



# **The Township of North Glengarry**

## **Glen Robertson Well Supply System**

### **2021 Annual and Summary Report**

In compliance with O. Reg 170/03, section 11, and O. Reg 170/03 schedule 22

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## Section 1: Introduction

This report is an annual summary of water quantity, quality system information, system operations and major expenditures for the Glen Robertson Well Supply during the reporting period of January 1, 2021 to December 31, 2021. It was prepared in accordance with section 11 and schedule 22 of the of Ontario's Drinking Water Systems Regulation O. Regulation 170/03.

## Section 2: System Description

The Glen Robertson Well Supply System is located on Irwin St within the hamlet of Glen Robertson, which is approximately 11 kms northeast of the Town of Alexandria. This system uses groundwater as its source to supply the residents with treated water and has a rated capacity of 224 m<sup>3</sup>/day. It is categorized as a small municipal residential drinking water system. In 2010 the source was deemed to be groundwater under the direct influence of surface water (GUDI), and upgrades were implemented to strengthen the treatment processes.

## Section 3: Process and Equipment Description

### Supply Well

One 300 mm diameter drilled well located on 3342 Irwin St., *UTM Easting: 538506 UTM Northing: 5022689 (NAD 83, accuracy +/- 10m)*. It is equipped with a submersible well pump rated at 5.1L/sec (67 IGPM), attached to a 50mm diameter discharge pipe.

### Pumping Station

All equipment is stored within a single-story brick building, approximately 17.4m<sup>2</sup>, (4.7m x 3.7m), located at the Irwin St address.

### Treatment Equipment

The raw water is pumped from the well into 50 mm piping. The water is directed towards 3 ultraviolet light systems (UV), 2 in service 1 in stand-by mode. The water passed through a 5-micron filter followed by a 1-micron filter prior to going through the UV system. The water is then directed past the sodium hypochlorite injection point.

The chlorination system utilizes two diaphragm sodium hypochlorite metering pumps, which discharges into the well discharge piping. The pumps have automatic switchover capabilities and will switch over if a problem develops with the lead pump during operation. There is 1 sodium hypochlorite storage tank, with 30L capacity that feeds both pumps and is contained within a secondary containment vessel.

Located outside the building but on the property, is an underground chlorine contact chamber consisting of 52m of 300mm piping. It is complete with a flushing port and a treated water sample line which feeds the on-line analyzers located in the water treatment plant.

### Monitoring Equipment

Three free chlorine analyzers are used for regulatory monitoring, one measures chlorine residuals directly after sodium hypochlorite injection point, one measures the residual at the end of the contact chamber as the treated water enters the distribution system and one analyzer is in place in the distribution.

One flow meter is installed directly after the sodium hypochlorite injection on the piping leading to the contact chamber. This unit will record all flows leaving the treatment process and entering the distribution. There is no raw flow meter in this system due to limited access and minimal water taking prior to treatment.

One on-line turbidity analyzer measures the treated water as it leaves the contact chamber and enters the distribution system.

All the equipment described above are connected to 7-day chart recorders, and all instruments in the water plant are also connected to a plc with real time and 7-day data retention capabilities. An automated alarm/dialler system is also in place to alert operational staff to any limit exceedances, but currently there is no remote monitoring system in place for this facility.

The UV units are connected to a monitor that displays real time readings. Currently this unit is not equipped with recording capabilities, but the UV units are connected to the alarm/dialler system, so if problems occur the unit is equipped with an automatically shut down preventing water from exiting the UV and an alarm will be initiated.

**System Pressure Equipment**

The well pump will start, run, or stop based on the system pressure, which can be observed on a gauge in the water plant prior to sodium hypochlorite injection. The start and stop point are manually set on the well pump pressure switch and can be adjusted within the threshold if required. There are always also five 400 L pneumatic pressure tanks operating between 275 to 400 kPa to maintain the system pressure.

**Emergency Power**

A 17-kW natural gas generator, equipped with auto start, is used to provide power to the water treatment building in the event of an outage. It is located outside the building on the southwest wall.

**Additional Equipment.**

All piping, valves, controls, and appurtenances along with associated mechanical and electrical equipment not mentioned in the description but are utilized to make up the system.

