2025
Annual Wastewater Report

Lancaster Sewage Treatment

Version 2.0

Prepared by: _____ February 18, 2026

Dillen Seguin
Director of Water and Wastewater

Date

Approved by: _____ February 18, 2026

David Kuhn
General Manager, Infrastructure Services

Date

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Revision History

Date	Description	Revision	Author
February 2, 2026	Initial Issue for Council Receipt	1.0	D. Seguin
February 18, 2026	Issued For Council Acceptance	2.0	D. Seguin

Lancaster Sewage Treatment Plant

In accordance with the Certificate of Approval, Number 8124-4L9KB9, Issue date July 17, 2000 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, 2025; 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	1,490 m^3/day (average daily flow)
Service Area	Village of Lancaster & South Lancaster
Service Population	Approximately 1,190
Effluent Receiver	Lake St. Francis
Major Process	Facultative Lagoon treatment facility complete with a phosphorus removal system

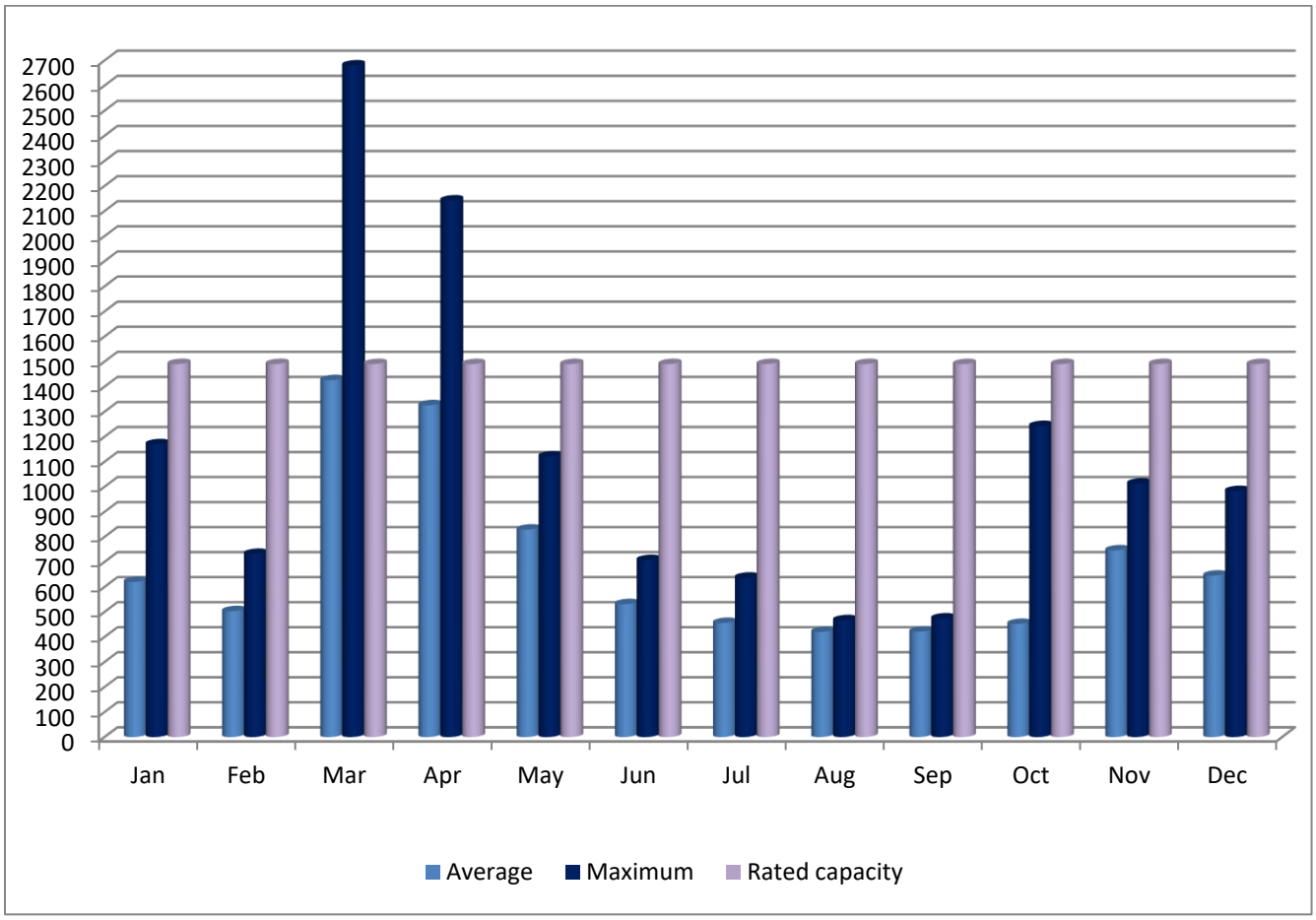
The Lancaster WPCP received and operates its operation under *Certificates of Approval (now referred to as Environmental Compliance Approval [ECA]) Number 8124-4L9KB9,* in accordance with Section 53 of the Ontario Water Resources Act. The Certificate of Approval outlines the terms and conditions, and the report captures these terms and conditions in the following sections.

