



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

CHATSWORTH
DRINKING WATER SYSTEM

Large Municipal Residential

SECTION 11
ANNUAL REPORT

For the period of
JANUARY 1, 2018 TO DECEMBER 31, 2018

Prepared by the Ontario Clean Water Agency
For The Township of Chatsworth

Drinking Water System Number:	210003011
Drinking Water System Name:	Chatsworth Drinking Water System
Drinking Water System Owner:	Township of Chatsworth
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2018 to December 31, 2018

Does the Drinking Water System serve more than 10,000 people?

No.

Is your annual report available to the public at no charge on a web site on the Internet?

No.

Location where the Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection:

Township of Chatsworth Municipal Office
Rural Route, No. 1
Chatsworth, Ontario
N0H 1G0

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

n/a.

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

n/a

How system users are notified that the annual report is available, and is free of charge:

- Public access/notice via the web
- Public access/notice via Government Office
- Public access/notice via a newspaper
- Public access/notice via Public Request
- Public access/notice via a Public Library
- Public access/notice via other method: Include notice in water billings

Description of Drinking Water System:

The Chatsworth Drinking Water System is owned by The Corporation of the Township of Chatsworth and is operated by the Ontario Clean Water Agency.

The Chatsworth Drinking Water System is a large municipal water system which draws its raw water from two (2) municipally owned wells. Each well is equipped with pumping equipment capable of pumping at 529.8 L/min at 105 m total dynamic head. Well No. 1 and Well No. 2 are equally rated at 569.0 L/min and are not meant to run simultaneously. Both wells are located within the same pumphouse. The pumphouse is located in Part Lot 5, Concession 1 East, Toronto Sydenham Road, former Township of Holland. Well #1 is a 33.6 meter deep drilled well. Well #2 is a 20.9 meter deep drilled well.

The wells are approximately 130 m from the Spey River, and have been determined by Henderson, Paddon & Associates Ltd. as being groundwater under some influence of surface water. When the wells were constructed, approximately 1.6 m of fill was added to the site to ensure good drainage around and away from the site, and as a safety measure to protect against flooding from the Spey River. Henderson, Paddon & Associates Ltd. also concluded that both Well No. 1 and Well No. 2 draw from the same aquifer.

The Chatsworth Drinking Water System's source water has been categorized as Groundwater Under the Direct Influence of Surface Water (GUDI). As such, the minimum log removal/inactivation required is 2 log for *Cryptosporidium* Oocysts, 3 log for *Giardia* Cysts and 4 log for viruses. The Chatsworth Drinking Water System achieves these credits from UV and chlorine disinfection.

Raw water is pumped from either Well No. 1 or Well No. 2 into a common discharge header. It then passes through a 5 micron nominal size cartridge filter with a filtration capacity of 8.9 L/s. The filtered water is monitored by an online turbidity analyzer and then directed through one of two ultraviolet disinfection reactors; one (1) duty, and one (1) standby. Each UV reactor has the capacity to provide a minimum dosage of 40 mJ/cm². Water is then directed past a flow meter before it is treated with sodium hypochlorite for primary and secondary disinfection. Treated water free chlorine residual is monitored by an online analyzer prior to being directed into the distribution system.

The Chatsworth Drinking Water System was established in 1984. The standpipe situated on side road #1 was replaced with a 1,055 cubic meter glass-fused-to-steel in 2018. The Water Distribution system consists of Polyvinyl Chloride (PVC) pipes that range in size from 150 mm to 200 mm in diameter. There are approximately 37 fire hydrants, 1 blow off, 1 hydrant flusher, 4 sampling stations and 242 service connections in the Chatsworth distribution system.

