



Chatham-Kent

Public Utilities Commission

2025 Annual Drinking Water Summary Report

Leamington (Wheatley) Drinking Water System

Reporting Period of January 1st – December 31st, 2025



1. INTRODUCTION AND BACKGROUND

1.1. System Description

Drinking-Water System Number:	260087048
Drinking-Water System Name:	Leamington (Wheatley) Drinking Water System
Drinking-Water System Owner:	Leamington
Drinking-Water System Category:	Large Municipal Year-Round Residential
Period being reported:	January 1 – December 31, 2025

Source Water:

Surface Water	Lake Erie
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Treatment (Temporary System):

The Wheatley Temporary Water Treatment Plant is located at 115 Detroit Line, Wheatley.

The temporary water treatment plant returned to service from May 10 to December 15, 2025.

From approximately November 2024, the Wheatley distribution system was supplied water from the Leamington Distribution System, which is supplied water from the Union Water Supply System located in the hamlet of Union, Ontario.

Pre-Treatment	Microstrainer
Filtration	Membrane
Primary Disinfection	Chlorination – Sodium Hypochlorite

Treatment (Existing Rehabilitated System):

The Wheatley Water Treatment Plant is located at 115 Detroit Line, Wheatley.

The existing water treatment plant underwent rehabilitation following a fire inside the water treatment plant in September 2023. Subsequent to the rehabilitation, the water treatment plant returned to service supplying water to the distribution systems on December 15, 2025.

Coagulation	Aluminum Sulfate / Polymer
Flocculation & Clarification	Up Flow Clarifiers
Filtration	Conventional Sand Filtration
Primary Disinfection	Chlorination – Chlorine Gas
Taste & Odour:	Powdered Activated Carbon

Distribution - Wheatley:

The Wheatley Water Distribution System consists of approximately 380 km of watermains which services the town of Wheatley, the town of Tilbury, and portions of the former townships of Romney and Tilbury East and the Municipality of Lakeshore. Population served is approximately 10,500.

Secondary Disinfection	Chlorination – Sodium Hypochlorite Chlorination – Chlorine Gas
Storage	Wheatley Elevated Tank Tilbury Elevated Tank
Re-chlorination	Tilbure Re-chlorination Station
Storage & Pumping	Tilbury Reservoir & Booster Pumping Station

Distribution – Leamington (Wheatley):

