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ST. THOMAS

WATER DISTRIBUTION SYSTEM

Ontario Regulation 170/03

Summary Report

For the Period:

January 1, 2025 – December 31, 2025

License Number: 057-101

Permit Number: 057-201



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1 Summary Report Requirements

1.1 Introduction

The 2025 Summary Report for the St. Thomas Water Distribution System (STWDS) has been prepared to satisfy the requirements of Schedule 22 of Ontario Regulation 170/03, to prepare and distribute a summary report of water system operations. The report is to outline any regulatory non-compliance with respect to water quality and water system management and administration and evaluate the water system infrastructures adequacy, with respect to its ability to continue to meet the communities water demands.

Specifically, Ontario Regulation 170/03, states that the summary report must:

- a. List the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and
- b. For each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

- A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
- A comparison of the summary to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement, to the flow rates specified in the written agreement.

The information provided within this report is for the purpose of providing the City of St. Thomas, as owner of the system, with the information to assess the capacity of the system. This report covers the reporting period from January 1, 2025, to December 31, 2025.

1.2 System Description

The St. Thomas Water Distribution System has three entry points into the network from the St. Thomas Area Secondary Water Supply System; the East Chamber located at the Elgin Middlesex Booster Station (490 South Edgeware Road); the West Chamber located in Water Works Park (2 South Edgeware); and the Wellington Road Chamber (Ford Line and Wellington Road). The system also receives water from one entry point into the network from the Elgin Area Primary Water Supply System at the Albert Robert Booster Station (8754 Tyke Road) in the Municipality of Central Elgin and one entry point into the network from the Southwold Water Distribution System on Fingal Line at the municipal boundary.

At the time of publication of this report, a Booster Station is currently undergoing site acceptance testing and will be placed into service during the 2026 calendar year. The Booster Station will be known as the South Edgeware Booster Station (SEBS). SEBS will obtain water from the Elgin Middlesex Pumping Station Reservoir as its source and provides pumping capacity to a newly constructed Pressure Zone 3, can provide redundant pumping capacity for the STASWSS

Transmission Main, and has a connection that allows for pumping directly into City of St. Thomas Water Distribution System - Pressure Zone 2.

1.3 System Approvals and Regulatory Requirements

Operation and Maintenance of the STDWS is governed by the *Safe Drinking Water Act, 2002*, and the regulations established under this Act. In accordance with the *Safe Drinking Water Act, 2002*, The City of St. Thomas holds a Municipal Drinking Water Licence and Drinking Water Works Permit, which provide approval for the establishment of drinking water infrastructure and provide the authority to operate and maintain said water system.

During the reporting period, The St. Thomas Drinking Water System was operated pursuant to the approvals, licences and permits listed below:

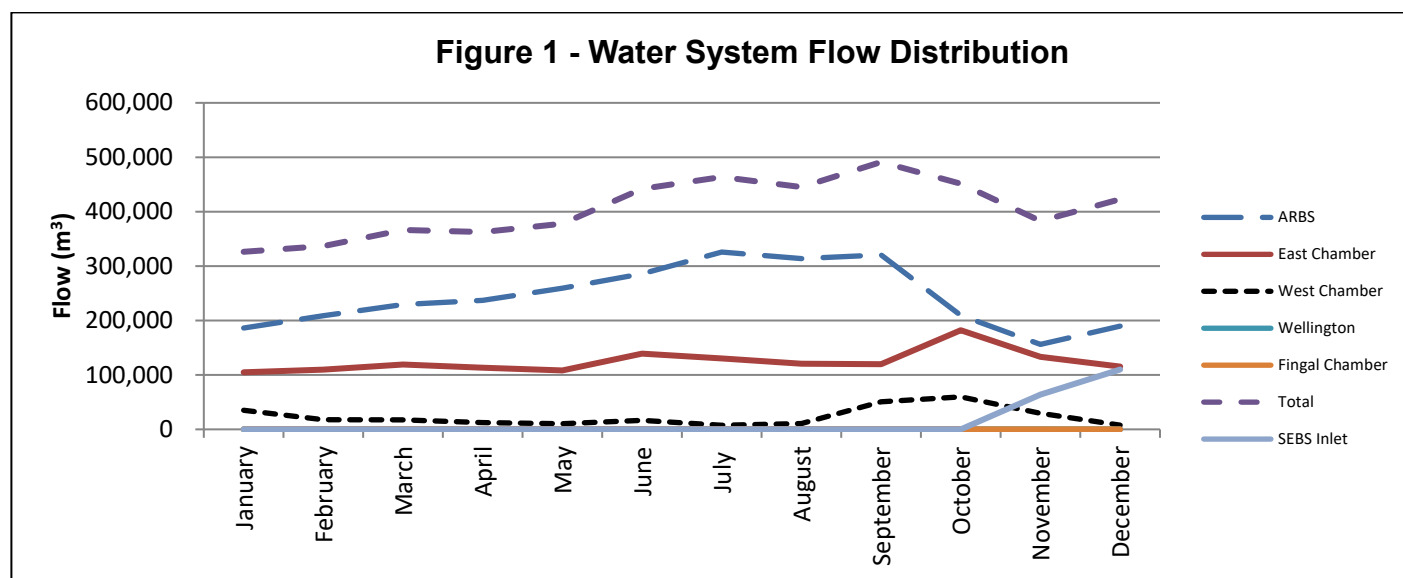
- City of St. Thomas Water Distribution System
 - MDWL No. 057-101, Issue Number 3, issued on June 30, 2021
 - DWWP No. 057-201, Issue Number 4, issued on April 30, 2024.

