



ANNUAL REPORT

Drinking-Water System Number:	220003332
Drinking-Water System Name:	Wheatley 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, 2024

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

Drinking Water System Name	Drinking Water System Number
<i>Non Municipal Year Round Residential in Lakeshore:</i>	
1. 3 rd Concession Waterline Association	260086125
2. 3 rd &4 th 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
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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

After the September 13th, 2023, fire, the Distribution System received treated water from the South Chatham-Kent Drinking Water System and from the Leamington Distribution System (Union WSS). The South Chatham-Kent Drinking Water Treatment Plant is located in Erie Beach, Ontario and obtains water from Lake Erie via an intake pipe and a raw water pumping station. The Leamington Distribution System (Union WSS) is fed from the Union Water Supply System (UWSS), a system which receives water from the Ruthven Water Treatment Plant (RWTP) located in the hamlet of Ruthven in the Town of Kingsville, Ontario and draws water from Lake Erie.

These systems were used while construction took place at the Wheatley Temporary Treatment plant, until the new system came online on May 13, 2024. The new Wheatley Temporary Water Treatment Plant draws raw water from Lake Erie. Raw water is pumped through strainers to filter out any large debris. The water then is filtered by membrane filtration trains contained in trailers. After filtration the water is disinfected with chlorine before being pumped to the distribution system. The distribution system pressure is maintained by an elevated storage tower in Wheatley with a capacity of 1,454 m3. The elevated storage tower in the community of Tilbury has a capacity of 6,181 m3. A reservoir in Tilbury provides storage capacity of 2,280 m3.

On November 12th, 2024, the Wheatley Temporary Treatment system shut down for the winter season and the Distribution System is supplied with water from the South Chatham-Kent Drinking Water System and from the Leamington Distribution System.

List all water treatment chemicals used over this reporting period

Chlorine Gas Sodium Hypochlorite

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

Expense	Cost (\$)
Temporary Water Treatment Plant	2,470,300
Laboratory Analysis	40,558

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
May 13 #164940	Distribution System Pressure Loss	<20	psi	Boil Water Advisory Watermain break repaired Flushing Sampling & Testing: (0 E.coli, 0 Coliforms)	May 13, 14 & 15
May 23 # 165017	Distribution System Pressure Loss (due to high demand)	<20	psi	Sampling & Testing: (0 E.coli, 0 Coliforms)	May 23

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	26	< 10 – 100	< 10 – 1100	0	
Treated	26	0 – 0	0 – 0	26	< 10 – < 10
Distribution	476	0 – 0	0 – 0	461	< 10 – 40
3rd Concession Waterline Association	12	0 - 0	0 - 0	12	< 10 - 10
3rd&4th Concession Waterline Association	12	0 - 0	0 - 0	12	< 10 - < 10
KOA Waterline Association	12	0 - 0	0 - 0	12	< 10 - < 10

Richardson Sideroad Waterline Association	12	0 - 0	0 - 0	12	< 10 - < 10
Tecumseh Road Waterline Association	12	0 - 0	0 - 0	12	< 10 - 10
Tilbury Townline Waterline Association	12	0 - 0	0 - 0	12	< 10 - 20
D & O Waterline Association	12	0 - 0	0 - 0	12	< 10 - 10
Mint Waterline Association	12	0 - 0	0 - 0	12	< 10 - 20
Cedar Inn Waterline Association	12	0 - 0	0 - 0	0	

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 (Filter Discharge)	8760	0.010 - 1.000 NTU
Chlorine (Reservoir Discharge)	8760	0.31– 2.28 mg/L
Fluoride	Not Applicable	Not Applicable

***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
Municipal Drinking Water License # 027-102 Table 3 and Table 7 Pages 12 & 15 Limit: 25 mg/L	Residue Management Suspended Solids	-	-	-
*From May 13 th 2024 to November 12 th 2024 the Wheatley WTP Backwash Water was discharged via sanitary sewer to the Wheatley Wastewater Treatment Plant for treatment.				

