



ANNUAL REPORT

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, 2019

Does your Drinking-Water System serve more than 10,000 people? Yes No

Is your annual report available to the public at no charge on a web site on the Internet? Yes No

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Chatham-Kent PUC Office 325 Grand Ave E Box 1191 Chatham, ON N7M 5L8
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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

1. Polyaluminum Chloride PAX XL6
2. Chlorine Gas
3. Sodium Hypochlorite
4. 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

Water Plant Upgrades	\$	153,000
Bulk Water Station Replacement		81,000

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
Feb 20	Residual Chlorine	>4.0	mg/L	None Required, the incident self-corrected	Feb 20
Sep 04	Total Coliform	1	cfu/100mL	Resample and test	Sep 04
Nov 19	Total Coliform	2	cfu/100mL	Resample and test	Nov 19
Nov 26	Total Coliform	1	cfu/100mL	Resample and test	Nov 26

Microbiological testing done under the Schedule 10 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	53	0 – NDOGT	8 – NDOGT	0	
Treated	53	0 – 0	0 – 1	53	<10 – 110
Distribution	477	0 – 0	0 – 2	477	<10 – 90

** NDOGT – No Data Overgrown with Target Organisms

Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity Filters	8760	0.0002 – 0.894 NTU
Chlorine Large Reservoir Outlet	8760	0.45 – 4.54 mg/L
Fluoride (Provided)	730	0.11 – 0.86 mg/L

***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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	Apr 15	<0.50	ug/L	No
Arsenic	Apr 15	<1.0	ug/L	No
Barium	Apr 15	15	ug/L	No
Boron	Apr 15	15	ug/L	No
Cadmium	Apr 15	<0.10	ug/L	No
Chromium	Apr 15	<5.0	ug/L	No
*Lead	See Schedule 15.1 Summary			
Mercury	Apr 15	<0.0001	ug/L	No
Selenium	Apr 15	<2.0	ug/L	No
Sodium	Apr 15	5.3	mg/L	No
Uranium	Apr 15	<0.10	ug/L	No
Fluoride	See Operational Section			
Nitrite	Dec 30	<0.010	mg/L	No
Nitrate	Dec 30	0.27	mg/L	No
Nitrite + Nitrate	Dec 30	0.27	mg/L	No

Summary of lead testing under Schedule 15.1 during this reporting period

Location Type	Number of Samples	Range of Lead Results ug/L (min#) – (max #)	Number of Exceedances / Adverses
Residential	0		
Non-Residential	0		
Distribution	8	<0.50 – <0.50	0

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

Parameter	Sample Date	Result Value	MAC Limits	Unit of Measure	Exceedance
Alachlor	Apr 15	<0.50	5	ug/L	No
Atrazine + N-dealkylated metabolites	Apr 15	<1.0	5	ug/L	No
Azinphos-methyl	Apr 15	<2.0	20	ug/L	No
Benzene	Apr 15	<0.10	1	ug/L	No
Benzo(a)pyrene	Apr 15	<0.0090	0.01	ug/L	No
Bromoxynil	Apr 15	<0.50	5	ug/L	No

