

Victoria Place Drinking Water System

Waterworks # 220011895
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 23, 2022

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 residences. The annual reports will be available to residents free of charge at the City of Kawartha Lakes Public Works Administration Office and [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: 220011895

Drinking Water System Name: Victoria Place 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	August 25, 2021	Announced, Focused inspection, 96.94% rating
AWQI's	0		
Number of Non-Compliances	1	October 25, 2021	One instance of 72 hour trend review performed outside of the 72 hour window.
Number of Boil Water Advisories	0		

System Process Description

Raw Source

The Victoria Place Water Treatment Plant is supplied with raw groundwater from four wells: Well # 1, 2, 3, and 7. The system is divided into two well banks. In the present configuration, Bank No. 1 consists of Well # 1, 2 and 3 and Bank No. 2 consists of Well #7.

Treatment

The treatment system consists of the following:

- Four groundwater wells considered to be Non-GUDI with pumps
- Sodium hypochlorite feed system with two metering pumps

- Unbaffled 295 m3 underground circular concrete storage reservoir
- Online chlorine analyzer
- Five flowmeters:
- Standby diesel generator on-site.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Jutzi

Summary of Non-Compliance

Adverse Water Quality Incidents

There were no AWQI reported during the reporting period.

Non-Compliance

There was 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 O. Reg. 170/03 6-5 (1)1-4, SDWA O. Reg. 170/03 6-5 (1)5-10	The 72 hour trend review was performed outside of the 72 hour window.	The trends were reviewed on Monday July 26, 2021 between 12:27 and 13:48 and they were not reviewed again until July 29, 2021 at 14:30.	Additional training on 72 hour review requirements was provided to operational staff on August 19, 2021. Minutes from that meeting have been submitted to the Ministry. No further corrective actions are Required.	Complete.

Flows

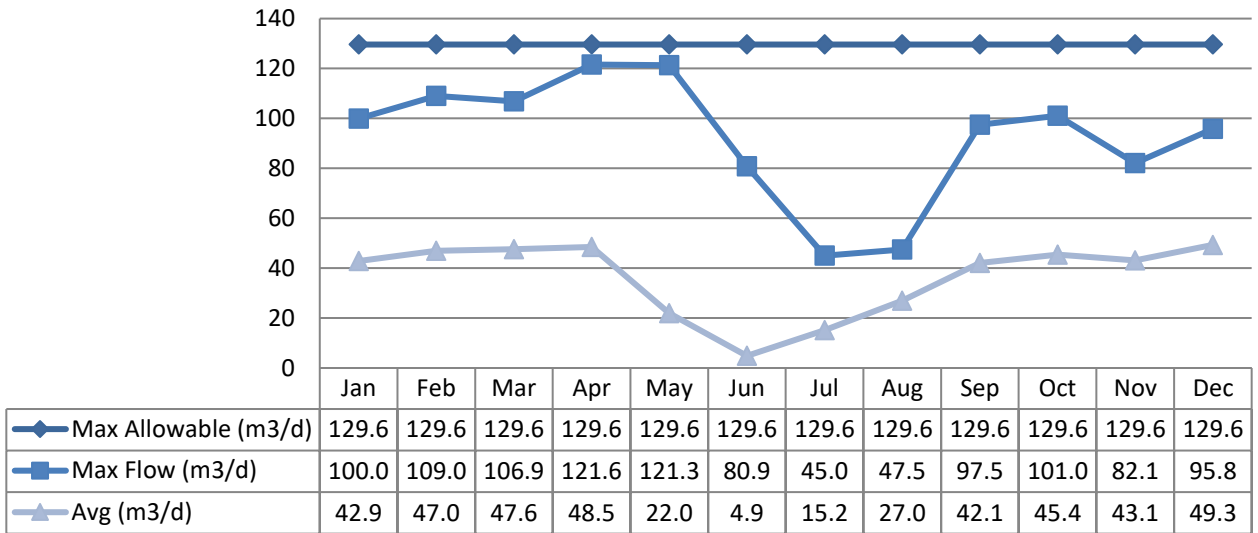
The Victoria Place Drinking Water System is operating on average under half the rated capacity.

