

# Mississippi Mills Drinking Water System

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## 2017 Annual Water Report

Reporting period of January 1, 2017 – December 31, 2017

Prepared For: The Municipality of Mississippi Mills

Prepared By:



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

This report has been prepared to satisfy the annual reporting requirements of the  
Provincial Regulations and Guidelines

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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.  
 KOA 1A0  
[www.mississippimills.ca](http://www.mississippimills.ca)

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

## Compliance Report Card

Drinking Water System Number:	<b>220001290</b>
System Owner:	<b>Municipality of Mississippi Mills</b>
Operating Authority:	Ontario Clean Water Agency
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2017 – December 31, 2017

Compliance Event	# of Events	Details
Ministry of Environment Inspections	1	There was one (1) inspection report received during this reporting period. <ul style="list-style-type: none"> <li>Report received on April 7, 2017 for Inspection on January 31, February 2<sup>nd</sup> and 3<sup>rd</sup>, 2017. Inspection Rating 98.71%</li> </ul>
Ministry of Labour Inspections	0	
QEMS External Audit (Treatment)	1	One (1) External On-Site Audit <ul style="list-style-type: none"> <li>No Non-Conformance</li> </ul>
QEMS External Audit (Distribution)	1	One (1) External On-Site Audit <ul style="list-style-type: none"> <li>No Non-Conformance</li> </ul>
AWQI's	1	One Total Coliform in the Distribution System
Non-Compliance	0	
Community Complaints	0	Community Complaints are responded to by the system owner.
Spills	0	

## Quality Control Measures

The Municipality of Mississippi Mills Well System is part of OCWA's operational Eastern Regional Hub. The facilities are supported by cluster, regional and corporate resources. Operational Services are delivered by OCWA staff that live and work in the community.

OCWA operates facilities in compliance with applicable regulations. The facility has comprehensive manuals detailing operations, maintenance, instrumentation, and emergency procedures. All procedures are treated as active documents, with annual reviews.

OCWA has additional "Value Added" and operational support services that the Municipality of Mississippi Mills benefits from including:

- Access to a network of operational compliance and support experts at the regional and corporate level, as well as affiliated programs that include the following:
  - Quality & Environmental Management System, Occupational Health & Safety System and an internal compliance audit system.
  - Process Data Collection (PDC) facility operating information repository, which consolidates field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis.
  - Work Management System (WMS) tracks and reports maintenance activities, and creates predictive and preventative reports.
  - Outpost 5 wide-area SCADA system allows for process optimization and data logging, process trending, remote alarming and optimization of staff time.
- Client reporting which includes operational data, equipment inventory, financial statements, maintenance work orders, and capital status reports
- Site-Specific Contingency Plans and Standard Operating Procedures
- Use of accredited laboratories
- Additional support in response to unusual circumstances, and extra support in an emergency.
- Use of sampling schedules for external laboratory sampling

## 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 the Ward of Almonte and to White Tail Ridge subdivision located in the Ward of Ramsay 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 turbine pump. 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 vertical turbine pump. 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 an artesian well which 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. 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. 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
Sodium Hypochlorite	Disinfection	Brenntag

## Summary of Non-Compliance

### Adverse Water Quality Incidents

AWQI #	Date	Legislation	Problem	Details	Corrective Action Taken
134275	2017-07-19	O. Reg 170/03	1 Total Coliform in Distribution System	1 Total Coliform in the Distribution system at a sampling site when completing weekly sampling	Sampled upstream and downstream of the Distribution System site

### Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliances identified for the reporting period.				

### Non-Compliance Identified in a Ministry Inspection:

There was one (1) inspection report received during this reporting period.

- Report received from January 31, Feb 2 and Feb 3 2017 Inspection on April 7, 2017
  - Inspection Rating 98.71%

Legislation	requirement(s) system failed to meet	duration of the failure	Corrective Action	Status
Condition 2.4 of Schedule B of the Drinking Water Works Permit	The owner did not have evidence that all required Director Notifications were made during the inspection period	03-Feb-2017	The Directors notification for Well 5 was submitted April 5, 2017. As stated in the action the Directors Notification for Well 8 was submitted March 2, 2017. A review Drinking Water Works Permit requirements for completing Directors Notifications will be completed including the timelines for submission.	Complete
Municipal Drinking Water License	The owner did not have evidence that all required notifications to all legal owners associated with the Drinking Water System had been made during the inspection period.	03-Feb-2017	The MDWL and DWWP were reviewed with council on April 18, 2017 and acknowledged by a resolution which was provided to the inspector.	Complete

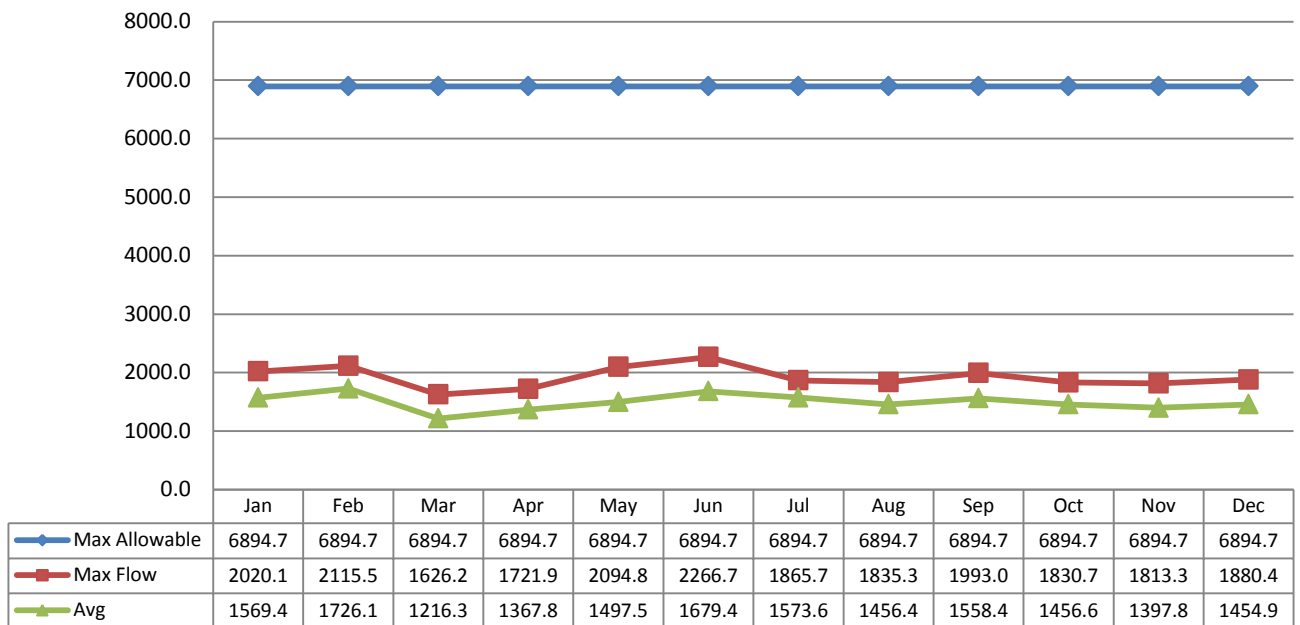
Legislation	requirement(s) system failed to meet	duration of the failure	Corrective Action	Status
Watermain Disinfection Procedure and O. Reg 128/04	The "Watermain Repair Form" did not contain the required information set out in Section 4 of the Ministry's Watermain Disinfection Procedure.	03-Feb-2017	The Watermain Repair Form was updated and approved for use.	Complete
Regulation 903	The Operating Authority is required to ensure that the screens for the air vents at each of the well pump houses are routinely inspected to ensure that the screens are in good condition.	03-Feb-2017	OCWA reviewed the screening of the air vents at Well 3 and Well 6. There will also be annual preventative maintenance work orders issued for an annual check of the screens at all the wells.	Complete
Inspection Protocol	Provide documentation that the approved alternate disinfection method was followed for the rehabilitation and repair work done on Well 8 (installation of the new well pump and disinfection method/actual disinfection results).	03-Feb-2017	Adequate documentation was provided to the Inspector. No further action was required.	Complete



