

Long Sault Wastewater System

Waterworks # 120000131

2025 Annual Report

Prepared For: Township of South Stormont

Reporting Period of January 1st – December 31st 2025

Issued: March 12, 2026

Revision: 0

Operating Authority:



This report has been prepared to meet the requirements set out in:

Document	Document #	Issue Date	Issue Number
Facility ECA	3-0918-93-979	June 1997	N/A
ECA for Municipal Sewage Collection System	186-W601	February 2, 2023	1.0

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1 Revision History

Date	Rev#	Revisions	Revised By
March 12, 2026	0	Annual Report Issued	Selena Shane, PCT

2 Operations and Compliance Reliability Indices

Compliance Event	# of Events
Ministry of Environment Inspections	No MECP inspections in 2025.
Ministry of Labour Inspections	No MOL inspections in 2025.
Non-Compliance	There was 2 non-compliances reported in 2025.
Community Complaints	There was 1 community complaints in 2025.
Spills	No spills reported in 2025.
Overflows	No overflow events in 2025.
Bypass	No bypass events in 2025.

3 Process Description

The Long Sault wastewater treatment system operates as a gravity-fed sanitary sewage collection network. Wastewater is conveyed through this system to the Mille Roches or Post Road pumping station, which then transfers the flow to the wastewater treatment facility.

Long Saults wastewater treatment plant (WWTP) is a Class II wastewater treatment system owned and operated by the Township of South Stormont. From the pumping station, wastewater passes through the inlet works, including fine screens with a screw compactor and a grit removal and disposal system. Aluminum Sulphate is added to assist in phosphorous removal. The wastewater then moves through either of two parallel Sequencing Batch Reactors (SBRs) equipped with individual aeration systems, mixers, decanters and sludge removal pumps. Effluent decanted from the SBRs is treated by UV disinfection and subsequently passes through an outfall pipe to the St. Lawrence River.

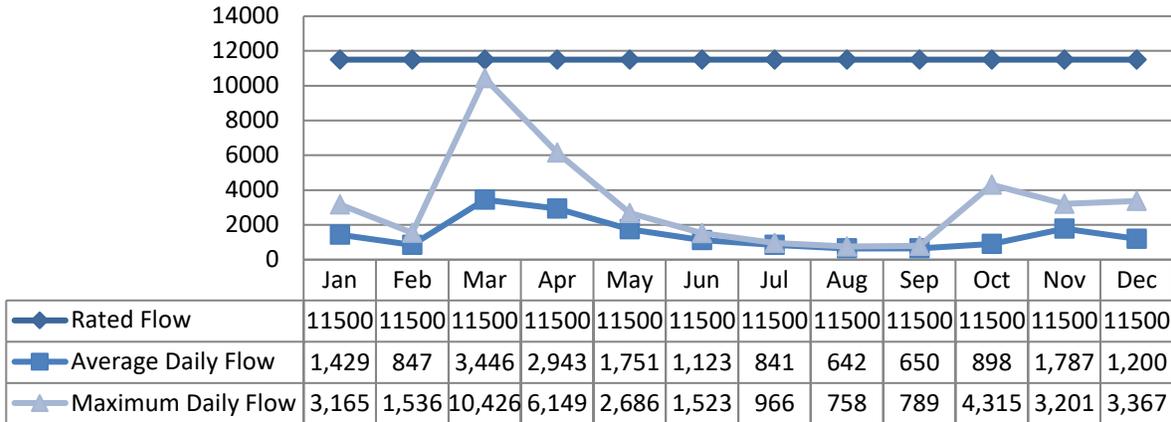
Sludge removed from the SBRs is transferred to a storage tank. From the tank, the sludge enters a gravity belt thickener. The thickened sludge is then pumped to an Autothermal Thermophilic Aerobic Digestion (ATAD) system for stabilization. The digested sludge is subsequently pumped to a biosolids storage tank. From the storage tank, biosolids are hauled off site to be utilized as soil conditioner.

This system ensures effective wastewater management and environmental protection for the Township.

4 Treatment Flows

The hydraulic flows reaching the treatment facility in 2025 averaged 1,466 m³/day, which represents 54% of the 2,700 m³/day design.

4.1 Raw Flow (m³/d)



4.2 Effluent Flow

A total of 535,188 m³ of effluent was discharged from Long Sault’s WWTP in 2025.

