

# Victoria Place Drinking Water System

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Waterworks # 220011895  
System Category – Large Municipal Residential

## Annual Water Report

Prepared For: The City of Kawartha Lakes

Reporting Period of January 1<sup>st</sup>, 2018 – December 31<sup>st</sup>, 2018

Issued: February 15, 2019

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 residences and the annual reports will be available to residents at the City of Kawartha Lakes Public Works Administration Office and on the City's website at [www.kawarthalakes.ca](http://www.kawarthalakes.ca). 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 12 Peel Street 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, 2018 - December 31, 2018

	# of Events	Date	Details
<b>Health &amp; Safety</b>			
Number of Incidents	0		
<b>Drinking Water</b>			
MECP Inspections	1	June 1, 2018	Announced-Detailed Drinking Water Inspection - Final Inspection Rating of 100%
AWQI's	1	January 11, 2018	The sodium in the treated water exceeded 20 mg/l
Number of Non-Compliances	0		
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 No.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 m<sup>3</sup> underground circular concrete storage reservoir
- Two online chlorine analyzers
- Five flowmeters:
- Standby diesel generator on-site.

**Treatment Chemicals used during the reporting year:**

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Brenntag

**Summary of Non-Compliance**

**Adverse Water Quality Incidents**

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
January 11, 2018	138546	Treated Water	Sodium Exceedance	The sodium in the treated water exceeded 20 mg/l	O. Reg. 170/03	Re-sample of the treated water.

**Non-Compliance**

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

## Flows

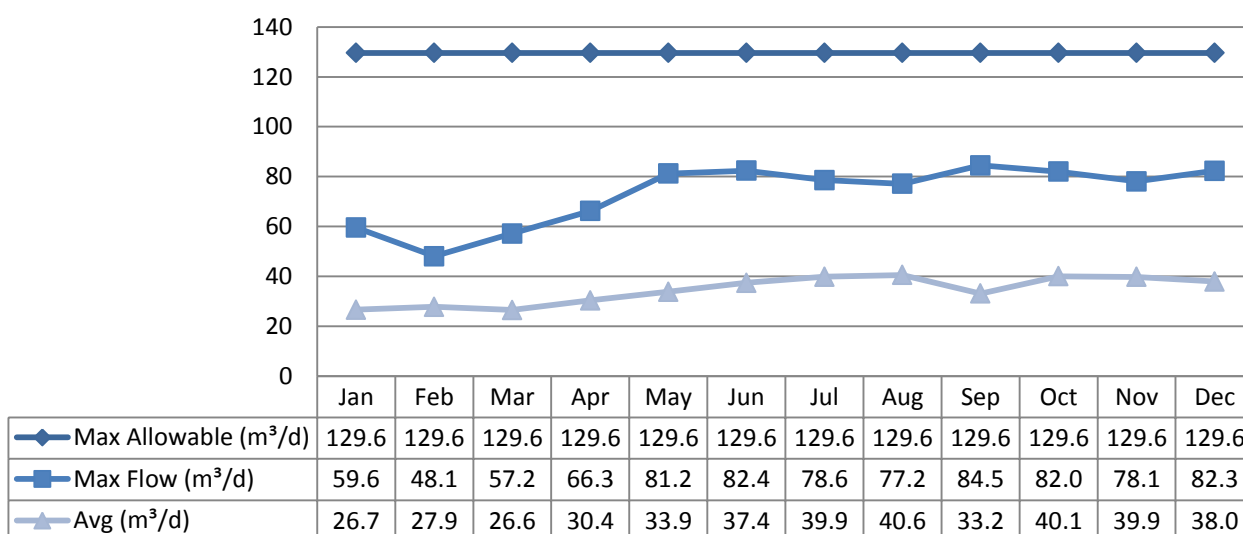
The Victoria Place Drinking Water System is operating on average under half the rated capacity.

### Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2018 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.

