



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, 2020

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

Replaced Fluoride Pump, Tank, Weight Scale and Lines	\$ 25,000
Alum Pump Replacement	10,000
Replaced Backwash Valves on Filter #1 and #2	2,000
Replaced Level Meter on Filter #4	2,000

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
May 20	Total Coliforms	3	cfu/100 mL	Flush, re-sample and test	May 20
July 14	Total Coliforms	4	cfu/100 mL	Flush, re-sample and test	July 14
July 21	Total Coliforms and E. coli	NDOGT	cfu/100 mL	Flush, re-sample and test (2 consecutive sets)	July 21 & 22
September 1	Total Coliforms and E. coli	NDOGN	cfu/100 mL	Flush, re-sample and test (2 consecutive sets)	September 4
September 10	Total Coliforms	7	cfu/100 mL	Flush, re-sample and test	September 11
September 29	Total Coliforms	13	cfu/100 mL	Flush, re-sample and test	September 29

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	17 – NDOGT	0	
Treated	53	0 – 0	0 – 0	53	<10 – 50
Distribution	474	0 – NDOGT	0 – NDOGT	466	<10 – NDOGT

** 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	0.004 – 0.975 NTU
Chlorine Large Reservoir Outlet	8760	1.23 – 3.55 mg/L
Fluoride (Provided)	187	0.32 – 0.77 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	MAC Limit	Unit of Measure	Exceedance
Antimony	January 13	<0.50	6	ug/L	No
Arsenic	January 13	<1.0	10	ug/L	No
Barium	January 13	17	1000	ug/L	No
Boron	January 13	23	5000	ug/L	No
Cadmium	January 13	<0.10	5	ug/L	No
Chromium	January 13	<5.0	50	ug/L	No
*Lead	See Schedule 15.1 Summary				
Mercury	January 13	<0.0001	0.001	mg/L	No
Selenium	January 13	<2.0	50	ug/L	No
Sodium	January 13	6.3	20	mg/L	No
Uranium	January 13	<0.10	20	ug/L	No
Fluoride	Continuous Monitoring Required: See Operational Section				
Nitrite	December 29	<0.010	1	mg/L	No
Nitrate	December 29	0.26	10	mg/L	No
Nitrite + Nitrate	December 29	0.26	-	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 #)	MAC Limit ug/L	Number of Exceedances / Adverses
Residential	0			
Non-Residential	0			
Distribution	8	<0.50 – <0.50	10	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	January 13	<0.50	5	ug/L	No
Atrazine + N-dealkylated metabolites	January 13	<1.0	5	ug/L	No
Azinphos-methyl	January 13	<2.0	20	ug/L	No
Benzene	January 13	<0.10	1	ug/L	No
Benzo(a)pyrene	January 13	<0.0090	0.01	ug/L	No
Bromoxynil	January 13	<0.50	5	ug/L	No
Carbaryl	January 13	<5.0	90	ug/L	No
Carbofuran	January 13	<5.0	90	ug/L	No
Carbon Tetrachloride	January 13	<0.10	2	ug/L	No
Chlorpyrifos (Dursban)	January 13	<1.0	90	ug/L	No
Diazinon	January 13	<1.0	20	ug/L	No
Dicamba	January 13	<1.0	120	ug/L	No
1,2-Dichlorobenzene	January 13	<0.20	200	ug/L	No
1,4-Dichlorobenzene	January 13	<0.20	5	ug/L	No
1,2-Dichloroethane	January 13	<0.20	5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	January 13	<0.10	14	ug/L	No
Dichloromethane	January 13	<0.50	50	ug/L	No
2-4 Dichlorophenol	January 13	<0.25	900	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	January 13	<1.0	100	ug/L	No
Diclofop-methyl	January 13	<0.90	9	ug/L	No
Dimethoate	January 13	<2.5	20	ug/L	No
Diquat	January 13	<7.0	70	ug/L	No
Diuron	January 13	<10	150	ug/L	No
Ethylbenzene	January 13	<0.10	140	ug/L	No
Glyphosate	January 13	<10	280	ug/L	No
Haloacetic Acids (HAA)	Jan 13	5.4	80	ug/L	No
	Apr 6	13			
	Jul 13	22			
	Oct 19	20			
Running Annual Average:		15.1			
Malathion	January 13	<5.0	190	ug/L	No
2 Methyl-4-chlorophenoxyacetic acid (MCPA)	January 13	<10	100	ug/L	No
Metolachlor	January 13	<0.50	190	ug/L	No
Metribuzin (Sencor)	January 13	<5.0	80	ug/L	No
Monochlorobenzene	January 13	<0.10	80	ug/L	No
Paraquat	January 13	<1.0	10	ug/L	No
Pentachlorophenol	January 13	<0.50	60	ug/L	No
Phorate	January 13	<0.50	2	ug/L	No
Picloram	January 13	<5.0	190	ug/L	No
Polychlorinated Biphenyls(PCB)	January 13	<0.05	3	ug/L	No
Prometryne	January 13	<0.25	1	ug/L	No
Simazine	January 13	<1.0	10	ug/L	No
Terbufos	January 13	<0.50	1	ug/L	No
Tetrachloroethylene	January 13	<0.10	10	ug/L	No



