



OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	220003341
Drinking-Water System Name:	Wallaceburg Drinking Water System
Drinking-Water System Owner:	Municipality of Chatham-Kent
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1 – December 31, 2016

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 [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 P.U.C. Office 325 Grand Ave., East P.O. Box 1191 Chatham, Ontario N7M 5L8</p> </div>	<p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">N/A</div> <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> <div style="border: 1px solid black; padding: 2px; width: 100px; text-align: center;">N/A</div> <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 raw water supply for the Wallaceburg WTP originates from the Chenal Ecarte, which is fed by the St. Clair River.

The Ministry of Environment monitors the St. Clair River for various contaminants. In the event that a spill occurs upstream of the raw water intake, the Wallaceburg WTP staff is notified and the intake is shut down until the chemical plume has passed.

The coagulant Poly Aluminum Chloride PAX XL6 is used in the treatment process.

Chlorine is injected at the effluent of the pretreatment tanks, before the filters and at the point of entry to prevent bacterial growth in the Distribution System.

Fluoride is also added to help prevent tooth decay.

The treated water is stored in reservoirs and in the elevated tower, which has a capacity of 4.5 million litres.

The Distribution System supplies the Wallaceburg area.

List all water treatment chemicals used over this reporting period

Poly Aluminum Chloride PAX XL6
 Chlorine Gas
 Sodium Hypochlorite
 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

Inspection of reservoirs	\$2,275
Portable generator replacement	\$2,500
Elevated tank safety upgrades	\$2,700
Inspection of high lift pumps	\$4,250



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
Jan 25	Benzo(a)Pyrene at POE	0.000014	mg/L	Re-sampled: results ND (Not Detected)	Jan 26
Jul 19	Total Coliforms in a distribution sample	6	cfu/100ml	Flush & Re-sample Results satisfactory	Jul 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	52	0 – NDOGN	4 - NDOGT	0	
Point of Entry	52	0 – 0	0 – 0	52	10 - 40
Distribution	469	0 – 0	0 – 6	469	10 – 520

* NDOGN – No Data Overgrown Non-Target Organisms

* NDOGT – No Data Overgrown 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	0.03 – 0.928
Chlorine	8760	1.43 – 1.59
Fluoride (If the DWS provides fluoridation)	730	0.51 – 0.63

***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	Result	Unit of Measure
N/A				
N/A				

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

Parameter	Sample Date Jan 19/2016	Sample Date Apr 19/2016	Sample Date Jul 25/2016	Sample Date Oct 24/2016	Exceedance
Antimony – ug/L	ND	ND	ND	ND	No
Arsenic - ug/L	ND	ND	ND	ND	No
Barium - ug/L	14	14	15	14	No
Boron - ug/L	12	19	13	20	No
Cadmium ug/L	ND	ND	ND	ND	No
Chromium – ug/L	ND	ND	ND	ND	No
*Lead – ug/L	N/A	N/A	N/A	N/A	No
Mercury – mg/L	ND	ND	ND	ND	No
Selenium – ug/L	ND	ND	ND	ND	No
Sodium - ug/L	5100	5000	5700	5200	No
Sodium Dist. System - ug/L	4900	N/A	N/A	N/A	No
Uranium – ug/L	ND	ND	ND	ND	No
Fluoride - mg/L	0.54	N/A	N/A	N/A	No
Nitrite - mg/L	ND	ND	ND	ND	No
Nitrate - mg/L	0.37	0.44	0.29	0.33	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	N/A		
Non-Residential	N/A		
Distribution	N/A		

Summary of Organic parameters sampled during this reporting period or the most recent sample results. (Results measured in ug/L)

Parameter	Sample Date Jan 19/2016	Sample Date Apr 19/2016	Sample Date Jul 18/16	Sample Date Oct. 24/2016	Exceedance
Alachlor	ND	ND	ND	ND	No
Atrazine + N-dealkylated metabolites	ND	ND	ND	ND	No
Azinphos-methyl	ND	ND	ND	ND	No
Benzene	ND	ND	ND	ND	No