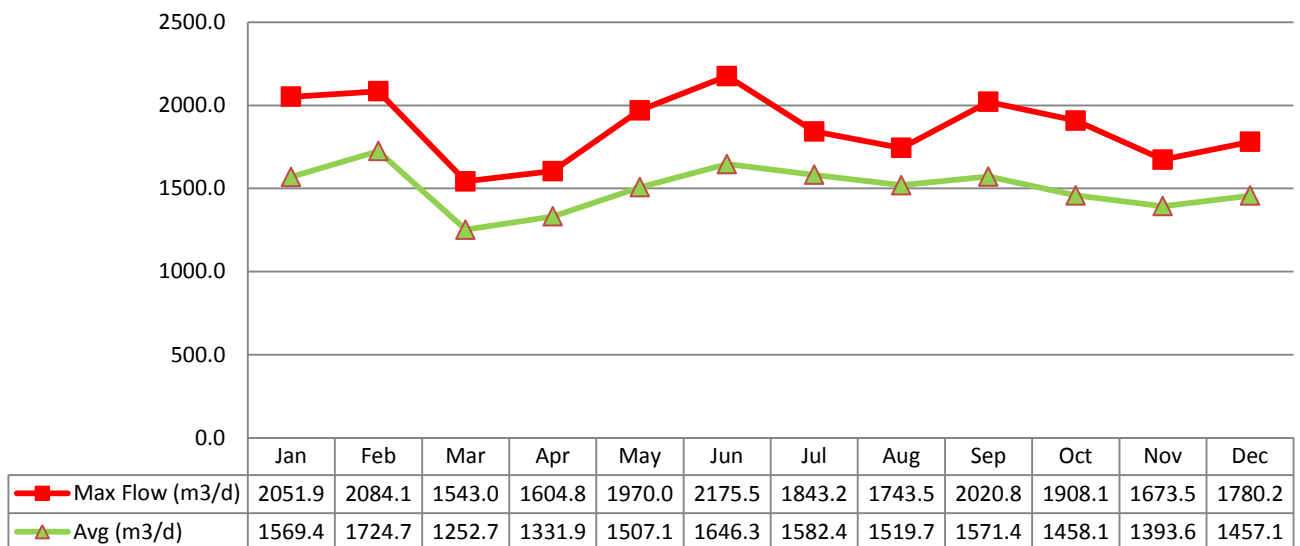
## Flows

Raw flows are regulated by the Permit to Take Water and the Treated flows are regulated by the Municipal License. Both the Municipal License and the Permit to Take Water have the same capacity restrictions.

