

# Woodville Drinking Water System

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Waterworks # 210001077  
System Category – Large Municipal Residential

## Annual Water Report

Prepared For: The City of Kawartha Lakes

Reporting Period of January 1<sup>st</sup> – December 31<sup>st</sup>, 2022

Issued: February 17, 2023

Revision: 0

Operating Authorities:



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 City of Kawartha Lakes Public Works Administration Office by appointment and [City's website](#). Notification that reports are available free of charge will be made on the City of Kawartha Lakes website. The City of Kawartha Lakes Public Works Administration Office is located at 322 Kent Street West in Lindsay, Ontario.

## Compliance Report Card

**Drinking Water System Number:** 210001077

**Drinking Water System Name:** Woodville WTP

**Drinking Water System Owner:** City of Kawartha Lakes

**Drinking Water System Category:** Large Municipal Residential

**Period Being Reported:** January 1, 2022 - December 31, 2022

	# of Events	Date	Details
<b>Health &amp; Safety</b>			
Number of Incidents	0		
<b>Drinking Water</b>			
MECP Inspections	1	May 18, 2022	Unannounced - Focused Drinking Water Inspection - Final Inspection Rating of 100%
AWQI's	0		
Number of Non-Compliances	1	July 18, 2022	No raw water sample from the production Well #1 was collected in summer of 2021 (semi-annually) and tested for sodium, calcium, magnesium and potassium.
Number of Boil Water Advisories	0		

## System Process Description

### Raw Source

The Woodville Water Treatment Plant is supplied with two GUDI wells (Wells 1 and 2). Well 3 is a pond makeup well.

### Treatment

The treatment system consists of the following:

- Two parallel treatment trains, each containing two sets of cartridge filters
- Sodium hypochlorite feed system with two metering pumps
- Two turbidity analyzers: one analyzer per filtration train
- Two chlorine residuals analyzers: immediately following the injection point and treated water
- Two flow meters: raw and treated
- Chlorine contact pipe
- SCADA system
- Water storage standpipe with a capacity of 1160 m<sup>3</sup>
- Standby generator

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Jutzi Water Technology

## Summary of Non-Compliance

### Adverse Water Quality Incidents

There were no adverse water quality incidents reported during the reporting period.

### Non-Compliance

There were no non-compliance issues reported during the reporting 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
SDWA   31   (1); Part 4.3 of the current Permit To Take Water (PTTW) Number 1207-AHKRXV requires the Permit Holder to ensure that the monitoring of the groundwater resource is carried out as described in	All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were not being met. no raw water sample from the production Well #1 was collected in summer of 2021 (semi-annually) and tested for sodium, calcium, magnesium and	January 14, 2022	Ensure that semi-annual sampling of Well #1 is carried out in accordance with the Permit to Take Water Number 1207-AHKRXV; submit a sampling procedure and calendar describing the semi-annual sampling requirements prescribed by the current PTTW; submit the laboratory	Complete

Legislation	Requirement(s) System Failed to Meet	Duration of the Failure (i.e. date(s))	Corrective Action	Status
Schedule "A" of the Permit.	potassium samples.		certificates of analysis for raw water samples collected in summer of 2022.	

