

Canadiana Shores Drinking Water System

Waterworks # 220006491
System Category – Large Municipal Residential

Annual Water Report

Prepared For: The City of Kawartha Lakes

Reporting Period of January 1st – December 31st, 2021

Issued: February 22, 2022

Operating Authorities:



OCWA

 **ONTARIO CLEAN WATER AGENCY**
AGENCE ONTARIENNE DES EAUX

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

Table of Contents

Annual Water Report	1
Report Availability	2
Compliance Report Card	2
System Process Description	2
Raw Source	2
Treatment	3
Treatment Chemicals used during the reporting year	3
Summary of Non-Compliance.....	3
Adverse Water Quality Incidents.....	3
Non-Compliance	4
Non-Compliance Identified in a Ministry Inspection	4
Flows	4
Raw Water Flows.....	4
Total Monthly Flows (m ³ /d)-Well #2	5
Monthly Rated Flows (L/s)-Well #2	5
Total Monthly Flows (m ³ /d)-Well #3	6
Monthly Rated Flows (L/s)-Well #3	6
Total Monthly Flow (m ³ /d)-Well #4.....	7
Monthly Rated Flows (L/s)-Well #4	7
Treated Water Flows	8
Monthly Rated Flows	8
Annual Total Flow Comparison.....	8
Regulatory Sample Results Summary	9
Microbiological Testing	9
Operational Testing	9
Inorganic Parameters	9
Schedule 15 Sampling.....	10
Organic Parameters.....	11
Additional Legislated Samples.....	12
Major Maintenance Summary	13
WTRS Submission Confirmation	A

Report Availability

This system does not serve more than 10,000 residences. The annual reports will be available free of charge to residents at the City of Kawartha Lakes Public Works Administration Office and on the City’s website at [the City 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: 220006491
Drinking Water System Name: Canadiana Shores DWS
Drinking Water System Owner: City of Kawartha Lakes
Drinking Water System Category: Large Municipal Residential
Period Being Reported: January 1, 2021 - December 31, 2021

	# of Events	Date	Details
Health & Safety			
Number of Incidents	0		
Drinking Water			
MECP Inspections	1	Aug. 30, 2021	Announced - Focused Drinking Water Inspection - Final Inspection Rating of 100%
AWQI's	2	Aug. 30, 2021	Distribution sample adverse for 6 Total Coliforms
		Sep. 8, 2021	Distribution sample adverse for 23 Total Coliforms
Number of Non-Compliances	0		
Number of Boil Water Advisories	1	Sep. 8, 2021	Partial system Boil Water Advisory issued by HKPR District Health Unit. Rescinded on Sep. 11, 2021.

System Process Description

Raw Source

The water supply for the DWS comes from three (3) groundwater wells that are considered to be GUDI (Groundwater Under the Direct Influence of Surface Water).

Treatment

The treatment system consists of the following:

- sodium hypochlorite disinfection system
- two (2) package treatment units with backwash equipment and backwash waste storage/decant tank system
- two (2) cartridge filtration systems
- two (2) booster pumps and equalization tank system
- hydropneumatic tanks
- a high lift pumping system
- Stand-by diesel generator on-site

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Jutzi Water Technologies

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
Aug. 30, 2021	155328	Distribution	Total Coliforms	One distribution sample adverse for 6 Total Coliforms.	O. Reg. 169	Flush and resample. Resample return with clear results.
Sep. 8, 2021	155426	Distribution	Total Coliforms	One distribution sample adverse for 23 Total Coliforms.	O. Reg. 169	Boil Water Advisory issued by MOH. Flush, two sets of resamples. Resamples returned with clear results. Boil Water Advisory rescinded on September 11, 2021.

Non-Compliance

There were no non-compliance issues reported during the reporting period.

Non-Compliance Identified in a Ministry Inspection:

There were no non-compliance issues identified during the Ministry inspection this reporting period.

