

Mississippi Mills Drinking Water System

Waterworks # 220001290
System Category – Large Municipal Residential

Annual Water Report

Prepared For: Municipality of Mississippi Mills

Reporting Period of January 1st – December 31st 2021

Issued: February 25, 2022

Revision: 0

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 residence and the annual reports will be available to users at the Municipality of Mississippi Mills Office. Notification will be at the Municipal Office and copies provided free of charge if requested. The Municipality of Mississippi Mills is located at 3131 Old Perth Rd., Almonte, Ontario, K0A 1A0. View the Municipalities website at www.mississippimills.ca

There are no additional drinking water systems that receive drinking water from this system.

Compliance Report Card

Compliance Event	# of Events
Ministry of Environment Inspections	OCWA/Mississippi Mills Distribution – September 17 2021 100%
Municipal Drinking Water Licence Drinking Water Works Permit	Renewal of Licences completed in 2021 New Expiry Date 2026-11-25
Ministry of Labour Inspections	No Inspections for the reporting period
QEMS External Audit	<u>OCWA:</u> One (1) External On-Site Audit completed <u>Municipality of Mississippi Mills:</u> One (1) External On-Site Audit completed
AWQI's/BWA	No AWQI's for the reporting period
Non-Compliance	No Non-Compliance's for the reporting period
Spills	There were no Spills during the reporting period.

System Process Description

The Mississippi Mills Drinking Water System consists of 5 drilled wells located throughout the Ward of Almonte. The system supplies water to only the Ward of Almonte and is owned by The Corporation of the Municipality of Mississippi Mills. The Ontario Clean Water Agency is the Operating Authority.

Well 3 is located in the eastern portion of the Town, approximately 60 m north of Ottawa Street and Harold Street. Well 3 is contained in its own brick construction pump house and is equipped with a submersible turbine pump rated at a capacity of 9.6 L/s at 70.7m TDH. Disinfection is achieved through injection of sodium hypochlorite into the feeder main prior to the treated water being discharged into a chlorine contact tank.

Well 5 is located along Almonte Street (County Road 16) near the south west end of Town. Well 5 is contained in its own brick construction pump house and is equipped with a submersible vertical pump rated at a capacity of 7.7 L/s at 120.18m TDH. A VFD was also installed to assist in flow control, reduce water pressure and electrical demand. Disinfection is achieved through injection of sodium hypochlorite into the feeder main prior to the treated water being discharged into a chlorine contact tank.

Well 6 is located in Gemmill’s Park in the south end of Town, immediately east of Highway 29. Well 6 is contained in its own brick construction pump house and is equipped with a turbine pump rated at a capacity of 22.7 L/s at 101.2m TDH. A VFD assists with flow control, water pressure and electrical demand. Disinfection is achieved through injection of sodium hypochlorite into the feeder main prior to the treated water being discharged into a chlorine contact tank.

Wells 7 and 8 are located within a single pump house near the northeast edge of Town, along the north side of Paterson Street. Well 7 and 8 are enclosed within a single brick and aluminum clad vented watertight pump house. Each well is equipped with a vertical turbine pump rated at a capacity of 44.8 L/s at 69.0m TDH. Both pumps have a VFD installed to assist in flow control, water pressure and electrical demand. The pumps are located directly on top of the well casings. Disinfection is achieved through injection of liquid sodium hypochlorite into the feeder main of each well, prior to the treated water being discharged into a single chlorine contact chamber.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
12 % Sodium Hypochlorite	Disinfection	Brenntag

Summary of Non-Compliance

Adverse Water Quality Incidents

Date	AWQI #	Location	Problem	Details	Legislation	Corrective Action Taken
No AWQI’s during the reporting period						

Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
No Non-Compliance’s 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
Reg 170/03	HAA samples must be taken from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of HAAs.	2021	HAAs form close to the point of treatment and sampling will take place at a distribution point close to the treatment plant.	Closed
Reg. O 170/03	THM samples must be taken from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of THMs.	2021	THMs usually form from a point furthest from the treatment plant and sampling will take place at the distribution point furthest away from the treatment plant.	Closed
Reg. O 170/03	Distribution logbooks contained numerous entries that had been written over, scribbled out or left difficult to decipher. It is highly recommended that original records completed are maintained so as to be legible and that subsequent corrections (or modifications) be completed with a strike out, initial and new record. This allows for demonstration and verification of all records.	2021	Internal logbook training was completed	Closed
Reg. O/170/03	Treatment logbooks indicated that the operators ensured that any activities that occurred in the system were documented. However, numerous days contained entries that were made by an Operator In Training (OIT) that did not contain a reference that the Operator In Charge (OIC) was consulted prior to the operational changes being completed.	2021	Training on OIT activities was completed.	Closed

Flows

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

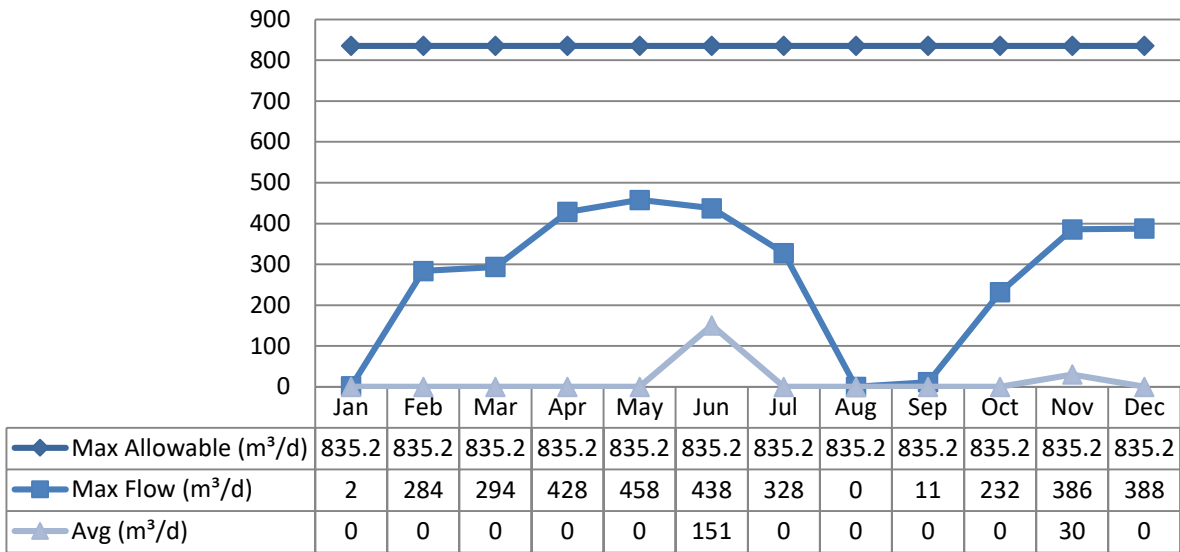
Raw Water Flows

The Raw Water flows are regulated under the Permit to Take Water. 2021 Raw Flow Data was submitted to the Ministry electronically under permit #0568-9LUL2N. The confirmation is attached in Appendix A.