**Monitoring Wells**

Two drilled monitoring wells are located on the property where the treatment plant is located. One being located northeast of the building, and one located southwest of the building. These wells were utilized in the past for groundwater level monitoring, but no monitoring is being currently conducted. In December 2021 the well covers were replaced to ensure well integrity is maintained, in accord with the most recent compliance inspection.

**Section 4: Flow Summary**

In order to assess the rated capacity of the WTP in terms of meeting existing and planned uses of the system, a summary of the treated flow rates during this period covered by this report was prepared and is presented below. In accordance with License #181-102 the Glen Robertson Well Supply shall not be operated to exceed the rated of the treatment system. Both the Permit to Take Water (PTTW) and the License requirements allow for a maximum of 224 m<sup>3</sup> total daily for raw and treated water.

The average treated daily flow for 2021 is calculated to be 24.9m<sup>3</sup> and the maximum daily flow for the year was reported to be 46.3m<sup>3</sup>. This represents 11.1% of the total plant rated capacity. Refer to the appendices for full 2021 data summary.

<u>2021 Treated Flow Summary</u>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum Daily Flow (m <sup>3</sup> )	32.6	26.1	31.8	38.0	39.9	46.3	36.9	33.6	32.3	26.9	33.4	26.6
Monthly Average Flow (m <sup>3</sup> )	23.2	21.3	23.0	31.0	25.2	31.7	26.3	27.6	23.5	22.5	22.5	21.4
Monthly Average Daily Maximum Instantaneous Flow (L/s)	1.46	1.12	1.44	1.76	1.36	1.45	1.48	1.54	1.54	1.20	1.94	1.29
Rated Maximum Daily Treated Flow for the approved system										224 m <sup>3</sup> /day		
Rated Maximum Instantaneous Treated Flow										2.6 L/s		

**Section 5: Sampling and Laboratory Analysis Summary**

The Township of North Glengarry uses Caduceon Laboratories as the primary provider for all sample analysis. Caduceon Laboratories is an accredited laboratory under the Ministry of the Environment and Climate Control requirements. Refer to table below for all results as required.

2021 Microbiological Testing Completed as per Schedule 10, 11 and/or 12 of O. Reg 170/03					
Location	Number of Samples	Range of E. Coli or Fecal Results (#-#)	Range of Total Coliform Results (#-#)	Number of HPC Samples	Range of HPC Results (#-#)
Raw	52	0 - 0	0 - 5	0	
Treated	52	0 - 0	0 - 0	52	< 2 - 40
Distribution	108	0 - 0	0 - 0	108	< 2 - 54

2021 Operational Testing as per Schedule 7, 8 and or 9 of O. Reg 170/03		
Parameter	Number of Grab Samples	Range of Results unit of measure is mg/L unless otherwise indicated (#-#)
Raw Turbidity	247	0.10 ntu – 0.82 ntu
Treated Free Chlorine	Continuous	0.27 - 2.60
Distribution Free Chlorine	Continuous	0.90 - 1.95
Fluoride (If the DWS provides fluoridation)		n/a

Additional Sampling or Testing in Accordance with System Approval Requirement or Order				
Date of Order or Approval Amendment	Parameter	Date Sampled	Result	Unit of Measure
n/a				

2021 Summary of Inorganic Parameters Tested (1ug/L = 0.001mg/L; RAA=Rolling Annual Average)					
Parameter	Sample Date	Standard (maximum concentration)	Result Value	Unit of Measure	Exceedance
Antimony	November 1, 2021	0.006 mg/L	< 0.0001	mg/L	No
Arsenic	November 1, 2021	0.01 mg/L	0.0002	mg/L	No
Barium	November 1, 2021	1.0 mg/L	0.176	mg/L	No
Boron	November 1, 2021	5.0 mg/L	0.033	mg/L	No
Cadmium	November 1, 2021	0.005 mg/L	< 0.000015	mg/L	No
Chromium	November 1, 2021	0.05 mg/L	< 0.002	mg/L	No
Lead	September 8, 2021	0.01mg/L	0.00161	mg/L	No
Mercury	November 1, 2021	0.001mg/L	< 0.00002	mg/L	No
Selenium	November 1, 2021	0.05 mg/L	< 0.001	mg/L	No
Sodium	June 19, 2017	20 mg/L	118	mg/L	No
Uranium	November 1, 2021	0.02 mg/L	0.00042	mg/L	No
Fluoride	June 19, 2017	1.5 mg/L	< 0.1	mg/L	No
Nitrite	January 18, 2022	1.0 mg/L	< 0.1	mg/L	No
Nitrate	January 18, 2022	10.0 mg/L	1.0	mg/L	No

