

Pinewood Drinking Water System

Waterworks # 220006464
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:



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	2
Treatment Chemicals used during the reporting year	3
Summary of Non-Compliance.....	3
Adverse Water Quality Incidents.....	3
Non-Compliance.....	3
Non-Compliance Identified in a Ministry Inspection	3
Flows	3
Raw Water Flows.....	3
Total Monthly Flows (m ³ /d)-Well #2	4
Monthly Rated Flows (L/s)-Well #2	4
Total Monthly Flows (m ³ /d)-Well #3	5
Monthly Rated Flows (L/s)-Well #3	5
Total Monthly Flows (m ³ /d)-Well #4	6
Monthly Rated Flows (L/s)-Well #4	6
Total Monthly Flows (m ³ /d)-Well #5	7
Monthly Rated Flows (L/s)-Well #5	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 12
 WTRS Submission ConfirmationA

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 on [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: 220006464

Drinking Water System Name: Pinewood 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	Sep. 21, 2021	Unannounced - Focused Drinking Water Inspection - Final Inspection Rating of 100%
AWQI's	0		
Number of Non-Compliances	0		
Number of Boil Water Advisories	0		

System Process Description

Raw Source

The water supply for the DWS comes from three (3) groundwater wells that are designated as non-GUDI (groundwater under direct influence).

Treatment

The treatment system consists of the following:

- Sodium hypochlorite disinfection feed system with metering pumps
- Two-celled storage reservoir

- Three high lift pumps
- Continuous on-line free chlorine analyzer
- Continuous on-line flow meters
- One portable generator

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

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

Non-Compliance(s)

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

Non-Compliance(s) Identified in a Ministry Inspection

There were no non-compliances identified in a Ministry Inspection during this reporting period.

Flows

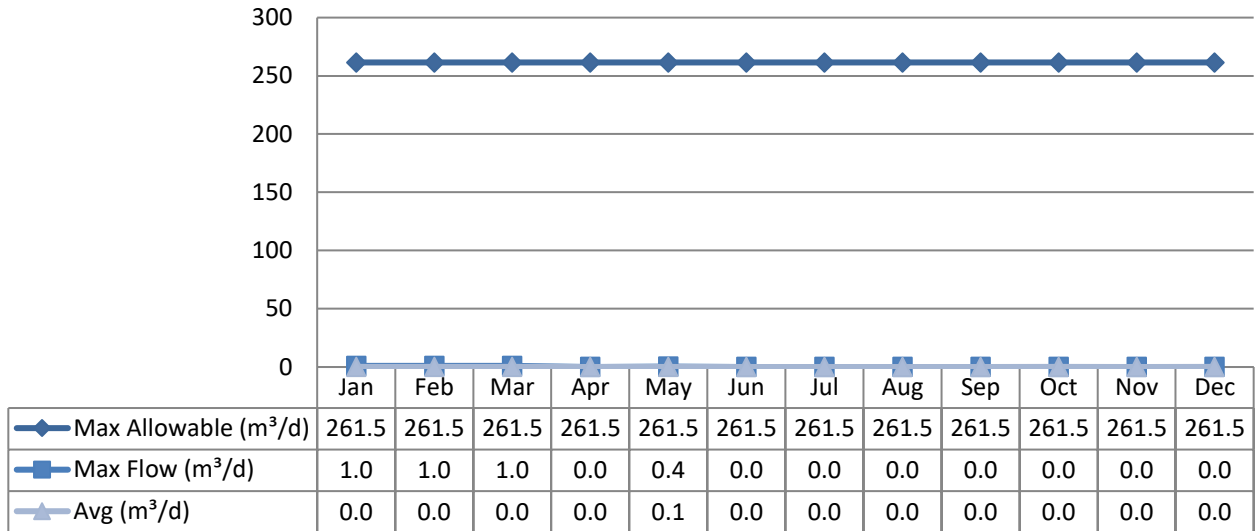
The Pinewood Drinking Water System is operating on average under half the rated capacity.

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 #7473-BBTPTY. The confirmation of the data that was submitted are attached in Appendix A.