Ontario Regulation 170/03 – Drinking Water Systems, governs the operation, maintenance and water quality monitoring requirements for municipal drinking water systems in Ontario. *Ontario Regulation 128/04 – Certification of Drinking Water System Operations and Water Quality Analysts* sets out the requirements for persons performing operational or maintenance activities on the water system. The *Safe Drinking Water Act, 2002* and the associated regulations are enforced by the Ministry of Environment, Conservation and Parks (MECP) and monitored through annual inspections by Ministry personnel. Any non-compliant conditions identified during the course of the annual inspection are listed in the Inspection Report issued at the conclusion of the inspection period and are summarized in Section 4.1 of this Report.

Ontario Regulation 169/03 – Ontario Drinking Water Quality Standards sets the limits for parameters of concern in drinking water. Drinking water quality is monitored by the Operating Authority and any exceedance of the Drinking Water Quality Standards must be reported to the MECP and Public Health Unit, verbally and in written form through the use of a Notice of Adverse Test Results and Issue Resolution Form. Any non-compliant conditions identified through water quality monitoring exercises over the reporting period have been documented on a Notice of Adverse Test Results and Issue Resolution Form and are summarized in Section 4.2 of this Report.

2 Evaluation of Water Quantities and Flow Rates

Figure 1 provides a graphical overview of the flows entering the St. Thomas Water Distribution System. Based on the 2025 flow data, the distribution of flows into the distribution system between the water supplied from the Albert Roberts Booster Station and South Edgeware Booster Station versus the St. Thomas Area Secondary Water Supply System (through the East, West, Wellington, and Fingal Chambers).