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 #5275-AY5Q6S. The confirmation and a copy of the data that was submitted are attached in Appendix A.

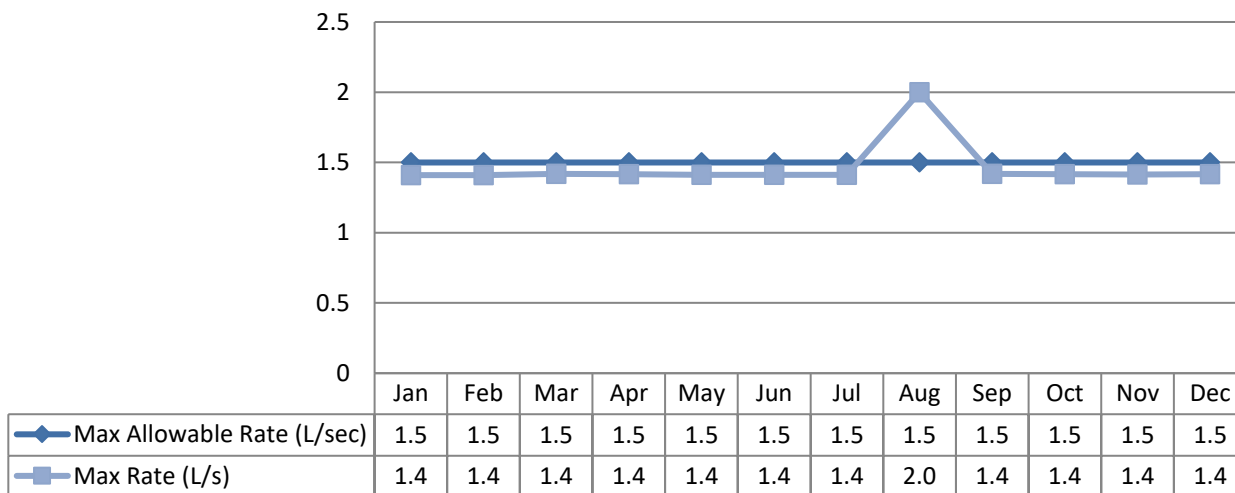
Total Monthly Flows (m3/d)

Max Allowable PTTW- Well #1



Monthly Rated Flows (L/s)

