

Real Time Water Quality Deployment Report

Iron Ore Company of Canada - Labrador West Network

2025-07-30 to 2025-09-18



Government of Newfoundland & Labrador
Department of Environment, Conservation & Climate Change
Water Resources Management Division

IOC - Labrador West Network



- The Water Resources Management Division, in partnership with the Iron Ore Company of Canada (IOC) and Environment and Climate Change Canada (ECCC), maintain a network of real-time water quality (RTWQ) and water quantity stations in Labrador West.
- For simplicity in this report, the stations *Wabush Lake at Dolomite Road* and *Wabush Lake at Lake Outlet* are hereafter referred to as **Dolomite Road** and **Julienne Narrows**, respectively. *Dumbell Stream above Dumbell Lake* is hereafter referred to as **Dumbell Stream**, *Pumphouse Stream above Drum Lake* as **Pumphouse Stream**, and *Unnamed Tributary above Fraggles Rock Lake* as **Fraggles Rock**.
- The stations on Wabush Lake are located upstream (Dolomite Road) and downstream (Julienne Narrows) of the IOC tailings disposal area.
- Water Resources Management Division staff monitor the real-time graphs regularly. They will inform IOC of any significant water quality events by email notification and by monthly deployment reports.

Station Name	Station Number	Latitude	Longitude	Deployment Date	Removal Date
Dolomite Road	NF03OA0019	52.97	-66.86	Jul 30	Sep 17
Dumbell Stream	NF03OA0023	52.99	-66.92	Jul 31	Sep 17
Fraggles Rock	NF03OA0025	52.97	-67.02	Jul 30	Sep 17
Julienne Narrows	NF03OA0017	53.15	-66.79	Jul 30	Sep 17
Pumphouse Stream	NF03OA0024	52.98	-66.96	Jul 31	Sep 18

Quality Assurance and Quality Control Procedures

As part of the Quality Assurance and Quality Control protocol (QA/QC), an assessment of the reliability of data recorded by an instrument is made at the beginning and end of the deployment period. The procedure is based on the approach used by the United States Geological Survey. With the exception of water quantity data (stage), all data used in the preparation of the graphs and subsequent discussion adhere to this stringent QA/QC protocol. Corrected data can be obtained upon request.

Parameter	Excellent	Good	Fair	Marginal	Poor
Dissolved oxygen	$\leq \pm 0.3$ mg/L	$\leq \pm 0.31 - 0.5$ mg/L	$\leq \pm 0.51 - 0.8$ mg/L	$\leq \pm 0.81 - 1$ mg/L	$> \pm 1$ mg/L
pH	$\leq \pm 0.2$ units	$\leq \pm 0.21 - 0.5$ units	$\leq \pm 0.51 - 0.8$ units	$\leq \pm 0.81 - 1$ units	$> \pm 1$ units
Specific Conductance	$\leq \pm 3$ μ S/cm or $\leq \pm 3\%$, whichever is greater	$\leq \pm 3.1 - 10$ μ S/cm or $\leq \pm 3.1 - 10\%$, whichever is greater	$\leq \pm 10 - 15$ μ S/cm or $\leq \pm 10.1 - 15\%$, whichever is greater	$\leq \pm 15.1 - 20$ μ S/cm or $\leq \pm 15.1 - 20\%$, whichever is greater	$> \pm 20$ μ S/cm or $> \pm 20\%$, whichever is greater
Turbidity	$\leq \pm 2$ turbidity units or $\leq \pm 5\%$, whichever is greater	$\leq \pm 2.1 - 5$ turbidity units or $\leq \pm 5.1 - 10\%$, whichever is greater	$\leq \pm 5.1 - 8$ turbidity units or $\leq \pm 10.1 - 15\%$, whichever is greater	$\leq \pm 8.1 - 10$ turbidity units or $\leq \pm 15.1 - 20\%$, whichever is greater	$> \pm 10$ turbidity units or $> \pm 20\%$, whichever is greater
Water Temperature	$\leq \pm 0.2$ °C	$\leq \pm 0.21 - 0.5$ °C	$\leq \pm 0.51 - 0.8$ °C	$\leq \pm 0.81 - 1$ °C	$> \pm 1$ °C

At deployment and removal, a QA/QC Sonde is temporarily deployed adjacent to the Field Sonde. Values for temperature, pH, conductivity, dissolved oxygen and turbidity are compared between the two instruments. Based on the degree of difference between parameters recorded by the Field Sonde and QA/QC Sonde at deployment and at removal, a qualitative statement is made on the data quality. There are a few circumstances which may cause QA/QC rankings below excellent, including the placement of the QA/QC sonde in relation to the field sonde, the amount of time each sonde was given to stabilize before readings were recorded, and deteriorating performance of one of the sensors.

The temperature sensor on any sonde is the most important. All other parameters can be divided into subgroups of: temperature dependent, temperature compensated, and temperature independent. Due to the temperature sensor's location on the sonde, the entire sonde must be at a constant temperature before the temperature sensor will stabilize. The values may take some time to climb to the appropriate reading; if a reading is taken too soon it may not accurately portray the water body.

Additionally, grab samples are collected during deployment to compare pH, specific conductivity and turbidity values between the field instrument and grab samples. Variability in results may be attributed to differences in the sampling location or depth relative to the sonde's deployment site or insufficient equilibration time for the sonde when initial field data was collected.

Deployment Notes

Due to a power issue, data was not available during the later portion of the deployment period for Dumbell Stream. There was also a power issue at Fraggie Rock. Log file data from the water quality monitoring instrument was used to fill in gaps in transmitted water quality data. The straight lines displayed for water elevation connect available measurements and may span periods of missing data; they do not represent continuous observations.

Hydrometric Data

Water Survey Canada operates the hydrometric components of most of these stations. Due to differences in protocols, Water Survey Canada hydrometric data is quality controlled on a less frequent basis than water quality data. The hydrometric data shown in this report is provisional and has not undergone quality control checks.

QAQC

Deployment Rankings



During deployment, most parameters across all stations ranked as *good* or *excellent*. At Julienne Narrows, deployment parameters did not rank well when compared to the QA/QC sonde. When compared to the grab sample collected at deployment, turbidity ranks as *excellent*. This indicates that there may have been issues with the placement of the QAQC sonde.

Grab sample rankings collected during deployment ranked as *good* or *excellent* for most parameters, indicating minimal differences between initial field sonde measurements and grab sample measurements. Grab sample ranking for pH at Dolomite Road ranked *fair* and conductivity at Julienne Narrows ranked *fair*.

Upon removal, the majority of parameters at all stations ranked *good* or *excellent*. Turbidity ranked *fair* at Julienne Narrows and *poor* at Pumphouse Stream.

There are a few circumstances which may cause less than ideal QA/QC rankings to be obtained. These include: the placement of the QA/QC sonde in relation to the field sonde; the amount of time each sonde was given to stabilize before readings were recorded; and deteriorating performance of one or more of the sensors.

QAQC Rankings

Station	Parameter	Deployment Rank	Grab Sample Deployment	Removal Rank
Dolomite Road	Dissolved Oxygen (mg/l)	Excellent	- -	Excellent
Dolomite Road	pH	Excellent	Fair	Good
Dolomite Road	Specific Conductivity (µS/cm)	Excellent	Excellent	Excellent
Dolomite Road	Temperature (°C)	Excellent	- -	Excellent
Dolomite Road	Turbidity (NTU)	Excellent	Excellent	Excellent
Dumbell Stream	Dissolved Oxygen (mg/l)	Excellent	- -	Good
Dumbell Stream	pH	Excellent	Excellent	Good
Dumbell Stream	Specific Conductivity (µS/cm)	Excellent	Good	Excellent
Dumbell Stream	Temperature (°C)	Excellent	- -	Excellent
Dumbell Stream	Turbidity (NTU)	Excellent	Good	Excellent
Fraggle Rock	Dissolved Oxygen (mg/l)	Excellent	- -	Excellent
Fraggle Rock	pH	Good	Good	Excellent
Fraggle Rock	Specific Conductivity (µS/cm)	Excellent	Good	Excellent
Fraggle Rock	Temperature (°C)	Good	- -	Excellent
Fraggle Rock	Turbidity (NTU)	Excellent	Excellent	Excellent
Julienne Narrows	Dissolved Oxygen (mg/l)	Fair	- -	Excellent
Julienne Narrows	pH	Excellent	Good	Good
Julienne Narrows	Specific Conductivity (µS/cm)	Marginal	Fair	Good
Julienne Narrows	Temperature (°C)	Poor	- -	Excellent
Julienne Narrows	Turbidity (NTU)	Poor	Excellent	Fair
Pumphouse Stream	Dissolved Oxygen (mg/l)	Marginal	- -	Excellent
Pumphouse Stream	pH	Excellent	Excellent	Good
Pumphouse Stream	Specific Conductivity (µS/cm)	Excellent	Excellent	Excellent
Pumphouse Stream	Temperature (°C)	Excellent	- -	Excellent
Pumphouse Stream	Turbidity (NTU)	Excellent	Good	Poor

Water Temperature

Deployment Period Statistics (°C)				
Name	Average	Median	Minimum	Maximum
Dolomite Road	16.06	15.90	12.50	20.50
Dumbell Stream	4.91	4.81	3.38	7.25
Fraggle Rock	12.76	12.42	6.94	20.41
Julienne Narrows	15.67	15.60	10.50	22.70
Pumphouse Stream	9.29	9.20	3.70	16.30

At Julienne Narrows, Dolomite Road and Fraggle Rock, water temperatures remained steady, with a slight increasing trend until mid August as temperatures warmed in the summer. Temperatures then decreased slightly over the remainder of the deployment period as this period extended into the fall season.