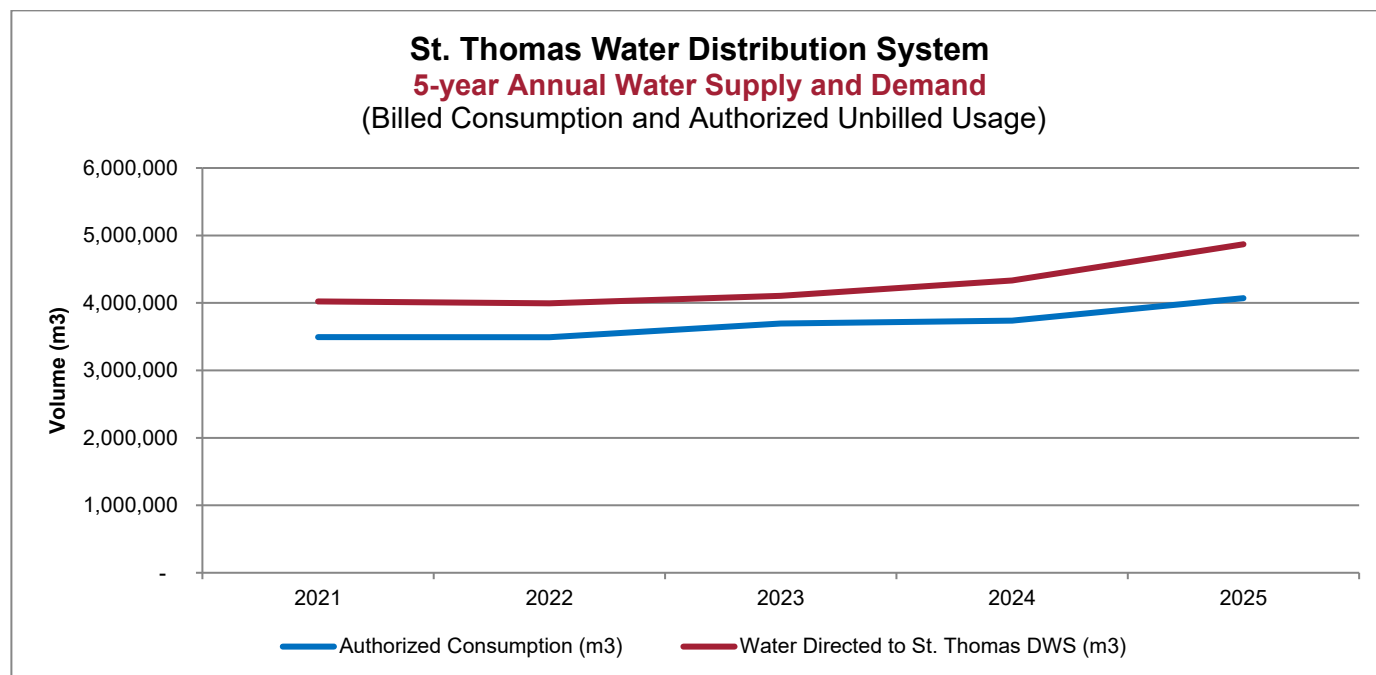
The total flow into the St. Thomas Water Distribution System increased by 12% from 4,332,233 m³ in 2024 to 4,869,366 m³ over the 2025 year.

The total billed consumption to customers of the St. Thomas Water Distribution System increased by 2.8% from 3,547,121 m³ in 2024 to 3,645,648 m³ in 2025.

Authorized unbilled usage (fire fighting and training exercises, maintenance programs and capital projects) was estimated at 424,750 m³. This is a 78% increase from 2024 and can be attributed to significant watermain commissioning activities over the 2025 calendar year (i.e. Yarmouth Yards Servicing).

As a result of the above, the real and apparent water loss in the St. Thomas Water Distribution System was 16.4%. A leak detection study was completed on all watermains greater than 250 mm in late December 2025. The study found no leaks within the system. A significant contributor to the increase in apparent water loss is the requirement to maintain adequate chlorine residuals in Pressure Zone 3, which currently has no users.

Figure 2 provides an overview of the water supply and billed consumption flows in the St. Thomas Water Distribution System over the last five (5) years.



2.1 Albert Roberts Booster Station – Elgin Area Primary Water Supply System

The Albert Roberts Booster Station (ARBS) receives treated water from the Elgin Area Primary Water Supply System, which pumps water from the water treatment plant located on the shores of Lake Erie to the east of the Town of Port Stanley. Water is pumped from a connection point on the transmission main that connects the water treatment plant to the Elgin Middlesex Pump Station and reservoir.

The ARBS is comprised of four high lift pumps that deliver water through a transmission main that services the St. Thomas Water Distribution System. The station maintains the operating pressure and includes a flow meter, chlorine analyzer, monitoring control, alarm system and instrumentation. Remote monitoring and control of the pumps are possible through the St. Thomas water SCADA system.

All pumps use a common header and the firm rated pumping capacity (2 pumps operating) of the ARBS is 170.3 l/s or a total of 14,714 m³/d.

The Table below compares the flows experienced in 2025 to the capacity of the Albert Roberts Booster Station's entry point into the St. Thomas Water Distribution System.