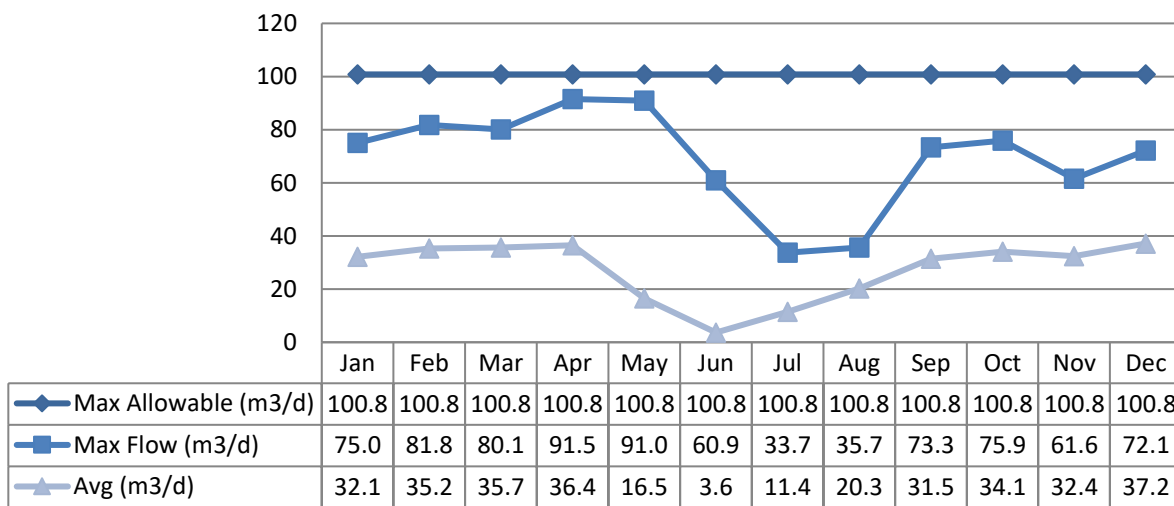
Max allowable rate – PTTW- Well #1



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

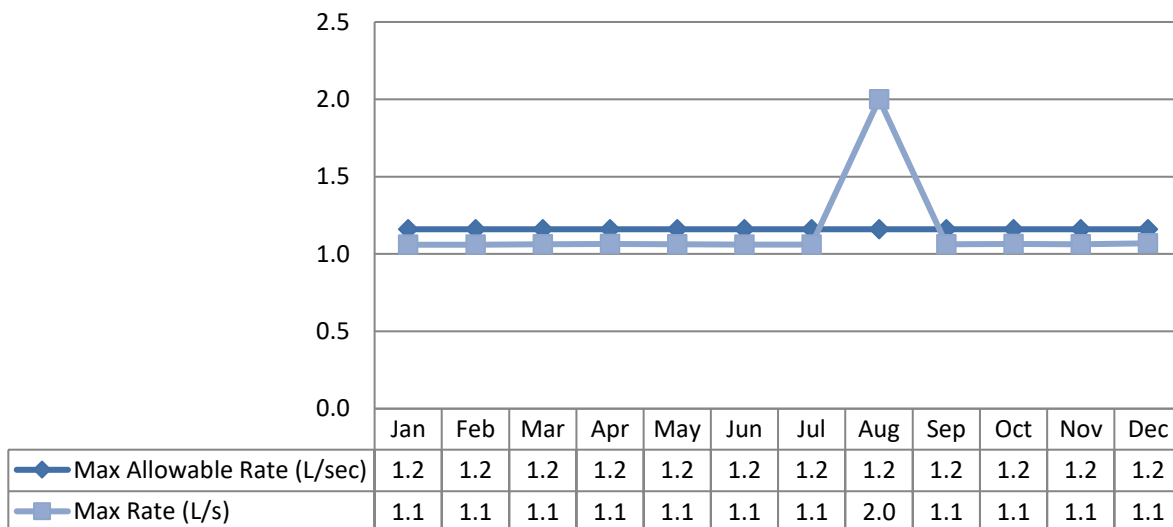
Total Monthly Flows (m3/d)

Max Allowable PTTW- Well #2



Monthly Rated Flows (L/s)

