

Long Sault-Ingleside Regional Water Treatment Plant

Drinking Water Works Permit 186-202
Municipal Drinking Water Licence 186-102

Works No. 260066417

- 2020 Summary Report -

Prepared by:

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BILL BRYCE, PRESIDENT

LONG SAULT-INGLESIDE REGIONAL WATER TREATMENT PLANT

2020 SUMMARY REPORT

Facility description:	Ultrafiltration (Zenon membrane filtration), booster station, elevated tank
Capacity:	9,500 m³/day
Service area:	Villages of Long Sault and Ingleside
Service population:	3500
In-service date:	2006
Raw water source:	St. Lawrence River
Disinfection method:	Sodium Hypochlorite
Operations manager:	Chris Eamon (613) 551-2720

This report is a summary of water quality information for the Long Sault-Ingleside Regional Water Treatment Plant, published in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation for the reporting period of January 1 to December 31, 2020. The Long Sault-Ingleside Regional Water Treatment Plant is categorized as a Large Municipal Residential Drinking Water System.

This report is prepared by Caneau Water and Sewage Operations Inc. on behalf of the Corporation of the Township of South Stormont. A copy of the Summary report is to be provided to the members of the municipal council no later than March 31, 2021.

"The report must list the requirements of the Act, the regulations, the system's approval and any order that the system failed to meet at any time during the period covered by the report and specify the duration of the failure; and for each failure referred to, describe the measures that were taken to correct the failure." – O. Reg. 170/03 s. 22(2)

"The report must also include the following information for the purpose of enabling the owner of the system to assess the rated capability of their system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows and daily instantaneous peak flow rates.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval."

O. Reg. 170/03 s. 22 (3)

System Description

The Long Sault-Ingleside Regional Water Treatment Plant is located on Moulinette Island, south of the town of Long Sault and has a rated capacity of 9,500 m³/day. The water treatment plant is a membrane filtration plant that began producing water in June 2005. The treatment process includes ultrafiltration (ZeeWeed membrane system manufactured by Zenon Environmental Inc.) through one of three membrane cassettes which are housed in large concrete tanks, taste

and odour removal through granular activated carbon (GAC) contactors, and primary disinfection provided by sodium hypochlorite, which is injected downstream of the GAC tanks. The water then passes through the chlorine contact chamber and a baffled clearwell into a high lift pumping well, all of which are located beneath the water treatment plant. A 10 km transmission main joins the distribution systems in Long Sault and Ingleside. The original Ingleside Water Treatment Plant was converted into a booster station. The distribution system now services a combined population in Long Sault and Ingleside of approximately 3,500.

Compliance with Terms and Conditions of the Municipal Drinking Water Licence

The Long Sault-Ingleside Regional Water Treatment Plant and distribution system was operated and maintained in accordance with O. Reg. 170/03 dated June 1, 2003 (last amendment – O. Reg. 65/20) and the Municipal Drinking Water Licence.

In accordance with Drinking Water Works Permit No. 186-202, condition 1.1, the drinking water system shall not be operated to exceed the rated capacity for the maximum flow rate into the treatment system of 9,500 m³/day. (See Appendix I for total flow, average daily flow and maximum daily flow.) The flows into the water treatment plant did not exceed the maximum flow rate at any time.

The Long Sault-Ingleside Regional Water Treatment Plant has a valid Permit to Take Water; number 4278-9XSHHK (issued June 24, 2015 and expiring June 30, 2025), authorizing the taking of no more than 9,500m³/day. The average water taking for the year was 5,209 m³/day, 55% of the authorized water taking. The maximum daily flow into the treatment system for the year was 7,907 m³/day (raw water) on June 20, 2020.

The Long Sault-Ingleside Regional Water Treatment Plant chlorinates at the raw water intake when the water temperature is above 10 degrees Celsius in order to control zebra mussel populations in the intake pipes.

The works and related equipment and appurtenances used to achieve compliance are properly operated and maintained, including effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of the Certificate of Approval and the Act and regulations, adequate laboratory facilities, process controls and alarms, and the use of the process chemical that comes in contact with the water being treated is suitable for the process and appropriate for drinking water.