Well 3

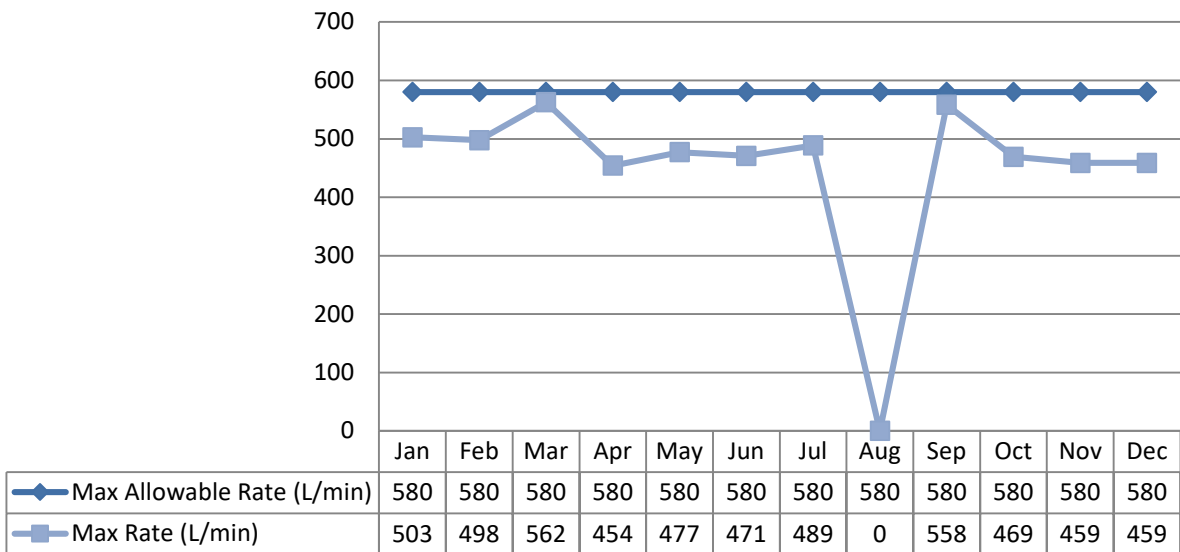
Total Monthly Flows (m³/d)

Max Allowable PTTW



Monthly Rated Flows (L/min)

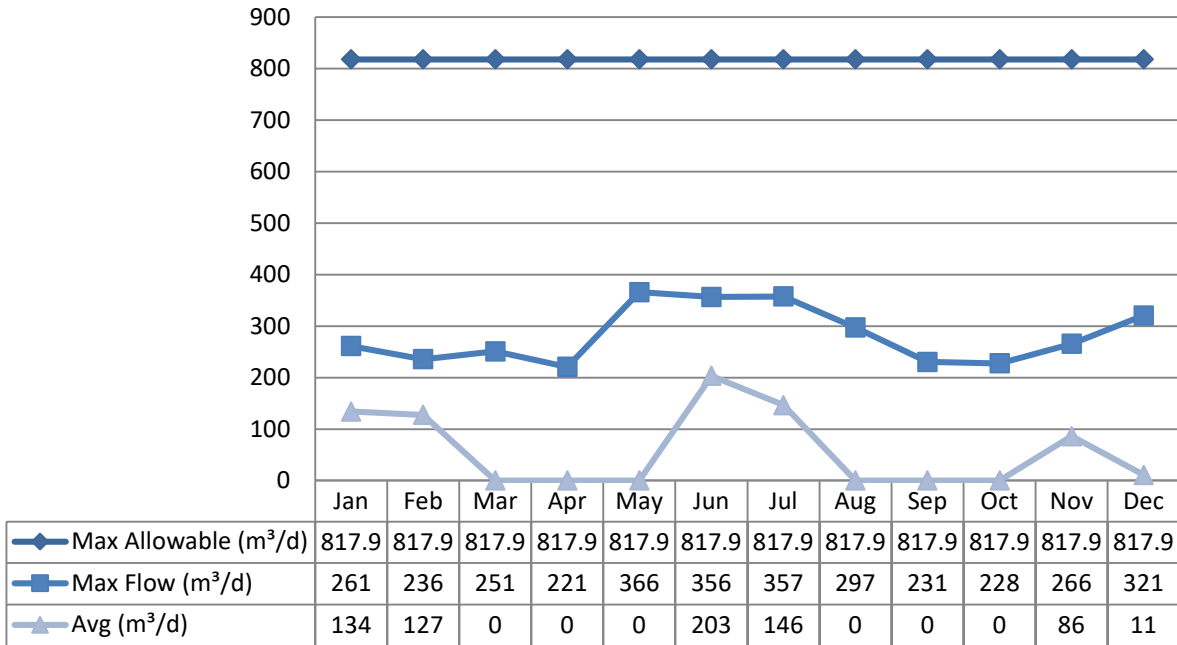
Max allowable rate - PTTW



Well 5

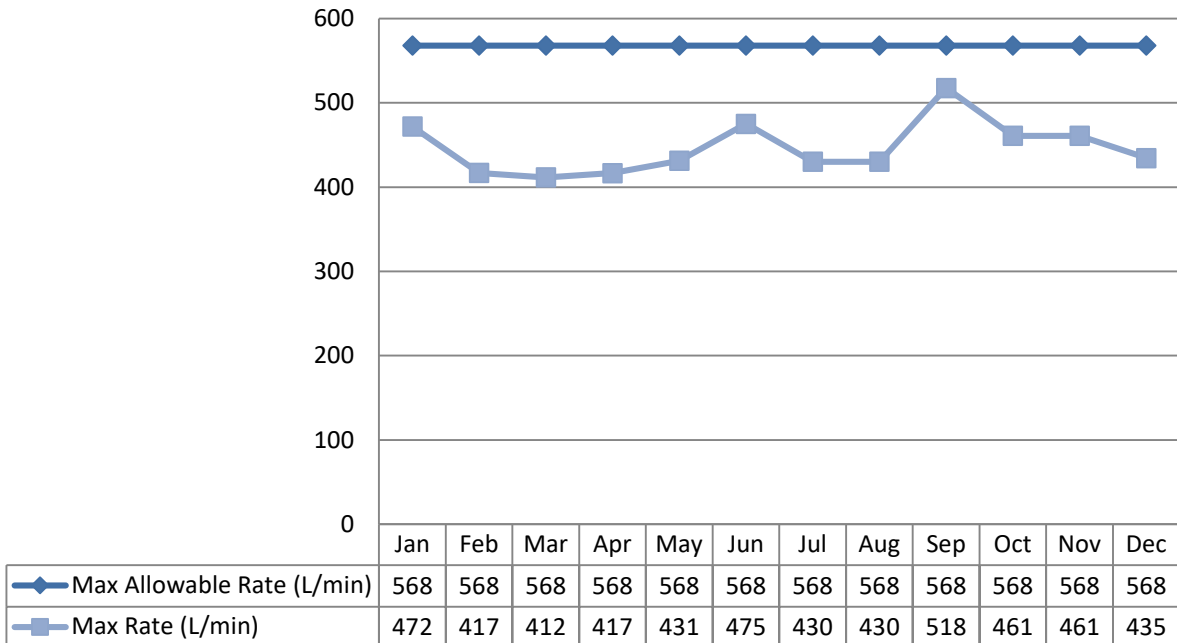
Total Monthly Flows (m³/d)

Max Allowable PTTW



Monthly Rated Flows (L/min)