## Flows

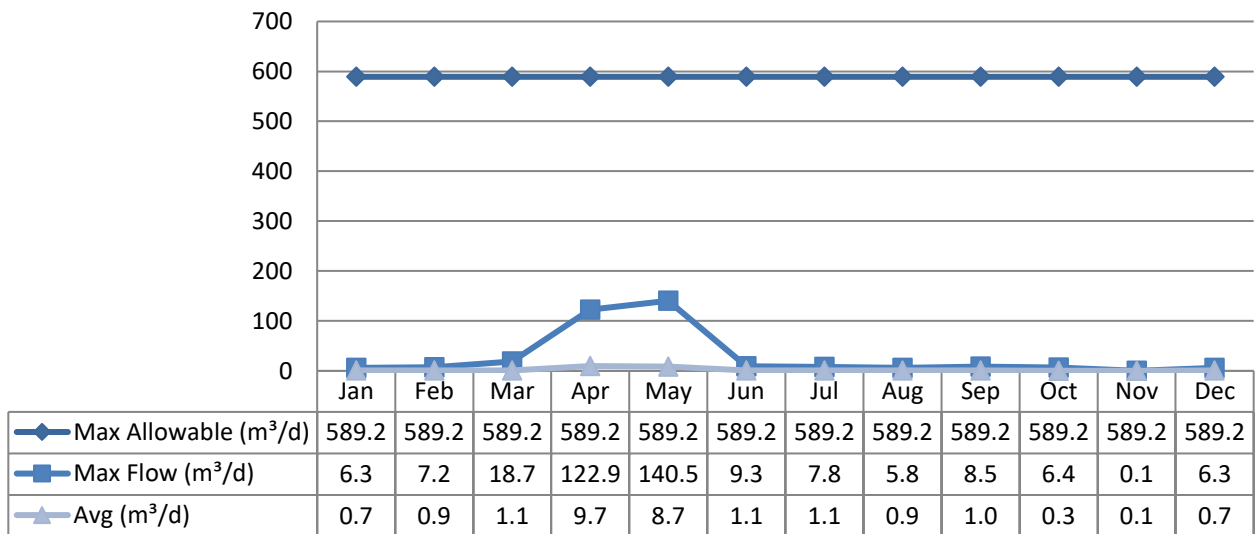
The Woodville Drinking Water System is operating on average under half the rated capacity.

### Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2022 Raw Flow Data was submitted to the Ministry electronically under permit #1207-AHKRXV. The confirmation and a copy of the data that was submitted are attached in Appendix A.

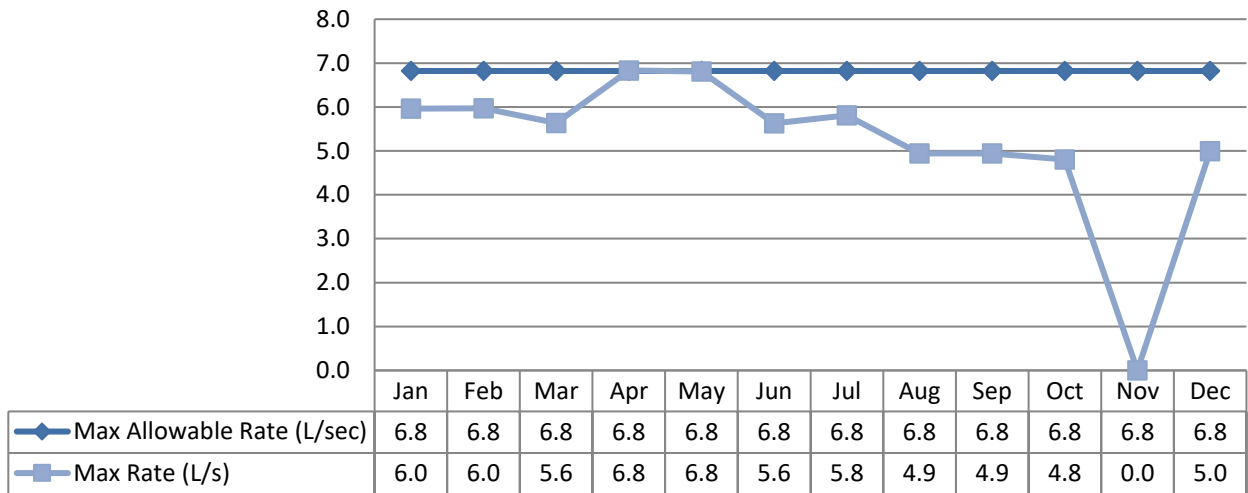
#### Total Monthly Flows (m<sup>3</sup>/d)