2021 Summary of Lead Testing							
(1ppm = 1mg/L)							
Location/ Type	Number of Samples	Range of Lead Results (#-#)	Unit of Measure	Range of Alkalinity Results (#-#)	Unit of Measure	Average pH	Exceedance
Residential Plumbing							
Non-Residential Plumbing							
Distribution	3			309 - 344	mg/L	7.11	No

2021 Summary of Organic Parameters Tested					
(1ug/L = 0.001mg/L; RAA=Rolling Annual Average)					
Parameter	Sample Date	Standard (maximum concentration)	Result Value	Unit of Measure	Exceedance
Alachlor	November 1, 2021	0.005 mg/L	< 0.3	ug/L	No
Atrazine + N-dealkylated metabolites	November 1, 2021	0.005 mg/L	< 0.5	ug/L	No
Azinphos-methyl	November 1, 2021	0.02 mg/L	< 1	ug/L	No
Benzene	November 1, 2021	0.001 mg/L	< 0.5	ug/L	No
Benzo(a)pyrene	November 1, 2021	0.00001 mg/L	< 0.006	ug/L	No
Bromoxynil	November 1, 2021	0.005 mg/L	< 0.5	ug/L	No
Carbaryl	November 1, 2021	0.09 mg/L	< 3	ug/L	No
Carbofuran	November 1, 2021	0.09 mg/L	< 1	ug/L	No
Carbon Tetrachloride	November 1, 2021	0.002 mg/L	< 0.2	ug/L	No
Chlorpyrifos	November 1, 2021	0.09 mg/L	< 0.5	ug/L	No
Diazinon	November 1, 2021	0.02 mg/L	< 1	ug/L	No
Dicamba	November 1, 2021	0.12 mg/L	< 10	ug/L	No
1,2-Dichlorobenzene	November 1, 2021	0.2 mg/L	< 0.5	ug/L	No
1,4-Dichlorobenzene	November 1, 2021	0.005 mg/L	< 0.5	ug/L	No
1,2-Dichloroethane	November 1, 2021	0.005 mg/L	< 0.5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	November 1, 2021	0.014 mg/L	< 0.5	ug/L	No
Dichloromethane	November 1, 2021	0.05 mg/L	< 5	ug/L	No
2-4 Dichlorophenol	November 1, 2021	0.9 mg/L	< 0.2	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	November 1, 2021	0.1 mg/L	< 10	ug/L	No
Diclofop-methyl	November 1, 2021	0.009 mg/L	< 0.9	ug/L	No
Dimethoate	November 1, 2021	0.02 mg/L	< 1	ug/L	No
Diquat	November 1, 2021	0.07 mg/L	< 5	ug/L	No
Diuron	November 1, 2021	0.15 mg/L	< 5	ug/L	No
Glyphosate	November 1, 2021	0.28 mg/L	< 25	ug/L	No
Halacetic Acid (RAA)	January 18, 2022	0.08mg/L	< 5.3	ug/L	No
Malathion	November 1, 2021	0.19 mg/L	< 5	ug/L	No
2 Methyl-4	November 1, 2021	0.1 mg/L	< 10	ug/L	No

