1120	1220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	972	1340	663	610	632	-
Carbonate (CO3)	mg/L	<0.6	<0.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.600	<0.600	<0.6	<0.6	<0.6	-
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	3990	3920	2250	-	2870	3150	3060	3340	3410	3500	3070	3300	3380	2940	3180	3310	2890	2770	2.2	2670	2990	3160	1020
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW09-6S	MW09-6S	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW15-01
Date Sampled		2019-08-13	2019-10-29	2010-11-16	2011-05-09	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2015-11-09
Lab Sample ID		9081278-01	N000444-01	K0K0729-02	K1E0403-01	K1E0403-04	K1H0536-01	K1J0685-02	2051369-04	2081484-02	2111131-02	3051354-02	3081378-05	3110772-05	4060249-05	4081094-05	4110161-05	5051773-05	8090975-03	8120636-03	9052874-02	9081278-02	N000444-02	5110701-01
Sample Type									Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal				Normal
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	1510	1590	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	712	767	772	532
Hydroxide (OH)	mg/L	<0.34	<0.34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.340	<0.340	<0.34	<0.34	<0.34	-
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	7.61	7.61	7.97	-	7.95	7.76	7.78	7.85	7.74	6.95	7.78	7.86	7.86	7.94	7.74	7.82	7.81	7.83	7.81	8.04	7.91	8.04	7.65
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.017
Phosphorus, Total Dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-	-	-	-
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Turbidity	NTU	248	77.2	87	641	-	-	71.1	-	2350	1910	620	664	1220	292	186	1180	122	-	3750	294	3080	671	37.8
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3.0
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3.0
E. coli, Total	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0003	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.3	-	<0.3	-
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	-	<0.0005
Benzene	µg/L	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-
Bromodichloromethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-

Sampling Location		MW09-6S	MW09-6S	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW10-8	MW15-01
Date Sampled		2019-08-13	2019-10-29	2010-11-16	2011-05-09	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-08-20	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2015-11-09
Lab Sample ID		9081278-01	N000444-01	K0K0729-02	K1E0403-01	K1E0403-04	K1H0536-01	K1J0685-02	2051369-04	2081484-02	2111131-02	3051354-02	3081378-05	3110772-05	4060249-05	4081094-05	4110161-05	5051773-05	8090975-03	8120636-03	9052874-02	9081278-02	N000444-02	5110701-01
Sample Type									Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal				Normal
Analyte	Unit																							
Bromoform	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	-	-
Carbon tetrachloride	µg/L	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-	-	-	-	-
Chloroethane	µg/L	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	<2	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-
Chloroform	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-
Dibromochloromethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-
Dibromomethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	-	-	-	-	-
Dichloromethane	µg/L	-	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3	-	<3	-
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	<0.0010
Ethylbenzene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	<0.0010
Methyl tert-butyl ether	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	<0.0010
Styrene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0602	-	-	-	-	0.005
Toluene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-
Vinyl chloride	µg/L	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	<2	-
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.100

Sampling Location		MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-11	MW18-11	MW18-11	MW18-11	MW18-11
Date Sampled		2016-05-02	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11	2018-12-04	2019-05-29	2019-08-13	2019-10-29	2018-06-27	2018-09-10	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2018-12-04	2018-12-06	2019-05-29	2019-08-13	2019-10-29
Lab Sample ID		6050110-01	6081657-01	6111045-01	7040391-01	7082760-01	7112039-01	8062805-01	8090971-01	8120631-01	9052867-01	9081228-01	N000451-01	8062805-02	8090975-02	8120636-02	9052874-03	9081278-03	N000444-03	8120636-08	8120644-01	9052874-04	9081278-04	N000444-04
Sample Type			Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Supplementary	Supplementary	Supplementary	Normal	Normal	Normal				Normal	Normal			
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	-	11.475	-	10.955	10.425	11.24	9.54	10.81	11.29	-	-	-	-	28.31	28.24	28.085	28.075	28.11	-	-	-	112.994	112.901
Dissolved Oxygen	mg/L	0.3	0.62	0.35	-	0.89	1.28	-	1.84	1.02	-	-	-	-	2.91	1.08	3.9	5	4.4	-	-	5.36	1.59	1.42
Electrical Conductivity	µS/cm	1062	1033	1031	1047	1122	1107	1050	1111	973	-	-	-	2480	2730	2380	2380	2462	2497	558	1036	1054	1172	1468
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	888.228	888.238	888.203	-	-	-	796.94	797.033
Oxidation reduction potential	mV	-6	177	162	229	101	-	198	41	30	-	-	-	222	126	128	-4.5	3.6	148.5	-	-	18.2	-128.1	-196.2
pH	pH Units	7.1	7.1	7.3	7.6	7.2	7.1	7.39	7.73	7.08	-	-	-	7.62	7.35	6.92	7.3	7.15	7.32	8.3	-	7.74	7.52	7.93
Temperature	°C	9.2	9.8	8.8	8.7	9.5	8.7	9.3	9.2	8.8	-	-	-	13.8	13.9	12.4	14.6	13.3	11.1	9.8	-	9.4	10.5	9.1
Anions																								
Bromide	mg/L	<0.10	<0.10	<0.10	<0.10	0.12	0.11	<0.10	<0.10	<0.10	<0.10	0.15	<0.10	<0.10	<1.00	0.64	-	-	-	<0.10	<1.00	-	-	-
Chloride	mg/L	117	107	94.5	125	125	116	105	114	113	113	113	116	314	313	343	299	337	348	26.6	23.2	60.9	89.7	105
Fluoride	mg/L	<0.10	<0.10	<0.10	0.16	0.14	<0.10	<0.10	0.12	<0.10	<0.10	<0.10	<0.10	0.32	0.29	0.2	0.14	0.13	<0.1	0.9	1.42	0.31	0.65	0.94
Nitrate (as N)	mg/L	1.19	1.05	0.803	0.807	1.18	1.15	0.892	0.954	0.855	0.92	1.03	0.906	12.9	21.7	15.7	21	30	34.7	1.03	0.043	0.023	<0.01	<0.01
Nitrite (as N)	mg/L	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.134	0.02	<0.01	0.131	<0.01	0.068	0.275	<0.01	<0.01	<0.01
Sulfate	mg/L	43.2	45.1	42.3	46.5	46.6	47.3	43.5	46	44.6	43.5	43.5	44.2	89.5	89	76.5	76.9	73.5	74.2	39	156	72.3	70.7	70.2
Metals																								
Aluminum, dissolved	mg/L	<0.005	-	0.007	<0.005	-	-	0.0154	<0.0050	0.0081	<0.0050	<0.0050	<0.0050	0.0126	0.0124	<0.0050	<0.005	<0.005	<0.005	0.0134	0.032	0.006	<0.005	<0.005
Aluminum, total	mg/L	0.069	-	0.122	0.047	-	-	-	0.0181	0.0297	2.53	7.7	0.759	-	-	-	-	-	-	-	-	-	-	-
Antimony, dissolved	mg/L	0.0004	-	0.0001	<0.0001	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0007	0.00072	0.00036	0.0003	<0.0002	0.00026	0.00072	0.00576	0.0057	0.00348	0.00284
Antimony, total	mg/L	0.0004	-	0.0001	<0.0001	-	-	-	<0.00020	<0.00020	<0.00020	0.00032	<0.00020	-	-	-	-	-	-	-	-	-	-	-
Arsenic, dissolved	mg/L	<0.0005	-	<0.0005	<0.0005	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00269	0.00212	0.00161	0.00164	0.00133	0.00143	<0.00050	0.0352	0.00373	0.00511	0.0045
Arsenic, total	mg/L	<0.0005	-	<0.0005	<0.0005	-	-	-	<0.00050	<0.00050	0.00184	0.00569	0.0007	-	-	-	-	-	-	-	-	-	-	-
Barium, dissolved	mg/L	0.156	-	0.157	0.165	-	-	0.152	0.159	0.161	0.162	0.166	0.172	0.14	0.167	0.227	0.303	0.316	0.296	0.0369	0.018	0.0424	0.0271	0.0202
Barium, total	mg/L	0.165	-	0.171	0.178	-	-	-	0.169	0.165	0.219	0.285	0.191	-	-	-	-	-	-	-	-	-	-	-
Beryllium, dissolved	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001
Beryllium, total	mg/L	<0.0001	-	0.0002	<0.0001	-	-	-	<0.00010	<0.00010	0.00017	0.00044	<0.00010	-	-	-	-	-	-	-	-	-	-	-
Bismuth, dissolved	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001
Bismuth, total	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	-	<0.00010	<0.00010	<0.00010	0.00012	<0.00010	-	-	-	-	-	-	-	-	-	-	-
Boron, dissolved	mg/L	0.033	-	0.031	0.036	-	-	0.0432	0.0222	0.0291	0.0264	0.026	0.0236	0.187	0.465	0.452	0.418	0.408	0.61	0.0339	0.418	0.153	0.17	0.301
Boron, total	mg/L	0.034	-	0.033	0.04	-	-	-	0.0322	0.023	0.0306	0.0286	0.0251	-	-	-	-	-	-	-	-	-	-	-
Cadmium, dissolved	mg/L	<0.00001	-	0.00001	<0.00001	-	-	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	0.000032	0.00001	0.000045	0.000036	0.000032	0.000039	0.000015	0.000016	<0.00001	<0.00001	<0.00001
Cadmium, total	mg/L	<0.00001	-	<0.00001	<0.00001	-	-	-	<0.000010	<0.000010	0.000029	0.000055	<0.000010	-	-	-	-	-	-	-	-	-	-	-
Calcium, dissolved	mg/L	88.1	-	86.4	92	-	-	91.9	78.3	88	94.1	90.8	93.6	136	97.8	86.3	94.5	92.5	92.9	14.9	23.7	46.1	43.2	48.7
Calcium, total	mg/L	89.6	-	92.2	102	-	-	-	91.8	89.2	119	193	104	-	-	-	-	-	-	-	-	-	-	-
Chromium, dissolved	mg/L	0.0018	-	<0.0005	<0.0005	-	-	<0.00050	<0.00050	0.00194	0.0008	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00106	0.00056	<0.0005	<0.00050	<0.00050	0.00266	<0.0005	<0.0005
Chromium, total	mg/L	<0.0005	-	<0.0005	<0.0005	-	-	-	<0.00050	<0.00050	0.00692	0.0167	0.00221	-	-	-	-	-	-	-	-	-	-	-
Cobalt, dissolved	mg/L	0.00019	-	0.00006	<0.00005	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.00273	0.00322	0.00402	0.00565	0.00559	0.00423	0.00046	0.00162	0.00076	0.00017	0.00013
Cobalt, total	mg/L	0.00022	-	0.00016	0.00006	-	-	-	<0.00010	<0.00010	0.00341	0.0105	0.00118	-	-	-	-	-	-	-	-	-	-	-
Copper, dissolved	mg/L	0.0008	-	0.003	<0.0002	-	-	0.00052	<0.00040	<0.00040	<0.00040	<0.00040	<0.00040	0.00242	0.00263	0.00297	0.0019	0.00125	0.00186	0.00271	<0.00040	0.00044	<0.0004	<0.0004
Copper, total	mg/L	0.0024	-	0.0181	0.0004	-	-	-	0.00092	<0.00040	0.005	0.0172	0.00165	-	-	-	-	-	-	-	-	-	-	-
Iron, dissolved	mg/L	0.279	-	<0.010	<0.010	-	-	0.034	<0.010	0.013	<0.010	<0.010	<0.010	0.038	0.011	<0.010	<0.01	<0.01	<0.01	0.017	0.018	0.115	2.05	0.495
Iron, total	mg/L	0.36	-	0.27	0.06	-	-	-	0.039	0.047	5.6	20.4	2.2	-	-	-	-	-	-	-	-	-	-	-
Lead, dissolved	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	0.0004	<0.0002	<0.0002	<0.0002	0.00031	<0.00020	<0.0002	<0.0002	<0.0002
Lead, total	mg/L	<0.0001	-	0.0002	<0.0001	-	-	-	<0.00020	0.00048	0.00327	0.0115	0.0011	-	-	-	-	-	-	-	-	-	-	-
Lithium, dissolved	mg/L	0.0058	-	0.0047	0.0054	-	-	0.00523	0.00539	0.00563	0.00585	0.00553	0.00593	0.0294	0.026	0.0232	0.0239	0.022	0.0243	0.0314	0.0871	0.0201	0.0212	0.0276
Lithium, total	mg/L	0.0059	-	0.005	0.0052	-	-	-	0.00573	0.00578	0.00989	0.0172	0.00677	-	-	-	-	-	-	-	-	-	-	-
Magnesium, dissolved	mg/L	45.6	-	45.3	48.7	-	-	45.6	46.8	50.1	46.5	45.9	51.8	138	188	204	193	192	204	58.4	28.5	87.9	105	147
Magnesium, total	mg/L	46.4	-	47.1	49	-	-	-	46.8	51.1	51.9	61.9	49.3	-	-	-	-	-	-	-	-	-	-	-
Manganese, dissolved	mg/L	0.0012	-	0.0013	0.0003	-	-	0.00291	<0.00020	0.00593	0.0011	0.00023	<0.00020	0.168	0.126	0.202	0.231	0.195	0.215	0.294	0.0149	0.106	0.152	0.132
Manganese, total	mg/L	0.0024	-	0.0046	0.0013	-	-	-	0.0017	0.00142	0.183	0.515	0.0782	-	-	-	-	-	-	-	-	-	-	-
Mercury, dissolved	mg/L	<0.00002	-	<0.00002	<0.00002	-	-	<0.000010	<0.000040	<0.000010	<0.000010	<0.000010	<0.000010	<0.000010	<0.000040	<0.000040	<0.00001	<0.00001	<0.00001	<0.000040	<0.000040	<0.00001	<0.00001	<0.00001
Mercury, total	mg/L	<0.00002	-	<0.00002	<0.00002	-	-	-	<0.000010	<0.000040	<0.000010	<0.000010	<0.000010	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-11	MW18-11	MW18-11	MW18-11	MW18-11
Date Sampled		2016-05-02	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11	2018-12-04	2019-05-29	2019-08-13	2019-10-29	2018-06-27	2018-09-10	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2018-12-04	2018-12-06	2019-05-29	2019-08-13	2019-10-29
Lab Sample ID		6050110-01	6081657-01	6111045-01	7040391-01	7082760-01	7112039-01	8062805-01	8090971-01	8120631-01	9052867-01	9081228-01	N000451-01	8062805-02	8090975-02	8120636-02	9052874-03	9081278-03	N000444-03	8120636-08	8120644-01	9052874-04	9081278-04	N000444-04
Sample Type			Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Supplementary	Supplementary	Supplementary	Normal	Normal	Normal				Normal	Normal			
Analyte	Unit																							
Molybdenum, dissolved	mg/L	0.0003	-	0.0003	0.0002	-	-	0.00032	0.00023	0.00024	0.00023	0.00022	0.00022	0.00287	0.00257	0.0019	0.00152	0.00141	0.00127	0.0062	0.0364	0.00762	0.00344	0.00324
Molybdenum, total	mg/L	0.0003	-	0.0004	0.0002	-	-	-	0.00022	0.00023	0.00049	0.00123	0.00029	-	-	-	-	-	-	-	-	-	-	-
Nickel, dissolved	mg/L	0.0017	-	0.0005	0.0003	-	-	<0.00040	<0.00040	0.00054	<0.00040	<0.00040	<0.00040	0.0355	0.0388	0.0438	0.0442	0.0447	0.0409	0.00553	0.00589	0.0301	0.0111	0.01
Nickel, total	mg/L	0.0024	-	0.0005	0.0004	-	-	-	<0.00040	<0.00040	0.00548	0.018	0.00202	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, dissolved	mg/L	<0.02	-	<0.02	<0.05	-	-	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	<0.05	<0.05	<0.050	<0.050	<0.05	<0.05	<0.05
Phosphorus, total	mg/L	<0.02	-	0.04	<0.05	-	-	-	<0.050	<0.050	0.182	0.417	<0.050	-	-	-	-	-	-	-	-	-	-	-
Potassium, dissolved	mg/L	2.33	-	2.35	2.32	-	-	2.21	2.1	2.14	2.14	2.18	2.31	13.7	20	19.9	20.3	24.4	25.7	5.73	38.1	5.39	4.78	4.51
Potassium, total	mg/L	2.23	-	2.31	2.31	-	-	-	2.11	2.15	2.57	3.22	2.41	-	-	-	-	-	-	-	-	-	-	-
Selenium, dissolved	mg/L	<0.0005	-	<0.0005	<0.0005	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	0.00109	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005
Selenium, total	mg/L	<0.0005	-	<0.0005	<0.0005	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	-	-	-	-	-	-	-	-	-	-
Silicon, dissolved	mg/L	5.3	-	4	4.9	-	-	4.5	4.6	5	4.4	4.7	5	8.5	10.2	10.9	9.5	9.9	11.1	1.1	4.3	2.4	3.1	4.8
Silicon, total	mg/L	5.4	-	5.2	5	-	-	-	4.9	5.1	9.4	14.5	6.3	-	-	-	-	-	-	-	-	-	-	-
Silver, dissolved	mg/L	<0.00005	-	<0.00005	<0.00005	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005
Silver, total	mg/L	<0.00005	-	<0.00005	<0.00005	-	-	-	<0.000050	<0.000050	<0.000050	<0.000050	<0.000050	-	-	-	-	-	-	-	-	-	-	-
Sodium, dissolved	mg/L	64	-	55.4	61.1	-	-	56.5	58	63	60.2	58.8	67.6	168	185	190	182	183	206	30.7	270	81.1	85.3	110
Sodium, total	mg/L	58.8	-	57.5	66	-	-	-	58.1	64.7	59.4	60	61.9	-	-	-	-	-	-	-	-	-	-	-
Strontium, dissolved	mg/L	0.592	-	0.548	0.561	-	-	0.532	0.555	0.562	0.563	0.579	0.617	0.842	1.18	1.43	1.44	1.46	1.34	0.0865	0.246	0.632	0.622	0.691
Strontium, total	mg/L	0.609	-	0.571	0.597	-	-	-	0.583	0.57	0.665	0.774	0.605	-	-	-	-	-	-	-	-	-	-	-
Sulfur, dissolved	mg/L	17	-	14	14	-	-	16.4	15.6	16.6	16.6	15.8	16.5	37.5	31.3	30.9	29	28.2	29	16.1	62.1	27.5	25.2	28.8
Sulfur, total	mg/L	16	-	14	14	-	-	-	16	15.7	16.4	15.1	14.5	-	-	-	-	-	-	-	-	-	-	-
Tellurium, dissolved	mg/L	<0.0002	-	<0.0002	<0.0002	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005
Tellurium, total	mg/L	<0.0002	-	<0.0002	<0.0002	-	-	-	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	-	-	-	-	-	-	-	-	-	-	-
Thallium, dissolved	mg/L	<0.00002	-	<0.00002	<0.00002	-	-	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	<0.000020	0.000088	0.000085	0.000071	0.000099	0.000091	0.000099	<0.000020	0.000141	<0.00002	<0.00002	<0.00002
Thallium, total	mg/L	<0.00002	-	<0.00002	<0.00002	-	-	-	<0.000020	<0.000020	0.000043	0.00007	<0.000020	-	-	-	-	-	-	-	-	-	-	-
Thorium, dissolved	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001
Thorium, total	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	-	<0.00010	<0.00010	0.00111	0.00404	0.00031	-	-	-	-	-	-	-	-	-	-	-
Tin, dissolved	mg/L	<0.0002	-	<0.0002	<0.0002	-	-	<0.00020	<0.00020	0.00033	<0.00020	<0.00020	<0.00020	0.00077	<0.00020	<0.00020	<0.0002	<0.0002	0.00023	<0.00020	0.00064	0.00022	<0.0002	<0.0002
Tin, total	mg/L	<0.0002	-	<0.0002	0.0004	-	-	-	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	-	-	-	-	-	-	-	-	-	-	-
Titanium, dissolved	mg/L	<0.005	-	<0.005	<0.005	-	-	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.0050	<0.0050	<0.005	<0.005	<0.005
Titanium, total	mg/L	<0.005	-	<0.005	<0.005	-	-	-	<0.0050	<0.0050	0.0992	0.111	0.0652	-	-	-	-	-	-	-	-	-	-	-
Tungsten, dissolved	mg/L	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.001
Tungsten, total	mg/L	-	-	-	-	-	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	-	-	-	-	-	-	-	-	-	-	-
Uranium, dissolved	mg/L	0.00115	-	0.00102	0.0011	-	-	0.00105	0.00106	0.00114	0.00111	0.00108	0.00109	0.00902	0.00845	0.00597	0.00432	0.00442	0.00424	0.000448	0.00256	0.000262	0.000084	0.0001
Uranium, total	mg/L	0.00114	-	0.00111	0.00108	-	-	-	0.00107	0.00111	0.0013	0.00156	0.00111	-	-	-	-	-	-	-	-	-	-	-
Vanadium, dissolved	mg/L	<0.001	-	<0.001	<0.001	-	-	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.001	<0.001	<0.001	<0.0010	<0.0010	<0.001	<0.001	<0.001
Vanadium, total	mg/L	<0.001	-	<0.001	<0.001	-	-	-	<0.0010	<0.0010	0.0043	0.0096	0.0018	-	-	-	-	-	-	-	-	-	-	-
Zinc, dissolved	mg/L	<0.004	-	0.007	<0.004	-	-	<0.0040	<0.0040	0.0174	0.0065	<0.0040	<0.0040	0.0065	<0.0040	0.006	0.021	0.0043	0.0111	0.0092	<0.0040	<0.004	0.0073	0.0081
Zinc, total	mg/L	<0.004	-	0.011	<0.004	-	-	-	<0.0040	0.0056	0.0156	0.045	0.0071	-	-	-	-	-	-	-	-	-	-	-
Zirconium, dissolved	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	<0.00010	0.0006	0.0006	0.00044	0.00027	0.00026	0.00029	<0.00010	0.00068	<0.0001	<0.0001	<0.0001
Zirconium, total	mg/L	<0.0001	-	<0.0001	<0.0001	-	-	-	<0.00010	<0.00010	0.00068	0.00047	0.00014	-	-	-	-	-	-	-	-	-	-	-
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	332	335	335	364	356	126	330	372	363	366	349	364	667	992	876	810	785	802	494	8900	431	541	700
Alkalinity, Carbonate (as CaCO3)	mg/L	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	<1	<1	<1
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	<1	<1	<1
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1	<1	<1	<1.0	<1.0	<1	<1	<1
Alkalinity, Total (as CaCO3)	mg/L	332	335	335	364	356	126	330	372	363	366	349	364	667	992	876	810	785	802	494	8900	431	541	700
Ammonia, Total (as N)	mg/L	-	-	-	-	-	-	<0.020	0.026	<0.020	0.102	0.118	<0.020	1.8	2.14	2.4	1.54	1.63	1.37	0.449	1.36	0.607	0.228	0.095
Bicarbonate (HCO3)	mg/L	404	408	409	444	434	154	402	453	443	446	425	444	813	1210	1070	988	957	978	603	10900	526	660	855
Carbonate (CO3)	mg/L	<1	<0.6	<0.6	<0.600	<0.600	<0.600	<0.600	<0.600	<0.600	<0.600	<0.600	<0.600	<0.600	<0.600	<0.600	<0.6	<0.6	<0.6	<0.600	<0.600	<0.6	<0.6	<0.6
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	993	974	1030	1080	1110	327	999	1050	1080	-	-	-	2390	2590	2500	2590	2580	2650	193	1190	992	1330	1490
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	1060	1050	1060	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-11	MW18-11	MW18-11	MW18-11	MW18-11
Date Sampled		2016-05-02	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11	2018-12-04	2019-05-29	2019-08-13	2019-10-29	2018-06-27	2018-09-10	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2018-12-04	2018-12-06	2019-05-29	2019-08-13	2019-10-29
Lab Sample ID		6050110-01	6081657-01	6111045-01	7040391-01	7082760-01	7112039-01	8062805-01	8090971-01	8120631-01	9052867-01	9081228-01	N000451-01	8062805-02	8090975-02	8120636-02	9052874-03	9081278-03	N000444-03	8120636-08	8120644-01	9052874-04	9081278-04	N000444-04
Sample Type			Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Supplementary	Supplementary	Supplementary	Normal	Normal	Normal				Normal	Normal			
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	427	416	447	-	-	-	1030	1020	1070	-	-	477	542	726
Hydroxide (OH)	mg/L	<1	<0.3	<0.3	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340	<0.340	<0.34	<0.34	<0.34	<0.340	<0.340	<0.34	<0.34	<0.34
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	7.86	-	-	-	-	-	7.74	7.88	7.74	-	-	-	7.81	7.7	7.62	8.11	7.88	8	8.07	7.93	8.18	8.1	8.2
pH	pH units	-	-	-	-	-	-	-	-	-	7.93	7.88	7.93	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	0.007	-	-	-	-	-	-	-	-	0.282	0.381	0.075	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	-	-	-	-	-	-	-	-	-	<0.0020	<0.0020	0.005	-	-	0.013	-	-	-	0.0053	0.0103	-	-	-
Total organic carbon	mg/L	<0.5	0.7	0.8	1	0.83	<0.50	0.71	<0.50	<0.50	0.7	<0.50	<0.50	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	2.5	12.1	7.28	1.6	1.3	2.48	1.41	-	3.69	153	81.8	60.5	267	-	661		3590		-	-	35.8	202	95.6
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	<3.0	<3.0	<3.0	-	-	-	<3.0	-	-	<1.1	<1.1	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	<1.1	<1.1	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	<3.0	<3.0	<3.0	-	-	-	<3.0	-	-	<1.1	<1.1	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	<1	<1	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	<0.0003	-	-	<0.0002	-	-	-	<0.0003	-	-	-	-	-	<0.0003	<0.0003	-	-	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.3	-	<0.3	-	-	<0.3	-	<0.3
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	<0.0005	-	<0.0005	<0.0005	-	-	-	<0.0005	-	-	-	-	-	<0.0005	<0.0005	-	-	-	-	-	-	-	-
Benzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5
Benzene	ug/L	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-

Sampling Location		MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW15-01	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-10	MW18-11	MW18-11	MW18-11	MW18-11	MW18-11
Date Sampled		2016-05-02	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2018-09-11	2018-12-04	2019-05-29	2019-08-13	2019-10-29	2018-06-27	2018-09-10	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2018-12-04	2018-12-06	2019-05-29	2019-08-13	2019-10-29
Lab Sample ID		6050110-01	6081657-01	6111045-01	7040391-01	7082760-01	7112039-01	8062805-01	8090971-01	8120631-01	9052867-01	9081228-01	N000451-01	8062805-02	8090975-02	8120636-02	9052874-03	9081278-03	N000444-03	8120636-08	8120644-01	9052874-04	9081278-04	N000444-04
Sample Type			Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Supplementary	Supplementary	Supplementary	Normal	Normal	Normal				Normal	Normal			
Analyte	Unit																							
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	<0.0010	-	-	<0.0005	-	-	-	<0.0005	-	-	-	-	-	<0.0005	<0.0005	-	-	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	<0.0020	-	-	<0.0020	-	-	-	<0.0020	-	-	-	-	-	<0.0020	<0.0020	-	-	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	<2	-	-	<2	-	<2
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Chloroform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	<0.0030	-	-	<0.0030	-	-	-	<0.0030	-	-	-	-	-	<0.0030	<0.0030	-	-	-	-	-	-	-	-
Dichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3	-	<3	-	-	<3	-	<3
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	<3.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	<0.0010	-	<0.0010	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	<0.0010	-	<0.0010	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	<0.0010	-	<0.0010	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Styrene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	<0.0010	-	0.0076	<0.0010	-	-	-	0.0023	-	-	-	-	-	0.0108	0.0162	-	-	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	150	-	12.8
Toluene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	<0.0010	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	<0.0020	-	-	<0.0010	-	-	-	<0.0010	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	<1	-	-	<1	-	<1
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	<1.0	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	<2	-	-	<2	-	<2
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	<2.0	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	<0.100	-	<0.100	<0.100	-	-	-	<0.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-04	Runoff 1	Runoff 2	Runoff 3	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2002-06-03	2002-08-26	2002-11-06	2003-03-07	2003-05-12	2003-11-03	2004-05-17	2004-11-08	2005-04-25	2005-11-02	2006-04-17	2006-11-05	2007-05-22	2004-05-17	2017-04-05	2017-04-05	2017-03-30	2002-06-03	2003-05-12	2004-05-17	2007-05-22	2007-11-05	2008-04-28
Lab Sample ID														K705752-01		7040434-01	7040434-02	7040370-01				K705752-02	K7K0165-01	K8E0035-01
Sample Type																Normal	Normal							
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	9999	9999	9999	9999	21.25	21.25	21.3	21.82	21.28	9999	21.18	9999	21.27	26.6	-	-	-	8	-	-	-	-	-
Dissolved Oxygen	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2370	13170	-	-	-	-	-	-	-
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxidation reduction potential	mV	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-2	-112	-	-	-	-	-	-	-
pH	pH Units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.4	7.6	-	-	-	-	-	-	-
Temperature	°C	-	-	-	-	11	11	13	11	12	-	10.3	-	10	13	4.2	4.3	-	-	10	12	7.5	5	-
Anions																								
Bromide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.82	<10.0	<0.10	-	-	-	-	-	-
Chloride	mg/L	-	-	-	-	57.5	63.8	72.5	75	128	-	159	-	90.5	298	708	1230	5.45	62.5	73.8	65	60.2	76.7	69.4
Fluoride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.00	<1.00	0.47	-	-	-	-	-	-
Nitrate (as N)	mg/L	-	-	-	-	27.8	16.3	34.5	32.5	65	-	77	-	12.5	55.5	2.78	<0.100	0.214	1.4	1.35	1.63	1.35	1.09	0.982
Nitrite (as N)	mg/L	-	-	-	-	<0.01	0.16	<0.01	0.04	<0.01	-	<0.01	-	1.44	0.01	<0.100	<0.100	0.021	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010
Sulfate	mg/L	-	-	-	-	51	78	71	79	104	-	150	-	254	640	153	32.7	13	44.5	43	40	37.5	38	38.6
Metals																								
Aluminum, dissolved	mg/L	-	-	-	-	<0.2	<0.2	<0.2	-	<0.4	-	<0.02	-	<0.050	<0.2	-	-	-	<0.2	<0.2	<0.2	<0.050	-	<0.050
Aluminum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.10	-	-	2.17	41.1	-	-	-	<0.10	-	-
Antimony, dissolved	mg/L	-	-	-	-	<0.2	<0.2	<0.2	-	<0.4	-	<0.02	-	<0.0050	<0.2	-	-	-	<0.2	<0.2	<0.2	<0.0050	-	<0.0030
Antimony, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.006	-	-	0.0063	0.0008	-	-	-	<0.006	-	-
Arsenic, dissolved	mg/L	-	-	-	-	<0.2	<0.2	<0.2	-	<0.4	-	<0.02	-	<0.0050	<0.2	-	-	-	<0.2	<0.2	<0.2	<0.0050	-	<0.0050
Arsenic, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	0.0524	0.0123	-	-	-	<0.010	-	-
Barium, dissolved	mg/L	-	-	-	-	0.2	0.19	0.19	-	0.21	-	0.15	-	0.124	0.12	-	-	-	0.2	0.2	0.21	0.191	-	0.191
Barium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.114	-	-	0.259	0.421	-	-	-	0.19	-	-
Beryllium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-	-	<0.0010	-	<0.0020
Beryllium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	0.0001	0.0014	-	-	-	<0.005	-	-
Bismuth, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-	-	<0.0010	-	<0.0005
Bismuth, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	<0.0001	0.0003	-	-	-	<0.001	-	-
Boron, dissolved	mg/L	-	-	-	-	0.6	0.58	0.59	-	0.6	-	0.6	-	0.632	0.65	-	-	-	<0.1	<0.1	<0.1	<0.020	-	<0.020
Boron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.608	-	-	4.9	0.164	-	-	-	<0.020	-	-
Cadmium, dissolved	mg/L	-	-	-	-	<0.01	<0.01	<0.01	-	<0.02	-	<0.01	-	<0.00010	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.00010	-	<0.00010
Cadmium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.00010	-	-	0.00048	0.00011	-	-	-	<0.00010	-	-
Calcium, dissolved	mg/L	-	-	-	-	174	177	175	-	210	-	210	-	215	165	-	-	-	90	104	88	84.6	88.4	91.2
Calcium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	206	-	-	382	174	-	-	-	85.1	-	-
Chromium, dissolved	mg/L	-	-	-	-	<0.01	<0.01	-	-	<0.02	-	<0.01	-	0.0054	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.0050	-	0.006
Chromium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	0.126	0.053	-	-	-	<0.010	-	-
Cobalt, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.0037	-	-	-	-	-	-	-	<0.0010	-	<0.0005
Cobalt, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.0034	-	-	0.0371	0.0191	-	-	-	<0.0010	-	-
Copper, dissolved	mg/L	-	-	-	-	<0.01	<0.01	-	-	<0.02	-	<0.01	-	0.0057	<0.01	-	-	-	<0.01	<0.01	<0.01	<0.0050	-	<0.0030
Copper, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	0.0227	0.033	-	-	-	<0.010	-	-
Iron, dissolved	mg/L	-	-	-	-	<0.03	<0.03	<0.03	-	<0.06	-	<0.06	-	0.655	<0.03	-	-	-	<0.03	<0.03	<0.03	0.267	-	0.386
Iron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	46	39.2	-	-	-	<0.30	-	-
Lead, dissolved	mg/L	-	-	-	-	<0.05	<0.05	<0.05	-	<0.1	-	<0.05	-	<0.0020	<0.05	-	-	-	<0.01	<0.05	<0.05	<0.0020	-	<0.0010
Lead, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-	-	0.0119	0.0296	-	-	-	<0.0020	-	-
Lithium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.0185	-	-	-	-	-	-	-	0.0018	-	0.002
Lithium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.0179	-	-	0.238	0.0402	-	-	-	<0.0050	-	-
Magnesium, dissolved	mg/L	-	-	-	-	99.4	103	91.3	-	120	-	97	-	103	233	-	-	-	37	43.7	38.1	38.4	41.1	40.2
Magnesium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	97.2	-	-	276	40.6	-	-	-	37.9	-	-
Manganese, dissolved	mg/L	-	-	-	-	0.009	0.083	0.02	-	0.04	-	0.007	-	0.107	0.009	-	-	-	<0.005	<0.005	<0.005	<0.0100	-	<0.0050
Manganese, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.107	-	-	1.41	0.71	-	-	-	<0.010	-	-
Mercury, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.00050	-	-	-	-	-	-	-	<0.00050	-	<0.00030
Mercury, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.00050	-	-	0.00004	0.0001	-	-	-	<0.00050	-	-