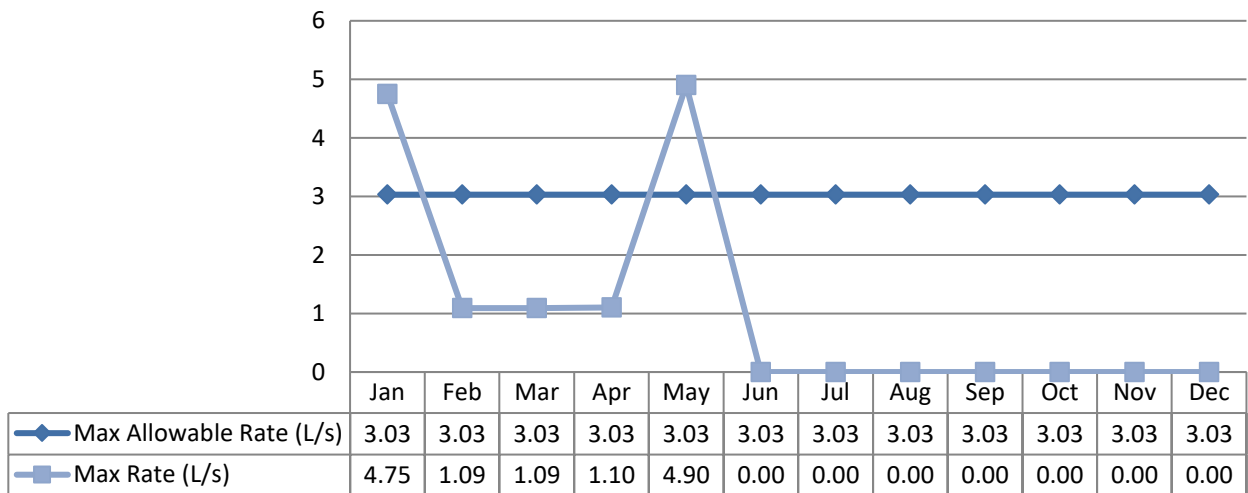
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #2



Monthly Rated Flows (L/s)

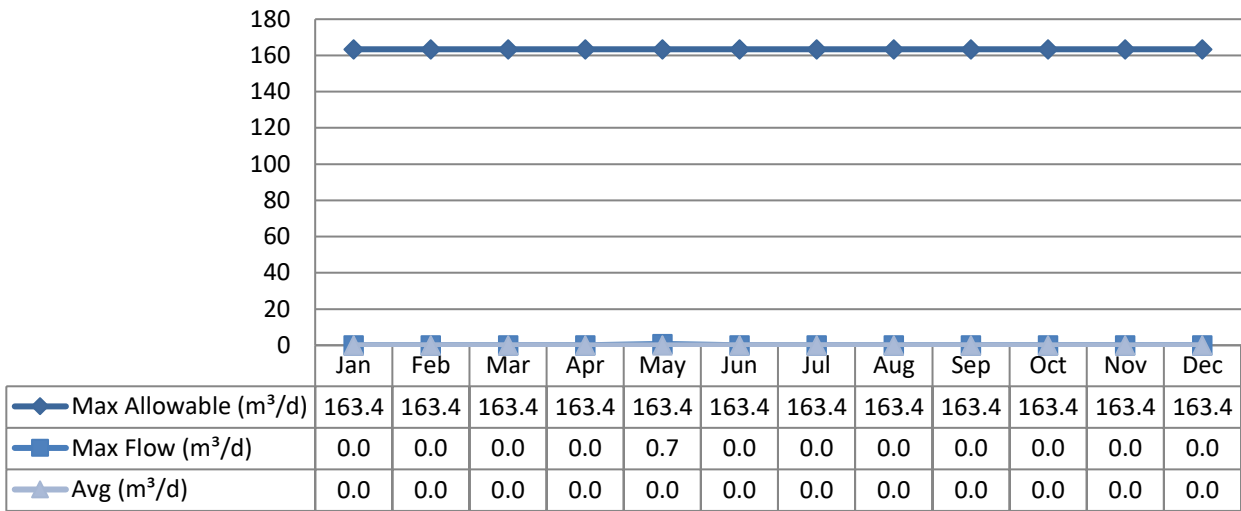
Max allowable rate – PTTW – Well #2



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s). The significant spike in January was due to sample collection and May was due to scheduled flow meter calibration. This well was decommissioned on May 31, 2021.