2. 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 Lancaster WPCP is 1,490 cubic meters per day (m^3/day); that is raw influent (flow) into the lagoon for treatment. During the reporting year 2025, the Lancaster WPCP exceeded the rated capacity of 1,490 m3/day, twenty (20) days.

Monthly Average and Maximum Daily Flows for 2025 (Rated capacity 1,490 m^3/day)



High Flow Events

March 2025 – Snow Melt

April 2025 – Heavy Rain Event

3. 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. Effluent Best Efforts Limits as per ECA, condition 3.1

Effluent Parameter	**Average Concentration** (milligrams per litre unless otherwise indicated)	**Average Loading Objective** (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
$CBOD_5$	25	37.3
Total Suspended Solids	30	44.7
Total Phosphorus Summer – June 1 to November 30 Winter – December 1 to May 31	 0.4 0.8	 0.60 1.2
Total Ammonia Nitrogen: Summer – June 1 to November 30 Winter- December 1 to May 31	 11 18	 16.4 26.8
E. Coli – May 1 to September 31		-

4. 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

Effluent Parameter	**Average Concentration** (milligrams per litre unless otherwise indicated)	**Average Loading Objective** (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
$CBOD_5$	30	44.7
Total Suspended Solids	40	59.6
Total Phosphorus Summer – June 1 to November 30 Winter – December 1 to May 31	 0.5 1.0	 0.75 1.5
Total Ammonia Nitrogen: Summer – June 1 to November 30 Winter- December 1 to May 31	 13 20	 19.4 30.0
E. Coli – May 1 to September 31		-

5. 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	Bi-monthly
Total Suspended Solids	24-hr composite	Bi-monthly
Total Phosphorus	24-hr composite	Weekly
Total Ammonia Nitrogen	24-hr composite	Weekly
E. Coli	Grab	Weekly

6. Laboratory

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

7. 2025 Annual Effluent Quality

In the reporting year 2025, 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 mg/L	Criteria Concentration mg/L	Average Loading kg/d	Loading Criteria kg/d
$CBOD_5$	5.21	30	4.10	44.7
Total Suspended Solids	12.73	40	10.43	59.6
Total Phosphorus: Summer – June 1 to Nov 30 Winter – Dec 1 to May 31	 0.19 0.26	 0.5 1.0	 0.11 0.27	 0.75 1.5
Total Ammonia Nitrogen: Summer – June 1 to Nov 30 Winter- Dec 1 to May 31	 6.05 12.30	 13 20	 3.80 12.05	 19.4 30.0
E. Coli			-	-

8. Inventory

Chemical	Annual Status	Units
Alum	49.370	Cubic meters

9. 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.
Treatment Plant	• Changed Oil - Blower #1, #2 and #3
Quarterly	• N/A
Semi-Annually	• Cleaned Filters on Blower #1, #2 and #3.
Annually	• Annual Calibration of Monitoring Equipment • Annual Calibration of Flow Meters
Major Maintenance	• Alum Tank Plastic Welding (Mar) • Splitter Box Flushing (Jun) • Lagoon Grass Cut (Jun) • Pump Station Cleaning x 2 Stations (Jun) • Confined Space for Inspections x 2 (Nov) • Confined Space for Sensor Fault/Repair • Steam Clean Alum Tank (Nov) • Alum Tank Liner Installed (Dec) • Alum Line at Lagoon Replaced (Dec)

10. Operational Issues

There were no operational issues noted during 2025.

11. 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 433 m^3 for the fiscal year 2025. Goulet Septic (Certificate of Approval Hauler # A 920463) is contracted and hauled/transported 433 m^3 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.