Entry Point	Flow Capacity (m ³ /day)	2025 Avg. Day Flow (m ³ /day)	Avg. Day % of Entry Point Capacity	2025 Max Day Flow (m ³ /day)	Max Day % of Entry Point Capacity
Albert Roberts BS	14,714	8006	54.4%	9794	67%

2.2 South Edgeware Booster Station – Elgin Area Primary Water Supply System

The South Edgeware Booster Station (SEBS) receives treated water from Elgin Middlesex Reservoir, which is filled by the Elgin Area Primary Water Supply System, which pumps water from the water treatment plant located on the shores of Lake Erie. SEBS takes its water from a connection point to the EMPS header main, on the South side of the EMPS building.

The SEBS is comprised of four high lift pumps (with room for a future fifth pump) that provide pumping capacity through 3 discharge lines. A 900 mm watermain provides water directly to the St. Thomas Water Distribution System Pressure Zone 3, which services the Yarmouth Yards Industrial Area. A 600 mm watermain connects into Pressure Zone 2 of the St. Thomas Water Distribution System just south of the East Chamber. A 750 mm watermain connects to the STASWSS watermain and can provide water pumping capacity to the STASWSS, in the case that the EMPS St. Thomas pumps are not able to run. The station maintains the operating pressure and includes an inlet and 3 discharge flow meters, an inlet and outlet chlorine analyzer, monitoring control, alarm system and instrumentation. Remote monitoring and control of the pumps are possible through the St. Thomas water SCADA system.

All pumps use a common header and the firm rated pumping capacity (2 pumps operating) of the SEBS is 660 l/s or a total of 57,024 m³/d.

The Table below compares the flows experienced in 2025 to the capacity of the South Edgeware Booster Station.

Entry Point	Flow Capacity (m ³ /day)	2025 Avg. Day Flow (m ³ /day)	Avg. Day % of Entry Point Capacity	2025 Max Day Flow (m ³ /day)	Max Day % of Entry Point Capacity
South Edgeware BS	57,024	477	0.8%	9504	17%

2.3 East Chamber – St. Thomas Area Secondary Water Supply System

The East Chamber is the first of three entry points into the St. Thomas Water Distribution System from the St. Thomas Area Secondary Water Supply System. The East Chamber is located on the grounds of the Elgin Middlesex Pumping Station. Flow through the East Chamber is restricted to 25,920 m³/day, based on the maximum instantaneous flow rate being 300 L/s.

Monthly flows experienced through the East Chamber for the 2025 calendar year are provided in Appendix B to this report.

The Table below compares the flows experienced in 2025 to the capacity of the East Chamber's entry point into the St. Thomas Water Distribution System.

Entry Point	Flow Capacity (m ³ /day)	2025 Avg. Day Flow (m ³ /day)	Avg. Day % of Entry Point Capacity	2025 Max Day Flow (m ³ /day)	Max Day % of Entry Point Capacity
East Chamber	25,920	4098	15.8%	7981	31%

2.4 West Chamber – St. Thomas Area Secondary Water Supply System

The West Chamber is the second of three entry points into the St. Thomas Water Distribution System from the St. Thomas Area Secondary Water Supply System. The West Chamber is located at 2 South Edgeware Road, within Waterworks Park. Flow through the West Chamber is restricted to 25,920 m³/day, based on the maximum instantaneous flow rate being 300 L/s.

Monthly flows experienced through the West Chamber for the 2025 calendar year are provided in Appendix B to this report.

The Table below compares the flows experienced in 2025 to the capacity of the West Chamber's entry point into the St. Thomas Water Distribution System.

Entry Point	Flow Capacity (m ³ /day)	2025 Avg. Day Flow (m ³ /day)	Avg. Day % of Entry Point Capacity	2025 Max Day Flow (m ³ /day)	Max Day % of Entry Point Capacity
West Chamber	25,920	754	2.9%	1857	7%

2.5 Wellington Road Chamber – St. Thomas Area Secondary Water Supply System

The Wellington Road Chamber is the third entry point into the St. Thomas Water Distribution System from the St. Thomas Area Secondary Water Supply System. The Chamber is located at the intersection of Wellington Road and Ford Line. Flow will typically only enter the St. Thomas Water Distribution System through the Wellington Road Chamber during periods of very high demand in the St. Thomas Water Distribution System. When flow enters the St. Thomas Water Distribution System from this location it is record by the meter reading as a negative value, as summarized in Appendix B.