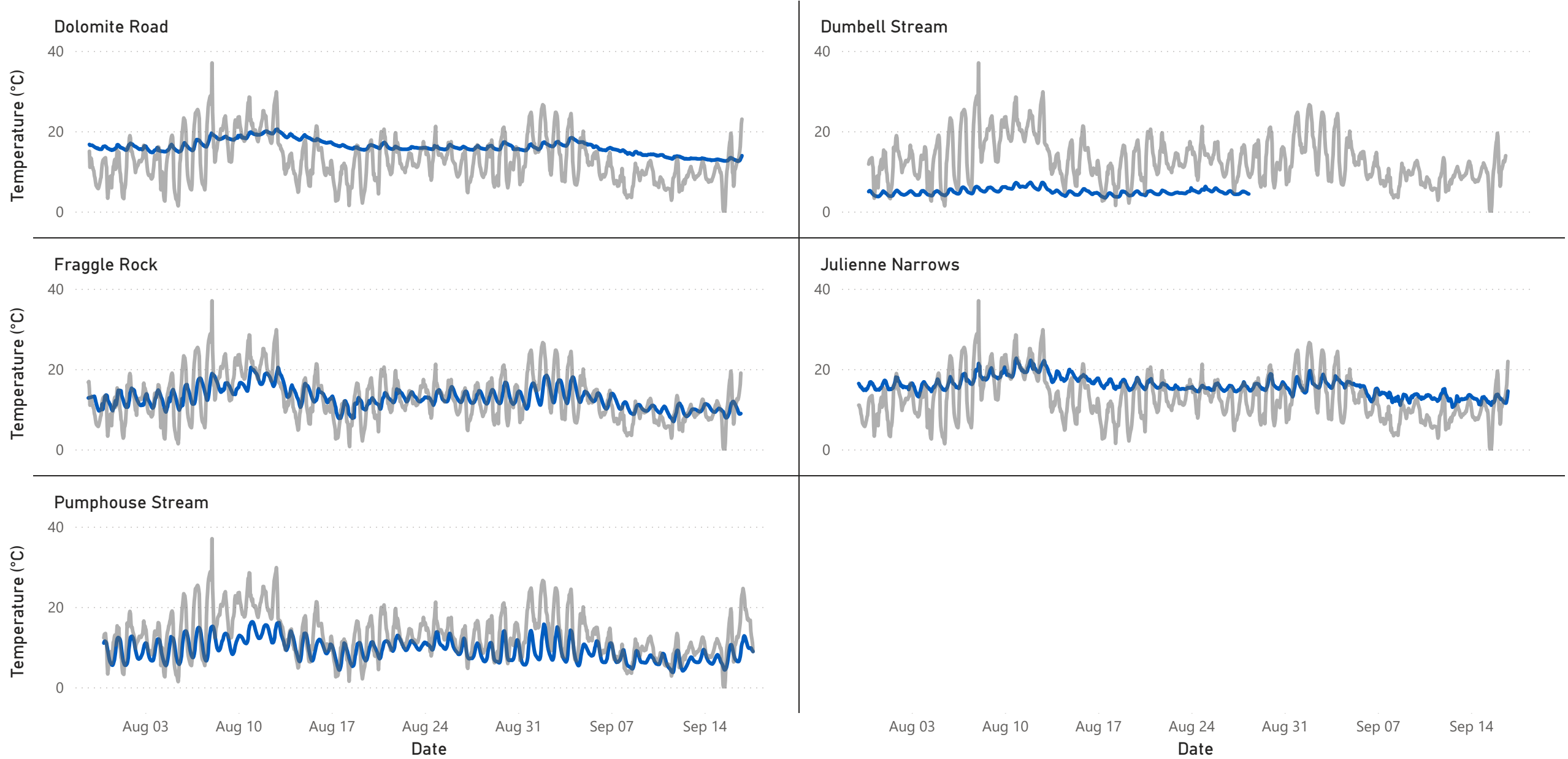
At Dumbell Stream and Pumphouse Stream, water temperatures were lower and didn't fluctuate as greatly. Water temperature at Dumbell Stream is usually lower than all other stations.

A natural daily cycle was also observed, with higher temperatures during the day and lower temperatures at night.

Water Temperature Station Graphs

Temperature (°C) and Air Temperature (°C)

● Temperature (°C) ● Average of Air Temperature



pH

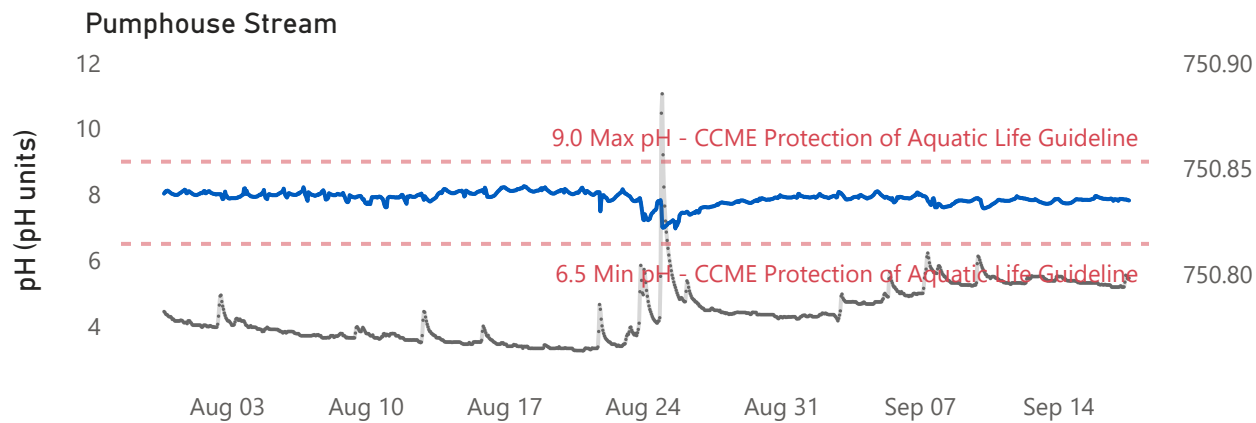
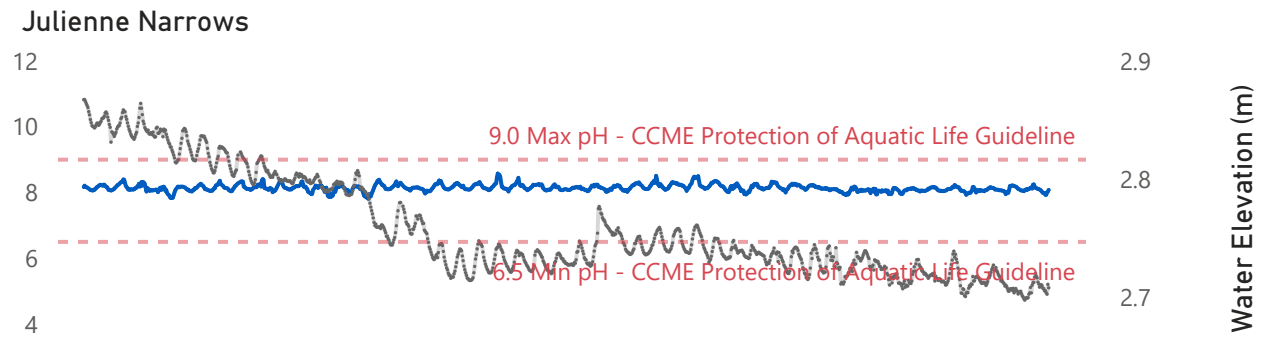
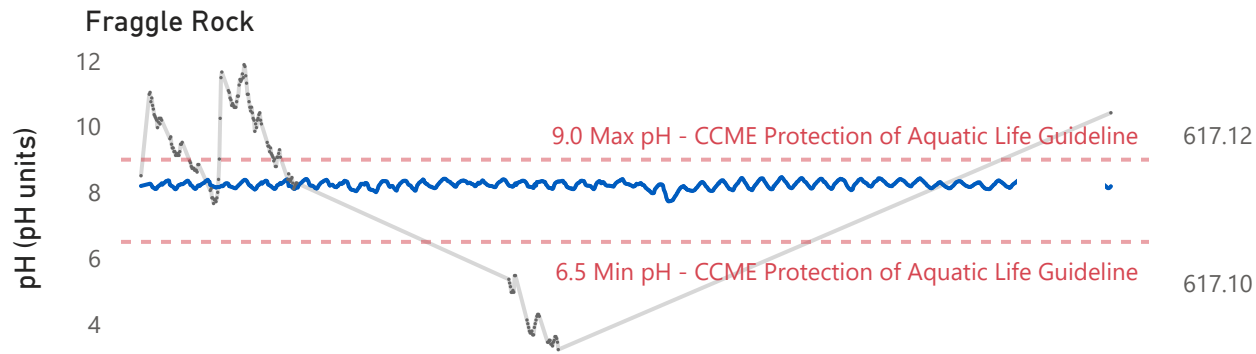
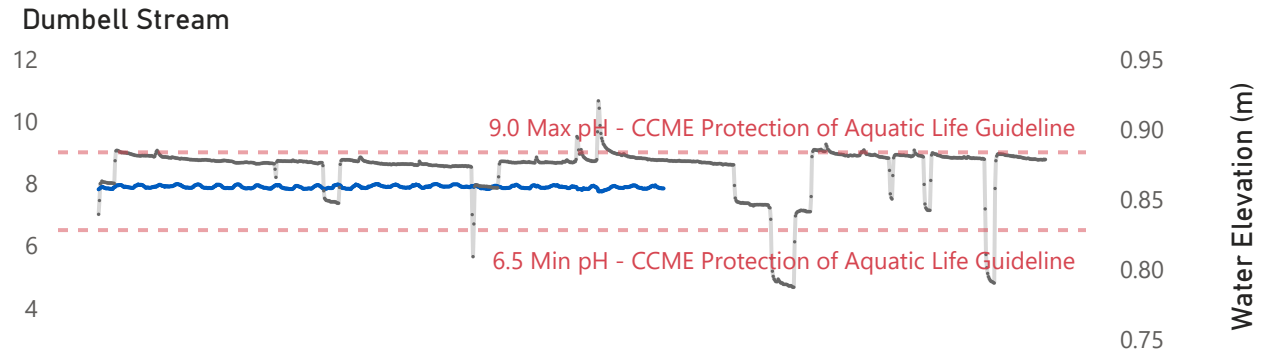
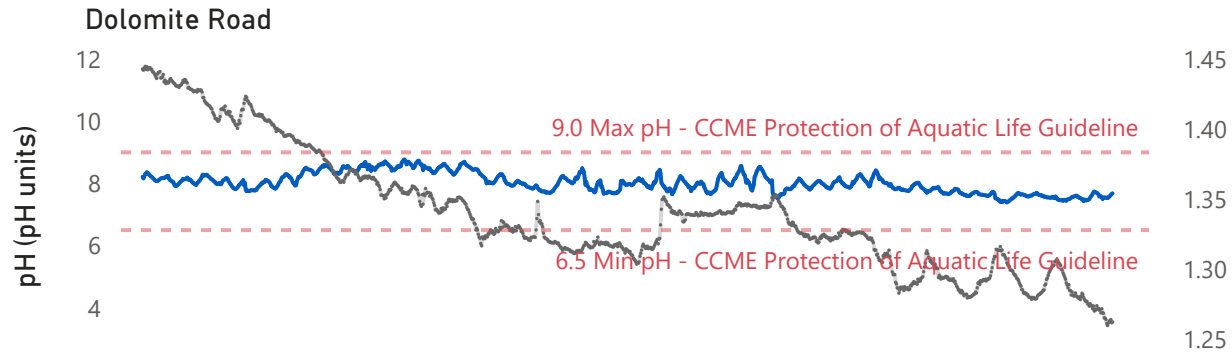
Deployment Period Statistics (pH Units)				
Name	Average	Median	Minimum	Maximum
Dolomite Road	8.02	8.00	7.39	8.77
Dumbell Stream	7.89	7.89	7.74	7.98
Fraggle Rock	8.24	8.24	7.73	8.47
Julienne Narrows	8.14	8.13	7.81	8.58
Pumphouse Stream	7.89	7.92	6.97	8.25

pH relates to the free hydrogen ions in water, and it is a measure of acidity in water. pH is a critical parameter because it influences the solubility of minerals and chemicals, the availability of nutrients, and the biological processes that occur in aquatic ecosystems. The Canadian Council of Ministers of the Environment (CCME) Freshwater Aquatic Life guideline provides a basis by which to judge the overall health of the brook. Their freshwater guidelines recommend a minimum pH of 6.5 and a maximum pH of 9.0; however, many rivers in Newfoundland and Labrador are naturally more acidic due to the local geology.

