

Alpine Village/Pirates Glen Drinking Water System

Waterworks # 220011154
System Category – Large Municipal Residential

Annual Water Report

Prepared For: The Municipality of Trent Lakes

Reporting Period of January 1st – December 31st, 2024

Issued: February 20, 2025

Revision: 0

Operating Authority:



This report has been prepared to satisfy the annual reporting requirements in O. Reg. 170/03 Section 11 and Schedule 22

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Report Availability

This system does not serve more than 10,000 residence and the annual reports will be available to residents at The Municipality of Trent Lakes Office and copies will provided free of charge if requested. The Municipality of Trent Lakes Office is located at 760 Peterborough County Road 36 Trent Lakes Ontario, KOM 1AO. A copy of the annual report is also available on the Municipality of Trent Lakes www.trentlakes.ca.

Compliance Report Card

Drinking Water System Number: 220011154

Drinking Water System Name: Alpine Village/Pirates Glen WTP

Drinking Water System Owner: Municipality of Trent Lakes

Drinking Water System Category: Large Municipal Residential

Period Being Reported: January 1, 2024 - December 31, 2024

Health & Safety	# of Events	Date	Details
Number of Incidents	0	N/A	N/A

Drinking Water	# of Events	Date	Details
MECP Inspections	1	September 10, 2024	2023/2024 MECP Unannounced Focused Inspection, 100% rating
AWQI's	1	November 7, 2024	Low Pressure
Number of Non-Compliances	0	N/A	N/A
Number of Boil Water Advisories	0	N/A	N/A

System Process Description

Raw Source

The Alpine Village/Pirates Glen Water Treatment Plant is supplied with two wells. Well 1 is non-GUDI and Well 2 is GUDI. Well 2 was offline from May 11 to July 29 2024.

Treatment

The treatment system consists of the following:

- Sodium hypochlorite feed system with two metering pumps
- One continuous treated water free chlorine residual analyzer
- Three continuous online turbidity analyzers
- 5 micron cartridge pre-filter
- 1 micron cartridge filters (two filter trains)

- Clearwell with two interconnected underground tanks
- Three Magnetic flow meters: one per well and one for treated water
- Three Centrifugal High Lift Pumps
- Six Hydropneumatic Pressure Vessels
- Standby power generator

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Jutzi

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Corrective Action Taken
November 7, 2024	166848	Distribution System	Loss of Pressure	Part of the distribution loss pressure due to maintenance on a main line isolation valve	Increase chlorine, resample, and bacteriological sample

Non-Compliance

Legislation	Requirement(s) system failed to meet	Duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliance issues identified during this period				

Non-Compliance Identified in a Ministry Inspection:

Legislation	Requirement(s) system failed to meet	Duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliances identified in a Ministry Inspection during this period.				

Flows

The Alpine Village/Pirates Glen Drinking Water System is operating below the rated capacity.

