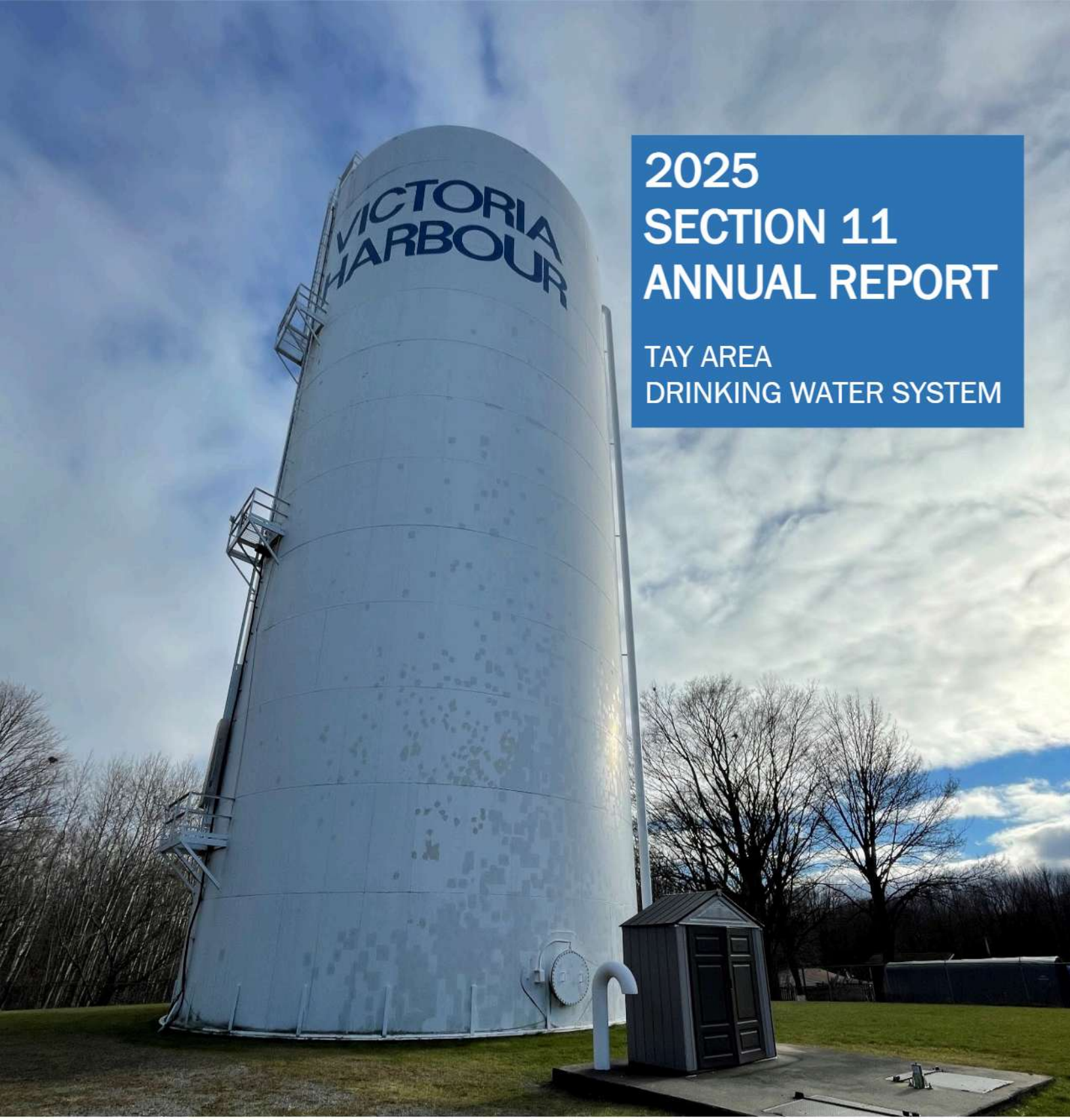

2025 SECTION 11 ANNUAL REPORT

TAY AREA DRINKING WATER SYSTEM

For the period of
January 1st, 2025 to December 31st, 2025

Prepared for the Corporation of the Township of Tay by the Ontario Clean Water Agency

TAY TOWNSHIP

OCWA
ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

This report was prepared in accordance with the requirements of *O.Reg 170/03, Section 11, Annual reports* for the following system and reporting period:

Drinking Water System Number:	220001076
Drinking Water System Name:	Tay Area Drinking Water System
Drinking Water System Owner:	The Corporation of the Township of Tay
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2025 to December 31, 2025

Does the Drinking Water System serve more than 10,000 people?