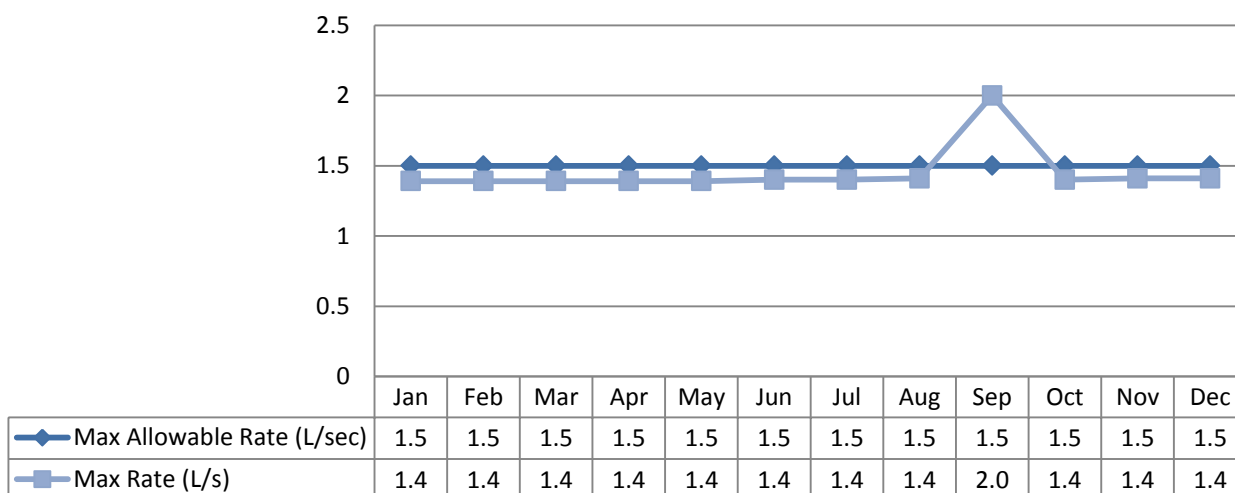
#### Total Monthly Flows (m<sup>3</sup>/d)

