

Little River Pollution Control Plant

(January 01, 2024 to December 31, 2024)

ANNUAL REPORT 2024



Submitted to:

The Ministry of Environment, Conservation & Parks

March 31, 2025

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Little River Pollution Control Plant 2024 Annual Report

Introduction

The Annual Report on the operation of the Little River Pollution Control Plant (LRPCP) for the 2024 calendar year, is being submitted in accordance with condition No. 11 of Environmental Compliance Approval (ECA) No. 4681-BT3L39 issued by The Ministry of Environment, Conservation and Parks (MECP).

The LRPCP has two separate activated sludge systems (Plant 1 and Plant 2) each with a separate outfall discharging to the Little River about 1 km upstream from the Detroit River. Both Plant 1 and Plant 2 each have a rated capacity of 36,400 m³/d.

All sample results (except E.Coli) are based on 24-hour composite samples collected by flow proportional automatic samplers. Reported overflow volumes are for the total plant after screening and grit removal. Plant overflow flow is chlorinated from May 1 through October 31.

Staff Organization

The Pollution Control Department employs 13 direct employees to operate and monitor the Little River Pollution Control Plant and an additional 22 supporting employees. The supporting employees include staff from the Environmental Quality Division, which carry out operational analytical requirements as outlined in the ECA of the plant.

Summary of Performance

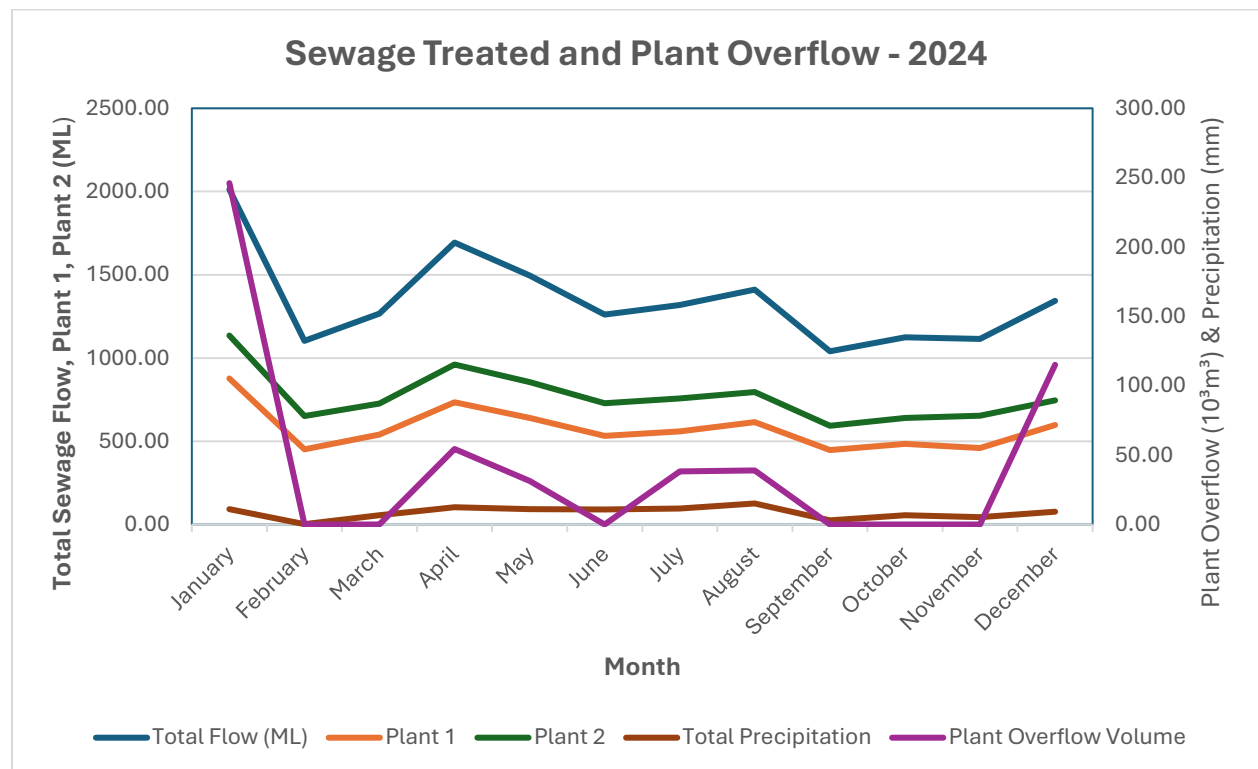
In 2024, the LRPCP treated a total of 16183 ML of sewage, an average of 44.2 ML/day. Plant 1 treated 6937.8 ML of sewage and Plant 2 treated 9244.9 ML of sewage. The monthly volumes of sewage treated, volumes of treatment plant overflow, and the total precipitation, as recorded at the Environment Canada Weather Station at the Windsor Airport, are listed in Table 1. Figure 1 displays this information in graphical form.

A summary of 2024, LRPCP Influent and Effluent data is found in Appendix A1 and A2.

Table 1: 2024 LRPCP Monthly Volumes

Month	Total Sewage Flow (ML)	Total Treated Sewage (ML)			Plant Overflow (Treated)			Total Precipitation (mm)
		Plant 1	Plant 2	Total	Volume (10 ³ m ³)	No. of Overflows	Duration (hours)	
January	2012.10	877.00	1135.10	2012.10	246.06	4.0	126.4	91.40
February	1102.90	451.20	651.70	1102.90	0.00	0.0	0.0	2.00
March	1267.30	540.50	726.80	1267.30	0.00	0.0	0.0	55.20
April	1693.90	733.80	960.10	1693.90	54.34	3.0	55.6	103.60
May	1495.90	640.00	855.90	1495.90	31.26	2.0	18.1	92.70
June	1260.60	532.30	728.30	1260.60	0.00	0.0	0.0	90.30
July	1318.00	560.00	758.00	1318.00	38.22	2.0	20.2	95.40
August	1410.00	614.00	796.00	1410.00	38.95	2.0	18.6	126.20
September	1040.00	447.00	593.00	1040.00	0.00	0.0	0.0	24.40
October	1125.00	485.00	640.00	1125.00	0.00	0.0	0.0	55.20
November	1114.00	460.00	654.00	1114.00	0.00	0.0	0.0	44.90
December	1343.00	597.00	746.00	1343.00	115.00	1.0	26.2	76.00
Total	16182.70	6937.80	9244.90	16182.70	523.83	14.0	265.1	857.30

Figure 1: 2024 Sewage Treated and Plant Overflow



Wastewater Systems Effluent Compliance

The LRPCP must operate within the effluent objectives outlined in The Ministry of Environment, Conservation and Parks (MECP) Environmental Compliance Approval (ECA). The ECA lists effluent limits for the following parameters: pH, Dissolved Oxygen (DO).

Final Effluent Design Objectives - Concentration Objectives

Final Effluent Parameter	Averaging Calculator	Objective (milligrams per litre unless otherwise indicated)
pH	Single Sample Result	6.5 - 9.0 inclusive
Dissolved Oxygen	Single Sample Result	greater than or equal to 4.0 mg/L

Efforts and Results Achieve in Meeting the Effluent Objectives

In addition to the Final Effluent Compliance limits, there are Concentration effluent limits, which are higher than the final effluent compliance limits. The LRPCP strives to produce effluent quality to meet these objectives. Dissolved Oxygen (DO) and pH are listed as an effluent objective. The Dissolved Oxygen effluent from the plant must be always maintained greater or equal to 4 milligrams per litre. The pH shall be maintained to the best of our efforts within the range of 6.5 to 9.0 inclusive, always.

There were 17 events where the pH was outside of the acceptable pH range of 6.5 to 9.0 in 2024. The results identified are an average result of pH's from Plant 1 & 2. **There were 2 single sample pH values that exceeded the acceptable pH range during the freezing period where temperatures are below 5°C or include the period from November 1 through April 30.

Date	pH Single Sample Result
6-Jul-24	6.17
21-Aug-25	6.33
12-Sep-24	6.49
15-Sep-24	6.46
16-Sep-24	6.48
18-Sep-24	6.48
19-Sep-24	6.48
20-Sep-24	6.47
21-Sep-24	6.46
22-Sep-24	6.47
23-Sep-24	6.45
24-Sep-24	6.43
25-Sep-24	6.39
26-Sep-24	6.46
29-Sep-24	6.49
6-Nov-24	6.24**
7-Nov-24	6.47**

**Freezing represent period when stream temperatures are below 5 °C, or include the period from November 1 through April 30. New pH probes were installed in July and September and adjusted in October due to calibration error.

There were 4 events in 2024 where the DO readings were below 4.0 mg/L in Plant 1. There were 4 events in 2024 where the DO readings were below 4.0 mg/L in Plant 2.

2024 DO Data					
Plant 1	DO Results		Plant 2	DO Results	Reason
5-Jun-24	3.4	High flow/probe fouling	25-Jun-24	2.3	Probe fouling
6-Jun-24	3.8	High flow/probe fouling	24-Jul-24	2.9	Probe fouling
9-Jun-24	3.3	Probe fouling	21-Aug-24	3.8	Probe fouling
24-Jul-25	3.1	Probe calibration	28-Sep-24	3.7	Probe fouling

LRPCP was operated within the rated capacity. The effluent from LRPCP was essentially free of floating and settleable solids and did not contain oil or any other substance that created a visible film, sheen, foam or discolouration on the receiving waters.

Low DO values were a result of probe fouling (typically algae buildup), high wet weather flows. Explanations for individual results can be found in DO Data Table above.

The LRPCP must operate within the effluent limits outlined in The Ministry of Environment, Conservation and Parks (MECP) Environmental Compliance Approval (ECA). The ECA lists effluent limits for the following parameters: Total Suspended Solids (TSS), CBOD₅, Total Ammonia NH₃, Total Phosphorus (TP), E. coli and pH (single sample value only). E. coli has a seasonal limit and objective from May 1 to October 31.

The following summarizes the performance and success of the plant relative to these limits. The average values, for these parameters are included in ECA, Table 1.1 and 1.2 below.

ECA - Table 1.1			
Effluent Parameters	Unit	Compliance Limits (average value)	
		Non-freezing	Freezing**
cBOD ₅	mg/L	15	15
TSS	mg/L	15	15
Total Ammonia	mg/L	6	6
Total Phosphorus	mg/L	1.0	1.0
E.coli*	counts/100mL	200	---

Note: *Represent the monthly geometric mean;

**Freezing represent period when stream temperatures are below 5 °C, or include the period from November 1 through April 30.

The following table provides the Monthly Average Effluent limits for LRPCP.

Table 2: 2024 LRPCP Combined Plant ECA Data

Month	cBOD mg/L	TSS (mg/L)	TP (mg/L)	Total Ammonia (mg/L)	ECOLI (CFU100/L)
January	4.00	3.88	0.08	0.76	* NT
February	4.07	3.39	0.28	0.10	* NT
March	5.44	4.69	0.25	0.24	* NT
April	4.00	3.98	0.10	0.14	* NT
May	4.19	5.45	0.21	0.15	23
June	4.00	4.93	0.41	0.11	25
July	4.10	4.30	0.24	0.23	71
August	4.10	3.70	0.18	0.22	55
September	5.00	5.10	0.46	0.16	22
October	5.00	4.50	0.52	0.34	22
November	4.20	3.40	0.33	1.62	* NT
December	4.30	4.60	0.21	0.36	* NT
Limit (Average)	15.00	15.00	1.00	6.00	200 (May to Oct.)
Limit (single sample)	25.00	25.00	1.50	8.00	1000 (May to Oct.)

* NT = not tested

The Monthly Average Concentration of the parameters cBOD₅, Total Suspended Solids (TSS), Total Ammonia Nitrogen (TAN), Total Phosphorus (TP) and E.coli did not exceed the corresponding maximum concentration limit set out in the ECA's Table 1.1 in 2024.