No

Is the Annual Report available to the public at no charge on a website on the Internet?

Yes

Note: If a large municipal residential system serves more than 10,000 people, the owner of the system shall ensure that a copy of every report prepared under this section is available to the public at no charge on a website on the Internet. O. Reg. 170/03, Section 11. (10)

Location where Summary Report required under O. Reg 170/03, Schedule 22 will be available for inspection. *(O. Reg 170/03, Section 11.(6)(f)):*

- Township of Tay Municipal Office at 450 Park Street, Victoria Harbour, Tay Township
- https://www.tay.ca/living-here/water-and-wastewater/water-plans-and-reports/

Note: This is required for large municipal residential systems or small municipal residential systems.

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

Drinking Water System Name	Drinking Water System Number
N/A	N/A

Is a copy of the annual report provided to all Drinking Water System owners that are connected to this system and to whom this system provides all of its drinking water?

N/A

How system users are notified that the annual report is available, and is free of charge. *(O.Reg 170/03, Section 11.(7))*

- [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: _____

Note: The owner of a drinking water system shall ensure that a copy of an annual report for the system is given, without charge, to every person who requests a copy. ((O.Reg 170/03, Section 11.(7)):

Description of Drinking Water System *(O.Reg 170/03, Section 11.(6)(a)):*

The Tay Area Drinking Water System (DWS) is classified as a Class III Water Treatment and Class II Water Distribution and Supply Subsystem. It is categorized under O.Reg 170/03 as a Large Municipal Residential Drinking Water System, servicing an approximate population of 8,000 persons. The system is comprised of Tay Area Water Treatment Plant, Low Lift Pumping Station, Waubaushene Booster Pumping Station, Port McNicoll Booster Pumping Station, Maple Street (Victoria Harbour) Booster Pumping Station, and two below grade treated water reservoirs. The raw water is drawn from Hogg's Bay – Georgian Bay, treated and distributed through distribution watermain.

The raw water is supplied from Hogg's Bay and enters the Low Lift Pumping Station where it receives pre-chlorination (Sodium Hypochlorite for Zebra Mussel control, when required) and is conveyed to the Tay Area Water Treatment Plant. The raw water passes through the Microza Filter System (for particulate removal), then through Granular Activated Carbon Filters (to aid in the removal of taste, odour and organics), treated with UV (for primary disinfection) and Sodium Hypochlorite (for primary and secondary disinfection). The treated water is stored in two reservoirs/contact tanks before being distributed to users. The treated water is conveyed through the distribution system, as well as to the Waubaushene, Port McNicoll, and Maple Street (Victoria Harbour) Booster Stations where the distribution water receives Sodium Hypochlorite for re-chlorination (secondary disinfection) and provided to the surrounding communities. Online equipment continuously monitors filter effluent turbidity, free chlorine residual and flows. The water treatment plant and booster stations are equipped with standby power in the event of a power failure.

List of water treatment chemicals used by the system during the reporting period *(O.Reg 170/03, Section 11.(6)(a)):*

- Sodium Hypochlorite 12% Solution
- Stern PAC Aluminum Chloride Hydroxide Sulfate 30-35%
- Sodium Hydroxide 50%
- Citric Acid 50%

Significant expenses were incurred to:

X	Install required equipment
X	Repair required equipment
X	Replace required equipment
	No significant expenses were incurred

Description of major expenses during the reporting period to install, repair or replace required equipment *(O.Reg 170/03, Section 11.(6)(e)):*

- Talbot St. Booster Station – Foot Valve Installation
- Talbot Booster Station – VFD Replacement
- Low Lift Pump Station – Chemical Pump Replacement
- Water Treatment Plant – GAC Valve Replacement & Circuit Board Installation
- Low Lift Strainer Repair
- Backflow Preventer Rebuilds
- Membrane Caps Replacements