Max Allowable PTTW- Well #1



#### Monthly Rated Flows (L/s)

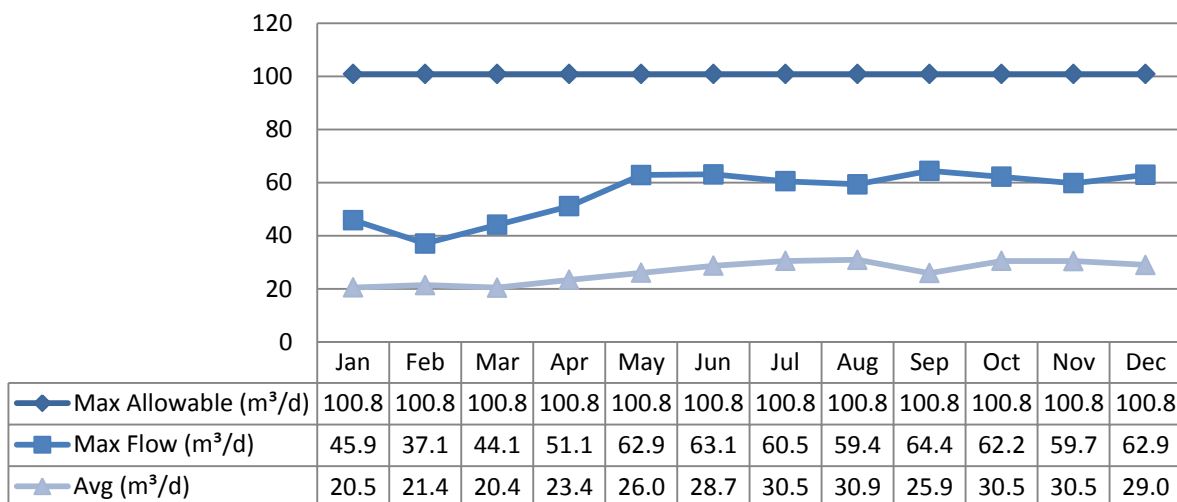
Max allowable rate – PTTW- Well #1



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

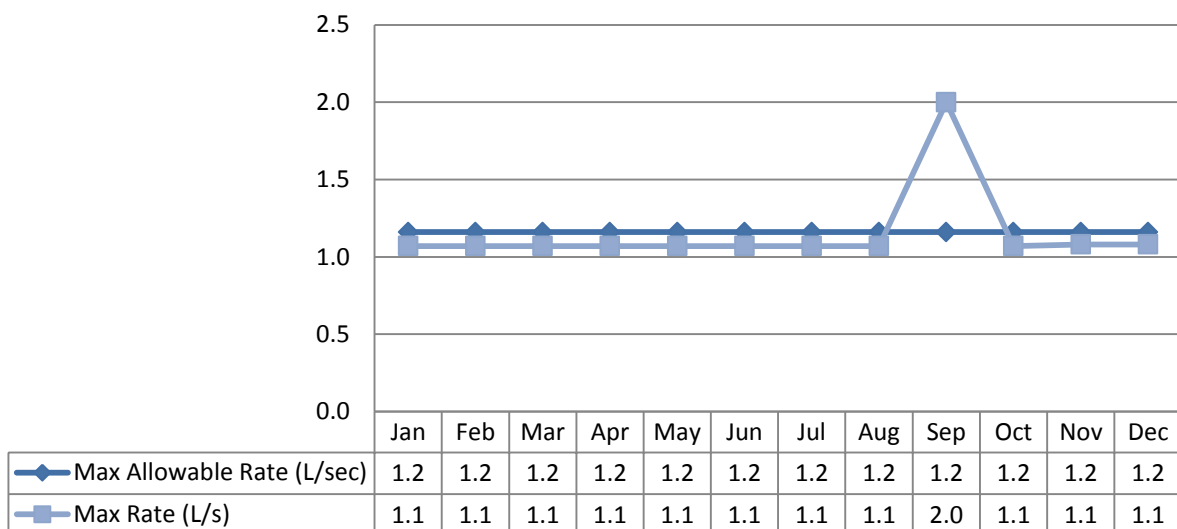
### Total Monthly Flows (m<sup>3</sup>/d)