### Total All Sources Total Flow Summary (m3/d)

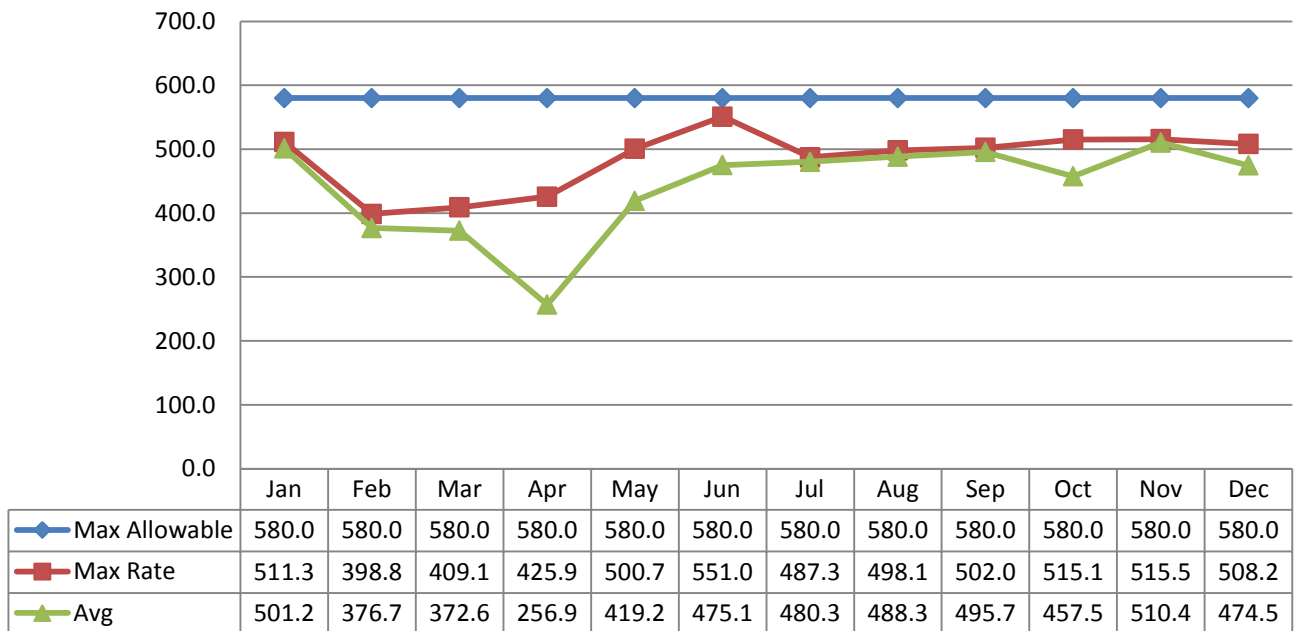


### Flow Demand (m3/d)

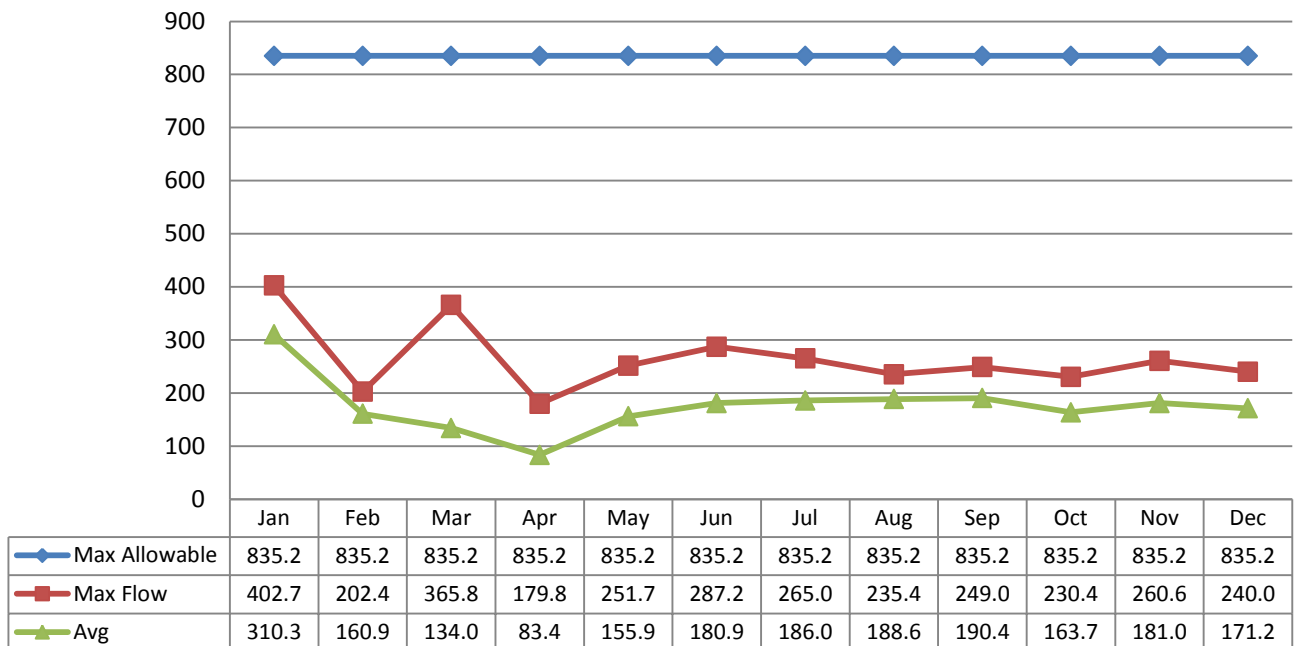


**Well 3**

*Rate of Taking (L/min)*

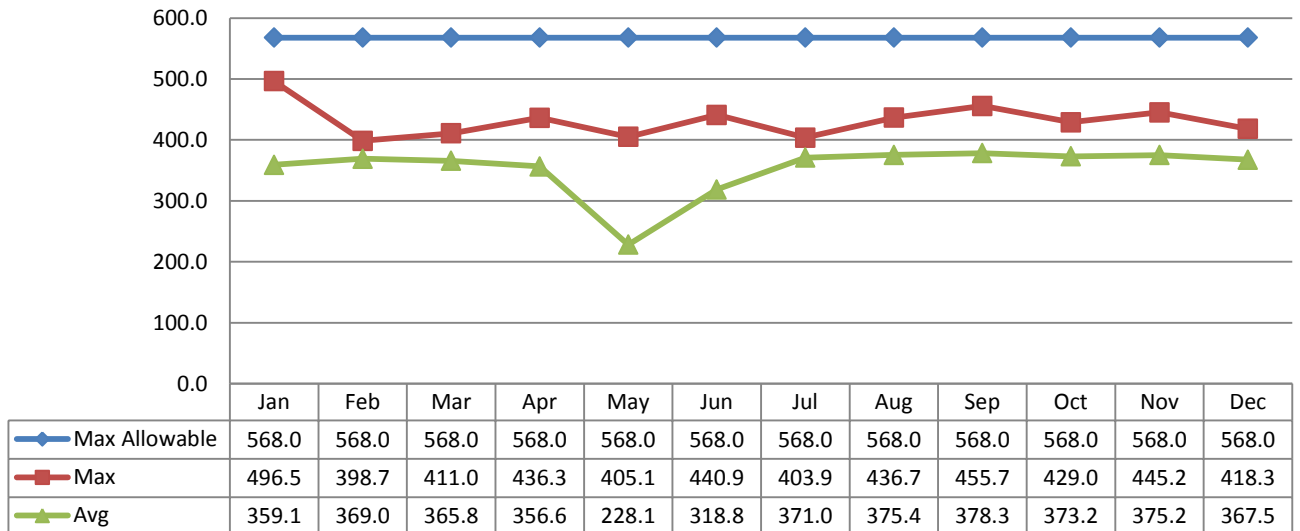


*Monthly Total Flow (m3/d)*

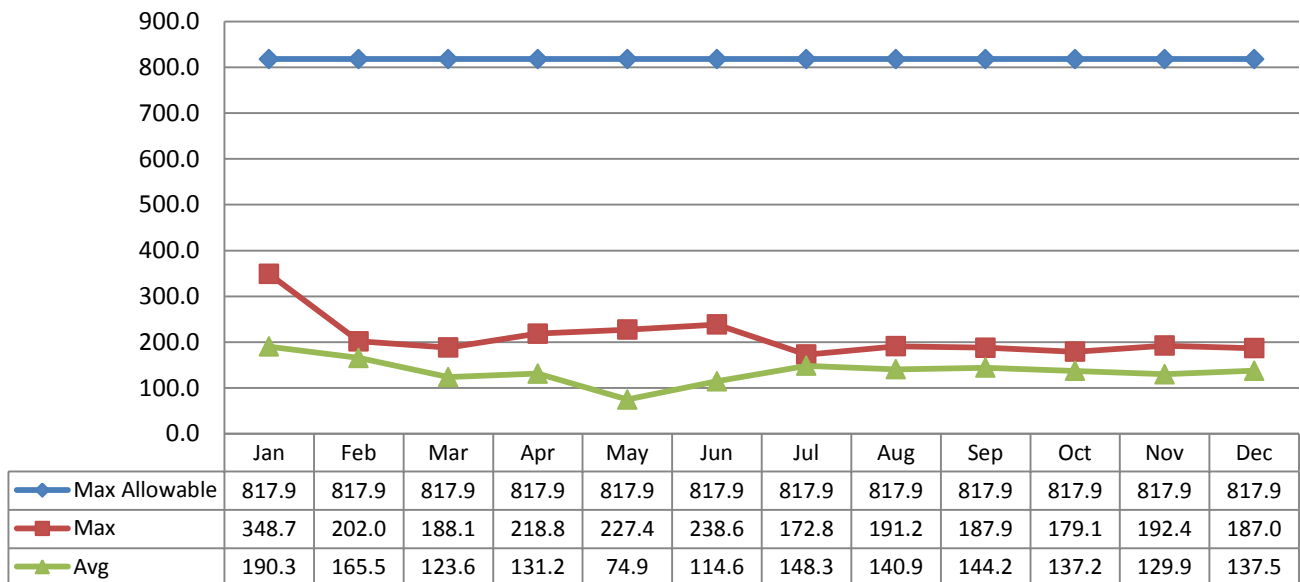


**Well 5**

*Rate of Taking (L/min)*

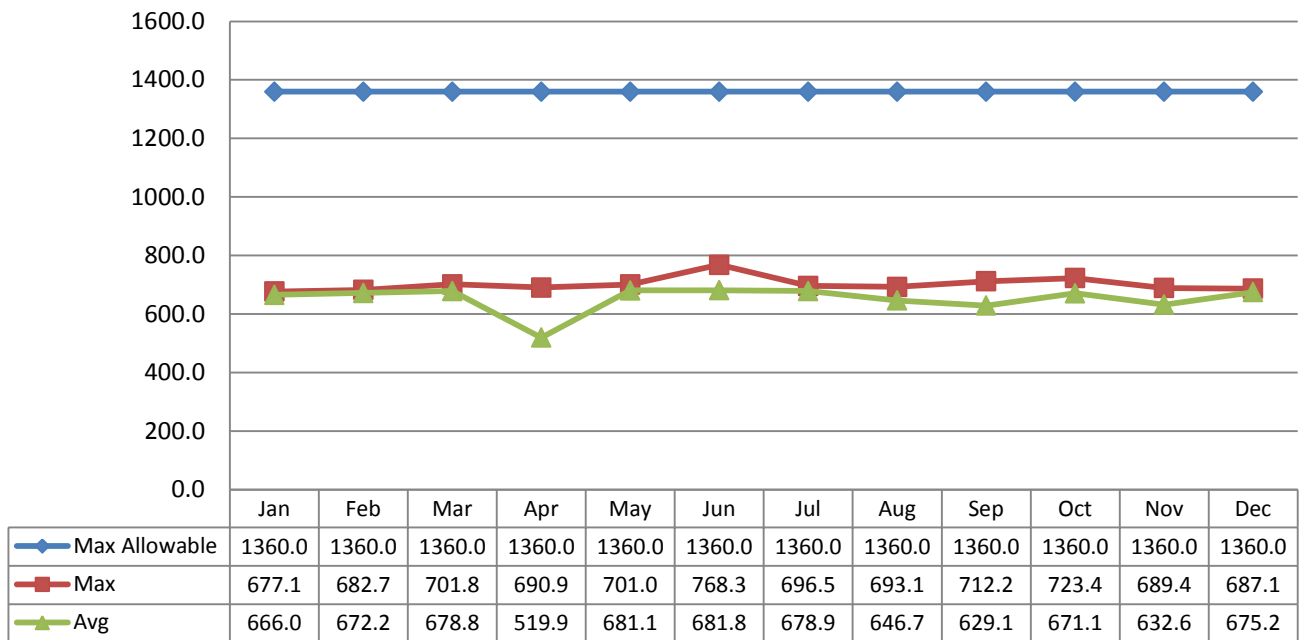


*Monthly Total Flow (m3/d)*

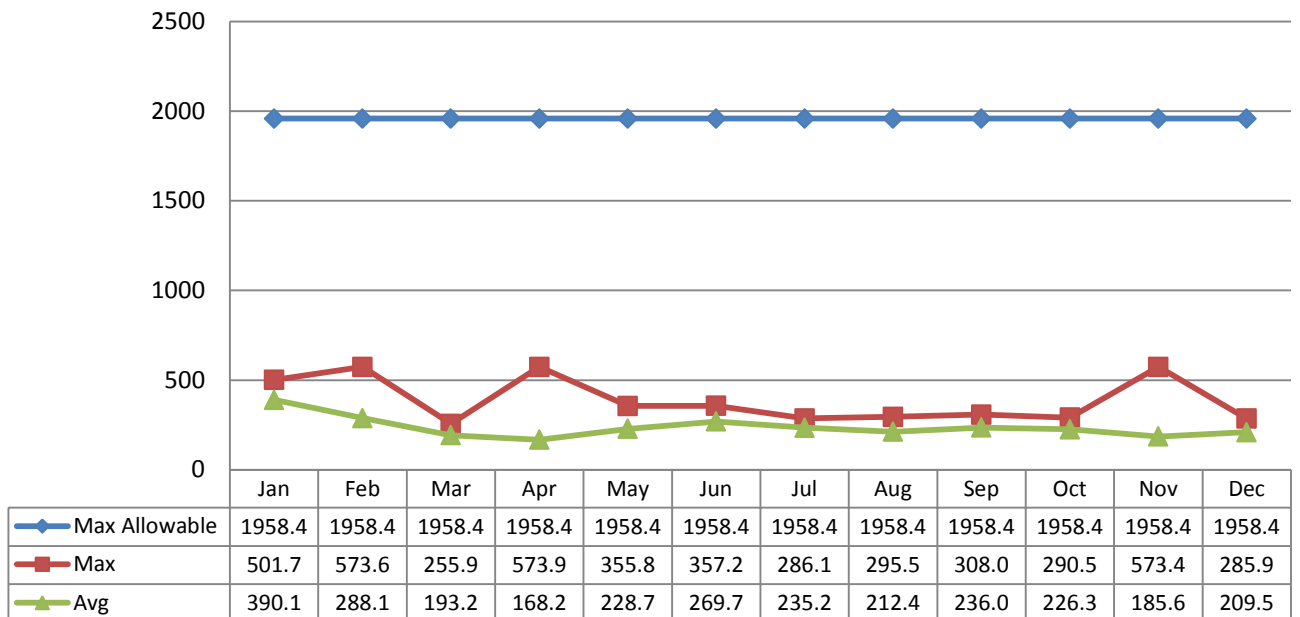


**Well 6**

*Rate of Taking (L/min)*

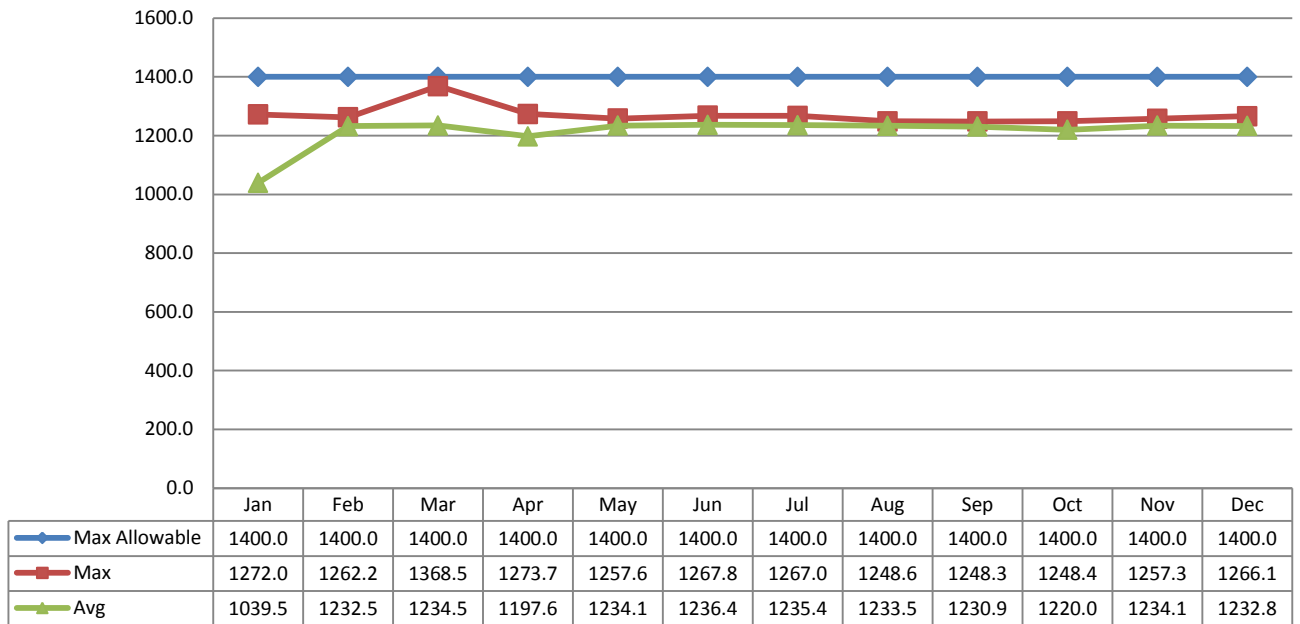


*Monthly Total Flow (m3/d)*

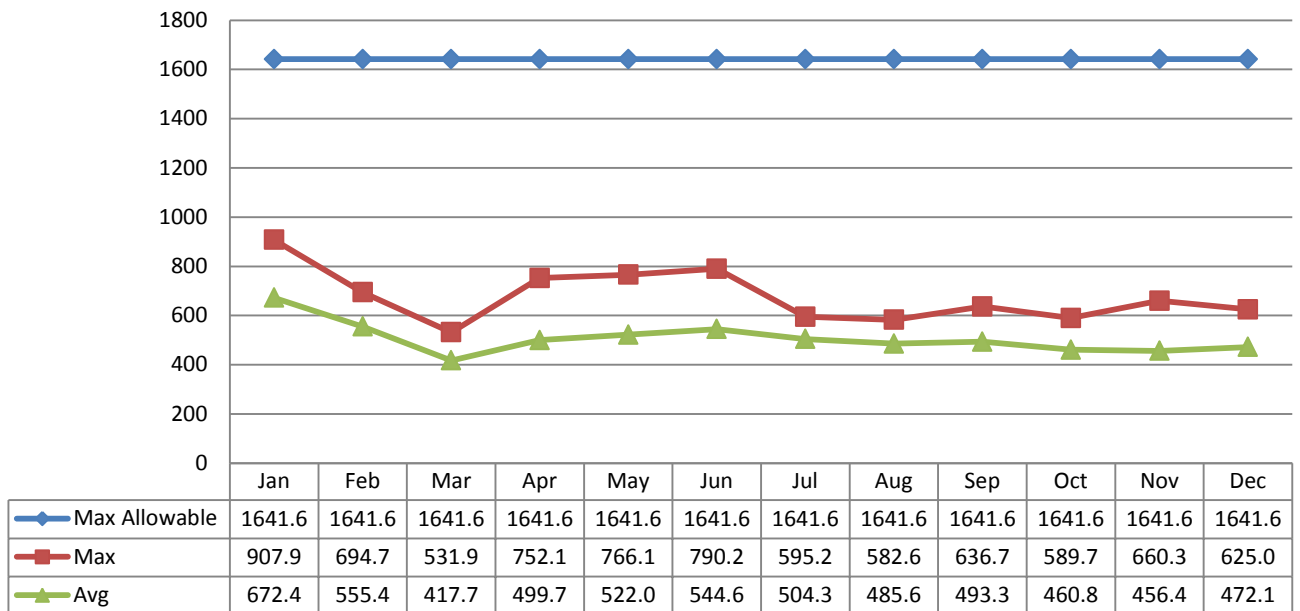


**Well 7**

*Rate of Taking (L/min)*



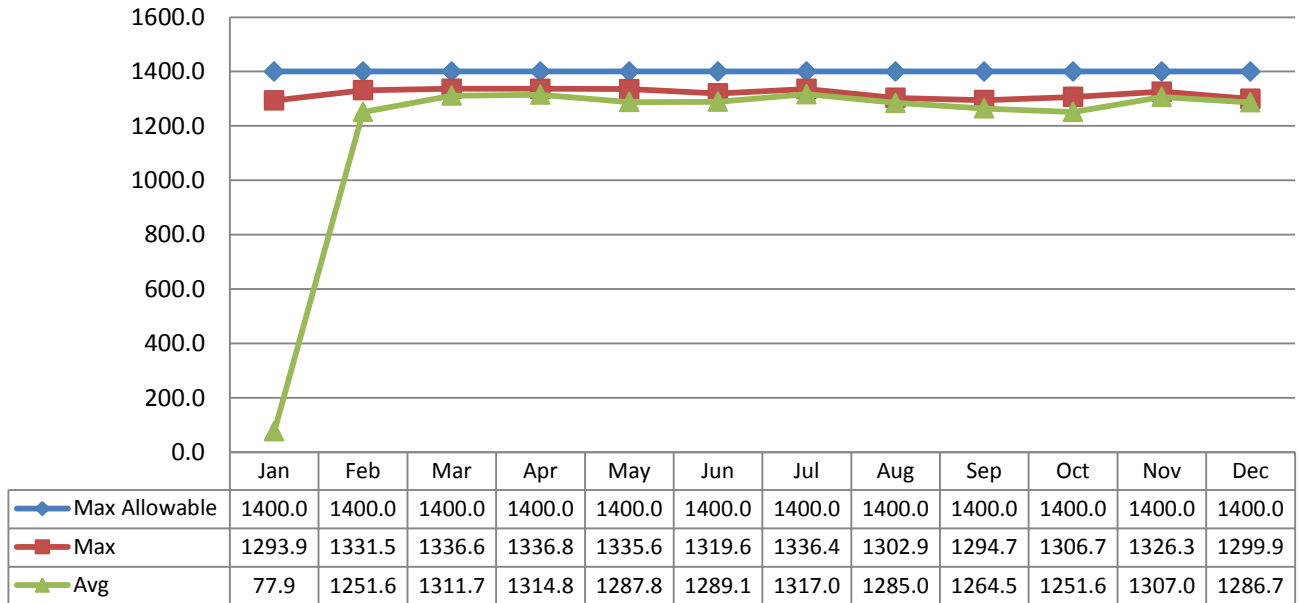
*Monthly Total Flow (m3/d)*



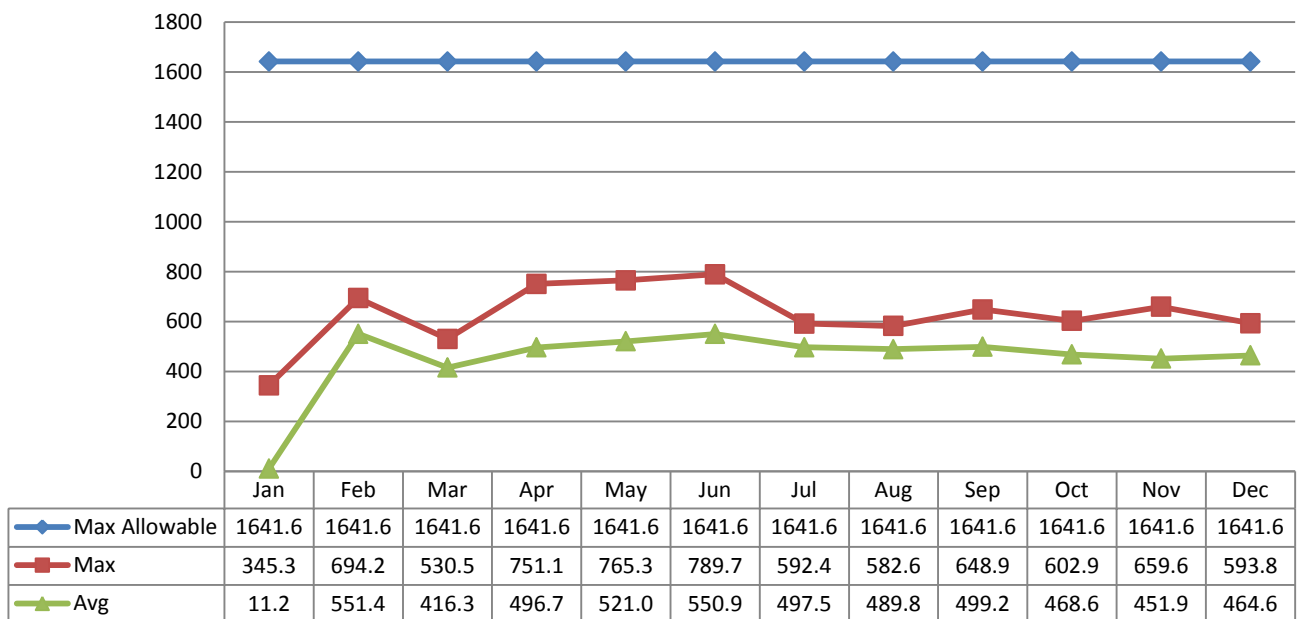
**Well 8**

This well was offline January 1-30, 2017.

*Rate of Taking (L/min)*



*Monthly Total Flow (m3/d)*



## Regulatory Sample Results Summary

### Microbiological Testing

	No. of Samples Collected	Range of E.Coli		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Results	
		Min	Max	Min	Max		Min	Max
<b>Raw Water</b>								
Well 3	52	0	0	0	1			
Well 5	52	0	0	0	1			
Well 6	52	0	0	0	3			
Well 7	52	0	0	0	0			
Well 8	51*	0	0	0	0			
<b>Treated Water</b>								
Well 3	52	0	0	0	0	52	2	14
Well 5	52	0	0	0	0	52	2	16
Well 6	52	0	0	0	0	51	2	12
Wells 7&8 combined	52	0	0	0	0	52	2	4
<b>Distribution</b>	203	0	0	0	1	202	2	8

\*Missing Well 8 sample was when well was offline

### Operational Testing

Operational Testing (170/03, Sch.7, Sch.8 or Sch.9):

Parameter	Location	Number of Grab Samples	Range (min-max)
Raw Water Turbidity (NTU)	Well 3	8760	0 - 2.17
	Well 5	8760	0 - 2.17
	Well 6	8760	0 - 2.17
	Well 7	8760	0 - 2.0
	Well 8	8760	0 - 2.0
Treated Water Free Chlorine Residual (mg/L)	Well 3	8760	0 – 2.17
	Well 5	8760	0 – 2.17
	Well 6	8760	0 – 2.17
	Well 7&8 Combined	8760	0 – 2.13