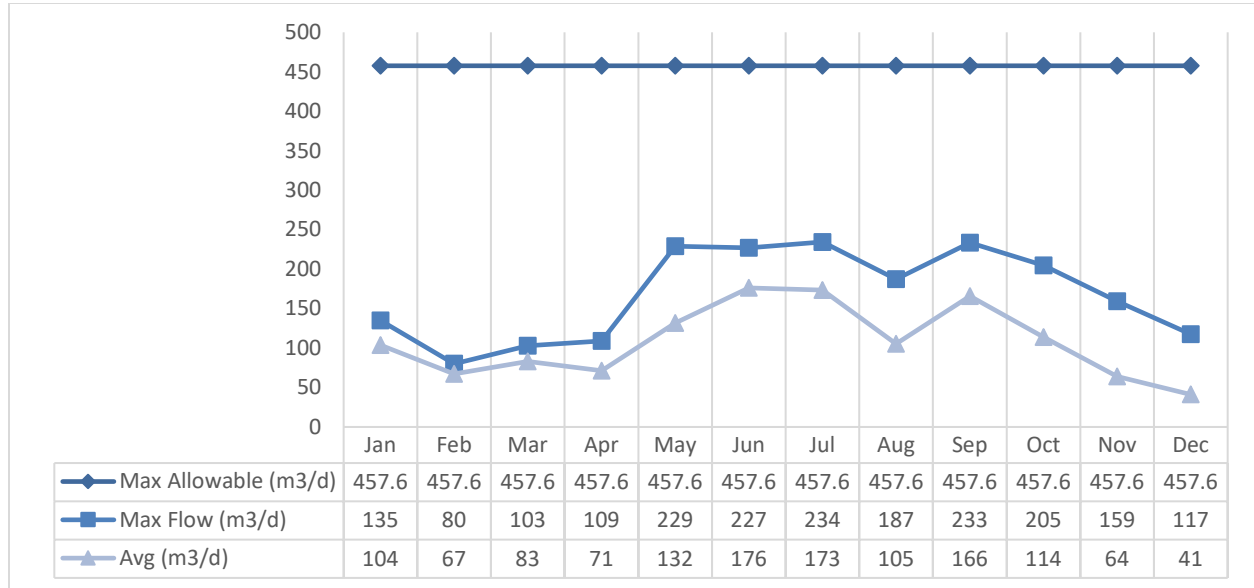
Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water (PTTW). 2024

Raw Flow Data was submitted to the Ministry of the Environment, Conservation and Parks electronically under permit No. P-300-1163168997. The confirmation and a copy of the data that was submitted are attached in Appendix A.

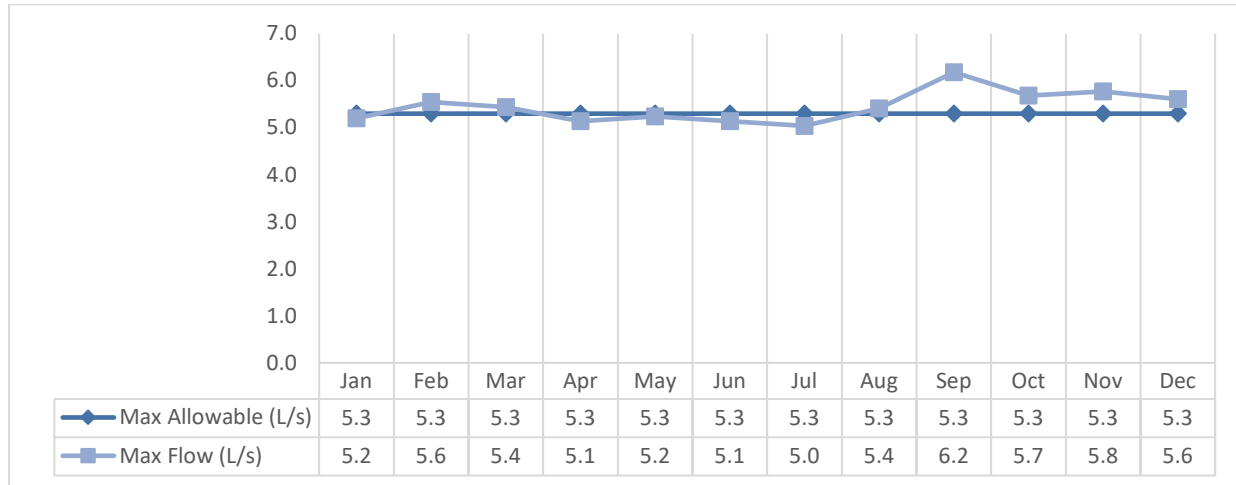
Total Monthly Flows (m3/d)

Max Allowable PTTW- Well #1



Monthly Rated Flows (L/s)

