2025 Annual Monitoring Report
North Baptiste Waste Transfer Station
Environmental Compliance Approval No. A361603

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Executive Summary

BluMetric Environmental Inc. (BluMetric®) is pleased to provide a summary of the 2025 environmental monitoring at the North Baptiste Waste Transfer Station (WTS), herein referred to as "the Site", in Maynooth, Ontario. This summary is presented as a plain language summary to be used in addition to the final report titled "2025 Annual Monitoring Report North Baptiste Waste Transfer Station, Environmental Compliance Approval No. A361603" (BluMetric, 2026).

It should be noted that this summary provides an overview of the main findings of the report to which it pertains. This summary does not provide a comprehensive report, and its review should not be considered a substitute for reading the report in its entirety.

Summary Statements, Conclusions, and Recommendations

Site visits were made on May 7, July 7, and October 21, 2025. Generally, the WTS was observed to be in good condition at the time of all site visits.

Site Operations

The Site currently collects waste in covered waste bins, which is picked up and transferred to another WDS. The Site has segregated collection areas for scrap metal, tires, large bulk items, electronic waste, and a recycling transfer station for household blue box recyclable containers and paper fibres. Based on the assumed recycling values for the entire year, it is estimated that a total of 11.95% of residential waste was recycled in 2025. There were no documented complaints, rejected waste, or emergency situations reported for the Site in 2025.

Vegetation was observed to be well established on the cap. Site operations should continue in accordance with the ECA issued in January 2020.

Groundwater

The ECA was revised in January 2020 (No. A361603) and now requires monitoring of groundwater quality conditions. Groundwater samples were successfully collected in May and October 2025 from the five groundwater monitoring wells located at the Site.

The groundwater elevation data suggests groundwater is flowing radially away from the landfill with the primary groundwater flow direction to the southeast. Groundwater results have been compared to the Ontario Drinking Water Standards, Objectives and Guidelines (ODWSOG), Reasonable Use Criteria/Reasonable Use Values (RUC/RUV), and Provincial Water Quality Objectives (PWQO) criteria. A summary of exceedances is provided within the report.

Groundwater quality in 2025 was generally within historical ranges for the Site. Monitoring wells NB-MW3, NB-MW4, and NB-MW5 are considered impacted by leachate. Groundwater at the Site is expected to discharge to surface at or before the property line and therefore it is expected that groundwater downgradient from the WDS property boundary is not being impacted by leachate and is compliant with Guideline B-7-1.

Groundwater sampling should be conducted at all monitoring locations as per the ECA issued in January 2020. Select metals were recommended for removal in 2019 but since no agreement has been received from the MECP, they have continued to be sample as part of the groundwater monitoring program. Upon MECP approval, these parameters should be removed from the groundwater suite of parameters.

In response to the MECP's SW Technical review recommendation that a leachate indicator well be installed, BluMetric recommends that NB-MW3 continue to be used as the leachate well for the east and NB-MW5R be used as the leachate well for the south.

Surface Water

There are eight surface water monitoring locations at the Site to characterize surface water flow and quality. Surface water samples were successfully collected in May and July 2025 at all monitoring locations; however, the October sampling was limited due to insufficient water. The background sample (MCG-A) was not collected in the fall due to dry conditions.

Surface water results have been compared to PWQO, and Table A and Table B criteria from the WDS Technical Guidance (MOE, 2010). A summary of exceedances is provided within the report.

Monitoring locations MCG-B, MCG-C, and MCG-D indicate impacts to the east and south of the Site, while MCG-H may also be demonstrating impacts.

Surface water sampling should continue at all established monitoring locations, and should be conducted in the spring, summer, and fall of each year, following a storm event if possible (precipitation greater than 10 mm over 24 hours).

Toxicity Surface Water

Toxicity samples were collected from MCG-C and MCG-H during the spring and from only MCG-H during the fall sampling events, due to dry conditions, for single-concentration acute lethality testing of Daphnia magna (48 hour) and rainbow trout (96 hour). The single concentration test is typically reported as a "pass" or "fail" test, with 50% mortality being the passing limit. All the results from the toxicity testing at both locations indicated that the percent mortality for Daphnia magna and Rainbow Trout were 0%.

Trigger Mechanisms and Contingency Plan

Trigger assessment points for surface water are toxicity sampling results at MCG-C and MCG-H. As discussed above all toxicity testing in 2025 passed, therefore additional sampling was not required.

Landfill Gas

Results in 2025 (0 to 10 parts per million [ppm]) indicate gas concentrations on the Site are currently not a hazard concern; concentrations are less than 1.0% methane gas (10,000 ppm, LEL-20%) in an on-site building, or its foundation. Gas concentrations should continue to be monitored during semi-annual sampling events.

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1 Introduction

This report provides a summary and analysis of environmental monitoring activities at the North Baptiste Waste Transfer Station (WTS), in Maynooth, Ontario. The WTS, as shown in Figure 01 is herein after referred to as "the Site". The Corporation of the Municipality of Hastings Highlands (MHHs or Municipality) retained BluMetric Environmental Inc. (BluMetric®) to conduct the 2025 environmental monitoring and sampling program and prepare the 2025 Annual Report.

This report is being prepared for the Corporation of the Municipality of Hastings Highlands (the Municipality). The Municipality owns and operates the Site, and it is operated under Environmental Compliance Approval (ECA) A361603 which is included in **Appendix A**. The report covers all work and activities conducted for the period from January 1 to December 31, 2025.

The most recent MECP Groundwater Technical Review was on the 2018 Annual Monitoring Report and the most recent MECP Surface Technical Review was on the 2020 Annual Monitoring Report, which was received on June 4, 2021. The reviews recommended changes to the surface water metals analysis and installation of a new leachate monitoring well.

The intent of this report is to be consistent with the general requirements of the Ontario Ministry of Environment, Conservation and Parks (MECP) document titled; *Monitoring and Reporting for Waste Disposal Sites (WDS), Groundwater and Surface Water: Technical Guidance Document* (MOE 2010), referred to as the "WDS Technical Guidance". The Monitoring and Screening Checklist from the WDS Technical Guidance has been completed and is included as **Appendix B** of this report. The screening checklist was completed with the Operational Status set as "open" as the WDS is closed however the WTS operated throughout 2025.

1.1 Location

The WTS is located on the south side of North Baptiste Lake Road, approximately 1.5 km from the intersection with Highway 62 and just north of Hickey Settlement (Figure 01). The civic address is 353 North Baptiste Lake Road, Maynooth, Ontario and is located approximately 9 km south of Maynooth. The total site area is 3.207 hectares (ha) (rounded to 3.2 ha in the remainder of this report) located on Part of Lot 3, Concessions 10 (formerly Herschel Township), now part of the Corporation of the Municipality of Hastings Highlands (MHHs). The WTS facility layout, road network, and site features are shown on Figure 02.

The Site includes a former WDS, which was closed and capped in August 2018. The former WDS has a 0.69 ha approved footprint, with an actual final footprint area of 0.51 ha. Buffer lands (area of land encompassing the former fill area to protect the surrounding land from WDS impacts) surround the former WDS footprint. The remainder of the 3.2 ha owned by MHHs is comprised of buffer lands. An additional buffer area unowned by MHHs is located to the north of Site. The final Closure Plan for the WDS and conversion of the Site to a WTS was approved in 2017. The North Baptiste WDS had been in operation since at least 1968.

1.2 Ownership and Key Personnel

The facility is operated by the MHHs, with the municipal office located in Maynooth, Ontario. The Municipality owns the 3.2 ha property on which the WTS and former WDS is situated.

The facility's operational representative is responsible for all activities on-site. The Competent Environmental Practitioner (CEP) for both groundwater and surface water is S'rana Scholes, P.Eng., of BluMetric. Ms. Scholes is a Professional Engineer as designated by Professional Engineers of Ontario (PEO).

Table 1: Contact Information

Role	Name	Address	Phone Number	Email
Site Owner / Contact	The Corporation of the Municipality of Hastings Highlands CAO – David Stewart	P.O. Box 130 33011 Highway No. 62 Maynooth, ON K0L 2S0	(613) 338-2811 x289	dstewart@hastingshighlands.ca
CEP	Senior Environmental Engineer, BluMetric – S'rana Scholes, P.Eng.	209 Frederick St Unit 3B, Kitchener, ON N2H 2M7	(877) 487-8436 x218	sscholes@blumetric.ca

1.3 Description and Development of the WDS

In addition to domestic waste bins, North Baptiste WTS includes recycling bins for metal, plastic, paper/cardboard products, as well as segregated areas for scrap metal and tires. Brush is no longer accepted at the Site. The Ontario Electronic Stewardship (OES) has approved the North Baptiste WTS for the collection of Waste Electrical and Electronic Equipment (WEEE) wastes. Regulations came into effect in 2020 with respect to this material, now referred to as Electrical and Electronic Equipment (EEE). The regulation with respect to EEE falls under the Resource Recovery and Circular Economy Act, 2016, and the regulation was filed on September 21, 2020.

1.4 Monitoring and Reporting Program Objectives and Requirements

The objectives of the monitoring and reporting program are to identify and mitigate impacts to the environment caused by the municipal solid WDS. The monitoring and reporting program has been developed with these objectives in mind. In addition, the monitoring and reporting program are designed to adhere to the WDS Technical Guidance (MOE, 2010) document and the ECA for the Site. The amended ECA (January 2020) stipulates under Schedule B the requirements for groundwater monitoring on a semi-annual basis and surface water monitoring each spring, summer and fall.

2 Physical Setting

2.1 Geology and Hydrogeology

2.1.1 Surficial Geology

The surficial geology of the area consists of glaciofluvial outwash (till) deposits such as gravel and sand (MNDM, 1991). The immediate area of the Site is characterized by generally sandy or gravelly overburden, with appearances of clay, and with a thickness ranging from approximately 2.4 to 38.4 metres (m), as indicated on nearby water well records.

Figure 03 illustrates the locations of private water wells within 1.5 km of the Site. The water well record (ID #7268327) for the closest water well located approximately 200 m west of the Site indicates that overburden consists of gravel with boulders to a depth of approximately 17 m below ground surface (mbgs). Other well records within 1.5 km of the Site indicate the maximum depth of overburden in the area is up to approximately 36 mbgs.

2.1.2 Bedrock Geology

Bedrock in the area is classified as clastic metasedimentary rocks (e.g. conglomerate, limestone, siltstone) or a tectonite unit. The tectonite unit rocks consist of tectonites, straight gneisses, porphyroclastic gneisses, unsubdivided gneisses in major deformation zones, mylonites, and protomylonites (MNDM, 1991). Water well records indicate the bedrock in the vicinity of the Site is granite.

2.1.3 Surface Water Features

The Site is upgradient and adjacent to the north side of a small, unnamed lake. The lake is surrounded by a large marsh area which lies immediately to the east and south of the Site. A small creek located just to the east of the Site flows southward from North Baptiste Lake Road and into the wetland area, the creek continues eastward flowing under highway 62 until it reaches O'Shaughnessy Lake. These features and the topographic contours can be seen on Figures 01 and 03.

Selby Creek is located 0.8 km east and southeast of the Site. It flows towards the marsh area from the northwest and exits the marsh area at the southeast. After this confluence, it continues to flow eastward for approximately 2.3 km to O'Shaughnessy Lake located east of Highway 62.

3 Description of Monitoring Program

3.1 Site Inspections and Operations Monitoring

In 2025, Site visits and inspections occurred on May 7 (spring event), July 7 (summer event), and October 21 (fall event). The inspection checklists are included in **Appendix D, Item D-1**.

The WTS was observed to generally be in good condition during all Site visits in 2025 (e.g., signage, tidiness, etc.). Vegetation growth on the cap has established and is growing well.

During the spring, summer and fall inspections, the following notable conditions were observed:

- Tall vegetation concealed part of the entrance sign during the fall inspection.
- Metals and bulk waste were observed to be large piles during the summer and started to merge together during the fall inspection.

Historically, flooding has been observed during site inspections as a result of blockages caused by off-site beaver activity downstream of the WTS.

Select photographs taken during the Site visits are provided at the end of the text following the tables and figures.

3.2 Monitoring Locations, Frequency and Monitoring Parameters

3.2.1 Groundwater Monitoring

Monitoring wells on the Site were originally drilled and installed in 1996 as part of the Site Development Plan, Capacity and Operations Report (Greer Galloway, 1996). Each monitoring well was drilled until assumed bedrock refusal. Well depths range from 5.49 mbgs (NB-MW4) to 9.45 mbgs (NB-MW5) and each well screens a water-bearing overburden till unit. Monitoring wells NB-MW2 and NB-MW5 were re-drilled and re-instrumented in 2016 and are denoted as NB-MW2R and NB-MW5R. The monitoring well logs are included in **Appendix C**.

There are currently five groundwater monitoring wells located at the Site. Groundwater elevations were measured at each of the five monitoring wells and groundwater samples were collected and analyzed to characterize groundwater quality. The monitoring requirements for the North Baptiste WTS and former WDS are defined in Schedule B of the Site ECA with modifications to the program recommended and/or approved by the MECP periodically. The locations and descriptions of the groundwater monitoring wells are provided in Table 2. The locations of the Site monitoring wells are shown on
Figure 04.

Table 2: Groundwater Monitoring Well Details

Groundwater Monitoring Well Name	Northing (m)	Easting (m)	Relative Location
NB-MW1	5,006,444	269,950	Background well, 60 m north and west of the disposal area
NB-MW2R	5,006,470	270,038	Downgradient, 75 m northeast of the disposal area
NB-MW3	5,006,410	270,053	Downgradient, 15 m east of the disposal Area/ leachate well for the east
NB-MW4	5,006,373	270,049	Downgradient, 20 m southeast of the disposal area
NB-MW5R	5,006,338	270,011	Downgradient, 20 m south of the disposal area/ leachate well for the south

Note: UTM Zone 18 NAD 83 coordinates, data based on 2016 geodetic survey

Groundwater samples were collected on May 7, 2025 (spring event) and October 21, 2025 (fall event). The laboratory reports and chain of custody records are included in **Appendix D, Item D-2**. Table 3 lists the groundwater quality monitoring parameters.

Table 3: Groundwater Quality Monitoring Parameters

Category	Parameters
Organic Parameters	Chemical Oxygen Demand (COD), Phenols
Inorganic Parameters	Alkalinity, Chloride, Hardness (Total), Nitrite, Nitrate, Sulphate, Phosphorous (total), Total Kjeldahl Nitrogen (TKN), Ammonia (N)-Total, Dissolved Organic Carbon (DOC) Metals: Aluminum, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silicon, Silver, Strontium, Thallium, Titanium, Vanadium, Sodium, Zinc, Lead
Physical/Chemical Parameters	pH, Conductivity, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Turbidity

Field measurements of groundwater pH, temperature, conductivity and oxygen reduction potential (ORP) were collected at the time of sampling and are discussed in Section 4.1.

During the fall monitoring event, the conditions of groundwater monitoring wells were inspected. Any repairs, such as new locks, labels or well caps, were made as necessary on the replacement wells drilled in 2016. Watertight casings and seals remain in place at these two monitors to ensure that surface water and foreign materials cannot enter groundwater monitoring wells. These 2016 groundwater monitoring wells are fitted with a vermin proof cap to meet the requirements of Ontario Regulation 903. They are locked to provide protection against vandalism and are in line with industry best practices. The remaining 1996 monitoring wells were installed without steel casing protection (MW1, MW3, MW4). These wells are difficult to access with heavy equipment as they are in the marshy area east of the Site, therefore they have not been upgraded. However, because of the difficult access, these wells are unlikely to be damaged by equipment or encountered by the public.

3.2.1.1 Groundwater Elevations

During each monitoring event, groundwater elevations were collected from each of the five monitoring wells using a Solinst electronic water level meter prior to purging/sampling activity. Groundwater elevation data is summarized in Table 4.

Table 4: Groundwater Elevation Data

Monitoring Well ID	Casing Depth (mbtoc)	Elevation (masl)*	Water Level	Water Level	Elevation	Elevation
			7-May-25	21-Oct-25	7-May-25	21-Oct-25
			(mtpvc)	(mtpvc)	(masl)	(masl)
NB-MW1	7.66	402.06	3.71	5.61	398.35	396.45
NB-MW2R	4.60	395.10	0.82	0.96	394.28	394.14
NB-MW3	5.24	394.66	0.57	0.74	394.09	393.92
NB-MW4	6.14	395.04	0.79	0.95	394.25	394.09
NB-MW5R	5.90	395.33	0.84	1.20	394.49	394.13

Notes: * Elevation data is based on 2016 geodetic survey
mbtoc - Metres below top of casing
masl - Metres above sea level
mtpvc – Metres above top of PVC

3.2.1.2 Groundwater Flow Direction

The groundwater elevation data suggests groundwater is flowing radially away from the landfill with the primary groundwater flow direction to the east – southeast towards NB-MW3 and NB-MW4, as seen in Figure 05 and Figure 06. There were slight changes in the water level observed in the eastern and southern wells near the adjacent wetland between the spring and fall monitoring events while the groundwater elevation at the upgradient background well NB-MW1 dropped approximately 2.0 metres from the spring to the fall monitoring event.

3.2.2 Surface Water Monitoring

Surface water sampling was conducted on May 7, July 7, and October 21, 2025. The eight current surface water sampling stations and one former sampling location are shown on Figure 04 and are described in Table 5. The monitoring requirements for the surface water monitoring at the North Baptiste WDS/WTS are defined in Schedule B of the Site ECA with modifications to the program recommended and/or approved by the MECP periodically.

A modification to the surface water monitoring plan that was incorporated in 2022 was to change in the location of the background sample. MCG-A2 replaced MCG-A as the background location following MECP review in 2019 and is currently listed in the ECA as the background sampling location. However, MECP correspondence from June 2021 indicated that based on a review of analytical results, MCG-A was more representative of the surface water conditions entering the landfill area and that MCG-A2 could be removed from the surface water monitoring program. MCG-A was sampled as the background surface water sampling location in 2025.

Also in 2022, sample location MCG-E moved from its original location on the west side of Highway 62, to the east side of Highway 62 where it could be accessed from a public road without crossing private property.

Samples could not be collected from MCG-A, MCG-B, MCG-C and MCG-D during the fall 2025 monitoring event due to dry conditions. The remainder of samples were collected according to the monitoring plan.

Table 5: Surface Water Monitoring Locations

Surface Water Location Name	Northing (m)	Easting (m)	Relative Location
Current Surface Water Monitoring Locations			
MCG-A	5,006,619	270,040	Background sample, north of the WDS.
MCG-B	5,006,394	270,048	Ponded water at toe area of the landfill, downstream of the WDS (east).
MCG-C	5,006,273	270,050	Downstream of the WDS in the wetland area to the south.
MCG-D	5,006,215	270,055	Downstream of the WDS in the wetland area to the south.
MCG-E	5,006,098	271,790	Selby Creek downstream from the WDS, east of Highway 62.
MCG-F	5,006,816	271,070	Selby Creek prior to confluence with drainage from wetland/pond adjacent to the WDS.
MCG-G	5,006,074	270,077	Background sample south of the WDS.
MCG-H	5,006,311	270,140	Location in creek before entering small lake/pond in the wetland.
Former Background Surface Water Monitoring Location			
MCG-A2	5,006,672	270,014	Removed from sampling program, replaced by MCG-A in spring 2022.

Note: UTM Zone 18 NAD 83 coordinates

As discussed in previous reports, MCG-F is thought to best represent upstream water quality (BluMetric, 2021). Application of de-icing chemicals along North Baptiste Lake Road may be impacting this upstream location as well as the downstream location MCG-E located just east of Highway 62.

Surface water temperature, pH, conductivity, and dissolved oxygen field measurements were recorded at the time of sampling. Surface water samples were analyzed for the parameters listed in Schedule B of the ECA and are shown in Table 6.

Table 6: Surface Water Quality Monitoring Parameters

Category	Parameters
Biological Parameters	Biochemical Oxygen Demand (BOD5)
Organic Parameters	Phenols
Inorganic Parameters	Alkalinity, Chloride, Nitrite, Nitrate, Sulphate, Phosphorous (total), TKN, Ammonia (N)-Total, Un-Ionized Ammonia, Hardness, Calcium. Metals (Total): Aluminum, Arsenic, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Manganese[1], Magnesium, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Zinc, Lead.
Physical/Chemical Parameters	pH, Colour, Conductivity, TDS, Total Suspended Solids (TSS), Turbidity

Note:
1 – Manganese was added to the list of parameters based on the MECP review of the 2020 Annual Monitoring Report, received on June 4, 2021.

Surface flow measurements were collected by using a Global Flow Probe for open channel flow. The flow velocity in meters per second (m/s) was recorded along with the width and depth of flow. Table 7 summarizes the calculated flow measurements and water clarity observations for each location.

Table 7: Surface Water Sampling Locations and Observations

Date	Location	Field Observations
May 7, 2025	MCG-A	Flow = 0.0114 m^3/s. Water clear. Garbage observed at and around the location, iron precipitate present. Sample collected.
	MCG-B	Ponded water at landfill toe with no visible flow. Water clear with red precipitate and orga sheen. Sample collected.
	MCG-C	Flooded area due to beaver activity with no defined flow channel; no flow observed. Water clear with light brown/yellow colour. Sample collected; one pail collected for toxicity.
	MCG-D	Large flooded area with minimal flow observed. Water clear with light brown/yellow colour. Sample collected.
	MCG-E	Flow = 0.56 m^3/s. Water clear. Sample collected.
	MCG-F	Flow = 0.0462 m^3/s. Water clear. Sample collected.
	MCG-G	Flow = 0.0288 m^3/s. Water clear. Sample collected.
	MCG-H	Flooded area due to beaver activity with no observed flow. Water clear. Sample collected; one pail collected for toxicity.

Date	Location	Field Observations
July 7, 2025	MCG-A	No flow observed in channel. Water clear with significant iron precipitate and sediment. Sample collected.
	MCG-B	Ponded water at landfill toe with no visible flow. Water clear with yellow tint and suspended solids. Sample collected.
	MCG-C	Flooded swamp with no flow observed. Water clear with slight yellow colour; organic material present. Sample collected.
	MCG-D	Large flooded swamp area. Water yellow-brown with suspended sediment. Sample collected.
	MCG-E	Flow = 0.06 m^3/s. Water clear with yellow tint. Sample collected.
	MCG-F	Minimal flow observed but not registered on flow meter. Water clear with light brown colour. Sample collected.
	MCG-G	Minimal flow observed but not registered on flow meter. Recent significant washout damaged upstream culvert. Water clear. Sample collected.
	MCG-H	Large flooded area with no flow observed. Water clear. Sample collected.
October 21, 2025	MCG-A	Location dry. No sample collected.
	MCG-B	Insufficient water to sample; very shallow ponded conditions. No sample collected.
	MCG-C	Insufficient water to sample. No sample collected.
	MCG-D	Insufficient water to sample; very shallow ponded conditions. No sample collected.
	MCG-E	Minimal flow observed but not registered on flow meter. Water clear. Sample collected; duplicate collected.
	MCG-F	No flow observed. Water clear. Sample collected.
	MCG-G	No visible flow observed. Water clear. Sample collected.
	MCG-H	Large flooded area with no observed flow (approximately 0.45 m depth). Water clear with brown colour. Sample collected; one pail collected for toxicity.

Note: m^3/s – cubic metres per second

3.2.3 Landfill Gas Monitoring

The primary gas present at landfill sites is methane. Methane cannot cause an explosion unless it accumulates to a concentration above its lower explosive limit (LEL) in an enclosed area. The LEL for methane is 5% in air. Regulation 232/98 methane concentration limits are as follows:

- Less than 2.5% methane gas (25,000 parts per million [ppm], LEL=50%) in the subsurface at the property;
- Less than 1.0% methane gas (10,000 ppm, LEL=20%) in an on-site building, or its foundation; and
- Less than 0.05 % methane gas (500 ppm, LEL=1%) in a building, or its foundation, which is located off-site.

An RKI Eagle gas monitor with methane detection was used to measure landfill gas concentrations at the Site during the semi-annual monitoring events. Routine landfill gas monitoring within any buildings or structures on site and NB-MW1 is required at the Site based on the Site Closure Plan (BluMetric, 2018). Voluntary gas monitoring was completed in the remaining monitoring wells during the semi-annual monitoring events.

3.3 Monitoring Procedures and Methods

3.3.1 Groundwater Sampling

Groundwater wells were purged a minimum of three borehole volumes or until the well was purged dry. In the case where a well was purged dry, samples were collected after sufficient water had returned for sampling purposes. Field parameters were recorded at the time of sampling and included temperature, pH, conductivity, and ORP measurements, During sampling events, the field parameters were measured using a YSI Multi-parameter system calibrated as per the manufacturer's instructions. Samples collected for dissolved metals and DOC were field filtered using a single use 0.45 µm in-line filter. This protocol ensured that the samples collected were representative of groundwater chemistry at the time of sampling and that no cross-contamination of the wells would occur. All purge water was collected in buckets and disposed of on-site, downgradient of the monitoring well. Clean nitrile gloves were used for each sample.

Samples were collected in laboratory prepared and supplied bottles and submitted to Bureau Veritas Laboratories in Mississauga, Ontario for analysis.

Groundwater samples were stored at approximately 4° Celsius (C) during shipment to Bureau Veritas. Chain of Custody forms accompanied the samples from submittal to the laboratory until the chemical results were provided to BluMetric. Laboratory reports and chain of custody forms are compiled in **Appendix D, Item D-2**.

3.3.2 Surface Water Monitoring

Field parameters were recorded at the time of sampling and included temperature, pH, conductivity, and dissolved oxygen measurements. During sampling events, the field parameters were measured using a YSI Multi-parameter system calibrated as per the manufacturer's instructions. Surface water samples were filtered by the laboratory for analysis of dissolved mercury and aluminum.

Surface water samples were collected in laboratory prepared and supplied bottles, and submitted to Bureau Veritas Laboratories in Mississauga Ontario, for analysis.

Surface water samples were stored at approximately 4° C during shipment to the laboratory. Chain of Custody forms accompanied the samples from submittal to the laboratories until the chemical results were provided to BluMetric. Laboratory reports and chain of custody forms are compiled in **Appendix D, Item D-3**.

Attempts were made to sample after rain events. The timing of surface water sampling ideally coincides within 24 hours of a 10 mm precipitation event for the surface water sampling events, however, this was not always achievable for the 2025 program. The spring sampling event was conducted on May 7, 2025, and was preceded by 8.9 mm of precipitation recorded between May 5 and May 6. The summer sampling event was conducted on July 7, 2025, and coincided with 8.3 mm of precipitation on the day of sampling. The fall sampling event was conducted on October 21, 2025, and was preceded by 14.5 mm of precipitation recorded between October 19 and October 20. Recorded precipitation and temperature values at Environment Canada's Bancroft, Ontario Weather Station are presented in **Appendix E**.

Supplemental sampling of surface water for analysis of toxicity to organisms at MCG-B and MCG-C was recommended by the MECP (2010, 2012). In 2017, the MECP recommended that toxicity sampling be completed during the fall sampling event in lieu of the spring event when water is diluted. However, BluMetric indicated in previous reporting that those locations are typically dry or too low to sample during the fall event. Therefore, toxicity sampling is carried out in the spring, and again in the fall if sufficient water is present. In addition, historical toxicity sampling location MCG-B has been changed to MCG-H, as MCG-B is a ponded location with no connection to the nearby surface waters.

Surface water toxicity samples were collected from locations MCG-C and MCG-H during the spring sampling event and from MCG-H during the fall sampling event. During the fall event, conditions at MCG-C consisted of insufficient water to collect either routine chemistry or toxicity samples. All surface water toxicity samples were submitted to Nautilus Environmental for single-concentration acute lethality testing using Daphnia magna (48-hour) and rainbow trout (96-hour). The toxicity laboratory reports are provided in **Appendix D, Item D-4**.

3.3.3 Landfill Gas Monitoring

There are no sampling valves, ports, or vapour monitors on-site. Gas monitoring was conducted using a calibrated RKI Eagle gas monitor in the on-site Attendant's building and for all groundwater monitoring wells during both groundwater sampling events (spring and fall) in 2025.

Gas monitoring measurements from the attendant's building are collected by inserting the intake of the gas monitoring equipment through a small hole or gap within the structures while these structures remain closed. Gas monitoring measurements from the groundwater monitoring wells are collected prior to collecting groundwater levels or samples by inserting the intake tubing of the gas detector under the cap of the monitoring well before removing the cap and by keeping the best seal possible around the cap and gas detector intake tubing.

3.3.4 Field QA/QC Program

The Quality Assurance/Quality Control (QA/QC) program for the Site included the collection of field duplicate samples to demonstrate that field sampling techniques utilized by BluMetric personnel can yield reproducible results. Field duplicates were collected concurrently with the original sample. Field duplicates were collected at a minimum 10% frequency during the sampling program at the WDS.

Precision is a measure of the reproducibility of analytical results and can be expressed quantitatively by the relative percent difference (RPD) between the original sample(s) and their corresponding field blind duplicate sample(s). The RPD is defined by the following equation:

$$RPD = 2 \times \frac{|(S - D)|}{(S + D)} \times 100$$

Where: S = concentration in the original sample
D = Concentration in the duplicate

An RPD is calculated where the average of the measured parameter concentrations of the original (S) and duplicate (D) samples are greater than 5X the laboratory reportable detection limits (RDL), which represents the RPD qualification criteria. A lower level of precision is expected where the above criteria are not met. A high level of reproducibility with respect to sample results collected at the Site is indicated by an RPD value below 10% for electrical conductivity, 20% for metals and inorganics, and 30% for BTEX and PHC. These criteria are used as a general guideline and

correspond to those recommended within the O. Reg. 153/04 Analytical Protocol (MOE, 2011) and by the Ontario QA/QC Interpretation Guide – Environmental Services (Maxxam, 2015). An RPD below the recommended criteria is considered acceptable, indicating that the sampling methodology can produce repeatable results.

All equipment for field parameter testing and gas monitoring are calibrated in the field during each sampling event, or by the supplier.

One blind field duplicate per media was collected during each Site visit and submitted for analysis. The field duplicate bottles were filled simultaneously with the actual sample bottles for a given location. The laboratory prepared bottles (identified and duplicate) for each group of chemical parameters (e.g. metals, nutrients, etc.) was first filled for the identified location and then the duplicate for that same group of chemical parameters was immediately filled. This continued until the two sample bottles for each group of parameters were filled.

4 Monitoring Results

4.1 Groundwater Quality

The 2025 field measurements indicated conductivity ranging from 105.4 µS/cm at NB-MW2R (upgradient) to 1304 µS/cm at NB-MW3 (downgradient) for the spring event, and from 89.6 µS/cm at NB-MW2R to 1260 µS/cm at NB-MW3 for the fall event. The field pH values for the spring ranged from 6.51 at NB-MW3 to 8.60 at NB-MW4 (downgradient). The field pH values for fall ranged from 6.61 at NB-MW3 to 8.02 at NB-MW5R. Historical groundwater data up to and including 2025 is provided in **Appendix F, Item F-1.**

Ontario Drinking Water Standards and Operational Guidelines (ODWSOG)

The 2025 groundwater parameters with concentrations exceeding the ODWSOG are summarized in Table 8. The full laboratory results are presented in Table 13 following the text.

Table 8: Groundwater Quality Results Exceeding ODWSOG

Monitoring Well Location	Parameter	Sampling Event(s)
NB-MW1 (Background)	Alkalinity (lower limit)	October
	Hardness (lower limit)	May, October
	Turbidity	May, October
NB-MW2R	Hardness (lower limit)	May, October
	Turbidity	May, October
NB-MW3 (Leachate well for east)	Chloride	May, October
	Hardness (upper limit)	May, October
	TDS	May, October
	Turbidity	October
	Dissolved Iron	May, October
	Dissolved Manganese	May, October
NB-MW4	Turbidity	May, October
NB-MW5R (Leachate well for south)	Hardness (lower limit)	May
	Turbidity	May, October
	Dissolved Manganese	May, October

Note: Background alkalinity for the region are typically below criteria.

Reasonable Use Values (RUVs)

The water quality results for background groundwater monitoring well NB-MW1 from 2006 to 2025 were used to calculate Reasonable Use Values (RUV), as per the guidance offered by MECP Procedures B-7 and B-7-1 using the following equation.

$$Cm = Cb + x\,(Cr - Cb)$$

Where:

- Cm: is the maximum allowable concentration in groundwater beneath adjacent property (RUV);
- Cb: is the median background concentration before any effects from human activity;
- Cr: is the maximum concentration that should be present based on use (ODWSOG); and
- x: is the constant that reduces the contamination to a level considered by the MECP to have only a negligible effect on the use of the water (0.25 for a health-related parameter and 0.5 for an aesthetic or physical parameter).

Table 9 summarizes the data that were used to calculate Cm values (RUV) for the landfill leachate indicator parameters:

Table 9: Reasonable Use Calculations

Parameter*	Cb (mg/L)	Cr (mg/L)	x	Cm (mg/L)
Sodium	21.8	200	0.5	**110.9**
Aluminum	0.01	0.1	0.5	**0.055**
Boron	0.005	5	0.25	**1.2538**
Copper	0.001	1	0.5	**0.5005**
Iron	0.0395	0.3	0.5	**0.1698**
Manganese	0.001	0.05	0.5	**0.0255**
Nitrate	0.325	10	0.25	**2.7438**

Note:
* Metals results are for dissolved metals in groundwater

Parameters that exceed the RUVs are shown in Table 10.

Table 10: Groundwater Concentrations Exceeding RUV

Groundwater Monitoring Location	Parameter *	Sampling Event(s)
NB-MW3	Manganese	May, October
	Iron	May, October
NB-MW5R	Manganese	May, October

Note:
* Metals results are for dissolved metals in groundwater

Provincial Water Quality Objectives (PWQO)

The groundwater results were compared to the PWQO due to the potential for groundwater to discharge to surface water at the Site. The full results are also presented in Table 13 at following the text. The following exceedances of the PWQO were identified:

- NB-MW1 – Total phosphorus (spring, fall),
- NB-MW2R – Total phosphorus (spring, fall),
- NB-MW3 – Total phosphorus (spring, fall), and Dissolved Cobalt (spring, fall), Dissolved Iron (spring, fall)
- NB-MW4 – Total phosphorus (spring, fall),
- NB-MW5 – Total phosphorus (spring, fall).

Groundwater alkalinity concentrations at the Site are naturally low, as observed from historical monitoring data. The background well (NB-MW1) mean concentration (2006-2025 data) for alkalinity is 24.87 mg/L. PWQO state that alkalinity cannot decrease by more than 25% of the natural concentration (i.e., alkalinity concentrations should be at or above 18.65 mg/L). As impacts from the WDS tend to increase the alkalinity of groundwater at the Site, the downgradient wells therefore do not exceed the PWQO for alkalinity.

4.2 Surface Water Quality

Surface water quality results were compared to PWQO. Following a review of the 2024 surface water monitoring program by the MECP of another MHH Site from 2025, it was noted that the WDS Technical Guidance Table A and Table B criteria were a draft and never adopted by the MECP. The MECP has indicated that the Table A and Table B criteria should not be used for the evaluation of surface water quality and therefore will not be discussed in the body of this report. Table 11 summarizes the surface water parameters that exceeded the applicable criteria. The full analytical results are presented in Table 14 at the end of the text (of note this does include the Table A and Table B criteria for reference only). Historical surface water data up to an including 2025 is provided in **Appendix F, Item F-2.** Note that surface water sampling locations MCG-A, MCG-B, MCG-C and MCG-D were dry during the fall monitoring event.

Table 11: Surface Water Quality Results Exceeding Criteria

Surface Water Monitoring Location	Parameter*	Criteria Exceeded	Sampling Event(s)
MCG-A (Background)	Cobalt	PWQO	July
	Iron	PWQO	May, July
MCG-B	Phenols	PWQO	July
	Total Phosphorus	PWQO	May, July
	Iron	PWQO	May, July
MCG-C	Total Phosphorus	PWQO	July
	Cadmium**	PWQO	May, July
	Cobalt	PWQO	July
	Iron	PWQO	May, July

Surface Water Monitoring Location	Parameter*	Criteria Exceeded	Sampling Event(s)
MCG-D	Phenols	PWQO	July
	Total Phosphorus	PWQO	July
	Aluminum (dissolved)	PWQO	May, July
	Cadmium**	PWQO	May, July
	Cobalt	PWQO	July
	Copper	PWQO	May, July
	Iron	PWQO	May, July
	Lead	PWQO	July
	Zinc	PWQO	July
MCG-E (Creek- Downstream)	Cadmium**	PWQO	May, July, October
	Iron	PWQO	July
MCG-F (Creek- Upstream)	Total Phosphorus	PWQO	October
	Aluminum (dissolved)	PWQO	July
	Cadmium**	PWQO	May, July, October
	Iron	PWQO	July, October
MCG-G (Background - west)	Cadmium**	PWQO	May, July, October
	Copper	PWQO	July
	Iron	PWQO	May
MCG-H	Total Phosphorus	PWQO	July, October
	Cadmium**	PWQO	May, July, October
	Iron	PWQO	July. October

Notes: Background pH for the region is typically below criteria.
*Metals results are for total metals in surface water unless otherwise indicated
**The detection limit for cadmium exceeds the PWQO criteria.

Surface water alkalinity concentrations at the Site are naturally low. The background monitoring location (MCG-A) has a long-term average alkalinity concentration of 18.33 mg/L based on data collected between 2006 and 2025. PWQO criteria states that alkalinity cannot decrease by more than 25% of the natural concentration (i.e., alkalinity concentrations should be at or above 13.75 mg/L). During the three 2025 surface water monitoring events, alkalinity concentrations at the majority of sampling locations were above 13.75 mg/L. Concentrations below this threshold were observed at locations MCG-D, MCG-F, and MCG-G during the spring sampling event, and at MCG-G during the summer sampling event.

All toxicity samples collected from MCG-C (spring) and MCG-H (spring and fall) in 2025 passed for single-concentration acute lethality testing of Daphnia magna (48 hour) and rainbow trout (96 hour).

4.3 Landfill Gas Results

An RKI Eagle gas monitor with methane detection was used to monitor landfill gas at the Site. Gas readings collected on May 7, 2025, were 0 ppm at the Attendant's Building, 0 ppm at monitoring wells NB-MW1, NB-MW2R and NB-MW5, 5 ppm at NB-MW3, and 10 ppm at NB-MW4.

Gas readings collected on October 21, 2025, were 0 ppm at the Attendant's Building, and 0 ppm at all monitoring wells, NB-MW1, NB-MW2R, NB-MW3, NB-MW4, and NB-MW5.

4.4 QA/QC Results

Two groundwater duplicates and three surface water duplicates were collected during the sampling events to evaluate the consistency of the analytical results and sampling methodology. Exceedances of the recommended RPDs (10% for electrical conductivity and 20% for metals and inorganics) are highlighted in the evaluation tables presented in **Appendix D, Item D-5**.

Exceedances of the recommended RPDs are as follows:

- Groundwater: No exceedances in the spring for the duplicate collected at NB-MW3. In the fall an exceedance for the duplicate collected at NB-MW3 is total phosphorus with a of RPD (24%).
- Surface water: A single exceedance of TDS RPD (35%) for the spring duplicate collected at MCG-E; no exceedances for the summer and fall events for the duplicates collected at MCG-E.

The two RPD values in exceedance of the recommended RPDs represent less than 1% of all analyzed parameters during the 2025 monitoring period. Therefore, the results of the 2025 QA/QC program are considered acceptable with a high degree of reproducibility.

5 Assessment, Interpretation and Discussion

5.1 Groundwater Assessment

Landfill leachate indicator parameters for groundwater at the Site include alkalinity (upper limit only), sulphate, nitrate, and dissolved metals (sodium, aluminum, copper, manganese, boron, iron, and zinc). Previously, total phosphorus was also identified as a leachate indicator parameter. However, because total phosphorus concentrations exceed at the background location (spring and fall) and are typically elevated in wetland environments due to high organic content, it is no longer considered a primary leachate indicator for the Site.

The 2025 groundwater quality results for the North Baptiste WDS are summarized in Table 13 (following the text). Parameters with concentrations outside the RUVs, ODWQS, and/or PWQO criteria are flagged. Historical groundwater chemistry results are provided in **Appendix F**, **Item F-1**. A Mann-Kendall trend analysis for select parameters is provided in **Appendix I**, following the tables, figures, and photographs at the end of this report. Groundwater quality in 2025 was generally consistent with historical ranges observed at the Site.

Monitoring well NB-MW1 (Background Well)
Monitoring well NB-MW1 is located just north of the WDS property boundary and represents the upgradient background location. Alkalinity and hardness concentrations at NB-MW1 are typically below the ODWQS lower aesthetic objective and are representative of background conditions; this pattern remained consistent in 2025. Turbidity exceeded the ODWQS at this location during 2025, consistent with recent results (turbidity monitoring was initiated in 2019).

Monitoring between 2014 and 2020 indicated potential impacts from road de-icing salts. A general decreasing trend in sodium, chloride, and conductivity was observed between 2020 and 2022, followed by increasing trends in 2023 and 2024. A historic high dissolved sodium concentration (40 mg/L) was recorded in April 2024 and has since shown a decreasing trend. During 2025, sodium, chloride, and conductivity remained below applicable guideline criteria.

Monitoring well NB-MW2R (Downgradient Well)
Monitoring well NB-MW2R is located approximately 75 m northeast of the waste disposal area and is downgradient of the WDS. Groundwater results collected in 2025 indicate conditions similar to the background location. ODWQS exceedances were observed for hardness (lower limit) and turbidity. All other parameters remained within applicable ODWQS guideline limits.

Monitoring well NB-MW3 (Leachate Indicator Well):
Monitoring well NB-MW3 is located approximately 15 m east of the disposal area and serves as the primary leachate indicator well on the east side of the Site. During the spring 2025 monitoring event, ODWQS exceedances were observed for chloride, hardness, TDS, dissolved iron, and dissolved manganese. During the fall event, the same parameters exceeded guidelines, along with turbidity. These results are consistent with continued leachate influence at this location.

Monitoring well NB-MW4 (Downgradient Well)
Monitoring well NB-MW4 is located approximately 20 m southeast of the WDS. During 2025, exceedances were limited to turbidity during both monitoring events. All other parameters remained within applicable ODWQS guidelines.

Monitoring well NB-MW5R (Leachate Indicator Well)
Monitoring well NB-MW5R is located approximately 20 m south of the disposal area and serves as the primary leachate indicator well on the south side of the Site. During the spring 2025 event, exceedances were observed for hardness, turbidity, and dissolved manganese. During the fall event, exceedances were limited to turbidity and dissolved manganese. All other parameters remained within applicable ODWQS guideline limits.

All downgradient monitoring wells are located within the waste site boundary and at least 30 m from the property line. With the exception of NB-MW2R, downgradient wells exhibited elevated alkalinity relative to the upgradient background well, indicating leachate influence; however, all alkalinity concentrations remained within ODWQS limits.

Total phosphorus exceeded PWQO criteria in all groundwater samples collected in 2025, consistent with recent years. Concentrations were variable, with lower levels observed at NB-MW3 (the primary leachate indicator well), suggesting that elevated total phosphorus at other locations is more likely attributable to wetland conditions rather than the waste mound.

Groundwater in the vicinity of the waste mound (NB-MW3, NB-MW4, and NB-MW5R) continues to reflect leachate influence and has the potential to affect adjacent surface water, where PWQO exceedances have been identified (Section 5.2). Continued monitoring of NB-MW3 and NB-MW5R as east and south leachate indicator wells remains appropriate. Given the radial groundwater flow pattern and uncertain trench locations, installation of a single dedicated leachate well is not considered practical.

Groundwater is expected to discharge to surface at or before the property boundary; therefore, downgradient groundwater beyond the WDS boundary is not anticipated to be impacted and is expected to remain compliant with Guideline B-7. Parameters previously proposed for removal from the monitoring program (arsenic, magnesium, mercury, nickel, and silver) continue to be monitored pending regulatory concurrence.

5.2 Surface Water Assessment

Surface water quality in 2025 was within historical ranges for the Site. Tables are provided in **Appendix F, Item F-2**. Surface water monitoring locations are shown on Figure 04.

Surface water monitoring locations MCG-A, MCG-F, and MCG-G are considered representative of background surface water conditions for the North Baptiste WDS and nearby Selby Creek.

MCG-A is located upstream of the WDS in a ditch that flows from the north and enters the wetland area surrounding the landfill to the east. Observable flow and a defined flow path are present only under wet conditions. MCG-G is located upstream of the WDS in a creek flowing from the west and entering the wetland area south of the former landfill. Monitoring locations MCG-B, MCG-C, and MCG-D are situated within the wetland area around the toe of the WDS and do not exhibit observable flow or defined channels.

MCG-F (upstream) is located along Selby Creek east of the WDS, upstream of the confluence with the tributary draining the marsh adjacent to the WDS. MCG-E (downstream) is located along Selby Creek east of Highway 62, downstream of the confluence with the tributary draining the marsh adjacent to the WDS.

Surface Water Location MCG-A
Background surface water monitoring location MCG-A replaced MCG-A2 in 2022 and serves as the background location for the downgradient wetland stream east of the waste mound. During the 2025 monitoring period, samples were collected during the spring and summer events; dry conditions prevented sampling during the fall event.

Total iron exceeded the PWQO during both the spring and summer events, and total cobalt exceeded the PWQO during the summer event. Historically, total aluminum, total cobalt, total copper, total iron, total lead, total phosphorus, and total zinc have intermittently exceeded their respective PWQOs at this location. In addition, pH has sporadically fallen below the lower PWQO criterion.

Surface Water Location MCG-B

MCG-B is located in a depression at the toe of the waste mound. Historically, large fluctuations in alkalinity and TDS have been observed at this location. During the 2025 monitoring period, samples were collected during the spring and summer events; dry conditions prevented sampling during the fall event.

Alkalinity reached a historic maximum during the summer 2024 sampling event but has since returned to concentrations consistent with historical conditions. During 2025, exceedances of the PWQO were observed for total phosphorus and total iron in both sampling events.

Surface Water Location MCG-C

MCG-C is located directly south of the waste mound within the wetland area. During the 2025 monitoring period, samples were collected during the spring and summer events; dry conditions prevented sampling during the fall event.

Exceedances of the PWQO were observed for total phosphorus and total iron in both sampling events.

A review of surface water quality at MCG-B and MCG-C indicates impacts consistent with landfill leachate migration, as indicator parameters exceed PWQOs and other surface water criteria identified in Table 11. Concentrations of alkalinity, conductivity, and sulphate are elevated relative to background location MCG-A.

Surface Water Location MCG-D

MCG-D is located directly south of the waste mound within the wetland area and further south than MCG-C. During the 2025 monitoring period, samples were collected during the spring and summer events; dry conditions prevented sampling during the fall event.
Exceedances of the PWQO during 2025 were observed as follows:

- Phenols – Summer
- Total Phosphorus – Summer
- Dissolved Aluminum (0.45 µm) – Spring and Summer
- Total Cadmium – Summer
- Total Cobalt – Summer
- Total Copper – Spring and Summer
- Total Iron – Spring and Summer
- Total Lead – Summer
- Total Zinc – Summer

Surface Water Location MCG-E

MCG-E is located approximately 1.6 km downstream of the WDS and approximately 950 m downstream of the wetland area. During the 2025 monitoring period, samples were collected during all three monitoring events, with duplicate samples obtained.

The only PWQO exceedance observed in 2025 was total iron during the summer event, which exceeded the guideline in both the primary and duplicate samples. All other parameters remained below applicable PWQO guidelines.

Surface Water Location MCG-F

MCG-F is located along Selby Creek upstream of the confluence with drainage from the wetland/pond adjacent to the WDS. During the 2025 monitoring period, samples were collected during all three monitoring events.

Exceedances of the PWQO were observed for dissolved aluminum (0.45 µm) during the summer event, total phosphorus during the fall event, and total iron during the summer and fall events. All other parameters remained below applicable PWQO guidelines.

Surface Water Location MCG-G

Western background surface water monitoring location MCG-G is located on the west and south sides of the Site, slightly upgradient of the waste mound. During the 2025 monitoring period, samples were collected during all three monitoring events.

Exceedances of the PWQO were limited to total iron during the spring event and total copper during the summer event. All other parameters remained below applicable PWQO guidelines.

Surface Water Location MCG-H

MCG-H is located downgradient of MCG-A and MCG-B at the point where the stream from MCG-A enters the wetland. During the 2025 monitoring period, samples were collected during all three monitoring events.

A historic high alkalinity concentration was observed in October 2024; however, concentrations decreased in 2025 to levels consistent with historical conditions, with an average concentration of 37.67 mg/L.

Overall, the 2025 surface water monitoring results indicate that background locations (MCG-A, MCG-F, and MCG-G) generally reflect typical baseline conditions, with occasional exceedances of PWQOs for parameters such as total iron and, less frequently, total copper and dissolved aluminum. In contrast, monitoring locations located within the wetland area adjacent to the waste mound (MCG-B, MCG-C, and MCG-D) continue to exhibit exceedances of leachate indicator parameters, including total phosphorus, total iron, dissolved aluminum, and select metals, with elevated alkalinity, conductivity, and sulphate relative to background conditions. Downstream location MCG-E demonstrated limited impacts during 2025, with only a single exceedance (total iron in summer), suggesting attenuation prior to discharge to Selby Creek. Therefore, the results are consistent with historical trends, indicating localized wetland impacts near the WDS while downstream surface water quality remains generally within applicable guideline criteria.

5.2.1 Surface Water Quality Comparison for Selby Creek

A comparison of surface water chemistry at location MCG-F (upstream of the confluence of Selby Creek with the tributary leaving the WDS) to MCG-E (downstream of the confluence of Selby Creek with the tributary leaving the WDS) for the 2025 results was completed for all chemical parameters tested, and the comparison table is provided in **Appendix G**. The average concentration for the monitoring period for each location was calculated, and then the percent difference was determined. The chemistry results for 2025 show relatively consistent results for each parameter, thus, the average values were used for the comparison. For leachate indicator parameters, the 2025 results demonstrate that average downstream concentrations are elevated for several parameters (e.g., conductivity, hardness, chloride, sulphate, total calcium, total magnesium, total potassium and total sodium) relative to the average upstream results. However, a number of parameter concentrations (e.g., alkalinity, TKN, total iron and total manganese) at the upstream location were elevated relative to the downstream location. The remaining leachate indicator parameters (ammonia, nitrate, total boron and total zinc) were not detectable at both the upstream and downstream locations.

It is also noted that the upstream water source is likely from an igneous rock formation, and downstream groundwater may be from a clastic metasedimentary rock (e.g., limestone), which may affect water quality. The WDS and northern portion of Hershel Township has been mapped as igneous bedrock while the lower half is mapped as metasedimentary rocks (MNDM, 1991). The impact from de-icing chemicals also complicates the comparisons.

5.2.2 Toxicity Assessment of Surface Water Quality

Toxicity samples were collected from MCG-C and MCG-H during the spring and from MCG-H during the fall sampling events for single-concentration acute lethality testing of Daphnia magna (48 hour) and rainbow trout (96 hour). The single concentration test is typically reported as a "pass" or "fail" test, with 50% mortality being the passing limit.

The results from the toxicity testing at both locations and for the spring and fall sampling events indicated that the percent mortality for Daphnia magna and Rainbow Trout was 0%. All results classified as a "pass". The toxicity laboratory results are included in **Appendix D, Item D-4**.

5.3 Mann-Kendall Analysis

A Mann-Kendall trend analysis was conducted for all groundwater and surface water monitoring locations using available data from the past 10 years. The analysis supports interpretation of 2025 results and informs future monitoring programs. A summary for each location is provided below, and the complete trend analysis is presented in **Appendix I**.

NB-MW1:
Parameters evaluated: Alkalinity, Hardness, pH, Phenols, Total Phosphorus, Turbidity, Dissolved Aluminum (0.45 µm), Dissolved Copper, Dissolved Zinc.

- Hardness: decreasing trend
- Turbidity: probable decreasing trend
- Alkalinity: probable increasing trend
- Dissolved Aluminum: increasing trend (below laboratory detection limit)
- Dissolved Copper: stable trend
- pH, Total Phosphorus, Dissolved Zinc: no discernible trend
- Phenols: insufficient data (below detection limit since May 2023)

Historical trends: Chloride, conductivity, and sodium increased from 2014–2020, decreased 2020–2022, and increased again in 2023–2024, likely due to road de-icing on North Baptiste Road.

NB-MW2R:

Parameters evaluated: Alkalinity, Hardness, Phenols, Total Phosphorus, Turbidity, Dissolved Aluminum (0.45 µm), Dissolved Iron, Dissolved Silver.

- Hardness, Total Phosphorus, Turbidity: decreasing trends
- Alkalinity, Dissolved Aluminum: no discernible trend
- Phenols, Dissolved Iron, Dissolved Silver: insufficient data (recent samples below detection limits)

NB-MW3:

Parameters evaluated: Chloride, Hardness, Phenols, TDS, Total Phosphorus, Turbidity, Dissolved Aluminum (0.45 µm), Dissolved Cobalt, Dissolved Iron, Dissolved Manganese.

- Increasing trends: Chloride, Hardness, Phenols, TDS, Dissolved Cobalt, Dissolved Iron, Dissolved Manganese
- Decreasing trends: Total Phosphorus, Turbidity
- Dissolved Aluminum: no discernible trend

NB-MW4:

Parameters evaluated: Hardness, Phenols, Total Phosphorus, Turbidity, Dissolved Cadmium.

- Hardness: probable decreasing trend
- Turbidity: decreasing trend
- Phenols, Total Phosphorus: stable trend
- Dissolved Cadmium: insufficient data (below detection limit since 2021)

NB-MW5R:

Parameters evaluated: DOC, Hardness, Phenols, Total Phosphorus, Turbidity, Dissolved Aluminum (0.45 µm), Dissolved Cobalt, Dissolved Iron, Dissolved Manganese, Dissolved Silver, Dissolved Zinc.

- Hardness: increasing trend
- DOC, Turbidity: decreasing trends
- Total Phosphorus, Dissolved Manganese: stable trend
- Dissolved Aluminum, Dissolved Iron: no discernible trend
- Phenols, Dissolved Cobalt, Dissolved Silver, Dissolved Zinc: insufficient data (majority below detection limit)

The 2025 Mann-Kendall trend analysis indicates that background conditions at NB-MW1 and NB-MW2R remain generally stable, with occasional probable increasing or decreasing trends for select parameters such as alkalinity, hardness, and turbidity. Downgradient wells within the WDS

boundary (NB-MW3, NB-MW4, and NB-MW5R) continue to show evidence of leachate influence, primarily reflected in elevated hardness, dissolved metals, and DOC, while most parameters remain within applicable ODWQS limits. Trends for Phenols, Dissolved Cobalt, Dissolved Silver, and Dissolved Zinc could not be established at several wells due to results below laboratory detection limits. Historical patterns of chloride, sodium, and conductivity suggest intermittent impacts from road de-icing, with concentrations fluctuating over the past decade. Overall, the groundwater data indicate localized leachate effects within the WDS boundary, while upgradient and off-property wells remain consistent with background water quality. Continued monitoring of NB-MW3 and NB-MW5R as leachate indicator wells is recommended to track potential changes over time.

MCG-A:

Parameters evaluated: pH, Total Phosphorus, Dissolved Aluminum (0.20 µm), Dissolved Aluminum (0.45 µm), Total Cobalt, Total Copper, Total Iron.

- Dissolved Aluminum (0.20 µm), Total Copper: stable trend
- pH, Dissolved Aluminum (0.45 µm), Total Iron: no discernible trend
- Total Phosphorus, Total Cobalt: insufficient data (majority below detection limit)

MCG-B:

Parameters evaluated: Sulphate, Phenols, Total Phosphorus, Dissolved Aluminum (0.45 µm), Total Boron, Total Cadmium, Total Cobalt, Total Copper, Total Iron, Total Lead, Total Silver, Total Zinc.

- Decreasing trends: Sulphate, Phenols, Total Phosphorus, Total Zinc
- Probable increasing trend: Total Copper
- Probable decreasing trend: Total Boron
- Stable trend: Total Cobalt
- No discernible trend: Dissolved Aluminum (0.45 µm), Total Cadmium, Total Iron, Total Lead
- Total Silver: insufficient data (below detection limit since 2017)

MCG-C:

Parameters evaluated: Phenols, Total Phosphorus, Dissolved Aluminum (0.20 µm), Total Boron, Total Cadmium, Total Cobalt, Total Iron, Total Lead, Total Zinc.

- Increasing trend: Phenols
- Decreasing trends: Total Phosphorus, Total Boron
- Stable trend: Dissolved Aluminum (0.20 µm), Total Cobalt
- No discernible trend: Total Iron, Total Lead, Total Zinc
- Total Cadmium: insufficient data (below detection limit since 2016)

MCG-D:

Parameters evaluated: pH, Phenols, Total Phosphorus, Dissolved Aluminum (0.20 µm), Dissolved Aluminum (0.45 µm), Total Cadmium, Total Cobalt, Total Copper, Total Iron, Total Lead, Total Nickel, Total Zinc.

- Increasing trends: pH; probable increasing: Dissolved Aluminum (0.45 µm)
- Decreasing trends: Total Nickel; probable decreasing: Total Lead
- Stable trends: Phenols, Dissolved Aluminum (0.20 µm), Total Copper
- No discernible trend: Total Phosphorus, Total Cadmium, Total Cobalt, Total Iron, Total Zinc

MCG-E:

Parameters evaluated: pH, Phenols, Total Phosphorus, Dissolved Aluminum (0.20 µm), Dissolved Aluminum (0.45 µm), Total Cadmium, Total Copper, Total Iron, Total Lead.

- Increasing trends: Total Phosphorus; Total Iron (historically stable since 2023)
- pH: recent increasing trend
- Stable trend: Phenols
- No discernible trends: Dissolved Aluminum (0.20 µm), Dissolved Aluminum (0.45 µm)
- Total Cadmium, Total Copper, Total Lead: insufficient data (majority below detection limit)

MCG-F:

Parameters evaluated: pH, Phenols, Total Phosphorus, Dissolved Aluminum (0.20 µm), Total Cadmium, Total Copper, Total Iron.

- Probable increasing trends: Total Phosphorus, Total Iron
- No discernible trends: pH, Dissolved Aluminum (0.20 µm)
- Phenols, Total Cadmium, Total Copper: insufficient data (majority below detection limit)

MCG-G:

Parameters evaluated: pH, Phenols, Total Phosphorus, Dissolved Aluminum (0.20 µm), Total Cadmium, Total Copper, Total Iron.

- Probable increasing trend: Total Phosphorus
- Stable trends: pH, Dissolved Aluminum (0.20 µm)
- No discernible trend: Total Iron
- Phenols, Total Cadmium, Total Copper: insufficient data (majority below detection limit)

MCG-H:

Parameters evaluated: pH, Phenols, Total Phosphorus, Dissolved Aluminum (0.20 µm), Total Cadmium, Total Copper, Total Iron.

- Increasing trend: Total Phosphorus

- Decreasing trend: Total Cadmium
- No discernible trends: pH, Phenols, Dissolved Aluminum (0.20 µm), Total Iron

Trend analysis for surface water locations indicates a mix of stable, increasing, and decreasing trends depending on parameter and location. Background locations (MCG-A, MCG-F, MCG-G) generally show stable conditions, although total phosphorus and select metals occasionally exceed laboratory detection limits, limiting trend interpretation. Downgradient and wetland-influenced locations (MCG-B, MCG-C, MCG-D, MCG-E, MCG-H) display evidence of both increasing and decreasing trends for parameters including total phosphorus, turbidity, pH, and dissolved metals, suggesting localized impacts from leachate and wetland processes. Parameters such as Phenols, Total Cadmium, and Total Copper were frequently below detection limits at multiple locations, limiting trend assessment. Overall, surface water quality remains largely consistent with historical patterns, with isolated trends highlighting areas requiring ongoing monitoring near the WDS and adjacent wetlands.

5.4 Landfill Gas Assessment

The RKI Eagle gas monitoring results for 2025 ranged from 0 to 10 ppm in the spring and were all 0 ppm in the fall. Gas measurements were collected from the Attendant's building and all well heads. These results indicate methane gas concentrations are well below concentrations of concern (i.e., 10,000 ppm) for the subsurface, buildings and structures on-site.

5.5 Trigger Mechanisms and Contingency Plan

The Trigger Mechanisms and Contingency Plan was finalized in January 2020 in consultation with the MECP and is provided in **Appendix H**. Trigger assessment points for surface water are toxicity samples at MCG-C and MCG-H. Toxicity testing includes a 48-hour *Daphnia magna* single concentration test and a 96-hour Rainbow Trout single concentration test with 50% mortality as the passing limit. The surface water toxicity results for 2025 did not trigger the Tier 1 Contingency Plan response for surface water.

Groundwater trigger mechanisms have been established for monitoring wells NB-MW3 (east) and NB-MW5R (south). Groundwater sampling is conducted on a semi-annual basis, with assessment parameters including alkalinity, chloride, dissolved iron, dissolved manganese, dissolved sodium, and TDS. The Contingency Plan is triggered if three or more trigger parameters exceed the 75th percentile of historical concentrations for a given assessment point in a single discrete sample. In

such cases, Tier 1 of the Contingency Plan is initiated, which involves repeat sampling within one month to confirm or refute the initial results at the affected location.

Upon review of the fall sampling results, monitoring well NB-MW3 met the Tier 1 trigger criteria, as concentrations of chloride, dissolved iron, and TDS exceeded the 75th percentile of the historical dataset. In accordance with Tier 1 of the Contingency Plan, a confirmation sampling event was completed on November 18, 2025, to confirm or refute the results at NB-MW3. Results from the confirmation sampling indicated a reduction in dissolved iron concentrations below the Tier 1 trigger threshold, Therefore, no Tier 2 trigger mechanism was warranted.

6 On-Site Operations

The North Baptiste WTS currently collects waste in covered waste bins (8 cubic yards). The waste is periodically picked up and transferred to one of the other WDSs operated by the MHHs. The Site has segregated collection areas for scrap metal, tires, large bulky items (eg., couches and mattresses), electronic waste and a recycling transfer station (8 cubic yard bin) for household blue box recyclable containers (eg., aluminum cans, metal cans, plastic bottles) and fibre (eg., paper and cardboard). The Municipality implemented a clear bag policy in October 2014 which was updated in May 2018, to facilitate increased waste diversion to extend the operational life of their municipal landfill sites. The clear bag policy applies to both recyclable and household waste, with non-compliant bags to be refused unless residents remove recyclables from the bag.

Signage at the WDS entrance displays the Site operating hours, tipping fees and any restrictions. Access to the WTS is controlled via a locked at the entrance. Figure 02 illustrates the aerial view of the Site after much of the capping material had been placed on the WDS mound and geotextile and granular material had been placed to cover the former WDS.

No visible signs of erosion of the former WDS cover material was observed during the 2025 Site inspections. The bulk waste pile was observed to have some items outside of its containment zone during the summer and fall inspections.

6.1 Annual Waste Summary

Although access to the Site is controlled by a locked steel security gate, it was reported that residents sometimes deposit garbage near the WTS entrance outside of normal operating hours. The Municipality takes steps to deter these occurrences. This contribution is collected by site personnel, recorded and included in the total waste volumes identified for the Site.

The quarterly breakdown for recyclables (R) and waste (W) for 2024 and 2025, excluding the segregated materials discussed in Section 6.2, are shown below in Table 12. Based on the assumed recycling values for the entire year, it is estimated a total of 11.95% of residential waste was recycled in 2025.

The 2025 numbers indicate that recycling quantities have decreased while waste quantities have increased at the North Baptiste Lake WTS from 2024 quantities by 8.54% and 5.41%, respectively. The waste calculations are based on bag counts at the waste sites. There were 12,311 bags deposited at the North Baptiste WDS in 2025, and an assumed 15 kg/bag (MHHs) was used in the tonnage calculations.

Table 12: Annual Recycling and Waste Tonnages

Q1		Q2		Q3		Q4		Totals	
2024									
R	**W**	**R**	**W**	**R**	**W**	**R**	**W**	**R**	**W**
5.1	34.0	6.6	41.9	10.7	57.2	4.9	42.2	**27.4**	**175.2**
2025									
R	**W**	**R**	**W**	**R**	**W**	**R**	**W**	**R**	**W**
5.97	35.52	5.7	44.36	7.72	62.52	5.67	43.28	**25.06**	**184.67**

6.2 Summary of Segregated Materials Removed

Segregated materials were also collected at the nine waste disposal/transfer sites in the MHHs.

The breakdown of these waste in 2025 at the North Baptiste WTS was as follows:

- Scrap metal – 0.0 tonnes;
- Bulky waste – 0.0 tonnes;
- Electronic waste – 0.0 tonnes;
- 39 tires.

6.3 Annual Complaints, Rejected Wastes & Emergencies Summary

There were no documented complaints, rejected waste, or emergency situations reported for the Site in 2025.

7 Summary Statements, Conclusions and Recommendations

The following summary statements, conclusions, and recommendations are based on the observations and results from the 2025 monitoring program:

7.1 Site Operations

- The WTS provides recycling and waste bins at the north of the Site in an orderly and accessible layout for public use (Figure 02).
- Oversized or metal items should be scheduled for pick-up before exceeding designated drop-off areas.
- The final topsoil cap and seeding of the former WDS mound were completed in 2018; both the cap and vegetation were observed to be in good condition during 2025 site visits.
- Covered waste bins reduce wind-blown litter; any debris should be collected regularly in accordance with the January 2020 ECA, including along North Baptiste Road and the Site.
- Waste transferred to the Site should continue to be tracked and documented, including bag counts or truck/vehicle loads.
- Records of public concerns or complaints regarding the WTS and responses from the Municipality should continue to be collected and documented.
- Public education on waste reduction and recycling should remain an ongoing effort.

7.2 Groundwater

- Groundwater elevations indicate radial flow away from the landfill, primarily toward the southeast.
- Monitoring wells NB-MW3, NB-MW4, and NB-MW5R are considered impacted by leachate.
- Groundwater is expected to be discharged to surface at or before the property line; downgradient groundwater is not expected to be impacted and remains compliant with Guideline B-7-1.
- Previous MECP reviews (2018, 2020) recommended installation of a leachate indicator well to help streamline monitoring; however, it is suggested that NB-MW3 continue to be used as the leachate well to the east and NB-MW5R be used as the leachate well to the south.
- Mann-Kendall trend analysis indicates that background wells NB-MW1 and NB-MW2R remain generally stable, with occasionally probable increasing or decreasing trends.
- Downgradient wells within the WDS boundary continue to show evidence of leachate influence.

- Continued monitoring of NB-MW3 and NB-MW5R as leachate indicator wells is recommended to track potential changes over time.

7.3 Surface Water

- Surface water quality at MCG-B, MCG-C, and MCG-D indicates localized impacts immediately east and south of the WDS.
- Overall, surface water quality remains largely consistent with historical patterns, with isolated trends highlighting areas requiring ongoing monitoring near the WDS and adjacent wetlands.
- In response to the MECP SW Technical Review, it was recommended in 2019 that dissolved metals including arsenic, magnesium, mercury, molybdenum, nickel, silicon, and silver be removed from the monitoring program. No confirmation was received; these parameters will continue to be monitored.
- The MECP have recommended that surface water quality is no longer compared to the Table A and Table B criteria as it wasn't officially adopted by the MECP.

7.4 Landfill Gas

- Gas concentrations should continue to be monitored semi-annually at the Attendant's building and all monitoring wells.
- Results from 2025 (0–10 ppm) indicate that gas concentrations remain well below levels of concern.

7.5 Trigger Mechanisms and Contingency Plan

- The Trigger Mechanisms and Contingency Plan for surface water and groundwater was finalized in January 2020.
- Surface water toxicity results in 2025 initiated a Tier 1 Contingency response. A confirmation sampling event on November 18, 2025, indicated that a Tier 2 response was not required.

8 Limiting Conditions

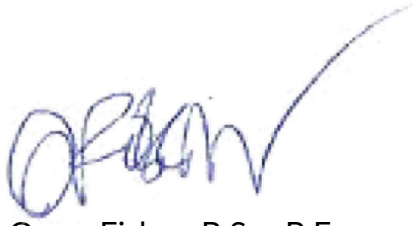
The conclusions presented in this report represent our professional opinion and are based upon the work described in this report and any limiting conditions in the terms of reference, scope of work, or conditions noted herein.

The findings presented in this report are based on conditions observed at the specified dates and locations, the analysis of samples for the specified parameters, and information obtained for this project. Unless otherwise stated, the findings cannot be extended to previous or future site conditions, locations that were not investigated directly, or types of analysis not performed.

BluMetric Environmental Inc. makes no warranty as to the accuracy or completeness of the information provided by others, or of conclusions and recommendations predicated on the accuracy of that information.

This report has been prepared for The Corporation of the Municipality of Hastings Highlands. Any use a third party makes of this report, any reliance on the report, or decisions based upon the report, are the responsibility of those third parties unless authorization is received from BluMetric in writing. BluMetric Environmental Inc. accepts no responsibility for any loss or damages suffered by any unauthorized third party as a result of decisions made or actions taken based on this report.

Respectfully submitted,
BluMetric Environmental Inc.



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Tables

Table 13: 2025 Groundwater Chemistry Results Hastings Highlands						Location	NB-MW1	NB-MW1	NB-MW2R	NB-MW2R	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW4	NB-MW4	NB-MW5R	NB-MW5R
						Sample ID	NB MW1	NB MW 1	NB MW2R	NB MW 2R	NB MW3	AQC-GW1 (NB-M	NB MW 3	AQC-GW1 (NB-M	NB MW4	NB MW 4	NB MW5R	NB MW 5R
Parameter	Units	RUV-NB	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	Sample Date	2025-May-07	2025-Oct-21	2025-May-07	2025-Oct-21	2025-May-07	2025-May-07	2025-Oct-21	2025-Oct-21	2025-May-07	2025-Oct-21	2025-May-07	2025-Oct-21
						Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-
Anions						Detection Limit												
Chloride	mg/L	-	250	-	-	1	63	17	3.4	2.7	280	280	270	260	27	30	24	23
Nitrate + Nitrite	mg/L	-	-	-	-	0.1	0.22	0.14	<0.1	0.11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate as N	mg/L	2.74375	10	-	-	0.1	0.22	0.14	<0.1	0.11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/L	-	1	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	-	500	-	-	1	7	6.8	5.5	5.2	14	14	14	14	19	19	19	18
Cations																		
Calcium (diss)	mg/L	-	-	-	-	0.2	15	5.1	6.9	6.9	110	110	110	110	31	31	21	22
Magnesium (diss)	mg/L	-	-	-	-	0.05	2.8	0.89	2.8	2.7	41	43	45	43	6.3	6.3	6.3	6.3
Potassium (diss)	mg/L	-	-	-	-	0.2	2	1.2	1.3	1.4	6.4	6.6	6.8	6.6	2.9	2.9	2.4	2.6
Sodium (diss)	mg/L	110.9	200	-	-	0.1	36	20	3.8	4	51	52	56	54	6	6.2	4.7	5.1
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	-	30 - 500	See Factsheet	-	1	31	27	32	31	140	140	150	150	59	65	39	38
Ammonia as N	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
Chemical Oxygen Demand	mg/L	-	-	-	-	4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4	<4
Dissolved Organic Carbon	mg/L	-	5	-	-	0.4	1.2	2	0.9	1.4	1.9	1.9	2.9	3.1	0.8	1.4	1.2	1.9
Electrical Conductivity	uS/cm	-	-	-	-	2	310	140	94	86	1300	1300	1300	1300	270	270	220	220
Hardness (as CaCO3)	mg/L	-	80 - 100	-	-	1	50	16	29	29	450	460	460	450	100	100	78	80
pH	pH units	-	6.5 - 8.5	6.5 - 8.5	-		7.07	7.29	7.7	7.66	7.35	7.3	7.39	7.42	8.07	8.06	7.57	7.7
Phenols	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
Total Dissolved Solids	mg/L	-	500	-	-	10	225	180	115	80	1120	1130	745	795	225	190	360	225
Total Kjeldahl Nitrogen	mg/L	-	-	-	-	0.1	<0.1	<0.1	<0.1	<0.1	0.13	0.11	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Phosphorus	mg/L	-	-	0.03	-	0.02	**1.9**	**1.2**	**1**	**0.74**	**0.082**	**0.077**	**0.23**	**0.18**	**1.2**	**0.73**	**16**	**7.4**
Total Suspended Solids	mg/L	-	-	-	-	10	560	1400	690	490	49	50	94	85	680	380	8200	11000
Turbidity	NTU	-	5	-	-	0.1	250	670	83	120	3.1	3.4	7.1	8.6	45	98	2000	4700
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.055	0.1	-	Calculated	0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
Arsenic (diss)	mg/L	-	0.01	-	0.005	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
Barium (diss)	mg/L	-	1	-	-	0.002	0.02	0.0069	0.0025	0.0028	0.12	0.12	0.12	0.12	0.012	0.012	0.017	0.016
Beryllium (diss)	mg/L	-	-	Calculated	-	0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Boron (diss)	mg/L	1.25375	5	-	0.2	0.01	<0.01	<0.01	<0.01	<0.01	0.13	0.13	0.14	0.13	<0.01	0.012	<0.01	0.015
Cadmium (diss)	mg/L	-	0.005	-	Calculated	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (diss)	mg/L	-	0.05	-	-	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
Cobalt (diss)	mg/L	-	-	-	0.0009	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.017	0.018	0.0046	0.0045	<0.0005	<0.0005	<0.0005	<0.0005
Copper (diss)	mg/L	0.5005	1	-	Calculated	0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009
Iron (diss)	mg/L	0.16975	0.3	0.3	-	0.1	<0.1	<0.1	<0.1	<0.1	0.74	0.76	1.1	1.1	<0.1	<0.1	<0.1	<0.1
Lead (diss)	mg/L	-	0.01	-	Calculated	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
Manganese (diss)	mg/L	0.0255	0.05	-	-	0.002	<0.002	<0.002	<0.002	<0.002	0.23	0.23	0.07	0.068	<0.002	<0.002	0.15	0.23
Mercury (diss)	mg/L	-	0.001	0.0002	-	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
Molybdenum (diss)	mg/L	-	-	-	0.04	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0017	0.0019	0.0019	0.0021
Nickel (diss)	mg/L	-	-	0.025	-	0.001	<0.001	<0.001	<0.001	<0.001	0.0096	0.0098	0.0068	0.0068	<0.001	<0.001	<0.001	<0.001
Selenium (diss)	mg/L	-	0.05	0.1	-	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silicon (diss)	mg/L	-	-	-	-	0.05	7.7	8.4	11	12	14	14	16	15	8.3	8.5	8.1	8.7
Silver (diss)	mg/L	-	-	0.0001	-	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Strontium (diss)	mg/L	-	-	-	-	0.001	0.19	0.058	0.044	0.044	1	1	1	1	0.099	0.098	0.11	0.11
Thallium (diss)	mg/L	-	-	-	0.0003	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
Titanium (diss)	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
Vanadium (diss)	mg/L	-	-	-	0.006	0.0005	<0.0005	0.00077	0.0035	0.0039	<0.0005	<0.0005	0.00099	0.00089	<0.0005	<0.0005	<0.0005	0.00051
Zinc (diss)	mg/L	-	5	-	0.02	0.005	0.01	0.018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim

Table 14: 2025 Surface Water Chemistry Results Hastings Highlands						Location	MCG-A	MCG-A	MCG-B	MCG-B	MCG-C	MCG-C	MCG-D	MCG-D	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E
						Sample ID	MCG-A	MCG-A	MCG-B	MCG-B	MCG-C	MCG-C	MCG-D	MCG-D	MCG-E	NB-QAQC-SW1 (MCG-E)	MCG-E	QAQC-SW1 (MC	MCG-E
Parameter	Units	MECP-GD-TA	MECP-GD-TB	PWQO-GENERAL	PWQO-INTERIM	Sample Date	2025-May-07	2025-Jul-07	2025-May-07	2025-Jul-07	2025-May-07	2025-Jul-07	2025-May-07	2025-Jul-07	2025-May-07	2025-May-07	2025-Jul-07	2025-Jul-07	2025-Oct-21
						Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions						Detection Limit													
Chloride	mg/L	180	128	-	-	1	3.3	7.7	7.4	7.8	1.6	<20	<1	<20	21	21	43	44	51
Nitrate + Nitrite	mg/L	-	-	-	-	0.1	<0.1	0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	0.18	0.19	<0.1
Nitrate as N	mg/L	-	-	-	-	0.1	<0.1	0.15	<0.1	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	<0.1	0.18	0.19	<0.1
Nitrite as N	mg/L	-	-	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	100	-	-	-	1	2	5.2	32	3.3	1	25	2.7	20	3.7	3.2	5.7	5.8	11
Cations																			
Calcium (tot)	mg/L	-	-	-	-	0.2	3.7	8.7	110	74	7.2	33	2.8	18	5.7	5.6	10	10	13
Magnesium (tot)	mg/L	-	-	-	-	0.05	0.38	0.89	14	10	2	8.4	0.89	4.1	0.92	0.92	1.6	1.6	2.3
Potassium (tot)	mg/L	-	-	-	-	0.2	0.36	0.94	14	13	1.4	0.88	0.37	2.2	0.59	0.59	0.91	0.91	1.6
Sodium (tot)	mg/L	-	-	-	-	0.1	3	7.1	15	17	3	11	1.9	2.7	17	16	31	31	37
Field Parameters																			
pH (Field)	pH units	-	-	-	-		6.67	6.18	6.74	6.74	6.64	6.62	6.1	6.43	7.35	7.35	6.96	6.96	7.61
Temperature	deg. C	-	-	-	-		10.4	14.8	12.9	16.8	13.4	20.4	13.1	18.5	12.8	12.8	17.7	17.7	5.5
General Chemistry																			
Alkalinity (as CaCO3)	mg/L	-	-	See Factsheet	-	1	12	26	300	290	16	120	6.8	71	14	14	27	26	27
Ammonia as N	mg/L	-	-	-	-	0.05	<0.05	<0.05	0.24	0.28	<0.05	<0.05	<0.05	1.4	<0.05	<0.05	<0.05	<0.05	<0.05
Biochemical Oxygen Demand	mg/L	-	-	-	-	2	<2	<2	<2	3	<2	7	<2	39	<2	<2	<2	<2	<2
Colour	TCU	-	-	-	-	2	8	24	8	13	110	220	95	540	32	32	44	44	21
Electrical Conductivity	uS/cm	-	-	-	-	2	44	96	660	580	52	260	29	140	120	120	240	230	310
Hardness (as CaCO3)	mg/L	-	-	-	-	1	11	27	320	260	20	120	11	49	17	18	32	32	44
pH	pH units	6 - 9	-	6.5 - 8.5	-		7.23	7.13	7.5	7.43	6.89	7.5	6.53	6.92	7.22	7.24	7.53	7.5	7.51
Phenols	mg/L	0.04	0.004	0.001	-	0.001	<0.001	<0.001	0.001	0.011	<0.001	<0.001	<0.001	**0.002**	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	-	-	-	-	10	45	65	405	325	85	215	35	135	70	100	150	155	120
Total Kjeldahl Nitrogen	mg/L	-	-	-	-	0.1	0.13	0.24	0.55	0.71	0.55	1.1	0.41	4.9	0.21	0.14	0.26	0.28	0.17
Total Phosphorus	mg/L	-	-	0.03	-	0.02	<0.02	<0.02	**0.073**	**0.071**	0.022	**0.051**	0.023	**2.1**	<0.02	<0.02	<0.02	<0.02	<0.02
Total Suspended Solids	mg/L	-	-	-	-	10	<10	<10	19	65	<10	16	<10	520	<10	<10	<10	<10	<10
Unionized Ammonia (Calc)	mg/L	-	-	-	-	0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	0.0016	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
Metals																			
Aluminum (diss, 0.2 µm)	mg/L	-	-	-	Calculated	0.005	0.04	0.029	<0.005	<0.005	0.074	0.019	0.17	0.079	0.05	0.045	0.039	0.04	0.01
Aluminum (tot)	mg/L	-	-	-	-	0.0049	0.071	0.05	0.0084	0.0074	0.079	0.03	0.18	2.2	0.09	0.09	0.059	0.058	0.012
Boron (tot)	mg/L	3.55	1.5	-	0.2	0.01	<0.01	<0.01	0.16	0.14	0.034	0.18	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (tot)	mg/L	0.00021	0.000017	-	Calculated	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	0.00046	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (tot)	mg/L	0.064	-	-	-	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
Cobalt (tot)	mg/L	-	-	-	0.0009	0.0005	<0.0005	0.00091	<0.0005	<0.0005	<0.0005	0.0014	<0.0005	0.044	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper (tot)	mg/L	0.0069	-	-	Calculated	0.0009	0.00098	0.0013	<0.0009	<0.0009	<0.0009	<0.0009	0.0014	0.0064	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009
Iron (tot)	mg/L	1	-	0.3	-	0.1	**0.45**	**1.8**	**16**	**19**	**0.73**	**4.2**	**0.51**	**98**	0.28	0.28	**0.68**	**0.68**	0.1
Lead (tot)	mg/L	0.002	-	-	Calculated	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.011	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (tot)	mg/L	-	-	-	-	0.002	0.032	0.14	1.1	1	0.059	1.1	0.047	15	0.014	0.016	0.012	0.012	0.0035
Zinc (tot)	mg/L	0.089	0.03	-	0.02	0.005	<0.005	0.0067	0.011	0.0057	<0.005	<0.005	<0.005	0.043	<0.005	<0.005	<0.005	<0.005	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim

Table 14: 2025 Surface Water Chemistry Results Hastings Highlands						Location	MCG-E	MCG-F	MCG-F	MCG-F	MCG-G	MCG-G	MCG-G	MCG-H	MCG-H	MCG-H
						Sample ID	QAQC-SW1 (MC	MCG-F	MCG-F	MCG-F	MCG-G	MCG-G	MCG-G	MCG-H	MCG-H	MCG-H
Parameter	Units	MECP-GD-TA	MECP-GD-TB	PWQO-GENERAL	PWQO-INTERIM	Sample Date	2025-Oct-21	2025-May-07	2025-Jul-07	2025-Oct-21	2025-May-07	2025-Jul-07	2025-Oct-21	2025-May-07	2025-Jul-07	2025-Oct-21
						Sample Depth	-	-	-	-	-	-	-	-	-	-
Anions						**Detection Limit**										
Chloride	mg/L	180	128	-	-	1	55	37	33	35	<1	<1	<1	6.7	6.7	8.9
Nitrate + Nitrite	mg/L	-	-	-	-	0.1	<0.1	<0.1	0.19	<0.1	<0.1	0.31	<0.1	<0.1	<0.1	<0.1
Nitrate as N	mg/L	-	-	-	-	0.1	<0.1	<0.1	0.19	<0.1	<0.1	0.31	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/L	-	-	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	100	-	-	-	1	11	2.6	3	5.5	2	3.2	4.4	2.2	2.1	7.1
Cations																
Calcium (tot)	mg/L	-	-	-	-	0.2	13	4.5	6	6.1	3.2	4	5.8	6.9	18	9.3
Magnesium (tot)	mg/L	-	-	-	-	0.05	2.4	0.77	1.1	1.3	0.68	0.9	1.5	1.3	3.8	2.3
Potassium (tot)	mg/L	-	-	-	-	0.2	1.6	0.96	0.98	1.7	0.41	0.51	0.84	0.92	1.5	1.7
Sodium (tot)	mg/L	-	-	-	-	0.1	38	28	28	25	1.2	1.5	1.9	5.4	7.3	6.7
Field Parameters																
pH (Field)	pH units	-	-	-	-		7.61	6.71	6.21	7.12	6.91	6.29	7.35	6.78	6.48	6.64
Temperature	deg. C	-	-	-	-		5.5	14.8	19.2	6.2	13.1	17.7	6.5	14.2	20.4	6.3
General Chemistry																
Alkalinity (as CaCO3)	mg/L	-	-	See Factsheet	-	1	25	9.6	23	39	8.6	13	24	22	63	28
Ammonia as N	mg/L	-	-	-	-	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15
Biochemical Oxygen Demand	mg/L	-	-	-	-	2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Colour	TCU	-	-	-	-	2	21	33	72	46	28	22	18	30	75	62
Electrical Conductivity	uS/cm	-	-	-	-	2	300	180	180	190	29	39	52	79	150	110
Hardness (as CaCO3)	mg/L	-	-	-	-	1	44	15	20	22	11	15	21	24	62	34
pH	pH units	6 - 9	-	6.5 - 8.5	-		7.49	6.99	7.36	7.18	7.02	7.17	7.28	7.12	7.3	7.11
Phenols	mg/L	0.04	0.004	0.001	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	-	-	-	-	10	125	125	115	100	40	30	<10	85	110	50
Total Kjeldahl Nitrogen	mg/L	-	-	-	-	0.1	0.15	0.23	0.41	0.28	0.13	0.21	0.23	0.15	0.63	0.47
Total Phosphorus	mg/L	-	-	0.03	-	0.02	0.024	<0.02	0.024	**0.033**	<0.02	<0.02	0.029	<0.02	**0.044**	**0.04**
Total Suspended Solids	mg/L	-	-	-	-	10	<10	<10	<10	<10	<10	12	<10	<10	36	<10
Unionized Ammonia (Calc)	mg/L	-	-	-	-	0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
Metals																
Aluminum (diss, 0.2 µm)	mg/L	-	-	-	Calculated	0.005	0.009	0.053	0.081	0.03	0.053	0.037	0.021	0.037	0.021	0.042
Aluminum (tot)	mg/L	-	-	-	-	0.0049	0.013	0.078	0.13	0.04	0.097	0.071	0.026	0.053	0.16	0.061
Boron (tot)	mg/L	3.55	1.5	-	0.2	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.018	<0.01
Cadmium (tot)	mg/L	0.00021	0.000017	-	Calculated	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (tot)	mg/L	0.064	-	-	-	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt (tot)	mg/L	-	-	-	0.0009	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00062	<0.0005
Copper (tot)	mg/L	0.0069	-	-	Calculated	0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	0.0014	0.001	<0.0009	<0.0009	<0.0009
Iron (tot)	mg/L	1	-	0.3	-	0.1	0.11	0.2	**1.3**	**0.53**	**0.32**	0.21	<0.1	0.11	**1.2**	**1.1**
Lead (tot)	mg/L	0.002	-	-	Calculated	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (tot)	mg/L	-	-	-	-	0.002	0.0031	0.017	0.063	0.02	0.017	0.033	0.0047	0.017	0.36	0.27
Zinc (tot)	mg/L	0.089	0.03	-	0.02	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim

Figures



LEGEND

Site Outline



REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

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N W E S

0 400 800 Metres

1:25,000

CLIENT

Municipality of Hasting Highlands

PROJECT

North Baptiste Lake Waste Transfer Station

TITLE

Site Location Map

BluMetric Environmental
1682 Woodward Drive
Ottawa,ON K2C 3R8
TEL: (613) 839-3053
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #	DATE
250253-08	February 24, 2026

DRAWN	CHECKED	FIG NO.	REV
PB	OF	01	0

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LEGEND

- Surface Water
- Monitoring Wells
- Current WDS Property
- Original WDS Property
- North Buffer Zone
- Site Feature

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

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N W E S

0 25 50 Metres

1:1,000

CLIENT

Municipality of Hasting Highlands

PROJECT

North Baptiste Lake Waste Transfer Station

TITLE

Site Plan

BluMetric® Environmental
1682 Woodward Drive
Ottawa,ON K2C 3R8
TEL: (613) 839-3053
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #	*DATE*		
250253-08	**February 24, 2026**		
DRAWN	*CHECKED*	*FIG NO.*	*REV*
PB	**OF**	**02**	**0**

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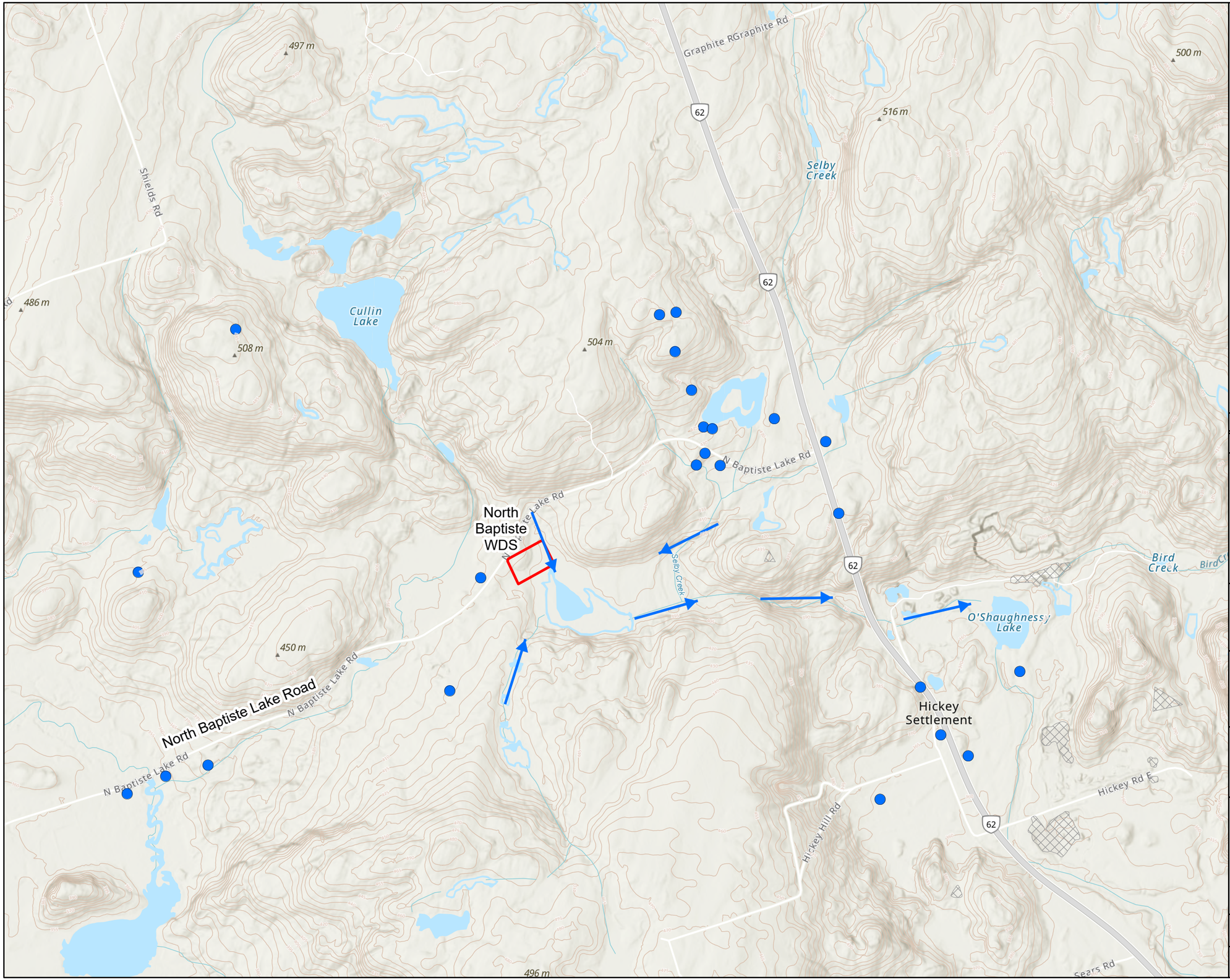

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

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N W E S

0 400 800 Metres

1:18,000

CLIENT

Municipality of Hasting Highlands

PROJECT

North Baptiste Lake Waste Transfer Station

TITLE

Regional Surface Water Flow Pattern and Private Water Wells

BluMetric Environmental
1682 Woodward Drive
Ottawa,ON K2C 3R8
TEL: (613) 839-3053
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #	DATE
250253-08	**February 24, 2026**

DRAWN	CHECKED	FIG NO.	REV
PB	**OF**	**03**	**0**

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LEGEND

- Monitoring Wells
- Potential Background Surface Water Sample Location
- Surface Water Sample Location
- Former Surface Water Sample Location
- Current WDS Property
- Original WDS Property
- North Buffer Zone

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

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N W E S

0 100 200 Metres

1:6,000

CLIENT

Municipality of Hasting Highlands

PROJECT

North Baptiste Lake Waste Transfer Station

TITLE

Groundwater & Surface Water Monitoring Locations

BluMetric Environmental
1682 Woodward Drive
Ottawa,ON K2C 3R8
TEL: (613) 839-3053
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #	DATE
250253-08	**February 24, 2026**

DRAWN	CHECKED	FIG NO.	REV
PB	**OF**	**04**	**0**

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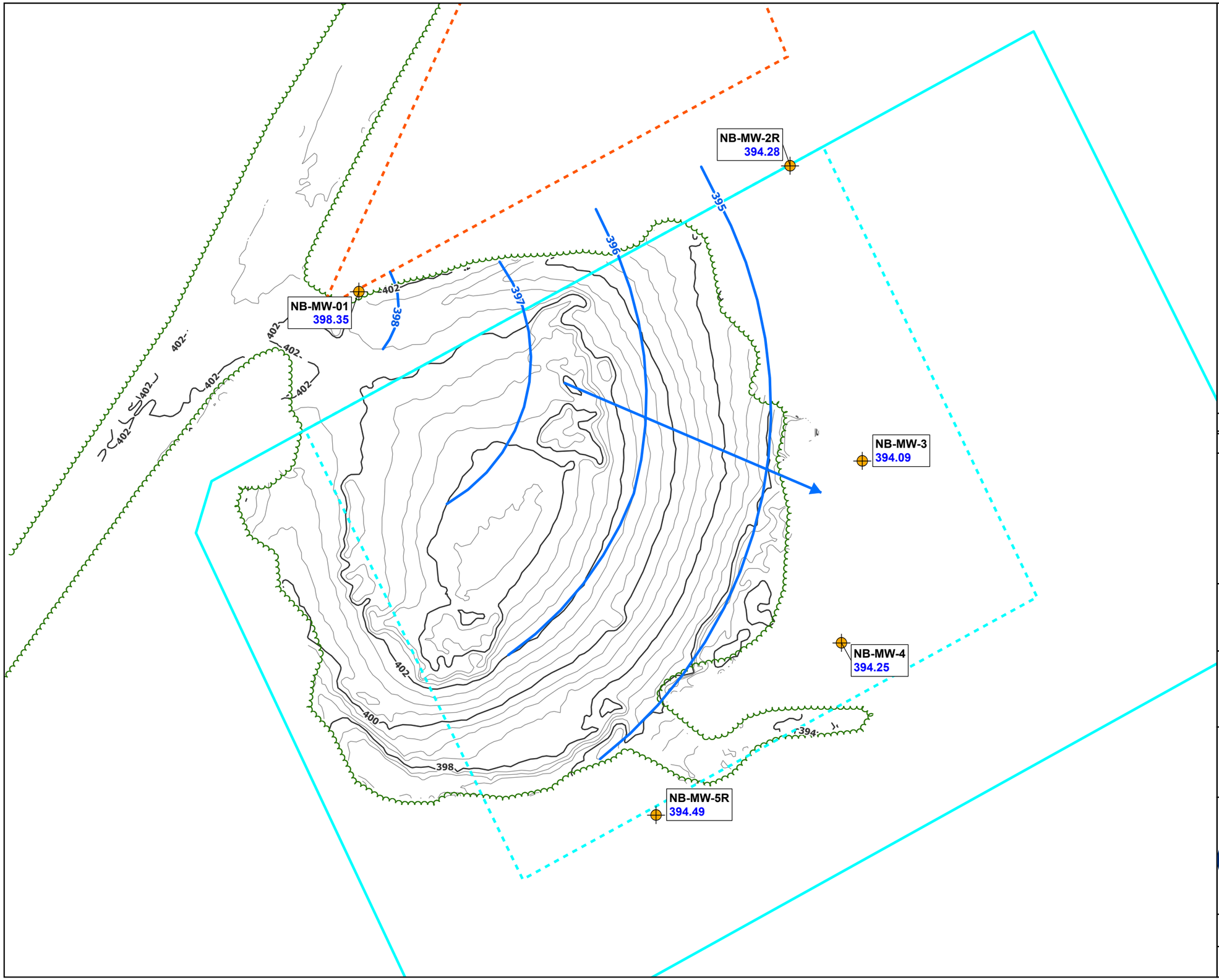

LEGEND

- Monitoring Wells
- Current WDS Property
- Original WDS Property
- North Buffer Zone
- Treeline
- Elevation Contour (2.0 m asl)
- Elevation Contour (0.5 m asl)
- Groundwater Elevation Contour
- Inferred Groundwater Flow Direction
- 397.94 Groundwater Elevation masl (Spring, 2025)

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC.
DO NOT SCALE DRAWING.
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N W E S

0 20 40 Metres

1:750

CLIENT

Municipality of Hasting Highlands

PROJECT

North Baptiste Lake
Waste Transfer Station

TITLE

Groundwater Flow Direction
Spring 2025

BluMetric Environmental
1682 Woodward Drive
Ottawa,ON K2C 3R8
TEL: (613) 839-3053
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #	DATE
250253-08	February 25, 2026

DRAWN	CHECKED	FIG NO.	REV
PB	OF	05	0

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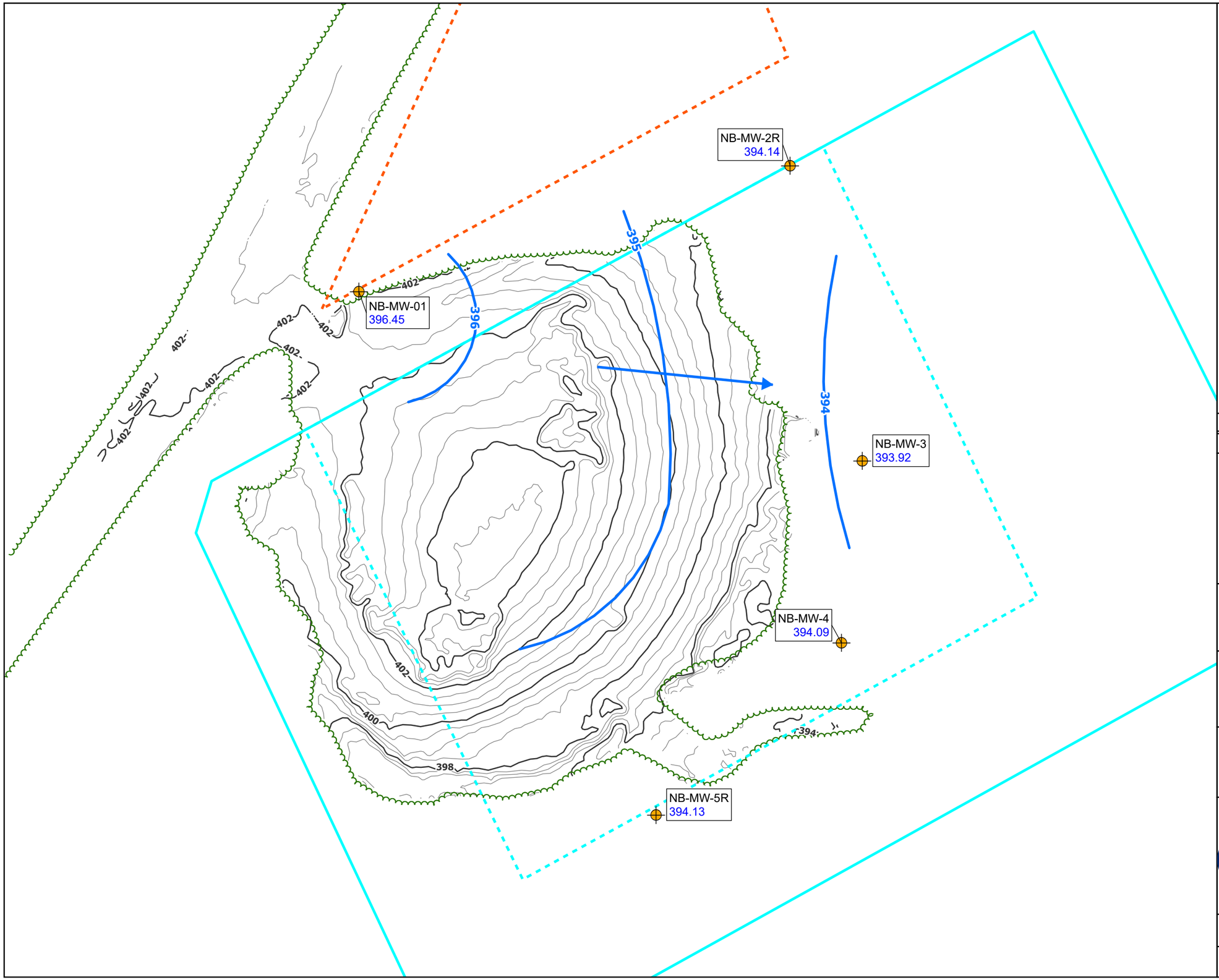

LEGEND

- Monitoring Wells
- Current WDS Property
- Original WDS Property
- North Buffer Zone
- Elevation Contour (0.5 m asl)
- Elevation Contour (2.0 m asl)
- Treeline
- Groundwater Elevation Contour
- Inferred Groundwater Flow Direction
- 397.94 Groundwater Elevation masl (Fall, 2025)

REV.	DESCRIPTION	YY/MM/DD	BY	CHK
1				

REFERENCES

PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC.
DO NOT SCALE DRAWING.
THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS.

N W E S

0 20 40 Metres

1:750

CLIENT

Municipality of Hasting Highlands

PROJECT

North Baptiste Lake
Waste Transfer Station

TITLE

Groundwater Flow Direction
Fall 2025

BluMetric Environmental
1682 Woodward Drive
Ottawa,ON K2C 3R8
TEL: (613) 839-3053
Email: info@blumetric.ca
Web: http://www.blumetric.ca

PROJECT #	DATE
250253-08	February 25, 2026

DRAWN	CHECKED	FIG NO.	REV
PB	OF	06	0

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Site Photographs



Photo 1: Signage at Front Entrance– May 7, 2025



Photo 2: Front Entrance with Signage – May 7, 2025



Photo 3: Waste and Recycling Bins – May 7, 2025



Photo 4: Bulk Waste Area – May 7, 2025



Photo 5: Scrap Metal Area – May 7, 2025



Photo 6: Tire Area – May 7, 2025



Photo 7: Stored Electrical Waste– May 7, 2025



Photo 8: Waste and Recycling Bins – May 7, 2025



Photo 9: Vegetation Growth on Cap – May 7, 2025



Photo 10: Vegetation Growth on Cap – May 7, 2025



Photo 11: Entrance from Within– May 7, 2025



Photo 12: Attendant's Building – May 7, 2025



Photo 13: MCG-A monitoring location – May 7, 2025



Photo 14: MCG-B monitoring location – May 7, 2025



Photo 15: MCG-C monitoring location – May 7, 2025



Photo 16: MCG-D monitoring location – May 7, 2025



Photo 17: MCG-E monitoring location – May 7, 2025



Photo 18: MCG-F monitoring location – May 7, 2025



Photo 19: MCG-G monitoring location – May 7, 2025



Photo 20: MCG-H monitoring location – May 7, 2025



Photo 21: Signage at Front Entrance – July 7, 2025



Photo 22: Front Entrance – July 7, 2025



Photo 23: Waste and Recycling Bins – July 7, 2025



Photo 24: Bulk Waste Area – July 7, 2025



Photo 25: Scrap Metal Area – July 7, 2025



Photo 26: Tire Area – July 7, 2025

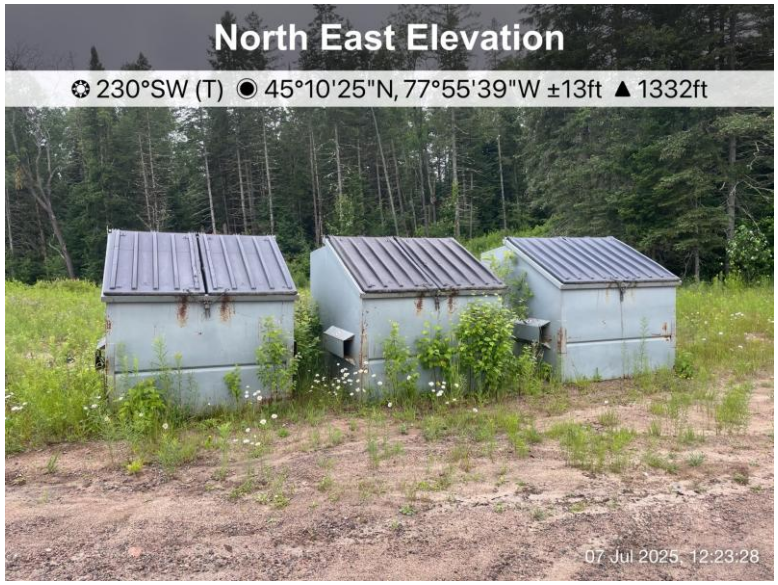


Photo 27: Additional Bins– July 7, 2025



Photo 28: Attendant's Building – July 7, 2025



Photo 29: MCG-A monitoring location – July 7, 2025



Photo 30: MCG-B monitoring location – July 7, 2025



Photo 31: MCG-C monitoring location – July 7, 2025



Photo 32: MCG-D monitoring location – July 7, 2025



Photo 33: MCG-E monitoring location – July 7, 2025



Photo 34: MCG-F monitoring location – July 7, 2025



Photo 35: MCG-G monitoring location – July 7, 2025



Photo 36: MCG-H monitoring location – July 7, 2025



Photo 37: Signage at Front Entrance – October 21, 2025



Photo 38: Front Entrance with Signage – October 21, 2025



Photo 39: Waste and Recycling Bins – October 21, 2025



Photo 40: Bulk Waste Area – October 21, 2025



Photo 41: Scrap Metal Area – October 21, 2025



Photo 42: Tire Area – October 21, 2025



Photo 43: Vegetation Growth on Cap – October 21, 2025



Photo 44: Attendant's Building – October 21, 2025



Photo 45: MCG-A monitoring location – October 21, 2025



Photo 46: MCG-B monitoring location – October 21, 2025



Photo 47: MCG-C monitoring location – October 21, 2025



Photo 48: MCG-D monitoring location – October 21, 2025



Photo 49: MCG-E monitoring location – October 21, 2025



Photo 50: MCG-F monitoring location – October 21, 2025



Photo 51: MCG-G monitoring location – October 21, 2025



Photo 52: MCG-H monitoring location – October 21, 2025

Appendix A

Environmental Compliance Approval

Ontario

Ministry of the Environment, Conservation and Parks
Ministère de l'Environnement, de la Protection de la nature et des Parcs

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL
NUMBER A361603
Issue Date: January 30, 2020

The Corporation of the Municipality of Hastings Highlands
33011 Highway 62 N
Post Office Box, No. 130
Maynooth, Ontario
K0L 2S0

Site Location: North Baptiste Waste Transfer Site (formerly North Baptiste Waste Disposal Site)
353 North Baptiste Rd (Lot 3, Concession 10, former Herschel Township)
Hastings Highlands Municipality, County of Hastings

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

for the use and operation of a waste transfer station on a 0.69 hectare closed landfill within a 3.207 hectare total Site area.

For the purpose of this environmental compliance approval, the following definitions apply:

Definitions

(a) "**Buffer**" means those lands between the limit of fill and the boundaries of the property owned by the *Owner,* that shall in no instance be less than 30 metres;

(b) "**Director**" means the one or more persons who from time to time are so designated for the purpose of Part V of the Environmental Protection Act, R.S.O. 1990, as amended from time to time;

(c) "**District Manager**" means the Manager of the Belleville District Office, Ministry of the Environment, Conservation and Parks;

(d) "**ECA**" means this Environmental Compliance Approval No. A361603 as amended from time to time and all Schedules attached to and forming part of this *ECA;*

(e) "**EPA**" means the Environmental Protection Act, R.S.O. 1990, as amended;

(f) "**Limit of Fill**" means the area in which waste is approved for final disposal according to this *ECA;*

(g) "**Ministry**" or "**MECP**" means the Ontario Ministry of the Environment, Conservation and Parks;

(h) "**ODWS**" means the Ontario Drinking Water Standards, as amended from time to time;

(i) "**Ontario Regulation 189**" means Ontario Regulation 189/94, Refrigerants, or as amended, made under the *EPA;* and

(j) "**Ontario Regulation 347**" means Ontario Regulation 347 of Revised Regulations of Ontario, 1990 (General - Waste Management), made under the *EPA,* as amended.

(k) "**Owner**" means The Corporation of the Municipality of Hastings Highlands, the party having charge, management or control of the *Site,* rather than the ownership of the *Site;*

(l) "**OWRA**" means the Ontario Water Resources Act, R.S.O. 1990, c.0.40, as amended;

(m) "**PWQO**" means the Provincial Water Quality Objectives included in the July 1994 publication entitled *Water Management Policies, Guidelines, Provincial Water Quality Objectives,* as amended from time to time;

(n) "**Regional Director**" means the Director, Eastern Region, Ministry of the Environment, Conservation and Parks;

(o) "**RUP**" means the Reasonable Use Policy (Guideline B-7) of the Ministry of the Environment, Conservation and Parks;

(p) "**Site**" means the property known as North Baptiste Waste Transfer Site (formerly North Baptiste Waste Disposal Site), 353 North Baptiste Rd (Lot 3, Concession 10, former Herschel Township) Hastings Highlands Municipality, County of Hastings, and described in this *ECA.*

(q) "**white goods which contain refrigerants**" means white goods which contain, or may contain refrigerants, and which include, but is not restricted to, refrigerators, freezers and air-conditioning systems; and

(r) "**Regulation 232**" means Ontario Regulation 232/98 (New Landfill Standards) made under the *EPA,* as amended from time to time.

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

General

1. This *ECA* supersedes and replaces Provisional Certificate Number A361603 issued on January 18, 2001;

and as amended.

2. Except as otherwise provided by these Conditions, the *Site* shall be designed, developed, used, maintained and operated, and all facilities, equipment and fixtures shall be built and or installed in accordance with the Application for a Certificate of Approval for a Waste Disposal Site dated October 27, 1996, and supporting documentation, and plans and specifications listed in Schedule "A".

3. The requirements specified in this *ECA* are requirements under the *Act.* Issuance of this *ECA* in no way abrogates the *Owner's* legal obligations to take all reasonable steps to avoid violating other applicable provisions of this legislation and other legislation and regulations.

4. The requirements of this *ECA* are severable. If any requirements of this *ECA,* or the application of any requirement of this *ECA* to any circumstance, is held invalid, the application of such requirement to other circumstances and the remainder of this *ECA* shall not be affected in any way.

5. The *Owner* must ensure compliance with all terms and conditions of this *ECA.* Any non-compliance constitutes a violation of the *Act* and is grounds for enforcement.

6. (a) The *Owner* shall, forthwith upon request of the *Director, District Manager,* or Provincial Officer (as defined in the *Act*), furnish any information requested by such persons with respect to compliance with this *ECA,* including but not limited to, any records required to be kept under this *ECA;* and

   (b) In the event the *Owner* provides the *Ministry* with information, records, documentation or notification in accordance with this *ECA* (for the purposes of this condition referred to as "Information"),
   (i) the receipt of Information by the *Ministry;*
   (ii) the acceptance by the *Ministry* of the Information's completeness or accuracy; or
   (iii) the failure of the *Ministry* to prosecute the *Owner,* or to require the *Owner* to take any action, under this *ECA* or any statute or regulation in relation to the Information;

   shall not be construed as an approval, excuse or justification by the *Ministry* of any act of omission of the *Owner* relating to the Information, amounting to non-compliance with this *ECA* or any statute or regulation.

7. The *Owner* shall allow *Ministry* personnel, or a *Ministry* authorized representative(s), upon presentation of credentials, to:
   (a) carry out any and all inspections authorized by Section 156, 157 or 158 of the Act, Section 15, 16 or 17 of the **Ontario Water Resources Act**, R.S.O. 1990, or Section 19 or 20 of the **Pesticides Act**, R.S.O. 1990, as amended from time to time, of any place to which this *ECA* relates; and,
   (b) without restricting the generality of the foregoing, to:
   (i) enter upon the premises where records required by the conditions of this *ECA* are kept;
   (ii) have access to and copy, at reasonable times, any records required by the conditions of this *ECA;*
   (iii) inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations required by the conditions of this *ECA;* and

(iv) sample and monitor at reasonable times for the purposes of assuring compliance with the conditions of this *ECA.*

8. Where there is a conflict between a provision of any document referred to in Schedule "A", and the conditions of this *ECA,* the conditions in this *ECA* shall take precedence. Where there is a conflict between the documents listed in Schedule "A", the document bearing the most recent date shall prevail.

9. Any information relating to this *ECA* and contained in Ministry files may be made available to the public in accordance with the provisions of the *Freedom of Information and Protection of Privacy Act* , R.S.O. 1990, C. F-31.

10. All records and monitoring data required by the conditions of this *ECA* must be kept on the *Owner's* premises for a minimum period of five (5) years from the date of their creation.

Certificate of Prohibition / Registration on Title

11. The *Owner* shall, if not previously completed:
    (a) within sixty (60) calendar days issuance of this *ECA,* submit to the *Director* for the *Director's* signature, two (2) copies of a completed Certificate of Prohibition containing a registerable description of the *Site,* in accordance with Form 1 of O. Reg. 14/92 (Document General - Form 4 - *Land Registration Reform Act*); and

    (b) within ten (10) calendar days of receiving the Certificate of Prohibition signed by the *Director,* register the Certificate of Prohibition in the appropriate Land Registry Office on title to the *Site* and submit to the *Director* immediately following registration the duplicate registered copy.

Transferral or Encumbrance of Site

12. Pursuant to Section 197 of the *EPA* , neither the *Owner* nor any person having an interest in the *Site* shall deal with the *Site* in any way without first giving a copy of this *ECA* to each person acquiring an interest in the *Site* as a result of the dealing.

13. No portion of this *Site* shall be transferred or encumbered prior to or after closing of the *Site,* unless the *Director* is notified in advance in writing and is satisfied with the arrangements made to ensure that all terms and conditions of this *ECA* will be carried out and sufficient financial assurance (*EPA* , Part XII) is deposited with the *Ministry,* if requested by the *Director,* to ensure that these terms and conditions will be carried out.

Notification

14. The *Owner* shall ensure that all communications/correspondence made pursuant to this *ECA* No. A361603.

15. The *Owner* shall notify the *District Manager* in writing within thirty (30) days of becoming aware of any of the following changes:

(i) change of *Owner* /Operator of the *Site* or both: and
(ii) address of the new *Owner* or change of address.

Service Area and Landfill Waste

16. Wastes generated only from within the geographic boundaries of the Municipality of Hastings Highlands may be received for disposal at this Site. No waste shall be received for disposal at this *Site* from outside the approved service area.

17. The final approved volumetric capacity of the landfill at the *Site,* excluding final cover, is 12,040 cubic metres.

18. (a) No waste may be placed in the landfill at the *Site* and the landfill shall be closed as described in Condition 43; and
(b) The *Site* shall be designed and operated as a waste transfer station with recycling operations as described in Conditions 19 and 20.

Recycling Operation

19. The operation of the *Site* for acceptance and storage of recyclable waste and subsequent transfer of such wastes by approved carriers for processing elsewhere shall be in accordance with the following:
(a) The *Owner* shall notify the *District Manager,* in writing, of any change in the operation or its termination within 30 days of the change occurring;
(b) The *Site* shall only accept recyclable material as identified in Table 3 of the Waste Transfer Station Design and Operations Plan, Item 19 of Schedule "A";
(c) Source separated waste materials shall be stored in covered containers and stored in a manner to prevent off-site impacts and which minimizes the impacts on the environment and the public;
(d) The *Operator* shall ensure that recycling operation is managed in a manner which minimizes the impacts of vermin, vectors, dust, odour, noise and traffic on the environment and the public;
(e) Except as otherwise specified by the *District Manager* in writing or in Table 3 of the Waste Transfer Station Design and Operations Plan, Item 19 of Schedule "A", wastes shall not be stored on *Site* for more than 8 weeks from the day of collection; and
(f) No wastes other than those listed in Condition 19 (b) and Condition 20 shall be collected and stored at the *Site* without an amendment to this *ECA.*

Waste Transfer Station

20. The *Owner* may accept, store and subsequently transfer waste at the *Site* in accordance with the following:
(a) The design, development, operation, and maintenance of the Waste Transfer Station at the *Site* shall be in accordance with the Waste Transfer Station Design and Operations Plan, as outlined in Item 19 of Schedule "A";
(b) The *Site* shall only accept, store and subsequently transfer waste as identified in Table 3 of the Waste Transfer Station Design and Operations Plan;
(c) The amount of waste that may be received at the *Site* shall not exceed the amounts identified in Table 3 of the Waste Transfer Station Design and Operations Plan, with a maximum of 6.0 metric

tonnes per week and a total maximum of 200 metric tonnes of waste/recyclables per year; and

(d) The *Owner* shall ensure that all waste is accepted, handled, and maintained in a manner which minimizes the impacts of vermin, vectors, dust, odour, noise and traffic on the environment and the public.

Operating Hours

21. The *Owner* shall set operational hours which provides an adequate level of service.
    (a) The hours of operation shall be any day of the week, during daylight hours. The *Owner* shall clearly post the hours of operation at the landfill gate.

    (b) The hours of operation may be changed with the approval of the *District Manager,* and provided that the hours are correctly posted at the landfill gate and that suitable public notice is given of any change. The *Director* shall be notified of the change with thirty days of such change.

22. No waste shall be received for disposal at the *Site* except during the hours of operation and under the supervision of an attendant.

23. The *Owner* shall ensure that during non-operating hours, the *Site* entrance and exit gates are locked or otherwise secured against access by unauthorized persons.

24. During non-operating hours, the *Owner* may conduct equipment maintenance, administrative functions and on-site activity other than waste disposal as required.

Signage and Security

25. A sign shall be posted at the entrance gate of the *Site* with the following information:
    (a) Name of the *Site* and *Owner;*
    (b) *ECA* Number for the *Site;*
    (c) Days and hours of operation;
    (d) Allowable and prohibited waste types;
    (e) Contact telephone number(s); and
    (f) Warning against unauthorized access and against dumping outside the *Site.*

26. The *Owner* shall ensure that:
    (a) access to the *Site* is restricted by fencing and/or natural features;
    (b) fencing and lockable gate are kept in good repair; and
    (c) the *Site* is screened from public view on all sides.

Burning At the Site

27. The *Owner* shall ensure that:
    (a) no waste other than segregated brush, lumber and clean wood is burned at this Site;
    (b) burning is conducted in accordance with the Ministry of Environment *"Guidance Manual for Landfill Sites Receiving Municipal Waste",* dated 1993;

(c) access to the burning area by the public and other unauthorized personnel is prohibited when burning is carried out; and
(d) no burning is to occur without the supervision of the attendant.

Nuisance Control

28. If at any time problems such as odours, dust, litter, noise, vectors, vermin, rodents, bears or other nuisances are found at the *Site,* the *Owner* shall take appropriate, immediate remedial action to eliminate the problem.

29. The *Owner* shall implement a litter control plan which shall include:
(a) taking all practical steps to prevent the escape of litter from the *Site;*
(b) litter pick-up at the *Site* during each operating day; and
(c) monthly litter pick-up along the access road in the vicinity of the *Site.*

Inspections

30. The *Owner* shall conduct regular inspections of the *Site* to ensure the landfill cap, all waste transfer operations, monitoring wells, and all aspects of the *Site* are maintained in a manner which minimizes the impacts on the environment and the public.

Staff Training

31. The *Owner* shall develop and maintain a training plan for current and new *Site* operations employees and shall ensure that all *Site* operations employees have been adequately trained and receive on-going training with respect to the following:
(a) terms, conditions and operating requirements of this *ECA;*
(b) the operation, inspection, and maintenance of the *Site* with respect to the approved design and operations documents;
(c) record keeping requirements;
(d) relevant waste management legislation and regulations;
(e) environmental concerns related to waste management at the *Site;*
(f) occupational health and safety concerns related to waste management at the *Site;* and
(g) emergency procedures and contingency plans in cases of fire, spills, off-site impacts and any other emergency situations.

Complaints

32. If at any time, the *Owner* receives complaints regarding the operation of the *Site,* the *Owner* shall respond to these complaints according to the following procedure:
(a) The *Owner* shall record each complaint on a formal complaint form entered in a log book. The information recorded shall included the nature of the complaint, the name, address and telephone number of the complainant and the time and date of the complaint;
(b) The *Owner,* upon notification of the complaint, shall initiate appropriate steps to determine all possible causes of the compliant, proceed to take the necessary actions to eliminate the cause of the

complaint and forward a formal reply to the complainant; and

(c) The *Owner* shall retain on-site a report written within one (1) week of the complaint date, listing the actions taken to resolve the complaint and any recommendations for remedial measures, and managerial or operational changes to reasonably avoid the reoccurrence of similar incidents.

Record Keeping

33. The *Owner* shall record the following information with respect to all wastes received at the Site:
    (a) date of record;
    (b) number of deliveries and types of materials received;
    (c) quantities and destinations of waste shipped from the *Site;*
    (d) results of the inspection required under Condition 30; and
    (e) any accidents, injuries, spills, leaks, other upsets or complaints received.

Spill Reporting

34. The *Owner* shall promptly take all necessary steps to contain and clean up any spills which result from the operation of the *Site.* All spills and upsets shall be immediately reported to the *Ministry* 's Spills Action Centre at (416) 325-3000 or 1-800-268-6060 and shall be recorded in a written log or an electronic file format, referred to in Condition 35 of this *ECA,* as to the nature of the spill or upset, and the action taken for clean-up, correction and prevention of future occurrences.

35. Within three (3) days of any spill or incident that occurs at the *Site,* the *Owner* shall submit to the *District Manager* a written report outlining the nature of the incident, remedial measures taken and measures taken to prevent potential future occurrences.

Monitoring Plan

36. The *Owner* shall retain qualified professionals to conduct groundwater and surface water monitoring as per Schedule "B" , and as modified by the *District Manager.*

37. (a) All monitoring wells which form part of any monitoring program shall be protected from damage.
    (b) Any groundwater monitoring wells that are damaged shall be repaired, replaced forthwith or properly abandoned.

Trigger Mechanisms and Contingency Plans

38. The *Owner* shall review all surface water and groundwater quality monitoring results to the trigger parameter concentrations outlined in the Trigger Mechanisms and Contingency Plan, identified as Item 20 in Schedule "A". If these trigger parameter concentrations are reached then the outlined contingencies within the Trigger Mechanisms and Contingency Plan shall be implemented.

Annual Report

39. No later than March 31 of each year, the *Owner* shall submit to the *District Manager* an Annual Report on

the development, operation and monitoring of the *Site* for the preceding calendar year.

40. The Annual Report shall, as a minimum, include the following elements:
    (a) Executive Summary
    (b) Site Operations
        i) A report on the types and volumes of waste that are received and transferred from the *Site;*
        ii) A summary of complaints regarding *Site* operations and the *Owner's* response;
        iii) An assessment as to whether or not the *Owner* is operating the *Site* in compliance with the Conditions of this *ECA;*
    (c) Environmental Quality Monitoring
        i) An analysis and interpretation of surface water and groundwater monitoring data;
        ii) An assessment of surface water quality at the Site boundaries with respect to PWQO, and groundwater quality with respect to RUP; and
        iii) An assessment of the adequacy of the natural attenuation of leachate generated by the *Site.*
    (d) Recommendations
        i) Recommendations on any proposed changes to surface water or groundwater monitoring programs or any repairs required to the monitoring well network.
        ii) Recommendations on any proposed changes to the waste transfer operation.
        iii) Recommendations on the requirement for any remedial works or contingency actions based on the monitoring results or *Site* operations.

41. The monitoring program may be altered by obtaining the written consent of the *District Manager* prior to these changes being made.

42. In the event that the results of the monitoring program are such that an off-site exceedance of the RUP, ODWS or PWQO can reasonably be predicted to occur, the *Owner* shall include in the annual report:
    a) the details of any such predicted off-site exceedance, including the assumptions upon which the prediction is based;
    b) a discussion of the modifications, if any, to intended operations which would be necessary to prevent the predicted off-site exceedance;
    c) a discussion of the modifications, if any, which should be made to the monitoring program; and
    d) a discussion of other mitigation measures or contingency actions, if any, which may be necessary to prevent off-site impacts.

Site Closure

43. The landfill shall be closed in accordance with the Closure Plan Report and New Proposed Implementation Schedule of Items 17 and 18 of Schedule "A", respectively.

44. The *Owner* must submit, for approval by the *Director* , a written Closure Plan for the *Site* one (1) year prior to the closure of the waste transfer station at the *Site* . This plan must include, as a minimum, a description of the work that will be done to facilitate closure of the *Site* , monitoring and long term maintenance of the *Site.*

45. Within thirty (30) days after closure of the *Site* , the *Owner* must notify the *District Manager* , in writing,

that the *Site* has been closed in accordance with the approved Closure Plan.

Schedule "A"

This Schedule "A" forms part of Provisional Certificate of Approval No. A361603:

1. Application and supporting information for Approval of a Waste Disposal Site to amend a Certificate of Approval for a Waste Disposal Site, dated October 27, 1996 and signed by Mrs. E. Dafoe, Clerk-Treasurer, the Corporation of the Township of Herschel.

2. Letter from Mrs. Erma Dafoe, Clerk-Treasurer, Municipality of Herschel to MOE, dated October 27, 1996, Re: Township of Herschel, McGarry (North) Waste Disposal Site, Provisional Certificate of Approval No. A361603.

3. Document titled "The Corporation of the Township of Herschel, McGarry (North) Waste Disposal Site, Provisional Certificate of Approval No. A361603, Site Development Plan, Capacity and Operations Report", dated September 1996 and prepared by the Greer Galloway Group Inc. Engineers and Planners.

4. Memo from Myron Zurawsky MOE to Jim Mulder, MOE, dated January 29, 1997, Re: Baptiste Lake North Road Waste Disposal Site (a.k.a. "McGarry (North) Waste Disposal site"), Amendment to Provisional C/A #A361603, Herschel Twp., Lot 3, Concession 10.

5. Memo from Ross Cholmondeley, MOE to Jim Mulder, MOE, January 17, 1997, Re: McGarry (North) Waste Disposal Site, Site Development Plan, Capacity and Operations Report, Provisional Certificate of Approval No. A361603.

6. Fax Cover Sheet and its attachment from Jim Mulder, MOE to. J. S. Rybak, the Greer Galloway Group Inc ., dated September 18, 1997, Client/Matter: Twp. of Herschel, Baptiste and McGarry Landfill Site application.

7. Facsimile and its attachment from Mohsen Keyvani, MOE to Steve Clark, Greer Galloway Group Inc., dated February 7, 2000.

8. Facsimile and its attachment from Mohsen Keyvani, MOE to Erma Dafoe, Clerk-Treasurer, Municipality of Herschel, dated March 16, 2000.

9. Letter from Erma Dafoe, Clerk-Treasurer, Municipality of Herschel to Mohsen Keyvani, MOE, dated April 5, 2000, Re: Baptiste and McGarry Waste Disposal Site, Township of Herschel .

10. Letter from Steve Clark, Greer Galloway Group Inc. to Mohsen Keyvani, MOE, dated April 12, 2000, Re: Baptiste and McGarry Waste Disposal Sites, GGG Project No. 00-1-5313.

11. Letter from Mohsen Keyvani, MOE to Erma Dafoe, Clerk-Treasurer, Municipality of Herschel, dated May 3, 2000, Re: Amendment to Provisional Certificate of Approval, No. A361602, Baptiste Lake

South Road Landfill Site, Located at Lot 28, Concession 4, and No. A361603, McGarry Landfill Site, Located at Part of Lot 3, Concession 10, Township of Herschel, County of Hastings.

12. Letter and its attachment from Steve Clarke, Greer Galloway Group Inc. to Mohsen Keyvani, MOE, dated May 31, 2000, Re: Amendment to the Provisional Certificate of Approvals: No. A361602, Baptiste Lake South Road Landfill Site, Located at Lot 28, Concession 4, and No. A361603, McGarry Landfill Site, Located at Part of Lot 3, Concession 10; Township of Herschel, County of Hastings.

13. Memo from Dana Cruikshank, MOE to Mohsen Keyvani, MOE, dated July 26, 2000, Re: McGarry Waste Disposal Sites, Interim Review Surface Water Sampling, Provisional Certificate of Approval No. A361603.

14. Letter from Steve Clark, the Greer Galloway Group Inc. to Mohsen Keyvani, MOE, dated October 17, 2000, Re: Response to Draft Certificate of Approvals: No. A361602, Baptiste Lake South Road Landfill Site; No. A361603, McGarry Landfill Site; GG Project 00-1- 5313.

15. Letter from Steve Clark, Greer Galloway Group Inc. to Mohsen Keyvani, MOE, dated December 21, 2000, Re: No. 361602, Baptiste Lake South Road Landfill site; No. A361603, McGarry Landfill Site; GGG Project No. 00- 1-5313.

16. Facsimile copy of letter from Mrs. Erma Dafoe, Deputy Clerk-Treasurer for Hastings Highlands to Mohsen Keyvani, MOE, dated January 8, 2001, re: amalgamation of the Township of Herschel.

17. Report titled "North Baptiste Road Waste Disposal Site Closure Plan" prepared by BluMetric Environmental Inc. Signed and sealed on October 3, 2016.

18. Letter from Iris O'Connor, BluMetric Environmental Inc. to Ministry of the Environment and Climate Change. Subject: ECA Amendment A361603 - North Baptiste Waste Disposal Site, MOECC Reference Number 2473-AETQAK, and dated October 20, 2016.

19. Report titled "North Baptiste Lake Waste Transfer Station Design and Operations Plan" prepared by BluMetric Environmental Inc. Signed and sealed on October 3, 2016.

20. Trigger Mechanisms and Contingency Plan prepared by BluMetric Environmental Inc. January 28, 2020.

21. Closure Report for North Baptiste Waste Disposal Site (WDS), prepared by BluMetric Environmental Inc. December 11, 2018.

Schedule "B"

This Schedule "B" forms part of Provisional Certificate of Approval No. A361603:

Groundwater Monitoring:

Locations: NB-MW1, NB-MW2R, NB-MW3, NB-MW4, and NB-MW5R

Monitoring: Groundwater sampling and field measurements for groundwater elevation, pH, temperature, and conductivity.

Parameters: Alkalinity, Chloride, Nitrite, Nitrate, Sulphate, Phosphorous (total), Total Kjeldahl Nitrogen (TKN), Ammonia (N)-Total, Dissolved Organic Carbon (DOC), Calcium, Aluminum, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Silicon, Silver, Strontium, Thallium, Titanium, Vanadium, Sodium, Zinc, Lead, Chemical Oxygen Demand (COD), Phenols, pH, Conductivity, Total Dissolved Solids (TDS), TSS, Hardness, Turbidity, Selenium.

Frequency: Groundwater monitoring shall be conducted on a semi-annual basis.

Surface Water Monitoring:

Locations: MCG-A2, MCG-B, MCG-C, MCG-D, MCG-E, MCG-F, MCG-G, and MCG-H

Monitoring: Surface water sampling and field measurements for surface water flow measurements, temperature, pH, conductivity, and dissolved oxygen measurements.

Parameters: Alkalinity, Chloride, Nitrite, Nitrate, Sulphate, Phosphorous (total), Total Kjeldahl Nitrogen (TKN), Ammonia (N)-Total, Un-Ionized Ammonia, Hardness, Calcium, Aluminum, Arsenic, Boron, Cadmium, Chromium, Cobalt, Copper, Iron, Magnesium, Mercury, Nickel, Potassium, Selenium, Silver, Sodium, Zinc, Lead, Phenols, Biochemical Oxygen Demand (BOD5), pH, Conductivity, Total Dissolved Solids (TDS), Total Suspended Solids (TSS), Colour, Turbidity.

Frequency: Sampling events shall be conducted each spring, summer, and fall.

The reasons for the imposition of these terms and conditions are as follows:

1. The reason for Condition 1 is to clarify that all previous Certificates of Approval are null and void and that the Owner is obligated by the Terms and Conditions of this Certificate only.

2. The reason for Condition 2 is to ensure that this Waste Disposal Site is operated in accordance with the application submitted by the Owner, and not in a manner which the Director has not been asked to consider.

3. The reason for Conditions 3, 4, 5, 8, 9, 10, 13, 14 and 15 is to clarify the legal responsibilities and obligations imposed by this Provisional Certificate of Approval.

4. The reason for Conditions 11 and 12 is to protect future occupants of the site and the environment from any hazards which might occur as a result of waste being disposed of on the site. This prohibition and potential hazard should be drawn to the attention of future owners and occupants by the Certificate being registered on title.

5. The reason for Conditions 6 and 7 is to ensure that appropriate Ministry staff have ready access to the system in order to confirm that the system is being operated according to this Provisional Certificate of Approval. The condition is supplementary to the powers afforded a Provincial Officer pursuant to the Environmental Protection Act, the Ontario Water Resources Act, and the Pesticides Act, as amended.

6. The reason for Conditions 16 is to specify the approved areas from which waste may be accepted at the site.

7 Condition 17 is to state the approved maximum landfill capacity.

8. The reason for Conditions 18, 43, 44, and 45 are to state that the landfill is closed and the manner in which it shall be closed as well to ensure that the waste transfer portion of the Site is closed in accordance with MOE standards and to protect the health and safety of the environment.

9. The reason for Condition 19 is to ensure the Site's recycling depot is operated in a manner which promotes efficient separation of recyclable wastes.

10. The reason for Condition 20 is to specify which waste and amounts that may be accepted at the waste transfer site, based on the application and the supporting documentation.

11. The reason for Conditions 21 through 26 are to minimize the risk of unauthorized entry and to ensure the Site is only operated in the presence of trained personnel and to ensure proper management of waste.

12. Conditions 27, 28, 29, and 30 are included to ensure that efficient and environmentally sound procedures are employed during the operation of the landfill site.

13. Condition 31 is included to ensure that the Owner properly trained the staff operating the site to ensure that the operations are undertaken in accordance with the requirements of this Certificate.

14. The reason for Condition 32 is to ensure that complaints are properly and quickly resolved and that complaints and follow-up actions have been documented.

15. Condition 33 is included to ensure that the Owner accurately estimates the amount of waste brought to the Site so that compliance with this Certificate can be verified.

16. The reason for Conditions 34, and 35 is to ensure that staff are properly trained in the operation of the equipment used at the Site and emergency response procedures. This will minimize the possibility of spills occurring and will enable staff to deal promptly and effectively with any spills that do occur.

17. Conditions 36, 37, and 38 are included to require the Owner to undertake the monitoring activities in accordance with the methods acceptable to the Ministry, in order to demonstrate that the Site impacts on the natural environment are acceptable.

18. Conditions 39 through 42 are included to ensure that regular review of Site development, operations and monitoring is documented and any possible improvements to site design, operations or monitoring programs are identified.

Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s). A361603 issued on January 18, 2001

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*

The Director appointed for the purposes of Part II.1 of

Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

the Environmental Protection Act
Ministry of the Environment, Conservation and Parks
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 30th day of January, 2020

Mohsen Keyvani, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

CM/
c: Area Manager, MECP Belleville
c: District Manager, MECP Kingston - District
Iris O'Connor, BluMetric Environmental Inc.

Appendix B

Monitoring and Screening Checklist (MECP/MOE)

Appendix D-Monitoring and Screening Checklist
General Information and Instructions

General Information: The checklist is to be completed, and submitted with the Monitoring Report.
Instructions: A complete checklist consists of:
(a) a completed and signed checklist, including any additional pages of information which can be attached as needed to provide further details where indicated.
(b) completed contact information for the Competent Environmental Practitioner (CEP)
(c) self-declaration that CEP(s) meet(s) the qualifications as set out below and in Section 1.2 of the Technical Guidance Document.

Definition of Groundwater CEP:
For groundwater, the CEP must have expertise in hydrogeology and meet one of the following:
(a) the person holds a licence, limited licence or temporary licence under the *Professional Engineers Act*; or
(b) the person holds a certificate of registration under the *Professional Geoscientists Act, 2000* and is a practicing member, temporary, member or limited member of the Association of Professional Geoscientists of Ontario. O. Reg. 66/08, s. 2..
Definition of Surface water CEP:
A CEP for surface water assessments is a scientist, professional engineer or professional geoscientist as described in (a) and (b) above with demonstrated experience and post-secondary education, either a diploma or degree, in hydrology, aquatic ecology, limnology, aquatic biology, physical geography with specialization in surface water, and/or water resource management.

The type of scientific work that a CEP performs must be consistent with that person's education and experience. If an individual has appropriate training and credentials in both groundwater and surface water and is responsible for both areas of expertise, the CEP may then complete and validate both sections of the checklist.

Monitoring Report and Site Information	
Waste Disposal Site Name	North Baptiste
Location (e.g. street address, lot, concession)	Part of Lot 3, Concession 10
GPS Location (taken within the property boundary at front gate/ front entry)	Zone 18, 269934 E, 5006428 N
Municipality	Municipality of Hasting Highlands (formerly Twp. of Herschel)
Client and/or Site Owner	The Corporation of Hasting Highlands
Monitoring Period (Year)	2025
This Monitoring Report is being submitted under the following:	
Environmental Compliance Approval Number:	A361603
Director's Order No.:	
Provincial Officer's Order No.:	
Other:	

Report Submission Frequency	◉ **Annual** ○ **Other**	Submitted to the MECP by March 31st.	
The site is: **(Operation Status)**	○ **Open** ○ **Inactive** ◉ **Closed**		
Does your Site have a Total Approved Capacity?	◉ **Yes** ○ **No**		
If yes, please specify Total Approved Capacity	12,040	*Units*	Cubic Metres
Does your Site have a Maximum Approved Fill Rate?	○ **Yes** ◉ **No**		
If yes, please specify Maximum Approved Fill Rate		*Units*	
Total Waste Received within Monitoring Period (Year)	184.67	*Units*	Tonnes
Total Waste Received within Monitoring Period (Year) *Methodology*	Estimation		
Estimated Remaining Capacity	0	*Units*	Cubic Metres
Estimated Remaining Capacity *Methodology*			
Estimated Remaining Capacity *Date Last Determined*			
Non-Hazardous Approved Waste Types	☒ Domestic ☒ Industrial, Commercial & Institutional (IC&I) ☒ Source Separated Organics (Green Bin) ☒ Tires	☒ Contaminated Soil ☒ Wood Waste ☒ Blue Box Material ☐ Processed Organics ☐ Leaf and Yard Waste	☐ Food Processing/Preparation Operations Waste ☐ Hauled Sewage Other:
Subject Waste Approved Waste Classes: Hazardous & Liquid Industrial *(separate waste classes by comma)*			
Year Site Opened *(enter the Calendar Year only)*	1968	**Current ECA Issue Date**	30-Jan-2020
Is your Site required to submit Financial Assurance?		○ **Yes** ◉ **No**	
Describe how your Landfill is designed.		◉ Natural Attenuation only ○ Fully engineered Facility ○ Partially engineered Facility	
Does your Site have an approved Contaminant Attenuation Zone?		○ **Yes** ◉ **No**	

If closed, specify C of A, control or authorizing document closure date:	11-Dec-2018

Has the nature of the operations at the site changed during this monitoring period?	○ **Yes** ◉ **No**
If yes, provide details:	
Have any measurements been taken since the last reporting period that indicate landfill gas volumes have exceeded the MOE limits for subsurface or adjacent buildings? (i.e. exceeded the LEL for methane)	○ Yes ◉ No

Groundwater WDS Verification:

Based on all available information about the site and site knowledge, it is my opinion that:

Sampling and Monitoring Program Status:

1) The monitoring program continues to effectively characterize site conditions and any groundwater discharges from the site. All monitoring wells are confirmed to be in good condition and are secure:	◉ **Yes** ○ **No**	
2) All groundwater, leachate and WDS gas sampling and monitoring for the monitoring period being reported on was successfully completed as required by Certificate(s) of Approval or other relevant authorizing/control document (s):	◉ **Yes** ○ **No** ○ **Not Applicable**	If no, list exceptions below or attach information.

Groundwater Sampling Location	**Description/Explanation for change (change in name or location, additions, deletions)**	**Date**

3) a) Is landfill gas being monitored or controlled at the site?	◉ Yes ○ No	
If yes to 3(a), please answer the next two questions below.		
b) Have any measurements been taken since the last reporting period that indicate landfill gas is present in the subsurface at levels exceeding criteria established for the site?	○ Yes ◉ No	
c) Has the sampling and monitoring identified under 3(a) for the monitoring period being reported on was successfully completed in accordance with established protocols, frequencies, locations, and parameters developed as per the Technical Guidance Document:	◉ Yes ○ No ○ Not Applicable	If no, list exceptions below or attach additional information.

Groundwater Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date

4) All field work for groundwater investigations was done in accordance with standard operating procedures as established/outlined per the Technical Guidance Document (including internal/external QA/QC requirements) (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	◉ Yes ○ No	

Sampling and Monitoring Program Results/WDS Conditions and Assessment:

5) The site has an adequate buffer, Contaminant Attenuation Zone (CAZ) and/or contingency plan in place. Design and operational measures, including the size and configuration of any CAZ, are adequate to prevent potential human health impacts and impairment of the environment.	(●) **Yes** ( ) **No**	Final Trigger Mechanisms and Contingency Plan put in place in 2020.	
6) The site meets compliance and assessment criteria.	( ) **Yes** (●) **No**	NB-MW3 and NB-MW5R exceeded the RUV for manganese in 2025 and NB-MW3 for iron, however, both wells are not located at the property boundary.	
7) The site continues to perform as anticipated. There have been no unusual trends/ changes in measured leachate and groundwater levels or concentrations.	(●) **Yes** ( ) **No**	Groundwater results at the Site have generally either remained consistent or have decreased, with the exception of an increasing trend Chloride, Hardness, Phenols, TDS, Dissolved Cobalt, Dissolved Iron, Dissolved Manganese at NB-MW3. And Hardness at NB-MW5R.	
1) Is one or more of the following risk reduction practices in place at the site: ***(a)*** **There is minimal reliance on natural attenuation of leachate due to the presence of an effective waste liner and active leachate collection/ treatment; or** ***(b)*** **There is a predictive monitoring program in-place (modeled indicator concentrations projected over time for key locations); or** ***(c)*** **The site meets the following two conditions (typically achieved after 15 years or longer of site operation):** ***i.*** **The site has developed stable leachate mound(s) and stable leachate plume geometry/concentrations; and** ***ii.*** **Seasonal and annual water levels and water quality fluctuations are well understood.**	(●) **Yes** ( ) **No**	**Note which practice(s):**	☐ **(a)** ☐ **(b)** ☒ **(c)**
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	(●) **Yes** ( ) **No** ( ) **Not Applicable**	NB-MW3 exceeded the Tier 1 trigger criteria for chloride, dissolved iron, and TDS (above the 75th percentile of historical data), prompting confirmation sampling on November 18, 2025. The follow-up results showed dissolved iron concentrations had decreased below the Tier 1 threshold; therefore, advancement to Tier 2 was not required.	

Groundwater CEP Declaration:

I am a licensed professional Engineer or a registered professional geoscientist in Ontario with expertise in hydrogeology, as defined in Appendix D under Instructions. Where additional expertise was needed to evaluate the site monitoring data, I have relied on individuals who I believe to be experts in the relevant discipline, who have co-signed the compliance monitoring report or monitoring program status report, and who have provided evidence to me of their credentials.

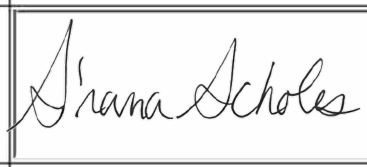
I have examined the applicable Certificate of Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended), and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to *ISO/IEC 17025:2005 (E)- General requirements for the competence of testing and calibration laboratories,* or as amended from time to time by the ministry.

If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature and will be rectified for the next monitoring/reporting period. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

○ **No changes to the monitoring program are recommended**	We have suggested that NB-MW3 continue to be used as the leachate well for the east and NB-MW5R be used as the leachate well for the south.
◉ **The following change(s) to the monitoring program is/are recommended:**	
○ **No Changes to site design and operation are recommended**	On-going maintenance of final cover and monitoring.
◉ **The following change(s) to the site design and operation is/ are recommended:**	

Name:	S'rana Scholes, P.Eng.		
Seal:			
Signature:		**Date:**	25-Mar-2026
CEP Contact Information:	S'rana Scholes, P.Eng.		
Company:	BluMetric Environmental Inc.		
Address:	Unit 3B, 209 Frederick Street Kitchener, ON N2H 2M7		
Telephone No.:	(877) 487-8436 x218	Fax No. :	(877) 487-8436
E-mail Address:	sscholes@blumetric.ca		
Co-signers for additional expertise provided:			
Signature:		**Date:**	Select Date
Signature:		**Date:**	Select Date

Surface Water WDS Verification:

Provide the name of surface water body/bodies potentially receiving the WDS effluent and the approximate distance to the waterbody (including the nearest surface water body/bodies to the site):

Name (s)	Wetland, Selby Creek, O'Shaughnessy Lake
Distance(s)	Eastern property boundary, 500 m, 2 km

Based on all available information and site knowledge, it is my opinion that:

Sampling and Monitoring Program Status:

1) The current surface water monitoring program continues to effectively characterize the surface water conditions, and includes data that relates upstream/background and downstream receiving water conditions:	(●) Yes ( ) No	
2) All surface water sampling for the monitoring period being reported was successfully completed in accordance with the Certificate(s) of Approval or relevant authorizing/control document(s) (if applicable):	( ) Yes (●) No ( ) **Not applicable (No C of A, authorizing / control document applies)**	If no, specify below or provide details in an attachment.

Surface Water Sampling Location	Description/Explanation for change (change in name or location, additions, deletions)	Date
All locations	Surface water samples were not collected after a 10 mm storm event in the preceding 24 hours for the sampling events. 2.3 mm of rain (spring), 8.3 mm (summer) and 9.1 mm (fall) preceded the sampling event.	May 7, July 7, October 21, 2025
MCG-A, MCG-B, MCG-C, MCG-D	Dry in the fall	October 21, 2025

3) a) Some or all surface water sampling and monitoring program requirements for the monitoring period have been established outside of a ministry C of A or authorizing/control document.	◉ **Yes** ○ **No** ○ **Not Applicable**	
b) If yes, all surface water sampling and monitoring identified under 3 (a) was successfully completed in accordance with the established program from the site, including sampling protocols, frequencies, locations and parameters) as developed per the Technical Guidance Document:	◉ **Yes** ○ **No** ○ **Not Applicable**	If no, specify below or provide details in an attachment.

Surface Water Sampling Location	**Description/Explanation for change (change in name or location, additions, deletions)**	**Date**

4) All field work for surface water investigations was done in accordance with standard operating procedures, including internal/external QA/QC requirements, as established/outlined as per the Technical Guidance Document, MOE 2010, or as amended. (Note: A SOP can be from a published source, developed internally by the site owner's consultant, or adopted by the consultant from another organization):	◉ **Yes** ○ **No**	Not applicable

Sampling and Monitoring Program Results/WDS Conditions and Assessment:

5) The receiving water body meets surface water-related compliance criteria and assessment criteria: i.e., there are no exceedances of criteria, based on MOE legislation, regulations, Water Management Policies, Guidelines and Provincial Water Quality Objectives and other assessment criteria (e.g., CWQGs, APVs), as noted in Table A or Table B in the Technical Guidance Document (Section 4.6):	◉ **Yes** ○ **No**

If no, list parameters that exceed criteria outlined above and the amount/percentage of the exceedance as per the table below or provide details in an attachment:

Parameter	Compliance or Assessment Criteria or Background	Amount by which Compliance or Assessment Criteria or Background Exceeded
e.g. Nickel	e.g. C of A limit, PWQO, background	e.g. X% above PWQO
See attached document		.
6) In my opinion, any exceedances listed in Question 5 are the result of non-WDS related influences (such as background, road salting, sampling site conditions)?	○ **Yes** ◉ **No**	

7) All monitoring program surface water parameter concentrations fall within a stable or decreasing trend. The site is not characterized by historical ranges of concentrations above assessment and compliance criteria.	○ **Yes** ◉ **No**	Parameter concentrations are generally within historical ranges.
8) For the monitoring program parameters, does the water quality in the groundwater zones adjacent to surface water receivers exceed assessment or compliance criteria (e.g. , PWQOs, CWQGs, or toxicity values for aquatic biota (APVs)):	◉ Yes ○ No ○ Not Known ○ Not Applicable	All monitoring wells exceed the PWQO for total phosphorus, while total cobalt and total iron also exceeded at NB-MW3 during both events. NB-MW3, 4, and 5R should be closely monitored for increasing trends of leachate parameters.
9) Have trigger values for contingency plans or site remedial actions been exceeded (where they exist):	○ **Yes** ◉ **No** ○ **Not Applicable**	The Contingency Plan was not triggered in 2025.

Surface Water CEP Declaration:

I, the undersigned hereby declare that I am a Competent Environmental Practitioner as defined in Appendix D under Instructions, holding the necessary level of experience and education to design surface water monitoring and sampling programs, conduct appropriate surface water investigations and interpret the related data as it pertains to the site for this monitoring period.

I have examined the applicable Certificate of Approval and any other environmental authorizing or control documents that apply to the site. I have read and followed the Monitoring and Reporting for Waste Disposal Sites Groundwater and Surface Water Technical Guidance Document (MOE, 2010, or as amended) and associated monitoring and sampling guidance documents, as amended from time to time. I have reviewed all of the data collected for the above-referenced site for the monitoring period(s) identified in this checklist. Except as otherwise agreed with the ministry for certain parameters, all of the analytical work has been undertaken by a laboratory which is accredited for the parameters analysed to *ISO/IEC 17025:2005 (E)- General requirements for the competence of testing and calibration laboratories,* or as amended from time to time by the ministry.

If any exceptions or potential concerns have been noted in the questions in the checklist attached to this declaration, it is my opinion that these exceptions and concerns are minor in nature or will be rectified for future monitoring events. Where this is not the case, the circumstances concerning the exception or potential concern and my client's proposed action have been documented in writing to the Ministry of the Environment District Manager in a letter from me dated:

Recommendations:

Based on my technical review of the monitoring results for the waste disposal site:

○ **No Changes to the monitoring program are recommended** ◉ **The following change(s) to the monitoring program is/are recommended:**	The SW technical reviewer suggested that parameters could be removed from the analyses list. We have suggested that a select number of metals be removed as identified in this and previous reports. Waiting for confirmation from MECP. We have suggested that NB-MW3 continue to be used as the leachate well for the east and NB-MW5R be used as the leachate well for the south.
◉ **No changes to the site design and operation are recommended** ○ **The following change(s) to the site design and operation is/are recommended:**	On-going maintenance and monitoring.

CEP Signature	
Relevant Discipline	Senior Environmental P.Eng. with >20 years experience assessing landfill SW. Hydrology at UofW.
Date:	25-Mar-2026
CEP Contact Information:	S'rana Scholes, P.Eng.
Company:	BluMetric Environmental Inc.
Address:	Unit 3B, 209 Frederick Street Kitchener, ON N2H 2M7
Telephone No.:	(877) 487-8436 x218
Fax No. :	(877) 487-8436
E-mail Address:	sscholes@blumetric.ca

Save As		**Print Form**

Appendix C

Monitoring Well Logs

Well Log: Lithology & Construction

Well Ident	Name
NB MW-1	

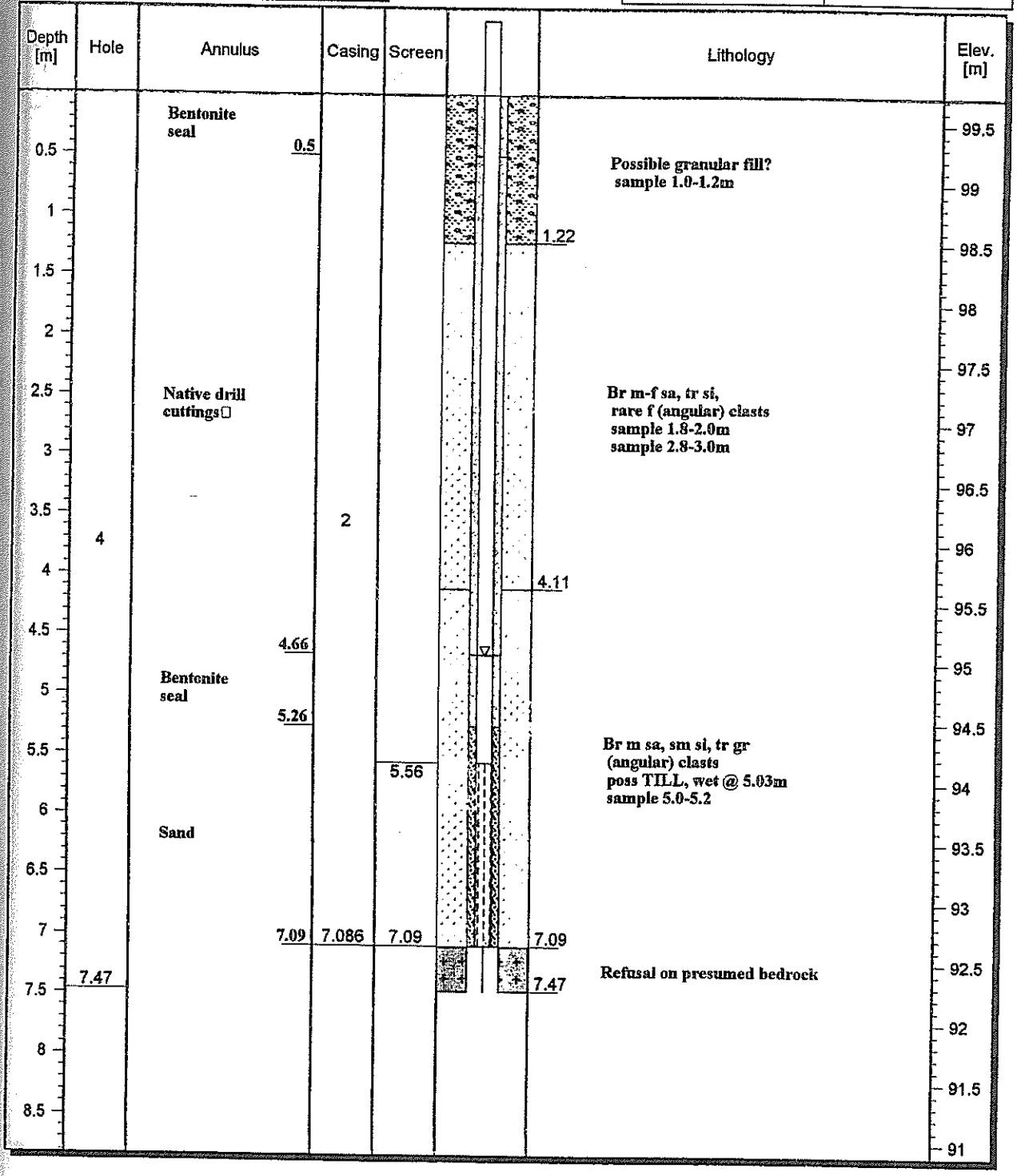
Drill. Method	Drill. Dates
auger	Feb 2, 1996

X	Y	Z	Meas. Pt. Elev.
1014	1011	99.72	100.34

All measurements are in meters. Hole and casing diameters in inches.

Scales (1: xxx)

Water Level (m AMSL)	Vertical	Horizontal
95.06	50.0	



Well Log: Lithology & Construction

Well Ident	Name
NB MW-2	

Drill. Method	Drill. Dates
auger	February 2, 1996

X	Y	Z	Meas. Pt. Elev.
1104	1043	92.52	93.44

All measurements are in meters. Hole and casing diameters in inches.

Scales (1: xxx)

Water Level (m AMSL)	Vertical	Horizontal
92.38	60.0	

Depth [m]	Hole	Annulus	Casing	Screen	Lithology	Elev. [m]
		Bentonite seal 0.5				92
1		Native drill cuttings 1.38			Muck, peat, organics, wet @ 0.6m	91
		Bentonite seal 1.98	2		1.83	
2				2.01		90
3		Sand			Grey-grn f-m sa, sm si, rare (angular) gravel clast sample 2.4-2.8m	89
			3.506	3.51		
4		3.81			4.42	88
	4				Br si, tr m sa sample 4.5-4.75m	
5					4.88	87
6		Native drill cuttings			Br m-f sa, tr si poorly sorted occ. pebble sample 6.5-7.0m	86
7					7.62	85
8					Br m sa, sm si tr (angular) gravel dense, poss TILL, sample 8.4-8.5m	84
	8.84	8.84			8.84	
9					Refusal on presumed bedrock	83
					9.5	
0						

Project No: 160238-08

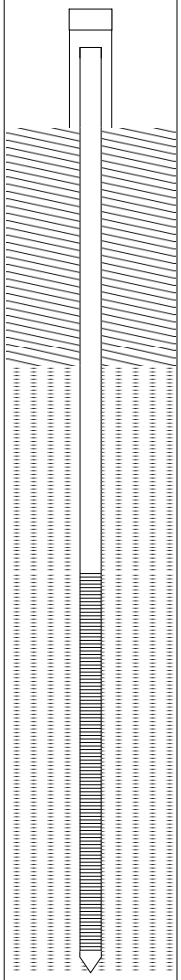
Project: North Baptiste WDS

Client: Municipality of Hastings Highlands

Site Coordinates: Zone 18 T North 5006481 , East 270044

Log of Borehole: NB-MW2 R

Field Personnel: B. M.

SUBSURFACE PROFILE				SAMPLE				WELL INSTALLATION	
Depth (ft / m)	Elevation	Symbol	Description	Number	Type	SPT N-Value	Recovery	Well Construction	Comments
-1	394.32		Ground Surface						Steel locking protective cover and casing
			Black organic PEAT						PVC S/U - 0.75m
1									Bentonite Holeplug
3									51mm (2") I.D. Sch. 40 PVC pipe
5	392.79		Brown, medium grain SAND with trace gravel. Wet to Saturated						#3 Silica sand pack
2									
7									10' Slot 10 PVC screen (2")
			MOE Well Tag A163243						
9									
	391.09								
11			End of Borehole						

Drill Method: 8" Hollow Stem Auger

Ground Elevation: 394.316

Checked by:

Sheet: 1 of 1

Hole Size: 8" (205mm)

T.O.P.: 395.1 masl

Drill Date: January 6, 2016

Static WL:

Well Log: Lithology & Construction

Well Ident	Name
NB MW-3	

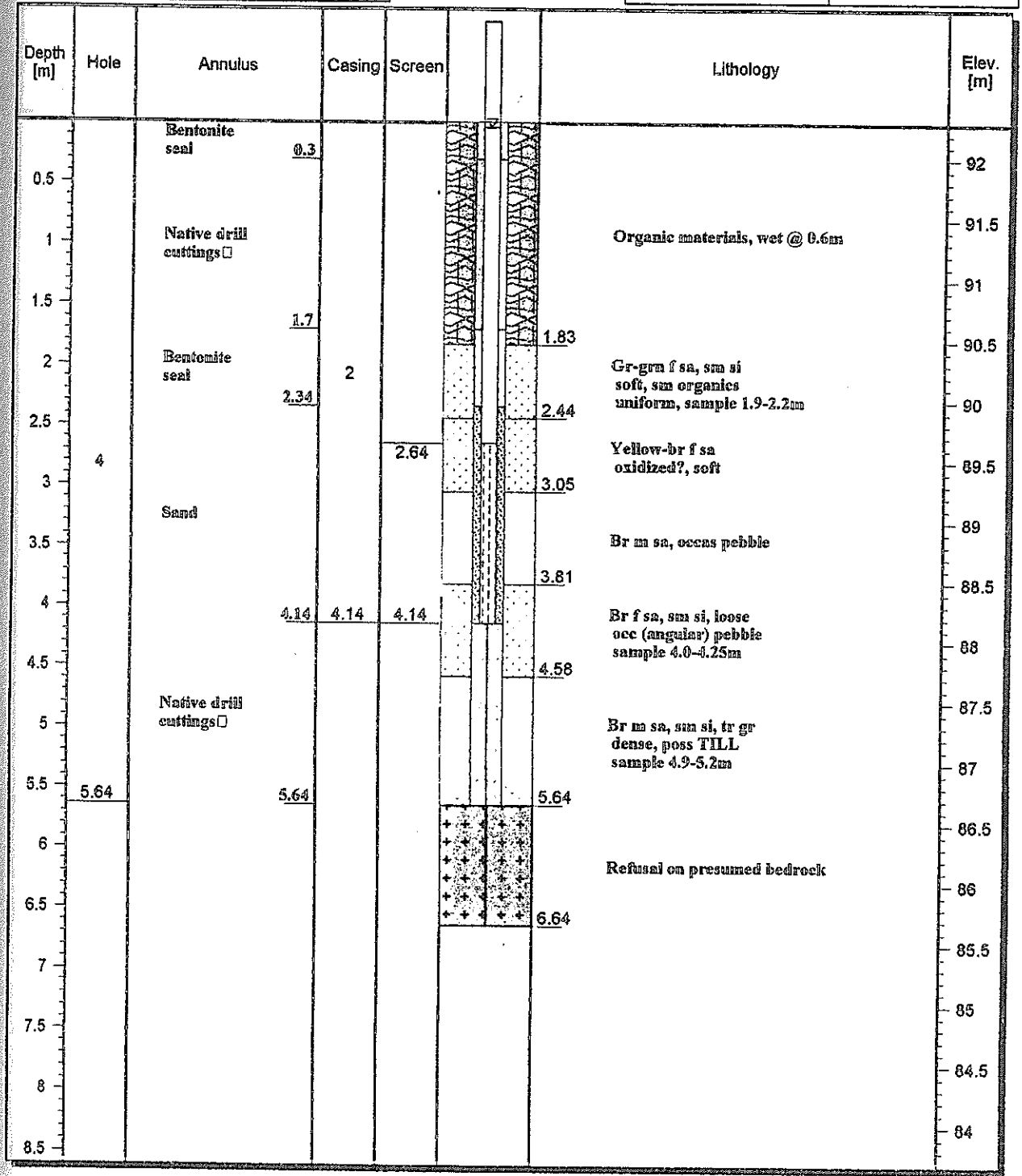
Drill. Method		Drill. Dates	
auger		February 2, 1996	

X	Y	Z	Meas. Pt. Elev.
1117	980	92.29	93.12

All measurements are in meters. Hole and casing diameters in inches.

Scales (1: xxx)

Water Level (m AMSL)	Vertical	Horizontal
92.25	50.0	



Well Log: Lithology & Construction

Well Ident	Name
NB MW-4	

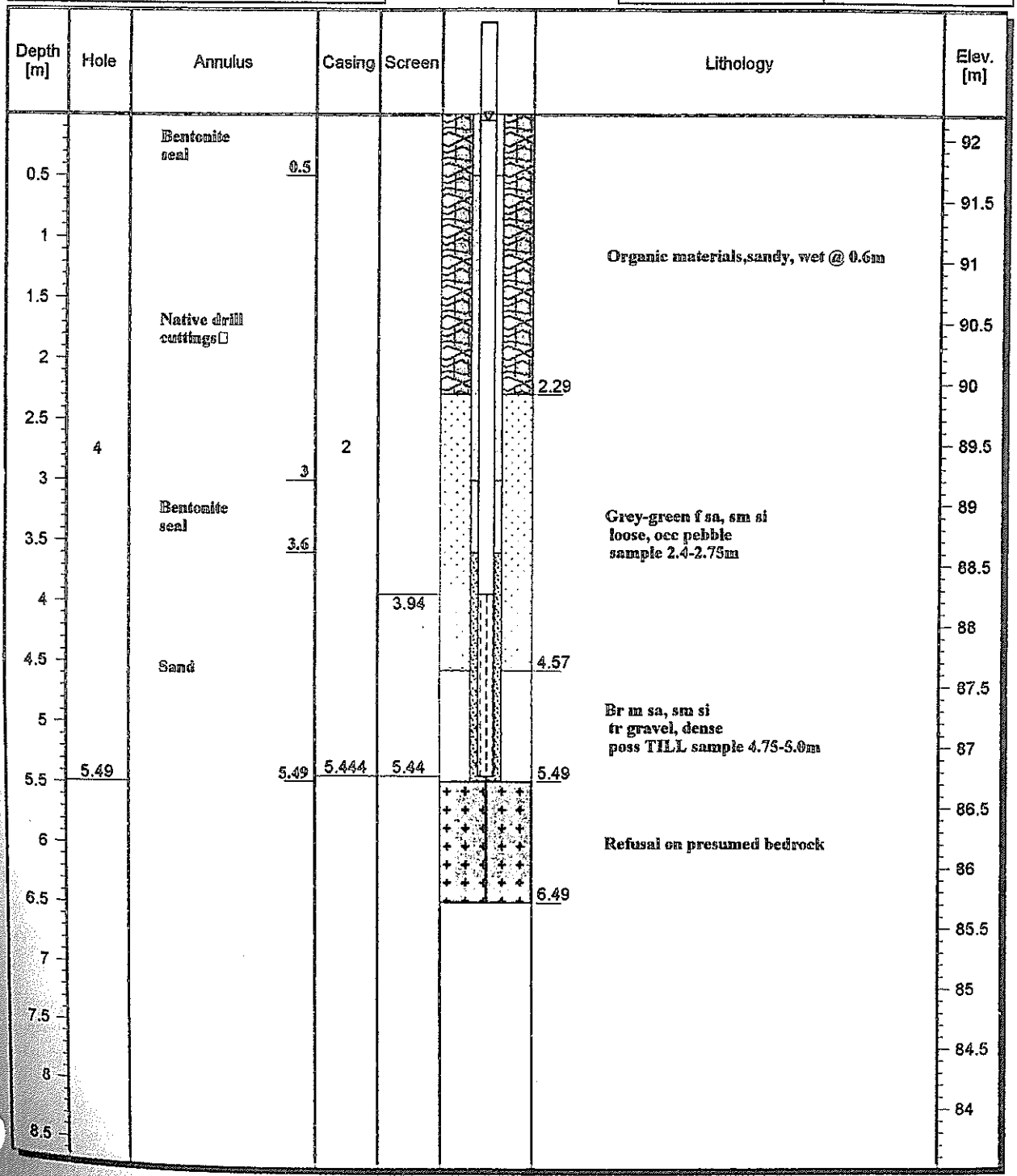
Drill. Method	auger	Drill. Dates	February 2, 1996

X	1114	Y	943	Z	92.20	Meas. Pt. Elev.	92.98

All measurements are in meters. Hole and casing diameters in inches.

