

CITY OF HAMILTON
WOODWARD DRINKING WATER SUBSYSTEM (DWSS)
WATER QUALITY ANNUAL REPORT

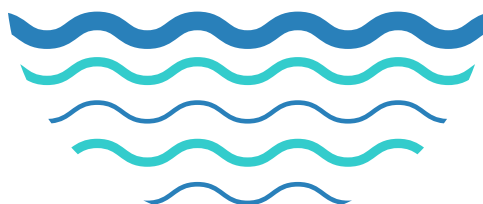
2018



Ontario Regulation 170/03 Section 11

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| Drinking Water System Number | Drinking Water System Name | Drinking Water System Owner | Drinking Water System Category | Period Being Reported |
|------------------------------|------------------------------------------------------|-----------------------------|--------------------------------|--------------------------------------|
| 220003118 | Woodward Subsystem of Hamilton Drinking Water System | City of Hamilton | Large Municipal Residential | January 1, 2018 to December 31, 2018 |

Complete if your Category is "Large Municipal Residential" or "Small Municipal Residential"

Does your Drinking Water System serve more than 10,000 people? ☒ YES ☐ NO

Is your annual report available to the public at no charge on a website on the Internet? www.hamilton.ca/waterquality ☒ YES ☐ NO

Location where Summary Report required under Ontario Regulation 170/03 Schedule 22 will be available for inspection: 700 Woodward Administration Building, Compliance Support Group

Complete for all other Categories

Number of Designated Facilities served: N/A

Did you provide a copy of your annual report to all Designated Facilities you serve? N/A

Number of Interested Authorities you report to: N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? N/A





List all Drinking Water Systems (if any), which receive all of their drinking water from your system:

| Drinking Water System Name | Drinking Water System Number |
|-------------------------------------------------|------------------------------|
| Caledonia/Cayuga/York Water Distribution System | 260004566 |
| North Aldershot Water Distribution System | 260086762 |
| Snake Road Water Distribution System | 260086775 |
| Bridgeview Community Water Distribution System | 260068419 |



Did you provide a copy of your annual report to all Drinking Water System owners that are connected to you and to whom you provide all of its drinking water?

☒ YES NO NOT APPLICABLE



Indicate how you notified system users that your annual report is available, and is free of charge:

System users are notified through the local newspaper that the annual report is available online free of charge at www.hamilton.ca/waterquality.

HAMILTON DWS, WOODWARD SUBSYSTEM



The Woodward Treatment Facility supplies a significant portion of Hamilton's population with drinking water including Stoney Creek, Dundas, Ancaster, Waterdown and Glanbrook. The population served is estimated at 535,000. In addition, the treatment system provides treated water to parts of Haldimand County (Caledonia, York and Cayuga) and parts of Halton Region.



The Woodward Treatment Facility has three raw water intake pipes (1.22m, 1.52m and 2.44m diameter) of which two intake pipes (2.44m and 1.52m diameter) are currently in use. The raw water is drawn from Lake Ontario at distances of 640m, 915m and 945m to begin the treatment process.

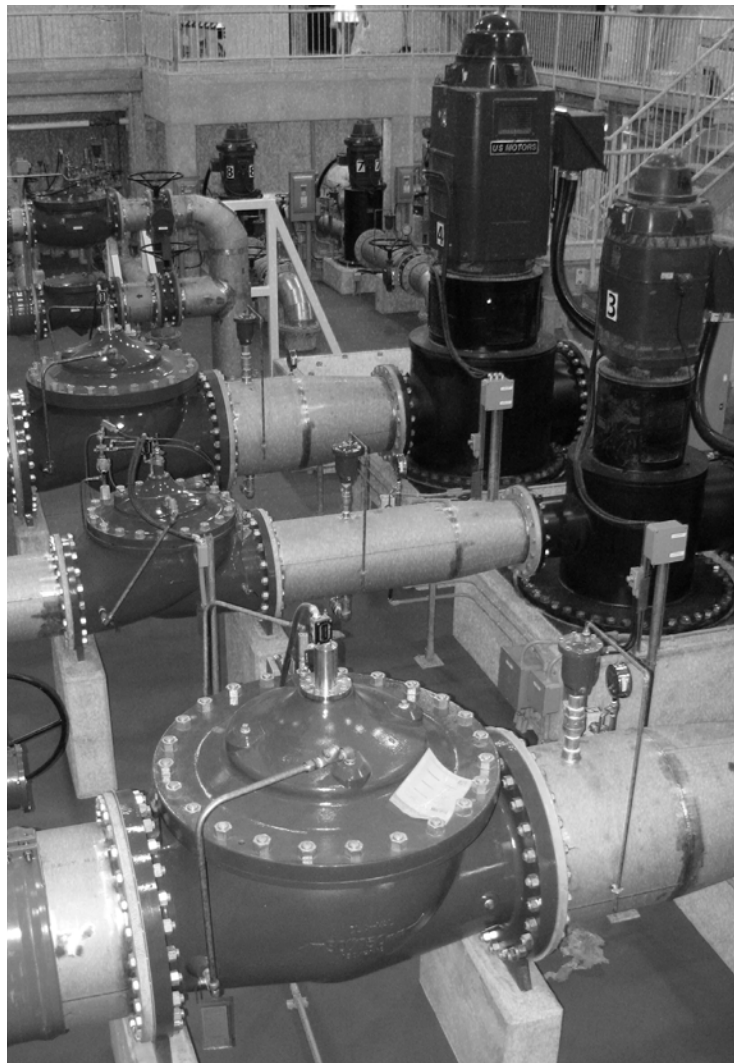
Treatment Process:

- Pre-chlorination of raw water. Chlorine for disinfection can be added at three places: raw water intake, the pretreatment stage, and after the filters.
- Screening
- Water clarification by coagulation and sedimentation. Polyaluminum chloride is added to coagulate suspended solids that settle down in sedimentation tanks.
- Filtration. The settled water is filtered using dual media filters of Sand/Granular Activated Carbon (GAC). GAC is used to reduce the presence of taste/odour causing compounds such as Geosmin/MIB in the raw water.
- Chlorine, ammonia, fluoride and phosphoric acid are added before the treated water is sent to the distribution system. Ammonia is added to convert chlorine to mono-chloramine to help maintain stable chlorine residuals in the distribution system. Fluoride is added to the drinking water to promote dental health and phosphoric acid is added to help reduce lead corrosion.
- High lift pumps push the water from the Woodward Treatment Facility to the distribution system



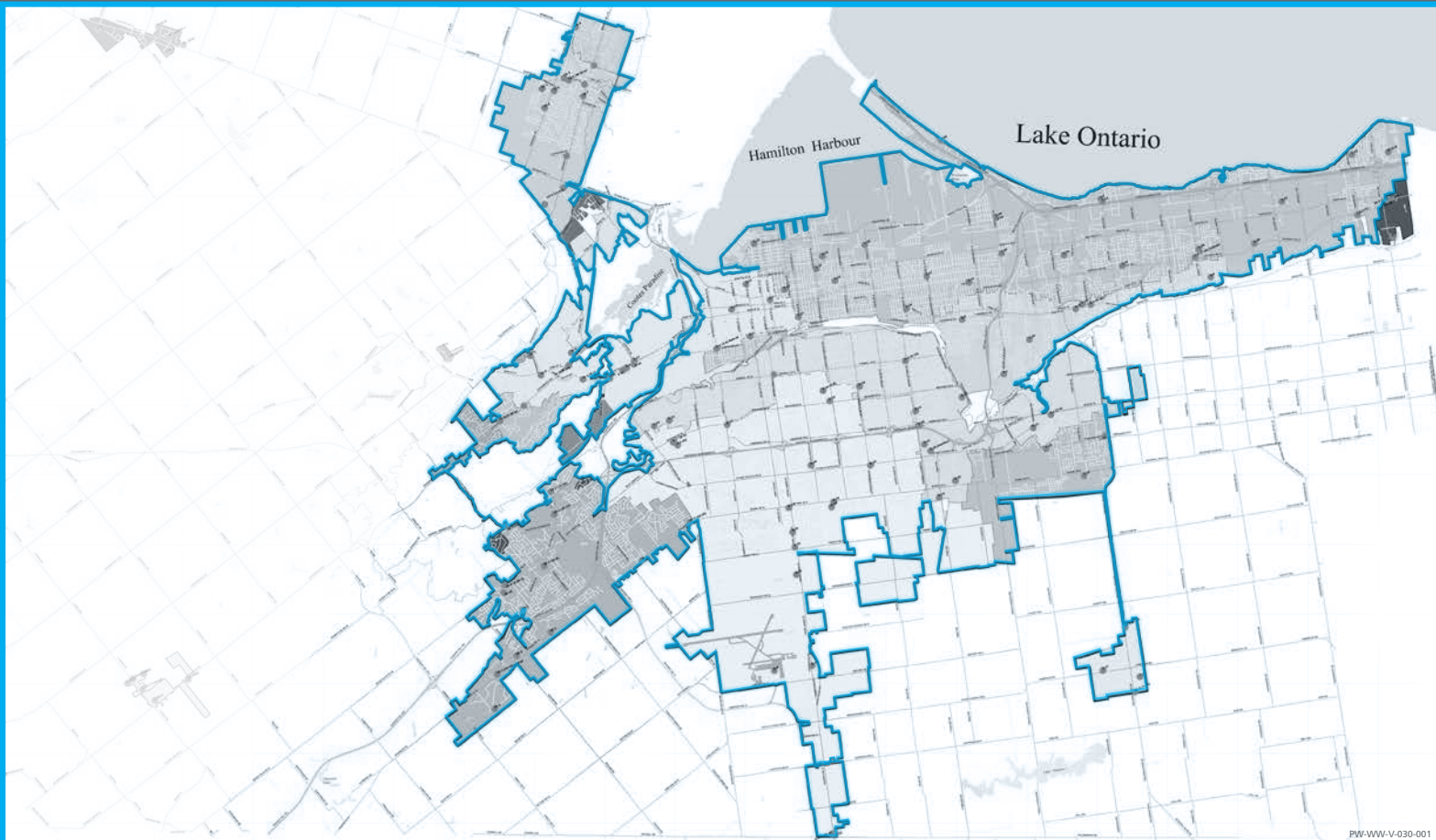
Distribution:

The water distribution system is comprised of 22 pumping stations; 12 reservoirs, 4 elevated storage tanks, one standpipe and over 2,000kms of watermains.



Sampling & Analysis:

Continuous monitoring equipment such as chlorine analyzers, turbidity meters and fluoride analyzers, ensure the maintenance of high quality water. Raw water is sampled and analyzed weekly; treated water is sampled and analyzed twice per day; distribution water is sampled and analyzed 5 days per week. In addition, chlorine residual in the distribution system is analyzed daily.

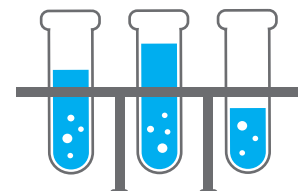


WOODWARD DRINKING WATER SUBSYSTEM



List all water treatment chemicals used over this reporting period:

- Polyaluminum Chloride
- Liquid Chlorine
- Aqueous Ammonia
- Hydrofluorosilicic Acid
- Phosphoric Acid

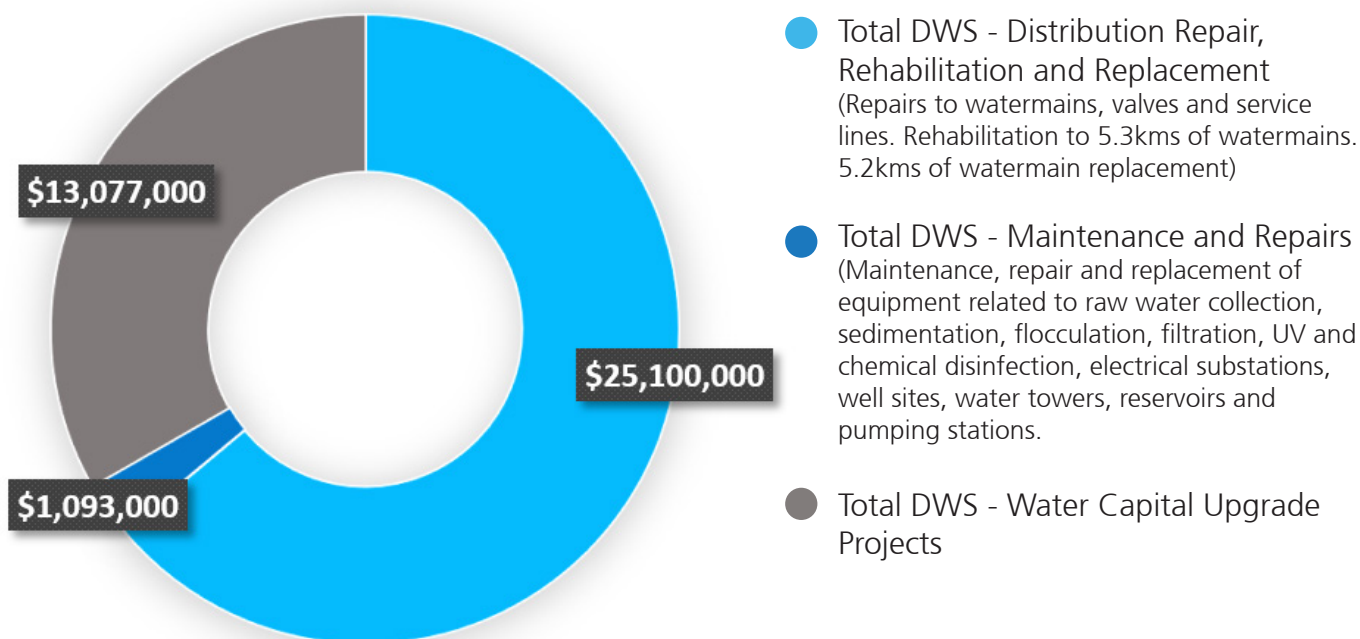


Were any significant expenses incurred to:

| | | |
|----------------------------|-----------------------------------------|-----------------------------|
| Install required equipment | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |
| Repair required equipment | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |
| Replace required equipment | <input checked="" type="checkbox"/> YES | <input type="checkbox"/> NO |

Please provide a brief description and a breakdown of monetary expenses incurred in 2018.

In 2018, the following expenses were incurred to complete repairs, maintenance and upgrades to the Drinking Water Systems within the City of Hamilton.



2018 HAMILTON DRINKING WATER SYSTEM WOODWARD SUBSYSTEM EXPENSE HIGHLIGHTS

Repairs to Watermains, Valves and Service Lines \$14,500,000 (City total)

Corrosion Control Capital Project \$5,200,000

New Waterdown Water Tower Capital Project \$1,400,000

Pump Station Upgrade Capital Projects \$1,242,000

Water Control Valves Upgrade Capital Project \$1,600,000

Water Treatment Plant Upgrades Capital Project \$1,090,000

Security of Water Pump Station Facilities Capital Project \$795,000

Woodward Water Treatment Plant Maintenance and Repairs to: Traveling Screen #1, Traveling Screen #3 (2018 tear out only), Electrical Substation Maintenance, Qualified Chlorine Contractor, Surge Building PRV Maintenance, Fluoride Analyzer Maintenance, Low Lift Sample Pumps, Chlorine Car Loading Station Maintenance, Water Plant Valve Actuators. \$620,500

Woodward Drinking Water Subsystem Outstation Maintenance and Repairs to: HD005 Pump #1 Overhaul, HD005 Electrical Maintenance, Greenhill 4B/5A Electrical Repairs and Maintenance, HD007 Pump Overhaul, HD12A Pump Overhaul, HD018 Chlorine Analyzer Maintenance, HD024 Chlorine Analyzer Maintenance. \$374,800