2021 Summary of Organic Parameters Tested (1ug/L = 0.001mg/L; RAA=Rolling Annual Average)					
Parameter	Sample Date	Standard (maximum concentration)	Result Value	Unit of Measure	Exceedance
<i>Chlorophenoxyacetic (MCPA)</i>					
<i>Metolachlor</i>	November 1, 2021	0.05 mg/L	< 3	ug/L	No
<i>Metribuzin</i>	November 1, 2021	0.08 mg/L	< 3	ug/L	No
<i>Monochlorobenzene</i>	November 1, 2021	0.08 mg/L	< 0.5	ug/L	No
<i>Paraquat</i>	November 1, 2021	0.01 mg/L	< 1	ug/L	No
<i>Pentachlorophenol</i>	November 1, 2021	0.06mg/L	< 0.2	ug/L	No
<i>Phorate</i>	November 1, 2021	0.002 mg/L	< 0.3	ug/L	No
<i>Picloram</i>	November 1, 2021	0.19 mg/L	< 15	ug/L	No
<i>Polychlorinated Biphenyls (PCB)</i>	November 1, 2021	0.003 mg/L	< 0.05	ug/L	No
<i>Prometryne</i>	November 1, 2021	0.001 mg/L	< 0.1	ug/L	No
<i>Simazine</i>	November 1, 2021	0.01 mg/L	< 0.5	ug/L	No
<i>THM (RAA)</i>	January 18, 2022	0.100 mg/L	14.3	ug/L	No
<i>Terbufos</i>	November 1, 2021	0.001 mg/L	< 0.5	ug/L	No
<i>Tetrachloroethylene</i>	November 1, 2021	0.01 mg/L	< 0.5	ug/L	No
<i>2,3,4,6-Tetrachlorophenol</i>	November 1, 2021	0.1 mg/L	< 0.2	ug/L	No
<i>Triallate</i>	November 1, 2021	0.23 mg/L	< 10	ug/L	No
<i>Trichloroethylene</i>	November 1, 2021	0.005 mg/L	< 0.5	ug/L	No
<i>2,4,6-Trichlorophenol</i>	November 1, 2021	0.005 mg/L	< 0.2	ug/L	No
<i>Trifluralin</i>	November 1, 2021	0.045 mg/L	< 0.5	ug/L	No
<i>Vinyl Chloride</i>	November 1, 2021	0.001 mg/L	< 0.2	ug/L	No

Inorganic or Organic Parameters that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards			
Parameter	Result Value	Unit of Measure	Date of Sample
n/a			

Section 6: Significant Expenses Incurred

There were no capital works during the 2021 budgetary period. All significant expenses were regarding to maintenance or equipment replacement, as described below.

- Install required equipment.
- Repair required equipment.
- Replace required equipment.
- None during this period

Briefly Describe Incident and/or Expenses Incurred:

No.	Project Name	Description	Cost
1	UV Unit Replacement	<ul style="list-style-type: none"> <li>UV3 replaced as proactive replacement program, ahead of SCADA system installation</li> </ul>	\$3,500 +install costs
2	On-line Chlorine Analyzer	<ul style="list-style-type: none"> <li>Replace front panel due to read out issues</li> </ul>	\$2,500

**Section 7: Compliance with Licenses, Permits, Approvals and Orders**

The system is an approved system through the accreditation process that was rolled out by the Ministry of the Environment, Conservation, and Parks in 2011. The operating authority strives to remain compliant with the Drinking Water Quality Management Standard, the Safe Drinking Water Act and all associated procedures or a guideline. This approach is utilized to creating a multi-barrier approach to ensure safe drinking water.

The following table is a listing of all permits and or licenses that apply to this system:

Description	Number	Version	Issue Date	Expiry Date
Water Works License	181-102	2	March 16, 2021	March 16, 2026
Water Works Permit	181-202	2	March 16, 2021	March 16, 2026
Permit to Take Water	3330-9UNQ2Q		March 20, 2015	March 16, 2025

The Township has been actively engaged in the process of internal and external auditing, but due to COVID and top management change over, some elements have surpassed some of the timelines for achievement. The QMS representative is actively working at bringing these items back into conformance.

During this period, all raw water flows were compliant with the permit to take water and all flows were well within the rated capacity for the system, currently at 11.1% of the allowable limits.

All disinfection equipment was operated in such a manner that all license requirements were met at all times. The treatment system was operated at all times to ensure compliance with the Procedure for Disinfection of Drinking Water in Ontario.

All equipment was maintained as per operations manuals and/or calibrated annually by a certified technician.

