



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	260024999
Drinking-Water System Name:	South Chatham-Kent Drinking Water System
Drinking-Water System Owner:	Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January - December 2015

<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 [X] No []</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>
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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
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

Surface water for the South Chatham-Kent Drinking Water System is obtained from Lake Erie via an intake pipe and a raw water pumping station. The Kent County Raw Water Pumping Station supplies both the South Chatham-Kent Water Treatment Plant and the Chatham Water Treatment Plant with raw water. Raw water from the pumping station is pumped to the South Chatham-Kent Water Treatment Plant and is passed through microstrainers for fine particulate removal. Filtration is then provided by a dual train membrane filtration system equipped with hollow fiber membrane modules for 0.2 micron removal. Filtered water from the membrane units is then passed through granular activated carbon filters for taste and odour control. Filtered water is then disinfected with chlorine gas. Hydrofluosilicic acid is also added as an aid in the prevention of tooth decay. Filtered water is then discharged to the contact chambers and subsequently to the high lift pump well. Treated water from the high lift pump well is discharged by the high lift pumps to the distribution system. The distribution system for the South Chatham-Kent Drinking Water System also includes a reservoir/booster station and an elevated tank, both located in Blenheim, for the storage and supply of water to the system.

List all water treatment chemicals used over this reporting period

1. Chlorine Gas
2. Hydrofluosilicic Acid



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

Module Membrane Replacement.....	\$138,000.00
SCADA Upgrade.....	\$53,000.00
Roofing Repair.....	\$9,000.00
Storage Barn Upgrades.....	\$7,000.00
UV Analyzer.....	\$2,500.00

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
July 27, 2015	Total Coliform in a Dist. sample	8	cfu/100 ml	Resample/retest	July 28, 2015

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	52	(0) – (24)	(0) – (1500)	NA	NA
Treated	52	(0) – (0)	(0) – (0)	52	(<10) – (50)
Distribution	468	(0) – (0)	(0) – (8)	156	(<10) – (140)

* NDOGN – No Data Overgrown With Non Target Organisms

** NDOGT – No Data Overgrown With Target Organisms

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	8760	(0.005) – (0.923) NTU
Chlorine	8760	(1.20) – (3.31) mg/L
Fluoride (If the DWS provides fluoridation)	8760	(0.62) – (0.76) mg/L

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 2015	Result	Unit of Measure
Municipal Drinking Water Licence # 027-102 Table 3 and Table 7 Limit: 25 mg/L	Residue Management Suspended Solids	Jan 26, 2015	1	mg/L
		Feb 23, 2015	1	
		Mar 30, 2015	1	
		Apr 27, 2015	2	
		May 25, 2015	1	
		Jun 29, 2015	39	
		Jul 27, 2015	7	
		Aug 31, 2015	14	
		Sep 28, 2015	6	
		Oct 26, 2015	51	
		Nov 30, 2015	110	
		Dec 21, 2015	1	

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Jan 13, 2015	<0.50	ug/L	No
Arsenic	Jan 13, 2015	<1.0	ug/L	No
Barium	Jan 13, 2015	16	ug/L	No
Boron	Jan 13, 2015	37	ug/L	No
Cadmium	Jan 13, 2015	<0.10	ug/L	No
Chromium	Jan 13, 2015	<5.0	ug/L	No
*Lead	See Schedule 15.1 Summary			
Mercury	Jan 13, 2015	<0.10	ug/L	No
Selenium	Jan 13, 2015	<2.0	ug/L	No
Sodium	Jan 13, 2015	9.7	mg/L	No
Uranium	Jan 13, 2015	0.40	ug/L	No
Fluoride	Continuous Monitoring Required: See Operational Section			
Nitrite	Oct 5, 2015	<0.010	mg/L	No
Nitrate	Oct 5, 2015	0.17	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	NA		
Non-Residential	NA		
Distribution	8	(<0.50) – (4.7)	0