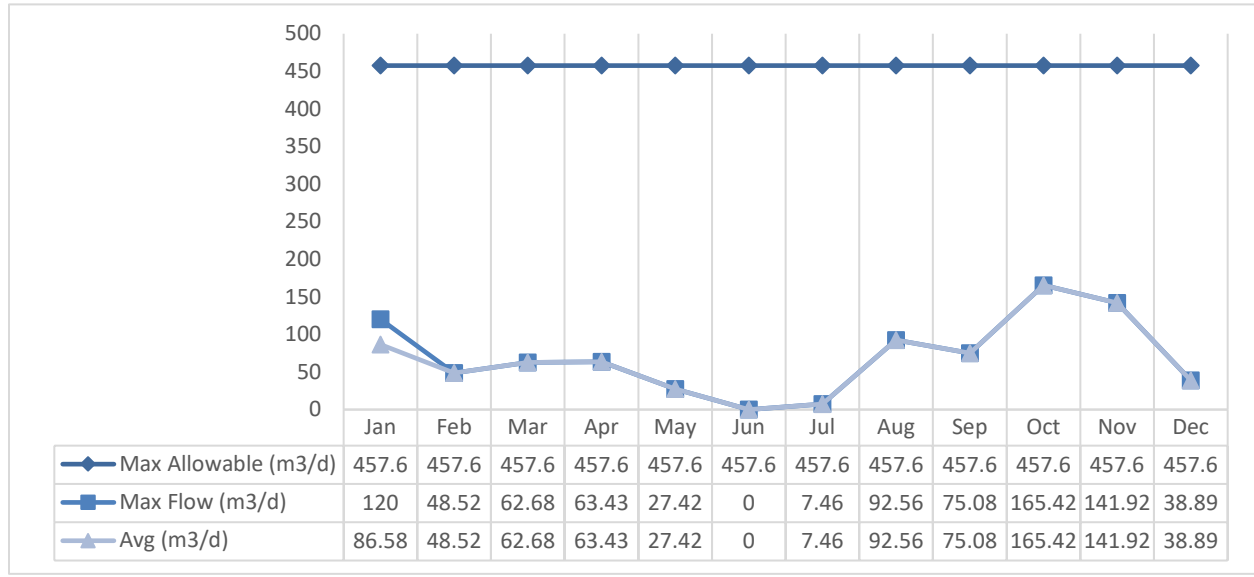
Max allowable rate – PTTW- Well #1



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s), exceedances were short in duration and reviewed for compliance. The scheduled Flow Meter calibration was in April.

Total Monthly Flows (m3/d)