Distribution Free Chlorine Residual (mg/L)	Gemmill's Bay PS	8760	0.5 – 1.59
	Various locations throughout the distribution system	203	0.4 – 1.55

NOTE: spikes recorded by on-line instrumentation were a result of air bubbles and various maintenance/calibration activities. All values are reviewed for compliance with O.Reg 170/03.

Additional Treated Water Samples

	Units	Well 3	Well 5	Well 6	Well 7&8	ODWSOG	
						AO	OG
Alkalinity	mg/L	278 - 290	290 - 306	268 - 281	277 - 300		30 - 300
Colour	TCU	2 - 7	2 - 7	2 - 7	2 - 3	5	
Total Hardness	mg/L	366 - 413	388 - 443	418 - 433	360 - 416		80 - 100
pH	N/A	7.91– 7.99	7.98 – 8.06	7.93 – 8.03	7.9 – 8.02		6.5 – 8.5
TDS	mg/L	435 - 645	532 - 800	473 - 694	449 - 640	500	
Chloride	mg/L	49.1 – 76.6	109 - 163	54.6 - 81.6	55.0 – 72.3	250	
Conductivity	uS/cm	826 - 968	998 - 1130	893 - 980	850 - 905	Measured during TDS testing.	

ODWQS – Ontario Drinking Water Standards, Objectives and Guidelines

AO – Aesthetic Objective

OG – Operational Guideline

Summary of additional samples Well 5:

The two following tables are the sample results from additional sample collected at Well 5:  
The first table contains the results of sample collected because the area had once housed transformers. 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 2017	0.4		25.0
Chromium	ug/L	July 2017	2.0	50	
PCBs (Polychlorinated Biphenyls)	ug/L	July 2017	0.05		3.0

Treated Water Parameter	Unit of Measure	Treated Water: Well 5 Annual Average
TKN (Total Kjeldahl Nitrogen)	mg/L	0.077
Total Phosphorus	mg/L	<0.01
Phosphate (O-PO4)	mg/L	<0.01
Dissolved Reactive Phosphorus	mg/L	<0.01
NH3 + NH4 as N	mg/L	<0.01



## Inorganic Parameters

These parameters are tested annually as a requirement under 170/03. Sodium and Fluoride are required to be tested every 5 years. Nitrates are tested quarterly 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