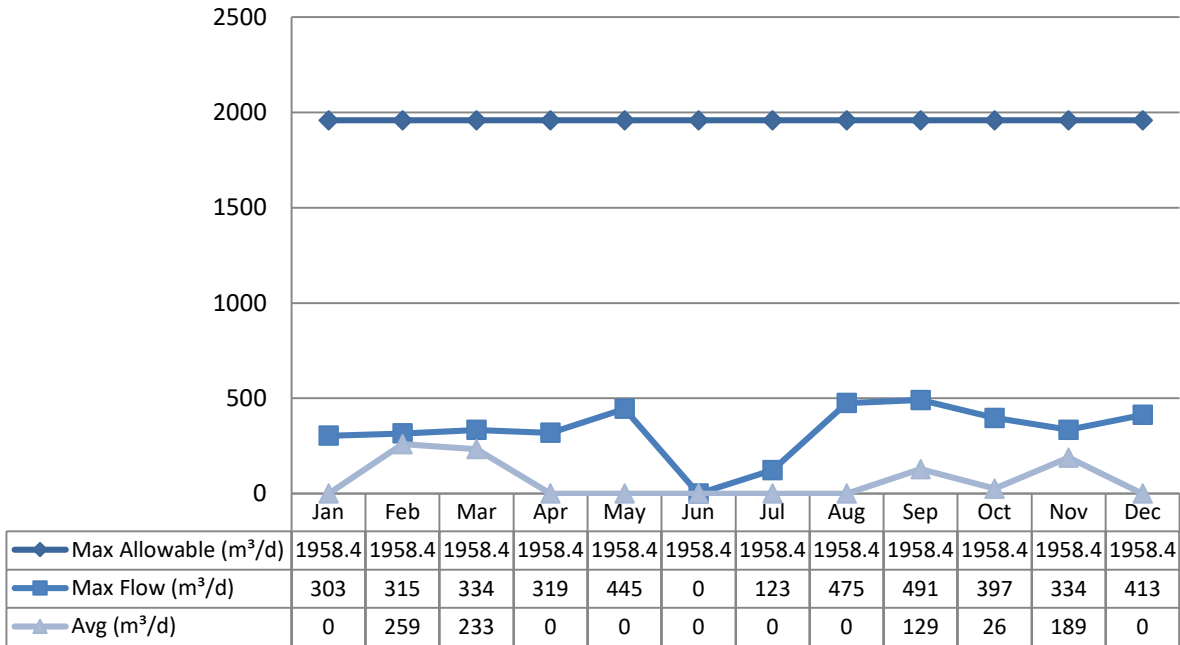
Max allowable rate – PTTW



Well 6

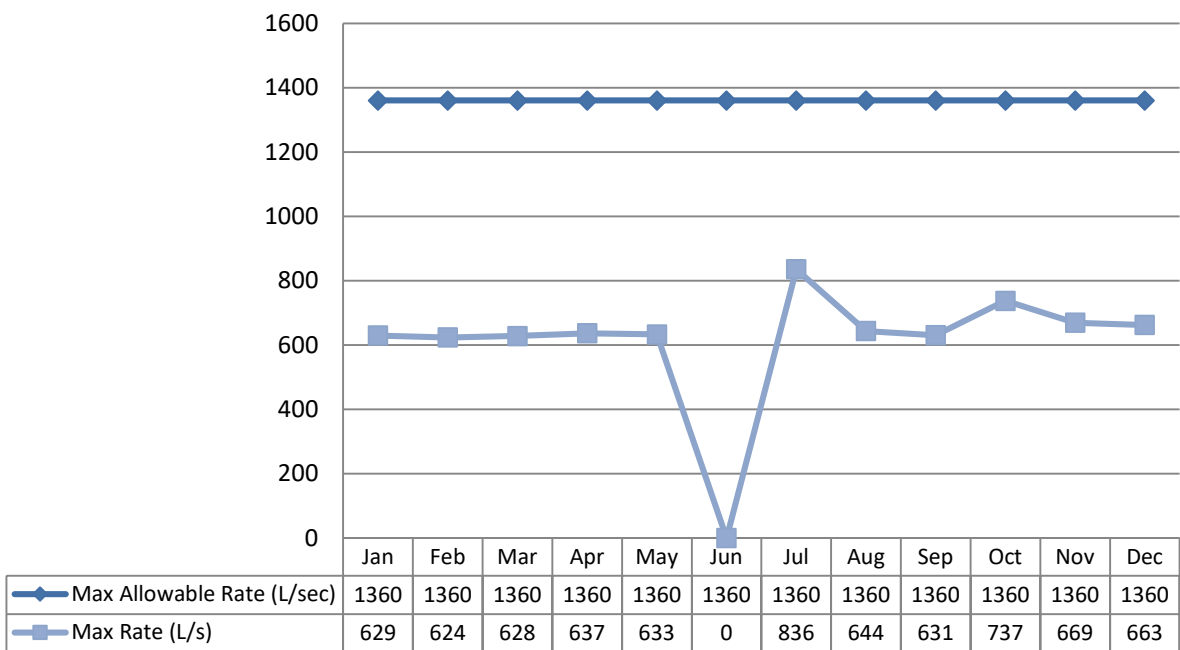
Total Monthly Flows (m³/d)

Max Allowable PTTW



Monthly Rated Flows (L/s)

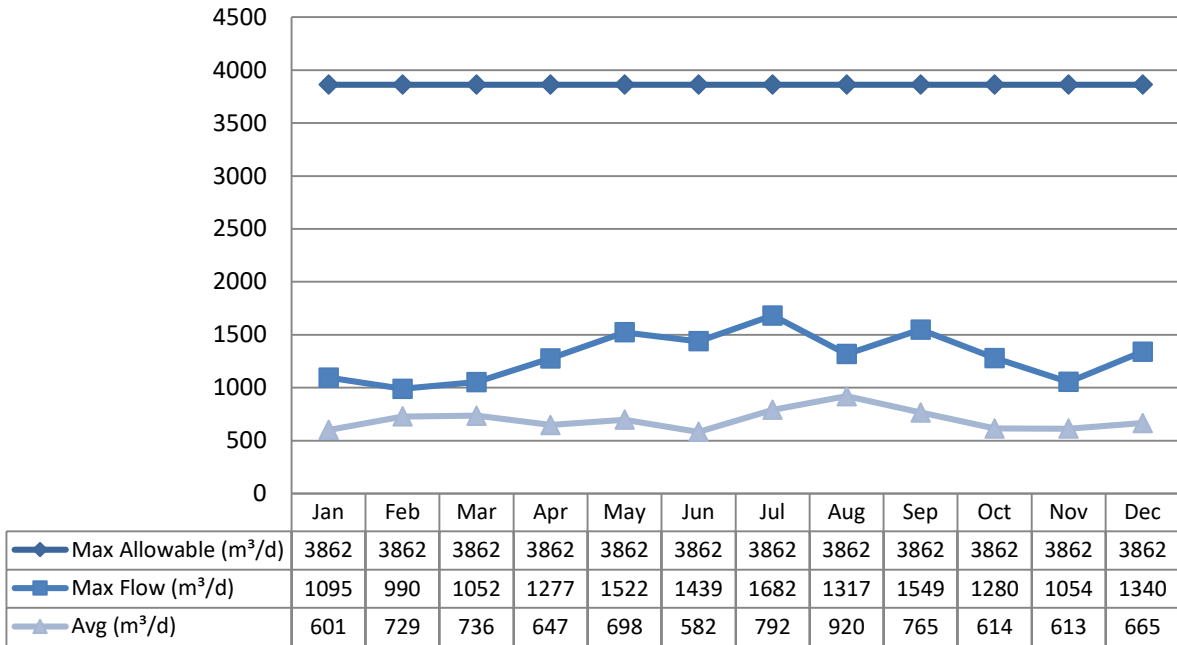
Max allowable rate – PTTW



Well 7

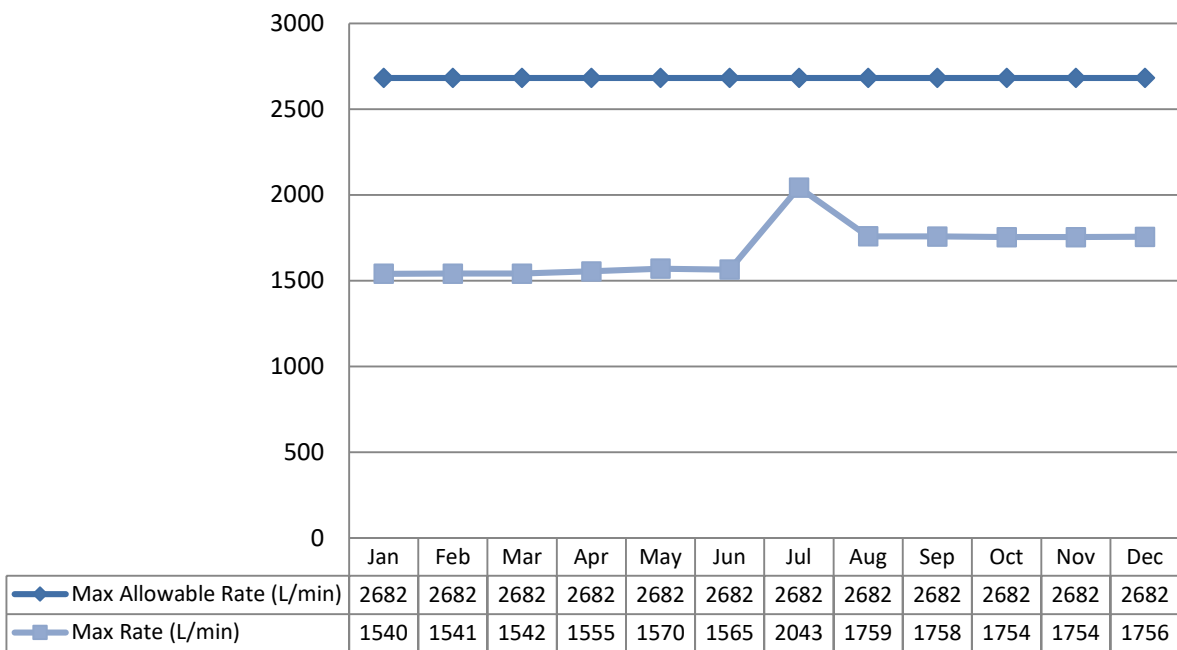
Total Monthly Flows (m³/d)

