

2024 Annual Wastewater Report

Glen Walter Sewage Treatment

Version 2.0

February 18, 2025

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Dark MiPart

Date

Approved by:

Sarah McDonald, P. Eng. General Manager, Infrastructure Services February 18, 2025

Date

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Revision History

Date	Description	Revision	Author
February 4, 2025	Initial Issue for Council Receipt	1.0	D. Seguin
February 18, 2025	Issued for Council Acceptance	2.0	D. Seguin

Glen Walter Sewage Treatment Plant

In accordance with the Amended Certificate of Approval, Number 3-0464-84-889, Notice 3 issue date March 23, 2015, the Water Pollution Control Plant (WPCP) is required to prepare an annual performance report. This document covers the reporting year January 01 to December 31, 2024; the facility performance report summarizes important information regarding the quality of the effluent wastewater, analytical test results, maintenance operations, and relevant activities of the WPCP.

1. Description of the Works

Capacity of Works	787 m ³ /day (average daily flow)
Service Area	Purcell subdivision, South Glengarry
Service Population	Approximately 1,080
Effluent Receiver	St. Lawrence River
Major Process	Secondary aeration treatment facility complete with a phosphorus removal system; ultra violet disinfection

The Glen Walter WPCP received and operates its operation under *Certificates of Approval (now referred to as Environmental Compliance Approval [ECA]) Number 3-0464-84-889*, original, Notice #1 and Notice #2 and Notice #3 documents, in accordance with Section 53 of the Ontario Water Resources Act. The Certificate of Approval outlines the terms and conditions, and, the report captures these terms and conditions in the following sections.

Rated Capacity

For the purposes of the ECA and the terms and conditions specified, the following definition applies: *"Rated Capacity"* means the *Average Daily Flow* for which the *Works* are approved to handle.

The rated capacity of the Glen Walter WPCP is 787 cubic meters per day (m³/day); that is raw influent (flow) into the plant for treatment. During the reporting year 2024, the Glen Walter WPCP exceeded the rated capacity of 787 m³/day, One Hundred-Ninety (190) days.



Monthly Average and Maximum Daily Flows for 2024 (Rated capacity 787 m³/day)

High Flow Events

March 2024 - Snow Melt

August 2024 - Heavy Rain Event

2. Effluent Objectives

The owner and/or operating authority shall use *best efforts* to design, construct and operate the *Works* with the objective that the concentrations and loadings of the materials named below (Table 1) as effluent parameters are not exceeded in the effluent from the *Works*.

Table 1. Enluent best chorts limits as per ECA, condition 3.	Table 1.	Effluent E	Best Efforts	Limits as	per ECA,	condition 3.
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Effluent Parameter	Average	Average Loading	
	Concentration	Objective	
	(milligrams per litre unless	(kilograms per day unless	
	otherwise indicated)	otherwise indicated)	
Column 1	Column 2	Column 3	
CBOD₅	15	-	
Total Suspended Solids	15	-	
Total Phosphorus	0.32	-	
Total Ammonia Nitrogen:		-	
Summer – June 1 to November 30	2.0		
Winter- December 1 to May 31	4.0		
E. Coli – May 1 to September 31	100 organisms per	-	
	100 millilitres		

3. Effluent Limits

The *Owner* shall operate and maintain the *Works* such that the concentrations and waste loadings of the materials named in Table 2 as effluent parameters are not exceeded in the effluent from the *Works*.

Table 2. Effluent Limits as	per C of A,	conditions 1.4
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Effluent Parameter	Average	Average Loading	
	Concentration	Objective	
	(milligrams per litre unless	(kilograms per day unless	
	otherwise indicated)	otherwise indicated)	
Column 1	Column 2	Column 3	
CBOD₅	25	19.7	
Total Suspended Solids	25	19.7	
Total Phosphorus	0.64	0.50	
Total Ammonia Nitrogen:			
Summer – June 1 to November	4.0	3.2	
30	8.0	6.3	
Winter- December 1 to May 31			
E. Coli – May 1 to September 31	200 organisms per	-	
	100 millilitres		

4. Monitoring And Recording

The *Owner* shall, upon commencement of operation of the *Works*, carry out the following the monitoring program.

Effluent Monitoring - (samples to be collected at the outlet of the disinfection facilities or at the outfall sewer as close as possible at the treatment plant).

Parameters	Sample Type	Frequency
CBOD ₅	24-hr composite	Weekly
Total Suspended Solids	24-hr composite	Weekly
Total Phosphorus	24-hr composite	Weekly
Total Ammonia Nitrogen	24-hr composite	Weekly
E. Coli	Grab	Weekly

5. Laboratory

Caduceon Environmental laboratories is contracted to conduct the required analytical tests of the influent (raw) and effluent samples, as per the ECA.