**Section 8: Non-Compliance with Licenses, Permits, Approvals and Orders**

There were 3 instances of non-conformances identified in the annual inspection. Once reported, the management and operations took action to mitigate all items identified. The only item not corrected was the continuous monitoring, which will be covered through the SCADA system upgrade which is currently on-going. Monitoring procedures are to be put in place and reporting to the Ministry quarterly reporting will commence in April, if not resolved.

Parameter	Regulatory Document	Requirement	Date of Correction
Monitoring Wells Maintenance	O. Reg 903	maintain wells to prevent entry of surface water and other foreign material	December 20, 2021
Primary Disinfection Continuous Monitoring (UV only)	O.Reg 170/03	ensure equipment had a recording device that continuously records the performance	On-Going, awaiting upgrades to SCADA
Director Notification	SDWA	changes to equipment parameters listed in MWWP requires notification submission	December 8, 2021

There was once incident in regard to required reporting under O. Regulation 170/03, as listed below. All license permit and/or approval requirements were met during this reporting period. Furthermore, there were no orders or additional requirements issued to this system.

2021 Reported Incident in accordance to subsection 18(1) of the Safe Drinking Water Act or Schedule 16 of O. Reg 170/03					
Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
April 28, 2021	System Wide Low Pressure	< 20	psi	<ul style="list-style-type: none"> <li>• repair well pump panel components</li> <li>• system wide flushing</li> <li>• sampling</li> </ul>	April 30, 2021

**Section 9: Township of North Glengarry Endorsement of Summary Report**

A copy of the report was presented to all members of the municipal Council through the Public Works Committee meeting held on February 23, 2022, see appendix D for motion. The report was also made available to the public through the Township of North Glengarry website or upon request at the Main office, located at 90 Main St South in Alexandria, or at the Public Works Office, located at 63 Kenyon St West in Alexandria

This report has been endorsed by Tim Wright, Director of Public Works on behalf of Township of North Glengarry Council.

**Section 10: Contact**

All efforts have been made to provide accurate and up to date information in a relevant format. In the event that additional information is required please submit all verbal requests by phone at 613-525-3087; in writing by mail to 63 Kenyon St West. P.O. Box 700, Alexandria Ontario, K0C 1A0; or in writing by email to dean@northglengarry.ca