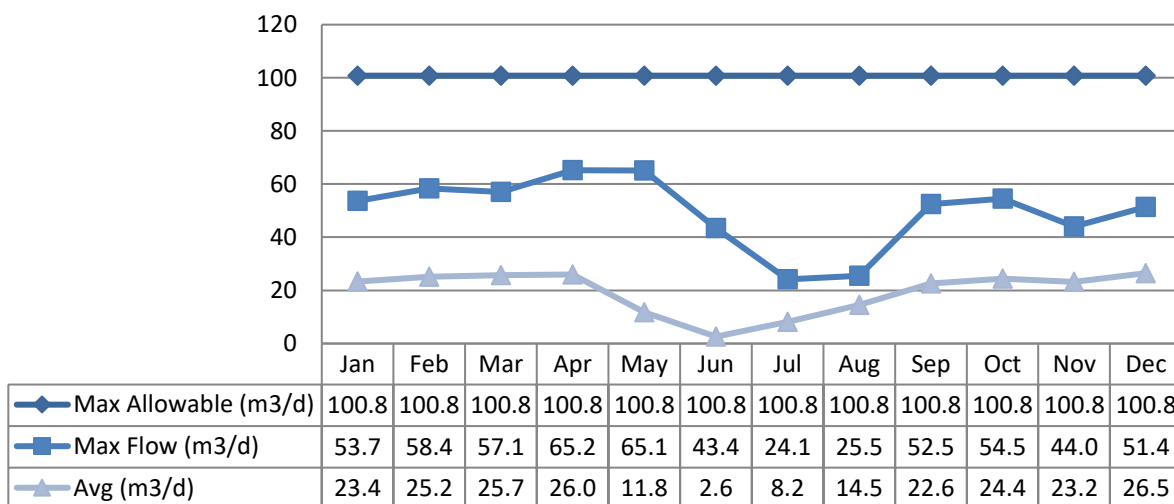
Max allowable rate – PTTW- Well #2



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

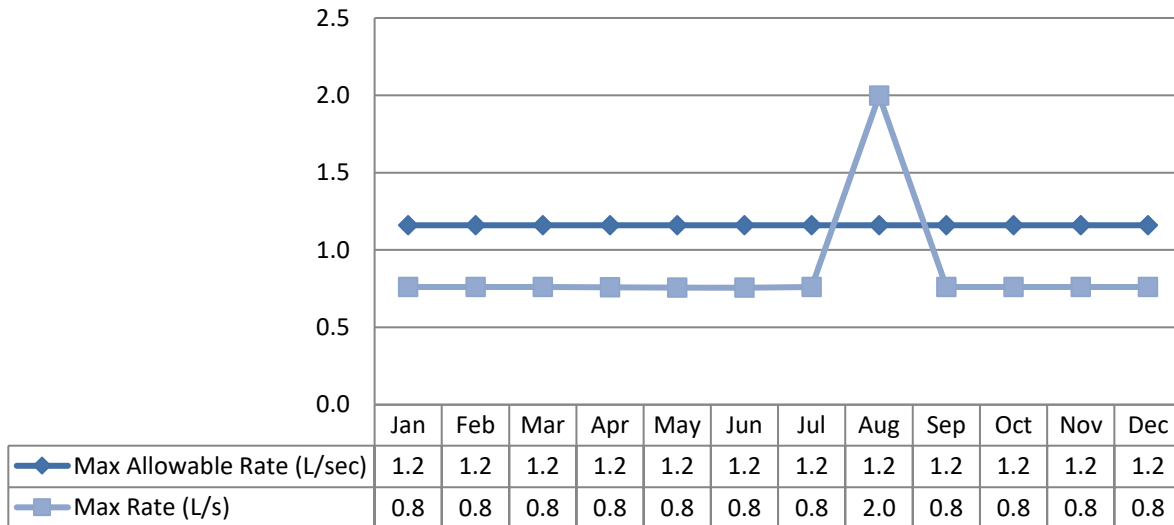
Total Monthly Flows (m3/d)

Max Allowable PTTW- Well #3



Monthly Rated Flows (L/s)