A flow meter measures the flow rate and daily quantity of water being taken from the source (intake) and conveyed to, and through, the water treatment plant. The raw and treated flows are recorded in Appendix I. The flow meters were calibrated October 7, 2020 by Endress and Hauser.

Free chlorine residual and turbidity in treated water is continuously monitored at the point of entrance to the distribution system. The Prominent chlorine analyzer is accurate to $\pm 2\%$ of the measured value. A low chlorine alarm calls out at a value that is above the required CT, and the high lift pumps will shut down if the chlorine reaches a level lower than the required CT, or the lowest free chlorine level of 0.20 mg/L, to prevent water below the required CT from being

distributed. A high chlorine alarm calls out at 3.50 mg/L. Operators try to keep the chlorine residual at an average of 1.00mg/L. The on-line chlorine analyzer is checked with the hand-held chlorine analyzer and adjusted as required. Calibration of the on-line chlorine analyzers was performed by Endress and Hauser on October 7, 2020. The Hach turbidimeters are accurate to ± 0.1 NTU (Nephelometric Turbidity Unit). The turbidimeters are checked monthly using a hand-held turbidity analyzer and adjusted accordingly. The turbidity analyzers were calibrated on August 20, 2020 by Hach Canada. If the turbidity reaches 1.00 NTU (Nephelometric Turbidity Units) for a period of 14 minutes, 50 seconds, the affected Zenon train will shut down and alarm out to prevent turbid water from entering the contact chamber. (See Appendix I for maximum turbidity, and minimum, maximum and average chlorine residual.)

Operators keep a daily log book recording raw and treated flow meter readings, free and total chlorine residual (both continuous and grab samples), raw and treated turbidity, pH and temperature.

Samples are collected throughout the year from the treated water to determine whether or not the water is safe for human consumption (in accordance with Regulation 170/03, Schedule 10 and 13, Microbiological and Chemical Sampling and Testing). Bacteriological analysis is performed weekly - 1 sample each per week from the raw and treated water, 13 samples per month from the distribution system. Nitrates, THMs and HAAs are analyzed 4 times a year in the distribution system. Schedule 23 and 24 (treated water) are analyzed annually. Sodium and fluoride (treated water) are analyzed once every 60 months. (See Appendix II.) All samples are analyzed at Caduceon Environmental Labs in Nepean, Ontario. Caduceon and its subcontracted labs are accredited by the Standards Council of Canada. Written procedures have been established for the notification of the Medical Officer of Health and the Ministry of the Environment Spills Action Centre should a sample result indicate an exceedance has occurred. In the reporting year, a single adverse result was received at the WTP. Caneau provided notifications and resampled as required by O. Reg 170.

Under Ontario Regulation 170/03, Schedule 15, Section 15.1-5 (lead sampling), Long Sault-Ingleside Regional WTP and distribution system is eligible for reduced sampling and reduced frequency (every 3 years). Samples were collected in 2018/2019 and will be collected again in 2021/2022. pH and alkalinity are required to be collected twice per year.

Effluent discharged from the backwash wastewater facility is analyzed monthly for Total Suspended Solids (annualized average), Total Chlorine Residual, and pH. The results are summarized in Appendix II – 2020 Annual Report for the Ministry of the Environment, Conservation and Parks.

Free chlorine residual in the distribution system is monitored by 2 alarmed online analyzers with datalogging. The analyzers are checked, at minimum, every 72 hours. These analyzers will alarm out when the chlorine goes below 0.15 mg/L or above 3.50 mg/L for a period greater than 15 minutes. The chlorine analyzers in the distribution system were calibrated on October 7 and 8, 2020 by Endress and Hauser.

All records and information relating to, or resulting from the monitoring, sampling and analyzing activities required by the Certificate of Approval are retained for a minimum of 5 years.

The Long Sault-Ingleside Regional Water Treatment Plant is classified Water Treatment 2 and Water Distribution 2 (Certificate Number 2232 and 2233). Operators hold valid licences applicable to this type of water treatment plant.