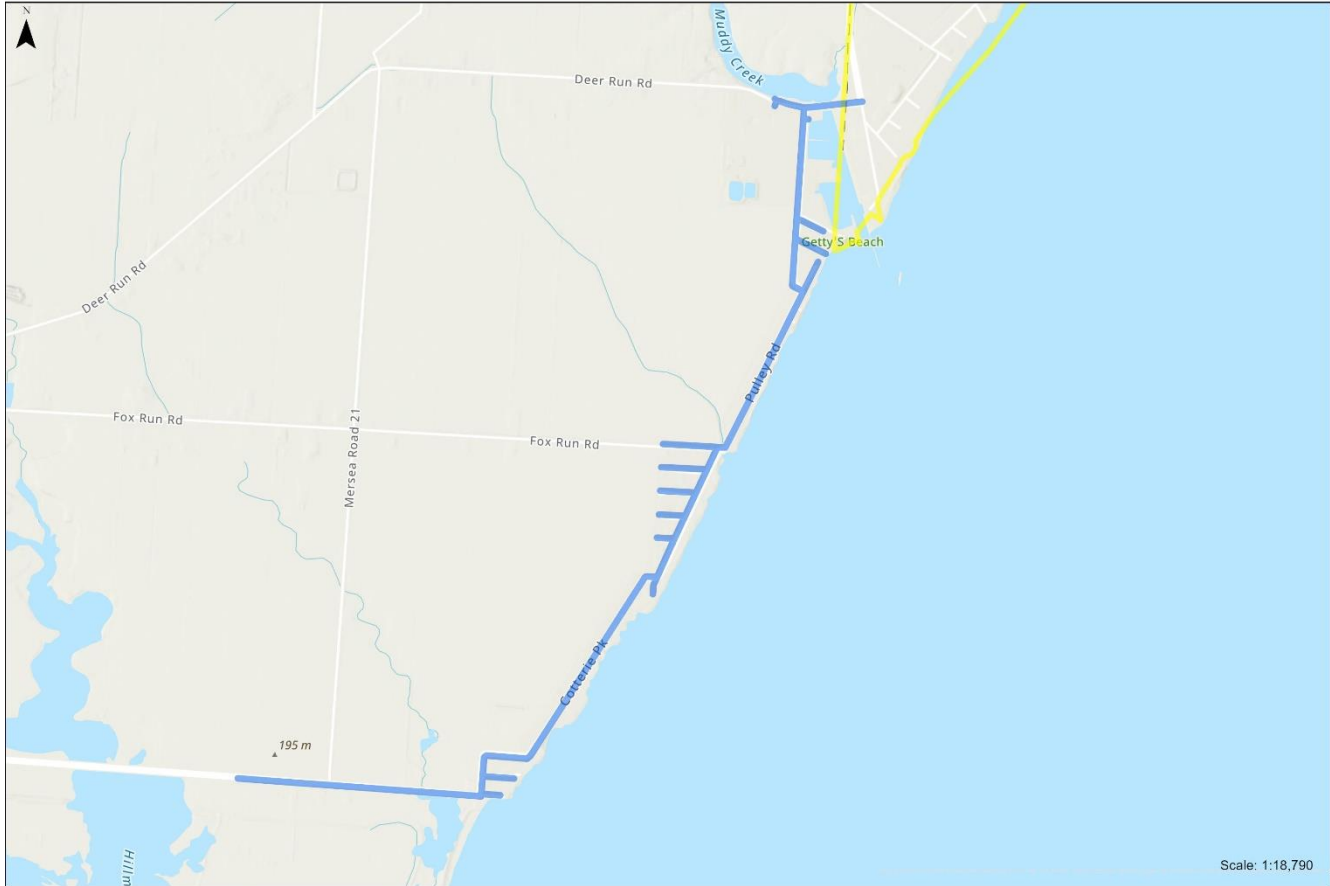
The Leamington (Wheatley) Drinking Water System consists of a water distribution system along the eastern shore of Lake Erie in the Municipality of Leamington, which is owned by the Municipality of Leamington. The drinking water system is supplied water from the Wheatley Drinking Water System which is owned and operated by the Chatham-Kent Public Utilities Commission.

This distribution system does not contain storage, pumping or re-chlorination facilities. The Leamington (Wheatley) Distribution System supplies approximately 180 residential and commercial service connections.

A water supply agreement is in effect between Chatham-Kent PUC and Municipality of Leamington. This agreement authorizes Chatham-Kent PUC to conduct testing and monitoring services of the Leamington (Wheatley) DS in accordance with the provisions of O. Reg. 170/03 s. 5 (4) on the Municipality of Leamington's behalf. Leamington's Water Services is responsible for all other aspects of the operation, including maintenance and repairs of the water distribution infrastructure.

Leamington (Wheatley) Distribution System

- Legend**
- Chatham-Kent Boundary
 - Leamington (Wheatley) Distribution System



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

Drinking Water System Name	Drinking Water System Number
None	

1.3. Description and breakdown of monetary expenses incurred (Wheatley DWS)

Expense	Cost (\$)
Laboratory Analysis	34,000
SCADA, Controls, Communication & Associated Equipment	13,000
Diesel Fuel	4,100
Chlorination System Repair Equipment	3,800
Sodium Hypochlorite	3,600

2. OPERATIONAL TESTING
2.1. Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report:

As the Leamington (Wheatley) Drinking Water System is a distribution system without treatment, the operational testing done under Schedule 7 of Regulation 170/03 during the reporting period is not applicable.

The operational testing is conducted by the donor system (Wheatley Drinking Water System).

The operational testing reported below illustrates the chlorine concentrations from chlorine residual testing in the distribution system.

Parameter	Number of Grab Samples	Range of Results (min #) - (max #)
Turbidity	Not Applicable	
Chlorine (Distribution)	152	0.76 – 2.50 mg/L
Fluoride	Not Applicable	

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

3. WATER QUALITY MONITORING

3.1. Microbiological Testing done under the Schedule 10 of Regulation 170/03, during this reporting period:

As per Schedule 10 of Regulation 170/03, the Leamington (Wheatley) Drinking Water System is required to take the following samples:

Distribution Water:

At least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken in each week. Each distribution sample is tested for E.coli and TC and 25% of distribution samples are tested for HPC.