2.6 Fingal Line Chamber – Southwold Water Distribution System

The Fingal Line Chamber supplies water from the Southwold Water Distribution System to a section of the St. Thomas Water Distribution System along Fingal Line. The water in the Southwold Water Distribution System originates from the St. Thomas Area Secondary Water Supply System. The water is re-chlorinated within the Southwold Water Distribution System. Flow through the Fingal Line Chamber is restricted to 13,824 m³/day, based on the maximum instantaneous flow rate being 160 L/s.

The Table below compares the flows experienced in 2025 to the capacity of the Fingal Line Chamber's entry point into the St. Thomas Water Distribution Water System.

Entry Point	Flow Capacity (m ³ /day)	2025 Avg. Day Flow (m ³ /day)	Avg. Day % of Entry Point Capacity
Fingal Line	13,824	4.9	<1%

3 Water Quality Summary

A summary of water quality testing completed by the City of St. Thomas – Environmental Services Dept. over the course of the reporting period is available in the Annual Report, attached as Appendix A.

4 Summary of Non-Compliant Conditions

4.1 Ministry of the Environment, Conservation and Parks Inspection

The Ontario Ministry of the Environment, Conservation and Parks (MECP) conducts an inspection of the St. Thomas Drinking Water System annually. An MECP inspection was completed on October 22, 2025. There were two (2) non-compliances identified within the annual inspection report. The resulting system inspection risk rating was identified as 10.33% and an overall final inspection rating of 89.67%. The inspection report is attached as Appendix C.

MECP Inspection Finding	Action Taken
Changes to the system registration information were not provided within ten (10) days of the change. Changes to contact information for the drinking water system were not provided to the ministry within ten days of the change. The 'Operating Authority Alternate Contact' information was incorrect and out-of-date at the time of the inspection. It should be noted that prior to the issuance of this report the owner/operating authority submitted a DWIS profile update form to update the 'Operating Authority Alternate Contact' information. No further actions are required at this time.	As noted in the inspection finding itself, an updated DWIS form was submitted to the Ministry before the inspection period was completed.
All parts of the drinking water system were not disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit. The ministry's Watermain Disinfection Procedure details disinfection procedures for planned and emergency work on watermain and specifies the operating authority shall maintain records of the information listed as a minimum. As part of this inspection the owner/operating authority provided disinfection documents associated with new watermain installation work and watermain repair records. Upon review it was found that one of these documents contained incorrect information that is required to be documented in accordance with the ministry's Watermain Disinfection Procedure and Ontario Regulation 128/04, Section 27 regarding record keeping requirements. From herein the owner/operating authority shall ensure that the required information as a minimum will be documented in accordance with the ministry's Watermain Disinfection Procedure and O. Reg 128/04 Section 27. Compliance shall be assessed during next the inspection period. It should be noted that prior to the issuance of this report the owner/operating authority obtained a third-party trainer to deliver a record keeping course to the operators.	As noted in the inspection finding itself, a third-party training provider was brought in to provide a session on Water System Record-Keeping, to help reiterate the importance of accurate record-keeping to staff. Reviewed common record-keeping errors with staff. Additionally, a review of the document used to collect watermain disinfection information was undertaken. Revisions were made to help reduce common record-keeping errors that were identified.

4.2 Adverse Test Results and Issue Resolution

Any non-compliant conditions identified through water quality monitoring exercises over the reporting period, and actions taken are summarized in the table below.

Adverse Test Result (Date / Location)	Action Taken
On July 11, 2025, the lab reported a result of 1 cfu/100mL of E.coli and 1 cfu/100 mL of Total coliform, on a routine sample taken from Sample Station 39.	The incident was reported to the MECP and assigned AWQI# 168947. A Boil Water Advisory was issued for an area determined in consultation with Southwest Public Health Unit (Approx. 450 homes). Flushing and resampling were completed in accordance with O. Reg. 170/03. Both sets of resamples returned with results of 0 cfu/100 mL. The Boil Water Advisory was lifted on July 13, 2025.