Reservoir Upgrade Capital Projects \$364,000

Check Valve Replacement Projects \$180,500

Anti-stagnation Valve Project \$90,000

Provide details on the notices submitted in accordance with subsection 18(1) of the Safe Drinking Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre.

| Notification Date (m-d-y) | Location of Adverse | Adverse Water Quality Incident | Resolution |
|---------------------------|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 03-09-2018 | Woodward WTP | Operational Adverse Equipment Malfunction. There was a hot water leak above #13 Filter at Water Plant. There was one drip of hot water every 15-20 seconds dripping in the middle of #13 Filter. The hot water contains a conditioning agent comprised mostly of sodium hydroxide. | → On March 10th, the hot water line for the South/East Quadrant was isolated, Filter #13 was taken out of service and backwashed. Treated samples were taken for Schedule 23 Metals and VOCs testing. All results were consistent with historical values. On March 12th the hot water line above Filter #13 was repaired and observed to have no more leaks. The filter was backwashed and returned to service. |
| 05-26-2018 | Fire Station, 363 Isaac Brock Dr. | Total Coliforms = 1 CFU/100mL (Regulatory requirement is 0 CFU/100mL) | → Resampled adverse location, one upstream and one downstream hydrant. All results passed. The adverse was not confirmed. |
| 07-06-2018 | Delbrook Court | Duty to report other observations. There was a watermain in need of emergency repair at the intersection of Royal Ave. and Stroud. In order to facilitate the repair, the City of Hamilton installed a temporary overland water line and put it into service before samples were taken and tested. | → Precautionary Boil Water Advisory was issued on July 6th. Two sets of samples were taken 24 hours apart. All results passed. Precautionary Boil Water Advisory was lifted on July 9th. On August 5th, two sets of samples were taken 24 hours apart from the repaired watermain. All results passed. The overland water line was removed on August 8th and the repaired watermain was put back in service. |
| 08-15-2018 | Hydrant FL03H025 | Free Chlorine = 0.02 mg/L Combined Chlorine = 0.15 mg/L (Regulatory requirement is minimum combined chlorine of 0.25 mg/L or free chlorine of 0.05 mg/L) | → Watermain was flushed to restore chlorine. Flushing restored the combined chlorine to 1.18 mg/L. |