Following all maintenance or repairs to the water treatment facility, all affected areas are disinfected in accordance with the MOE's "Procedure for Disinfection of Drinking Water in Ontario" dated June 2006. All chemicals used in the treatment process and all materials contacting the water meet both the American Water Works Association (AWWA) quality criteria and the American National Standards Institute (ANSI) safety criteria. All chemicals have been registered by a testing institution accredited under the Standards Council of Canada Act or by ANSI.

A contingency plan has been implemented to ensure adequate equipment and material are available for dealing with emergencies, upset conditions, equipment breakdowns in the works and spill scenarios.

An operating manual incorporates the requirements of the Drinking Water Works Permit. The manual includes monitoring and reporting of the necessary and in-process parameters essential for control of the treatment process and for the assessment of the performance of the works. It also contains procedures that are required for adequate operation and maintenance of the monitoring equipment.

Drawings are prepared and kept up-to-date showing the new works as constructed (record drawings), including timely incorporation of all modifications made to the works throughout its operational life.

A Process and Instrumentation Diagram (PID) for the entire water treatment plant has been prepared and is kept up-to-date, including timely incorporation of all modifications that are made to the works.

All record drawings and diagrams and all existing record drawings which are currently in retention throughout the operational life of the water works are readily available for inspection by Ministry staff.

Procedures have been established and are followed for receiving, responding to, and recording complaints about any aspect of the works, including recording the steps that were taken to determine the cause of complaint and the corrective measures taken to alleviate the cause and prevent its reoccurrence.

Compliance with Regulatory Requirements and Actions Required

The 2020-2021 Compliance Inspection was completed on January 13, 2021 by the Ministry of the Environment, Conservation and Parks. The Compliance Inspection Report was received on March 16, 2021. There were no issues of regulatory non-compliance identified in the report and the final inspection rating was 100%. A copy of the report is available at the Township office.

MAINTENANCE

- January 3 – Surgeson Electric on site to troubleshoot pressure switches on air compressors.
- January 20 – Marleau HVAC on site to replace fans in production room.
- January 21 – Marleau HVAC on site to work on recirculation pump P97B, and to plumb new lines for Cl₂ maintenance clean pump.
- January 21 – Capital Controls on site to replace batteries in PLCs and Zenon cabinet.
- February 4 – Bergeron Electric on site and running wire as part of 2019 capital budget for ejector upgrades.
- February 11 – Eastern Welding on site to prep for backup vacuum ejector installation.
- February 11 - Quarterly samples collected at WTP and distribution points.
- February 14 – Marleau HVAC on site to replace defective raw water faucets.
- February 24 – Cliff Gallinger on site to paint main hallways, office and washrooms.
- February 27 – Dwyer Glass on site repairing Zenon room man door.
- February 28 – Fence Depot on site to work on gate at Ingleside Booster Station.
- March 2 – Painters on site to continue painting office area of WTP.
- March 16 – Genrep on site to conduct semi-annual load test at Ingleside booster station.
- March 17 – Marleau on site to install outdoor lights at Ingleside booster station.
- March 17 – Pyro Pro on site to do annual fire extinguisher inspections.
- March 24 – Marleau HVAC on site to troubleshoot furnace.
- March 31 – Capital Controls logged in remotely to troubleshoot fault code 55 on LLP #3. The temperature sensor on the main control board detected excessive heat.
- April 28 – Marleau HVAC on site to conduct semi-annual maintenance on AC and air handling units.
- May 1 – Marleau HVAC on site to inspect Cl₂ bulk tank.
- May 1 – Enbridge Gas on site to replace gas meter.
- May 1- Marleau HVAC on site to re-start all unit heaters due to work from Enbridge Gas.
- May 11 - Annual samples collected, quarterly samples collected at WTP and distribution points.
- May 14 – Eastern Welding on site to check tank size.
- May 14 – Marleau HVAC on site to troubleshoot furnace.
- May 20 – Marleau HVAC on site to replace control board on furnace.
- June 3 – Cogeco on site to troubleshoot modem connection.
- June 5 – Genrep on site for semi-annual generator checks.
- June 9 – Devine on site at Ingleside Booster to test/service PRV/PSV.
- June 10 – Marleau Mechanical on site to assess lighting options for plant exterior.
- June 11 – Marleau Mechanical on site to install new compressor on HLP 3 cooling.
- June 15 – Township of South Stormont and DBC on site at Ingleside Booster to work on connection to Farran’s Park.
- June 25 – Eastern Welding on site to install new PRV/PSV at Ingleside Booster.
- June 26 – Eastern Welding on site to remove west bulk chlorine tank and to prepare railings for tank replacement job.
- June 29 – Eastern Welding on site to begin installation of new chlorine bulk tank.
- June 30 – Eastern Welding on site, continuing to work on installation of new chlorine bulk tank.
- July 13 – Surgeson on site to troubleshoot excessive running alert on compressors.
- July 23 – Marleau and Surgeson on site to troubleshoot AC units on low lift pump VFD.
- August 5 – Suez, Bergeron and Eastern Welding on site for meeting to discuss backup vacuum ejector system.
- August 7 – Marleau on site to install new lights on WTP exterior.
- August 10 – Surgeson Electric on site to inspect Cl₂ bulk tank surefeed panel to order proper replacement.
- August 10 - Quarterly samples collected at WTP and distribution points.
- August 17 – 20 Hach on site to calibrate handhelds and turbidity analyzers.

