



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	260002551
Drinking-Water System Name:	Bothwell Distribution System
Drinking-Water System Owner:	Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1 - December 31, 2017

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

Complete for all other Categories.

<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 web site 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;"> <p>Chatham-Kent PUC Office 325 Grand Ave., East P.O. Box 1191 Chatham, Ontario N7M 5L8</p> </div>	<p>Number of Designated Facilities served: <input type="text" value="N/A"/></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: <input type="text" value="N/A"/></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>
--	---

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
Subsequent donor back to Southwest Middlesex	

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 Bothwell Distribution System receives treated water from the West Lorne Water System. The source of the raw water is Lake Erie. The water supply system consists of the West Elgin Water Treatment Plant located south of the settlement of Eagle along the Lake Erie shoreline in the Municipality of West Elgin. Water is transported from West Lorne to Newbury, Glencoe, Bothwell, Melbourne and rural areas by the Glencoe pipeline. A pumping station at Glencoe reservoir pumps directly to Mosa Township, Newbury and the Bothwell elevated tower. Water is stored in the Bothwell elevated tower to supply the Bothwell Distribution System.

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

Sodium Hypochlorite

**Were any significant expenses incurred to?** [  ]

- Install required equipment
- [  ] Repair required equipment
- [X] Replace required equipment

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

Flow meter replacement	\$7,388
------------------------	---------



# Ontario Drinking-Water Systems Regulation O. Reg. 170/03

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
Apr 12	Total coliforms in a distribution sample	2	cfu/100mL	Flush, Resample/Retest	April 12
Aug 16	Total coliform in a distribution sample	1	cfu/100mL	Flush, Resample/Retest	Aug 16
Sep 7	Total coliforms in a distribution sample	3	cfu/100mL	Flush, Resample/Retest	Sept 7
Sep 7	Total coliforms in a distribution sample	2	cfu/100mL	Flush, Resample/Retest	Sept 7

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

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Tower Inlet	54	0 – 0	0 – 1	52	10 - 90
Distribution	269	0 - 0	0 – 3	261	10 - 1000

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

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity	N/A	
Chlorine	366	0.32 – 2.01
Fluoride (If the DWS provides fluoridation)	N/A	

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

*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
None				

**Summary of Inorganic parameters tested during this reporting period or the most recent sample results**

Parameter	Sample Date Jan 23/17	Sample Date Apr 10/17	Sample Date Jul 7/17	Sample Date Oct 23/17	Exceedance
Antimony	N/A	N/A	N/A	N/A	NO
Arsenic	N/A	N/A	N/A	N/A	NO
Barium	N/A	N/A	N/A	N/A	NO
Boron	N/A	N/A	N/A	N/A	NO
Cadmium	N/A	N/A	N/A	N/A	NO
Chromium	N/A	N/A	N/A	N/A	NO
*Lead	N/A	N/A	N/A	N/A	NO
Mercury	N/A	N/A	N/A	N/A	NO
Selenium	N/A	N/A	N/A	N/A	NO
Sodium	N/A	N/A	N/A	N/A	NO
<b>Total Ammonia</b>	N/A	N/A	N/A	N/A	NO
<b>Dissolved Organic Carbon</b>	N/A	N/A	N/A	N/A	NO
<b>Turbidity</b>	N/A	N/A	N/A	N/A	NO
<b>Uranium</b>	N/A	N/A	N/A	N/A	NO
<b>Fluoride</b>	N/A	N/A	N/A	N/A	NO
<b>Nitrite</b>	N/A	N/A	N/A	N/A	NO
<b>Nitrate</b>	N/A	N/A	N/A	N/A	NO

\*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential systems

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

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results ug/L (min#) – (max #)	Number of Exceedances / Adverses
Residential	N/A		
Non-Residential	N/A		
Distribution	4	0.5 - 0.5	0