Scales (1: xxx)

Water Level (m AMSL)	Vertical	Horizontal
92.15	50.0	



Well Log: Lithology & Construction

Well Ident	Name
NB MW-5	

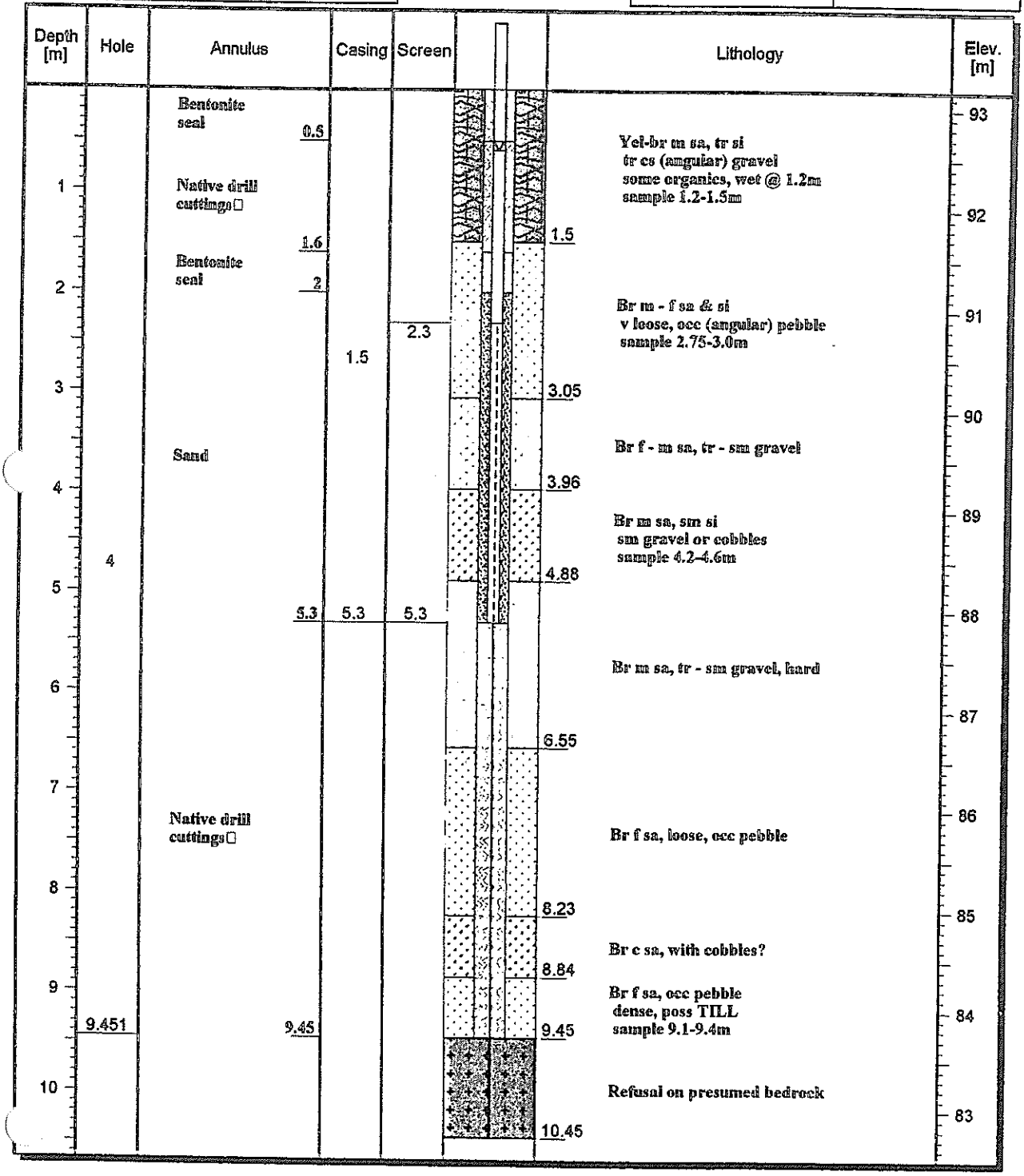
Drill. Method	Drill. Dates
auger	February 2, 1996

X	Y	Z	Meas. Pt. Elev.
1078	907	93.17	93.83

All measurements are in meters. Hole and casing diameters in inches.

Scales (1: xxx)

Water Level (m AMSL)	Vertical	Horizontal
92.58	60.0	



Project No: 160238-08

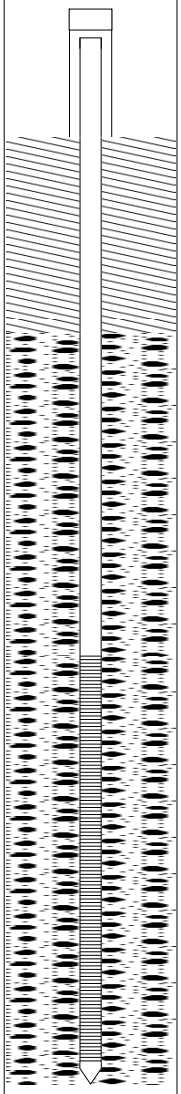
Project: North Baptiste WDS

Client: Municipality of Hastings Highlands

Site Coordinates: Zone 18 T North 5006346 , East 270011

Log of Borehole: NB-MW5 R

Field Personnel: B. M.

SUBSURFACE PROFILE				SAMPLE				WELL INSTALLATION	
Depth (ft / m)	Elevation	Symbol	Description	Number	Type	SPT N-Value	Recovery	Well Construction	Comments
-3 / -1	394.46		Ground Surface						Steel locking protective cover and casing PVC S/U - 0.56m
1			NB-MW5 damaged by bears.						
3			Replacement Monitor Drilling Detail:						Bentonite Holeplug
5			Top section of PVC pipe removed.						
7 / 2			Centred augers over existing hole and overdrilled to depth.						51mm (2") I.D. Sch. 40 PVC pipe
9			Replacement Monitor installed as detailed.						
11			Flowing sands and silts encountered which caved around sceen zone. Some silica sand added.						
13 / 4									
15			MOE Well Tag A163242						Flowing Silt and Sand with #3 Silica
17									10' Slot 10 PVC screen (2")
19 / 6									
21	387.73								
23			End of Borehole						

Drill Method: 8" Hollow Stem Auger

Hole Size: 8" (205mm)

Drill Date: January 5-6, 2016

Ground Elevation: 394.464

T.O.P.: 395.331 masl

Static WL:

Checked by:

Sheet: 1 of 1

Appendix D

Field Data Forms, Laboratory Reports, and Chain of Custody Records

Appendix D

D-1 Operations & Inspection Forms

SMALL LANDFILL
OPERATION AND INSPECTION FORM

Site Name: North Baptiste WTS, MHHs	**Date:** May 7th, 2025	**Weather:** 15°C
Project #: 250253-08	**BluMetric Staff:** NW / BM	Sunny & Clouds

Photographs of each item below should be collected during site visits.

OVERALL INSPECTION AND OPERATION REVIEW

- ❑ Signage in good condition — Yes ✓ No _
- ❑ ECA and emergency numbers on signage — Yes ✓ No _
- ❑ Hour of operation observed — Yes ✓ No _
- ❑ Site open under normal operating hours — Yes ✓ No _
- ❑ Perimeter fencing and gate in good condition — Yes ✓ No _
- ❑ Gate locked if closed — Yes ✓ No _

DESIGNATED WASTE AREA

- ❑ Working active/trench area (moderate size, daily cover, compacted) — ~~Yes~~ ~~No~~ NA - WTS
- ❑ Designated waste areas are properly signed and easily accessed by public — ~~Yes~~ ~~No~~

RECYCLING OPERATION (if applicable)

- ❑ Proper signage and bins present — Yes ✓ No _
- ❑ Clearly signed — Yes ✓ No _
- ❑ Overall neat in appearance — Yes ✓ No _

SEGREGATED SCRAP PILES (metal, tires, brush, etc.)

- ❑ Metals neat and appropriate size — Yes ✓ No _
- ❑ Tires neat and appropriate size — Yes ✓ No _
- ❑ Bulky Items neat and appropriate size — Yes ✓ No _
- ❑ Brush pile neat and appropriate size — ~~Yes~~ ~~No~~ } Not accepted
- ❑ Construction Debris neat and appropriate size — ~~Yes~~ ~~No~~ }

MONITORING WELL CONDITION

- ❑ Casing conditions (frost heave, lock, cap) — Yes ✓ No _
- ❑ Monitor condition (capped, vented) — Yes ✓ No _
- ❑ Wells clearly labeled (re-label as required) — Yes ✓ No _
- ❑ Well clearly visible (clear brush if necessary) — Yes ✓ No _

LANDFILL GAS MONITORING

- ❑ Conducted at structures — Yes ✓ No _ *Attendants Building = 0 ppm*
- ❑ Conducted at monitoring wells — Yes ✓ No _

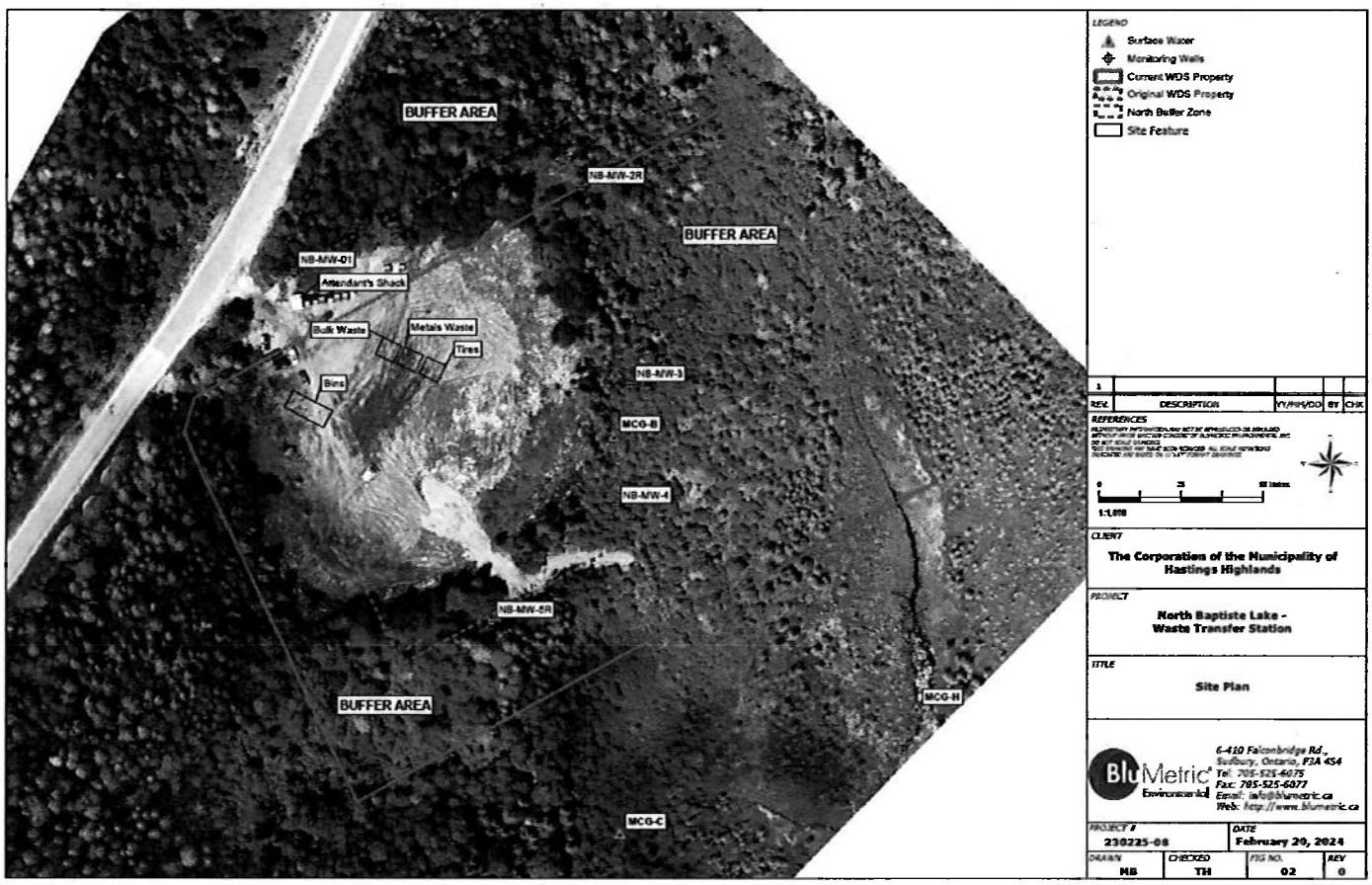
REPAIRS: Provide details of repairs made or materials required for repairs upon next site visit:

OBSERVATIONS OF PHYSICAL ENVIRONMENT: Please comment on any changes to the local environment (e.g. settling or slumping of waste/cover, new or altered drainage, presence of seeps, changes in vegetation cover, etc.)

This form is intended as a general reminder of information that should recorded during monitoring activities. The above information is a minimum guide. Any information deemed important should be recorded in the field notes for each site.

MOUND SURFACE CONDITIONS

❑	Any Signs of Erosion	Yes _	No ✓
❑	Vegetation Established Well	Yes ✓	No _
❑	Any Signs of Surface Cracking due to Gas	Yes _	No ✓
❑	Any Signs of Standing/Ponded Water	Yes _	No ✓
❑	Any Signs of Surface Water blockages	Yes _	No ✓
❑	Any Signs of Seeps	Yes _	No ✓



Identify any remedial actions required:

Identify any changes to site layout on drawing and/or comment:

This form is intended as a general reminder of information that should recorded during monitoring activities. The above information is a minimum guide. Any information deemed important should be recorded in the field notes for each site.

SMALL LANDFILL
OPERATION AND INSPECTION FORM

Site Name: North Baptiste WTS, MHHs	**Date:** July 7th, 2025	**Weather:** 21°C, humid, overcast
Project #: 250253-08	**BluMetric Staff:** NW/CR	

Photographs of each item below should be collected during site visits.

OVERALL INSPECTION AND OPERATION REVIEW

❑ Signage in good condition	Yes ✓	No _
❑ ECA and emergency numbers on signage	Yes ✓	No _
❑ Hour of operation observed	Yes ✓	No _
❑ Site open under normal operating hours	Yes ✓	No _
❑ Perimeter fencing and gate in good condition	Yes ✓	No _
❑ Gate locked if closed	Yes ✓	No_

DESIGNATED WASTE AREA

❑ Working active/trench area (moderate size, daily cover, compacted)	Yes _	No _	→NA
❑ Designated waste areas are properly signed and easily accessed by public	Yes _	No _	

RECYCLING OPERATION (if applicable)

❑ Proper signage and bins present	Yes ✓	No _
❑ Clearly signed	Yes ✓	No _
❑ Overall neat in appearance	Yes ✓	No _

SEGREGATED SCRAP PILES (metal, tires, brush, etc.)

❑ Metals neat and appropriate size	Yes ✓	No _	
❑ Tires neat and appropriate size	Yes ✓	No _	
❑ Bulky Items neat and appropriate size	Yes ✓	No _	→Large but contained
❑ Brush pile neat and appropriate size	~~Yes~~ _	~~No~~ _	→NA
❑ Construction Debris neat and appropriate size	Yes _	~~No~~ _	

MONITORING WELL CONDITION

❑ Casing conditions (frost heave, lock, cap)	Yes _	~~No~~ _	→Not assessed
❑ Monitor condition (capped, vented)	Yes _	No _	
❑ Wells clearly labeled (re-label as required)	Yes _	No _	
❑ Well clearly visible (clear brush if necessary)	Yes _	No _	

LANDFILL GAS MONITORING

❑ Conducted at structures	Yes _	~~No~~ _	→Not assessed
❑ Conducted at monitoring wells	Yes _	No _	

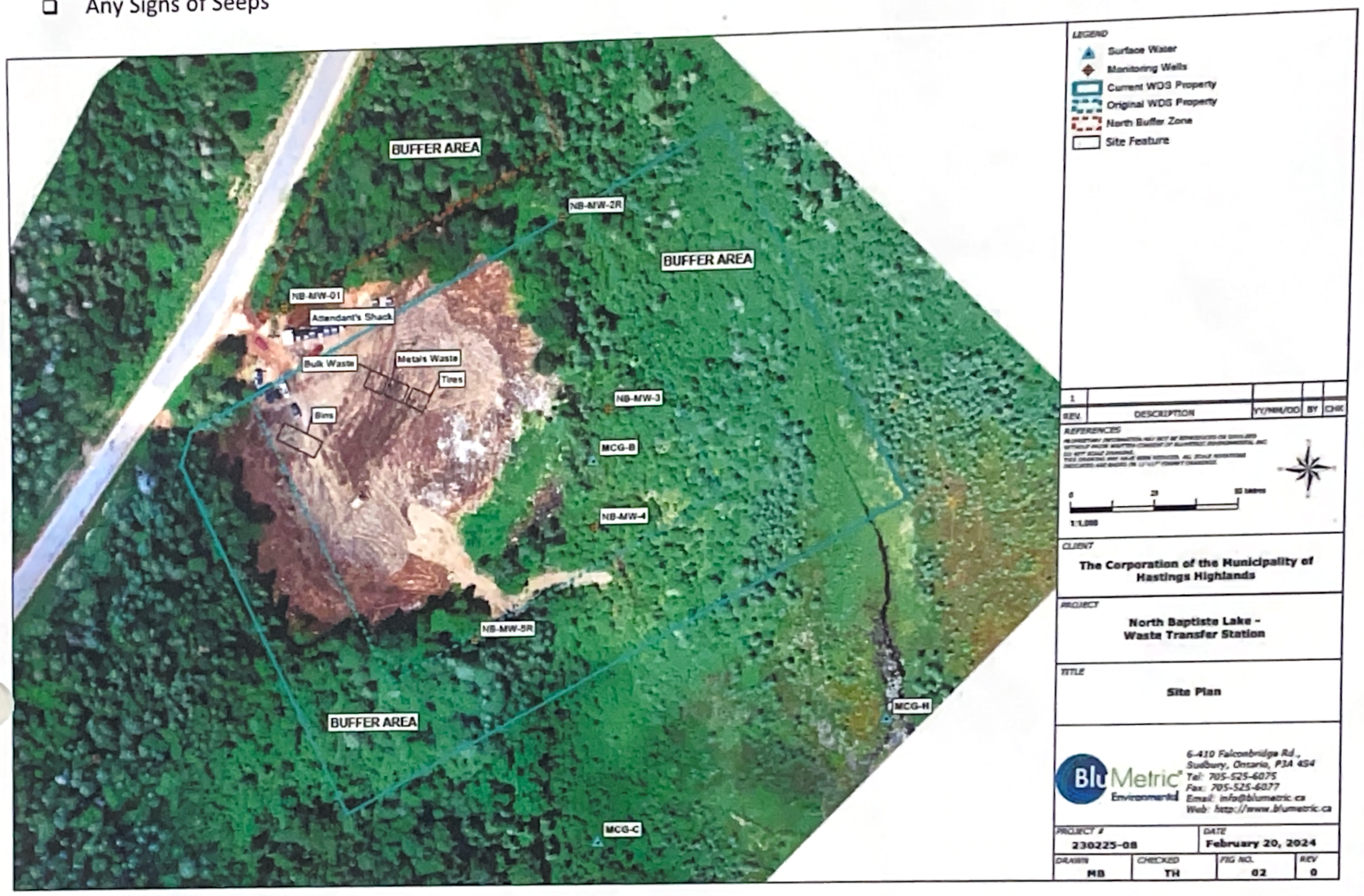
REPAIRS: Provide details of repairs made or materials required for repairs upon next site visit:

OBSERVATIONS OF PHYSICAL ENVIRONMENT: Please comment on any changes to the local environment (e.g. settling or slumping of waste/cover, new or altered drainage, presence of seeps, changes in vegetation cover, etc.)

This form is intended as a general reminder of information that should recorded during monitoring activities. The above information is a minimum guide. Any information deemed important should be recorded in the field notes for each site.

MOUND SURFACE CONDITIONS

❑ Any Signs of Erosion	Yes _	No ✓
❑ Vegetation Established Well	Yes ✓	No _
❑ Any Signs of Surface Cracking due to Gas	Yes _	No ✓
❑ Any Signs of Standing/Ponded Water	Yes _	No ✓
❑ Any Signs of Surface Water blockages	Yes _	No ✓
❑ Any Signs of Seeps	Yes _	No ✓



Identify any remedial actions required:

Identify any changes to site layout on drawing and/or comment:

This form is intended as a general reminder of information that should recorded during monitoring activities. The above information is a minimum guide. Any information deemed important should be recorded in the field notes for each site.

SMALL LANDFILL OPERATION AND INSPECTION FORM

BluMetric Environmental

Site Name: North Baptiste WTS, MHHs	Date: Oct 21, 2025	Weather: Sunny -1° → 8°C
Project #: 250253-08	BluMetric Staff: BM / DK	

Photographs of each item below should be collected during site visits.

OVERALL INSPECTION AND OPERATION REVIEW

❑ Signage in good condition	Yes ✓	No _	Brush in front of sign could be cleared
❑ ECA and emergency numbers on signage	Yes ✓	No _	
❑ Hour of operation observed	Yes ✓	No _	
❑ Site open under normal operating hours	Yes _	No ✓	
❑ Perimeter fencing and gate in good condition	Yes ✓	No _	
❑ Gate locked if closed	Yes ✓	No _	

DESIGNATED WASTE AREA

❑ Working active/trench area (moderate size, daily cover, compacted)	Yes _	No _	N/A ✓
❑ Designated waste areas are properly signed and easily accessed by public	Yes ✓	No _	Transfer site

RECYCLING OPERATION (if applicable)

❑ Proper signage and bins present	Yes ✓	No _
❑ Clearly signed	Yes ✓	No _
❑ Overall neat in appearance	Yes ✓	No _

SEGREGATED SCRAP PILES (metal, tires, brush, etc.)

❑ Metals neat and appropriate size	Yes _	No ✓	Metals and bulk areas are full and flowing into each other - should be removed
❑ Tires neat and appropriate size	Yes ✓	No _	
❑ Bulky Items neat and appropriate size	Yes _	No ✓	
❑ Brush pile neat and appropriate size	Yes _	No _	
❑ Construction Debris neat and appropriate size	Yes _	No _	N-A ✓ N/A ✓

MONITORING WELL CONDITION

❑ Casing conditions (frost heave, lock, cap)	Yes ✓	No _
❑ Monitor condition (capped, vented)	Yes ✓	No _
❑ Wells clearly labeled (re-label as required)	Yes ✓	No _
❑ Well clearly visible (clear brush if necessary)	Yes ✓	No _

LANDFILL GAS MONITORING

❑ Conducted at structures	Yes ✓	No _
❑ Conducted at monitoring wells	Yes ✓	No _

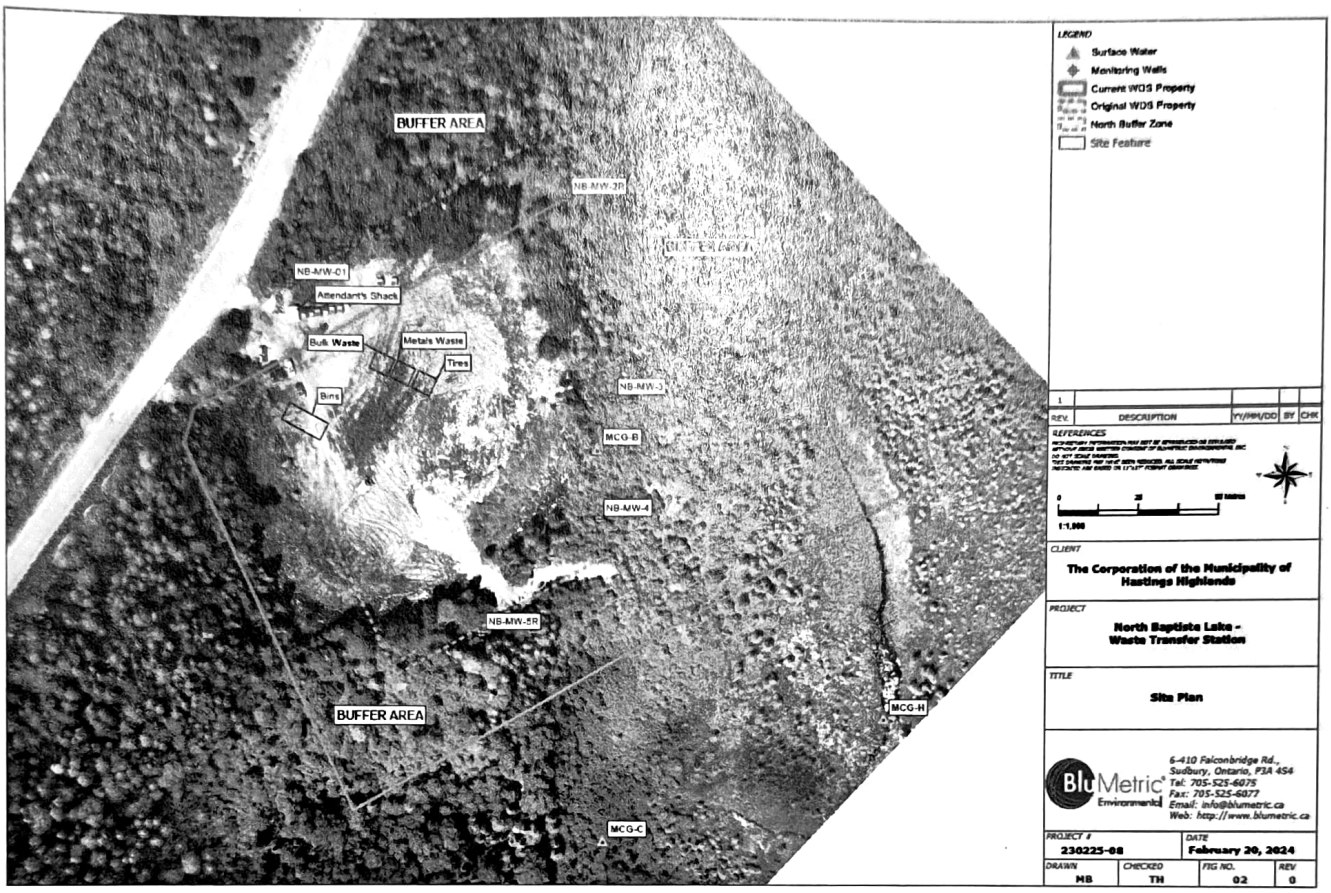
REPAIRS: Provide details of repairs made or materials required for repairs upon next site visit:

OBSERVATIONS OF PHYSICAL ENVIRONMENT: Please comment on any changes to the local environment (e.g. settling or slumping of waste/cover, new or altered drainage, presence of seeps, changes in vegetation cover, etc.)

This form is intended as a general reminder of information that should recorded during monitoring activities. The above information is a minimum guide. Any information deemed important should be recorded in the field notes for each site.

MOUND SURFACE CONDITIONS

- ❑ Any Signs of Erosion — Yes _ — No ✓
- ❑ Vegetation Established Well — Yes ✓ — No _
- ❑ Any Signs of Surface Cracking due to Gas — Yes _ — No ✓
- ❑ Any Signs of Standing/Ponded Water — Yes _ — No ✓
- ❑ Any Signs of Surface Water blockages — Yes _ — No ✓
- ❑ Any Signs of Seeps — Yes _ — No ✓



Identify any remedial actions required:

Identify any changes to site layout on drawing and/or comment:

This form is intended as a general reminder of information that should recorded during monitoring activities. The above information is a minimum guide. Any information deemed important should be recorded in the field notes for each site.

Appendix D

D-2 Groundwater Laboratory Reports

Your Project #: 250253-08
Site Location: North Baptiste
Your C.O.C. #: C#1062825-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/10/31
Report #: R8642885
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5D4577
Received: 2025/10/23, 10:50

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity	3	N/A	2025/10/30	CAM SOP-00448	SM 24 2320 B m
Alkalinity	3	N/A	2025/10/31	CAM SOP-00448	SM 24 2320 B m
Chloride by Automated Colourimetry	5	N/A	2025/10/29	CAM SOP-00463	SM 24 4500-Cl E m
Chloride by Automated Colourimetry	1	N/A	2025/10/30	CAM SOP-00463	SM 24 4500-Cl E m
Chemical Oxygen Demand	6	N/A	2025/10/30	CAM SOP-00416	SM 24 5220 D m
Conductivity	3	N/A	2025/10/30	CAM SOP-00414	SM 24 2510 m
Conductivity	3	N/A	2025/10/31	CAM SOP-00414	SM 24 2510 m
Dissolved Organic Carbon (DOC) (1)	6	N/A	2025/10/28	CAM SOP-00446	SM 24 5310 B m
Hardness (calculated as CaCO3)	6	N/A	2025/10/29	CAM SOP 00102/00408/00447	SM 2340 B
Dissolved Mercury in Water by CVAA	5	2025/10/28	2025/10/28	CAM SOP-00453	EPA 7470A m
Dissolved Mercury in Water by CVAA	1	2025/10/29	2025/10/30	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	6	N/A	2025/10/28	CAM SOP-00447	EPA 6020B m
Total Ammonia-N	6	N/A	2025/10/29	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (2)	6	N/A	2025/10/25	CAM SOP-00440	SM 24 4500-NO3I/NO2B
pH (3)	3	2025/10/25	2025/10/30	CAM SOP-00413	SM 24th - 4500H+ B
pH (3)	3	2025/10/25	2025/10/31	CAM SOP-00413	SM 24th - 4500H+ B
Phenols (4AAP)	6	N/A	2025/10/30	CAM SOP-00444	OMOE E3179 m
Sulphate by Automated Turbidimetry	2	N/A	2025/10/28	CAM SOP-00464	SM 24 4500-SO42- E m
Sulphate by Automated Turbidimetry	3	N/A	2025/10/29	CAM SOP-00464	SM 24 4500-SO42- E m
Sulphate by Automated Turbidimetry	1	N/A	2025/10/30	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	6	2025/10/28	2025/10/29	CAM SOP-00428	SM 24 2540C m
Total Kjeldahl Nitrogen in Water	6	2025/10/29	2025/10/30	CAM SOP-00938	SM 4500-N B m
Total Phosphorus (Colourimetric)	6	2025/10/29	2025/10/31	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	6	2025/10/28	2025/10/29	CAM SOP-00428	SM 24 2540D m
Turbidity	6	N/A	2025/10/25	CAM SOP-00417	SM 24 2130 B

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

Your Project #: 250253-08
Site Location: North Baptiste
Your C.O.C. #: C#1062825-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/10/31
Report #: R8642885
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5D4577
Received: 2025/10/23, 10:50

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(3) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AWOR80			AWOR80		
Sampling Date		2025/10/21 10:55			2025/10/21 10:55		
COC Number		C#1062825-01-01			C#1062825-01-01		
	UNITS	NB MW 1	RDL	QC Batch	NB MW 1 Lab-Dup	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L	16	1.0	A039556			
Inorganics							
Total Ammonia-N	mg/L	ND	0.050	A041808			
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	A042587			
Conductivity	umho/cm	140	2.0	A040100			
Total Dissolved Solids	mg/L	180	10	A042105			
Total Kjeldahl Nitrogen (TKN)	mg/L	ND	0.10	A042157			
Dissolved Organic Carbon	mg/L	2.0	0.4	A041655	2.1	0.4	A041655
pH	pH	7.29		A040101			
Phenols-4AAP	mg/L	ND	0.0010	A043631			
Total Phosphorus	mg/L	1.2	0.020	A042569			
Total Suspended Solids	mg/L	1400	20	A042053			
Dissolved Sulphate (SO4)	mg/L	6.8	1.0	A040184			
Turbidity	NTU	670	0.5	A040131			
Alkalinity (Total as CaCO3)	mg/L	27	1.0	A040097			
Dissolved Chloride (Cl-)	mg/L	17	1.0	A040180			
Nitrite (N)	mg/L	ND	0.010	A040123			
Nitrate (N)	mg/L	0.14	0.10	A040123			
Nitrate + Nitrite (N)	mg/L	0.14	0.10	A040123			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AWOR81			AWOR82		
Sampling Date		2025/10/21 10:06			2025/10/21 10:30		
COC Number		C#1062825-01-01			C#1062825-01-01		
	UNITS	NB MW 2R	RDL	QC Batch	NB MW 3	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L	29	1.0	A039556	460	1.0	A039556
Inorganics							
Total Ammonia-N	mg/L	ND	0.050	A041808	ND	0.050	A041808
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	A042587	ND	4.0	A042587
Conductivity	umho/cm	86	2.0	A040198	1300	2.0	A040198
Total Dissolved Solids	mg/L	80	10	A042105	745	10	A042143
Total Kjeldahl Nitrogen (TKN)	mg/L	ND	0.10	A042157	ND	0.10	A042157
Dissolved Organic Carbon	mg/L	1.4	0.4	A041655	2.9	0.4	A041655
pH	pH	7.66		A040199	7.39		A040199
Phenols-4AAP	mg/L	ND	0.0010	A043631	ND	0.0010	A043631
Total Phosphorus	mg/L	0.74	0.020	A042569	0.23	0.020	A042569
Total Suspended Solids	mg/L	490	10	A042053	94	10	A042117
Dissolved Sulphate (SO4)	mg/L	5.2	1.0	A040184	14	1.0	A040184
Turbidity	NTU	120	0.1	A040131	7.1	0.1	A040131
Alkalinity (Total as CaCO3)	mg/L	31	1.0	A040197	150	1.0	A040197
Dissolved Chloride (Cl-)	mg/L	2.7	1.0	A040180	270	2.0	A040180
Nitrite (N)	mg/L	ND	0.010	A040123	ND	0.010	A040123
Nitrate (N)	mg/L	0.11	0.10	A040123	ND	0.10	A040123
Nitrate + Nitrite (N)	mg/L	0.11	0.10	A040123	ND	0.10	A040123

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AWOR82			AWOR83		
Sampling Date		2025/10/21 10:30			2025/10/21 11:15		
COC Number		C#1062825-01-01			C#1062825-01-01		
	UNITS	NB MW 3 Lab-Dup	RDL	QC Batch	NB MW 4	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L				100	1.0	A039556
Inorganics							
Total Ammonia-N	mg/L				ND	0.050	A041808
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	A042587	ND	4.0	A042587
Conductivity	umho/cm				270	2.0	A040100
Total Dissolved Solids	mg/L				190	10	A042105
Total Kjeldahl Nitrogen (TKN)	mg/L				ND	0.10	A042157
Dissolved Organic Carbon	mg/L				1.4	0.4	A041655
pH	pH				8.06		A040101
Phenols-4AAP	mg/L				ND	0.0010	A043631
Total Phosphorus	mg/L				0.73	0.020	A042569
Total Suspended Solids	mg/L				380	10	A042053
Dissolved Sulphate (SO4)	mg/L				19	1.0	A040188
Turbidity	NTU	8.0	0.1	A040131	98	0.1	A040081
Alkalinity (Total as CaCO3)	mg/L				65	1.0	A040097
Dissolved Chloride (Cl-)	mg/L				30	1.0	A040186
Nitrite (N)	mg/L	ND	0.010	A040123	ND	0.010	A040123
Nitrate (N)	mg/L	ND	0.10	A040123	ND	0.10	A040123
Nitrate + Nitrite (N)	mg/L	ND	0.10	A040123	ND	0.10	A040123

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AWOR84			AWOR85		
Sampling Date		2025/10/21 11:25			2025/10/21 10:30		
COC Number		C#1062825-01-01			C#1062825-01-01		
	UNITS	NB MW 5R	RDL	QC Batch	NB-QAQC-GW1	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L	80	1.0	A039556	450	1.0	A039919
Inorganics							
Total Ammonia-N	mg/L	ND	0.050	A041808	ND	0.050	A041808
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	A042587	ND	4.0	A042587
Conductivity	umho/cm	220	2.0	A040100	1300	2.0	A040198
Total Dissolved Solids	mg/L	225	10	A042143	795	10	A042105
Total Kjeldahl Nitrogen (TKN)	mg/L	ND	0.10	A042157	ND	0.10	A042157
Dissolved Organic Carbon	mg/L	1.9	0.4	A041655	3.1	0.4	A041655
pH	pH	7.70		A040101	7.42		A040199
Phenols-4AAP	mg/L	ND	0.0010	A043631	ND	0.0010	A043631
Total Phosphorus	mg/L	7.4	0.020	A042569	0.18	0.020	A042569
Total Suspended Solids	mg/L	11000	200	A042117	85	10	A042053
Dissolved Sulphate (SO4)	mg/L	18	1.0	A040188	14	1.0	A041199
Turbidity	NTU	4700	1	A040081	8.6	0.1	A040081
Alkalinity (Total as CaCO3)	mg/L	38	1.0	A040097	150	1.0	A040197
Dissolved Chloride (Cl-)	mg/L	23	1.0	A040186	260	2.0	A041198
Nitrite (N)	mg/L	ND	0.010	A040079	ND	0.010	A040079
Nitrate (N)	mg/L	ND	0.10	A040079	ND	0.10	A040079
Nitrate + Nitrite (N)	mg/L	ND	0.10	A040079	ND	0.10	A040079

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AWOR85		
Sampling Date		2025/10/21 10:30		
COC Number		C#1062825-01-01		
	UNITS	**NB-QAQC-GW1 Lab-Dup**	**RDL**	**QC Batch**
Inorganics				
Conductivity	umho/cm	1300	2.0	A040198
pH	pH	7.56		A040199
Dissolved Sulphate (SO4)	mg/L	13	1.0	A041199
Alkalinity (Total as CaCO3)	mg/L	150	1.0	A040197
Dissolved Chloride (Cl-)	mg/L	260	2.0	A041198

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AWOR80	AWOR81	AWOR82	AWOR83	AWOR84		
Sampling Date		2025/10/21 10:55	2025/10/21 10:06	2025/10/21 10:30	2025/10/21 11:15	2025/10/21 11:25		
COC Number		C#1062825-01-01	C#1062825-01-01	C#1062825-01-01	C#1062825-01-01	C#1062825-01-01		
	UNITS	NB MW 1	NB MW 2R	NB MW 3	NB MW 4	NB MW 5R	RDL	QC Batch
Metals								
Dissolved Mercury (Hg)	ug/L	ND	ND	ND	ND	ND	0.10	A041518
Dissolved Aluminum (Al)	ug/L	ND	ND	ND	ND	ND	4.9	A041895
Dissolved Arsenic (As)	ug/L	ND	ND	ND	ND	ND	1.0	A041895
Dissolved Barium (Ba)	ug/L	6.9	2.8	120	12	16	2.0	A041895
Dissolved Beryllium (Be)	ug/L	ND	ND	ND	ND	ND	0.40	A041895
Dissolved Boron (B)	ug/L	ND	ND	140	12	15	10	A041895
Dissolved Cadmium (Cd)	ug/L	ND	ND	ND	ND	ND	0.090	A041895
Dissolved Calcium (Ca)	ug/L	5100	6900	110000	31000	22000	200	A041895
Dissolved Chromium (Cr)	ug/L	ND	ND	ND	ND	ND	5.0	A041895
Dissolved Cobalt (Co)	ug/L	ND	ND	4.6	ND	ND	0.50	A041895
Dissolved Copper (Cu)	ug/L	ND	ND	ND	ND	ND	0.90	A041895
Dissolved Iron (Fe)	ug/L	ND	ND	1100	ND	ND	100	A041895
Dissolved Lead (Pb)	ug/L	ND	ND	ND	ND	ND	0.50	A041895
Dissolved Magnesium (Mg)	ug/L	890	2700	45000	6300	6300	50	A041895
Dissolved Manganese (Mn)	ug/L	ND	ND	70	ND	230	2.0	A041895
Dissolved Molybdenum (Mo)	ug/L	ND	ND	ND	1.9	2.1	0.50	A041895
Dissolved Nickel (Ni)	ug/L	ND	ND	6.8	ND	ND	1.0	A041895
Dissolved Potassium (K)	ug/L	1200	1400	6800	2900	2600	200	A041895
Dissolved Selenium (Se)	ug/L	ND	ND	ND	ND	ND	2.0	A041895
Dissolved Silicon (Si)	ug/L	8400	12000	16000	8500	8700	50	A041895
Dissolved Silver (Ag)	ug/L	ND	ND	ND	ND	ND	0.090	A041895
Dissolved Sodium (Na)	ug/L	20000	4000	56000	6200	5100	100	A041895
Dissolved Strontium (Sr)	ug/L	58	44	1000	98	110	1.0	A041895
Dissolved Thallium (Tl)	ug/L	ND	ND	ND	ND	ND	0.050	A041895
Dissolved Titanium (Ti)	ug/L	ND	ND	ND	ND	ND	5.0	A041895
Dissolved Vanadium (V)	ug/L	0.77	3.9	0.99	ND	0.51	0.50	A041895
Dissolved Zinc (Zn)	ug/L	18	ND	ND	ND	ND	5.0	A041895

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Chemistry testing is conducted at 6740 Campobello Rd.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AWOR85		
Sampling Date		2025/10/21 10:30		
COC Number		C#1062825-01-01		
	UNITS	NB-QAQC-GW1	RDL	QC Batch
Metals				
Dissolved Mercury (Hg)	ug/L	ND	0.10	A042449
Dissolved Aluminum (Al)	ug/L	ND	4.9	A041895
Dissolved Arsenic (As)	ug/L	ND	1.0	A041895
Dissolved Barium (Ba)	ug/L	120	2.0	A041895
Dissolved Beryllium (Be)	ug/L	ND	0.40	A041895
Dissolved Boron (B)	ug/L	130	10	A041895
Dissolved Cadmium (Cd)	ug/L	ND	0.090	A041895
Dissolved Calcium (Ca)	ug/L	110000	200	A041895
Dissolved Chromium (Cr)	ug/L	ND	5.0	A041895
Dissolved Cobalt (Co)	ug/L	4.5	0.50	A041895
Dissolved Copper (Cu)	ug/L	ND	0.90	A041895
Dissolved Iron (Fe)	ug/L	1100	100	A041895
Dissolved Lead (Pb)	ug/L	ND	0.50	A041895
Dissolved Magnesium (Mg)	ug/L	43000	50	A041895
Dissolved Manganese (Mn)	ug/L	68	2.0	A041895
Dissolved Molybdenum (Mo)	ug/L	ND	0.50	A041895
Dissolved Nickel (Ni)	ug/L	6.8	1.0	A041895
Dissolved Potassium (K)	ug/L	6600	200	A041895
Dissolved Selenium (Se)	ug/L	ND	2.0	A041895
Dissolved Silicon (Si)	ug/L	15000	50	A041895
Dissolved Silver (Ag)	ug/L	ND	0.090	A041895
Dissolved Sodium (Na)	ug/L	54000	100	A041895
Dissolved Strontium (Sr)	ug/L	1000	1.0	A041895
Dissolved Thallium (Tl)	ug/L	ND	0.050	A041895
Dissolved Titanium (Ti)	ug/L	ND	5.0	A041895
Dissolved Vanadium (V)	ug/L	0.89	0.50	A041895
Dissolved Zinc (Zn)	ug/L	ND	5.0	A041895

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

TEST SUMMARY

Bureau Veritas ID: AWOR80
Sample ID: NB MW 1
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A040097	N/A	2025/10/30	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A040180	N/A	2025/10/29	Alina Dobreanu
Chemical Oxygen Demand	SPEC	A042587	N/A	2025/10/30	Arshdeep Jagayat
Conductivity	AT	A040100	N/A	2025/10/30	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A041655	N/A	2025/10/28	Gyulshen Idriz
Hardness (calculated as CaCO3)		A039556	N/A	2025/10/29	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	A041518	2025/10/28	2025/10/28	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	A041895	N/A	2025/10/28	Indira HarryPaul
Total Ammonia-N	SKAL/NH4	A041808	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A040123	N/A	2025/10/25	Helen He
pH	AT	A040101	2025/10/25	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043631	N/A	2025/10/30	Jency Sara Johnson
Sulphate by Automated Turbidimetry	SKAL	A040184	N/A	2025/10/29	Massarat Jan
Total Dissolved Solids	BAL	A042105	2025/10/28	2025/10/29	Hiu Fung Yan (James)
Total Kjeldahl Nitrogen in Water	SKAL	A042157	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042569	2025/10/29	2025/10/31	Vidhi Khatri
Total Suspended Solids	BAL	A042053	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Turbidity	AT	A040131	N/A	2025/10/25	Pinky joy JANABAN

Bureau Veritas ID: AWOR80 Dup
Sample ID: NB MW 1
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A041655	N/A	2025/10/28	Gyulshen Idriz

Bureau Veritas ID: AWOR81
Sample ID: NB MW 2R
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A040197	N/A	2025/10/31	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A040180	N/A	2025/10/29	Alina Dobreanu
Chemical Oxygen Demand	SPEC	A042587	N/A	2025/10/30	Arshdeep Jagayat
Conductivity	AT	A040198	N/A	2025/10/31	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A041655	N/A	2025/10/28	Gyulshen Idriz
Hardness (calculated as CaCO3)		A039556	N/A	2025/10/29	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	A041518	2025/10/28	2025/10/28	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	A041895	N/A	2025/10/28	Indira HarryPaul
Total Ammonia-N	SKAL/NH4	A041808	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A040123	N/A	2025/10/25	Helen He
pH	AT	A040199	2025/10/25	2025/10/31	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043631	N/A	2025/10/30	Jency Sara Johnson
Sulphate by Automated Turbidimetry	SKAL	A040184	N/A	2025/10/29	Massarat Jan

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

TEST SUMMARY

Bureau Veritas ID: AWOR81
Sample ID: NB MW 2R
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Dissolved Solids	BAL	A042105	2025/10/28	2025/10/29	Hiu Fung Yan (James)
Total Kjeldahl Nitrogen in Water	SKAL	A042157	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042569	2025/10/29	2025/10/31	Vidhi Khatri
Total Suspended Solids	BAL	A042053	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Turbidity	AT	A040131	N/A	2025/10/25	Pinky joy JANABAN

Bureau Veritas ID: AWOR82
Sample ID: NB MW 3
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A040197	N/A	2025/10/31	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A040180	N/A	2025/10/29	Alina Dobreanu
Chemical Oxygen Demand	SPEC	A042587	N/A	2025/10/30	Arshdeep Jagayat
Conductivity	AT	A040198	N/A	2025/10/31	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A041655	N/A	2025/10/28	Gyulshen Idriz
Hardness (calculated as CaCO3)		A039556	N/A	2025/10/29	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	A041518	2025/10/28	2025/10/28	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	A041895	N/A	2025/10/28	Indira HarryPaul
Total Ammonia-N	SKAL/NH4	A041808	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A040123	N/A	2025/10/25	Helen He
pH	AT	A040199	2025/10/25	2025/10/31	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043631	N/A	2025/10/30	Jency Sara Johnson
Sulphate by Automated Turbidimetry	SKAL	A040184	N/A	2025/10/29	Massarat Jan
Total Dissolved Solids	BAL	A042143	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Total Kjeldahl Nitrogen in Water	SKAL	A042157	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042569	2025/10/29	2025/10/31	Vidhi Khatri
Total Suspended Solids	BAL	A042117	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Turbidity	AT	A040131	N/A	2025/10/25	Pinky joy JANABAN

Bureau Veritas ID: AWOR82 Dup
Sample ID: NB MW 3
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chemical Oxygen Demand	SPEC	A042587	N/A	2025/10/30	Arshdeep Jagayat
Nitrate & Nitrite as Nitrogen in Water	LACH	A040123	N/A	2025/10/25	Helen He
Turbidity	AT	A040131	N/A	2025/10/25	Pinky joy JANABAN

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

TEST SUMMARY

Bureau Veritas ID: AWOR83
Sample ID: NB MW 4
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A040097	N/A	2025/10/30	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A040186	N/A	2025/10/29	Alina Dobreanu
Chemical Oxygen Demand	SPEC	A042587	N/A	2025/10/30	Arshdeep Jagayat
Conductivity	AT	A040100	N/A	2025/10/30	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A041655	N/A	2025/10/28	Gyulshen Idriz
Hardness (calculated as CaCO3)		A039556	N/A	2025/10/29	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	A041518	2025/10/28	2025/10/28	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	A041895	N/A	2025/10/28	Indira HarryPaul
Total Ammonia-N	SKAL/NH4	A041808	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A040123	N/A	2025/10/25	Helen He
pH	AT	A040101	2025/10/25	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043631	N/A	2025/10/30	Jency Sara Johnson
Sulphate by Automated Turbidimetry	SKAL	A040188	N/A	2025/10/28	Massarat Jan
Total Dissolved Solids	BAL	A042105	2025/10/28	2025/10/29	Hiu Fung Yan (James)
Total Kjeldahl Nitrogen in Water	SKAL	A042157	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042569	2025/10/29	2025/10/31	Vidhi Khatri
Total Suspended Solids	BAL	A042053	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Turbidity	AT	A040081	N/A	2025/10/25	Pinky joy JANABAN

Bureau Veritas ID: AWOR84
Sample ID: NB MW 5R
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A040097	N/A	2025/10/30	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A040186	N/A	2025/10/29	Alina Dobreanu
Chemical Oxygen Demand	SPEC	A042587	N/A	2025/10/30	Arshdeep Jagayat
Conductivity	AT	A040100	N/A	2025/10/30	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A041655	N/A	2025/10/28	Gyulshen Idriz
Hardness (calculated as CaCO3)		A039556	N/A	2025/10/29	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	A041518	2025/10/28	2025/10/28	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	A041895	N/A	2025/10/28	Indira HarryPaul
Total Ammonia-N	SKAL/NH4	A041808	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A040079	N/A	2025/10/25	Helen He
pH	AT	A040101	2025/10/25	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043631	N/A	2025/10/30	Jency Sara Johnson
Sulphate by Automated Turbidimetry	SKAL	A040188	N/A	2025/10/28	Massarat Jan
Total Dissolved Solids	BAL	A042143	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Total Kjeldahl Nitrogen in Water	SKAL	A042157	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042569	2025/10/29	2025/10/31	Vidhi Khatri
Total Suspended Solids	BAL	A042117	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Turbidity	AT	A040081	N/A	2025/10/25	Pinky joy JANABAN

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

TEST SUMMARY

Bureau Veritas ID: AWOR85
Sample ID: NB-QAQC-GW1
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A040197	N/A	2025/10/31	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A041198	N/A	2025/10/30	Alina Dobreanu
Chemical Oxygen Demand	SPEC	A042587	N/A	2025/10/30	Arshdeep Jagayat
Conductivity	AT	A040198	N/A	2025/10/31	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A041655	N/A	2025/10/28	Gyulshen Idriz
Hardness (calculated as CaCO3)		A039919	N/A	2025/10/29	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	A042449	2025/10/29	2025/10/30	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	A041895	N/A	2025/10/28	Indira HarryPaul
Total Ammonia-N	SKAL/NH4	A041808	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A040079	N/A	2025/10/25	Helen He
pH	AT	A040199	2025/10/25	2025/10/31	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043631	N/A	2025/10/30	Jency Sara Johnson
Sulphate by Automated Turbidimetry	SKAL	A041199	N/A	2025/10/30	Massarat Jan
Total Dissolved Solids	BAL	A042105	2025/10/28	2025/10/29	Hiu Fung Yan (James)
Total Kjeldahl Nitrogen in Water	SKAL	A042157	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042569	2025/10/29	2025/10/31	Vidhi Khatri
Total Suspended Solids	BAL	A042053	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Turbidity	AT	A040081	N/A	2025/10/25	Pinky joy JANABAN

Bureau Veritas ID: AWOR85 Dup
Sample ID: NB-QAQC-GW1
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A040197	N/A	2025/10/31	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A041198	N/A	2025/10/30	Alina Dobreanu
Conductivity	AT	A040198	N/A	2025/10/31	Surinder Rai
pH	AT	A040199	2025/10/25	2025/10/31	Surinder Rai
Sulphate by Automated Turbidimetry	SKAL	A041199	N/A	2025/10/30	Massarat Jan

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Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C

Turbidity: Samples analyzed past hold time. Results may be biased. Analysis performed with client's consent.

Results relate only to the items tested.

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Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

QUALITY ASSURANCE REPORT

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
A040079	Nitrate (N)	2025/10/25	102	80 - 120	101	80 - 120	ND, RDL=0.10	mg/L	NC	20		
A040079	Nitrite (N)	2025/10/25	105	80 - 120	104	80 - 120	ND, RDL=0.010	mg/L	NC	20		
A040081	Turbidity	2025/10/25			94	80 - 120	ND, RDL=0.1	NTU	3.7	20		
A040097	Alkalinity (Total as CaCO3)	2025/10/30			95	85 - 115	ND, RDL=1.0	mg/L	0.66	20		
A040100	Conductivity	2025/10/30			100	85 - 115	ND, RDL=2.0	umho/cm	0.40	10		
A040101	pH	2025/10/30			102	98 - 103			0.18	N/A		
A040123	Nitrate (N)	2025/10/25	102	80 - 120	103	80 - 120	ND, RDL=0.10	mg/L	NC	20		
A040123	Nitrite (N)	2025/10/25	105	80 - 120	105	80 - 120	ND, RDL=0.010	mg/L	NC	20		
A040131	Turbidity	2025/10/25			98	80 - 120	ND, RDL=0.1	NTU	12	20		
A040180	Dissolved Chloride (Cl-)	2025/10/29	NC	80 - 120	97	80 - 120	ND, RDL=1.0	mg/L	0.095	20		
A040184	Dissolved Sulphate (SO4)	2025/10/29	89	75 - 125	97	80 - 120	ND, RDL=1.0	mg/L	1.0	20		
A040186	Dissolved Chloride (Cl-)	2025/10/29	NC	80 - 120	96	80 - 120	ND, RDL=1.0	mg/L	0.57	20		
A040188	Dissolved Sulphate (SO4)	2025/10/28	91	75 - 125	95	80 - 120	ND, RDL=1.0	mg/L	6.4	20		
A040197	Alkalinity (Total as CaCO3)	2025/10/31			97	85 - 115	ND, RDL=1.0	mg/L	1.9	20		
A040198	Conductivity	2025/10/31			100	85 - 115	ND, RDL=2.0	umho/cm	0.24	10		
A040199	pH	2025/10/31			101	98 - 103			1.9	N/A		
A041198	Dissolved Chloride (Cl-)	2025/10/30	NC	80 - 120	94	80 - 120	ND, RDL=1.0	mg/L	0.84	20		
A041199	Dissolved Sulphate (SO4)	2025/10/30	88	75 - 125	98	80 - 120	ND, RDL=1.0	mg/L	3.8	20		
A041518	Dissolved Mercury (Hg)	2025/10/28	97	75 - 125	94	80 - 120	ND, RDL=0.10	ug/L	NC	20		
A041655	Dissolved Organic Carbon	2025/10/28	91	80 - 120	97	80 - 120	ND, RDL=0.4	mg/L	1.7	20		
A041808	Total Ammonia-N	2025/10/29	97	75 - 125	99	80 - 120	ND, RDL=0.050	mg/L	NC	20		
A041895	Dissolved Aluminum (Al)	2025/10/29	105	80 - 120	96	80 - 120	ND, RDL=4.9	ug/L	NC	20		
A041895	Dissolved Arsenic (As)	2025/10/29	103	80 - 120	98	80 - 120	ND, RDL=1.0	ug/L	NC	20		
A041895	Dissolved Barium (Ba)	2025/10/29	97	80 - 120	93	80 - 120	ND, RDL=2.0	ug/L	1.6	20		
A041895	Dissolved Beryllium (Be)	2025/10/29	77 (1)	80 - 120	92	80 - 120	ND, RDL=0.40	ug/L	NC	20		
A041895	Dissolved Boron (B)	2025/10/29	NC	80 - 120	91	80 - 120	ND, RDL=10	ug/L	0.51	20		

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Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
A041895	Dissolved Cadmium (Cd)	2025/10/29	95	80 - 120	95	80 - 120	ND, RDL=0.090	ug/L	NC	20		
A041895	Dissolved Calcium (Ca)	2025/10/29	NC	80 - 120	96	80 - 120	ND, RDL=200	ug/L	2.1	20		
A041895	Dissolved Chromium (Cr)	2025/10/29	95	80 - 120	92	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A041895	Dissolved Cobalt (Co)	2025/10/29	98	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A041895	Dissolved Copper (Cu)	2025/10/29	84	80 - 120	91	80 - 120	ND, RDL=0.90	ug/L	NC	20		
A041895	Dissolved Iron (Fe)	2025/10/29	99	80 - 120	97	80 - 120	ND, RDL=100	ug/L	NC	20		
A041895	Dissolved Lead (Pb)	2025/10/29	90	80 - 120	92	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A041895	Dissolved Magnesium (Mg)	2025/10/29	NC	80 - 120	97	80 - 120	ND, RDL=50	ug/L	0.32	20		
A041895	Dissolved Manganese (Mn)	2025/10/29	97	80 - 120	95	80 - 120	ND, RDL=2.0	ug/L	0.78	20		
A041895	Dissolved Molybdenum (Mo)	2025/10/29	94	80 - 120	92	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A041895	Dissolved Nickel (Ni)	2025/10/29	92	80 - 120	94	80 - 120	ND, RDL=1.0	ug/L	NC	20		
A041895	Dissolved Potassium (K)	2025/10/29	NC	80 - 120	98	80 - 120	ND, RDL=200	ug/L	0.18	20		
A041895	Dissolved Selenium (Se)	2025/10/29	77 (1)	80 - 120	97	80 - 120	ND, RDL=2.0	ug/L	NC	20		
A041895	Dissolved Silicon (Si)	2025/10/29	103	80 - 120	95	80 - 120	ND, RDL=50	ug/L	0.55	20		
A041895	Dissolved Silver (Ag)	2025/10/29	74 (1)	80 - 120	79 (2)	80 - 120	ND, RDL=0.090	ug/L	NC	20		
A041895	Dissolved Sodium (Na)	2025/10/29	NC	80 - 120	97	80 - 120	ND, RDL=100	ug/L	0.31	20		
A041895	Dissolved Strontium (Sr)	2025/10/29	NC	80 - 120	94	80 - 120	ND, RDL=1.0	ug/L	1.6	20		
A041895	Dissolved Thallium (Tl)	2025/10/29	94	80 - 120	94	80 - 120	ND, RDL=0.050	ug/L	NC	20		
A041895	Dissolved Titanium (Ti)	2025/10/29	104	80 - 120	94	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A041895	Dissolved Vanadium (V)	2025/10/29	102	80 - 120	94	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A041895	Dissolved Zinc (Zn)	2025/10/29	88	80 - 120	96	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A042053	Total Suspended Solids	2025/10/29			98	80 - 120	ND, RDL=10	mg/L	NC	20		
A042105	Total Dissolved Solids	2025/10/29			105	80 - 120	ND, RDL=10	mg/L	0.13	20		
A042117	Total Suspended Solids	2025/10/29			99	80 - 120	ND, RDL=10	mg/L	NC	20		
A042143	Total Dissolved Solids	2025/10/29			103	80 - 120	ND, RDL=10	mg/L	2.6	20		
A042157	Total Kjeldahl Nitrogen (TKN)	2025/10/30	NC	80 - 120	94	80 - 120	ND, RDL=0.10	mg/L	1.8	20	93	80 - 120
A042449	Dissolved Mercury (Hg)	2025/10/30	99	75 - 125	102	80 - 120	ND, RDL=0.10	ug/L	NC	20		

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Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
A042569	Total Phosphorus	2025/10/31	106	80 - 120	108	80 - 120	ND, RDL=0.020	mg/L	2.6	20	100	80 - 120
A042587	Total Chemical Oxygen Demand (COD)	2025/10/30	105	80 - 120	98	80 - 120	ND, RDL=4.0	mg/L	NC	20		
A043631	Phenols-4AAP	2025/10/30	99	80 - 120	99	80 - 120	ND, RDL=0.0010	mg/L	0	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Matrix Spike exceeds acceptance limits, probable matrix interference

(2) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Bureau Veritas Job #: C5D4577
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: DK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Chemistry testing is conducted at 6740 Campobello Rd.

C5D4577
2025/10/23 10:50

TR

Bureau Veritas
36 Antares Dr Unit 100, Nepean, Ontario Canada K2E 7W5 Tel:(613) 274-0573 Toll-free 800-563-6266 Fax:(613) 274-0574 www.bvna.com

NONT-2025-10-5183

Invoice To:		Report To:		PROJECT INFORMATION:	
Company:	#1192 BluMetric Environmental Inc	Company:	#5638 BluMetric Environmental Inc	Quotation #:	C45784
Attention:	Accounts Payable	Attention:	MHH Distribution	P.O. #:	
Address:	1682 Woodward Drive Ottawa ON K2C 3R8	Address:	The Tower - The Woolen Mill 4 Cataraqui St Kingston ON K7K 1Z7	Project:	250253-08
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Project Name:	North Baptiste
Email:	ap@blumetric.ca	Email:	cbandler@blumetric.ca, cmiller@blumetric.ca, edms@bl	Site #:	
				Sampled By:	DK BM

Quality:

Bottle Order #: 1062825

COC #: C#1062825-01-01

Project Manager: Deepthi Shaji

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: Time Required:
Rush Confirmation Number: (call lab for #)

Regulation 153 (2011)	Other Regulations	Special Instructions
☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ___	☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ___ ☐ PWQO ☐ Reg 406 Table ___ ☐ Other ___	

Include Criteria on Certificate of Analysis (Y/N)? ___

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Groundwater - CDWS	# of Bottles	Comments
1		NB MW1	2025/10/21	10:55	GW	Y	X	8	
2		NB MW2R	2025/10/21	10:06	GW	Y	X	8	
3		NB MW3	2025/10/21	10:30	GW	Y	X	8	
4		NB MW4	2025/10/21	11:15	GW	Y	X	8	
5		NB MW5R	2025/10/21	11:25	GW	Y	X	8	
6		NB-QAQC-GW1	2025/10/21	10:30	GW	Y	X	8	
7									
8									
9									
10									

* Relinquished By (Print):	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Brad McCallum	2025/10/22	8:00				

Laboratory Use Only
Time Sensitive
Temperature (°C) on Recei: 6.3 2
Custody Seal Present ☐ Intact ☐ Yes ☐ No

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your P.O. #: 250253-00
Your Project #: 25253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: C#1068923-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/11/26
Report #: R8658585
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5E6648
Received: 2025/11/19, 09:53

Sample Matrix: Ground Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity	1	N/A	2025/11/21	CAM SOP-00448	SM 24 2320 B m
Chloride by Automated Colourimetry	1	N/A	2025/11/25	CAM SOP-00463	SM 24 4500-Cl E m
Chemical Oxygen Demand	1	N/A	2025/11/21	CAM SOP-00416	SM 24 5220 D m
Conductivity	1	N/A	2025/11/21	CAM SOP-00414	SM 24 2510 m
Dissolved Organic Carbon (DOC) (1)	1	N/A	2025/11/24	CAM SOP-00446	SM 24 5310 B m
Hardness (calculated as CaCO3)	1	N/A	2025/11/21	CAM SOP 00102/00408/00447	SM 2340 B
Dissolved Mercury in Water by CVAA	1	2025/11/21	2025/11/21	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	1	N/A	2025/11/20	CAM SOP-00447	EPA 6020B m
Total Ammonia-N	1	N/A	2025/11/21	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (2)	1	N/A	2025/11/20	CAM SOP-00440	SM 24 4500-NO3I/NO2B
pH (3)	1	2025/11/20	2025/11/21	CAM SOP-00413	SM 24th - 4500H+ B
Phenols (4AAP)	1	N/A	2025/11/25	CAM SOP-00444	OMOE E3179 m
Sulphate by Automated Turbidimetry	1	N/A	2025/11/25	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	1	2025/11/24	2025/11/25	CAM SOP-00428	SM 24 2540C m
Total Kjeldahl Nitrogen in Water	1	2025/11/20	2025/11/25	CAM SOP-00938	SM 4500-N B m
Total Phosphorus (Colourimetric)	1	2025/11/20	2025/11/24	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	1	2025/11/20	2025/11/21	CAM SOP-00428	SM 24 2540D m
Turbidity	1	N/A	2025/11/20	CAM SOP-00417	SM 24 2130 B

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless

Your P.O. #: 250253-00
Your Project #: 25253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: C#1068923-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/11/26
Report #: R8658585
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5E6648
Received: 2025/11/19, 09:53

otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(3) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843
==========
This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C5E6648
Report Date: 2025/11/26

BluMetric Environmental Inc
Client Project #: 25253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-00

RESULTS OF ANALYSES OF GROUND WATER

Bureau Veritas ID		AXMT16			AXMT16		
Sampling Date		2025/11/18 10:00			2025/11/18 10:00		
COC Number		C#1068923-01-01			C#1068923-01-01		
	UNITS	**NB MW3**	**RDL**	**QC Batch**	**NB MW3 Lab-Dup**	**RDL**	**QC Batch**
Calculated Parameters							
Hardness (CaCO3)	mg/L	470	1.0	A057312			
Inorganics							
Total Ammonia-N	mg/L	ND	0.050	A058280	ND	0.050	A058280
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	A058704			
Conductivity	umho/cm	1200	2.0	A058383			
Total Dissolved Solids	mg/L	780	10	A060406			
Total Kjeldahl Nitrogen (TKN)	mg/L	0.15	0.10	A058549			
Dissolved Organic Carbon	mg/L	3.1	0.4	A059185	3.1	0.4	A059185
pH	pH	6.91		A058384			
Phenols-4AAP	mg/L	ND	0.0010	A061320			
Total Phosphorus	mg/L	0.029	0.020	A058717	0.034	0.020	A058717
Total Suspended Solids	mg/L	32	10	A058257			
Dissolved Sulphate (SO4)	mg/L	17	1.0	A058542			
Turbidity	NTU	2.7	0.1	A058358			
Alkalinity (Total as CaCO3)	mg/L	160	1.0	A058379			
Dissolved Chloride (Cl-)	mg/L	250	2.0	A058538			
Nitrite (N)	mg/L	ND	0.010	A058340			
Nitrate (N)	mg/L	ND	0.10	A058340			
Nitrate + Nitrite (N)	mg/L	ND	0.10	A058340			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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ELEMENTS BY ATOMIC SPECTROSCOPY (GROUND WATER)

Bureau Veritas ID		AXMT16	AXMT16		
Sampling Date		2025/11/18 10:00	2025/11/18 10:00		
COC Number		C#1068923-01-01	C#1068923-01-01		
	UNITS	NB MW3	NB MW3 Lab-Dup	RDL	QC Batch
Metals					
Dissolved Mercury (Hg)	ug/L	ND	ND	0.10	A058878
Dissolved Aluminum (Al)	ug/L	ND	ND	4.9	A058675
Dissolved Arsenic (As)	ug/L	ND	ND	1.0	A058675
Dissolved Barium (Ba)	ug/L	130	130	2.0	A058675
Dissolved Beryllium (Be)	ug/L	ND	ND	0.40	A058675
Dissolved Boron (B)	ug/L	130	130	10	A058675
Dissolved Cadmium (Cd)	ug/L	ND	ND	0.090	A058675
Dissolved Calcium (Ca)	ug/L	120000	120000	200	A058675
Dissolved Chromium (Cr)	ug/L	ND	ND	5.0	A058675
Dissolved Cobalt (Co)	ug/L	3.8	3.8	0.50	A058675
Dissolved Copper (Cu)	ug/L	ND	ND	0.90	A058675
Dissolved Iron (Fe)	ug/L	340	340	100	A058675
Dissolved Lead (Pb)	ug/L	ND	ND	0.50	A058675
Dissolved Magnesium (Mg)	ug/L	43000	43000	50	A058675
Dissolved Manganese (Mn)	ug/L	64	63	2.0	A058675
Dissolved Molybdenum (Mo)	ug/L	ND	ND	0.50	A058675
Dissolved Nickel (Ni)	ug/L	6.9	7.5	1.0	A058675
Dissolved Potassium (K)	ug/L	7500	7400	200	A058675
Dissolved Selenium (Se)	ug/L	ND	ND	2.0	A058675
Dissolved Silicon (Si)	ug/L	16000	16000	50	A058675
Dissolved Silver (Ag)	ug/L	ND	ND	0.090	A058675
Dissolved Sodium (Na)	ug/L	58000	58000	100	A058675
Dissolved Strontium (Sr)	ug/L	1100	1000	1.0	A058675
Dissolved Thallium (Tl)	ug/L	ND	ND	0.050	A058675
Dissolved Titanium (Ti)	ug/L	ND	ND	5.0	A058675
Dissolved Vanadium (V)	ug/L	0.93	1.0	0.50	A058675
Dissolved Zinc (Zn)	ug/L	ND	ND	5.0	A058675

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Bureau Veritas Job #: C5E6648
Report Date: 2025/11/26

BluMetric Environmental Inc
Client Project #: 25253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-00

TEST SUMMARY

Bureau Veritas ID: AXMT16
Sample ID: NB MW3
Matrix: Ground Water

Collected: 2025/11/18
Shipped:
Received: 2025/11/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	A058379	N/A	2025/11/21	Surinder Rai
Chloride by Automated Colourimetry	SKAL	A058538	N/A	2025/11/25	Massarat Jan
Chemical Oxygen Demand	SPEC	A058704	N/A	2025/11/21	Arshdeep Jagayat
Conductivity	AT	A058383	N/A	2025/11/21	Surinder Rai
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A059185	N/A	2025/11/24	Gyulshen Idriz
Hardness (calculated as CaCO3)		A057312	N/A	2025/11/21	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	A058878	2025/11/21	2025/11/21	Prabhdeep Kaur
Dissolved Metals by ICPMS	ICP/MS	A058675	N/A	2025/11/20	Azita Fazaeli
Total Ammonia-N	SKAL/NH4	A058280	N/A	2025/11/21	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A058340	N/A	2025/11/20	Chandra Nandlal
pH	AT	A058384	2025/11/20	2025/11/21	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A061320	N/A	2025/11/25	Shivani Shivani
Sulphate by Automated Turbidimetry	SKAL	A058542	N/A	2025/11/25	Massarat Jan
Total Dissolved Solids	BAL	A060406	2025/11/24	2025/11/25	Manowalage shanika GUNASEKARA
Total Kjeldahl Nitrogen in Water	SKAL	A058549	2025/11/20	2025/11/25	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A058717	2025/11/20	2025/11/24	Vidhi Khatri
Total Suspended Solids	BAL	A058257	2025/11/20	2025/11/21	Manowalage shanika GUNASEKARA
Turbidity	AT	A058358	N/A	2025/11/20	Pinky joy JANABAN

Bureau Veritas ID: AXMT16 Dup
Sample ID: NB MW3
Matrix: Ground Water

Collected: 2025/11/18
Shipped:
Received: 2025/11/19

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Organic Carbon (DOC)	TOCV/NDIR	A059185	N/A	2025/11/24	Gyulshen Idriz
Dissolved Mercury in Water by CVAA	CV/AA	A058878	2025/11/21	2025/11/21	Prabhdeep Kaur
Dissolved Metals by ICPMS	ICP/MS	A058675	N/A	2025/11/20	Azita Fazaeli
Total Ammonia-N	SKAL/NH4	A058280	N/A	2025/11/21	Kruti Jitesh Patel
Total Phosphorus (Colourimetric)	SKAL/P	A058717	2025/11/20	2025/11/24	Vidhi Khatri

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GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	7.0°C

Results relate only to the items tested.

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QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
A058257	Total Suspended Solids	2025/11/21			101	80 - 120	ND, RDL=10	mg/L	NC	20		
A058280	Total Ammonia-N	2025/11/21	96	75 - 125	100	80 - 120	ND, RDL=0.050	mg/L	NC	20		
A058340	Nitrate (N)	2025/11/20	99	80 - 120	98	80 - 120	ND, RDL=0.10	mg/L	0.88	20		
A058340	Nitrite (N)	2025/11/20	105	80 - 120	104	80 - 120	ND, RDL=0.010	mg/L	NC	20		
A058358	Turbidity	2025/11/20			103	80 - 120	ND, RDL=0.1	NTU	1.4	20		
A058379	Alkalinity (Total as CaCO3)	2025/11/21			97	85 - 115	ND, RDL=1.0	mg/L	4.2	20		
A058383	Conductivity	2025/11/21			101	85 - 115	ND, RDL=2.0	umho/cm	0.53	10		
A058384	pH	2025/11/21			102	98 - 103			0.12	N/A		
A058538	Dissolved Chloride (Cl-)	2025/11/25	NC	80 - 120	94	80 - 120	ND, RDL=1.0	mg/L	0.99	20		
A058542	Dissolved Sulphate (SO4)	2025/11/25	99	75 - 125	100	80 - 120	ND, RDL=1.0	mg/L	0.83	20		
A058549	Total Kjeldahl Nitrogen (TKN)	2025/11/26	94	80 - 120	99	80 - 120	ND, RDL=0.10	mg/L	0	20	101	80 - 120
A058675	Dissolved Aluminum (Al)	2025/11/20	104	80 - 120	101	80 - 120	ND, RDL=4.9	ug/L	NC	20		
A058675	Dissolved Arsenic (As)	2025/11/20	104	80 - 120	100	80 - 120	ND, RDL=1.0	ug/L	NC	20		
A058675	Dissolved Barium (Ba)	2025/11/20	101	80 - 120	97	80 - 120	ND, RDL=2.0	ug/L	0.043	20		
A058675	Dissolved Beryllium (Be)	2025/11/20	106	80 - 120	100	80 - 120	ND, RDL=0.40	ug/L	NC	20		
A058675	Dissolved Boron (B)	2025/11/20	102	80 - 120	95	80 - 120	ND, RDL=10	ug/L	0.022	20		
A058675	Dissolved Cadmium (Cd)	2025/11/20	104	80 - 120	101	80 - 120	ND, RDL=0.090	ug/L	NC	20		
A058675	Dissolved Calcium (Ca)	2025/11/20	NC	80 - 120	103	80 - 120	ND, RDL=200	ug/L	2.0	20		
A058675	Dissolved Chromium (Cr)	2025/11/20	99	80 - 120	95	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A058675	Dissolved Cobalt (Co)	2025/11/20	99	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	0.37	20		
A058675	Dissolved Copper (Cu)	2025/11/20	103	80 - 120	99	80 - 120	ND, RDL=0.90	ug/L	NC	20		
A058675	Dissolved Iron (Fe)	2025/11/20	102	80 - 120	98	80 - 120	ND, RDL=100	ug/L	0.87	20		
A058675	Dissolved Lead (Pb)	2025/11/20	98	80 - 120	94	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A058675	Dissolved Magnesium (Mg)	2025/11/20	NC	80 - 120	96	80 - 120	ND, RDL=50	ug/L	0.050	20		
A058675	Dissolved Manganese (Mn)	2025/11/20	103	80 - 120	98	80 - 120	ND, RDL=2.0	ug/L	1.5	20		
A058675	Dissolved Molybdenum (Mo)	2025/11/20	104	80 - 120	98	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A058675	Dissolved Nickel (Ni)	2025/11/20	98	80 - 120	94	80 - 120	ND, RDL=1.0	ug/L	8.5	20		
A058675	Dissolved Potassium (K)	2025/11/20	106	80 - 120	99	80 - 120	ND, RDL=200	ug/L	0.69	20		
A058675	Dissolved Selenium (Se)	2025/11/20	106	80 - 120	103	80 - 120	ND, RDL=2.0	ug/L	NC	20		

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QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
A058675	Dissolved Silicon (Si)	2025/11/20	98	80 - 120	99	80 - 120	ND, RDL=50	ug/L	0.37	20		
A058675	Dissolved Silver (Ag)	2025/11/20	92	80 - 120	97	80 - 120	ND, RDL=0.090	ug/L	NC	20		
A058675	Dissolved Sodium (Na)	2025/11/20	NC	80 - 120	98	80 - 120	ND, RDL=100	ug/L	1.5	20		
A058675	Dissolved Strontium (Sr)	2025/11/20	NC	80 - 120	99	80 - 120	ND, RDL=1.0	ug/L	1.3	20		
A058675	Dissolved Thallium (Tl)	2025/11/20	100	80 - 120	98	80 - 120	ND, RDL=0.050	ug/L	NC	20		
A058675	Dissolved Titanium (Ti)	2025/11/20	100	80 - 120	99	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A058675	Dissolved Vanadium (V)	2025/11/20	101	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L	8.2	20		
A058675	Dissolved Zinc (Zn)	2025/11/20	102	80 - 120	99	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A058704	Total Chemical Oxygen Demand (COD)	2025/11/21	NC	80 - 120	96	80 - 120	ND, RDL=4.0	mg/L	0.76	20		
A058717	Total Phosphorus	2025/11/24	100	80 - 120	99	80 - 120	ND, RDL=0.020	mg/L	17	20	115	80 - 120
A058878	Dissolved Mercury (Hg)	2025/11/21	84	75 - 125	91	80 - 120	ND, RDL=0.10	ug/L	NC	20		
A059185	Dissolved Organic Carbon	2025/11/24	94	80 - 120	97	80 - 120	ND, RDL=0.4	mg/L	0.36	20		
A060406	Total Dissolved Solids	2025/11/25			93	80 - 120	ND, RDL=10	mg/L	0.62	20		
A061320	Phenols-4AAP	2025/11/25	94	80 - 120	95	80 - 120	ND, RDL=0.0010	mg/L	NC	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Bureau Veritas Job #: C5E6648
Report Date: 2025/11/26

BluMetric Environmental Inc
Client Project #: 25253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-00

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Louise Harding, Scientific Specialist

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C5E6648
2025/11/19 09:53

Page 1 of 1

Bureau Veritas
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CHAIN OF CUSTODY RECORD

Invoice To:		Report To:		PROJECT INFORMATION:		Laboratory Use Only:	
Company:	#1192 BluMetric Environmental Inc	Company:	#5638 BluMetric Environmental Inc	Quotation #:	C45784	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	MHH Distribution	P.O. #:	250253-00		1068923
Address:	1682 Woodward Drive Ottawa ON K2C 3R8	Address:	The Tower - The Woolen Mill 4 Cataraqui St Kingston ON K7K 1Z7	Project:	250253-08	COC #:	Project Manager:
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Project Name:		C#1068923-01-01	Deepthi Shaji
Email:	ap@blumetric.ca	Email:	cbandler@blumetric.ca, cmiller@blumetric.ca, edms@bl	Site #:	North Baptiste		
				Sampled By:	BM		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558. ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT:
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI / DOC	Groundwater - ODWS								# of Bottles	Comments
1		NB MW3	2025/11/18	10:00	GW	Y	✓								9	
2																
3																
4																
5																
6																
7																
8																
9																
10																

NONT-2025-11-3617

* Relinquished By (Print):	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only				
Brad M'Callum	2025/11/18	13:30	ANMOLPREET SINGH	2025/11/19	09:53		Time Sensitive	Temperature (°C) on Recei 7 / 7 / 7	Custody Seal Present	Yes	No
									Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

ON 90

Bureau Veritas Canada (2019) Inc.