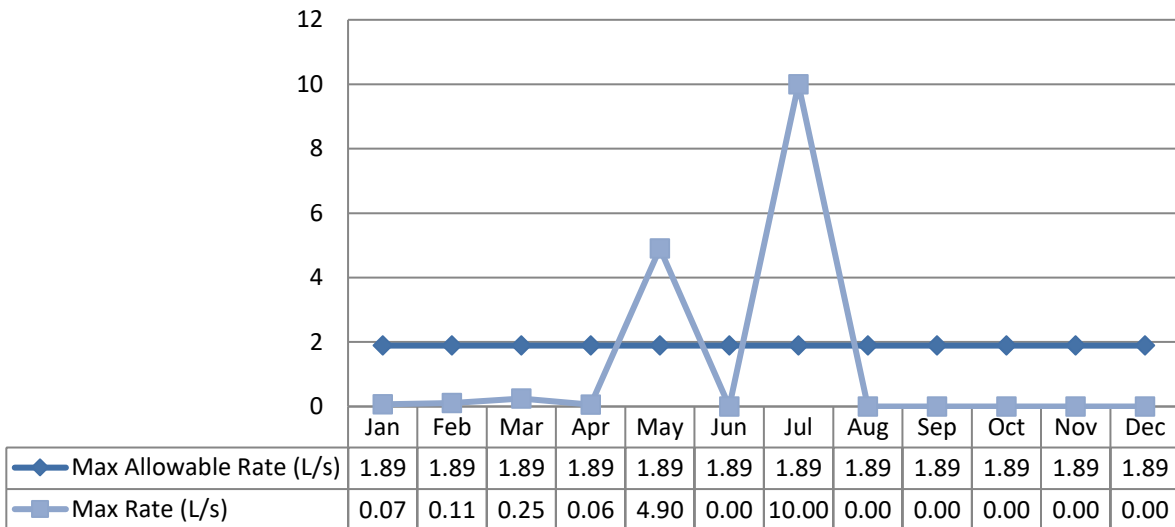
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #3



Monthly Rated Flows (L/s)

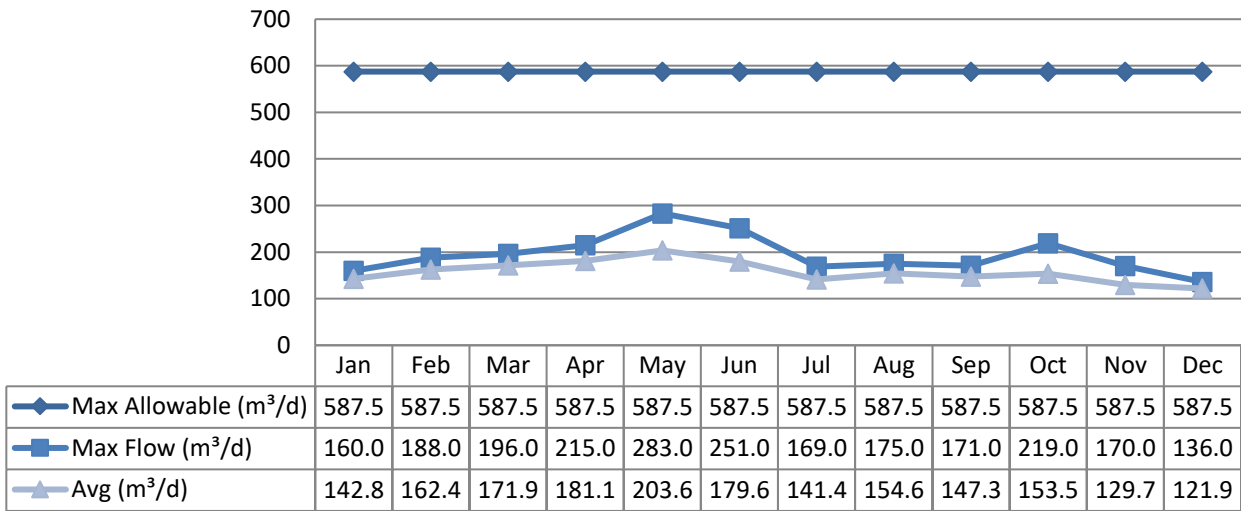
Max allowable rate – PTTW – Well #3



Note: The above table shows there were exceedances in instantaneous peak flow rate (L/s). The significant spike in May was due to scheduled flow meter calibration and July was due to sample collection. This well was decommissioned on July 21, 2021.