Flows

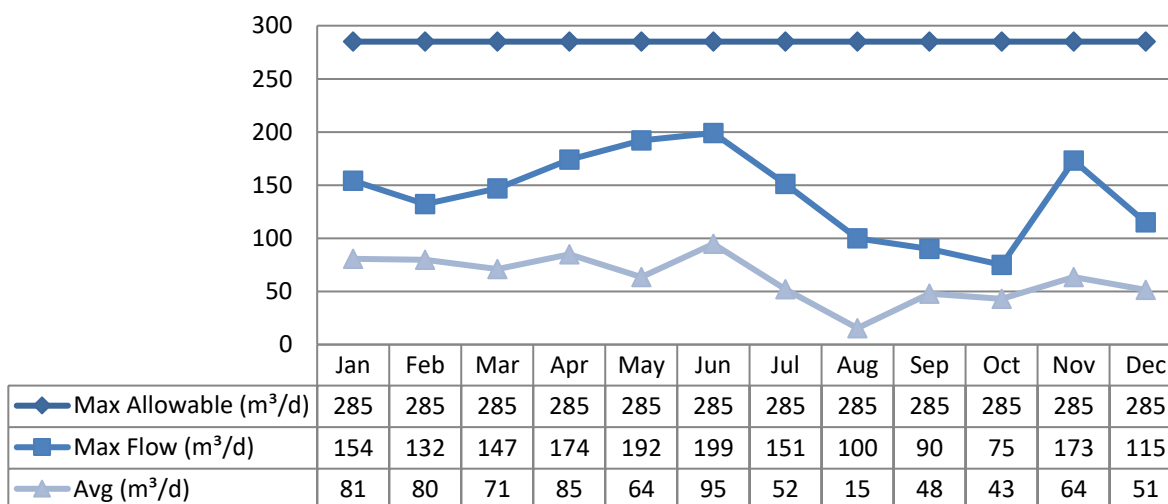
The Canadiana Shores Drinking Water System is operating on average under half the rated capacity.

Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2021 Raw Flow Data was submitted to the Ministry electronically under permit #1311-BMZH78. The confirmations and a copy of the data that was submitted are attached in Appendix A.

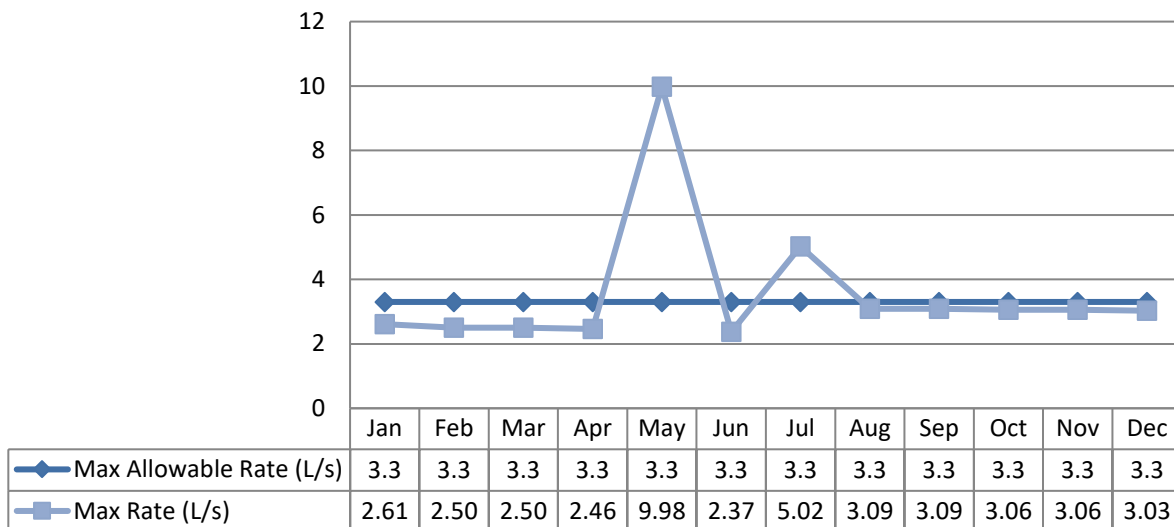
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #2



Monthly Rated Flows (L/s)