pH remained stable and consistent at all stations, with small fluctuations likely resulting from precipitation events. Rainwater, with its naturally lower pH, temporarily dilutes the water column, causing a short-term decrease in pH. However, pH levels typically return to baseline within a few days to weeks. pH at all stations remained within the CCME Guidelines for the Protection of Aquatic Life for the entire deployment period. pH fluctuated at Dolomite Road, as did water elevation. There was also a noticeable fluctuation in pH at Pumphouse Stream and Fraggle Rock during the last week of August, during which, there were noticeable spikes in water elevation at pumphouse stream. Water elevation data from Fraggle Rock was removed from this visual due to lack of data.

pH Station Graphs

● pH (pH units) ● Water Elevation (m)



Specific Conductivity

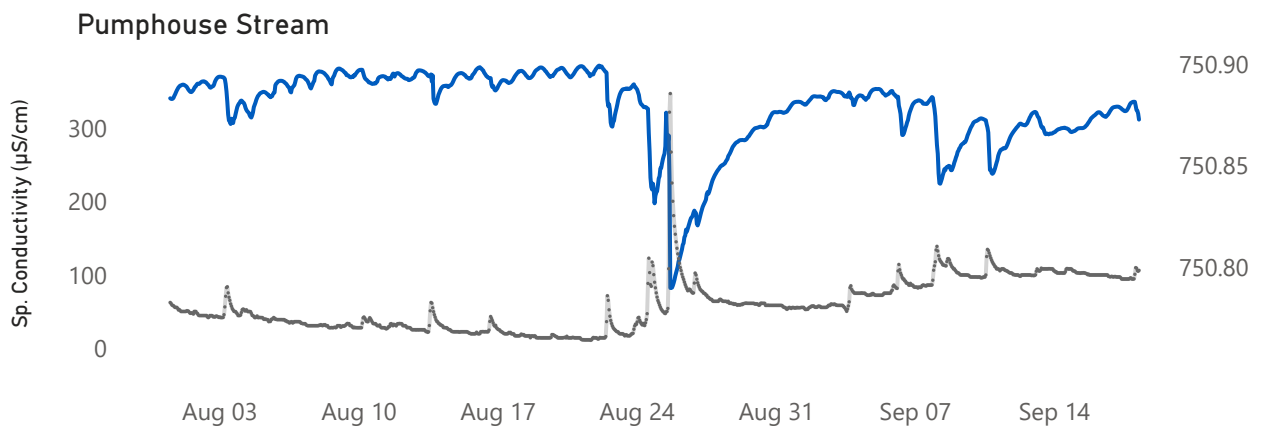
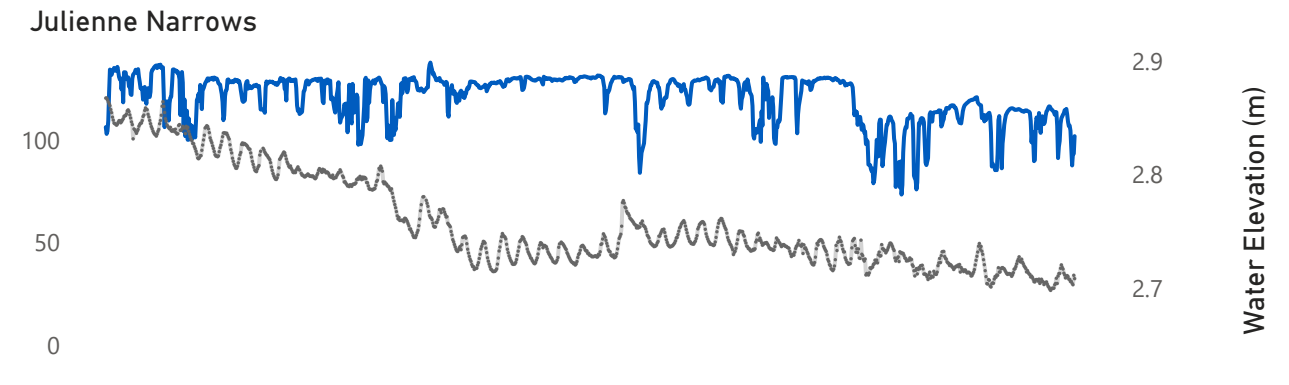
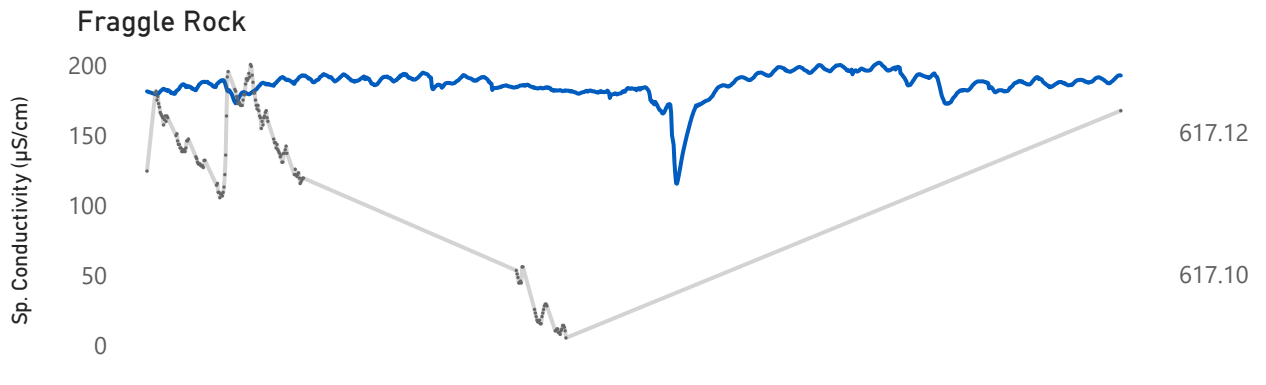
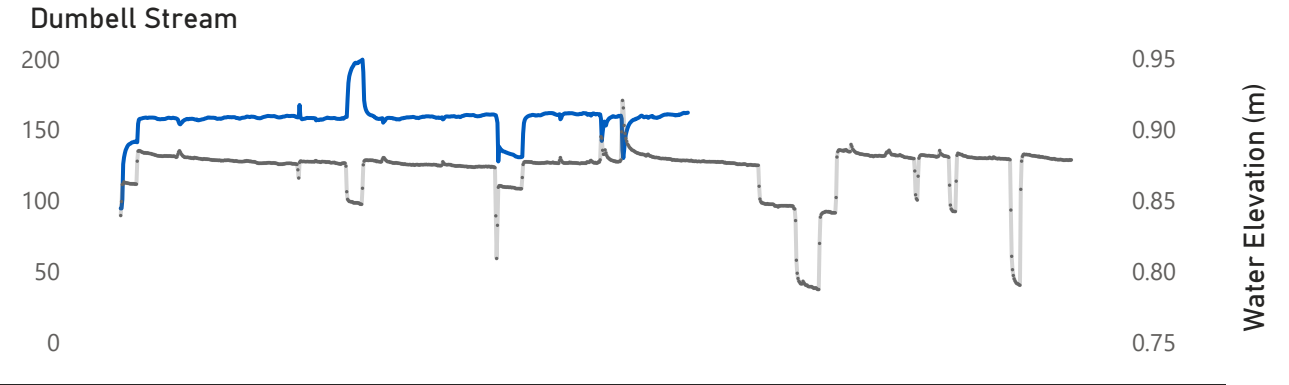
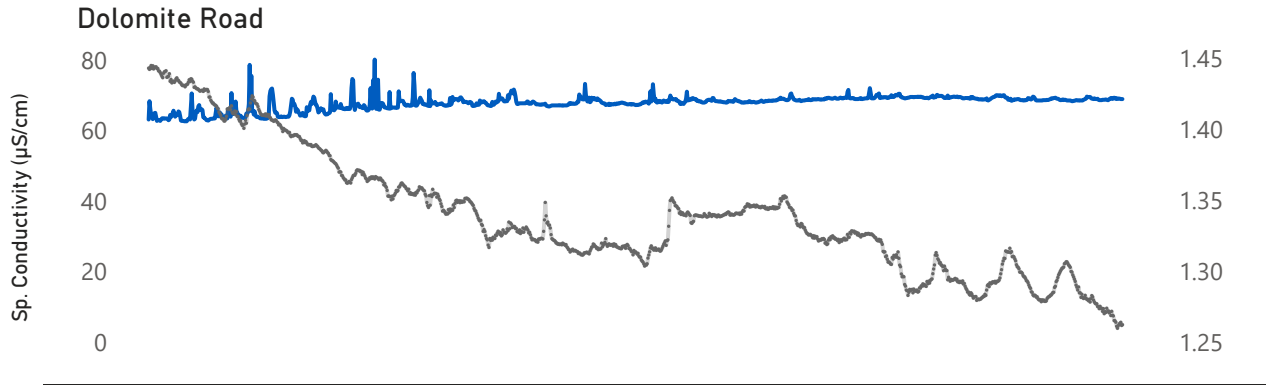
Deployment Period Statistics ($\mu\text{S}/\text{cm}$)				
Name	Average	Median	Minimum	Maximum
Dolomite Road	67.82	68.30	62.60	80.10
Dumbell Stream	157.86	158.80	94.40	199.60
Fraggle Rock	186.08	187.16	115.20	201.70
Julienne Narrows	120.67	125.70	73.40	137.80
Pumphouse Stream	328.06	342.70	82.00	385.90

Specific conductivity is a common indicator of the concentration of dissolved ions in water, such as salts, acids, and bases. Higher concentrations of dissolved ions result in higher specific conductivity, while pure water exhibits low conductivity. Specific conductivity is often affected by precipitation. During precipitation events, rainwater can temporarily dilute the water column, resulting in a short-term decrease in conductivity. However, high precipitation events can also cause a temporary increase in conductivity if sediment from the bottom of the waterbody is disturbed around the sensor or if runoff carrying dissolved ions enters the water column.

Patterns in conductivity varied across this network. For the two stations located on Wabush Lake (Dolomite Road and Julienne Narrows), one station is situated upstream of the mine's tailings and the other is located downstream. This can explain the difference in variation between these two stations. At Dolomite Road, conductivity increases slightly, while stage decreases. With the smaller streams, fluctuations due to precipitation events are more pronounced. Pumphouse Stream is a good example of this; when elevation increased temporarily, conductivity decreased. This trend was also evident at Fraggle Rock and Julienne Narrows.