4.3 Imported Waste/Sewage

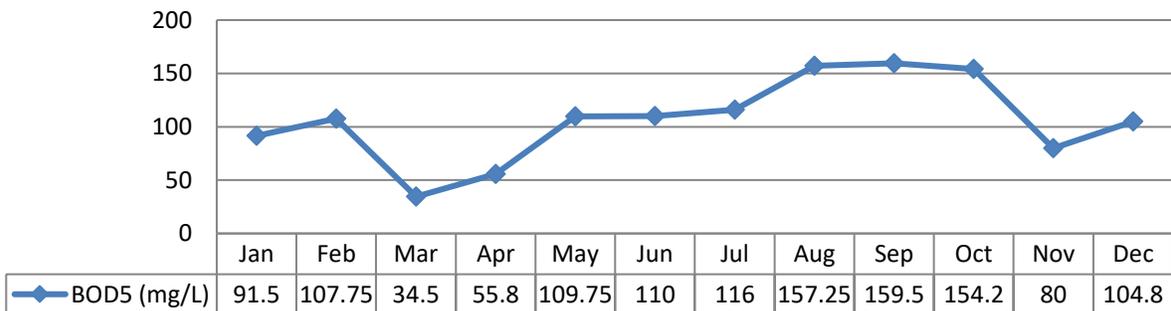
There was no Septage accepted in 2025.

5 Raw Sewage Quality

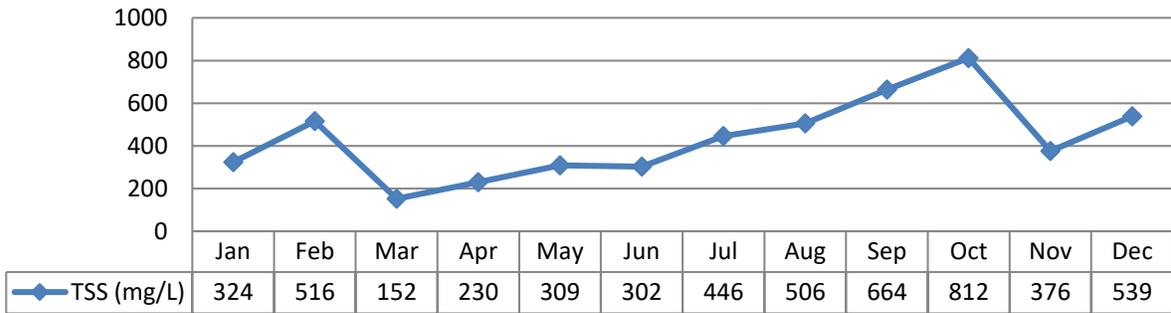
Current year minimum, maximum and averages are available in Appendix A – Performance Assessment Report.

5.1 Influent Trending

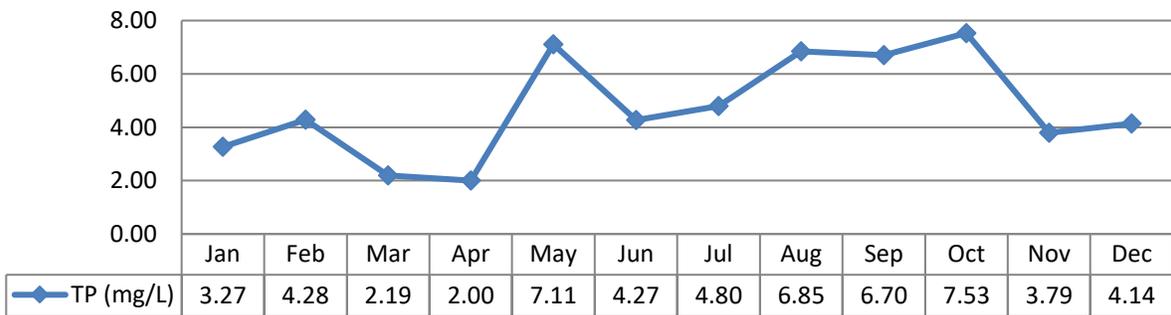
5.1.1 CBOD₅ (mg/L)



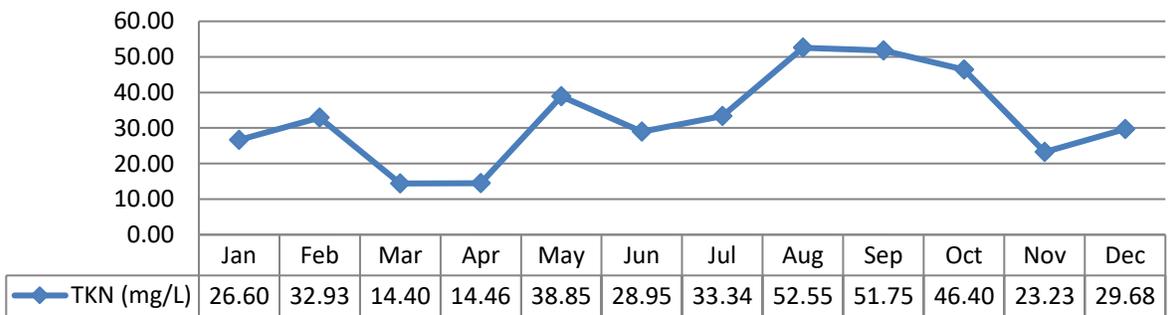
5.1.2 Total Suspended Solids (mg/L)