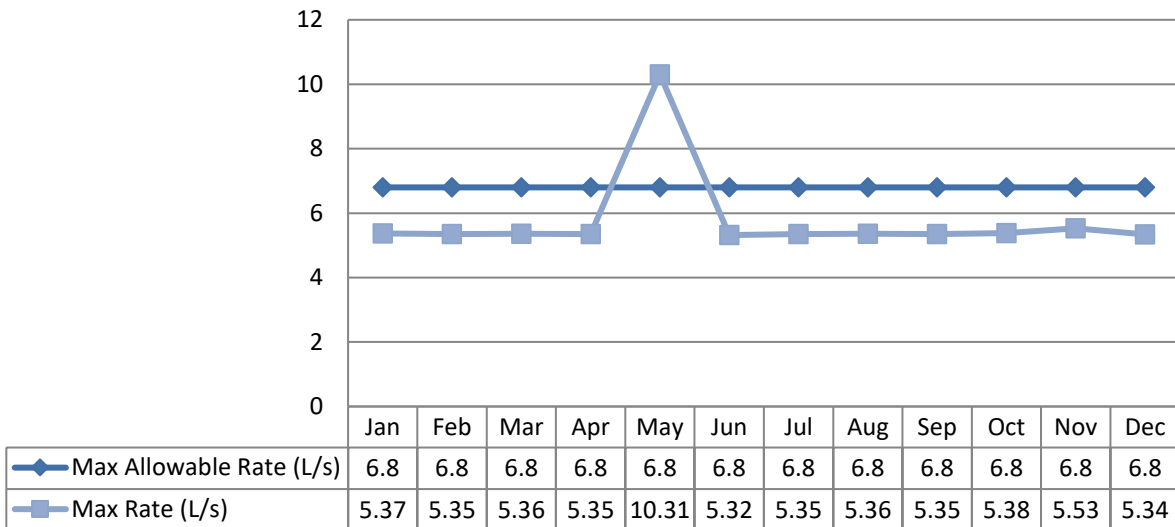
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #4



Monthly Rated Flows (L/s)

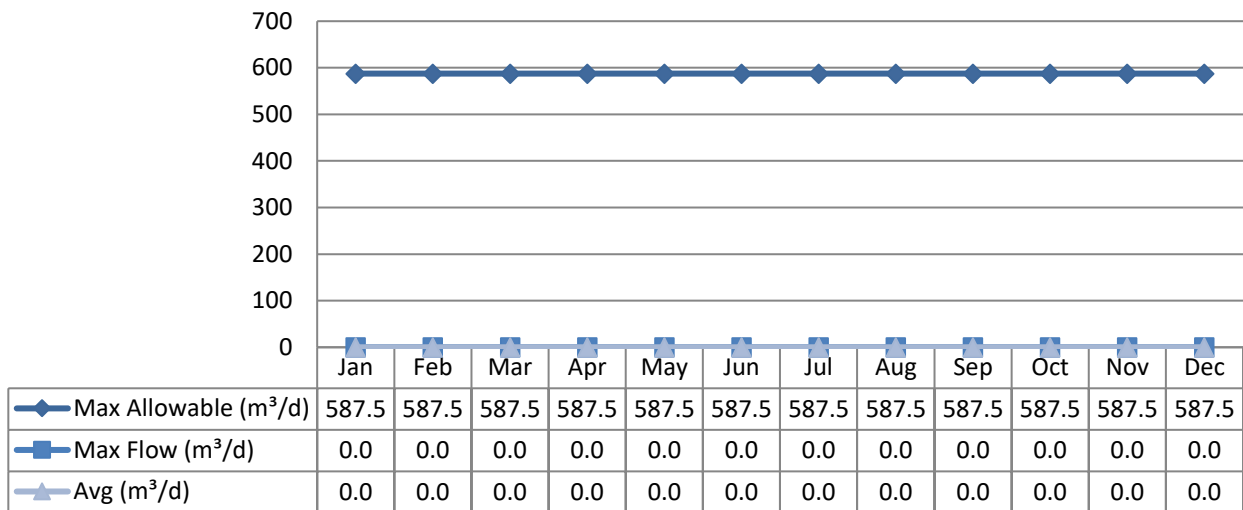
Max allowable rate – PTTW – Well #4



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.