Your P.O. #: 250253-08
Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1041562-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/05/15
Report #: R8539462
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C552991
Received: 2025/05/09, 11:12

Sample Matrix: Water
Samples Received: 6

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Alkalinity	1	N/A	2025/05/13	CAM SOP-00448	SM 24 2320 B m
Alkalinity	4	N/A	2025/05/14	CAM SOP-00448	SM 24 2320 B m
Alkalinity	1	N/A	2025/05/15	CAM SOP-00448	SM 24 2320 B m
Chloride by Automated Colourimetry	4	N/A	2025/05/14	CAM SOP-00463	SM 24 4500-Cl E m
Chloride by Automated Colourimetry	2	N/A	2025/05/15	CAM SOP-00463	SM 24 4500-Cl E m
Chemical Oxygen Demand	6	N/A	2025/05/14	CAM SOP-00416	SM 24 5220 D m
Conductivity	1	N/A	2025/05/13	CAM SOP-00414	SM 24 2510 m
Conductivity	4	N/A	2025/05/14	CAM SOP-00414	SM 24 2510 m
Conductivity	1	N/A	2025/05/15	CAM SOP-00414	SM 24 2510 m
Dissolved Organic Carbon (DOC) (1)	6	N/A	2025/05/13	CAM SOP-00446	SM 24 5310 B m
Hardness (calculated as CaCO3)	6	N/A	2025/05/15	CAM SOP 00102/00408/00447	SM 2340 B
Dissolved Mercury in Water by CVAA	6	2025/05/14	2025/05/15	CAM SOP-00453	EPA 7470A m
Dissolved Metals by ICPMS	6	N/A	2025/05/14	CAM SOP-00447	EPA 6020B m
Total Ammonia-N	6	N/A	2025/05/15	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (2)	6	N/A	2025/05/12	CAM SOP-00440	SM 24 4500-NO3I/NO2B
pH (3)	1	2025/05/12	2025/05/13	CAM SOP-00413	SM 24th - 4500H+ B
pH (3)	4	2025/05/12	2025/05/14	CAM SOP-00413	SM 24th - 4500H+ B
pH (3)	1	2025/05/13	2025/05/15	CAM SOP-00413	SM 24th - 4500H+ B
Phenols (4AAP)	6	N/A	2025/05/14	CAM SOP-00444	OMOE E3179 m
Sulphate by Automated Turbidimetry	4	N/A	2025/05/14	CAM SOP-00464	SM 24 4500-SO42- E m
Sulphate by Automated Turbidimetry	2	N/A	2025/05/15	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	6	2025/05/14	2025/05/15	CAM SOP-00428	SM 24 2540C m
Total Kjeldahl Nitrogen in Water	5	2025/05/13	2025/05/14	CAM SOP-00938	SM 4500-N B m
Total Kjeldahl Nitrogen in Water	1	2025/05/14	2025/05/15	CAM SOP-00938	SM 4500-N B m
Total Phosphorus (Colourimetric)	2	2025/05/13	2025/05/14	CAM SOP-00407	SM 24 4500-P I
Total Phosphorus (Colourimetric)	4	2025/05/13	2025/05/15	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	5	2025/05/13	2025/05/15	CAM SOP-00428	SM 24 2540D m
Total Suspended Solids	1	2025/05/14	2025/05/15	CAM SOP-00428	SM 24 2540D m
Turbidity	6	N/A	2025/05/12	CAM SOP-00417	SM 24 2130 B

Your P.O. #: 250253-08
Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1041562-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/05/15
Report #: R8539462
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C552991
Received: 2025/05/09, 11:12

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Dissolved Organic Carbon (DOC) present in the sample should be considered as non-purgeable DOC.
(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(3) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

Your P.O. #: 250253-08
Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1041562-01-01

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4 Cataraqui St
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CANADA K7K 1Z7

Report Date: 2025/05/15
Report #: R8539462
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C552991
Received: 2025/05/09, 11:12

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

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This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP95			AQSP96		
Sampling Date		2025/05/07 13:25			2025/05/07 12:20		
COC Number		1041562-01-01			1041562-01-01		
	UNITS	NB MW1	RDL	QC Batch	NB MW2R	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L	50	1.0	9926151	29	1.0	9926151
Inorganics							
Total Ammonia-N	mg/L	ND	0.050	9928806	ND	0.050	9928806
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	9928069	ND	4.0	9928069
Conductivity	umho/cm	310	2.0	9927212	94	2.0	9927212
Total Dissolved Solids	mg/L	225	10	9928978	115	10	9928978
Total Kjeldahl Nitrogen (TKN)	mg/L	ND	0.10	9928144	ND	0.10	9928144
Dissolved Organic Carbon	mg/L	1.2	0.4	9927744	0.9	0.4	9927744
pH	pH	7.07		9927213	7.70		9927213
Phenols-4AAP	mg/L	ND	0.0010	9928482	ND	0.0010	9928482
Total Phosphorus	mg/L	1.9	0.020	9928062	1.0	0.020	9928062
Total Suspended Solids	mg/L	560	33	9928639	690	10	9928639
Dissolved Sulphate (SO4)	mg/L	7.0	1.0	9927946	5.5	1.0	9927194
Turbidity	NTU	250	0.1	9927116	83	0.1	9927116
Alkalinity (Total as CaCO3)	mg/L	31	1.0	9927209	32	1.0	9927209
Dissolved Chloride (Cl-)	mg/L	63	1.0	9927942	3.4	1.0	9927184
Nitrite (N)	mg/L	ND	0.010	9927092	ND	0.010	9927092
Nitrate (N)	mg/L	0.22	0.10	9927092	ND	0.10	9927092
Nitrate + Nitrite (N)	mg/L	0.22	0.10	9927092	ND	0.10	9927092

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP97			AQSP97		
Sampling Date		2025/05/07 12:40			2025/05/07 12:40		
COC Number		1041562-01-01			1041562-01-01		
	UNITS	NB MW3	RDL	QC Batch	NB MW3 Lab-Dup	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L	450	1.0	9926151			
Inorganics							
Total Ammonia-N	mg/L	ND	0.050	9928806			
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	9928069			
Conductivity	umho/cm	1300	2.0	9927765	1300	2.0	9927765
Total Dissolved Solids	mg/L	1120	10	9928978			
Total Kjeldahl Nitrogen (TKN)	mg/L	0.13	0.10	9928467			
Dissolved Organic Carbon	mg/L	1.9	0.4	9927744			
pH	pH	7.35		9927768	7.43		9927768
Phenols-4AAP	mg/L	ND	0.0010	9928482			
Total Phosphorus	mg/L	0.082	0.020	9928062			
Total Suspended Solids	mg/L	49	10	9928639			
Dissolved Sulphate (SO4)	mg/L	14	1.0	9927194			
Turbidity	NTU	3.1	0.1	9927116			
Alkalinity (Total as CaCO3)	mg/L	140	1.0	9927763	140	1.0	9927763
Dissolved Chloride (Cl-)	mg/L	280	2.0	9927184			
Nitrite (N)	mg/L	ND	0.010	9927092			
Nitrate (N)	mg/L	ND	0.10	9927092			
Nitrate + Nitrite (N)	mg/L	ND	0.10	9927092			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP98			AQSP99		
Sampling Date		2025/05/07 13:15			2025/05/07 13:00		
COC Number		1041562-01-01			1041562-01-01		
	UNITS	NB MW4	RDL	QC Batch	NB MW5R	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L	100	1.0	9926151	78	1.0	9926151
Inorganics							
Total Ammonia-N	mg/L	ND	0.050	9928806	ND	0.050	9928806
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	9928069	ND	4.0	9928069
Conductivity	umho/cm	270	2.0	9927212	220	2.0	9927201
Total Dissolved Solids	mg/L	225	10	9928978	360	10	9928978
Total Kjeldahl Nitrogen (TKN)	mg/L	ND	0.10	9928144	ND	0.10	9928144
Dissolved Organic Carbon	mg/L	0.8	0.4	9927744	1.2	0.4	9927744
pH	pH	8.07		9927213	7.57		9927203
Phenols-4AAP	mg/L	ND	0.0010	9928482	ND	0.0010	9928482
Total Phosphorus	mg/L	1.2	0.020	9928062	16	0.20	9928062
Total Suspended Solids	mg/L	680	10	9928639	8200	100	9928639
Dissolved Sulphate (SO4)	mg/L	19	1.0	9927194	19	1.0	9927946
Turbidity	NTU	45	0.1	9927116	2000	1	9927116
Alkalinity (Total as CaCO3)	mg/L	59	1.0	9927209	39	1.0	9927198
Dissolved Chloride (Cl-)	mg/L	27	1.0	9927184	24	1.0	9927942
Nitrite (N)	mg/L	ND	0.010	9927092	ND	0.010	9927092
Nitrate (N)	mg/L	ND	0.10	9927092	ND	0.10	9927092
Nitrate + Nitrite (N)	mg/L	ND	0.10	9927092	ND	0.10	9927092

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSQ00		
Sampling Date		2025/05/07 12:40		
COC Number		1041562-01-01		
	UNITS	NB-QAQC-GW1	RDL	QC Batch
Calculated Parameters				
Hardness (CaCO3)	mg/L	460	1.0	9926151
Inorganics				
Total Ammonia-N	mg/L	ND	0.050	9928806
Total Chemical Oxygen Demand (COD)	mg/L	ND	4.0	9928069
Conductivity	umho/cm	1300	2.0	9927212
Total Dissolved Solids	mg/L	1130	10	9928978
Total Kjeldahl Nitrogen (TKN)	mg/L	0.11	0.10	9928144
Dissolved Organic Carbon	mg/L	1.9	0.4	9927744
pH	pH	7.30		9927213
Phenols-4AAP	mg/L	ND	0.0010	9928482
Total Phosphorus	mg/L	0.077	0.020	9928062
Total Suspended Solids	mg/L	50	10	9928641
Dissolved Sulphate (SO4)	mg/L	14	1.0	9927194
Turbidity	NTU	3.4	0.1	9927116
Alkalinity (Total as CaCO3)	mg/L	140	1.0	9927209
Dissolved Chloride (Cl-)	mg/L	280	2.0	9927184
Nitrite (N)	mg/L	ND	0.010	9927092
Nitrate (N)	mg/L	ND	0.10	9927092
Nitrate + Nitrite (N)	mg/L	ND	0.10	9927092

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ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AQSP95		AQSP96		AQSP97	AQSP98		
Sampling Date		2025/05/07 13:25		2025/05/07 12:20		2025/05/07 12:40	2025/05/07 13:15		
COC Number		1041562-01-01		1041562-01-01		1041562-01-01	1041562-01-01		
	UNITS	NB MW1	QC Batch	NB MW2R	QC Batch	NB MW3	NB MW4	RDL	QC Batch
Metals									
Dissolved Mercury (Hg)	ug/L	ND	9928964	ND	9928963	ND	ND	0.10	9928964
Dissolved Aluminum (Al)	ug/L	ND	9926363	ND	9926363	ND	ND	4.9	9926363
Dissolved Arsenic (As)	ug/L	ND	9926363	ND	9926363	ND	ND	1.0	9926363
Dissolved Barium (Ba)	ug/L	20	9926363	2.5	9926363	120	12	2.0	9926363
Dissolved Beryllium (Be)	ug/L	ND	9926363	ND	9926363	ND	ND	0.40	9926363
Dissolved Boron (B)	ug/L	ND	9926363	ND	9926363	130	ND	10	9926363
Dissolved Cadmium (Cd)	ug/L	ND	9926363	ND	9926363	ND	ND	0.090	9926363
Dissolved Calcium (Ca)	ug/L	15000	9926363	6900	9926363	110000	31000	200	9926363
Dissolved Chromium (Cr)	ug/L	ND	9926363	ND	9926363	ND	ND	5.0	9926363
Dissolved Cobalt (Co)	ug/L	ND	9926363	ND	9926363	17	ND	0.50	9926363
Dissolved Copper (Cu)	ug/L	ND	9926363	ND	9926363	ND	ND	0.90	9926363
Dissolved Iron (Fe)	ug/L	ND	9926363	ND	9926363	740	ND	100	9926363
Dissolved Lead (Pb)	ug/L	ND	9926363	ND	9926363	ND	ND	0.50	9926363
Dissolved Magnesium (Mg)	ug/L	2800	9926363	2800	9926363	41000	6300	50	9926363
Dissolved Manganese (Mn)	ug/L	ND	9926363	ND	9926363	230	ND	2.0	9926363
Dissolved Molybdenum (Mo)	ug/L	ND	9926363	ND	9926363	ND	1.7	0.50	9926363
Dissolved Nickel (Ni)	ug/L	ND	9926363	ND	9926363	9.6	ND	1.0	9926363
Dissolved Potassium (K)	ug/L	2000	9926363	1300	9926363	6400	2900	200	9926363
Dissolved Selenium (Se)	ug/L	ND	9926363	ND	9926363	ND	ND	2.0	9926363
Dissolved Silicon (Si)	ug/L	7700	9926363	11000	9926363	14000	8300	50	9926363
Dissolved Silver (Ag)	ug/L	ND	9926363	ND	9926363	ND	ND	0.090	9926363
Dissolved Sodium (Na)	ug/L	36000	9926363	3800	9926363	51000	6000	100	9926363
Dissolved Strontium (Sr)	ug/L	190	9926363	44	9926363	1000	99	1.0	9926363
Dissolved Thallium (Tl)	ug/L	ND	9926363	ND	9926363	ND	ND	0.050	9926363
Dissolved Titanium (Ti)	ug/L	ND	9926363	ND	9926363	ND	ND	5.0	9926363
Dissolved Vanadium (V)	ug/L	ND	9926363	3.5	9926363	ND	ND	0.50	9926363
Dissolved Zinc (Zn)	ug/L	10	9926363	ND	9926363	ND	ND	5.0	9926363

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Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AQSP99		AQSQ00		
Sampling Date		2025/05/07 13:00		2025/05/07 12:40		
COC Number		1041562-01-01		1041562-01-01		
	UNITS	NB MW5R	QC Batch	NB-QAQC-GW1	RDL	QC Batch
Metals						
Dissolved Mercury (Hg)	ug/L	ND	9928963	ND	0.10	9928964
Dissolved Aluminum (Al)	ug/L	ND	9926363	ND	4.9	9926363
Dissolved Arsenic (As)	ug/L	ND	9926363	ND	1.0	9926363
Dissolved Barium (Ba)	ug/L	17	9926363	120	2.0	9926363
Dissolved Beryllium (Be)	ug/L	ND	9926363	ND	0.40	9926363
Dissolved Boron (B)	ug/L	ND	9926363	130	10	9926363
Dissolved Cadmium (Cd)	ug/L	ND	9926363	ND	0.090	9926363
Dissolved Calcium (Ca)	ug/L	21000	9926363	110000	200	9926363
Dissolved Chromium (Cr)	ug/L	ND	9926363	ND	5.0	9926363
Dissolved Cobalt (Co)	ug/L	ND	9926363	18	0.50	9926363
Dissolved Copper (Cu)	ug/L	ND	9926363	ND	0.90	9926363
Dissolved Iron (Fe)	ug/L	ND	9926363	760	100	9926363
Dissolved Lead (Pb)	ug/L	ND	9926363	ND	0.50	9926363
Dissolved Magnesium (Mg)	ug/L	6300	9926363	43000	50	9926363
Dissolved Manganese (Mn)	ug/L	150	9926363	230	2.0	9926363
Dissolved Molybdenum (Mo)	ug/L	1.9	9926363	ND	0.50	9926363
Dissolved Nickel (Ni)	ug/L	ND	9926363	9.8	1.0	9926363
Dissolved Potassium (K)	ug/L	2400	9926363	6600	200	9926363
Dissolved Selenium (Se)	ug/L	ND	9926363	ND	2.0	9926363
Dissolved Silicon (Si)	ug/L	8100	9926363	14000	50	9926363
Dissolved Silver (Ag)	ug/L	ND	9926363	ND	0.090	9926363
Dissolved Sodium (Na)	ug/L	4700	9926363	52000	100	9926363
Dissolved Strontium (Sr)	ug/L	110	9926363	1000	1.0	9926363
Dissolved Thallium (Tl)	ug/L	ND	9926363	ND	0.050	9926363
Dissolved Titanium (Ti)	ug/L	ND	9926363	ND	5.0	9926363
Dissolved Vanadium (V)	ug/L	ND	9926363	ND	0.50	9926363
Dissolved Zinc (Zn)	ug/L	ND	9926363	ND	5.0	9926363

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

TEST SUMMARY

Bureau Veritas ID: AQSP95
Sample ID: NB MW1
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9927209	N/A	2025/05/14	Nachiketa Gohil
Chloride by Automated Colourimetry	SKAL	9927942	N/A	2025/05/15	Alina Dobreanu
Chemical Oxygen Demand	SPEC	9928069	N/A	2025/05/14	Kruti Jitesh Patel
Conductivity	AT	9927212	N/A	2025/05/14	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9927744	N/A	2025/05/13	Gyulshen Idriz
Hardness (calculated as CaCO3)		9926151	N/A	2025/05/15	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	9928964	2025/05/14	2025/05/15	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	9926363	N/A	2025/05/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9928806	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9927092	N/A	2025/05/12	Chandra Nandlal
pH	AT	9927213	2025/05/12	2025/05/14	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9928482	N/A	2025/05/14	Madhav Somani
Sulphate by Automated Turbidimetry	SKAL	9927946	N/A	2025/05/15	Alina Dobreanu
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/15	Vidhi Khatri
Total Suspended Solids	BAL	9928639	2025/05/13	2025/05/15	Tina Teng
Turbidity	AT	9927116	N/A	2025/05/12	Gurparteek KAUR

Bureau Veritas ID: AQSP96
Sample ID: NB MW2R
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9927209	N/A	2025/05/14	Nachiketa Gohil
Chloride by Automated Colourimetry	SKAL	9927184	N/A	2025/05/14	Alina Dobreanu
Chemical Oxygen Demand	SPEC	9928069	N/A	2025/05/14	Kruti Jitesh Patel
Conductivity	AT	9927212	N/A	2025/05/14	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9927744	N/A	2025/05/13	Gyulshen Idriz
Hardness (calculated as CaCO3)		9926151	N/A	2025/05/15	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	9928963	2025/05/14	2025/05/15	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	9926363	N/A	2025/05/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9928806	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9927092	N/A	2025/05/12	Chandra Nandlal
pH	AT	9927213	2025/05/12	2025/05/14	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9928482	N/A	2025/05/14	Madhav Somani
Sulphate by Automated Turbidimetry	SKAL	9927194	N/A	2025/05/14	Alina Dobreanu
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/15	Vidhi Khatri
Total Suspended Solids	BAL	9928639	2025/05/13	2025/05/15	Tina Teng
Turbidity	AT	9927116	N/A	2025/05/12	Gurparteek KAUR

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

TEST SUMMARY

Bureau Veritas ID: AQSP97
Sample ID: NB MW3
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9927763	N/A	2025/05/15	Nachiketa Gohil
Chloride by Automated Colourimetry	SKAL	9927184	N/A	2025/05/14	Alina Dobreanu
Chemical Oxygen Demand	SPEC	9928069	N/A	2025/05/14	Kruti Jitesh Patel
Conductivity	AT	9927765	N/A	2025/05/15	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9927744	N/A	2025/05/13	Gyulshen Idriz
Hardness (calculated as CaCO3)		9926151	N/A	2025/05/15	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	9928964	2025/05/14	2025/05/15	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	9926363	N/A	2025/05/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9928806	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9927092	N/A	2025/05/12	Chandra Nandlal
pH	AT	9927768	2025/05/13	2025/05/15	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9928482	N/A	2025/05/14	Madhav Somani
Sulphate by Automated Turbidimetry	SKAL	9927194	N/A	2025/05/14	Alina Dobreanu
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Total Kjeldahl Nitrogen in Water	SKAL	9928467	2025/05/14	2025/05/15	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/15	Vidhi Khatri
Total Suspended Solids	BAL	9928639	2025/05/13	2025/05/15	Tina Teng
Turbidity	AT	9927116	N/A	2025/05/12	Gurparteek KAUR

Bureau Veritas ID: AQSP97 Dup
Sample ID: NB MW3
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9927763	N/A	2025/05/15	Nachiketa Gohil
Conductivity	AT	9927765	N/A	2025/05/15	Nachiketa Gohil
pH	AT	9927768	2025/05/13	2025/05/15	Nachiketa Gohil

Bureau Veritas ID: AQSP98
Sample ID: NB MW4
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9927209	N/A	2025/05/14	Nachiketa Gohil
Chloride by Automated Colourimetry	SKAL	9927184	N/A	2025/05/14	Alina Dobreanu
Chemical Oxygen Demand	SPEC	9928069	N/A	2025/05/14	Kruti Jitesh Patel
Conductivity	AT	9927212	N/A	2025/05/14	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9927744	N/A	2025/05/13	Gyulshen Idriz
Hardness (calculated as CaCO3)		9926151	N/A	2025/05/15	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	9928964	2025/05/14	2025/05/15	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	9926363	N/A	2025/05/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9928806	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9927092	N/A	2025/05/12	Chandra Nandlal

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

TEST SUMMARY

Bureau Veritas ID: AQSP98
Sample ID: NB MW4
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH	AT	9927213	2025/05/12	2025/05/14	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9928482	N/A	2025/05/14	Madhav Somani
Sulphate by Automated Turbidimetry	SKAL	9927194	N/A	2025/05/14	Alina Dobreanu
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928639	2025/05/13	2025/05/15	Tina Teng
Turbidity	AT	9927116	N/A	2025/05/12	Gurparteek KAUR

Bureau Veritas ID: AQSP99
Sample ID: NB MW5R
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9927198	N/A	2025/05/13	Nachiketa Gohil
Chloride by Automated Colourimetry	SKAL	9927942	N/A	2025/05/15	Alina Dobreanu
Chemical Oxygen Demand	SPEC	9928069	N/A	2025/05/14	Kruti Jitesh Patel
Conductivity	AT	9927201	N/A	2025/05/13	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9927744	N/A	2025/05/13	Gyulshen Idriz
Hardness (calculated as CaCO3)		9926151	N/A	2025/05/15	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	9928963	2025/05/14	2025/05/15	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	9926363	N/A	2025/05/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9928806	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9927092	N/A	2025/05/12	Chandra Nandlal
pH	AT	9927203	2025/05/12	2025/05/13	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9928482	N/A	2025/05/14	Madhav Somani
Sulphate by Automated Turbidimetry	SKAL	9927946	N/A	2025/05/15	Alina Dobreanu
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/15	Vidhi Khatri
Total Suspended Solids	BAL	9928639	2025/05/13	2025/05/15	Tina Teng
Turbidity	AT	9927116	N/A	2025/05/12	Gurparteek KAUR

Bureau Veritas ID: AQSQ00
Sample ID: NB-QAQC-GW1
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Alkalinity	AT	9927209	N/A	2025/05/14	Nachiketa Gohil
Chloride by Automated Colourimetry	SKAL	9927184	N/A	2025/05/14	Alina Dobreanu
Chemical Oxygen Demand	SPEC	9928069	N/A	2025/05/14	Kruti Jitesh Patel
Conductivity	AT	9927212	N/A	2025/05/14	Nachiketa Gohil
Dissolved Organic Carbon (DOC)	TOCV/NDIR	9927744	N/A	2025/05/13	Gyulshen Idriz

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

TEST SUMMARY

Bureau Veritas ID: AQSQ00
Sample ID: NB-QAQC-GW1
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Hardness (calculated as CaCO3)		9926151	N/A	2025/05/15	Automated Statchk
Dissolved Mercury in Water by CVAA	CV/AA	9928964	2025/05/14	2025/05/15	Maitri PATIL
Dissolved Metals by ICPMS	ICP/MS	9926363	N/A	2025/05/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9928806	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9927092	N/A	2025/05/12	Chandra Nandlal
pH	AT	9927213	2025/05/12	2025/05/14	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9928482	N/A	2025/05/14	Madhav Somani
Sulphate by Automated Turbidimetry	SKAL	9927194	N/A	2025/05/14	Alina Dobreanu
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928641	2025/05/14	2025/05/15	Tina Teng
Turbidity	AT	9927116	N/A	2025/05/12	Gurparteek KAUR

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	6.0°C

Results relate only to the items tested.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9926363	Dissolved Aluminum (Al)	2025/05/14	180 (1)	80 - 120	100	80 - 120	ND, RDL=4.9	ug/L				
9926363	Dissolved Arsenic (As)	2025/05/14	100	80 - 120	97	80 - 120	ND, RDL=1.0	ug/L	NC	20		
9926363	Dissolved Barium (Ba)	2025/05/14	99	80 - 120	97	80 - 120	ND, RDL=2.0	ug/L	1.0	20		
9926363	Dissolved Beryllium (Be)	2025/05/14	93	80 - 120	95	80 - 120	ND, RDL=0.40	ug/L	NC	20		
9926363	Dissolved Boron (B)	2025/05/14	89	80 - 120	92	80 - 120	ND, RDL=10	ug/L	2.3	20		
9926363	Dissolved Cadmium (Cd)	2025/05/14	99	80 - 120	96	80 - 120	ND, RDL=0.090	ug/L	15	20		
9926363	Dissolved Calcium (Ca)	2025/05/14	NC	80 - 120	99	80 - 120	ND, RDL=200	ug/L				
9926363	Dissolved Chromium (Cr)	2025/05/14	99	80 - 120	95	80 - 120	ND, RDL=5.0	ug/L	NC	20		
9926363	Dissolved Cobalt (Co)	2025/05/14	97	80 - 120	98	80 - 120	ND, RDL=0.50	ug/L	1.6	20		
9926363	Dissolved Copper (Cu)	2025/05/14	94	80 - 120	95	80 - 120	ND, RDL=0.90	ug/L	0.29	20		
9926363	Dissolved Iron (Fe)	2025/05/14	99	80 - 120	96	80 - 120	ND, RDL=100	ug/L				
9926363	Dissolved Lead (Pb)	2025/05/14	92	80 - 120	95	80 - 120	ND, RDL=0.50	ug/L	NC	20		
9926363	Dissolved Magnesium (Mg)	2025/05/14	NC	80 - 120	98	80 - 120	ND, RDL=50	ug/L				
9926363	Dissolved Manganese (Mn)	2025/05/14	NC	80 - 120	97	80 - 120	ND, RDL=2.0	ug/L				
9926363	Dissolved Molybdenum (Mo)	2025/05/14	101	80 - 120	94	80 - 120	ND, RDL=0.50	ug/L	6.9	20		
9926363	Dissolved Nickel (Ni)	2025/05/14	94	80 - 120	95	80 - 120	ND, RDL=1.0	ug/L	1.5	20		
9926363	Dissolved Potassium (K)	2025/05/14	103	80 - 120	97	80 - 120	ND, RDL=200	ug/L				
9926363	Dissolved Selenium (Se)	2025/05/14	98	80 - 120	98	80 - 120	ND, RDL=2.0	ug/L	NC	20		
9926363	Dissolved Silicon (Si)	2025/05/14	104	80 - 120	95	80 - 120	ND, RDL=50	ug/L				
9926363	Dissolved Silver (Ag)	2025/05/14	92	80 - 120	94	80 - 120	ND, RDL=0.090	ug/L	NC	20		
9926363	Dissolved Sodium (Na)	2025/05/14	NC	80 - 120	98	80 - 120	ND, RDL=100	ug/L	2.1	20		
9926363	Dissolved Strontium (Sr)	2025/05/14	NC	80 - 120	96	80 - 120	ND, RDL=1.0	ug/L				
9926363	Dissolved Thallium (Tl)	2025/05/14	95	80 - 120	100	80 - 120	ND, RDL=0.050	ug/L	9.5	20		
9926363	Dissolved Titanium (Ti)	2025/05/14	105	80 - 120	99	80 - 120	ND, RDL=5.0	ug/L				
9926363	Dissolved Vanadium (V)	2025/05/14	104	80 - 120	97	80 - 120	ND, RDL=0.50	ug/L	14	20		
9926363	Dissolved Zinc (Zn)	2025/05/14	91	80 - 120	97	80 - 120	ND, RDL=5.0	ug/L	1.9	20		
9927092	Nitrate (N)	2025/05/12	94	80 - 120	96	80 - 120	ND, RDL=0.10	mg/L	0.55	20		

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9927092	Nitrite (N)	2025/05/12	96	80 - 120	98	80 - 120	ND, RDL=0.010	mg/L	0	20		
9927116	Turbidity	2025/05/12			98	80 - 120	ND, RDL=0.1	NTU	3.1	20		
9927184	Dissolved Chloride (Cl-)	2025/05/14	NC	80 - 120	97	80 - 120	ND, RDL=1.0	mg/L	0.58	20		
9927194	Dissolved Sulphate (SO4)	2025/05/14	NC	75 - 125	95	80 - 120	ND, RDL=1.0	mg/L	0.86	20		
9927198	Alkalinity (Total as CaCO3)	2025/05/13			96	85 - 115	ND, RDL=1.0	mg/L	0.0043	20		
9927201	Conductivity	2025/05/13			100	85 - 115	ND, RDL=2.0	umho/cm	0.56	10		
9927203	pH	2025/05/13			102	98 - 103			0.27	N/A		
9927209	Alkalinity (Total as CaCO3)	2025/05/13			96	85 - 115	ND, RDL=1.0	mg/L	0.75	20		
9927212	Conductivity	2025/05/13			101	85 - 115	ND, RDL=2.0	umho/cm	0.17	10		
9927213	pH	2025/05/13			102	98 - 103			1.1	N/A		
9927744	Dissolved Organic Carbon	2025/05/13	92	80 - 120	96	80 - 120	ND, RDL=0.4	mg/L	2.4	20		
9927763	Alkalinity (Total as CaCO3)	2025/05/15			98	85 - 115	ND, RDL=1.0	mg/L	1.0	20		
9927765	Conductivity	2025/05/15			102	85 - 115	ND, RDL=2.0	umho/cm	0.077	10		
9927768	pH	2025/05/15			102	98 - 103			1.1	N/A		
9927942	Dissolved Chloride (Cl-)	2025/05/15	NC	80 - 120	101	80 - 120	ND, RDL=1.0	mg/L	0.12	20		
9927946	Dissolved Sulphate (SO4)	2025/05/15	95	75 - 125	101	80 - 120	ND, RDL=1.0	mg/L	12	20		
9928062	Total Phosphorus	2025/05/14	95	80 - 120	96	80 - 120	ND, RDL=0.020	mg/L	9.9	20	98	80 - 120
9928069	Total Chemical Oxygen Demand (COD)	2025/05/14	108	80 - 120	97	80 - 120	ND, RDL=4.0	mg/L	9.0	20		
9928144	Total Kjeldahl Nitrogen (TKN)	2025/05/14	NC	80 - 120	98	80 - 120	ND, RDL=0.10	mg/L	1.5	20	100	80 - 120
9928467	Total Kjeldahl Nitrogen (TKN)	2025/05/14	95	80 - 120	99	80 - 120	ND, RDL=0.10	mg/L	NC	20	102	80 - 120
9928482	Phenols-4AAP	2025/05/14	96	80 - 120	101	80 - 120	ND, RDL=0.0010	mg/L	NC	20		
9928639	Total Suspended Solids	2025/05/15			98	80 - 120	ND, RDL=10	mg/L	NC	20		
9928641	Total Suspended Solids	2025/05/15			97	80 - 120	ND, RDL=10	mg/L	NC	20		
9928806	Total Ammonia-N	2025/05/15	92	75 - 125	95	80 - 120	ND, RDL=0.050	mg/L	NC	20		

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9928963	Dissolved Mercury (Hg)	2025/05/15	101	75 - 125	103	80 - 120	ND, RDL=0.10	ug/L	NC	20		
9928964	Dissolved Mercury (Hg)	2025/05/15	101	75 - 125	105	80 - 120	ND, RDL=0.10	ug/L	NC	20		
9928978	Total Dissolved Solids	2025/05/15			102	80 - 120	ND, RDL=10	mg/L	5.7	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

(1) Recovery or RPD for this parameter is outside control limits. The overall quality control for this analysis meets acceptability criteria.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552991
Report Date: 2025/05/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: BM

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Louise Harding, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

C552991
2025/05/09 11:12

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

NONT-2025-05-1798

Bottle Order #: 1041562

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#1192 BluMetric Environmental Inc	Company Name:	#5638 BluMetric Environmental Inc	Quotation #:	C45784
Attention:	Accounts Payable	Attention:	S'rana Scholes	P.O. #:	250253-08
Address:	1682 Woodward Drive Ottawa ON K2C 3R8	Address:	The Tower - The Woolen Mill 4 Cataraqui St Kingston ON K7K 1Z7	Project:	250253-08
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Project Name:	
Email:	ap@blumetric.ca	Email:	sscholes@blumetric.ca, cbandler@blumetric.ca, edms	Site #:	North Baptiste
				Sampled By:	BM/ NN

COC #: C#1041562-01-01

Project Manager: Deepthi Shaji

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558. ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Field Filtered (please circle): Metals / Hg / Cr VI

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered	Groundwater - ODWS	# of Bottles	Comments
1		NB MW1	25/05/07	13:25	GW	✓	✓	8	
2		NB MW2R	25/05/07	12:20	GW	✓	✓	8	
3		NB MW3	25/05/07	12:40	GW	✓	✓	8	
4		NB MW4	25/05/07	13:15	GW	✓	✓	8	
5		NB MW5R	25/05/07	13:00	GW	✓	✓	8	
6		NB-QAQC-GW1	25/05/07	12:40	GW	✓	✓	8	
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Brad McCallum / Brad McCallum	2025/05/08	8:00	[illegible]	2025/05/09	11:12	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	4 / 6 / 8	Present	✓	
		Intact	✓	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

DM
CC

Bureau Veritas Canada (2019) Inc.

Appendix D

D-3 Surface Water Laboratory Reports

Your Project #: 250253-08
Site Location: North Baptiste
Your C.O.C. #: C#1062826-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/10/31
Report #: R8642858
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5D4599
Received: 2025/10/23, 10:22

Sample Matrix: Water
Samples Received: 5

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Dissolved Aluminum (0.2 u, clay free)	5	N/A	2025/10/29	CAM SOP-00447	EPA 6020B m
Alkalinity	5	N/A	2025/10/30	CAM SOP-00448	SM 24 2320 B m
Biochemical Oxygen Demand (BOD)	5	2025/10/25	2025/10/30	CAM SOP-00427	SM 24 5210B m
Chloride by Automated Colourimetry	5	N/A	2025/10/29	CAM SOP-00463	SM 24 4500-Cl E m
Colour	5	N/A	2025/10/28	CAM SOP-00412	SM 24 2120C m
Conductivity	5	N/A	2025/10/30	CAM SOP-00414	SM 24 2510 m
Hardness (calculated as CaCO3)	5	N/A	2025/10/30	CAM SOP 00102/00408/00447	SM 2340 B
Total Metals Analysis by ICPMS	5	2025/10/29	2025/10/29	CAM SOP-00447	EPA 6020B m
Total Ammonia-N	5	N/A	2025/10/29	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1)	5	N/A	2025/10/28	CAM SOP-00440	SM 24 4500-NO3I/NO2B
pH (2)	5	2025/10/28	2025/10/30	CAM SOP-00413	SM 24th - 4500H+ B
Phenols (4AAP)	5	N/A	2025/10/30	CAM SOP-00444	OMOE E3179 m
Field Measured pH (3)	5	N/A	2025/10/28		Field pH Meter
Sulphate by Automated Turbidimetry	5	N/A	2025/10/29	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	5	2025/10/28	2025/10/30	CAM SOP-00428	SM 24 2540C m
Field Temperature (3)	5	N/A	2025/10/28		Field Thermometer
Total Kjeldahl Nitrogen in Water	5	2025/10/29	2025/10/30	CAM SOP-00938	SM 4500-N B m
Total Phosphorus (Colourimetric)	4	2025/10/29	2025/10/30	CAM SOP-00407	SM 24 4500-P I
Total Phosphorus (Colourimetric)	1	2025/10/29	2025/10/31	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	5	2025/10/28	2025/10/29	CAM SOP-00428	SM 24 2540D m
Un-ionized Ammonia (4)	5	2025/10/24	2025/10/29	Auto Calc.	PWQO

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement

Your Project #: 250253-08
Site Location: North Baptiste
Your C.O.C. #: C#1062826-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/10/31
Report #: R8642858
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5D4599
Received: 2025/10/23, 10:22

Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(2) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

(3) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.
(4) Un-ionized ammonia is calculated using the total ammonia result and field data provided by the client for pH and temperature.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C5D4599
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: BM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AWOS47	AWOS48	AWOS49	AWOS50		
Sampling Date		2025/10/21 08:15	2025/10/21 08:30	2025/10/21 08:53	2025/10/21 09:41		
COC Number		C#1062826-01-01	C#1062826-01-01	C#1062826-01-01	C#1062826-01-01		
	UNITS	MCG-E	MCG-F	MCG-G	MCG-H	RDL	QC Batch
Calculated Parameters							
Hardness (CaCO3)	mg/L	44	22	21	34	1.0	A039919
Total Un-ionized Ammonia	mg/L	ND	ND	ND	ND	0.00061	A039583
Field Measurements							
Field Temperature	Celsius	5.5	6.2	6.5	6.3	N/A	ONSITE
Field Measured pH	pH	7.61	7.12	7.35	6.64		ONSITE
Inorganics							
Total Ammonia-N	mg/L	ND	ND	ND	0.15	0.050	A041778
Total BOD	mg/L	ND	ND	ND	ND	2	A039999
Colour	TCU	21	46	18	62	2	A041487
Conductivity	umho/cm	310	190	52	110	2.0	A042071
Total Dissolved Solids	mg/L	120	100	ND	50	10	A042144
Total Kjeldahl Nitrogen (TKN)	mg/L	0.17	0.28	0.23	0.47	0.10	A042626
pH	pH	7.51	7.18	7.28	7.11		A042056
Phenols-4AAP	mg/L	ND	ND	ND	ND	0.0010	A043541
Total Phosphorus	mg/L	ND	0.033	0.029	0.040	0.020	A042591
Total Suspended Solids	mg/L	ND	ND	ND	ND	10	A042142
Dissolved Sulphate (SO4)	mg/L	11	5.5	4.4	7.1	1.0	A041920
Alkalinity (Total as CaCO3)	mg/L	27	39	24	28	1.0	A042051
Dissolved Chloride (Cl-)	mg/L	51	35	ND	8.9	1.0	A041915
Nitrite (N)	mg/L	ND	ND	ND	ND	0.010	A041783
Nitrate (N)	mg/L	ND	ND	ND	ND	0.10	A041783
Nitrate + Nitrite (N)	mg/L	ND	ND	ND	ND	0.10	A041783

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4599
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: BM

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AWOS51		
Sampling Date		2025/10/21 08:15		
COC Number		C#1062826-01-01		
	UNITS	NB-QAQC-SW1	RDL	QC Batch
Calculated Parameters				
Hardness (CaCO3)	mg/L	44	1.0	A039919
Total Un-ionized Ammonia	mg/L	ND	0.00061	A039583
Field Measurements				
Field Temperature	Celsius	5.5	N/A	ONSITE
Field Measured pH	pH	7.61		ONSITE
Inorganics				
Total Ammonia-N	mg/L	ND	0.050	A041778
Total BOD	mg/L	ND	2	A039999
Colour	TCU	21	2	A041487
Conductivity	umho/cm	300	2.0	A042071
Total Dissolved Solids	mg/L	125	10	A042144
Total Kjeldahl Nitrogen (TKN)	mg/L	0.15	0.10	A042626
pH	pH	7.49		A042056
Phenols-4AAP	mg/L	ND	0.0010	A043541
Total Phosphorus	mg/L	0.024	0.020	A042591
Total Suspended Solids	mg/L	ND	10	A042142
Dissolved Sulphate (SO4)	mg/L	11	1.0	A041920
Alkalinity (Total as CaCO3)	mg/L	25	1.0	A042051
Dissolved Chloride (Cl-)	mg/L	55	1.0	A041915
Nitrite (N)	mg/L	ND	0.010	A041783
Nitrate (N)	mg/L	ND	0.10	A041783
Nitrate + Nitrite (N)	mg/L	ND	0.10	A041783

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4599
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: BM

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AWOS47	AWOS48	AWOS49	AWOS50		
Sampling Date		2025/10/21 08:15	2025/10/21 08:30	2025/10/21 08:53	2025/10/21 09:41		
COC Number		C#1062826-01-01	C#1062826-01-01	C#1062826-01-01	C#1062826-01-01		
	UNITS	MCG-E	MCG-F	MCG-G	MCG-H	RDL	QC Batch
Metals							
Dissolved (0.2u) Aluminum (Al)	ug/L	10	30	21	42	5	A041952
Total Aluminum (Al)	ug/L	12	40	26	61	4.9	A042898
Total Boron (B)	ug/L	ND	ND	ND	ND	10	A042898
Total Cadmium (Cd)	ug/L	ND	ND	ND	ND	0.090	A042898
Total Calcium (Ca)	ug/L	13000	6100	5800	9300	200	A042898
Total Chromium (Cr)	ug/L	ND	ND	ND	ND	5.0	A042898
Total Cobalt (Co)	ug/L	ND	ND	ND	ND	0.50	A042898
Total Copper (Cu)	ug/L	ND	ND	1.0	ND	0.90	A042898
Total Iron (Fe)	ug/L	100	530	ND	1100	100	A042898
Total Lead (Pb)	ug/L	ND	ND	ND	ND	0.50	A042898
Total Magnesium (Mg)	ug/L	2300	1300	1500	2300	50	A042898
Total Manganese (Mn)	ug/L	3.5	20	4.7	270	2.0	A042898
Total Potassium (K)	ug/L	1600	1700	840	1700	200	A042898
Total Sodium (Na)	ug/L	37000	25000	1900	6700	100	A042898
Total Zinc (Zn)	ug/L	ND	ND	ND	ND	5.0	A042898

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Chemistry testing is conducted at 6740 Campobello Rd.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AWOS51		
Sampling Date		2025/10/21 08:15		
COC Number		C#1062826-01-01		
	UNITS	NB-QAQC-SW1	RDL	QC Batch
Metals				
Dissolved (0.2u) Aluminum (Al)	ug/L	9	5	A041952
Total Aluminum (Al)	ug/L	13	4.9	A042898
Total Boron (B)	ug/L	ND	10	A042898
Total Cadmium (Cd)	ug/L	ND	0.090	A042898
Total Calcium (Ca)	ug/L	13000	200	A042898
Total Chromium (Cr)	ug/L	ND	5.0	A042898
Total Cobalt (Co)	ug/L	ND	0.50	A042898
Total Copper (Cu)	ug/L	ND	0.90	A042898
Total Iron (Fe)	ug/L	110	100	A042898
Total Lead (Pb)	ug/L	ND	0.50	A042898
Total Magnesium (Mg)	ug/L	2400	50	A042898
Total Manganese (Mn)	ug/L	3.1	2.0	A042898
Total Potassium (K)	ug/L	1600	200	A042898
Total Sodium (Na)	ug/L	38000	100	A042898
Total Zinc (Zn)	ug/L	ND	5.0	A042898

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4599
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: BM

TEST SUMMARY

Bureau Veritas ID: AWOS47
Sample ID: MCG-E
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	A041952	N/A	2025/10/29	Prempal Bhatti
Alkalinity	AT	A042051	N/A	2025/10/30	Surinder Rai
Biochemical Oxygen Demand (BOD)	DO	A039999	2025/10/25	2025/10/30	Razieh Tabesh
Chloride by Automated Colourimetry	SKAL	A041915	N/A	2025/10/29	Alina Dobreanu
Colour	SPEC	A041487	N/A	2025/10/28	Viorica Rotaru
Conductivity	AT	A042071	N/A	2025/10/30	Surinder Rai
Hardness (calculated as CaCO3)		A039919	N/A	2025/10/30	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	A042898	2025/10/29	2025/10/29	Azita Fazaeli
Total Ammonia-N	SKAL/NH4	A041778	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A041783	N/A	2025/10/28	Chandra Nandlal
pH	AT	A042056	2025/10/28	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043541	N/A	2025/10/30	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	A041920	N/A	2025/10/29	Massarat Jan
Total Dissolved Solids	BAL	A042144	2025/10/28	2025/10/30	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	A042626	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042591	2025/10/29	2025/10/31	Vidhi Khatri
Total Suspended Solids	BAL	A042142	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Un-ionized Ammonia	CALC/NH3	A039583	2025/10/29	2025/10/29	Automated Statchk

Bureau Veritas ID: AWOS48
Sample ID: MCG-F
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	A041952	N/A	2025/10/29	Prempal Bhatti
Alkalinity	AT	A042051	N/A	2025/10/30	Surinder Rai
Biochemical Oxygen Demand (BOD)	DO	A039999	2025/10/25	2025/10/30	Razieh Tabesh
Chloride by Automated Colourimetry	SKAL	A041915	N/A	2025/10/29	Alina Dobreanu
Colour	SPEC	A041487	N/A	2025/10/28	Viorica Rotaru
Conductivity	AT	A042071	N/A	2025/10/30	Surinder Rai
Hardness (calculated as CaCO3)		A039919	N/A	2025/10/30	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	A042898	2025/10/29	2025/10/29	Azita Fazaeli
Total Ammonia-N	SKAL/NH4	A041778	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A041783	N/A	2025/10/28	Chandra Nandlal
pH	AT	A042056	2025/10/28	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043541	N/A	2025/10/30	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	A041920	N/A	2025/10/29	Massarat Jan
Total Dissolved Solids	BAL	A042144	2025/10/28	2025/10/30	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	A042626	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042591	2025/10/29	2025/10/30	Vidhi Khatri

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4599
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: BM

TEST SUMMARY

Bureau Veritas ID: AWOS48
Sample ID: MCG-F
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Suspended Solids	BAL	A042142	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Un-ionized Ammonia	CALC/NH3	A039583	2025/10/29	2025/10/29	Automated Statchk

Bureau Veritas ID: AWOS49
Sample ID: MCG-G
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	A041952	N/A	2025/10/29	Prempal Bhatti
Alkalinity	AT	A042051	N/A	2025/10/30	Surinder Rai
Biochemical Oxygen Demand (BOD)	DO	A039999	2025/10/25	2025/10/30	Razieh Tabesh
Chloride by Automated Colourimetry	SKAL	A041915	N/A	2025/10/29	Alina Dobreanu
Colour	SPEC	A041487	N/A	2025/10/28	Viorica Rotaru
Conductivity	AT	A042071	N/A	2025/10/30	Surinder Rai
Hardness (calculated as CaCO3)		A039919	N/A	2025/10/30	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	A042898	2025/10/29	2025/10/29	Azita Fazaeli
Total Ammonia-N	SKAL/NH4	A041778	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A041783	N/A	2025/10/28	Chandra Nandlal
pH	AT	A042056	2025/10/28	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043541	N/A	2025/10/30	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	A041920	N/A	2025/10/29	Massarat Jan
Total Dissolved Solids	BAL	A042144	2025/10/28	2025/10/30	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	A042626	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042591	2025/10/29	2025/10/30	Vidhi Khatri
Total Suspended Solids	BAL	A042142	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Un-ionized Ammonia	CALC/NH3	A039583	2025/10/29	2025/10/29	Automated Statchk

Bureau Veritas ID: AWOS50
Sample ID: MCG-H
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	A041952	N/A	2025/10/29	Prempal Bhatti
Alkalinity	AT	A042051	N/A	2025/10/30	Surinder Rai
Biochemical Oxygen Demand (BOD)	DO	A039999	2025/10/25	2025/10/30	Razieh Tabesh
Chloride by Automated Colourimetry	SKAL	A041915	N/A	2025/10/29	Alina Dobreanu
Colour	SPEC	A041487	N/A	2025/10/28	Viorica Rotaru
Conductivity	AT	A042071	N/A	2025/10/30	Surinder Rai
Hardness (calculated as CaCO3)		A039919	N/A	2025/10/30	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	A042898	2025/10/29	2025/10/29	Azita Fazaeli
Total Ammonia-N	SKAL/NH4	A041778	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A041783	N/A	2025/10/28	Chandra Nandlal

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Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C5D4599
Report Date: 2025/10/31

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: BM

TEST SUMMARY

Bureau Veritas ID: AWOS50
Sample ID: MCG-H
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH	AT	A042056	2025/10/28	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043541	N/A	2025/10/30	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	A041920	N/A	2025/10/29	Massarat Jan
Total Dissolved Solids	BAL	A042144	2025/10/28	2025/10/30	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	A042626	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042591	2025/10/29	2025/10/30	Vidhi Khatri
Total Suspended Solids	BAL	A042142	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Un-ionized Ammonia	CALC/NH3	A039583	2025/10/29	2025/10/29	Automated Statchk

Bureau Veritas ID: AWOS51
Sample ID: NB-QAQC-SW1
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	A041952	N/A	2025/10/29	Prempal Bhatti
Alkalinity	AT	A042051	N/A	2025/10/30	Surinder Rai
Biochemical Oxygen Demand (BOD)	DO	A039999	2025/10/25	2025/10/30	Razieh Tabesh
Chloride by Automated Colourimetry	SKAL	A041915	N/A	2025/10/29	Alina Dobreanu
Colour	SPEC	A041487	N/A	2025/10/28	Viorica Rotaru
Conductivity	AT	A042071	N/A	2025/10/30	Surinder Rai
Hardness (calculated as CaCO3)		A039919	N/A	2025/10/30	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	A042898	2025/10/29	2025/10/29	Azita Fazaeli
Total Ammonia-N	SKAL/NH4	A041778	N/A	2025/10/29	Kruti Jitesh Patel
Nitrate & Nitrite as Nitrogen in Water	LACH	A041783	N/A	2025/10/28	Chandra Nandlal
pH	AT	A042056	2025/10/28	2025/10/30	Surinder Rai
Phenols (4AAP)	TECH/PHEN	A043541	N/A	2025/10/30	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	A041920	N/A	2025/10/29	Massarat Jan
Total Dissolved Solids	BAL	A042144	2025/10/28	2025/10/30	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/10/28	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	A042626	2025/10/29	2025/10/30	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	A042591	2025/10/29	2025/10/30	Vidhi Khatri
Total Suspended Solids	BAL	A042142	2025/10/28	2025/10/29	Manowalage shanika GUNASEKARA
Un-ionized Ammonia	CALC/NH3	A039583	2025/10/29	2025/10/29	Automated Statchk

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Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	3.3°C

Results relate only to the items tested.

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Bureau Veritas Job #: C5D4599
Report Date: 2025/10/31

QUALITY ASSURANCE REPORT

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: North Baptiste
Sampler Initials: BM

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
A039999	Total BOD	2025/10/30					ND,RDL=2	mg/L	5.7	30	95	80 - 120
A041487	Colour	2025/10/28			100	80 - 120	ND,RDL=2	TCU	3.1	25		
A041778	Total Ammonia-N	2025/10/29	101	75 - 125	99	80 - 120	ND, RDL=0.050	mg/L	NC	20		
A041783	Nitrate (N)	2025/10/28	NC	80 - 120	98	80 - 120	ND, RDL=0.10	mg/L	1.1	20		
A041783	Nitrite (N)	2025/10/28	103	80 - 120	104	80 - 120	ND, RDL=0.010	mg/L	NC	20		
A041915	Dissolved Chloride (Cl-)	2025/10/29	NC	80 - 120	93	80 - 120	ND, RDL=1.0	mg/L	0.75	20		
A041920	Dissolved Sulphate (SO4)	2025/10/29	90	75 - 125	98	80 - 120	ND, RDL=1.0	mg/L	0.13	20		
A041952	Dissolved (0.2u) Aluminum (Al)	2025/10/29	102	80 - 120	101	80 - 120	ND,RDL=5	ug/L	NC	20		
A042051	Alkalinity (Total as CaCO3)	2025/10/30			96	85 - 115	ND, RDL=1.0	mg/L	3.3	20		
A042056	pH	2025/10/30			102	98 - 103			1.0	N/A		
A042071	Conductivity	2025/10/30			101	85 - 115	ND, RDL=2.0	umho/cm	0.54	10		
A042142	Total Suspended Solids	2025/10/29			97	80 - 120	ND, RDL=10	mg/L	NC	20		
A042144	Total Dissolved Solids	2025/10/30			98	80 - 120	ND, RDL=10	mg/L	9.5	20		
A042591	Total Phosphorus	2025/10/30	105	80 - 120	105	80 - 120	ND, RDL=0.020	mg/L	4.0	20	107	80 - 120
A042626	Total Kjeldahl Nitrogen (TKN)	2025/10/30	92	80 - 120	92	80 - 120	ND, RDL=0.10	mg/L	NC	20	92	80 - 120
A042898	Total Aluminum (Al)	2025/10/29	105	80 - 120	97	80 - 120	ND, RDL=4.9	ug/L	3.8	20		
A042898	Total Boron (B)	2025/10/29	96	80 - 120	93	80 - 120	ND, RDL=10	ug/L	0.24	20		
A042898	Total Cadmium (Cd)	2025/10/29	102	80 - 120	101	80 - 120	ND, RDL=0.090	ug/L	NC	20		
A042898	Total Calcium (Ca)	2025/10/29	NC	80 - 120	98	80 - 120	ND, RDL=200	ug/L	3.5	20		
A042898	Total Chromium (Cr)	2025/10/29	95	80 - 120	94	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A042898	Total Cobalt (Co)	2025/10/29	97	80 - 120	96	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A042898	Total Copper (Cu)	2025/10/29	98	80 - 120	98	80 - 120	ND, RDL=0.90	ug/L	NC	20		
A042898	Total Iron (Fe)	2025/10/29	96	80 - 120	96	80 - 120	ND, RDL=100	ug/L	NC	20		
A042898	Total Lead (Pb)	2025/10/29	99	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	NC	20		
A042898	Total Magnesium (Mg)	2025/10/29	NC	80 - 120	95	80 - 120	ND, RDL=50	ug/L	1.6	20		
A042898	Total Manganese (Mn)	2025/10/29	96	80 - 120	97	80 - 120	ND, RDL=2.0	ug/L	6.6	20		
A042898	Total Potassium (K)	2025/10/29	96	80 - 120	96	80 - 120	ND, RDL=200	ug/L	1.1	20		

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Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
A042898	Total Sodium (Na)	2025/10/29	96	80 - 120	97	80 - 120	ND, RDL=100	ug/L	1.0	20		
A042898	Total Zinc (Zn)	2025/10/29	98	80 - 120	102	80 - 120	ND, RDL=5.0	ug/L	NC	20		
A043541	Phenols-4AAP	2025/10/30	96	80 - 120	101	80 - 120	ND, RDL=0.0010	mg/L	3.0	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Chemistry testing is conducted at 6740 Campobello Rd.

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Chemistry testing is conducted at 6740 Campobello Rd.

C5D4599
2025/10/23 10:22

Bureau Veritas
36 Antares Dr Unit 100, Nepean, Ontario Canada K2E 7W5 Tel:(613) 274-0573 Toll-free:800-563-6266 Fax:(613) 274-0574 www.bvna.com

IMMEDIATE

NONT-2025-10-5070

Invoice To:		Report To:		PROJECT INFORMATION:	
Company:	#1192 BluMetric Environmental Inc	Company:	#5638 BluMetric Environmental Inc	Quotation #:	C45784
Attention:	Accounts Payable	Attention:	MHH Distribution	P.O. #:	
Address:	1682 Woodward Drive Ottawa ON K2C 3R8	Address:	The Tower - The Woolen Mill 4 Cataraqui St Kingston ON K7K 1Z7	Project:	250253-08
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Project Name:	North Baptiste
Email:	ap@blumetric.ca	Email:	cbandler@blumetric.ca, cmiller@blumetric.ca, edms@bl	Site #:	
				Sampled By:	BM / DK

Bottle Order #: 1062826

COC #:	Project Manager:
C#1062826-01-01	Deepthi Shaji

FOR REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☐ Res/Park ☐ Medium/Fine ☐ Table 2 ☐ Ind/Comm ☐ Coarse ☐ Table 3 ☐ Agri/Other ☐ For RSC ☐ Table ____

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw ☐ Reg 558 ☐ Storm Sewer Bylaw ☐ MISA Municipality ____ ☐ PWQO ☐ Reg 406 Table ____ ☐ Other ____

Special Instructions:

Include Criteria on Certificate of Analysis (Y/N)? ____

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Field Filtered (please circle): Metals / Hg / Cr VI

Surface Water - PWQO

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests.
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ____ Time Required: ____ ☐
Rush Confirmation Number: ____ (call lab for #)

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	# of Bottles	Comments
1		~~MCG-A~~					
2		~~MCG-B~~					
3		~~MCG-C~~					
4		~~MCG-D~~					
5		MCG-E	2025/10/21	8:15	SW	7	
6		MCG-F	2025/10/21	8:30	SW	7	
7		MCG-G	2025/10/21	8:53	SW	7	
8		MCG-H	2025/10/21	9:41	SW	7	
9		NB-QAQC-SW1	2025/10/21	8:15	SW	7	
10							

* Relinquished By (Print):	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Brad McCallum	2025/10/22	8:00	[signature]	2025/10/23	10:22	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Receipt	Custody Seal Present	Yes	No
	6/2/2	Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

Your P.O. #: 250253-08
Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1041563-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/05/16
Report #: R8539956
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C552990
Received: 2025/05/09, 11:12

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Dissolved Aluminum (0.2 u, clay free)	9	N/A	2025/05/14	CAM SOP-00447	EPA 6020B m
Alkalinity	9	N/A	2025/05/13	CAM SOP-00448	SM 24 2320 B m
Biochemical Oxygen Demand (BOD)	9	2025/05/11	2025/05/16	CAM SOP-00427	SM 24 5210B m
Chloride by Automated Colourimetry	9	N/A	2025/05/15	CAM SOP-00463	SM 24 4500-Cl E m
Colour	9	N/A	2025/05/13	CAM SOP-00412	SM 24 2120C m
Conductivity	9	N/A	2025/05/13	CAM SOP-00414	SM 24 2510 m
Hardness (calculated as CaCO3)	9	N/A	2025/05/14	CAM SOP 00102/00408/00447	SM 2340 B
Total Metals Analysis by ICPMS	9	2025/05/14	2025/05/15	CAM SOP-00447	EPA 6020B m
Total Ammonia-N	9	N/A	2025/05/15	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1)	9	N/A	2025/05/12	CAM SOP-00440	SM 24 4500-NO3I/NO2B
pH (2)	9	2025/05/10	2025/05/13	CAM SOP-00413	SM 24th - 4500H+ B
Phenols (4AAP)	9	N/A	2025/05/14	CAM SOP-00444	OMOE E3179 m
Field Measured pH (3)	9	N/A	2025/05/13		Field pH Meter
Sulphate by Automated Turbidimetry	9	N/A	2025/05/15	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids	9	2025/05/14	2025/05/15	CAM SOP-00428	SM 24 2540C m
Field Temperature (3)	9	N/A	2025/05/13		Field Thermometer
Total Kjeldahl Nitrogen in Water	9	2025/05/13	2025/05/14	CAM SOP-00938	SM 4500-N B m
Total Phosphorus (Colourimetric)	9	2025/05/13	2025/05/14	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids	9	2025/05/14	2025/05/15	CAM SOP-00428	SM 24 2540D m
Un-ionized Ammonia (4)	9	2025/05/09	2025/05/15	Auto Calc.	PWQO

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Your P.O. #: 250253-08
Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1041563-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/05/16
Report #: R8539956
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C552990
Received: 2025/05/09, 11:12

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(2) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

(3) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.
(4) Un-ionized ammonia is calculated using the total ammonia result and field data provided by the client for pH and temperature.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP86			AQSP86			AQSP87		
Sampling Date		2025/05/07 10:30			2025/05/07 10:30			2025/05/07 11:35		
COC Number		1041563-01-01			1041563-01-01			1041563-01-01		
	UNITS	MCG-A	RDL	QC Batch	MCG-A Lab-Dup	RDL	QC Batch	MCG-B	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	11	1.0	9926105				320	1.0	9926105
Total Un-ionized Ammonia	mg/L	ND	0.00061	9925845				ND	0.00061	9925845
Field Measurements										
Field Temperature	Celsius	10.4	N/A	ONSITE				12.9	N/A	ONSITE
Field Measured pH	pH	6.67		ONSITE				6.74		ONSITE
Inorganics										
Total Ammonia-N	mg/L	ND	0.050	9928677	ND	0.050	9928677	0.24	0.050	9928677
Total BOD	mg/L	ND	2	9926515				ND	2	9926515
Colour	TCU	8	2	9926411				8	2	9926411
Conductivity	umho/cm	44	2.0	9926412				660	2.0	9926412
Total Dissolved Solids	mg/L	45	10	9928978				405	10	9928978
Total Kjeldahl Nitrogen (TKN)	mg/L	0.13	0.10	9928144				0.55	0.10	9928144
pH	pH	7.23		9926413				7.50		9926413
Phenols-4AAP	mg/L	ND	0.0010	9928544				0.0010	0.0010	9928544
Total Phosphorus	mg/L	ND	0.020	9928062				0.073	0.020	9928062
Total Suspended Solids	mg/L	ND	10	9928944				19	10	9928944
Dissolved Sulphate (SO4)	mg/L	2.0	1.0	9926393				32	1.0	9926393
Alkalinity (Total as CaCO3)	mg/L	12	1.0	9926408				300	1.0	9926408
Dissolved Chloride (Cl-)	mg/L	3.3	1.0	9926392				7.4	1.0	9926392
Nitrite (N)	mg/L	ND	0.010	9926357				ND	0.010	9926357
Nitrate (N)	mg/L	ND	0.10	9926357				ND	0.10	9926357
Nitrate + Nitrite (N)	mg/L	ND	0.10	9926357				ND	0.10	9926357

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP87			AQSP88			AQSP88		
Sampling Date		2025/05/07 11:35			2025/05/07 11:50			2025/05/07 11:50		
COC Number		1041563-01-01			1041563-01-01			1041563-01-01		
	UNITS	MCG-B Lab-Dup	RDL	QC Batch	MCG-C	RDL	QC Batch	MCG-C Lab-Dup	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L				20	1.0	9926105			
Total Un-ionized Ammonia	mg/L				ND	0.00061	9925845			
Field Measurements										
Field Temperature	Celsius				13.4	N/A	ONSITE			
Field Measured pH	pH				6.64		ONSITE			
Inorganics										
Total Ammonia-N	mg/L				ND	0.050	9928677			
Total BOD	mg/L				ND	2	9926515			
Colour	TCU				110	4	9926411			
Conductivity	umho/cm				52	2.0	9926412			
Total Dissolved Solids	mg/L				85	10	9928978	90	10	9928978
Total Kjeldahl Nitrogen (TKN)	mg/L				0.55	0.10	9928144			
pH	pH				6.89		9926413			
Phenols-4AAP	mg/L				ND	0.0010	9928899			
Total Phosphorus	mg/L	0.067	0.020	9928062	0.022	0.020	9928062			
Total Suspended Solids	mg/L				ND	10	9928944			
Dissolved Sulphate (SO4)	mg/L				1.0	1.0	9926393			
Alkalinity (Total as CaCO3)	mg/L				16	1.0	9926408			
Dissolved Chloride (Cl-)	mg/L				1.6	1.0	9926392			
Nitrite (N)	mg/L				ND	0.010	9926357			
Nitrate (N)	mg/L				ND	0.10	9926357			
Nitrate + Nitrite (N)	mg/L				ND	0.10	9926357			

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QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP89			AQSP89			AQSP90		
Sampling Date		2025/05/07 12:00			2025/05/07 12:00			2025/05/07 09:45		
COC Number		1041563-01-01			1041563-01-01			1041563-01-01		
	UNITS	MCG-D	RDL	QC Batch	MCG-D Lab-Dup	RDL	QC Batch	MCG-E	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	11	1.0	9926105				17	1.0	9926105
Total Un-ionized Ammonia	mg/L	ND	0.00061	9925845				ND	0.00061	9925845
Field Measurements										
Field Temperature	Celsius	13.1	N/A	ONSITE				12.8	N/A	ONSITE
Field Measured pH	pH	6.1		ONSITE				7.35		ONSITE
Inorganics										
Total Ammonia-N	mg/L	ND	0.050	9928677				ND	0.050	9928677
Total BOD	mg/L	ND	2	9926515				ND	2	9926515
Colour	TCU	95	2	9926411				32	2	9926411
Conductivity	umho/cm	29	2.0	9926412				120	2.0	9926412
Total Dissolved Solids	mg/L	35	10	9928989	40	10	9928989	70	10	9928989
Total Kjeldahl Nitrogen (TKN)	mg/L	0.41	0.10	9928144				0.21	0.10	9928144
pH	pH	6.53		9926413				7.22		9926413
Phenols-4AAP	mg/L	ND	0.0010	9928899				ND	0.0010	9928899
Total Phosphorus	mg/L	0.023	0.020	9928062				ND	0.020	9928062
Total Suspended Solids	mg/L	ND	10	9928944				ND	10	9928944
Dissolved Sulphate (SO4)	mg/L	2.7	1.0	9926393				3.7	1.0	9926393
Alkalinity (Total as CaCO3)	mg/L	6.8	1.0	9926408				14	1.0	9926408
Dissolved Chloride (Cl-)	mg/L	ND	1.0	9926392				21	1.0	9926392
Nitrite (N)	mg/L	ND	0.010	9926357				ND	0.010	9926357
Nitrate (N)	mg/L	ND	0.10	9926357				ND	0.10	9926357
Nitrate + Nitrite (N)	mg/L	ND	0.10	9926357				ND	0.10	9926357

RDL = Reportable Detection Limit
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Lab-Dup = Laboratory Initiated Duplicate
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N/A = Not Applicable

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP90			AQSP91		AQSP92		
Sampling Date		2025/05/07 09:45			2025/05/07 10:20		2025/05/07 10:50		
COC Number		1041563-01-01			1041563-01-01		1041563-01-01		
	UNITS	MCG-E Lab-Dup	RDL	QC Batch	MCG-F	QC Batch	MCG-G	RDL	QC Batch
Calculated Parameters									
Hardness (CaCO3)	mg/L				15	9926105	11	1.0	9926105
Total Un-ionized Ammonia	mg/L				ND	9925845	ND	0.00061	9925845
Field Measurements									
Field Temperature	Celsius				14.8	ONSITE	13.1	N/A	ONSITE
Field Measured pH	pH				6.71	ONSITE	6.91		ONSITE
Inorganics									
Total Ammonia-N	mg/L				ND	9928677	ND	0.050	9928677
Total BOD	mg/L				ND	9926515	ND	2	9926515
Colour	TCU				33	9926411	28	2	9926411
Conductivity	umho/cm				180	9926412	29	2.0	9926412
Total Dissolved Solids	mg/L				125	9928978	40	10	9928989
Total Kjeldahl Nitrogen (TKN)	mg/L				0.23	9928144	0.13	0.10	9928144
pH	pH				6.99	9926413	7.02		9926413
Phenols-4AAP	mg/L				ND	9928899	ND	0.0010	9928899
Total Phosphorus	mg/L				ND	9928062	ND	0.020	9928062
Total Suspended Solids	mg/L				ND	9928944	ND	10	9928944
Dissolved Sulphate (SO4)	mg/L				2.6	9926393	2.0	1.0	9926393
Alkalinity (Total as CaCO3)	mg/L				9.6	9926408	8.6	1.0	9926408
Dissolved Chloride (Cl-)	mg/L				37	9926392	ND	1.0	9926392
Nitrite (N)	mg/L	ND	0.010	9926357	ND	9926357	ND	0.010	9926357
Nitrate (N)	mg/L	ND	0.10	9926357	ND	9926357	ND	0.10	9926357
Nitrate + Nitrite (N)	mg/L	ND	0.10	9926357	ND	9926357	ND	0.10	9926357

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		AQSP93		AQSP94		
Sampling Date		2025/05/07 11:30		2025/05/07 09:45		
COC Number		1041563-01-01		1041563-01-01		
	UNITS	MCG-H	QC Batch	NB-QAQC-SW1	RDL	QC Batch
Calculated Parameters						
Hardness (CaCO3)	mg/L	24	9926105	18	1.0	9926105
Total Un-ionized Ammonia	mg/L	ND	9925845	ND	0.00061	9925845
Field Measurements						
Field Temperature	Celsius	14.2	ONSITE	12.8	N/A	ONSITE
Field Measured pH	pH	6.78	ONSITE	7.35		ONSITE
Inorganics						
Total Ammonia-N	mg/L	ND	9928677	ND	0.050	9928677
Total BOD	mg/L	ND	9926515	ND	2	9926515
Colour	TCU	30	9926411	32	2	9926411
Conductivity	umho/cm	79	9926412	120	2.0	9926412
Total Dissolved Solids	mg/L	85	9928989	100	10	9928989
Total Kjeldahl Nitrogen (TKN)	mg/L	0.15	9928144	0.14	0.10	9928144
pH	pH	7.12	9926413	7.24		9926413
Phenols-4AAP	mg/L	ND	9928899	ND	0.0010	9928544
Total Phosphorus	mg/L	ND	9928062	ND	0.020	9928062
Total Suspended Solids	mg/L	ND	9928947	ND	10	9928944
Dissolved Sulphate (SO4)	mg/L	2.2	9926393	3.2	1.0	9926393
Alkalinity (Total as CaCO3)	mg/L	22	9926408	14	1.0	9926408
Dissolved Chloride (Cl-)	mg/L	6.7	9926392	21	1.0	9926392
Nitrite (N)	mg/L	ND	9926357	ND	0.010	9926357
Nitrate (N)	mg/L	ND	9926357	ND	0.10	9926357
Nitrate + Nitrite (N)	mg/L	ND	9926357	ND	0.10	9926357

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ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

N/A = Not Applicable

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AQSP86	AQSP87	AQSP88	AQSP89		
Sampling Date		2025/05/07 10:30	2025/05/07 11:35	2025/05/07 11:50	2025/05/07 12:00		
COC Number		1041563-01-01	1041563-01-01	1041563-01-01	1041563-01-01		
	UNITS	MCG-A	MCG-B	MCG-C	MCG-D	RDL	QC Batch
Metals							
Dissolved (0.2u) Aluminum (Al)	ug/L	40	ND	74	170	5	9927911
Total Aluminum (Al)	ug/L	71	8.4	79	180	4.9	9928972
Total Boron (B)	ug/L	ND	160	34	ND	10	9928972
Total Cadmium (Cd)	ug/L	ND	ND	ND	ND	0.090	9928972
Total Calcium (Ca)	ug/L	3700	110000	7200	2800	200	9928972
Total Chromium (Cr)	ug/L	ND	ND	ND	ND	5.0	9928972
Total Cobalt (Co)	ug/L	ND	ND	ND	ND	0.50	9928972
Total Copper (Cu)	ug/L	0.98	ND	ND	1.4	0.90	9928972
Total Iron (Fe)	ug/L	450	16000	730	510	100	9928972
Total Lead (Pb)	ug/L	ND	ND	ND	ND	0.50	9928972
Total Magnesium (Mg)	ug/L	380	14000	2000	890	50	9928972
Total Manganese (Mn)	ug/L	32	1100	59	47	2.0	9928972
Total Potassium (K)	ug/L	360	14000	1400	370	200	9928972
Total Sodium (Na)	ug/L	3000	15000	3000	1900	100	9928972
Total Zinc (Zn)	ug/L	ND	11	ND	ND	5.0	9928972

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QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AQSP89			AQSP90	AQSP91	AQSP92		
Sampling Date		2025/05/07 12:00			2025/05/07 09:45	2025/05/07 10:20	2025/05/07 10:50		
COC Number		1041563-01-01			1041563-01-01	1041563-01-01	1041563-01-01		
	UNITS	MCG-D Lab-Dup	RDL	QC Batch	MCG-E	MCG-F	MCG-G	RDL	QC Batch
Metals									
Dissolved (0.2u) Aluminum (Al)	ug/L				50	53	53	5	9927911
Total Aluminum (Al)	ug/L	180	4.9	9928972	90	78	97	4.9	9928972
Total Boron (B)	ug/L	ND	10	9928972	ND	ND	ND	10	9928972
Total Cadmium (Cd)	ug/L	ND	0.090	9928972	ND	ND	ND	0.090	9928972
Total Calcium (Ca)	ug/L	2800	200	9928972	5700	4500	3200	200	9928972
Total Chromium (Cr)	ug/L	ND	5.0	9928972	ND	ND	ND	5.0	9928972
Total Cobalt (Co)	ug/L	ND	0.50	9928972	ND	ND	ND	0.50	9928972
Total Copper (Cu)	ug/L	1.4	0.90	9928972	ND	ND	ND	0.90	9928972
Total Iron (Fe)	ug/L	500	100	9928972	280	200	320	100	9928972
Total Lead (Pb)	ug/L	ND	0.50	9928972	ND	ND	ND	0.50	9928972
Total Magnesium (Mg)	ug/L	860	50	9928972	920	770	680	50	9928972
Total Manganese (Mn)	ug/L	45	2.0	9928972	14	17	17	2.0	9928972
Total Potassium (K)	ug/L	370	200	9928972	590	960	410	200	9928972
Total Sodium (Na)	ug/L	1900	100	9928972	17000	28000	1200	100	9928972
Total Zinc (Zn)	ug/L	ND	5.0	9928972	ND	ND	ND	5.0	9928972

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		AQSP93	AQSP94		
Sampling Date		2025/05/07 11:30	2025/05/07 09:45		
COC Number		1041563-01-01	1041563-01-01		
	UNITS	MCG-H	NB-QAQC-SW1	RDL	QC Batch
Metals					
Dissolved (0.2u) Aluminum (Al)	ug/L	37	45	5	9927911
Total Aluminum (Al)	ug/L	53	90	4.9	9928972
Total Boron (B)	ug/L	ND	ND	10	9928972
Total Cadmium (Cd)	ug/L	ND	ND	0.090	9928972
Total Calcium (Ca)	ug/L	6900	5600	200	9928972
Total Chromium (Cr)	ug/L	ND	ND	5.0	9928972
Total Cobalt (Co)	ug/L	ND	ND	0.50	9928972
Total Copper (Cu)	ug/L	ND	ND	0.90	9928972
Total Iron (Fe)	ug/L	110	280	100	9928972
Total Lead (Pb)	ug/L	ND	ND	0.50	9928972
Total Magnesium (Mg)	ug/L	1300	920	50	9928972
Total Manganese (Mn)	ug/L	17	16	2.0	9928972
Total Potassium (K)	ug/L	920	590	200	9928972
Total Sodium (Na)	ug/L	5400	16000	100	9928972
Total Zinc (Zn)	ug/L	ND	ND	5.0	9928972

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

TEST SUMMARY

Bureau Veritas ID: AQSP86
Sample ID: MCG-A
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928544	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

Bureau Veritas ID: AQSP86 Dup
Sample ID: MCG-A
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan

Bureau Veritas ID: AQSP87
Sample ID: MCG-B
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

Bureau Veritas ID: AQSP87
Sample ID: MCG-B
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928544	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

Bureau Veritas ID: AQSP87 Dup
Sample ID: MCG-B
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri

Bureau Veritas ID: AQSP88
Sample ID: MCG-C
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928899	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

Bureau Veritas ID: AQSP88 Dup
Sample ID: MCG-C
Matrix: Water
Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage

Bureau Veritas ID: AQSP89
Sample ID: MCG-D
Matrix: Water
Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928899	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928989	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

Bureau Veritas ID: AQSP89 Dup
Sample ID: MCG-D
Matrix: Water
Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Dissolved Solids	BAL	9928989	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage

Bureau Veritas ID: AQSP90
Sample ID: MCG-E
Matrix: Water
Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

TEST SUMMARY

Bureau Veritas ID: AQSP90
Sample ID: MCG-E
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928899	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928989	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

Bureau Veritas ID: AQSP90 Dup
Sample ID: MCG-E
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal

Bureau Veritas ID: AQSP91
Sample ID: MCG-F
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928899	N/A	2025/05/14	Madhav Somani

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

TEST SUMMARY

Bureau Veritas ID: AQSP91
Sample ID: MCG-F
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928978	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

Bureau Veritas ID: AQSP92
Sample ID: MCG-G
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928899	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928989	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

Bureau Veritas ID: AQSP93
Sample ID: MCG-H
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

TEST SUMMARY

Bureau Veritas ID: AQSP93
Sample ID: MCG-H
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928899	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928989	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928947	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

Bureau Veritas ID: AQSP94
Sample ID: NB-QAQC-SW1
Matrix: Water

Collected: 2025/05/07
Shipped:
Received: 2025/05/09

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9927911	N/A	2025/05/14	Azita Fazaeli
Alkalinity	AT	9926408	N/A	2025/05/13	Gurparteek KAUR
Biochemical Oxygen Demand (BOD)	DO	9926515	2025/05/11	2025/05/16	Frank Zhang
Chloride by Automated Colourimetry	SKAL	9926392	N/A	2025/05/15	Massarat Jan
Colour	SPEC	9926411	N/A	2025/05/13	Gyulshen Idriz
Conductivity	AT	9926412	N/A	2025/05/13	Gurparteek KAUR
Hardness (calculated as CaCO3)		9926105	N/A	2025/05/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9928972	2025/05/14	2025/05/15	Nan Raykha
Total Ammonia-N	SKAL/NH4	9928677	N/A	2025/05/15	Massarat Jan
Nitrate & Nitrite as Nitrogen in Water	LACH	9926357	N/A	2025/05/12	Chandra Nandlal
pH	AT	9926413	2025/05/10	2025/05/13	Gurparteek KAUR
Phenols (4AAP)	TECH/PHEN	9928544	N/A	2025/05/14	Madhav Somani
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Sulphate by Automated Turbidimetry	SKAL	9926393	N/A	2025/05/15	Massarat Jan
Total Dissolved Solids	BAL	9928989	2025/05/14	2025/05/15	Binuja Kodithuwakku Arachchilage
Field Measured pH	PH	ONSITE	N/A	2025/05/13	Deepthi Shaji
Total Kjeldahl Nitrogen in Water	SKAL	9928144	2025/05/13	2025/05/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9928062	2025/05/13	2025/05/14	Vidhi Khatri
Total Suspended Solids	BAL	9928944	2025/05/14	2025/05/15	Tina Teng
Un-ionized Ammonia	CALC/NH3	9925845	2025/05/15	2025/05/15	Automated Statchk

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	4.3°C
Package 2	6.0°C

Results relate only to the items tested.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9926357	Nitrate (N)	2025/05/12	92	80 - 120	95	80 - 120	ND, RDL=0.10	mg/L	NC	20		
9926357	Nitrite (N)	2025/05/12	96	80 - 120	98	80 - 120	ND, RDL=0.010	mg/L	NC	20		
9926392	Dissolved Chloride (Cl-)	2025/05/15	NC	80 - 120	100	80 - 120	ND, RDL=1.0	mg/L	0.74	20		
9926393	Dissolved Sulphate (SO4)	2025/05/15	88	75 - 125	100	80 - 120	ND, RDL=1.0	mg/L	1.6	20		
9926408	Alkalinity (Total as CaCO3)	2025/05/13			99	85 - 115	ND, RDL=1.0	mg/L	2.6	20		
9926411	Colour	2025/05/13			98	80 - 120	ND,RDL=2	TCU	1.1	25		
9926412	Conductivity	2025/05/13			103	85 - 115	ND, RDL=2.0	umho/cm	3.9	10		
9926413	pH	2025/05/13			102	98 - 103			0.18	N/A		
9926515	Total BOD	2025/05/16					ND,RDL=2	mg/L	NC	30	103	80 - 120
9927911	Dissolved (0.2u) Aluminum (Al)	2025/05/14	100	80 - 120	102	80 - 120	ND,RDL=5	ug/L	NC	20		
9928062	Total Phosphorus	2025/05/14	95	80 - 120	96	80 - 120	ND, RDL=0.020	mg/L	9.9	20	98	80 - 120
9928144	Total Kjeldahl Nitrogen (TKN)	2025/05/14	NC	80 - 120	98	80 - 120	ND, RDL=0.10	mg/L	1.5	20	100	80 - 120
9928544	Phenols-4AAP	2025/05/14	93	80 - 120	101	80 - 120	ND, RDL=0.0010	mg/L	NC	20		
9928677	Total Ammonia-N	2025/05/15	95	75 - 125	98	80 - 120	ND, RDL=0.050	mg/L	NC	20		
9928899	Phenols-4AAP	2025/05/14	95	80 - 120	100	80 - 120	ND, RDL=0.0010	mg/L	NC	20		
9928944	Total Suspended Solids	2025/05/15			102	80 - 120	ND, RDL=10	mg/L	NC	20		
9928947	Total Suspended Solids	2025/05/15			101	80 - 120	ND, RDL=10	mg/L	9.5	20		
9928972	Total Aluminum (Al)	2025/05/15	99	80 - 120	101	80 - 120	ND, RDL=4.9	ug/L	2.1	20		
9928972	Total Boron (B)	2025/05/15	97	80 - 120	93	80 - 120	ND, RDL=10	ug/L	NC	20		
9928972	Total Cadmium (Cd)	2025/05/15	100	80 - 120	98	80 - 120	ND, RDL=0.090	ug/L	NC	20		
9928972	Total Calcium (Ca)	2025/05/15	100	80 - 120	100	80 - 120	ND, RDL=200	ug/L	2.9	20		
9928972	Total Chromium (Cr)	2025/05/15	99	80 - 120	98	80 - 120	ND, RDL=5.0	ug/L	NC	20		
9928972	Total Cobalt (Co)	2025/05/15	104	80 - 120	101	80 - 120	ND, RDL=0.50	ug/L	NC	20		
9928972	Total Copper (Cu)	2025/05/15	99	80 - 120	95	80 - 120	ND, RDL=0.90	ug/L	2.4	20		

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9928972	Total Iron (Fe)	2025/05/15	101	80 - 120	100	80 - 120	ND, RDL=100	ug/L	1.8	20		
9928972	Total Lead (Pb)	2025/05/15	103	80 - 120	100	80 - 120	ND, RDL=0.50	ug/L	NC	20		
9928972	Total Magnesium (Mg)	2025/05/15	101	80 - 120	97	80 - 120	ND, RDL=50	ug/L	3.3	20		
9928972	Total Manganese (Mn)	2025/05/15	99	80 - 120	98	80 - 120	ND, RDL=2.0	ug/L	4.1	20		
9928972	Total Potassium (K)	2025/05/15	94	80 - 120	93	80 - 120	ND, RDL=200	ug/L	2.2	20		
9928972	Total Sodium (Na)	2025/05/15	102	80 - 120	100	80 - 120	ND, RDL=100	ug/L	2.2	20		
9928972	Total Zinc (Zn)	2025/05/15	99	80 - 120	97	80 - 120	ND, RDL=5.0	ug/L	NC	20		
9928978	Total Dissolved Solids	2025/05/15			102	80 - 120	ND, RDL=10	mg/L	5.7	20		
9928989	Total Dissolved Solids	2025/05/15			95	80 - 120	ND, RDL=10	mg/L	13	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C552990
Report Date: 2025/05/16

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Deepthi Shaji, Project Manager

Louise Harding, Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

C552990
2025/05/09 11:12

Page 1 of 1

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

NONT-2025-05-1794

Bottle Order #: 1041563

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#1192 BluMetric Environmental Inc	Company Name:	#5638 BluMetric Environmental Inc	Quotation #:	C45784
Attention:	Accounts Payable	Attention:	S'rana Scholes	P.O. #:	250253-08
Address:	1682 Woodward Drive Ottawa ON K2C 3R8	Address:	The Tower - The Woolen Mill 4 Cataraqui St Kingston ON K7K 1Z7	Project:	250253-08
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Project Name:	
Email:	ap@blumetric.ca	Email:	sscholes@blumetric.ca, cbandler@blumetric.ca, edms	Site #:	North Baptiste
				Sampled By:	NW/BM

COC #: C#1041563-01-01

Project Manager: Deepthi Shaji

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558. ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Field Filtered (please circle): Metals / Hg / Cr VI

Surface Water - PWQO

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: [X]
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	# of Bottles	Temp °C	Comments	pH
1		MCG-A	25/05/07	10:30	SW	7	10.4		6.67
2		MCG-B	25/05/07	11:35	SW	7	12.9		6.74
3		MCG-C	25/05/07	11:50	SW	7	13.4		6.64
4		MCG-D	25/05/07	12:00	SW	7	13.1		6.1
5		MCG-E	25/05/07	9:45	SW	7	12.8		7.35
6		MCG-F	25/05/07	10:20	SW	7	14.8		6.71
7		MCG-G	25/05/07	10:50	SW	7	13.1		6.91
8		MCG-H	25/05/07	11:30	SW	7	14.2		6.78
9		NB-QAQC-SW1	25/05/07	9:45	SW	7	12.8		7.35
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Nathan Wilson	25/05/08	08:00	[illegible]	2025/05/09	11:12	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	5/4/4 6/6/6	Present	✓	
		Intact	✓	

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client
CAJ
ICC

Bureau Veritas Canada (2019) Inc.

Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1051678-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/07/15
Report #: R8576392
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C581598
Received: 2025/07/08, 16:10

Sample Matrix: Water
Samples Received: 9

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
Dissolved Aluminum (0.2 u, clay free) (1)	9	N/A	2025/07/11	CAM SOP-00447	EPA 6020B m
Alkalinity (1)	9	N/A	2025/07/10	CAM SOP-00448	SM 24 2320 B m
Biochemical Oxygen Demand (BOD) (1)	9	2025/07/10	2025/07/15	CAM SOP-00427	SM 24 5210B m
Chloride by Automated Colourimetry (1)	9	N/A	2025/07/10	CAM SOP-00463	SM 24 4500-Cl E m
Colour (1)	9	N/A	2025/07/09	CAM SOP-00412	SM 24 2120C m
Conductivity (1)	9	N/A	2025/07/10	CAM SOP-00414	SM 24 2510 m
Hardness (calculated as CaCO3) (1)	9	N/A	2025/07/14	CAM SOP 00102/00408/00447	SM 2340 B
Total Metals Analysis by ICPMS (1)	9	2025/07/14	2025/07/14	CAM SOP-00447	EPA 6020B m
Total Ammonia-N (1)	9	N/A	2025/07/15	CAM SOP-00441	USGS I-2522-90 m
Nitrate & Nitrite as Nitrogen in Water (1, 2)	9	N/A	2025/07/11	CAM SOP-00440	SM 24 4500-NO3I/NO2B
pH (1, 3)	9	2025/07/09	2025/07/10	CAM SOP-00413	SM 24th - 4500H+ B
Phenols (4AAP) (1)	8	N/A	2025/07/10	CAM SOP-00444	OMOE E3179 m
Phenols (4AAP) (1)	1	N/A	2025/07/11	CAM SOP-00444	OMOE E3179 m
Field Measured pH (1, 4)	9	N/A	2025/07/10		Field pH Meter
Sulphate by Automated Turbidimetry (1)	9	N/A	2025/07/10	CAM SOP-00464	SM 24 4500-SO42- E m
Total Dissolved Solids (1)	1	2025/07/10	2025/07/11	CAM SOP-00428	SM 24 2540C m
Total Dissolved Solids (1)	8	2025/07/11	2025/07/12	CAM SOP-00428	SM 24 2540C m
Field Temperature (1, 4)	9	N/A	2025/07/10		Field Thermometer
Total Kjeldahl Nitrogen in Water (1)	7	2025/07/10	2025/07/11	CAM SOP-00938	SM 4500-N B m
Total Kjeldahl Nitrogen in Water (1)	2	2025/07/10	2025/07/14	CAM SOP-00938	SM 4500-N B m
Total Phosphorus (Colourimetric) (1)	8	2025/07/10	2025/07/11	CAM SOP-00407	SM 24 4500-P I
Total Phosphorus (Colourimetric) (1)	1	2025/07/10	2025/07/14	CAM SOP-00407	SM 24 4500-P I
Total Suspended Solids (1)	9	2025/07/10	2025/07/11	CAM SOP-00428	SM 24 2540D m
Un-ionized Ammonia (1, 5)	9	2025/07/09	2025/07/15	Auto Calc.	PWQO

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in

Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1051678-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/07/15
Report #: R8576392
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C581598
Received: 2025/07/08, 16:10

writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Bureau Veritas Mississauga, 6740 Campobello Rd , Mississauga, ON, L5N 2L8
(2) Values for calculated parameters may not appear to add up due to rounding of raw data and significant figures.
(3) "The CCME method and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) requires pH to be analyzed within 15 minutes of sampling and therefore field analysis is required for compliance. All Laboratory pH analyses in this report are reported past the CCME and Analytical Protocol (O. Reg 153/04, O. Reg. 406/19) holding time. Bureau Veritas endeavors to analyze samples as soon as possible after receipt."

(4) This is a field test, therefore, the results relate to items that were not analysed at Bureau Veritas.
(5) Un-ionized ammonia is calculated using the total ammonia result and field data provided by the client for pH and temperature.

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843
==========
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Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C581598
Report Date: 2025/07/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ASTI73			ASTI73			ASTI74		
Sampling Date		2025/07/07 11:17			2025/07/07 11:17			2025/07/07 12:50		
COC Number		1051678-01-01			1051678-01-01			1051678-01-01		
	UNITS	MCG-A	RDL	QC Batch	MCG-A Lab-Dup	RDL	QC Batch	MCG-B	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	27	1.0	9966040				260	1.0	9966040
Total Un-ionized Ammonia	mg/L	ND	0.00061	9966041				ND	0.00061	9966041
Field Measurements										
Field Temperature	Celsius	14.8	N/A	ONSITE				16.8	N/A	ONSITE
Field Measured pH	pH	6.18		ONSITE				6.74		ONSITE
Inorganics										
Total Ammonia-N	mg/L	ND	0.050	9967114				0.28	0.050	9967114
Total BOD	mg/L	ND	2	9966878				3	2	9966878
Colour	TCU	24	2	9966029				13	2	9966029
Conductivity	umho/cm	96	2.0	9966562				580	2.0	9966562
Total Dissolved Solids	mg/L	65	10	9968009				325	10	9968009
Total Kjeldahl Nitrogen (TKN)	mg/L	0.24	0.10	9967241				0.71	0.10	9967241
pH	pH	7.13		9966565				7.43		9966565
Phenols-4AAP	mg/L	ND	0.0010	9967248				0.011	0.0010	9968109
Total Phosphorus	mg/L	ND	0.020	9967134	ND	0.020	9967134	0.071	0.020	9967134
Total Suspended Solids	mg/L	ND	10	9966978				65	10	9966978
Dissolved Sulphate (SO4)	mg/L	5.2	1.0	9966571				3.3	1.0	9966571
Alkalinity (Total as CaCO3)	mg/L	26	1.0	9966566				290	1.0	9966566
Dissolved Chloride (Cl-)	mg/L	7.7	1.0	9966570				7.8	1.0	9966570
Nitrite (N)	mg/L	ND	0.010	9966561				ND	0.010	9966561
Nitrate (N)	mg/L	0.15	0.10	9966561				ND	0.10	9966561
Nitrate + Nitrite (N)	mg/L	0.15	0.10	9966561				ND	0.10	9966561

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable

Bureau Veritas Job #: C581598
Report Date: 2025/07/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ASTI75			ASTI76			ASTI77		
Sampling Date		2025/07/07 13:01			2025/07/07 13:13			2025/07/07 10:32		
COC Number		1051678-01-01			1051678-01-01			1051678-01-01		
	UNITS	MCG-C	RDL	QC Batch	MCG-D	RDL	QC Batch	MCG-E	RDL	QC Batch
Calculated Parameters										
Hardness (CaCO3)	mg/L	120	1.0	9966040	49	1.0	9966040	32	1.0	9966040
Total Un-ionized Ammonia	mg/L	ND	0.00061	9966041	0.0016	0.00061	9966041	ND	0.00061	9966041
Field Measurements										
Field Temperature	Celsius	20.4	N/A	ONSITE	18.5	N/A	ONSITE	17.7	N/A	ONSITE
Field Measured pH	pH	6.62		ONSITE	6.43		ONSITE	6.96		ONSITE
Inorganics										
Total Ammonia-N	mg/L	ND	0.050	9967114	1.4	0.050	9967114	ND	0.050	9967114
Total BOD	mg/L	7	2	9966878	39	2	9966878	ND	2	9966878
Colour	TCU	220	10	9966029	540	20	9966029	44	2	9966029
Conductivity	umho/cm	260	2.0	9966562	140	2.0	9966562	240	2.0	9966562
Total Dissolved Solids	mg/L	215	10	9968009	135	10	9968009	150	10	9968009
Total Kjeldahl Nitrogen (TKN)	mg/L	1.1	0.10	9967241	4.9	0.50	9967241	0.26	0.10	9967241
pH	pH	7.50		9966565	6.92		9966565	7.53		9966565
Phenols-4AAP	mg/L	ND	0.0010	9967248	0.0020	0.0010	9967248	ND	0.0010	9967248
Total Phosphorus	mg/L	0.051	0.020	9967134	2.1	0.10	9967134	ND	0.020	9967134
Total Suspended Solids	mg/L	16	10	9966978	520	33	9966978	ND	10	9966978
Dissolved Sulphate (SO4)	mg/L	25	20	9966572	20 (1)	20	9966571	5.7	1.0	9966572
Alkalinity (Total as CaCO3)	mg/L	120	1.0	9966566	71	1.0	9966566	27	1.0	9966566
Dissolved Chloride (Cl-)	mg/L	ND (1)	20	9966573	ND (1)	20	9966570	43	1.0	9966573
Nitrite (N)	mg/L	ND	0.010	9966561	ND	0.050	9966561	ND	0.010	9966561
Nitrate (N)	mg/L	ND	0.10	9966561	ND	0.50	9966561	0.18	0.10	9966561
Nitrate + Nitrite (N)	mg/L	ND	0.10	9966561	ND	0.50	9966561	0.18	0.10	9966561

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable
(1) Due to colour interferences, sample required dilution. Detection limit was adjusted accordingly.