6. 2024 Annual Effluent Quality

In the reporting year 2024, the *Works* were operated and maintained such that the concentrations and waste loadings of the materials named in Table 2 as effluent parameters were not exceeded in the effluent from the *Works*; in compliance with the ECA requirements for the effluent limits parameters.

In addition, *best efforts* were achieved with the objective that the concentrations and loadings of the materials named above in (Table 1) as effluent parameters were not exceeded in the effluent from the *Works*.

Parameters	Average Concentration	Criteria Concentration	Average Loading	Loading Criteria
	mg/L	mg/L	kg/d	kg/d
CBOD ₅	3.1	25	2.49	15.63
Total Suspended Solids	6.6	25	5.69	15.63
Total Phosphorus	0.22	0.86	0.16	0.54
Total Ammonia Nitrogen:				
Summer – June 1 to Nov 30	0.31	4.0	0.17	2.5
Winter- Dec 1 to May 31	0.19	8.0	0.15	5.0
E. Coli	2.9	200 organisms	-	-
		per		
		100 millilitres		

7. Inventory

Chemical	Annual Status	Units
Alum	10.8	Cubic meters

8. Maintenance

The Operators performed the routine operations and maintenance at the treatment plant and pumping stations in accordance with the preventative maintenance program (report on file at plant). The activities are highlighted as follows:

Monthly	Checked Operations and Performance of Sewage Pumps.	
	Flushed Alum Feed Line	
	Rotation of Sewage Pumps	
Treatment Plant	Changed Oil on Blower #1	
	Cleaned Air Diffusers in Digester	
Quarterly	• N/A	
Semi-Annually	 Changed Filters on Blower #1 and #2. 	
	Greased Clarifier Drive.	
	Cleaned Alum Sensors	
Annually	 Annual Calibration of Monitoring Equipment 	
	 Annual Calibration of Flow Meters 	
Major Maintenance	 Install New Blower (Blower #2) 	
	 Install New Pump Station Level Sensor (Mar) 	
	 Effluent Inspection (May) 	
	 Effluent Flush and Repair (Jul) 	
	Clean Grit Channel (Jul)	
	 Pump station cleaning x 3 Stations (Jul) 	
	Manhole Grouting (Sep)	
	CIPP Spot Repairs (Sep)	
	Grouting (Sep)	

9. Operational Issues

There were no operational issues noted during 2024.

10. Biosolid (Sludge) Summary

The Glen Walter WPCP has a program in place for the removal of biosolids transferred from the Glen Walter W.P.C.P *Works to the Lancaster lagoons*; volume totaling 499 m³ for the fiscal year 2024. Joseph Romeo René Goulet (Certificate of Approval Hauler # A 920463) is contracted and hauled/transported 499 m³ to the Lancaster Lagoons for disposal.

The *Works* maintains haulage records for biosolids transferred from the Glen Walter WPCP to the Lancaster Lagoons; available upon request.

11. Complaints

No complaints reported during the 2024 operational year.

12. By-Pass Report(s)

By-passing occurrences: 1

Overflow 1		
Date:	August 9th, 2024	
Asset:	Glen Walter SPS #1	
Location:	18352 County Road 2	
Reference Number:	1-9RIKA8	
Cause:	Wet Weather	
Volume:	1026m3	
Duration:	9.5hours	
Disinfection:	None	
Adverse Impact:	None	
Grab Samples:	Yes	

*All by-pass/overflows for the collection system(s) have been moved to the Municipal sewer collection report for 2024 and ongoing. However, bypass/overflows may still occur for the wastewater system facility(s).

13. Reports

- Appendix A Lancaster Sewage Annual Performance Report 2024 (Attached)
- Caduceon Environmental Laboratories Analytical Reports (on-file at plant)
- Lancaster Daily/Monthly Report Summary (on-file at plant)
- Lancaster Bypass Incident Report (on-file at plant)