Max Allowable PTTW- Well #1



*Monthly Rated Flows (L/s)*

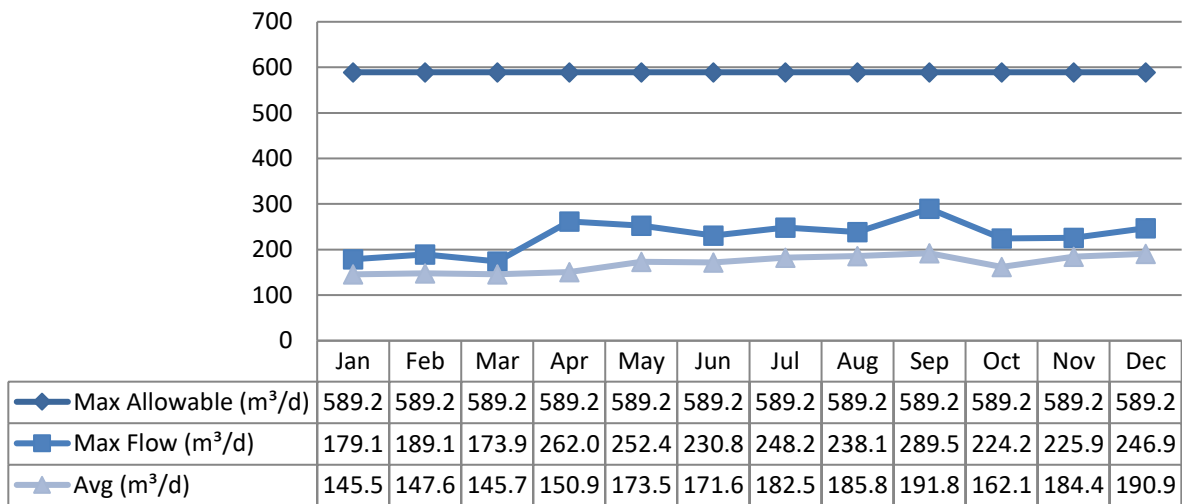
Max allowable rate – PTTW- Well #1



Note: The scheduled Flow Meter calibration occurred in August 2022.