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|------------|-----------------------------------------------|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 08-30-2018 | Lee Smith Booster Station – Ancaster | Total Coliforms = 4 CFU/100 mL (Regulatory requirement is 0 CFU/100mL) | → • August 30th, resample and test - resulted in confirmed AWQI at Lee Smith Booster Station. • September 1st, resample and test - resulted in adverse at upstream hydrant. • September 2nd, resample and test. Two sets of samples were taken 24 hours apart. All results passed. • Reservoir was cleaned on September 12th, disinfected in the morning of September 14th utilizing Method 2 of the AWWA Standard. It was refilled to overflow and isolated. • September 15th, two sets of samples were taken 24 hours apart. All results passed. |
| 10-03-2018 | Central Fire Station, 35-43 John St. N. | Total Coliforms = 2 CFU/100mL (Regulatory requirement is 0 CFU/100mL) | → Resampled adverse location, one upstream and one downstream hydrant. All results passed. The adverse was not confirmed. |
| 10-24-2018 | Fire Station 24, 252 Parkside Dr. | Total Coliforms = 2 CFU/100mL (Regulatory requirement is 0 CFU/100mL) | → Resampled adverse location, one upstream and one downstream hydrant. All results passed. The adverse was not confirmed. |

Microbiological testing done under Schedule 10, 11, 12 and 17, 18 of Regulation 170/03, during this reporting period.

| SAMPLE TYPE | NUMBER OF SAMPLES | RANGE OF E.COLI RESULTS (MIN #) to (MAX #) CFU/100ML | RANGE OF TOTAL COLIFORM RESULTS (MIN #) to (MAX #) CFU/100ML | NUMBER OF HPC SAMPLES | RANGE OF HPC RESULTS (MIN #) to (MAX #) CFU/1ML |
|--------------|----------------------|------------------------------------------------------------|--------------------------------------------------------------------|--------------------------|-------------------------------------------------------|
| RAW | 52 | 0 to 50 | 0 to 870 | N/A | N/A |
| TREATED | 611 | 0 | 0 | 379 | 0 to 21 |
| DISTRIBUTION | 1,876 | 0 | 0 to 45 | 1,223 | 0 to 98 |

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

NOTE: For continuous monitors use 8760 as the number of samples.