List of water treatment chemicals used during the reporting period:

- Sodium Hypochlorite 6%

Significant expenses were incurred to:

- Install required equipment
- Repair required equipment
- Replace required equipment
- No significant expenses were incurred

Description of expenses:

- Installed New Standpipe and put into service
- Replaced air relief valve and saddle on Sideroad 1.
- Annual inspection / service of the UV System performed by H2Flow
- Replaced vent valve and diaphragm on both chlorine pumps
- Replaced chlorine suction lines and injectors.
- Replaced all lamps on UV system #2
- Replaced UPS in Outpost panel.
- Installation of UV system lockouts
- Installed New chlorine pump and chlorine storage tank
- Installed 2 inch valve chamber bypass line at Standpipe
- Installed New time relay for standpipe control panel

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:

Date of Incident	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
June 16, 2018	Incomplete UV disinfection while water being supplied to consumers	0	W/m2	May 16, 2018 <ul style="list-style-type: none"> • System was back flushed from Standpipe using fire hydrants. • Precautionary Boil Water Advisory was issued for residents. • Samples for bacteriological analysis at the raw water sample point, point of entry and at three distribution sampling sites taken. • Chlorine dosing was increased. May 17, 2018 <ul style="list-style-type: none"> • Second set of samples for bacteriological analysis at the raw water sample point, point of entry and at three distribution sampling sites taken. • SGS draft laboratory results confirms 0 presence of total coliforms and E.coli at all sampled distribution sites and at point of entry from initial set of samples collected on May 16. • Precautionary Boil Water Advisory lifted. May 22, 2018 <ul style="list-style-type: none"> • SGS Laboratory results confirms 0 presence of total coliforms and E.coli at all sampled distribution sites and at point of entry from second set of samples collected on May 17. May 28, 2018 OCWA Staff upgraded the Chatsworth DWS's existing Outpost SCADA System to allow the system to maintain communication link between the plant's UV disinfection system and well pumps in a situation where there is no power to the UV system only.	June 28, 2018

Table 1. Microbiological testing done under Schedule 10, 11 or 12 of Regulation 170/03 during this reporting Period

Location	Number of Samples	Range of E.coli Results		Range of Total Coliforms Results		Number of HPC Samples	Range of HPC Samples	
		Minimum	Maximum	Minimum	Maximum		Minimum	Maximum
Raw (Well 1)	52	0	1	0	31	n/a	n/a	n/a
Raw (Well 2)	54	0	2	0	25	n/a	n/a	n/a
Treated (TW)	54	0	0	0	0	52	0	1
Distribution (DW)	110	0	0	0	0	52	0	3

Table 2. Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results	
		Minimum	Maximum
Turbidity, In-House (NTU) – Well #1	12	0.1	1.29
Turbidity, In-House (NTU) – Well #2	12	0.05	0.8
Turbidity, On-Line (NTU) – Filter	8760	0	0.8216
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.75	1.9995
Free Chlorine Residual, In-House (mg/L) - DW	389	0.37	2.18

NOTE: Record the unit of measure if it is not milligrams per litre.

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

Table 3. Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of Order of MDWL	Parameter	Date Sampled	Result (Annual Average)	Unit of Measure
11/19/2008	UV Transmittance	Jan 1, 2018 to Dec 31, 2018	99.0 %	Scale 1 – 100%

Table 4. Summary of Inorganic parameters tested during this reporting period or most recent sample results

