



GLEN WALTER SEWAGE TREATMENT
Annual Report
2021

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**The Corporation of the Township of South Glengarry
Glen Walter Water Pollution Control Plant
(Sewage Plant)
2021 Annual Performance Report**

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, 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	787 m ³ /day (average daily flow)
Service Area	Purcell subdivision, South Glengarry
Service Population	Approximately 875
Effluent Receiver	St. Lawrence River
Major Process	Secondary aeration treatment facility complete with a phosphorus removal system; ultra violet disinfection

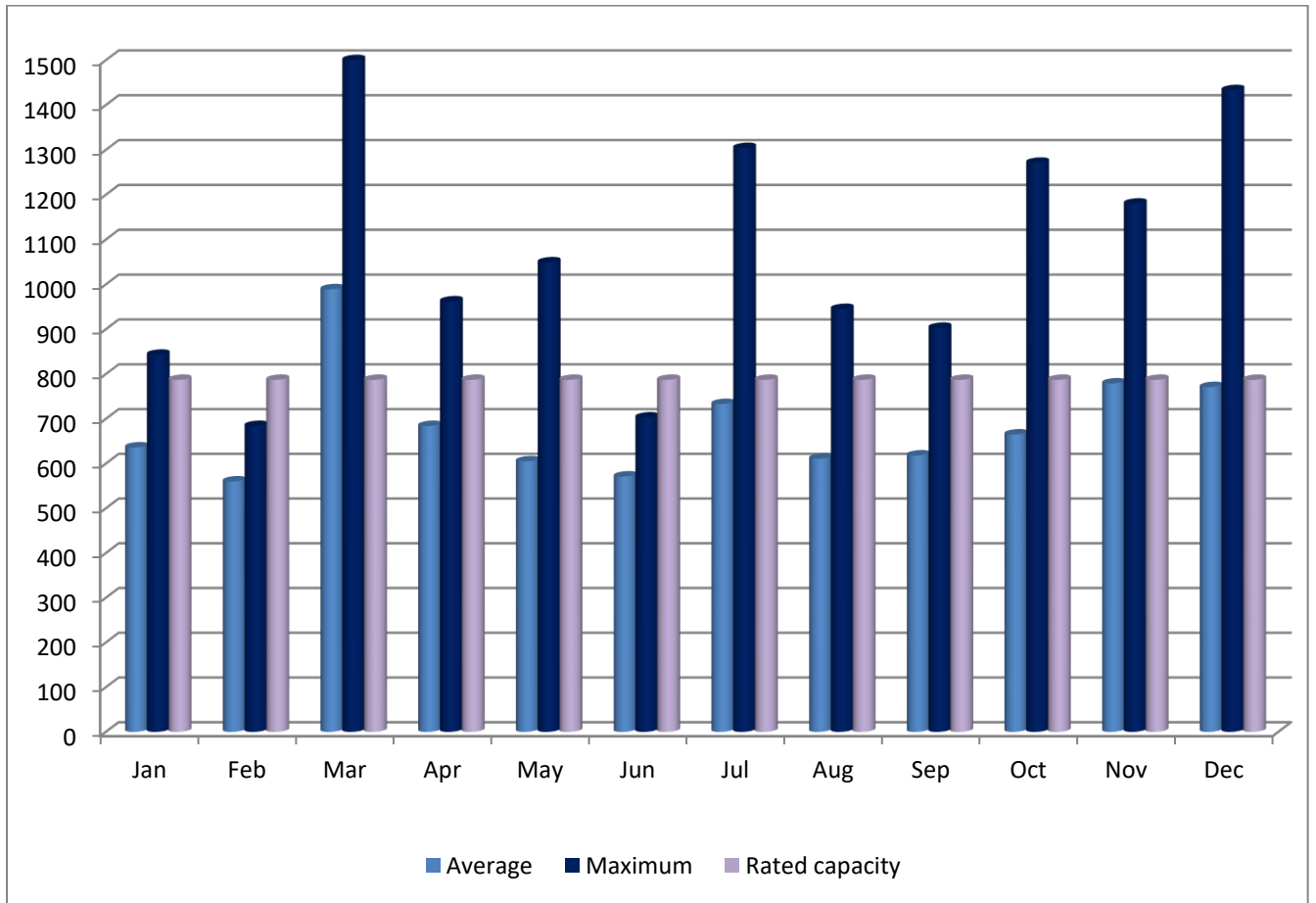
The Glen Walter WPCP received and operates its operation under *Certificates of Approval (now referred to as Environmental Compliance Approval [ECA])* Number 3-0464-84-889, original, Notice #1 and Notice #2 and Notice #3 documents, in accordance with Section 53 of the Ontario Water Resources Act. The 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 2021, the Glen Walter WPCP exceeded the rated capacity of 787 m³/day, seventy-nine (79) days.