## Appendix A: Glen Robertson 2021 Daily Treated Flows (m<sup>3</sup>)

	January	February	March	April	May	June	July	August	September	October	November	December
1	28.5	18.9	23.2	24.5	38.0	29.2	24.0	25.8	21.7	21.3	24.5	14.9
2	28.5	19.8	23.4	24.5	38.0	25.3	24.5	25.8	21.6	21.3	28.6	19.7
3	32.6	17.7	16.9	27.1	39.7	15.8	24.5	26.8	18.3	21.3	25.0	23.6
4	32.6	21.1	21.8	27.1	39.9	25.8	24.5	27.7	25.7	21.8	23.8	23.6
5	30.8	21.8	22.4	27.1	12.7	25.8	28.1	27.7	25.7	18.6	33.4	23.6
6	30.2	21.8	22.4	29.4	18.7	39.0	36.9	25.3	25.7	23.8	22.3	18.1
7	26.1	21.8	22.4	25.1	22.2	30.4	21.5	25.3	30.8	19.4	22.3	25.0
8	21.8	18.4	24.9	26.2	22.2	46.3	23.3	25.3	18.5	26.8	20.7	13.8
9	21.8	21.1	23.1	30.0	22.2	28.7	29.8	31.5	22.4	26.8	20.9	19.3
10	21.8	17.6	16.9	30.0	18.8	22.9	29.8	26.7	22.9	22.3	20.8	22.1
11	28.0	24.5	25.1	30.0	20.6	42.7	29.8	33.6	22.9	22.3	19.5	22.1
12	18.8	19.0	21.0	29.1	18.4	42.7	31.1	13.4	22.9	23.7	23.0	22.1
13	16.3	22.3	21.0	33.6	16.4	42.7	28.7	33.0	26.4	19.8	23.0	17.5
14	17.8	22.3	21.0	24.4	26.8	37.8	28.7	33.0	23.7	20.7	23.0	19.9
15	22.8	22.3	20.5	29.7	26.8	38.5	36.1	33.0	31.1	22.7	26.1	19.3
16	22.8	20.0	27.2	32.0	26.8	39.6	28.4	31.2	15.2	22.7	24.0	15.8
17	22.8	22.1	14.6	32.0	26.8	34.3	28.4	26.0	23.3	22.7	21.6	22.7
18	22.2	20.0	26.7	32.0	23.9	36.6	28.4	28.6	23.3	22.7	17.6	22.7
19	29.8	24.9	23.5	32.2	24.9	36.6	29.1	25.2	32.3	22.9	24.0	22.7
20	17.3	24.9	23.6	30.5	24.5	36.6	21.7	31.7	25.2	19.0	24.0	21.3
21	21.5	24.9	23.5	30.5	30.9	27.6	24.2	31.7	18.8	20.4	24.0	21.6
22	20.5	19.6	26.7	31.6	30.9	30.5	20.7	31.7	24.1	22.3	23.5	26.1
23	20.5	26.1	23.7	35.7	30.9	24.1	25.0	29.4	19.5	22.3	21.6	21.6
24	20.5	19.2	18.6	35.7	11.9	29.1	25.0	26.0	25.7	22.3	16.0	26.6
25	16.3	17.0	23.3	35.7	29.7	33.1	25.0	26.7	25.7	20.8	18.2	26.6
26	19.8	22.6	24.6	33.1	16.7	25.3	24.7	25.0	25.7	25.5	21.5	26.6
27	22.0	22.6	24.6	37.6	25.0	25.3	21.4	26.1	25.9	19.2	21.5	18.8
28	19.6	22.6	24.6	37.7	24.0	31.0	23.3	26.1	24.3	20.7	21.5	18.8
29	21.4		22.0	37.9	24.0	23.1	20.7	26.1	16.5	26.9	18.6	22.0
30	21.4		29.3	38.0	24.0	24.0	23.7	28.5	20.3	26.9	21.1	21.7
31	21.4		31.8		24.6		25.8	22.7		26.9		23.4
Minimum	16.3	17.0	14.6	24.4	11.9	15.8	20.7	13.4	15.2	18.6	16.0	13.8
Maximum	32.6	26.1	31.8	38.0	39.9	46.3	36.9	33.6	32.3	26.9	33.4	26.6
Average	23.2	21.3	23.0	31.0	25.2	31.7	26.3	27.6	23.5	22.5	22.5	21.4
Total	717.9	597.0	714.4	929.3	780.9	950.5	816.6	856.6	706.2	696.7	675.7	663.5