- MDL = Minimum Detection Limit the laboratory can test.

Parameter	Sample Date	Sample Result	Exceedance
Antimony: Sb (ug/L) - TW3	09/09/2015	<MDL 0.1	No
Antimony: Sb (ug/L) - TW5	09/09/2015	<MDL 0.1	No
Antimony: Sb (ug/L) - TW6	09/09/2015	<MDL 0.1	No
Antimony: Sb (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Arsenic: As (ug/L) - TW3	09/09/2015	0.7	No
Arsenic: As (ug/L) - TW5	09/09/2015	0.9	No
Arsenic: As (ug/L) - TW6	09/09/2015	1.0	No
Arsenic: As (ug/L) - TW7&8	09/09/2015	1.8	No
Barium: Ba (ug/L) - TW3	09/09/2015	130	No
Barium: Ba (ug/L) - TW5	09/09/2015	172	No
Barium: Ba (ug/L) - TW6	09/09/2015	95	No
Barium: Ba (ug/L) - TW7&8	09/09/2015	156	No
Boron: B (ug/L) - TW3	09/09/2015	234	No
Boron: B (ug/L) - TW5	09/09/2015	49	No
Boron: B (ug/L) - TW6	09/09/2015	274	No
Boron: B (ug/L) - TW7&8	09/09/2015	177	No
Cadmium: Cd (ug/L) - TW3	09/09/2015	<MDL 0.02	No
Cadmium: Cd (ug/L) - TW5	09/09/2015	<MDL 0.02	No
Cadmium: Cd (ug/L) - TW6	09/09/2015	<MDL 0.02	No
Cadmium: Cd (ug/L) - TW7&8	09/09/2015	<MDL 0.02	No
Chromium: Cr (ug/L) - TW3	09/09/2015	<MDL 2.0	No
Chromium: Cr (ug/L) - TW5	09/09/2015	<MDL 2.0	No
Chromium: Cr (ug/L) - TW6	09/09/2015	<MDL 2.0	No
Chromium: Cr (ug/L) - TW7&8	09/09/2015	<MDL 2.0	No
Mercury: Hg (ug/L) - TW3	09/09/2015	<MDL 0.02	No
Mercury: Hg (ug/L) - TW5	09/09/2015	<MDL 0.02	No
Mercury: Hg (ug/L) - TW6	09/09/2015	<MDL 0.02	No
Mercury: Hg (ug/L) - TW7&8	09/09/2015	<MDL 0.02	No
Selenium: Se (ug/L) - TW3	09/09/2015	2	No
Selenium: Se (ug/L) - TW5	09/09/2015	2	No
Selenium: Se (ug/L) - TW6	09/09/2015	2	No
Selenium: Se (ug/L) - TW7&8	09/09/2015	4	No
Sodium: Na (mg/L) - TW3	15/07/2013	44.00	Yes*
Sodium: Na (mg/L) - TW3 - resample	22/07/2013	41.00	Yes*
Sodium: Na (mg/L) - TW5	15/07/2013	57.00	Yes*
Sodium: Na (mg/L) - TW5 - resample	22/07/2013	55.00	Yes*
Sodium: Na (mg/L) - TW7&8	15/07/2013	40.00	Yes*