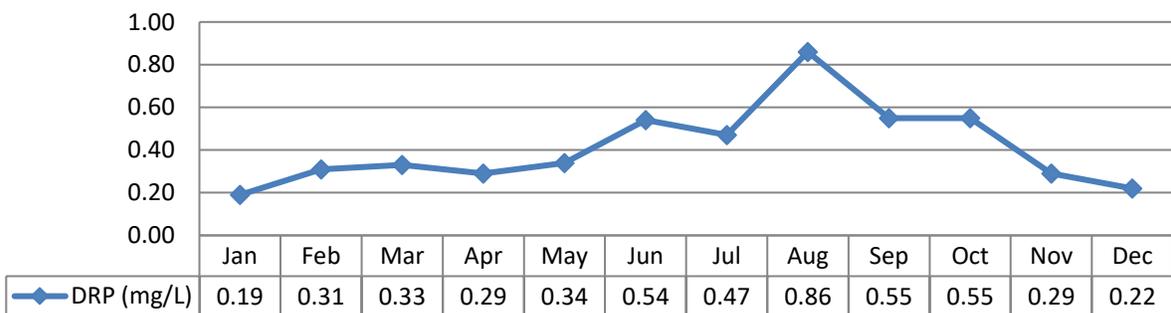
5.1.3 Total Phosphorus (mg/L)



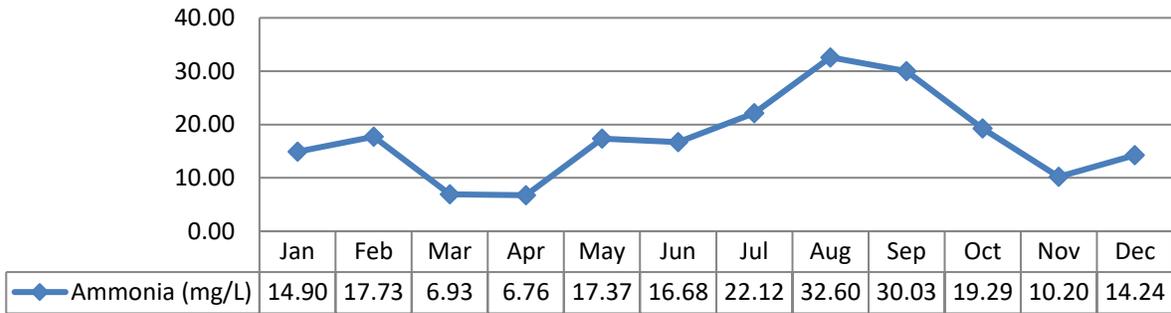
5.1.4 Total Kjeldahl Nitrogen (TKN) (mg/L)



5.1.5 Dissolved Reactive Phosphorus (DRP) (mg/L)



5.1.6 Ammonia (mg/L)



6 Effluent Quality

Effluent results from the WWTP for 2025 are tabulated below. Additional data can be found in the Performance Assessment Reports attached in Appendix A.

6.1 Effluent Quality Assurance and Control Measures Taken

This system is part of the Township of South Stormont. Operational Services are delivered by OCWA staff that live and work in the community. The systems are operated to meet compliance with applicable regulations. The system has comprehensive manuals detailing operations, maintenance, instrumentation, and emergency procedures. All procedures are treated as active documents and are updated as required. These documents are also part of OCWA’s Quality & Environmental Management System.

The process is reviewed and maintained by certified operators. These operator’s complete in-house rounds and testing to monitor the process. All Sampling and analysis follow approved methods and protocols for sampling, analysis and recording as specified in the Ministry’s Procedure F-10-1, “Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works”, the Ministry’s publication, “Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater” and the publication, “Standard Methods for the Examination of Water and Wastewater”.

All final effluent samples collected during the reporting period to meet legislated sampling requirements are submitted to Caduceon Ottawa for analysis, with the exception of pH and temperature. Caduceon Ottawa has been deemed accredited by the Canadian Association for Laboratory Accreditation (CALA), meeting strict provincial guidelines including an extensive quality assurance/quality control program. By choosing this laboratory, OCWA is ensuring appropriate control measures are undertaken during sample analysis. The pH and temperature parameters are analyzed in the field at the time of sample collection by certified operators, to ensure accuracy and precision of the results obtained.