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	Aug 12	< 0.50	6	ug/L	No
Arsenic	Aug 12	< 1.0	10	ug/L	No
Barium	Aug 12	18	1000	ug/L	No
Boron	Aug 12	18	5000	ug/L	No
Cadmium	Aug 12	< 0.090	5	ug/L	No
Chromium	Aug 12	< 5.0	50	ug/L	No
*Lead	See Schedule 15.1 Summary				
Mercury	Aug 12	< 0.00010	0.001	mg/L	No
Selenium	Aug 12	< 2.0	50	ug/L	No
Sodium	Aug 12	11	20	mg/L	No
Uranium	Aug 12	0.30	20	ug/L	No
Fluoride	Aug 12	< 0.10	1.5	mg/L	No
Nitrite	Aug 12	< 0.010	1	mg/L	No
Nitrate	Aug 12	0.19	10	mg/L	No
Nitrite + Nitrate	Aug 12	0.19	-	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	26	< 0.50 – 0.87	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	Aug 12	< 0.50	5	ug/L	No
Atrazine + N-dealkylated metabolites	Aug 12	< 1.0	5	ug/L	No
Azinphos-methyl	Aug 12	< 2.0	20	ug/L	No
Benzene	Aug 12	< 0.10	1	ug/L	No
Benzo(a)pyrene	Aug 12	< 0.0050	0.01	ug/L	No
Bromoxynil	Aug 12	< 0.50	5	ug/L	No
Carbaryl	Aug 12	< 5.0	90	ug/L	No
Carbofuran	Aug 12	< 5.0	90	ug/L	No
Carbon Tetrachloride	Aug 12	< 0.10	2	ug/L	No
Chlorpyrifos (Dursban)	Aug 12	< 1.0	90	ug/L	No
Diazinon	Aug 12	< 1.0	20	ug/L	No
Dicamba	Aug 12	< 1.0	120	ug/L	No
1,2-Dichlorobenzene	Aug 12	< 0.20	200	ug/L	No
1,4-Dichlorobenzene	Aug 12	< 0.20	5	ug/L	No
1,2-Dichloroethane	Aug 12	< 0.20	5	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	Aug 12	< 0.10	14	ug/L	No

Dichloromethane	Aug 12	< 0.50	50	ug/L	No
2,4-Dichlorophenol	Aug 12	< 0.25	900	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Aug 12	< 1.0	100	ug/L	No
Diclofop-methyl	Aug 12	< 0.90	9	ug/L	No
Dimethoate	Aug 12	< 2.5	20	ug/L	No
Diquat	Aug 12	< 7.0	70	ug/L	No
Diuron	Aug 12	< 10	150	ug/L	No
Ethylbenzene	Aug 12	< 0.10	140	ug/L	No
Glyphosate	Aug 12	< 10	280	ug/L	No
Haloacetic Acids (HAA) (Distribution)	Feb 12 May 27 Aug 12 Dec 2	26 19 36 26	80	ug/L	No
Running Annual Average:		27			
Malathion	Aug 12	< 5.0	190	ug/L	No
2 Methyl-4-chlorophenoxyacetic acid (MCPA)	Aug 12	< 10	100	ug/L	No
Metolachlor	Aug 12	< 0.50	50	ug/L	No
Metribuzin (Sencor)	Aug 12	< 5.0	80	ug/L	No
Monochlorobenzene	Aug 12	< 0.10	80	ug/L	No
Paraquat	Aug 12	< 1.0	10	ug/L	No
Pentachlorophenol	Aug 12	< 0.50	60	ug/L	No
Phorate	Aug 12	< 0.50	2	ug/L	No
Picloram	Aug 12	< 5.0	190	ug/L	No
Polychlorinated Biphenyls (PCB)	Aug 12	< 0.05	3	ug/L	No
Prometryne	Aug 12	< 0.25	1	ug/L	No
Simazine	Aug 12	< 1.0	10	ug/L	No
Terbufos	Aug 12	< 0.50	1	ug/L	No
Tetrachloroethylene	Aug 12	< 0.10	10	ug/L	No
2,3,4,6-Tetrachlorophenol	Aug 12	< 0.50	100	ug/L	No
Trihalomethanes (THM) (Distribution) Sampled from the Mint Waterline DS	Feb 12 May 13 Aug 12 Dec 09	36 38 60 39	100	ug/L	No
Running Annual Average:		43			
Toluene	Aug 12	< 0.20	60	ug/L	No
Triallate	Aug 12	< 1.0	230	ug/L	No
Trichloroethylene	Aug 12	< 0.10	5	ug/L	No
2,4,6-Trichlorophenol	Aug 12	< 0.50	5	ug/L	No
Trifluralin	Aug 12	< 1.0	45	ug/L	No
Vinyl Chloride	Aug 12	< 0.20	1	ug/L	No
Xylenes	Aug 12	< 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: Treated – Point of Entry	Unit of Measure
Alkalinity	Aug 12	92	mg/L
Aluminum	Aug 12	18	ug/L
Colour	Aug 12	< 2	TCU
Fluoride	Aug 12	< 0.10	mg/L
Hardness	Aug 12	110	mg/L

Parameter	Sample Date	Result: Raw – Before Treatment	Result: Treated - 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	0.335	< 0.150	
	Sept 16	0.300	< 0.150	
	Sept 17	< 0.150	< 0.150	
	Sept 18	< 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		