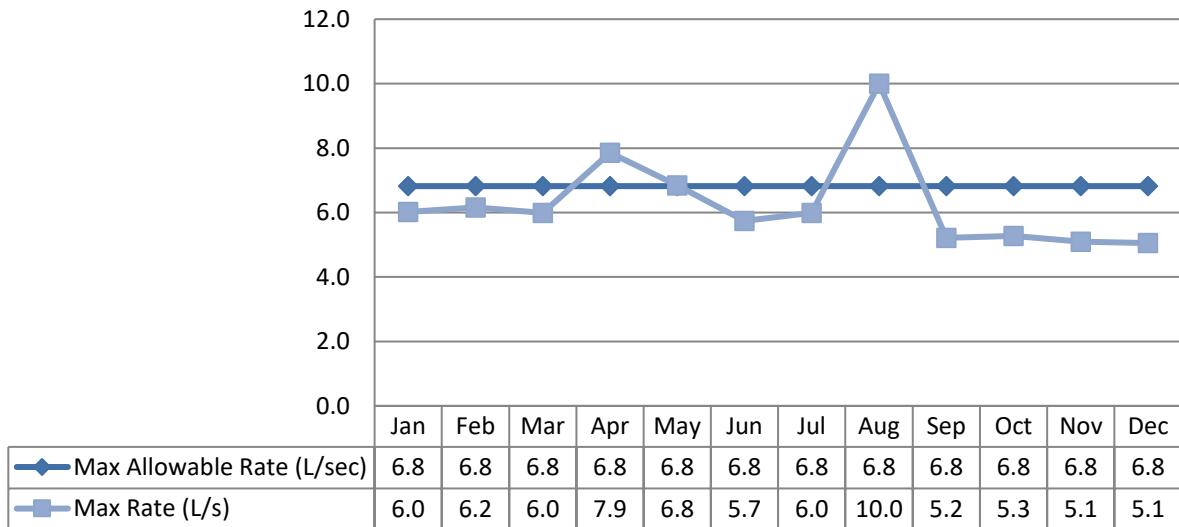
*Total Monthly Flows (m³/d)*

Max Allowable PTTW- Well #2



*Monthly Rated Flows (L/s)*

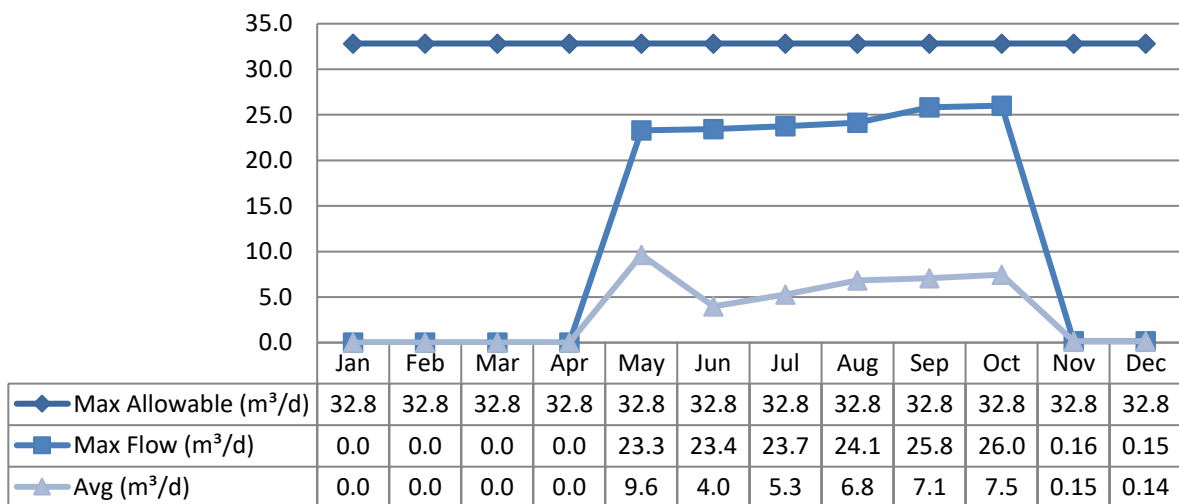
Max allowable rate – PTTW- Well #2



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s) which were short in duration and reviewed for compliance. The scheduled Flow Meter calibration occurred in August 2022. The max results for April and May were caused by raw water capacity testing. Readings can also spike during generator runs or unplanned power outages.

*Total Monthly Flows (m<sup>3</sup>/d)*

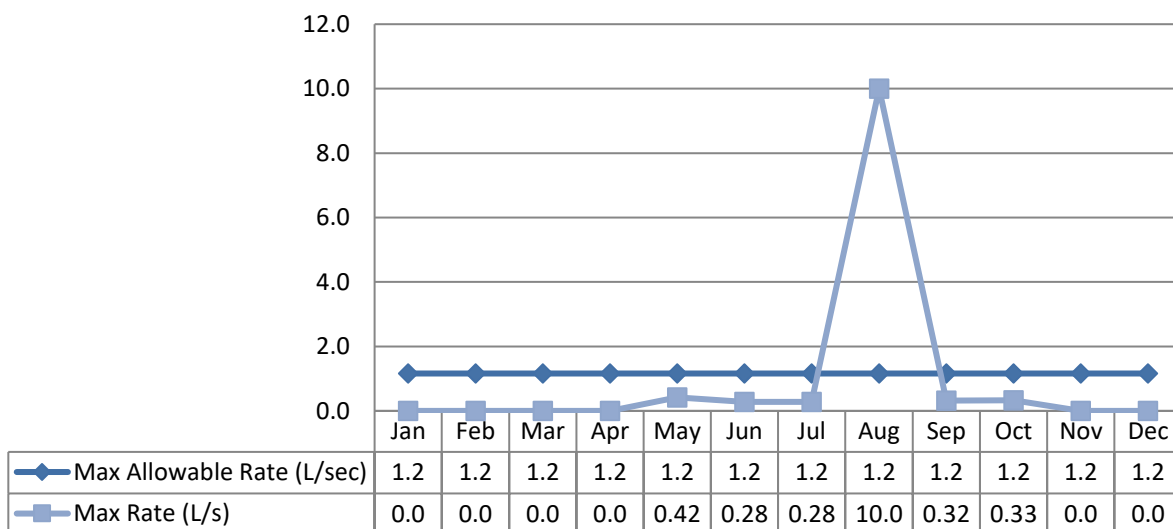
Max Allowable PTTW- Well #3 (Pond Makeup Well)





Monthly Rated Flows (L/s)