12. Complaints

No complaints reported during the 2025 operational year.

13. By-Pass Report(s)

By-passing occurrences: 0

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

14. Reports

- Appendix A – Lancaster Sewage Annual Performance Report 2025 (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)

Municipality: Township of South Glengarry
Project: Lancaster Lagoons

Annual Report Data
2025

Water Course: Lake St. Francis
Design Capacity: 1.490 x 1000 m3/D

Description: 2 Sewage Pumping Stations - 1 Aeration Cell - Facultative Treatment - Continuous Discharge

	Influent Flow			*Effluent*	*Biochemical Oxygen Demand*			*Suspended Solids - Total*			*Phosphorus*			*Ammonium*	*Waste Loadings*				*Alum*	*Effluent Flow*
	Total X 1000 m3	*Average X 1000 m3*	*Maximum Daily X 1000 m3*	*Flow - Total X 1000 m3/D*	*Average Influent mg/L*	*Average Effluent mg/L*	*Removal Percent*	*Average Influent mg/L*	*Average Effluent mg/L*	*Removal Percent*	*Average Influent mg/L*	*Average Effluent mg/L*	*Removal Percent*	*Average Effluent mg/L*	*BOD Kg/D*	*TSS Kg/D*	*TP Kg/D*	*N-NH3 Kg/D*	*m3 Used*	Average m3/D
January	19.233	0.620	1.170	24.884	119.50	4.00	96.65	239.50	5.50	97.70	4.76	0.24	94.96	13.65	3.21	4.41	0.19	10.95	3.500	0.802
February	14.092	0.503	0.732	14.665	130.00	10.50	91.92	211.25	12.00	94.32	5.65	0.27	95.22	18.58	5.49	6.28	0.14	9.72	2.675	0.523
March	44.223	1.426	2.680	46.334	70.75	10.75	84.81	135.50	15.00	88.93	2.59	0.44	83.01	16.70	16.06	22.41	0.66	24.95	4.200	1.494
April	39.800	1.326	2.142	44.062	61.00	4.00	93.44	113.25	14.25	87.42	1.95	0.19	90.26	8.66	5.87	20.92	0.28	12.71	5.850	1.468
May	25.720	0.829	1.121	25.111	142.50	3.00	97.89	211.75	3.50	98.35	4.87	0.05	98.97	1.75	2.43	2.84	0.04	1.42	5.760	0.810
June	15.931	0.531	0.707	17.344	136.25	3.25	97.61	246.25	3.00	98.78	4.98	0.05	99.00	0.24	1.88	1.73	0.03	0.14	5.180	0.578
July	13.784	0.456	0.637	12.764	179.50	3.25	98.19	454.50	5.00	98.90	8.93	0.06	99.33	0.35	1.34	2.06	0.02	0.14	4.550	0.411
August	13.040	0.420	0.467	8.224	168.75	6.75	96.00	565.25	17.00	96.99	13.41	0.27	97.99	2.34	1.79	4.51	0.07	0.62	4.125	0.265
September	12.650	0.421	0.474	10.266	182.00	4.00	97.80	482.00	9.25	98.08	8.12	0.16	98.03	6.73	1.37	3.16	0.05	2.30	4.850	0.342
October	14.023	0.452	1.243	12.896	187.00	4.25	97.73	301.25	11.25	96.27	7.47	0.27	96.39	12.1	1.77	4.68	0.11	5.03	3.630	0.416
November	22.402	0.746	1.013	29.974	104.00	4.50	95.67	212.50	28.00	86.82	4.84	0.35	92.77	14.55	4.50	27.97	0.35	14.54	2.700	0.999
December	20.018	0.645	0.983	25.934	92.75	4.25	95.42	158.50	29.00	81.70	3.74	0.36	90.37	15.05	3.55	24.24	0.30	12.58	2.350	0.836
Total	254.916			272.458											49.25	125.20	2.25	95.10	49.370	8.944
Average	21.243	0.698	1.114	22.705	131.17	5.21	95.26	277.63	12.73	93.69	5.94	0.23	94.69	9.23	4.10	10.43	0.19	7.93		
Criteria		*1.49*				*30*			*40*			*S 0.5*		*S 13*	*44.7*	*59.6*	*S 0.75*	S 19.4		
												W 1.0		*W 20*			*W 1.5*	W 30		
Maximum		1.426				5.21			12.73								0.19	7.9		
Compliance		Yes				Yes			Yes			Yes		Yes	Yes	Yes	Yes	Yes		