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Exceedance
Antimony: Sb (µg/L) - TW1	2018/01/08	0.34	No
Antimony: Sb (µg/L) - TW2	2018/01/08	0.18	No
Arsenic: As (µg/L) - TW1	2018/01/08	<MDL 0.2	No
Arsenic: As (µg/L) - TW2	2018/01/08	<MDL 0.2	No
Barium: Ba (µg/L) - TW1	2018/01/08	8.29	No
Barium: Ba (µg/L) - TW2	2018/01/08	8.1	No
Boron: B (µg/L) - TW1	2018/01/08	16.0	No
Boron: B (µg/L) - TW2	2018/01/08	13.0	No
Cadmium: Cd (µg/L) - TW1	2018/01/08	<MDL 0.003	No
Cadmium: Cd (µg/L) - TW2	2018/01/08	<MDL 0.003	No
Chromium: Cr (µg/L) - TW1	2018/01/08	0.16	No
Chromium: Cr (µg/L) - TW2	2018/01/08	0.17	No
Mercury: Hg (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Mercury: Hg (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Selenium: Se (µg/L) - TW1	2018/01/08	0.29	No
Selenium: Se (µg/L) - TW2	2018/01/08	0.27	No
Uranium: U (µg/L) - TW1	2018/01/08	0.564	No
Uranium: U (µg/L) - TW2	2018/01/08	0.562	No
Fluoride (mg/L) - TW1	2017/01/11	0.06	No
Fluoride (mg/L) - TW2	2017/01/11	0.06	No
Nitrite (mg/L) - TW1	2018/01/08	<MDL 0.003	No
Nitrite (mg/L) - TW1	2018/04/03	<MDL 0.003	No
Nitrite (mg/L) - TW1	2018/07/03	<MDL 0.003	No
Nitrite (mg/L) - TW1	2018/10/01	<MDL 0.003	No
Nitrite (mg/L) - TW2	2018/01/08	<MDL 0.003	No
Nitrite (mg/L) - TW2	2018/04/03	<MDL 0.003	No
Nitrite (mg/L) - TW2	2018/07/03	<MDL 0.003	No
Nitrite (mg/L) - TW2	2018/10/01	<MDL 0.003	No
Nitrate (mg/L) - TW1	2018/01/08	0.928	No
Nitrate (mg/L) - TW1	2018/04/03	0.286	No
Nitrate (mg/L) - TW1	2018/07/03	1.56	No
Nitrate (mg/L) - TW1	2018/10/01	1.3	No
Nitrate (mg/L) - TW2	2018/01/08	0.477	No
Nitrate (mg/L) - TW2	2018/04/03	0.434	No
Nitrate (mg/L) - TW2	2018/07/03	1.52	No
Nitrate (mg/L) - TW2	2018/10/01	1.33	No
Sodium: Na (mg/L) - TW1	2014/01/13	4.72	No
Sodium: Na (mg/L) - TW2	2014/01/13	5.56	No

NOTE: 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.

NOTE: Sodium and Fluoride samples are to be taken every 60 months. The most current sampling session was in January 2014 for Sodium; the next sampling is scheduled for January 2019. The most current sampling session was in January 2017 for Fluoride; the next sampling is scheduled for January 2022.

Table 5. Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results		Number of Exceedances
		Minimum	Maximum	
Plumbing	n/a	n/a	n/a	n/a
Distribution (µg/L)	2	0.08	0.3	n/a
Alkalinity (mg/L)	2	284	303	n/a

NOTE: This system qualifies for the plumbing exemption as per Ontario Regulation 170/03 Schedule 15.1-5 (9) (10). This system also qualifies for reduced distribution sampling. Every 36 months, 2 distribution samples are taken during each sampling period and sampled for lead (1 per period). The most recent lead sampling session was in 2018. The next sampling session will be 2021.

Table 6. Summary of Organic parameters sampled during this reporting period or most recent sample results.