The following ECA Table 1.2 provides the Concentration Limits at the outlet of Plant 1&2:

ECA - Table 1.2			
Effluent Parameters	Unit	Concentration Limits (single sample results)	
		Non-freezing	Freezing**
cBOD ₅	mg/L	25	25
TSS	mg/L	25	25
Total Ammonia	mg/L	8	8
Total Phosphorus	mg/L	1.5	1.5
E.Coli*	counts/100mL	1000	---
pH	Unitless	6.5 - 9.0	6.5 - 9.0

Note: *Represent the monthly geometric mean;

**Freezing represent period when stream temperatures are below 5 °C, or include the period from November 1 through April 30.

Historical Trend of the Sewage Characteristics and Flow Rates

The amended Environmental Compliance Approval (ECA) number 4681-BT3L39 requires a review of the historical trend of the sewage characteristics and flow rates. Historical data only begins from 2021 due to the amended ECA #4681-BT3L39 dated January 29, 2021. Beginning January 2021, we changed accredited laboratories to meet the requirements of this ECA. Previous data (before 2021) were from a different accredited laboratory. The Historical sewage characteristics can be found in Appendix B2.

Deviation from Monitoring Schedule:

The 2024 and 2025 monitoring schedules are included in Appendix C.

A monitoring program has been established using a contracted certified laboratory for compliance reporting as per the plant's ECA. The Pollution Control Laboratory also maintains a separate monitoring program for plant operational purposes.

The 2024 and 2025 schedules list the day of the week/month for the scheduled sampling. As noted, the 2024 schedule was revised and updated for 2025. The revisions included a rotation of the day of the week/month for the scheduled sampling program, except when the actual scheduled monitoring frequency was three (3) or more times per week.

There were seven (7) deviations from the 2023 sampling schedule due to circumstances such as holidays, sampler malfunctions, power outages and missed dates of collection.

January 10, 2024

- LRPCP Sludge was collected on January 11, 2024.

March 13, 2024

- LRPCP Sludge was collected on March 14, 2024.

April 3, 2024

- LRPCP Influent, Effluent #1 & #2 samples were collected on April 4, 2024.

May 3, 2024

- There was a Primary overflow event that occurred on this day and due to a communication error the E.Coli sample was collected but was not delivered to the accredited lab. The issue has been resolved.

June 18, 2024

- LRPCP Annual Trace Organics were scheduled to be collected on June 18, 2024, the sampling date was changed to June 20, 2024. The samples included Influent, Effluent and Sludge.

December 11, 2024

- LRPCP Monthly Sludge collected on December 10, 2024.

December 29, 2024

- Unscheduled LRPCP Weekly Influent and Effluent which was collected on December 29, 2024.

2024 Operating Corrective Actions

January	MCRT adjusted from 9 days to 10 for Plant 1 & Plant 2. Poly Aluminum Chloride dosed in Plant 1 RAS to control filamentous and aid settling.
February	SCADA system CPU's replaced to enable software upgrades.
March	Poly Aluminum Chloride addition halted, not required in weather.
April	All FST weir brushes cleaned, and any worn brushes replaced. UV systems Plant 1&2 maintenance performed for May 1st service.
May	All aeration overflows adjusted to improve settling. MCRT adjusted Plant 1 from 10 days to 9 days, Plant 2 from 10 days to 9 days. Primary Overflow tank cleaned of sediment. FST centre rings and aeration channels cleaned of thick foam.
June	Aeration tanks rotated out of service for annual inspections.
July	Annual DO calibrations performed for Plant 1 & 2 Aeration tanks and Plant 1 & 2 outfalls. Aeration Tank #4 O/S for several weeks due to low flow
August	Primary Overflow tank cleaned of sediment. MCRT adjusted Plant 1, from 9 days to 8 days Inlet Bar Screens adjusted
October	New flowmeter for Plant 1 wasting installed. Annual flow calibrations for Influent, discharge and Overflow meters performed.
November	UV Systems Plant 1&2 out of service for season November 1st.
December	Clar-Ion A7 dosed in place of Alum for two weeks to clean out sediment in Alum lines.

2024 Infrastructure Capital Improvement Projects

The following list summarizes all of the maintenance carried out on major structure, equipment, apparatus, mechanism or items forming part of the Little River Pollution Control Plant.

- Administration Building/Staff facilities renovation commenced in November. Completion estimated Spring 2025.
- New replacement overhead crane is being replaced. Contractor on board. Work in progress. Completion in Spring of 2025.
- Ultraviolet disinfection system upgrade designed and tendered. Work to commence in Spring 2025.
- Two new MV Transformers purchased. Deficiencies being addressed. To be completed in 2025.
- New PLC in Blower Building #2.
- Actuators added to PST 1 & 2 Inlet valves.
- Positioning valves added to Plant 2 Aeration Blowers 5 & 7.

2024 Infrastructure Maintenance Projects

The following list summarizes the maintenance carried out on major equipment, apparatus, mechanism or items forming part of the Little River Pollution Control Plant.

GENERATOR BUILDING

- Repaired 52-F1 with new trip sensor
- Diesel Generators received annual maintenance

SITE

- Numerous outdoor lights repaired or replaced
- Concrete panels replaced various areas

LEACHATE

- Discharge line re-routed and replaced

ADMIN

- Replaced inlet H₂S gas sensor
- Inlet chamber BSB-C1 gate mounts re-enforced
- Replaced Plant 2 solids meter
- SCADA UPS emergency backup power batteries replaced
- Level control replaced ASP #7

PLANT1

- Installed channel flow meter LR_PST34_FM
- Replaced scum tray heaters as needed
- Replaced dissolved oxygen sensors as required
- Sludge Pump #3 replaced

PLANT2

- Replaced scum tray heaters as needed
- Replaced Blower Building2 PLC panel
- Weir cleaning brush system FST 5 repaired
- Relocated dissolved oxygen sensors to Tanks 9, 11, 14.
- Automatic DO control for Aeration Tanks added.
- Aeration Tank 10, DO probe replaced.
- AB #6 speed control board replaced

DEWATERING

- Numerous Sodium Hypochlorite line leaks repaired
- Disconnect/reconnect macerator for maintenance
- Cake Pump #1 hydraulic power pac repaired
- Centrifuge 3 belts changed

UV

- Repaired many UV racks
- Numerous bulbs and ballasts replaced
- Replaced GFCI receptacles

Effluent Quality Assurance or Control Measures

Plant personnel monitor operational indicators routinely to ensure that appropriate process and operational adjustments are made in an effort to produce high quality effluent. All changes to plant SRT and MCRT values are referenced in the above section titled "Operating Issues and Corrective actions". Other operational/process adjustments utilized in the plant to ensure a good quality effluent are performed on an as needed basis. These adjustments include, but are not limited to, adjusting wasting rates daily, removing a primary clarifier from service during prolonged periods of low flows (summer months), making adjustments to dissolved oxygen levels in the aeration units when necessary and increasing the number of UV banks in service during higher flows to maintain appropriate levels of disinfection. Jar testing aids in the optimization of alum and polymer dosing. Microscope work is performed to ensure the presence of desired "indicator" organisms in the aeration units. Polyaluminum Chloride is added to the return flow from the final clarifiers during winter months when required to assist in settling when the presence of Microthrix has been identified.

Every effort is made, where possible, to minimize the number of overflow events and the volume of overflow during wet weather events. Operators have the ability, to a limited extent, to control the amount of flow that is pumped through the plant at a level just below the point at which an overflow would occur during wet weather periods. This is of course dependent upon the intensity and duration of the wet weather event as well as the projected weather forecast and the probability of additional precipitation.

Routine preventative maintenance is performed on all equipment at the LRPCP. The Antero Equipment Maintenance Program (by AllMax Software Inc.) is used to maintain an inventory of all plant equipment and allows for the development and tracking of work orders and provides a record of all maintenance and special repairs that have been carried out. Preventative maintenance is performed to ensure that necessary equipment is available to the plant during normal operations and during emergencies. For instance, standby diesel generators are operated on a routine basis to ensure they are available during power outages. Plant operators

and millwrights perform routine diesel generator maintenance. A local diesel maintenance contractor is also retained twice a year to perform annual maintenance on each unit.

Under the DMAF Program we are expanding the Pontiac Pumping Station which the goal is to provide overflow relief for LRPCP due to inflow and infiltration in the sanitary collection system during significant storms events. This will prevent and avoid impacts to the system and local residents, providing a more resilient system and improved overflow management.

Calibration and Maintenance of Monitoring Equipment

Calibration and maintenance of the effluent monitoring equipment and automatic samplers were carried out by the Environmental Technologist.

Plant 1 and Plant 2 discharge channel flowmeters and Plant Overflow flowmeter were verified and calibrated in September 2024 by an external certified Instrumentation Technician. Channel 1 & 2 Influent flowmeters were verified and calibrated September 2024. Calibration Certificates can be found in Appendix D.

LRPCP does not receive any imported sewage however they do receive leachate. The volume of this leachate is measured by calculating volume received by measuring Leachate holding tank level using a Milltronics level sensor and holding total tank volume. The calculated volume is entered on the Manifests received from the haulers, additionally a flowmeter is used to meter and measure the volume introduced to the treatment process, this calibration was also performed in September 2024 and can be found in Appendix D.

Design Objectives

The design objectives for rated capacity were achieved. LRPCP Plant Rated Capacity = 72.8 ML/day (72,800 m³/d). The average daily influent flow for LRPCP is 16183 ML/366 = 44.2 ML/day. The comparison to the rated capacity is calculated as $44.2/72.8 = 60.7\%$ (average annual daily influent/plant capacity = % of capacity used in 2024).

Biosolids - Production and Disposal

A total of 112,802,021 litres of raw sludge (average 3.44 % solids) was dewatered during the year. A total of 9541 tonnes of wet sludge cake (average 27.95 % solids yielding 2667 dry tonnes) were produced at the LRPCP in 2024. All Little River's biosolid production in 2024 was converted to approximately 2,670.00 tonnes of fertilizer while zero metric tonnes were sent to the landfill. For the year 2024, Synagro (Windsor) Limited operated the Windsor Biosolids Processing Facility (WBPF).

The quantities of sludge pumped, wet cake produced and associated solid percentages are listed in the following table 3.

Table 3: 2024 LRPCP Monthly Sludge Quantities and Associated Solid Percentage

Month	Sludge Pumped (L)	Sludge Solids %	Wet Cake (Tonnes)	Landfilled (Tonnes)	Processed (Tonnes)	Cake Solids (%)
January	8,713,264	4.07	860.30	0	860.30	27.86
February	7,717,596	3.86	1131.20	0	1131.20	30.54
March	8,043,919	3.62	729.90	0	729.90	28.78
April	8,988,594	3.79	810.70	0	810.70	28.99
May	8,726,034	3.82	904.50	0	904.50	28.67
June	7,472,179	3.82	696.60	0	696.60	28.63
July	8,754,424	3.55	771.70	0	771.70	29.04
August	10,630,664	3.23	709.60	0	709.60	28.04
September	10,365,315	2.63	615.72	0	615.72	27.72
October	12,810,070	2.77	819.93	0	819.93	25.23
November	10,619,055	2.90	764.91	0	764.91	26.43
December	10,645,136	3.22	783.23	0	783.23	25.73
Total	113,486,250	3.44 (avg)	9,598.29	0	9,598.29	27.95 (avg)

Complaints and Public Engagement

Two odour complaints were received from the public during the year regarding the operation of the LRPCP. Complainants was contacted and advised that our odour control system had some operational issues for a short time which may have resulted in increased odours for 2 to 3 hours. Residents were encouraged to notify the City of any further issues.

LRPCP normally engages area students through several Plant Tours with various educational institutions as well as engaging area residents by hosting an open house Bi-annually. In 2024, 4 tours of the LRPCP were conducted, one local grade school, one high school and two tours of professionals working in the field.

Overflow Events

Throughout 2024, the plant experienced several plant overflows events. Over the course of the year, approximately 523.8 million litres of wastewater overflowed receiving screening, grit removal and seasonally disinfection with sodium hypochlorite. High flow events, caused by the spring snowmelt and heavy rain events accounted for 100% of the overflows. When applicable, the overflows were disinfected sodium hypochlorite. All overflow and spill events were reported to the MECP -Spills Action Center following the established reporting protocol. Plant overflows are listed in Table 1 - Monthly Volumes. Figure 1 displays the plant overflows in graphical form.

