



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, 2018

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>
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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

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
- Replace required equipment

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

Flow Meter Replacement at Trillium & Haggerty	\$3,350
Chlorine Weigh Scale Display Replacement	2,000
Duck Bill Installation on Tower Overflow	1,400
Chlorine Weigh Scale Replacement	800
New Tower Level Pressure Meter	3,300
Cl ₂ Pump Control Logic Update	100
AIT 801 pH Probe Replacement	250



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 5	Loss of Pressure in the Donor System	<20	psi	Sample & Test	Sept 5 & 6
Sept 22	Free Chlorine >5.0 mg/L in the Distribution System	>5.0	mg/L	Flush, revise SCADA logic	Sept 22 & 24

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 - 0	52	10 - 90
Distribution	266	0 - 0	0 - 0	262	10 - 1600

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	362	0.33 – 2.03
Fluoride (If the DWS provides fluoridation)	N/A	

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

N/A denotes does not apply.

*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

The following parameters are sampled by the donor system.	Sample Date	Sample Date	Sample Date	Sample Date	Exceedance
Antimony					
Arsenic					
Barium					
Boron					
Cadmium					
Chromium					
*Lead					
Mercury					
Selenium					
Sodium					
Total Ammonia					
Dissolved Organic Carbon					
Turbidity					
Uranium					
Fluoride					
Nitrite					
Nitrate					

*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	0	N/A	N/A
Non-Residential	0	N/A	N/A
Distribution	4	<0.50 - <0.50	0



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

The following parameters are sampled by the donor system with the exception of HAAs and THMs.	Sample Date January 15	Sample Date April 16	Sample Date July 16	Sample Date October 15	Exceedance
Alachlor					
Aldicarb					
Aldrin + Dieldrin					
Atrazine + N-dealkylated metabolites					
Azinphos-methyl					
Bendiocarb					
Benzene					
Benzo(a)pyrene					
Bromoxynil					
Carbaryl					
Carbofuran					
Carbon Tetrachloride					
Chlordane (Total)					
Chlorpyrifos					
Cyanazine					
Diazinon					
Dicamba					
1,2-Dichlorobenzene					
1,4-Dichlorobenzene					
Dichlorodiphenyltrichloroethane (DDT) + metabolites					
1,2-Dichloroethane					
1,1-Dichloroethylene (vinylidene chloride)					
Dichloromethane					
2,4 Dichlorophenol					
2,4-Dichlorophenoxy acetic acid (2,4-D)					
Diclofop-methyl					
Dimethoate					
Dinoseb					
Diquat					
Diuron					
Glyphosate					
Haloactic Acid- ug/L					None
HAA Average: 29.5	23	31	24	40	
Heptachlor + Heptachlor Epoxide					
Lindane (Total)					
Malathion					
Methoxychlor					
Metolachlor					



Metribuzin					
Monochlorobenzene					
Paraquat					
Parathion					
Pentachlorophenol					
Phorate					
Picloram					
Polychlorinated Biphenyls(PCB)					
Prometryne					
Simazine					
THM – ug/L Running Annual Average 81.4 ug/L	51.9	53.9	86.7	133	None
Temephos					
Terbufos					
Tetrachloroethylene					
2,3,4,6-Tetrachlorophenol					
Triallate					
Trichloroethylene					
2,4,6-Trichlorophenol					
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)					
Trifluralin					
Vinyl Chloride					

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
THM	81.4	ug/L	Running Annual Average

Summary of additional voluntary testing and sampling on treated water.

Sample Date	Parameter	Result	Unit of Measure
None			