



**ANNUAL REPORT**

<b>Drinking-Water System Number:</b>	220003332
<b>Drinking-Water System Name:</b>	Wheatley Drinking Water System
<b>Drinking-Water System Owner:</b>	Municipality of Chatham-Kent
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1 – December 31, 2022

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

**Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] 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

**List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
<i>Non Municipal Year Round Residential in Lakeshore:</i>	
1. 3 <sup>rd</sup> Concession Waterline Association	260086125
2. 3 <sup>rd</sup> &4 <sup>th</sup> Concession Waterline Association	260086203
3. KOA Waterline Association	260086138
4. Richardson Sideroad Waterline Association	260086190
5. Tecumseh Road Waterline Association	260086151
6. Tilbury Townline Waterline Association	260086164
<i>Non Municipal Year Round Residential in Chatham-Kent:</i>	
1. D & O Waterline Association	260091793
2. Mint Waterline Distribution System	260091767



<i>Small Drinking Water System in Lakeshore:</i> 1. Cedar Inn Waterline Association	768003593
<i>Large Municipal Year Round Residential in Leamington:</i> Leamington (Wheatley) Distribution System	260087048

**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 Wheatley Water Treatment Plant draws raw water from Lake Erie. Large debris is screened out of the raw water as it is drawn into the treatment plant. Chlorine is added at the raw intake to control the growth of zebra mussels within the intake pipe. The raw water then passes through a 35micron microstrainer to remove algae and other fine particles. Aluminum Sulphate and Polymer are added to achieve more effective settling in the clarifier. Activated carbon is added in the clarifier and is primarily used to remove dissolved organic matter that causes taste, odor, and color in drinking water. The water then passes through the gravity filters into the clearwell where it is disinfected with chlorine before being pumped into the distribution system. The distribution system pressure is regulated by an elevated storage tower in Wheatley with a capacity of 1454 m<sup>3</sup>. The elevated storage tower in the community of Tilbury has a capacity of 6181 m<sup>3</sup>.

**List all water treatment chemicals used over this reporting period**

1. Chlorine Gas
2. Sodium Hypochlorite
3. Aluminum Sulphate
4. Activated Carbon
5. Betz Dearborn Klar-Aid IC1179 (Polymer)



**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**

New Low Lift Motor (Pump #3)	\$ 6,200
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**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 & AWQI No.	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
None					

**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 #)
<b>Raw</b>	52	<10 – 26	<10 – 490	0	
<b>Treated</b>	52	0 – 0	0 – 0	52	<10 – <10
<b>Distribution</b>	703	0 – 0	0 – 0	691	<10 – 60

\*\* 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 #)
<b>Turbidity</b> Filters	8760	0.0000 – 0.99025 NTU
<b>Chlorine</b> Reservoir Outlet	8760	0.012 – 1.79 mg/L
<b>Fluoride</b>	Not Provided	

*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 2022	Result	Unit of Measure
Municipal Drinking Water License # 027-102 Table 3 and Table 7 Pages 12 & 15 Limit: 25 mg/L	Residue Management Suspended Solids	January 10	4.3	mg/L
		February 14	9.0	
		March 14	6.0	
		April 11	2.0	
		May 9	6.0	
		June 13	19.0	
		July 11	27.7	
		August 8	2.7	
		September 1	3.7	
		October 11	5.0	
		November 14	10.3	
		December 12	3.0	
		12 Month Avg	8.2	mg/L