- August 21 – EVB on site to look at exterior lights.
- August 25 – Continental Carbon, DBC, Calgon on site to remove and replace carbon on GAC tank #2.
- August 26 – Continental Carbon, DBC, Calgon on site to remove carbon from GAC tank #3.
- August 27 – Continental Carbon, DBC, Calgon on site to remove and replace spent carbon on GAC tank #3.
- September 9 – Dwyer Glass on site to repair Cl₂ door.
- September 16 – ALFS Pump Service and MacDonald Electric on site to work on diesel fuel pump/level sensor control.
- September 17 – MacDonald Electric on site to trace Veeder-Root and replace fuse system.
- September 22 – Eastern Welding on site to start configuring backup vacuum ejector job.
- September 23 – Eastern Welding on site to work on backup vacuum ejector system.
- September 28 – Eastern Welding on site to install backup vacuum ejector system on train #1.
- September 29 – Eastern Welding on site to install backup vacuum ejector system on trains #2 and #3.
- September 30 – Eastern Welding on site to repair pinhole leak on permeate line.
- October 1 – Genrep on site for annual generator maintenance and transfer test at Ingleside Booster.
- October 2 – Eastern Welding on site to fit support posts for ejectors and install repair bands on permeate pipe.
- October 5 – Eastern Welding on site to inspect leak on permeate pipe.
- October 6 – Genrep on site to service generator.
- October 6 – Eastern Welding on site to install ejector support posts.
- October 7 – E&H on site for annual flow meter and Cl₂ analyzer calibrations.
- October 8 – E&H on site at Ingleside Booster for annual Cl₂ analyzer and flow meter calibrations.
- October 9 – Township on site at Ingleside Booster to deliver diesel.
- October 21 – Zeeweed membranes replaced on train #2.
- October 21 – DBC on site to receive and haul train #2 membrane flush (high COD glycerine) to Ingleside WWTP.
- October 27 – Bergeron Electric on site at Ingleside Booster for annual fire alarm testing.
- November 2 - Quarterly samples collected at WTP and distribution points.
- November 9 – Capital Steam Cleaning on site to pressure wash exterior walls at Ingleside Booster.
- November 10 – Marleau on site to install photocell for light at low lift station.
- December 8 – Capital Controls on site to back up SCADA computer.
- December 15 – Suez and Bergeron Electric on site to complete the installation and programming of the backup vacuum ejector system.
- December 16 – Suez on site to conduct testing on backup vacuum ejector system.
- December 24 – Marleau Mechanical on site to change ballast in hallway light.