Max Allowable PTTW



Monthly Rated Flows (L/min)

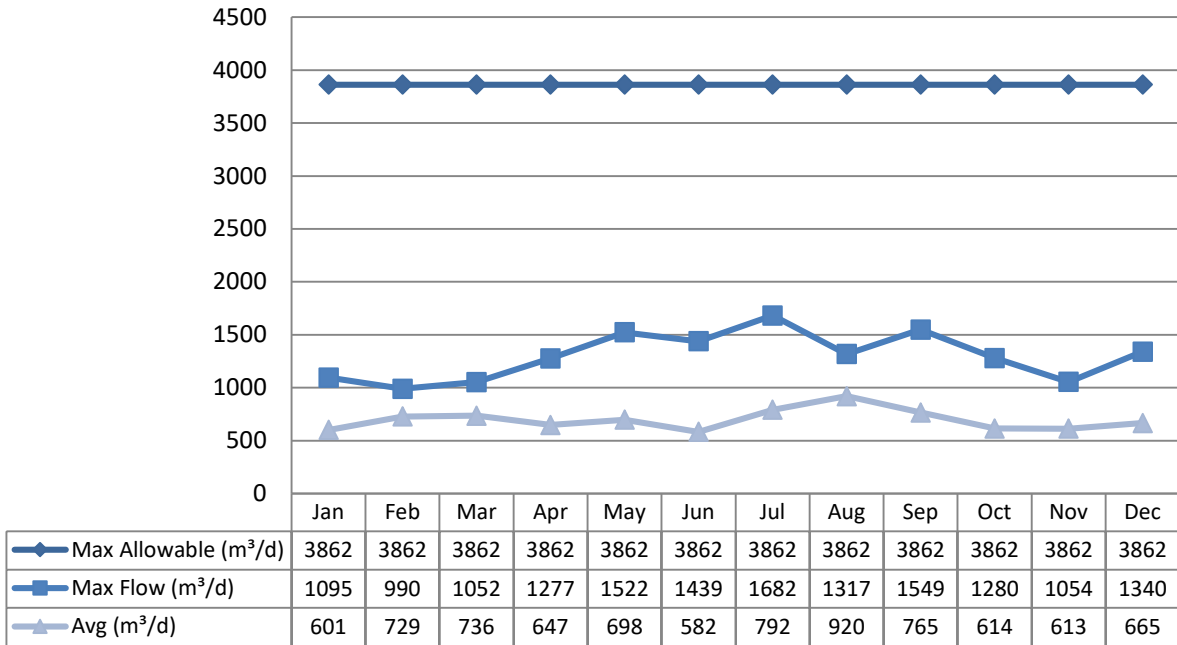
Max allowable rate - PTTW



Well 8

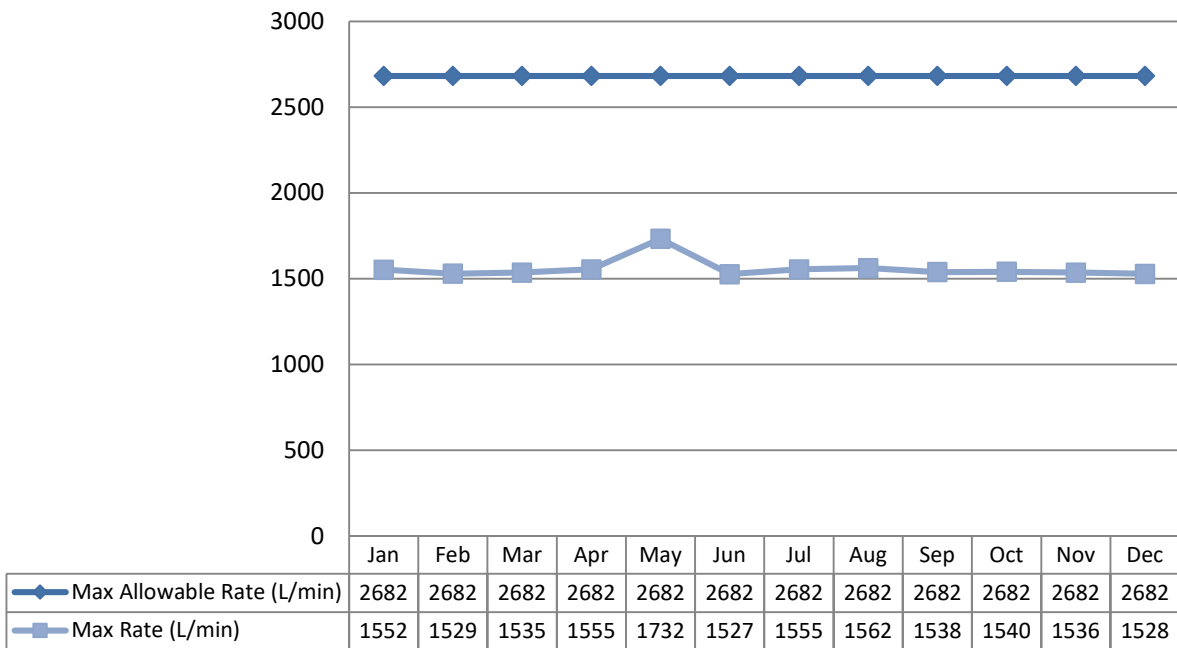
Total Monthly Flows (m³/d)

Max Allowable PTTW



Monthly Rated Flows (L/min)

Max allowable rate - PTTW

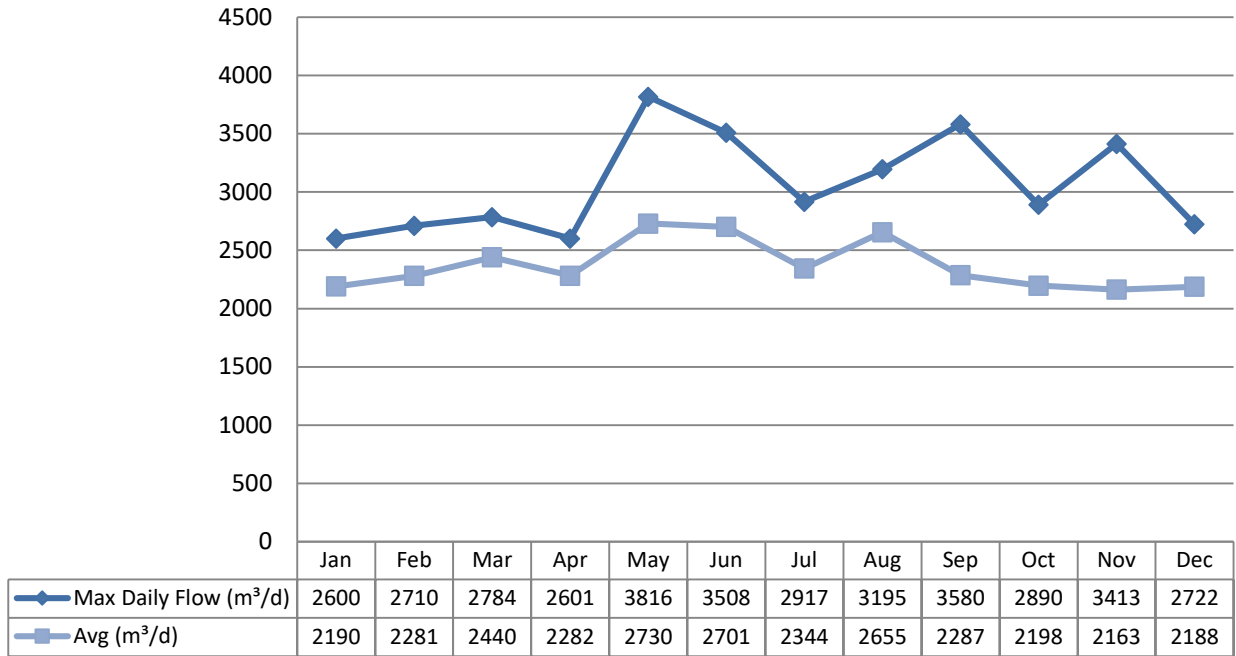


System Water Flows

The System Water flows are regulated under the Municipal Drinking Water Licence.