Sampling Location		MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-04	Runoff 1	Runoff 2	Runoff 3	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2002-06-03	2002-08-26	2002-11-06	2003-03-07	2003-05-12	2003-11-03	2004-05-17	2004-11-08	2005-04-25	2005-11-02	2006-04-17	2006-11-05	2007-05-22	2004-05-17	2017-04-05	2017-04-05	2017-03-30	2002-06-03	2003-05-12	2004-05-17	2007-05-22	2007-11-05	2008-04-28
Lab Sample ID														K705752-01		7040434-01	7040434-02	7040370-01				K705752-02	K7K0165-01	K8E0035-01
Sample Type																Normal	Normal							
Analyte	Unit																							
Molybdenum, dissolved	mg/L	-	-	-	-	<0.03	<0.03	<0.03	-	<0.06	-	<0.03	-	<0.0020	<0.03	-	-	-	<0.03	<0.03	<0.03	<0.0020	-	<0.0010
Molybdenum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	0.0061	0.0025	-	-	-	<0.0050	-	-
Nickel, dissolved	mg/L	-	-	-	-	<0.05	<0.05	<0.05	-	<0.1	-	<0.05	-	0.037	<0.05	-	-	-	<0.05	<0.05	<0.05	<0.010	-	<0.005
Nickel, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	-	-	0.19	0.04	-	-	-	<0.020	-	-
Phosphorus, dissolved	mg/L	-	-	-	-	<0.3	<0.3	<0.3	-	<0.6	-	<0.3	-	<0.500	<0.3	-	-	-	<0.3	<0.3	<0.3	<0.500	-	<0.200
Phosphorus, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.50	-	-	13.1	0.61	-	-	-	<0.50	-	-
Potassium, dissolved	mg/L	-	-	-	-	54	53	50	-	50	-	57	-	59.5	52	-	-	-	<2	<2	<2	1.66	-	2.17
Potassium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	56.4	-	-	852	16.6	-	-	-	1.53	-	-
Selenium, dissolved	mg/L	-	-	-	-	<0.2	<0.2	<0.2	-	<0.4	-	<0.2	-	<0.0100	<0.2	-	-	-	<0.2	<0.2	<0.2	<0.0100	-	<0.0050
Selenium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	0.0007	<0.0005	-	-	-	<0.010	-	-
Silicon, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	9.58	-	-	-	-	-	-	-	3.88	-	5.01
Silicon, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	7.5	-	-	29.8	73.8	-	-	-	2.6	-	-
Silver, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0004	-	-	-	-	-	-	-	<0.0004	-	<0.00040
Silver, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.00050	-	-	0.00015	<0.00005	-	-	-	<0.00050	-	-
Sodium, dissolved	mg/L	-	-	-	-	68	73.8	74	-	120	-	130	-	107	234	-	-	-	34	37	37	36.8	-	43.1
Sodium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	98	-	-	1460	8.12	-	-	-	34.8	-	-
Strontium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	1.12	-	-	-	-	-	-	-	0.414	-	0.434
Strontium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	2.4	0.579	-	-	-	0.405	-	-
Sulfur, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfur, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	31	4	-	-	-	-	-	-
Tellurium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	-	-	-	-	<0.0050	-	<0.0030
Tellurium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	<0.0002	<0.0002	-	-	-	<0.005	-	-
Thallium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-	-	<0.0010	-	<0.0005
Thallium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	<0.00002	0.00032	-	-	-	<0.0010	-	-
Thorium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	-	-	-	-	<0.0050	-	<0.0030
Thorium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	-	-	0.0004	0.0099	-	-	-	<0.005	-	-
Tin, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-	-	-	-	-	-	-	<0.0020	-	<0.0020
Tin, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	0.0093	0.0013	-	-	-	<0.001	-	-
Titanium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0200	-	-	-	-	-	-	-	<0.0200	-	<0.100
Titanium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	0.069	1.4	-	-	-	<0.050	-	-
Tungsten, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tungsten, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Uranium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.0025	-	-	-	-	-	-	-	0.0011	-	0.0012
Uranium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	0.0028	-	-	0.00069	0.00239	-	-	-	0.0012	-	-
Vanadium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.0050	-	-	-	-	-	-	-	<0.0050	-	<0.010
Vanadium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	0.011	0.042	-	-	-	<0.010	-	-
Zinc, dissolved	mg/L	-	-	-	-	0.017	0.0197	0.02	-	0.01	-	0.028	-	<0.040	0.02	-	-	-	0.01	0.021	0.039	<0.040	-	<0.030
Zinc, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.050	-	-	0.576	0.094	-	-	-	<0.050	-	-
Zirconium, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	-	-	-	-	-	<0.010	-	<0.005
Zirconium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	<0.010	-	-	0.0071	0.028	-	-	-	<0.010	-	-
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3050	9700	6010	-	-	-	-	-	-
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1	-	-	-	-	-	-
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1	-	-	-	-	-	-
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.0	<1.0	<1	-	-	-	-	-	-
Alkalinity, Total (as CaCO3)	mg/L	-	-	-	-	2800	5600	1720	7040	4100	-	3500	-	3000	900	3050	9700	6010	287	290	324	310	340	333
Ammonia, Total (as N)	mg/L	-	-	-	-	-	-	-	0.19	0.04	-	0.08	-	0.31	-	-	928	0.792	-	-	-	<0.02	<0.02	0.04
Bicarbonate (HCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3720	11800	7330	-	-	-	-	-	-
Carbonate (CO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.600	<0.600	<0.600	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	-	-	-	-	69	202	108	184	136	-	129	-	39	89	-	-	-	<5	5	10	<5	<5	-
Electrical Conductivity	µS/cm	-	-	-	-	1660	1620	1600	1900	2000	-	2200	-	1910	2810	8440	13800	324	845	866	791	822	881	842
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-04	Runoff 1	Runoff 2	Runoff 3	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2002-06-03	2002-08-26	2002-11-06	2003-03-07	2003-05-12	2003-11-03	2004-05-17	2004-11-08	2005-04-25	2005-11-02	2006-04-17	2006-11-05	2007-05-22	2004-05-17	2017-04-05	2017-04-05	2017-03-30	2002-06-03	2003-05-12	2004-05-17	2007-05-22	2007-11-05	2008-04-28
Lab Sample ID														K705752-01		7040434-01	7040434-02	7040370-01				K705752-02	K7K0165-01	K8E0035-01
Sample Type																Normal	Normal							
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydroxide (OH)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.340	<0.340	<0.340	-	-	-	-	-	-
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-	1.35	1.09	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	2.92	13	3.7	4.7	5.12	-	5.1	-	7.12	0.84	-	-	-	0.05	<0.05	0.08	0.1	0.06	-
pH	pH Units	-	-	-	-	7.1	6.8	6.9	7.1	7.2	-	7	-	6.8	7	-	7.7	7.85	7.1	7.2	7.3	7.1	7.4	7.4
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	-	-	-	-	-	-	-	-	-	-	-	-	-	680	-	212	-	0.4	2.5	0.6	-	-	0.2
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0011	<0.0005	-	-	-	-	-	-
Benzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-

Sampling Location		MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-02	MW95-04	Runoff 1	Runoff 2	Runoff 3	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2002-06-03	2002-08-26	2002-11-06	2003-03-07	2003-05-12	2003-11-03	2004-05-17	2004-11-08	2005-04-25	2005-11-02	2006-04-17	2006-11-05	2007-05-22	2004-05-17	2017-04-05	2017-04-05	2017-03-30	2002-06-03	2003-05-12	2004-05-17	2007-05-22	2007-11-05	2008-04-28
Lab Sample ID														K705752-01		7040434-01	7040434-02	7040370-01				K705752-02	K7K0165-01	K8E0035-01
Sample Type																Normal	Normal							
Analyte	Unit																							
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	<0.0020	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Chloroform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	<0.0030	-	-	-	-	-	-
Dichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0028	<0.0010	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Methyl tert-butyl ether	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.104	<0.0010	-	-	-	-	-	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.0010	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2008-10-14	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-11-20
Lab Sample ID		K8J0452-01	K9E0816-01	K9K0184-03	K0B0397-03	K0F0788-02	K0K0729-03	K1E0403-02	K1H0536-04	K1J0685-04	2051369-02	2081484-04	2111131-04	3051354-04	3110772-02	4060249-02	4081094-01	4110161-01	5051773-02	6050336-05	6081698-04	6111141-02	7040434-04	7111886-03
Sample Type											Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	-	2.01	3.7	-	-	-	-	-	-	-	-	-	-	-	4.5	3.93	4.38	4.85	4.24	4.67	-	-	-
Electrical Conductivity	µS/cm	-	900	890	870	970	890	-	690	930	740	860	800	640	710	799	805	756	813	1013	986	932	63	1050
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxidation reduction potential	mV	-	-	-	-	49	159	-	62	119	111	221	188	258	74	165	201	47	68	156	240	293	261	-
pH	pH Units	-	6.85	7.48	7.2	7.41	7.49	-	7.35	7.39	7.43	7.59	7.6	7.36	7.2	7.5	7.5	7.2	7.2	7.4	7.3	7.5	7.5	7.2
Temperature	°C	-	8.4	8.4	7.4	12.2	8.2	-	9.4	7.6	8.2	8.8	8.1	8.4	8.1	7.9	8.5	8.4	12.9	8.31	8.6	8.3	8	8.2
Anions																								
Bromide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chloride	mg/L	86.9	74	57.6	91.1	76.7	75.7	79.2	72.9	77.2	63	67.2	65.6	69.1	68.5	67	69.7	70.2	81.2	97.3	88.5	88.6	90.4	105
Fluoride	mg/L	-	-	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Nitrate (as N)	mg/L	1.17	1.12	1.21	1.3	1.17	1.14	0.895	1.26	1.21	1.19	1.2	0.755	1.36	1.33	1.26	1.55	1.57	1.53	1.72	1.48	1.19	1.39	1.61
Nitrite (as N)	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010
Sulfate	mg/L	40.6	38.8	39.8	42.9	41.2	36.1	37.6	35.8	40	37.2	36.6	40.4	36.6	38.8	37.6	39.7	40.7	40	40.3	41.5	40.2	42.8	43.8
Metals																								
Aluminum, dissolved	mg/L	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.014	<0.005	<0.005	<0.005	<0.005	0.021	<0.005	-	-	<0.005	<0.005	-	-
Aluminum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	-	<0.005	<0.0050
Antimony, dissolved	mg/L	<0.0006	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0004	0.0001	<0.0020	<0.0001	0.0007	0.0003	0.0003	0.0007	0.0004	0.0005	0.0002	-	-	<0.0001	<0.0001	-	-
Antimony, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.0001	<0.00020
Arsenic, dissolved	mg/L	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	<0.0005	<0.0005	-	-
Arsenic, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	-	-	<0.0005	<0.00050
Barium, dissolved	mg/L	0.211	0.227	0.173	0.244	0.216	0.217	0.189	0.195	0.184	0.189	0.193	0.191	0.195	0.2	0.192	0.195	0.21	-	-	0.247	0.219	-	-
Barium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.193	0.227	-	-	0.214	0.228
Beryllium, dissolved	mg/L	<0.0004	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	<0.0001	<0.0001	-	-
Beryllium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.0001	<0.00010
Bismuth, dissolved	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	<0.0001	<0.0001	-	-
Bismuth, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.0001	<0.00010
Boron, dissolved	mg/L	0.013	0.015	0.02	0.02	0.015	0.042	0.016	0.018	0.017	0.018	0.012	0.018	0.018	0.032	0.021	0.024	0.014	-	-	0.031	0.014	-	-
Boron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.015	0.021	-	-	0.025	0.014
Cadmium, dissolved	mg/L	<0.00002	0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.00005	0.00009	<0.00001	0.00001	<0.00001	<0.00001	0.00001	<0.00001	<0.00001	0.00003	0.00002	-	-	0.00002	<0.00001	-	-
Cadmium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00001	<0.00001	-	-	<0.00001	<0.000010
Calcium, dissolved	mg/L	87	83.8	80	87.4	79.1	81.3	90	83.8	84.7	74.7	80.7	82	82.5	88.6	90.2	92.1	88.7	-	-	100	86.1	-	-
Calcium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	91.7	99.5	-	-	93.7	91.1
Chromium, dissolved	mg/L	0.006	0.0033	0.0028	0.0116	0.0022	0.0007	<0.0005	0.0007	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	<0.0005	<0.0005	-	-
Chromium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	-	-	0.0005	0.00052
Cobalt, dissolved	mg/L	<0.0001	0.00009	0.00006	0.00007	0.0001	0.00013	<0.00005	0.00018	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	0.00006	-	-	0.00006	<0.00005	-	-
Cobalt, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005	<0.00005	-	-	<0.00005	<0.00010
Copper, dissolved	mg/L	0.0046	0.0038	0.0016	0.0045	0.0025	0.0025	0.0008	0.0038	0.0016	0.0007	0.0013	0.001	0.0008	0.0006	0.0009	0.0014	0.0014	-	-	0.0016	0.0012	-	-
Copper, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0039	0.0009	-	-	0.0015	0.00073
Iron, dissolved	mg/L	0.079	0.082	0.07	0.063	0.147	0.166	<0.010	0.02	<0.01	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	0.031	<0.010	-	-	<0.010	<0.010	-	-
Iron, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.01	<0.01	-	-	<0.01	<0.010
Lead, dissolved	mg/L	0.0002	0.0001	<0.0001	0.0002	0.0002	0.0002	0.0001	0.0005	0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	0.0001	0.0001	-	-	<0.0001	0.0001	-	-
Lead, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0001	0.0004	-	-	0.0001	<0.00020
Lithium, dissolved	mg/L	0.0015	0.0021	0.0013	0.0017	0.0021	0.004	0.002	0.0017	0.0018	0.0017	0.0016	0.0018	0.0018	0.0018	0.002	0.0022	0.002	-	-	0.0019	0.0019	-	-
Lithium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.002	0.0022	-	-	0.002	0.00199
Magnesium, dissolved	mg/L	38.9	34.9	39.8	39.7	35	40.5	39.7	37.3	34.9	39.1	37.7	36.8	38.9	39.3	41.8	39.4	38	-	-	49.3	41.5	-	-
Magnesium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	39.8	45.4	-	-	39.6	39.2
Manganese, dissolved	mg/L	<0.0010	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0006	0.0008	<0.0002	0.0007	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0068	0.0012	-	-	0.0003	<0.0002	-	-
Manganese, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	-	-	<0.0002	<0.00020
Mercury, dissolved	mg/L	<0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00002	<0.00002	<0.00002	<0.00002	0.00005	0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	<0.00002	<0.00002	-	-
Mercury, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00002	<0.00002	-	-	<0.00002	<0.000010

Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2008-10-14	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-11-20
Lab Sample ID		K8J0452-01	K9E0816-01	K9K0184-03	K0B0397-03	K0F0788-02	K0K0729-03	K1E0403-02	K1H0536-04	K1J0685-04	2051369-02	2081484-04	2111131-04	3051354-04	3110772-02	4060249-02	4081094-01	4110161-01	5051773-02	6050336-05	6081698-04	6111141-02	7040434-04	7111886-03
Sample Type											Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Molybdenum, dissolved	mg/L	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0002	0.0003	0.0012	0.0003	0.0005	0.0003	0.0002	0.0003	0.0003	0.0003	0.0002	-	-	0.0002	0.0002	-	-
Molybdenum, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0003	0.0003	-	-	0.0002	0.00019
Nickel, dissolved	mg/L	0.001	0.0014	0.001	0.0012	0.0016	0.0037	0.0002	0.0011	<0.0002	<0.0002	0.0003	<0.0002	<0.0002	0.0002	<0.0002	0.0015	0.0004	-	-	<0.0002	<0.0002	-	-
Nickel, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	0.0002	-	-	<0.0002	<0.00040
Phosphorus, dissolved	mg/L	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.11	<0.02	-	-	<0.02	<0.02	-	-
Phosphorus, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.020	<0.02	-	-	<0.05	<0.050
Potassium, dissolved	mg/L	1.82	2.08	1.48	1.93	2.33	1.95	1.74	1.75	1.5	2.04	1.62	1.61	1.69	1.67	1.7	1.84	1.9	-	-	2.2	1.93	-	-
Potassium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.86	2.05	-	-	1.85	1.89
Selenium, dissolved	mg/L	<0.0010	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	<0.0005	<0.0005	-	-
Selenium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	-	-	<0.0005	<0.00050
Silicon, dissolved	mg/L	5.35	4.1	3.53	7.83	4	2.33	4.89	4.8	4.4	4.8	4.6	4.9	4.6	4.2	4.5	4.6	4.9	-	-	4.5	4.9	-	-
Silicon, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.8	5.3	-	-	4.7	4.4
Silver, dissolved	mg/L	<0.00008	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	0.00007	<0.00005	<0.00005	<0.00005	0.00006	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	<0.00005	<0.00005	-	-
Silver, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00005	<0.00005	-	-	<0.00005	<0.000050
Sodium, dissolved	mg/L	42.1	36.7	44.4	45.6	37.8	37.8	44	39.9	38.2	40.8	39.4	38.7	41.7	42.4	42.5	44.5	48.5	-	-	58.2	50	-	-
Sodium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46.9	56.5	-	-	52.7	52.1
Strontium, dissolved	mg/L	0.442	0.481	0.409	0.409	0.451	0.628	0.423	0.436	0.37	0.441	0.405	0.399	0.432	0.4	0.421	0.457	0.438	-	-	0.527	0.462	-	-
Strontium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.425	0.49	-	-	0.446	0.486
Sulfur, dissolved	mg/L	-	-	-	-	-	-	-	-	-	16	17	15	13	9	16	12	13	-	-	18	15	-	-
Sulfur, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	16	-	-	12	14
Tellurium, dissolved	mg/L	<0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	<0.0002	<0.0002	-	-
Tellurium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	-	-	<0.0002	<0.00050
Thallium, dissolved	mg/L	<0.0001	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	<0.00002	<0.00002	-	-
Thallium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.00002	<0.00002	-	-	<0.00002	<0.000020
Thorium, dissolved	mg/L	<0.0006	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	<0.0001	<0.0001	-	-
Thorium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	-	-	<0.0001	<0.00010
Tin, dissolved	mg/L	<0.0004	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	<0.0002	<0.0002	-	-
Tin, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	-	-	<0.0002	<0.00020
Titanium, dissolved	mg/L	<0.020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	<0.005	<0.005	-	-
Titanium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	-	-	<0.005	<0.0050
Tungsten, dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tungsten, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010
Uranium, dissolved	mg/L	0.0014	0.00124	0.00114	0.00102	0.00115	0.00127	0.00113	0.00107	0.00104	0.00103	0.00109	0.00103	0.00112	0.00105	0.00114	0.00143	0.00123	-	-	0.0013	0.00115	-	-
Uranium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.00115	0.00134	-	-	0.00124	0.00127
Vanadium, dissolved	mg/L	<0.002	<0.0010	<0.0010	0.0046	0.0018	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.001	<0.001	-	-
Vanadium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	-	-	<0.001	<0.0010
Zinc, dissolved	mg/L	0.008	0.0088	0.0021	0.0051	0.0058	0.0032	<0.0040	0.016	<0.004	<0.004	0.006	<0.004	<0.004	<0.004	<0.004	<0.004	0.005	-	-	<0.004	<0.004	-	-
Zinc, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	<0.004	-	-	<0.004	<0.0040
Zirconium, dissolved	mg/L	<0.001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	<0.0001	<0.0001	-	-
Zirconium, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	0.0002	-	-	<0.0001	<0.00010
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	336	338	336	343	361
Alkalinity, Carbonate (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0
Alkalinity, Total (as CaCO3)	mg/L	345	337	330	325	328	313	331	332	327	304	313	332	326	314	319	320	319	328	336	338	336	343	361
Ammonia, Total (as N)	mg/L	0.06	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	0.02	<0.020	0.03	0.025	0.024	0.029	<0.020	<0.020	<0.020	0.038	<0.020	0.031	<0.020	0.026	0.024
Bicarbonate (HCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	410	412	410	418	441
Carbonate (CO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<0.6	<0.6	<0.600	<0.600
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	884	899	902	905	874	854	869	835	873	825	836	838	833	859	857	880	900	911	966	948	966	959	1050
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2008-10-14	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-11-20
Lab Sample ID		K8J0452-01	K9E0816-01	K9K0184-03	K0B0397-03	K0F0788-02	K0K0729-03	K1E0403-02	K1H0536-04	K1J0685-04	2051369-02	2081484-04	2111131-04	3051354-04	3110772-02	4060249-02	4081094-01	4110161-01	5051773-02	6050336-05	6081698-04	6111141-02	7040434-04	7111886-03
Sample Type											Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	393	-	-	-	-	389
Hydroxide (OH)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	<0.3	<0.3	<0.340	<0.340
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	6.9	7.7	7.76	7.81	7.93	7.79	7.85	7.81	7.82	7.87	7.8	6.94	7.86	7.82	7.92	7.65	7.85	7.83	7.53	7.77	7.97	7.85	7.91
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	0.1	<0.1	0.3	0.2	<0.1	0.1	<0.1	0.11	<0.1	<0.1	0.1	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	0.26
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-
1,2-Dibromoethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
1,2-Dichloropropane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
Benzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Bromodichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-

Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4
Date Sampled		2008-10-14	2009-05-25	2009-11-04	2010-02-09	2010-06-15	2010-11-16	2011-05-09	2011-08-10	2011-10-18	2012-05-24	2012-08-22	2012-11-20	2013-05-21	2013-11-12	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-11-20
Lab Sample ID		K8J0452-01	K9E0816-01	K9K0184-03	K0B0397-03	K0F0788-02	K0K0729-03	K1E0403-02	K1H0536-04	K1J0685-04	2051369-02	2081484-04	2111131-04	3051354-04	3110772-02	4060249-02	4081094-01	4110161-01	5051773-02	6050336-05	6081698-04	6111141-02	7040434-04	7111886-03
Sample Type											Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Analyte	Unit																							
Bromoform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-
Carbon tetrachloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-
Chloroethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Chloroform	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Dibromochloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Dibromomethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	-
Dichloromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Ethylbenzene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Methyl tert-butyl ether	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Styrene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Toluene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Trichlorofluoromethane	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-
Vinyl chloride	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Well ID 22653
Date Sampled		2018-06-26	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2013-08-20	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2019-05-29	2019-08-13	2018-12-04
Lab Sample ID		8062674-04	8090975-06	8120636-05	9052874-05	9081278-05	N000444-05	3081378-02	4060249-01	4081094-02	4110161-02	5051773-01	5081710-01	5110693-04	6050336-04	6081698-05	6111141-01	7040434-05	7090074-02	7111886-02	8062674-05	9052874-06	9081278-06	8120636-07
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal			Normal
Analyte	Unit																							
Field Parameters																								
Depth to Water	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5.82
Dissolved Oxygen	mg/L	-	5.59	5.67	4.89	6.47	5.47	-	8.14	7.68	7.38	6.4	7.04	6.51	5.61	6.13	5.71	-	9.27	9.21	-	10.26	8.83	2.87
Electrical Conductivity	µS/cm	1055	1043	904	923	932	834	650	577	577	677	587	401	670	693	695	723	635	680	726	727	634	713	352
Elevation of Piezometric Surface	m	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oxidation reduction potential	mV	218	123	102	-14.1	185.9	100.6	246	183	172	66	211	46	74	122	234	163	265	31	-	204	-20	150.6	-
pH	pH Units	7.46	7.52	7.26	7.34	7.28	7.42	7.15	7.3	7.9	7.4	7.4	7.4	6.6	7.3	7.2	7.3	7.3	-	7.5	7.45	7.58	7.38	8.65
Temperature	°C	8.3	8.4	8.3	9.7	9.3	7.4	7.9	7.7	8.1	8.1	7.8	10.2	8.2	8.2	8.4	8	7.9	9.5	7.9	8.1	9.9	9.3	7.8
Anions																								
Bromide	mg/L	<0.10	<0.10	<0.10	-	-	-	-	-	-	-	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	-	-	<0.10
Chloride	mg/L	103	87.4	97	97.9	92.7	92.8	22.9	23.7	26.2	34.5	28.7	24.8	28.6	24.4	29.2	30.5	31	34.4	36.2	39.7	41	42.1	29.4
Fluoride	mg/L	0.15	<0.10	<0.10	<0.1	<0.1	<0.1	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.11	0.18	<0.10	<0.1	<0.1	0.13
Nitrate (as N)	mg/L	1.26	1.76	1.6	1.72	1.65	1.76	0.781	0.839	0.993	1.23	0.89	1.01	0.925	0.978	1.03	0.976	1.09	1.11	1.3	0.933	1.28	1.32	<0.010
Nitrite (as N)	mg/L	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.01	<0.01	<0.010
Sulfate	mg/L	38.8	42.3	42.9	43.5	41.4	41.8	20.4	23.5	24.1	24.3	24.3	23.8	24.8	25.2	27.1	24.9	27.6	24.4	23	25.2	30.8	28.6	23.5
Metals																								
Aluminum, dissolved	mg/L	0.0057	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	0.011	<0.005	-	-	-	-	<0.005	<0.005	-	<0.0050	-	0.0069	<0.005	<0.005	0.0068
Aluminum, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.05	<0.005	-	-	<0.005	-	<0.0050	-	-	-	-
Antimony, dissolved	mg/L	<0.00020	<0.00020	<0.00020	<0.0002	<0.0002	<0.0002	0.0005	0.0005	0.0003	0.0002	-	-	-	-	<0.0001	<0.0001	-	<0.00020	-	<0.00020	<0.0002	<0.0002	<0.00020
Antimony, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00020	-	-	-	-
Arsenic, dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	-	<0.00050	-	<0.00050	<0.0005	<0.0005	<0.00050
Arsenic, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.005	<0.0005	-	-	<0.0005	-	<0.00050	-	-	-	-
Barium, dissolved	mg/L	0.196	0.219	0.214	0.217	0.218	0.205	0.133	0.126	0.136	0.146	-	-	-	-	0.169	0.155	-	0.133	-	0.133	0.165	0.161	0.0224
Barium, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.142	0.146	0.14	0.162	-	-	0.15	-	0.146	-	-	-	-
Beryllium, dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010	-	<0.00010	<0.0001	<0.0001	<0.00010
Beryllium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00010	-	-	-	-
Bismuth, dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010	-	<0.00010	<0.0001	<0.0001	<0.00010
Bismuth, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00010	-	-	-	-
Boron, dissolved	mg/L	0.0335	0.0357	0.0293	0.0221	0.0225	0.0665	0.05	0.015	0.012	0.006	-	-	-	-	0.014	0.007	-	0.143	-	0.017	0.0099	0.0106	0.0156
Boron, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.006	0.007	<0.04	0.012	-	-	0.016	-	0.0068	-	-	-	-
Cadmium, dissolved	mg/L	<0.000010	<0.000010	<0.000010	<0.00001	<0.00001	<0.00001	0.00002	<0.00001	0.00002	<0.00001	-	-	-	-	0.00002	<0.00001	-	<0.000010	-	<0.000010	<0.00001	<0.00001	<0.000010
Cadmium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.00001	<0.00001	<0.0001	<0.00001	-	-	<0.00001	-	<0.000010	-	-	-	-
Calcium, dissolved	mg/L	93.1	90.1	86.2	93.4	93.5	89.6	81.5	82.8	82.7	84.3	-	-	-	-	96.8	85.7	-	84.4	-	85.5	99.2	93.4	20.4
Calcium, total	mg/L	-	-	-	-	-	-	-	-	-	-	90.4	87.9	87	105	-	-	89.6	-	83.6	-	-	-	-
Chromium, dissolved	mg/L	<0.00050	<0.00050	<0.00050	0.00085	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	-	<0.00050	-	<0.00050	0.0009	<0.0005	<0.00050
Chromium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.005	<0.0005	-	-	0.0006	-	0.00062	-	-	-	-
Cobalt, dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.00005	<0.00005	0.00007	0.00006	-	-	-	-	0.00007	<0.00005	-	<0.00010	-	<0.00010	<0.0001	<0.0001	<0.00010
Cobalt, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.00005	<0.00005	<0.0005	<0.00005	-	-	<0.00005	-	<0.00010	-	-	-	-
Copper, dissolved	mg/L	0.00099	0.00182	0.00065	0.00984	0.0014	0.0013	0.0008	0.0013	0.0028	0.0024	-	-	-	-	0.0014	0.0008	-	0.00143	-	0.00106	0.00231	0.00228	<0.00040
Copper, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.001	0.0016	<0.002	0.0008	-	-	0.0013	-	0.00153	-	-	-	-
Iron, dissolved	mg/L	<0.010	<0.010	<0.010	<0.01	<0.01	<0.01	<0.010	<0.010	0.033	0.013	-	-	-	-	0.012	<0.010	-	0.019	-	0.018	0.016	<0.01	1.93
Iron, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.01	0.01	<0.10	<0.01	-	-	<0.01	-	<0.010	-	-	-	-
Lead, dissolved	mg/L	<0.00020	<0.00020	0.00025	0.00066	<0.0002	<0.0002	<0.0001	<0.0001	0.0002	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00020	-	<0.00020	<0.0002	<0.0002	<0.00020
Lead, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.0001	0.0001	<0.001	0.0001	-	-	<0.0001	-	<0.00020	-	-	-	-
Lithium, dissolved	mg/L	0.00226	0.00212	0.00231	0.00228	0.00224	0.00228	0.0013	0.0013	0.0014	0.0013	-	-	-	-	0.0012	0.0012	-	0.0014	-	0.00132	0.0016	0.00146	0.00204
Lithium, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.0014	0.0012	0.001	0.0017	-	-	0.0013	-	0.00115	-	-	-	-
Magnesium, dissolved	mg/L	42.6	42.3	44.1	41.9	41.1	44.5	28.1	28.5	28.7	27.1	-	-	-	-	33.6	28.8	-	28.2	-	27.7	31.6	29.3	26.2
Magnesium, total	mg/L	-	-	-	-	-	-	-	-	-	-	29.2	27.1	26.8	33	-	-	26.8	-	24	-	-	-	-
Manganese, dissolved	mg/L	0.00162	<0.00020	0.00517	<0.0002	<0.0002	<0.0002	0.0009	0.0013	0.0082	0.0014	-	-	-	-	0.0011	0.0008	-	0.00294	-	0.00229	0.00175	0.00077	0.0986
Manganese, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.0011	0.001	<0.002	0.0007	-	-	0.0007	-	0.00077	-	-	-	-
Mercury, dissolved	mg/L	<0.000010	<0.000040	<0.000010	<0.00001	<0.00001	<0.00001	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-	<0.00002	<0.00002	-	<0.000010	-	<0.000040	<0.00001	<0.00001	<0.000010
Mercury, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.00002	-	<0.00002	<0.00002	-	-	<0.00002	-	<0.000010	-	-	-	-

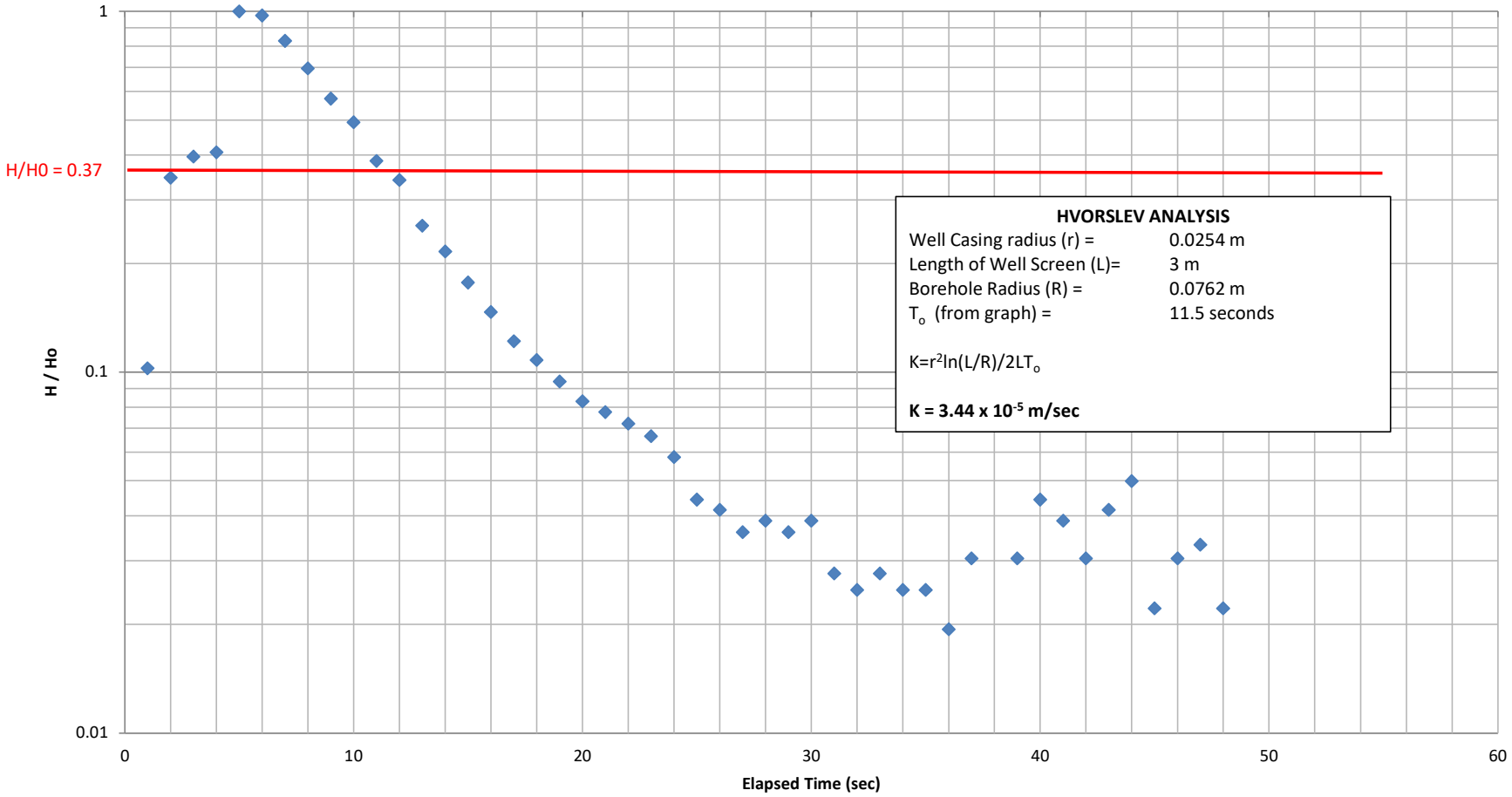
Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Well ID 22653
Date Sampled		2018-06-26	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2013-08-20	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2019-05-29	2019-08-13	2018-12-04
Lab Sample ID		8062674-04	8090975-06	8120636-05	9052874-05	9081278-05	N000444-05	3081378-02	4060249-01	4081094-02	4110161-02	5051773-01	5081710-01	5110693-04	6050336-04	6081698-05	6111141-01	7040434-05	7090074-02	7111886-02	8062674-05	9052874-06	9081278-06	8120636-07
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal			Normal
Analyte	Unit																							
Molybdenum, dissolved	mg/L	0.00018	0.00021	0.00023	0.00021	0.0002	0.00018	0.0003	0.0004	0.0004	0.0004	-	-	-	-	0.0003	0.0002	-	0.0003	-	0.00044	0.00036	0.00031	0.00025
Molybdenum, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.0005	0.0003	<0.001	0.0003	-	-	0.0003	-	0.00026	-	-	-	-
Nickel, dissolved	mg/L	<0.00040	<0.00040	<0.00040	<0.0004	<0.0004	<0.0004	0.0003	<0.0002	0.0012	0.0004	-	-	-	-	0.0002	0.0003	-	<0.00040	-	<0.00040	<0.0004	<0.0004	<0.00040
Nickel, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0002	0.0006	<0.002	0.0002	-	-	0.0002	-	<0.00040	-	-	-	-
Phosphorus, dissolved	mg/L	<0.050	<0.050	<0.050	<0.05	<0.05	<0.05	<0.02	<0.02	0.07	<0.02	-	-	-	-	<0.02	<0.02	-	<0.050	-	<0.050	<0.05	<0.05	<0.050
Phosphorus, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.020	0.03	<0.2	<0.02	-	-	<0.05	-	<0.050	-	-	-	-
Potassium, dissolved	mg/L	1.95	1.77	2.12	1.78	1.86	1.65	1	0.89	0.95	0.94	-	-	-	-	1.1	0.99	-	0.89	-	1.01	1.02	1	0.95
Potassium, total	mg/L	-	-	-	-	-	-	-	-	-	-	1.03	0.99	0.8	1.06	-	-	0.93	-	0.91	-	-	-	-
Selenium, dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	<0.0005	<0.0005	-	<0.00050	-	<0.00050	<0.0005	<0.0005	<0.00050
Selenium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005	<0.005	<0.0005	-	-	<0.0005	-	<0.00050	-	-	-	-
Silicon, dissolved	mg/L	4.9	4.6	4.9	4.4	5	5.6	4.1	4	4.4	4.5	-	-	-	-	4.2	4.5	-	4	-	4.3	4.4	4.5	<1.0
Silicon, total	mg/L	-	-	-	-	-	-	-	-	-	-	4.7	4.3	<5	5.2	-	-	4.3	-	3.7	-	-	-	-
Silver, dissolved	mg/L	<0.000050	<0.000050	<0.000050	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-	<0.00005	<0.00005	-	<0.000050	-	<0.000050	<0.00005	<0.00005	<0.000050
Silver, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.00005	0.00154	<0.0005	<0.00005	-	-	<0.00005	-	<0.000050	-	-	-	-
Sodium, dissolved	mg/L	57.8	56.9	58.5	56.9	55.9	62	15.2	13.9	15.4	17.9	-	-	-	-	17.9	16.7	-	17	-	20.3	23.1	22.6	14.7
Sodium, total	mg/L	-	-	-	-	-	-	-	-	-	-	18.9	15.1	15.9	17.9	-	-	17.1	-	15.7	-	-	-	-
Strontium, dissolved	mg/L	0.492	0.46	0.471	0.459	0.479	0.439	0.282	0.269	0.301	0.29	-	-	-	-	0.344	0.312	-	0.258	-	0.281	0.328	0.331	0.115
Strontium, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.296	0.298	0.27	0.325	-	-	0.294	-	0.285	-	-	-	-
Sulfur, dissolved	mg/L	16.1	14.3	15	15.7	15.7	16.1	8	10	8	7	-	-	-	-	13	9	-	7.8	-	9.8	12	10.7	7.1
Sulfur, total	mg/L	-	-	-	-	-	-	-	-	-	-	9	8	<10	11	-	-	6	-	7.9	-	-	-	-
Tellurium, dissolved	mg/L	<0.00050	<0.00050	<0.00050	<0.0005	<0.0005	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	<0.0002	<0.0002	-	<0.00050	-	<0.00050	<0.0005	<0.0005	<0.00050
Tellurium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	<0.002	<0.0002	-	-	<0.0002	-	<0.00050	-	-	-	-
Thallium, dissolved	mg/L	<0.000020	<0.000020	<0.000020	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	<0.00002	-	-	-	-	<0.00002	<0.00002	-	<0.000020	-	<0.000020	<0.00002	<0.00002	<0.000020
Thallium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.00002	<0.00002	<0.0002	<0.00002	-	-	<0.00002	-	<0.000020	-	-	-	-
Thorium, dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010	-	<0.00010	<0.0001	<0.0001	<0.00010
Thorium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00010	-	-	-	-
Tin, dissolved	mg/L	<0.00020	<0.00020	0.00022	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	-	-	-	-	<0.0002	<0.0002	-	<0.00020	-	<0.00020	<0.0002	<0.0002	0.00077
Tin, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0002	<0.0002	<0.002	<0.0002	-	-	<0.0002	-	<0.00020	-	-	-	-
Titanium, dissolved	mg/L	<0.0050	<0.0050	<0.0050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	<0.005	<0.005	-	<0.0050	-	<0.0050	<0.005	<0.005	<0.0050
Titanium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.005	<0.005	<0.05	<0.005	-	-	<0.005	-	<0.0050	-	-	-	-
Tungsten, dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	<0.001	<0.001	<0.0010
Tungsten, total	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-
Uranium, dissolved	mg/L	0.00117	0.00132	0.00133	0.00128	0.00128	0.00124	0.00105	0.00103	0.00114	0.00114	-	-	-	-	0.00117	0.00106	-	0.00109	-	0.001	0.0013	0.00121	<0.000020
Uranium, total	mg/L	-	-	-	-	-	-	-	-	-	-	0.00112	0.00111	0.0011	0.00133	-	-	0.00109	-	0.00107	-	-	-	-
Vanadium, dissolved	mg/L	<0.0010	<0.0010	<0.0010	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	<0.001	<0.001	-	<0.0010	-	<0.0010	<0.001	<0.001	<0.0010
Vanadium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001	<0.01	<0.001	-	-	<0.001	-	<0.0010	-	-	-	-
Zinc, dissolved	mg/L	0.0062	<0.0040	0.0063	0.0265	<0.004	<0.004	<0.004	<0.004	0.01	0.005	-	-	-	-	<0.004	<0.004	-	0.01	-	0.0052	0.0055	0.0094	0.0043
Zinc, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.004	0.016	<0.04	<0.004	-	-	0.004	-	<0.0040	-	-	-	-
Zirconium, dissolved	mg/L	<0.00010	<0.00010	<0.00010	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	<0.0001	<0.0001	-	<0.00010	-	<0.00010	<0.0001	<0.0001	<0.00010
Zirconium, total	mg/L	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.001	<0.0001	-	-	<0.0001	-	<0.00010	-	-	-	-
General Parameters																								
Alkalinity, Bicarbonate (as CaCO3)	mg/L	336	378	355	357	346	409	-	-	-	-	-	-	-	292	296	308	314	288	304	288	331	317	142
Alkalinity, Carbonate (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1	<1	<1	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1	<1.0
Alkalinity, Hydroxide (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1	<1	<1	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1	<1.0
Alkalinity, Phenolphthalein (as CaCO3)	mg/L	<1.0	<1.0	<1.0	<1	<1	<1	-	-	-	-	-	-	-	<1	<1	<1	<1.0	<1.0	<1.0	<1.0	<1	<1	<1.0
Alkalinity, Total (as CaCO3)	mg/L	336	378	355	357	346	409	268	276	277	291	303	288	295	292	296	308	314	288	304	288	331	317	142
Ammonia, Total (as N)	mg/L	<0.020	0.02	<0.020	0.063	0.07	<0.02	<0.020	0.024	<0.020	<0.020	<0.020	<0.020	0.02	<0.020	0.02	0.037	0.03	0.021	0.028	<0.020	0.089	0.067	0.326
Bicarbonate (HCO3)	mg/L	410	461	433	435	423	498	-	-	-	-	-	-	-	356	361	375	383	352	371	351	404	387	173
Carbonate (CO3)	mg/L	<0.600	<0.600	<0.600	<0.6	<0.6	<0.6	-	-	-	-	-	-	-	<1	<0.6	<0.6	<0.600	<0.600	<0.600	<0.600	<0.6	<0.6	<0.600
Chemical Oxygen Demand	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	µS/cm	1010	1020	1000	973	989	961	620	621	634	679	672	618	661	658	666	712	692	655	704	702	739	759	387
Electrical Conductivity	uS/cm	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Well ID 22653
Date Sampled		2018-06-26	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2013-08-20	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2019-05-29	2019-08-13	2018-12-04
Lab Sample ID		8062674-04	8090975-06	8120636-05	9052874-05	9081278-05	N000444-05	3081378-02	4060249-01	4081094-02	4110161-02	5051773-01	5081710-01	5110693-04	6050336-04	6081698-05	6111141-01	7040434-05	7090074-02	7111886-02	8062674-05	9052874-06	9081278-06	8120636-07
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal			Normal
Analyte	Unit																							
Hardness, Total (as CaCO3)	mg/L	-	-	-	406	403	407	-	-	-	-	346	332	328	-	-	-	-	-	308	-	378	354	-
Hydroxide (OH)	mg/L	<0.340	<0.340	<0.340	<0.34	<0.34	<0.34	-	-	-	-	-	-	-	<1	<0.3	<0.3	<0.340	<0.340	<0.340	<0.340	<0.34	<0.34	<0.340
Nitrate + Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrogen, Total Kjeldahl	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
pH	pH Units	7.88	7.83	7.92	7.99	7.92	8.16	7.94	7.87	7.7	7.86	7.81	7.79	7.72	7.74	7.76	7.89	7.89	8.03	8	7.93	8.02	7.95	8
pH	pH units	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total (as P)	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosphorus, Total Dissolved	mg/L	-	-	<0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020
Total organic carbon	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Turbidity	NTU	<0.10	-	<0.10	0.19	<0.1	0.1	0.6	<0.1	<0.1	0.1	<0.1	0.2	0.1	<0.1	0.11	0.13	0.16	0.12	0.1	<0.10	3.63	23.7	142
Microbiological Parameters																								
Coliforms, Fecal	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Fecal (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coliforms, Total (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli (MPN)	MPN/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E. coli, Total	CFU/100 mL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (VOC)																								
1,1-Dichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,1-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,1-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,1,1-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,1,2-Trichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2,2-Tetrachloroethane	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-
1,1,2,2-Tetrachloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane	mg/L	-	<0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0002	-	-	-	-	-	-
1,2-Dibromoethane	µg/L	-	-	-	<0.3	-	<0.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.3	-	-
1,2-Dibromoethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-
1,2-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,2-Dichloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
1,2-Dichloropropane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,2-Dichloropropane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,3-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropene (cis + trans)	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,3-Dichloropropene (cis + trans)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
1,4-Dichlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	mg/L	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
Benzene	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-
Benzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Bromodichloromethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Bromodichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromoform	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-

