



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, 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 [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [<input checked="" type="checkbox"/>] No [<input type="checkbox"/>]</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. 325 Grand Ave. East P.O. 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" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [<input type="checkbox"/>] No [<input type="checkbox"/>]</p> <p>Number of Interested Authorities you report to: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [<input type="checkbox"/>] No [<input type="checkbox"/>]</p>
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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 the water 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 liters.

The Distribution System supplies the Wallaceburg area.

List all water treatment chemicals used over this reporting period

Polyaluminum Chloride PAX XL6
 Chlorine Gas
 Sodium Hypochlorite
 Hydrofluosilic 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

Environmental Assessment for Upgrades \$75,160

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
May 29	Total Coliform at the Point of Entry	1	cfu/100ml	Flush, Resample	May 29
May 29	Total Coliform in a Distribution sample	1	cfu/100ml	Flush, Resample	May 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	52	0 - NDOGT	0 - NDOGT	0	N/A
Point of Entry	52	0 - 0	0 - 1	52	10 - 40
Distribution	471	0 - 0	0 - 1	471	10 - 430

*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 (filter)	8760	0.012 – 0.860
Chlorine (post)	8760	0.934 – 2.96
Fluoride (If the DWS provides fluoridation)	730	0.21 – 0.78

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	Result	Unit of Measure
None				

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

	Sample Date Jan 15	Sample Date Apr 30	Sample Date Jul 16	Sample Date Oct 15	Exceedances
Antimony – ug/L	< 0.50	< 0.50	< 0.50	< 0.50	No
Arsenic- ug/L	< 1.0	< 1.0	< 1.0	< 1.0	No
Barium – ug/L	16	14	14	13	No
Boron – ug/L	15	12	15	14	No
Cadmium – ug/L	< 0.10	< 0.10	< 0.10	< 0.10	No
Chromium – ug/L	< 5.0	< 5.0	< 5.0	< 5.0	No
*Lead – ug/L	See Schedule 15.1 Summary				
Mercury – mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001	No
Selenium – ug/L	< 2.0	< 2.0	< 2.0	< 2.0	No
Sodium – mg/L	7.9	4.8	5.3	5.1	No
Uranium – ug/L	< 0.10	< 0.10	< 0.10	< 0.10	No

Fluoride – mg/L	See Operational Section				
Nitrate – mg/L	0.91	0.40	0.29	0.26	No
Nitrite – mg/L	< 0.010	< 0.010	< 0.010	< 0.010	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	N/A	N/A
Non Residential	0	N/A	N/A
Distribution	8	< 0.50 - < 0.50	0

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

Parameter	Sample Date Jan 15	Sample Date Apr 30	Sample Date Jul 16	Sample Date Oct 15	Exceedances
Alachlor	< 0.50	< 0.50	< 0.50	< 0.50	No
Atrazine + N-dealkylated metabolites	< 1.0	< 1.0	< 1.0	< 1.0	No
Azinphos - methyl	< 2.0	< 2.0	< 2.0	< 2.0	No
Benzene	< 0.10	< 0.10	< 0.10	< 0.10	No
Benzo(a)pyrene	< 0.0090	< 0.0090	< 0.0090	< 0.0090	No
Bromoxynil	< 0.50	< 0.50	< 0.50	< 0.50	No
Carbaryl	< 5.0	< 5.0	< 5.0	< 5.0	No
Carbofuran	< 5.0	< 5.0	< 5.0	< 5.0	No
Carbon Tetrachloride	< 0.10	< 0.10	< 0.10	< 0.10	No
Chloropyrifos	< 1.0	< 1.0	< 1.0	< 1.0	No
Diazinon	< 1.0	< 1.0	< 1.0	< 1.0	No
Dicamba	< 1.0	< 1.0	< 1.0	< 1.0	No
1,2 - Dichlorobenzene	< 0.20	< 0.20	< 0.20	< 0.20	No
1,4 - Dichlorobenzene	< 0.20	< 0.20	< 0.20	< 0.20	No
1,2 – Dichloroethane	< 0.20	< 0.20	< 0.20	< 0.20	No
1,1- Dichloroethylene (vinylidenechloride)	< 0.10	< 0.10	< 0.10	< 0.10	No
Dichloromethane	< 0.50	< 0.50	< 0.50	< 0.50	No
2,4 - Dichlorophenol	< 0.25	< 0.25	< 0.25	< 0.25	No
2,4 - Dichlorophenoxy acetic acid (2,4 - D)	< 1.0	< 1.0	< 1.0	< 1.0	No