	Infi	luent Flow		Effluent Flow	Biochemic	al Oxygen:	Demand	Suspend	led Solids	- Total	Ы	osphorus		Ammonium		Waste Lo	oadings		Alum	Effluent Flow
		Average	Maximum		A verage	Average		Average	Average		Average	Average		Average						
	Total X 1000	X 1000	Daily X	Total X 1000	Influent	Effluent	Removal	Influent	Effluent	Removal	Influent	Effluent	Removal	Effluent	BOD	TSS		N-NH3		
	т3	<i>m</i> 3	1000 m3	m3/D	mg/L	mg/L	Percent	mg/L	mg/L	Percent	mg/L	mg/L	Percent	mg/L	Kg/D	Kg/D	TP Kg/D	Kg/D	m3 Used	Average m3/D
January	29.337	0.946	1.597	29.337	4	3.00	93.18	156	5.40	96.54	2.36	0.11	95.34	0.17	2.84	5.11	0.10	0.16	0.892	0.946
February	27.257	0.939	1.228	27.257	45	3.00	93.33	106	6.50	93.87	2.94	0.09	96.94	0.06	2.82	6.10	0.08	0.06	9:830	66.0
March	31.165	1.005	2.056	31.165	32	3.25	89.84	72	15.25	78.82	1.98	0.29	85.35	0.06	3.27	15.33	0.29	0.06	0.888	1.005
April	33.021	1.100	1.557	33.021	42	3.00	92.86	82	12.00	85.37	2.70	0.09	96.67	0.05	3.30	13.20	0.10	0.06	0:993	1.100
May	25.041	0.807	0.985	25.041	26	3.00	88.46	114	3.50	96.93	2.66	0.09	96.62	0.08	2.42	2.82	0.07	0.06	1.026	0.807
June	24.961	0.832	1.341	24.961	64	3.00	95.31	136	5.00	96.32	3.48	0.22	93.68	0.34	2.50	4.16	0.18	0.28	0:826	0.832
July	24.856	0.801	1.338	24.856	53	3.00	94.34	135	6.40	95.26	2.59	0.25	90.35	0.08	2.40	5.13	0.20	0.06	0.829	0.801
August	32.021	1.032	2.886	32.021	84	3.00	96.43	155	4.50	97.10	4.10	0.20	95.12	0.06	3.10	4.64	0.21	0.06	0.892	1.032
September	19.028	0.634	1.026	19.028	68	3.50	94.85	124	3.25	97.38	3.01	0.20	93.36	0.08	2.22	2.06	0.13	0.05	0.864	0.634
October	16.060	0.518	0.639	16.060	64	3.00	95.31	120	6.00	95.00	3.37	0.25	92.58	0.07	1.55	3.11	0.13	0.04	0.892	0.518
November	14.273	0.475	0.595	14.273	74	3.00	95.95	200	4.50	97.75	5.08	0.64	87.40	1.23	1.43	2.14	0.30	0.58	0:938	0.475
December	20.907	0.674	1.237	20.907	195	3.00	98.46	525	6.60	98.74	6.79	0.22	96.76	0.74	2.02	4.45	0.15	0.50	0.892	0.674
Total	297.927			297.927										3.02	29.86	68.25	1.95	1.98	10.797	9.76
Average		0.814		24.827	65.9	3.1	94.0	160.4	6.6	94.1	3.42	0.22	93.35	0.25	2.49	5.69	0.16	0.16	0.900	0.81
Criteria		0.787				25			25			0.64		(S) 4 W (8)	19.7	19.7	0.5	S 3.2		
																		W 6.3		
Maximum		0.814				3.5			15.3			0.64		(S) Y (W) Y						
Compliance		N				Yes			Yes			Yes		Yes	Yes	Yes	Yes	Yes		
Maximum Compliance		<u>0.814</u> No				3.5 Yes			15.3 Yes			0.64 Yes			(S) Y (W) Y Yes	(S) Y (W) Y Yes Yes	(S) Y (W) Y Yes Yes Yes	(S) Y (W) Y Yes Yes Yes	(S) Y (W) Y (S) Y (W) Y (S) Y (W) Y (S) Y (S) Y	(S) Y (W) Y (S) Y (W) Y Yes Yes Yes Yes

Water Course: St. Lawrence River Design Capacity: 0.787 x 1000 m3/D

> Annual Report Data 2024

Description: 3 Sewage Pumping Stations - 1 Extended Aeration Plant - UV Effluent Disinfection

Municipality: Township of South Glengarry Project: Glen Walter W.P.C.P

	Efflu	ient E-Coli	i
	Min	Max	Geo. Mean
January	1	2	1.4
February	1	1	1.0
March	1	10	3.2
April	1	1	1.0
May	1	42	6.5
June	5	24	11.0
July	1	2	1.4
August	1	1	1.0
September	1	14	3.7
October	1	1	1.0
November	1	3	1.7
December	1	2	1.4

Average	1.3	9	2.9
Criteria		200	
Maximum		Yes	
Compliance		Yes	

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