Summary of any reports/notices submitted to the Ministry and/or Spills Action Centre in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg 170/03 during the reporting period, including a description of any corrective actions taken under Schedule 17 or 18 *(O. Reg 170/03, Section 11.(6)(b),(d):*

Incident Date (yyyy/mm/dd)	Parameter/ Notice of	Result & Unit	Reporting Summary, Corrective Actions & Resolution
N/A	N/A	N/A	N/A

Table 1. Microbiological testing done under the Schedule 10, 11 or 12 (as applicable) of O.Reg 170/03 during this reporting period *(O.Reg 170/03, Section 11.(6)(c)).*

Location	Number of Samples	Range of E. Coli or Fecal Results		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Samples	
		Min.	Max.	Min.	Max.		Min.	Max.
Raw Water – RW[1A]	52	0	0	0	1420	N/A	N/A	N/A
Treated Water[1B]	52	0	20	0	0	52	0	2
Distribution[1C]	221	0	0	0	0	64	0	10

Note: HPC = Heterotrophic Plate Count

Note: Units for E.Coli or Fecal Results are cfu/100 mL, units for Total Coliform Results are cfu/100 mL, units for HPC results are cfu/1mL

[1A]O.Reg 170/03, Schedule 10-4. (1)(3) requires for a large municipal residential system that a water sample is taken at least once every week from the drinking water system's raw water, before any treatment is applied to the water and tested for E.Coli and total coliforms.

[1B]O Reg 170/03, Schedule 10-3 requires for a large municipal residential system that a treated water sample is taken at least once every week and tested for E.Coli, total coliforms and general bacteria population expressed as colony counts on a heterotrophic count (HPC).

[1C] O.Reg. 170/03 Schedule 10-2.(1)(2)(3) requires that a system that serves 100,000 people or less, at least eight distribution samples, plus one additional sample for every 1,000 people served by the system to be taken every month, with at least one of the samples being taken in each week and be tested for E.Coli, Total Coliforms. At least 25 percent of the samples required must be tested for general bacteria population expressed as colony counts on heterotrophic plate count (HPC). The number of people served by the system is 8,000 (as confirmed with the Owner on November 12, 2024) and therefore requires at minimum sixteen (16) samples per month.

Table 2. Operational testing done under Schedule 7, 8 or 9 (as applicable) O. Reg 170/03 during the period covered by this Annual Report *(O. Reg 170/03, Section 11.(6)(c)).*

Parameter & Location	Number of Samples	Range of Results	
		Min.	Max.
Filter Effluent Turbidity, Rack 1 (Continuous) [NTU][2A]	8760	0.00	2.00[2A]
Filter Effluent Turbidity, Rack 2 (Continuous) [NTU][2A]	8760	0.00	2.00[2A]
Filter Effluent Turbidity, Rack 3 (Continuous) [NTU][2A]	8760	0.00	2.00[2A]
Filter Effluent Turbidity, Rack 4 (Continuous) [NTU][2A]	8760	0.00	2.00[2A]
Free Chlorine Residual, Treated (Continuous) [mg/L][2B]	8760	0.34[2D]	3.22
Free Chlorine Residual, Distribution (Continuous) [mg/L]- Maple Booster Station[2C]	8760	0.68	2.02
Free Chlorine Residual, Distribution (Continuous) [mg/L]- Talbot Booster Station[2C]	8760	0.88	1.86
Free Chlorine Residual, Distribution (Continuous) [mg/L]- Waubashene Booster Station[2C]	8760	0.77	2.02

Note: The number of samples used for continuous monitoring units is 8760.

[2A]If a drinking water system obtains water from a raw water supply that is surface water and the system provides filtration, the owner of a system shall ensure that sampling and testing for turbidity is carried out by continuous monitoring equipment on each filter effluent line (O.Reg.170/03, Schedule 7-3.(2)(b)). Turbidity values are continuously monitored during production, maintenance and start up activities. Filter-to-waste is implemented to ensure effluent turbidity requirements are met at all times and membrane integrity is monitored on a weekly basis. The filtered water turbidity was less than or equal to 0.1 NTU in 99% of the measurements for each filter train for every month of the reporting year.