In 2024 there was one (1) Emergency Bypasses to Pontiac Pumping Station and were reported to the MECP as “Pumping Station Overflows”, as seen in Table 4.

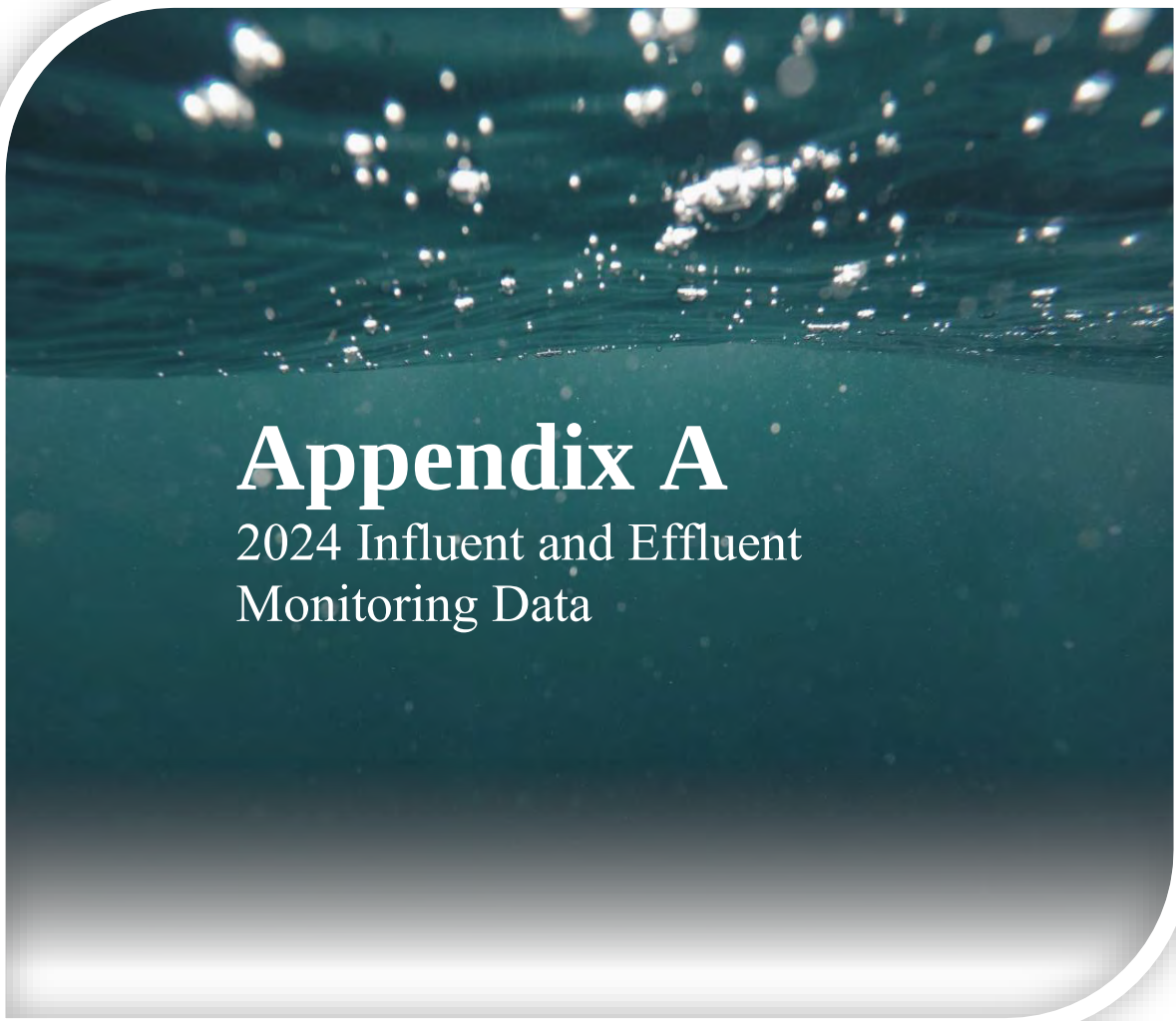
Table 4: Pontiac Pumping Station Overflow Events

Event #	Event Summary	Event Type	Date Occurred	Facility Name
#1-4M7JT1	Pontiac PS	Bypass	Jan 26, 2024	LRPCP

Performance F-5-1 Conformance

The City's Engineering Department is in the progress of implementing a Sewer Master Plan at a cost of approximately \$5,000,000,000.00 that is intended to identify short and long-term solutions to reduce the risks of basement, surface and coastal flooding in the City. This work includes public engagement, sewer system modeling, on site flow monitoring, sewer inflow & infiltration investigation, pumping station requirements, additional storm water storage, foundation drains and downspout disconnection. The Sewer Master Plan's recommendations were endorsed by Council in late 2020 with implementation efforts planned over the next 50 plus years.

The implementation of the Sewer Master Plan is anticipated to directly affect flows to the LRWRP and LRPCP over the short and long term. The City is continuing to implement this Master Plan which includes reducing wet weather flow in the sanitary and combined sewage systems, anticipated to reduce the associated peak rate and volume of wet weather flow conveyed to the LRWRP and LRPCP.

An underwater photograph showing numerous bubbles rising from the bottom towards the surface. The water is a deep teal color, and the bubbles are illuminated from above, creating a shimmering effect. The text is overlaid on the lower half of the image.

Appendix A

2024 Influent and Effluent
Monitoring Data

Appendix A: Influent Monitoring Data

Table A1 - LRPCP 2024 Influent Wastewater Characteristics from ECA report

MONTH	INFLUENT											
	BOD (mg/L)			SS (mg/L)			TP (mg/L)			TKN (mg/L)		
	avg.	max.	min.	avg.	max.	min.	avg.	max.	min.	avg.	max.	min.
Jan	108.20	269.00	25.00	102.00	232.00	34.00	2.03	4.30	0.90	17.18	31.40	8.80
Feb	168.80	227.00	95.00	119.00	142.00	59.00	3.40	3.80	3.10	28.14	32.00	21.90
Mar	211.20	314.00	153.00	125.00	182.00	98.00	3.24	4.30	2.50	27.22	32.40	23.40
Apr	117.40	176.00	40.00	110.00	164.00	54.00	2.70	3.40	1.70	21.88	29.00	13.10
May	116.70	154.00	63.00	101.00	130.00	48.00	2.57	3.60	1.80	25.93	38.00	14.10
Jun	149.60	196.00	122.00	153.00	217.00	104.00	3.88	4.60	3.00	30.08	33.30	26.40
Jul	152.00	203.00	89.00	194.00	404.00	109.00	2.91	4.13	1.61	20.87	34.40	10.20
Aug	121.00	188.00	71.00	117.00	161.00	65.00	2.61	4.43	1.38	22.22	31.80	11.10
Sep	168.00	198.00	109.00	130.00	187.00	100.00	3.97	4.24	3.76	32.08	36.00	28.10
Oct	166.00	203.00	137.00	127.00	170.00	67.00	3.95	4.64	2.97	33.03	37.60	25.60
Nov	139.00	201.00	93.00	130.00	202.00	91.00	4.10	5.26	3.04	32.16	39.80	24.90
Dec	140.00	181.00	43.00	122.00	145.00	111.00	3.11	4.14	1.31	28.93	38.10	10.60
Avg.	146.49	209.17	86.67	127.50	194.67	78.33	3.21	4.24	2.26	26.64	34.48	18.18
Max.	211.20	314.00	153.00	194.00	404.00	111.00	4.10	5.26	3.76	33.03	39.80	28.10
Min.	108.20	154.00	25.00	101.00	130.00	34.00	2.03	3.40	0.90	17.18	29.00	8.80

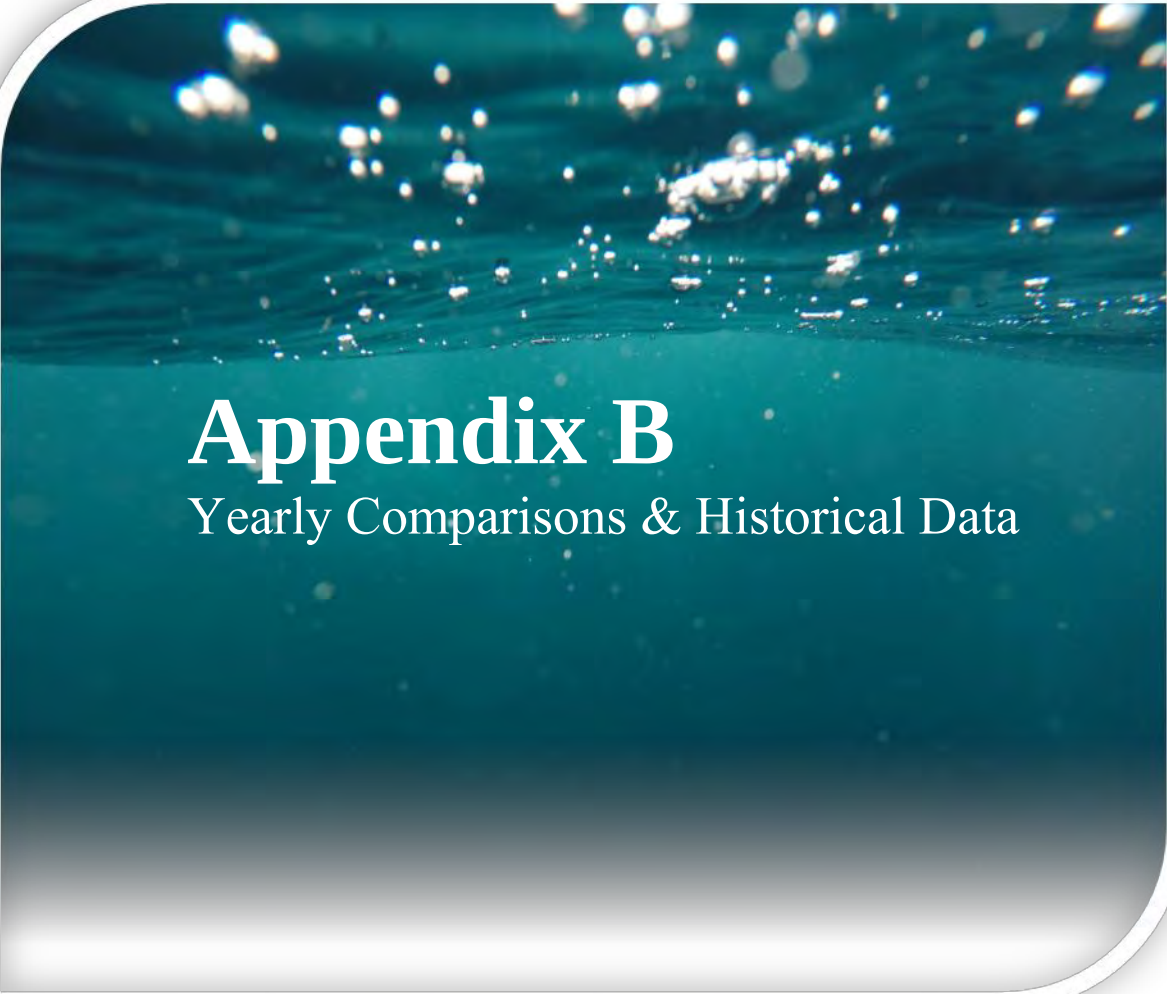
MONTH	INFLUENT							
	NH3 (mg/L)			Alkalinity (mg/L)			pH	
	avg.	max.	min.	avg.	max.	min.	max.	min.
Jan	12.93	24.10	6.40	230.50	263.00	182.00	7.64	7.04
Feb	23.82	27.40	20.50	250.80	263.00	237.00	7.55	7.10
Mar	22.36	29.10	18.00	257.80	269.00	230.00	7.44	7.10
Apr	18.24	24.20	8.60	251.80	286.00	209.00	7.44	7.15
May	20.47	26.80	12.60	262.17	275.00	235.00	7.50	7.18
Jun	24.96	29.30	20.30	260.60	294.00	201.00	7.46	7.18
Jul	17.40	27.70	7.80	260.00	297.00	196.00	6.87	6.17
Aug	18.70	27.90	9.00	267.00	283.00	232.00	6.79	6.33
Sep	29.40	33.50	25.80	272.00	283.00	257.00	6.75	6.39
Oct	29.30	34.00	22.00	267.00	282.00	252.00	6.91	6.51
Nov	27.00	33.50	20.40	256.00	279.00	220.00	6.86	6.24
Dec	24.60	31.80	9.30	247.00	289.00	171.00	6.89	6.65
Avg.	22.43	29.11	15.06	256.89	280.25	218.50	7.18	6.75
Max.	29.40	34.00	25.80	272.00	297.00	257.00	7.64	7.18
Min.	12.93	24.10	6.40	230.50	263.00	171.00	6.75	6.17