Specific Conductivity Station Graphs

● Specific Conductivity ($\mu\text{S}/\text{cm}$) ● Water Elevation (m)



Aug 03 Aug 10 Aug 17 Aug 24 Aug 31 Sep 07 Sep 14

Aug 03 Aug 10 Aug 17 Aug 24 Aug 31 Sep 07 Sep 14

Dissolved Oxygen

Name	Deployment Period Statistics							
	Average (mg/L)	Average (% Sat.)	Median (mg/L)	Median (% Sat.)	Minimum (mg/L)	Minimum (% Sat.)	Maximum (mg/L)	Maximum (% Sat.)
Dolomite Road	9.44	95.79	9.44	95.50	8.61	82.40	10.23	110.60
Dumbell Stream	12.13	94.74	12.17	94.70	11.34	93.20	12.67	96.70
Fraggle Rock	9.88	93.02	9.88	92.80	8.36	89.69	11.38	97.50
Julienne Narrows	9.33	93.67	9.31	93.10	7.77	85.00	10.53	111.00
Pumphouse Stream	10.35	90.28	10.31	87.05	4.32	43.30	14.24	139.00

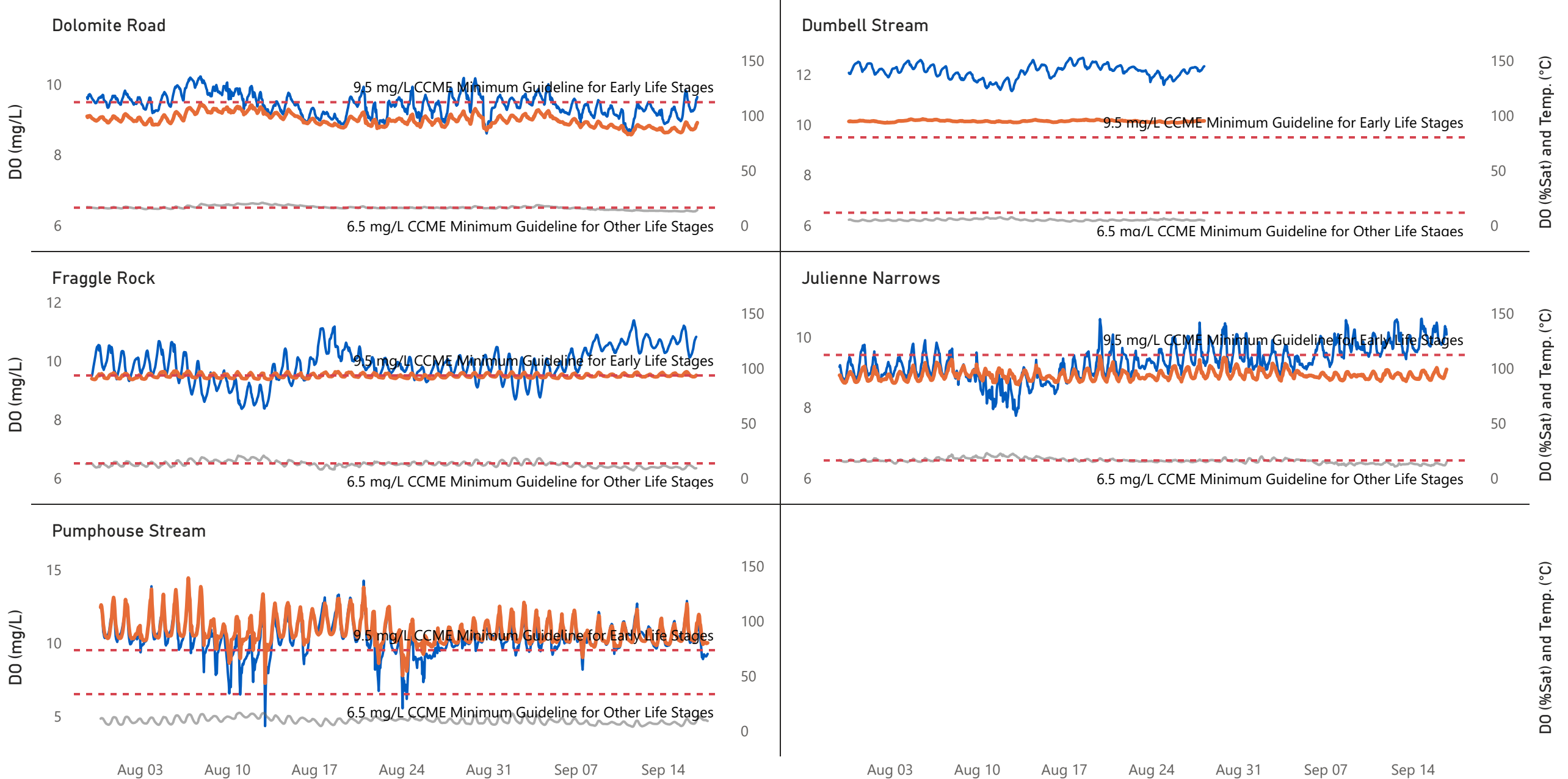
Dissolved oxygen (DO) is crucial for supporting aquatic life, and the CCME (Canadian Council of Ministers of the Environment) Freshwater Aquatic Life guidelines establish reference values to evaluate waterway health. The minimum DO guideline is 9.5 mg/L for early life stages in cold water species and 6.5 mg/L for other life stages. DO concentrations can fluctuate due to factors such as water temperature, atmospheric pressure, and the presence of other dissolved substances. Warmer water typically holds less dissolved oxygen than cooler water.

Throughout the monitoring period, DO concentrations remained above the Canadian Council of Ministers of the Environment (CCME) guideline for the protection of other life stages (6.5 mg/L) at most stations. At Pumphouse Stream, levels fell below this guideline for 0.24% of the time. For the guideline for the protection of early life stages (9.5mg/L), levels at most stations fell below this guideline during warmer water temperatures in the summer. Most stations displayed a increase in dissolved oxygen levels over the course of this deployment period, as water temperature cooled in to fall. Dissolved oxygen at Dumbell Stream remained high for the entire deployment period, as water temperatures remained cool.

The pie charts on the following page give a quick view of the percentage of time that levels were below the specified guidelines at each station.

Dissolved Oxygen Station Graphs

● DO (mg/L) ● Water Temperature (°C) ● Percent Saturation

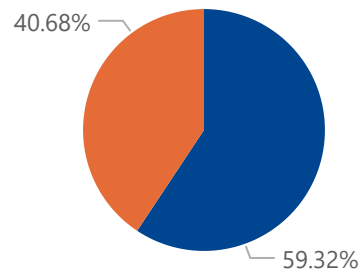


CCME Guidelines for the Protection of Aquatic Life for Dissolved Oxygen

CCME Early Life Stages Guideline of 9.5 mg/L

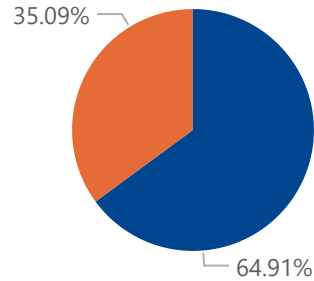
Dolomite Road

● Below ● Above



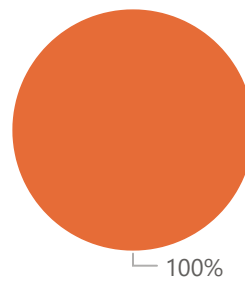
Julienne Narrows

● Below ● Above



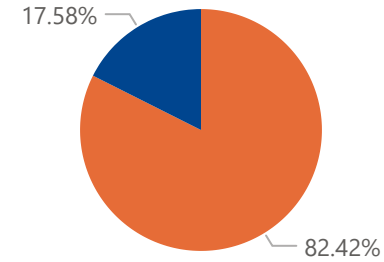
Dumbell Stream

● Above



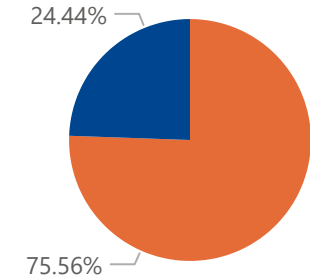
Pumphouse Stream

● Above ● Below



Fraggle Rock

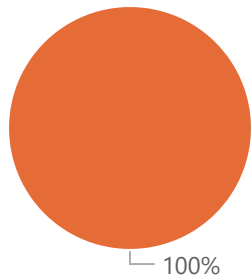
● Above ● Below



CCME Other Life Stages Guideline of 6.5 mg/L

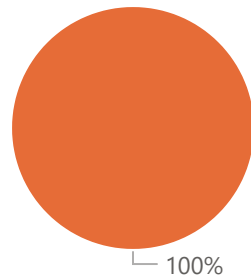
Dolomite Road

● Above



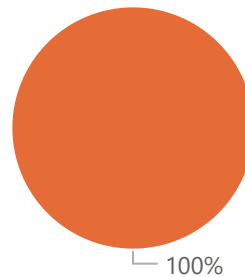
Julienne Narrows

● Above



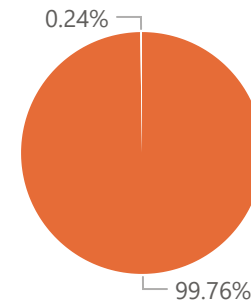
Dumbell Stream

● Above



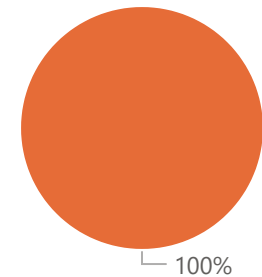
Pumphouse Stream

● Above ● Below



Fraggle Rock

● Above



Turbidity

Deployment Period Statistics (NTU)				
Name	Average	Median	Minimum	Maximum
Dolomite Road	5.92	6.30	1.50	35.20
Dumbell Stream	0.30	0.20	0.00	17.30
Fraggle Rock	0.45	0.43	0.07	5.65
Julienne Narrows	4.17	1.50	0.60	176.90
Pumphouse Stream	1.53	0.60	0.20	18.50