Carbaryl	Apr 15	<5.0	90	ug/L	No
Carbofuran	Apr 15	<5.0	90	ug/L	No
Carbon Tetrachloride	Apr 15	<0.10	2	ug/L	No
Chlorpyrifos (Dursban)	Apr 15	<1.0	90	ug/L	No
Diazinon	Apr 15	<1.0	20	ug/L	No
Dicamba	Apr 15	<1.0	120	ug/L	No
1,2-Dichlorobenzene	Apr 15	<0.20	200	ug/L	No
1,4-Dichlorobenzene	Apr 15	<0.20	5	ug/L	No
1,2-Dichloroethane	Apr 15	<0.20	5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Apr 15	<0.10	14	ug/L	No
Dichloromethane	Apr 15	<0.50	50	ug/L	No
2-4 Dichlorophenol	Apr 15	<0.25	900	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Apr 15	<1.0	100	ug/L	No
Diclofop-methyl	Apr 15	<0.90	9	ug/L	No
Dimethoate	Apr 15	<2.5	20	ug/L	No
Diquat	Apr 15	<7.0	70	ug/L	No
Diuron	Apr 15	<10	150	ug/L	No
Ethylbenzene	Apr 15	<0.10	140	ug/L	No
Glyphosate	Apr 15	<10	280	ug/L	No
Haloacetic Acids (HAA)	Jan 14	26			
	Apr 15	19			
	Apr 15 (lab dup)	16	-	ug/L	No
	Jul 15	20			
Running Annual Average: 19.6	Oct 21	15			
Malathion	Apr 15	<5.0	190	ug/L	No
2 Methyl-4-chlorophenoxyacetic acid (MCPA)	Apr 15	<10	100	ug/L	No
Metolachlor	Apr 15	<0.50	190	ug/L	No
Metribuzin (Sencor)	Apr 15	<5.0	80	ug/L	No
Monochlorobenzene	Apr 15	<0.10	80	ug/L	No
Paraquat	Apr 15	<1.0	10	ug/L	No
Pentachlorophenol	Apr 15	<0.50	60	ug/L	No
Phorate	Apr 15	<0.50	2	ug/L	No
Picloram	Apr 15	<5.0	190	ug/L	No
Polychlorinated Biphenyls(PCB)	Apr 15	<0.05	3	ug/L	No
Prometryne	Apr 15	<0.25	1	ug/L	No
Simazine	Apr 15	<1.0	10	ug/L	No
Terbufos	Apr 15	<0.50	1	ug/L	No
Tetrachloroethylene	Apr 15	<0.10	10	ug/L	No
2,3,4,6-Tetrachlorophenol	Apr 15	<0.50	100	ug/L	No
Trihalomethanes (THM)	Jan 14	17.3			
	Apr 15	26.4			
Running Annual Average: 28.2	Jul 15	46.8	100	ug/L	No
	Oct 21	22.4			
Toluene	Apr 15	<0.20	60	ug/L	No
Triallate	Apr 15	<1.0	230	ug/L	No
Trichloroethylene	Apr 15	<0.10	5	ug/L	No
2,4,6-Trichlorophenol	Apr 15	<0.50	5	ug/L	No
Trifluralin	Apr 15	<1.0	45	ug/L	No
Vinyl Chloride	Apr 15	<0.20	1	ug/L	No
Xylenes	Apr 15	<0.10	90	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	Sample Date	Result: Raw – Before Treatment	Result: Point of Entry	Unit of Measure
Microcystin	May 27	<0.150	<0.150	ug/L
	Jun 3	<0.150	<0.150	
	Jun 10	<0.150	<0.150	
	Jun 17	<0.150	<0.150	
	Jun 24	<0.150	<0.150	
	Jul 2	<0.150	<0.150	
	Jul 8	<0.150	<0.150	
	Jul 15	<0.150	<0.150	
	Jul 22	<0.150	<0.150	
	Jul 29	<0.150	<0.150	
	Aug 6	<0.150	<0.150	
	Aug 12	<0.150	<0.150	
	Aug 19	<0.150	<0.150	
	Aug 26	<0.150	<0.150	
	Sept 3	<0.150	<0.150	
	Sept 9	<0.150	<0.150	
	Sept 16	<0.150	<0.150	
	Sept 23	<0.150	<0.150	
	Sept 30	<0.150	<0.150	
	Oct 7	<0.150	<0.150	
Oct 15	<0.150	<0.150		
Oct 21	<0.150	<0.150		
Oct 28	<0.150	<0.150		

Sample Date	Parameter			Unit of Measure
	Nitrite	Nitrate	Nitrite + Nitrate	
Jan 2	<0.010	0.41	0.41	mg/L
Jan 8	<0.010	0.37	0.37	
Jan 14	<0.010	0.28	0.28	
Jan 21	<0.010	0.30	0.30	
Jan 28	<0.010	0.36	0.36	
Feb 4	<0.010	0.36	0.36	mg/L
Feb 11	<0.010	0.93	0.93	
Feb 19	<0.010	0.33	0.33	
Feb 25	<0.010	0.32	0.32	



Mar 4	<0.010	0.32	0.32	mg/L
Mar 11	<0.010	0.30	0.30	
Mar 18	<0.010	1.24	1.24	
Mar 25	<0.010	0.37	0.37	
Apr 1	<0.010	0.51	0.51	mg/L
Apr 8	<0.010	0.40	0.40	
Apr 15	<0.010	0.36	0.36	
Apr 23	<0.010	4.11	4.11	
Apr 29	<0.010	3.14	3.14	
May 6	<0.010	1.60	1.60	mg/L
May 13	<0.010	0.60	0.60	
May 21	<0.010	0.57	0.57	
May 27	<0.010	0.58	0.58	
Jun 3	<0.010	0.61	0.61	mg/L
Jun 10	<0.010	0.41	0.41	
Jun 17	<0.010	0.34	0.34	
Jun 24	<0.010	0.31	0.31	
Jul 2	<0.010	0.30	0.30	mg/L
Jul 8	<0.010	0.36	0.36	
Jul 15	<0.010	0.32	0.32	
Jul 22	<0.010	0.35	0.35	
Jul 29	<0.010	0.26	0.26	
Aug 6	<0.010	0.25	0.25	mg/L
Aug 12	<0.010	0.25	0.25	
Aug 19	<0.010	0.25	0.25	
Aug 26	<0.010	0.26	0.26	
Sept 3	<0.010	0.25	0.25	mg/L
Sept 9	<0.010	0.23	0.23	
Sept 16	<0.010	0.28	0.28	
Sept 23	<0.010	0.23	0.23	
Sept 30	<0.010	0.25	0.25	
Oct 7	<0.010	0.25	0.25	mg/L
Oct 15	<0.010	0.27	0.27	
Oct 21	<0.010	0.25	0.25	
Oct 28	<0.010	0.25	0.25	
Nov 4	<0.010	1.47	1.47	mg/L
Nov 12	<0.010	0.28	0.28	
Nov 18	<0.010	0.26	0.26	
Nov 25	<0.010	0.28	0.28	
Dec 2	<0.010	0.26	0.26	mg/L
Dec 9	<0.010	0.30	0.30	
Dec 16	<0.010	0.27	0.27	
Dec 23	<0.010	0.30	0.30	
Dec 30	<0.010	0.27	0.27	