2,3,4,6-Tetrachlorophenol	January 13	<0.50	100	ug/L	No
Trihalomethanes (THM)	Jan 13	26.0	100	ug/L	No
	Apr 6	29.3			
	Jul 13	39.8			
	Jul 13 (lab dup)	40.6			
	Oct 19	31.1			
Running Annual Average:		31.7			
Toluene	January 13	<0.20	60	ug/L	No
Triallate	January 13	<1.0	230	ug/L	No
Trichloroethylene	January 13	<0.10	5	ug/L	No
2,4,6-Trichlorophenol	January 13	<0.50	5	ug/L	No
Trifluralin	January 13	<1.0	45	ug/L	No
Vinyl Chloride	January 13	<0.20	1	ug/L	No
Xylenes	January 13	<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 25	<0.150	<0.150	ug/L
	Jun 01	<0.150	<0.150	
	Jun 08	<0.150	<0.150	
	Jun 15	<0.150	<0.150	
	Jun 22	<0.150	<0.150	
	Jun 29	<0.150	0.534	
	Jul 06	<0.150	<0.150	
	Jul 13	<0.150	<0.150	
	Jul 20	<0.150	<0.150	
	Jul 27	<0.150	<0.150	
	Aug 04	<0.150	<0.150	
	Aug 10	<0.150	<0.150	
	Aug 17	<0.150	0.158	
	Aug 24	<0.150	<0.150	
	Aug 31	<0.150	<0.150	
	Sept 08	<0.150	<0.150	
	Sept 14	<0.150	<0.150	
	Sept 21	<0.150	<0.150	
	Sept 28	<0.150	<0.150	
	Oct 05	<0.150	<0.150	
Oct 13	<0.150	<0.150		
Oct 19	<0.150	<0.150		
Oct 26	<0.150	<0.150		

Sample Date	Parameter			Unit of Measure
	Nitrite	Nitrate	Nitrite + Nitrate	
Jan 08	<0.010	0.25	0.25	mg/L
Jan 13	<0.010	1.44	1.44	
Jan 22	<0.010	0.35	0.35	
Jan 29	<0.010	2.34	2.34	
Feb 05	<0.010	0.32	0.32	mg/L
Feb 12	<0.010	0.34	0.34	
Feb 19	<0.010	0.37	0.37	
Feb 26	<0.010	0.37	0.37	
Mar 04	<0.010	0.45	0.45	mg/L
Mar 11	<0.010	0.37	0.37	
Mar 18	<0.010	0.31	0.31	
Mar 25	<0.010	0.33	0.33	
Apr 01	<0.010	1.17	1.17	mg/L
Apr 08	<0.010	0.38	0.38	
Apr 15	<0.010	0.31	0.31	
Apr 22	<0.010	0.28	0.28	
Apr 29	<0.010	0.34	0.34	
May 06	<0.010	0.27	0.27	mg/L
May 13	<0.010	0.30	0.30	
May 20	<0.010	1.15	1.15	
May 27	<0.010	0.61	0.61	
Jun 03	<0.010	0.33	0.33	mg/L
Jun 10	<0.010	0.34	0.34	
Jun 17	<0.010	0.32	0.32	
Jun 24	<0.010	0.27	0.27	
Jun 30	<0.010	0.29	0.29	
Jul 08	<0.010	0.26	0.26	mg/L
Jul 15	<0.010	0.28	0.28	
Jul 22	<0.010	0.24	0.24	
Jul 29	<0.010	0.27	0.27	
Aug 05	<0.010	0.28	0.28	mg/L
Aug 12	<0.010	0.30	0.30	
Aug 19	<0.010	0.24	0.24	
Aug 26	<0.010	0.27	0.27	
Sept 02	<0.010	0.25	0.25	mg/L
Sept 09	<0.010	0.27	0.27	
Sept 16	<0.010	0.26	0.26	
Sept 23	<0.010	0.24	0.24	
Sept 30	<0.010	0.24	0.24	



Oct 07	<0.010	0.23	0.23	mg/L
Oct 14	<0.010	0.26	0.26	
Oct 21	<0.010	0.26	0.26	
Oct 28	<0.010	0.25	0.25	
Nov 04	<0.010	0.25	0.25	mg/L
Nov 12	<0.010	0.26	0.26	
Nov 18	<0.010	0.27	0.27	
Nov 25	<0.010	0.25	0.25	
Dec 02	<0.010	0.30	0.30	mg/L
Dec 09	<0.010	0.27	0.27	
Dec 16	<0.010	0.88	0.88	
Dec 22	<0.010	0.29	0.29	
Dec 29	<0.010	0.26	0.26	