Appendix A: Effluent Monitoring Data

Table A2 - LRPCP 2024 Effluent Wastewater Characteristics from ECA report

MONTH	FINAL EFFLUENT												
	cBOD (mg/L)			SS (mg/L)			TP (mg/L)			NH3 (mg/L)			eCOLI
	avg.	max.	min.	avg.	max.	min.	avg.	max.	min.	avg.	max.	min.	cfu/100 ml (AVG)
Jan	4.00	4.00	4.00	3.88	5.00	3.00	0.08	0.12	0.04	0.76	3.14	0.10	NT *
Feb	4.07	5.80	2.50	3.39	4.00	3.00	0.28	0.68	0.06	0.10	0.10	0.10	NT *
Mar	5.44	9.40	4.00	4.69	6.00	3.00	0.25	0.80	0.08	0.24	0.80	0.10	NT *
Apr	4.00	4.00	4.00	3.98	8.00	2.00	0.10	0.15	0.05	0.14	0.32	0.10	NT *
May	4.19	5.10	4.00	5.45	8.00	3.00	0.21	0.42	0.08	0.15	0.38	0.10	23.00
Jun	4.00	4.00	4.00	4.93	8.00	3.00	0.41	0.55	0.29	0.11	0.16	0.10	25.00
Jul	4.10	4.30	4.00	4.30	7.20	2.70	0.24	0.37	0.14	0.23	0.83	0.10	71.00
Aug	4.10	4.60	4.00	3.70	4.40	2.40	0.18	0.35	0.09	0.22	0.48	0.10	55.00
Sep	5.00	7.10	4.00	5.10	6.30	4.00	0.46	0.68	0.13	0.16	0.41	0.10	22.00
Oct	5.00	10.00	4.00	4.50	6.50	2.60	0.52	10.30	0.11	0.34	0.67	0.10	22.00
Nov	4.20	4.70	4.00	3.40	4.30	2.00	0.33	0.85	0.13	1.62	4.61	0.15	NT *
Dec	4.30	4.30	4.00	4.60	7.60	2.50	0.21	0.38	0.13	0.36	1.44	0.10	NT *
Avg.	4.37	5.61	3.88	4.33	6.28	2.77	0.27	1.30	0.11	0.37	1.11	0.10	36.33
Max.	5.44	10.00	4.00	5.45	8.00	4.00	0.52	10.30	0.29	1.62	4.61	0.15	71.00
Min.	4.00	4.00	2.50	3.39	4.00	2.00	0.08	0.12	0.04	0.10	0.10	0.10	22.00

* NT = not tested

An underwater photograph showing a dense field of bubbles rising towards the surface. Sunlight rays penetrate the water, creating a shimmering effect. The overall color palette is a range of blues and greens, from deep teal to bright cyan.

Appendix B

Yearly Comparisons & Historical Data

Appendix B: Yearly Comparisons & Historical Data



Little River Pollution Control Plant ECA#4681-BT3L39 Regulated Sampling Results - 2024

Table B1

Sludge Holding Tank/Truck Loading Bay - Quarterly Grab Sample					
Parameter	Unit	14-Mar-24	12-Jun-24	11-Sep-24	10-Dec-24
Arsenic	mg/kg	2.0	3.0	4.0	3.0
Cadmium	mg/kg	0.5	0.4	0.6	0.6
Chromium	mg/kg	10.0	8.0	15.0	13.0
Cobalt	mg/kg	1.0	1.0	1.0	2.0
Copper	mg/kg	170	130	210	230
Lead	mg/kg	7.0	8.0	9.0	11.0
Molybdenum	mg/kg	5.0	4.0	11.0	10.0
Nickel	mg/kg	8.0	6.0	12.0	10.0
Phosphorus	mg/kg	14200	13000	23000	24000
Potassium	mg/kg	1900	1800	3000	3500
Selenium	mg/kg	3.0	2	3.0	3.0
Zinc	mg/kg	320	290	470	420
Mercury	mg/kg	0.22	0.20	0.47	0.34
Solids	%	4.48	4.08	2.53	3.48
Ammonia as N (KCl Extr)	µg/g	3470	3680	5020	5310
Nitrate as N (10:1)	µg/g	3	3	3	3

Final Effluent Acute Lethality Mean Mortality - Annual Grab Sample				
Parameter	Unit	6-Aug-24		
Daphnia Magna	%	0.0		
Rainbow Trout	%	0.0		

Final Effluent Outside Normal Operating Conditions (Bypass-Composite/Overflow-Grab)	
(Bypass of Unit Processes/Overflows except for Raw and Primary Overflows)	
Parameter	Unit
Carbonaceous BOD	mg/L
Total Suspended Solids	mg/L
NH3	mg/L
TKN	mg/L
Nitrate	mg/L
Nitrite	mg/L
Total Phosphorous	mg/L

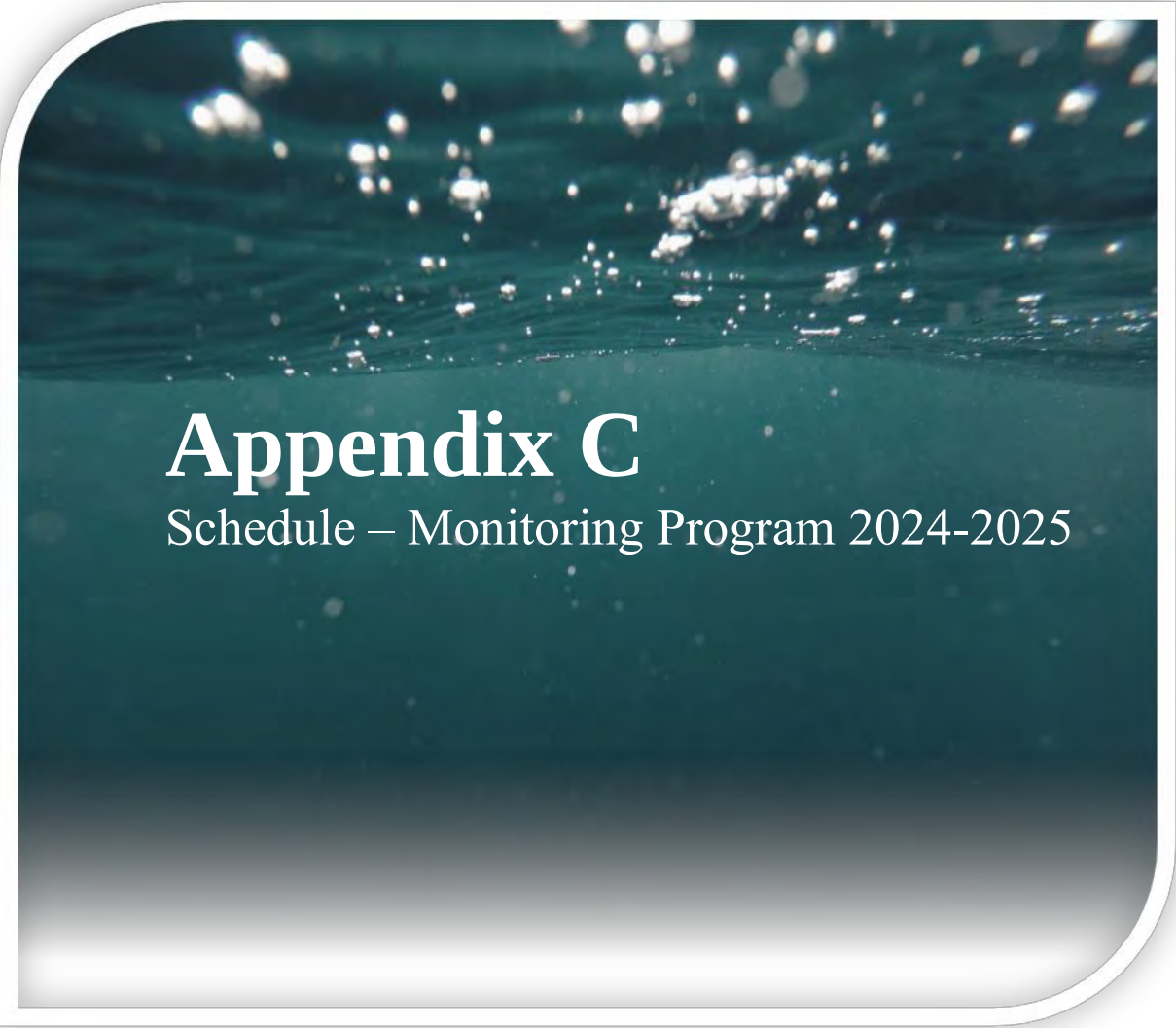
Chamber Sampling Point Overflows - Composite Sample													
Parameter	Unit	9-Jan-24	13-Jan-24	24-Jan-24	25-Jan-24	26-Jan-24	27-Jan-24	28-Jan-24	29-Jan-24	11-Apr-24	12-Apr-24	13-Apr-24	28-Apr-24
BOD5	mg/L	67.0	54.0		106.0	45.0	38.0	66.0	47.0	125.0	73.0	82.0	203.0
Total Suspended Solids	mg/L	98.0	53.0		213	57.0	41.0	121.0	77	244.0	109.0	135.0	375
Total Phosphorous	mg/L	0.9	0.7		1.1	0.5	0.8	0.9	0.6	1.6	0.9	0.9	2.0
E.Coli	cfu/100mL	1500000.0	1100000.0	600000.0				2700000.0		300000.0			2600000.0

Chamber Sampling Point Overflows - Composite Sample												
Parameter	Unit	29-Apr-24	30-Apr-24	3-May-24	26-May-24	27-May-24	10-Jul-24	17-Jul-24	2-Aug-24	6-Aug-24	29-Dec-24	30-Dec-24
BOD5	mg/L	70.0	94.0	29.0	101.0	232.0	167.0	89.0	152.0	94.0	71.0	112.0
Total Suspended Solids	mg/L	111.0	65.0	224.0	153	335.0	364.0	123.0	486	180.0	520.0	121.0
Total Phosphorous	mg/L	1.3	0.7	1.0	1.8	2.7	1.8	1.1	4.3	1.2	3.6	0.8
E.Coli	cfu/100mL	1300000.0			1600000.0		1200000.0	500000.0	2400000.0	1000000.0	2600000.0	

Appendix B: Yearly Comparisons & Historical Data

**Table B2 - LRPCP YEARLY COMPARISONS/PRIMARY TOTAL OVERFLOWS
2021 - 2024**

YEAR	Influent Concentration (mg/L) Average				Effluent Concentration (mg/L) Average				Percent Removal (%) Average			Flow Data								
	BOD	SS	TP	NH3	cBOD	SS	TP	NH3	SS	TP	NH3	Effluent Flow (ML)	BW Return Flow (ML)	Total Treated Flow (ML)	Total Overflow (ML)*	Total Overflow Occ.*	Total Overflow Hrs.*	Avg. Daily flow (ML/D)	Avg. Daily Flow (MGD)	Max Daily Flow (ML/D)
2021	151.00	87.00	1.90	10.40	4.00	5.00	0.23	0.12	97.48	93.77	99.75	15439.6	0	15439.6	1079.68	23	416	42.30	9.31	112.83
2022	188.03	180.58	3.58	26.97	3.40	4.39	0.34	0.44	97.65	93.77	99.74	13601	0	13601	138.88	8	74	37.26	8.20	115.09
2023	132.08	115.17	8.46	21.23	3.70	3.65	0.11	0.11	97.99	91.04	99.39	16163.1	0	16163.1	695.556	15	356	44.28	9.74	120.57
2024	146.49	127.50	3.21	22.43	4.37	4.33	0.27	0.37	97.50	90.74	99.11	16181.9	0	16181.9	500.422	14	272	44.33	9.75	124.18

An underwater photograph showing numerous bubbles rising towards the surface, with light rays filtering through the dark blue water. The image is framed with rounded corners and a white border.