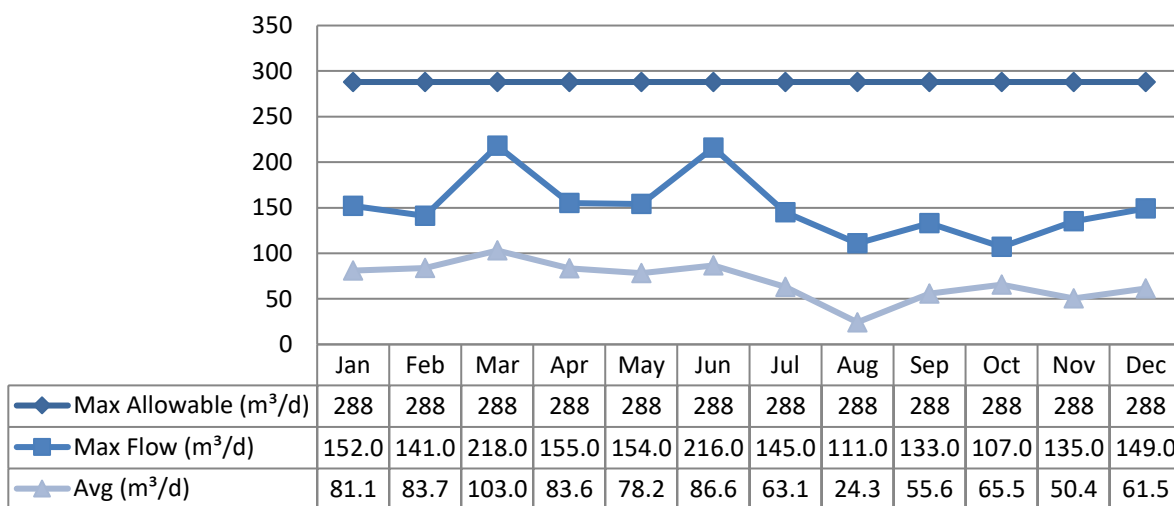
Max allowable rate – PTTW – Well #2



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s). The significant spike in May was due to scheduled Flow Meter calibration. The spike in July was due to well maintenance.

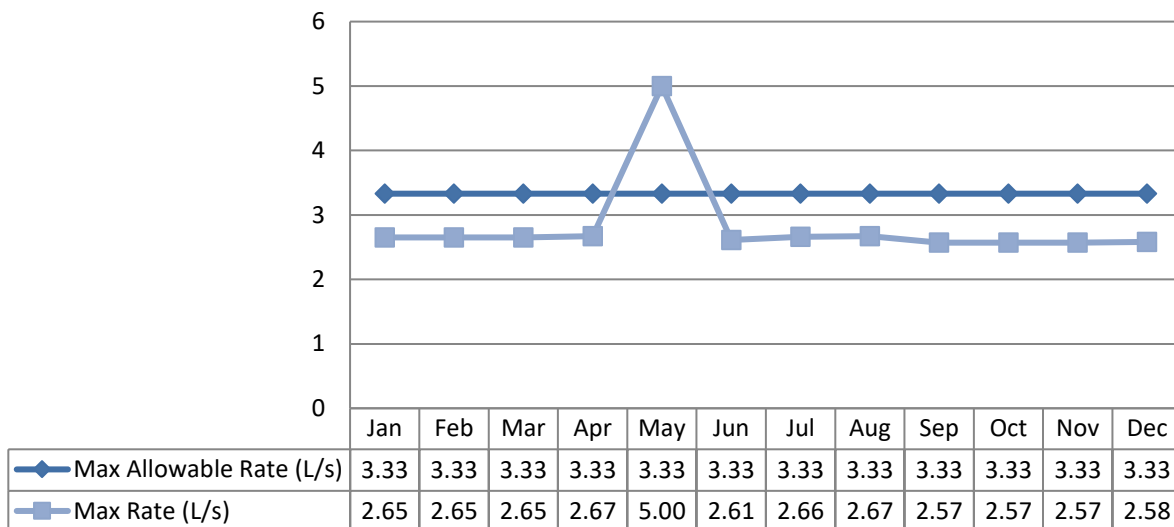
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #3



Monthly Rated Flows (L/s)