OCWA uses a data management system Process Data Management (PDM). This database program consolidates all operational data from a variety of sources including field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis.

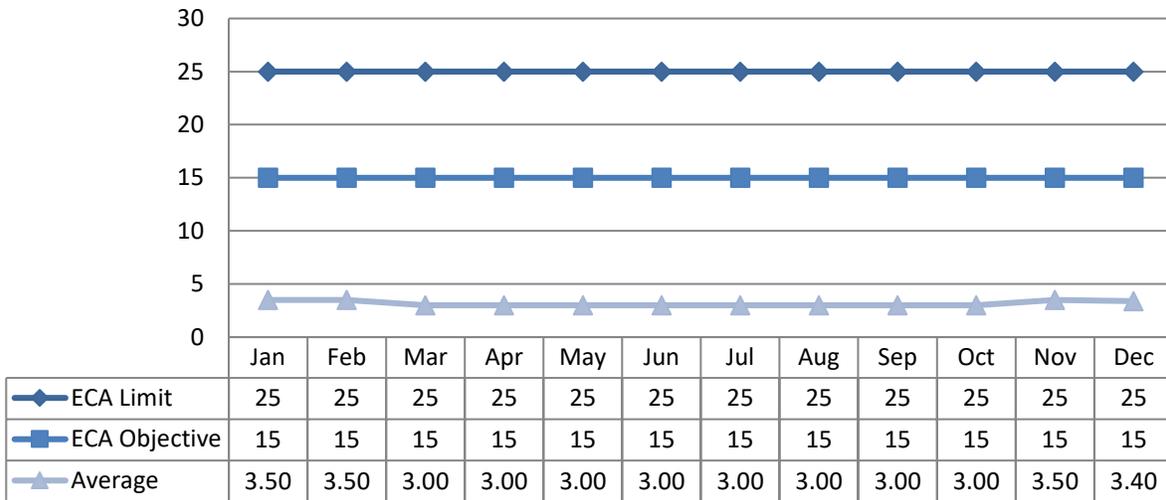
The operations team also has access to a network of operational compliance and process specialists to assist for emerging process issues. This aids in establishing additional control measures to ensure a quality effluent product.

Detailed individual sample results for both raw sewage and final effluent can be requested from the operating authority.

6.2 CBOD5 (mg/L)

Compliance Limit and Objective for this parameter was met in 2025.

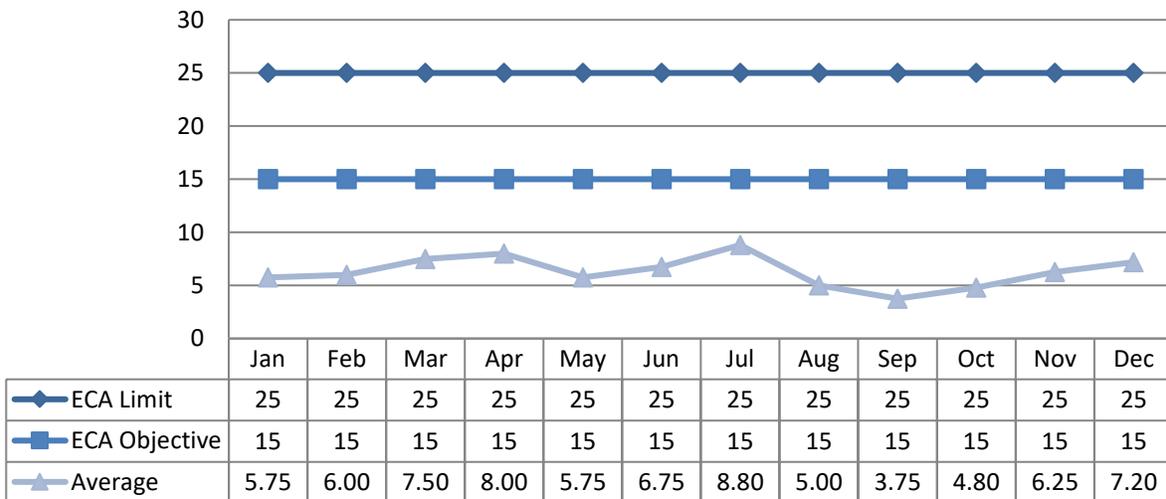
6.2.1 Concentration (mg/L)



6.3 Total Suspended Solids (mg/L)

Compliance Limit for this parameter was met in 2025.