Appendix C

Schedule – Monitoring Program 2024-2025



2024 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Jan-24	Feb-24	Mar-24
Monday, 1 January 2024	Thursday, 1 February 2024	Friday, 1 March 2024
Tuesday, 2 January 2024	Friday, 2 February 2024	Saturday, 2 March 2024
Wednesday, 3 January 2024	Saturday, 3 February 2024	Sunday, 3 March 2024
Thursday, 4 January 2024	Sunday, 4 February 2024	Monday, 4 March 2024
Friday, 5 January 2024	Monday, 5 February 2024	Tuesday, 5 March 2024
Saturday, 6 January 2024	Tuesday, 6 February 2024	Wednesday, 6 March 2024
Sunday, 7 January 2024	Wednesday, 7 February 2024	Thursday, 7 March 2024
Monday, 8 January 2024	Thursday, 8 February 2024	Friday, 8 March 2024
Tuesday, 9 January 2024	Friday, 9 February 2024	Saturday, 9 March 2024
Wednesday, 10 January 2024	Saturday, 10 February 2024	Sunday, 10 March 2024
Thursday, 11 January 2024	Sunday, 11 February 2024	Monday, 11 March 2024
Friday, 12 January 2024	Monday, 12 February 2024	Tuesday, 12 March 2024
Saturday, 13 January 2024	Tuesday, 13 February 2024	Wednesday, 13 March 2024
Sunday, 14 January 2024	Wednesday, 14 February 2024	Thursday, 14 March 2024
Monday, 15 January 2024	Thursday, 15 February 2024	Friday, 15 March 2024
Tuesday, 16 January 2024	Friday, 16 February 2024	Saturday, 16 March 2024
Wednesday, 17 January 2024	Saturday, 17 February 2024	Sunday, 17 March 2024
Thursday, 18 January 2024	Sunday, 18 February 2024	Monday, 18 March 2024
Friday, 19 January 2024	Monday, 19 February 2024	Tuesday, 19 March 2024
Saturday, 20 January 2024	Tuesday, 20 February 2024	Wednesday, 20 March 2024
Sunday, 21 January 2024	Wednesday, 21 February 2024	Thursday, 21 March 2024
Monday, 22 January 2024	Thursday, 22 February 2024	Friday, 22 March 2024
Tuesday, 23 January 2024	Friday, 23 February 2024	Saturday, 23 March 2024
Wednesday, 24 January 2024	Saturday, 24 February 2024	Sunday, 24 March 2024
Thursday, 25 January 2024	Sunday, 25 February 2024	Monday, 25 March 2024
Friday, 26 January 2024	Monday, 26 February 2024	Tuesday, 26 March 2024
Saturday, 27 January 2024	Tuesday, 27 February 2024	Wednesday, 27 March 2024
Sunday, 28 January 2024	Wednesday, 28 February 2024	Thursday, 28 March 2024
Monday, 29 January 2024	Thursday, 29 February 2024	Friday, 29 March 2024
Tuesday, 30 January 2024		Saturday, 30 March 2024
Wednesday, 31 January 2024		Sunday, 31 March 2024

1 - Holiday

2A - Composite - Monthly - LRWRP & LRPCP Influent/Effluent

2B - Composite - Monthly - LRWRP & LRPCP Sludge

3 - Composite - Weekly - LRWRP & LRPCP Influent/Effluent

4 - Composite - 2nd Weekly - LRWRP Effluent (CBOD & TSS)

5 - Grab - Weekly - LRWRP & LRPCP Effluent - E. Coli **

6 - Grab - Annual - LRWRP/LRPCP Effluent Toxicity

7 - Grab - Monthly - LRWRP Imported Sewage

8 - Composite - Quarterly - LRWRP Effluent Industrial Wastewater Related

9 - Grab - Quarterly - LRWRP Effluent Leachate Related

10 - Grab - Annual - LRWRP/LRPCP Sludge & Influent/Effluent (Trace Organics)

** LRWRP - WSER Acute Lethality RT testing is quarterly unless of test failure (>50% mortality), then testing reverts to monthly as per WSER (federal regulation)

** LRWRP - ECA Acute Lethality RT & DM testing is annually unless of test failure (>50% mortality), then testing reverts to quarterly as per MECP ECA (provincial regulation, see LRWRP ECA Condition 9(4) & Schedule D for details)

**LRPCP - Effluent E. Coli must be monitored during the disinfection period from May 1 through October 31

Note: In the event of a holiday or a missed sample, the scheduled sampling date shall be moved to the next available date

LRWRP - Plant operations outside of Normal Operating Conditions - occurs when primary or secondary daily flow exceeds the available capacity for the day
Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow

BOD TSS TP TKN

LRPCP - Primary Overflow

BOD TSS TP E. Coli



2024 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Apr-24	May-24	Jun-24
Monday, 1 April 2024	Wednesday, 1 May 2024	Saturday, 1 June 2024
Tuesday, 2 April 2024	Thursday, 2 May 2024	Sunday, 2 June 2024
Wednesday, 3 April 2024	Friday, 3 May 2024	Monday, 3 June 2024
Thursday, 4 April 2024	Saturday, 4 May 2024	Tuesday, 4 June 2024
Friday, 5 April 2024	Sunday, 5 May 2024	Wednesday, 5 June 2024
Saturday, 6 April 2024	Monday, 6 May 2024	Thursday, 6 June 2024
Sunday, 7 April 2024	Tuesday, 7 May 2024	Friday, 7 June 2024
Monday, 8 April 2024	Wednesday, 8 May 2024	Saturday, 8 June 2024
Tuesday, 9 April 2024	Thursday, 9 May 2024	Sunday, 9 June 2024
Wednesday, 10 April 2024	Friday, 10 May 2024	Monday, 10 June 2024
Thursday, 11 April 2024	Saturday, 11 May 2024	Tuesday, 11 June 2024
Friday, 12 April 2024	Sunday, 12 May 2024	Wednesday, 12 June 2024
Saturday, 13 April 2024	Monday, 13 May 2024	Thursday, 13 June 2024
Sunday, 14 April 2024	Tuesday, 14 May 2024	Friday, 14 June 2024
Monday, 15 April 2024	Wednesday, 15 May 2024	Saturday, 15 June 2024
Tuesday, 16 April 2024	Thursday, 16 May 2024	Sunday, 16 June 2024
Wednesday, 17 April 2024	Friday, 17 May 2024	Monday, 17 June 2024
Thursday, 18 April 2024	Saturday, 18 May 2024	Tuesday, 18 June 2024
Friday, 19 April 2024	Sunday, 19 May 2024	Wednesday, 19 June 2024
Saturday, 20 April 2024	Monday, 20 May 2024	Thursday, 20 June 2024
Sunday, 21 April 2024	Tuesday, 21 May 2024	Friday, 21 June 2024
Monday, 22 April 2024	Wednesday, 22 May 2024	Saturday, 22 June 2024
Tuesday, 23 April 2024	Thursday, 23 May 2024	Sunday, 23 June 2024
Wednesday, 24 April 2024	Friday, 24 May 2024	Monday, 24 June 2024
Thursday, 25 April 2024	Saturday, 25 May 2024	Tuesday, 25 June 2024
Friday, 26 April 2024	Sunday, 26 May 2024	Wednesday, 26 June 2024
Saturday, 27 April 2024	Monday, 27 May 2024	Thursday, 27 June 2024
Sunday, 28 April 2024	Tuesday, 28 May 2024	Friday, 28 June 2024
Monday, 29 April 2024	Wednesday, 29 May 2024	Saturday, 29 June 2024
Tuesday, 30 April 2024	Thursday, 30 May 2024	Sunday, 30 June 2024
	Friday, 31 May 2024	

1 - Holiday

2 - Composite - Monthly - LRWRP & LRPCP Influent/Effluent

2 - Composite - Monthly - LRWRP & LRPCP Sludge

3 - Composite - Weekly - LRWRP & LRPCP Influent/Effluent

4 - Composite - 2nd Weekly - LRWRP Effluent (CBOD & TSS)

5 - Grab - Weekly - LRWRP & LRPCP Effluent - E. Coli **

6 - Grab - Annual - LRWRP/LRPCP Effluent Toxicity

7 - Grab - Monthly - LRWRP Imported Sewage

8 - Composite - Quarterly - LRWRP Effluent Industrial Wastewater Related

9 - Grab - Quarterly - LRWRP Effluent Leachate Related

10 - Grab - Annual - LRWRP/LRPCP Sludge & Influent/Effluent (Trace Organics)

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Note: In the event of a holiday or a missed sample, the scheduled sampling date shall be moved to the next available date

LRWRP - Plant operations outside of Normal Operating Conditions - occurs when primary or secondary daily flow exceeds the available capacity for the day
Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow
BOD TSS TP TKN

LRPCP - Primary Overflow
BOD TSS TP E. Coli



2024 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Jul-24	Aug-24	Sep-24
Monday, 1 July 2024	Thursday, 1 August 2024	Sunday, 1 September 2024
Tuesday, 2 July 2024	Friday, 2 August 2024	Monday, 2 September 2024
Wednesday, 3 July 2024	Saturday, 3 August 2024	Tuesday, 3 September 2024
Thursday, 4 July 2024	Sunday, 4 August 2024	Wednesday, 4 September 2024
Friday, 5 July 2024	Monday, 5 August 2024	Thursday, 5 September 2024
Saturday, 6 July 2024	Tuesday, 6 August 2024	Friday, 6 September 2024
Sunday, 7 July 2024	Wednesday, 7 August 2024	Saturday, 7 September 2024
Monday, 8 July 2024	Thursday, 8 August 2024	Sunday, 8 September 2024
Tuesday, 9 July 2024	Friday, 9 August 2024	Monday, 9 September 2024
Wednesday, 10 July 2024	Saturday, 10 August 2024	Tuesday, 10 September 2024
Thursday, 11 July 2024	Sunday, 11 August 2024	Wednesday, 11 September 2024
Friday, 12 July 2024	Monday, 12 August 2024	Thursday, 12 September 2024
Saturday, 13 July 2024	Tuesday, 13 August 2024	Friday, 13 September 2024
Sunday, 14 July 2024	Wednesday, 14 August 2024	Saturday, 14 September 2024
Monday, 15 July 2024	Thursday, 15 August 2024	Sunday, 15 September 2024
Tuesday, 16 July 2024	Friday, 16 August 2024	Monday, 16 September 2024
Wednesday, 17 July 2024	Saturday, 17 August 2024	Tuesday, 17 September 2024
Thursday, 18 July 2024	Sunday, 18 August 2024	Wednesday, 18 September 2024
Friday, 19 July 2024	Monday, 19 August 2024	Thursday, 19 September 2024
Saturday, 20 July 2024	Tuesday, 20 August 2024	Friday, 20 September 2024
Sunday, 21 July 2024	Wednesday, 21 August 2024	Saturday, 21 September 2024
Monday, 22 July 2024	Thursday, 22 August 2024	Sunday, 22 September 2024
Tuesday, 23 July 2024	Friday, 23 August 2024	Monday, 23 September 2024
Wednesday, 24 July 2024	Saturday, 24 August 2024	Tuesday, 24 September 2024
Thursday, 25 July 2024	Sunday, 25 August 2024	Wednesday, 25 September 2024
Friday, 26 July 2024	Monday, 26 August 2024	Thursday, 26 September 2024
Saturday, 27 July 2024	Tuesday, 27 August 2024	Friday, 27 September 2024
Sunday, 28 July 2024	Wednesday, 28 August 2024	Saturday, 28 September 2024
Monday, 29 July 2024	Thursday, 29 August 2024	Sunday, 29 September 2024
Tuesday, 30 July 2024	Friday, 30 August 2024	Monday, 30 September 2024
Wednesday, 31 July 2024	Saturday, 31 August 2024	