Diclofop - methyl	< 0.90	< 0.90	< 0.90	< 0.90	No
Dimethoate	< 2.5	< 2.5	< 2.5	< 2.5	No
Diquat	< 7.0	< 7.0	< 7.0	< 7.0	No
Diuran	< 10	< 10	< 10	< 10	No
Glyphosate	< 10	< 10	< 10	< 10	No
Haloacetic acid HAA Annual Average: 11.5	5.7	5.0	7.3	28	No
Malathion	< 5.0	< 5.0	< 5.0	< 5.0	No
2-Methyl-4- chlorophenoxyacetic acid (MCPA)	< 10	< 10	< 10	< 10	No
Metolachlor	< 0.50	< 0.50	< 0.50	< 0.50	No
Metribuzin	< 5.0	< 5.0	< 5.0	< 5.0	No
Monochlorobenzene (chlorobenzene)	< 0.10	< 0.10	< 0.10	< 0.10	No
Paraquat	< 1.0	< 1.0	< 1.0	< 1.0	No
Pentachlorophenol	< 0.50	< 0.50	< 0.50	< 0.50	No
Phorate	< 0.50	< 0.50	< 0.50	< 0.50	No
Picloram	< 5.0	< 5.0	< 5.0	< 5.0	No
Polychlorinated Byphenyls (PCB)	< 0.05	< 0.05	< 0.05	< 0.05	No
Prometryne	< 0.25	< 0.25	< 0.25	< 0.25	No
Simazine	< 1.0	< 1.0	< 1.0	< 1.0	No
Trihalomethanes THM Distribution THM Running Annual Average: 33.7	13.9	26.6	45.5	48.9	No
Terbufos	< 0.50	< 0.50	< 0.50	< 0.50	None
Tetrachloroethylene (perchloroethylene)	< 0.10	< 0.10	< 0.10	< 0.10	None
2,3,4,6 - Tetrachlorophenol	< 0.50	< 0.50	< 0.50	< 0.50	None
Triallate	< 1.0	< 1.0	< 1.0	< 1.0	None
Trichloroethylene	< 0.10	< 0.10	< 0.10	< 0.10	None
2,4,6 - Trichlorophenol	< 0.50	< 0.50	< 0.50	< 0.50	None
Trifluralin	< 1.0	< 1.0	< 1.0	< 1.0	None
Vinyl Chloride	< 0.20	< 0.20	< 0.20	< 0.20	None

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	Date Sampled	Result: Raw – Before Treatment	Result: Point of Entry	Result: Distribution	Unit of Measure
Microcystin	May 28	No Sample	No Sample	No Sample	ug/L
Microcystin	Jun 04	<0.150	<0.150	Broken Bottle	ug/L
Microcystin	Jun 11	<0.150	<0.150	<0.150	ug/L
Microcystin	Jun 18	<0.150	<0.150	<0.150	ug/L
Microcystin	Jun 25	<0.150	<0.150	<0.150	ug/L
Microcystin	Jul 03	<0.150	<0.150	<0.150	ug/L
Microcystin	Jul 09	<0.150	<0.150	<0.150	ug/L
Microcystin	Jul 16	<0.150	<0.150	0.209	ug/L
Microcystin	Jul 23	<0.150	<0.150	<0.150	ug/L
Microcystin	Jul 30	<0.150	<0.150	<0.150	ug/L
Microcystin	Aug 08	<0.150	<0.150	0.150	ug/L
Microcystin	Aug 13	<0.150	<0.150	<0.150	ug/L
Microcystin	Aug 20	<0.150	<0.150	<0.150	ug/L
Microcystin	Aug 27	<0.150	<0.150	<0.150	ug/L
Microcystin	Sept 4	<0.150	<0.150	<0.150	ug/L
Microcystin	Sept 10	<0.150	<0.150	<0.150	ug/L
Microcystin	Sept 17	<0.150	<0.150	<0.150	ug/L
Microcystin	Sept 24	<0.150	<0.150	<0.150	ug/L
Microcystin	Oct 1	<0.150	<0.150	<0.150	ug/L
Microcystin	Oct 9	<0.150	<0.150	<0.150	ug/L
Microcystin	Oct 15	<0.150	<0.150	<0.150	ug/L
Microcystin	Oct 22	<0.150	<0.150	<0.150	ug/L
Microcystin	Oct 29	<0.150	<0.150	<0.150	ug/L
Microcystin	Nov 5	<0.150	<0.150	<0.150	ug/L
Microcystin	Nov 13	<0.150	<0.150	<0.150	ug/L
Microcystin	Nov 19	<0.150	<0.150	<0.150	ug/L
Microcystin	Nov 26	<0.150	<0.150	<0.150	ug/L

