

**Part III Form 2  
Section 11. ANNUAL REPORT.**

<b>Drinking-Water System Number:</b>	<b>220002618</b>
<b>Drinking-Water System Name:</b>	<b>Teeswater Water System</b>
<b>Drinking-Water System Owner:</b>	<b>Municipality Of South Bruce</b>
<b>Drinking-Water System Category:</b>	<b>Large Municipal Residential</b>
<b>Period being reported:</b>	<b>January 1, 2019 to December 31, 2019</b>

<p><b><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></b></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [ ] No [X]</p> <p>Is your annual report available to the public at no charge on a website on the Internet? Yes [X] No [ ]</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;">                 Municipality of South Bruce                  Administration Office                  21 Gordon Street East                  Teeswater, Ontario             </div>	<p><b><u>Complete for all other Categories.</u></b></p> <p>Number of Designated Facilities served:</p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [ ] No [ ]</p> <p>Number of Interested Authorities you report to:</p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [ ] No [ ]</p>
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**Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report**

**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
N/A	N/A

**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

**Indicate how you notified system users that your 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

**Describe your Drinking-Water System**

The Teeswater Water System was established in 1947; however, the original well was replaced in 1996 with a new 330 mm diameter, 85 meter deep drilled well. The artesian aquifer into which the well has been drilled provides enough head that the system does not require a well pump to provide the required water to the pumphouse.

The pumphouse contains 3 pumps to maintain pressure in the distribution system. The pump house has a chlorine board with 2 chemical pumps capable of automatic switch over. There is also a diesel generator with auto transfer, and a diesel pump as a back-up.

Data is stored on the PLC which gathers information as per MOE requirements. This data is printed off daily and kept at the pumphouse. It records chlorine residual, turbidity, flow, pressure and any alarms that occur. It also creates a daily summary sheet and a monthly report.

Prior to entering the distribution system, the water is treated by adding a disinfectant (sodium hypochlorite also known as chlorine) to protect against microbial contaminants. Residual chlorine levels are maintained in the water distribution system to effectively provide disinfection throughout the entire system.

The drilled well supplies the consumers with groundwater. The well is located outside the pumphouse on the east side of County Road #4 (Clinton Street) and south of the Teeswater River in the former Village of Teeswater within the Municipality of South Bruce. The well casing extends approximately 900 mm above ground.

**List all water treatment chemicals used over this reporting period**

Sodium Hypochlorite

**Were any significant expenses incurred to?**

- Install required equipment
- Repair required equipment
- Replace required equipment

**Please provide a brief description and a breakdown of monetary expenses incurred**

**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**

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
Sept. 19, 2019	Received a Total Coliform result of 1 in a 100 mL distribution sample  AWQI # 148136	1	CFU/100 mL	The operator resampled test location, as well as upstream and downstream locations (Clinton St. CO-OP and Hometown Pizza). All samples came back with a 0 reading for both Total Coliform and e. Coli.	Sept. 23, 2019

**Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.**

	# of E.Coli & Total Coliform Samples	Range of E.Coli Results (# - #)	Range of Total Coliform Results (# - #)	# of HPC Samples	Range of HPC Results (# - #)
<b>Raw</b>	53	0 - 0	0 - 0		
<b>Treated (Pumphouse tap point Entry)</b>	53	0 - 0	0 - 0	52	0 - 7
<b>Distribution</b>	161	0 - 0	0 - 1	53	0 - 3

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

	Raw Water (hand held)		Pumphouse		Pumphouse Tap (point of Entry)		Distribution System	
	# grab samples	Range of Results (#-#)	# grab samples	Range of Results (#-#)	# grab samples	Range of Results (#-#)	# grab samples	Range of Results (#-#)
<b>Turbidity</b>	53	0.05-12 NTU	365(Ana.)	0.01-0.14 NTU	53	0.06-0.16 NTU	159	0.04-0.29 NTU
<b>Free Chlorine</b>	N/A	N/A	365 (Ana.)	1.22 - 2.24	282	1.18 - 2.19	470	0.53 - 2.20

<b>(hand held)</b>						
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**NOTE:** Record the unit of measure if it is **not** milligrams per litre.

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

Date of legal instrument issued	Parameter	Date Sampled	Result	Unit of Measure
N/A				

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results (Well #3)**

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
<b>Antimony</b>	Jan. 23, 2018	<0.6	ug/L	No
<b>Arsenic</b>	Jan. 23, 2018	<1.0	ug/L	No
<b>Barium</b>	Jan. 23, 2018	226	ug/L	No
<b>Boron</b>	Jan. 23, 2018	<50	ug/L	No
<b>Cadmium</b>	Jan. 23, 2018	<0.1	ug/L	No
<b>Chromium</b>	Jan. 23, 2018	<1.0	ug/L	No
<b>Lead (Distribution)</b>	Jan. 22, 2019	<1.0	ug/L	No
<b>Mercury</b>	Jan. 23, 2018	<0.1	ug/L	No
<b>Selenium</b>	Jan. 23, 2018	<5.0	ug/L	Yes
<b>Sodium every 5 years next 2021</b>	Jan. 19/16	3.30	mg/L	No
<b>Uranium</b>	Jan. 23, 2018	<5.0	ug/L	No
<b>Fluoride every 5 years next 2021</b>	Jan. 19, 2016 April 19, 2016	0.40 0.40	mg/L	No
<b>Nitrite</b>	<b>1</b> Jan. 22, 2019	<0.01	mg/L	No
	<b>2</b> Apr. 30, 2019	<0.01	mg/L	No
	<b>3</b> Jul. 23, 2019	<0.01	mg/L	No
	<b>4</b> Oct. 22, 2019	<0.01	mg/L	No
<b>Nitrate</b>	<b>1</b> Jan. 22, 2019	1.72	mg/L	No
	<b>2</b> Apr. 30, 2019	1.63	mg/L	No
	<b>3</b> Jul. 23, 2019	1.75	mg/L	No
	<b>4</b> Oct. 22, 2019	1.95	mg/L	No