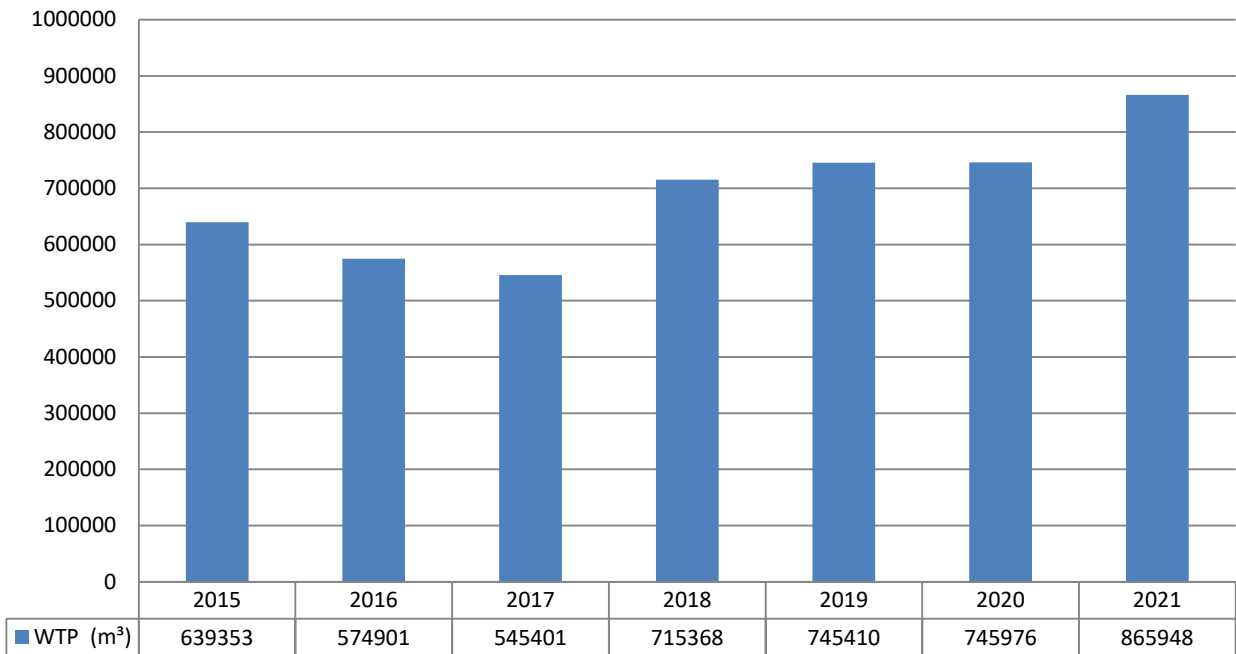
Monthly Flows

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		No. of HPC Samples Collected	Range of HPC Results	
		Min	Max	Min	Max		Min	Max
MMills DWS RW Well 3	40	0	0	0	0			
MMills DWS RW Well 5	51	0	0	0	0			
MMills DWS RW Well 6	45	0	0	0	20			
MMills DWS RW Well 7	52	0	0	0	0			
MMills DWS RW Well 8	52	0	0	0	1			
MMills DWS TW Well 3	40	0	0	0	0	40	2	12
MMills DWS TW Well 5	52	0	0	0	0	52	2	8
MMills DWS TW Well 6	44	0	0	0	0	44	2	2
MMills DWS TW Wells 7&8 combined	52	0	0	0	0	52	2	2
Distribution	208	0	0	0	0	208	2	90

* Number of Samples collected varies due to the individual well being Out of Service for Maintenance

Operational Testing

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity, On-Line (NTU) - RW6	8760	0.03	2.83
Turbidity, On-Line (NTU) - RW7	8760	0	2.0
Turbidity, On-Line (NTU) - RW8	8760	0	2.0
Free Chlorine Residual, On-Line (mg/L) - TW3	8760	0.37	1.98
Free Chlorine Residual, In-House (mg/L) – TW3	147	0.54	1.65
Free Chlorine Residual, On-Line (mg/L) - TW5	8760	0.63	2.0
Free Chlorine Residual, In-House (mg/L) – TW5	148	0.73	1.61
Free Chlorine Residual, On-Line (mg/L) - TW6	8760	0.12	2.0
Free Chlorine Residual, In-House (mg/L) – TW6	147	0.52	1.76
Free Chlorine Residual, On-Line (mg/L) - TW7/8	8760	0.0	1.73
Free Chlorine Residual, In-House (mg/L) – TW7/8	148	0.69	1.51
Free Chlorine Residual, On-Line (mg/L) - DW	8760	0.412	4.46
Free Chlorine Residual, DW Field (mg/L) Lab Upload - DW	209	0.67	1.76