Max Allowable PTTW- Well #2



### Monthly Rated Flows (L/s)

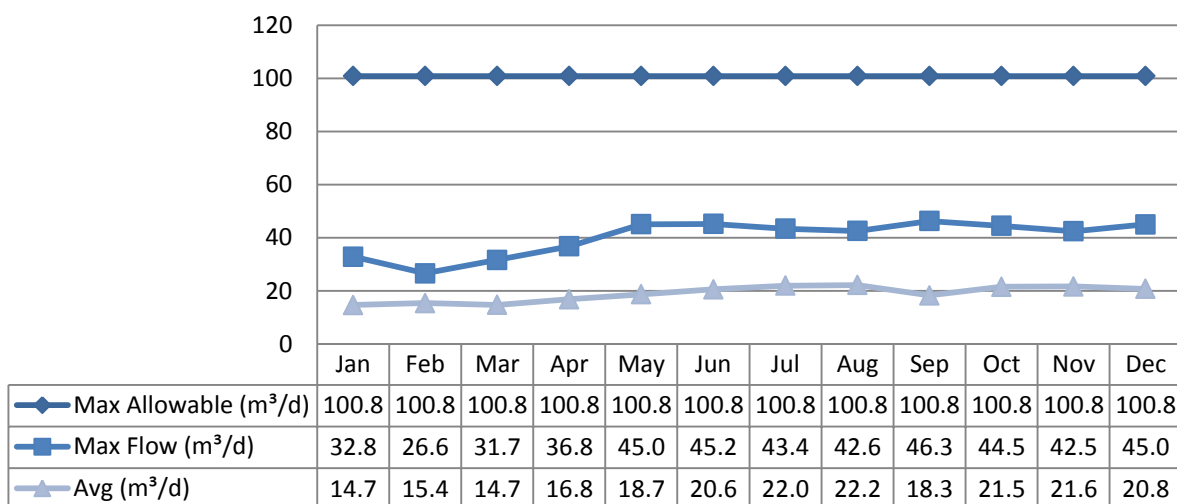
Max allowable rate – PTTW- Well #2



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

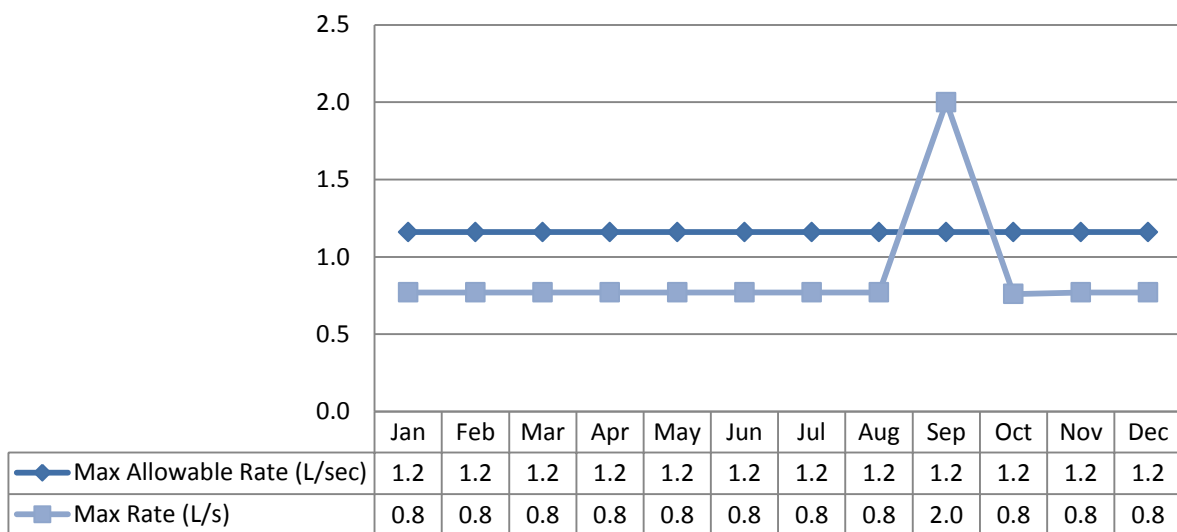
Total Monthly Flows (m<sup>3</sup>/d)

Max Allowable PTTW- Well #3



Monthly Rated Flows (L/s)