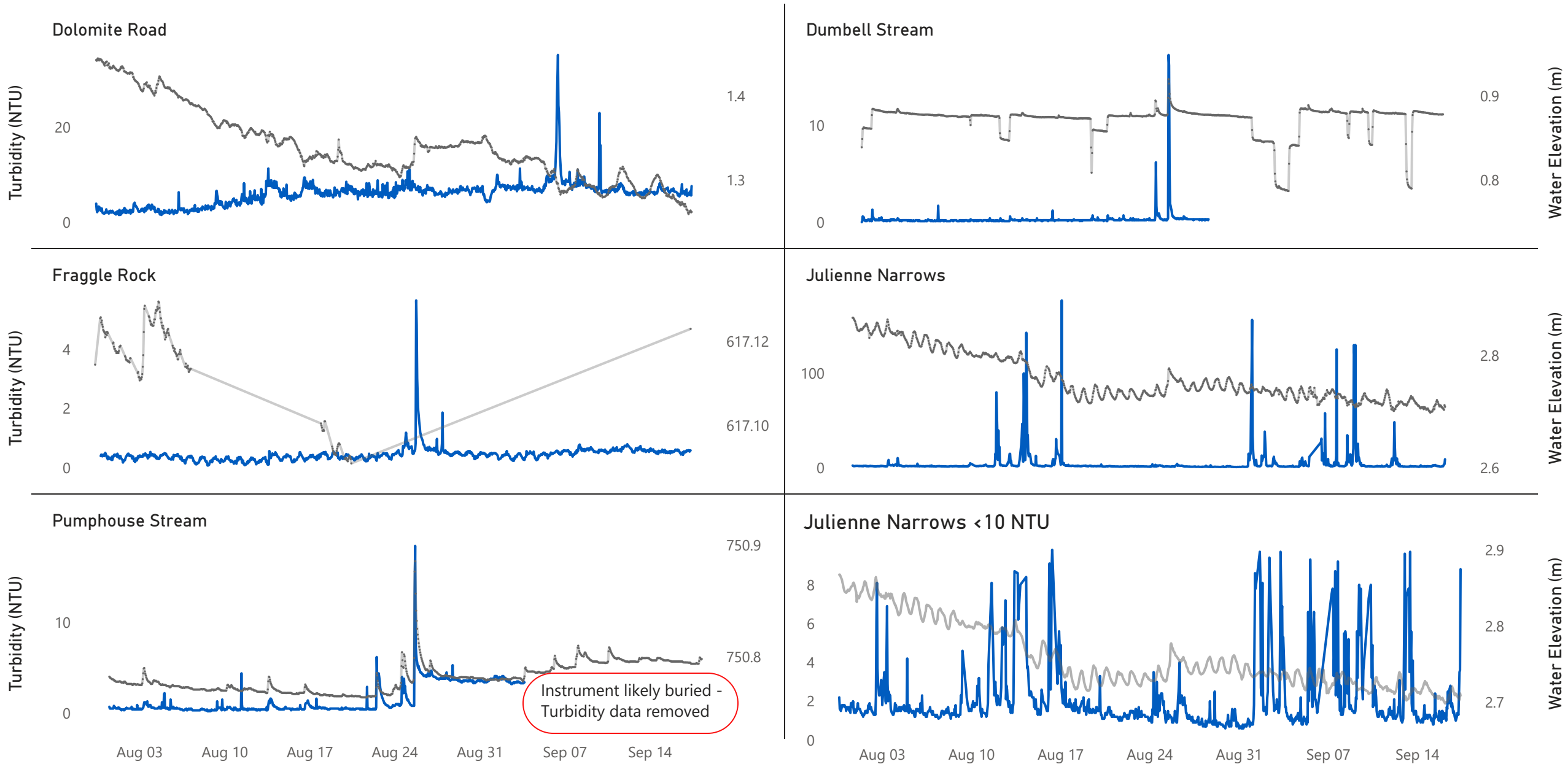
Turbidity, a measure of water cloudiness, often increases during precipitation events as runoff carries silt and debris into the waterbody. High turbidity values can reduce light penetration for aquatic plants, disrupt benthic habitats and potentially harm fish gills or damage monitoring equipment.

Throughout the deployment period, turbidity levels remained generally low at all stations, indicating clear water conditions. Precipitation events can cause increases in water levels, resulting in short-term turbidity spikes. Values typically return to baseline within a few days. This is most evident in smaller streams, like Pumphouse Stream and Dumbell Stream.

Turbidity levels at Julienne Narrows fluctuate more than other stations due to possible wave action. Two weeks of data was removed from Pumphouse Stream as readings were likely inaccurate due to possible sediment settling on the sensor.

Turbidity Station Graphs

● Turbidity (NTU) ● Water Elevation (m)



Water Elevation or Stage

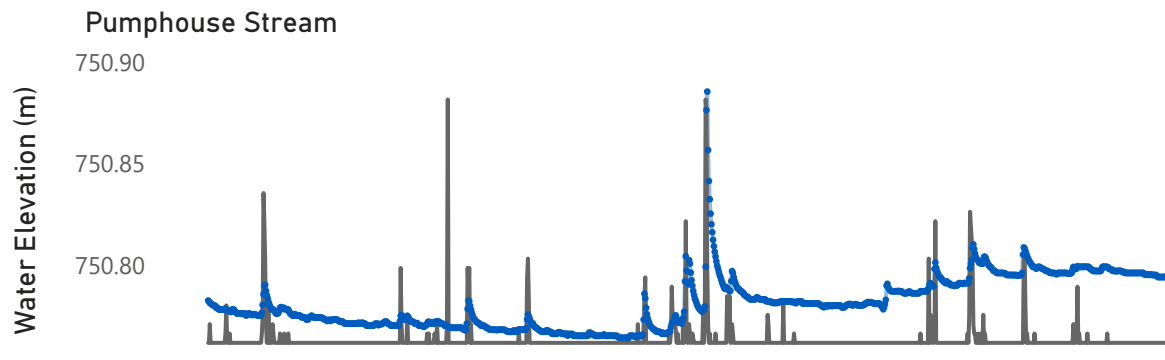
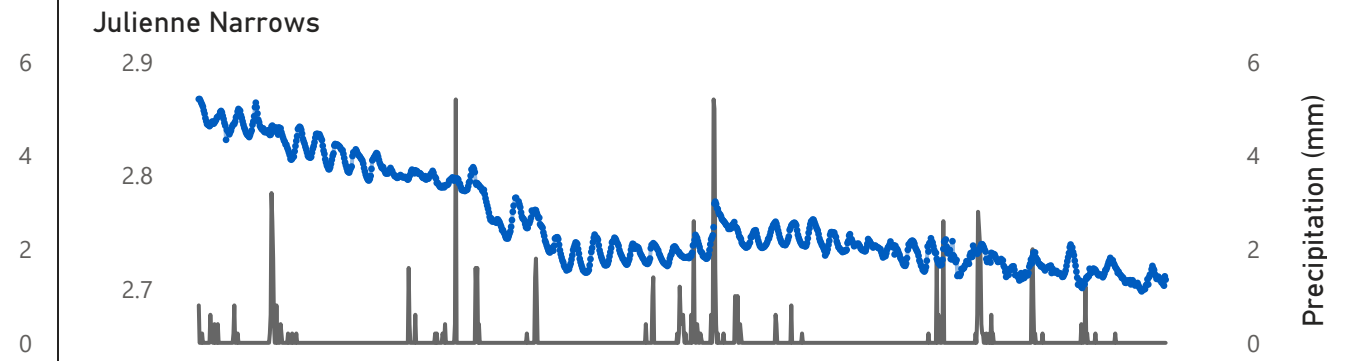
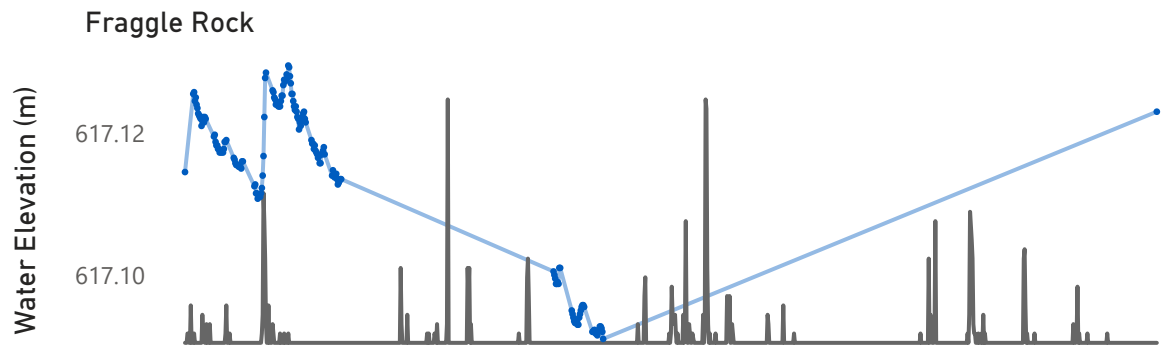
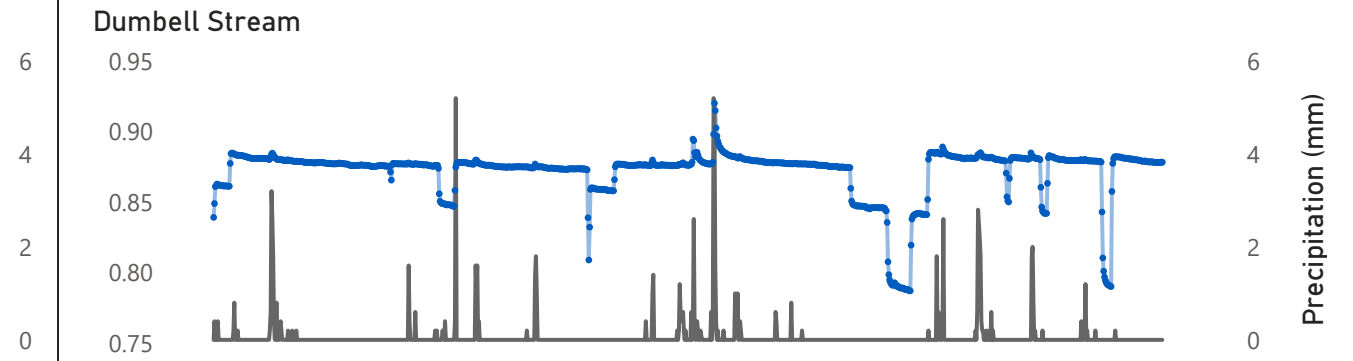
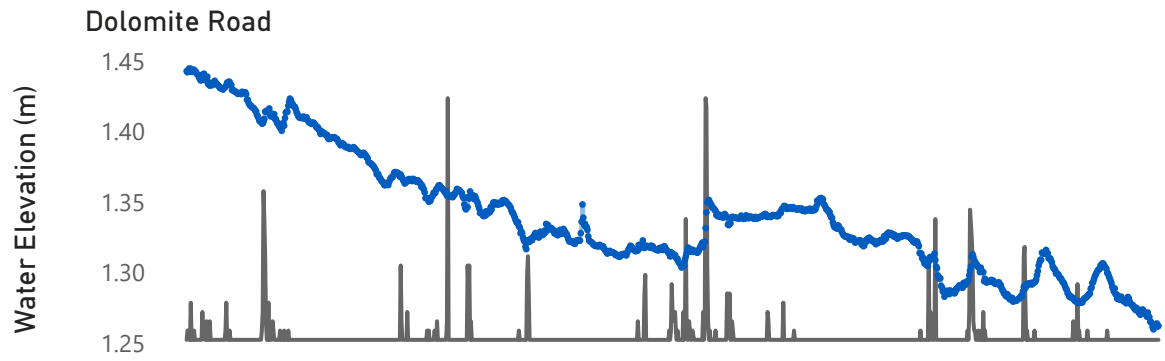
Deployment Period Statistics (m)				
Name	Minimum	Maximum	Average	Median
Dolomite Road	1.26	1.44	1.34	1.33
Dumbell Stream	0.79	0.92	0.87	0.88
Fraggle Rock	617.09	617.13	617.11	617.12
Julienne Narrows	2.70	2.87	2.76	2.74
Pumphouse Stream	750.76	750.89	750.78	750.78

Water elevation provides an estimate of the water level at a monitoring station and plays a vital role in analyzing trends in water quality data, particularly for parameters such as specific conductivity, pH, and turbidity. Water elevation generally rises during precipitation events as rainwater and runoff enter the water column. By monitoring water elevation alongside precipitation events, we can better interpret our data, distinguish whether an elevation increase is caused by rainfall or potential industrial activities, and assess its impact on water quality. Precipitation data was obtained from the weather station at Moosehead Lake, owned by the Department of Forestry, Agriculture and Lands.

