



**LANCASTER SEWAGE TREATMENT  
Annual Report  
2021**

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**The Corporation of the Township of South Glengarry  
Lancaster Sewage Treatment  
(Sewage Plant)  
2021 Annual Performance Report**

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, 2021; 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.

**DESCRIPTION OF WORKS**

Capacity of Works	1,490 m <sup>3</sup> /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

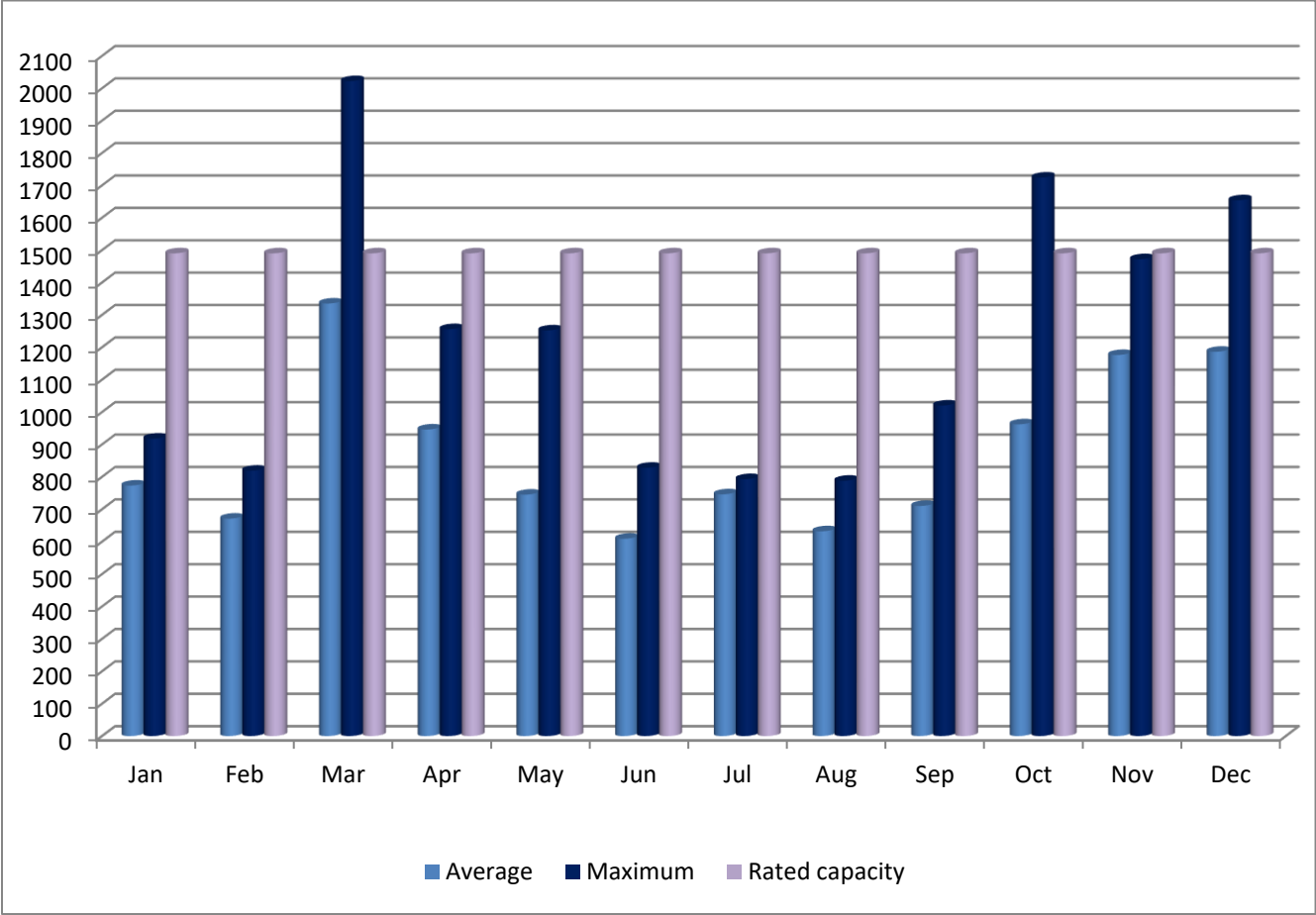
The Lancaster WPCP received and operates its operation under *Certificates of Approval (now referred to as Environmental Compliance Approval [ECA]) Number 8124-4L9KB9*, in accordance with Section 53 of the Ontario Water Resources Act. The Certificate of Approval outlines the terms and conditions, and,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

**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<sup>3</sup>/day); that is raw influent (flow) into the lagoon for treatment. During the reporting year 2021, the Lancaster WPCP exceeded the rated capacity of 1,490 m<sup>3</sup>/day, Four-teen (14) days.