Parameter	Sample Date	Result Value	Exceedance
Alachlor (µg/L) - TW1	2018/01/08	<MDL 0.02	No
Alachlor (µg/L) - TW2	2018/01/08	<MDL 0.02	No
Atrazine + N-dealkylated metabolites (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Atrazine + N-dealkylated metabolites (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Azinphos-methyl (µg/L) - TW1	2018/01/08	<MDL 0.05	No
Azinphos-methyl (µg/L) - TW2	2018/01/08	<MDL 0.05	No
Benzene (µg/L) - TW1	2018/01/08	<MDL 0.32	No
Benzene (µg/L) - TW2	2018/01/08	<MDL 0.32	No
Benzo(a)pyrene (µg/L) - TW1	2018/01/08	<MDL 0.004	No
Benzo(a)pyrene (µg/L) - TW2	2018/01/08	<MDL 0.004	No
Bromoxynil (µg/L) - TW1	2018/01/08	<MDL 0.33	No
Bromoxynil (µg/L) - TW2	2018/01/08	<MDL 0.33	No
Carbaryl (µg/L) - TW1	2018/01/08	<MDL 0.05	No
Carbaryl (µg/L) - TW2	2018/01/08	<MDL 0.05	No
Carbofuran (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Carbofuran (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Carbon Tetrachloride (µg/L) - TW1	2018/01/08	<MDL 0.16	No
Carbon Tetrachloride (µg/L) - TW2	2018/01/08	<MDL 0.16	No
Chlorpyrifos (µg/L) - TW1	2018/01/08	<MDL 0.02	No
Chlorpyrifos (µg/L) - TW2	2018/01/08	<MDL 0.02	No
Diazinon (µg/L) - TW1	2018/01/08	<MDL 0.02	No
Diazinon (µg/L) - TW2	2018/01/08	<MDL 0.02	No
Dicamba (µg/L) - TW1	2018/01/08	<MDL 0.2	No
Dicamba (µg/L) - TW2	2018/01/08	<MDL 0.2	No
1,2-Dichlorobenzene (µg/L) - TW1	2018/01/08	<MDL 0.41	No
1,2-Dichlorobenzene (µg/L) - TW2	2018/01/08	<MDL 0.41	No
1,4-Dichlorobenzene (µg/L) - TW1	2018/01/08	<MDL 0.36	No
1,4-Dichlorobenzene (µg/L) - TW2	2018/01/08	<MDL 0.36	No
1,2-Dichloroethane (µg/L) - TW1	2018/01/08	<MDL 0.35	No
1,2-Dichloroethane (µg/L) - TW2	2018/01/08	<MDL 0.35	No
1,1-Dichloroethylene (µg/L) - TW1	2018/01/08	<MDL 0.33	No
1,1-Dichloroethylene (µg/L) - TW2	2018/01/08	<MDL 0.33	No
Dichloromethane (Methylene Chloride) (µg/L) - TW1	2018/01/08	<MDL 0.35	No
Dichloromethane (Methylene Chloride) (µg/L) - TW2	2018/01/08	<MDL 0.35	No
2,4-Dichlorophenol (µg/L) - TW1	2018/01/08	<MDL 0.15	No
2,4-Dichlorophenol (µg/L) - TW2	2018/01/08	<MDL 0.15	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) - TW1	2018/01/08	<MDL 0.19	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) - TW2	2018/01/08	<MDL 0.19	No
Diclofop-methyl (µg/L) - TW1	2018/01/08	<MDL 0.4	No
Diclofop-methyl (µg/L) - TW2	2018/01/08	<MDL 0.4	No
Dimethoate (µg/L) - TW1	2018/01/08	<MDL 0.03	No
Dimethoate (µg/L) - TW2	2018/01/08	<MDL 0.03	No
Diquat (µg/L) - TW1	2018/01/08	<MDL 1.0	No
Diquat (µg/L) - TW2	2018/01/08	<MDL 1.0	No
Diuron (µg/L) - TW1	2018/01/08	<MDL 0.03	No
Diuron (µg/L) - TW2	2018/01/08	<MDL 0.03	No
Glyphosate (µg/L) - TW1	2018/01/08	<MDL 1.0	No
Glyphosate (µg/L) - TW2	2018/01/08	<MDL 1.0	No
Malathion (µg/L) - TW1	2018/01/08	<MDL 0.02	No
Malathion (µg/L) - TW2	2018/01/08	<MDL 0.02	No
Metolachlor (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Metolachlor (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Metribuzin (µg/L) - TW1	2018/01/08	<MDL 0.02	No
Metribuzin (µg/L) - TW2	2018/01/08	<MDL 0.02	No
Monochlorobenzene (Chlorobenzene) (µg/L) - TW1	2018/01/08	<MDL 0.3	No
Monochlorobenzene (Chlorobenzene) (µg/L) - TW2	2018/01/08	<MDL 0.3	No