	Number of Samples	Range of E. coli Results (min #) - (max #)	Range of Total Coliform Results (min #) - (max #)	Number of HPC Samples	Range of HPC Results (min #) - (max #)
Raw					
Treated					
Distribution	152	0 – 0	0 – 0	148	< 10 – 140

3.2. Summary of Inorganic parameters tested during this reporting period or the most recent sample results:

As the Leamington (Wheatley) Drinking Water System is a distribution system without treatment, the summary of Inorganic parameters tested during the reporting period is not applicable.

As per Schedule 13 of Regulation 170/03, the donor system (Wheatley Drinking Water System) is required to take a minimum of one treated water sample to be tested for the parameters outlined in Schedule 13 and 23 as reported in the table below.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
Antimony	Aug 12	< 0.50	6	ug/L	No
Arsenic	Aug 12	1.1	10	ug/L	No
Barium	Aug 12	20	1,000	ug/L	No
Boron	Aug 12	20	5,000	ug/L	No
Cadmium	Aug 12	< 0.090	5	ug/L	No
Chromium	Aug 12	< 5.0	50	ug/L	No
Mercury	Aug 12	< 0.0001	0.001	mg/L	No
Selenium	Aug 12	< 2.0	50	ug/L	No
Sodium	Nov 17	11,000	20,000	ug/L	No

Uranium	Aug 12	0.34	20	ug/L	No
Fluoride	Nov 17	0.11	1.5	mg/L	No
Nitrite	Nov 17	< 0.010	1	mg/L	No
Nitrate	Nov 17	<0.10	10	mg/L	No
Nitrite + Nitrate	Nov 17	<0.10	-	mg/L	No

* MAC: Maximum Acceptable Concentration

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

As the Leamington (Wheatley) Drinking Water System is a distribution system without treatment, the summary of Organic parameters tested during the reporting period is not applicable.

As per Schedule 13 of Regulation 170/03, the donor system (Wheatley Drinking Water System) is required to take a minimum of one treated water sample to be tested for the parameters outlined in Schedule 24 as reported in the table below.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Parameter	Sample Date	Result Value	MAC* Limit	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
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
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

* MAC: Maximum Acceptable Concentration

THM sampling is not conducted for the Leamington (Wheatley) Distribution System and the results for the Wheatley Drinking Water System are deemed representative for the Leamington (Wheatley) Distribution System.

Parameter	Sample Location	Sample Date	Result Value	RAA Value	MAC* Limit	Unit of Measure	Exceedance
THMs	Coatsworth Road	Feb 18	18.8	34.8	100	ug/L	No
	Mint Line	Feb 18	28.9				
	Coatsworth Road	May 13	21.1	33.4			No
	Mint Line	May 13	31.7				
	Coatsworth Road	Aug 11	42.0	35.2			No
	Mint Line	Aug 11	66.0				
	Coatsworth Road	Nov 17	28.3	34.9			No
	Mint Line	Nov 17	42.2				

* MAC: Maximum Acceptable Concentration

HAA sampling is not conducted for the Leamington (Wheatley) Distribution System and the results for the Wheatley Drinking Water System are deemed representative for the Leamington (Wheatley) Distribution System.

Parameter	Sample Date	Result Value	RAA Value	MAC* Limit	Unit of Measure	Exceedance
HAAs	Feb 18	14.0	23.8	80	ug/L	No
	May 13	22.0	24.5			No
	Aug 11	33.0	23.8			No
	Nov 17	23.0	23.0			No

* MAC: Maximum Acceptable Concentration

3.4. Summary of Lead analysis during this reporting period:

As per Schedule 15.1 of Regulation 170/03, the Leamington (Wheatley) Drinking Water System qualifies for reduced lead sampling. A minimum of 1 distribution sample must be taken and tested for lead during each of the following periods in the relevant 12-month period:

1. The period from December 15 to April 15.
2. The period from June 15 to October 15.

Any results displayed as less than (<) are below the detection limit of the accredited third-party laboratory.