NOTE: 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 every 36 months 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
- 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) - TW3	2019/09/09	<MDL 0.1	6.0	No	No
Antimony: Sb (ug/L) - TW5	2019/09/09	<MDL 0.1	6.0	No	No
Antimony: Sb (ug/L) - TW6	2019/09/09	<MDL 0.1	6.0	No	No
Antimony: Sb (ug/L) - TW7/8	2019/09/09	<MDL 0.1	6.0	No	No
Arsenic: As (ug/L) - TW3	2019/09/09	<MDL 0.1	10.0	No	No
Arsenic: As (ug/L) - TW5	2019/09/09	<MDL 0.1	10.0	No	No
Arsenic: As (ug/L) - TW6	2019/09/09	<MDL 0.1	10.0	No	No
Arsenic: As (ug/L) - TW7/8	2019/09/09	<MDL 0.1	10.0	No	No
Barium: Ba (ug/L) - TW3	2019/09/09	120.0	1000.0	No	No
Barium: Ba (ug/L) - TW5	2019/09/09	154.0	1000.0	No	No
Barium: Ba (ug/L) - TW6	2019/09/09	92.0	1000.0	No	No
Barium: Ba (ug/L) - TW7/8	2019/09/09	152.0	1000.0	No	No
Boron: B (ug/L) - TW3	2019/09/09	247.0	5000.0	No	No
Boron: B (ug/L) - TW5	2019/09/09	50.0	5000.0	No	No
Boron: B (ug/L) - TW6	2019/09/09	284.0	5000.0	No	No
Boron: B (ug/L) - TW7/8	2019/09/09	183.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW3	2019/09/09	<MDL 0.02	5.0	No	No
Cadmium: Cd (ug/L) - TW5	2019/09/09	<MDL 0.02	5.0	No	No
Cadmium: Cd (ug/L) - TW6	2019/09/09	<MDL 0.02	5.0	No	No
Cadmium: Cd (ug/L) - TW7/8	2019/09/09	<MDL 0.02	5.0	No	No
Chromium: Cr (ug/L) - TW3	2019/09/09	<MDL 2.0	50.0	No	No
Chromium: Cr (ug/L) - TW5	2019/09/09	<MDL 2.0	50.0	No	No
Chromium: Cr (ug/L) - TW6	2019/09/09	<MDL 2.0	50.0	No	No
Chromium: Cr (ug/L) - TW7/8	2019/09/09	<MDL 2.0	50.0	No	No
Mercury: Hg (ug/L) - TW3	2019/09/09	<MDL 0.02	1.0	No	No
Mercury: Hg (ug/L) - TW5	2019/09/09	<MDL 0.02	1.0	No	No
Mercury: Hg (ug/L) - TW6	2019/09/09	<MDL 0.02	1.0	No	No
Mercury: Hg (ug/L) - TW7/8	2019/09/09	<MDL 0.02	1.0	No	No
Selenium: Se (ug/L) - TW3	2019/09/09	<MDL 1.0	50.0	No	No
Selenium: Se (ug/L) - TW5	2019/09/09	<MDL 1.0	50.0	No	No
Selenium: Se (ug/L) - TW6	2019/09/09	<MDL 1.0	50.0	No	No
Selenium: Se (ug/L) - TW7/8	2019/09/09	<MDL 1.0	50.0	No	No
Uranium: U (ug/L) - TW3	2019/09/09	0.65	20.0	No	No
Uranium: U (ug/L) - TW5	2019/09/09	0.78	20.0	No	No
Uranium: U (ug/L) - TW6	2019/09/09	0.89	20.0	No	No
Uranium: U (ug/L) - TW7/8	2019/09/09	1.05	20.0	No	No
Additional Inorganics					
Fluoride (mg/L) - TW3	2019/02/05	0.1	1.5	No	No
Fluoride (mg/L) - TW5	2019/02/05	<MDL 0.1	1.5	No	No
Fluoride (mg/L) - TW6	2019/02/05	0.3	1.5	No	No
Fluoride (mg/L) - TW7/8	2019/02/05	0.2	1.5	No	No
Nitrite (mg/L) - TW3	2021/02/09	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW3	2021/05/11	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW3	2021/11/08	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW5	2021/02/09	<MDL 0.1	1.0	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Nitrite (mg/L) - TW5	2021/05/11	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW5	2021/08/10	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW5	2021/11/16	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW6	2021/02/09	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW6	2021/05/11	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW6	2021/08/10	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW6	2021/11/16	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW7/8	2021/02/09	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW7/8	2021/05/11	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW7/8	2021/08/10	<MDL 0.1	1.0	No	No
Nitrite (mg/L) - TW7/8	2021/11/16	<MDL 0.1	1.0	No	No
Nitrate (mg/L) - TW3	2021/02/09	0.8	10.0	No	No
Nitrate (mg/L) - TW3	2021/05/11	<MDL 0.1	10.0	No	No
Nitrate (mg/L) - TW3	2021/11/08	0.2	10.0	No	No
Nitrate (mg/L) - TW5	2021/02/09	0.2	10.0	No	No
Nitrate (mg/L) - TW5	2021/05/11	0.4	10.0	No	No
Nitrate (mg/L) - TW5	2021/08/10	0.3	10.0	No	No
Nitrate (mg/L) - TW5	2021/11/16	0.2	10.0	No	No
Nitrate (mg/L) - TW6	2020/02/12	0.5	10.0	No	No
Nitrate (mg/L) - TW6	2020/05/11	0.4	10.0	No	No
Nitrate (mg/L) - TW6	2020/08/10	0.6	10.0	No	No
Nitrate (mg/L) - TW6	2020/11/16	0.5	10.0	No	No
Nitrate (mg/L) - TW7/8	2020/02/12	0.8	10.0	No	No
Nitrate (mg/L) - TW7/8	2020/05/11	1.2	10.0	No	No
Nitrate (mg/L) - TW7/8	2020/08/10	1.2	10.0	No	No
Nitrate (mg/L) - TW7/8	2020/11/16	1.4	10.0	No	No
Sodium: Na (mg/L) - TW3	2019/07/03	41.4	20*	Yes	Yes
Sodium: Na (mg/L) - TW5	2019/07/03	60.9	20*	Yes	Yes
Sodium: Na (mg/L) - TW6	2019/07/03	44.6	20*	Yes	Yes
Sodium: Na (mg/L) - TW7/8	2019/07/03	43.5	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 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.

** Sodium was reported as an AWQI in 2018. No regulatory reporting requirements in 2019.

Schedule 15 Sampling:

The Schedule 15 Sampling is required under O.Reg 170/03. This system is under the plumbing exemption. 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)	12	12	256	305	N/A	N/A
pH	6	6	7.66	7.91	N/A	N/A
Lead (ug/l)	6	6	0.17	1.76	10	0

