



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	260015587
Drinking-Water System Name:	Highgate 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 [] 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> <table border="1" style="width: 100%;"> <tr> <td>Chatham-Kent PUC Office 325 Grand Ave E Box 1191 Chatham, ON N7M 5L8</td> </tr> </table>	Chatham-Kent PUC Office 325 Grand Ave E Box 1191 Chatham, ON N7M 5L8	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <table border="1" style="width: 100%;"> <tr> <td style="height: 20px;"></td> </tr> </table> <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> <table border="1" style="width: 100%;"> <tr> <td style="width: 100px; height: 20px;"></td> </tr> </table> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>		
Chatham-Kent PUC Office 325 Grand Ave E Box 1191 Chatham, ON N7M 5L8				

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 Highgate Drinking Water System is obtained from two deep wells. The raw water is pumped by the submersible well pumps and is filtered through a five micron pre-filter, followed by filtration through a one micron post-filter. The filtered water is disinfected with sodium hypochlorite before being stored in ten pressure tanks with a common header pipe. Upon exiting the pressure tanks, the filtered water is disinfected once more, this time by an ultraviolet system. The disinfected water then passes through a static mixer before entering the contact chamber. The treated water subsequently exits the contact chamber and enters the distribution system.

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

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

UV Rebuild	\$ 3,085
Radio Replacements.....	5,000



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
Jan 16, 2015	Treated POE - Fluoride	1.9	mg/L	Resample/Re-test	Jan 16, 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	104	(0) – (0)	(0) – (1)	NA	NA
Treated	52	(0) – (0)	(0) – (0)	52	(<10) – (30)
Distribution	122	(0) – (0)	(0) – (0)	52	(<10) – (120)

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	101	(0.096) – (0.797) NTU
Turbidity – Filtrate	365	(0.084) – (0.196) NTU
Chlorine	8760	(0.29) – (4.27) mg/L
Fluoride (If the DWS provides fluoridation)	Fluoride is Naturally Occurring	

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 Well 1	Result Well 2	Unit of Measure
Municipal Drinking Water License # 027-103 Table 6 Quarterly	Raw - Organic Nitrogen	Jan 12, 2015	<0.1	<0.1	mg/L
		Apr 13, 2015	0.2	0.2	
		Jul 13, 2015	<0.1	<0.1	
		Oct 5, 2015	<0.1	<0.1	
as above Table 6 Quarterly	Raw - Methane	Jan 12, 2015	43	27	L/m3
		Apr 13, 2015	24	27	
		Jul 13, 2015	34	37	
		Oct 5, 2015	41	26	
as above Table 5 Quarterly Limit: 1.5 mg/L	Point of Entry - Fluoride	Jan 12, 2015	1.9		mg/L
		Apr 13, 2015	1.9		
		Jul 13, 2015	1.8		
		Oct 5, 2015	1.7		
as above Table 5 Quarterly Limit: 20 mg/L	Point of Entry - Sodium	Jan 12, 2015	96		mg/L
		Apr 13, 2015	83		
		Jul 13, 2015	93		
		Oct 5, 2015	110		