Location Type	Number of Samples	Range of Lead Results (min #) - (max #)	MAC* Limit	Unit of Measure	Number of Exceedances / Adverses
Residential	0		10	ug/L	
Non-Residential	0				
Distribution	2	< 0.50 – <0.50			0

* MAC: Maximum Acceptable Concentration

3.5. List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

As per Schedule 13-5 of Regulation 170/03, if a test result for any of the inorganic or organic parameters listed in Schedule 23/24 exceeds half of the standard prescribed for the parameter in Schedule 2 to the Ontario Drinking Water Quality Standards, the frequency of sampling and testing for that parameter under that section shall be increased so that at least one water sample is taken and tested every three months.

Parameter	Sample Date	Result Value	Half MAC* Limit	Unit of Measure	Exceedance
<i>None during the reporting period</i>					

* MAC: Maximum Acceptable Concentration

3.6. Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Parameter	Sample Date	Result Value	MAC* Limit	Unit of Measure	Exceedance
<i>None during the reporting period</i>					

* MAC: Maximum Acceptable Concentration

4. ADVERSE WATER QUALITY INCIDENTS

An adverse drinking water condition is identified by a test result or an observed event that that water may not be safe for consumption and/or detrimental to public health.

Adverse water quality indicators may be as a result of adverse test results that exceed the Ontario Drinking Water Quality Standards. Additional indicators of adverse water quality may be, but not limited to, inadequate filtration or disinfection, low distribution system pressure, evident or suspected contamination of the water system.

Depending on the severity of the adverse water quality indicator, the local Medical Officer of Health / Public Health Unit may issue a water advisory, such as a Boil Water Advisory or Do Not Drink Advisory.

Adverse water quality incidents require timely reporting to the local Medical Officer of Health / Public Health Unit and the Spills Action Centre (SAC) of the Ministry of the Environment, Conservation and Parks (MECP).

Adverse Water Quality Incidents	
<i>None during the reporting period</i>	
AWQI #:	Type:
Parameter:	
Result(s):	Limit:
Date Issued:	Date Resolved:
Details of Adverse:	
Actions Taken & Results Achieved:	

Boil Water Advisories	
<i>None during the reporting period</i>	
AWQI #:	Type:
Parameter:	
Result(s):	Objective:
Date Issued:	Date Rescinded:
Details of Boil Water Advisory:	
Affected Area:	
Actions Taken & Results Achieved:	

5. NON-COMPLIANCES

Failure to meet the standards outlined in provincial regulations, such as those set by the Safe Drinking Water Act, 2002, may result in non-compliance of such regulatory requirements. Additionally, failure to meet the requirements and conditions of the Municipal Drinking Water Licence and Drinking Water Works Permit may also result in a non-compliance.

Depending on the severity of the non-compliance, a non-compliance may affect the drinking water systems inspection rating, investigated with potential for charges/fines and provincial officers' orders issued all at the discretion of the Ministry of the Environment, Conservation and Parks (MECP).

Non-Compliances
<i>None during the reporting period</i>
Type:
Parameter:
Date(s) / Period:
Finding(s):
Criteria / Limit:
Details:
Action(s) Taken:

6. NON-CONFORMANCES

Not undertaking or consideration of drinking water system best management practices may result in a non-conformance of such practices. Best management practices are not mandatory or a regulatory requirement for implementation, but rather a recommendation by the Ministry of the Environment, Conservation and Parks (MECP), to improve the drinking water system or quality management system.

Non-Conformances
<i>None during the reporting period</i>
Type:
Parameter:
Date(s) / Period:
Finding(s):
Recommendation / Objective:
Action(s) Taken:

7. SPILL OF A POLLUTANT / DISCHARGE OF A CONTAMINANT

Spills of a pollutant or discharges of a contaminant to the natural environment which has or may have an adverse effect on or impairment of the natural environment. The requirements monitoring, reporting, remediation of spills and containment discharges are set out in the Environmental Protection Act, R.S.O. 1990 and the Municipal Drinking Water Licence.

Spills of a pollutant or discharges of a contaminant require timely reporting to the local Medical Officer of Health / Public Health Unit and the Spills Action Centre (SAC) of the Ministry of the Environment, Conservation and Parks (MECP).

Spills of a Pollutant / Discharge or a Contaminant	
<i>None during the reporting period</i>	
Incident #:	Spill / Contaminant Material:
Beginning Date:	Beginning Time:
End Date:	End Time:
Duration:	Volume:
Source of Spill:	
Location of Spill:	
Cause of Spill:	
Action(s) Taken:	