[2B]O.Reg 170/03 Schedule 7-2.(1) requires a drinking water system that provides chlorination for primary disinfection to sample and test for free chlorine residual with continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed.

[2C]O.Reg 170/03 Schedule 7-2.(3) requires a large municipal residential system that provides secondary disinfection to take at least seven distribution samples each week and immediately tested for free chlorine residual, if the system provides chlorination and does not provide chloramination. At Tay Area DWS, distribution free chlorine residual is measured via continuous monitoring at three locations- Maple, Talbot and Waubashene Booster Station, as permitted under O.Reg 170/03 Schedule 7-2 (4).

[2D]May 30, 2025 – low chlorine residual was the result of air in the chlorine pumps, production racks shut down on low alarm. Air was bled out and chlorine dosage was increased. Racks were placed back into production and chlorine residuals were taken to confirm adequate disinfection levels within the contact chamber.

Table 3. Summary of additional testing and sampling results carried out in accordance with the requirement of an approval, municipal drinking water licence or order (including OWRA) or other legal instrument during the reporting period and if tests required under this Regulation in respect of a parameter were not required during that period, summarize the most recent results of tests of that parameter *(O. Reg 170/03, Section 11.(6)(c)):*

Legal Instrument & Issue Date (yyyy/mm/dd)	**Parameter**	**Date Sampled** (yyyy/mm/dd)	**Result**	**Unit of Measure**
N/A	N/A	N/A	N/A	N/A

Table 4. Summary of Inorganic parameters tested during this reporting period or the most recent sample results[4A] *(O.Reg 170/03, Section 11.(6)(c))*

Parameter & Location	**Sample Date** (yyyy/mm/dd)	**Sample Result**	**Maximum Allowable Concentration (MAC)**	**Exceedance of MAC**
Antimony: Sb (µg/L) – TW	2025/01/06	< MDL 0.6	6.0	No
Arsenic: As (µg/L) – TW	2025/01/06	0.2	10.0	No
Barium: Ba (µg/L) – TW	2025/01/06	26.9	1000.0	No
Boron: B (µg/L) – TW	2025/01/06	13	5000.0	No
Cadmium: Cd (µg/L) – TW	2025/01/06	< MDL 0.003	5.0	No
Chromium: Cr (µg/L) – TW	2025/01/06	0.16	50.0	No
Mercury: Hg (µg/L) – TW	2025/01/06	< MDL 0.01	1.0	No
Selenium: Se (µg/L) – TW	2025/01/06	0.08	50.0	No
Uranium: U (µg/L) – TW	2025/01/06	0.036	20.0	No
Fluoride (mg/L) – TW	2022/01/04[4B]	<MDL 0.06	1.5	No
Nitrite (mg/L) – TW	2025/01/06	<MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2025/04/07	<MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2025/07/07	<MDL 0.003	1.0	No
Nitrite (mg/L) – TW	2025/10/06	<MDL 0.003	1.0	No
Nitrate (mg/L) – TW	2025/01/06	0.210	10.0	No
Nitrate (mg/L) – TW	2025/04/07	0.243	10.0	No

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Nitrate (mg/L) – TW	2025/07/07	0.083	10.0	No
Nitrate (mg/L) – TW	2025/10/06	0.023	10.0	No

Note: MDL = Minimum Detection Limit, TW = Treated Water

[4A]The owner of a large municipal residential system that obtains water from a raw water supply that is surface water shall ensure that at least one water sample for inorganics is taken every 12 months (O.Reg 170/03, Schedule 13-2.(1)). The last set of samples were collected and tested on January 6, 2025. The next set of samples are scheduled to be collected and tested in January, 2026.

[4B]Fluoride is reportable every 60 months. The most recent Fluoride samples were tested in January, 2022, the next set of samples is scheduled to be tested in January, 2027.

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Aesthetic Objective (AO)	Exceedance	
				AO	> 20 mg/L
Sodium: Na (mg/L) – TW	2023/05/01[4C]	16.5	200	No	No
Sodium: Na (mg/L) – TW	2023/08/08[4C]	19.0	200	No	No

Note: MDL = Minimum Detection Limit, TW = Treated Water

Note: There is no regulatory Maximum Allowable Concentration (MAC) Sodium. The aesthetic objective (AO) for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

[4C]Sodium is reportable every 60 months. The most recent reportable Sodium samples were tested in 2023, the next set of reportable samples is scheduled to be tested in 2028.