Throughout the deployment period, water elevation decreased at Dolomite Road, Julienne Narrows and Fraggle Rock (based on the limited data available). Looking at the baseline at Dumbell Stream, water elevation remained relatively stable, similar to Pumphouse Stream, except for increases noted after precipitation events.

Water Elevation and Precipitation Station Graphs

● Water Elevation (m) ● Precipitation (mm)



Aug 03 Aug 10 Aug 17 Aug 24 Aug 31 Sep 07 Sep 14

Aug 03 Aug 10 Aug 17 Aug 24 Aug 31 Sep 07 Sep 14

Precipitation Data (hourly)

Retrieved from the Moosehead Lake Weather Station



0.08

Average (mm)

0.00

Median (mm)

0.00

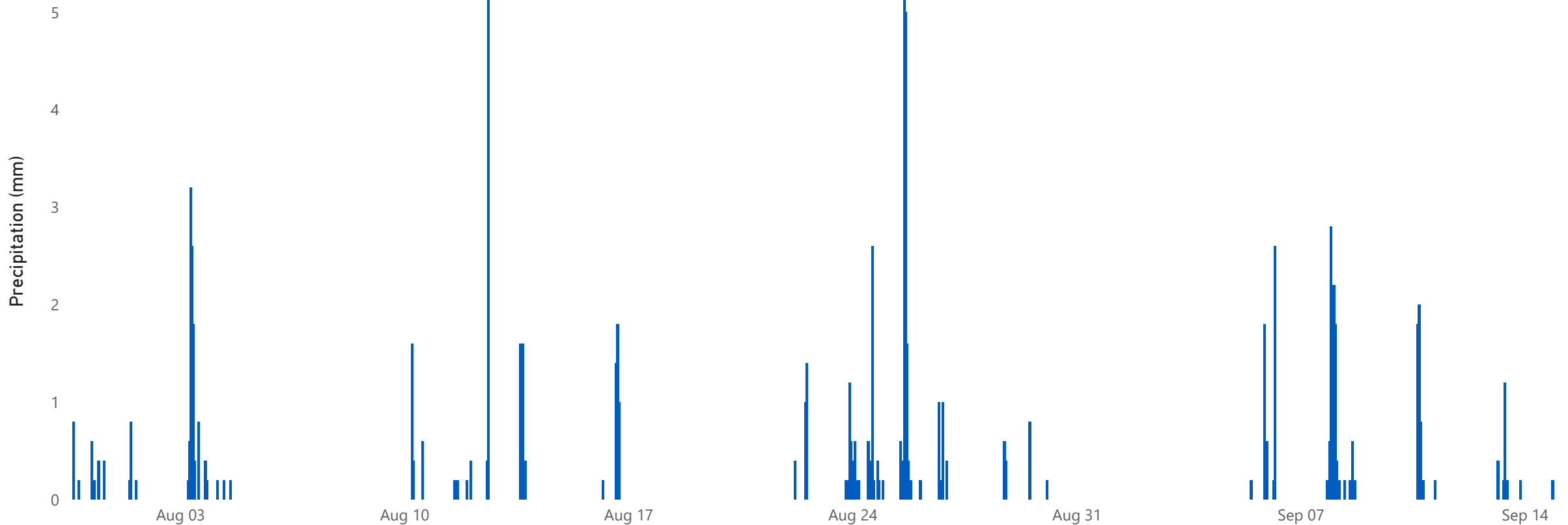
Minimum (mm)

5.20

Maximum (mm)

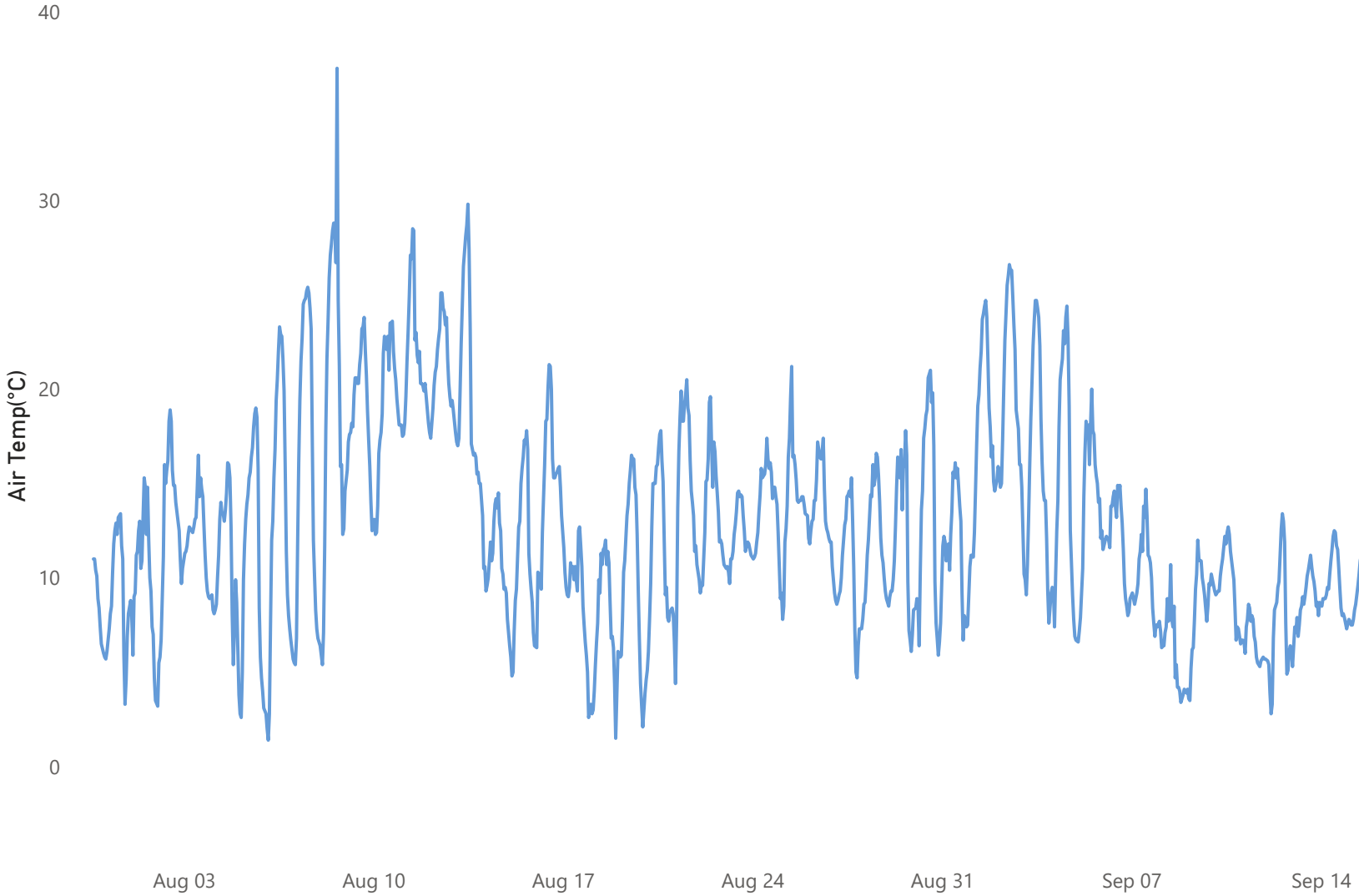
84.80

Total (mm)

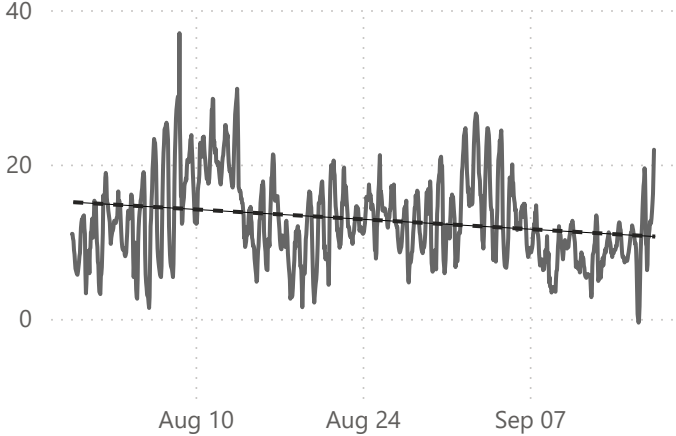


Air Temperature Data (hourly)

Retrieved from Moosehead Lake Weather Station



Air Temperature Trendline



12.88
Average (°C)

12.10
Median (°C)

-0.50
Minimum (°C)

37.00
Maximum (°C)

Deployment Summary

- Instruments were deployed on July 30th and July 31st and removed by September 18th. This was the second deployment for 2025.
- In most cases, precipitation events or increases/decreases in water level could be used to explain the data fluctuations. Most values recorded were within ranges as suggested by the CCME Guidelines for the Protection of Aquatic Life for pH and dissolved oxygen.
- Water temperatures at most stations corresponded with air temperature. Temperature ranged between 3.38°C and 22.70°C at these stations during deployment.
- All pH values were within the recommended CCME Guidelines for the Protection of Aquatic Life. pH ranged between 6.97 and 8.77. Fluctuations were noted between day and night.
- Specific conductivity ranged from 62.60 µs/cm to 80.10 µs/cm at Dolomite Road, 73.40 µs/cm to 137.80 µs/cm at Julienne Narrows, 94.40 µs/cm to 199.60 µs/cm at Dumbell Stream, 82.00 µs/cm to 385.90 µs/cm at Pumphouse Stream and 115.20 µs/cm to 201.70 µs/cm at Fraggie Rock.
- At most stations dissolved oxygen values were above the minimum CCME Guideline for the Protection of Aquatic Life for Cold Water Biota at Other Life Stages of 6.5 mg/L. Pumphouse Stream was the only station with data that fell below this guideline, and that was for a very short amount of time. When dissolved oxygen values are compared to the CCME Guideline for the Protection of Aquatic Life for Cold Water Biota at Early Life Stages of 9.5 mg/L, most stations had data fall below this guideline when temperatures were warmest. Dumbell Stream is the only station that was above both guidelines for the entire deployment period.
- Turbidity at Dolomite Road ranged from 1.50 to 35.20 NTU, 0.60 to 176.90 at Julienne Narrows, 0.00 to 17.30 NTU at Dumbell Stream, 0.20 to 18.50 NTU at Pumphouse Stream, and 0.07 to 5.65 NTU at Fraggie Rock.
- Overall, water stage levels at Dolomite Road, Julienne Narrows, and Fraggie Rock decreased. Baseline water levels at Dumbell Stream and Pumphouse Stream remained relatively stable. The issue at Dumbell Stream has not been rectified.
- Water Survey Canada operates the hydrometric component of certain stations. Due to differences in protocols, Water Survey Canada hydrometric data is quality controlled on a less frequent basis than water quality data. The hydrometric data shown in this report for certain stations is provisional and has not undergone quality control checks. Corrected hydrometric data can be obtained at <https://wateroffice.ec.gc.ca/> or upon request to Water Survey Canada. For stations that are solely operated by the Water Resources Management Division, hydrometric data is quality controlled on a less frequent basis than water quality data due to differences in protocols. The hydrometric data shown in this report for Fraggie Rock is provisional and has not undergone quality control checks.
- Grab sample results are attached.