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Jan 13, 2015	<0.50	ug/L	No
Aldicarb	Jan 13, 2015	<5.0	ug/L	No
Aldrin + Dieldrin	Jan 13, 2015	<0.006	ug/L	No
Atrazine + N-dealkylated metabolites	Jan 13, 2015	<1.0	ug/L	No
Azinphos-methyl	Jan 13, 2015	<2	ug/L	No
Bendiocarb	Jan 13, 2015	<2.0	ug/L	No
Benzene	Jan 13, 2015	<0.10	ug/L	No
Benzo(a)pyrene	Jan 13, 2015	<0.0090	ug/L	No
Bromoxynil	Jan 13, 2015	<0.50	ug/L	No
Carbaryl	Jan 13, 2015	<5.0	ug/L	No
Carbofuran	Jan 13, 2015	<5.0	ug/L	No
Carbon Tetrachloride	Jan 13, 2015	<0.10	ug/L	No
Chlordane (Total)	Jan 13, 2015	<0.006	ug/L	No
Chlorpyrifos	Jan 13, 2015	<1.0	ug/L	No
Cyanazine	Jan 13, 2015	<1.0	ug/L	No
Diazinon	Jan 13, 2015	<1.0	ug/L	No
Dicamba	Jan 13, 2015	<1.0	ug/L	No
1,2-Dichlorobenzene	Jan 13, 2015	<0.20	ug/L	No
1,4-Dichlorobenzene	Jan 13, 2015	<0.20	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Jan 13, 2015	<0.006	ug/L	No
1,2-Dichloroethane	Jan 13, 2015	<0.20	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jan 13, 2015	<0.10	ug/L	No
Dichloromethane	Jan 13, 2015	<0.50	ug/L	No
2-4 Dichlorophenol	Jan 13, 2015	<0.50	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jan 13, 2015	<1.0	ug/L	No
Diclofop-methyl	Jan 13, 2015	<0.90	ug/L	No
Dimethoate	Jan 13, 2015	<2.5	ug/L	No
Dinoseb	Jan 13, 2015	<1.0	ug/L	No
Diquat	Jan 13, 2015	<7	ug/L	No
Diuron	Jan 13, 2015	<10	ug/L	No
Glyphosate	Jan 13, 2015	<10	ug/L	No
Heptachlor + Heptachlor Epoxide	Jan 13, 2015	<0.006	ug/L	No
Lindane (Total)	Jan 13, 2015	<0.006	ug/L	No
Malathion	Jan 13, 2015	<5.0	ug/L	No
Methoxychlor	Jan 13, 2015	<0.02	ug/L	No
Metolachlor	Jan 13, 2015	<0.50	ug/L	No

Metribuzin	Jan 13, 2015	<5.0	ug/L	No
Monochlorobenzene	Jan 13, 2015	<0.10	ug/L	No
Paraquat	Jan 13, 2015	<1	ug/L	No
Parathion	Jan 13, 2015	<1.0	ug/L	No
Pentachlorophenol	Jan 13, 2015	<0.50	ug/L	No
Phorate	Jan 13, 2015	<0.50	ug/L	No
Picloram	Jan 13, 2015	<5.0	ug/L	No
Polychlorinated Biphenyls(PCB)	Jan 13, 2015	<0.05	ug/L	No
Prometryne	Jan 13, 2015	<0.25	ug/L	No
Simazine	Jan 13, 2015	<1.0	ug/L	No
THM (NOTE: show latest annual average) 2015 POE: Jan 13, 2015 – 10.6 ug/L	Jan 13, 2015 Apr 13, 2015 Jul 13, 2015 Oct 5, 2015 2015 Avg	23.3 60.2 28.0 41.1 38.2	ug/L	No
Temephos	Jan 13, 2015	<10	ug/L	No
Terbufos	Jan 13, 2015	<0.50	ug/L	No
Tetrachloroethylene	Jan 13, 2015	<0.10	ug/L	No
2,3,4,6-Tetrachlorophenol	Jan 13, 2015	<0.50	ug/L	No
Triallate	Jan 13, 2015	<1.0	ug/L	No
Trichloroethylene	Jan 13, 2015	<0.10	ug/L	No
2,4,6-Trichlorophenol	Jan 13, 2015	<0.50	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Jan 13, 2015	<1.0	ug/L	No
Trifluralin	Jan 13, 2015	<1.0	ug/L	No
Vinyl Chloride	Jan 13, 2015	<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	Unit of Measure	Date of Sample
None			