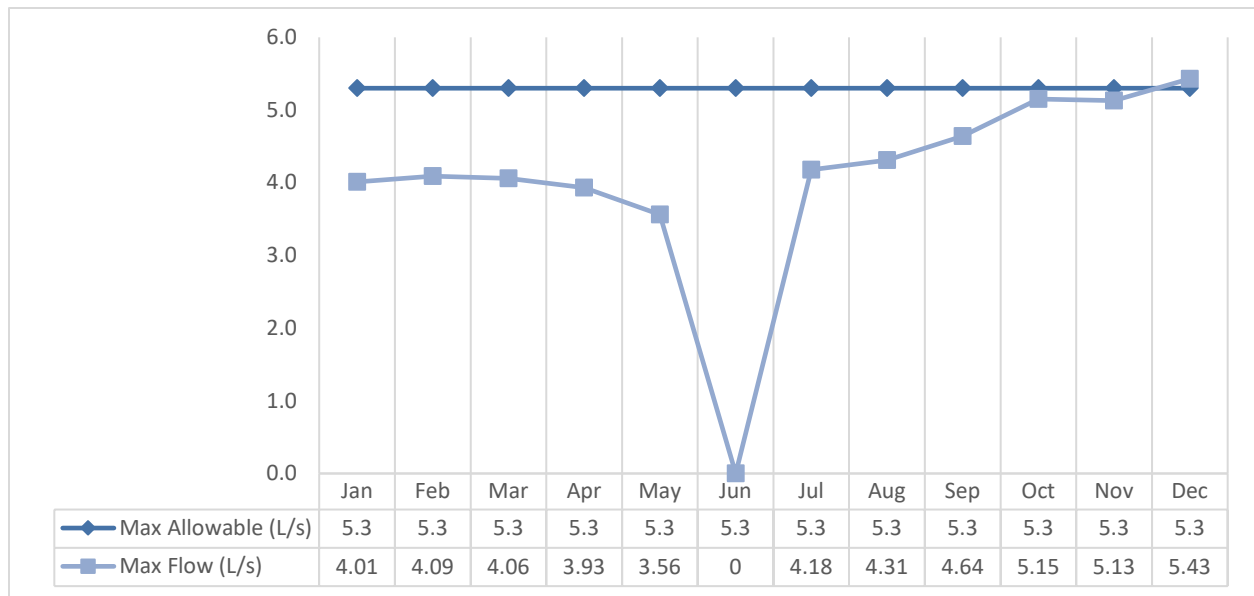
Max Allowable PTTW- Well #2



Note: Well 2 was offline from May 11 to July 29 2024.

Monthly Rated Flows (L/s)

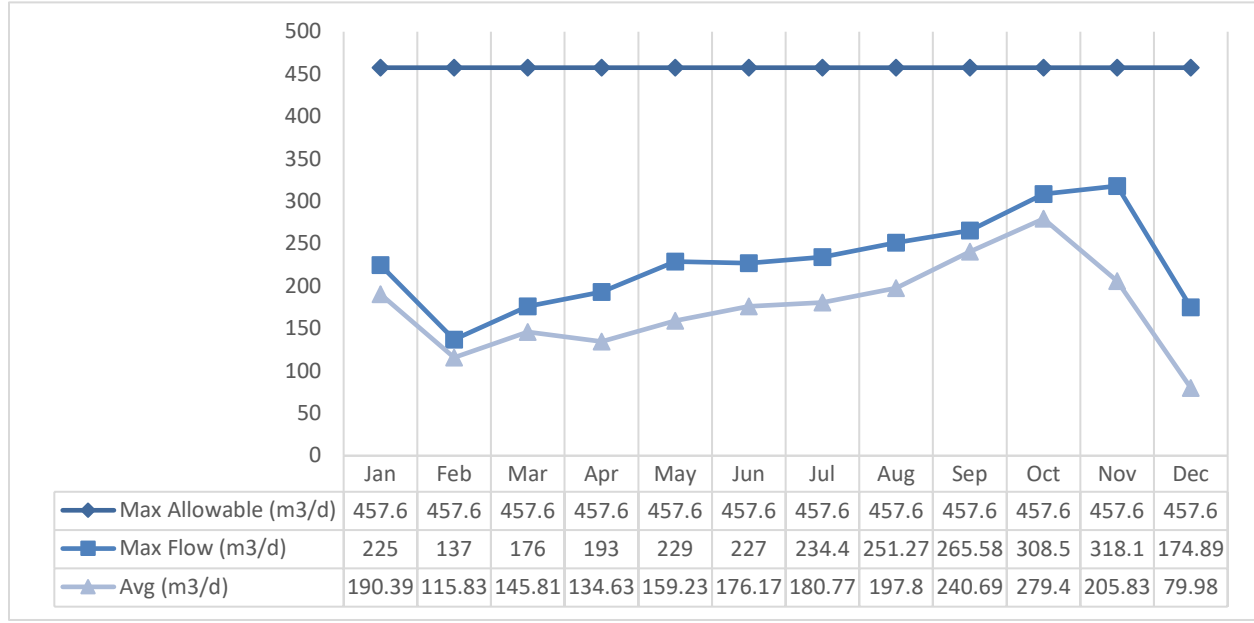
Max allowable rate – PTTW- Well #2



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s), exceedances were short in duration and reviewed for compliance, and occurred in the process of bringing Well 2 online. The scheduled Flow Meter calibration was in April.

