

CITY OF HAMILTON  
GREENSVILLE DRINKING WATER SYSTEM (DWS)  
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
220004126	Greensville Drinking Water System FDG01	City of Hamilton	Small 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](http://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
None other than Greenville System	220004126



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](http://www.hamilton.ca/waterquality).



A black and white photograph of a man with a beard and short hair, wearing a white t-shirt, drinking water from a clear glass. The background is a bright, out-of-focus interior space with large windows. A solid blue horizontal bar is positioned at the top of the page, containing the title text.

## GREENSVILLE DWS

The Greenville water supply system consists of one well, one well station, treatment, sampling and analysis which services a population of approximately 100 people.

### Water Well:

Greenville Well FDG01 is a 150mm diameter, approximately 12-metre-deep drilled ground water well under the influence of surface water (GUDI).

### Treatment:

Water passes through 2 stage cartridge filters, is disinfected using UV light and sodium hypochlorite (chlorine) prior to entering the distribution system. Fluoridation is not carried out at the Greenville community well.

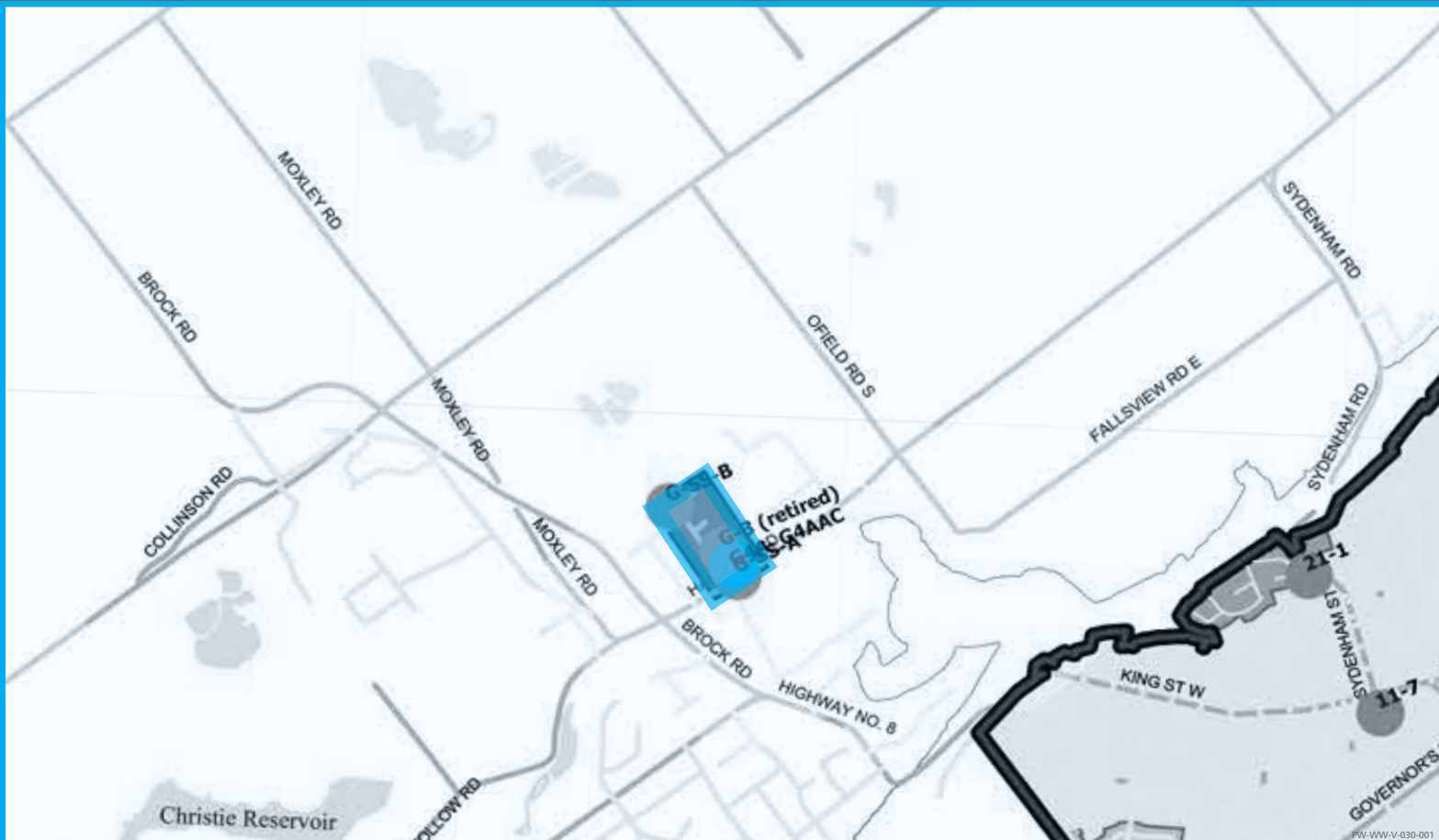
### Well Station:

Within the Well Station, water treatment takes place, well water level, discharge pressure and flow are monitored. Hydropneumatic pressure tanks are used to control system pressures.

### Sampling & Analysis:

The well is equipped with on-line chlorine residual and turbidity analyzers that continually monitor the treated water quality at the well station. A chlorine contact chamber is used to ensure disinfection of the water. Raw, treated and distribution water is sampled and analyzed weekly. In addition, chlorine residual in the distribution system is analyzed daily.



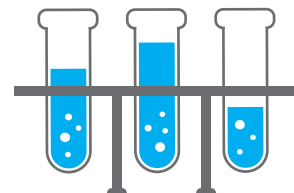


## GREENSVILLE DRINKING WATER SYSTEM



List all water treatment chemicals used over this reporting period:

→ Sodium Hypochlorite



Were any significant expenses incurred to:

Install required equipment	YES	<input type="text" value="NO"/>
Repair required equipment	YES	<input type="text" value="NO"/>
Replace required equipment	<input type="text" value="YES"/>	NO

2018 GREENSVILLE DRINKING WATER SYSTEM HIGHLIGHTS

Chlorine Feed Pump Replacements and Accumulator Tank Replacements (3) \$25,000

An Environmental Assessment was initiated for a development of a new Greenville Communal Well.

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
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We are pleased to announce that there were no Adverse Water Quality Incidents for the period of January to December 2018.



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 1	0 to 1	N/A	N/A
TREATED	52	0	0	52	0 to 2
DISTRIBUTION	104	0	0	104	0 to 2

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	8,760	0.02 to 0.91	NTU
FREE CHLORINE - TREATED	8,760	1.66 to 2.48	mg/L
FREE CHLORINE - DISTRIBUTION	364	0.92 to 2.62	mg/L

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
N/A	-	-	-





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
<b>GREENSVILLE WELL TREATED</b>				
ANTIMONY	2018-05-16 to 2018-10-17	<0.0001	mg/L	0
ARSENIC	2018-05-16 to 2018-10-17	<0.0001	mg/L	0
BARIUM	2018-05-16 to 2018-10-17	0.132 to 0.135	mg/L	0
BORON	2018-05-16 to 2018-10-17	0.031 to 0.032	mg/L	0
CADMIUM	2018-05-16 to 2018-10-17	<0.0001	mg/L	0
CHROMIUM	2018-05-16 to 2018-10-17	<0.0001 to 0.0001	mg/L	0
FLUORIDE	2018-05-16 to 2018-10-17	0.11 to 0.12	mg/L	0
MERCURY	2018-05-16 to 2018-10-17	<0.00005	mg/L	0
NITRATE AS N	2018-01-03 to 2018-12-05	5.54 to 6.39	mg/L	0
NITRITE AS N	2018-01-03 to 2018-12-05	<0.01	mg/L	0
SELENIUM	2018-05-16 to 2018-10-17	0.0002	mg/L	0
SODIUM	2018-05-16 to 2018-10-17	119	mg/L	0
URANIUM	2018-05-16 to 2018-10-17	0.593 to 0.655	ug/L	0

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

LOCATION TYPE	NO. OF POINTS SAMPLED	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 POINTS OF LEAD EXCEEDANCES
PLUMBING-NR	NA	N/A	N/A	N/A	N/A	N/A	N/A
PLUMBING-R	NA	N/A	N/A	N/A	N/A	N/A	N/A
DISTRIBUTION	2	2	7.28 to 7.31	324 to 349	N/A	N/A	N/A