Bureau Veritas Job #: C581598
Report Date: 2025/07/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ASTI78	ASTI79			ASTI79		
Sampling Date		2025/07/07 10:59	2025/07/07 11:52			2025/07/07 11:52		
COC Number		1051678-01-01	1051678-01-01			1051678-01-01		
	UNITS	MCG-F	MCG-G	RDL	QC Batch	MCG-G Lab-Dup	RDL	QC Batch
Calculated Parameters								
Hardness (CaCO3)	mg/L	20	15	1.0	9966040			
Total Un-ionized Ammonia	mg/L	ND	ND	0.00061	9966041			
Field Measurements								
Field Temperature	Celsius	19.2	17.7	N/A	ONSITE			
Field Measured pH	pH	6.21	6.29		ONSITE			
Inorganics								
Total Ammonia-N	mg/L	ND	ND	0.050	9967114			
Total BOD	mg/L	ND	ND	2	9966878			
Colour	TCU	72	22	2	9966029			
Conductivity	umho/cm	180	39	2.0	9966562			
Total Dissolved Solids	mg/L	115	30	10	9968009			
Total Kjeldahl Nitrogen (TKN)	mg/L	0.41	0.21	0.10	9967241	0.25	0.10	9967241
pH	pH	7.36	7.17		9966565			
Phenols-4AAP	mg/L	ND	ND	0.0010	9967248			
Total Phosphorus	mg/L	0.024	ND	0.020	9967134			
Total Suspended Solids	mg/L	ND	12	10	9966978			
Dissolved Sulphate (SO4)	mg/L	3.0	3.2	1.0	9966571			
Alkalinity (Total as CaCO3)	mg/L	23	13	1.0	9966566			
Dissolved Chloride (Cl-)	mg/L	33	ND	1.0	9966570			
Nitrite (N)	mg/L	ND	ND	0.010	9966561			
Nitrate (N)	mg/L	0.19	0.31	0.10	9966561			
Nitrate + Nitrite (N)	mg/L	0.19	0.31	0.10	9966561			

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
Lab-Dup = Laboratory Initiated Duplicate
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.
N/A = Not Applicable

Bureau Veritas Job #: C581598
Report Date: 2025/07/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: NW

RESULTS OF ANALYSES OF WATER

Bureau Veritas ID		ASTI80		ASTI81		
Sampling Date		2025/07/07 12:41		2025/07/07 10:32		
COC Number		1051678-01-01		1051678-01-01		
	UNITS	MCG-H	QC Batch	NB-QAQC-SW1	RDL	QC Batch
Calculated Parameters						
Hardness (CaCO3)	mg/L	62	9966040	32	1.0	9966040
Total Un-ionized Ammonia	mg/L	ND	9966041	ND	0.00061	9966041
Field Measurements						
Field Temperature	Celsius	20.4	ONSITE	17.7	N/A	ONSITE
Field Measured pH	pH	6.48	ONSITE	6.96		ONSITE
Inorganics						
Total Ammonia-N	mg/L	ND	9967114	ND	0.050	9967114
Total BOD	mg/L	ND	9966878	ND	2	9966878
Colour	TCU	75	9966029	44	2	9966029
Conductivity	umho/cm	150	9966562	230	2.0	9966562
Total Dissolved Solids	mg/L	110	9968009	155	10	9967412
Total Kjeldahl Nitrogen (TKN)	mg/L	0.63	9967241	0.28	0.10	9967241
pH	pH	7.30	9966565	7.50		9966565
Phenols-4AAP	mg/L	ND	9967248	ND	0.0010	9967248
Total Phosphorus	mg/L	0.044	9967134	ND	0.020	9967134
Total Suspended Solids	mg/L	36	9966978	ND	10	9966978
Dissolved Sulphate (SO4)	mg/L	2.1	9966572	5.8	1.0	9966571
Alkalinity (Total as CaCO3)	mg/L	63	9966566	26	1.0	9966566
Dissolved Chloride (Cl-)	mg/L	6.7	9966573	44	1.0	9966570
Nitrite (N)	mg/L	ND	9966561	ND	0.010	9966561
Nitrate (N)	mg/L	ND	9966561	0.19	0.10	9966561
Nitrate + Nitrite (N)	mg/L	ND	9966561	0.19	0.10	9966561

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

N/A = Not Applicable

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		ASTI73	ASTI74	ASTI75		ASTI76		
Sampling Date		2025/07/07 11:17	2025/07/07 12:50	2025/07/07 13:01		2025/07/07 13:13		
COC Number		1051678-01-01	1051678-01-01	1051678-01-01		1051678-01-01		
	UNITS	MCG-A	MCG-B	MCG-C	RDL	MCG-D	RDL	QC Batch
Metals								
Dissolved (0.2u) Aluminum (Al)	ug/L	29	ND	19	5	79	5	9967368
Total Aluminum (Al)	ug/L	50	7.4	30	4.9	2200	4.9	9968965
Total Boron (B)	ug/L	ND	140	180	10	ND	10	9968965
Total Cadmium (Cd)	ug/L	ND	ND	ND	0.090	0.46	0.090	9968965
Total Calcium (Ca)	ug/L	8700	74000	33000	200	18000	200	9968965
Total Chromium (Cr)	ug/L	ND	ND	ND	5.0	ND	5.0	9968965
Total Cobalt (Co)	ug/L	0.91	ND	1.4	0.50	44	0.50	9968965
Total Copper (Cu)	ug/L	1.3	ND	ND	0.90	6.4	0.90	9968965
Total Iron (Fe)	ug/L	1800	19000	4200	100	98000	100	9968965
Total Lead (Pb)	ug/L	ND	ND	ND	0.50	11	0.50	9968965
Total Magnesium (Mg)	ug/L	890	10000	8400	50	4100	50	9968965
Total Manganese (Mn)	ug/L	140	1000	1100	2.0	15000	10	9968965
Total Potassium (K)	ug/L	940	13000	880	200	2200	200	9968965
Total Sodium (Na)	ug/L	7100	17000	11000	100	2700	100	9968965
Total Zinc (Zn)	ug/L	6.7	5.7	ND	5.0	43	5.0	9968965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

ELEMENTS BY ATOMIC SPECTROSCOPY (WATER)

Bureau Veritas ID		ASTI77	ASTI78	ASTI79	ASTI80	ASTI81		
Sampling Date		2025/07/07 10:32	2025/07/07 10:59	2025/07/07 11:52	2025/07/07 12:41	2025/07/07 10:32		
COC Number		1051678-01-01	1051678-01-01	1051678-01-01	1051678-01-01	1051678-01-01		
	UNITS	**MCG-E**	**MCG-F**	**MCG-G**	**MCG-H**	**NB-QAQC-SW1**	**RDL**	**QC Batch**
Metals								
Dissolved (0.2u) Aluminum (Al)	ug/L	39	81	37	21	40	5	9967368
Total Aluminum (Al)	ug/L	59	130	71	160	58	4.9	9968965
Total Boron (B)	ug/L	ND	ND	ND	18	ND	10	9968965
Total Cadmium (Cd)	ug/L	ND	ND	ND	ND	ND	0.090	9968965
Total Calcium (Ca)	ug/L	10000	6000	4000	18000	10000	200	9968965
Total Chromium (Cr)	ug/L	ND	ND	ND	ND	ND	5.0	9968965
Total Cobalt (Co)	ug/L	ND	ND	ND	0.62	ND	0.50	9968965
Total Copper (Cu)	ug/L	ND	ND	1.4	ND	ND	0.90	9968965
Total Iron (Fe)	ug/L	680	1300	210	1200	680	100	9968965
Total Lead (Pb)	ug/L	ND	ND	ND	ND	ND	0.50	9968965
Total Magnesium (Mg)	ug/L	1600	1100	900	3800	1600	50	9968965
Total Manganese (Mn)	ug/L	12	63	33	360	12	2.0	9968965
Total Potassium (K)	ug/L	910	980	510	1500	910	200	9968965
Total Sodium (Na)	ug/L	31000	28000	1500	7300	31000	100	9968965
Total Zinc (Zn)	ug/L	ND	ND	ND	ND	ND	5.0	9968965

RDL = Reportable Detection Limit
QC Batch = Quality Control Batch
ND = Not Detected at a concentration equal or greater than the indicated Detection Limit.

TEST SUMMARY

Bureau Veritas ID: ASTI73
Sample ID: MCG-A
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966570	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966571	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

Bureau Veritas ID: ASTI73 Dup
Sample ID: MCG-A
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri

Bureau Veritas ID: ASTI74
Sample ID: MCG-B
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966570	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9968109	N/A	2025/07/11	Jency Sara Johnson

TEST SUMMARY

Bureau Veritas ID: ASTI74
Sample ID: MCG-B
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966571	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

Bureau Veritas ID: ASTI75
Sample ID: MCG-C
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966573	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966572	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/14	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

Bureau Veritas ID: ASTI76
Sample ID: MCG-D
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966570	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru

TEST SUMMARY

Bureau Veritas ID: ASTI76
Sample ID: MCG-D
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966571	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/14	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

Bureau Veritas ID: ASTI77
Sample ID: MCG-E
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966573	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966572	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

TEST SUMMARY

Bureau Veritas ID: ASTI78
Sample ID: MCG-F
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966570	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966571	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

Bureau Veritas ID: ASTI79
Sample ID: MCG-G
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966570	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966571	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng

TEST SUMMARY

Bureau Veritas ID: ASTI79 **Collected:** 2025/07/07
Sample ID: MCG-G **Shipped:**
Matrix: Water **Received:** 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

Bureau Veritas ID: ASTI79 Dup **Collected:** 2025/07/07
Sample ID: MCG-G **Shipped:**
Matrix: Water **Received:** 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi

Bureau Veritas ID: ASTI80 **Collected:** 2025/07/07
Sample ID: MCG-H **Shipped:**
Matrix: Water **Received:** 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966573	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966572	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9968009	2025/07/11	2025/07/12	Manowalage shanika GUNASEKARA
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

Bureau Veritas ID: ASTI81 **Collected:** 2025/07/07
Sample ID: NB-QAQC-SW1 **Shipped:**
Matrix: Water **Received:** 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Dissolved Aluminum (0.2 u, clay free)	ICP/MS	9967368	N/A	2025/07/11	Azita Fazaeli
Alkalinity	AT	9966566	N/A	2025/07/10	Nachiketa Gohil
Biochemical Oxygen Demand (BOD)	DO	9966878	2025/07/10	2025/07/15	Nusrat Naz
Chloride by Automated Colourimetry	SKAL	9966570	N/A	2025/07/10	Massarat Jan
Colour	SPEC	9966029	N/A	2025/07/09	Viorica Rotaru

Bureau Veritas Job #: C581598
Report Date: 2025/07/15

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: NW

TEST SUMMARY

Bureau Veritas ID: ASTI81
Sample ID: NB-QAQC-SW1
Matrix: Water

Collected: 2025/07/07
Shipped:
Received: 2025/07/08

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
Conductivity	AT	9966562	N/A	2025/07/10	Nachiketa Gohil
Hardness (calculated as CaCO3)		9966040	N/A	2025/07/14	Automated Statchk
Total Metals Analysis by ICPMS	ICP/MS	9968965	2025/07/14	2025/07/14	Thuy Linh Nguyen
Total Ammonia-N	SKAL/NH4	9967114	N/A	2025/07/15	Muskan
Nitrate & Nitrite as Nitrogen in Water	LACH	9966561	N/A	2025/07/11	Helen He
pH	AT	9966565	2025/07/09	2025/07/10	Nachiketa Gohil
Phenols (4AAP)	TECH/PHEN	9967248	N/A	2025/07/10	Jency Sara Johnson
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Sulphate by Automated Turbidimetry	SKAL	9966571	N/A	2025/07/10	Massarat Jan
Total Dissolved Solids	BAL	9967412	2025/07/10	2025/07/11	Tina Teng
Field Measured pH	PH	ONSITE	N/A	2025/07/10	Harwin Grewal
Total Kjeldahl Nitrogen in Water	SKAL	9967241	2025/07/10	2025/07/11	Rajni Tyagi
Total Phosphorus (Colourimetric)	SKAL/P	9967134	2025/07/10	2025/07/11	Vidhi Khatri
Total Suspended Solids	BAL	9966978	2025/07/10	2025/07/11	Tina Teng
Un-ionized Ammonia	CALC/NH3	9966041	2025/07/15	2025/07/15	Automated Statchk

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	2.7°C
Package 2	5.7°C

Sample ASTI76 [MCG-D] : Nitrite/Nitrate: Due to color interferences, sample required dilution. Detection limits were adjusted accordingly.

Results relate only to the items tested.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

Bureau Veritas Job #: C581598
Report Date: 2025/07/15

QUALITY ASSURANCE REPORT

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: NW

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9966029	Colour	2025/07/09			99	80 - 120	ND,RDL=2	TCU	NC	25		
9966561	Nitrate (N)	2025/07/11	NC	80 - 120	94	80 - 120	ND, RDL=0.10	mg/L	2.8	20		
9966561	Nitrite (N)	2025/07/11	NC	80 - 120	105	80 - 120	ND, RDL=0.010	mg/L	1.8	20		
9966562	Conductivity	2025/07/10			102	85 - 115	ND, RDL=2.0	umho/cm	0.25	10		
9966565	pH	2025/07/10			102	98 - 103			1.2	N/A		
9966566	Alkalinity (Total as CaCO3)	2025/07/10			98	85 - 115	ND, RDL=1.0	mg/L	2.5	20		
9966570	Dissolved Chloride (Cl-)	2025/07/10	NC	80 - 120	99	80 - 120	ND, RDL=1.0	mg/L	0.31	20		
9966571	Dissolved Sulphate (SO4)	2025/07/10	NC	75 - 125	98	80 - 120	ND, RDL=1.0	mg/L	1.5	20		
9966572	Dissolved Sulphate (SO4)	2025/07/10	NC	75 - 125	99	80 - 120	ND, RDL=1.0	mg/L	0.86	20		
9966573	Dissolved Chloride (Cl-)	2025/07/10	NC	80 - 120	98	80 - 120	ND, RDL=1.0	mg/L	0.35	20		
9966878	Total BOD	2025/07/15					ND,RDL=2	mg/L	3.0	30	92	80 - 120
9966978	Total Suspended Solids	2025/07/11			95	80 - 120	ND, RDL=10	mg/L	NC	20		
9967114	Total Ammonia-N	2025/07/15	91	75 - 125	103	80 - 120	ND, RDL=0.050	mg/L	0.091	20		
9967134	Total Phosphorus	2025/07/11	103	80 - 120	99	80 - 120	ND, RDL=0.020	mg/L	NC	20	112	80 - 120
9967241	Total Kjeldahl Nitrogen (TKN)	2025/07/11	115	80 - 120	104	80 - 120	ND, RDL=0.10	mg/L	17	20	108	80 - 120
9967248	Phenols-4AAP	2025/07/11	NC	80 - 120	94	80 - 120	ND, RDL=0.0010	mg/L	3.0	20		
9967368	Dissolved (0.2u) Aluminum (Al)	2025/07/11	105	80 - 120	99	80 - 120	ND,RDL=5	ug/L	NC	20		
9967412	Total Dissolved Solids	2025/07/11			102	80 - 120	ND, RDL=10	mg/L	1.8	20		
9968009	Total Dissolved Solids	2025/07/12			100	80 - 120	ND, RDL=10	mg/L	0	20		
9968109	Phenols-4AAP	2025/07/11	84	80 - 120	93	80 - 120	ND, RDL=0.0010	mg/L	0	20		
9968965	Total Aluminum (Al)	2025/07/14	101	80 - 120	101	80 - 120	ND, RDL=4.9	ug/L	15	20		
9968965	Total Boron (B)	2025/07/14	90	80 - 120	93	80 - 120	ND, RDL=10	ug/L	0.94	20		
9968965	Total Cadmium (Cd)	2025/07/14	96	80 - 120	97	80 - 120	ND, RDL=0.090	ug/L	NC	20		
9968965	Total Calcium (Ca)	2025/07/14	NC	80 - 120	99	80 - 120	ND, RDL=200	ug/L	1.3	20		
9968965	Total Chromium (Cr)	2025/07/14	93	80 - 120	96	80 - 120	ND, RDL=5.0	ug/L	NC	20		
9968965	Total Cobalt (Co)	2025/07/14	101	80 - 120	103	80 - 120	ND, RDL=0.50	ug/L	NC	20		

QUALITY ASSURANCE REPORT(CONT'D)

			Matrix Spike		SPIKED BLANK		Method Blank		RPD		QC Standard	
QC Batch	Parameter	Date	% Recovery	QC Limits	% Recovery	QC Limits	Value	UNITS	Value (%)	QC Limits	% Recovery	QC Limits
9968965	Total Copper (Cu)	2025/07/14	99	80 - 120	101	80 - 120	ND, RDL=0.90	ug/L	15	20		
9968965	Total Iron (Fe)	2025/07/14	97	80 - 120	99	80 - 120	ND, RDL=100	ug/L	NC	20		
9968965	Total Lead (Pb)	2025/07/14	94	80 - 120	93	80 - 120	ND, RDL=0.50	ug/L	NC	20		
9968965	Total Magnesium (Mg)	2025/07/14	89	80 - 120	100	80 - 120	ND, RDL=50	ug/L	0.13	20		
9968965	Total Manganese (Mn)	2025/07/14	95	80 - 120	99	80 - 120	ND, RDL=2.0	ug/L	4.0	20		
9968965	Total Potassium (K)	2025/07/14	99	80 - 120	102	80 - 120	ND, RDL=200	ug/L	1.8	20		
9968965	Total Sodium (Na)	2025/07/14	96	80 - 120	100	80 - 120	ND, RDL=100	ug/L	0.52	20		
9968965	Total Zinc (Zn)	2025/07/14	98	80 - 120	102	80 - 120	ND, RDL=5.0	ug/L	5.2	20		

N/A = Not Applicable

Duplicate: Paired analysis of a separate portion of the same sample. Used to evaluate the variance in the measurement.

Matrix Spike: A sample to which a known amount of the analyte of interest has been added. Used to evaluate sample matrix interference.

QC Standard: A sample of known concentration prepared by an external agency under stringent conditions. Used as an independent check of method accuracy.

Spiked Blank: A blank matrix sample to which a known amount of the analyte, usually from a second source, has been added. Used to evaluate method accuracy.

Method Blank: A blank matrix containing all reagents used in the analytical procedure. Used to identify laboratory contamination.

NC (Matrix Spike): The recovery in the matrix spike was not calculated. The relative difference between the concentration in the parent sample and the spike amount was too small to permit a reliable recovery calculation (matrix spike concentration was less than the native sample concentration)

NC (Duplicate RPD): The duplicate RPD was not calculated. The concentration in the sample and/or duplicate was too low to permit a reliable RPD calculation (absolute difference <= 2x RDL).

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

Cristina Carriere

Cristina Carriere, Senior Scientific Specialist

Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas 100 – 36 Antares Dr. Nepean, ON, K2E 7W5 Phone: 613-274-0573 Website: www.bvna.com

C581598
2025/07/08 16:10

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Received in Ottawa

CHAIN OF CUSTODY RECORD

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:		Laboratory Use Only:	
Company Name:	#1192 BluMetric Environmental Inc	Company Name:	#5638 BluMetric Environmental Inc	Quotation #:	C45784	Bureau Veritas Job #:	Bottle Order #: 1051678
Attention:	Accounts Payable	Attention:	S'rana Scholes	P.O. #:			
Address:	1682 Woodward Drive Ottawa ON K2C 3R8	Address:	The Tower - The Woolen Mill 4 Cataraqui St Kingston ON K7K 1Z7	Project:	250253-08	COC #:	Project Manager:
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Project Name:		C#1051678-01-01	Deepthi Shaji
Email:	ap@blumetric.ca	Email:	sscholes@blumetric.ca, cbandler@blumetric.ca, edms	Site #:	North Baptiste		
				Sampled By:	NW / CR		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
☐ Table 1 ☐ Res/Park ☐ Medium/Fine
☐ Table 2 ☐ Ind/Comm ☐ Coarse
☐ Table 3 ☐ Agri/Other ☐ For RSC
☐ Table ___

Other Regulations
☐ CCME ☐ Sanitary Sewer Bylaw
☐ Reg 558. ☐ Storm Sewer Bylaw
☐ MISA Municipality ___
☐ PWQO ☐ Reg 406 Table ___
☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Surface Water - PWQO	ANALYSIS REQUESTED (PLEASE BE SPECIFIC)	# of Bottles	Temp °C	Comments	pH
1		MCG-A	25/07/07	11:17	SW	None	✓		7	14.8		6.18
2		MCG-B	25/7/7	12:50	SW	None	✓		7	16.8		6.74
3		MCG-C	25/7/7	13:01	SW	None	✓		7	20.4		6.62
4		MCG-D	25/7/7	13:13	SW	None	✓		7	18.5		6.43
5		MCG-E	25/7/7	10:32	SW	None	✓		7	17.7		6.96
6		MCG-F	25/7/7	10:59	SW	None	✓		7	19.2		6.21
7		MCG-G	25/7/7	11:52	SW	None	✓		7	17.7		6.29
8		MCG-H	25/7/7	12:41	SW	None	✓		7	20.4		6.48
9		NB-QAQC-SW1	25/7/7	10:32	SW	None	✓		7	17.7		6.96
10											ice	

OTT-2025-07-060

BOD

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Nathan Wilson	25/07/08	14:00	Pedro da Silva	2025/07/08	16:10	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	2/2/4 3.5/6/6	Present		✓
		Intact		✓

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

Appendix D

D-4 Toxicity Sampling Laboratory Reports

Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: C#1062828-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/11/12
Report #: R8649524
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5D3635
Received: 2025/10/23, 10:22

Sample Matrix: Water
Samples Received: 1

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
48-h Daphnia Magna Single Concentration (1)	1	N/A	N/A		
96-h Rainbow Trout Single Concentration (1)	1	N/A	N/A		

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

Bureau Veritas liability is limited to the actual cost of the requested analyses, unless otherwise agreed in writing. There is no other warranty expressed or implied. Bureau Veritas has been retained to provide analysis of samples provided by the Client using the testing methodology referenced in this report. Interpretation and use of test results are the sole responsibility of the Client and are not within the scope of services provided by Bureau Veritas, unless otherwise agreed in writing. Bureau Veritas is not responsible for the accuracy or any data impacts, that result from the information provided by the customer or their agent.

Solid sample results, except biota, are based on dry weight unless otherwise indicated. Organic analyses are not recovery corrected except for isotope dilution methods.
Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Nautilus Environmental - Guelph, 11 Nicholas Beaver Rd Unit B, Puslinch, ON, N0B 2C0

Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: C#1062828-01-01

Attention: MHH Distribution

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/11/12
Report #: R8649524
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C5D3635
Received: 2025/10/23, 10:22

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

==========

This report has been generated and distributed using a secure automated process.
Bureau Veritas has procedures in place to guard against improper use of the electronic signature and have the required "signatories", as per ISO/IEC 17025, signing the reports. For Service Group specific validation, please refer to the Validation Signatures page if included, otherwise available by request. For Department specific Analyst/Supervisor validation names, please refer to the Test Summary section if included, otherwise available by request. This report is authorized by Rodney Major, General Manager responsible for Ontario Environmental laboratory operations.

Bureau Veritas Job #: C5D3635
Report Date: 2025/11/12

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: DK

TEST SUMMARY

Bureau Veritas ID: AWMY00
Sample ID: MCG-H
Matrix: Water

Collected: 2025/10/21
Shipped:
Received: 2025/10/23

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
48-h Daphnia Magna Single Concentration		A052826	N/A		Lims Auto Schedule Runner
96-h Rainbow Trout Single Concentration		A052829	N/A		Lims Auto Schedule Runner

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Chemistry testing is conducted at 6740 Campobello Rd.

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	15.0°C

Results relate only to the items tested.

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Bureau Veritas Job #: C5D3635
Report Date: 2025/11/12

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Sampler Initials: DK

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:

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Chemistry testing is conducted at 6740 Campobello Rd.

C5D3635
2025/10/23 10:22

Page 1 of 1

Bureau Veritas
6740 Campobello Road, Mississauga, Ontario Canada L5N 2L8 Tel:(905) 817-5700 Toll-free:800-563-6266 Fax:(905) 817-5777 www.bvna.com

CHAIN OF CUSTODY RECORD

Invoice To:		Report To:		PROJECT INFORMATION:		Laboratory Use Only:	
Company:	#1192 BluMetric Environmental Inc	Company:	#5638 BluMetric Environmental Inc	Quotation #:	C45784	Bureau Veritas Job #:	Bottle Order #:
Attention:	Accounts Payable	Attention:	MHH Distribution	P.O. #:			1062828
Address:	1682 Woodward Drive Ottawa ON K2C 3R8	Address:	The Tower - The Woolen Mill 4 Cataraqui St Kingston ON K7K 1Z7	Project:	250253-08	COC #:	Project Manager:
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Project Name:	North Baptiste	C#1062828-01-01	Deepthi Shaji
Email:	ap@blumetric.ca	Email:	cbandler@blumetric.ca, cmiller@blumetric.ca, edms@bl	Site #:			
				Sampled By:	DK, BM		

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011): ☐ Table 1 ☐ Res/Park ☐ Medium/Fine; ☐ Table 2 ☐ Ind/Comm ☐ Coarse; ☐ Table 3 ☐ Agri/Other ☐ For RSC; ☐ Table ___

Other Regulations: ☐ CCME ☐ Sanitary Sewer Bylaw; ☐ Reg 558. ☐ Storm Sewer Bylaw; ☐ MISA Municipality ___; ☐ PWQO ☐ Reg 406 Table ___; ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

ANALYSIS REQUESTED (PLEASE BE SPECIFIC)

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Toxicity	# of Bottles	Comments
1		~~MCG-C~~							
2		MCG-H	2025/10/21	9:41	SW		X	1	
3									
4									
5									
6									
7									
8									
9									
10									

NONT-2025-10-5158

* Relinquished By (Print):	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted	Laboratory Use Only			
Brad M'Callum	2025/10/22	8:00	Ashlie Sukkar Ash Pye Sukkar	2025/10/23	10:22		Time Sensitive	Temperature (°C) on Recei 14 / 14	Custody Seal Present / Intact	Yes / No

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SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

Bureau Veritas Canada (2019) Inc.

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

PRELIMINARY

ACUTE LETHALITY REPORT SUMMARY

Work Order : 259240

Deepthi Shaji
Bureau Veritas Laboratories
6740 Campobello Road
Mississauga ON
L5N 2L8

RESULTS

Substance	Date Collected	Date Tested	Species / Test	LC50	Mortality in 100% Concentration (%)
MCG-H	2025-10-21	2025-10-25	Dm SC	-	0
	2025-10-21	2025-10-25	RBT SC	-	0

RBT = rainbow trout
Dm = *Daphnia magna*
* = pH Stabilized
SC = single concentration

Test Method(s)

Reference Method for Determining Acute Lethality of Effluents to Daphnia magna. Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments)

Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments)

Although test results are generated under strict QA/QC protocols, the results provided herein, along with any unsigned test reports, faxes, or emails are considered preliminary.

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna
EPS 1/RM/14

Work Order : 259240
Sample Number : 88973

SAMPLE IDENTIFICATION

Company :	Bureau Veritas Laboratories		
Location :	Mississauga ON	Sampling Date :	2025-10-21
Job Number :	C5D3635	Sampling Time :	09:41
Substance :	MCG-H	Date Received :	2025-10-24
Sampling Method :	Not provided	Time Received :	14:15
Sampled By :	Not provided	Temperature at Receipt :	11 °C
Sample Description :	Clear, orange.	Date Tested :	2025-10-25

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	*Daphnia magna*	Time to First Brood :	8.0 days
Organism Batch :	Dm25-22	Average Brood Size :	28.5
Culture Mortality :	2.7% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms per Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms per Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	None	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride		
Date Tested :	2025-10-21	LC50 :	5.8 g/L
Organism Batch :	Dm25-22	95% Confidence Limits :	5.5 - 6.1 g/L
Analyst(s) :	ACS, MZG	Historical Mean LC50 :	6.3 g/L
Statistical Method :	Spearman-Kärber	Warning Limits (± 2SD) :	5.7 - 6.9 g/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 259240
Sample Number : 88973

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)*	Hardness (as $CaCO_3$)
Initial Chemistry (100%) :	6.7	8.8	102	20	100	40 mg/L

0 HOURS

Date & Time : 2025-10-25 9:45
Analyst(s) : AW

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation*	Hardness
100	A	0	0	6.7	8.8	102	20	100	40
100	B	0	0	6.7	8.8	102	20	100	40
100	C	0	0	6.7	8.8	102	20	100	40
Control	A	0	0	8.3	8.7	471	20	100	150
Control	B	0	0	8.3	8.7	471	20	100	150
Control	C	0	0	8.3	8.7	471	20	100	150

Notes:

24 HOURS

Date & Time : 2025-10-26 9:15
Analyst(s) : AW

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	–	0	–	–	–	20
100	B	–	0	–	–	–	20
100	C	–	0	–	–	–	20
Control	A	–	0	–	–	–	20
Control	B	–	0	–	–	–	20
Control	C	–	0	–	–	–	20

Notes:

48 HOURS

Date & Time : 2025-10-27 9:30
Analyst(s) : ACS (NM)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	0	0	7.6	8.6	116	19
100	B	0	0	7.6	8.6	105	19
100	C	0	0	7.7	8.6	110	19
Control	A	0	0	8.3	8.6	496	19
Control	B	0	0	8.3	8.6	496	19
Control	C	0	0	8.2	8.6	491	19

Notes:

Number immobile does not include number dead.

"–" = not measured/not required
* adjusted for temperature and barometric pressure

Test Data Reviewed By : CYW
Date : 2025-10-29

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT
Rainbow Trout
EPS 1/RM/13

Work Order : 259240
Sample Number : 88973

SAMPLE IDENTIFICATION

Company :	Bureau Veritas Laboratories		
Location :	Mississauga ON	Sampling Date :	2025-10-21
Job Number :	C5D3635	Sampling Time :	09:41
Substance :	MCG-H	Date Received :	2025-10-24
Sampling Method :	Not provided	Time Received :	14:15
Sampled By :	Not provided	Temperature at Receipt :	11 °C
Sample Description :	Clear, orange.	Date Tested :	2025-10-25

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007, February 2016, and December 2023 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	*Oncorhynchus mykiss*	Mean Fork Length :	39.1 mm
Organism Batch :	T25-27	Range of Fork Lengths :	36 - 42 mm
Control Sample Size :	10	Mean Wet Weight :	0.5 g
Cumulative stock mortality rate :	0.1% (previous 7 days)	Organism Loading Rate :	0.3 g/L
Control organisms showing stress :	0 (at test completion)		

TEST CONDITIONS

Test Type :	Single concentration	Number of Replicates :	1
Sample pH Adjustment :	None	Organisms Per Replicate :	10
Sample Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Organisms Per Test Level :	10
Duration of Sample Pre-Aeration :	30 minutes	Volume of Sample :	18 L
Control Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Volume of Control :	20 L
Duration of Control Pre-aeration:	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride		
Organism Batch :	T25-27	LC50 :	3871 mg/L
Date Tested :	2025-10-25	95% Confidence Limits :	3505 - 4275 mg/L
Analyst(s) :	JGR, JCS, OHC	Historical Mean LC50 :	3663 mg/L
Statistical Method :	Spearman-Kärber	Warning Limits (± 2SD) :	2942 - 4562 mg/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 259240
Sample Number : 88973

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)[3]
Initial Water Chemistry (100%) :	6.4	9.2	100	14	92
After 30 min pre-aeration :	6.6	9.4	100	14	95

0 HOURS

Date & Time 2025-10-25 8:30
Analyst(s) : JGR

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation[3]
100%	0	0	6.6	9.4	100	14	95
Control	0	0	8.2	9.9	668	14	100

Notes:

24 HOURS

Date & Time 2025-10-26 8:05
Analyst(s) : JGR

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

48 HOURS

Date & Time 2025-10-27 8:50
Analyst(s) : JCS

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

72 HOURS

Date & Time 2025-10-28 9:15
Analyst(s) : OHC (NWP)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

96 HOURS

Date & Time 2025-10-29 8:25
Analyst(s) : JCS

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	7.5	9.4	105	15
Control	0	0	8.3	9.3	631	15

Notes:

"–" = not measured/not required
Number impaired does not include number dead.
[3] adjusted for temperature and barometric pressure

Test Data Reviewed By : JJ
Date : 2025-11-02

CHAIN OF CUSTODY RECORD

NAUTILUS ENVIRONMENTAL

Nautilus Work Order No: 259240

Shipping Address: Nautilus Environmental Guelph.
B-11 Nicholas Beaver Road
Puslinch, Ontario Canada N0B 2J0

Voice: (519) 763-4412 **Fax:** (519) 763-4419

P.O. Number: C5D3635

Field Sampler Name (print):

Signature:

Affiliation:

Sample Storage (prior to shipping):

Custody Relinquished by: Bhavjot kaur BHAVJOT KAUR

Date/Time Shipped: 2025/10/24 11:35

Client: Bureau Veritas Laboratories

6740 Campobello Road, Mississauga, Ontario, L5N 2L8

Phone:

Fax:

Contact: Deepthi Shaji -deepthi.shaji@bureauveritas.com

Sample Identification					Analyses Requested									Sample Method and Volume		
Date Collected (yyyy-mm-dd)	Time Collected (e.g. 14:30, 24 hr clock)	Sample Name	Nautilus Sample Number	Temp. on arrival	Rainbow Trout Single Concentration	Rainbow Trout LC50	*Daphnia magna* Single Concentration	*Daphnia magna* LC50	Fathead Minnow Survival & Growth	*Ceriodaphnia dubia* Survival & Reproduction	*Lemna minor* Growth	*Pseudokirchneriella subcapitata* Growth	Other (please specify below)	Grab	Composite	# of Containers and Volume (eg. 2 x 1L, 3 x 10L, etc.)
2025-10-21	09:41	MCG-H	88973	11°C	✔		✔									1 Pail

For Lab Use Only

Received By: KP

Date: 2025-10-24

Time: 14:15

Storage Location:

Storage Temp.(°C)

Please list any special requests or instructions:

48 Hour single conc. Daphnia Magna
96 Hour single conc. using Rainbow Trout

Your P.O. #: 250253-08
Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1041561-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/05/29
Report #: R8547217
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C551200
Received: 2025/05/07, 09:25

Sample Matrix: Water
Samples Received: 2

Analyses	Quantity	Date Extracted	Date Analyzed	Laboratory Method	Analytical Method
48-h Daphnia Magna Single Concentration (1)	2	N/A	N/A		
96-h Rainbow Trout Single Concentration (1)	2	N/A	N/A		

Remarks:

Bureau Veritas is accredited to ISO/IEC 17025 for specific parameters on scopes of accreditation. Unless otherwise noted, procedures used by Bureau Veritas are based upon recognized Provincial, Federal or US method compendia such as CCME, EPA, APHA or the Quebec Ministry of Environment.

All work recorded herein has been done in accordance with procedures and practices ordinarily exercised by professionals in Bureau Veritas' profession using accepted testing methodologies, quality assurance and quality control procedures (except where otherwise agreed by the client and Bureau Veritas in writing). All data is in statistical control and has met quality control and method performance criteria unless otherwise noted. All method blanks are reported; unless indicated otherwise, associated sample data are not blank corrected. Where applicable, unless otherwise noted, Measurement Uncertainty has not been accounted for when stating conformity to the referenced standard.

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Results relate to samples tested. When sampling is not conducted by Bureau Veritas, results relate to the supplied samples tested.
This Certificate shall not be reproduced except in full, without the written approval of the laboratory.
Reference Method suffix “m” indicates test methods incorporate validated modifications from specific reference methods to improve performance.
* RPDs calculated using raw data. The rounding of final results may result in the apparent difference.
(1) This test was performed by Nautilus Environmental - Guelph, 11 Nicholas Beaver Rd Unit B, Puslinch, ON, N0B 2C0

Your P.O. #: 250253-08
Your Project #: 250253-08
Site Location: NORTH BAPTISTE
Your C.O.C. #: 1041561-01-01

Attention: S'rana Scholes

BluMetric Environmental Inc
The Tower - The Woolen Mill
4 Cataraqui St
Kingston, ON
CANADA K7K 1Z7

Report Date: 2025/05/29
Report #: R8547217
Version: 1 - Final

CERTIFICATE OF ANALYSIS

BUREAU VERITAS JOB #: C551200
Received: 2025/05/07, 09:25

Encryption Key

Please direct all questions regarding this Certificate of Analysis to:
Deepthi Shaji, Project Manager
Email: Deepthi.Shaji@bureauveritas.com
Phone# (905)817-5700 Ext:7065843

==========

This report has been generated and distributed using a secure automated process.
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Bureau Veritas Job #: C551200
Report Date: 2025/05/29

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

TEST SUMMARY

Bureau Veritas ID: AQPO33
Sample ID: MCG-C
Matrix: Water

Collected: 2025/05/05
Shipped:
Received: 2025/05/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
48-h Daphnia Magna Single Concentration		9930355	N/A		Neroshun Govinthathas
96-h Rainbow Trout Single Concentration		9930356	N/A		Neroshun Govinthathas

Bureau Veritas ID: AQPO34
Sample ID: MCG-H
Matrix: Water

Collected: 2025/05/05
Shipped:
Received: 2025/05/07

Test Description	Instrumentation	Batch	Extracted	Date Analyzed	Analyst
48-h Daphnia Magna Single Concentration		9930355	N/A		Neroshun Govinthathas
96-h Rainbow Trout Single Concentration		9930356	N/A		Neroshun Govinthathas

Bureau Veritas 6740 Campobello Road, Mississauga, Ontario, L5N 2L8 Tel: (905) 817-5700 Toll-Free: 800-563-6266 Fax: (905) 817-5777 www.bvna.com

Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C551200
Report Date: 2025/05/29

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

GENERAL COMMENTS

Each temperature is the average of up to three cooler temperatures taken at receipt

Package 1	18.0°C

Results relate only to the items tested.

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

Bureau Veritas Job #: C551200
Report Date: 2025/05/29

BluMetric Environmental Inc
Client Project #: 250253-08
Site Location: NORTH BAPTISTE
Your P.O. #: 250253-08
Sampler Initials: NW

VALIDATION SIGNATURE PAGE

The analytical data and all QC contained in this report were reviewed and validated by:



Neroshun Govinthathas, Project Manager Assistant

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Microbiology testing is conducted at 6660 Campobello Rd. Chemistry testing is conducted at 6740 Campobello Rd.

C551200
2025/05/07 09:25

Bureau Veritas
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CI

NONT-2025-05-1005

Bottle Order #: 1041561

COC #: C#1041561-01-01

Project Manager: Deepthi Shaji

INVOICE TO:		REPORT TO:		PROJECT INFORMATION:	
Company Name:	#1192 BluMetric Environmental Inc	Company Name:	#5638 BluMetric Environmental Inc	Quotation #:	C45784
Attention:	Accounts Payable	Attention:	S'rana Scholes	P.O. #:	250753-08
Address:	1682 Woodward Drive	Address:	The Tower - The Woolen Mill 4 Cataraqui St	Project:	250253-08
	Ottawa ON K2C 3R8		Kingston ON K7K 1Z7	Project Name:	
Tel:	(613) 839-3053 Fax: (613) 839-5376	Tel:	(613) 531-2725 Fax:	Site #:	North Baptiste
Email:	ap@blumetric.ca	Email:	sscholes@blumetric.ca, cbandler@blumetric.ca, edms	Sampled By:	NW & BM

MOE REGULATED DRINKING WATER OR WATER INTENDED FOR HUMAN CONSUMPTION MUST BE SUBMITTED ON THE BUREAU VERITAS DRINKING WATER CHAIN OF CUSTODY

Regulation 153 (2011)
- ☐ Table 1 ☐ Res/Park ☐ Medium/Fine
- ☐ Table 2 ☐ Ind/Comm ☐ Coarse
- ☐ Table 3 ☐ Agri/Other ☐ For RSC
- ☐ Table ___

Other Regulations
- ☐ CCME ☐ Sanitary Sewer Bylaw
- ☐ Reg 558. ☐ Storm Sewer Bylaw
- ☐ MISA Municipality ___
- ☐ PWQO ☐ Reg 406 Table ___
- ☐ Other ___

Special Instructions

Include Criteria on Certificate of Analysis (Y/N)? ___

Turnaround Time (TAT) Required:
Please provide advance notice for rush projects

Regular (Standard) TAT: ☒
(will be applied if Rush TAT is not specified):
Standard TAT = 5-7 Working days for most tests..
Please note: Standard TAT for certain tests such as BOD and Dioxins/Furans are > 5 days - contact your Project Manager for details.

Job Specific Rush TAT (if applies to entire submission)
Date Required: ___ Time Required: ___ ☐
Rush Confirmation Number: ___ *(call lab for #)*

	Sample Barcode Label	Sample (Location) Identification	Date Sampled	Time Sampled	Matrix	Field Filtered (please circle): Metals / Hg / Cr VI	Toxicity	# of Bottles	Comments
1		MCG-C	25/05/05	17:15	SW	None	✓	1	
2		MCG-H	25/05/05	17:00	SW	None	✓	1	
3									
4									
5									
6									
7									
8									
9									
10									

* RELINQUISHED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	RECEIVED BY: (Signature/Print)	Date: (YY/MM/DD)	Time	# jars used and not submitted
Nathan Wilson	25/05/06	08:00	[illegible]	2025/05/07	09:25	

Laboratory Use Only

Time Sensitive	Temperature (°C) on Recei	Custody Seal	Yes	No
	18/17/18	Present		
		Intact		

* UNLESS OTHERWISE AGREED TO IN WRITING, WORK SUBMITTED ON THIS CHAIN OF CUSTODY IS SUBJECT TO BUREAU VERITAS'S STANDARD TERMS AND CONDITIONS. SIGNING OF THIS CHAIN OF CUSTODY DOCUMENT IS ACKNOWLEDGMENT AND ACCEPTANCE OF OUR TERMS WHICH ARE AVAILABLE FOR VIEWING AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/COC-TERMS-AND-CONDITIONS.

* IT IS THE RESPONSIBILITY OF THE RELINQUISHER TO ENSURE THE ACCURACY OF THE CHAIN OF CUSTODY RECORD. AN INCOMPLETE CHAIN OF CUSTODY MAY RESULT IN ANALYTICAL TAT DELAYS.

** SAMPLE CONTAINER, PRESERVATION, HOLD TIME AND PACKAGE INFORMATION CAN BE VIEWED AT WWW.BVNA.COM/ENVIRONMENTAL-LABORATORIES/RESOURCES/CHAIN-CUSTODY-FORMS-COCS.

SAMPLES MUST BE KEPT COOL (< 10° C) FROM TIME OF SAMPLING UNTIL DELIVERY TO BUREAU VERITAS

White: Bureau Veritas Yellow: Client

20/05/18

Bureau Veritas Canada (2019) Inc.

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

PRELIMINARY

ACUTE LETHALITY REPORT SUMMARY

Work Order : 257694

Deepthi Shaji
Bureau Veritas Laboratories
6740 Campobello Road
Mississauga ON
L5N 2L8

RESULTS

Substance	Date Collected	Date Tested	Species / Test	LC50	Mortality in 100% Concentration (%)
MCG-C	2025-05-05	2025-05-08	Dm SC	-	0
	2025-05-05	2025-05-08	RBT SC	-	0
MCG-H	2025-05-05	2025-05-08	Dm SC	-	0
	2025-05-05	2025-05-08	RBT SC	-	0

RBT = rainbow trout
Dm = *Daphnia magna*
* = pH Stabilized
SC = single concentration

Test Method(s)

Reference Method for Determining Acute Lethality of Effluents to Daphnia magna. Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments)

Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007 and February 2016 amendments)

Although test results are generated under strict QA/QC protocols, the results provided herein, along with any unsigned test reports, faxes, or emails are considered preliminary.

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TOXICITY TEST REPORT

Daphnia magna
EPS 1/RM/14

Work Order : 257694
Sample Number : 86731

SAMPLE IDENTIFICATION

Company :	Bureau Veritas Laboratories		
Location :	Mississauga ON	Sampling Date :	2025-05-05
Job Number :	C551200	Sampling Time :	17:15
Substance :	MCG-C	Date Received :	2025-05-07
Sampling Method :	Not provided	Time Received :	14:15
Sampled By :	Not provided	Temperature at Receipt :	22 °C
Sample Description :	Orange, clear	Date Tested :	2025-05-08

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	*Daphnia magna*	Time to First Brood :	8.6 days
Organism Batch :	Dm25-08	Average Brood Size :	33.1
Culture Mortality :	0.3% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms per Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms per Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	None	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride		
Date Tested :	2025-05-06	LC50 :	6.4 g/L
Organism Batch :	Dm25-08	95% Confidence Limits :	6.1 - 6.8 g/L
Analyst(s) :	CYW	Historical Mean LC50 :	6.5 g/L
Statistical Method :	Linear Regression (MLE)	Warning Limits (± 2SD) :	5.7 - 7.4 g/L

COMMENTS

- All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 257694
Sample Number : 86731

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)*	Hardness (as $CaCO_3$)
Initial Chemistry (100%) :	6.9	8.4	107	20	97	50 mg/L

0 HOURS

Date & Time : 2025-05-08 9:25
Analyst(s) : SSF / CYW (SSF)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation*	Hardness
100	A	0	0	6.9	8.4	107	20	97	50
100	B	0	0	6.9	8.4	107	20	97	50
100	C	0	0	6.9	8.4	107	20	97	50
Control	A	0	0	8.1	8.6	463	20	99	150
Control	B	0	0	8.1	8.6	463	20	99	150
Control	C	0	0	8.1	8.6	463	20	99	150

Notes:

24 HOURS

Date & Time : 2025-05-09 9:40
Analyst(s) : ACS (MK)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	–	0	–	–	–	20
100	B	–	0	–	–	–	20
100	C	–	0	–	–	–	20
Control	A	–	0	–	–	–	20
Control	B	–	0	–	–	–	20
Control	C	–	0	–	–	–	20

Notes: Three test organisms floating in Control replicate B.

48 HOURS

Date & Time : 2025-05-10 9:05
Analyst(s) : CYW (SF)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	0	0	7.8	8.3	116	20
100	B	0	0	7.9	8.3	114	20
100	C	0	0	7.9	8.3	116	20
Control	A	0	0	8.2	8.4	477	20
Control	B	0	0	8.2	8.4	476	20
Control	C	0	0	8.3	8.4	475	20

Notes: Three test organisms floating in Control replicate B.

Number immobile does not include number dead.

"–" = not measured/not required
* adjusted for temperature and barometric pressure

Test Data Reviewed By : JL
Date : 2025-05-13

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B-11 Nicholas Beaver Road
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Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT
Rainbow Trout
EPS 1/RM/13

Work Order : 257694
Sample Number : 86731

SAMPLE IDENTIFICATION

Company :	Bureau Veritas Laboratories		
Location :	Mississauga ON	Sampling Date :	2025-05-05
Job Number :	C551200	Sampling Time :	17:15
Substance :	MCG-C	Date Received :	2025-05-07
Sampling Method :	Not provided	Time Received :	14:15
Sampled By :	Not provided	Temperature at Receipt :	22 °C
Sample Description :	Orange, clear	Date Tested :	2025-05-08

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007, February 2016, and December 2023 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	*Oncorhynchus mykiss*	Mean Fork Length :	41.4 mm
Organism Batch :	T25-08	Range of Fork Lengths :	36 - 43 mm
Control Sample Size :	10	Mean Wet Weight :	0.6 g
Cumulative stock mortality rate :	0% (previous 7 days)	Organism Loading Rate :	0.3 g/L
Control organisms showing stress :	0 (at test completion)		

TEST CONDITIONS

Test Type :	Single concentration	Number of Replicates :	1
Sample pH Adjustment :	None	Organisms Per Replicate :	10
Sample Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Organisms Per Test Level :	10
Duration of Sample Pre-Aeration :	30 minutes	Volume of Sample :	16 L
Control Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Volume of Control :	18 L
Duration of Control Pre-aeration:	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride		
Organism Batch :	T25-08	LC50 :	4561 mg/L
Date Tested :	2025-05-01	95% Confidence Limits :	4151 - 5011 mg/L
Analyst(s) :	GF, JGR, NM	Historical Mean LC50 :	4175 mg/L
Statistical Method :	Linear Regression (MLE)	Warning Limits (± 2SD) :	3244 - 5373 mg/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 257694
Sample Number : 86731

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)[3]
Initial Water Chemistry (100%) :	6.9	8.6	107	15	90
After 30 min pre-aeration :	7.0	9.2	108	15	95

0 HOURS

Date & Time 2025-05-08 8:45
Analyst(s) : GF (NWP)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation[3]
100%	0	0	7.0	9.2	108	15	95
Control	0	0	8.1	9.7	689	15	99

Notes:

24 HOURS

Date & Time 2025-05-09 8:25
Analyst(s) : JGR

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

48 HOURS

Date & Time 2025-05-10 9:35
Analyst(s) : JGR

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

72 HOURS

Date & Time 2025-05-11 7:50
Analyst(s) : NWP

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

96 HOURS

Date & Time 2025-05-12 8:05
Analyst(s) : GF (NWP)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	7.6	9.3	113	15
Control	0	0	8.0	9.0	657	15

Notes:

"–" = not measured/not required
Number impaired does not include number dead.
[3] adjusted for temperature and barometric pressure

Test Data Reviewed By : JJ
Date : 2025-05-12

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna
EPS 1/RM/14

Work Order : 257694
Sample Number : 86732

SAMPLE IDENTIFICATION

Company :	Bureau Veritas Laboratories		
Location :	Mississauga ON	Sampling Date :	2025-05-05
Job Number :	C551200	Sampling Time :	17:00
Substance :	MCG-H	Date Received :	2025-05-07
Sampling Method :	Not provided	Time Received :	14:15
Sampled By :	Not provided	Temperature at Receipt :	22 °C
Sample Description :	Yellow, clear	Date Tested :	2025-05-08

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	*Daphnia magna*	Time to First Brood :	8.6 days
Organism Batch :	Dm25-08	Average Brood Size :	33.1
Culture Mortality :	0.3% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms per Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms per Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	Yes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride		
Date Tested :	2025-05-06	LC50 :	6.4 g/L
Organism Batch :	Dm25-08	95% Confidence Limits :	6.1 - 6.8 g/L
Analyst(s) :	CYW	Historical Mean LC50 :	6.5 g/L
Statistical Method :	Linear Regression (MLE)	Warning Limits (± 2SD) :	5.7 - 7.4 g/L

COMMENTS

- All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 257694
Sample Number : 86732

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)*	Hardness (as $CaCO_3$)
Initial Chemistry (100%) :	6.8	8.6	58	20	99	22 mg/L
Chemistry after Adjustment (100%) :	7.3	8.5	76	20	100	26 mg/L

0 HOURS

Date & Time : 2025-05-08 11:20
Analyst(s) : SSF/ CYW (SSF)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation*	Hardness
100	A	0	0	7.3	8.5	76	20	100	26
100	B	0	0	7.3	8.5	76	20	100	26
100	C	0	0	7.3	8.5	76	20	100	26
Control	A	0	0	8.1	8.6	463	20	99	150
Control	B	0	0	8.1	8.6	463	20	99	150
Control	C	0	0	8.1	8.6	463	20	99	150

Notes:

24 HOURS

Date & Time : 2025-05-09 10:55
Analyst(s) : ACS (MK)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	–	0	–	–	–	20
100	B	–	0	–	–	–	20
100	C	–	0	–	–	–	20
Control	A	–	0	–	–	–	20
Control	B	–	0	–	–	–	20
Control	C	–	0	–	–	–	20

Notes: One test organism floating in each of Control replicates A and B.

48 HOURS

Date & Time : 2025-05-10 11:20
Analyst(s) : CYW (SF)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	0	0	7.5	8.4	85	20
100	B	0	0	7.6	8.4	84	20
100	C	0	0	7.6	8.4	89	20
Control	A	0	0	8.2	8.5	475	20
Control	B	0	0	8.2	8.5	475	20
Control	C	0	0	8.2	8.5	474	20

Notes: Some test organisms in Control replicates A and B were floating but mobile.

Number immobile does not include number dead.

"–" = not measured/not required
* adjusted for temperature and barometric pressure

Test Data Reviewed By : JL
Date : 2025-05-13

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Fax. (519) 763-4419

TOXICITY TEST REPORT
Rainbow Trout
EPS 1/RM/13

Work Order : 257694
Sample Number : 86732

SAMPLE IDENTIFICATION

Company :	Bureau Veritas Laboratories		
Location :	Mississauga ON	Sampling Date :	2025-05-05
Job Number :	C551200	Sampling Time :	17:00
Substance :	MCG-H	Date Received :	2025-05-07
Sampling Method :	Not provided	Time Received :	14:15
Sampled By :	Not provided	Temperature at Receipt :	22 °C
Sample Description :	Yellow, clear	Date Tested :	2025-05-08

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007, February 2016, and December 2023 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	*Oncorhynchus mykiss*	Mean Fork Length :	41.4 mm
Organism Batch :	T25-08	Range of Fork Lengths :	36 - 43 mm
Control Sample Size :	10	Mean Wet Weight :	0.6 g
Cumulative stock mortality rate :	0% (previous 7 days)	Organism Loading Rate :	0.3 g/L
Control organisms showing stress :	0 (at test completion)		

TEST CONDITIONS

Test Type :	Single concentration	Number of Replicates :	1
Sample pH Adjustment :	None	Organisms Per Replicate :	10
Sample Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Organisms Per Test Level :	10
Duration of Sample Pre-Aeration :	30 minutes	Volume of Sample :	18 L
Control Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Volume of Control :	18 L
Duration of Control Pre-aeration:	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride		
Organism Batch :	T25-08	LC50 :	4561 mg/L
Date Tested :	2025-05-01	95% Confidence Limits :	4151 - 5011 mg/L
Analyst(s) :	GF, JGR, NM	Historical Mean LC50 :	4175 mg/L
Statistical Method :	Linear Regression (MLE)	Warning Limits (± 2SD) :	3244 - 5373 mg/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 257694
Sample Number : 86732

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)[3]
Initial Water Chemistry (100%) :	6.9	8.7	61	15	91
After 30 min pre-aeration :	7.2	9.1	62	15	95

0 HOURS

Date & Time 2025-05-08 8:45
Analyst(s) : GF (NWP)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation[3]
100%	0	0	7.2	9.1	62	15	95
Control	0	0	8.1	9.7	689	15	99

Notes:

24 HOURS

Date & Time 2025-05-09 8:25
Analyst(s) : JGR

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

48 HOURS

Date & Time 2025-05-10 9:35
Analyst(s) : JGR

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

72 HOURS

Date & Time 2025-05-11 7:50
Analyst(s) : NWP

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

96 HOURS

Date & Time 2025-05-12 8:05
Analyst(s) : GF (NWP)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	7.5	9.3	68	15
Control	0	0	8.0	9.0	657	15

Notes:

"–" = not measured/not required
Number impaired does not include number dead.
[3] adjusted for temperature and barometric pressure

Test Data Reviewed By : JJ
Date : 2025-05-12

Appendix D

D-5 Quality Assurance/Quality Control (QA/QC)

Hastings Highlands QA/QC Results Appendix D-5-1 Groundwater		Location	NB-MW3	NB-MW3	RPD	NB-MW3	NB-MW3	RPD
		Sample ID	NB MW3	NB-QAQC-GW1		NB MW 3	NB-QAQC-GW1	
Parameter	Units	Sample Date	2025-05-07	2025-05-07		2025-10-21	2025-10-21	
		Sample Depth	-	-		-	-	
Anions		Detection Limit						
Chloride	mg/L	2	280	280	0%	270	260	4%
Nitrate + Nitrite	mg/L	0.1	<0.1	<0.1	NC	<0.1	<0.1	NC
Nitrate as N	mg/L	0.1	<0.1	<0.1	NC	<0.1	<0.1	NC
Nitrite as N	mg/L	0.01	<0.01	<0.01	NC	<0.01	<0.01	NC
Sulphate	mg/L	1	14	14	0%	14	14	0%
Cations								
Calcium (diss)	mg/L	0.2	110	110	0%	110	110	0%
Magnesium (diss)	mg/L	0.05	41	43	5%	45	43	5%
Potassium (diss)	mg/L	0.2	6.4	6.6	3%	6.8	6.6	3%
Sodium (diss)	mg/L	0.1	51	52	2%	56	54	4%
General Chemistry								
Alkalinity (as CaCO3)	mg/L	1	140	140	0%	150	150	0%
Ammonia as N	mg/L	0.05	<0.05	<0.05	NC	<0.05	<0.05	NC
Chemical Oxygen Demand	mg/L	4	<4	<4	NC	<4	<4	NC
Dissolved Organic Carbon	mg/L	0.4	1.9	1.9	NC	2.9	3.1	7%
Electrical Conductivity	uS/cm	2	1300	1300	0%	1300	1300	0%
Hardness (as CaCO3)	mg/L	1	450	460	2%	460	450	2%
Phenols	mg/L	0.001	<0.001	<0.001	NC	<0.001	<0.001	NC
Total Dissolved Solids	mg/L	10	1120	1130	1%	745	795	6%
Total Kjeldahl Nitrogen	mg/L	0.1	0.13	0.11	NC	<0.1	<0.1	NC
Total Phosphorus	mg/L	0.02	0.082	0.077	NC	0.23	0.18	24%
Total Suspended Solids	mg/L	10	49	50	NC	94	85	10%
Turbidity	NTU	0.1	3.1	3.4	9%	7.1	8.6	19%
pH	pH units		7.35	7.3	1%	7.39	7.42	0%
Metals								
Aluminum (diss, 0.45 µm)	mg/L	0.0049	<0.0049	<0.0049	NC	<0.0049	<0.0049	NC
Arsenic (diss)	mg/L	0.001	<0.001	<0.001	NC	<0.001	<0.001	NC
Barium (diss)	mg/L	0.002	0.12	0.12	0%	0.12	0.12	0%
Beryllium (diss)	mg/L	0.0004	<0.0004	<0.0004	NC	<0.0004	<0.0004	NC
Boron (diss)	mg/L	0.01	0.13	0.13	0%	0.14	0.13	7%
Cadmium (diss)	mg/L	0.00009	<0.00009	<0.00009	NC	<0.00009	<0.00009	NC
Chromium (diss)	mg/L	0.005	<0.005	<0.005	NC	<0.005	<0.005	NC
Cobalt (diss)	mg/L	0.0005	0.017	0.018	6%	0.0046	0.0045	2%
Copper (diss)	mg/L	0.0009	<0.0009	<0.0009	NC	<0.0009	<0.0009	NC
Iron (diss)	mg/L	0.1	0.74	0.76	3%	1.1	1.1	0%
Lead (diss)	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Manganese (diss)	mg/L	0.002	0.23	0.23	0%	0.07	0.068	3%
Mercury (diss)	mg/L	0.0001	<0.0001	<0.0001	NC	<0.0001	<0.0001	NC
Molybdenum (diss)	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Nickel (diss)	mg/L	0.001	0.0096	0.0098	2%	0.0068	0.0068	0%
Selenium (diss)	mg/L	0.002	<0.002	<0.002	NC	<0.002	<0.002	NC
Silicon (diss)	mg/L	0.05	14	14	0%	16	15	6%
Silver (diss)	mg/L	0.00009	<0.00009	<0.00009	NC	<0.00009	<0.00009	NC
Strontium (diss)	mg/L	0.001	1	1	0%	1	1	0%
Thallium (diss)	mg/L	0.00005	<0.00005	<0.00005	NC	<0.00005	<0.00005	NC
Titanium (diss)	mg/L	0.005	<0.005	<0.005	NC	<0.005	<0.005	NC
Vanadium (diss)	mg/L	0.0005	<0.0005	<0.0005	NC	0.00099	0.00089	NC
Zinc (diss)	mg/L	0.005	<0.005	<0.005	NC	<0.005	<0.005	NC

-LEGEND-

Detection Limit	May vary between sample locations and events
RPD	Relative Percent Difference
NC	No Calculation; the concentrations of at least one duplicate sample was non-detect or measured at a concentration less than 5 times the Detection Limit
Orange	RPD exceeds 10% for electrical conductivity, 20% for metals and inorganics, 30% for BTEX and PHCs

Hastings Highlands QA/QC Results Appendix D-5-2 Surface Water		Location	MCG-E	MCG-E	RPD	MCG-E	MCG-E	RPD	MCG-E	MCG-E	RPD
		Sample ID	MCG-E	NB-QAQC-SW1		MCG-E	NB-QAQC-SW1		MCG-E	NB-QAQC-SW1	
Parameter	Units	Sample Date	2025-05-07	2025-05-07		2025-07-07	2025-07-07		2025-10-21	2025-10-21	
		Sample Depth	-	-		-	-		-	-	
Anions		Detection Limit									
Chloride	mg/L	1	21	21	0%	43	44	2%	51	55	8%
Nitrate + Nitrite	mg/L	0.1	<0.1	<0.1	NC	0.18	0.19	NC	<0.1	<0.1	NC
Nitrate as N	mg/L	0.1	<0.1	<0.1	NC	0.18	0.19	NC	<0.1	<0.1	NC
Nitrite as N	mg/L	0.01	<0.01	<0.01	NC	<0.01	<0.01	NC	<0.01	<0.01	NC
Sulphate	mg/L	1	3.7	3.2	NC	5.7	5.8	2%	11	11	0%
Cations											
Calcium (tot)	mg/L	0.2	5.7	5.6	2%	10	10	0%	13	13	0%
Magnesium (tot)	mg/L	0.05	0.92	0.92	0%	1.6	1.6	0%	2.3	2.4	4%
Potassium (tot)	mg/L	0.2	0.59	0.59	NC	0.91	0.91	NC	1.6	1.6	0%
Sodium (tot)	mg/L	0.1	17	16	6%	31	31	0%	37	38	3%
Field Parameters											
Temperature	deg. C		12.8	12.8	0%	17.7	17.7	0%	5.5	5.5	0%
pH (Field)	pH units		7.35	7.35	0%	6.96	6.96	0%	7.61	7.61	0%
General Chemistry											
Alkalinity (as CaCO3)	mg/L	1	14	14	0%	27	26	4%	27	25	8%
Ammonia as N	mg/L	0.05	<0.05	<0.05	NC	<0.05	<0.05	NC	<0.05	<0.05	NC
Biochemical Oxygen Demand	mg/L	2	<2	<2	NC	<2	<2	NC	<2	<2	NC
Colour	TCU	2	32	32	0%	44	44	0%	21	21	0%
Electrical Conductivity	uS/cm	2	120	120	0%	240	230	4%	310	300	3%
Hardness (as CaCO3)	mg/L	1	17	18	6%	32	32	0%	44	44	0%
Phenols	mg/L	0.001	<0.001	<0.001	NC	<0.001	<0.001	NC	<0.001	<0.001	NC
Total Dissolved Solids	mg/L	10	70	100	35%	150	155	3%	120	125	4%
Total Kjeldahl Nitrogen	mg/L	0.1	0.21	0.14	NC	0.26	0.28	NC	0.17	0.15	NC
Total Phosphorus	mg/L	0.02	<0.02	<0.02	NC	<0.02	<0.02	NC	<0.02	0.024	NC
Total Suspended Solids	mg/L	10	<10	<10	NC	<10	<10	NC	<10	<10	NC
Unionized Ammonia (Calc)	mg/L	0.00061	<0.00061	<0.00061	NC	<0.00061	<0.00061	NC	<0.00061	<0.00061	NC
pH	pH units		7.22	7.24	0%	7.53	7.5	0%	7.51	7.49	0%
Metals											
Aluminum (diss, 0.2 µm)	mg/L	0.005	0.05	0.045	11%	0.039	0.04	3%	0.01	0.009	NC
Aluminum (tot)	mg/L	0.0049	0.09	0.09	0%	0.059	0.058	2%	0.012	0.013	NC
Boron (tot)	mg/L	0.01	<0.01	<0.01	NC	<0.01	<0.01	NC	<0.01	<0.01	NC
Cadmium (tot)	mg/L	0.00009	<0.00009	<0.00009	NC	<0.00009	<0.00009	NC	<0.00009	<0.00009	NC
Chromium (tot)	mg/L	0.005	<0.005	<0.005	NC	<0.005	<0.005	NC	<0.005	<0.005	NC
Cobalt (tot)	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Copper (tot)	mg/L	0.0009	<0.0009	<0.0009	NC	<0.0009	<0.0009	NC	<0.0009	<0.0009	NC
Iron (tot)	mg/L	0.1	0.28	0.28	NC	0.68	0.68	0%	0.1	0.11	NC
Lead (tot)	mg/L	0.0005	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC	<0.0005	<0.0005	NC
Manganese (tot)	mg/L	0.002	0.014	0.016	13%	0.012	0.012	0%	0.0035	0.0031	NC
Zinc (tot)	mg/L	0.005	<0.005	<0.005	NC	<0.005	<0.005	NC	<0.005	<0.005	NC

-LEGEND-

Detection Limit	May vary between sample locations and events
RPD	Relative Percent Difference
NC	No Calculation; the concentrations of at least one duplicate sample was non-detect or measured at a concentration less than 5 times the Detection Limit
Orange	RPD exceeds 40% (Surface Water data quality objective*)

*Guidance Manual for Environmental Site Characterization in Support of Environmental and Human Health Risk Assessment, Volume 1 Guidance Manual, Canadian Council of Ministers of the Environment, 2016

10% for electrical conductivity

20% for metals and inorganics

30% for BTEX and PHC.

Appendix E

Environment Canada Weather Data

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-01	2025	1	1		0.7		-3		-1.2		19.2		0						7		5		31		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-02	2025	1	2		-1.3		-6.6		-4		22		0						0		8		31		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-03	2025	1	3		-5.8		-13.9		-9.8		27.8		0						0		7		30		33	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-04	2025	1	4		-6		-15.4		-10.7		28.7		0						0.2		7		30		32	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-05	2025	1	5		-7.4		-13.2		-10.3		28.3		0						0.1		8		30		33	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-06	2025	1	6		-9.8		-18		-13.9		31.9		0						0		7					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-07	2025	1	7		-7.5		-14.1		-10.8		28.8		0						0		7		33		43	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-08	2025	1	8		-9.1		-19.4		-14.2		32.2		0						0		6		32		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-09	2025	1	9		-5.9		-15.6		-10.7		28.7		0						0		6		31		39	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-10	2025	1	10		-2.7		-20.2		-11.5		29.5		0						2.5		6					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-11	2025	1	11		-2.9		-8.5		-5.7		23.7		0						1.7		10					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-12	2025	1	12		0		-4.6		-2.3		20.3		0						2.6		10					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-13	2025	1	13		-0.6		-5.8		-3.2		21.2		0						3.5		14					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-14	2025	1	14		-5.7		-14.9		-10.3		28.3		0						0.8		17		1		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-15	2025	1	15		-5.3		-15.3		-10.3		28.3		0						0		18					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-16	2025	1	16		-4.9		-10		-7.4		25.4		0						0		16					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-17	2025	1	17		-1		-7.3		-4.1		22.1		0						0.2		16		19		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-18	2025	1	18		1.5		-11.2		-4.8		22.8		0						4.4		16					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-19	2025	1	19		-10.6		-20.7		-15.7		33.7		0						0		15					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-20	2025	1	20		-11.8		-27.6		-19.7		37.7		0						0		15					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-21	2025	1	21		-12.2		-24.7		-18.4		36.4		0						0		15					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-22	2025	1	22		-12.3		-29.5		-20.9		38.9		0						0.2		15					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-23	2025	1	23		-5.8		-16.4		-11.1		29.1		0						0.5		16					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-24	2025	1	24		-7.7		-24.9		-16.3		34.3		0						0		17					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-25	2025	1	25		-4.6		-16.1		-10.3		28.3		0						1.6		17					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-26	2025	1	26		-2.8		-6		-4.4		22.4		0						0.9		21		29		49	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-27	2025	1	27		-0.1		-8.7		-4.4		22.4		0						5.3		20		25		48	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-28	2025	1	28		-8.7		-20		-14.4		32.4		0						7.8		22		34		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-29	2025	1	29		-5.3		-21.7		-13.5		31.5		0						2.9		33		30		37	
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-30	2025	1	30		-3.5		-26.7		-15.1		33.1		0						0.3		30					
-77.88	45.07	BANCROFT AUTO	616I001	2025-01-31	2025	1	31		-2.6		-15.9		-9.2		27.2		0						0		29		35		34	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-01	2025	2	1		-11.4		-27.5		-19.4		37.4		0						0		28					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-02	2025	2	2		-10.4		-27.9		-19.2		37.2		0						1		28					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-03	2025	2	3		-0.5		-12.1		-6.3		24.3		0						2.5		27					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-04	2025	2	4		-7.2		-24.7		-15.9		33.9		0						0		29		33		43	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-05	2025	2	5		-9.4		-30.1		-19.7		37.7		0						0		28					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-06	2025	2	6		-2.3		-23		-12.6		30.6		0						6.1		28		30		37	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-07	2025	2	7		-3.4		-9.9		-6.7		24.7		0						0.5		36		29		46	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-08	2025	2	8		-2.7		-21		-11.9		29.9		0						0		33					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-09	2025	2	9		-2.4		-12.6		-7.5		25.5		0						0.6		33		28		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-10	2025	2	10		-4.9		-13		-8.9		26.9		0						0		34					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-11	2025	2	11		-7		-22.6		-14.8		32.8		0						0		33					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-12	2025	2	12		-8.2		-28.8		-18.5		36.5		0						7.2		32					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-13	2025	2	13		-6.1		-20.6		-13.4		31.4		0						17.2		56		31		45	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-14	2025	2	14		-5.6		-24.4		-15		33		0						0		55		31		38	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-15	2025	2	15		-5.8		-13.8		-9.8		27.8		0						7.7		54					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-16	2025	2	16		-10.2		-15.5		-12.9		30.9		0						15.2		67		32		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-17	2025	2	17		-9.5		-18.3		-13.9		31.9		0						0		70		31		50	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-18	2025	2	18		-11		-20.4		-15.7		33.7		0						0		65		30		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-19	2025	2	19		-7.8		-27.9		-17.9		35.9		0						0		63					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-20	2025	2	20		-6.3		-23.4		-14.9		32.9		0						0		60					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-21	2025	2	21		-6		-20.9		-13.5		31.5		0						0		58					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-22	2025	2	22		-1.4		-21.7		-11.6		29.6		0						0		57					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-23	2025	2	23		-1.1		-4.9		-3		21		0						0.1		55					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-24	2025	2	24		4.5		-2.8		0.8		17.2		0						0.7		54		17		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-25	2025	2	25		5.4		-4.9		0.3		17.7		0						2.4		53					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-26	2025	2	26		5		-8.8		-1.9		19.9		0						0.1		50					
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-27	2025	2	27		5		-10.6		-2.8		20.8		0						0.5		47		31		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-02-28	2025	2	28		-2.4		-14.4		-8.4		26.4		0						7.1		46		31		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-01	2025	3	1		-0.2		-19.9		-10		28		0						0.5		55		30		38	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-02	2025	3	2		-9.6		-29.2		-19.4		37.4		0						0		54					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-03	2025	3	3		-1.7		-24.4		-13.1		31.1		0						0		53					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-04	2025	3	4		1		-4.4		-1.7		19.7		0						6.9		52					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-05	2025	3	5		5.8		0.2		3		15		0						12.3		52					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-06	2025	3	6		5.1		-8.3		-1.6		19.6		0						1.3		43		32		40	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-07	2025	3	7		-1.6		-7.6		-4.6		22.6		0						1.3		42		30		51	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-08	2025	3	8		-0.9		-11.5		-6.2		24.2		0						0		42		31		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-09	2025	3	9		3.8		-7.9		-2		20		0						3.1		41		30		38	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-10	2025	3	10		7.8		-5.4		1.2		16.8		0						0		43					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-11	2025	3	11		11.4		-5.7		2.9		15.1		0						0		40		31		41	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-12	2025	3	12		-0.1		-11.7		-5.9		23.9		0						0		35					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-13	2025	3	13		8.8		-14		-2.6		20.6		0						0		35					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-14	2025	3	14		13.1		-9.7		1.7		16.3		0						0		33					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-15	2025	3	15		13.1		-0.9		6.1		11.9		0						1.8		31					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-16	2025	3	16		12.4		-0.7		5.9		12.1		0						34.8		20		11		33	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-17	2025	3	17		3.5		-7.1		-1.8		19.8		0						0.1		11					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-18	2025	3	18		10.1		-7.2		1.4		16.6		0						0		11					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-19	2025	3	19		18.9		-2.4		8.3		9.7		0						0		7		20		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-20	2025	3	20		11		-3.6		3.7		14.3		0						0.6				32		44	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-21	2025	3	21		6.7		-8.2		-0.7		18.7		0						0				31		32	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-22	2025	3	22		3.5		-10.4		-3.4		21.4		0						1.5				32		39	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-23	2025	3	23		0.9		-14.3		-6.7		24.7		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-24	2025	3	24		3.3		-4.8		-0.7		18.7		0						8.6		0					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-25	2025	3	25		1.5		-3.4		-1		19		0						1.4							
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-26	2025	3	26		1.6		-8.1		-3.2		21.2		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-27	2025	3	27		7.5		-11.7		-2.1		20.1		0						0.3				32		33	
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-28	2025	3	28		0.3		-6.8		-3.3		21.3		0						13.4							
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-29	2025	3	29		-2.2		-4.9		-3.6		21.6		0						15.4		8					
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-30	2025	3	30		0.6		-2.9		-1.2		19.2		0						15.6		8			M		M
-77.88	45.07	BANCROFT AUTO	616I001	2025-03-31	2025	3	31		7.5		-2.7		2.4		15.6		0						3.4		6			M		M
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-01	2025	4	1		-0.1		-9.2		-4.6		22.6		0						0		2		30		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-02	2025	4	2		0.6		-8.5		-4		22		0						20.1				9		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-03	2025	4	3		14.9		0.5		7.7		10.3		0						17.6				32		48	
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-04	2025	4	4		11.5		-2.8		4.3		13.7		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-05	2025	4	5		7.4		-0.6		3.4		14.6		0						15.1							
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-06	2025	4	6		5.3		-4.2		0.5		17.5		0						0				35		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-07	2025	4	7		7.8		-8.1		-0.1		18.1		0						1.1							
-77.88	45.07	BANCROFT AUTO	616I001	2025-04-08	2025	4	8		-2.5		-11.3		-6.9		24.9		0						1.1		2		34		39	

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-09	2025	4	9		2.9		-14.1		-5.6		23.6		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-10	2025	4	10		6		-7.2		-0.6		18.6		0						0.5							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-11	2025	4	11		3.2		-0.6		1.3		16.7		0						2.3		2					
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-12	2025	4	12			M		M		M		M		M						M				M		M
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-13	2025	4	13		15.5		-3.4		6		12		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-14	2025	4	14		15.7		-3.5		6.1		11.9		0						0				16		38	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-15	2025	4	15		6.3		-2.4		1.9		16.1		0						0.8				30		34	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-16	2025	4	16			M		M		M		M		M						M				M		M
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-17	2025	4	17		12		-7.3		2.4		15.6		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-18	2025	4	18		14.7		-4.3		5.2		12.8		0						2.9							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-19	2025	4	19		17.8		1.6		9.7		8.3		0						21				30		37	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-20	2025	4	20		11		-2.5		4.3		13.7		0						0				34		33	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-21	2025	4	21		9.3		-2.3		3.5		14.5		0						9.6							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-22	2025	4	22		7.2		-2.4		2.4		15.6		0						0.1				19		31	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-23	2025	4	23		16		-4		6		12		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-24	2025	4	24		20.9		1		11		7		0						2							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-25	2025	4	25		18.1		7.9		13		5		0						0.1							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-26	2025	4	26		11.5		1.3		6.4		11.6		0						12.4				33		37	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-27	2025	4	27		17.2		-1.4		7.9		10.1		0						0.5				32		46	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-28	2025	4	28		21.3		-2.1		9.6		8.4		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-29	2025	4	29		26.9		0.8		13.8		4.2		0						8.5				19		46	
-77.88	45.07	BANCROFT AUTO	6161001	2025-04-30	2025	4	30		13.6		-1.4		6.1		11.9		0						0				35		36	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-01	2025	5	1		15.9		-3.6		6.1		11.9		0						12.1							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-02	2025	5	2		13.7		2.7		8.2		9.8		0						0.3				25		33	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-03	2025	5	3		14		0.7		7.3		10.7		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-04	2025	5	4		19.8		-1.8		9		9		0						0				7		34	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-05	2025	5	5		19.9		7.4		13.7		4.3		0						6				6		34	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-06	2025	5	6		20.8		12.9		16.9		1.1		0						2.9							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-07	2025	5	7		17.2		3.9		10.5		7.5		0						0.4				1		34	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-08	2025	5	8		13.1		-1.9		5.6		12.4		0						0				1		32	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-09	2025	5	9		16.8		-3.4		6.7		11.3		0						0				33		35	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-10	2025	5	10		20.8		-2.2		9.3		8.7		0						0				34		37	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-11	2025	5	11		17.8		-1.9		8		10		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-12	2025	5	12		27.7		1.4		14.6		3.4		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-13	2025	5	13		27.8		5.1		16.4		1.6		0						0				17		37	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-14	2025	5	14		19.8		14.1		16.9		1.1		0						1.2							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-15	2025	5	15		20.2		9.8		15		3		0						1.3							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-16	2025	5	16		25.7		7.5		16.6		1.4		0						0.4							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-17	2025	5	17		20.6		7.2		13.9		4.1		0						26.2				25		40	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-18	2025	5	18		11.7		4.8		8.3		9.7		0						1.2				33		32	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-19	2025	5	19		11.4		-0.4		5.5		12.5		0						0				32		35	
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-20	2025	5	20		16.2		-1.2		7.5		10.5		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-21	2025	5	21		12.7		7.5		10.1		7.9		0						5							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-22	2025	5	22		9.7		6.4		8.1		9.9		0						7.9							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-23	2025	5	23		9.3		6.4		7.9		10.1		0						9.5							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-24	2025	5	24		12.2		5.9		9		9		0						4.1							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-25	2025	5	25		14.1		3.8		8.9		9.1		0						2.9							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-26	2025	5	26		22.8		1.4		12.1		5.9		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-27	2025	5	27		25.2		1.7		13.4		4.6		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-28	2025	5	28		24.6		2.7		13.7		4.3		0						2.4							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-29	2025	5	29		17.5		11.6		14.6		3.4		0						11.4							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-30	2025	5	30		23		11.2		17.1		0.9		0						0.7							
-77.88	45.07	BANCROFT AUTO	6161001	2025-05-31	2025	5	31		11.6		5.7		8.6		9.4		0						0				32		42	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-01	2025	6	1		12.7		1.1		6.9		11.1		0						0.1				33		35	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-02	2025	6	2		21.2		-1.2		10		8		0						0				30		36	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-03	2025	6	3		27.1		3.1		15.1		2.9		0						0				18		31	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-04	2025	6	4		29.9		14.3		22.1		0		4.1						4.2				23		35	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-05	2025	6	5		21.3		8.5		14.9		3.1		0						3.1							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-06	2025	6	6		25		8.6		16.8		1.2		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-07	2025	6	7		23		5.6		14.3		3.7		0						0				3		33	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-08	2025	6	8		22.3		3		12.7		5.3		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-09	2025	6	9		20.9		10.3		15.6		2.4		0						1.7							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-10	2025	6	10		19.6		11.4		15.5		2.5		0						0.8				30		32	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-11	2025	6	11		23.4		8.3		15.8		2.2		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-12	2025	6	12		20.9		6.6		13.7		4.3		0						0				27		31	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-13	2025	6	13		17.6		4.4		11		7		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-14	2025	6	14		21.1		6.4		13.8		4.2		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-15	2025	6	15		24.4		6.1		15.2		2.8		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-16	2025	6	16		26.5		4		15.3		2.7		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-17	2025	6	17		26.8		11.8		19.3		0		1.3						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-18	2025	6	18		27.4		16.9		22.1		0		4.1						0.1							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-19	2025	6	19		22.7		13.5		18.1		0		0.1						16.9				2		49	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-20	2025	6	20		22.3		9.3		15.8		2.2		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-21	2025	6	21		25.7		8.1		16.9		1.1		0						23				17		40	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-22	2025	6	22		31.5		18.8		25.1		0		7.1						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-23	2025	6	23			M		M		M		M		M						M				M		M
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-24	2025	6	24		32.2		18.7		25.4		0		7.4						0				30		31	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-25	2025	6	25		26.7		15.6		21.2		0		3.2						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-26	2025	6	26		17.2		12.6		14.9		3.1		0						1.4							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-27	2025	6	27		20.5		13.2		16.8		1.2		0						4.1							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-28	2025	6	28		24.1		15.4		19.8		0		1.8						1.6				24		32	
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-29	2025	6	29		27.6		13.6		20.6		0		2.6						0.2							
-77.88	45.07	BANCROFT AUTO	6161001	2025-06-30	2025	6	30		30.5		12.9		21.7		0		3.7						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-01	2025	7	1		27.9		15.3		21.6		0		3.6						0.9							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-02	2025	7	2		28.4		14.3		21.3		0		3.3						0				31		31	
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-03	2025	7	3		23.6		7.4		15.5		2.5		0						0.1				3		34	
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-04	2025	7	4		25.4		5.8		15.6		2.4		0						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-05	2025	7	5		30.9		10.1		20.5		0		2.5						3.1							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-06	2025	7	6		31.7		17.5		24.6		0		6.6						0				22		36	
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-07	2025	7	7		20.7		17.4		19		0		1						8.3							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-08	2025	7	8		25.6		13		19.3		0		1.3						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-09	2025	7	9			M		M		M		M		M						M				M		M
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-10	2025	7	10			M		M		M		M		M						M				M		M
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-11	2025	7	11		29.9		11.9		20.9		0		2.9						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-12	2025	7	12		32.1		13.3		22.7		0		4.7						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-13	2025	7	13		30.5		12.7		21.6		0		3.6						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-14	2025	7	14		29.5		12.1		20.8		0		2.8						0							
-77.88	45.07	BANCROFT AUTO	6161001	2025-07-15	2025	7	15		31.7		12.5		22.1		0		4.1						0							