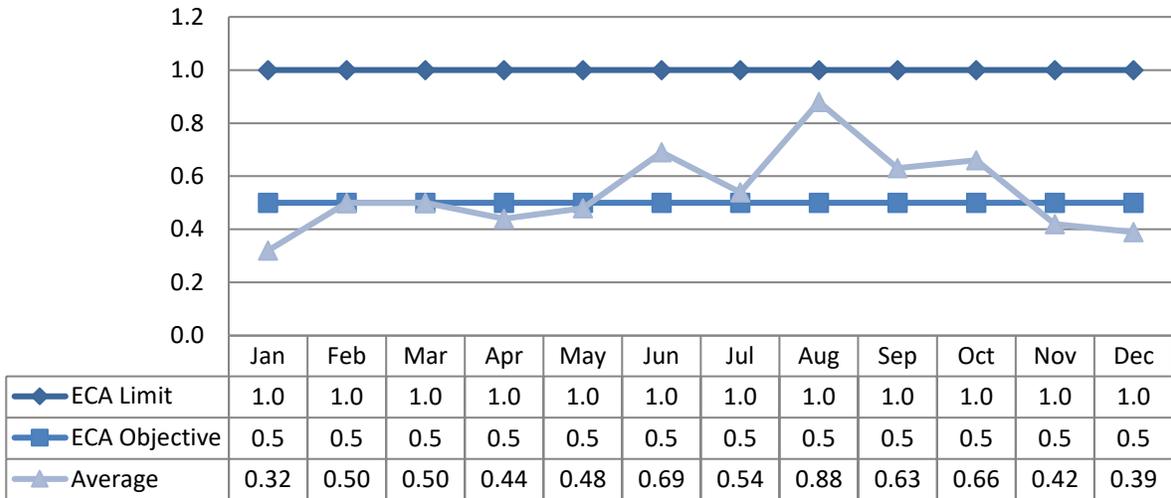
6.3.1 Concentration (mg/L)



6.4 Total Phosphorus (mg/L)

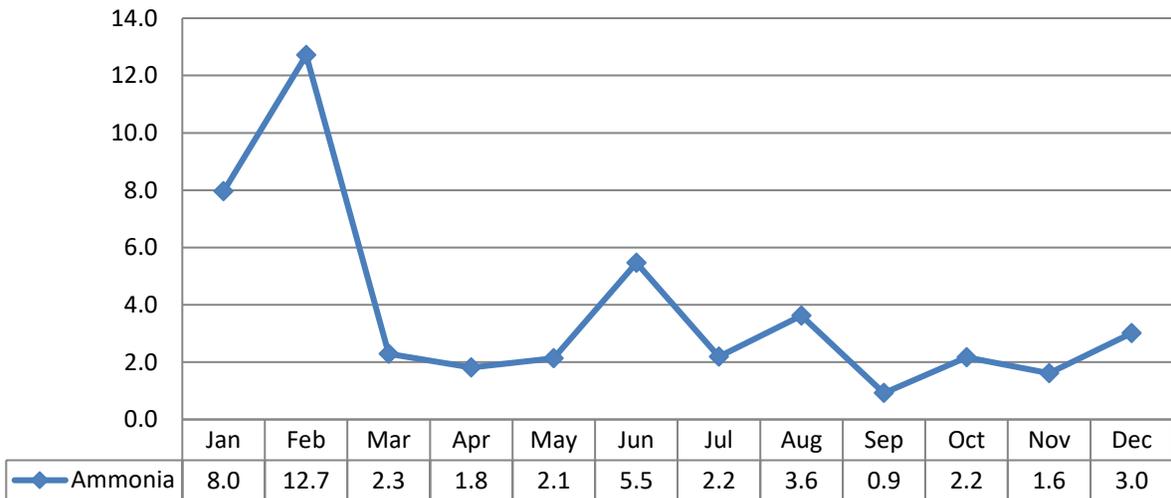
Compliance Limit for this parameter was met in 2025.