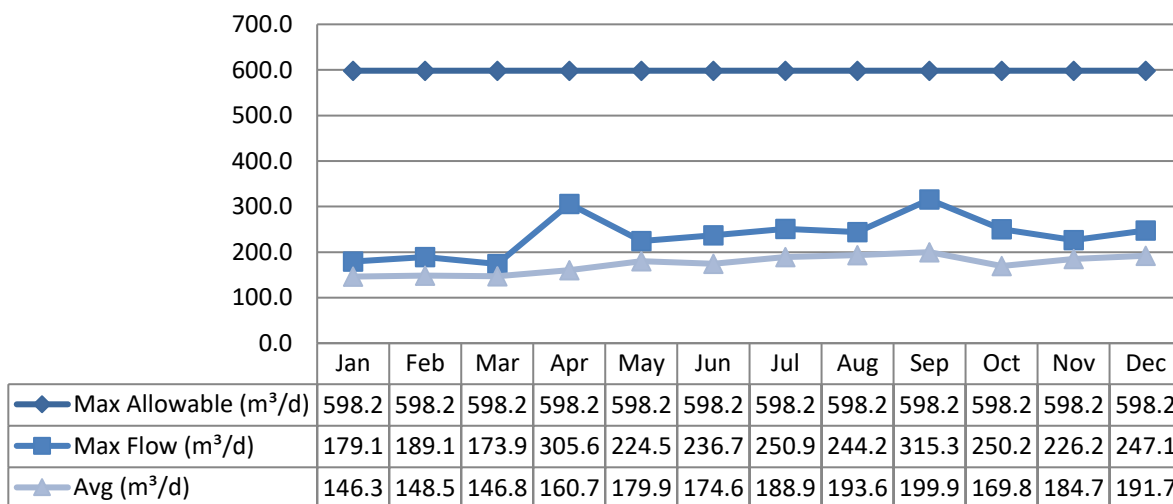
Max allowable rate – PTTW- Well #3



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s) which were short in duration and reviewed for compliance. The scheduled Flow Meter calibration occurred in August 2022.

Total Monthly Flows (m<sup>3</sup>/d)

Max Allowable PTTW- Total Raw

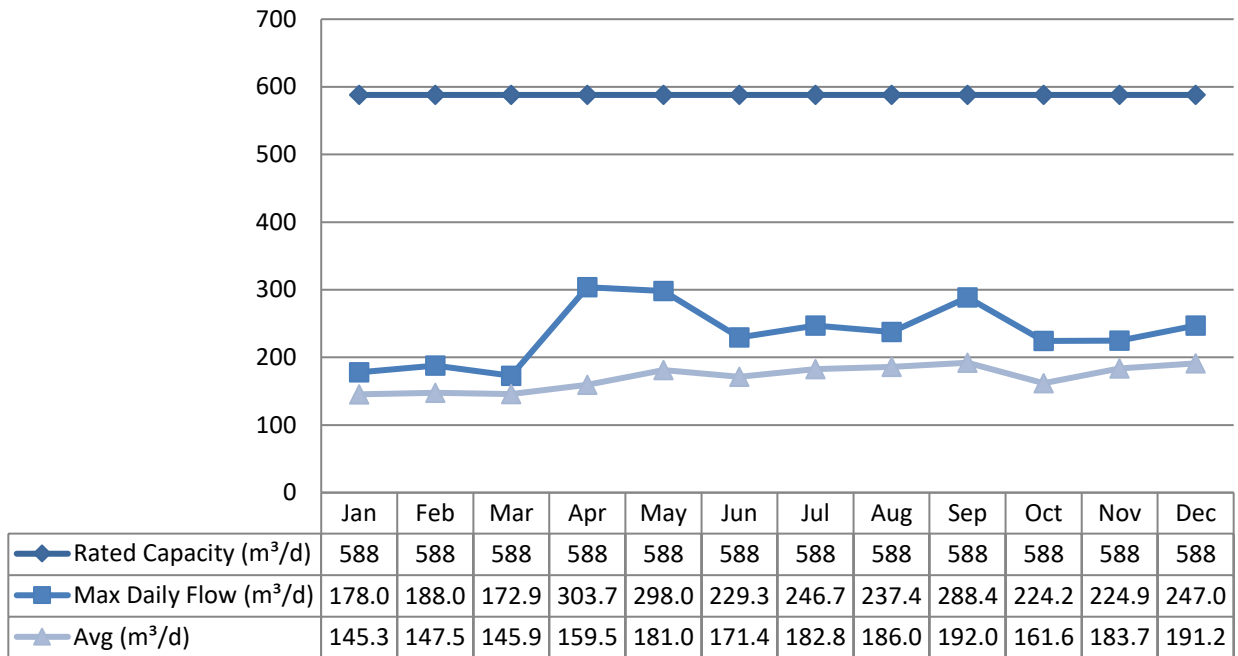


**Treated Water Flows**

The Treated Water flows are regulated under the Municipal Licence.