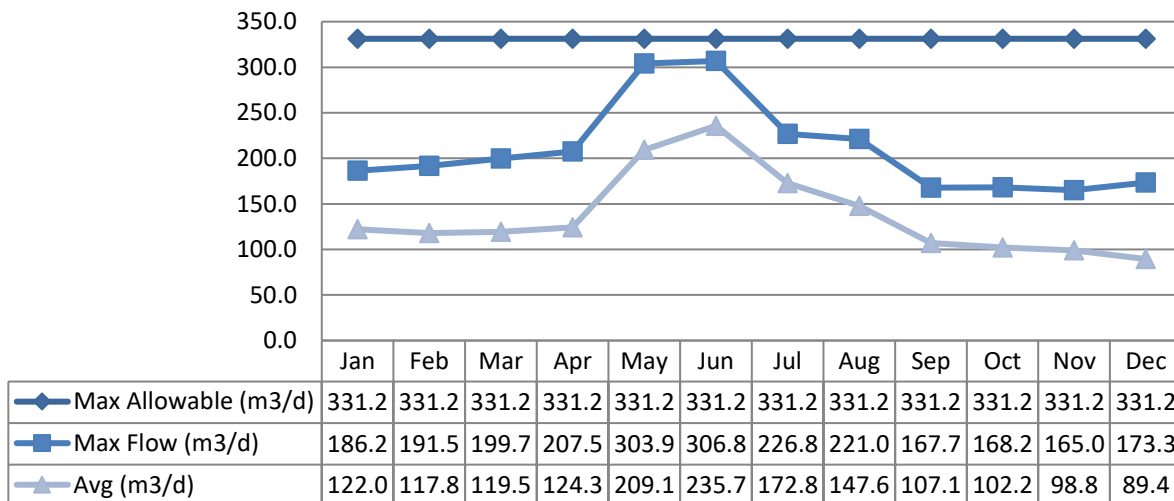
Max allowable rate – PTTW- Well #3



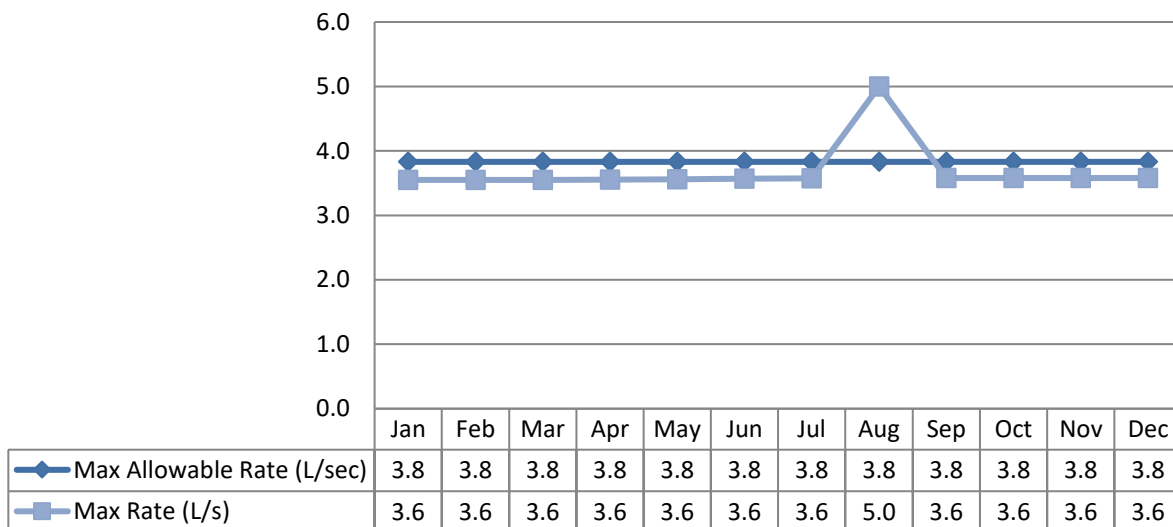
Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s). The significant spike in August was due to scheduled Flow Meter calibration.

Total Monthly Flows (m3/d)

