



**GLEN WALTER SEWAGE TREATMENT  
Annual Report  
2018**

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**The Corporation of the Township of South Glengarry  
Glen Walter Water Pollution Control Plant  
(Sewage Plant)  
2018 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, 2018; 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 <sup>3</sup> /day (average daily flow)
Service Area	Purcell subdivision, South Glengarry
Service Population	approximately 775
Effluent Receiver	St. Lawrence River
Major Process	Secondary aeration treatment facility complete with a phosphorus removal system; ultra violet disinfection

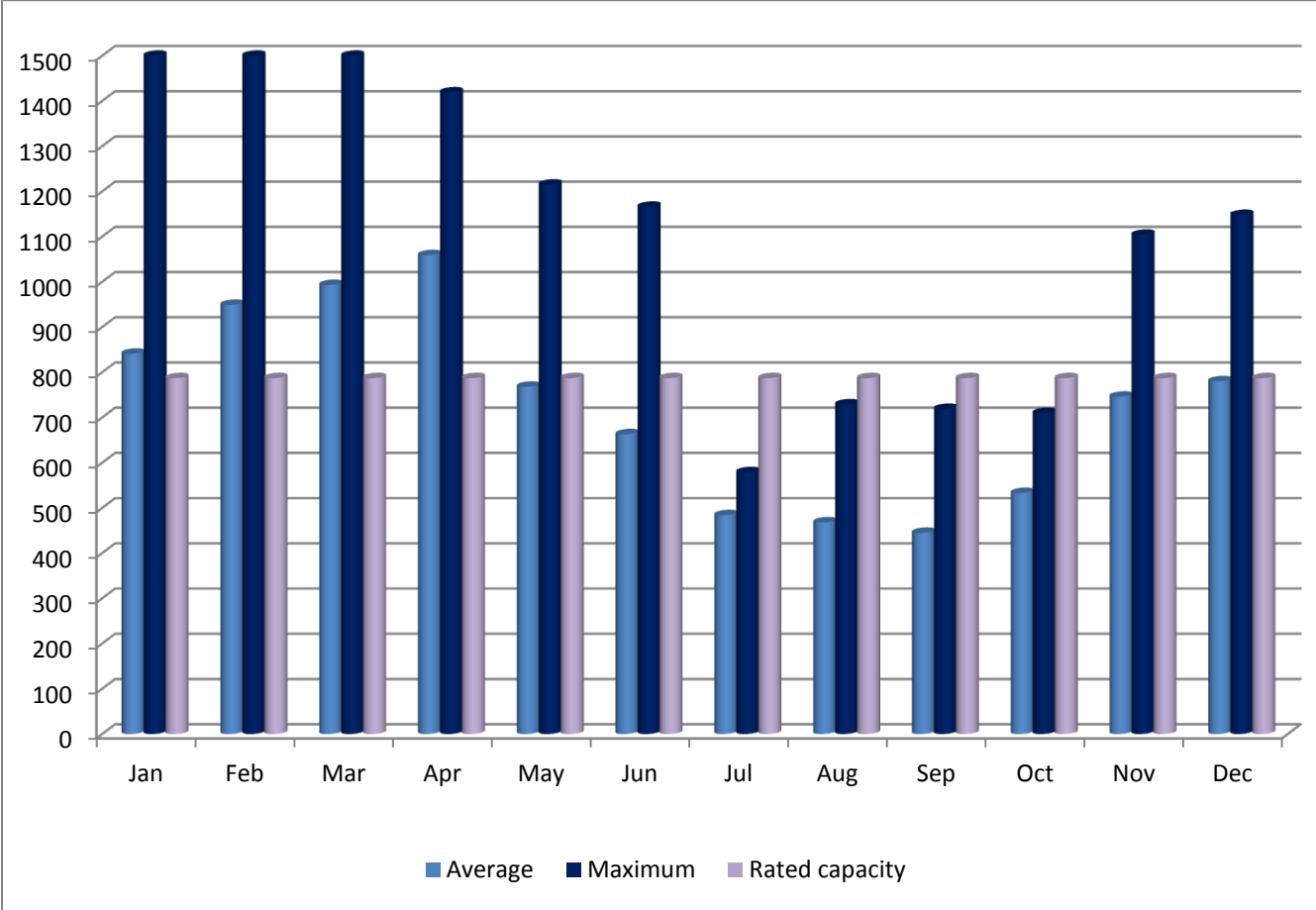
The Glen Walter WPCP received and operates its operation under *Certificates of Approval (now referred to as Environmental Compliance Approval [ECA])* Number 3-0464-84-889, original, Notice #1 and Notice #2 and Notice #3 documents, in accordance with Section 53 of the Ontario Water Resources Act. The 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 (m<sup>3</sup>/day); that is raw influent (flow) into the plant for treatment. During the reporting year 2018, the Glen Walter WPCP exceeded the rated capacity of 787 m<sup>3</sup>/day one hundred and thirty days (130) days.

**Monthly Average and Maximum Daily Flows for 2018  
(Rated capacity 787 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</i> <sub>5</sub>	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**

<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</i> <sub>5</sub>	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	-
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## 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	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.