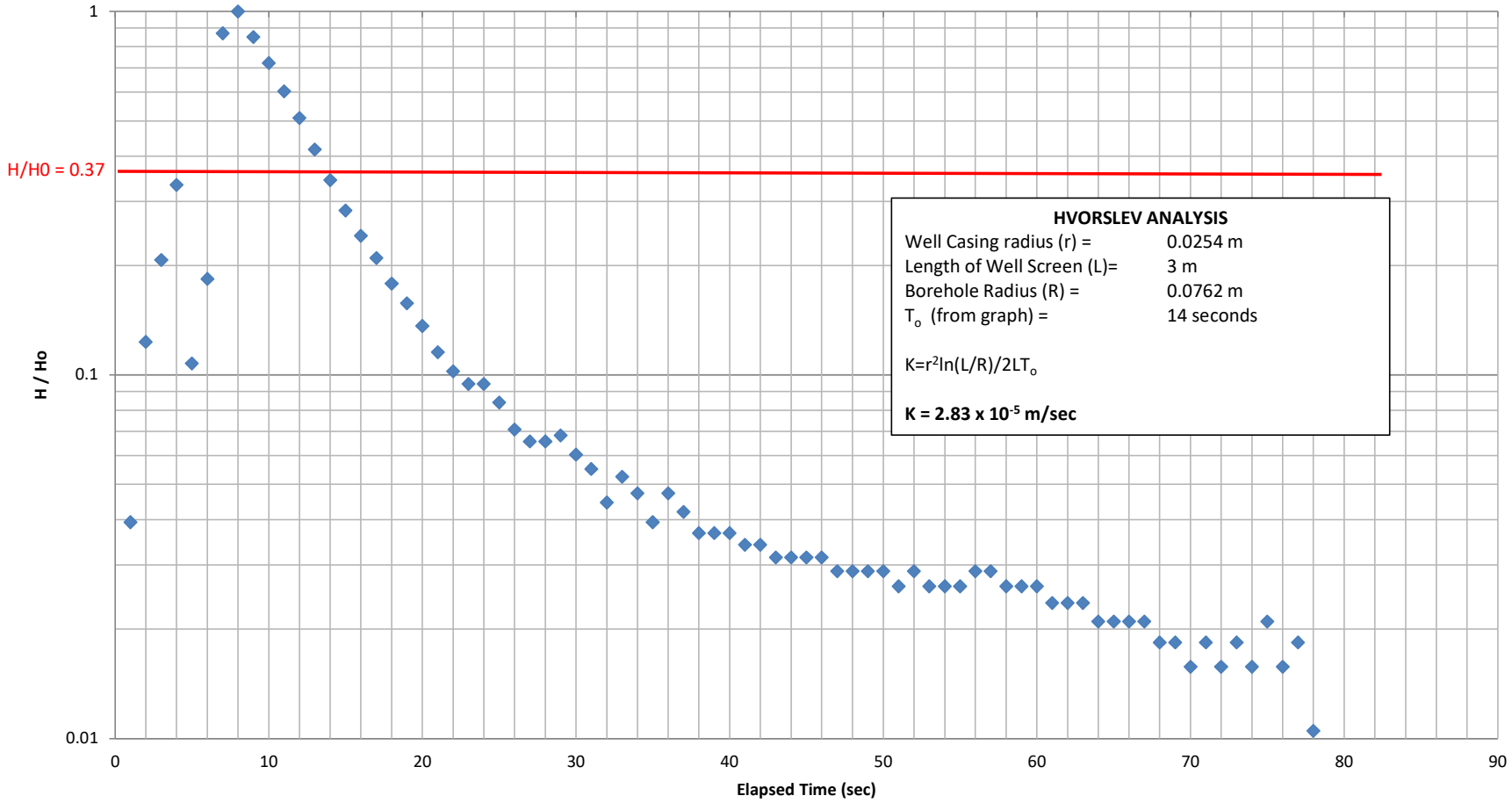
Sampling Location		Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #4	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Town Well #6	Well ID 22653
Date Sampled		2018-06-26	2018-09-11	2018-12-03	2019-05-29	2019-08-13	2019-10-29	2013-08-20	2014-06-02	2014-08-18	2014-11-04	2015-05-25	2015-08-25	2015-11-09	2016-05-03	2016-08-22	2016-11-14	2017-04-05	2017-08-29	2017-11-20	2018-06-26	2019-05-29	2019-08-13	2018-12-04
Lab Sample ID		8062674-04	8090975-06	8120636-05	9052874-05	9081278-05	N000444-05	3081378-02	4060249-01	4081094-02	4110161-02	5051773-01	5081710-01	5110693-04	6050336-04	6081698-05	6111141-01	7040434-05	7090074-02	7111886-02	8062674-05	9052874-06	9081278-06	8120636-07
Sample Type		Normal	Normal	Normal				Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal			Normal
Analyte	Unit																							
Bromoform	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Bromoform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	mg/L	-	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	-	-	-	-	-	-
Carbon tetrachloride	µg/L	-	-	-	<0.5	-	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.5	-	-
Carbon tetrachloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Chlorobenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	mg/L	-	<0.0020	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0020	-	-	-	-	-	-
Chloroethane	µg/L	-	-	-	<2	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-
Chloroethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Chloroform	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Chloroform	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
cis-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Dibromochloromethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Dibromochloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Dibromomethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Dibromomethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	mg/L	-	<0.0030	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0030	-	-	-	-	-	-
Dichloromethane	µg/L	-	-	-	<3	-	<3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<3	-	-
Dichloromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Ethylbenzene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Ethylbenzene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methyl tert-butyl ether	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Methyl tert-butyl ether	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Methyl tert-butyl ether	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Styrene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Styrene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Tetrachloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Toluene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Toluene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
trans-1,2-Dichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethylene	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Trichloroethylene	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Trichlorofluoromethane	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Trichlorofluoromethane	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	mg/L	-	<0.0010	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0010	-	-	-	-	-	-
Vinyl chloride	µg/L	-	-	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<1	-	-
Vinyl chloride	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Xylenes (total)	µg/L	-	-	-	<2	-	<2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<2	-	-
Xylenes (total)	ug/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BCMOE Aggregate Hydrocarbons																								
VPHw	mg/L	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

APPENDIX E SINGLE WELL RESPONSE TESTING

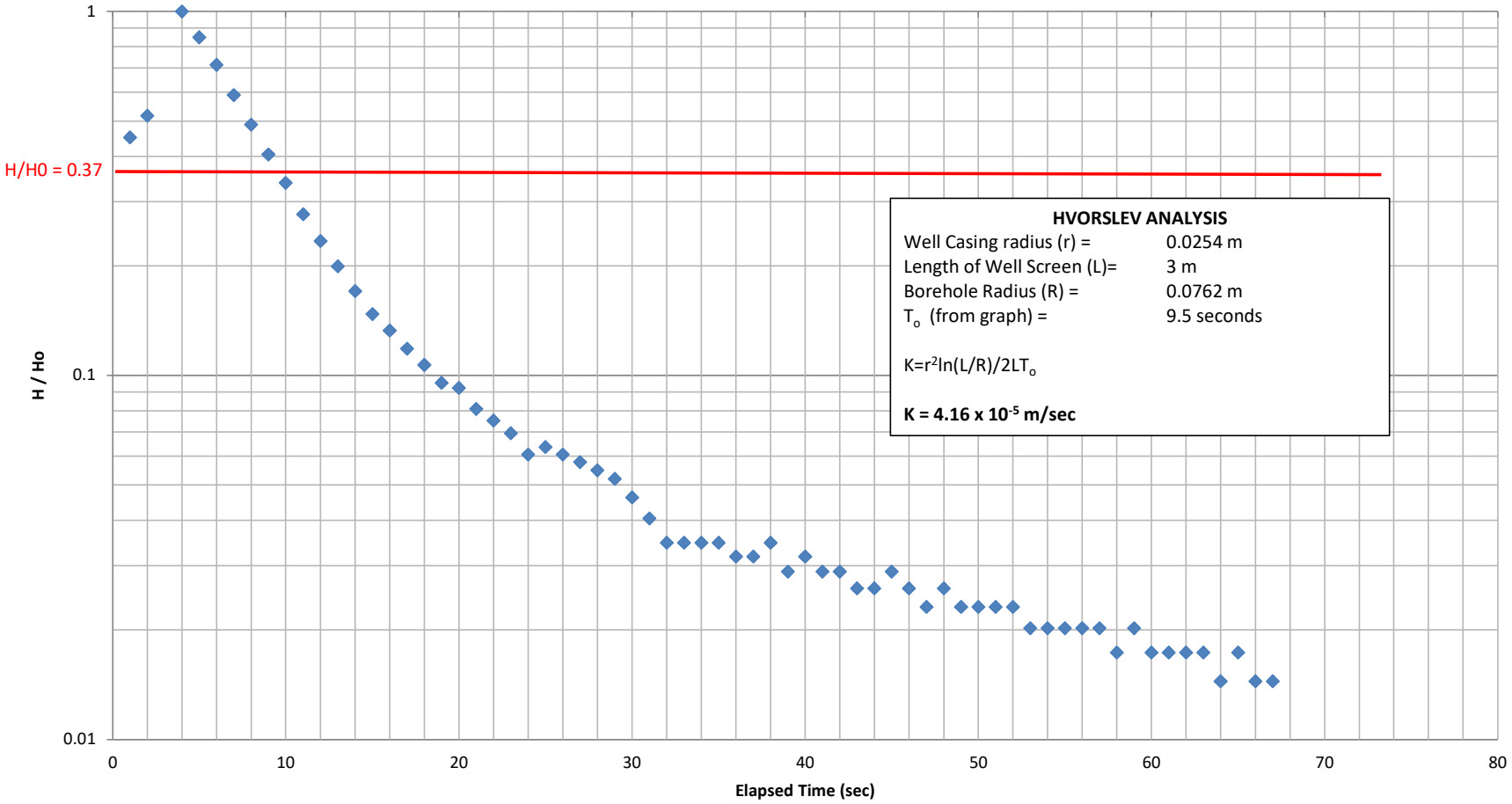
MW09-06S (Rising Head Test #1)



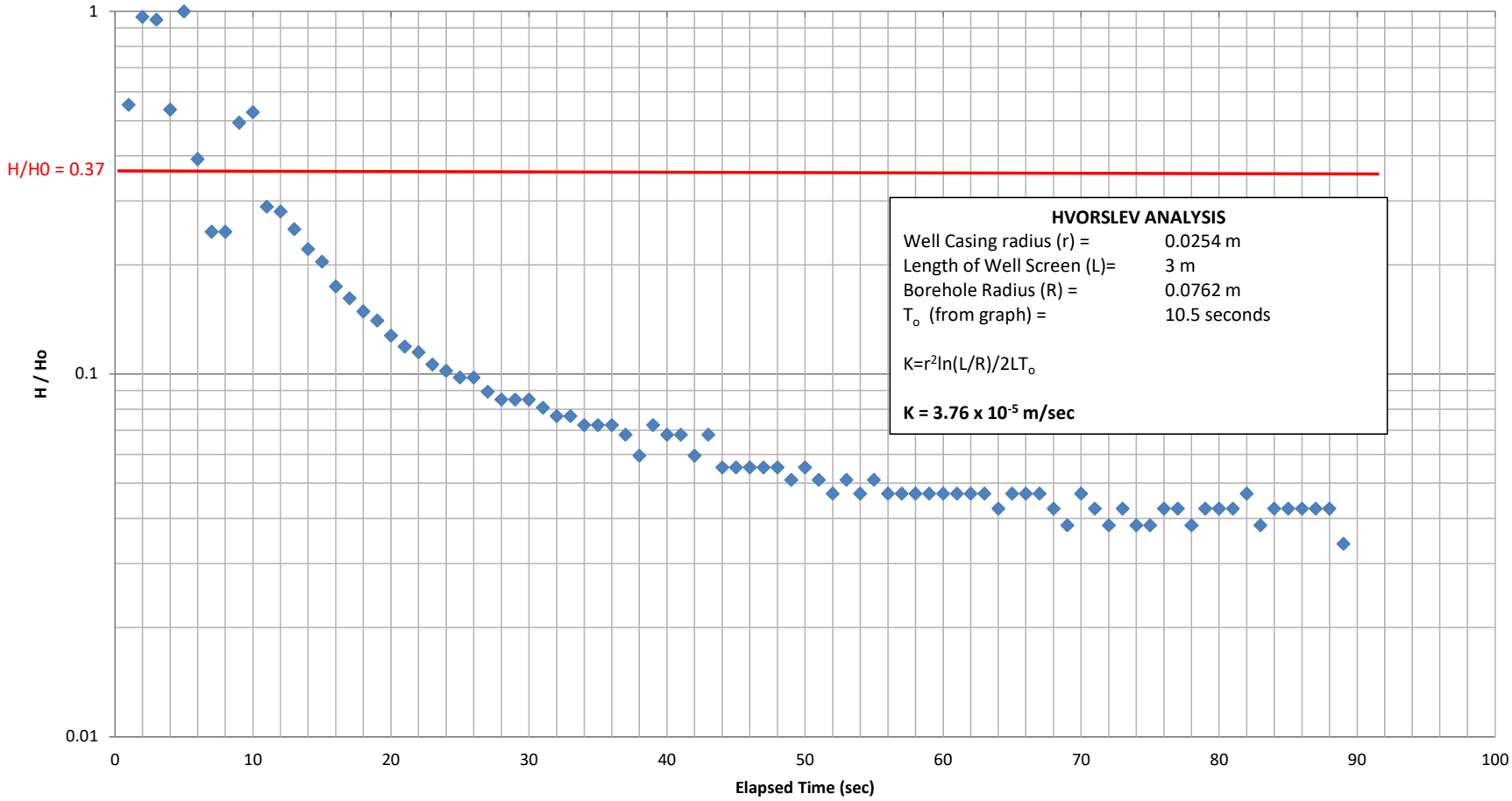
MW09-06S (Rising Head Test #2)



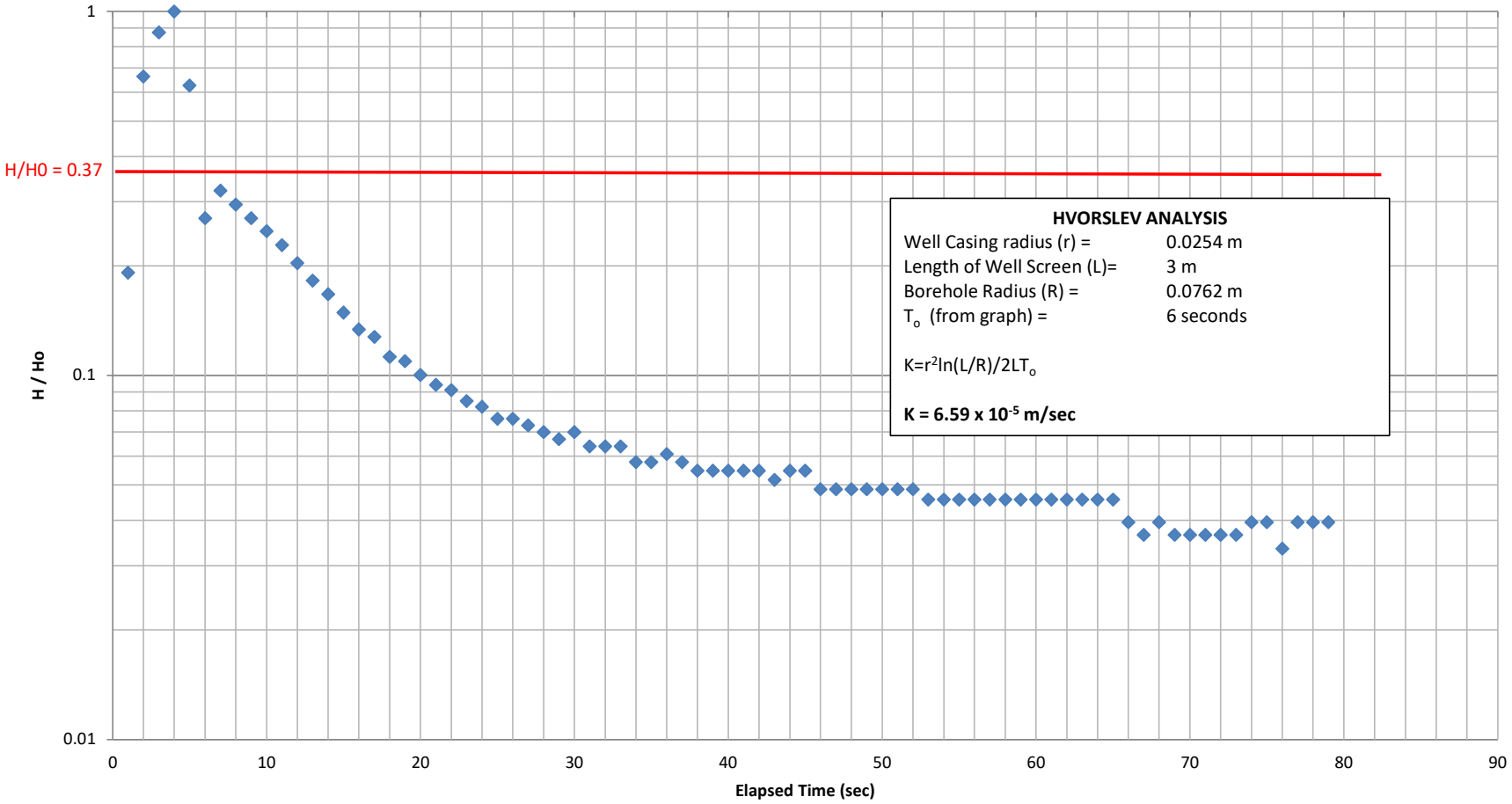
MW09-06S (Rising Head Test #3)



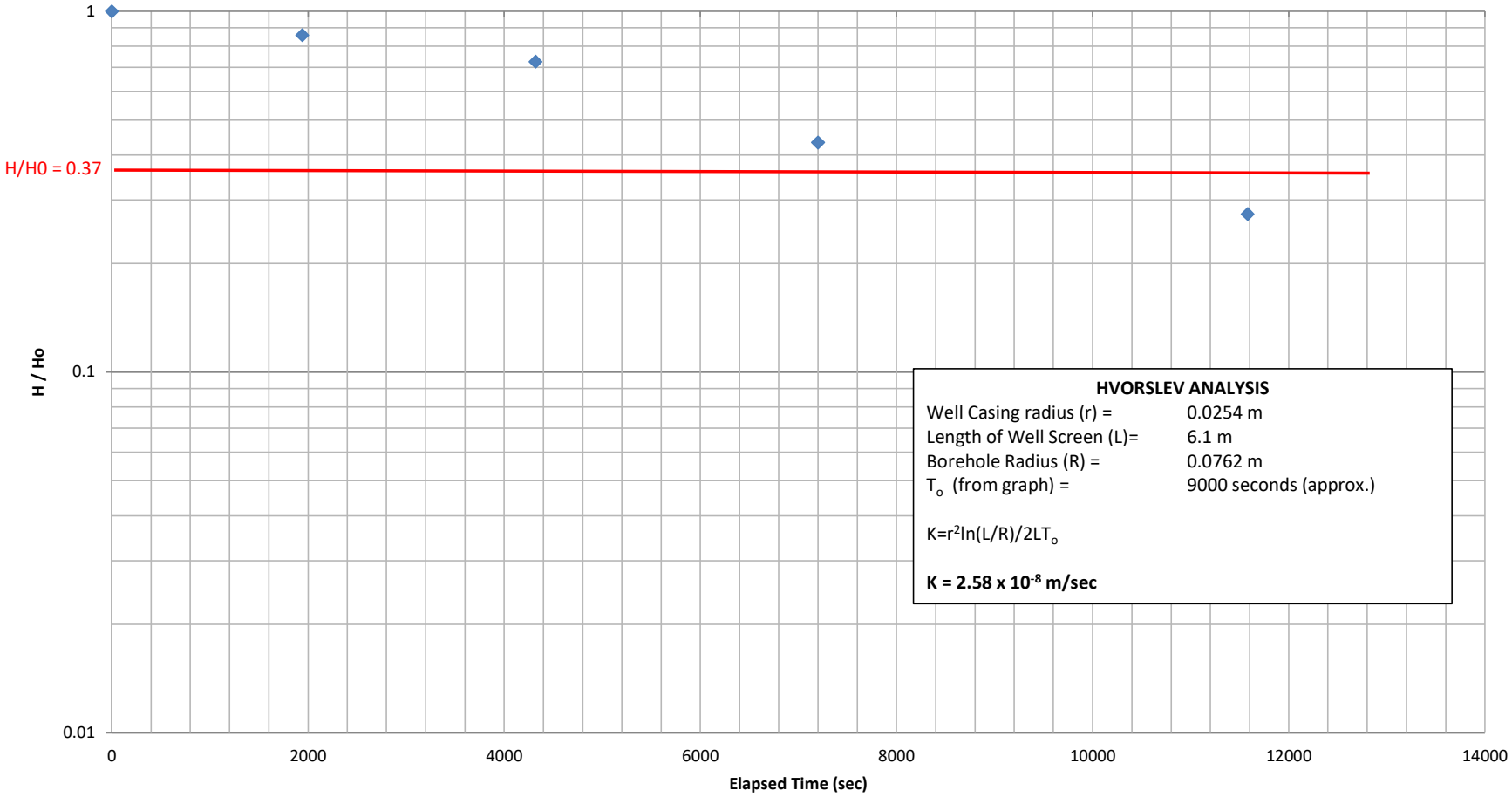
MW09-06S (Falling Head Test #1)



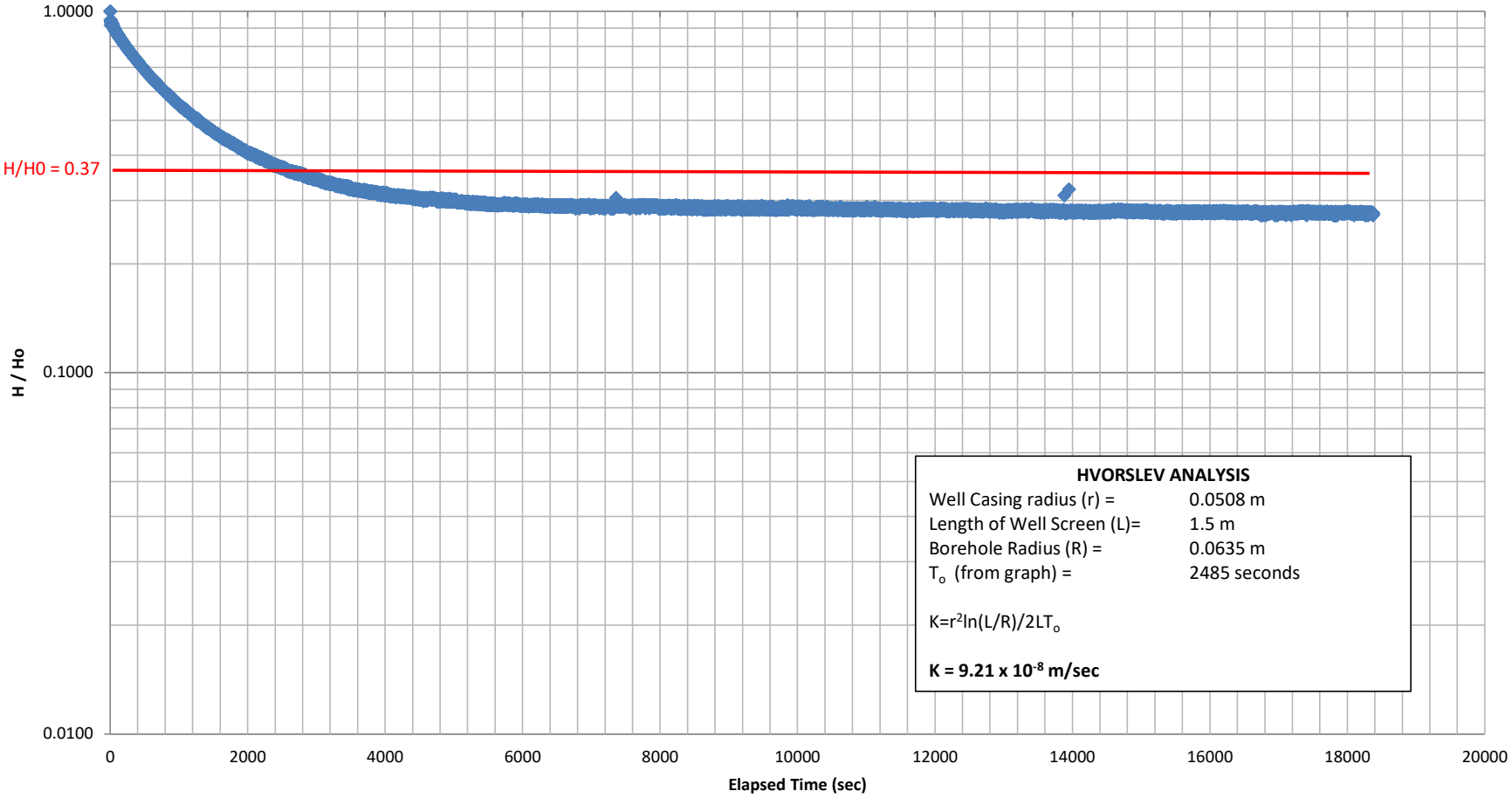
MW09-06S (Falling Head Test #2)



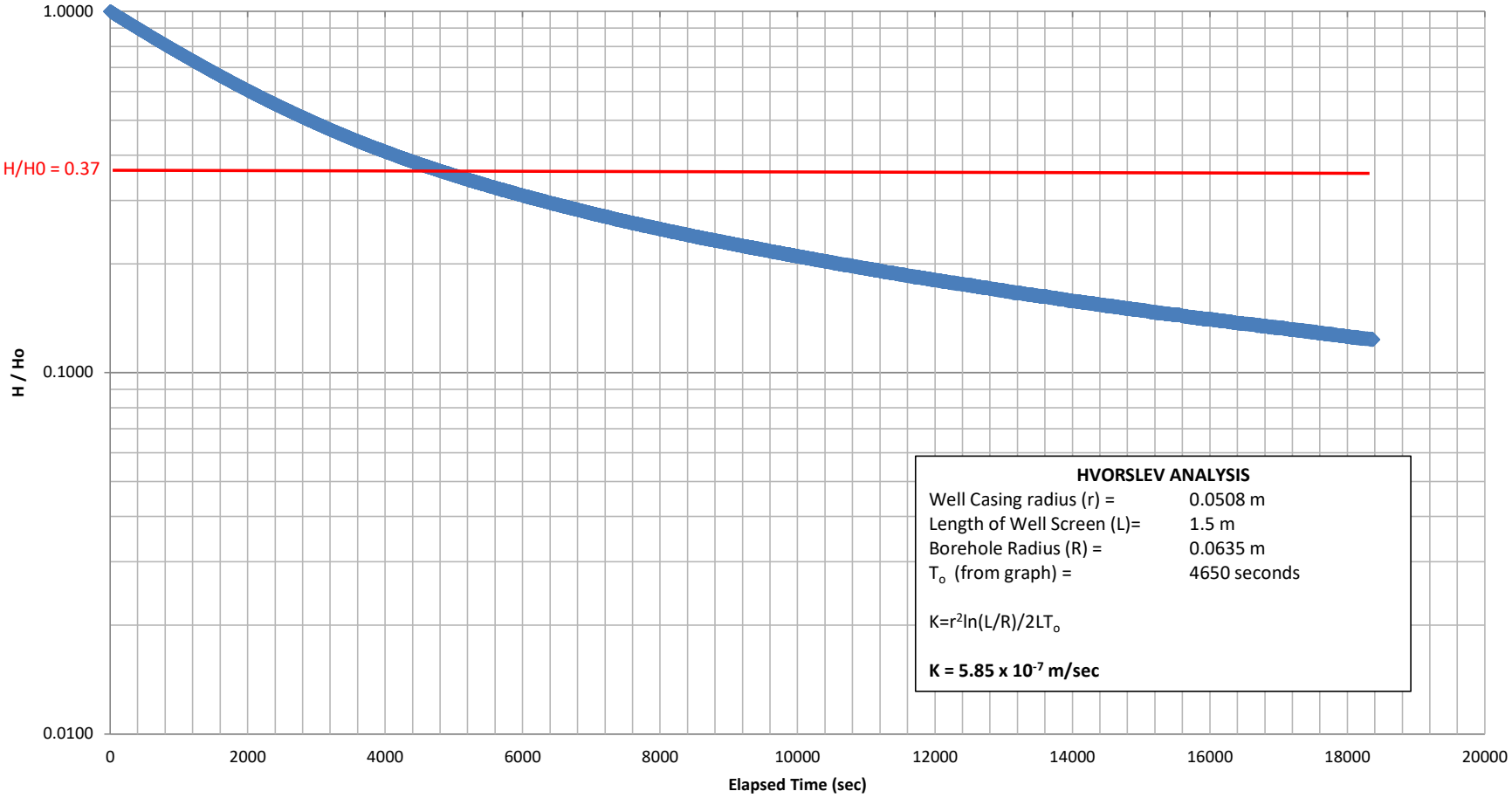
MW09-06D (Falling Head Test)



