



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	220003369
Drinking-Water System Name:	Ridgetown Drinking Water System
Drinking-Water System Owner:	Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January - December 2018

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></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 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 E Box 1191 Chatham, ON N7M 5L8</p> </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text"/></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"/></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
None	

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

Ground water for the Ridgetown Drinking Water System is obtained through seven deep wells. The drinking water system is comprised of two treatment facilities, one located on Erie Street South and the other located on Scane Road.

The three wells, Well #1- Colby, Well #2 - Hitch, and Well #3A- Harris, supply raw water from submersible well pumps through a common pipe to the treatment system at the Erie Street site. Water from these wells is disinfected with sodium hypochlorite and then passed through a cascade aerator for methane gas reduction before being discharged into reservoirs on site. Treated water from the North and South reservoirs is subsequently discharged to the distribution system by high lift pumps.

The four Scane Wells, S1, S4, S5, and S7, supply raw water from submersible well pumps through a common pipe to the treatment system at the Scane Road site. Water from these wells is disinfected with sodium hypochlorite and then passed through a cascade aerator for methane gas reduction before being discharged into the reservoir on site. Treated water from the reservoir is subsequently discharged to the distribution system by high lift pumps.

The distribution system for the Ridgetown Drinking Water System also includes an elevated tank for the storage and supply of water to the system as well as the Highgate Reservoir and Booster Pumping Station.

Fluoride is naturally occurring in the source water in concentrations greater than the 1.5 mg/L Ontario Drinking Water Quality Standard. Sodium is also naturally occurring in the source water in concentrations greater than the 20 mg/L aesthetic objective.

List all water treatment chemicals used over this reporting period

1. 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

Sodium Hypochlorite	\$	8,350
Genset Testing		3,000
Analyser Verification		2,600
Flowmeter Calibration		7,660
S1 and S5 Flowmeter Replacements		7,000
SCADA & Communications Troubleshooting		1,995

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 21	POE Turbidity > 5	5	NTU	Surge valve repairs	Apr 21
Apr 30	Distribution System Pressure	<20	PSI	30 sec pump start delay removed	May 7
May 7	Distribution System Pressure	0	PSI	30 sec pump start delay removed	May 7
Sept 20	Distribution System Pressure	<20	PSI	Self corrected a few seconds into hydrant flow testing.	Sept 20

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 #)
Raw	349	0 – 0	0 – 4	0	N/A
Treated	104	0 – 0	0 – 0	104	10 – 50
Distribution	285	0 – 0	0 – 0	269	10 – 80

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 (Raw)	308	0.150 – 0.900 NTU
Chlorine (POE)	8760	0.34 – 3.40 mg/L
Fluoride (If the DWS provides fluoridation)	Fluoride Naturally Occurring	

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

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 2018	Result Erie	Result Scane	Unit of Measure
June 26, 2003 letter from C-K Health Unit	Point of Entry - Fluoride	Jan 15, 2018	1.8	1.8	mg/L

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

Parameter	Sample Date	Result Value Erie	Result Value Scane	Unit of Measure	Exceedance
Antimony	Jan 11, 2016	<0.50	<0.50	ug/L	No
Arsenic	Jan 11, 2016	<1.0	<1.0	ug/L	No
Barium	Jan 11, 2016	96	180	ug/L	No
Boron	Jan 11, 2016	1000	980	ug/L	No
Cadmium	Jan 11, 2016	<0.10	<0.10	ug/L	No
Chromium	Jan 11, 2016	<5.0	<5.0	ug/L	No
*Lead	See Schedule 15.1 Summary				
Mercury	Jan 11, 2016	<0.10	<0.10	ug/L	No
Selenium	Jan 11, 2016	<2.0	<2.0	ug/L	No
Sodium	Jan 15, 2018	67	71	mg/L	Yes - Reported Jan 16, 2015 AWQI # 122310
Uranium	Jan 11, 2016	<0.10	<0.10	ug/L	No
Fluoride	Jan 15, 2018	1.8	1.8	mg/L	Yes - Reported Aug 20, 2013 AWQI # 113497
Nitrite	October 15, 2018	<0.010	<0.010	mg/L	No
Nitrate	October 15, 2018	<0.10	<0.10	mg/L	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	0		
Non-Residential	0		
Distribution	8	<0.50 – 0.52	0