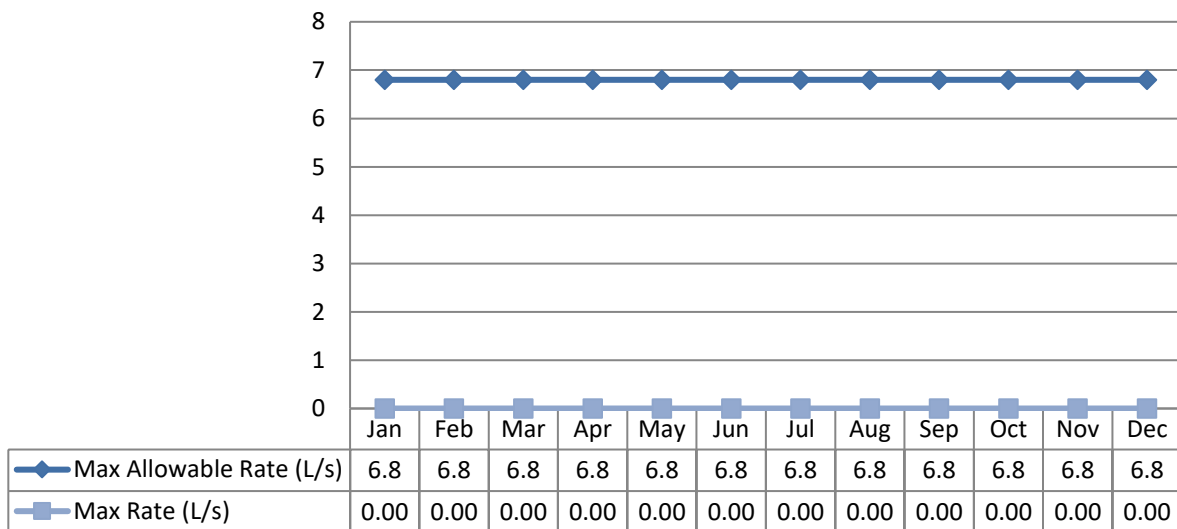
Total Monthly Flows (m³/d)

Max Allowable PTTW – Well #5



Monthly Rated Flows (L/s)

Max allowable rate – PTTW – Well #5



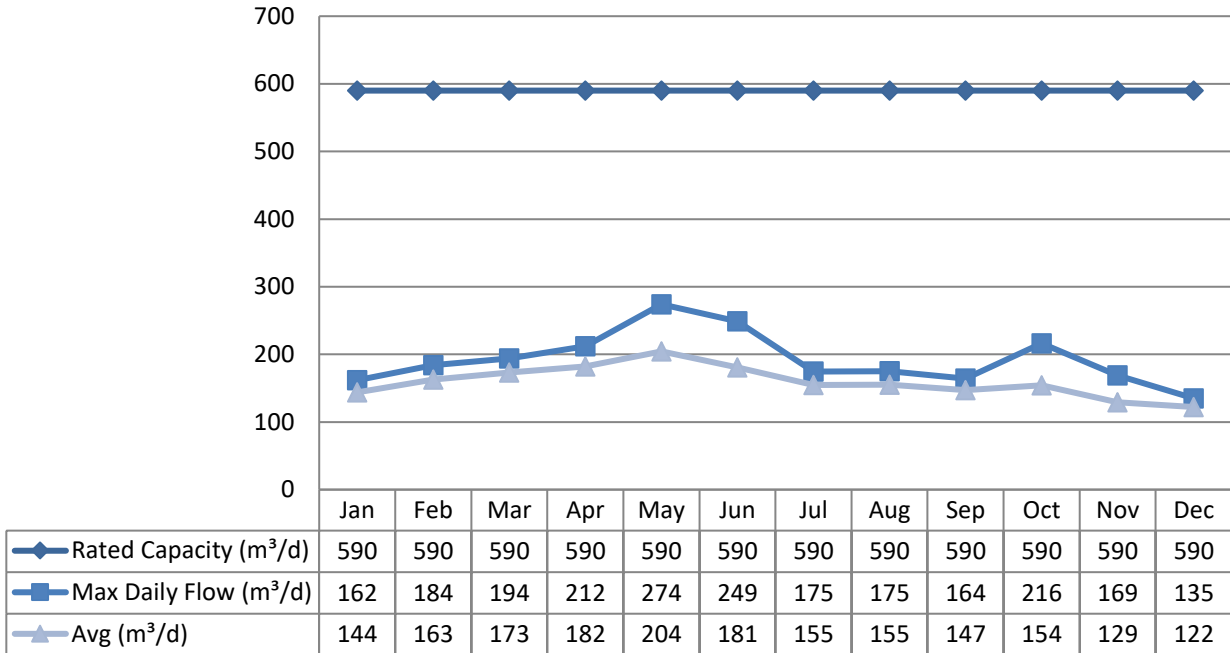
Note: This well was not in production during the reporting period.