APPENDIX I
Flow Data

LONG SAULT-INGLESIDE WATER TREATMENT SYSTEM SUMMARY REPORT

Municipality: **Township of South Stormont**

Year: **2020**

Source: **St. Lawrence River**

Capacity: **9,500m³/day**

Description: **Membrane Filtration, GAC, Chlorination**

Month	Raw Flow	Treated Flow			Treated Water Physical/Chemical Parameters								Bacteria (Number of Samples)				
	Total Flow m ³	Total Flow m ³	Avg. Day m ³ /day	Max. Day m ³ /day	Free Chlorine Residual			Turbidity Max. NTU	NO ₂ mg/L	NO ₃ mg/L	THM ug/l	HAA ug/L	Raw Water	Safe		Unsafe or Poor	
					Avg. mg/L	Min. mg/L	Max. mg/L							Plant	Distribution	Plant	Distribution
January	156,626	128,928	4,159	4,823	1.14	0.94	1.32	1.00					4	4	13		
February	139,008	115,310	3,976	4,518	1.07	0.97	1.17	1.00	<0.1	0.30	54.0	5.3	4	4	13		
March	156,265	129,189	4,167	5,656	1.07	0.89	1.21	0.32					5	5	13		
April	148,632	123,757	4,125	4,526	1.08	0.98	1.25	0.41					4	4	10		1
May	177,942	148,067	4,776	6,885	1.08	0.92	1.59	0.33	<0.1	0.40	50.0	17.7	4	4	8		
June	193,860	163,473	5,449	6,742	1.11	0.93	1.42	0.24					5	5	10		
July	197,662	164,659	5,312	6,472	1.20	1.00	1.56	0.05					4	4	8		
August	169,883	141,675	4,570	5,643	1.17	0.87	1.52	0.10	<0.1	0.20	54.0	17.4	5	5	10		
September	148,183	121,814	4,060	4,893	1.16	0.89	1.56	0.06					4	4	8		
October	149,614	122,004	3,936	5,052	1.24	0.67	2.03	0.06					4	4	8		
November	132,919	109,604	4,431	5,337	1.21	1.06	1.46	0.16	<0.1	0.20	63.0	9.0	5	5	12		
December	135,993	112,266	3,621	4,545	1.10	0.98	1.21	0.12					4	4	12		
Total	1,906,587	1,580,746											52	52	125	0	1
Average			4,382		1.14				< 0.1	0.28	55.3	12.4					
Minimum						0.67											
Maximum				6,885			2.03	1.00									
ODWS									1	10	100.0	80.0	52	52	144		

APPENDIX II
2020 Annual Report
Ministry of the Environment, Conservation and Parks



Section 11: ANNUAL REPORT

Drinking-Water System Number:	260066417
Drinking-Water System Name:	Long Sault-Ingleside Regional Water Treatment Plant
Drinking-Water System Owner:	Township of South Stormont
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1 – December 31, 2020

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [] No [x]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [x] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <table border="1" style="width: 100%;"> <tr> <td>Township of South Stormont 2 Milles Roches Road Long Sault, ON K0C 1P0 Website: southstormont.ca</td> </tr> </table>	Township of South Stormont 2 Milles Roches Road Long Sault, ON K0C 1P0 Website: southstormont.ca	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <input style="width: 100px; height: 20px;" type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
Township of South Stormont 2 Milles Roches Road Long Sault, ON K0C 1P0 Website: southstormont.ca		

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Drinking Water System Name	Drinking Water System Number

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?
Yes [] No []



Indicate how you notified system users that your annual report is available, and is free of charge.

- Public access/notice via the web**
- Public access/notice via Government Office**
- Public access/notice via a newspaper**
- Public access/notice via Public Request**
- Public access/notice via a Public Library**
- Public access/notice via other method** _____

Describe your Drinking-Water System

The Long Sault Regional Water Treatment Plant is located on Moulinette Island, south of the town of Long Sault. The water treatment plant is a membrane filtration plant that began producing water in June 2005. The treatment process includes ultrafiltration (ZeeWeed membrane system manufactured by Zenon Environmental Inc) through one of three membrane cassettes which are housed in large concrete tanks, taste and odour removal through granular activated carbon (GAC) contactors, and primary disinfection provided by sodium hypochlorite, which is injected downstream of the GAC tanks. The water then passes through the chlorine contact chamber and a baffled clearwell into a high lift pumping well, all of which are located beneath the water treatment plant. A 10-km transmission main joins the distribution systems in Long Sault and Ingleside. The original Ingleside Water Treatment Plant was converted into a booster station. The rated capacity is 9,500m³/day. The distribution system now services a combined population in Long Sault and Ingleside of approximately 3500.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite, sodium bisulfite, citric acid and sodium hydroxide

Were any significant expenses incurred to?