Total Monthly Flows (m3/d)

Max Allowable PTTW- Total Raw

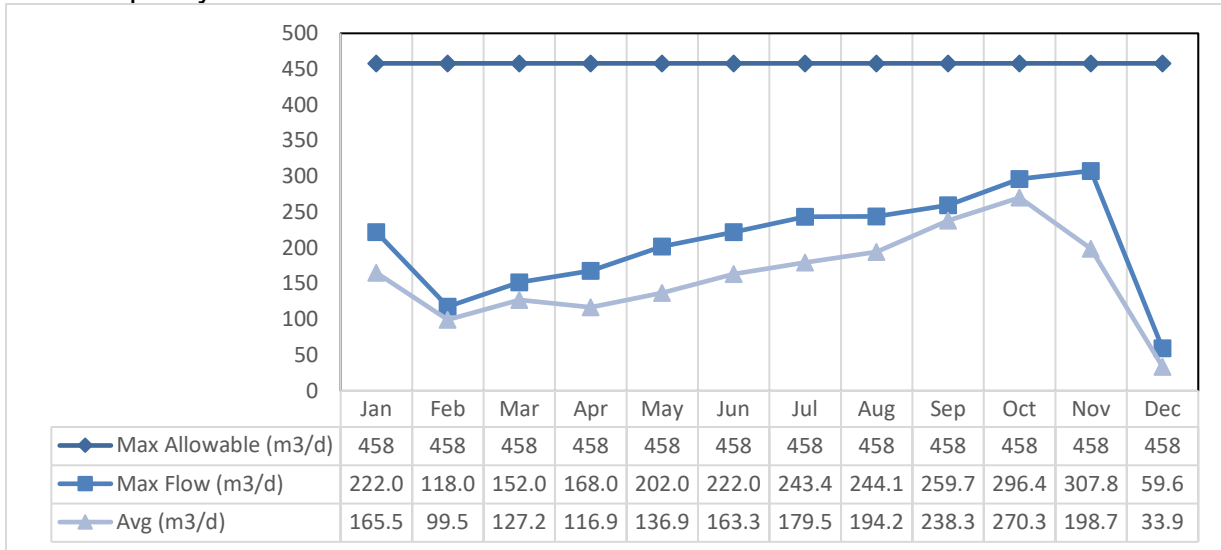


Treated Water Flows

The Treated Water flows are regulated under the Municipal Drinking Water Licence.