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-16	2025	7	16		32.5		14.2		23.3		0		5.3						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-17	2025	7	17		25.2		10		17.6		0.4		0						15.2				30		43	
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-18	2025	7	18		25.1		6		15.5		2.5		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-19	2025	7	19		26.1		10.3		18.2		0		0.2						5.4							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-20	2025	7	20		25.8		15.1		20.5		0		2.5						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-21	2025	7	21		20.7		6.3		13.5		4.5		0						0				1		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-22	2025	7	22		22.9		4.3		13.6		4.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-23	2025	7	23		28.7		6.9		17.8		0.2		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-24	2025	7	24		34.1		15.9		25		0		7						0.3				35		67	
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-25	2025	7	25		27.9		13.7		20.8		0		2.8						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-26	2025	7	26		28.9		11.7		20.3		0		2.3						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-27	2025	7	27		29.3		17.2		23.2		0		5.2						1.8							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-28	2025	7	28		33.2		15.6		24.4		0		6.4						0				20		34	
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-29	2025	7	29		29.6		15.8		22.7		0		4.7						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-30	2025	7	30		26.2		12.9		19.6		0		1.6						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-07-31	2025	7	31		23		6.9		15		3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-01	2025	8	1		22.5		3.8		13.2		4.8		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-02	2025	8	2		25.8		5		15.4		2.6		0						0				30		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-03	2025	8	3		26.8		11.7		19.3		0		1.3						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-04	2025	8	4		25.1		10.1		17.6		0.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-05	2025	8	5		26.1		11.3		18.7		0		0.7						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-06	2025	8	6		29.2		8.2		18.7		0		0.7						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-07	2025	8	7		29.4		11.7		20.5		0		2.5						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-08	2025	8	8		29.9		11.5		20.7		0		2.7						2.6				31		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-09	2025	8	9		32.6		14.6		23.6		0		5.6						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-10	2025	8	10		34.1		16.7		25.4		0		7.4						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-11	2025	8	11		33.7		15		24.4		0		6.4						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-12	2025	8	12		34.8		17.9		26.4		0		8.4						0				21		38	
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-13	2025	8	13		30.5		14.5		22.5		0		4.5						0.2							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-14	2025	8	14		26.6		8.8		17.7		0.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-15	2025	8	15		29.7		6.6		18.1		0		0.1						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-16	2025	8	16		32.1		10.3		21.2		0		3.2						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-17	2025	8	17		21.1		5.8		13.4		4.6		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-18	2025	8	18		21.1		2		11.6		6.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-19	2025	8	19		19.2		8.6		13.9		4.1		0						3.2							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-20	2025	8	20		19.5		10.1		14.8		3.2		0						1.3							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-21	2025	8	21		26		7.4		16.7		1.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-22	2025	8	22		28.5		7.7		18.1		0		0.1						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-23	2025	8	23		25.7		12.9		19.3		0		1.3						0.5				20		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-24	2025	8	24		25.5		12.2		18.9		0		0.9						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-25	2025	8	25		20		9.8		14.9		3.1		0						0.3				29		34	
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-26	2025	8	26		18.5		6.4		12.5		5.5		0						0.4							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-27	2025	8	27		21.3		5		13.2		4.8		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-28	2025	8	28		18.3		10		14.2		3.8		0						12.1							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-29	2025	8	29		17.9		4.5		11.2		6.8		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-30	2025	8	30		21.2		2.3		11.8		6.2		0						0				1		39	
-77.88	45.07	BANCROFT AUTO	616I001	2025-08-31	2025	8	31		25.1		3.1		14.1		3.9		0						0				M		M	
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-01	2025	9	1		27		4.6		15.8		2.2		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-02	2025	9	2		26.1		8.1		17.1		0.9		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-03	2025	9	3		26.1		6.3		16.2		1.8		0						0				20		32	
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-04	2025	9	4		18.3		3		10.7		7.3		0						18.1							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-05	2025	9	5		20.1		2.4		11.3		6.7		0						0				24		40	
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-06	2025	9	6		18.3		7.1		12.7		5.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-07	2025	9	7		17		5.1		11.1		6.9		0						0.3				31		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-08	2025	9	8		17.6		0.1		8.9		9.1		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-09	2025	9	9		21.4		-0.2		10.6		7.4		0						0				M		M	
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-10	2025	9	10		24		2.1		13		5		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-11	2025	9	11		21.4		3.9		12.7		5.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-12	2025	9	12		22.8		1.5		12.1		5.9		0						0				M		M	
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-13	2025	9	13		23.3		10.3		16.8		1.2		0						0.3							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-14	2025	9	14		22.5		6.1		14.3		3.7		0						0.6							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-15	2025	9	15		23.8		2.5		13.2		4.8		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-16	2025	9	16		25.3		3.7		14.5		3.5		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-17	2025	9	17		27.3		3.9		15.6		2.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-18	2025	9	18		25.9		6.6		16.3		1.7		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-19	2025	9	19		19.4		0.1		9.7		8.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-20	2025	9	20		18.8		-3.5		7.7		10.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-21	2025	9	21		25.6		-4.3		10.6		7.4		0						0.9							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-22	2025	9	22		18.5		15.5		17		1		0						5.4							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-23	2025	9	23		23.3		16.2		19.7		0		1.7						0.3							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-24	2025	9	24		23.3		14.6		19		0		1						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-25	2025	9	25		16.4		12.1		14.3		3.7		0						0.4							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-26	2025	9	26		22.2		12.3		17.2		0.8		0						0.1							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-27	2025	9	27		23.1		10.2		16.7		1.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-28	2025	9	28		23.6		5.6		14.6		3.4		0						0				35		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-29	2025	9	29		26.9		3.1		15		3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-09-30	2025	9	30		20.5		2.1		11.3		6.7		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-01	2025	10	1		16.7		-1.8		7.4		10.6		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-02	2025	10	2		19.9		-2.2		8.9		9.1		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-03	2025	10	3		25.8		-1.3		12.2		5.8		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-04	2025	10	4		29.1		8.6		18.9		0		0.9						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-05	2025	10	5		29.4		8.6		19		0		1						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-06	2025	10	6		27.6		7.9		17.8		0.2		0						0				18		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-07	2025	10	7		20.2		6.6		13.4		4.6		0						4.2							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-08	2025	10	8		11.9		-3.4		4.2		13.8		0						0				34		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-09	2025	10	9		11		-6.4		2.3		15.7		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-10	2025	10	10		15.6		-6.3		4.7		13.3		0						0.4							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-11	2025	10	11		14.9		3.9		9.4		8.6		0						0.6							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-12	2025	10	12		19.5		-0.6		9.5		8.5		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-13	2025	10	13		21.5		-0.7		10.4		7.6		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-14	2025	10	14		22.2		0.1		11.2		6.8		0						0				2		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-15	2025	10	15		13.2		0.9		7		11		0						0				M		M	
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-16	2025	10	16		13.6		-4.2		4.7		13.3		0						0				M		M	
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-17	2025	10	17		13.4		-4.5		4.4		13.6		0						1.5							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-18	2025	10	18		18.9		7.6		13.3		4.7		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-19	2025	10	19		21.3		12.2		16.8		1.2		0						5.4				20		43	
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-20	2025	10	20		14		-1.4		6.3		11.7		0						9.1				31		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-21	2025	10	21		10.6		-1.4		4.6		13.4		0						0.4							

Longitude (x)	Latitude (y)	Station Name	Climate ID	Date/Time	Year	Month	Day	Data Quality	Max Temp (°C)	Max Temp Flag	Min Temp (°C)	Min Temp Flag	Mean Temp (°C)	Mean Temp Flag	Heat Deg Days (°C)	Heat Deg Days Flag	Cool Deg Days (°C)	Cool Deg Days Flag	Total Rain (mm)	Total Rain Flag	Total Snow (cm)	Total Snow Flag	Total Precip (mm)	Total Precip Flag	Snow on Grnd (cm)	Snow on Grnd Flag	Dir of Max Gust (10s deg)	Dir of Max Gust Flag	Spd of Max Gust (km/h)	Spd of Max Gust Flag
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-22	2025	10	22		10.8		0.1		5.4		12.6		0						6.9							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-23	2025	10	23		10.7		-0.1		5.3		12.7		0						0.6							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-24	2025	10	24		7		0.5		3.8		14.2		0						0.9							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-25	2025	10	25		9.8		-5.3		2.2		15.8		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-26	2025	10	26		6.5		-7.4		-0.4		18.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-27	2025	10	27		9.9		-6.8		1.5		16.5		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-28	2025	10	28		12.3		-7.2		2.6		15.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-29	2025	10	29		12.4		-6.8		2.8		15.2		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-30	2025	10	30		4.2		-5.1		-0.4		18.4		0						13.5							
-77.88	45.07	BANCROFT AUTO	616I001	2025-10-31	2025	10	31		3.9		1.6		2.7		15.3		0						15.4				31		40	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-01	2025	11	1		5.2		-0.2		2.5		15.5		0						0.1							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-02	2025	11	2		8.6		-1.1		3.7		14.3		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-03	2025	11	3		8		1.3		4.6		13.4		0						4.4				29		42	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-04	2025	11	4		11.4		-2.6		4.4		13.6		0						0				32		45	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-05	2025	11	5		3.6		-1.8		0.9		17.1		0						11.7							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-06	2025	11	6		2.8		-5.1		-1.2		19.2		0						0.5				31		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-07	2025	11	7		8		-2.4		2.8		15.2		0						3.1				25		33	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-08	2025	11	8		6.1		-4.4		0.9		17.1		0						0.1				31		40	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-09	2025	11	9		-4.1		-5.5		-4.8		22.8		0						3.5							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-10	2025	11	10		-4.4		-6.4		-5.4		23.4		0						2		1					
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-11	2025	11	11		-0.1		-6		-3		21		0						2.5		8		29		32	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-12	2025	11	12		1.9		-1.4		0.3		17.7		0						1.8		6					
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-13	2025	11	13		4.3		-2.9		0.7		17.3		0						0		4		30		33	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-14	2025	11	14		4.1		-8.4		-2.1		20.1		0						0		1					
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-15	2025	11	15		1.7		-8.8		-3.6		21.6		0						17				29		32	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-16	2025	11	16		1.7		-3.6		-0.9		18.9		0						0.1				32		43	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-17	2025	11	17		-0.5		-3.6		-2		20		0						0				33		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-18	2025	11	18		2.5		-10.6		-4		22		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-19	2025	11	19		-1.3		-13.6		-7.4		25.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-20	2025	11	20		4.9		-12		-3.6		21.6		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-21	2025	11	21		7.1		-4.5		1.3		16.7		0						0.8				26		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-22	2025	11	22		3.1		-8		-2.4		20.4		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-23	2025	11	23		2.8		-4.3		-0.8		18.8		0						3.7							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-24	2025	11	24		5.3		-3.4		0.9		17.1		0						0							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-25	2025	11	25		8.2		-0.1		4		14		0						2.2							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-26	2025	11	26		8.4		0.2		4.3		13.7		0						4.5							
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-27	2025	11	27		1		-4.4		-1.7		19.7		0						2.5				21		38	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-28	2025	11	28		-3.7		-5.7		-4.7		22.7		0						0.1		1		29		40	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-29	2025	11	29		-1.1		-9.1		-5.1		23.1		0						0.1		1		29		32	
-77.88	45.07	BANCROFT AUTO	616I001	2025-11-30	2025	11	30		0.6		-7.3		-3.3		21.3		0						16		7		31		44	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-01	2025	12	1		-6.6		-12.7		-9.6		27.6		0						0		19					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-02	2025	12	2		-1.9		-15.5		-8.7		26.7		0						1.5		17					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-03	2025	12	3		-2		-13.4		-7.7		25.7		0						1.5		15		31		40	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-04	2025	12	4		-4.5		-27.6		-16.1		34.1		0						0.1		15		30		45	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-05	2025	12	5		-4.1		-27.9		-16		34		0						0		14					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-06	2025	12	6		-0.9		-8		-4.4		22.4		0						2.5		15					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-07	2025	12	7		-7		-18.4		-12.7		30.7		0						3.6		15					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-08	2025	12	8		-8.1		-28.8		-18.4		36.4		0						0		18					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-09	2025	12	9		-3.6		-22.8		-13.2		31.2		0						2		18					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-10	2025	12	10		-1.7		-10.4		-6.1		24.1		0						8.8		21		31		43	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-11	2025	12	11		-9.5		-15.5		-12.5		30.5		0						0		26		34		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-12	2025	12	12		-4.5		-18.6		-11.5		29.5		0						0		24		30		31	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-13	2025	12	13		-3.1		-12.9		-8		26		0						3.6		23		31		32	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-14	2025	12	14		-10.5		-22.7		-16.6		34.6		0						0		27					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-15	2025	12	15		-5.9		-18		-11.9		29.9		0						0		26					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-16	2025	12	16		-1.6		-9.8		-5.7		23.7		0						0		24					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-17	2025	12	17		3.1		-1.7		0.7		17.3		0						0.1		23		30		42	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-18	2025	12	18		6.1		-1.5		2.3		15.7		0						0.6		21		15		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-19	2025	12	19		6.6		-10.8		-2.1		20.1		0						15.8		11		30		47	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-20	2025	12	20		-0.1		-14		-7.1		25.1		0						2.4		10		30		35	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-21	2025	12	21		0.2		-20.2		-10		28		0						0		13		28		45	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-22	2025	12	22		-2.4		-16.6		-9.5		27.5		0						0.2		12					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-23	2025	12	23		1.1		-3.8		-1.4		19.4		0						6.5		14		32		37	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-24	2025	12	24		0.9		-8.7		-3.9		21.9		0						0.1		18		30		42	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-25	2025	12	25		-2.7		-17.6		-10.2		28.2		0						0		17		36		36	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-26	2025	12	26		-13.4		-18.9		-16.1		34.1		0						11.4		17					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-27	2025	12	27		-8		-19.9		-14		32		0						0		27					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-28	2025	12	28		-1.7		-14.5		-8.1		26.1		0						7.9		26					
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-29	2025	12	29		1.6		-13.1		-5.8		23.8		0						4.8		24		30		47	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-30	2025	12	30		-13.1		-17.2		-15.1		33.1		0						0		23		31		40	
-77.88	45.07	BANCROFT AUTO	616I001	2025-12-31	2025	12	31		-8.3		-15.2		-11.7		29.7		0						2.4		23		32		35	

Daily Data Report for July 2025

BANCROFT AUTO
ONTARIO
Current Station Operator: ECCC - MSC

Latitude:	45°04'17.000" N	Longitude:	77°52'44.000" W	Elevation:	330.70 m
Climate ID:	6160981	WMO ID:	71294	TC ID:	WRK

Related Data
No related data is available for this station

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Daily Data Report for July 2025

DAY	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
01	27.9	15.3	21.6	0.0	3.6			0.9			
02	28.4	14.3	21.3	0.0	3.3			0.0		31	31
03	23.6	7.4	15.5	2.5	0.0			0.1		3	34
04	25.4	5.8	15.6	2.4	0.0			0.0			
05	30.9	10.1	20.5	0.0	2.5			3.1			
06	31.7	17.5	24.6	0.0	6.6			0.0		22	36
07	20.7	17.4	19.0	0.0	1.0			8.3			
08	25.6	13.0	19.3	0.0	1.3			0.0			
09	M	M	M	M	M			M		M	M
10	M	M	M	M	M			M		M	M
11	29.9	11.9	20.9	0.0	2.9			0.0			
12	32.1	13.3	22.7	0.0	4.7			0.0			
13	30.5	12.7	21.6	0.0	3.6			0.0			
14	29.5	12.1	20.8	0.0	2.8			0.0			
15	31.7	12.5	22.1	0.0	4.1			0.0			
16	32.5	14.2	23.3	0.0	5.3			0.0			
17	25.2	10.0	17.6	0.4	0.0			15.2		30	43
18	25.1	6.0	15.5	2.5	0.0			0.0			
19	26.1	10.3	18.2	0.0	0.2			5.4			
20	25.8	15.1	20.5	0.0	2.5			0.0			
21	20.7	6.3	13.5	4.5	0.0			0.0		1	31
22	22.9	4.3	13.6	4.4	0.0			0.0			
23	28.7	6.9	17.8	0.2	0.0			0.0			
24	34.1	15.9	25.0	0.0	7.0			0.3		35	67
25	27.9	13.7	20.8	0.0	2.8			0.0			
26	28.9	11.7	20.3	0.0	2.3			0.0			
27	29.3	17.2	23.2	0.0	5.2			1.8			
28	33.2	15.6	24.4	0.0	6.4			0.0		20	34
29	29.6	15.8	22.7	0.0	4.7			0.0			
30	26.2	12.9	19.6	0.0	1.6			0.0			
31	23.0	6.9	15.0	3.0	0.0			0.0			
Sum				19.9^	74.4^			35.1^			
Avg	27.8^	11.9^	19.9^								
Xtrm	34.1^	4.3^				M	M	15.2^		35^	67^

Summary, average and extreme values are based on the data above.

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Daily Data Report for May 2025

BANCROFT AUTO
ONTARIO
Current Station Operator: ECCC - MSC

Latitude:	45°04'17.000" N	Longitude:	77°53'44.000" W	Elevation:	330.70 m
Climate ID:	6160001	WMO ID:	71294	TC ID:	WRK

Related Data
No related data is available for this station

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Daily Data Report for May 2025

DAY	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
01	15.9	-3.6	6.1	11.9	0.0			12.1			
02	13.7	2.7	8.2	9.8	0.0			0.3		25	33
03	14.0	0.7	7.3	10.7	0.0			0.0			
04	19.8	-1.8	9.0	9.0	0.0			0.0		7	34
05	19.9	7.4	13.7	4.3	0.0			6.0		6	34
06	20.8	12.9	16.9	1.1	0.0			2.9			
07	17.2	3.9	10.5	7.5	0.0			0.4		1	34
08	13.1	-1.9	5.6	12.4	0.0			0.0		1	32
09	16.8	-3.4	6.7	11.3	0.0			0.0		33	35
10	20.8	-2.2	9.3	8.7	0.0			0.0		34	37
11	17.8	-1.9	8.0	10.0	0.0			0.0			
12	27.7	1.4	14.6	3.4	0.0			0.0			
13	27.8	5.1	16.4	1.6	0.0			0.0		17	37
14	19.8	14.1	16.9	1.1	0.0			1.2			
15	20.2	9.8	15.0	3.0	0.0			1.3			
16	25.7	7.5	16.6	1.4	0.0			0.4			
17	20.6	7.2	13.9	4.1	0.0			26.2		25	40
18	11.7	4.8	8.3	9.7	0.0			1.2		33	32
19	11.4	-0.4	5.5	12.5	0.0			0.0		32	35
20	16.2	-1.2	7.5	10.5	0.0			0.0			
21	12.7	7.5	10.1	7.9	0.0			5.0			
22	9.7	6.4	8.1	9.9	0.0			7.9			
23	9.3	6.4	7.9	10.1	0.0			9.5			
24	12.2	5.9	9.0	9.0	0.0			4.1			
25	14.1	3.8	8.9	9.1	0.0			2.9			
26	22.8	1.4	12.1	5.9	0.0			0.0			
27	25.2	1.7	13.4	4.6	0.0			0.0			
28	24.6	2.7	13.7	4.3	0.0			2.4			
29	17.5	11.6	14.6	3.4	0.0			11.4			
30	23.0	11.2	17.1	0.9	0.0			0.7			
31	11.6	5.7	8.6	9.4	0.0			0.0		32	42
Sum				218.5	0.0			95.9			
Avg	17.9	4.0	11.0								
Xtrm	27.8	-3.6				M	M	26.2		32^	42^

Summary, average and extreme values are based on the data above.

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Daily Data Report for October 2025

BANCROFT AUTO
ONTARIO
Current Station Operator: ECCC - MSC

Latitude:	45°04'17.000" N	Longitude:	77°52'44.000" W	Elevation:	330.70 m
Climate ID:	6102001	WMO ID:	71294	TC ID:	WRK

Related Data
No related data is available for this station

Additional Search Options
Nearby Stations with Data
Historical Data Search

Download Data
Daily Data (2025)
■ CSV □ XML □ Meradata(csv)
Download Data
Get More Data

← Previous Month | 2025 | October | Go | Next Month →

Daily Data Report for October 2025

DAY	Max Temp °C	Min Temp °C	Mean Temp °C	Heat Deg Days	Cool Deg Days	Total Rain mm	Total Snow cm	Total Precip mm	Snow on Grnd cm	Dir of Max Gust 10's deg	Spd of Max Gust km/h
01	16.7	-1.8	7.4	10.6	0.0			0.0			
02	19.9	-2.2	8.9	9.1	0.0			0.0			
03	25.8	-1.3	12.2	5.8	0.0			0.0			
04	29.1	8.6	18.9	0.0	0.9			0.0			
05	29.4	8.6	19.0	0.0	1.0			0.0			
06	27.6	7.9	17.8	0.2	0.0			0.0		18	35
07	20.2	6.6	13.4	4.6	0.0			4.2			
08	11.9	-3.4	4.2	13.8	0.0			0.0		34	31
09	11.0	-6.4	2.3	15.7	0.0			0.0			
10	15.6	-6.3	4.7	13.3	0.0			0.4			
11	14.9	3.9	9.4	8.6	0.0			0.6			
12	19.5	-0.6	9.5	8.5	0.0			0.0			
13	21.5	-0.7	10.4	7.6	0.0			0.0			
14	22.2	0.1	11.2	6.8	0.0			0.0		2	35
15	13.2	0.9	7.0	11.0	0.0			0.0		M	M
16	13.6	-4.2	4.7	13.3	0.0			0.0		M	M
17	13.4	-4.5	4.4	13.6	0.0			1.5			
18	18.9	7.6	13.3	4.7	0.0			0.0			
19	21.3	12.2	16.8	1.2	0.0			5.4		20	43
20	14.0	-1.4	6.3	11.7	0.0			9.1		31	31
21	10.6	-1.4	4.6	13.4	0.0			0.4			
22	10.8	0.1	5.4	12.6	0.0			6.9			
23	10.7	-0.1	5.3	12.7	0.0			0.6			
24	7.0	0.5	3.8	14.2	0.0			0.9			
25	9.8	-5.3	2.2	15.8	0.0			0.0			
26	6.5	-7.4	-0.4	18.4	0.0			0.0			
27	9.9	-6.8	1.5	16.5	0.0			0.0			
28	12.3	-7.2	2.6	15.4	0.0			0.0			
29	12.4	-6.8	2.8	15.2	0.0			0.0			
30	4.2	-5.1	-0.4	18.4	0.0			13.5			
31	3.9	1.6	2.7	15.3	0.0			15.4		31	40
Sum				328.0	1.9			58.9			
Avg	15.4	-0.5	7.5								
Xtrm	29.4	-7.4				M	M	15.4		20^	43^

Summary, average and extreme values are based on the data above.

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Appendix F

Historical Water Chemistry

Appendix F

F-1 Historical Groundwater Chemistry

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1
							Sample ID	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB MW1
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2015-May-04	2015-Oct-26	2016-Apr-28	2016-Oct-26	2017-May-10	2017-Oct-23	2018-May-07	2018-Oct-22	2019-May-07	2019-Oct-24	2020-May-06
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	74.6	64.7	76.1	48.8	36.7	29.1	102	60	77	43.5	94.5
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	0.68	0.57	0.69	0.42	0.58	1.2	0.31	0.27	0.57	0.2	0.31
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	<0.05
Sulphate	mg/L	30.9	500	-	-	-	0.1	5.44	6.37	6.4	6.99	11.6	6.18	6.94	8.35	10.1	7.88	7.1
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	20.7	15.7	18.7	11.3	11	8.46	23.3	13.7	17.9	9.8	17.9
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	3.94	2.96	3.78	2.21	2.29	1.86	4.63	2.63	3.44	2.02	3.54
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	2.69	2.75	2.71	1.84	2.09	3.92	2.7	2.12	2.6	2.15	2.58
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	29.5	26.6	30.3	22.9	25.5	18	36.5	28.1	36.3	25.2	37.1
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	24	23	26	25	40	22	22	20	36	22	23
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	-	-	-	-	-	0.12	0.05	-	-	0.06	0.03
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	-	-	-	-	-	11	-	-	-	-	<5
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	2.6	1.6	1.8	1.1	1.1	2.3	2.3	1.7	1.2	0.9	0.9
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	318	258	317	232	241	151	384	277	348	244	442
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	67.9	51.4	62.3	37.3	36.9	28.8	77.2	45	58.9	32.8	59.3
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		6.9	6.31	7.56	7.11	7.48	6.88	6.42	7.28	6.7	7.22	6.53
Phenols	mg/L	0.01	-	0.001	-	-	0.001	-	-	-	-	-	-	-	-	-	-	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	244	158	202	120	126	152	212	160	190	144	230
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	0.19	-	0.16	-	-	0.28	0.29	-	-	-	0.13
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	1.12	0.45	2.24	1.21	0.68	1.56	1.74	0.91	0.83	1.47	1.59
Total Suspended Solids	mg/L	11000	-	-	-	-	10	-	-	-	-	-	-	-	-	1120	2510	996
Turbidity	NTU	5560	5	-	-	-	0.1	-	-	-	-	-	-	-	-	464	659	480
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	0.005	0.005	-	0.187	0.007	0.011	-	-	0.006	0.009	0.023
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	-	-	-	-	-	-	-	-	-	-	<0.003
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.026	0.019	0.025	0.02	0.016	0.016	0.034	0.017	0.031	0.016	0.028
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	-	-	-	-	-	-	-	-	-	-	<0.001
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	-	-	-	-	-	-	0.011	-	-	-	<0.01
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	-	-	-	-	-	-	-	-	-	-	<0.0001
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	<0.003
Cobalt (diss)	mg/L	**0.018**	-	-	0.0009	-	0.0005	-	-	-	-	-	-	-	-	-	-	<0.0005
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	-	-	-	-	-	-	-	-	-	-	0.002
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	-	-	-	0.125	-	-	-	-	-	-	<0.01
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	-	-	-	-	-	-	-	-	-	-	<0.001
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	0.003	0.002	0.002	0.004	-	0.003	0.003	-	0.003	-	0.003
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	-	-	-	-	-	-	-	-	-	-	<0.002
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	-	-	-	-	-	-	-	-	-	-	<0.003
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	-	-	-	-	-	-	-	-	-	-	<0.004
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	6.85	7.12	7.56	9.04	7.01	7.79	7.76	8.41	6.39	8.29	6.95
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	-	-	-	-	-	-	-	-	-	-	<0.0001
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.255	0.166	0.243	0.145	0.151	0.107	0.315	0.153	0.261	0.117	0.244
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	-	-	-	-	-	-	-	-	-	-	<0.0003
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	-	-	-	0.013	-	-	-	-	-	-	<0.002
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	-	-	-	-	-	-	-	-	-	-	<0.002
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	-	-	-	-	-	-	0.018	0.009	0.011	0.005	0.007
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result — Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1	NB-MW1
							Sample ID	NB MW1	NB MW1	NB MW1	NB MW1	NB MW1	NB MW1	NB MW1	NB MW1	NB MW1	NB MW1	NB MW 1
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2020-Oct-06	2021-Apr-20	2021-Oct-18	2022-May-03	2022-Oct-18	2023-May-03	2023-Oct-19	2024-Apr-29	2024-Oct-29	2025-May-07	2025-Oct-21
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	41.2	48.1	15	17	12.6	48.1	31	79	45	63	17
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	-	0.19	0.25	0.13	0.22	0.14
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	0.17	0.26	0.22	0.16	0.13	0.21	0.19	0.25	0.13	0.22	0.14
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	<0.05	<0.05	0.26	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	30.9	500	-	-	-	0.1	7.36	7.09	6.91	7.89	7.27	5.99	6.8	3.6	8.2	7	6.8
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	8.43	10.2	4.63	4.56	3.51	11.6	9.5	21	11	15	5.1
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	1.59	2.01	0.91	0.88	0.76	2.15	1.7	4	1.9	2.8	0.89
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	1.7	1.86	1.57	1.26	1.09	1.89	1.7	2.5	1.8	2	1.2
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	21.6	25.2	14	16.6	11.4	27.4	24	40	29	36	20
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	25	23	26	24	17	29	24	26	28	31	27
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	<0.02	<0.02	0.23	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	7	<5	<5	<5	<5	<5	6.2	<4	<4	<4	<4
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	1.8	2.2	2.1	2.1	1.9	1.4	1.2	1.2	1.3	1.2	2
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	186	239	116	126	101	229	190	370	240	310	140
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	27.6	33.7	15.3	15	11.9	37.8	31	70	34	50	16
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		6.56	6.75	6.74	6.59	6.7	7.05	7.21	7.14	7.14	7.07	7.29
Phenols	mg/L	0.01	-	0.001	-	-	0.001	<0.001	<0.001	<0.001	0.001	0.003	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	128	144	92	84	86	144	130	285	195	225	180
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	0.1	<0.1	0.47	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	0.91	0.61	0.51	0.79	0.28	1.15	1.4	1.8	0.76	1.9	1.2
Total Suspended Solids	mg/L	11000	-	-	-	-	10	1590	289	508	767	1860	414	860	1100	610	560	1400
Turbidity	NTU	5560	5	-	-	-	0.1	204	423	330	543	140	258	140	67	120	250	670
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	<0.004	0.008	0.04	0.041	0.021	<0.004	<0.0049	<0.0049	0.046	<0.0049	<0.0049
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.012	0.013	0.007	0.007	0.005	0.014	0.011	0.027	0.014	0.02	0.0069
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	<0.003	<0.003	<0.003	<0.003	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt (diss)	mg/L	**0.018**	-	-	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
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	<0.002	<0.002	<0.002	<0.002	**0.002**	<0.001	**0.0054**	<0.0009	0.0016	<0.0009	<0.0009
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	<0.01	<0.01	0.029	<0.01	<0.01	0.012	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	<0.003	<0.003	<0.003	<0.001	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	<0.004	<0.004	<0.004	<0.004	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	8.29	7.08	8.68	9.35	8.74	8.55	10	8.7	8.9	7.7	8.4
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	<0.0001	<0.0001	<0.0001	0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.107	0.13	0.051	0.059	0.041	0.125	0.085	0.25	0.12	0.19	0.058
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00054	<0.0005	0.00072	<0.0005	0.00077
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	0.007	**0.024**	0.018	<0.005	0.011	0.019	**0.03**	0.014	<0.005	0.01	0.018
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R
							Sample ID	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	W2R-QAQC (NB-I	NB-MW2R	NB MW2R	NB MW2R
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2016-Apr-28	2016-Oct-26	2017-May-10	2017-Oct-23	2018-May-07	2018-Oct-22	2019-May-07	2019-May-07	2019-Oct-24	2020-May-06	2020-Oct-06
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	9.81	8.41	7.5	8.98	11.3	9.69	15.9	15.4	18.3	16.9	15.6
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	0.21	0.19	0.22	0.16	0.17	0.15	0.16	0.16	0.16	0.19	0.14
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	-	-	-	-	-	-	-	-	-	<0.05	<0.05
Sulphate	mg/L	30.9	500	-	-	-	0.1	6.99	6.64	7.7	6.55	6.76	6.37	6.25	6.2	6.64	7.43	7.7
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	7.93	7.48	7	8.41	8.79	8.17	9.68	9.6	10.5	8.48	9.01
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	3.32	3.06	3	3.42	3.83	3.14	3.8	3.74	4.05	3.61	3.56
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	1.78	1.67	1.68	2.02	1.71	1.69	1.82	1.78	1.91	1.64	1.8
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	4.69	4.41	4.2	4.8	4.84	4.74	5.08	5.09	5.56	4.79	5.24
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	31	30	29	29	40	24	32	32	27	26	35
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	-	0.03	-	0.03	0.12	-	-	-	0.05	<0.02	<0.02
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	-	-	-	-	-	-	-	-	-	14	10
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	0.9	1	0.9	1	0.9	0.8	1.3	0.8	1	0.8	0.7
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	104	105	101	92	110	108	117	118	173	148	122
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	33.5	31.3	29.8	35.1	37.7	33.3	39.8	39.4	42.9	36	37.2
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		7.75	7.45	7.66	7.27	6.72	7.45	6.96	7.03	7.59	7.16	6.73
Phenols	mg/L	0.01	-	0.001	-	-	0.001	-	-	-	-	-	-	-	-	-	<0.001	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	82	76	74	82	64	67	72	74	86	92	74
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	0.26	-	-	-	0.36	-	-	-	-	0.1	0.1
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	6.89	8.64	3.52	3.54	1.33	0.75	0.56	0.63	2.28	2.31	3.01
Total Suspended Solids	mg/L	11000	-	-	-	-	10	-	-	-	-	-	-	316	301	2900	2030	1770
Turbidity	NTU	5560	5	-	-	-	0.1	-	-	-	-	-	-	119	126	316	375	357
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	0.008	0.072	0.01	0.006	-	0.007	0.006	0.005	0.17	0.01	<0.004
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	-	-	-	-	-	-	-	-	-	<0.003	<0.003
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.01	0.009	0.005	0.006	0.005	0.005	0.006	0.005	0.011	0.005	0.005
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	-	-	-	-	-	-	0.0006	-	-	<0.001	<0.001
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	-	-	-	-	-	-	-	-	-	<0.01	<0.01
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	-	-	-	-	-	-	-	-	-	<0.003	<0.003
Cobalt (diss)	mg/L	**0.018**	-	-	0.0009	-	0.0005	-	-	-	-	-	-	-	-	0.0006	<0.0005	<0.0005
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	-	-	-	-	-	-	-	-	0.002	<0.002	<0.002
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	-	0.118	-	-	-	-	-	-	0.221	<0.01	<0.01
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	-	-	-	-	-	-	-	-	-	<0.001	<0.001
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	0.002	0.003	-	-	-	-	-	-	0.03	<0.002	<0.002
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	-	-	-	-	-	-	-	-	-	<0.002	<0.002
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	-	-	-	-	-	-	-	-	-	<0.003	<0.003
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	-	-	-	-	-	-	-	-	-	<0.004	<0.004
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	11.8	12.6	11	11.1	11	11.8	9.46	9.36	11.6	13.062	6.85
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.067	0.051	0.044	0.045	0.059	0.05	0.057	0.057	0.067	0.061	0.086
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	-	-	-	-	-	-	-	-	-	<0.0003	<0.0003
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	-	0.004	-	-	-	-	-	-	0.009	<0.002	<0.002
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	0.003	0.004	0.003	0.004	0.003	0.004	0.003	0.003	0.004	0.003	0.003
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	0.011	-	-	-	-	-	-	-	-	<0.005	<0.005
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result — Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R	NB-MW2R
							Sample ID	NB MW2R	QC GW-S21 (NB-MW2R)	NB MW2R	NB MW2R	QC GW-S22 (NB-MW2R)	NB MW2R	NB MW2R	NB MW2R	NB MW2R	NB MW2R	NB MW2R
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2021-Apr-20	2021-Apr-20	2021-Oct-18	2022-May-03	2022-May-03	2022-Oct-18	2023-May-03	2023-Oct-19	2024-Apr-29	2024-Oct-29	2025-May-07
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	16.6	17.1	9.32	9.17	8.87	6.26	6.67	4.1	3	1.8	3.4
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	-	-	0.11	0.1	<0.1	<0.1
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	0.13	0.14	0.11	0.12	0.11	0.11	0.11	0.11	0.1	<0.1	<0.1
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	30.9	500	-	-	-	0.1	6.86	6.86	7.09	7.2	7.2	7.61	6.93	5.6	6	6.8	5.5
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	9.77	9.99	7.31	8.37	8.37	7.52	7.61	7.6	7.1	6.8	6.9
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	4.17	4.21	3.24	3.53	3.51	3.16	3.31	3.1	3.1	2.8	2.8
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	1.77	1.79	1.72	1.7	1.65	1.61	1.74	1.6	1.5	1.5	1.3
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	5.88	6.04	4.25	4.89	4.89	3.92	4.55	4.4	4.2	3.8	3.8
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	29	30	30	27	30	27	33	32	34	31	32
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	<0.02	<0.02	0.11	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	<5	<5	<5	<5	13	<5	<5	<4	<4	<4	<4
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	2.3	2	1	0.7	0.7	0.9	0.7	1.2	1.1	0.8	0.9
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	144	146	108	111	110	100	100	92	84	87	94
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	41.6	42.3	31.6	35.4	35.4	31.8	32.6	32	30	29	29
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		7.32	7.36	7.11	6.87	6.98	7.29	7.34	7.61	7.79	7.57	7.7
Phenols	mg/L	0.01	-	0.001	-	-	0.001	<0.001	<0.001	<0.001	0.002	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	96	98	86	46	52	72	78	70	85	60	115
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	<0.1	<0.1	<0.1	0.12	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	0.87	0.68	0.63	0.21	0.28	0.45	0.31	2.3	0.81	1.2	1
Total Suspended Solids	mg/L	11000	-	-	-	-	10	948	1300	324	232	248	240	776	1000	840	810	690
Turbidity	NTU	5560	5	-	-	-	0.1	177	232	107	65.6	79.7	71.8	77.1	27	24	12	83
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	<0.004	0.011	0.011	0.006	0.045	0.016	<0.004	0.013	<0.0049	<0.0049	<0.0049
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.005	0.005	0.003	0.004	0.004	0.003	0.003	0.0032	0.0027	0.0027	0.0025
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0004
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	<0.003	<0.003	<0.003	<0.003	<0.003	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005
Cobalt (diss)	mg/L	**0.018**	-	-	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
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.001	<0.0009	<0.0009	<0.0009	<0.0009
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	<0.0005	<0.0005
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	<0.004	0.039	<0.004	<0.004	<0.004	<0.001	0.002	<0.002	<0.002	<0.002	<0.002
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	10.1	10.4	11.7	12.2	11.7	12.5	11.6	13	11	12	11
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	<0.0001	0.0002	<0.0001	<0.0001	0.0036	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.081	0.102	0.048	0.061	0.061	0.058	0.044	0.047	0.044	0.042	0.044
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	<0.00005	<0.00005
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	0.003	0.003	0.003	0.003	0.003	0.004	0.004	0.004	0.0037	0.0042	0.0035
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	<0.005	<0.005	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW2R	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3
							Sample ID	NB MW 2R	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2025-Oct-21	2015-May-04	2015-Oct-26	2016-Apr-28	2016-Oct-26	2017-May-10	2017-Oct-23	2018-May-07	2018-Oct-22	2019-May-07	2019-Oct-24
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	2.7	34.1	37.7	39.8	43.9	51.2	63.8	70.7	67.3	65	70.5
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	0.11	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	0.11	0.28	-	0.53	0.29	0.84	0.41	0.81	0.33	0.98	0.56
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	<0.01	-	-	-	-	-	-	-	-	-	-
Sulphate	mg/L	30.9	500	-	-	-	0.1	5.2	23	22.5	21.3	19.1	16.8	16.6	15.4	16.2	14	17.4
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	6.9	29.1	29.5	30.2	29.7	32.7	40.3	42.6	42.9	39.4	46.4
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	2.7	11.9	11.1	12	11.4	13.6	15.9	16.9	16	14.8	17.4
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	1.4	3.97	4.12	4.34	3.88	4.37	4.4	4.35	4.25	4.16	4.46
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	4	35.1	34	34.8	30.5	33	33	29.6	28	28.7	30.5
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	31	127	126	137	128	132	142	148	121	153	151
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	<0.05	-	-	-	-	-	-	0.07	-	-	0.08
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	<4	-	-	-	47	-	8	-	-	-	-
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	1.4	1.5	2	1.9	1.4	1.5	3.4	1.7	2.1	1.4	1.5
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	86	396	405	409	424	493	444	506	530	493	604
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	29	121.7	119.4	124.8	121.1	137.7	166.1	176	173	159	188
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		7.66	7.5	6.87	8.15	8.01	7.89	8.02	7.45	7.88	7.47	8.05
Phenols	mg/L	0.01	-	0.001	-	-	0.001	<0.001	-	0.003	-	-	-	-	-	-	-	-
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	80	232	218	242	224	246	282	154	304	260	302
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	<0.1	0.14	-	2.92	0.18	0.11	-	0.51	0.15	-	-
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	0.74	0.11	0.46	0.45	0.81	1.39	0.17	0.7	0.14	0.25	0.31
Total Suspended Solids	mg/L	11000	-	-	-	-	10	490	-	-	-	-	-	-	-	-	153	151
Turbidity	NTU	5560	5	-	-	-	0.1	120	-	-	-	-	-	-	-	-	91.4	28.7
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	<0.0049	-	0.008	-	0.02	0.007	0.014	0.312	0.004	-	0.04
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	<0.001	-	-	-	-	-	-	-	-	-	-
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.0028	0.033	0.039	0.035	0.038	0.037	0.048	0.051	0.047	0.046	0.066
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	<0.0004	-	-	-	-	-	-	-	-	-	-
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	<0.01	0.146	0.157	0.14	0.132	0.117	0.122	0.137	0.119	0.095	0.138
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	<0.00009	-	-	-	-	-	-	-	-	-	-
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	<0.005	-	-	-	-	-	-	-	-	0.004	-
Cobalt (diss)	mg/L	**0.018**	-	-	0.0009	-	0.0005	<0.0005	-	**0.007**	**0.001**	-	**0.001**	**0.002**	**0.002**	-	**0.0015**	**0.004**
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	<0.0009	-	-	-	-	-	-	-	-	0.001	0.002
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	<0.1	-	0.115	-	-	-	-	-	-	-	0.037
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	<0.0005	-	-	-	-	-	-	-	-	-	-
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	<0.002	0.005	0.146	0.02	0.003	0.015	0.023	0.021	0.004	0.017	0.032
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	<0.0001	-	-	-	-	-	-	-	-	-	-
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	<0.0005	-	-	-	-	-	-	-	-	-	-
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	<0.001	-	-	-	-	-	-	-	-	-	0.004
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	<0.002	-	-	-	-	-	-	-	-	-	-
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	12	14.8	14.2	15.4	15.6	15	14.4	15.1	14.9	12.1	15.9
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	<0.00009	-	-	-	-	-	-	-	-	-	-
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.044	0.257	0.288	0.28	0.292	0.308	0.354	0.402	0.391	0.362	0.499
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	<0.00005	-	-	-	-	-	-	-	-	-	-
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	<0.005	-	-	-	-	-	-	-	-	-	0.003
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	0.0039	-	-	-	-	-	-	-	-	-	-
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	<0.005	-	-	0.013	-	-	-	-	-	-	-
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result — Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3
							Sample ID	IW3-QAQC (NB-I	NB MW3	NB MW3	NB MW3	NB MW3	NB MW3	NB MW3	QC GW1-F22 (NE	NB MW3	NB MW3	NB MW3
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2019-Oct-24	2020-May-06	2020-Oct-06	2021-Apr-20	2021-Oct-18	2022-May-03	2022-Oct-18	2022-Oct-18	2023-May-03	2023-Oct-19	2024-Apr-29
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	71.2	80.8	72.5	87.5	99.9	117	122	124	141	110	220
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	<0.1	<0.1
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	0.57	1.33	0.28	0.78	0.43	0.36	0.06	<0.05	0.14	<0.1	<0.1
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	-	<0.1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01
Sulphate	mg/L	30.9	500	-	-	-	0.1	17.7	17.8	16.6	21.7	29.2	29.9	30.9	30.9	23.2	8.8	16
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	45.8	46.2	36.2	55.7	63.8	63.7	63.4	60.1	72.3	76	96
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	17.2	18.2	13.5	22.4	24.7	24.3	24.3	23.3	27.2	29	38
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	4.34	4.58	4.17	4.87	5.24	5.32	5.3	5.06	5.76	5.6	6.4
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	30.1	31.5	22	32.2	32.5	32.4	30.1	30	35.5	38	47
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	151	147	150	168	173	150	143	146	135	130	130
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	0.03	<0.02	<0.02	0.03	0.08	<0.02	0.02	<0.02	<0.02	<0.05	<0.05
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	-	<5	8	<5	<5	62	<5	14	<5	6.6	<4
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	1.4	1.5	2.6	2.9	2.2	1.8	2.1	2	1.7	1.7	2
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	612	685	503	687	698	724	728	731	776	860	1100
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	185	190	146	231	261	259	258	246	293	310	390
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		8.06	6.91	7.21	7.01	7.09	6.99	7.39	7.41	7.61	7.39	7.52
Phenols	mg/L	0.01	-	0.001	-	-	0.001	-	<0.001	<0.001	0.003	0.004	0.005	0.007	0.01	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	282	326	302	404	438	414	484	476	594	585	740
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	-	0.16	0.2	0.2	0.2	0.15	-	-	0.16	0.18	0.12
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	0.32	0.43	0.22	0.13	0.19	0.14	0.09	0.1	0.19	0.17	0.091
Total Suspended Solids	mg/L	11000	-	-	-	-	10	141	202	347	93	81	114	32	32	295	190	110
Turbidity	NTU	5560	5	-	-	-	0.1	30.9	95.1	67.1	35.3	27.5	33.8	21.9	7.6	18.5	2.3	2.6
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	0.032	0.014	<0.004	<0.004	0.022	0.028	0.016	0.015	<0.004	<0.0049	<0.0049
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.062	0.057	0.037	0.062	0.072	0.072	0.064	0.065	0.067	0.084	0.1
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	0.13	0.115	0.092	0.135	0.149	0.15	0.15	0.141	0.145	0.15	0.14
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.002	0.01	<0.002	<0.005	<0.005
Cobalt (diss)	mg/L	**0.018**	-	-	0.0009	-	0.0005	**0.0037**	**0.0017**	**0.007**	**0.0019**	**0.0018**	**0.0016**	**0.0028**	**0.0028**	<0.0005	**0.0043**	<0.0005
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	0.001	0.003	<0.002	<0.002	0.002	<0.002	0.001	0.002	<0.001	0.0011	<0.0009
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	-	<0.01	0.012	<0.01	0.015	<0.01	0.013	0.042	0.016	<0.1	<0.1
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	0.0009	<0.0005	<0.0005
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	0.031	0.021	0.046	0.025	0.029	0.024	0.04	0.044	<0.002	0.067	0.0022
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	0.003	0.003	<0.003	0.003	0.005	0.007	0.004	0.005	0.003	0.0054	0.0059
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.001	<0.001	<0.001	<0.002	<0.002
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	15.4	18.766	9.9	14	15.2	15.1	15	16.1	15.9	16	16
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.473	0.438	0.339	0.609	0.565	0.593	0.581	0.599	0.558	0.68	0.86
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	-	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.00005
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	0.003	<0.002	<0.002	<0.002	0.006	<0.002	<0.002	<0.002	<0.002	<0.005	<0.005
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00083	0.00066
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	0.006	<0.005	<0.005	<0.005	0.008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW3	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4
							Sample ID	NB MW3	AQC-GW1 (NB-M	NB MW3	AQC-GW1 (NB-M	NB MW 3	AQC-GW1 (NB-M	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2024-Oct-29	2024-Oct-29	2025-May-07	2025-May-07	2025-Oct-21	2025-Oct-21	2015-May-04	2015-Oct-26	2016-Apr-28	2016-Oct-26	2017-May-10
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							**Detection Limit**											
Chloride	mg/L	280	250	-	-	-	0.1	260	260	280	280	270	260	36.3	39	36.4	36	33.9
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	-	-	-	-
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	-	-	-	-
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-
Sulphate	mg/L	30.9	500	-	-	-	0.1	16	16	14	14	14	14	20.6	23.7	21	20.7	22
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	100	100	110	110	110	110	34.7	33.9	32.6	32.1	32.5
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	39	39	41	43	45	43	7.21	6.76	6.67	6.42	7
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	6.6	6.6	6.4	6.6	6.8	6.6	3.43	3.34	3.5	3.29	3.38
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	48	48	51	52	56	54	6.28	5.94	5.84	5.49	5.9
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	130	130	140	140	150	150	60	62	66	64	66
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	30	4.4	<4	<4	<4	<4	-	27	-	-	-
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	2.2	1.7	1.9	1.9	2.9	3.1	0.8	1.3	1.6	1.1	0.8
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	1200	1200	1300	1300	1300	1300	279	284	279	285	310
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	420	420	450	460	460	450	116.3	112.5	108.9	106.6	110
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		7.43	7.51	7.35	7.3	7.39	7.42	8.04	7.03	7.89	7.72	7.84
Phenols	mg/L	0.01	-	0.001	-	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	990	1010	1120	1130	745	795	204	168	174	162	176
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	0.14	0.12	0.13	0.11	<0.1	<0.1	-	-	1.61	-	-
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	0.17	0.19	0.082	0.077	0.23	0.18	0.77	1.16	0.51	1.42	1.46
Total Suspended Solids	mg/L	11000	-	-	-	-	10	180	160	49	50	94	85	-	-	-	-	-
Turbidity	NTU	5560	5	-	-	-	0.1	1.7	2.4	3.1	3.4	7.1	8.6	-	-	-	-	-
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	0.004	0.006	0.005	0.026	0.008
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.12	0.12	0.12	0.12	0.12	0.12	0.013	0.013	0.013	0.015	0.013
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	-	-	-	-	-
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	0.14	0.13	0.13	0.13	0.14	0.13	-	-	-	-	-
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-	-	-
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-
Cobalt (diss)	mg/L	**0.018**	-	-	0.0009	-	0.0005	**0.0017**	**0.0018**	**0.017**	**0.018**	**0.0046**	**0.0045**	-	-	-	-	-
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	0.0011	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	0.12	0.12	0.74	0.76	1.1	1.1	-	-	-	-	-
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	0.027	0.027	0.23	0.23	0.07	0.068	-	0.009	-	0.006	-
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.002	0.002	0.002	0.002	-
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	0.0057	0.0058	0.0096	0.0098	0.0068	0.0068	-	-	-	-	-
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	15	15	14	14	16	15	8.2	7.72	8.51	9.58	8.4
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-	-	-
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.94	0.94	1	1	1	1	0.11	0.109	0.11	0.108	0.105
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	-	-	-	-	-
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	0.00065	0.00065	<0.0005	<0.0005	0.00099	0.00089	-	-	-	-	-
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result — Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4
							Sample ID	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB MW4	QC GW-S20 (NB	NB MW4	QC GW-F20 (NB	NB MW4	NB MW4
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2017-Oct-23	2018-May-07	2018-Oct-22	2019-May-07	2019-Oct-24	2020-May-06	2020-May-06	2020-Oct-06	2020-Oct-06	2021-Apr-20	2021-Oct-18
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							**Detection Limit**											
Chloride	mg/L	280	250	-	-	-	0.1	32.1	33.2	32.1	31.8	28.1	31.9	31.7	28.8	28.6	29.1	28.6
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	-	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	mg/L	30.9	500	-	-	-	0.1	21.2	21.8	22.3	22.6	22.9	25.8	25.9	24.2	24.3	22.1	23.9
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	32.9	32.2	33	32.2	31.2	29.9	29.9	28.9	29.1	33	29.8
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	6.77	6.76	6.42	6.41	6.09	6.22	6.28	5.73	5.79	7.04	6.32
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	3.26	3.14	3.31	3.09	3.07	3.13	3.13	3.05	3.05	3.45	3.13
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	5.95	5.66	5.65	5.9	5.67	5.52	5.51	5.3	5.32	6.23	5.67
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	65	69	56	75	62	64	63	66	68	62	61
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	-	0.11	-	-	0.07	0.02	0.15	<0.02	<0.02	<0.02	0.1
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	5	-	-	-	-	<5	<5	11	14	<5	<5
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	2.5	1.3	3.1	1	0.6	0.8	0.7	0.7	0.7	1.9	0.7
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	241	267	287	276	303	339	339	248	248	285	257
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	110	108.2	108.8	107	103	100	101	95.8	96.5	111	100
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		7.63	7.21	7.63	7.37	7.71	7.66	7.69	7.14	7.21	7.8	7.62
Phenols	mg/L	0.01	-	0.001	-	-	0.001	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	0.002	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	172	152	174	160	148	174	166	152	162	180	176
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	-	0.36	-	-	-	0.12	0.16	<0.1	<0.1	<0.1	<0.1
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	2.66	0.86	1.62	0.67	1.21	0.86	0.79	0.64	0.67	0.55	0.91
Total Suspended Solids	mg/L	11000	-	-	-	-	10	-	-	-	310	1580	446	340	665	609	446	199
Turbidity	NTU	5560	5	-	-	-	0.1	-	-	-	130	110	88.9	92	123	139	115	110
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	0.009	-	0.008	0.007	0.02	0.02	0.019	0.011	<0.004	0.011	0.024
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.015	0.014	0.013	0.014	0.016	0.013	0.013	0.011	0.012	0.012	0.012
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	-	0.011	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	0.011
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	**0.0002**
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cobalt (diss)	mg/L	**0.018**	-	-	0.0009	-	0.0005	-	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	-	-	-	-	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	-	-	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	-	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	0.002	-	0.003	-	0.004	<0.002	<0.002	0.004	0.003	<0.002	0.003
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	-	0.002	0.002	0.002	0.002	0.002	0.002	<0.002	0.002	0.002	<0.002
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	-	-	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	8.12	8.95	8.42	7.24	8.74	7.96	8.66	10.9	8.81	7.96	8.25
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.096	0.106	0.103	0.111	0.106	0.098	0.105	0.113	0.106	0.098	0.097
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	-	-	-	-	-	<0.0003	<0.0003	0.0003	<0.0003	<0.0003	<0.0003
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	-	-	-	-	-	0.004	<0.002	<0.002	<0.002	<0.002	<0.002
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	-	-	-	-	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	-	-	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result — Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4	NB-MW4
							Sample ID	QC GW-F21 (NB	NB MW4	NB MW4	NB MW4	AQC-GW1 (NB-M	NB MW4	AQC-GW1 (NB-M	NB MW4	AQC-GW1 (NB-M	NB MW4	NB MW4
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2021-Oct-18	2022-May-03	2022-Oct-18	2023-May-03	2023-May-03	2023-Oct-19	2023-Oct-19	2024-Apr-29	2024-Apr-29	2024-Oct-29	2025-May-07
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	28.6	27.8	28.8	30.4	30.4	26	26	27	27	29	27
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	30.9	500	-	-	-	0.1	23.9	23.3	25.4	22.4	22.4	20	20	20	20	21	19
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	29.7	31.1	30	33	33.6	35	35	33	33	31	31
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	6.43	6.43	6.17	6.76	6.66	6.9	7.1	6.8	6.7	6.4	6.3
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	3.22	3.22	3.17	3.24	3.17	3.2	3.3	3.1	3.1	3.1	2.9
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	5.78	5.85	5.54	5.77	5.94	6.6	6.9	6.2	6.3	6.1	6
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	62	59	59	68	67	61	61	64	63	60	59
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	0.09	<0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	<5	<5	<5	<5	<5	<4	<4	<4	<4	5.7	<4
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	0.7	0.7	0.8	0.6	<0.5	0.6	0.7	0.8	0.8	0.9	0.8
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	257	261	260	277	275	270	270	260	260	270	270
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	101	104	100	110	111	110	120	110	110	100	100
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		7.6	7.29	7.85	7.87	7.83	8.03	8.03	8.13	8.15	7.77	8.07
Phenols	mg/L	0.01	-	0.001	-	-	0.001	<0.001	0.002	0.003	<0.001	<0.001	<0.001	0.0011	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	180	128	166	192	188	160	220	195	200	160	225
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	<0.1	<0.1	-	<0.1	<0.1	0.14	<0.1	<0.1	<0.1	<0.1	<0.1
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	1.1	1.21	0.68	0.5	0.57	2.5	2.6	1.9	1.9	0.44	1.2
Total Suspended Solids	mg/L	11000	-	-	-	-	10	240	410	459	278	296	910	900	2200	2300	330	680
Turbidity	NTU	5560	5	-	-	-	0.1	107	109	2.5	49.5	52.8	14	15	15	17	11	45
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	0.022	0.029	0.021	<0.004	<0.004	0.005	<0.0049	<0.0049	<0.0049	0.0063	<0.0049
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.013	0.012	0.011	0.012	0.011	0.013	0.013	0.012	0.012	0.013	0.012
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	0.012	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	<0.003	<0.003	<0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt (diss)	mg/L	**0.018**	-	-	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
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	<0.002	<0.002	<0.001	<0.001	<0.001	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	0.016	<0.01	<0.01	<0.01	<0.01	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	0.005	<0.002	0.006	<0.002	<0.002	0.0031	0.0032	<0.002	<0.002	<0.002	<0.002
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	<0.002	<0.002	0.002	<0.002	<0.002	0.0021	0.002	0.0021	0.002	0.0023	0.0017
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	<0.004	<0.004	<0.001	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	8.91	9.38	9.42	9.09	8.94	10	10	9.3	9.2	8.6	8.3
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.096	0.107	0.095	0.097	0.097	0.099	0.1	0.1	0.1	0.1	0.099
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0071	<0.005
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW4	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R
							Sample ID	NB MW 4	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB MW5R
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2025-Oct-21	2016-Apr-28	2016-Oct-26	2017-May-10	2017-Oct-23	2018-May-07	2018-Oct-22	2019-May-07	2019-Oct-24	2020-May-06	2020-Oct-06
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit											
Chloride	mg/L	280	250	-	-	-	0.1	30	24.4	24.8	24.7	22.4	21.6	21.5	22	21.2	24.5	24.4
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	<0.1	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	<0.1	-	-	0.09	-	-	-	-	-	0.06	<0.05
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	<0.01	-	-	-	-	-	-	-	-	<0.05	<0.05
Sulphate	mg/L	30.9	500	-	-	-	0.1	19	27.9	21	21.4	20	19.5	20.6	20.7	21	23.7	22.1
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	31	9.96	9.21	14.2	15.5	15.5	16.8	17.3	17.6	17	18.6
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	6.3	2.92	2.76	4.7	5.06	5.19	5.13	5.38	5.47	5.89	5.66
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	2.9	1.95	1.46	1.91	2.22	1.75	1.75	1.9	2.17	2.09	2.2
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	6.2	73.3	29.8	14.9	13.3	8.2	7.74	6.35	6.1	4.96	5.13
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	65	138	55	41	40	50	32	42	35	34	38
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	<0.05	-	0.04	-	0.05	0.18	0.03	-	0.11	0.07	<0.02
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	<4	12	-	5	8	-	-	-	-	<5	17
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	1.4	9.9	3.8	1.8	4	3.2	1.7	1.8	1	1	1.2
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	270	387	234	223	174	182	197	191	230	235	186
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	100	36.9	34.4	54.8	59.5	60.1	63.1	65.4	66.5	66.7	69.8
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		8.06	8.26	7.68	7.76	7.41	6.84	7.48	7.09	7.59	7.33	6.78
Phenols	mg/L	0.01	-	0.001	-	-	0.001	<0.001	-	-	-	-	-	-	-	-	<0.001	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	190	294	198	164	140	160	156	126	120	136	136
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	<0.1	0.46	-	-	-	0.58	-	-	-	0.1	0.14
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	0.73	0.8	9.94	3.4	14	4.15	10.3	4.75	6.4	2.87	5.52
Total Suspended Solids	mg/L	11000	-	-	-	-	10	380	-	-	-	-	-	-	2470	4860	1510	3880
Turbidity	NTU	5560	5	-	-	-	0.1	98	-	-	-	-	-	-	5560	3620	1910	4310
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	<0.0049	0.053	0.606	0.011	0.007	-	0.008	0.004	0.007	0.012	<0.004
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	<0.001	-	-	-	-	-	-	-	-	<0.003	<0.003
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.012	0.017	0.023	0.014	0.013	0.015	0.013	0.018	0.017	0.017	0.016
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	<0.0004	-	-	-	-	-	-	-	-	<0.001	<0.001
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	0.012	0.057	0.023	-	-	-	-	-	-	<0.01	<0.01
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	<0.00009	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	<0.005	-	-	-	-	-	-	-	-	<0.003	<0.003
Cobalt (diss)	mg/L	**0.018**	-	-	0.0009	-	0.0005	<0.0005	-	**0.002**	-	-	-	-	-	-	<0.0005	0.0007
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	<0.0009	-	0.004	-	-	-	-	0.001	-	<0.002	<0.002
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	<0.1	0.097	0.649	-	-	-	-	-	-	<0.01	0.018
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	<0.0005	-	-	-	-	-	-	-	-	<0.001	<0.001
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	<0.002	0.149	0.139	0.18	0.046	0.251	0.283	0.264	0.309	0.148	0.252
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	<0.0001	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	0.0019	0.023	0.007	0.003	0.003	0.002	0.003	0.002	0.002	<0.002	0.003
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	<0.001	-	-	-	-	-	-	-	-	<0.003	<0.003
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	<0.002	-	-	-	-	-	-	-	-	<0.004	<0.004
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	8.5	5.98	7.79	7.3	6.76	7.39	7.33	6.29	7.62	7.58	8.95
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	<0.00009	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.098	0.069	0.061	0.081	0.073	0.09	0.094	0.1	0.095	0.09	0.102
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	<0.00005	-	-	-	-	-	-	-	-	<0.0003	<0.0003
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	<0.005	0.004	0.047	-	-	-	-	-	-	<0.002	0.01
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	<0.0005	-	-	-	-	-	-	-	-	<0.002	<0.002
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	<0.005	0.007	0.007	-	-	-	-	-	-	<0.005	<0.005
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	-	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result — Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R	NB-MW5R
							Sample ID	NB MW5R	NB MW5R	NB MW5R	NB MW5R	NB MW5R	MW5R	NB MW5R	NB MW5R	NB MW5R	NB MW5R	NB MW 5R
Parameter	Units	Max Concentration	ODWQS-ALL-MERGED	PWQO-GENERAL	PWQO-INTERIM	RUV-NB	Sample Date	2021-Apr-20	2021-Oct-18	2022-May-03	2022-Oct-18	2023-May-03	2023-Jun-01	2023-Oct-19	2024-Apr-29	2024-Oct-29	2025-May-07	2025-Oct-21
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-
Anions							**Detection Limit**											
Chloride	mg/L	280	250	-	-	-	0.1	24.2	24.1	23.2	26.2	25.9	23	20	24	25	24	23
Nitrate + Nitrite	mg/L	0.25	-	-	-	-	0.1	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate as N	mg/L	1.33	10	-	-	2.74375	0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<1	<0.1	<0.1
Nitrite as N	mg/L	0.26	1	-	-	-	0.01	0.06	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	30.9	500	-	-	-	0.1	20.1	21.7	20.4	23.4	20.9	20	13	17	20	19	18
Cations																		
Calcium (diss)	mg/L	110	-	-	-	-	0.05	18.7	18.3	19	18.8	19.8	20	23	22	21	21	22
Magnesium (diss)	mg/L	45	-	-	-	-	0.05	6.16	6.03	6.02	6.22	6.34	6.2	6.9	6.7	6.2	6.3	6.3
Potassium (diss)	mg/L	6.8	-	-	-	-	0.05	2.24	2.21	2.32	2.4	2.51	2.2	2.6	2.5	2.4	2.4	2.6
Sodium (diss)	mg/L	73.3	200	-	-	110.9	0.05	5.14	5.47	4.86	4.72	4.8	4.8	5.9	5.3	5	4.7	5.1
General Chemistry																		
Alkalinity (as CaCO3)	mg/L	173	30 - 500	See Factsheet	-	-	1	35	35	33	47	43	35	37	40	55	39	38
Ammonia as N	mg/L	0.23	-	-	-	-	0.02	<0.02	0.11	<0.02	<0.02	<0.02	0.059	<0.05	<0.05	<0.05	<0.05	<0.05
Chemical Oxygen Demand	mg/L	62	-	-	-	-	4	<5	<5	<5	11	<5	<4	4.9	<4	<4	<4	<4
Dissolved Organic Carbon	mg/L	9.9	5	-	-	-	0.4	2.4	1.4	1	1.1	1.1	0.7	1.1	1.3	0.9	1.2	1.9
Electrical Conductivity	uS/cm	1300	-	-	-	-	1	213	195	194	206	210	200	210	200	220	220	220
Hardness (as CaCO3)	mg/L	460	80 - 100	-	-	-	0.5	72.1	70.5	72.2	72.6	75.5	76	86	82	78	78	80
pH	pH units	8.26	6.5 - 8.5	6.5 - 8.5	-	-		7.48	7.24	7.01	7.51	7.58	7.6	7.68	7.78	7.55	7.57	7.7
Phenols	mg/L	0.01	-	0.001	-	-	0.001	<0.001	<0.001	0.002	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	1130	500	-	-	-	10	146	154	184	138	158	170	170	260	220	360	225
Total Kjeldahl Nitrogen	mg/L	2.92	-	-	-	-	0.1	0.17	0.17	<0.1	-	0.21	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Total Phosphorus	mg/L	16	-	0.02	-	-	0.02	4.41	3.05	4.16	2.25	6.06	1.8	2.1	3.3	2.6	16	7.4
Total Suspended Solids	mg/L	11000	-	-	-	-	10	2760	1390	2540	1890	1780	1800	1900	3800	2600	8200	11000
Turbidity	NTU	5560	5	-	-	-	0.1	3680	2280	462	236	1050	180	210	280	170	2000	4700
Metals																		
Aluminum (diss, 0.45 µm)	mg/L	0.606	0.1	-	Calculated	0.055	0.004	0.004	**0.279**	0.023	0.018	0.01	0.005	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049
Arsenic (diss)	mg/L	<0.003	0.01	-	0.005	-	0.001	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium (diss)	mg/L	0.12	1	-	-	-	0.002	0.016	0.021	0.016	0.017	0.014	0.016	0.017	0.016	0.017	0.017	0.016
Beryllium (diss)	mg/L	<0.001	-	Calculated	-	-	0.0004	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004
Boron (diss)	mg/L	0.157	5	-	0.2	1.25375	0.01	<0.01	0.012	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.015
Cadmium (diss)	mg/L	0.0002	0.005	-	Calculated	-	0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (diss)	mg/L	0.01	0.05	-	-	-	0.002	<0.003	<0.003	<0.003	<0.002	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt (diss)	mg/L	**0.018**	-	-	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
Copper (diss)	mg/L	0.0054	1	-	Calculated	0.5005	0.0009	<0.002	0.002	<0.002	0.001	<0.001	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009
Iron (diss)	mg/L	1.1	0.3	0.3	-	0.16975	0.01	<0.01	0.319	<0.01	<0.01	0.03	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Lead (diss)	mg/L	<0.001	0.01	-	Calculated	-	0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (diss)	mg/L	0.309	0.05	-	-	0.0255	0.002	0.225	0.102	0.18	0.206	0.071	0.19	0.16	0.09	0.062	0.15	0.23
Mercury (diss)	mg/L	<0.0001	0.001	0.0002	-	-	0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum (diss)	mg/L	0.023	-	-	0.04	-	0.0005	<0.002	<0.002	0.002	<0.002	<0.002	0.0022	0.0022	0.002	0.002	0.0019	0.0021
Nickel (diss)	mg/L	0.0098	-	0.025	-	-	0.001	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Selenium (diss)	mg/L	0.039	0.05	0.1	-	-	0.001	<0.004	<0.004	<0.004	<0.001	<0.001	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silicon (diss)	mg/L	18.766	-	-	-	-	0.05	8.51	9.13	7.85	8.84	8.75	7.9	9.8	9	8	8.1	8.7
Silver (diss)	mg/L	0.0036	-	0.0001	-	-	0.00009	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Strontium (diss)	mg/L	1	-	-	-	-	0.001	0.091	0.107	0.106	0.111	0.099	0.11	0.1	0.11	0.11	0.11	0.11
Thallium (diss)	mg/L	<0.0003	-	-	0.0003	-	0.00005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005	<0.00005
Titanium (diss)	mg/L	0.047	-	-	-	-	0.002	<0.002	0.014	<0.002	0.003	<0.002	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Vanadium (diss)	mg/L	0.0042	-	-	0.006	-	0.0005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00051
Zinc (diss)	mg/L	**0.066**	5	-	0.02	-	0.005	<0.005	**0.066**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Zirconium (diss)	mg/L	<0.001	-	-	0.004	-	0.001	-	-	-	-	-	<0.001	-	-	-	-	-

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds ODWQS-ALL-MERGED	Ontario Drinking Water Quality Standards All Types Merged
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds RUV-NB	Reasonable Use Values North Baptiste

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.

Result — Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Appendix F

F-2 Historical Surface Water Chemistry

Hastings Highlands Analytical Chemistry Results:							Location	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A2	MCG-A2
							Sample ID	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A	MCG-A2	MCG-A2
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2015-May-04	2016-Apr-28	2016-Aug-17	2017-May-10	2017-Jul-20	2018-May-07	2019-May-07	2020-May-07	2022-May-03	2023-May-03	2024-Apr-29	2024-Jul-11	2025-May-07	2025-Jul-07	2015-May-04	2016-Apr-28
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	4.12	4.26	8.56	2.03	4.5	3.64	3.04	-	5.43	1.3	1.5	<1	3.3	7.7	0.67	0.39
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	0.15	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	-	-	-	-	0.06	-	<0.05	-	<0.05	<0.05	<0.1	<0.1	<0.1	0.15	-	-
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	-	-	-	-	-	-	<0.05	-	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	-	-
Sulphate	mg/L	**186**	-	-	100	-	0.1	9.4	6.02	14.4	4.69	5.93	4.21	4.42	-	4.08	2.49	2.6	1.5	2	5.2	4.25	3.84
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	6.43	4.39	10.8	3.15	7.3	3.31	3.19	-	4.54	1.53	2.9	1.9	3.7	8.7	2.38	1.79
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	0.65	0.47	0.79	0.38	0.7	0.39	0.36	-	0.42	0.24	0.31	0.26	0.38	0.89	0.39	0.31
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	0.68	0.43	1.54	0.4	0.81	0.38	0.39	-	<1.15	<0.5	0.34	0.29	0.36	0.94	0.4	0.26
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	3.57	2.57	10.3	2.01	4.37	2.63	2.77	-	3.88	1.43	2.3	1.1	3	7.1	1.09	0.81
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	6.09	4.97	6.67	6.18	-	-
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	7.4	14.8	10.4	14.8	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	10	8	38	12	26	8	-	10	8	7	7.9	9.6	12	26	-	-
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	-	-	-	-	-	0.15	<0.02	-	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	0.07	-
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	-	-	-	-	-	-	<5	-	<2	<2	<2	3	<2	<2	-	-
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	10	8	17	10	35	10	<5	-	9.07	9	7	23	8	24	10	7
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		7.52	12.64	8.49	12.83	6.78	9.08	-	-	-	-	-	-	-	-	5.82	10.05
Electrical Conductivity	uS/cm	992	-	-	-	-	1	62	48	124	41	76	39	40	-	51	25	31	29	44	96	24	19
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	18.7	12.9	30.2	9.4	21.1	9.9	9.4	-	13.1	4.8	9.5	6.2	11	27	7.5	5.7
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.28	6.57	7.54	8.58	7	6.17	6.45	-	6.5	6.92	6.96	6.97	7.23	7.13	6.45	**5.78**
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-
Total Dissolved Solids	mg/L	632	-	-	-	-	10	40	38	80	28	54	20	28	-	<10	36	30	25	45	65	22	22
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.19	0.13	0.21	0.17	0.18	0.37	<0.1	-	0.11	<0.1	0.11	0.23	0.13	0.24	0.24	0.13
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	-	-	-	-	0.02	-	0.09	-	<0.02	<0.02	<0.02	0.021	<0.02	<0.02	-	-
Total Suspended Solids	mg/L	11000	-	-	-	-	10	-	-	-	-	-	-	<10	-	<10	<10	<10	<10	<10	<10	17	21
Turbidity	NTU	7310	-	-	-	-	0.1	0.6	259	0.8	-	5.8	0.5	0.9	-	0.5	0.7	0.2	1	-	-	3.4	7.9
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	0.00002	0.000001	0.000027	0.000002	0.000055	0.0000369	-	-	-	<0.000002	<0.00061	<0.00061	<0.00061	<0.00061	0.00009	0.0000001
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	0.038	0.095	0.07	0.21	0.04	0.029	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.049	0.066	0.044	0.083	0.037	0.072	0.071	-	-	-	-	-	-	-	0.074	0.092
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	-	-	-	-	-	-	-	-	-	-	0.067	0.25	0.071	0.05	-	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	-	-	-	-	<0.003	<0.003	<0.001	<0.001	-	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	-	-	0.017	-	-	-	-	-	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	-	-
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	-	-
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	-	-	-	-	-	-	<0.003	-	<0.003	<0.003	<0.005	<0.005	<0.005	<0.005	-	-
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	-	-	-	-	0.0013	-	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00091	-	-
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	-	-	0.002	-	-	-	<0.002	-	<0.002	0.001	0.001	0.0014	0.00098	0.0013	-	-
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	0.12	0.07	0.21	0.03	**3.24**	0.17	0.17	-	0.49	0.085	<0.1	0.13	0.45	**1.8**	**1.15**	0.48
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	-	-	-	-	-	-	<0.001	-	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	-	-
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	-	-	-	-	-	-	0.037	0.003	0.0042	0.013	0.032	0.14	-	-
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	-	-	-	-	<0.003	-	<0.003	0.005	<0.001	<0.001	-	-	-	-
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	-	-	-	-	-	-	<0.004	-	<0.002	<0.002	<0.002	<0.002	-	-	-	-
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	-	-	-	<0.0001	-	<0.0001	<0.0001	<0.00009	<0.00009	-	-	-	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	0.006	0.011	0.008	-	0.01	0.006	<0.005	-	<0.02	<0.02	<0.005	0.0079	<0.005	0.0067	-	0.008

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B
							Sample ID	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-A2	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2017-May-10	2017-Jul-20	2018-May-07	2019-May-07	2020-May-06	2021-Apr-20	2021-Jul-14	2015-May-04	2015-Sep-09	2015-Oct-26	2016-Apr-28	2016-Aug-17	2016-Oct-26	2017-May-10	2017-Jul-20	2017-Oct-23
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	0.24	0.25	0.24	0.8	0.38	0.34	0.19	43.7	37.6	44.3	36.4	30.1	34.6	21.8	29.2	27.8
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-			-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	-	-	-	<0.05	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-
Sulphate	mg/L	**186**	-	-	100	-	0.1	3.76	3.56	3.16	2.93	3.03	2.97	2.65	**141**	17.4	**158**	94.8	**186**	31.9	**111**	57.1	41
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	1.56	2.16	1.59	1.84	1.61	1.7	1.84	98.1	73.6	108	93	132	90.9	104	115	118
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	0.28	0.34	0.29	0.27	<0.25	0.35	0.3	18.5	15.2	23.8	15.4	22.7	17.3	15.2	18.6	21
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	0.26	0.27	0.23	0.3	0.38	<0.58	<0.58	17.9	21.5	25.9	13.3	21.1	17.3	13.4	17	21.7
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	0.78	1.07	0.76	1.08	0.85	0.98	1.08	27.8	21.8	25.8	21.9	33	17.5	22.2	22.5	22.5
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	-	8	-	5	<5	<5	6	222	226	258	218	297	305	246	365	384
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	-	-	0.09	<0.02	0.02	<0.02	<0.02	0.28	0.12	0.22	0.12	0.23	0.58	0.13	0.39	0.82
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	-	-	-	<5	-	<2	<6	-	-	-	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	<5	-	-	-	14	45	-	21	76	-	-	69
Colour	TCU	540	-	-	-	-	2	10	7	10	7	-	8	9	14	98	27	12	28	17	10	23	18
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		10.75	4.93	9.48	-	-	-	-	0.87	-	-	3.41	0.68	1.48	1.55	0.24	1.98
Electrical Conductivity	uS/cm	992	-	-	-	-	1	19	24	17	21	21	19	18	813	592	859	704	992	688	797	858	733
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	5	6.8	5.2	5.7	4.5	5.7	5.8	321	246	368	296	423	298	322	364	381
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		6.65	6.4	**5.85**	6.12	**5.99**	**5.98**	6.41	7.43	7.66	7.81	7.67	7.98	7.9	8.12	8.16	7.96
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	-	-	-	<0.001	<0.001	<0.001	<0.001	-	0.005	0.026	-	-	0.027	-	-	0.019
Total Dissolved Solids	mg/L	632	-	-	-	-	10	-	26	-	24	<20	32	28	488	330	528	404	632	390	418	388	500
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.16	0.36	0.37	<0.1	0.2	0.18	<0.1	1.85	3.6	9.46	1.29	4.58	4.02	0.65	1.92	4.83
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	-	0.13	0.02	<0.02	<0.02	<0.02	<0.02	0.11	0.66	1.49	0.06	0.52	3.37	0.21	0.44	7.66
Total Suspended Solids	mg/L	11000	-	-	-	-	10	-	415	30	<10	24	<10	<10	59	208	206	50	176	2480	37	188	2570
Turbidity	NTU	7310	-	-	-	-	0.1	-	147	1.6	0.7	4.6	1.2	0.8	77.9	49.9	29.5	33.7	21.2	510	58.2	112	5040
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	0.0000002	0.0000028	0.0000015	-	-	-	-	0.00047	0.00187	0.00026	0.000014	0.000213	0.00028	0.000079	0.000821	0.000781
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.106	0.07	0.111	0.082	0.114	0.094	0.096	0.004	0.007	-	-	0.008	0.016	-	0.008	0.019
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	-	-	-	-	0.173	0.131	0.159	-	-	-	-	-	-	-	-	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	<0.003	<0.003	<0.003	-	-	-	-	-	-	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	-	-	-	-	<0.01	0.011	<0.01	0.16	0.335	0.28	0.182	0.332	0.295	0.149	0.199	0.291
Cadmium (tot)	mg/L	**0.0128**	-	Calculated	0.00021	0.000017	0.00009	-	-	-	-	<0.0001	<0.0001	<0.0001	-	-	0.0002	-	-	**0.0017**	0.0002	0.0002	**0.0018**
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	-	-	-	<0.003	<0.003	<0.003	<0.003	-	-	-	-	-	0.005	-	0.007	0.009
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	-	0.0037	-	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	0.0021	-	0.0006	0.0037
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	-	0.005	-	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	0.003	0.003	-
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	-	**34.9**	0.07	0.05	0.042	0.036	0.052	**14.8**	**6**	**8.71**	**9.17**	**3.37**	**45.5**	**13**	**28.8**	**44**
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	-	0.002	-	<0.001	<0.001	<0.001	<0.001	-	-	0.001	-	-	**0.019**	0.001	0.002	**0.036**
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	-	-	0.007	-	-	-	-	-	-	-	-	-	-	-
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	-	<0.003	<0.003	<0.003	<0.003	-	0.003	0.005	-	-	0.006	-	-	0.008
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	-	-	-	<0.004	<0.004	<0.004	<0.002	-	-	0.014	-	-	0.022	-	-	0.086
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	3.62	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	0.0002	-	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	0.012	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	<0.0003	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	-	0.021	0.006	<0.005	<0.005	0.006	<0.005	0.026	0.027	**0.11**	0.042	0.032	**0.443**	**0.111**	0.026	**0.386**

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B
							Sample ID	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B	MCG-B
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2018-May-07	2018-Jul-30	2018-Oct-22	2019-May-07	2019-Aug-14	2019-Oct-24	2020-May-06	2020-Oct-06	2021-Apr-20	2021-Jul-14	2022-May-03	2023-May-03	2024-Apr-29	2024-Jul-11	2024-Oct-29	2025-May-07
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	46.3	42.5	38	33.6	33	47.3	31.7	47.8	25.6	27.3	17.4	9.78	12	8.4	13	7.4
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	-	-	-	<0.1	<0.05	<0.05	<0.25	<0.1	<0.1	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	-	-	-	<0.1	<0.05	<0.05	<0.25	<0.1	<0.1	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	**186**	-	-	100	-	0.1	71.1	55.1	80.3	64.5	6.22	37.9	53.4	15.9	44.6	14.4	44.1	50.2	28	55	24	32
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	69.4	70.9	125	86.2	30	76.2	85.39	100.49	109	116	102	88.4	94	130	88	110
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	10.8	13.5	22.1	13.7	6.37	14.6	15.39	18	19.7	20.4	16.2	11.6	14	25	13	14
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	9.49	10.3	22.2	12.9	4.04	15.2	14.46	20.94	18	21.4	17.7	13.3	19	18	17	14
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	32.9	24.7	27.3	28.3	11.6	22	21.23	23.17	24.3	21.7	21.7	13.4	19	21	18	15
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	6.74	6.35	-	6.74
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	9.2	14.1	-	12.9
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	187	157	330	299	79	228	236	338	296	426	261	279	290	440	300	300
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	0.05	0.57	0.55	0.13	0.41	0.42	0.05	0.12	<0.02	0.1	<0.02	0.03	0.18	<0.05	0.55	0.24
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	-	-	-	<5	13	17	-	5	2	14	2	<2	<2	<2	29	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	8	50	7	-	-	-	23	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	19	9	8	8	49	13	-	19	17	34	13.1	27.8	11	20	23	8
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		2.99	3.32	6.68	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	603	551	979	684	304	680	805	730	776	782	654	622	640	940	620	660
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	218	233	403	272	101	250	277	325	353	374	321	269	310	460	290	320
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.38	7.81	7.7	7.63	7.21	7.69	7.27	7.93	7.5	7.64	7.17	7.61	7.5	7.94	7.58	7.5
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	0.002	0.006	0.011	0.002	0.016	0.031	0.003	0.025	0.004	0.006	0.014	0.0012	0.0013	0.0011	0.0019	0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	348	344	590	380	166	376	408	434	462	472	376	384	385	520	405	405
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	4.58	12	0.84	0.64	2.93	1.89	0.46	1.82	0.54	1.68	0.7	0.33	0.65	0.71	1.2	0.55
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.52	2.21	0.68	0.18	0.76	1.24	0.02	0.37	0.05	0.48	0.1	0.05	0.077	0.12	0.32	0.073
Total Suspended Solids	mg/L	11000	-	-	-	-	10	172	346	461	<10	60	630	<10	169	10	12	50	<10	34	23	320	19
Turbidity	NTU	7310	-	-	-	-	0.1	54.3	63.6	249	31.8	63	184	10.1	125	12.8	94.6	9	9.9	11	4.4	-	-
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	0.000037	0.000317	0.000121	-	-	-	-	-	-	-	-	0.000035	<0.00061	<0.00061	<0.00061	<0.00061
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	-	-	0.005	<0.004	<0.005	0.005	<0.005	<0.005
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	-	0.009	0.015	<0.004	0.006	0.132	0.032	0.011	<0.004	0.004	-	-	-	-	-	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	-	-	-	-	-	-	0.011	1.83	0.014	0.145	-	-	0.012	0.056	0.8	0.0084
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	0.067	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	0.179	0.863	0.141	-	-	-	0.133	0.161	0.184	0.2	0.164	0.184	0.18	0.35	0.16	0.16
Cadmium (tot)	mg/L	**0.0128**	-	Calculated	0.00021	0.000017	0.00009	**0.0003**	**0.0003**	-	-	-	-	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	0.00015	0.00083	<0.00009
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	0.004	-	-	<0.003	<0.003	<0.003	0.014	<0.003	<0.003	<0.003	<0.003	<0.003	<0.005	<0.005	<0.005	<0.005
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	0.0005	-	0.0027	<0.0005	<0.0005	0.0006	0.0006	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00085	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	0.002	0.002	**0.01**	<0.002	<0.002	0.004	0.004	0.003	<0.002	<0.002	<0.002	<0.001	<0.0009	0.0041	0.0091	<0.0009
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**11.2**	**14.8**	**15.2**	**5.35**	**8.3**	**10.6**	**1.57**	**16.9**	**2.97**	**18.1**	**7.06**	**2.31**	**14**	**4.2**	**47**	**16**
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	0.008	0.001	0.002	<0.001	<0.001	**0.003**	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.0005	<0.0005	**0.0035**	<0.0005
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	-	-	-	-	0.414	-	-	-	0.938	0.385	0.92	0.4	0.96	1.1
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	-	<0.003	<0.003	<0.003	0.013	<0.003	<0.003	0.004	<0.003	<0.003	<0.001	0.003	0.004	-
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	0.033	0.037	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	8.73	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	0.456	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	<0.0003	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	0.067	0.085	0.014	0.034	0.023	0.031	0.019	0.063	0.021	0.018	<0.02	0.057	0.007	0.13	0.31	0.011