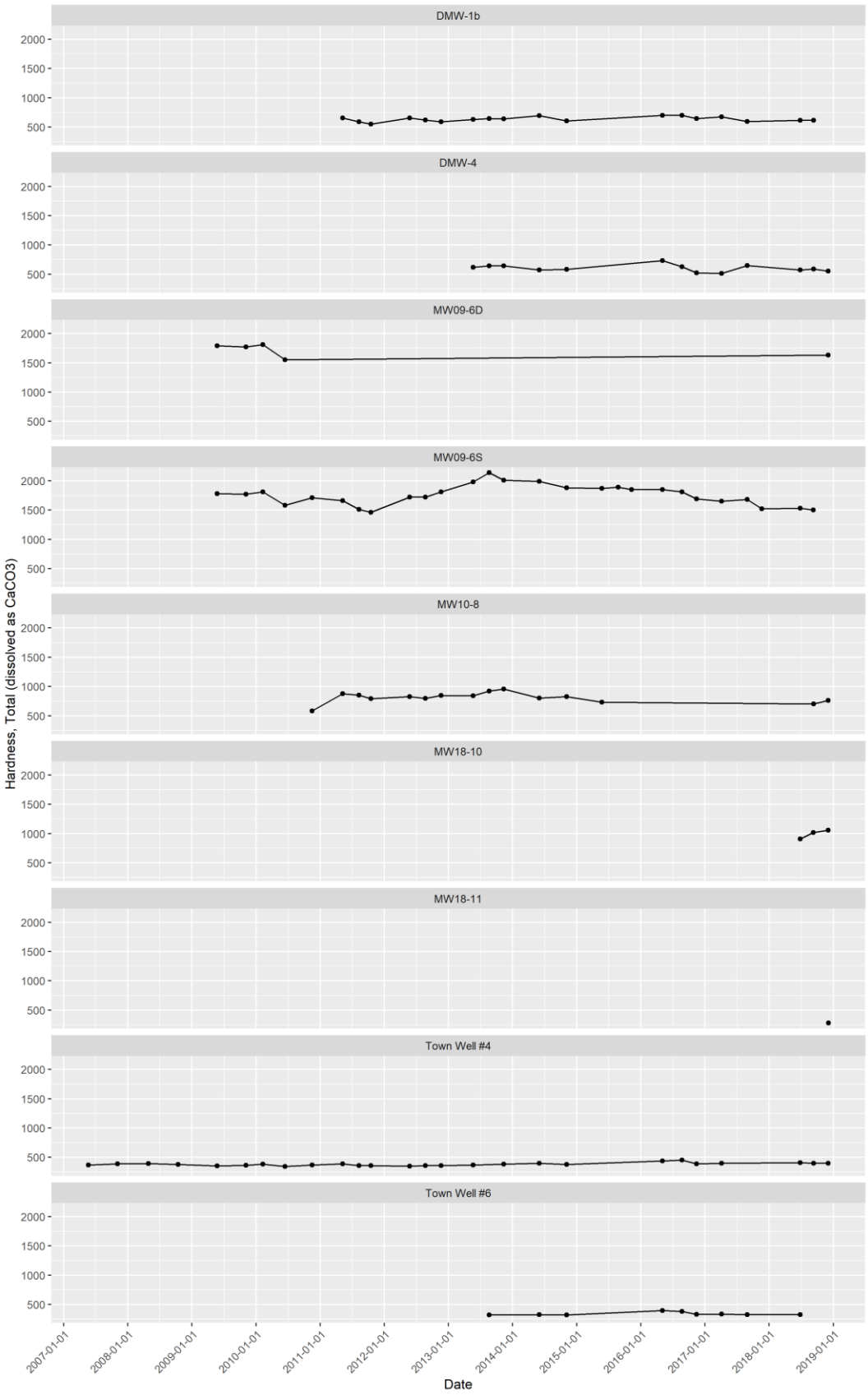
MW10-08 (Falling Head Test)

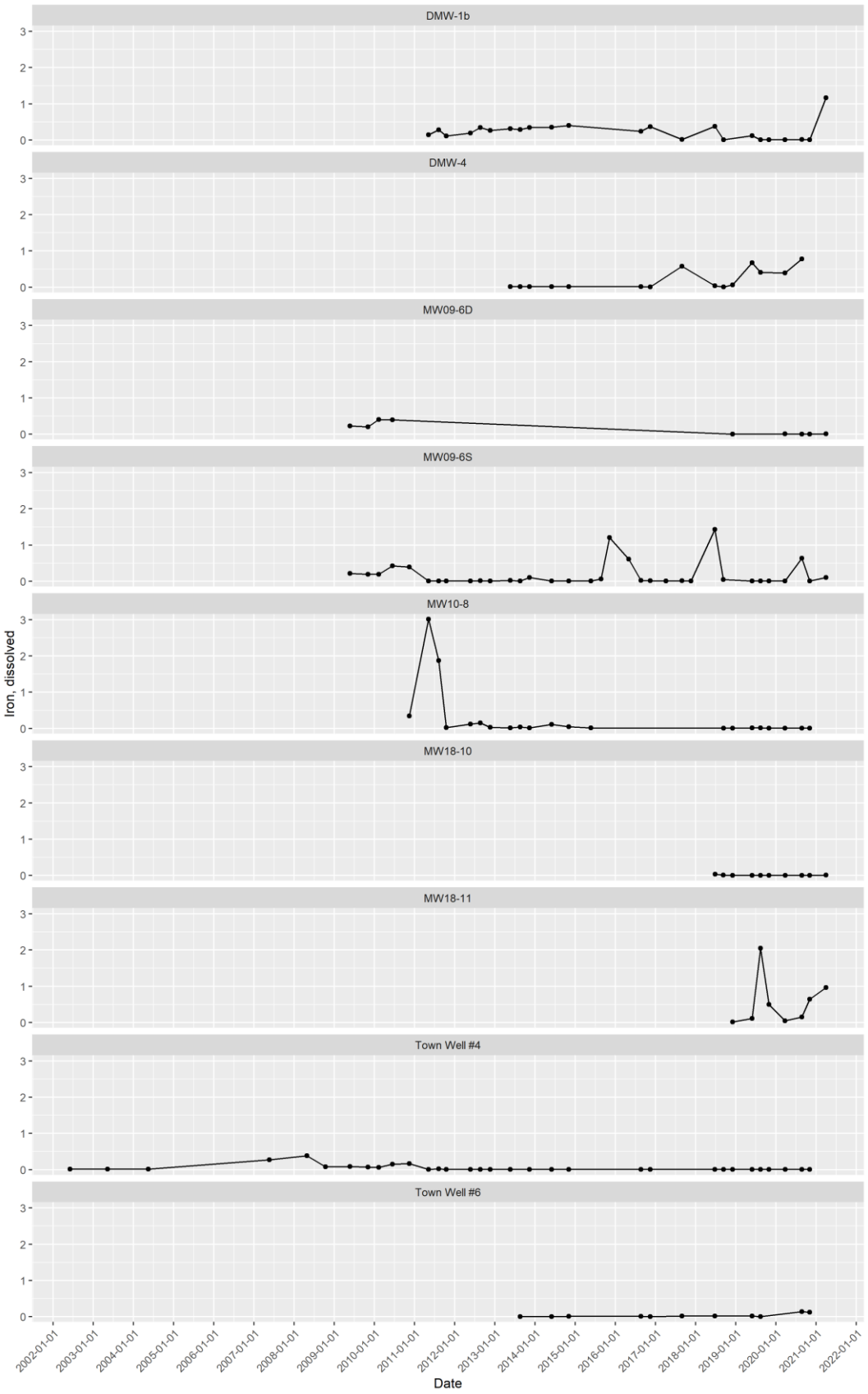


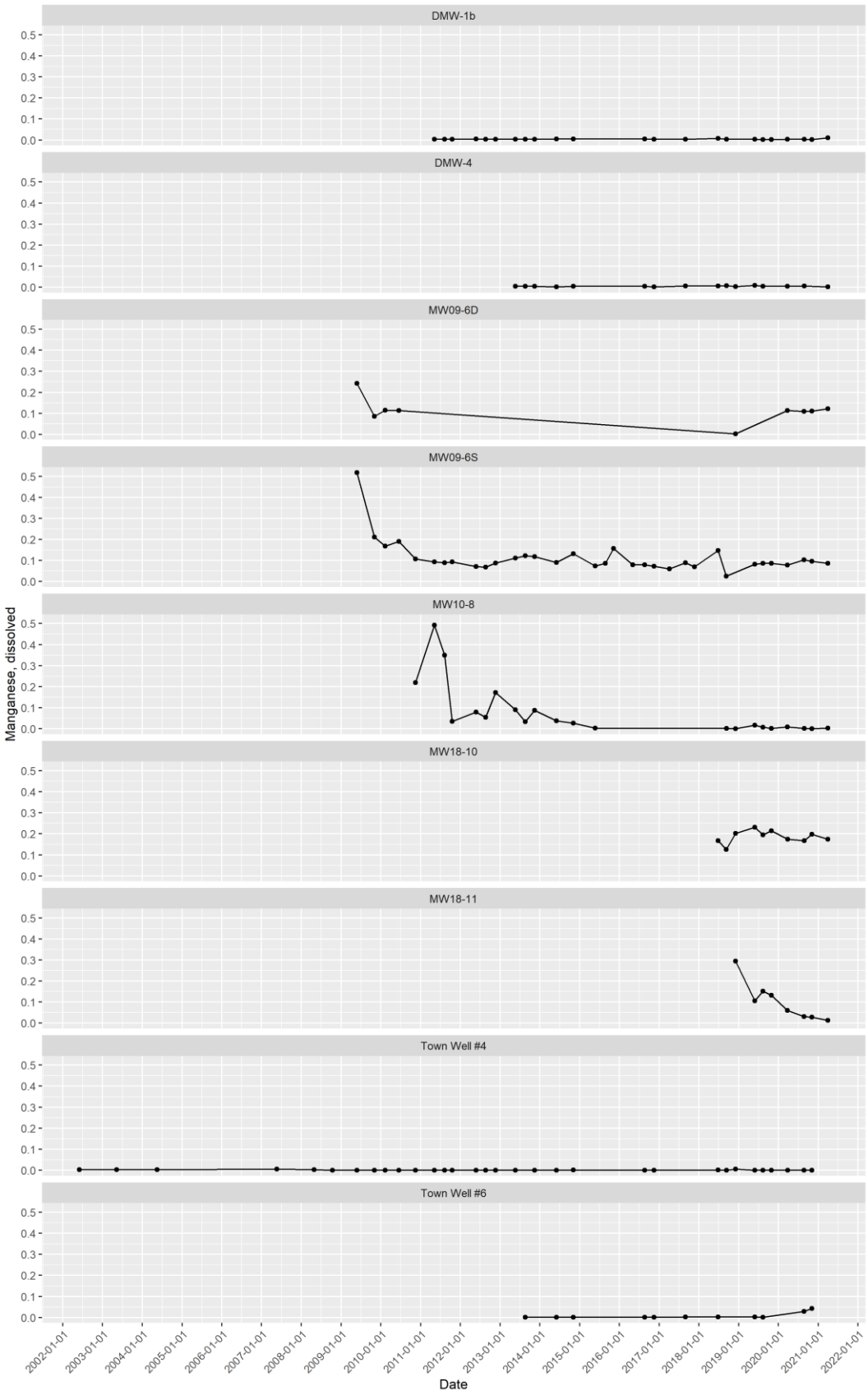
MW18-11 (Falling Head Test)

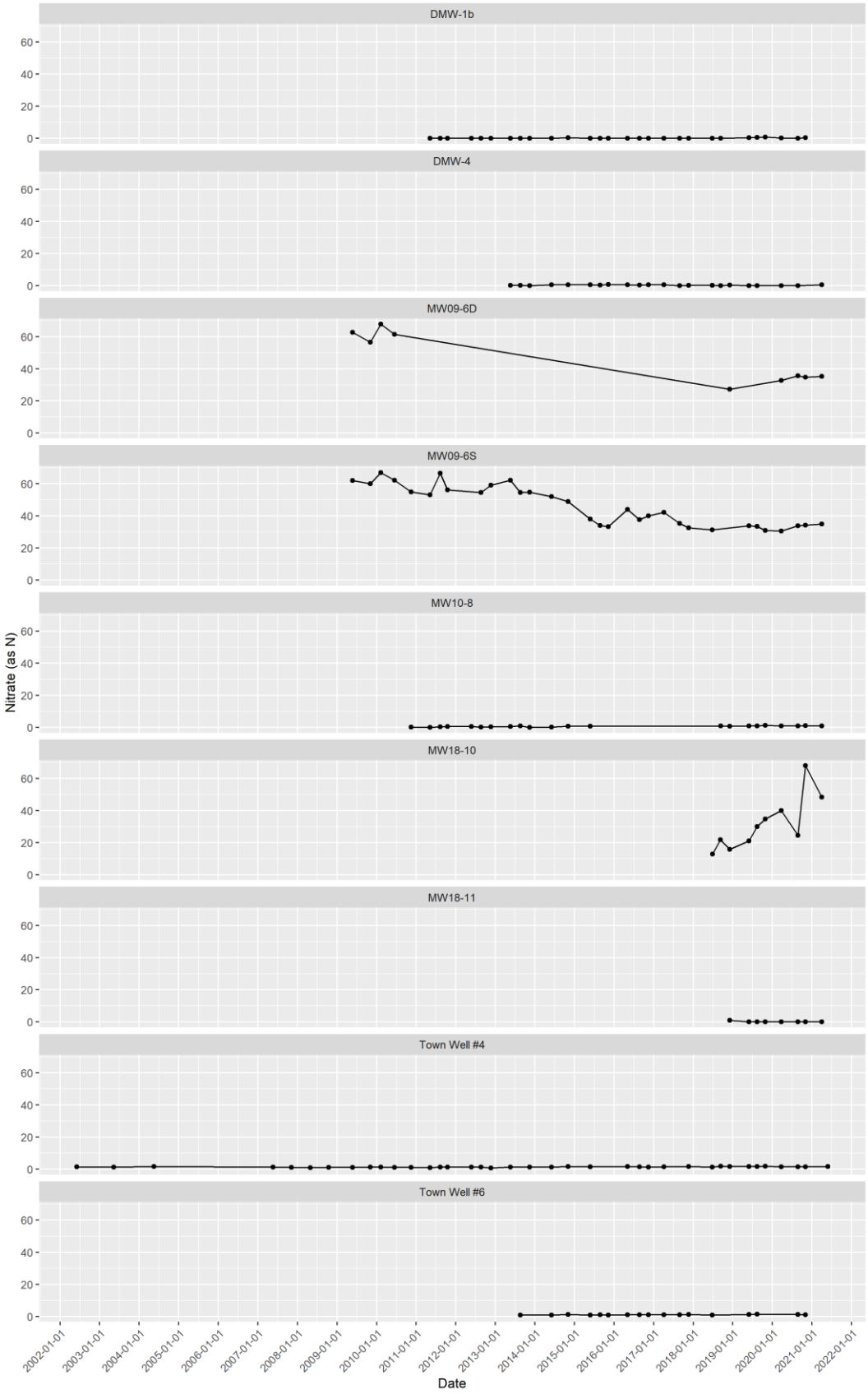


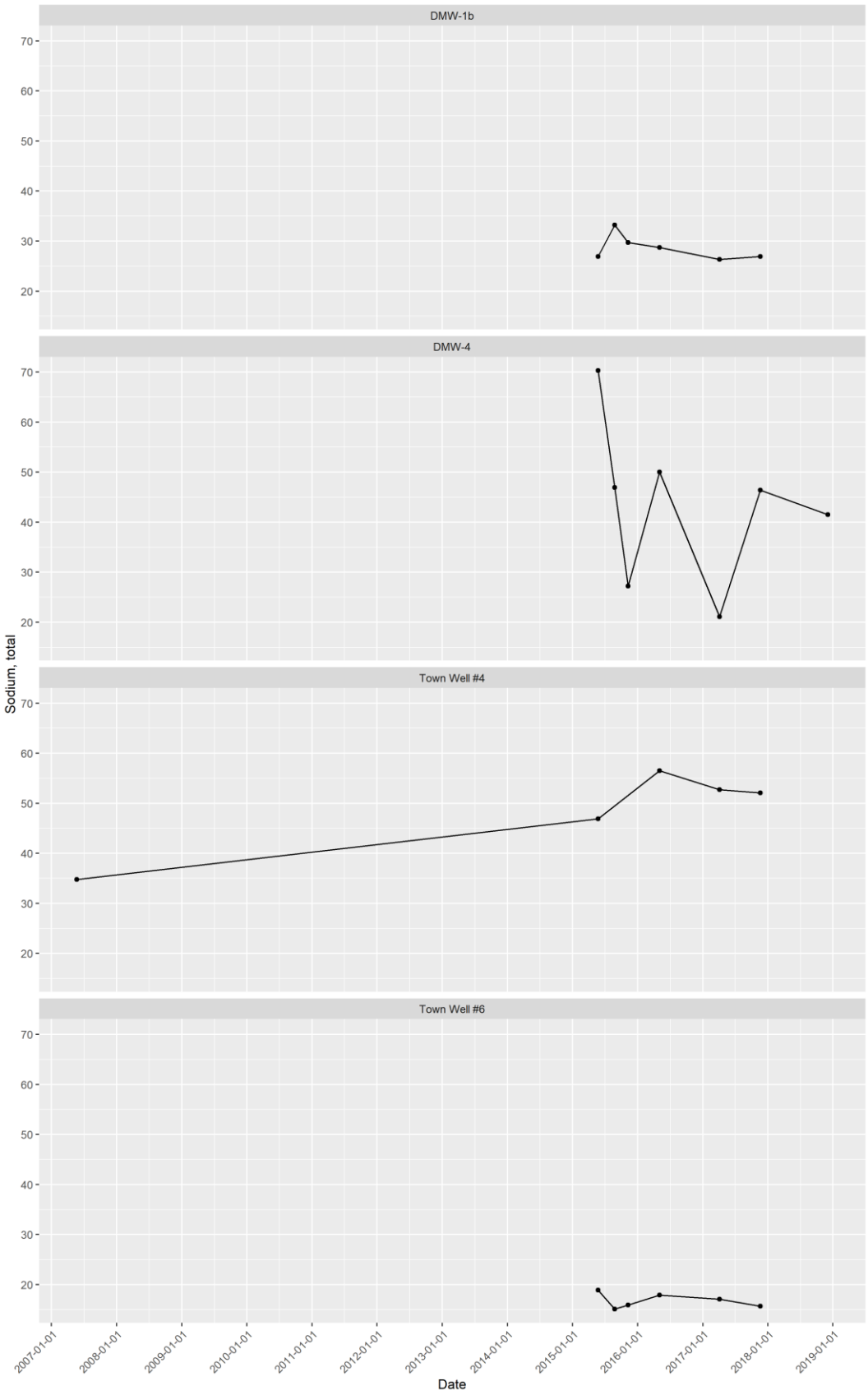
APPENDIX F TIME SERIES PLOTS

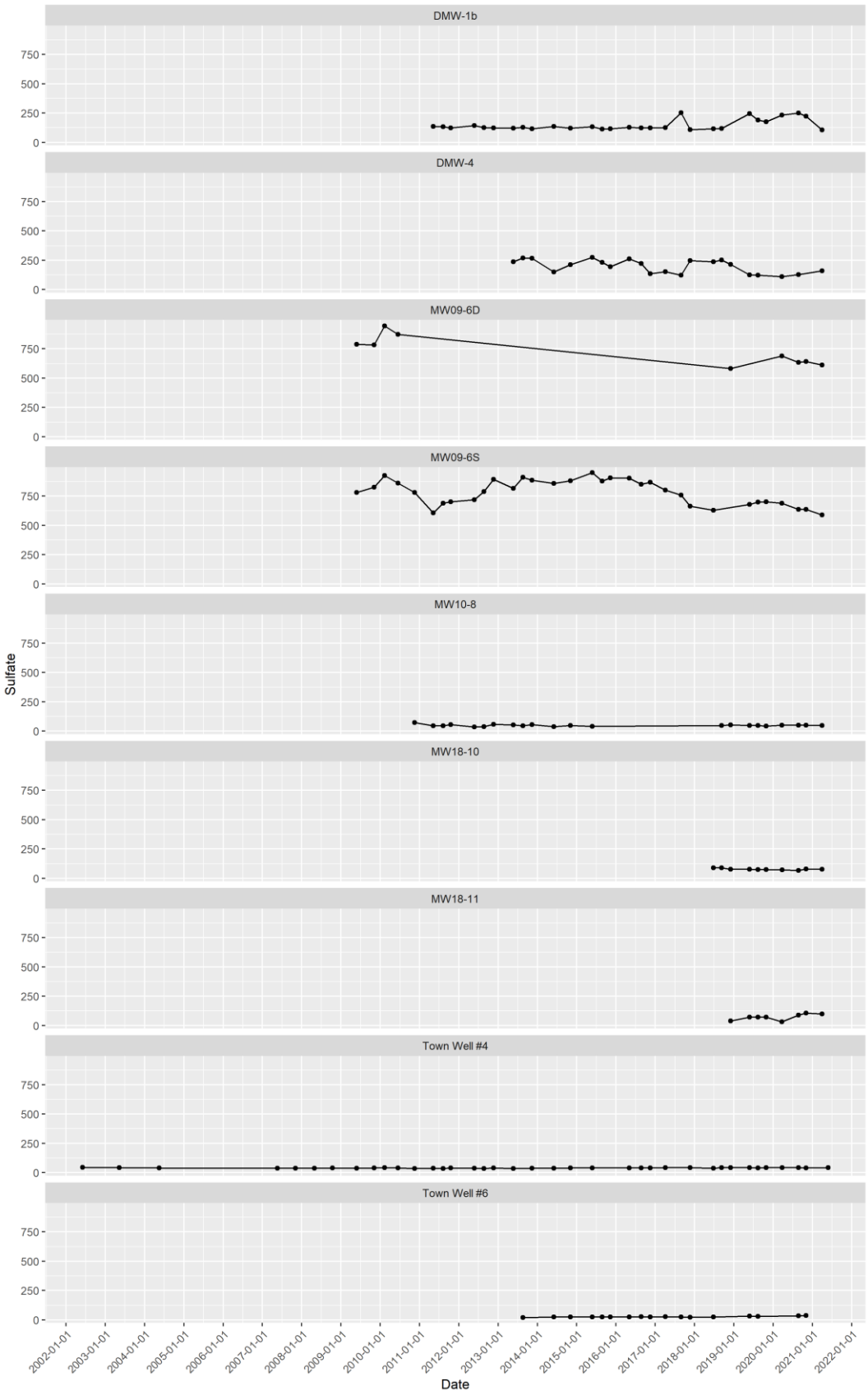

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Hardness, Total (dissolved as CaCO3)
2000
1500
1000
500
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
Date

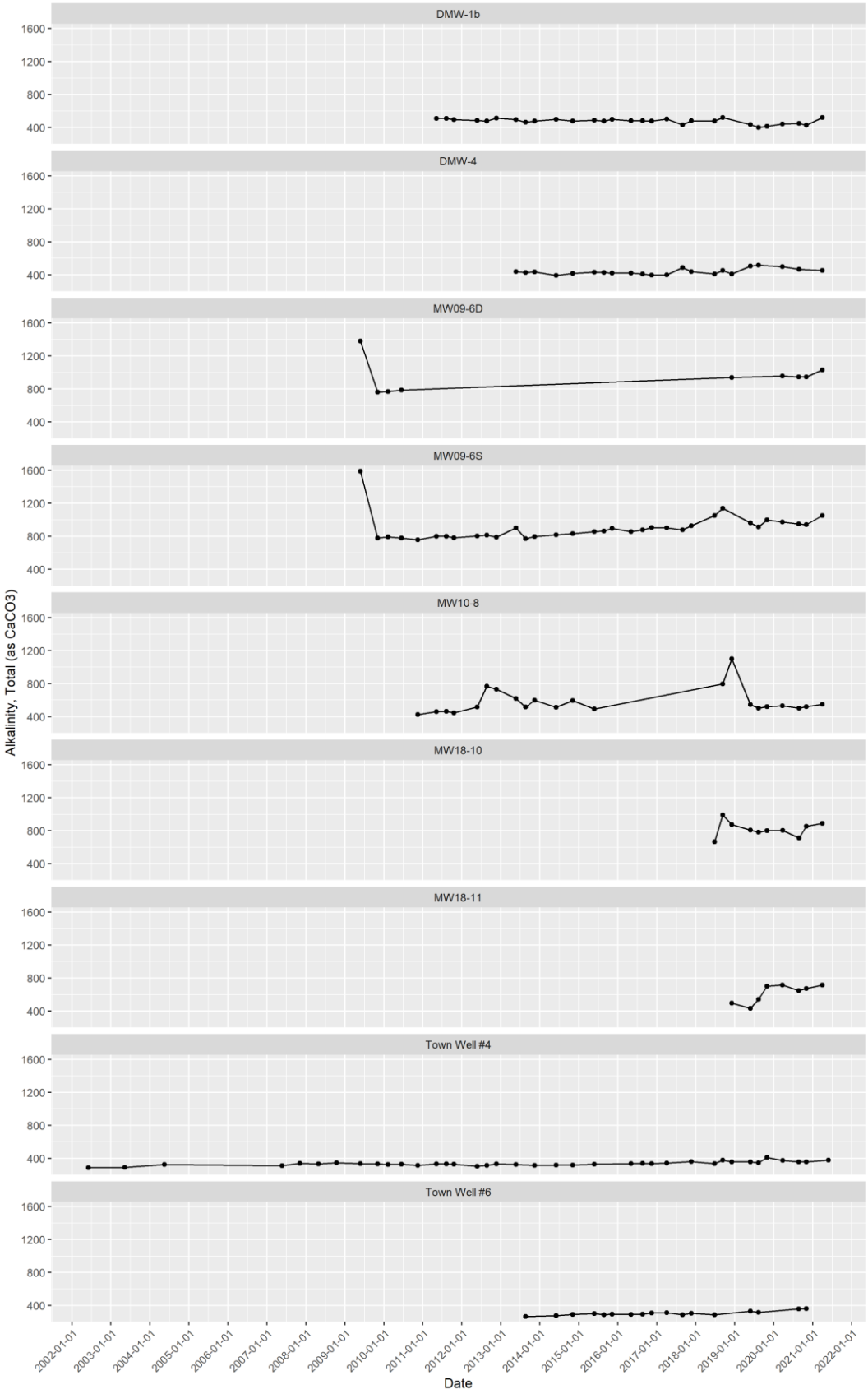

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Iron, dissolved
Date
0
1
2
3
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01

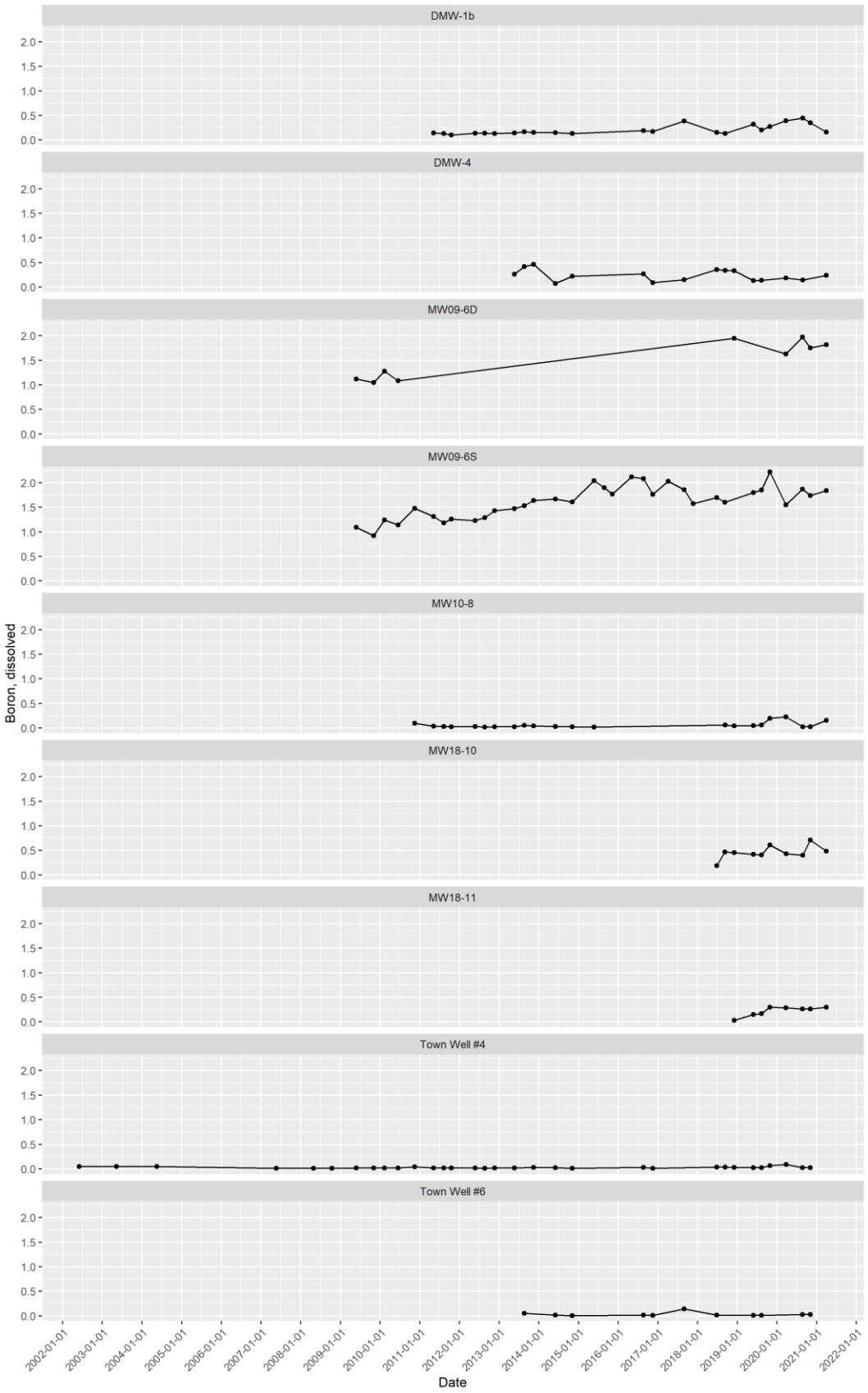

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Manganese, dissolved
0.0
0.1
0.2
0.3
0.4
0.5
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01
Date

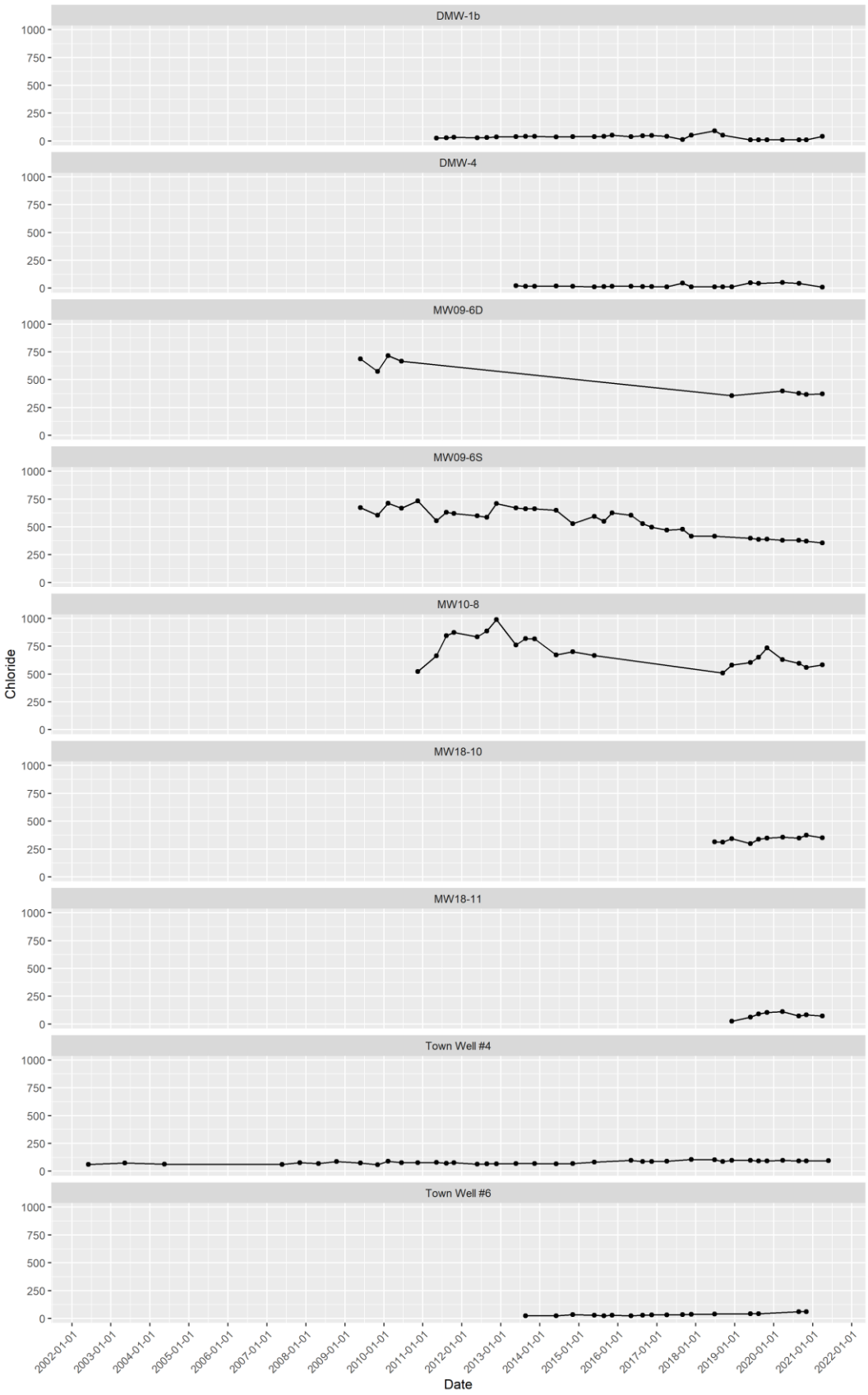

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Nitrate (as N)
0
20
40
60
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01
Date

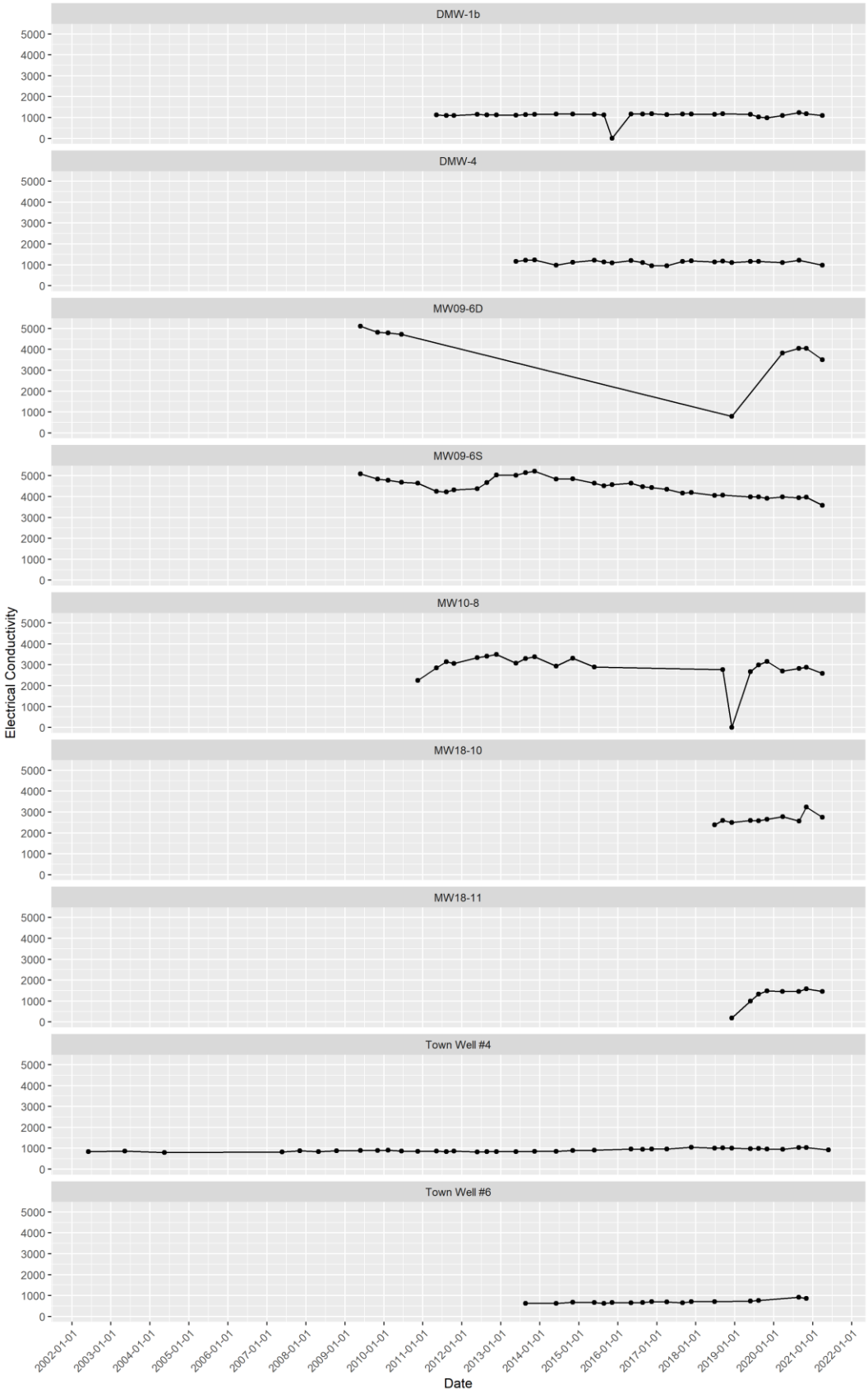

DMW-1b
DMW-4
Town Well #4
Town Well #6
Sodium, total
70
60
50
40
30
20
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
Date