Lancaster Lagoon pH Readings 2025 (x3 Per Week)

Jan-24		pH	Feb-24		pH	Mar-24		pH	Apr-24		pH	May-24		pH	Jun-24		pH	Jul-24		pH	Aug-24		pH	Sep-24		pH	Oct-24		pH	Nov-24		pH	Dec-24		pH
Total			Total			Total			Total			Total			Total			Total			Total			Total			Total			Total			Total	
Average	7.26		Average	7.24		Average	7.25		Average	7.93		Average	7.55		Average	7.59		Average	7.69		Average	7.36		Average	7.42		Average	7.40		Average	8.05		Average	7.72
1	7.01		1	7.1		1			1	7.3		1	7.66		1			1			1			1			1	7.75		1			1	8.21
2	7.29		2	7.41		2			2	7.34		2			2	7.4		2	7.84		2			2	7.33		2	7.73		2			2	8.51
3			3	7.21		3	7.21		3	7.01		3			3	7.46		3	7.32		3			3			3			3	7.5		3	8.1
4			4			4	7.27		4			4			4			4			4			4	7.39		4			4	7.7		4	
5			5			5	7.5		5			5	7.6		5	7.59		5			5	7.74		5	7.31		5			5	7.72		5	
6	7.46		6			6			6			6			6			6			6	7.52		6			6	7.35		6			6	
7	7.34		7			7			7	7.46		7	7.49		7			7	7.89		7	7.21		7			7	7.32		7			7	
8	7.21		8			8			8	7.41		8	7.48		8			8	7.57		8			8	7.4		8	7.48		8			8	8.08
9			9			9			9	7.75		9			9	7.37		9	7.31		9			9	7.48		9			9			9	8.22
10			10	7.17		10	7.1		10			10			10	7.3		10			10			10	7.47		10			10	7.89		10	7.99
11			11	7.21		11	7.09		11			11			11	7.58		11			11	7.4		11			11			11			11	
12			12	7.19		12			12			12	7.45		12	7.63		12			12	7.52		12			12			12	8.02		12	
13	7.14		13			13			13			13	7.6		13			13			13	7.32		13			13			13	8.16		13	
14	7.16		14			14			14	8.43		14	7.64		14			14	7.42		14			14			14	7.37		14			14	
15	7.21		15			15			15	8.37		15			15			15	7.72		15			15	7.48		15	7.45		15			15	7.51
16			16			16			16	8.37		16			16	7.76		16	7.47		16			16	7.51		16	7.05		16			16	7.61
17			17			17	7.13		17			17			17	7.75		17	7.55		17			17	7.47		17			17	8.2		17	7.56
18			18	7.15		18	7.42		18			18			18			18			18	7.26		18			18			18	8.34		18	7.55
19			19	7.51		19	7.29		19			19			19	7.6		19			19	7.28		19			19			19	8.32		19	
20	7.11		20	7.39		20			20			20	7.45		20			20			20	7.31		20			20	7.4		20			20	
21	7.35		21			21			21			21	7.5		21			21	7.41		21	7.22		21			21	7.25		21			21	
22	7.31		22			22			22	8.46		22	7.44		22			22	7.84		22			22	7.43		22	7.34		22			22	7.52
23			23			23			23	8.74		23			23	7.74		23	7.44		23			23	7.45		23			23			23	7.46
24			24	7.3		24	7.52		24	8.69		24			24	7.87		24			24			24	7.39		24			24	8.18		24	
25			25	7.03		25	7.33		25			25			25	7.54		25			25	7.28		25			25			25	8.12		25	
26			26	7.18		26	7.24		26			26	7.48		26	7.54		26			26	7.26		26			26			26	8.27		26	7.21
27	7.25		27			27			27			27	7.6		27			27			27	7.34		27			27	7.35		27	8.26		27	
28	7.41		28			28			28	8.01		28	7.73		28			28	7.71		28			28			28	7.37		28			28	
29	7.41					29			29	7.93		29			29			29	8.75		29			29	7.38		29	7.39		29			29	7.29
30						30			30	7.71		30			30	7.71		30	8.15		30			30			30			30			30	7.44
31						31	7.12					31						31			31						31						31	7.3