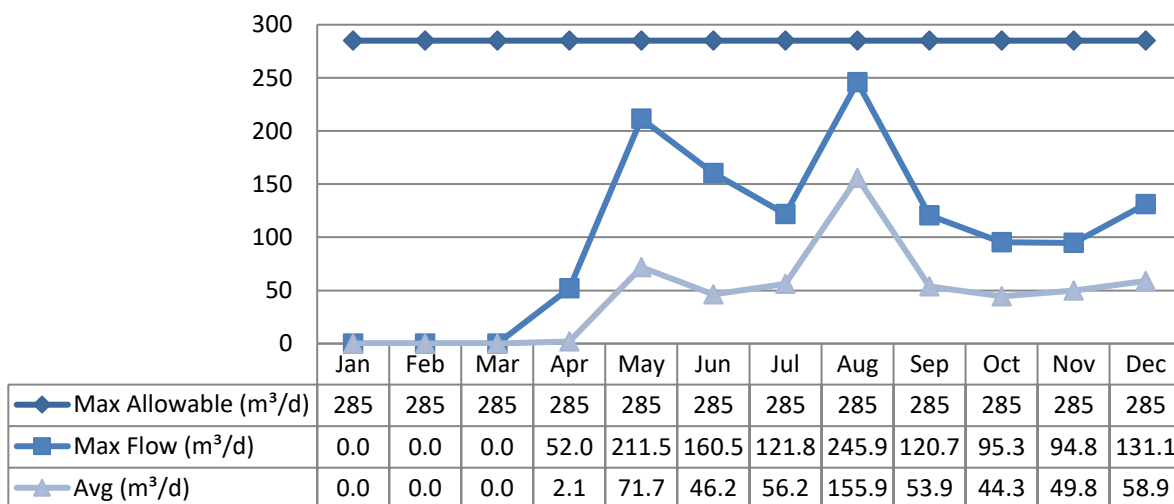
Max allowable rate – PTTW – Well #3



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s). The spike in May was due to scheduled Flow Meter calibration.

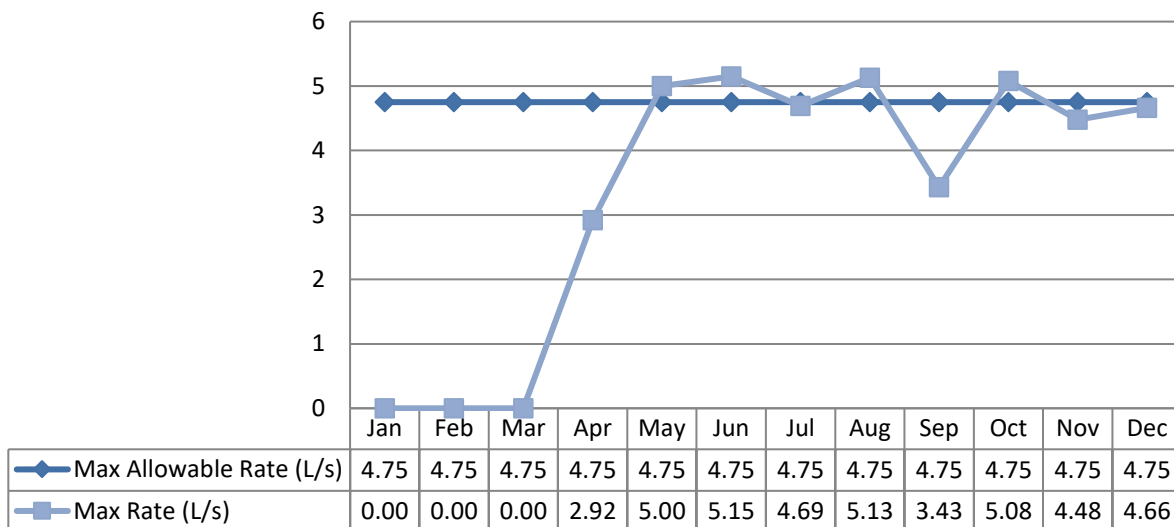
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #4



Monthly Rated Flows (L/s)