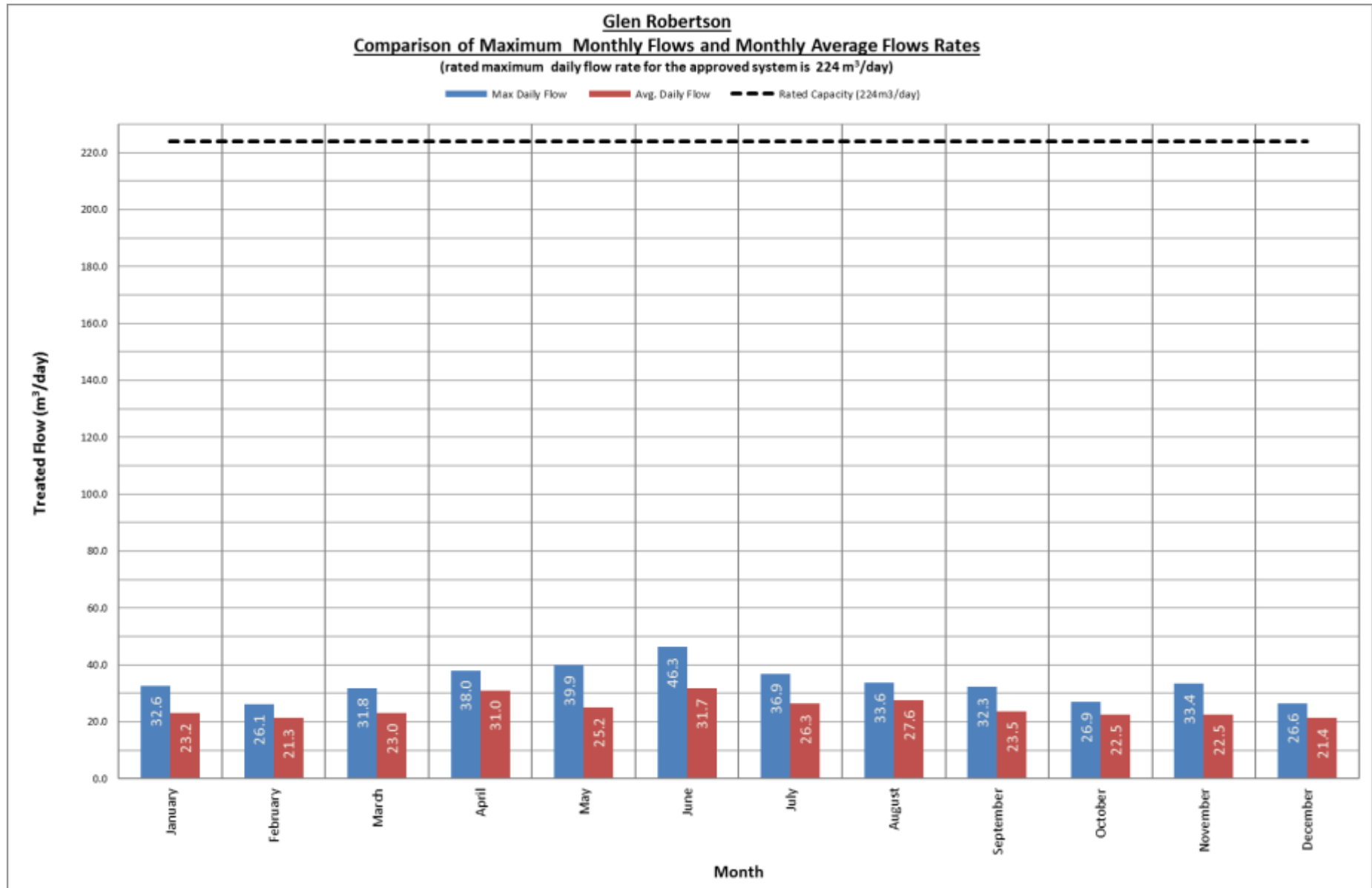
Annual Treated Flows Summary
11.9
46.3
24.9
9105.4