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-B	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C
							Sample ID	MCG-B	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2025-Jul-07	2015-May-04	2015-Sep-09	2015-Oct-26	2016-Apr-28	2016-Aug-17	2016-Oct-26	2017-May-10	2018-May-07	2019-May-07	2020-May-06	2020-Oct-06	2021-Apr-20	2021-Jul-14	2021-Oct-18	2022-May-03
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	7.8	36.2	64	67.3	32.7	36	46.9	25.9	19	16.9	16.9	37.9	33.3	12.5	13.1	8.42
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	<0.1	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.01	-	-	-	-	-	-	-	-	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05
Sulphate	mg/L	**186**	-	-	100	-	0.1	3.3	54.3	93.9	78.5	62.4	85.8	67.2	63.6	21.6	35.4	21.3	12	25.1	3.57	2.47	17.2
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	74	30.9	45.9	36.7	44.3	35.6	38.3	53.4	28.2	34	28.73	47.16	57.3	32.6	26.5	17.5
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	10	7.85	11	8.9	9.9	8.37	9.16	11.6	6.58	7.69	7.41	10.41	13.7	9.63	8.23	4.85
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	13	14.2	16	14.6	16.9	13.1	11.6	20.2	11.3	11.1	8.44	13.52	20.2	4.88	6.37	3.73
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	17	44.6	79.8	61.7	44.5	58.1	42.5	45.3	25.7	23.8	21.05	37.39	40.2	15.3	13.5	10.3
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		6.74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		16.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	290	112	115	107	166	107	113	197	130	148	110	185	209	129	104	53
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	0.28	-	-	-	-	-	0.07	0.03	0.07	0.02	<0.02	<0.02	<0.02	0.02	0.06	<0.02
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	3	-	-	-	-	-	-	-	-	<5	-	<5	<2	<6	5	2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	7	-	-	-	50	42	8	-	57	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	13	98	219	126	65	197	147	82	93	35	-	110	60	249	366	117
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	18.8	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	4.81	-	-	6.52	3.15	0.91	9.06	1.9	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	580	459	603	566	548	536	517	640	331	375	384	457	611	285	224	181
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	260	109	160	128	151	123	133	181	97.5	117	102	161	199	121	100	63.7
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.43	7.73	7.81	7.53	7.66	7.78	7.58	8.07	7.35	7.46	7.53	7.72	8.02	7.41	7.27	7.01
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	0.011	-	0.001	-	-	-	-	-	0.002	0.001	0.001	0.002	0.002	0.005	0.003	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	325	284	438	368	326	372	352	380	188	222	196	312	370	228	230	132
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.71	1.67	7.42	1.84	11.2	1.57	10.4	1.85	2.39	0.68	0.91	1.34	0.82	1.2	1.23	0.73
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.071	-	0.28	0.25	0.48	0.05	3.15	1.18	0.24	0.52	0.04	0.1	<0.02	0.1	0.05	0.04
Total Suspended Solids	mg/L	11000	-	-	-	-	10	65	23	328	221	300	204	2910	1170	56	172	<10	82	<10	<10	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	-	9.1	51.1	81	120	6.8	4570	124	112	85.2	10.3	45.7	4.9	5.6	6.2	1.3
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	<0.00061	0.00069	0.00007	0.00002	0.000013	0.000037	0.00003	0.000112	0.000359	-	-	-	-	-	-	-
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.036
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	-	0.012	0.02	0.014	0.008	0.021	0.021	0.01	0.013	0.012	0.01	0.013	0.005	0.057	0.043	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.0074	-	-	-	-	-	-	-	-	-	0.04	0.415	0.044	0.09	0.083	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	0.033	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	<0.001	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	0.14	0.207	0.613	0.348	0.398	0.656	0.345	0.337	0.264	0.341	0.191	0.262	0.306	0.17	0.128	0.174
Cadmium (tot)	mg/L	**0.0128**	-	Calculated	0.00021	0.000017	0.00009	<0.00009	-	-	0.0002	**0.0003**	-	0.0008	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.005	-	-	-	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	<0.0005	-	-	0.0005	0.0035	-	0.0024	0.0013	0.0008	0.0006	<0.0005	0.0022	0.0008	0.0019	0.0016	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.0009	-	-	-	0.004	-	0.002	-	-	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**19**	0.11	0.23	0.87	**4.35**	0.05	**8.82**	0.89	**1.16**	0.72	0.088	**1.36**	0.584	0.945	**2.47**	0.299
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<0.0005	-	0.001	**0.006**	**0.019**	-	**0.022**	**0.004**	**0.005**	**0.003**	<0.001	**0.003**	<0.001	<0.001	<0.001	<0.001
Manganese (tot)	mg/L	15	-	-	-	-	0.002	1	-	-	-	-	-	-	-	-	-	0.079	-	-	-	0.757	0.064
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	0.003	0.003	-	-	0.004	-	-	<0.003	<0.003	0.004	<0.003	<0.003	<0.003	<0.003
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	-	-	-	-	-	-	0.006	-	-	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.002
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	5.79	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	0.206	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	<0.0003	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	<0.002	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	0.0057	-	0.017	0.032	**0.091**	0.006	0.156	0.018	0.022	0.013	<0.005	0.02	0.018	0.01	<0.02	<0.02

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D
							Sample ID	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-C	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2022-Aug-04	2022-Oct-18	2023-May-03	2023-Aug-09	2023-Oct-19	2024-Apr-29	2024-Jul-11	2024-Oct-29	2025-May-07	2025-Jul-07	2015-Sep-09	2016-Apr-28	2016-Aug-17	2016-Oct-26	2017-May-10	2017-Oct-23
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	31.5	24.9	4.92	28	58	13	9	17	1.6	<20	43.5	1.3	166	1.35	6.1	0.08
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1		-	-	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	0.2	<0.1	<0.1	<0.1	<0.05	0.08	0.07	<0.05	<0.05	0.08
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	mg/L	**186**	-	-	100	-	0.1	4.56	14.9	15.3	2.9	10	11	8.4	3.1	1	25	18	6.72	10.3	22.2	7.14	8.85
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	49.3	28.6	13.3	51	54	20	16	24	7.2	33	6.74	2.31	4.21	7.9	2.49	3.79
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	11.5	9.64	4.58	13	14	5.7	4	6.3	2	8.4	1.91	0.73	1.25	2.28	0.82	1.26
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	3.79	8.66	2.9	4	14	3.6	5	4.2	1.4	0.88	2.12	0.47	0.47	2.17	0.51	0.67
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	24.4	23.9	7.82	21	35	9.9	11	9.4	3	11	3.44	1.52	1.74	3.33	1.7	2.1
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	6.38	6.43	6.61	6.27	-	6.64	6.62	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		-	-	-	16.6	8.2	9.1	16.7	-	13.4	20.4	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	142	83	40	180	170	97	60	84	16	120	12	-	6	17	-	6
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	<0.02	<0.02	<0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	0.48	-	-
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	10	<2	<2	4	<2	2	2	<2	<2	7	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	5	-	-	44	-	-
Colour	TCU	540	-	-	-	-	2	183	102	174	98	83	140	130	98	110	220	74	62	117	67	96	105
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-	-	-	-	8.25	2.1	1.99	10.96	0.2
Electrical Conductivity	uS/cm	992	-	-	-	-	1	355	268	136	420	540	250	170	220	52	260	75	30	48	101	35	44
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	170	111	52.1	180	190	110	59	97	20	120	24.7	8.8	15.7	29.1	9.6	14.7
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.43	7.21	7.24	7.6	7.93	7.71	7.46	7.49	6.89	7.5	6.97	**5.93**	6.31	6.91	6.27	6.37
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	0.005	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	0.005	-	-
Total Dissolved Solids	mg/L	632	-	-	-	-	10	268	224	134	250	270	170	150	155	85	215	72	36	88	88	32	68
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	1.3	1.06	0.84	0.77	0.91	0.63	0.76	0.57	0.55	1.1	2.37	0.34	6.08	6.25	0.48	12
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.16	<0.02	<0.02	0.026	0.025	<0.02	0.047	0.02	0.022	0.051	0.16	0.01	0.42	11	0.02	2.04
Total Suspended Solids	mg/L	11000	-	-	-	-	10	10	<10	<10	12	18	10	<10	<10	<10	16	224	-	1020	11000	-	1330
Turbidity	NTU	7310	-	-	-	-	0.1	3.5	2.6	0.9	0.8	0.5	0.7	1.5	-	-	-	-	-	-	7310	-	616
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	<0.000002	<0.000002	<0.000002	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	0.00002	0.000008	0.000001	0.00002	0.000001	0.000003
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	0.099	<0.005	0.008	0.018	0.12	0.016	0.074	0.019	-	-	-	-	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.009	0.015	-	-	-	-	-	-	-	-	0.103	0.142	0.231	0.089	0.187	0.153
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.029	0.039	-	0.014	0.024	0.034	0.17	0.029	0.079	0.03	0.103	0.142	0.231	0.089	0.187	0.153
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	0.356	0.241	0.181	0.19	0.22	0.1	0.18	0.06	0.034	0.18	<0.01	0.011	0.016	0.024	0.013	<0.01
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	0.0002	<0.0001	0.0006	0.0128	<0.0001	0.0011
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.003	<0.003	<0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	0.0009	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0014	0.0031	<0.0005	0.0047	0.0387	<0.0005	0.0075
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.002	<0.002	<0.001	<0.0009	<0.0009	<0.0009	0.0014	<0.0009	<0.0009	<0.0009	0.002	<0.002	0.005	0.004	<0.002	0.011
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**1.44**	0.331	0.551	0.74	0.39	0.41	0.35	0.88	0.73	**4.2**	**4.57**	0.09	**4.56**	**56.2**	0.17	**21.7**
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<0.001	<0.001	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	**0.004**	<0.001	**0.011**	**0.087**	<0.001	**0.029**
Manganese (tot)	mg/L	15	-	-	-	-	0.002	0.906	0.097	0.02	0.64	0.17	0.025	0.12	0.31	0.059	1.1	-	-	-	-	-	-
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	<0.0001	<0.0001	<0.0001	-	-	<0.0001	<0.0001	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.003	<0.003	<0.003	<0.001	0.0014	<0.001	0.001	<0.001	-	-	<0.003	<0.003	<0.003	0.029	<0.003	0.004
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	<0.004	<0.004	<0.004	0.005	<0.004	<0.004
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	<0.0001	<0.0001	<0.0001	<0.001	0.0001	<0.0001
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	<0.02	<0.02	<0.02	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.013	0.006	0.035	0.768	<0.005	0.056

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D
							Sample ID	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D	MCG-D
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2018-May-07	2019-May-07	2020-May-06	2020-Oct-06	2021-Apr-20	2021-Jul-14	2021-Oct-18	2022-May-03	2022-Oct-18	2023-May-03	2023-Aug-09	2023-Oct-19	2024-Apr-29	2024-Jul-11	2024-Oct-29	2025-May-07
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	0.48	0.51	0.4	0.64	0.42	0.6	0.69	0.66	1.99	0.67	<20	1	<1	1	<1	<1
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	0.1	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	**186**	-	-	100	-	0.1	4.95	5.73	6.44	6.58	4.38	1.14	0.83	4.39	20.8	4.73	<20	9.3	6.7	<1	1.2	2.7
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	2.14	2.63	2.71	4.35	2.69	3.92	4.23	2.38	5.89	1.98	8	6.1	3.3	3.8	5	2.8
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	0.71	0.76	0.79	1.05	1.07	1.1	1.35	0.86	2.01	0.68	2.1	1.7	0.99	1	1.6	0.89
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	0.61	0.5	0.52	0.6	<0.58	<0.58	1.31	<1.15	0.67	<0.5	1.2	0.89	0.44	0.56	0.72	0.37
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	1.42	1.54	1.82	2.06	2.16	2.18	2.39	2.15	3.3	1.35	2.3	3.2	1.9	1.4	2	1.9
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	5.6	5.93	5.73	5.51	-	6.1
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	16.8	7.8	8.1	15.8	-	13.1
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	-	6	5	9	6	10	12	6	<5	<5	30	16	7	9.3	26	6.8
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	0.06	<0.02	0.04	0.07	<0.02	0.05	0.06	<0.02	0.05	<0.02	0.072	<0.05	<0.05	<0.05	0.056	<0.05
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	-	<5	-	6	<2	<6	10	<2	3	<2	12	3	<2	<2	3	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	41	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	95	41	-	122	110	249	186	80.7	34.8	102	150	96	97	220	100	95
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	12.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	28	31	39	37	33	32	33	30	72	32	66	67	32	35	56	29
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	8.3	9.7	10	15.2	11.1	14.3	16.1	9.5	23	7.7	29	24	12	14	22	11
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		**5.94**	6.08	6.37	6.41	6.26	6.62	6.45	6.14	6.13	6.26	6.58	7.02	6.53	6.38	6.84	6.53
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	-	0.001	0.002	<0.001	<0.001	0.002	0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	22	50	32	28	48	90	86	32	74	68	70	115	45	90	40	35
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.66	0.18	0.59	1.35	0.56	1.14	1.6	0.39	0.78	0.38	1.1	0.97	0.44	0.85	0.68	0.41
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.09	0.02	0.06	0.05	<0.02	0.1	0.79	<0.02	<0.02	0.03	0.2	0.097	<0.02	0.11	0.099	0.023
Total Suspended Solids	mg/L	11000	-	-	-	-	10	47	<10	20	1170	<10	<10	96	11	26	<10	47	40	<10	27	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	0.8	0.9	7.2	54.4	2.6	2.3	49.1	<0.5	24.5	0.6	5.1	1.6	0.5	2.4	-	-
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	0.000018	-	-	-	-	-	-	-	0.000005	<0.000002	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	0.138	-	0.187	0.098	0.098	0.23	0.37	0.1	0.17
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.147	0.167	0.173	0.302	0.237	0.424	0.226	-	0.073	-	-	-	-	-	-	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.147	-	0.372	1.17	0.255	0.559	0.938	-	0.517	-	0.2	0.26	0.26	0.6	0.14	0.18
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	<0.003	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	<0.001	<0.001	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	0.014	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	<0.01	-	<0.01	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	0.014	<0.01	<0.01	<0.01	0.011	<0.01	<0.01
Cadmium (tot)	mg/L	**0.0128**	-	Calculated	0.00021	0.000017	0.00009	<0.0001	-	<0.0001	0.0002	<0.0001	<0.0001	0.0001	<0.0001	0.0001	<0.0001	<0.00009	<0.00009	<0.00009	0.00013	<0.00009	<0.00009
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	0.0017	<0.0005	<0.0005	0.0022	<0.0005	0.0009	0.002	<0.0005	0.0018	<0.0005	0.0028	0.0015	<0.0005	0.0016	0.0055	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	0.002	<0.002	0.002	0.004	<0.002	0.002	0.004	<0.002	0.002	0.001	<0.0009	0.0013	0.0017	0.0024	<0.0009	0.0014
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**1.15**	0.19	0.669	**4.7**	0.392	**1.62**	**9.16**	0.337	**2.31**	0.271	**4.1**	**1.7**	0.43	**2**	**3.9**	0.51
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	0.003	<0.001	<0.001	0.005	<0.001	<0.001	0.004	<0.001	0.003	<0.001	0.00074	0.00081	<0.0005	0.0015	<0.0005	<0.0005
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	0.103	-	-	-	0.521	0.05	0.464	0.014	1.2	0.47	0.076	0.4	2.7	0.047
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	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	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.003	<0.003	<0.003	<0.003	<0.001	<0.001	<0.001	0.0011	<0.001	-
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	2.79	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	<0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	0.012	<0.005	0.006	0.017	0.008	0.024	<0.02	<0.02	<0.02	<0.02	<0.005	0.0082	0.007	0.013	<0.005	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-D	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E
							Sample ID	MCG-D	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	AQC SW-S19 (M
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2025-Jul-07	2015-May-04	2015-Sep-09	2015-Oct-26	2016-Apr-28	2016-Aug-17	2016-Oct-26	2017-May-10	2017-Jul-20	2017-Oct-23	2018-May-07	2018-Jul-30	2018-Oct-22	2019-May-07	2019-May-07
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit															
Chloride	mg/L	166	-	-	180	128	0.1	<20	51.6	62.6	79.6	28.6	37.7	70	34.9	52	55.6	29.9	73	74.4	31	30.9
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	<0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	<0.5	0.08	0.09	-	-	0.14	0.06	0.05	0.11	0.06	0.07	0.12	-	<0.05	<0.05
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.05	-	-	-	-	-	-	-	-	-	-	-	-	<0.05	<0.05
Sulphate	mg/L	**186**	-	-	100	-	0.1	20	7.16	7.65	9.6	5.85	7.44	10.4	5.78	4.6	5.83	4.62	7.6	8.1	5.17	5.07
Cations																						
Calcium (tot)	mg/L	132	-	-	-	-	0.05	18	8.85	13.3	13	5.27	6.13	13.5	5.49	9.09	10.3	4.88	13	12.7	5.45	5.41
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	4.1	1.52	2.38	2.45	0.92	1.22	2.68	0.95	1.61	1.94	0.86	2.25	2.3	0.89	0.89
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	2.2	1.1	1.83	1.64	0.64	1.03	1.42	0.76	0.81	1.25	0.66	1.2	1.25	0.65	0.66
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	2.7	29.3	40.2	37.8	16.9	24.8	35.1	21.5	29.9	33.3	17.9	39.5	40.8	18.3	18.3
Field Parameters																						
pH (Field)	pH units	7.61	-	-	-	-		6.43	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		18.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry																						
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	71	13	24	24	9	12	25	11	28	26	11	24	21	12	12
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	1.4	-	-	-	0.06	-	-	-	-	0.16	0.06	-	-	<0.02	<0.02
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	39	-	-	-	-	-	-	-	-	-	-	-	-	<5	<5
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	540	33	52	30	32	75	26	44	84	46	39	10	10	15	14
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	7.85	-	-	13.15	9.55	11.52	14	8.74	10.29	11.36	7.47	13.71	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	140	222	273	304	136	180	310	174	231	221	133	324	333	144	145
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	49	28.4	43	42.6	16.9	20.3	44.7	17.6	29.3	33.7	15.7	41.6	41.2	17.3	17.2
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		6.92	7.22	7.55	6.95	6.31	7.22	7.43	7.35	7	7.18	6.25	7.12	6.84	6.56	6.63
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	0.002	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	135	120	152	168	78	112	162	86	112	132	70	170	178	86	72
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	4.9	0.29	0.27	0.21	0.25	0.56	0.14	0.25	0.32	0.3	0.47	0.25	-	<0.1	<0.1
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	2.1	-	-	0.01	0.01	0.03	-	0.01	0.03	0.02	0.05	-	-	<0.02	<0.02
Total Suspended Solids	mg/L	11000	-	-	-	-	10	520	-	-	-	-	13	-	-	-	-	-	-	-	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	-	3.4	1.8	0.6	1.4	4.3	-	0.8	2.1	1.5	1.2	3.5	4.9	1.3	1.4
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	0.0016	0.00003	0.00009	0.00004	0.000007	0.000057	0.00003	0.0000119	0.000251	0.0006	0.0000276	0.0001083	0.0000203	-	-
Metals																						
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	0.079	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	-	0.034	0.018	0.014	0.06	0.081	0.01	0.07	0.036	0.018	0.065	0.016	0.014	0.052	0.053
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	2.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	<0.01	-	-	-	-	0.013	-	-	-	-	-	-	-	-	-
Cadmium (tot)	mg/L	**0.0128**	-	Calculated	0.00021	0.000017	0.00009	0.00046	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	<0.003	<0.003
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	0.044	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	0.0064	-	-	-	-	-	-	-	-	-	-	-	-	<0.002	<0.002
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**98**	0.18	0.3	0.01	0.11	0.42	0.08	0.1	0.69	0.27	0.15	0.42	0.12	0.1	0.12
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	0.011	-	-	-	-	-	-	-	-	-	-	-	-	<0.001	<0.001
Manganese (tot)	mg/L	15	-	-	-	-	0.002	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.003	<0.003
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004	<0.004
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001	<0.0001
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	0.043	-	-	-	0.007	-	-	-	0.005	-	-	-	-	<0.005	<0.005

MCG-E	MCG-E	MCG-E
MCG-E	MCG-E	MCG-E
2019-Aug-14	-	
68		
-		
0.14		
<0.05		
8.8		
14.2		
2.53		
1.41		
35		
-		
-		
30		
<0.02		
<5		
-		
34		
-		
-		
328		
45.9		
7.22		
<0.001		
150		
0.1		
0.03		
<10		
0.8		
-		
-		
0.011		
-		
-		
-		
-		
-		
-		
-		
<0.003		
<0.0005		
<0.002		
0.18		
<0.001		
-		
<0.0001		
-		
-		
<0.003		
<0.004		
-		
<0.0001		
-		
-		
-		
-		
<0.005		

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E
							Sample ID	AQC SW-SU19 (M	MCG-E	AQC SW-F19 (M	MCG-E	AQC SW-S20 (M	MCG-E	AQC SW-SU20 (M	MCG-E	AQC SW-F20 (M	MCG-E	AQC SW-21 (MC	MCG-E	MCG-E	MCG-E	MCG-E	AQC SW-SU22 (M
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2019-Aug-14	2019-Oct-24	2019-Oct-24	2020-May-06	2020-May-06	2020-Aug-25	2020-Aug-25	2020-Oct-06	2020-Oct-06	2021-Apr-20	2021-Apr-20	2021-Jul-14	2021-Oct-18	2022-May-03	2022-Aug-04	2022-Aug-04
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	67.8	74.6	74.7	35	35.7	74.6	74.6	53.7	53.7	34.8	34.8	32.7	35.5	32.4	70.3	70.3
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	0.15	0.21	0.2	<0.05	0.05	0.12	0.13	<0.05	<0.05	0.07	0.07	0.06	<0.05	0.07	0.17	0.17
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<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
Sulphate	mg/L	**186**	-	-	100	-	0.1	8.53	14.4	14.7	6.16	5.93	7.43	6.75	5.51	5.51	5.07	5.05	3.34	4.46	4.99	5.81	5.8
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	14.2	13.5	13.5	6.19	6.76	14.79	14.34	8.54	8.68	7.15	7.01	7.17	8.98	6.25	12.8	13
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	2.52	2.46	2.48	1.04	1.12	2.68	2.53	1.4	1.46	1.34	1.33	1.17	1.5	1.15	2.26	2.34
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	1.41	1.52	1.52	0.77	0.81	1.56	1.43	1.13	1.08	0.72	0.77	0.71	1.11	<1.15	1.49	1.33
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	34.8	44.3	43.9	19.56	21.2	47.09	45.43	29.91	30.08	23.2	22.7	20.6	22.9	19.4	43.1	46.5
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	27	21	20	10	10	31	30	21	33	12	12	20	26	11	33	28
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	<0.02	0.09	0.1	0.04	0.04	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.12	<0.02	<0.02	<0.02
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	<5	<5	<5	-	-	<2	<2	<5	<5	<2	<2	<6	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	8	6	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	32	40	39	-	-	42	43	66	65	35	37	83	58	27.4	68.8	69.6
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	5.7	5.6	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	329	383	338	200	201	318	317	217	218	173	174	156	176	155	283	284
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	45.8	43.8	43.9	19.7	21.5	48	46.2	27.1	27.7	23.4	23	22.7	28.6	20.3	41.3	42.1
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.23	6.95	7.46	6.76	6.84	6.53	6.52	6.59	6.63	6.94	7.02	6.83	6.94	6.49	7.57	7.11
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	<0.001	0.004	0.002	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
Total Dissolved Solids	mg/L	632	-	-	-	-	10	160	178	210	82	90	202	196	126	130	112	110	102	106	68	174	170
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	<0.1	0.27	0.26	0.32	0.33	0.3	0.32	0.36	0.38	0.28	0.29	0.29	0.26	0.17	0.47	0.43
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	0.03	<0.02	<0.02	0.06	0.06
Total Suspended Solids	mg/L	11000	-	-	-	-	10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	0.9	1.2	1	0.9	1.4	4.3	1.3	1.1	0.9	1.5	1.2	2.3	1.3	0.7	3.3	3
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.000002	<0.000002
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	0.033	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.012	0.023	0.027	0.058	0.058	0.018	0.018	0.042	0.039	0.036	0.047	0.065	0.038	-	0.035	0.035
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	-	-	-	0.086	0.092	0.072	0.057	0.031	0.103	0.085	0.088	0.169	0.078	-	0.064	0.146
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	0.019	0.021	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	-	-	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.017	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.008	<0.003	<0.003	<0.003
Cobalt (tot)	mg/L	0.044	-	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	<0.0005	<0.0005	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	0.18	0.21	0.2	0.169	0.197	0.469	0.47	0.286	0.312	0.23	0.254	0.831	0.576	0.266	**1.69**	**1.64**
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<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
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	-	0.01	0.012	-	-	-	-	-	-	-	0.014	0.017	0.036	0.03
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	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
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.007	0.003	<0.003	<0.003	<0.003
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	0.003	<0.002	<0.002	<0.002	<0.002
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	2.47	2.76	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<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
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	0.046	0.054	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	<0.0003	<0.0003	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	<0.002	0.002	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.005	<0.005	<0.02	<0.02	<0.02	<0.02

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E	MCG-E
							Sample ID	MCG-E	AQC SW-F22 (M	MCG-E	QAQC-SW1 (MC	MCG-E	3-QAQC-1 (MCG	MCG-E	QAQC-SW1 (MC	MCG-E	QAQC-SW1 (MC	MCG-E	QAQC-SW1 (MC	MCG-E	QAQC-SW1 (MC	MCG-E	MCG-E
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2022-Oct-18	2022-Oct-18	2023-May-03	2023-May-03	2023-Aug-09	2023-Aug-09	2023-Oct-19	2023-Oct-19	2024-Apr-29	2024-Jul-11	2024-Jul-11	2024-Oct-29	2024-Oct-29	2025-May-07	2025-May-07	2025-Jul-07
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	58.9	57.7	20.4	-	53	54	62	56	27	13	13	38	38	21	21	43
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	0.17	0.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.18
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	0.05	0.06	0.05	-	0.17	0.17	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.18
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.05	<0.05	<0.05	-	<0.01	<0.01	<0.01	0.013	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	**186**	-	-	100	-	0.1	6.39	6.83	3.77	-	6.1	6.2	9	8.5	6.6	1.1	1.5	5.9	6.2	3.7	3.2	5.7
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	10.9	9.25	3.21	-	12	12	13	12	6	3.8	3.7	9	8.7	5.7	5.6	10
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	2.31	2.23	0.73	-	2.1	2.1	2.4	2.3	1.1	0.71	0.67	1.6	1.6	0.92	0.92	1.6
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	1.9	1.47	0.71	-	1.1	1.1	1.5	1.4	0.67	0.65	0.62	0.94	0.95	0.59	0.59	0.91
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	45.1	37.5	15.3	-	36	36	41	41	19	9.7	9.3	24	24	17	16	31
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	6.55	6.55	6.97	6.97	7	5.48	5.48	-	-	7.35	7.35	6.96
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	15	15	6.7	6.7	8.1	16.4	16.4	-	-	12.8	12.8	17.7
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	23	24	11	-	30	30	27	26	14	14	10	27	25	14	14	27
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	<0.02	<0.02	<0.02	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	<2	<2	<2	-	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	50.3	50.6	47.9	-	46	47	25	24	30	96	96	25	25	32	32	44
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	245	249	105	-	270	260	290	290	140	76	75	200	200	120	120	240
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	36.7	32.3	11	-	40	39	40	42	22	12	12	33	33	17	18	32
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.23	7.22	6.84	-	7.33	7.42	7.55	7.47	7.25	7.18	6.85	7.26	7.44	7.22	7.24	7.53
Phenols	mg/L	0.031	0.001	-	0.04	0.004	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
Total Dissolved Solids	mg/L	632	-	-	-	-	10	140	146	88	-	140	130	195	160	75	70	70	160	115	70	100	150
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.5	0.46	0.2	-	0.29	0.23	0.27	0.26	0.23	0.47	0.48	0.15	0.14	0.21	0.14	0.26
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	<0.02	<0.02	<0.02	-	<0.02	<0.02	<0.02	<0.02	<0.02	0.046	0.046	<0.02	<0.02	<0.02	<0.02	<0.02
Total Suspended Solids	mg/L	11000	-	-	-	-	10	<10	<10	<10	-	<10	<10	<10	<10	<10	44	48	<10	<10	<10	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	1.6	1.4	1.4	-	2.6	2.7	0.9	0.9	0.5	4.2	2.6	-	-	-	-	-
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	<0.000002	<0.000002	<0.000002	-	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00052	<0.00061	<0.00061	<0.00061	<0.00061
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	0.08	-	0.036	0.039	0.014	0.013	0.045	0.15	0.17	0.02	0.02	0.05	0.045	0.039
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.029	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.069	0.058	-	-	0.092	0.087	0.025	0.023	0.075	0.46	0.45	0.027	0.026	0.09	0.09	0.059
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	<0.003	<0.003	<0.003	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	0.011	<0.01	<0.01	-	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	<0.0001	<0.0001	<0.0001	-	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.003	<0.003	<0.003	-	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	<0.0005	<0.0005	<0.0005	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00064	0.0006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.002	<0.002	<0.001	-	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	0.0013	0.0013	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	0.619	0.469	0.25	-	**1.1**	**1.1**	0.25	0.24	0.25	**1.3**	**1.3**	0.3	0.31	0.28	0.28	0.68
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<0.001	<0.001	0.002	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00054	0.00051	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (tot)	mg/L	15	-	-	-	-	0.002	0.015	0.013	0.015	-	0.036	0.035	0.0069	0.0067	0.015	0.11	0.11	0.0074	0.0082	0.014	0.016	0.012
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.003	<0.003	<0.003	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.002	<0.002	<0.002	-	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<0.0001	<0.0001	<0.0001	-	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	<0.02	<0.02	<0.02	-	<0.005	<0.005	<0.005	<0.005	<0.005	0.0055	0.0055	<0.005	<0.005	<0.005	<0.005	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-E	MCG-E	MCG-E	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F
							Sample ID	QAQC-SW1 (MC	MCG-E	QAQC-SW1 (MC	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2025-Jul-07	2025-Oct-21	2025-Oct-21	2015-May-04	2015-Sep-09	2015-Oct-26	2016-Apr-28	2016-Aug-17	2016-Oct-26	2017-May-10	2017-Jul-20	2017-Oct-23	2018-May-07	2018-Jul-30	2018-Oct-22	2019-May-07
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	44	51	55	84.4	95.4	119	41.2	57.4	66.8	52.4	58.5	64.1	-	-	-	38.1
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	0.19	<0.1	<0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	0.19	<0.1	<0.1	0.08	-	-	-	-	-	-	0.09	-	37.5	62.3	71.7	<0.05
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-	-	-	0.1	-	<0.05
Sulphate	mg/L	**186**	-	-	100	-	0.1	5.8	11	11	6.12	5.63	5.38	4.99	3.42	4.8	5.95	2.46	2.74	-	-	-	4.76
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	10	13	13	7.91	9.65	9.08	3.85	4.69	6.35	4.51	6.42	7.3	3.59	8.04	7.4	3.84
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	1.6	2.3	2.4	1.49	1.92	1.86	0.73	1.07	1.34	0.88	1.26	1.39	0.67	1.45	1.43	0.63
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	0.91	1.6	1.6	2.97	3.47	3.13	1.35	1.37	1.7	1.72	1.32	1.76	1.09	1.37	1.35	1.1
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	31	37	38	47.5	60.9	58.2	24.7	36.7	35.5	33.6	36.6	40	23.1	37.1	40	23.7
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		6.96	7.61	7.61	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		17.7	5.5	5.5	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	26	27	25	8	13	10	8	11	12	12	29	23	9	22	10	10
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	<0.05	<0.05	<0.05	-	-	-	-	-	-	-	-	-	0.23	0.04	-	<0.02
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	<2	<2	<2	-	-	-	-	-	-	-	-	-	-	-	-	<5
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	44	21	21	29	54	19	32	41	32	51	94	51	36	9	9	12
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	6.32	-	-	10.85	7.76	10.06	12.08	7.23	8.31	10.78	7.47	10.58	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	230	310	300	326	364	395	171	233	269	241	245	235	152	270	292	164
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	32	44	44	25.9	32	30.3	12.6	16.1	21.4	14.9	21.2	24	11.7	26	24.4	12.2
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.5	7.51	7.49	6.89	7.26	6.69	6.31	7.2	7.13	7.35	7.04	7.16	6.22	7.27	6.94	6.51
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	155	120	125	170	180	206	86	124	112	112	114	138	82	130	156	86
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.28	0.17	0.15	0.39	0.43	0.32	0.26	0.46	0.26	0.34	0.41	0.39	0.68	0.42	0.14	<0.1
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	<0.02	<0.02	0.024	-	-	-	0.01	0.02	-	0.01	0.03	0.03	0.02	0.03	-	0.03
Total Suspended Solids	mg/L	11000	-	-	-	-	10	<10	<10	<10	-	-	-	-	-	-	-	-	-	-	-	-	<10
Turbidity	NTU	7310	-	-	-	-	0.1	-	-	-	1.3	433	0.8	1.8	1.8	0.9	0.7	2.4	1.5	1	5.1	3	1.1
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	<0.00061	<0.00061	<0.00061	0.00003	0.00007	0.00003	0.000001	0.000023	0.000001	0.0000098	0.000128	0.000036	0.0000967	0.0001077	0.0000088	-
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	0.04	0.01	0.009	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	-	-	-	0.029	0.031	0.012	0.055	0.028	0.022	0.07	0.034	0.021	0.056	0.032	0.018	0.06
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.058	0.012	0.013	-	-	-	-	-	-	-	-	-	4.01	3.16	4.04	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	<0.01	<0.01	<0.01	-	-	0.018	-	-	-	-	-	-	-	-	-	-
Cadmium (tot)	mg/L	**0.0128**	-	Calculated	0.00021	0.000017	0.00009	<0.00009	<0.00009	<0.00009	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	-	-	-	-	<0.003
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-	-	-	-	-	<0.002
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	0.68	0.1	0.11	0.3	0.87	0.21	0.09	0.23	0.39	0.1	0.99	0.41	0.16	1.33	0.41	0.16
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-	-	-	-	-	-	<0.001
Manganese (tot)	mg/L	15	-	-	-	-	0.002	0.012	0.0035	0.0031	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.003
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.004
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-	0.011	-	0.006	-	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F
							Sample ID	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	AQC-SW-SU21 (M	MCG-F	AQC SW-F21 (M	MCG-F	AQC SW-S22 (M	MCG-F	MCG-F	MCG-F	MCG-F
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2019-Jul-14	2019-Oct-24	2020-May-06	2020-Aug-25	2020-Oct-06	2021-Apr-20	2021-Jul-14	2021-Jul-14	2021-Oct-18	2021-Oct-18	2022-May-03	2022-May-03	2022-Aug-04	2022-Oct-18	2023-May-03	2023-Aug-09
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	57.4	51.6	45.6	49.5	61.2	55.1	56.4	57.1	42.8	42.8	57	56.9	58.7	54	34.7	30
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.1
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	0.1	<0.05	<0.05	0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	0.06	0.08	<0.05	<0.05	<0.1
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<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	<0.01
Sulphate	mg/L	**186**	-	-	100	-	0.1	1.28	7.3	6.73	3.5	3.71	4.2	2.57	2.59	2.01	1.98	4.4	4.36	1.96	4.5	3.33	2.6
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	6.82	7.92	5.01	8.6	6.9	5.91	5.93	5.83	5.93	5.84	5.54	5.68	7.53	6.51	3.2	7
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	1.25	1.53	0.87	1.42	1.07	1.22	1.09	1.11	1.1	1.16	0.94	1.1	1.57	1.59	0.61	1.1
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	1.35	1.66	1.41	1.44	1.5	1.42	1.14	1.18	1.68	1.69	1.3	1.53	1.42	1.52	0.82	0.91
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	35.8	32.9	27.3	34.48	34.56	34.6	34.6	34.2	27.5	27.8	33.5	33.9	42.5	34.2	20.4	24
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6.14
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16.5
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	26	18	7	34	14	7	12	13	43	20	6	6	23	17	8	27
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	0.04	0.1	0.1	<0.02	<0.02	<0.02	0.03	0.03	0.18	0.12	<0.02	<0.02	<0.02	0.06	<0.02	0.057
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	<5	<5	-	<2	<5	<2	<6	<2	<2	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	67	28	-	53	59	32	88	88	67	68	25.9	25.8	77.8	34.7	37.8	61
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	5.8	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	269	281	236	218	229	232	218	218	183	182	221	219	227	218	143	170
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	22.2	26.1	16.1	27.3	21.6	19.8	19.3	19.1	19.3	19.4	17.7	18.7	25.3	22.8	10.5	24
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.19	7.34	6.62	6.53	6.52	6.75	6.75	6.77	6.82	6.82	6.28	6.28	7.02	6.91	6.67	7.1
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	<0.001	0.003	<0.001	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	112	116	100	120	134	116	118	124	114	108	96	104	134	126	100	90
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.33	0.3	0.38	0.39	0.46	0.32	0.35	0.38	0.31	0.23	0.2	0.17	0.59	0.42	0.26	0.38
Total Phosphorus	mg/L	11	0.03	-	-	-	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	<0.02	0.28	<0.02	<0.02
Total Suspended Solids	mg/L	11000	-	-	-	-	10	<10	<10	<10	<10	<10	<10	<10	<10	15	<10	<10	<10	<10	<10	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	9	4.8	1.4	4.6	1.2	2.9	2	1.8	1.7	1.5	<0.5	<0.5	3.4	2	1.7	3.8
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	-	-	-	-	-	-	-	-	-	-	-	-	<0.000002	0.000011	<0.000002	<0.00061
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	-	-	0.04	0.036	-	-	0.065	0.039
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.03	0.029	0.059	0.029	0.036	0.05	0.065	0.067	0.065	0.064	-	-	0.043	0.037	-	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	-	-	0.126	0.076	0.043	0.061	0.114	0.115	0.112	0.12	-	-	0.347	0.071	-	0.069
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	0.017	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	<0.001	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	-	-	<0.01	<0.01	<0.01	0.014	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	-	-	<0.0001	<0.0001	0.0002	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.00009
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.005
Cobalt (tot)	mg/L	0.044	-	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	0.0007	<0.0005	<0.0005	0.00053
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.002	<0.002	<0.002	<0.002	0.003	0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001	<0.0009
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**1.17**	0.83	0.273	**1.14**	0.283	0.126	0.707	0.834	0.933	0.891	0.255	0.236	**3.51**	0.804	0.3	**2**
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<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	<0.0005
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	0.02	-	-	-	-	-	0.051	0.055	0.027	0.025	0.183	0.103	0.012	0.2
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	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	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.0001
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.001
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	1.57	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<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	<0.00009
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	0.039	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	<0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	<0.002	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	0.007	<0.005	<0.005	<0.005	<0.005	0.01	<0.005	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G
							Sample ID	MCG-F	MCG-F	-QAQC-SW (MC(	MCG-F	MCG-F	MCG-F	MCG-F	MCG-F	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2023-Oct-19	2024-Apr-29	2024-Apr-29	2024-Jul-11	2024-Oct-29	2025-May-07	2025-Jul-07	2025-Oct-21	2015-May-04	2015-Sep-09	2015-Oct-26	2016-Apr-28	2016-Aug-17	2016-Oct-26	2017-May-10	2017-Jul-20
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	35	39	39	45	38	37	33	35	0.59	0.32	1.01	0.41	0.18	0.54	0.25	-
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	<0.1	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	<0.1	0.07	0.05	0.07	-	-	-	-	-
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-
Sulphate	mg/L	**186**	-	-	100	-	0.1	3.9	4.5	4.5	2.7	3.2	2.6	3	5.5	4.98	2.42	4.65	4.96	14.2	7.62	5.08	2.4
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	5.6	4.7	4.8	5.8	5.7	4.5	6	6.1	3.83	6.81	5.98	3.16	7.33	6.97	3.44	4.27
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	1.1	0.86	0.9	1	1.1	0.77	1.1	1.3	0.88	1.68	1.57	0.73	1.65	1.74	0.75	0.95
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	1.2	0.92	0.95	1.1	1.3	0.96	0.98	1.7	0.66	0.62	1.19	0.5	0.81	1.17	0.46	0.27
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	25	26	27	29	23	28	28	25	1.31	1.96	2.67	1.16	1.94	2.34	1.09	1.36
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		5.72	6.38	6.38	5.65	-	6.71	6.21	7.12	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		7.5	9.7	9.7	18.5	-	14.8	19.2	6.2	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	14	8.8	14	25	17	9.6	23	39	10	23	25	6	17	25	8	18
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	0.07	-	-	-	-	-
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	32	28	28	88	36	33	72	46	45	58	54	35	75	40	44	79
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-	6.72	-	-	10.65	9.06	10.03	13.24	7.1
Electrical Conductivity	uS/cm	992	-	-	-	-	1	180	170	170	200	180	180	180	190	36	54	58	32	72	67	36	39
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	19	17	17	19	21	15	20	22	13.2	23.9	21.4	10.9	25.1	24.6	11.7	14.6
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.27	6.93	7.25	7.26	7.04	6.99	7.36	7.18	7.06	7.58	7.31	6.18	7.36	7.45	7.02	6.81
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-
Total Dissolved Solids	mg/L	632	-	-	-	-	10	145	105	115	115	130	125	115	100	30	42	52	40	68	32	34	32
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.35	0.24	0.31	0.48	0.27	0.23	0.41	0.28	0.42	0.42	0.47	0.26	0.69	0.26	0.28	0.36
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	<0.02	<0.02	<0.02	0.026	<0.02	<0.02	0.024	0.033	-	-	0.02	0.01	0.04	-	0.01	0.03
Total Suspended Solids	mg/L	11000	-	-	-	-	10	<10	<10	<10	10	21	<10	<10	<10	47	-	-	-	-	-	-	-
Turbidity	NTU	7310	-	-	-	-	0.1	1.2	0.5	0.6	0.6	-	-	-	-	1.7	-	4	1.5	3.8	1.2	0.8	2.3
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	0.0001	0.00007	0.0001	0.000003	0.000065	0.00003	0.000004	0.000148
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	0.025	0.045	0.044	0.062	0.043	0.053	0.081	0.03	-	-	-	-	-	-	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	0.041	0.019	0.038	0.058	0.055	0.022	0.077	0.028
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.046	0.057	0.058	0.14	0.17	0.078	0.13	0.04	-	-	-	-	-	-	-	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	0.01	-	-	-
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-	-	-	-	-	-
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-	-
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	-	-	-	-	-	-	-	-
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	0.58	0.22	0.23	0.83	**1.5**	0.2	**1.3**	0.53	0.32	0.84	**1.3**	0.19	**1.14**	0.84	0.19	0.75
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-	-
Manganese (tot)	mg/L	15	-	-	-	-	0.002	0.035	0.02	0.02	0.078	0.13	0.017	0.063	0.02	-	-	-	-	-	-	-	-
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	<0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-	-	-	-	-	-	-	-	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	0.006	-	0.006	0.007

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G
							Sample ID	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2017-Oct-23	2018-May-07	2018-Jul-30	2018-Oct-22	2019-May-07	2019-Oct-24	2020-May-06	2020-Aug-25	2020-Oct-06	2021-Apr-20	2021-Jul-14	2021-Oct-18	2022-May-03	2022-Aug-04	2022-Oct-18	2023-May-03
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	0.33	0.37	0.31	0.44	0.37	0.45	0.29	0.28	0.42	0.24	0.36	0.4	0.28	0.25	0.45	0.32
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	-	0.06	0.05	-	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	0.23	<0.05	<0.05
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	mg/L	**186**	-	-	100	-	0.1	3.26	4.59	3.93	8.06	4.2	14.4	4.84	1.42	2.73	3.39	1.95	1.67	4.02	0.93	2	2.92
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	4.97	2.94	6.73	5.61	3.11	7.11	3.69	8.55	5.3	3.95	5.09	5.32	3.34	7.48	4.21	2.82
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	1.23	0.68	1.67	1.4	0.62	1.8	0.67	1.99	1.12	0.97	1.09	1.15	0.8	1.61	1.24	0.64
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	0.78	0.52	0.56	0.95	0.48	0.85	0.52	0.76	0.7	<0.58	<0.58	0.88	<1.15	0.58	0.75	0.53
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	2.01	1.01	2.14	2.1	1.02	2.19	1.21	2.01	1.69	1.41	1.35	1.58	1.57	1.94	1.86	0.62
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	18	8	21	13	8	15	12	30	18	8	14	17	5	23	15	7
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	-	0.07	-	-	<0.02	0.04	0.04	<0.02	<0.02	<0.02	<0.02	0.11	<0.02	<0.02	0.03	<0.02
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	-	-	-	-	<5	<5	-	<2	<5	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	13	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	50	43	10	12	16	27	-	63	58	46	80	63	34.3	87.4	38.5	50.1
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	7.4	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		9.27	11.36	7.09	11.28	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	43	30	59	59	28	107	42	58	43	33	36	43	31	54	42	27
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	17.5	10.1	23.7	19.8	10.3	25.2	12	29.5	17.8	13.9	17.2	18	11.6	25.3	15.6	9.7
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.08	6.14	7.3	6.93	6.41	7.38	7.9	6.57	6.61	6.78	6.85	6.82	6.27	7.03	7.03	6.66
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	-	-	-	-	<0.001	0.003	0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	36	26	40	50	26	66	28	52	34	64	46	52	56	54	42	50
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.29	0.39	0.42	0.26	<0.1	0.34	0.52	0.57	0.48	0.41	0.33	0.36	0.27	0.73	0.51	0.28
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.02	0.03	0.02	-	0.05	<0.02	<0.02	0.02	0.09	<0.02	0.03	<0.02	<0.02	0.08	0.04	<0.02
Total Suspended Solids	mg/L	11000	-	-	-	-	10	-	10	-	-	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	1.3	1.4	2.7	2.9	1.5	1.4	1.3	5.4	3.2	1.4	4.6	2.2	0.7	7.7	2.1	5.9
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	0.000014	0.00001	0.000055	0.000004	-	-	-	-	-	-	-	-	-	<0.000002	0.000009	<0.000002
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	-	-	-	-	0.043	-	-	0.073
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.021	0.059	0.014	0.019	0.06	0.02	0.084	0.029	0.035	0.038	0.041	0.032	-	0.035	0.021	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	-	-	-	-	-	-	0.179	0.085	0.108	0.072	0.134	0.083	-	0.158	0.086	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	0.011	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	-	-	-	-	-	-	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	-	-	-	-	-	-	<0.0001	<0.0001	0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	0.0001
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0009	<0.0005	0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	-	-	-	-	<0.002	<0.002	<0.002	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.001
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	0.41	0.2	0.54	0.19	0.15	0.29	0.313	0.854	0.653	0.356	**1.65**	0.978	0.248	**2.54**	0.885	0.755
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	-	-	-	-	0.026	-	-	-	-	0.04	0.016	0.244	0.075	0.06
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	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
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.004
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	-	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	2.62	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	0.032	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	<0.0003	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	0.008	-	-	-	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	<0.005	<0.02	<0.02	<0.02	<0.02	<0.02

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H
							Sample ID	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-G	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2023-Aug-09	2023-Oct-19	2024-Apr-29	2024-Jul-11	2024-Oct-29	2025-May-07	2025-Jul-07	2025-Oct-21	2015-May-04	2015-Sep-09	2015-Oct-26	2016-Apr-28	2016-Aug-17	2016-Oct-26	2017-May-10	2017-Jul-20
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit																
Chloride	mg/L	166	-	-	180	128	0.1	<1	<1	<1	<1	<1	<1	<1	<1	6.32	11.2	13.1	6.61	13.1	13.5	4.31	6.24
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	0.38	0.11	<0.1	<0.1	0.14	<0.1	0.31	<0.1	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	0.38	0.11	<0.1	<0.1	0.14	<0.1	0.31	<0.1	-	-	-	-	-	-	-	-
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	-	-	-	-
Sulphate	mg/L	**186**	-	-	100	-	0.1	1.5	1.3	2.7	<1	2.2	2	3.2	4.4	7.13	5.7	10.9	5.68	14.2	12.6	5.24	2.29
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	7.6	5.1	3.4	3.7	4.1	3.2	4	5.8	5.18	10.7	9.8	4.12	8.69	11.3	3.91	7.18
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	1.6	1.2	0.75	0.75	0.95	0.68	0.9	1.5	1.08	2.49	2.49	0.86	2.4	3.24	0.83	1.49
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	0.74	0.64	0.48	0.22	0.43	0.41	0.51	0.84	0.83	1.78	1.91	0.63	1.74	2.08	0.66	0.74
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	1.4	1.5	1.2	0.98	1.5	1.2	1.5	1.9	4.5	8.71	7.61	4.13	10.1	7.5	3.7	5.13
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		6.64	6.7	6.24	5.84	-	6.91	6.29	7.35	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		16.2	8.2	9.7	18.9	-	13.1	17.7	6.5	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	25	16	10	12	15	8.6	13	24	10	29	25	7	23	30	9	31
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	-	-	-	0.25	-	0.06	-	-
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	<2	<2	<2	<2	<2	<2	<2	<2	-	-	-	-	-	-	-	-
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	63	39	33	75	25	28	22	18	36	101	68	23	112	65	38	65
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-	6.75	-	-	10.96	6.74	4.84	10.19	4.72
Electrical Conductivity	uS/cm	992	-	-	-	-	1	56	42	28	29	40	29	39	52	64	110	114	58	129	137	54	82
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	27	18	12	13	17	11	15	21	17.4	37	34.7	13.8	31.6	41.6	13.2	24.1
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.34	7.32	7.03	6.98	7.22	7.02	7.17	7.28	6.95	7.45	7.05	6.2	7.32	7.27	7.23	7.12
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-
Total Dissolved Solids	mg/L	632	-	-	-	-	10	55	60	15	35	50	40	30	<10	50	90	82	38	110	96	44	46
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.38	0.43	0.26	0.35	0.16	0.13	0.21	0.23	0.28	0.56	0.29	0.45	0.58	0.43	0.22	0.28
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.036	0.021	<0.02	0.034	<0.02	<0.02	<0.02	0.029	-	0.02	0.03	0.01	0.02	0.03	-	0.04
Total Suspended Solids	mg/L	11000	-	-	-	-	10	13	<10	<10	17	<10	<10	12	<10	-	-	-	-	-	-	-	-
Turbidity	NTU	7310	-	-	-	-	0.1	7.9	3.1	0.8	1.6	-	-	-	-	1.4	32.8	2.3	-	1.7	5	-	1.9
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	0.00007	0.00006	0.00001	0.000001	0.000005	0.00001	0.0000022	0.00004
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	0.048	0.033	0.046	0.05	0.031	0.053	0.037	0.021	-	-	-	-	-	-	-	-
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	0.072	0.077	0.071	0.066	0.146	0.088	0.077	0.063
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.23	0.065	0.084	0.17	0.051	0.097	0.071	0.026	-	-	-	-	-	-	-	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	-	-	-	-	0.032	0.011	-	-
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-	-	-	-	-	-
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	-	-	-	-
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	0.00088	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	0.0005	0.0005	-	-
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	0.0014	0.001	-	-	-	-	-	-	-	-
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**2.5**	0.92	0.39	**2.1**	0.48	0.32	0.21	<0.1	0.17	0.62	0.72	0.05	0.51	**1.46**	0.06	0.46
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	-	-	-	-	-	-	-	-
Manganese (tot)	mg/L	15	-	-	-	-	0.002	0.33	0.051	0.028	0.11	0.048	0.017	0.033	0.0047	-	-	-	-	-	-	-	-
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	<0.0001	<0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-	-	-	-	-	-	-	-	-
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-	-	-	-	-	-	-	-	-
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-	-	-	-	-	-	-	-	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	-	-	-	-	0.01	0.005	-	0.007

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H
							Sample ID	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2017-Oct-23	2018-May-07	2018-Jul-30	2018-Oct-22	2019-May-07	2019-Aug-14	2019-Oct-24	2020-May-06	2020-Aug-25	2020-Oct-06	2021-Apr-20	2021-Oct-18	2022-May-03	2022-Aug-04	2022-Oct-18	2023-May-03
							Sample Depth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anions							Detection Limit															
Chloride	mg/L	166	-	-	180	128	0.1	63.5	6.63	10.4	14.3	5.15	6.94	14.4	5.49	10.9	11.8	7.44	4.7	9.79	5.68	19.4	2.75
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	-	-	-	0.06	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	-	-	-	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate	mg/L	**186**	-	-	100	-	0.1	2.7	4.1	6.83	7.61	4.39	3.33	17.9	4.21	2.6	4.42	4.1	1.44	3.48	0.49	2.53	2.78
Cations																							
Calcium (tot)	mg/L	132	-	-	-	-	0.05	7.17	3.79	11.4	9.78	3.86	9.16	11.9	4.02	14.27	7.07	6.38	7.53	7.1	9.18	16	4.4
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	1.38	0.79	2.83	2.54	0.73	2.23	3.56	0.81	3.42	1.22	1.77	1.47	1.63	2.05	6.02	0.67
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	1.76	0.56	1.36	1.52	0.58	0.61	2.32	0.59	1.7	0.89	1.25	1.19	<1.15	1.6	5.36	<0.5
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	39.5	4.18	7.21	7.36	3.97	5.58	7.79	3.82	8.04	7.17	5.18	4.34	6.46	6.09	11.1	2.74
Field Parameters																							
pH (Field)	pH units	7.61	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Temperature	deg. C	20.4	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
General Chemistry																							
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	23	9	24	21	11	30	24	7	42	18	15	29	11	30	34	8
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	-	0.07	-	0.02	<0.02	<0.02	0.05	0.03	<0.02	<0.02	<0.02	0.12	<0.02	<0.02	0.02	<0.02
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	-	-	-	-	<5	<5	<5	-	<2	<5	<2	<2	2	5	<2	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	<5	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	50	27	69	15	13	69	108	-	156	42	49	48	29.5	93.9	108	33.5
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		3.82	9.64	7.7	6.47	-	-	-	-	-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	235	53	126	125	52	111	145	64	119	86	78	72	77	83	146	40
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	23.6	12.7	40.1	34.9	12.6	32.1	44.4	13.4	49.7	22.7	23.2	24.9	24.4	31.4	64.7	13.7
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		7.19	6.17	7.32	7.25	6.5	7	7.26	6.59	6.62	6.6	6.74	6.83	6.38	6.85	6.98	6.62
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	-	-	-	-	<0.001	0.002	0.004	<0.001	0.004	<0.001	<0.001	<0.001	0.002	0.004	0.012	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	78	34	94	88	28	54	118	34	110	66	68	80	44	72	124	64
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.35	0.47	0.36	0.18	<0.1	0.37	0.46	0.24	0.72	0.33	0.42	0.27	0.24	1.02	0.81	0.18
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.05	0.05	-	0.04	<0.02	0.04	<0.02	<0.02	0.03	<0.02	<0.02	<0.02	<0.02	0.1	<0.02	<0.02
Total Suspended Solids	mg/L	11000	-	-	-	-	10	-	-	-	19	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Turbidity	NTU	7310	-	-	-	-	0.1	2.9	0.7	4	5.1	<0.5	2.4	1.6	0.7	8.4	1.8	2.8	2.3	0.5	2.6	1.3	0.7
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	0.00001	0.0000039	0.0000197	0.0000042	-	-	-	-	-	-	-	-	-	<0.000002	0.000006	<0.000002
Metals																							
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-	-	-	-	-	0.024	-	-	0.077
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	0.08	0.07	0.045	0.05	0.065	0.023	0.113	0.053	0.084	0.058	0.047	0.044	-	0.02	0.036	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	-	-	-	-	-	-	-	0.089	0.119	0.122	0.057	0.087	-	0.105	0.044	-
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	-	-	-	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	0.012	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	<0.001	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	-	-	-	-	-	-	-	<0.01	<0.01	<0.01	0.014	<0.01	<0.01	0.014	0.017	0.012
Cadmium (tot)	mg/L	0.0128	-	Calculated	0.00021	0.000017	0.00009	-	-	-	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	-	-	-	-	<0.0005	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	-	-	-	-	<0.002	<0.002	<0.002	<0.002	0.005	<0.002	0.004	<0.002	<0.002	<0.002	<0.002	<0.001
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	0.59	0.24	0.63	**1.28**	0.04	0.62	0.39	0.054	**1.63**	0.568	0.056	0.78	0.087	**1.17**	0.326	0.079
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	-	-	-	-	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Manganese (tot)	mg/L	15	-	-	-	-	0.002	-	-	-	-	-	-	-	0.007	-	-	-	0.14	0.021	0.234	0.095	0.004
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	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
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	-	-	-	-	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	-	-	-	-	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	3.44	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	-	-	-	-	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	0.035	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	<0.0003	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	<0.002	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	-	-	-	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	0.01	0.009	<0.02	<0.02	<0.02	<0.02	<0.02

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet	for all Calculated criteria/guidelines.
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Hastings Highlands Analytical Chemistry Results:							Location	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H
							Sample ID	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H	MCG-H
Parameter	Units	Max Concentration	PWQO-GENERAL	PWQO-INTERIM	MECP-GD-TA	MECP-GD-TB	Sample Date	2023-Aug-09	2023-Oct-19	2024-Apr-29	2024-Jul-11	2024-Oct-29	2025-May-07	2025-Jul-07	2025-Oct-21
							Sample Depth	-	-	-	-	-	-	-	-
Anions							Detection Limit								
Chloride	mg/L	166	-	-	180	128	0.1	10	16	7.1	<1	15	6.7	6.7	8.9
Nitrate + Nitrite	mg/L	<0.5	-	-	-	-	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate as N	mg/L	71.7	-	-	-	-	0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrite as N	mg/L	<0.25	-	-	-	-	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sulphate	mg/L	**186**	-	-	100	-	0.1	1.7	2.9	4.5	3.1	2.6	2.2	2.1	7.1
Cations															
Calcium (tot)	mg/L	132	-	-	-	-	0.05	9.6	22	9.5	2.7	20	6.9	18	9.3
Magnesium (tot)	mg/L	25	-	-	-	-	0.05	2.6	7	2.5	0.52	4.8	1.3	3.8	2.3
Potassium (tot)	mg/L	25.9	-	-	-	-	0.05	0.83	6.4	2.1	0.39	4.8	0.92	1.5	1.7
Sodium (tot)	mg/L	79.8	-	-	-	-	0.05	4.8	12	5.7	1.9	8.4	5.4	7.3	6.7
Field Parameters															
pH (Field)	pH units	7.61	-	-	-	-		5.86	6.55	6.13	5.56	-	6.78	6.48	6.64
Temperature	deg. C	20.4	-	-	-	-		18.1	8.8	9.1	15.8	-	14.2	20.4	6.3
General Chemistry															
Alkalinity (as CaCO3)	mg/L	440	See Factsheet	-	-	-	1	34	68	36	12	70	22	63	28
Ammonia as N	mg/L	1.4	-	-	-	-	0.02	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.15
Biochemical Oxygen Demand	mg/L	39	-	-	-	-	2	5	<2	<2	<2	<2	<2	<2	<2
Chemical Oxygen Demand	mg/L	76	-	-	-	-	5	-	-	-	-	-	-	-	-
Colour	TCU	540	-	-	-	-	2	90	160	48	56	37	30	75	62
Dissolved Organic Carbon	mg/L	18.8	-	-	-	-	0.5	-	-	-	-	-	-	-	-
Dissolved Oxygen	mg/L	14	See Factsheet	-	-	-		-	-	-	-	-	-	-	-
Electrical Conductivity	uS/cm	992	-	-	-	-	1	89	250	99	28	200	79	150	110
Hardness (as CaCO3)	mg/L	460	-	-	-	-	0.5	36	86	37	9.1	77	24	62	34
pH	pH units	8.58	6.5 - 8.5	-	6 - 9	-		6.89	7.64	7.46	6.95	7.43	7.12	7.3	7.11
Phenols	mg/L	0.031	0.001	-	0.04	0.004	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Dissolved Solids	mg/L	632	-	-	-	-	10	60	195	70	45	130	85	110	50
Total Kjeldahl Nitrogen	mg/L	12	-	-	-	-	0.1	0.62	0.98	0.3	0.28	0.24	0.15	0.63	0.47
Total Phosphorus	mg/L	11	0.03	-	-	-	0.02	0.057	<0.02	<0.02	<0.02	<0.02	<0.02	0.044	0.04
Total Suspended Solids	mg/L	11000	-	-	-	-	10	39	<10	<10	<10	<10	<10	36	<10
Turbidity	NTU	7310	-	-	-	-	0.1	1.7	0.5	0.3	1.3	-	-	-	-
Unionized Ammonia (Calc)	mg/L	0.00187	-	-	-	-	0.000002	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061	<0.00061
Metals															
Aluminum (diss, 0.2 µm)	mg/L	0.37	-	Calculated	-	-	0.004	0.031	0.015	0.022	0.17	0.012	0.037	0.021	0.042
Aluminum (diss, 0.45 µm)	mg/L	0.424	-	Calculated	-	-	0.004	-	-	-	-	-	-	-	-
Aluminum (tot)	mg/L	4.04	-	-	-	-	0.004	0.081	0.017	0.026	0.21	0.015	0.053	0.16	0.061
Arsenic (tot)	mg/L	<0.003	-	0.005	-	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-
Barium (tot)	mg/L	0.067	-	-	2.3	-	0.002	-	-	-	-	-	-	-	-
Beryllium (tot)	mg/L	<0.001	Calculated	-	-	-	0.001	-	-	-	-	-	-	-	-
Boron (tot)	mg/L	0.863	-	0.2	3.55	1.5	0.01	0.02	0.01	0.014	<0.01	0.012	<0.01	0.018	<0.01
Cadmium (tot)	mg/L	**0.0128**	-	Calculated	0.00021	0.000017	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009
Chromium (tot)	mg/L	0.014	-	-	0.064	-	0.003	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Cobalt (tot)	mg/L	0.044	-	0.0009	-	-	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.00062	<0.0005
Copper (tot)	mg/L	**0.011**	-	Calculated	0.0069	-	0.0009	<0.0009	<0.0009	<0.0009	0.0011	<0.0009	<0.0009	<0.0009	<0.0009
Iron (tot)	mg/L	**98**	0.3	-	1	-	0.01	**1.3**	0.16	<0.1	0.19	0.16	0.11	**1.2**	**1.1**
Lead (tot)	mg/L	**0.087**	-	Calculated	0.002	-	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese (tot)	mg/L	15	-	-	-	-	0.002	0.09	0.02	0.0032	0.01	0.024	0.017	0.36	0.27
Mercury (diss)	mg/L	<0.0001	0.0002	-	-	-	0.0001	-	-	<0.0001	<0.0001	-	-	-	-
Mercury (tot)	mg/L	<0.0001	0.0002	-	-	-	0.0001	<0.0001	<0.0001	-	-	-	-	-	-
Molybdenum (tot)	mg/L	<0.002	-	0.04	-	-	0.002	-	-	-	-	-	-	-	-
Nickel (tot)	mg/L	0.029	0.025	-	-	-	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-	-	-
Selenium (tot)	mg/L	0.086	0.1	-	-	-	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	-	-	-
Silicon (tot)	mg/L	8.73	-	-	-	-	0.05	-	-	-	-	-	-	-	-
Silver (tot)	mg/L	<0.001	0.0001	-	-	-	0.00009	<0.00009	<0.00009	<0.00009	<0.00009	<0.00009	-	-	-
Strontium (tot)	mg/L	0.456	-	-	-	-	0.005	-	-	-	-	-	-	-	-
Thallium (tot)	mg/L	<0.0003	-	0.0003	-	-	0.0003	-	-	-	-	-	-	-	-
Titanium (tot)	mg/L	0.016	-	-	-	-	0.002	-	-	-	-	-	-	-	-
Vanadium (tot)	mg/L	<0.002	-	0.006	-	-	0.002	-	-	-	-	-	-	-	-
Zinc (tot)	mg/L	0.768	-	0.02	0.089	0.03	0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

-LEGEND-

Detection Limit	DL: May vary between sample locations and events
DL exceeds criteria	
Concentration exceeds PWQO-GENERAL	Provincial Water Quality Objectives General
Concentration exceeds PWQO-INTERIM	Provincial Water Quality Objectives Interim
Concentration exceeds MECP-GD-TA	MECP Guidance Document Table A
Concentration exceeds MECP-GD-TB	MECP Guidance Document Table B

- FOR REVIEWER -

*Please double check with Factsheet for all Calculated criteria/guidelines.	
Result	Calculated Criteria result could not be determined. Please see Factsheet and calculate manually.

Appendix G

Selby Creek Comparison Table

Appendix G: Comparison of Surface Water Quality Upstream & Downstream on Selby Creek 2025

Parameter	Units	MDL	MCG-F (upstream)			Average	MCG-E (downstream)			Average	Percent Difference
			7-May-25	7-Jul-25	21-Oct-25		7-May-25	7-Jul-25	21-Oct-25		
pH	pH Units	NA	6.990	7.36	7.18	7.18	7.2200	7.53	7.51	7.420	-3.33%
Alkalinity (as CaCO3)	mg/L	5	9.600	23	39	23.87	14.0000	27	27	22.667	5.16%
Electrical Conductivity	uS/cm	2	180.000	180	190	183.33	120.0000	240	310	223.333	-19.67%
Hardness (as CaCO3) (Calculated)	mg/L	0.5	15.000	20	22	19.00	17.0000	32	44	31.000	-48.00%
Total Dissolved Solids	mg/L	20	125.000	115	100	113.33	70.0000	150	120	113.333	0.00%
Total Suspended Solids	mg/L	10	10.000	10	10	10.00	10.0000	10	10	10.000	0.00%
Chloride	mg/L	0.20	37.000	33	35	35.00	21.0000	43	51	38.333	-9.09%
Nitrate as N	mg/L	0.10	0.100	0.19	0.1	0.13	0.1000	0.18	0.1	0.127	2.60%
Nitrite as N	mg/L	0.10	0.010	0.01	0.01	0.01	0.0100	0.01	0.01	0.010	0.00%
Sulphate	mg/L	0.20	2.600	3	5.5	3.70	3.7000	5.7	11	6.800	-59.05%
Ammonia as N	mg/L	0.02	0.050	0.05	0.05	0.05	0.0500	0.05	0.05	0.050	0.00%
Total Kjeldahl Nitrogen	mg/L	0.10	0.230	0.41	0.28	0.31	0.2100	0.26	0.17	0.213	35.90%
Total Phosphorus	mg/L	0.02	0.020	0.024	0.033	0.03	0.0200	0.02	0.02	0.020	24.82%
Phenols	mg/L	0.001	0.001	0.001	0.001	0.001	0.0010	0.001	0.001	0.001	0.00%
True Colour	TCU	5	33.000	72	46	50.33	32.0000	44	21	32.333	43.55%
Turbidity	NTU	0.5	-	-	-	-	-	-	-	-	-
Total Calcium	mg/L	0.16	4.500	6	6.1	5.53	5.7000	10	13	9.567	-53.42%
Total Magnesium	mg/L	0.17	0.770	1.10	1.3	1.06	0.9200	1.60	2.3	1.607	-41.30%
Total Potassium	mg/L	0.58	0.960	0.98	1.7	1.21	0.5900	0.91	1.6	1.033	16.02%
Total Sodium	mg/L	0.22	28.000	28	25	27.00	17.0000	31	37	28.333	-4.82%
Aluminum-dissolved	mg/L	0.004	0.053	0.081	0.030	0.05	0.0500	0.039	0.010	0.033	49.43%
Total Aluminum	mg/L	0.010	0.078	0.13	0.04	0.08	0.0900	0.059	0.012	0.054	42.54%
Total Arsenic	mg/L	0.003	-	-	-	-	-	-	-	-	-
Total Boron	mg/L	0.010	0.010	0.01	0.01	0.01	0.0100	0.01	0.01	0.010	0.00%
Total Cadmium	mg/L	0.0001	0.000	0.00009	0.00009	0.00	0.0001	0.00009	0.00009	0.000	0.00%
Total Chromium	mg/L	0.003	0.005	0.005	0.005	0.01	0.0050	0.005	0.005	0.005	0.00%
Total Cobalt	mg/L	0.0005	0.001	0.0005	0.0005	0.00	0.0005	0.0005	0.0005	0.001	0.00%
Total Copper	mg/L	0.002	0.001	0.0009	0.0009	0.00	0.0009	0.0009	0.0009	0.001	0.00%
Total Iron	mg/L	0.010	0.200	1.3	0.53	0.68	0.2800	0.68	0.1	0.353	62.78%
Total Lead	mg/L	0.001	0.001	0.0005	0.0005	0.00	0.0005	0.0005	0.0005	0.001	0.00%
Total Manganese	mg/L	0.002	0.017	0.063	0.02	0.03	0.0140	0.012	0.0035	0.010	108.88%
Dissolved Mercury	mg/L	0.0001	-	-	-	-	-	-	-	-	-
Total Nickel	mg/L	0.003	-	-	-	-	-	-	-	-	-
Total Selenium	mg/L	0.004	-	-	-	-	-	-	-	-	-
Total Silver	mg/L	0.0001	-	-	-	-	-	-	-	-	-
Total Zinc	mg/L	0.005	0.005	0.005	0.005	0.005	0.0050	0.005	0.005	0.005	0.00%
BOD5	mg/L	6	2.000	2	2	2.00	2.0000	2	2	2.000	0.00%

RDL = Readable Detection Limit

Negative percentages represent higher concentrations at downstream compared to upstream monitoring location

0.02 indicates < removed

- indicated no data

Appendix H

Final Trigger Mechanisms and Contingency Plan (January 2020)

NORTH BAPTISTE WASTE TRANSFER STATION
(FORMER WDS)
SURFACE WATER CONTINGENCY PLAN
(FINAL APPROVED – AUGUST 16, 2019)

OBJECTIVE AND BACKGROUND

The objective of the contingency plan for the North Baptiste Lake Waste Transfer Station (WTS)/Waste Disposal Site (WDS) is to ensure that procedures have been developed in the event of a failing toxicity sample result at either surface water location MCG-H or MCG-C. The toxicity testing includes a 48-hour *Daphnia magna* single concentration test and 96-hour Rainbow Trout single concentration test. The single concentration test is typically reported as a "pass" or "fail" test, with 50% mortality being the passing limit. Surface water has been monitored at the Site since 2008 and toxicity testing has been conducted continuously (once annually) since 2013.

The MOECC requested this Contingency Plan be developed as part of the surface water review of the 2015 Annual Monitoring Report for the Site (August 15, 2016) to "ensure fast and effective steps to mitigate environmental impacts should a failed toxicity test occur".

OBJECTIVE: MITIGATE SURFACE WATER IMPACTS

- To identify steps in the mitigation of surface water run-off impacts from the waste site.
- To identify steps in the mitigation of groundwater discharging from below the waste site to the surface.

Wetland East and South of Site-Surface Water

Assessment Points- MCG-H (East) and MCG-C (South)
Trigger Mechanisms- Failed Toxicity Results
Frequency-Sampling: Semi - annually in the spring and fall
Contingency Plan is activated if a failed toxicity result is obtained

Note: The MOECC requested fall toxicity sampling, the current locations are sometimes dry, or have too little water to obtain samples during the fall sampling event, therefore we are

suggesting continuing with the spring toxicity sampling and collecting fall toxicity samples when sufficient water is present. Additionally if fall sampling fails, it is likely that the surface water may be frozen by the time analytical results are obtained, reviewed, and re-sampling can be scheduled. Sampling in the wetland during frozen/semi-frozen conditions is a Health and Safety Hazard and is not recommended during snow cover or semi-frozen conditions. Historic toxicity sampling location MCG-B (East) and adjacent to the toe of the mound, is hereby replaced by MCG-H for "East" toxicity sampling.

SURFACE WATER CONTINGENCY PLAN

Tier 1: If a toxicity test results in a failed test, a repeat toxicity and the site surface water suite will be collected and analyzed at the failed sample location within one (1) month to confirm or refute the result.

Tier 2: If the "failed" test result is confirmed through additional sampling then the following measures will be implemented:

- Increase toxicity sample monitoring frequency to twice monthly, for four months under non-freezing or snow cover conditions.
- Collect groundwater monitoring at the nearest monitoring well location to coincide with the additional toxicity sampling.
- If four "failed" toxicity test results are obtained (including the initial and Tier 1 sampling) then proceed to Tier 3 procedures.
- If four consecutive "pass" toxicity test results are obtained, revert back to semi-annual sampling; and
- Review site conditions during each sampling event to identify any other potential causes for surface water impacts.

Tier 3: If four "failed" toxicity test results are obtained from semi-annual, Tier 1, and Tier 2 additional sampling, then the following measures are to be implemented:

- Within six months of the failed test results (allowing for additional drilling to be completed around the perimeter toe of the waste mound) an additional hydrogeological and surface water assessment will be completed. Following the completion of hydrogeological/surface water assessment, then one or more of the following Tier 4 mitigation measures will be designed.

Tier 4: If additional remedial measures are necessary they may include but are not limited to:

Tier 4: If additional remedial measures are necessary they may include but are not limited to:

- Installation of purge wells upgradient of the "failed" toxicity test location;
- Installation of a barrier wall immediately adjacent to licensed disposal area within the groundwater flow path.
- Installation of interceptor trenches immediately adjacent to the licensed disposal area within the groundwater flow path.

NORTH BAPTISTE WASTE TRANSFER STATION
(FORMER WDS)
GROUNDWATER
TRIGGER MECHANISMS
APPROVED AUGUST 16, 2019

OBJECTIVE: GROUNDWATER IMPACTS

The objective of the groundwater trigger mechanisms and contingency plan for the former Waste Disposal Site (WDS) is to identify increased concerns for leachate impacted groundwater discharging to surface water and ensure timely action to prevent and mitigate any adverse impacts to the environment.

East & South Property Boundary-Groundwater

Assessment Points- NB-MW3 (East) and NB-MW5R (South)
Trigger Parameters- Alkalinity, Chloride, Iron, Manganese, Sodium, and TDS
Frequency-Sampling four times per year (Semi-annually)
Contingency Plan is activated if three or more of the following trigger parameter exceedances occur at one assessment point for one discreet sample:

- Alkalinity, Chloride, Iron, Manganese, Sodium, and TDS exceeds the 75th percentile of the historical data for the assessment point;

Table 2: Trigger Parameter Concentrations (2009- 2017)

Parameter	MW3 75th percentile of historic data (2009-2017) (mg/L)	MW5R 75th percentile of historic data (2006-2017) (mg/L)
Alkalinity	190	40
Chloride	57	25
Iron	0.83	0.51
Manganese	0.23	0.14
Sodium	60	13
TDS	366	152

Note: MW5R includes historic data from MW5

CONTINGENCY PLAN – GROUNDWATER

Tier 1: If three or more trigger parameter concentrations are exceeded at one assessment point during one sampling event, a repeat sampling will be conducted within one (1) month to confirm or refute the results at that location.

Tier 2: If Tier 1 re-sampling confirms parameter exceedances then collect a toxicity sample at the downgradient surface water monitoring location from the assessment point which was triggered (MCG-H for well NB-MW3, MCG-C for NB-MW-5R).

Respectfully submitted,

BluMetric Environmental Inc.



Iris O'Connor, P.Eng.