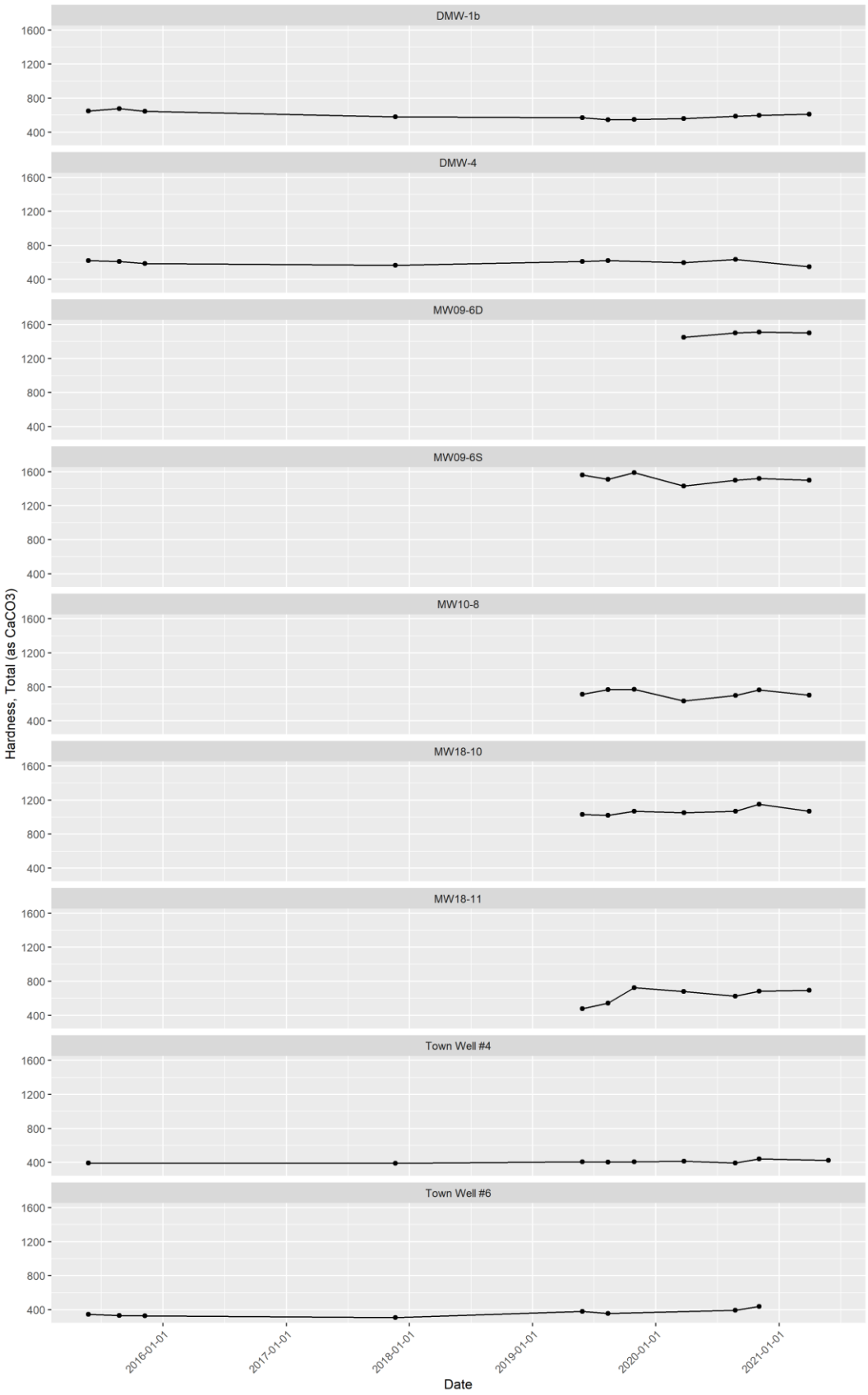

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Sulfate
0
250
500
750
Date
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01


DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Alkalinity, Total (as CaCO3)
1600
1200
800
400
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01
Date

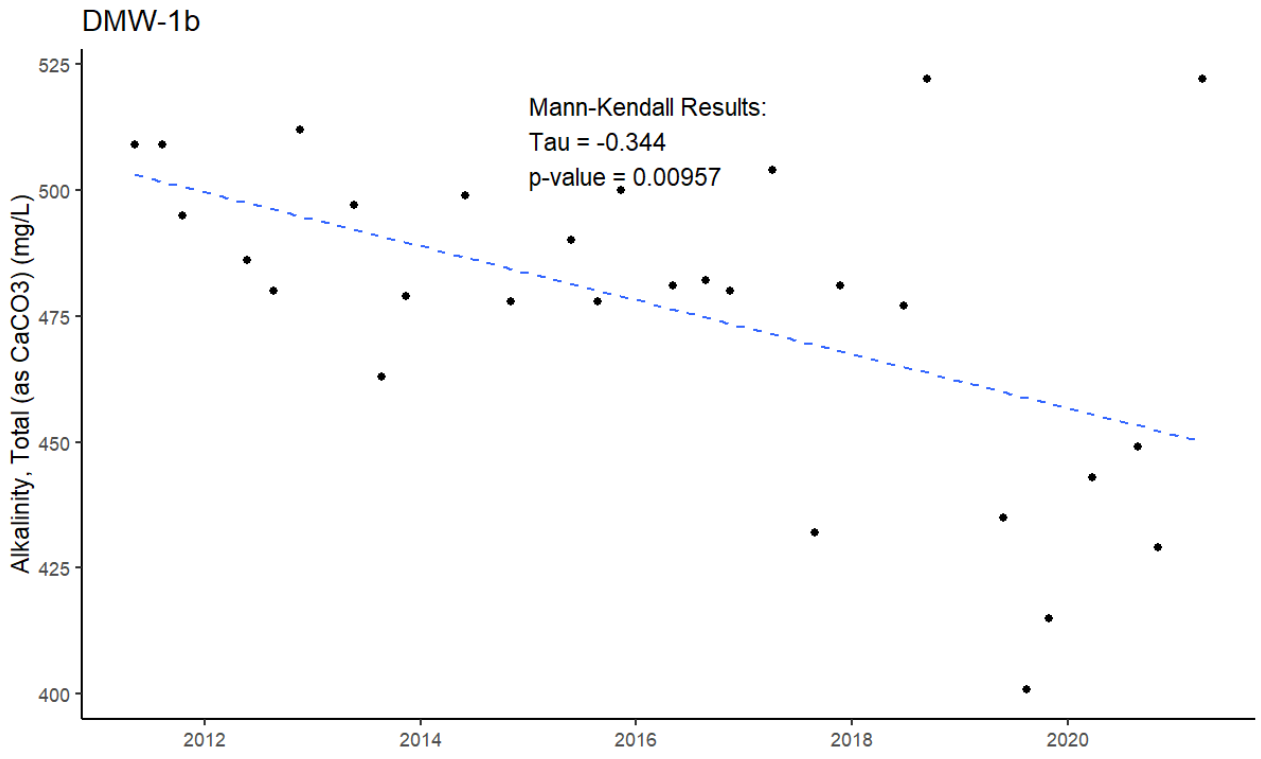

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Boron, dissolved
2.0
1.5
1.0
0.5
0.0
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01
Date

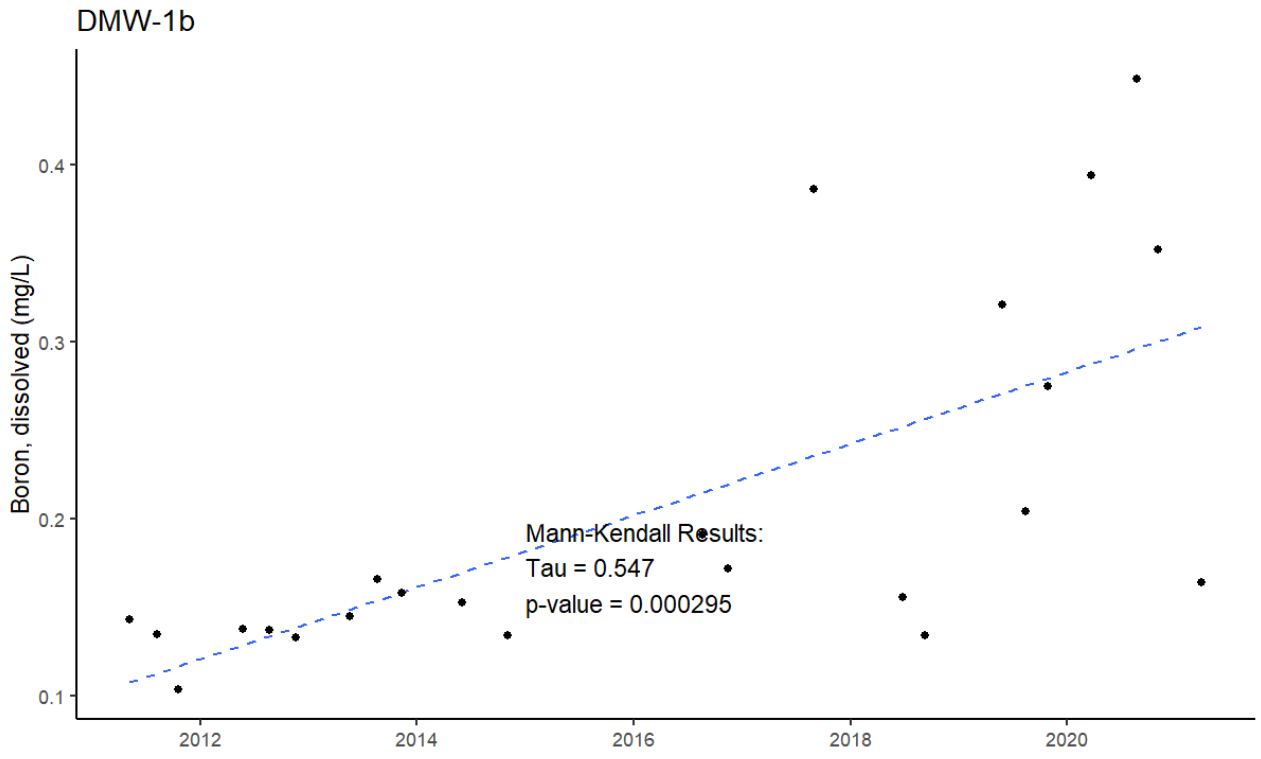

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Chloride
0
250
500
750
1000
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01
Date

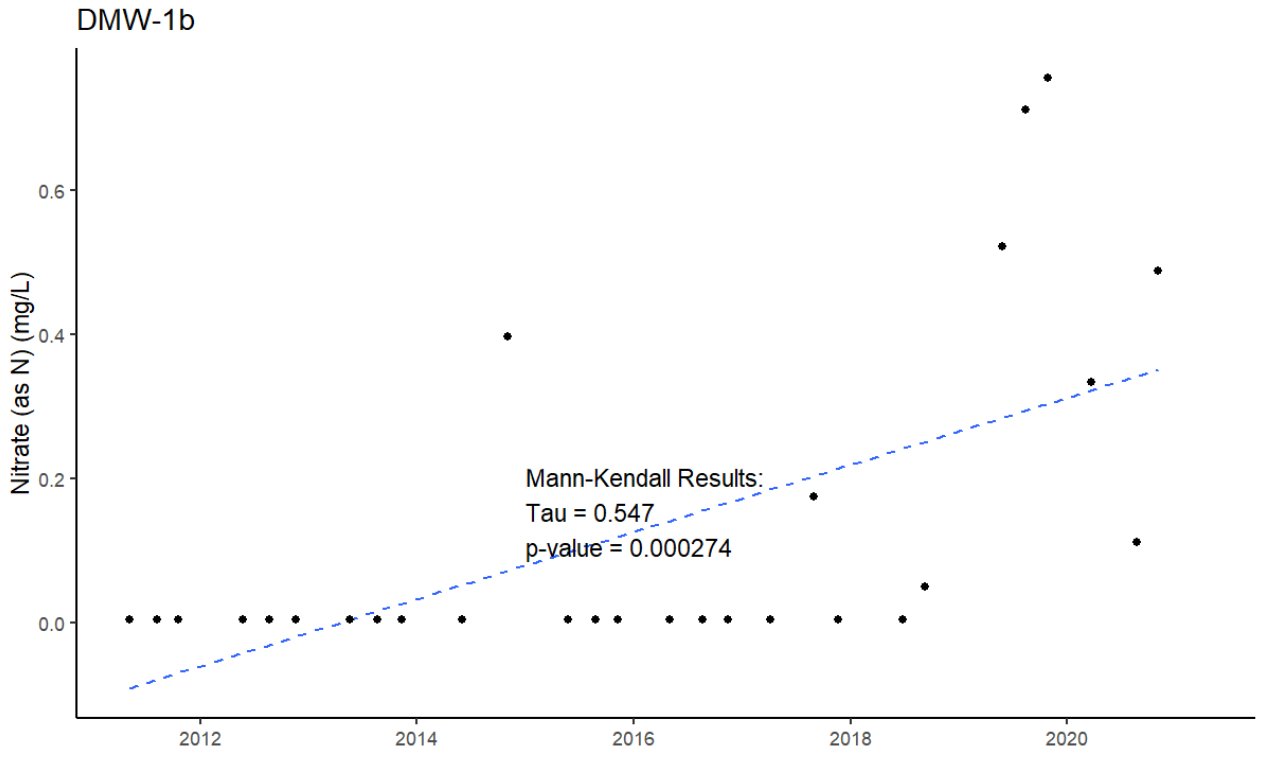

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Electrical Conductivity
0
1000
2000
3000
4000
5000
2002-01-01
2003-01-01
2004-01-01
2005-01-01
2006-01-01
2007-01-01
2008-01-01
2009-01-01
2010-01-01
2011-01-01
2012-01-01
2013-01-01
2014-01-01
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
2022-01-01
Date

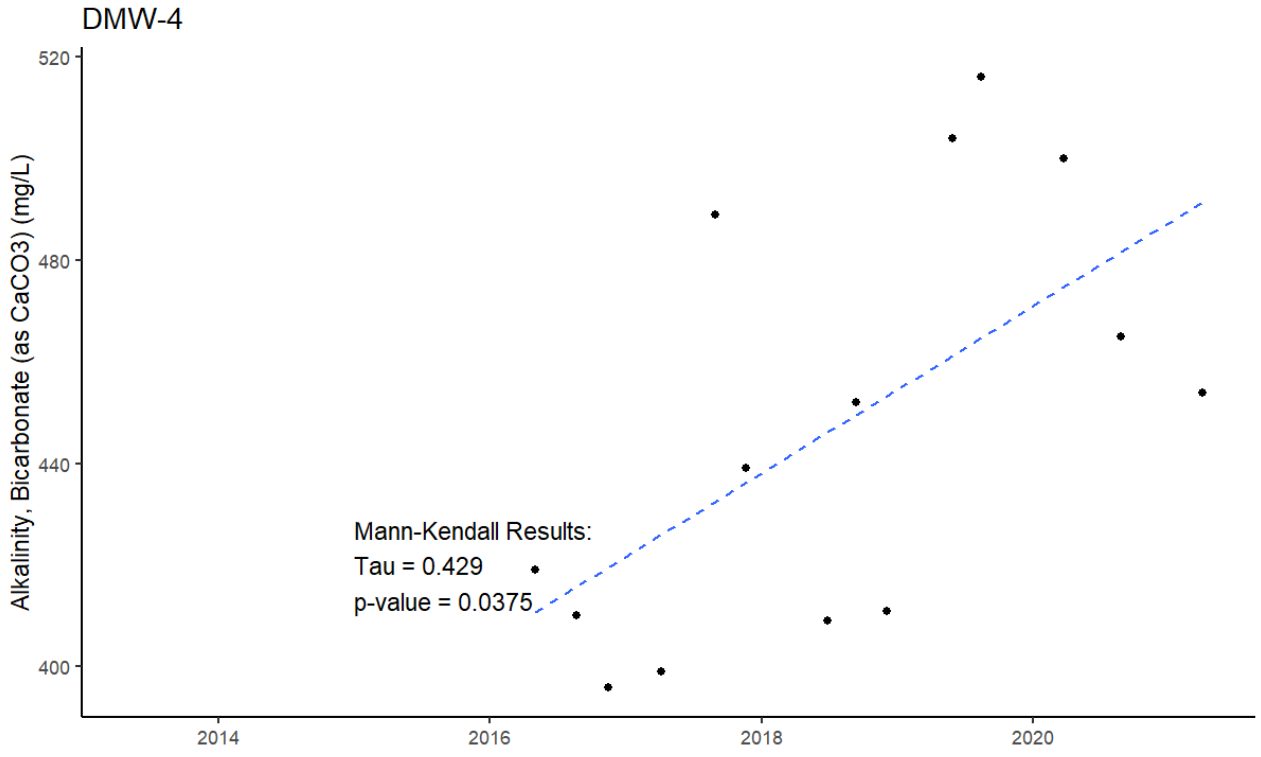

DMW-1b
DMW-4
MW09-6D
MW09-6S
MW10-8
MW18-10
MW18-11
Town Well #4
Town Well #6
Hardness, Total (as CaCO3)
1600
1200
800
400
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
Date

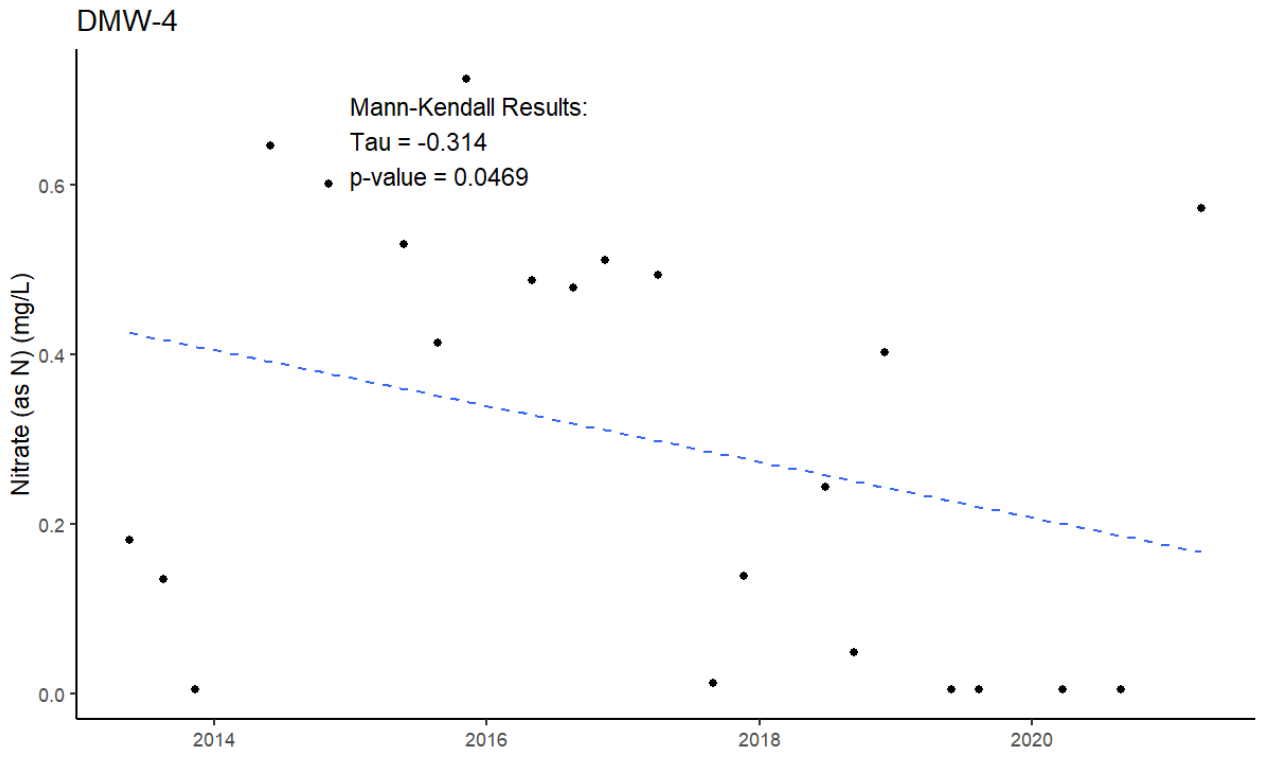
APPENDIX G MANN KENDALL, REGRESSION AND PIPER PLOTS

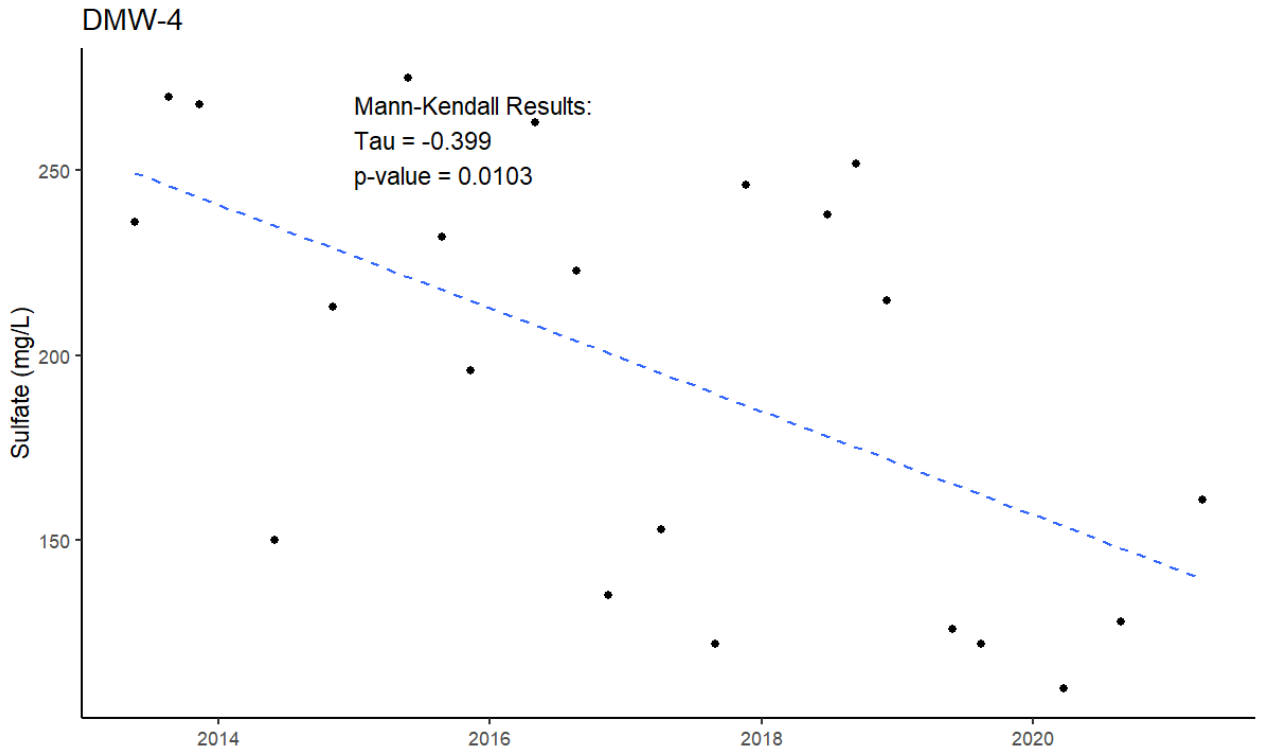

DMW-1b
Mann-Kendall Results:
Tau = -0.344
p-value = 0.00957
Alkalinity, Total (as CaCO3) (mg/L)
525
500
475
450
425
400
2012
2014
2016
2018
2020

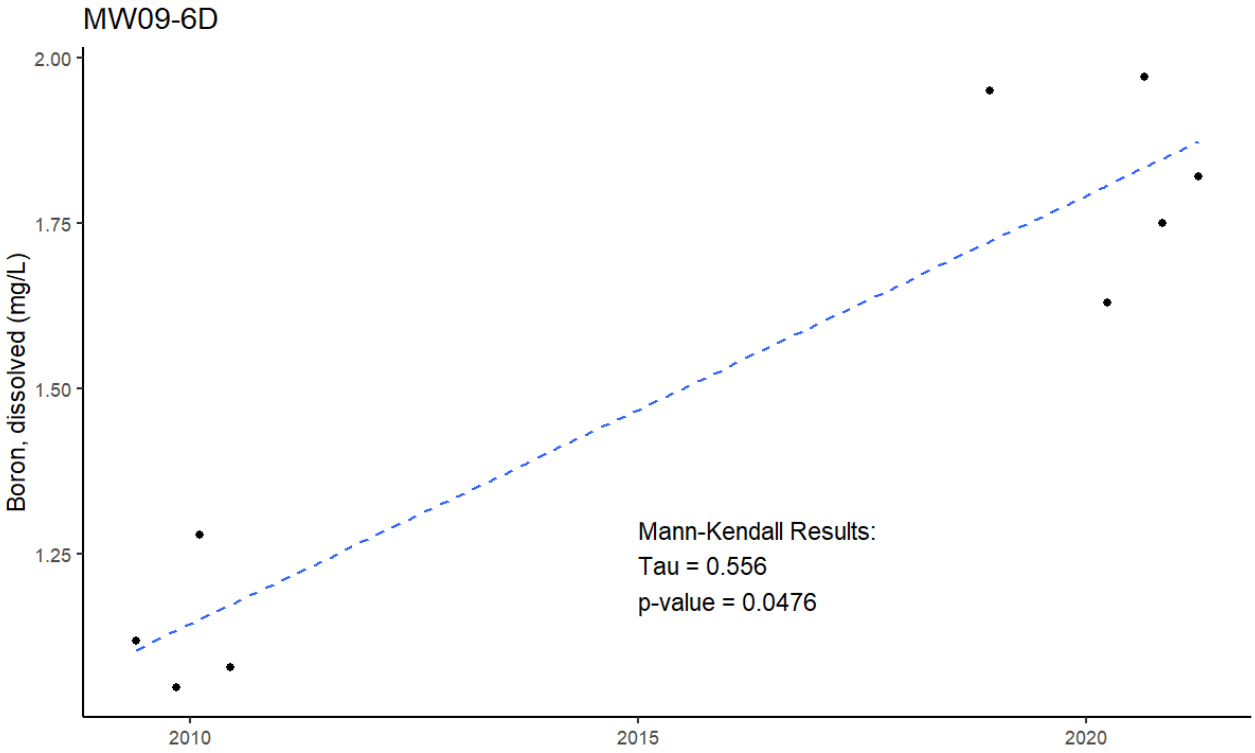

DMW-1b
Mann-Kendall Results:
Tau = 0.547
p-value = 0.000295
Boron, dissolved (mg/L)
0.4
0.3
0.2
0.1
2012
2014
2016
2018
2020

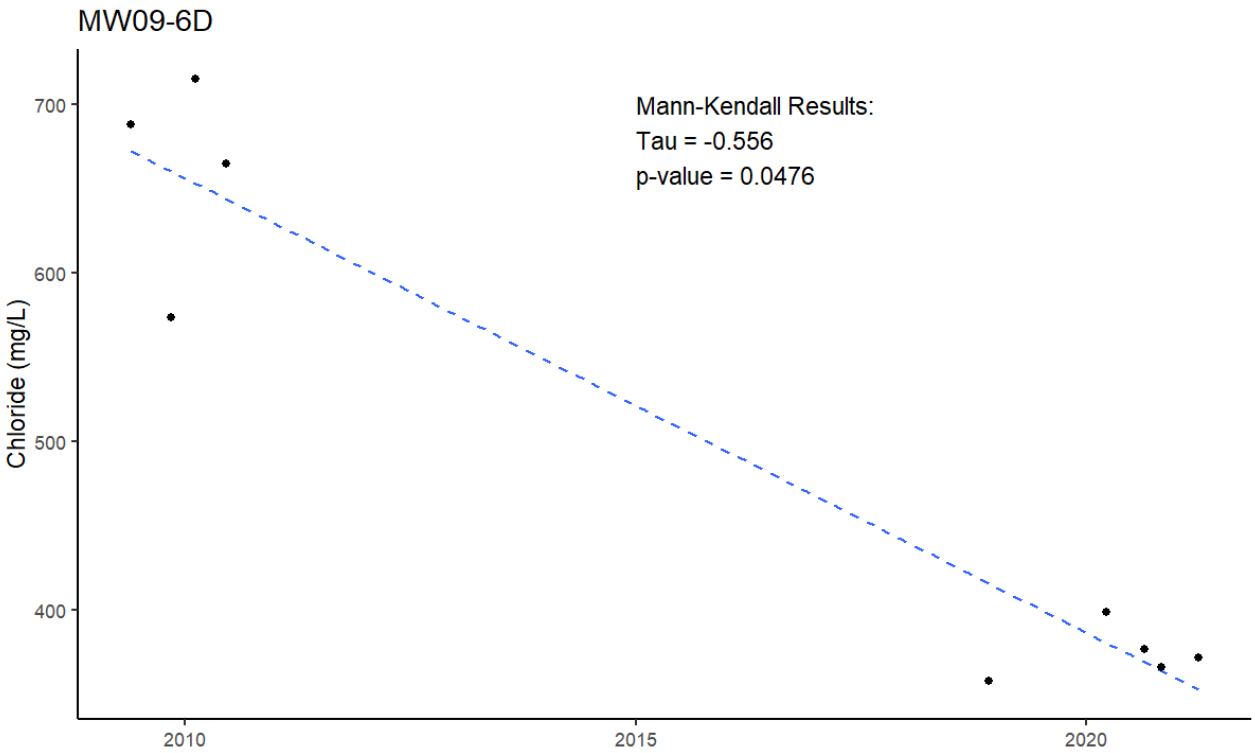

DMW-1b
Nitrate (as N) (mg/L)
0.0
0.2
0.4
0.6
2012
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.547
p-value = 0.000274

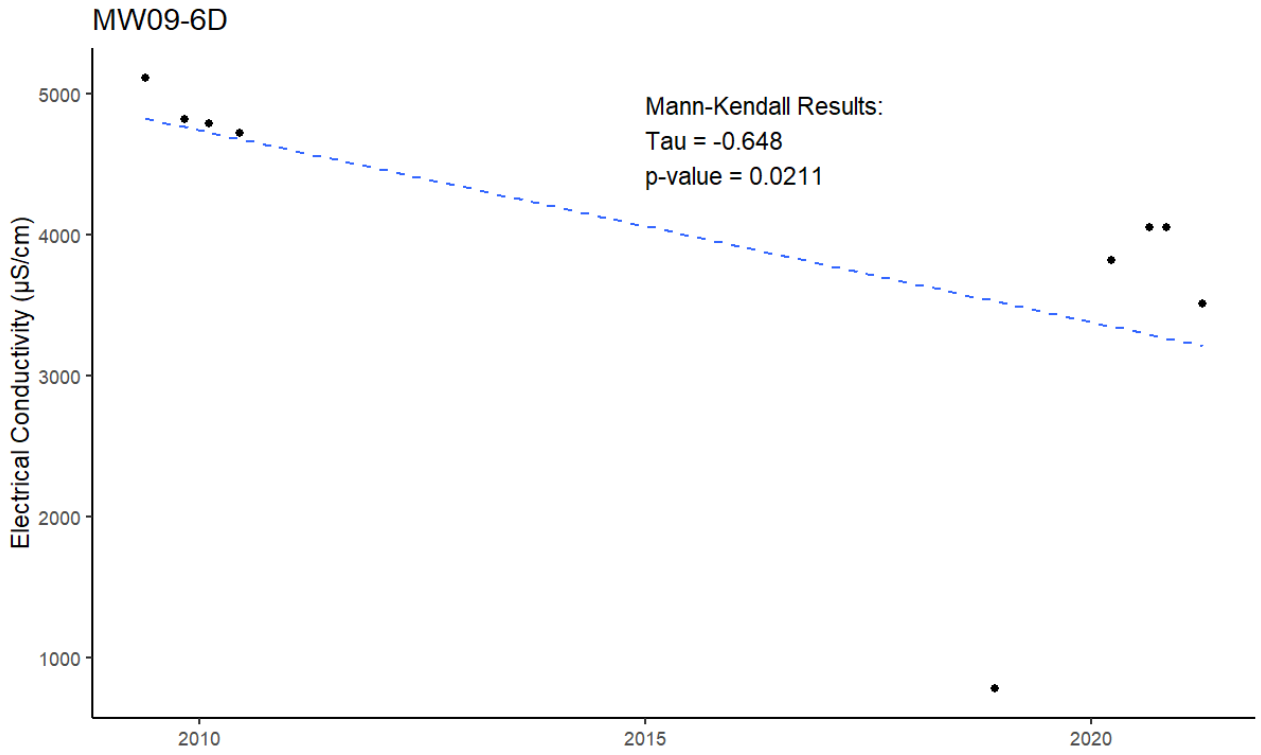

DMW-4
Alkalinity, Bicarbonate (as CaCO3) (mg/L)
520
480
440
400
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.429
p-value = 0.0375

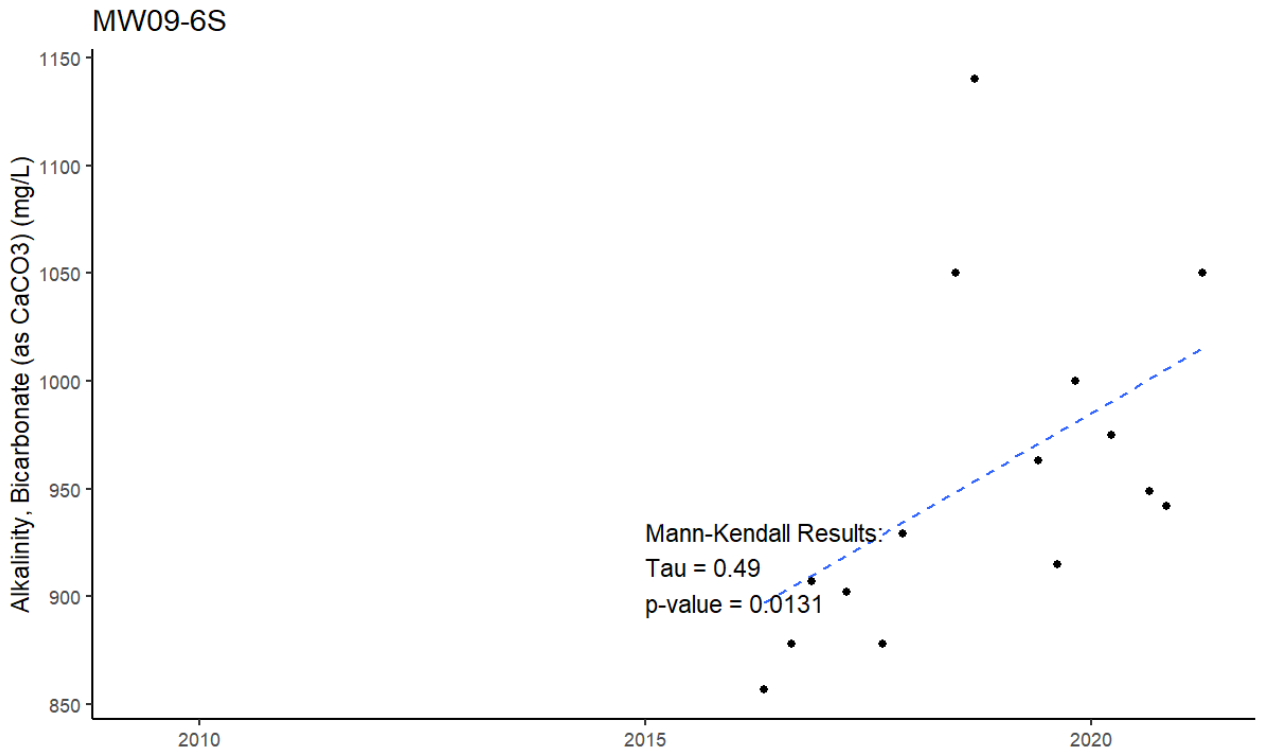

DMW-4
Nitrate (as N) (mg/L)
0.6
0.4
0.2
0.0
2014
2016
2018
2020
Mann-Kendall Results:
Tau = -0.314
p-value = 0.0469