1 - Holiday

2 - Composite - Monthly - LRWRP & LRPCP Influent/Effluent

2 - Composite - Monthly - LRWRP & LRPCP Sludge

3 - Composite - Weekly - LRWRP & LRPCP Influent/Effluent

4 - Composite - 2nd Weekly - LRWRP Effluent (CBOD & TSS)

5 - Grab - Weekly - LRWRP & LRPCP Effluent - E. Coli **

6 - Grab - Annual - LRWRP/LRPCP Effluent Toxicity

7 - Grab - Monthly - LRWRP Imported Sewage

8 - Composite - Quarterly - LRWRP Effluent Industrial Wastewater Related

9 - Grab - Quarterly - LRWRP Effluent Leachate Related

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Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow

BOD TSS TP TKN

LRPCP - Primary Overflow

BOD TSS TP E. Coli

2024 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Oct-24	Nov-24	Dec-24
Tuesday, 1 October 2024	Friday, 1 November 2024	Sunday, 1 December 2024
Wednesday, 2 October 2024	Saturday, 2 November 2024	Monday, 2 December 2024
Thursday, 3 October 2024	Sunday, 3 November 2024	Tuesday, 3 December 2024
Friday, 4 October 2024	Monday, 4 November 2024	Wednesday, 4 December 2024
Saturday, 5 October 2024	Tuesday, 5 November 2024	Thursday, 5 December 2024
Sunday, 6 October 2024	Wednesday, 6 November 2024	Friday, 6 December 2024
Monday, 7 October 2024	Thursday, 7 November 2024	Saturday, 7 December 2024
Tuesday, 8 October 2024	Friday, 8 November 2024	Sunday, 8 December 2024
Wednesday, 9 October 2024	Saturday, 9 November 2024	Monday, 9 December 2024
Thursday, 10 October 2024	Sunday, 10 November 2024	Tuesday, 10 December 2024
Friday, 11 October 2024	Monday, 11 November 2024	Wednesday, 11 December 2024
Saturday, 12 October 2024	Tuesday, 12 November 2024	Thursday, 12 December 2024
Sunday, 13 October 2024	Wednesday, 13 November 2024	Friday, 13 December 2024
Monday, 14 October 2024	Thursday, 14 November 2024	Saturday, 14 December 2024
Tuesday, 15 October 2024	Friday, 15 November 2024	Sunday, 15 December 2024
Wednesday, 16 October 2024	Saturday, 16 November 2024	Monday, 16 December 2024
Thursday, 17 October 2024	Sunday, 17 November 2024	Tuesday, 17 December 2024
Friday, 18 October 2024	Monday, 18 November 2024	Wednesday, 18 December 2024
Saturday, 19 October 2024	Tuesday, 19 November 2024	Thursday, 19 December 2024
Sunday, 20 October 2024	Wednesday, 20 November 2024	Friday, 20 December 2024
Monday, 21 October 2024	Thursday, 21 November 2024	Saturday, 21 December 2024
Tuesday, 22 October 2024	Friday, 22 November 2024	Sunday, 22 December 2024
Wednesday, 23 October 2024	Saturday, 23 November 2024	Monday, 23 December 2024
Thursday, 24 October 2024	Sunday, 24 November 2024	Tuesday, 24 December 2024
Friday, 25 October 2024	Monday, 25 November 2024	Wednesday, 25 December 2024
Saturday, 26 October 2024	Tuesday, 26 November 2024	Thursday, 26 December 2024
Sunday, 27 October 2024	Wednesday, 27 November 2024	Friday, 27 December 2024
Monday, 28 October 2024	Thursday, 28 November 2024	Saturday, 28 December 2024
Tuesday, 29 October 2024	Friday, 29 November 2024	Sunday, 29 December 2024
Wednesday, 30 October 2024	Saturday, 30 November 2024	Monday, 30 December 2024
Thursday, 31 October 2024		Tuesday, 31 December 2024

1 - Holiday

2 - Composite - Monthly - LRWRP & LRPCP Influent/Effluent

2 - Composite - Monthly - LRWRP & LRPCP Sludge

3 - Composite - Weekly - LRWRP & LRPCP Influent/Effluent

4 - Composite - 2nd Weekly - LRWRP Effluent (CBOD & TSS)

5 - Grab - Weekly - LRWRP & LRPCP Effluent - E. Coli **

6 - Grab - Annual - LRWRP/LRPCP Effluent Toxicity

7 - Grab - Monthly - LRWRP Imported Sewage

8 - Composite - Quarterly - LRWRP Effluent Industrial Wastewater Related

9 - Grab - Quarterly - LRWRP Effluent Leachate Related

10 - Grab - Annual - LRWRP/LRPCP Sludge & Influent/Effluent (Trace Organics)

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** LRWRP - ECA Acute Lethality RT & DM testing is annually unless of test failure (>50% mortality), then testing reverts to quarterly as per MECP ECA (provincial regulation, see LRWRP ECA Condition 9(4) & Schedule D for details)

**LRPCP - Effluent E. Coli must be monitored during the disinfection period from May 1 through October 31

Note: In the event of a holiday or a missed sample, the scheduled sampling date shall be moved to the next available date

LRWRP - Plant operations outside of Normal Operating Conditions - occurs when primary or secondary daily flow exceeds the available capacity for the day

Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow

BOD TSS TP TKN

LRPCP - Primary Overflow

BOD TSS TP E. Coli

2025 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Jan-25	Feb-25	Mar-25
Wednesday, 1 January 2025	Saturday, 1 February 2025	Saturday, 1 March 2025
Thursday, 2 January 2025	Sunday, 2 February 2025	Sunday, 2 March 2025
Friday, 3 January 2025	Monday, 3 February 2025	Monday, 3 March 2025
Saturday, 4 January 2025	Tuesday, 4 February 2025	Tuesday, 4 March 2025
Sunday, 5 January 2025	Wednesday, 5 February 2025	Wednesday, 5 March 2025
Monday, 6 January 2025	Thursday, 6 February 2025	Thursday, 6 March 2025
Tuesday, 7 January 2025	Friday, 7 February 2025	Friday, 7 March 2025
Wednesday, 8 January 2025	Saturday, 8 February 2025	Saturday, 8 March 2025
Thursday, 9 January 2025	Sunday, 9 February 2025	Sunday, 9 March 2025
Friday, 10 January 2025	Monday, 10 February 2025	Monday, 10 March 2025
Saturday, 11 January 2025	Tuesday, 11 February 2025	Tuesday, 11 March 2025
Sunday, 12 January 2025	Wednesday, 12 February 2025	Wednesday, 12 March 2025
Monday, 13 January 2025	Thursday, 13 February 2025	Thursday, 13 March 2025
Tuesday, 14 January 2025	Friday, 14 February 2025	Friday, 14 March 2025
Wednesday, 15 January 2025	Saturday, 15 February 2025	Saturday, 15 March 2025
Thursday, 16 January 2025	Sunday, 16 February 2025	Sunday, 16 March 2025
Friday, 17 January 2025	Monday, 17 February 2025	Monday, 17 March 2025
Saturday, 18 January 2025	Tuesday, 18 February 2025	Tuesday, 18 March 2025
Sunday, 19 January 2025	Wednesday, 19 February 2025	Wednesday, 19 March 2025
Monday, 20 January 2025	Thursday, 20 February 2025	Thursday, 20 March 2025
Tuesday, 21 January 2025	Friday, 21 February 2025	Friday, 21 March 2025
Wednesday, 22 January 2025	Saturday, 22 February 2025	Saturday, 22 March 2025
Thursday, 23 January 2025	Sunday, 23 February 2025	Sunday, 23 March 2025
Friday, 24 January 2025	Monday, 24 February 2025	Monday, 24 March 2025
Saturday, 25 January 2025	Tuesday, 25 February 2025	Tuesday, 25 March 2025
Sunday, 26 January 2025	Wednesday, 26 February 2025	Wednesday, 26 March 2025
Monday, 27 January 2025	Thursday, 27 February 2025	Thursday, 27 March 2025
Tuesday, 28 January 2025	Friday, 28 February 2025	Friday, 28 March 2025
Wednesday, 29 January 2025	Saturday, 1 March 2025	Saturday, 29 March 2025
Thursday, 30 January 2025		Sunday, 30 March 2025
Friday, 31 January 2025		Monday, 31 March 2025

1 - Holiday

2A - Composite - Monthly - LRWRP & LRPCP Influent/Effluent

2B - Composite - Monthly - LRWRP & LRPCP Sludge

3 - Composite - Weekly - LRWRP & LRPCP Influent/Effluent

4 - Composite - 2nd Weekly - LRWRP Effluent (CBOD & TSS)

5 - Grab - Weekly - LRWRP & LRPCP Effluent - E. Coli **

6 - Grab - Annual - LRWRP/LRPCP Effluent Toxicity

7 - Grab - Monthly - LRWRP Imported Sewage

8 - Composite - Quarterly - LRWRP Effluent Industrial Wastewater Related

9 - Grab - Quarterly - LRWRP Effluent Leachate Related

10 - Grab - Annual - LRWRP/LRPCP Sludge & Influent/Effluent (Trace Organics)

** LRWRP - WSER Acute Lethality RT testing is quarterly unless of test failure (>50% mortality), then testing reverts to monthly as per WSER (federal regulation)

** LRWRP - ECA Acute Lethality RT & DM testing is annually unless of test failure (>50% mortality), then testing reverts to quarterly as per MECP ECA (provincial regulation), see LRWRP ECA Condition 9(4) & Schedule D for details

**LRPCP - Effluent E. Coli must be monitored during the disinfection period from May 1 through October 31

Note: In the event of a holiday or a missed sample, the scheduled sampling date shall be moved to the next available date

LRWRP - Plant operations outside of Normal Operating Conditions - occurs when primary or secondary daily flow exceeds the available capacity for the day

Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow

BOD TSS TP TKN

LRPCP - Primary Overflow

BOD TSS TP E. Coli



2025 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Apr-25	May-25	Jun-25
Tuesday, 1 April 2025	Thursday, 1 May 2025	Sunday, 1 June 2025
Wednesday, 2 April 2025	Friday, 2 May 2025	Monday, 2 June 2025
Thursday, 3 April 2025	Saturday, 3 May 2025	Tuesday, 3 June 2025
Friday, 4 April 2025	Sunday, 4 May 2025	Wednesday, 4 June 2025
Saturday, 5 April 2025	Monday, 5 May 2025	Thursday, 5 June 2025
Sunday, 6 April 2025	Tuesday, 6 May 2025	Friday, 6 June 2025
Monday, 7 April 2025	Wednesday, 7 May 2025	Saturday, 7 June 2025
Tuesday, 8 April 2025	Thursday, 8 May 2025	Sunday, 8 June 2025
Wednesday, 9 April 2025	Friday, 9 May 2025	Monday, 9 June 2025
Thursday, 10 April 2025	Saturday, 10 May 2025	Tuesday, 10 June 2025
Friday, 11 April 2025	Sunday, 11 May 2025	Wednesday, 11 June 2025
Saturday, 12 April 2025	Monday, 12 May 2025	Thursday, 12 June 2025
Sunday, 13 April 2025	Tuesday, 13 May 2025	Friday, 13 June 2025
Monday, 14 April 2025	Wednesday, 14 May 2025	Saturday, 14 June 2025
Tuesday, 15 April 2025	Thursday, 15 May 2025	Sunday, 15 June 2025
Wednesday, 16 April 2025	Friday, 16 May 2025	Monday, 16 June 2025
Thursday, 17 April 2025	Saturday, 17 May 2025	Tuesday, 17 June 2025
Friday, 18 April 2025	Sunday, 18 May 2025	Wednesday, 18 June 2025
Saturday, 19 April 2025	Monday, 19 May 2025	Thursday, 19 June 2025
Sunday, 20 April 2025	Tuesday, 20 May 2025	Friday, 20 June 2025
Monday, 21 April 2025	Wednesday, 21 May 2025	Saturday, 21 June 2025
Tuesday, 22 April 2025	Thursday, 22 May 2025	Sunday, 22 June 2025
Wednesday, 23 April 2025	Friday, 23 May 2025	Monday, 23 June 2025
Thursday, 24 April 2025	Saturday, 24 May 2025	Tuesday, 24 June 2025
Friday, 25 April 2025	Sunday, 25 May 2025	Wednesday, 25 June 2025
Saturday, 26 April 2025	Monday, 26 May 2025	Thursday, 26 June 2025
Sunday, 27 April 2025	Tuesday, 27 May 2025	Friday, 27 June 2025
Monday, 28 April 2025	Wednesday, 28 May 2025	Saturday, 28 June 2025
Tuesday, 29 April 2025	Thursday, 29 May 2025	Sunday, 29 June 2025
Wednesday, 30 April 2025	Friday, 30 May 2025	Monday, 30 June 2025
	Saturday, 31 May 2025	