Parameter	Sample Date	Sample Result	Exceedance
Sodium: Na (mg/L) - TW7&8 - resample	22/07/2013	39.00	Yes*
Sodium: Na (mg/L) - TW6	03/02/2015	42.00	Yes*
Sodium: Na (mg/L) - TW6 - resample	05/02/2015	40.00	Yes*
Uranium: U (ug/L) - TW3	09/09/2015	0.78	No
Uranium: U (ug/L) - TW5	09/09/2015	0.85	No
Uranium: U (ug/L) - TW6	09/09/2015	0.95	No
Uranium: U (ug/L) - TW7&8	09/09/2015	1.14	No
Fluoride: F (mg/L) - TW3	20/10/2015	0.3	No
Fluoride: F (mg/L) - TW5	20/10/2015	0.3	No
Fluoride: F (mg/L) - TW6	20/10/2015	0.4	No
Fluoride: F (mg/L) - TW7&8	20/10/2015	0.4	No
Nitrite (mg/L) - TW3	2017/01/10	<MDL 0.1	No
Nitrite (mg/L) - TW3	2017/04/04	<MDL 0.1	No
Nitrite (mg/L) - TW3	2017/08/08	<MDL 0.1	No
Nitrite (mg/L) - TW3	2017/10/03	<MDL 0.1	No
Nitrite (mg/L) - TW5	2017/01/10	<MDL 0.1	No
Nitrite (mg/L) - TW5	2017/04/04	0.2	No
Nitrite (mg/L) - TW5	2017/08/08	<MDL 0.1	No
Nitrite (mg/L) - TW5	2017/10/03	<MDL 0.1	No
Nitrite (mg/L) - TW78	2017/01/10	<MDL 0.1	No
Nitrite (mg/L) - TW78	2017/04/04	<MDL 0.1	No
Nitrite (mg/L) - TW78	2017/08/08	<MDL 0.1	No
Nitrite (mg/L) - TW78	2017/10/03	<MDL 0.1	No
Nitrite (mg/L) - TW6	2017/01/10	<MDL 0.1	No
Nitrite (mg/L) - TW6	2017/04/04	<MDL 0.1	No
Nitrite (mg/L) - TW6	2017/08/08	<MDL 0.1	No
Nitrite (mg/L) - TW6	2017/10/03	<MDL 0.1	No
Nitrate (mg/L) - TW3	2017/01/10	0.3	No
Nitrate (mg/L) - TW3	2017/04/04	0.2	No
Nitrate (mg/L) - TW3	2017/08/08	0.2	No
Nitrate (mg/L) - TW3	2017/10/03	0.4	No
Nitrate (mg/L) - TW5	2017/01/10	0.7	No
Nitrate (mg/L) - TW5	2017/04/04	0.5	No
Nitrate (mg/L) - TW5	2017/08/08	0.3	No
Nitrate (mg/L) - TW5	2017/10/03	0.2	No
Nitrate (mg/L) - TW78	2017/01/10	1.5	No
Nitrate (mg/L) - TW78	2017/04/04	2.6	No
Nitrate (mg/L) - TW78	2017/08/08	2.1	No
Nitrate (mg/L) - TW78	2017/10/03	0.9	No
Nitrate (mg/L) - TW6	2017/01/10	1.5	No
Nitrate (mg/L) - TW6	2017/04/04	0.5	No
Nitrate (mg/L) - TW6	2017/08/08	0.4	No

Parameter	Sample Date	Sample Result	Exceedance
Nitrate (mg/L) - TW6	2017/10/03	0.5	No

\*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

This facility is sampling under the exemption requirements of O.Reg 170/03 sampling program.

Location Type	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
		MIN	MAX		
Distribution System - Lead Results (ug/L)	2	0.28	1.15	10	0
Distribution System - Alkalinity (mg/L)	7	279	313		
Distribution System - pH Lab	5	7.96	8.03		

### Organic Parameters

These parameters are tested annually as a requirement 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.

MDL – Minimum Detection Limit

Parameter	Sample Date	Result Value	Exceedance
Alachlor (ug/L) - TW3	09/09/2015	<MDL 0.3	No
Alachlor (ug/L) - TW5	09/09/2015	<MDL 0.3	No
Alachlor (ug/L) - TW6	09/09/2015	<MDL 0.3	No
Alachlor (ug/L) - TW7&8	09/09/2015	<MDL 0.3	No
Aldicarb (ug/L) - TW3	09/09/2015	<MDL 3.0	No
Aldicarb (ug/L) - TW5	09/09/2015	<MDL 3.0	No
Aldicarb (ug/L) - TW6	09/09/2015	<MDL 3.0	No
Aldicarb (ug/L) - TW7&8	09/09/2015	<MDL 3.0	No
Aldrin + Dieldrin (ug/L) - TW3	09/09/2015	<MDL 0.02	No
Aldrin + Dieldrin (ug/L) - TW5	09/09/2015	<MDL 0.02	No
Aldrin + Dieldrin (ug/L) - TW6	09/09/2015	<MDL 0.02	No
Aldrin + Dieldrin (ug/L) - TW7&8	09/09/2015	<MDL 0.02	No
Atrazine + N-dealkylated metabolites (ug/L) - TW3	09/09/2015	< 0.5	No
Atrazine + N-dealkylated metabolites (ug/L) - TW5	09/09/2015	< 0.5	No
Atrazine + N-dealkylated metabolites (ug/L) - TW6	09/09/2015	< 0.5	No
Atrazine + N-dealkylated metabolites (ug/L) - TW7&8	09/09/2015	< 0.5	No
Azinphos-methyl (ug/L) - TW3	09/09/2015	<MDL 1.0	No
Azinphos-methyl (ug/L) - TW5	09/09/2015	<MDL 1.0	No
Azinphos-methyl (ug/L) - TW6	09/09/2015	<MDL 1.0	No
Azinphos-methyl (ug/L) - TW7&8	09/09/2015	<MDL 1.0	No
Bendiocarb (ug/L) - TW3	09/09/2015	<MDL 3.0	No
Bendiocarb (ug/L) - TW5	09/09/2015	<MDL 3.0	No
Bendiocarb (ug/L) - TW6	09/09/2015	<MDL 3.0	No
Bendiocarb (ug/L) - TW7&8	09/09/2015	<MDL 3.0	No

Parameter	Sample Date	Result Value	Exceedance
Benzene (ug/L) - TW3	09/09/2015	<MDL 0.5	No
Benzene (ug/L) - TW5	09/09/2015	<MDL 0.5	No
Benzene (ug/L) - TW6	09/09/2015	<MDL 0.5	No
Benzene (ug/L) - TW7&8	09/09/2015	<MDL 0.5	No
Benzo(a)pyrene (ug/L) - TW3	09/09/2015	<MDL 0.005	No
Benzo(a)pyrene (ug/L) - TW5	09/09/2015	<MDL 0.005	No
Benzo(a)pyrene (ug/L) - TW6	09/09/2015	<MDL 0.005	No
Benzo(a)pyrene (ug/L) - TW7&8	09/09/2015	<MDL 0.005	No
Bromoxynil (ug/L) - TW3	09/09/2015	<MDL 0.3	No
Bromoxynil (ug/L) - TW5	09/09/2015	<MDL 0.3	No
Bromoxynil (ug/L) - TW6	09/09/2015	<MDL 0.3	No
Bromoxynil (ug/L) - TW7&8	09/09/2015	<MDL 0.3	No
Carbaryl (ug/L) - TW3	09/09/2015	<MDL 3.0	No
Carbaryl (ug/L) - TW5	09/09/2015	<MDL 3.0	No
Carbaryl (ug/L) - TW6	09/09/2015	<MDL 3.0	No
Carbaryl (ug/L) - TW7&8	09/09/2015	<MDL 3.0	No
Carbofuran (ug/L) - TW3	09/09/2015	<MDL 1.0	No
Carbofuran (ug/L) - TW5	09/09/2015	<MDL 1.0	No
Carbofuran (ug/L) - TW6	09/09/2015	<MDL 1.0	No
Carbofuran (ug/L) - TW7&8	09/09/2015	<MDL 1.0	No
Carbon Tetrachloride (ug/L) - TW3	09/09/2015	<MDL 0.2	No
Carbon Tetrachloride (ug/L) - TW5	09/09/2015	<MDL 0.2	No
Carbon Tetrachloride (ug/L) - TW6	09/09/2015	<MDL 0.2	No
Carbon Tetrachloride (ug/L) - TW7&8	09/09/2015	<MDL 0.2	No
Chlordane:Total (ug/L) - TW3	09/09/2015	<MDL 0.04	No
Chlordane:Total (ug/L) - TW5	09/09/2015	<MDL 0.04	No
Chlordane:Total (ug/L) - TW6	09/09/2015	<MDL 0.04	No
Chlordane:Total (ug/L) - TW7&8	09/09/2015	<MDL 0.04	No
Chlorpyrifos (ug/L) - TW3	09/09/2015	<MDL 0.5	No
Chlorpyrifos (ug/L) - TW5	09/09/2015	<MDL 0.5	No
Chlorpyrifos (ug/L) - TW6	09/09/2015	<MDL 0.5	No
Chlorpyrifos (ug/L) - TW7&8	09/09/2015	<MDL 0.5	No
Cyanazine (ug/L) - TW3	09/09/2015	<MDL 0.5	No
Cyanazine (ug/L) - TW5	09/09/2015	<MDL 0.5	No
Cyanazine (ug/L) - TW6	09/09/2015	<MDL 0.5	No
Cyanazine (ug/L) - TW7&8	09/09/2015	<MDL 0.5	No
Diazinon (ug/L) - TW3	09/09/2015	<MDL 1.0	No
Diazinon (ug/L) - TW5	09/09/2015	<MDL 1.0	No
Diazinon (ug/L) - TW6	09/09/2015	<MDL 1.0	No
Diazinon (ug/L) - TW7&8	09/09/2015	<MDL 1.0	No
Dicamba (ug/L) - TW3	09/09/2015	<MDL 5.0	No
Dicamba (ug/L) - TW5	09/09/2015	<MDL 5.0	No
Dicamba (ug/L) - TW6	09/09/2015	<MDL 5.0	No
Dicamba (ug/L) - TW7&8	09/09/2015	<MDL 5.0	No
1,2-Dichlorobenzene (ug/L) - TW3	09/09/2015	<MDL 0.1	No