Max Allowable PTTW- Well #7



Monthly Rated Flows (L/s)
Max allowable rate – PTTW- Well #7



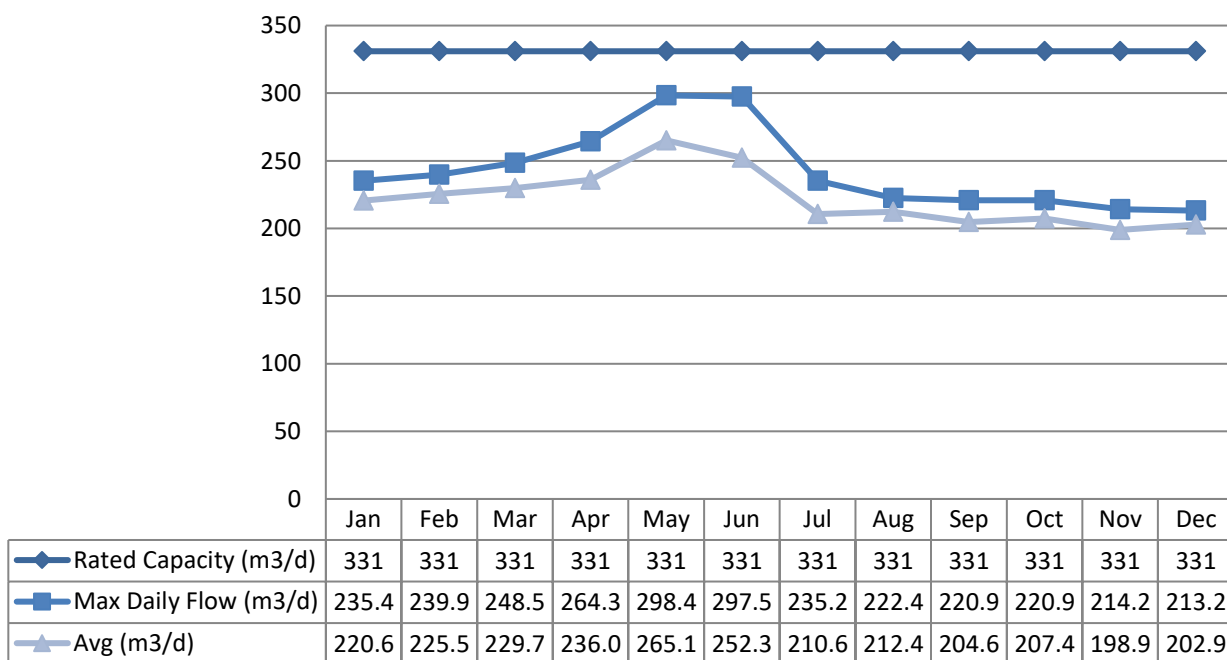
Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s). The significant spike in August was due to scheduled Flow Meter calibration.

Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence.