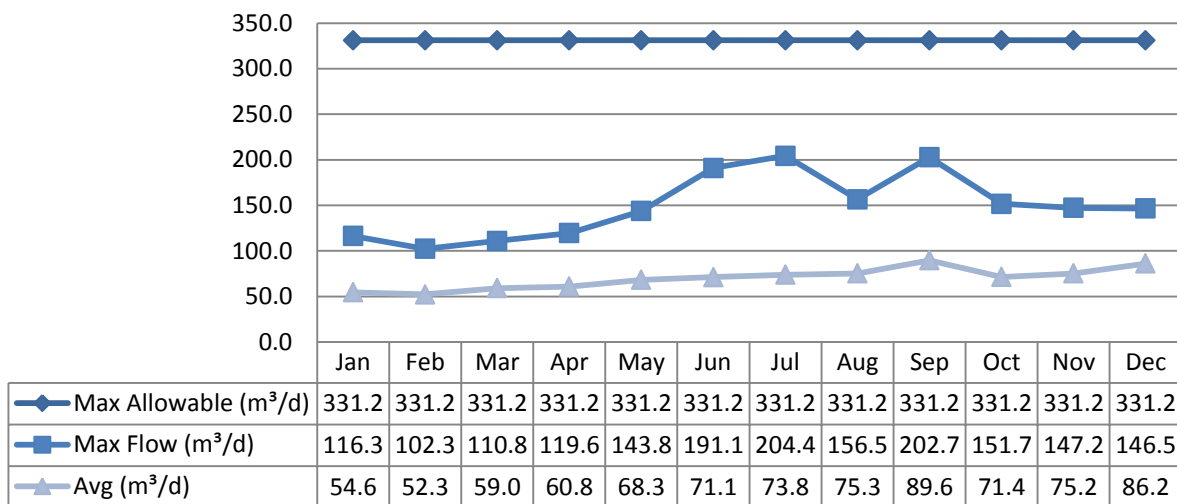
Max allowable rate – PTTW- Well #3



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

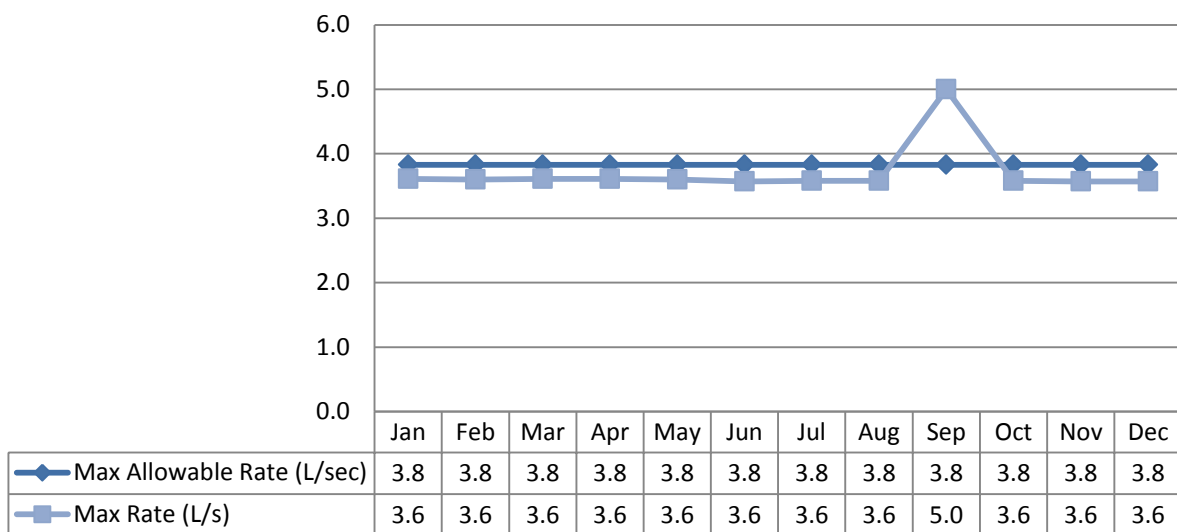
Total Monthly Flows (m<sup>3</sup>/d)

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 September was due to scheduled Flow Meter calibration.

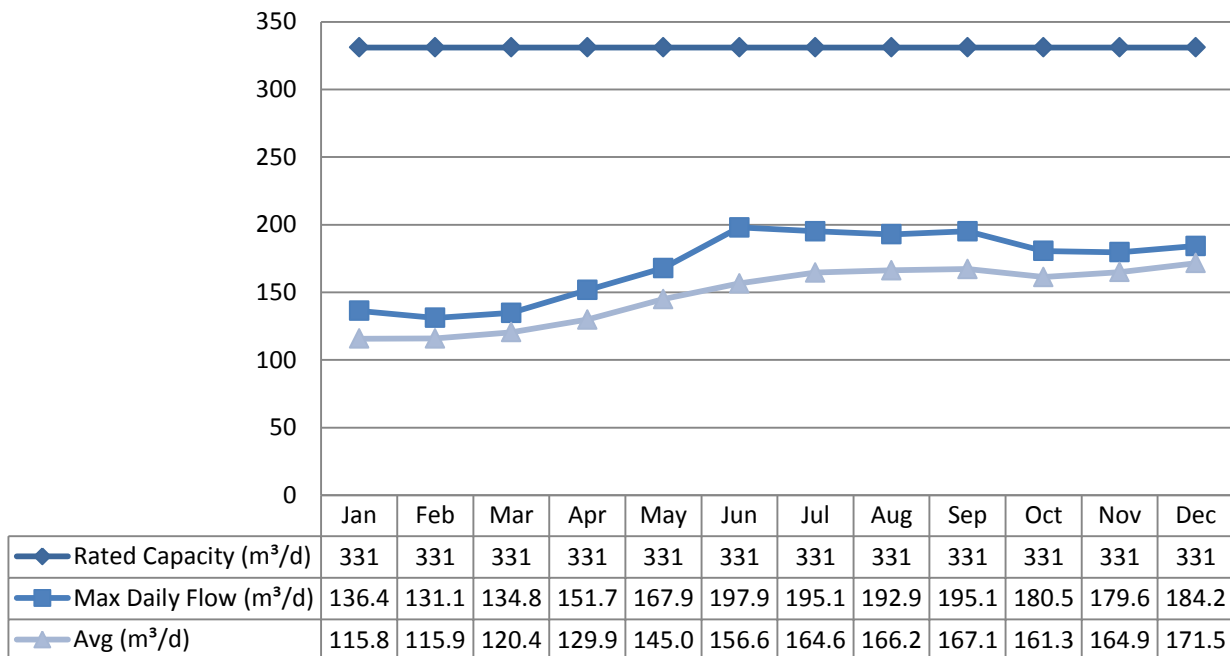
Issued: February 15, 2019

## **Treated Water Flows**

The Treated Water flows are regulated under the Municipal Licence.