Table 5: Summary of lead testing under Schedule 15.1 during this reporting period *(O.Reg 170/03, Section 11.(6)(g))*

Location/Type & Parameter	Number of Samples[5A]	Range of Results		Number of Lead Exceedances
		Min.	Max.	MAC = 10 µg/L
Period: January 1 to April 15				
Plumbing – Lead (µg/L)[5B]	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L)[5C]	3	0.01	0.72	0
Distribution – Alkalinity (mg/L as $CaCO_3$)	3	62	66	N/A
Distribution – pH	3	7.28	7.60	N/A
Period: June 15 to October 15				
Plumbing – Lead (µg/L)[5B]	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L)[5C]	6	<MDL 0.01	2.83	0
Distribution – Alkalinity (mg/L as $CaCO_3$)	6	69	81	N/A

Location/Type & Parameter	Number of Samples[5A]	Range of Results		Number of Lead Exceedances
		Min.	Max.	MAC = 10 µg/L
Distribution – pH	6	7.45	7.57	N/A
Period: December 15 to 31				
Plumbing – Lead (µg/L)[5B]	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L)[5C]	N/A	N/A	N/A	N/A
Distribution – Alkalinity (mg/L as $CaCO_3$)	N/A	N/A	N/A	N/A
Distribution – pH	N/A	N/A	N/A	N/A

Note: this is required for large municipal residential systems, small municipal residential systems or non-municipal year-round residential system. (O.Reg 170/03, Section 11.(6)(g))

[5A]This system follows a reduced sampling schedule (O.Reg. 170/03, Section 15.1.5). The number of sampling points for the system is based on the population served by the system. The number of people served by the system is 8,000 (as confirmed with the Owner on November 12, 2024), and therefore requires three (3) distribution sampling points per sampling period.

[5B]Plumbing samples are not applicable as this system qualifies for the plumbing exemption per O. Reg 170/03 Schedule 15.1-5 (9) (10).

[5C]This system follows a reduced sampling schedule (O.Reg 170/03, Section 15.1.5). Distribution lead samples are collected every 36 months. The most recent set of distribution lead samples were collected within the winter period of December 15, 2024 to April 15, 2025 and summer period of June 15, 2025 to October 15, 2025. The next set of distribution lead samples is scheduled to be collected within the winter period of December 15, 2027 to April 15, 2028 and summer period of June 15, 2028 to October 15, 2028.

Table 6: Summary of Organic parameters sampled during this reporting period or the most recent sample results *(O.Reg 170/03, Section 11.(6)(c))*.

Parameter & Location	Sample Date[6A] (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Alachlor (µg/L) – TW	2025/01/06	<MDL 0.02	5.0	No
Atrazine + N-dealkylated metabolites (µg/L) – TW	2025/01/06	<MDL 0.01	5.0	No
Azinphos-methyl (µg/L) – TW	2025/01/06	<MDL 0.05	20.0	No
Benzene (µg/L) – TW	2025/01/06	<MDL 0.32	1.0	No
Benzo(a)pyrene (µg/L) – TW	2025/01/06	<MDL 0.004	0.01	No
Bromoxynil (µg/L) – TW	2025/01/06	<MDL 0.33	5.0	No
Carbaryl (µg/L) – TW	2025/01/06	<MDL 0.05	90.0	No
Carbofuran (µg/L) – TW	2025/01/06	<MDL 0.01	90.0	No
Carbon Tetrachloride (µg/L) – TW	2025/01/06	<MDL 0.17	2.0	No
Chlorpyrifos (µg/L) – TW	2025/01/06	<MDL 0.02	90.0	No
Diazinon (µg/L) – TW	2025/01/06	<MDL 0.02	20.0	No
Dicamba (µg/L) – TW	2025/01/06	<MDL 0.2	120.0	No