Parameter	Sample Date	Result Value	Exceedance
1,2-Dichlorobenzene (ug/L) - TW5	09/09/2015	<MDL 0.1	No
1,2-Dichlorobenzene (ug/L) - TW6	09/09/2015	<MDL 0.1	No
1,2-Dichlorobenzene (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
1,4-Dichlorobenzene (ug/L) - TW3	09/09/2015	<MDL 0.2	No
1,4-Dichlorobenzene (ug/L) - TW5	09/09/2015	<MDL 0.2	No
1,4-Dichlorobenzene (ug/L) - TW6	09/09/2015	<MDL 0.2	No
1,4-Dichlorobenzene (ug/L) - TW7&8	09/09/2015	<MDL 0.2	No
(DDT) + metabolites (ug/L) - TW3	09/09/2015	<MDL 0.01	No
(DDT) + metabolites (ug/L) - TW5	09/09/2015	<MDL 0.01	No
(DDT) + metabolites (ug/L) - TW6	09/09/2015	<MDL 0.01	No
(DDT) + metabolites (ug/L) - TW7&8	09/09/2015	<MDL 0.01	No
1,2-Dichloroethane (ug/L) - TW3	09/09/2015	<MDL 0.1	No
1,2-Dichloroethane (ug/L) - TW5	09/09/2015	<MDL 0.1	No
1,2-Dichloroethane (ug/L) - TW6	09/09/2015	<MDL 0.1	No
1,2-Dichloroethane (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
1,1-Dichloroethylene (ug/L) - TW3	09/09/2015	<MDL 0.1	No
1,1-Dichloroethylene (ug/L) - TW5	09/09/2015	<MDL 0.1	No
1,1-Dichloroethylene (ug/L) - TW6	09/09/2015	<MDL 0.1	No
1,1-Dichloroethylene (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Dichloromethane (ug/L) - TW3	09/09/2015	<MDL 0.3	No
Dichloromethane (ug/L) - TW5	09/09/2015	<MDL 0.3	No
Dichloromethane (ug/L) - TW6	09/09/2015	<MDL 0.3	No
Dichloromethane (ug/L) - TW7&8	09/09/2015	<MDL 0.3	No
2,4-Dichlorophenol (ug/L) - TW3	09/09/2015	<MDL 0.1	No
2,4-Dichlorophenol (ug/L) - TW5	09/09/2015	<MDL 0.1	No
2,4-Dichlorophenol (ug/L) - TW6	09/09/2015	<MDL 0.1	No
2,4-Dichlorophenol (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW3	09/09/2015	<MDL 5.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW5	09/09/2015	<MDL 5.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW6	09/09/2015	<MDL 5.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW7&8	09/09/2015	<MDL 5.0	No
Diclofop-methyl (ug/L) - TW3	09/09/2015	<MDL 0.5	No
Diclofop-methyl (ug/L) - TW5	09/09/2015	<MDL 0.5	No
Diclofop-methyl (ug/L) - TW6	09/09/2015	<MDL 0.5	No
Diclofop-methyl (ug/L) - TW7&8	09/09/2015	<MDL 0.5	No
Dimethoate (ug/L) - TW3	09/09/2015	<MDL 1.0	No
Dimethoate (ug/L) - TW5	09/09/2015	<MDL 1.0	No
Dimethoate (ug/L) - TW6	09/09/2015	<MDL 1.0	No
Dimethoate (ug/L) - TW7&8	09/09/2015	<MDL 1.0	No
Dinoseb (ug/L) - TW3	09/09/2015	<MDL 0.5	No
Dinoseb (ug/L) - TW5	09/09/2015	<MDL 0.5	No
Dinoseb (ug/L) - TW6	09/09/2015	<MDL 0.5	No
Dinoseb (ug/L) - TW7&8	09/09/2015	<MDL 0.5	No
Diquat (ug/L) - TW3	09/09/2015	<MDL 5.0	No

Parameter	Sample Date	Result Value	Exceedance
Diquat (ug/L) - TW5	09/09/2015	<MDL 5.0	No
Diquat (ug/L) - TW6	09/09/2015	<MDL 5.0	No
Diquat (ug/L) - TW7&8	09/09/2015	<MDL 5.0	No
Diuron (ug/L) - TW3	09/09/2015	<MDL 5.0	No
Diuron (ug/L) - TW5	09/09/2015	<MDL 5.0	No
Diuron (ug/L) - TW6	09/09/2015	<MDL 5.0	No
Diuron (ug/L) - TW7&8	09/09/2015	<MDL 5.0	No
Glyphosate (ug/L) - TW3	09/09/2015	<MDL 25.0	No
Glyphosate (ug/L) - TW5	09/09/2015	<MDL 25.0	No
Glyphosate (ug/L) - TW6	09/09/2015	<MDL 25.0	No
Glyphosate (ug/L) - TW7&8	09/09/2015	<MDL 25.0	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW3	09/09/2015	<MDL 0.1	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW5	09/09/2015	<MDL 0.1	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW6	09/09/2015	<MDL 0.1	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Lindane: (ug/L) - TW3	09/09/2015	<MDL 0.1	No
Lindane: (ug/L) - TW5	09/09/2015	<MDL 0.1	No
Lindane: (ug/L) - TW6	09/09/2015	<MDL 0.1	No
Lindane: (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Malathion (ug/L) - TW3	09/09/2015	<MDL 5.0	No
Malathion (ug/L) - TW5	09/09/2015	<MDL 5.0	No
Malathion (ug/L) - TW6	09/09/2015	<MDL 5.0	No
Malathion (ug/L) - TW7&8	09/09/2015	<MDL 5.0	No
Methoxychlor (ug/L) - TW3	09/09/2015	<MDL 0.1	No
Methoxychlor (ug/L) - TW5	09/09/2015	<MDL 0.1	No
Methoxychlor (ug/L) - TW6	09/09/2015	<MDL 0.1	No
Methoxychlor (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Metolachlor (ug/L) - TW3	09/09/2015	<MDL 3.0	No
Metolachlor (ug/L) - TW5	09/09/2015	<MDL 3.0	No
Metolachlor (ug/L) - TW6	09/09/2015	<MDL 3.0	No
Metolachlor (ug/L) - TW7&8	09/09/2015	<MDL 3.0	No
Metribuzin (ug/L) - TW3	09/09/2015	<MDL 3.0	No
Metribuzin (ug/L) - TW5	09/09/2015	<MDL 3.0	No
Metribuzin (ug/L) - TW6	09/09/2015	<MDL 3.0	No
Metribuzin (ug/L) - TW7&8	09/09/2015	<MDL 3.0	No
Monochlorobenzene (ug/L) - TW3	09/09/2015	< 0.2	No
Monochlorobenzene (ug/L) - TW5	09/09/2015	< 0.2	No
Monochlorobenzene (ug/L) - TW6	09/09/2015	< 0.2	No
Monochlorobenzene (ug/L) - TW7&8	09/09/2015	< 0.2	No
Paraquat (ug/L) - TW3	09/09/2015	<MDL 1.0	No
Paraquat (ug/L) - TW5	09/09/2015	<MDL 1.0	No
Paraquat (ug/L) - TW6	09/09/2015	<MDL 1.0	No
Paraquat (ug/L) - TW7&8	09/09/2015	<MDL 1.0	No
Parathion (ug/L) - TW3	09/09/2015	<MDL 3.0	No
Parathion (ug/L) - TW5	09/09/2015	<MDL 3.0	No