**Monthly Average and Maximum Daily Flows for 2021**  
**(Rated capacity 1,490 m<sup>3</sup>/day)**



## 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*.

**Effluent *Best Efforts* Limits as per ECA, condition 3.1 Table 1**

<b>Effluent Parameter</b>	<b>Average Concentration</b> (milligrams per litre unless otherwise indicated)	<b>Average Loading Objective</b> (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
<i>CBOD<sub>5</sub></i>	25	37.3
Total Suspended Solids	30	44.7
Total Phosphorus		
Summer – June 1 to November 30	0.4	0.60
Winter – December 1 to May 31	0.8	1.2
Total Ammonia Nitrogen:		
Summer – June 1 to November 30	11	16.4
Winter- December 1 to May 31	18	26.8
<i>E. Coli – May 1 to September 31</i>		-

## 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*.

**Effluent Limits as per C of A, conditions 1.4 Table 2**

<b>Effluent Parameter</b>	<b>Average Concentration</b> (milligrams per litre unless otherwise indicated)	<b>Average Loading Objective</b> (kilograms per day unless otherwise indicated)
Column 1	Column 2	Column 3
<i>CBOD<sub>5</sub></i>	30	44.7
Total Suspended Solids	40	59.6
Total Phosphorus		
Summer – June 1 to November 30	0.5	0.75
Winter – December 1 to May 31	1.0	1.5
Total Ammonia Nitrogen:		
Summer – June 1 to November 30	13	19.4
Winter- December 1 to May 31	20	30.0
<i>E. Coli – May 1 to September 31</i>		-

## 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)**

### Effluent Monitoring

Parameters	Sample Type	Frequency
<i>CBOD<sub>5</sub></i>	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
<i>E. Coli</i>	Grab	Weekly

## LABORATORY

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

### 2021 ANNUAL EFFLUENT QUALITY:

Parameters	Average Concentration mg/L	Criteria Concentration mg/L	Average Loading, kg/d	Loading Criteria, kg/d
<i>CBOD<sub>5</sub></i>	4.8	30	3.73	44.7
Total Suspended Solids	6.8	40	5.43	59.6
Total Phosphorus				
Summer – June 1 to November 30	0.12	0.5	0.08	0.75
Winter – December 1 to May 31	0.21	1.0	0.17	1.5
Total Ammonia Nitrogen:				
Summer – June 1 to November 30	5.59	13	4.60	19.4
Winter- December 1 to May 31	9.39	20	7.81	30.0
<i>E. Coli</i>	21.4		-	-

In the reporting year 2021, 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*

## **INVENTORY**

<b>Chemical</b>	<b>Annual Status</b>	<b>Units</b>
Alum	41.5	Cubic meters

## **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**

- New pump station sensor installed on South Beech (May)
- Cleaning of pump station (May/Jun)
- Pump #1 Old Montreal pump station sent out for repair (Aug)
- Clean gravity sewer on Victoria due to blockage (Aug)
- Clean gravity sewer on Military Road due to blockage (Aug)
- Sewer force main break South Beech Street (Nov)

## **OPERATIONAL ISSUES**

No operational issues noted within the 2021 fiscal year

## **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 360 m<sup>3</sup> for the fiscal year 2021. Joseph Romeo René Goulet (Certificate of Approval Hauler # A 920463) is contracted and hauled/transported 360 m<sup>3</sup> 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.

## **COMPLAINTS**

No complaints reported during the 2021 operational year

## **BY-PASS REPORT(S)**

No By-passes in 2021

## **REPORTS**

Appendix A – Lancaster Sewage Annual Performance Report 2021 (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)

**APPENDIX – A –  
Lancaster Lagoons  
2021**