6.4.1 Concentration (mg/L)



6.5 Ammonia (mg/L)

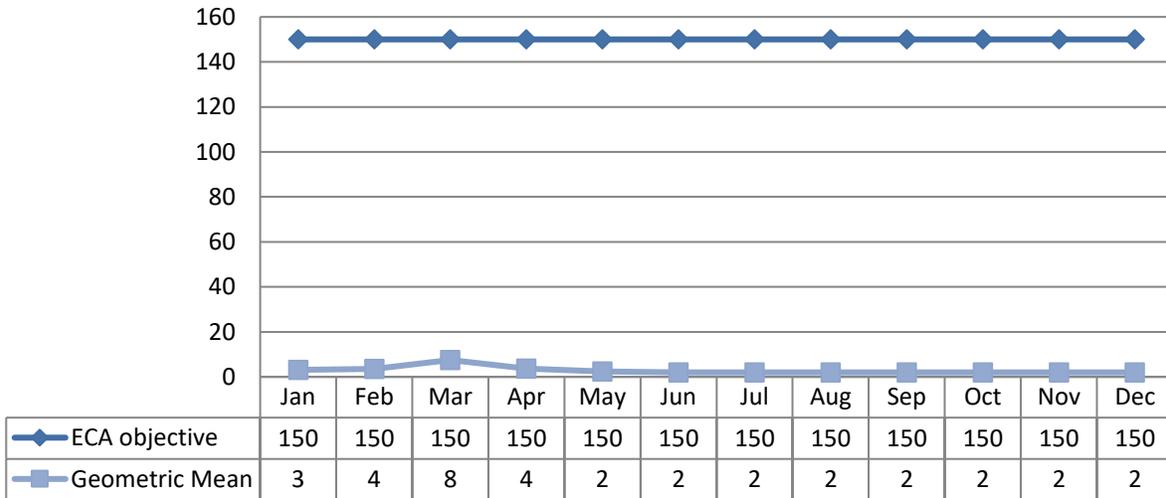
There were 2 non compliances where the phosphorus limit was exceeded in February 2025.



6.6 E-coli

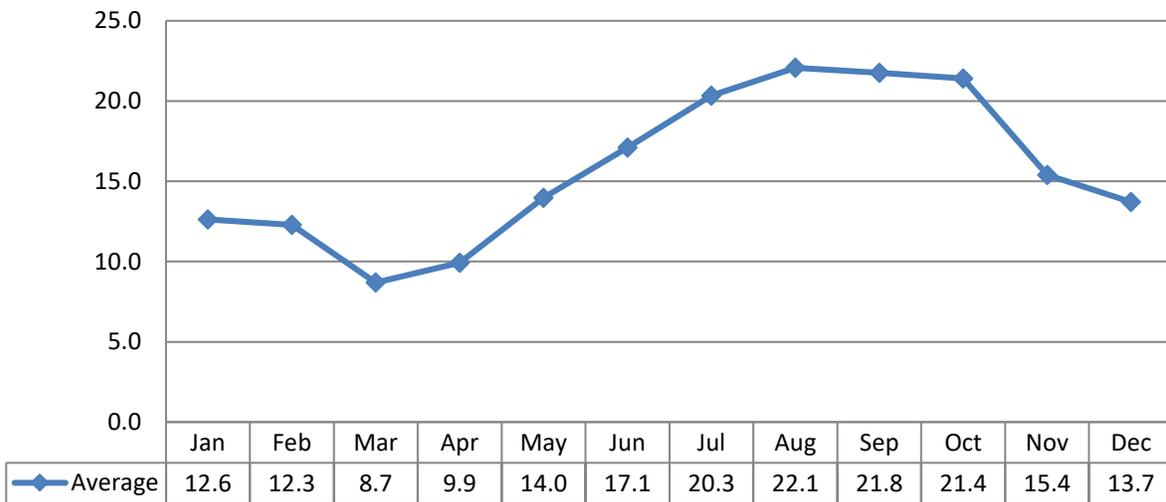
There is no Compliance Limit for this parameter and the Objective for this parameter was met in 2025.

6.6.1 Geometric Mean (cfu/100mL)



6.7 Temperature

There are no compliance limits or objectives defined for Effluent.



7 Operating Issues

Upon review of the process, it was determined that elevated sample results were attributed to equipment maintenance. During the period of repairs and replacement, the facility operated with only one Sequencing Batch Reactor (SBR). Operational adjustments were implemented during this time to ensure continued treatment.

7.1 Effluent Quality Non-Compliance Summary

Date	Exceedance of	Limit	Value	Corrective Action
February 05, 2025	Ammonia	15	15.8	Lower solids due to Maintenance and repairs on aeration diffusers.
February 15, 2025	Ammonia	15	15.1	Lower solids due to Maintenance and repairs on aeration diffusers.

7.2 Summary of Abnormal Sewage Discharge Events

Abnormal Discharge Events include Bypass, Overflows, Diversions and Spills of Sewage. Summary Details are included in Appendix B.

7.3 Spills (Other than Sewage)

Date	Location	Details	Volume (m3)	Start Date and Time	End Date and Time
No spills to report in 2025.					

8 Maintenance

Unplanned maintenance is conducted as required.