Parameter	Sample Date	Result Value	Exceedance
Parathion (ug/L) - TW6	09/09/2015	<MDL 3.0	No
Parathion (ug/L) - TW7&8	09/09/2015	<MDL 3.0	No
Pentachlorophenol (ug/L) - TW3	09/09/2015	<MDL 0.1	No
Pentachlorophenol (ug/L) - TW5	09/09/2015	<MDL 0.1	No
Pentachlorophenol (ug/L) - TW6	09/09/2015	<MDL 0.1	No
Pentachlorophenol (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Phorate (ug/L) - TW3	09/09/2015	<MDL 0.3	No
Phorate (ug/L) - TW5	09/09/2015	<MDL 0.3	No
Phorate (ug/L) - TW6	09/09/2015	<MDL 0.3	No
Phorate (ug/L) - TW7&8	09/09/2015	<MDL 0.3	No
Picloram (ug/L) - TW3	09/09/2015	<MDL 5.0	No
Picloram (ug/L) - TW5	09/09/2015	<MDL 5.0	No
Picloram (ug/L) - TW6	09/09/2015	<MDL 5.0	No
Picloram (ug/L) - TW7&8	09/09/2015	<MDL 5.0	No
Polychlorinated Bichenysl(PCB) (ug/L) - TW3	09/09/2015	<MDL 0.05	No
Polychlorinated Bichenysl(PCB) (ug/L) - TW5	09/09/2015	<MDL 0.05	No
Polychlorinated Bichenysl(PCB) (ug/L) - TW6	09/09/2015	<MDL 0.05	No
Polychlorinated Bichenysl(PCB) (ug/L) - TW7&8	09/09/2015	<MDL 0.05	No
Prometryne (ug/L) - TW3	09/09/2015	<MDL 0.1	No
Prometryne (ug/L) - TW5	09/09/2015	<MDL 0.1	No
Prometryne (ug/L) - TW6	09/09/2015	<MDL 0.1	No
Prometryne (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Simazine (ug/L) - TW3	09/09/2015	<MDL 0.5	No
Simazine (ug/L) - TW5	09/09/2015	<MDL 0.5	No
Simazine (ug/L) - TW6	09/09/2015	<MDL 0.5	No
Simazine (ug/L) - TW7&8	09/09/2015	<MDL 0.5	No
Temephos (ug/L) - TW3	09/09/2015	<MDL 10.0	No
Temephos (ug/L) - TW5	09/09/2015	<MDL 10.0	No
Temephos (ug/L) - TW6	09/09/2015	<MDL 10.0	No
Temephos (ug/L) - TW7&8	09/09/2015	<MDL 10.0	No
Terbufos (ug/L) - TW3	09/09/2015	<MDL 0.3	No
Terbufos (ug/L) - TW5	09/09/2015	<MDL 0.3	No
Terbufos (ug/L) - TW6	09/09/2015	<MDL 0.3	No
Terbufos (ug/L) - TW7&8	09/09/2015	<MDL 0.3	No
Tetrachloroethylene (ug/L) - TW3	09/09/2015	<MDL 0.2	No
Tetrachloroethylene (ug/L) - TW5	09/09/2015	<MDL 0.2	No
Tetrachloroethylene (ug/L) - TW6	09/09/2015	<MDL 0.2	No
Tetrachloroethylene (ug/L) - TW7&8	09/09/2015	<MDL 0.2	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW3	09/09/2015	<MDL 0.1	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW5	09/09/2015	<MDL 0.1	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW6	09/09/2015	<MDL 0.1	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
Triallate (ug/L) - TW3	09/09/2015	<MDL 10.0	No
Triallate (ug/L) - TW5	09/09/2015	<MDL 10.0	No
Triallate (ug/L) - TW6	09/09/2015	<MDL 10.0	No

Parameter	Sample Date	Result Value	Exceedance
Triallate (ug/L) - TW7&8	09/09/2015	<MDL 10.0	No
Trichloroethylene (ug/L) - TW3	09/09/2015	<MDL 0.1	No
Trichloroethylene (ug/L) - TW5	09/09/2015	<MDL 0.1	No
Trichloroethylene (ug/L) - TW6	09/09/2015	<MDL 0.1	No
Trichloroethylene (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
2,4,6-Trichlorophenol (ug/L) - TW3	09/09/2015	<MDL 0.1	No
2,4,6-Trichlorophenol (ug/L) - TW5	09/09/2015	<MDL 0.1	No
2,4,6-Trichlorophenol (ug/L) - TW6	09/09/2015	<MDL 0.1	No
2,4,6-Trichlorophenol (ug/L) - TW7&8	09/09/2015	<MDL 0.1	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW3	09/09/2015	<MDL 10.0	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW5	09/09/2015	<MDL 10.0	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW6	09/09/2015	<MDL 10.0	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW7&8	09/09/2015	<MDL 10.0	No
Trifluralin (ug/L) - TW3	09/09/2015	<MDL 0.5	No
Trifluralin (ug/L) - TW5	09/09/2015	<MDL 0.5	No
Trifluralin (ug/L) - TW6	09/09/2015	<MDL 0.5	No
Trifluralin (ug/L) - TW7&8	09/09/2015	<MDL 0.5	No
Vinyl Chloride (ug/L) - TW3	09/09/2015	<MDL 0.2	No
Vinyl Chloride (ug/L) - TW5	09/09/2015	<MDL 0.2	No
Vinyl Chloride (ug/L) - TW6	09/09/2015	<MDL 0.2	No
Vinyl Chloride (ug/L) - TW7&8	09/09/2015	<MDL 0.2	No
<b>Distribution Water</b>			
Trihalomethane: Total (ug/L) Annual Average - DW	2017	9.725	No

## Maintenance Summary

OCWA uses a risk-based preventative maintenance framework that ensures assets are maintained to manufacturer's and/or industry standards. Maintenance is completed using various tools and operational supports. The Mississippi Cluster has specialized certified staff such as Millwrights, Electricians and Instrumentation Specialists to name a few.

OCWA uses a Workplace Maintenance System (WMS). WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis. The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out. Emergency and capital repair maintenance is completed and added to the system.

Capital projects are listed and provided to the Municipality of Mississippi Mills in the form of a "Capital Forecast". This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement.



### Facility Maintenance Highlights

Work Order #	Details
472183	Fabricate step
472825	Alarm keypad replacement
255234	Plumbing Supplies
288135	Annual Tower Inspection
288141	SCADA CCP's
289246	New Conduit For Wells 03, 05, 06
344896	Pocket Colorimeter II
375718	Monitor Well 6 during water main repair
377880	DWQMS External Audit Fees 2017
438031	Water Tower Level Loss
541711	Almonte Daycare Lead Sampling
409054	Portable Generator Repairs
243786	Chlorine Pump Parts & Panel Parts
243039	Well 8 Pump and Rehabilitation

### Distribution Highlights

#### Maintenance and Operations:

- Water main flushing program completed;
- Valve turning program completed;
- Several repairs – valves, hydrants, services and curb stops;
- Initiated detailed design work for future water main replacements on Victoria Street, King Street and Mercer/Marshall Streets.
- Water and Wastewater Master Plan Update completed;
- New water mains commissioned on Mill Run Phase 3 Subdivision, Riverfront Phase 3 Subdivision, Church Street, and Union Street North.
- Planning Initiatives:
  - Schedule 'B' Class EA - Water Storage;
  - Watermain on State Street in 2018;
  - Radio Frequency Meter Upgrades;
  - Engineering for future water and sewer works on Victoria Street, Mercer/Marshall Street, and King Street continues in 2018;
  - Annual Infiltration and Inflow Program;
  - Well Site Mechanical/Electrical/Instrumentation upgrades in 2018;
  -

## **Community Complaints**

Community complaints are responded to by the Municipality of Mississippi Mills staff.

## **QEMS**



The Ontario Clean Water Agency has received Full scope accreditation. An on-site audit was conducted by a third party auditor and there were no non-conformances identified. An Internal Audit and Management Review were also completed. Minutes from the 2017 Management Review were provided to the Municipality.

## **Water Taking and Transfer Data**

Data was submitted electronically on February 22, 2017 under permit #0568-9LUL2N and #8175-AQPHA8. The confirmation and a copy of the submitted data are attached in Appendix A.

# Appendix A

## WTRS Data and Submission Confirmation



Ministry of the Environment and Climate Change

| [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-AQPH48  
Permit Holder: THE CORPORATION OF THE TOWN OF MISSISSIPPI MILLS.  
Received on: Feb 22, 2018 10:16 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.

TOWN OF MISSISSIPPI MILLS | 2018/02/22  
version: v4.5.0.8 (build#: 18)  
Last modified: 2018/01/11

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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: 0568-9LUL2N  
Permit Holder: THE CORPORATION OF THE TOWN OF MISSISSIPPI MILLS.  
Received on: Feb 22, 2018 10:18 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.

TOWN OF MISSISSIPPI MILLS | 2018/02/22  
version: v4.5.0.8 (build#: 18)  
Last modified: 2018/01/11

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