| PARAMETER - SAMPLE TYPE | NUMBER OF GRAB SAMPLES | RANGE OF RESULTS (MIN #) to (MAX #) | UNIT OF MEASURE |
|----------------------------------------------------------|------------------------|-------------------------------------|-----------------|
| TURBIDITY - TREATED- FILTER 1 | 8,760 | 0.019 to 0.180 | NTU |
| TURBIDITY - TREATED- FILTER 2 | 8,760 | 0.020 to 0.137 | NTU |
| TURBIDITY - TREATED- FILTER 3 | 8,760 | 0.019 to 0.162 | NTU |
| TURBIDITY - TREATED- FILTER 4 | 8,760 | 0.020 to 0.258 | NTU |
| TURBIDITY - TREATED- FILTER 5 | 8,760 | 0.016 to 0.160 | NTU |
| TURBIDITY - TREATED- FILTER 6 | 8,760 | 0.019 to 0.180 | NTU |
| TURBIDITY - TREATED- FILTER 7 | n/a | O/S | NTU |
| TURBIDITY - TREATED- FILTER 8 | 8,760 | 0.016 to 0.208 | NTU |
| TURBIDITY - TREATED- FILTER 9 | 8,760 | 0.018 to 0.123 | NTU |
| TURBIDITY - TREATED- FILTER 10 | 8,760 | 0.020 to 0.170 | NTU |
| TURBIDITY - TREATED- FILTER 11 | 8,760 | 0.016 to 0.198 | NTU |
| TURBIDITY - TREATED- FILTER 12 | 8,760 | 0.018 to 0.279 | NTU |
| TURBIDITY - TREATED- FILTER 13 | 8,760 | 0.020 to 0.182 | NTU |
| TURBIDITY - TREATED- FILTER 14 | 8,760 | 0.019 to 0.139 | NTU |
| TURBIDITY - TREATED- FILTER 15 | 8,760 | 0.017 to 0.138 | NTU |
| TURBIDITY - TREATED- FILTER 16 | 8,760 | 0.015 to 0.277 | NTU |
| TURBIDITY - TREATED- FILTER 17 | 8,760 | 0.016 to 0.224 | NTU |
| TURBIDITY - TREATED- FILTER 18 | 8,760 | 0.019 to 0.195 | NTU |
| TURBIDITY - TREATED- FILTER 19 | 8,760 | 0.019 to 0.198 | NTU |
| TURBIDITY - TREATED- FILTER 20 | 8,760 | 0.026 to 0.136 | NTU |
| TURBIDITY - TREATED- FILTER 21 | 8,760 | 0.019 to 0.279 | NTU |
| TURBIDITY - TREATED- FILTER 22 | 8,760 | 0.019 to 0.101 | NTU |
| TURBIDITY - TREATED- FILTER 23 | 8,760 | 0.022 to 0.285 | NTU |
| TURBIDITY - TREATED- FILTER 24 | 8,760 | 0.017 to 0.147 | NTU |
| COMBINED CHLORINE - TREATED | 8,760 | 1.17 to 2.84 | mg/L |
| FREE CHLORINE - DISTRIBUTION | 1,980 | <0.02 to 0.30 | mg/L |
| COMBINED CHLORINE - DISTRIBUTION | 1,980 | 0.62 to 2.77 | mg/L |
| FLUORIDE – TREATED (IF THE DWS PROVIDES FLUORIDATION) | 8,760 | 0.40 to 0.90 | mg/L |

****O/S** - OUT OF SERVICE**

Summary of additional testing and sampling carried out in accordance with the requirement of a licence, approval, order or other legal instrument.

| PARAMETER | SAMPLE DATE | RESULT VALUE | UNIT OF MEASURE |
|-----------------------------------|--------------------------|------------------|-----------------|
| TREATED – MICROCYSTIN | 2018-06-05 to 2018-11-06 | <0.15 | ug/L |
| RAW - MICROCYSTIN | 2018-01-09 to 2018-12-11 | <0.15 to 0.16 | ug/L |
| TREATED - CHLORIDE | 2018-11-13 | 31.5 | mg/L |
| TREATED - SULPHATE | 2018-11-13 | 24.7 | mg/L |
| TREATED - O-PHOSPHATE AS PO4 | 2018-11-05 to 2018-12-31 | <0.15 to 3.80 | mg/L |
| TREATED – COLOUR (APPARENT) | 2018-10-16 | <2 | CU |
| TREATED – COLOUR (TRUE) | 2018-10-16 | <2 | CU |
| TREATED - ALKALINITY | 2018-10-16 | 85 | mg/L |
| TREATED - IRON | 2018-10-16 | <0.003 | mg/L |
| TREATED – COPPER | 2018-10-16 | 0.0002 | mg/L |
| TREATED – TOTAL DISSOLVED SOLIDS | 2018-10-16 | 178 | mg/L |
| PLUMBING – COPPER | 2018-12-17 to 2018-12-21 | 0.0020 to 0.0510 | mg/L |
| DISTRIBUTION - IRON | 2018-12-11 to 2018-12-12 | <0.003 to 0.056 | mg/L |
| DISTRIBUTION - O-PHOSPHATE AS PO4 | 2018-11-05 to 2018-12-27 | <0.15 to 2.55 | mg/L |
| DISTRIBUTION - FIELD TEMPERATURE | 2018-11-05 to 2018-12-27 | 7.1 to 17.3 | °C |
| DISTRIBUTION - FIELD TURBIDITY | 2018-11-05 to 2018-12-27 | 0.06 to 1.10 | NTU |

| PARAMETER | NUMBER OF GRAB SAMPLES | RESULT VALUE | UNIT OF MEASURE |
|--------------------------|------------------------|----------------|-----------------|
| TEMPERATURE – RAW | 8,760 | -0.97 to 23.08 | °C |
| PH – TREATED | 1,296 | 6.78 to 7.53 | pH |
| ORTHOPHOSPHATE – TREATED | 1,296 | 0.03 to 6.36 | mg/L |

