Ontario **Drinking-Water Systems Regulation O. Reg. 170/03**

OPTIONAL ANNUAL REPORT TEMPLATE

Drinking-Water System Number:	**260004969**
Drinking-Water System Name:	Town of Tecumseh Distribution System
Drinking-Water System Owner:	The Corporation of The Town of Tecumseh
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	01- January -2022 to 31- December – 2022

Complete if your Category is Large Municipal Residential or Small Municipal Residential

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.

Town of Tecumseh Municipal Office
917 Lesperance Road
Tecumseh, Ontario
N8N 1W9

Complete for all other Categories.

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [X] No [ ]

Number of Interested Authorities you report to: 2

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [x] No [ ]

Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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
Lakeshore Dist. System	260004982

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 [x] No [ ]

Indicate how you notified system users that your annual report is available, and is free of charge.

- **[x] Public access/notice via the web**
- **[ ] Public access/notice via Government Office**
- **[ ] Public access/notice via a newspaper**
- **[x] Public access/notice via Public Request**
- **[ ] Public access/notice via a Public Library**
- **[ ] Public access/notice via other method _____**

Describe your Drinking-Water System

Water Distribution System

The Town of Tecumseh, City of Windsor and the Windsor Utilities Commission (WUC) entered into a 50-year Service Agreement in November 2004. The Service Agreement was implemented on March 31, 2006 when four boundary metering chambers were installed and maintained by the Town of Tecumseh. Tecumseh's drinking water system also includes a water tower located on Tecumseh Road, with no re-chlorination stations within the distribution system

Prior to August 1, 2008, WUC provided water to 2,400 residents in the former Township of Sandwich South, south of Highway 401 ("South Water Area"). The Town installed eight additional boundary meter chambers and assumed the responsibility for the operations and maintenance of the water distribution system from WUC in this South Water Area effective August 1, 2008.

The Town of Tecumseh and the Town of Lakeshore entered into an agreement on May 13, 2003 whereby the Tecumseh distribution system supplies drinking water to the Lakeshore distribution system. This agreement expired on December 31, 2007 and is currently being renegotiated; the status quo is maintained until a new agreement is signed.

List all water treatment chemicals used over this reporting period

N/A

Were any significant expenses incurred to?

- **No [ ] Yes [ ]** Install required equipment
- **No [ ] Yes [ ]** Repair required equipment
- **No [ ] Yes [X]** Replace required equipment- PWES-2022-03

Please provide a brief description and a breakdown of monetary expenses incurred

Construction for replacement of existing 200mm diameter cast iron watermain with the new directionally drilled 20mm diameter PVC watermain on Old Tecumseh Road from Brighton to the Pike Creek Bridge. Approximately 150m. Total cost of projects was $99,073, excluding HST.

PWES Capital works plan for 2022 included replacement of 10 water sampling stations. Due to material shortage, 5 sampling stations were replaced. The remaining will be completed in 2023. The total estimated cost is $37,000.

PWES had included the Watermain Anode Program – Inspection/Replacement in its approved 2021 Capital Works Plan. In September of 2021, the tender was awarded to C.P. Systems to undertake the continuation of the program. Following award of the tender, C.P. Systems advised that there is shortage of anodes and they are unable to obtain enough anodes to complete the work in 2021. Accordingly, it was agreed that the work would be postponed until 2022 when there is a sufficient supply of anodes to allow the contractor to complete the work in its entirety. Work was completed in 2022 with a total cost of the project being $271,672, excluding HST.

County Road 42 and County Road 43 Improvements, Phase 1.
Phase 1 started and includes the underground work along County Road 42 between 11th Concession and Pike Creek. The scope of construction generally includes storm and sanitary sewers, watermains and restoration. This work is being done in advance of the road improvements in order to facilitate the utility relocations required along this corridor and to provide the storm outlet for the County Road 43 Diversion (Phase 2) slated for a construction start sometime in 2024. Total costs of the project for Tecumseh's portion (water and wastewater) are estimated at 6,476,000 excluding HST ($3,359,000 for Water and $3,117,000 for Wastewater).

Construction continued for the Manning Road Improvement Project (Phase 2)
This project involved the replacement of the existing 150mm diameter of Cast Iron watermain on Manning Road from St. Thomas Street to Riverside Drive with new 250mm diameter watermain (approximately 690m). Included in this project was replacement of 150mm diameter Cast Iron watermain on St. Thomas from Manning Road to Grace Road with 150mm diameter PVC watermain (approximately 90m) and connecting Little River Road between Manning Road and Grace Road (approximately 90m). Total cost of the watermain portion of the project was $657,400 excluding HST.