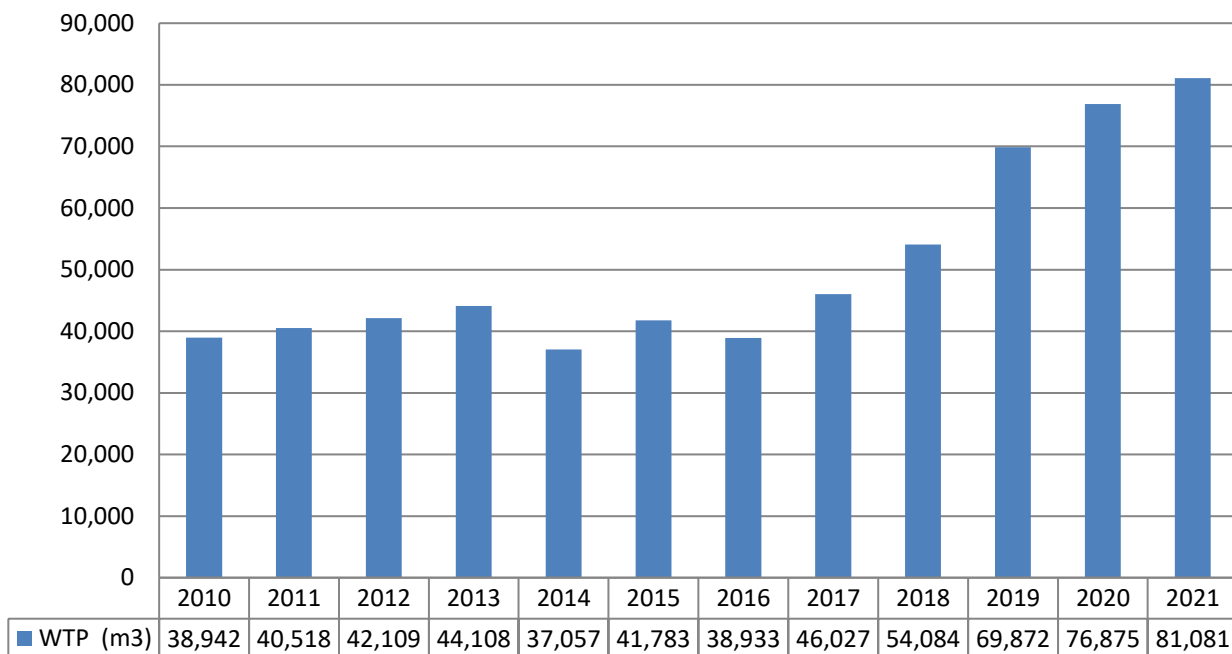
Monthly Rated Flows

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 Total Coliform Results		Range of HPC Results	
		Min	Max	Min	Max	Min	Max
Raw Well 1	52	0	0	0	2		
Raw Well 2	52	0	0	0	1		
Raw Well 3	52	0	3	0	3		
Raw Well 7	52	0	0	0	0		
Treated	53	0	0	0	0	0	11
Distribution	157	0	0	0	0	0	2

Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity Well 1 (NTU)	12	0.06	0.12
Turbidity Well 2 (NTU)	12	0.06	0.13
Turbidity Well 3 (NTU)	12	0.05	0.12
Turbidity Well 7 (NTU)	12	0.06	0.12
Chlorine	8760	0.95	1.79
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 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
- BDL = Below the laboratory detection level

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Treated Water					
Antimony: Sb (ug/L)	2020/01/06	<MDL 0.09	6.0	No	No
Arsenic: As (ug/L)	2020/01/06	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L)	2020/01/06	104.0	1000.0	No	No
Boron: B (ug/L)	2020/01/06	19.0	5000.0	No	No
Cadmium: Cd (ug/L)	2020/01/06	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L)	2020/01/06	0.33	50.0	No	No
Mercury: Hg (ug/L)	2020/01/06	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L)	2020/01/06	0.41	50.0	No	No
Uranium: U (ug/L)	2020/01/06	0.252	20.0	No	No
Additional Inorganics					
Fluoride (mg/L)	2018/01/09	0.06	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