8.1 Normal Maintenance and Repairs

Maintenance/Repair
Jan 9 - Annual maintenance and testing (Mille Roches SPS). Jan 16-17 - Installed new ladders in east SBR and we installed new waste pump. Jan 29 – Annual maintenance and testing (Post Road SPS). Feb 3 – Installed new ladder in effluent chamber. March 18 – Annual fire extinguisher inspections at plant and both SPS. March 26 – Installed checkered plating in bar screen room to cover open channels for safety. March 31 – Generator repairs. April 3 – Installed new level sensor for alum tank. April 24 – Contractor on site troubleshooting plc hardware fault issues. April 25- Contractor on site switching out communication cables and ethernet switch for the plc. May 7 – HVAC contractor on site for spring maintenance. May 7-9 – Sludge Hauling. May 20-21 - Installed new lights in bar screen room. May 21- Installed new power supply for ATAD PLC. June 5 – Installed new UV racks with new bulbs. July 22 – Annual backflow preventer testing. Sept 4- Replace faulty gas sensor and semi-annual calibrations. Sept 25-26 – Sludge Hauling. Oct 7 – Semi-annual generator maintenance and testing at plant and both SPS. Oct 14-27 – Biofilter media replacement, install new nozzles on tanks and for general maintenance. November 12 – Flow meter/level sensor calibrations at plant and both SPS November 27 – Post road SPS VFD’s Installed. Dec 1 – Replace isolators for ATAD temp zones in ATAD PLC cabinet and for some SCADA work. Dec 9 –HVAC contractor on site to replace seized motor on heating fan in thickening room. Dec 11 – Electrician on site to look at faulty float system for effluent pump controls.

Maintenance/Repair
Dec 12 – HVAC contractor on site to work on boiler system. Dec 18 – HVAC contractor on site to replace faulty VFD for exhaust fan on plant HVAC system and also do annual maintenance on heater at post road SPS.

8.2 Emergency Maintenance and Repairs

Maintenance/Repair Details
Sewer Lateral Repair - @ 4 Kent Cres, Long Sault (November 12)

8.3 Flow Meter Calibrations and Maintenance

Location	Date of Calibration	Additional Maintenance
FIT-01 Sewage Influent	November 12, 2025	None.
FIT-02 Sewage Influent	November 12, 2025	None.
LIT Thickened WAS Tank	November 12, 2025	None.
LIT WAS Tank	November 12, 2025	None.

8.4 Authorized Alterations in Collection System

Alteration	Details	Significant Drinking Water Threat (Y/N)
No alterations to the collection system in 2025.		

8.5 Notice of Modifications

Date	Process	Modification	Status
No modifications to the collection system in 2025.			

9 Sludge Generation

9.1 Sludge Disposal Summary

Date	Disposal Location	Total Volume (m3)
May 7,8,9, 2025	Nine Mile Tank (ECA #710174)	640
September 25, 26, 2025	Nine Mile Tank (ECA #710174)	480

In 2025, a total of 1120 m³ of liquid sludge was removed from Long Sault’s WWTP and was utilized as soil conditioner. The sludge was removed from the WWTP by GFL in May and October. It is anticipated that approximately the same volume of sludge will be generated in 2026.

10 Summary of Complaints

Location	Date	Nature of Complaint	Actions Taken
Ouellette Ave	01/16/25	Sewer Backup	Investigated by Township.
Barry St	09/03/25	Sewer Backup	Investigated by Township.
Robin Rd	10/17/25	Odour	Investigated by Township and OCWA.

Appendix A – Performance Assessment Report



Flows

Row Flow: Total - Row m/d	44,230.00	23,708.00	106,811.00	66,288.00	54,283.00	33,616.00	26,080.00	19,914.00	19,487.00	27,840.00	53,612.00	37,193.00	535,188.00			0.00
Row Flow: Avg - Row m/d	1,428.71	846.71	3,445.71	2,942.53	1,751.06	1,122.53	841.29	642.53	643.57	886.06	1,787.07	1,195.77			0.00	
Row Flow: Max - Row m/d	3,165.00	1,536.00	10,426.00	6,143.00	2,686.00	1,523.00	966.00	758.00	789.00	4,315.00	3,201.00	3,367.00			10,426.00	0.00

Carbonaceous Biochemical Oxygen Demand: CBOD

Row: Avg cBOD5 - Row mg/L	31.50	107.35	34.50	55.80	103.75	110.00	116.80	157.23	153.50	154.20	80.00	104.80			106.90	153.50	0.00
Row: # of samples of cBOD5 - Row	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Eff: Avg cBOD5 - Eff mg/L	3.50	3.50	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.50	3.40			3.15		25.00
Eff: # of samples of cBOD5 - Eff	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Percent Removal: cBOD5 - Row %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		0.00