# Ontario Drinking-Water Systems Regulation O. Reg. 170/03

## Summary of Organic parameters sampled during this reporting period or the most recent sample results

Parameter	Sample Date Jan 23/17	Sample Date Apr 10/17	Sample Date Jul 7/17	Sample Date Oct 23/17	Exceedance
Alachlor	N/A	N/A	N/A	N/A	NO
Aldicarb	N/A	N/A	N/A	N/A	NO
Aldrin + Dieldrin	N/A	N/A	N/A	N/A	NO
Atrazine + N-dealkylated metabolites	N/A	N/A	N/A	N/A	NO
Azinphos-methyl	N/A	N/A	N/A	N/A	NO
Bendiocarb	N/A	N/A	N/A	N/A	NO
Benzene	N/A	N/A	N/A	N/A	NO
Benzo(a)pyrene	N/A	N/A	N/A	N/A	NO
Bromoxynil	N/A	N/A	N/A	N/A	NO
Carbaryl	N/A	N/A	N/A	N/A	NO
Carbofuran	N/A	N/A	N/A	N/A	NO
Carbon Tetrachloride	N/A	N/A	N/A	N/A	NO
Chlordane (Total)	N/A	N/A	N/A	N/A	NO
Chlorpyrifos	N/A	N/A	N/A	N/A	NO
Cyanazine	N/A	N/A	N/A	N/A	NO
Diazinon	N/A	N/A	N/A	N/A	NO
Dicamba	N/A	N/A	N/A	N/A	NO
1,2-Dichlorobenzene	N/A	N/A	N/A	N/A	NO
1,4-Dichlorobenzene	N/A	N/A	N/A	N/A	NO
Dichlorodiphenyltrichloroethane (DDT) + metabolites	N/A	N/A	N/A	N/A	NO
1,2-Dichloroethane	N/A	N/A	N/A	N/A	NO
1,1-Dichloroethylene (vinylidene chloride)	N/A	N/A	N/A	N/A	NO
Dichloromethane	N/A	N/A	N/A	N/A	NO
2-4 Dichlorophenol	N/A	N/A	N/A	N/A	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	N/A	N/A	N/A	N/A	NO
Diclofop-methyl	N/A	N/A	N/A	N/A	NO
Dimethoate	N/A	N/A	N/A	N/A	NO
Dinoseb	N/A	N/A	N/A	N/A	NO
Diquat	N/A	N/A	N/A	N/A	NO
Diuron	N/A	N/A	N/A	N/A	NO
Glyphosate	N/A	N/A	N/A	N/A	NO
Haloacetic Acid- ug/L (NOTE: show latest annual average) SS#4- Elm St. & Bothwell Rd.- Jan 23/17 SS#4- Elm St. & Bothwell Rd - Apr 10/17 SS#5- Catherine & Cherry St. W - Jul 17/17 SS#1-Peter St. & Zone Rd. 9 - Oct 23/17 HAA Annual Average	28	24	28	50  32.5	NO
Heptachlor + Heptachlor Epoxide	N/A	N/A	N/A	N/A	NO
Lindane (Total)	N/A	N/A	N/A	N/A	NO
Malathion	N/A	N/A	N/A	N/A	NO



# Ontario Drinking-Water Systems Regulation O. Reg. 170/03

Methoxychlor	N/A	N/A	N/A	N/A	NO
Metolachlor	N/A	N/A	N/A	N/A	NO
Metribuzin	N/A	N/A	N/A	N/A	NO
Monochlorobenzene	N/A	N/A	N/A	N/A	NO
Paraquat	N/A	N/A	N/A	N/A	NO
Parathion	N/A	N/A	N/A	N/A	NO
Pentachlorophenol	N/A	N/A	N/A	N/A	NO
Phorate	N/A	N/A	N/A	N/A	NO
Picloram	N/A	N/A	N/A	N/A	NO
Polychlorinated Biphenyls(PCB)	N/A	N/A	N/A	N/A	NO
Prometryne	N/A	N/A	N/A	N/A	NO
Simazine	N/A	N/A	N/A	N/A	NO
THM – Jan., April, July, Oct. – ug/L	62.5	52.7	72.5	116	NO
THM Running Annual Average – ug/L	92.6	81.4	62.6	75.9	
Temephos	N/A	N/A	N/A	N/A	NO
Terbufos	N/A	N/A	N/A	N/A	NO
Tetrachloroethylene	N/A	N/A	N/A	N/A	NO
2,3,4,6-Tetrachlorophenol	N/A	N/A	N/A	N/A	NO
Triallate	N/A	N/A	N/A	N/A	NO
Trichloroethylene	N/A	N/A	N/A	N/A	NO
2,4,6-Trichlorophenol	N/A	N/A	N/A	N/A	NO
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	N/A	N/A	N/A	N/A	NO
Trifluralin	N/A	N/A	N/A	N/A	NO
Vinyl Chloride	N/A	N/A	N/A	N/A	NO



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

<b>Parameter</b>	<b>Result Value</b>	<b>Unit of Measure</b>	<b>Date of Sample</b>
THM	75.9	ug/L	Running Annual Average

**Summary of additional voluntary testing and sampling on treated water.**

<b>Sample Date</b>	<b>Parameter</b>	<b>Result</b>	<b>Unit of Measure</b>
None			