1 - Holiday

2A - Composite - Monthly - LRWRP & LRPCP Influent/Effluent

2B - Composite - Monthly - LRWRP & LRPCP Sludge

3 - Composite - Weekly - LRWRP & LRPCP Influent/Effluent

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9 - Grab - Quarterly - LRWRP Effluent Leachate Related

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LRWRP - Plant operations outside of Normal Operating Conditions - occurs when primary or secondary daily flow exceeds the available capacity for the day
Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow
BOD TSS TP TKN

LRPCP - Primary Overflow
BOD TSS TP E. Coli

2025 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Jul-25	Aug-25	Sep-25
Tuesday, 1 July 2025	Friday, 1 August 2025	Monday, 1 September 2025
Wednesday, 2 July 2025	Saturday, 2 August 2025	Tuesday, 2 September 2025
Thursday, 3 July 2025	Sunday, 3 August 2025	Wednesday, 3 September 2025
Friday, 4 July 2025	Monday, 4 August 2025	Thursday, 4 September 2025
Saturday, 5 July 2025	Tuesday, 5 August 2025	Friday, 5 September 2025
Sunday, 6 July 2025	Wednesday, 6 August 2025	Saturday, 6 September 2025
Monday, 7 July 2025	Thursday, 7 August 2025	Sunday, 7 September 2025
Tuesday, 8 July 2025	Friday, 8 August 2025	Monday, 8 September 2025
Wednesday, 9 July 2025	Saturday, 9 August 2025	Tuesday, 9 September 2025
Thursday, 10 July 2025	Sunday, 10 August 2025	Wednesday, 10 September 2025
Friday, 11 July 2025	Monday, 11 August 2025	Thursday, 11 September 2025
Saturday, 12 July 2025	Tuesday, 12 August 2025	Friday, 12 September 2025
Sunday, 13 July 2025	Wednesday, 13 August 2025	Saturday, 13 September 2025
Monday, 14 July 2025	Thursday, 14 August 2025	Sunday, 14 September 2025
Tuesday, 15 July 2025	Friday, 15 August 2025	Monday, 15 September 2025
Wednesday, 16 July 2025	Saturday, 16 August 2025	Tuesday, 16 September 2025
Thursday, 17 July 2025	Sunday, 17 August 2025	Wednesday, 17 September 2025
Friday, 18 July 2025	Monday, 18 August 2025	Thursday, 18 September 2025
Saturday, 19 July 2025	Tuesday, 19 August 2025	Friday, 19 September 2025
Sunday, 20 July 2025	Wednesday, 20 August 2025	Saturday, 20 September 2025
Monday, 21 July 2025	Thursday, 21 August 2025	Sunday, 21 September 2025
Tuesday, 22 July 2025	Friday, 22 August 2025	Monday, 22 September 2025
Wednesday, 23 July 2025	Saturday, 23 August 2025	Tuesday, 23 September 2025
Thursday, 24 July 2025	Sunday, 24 August 2025	Wednesday, 24 September 2025
Friday, 25 July 2025	Monday, 25 August 2025	Thursday, 25 September 2025
Saturday, 26 July 2025	Tuesday, 26 August 2025	Friday, 26 September 2025
Sunday, 27 July 2025	Wednesday, 27 August 2025	Saturday, 27 September 2025
Monday, 28 July 2025	Thursday, 28 August 2025	Sunday, 28 September 2025
Tuesday, 29 July 2025	Friday, 29 August 2025	Monday, 29 September 2025
Wednesday, 30 July 2025	Saturday, 30 August 2025	Tuesday, 30 September 2025
Thursday, 31 July 2025	Sunday, 31 August 2025	

1 - Holiday

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Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow
BOD TSS TP TKN

LRPCP - Primary Overflow
BOD TSS TP E. Coli



2025 LRWRP/LRPCP MECP ECA & ECCC WSER Testing Schedule

Oct-25	Nov-25	Dec-25
Wednesday, 1 October 2025	Saturday, 1 November 2025	Monday, 1 December 2025
Thursday, 2 October 2025 4 5	Sunday, 2 November 2025	Tuesday, 2 December 2025 3
Friday, 3 October 2025	Monday, 3 November 2025 2A 2B 7	Wednesday, 3 December 2025
Saturday, 4 October 2025	Tuesday, 4 November 2025 3	Thursday, 4 December 2025 4 5
Sunday, 5 October 2025	Wednesday, 5 November 2025	Friday, 5 December 2025
Monday, 6 October 2025 2A 2B 7	Thursday, 6 November 2025 4 5	Saturday, 6 December 2025
Tuesday, 7 October 2025 3	Friday, 7 November 2025	Sunday, 7 December 2025
Wednesday, 8 October 2025	Saturday, 8 November 2025	Monday, 8 December 2025 2A 2B 7
Thursday, 9 October 2025 4 5	Sunday, 9 November 2025	Tuesday, 9 December 2025 3
Friday, 10 October 2025	Monday, 10 November 2025	Wednesday, 10 December 2025
Saturday, 11 October 2025	Tuesday, 11 November 2025 1 3	Thursday, 11 December 2025 4 5
Sunday, 12 October 2025	Wednesday, 12 November 2025	Friday, 12 December 2025
Monday, 13 October 2025 1	Thursday, 13 November 2025 4 5	Saturday, 13 December 2025
Tuesday, 14 October 2025 3	Friday, 14 November 2025	Sunday, 14 December 2025
Wednesday, 15 October 2025	Saturday, 15 November 2025	Monday, 15 December 2025
Thursday, 16 October 2025 4 5	Sunday, 16 November 2025	Tuesday, 16 December 2025 3
Friday, 17 October 2025	Monday, 17 November 2025	Wednesday, 17 December 2025
Saturday, 18 October 2025	Tuesday, 18 November 2025 3	Thursday, 18 December 2025 4 5
Sunday, 19 October 2025	Wednesday, 19 November 2025	Friday, 19 December 2025
Monday, 20 October 2025 8 9	Thursday, 20 November 2025 4 5	Saturday, 20 December 2025
Tuesday, 21 October 2025 3	Friday, 21 November 2025	Sunday, 21 December 2025
Wednesday, 22 October 2025	Saturday, 22 November 2025	Monday, 22 December 2025 4 5
Thursday, 23 October 2025 4 5	Sunday, 23 November 2025	Tuesday, 23 December 2025 3
Friday, 24 October 2025	Monday, 24 November 2025	Wednesday, 24 December 2025
Saturday, 25 October 2025	Tuesday, 25 November 2025 3	Thursday, 25 December 2025 1
Sunday, 26 October 2025	Wednesday, 26 November 2025	Friday, 26 December 2025 1
Monday, 27 October 2025	Thursday, 27 November 2025 4 5	Saturday, 27 December 2025
Tuesday, 28 October 2025 3	Friday, 28 November 2025	Sunday, 28 December 2025
Wednesday, 29 October 2025	Saturday, 29 November 2025	Monday, 29 December 2025 4 5
Thursday, 30 October 2025 4 5	Sunday, 30 November 2025	Tuesday, 30 December 2025 3
Friday, 31 October 2025		Wednesday, 31 December 2025

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Effluent Composite - CBOD TSS TP NH3 TKN NO2 NO3

LRWRP - Raw Sewage or Primary Overflow

BOD TSS TP TKN

LRPCP - Primary Overflow

BOD TSS TP E. Coli

An underwater photograph showing numerous bubbles rising towards the surface, with light rays filtering through the water. The scene is dark and moody, with a greenish-blue tint.

Appendix D

2024 Flow Monitoring Equipment
Calibration Certificates



VERIFICATION REPORT

Customer Name:	City of Windsor						
Plant Name and address:	Little River PCP; 9400 Little River Road, Windsor, ON N8S 4J8						
Service Date:	10-Sep-24	Instrument Type:	FIT	W.O. Number:	240686-0001	Asset#:	NA
Due Date:	10-Sep-25	Manufacturer:	Nivus				
Follow-Up Required:	No	Model:	NF7-5M9E0A002				
As Left Status:	OK	Serial #:	2036NF72324				
Instrument Visual Inspection:		Range:	0 to 82000 m3/d		Output:	4-20 mA	
Mechanical Inspection:	OK	Tag Infomration:	FE01 (L1_UVEE_FM1)				
Electrical Inspection:	OK	Description:	Flow Measurement				
As found Display information:	OK	Process/Location Description:	Flow Measurement				

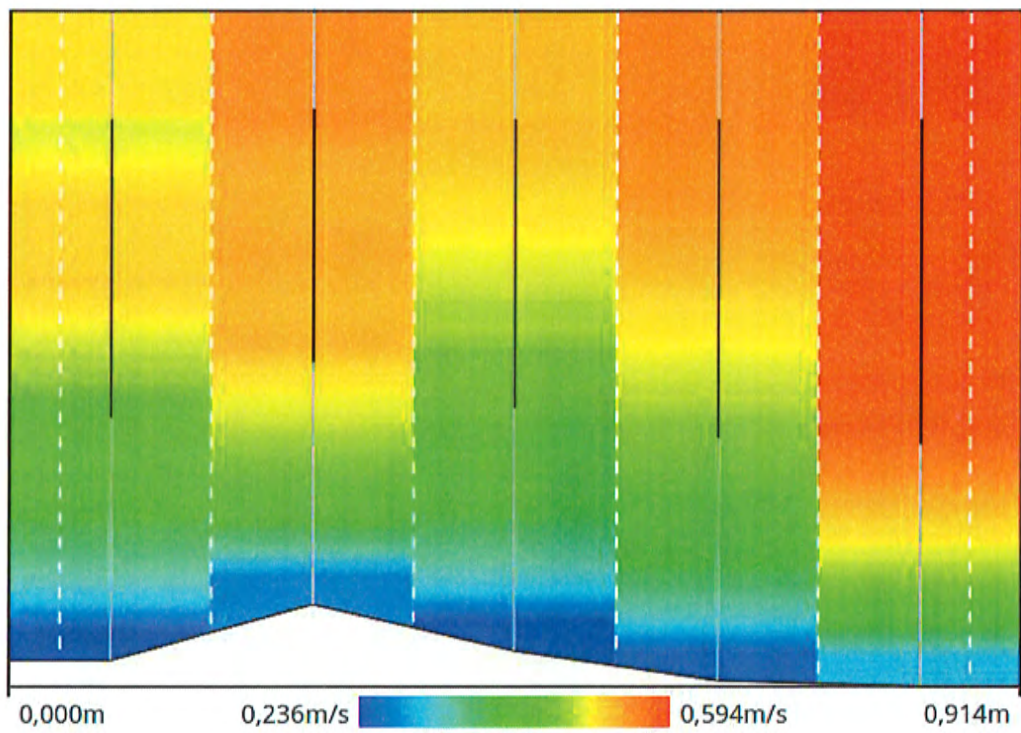
Instrument Information:	
Channel Profile:	Rectangle
Sludge Level:	0.00 m
Flow Unit:	m3/d
Sensor Type:	Wedge
Mounting Height:	0.002 m
Mounting Angle:	0.00°
Offset:	0.00 m
Velocity Unit:	m/s
Level Unit:	m