Parameter	Sample Date	Result Value	Exceedance
Paraquat (µg/L) - TW1	2018/01/08	<MDL 1.0	No
Paraquat (µg/L) - TW2	2018/01/08	<MDL 1.0	No
PCB (µg/L) - TW1	2018/01/08	<MDL 0.04	No
PCB (µg/L) - TW2	2018/01/08	<MDL 0.04	No
Pentachlorophenol (µg/L) - TW1	2018/01/08	<MDL 0.15	No
Pentachlorophenol (µg/L) - TW2	2018/01/08	<MDL 0.15	No
Phorate (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Phorate (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Picloram (µg/L) - TW1	2018/01/08	<MDL 1.0	No
Picloram (µg/L) - TW2	2018/01/08	<MDL 1.0	No
Prometryne (µg/L) - TW1	2018/01/08	<MDL 0.03	No
Prometryne (µg/L) - TW2	2018/01/08	<MDL 0.03	No
Simazine (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Simazine (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Terbufos (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Terbufos (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Tetrachloroethylene (µg/L) - TW1	2018/01/08	<MDL 0.35	No
Tetrachloroethylene (µg/L) - TW2	2018/01/08	<MDL 0.35	No
2,3,4,6-Tetrachlorophenol (µg/L) - TW1	2018/01/08	<MDL 0.2	No
2,3,4,6-Tetrachlorophenol (µg/L) - TW2	2018/01/08	<MDL 0.2	No
2,4,6-Trichlorophenol (µg/L) - TW1	2018/01/08	<MDL 0.25	No
2,4,6-Trichlorophenol (µg/L) - TW2	2018/01/08	<MDL 0.25	No
Triallate (µg/L) - TW1	2018/01/08	<MDL 0.01	No
Triallate (µg/L) - TW2	2018/01/08	<MDL 0.01	No
Trichloroethylene (µg/L) - TW1	2018/01/08	<MDL 0.44	No
Trichloroethylene (µg/L) - TW2	2018/01/08	<MDL 0.44	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (µg/L) - TW1	2018/01/08	<MDL 0.12	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (µg/L) - TW2	2018/01/08	<MDL 0.12	No
Trifluralin (µg/L) - TW1	2018/01/08	<MDL 0.02	No
Trifluralin (µg/L) - TW2	2018/01/08	<MDL 0.02	No
Vinyl Chloride (µg/L) - TW1	2018/01/08	<MDL 0.17	No
Vinyl Chloride (µg/L) - TW2	2018/01/08	<MDL 0.17	No
Trihalomethane: Total (µg/L) Annual Average - DW	2018 (Quarterly)	8.65	No
HAA Total (µg/L) Annual Average - DW	2018 (Quarterly)	5.3	No

Table 7. List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
n/a	n/a	n/a	n/a

NOTE: This is required only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, small municipal non-residential, large non municipal non-residential)

Appendix A

Annual Summary for parameters tested during 2018 or the most recent sample results

Table 4 – Inorganic Parameters

Table 6 – Organic Parameters

Drinking-Water System Number: 210003011
 Drinking-Water System Name: CHATSWORTH DRINKING WATER SYSTEM
 Drinking-Water System Owner: Township of Chatsworth
 Drinking-Water System Category: Large Municipal Residential
 Period being reported: 01/2018 12/2018

Table 4 - Summary of Inorganic parameters tested during this reporting period or the most recent sample results
 (Including maximum allowable concentrations - MAC)