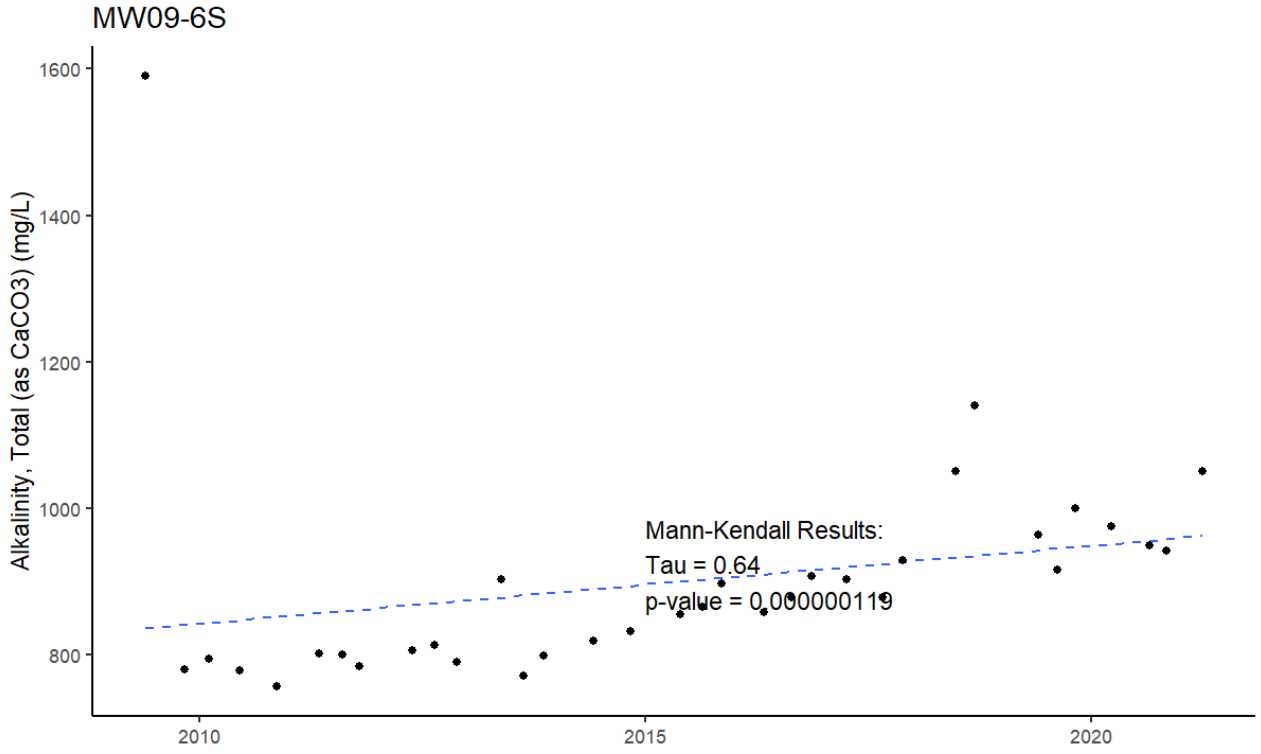

DMW-4
Mann-Kendall Results:
Tau = -0.399
p-value = 0.0103
Sulfate (mg/L)
250
200
150
2014
2016
2018
2020

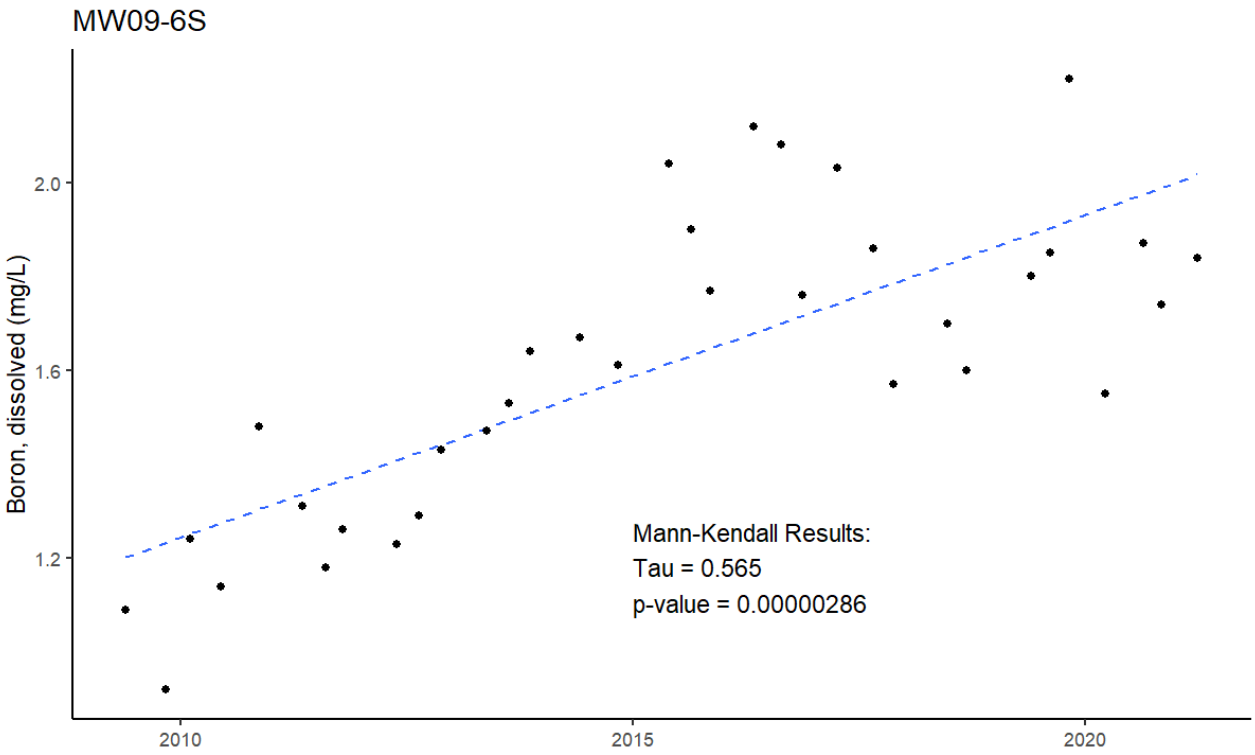

MW09-6D
Boron, dissolved (mg/L)
2.00
1.75
1.50
1.25
2010
2015
2020
Mann-Kendall Results:
Tau = 0.556
p-value = 0.0476

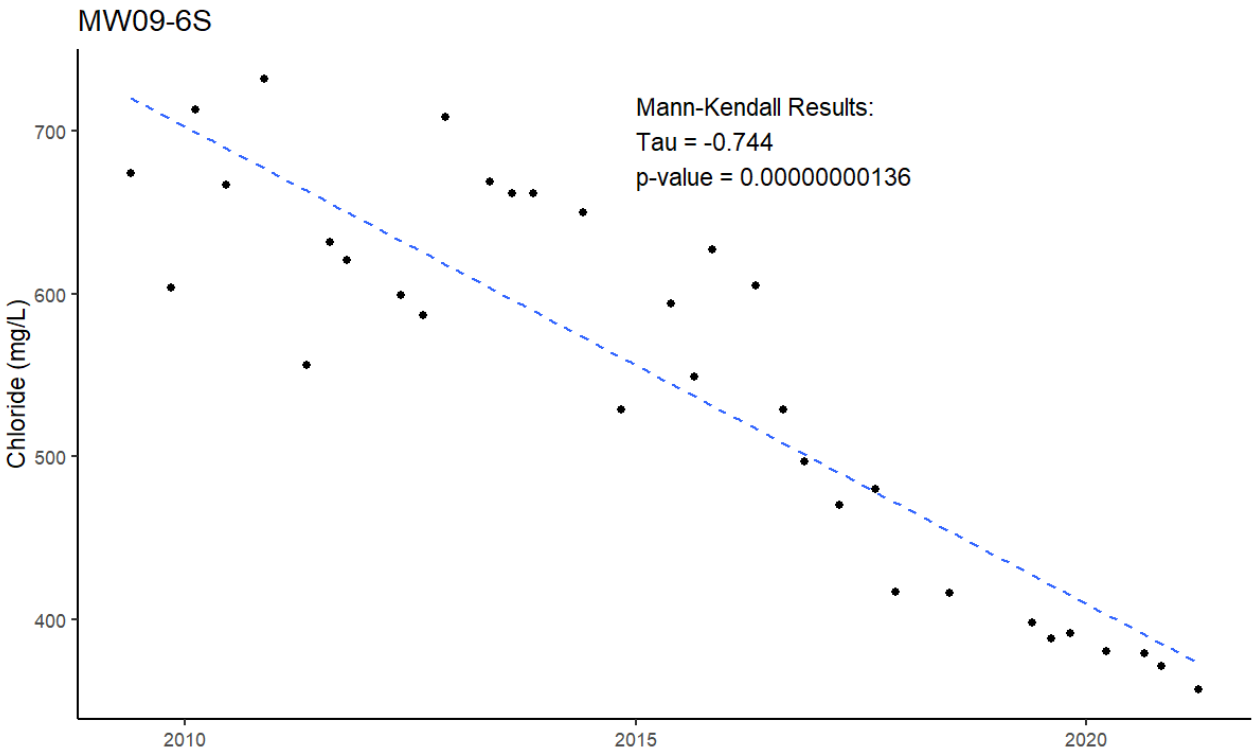

MW09-6D
Chloride (mg/L)
700
600
500
400
2010
2015
2020
Mann-Kendall Results:
Tau = -0.556
p-value = 0.0476

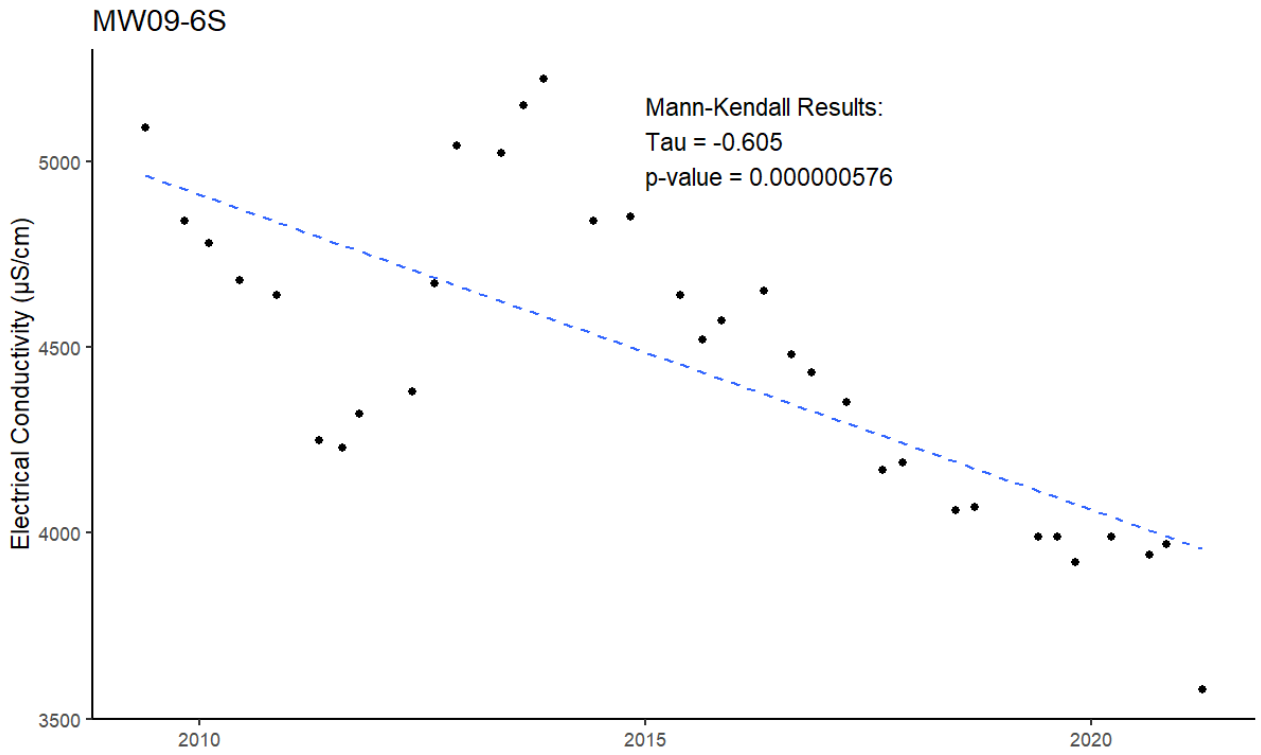

MW09-6D
Mann-Kendall Results:
Tau = -0.648
p-value = 0.0211
Electrical Conductivity (µS/cm)
5000
4000
3000
2000
1000
2010
2015
2020

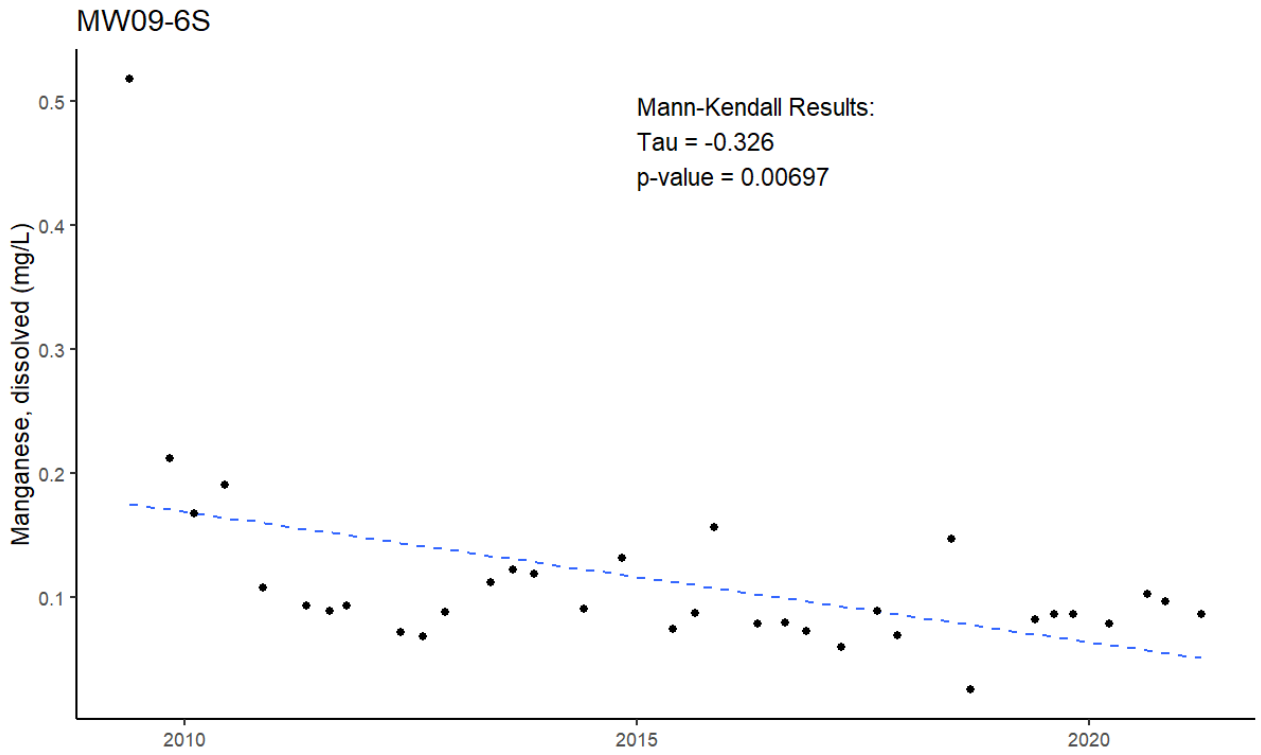

MW09-6S
Alkalinity, Bicarbonate (as CaCO3) (mg/L)
1150
1100
1050
1000
950
900
850
2010
2015
2020
Mann-Kendall Results:
Tau = 0.49
p-value = 0.0131

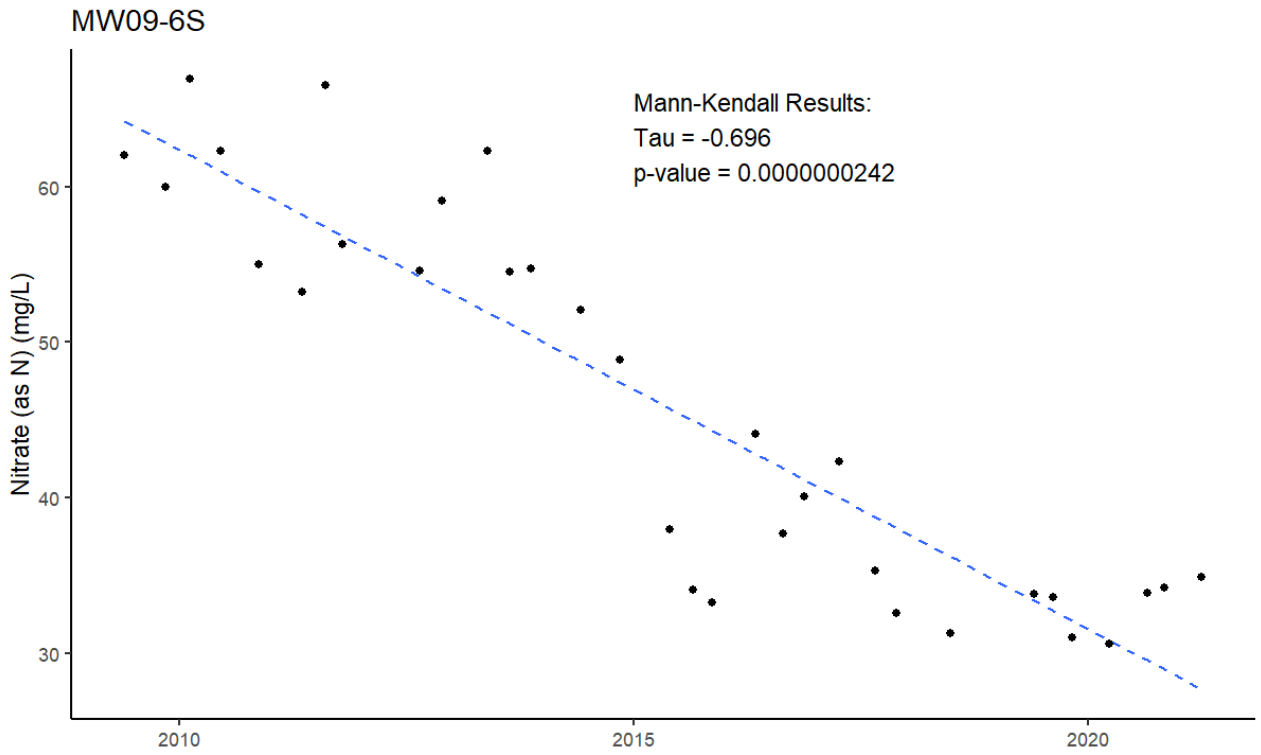

MW09-6S
Alkalinity, Total (as CaCO3) (mg/L)
1600
1400
1200
1000
800
2010
2015
2020
Mann-Kendall Results:
Tau = 0.64
p-value = 0.000000119

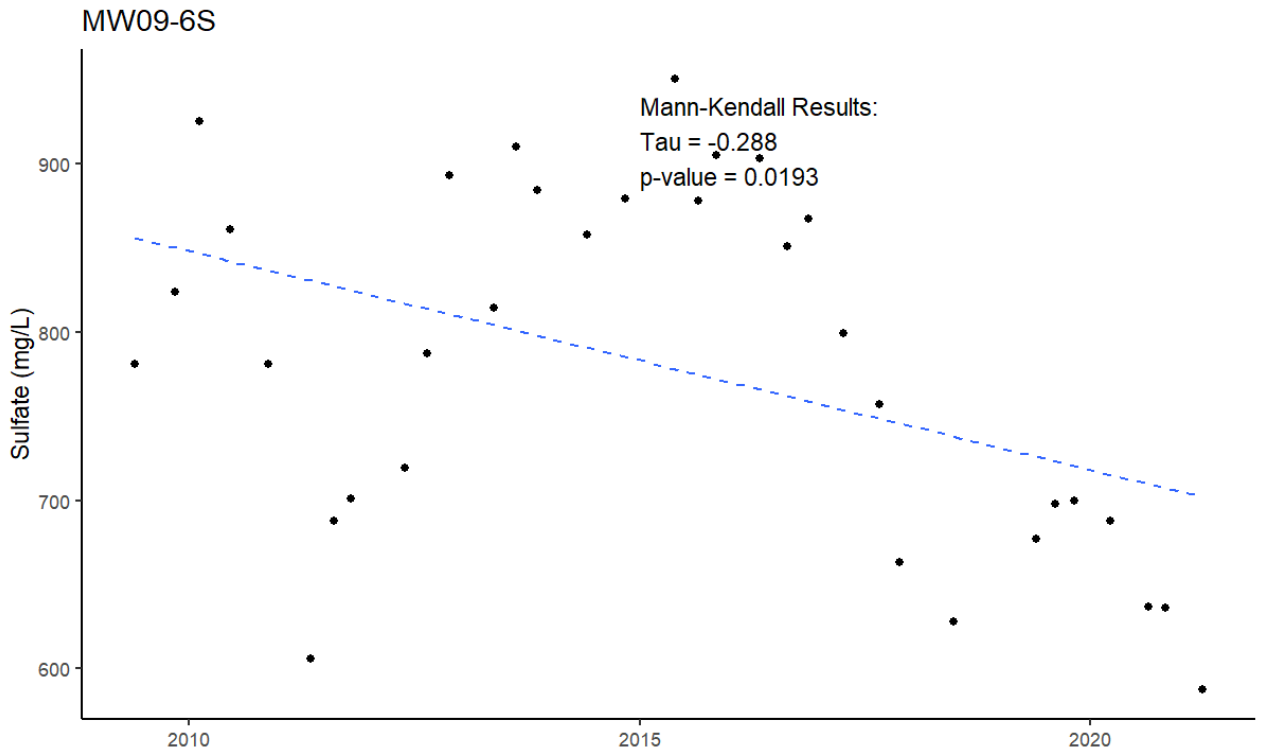

MW09-6S
Boron, dissolved (mg/L)
2.0
1.6
1.2
2010
2015
2020
Mann-Kendall Results:
Tau = 0.565
p-value = 0.00000286

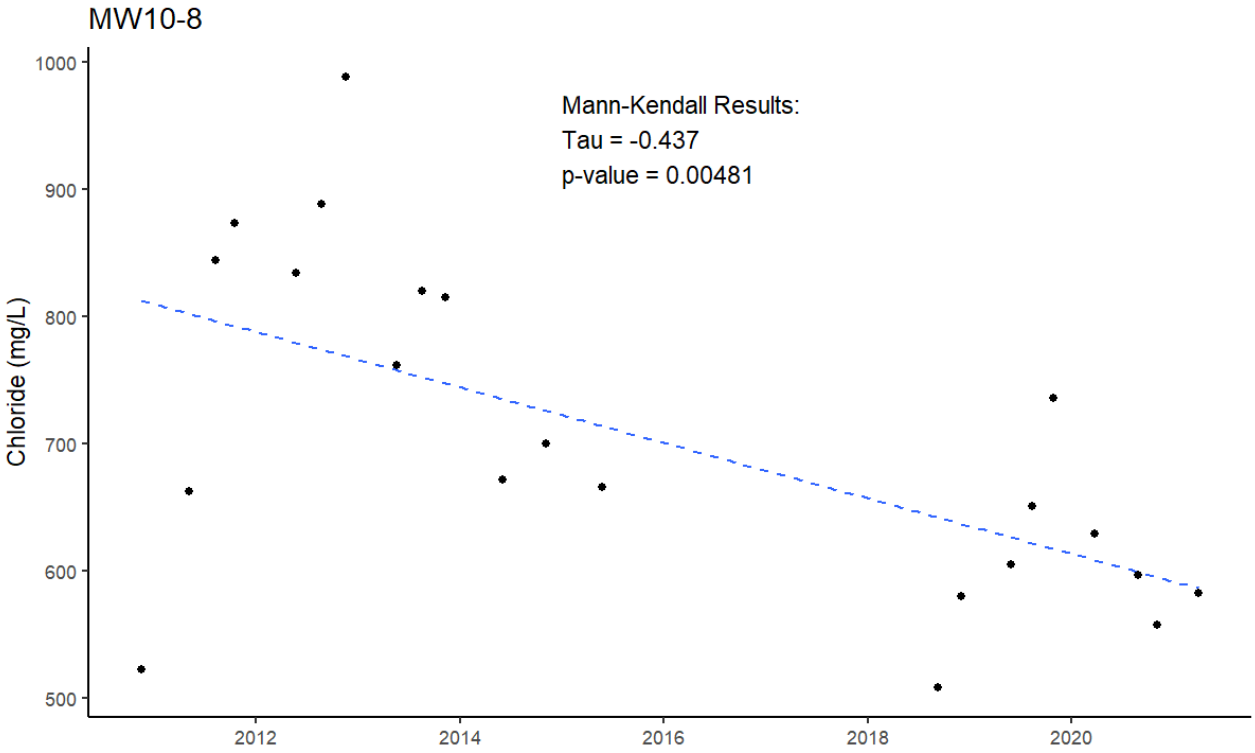

MW09-6S
Chloride (mg/L)
700
600
500
400
2010
2015
2020
Mann-Kendall Results:
Tau = -0.744
p-value = 0.00000000136

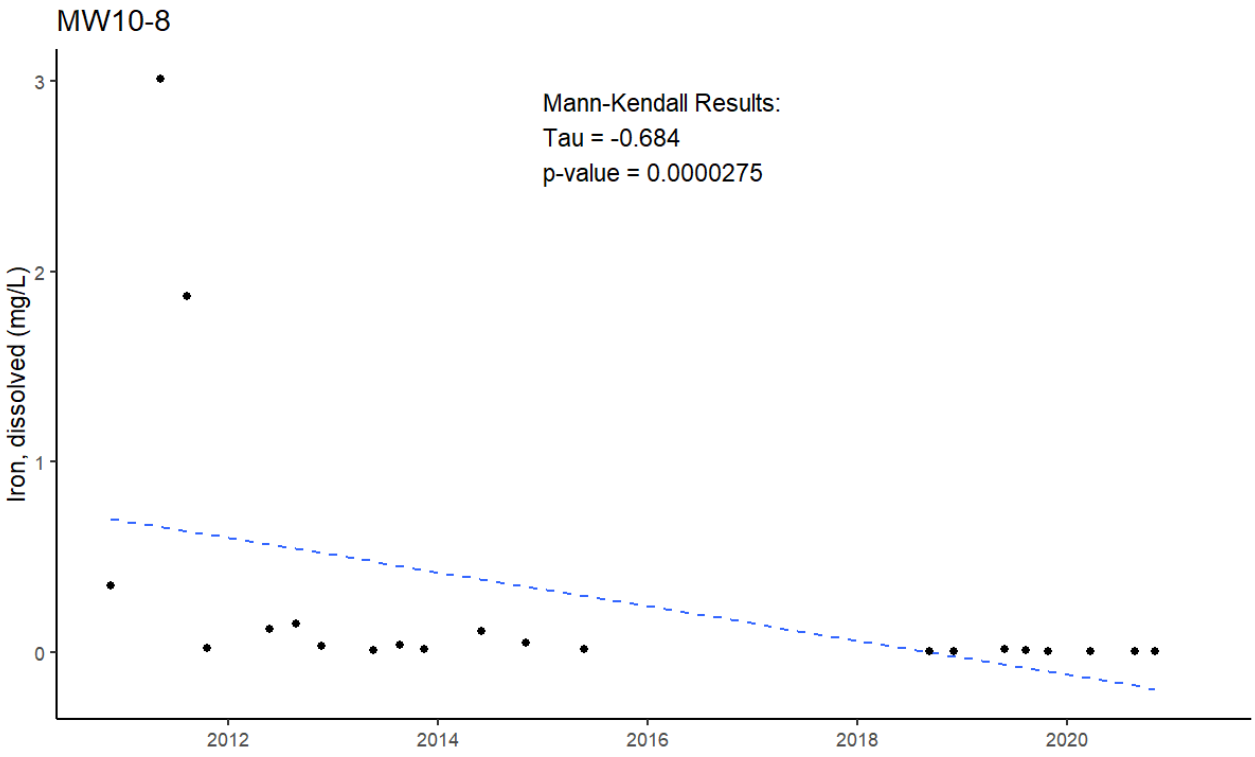

MW09-6S
Mann-Kendall Results:
Tau = -0.605
p-value = 0.000000576
Electrical Conductivity (µS/cm)
5000
4500
4000
3500
2010
2015
2020

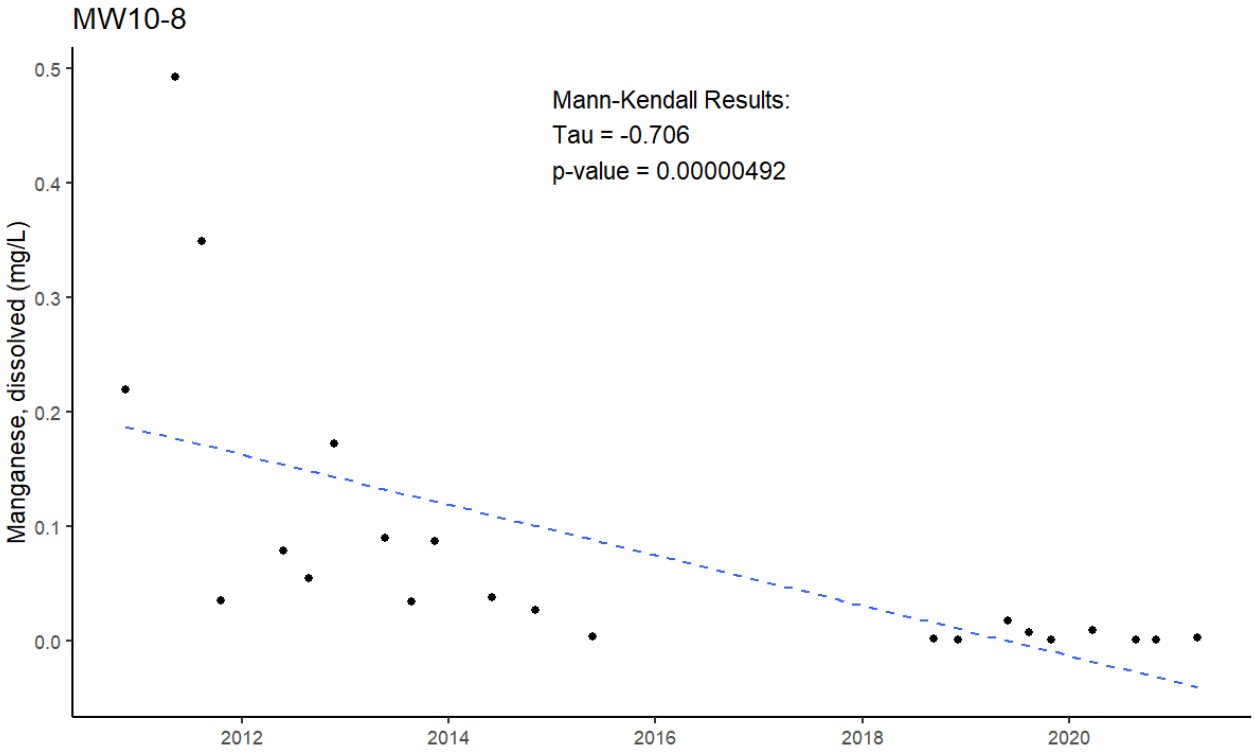

MW09-6S
Mann-Kendall Results:
Tau = -0.326
p-value = 0.00697
Manganese, dissolved (mg/L)
0.5
0.4
0.3
0.2
0.1
2010
2015
2020

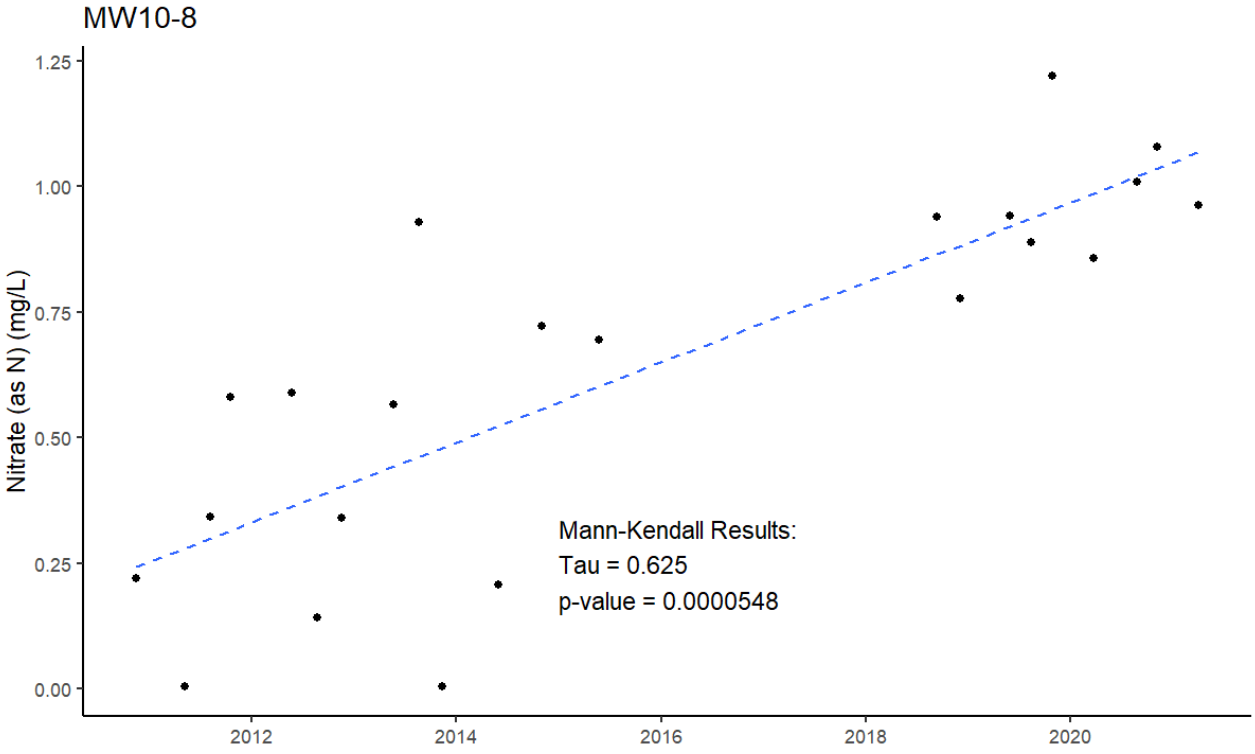

MW09-6S
Mann-Kendall Results:
Tau = -0.696
p-value = 0.0000000242
Nitrate (as N) (mg/L)
60
50
40
30
2010
2015
2020