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	Jul 2, 2013	0.58	ug/L	No
Arsenic	Jul 2, 2013	<1.0	ug/L	No
Barium	Jul 2, 2013	310	ug/L	No
Boron	Jul 2, 2013	720	ug/L	No
Cadmium	Jul 2, 2013	<0.10	ug/L	No
Chromium	Jul 2, 2013	<5.0	ug/L	No
Lead	See Schedule 15.1 Summary			
Mercury	Jul 2, 2013	<0.10	mg/L	No
Selenium	Jul 2, 2013	<2.0	ug/L	No
Sodium	Oct 5, 2015	110	mg/L	Yes - Reported Jul 18, 2014 AWQI # 118989
Uranium	Jul 2, 2013	<0.10	ug/L	No
Fluoride	Oct 5, 2015	1.7	mg/L	Yes - Reported Jan 16, 2015 AWQI # 122303
Nitrite	Oct 5, 2015	<0.010	mg/L	No
Nitrate	Oct 5, 2015	<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	NA		0
Non-Residential	NA		0
Distribution	0	0	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	Jul 2, 2013	<0.50	ug/L	No
Aldicarb	Jul 2, 2013	<5.0	ug/L	No
Aldrin + Dieldrin	Jul 2, 2013	<0.01	ug/L	No
Atrazine + N-dealkylated metabolites	Jul 2, 2013	<1.0	ug/L	No
Azinphos-methyl	Jul 2, 2013	<2	ug/L	No
Bendiocarb	Jul 2, 2013	<2.0	ug/L	No
Benzene	Jul 2, 2013	<0.10	ug/L	No
Benzo(a)pyrene	Jul 2, 2013	<0.0090	ug/L	No
Bromoxynil	Jul 2, 2013	<0.50	ug/L	No
Carbaryl	Jul 2, 2013	<5.0	ug/L	No
Carbofuran	Jul 2, 2013	<5.0	ug/L	No
Carbon Tetrachloride	Jul 2, 2013	<0.10	ug/L	No
Chlordane (Total)	Jul 2, 2013	<0.01	ug/L	No
Chlorpyrifos	Jul 2, 2013	<1.0	ug/L	No
Cyanazine	Jul 2, 2013	<1.0	ug/L	No
Diazinon	Jul 2, 2013	<1.0	ug/L	No
Dicamba	Jul 2, 2013	<1.0	ug/L	No
1,2-Dichlorobenzene	Jul 2, 2013	<0.20	ug/L	No
1,4-Dichlorobenzene	Jul 2, 2013	<0.20	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Jul 2, 2013	<0.02	ug/L	No
1,2-Dichloroethane	Jul 2, 2013	<0.20	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Jul 2, 2013	<0.10	ug/L	No
Dichloromethane	Jul 2, 2013	<0.50	ug/L	No
2-4 Dichlorophenol	Jul 2, 2013	<0.50	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Jul 2, 2013	<1.0	ug/L	No
Diclofop-methyl	Jul 2, 2013	<0.90	ug/L	No
Dimethoate	Jul 2, 2013	<2.5	ug/L	No
Dinoseb	Jul 2, 2013	<1.0	ug/L	No
Diquat	Jul 2, 2013	<7	ug/L	No
Diuron	Jul 2, 2013	<10	ug/L	No
Glyphosate	Jul 2, 2013	<10	ug/L	No
Heptachlor + Heptachlor Epoxide	Jul 2, 2013	<0.01	ug/L	No
Lindane (Total)	Jul 2, 2013	<0.006	ug/L	No
Malathion	Jul 2, 2013	<5.0	ug/L	No

Methoxychlor	Jul 2, 2013	<0.02	ug/L	No
Metolachlor	Jul 2, 2013	<0.50	ug/L	No
Metribuzin	Jul 2, 2013	<5.0	ug/L	No
Monochlorobenzene	Jul 2, 2013	<0.10	ug/L	No
Paraquat	Jul 2, 2013	<1	ug/L	No
Parathion	Jul 2, 2013	<1.0	ug/L	No
Pentachlorophenol	Jul 2, 2013	<0.50	ug/L	No
Phorate	Jul 2, 2013	<0.50	ug/L	No
Picloram	Jul 2, 2013	<5.0	ug/L	No
Polychlorinated Biphenyls(PCB)	Jul 2, 2013	<0.05	ug/L	No
Prometryne	Jul 2, 2013	<0.25	ug/L	No
Simazine	Jul 2, 2013	<1.0	ug/L	No
THM (NOTE: show latest annual average) 2013 POE: Jul 2, 2013 – 9.23 ug/L	Jan 12, 2015 Apr 13, 2015 Jul 13, 2015 Oct 5, 2015 2015 Avg	49.1 57.6 88.4 104 74.8	ug/L	Yes - Reported Oct 9, 2014 AWQI #120898
Temephos	Jul 2, 2013	<10	ug/L	No
Terbufos	Jul 2, 2013	<0.50	ug/L	No
Tetrachloroethylene	Jul 2, 2013	<0.10	ug/L	No
2,3,4,6-Tetrachlorophenol	Jul 2, 2013	<0.50	ug/L	No
Triallate	Jul 2, 2013	<1.0	ug/L	No
Trichloroethylene	Jul 2, 2013	<0.10	ug/L	No
2,4,6-Trichlorophenol	Jul 2, 2013	<0.50	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Jul 2, 2013	<1.0	ug/L	No
Trifluralin	Jul 2, 2013	<1.0	ug/L	No
Vinyl Chloride	Jul 2, 2013	<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
Fluoride – POE	1.9	mg/L	Jan 12, 2015
Fluoride – POE	1.9	mg/L	Jan 16, 2015
Fluoride – POE	1.9	mg/L	Apr 13, 2015
Fluoride – POE	1.8	mg/L	Jul 13, 2015
Fluoride – POE	1.7	mg/L	Oct 5, 2015
THM - Distribution	74.8	ug/L	Running Average

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

Parameter	Result Value	Unit of Measure	Date of Sample
None			