



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	260015587
Drinking-Water System Name:	Highgate Water Supply System
Drinking-Water System Owner:	Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January - December 2009

<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>
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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

The Highgate Water Supply System became operational on October 1, 2003 and is located at the same site as the former Highgate Pure Water System. This system consists of 2 raw water wells which pump the water through 5 micron and 1 micron pleated filters. The water then enters into 10 pressure tanks. Along with disinfecting the water with Sodium Hypochlorite, the water is also disinfected with an ultraviolet system. The water then flows into the 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

Cartridge Filters (1 & 5 Micron)	\$2,136
UV Bulb & Sleeve Replacements	\$5,332
Well # 1 Inspection / Well Casing Thickness Test	\$5,709
Back-up UPS for UV # 2 Unit	\$1,446
Softstart for Well # 2 Motor	\$2,616

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 9	Loss of U.V. disinfection			Disinfectant restored	Jan 9
March 1	CT not met			Disinfectant restored Flushing	March 1
June 6	CT not met			Disinfectant restored Flushing Resample/Re-test	June 6
June 12	Loss of U.V. disinfection			Disinfectant restored	June 12
June 19	Loss of U.V. disinfection			Disinfectant restored	June 19
July 5	CT not met			Disinfectant restored Flushing Resample/Re-test	July 5
July 6	CT not met			Disinfectant restored Flushing	July 6
Aug 4	Loss of U.V. disinfection			Disinfectant restored	Aug 4
Aug 10	Loss of U.V. disinfection			Disinfectant restored	Aug 10
Aug 10	Loss of U.V. disinfection			Disinfectant restored	Aug 10
Aug 11	Loss of U.V. disinfection			Disinfectant restored	Aug 11
Aug 16	U.V. intensity signal lost			Connections repaired	Aug 16
Sept 14	Loss of U.V. disinfection			Disinfectant restored	Sept 14
Oct 5	Loss of U.V. disinfection			Disinfectant restored	Oct 5
Oct 14	Sodium	110	mg/L	Naturally occurring in groundwater source	Oct 14
Dec 22	CT not met			Disinfectant restored	Dec 22
Dec 29	Loss of U.V. disinfection			Disinfectant restored	Dec 29



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 – 3	0	
Treated	52	0 – 0	0 – 0	52	<10 - 190
Distribution	121	0 – 0	0 – 0	52	<10 - 30

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	24	0.057 – 0.449
Chlorine	8760	0.02 – 4.34
Fluoride (If the DWS provides fluoridation)	Fluoride Not Provided	

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 2009	Result Well 1	Result Well 2	Unit of Measure
C of A 6826-5XNQ9K May 04, 2004	Raw - Organic Nitrogen	Jan 5	0.1	0.1	mg/L
		Apr 6	0.1	0.2	
		July 6	0.1	0.1	
		Oct 5	0.2	0.2	
as above	Raw - Methane	Jan 5	34	33	L/m3
		Apr 6	55	36	
		July 6	38	25	
		Oct 5	39	27	
as above	Point of Entry Fluoride	Jan 5	1.6		mg/L
		Apr 6	1.9		
		July 6	2.1		
		Oct 5	1.8		
as above	Point of Entry Sodium	Jan 5	100		mg/L
		Apr 6	88		
		July 6	81		
		Oct 5	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	June 29	<0.5	ug/L	No
Arsenic	June 29	<1.0	ug/L	No
Barium	June 29	310	ug/L	No
Boron	June 29	700	ug/L	No
Cadmium	June 29	<0.1	ug/L	No
Chromium	June 29	<5.0	ug/L	No
Lead	See Schedule 15.1 Summary			
Mercury	June 29	<0.1	mg/L	No
Selenium	June 29	<2.0	ug/L	No
Sodium	Oct 5	110	mg/L	Yes - Reported Oct 14, 2009 AWQI 91816
Uranium	June 29	<0.1	ug/L	No
Fluoride	Oct 5	1.8	mg/L	Yes - Reported May 03, 2005 AWQI 54224
Nitrite	Oct 5	<0.01	mg/L	No
Nitrate	Oct 5	<0.1	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			
Non-Residential			
Distribution			