### 2018 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>	3.20	25	2.32	15.63
Total Suspended Solids	7.37	25	5.6	15.63
Total Phosphorus	0.24	0.86	0.17	0.54
Total Ammonia Nitrogen:				
Summer - 14° C (May 1 to September 30)	1.42	4.0	0.69	2.5
Winter- 4° C (October 1 – April 30)	0.14	8.0	0.12	5.0
<i>E. Coli</i> (monthly geometric mean density)	7.3	200 organisms per 100 millilitres	-	-

In the reporting year 2018, 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	10.4	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:**

- 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 – Flowmetrix Technical Services Inc.
- Annual calibration of flow meters – Flowmetrix Technical Services Inc.

## **OPERATIONAL ISSUES**

The facility met all operational requirements for the fiscal year January 01 – December 31, 2018.

## **BIOSOLID (SLUDGE) SUMMARY**

The Glen Walter WPCP has a program in place for the removal of biosolids transferred from the *Works*; volume totaling 446 m<sup>3</sup> for the fiscal year 2018. Joseph Romeo René Goulet (Certificate of Approval Hauler # A 920463) is contracted and hauled/transported 446 m<sup>3</sup> 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, 2018.

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

By-passing occurrences: January 12, 2018; February 21, 2018; March 31, 2018; April 30, 2018,

## **REPORTS**

Appendix A – Annual Performance

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)



**APPENDIX – A –**

**Glen Walter Annual Performance Report**

**2018**

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

Annual Report Data  
2018

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

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

	Influent Flow			Effluent Flow	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		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		
January	26.101	0.841	1.719	26.101	106	3.00	97.17	110	5.60	94.91	3.23	0.19	94.12	0.17	2.52	4.71	0.16	0.14	0.840	0.841
February	26.591	0.949	1.841	26.591	113	3.00	97.35	160	5.25	96.72	3.44	0.11	96.80	0.15	2.85	4.98	0.10	0.14	0.806	0.949
March	30.790	0.993	1.600	30.790	76	3.00	96.05	80	8.00	90.00	2.42	0.15	93.80	0.09	2.98	7.94	0.15	0.09	0.892	0.993
April	31.794	1.059	1.419	31.794	51	3.00	94.12	60	7.25	87.92	1.29	0.17	86.82	0.27	3.18	7.68	0.18	0.29	0.864	1.059
May	23.837	0.768	1.215	23.837	67	3.00	95.52	64	5.40	91.56	1.58	0.27	82.91	0.06	2.30	4.15	0.21	0.05	0.864	0.768
June	19.899	0.663	1.166	19.899	62	3.00	95.16	108	3.50	96.76	2.67	0.08	97.00	0.31	1.99	2.32	0.05	0.21	0.864	0.663
July	15.018	0.484	0.579	15.018	157	3.40	97.83	160	5.00	96.88	7.30	0.23	96.85	2.33	1.65	2.42	0.11	1.13	0.892	0.484
August	14.533	0.468	0.729	14.533	167	3.00	98.20	200	3.50	98.25	5.89	0.27	95.42	4.35	1.40	1.64	0.13	2.04	0.892	0.468
September	13.375	0.445	0.719	13.375	135	3.00	97.78	152	4.50	97.04	5.65	0.19	96.64	0.09	1.34	2.00	0.08	0.04	0.864	0.445
October	16.553	0.533	0.710	16.553	77	3.20	95.84	134	6.20	95.37	4.33	0.23	94.69	0.1	1.71	3.30	0.12	0.05	0.892	0.533
November	22.398	0.746	1.104	22.398	96	4.75	95.05	82	21.00	74.39	2.19	0.53	75.80	0.1	3.54	15.67	0.40	0.07	0.864	0.746
December	24.200	0.780	1.148	24.200	31	3.00	90.32	85	13.25	84.41	0.15	0.48	-220.00	0.15	2.34	10.34	0.37	0.12	0.892	0.78
<b>Total</b>	265.089			265.089										8.17	27.79	67.15	2.07	4.36	10.426	8.73
<b>Average</b>	22.091	0.727		22.09	94.83	3.20	95.87	116.25	7.37	92.02	3.35	0.24	65.90	0.68	2.32	5.60	0.17	0.36	0.869	0.73
<b>Criteria</b>		<b>0.787</b>				<b>25</b>			<b>25</b>			<b>0.86</b>		<b>4</b>	<b>15.63</b>	<b>15.63</b>	<b>0.54</b>	<b>S 2.5</b>		
																		<b>W 5.0</b>		
<b>Maximum</b>		1.059				4.75			21			0.53			3.54	15.67	0.4	2.04		
<b>Compliance</b>		No				Yes			Yes			Yes		Yes	Yes	Yes	Yes	Yes		

	Effluent E-Coli		
	Min	Max	Geo. Mean
January	2	8	4.0
February	2	64	11.3
March	2	500	31.6
April	2	8	4.0
May	2	30	7.7
June	2	2	2.0
July	2	110	14.8
August	2	2	2.0
September	2	2	2.0
October	2	2	2.0
November	2	4	2.8
December	2	6	3.5

<b>Average</b>	2	61.5	7.3
<b>Criteria</b>		200	

<b>Maximum</b>	500
<b>Compliance</b>	No