Max allowable rate – PTTW – Well #4



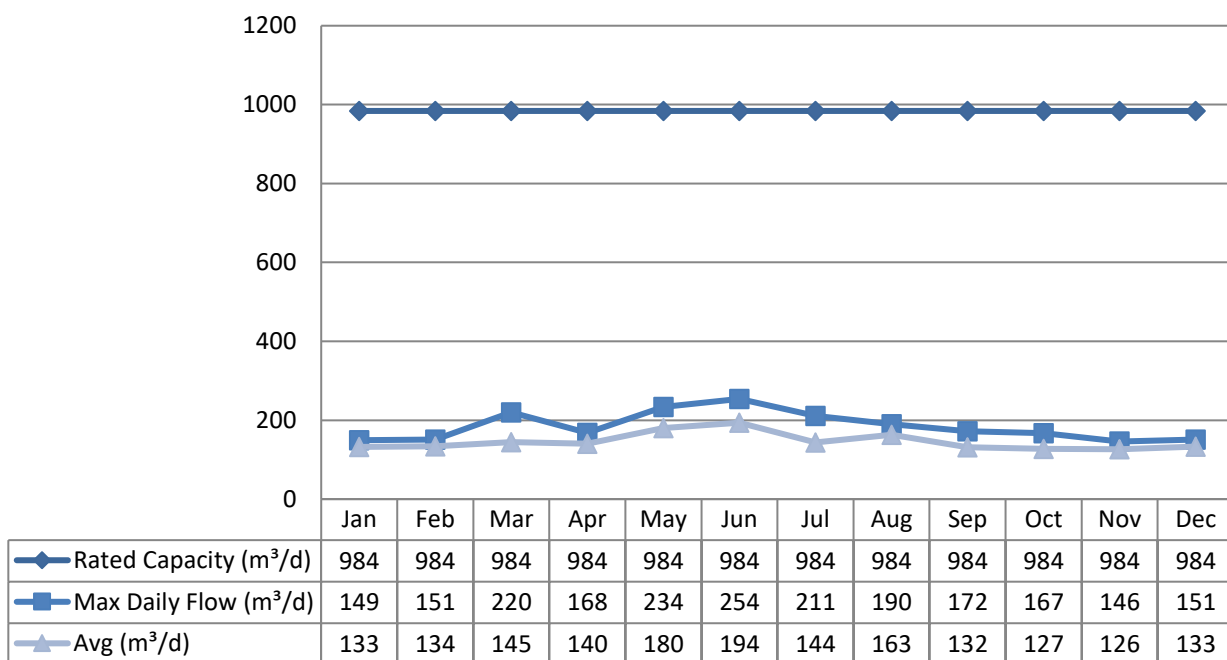
Note: Well 4 was put into production on April 26, 2021. The significant spikes in May, June, July, August, October were due to power transfer between utility and the onsite generator.

Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence.