## Appendix B: Glen Robertson 2021 Treated Maximum Instantaneous Flows (L/s)

	January	February	March	April	May	June	July	August	September	October	November	December
1	0.84	0.90	1.00	0.86	1.09	1.34	1.06	1.18	1.20	0.96	1.23	0.92
2	0.92	1.06	1.26	1.00	1.04	1.04	0.84	1.00	1.20	1.06	1.09	0.88
3	1.00	0.96	1.10	1.02	1.02	0.84	0.94	1.30	0.92	1.17	1.18	1.08
4	0.90	0.92	0.94	0.96	1.05	1.00	1.32	1.14	0.96	1.02	0.94	1.10
5	0.88	0.82	0.92	1.02	1.14	0.96	1.08	1.32	1.10	1.08	0.89	1.16
6	0.90	1.00	0.90	0.88	0.84	1.41	1.18	0.88	0.96	1.20	1.10	0.92
7	0.94	0.94	1.04	0.89	0.96	1.23	1.08	1.40	1.54	0.92	1.04	0.86
8	0.94	0.88	0.96	0.86	0.94	1.27	1.02	1.08	1.14	0.86	1.10	0.84
9	0.88	1.04	1.09	0.88	1.14	1.12	0.92	1.20	1.08	1.16	0.90	0.98
10	0.96	0.94	0.76	1.10	1.12	1.16	1.08	0.96	0.98	1.12	0.86	0.88
11	1.08	1.12	0.81	1.15	0.92	1.00	1.22	1.04	1.00	1.06	0.82	0.94
12	0.74	1.03	0.77	0.88	0.84	1.42	1.48	1.18	1.14	0.88	0.86	1.06
13	0.77	0.95	1.04	1.02	0.92	1.42	1.08	1.11	1.32	0.90	1.12	0.76
14	0.83	0.94	0.94	0.98	0.98	1.40	1.16	1.18	0.98	1.08	0.98	0.88
15	0.98	0.92	0.85	1.12	1.36	1.26	1.32	1.32	1.12	0.94	1.20	0.98
16	1.11	1.04	1.05	1.00	1.30	1.45	1.06	1.13	1.06	0.98	0.82	0.99
17	0.96	0.88	0.86	1.00	1.08	1.40	0.90	1.06	1.00	0.94	1.01	0.96
18	0.96	1.02	0.98	1.00	0.96	1.14	1.12	1.26	1.04	1.18	1.26	1.29
19	0.87	0.86	0.84	1.00	1.24	1.34	1.16	1.18	1.04	1.08	1.02	1.17
20	0.82	1.02	0.78	0.96	1.00	1.42	1.04	1.05	0.94	1.00	1.18	0.84
21	0.76	0.94	0.98	0.87	1.08	1.26	1.24	1.05	1.24	0.86	1.27	0.90
22	0.78	0.88	0.84	0.90	1.24	1.24	1.00	1.29	1.10	0.88	0.95	1.04
23	0.90	0.88	0.90	1.10	0.87	1.20	1.04	1.26	1.02	1.08	1.94	0.98
24	0.94	1.00	0.88	1.04	1.12	1.36	1.13	1.46	0.84	1.16	1.10	0.98
25	0.74	0.92	1.01	1.00	1.15	1.14	1.20	1.18	0.94	0.96	0.87	0.94
26	0.84	0.96	0.85	1.08	1.14	0.98	0.94	1.30	1.20	1.06	0.83	1.06
27	0.84	0.98	0.86	1.08	1.20	1.06	1.00	1.10	1.10	1.09	0.94	0.92
28	1.46	1.10	0.87	1.76	0.88	1.24	1.04	1.04	1.06	1.08	1.04	0.86
29	0.94		0.85	1.17	1.10	1.00	0.88	1.00	0.98	0.90	0.80	0.95
30	1.06		1.32	0.98	1.00	1.18	1.07	1.54	1.10	1.01	1.43	1.02
31	1.08		1.44		1.10		1.34	0.92		0.96		0.87
Maximum	1.46	1.12	1.44	1.76	1.36	1.45	1.48	1.54	1.54	1.20	1.94	1.29
Average	0.92	0.96	0.96	1.02	1.06	1.21	1.09	1.16	1.08	1.02	1.06	0.97

Annual Treated Flows Summary
1.94
1.04

## Appendix C: 2021 Comparative Monthly Treated Flows Rates



## Appendix D: Council Resolution of Receipt



**STAFF REPORT TO THE COMMITTEE OF THE WHOLE** Report No: PW 2021-05

February 17, 2021

From: Angela Cullen – Water/Wastewater Compliance Coordinator

RE: 2020 Waterworks Annual Reports

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**Recommended Motion:**

THAT the Committee of the Whole receive Staff Report No. PW 2021-05, 2020 Waterworks Annual Reports for information purposes only.

**Background / Analysis:**

Staff have prepared the 2020 Drinking Water System Annual Reports for the Glen Robertson Drinking Water Systems and the Maxville Wastewater System.

The attached drinking water annual summary reports will be sent to the Ministry of Environment as part of the Township's obligation under Ontario Regulation 170/03, and posted to the Township website for public access.

The attached wastewater annual report will be sent to the Ministry of Environment as part of the Township's obligation under the Environmental Compliance Approval, under the Environmental Protection Act, and posted to the Township website for public access.

**Alternatives:**

N/A

**Financial Implications:**

N/A

**Attachments & Relevant Legislation:**

- Glen Robertson Well Supply Annual and Summary Report
- Glen Robertson Drinking Water System Council Presentation
- Maxville Wastewater System Annual Report
- Maxville Waste Water System Council Presentation

**Others Consulted:**

Dean McDonald, Acting Director of Public Works



Reviewed and Approved by:  
Sarah Huskinson, CAO/Clerk