Benzo(a)pyrene	0.014	ND	ND	ND	Yes
Bromoxynil	ND	ND	ND	ND	No
Carbaryl	ND	ND	ND	ND	No
Carbofuran	ND	ND	ND	ND	No
Carbon Tetrachloride	ND	ND	ND	ND	No
Chlorpyrifos	ND	ND	ND	ND	No
Diazinon	ND	ND	ND	ND	No
Dicamba	ND	ND	ND	ND	No
1,2-Dichlorobenzene	ND	ND	ND	ND	No
1,4-Dichlorobenzene	ND	ND	ND	ND	No
1,2-Dichloroethane	ND	ND	ND	ND	No
1,1-Dichloroethylene (vinylidene chloride)	ND	ND	ND	ND	No
Dichloromethane	ND	ND	ND	ND	No
2-4 Dichlorophenol	ND	ND	ND	ND	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	ND	ND	ND	ND	No
Diclofop-methyl	ND	ND	ND	ND	No
Dimethoate	ND	ND	ND	ND	No
Diquat	ND	ND	ND	ND	No
Diuron	ND	ND	ND	ND	No
Glyphosate	ND	ND	ND	ND	No
Malathion	ND	ND	ND	ND	No
2 methyl-4-chlorophenoxyacetic acid (MCPA) mg/L	ND	ND	ND	ND	No
Metolachlor	ND	ND	ND	ND	No
Metribuzin	ND	ND	ND	ND	No
Monochlorobenzene	ND	ND	ND	ND	No
Paraquat	ND	ND	ND	ND	No
Pentachlorophenol	ND	ND	ND	ND	No
Phorate	ND	ND	ND	ND	No
Picloram	ND	ND	ND	ND	No
Polychlorinated Biphenyls(PCB)	ND	ND	ND	ND	No
Prometryne	ND	ND	ND	ND	No
Simazine	ND	ND	ND	ND	No
THM – POE Jan., April, Jul, Oct. THM Annual Average	8.11 11.5	11.4 12.1	23.2 13.6	—	No
THM Dist. - Jan., Apr., Jul, Oct. THM Annual Average	17.2 23.7	21.8 24.9	50.1 29.0	45.0 33.5	No
Terbufos	ND	ND	ND	ND	No
Tetrachloroethylene	ND	ND	ND	ND	No
2,3,4,6-Tetrachlorophenol	ND	ND	ND	ND	No
Triallate	ND	ND	ND	ND	No
Trichloroethylene	ND	ND	ND	ND	No
2,4,6-Trichlorophenol	ND	ND	ND	ND	No
Trifluralin	ND	ND	ND	ND	No
Vinyl Chloride	ND	ND	ND	ND	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
Benzo(a)pyrene	0.014	µg/L	Jan 16

Summary of additional voluntary testing and sampling on treated water.

Sample Date	Parameter		Nitrite + Nitrate	Unit of Measure
	Nitrite	Nitrate		
Jan 04/16	ND	0.5	0.5	mg/L
Jan 11/16	ND	0.34	0.34	mg/L
Jan 18/16	ND	0.38	0.38	mg/L
Jan 25/16	ND	0.28	0.28	mg/L
Feb 01/16	ND	0.34	0.34	mg/L
Feb 08/16	ND	0.33	0.33	mg/L
Feb 16/16	ND	0.32	0.32	mg/L
Feb 22/16	ND	0.33	0.33	mg/L
Feb 29/16	ND	1.16	1.16	mg/L
Mar 07/16	ND	0.41	0.41	mg/L
Mar 14/16	ND	0.41	0.41	mg/L
Mar 21/16	ND	0.35	0.35	mg/L
Mar 29/16	ND	4.42	4.42	mg/L
Apr 04/16	ND	4.18	4.18	mg/L
Apr 11/16	ND	0.53	0.53	mg/L
Apr 18/16	ND	0.49	0.49	mg/L
Apr 25/16	ND	0.38	0.38	mg/L
May 02/16	ND	0.59	0.59	mg/L
May 09/16	ND	0.57	.057	mg/L
May 16/16	ND	0.58	0.58	mg/L
May 24/16	ND	0.49	0.49	mg/L
May30/16	ND	0.40	0.40	mg/L
June 06/16	ND	0.41	0.41	mg/L
June13/16	ND	0.38	0.38	mg/L
June 20/16	ND	0.37	0.37	mg/L
June 27/16	ND	0.38	0.38	mg/L
July 18/16	ND	0.33	0.33	mg/L
July 25/16	ND	0.31	0.31	mg/L
Aug. 02/16	ND	0.29	0.29	mg/L
Aug. 08/16	ND	0.25	0.25	mg/L