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Bureau Veritas Job #: C594826
Report Date: 2025/08/15

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Your P.O. #: 224006869

Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ60 UNNAMED TRIBULARY ABOVE FRAGGLE ROCK LAKE Sampling Date 2025/07/30 12:10 Matrix W Sample # 2025-6313-00-SI-SP Registration # SA-0000								
RESULTS OF ANALYSES OF WATER								
Calculated Parameters								
Hardness (CaCO3)	-	91	1.0	mg/L	N/A	2025/08/11		9984078
Total Kjeldahl Nitrogen (TKN)	-	0.27	0.10	mg/L	N/A	2025/08/12		9983389
Nitrate (N)	-	1.0	0.050	mg/L	N/A	2025/08/14		9984080
Total dissolved solids (calc., EC)	-	100	1.0	mg/L	N/A	2025/08/12		9984162
Inorganics								
Conductivity	-	190	1.0	uS/cm	N/A	2025/08/11	M2C	9986592
Chloride (Cl-)	-	1.5	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Bromide (Br-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Sulphate (SO4)	-	8.2	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Total Alkalinity (Total as CaCO3)	-	78	2.0	mg/L	N/A	2025/08/11	M2C	9986593
Colour	-	15	5.0	TCU	N/A	2025/08/13	MCN	9988226
Dissolved Fluoride (F-)	-	ND	0.10	mg/L	N/A	2025/08/11	M2C	9986594
Nitrate + Nitrite (N)	-	1.0	0.050	mg/L	N/A	2025/08/13	EMT	9988230
Nitrite (N)	-	0.011	0.010	mg/L	N/A	2025/08/13	MCN	9988231
Nitrogen (Ammonia Nitrogen)	-	ND	0.050	mg/L	N/A	2025/08/12	MCN	9987465
Total Nitrogen (N)	-	1.3	0.10	mg/L	N/A	2025/08/11	S6S	9986588
Dissolved Organic Carbon (C)	-	2.3	0.50	mg/L	N/A	2025/08/12	S6S	9987497
Total Organic Carbon (C)	-	2.5	0.50	mg/L	N/A	2025/08/13	S6S	9988375
pH	-	8.01		pH	N/A	2025/08/11	M2C	9986587
Total Phosphorus	-	ND	0.004	mg/L	2025/08/13	2025/08/14	VKH	9988703
Total Suspended Solids	-	ND	1.0	mg/L	2025/08/06	2025/08/07	ISM	9983804
Turbidity	-	1.2	0.10	NTU	N/A	2025/08/14	KMC	9988776
MERCURY BY COLD VAPOUR AA (WATER)								
Metals								
Total Mercury (Hg)	-	ND	0.000013	mg/L	2025/08/11	2025/08/11	JEP	9985607
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Aluminum (Al)	-	0.011	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Aluminum (Al)	-	0.011	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Antimony (Sb)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Antimony (Sb)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Arsenic (As)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Arsenic (As)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Barium (Ba)	-	0.0059	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Barium (Ba)	-	0.0056	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Boron (B)	-	ND	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Boron (B)	-	ND	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Cadmium (Cd)	-	ND	0.000010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Cadmium (Cd)	-	ND	0.000010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Calcium (Ca)	-	17	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Calcium (Ca)	-	17	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Chromium (Cr)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Chromium (Cr)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216



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Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ60 UNNAMED TRIBULARY ABOVE FRAGGLE ROCK LAKE								
Sampling Date		2025/07/30 12:10						
Matrix		W						
Sample #		2025-6313-00-SI-SP						
Registration #		SA-0000						
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Copper (Cu)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Copper (Cu)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Iron (Fe)	-	0.059	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Iron (Fe)	-	0.057	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Lead (Pb)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Lead (Pb)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Magnesium (Mg)	-	11	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Magnesium (Mg)	-	11	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Manganese (Mn)	-	0.014	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Manganese (Mn)	-	0.014	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Nickel (Ni)	-	ND	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Nickel (Ni)	-	ND	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Phosphorus (P)	-	ND	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Phosphorus (P)	-	ND	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Potassium (K)	-	1.2	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Potassium (K)	-	1.2	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Selenium (Se)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Selenium (Se)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Sodium (Na)	-	0.96	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Sodium (Na)	-	0.93	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Strontium (Sr)	-	0.017	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Strontium (Sr)	-	0.016	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Uranium (U)	-	0.00021	0.00010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Uranium (U)	-	0.00020	0.00010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Zinc (Zn)	-	ND	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Dup.Total Zinc (Zn)	-	ND	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216



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Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ62 WABUSH LAKE AT DOLOMITE ROAD								
Sampling Date		2025/07/30 13:45						
Matrix		W						
Sample #		2025-6315-00-SI-SP						
Registration #		SA-0000						
RESULTS OF ANALYSES OF WATER								
Calculated Parameters								
Hardness (CaCO3)	-	28	1.0	mg/L	N/A	2025/08/11		9984078
Total Kjeldahl Nitrogen (TKN)	-	0.21	0.10	mg/L	N/A	2025/08/12		9983389
Nitrate (N)	-	ND	0.050	mg/L	N/A	2025/08/14		9984080
Total dissolved solids (calc., EC)	-	35	1.0	mg/L	N/A	2025/08/12		9984162
Inorganics								
Conductivity	-	64	1.0	uS/cm	N/A	2025/08/11	M2C	9986592
Chloride (Cl-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Bromide (Br-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Sulphate (SO4)	-	2.2	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Total Alkalinity (Total as CaCO3)	-	27	2.0	mg/L	N/A	2025/08/11	M2C	9986593
Colour	-	24	5.0	TCU	N/A	2025/08/13	MCN	9988226
Dissolved Fluoride (F-)	-	ND	0.10	mg/L	N/A	2025/08/11	M2C	9986594
Nitrate + Nitrite (N)	-	ND	0.050	mg/L	N/A	2025/08/13	EMT	9988230
Nitrite (N)	-	ND	0.010	mg/L	N/A	2025/08/13	MCN	9988231
Nitrogen (Ammonia Nitrogen)	-	ND	0.050	mg/L	N/A	2025/08/12	MCN	9987465
Total Nitrogen (N)	-	0.21	0.10	mg/L	N/A	2025/08/11	S6S	9986588
Dissolved Organic Carbon (C)	-	4.0	0.50	mg/L	N/A	2025/08/13	S6S	9988381
Dup.Dissolved Organic Carbon (C)	-	4.1	0.50	mg/L	N/A	2025/08/13	S6S	9988381
Total Organic Carbon (C)	-	4.4	0.50	mg/L	N/A	2025/08/14	S6S	9989260
pH	-	7.60		pH	N/A	2025/08/11	M2C	9986587
Total Phosphorus	-	0.004	0.004	mg/L	2025/08/13	2025/08/14	VKH	9988703
Total Suspended Solids	-	4.9	1.4	mg/L	2025/08/06	2025/08/07	ISM	9983804
Turbidity	-	4.8	0.10	NTU	N/A	2025/08/14	KMC	9988787
Dup.Turbidity	-	4.7	0.10	NTU	N/A	2025/08/14	KMC	9988787
MERCURY BY COLD VAPOUR AA (WATER)								
Metals								
Total Mercury (Hg)	-	ND	0.000013	mg/L	2025/08/11	2025/08/11	JEP	9985620
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Aluminum (Al)	-	0.028	0.0050	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Antimony (Sb)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Arsenic (As)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Barium (Ba)	-	0.011	0.0010	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Boron (B)	-	ND	0.050	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Cadmium (Cd)	-	ND	0.000010	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Calcium (Ca)	-	6.6	0.10	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Chromium (Cr)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Copper (Cu)	-	0.00077	0.00050	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Iron (Fe)	-	0.18	0.050	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Lead (Pb)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Magnesium (Mg)	-	2.8	0.10	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Manganese (Mn)	-	0.084	0.0020	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Nickel (Ni)	-	ND	0.0020	mg/L	2025/08/08	2025/08/08	MTZ	9985224



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NL Department of Environment, Climate Change and
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Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ62 WABUSH LAKE AT DOLOMITE ROAD								
Sampling Date		2025/07/30 13:45						
Matrix		W						
Sample #		2025-6315-00-SI-SP						
Registration #		SA-0000						
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Phosphorus (P)	-	ND	0.10	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Potassium (K)	-	0.91	0.10	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Selenium (Se)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Sodium (Na)	-	0.88	0.10	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Strontium (Sr)	-	0.014	0.0020	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Uranium (U)	-	ND	0.00010	mg/L	2025/08/08	2025/08/08	MTZ	9985224
Total Zinc (Zn)	-	ND	0.0050	mg/L	2025/08/08	2025/08/08	MTZ	9985224