**Summary of Organic parameters sampled during this reporting period or the most recent sample results (Well #3)**

Parameter	Sample Date	Results Value	Unit of Measure	Exceedance
Alachlor	Jan. 23, 2018	<0.1	ug/L	No
Atrazine + N-dealkylated metabolites	Jan. 23, 2018	<0.2	ug/L	No
Azinphos-methyl	Jan. 23, 2018	<0.1	ug/L	No
Benzene	Jan. 23, 2018	<0.5	ug/L	Yes
Benzo(a)pyrene	Jan. 23, 2018	<0.01	ug/L	No
Bromoxynil	Jan. 23, 2018	<0.2	ug/L	No
Carbaryl	Jan. 23, 2018	<0.2	ug/L	No
Carbofuran	Jan. 23, 2018	<0.2	ug/L	No
Carbon Tetrachloride	Jan. 23, 2018	<0.2	ug/L	No
Chlorpyrifos	Jan. 23, 2018	<0.1	ug/L	No
Diazinon	Jan. 23, 2018	<0.1	ug/L	No
Dicamba	Jan. 23, 2018	<0.2	ug/L	No
1,2-Dichlorobenzene	Jan. 23, 2018	<0.5	ug/L	No
1,4-Dichlorobenzene	Jan. 23, 2018	<0.5	ug/L	No
1,2-Dichloroethane	Jan. 23, 2018	<0.5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan. 23, 2018	<0.5	ug/L	No
Dichloromethane	Jan. 23, 2018	<5.0	ug/L	No
2-4 Dichlorophenol	Jan. 23, 2018	<0.3	ug/L	No
2,4-Dichlorophenylacetic Acid	Jan. 23, 2018	111.2	%	No
2,4-D (2,4-Dichlorophenoxy acetic acid)	Jan. 23, 2018	<0.2	ug/L	No
Diclofop-methyl	Jan. 23, 2018	<0.2	ug/L	No
Dimethoate	Jan. 23, 2018	<0.1	ug/L	No
Diquat	Jan. 23, 2018	<1.0	ug/L	No
Diuron	Jan. 23, 2018	<1.0	ug/L	No
Glyphosate	Jan. 23, 2018	<5.0	ug/L	No
HAA (Haloacetic Acid)	Jan. 22, 2019 Apr. 30, 2019 Jul. 23, 2019 Oct. 22, 2019	<2.20 <2.20 <2.20 <2.20	ug/L	No
Malathion	Jan. 23, 2018	<0.1	ug/L	No
MCPA (2-Methyl-4-chlorophenoxyacetic acid)	Jan. 23, 2018	<0.2	ug/L	No
Metolachlor	Jan. 23, 2018	<0.1	ug/L	No
Metribuzin	Jan. 23, 2018	<0.1	ug/L	No
Monochlorobenzene	Jan. 23, 2018	<0.5	ug/L	No
Paraquat	Jan. 23, 2018	<1.0	ug/L	No
Pentachlorophenol	Jan. 23, 2018	<0.5	ug/L	No
Phorate	Jan. 23, 2018	<0.1	ug/L	No

<b>Picloram</b>	Jan. 23, 2018	<0.2	ug/L	No
<b>Polychlorinated Biphenyls (PCB)</b>	Jan. 23, 2018	<0.035	ug/L	No
<b>Prometryne</b>	Jan. 23, 2018	<0.10	ug/L	No
<b>Simazine</b>	Jan. 23, 2018	<0.1	ug/L	No
<b>THM</b> (Note: show latest annual average)	<b>2019 Average</b>	4.0	ug/L	No
<b>Terbufos</b>	Jan. 23, 2018	<0.2	ug/L	No
<b>Tetrachloroethylene</b>	Jan. 23, 2018	<0.5	ug/L	No
<b>2,3,4,6-Tetrachlorophenol</b>	Jan. 23, 2018	<0.5	ug/L	No
<b>Triallate</b>	Jan. 23, 2018	<0.1	ug/L	No
<b>Trichloroethylene</b>	Jan. 23, 2018	<0.5	ug/L	No
<b>2,4,6-Trichlorophenol</b>	Jan. 23, 2018	<0.5	ug/L	No
<b>Trifluralin</b>	Jan. 23, 2018	<0.1	ug/L	No
<b>Vinyl Chloride</b>	Jan. 23, 2018	<0.2	ug/L	No

\*N.D. = Not Detected

**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