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
<b>GREENSVILLE WELL TREATED</b>				
1,1-DICHLOROETHYLENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
1,2-DICHLOROBENZENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
1,2-DICHLOROETHANE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
1,4-DICHLOROBENZENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
BENZENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
CARBON TETRACHLORIDE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
CHLOROBENZENE	2018-05-16 to 2018-10-17	<0.3	ug/L	0
DICHLOROMETHANE	2018-05-16 to 2018-10-17	<0.5	ug/L	0
ETHYLBENZENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
TETRACHLOROETHYLENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
TOLUENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
TRICHLOROETHYLENE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
VINYL CHLORIDE	2018-05-16 to 2018-10-17	<0.2	ug/L	0
XYLENE	2018-05-16 to 2018-10-17	<0.3	ug/L	0
2,3,4,6-TETRACHLOROPHENOL	2018-05-16	<0.2	ug/L	0
2,4,6-TRICHLOROPHENOL	2018-05-16	<0.25	ug/L	0
2,4-DICHLOROPHENOXY ACETIC ACID (2,4-D)	2018-05-16	<0.19	ug/L	0
2,4-DICHLOROPHENOL	2018-05-16	<0.15	ug/L	0
ALACHLOR	2018-05-16	<0.02	ug/L	0
ATRAZINE + DESETHYL-ATRAZINE METABOLITES	2018-05-16	<0.01	ug/L	0
AZINPHOS-METHYL	2018-05-16	<0.05	ug/L	0
BENZO[A]PYRENE	2018-05-16	<0.004	ug/L	0
BROMOXYNIL	2018-05-16	<0.33	ug/L	0
CARBARYL	2018-05-16	<0.05	ug/L	0
CARBOFURAN	2018-05-16	<0.01	ug/L	0
CHLORPYRIFOS	2018-05-16	<0.02	ug/L	0
DIAZINON	2018-05-16	<0.02	ug/L	0
DICAMBA	2018-05-16	<0.20	ug/L	0
DICLOFOP-METHYL	2018-05-16	<0.40	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
DIMETHOATE	2018-05-16	<0.03	ug/L	0
DIQUAT	2018-05-16	<1	ug/L	0
DIURON	2018-05-16	<0.03	ug/L	0
GLYPHOSATE	2018-05-16	<1	ug/L	0
MALATHION	2018-05-16	<0.02	ug/L	0
MCPA (2-METHYL-4-CHLOROPHENOXYACETIC ACID)	2018-05-16	<0.00012	mg/L	0
METOLACHLOR	2018-05-16	<0.01	ug/L	0
METRIBUZIN (SENCOR)	2018-05-16	<0.02	ug/L	0
PARAQUAT	2018-05-16	<1	ug/L	0
POLYCHLORINATED BIPHENYLS (PCB)	2018-05-16	<0.05	ug/L	0
PENTACHLOROPHENOL	2018-05-16	<0.15	ug/L	0
PHORATE	2018-05-16	<0.01	ug/L	0
PICLORAM	2018-05-16	<1	ug/L	0
PROMETRYNE	2018-05-16	<0.03	ug/L	0
SIMAZINE	2018-05-16	<0.01	ug/L	0
TERBUFOS	2018-05-16	<0.01	ug/L	0
TRIALATE	2018-05-16	<0.01	ug/L	0
TRIFLURALIN	2018-05-16	<0.02	ug/L	0

DISTRIBUTION

TOTAL TRIHALOMETHANES*	Running annual average for the last four quarters.	15.8	ug/L	0
HALOACETIC ACIDS	2018-01-22 to 2018-10-17	<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
NITRATE	2018-01-03	5.97	mg/L
NITRATE	2018-01-22	6.15	mg/L
NITRATE	2018-02-07	6.39	mg/L
NITRATE	2018-03-07	5.91	mg/L
NITRATE	2018-04-04	6.18	mg/L
NITRATE	2018-05-02	5.70	mg/L
NITRATE	2018-05-16	6.03	mg/L
NITRATE	2018-06-06	5.73	mg/L
NITRATE	2018-07-04	5.54	mg/L
NITRATE	2018-08-01	5.70	mg/L
NITRATE	2018-08-08	5.61	mg/L
NITRATE	2018-09-05	5.93	mg/L
NITRATE	2018-10-03	5.80	mg/L
NITRATE	2018-10-17	5.83	mg/L
NITRATE	2018-11-07	5.91	mg/L
NITRATE	2018-12-05	5.69	mg/L

(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