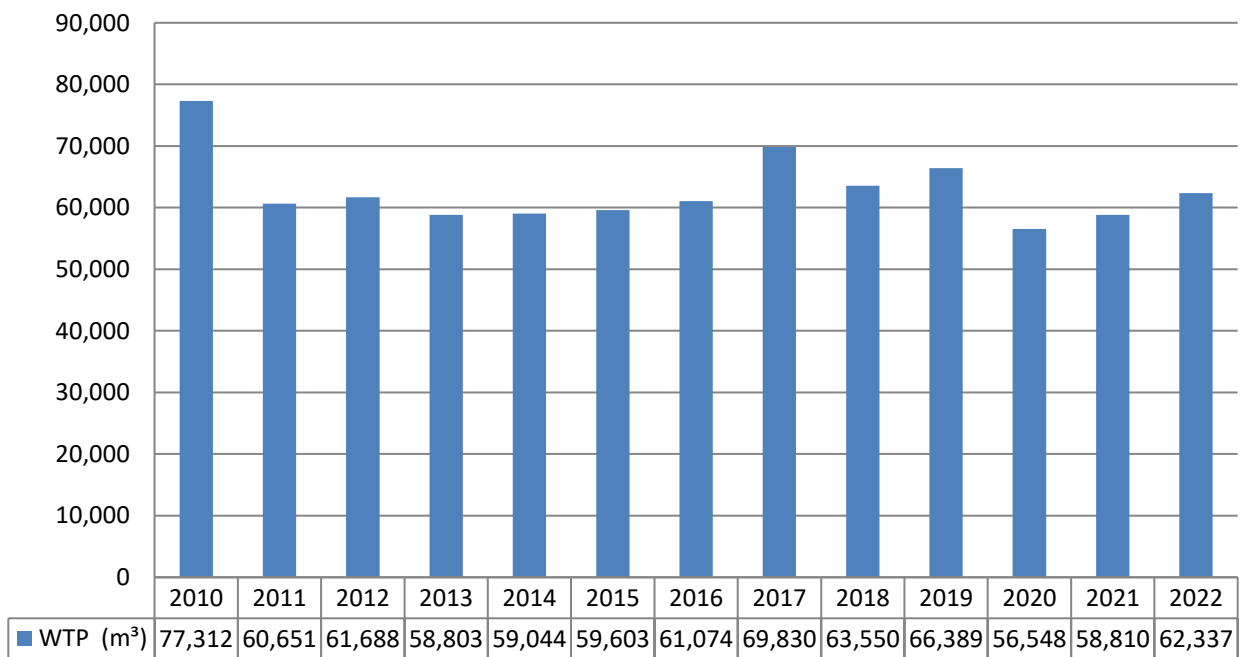
Monthly Rated Flows

Rated Capacity - MDWL



Annual Total Flow Comparison

Total Annual m<sup>3</sup>



## Regulatory Sample Results Summary

### Microbiological Testing

Source	No. of Samples Collected	Range of E. coli Results Min	Range of E.coli Results Max	Range of Total Coliform Results Min	Range of Total Coliform Results Max	Range of HPC Results Min	Range of HPC Results Max
Raw Well 1	52	0	0	0	2		
Raw Well 2	52	0	0	0	0		
Treated	52	0	0	0	0	0	2
Distribution	156	0	0	0	0	0	117

### Operational Testing

	No. of Samples Collected	Range of Results Minimum	Range of Results Maximum
Turbidity Well 1 (NTU)	48	0.13	1.99
Turbidity Well 2 (NTU)	50	0.07	0.87
Chlorine	8760	0	3.35
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

**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. All spikes are reviewed for compliance with O. Reg. 170/03.

### Inorganic Parameters

These parameters are tested as a requirement under O. Reg. 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 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.