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

Parameter	Sample Date	Result Value Erie	Result Value Scane	Unit of Measure	Exceedance
Alachlor	Jan 11, 2016	<0.5	<0.5	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 11, 2016	<1.0	<1.0	ug/L	No
Azinphos-methyl	Jan 11, 2016	<2	<2	ug/L	No
Benzene	Jan 11, 2016	<0.10	<0.10	ug/L	No
Benzo(a)pyrene	Jan 11, 2016	<0.009	<0.009	ug/L	No
Bromoxynil	Jan 11, 2016	<0.5	<0.5	ug/L	No
Carbaryl	Jan 11, 2016	<5	<5	ug/L	No
Carbofuran	Jan 11, 2016	<5	<5	ug/L	No
Carbon Tetrachloride	Jan 11, 2016	<0.10	<0.10	ug/L	No
Chlorpyrifos	Jan 11, 2016	<1	<1	ug/L	No
Diazinon	Jan 11, 2016	<1	<1	ug/L	No
Dicamba	Jan 11, 2016	<1	<1	ug/L	No
1,2-Dichlorobenzene	Jan 11, 2016	<0.20	<0.20	ug/L	No
1,4-Dichlorobenzene	Jan 11, 2016	<0.20	<0.20	ug/L	No
1,2-Dichloroethane	Jan 11, 2016	<0.20	<0.20	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 11, 2016	<0.10	<0.10	ug/L	No
Dichloromethane	Jan 11, 2016	<0.50	<0.50	ug/L	No
2-4 Dichlorophenol	Jan 11, 2016	<0.25	<0.25	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan 11, 2016	<1	<1	ug/L	No
Diclofop-methyl	Jan 11, 2016	<0.9	<0.9	ug/L	No
Dimethoate	Jan 11, 2016	<2.5	<2.5	ug/L	No
Diquat	Jan 11, 2016	<7	<7	ug/L	No
Diuron	Jan 11, 2016	<10	<10	ug/L	No
Glyphosate	Jan 11, 2016	<10	<10	ug/L	No

Haloacetic Acids (Total) (NOTE: show latest annual average) 2018 - Distribution	Jan 15, 2018	<5.0		ug/L	No	
	Apr 16, 2018	<5.0				
	Jul 16, 2018	<5.0				
	Jul 16, 2018	5.9				
	Oct 15, 2018	<5.0				
	Oct 15, 2018	6.1				
	2018 Avg	5.25				
Metolachlor	Jan 11, 2016	<0.5	<0.5	ug/L	No	
2 Methal-4-chlorophenoxyacetic acid (MCPA)	Jan.11, 2016	<0.00012	<0.00012	mg/L	No	
Metribuzin	Jan 11, 2016	<5	<5	ug/L	No	
Monochlorobenzene	Jan 11, 2016	<0.10	<0.10	ug/L	No	
Paraquat	Jan 11, 2016	<1	<1	ug/L	No	
Pentachlorophenol	Jan 11, 2016	<0.5	<0.5	ug/L	No	
Phorate	Jan 11, 2016	<0.5	<0.5	ug/L	No	
Picloram	Jan 11, 2016	<5	<5	ug/L	No	
Polychlorinated Biphenyls(PCB)	Jan 11, 2016	<0.05	<0.05	ug/L	No	
Prometryne	Jan 11, 2016	<0.25	<0.25	ug/L	No	
Simazine	Jan 11, 2016	<1	<1	ug/L	No	
THM (NOTE: show latest annual average) 2018 - Distribution	Jan 15, 2018	32.3		ug/L	No	
	Apr 16, 2018	42.25				
	Jul 16, 2018	55.6				
	Oct 15, 2018	68.3				
		2018 Avg	49.6			
Terbufos	Jan 11, 2016	<0.5	<0.5	ug/L	No	
Tetrachloroethylene	Jan 11, 2016	<0.10	<0.10	ug/L	No	
2,3,4,6-Tetrachlorophenol	Jan 11, 2016	<0.5	<0.5	ug/L	No	
Triallate	Jan 11, 2016	<1	<1	ug/L	No	
Trichloroethylene	Jan 11, 2016	<0.10	<0.10	ug/L	No	
2,4,6-Trichlorophenol	Jan 11, 2016	<0.5	<0.5	ug/L	No	
Trifluralin	Jan 11, 2016	<1	<1	ug/L	No	
Vinyl Chloride	Jan 11, 2016	<0.20	<0.20	ug/L	No	

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 Erie	Result Value Scane	Unit of Measure	Date of Sample
Fluoride – POE	1.8	1.8	mg/L	Jan 15, 2018



Summary of additional voluntary sampling and testing during this reporting period.

Parameter	Result Value							Unit of Measure	Date of Sample
	Colby Well # 1	Hitch Well # 2	Harris Well # 3A	Scane Well # 4	Scane Well #5	Scane Well # 7	Scane Well #1		
Nitrite - Raw	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	mg/L	Jan 15, 2018
Nitrate - Raw	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		Jan 15, 2018
Nitrite - Raw	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		Apr 16, 2018
Nitrate - Raw	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		Apr 16, 2018
Nitrite - Raw	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		Jul 16, 2018
Nitrate - Raw	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		Jul 16, 2018
Nitrite - Raw	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010		Oct. 15, 2018
Nitrate - Raw	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10		Oct. 15, 2018