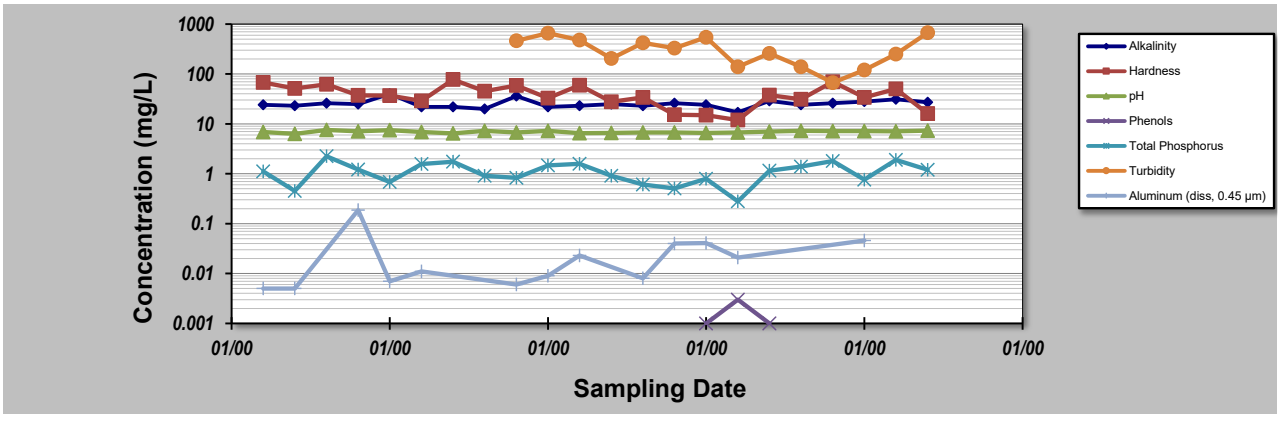
Appendix I

Mann-Kendall Analysis

GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW1
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Alkalinity	Hardness	pH	Phenols	otal Phosphoru	Turbidity	hinum (diss, 0.45 µr
Sampling Event	Sampling Date	NB-MW1 CONCENTRATION (mg/L)					
1	2015-May-04	24	67.9	6.9	-	1.12	-	0.005
2	2015-Oct-26	23	51.4	6.31	-	0.45	-	0.005
3	2016-Apr-28	26	62.3	7.56	-	2.24	-	-
4	2016-Oct-26	25	37.3	7.11	-	1.21	-	0.187
5	2017-May-10	40	36.9	7.48	-	0.68	-	0.007
6	2017-Oct-23	22	28.8	6.88	-	1.56	-	0.011
7	2018-May-07	22	77.2	6.42	-	1.74	-	-
8	2018-Oct-22	20	45	7.28	-	0.91	-	-
9	2019-May-07	36	58.9	6.7	-	0.83	464	0.006
10	2019-Oct-24	22	32.8	7.22	-	1.47	659	0.009
11	2020-May-06	23	59.3	6.53	<0.001	1.59	480	0.023
12	2020-Oct-06	25	27.6	6.56	<0.001	0.91	204	<0.004
13	2021-Apr-20	23	33.7	6.75	<0.001	0.61	423	0.008
14	2021-Oct-18	26	15.3	6.74	<0.001	0.51	330	0.04
15	2022-May-03	24	15	6.59	0.001	0.79	543	0.041
16	2022-Oct-18	17	11.9	6.7	0.003	0.28	140	0.021
17	2023-May-03	29	37.8	7.05	0.001	1.15	258	<0.004
18	2023-Oct-19	24	31	7.21	<0.001	1.4	140	<0.0049
19	2024-Apr-29	26	70	7.14	<0.001	1.8	67	<0.0049
20	2024-Oct-29	28	34	7.14	<0.001	0.76	120	0.046
21	2025-May-07	31	50	7.07	<0.001	1.9	250	<0.0049
22	2025-Oct-21	27	16	7.29	<0.001	1.2	670	<0.0049
23								
24								
25								
Coefficient of Variation:		0.20	0.47	0.05	0.69	0.46	0.60	1.56
Mann-Kendall Statistic (S):		48	-69	25	0	2	-30	39
Confidence Factor:		90.6%	97.3%	74.8%		51.1%	94.4%	99.1%
Concentration Trend:		Prob. Increasing	Decreasing	No Trend		No Trend	Prob. Decreasing	Increasing



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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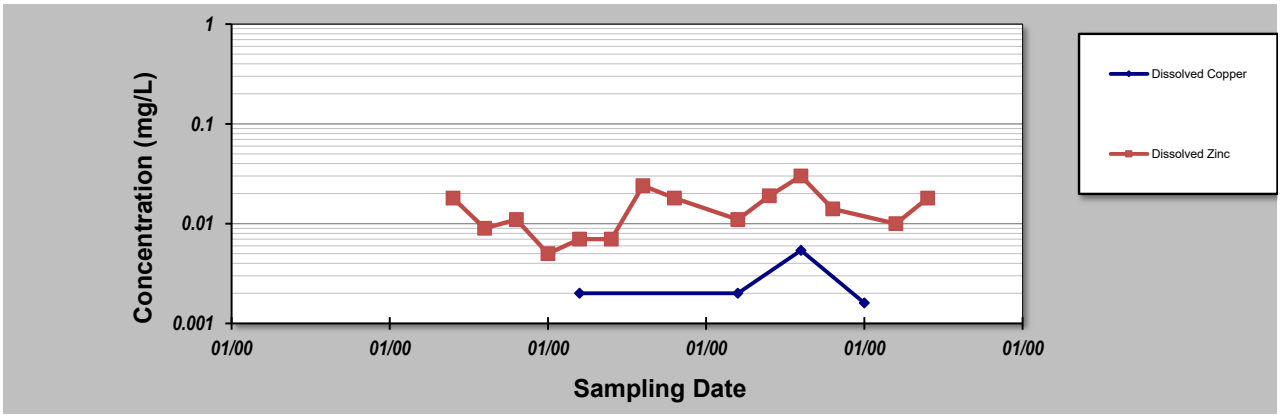
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW1
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Dissolved Coppe	Dissolved Zinc					
Sampling Event	Sampling Date	NB-MW1 CONCENTRATION (mg/L)						
1	2015-May-04	-	-					
2	2015-Oct-26	-	-					
3	2016-Apr-28	-	-					
4	2016-Oct-26	-	-					
5	2017-May-10	-	-					
6	2017-Oct-23	-	-					
7	2018-May-07	-	0.018					
8	2018-Oct-22	-	0.009					
9	2019-May-07	-	0.011					
10	2019-Oct-24	-	0.005					
11	2020-May-06	0.002	0.007					
12	2020-Oct-06	<0.002	0.007					
13	2021-Apr-20	<0.002	0.024					
14	2021-Oct-18	<0.002	0.018					
15	2022-May-03	<0.002	<0.005					
16	2022-Oct-18	0.002	0.011					
17	2023-May-03	<0.001	0.019					
18	2023-Oct-19	0.0054	0.03					
19	2024-Apr-29	<0.0009	0.014					
20	2024-Oct-29	0.0016	<0.005					
21	2025-May-07	<0.0009	0.01					
22	2025-Oct-21	<0.0009	0.018					
23								
24								
25								
Coefficient of Variation:		0.65	0.50					
Mann-Kendall Statistic (S):		-1	22					
Confidence Factor:		50.0%	87.2%					
Concentration Trend:		Stable	No Trend					



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
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3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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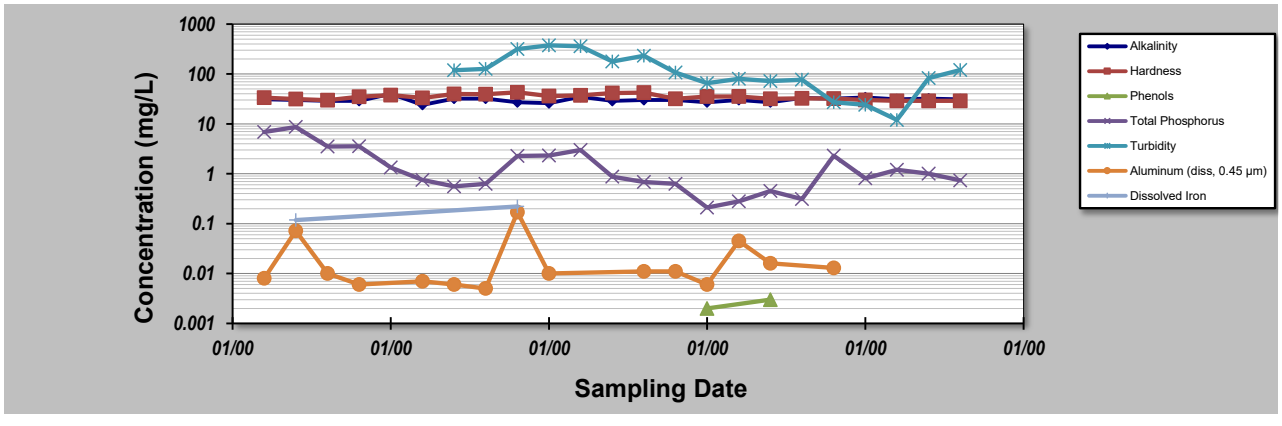
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW2R
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Alkalinity	Hardness	Phenols	otal Phosphoru	Turbidity	hinum (diss, 0.45	Dissolved Iron
Sampling Event	Sampling Date	NB-MW2R CONCENTRATION (mg/L)						
1	2016-Apr-28	31	33.5	-	6.89	-	0.008	-
2	2016-Oct-26	30	31.3	-	8.64	-	0.072	0.118
3	2017-May-10	29	29.8	-	3.52	-	0.01	-
4	2017-Oct-23	29	35.1	-	3.54	-	0.006	-
5	2018-May-07	40	37.7	-	1.33	-	-	-
6	2018-Oct-22	24	33.3	-	0.75	-	0.007	-
7	2019-May-07	32	39.8	-	0.56	119	0.006	-
8	2019-May-07	32	39.4	-	0.63	126	0.005	-
9	2019-Oct-24	27	42.9	-	2.28	316	0.17	0.221
10	2020-May-06	26	36	<0.001	2.31	375	0.01	<0.01
11	2020-Oct-06	35	37.2	<0.001	3.01	357	<0.004	<0.01
12	2021-Apr-20	29	41.6	<0.001	0.87	177	<0.004	<0.01
13	2021-Apr-20	30	42.3	<0.001	0.68	232	0.011	<0.01
14	2021-Oct-18	30	31.6	<0.001	0.63	107	0.011	<0.01
15	2022-May-03	27	35.4	0.002	0.21	65.6	0.006	<0.01
16	2022-May-03	30	35.4	<0.001	0.28	79.7	0.045	<0.01
17	2022-Oct-18	27	31.8	0.003	0.45	71.8	0.016	<0.01
18	2023-May-03	33	32.6	<0.001	0.31	77.1	<0.004	<0.01
19	2023-Oct-19	32	32	<0.001	2.3	27	0.013	<0.1
20	2024-Apr-29	34	30	<0.001	0.81	24	<0.0049	<0.1
21	2024-Oct-29	31	29	<0.001	1.2	12	<0.0049	<0.1
22	2025-May-07	32	29	<0.001	1	83	<0.0049	<0.1
23	2025-Oct-21	31	29	<0.001	0.74	120	<0.0049	<0.1
24								
25								
Coefficient of Variation:		0.11	0.13	0.28	1.14	0.82	1.66	0.43
Mann-Kendall Statistic (S):		36	-75	1	-92	-66	20	1
Confidence Factor:		82.0%	97.5%		99.3%	99.7%	82.3%	
Concentration Trend:		No Trend	Decreasing		Decreasing	Decreasing	No Trend	



Notes:

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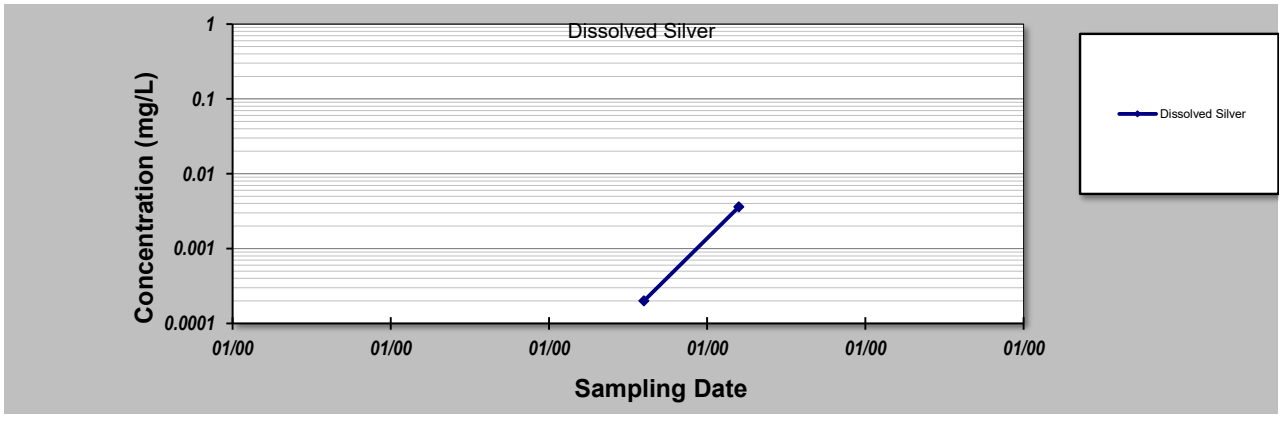
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW2R
Conducted By:	Oscar Fisher	Concentration Units:	mg/L
Sampling Point ID:	Dissolved Silver		

Sampling Event	Sampling Date	NB-MW2R CONCENTRATION (mg/L)
1	2016-Apr-28	-
2	2016-Oct-26	-
3	2017-May-10	-
4	2017-Oct-23	-
5	2018-May-07	-
6	2018-Oct-22	-
7	2019-May-07	-
8	2019-May-07	-
9	2019-Oct-24	-
10	2020-May-06	<0.0001
11	2020-Oct-06	<0.0001
12	2021-Apr-20	<0.0001
13	2021-Apr-20	0.0002
14	2021-Oct-18	<0.0001
15	2022-May-03	<0.0001
16	2022-May-03	0.0036
17	2022-Oct-18	<0.0001
18	2023-May-03	<0.0001
19	2023-Oct-19	<0.00009
20	2024-Apr-29	<0.00009
21	2024-Oct-29	<0.00009
22	2025-May-07	<0.00009
23	2025-Oct-21	<0.00009
24		
25		
Coefficient of Variation:		1.27
Mann-Kendall Statistic (S):		1
Confidence Factor:		
Concentration Trend:		



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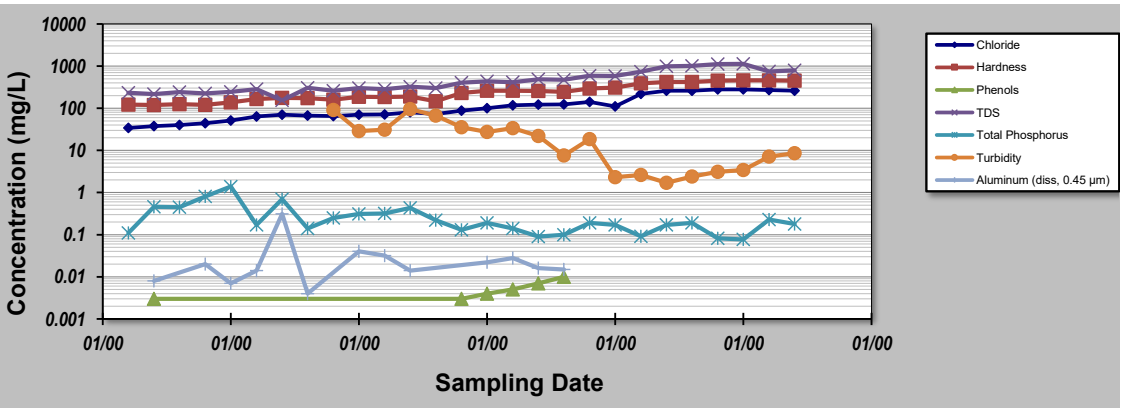
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW3
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Chloride	Hardness	Phenols	TDS	otal Phosphoru	Turbidity	hinum (diss, 0.45 µn
Sampling Event	Sampling Date	NB-MW3 CONCENTRATION (mg/L)						
1	2015-May-04	34.1	121.7	-	232	0.11	-	-
2	2015-Oct-26	37.7	119.4	0.003	218	0.46	-	0.008
3	2016-Apr-28	39.8	124.8	-	242	0.45	-	-
4	2016-Oct-26	43.9	121.1	-	224	0.81	-	0.02
5	2017-May-10	51.2	137.7	-	246	1.39	-	0.007
6	2017-Oct-23	63.8	166.1	-	282	0.17	-	0.014
7	2018-May-07	70.7	176	-	154	0.7	-	0.312
8	2018-Oct-22	67.3	173	-	304	0.14	-	0.004
9	2019-May-07	65	159	-	260	0.25	91.4	-
10	2019-Oct-24	70.5	188	-	302	0.31	28.7	0.04
11	2019-Oct-24	71.2	185	-	282	0.32	30.9	0.032
12	2020-May-06	80.8	190	<0.001	326	0.43	95.1	0.014
13	2020-Oct-06	72.5	146	<0.001	302	0.22	67.1	<0.004
14	2021-Apr-20	87.5	231	0.003	404	0.13	35.3	<0.004
15	2021-Oct-18	99.9	261	0.004	438	0.19	27.5	0.022
16	2022-May-03	117	259	0.005	414	0.14	33.8	0.028
17	2022-Oct-18	122	258	0.007	484	0.09	21.9	0.016
18	2022-Oct-18	124	246	0.01	476	0.1	7.6	0.015
19	2023-May-03	141	293	<0.001	594	0.19	18.5	<0.004
20	2023-Oct-19	110	310	<0.001	585	0.17	2.3	<0.0049
21	2024-Apr-29	220	390	<0.001	740	0.091	2.6	<0.0049
22	2024-Oct-29	260	420	<0.001	990	0.17	1.7	<0.0049
23	2024-Oct-29	260	420	<0.001	1010	0.19	2.4	<0.0049
24	2025-May-07	280	450	<0.001	1120	0.082	3.1	<0.0049
25	2025-May-07	280	460	<0.001	1130	0.077	3.4	<0.0049
26	2025-Oct-21	270	460	<0.001	745	0.23	7.1	<0.0049
27	2025-Oct-21	260	450	<0.001	795	0.18	8.6	<0.0049
28								
29								
30								
Coefficient of Variation:		0.69	0.47	0.51	0.60	0.99	1.13	2.01
Mann-Kendall Statistic (S):		319	302	14	295	-138	-95	9
Confidence Factor:		>99.9%	>99.9%	99.6%	>99.9%	99.8%	>99.9%	68.4%
Concentration Trend:		Increasing	Increasing	Increasing	Increasing	Decreasing	Decreasing	No Trend



Notes:

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2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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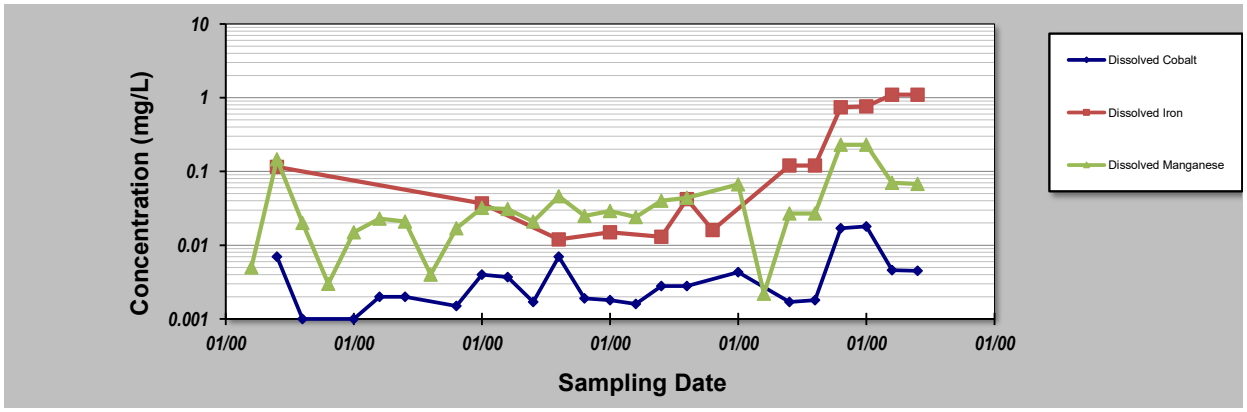
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW3
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID: Dissolved Cobalt | Dissolved Iron | ssolved Manganese

Sampling Event	Sampling Date	NB-MW3 CONCENTRATION (mg/L)						
1	2015-May-04	-	-	0.005				
2	2015-Oct-26	0.007	0.115	0.146				
3	2016-Apr-28	0.001	-	0.02				
4	2016-Oct-26	-	-	0.003				
5	2017-May-10	0.001	-	0.015				
6	2017-Oct-23	0.002	-	0.023				
7	2018-May-07	0.002	-	0.021				
8	2018-Oct-22	-	-	0.004				
9	2019-May-07	0.0015	-	0.017				
10	2019-Oct-24	0.004	0.037	0.032				
11	2019-Oct-24	0.0037	-	0.031				
12	2020-May-06	0.0017	<0.01	0.021				
13	2020-Oct-06	0.007	0.012	0.046				
14	2021-Apr-20	0.0019	<0.01	0.025				
15	2021-Oct-18	0.0018	0.015	0.029				
16	2022-May-03	0.0016	<0.01	0.024				
17	2022-Oct-18	0.0028	0.013	0.04				
18	2022-Oct-18	0.0028	0.042	0.044				
19	2023-May-03	<0.0005	0.016	<0.002				
20	2023-Oct-19	0.0043	<0.1	0.067				
21	2024-Apr-29	<0.0005	<0.1	0.0022				
22	2024-Oct-29	0.0017	0.12	0.027				
23	2024-Oct-29	0.0018	0.12	0.027				
24	2025-May-07	0.017	0.74	0.23				
25	2025-May-07	0.018	0.76	0.23				
26	2025-Oct-21	0.0046	1.1	0.07				
27	2025-Oct-21	0.0045	1.1	0.068				
28								
29								
30								
Coefficient of Variation:		1.08	1.34	1.25				
Mann-Kendall Statistic (S):		71	52	146				
Confidence Factor:		97.6%	100.0%	100.0%				
Concentration Trend:		Increasing	Increasing	Increasing				



Notes:

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2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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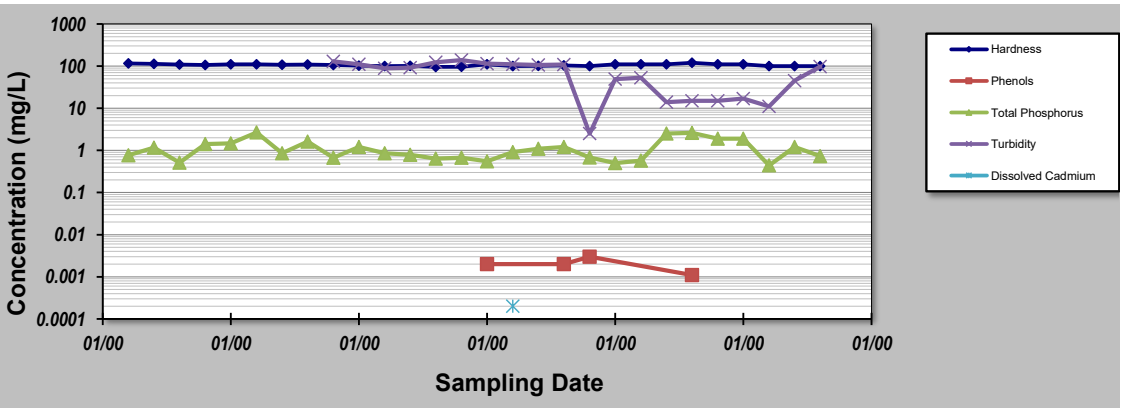
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW4
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Hardness	Phenols	Total Phosphorus	Turbidity	Dissolved Cadmium		
Sampling Event	Sampling Date	NB-MW4 CONCENTRATION (mg/L)						
1	2015-May-04	116.3	-	0.77	-	-		
2	2015-Oct-26	112.5	-	1.16	-	-		
3	2016-Apr-28	108.9	-	0.51	-	-		
4	2016-Oct-26	106.6	-	1.42	-	-		
5	2017-May-10	110	-	1.46	-	-		
6	2017-Oct-23	110	-	2.66	-	-		
7	2018-May-07	108.2	-	0.86	-	-		
8	2018-Oct-22	108.8	-	1.62	-	-		
9	2019-May-07	107	-	0.67	130	-		
10	2019-Oct-24	103	-	1.21	110	-		
11	2020-May-06	100	<0.001	0.86	88.9	<0.0001		
12	2020-May-06	101	<0.001	0.79	92	<0.0001		
13	2020-Oct-06	95.8	<0.001	0.64	123	<0.0001		
14	2020-Oct-06	96.5	<0.001	0.67	139	<0.0001		
15	2021-Apr-20	111	0.002	0.55	115	<0.0001		
16	2021-Oct-18	100	<0.001	0.91	110	0.0002		
17	2021-Oct-18	101	<0.001	1.1	107	<0.0001		
18	2022-May-03	104	0.002	1.21	109	<0.0001		
19	2022-Oct-18	100	0.003	0.68	2.5	<0.0001		
20	2023-May-03	110	<0.001	0.5	49.5	<0.0001		
21	2023-May-03	111	<0.001	0.57	52.8	<0.0001		
22	2023-Oct-19	110	<0.001	2.5	14	<0.00009		
23	2023-Oct-19	120	0.0011	2.6	15	<0.00009		
24	2024-Apr-29	110	<0.001	1.9	15	<0.00009		
25	2024-Apr-29	110	<0.001	1.9	17	<0.00009		
26	2024-Oct-29	100	<0.001	0.44	11	<0.00009		
27	2025-May-07	100	<0.001	1.2	45	<0.00009		
28	2025-Oct-21	100	<0.001	0.73	98	<0.00009		
29								
30								
Coefficient of Variation:		0.06	0.38	0.57	0.65			
Mann-Kendall Statistic (S):		-70	-1	-10	-90			
Confidence Factor:		91.3%	50.0%	57.0%	99.8%			
Concentration Trend:		Prob. Decreasing	Stable	Stable	Decreasing			



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
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3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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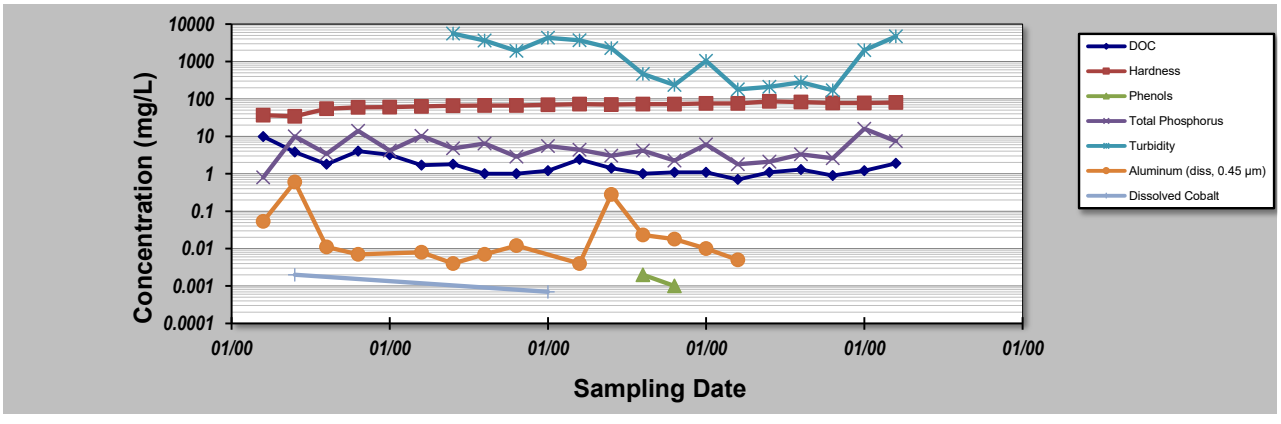
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW5R
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	DOC	Hardness	Phenols	otal Phosphoru	Turbidity	hinum (diss, 0.45	Dissolved Cobalt
Sampling Event	Sampling Date	NB-MW5R CONCENTRATION (mg/L)						
1	2016-Apr-28	9.9	36.9	-	0.8	-	0.053	-
2	2016-Oct-26	3.8	34.4	-	9.94	-	0.606	0.002
3	2017-May-10	1.8	54.8	-	3.4	-	0.011	-
4	2017-Oct-23	4	59.5	-	14	-	0.007	-
5	2018-May-07	3.2	60.1	-	4.15	-	-	-
6	2018-Oct-22	1.7	63.1	-	10.3	-	0.008	-
7	2019-May-07	1.8	65.4	-	4.75	5560	0.004	-
8	2019-Oct-24	1	66.5	-	6.4	3620	0.007	-
9	2020-May-06	1	66.7	<0.001	2.87	1910	0.012	<0.0005
10	2020-Oct-06	1.2	69.8	<0.001	5.52	4310	<0.004	0.0007
11	2021-Apr-20	2.4	72.1	<0.001	4.41	3680	0.004	<0.0005
12	2021-Oct-18	1.4	70.5	<0.001	3.05	2280	0.279	<0.0005
13	2022-May-03	1	72.2	0.002	4.16	462	0.023	<0.0005
14	2022-Oct-18	1.1	72.6	0.001	2.25	236	0.018	<0.0005
15	2023-May-03	1.1	75.5	<0.001	6.06	1050	0.01	<0.0005
16	2023-Jun-01	0.7	76	<0.001	1.8	180	0.005	<0.0005
17	2023-Oct-19	1.1	86	<0.001	2.1	210	<0.0049	<0.0005
18	2024-Apr-29	1.3	82	<0.001	3.3	280	<0.0049	<0.0005
19	2024-Oct-29	0.9	78	<0.001	2.6	170	<0.0049	<0.0005
20	2025-May-07	1.2	78	<0.001	16	2000	<0.0049	<0.0005
21	2025-Oct-21	1.9	80	<0.001	7.4	4700	<0.0049	<0.0005
22								
23								
24								
25								
Coefficient of Variation:		0.98	0.20	0.47	0.73	0.93	2.26	0.68
Mann-Kendall Statistic (S):		-88	191	-1	-22	-41	-15	-1
Confidence Factor:		99.6%	>99.9%		73.5%	97.7%	77.5%	
Concentration Trend:		Decreasing	Increasing		Stable	Decreasing	No Trend	



Notes:

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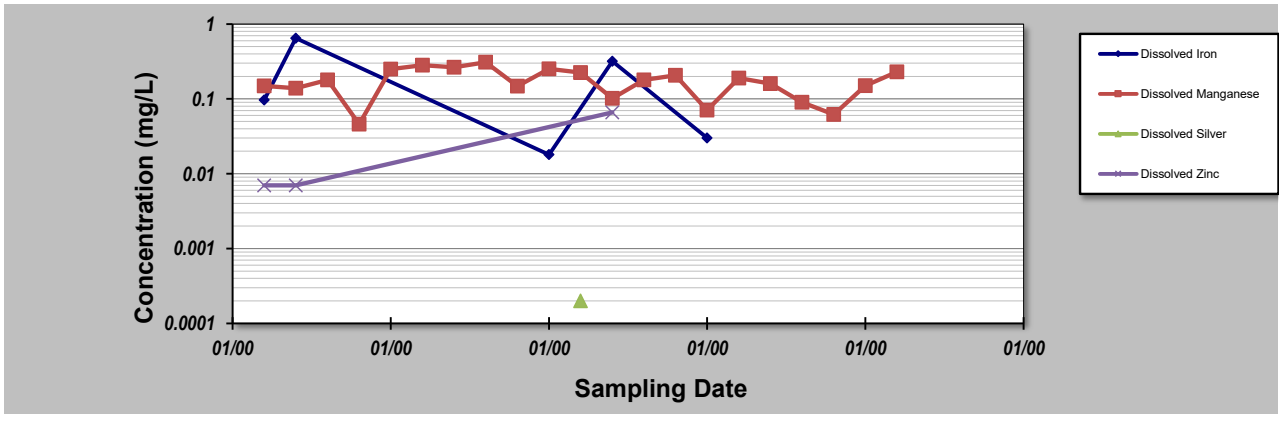
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	NB-MW5R
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Dissolved Iron	solved Mangan	Dissolved Silver	Dissolved Zinc			

Sampling Event	Sampling Date	NB-MW5R CONCENTRATION (mg/L)						
1	2016-Apr-28	0.097	0.149	-	0.007			
2	2016-Oct-26	0.649	0.139	-	0.007			
3	2017-May-10	-	0.18	-	-			
4	2017-Oct-23	-	0.046	-	-			
5	2018-May-07	-	0.251	-	-			
6	2018-Oct-22	-	0.283	-	-			
7	2019-May-07	-	0.264	-	-			
8	2019-Oct-24	-	0.309	-	-			
9	2020-May-06	<0.01	0.148	<0.0001	<0.005			
10	2020-Oct-06	0.018	0.252	<0.0001	<0.005			
11	2021-Apr-20	<0.01	0.225	0.0002	<0.005			
12	2021-Oct-18	0.319	0.102	<0.0001	0.066			
13	2022-May-03	<0.01	0.18	<0.0001	<0.005			
14	2022-Oct-18	<0.01	0.206	<0.0001	<0.005			
15	2023-May-03	0.03	0.071	<0.0001	<0.005			
16	2023-Jun-01	<0.1	0.19	<0.00009	<0.005			
17	2023-Oct-19	<0.1	0.16	<0.00009	<0.005			
18	2024-Apr-29	<0.1	0.09	<0.00009	<0.005			
19	2024-Oct-29	<0.1	0.062	<0.00009	<0.005			
20	2025-May-07	<0.1	0.15	<0.00009	<0.005			
21	2025-Oct-21	<0.1	0.23	<0.00009	<0.005			
22								
23								
24								
25								
Coefficient of Variation:		1.20	0.43		1.28			
Mann-Kendall Statistic (S):		-2	-29		2			
Confidence Factor:		59.2%	79.9%					
Concentration Trend:		No Trend	Stable					



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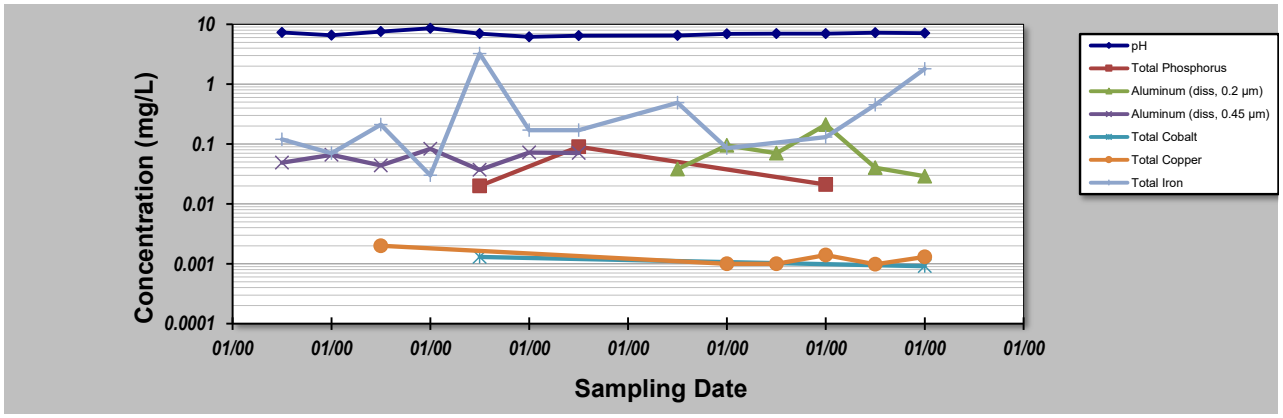
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-A
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	pH	otal Phosphoru	minum (diss, 0.2	hinum (diss, 0.45	Total Cobalt	Total Copper	Total Iron
Sampling Event	Sampling Date	MCG-A CONCENTRATION (mg/L)						
1	2015-May-04	7.28	-	-	0.049	-	-	0.12
2	2016-Apr-28	6.57	-	-	0.066	-	-	0.07
3	2016-Aug-17	7.54	-	-	0.044	-	0.002	0.21
4	2017-May-10	8.58	-	-	0.083	-	-	0.03
5	2017-Jul-20	7	0.02	-	0.037	0.0013	-	3.24
6	2018-May-07	6.17	-	-	0.072	-	-	0.17
7	2019-May-07	6.45	0.09	-	0.071	<0.0005	<0.002	0.17
8	2020-May-07	-	-	-	-	-	-	-
9	2022-May-03	6.5	<0.02	0.038	-	<0.0005	<0.002	0.49
10	2023-May-03	6.92	<0.02	0.095	-	<0.0005	0.001	0.085
11	2024-Apr-29	6.96	<0.02	0.07	-	<0.0005	0.001	<0.1
12	2024-Jul-11	6.97	0.021	0.21	-	<0.0005	0.0014	0.13
13	2025-May-07	7.23	<0.02	0.04	-	<0.0005	0.00098	0.45
14	2025-Jul-07	7.13	<0.02	0.029	-	0.00091	0.0013	1.8
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.09	0.92	0.85	0.28	0.25	0.31	1.67
Mann-Kendall Statistic (S):		2	1	-3	3	-1	-4	19
Confidence Factor:		52.4%		64.0%	61.4%		70.3%	88.9%
Concentration Trend:		No Trend		Stable	No Trend		Stable	No Trend



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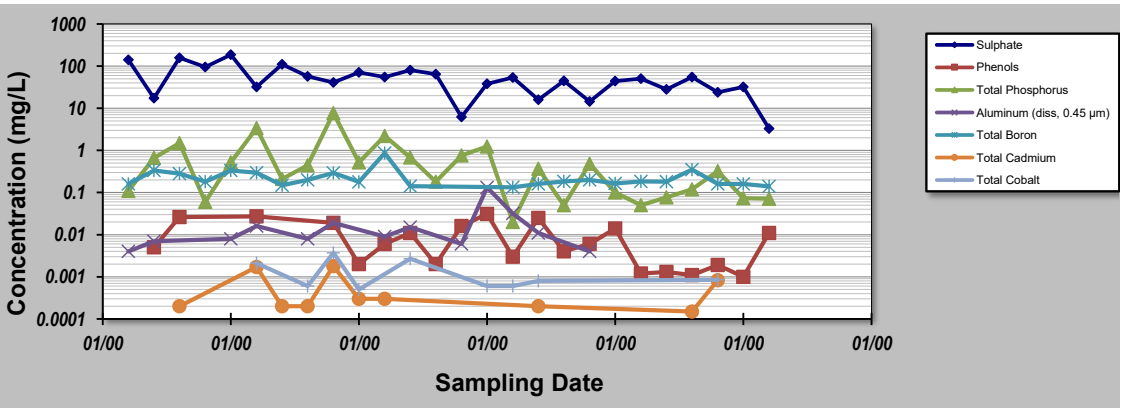
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-B
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Sulphate	Phenols	Total Phosphorus	Aluminum (diss, 0.45	Total Boron	Total Cadmium	Total Cobalt
Sampling Event	Sampling Date	MCG-B CONCENTRATION (mg/L)						
1	2015-May-04	141	-	0.11	0.004	0.16	-	-
2	2015-Sep-09	17.4	0.005	0.66	0.007	0.335	-	-
3	2015-Oct-26	158	0.026	1.49	-	0.28	0.0002	-
4	2016-Apr-28	94.8	-	0.06	-	0.182	-	-
5	2016-Aug-17	186	-	0.52	0.008	0.332	-	-
6	2016-Oct-26	31.9	0.027	3.37	0.016	0.295	0.0017	0.0021
7	2017-May-10	111	-	0.21	-	0.149	0.0002	-
8	2017-Jul-20	57.1	-	0.44	0.008	0.199	0.0002	0.0006
9	2017-Oct-23	41	0.019	7.66	0.019	0.291	0.0018	0.0037
10	2018-May-07	71.1	0.002	0.52	-	0.179	0.0003	0.0005
11	2018-Jul-30	55.1	0.006	2.21	0.009	0.863	0.0003	-
12	2018-Oct-22	80.3	0.011	0.68	0.015	0.141	-	0.0027
13	2019-May-07	64.5	0.002	0.18	<0.004	-	-	<0.0005
14	2019-Aug-14	6.22	0.016	0.76	0.006	-	-	<0.0005
15	2019-Oct-24	37.9	0.031	1.24	0.132	-	-	0.0006
16	2020-May-06	53.4	0.003	0.02	0.032	0.133	<0.0001	0.0006
17	2020-Oct-06	15.9	0.025	0.37	0.011	0.161	0.0002	0.0008
18	2021-Apr-20	44.6	0.004	0.05	<0.004	0.184	<0.0001	<0.0005
19	2021-Jul-14	14.4	0.006	0.48	0.004	0.2	<0.0001	<0.0005
20	2022-May-03	44.1	0.014	0.1	-	0.164	<0.0001	<0.0005
21	2023-May-03	50.2	0.0012	0.05	-	0.184	<0.0001	<0.0005
22	2024-Apr-29	28	0.0013	0.077	-	0.18	<0.00009	<0.0005
23	2024-Jul-11	55	0.0011	0.12	-	0.35	0.00015	<0.0005
24	2024-Oct-29	24	0.0019	0.32	-	0.16	0.00083	0.00085
25	2025-May-07	32	0.001	0.073	-	0.16	<0.00009	<0.0005
26	2025-Jul-07	3.3	0.011	0.071	-	0.14	<0.00009	<0.0005
27								
28								
29								
30								
Coefficient of Variation:		0.79	0.98	1.89	1.64	0.65	1.09	0.84
Mann-Kendall Statistic (S):		-141	-77	-103	18	-61	-2	-1
Confidence Factor:		99.9%	99.0%	98.8%	84.7%	94.3%	53.5%	50.0%
Concentration Trend:		Decreasing	Decreasing	Decreasing	No Trend	Prob. Decreasing	No Trend	Stable



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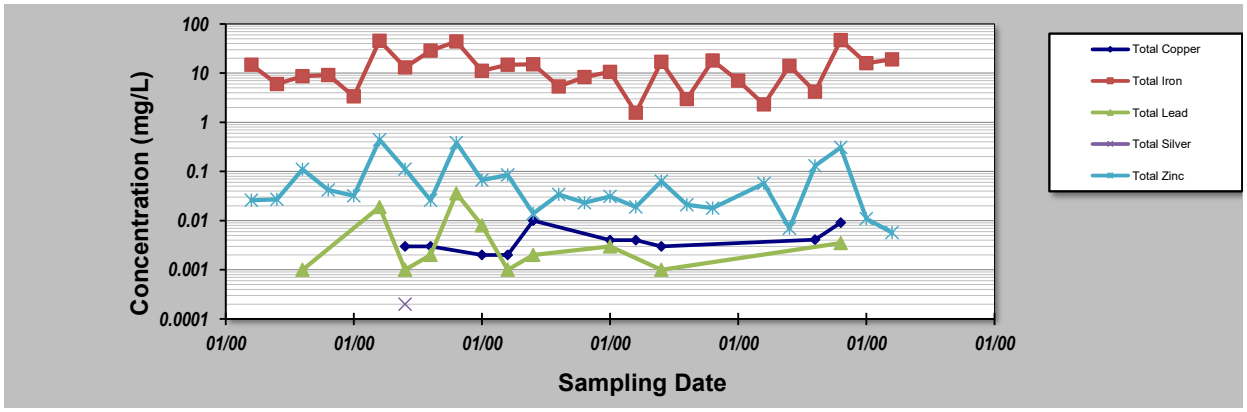
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-B
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Total Copper	Total Iron	Total Lead	Total Silver	Total Zinc		
Sampling Event	Sampling Date	MCG-B CONCENTRATION (mg/L)						
1	2015-May-04	-	14.8	-	-	0.026		
2	2015-Sep-09	-	6	-	-	0.027		
3	2015-Oct-26	-	8.71	0.001	-	0.11		
4	2016-Apr-28	-	9.17	-	-	0.042		
5	2016-Aug-17	-	3.37	-	-	0.032		
6	2016-Oct-26	-	45.5	0.019	-	0.443		
7	2017-May-10	0.003	13	0.001	0.0002	0.111		
8	2017-Jul-20	0.003	28.8	0.002	-	0.026		
9	2017-Oct-23	-	44	0.036	-	0.386		
10	2018-May-07	0.002	11.2	0.008	-	0.067		
11	2018-Jul-30	0.002	14.8	0.001	-	0.085		
12	2018-Oct-22	0.01	15.2	0.002	-	0.014		
13	2019-May-07	<0.002	5.35	<0.001	<0.0001	0.034		
14	2019-Aug-14	<0.002	8.3	<0.001	<0.0001	0.023		
15	2019-Oct-24	0.004	10.6	0.003	<0.0001	0.031		
16	2020-May-06	0.004	1.57	<0.001	<0.0001	0.019		
17	2020-Oct-06	0.003	16.9	0.001	<0.0001	0.063		
18	2021-Apr-20	<0.002	2.97	<0.001	<0.0001	0.021		
19	2021-Jul-14	<0.002	18.1	<0.001	<0.0001	0.018		
20	2022-May-03	<0.002	7.06	<0.001	<0.0001	<0.02		
21	2023-May-03	<0.001	2.31	<0.001	<0.0001	0.057		
22	2024-Apr-29	<0.0009	14	<0.0005	<0.00009	0.007		
23	2024-Jul-11	0.0041	4.2	<0.0005	<0.00009	0.13		
24	2024-Oct-29	0.0091	47	0.0035	<0.00009	0.31		
25	2025-May-07	<0.0009	16	<0.0005	-	0.011		
26	2025-Jul-07	<0.0009	19	<0.0005	-	0.0057		
27								
28								
29								
30								
Coefficient of Variation:		0.64	0.86	1.56		1.41		
Mann-Kendall Statistic (S):		18	10	2		-75		
Confidence Factor:		93.4%	57.8%	53.0%		95.8%		
Concentration Trend:		Prob. Increasing	No Trend	No Trend		Decreasing		



Notes:

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2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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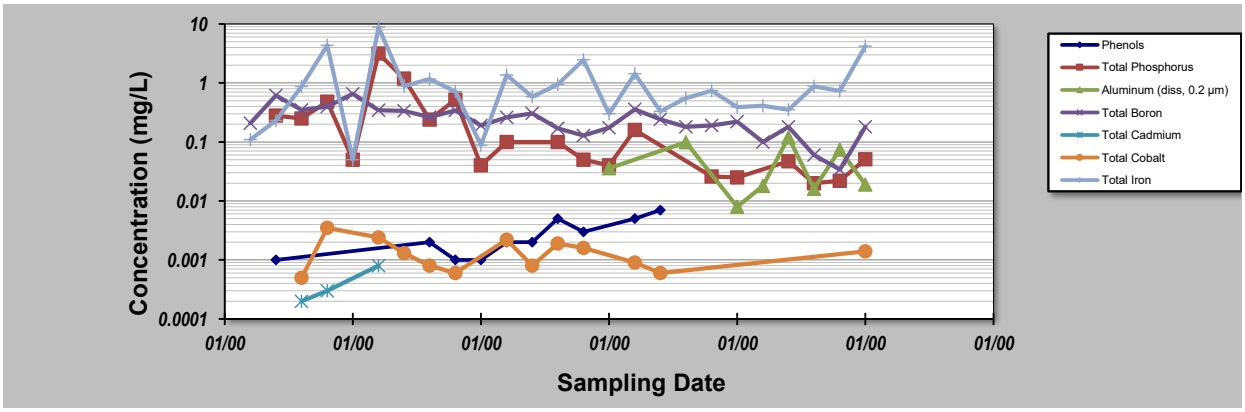
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-C
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Phenols	Total Phosphoru	minum (diss, 0.2	Total Boron	Total Cadmium	Total Cobalt	Total Iron
Sampling Event	Sampling Date	MCG-C CONCENTRATION (mg/L)						
1	2015-May-04	-	-	-	0.207	-	-	0.11
2	2015-Sep-09	0.001	0.28	-	0.613	-	-	0.23
3	2015-Oct-26	-	0.25	-	0.348	0.0002	0.0005	0.87
4	2016-Apr-28	-	0.48	-	0.398	0.0003	0.0035	4.35
5	2016-Aug-17	-	0.05	-	0.656	-	-	0.05
6	2016-Oct-26	-	3.15	-	0.345	0.0008	0.0024	8.82
7	2017-May-10	-	1.18	-	0.337	-	0.0013	0.89
8	2018-May-07	0.002	0.24	-	0.264	-	0.0008	1.16
9	2019-May-07	0.001	0.52	-	0.341	<0.0001	0.0006	0.72
10	2020-May-06	0.001	0.04	-	0.191	<0.0001	<0.0005	0.088
11	2020-Oct-06	0.002	0.1	-	0.262	<0.0001	0.0022	1.36
12	2021-Apr-20	0.002	<0.02	-	0.306	<0.0001	0.0008	0.584
13	2021-Jul-14	0.005	0.1	-	0.17	<0.0001	0.0019	0.945
14	2021-Oct-18	0.003	0.05	-	0.128	<0.0001	0.0016	2.47
15	2022-May-03	<0.001	0.04	0.036	0.174	<0.0001	<0.0005	0.299
16	2022-Aug-04	0.005	0.16	-	0.356	<0.0001	0.0009	1.44
17	2022-Oct-18	0.007	<0.02	-	0.241	<0.0001	0.0006	0.331
18	2023-May-03	<0.001	<0.02	0.099	0.181	<0.0001	<0.0005	0.551
19	2023-Aug-09	<0.001	0.026	<0.005	0.19	<0.00009	<0.0005	0.74
20	2023-Oct-19	<0.001	0.025	0.008	0.22	<0.00009	<0.0005	0.39
21	2024-Apr-29	<0.001	<0.02	0.018	0.1	<0.00009	<0.0005	0.41
22	2024-Jul-11	<0.001	0.047	0.12	0.18	<0.00009	<0.0005	0.35
23	2024-Oct-29	<0.001	0.02	0.016	0.06	<0.00009	<0.0005	0.88
24	2025-May-07	<0.001	0.022	0.074	0.034	<0.00009	<0.0005	0.73
25	2025-Jul-07	<0.001	0.051	0.019	0.18	<0.00009	0.0014	4.2
26								
27								
28								
29								
30								
Coefficient of Variation:		0.72	2.10	0.88	0.57	0.74	0.62	1.46
Mann-Kendall Statistic (S):		32	-105	0	-173	3	-10	16
Confidence Factor:		99.9%	>99.9%	45.2%	>99.9%		70.5%	63.6%
Concentration Trend:		Increasing	Decreasing	Stable	Decreasing		Stable	No Trend



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
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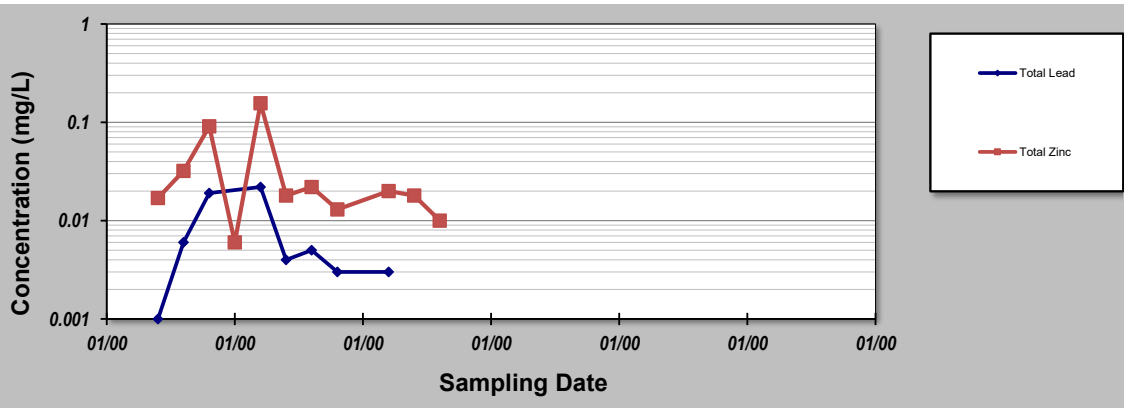
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-C
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Total Lead	Total Zinc					
Sampling Event	Sampling Date	MCG-C CONCENTRATION (mg/L)						
1	2015-May-04	-	-					
2	2015-Sep-09	0.001	0.017					
3	2015-Oct-26	0.006	0.032					
4	2016-Apr-28	0.019	0.091					
5	2016-Aug-17	-	0.006					
6	2016-Oct-26	0.022	0.156					
7	2017-May-10	0.004	0.018					
8	2018-May-07	0.005	0.022					
9	2019-May-07	0.003	0.013					
10	2020-May-06	<0.001	<0.005					
11	2020-Oct-06	0.003	0.02					
12	2021-Apr-20	<0.001	0.018					
13	2021-Jul-14	<0.001	0.01					
14	2021-Oct-18	<0.001	<0.02					
15	2022-May-03	<0.001	<0.02					
16	2022-Aug-04	<0.001	<0.02					
17	2022-Oct-18	<0.001	<0.02					
18	2023-May-03	<0.001	<0.02					
19	2023-Aug-09	<0.0005	<0.005					
20	2023-Oct-19	<0.0005	<0.005					
21	2024-Apr-29	<0.0005	<0.005					
22	2024-Jul-11	<0.0005	<0.005					
23	2024-Oct-29	<0.0005	<0.005					
24	2025-May-07	<0.0005	<0.005					
25	2025-Jul-07	<0.0005	<0.005					
26								
27								
28								
29								
30								
Coefficient of Variation:		1.01	1.25					
Mann-Kendall Statistic (S):		-5	-12					
Confidence Factor:		68.3%	79.9%					
Concentration Trend:		No Trend	No Trend					



Notes:

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3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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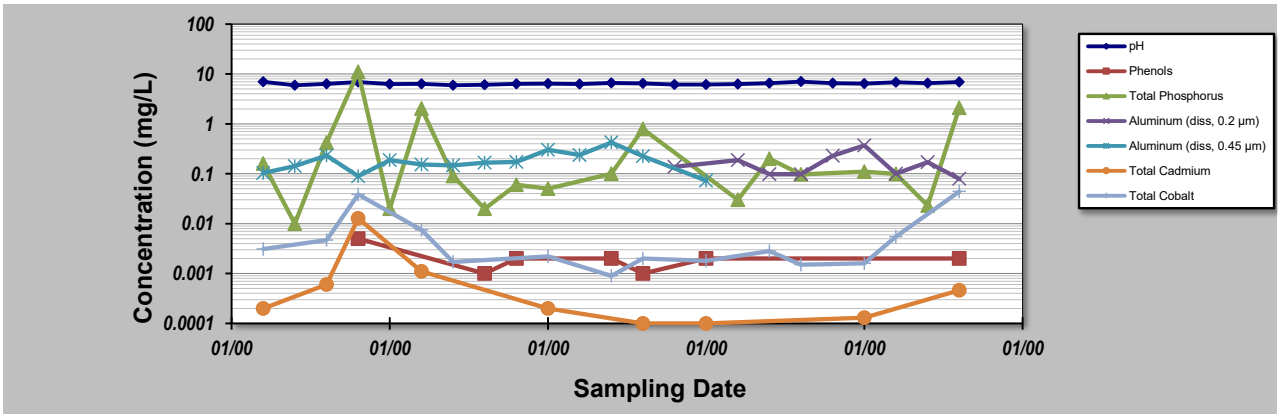
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-D
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	pH	Phenols	Total Phosphorus	Aluminum (diss, 0.2	Aluminum (diss, 0.45	Total Cadmium	Total Cobalt

Sampling Event	Sampling Date	MCG-D CONCENTRATION (mg/L)						
1	2015-Sep-09	6.97	-	0.16	-	0.103	0.0002	0.0031
2	2016-Apr-28	5.93	-	0.01	-	0.142	<0.0001	<0.0005
3	2016-Aug-17	6.31	-	0.42	-	0.231	0.0006	0.0047
4	2016-Oct-26	6.91	0.005	11	-	0.089	0.0128	0.0387
5	2017-May-10	6.27	-	0.02	-	0.187	<0.0001	<0.0005
6	2017-Oct-23	6.37	-	2.04	-	0.153	0.0011	0.0075
7	2018-May-07	5.94	-	0.09	-	0.147	<0.0001	0.0017
8	2019-May-07	6.08	0.001	0.02	-	0.167	-	<0.0005
9	2020-May-06	6.37	0.002	0.06	-	0.173	<0.0001	<0.0005
10	2020-Oct-06	6.41	<0.001	0.05	-	0.302	0.0002	0.0022
11	2021-Apr-20	6.26	<0.001	<0.02	-	0.237	<0.0001	<0.0005
12	2021-Jul-14	6.62	0.002	0.1	-	0.424	<0.0001	0.0009
13	2021-Oct-18	6.45	0.001	0.79	-	0.226	0.0001	0.002
14	2022-May-03	6.14	<0.001	<0.02	0.138	-	<0.0001	<0.0005
15	2022-Oct-18	6.13	0.002	<0.02	-	0.073	0.0001	0.0018
16	2023-May-03	6.26	<0.001	0.03	0.187	-	<0.0001	<0.0005
17	2023-Aug-09	6.58	<0.001	0.2	0.098	-	<0.00009	0.0028
18	2023-Oct-19	7.02	<0.001	0.097	0.098	-	<0.00009	0.0015
19	2024-Apr-29	6.53	<0.001	<0.02	0.23	-	<0.00009	<0.0005
20	2024-Jul-11	6.38	<0.001	0.11	0.37	-	0.00013	0.0016
21	2024-Oct-29	6.84	<0.001	0.099	0.1	-	<0.00009	0.0055
22	2025-May-07	6.53	<0.001	0.023	0.17	-	<0.00009	<0.0005
23	2025-Jul-07	6.92	0.002	2.1	0.079	-	0.00046	0.044
24								
25								
Coefficient of Variation:		0.05	0.63	2.75	0.56	0.49	2.39	1.67
Mann-Kendall Statistic (S):		68	-2	10	-3	29	-10	-9
Confidence Factor:		96.2%	55.7%	62.2%	58.0%	93.7%	82.1%	66.6%
Concentration Trend:		Increasing	Stable	No Trend	Stable	Prob. Increasing	No Trend	No Trend



Notes:

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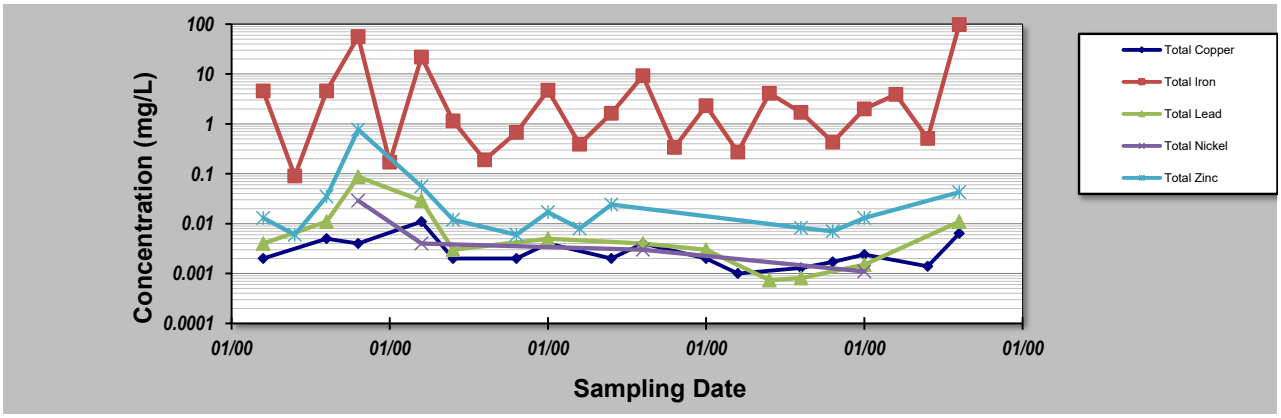
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-D
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Total Copper	Total Iron	Total Lead	Total Nickel	Total Zinc		
Sampling Event	Sampling Date	MCG-D CONCENTRATION (mg/L)						
1	2015-Sep-09	0.002	4.57	0.004	<0.003	0.013		
2	2016-Apr-28	<0.002	0.09	<0.001	<0.003	0.006		
3	2016-Aug-17	0.005	4.56	0.011	<0.003	0.035		
4	2016-Oct-26	0.004	56.2	0.087	0.029	0.768		
5	2017-May-10	<0.002	0.17	<0.001	<0.003	<0.005		
6	2017-Oct-23	0.011	21.7	0.029	0.004	0.056		
7	2018-May-07	0.002	1.15	0.003	<0.003	0.012		
8	2019-May-07	<0.002	0.19	<0.001	<0.003	<0.005		
9	2020-May-06	0.002	0.669	<0.001	<0.003	0.006		
10	2020-Oct-06	0.004	4.7	0.005	<0.003	0.017		
11	2021-Apr-20	<0.002	0.392	<0.001	<0.003	0.008		
12	2021-Jul-14	0.002	1.62	<0.001	<0.003	0.024		
13	2021-Oct-18	0.004	9.16	0.004	0.003	<0.02		
14	2022-May-03	<0.002	0.337	<0.001	<0.003	<0.02		
15	2022-Oct-18	0.002	2.31	0.003	<0.003	<0.02		
16	2023-May-03	0.001	0.271	<0.001	<0.003	<0.02		
17	2023-Aug-09	<0.0009	4.1	0.00074	<0.001	<0.005		
18	2023-Oct-19	0.0013	1.7	0.00081	<0.001	0.0082		
19	2024-Apr-29	0.0017	0.43	<0.0005	<0.001	0.007		
20	2024-Jul-11	0.0024	2	0.0015	0.0011	0.013		
21	2024-Oct-29	<0.0009	3.9	<0.0005	<0.001	<0.005		
22	2025-May-07	0.0014	0.51	<0.0005	-	<0.005		
23	2025-Jul-07	0.0064	98	0.011	-	0.043		
24								
25								
Coefficient of Variation:		0.78	2.39	1.84	1.42	2.77		
Mann-Kendall Statistic (S):		-29	15	-25	-6	-3		
Confidence Factor:		89.5%	64.3%	95.0%	95.8%	54.3%		
Concentration Trend:		Stable	No Trend	Prob. Decreasing	Decreasing	No Trend		



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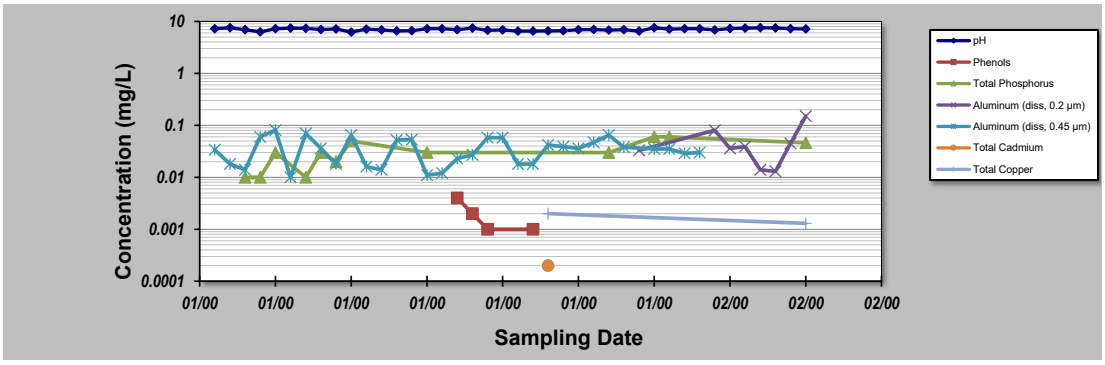
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-E
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	pH	Phenols	Total Phosphorus	Aluminum (diss, 0.2	Aluminum (diss, 0.45	Total Cadmium	Total Copper
Sampling Event	Sampling Date	MCG-E CONCENTRATION (mg/L)						
1	2015-May-04	7.22	-	-	-	0.034	-	-
2	2015-Sep-09	7.55	-	-	-	0.018	-	-
3	2015-Oct-26	6.95	-	0.01	-	0.014	-	-
4	2016-Apr-28	6.31	-	0.01	-	0.06	-	-
5	2016-Aug-17	7.22	-	0.03	-	0.081	-	-
6	2016-Oct-26	7.43	-	-	-	0.01	-	-
7	2017-May-10	7.35	-	0.01	-	0.07	-	-
8	2017-Jul-20	7	-	0.03	-	0.036	-	-
9	2017-Oct-23	7.18	-	0.02	-	0.018	-	-
10	2018-May-07	6.25	-	0.05	-	0.065	-	-
11	2018-Jul-30	7.12	-	-	-	0.016	-	-
12	2018-Oct-22	6.84	-	-	-	0.014	-	-
13	2019-May-07	6.56	<0.001	<0.02	-	0.052	-	<0.002
14	2019-May-07	6.63	<0.001	<0.02	-	0.053	-	<0.002
15	2019-Aug-14	7.22	<0.001	0.03	-	0.011	-	<0.002
16	2019-Aug-14	7.23	<0.001	<0.02	-	0.012	-	<0.002
17	2019-Oct-24	6.95	0.004	<0.02	-	0.023	-	<0.002
18	2019-Oct-24	7.46	0.002	<0.02	-	0.027	-	<0.002
19	2020-May-06	6.76	0.001	<0.02	-	0.058	<0.0001	<0.002
20	2020-May-06	6.84	<0.001	<0.02	-	0.058	<0.0001	<0.002
21	2020-Aug-25	6.53	<0.001	<0.02	-	0.018	<0.0001	<0.002
22	2020-Aug-25	6.52	0.001	<0.02	-	0.018	<0.0001	<0.002
23	2020-Oct-06	6.59	<0.001	<0.02	-	0.042	0.0002	0.002
24	2020-Oct-06	6.63	<0.001	<0.02	-	0.039	<0.0001	<0.002
25	2021-Apr-20	6.94	<0.001	<0.02	-	0.036	<0.0001	<0.002
26	2021-Apr-20	7.02	<0.001	<0.02	-	0.047	<0.0001	<0.002
27	2021-Jul-14	6.83	<0.001	0.03	-	0.065	<0.0001	<0.002
28	2021-Oct-18	6.94	<0.001	<0.02	-	0.038	<0.0001	<0.002
29	2022-May-03	6.49	<0.001	<0.02	0.033	-	<0.0001	<0.002
30	2022-Aug-04	7.57	<0.001	0.06	-	0.035	<0.0001	<0.002
31	2022-Aug-04	7.11	<0.001	0.06	-	0.035	<0.0001	<0.002
32	2022-Oct-18	7.23	<0.001	<0.02	-	0.029	<0.0001	<0.002
33	2022-Oct-18	7.22	<0.001	<0.02	-	0.03	<0.0001	<0.002
34	2023-May-03	6.84	<0.001	<0.02	0.08	-	<0.0001	<0.001
35	2023-Aug-09	7.33	<0.001	<0.02	0.036	-	<0.00009	<0.0009
36	2023-Aug-09	7.42	<0.001	<0.02	0.039	-	<0.00009	<0.0009
37	2023-Oct-19	7.55	<0.001	<0.02	0.014	-	<0.00009	<0.0009
38	2023-Oct-19	7.47	<0.001	<0.02	0.013	-	<0.00009	<0.0009
39	2024-Apr-29	7.25	<0.001	<0.02	0.045	-	<0.00009	<0.0009
40	2024-Jul-11	7.18	<0.001	0.046	0.15	-	<0.00009	0.0013
Coefficient of Variation:		0.05	0.71	0.57	0.88	0.54		0.30
Mann-Kendall Statistic (S):		89	-5	40	4	19		-1
Confidence Factor:		84.7%	89.6%	99.7%	64.0%	61.4%		
Concentration Trend:		No Trend	Stable	Increasing	No Trend	No Trend		



Notes:

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2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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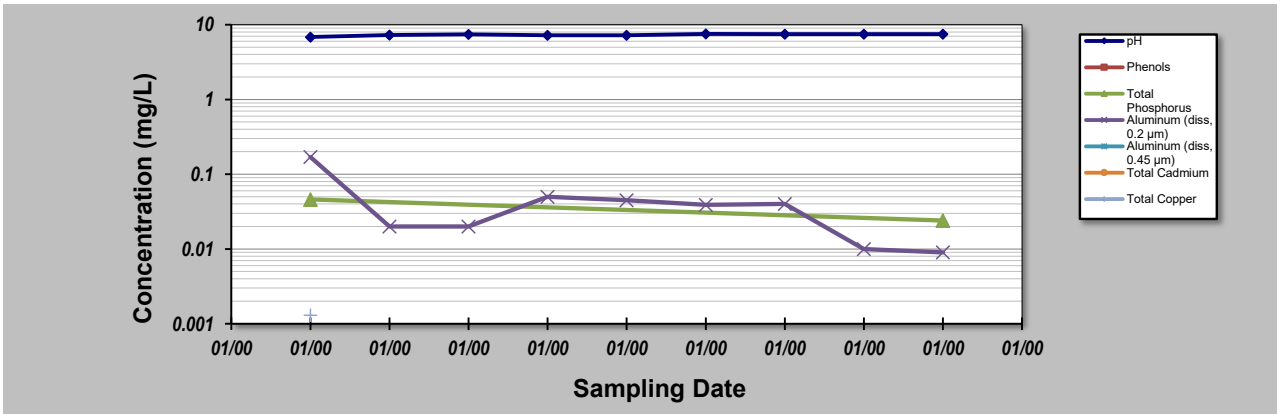
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-E
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	pH	Phenols	Total Phosphorus	Aluminum (diss, 0.2	Aluminum (diss, 0.45	Total Cadmium	Total Copper
Sampling Event	Sampling Date	MCG-E CONCENTRATION (mg/L)						
1	2024-Jul-11	6.85	<0.001	0.046	0.17	-	<0.00009	0.0013
2	2024-Oct-29	7.26	<0.001	<0.02	0.02	-	<0.00009	<0.0009
3	2024-Oct-29	7.44	<0.001	<0.02	0.02	-	<0.00009	<0.0009
4	2025-May-07	7.22	<0.001	<0.02	0.05	-	<0.00009	<0.0009
5	2025-May-07	7.24	<0.001	<0.02	0.045	-	<0.00009	<0.0009
6	2025-Jul-07	7.53	<0.001	<0.02	0.039	-	<0.00009	<0.0009
7	2025-Jul-07	7.5	<0.001	<0.02	0.04	-	<0.00009	<0.0009
8	2025-Oct-21	7.51	<0.001	<0.02	0.01	-	<0.00009	<0.0009
9	2025-Oct-21	7.49	<0.001	0.024	0.009	-	<0.00009	<0.0009
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Coefficient of Variation:		0.03		0.44	1.10			
Mann-Kendall Statistic (S):		18		-1	-17			
Confidence Factor:		96.2%			95.1%			
Concentration Trend:		Increasing			Decreasing			



Notes:

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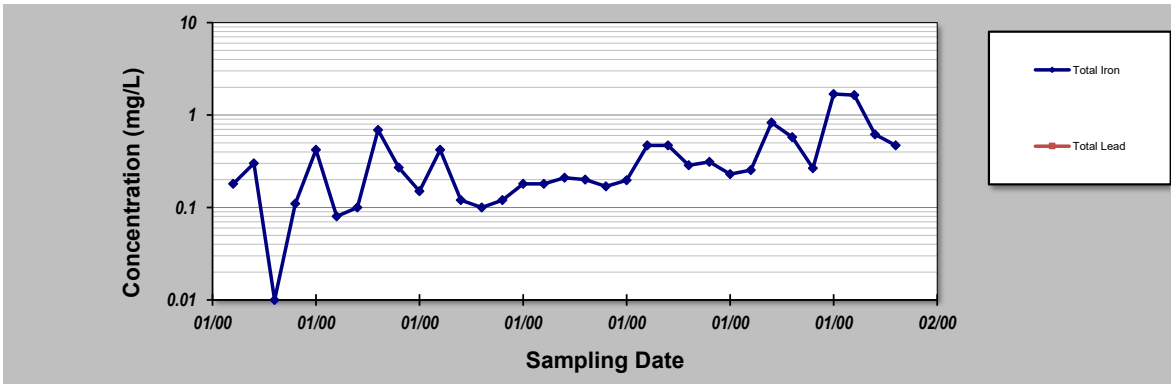
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-E
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Total Iron	Total Lead					
Sampling Event	Sampling Date	MCG-E CONCENTRATION (mg/L)					
1	2015-May-04	0.18	-				
2	2015-Sep-09	0.3	-				
3	2015-Oct-26	0.01	-				
4	2016-Apr-28	0.11	-				
5	2016-Aug-17	0.42	-				
6	2016-Oct-26	0.08	-				
7	2017-May-10	0.1	-				
8	2017-Jul-20	0.69	-				
9	2017-Oct-23	0.27	-				
10	2018-May-07	0.15	-				
11	2018-Jul-30	0.42	-				
12	2018-Oct-22	0.12	-				
13	2019-May-07	0.1	<0.001				
14	2019-May-07	0.12	<0.001				
15	2019-Aug-14	0.18	<0.001				
16	2019-Aug-14	0.18	<0.001				
17	2019-Oct-24	0.21	<0.001				
18	2019-Oct-24	0.2	<0.001				
19	2020-May-06	0.169	<0.001				
20	2020-May-06	0.197	<0.001				
21	2020-Aug-25	0.469	<0.001				
22	2020-Aug-25	0.47	<0.001				
23	2020-Oct-06	0.286	<0.001				
24	2020-Oct-06	0.312	<0.001				
25	2021-Apr-20	0.23	<0.001				
26	2021-Apr-20	0.254	<0.001				
27	2021-Jul-14	0.831	<0.001				
28	2021-Oct-18	0.576	<0.001				
29	2022-May-03	0.266	<0.001				
30	2022-Aug-04	1.69	<0.001				
31	2022-Aug-04	1.64	<0.001				
32	2022-Oct-18	0.619	<0.001				
33	2022-Oct-18	0.469	<0.001				
34							
35							
Coefficient of Variation:		1.03					
Mann-Kendall Statistic (S):		245					
Confidence Factor:		>99.9%					
Concentration Trend:		Increasing					



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GSI MANN-KENDALL TOOLKIT
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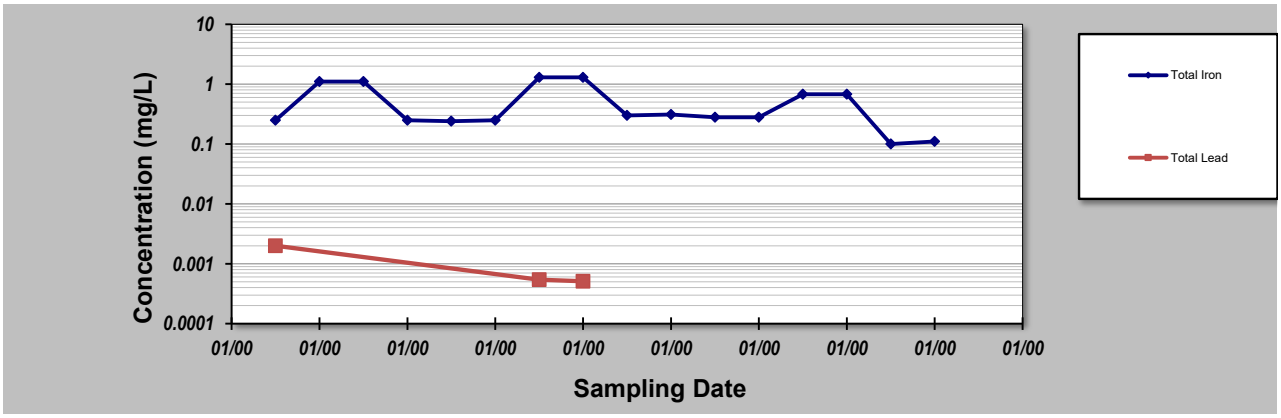
Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-E
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	Total Iron	Total Lead					
Sampling Event	Sampling Date	MCG-E CONCENTRATION (mg/L)						
1	2023-May-03	0.25	0.002					
2	2023-Aug-09	1.1	<0.0005					
3	2023-Aug-09	1.1	<0.0005					
4	2023-Oct-19	0.25	<0.0005					
5	2023-Oct-19	0.24	<0.0005					
6	2024-Apr-29	0.25	<0.0005					
7	2024-Jul-11	1.3	0.00054					
8	2024-Jul-11	1.3	0.00051					
9	2024-Oct-29	0.3	<0.0005					
10	2024-Oct-29	0.31	<0.0005					
11	2025-May-07	0.28	<0.0005					
12	2025-May-07	0.28	<0.0005					
13	2025-Jul-07	0.68	<0.0005					
14	2025-Jul-07	0.68	<0.0005					
15	2025-Oct-21	0.1	<0.0005					
16	2025-Oct-21	0.11	<0.0005					
17								
18								
19								
20								
Coefficient of Variation:		0.81	0.84					
Mann-Kendall Statistic (S):		-15	-3					
Confidence Factor:		73.3%						
Concentration Trend:		Stable						



Notes:

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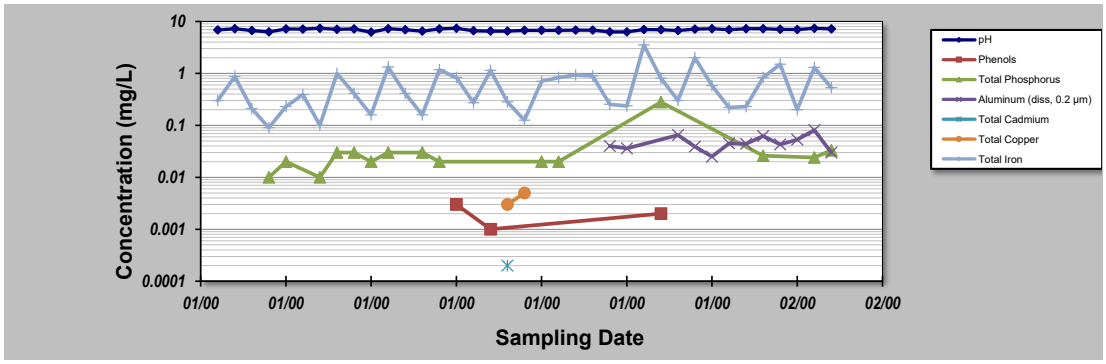
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-F
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	pH	Phenols	Total Phosphorus	Aluminum (diss, 0.2	Total Cadmium	Total Copper	Total Iron
Sampling Event	Sampling Date	MCG-F CONCENTRATION (mg/L)						
1	2015-May-04	6.89	-	-	-	-	-	0.3
2	2015-Sep-09	7.26	-	-	-	-	-	0.87
3	2015-Oct-26	6.69	-	-	-	-	-	0.21
4	2016-Apr-28	6.31	-	0.01	-	-	-	0.09
5	2016-Aug-17	7.2	-	0.02	-	-	-	0.23
6	2016-Oct-26	7.13	-	-	-	-	-	0.39
7	2017-May-10	7.35	-	0.01	-	-	-	0.1
8	2017-Jul-20	7.04	-	0.03	-	-	-	0.99
9	2017-Oct-23	7.16	-	0.03	-	-	-	0.41
10	2018-May-07	6.22	-	0.02	-	-	-	0.16
11	2018-Jul-30	7.27	-	0.03	-	-	-	1.33
12	2018-Oct-22	6.94	-	-	-	-	-	0.41
13	2019-May-07	6.51	<0.001	0.03	-	-	<0.002	0.16
14	2019-Jul-14	7.19	<0.001	0.02	-	-	<0.002	1.17
15	2019-Oct-24	7.34	0.003	<0.02	-	-	<0.002	0.83
16	2020-May-06	6.62	<0.001	<0.02	-	<0.0001	<0.002	0.273
17	2020-Aug-25	6.53	0.001	<0.02	-	<0.0001	<0.002	1.14
18	2020-Oct-06	6.52	<0.001	<0.02	-	0.0002	0.003	0.283
19	2021-Apr-20	6.75	<0.001	<0.02	-	<0.0001	0.005	0.126
20	2021-Jul-14	6.75	<0.001	0.02	-	<0.0001	<0.002	0.707
21	2021-Jul-14	6.77	<0.001	0.02	-	<0.0001	<0.002	0.834
22	2021-Oct-18	6.82	<0.001	<0.02	-	<0.0001	<0.002	0.933
23	2021-Oct-18	6.82	<0.001	<0.02	-	<0.0001	<0.002	0.891
24	2022-May-03	6.28	<0.001	<0.02	0.04	<0.0001	<0.002	0.255
25	2022-May-03	6.28	<0.001	<0.02	0.036	<0.0001	<0.002	0.236
26	2022-Aug-04	7.02	<0.001	<0.02	-	<0.0001	<0.002	3.51
27	2022-Oct-18	6.91	0.002	0.28	-	<0.0001	<0.002	0.804
28	2023-May-03	6.67	<0.001	<0.02	0.065	<0.0001	<0.001	0.3
29	2023-Aug-09	7.1	<0.001	<0.02	0.039	<0.00009	<0.0009	2
30	2023-Oct-19	7.27	<0.001	<0.02	0.025	<0.00009	<0.0009	0.58
31	2024-Apr-29	6.93	<0.001	<0.02	0.045	<0.00009	<0.0009	0.22
32	2024-Apr-29	7.25	<0.001	<0.02	0.044	<0.00009	<0.0009	0.23
33	2024-Jul-11	7.26	<0.001	0.026	0.062	<0.00009	<0.0009	0.83
34	2024-Oct-29	7.04	<0.001	<0.02	0.043	<0.00009	<0.0009	1.5
35	2025-May-07	6.99	<0.001	<0.02	0.053	<0.00009	<0.0009	0.2
36	2025-Jul-07	7.36	<0.001	0.024	0.081	<0.00009	<0.0009	1.3
37	2025-Oct-21	7.18	<0.001	0.033	0.03	<0.00009	<0.0009	0.53
38								
39								
40								
Coefficient of Variation:		0.05	0.50	1.66	0.34		0.35	0.97
Mann-Kendall Statistic (S):		74	-1	34	12		1	107
Confidence Factor:		82.9%		94.9%	77.0%			91.7%
Concentration Trend:		No Trend		Prob. Increasing	No Trend			Prob. Increasing



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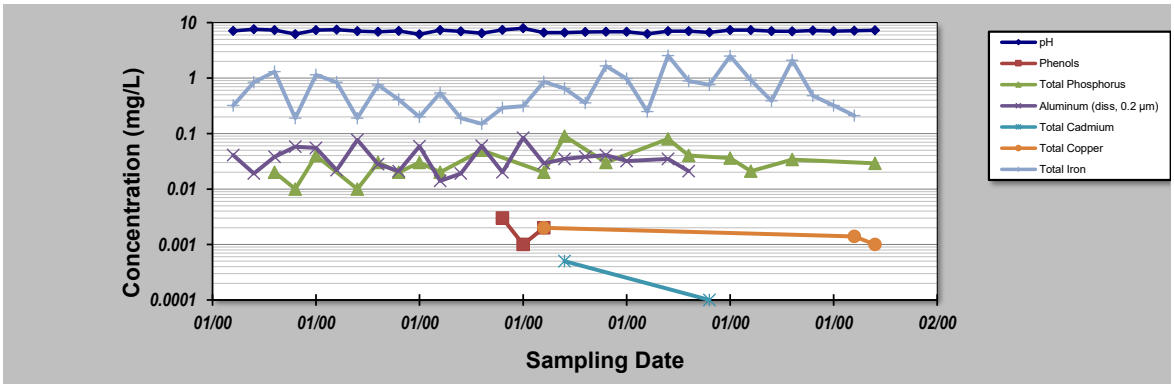
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-G
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	pH	Phenols	otal Phosphoru	minum (diss, 0.2	Total Cadmium	Total Copper	Total Iron
Sampling Event	Sampling Date	MCG-G CONCENTRATION (mg/L)						
1	2015-May-04	7.06	-	-	0.041	-	-	0.32
2	2015-Sep-09	7.58	-	-	0.019	-	-	0.84
3	2015-Oct-26	7.31	-	0.02	0.038	-	-	1.3
4	2016-Apr-28	6.18	-	0.01	0.058	-	-	0.19
5	2016-Aug-17	7.36	-	0.04	0.055	-	-	1.14
6	2016-Oct-26	7.45	-	-	0.022	-	-	0.84
7	2017-May-10	7.02	-	0.01	0.077	-	-	0.19
8	2017-Jul-20	6.81	-	0.03	0.028	-	-	0.75
9	2017-Oct-23	7.08	-	0.02	0.021	-	-	0.41
10	2018-May-07	6.14	-	0.03	0.059	-	-	0.2
11	2018-Jul-30	7.3	-	0.02	0.014	-	-	0.54
12	2018-Oct-22	6.93	-	-	0.019	-	-	0.19
13	2019-May-07	6.41	<0.001	0.05	0.06	-	<0.002	0.15
14	2019-Oct-24	7.38	0.003	<0.02	0.02	-	<0.002	0.29
15	2020-May-06	7.9	0.001	<0.02	0.084	<0.0001	<0.002	0.313
16	2020-Aug-25	6.57	0.002	0.02	0.029	<0.0001	0.002	0.854
17	2020-Oct-06	6.61	<0.001	0.09	0.035	0.0005	<0.002	0.653
18	2021-Apr-20	6.78	<0.001	<0.02	0.038	<0.0001	<0.002	0.356
19	2021-Jul-14	6.85	<0.001	0.03	0.041	<0.0001	<0.002	1.65
20	2021-Oct-18	6.82	<0.001	<0.02	0.032	<0.0001	<0.002	0.978
21	2022-May-03	6.27	<0.001	<0.02	-	<0.0001	<0.002	0.248
22	2022-Aug-04	7.03	<0.001	0.08	0.035	<0.0001	<0.002	2.54
23	2022-Oct-18	7.03	<0.001	0.04	0.021	<0.0001	<0.002	0.885
24	2023-May-03	6.66	<0.001	<0.02	-	0.0001	<0.001	0.755
25	2023-Aug-09	7.34	<0.001	0.036	-	<0.00009	<0.0009	2.5
26	2023-Oct-19	7.32	<0.001	0.021	-	<0.00009	<0.0009	0.92
27	2024-Apr-29	7.03	<0.001	<0.02	-	<0.00009	<0.0009	0.39
28	2024-Jul-11	6.98	<0.001	0.034	-	<0.00009	<0.0009	2.1
29	2024-Oct-29	7.22	<0.001	<0.02	-	<0.00009	<0.0009	0.48
30	2025-May-07	7.02	<0.001	<0.02	-	<0.00009	<0.0009	0.32
31	2025-Jul-07	7.17	<0.001	<0.02	-	<0.00009	0.0014	0.21
32	2025-Oct-21	7.28	<0.001	0.029	-	<0.00009	0.001	<0.1
33								
34								
35								
Coefficient of Variation:		0.06	0.50	0.63	0.51	0.94	0.34	0.87
Mann-Kendall Statistic (S):		0	-1	40	-6	-1	-3	52
Confidence Factor:		49.4%		92.9%	55.5%			80.6%
Concentration Trend:		Stable		Prob. Increasing	Stable			No Trend



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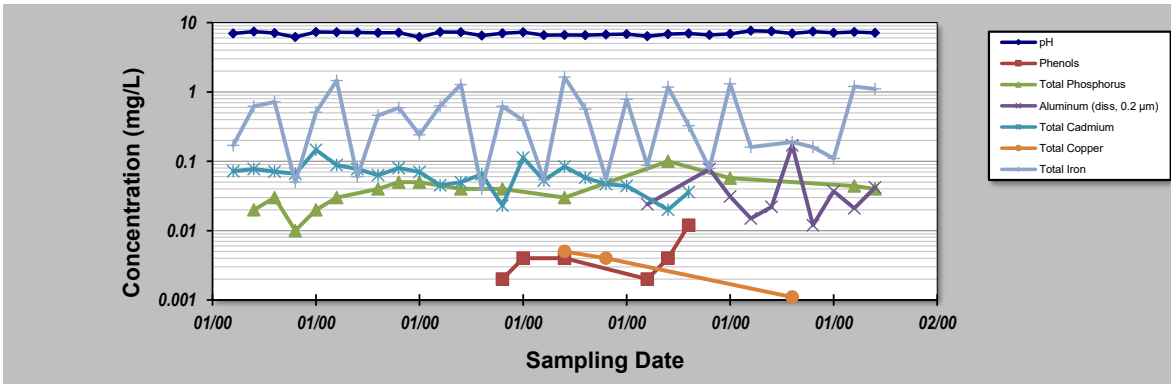
GSI MANN-KENDALL TOOLKIT
for Constituent Trend Analysis

Evaluation Date:	12-Feb-26	Job ID:	250253-08
Facility Name:	North Baptiste WDS	Constituent:	MCG-H
Conducted By:	Oscar Fisher	Concentration Units:	mg/L

Sampling Point ID:	pH	Phenols	otal Phosphoru	minum (diss, 0.2	Total Cadmium	Total Copper	Total Iron
Sampling Event	Sampling Date	MCG-H CONCENTRATION (mg/L)						
1	2015-May-04	6.95	-	-	-	0.072	-	0.17
2	2015-Sep-09	7.45	-	0.02	-	0.077	-	0.62
3	2015-Oct-26	7.05	-	0.03	-	0.071	-	0.72
4	2016-Apr-28	6.2	-	0.01	-	0.066	-	0.05
5	2016-Aug-17	7.32	-	0.02	-	0.146	-	0.51
6	2016-Oct-26	7.27	-	0.03	-	0.088	-	1.46
7	2017-May-10	7.23	-	-	-	0.077	-	0.06
8	2017-Jul-20	7.12	-	0.04	-	0.063	-	0.46
9	2017-Oct-23	7.19	-	0.05	-	0.08	-	0.59
10	2018-May-07	6.17	-	0.05	-	0.07	-	0.24
11	2018-Jul-30	7.32	-	-	-	0.045	-	0.63
12	2018-Oct-22	7.25	-	0.04	-	0.05	-	1.28
13	2019-May-07	6.5	<0.001	<0.02	-	0.065	<0.002	0.04
14	2019-Aug-14	7	0.002	0.04	-	0.023	<0.002	0.62
15	2019-Oct-24	7.26	0.004	<0.02	-	0.113	<0.002	0.39
16	2020-May-06	6.59	<0.001	<0.02	-	0.053	<0.002	0.054
17	2020-Aug-25	6.62	0.004	0.03	-	0.084	0.005	1.63
18	2020-Oct-06	6.6	<0.001	<0.02	-	0.058	<0.002	0.568
19	2021-Apr-20	6.74	<0.001	<0.02	-	0.047	0.004	0.056
20	2021-Oct-18	6.83	<0.001	<0.02	-	0.044	<0.002	0.78
21	2022-May-03	6.38	0.002	<0.02	0.024	-	<0.002	0.087
22	2022-Aug-04	6.85	0.004	0.1	-	0.02	<0.002	1.17
23	2022-Oct-18	6.98	0.012	<0.02	-	0.036	<0.002	0.326
24	2023-May-03	6.62	<0.001	<0.02	0.077	-	<0.001	0.079
25	2023-Aug-09	6.89	<0.001	0.057	0.031	-	<0.0009	1.3
26	2023-Oct-19	7.64	<0.001	<0.02	0.015	-	<0.0009	0.16
27	2024-Apr-29	7.46	<0.001	<0.02	0.022	-	<0.0009	<0.1
28	2024-Jul-11	6.95	<0.001	<0.02	0.17	-	0.0011	0.19
29	2024-Oct-29	7.43	<0.001	<0.02	0.012	-	<0.0009	0.16
30	2025-May-07	7.12	<0.001	<0.02	0.037	-	<0.0009	0.11
31	2025-Jul-07	7.3	<0.001	0.044	0.021	-	<0.0009	1.2
32	2025-Oct-21	7.11	<0.001	0.04	0.042	-	<0.0009	1.1
33								
34								
35								
Coefficient of Variation:		0.05	0.80	0.52	1.06	0.43	0.60	0.89
Mann-Kendall Statistic (S):		22	7	50	-1	-106	-3	9
Confidence Factor:		63.2%	86.4%	99.3%	50.0%	99.9%		55.4%
Concentration Trend:		No Trend	No Trend	Increasing	No Trend	Decreasing		No Trend



Notes:

1. At least four independent sampling events per well are required for calculating the trend. *Methodology is valid for 4 to 40 samples.*
2. Confidence in Trend = Confidence (in percent) that constituent concentration is increasing (S>0) or decreasing (S<0): >95% = Increasing or Decreasing; ≥ 90% = Probably Increasing or Probably Decreasing; < 90% and S>0 = No Trend; < 90%, S≤0, and COV ≥ 1 = No Trend; < 90% and COV < 1 = Stable.
3. Methodology based on "MAROS: A Decision Support System for Optimizing Monitoring Plans", J.J. Aziz, M. Ling, H.S. Rifai, C.J. Newell, and J.R. Gonzales, *Ground Water*, 41(3):355-367, 2003.

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