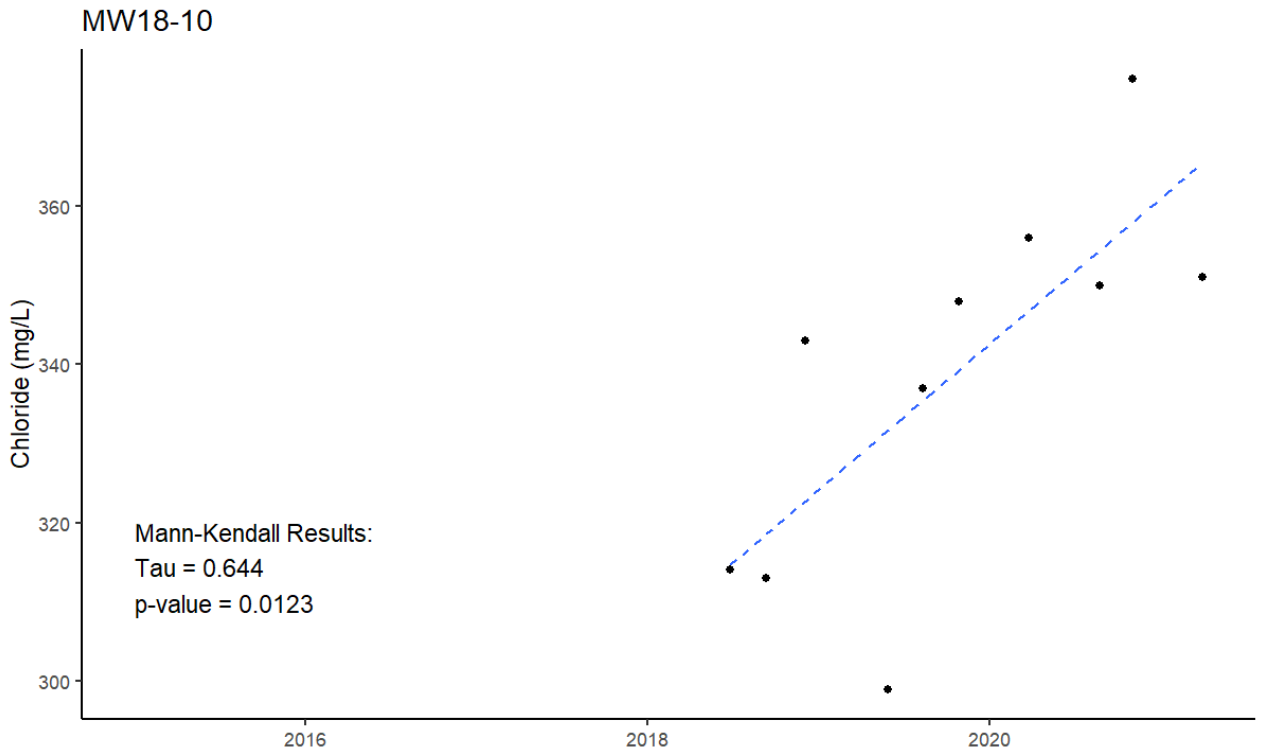

MW09-6S
Mann-Kendall Results:
Tau = -0.288
p-value = 0.0193
Sulfate (mg/L)
900
800
700
600
2010
2015
2020

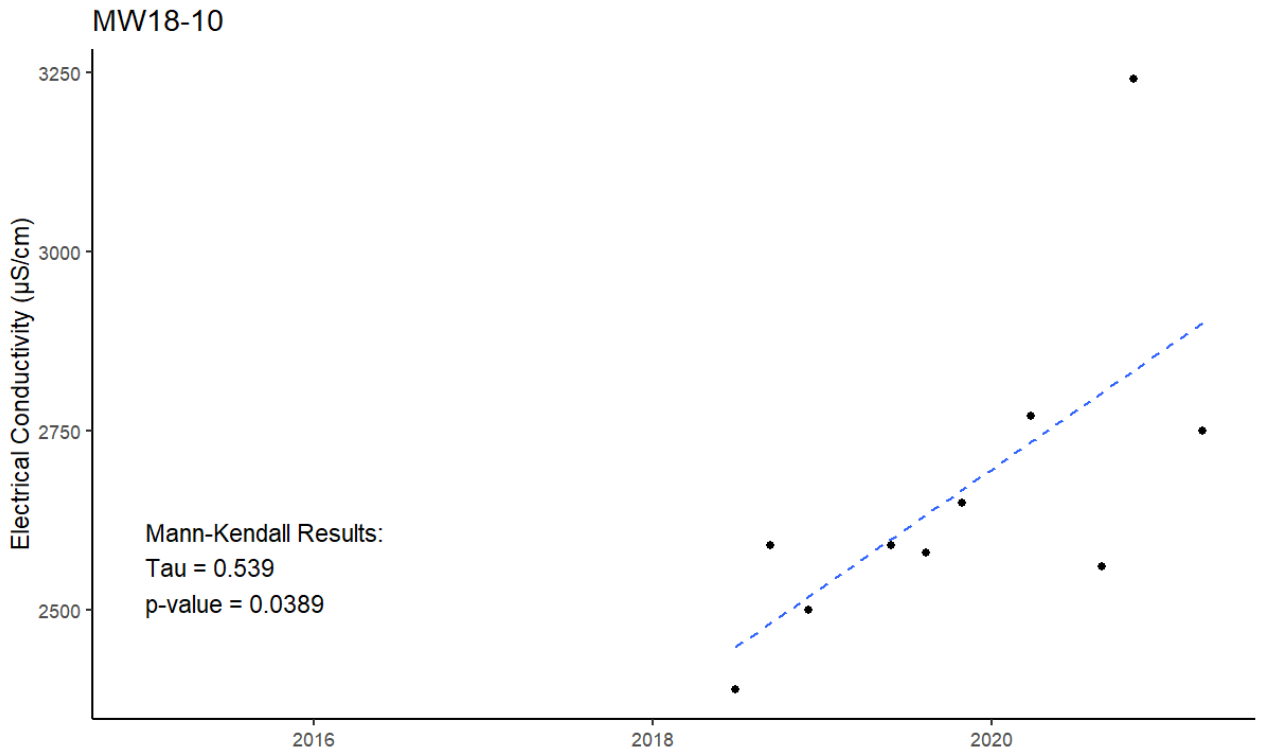

MW10-8
Mann-Kendall Results:
Tau = -0.437
p-value = 0.00481
Chloride (mg/L)
1000
900
800
700
600
500
2012
2014
2016
2018
2020

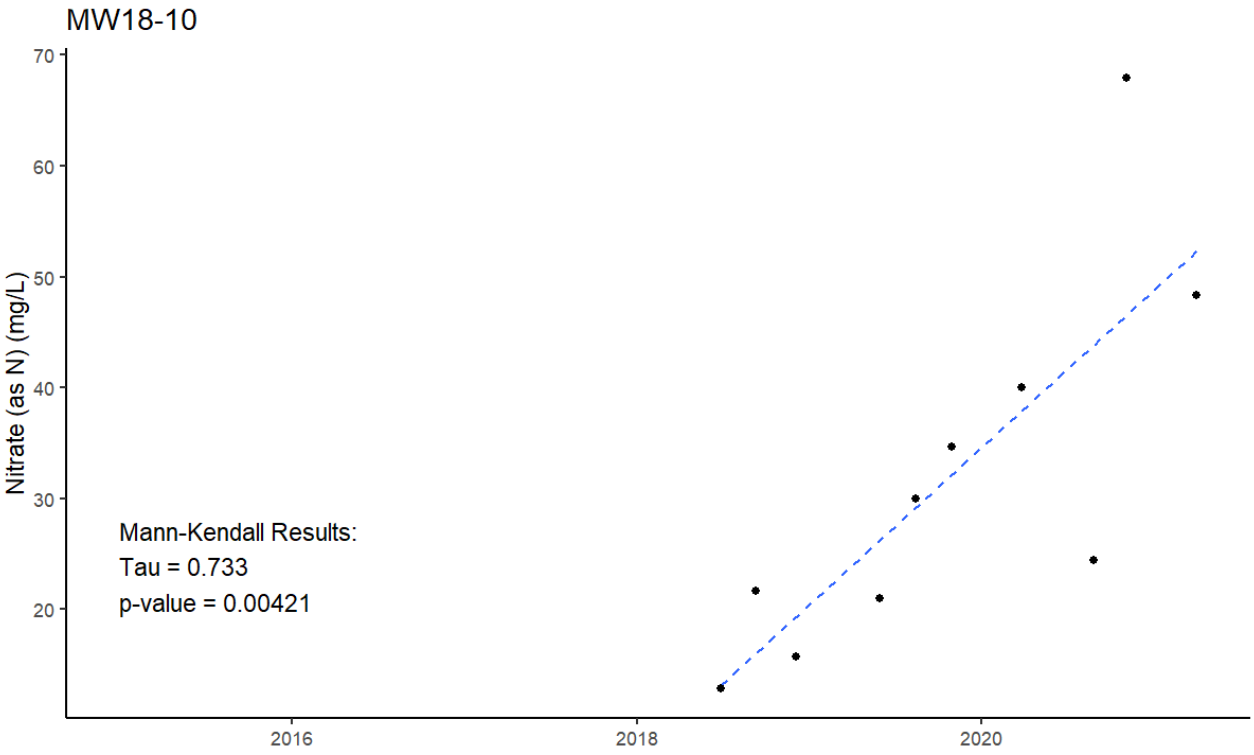

MW10-8
Mann-Kendall Results:
Tau = -0.684
p-value = 0.0000275
Iron, dissolved (mg/L)
3
2
1
0
2012
2014
2016
2018
2020

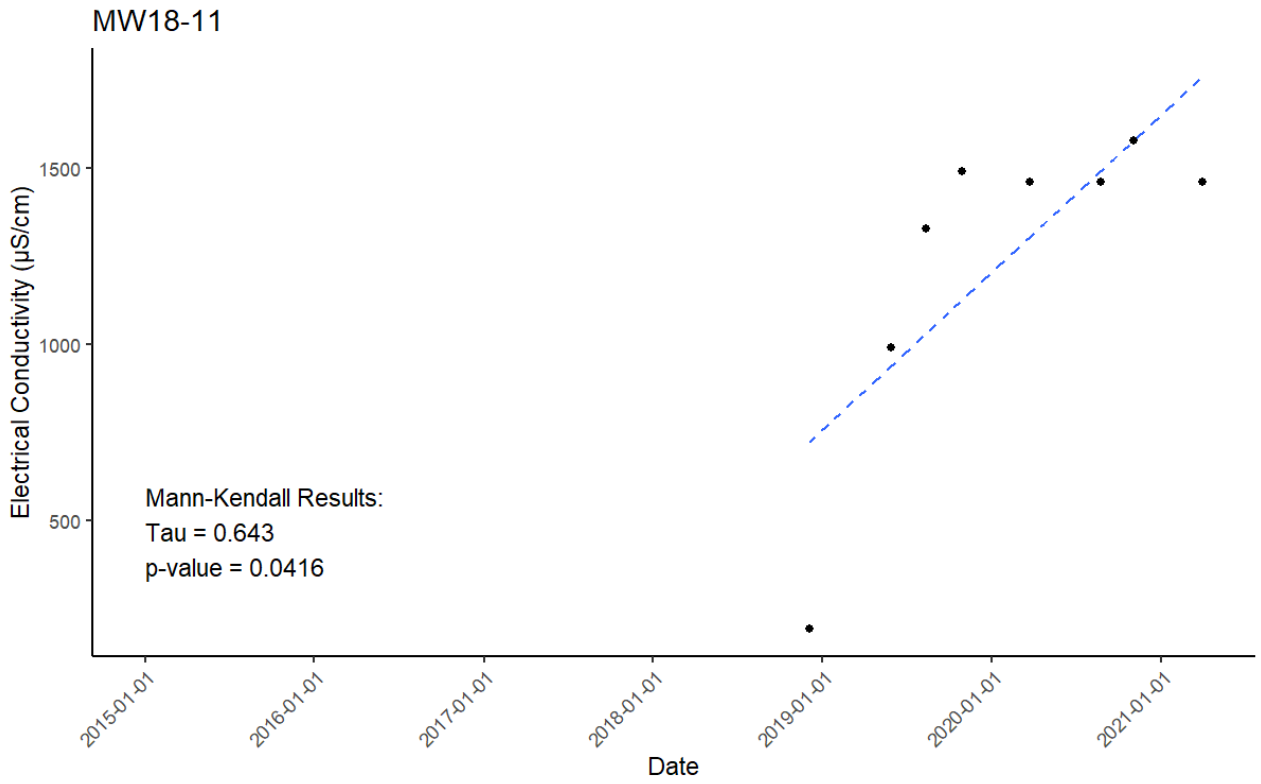

MW10-8
Mann-Kendall Results:
Tau = -0.706
p-value = 0.00000492
Manganese, dissolved (mg/L)
0.5
0.4
0.3
0.2
0.1
0.0
2012
2014
2016
2018
2020

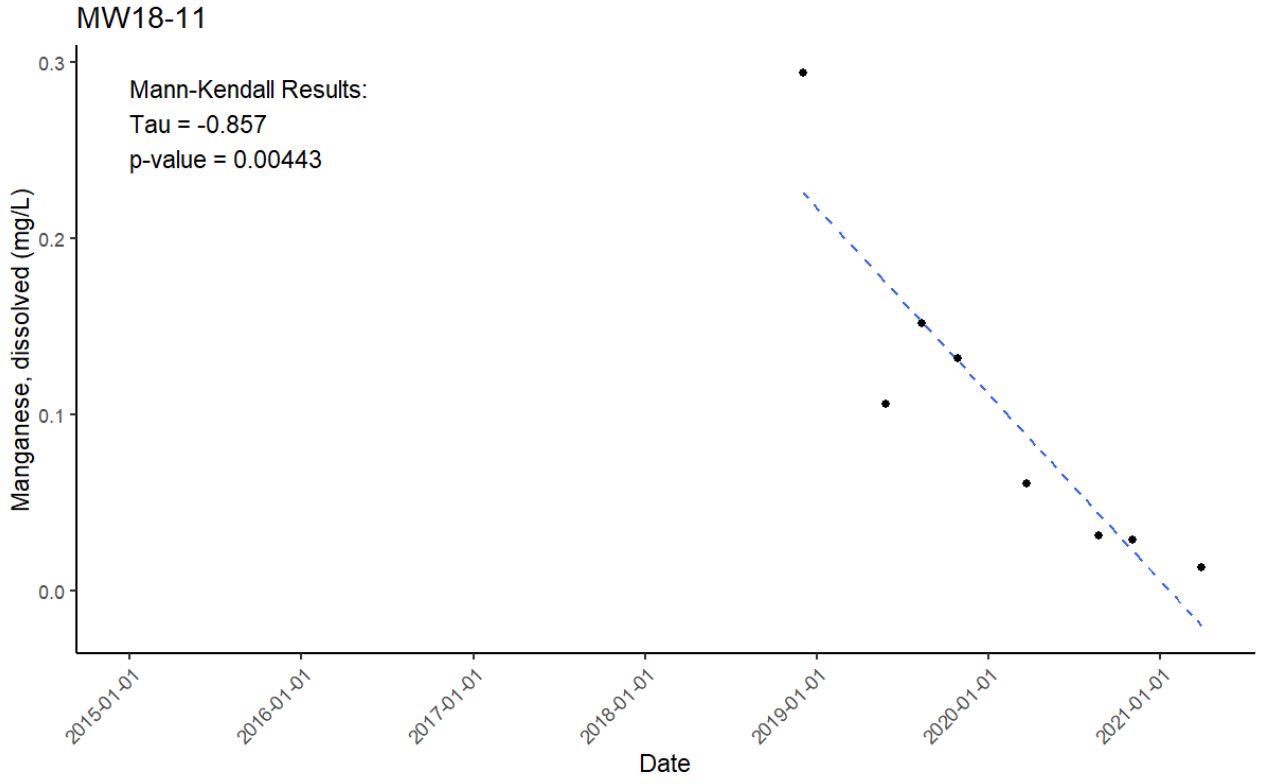

MW10-8
Mann-Kendall Results:
Tau = 0.625
p-value = 0.0000548
Nitrate (as N) (mg/L)
1.25
1.00
0.75
0.50
0.25
0.00
2012
2014
2016
2018
2020

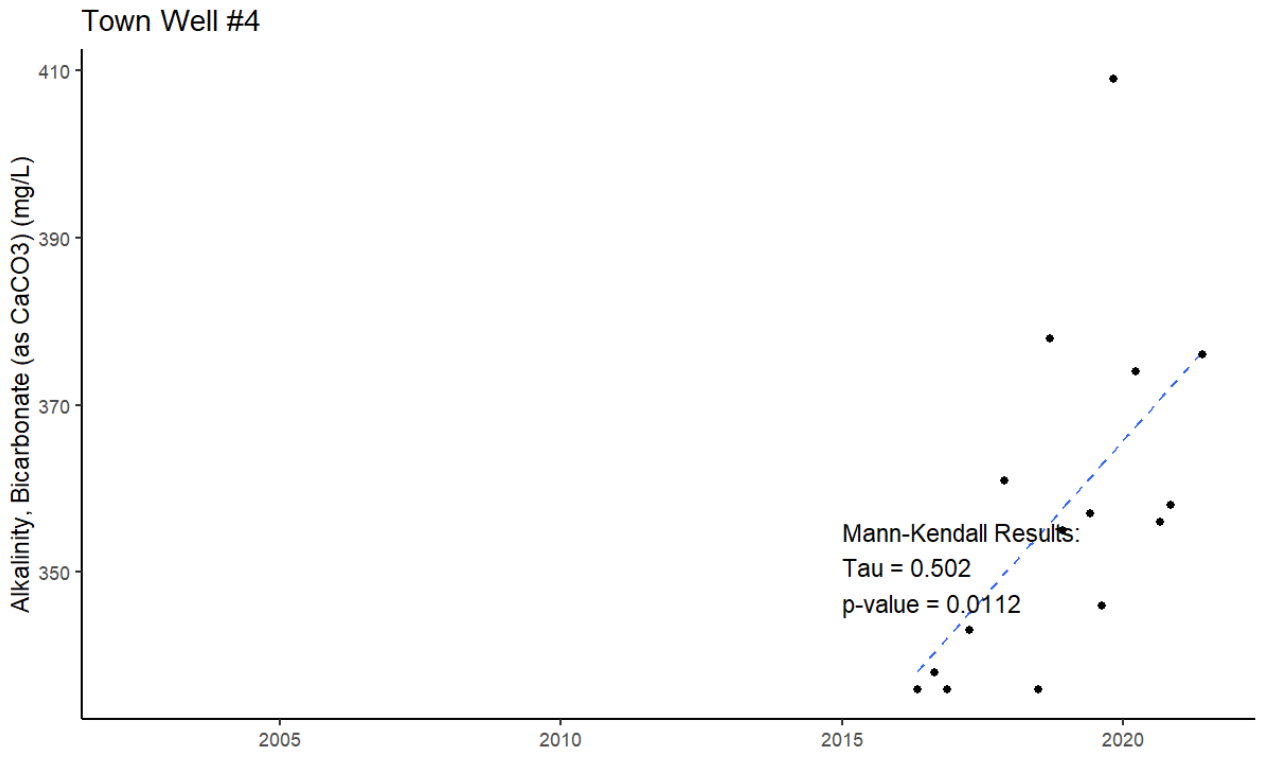

MW18-10
Chloride (mg/L)
360
340
320
300
2016
2018
2020
Mann-Kendall Results:
Tau = 0.644
p-value = 0.0123

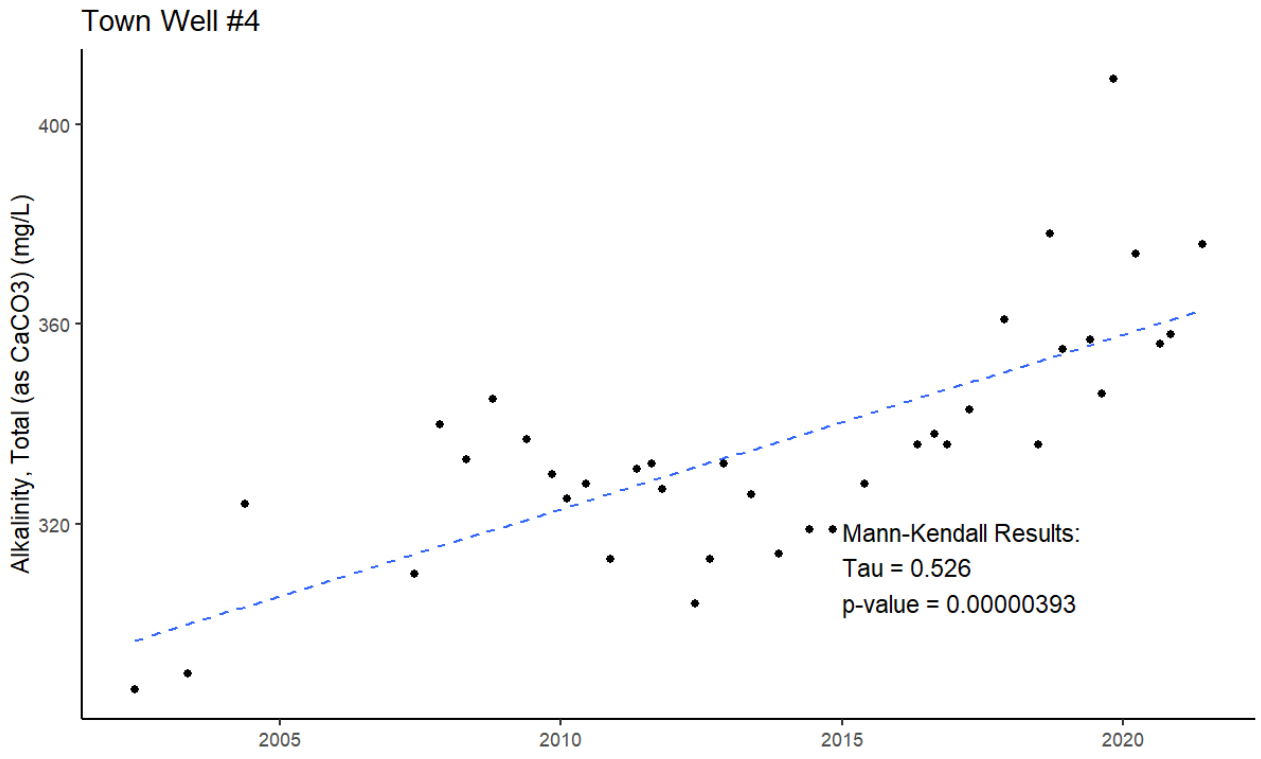

MW18-10
Electrical Conductivity (µS/cm)
3250
3000
2750
2500
2016
2018
2020
Mann-Kendall Results:
Tau = 0.539
p-value = 0.0389

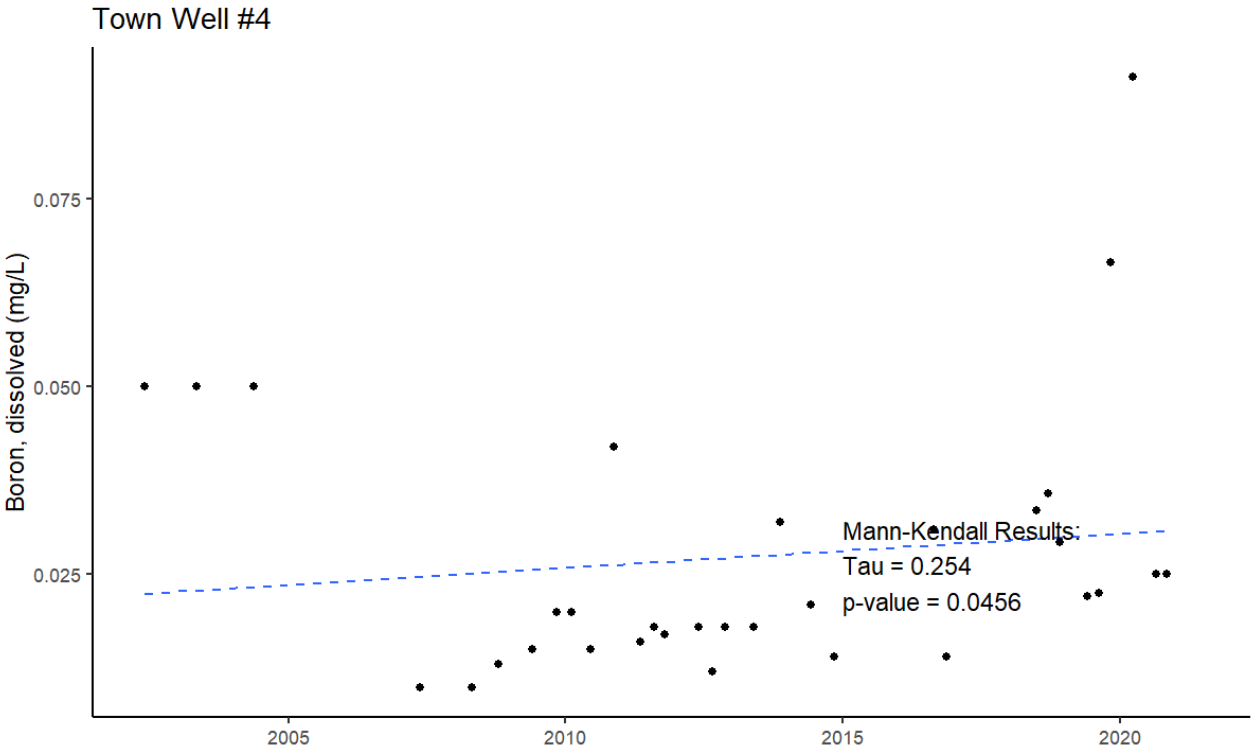

MW18-10
Nitrate (as N) (mg/L)
70
60
50
40
30
20
2016
2018
2020
Mann-Kendall Results:
Tau = 0.733
p-value = 0.00421

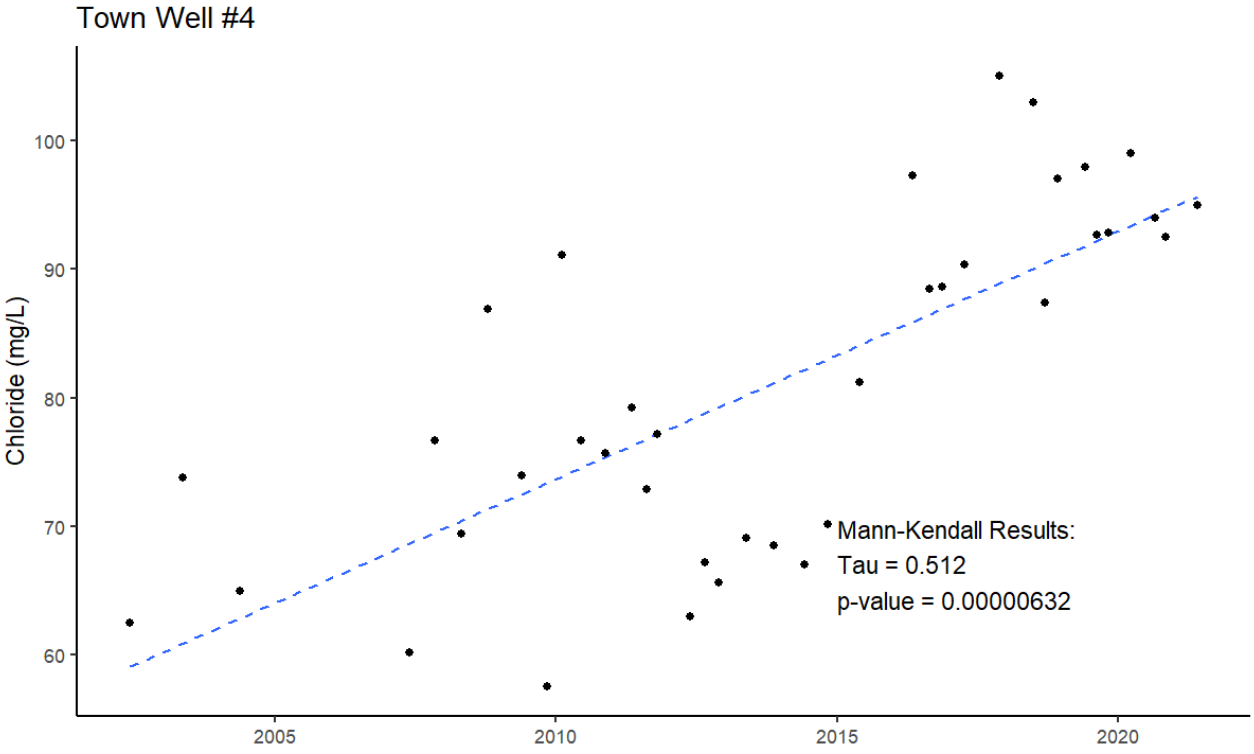

MW18-11
Electrical Conductivity (µS/cm)
1500
1000
500
Mann-Kendall Results:
Tau = 0.643
p-value = 0.0416
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
Date

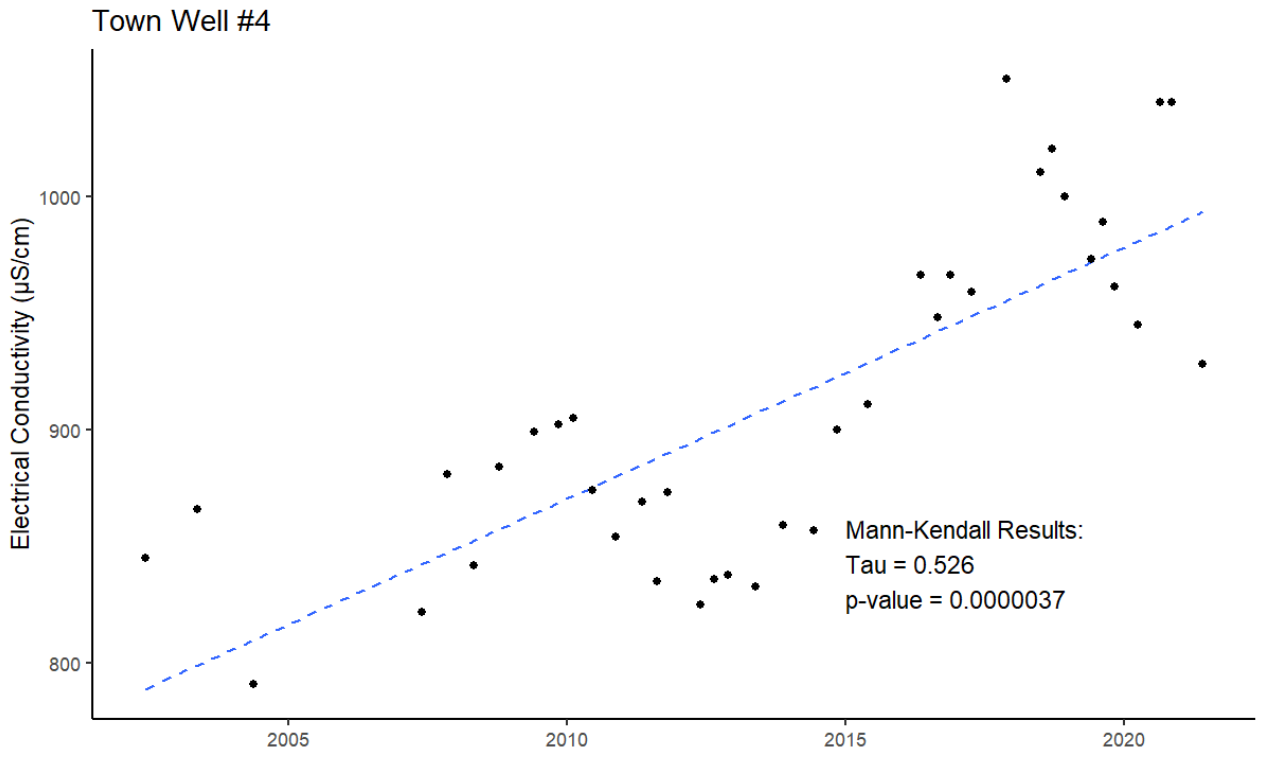

MW18-11
Manganese, dissolved (mg/L)
0.3
0.2
0.1
0.0
Mann-Kendall Results:
Tau = -0.857
p-value = 0.00443
2015-01-01
2016-01-01
2017-01-01
2018-01-01
2019-01-01
2020-01-01
2021-01-01
Date

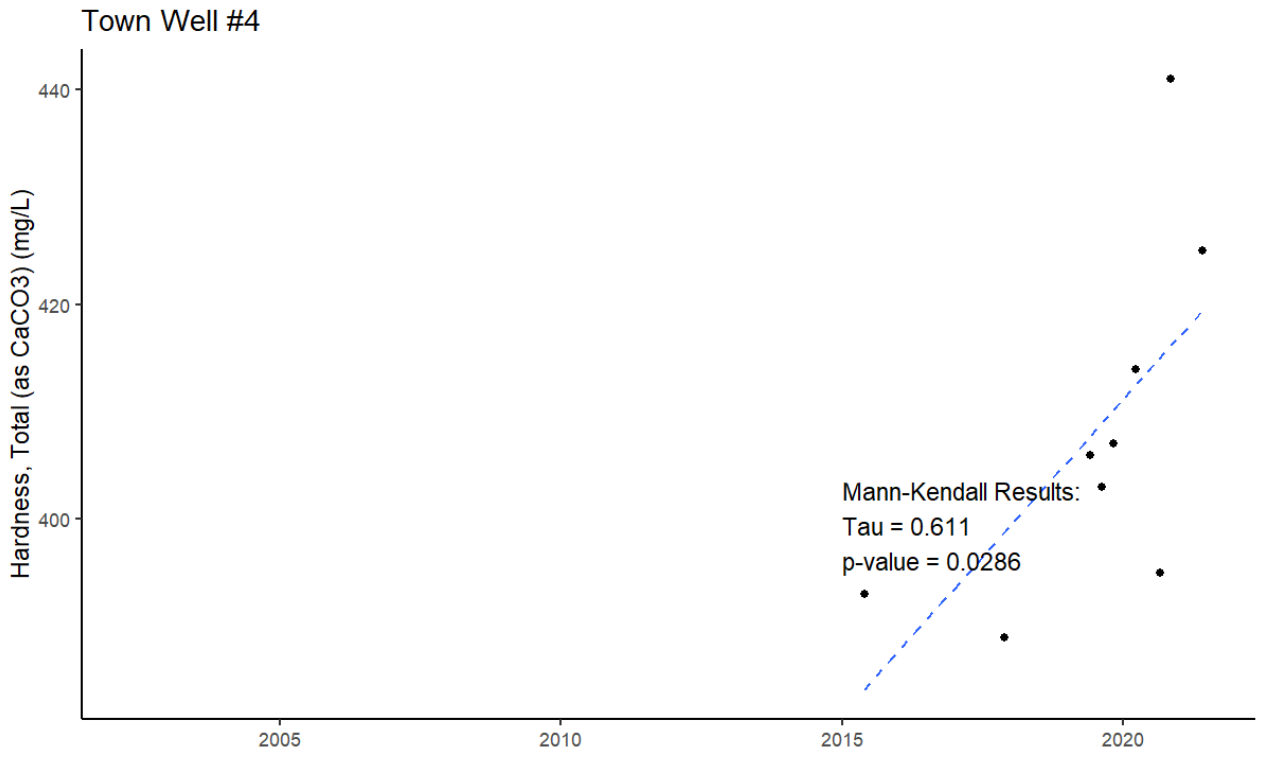

Town Well #4
Alkalinity, Bicarbonate (as CaCO3) (mg/L)
410
390
370
350
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.502
p-value = 0.0112

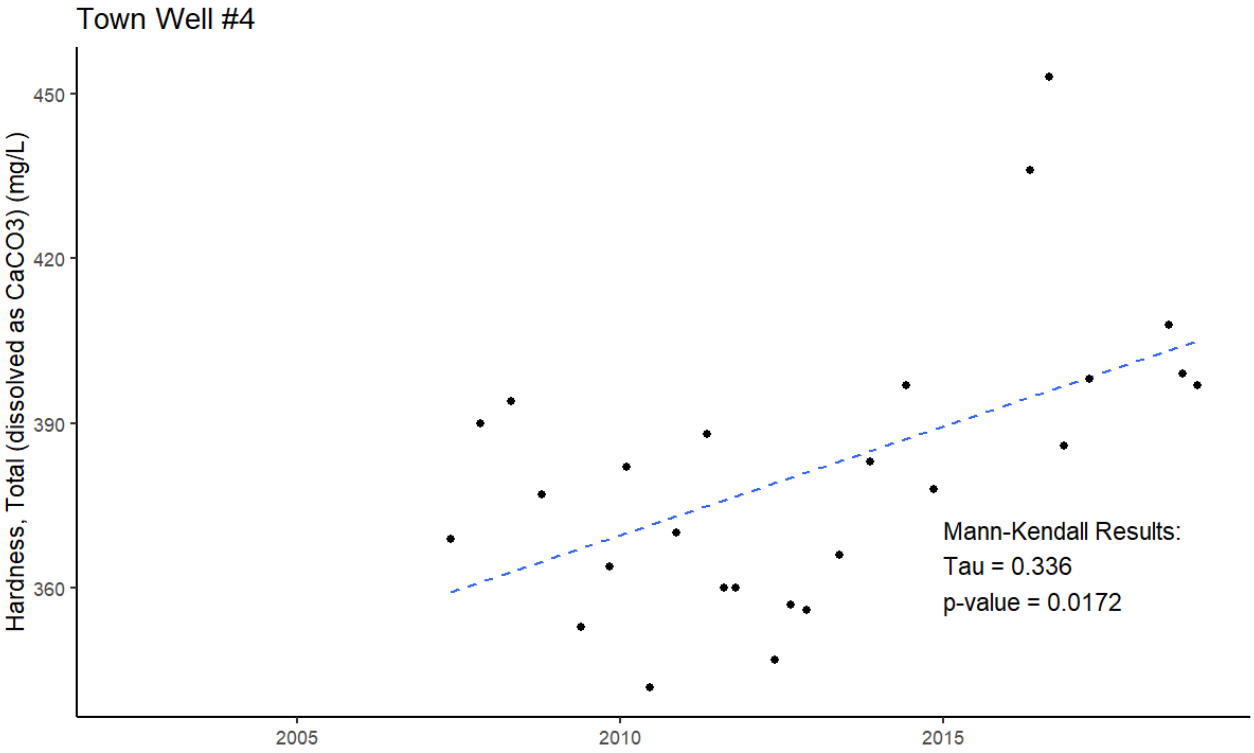

Town Well #4
Alkalinity, Total (as CaCO3) (mg/L)
400
360
320
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.526
p-value = 0.00000393