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	No. of Exceedances	
				MAC	1/2 MAC
Antimony: Sb (ug/L) - TW2	2018/01/08	0.18	6.0	No	No
Antimony: Sb (ug/L) - TW1	2018/01/08	0.34	6.0	No	No
Antimony: Sb (ug/L) - TW					
Arsenic: As (ug/L) - TW2	2018/01/08	<MDL 0.2	10.0	No	No
Arsenic: As (ug/L) - TW1	2018/01/08	<MDL 0.2	10.0	No	No
Arsenic: As (ug/L) - TW					
Barium: Ba (ug/L) - TW2	2018/01/08	8.1	1000.0	No	No
Barium: Ba (ug/L) - TW1	2018/01/08	8.29	1000.0	No	No
Barium: Ba (ug/L) - TW					
Boron: B (ug/L) - TW2	2018/01/08	13.0	5000.0	No	No
Boron: B (ug/L) - TW1	2018/01/08	16.0	5000.0	No	No
Boron: B (ug/L) - TW					
Cadmium: Cd (ug/L) - TW2	2018/01/08	<MDL 0.003	5.0	No	No
Cadmium: Cd (ug/L) - TW1	2018/01/08	<MDL 0.003	5.0	No	No
Cadmium: Cd (ug/L) - TW					
Chromium: Cr (ug/L) - TW2	2018/01/08	0.17	50.0	No	No
Chromium: Cr (ug/L) - TW1	2018/01/08	0.16	50.0	No	No
Chromium: Cr (ug/L) - TW					
Mercury: Hg (ug/L) - TW2	2018/01/08	<MDL 0.01	1.0	No	No
Mercury: Hg (ug/L) - TW1	2018/01/08	<MDL 0.01	1.0	No	No
Mercury: Hg (ug/L) - TW					
Selenium: Se (ug/L) - TW2	2018/01/08	0.27	50.0	No	No
Selenium: Se (ug/L) - TW1	2018/01/08	0.29	50.0	No	No
Selenium: Se (ug/L) - TW					
Uranium: U (ug/L) - TW2	2018/01/08	0.562	20.0	No	No
Uranium: U (ug/L) - TW1	2018/01/08	0.564	20.0	No	No
Uranium: U (ug/L) - TW					
Additional Inorganics					
Fluoride (mg/L) - TW2	2017/01/11	0.06	1.5	No	No
Fluoride (mg/L) - TW1	2017/01/11	0.06	1.5	No	No
Fluoride (mg/L) - TW					
Nitrite (mg/L) - TW2	2018/01/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW2	2018/04/03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW2	2018/07/03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW2	2018/10/01	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW1	2018/01/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW1	2018/04/03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW1	2018/07/03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW1	2018/10/01	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW2	2018/01/08	0.477	10.0	No	No
Nitrate (mg/L) - TW2	2018/04/03	0.434	10.0	No	No
Nitrate (mg/L) - TW2	2018/07/03	1.52	10.0	No	No
Nitrate (mg/L) - TW2	2018/10/01	1.33	10.0	No	No
Nitrate (mg/L) - TW1	2018/01/08	0.928	10.0	No	No
Nitrate (mg/L) - TW1	2018/04/03	0.286	10.0	No	No
Nitrate (mg/L) - TW1	2018/07/03	1.56	10.0	No	No
Nitrate (mg/L) - TW1	2018/10/01	1.3	10.0	No	No
Sodium: Na (mg/L) - TW2	2014/01/13	5.56	20*	No	No
Sodium: Na (mg/L) - TW1	2014/01/13	4.72	20*	No	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 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.

Drinking-Water System Number: 210003011
Drinking-Water System Name: CHATSWORTH DRINKING WATER SYSTEM
Drinking-Water System Owner: Township of Chatsworth
Drinking-Water System Category: Large Municipal Residential
Period being reported: 01/2018 12/2018

Table 6 - Summary of Organic parameters sampled during this reporting period or the most recent sample results
(Including maximum allowable concentrations - MAC)