Summary of Inorganic parameters required by Regulation 170/03 and tested during this reporting period.

| PARAMETER | SAMPLE DATE | RESULT VALUE | UNIT OF MEASURE | NO. OF AWQIs |
|-----------|--------------------------|------------------|-----------------|--------------|
| ANTIMONY | 2018-05-22 to 2018-10-16 | 0.0001 to 0.0002 | mg/L | 0 |
| ARSENIC | 2018-05-22 to 2018-10-16 | 0.0006 to 0.0007 | mg/L | 0 |

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**Summary of Inorganic parameters required by Regulation 170/03 and tested during this reporting period.
(continued)...**

| | | | | |
|--------------|--------------------------|------------------|------|---|
| BARIUM | 2018-05-22 to 2018-10-16 | 0.0206 to 0.0233 | mg/L | 0 |
| BORON | 2018-05-22 to 2018-10-16 | 0.019 to 0.024 | mg/L | 0 |
| CADMIUM | 2018-05-22 to 2018-10-16 | <0.0001 | mg/L | 0 |
| CHROMIUM | 2018-05-22 to 2018-10-16 | <0.0001 | mg/L | 0 |
| FLUORIDE | 2018-05-22 to 2018-10-16 | 0.58 to 0.59 | mg/L | 0 |
| MERCURY | 2018-05-22 to 2018-10-16 | <0.00005 | mg/L | 0 |
| NITRATE AS N | 2018-01-23 to 2018-10-16 | 0.20 to 0.42 | mg/L | 0 |
| NITRITE AS N | 2018-01-23 to 2018-10-16 | <0.01 | mg/L | 0 |
| SELENIUM | 2018-05-22 to 2018-10-16 | 0.0001 | mg/L | 0 |
| SODIUM | 2018-05-22 to 2018-10-16 | 14.4 to 18.7 | mg/L | 1 |
| URANIUM | 2018-05-22 | 0.300 | ug/L | 0 |

Summary of lead testing under Schedule 15.1 during this reporting period.

| LOCATION TYPE | NO. OF SAMPLES REQUIRED | NO. OF SAMPLES TAKEN | RANGE OF pH RESULTS (min #) to (max #) pH Units | RANGE OF ALKALINITY RESULTS (min #) to (max #) mg/L | RANGE OF LEAD RESULTS (min #) to (max #) mg/L | NO. OF LEAD AWQIs | NO. OF LEAD EXCEEDANCES |
|---------------|-------------------------|----------------------|-------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------|-------------------|-------------------------|
| PLUMBING-NR | 2 | 2 | 7.48 | N/A | 0.0004 to 0.0008 | 0 | 0 |
| PLUMBING-R | 38 | 38 | 7.41 to 7.65 | N/A | 0.0002 to 0.0128 | 0 | 0 |
| DISTRIBUTION | 2 | 2 | 7.48 to 7.51 | 87 to 89 | 0.0001 to 0.0002 | 0 | 0 |

NR - Non Residential
R- Residential



Summary of Organic parameters required by Regulation 170/03 and tested during this reporting period.