Organic Parameters

These parameters are tested every 36 months 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) - TW3	2019/09/09	<MDL 0.3	5.00	No	No
Alachlor (ug/L) - TW5	2019/09/09	<MDL 0.3	5.00	No	No
Alachlor (ug/L) - TW7/8	2019/09/09	<MDL 0.3	5.00	No	No
Alachlor (ug/L) - TW6	2019/09/09	<MDL 0.3	5.00	No	No
Azinphos-methyl (ug/L) - TW3	2019/09/09	<MDL 1.0	20.00	No	No
Azinphos-methyl (ug/L) - TW5	2019/09/09	<MDL 1.0	20.00	No	No
Azinphos-methyl (ug/L) - TW7/8	2019/09/09	<MDL 1.0	20.00	No	No
Azinphos-methyl (ug/L) - TW6	2019/09/09	<MDL 1.0	20.00	No	No
Benzene (ug/L) - TW3	2019/09/09	<MDL 0.5	1.00	No	No
Benzene (ug/L) - TW5	2019/09/09	<MDL 0.5	1.00	No	No
Benzene (ug/L) - TW7/8	2019/09/09	<MDL 0.5	1.00	No	No
Benzene (ug/L) - TW6	2019/09/09	<MDL 0.5	1.00	No	No
Benzo(a)pyrene (ug/L) - TW3	2019/09/09	<MDL 0.005	0.01	No	No
Benzo(a)pyrene (ug/L) - TW5	2019/09/09	<MDL 0.005	0.01	No	No
Benzo(a)pyrene (ug/L) - TW7/8	2019/09/09	<MDL 0.005	0.01	No	No
Benzo(a)pyrene (ug/L) - TW6	2019/09/09	<MDL 0.005	0.01	No	No
Bromoxynil (ug/L) - TW3	2019/09/09	<MDL 0.5	5.00	No	No
Bromoxynil (ug/L) - TW5	2019/09/09	<MDL 0.5	5.00	No	No
Bromoxynil (ug/L) - TW7/8	2019/09/09	<MDL 0.5	5.00	No	No
Bromoxynil (ug/L) - TW6	2019/09/09	<MDL 0.5	5.00	No	No
Carbaryl (ug/L) - TW3	2019/09/09	<MDL 3.0	90.00	No	No
Carbaryl (ug/L) - TW5	2019/09/09	<MDL 3.0	90.00	No	No
Carbaryl (ug/L) - TW7/8	2019/09/09	<MDL 3.0	90.00	No	No
Carbaryl (ug/L) - TW6	2019/09/09	<MDL 3.0	90.00	No	No
Carbofuran (ug/L) - TW3	2019/09/09	<MDL 1.0	90.00	No	No
Carbofuran (ug/L) - TW5	2019/09/09	<MDL 1.0	90.00	No	No
Carbofuran (ug/L) - TW7/8	2019/09/09	<MDL 1.0	90.00	No	No
Carbofuran (ug/L) - TW6	2019/09/09	<MDL 1.0	90.00	No	No
Carbon Tetrachloride (ug/L) - TW3	2019/09/09	<MDL 0.2	2.00	No	No
Carbon Tetrachloride (ug/L) - TW5	2019/09/09	<MDL 0.2	2.00	No	No
Carbon Tetrachloride (ug/L) - TW7/8	2019/09/09	<MDL 0.2	2.00	No	No
Carbon Tetrachloride (ug/L) - TW6	2019/09/09	<MDL 0.2	2.00	No	No
Chlorpyrifos (ug/L) - TW3	2019/09/09	<MDL 0.5	90.00	No	No
Chlorpyrifos (ug/L) - TW5	2019/09/09	<MDL 0.5	90.00	No	No
Chlorpyrifos (ug/L) - TW7/8	2019/09/09	<MDL 0.5	90.00	No	No
Chlorpyrifos (ug/L) - TW6	2019/09/09	<MDL 0.5	90.00	No	No
Diazinon (ug/L) - TW3	2019/09/09	<MDL 1.0	20.00	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Diazinon (ug/L) - TW5	2019/09/09	<MDL 1.0	20.00	No	No
Diazinon (ug/L) - TW7/8	2019/09/09	<MDL 1.0	20.00	No	No
Diazinon (ug/L) - TW6	2019/09/09	<MDL 1.0	20.00	No	No
Dicamba (ug/L) - TW3	2019/09/09	<MDL 10.0	120.00	No	No
Dicamba (ug/L) - TW5	2019/09/09	<MDL 10.0	120.00	No	No
Dicamba (ug/L) - TW7/8	2019/09/09	<MDL 10.0	120.00	No	No
Dicamba (ug/L) - TW6	2019/09/09	<MDL 10.0	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW3	2019/09/09	<MDL 0.5	200.00	No	No
1,2-Dichlorobenzene (ug/L) - TW5	2019/09/09	<MDL 0.5	200.00	No	No
1,2-Dichlorobenzene (ug/L) - TW7/8	2019/09/09	<MDL 0.5	200.00	No	No
1,2-Dichlorobenzene (ug/L) - TW6	2019/09/09	<MDL 0.5	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW3	2019/09/09	<MDL 0.5	5.00	No	No
1,4-Dichlorobenzene (ug/L) - TW5	2019/09/09	<MDL 0.5	5.00	No	No
1,4-Dichlorobenzene (ug/L) - TW7/8	2019/09/09	<MDL 0.5	5.00	No	No
1,4-Dichlorobenzene (ug/L) - TW6	2019/09/09	<MDL 0.5	5.00	No	No
1,2-Dichloroethane (ug/L) - TW3	2019/09/09	<MDL 0.5	5.00	No	No
1,2-Dichloroethane (ug/L) - TW5	2019/09/09	<MDL 0.5	5.00	No	No
1,2-Dichloroethane (ug/L) - TW7/8	2019/09/09	<MDL 0.5	5.00	No	No
1,2-Dichloroethane (ug/L) - TW6	2019/09/09	<MDL 0.5	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW3	2019/09/09	<MDL 0.1	14.00	No	No
1,1-Dichloroethylene (ug/L) - TW5	2019/09/09	<MDL 0.1	14.00	No	No
1,1-Dichloroethylene (ug/L) - TW7/8	2019/09/09	<MDL 0.1	14.00	No	No
1,1-Dichloroethylene (ug/L) - TW6	2019/09/09	<MDL 0.1	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW3	2019/09/09	<MDL 5.0	50.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW5	2019/09/09	<MDL 5.0	50.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW7/8	2019/09/09	<MDL 5.0	50.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW6	2019/09/09	<MDL 5.0	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW3	2019/09/09	<MDL 0.1	900.00	No	No
2,4-Dichlorophenol (ug/L) - TW5	2019/09/09	<MDL 0.1	900.00	No	No
2,4-Dichlorophenol (ug/L) - TW7/8	2019/09/09	<MDL 0.1	900.00	No	No
2,4-Dichlorophenol (ug/L) - TW6	2019/09/09	<MDL 0.1	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW3	2019/09/09	<MDL 10.0	100.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW5	2019/09/09	<MDL 10.0	100.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW7/8	2019/09/09	<MDL 10.0	100.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW6	2019/09/09	<MDL 10.0	100.00	No	No
Diclofop-methyl (ug/L) - TW3	2019/09/09	<MDL 0.9	9.00	No	No
Diclofop-methyl (ug/L) - TW5	2019/09/09	<MDL 0.9	9.00	No	No
Diclofop-methyl (ug/L) - TW7/8	2019/09/09	<MDL 0.9	9.00	No	No
Diclofop-methyl (ug/L) - TW6	2019/09/09	<MDL 0.9	9.00	No	No
Dimethoate (ug/L) - TW3	2019/09/09	<MDL 1.0	20.00	No	No
Dimethoate (ug/L) - TW5	2019/09/09	<MDL 1.0	20.00	No	No
Dimethoate (ug/L) - TW7/8	2019/09/09	<MDL 1.0	20.00	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Dimethoate (ug/L) - TW6	2019/09/09	<MDL 1.0	20.00	No	No
Diquat (ug/L) - TW3	2019/09/09	<MDL 5.0	70.00	No	No
Diquat (ug/L) - TW5	2019/09/09	<MDL 5.0	70.00	No	No
Diquat (ug/L) - TW7/8	2019/09/09	<MDL 5.0	70.00	No	No
Diquat (ug/L) - TW6	2019/09/09	<MDL 5.0	70.00	No	No
Diuron (ug/L) - TW3	2019/09/09	<MDL 5.0	150.00	No	No
Diuron (ug/L) - TW5	2019/09/09	<MDL 5.0	150.00	No	No
Diuron (ug/L) - TW7/8	2019/09/09	<MDL 5.0	150.00	No	No
Diuron (ug/L) - TW6	2019/09/09	<MDL 5.0	150.00	No	No
Glyphosate (ug/L) - TW3	2019/09/09	<MDL 25.0	280.00	No	No
Glyphosate (ug/L) - TW5	2019/09/09	<MDL 25.0	280.00	No	No
Glyphosate (ug/L) - TW7/8	2019/09/09	<MDL 25.0	280.00	No	No
Glyphosate (ug/L) - TW6	2019/09/09	<MDL 25.0	280.00	No	No
Malathion (ug/L) - TW3	2019/09/09	<MDL 5.0	190.00	No	No
Malathion (ug/L) - TW5	2019/09/09	<MDL 5.0	190.00	No	No
Malathion (ug/L) - TW7/8	2019/09/09	<MDL 5.0	190.00	No	No
Malathion (ug/L) - TW6	2019/09/09	<MDL 5.0	190.00	No	No
Metolachlor (ug/L) - TW3	2019/09/09	<MDL 3.0	50.00	No	No
Metolachlor (ug/L) - TW5	2019/09/09	<MDL 3.0	50.00	No	No
Metolachlor (ug/L) - TW7/8	2019/09/09	<MDL 3.0	50.00	No	No
Metolachlor (ug/L) - TW6	2019/09/09	<MDL 3.0	50.00	No	No
Metribuzin (ug/L) - TW3	2019/09/09	<MDL 3.0	80.00	No	No
Metribuzin (ug/L) - TW5	2019/09/09	<MDL 3.0	80.00	No	No
Metribuzin (ug/L) - TW7/8	2019/09/09	<MDL 3.0	80.00	No	No
Metribuzin (ug/L) - TW6	2019/09/09	<MDL 3.0	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW3	2019/09/09	<MDL 0.5	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW5	2019/09/09	<MDL 0.5	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW7/8	2019/09/09	<MDL 0.5	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW6	2019/09/09	<MDL 0.5	80.00	No	No
Paraquat (ug/L) - TW3	2019/09/09	<MDL 1.0	10.00	No	No
Paraquat (ug/L) - TW5	2019/09/09	<MDL 1.0	10.00	No	No
Paraquat (ug/L) - TW7/8	2019/09/09	<MDL 1.0	10.00	No	No
Paraquat (ug/L) - TW6	2019/09/09	<MDL 1.0	10.00	No	No
PCB (ug/L) - TW3	2019/09/09	<MDL 0.05	3.00	No	No
PCB (ug/L) - TW5	2019/09/09	<MDL 0.05	3.00	No	No
PCB (ug/L) - TW7/8	2019/09/09	<MDL 0.05	3.00	No	No
PCB (ug/L) - TW6	2019/09/09	<MDL 0.05	3.00	No	No
Pentachlorophenol (ug/L) - TW3	2019/09/09	<MDL 0.1	60.00	No	No
Pentachlorophenol (ug/L) - TW5	2019/09/09	<MDL 0.1	60.00	No	No
Pentachlorophenol (ug/L) - TW7/8	2019/09/09	<MDL 0.1	60.00	No	No
Pentachlorophenol (ug/L) - TW6	2019/09/09	<MDL 0.1	60.00	No	No
Phorate (ug/L) - TW3	2019/09/09	<MDL 0.3	2.00	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Phorate (ug/L) - TW5	2019/09/09	<MDL 0.3	2.00	No	No
Phorate (ug/L) - TW7/8	2019/09/09	<MDL 0.3	2	No	No
Phorate (ug/L) - TW6	2019/09/09	<MDL 0.3	2	No	No
Picloram (ug/L) - TW3	2019/09/09	<MDL 20.0	190	No	No
Picloram (ug/L) - TW5	2019/09/09	<MDL 20.0	190	No	No
Picloram (ug/L) - TW7/8	2019/09/09	<MDL 20.0	190	No	No
Picloram (ug/L) - TW6	2019/09/09	<MDL 20.0	190	No	No
Prometryne (ug/L) - TW3	2019/09/09	<MDL 0.1	1	No	No
Prometryne (ug/L) - TW5	2019/09/09	<MDL 0.1	1	No	No
Prometryne (ug/L) - TW7/8	2019/09/09	<MDL 0.1	1	No	No
Prometryne (ug/L) - TW6	2019/09/09	<MDL 0.1	1	No	No
Simazine (ug/L) - TW3	2019/09/09	<MDL 0.5	10	No	No
Simazine (ug/L) - TW5	2019/09/09	<MDL 0.5	10	No	No
Simazine (ug/L) - TW7/8	2019/09/09	<MDL 0.5	10	No	No
Simazine (ug/L) - TW6	2019/09/09	<MDL 0.5	10	No	No
Terbufos (ug/L) - TW3	2019/09/09	<MDL 0.3	1	No	No
Terbufos (ug/L) - TW5	2019/09/09	<MDL 0.3	1	No	No
Terbufos (ug/L) - TW7/8	2019/09/09	<MDL 0.3	1	No	No
Terbufos (ug/L) - TW6	2019/09/09	<MDL 0.3	1	No	No
Tetrachloroethylene (ug/L) - TW3	2019/09/09	<MDL 0.5	10	No	No
Tetrachloroethylene (ug/L) - TW5	2019/09/09	<MDL 0.5	10	No	No
Tetrachloroethylene (ug/L) - TW7/8	2019/09/09	<MDL 0.5	10	No	No
Tetrachloroethylene (ug/L) - TW6	2019/09/09	<MDL 0.5	10	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW3	2019/09/09	<MDL 0.1	100	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW5	2019/09/09	<MDL 0.1	100	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW7/8	2019/09/09	<MDL 0.1	100	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW6	2019/09/09	<MDL 0.1	100	No	No
Triallate (ug/L) - TW3	2019/09/09	<MDL 10.0	230	No	No
Triallate (ug/L) - TW5	2019/09/09	<MDL 10.0	230	No	No
Triallate (ug/L) - TW7/8	2019/09/09	<MDL 10.0	230	No	No
Triallate (ug/L) - TW6	2019/09/09	<MDL 10.0	230	No	No
Trichloroethylene (ug/L) - TW3	2019/09/09	<MDL 0.5	5	No	No
Trichloroethylene (ug/L) - TW5	2019/09/09	<MDL 0.5	5	No	No
Trichloroethylene (ug/L) - TW7/8	2019/09/09	<MDL 0.5	5	No	No
Trichloroethylene (ug/L) - TW6	2019/09/09	<MDL 0.5	5	No	No
2,4,6-Trichlorophenol (ug/L) - TW3	2019/09/09	<MDL 0.1	5	No	No
2,4,6-Trichlorophenol (ug/L) - TW5	2019/09/09	<MDL 0.1	5	No	No
2,4,6-Trichlorophenol (ug/L) - TW7/8	2019/09/09	<MDL 0.1	5	No	No
2,4,6-Trichlorophenol (ug/L) - TW6	2019/09/09	<MDL 0.1	5	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW3	2019/09/09	<MDL 10.0	100	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) -	2019/09/09	<MDL 10.0	100	No	No