- Install required equipment**
- Repair required equipment**
- Replace required equipment**

Please provide a brief description and a breakdown of monetary expenses incurred

Replace Zeeweed membrane on train #2 - \$295,459
Install back-up air removal system - \$38,307
Suez monitoring system (24/7/365) - \$15,958
Replace one of two Chlorine bulk tanks - \$12,471
Replace combustion heater and install ceiling fans - \$9,052
Replace one of two chlorine bulk tank feed supply pumps - \$7,423
Replace uninterrupted power supply - \$7,258
Replace booster station PRV/PSV - \$6,159
Replace air release valves - \$5,670
Replace solenoid valves - \$3,587
Replace flow meter - \$3,420
Conduct annual calibrations - \$3,361
Replace butterfly valve - \$3,315
Conduct generator inspections - \$3,220
Service all pressure sustaining/pressure relief valves - \$2,430
Replace generator Solenoid valves - \$1,831
Replace booster station control valve - \$1,635
Replace pH sensor on chlorine analyzers- \$1,258
Replace SCADA PLC card batteries - \$1,211



Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Apr 6, 2020	TC	3	CFU/100ml	Resampled	Apr 9, 2020

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw	52	0-6	0-24		
Treated	52	0-0	0-0	52	<2-4
Distribution	125	0-0	0-3	51	<2-2

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Raw Turbidity	8760	0.00-10.00
Permeate Turbidity		
Train #1	8760	0.00-1.00
Train #2	8760	0.02-0.54
Train #3	8760	0.02-0.52
Chlorine	8760	0.67-2.03
Fluoride (If the DWS provides fluoridation)		

NOTE: For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of legal instrument issued: Municipal Drinking Water Licence	Parameter	Date Sampled	Result	Unit of Measure
December 4, 2020	Total Suspended Solids (composite)	January	0.20	mg/L
		February	0.80	
	MDWL criteria- 25mg/L (annual average concentration)	March	0.90	
		April	1.00	
		May	1.75	
		June	0.98	



		July	1.01	
		August	1.10	
		September	1.45	
		October	1.01	
		November	1.51	
		December	1.60	
		Total Annualized Average =		1.11
				mg/L
	pH	January	8.44	
		February	8.32	
	MDWL criteria-6.5-8.5 (maximum concentration)	March	8.38	
		April	8.21	
		May	8.49	
		June	8.34	
		July	8.10	
		August	8.29	
		September	8.23	
		October	8.29	
		November	8.18	
		December	8.24	
	Total Chlorine Residual	January	0.02	
		February	0.01	
	MDWL criteria-0.02mg/L (maximum concentration)	March	0.02	
		April	0.02	
		May	0.02	
		June	0.01	
		July	0.02	
		August	0.01	
		September	0.02	
		October	0.02	
		November	0.02	
		December	0.02	
				mg/L

Summary of Inorganic parameters tested during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	May 11, 2020	0.0001	mg/L	
Arsenic	May 11, 2020	0.0006	mg/L	
Barium	May 11, 2020	0.022	mg/L	
Boron	May 11, 2020	0.021	mg/L	
Cadmium	May 11, 2020	<0.000015	mg/L	
Chromium	May 11, 2020	<0.002	mg/L	
*Lead				
Mercury	May 11, 2020	<0.00002	mg/L	
Selenium	May 11, 2020	<0.001	mg/L	
Sodium	May 15, 2017	14.4	mg/L	
Uranium	May 11, 2020	0.00027	mg/L	
Fluoride	May 15, 2017	<0.1	mg/L	
Nitrite	February 11, 2020	<0.1	mg/L	
	May 11, 2020	<0.1	mg/L	