Parameter & Location	Sample Date[6A] (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
1,2-Dichlorobenzene (µg/L) – TW	2025/01/06	<MDL 0.41	200.0	No
1,4-Dichlorobenzene (µg/L) – TW	2025/01/06	<MDL 0.36	5.0	No
1,2-Dichloroethane (µg/L) – TW	2025/01/06	<MDL 0.35	5.0	No
1,1-Dichloroethylene (µg/L) – TW	2025/01/06	<MDL 0.33	14.0	No
Dichloromethane (Methylene Chloride) (µg/L) – TW	2025/01/06	<MDL 0.35	50.0	No
2,4-Dichlorophenol (µg/L) – TW	2025/01/06	<MDL 0.15	900.0	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) – TW	2025/01/06	<MDL 0.19	100.0	No
Diclofop-methyl (µg/L) – TW	2025/01/06	<MDL 0.4	9.0	No
Dimethoate (µg/L) – TW	2025/01/06	<MDL 0.06	20.0	No
Diquat (µg/L) – TW	2025/01/06	<MDL 1.0	70.0	No
Diuron (µg/L) – TW	2025/01/06	<MDL 0.03	150.0	No
Glyphosate (µg/L) – TW	2025/01/06	<MDL 1.0	280.0	No
Malathion (µg/L) – TW	2025/01/06	<MDL 0.02	190.0	No
Metolachlor (µg/L) – TW	2025/01/06	<MDL 0.01	50.0	No
Metribuzin (µg/L) – TW	2025/01/06	<MDL 0.02	80.0	No
Monochlorobenzene (Chlorobenzene) (µg/L) – TW	2025/01/06	<MDL 0.3	80.0	No
Paraquat (µg/L) – TW	2025/01/06	<MDL 1.0	10.0	No
PCB (µg/L) – TW	2025/01/06	<MDL 0.04	3.0	No
Pentachlorophenol (µg/L) – TW	2025/01/06	<MDL 0.15	60.0	No
Phorate (µg/L) – TW	2025/01/06	<MDL 0.01	2.0	No
Picloram (µg/L) – TW	2025/01/06	<MDL 1.0	190.0	No
Prometryne (µg/L) – TW	2025/01/06	<MDL 0.03	1.0	No
Simazine (µg/L) – TW	2025/01/06	<MDL 0.01	10.0	No
Terbufos (µg/L) – TW	2025/01/06	<MDL 0.01	1.0	No
Tetrachloroethylene (µg/L) – TW	2025/01/06	<MDL 0.35	10.0	No
2,3,4,6-Tetrachlorophenol (µg/L) – TW	2025/01/06	<MDL 0.2	100.0	No
Triallate (µg/L) – TW	2025/01/06	<MDL 0.01	230.0	No
Trichloroethylene (µg/L) – TW	2025/01/06	<MDL 0.44	5.0	No
2,4,6-Trichlorophenol (µg/L) – TW	2025/01/06	<MDL 0.25	5.0	No
2-methyl-4-chlorophenoxyacetic acid (MCPA) (µg/L) – TW	2025/01/06	<MDL 0.12	100.0	No
Trifluralin (µg/L) – TW	2025/01/06	<MDL 0.02	45.0	No
Vinyl Chloride (µg/L) – TW	2025/01/06	<MDL 0.17	1.0	No
Trihalomethane: Total Annual Average (µg/L) – DW	2025 (Quarterly)	66.00	100.00	No
Haloacetic Acid: Total Annual Average (µg/L) – DW	2025 (Quarterly)	49.025	80.00	No

Note: TW = Treated Water, DW = Distribution Water, MDL = Minimum Detection Limit, MAC = Maximum Allowable Concentration, HAA = Haloacetic Acids

[6A]The owner of a large municipal residential system that obtains water from a raw water supply that is surface water shall ensure that at least one water sample for organics is taken every 12 months (O.Reg 170/03, Schedule 13-4.(1)). The last set of samples were collected and tested on January 6, 2025. The next set of samples are scheduled to be collected and tested in January, 2026.

Table 7: List of Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards for the reporting period.

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result
Trihalomethane: Total Annual Average (µg/L) – DW	2025 (Quarterly)	66.00
Haloacetic Acid: Total Annual Average (µg/L) – DW	2025 (Quarterly)	49.025