Treated Water Flows

The Treated Water flows are regulated under the Municipal Licence.

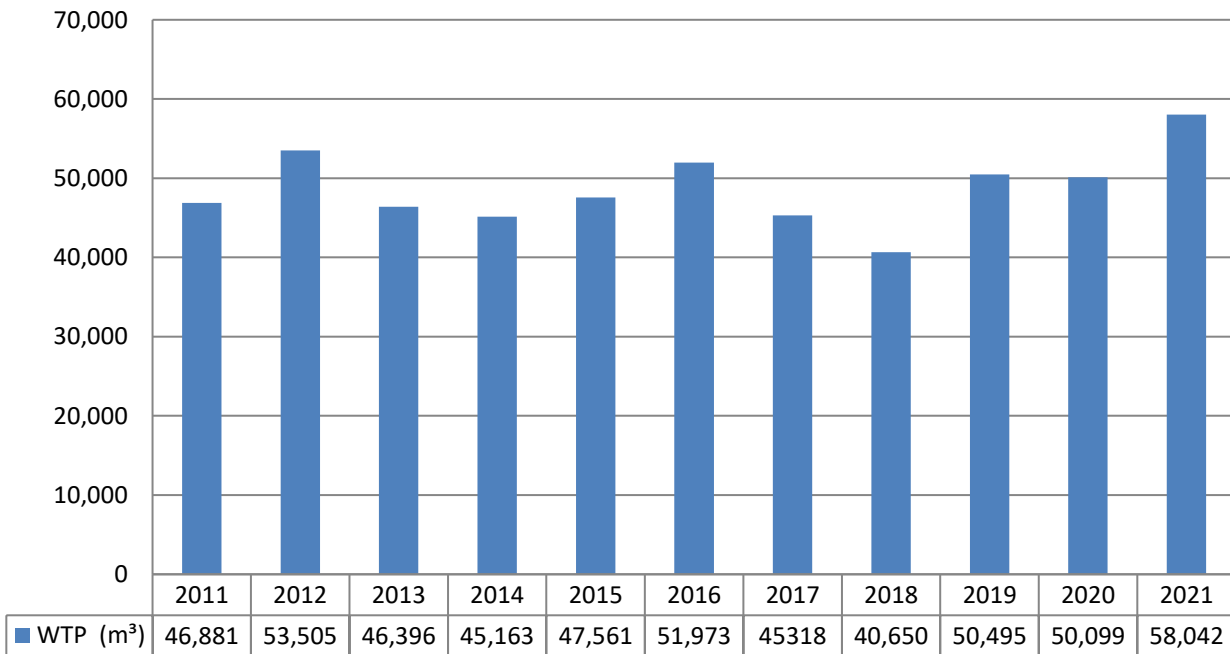
Monthly Rated Flows

Rated Capacity – MDWL



Annual Total Flow Comparison

Total Annual m³



Regulatory Sample Results Summary

Microbiological Testing

		Range of E. coli Results		Range of Total Coliform Results		Range of HPC Results	
Source	# of Samples	Min	Max	Min	Max	Min	Max
Raw Well 2	21	0	0	0	0		
Raw Well 3	21	0	0	0	0		
Raw Well 4	52	0	0	0	0		
Raw Well 5	22	0	0	0	0		
Treated	55	0	0	0	0	0	1
Distribution	153	0	0	0	0	0	4

Note: Well 5 was not in production during the reporting period.

Note: Well 2 was decommissioned on May 31, 2021.

Note: Well 3 was decommissioned on July 21, 2021.

Operational Testing

Parameter	Number of Samples Collected	Range of Results Minimum	Range of Results Maximum
Turbidity Well 2 (NTU)	5	0.16	0.37
Turbidity Well 3 (NTU)	5	0.2	0.49
Turbidity Well 4 (NTU)	12	0.11	0.41
Turbidity Well 5 (NTU)	5	0.54	0.94
Turbidity – TW (NTU)	8760	0	2
Chlorine	8760	0	3.17
Fluoride (If the DWS provides fluoridation)	N/A	N/A	N/A

Note: Well 5 was not in production during the reporting period.