	August 10, 2020	<0.1	mg/L	
	November 2, 2020	<0.1	mg/L	
Nitrate	February 11, 2020	0.3	mg/L	
	May 11, 2020	0.4	mg/L	
	August 10, 2020	0.2	mg/L	
	November 2, 2020	0.2	mg/L	

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	Exempt*		
Distribution	N/A*		

*Due to historically low concentrations of lead in its drinking water, the Township of South Stormont is exempt from plumbing sampling for lead and is required to sample for lead in the distribution system every three years in both “winter” (Dec-Apr) and “summer” periods (Jun-Oct). The next distribution lead samples will be collected between Dec 15, 2021 and Apr 15, 2022 and between Jun 15, 2022 and Oct 15, 2022.

Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	May 11, 2020	<0.3	ug/L	
Atrazine + N-dealkylated metabolites	May 11, 2020	<0.5	ug/L	
Azinphos-methyl	May 11, 2020	<1	ug/L	
Benzene	May 11, 2020	<0.5	ug/L	
Benzo(a)pyrene	May 11, 2020	<0.005	ug/L	
Bromoxynil	May 11, 2020	<0.5	ug/L	
Carbaryl	May 11, 2020	<3	ug/L	
Carbofuran	May 11, 2020	<1	ug/L	
Carbon Tetrachloride	May 11, 2020	<0.2	ug/L	
Chlorpyrifos	May 11, 2020	<0.5	ug/L	
Diazinon	May 11, 2020	<1	ug/L	
Dicamba	May 11, 2020	<10	ug/L	
1,2-Dichlorobenzene	May 11, 2020	<0.5	ug/L	
1,4-Dichlorobenzene	May 11, 2020	<0.5	ug/L	
1,2-Dichloroethane	May 11, 2020	<0.5	ug/L	
1,1-Dichloroethylene	May 11, 2020	<0.5	ug/L	
Dichloromethane (methylene chloride)	May 11, 2020	<5	ug/L	



2-4 Dichlorophenol	May 11, 2020	<0.1	ug/L	
2,4-Dichlorophenoxy acetic acid (2,4-D)	May 11, 2020	<10	ug/L	
Diclofop-methyl	May 11, 2020	<0.9	ug/L	
Dimethoate	May 11, 2020	<1	ug/L	
Diquat	May 11, 2020	<5	ug/L	
Diuron	May 11, 2020	<5	ug/L	
Glyphosate	May 11, 2020	<25	ug/L	
Malathion	May 11, 2020	<5	ug/L	
MCPA	May 11, 2020	<10	ug/L	
Metolachlor	May 11, 2020	<3	ug/L	
Metribuzin	May 11, 2020	<3	ug/L	
Monochlorobenzene	May 11, 2020	<0.5	ug/L	
Paraquat	May 11, 2020	<1	ug/L	
Pentachlorophenol	May 11, 2020	<0.1	ug/L	
Phorate	May 11, 2020	<0.3	ug/L	
Picloram	May 11, 2020	<15	ug/L	
Polychlorinated Biphenyls(PCB)	May 11, 2020	<0.05	ug/L	
Prometryne	May 11, 2020	<0.1	ug/L	
Simazine	May 11, 2020	<0.5	ug/L	
THM (NOTE: show latest annual average)		55.3	ug/L	
Haloacetic Acid (HAA) (NOTE: show latest annual average)		12.4	ug/L	
Terbufos	May 11, 2020	<0.5	ug/L	
Tetrachloroethylene	May 11, 2020	<0.5	ug/L	
2,3,4,6-Tetrachlorophenol	May 11, 2020	<0.1	ug/L	
Triallate	May 11, 2020	<10	ug/L	
Trichloroethylene	May 11, 2020	<0.5	ug/L	
2,4,6-Trichlorophenol	May 11, 2020	<0.1	ug/L	
Trifluralin	May 11, 2020	<0.5	ug/L	
Vinyl Chloride	May 11, 2020	<0.2	ug/L	

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
THM	54	ug/L	Feb 11, 2020
THM	54	ug/L	Aug 10, 2020
THM	63	ug/L	Nov 2, 2020