Sample Date	Parameter		Nitrite + Nitrate	Unit of Measure
	Nitrite	Nitrate		
Jan 2	< 0.010	0.31	0.31	mg/L
Jan 8	< 0.010	0.31	0.31	mg/L
Jan 15	< 0.010	0.91	0.91	mg/L
Jan 22	< 0.010	0.32	0.32	mg/L
Jan 29	< 0.010	0.70	0.70	mg/L
Feb 5	< 0.010	0.30	0.30	mg/L
Feb 12	< 0.010	0.31	0.31	mg/L
Feb 20	< 0.010	0.34	0.34	mg/L



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Feb 26	< 0.010	4.81	4.81	mg/L
Mar 5	< 0.010	0.42	0.42	mg/L
Mar 12	< 0.010	0.38	0.38	mg/L
Mar 19	< 0.010	0.35	0.35	mg/L
Mar 26	< 0.010	0.34	0.34	mg/L
Apr 3	< 0.010	0.41	0.41	mg/L
Apr 9	< 0.010	0.78	0.78	mg/L
Apr 16	< 0.010	0.55	0.55	mg/L
Apr 23	< 0.010	0.57	0.57	mg/L
Apr 30	< 0.010	0.40	0.40	mg/L
May 7	< 0.010	0.41	0.41	mg/L
May 14	< 0.010	0.32	0.32	mg/L
May 22	< 0.010	0.32	0.32	mg/L
May 28	< 0.010	0.32	0.32	mg/L
Jun 4	< 0.010	0.38	0.38	mg/L
Jun 11	< 0.010	0.35	0.35	mg/L
Jun18	< 0.010	0.30	0.30	mg/L
Jun 25	< 0.010	0.32	0.32	mg/L
Jul 3	< 0.010	0.32	0.32	mg/L
Jul 9	< 0.010	0.30	0.30	mg/L
Jul 16	< 0.010	0.29	0.29	mg/L
Jul 23	< 0.010	0.29	0.29	mg/L
Jul 30	< 0.010	0.30	0.30	mg/L
Aug 7	< 0.010	0.26	0.26	mg/L
Aug 13	< 0.010	0.29	0.29	mg/L
Aug 20	< 0.010	0.26	0.26	mg/L
Aug 27	< 0.010	0.29	0.29	mg/L
Sept 4	< 0.010	0.27	0.27	mg/L
Sept 10	< 0.010	0.27	0.27	mg/L
Sept 17	< 0.010	0.26	0.26	mg/L
Sept 24	< 0.010	0.27	0.27	mg/L
Oct 1	< 0.010	0.29	0.29	mg/L
Oct 9	< 0.010	0.66	0.66	mg/L
Oct 15	< 0.010	0.26	0.26	mg/L
Oct 24	< 0.010	0.29	0.29	mg/L
Oct 29	< 0.010	0.28	0.28	mg/L
Nov 5	< 0.010	4.93	4.93	mg/L
Nov 13	< 0.010	0.34	0.34	mg/L
Nov 19	< 0.010	0.32	0.32	mg/L
Nov 26	< 0.010	0.33	0.33	mg/L



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Dec 5	< 0.010	0.38	0.38	mg/L
Dec 11	< 0.010	0.28	0.28	mg/L
Dec 19	< 0.010	0.30	0.30	mg/L
Dec 27	< 0.010	0.39	0.39	mg/L