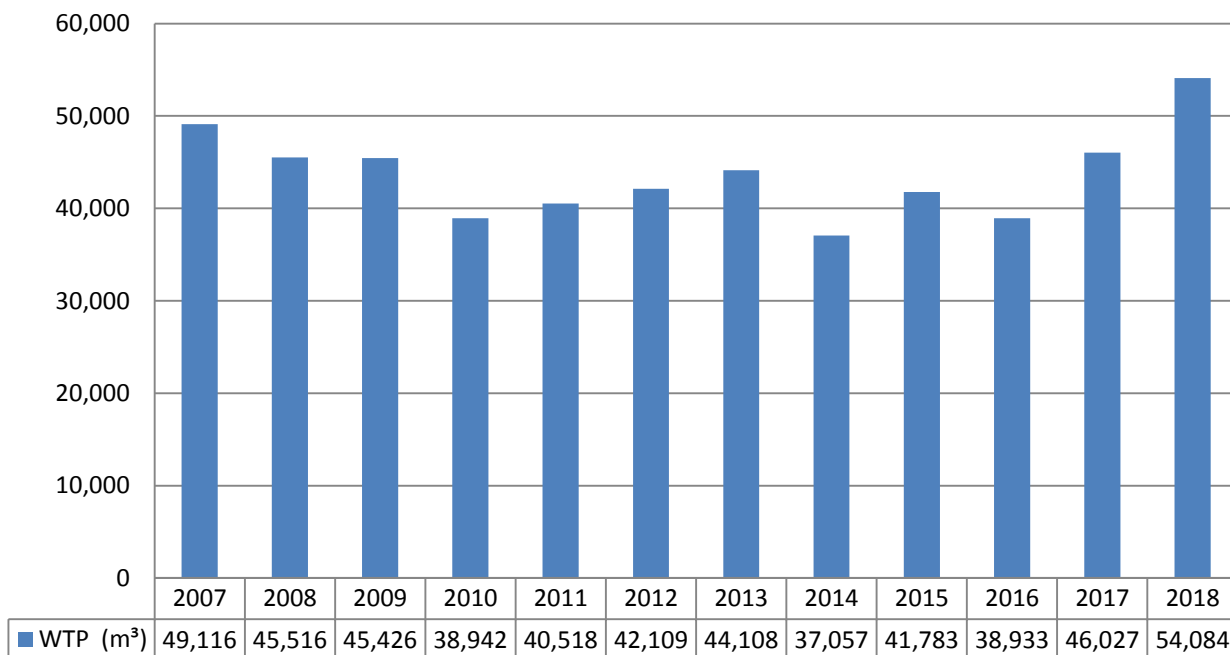
### **Monthly Rated Flows**

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	1		
Raw Well 2	52	0	0	0	0		
Raw Well 3	52	0	0	0	1		
Raw Well 7	52	0	0	0	0		
Treated	52	0	0	0	0	0	3
Distribution	156	0	0	0	0	0	3

### Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity Well 1 (NTU)	12	0.05	0.14
Turbidity Well 2 (NTU)	12	0.05	0.1
Turbidity Well 3 (NTU)	12	0.06	0.11
Turbidity Well 7 (NTU)	12	0.04	0.11
Chlorine	8760	0	1.99
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 five 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) - TW	2017/01/10	<MDL 0.02	6.0	No	No
Arsenic: As (ug/L) - TW	2017/01/10	<MDL 0.2	10.0	No	No
Barium: Ba (ug/L) - TW	2017/01/10	112.0	1000.0	No	No
Boron: B (ug/L) - TW	2017/01/10	25.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW	2017/01/10	<MDL 0.003	5.0	No	No
Chromium: Cr (ug/L) - TW	2017/01/10	0.64	50.0	No	No
Mercury: Hg (ug/L) - TW	2017/01/10	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW	2017/01/10	0.58	50.0	No	No
Uranium: U (ug/L) - TW	2017/01/10	0.263	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW	2018/01/09	0.06	1.5	No	No
Nitrite (mg/L) - TW	2018/01/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/04/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/07/09	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW	2018/10/09	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW	2018/01/09	4.46	10.0	No	No
Nitrate (mg/L) - TW	2018/04/09	4.15	10.0	No	No
Nitrate (mg/L) - TW	2018/07/09	3.94	10.0	No	No
Nitrate (mg/L) - TW	2018/10/09	5.23	10.0	No	Yes
Sodium: Na (mg/L) - TW	2018/01/12	32.6	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 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)	Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	4	4	238	250	N/A	N/A
pH	4	4	7.23	7.77	N/A	N/A
Lead (ug/l)	N/A	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
<b>Treated Water</b>					
Alachlor (ug/L) - TW	2017/01/10	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2017/01/10	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW	2017/01/10	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW	2017/01/10	<MDL 0.32	1.00	No	No
Benzo(a)pyrene (ug/L) - TW	2017/01/10	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW	2017/01/10	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW	2017/01/10	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW	2017/01/10	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW	2017/01/10	<MDL 0.16	2.00	No	No
Chlorpyrifos (ug/L) - TW	2017/01/10	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW	2017/01/10	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW	2017/01/10	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW	2017/01/10	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW	2017/01/10	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW	2017/01/10	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW	2017/01/10	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	2017/01/10	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW	2017/01/10	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2017/01/10	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW	2017/01/10	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW	2017/01/10	<MDL 0.03	20.00	No	No
Diquat (ug/L) - TW	2017/01/10	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW	2017/01/10	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW	2017/01/10	<MDL 1.0	280.00	No	No
Malathion (ug/L) - TW	2017/01/10	<MDL 0.02	190.00	No	No
2-Methyl-4chlorophenoxyacetic Acid (MCPA)	2017/01/10	<MDL 0.01	50.00	No	No
Metolachlor (ug/L) - TW	2017/01/10	<MDL 0.02	80.00	No	No
Metribuzin (ug/L) - TW	2017/01/10	<MDL 0.3	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2017/01/10	<MDL 1.0	10.00	No	No
Paraquat (ug/L) - TW	2017/01/10	<MDL 0.04	3.00	No	No

Issued: February 15, 2019

	Sample Date yyyy/mm/dd	Sample Result	MAC	Exceedance	Exceedance
				MAC	1/2 MAC
PCB (ug/L) - TW	2017/01/10	<MDL 0.15	60.00	No	No
Pentachlorophenol (ug/L) - TW	2017/01/10	<MDL 0.01	2.00	No	No
Phorate (ug/L) - TW	2017/01/10	<MDL 1.0	190.00	No	No
Picloram (ug/L) - TW	2017/01/10	<MDL 0.03	1.00	No	No
Prometryne (ug/L) - TW	2017/01/10	<MDL 0.01	10.00	No	No
Simazine (ug/L) - TW	2017/01/10	<MDL 0.01	1.00	No	No
Terbufos (ug/L) - TW	2017/01/10	<MDL 0.35	10.00	No	No
Tetrachloroethylene (ug/L) - TW	2017/01/10	<MDL 0.2	100.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2017/01/10	<MDL 0.01	230.00	No	No
Triallate (ug/L) - TW	2017/01/10	<MDL 0.44	5.00	No	No
Trichloroethylene (ug/L) - TW	2017/01/10	<MDL 0.25	5.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW	2017/01/10	<MDL 0.12	100.00	No	No
Trifluralin (ug/L) - TW	2017/01/10	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW	2017/01/10	<MDL 0.17	1.00	No	No
<b>Distribution Water</b>					
Trihalomethane: Total (ug/L) Annual Average - DW	2018	14.25	100	No	No
HAA Total (ug/L) Annual Average - DW	2018	5.3	N/A	N/A	N/A

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
821266	Repair Exhaust Fan
983638	Chemical Room Lighting Upgrade
983635	New window installed

# Appendix A

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## WTRS Data and Submission Confirmation

### Confirmation:

Thank you for submitting your water taking data online.

Permit Number: 7640-AQJHCV  
Permit Holder: THE CORPORATION OF THE CITY OF KAWARTHA LAKES.  
Received on: Jan 29, 2019 1:19 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.