| PARAMETER | SAMPLE DATE | RESULT VALUE | UNIT OF MEASURE | NO. OF AWQIs |
|------------------------------|--------------------------|--------------|-----------------|--------------|
| TREATED | | | | |
| 1,1-DICHLOROETHYLENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| 1,2-DICHLOROBENZENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| 1,2-DICHLOROETHANE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| 1,4-DICHLOROBENZENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| BENZENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| CARBON TETRACHLORIDE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| CHLOROBENZENE | 2018-05-22 to 2018-10-16 | <0.3 | ug/L | 0 |
| DICHLOROMETHANE | 2018-05-22 to 2018-10-16 | <0.5 | ug/L | 0 |
| ETHYLBENZENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| TETRACHLOROETHYLENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| TOLUENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| TRICHLOROETHYLENE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| VINYL CHLORIDE | 2018-05-22 to 2018-10-16 | <0.2 | ug/L | 0 |
| XYLENE | 2018-05-22 to 2018-10-16 | <0.3 | ug/L | 0 |
| 2,3,4,6-TETRACHLOROPHENOL | 2018-05-22 | <0.2 | ug/L | 0 |
| 2,4,6-TRICHLOROPHENOL | 2018-05-22 | <0.25 | ug/L | 0 |
| 2,4-D | 2018-05-22 | <0.19 | ug/L | 0 |
| 2,4-DICHLOROPHENOL | 2018-05-22 | <0.15 | ug/L | 0 |
| ALACHLOR | 2018-05-22 | <0.02 | ug/L | 0 |
| ATRAZINE + DESETHYL-ATRAZINE | 2018-05-22 | 0.06 | ug/L | 0 |
| AZINPHOS-METHYL | 2018-05-22 | <0.05 | ug/L | 0 |
| BENZO[A]PYRENE | 2018-05-22 | <0.004 | ug/L | 0 |
| BROMOXYNIL | 2018-05-22 | <0.33 | ug/L | 0 |
| CARBARYL | 2018-05-22 | <0.05 | ug/L | 0 |
| CARBOFURAN | 2018-05-22 | <0.01 | ug/L | 0 |
| CHLORPYRIFOS (DURBAN) | 2018-05-22 | <0.02 | ug/L | 0 |
| DIAZINON | 2018-05-22 | <0.02 | ug/L | 0 |
| DICAMBA | 2018-05-22 | <0.20 | ug/L | 0 |
| DICLOFOP-METHYL | 2018-05-22 | <0.40 | ug/L | 0 |
| DIMETHOATE | 2018-05-22 | <0.03 | ug/L | 0 |

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Summary of Organic parameters required by Regulation 170/03 and tested during this reporting period. (continued)...

| PARAMETER | SAMPLE DATE | RESULT VALUE | UNIT OF MEASURE | NO. OF AWQIs |
|--------------------------------------------|-------------|--------------|-----------------|--------------|
| DIQUAT | 2018-05-22 | <1 | ug/L | 0 |
| DIURON | 2018-05-22 | <0.03 | ug/L | 0 |
| GLYPHOSATE | 2018-05-22 | <1 | ug/L | 0 |
| MALATHION | 2018-05-22 | <0.02 | ug/L | 0 |
| MCPA (2-METHYL-4-CHLOROPHENOXYACETIC ACID) | 2018-05-22 | <0.00012 | mg/L | 0 |
| METOLACHLOR | 2018-05-22 | <0.01 | ug/L | 0 |
| METRIBUZIN (SENCOR) | 2018-05-22 | <0.02 | ug/L | 0 |
| PARAQUAT | 2018-05-22 | <1 | ug/L | 0 |
| PCBs TOTAL | 2018-05-22 | <0.05 | ug/L | 0 |
| PENTACHLOROPHENOL | 2018-05-22 | <0.15 | ug/L | 0 |
| PHORATE | 2018-05-22 | <0.01 | ug/L | 0 |
| PICLORAM | 2018-05-22 | <1 | ug/L | 0 |
| PROMETRYNE | 2018-05-22 | <0.03 | ug/L | 0 |
| SIMAZINE | 2018-05-22 | <0.01 | ug/L | 0 |
| TERBUFOS | 2018-05-22 | <0.01 | ug/L | 0 |
| TRIALATE | 2018-05-22 | <0.01 | ug/L | 0 |
| TRIFLURALIN | 2018-05-22 | <0.02 | ug/L | 0 |

DISTRIBUTION

| | | | | |
|--------------------------------------|----------------------------------------------------|------|------|-----|
| TOTAL TRIHALOMETHANES - DISTRIBUTION | Running annual average for the last four quarters. | 25.2 | ug/L | 0 |
| HALOACETIC ACIDS | 2018-01-23 to 2018-10-15 | <5.3 | ug/L | N/A |

* The Maximum Acceptable Concentration for Trihalomethanes in the distribution is based on a running average of the results from all sampling events in the past four quarters. This running average can be found in the result value column.

List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards (O.Reg. 169/03).

| PARAMETER | SAMPLE DATE | RESULT VALUE | UNIT OF MEASURE |
|-----------|-------------|--------------|-----------------|
| N/A | - | - | - |

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, non municipal year round residential, large non municipal non residential)

DEFINITIONS:

AWQI: Adverse Water Quality Incident
mg/L: milligrams per litre
ug/L: micrograms per litre

CFU: Colony Forming Unit
mL: millilitre

HPC: Heterotrophic Plate Count
N/A: Not Applicable