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
TW5					
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW7/8	2019/09/09	<MDL 10.0	100	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW6	2019/09/09	<MDL 10.0	100	No	No
Trifluralin (ug/L) - TW3	2019/09/09	<MDL 0.5	45	No	No
Trifluralin (ug/L) - TW5	2019/09/09	<MDL 0.5	45	No	No
Trifluralin (ug/L) - TW7/8	2019/09/09	<MDL 0.5	45	No	No
Trifluralin (ug/L) - TW6	2019/09/09	<MDL 0.5	45	No	No
Vinyl Chloride (ug/L) - TW3	2019/09/09	<MDL 0.2	1	No	No
Vinyl Chloride (ug/L) - TW5	2019/09/09	<MDL 0.2	1	No	No
Vinyl Chloride (ug/L) - TW7/8	2019/09/09	<MDL 0.2	1	No	No
Vinyl Chloride (ug/L) - TW6	2019/09/09	<MDL 0.2	1	No	No
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average - DW	2021	12.25	100	No	No
HAA Total (ug/L) Annual Average - DW	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

The following two tables are the sample results from additional sample collected at Well 5:

The first table contains the results of sample collected because the adjoining lands where once used for storage of electrical transformers and hydro poles. The transformers and hydro poles are no longer stored at the adjoining lands but sampling will continue. Please note the samples are collected on raw water. There is no MAC / IMAC (Maximum Acceptable Concentration / Interim Maximum Acceptable Concentration) for raw water but the treated water MAC /IMAC have been provided for reference.

The second table contains the results of sample collected because of the wells' proximity to the wastewater treatment lagoons. These results help to assess the integrity of the lagoon cells.

Raw Water: Well 5 Parameter	Unit of Measure	Sample Date	Result Value	ODWS	
				MAC	IMAC
Arsenic	ug/L	July 5, 2021	<0.0001		25.0
Chromium	ug/L	July 5, 2021	<0.002	50	
PCBs (Polychlorinated Biphenyls)	ug/L	July 5, 2021	<0.05		3.0
Treated Water Parameter	Unit of Measure	Treated Water: Well 5 Annual Average 2021			
TKN (Total Kjeldahl Nitrogen)	mg/L	0.02			
Total Phosphorus	mg/L	0.002			
o-Phosphate (O-PO4)	mg/L	0.0118			
Dissolved Reactive Phosphorus	mg/L	0.0038			

NH3 + NH4 as N	mg/L	0.02
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Major Maintenance Summary

WO #	Description
2267859	Capital Well 3 chlorine injector pipe leak
2364722	Capital Well 8 Flow meter troubleshooting
2365365	Capital New Flow Control Valve for Well #3
2405779	Capital Capital Controls - Daily Reports not generating
2408280	Capital SAI Global DWQMS audit
2450770	Capital Reservoir
2451400	Capital Well 3 Flow Meter
2453984	Capital New Chlorine Pump Well 3
2455049	Capital Tower Safety inspection
2497835	Capital Well 6 Chlorine Panel Parts
2500928	Capital Critical Spare Free Chlorine probe
2502339	Capital Replacement PRV's for chlorine panels SB18
2540985	Capital Capital Controls Communication Loss Well #3
2093253	Capital Pump parts
2133322	Capital Well level monitoring
2176654	Capital Well 6 communications
2221236	Capital Flygt submersible utility pump 600V
2223385	Capital SCADA system assistance
2223410	Capital Total Chlorine Caps
2267667	Capital Replace outdoor wall packs to meet town lighting bylaw
2316803	Capital Replacment parts for water regulating valve for well #3
2316878	Capital service call VFD well pump 8
2318753	Capital Well 3 outdoor light
2359832	Capital Replace defective outdoor wall fixture
2363542	Capital Well 6 Flow meter faulting
2363757	Capital Chorine panel replacement Well 6
2364696	Capital Well 8 Flow meter fault

WO #	Description
2405776	Capital Capital Controls Daily Reports not generating

Distribution Highlights

Distribution Highlights were provided by the Municipality of Mississippi Mills.

Compliance Report Card

In September 2021, the MECP completed an on site Inspections for the Distribution system. The Inspection report rating was 100%.

An on site QEMS External Audit was completed and there was no non-conformances.

Maintenance & Operations

The following program were completed in 2021:

- The water main flushing program
- the valve turning program was 100% completed in 2021.
- Fire flow testing was completed throughout the entire system.
- Several repairs – valves, hydrants, services, and curb stops

New water mains commissioned on Martin Street, White Tail Ridge Phase 3&4 Subdivision and Mill Run Phase 6 Subdivision.

Planning Initiatives



The Schedule 'B' Class EA, Water Storage construction advanced in 2021. The substantial completion is expected for February 2022.

Additional planning initiatives include:

- Radio Frequency Meter Upgrades
 - Annual Infiltration and Inflow Program
 - Municipal Licence renewed November of 2021
 - Long Term Financial Plan and Rate Study Completed in 2021
-

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: 8175-AQPHA8
Permit Holder: THE CORPORATION OF THE TOWN OF MISSISSIPPI MILLS.
Received on: Feb 16, 2022 11:05 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.

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TOWN OF MISSISSIPPI MILLS | 2022/02/16
version: v4.5.0.21 (build#: 22)
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