Point	Channel Width	Portable velocity (m/s)	Process flow meter Average During that Duration velocity reading (m/s)	Deviation (%)
Point 1	0.091	0.453	0.479	-1.25%
Point 2	0.274	0.495		
Point 3	0.457	0.454		
Point 4	0.640	0.478		
Point 5	0.823	0.545		
AVERAGE		0.4850	0.4790	-1.25%

Comments		Test Equipment Used	
		Name / Type	Serial and Due Date
Flow meter verified successfully and it is well within the range.		Nivuflow Nivumobile Stick	2209NFS0094
Channel Width: 0.914 m			
Channel Height: 2.369 m			
Other Outputs Tested:		Tested	
Loop Check Performed:		Tested	
Within Specification:		Yes	
		Technician Name	Witness Name
		Vaibhav/Parth	Curtis
		Date:	10-Sep-24
		Date:	10-Sep-24

FIT01@app1_v [m/s]	
Name:	FIT01@app1_v [m/s]
Start:	10/09/2024 11:22:30
End:	10/09/2024 11:38:00
Number Measurement Values:	32
Measurement Values Duration:	00:15:30
Average:	0.479 [m/s]
Sum:	NaN []
Minimum Value:	-0.293 [m/s]
Minimum Time:	10/09/2024 11:31:30
Maximum Value:	0.571 [m/s]
Maximum Time:	10/09/2024 11:35:30

Fixed Field Flow Meter
L1_UVEE_FM1



Portable Flow Meter



VERIFICATION

Customer Name:		City of Windsor					
Plant Name and address:		Little River WPCP; 9400 Little River Road, Windsor, ON N8S 4J8					
Service Date:	10-Sep-24	Instrument Type:	FIT	W.O. Number:	240686-0001	Asset#:	NA
Due Date:	10-Sep-25	Manufacturer:	Nivus				
Follow-Up Required:	No	Model:	NF7-5M9E0A002				
As Left Status:	OK	Serial #:	2036NF72324				
Instrument Visual Inspection:		Range:	-10000 TO 250000 m3/d		Output:	4-20 mA	
Mechanical Inspection:	OK	Tag Infomration:	FE02 (L1_UVEE_FM2)				
Electrical Inspection:	OK	Description:	Overflow Pipe				
As found Display information:	OK	Process/Location Descrption:	Overflow Pipe				

Instrument Information:	
Channel Profile:	Pipe
Sludge Level:	0.00 m
Flow Unit:	m3/day
Sensor Type:	Fixed
Mounting Height:	0.000 m
Offset:	0.000 m
Velocity Unit:	m/s

Point	Type	As found	As Found	As Left	As Left
Dry verification	Loop Test	4 mA	20mA	4 mA	20mA
	Checked velocity at low and high flow rate found all 16 gates reading , Checked velocity and flow at no flow and found satisfactory performace of flow meter.				

Comments		Test Equipment Used	
		Name / Type	Serial and Due Date
Channel ID : 1.067 m			
Other Outputs Tested:	Tested	Technician Name	Witness Name
Loop Check Performed:	Tested	Vaibhav/Parth	Curtis
Within Specification:	Yes	Date:	10-Sep-24
		Date:	10-Sep-24



CALIBRATION REPORT

TAG NO.: L2_UVEE_FM1
REPORT NO.: 240924
DATE: 25-Sep-24

SITE: Little River WWTP (Windsor)
PROCESS AREA: UV2-Final Effluent
INSTR. TAG: L2_UVEE_FM1
MANUFACTURER: Siemens
MODEL: Sitrans Multiranger 200 HMI
SERIAL No.:
INSTR. RANGE: 0 to 80000 m³/Day

DATE: September 25, 2024
TECHNICIAN: Mike Humphries
REPORT NO.: 240924

PRIMARY

DEVICE: 1.50 m Rectangular Weir

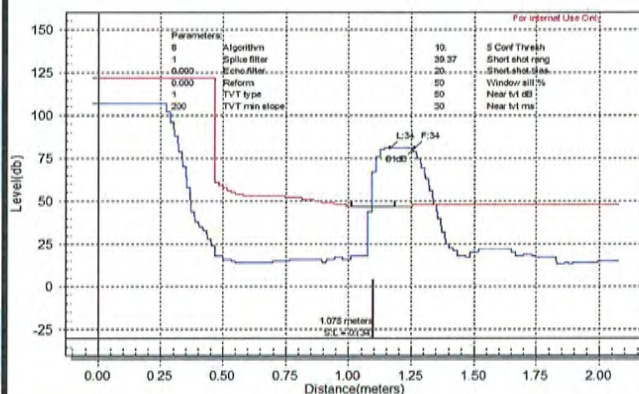
MAX FLOW: 80000 m³/Day

MAX HEAD: 20.00 in

CONSTANT: 37180.64

EXPONENT: 1.5

Output: mA Flow
Zero: 4 0.00
Max: 20 80000.0



Confidence: 33
Echo Strength: 79 dB
Noise Average: -6 dB
Empty: 49.291"
Span: 20.00"
Transducer: XRS-5C

OCM Flow Table

Head Applied (in)	Head Displayed (in)	Error (%)	Calculated Flow (m ³ /d)	Flow Displayed (m ³ /d)	Error (%)	Calculated mA Output	Measured mA Output	Error (%)
0.00	0.00	0.00	0.00	0.00	0.00	4.00	3.99	-0.25
4.00	4	0.00	7155	7096	-0.84	5.43	5.41	-0.39
8.00	8	0.00	20239	20202	-0.18	8.05	8.03	-0.22
12.00	12	0.00	37181	37136	-0.12	11.44	11.42	-0.14
16.00	16	0.00	57243	57131	-0.20	15.45	15.41	-0.25
20.00	20	0.00	80000	79894	-0.13	20.00	19.98	-0.10

Totalizer As Found m³
Totalizer As Left m³

Zero As Found 49.291 in
Zero As Left 49.291 in
Change in Zero 0.000 in

Comments

AS FOUND: PASS

AS LEFT: PASS

CERTIFIED BY:

Mike Humphries



VERIFICATION

Customer Name:	City of Windsor						
Plant Name and address:	Little River WPCP; 9400 Little River Road, Windsor, ON N8S 4J8						
Service Date:	10-Sep-24	Instrument Type:	FIT	W.O. Number:	240686-0001	Asset#:	NA
Due Date:	10-Sep-25	Manufacturer:	Nivus				
Follow-Up Required:	No	Model:	NF7-5G3E0A001				
As Left Status:	OK	Serial #:	2324NF74286				
Instrument Visual Inspection:		Range:	0 to 260000 m^3/Day		Output:	4-20 mA	
Mechanical Inspection:	OK	Tag Infomration:	FIT-01				
Electrical Inspection:	OK	Description:	Storm Water				
As found Display information:	OK	Process/Location Description:	Storm Water				

Instrument Information:	
Channel Profile:	Pipe
Sludge Level:	0.00 m
Flow Unit:	m ³ /day
Sensor Type:	Fixed
Mounting Height:	0.065 m
Offset:	-0.297 m
Velocity Unit:	m/s

Point	Type	As found		As Left
Internal Simulation	4 mA	4 mA		4 mA
	8 mA	8 mA		8 mA
	12 mA	12 mA		12 mA
	16 mA	16 mA		16 mA
	20 mA	20 mA		20 mA

Comments		Test Equipment Used	
		Name / Type	Serial and Due Date
As no flow was available, we performed internal simulation and verified analog output.		Fluke Digital Multimeter	
As SCADA reading was not available, we measured analog mA output from the panel.			
Pipe ID - 1.2 m			
Other Outputs Tested:	Tested	Technician Name	Witness Name
Loop Check Performed:	Tested	Vaibhav/Parth	Curtis
Within Specification:	Yes	Date:	10-Sep-24
		Date:	10-Sep-24

	CALIBRATION REPORT		TAG NO.: LR_GRIT_FM1 REPORT NO.: 240924 DATE: 25-Sep-24	
			SITE: Little River WWTP PROCESS AREA: Influent INSTR. TAG: LR_GRIT_FM1 MANUFACTURER: Milltronics MODEL: Multiranger Plus SERIAL No.: 09887914-01 INSTR. RANGE: 0 - 6000 m³/h	DATE: September 25, 2024 TECHNICIAN: Mike Humphries REPORT NO.: 240924

PRIMARY DEVICE: Modified Parshall Flume MAX FLOW: 6000 m³/h MAX HEAD: 76.20 cm CONSTANT: 9111.5 EXPONENT: 1.537 Output: mA Flow Zero: 4 0.00 Max: 20 6000.0	Confidence: 33 Echo Strength: 85 dB Noise Average: 5 dB Empty: 1.310 m Span: 0.762 m Transducer: ST-25
---	---

OCM Flow Table								
Head Applied (cm)	Head Displayed (cm)	Error (%)	Calculated Flow (m³/h)	Flow Displayed (m³/h)	Error (%)	Calculated mA Output	Measured mA Output	Error (%)
0.00	0.00	0.00	0.00	0.00	0.00	4.00	4.01	0.25
20.00	19.90	-0.50	767.8	764	-0.50	6.05	6.01	-0.63
40.00	40.20	0.50	2228.2	2245	0.75	9.94	9.96	0.18
60.00	60.00	0.00	4155.4	4161	0.14	15.08	14.99	-0.61
76.20	76.40	0.26	6000.0	6038	0.63	20.00	20.06	0.27

Totalizer As Found NA m³ Totalizer As Left NA m³ Zero As Found 1.31000 m³ Zero As Left (including offset) 1.31000 m³ Change in Zero 0.00000 cm	Comments Unable to stop flow at time of service.
---	--

		CALIBRATION REPORT		TAG NO.: LR_GRIT_FM2 REPORT NO.: 240924 DATE: 25-Sep-24
SITE:	Little River WWTP	DATE:	September 25, 2024	
PROCESS AREA:	Influent	TECHNICIAN:	Mike Humphries	
INSTR. TAG:	LR_GRIT_FM2	REPORT NO.:	240924	
MANUFACTURER:	Milltronics			
MODEL:	Multiranger Plus			
SERIAL No.:	09883111-01			
INSTR. RANGE:	0 - 7100 m ³ /h			

PRIMARY DEVICE: Modified Parshall Flume			Confidence: 23 Echo Strength: 83 dB Noise Average: -2 dB Empty: 1.357 m Span: 0.762 m Transducer: ST-25
MAX FLOW:	7100	m ³ /h	
MAX HEAD:	76.20	cm	
CONSTANT:	10802.4		
EXPONENT:	1.544		
Output:	mA	Flow	
Zero:	4	0.00	
Max:	20	7100.0	

OCM Flow Table								
Head Applied (cm)	Head Displayed (cm)	Error (%)	Calculated Flow (m ³ /h)	Flow Displayed (m ³ /h)	Error (%)	Calculated mA Output	Measured mA Output	Error (%)
0.00	0.00	0.00	0.00	0.00	0.00	4.00	3.96	-1.01
20.00	19.90	-0.50	900.1	894	-0.69	6.03	5.99	-0.64
40.00	40.20	0.50	2624.8	2638	0.50	9.92	9.93	0.15
60.00	59.80	-0.33	4908.9	4881	-0.57	15.06	14.99	-0.48
76.20	75.90	-0.40	7100.0	7067	-0.47	20.00	19.92	-0.40

Totalizer As Found NA m ³ Totalizer As Left NA m ³ Zero As Found 1.35700 m ³ Zero As Left (including offset) 1.35700 m ³ Change in Zero 0.00000 cm	Comments Unable to stop flow at time of service.
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AS FOUND: PASS	AS LEFT: PASS	CERTIFIED BY: Mike Humphries
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