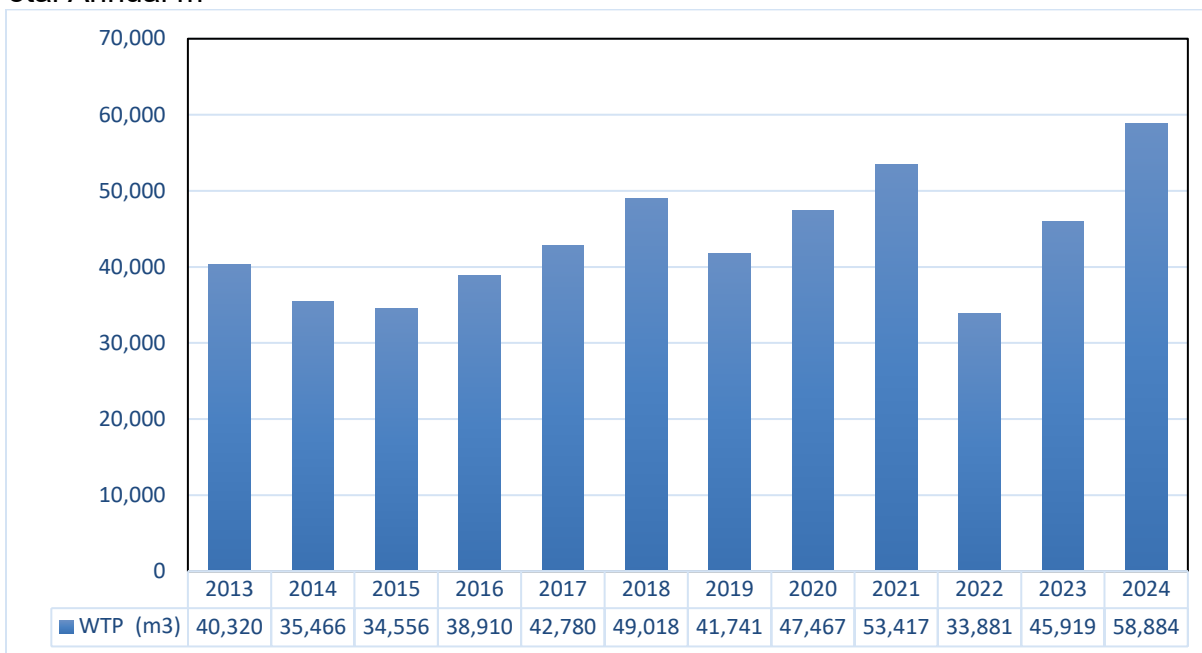
Monthly Rated Flows

Rated Capacity – MDWL



Annual Total Flow Comparison

Total Annual m³



Regulatory Sample Results Summary

Microbiological Testing

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		Range of HPC Results	
		Min	Max	Min	Max	Min	Max
Raw Well 1	53	0	0	0	8		
Raw Well 2 (GUDI)	51	0	2	0	12		
Treated	53	0	0	0	0	0	6
Distribution	161	0	0	0	0	0	19

Note: Well 2 was offline from May 11 to July 29 2024.

Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity Well 1 (NTU)	20	0.10	0.58
Turbidity Well 2 (NTU)	19	0.15	0.90
Turbidity Filter 1	8760	0.00	2.00
Turbidity Filter 2	8760	0.00	2.00
Chlorine (mg/L)	8760	0	1.97

Note: Record the unit of measure if it is **not** milligrams per litre.

Note: For continuous monitors 8760 is used as the number of samples. Spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. The scheduled calibrations were completed in April. All spikes are reviewed for compliance with O.Reg 170/03

Inorganic Parameters

These parameters are tested as a requirement under 170/03. Sodium and Fluoride are required to be tested every 5 years. Nitrate and Nitrite are tested quarterly and the metals are tested annually as required under 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- MDL = Method Detection Limit

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L)	2024/01/08	<MDL 0.6	6.0	No	No
Arsenic: As (ug/L)	2024/01/08	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L)	2024/01/08	57.4	1000.0	No	No
Boron: B (ug/L)	2024/01/08	119.0	5000.0	No	No
Cadmium: Cd (ug/L)	2024/01/08	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L)	2024/01/08	0.32	50.0	No	No
Mercury: Hg (ug/L)	2024/01/08	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L)	2024/01/08	0.10	50.0	No	No
Additional Inorganics					
Fluoride (mg/L)	2023/01/16	0.91	1.5	No	Yes
Nitrite (mg/L)	2024/01/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2024/04/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2024/07/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2024/10/15	<MDL 0.003	1.0	No	No
Nitrate (mg/L)	2024/01/08	1.63	10.0	No	No
Nitrate (mg/L)	2024/04/08	1.59	10.0	No	No
Nitrate (mg/L)	2024/07/08	0.315	10.0	No	No
Nitrate (mg/L)	2024/10/15	0.938	10.0	No	No
Sodium: Na (mg/L)	2023/01/24	26.3	20*	Yes	Yes
Uranium: U (ug/L)	2024/01/08	9.08	20.0	No	No
Uranium: U (ug/L)	2024/01/08	8.69	20.0	No	No
Uranium: U (ug/L)	2024/04/09	8.71	20.0	No	No
Uranium: U (ug/L)	2024/07/08	19.2	20.0	No	Yes
Uranium: U (ug/L)	2024/10/15	14.1	20.0	No	Yes

*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

Schedule 15 Sampling:

The Schedule 15 Sampling is required under O. Reg. 170/03. This system is under reduced sampling and no plumbing samples were collected.