Note: Well 2 was decommissioned on May 31, 2021.

Note: Well 3 was decommissioned on July 21, 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 five years. Nitrate and Nitrite are tested quarterly and the metals are tested every three years 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	2020/01/06	<MDL 0.09	6.0	No	No
Arsenic: As (ug/L) - TW	2020/01/06	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L) - TW	2020/01/06	165.0	1000.0	No	No
Boron: B (ug/L) - TW	2020/01/06	20.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2020/01/06	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2020/01/06	0.1	50.0	No	No
Mercury: Hg (ug/L) - TW	2020/01/06	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2020/01/06	<MDL 0.04	50.0	No	No
Uranium: U (ug/L) - TW	2020/01/06	0.009	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	2018/01/03	0.14	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	2021/10/05	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2021/01/04	<MDL 0.006	10.0	No	No
Nitrate (mg/L) - TW	2021/04/06	0.011	10.0	No	No
Nitrate (mg/L) - TW	2021/07/05	0.01	10.0	No	No
Nitrate (mg/L) - TW	2021/10/05	0.011	10.0	No	No
Sodium: Na (mg/L) - TW	2018/01/02	11.3	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		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	2	2	146	157	N/A	N/A
pH	2	2	8.11	8.35	N/A	N/A
Lead (ug/l)	2	0	N/A	N/A	10	No

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	Number of Exceedances	
				MAC	1/2 MAC
Treated Water					
Alachlor (ug/L) - TW	2020/01/06	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2020/01/06	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2020/01/06	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW	2020/01/06	<MDL 0.32	1.00	No	No
Benzo(a)pyrene (ug/L) - TW	2020/01/06	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2020/01/06	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2020/01/06	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	2020/01/06	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2020/01/06	<MDL 0.17	2.00	No	No
Chlorpyrifos (ug/L) - TW	2020/01/06	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW	2020/01/06	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2020/01/06	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	2020/01/06	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2020/01/06	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2020/01/06	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2020/01/06	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2020/01/06	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2020/01/06	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2020/01/06	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	2020/01/06	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2020/01/06	<MDL 0.06	20.00	No	No
Diquat (ug/L) - TW	2020/01/06	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	2020/01/06	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	2020/01/06	<MDL 1.0	280.00	No	No
Malathion (ug/L) - TW	2020/01/06	<MDL 0.02	190.00	No	No
2-Methyl-4chlorophenoxyacetic Acid (MCPA)	2020/01/06	<MDL 0.12	100.00	No	No
Metolachlor (ug/L) - TW	2020/01/06	<MDL 0.01	50.00	No	No
Metribuzin (ug/L) - TW	2020/01/06	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2020/01/06	<MDL 0.3	80.00	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Paraquat (ug/L) - TW	2020/01/06	<MDL 1.0	10.00	No	No
PCB (ug/L) - TW	2020/01/06	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW	2020/01/06	<MDL 0.15	60.00	No	No
Phorate (ug/L) - TW	2020/01/06	<MDL 0.01	2.00	No	No
Picloram (ug/L) - TW	2020/01/06	<MDL 1.0	190.00	No	No
Prometryne (ug/L) - TW	2020/01/06	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW	2020/01/06	<MDL 0.01	10.00	No	No
Terbufos (ug/L) - TW	2020/01/06	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW	2020/01/06	<MDL 0.35	10.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2020/01/06	<MDL 0.2	100.00	No	No
Triallate (ug/L) - TW	2020/01/06	<MDL 0.01	230.00	No	No
Trichloroethylene (ug/L) - TW	2020/01/06	<MDL 0.44	5.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2020/01/06	<MDL 0.25	5.00	No	No
Trifluralin (ug/L) - TW	2020/01/06	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2020/01/06	<MDL 0.17	1.00	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average - DW	2021	17.0	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



There were no additional legislated samples required to report during this reporting period.

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

WO #	Description
2360579	Highlift Leak Seal, Replace Seal
1380806	Repair pad for generator trailer

Appendix A

WTRS 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: 7473-BBTPTY
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.
Received on: Feb 18, 2022 10:57 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 | 2022/02/18
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](#)