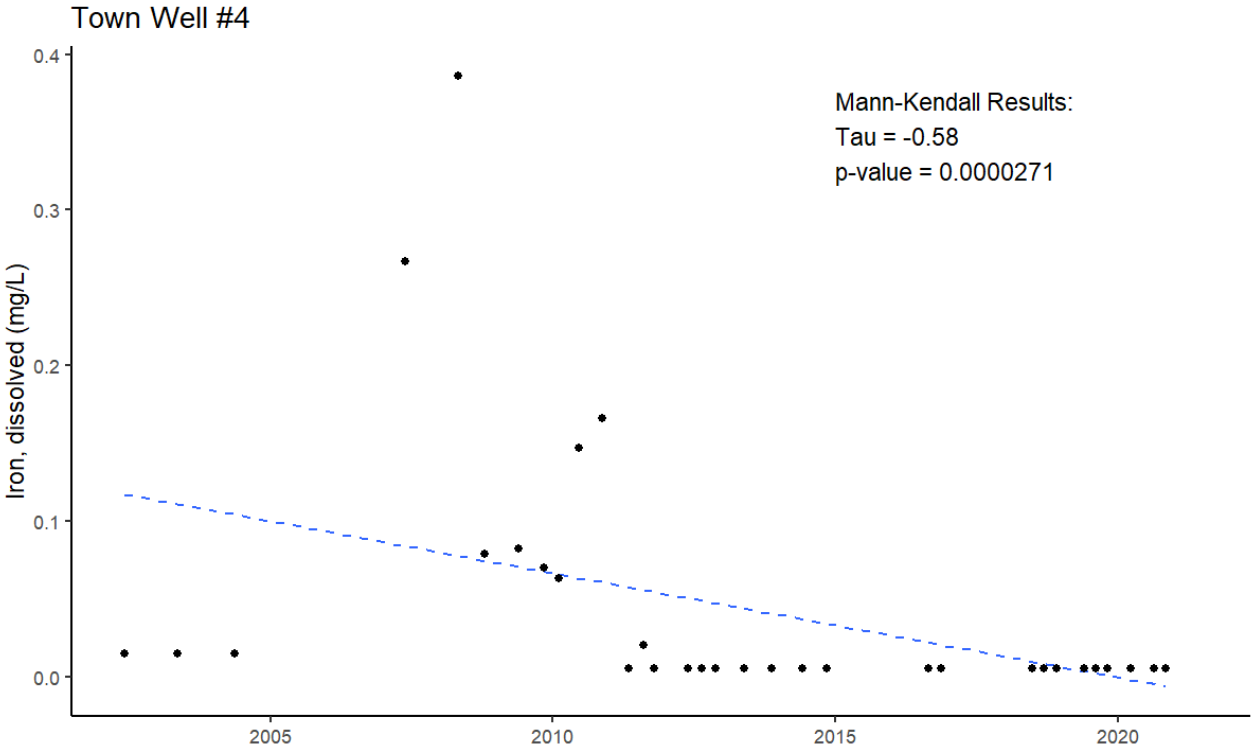

Town Well #4
Boron, dissolved (mg/L)
0.075
0.050
0.025
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.254
p-value = 0.0456

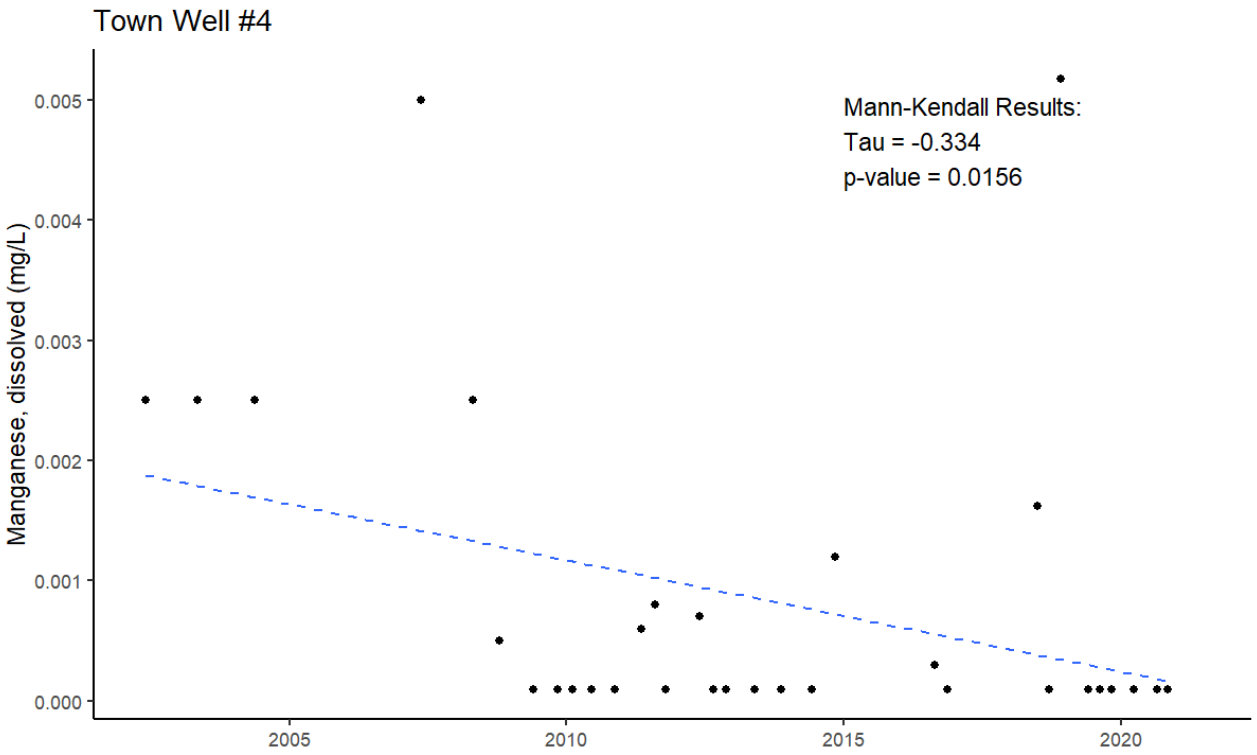

Town Well #4
Chloride (mg/L)
100
90
80
70
60
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.512
p-value = 0.00000632

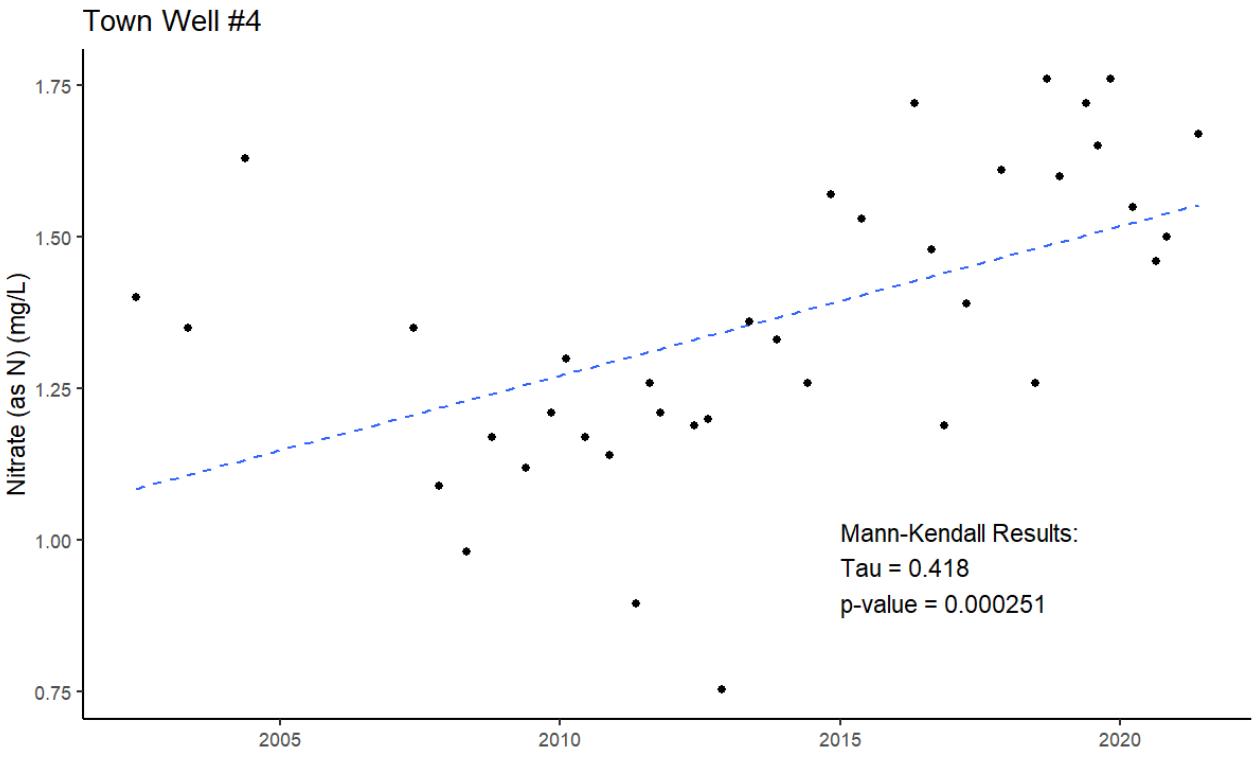

Town Well #4
Electrical Conductivity (µS/cm)
1000
900
800
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.526
p-value = 0.0000037

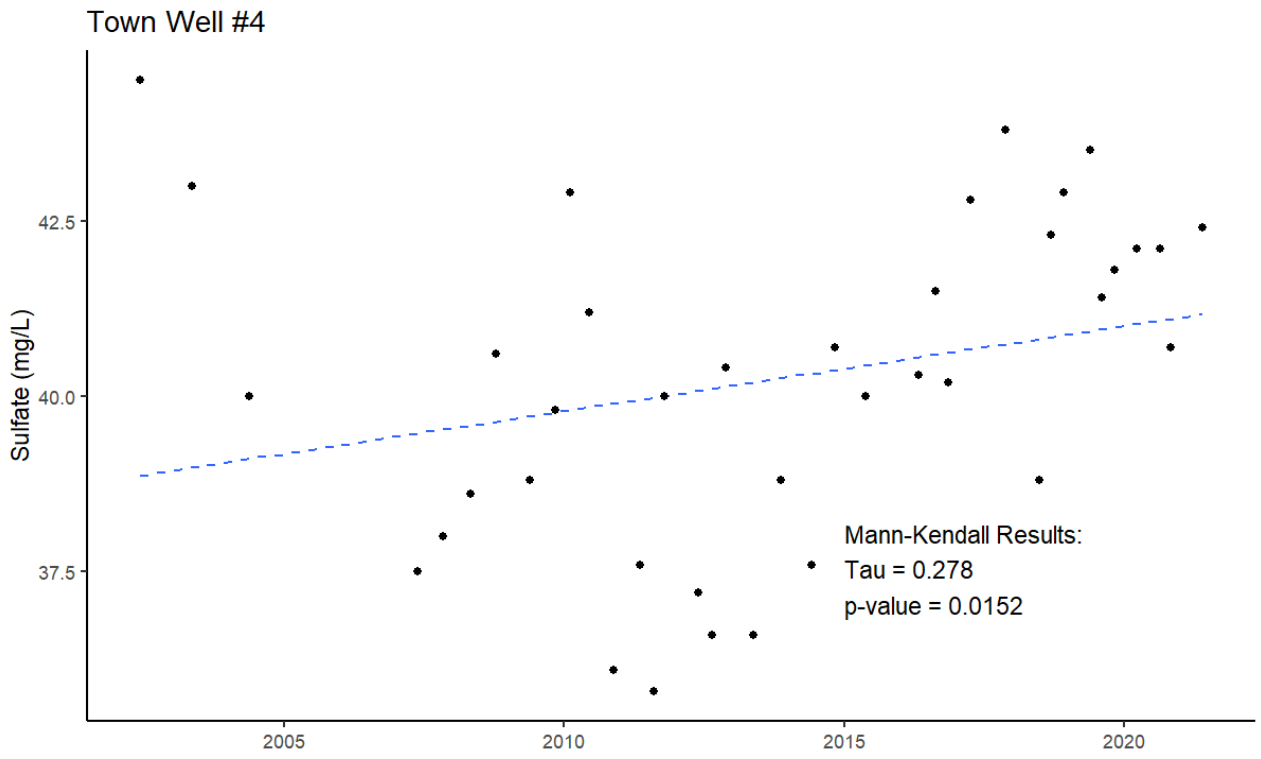

Town Well #4
Hardness, Total (as CaCO3) (mg/L)
440
420
400
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.611
p-value = 0.0286

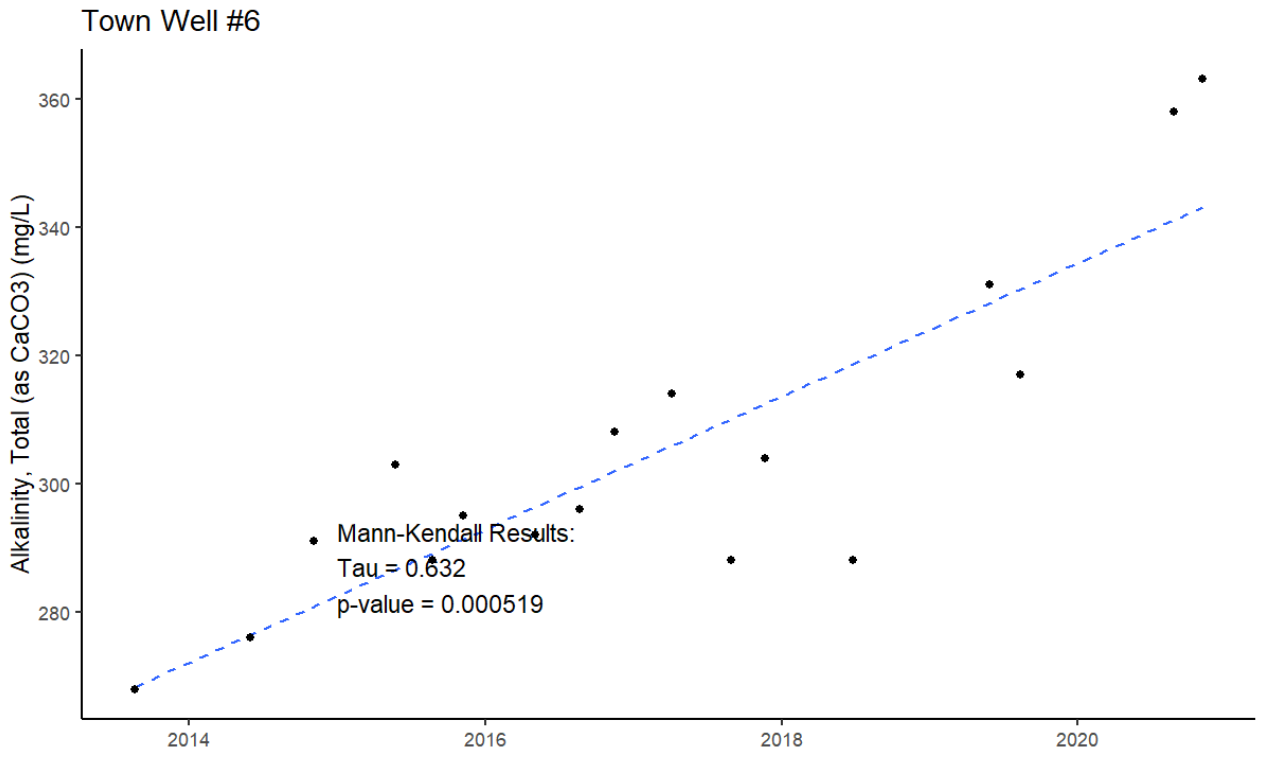

Town Well #4
Hardness, Total (dissolved as CaCO3) (mg/L)
450
420
390
360
2005
2010
2015
Mann-Kendall Results:
Tau = 0.336
p-value = 0.0172

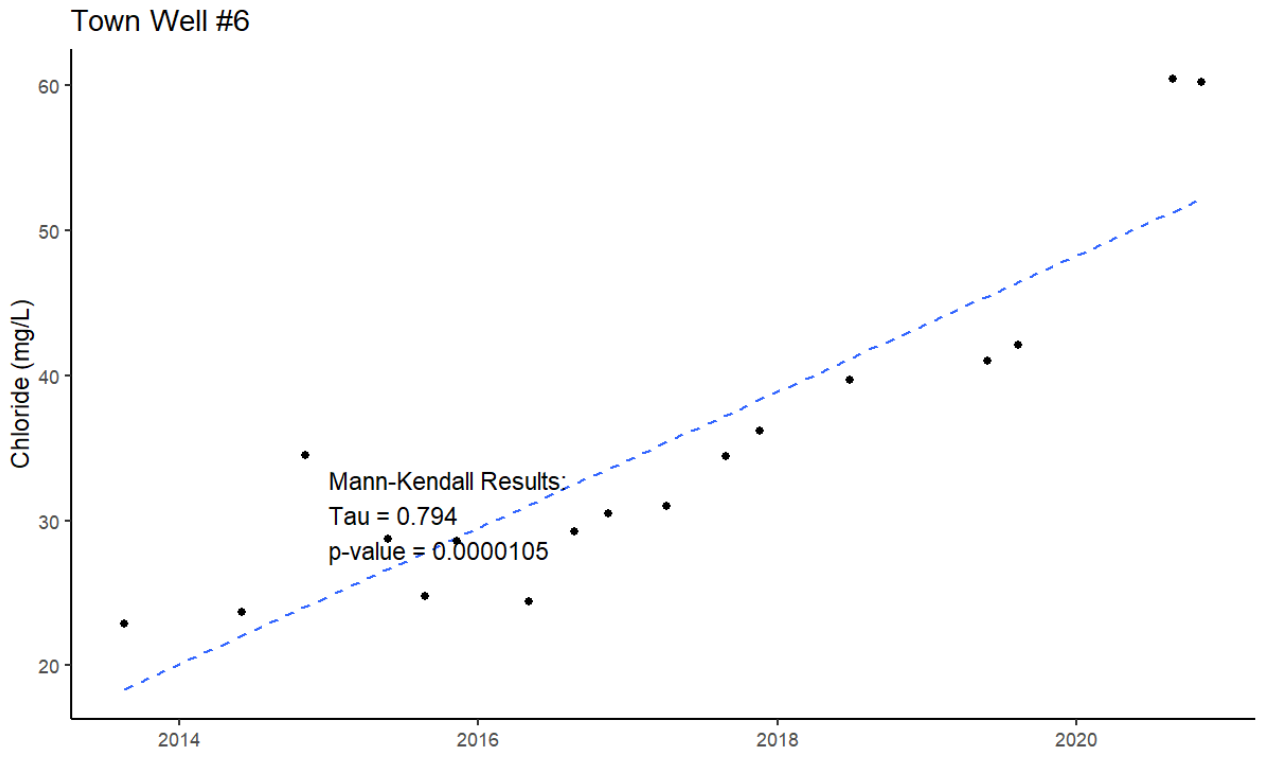

Town Well #4
Iron, dissolved (mg/L)
0.4
0.3
0.2
0.1
0.0
2005
2010
2015
2020
Mann-Kendall Results:
Tau = -0.58
p-value = 0.0000271

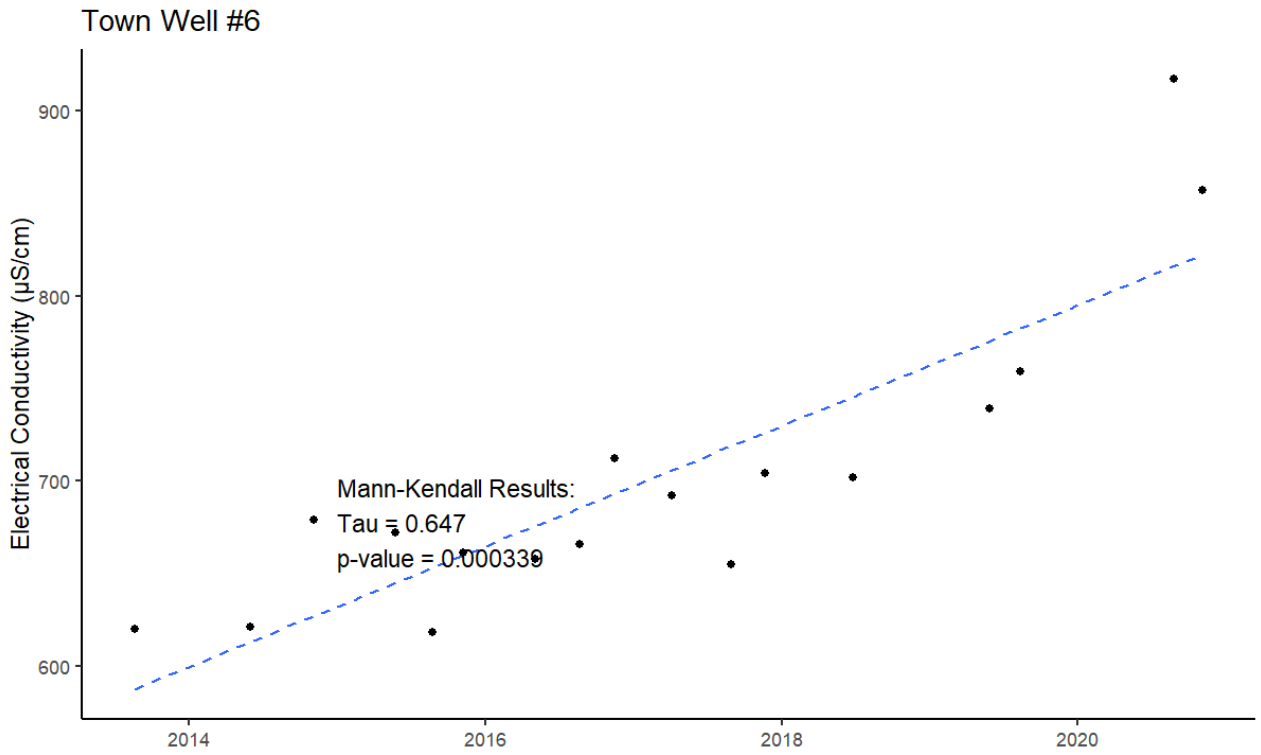

Town Well #4
Manganese, dissolved (mg/L)
0.005
0.004
0.003
0.002
0.001
0.000
2005
2010
2015
2020
Mann-Kendall Results:
Tau = -0.334
p-value = 0.0156

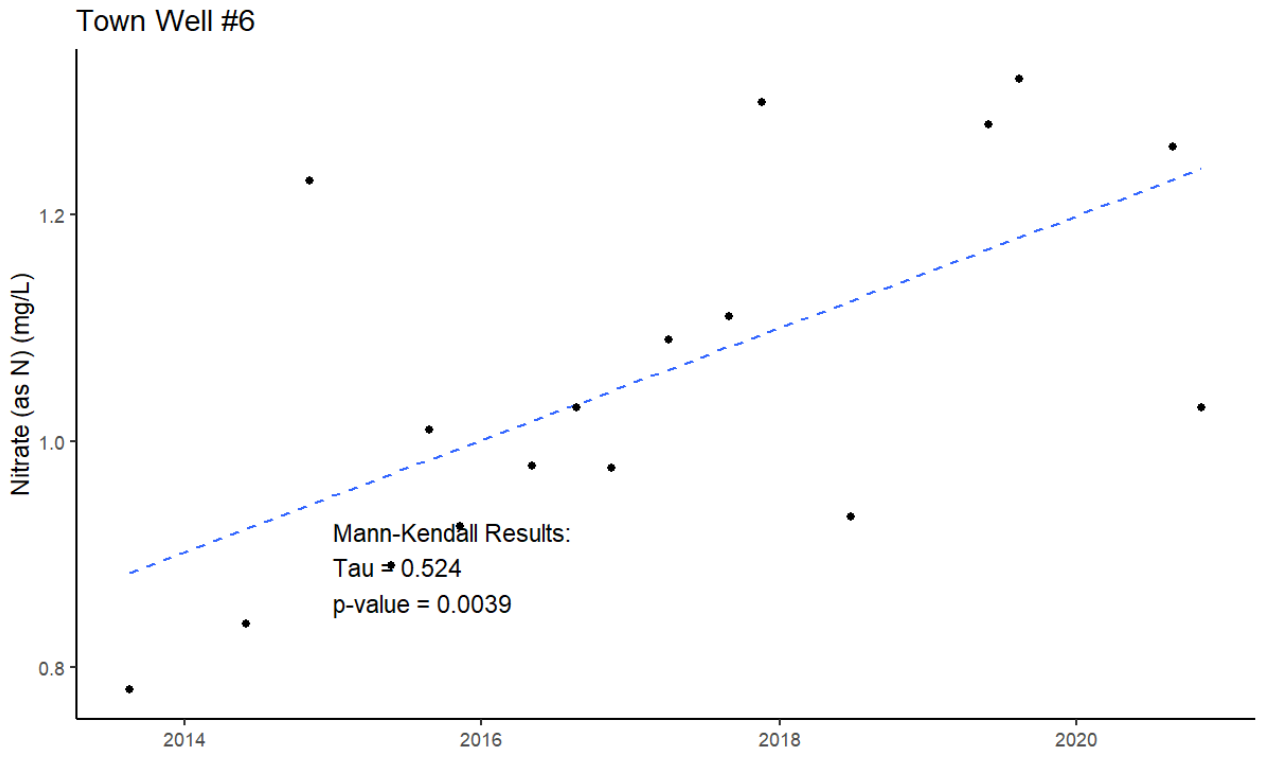

Town Well #4
Nitrate (as N) (mg/L)
1.75
1.50
1.25
1.00
0.75
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.418
p-value = 0.000251

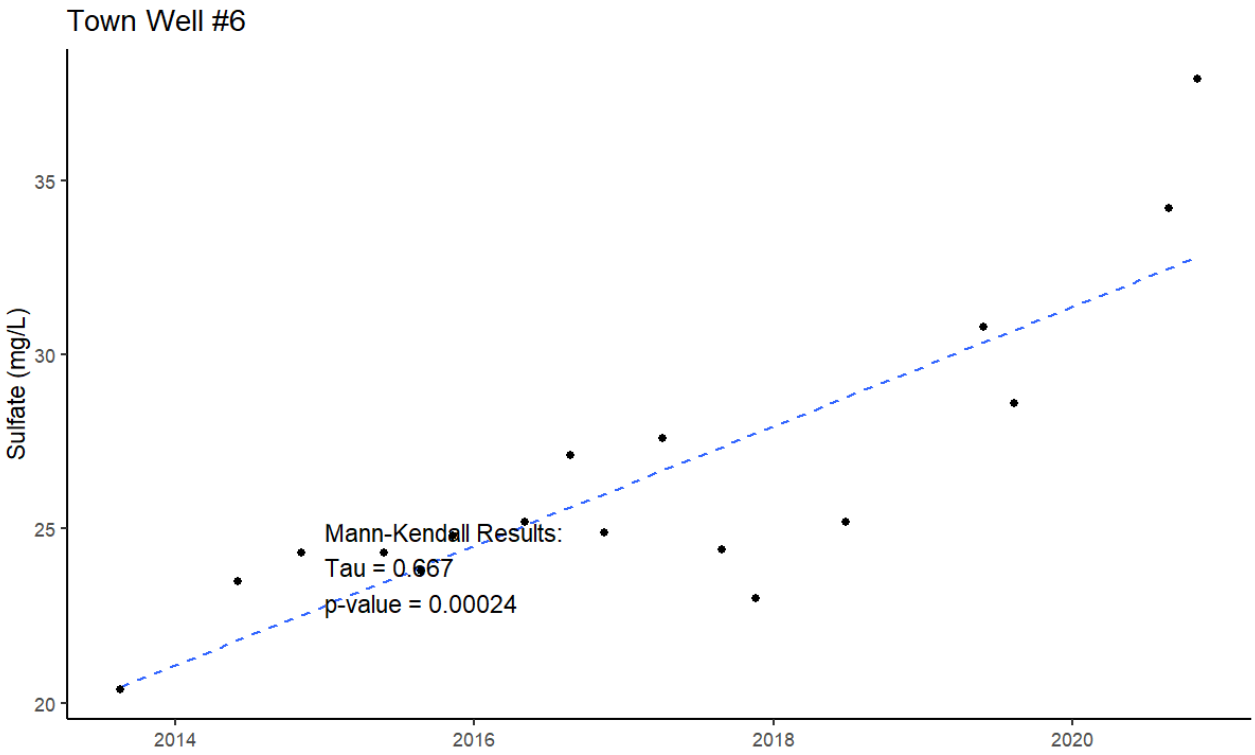

Town Well #4
Sulfate (mg/L)
42.5
40.0
37.5
2005
2010
2015
2020
Mann-Kendall Results:
Tau = 0.278
p-value = 0.0152

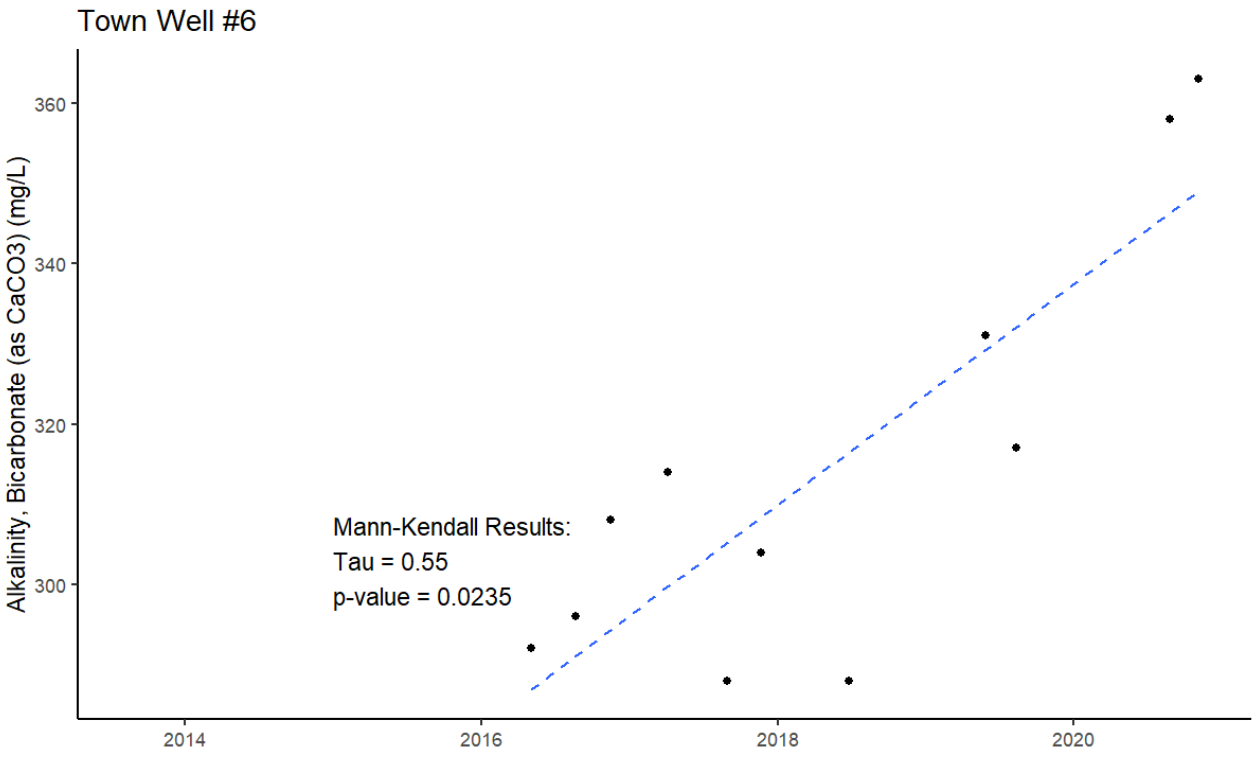

Town Well #6
Alkalinity, Total (as CaCO3) (mg/L)
360
340
320
300
280
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.632
p-value = 0.000519

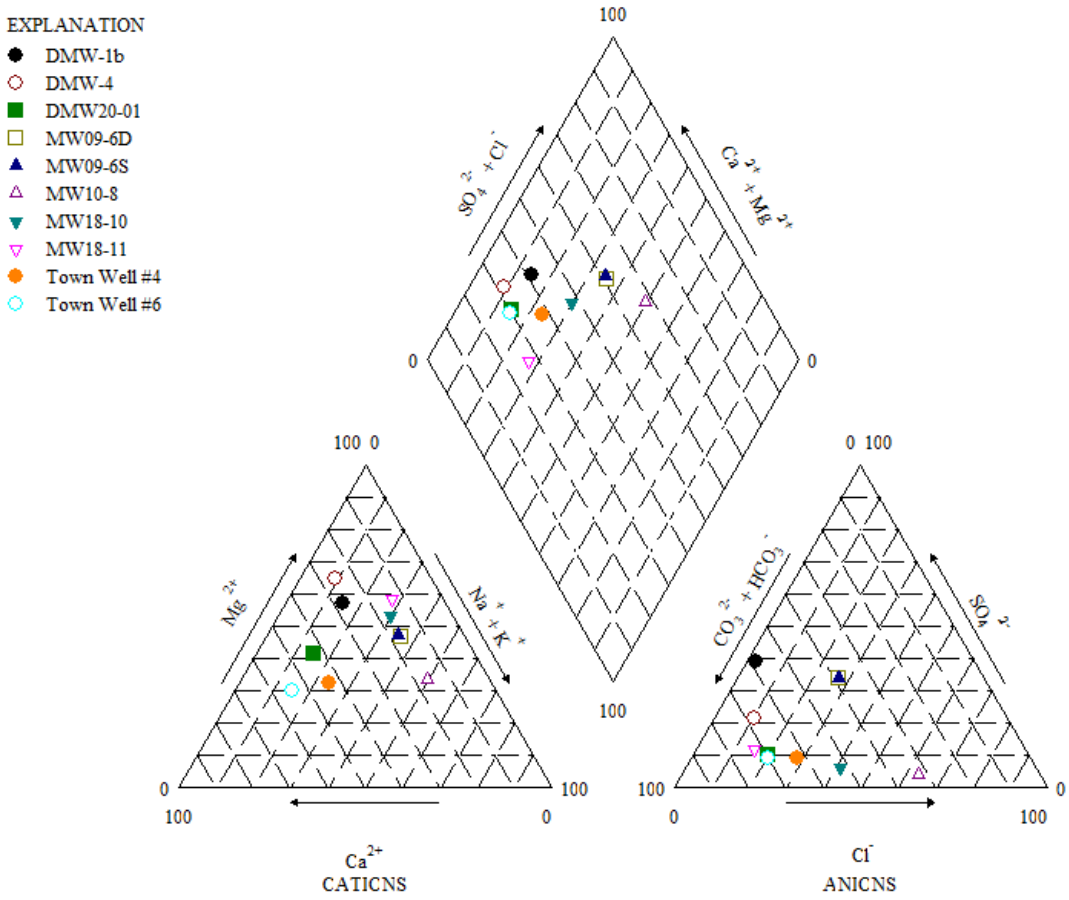

Town Well #6
Chloride (mg/L)
60
50
40
30
20
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.794
p-value = 0.0000105


Town Well #6
Electrical Conductivity (µS/cm)
900
800
700
600
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.647
p-value = 0.000339


Town Well #6
Nitrate (as N) (mg/L)
1.2
1.0
0.8
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.524
p-value = 0.0039


Town Well #6
Sulfate (mg/L)
35
30
25
20
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.667
p-value = 0.00024


Town Well #6
Alkalinity, Bicarbonate (as CaCO3) (mg/L)
360
340
320
300
2014
2016
2018
2020
Mann-Kendall Results:
Tau = 0.55
p-value = 0.0235



2020 Piper Plot