Total Suspended Solids: TSS

Row: Avg TSS - Row mg/L	324.25	516.25	152.25	229.60	308.50	302.25	446.60	506.25	663.75	812.00	376.25	539.00			437.21	812.00	0.00
Row: # of samples of TSS - Row	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Eff: Avg TSS - Eff mg/L	5.75	6.00	7.50	8.00	5.75	6.75	8.80	5.00	3.75	4.80	6.25	7.20			6.37	8.80	25.00
Eff: # of samples of TSS - Eff	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Percent Removal: TSS - Row %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		0.00

Total Phosphorus: TP

Row: Avg TP - Row mg/L	5.27	4.28	2.19	2.00	7.11	4.27	4.80	6.85	6.70	7.53	3.79	4.14			4.73	7.53	0.00
Row: # of samples of TP - Row	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Eff: Avg TP - Eff mg/L	0.32	0.50	0.50	0.44	0.48	0.63	0.54	0.68	0.63	0.66	0.42	0.39			0.55	0.68	0.00
Eff: # of samples of TP - Eff	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Percent Removal: TP - Row %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			0.00		0.00

Nitrogen Series

Row: Avg TKN - Row mg/L	28.60	32.53	14.40	14.44	36.95	26.35	33.34	52.55	51.75	46.40	23.23	23.64			32.47	52.55	0.00
Row: # of samples of TKN - Row	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Eff: Avg TAN - Eff mg/L	7.96	12.71	2.29	1.81	2.13	5.47	2.19	3.62	0.32	2.11	1.61	3.01			3.71	12.71	8.00
Eff: # of samples of TAN - Eff	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Eff: Avg NO3-N - Eff mg/L	1.27	1.14	3.45	2.30	2.50	2.36	2.27	1.97	1.83	2.05	3.30	2.27			2.80	3.30	0.00
Eff: # of samples of NO3-N - Eff	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00
Eff: Avg NO2-N - Eff mg/L	0.19	0.46	0.13	0.20	0.30	0.52	0.39	0.25	0.20	0.19	0.13	0.29			0.27	0.52	0.00
Eff: # of samples of NO2-N - Eff	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00

Disinfection

Eff: GMD E. Coli - Eff cfu/100mL	3.13	3.56	1.50	3.64	2.38	2.00	2.00	2.00	2.00	2.00	2.00	2.00					200.00
Eff: # of samples of E. Coli - Eff	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00				0.00

Appendix B - Details of Abnormal Sewage Discharge Events

Event Details Summary

Facility Bypass

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
No facility bypass' to report in 2025.								

Facility Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
No facility overflows to report in 2025.								

Collection Overflow

There are no authorized overflow locations in this system.

Spills of Sewage

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
No spills of sewage to report in 2025.								

Appendix C - ECA Annual Report Requirements

Facility ECA # 2147-734L2K Section 12(6)	Section in Report
a) a summary and interpretation of all monitoring data and comparison to the effluent limits outlined in Condition 7, including an overview of success and adequacy	Treatment Flows, Raw Sewage and Effluent Quality
b) a description of any operating problems encountered and corrective actions taken	Operating Issues and Problems
c) summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works	Maintenance
d) summary of any effluent quality assurance or control measures undertaken in the reporting period	Effluent Quality
e) summary of the calibration and maintenance carried out on all effluent monitoring equipment	Maintenance
f) description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6	Effluent Quality
g) tabulation of the quantity of septage added to the Works for co-treatment during the reporting period	Treatment Flows
h) summary of chemical characterization data for samples of septage collected in accordance with Table 4 in Condition 11 during the reporting period	Raw Sewage Quality
i) tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed	Sludge Generation
j) tabulation of the quantity of groundwater pumped from the WWTP Building foundation drainage system to the storm sewer system	Groundwater Pumping Volumes
k) summary of any complaints received during the reporting period and any steps taken to address the complaints	Summary of Complaints
l) summary of all By-pass, overflow, spill or abnormal discharge events	Operating Issues and Problems
m) any other information the District Manager requires from time to time	N/A

Collection ECA # 165-W601 Schedule E	Section in Report
4.6.3 If applicable, includes a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.	Operating Issues and Problems
4.6.4 Includes a summary of any operating problems encountered and corrective actions taken.	Operating Issues and Problems
4.6.5 Includes a summary of all calibration, maintenance, and repairs carried out on any major structure, Equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.	Maintenance
4.6.6 Includes a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.	Summary of Complaints
4.6.7 Includes a summary of all Alterations to the Authorized System within the reporting period that are authorized by this Approval including a list of Alterations that pose a Significant Drinking Water Threat.	Maintenance
4.6.8 Includes a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including: a) Dates; b) Volumes and durations;	Operating Issues and Problems Appendix D