TREATED WATER	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Alachlor (ug/L) - TW2	2018/01/08	<MDL 0.02	5.00	No	No
Alachlor (ug/L) - TW1	2018/01/08	<MDL 0.02	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW2	2018/01/08	<MDL 0.01	5.00	No	No
Atrazine + N-dealkylated metabolites (ug/L) - TW1	2018/01/08	<MDL 0.01	5.00	No	No
Azinphos-methyl (ug/L) - TW2	2018/01/08	<MDL 0.05	20.00	No	No
Azinphos-methyl (ug/L) - TW1	2018/01/08	<MDL 0.05	20.00	No	No
Benzene (ug/L) - TW2	2018/01/08	<MDL 0.32	1.00	No	No
Benzene (ug/L) - TW1	2018/01/08	<MDL 0.32	1.00	No	No
Benzo(a)pyrene (ug/L) - TW2	2018/01/08	<MDL 0.004	0.01	No	No
Benzo(a)pyrene (ug/L) - TW1	2018/01/08	<MDL 0.004	0.01	No	No
Bromoxynil (ug/L) - TW2	2018/01/08	<MDL 0.33	5.00	No	No
Bromoxynil (ug/L) - TW1	2018/01/08	<MDL 0.33	5.00	No	No
Carbaryl (ug/L) - TW2	2018/01/08	<MDL 0.05	90.00	No	No
Carbaryl (ug/L) - TW1	2018/01/08	<MDL 0.05	90.00	No	No
Carbofuran (ug/L) - TW2	2018/01/08	<MDL 0.01	90.00	No	No
Carbofuran (ug/L) - TW1	2018/01/08	<MDL 0.01	90.00	No	No
Carbon Tetrachloride (ug/L) - TW2	2018/01/08	<MDL 0.16	2.00	No	No
Carbon Tetrachloride (ug/L) - TW1	2018/01/08	<MDL 0.16	2.00	No	No
Chlorpyrifos (ug/L) - TW2	2018/01/08	<MDL 0.02	90.00	No	No
Chlorpyrifos (ug/L) - TW1	2018/01/08	<MDL 0.02	90.00	No	No
Diazinon (ug/L) - TW2	2018/01/08	<MDL 0.02	20.00	No	No
Diazinon (ug/L) - TW1	2018/01/08	<MDL 0.02	20.00	No	No
Dicamba (ug/L) - TW2	2018/01/08	<MDL 0.2	120.00	No	No
Dicamba (ug/L) - TW1	2018/01/08	<MDL 0.2	120.00	No	No
1,2-Dichlorobenzene (ug/L) - TW2	2018/01/08	<MDL 0.41	200.00	No	No
1,2-Dichlorobenzene (ug/L) - TW1	2018/01/08	<MDL 0.41	200.00	No	No
1,4-Dichlorobenzene (ug/L) - TW2	2018/01/08	<MDL 0.36	5.00	No	No
1,4-Dichlorobenzene (ug/L) - TW1	2018/01/08	<MDL 0.36	5.00	No	No
1,2-Dichloroethane (ug/L) - TW2	2018/01/08	<MDL 0.35	5.00	No	No
1,2-Dichloroethane (ug/L) - TW1	2018/01/08	<MDL 0.35	5.00	No	No
1,1-Dichloroethylene (ug/L) - TW2	2018/01/08	<MDL 0.33	14.00	No	No
1,1-Dichloroethylene (ug/L) - TW1	2018/01/08	<MDL 0.33	14.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW2	2018/01/08	<MDL 0.35	50.00	No	No
Dichloromethane (Methylene Chloride) (ug/L) - TW1	2018/01/08	<MDL 0.35	50.00	No	No
2,4-Dichlorophenol (ug/L) - TW2	2018/01/08	<MDL 0.15	900.00	No	No
2,4-Dichlorophenol (ug/L) - TW1	2018/01/08	<MDL 0.15	900.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW2	2018/01/08	<MDL 0.19	100.00	No	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW1	2018/01/08	<MDL 0.19	100.00	No	No
Diclofop-methyl (ug/L) - TW2	2018/01/08	<MDL 0.4	9.00	No	No
Diclofop-methyl (ug/L) - TW1	2018/01/08	<MDL 0.4	9.00	No	No
Dimethoate (ug/L) - TW2	2018/01/08	<MDL 0.03	20.00	No	No
Dimethoate (ug/L) - TW1	2018/01/08	<MDL 0.03	20.00	No	No
Diquat (ug/L) - TW2	2018/01/08	<MDL 1.0	70.00	No	No
Diquat (ug/L) - TW1	2018/01/08	<MDL 1.0	70.00	No	No
Diuron (ug/L) - TW2	2018/01/08	<MDL 0.03	150.00	No	No
Diuron (ug/L) - TW1	2018/01/08	<MDL 0.03	150.00	No	No
Glyphosate (ug/L) - TW2	2018/01/08	<MDL 1.0	280.00	No	No
Glyphosate (ug/L) - TW1	2018/01/08	<MDL 1.0	280.00	No	No
Malathion (ug/L) - TW2	2018/01/08	<MDL 0.02	190.00	No	No
Malathion (ug/L) - TW1	2018/01/08	<MDL 0.02	190.00	No	No
Metolachlor (ug/L) - TW2	2018/01/08	<MDL 0.01	50.00	No	No
Metolachlor (ug/L) - TW1	2018/01/08	<MDL 0.01	50.00	No	No
Metribuzin (ug/L) - TW2	2018/01/08	<MDL 0.02	80.00	No	No
Metribuzin (ug/L) - TW1	2018/01/08	<MDL 0.02	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW2	2018/01/08	<MDL 0.3	80.00	No	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW1	2018/01/08	<MDL 0.3	80.00	No	No
Paraquat (ug/L) - TW2	2018/01/08	<MDL 1.0	10.00	No	No
Paraquat (ug/L) - TW1	2018/01/08	<MDL 1.0	10.00	No	No
PCB (ug/L) - TW2	2018/01/08	<MDL 0.04	3.00	No	No
PCB (ug/L) - TW1	2018/01/08	<MDL 0.04	3.00	No	No
Pentachlorophenol (ug/L) - TW2	2018/01/08	<MDL 0.15	60.00	No	No