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Aug. 15/16	ND	0.27	0.27	mg/L
Aug. 22/16	ND	0.28	0.28	mg/L
Aug. 29/16	ND	0.24	0.24	mg/L
Sep. 06/16	ND	0.24	0.24	mg/L
Sep. 12/16	ND	0.23	0.23	mg/L
Sep. 19/16	ND	0.24	0.24	mg/L
Sep. 26/16	ND	0.24	0.24	mg/L
Oct. 03/16	ND	0.24	0.24	mg/L
Oct. 11/16	ND	0.31	0.31	mg/L
Oct. 17/16	ND	0.28	0.28	mg/L
Oct. 24/16	ND	0.33	0.33	mg/L
Oct. 31/16	ND	0.28	0.28	mg/L
Nov. 07/16	ND	0.30	0.30	mg/L
Nov.14/16	ND	0.27	0.27	mg/L
Nov.21/16	ND	0.25	0.25	mg/L
Nov. 28/16	ND	0.29	0.29	mg/L
Dec. 05/16	ND	0.29	0.29	mg/L
Dec. 12/16	ND	0.28	0.28	mg/L
Dec. 19/16	ND	0.25	0.25	mg/L
Dec. 28/16	ND	0.42	0.42	mg/L

Microcystin DM				
Parameter	Sample Date	Raw – Before Treatment	Point of Entry	Unit of Measure
Microcystin DM	June 6/16	<0.15	<0.15	ppb
Microcystin DM	June 13/16	0.20	0.33	ppb
Microcystin DM	June 20/16	<0.15	<0.15	ppb
Microcystin DM	July 4/16	<0.15	<0.15	ppb
Microcystin DM	July 11/16	<0.15	<0.15	ppb
Microcystin DM	July 18/16	<0.15	<0.15	ppb
Microcystin DM	July 25/16	<0.15	<0.15	ppb
Microcystin DM	Aug. 2/16	<0.15	<0.15	ppb
Microcystin DM	Aug. 8/16	<0.15	<0.15	ppb
Microcystin DM	Aug. 15/16	<0.15	<0.15	ppb
Microcystin DM	Aug. 22/16	<0.15	<0.15	ppb
Microcystin DM	Aug. 29/16	<0.15	<0.15	ppb
Microcystin DM	Sept. 6/16	<0.15	<0.15	ppb
Microcystin DM	Sept. 12/16	<0.15	<0.15	ppb
Microcystin DM	Sept. 19/16	<0.15	<0.15	ppb
Microcystin DM	Sept. 26/16	<0.15	<0.15	ppb
Microcystin DM	Oct.03/16	<0.15	<0.15	ppb
Microcystin DM	Oct. 11/16	<0.15	<0.15	ppb
Microcystin DM	Oct. 17/16	<0.15	<0.15	ppb
Microcystin DM	Oct.24/16	<0.15	<0.15	ppb
Microcystin DM	Oct.31/16	<0.15	<0.15	ppb
Microcystin DM	Nov.7/16	<0.15	<0.15	ppb
Microcystin DM	Nov.14/16	<0.15	<0.15	ppb
Microcystin DM	Nov.21/16	<0.15	<0.15	ppb
Microcystin DM	Nov.28/16	<0.15	<0.15	ppb
PPB	Signifies parts per billion			
NDBT	Signifies sample bottle was broken on receipt at lab			
ND	Signifies non detect result			
NA	Signifies sampling not required			