Distribution System	Number of Sampling Points	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	2	2	278	279		
pH	2	2	7.16	7.20		
Lead (ug/l)	2	2	0.10	0.11	10	0

MAC = Maximum Allowable Concentration as per O. Reg. 169/03

Organic Parameters

These parameters are tested annually as a requirement under O. Reg. 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L)	2024/01/08	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L)	2024/01/08	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L)	2024/01/08	<MDL 0.05	20.0	No	No
Benzene (ug/L)	2024/01/08	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L)	2024/01/08	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L)	2024/01/08	<MDL 0.33	5.0	No	No
Carbaryl (ug/L)	2024/01/08	<MDL 0.05	90.0	No	No
Carbofuran (ug/L)	2024/01/08	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L)	2024/01/08	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L)	2024/01/08	<MDL 0.02	90.0	No	No
Diazinon (ug/L)	2024/01/08	<MDL 0.02	20.0	No	No
Dicamba (ug/L)	2024/01/08	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L)	2024/01/08	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L)	2024/01/08	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L)	2024/01/08	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L)	2024/01/08	<MDL 0.33	14.0	No	No

Treated Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Dichloromethane (Methylene Chloride) (ug/L)	2024/01/08	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L)	2024/01/08	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)	2024/01/08	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L)	2024/01/08	<MDL 0.40	9.0	No	No
Dimethoate (ug/L)	2024/01/08	<MDL 0.06	20.0	No	No
Diquat (ug/L)	2024/01/08	<MDL 1.0	70.0	No	No
Diuron (ug/L)	2024/01/08	<MDL 0.03	150.0	No	No
Glyphosate (ug/L)	2024/01/08	<MDL 1.0	280.0	No	No
Malathion (ug/L)	2024/01/08	<MDL 0.02	190.0	No	No
Metolachlor (ug/L)	2024/01/08	<MDL 0.01	50.0	No	No
Metribuzin (ug/L)	2024/01/08	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)	2024/01/08	<MDL 0.30	80.0	No	No
Paraquat (ug/L)	2024/01/08	<MDL 1.0	10.0	No	No
PCB (ug/L)	2024/01/08	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L)	2024/01/08	<MDL 0.15	60.0	No	No
Phorate (ug/L)	2024/01/08	<MDL 0.01	2.0	No	No
Picloram (ug/L)	2024/01/08	<MDL 1.0	190.0	No	No
Prometryne (ug/L)	2024/01/08	<MDL 0.03	1.0	No	No
Simazine (ug/L)	2024/01/08	<MDL 0.01	10.0	No	No
Terbufos (ug/L)	2024/01/08	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L)	2024/01/08	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L)	2024/01/08	<MDL 0.20	100.0	No	No
Triallate (ug/L)	2024/01/08	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L)	2024/01/08	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L)	2024/01/08	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L)	2024/01/08	<MDL 0.12	100.0	No	No
Trifluralin (ug/L)	2024/01/08	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L)	2024/01/08	<MDL 0.17	1.0	No	No

MAC = Maximum Allowable Concentration as per O. Reg. 169/03
 MDL = Method Detection Limit

Distribution Water	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Trihalomethane: Total (ug/L) Annual Average	2024	9.54	100.0	No	No
HAA Total (ug/L) Annual Average	2024	5.30	80.0	No	No

MAC = Maximum Allowable Concentration as per O. Reg. 169/03

MDL = Method Detection Limit

Additional Legislated Samples

Additional Samples required under O. Reg. 170/03 Schedule 13: Chemical Sampling and Testing.

Parameter	Location	No. of Samples Collected	Range of Results	
			Minimum	Maximum
Uranium: U (ug/L)	Treated	5	8.69	19.2

Major Maintenance Summary incurred to install, repair or replace required equipment

WO #	Description
3764101	Service Line Repair
3950979	UPS Battery Alarm, Replace/Investigate
4000070	Alarm Panel, Troubleshooting

Appendix A

WTRS Submission Confirmation

Hello,

Attached is a copy of your completed Online Reporting. Please keep this for your records should you need it for future reference.

Service Name: Confirmation of Water Taking PTTW Reporting Submission - 2024

Date/Time Submitted: Feb 11, 2025 2:01:55 PM

Submission Confirmation#: 1000269779

Submitted To:

Ministry of the Environment, Conservation and Parks Water User Reporting Section

125 Resources Road, West Wing

Toronto, ON M9P 3V6

[Tel:1-877-344-2011](tel:1-877-344-2011)

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