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

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances MAC	No. of Exceedances ½ MAC
<b>Treated Water</b>					
Antimony: Sb (ug/L)	2022/01/10	<MDL 0.6	6.0	No	No
Arsenic: As (ug/L)	2022/01/10	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L)	2022/01/10	45.3	1000.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances MAC	No. of Exceedances ½ MAC
Boron: B (ug/L)	2022/01/10	14.0	5000.0	No	No
Cadmium: Cd (ug/L)	2022/01/10	0.006	5.0	No	No
Chromium: Cr (ug/L)	2022/01/10	0.17	50.0	No	No
Mercury: Hg (ug/L)	2022/01/10	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L)	2022/01/10	0.15	50.0	No	No
Uranium: U (ug/L)	2022/01/10	0.672	20.0	No	No
<b>Additional Inorganics</b>					
Fluoride (mg/L)	2018/01/15	<MDL 0.06	1.5	No	No
Nitrite (mg/L)	2022/01/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2022/04/04	0.004	1.0	No	No
Nitrite (mg/L)	2022/07/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L)	2022/10/03	<MDL 0.003	1.0	No	No
Nitrate (mg/L)	2022/01/04	1.98	10.0	No	No
Nitrate (mg/L)	2022/04/04	2.13	10.0	No	No
Nitrate (mg/L)	2022/07/04	1.73	10.0	No	No
Nitrate (mg/L)	2022/10/03	2.04	10.0	No	No
Sodium: Na (mg/L)	2018/01/15	8.22	20*	No	No

\*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. No plumbing samples were collected.

Distribution System	No. of Sampling Points	No. of Samples	Range of Results Min	Range of Results Max	MAC (ug/L)	No. Of Exceedances
Alkalinity (mg/L)	4	3	81	288	N/A	N/A

Distribution System	No. of Sampling Points	No. of Samples	Range of Results Min	Range of Results Max	MAC (ug/L)	No. Of Exceedances
pH	4	3	6.90	7.83	N/A	N/A
Lead (ug/l)	4	0	N/A	N/A	10	0

### 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.

	Sample Date (yyy/mm/dd)	Sample Result	MAC	Exceedance MAC	Exceedance ½ MAC
<b>Treated Water</b>					
Alachlor (ug/L)	2022/01/10	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L)	2022/01/10	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L)	2022/01/10	<MDL 0.05	20.0	No	No
Benzene (ug/L)	2022/01/10	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L)	2022/01/10	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L)	2022/01/10	<MDL 0.33	5.0	No	No
Carbaryl (ug/L)	2022/01/10	<MDL 0.05	90.0	No	No
Carbofuran (ug/L)	2022/01/10	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L)	2022/01/10	<MDL 0.17	2.0	No	No
Chlorpyrifos (ug/L)	2022/01/10	<MDL 0.02	90.0	No	No
Diazinon (ug/L)	2022/01/10	<MDL 0.02	20.0	No	No
Dicamba (ug/L)	2022/01/10	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L)	2022/01/10	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L)	2022/01/10	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L)	2022/01/10	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L)	2022/01/10	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L)	2022/01/10	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L)	2022/01/10	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L)	2022/01/10	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L)	2022/01/10	<MDL 0.4	9.0	No	No
Dimethoate (ug/L)	2022/01/10	<MDL 0.06	20.0	No	No
Diquat (ug/L)	2022/01/10	<MDL 1.0	70.0	No	No
Diuron (ug/L)	2022/01/10	<MDL 0.03	150.0	No	No
Glyphosate (ug/L)	2022/01/10	<MDL 1.0	280.0	No	No

	Sample Date (yyy/mm/dd)	Sample Result	MAC	Exceedance MAC	Exceedance ½ MAC
Malathion (ug/L)	2022/01/10	<MDL 0.02	190.0	No	No
Metolachlor (ug/L)	2022/01/10	<MDL 0.01	50.0	No	No
Metribuzin (ug/L)	2022/01/10	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)	2022/01/10	<MDL 0.3	80.0	No	No
Paraquat (ug/L)	2022/01/10	<MDL 1.0	10.0	No	No
PCB (ug/L)	2022/01/10	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L)	2022/01/10	<MDL 0.15	60.0	No	No
Phorate (ug/L)	2022/01/10	<MDL 0.01	2.0	No	No
Picloram (ug/L)	2022/01/10	<MDL 1.0	190.0	No	No
Prometryne (ug/L)	2022/01/10	<MDL 0.03	1.0	No	No
Simazine (ug/L)	2022/01/10	<MDL 0.01	10.0	No	No
Terbufos (ug/L) -	2022/01/10	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L)	2022/01/10	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L)	2022/01/10	<MDL 0.2	100.0	No	No
Triallate (ug/L)	2022/01/10	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L)	2022/01/10	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L)	2022/01/10	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L)	2022/01/10	<MDL 0.12	100.0	No	No
Trifluralin (ug/L)	2022/01/10	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L)	2022/01/10	<MDL 0.17	1.0	No	No
<b>Distribution Water</b>					
Trihalomethane: Total (ug/L) Annual Average	2022/01/01	23.25	100.0	No	No
HAA Total (ug/L) Annual Average	2022/01/01	16.5	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 Permit to Take Water 1207-AHKRZV.