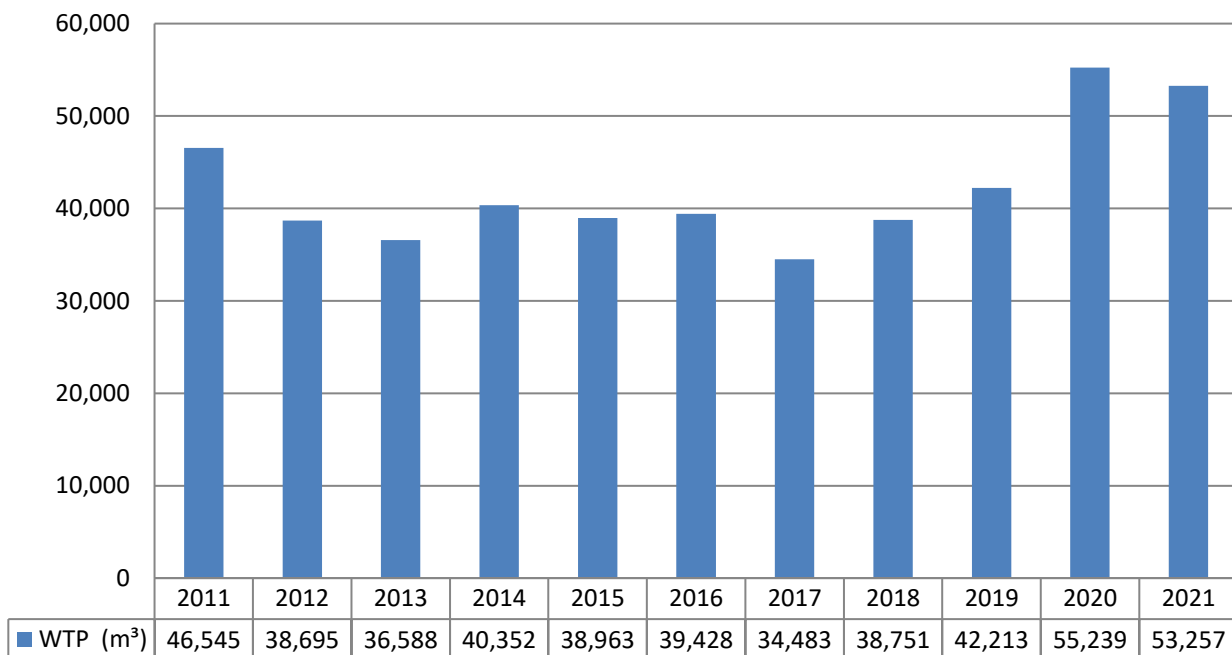
Monthly Rated Flows

Rated Capacity – MDWL



Annual Total Flow Comparison

Total Annual m³



Regulatory Sample Results Summary

Microbiological Testing

	No. of Samples Collected	Range of E. Coli Results	Range of E. Coli Results	Range of Total Coliform Results	Range of Total Coliform Results	Range of HPC Results	Range of Results
		Min	Max	Min	Max	Min	Max
Raw Well 2	56	0	0	0	2		
Raw Well 3	57	0	0	0	28		
Raw Well 4	31	0	0	0	1		
Treated	51	0	0	0	0	0	2
Distribution	160	0	0	0	23	0	5

Note: Well 4 was put into production on April 26, 2021.

Operational Testing

	No. of Samples Collected	Range of Results	Range of Results
		Minimum	Maximum
Turbidity Well 2 (NTU)	12	0.11	0.52
Turbidity Well 3 (NTU)	12	0.12	0.69
Turbidity Well 4 (NTU)	8	0.17	0.38
Turbidity – Filter Line 1 (NTU)	8760	0	2.00
Turbidity – Filter Line 2 (NTU)	8760	0	1.99
Chlorine	8760	0	4.30
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

Note: Well 4 was put into production on April 26, 2021.

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	Exceedance	Exceedance
				MAC	1/2 MAC
Treated Water					
Antimony: Sb (ug/L) - TW	2021/01/04	<MDL 0.09	6.0	No	No
Arsenic: As (ug/L) - TW	2021/01/04	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L) - TW	2021/01/04	114.0	1000.0	No	No
Boron: B (ug/L) - TW	2021/01/04	10.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2021/01/04	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2021/01/04	0.2	50.0	No	No
Mercury: Hg (ug/L) - TW	2021/01/04	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2021/01/04	0.08	50.0	No	No
Uranium: U (ug/L) - TW	2021/01/04	4.55	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	2018/01/08	0.09	1.5	No	No
Nitrite (mg/L) - TW	2021/01/04	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2021/04/06	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2021/07/05	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2021/10/04	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2021/01/04	1.14	10.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
Nitrate (mg/L) - TW	2021/04/06	1.5	10.0	No	No
Nitrate (mg/L) - TW	2021/07/05	1.28	10.0	No	No
Nitrate (mg/L) - TW	2021/10/04	0.799	10.0	No	No
Sodium: Na (mg/L) - TW	2018/01/08	17.0	20*	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. No plumbing samples were collected.

Distribution System	Number of Sampling Points	Number of Samples	Range of Results Minimum	Range of Results Maximum	MAC (ug/L)	Number of Exceedances
Alkalinity (mg/L)	2	4	280	284	N/A	N/A
pH	2	3	7.81	8.49	N/A	N/A
Lead (ug/l)	2	0	N/A	N/A	10	N/A