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
None					

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	**N/A**				
Treated	**N/A**				
Distribution	519	0 to 0	0 to 0	156	0 to 20

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	**N/A**	
Chlorine ***Tecumseh Water Tower***	**8760**	**Max 1.27 mg/L** **Min 0.83 mg/L**
Chlorine ***Distribution Free Chlorine Residuals***	**1626**	**Max 1.78 mg/L** **Min 0.37 mg/L**
Fluoride (If the DWS provides fluoridation)	**N/A**	

NOTE: For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

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
N/A				

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				
Arsenic				
Barium				
Boron				
Cadmium				

Chromium				
***Lead**				
Mercury				
Selenium				
Sodium				
Uranium				
Fluoride				
Nitrite				
Nitrate				

*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 Distribution	Number of Samples	Alkalinity Result (range 30-500)	Lead Result (range 0-0.01)	Unit of Measure	Field pH (range 0-14)	Number of Exceedances
Winter Session – Collection Date: March 9, 2022						
279 Edgewater	**1**	**83**	**0.00096**	**Mg/L**	**7.2**	**None**
284 Coronado	**1**	**90**	**0.00231**	**Mg/L**	**7.2**	
645 William	**1**	**81**	**0.00107**	**Mg/L**	**7.3**	
12117 Evergreen	**1**	**90**	**0.00017**	**Mg/L**	**7.3**	

Location Type Distribution	Number of Samples	Alkalinity Result (range 30-500)	Lead Result (range 0-0.01)	Unit of Measure	Field pH (range 0-14)	Number of Exceedances
Summer Session – Collection Date: October 14, 2022						
279 Edgewater	**1**	**82**	**0.00005**	**Mg/L**	**7.2**	**None**
284 Coronado	**1**	**79**	**0.00009**	**Mg/L**	**7.2**	
645 William	**1**	**80**	**0.00014**	**Mg/L**	**7.1**	
12117 Evergreen	**1**	**82**	**0.00003**	**Mg/L**	**7.1**	

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor				
Aldicarb				

Aldrin + Dieldrin				
Atrazine + N-dealkylated metobolites				
Azinphos-methyl				
Bendiocarb				
Benzene				
Benzo(a)pyrene				
Bromoxynil				
Carbaryl				
Carbofuran				
Carbon Tetrachloride				
Chlordane (Total)				
Chlorpyrifos				
Cyanazine				
Diazinon				
Dicamba				
1,2-Dichlorobenzene				
1,4-Dichlorobenzene				
Dichlorodiphenyltrichloroethane (DDT) + metabolites				
1,2-Dichloroethane				
1,1-Dichloroethylene (vinylidene chloride)				
Dichloromethane				
2-4 Dichlorophenol				
2,4-Dichlorophenoxy acetic acid (2,4-D)				
Diclofop-methyl				
Dimethoate				
Dinoseb				
Diquat				
Diuron				
Glyphosate				
Haloacetic Acids (HAAs) (NOTE**:** show latest running annual average**)**	**quarterly**	**16.4**	**µg/L**	**None**
Heptachlor + Heptachlor Epoxide				
Lindane (Total)				
Malathion				
Methoxychlor				
Metolachlor				
Metribuzin				
Monochlorobenzene				
Paraquat				
Parathion				
Pentachlorophenol				
Phorate				
Picloram				

Polychlorinated Biphenyls(PCB)				
Prometryne				
Simazine				
THM (NOTE: show latest running annual average)	**quarterly**	**22.46**	**µg/L**	**None**
Temephos				
Terbufos				
Tetrachloroethylene				
2,3,4,6-Tetrachlorophenol				
Triallate				
Trichloroethylene				
2,4,6-Trichlorophenol				
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)				
Trifluralin				
Vinyl Chloride				

Summary table for Running Annual Averages of Organic Parameters sampled during this reporting period.

Parameter	Sample Date	Result	Running Annual Average	Unit of Measure	Number of Exceedances
HAA	**Jan.10, 2022**	**11.7**	**16.4**	**µg/L**	**None**
	Apr.11, 2022	**11.9**		**µg/L**	
	July 11, 2022	**24.1**		**µg/L**	
	Oct.14, 2022	**17.8**		**µg/L**	

Parameter	Sample Date	Average Result	Running Annual Average	Unit of Measure	Number of Exceedances
THM	**Jan.10, 2022**	**19.5**	**22.46**	**µg/L**	**None**
	Apr.11, 2022	**21.7**		**µg/L**	
	July 11, 2022	**26.7**		**µg/L**	
	Oct.14, 2022	**22.0**		**µg/L**	

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
N/A			