Monthly Average and Maximum Daily Flows for 2021
(Rated capacity 787 m³/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

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
<i>CBOD₅</i>	15	9.38
Total Suspended Solids	15	9.38
Total Phosphorus	0.5	0.31
Total Ammonia Nitrogen:		
Summer - 14° C (May 1 to September 30)	2.0	1.25
Winter- 4° C (October 1 – April 30)	4.0	2.50
<i>E. Coli</i>	100 organisms per 100 millilitres	-

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 4 (1) – Table 2

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
<i>CBOD₅</i>	25	15.63
Total Suspended Solids	25	15.63
Total Phosphorus	0.86	0.54
Total Ammonia Nitrogen:		
Summer - 14° C (May 1 to September 30)	4.0	2.5
Winter- 4° C (October 1 – April 30)	8.0	5.0
<i>E. Coli</i>	200 organisms per 100 millilitres	-

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>CBOD₅</i>	24-hr composite	Weekly
Total Suspended Solids	24-hr composite	Weekly
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>CBOD₅</i>	3.1	25	2.10	15.63
Total Suspended Solids	5.4	25	3.64	15.63
Total Phosphorus	0.21	0.86	0.14	0.54
Total Ammonia Nitrogen:				
Summer - 14° C (May 1 to September 30)	0.79	4.0	0.49	2.5
Winter- 4° C (October 1 – April 30)	1.39	8.0	0.99	5.0
<i>E. Coli</i> (monthly geometric mean density)	1.6	200 organisms per 100 millilitres	-	-

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

Chemical	Annual Status	Units
Alum	9.7	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.
- Flushed Alum feed line

TREATMENT PLANT

- Changed oil on blower #1 and #2
- Cleaned air diffusers in digester

PUMP STATIONS

- Cleaned Check Valves at SPS #1
- Greased Check Valves at SPS #2

QUARTERLY

N/A

SEMI-ANNUALLY

- Changed filters on blower #1 and #2.
- Greased comminutor and clarifier drive.
- Cleaned alum sensors

ANNUALLY

- Annual calibration of monitoring equipment
- Annual calibration of flow meters

MAJOR MAINTENANCE

- New heat trace wire installed on sewage plant (Jan)
- Fixed blower #2 required new pulley and belts (Mar)
- Pump station cleaning (May/Jul)
- New pump station PSL installed (May)
- Sewage force main break on County Rd. 2 (Yacht Force main) (Aug)
- New Sewage pump installed (Nov)
- Breaker for sewage pump 1 replaced (Nov)
- Blower #2 sent out for rebuild (Nov)
- Clean and camera gravity fed sewer on County Road 2 (Golf Course to Purcell) (Dec)
- Clean and camera gravity fed sewer on St. Laurent Blvd. (Dec)

OPERATIONAL ISSUES

The facility met all operational requirements for the fiscal year January 01 – December 31, 2021.

BIOSOLID (SLUDGE) SUMMARY

The Glen Walter WPCP has a program in place for the removal of biosolids transferred from the *Works*; volume totaling 360 m³ for the fiscal year 2021. Joseph Romeo René Goulet (Certificate of Approval Hauler # A 920463) is contracted and hauled/transported 360 m³ to the Lancaster Lagoons for disposal.

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

COMPLAINTS

No complaints were lodged in the fiscal year January 01 – December 31, 2021.

BY-PASS REPORT(S)

By-passing occurrences: (0)

REPORTS

Appendix A – Annual Performance (2021)

Caduceon Environmental Laboratories Analytical Reports (on-file at plant)

Glen Walter Daily/Monthly Report Summary – (on-file at plant)

Bypass Report (on-file at plant as per occurrence)