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

Parameter	Result Value	Unit of Measure	Date of Sample
Microcystin - Raw	0.23	ug/L	Jun 15, 2015
Microcystin – Point of Entry	0.23	ug/L	Jun 15, 2015
Microcystin - Raw	<0.14	ug/L	Jun 22, 2015
Microcystin – Point of Entry	<0.14	ug/L	Jun 22, 2015
Microcystin - Raw	<0.14	ug/L	Jun 29, 2015
Microcystin – Point of Entry	<0.14	ug/L	Jun 29, 2015
Microcystin - Raw	<0.14	ug/L	Jul 6, 2015
Microcystin – Point of Entry	<0.14	ug/L	Jul 6, 2015
Microcystin - Raw	<0.14	ug/L	Jul 13, 2015
Microcystin – Point of Entry	<0.14	ug/L	Jul 13, 2015
Microcystin - Raw	<0.14	ug/L	Jul 20, 2015
Microcystin – Point of Entry	<0.14	ug/L	Jul 20, 2015
Microcystin - Raw	<0.14	ug/L	Jul 27, 2015
Microcystin – Point of Entry	<0.14	ug/L	Jul 27, 2015
Microcystin - Raw	<0.14	ug/L	Aug 4, 2015
Microcystin – Point of Entry	0.17	ug/L	Aug 4, 2015
Microcystin - Raw	<0.14	ug/L	Aug 10, 2015
Microcystin – Point of Entry	<0.14	ug/L	Aug 10, 2015
Microcystin - Raw	<0.14	ug/L	Aug 17, 2015



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

Microcystin – Point of Entry	<0.14	ug/L	Aug 17, 2015
Microcystin - Raw	0.19	ug/L	Aug 24, 2015
Microcystin – Point of Entry	<0.14	ug/L	Aug 24, 2015
Microcystin - Raw	<0.14	ug/L	Aug 31, 2015
Microcystin – Point of Entry	<0.14	ug/L	Aug 31, 2015
Microcystin - Raw	<0.14	ug/L	Sep 8, 2015
Microcystin – Point of Entry	0.17	ug/L	Sep 8, 2015
Microcystin - Raw	<0.14	ug/L	Sep 14, 2015
Microcystin – Point of Entry	<0.14	ug/L	Sep 14, 2015
Microcystin - Raw	<0.14	ug/L	Sep 21, 2015
Microcystin – Point of Entry	<0.14	ug/L	Sep 21, 2015
Microcystin - Raw	<0.14	ug/L	Sep 28, 2015
Microcystin – Point of Entry	<0.14	ug/L	Sep 28, 2015
Microcystin - Raw	0.29	ug/L	Oct 5, 2015
Microcystin – Point of Entry	<0.14	ug/L	Oct 5, 2015
Microcystin - Raw	<0.14	ug/L	Oct 13, 2015
Microcystin – Point of Entry	<0.14	ug/L	Oct 13, 2015
Microcystin - Raw	<0.14	ug/L	Oct 19, 2015
Microcystin – Point of Entry	<0.14	ug/L	Oct 19, 2015
Microcystin - Raw	0.26	ug/L	Oct 26, 2015
Microcystin – Point of Entry	<0.14	ug/L	Oct 26, 2015
Microcystin - Raw	<0.14	ug/L	Nov 2, 2015
Microcystin – Point of Entry	Bottle broken in transit	ug/L	Nov 2, 2015
Microcystin - Raw	<0.14	ug/L	Nov 9, 2015
Microcystin – Point of Entry	<0.14	ug/L	Nov 9, 2015
Microcystin - Raw	<0.14	ug/L	Nov 16, 2015
Microcystin – Point of Entry	<0.14	ug/L	Nov 16, 2015
Microcystin - Raw	<0.14	ug/L	Nov 23, 2015
Microcystin – Point of Entry	<0.14	ug/L	Nov 23, 2015
Microcystin - Raw	<0.14	ug/L	Nov 30, 2015
Microcystin – Point of Entry	<0.14	ug/L	Nov 30, 2015