Organic Parameters

These parameters are tested 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 (yyyy/mm/dd)	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
Treated Water					
Alachlor (ug/L) - TW	2021/01/04	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2021/01/04	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2021/01/04	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW	2021/01/04	<MDL 0.32	1.00	No	No
Benzo(a)pyrene (ug/L) - TW	2021/01/04	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2021/01/04	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2021/01/04	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	2021/01/04	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2021/01/04	<MDL 0.17	2.00	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
Chlorpyrifos (ug/L) - TW	2021/01/04	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW	2021/01/04	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2021/01/04	<MDL 0.2	120.0 0	No	No
1,2-Dichlorobenzene (ug/L) - TW	2021/01/04	<MDL 0.41	200.0 0	No	No
1,4-Dichlorobenzene (ug/L) - TW	2021/01/04	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2021/01/04	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2021/01/04	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2021/01/04	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2021/01/04	<MDL 0.15	900.0 0	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2021/01/04	<MDL 0.19	100.0 0	No	No
Diclofop-methyl (ug/L) - TW	2021/01/04	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2021/01/04	<MDL 0.06	20.00	No	No
Diquat (ug/L) - TW	2021/01/04	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	2021/01/04	<MDL 0.03	150.0 0	No	No
Glyphosate (ug/L) - TW	2021/01/04	<MDL 1.0	280.0 0	No	No
Malathion (ug/L) - TW	2021/01/04	<MDL 0.02	190.0 0	No	No
2-Methyl- 4chlorophenoxyacetic Acid (MCPA) (ug/L)	2021/01/04	<MDL 0.12	100.0 0	No	No
Metolachlor (ug/L) - TW	2021/01/04	<MDL 0.01	50.00	No	No
Metribuzin (ug/L) - TW	2021/01/04	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2021/01/04	<MDL 0.3	80.00	No	No
Paraquat (ug/L) - TW	2021/01/04	<MDL 1.0	10.00	No	No
PCB (ug/L) - TW	2021/01/04	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW	2021/01/04	<MDL 0.15	60.00	No	No
Phorate (ug/L) - TW	2021/01/04	<MDL 0.01	2.00	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
Picloram (ug/L) - TW	2021/01/04	<MDL 1.0	190.0 0	No	No
Prometryne (ug/L) - TW	2021/01/04	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW	2021/01/04	<MDL 0.01	10.00	No	No
Terbufos (ug/L) - TW	2021/01/04	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2021/01/04	<MDL 0.35	10.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2021/01/04	<MDL 0.2	100.0 0	No	No
Triallate (ug/L) - TW	2021/01/04	<MDL 0.01	230.0 0	No	No
Trichloroethylene (ug/L) - TW	2021/01/04	<MDL 0.44	5.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2021/01/04	<MDL 0.25	5.00	No	No
Trifluralin (ug/L) - TW	2021/01/04	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2021/01/04	<MDL 0.17	1.00	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average - DW	2021	7.85	100	No	No
HAA Total (ug/L) Annual Average - DW	2021	5.3	80	No	No

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

Additional Legislated Samples

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
July 26, 2016	Suspended Solids (Composite)	January 25, 2021	<2	mg/L
July 26, 2016	Suspended Solids (Composite)	February 22, 2021	<2	mg/L
July 26, 2016	Suspended Solids (Composite)	March 29, 2021	7	mg/L
Apr. 30, 2021	Suspended Solids (Composite)	April 26, 2021	4	mg/L

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
Apr. 30, 2021	Suspended Solids (Composite)	May 31, 2021	<2	mg/L
Apr. 30, 2021	Suspended Solids (Composite)	June 28, 2021	<2	mg/L
Apr. 30, 2021	Suspended Solids (Composite)	July 26, 2021	2	mg/L
Apr. 30, 2021	Suspended Solids (Composite)	August 30, 2021	9	mg/L
Sep. 21, 2021	Suspended Solids (Composite)	September 27, 2021	2	mg/L
Sep. 21, 2021	Suspended Solids (Composite)	October 25, 2021	3	mg/L
Sep. 21, 2021	Suspended Solids (Composite)	November 29, 2021	5	mg/L
Sep. 21, 2021	Suspended Solids (Composite)	December 29, 2021	<2	mg/L
Sep. 21, 2021	Suspended Solids Annual Average Concentration	2021	3.5	mg/L


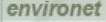

Major Maintenance Summary incurred to install, repair or replace required equipment

WO # Description

2504028 Filter 2 Turbidity Analyzer

Appendix A

WTRS Submission Confirmations



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: 1311-BMZH78
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on: Feb 10, 2022 11:45 AM

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 | 2022/02/10
version: v4.5.0.21 (build#: 22)
Last modified: 2018/09/18

 This site maintained by
the Government of Ontario ©2022 [Queen's Printer for Ontario](#)