**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	August 15	<0.50	6	ug/L	No
Arsenic	August 15	<1.0	10	ug/L	No
Barium	August 15	19	1000	ug/L	No
Boron	August 15	17	5000	ug/L	No
Cadmium	August 15	<0.090	5	ug/L	No
Chromium	August 15	<5.0	50	ug/L	No
*Lead	See Schedule 15.1 Summary				
Mercury	August 15	<0.00010	0.001	mg/L	No
Selenium	August 15	<2.0	50	ug/L	No
Sodium	August 15	8600	20000	ug/L	No
Uranium	August 15	<0.10	20	ug/L	No
Fluoride	August 15	10	1.5	mg/L	No
Nitrite	August 15	<0.010	1	mg/L	No
Nitrate	August 15	<0.10	10	mg/L	No
Nitrite + Nitrate	August 15	<0.10	-	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	27	<0.50 – 0.64	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	August 15	<0.50	5	ug/L	No
Atrazine + N-dealkylated metabolites	August 15	<1.0	5	ug/L	No
Azinphos-methyl	August 15	<2.0	20	ug/L	No
Benzene	August 15	<0.10	1	ug/L	No
Benzo(a)pyrene	August 15	<0.0050	0.01	ug/L	No
Bromoxynil	August 15	<0.50	5	ug/L	No
Carbaryl	August 15	<5.0	90	ug/L	No
Carbofuran	August 15	<5.0	90	ug/L	No
Carbon Tetrachloride	August 15	<0.10	2	ug/L	No
Chlorpyrifos (Dursban)	August 15	<1.0	90	ug/L	No
Diazinon	August 15	<1.0	20	ug/L	No
Dicamba	August 15	<1.0	120	ug/L	No
1,2-Dichlorobenzene	August 15	<0.20	200	ug/L	No
1,4-Dichlorobenzene	August 15	<0.20	5	ug/L	No
1,2-Dichloroethane	August 15	<0.20	5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	August 15	<0.10	14	ug/L	No
Dichloromethane	August 15	<0.50	50	ug/L	No
2-4 Dichlorophenol	August 15	<0.25	900	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	August 15	<1.0	100	ug/L	No
Diclofop-methyl	August 15	<0.90	9	ug/L	No
Dimethoate	August 15	<2.5	20	ug/L	No
Diquat	August 15	<7.0	70	ug/L	No
Diuron	August 15	<10	150	ug/L	No
Ethylbenzene	August 15	<0.10	140	ug/L	No
Glyphosate	August 15	<10	280	ug/L	No
<b>Haloacetic Acids (HAA)</b>	Feb 14 May 2 Aug 15 Nov 14	17 23 28 18	80	ug/L	No
<b>Running Annual Average:</b>		<b>21.5</b>			
Malathion	August 15	<5.0	190	ug/L	No
2 Methyl-4-chlorophenoxyacetic acid (MCPA)	August 15	<10	100	ug/L	No
Metolachlor	August 15	<0.50	190	ug/L	No
Metribuzin (Sencor)	August 15	<5.0	80	ug/L	No
Monochlorobenzene	August 15	<0.10	80	ug/L	No
Paraquat	August 16	<1.0	10	ug/L	No
Pentachlorophenol	August 15	<0.50	60	ug/L	No
Phorate	August 15	<0.50	2	ug/L	No
Picloram	August 15	<5.0	190	ug/L	No
Polychlorinated Biphenyls(PCB)	August 15	<0.05	3	ug/L	No
Prometryne	August 15	<0.25	1	ug/L	No
Simazine	August 15	<1.0	10	ug/L	No
Terbufos	August 15	<0.50	1	ug/L	No

<b>Tetrachloroethylene</b>	August 15	<0.10	10	ug/L	No
<b>2,3,4,6-Tetrachlorophenol</b>	August 15	<0.50	100	ug/L	No
<b>Trihalomethanes (THM) (MINT)</b>	Feb 14 May 2 Aug 15 Nov 14	24.1 33.7 53.1 37.0	100	ug/L	No
<b>Running Annual Average:</b>		<b>36.9</b>			
<b>Toluene</b>	August 15	<0.20	60	ug/L	No
<b>Triallate</b>	August 15	<1.0	230	ug/L	No
<b>Trichloroethylene</b>	August 15	<0.10	5	ug/L	No
<b>2,4,6-Trichlorophenol</b>	August 15	<0.50	5	ug/L	No
<b>Trifluralin</b>	August 15	<1.0	45	ug/L	No
<b>Vinyl Chloride</b>	August 15	<0.20	1	ug/L	No
<b>Xylenes</b>	August 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: Point of Entry	Unit of Measure
Alkalinity	November 14	75	mg/L
Aluminum	November 14	14	ug/L
Colour	November 14	2	TCU
Fluoride	November 14	<0.10	mg/L
Hardness	November 14	110	mg/L
pH	November 14	7.64	



<b>Parameter</b>	<b>Sample Date</b>	<b>Result: Raw – Before Treatment</b>	<b>Result: Point of Entry</b>	<b>Unit of Measure</b>
Microcystin	May 30	<0.150	<0.150	ug/L
	Jun 06	<0.150	<0.150	
	Jun 13	<0.150	<0.150	
	Jun 20	<0.150	<0.150	
	Jun 27	<0.150	<0.150	
	Jul 04	<0.150	<0.150	
	Jul 11	<0.150	<0.150	
	Jul 18	<0.150	<0.150	
	Jul 25	<0.150	<0.150	
	Aug 02	<0.150	<0.150	
	Aug 08	<0.150	<0.150	
	Aug 15	<0.150	<0.150	
	Aug 22	<0.150	<0.150	
	Aug 29	<0.150	<0.150	
	Sept 06	<0.150	<0.150	
	Sept 12	0.600	<0.150	
	Sept 19	<0.150	<0.150	
	Sept 26	<0.150	<0.150	
	Oct 03	<0.150	<0.150	
	Oct 11	<0.150	<0.150	
Oct 17	<0.150	<0.150		
Oct 24	<0.150	<0.150		
Oct 31	<0.150	<0.150		