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	June 29	<0.5	ug/L	No
Aldicarb	June 29	<5.0	ug/L	No
Aldrin + Dieldrin	June 29	<0.01	ug/L	No
Atrazine + N-dealkylated metabolites	June 29	<1.0	ug/L	No
Azinphos-methyl	June 29	<2.0	ug/L	No
Bendiocarb	June 29	<2.0	ug/L	No
Benzene	June 29	<0.1	ug/L	No
Benzo(a)pyrene	June 29	<0.009	ug/L	No
Bromoxynil	June 29	<0.5	ug/L	No



Carbaryl	June 29	<5.0	ug/L	No
Carbofuran	June 29	<5.0	ug/L	No
Carbon Tetrachloride	June 29	<0.1	ug/L	No
Chlordane (Total)	June 29	<0.01	ug/L	No
Chlorpyrifos	June 29	<1.0	ug/L	No
Cyanazine	June 29	<1.0	ug/L	No
Diazinon	June 29	<1.0	ug/L	No
Dicamba	June 29	<1.0	ug/L	No
1,2-Dichlorobenzene	June 29	<0.2	ug/L	No
1,4-Dichlorobenzene	June 29	<0.2	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	June 29	<0.02	ug/L	No
1,2-Dichloroethane	June 29	<0.2	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	June 29	<0.1	ug/L	No
Dichloromethane	June 29	<0.5	ug/L	No
2-4 Dichlorophenol	June 29	<0.5	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	June 29	<1.0	ug/L	No
Diclofop-methyl	June 29	<0.9	ug/L	No
Dimethoate	June 29	<3.0	ug/L	No
Dinoseb	June 29	<1.0	ug/L	No
Diquat	June 29	<7.0	ug/L	No
Diuron	June 29	<10	ug/L	No
Glyphosate	June 29	<10	ug/L	No
Heptachlor + Heptachlor Epoxide	June 29	<0.01	ug/L	No
Lindane (Total)	June 29	<0.006	ug/L	No
Malathion	June 29	<5.0	ug/L	No
Methoxychlor	June 29	<0.02	ug/L	No
Metolachlor	June 29	<0.5	ug/L	No
Metribuzin	June 29	<5.0	ug/L	No
Monochlorobenzene	June 29	<0.1	ug/L	No
Paraquat	June 29	<1.0	ug/L	No
Parathion	June 29	<1.0	ug/L	No
Pentachlorophenol	June 29	<0.5	ug/L	No
Phorate	June 29	<0.5	ug/L	No
Picloram	June 29	<5.0	ug/L	No
Polychlorinated Biphenyls(PCB)	June 29	<0.05	ug/L	No
Prometryne	June 29	<0.3	ug/L	No
Simazine	June 29	<1.0	ug/L	No
THM (NOTE: show latest annual average) 2009 POE: June 29 – 10.1 ug/L	Jan 5 Apr 6 July 6 Oct 5 Avg '09	67.3 75.7 95.3 93.2 82.9	ug/L	No
Temephos	June 29	<10	ug/L	No
Terbufos	June 29	<0.5	ug/L	No
Tetrachloroethylene	June 29	<0.1	ug/L	No
2,3,4,6-Tetrachlorophenol	June 29	<0.5	ug/L	No
Triallate	June 29	<1.0	ug/L	No
Trichloroethylene	June 29	<0.1	ug/L	No
2,4,6-Trichlorophenol	June 29	<0.5	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	June 29	<1.0	ug/L	No



Trifluralin	June 29	<1.0	ug/L	No
Vinyl Chloride	June 29	<0.2	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	1.6	mg/L	Jan 5
Flouride	1.9	mg/L	Apr 6
Flouride	2.1	mg/L	July 6
Flouride	1.8	mg/L	Oct 5
Sodium	100	mg/L	Jan 5
Sodium	88	mg/L	Apr 6
Sodium	81	mg/L	July 6
Sodium	110	mg/L	Oct 5
THM	82.9	ug/L	Running Average