Pentachlorophenol (ug/L) - TW1	2018/01/08	<MDL 0.15	60.00	No	No
Phorate (ug/L) - TW2	2018/01/08	<MDL 0.01	2.00	No	No
Phorate (ug/L) - TW1	2018/01/08	<MDL 0.01	2.00	No	No
Picloram (ug/L) - TW2	2018/01/08	<MDL 1.0	190.00	No	No
Picloram (ug/L) - TW1	2018/01/08	<MDL 1.0	190.00	No	No
Prometryne (ug/L) - TW2	2018/01/08	<MDL 0.03	1.00	No	No
Prometryne (ug/L) - TW1	2018/01/08	<MDL 0.03	1.00	No	No
Simazine (ug/L) - TW2	2018/01/08	<MDL 0.01	10.00	No	No
Simazine (ug/L) - TW1	2018/01/08	<MDL 0.01	10.00	No	No
Terbufos (ug/L) - TW2	2018/01/08	<MDL 0.01	1.00	No	No
Terbufos (ug/L) - TW1	2018/01/08	<MDL 0.01	1.00	No	No
Tetrachloroethylene (ug/L) - TW2	2018/01/08	<MDL 0.35	10.00	No	No
Tetrachloroethylene (ug/L) - TW1	2018/01/08	<MDL 0.35	10.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW2	2018/01/08	<MDL 0.2	100.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW1	2018/01/08	<MDL 0.2	100.00	No	No
Triallate (ug/L) - TW2	2018/01/08	<MDL 0.01	230.00	No	No
Triallate (ug/L) - TW1	2018/01/08	<MDL 0.01	230.00	No	No
Trichloroethylene (ug/L) - TW2	2018/01/08	<MDL 0.44	5.00	No	No
Trichloroethylene (ug/L) - TW1	2018/01/08	<MDL 0.44	5.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW2	2018/01/08	<MDL 0.25	5.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW1	2018/01/08	<MDL 0.25	5.00	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW2	2018/01/08	<MDL 0.12	100.00	No	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (ug/L) - TW1	2018/01/08	<MDL 0.12	100.00	No	No
Trifluralin (ug/L) - TW2	2018/01/08	<MDL 0.02	45.00	No	No
Trifluralin (ug/L) - TW1	2018/01/08	<MDL 0.02	45.00	No	No
Vinyl Chloride (ug/L) - TW2	2018/01/08	<MDL 0.17	1.00	No	No
Vinyl Chloride (ug/L) - TW1	2018/01/08	<MDL 0.17	1.00	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2018/01/01		8.65	100.00	No
HAA Total (ug/L) Annual Average - DW	2018/01/01		5.3		N/A