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Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ63 WABUSH LAKE AT LAKE OUTLET (JULIENNE NARROWS)								
Sampling Date		2025/07/30 15:35						
Matrix		W						
Sample #		2025-6316-00-SI-SP						
Registration #		SA-0000						
RESULTS OF ANALYSES OF WATER								
Calculated Parameters								
Hardness (CaCO3)	-	51	1.0	mg/L	N/A	2025/08/11		9984078
Total Kjeldahl Nitrogen (TKN)	-	0.17	0.10	mg/L	N/A	2025/08/12		9983389
Nitrate (N)	-	0.48	0.050	mg/L	N/A	2025/08/14		9984080
Total dissolved solids (calc., EC)	-	60	1.0	mg/L	N/A	2025/08/12		9984162
Inorganics								
Conductivity	-	110	1.0	uS/cm	N/A	2025/08/11	M2C	9986592
Chloride (Cl-)	-	1.3	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Bromide (Br-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Sulphate (SO4)	-	3.2	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Total Alkalinity (Total as CaCO3)	-	45	2.0	mg/L	N/A	2025/08/11	M2C	9986593
Colour	-	19	5.0	TCU	N/A	2025/08/13	MCN	9988226
Dissolved Fluoride (F-)	-	ND	0.10	mg/L	N/A	2025/08/11	M2C	9986594
Nitrate + Nitrite (N)	-	0.48	0.050	mg/L	N/A	2025/08/13	EMT	9988230
Nitrite (N)	-	ND	0.010	mg/L	N/A	2025/08/13	MCN	9988231
Nitrogen (Ammonia Nitrogen)	-	ND	0.050	mg/L	N/A	2025/08/12	MCN	9987465
Total Nitrogen (N)	-	0.64	0.10	mg/L	N/A	2025/08/11	S6S	9986588
Dissolved Organic Carbon (C)	-	3.3	0.50	mg/L	N/A	2025/08/12	S6S	9987497
Total Organic Carbon (C)	-	3.3	0.50	mg/L	N/A	2025/08/14	S6S	9989260
pH	-	7.78		pH	N/A	2025/08/11	M2C	9986587
Total Phosphorus	-	ND	0.004	mg/L	2025/08/13	2025/08/14	VKH	9988703
Total Suspended Solids	-	3.8	1.0	mg/L	2025/08/06	2025/08/07	ISM	9983804
Turbidity	-	3.1	0.10	NTU	N/A	2025/08/14	KMC	9988776
MERCURY BY COLD VAPOUR AA (WATER)								
Metals								
Total Mercury (Hg)	-	ND	0.000013	mg/L	2025/08/11	2025/08/11	JEP	9985620
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Aluminum (Al)	-	0.023	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Antimony (Sb)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Arsenic (As)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Barium (Ba)	-	0.0035	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Boron (B)	-	ND	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Cadmium (Cd)	-	ND	0.000010	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Calcium (Ca)	-	12	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Chromium (Cr)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Copper (Cu)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Iron (Fe)	-	0.064	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Lead (Pb)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Magnesium (Mg)	-	5.0	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Manganese (Mn)	-	0.019	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Nickel (Ni)	-	ND	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Phosphorus (P)	-	ND	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Potassium (K)	-	1.3	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985210



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Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ63 WABUSH LAKE AT LAKE OUTLET (JULIENNE NARROWS)								
Sampling Date		2025/07/30 15:35						
Matrix		W						
Sample #		2025-6316-00-SI-SP						
Registration #		SA-0000						
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Selenium (Se)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Sodium (Na)	-	1.4	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Strontium (Sr)	-	0.018	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Uranium (U)	-	0.00012	0.00010	mg/L	2025/08/08	2025/08/08	MOA	9985210
Total Zinc (Zn)	-	ND	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985210



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Your P.O. #: 224006869

Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ64 DUMBELL STREAM ABOVE DUMBELL LAKE Sampling Date 2025/07/31 12:20 Matrix W Sample # 2025-6317-00-SI-SP Registration # SA-0000								
RESULTS OF ANALYSES OF WATER								
Calculated Parameters								
Hardness (CaCO3)	-	42	1.0	mg/L	N/A	2025/08/11		9984078
Total Kjeldahl Nitrogen (TKN)	-	0.72	0.25	mg/L	N/A	2025/08/12		9983389
Nitrate (N)	-	2.6	0.25	mg/L	N/A	2025/08/14		9984080
Total dissolved solids (calc., EC)	-	55	1.0	mg/L	N/A	2025/08/12		9984162
Inorganics								
Conductivity	-	98	1.0	uS/cm	N/A	2025/08/11	M2C	9986592
Chloride (Cl-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Dup.Chloride (Cl-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Bromide (Br-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Dup.Bromide (Br-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Sulphate (SO4)	-	2.7	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Dup.Sulphate (SO4)	-	2.6	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Total Alkalinity (Total as CaCO3)	-	34	2.0	mg/L	N/A	2025/08/11	M2C	9986593
Colour	-	ND	5.0	TCU	N/A	2025/08/13	MCN	9988226
Dissolved Fluoride (F-)	-	ND	0.10	mg/L	N/A	2025/08/11	M2C	9986594
Nitrate + Nitrite (N)	-	2.6	0.25	mg/L	N/A	2025/08/13	EMT	9988230
Nitrite (N)	-	ND	0.010	mg/L	N/A	2025/08/13	MCN	9988231
Nitrogen (Ammonia Nitrogen)	-	ND	0.050	mg/L	N/A	2025/08/12	MCN	9987465
Total Nitrogen (N)	-	3.0	0.10	mg/L	N/A	2025/08/11	S6S	9986588
Dissolved Organic Carbon (C)	-	ND	0.50	mg/L	N/A	2025/08/11	S6S	9986512
Total Organic Carbon (C)	-	ND	0.50	mg/L	N/A	2025/08/13	S6S	9988375
pH	-	7.69		pH	N/A	2025/08/11	M2C	9986587
Total Phosphorus	-	ND	0.004	mg/L	2025/08/13	2025/08/14	VKH	9988703
Total Suspended Solids	-	1.0	1.0	mg/L	2025/08/06	2025/08/07	ISM	9983804
Turbidity	-	2.6	0.10	NTU	N/A	2025/08/14	KMC	9988776
MERCURY BY COLD VAPOUR AA (WATER)								
Metals								
Total Mercury (Hg)	-	ND	0.000013	mg/L	2025/08/11	2025/08/11	JEP	9985620
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Aluminum (Al)	-	0.011	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Antimony (Sb)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Arsenic (As)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Barium (Ba)	-	0.0020	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Boron (B)	-	ND	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Cadmium (Cd)	-	ND	0.000010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Calcium (Ca)	-	9.9	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Chromium (Cr)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Copper (Cu)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Iron (Fe)	-	ND	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Lead (Pb)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Magnesium (Mg)	-	4.1	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Manganese (Mn)	-	ND	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216



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VERITAS

Bureau Veritas Job #: C594826
Report Date: 2025/08/15

NL Department of Environment, Climate Change and
Municipalities
Your P.O. #: 224006869

Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ64 DUMBELL STREAM ABOVE DUMBELL LAKE Sampling Date 2025/07/31 12:20 Matrix W Sample # 2025-6317-00-SI-SP Registration # SA-0000								
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Nickel (Ni)	-	ND	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Phosphorus (P)	-	ND	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Potassium (K)	-	0.76	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Selenium (Se)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Sodium (Na)	-	0.51	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Strontium (Sr)	-	0.011	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Uranium (U)	-	ND	0.00010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Zinc (Zn)	-	ND	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216



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Bureau Veritas Job #: C594826
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NL Department of Environment, Climate Change and
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Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ65 PUMPHOUSE STREAM ABOVE DRUM LAKE Sampling Date 2025/07/31 14:10 Matrix W Sample # 2025-6318-00-SI-SP Registration # SA-0000								
RESULTS OF ANALYSES OF WATER								
Calculated Parameters								
Hardness (CaCO3)	-	170	1.0	mg/L	N/A	2025/08/11		9984078
Total Kjeldahl Nitrogen (TKN)	-	1.4	0.25	mg/L	N/A	2025/08/12		9983389
Nitrate (N)	-	4.7	0.25	mg/L	N/A	2025/08/14		9984080
Total dissolved solids (calc., EC)	-	190	1.0	mg/L	N/A	2025/08/13		9984162
Inorganics								
Conductivity	-	350	1.0	uS/cm	N/A	2025/08/12	M2C	9987014
Chloride (Cl-)	-	1.9	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Bromide (Br-)	-	ND	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Sulphate (SO4)	-	17	1.0	mg/L	N/A	2025/08/12	RSU	9987094
Total Alkalinity (Total as CaCO3)	-	140	2.0	mg/L	N/A	2025/08/12	M2C	9987018
Colour	-	8.6	5.0	TCU	N/A	2025/08/13	MCN	9988226
Dissolved Fluoride (F-)	-	ND	0.10	mg/L	N/A	2025/08/12	M2C	9987024
Nitrate + Nitrite (N)	-	4.7	0.25	mg/L	N/A	2025/08/13	EMT	9988230
Nitrite (N)	-	ND	0.010	mg/L	N/A	2025/08/13	MCN	9988231
Nitrogen (Ammonia Nitrogen)	-	ND	0.050	mg/L	N/A	2025/08/12	MCN	9987465
Total Nitrogen (N)	-	5.9	0.10	mg/L	N/A	2025/08/11	S6S	9986588
Dissolved Organic Carbon (C)	-	1.3	0.50	mg/L	N/A	2025/08/12	S6S	9987497
Total Organic Carbon (C)	-	1.4	0.50	mg/L	N/A	2025/08/14	S6S	9989260
pH	-	7.99		pH	N/A	2025/08/12	M2C	9987010
Total Phosphorus	-	0.041	0.004	mg/L	2025/08/13	2025/08/15	VKH	9988703
Total Suspended Solids	-	1.2	1.0	mg/L	2025/08/06	2025/08/07	ISM	9983804
Turbidity	-	1.4	0.10	NTU	N/A	2025/08/14	KMC	9988776
MERCURY BY COLD VAPOUR AA (WATER)								
Metals								
Total Mercury (Hg)	-	ND	0.000013	mg/L	2025/08/11	2025/08/11	JEP	9985620
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Aluminum (Al)	-	0.038	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Antimony (Sb)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Arsenic (As)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Barium (Ba)	-	0.010	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Boron (B)	-	ND	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Cadmium (Cd)	-	ND	0.000010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Calcium (Ca)	-	42	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Chromium (Cr)	-	ND	0.0010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Copper (Cu)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Iron (Fe)	-	0.14	0.050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Lead (Pb)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Magnesium (Mg)	-	16	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Manganese (Mn)	-	0.12	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Nickel (Ni)	-	ND	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Phosphorus (P)	-	ND	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Potassium (K)	-	1.2	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216



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Sample Details/Parameters	A	Result	RDL	UNITS	Extracted	Analyzed	By	Batch
ATSQ65 PUMPHOUSE STREAM ABOVE DRUM LAKE								
Sampling Date		2025/07/31 14:10						
Matrix		W						
Sample #		2025-6318-00-SI-SP						
Registration #		SA-0000						
ELEMENTS BY ICP/MS (WATER)								
Metals								
Total Selenium (Se)	-	ND	0.00050	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Sodium (Na)	-	0.65	0.10	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Strontium (Sr)	-	0.030	0.0020	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Uranium (U)	-	0.00041	0.00010	mg/L	2025/08/08	2025/08/08	MOA	9985216
Total Zinc (Zn)	-	ND	0.0050	mg/L	2025/08/08	2025/08/08	MOA	9985216