Parameter	Location	No. of Samples Collected	Range of Results Min	Range of Results Max
Nitrite (mg/L)	Well 1	14	<MDL 0.003	<MDL 0.003
Nitrite (mg/L)	Well 2	14	<MDL 0.003	0.003
Nitrate (mg/L)	Well 1	14	1.59	2.13
Nitrate (mg/L)	Well 2	14	1.72	2.13

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Parameter	Location	No, of Samples Collected	Range of Results Min	Range of Results Max
Nitrites + Nitrates (mg/L)	Well 1	14	1.59	2.13
Nitrites + Nitrates (mg/L)	Well 2	14	1.72	2.13
Calcium (mg/L)	Well 1	2	107	110
Calcium (mg/L)	Well 2	2	107	114
Magnesium (mg/L)	Well 1	2	9.86	12.5
Magnesium (mg/L)	Well 2	2	10.1	12.7
Sodium (mg/L)	Well 1	2	5.86	6.46
Sodium (mg/L)	Well 2	2	7.55	8.1
Potassium (mg/L)	Well 1	2	1.66	1.86
Potassium (mg/L)	Well 2	2	11.73	2.13
Chloride (mg/L)	Well 1	2	8.0	8.4
Chloride (mg/L)	Well 2	2	12.0	12.0
Sulphate (mg/L)	Well 1	2	15	17
Sulphate (mg/L)	Well 2	2	18	20
Alkalinity (mg/L as CaCO <sub>3</sub> )	Well 1	2	271	287
Alkalinity (mg/L as CaCO <sub>3</sub> )	Well 2	2	272	287
pH	Well 1	2	7.55	7.96
pH	Well 2	2	7.57	7.97
Ammonia+Ammonium (N) (mg/L)	Well 1	14	<MDL 0.04	0.04
Ammonia+Ammonium (N) (mg/L)	Well 2	14	<MDL 0.04	0.06
Total Kjeldahl Nitrogen (mg/L)	Well 1	14	0.05	0.24
Total Kjeldahl Nitrogen (mg/L)	Well 2	14	<MDL 0.05	0.26
Conductivity (uS/cm)	Well 1	2	556	560
Conductivity (uS/cm)	Well 2	2	580	5580
Total Dissolved Solids (mg/L)	Well 1	2	300	309
Total Dissolved Solids (mg/L)	Well 2	2	311	337
Hydrogen Sulphide (mg/L)	Well 1	2	<MDL 0.006	MDL<0.006
Hydrogen Sulphide (mg/L)	Well 2	2	<MDL 0.006	MDL<0.006
Ion Ratio	Well 1	2	0.30	1.92
Ion Ratio	Well 2	2	0.32	1.39



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

<b>WO #</b>	<b>Description</b>
2727061	Woodville WT Roof Replacement
2872626	Well 1 Strainer Replacement
3106963	Chlorine Pump, Backpressure Valve, Spare
3136834	Generator Fuel lines Inspection/Modification
3145117	Diesel Tank, Inspection
3202137	Water Entering Facility, Repairs
3204543	Main Door, Repair
2772952	Well 1 Level Sensor, Repair
2775854	Snow and Ice, Removal
2776114	Capacity Study
2820526	Post Chlorine Analyzer, Cell Holder, Spare
2919061	Filter 1/2 Turbidity Analyzer, Desiccant Replacement
2964399	Chlorine Pump # 2, Repair Kit



# Appendix A

## WTRS Data and Submission Confirmation



Ministry of the Environment,  
Conservation and Parks

| [WT DATA](#) | [USER PROFILE](#) | [CONTACT US](#) | [HELP](#) | [HOME](#) | [LOGOUT](#) |

Location: [WTRS](#) / [WT DATA](#) / [Input WT Record](#) WTRS-WT-008

**Water Taking Data submitted successfully.**

**Confirmation:**


Thank you for submitting your water taking data online.

Permit Number: 1207-AHKRXV  
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.  
Received on: Jan 30, 2023 2:33 PM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

[Print Confirmation](#)   [Return to Main Page](#)

CITY OF KAWARTHA LAKES | 2023/01/30  
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