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Nitrite (mg/L) - TW	2021/10/04	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2021/01/04	5.43	10.0	No	Yes
Nitrate (mg/L) - TW	2021/04/06	5.22	10.0	No	No
Nitrate (mg/L) - TW	2021/07/05	5.24	10.0	No	No
Nitrate (mg/L) - TW	2021/10/04	5.9	10.0	No	Yes
Sodium: Na (mg/L) - TW	2021/01/04	35.0	20*	Yes	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 mg/L 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		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	4	4	249	259	N/A	N/A
pH	4	4	7.36	7.98	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 (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Treated Water					
Alachlor (ug/L) - TW	2020/01/06	<MDL 0.02	5.0	No	No
Atrazine + N-dealkylated metabolites (ug/L)	2020/01/06	<MDL 0.01	5.0	No	No
Azinphos-methyl (ug/L)	2020/01/06	<MDL 0.05	20.0	No	No
Benzene (ug/L)	2020/01/06	<MDL 0.32	1.0	No	No
Benzo(a)pyrene (ug/L)	2020/01/06	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L)	2020/01/06	<MDL 0.33	5.0	No	No
Carbaryl (ug/L)	2020/01/06	<MDL 0.05	90.0	No	No
Carbofuran (ug/L)	2020/01/06	<MDL 0.01	90.0	No	No
Carbon Tetrachloride (ug/L)	2020/01/06	<MDL 0.17	2.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Chlorpyrifos (ug/L)	2020/01/06	<MDL 0.02	90.0	No	No
Diazinon (ug/L)	2020/01/06	<MDL 0.02	20.0	No	No
Dicamba (ug/L)	2020/01/06	<MDL 0.2	120.0	No	No
1,2-Dichlorobenzene (ug/L)	2020/01/06	<MDL 0.41	200.0	No	No
1,4-Dichlorobenzene (ug/L)	2020/01/06	<MDL 0.36	5.0	No	No
1,2-Dichloroethane (ug/L)	2020/01/06	<MDL 0.35	5.0	No	No
1,1-Dichloroethylene (ug/L)	2020/01/06	<MDL 0.33	14.0	No	No
Dichloromethane (Methylene Chloride) (ug/L)	2020/01/06	<MDL 0.35	50.0	No	No
2,4-Dichlorophenol (ug/L)	2020/01/06	<MDL 0.15	900.0	No	No
2,4-Dichlorophenoxy acetic acid (2,4- D) (ug/L)	2020/01/06	<MDL 0.19	100.0	No	No
Diclofop-methyl (ug/L)	2020/01/06	<MDL 0.4	9.0	No	No
Dimethoate (ug/L)	2020/01/06	<MDL 0.06	20.0	No	No
Diquat (ug/L)	2020/01/06	<MDL 1.0	70.0	No	No
Diuron (ug/L)	2020/01/06	<MDL 0.03	150.0	No	No
Glyphosate (ug/L)	2020/01/06	<MDL 1.0	280.0	No	No
Malathion (ug/L)	2020/01/06	<MDL 0.02	190.0	No	No
Metolachlor (ug/L)	2020/01/06	<MDL 0.01	50.0	No	No
Metribuzin (ug/L)	2020/01/06	<MDL 0.02	80.0	No	No
Monochlorobenzene (Chlorobenzene) (ug/L)	2020/01/06	<MDL 0.3	80.0	No	No
Paraquat (ug/L)	2020/01/06	<MDL 1.0	10.0	No	No
PCB (ug/L)	2020/01/06	<MDL 0.04	3.0	No	No
Pentachlorophenol (ug/L)	2020/01/06	<MDL 0.15	60.0	No	No
Phorate (ug/L)	2020/01/06	<MDL 0.01	2.0	No	No
Picloram (ug/L)	2020/01/06	<MDL 1.0	190.0	No	No
Prometryne (ug/L)	2020/01/06	<MDL 0.03	1.0	No	No
Simazine (ug/L)	2020/01/06	<MDL 0.01	10.0	No	No
Terbufos (ug/L)	2020/01/06	<MDL 0.01	1.0	No	No
Tetrachloroethylene (ug/L)	2020/01/06	<MDL 0.35	10.0	No	No
2,3,4,6-Tetrachlorophenol (ug/L)	2020/01/06	<MDL 0.2	100.0	No	No
Triallate (ug/L)	2020/01/06	<MDL 0.01	230.0	No	No
Trichloroethylene (ug/L)	2020/01/06	<MDL 0.44	5.0	No	No
2,4,6-Trichlorophenol (ug/L)	2020/01/06	<MDL 0.25	5.0	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L)	2020/01/06	<MDL 0.12	100.0	No	No
Trifluralin (ug/L)	2020/01/06	<MDL 0.02	45.0	No	No
Vinyl Chloride (ug/L)	2020/01/06	<MDL 0.17	1.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average	2021	21.0	100.0	No	No
HAA Total (ug/L) Annual Average	2021	5.3	80.0	No	No

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

BDL = Below the laboratory detection level

Additional Legislated Samples

There was no additional sampling required.



Major Maintenance Summary

WO # Description

1960268 Check and Correct Operation of Generator Air Intake Louvres

Appendix A

WTRS Data and Submission Confirmation



Ministry of the Environment,
Conservation and Parks

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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: 5275-AY5Q6S
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on: Feb 4, 2022 1:27 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.

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