5 List of Appendices

Appendix A – St. Thomas Water Distribution System – 2025 Annual Report

Appendix B – Chamber and Station Flows – 2025

Appendix C – 2025 MECP Inspection Report

APPENDIX A

– St. Thomas WDS – 2025 Annual Report



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

Drinking-Water System Number:	260002187
Drinking-Water System Name:	St. Thomas Water Distribution System
Drinking-Water System Owner:	Corporation of the City of St. Thomas
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2025, through December 31, 2025

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

Does your Drinking-Water System serve more than 10,000 people? Yes ☒ No ☐

Is your annual report available to the public at no charge on a web site on the Internet? Yes ☒ No ☐

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

City of St. Thomas, City Hall
Environmental Services
545 Talbot Street
St Thomas, Ontario N5P 3V7

Complete for all other Categories.

Number of Designated Facilities served:

NA

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes ☐ No ☐

Number of Interested Authorities you report to:

NA

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes ☐ No ☐

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
Municipality of Central Elgin	260004761
Township of Southwold	210001362

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

City of St. Thomas Website – www.city.st-thomas.on.ca

☒ 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

Water in the St. Thomas WDS is ultimately supplied from the Elgin Area Primary Water Supply System (EAPWSS). Amongst going off in other directions, in context to the St. Thomas WDS, the EAPWSS extends from the Water Treatment Plant intake in Lake Erie to the Elgin Middlesex Pumping Station (EMPS) and Terminal Reservoir located in the Northeast of St. Thomas. The St. Thomas WDS connects to the EAPWSS transmission main as it passes along the East side of St. Thomas at the Albert Roberts Booster Station.

At the site of the Elgin Middlesex Pumping Station and Terminal Reservoir, the City has recently constructed another connection to the EAPWSS at the South Edgeware Booster Station (SEBS), which obtains water from the EMPS Terminal Reservoir

The St. Thomas WDS system also obtains water from the St. Thomas Area Secondary Water Supply System (STASWSS). This system provides top-up chlorination and pressurization through various connections to its member municipalities (Southwold, Central Elgin and St. Thomas) before terminating at the Clinton Line Meter Chamber on Wonderland Road in Southwold.

The St. Thomas Distribution System consists of approximately 230,000 metres of water main ranging in size from 50 mm to 900 mm in diameter. Material types include Cast Iron, Concrete, Ductile Iron, Polyethylene, and PVC.

The St. Thomas Water Distribution System provides water to over 17,100 service connections including approximately 1000 services within the Municipality of Central Elgin and 47 services within the Township of Southwold (Lynhurst Subdivision).

List all water treatment chemicals used over this reporting period

12% Sodium Hypochlorite (Disinfection/Repairs)

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

Albert Roberts Permanent Generator Installation	\$115,000
Centre Street Watermain Replacement and Upsizing	\$701,000
Chestnut Street Watermain Replacement and Upsizing	\$254,000
Fairview Avenue Watermain Replacement and Upsizing	\$480,000
First Avenue Watermain Replacement and Upsizing	\$276,000
Forest and Smith Area Watermain Replacement	\$490,000
South Edgeware Booster Station	\$14,820,000
Yarmouth Yards Water Servicing	\$10,220,000

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
July 11, 2025	E. Coli	1	Colony forming unit(s) (cfu)/100 mL	Boil Water Advisory issued for area determined in consultation with Southwest Public Health Unit. Flushing and resampling in accordance with O. Reg. 170/03 completed. Both sets of resamples returned results of 0 cfu/100 mL.	Initial Response: July 11, 2025 Boil Water Advisory Rescinded: July 13, 2025.
	Total Coliform	1			

Microbiological testing done under 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	NA	NA	NA	NA	NA
Treated	NA	NA	NA	NA	NA
St. Thomas	779	(0)-(1)	(0)-(1)	779	(<10) - (NDOG*)
Central Elgin	52	(0)-(0)	(0)-(0)	52	(<10)-(70)
Southwold	13	(0)-(0)	(0)-(0)	13	(<10)-(10)
Distribution Total	844	(0)-(0)	(0)-(0)	844	(<10) - (NDOG*)

* - NDOG is a lab code that means there was no data reportable on the sample due to overgrowth that may or may not be representative of water quality. The NDOG results were from samples taken on July 9 and September 24, 2025. Resamples were taken on July 12 and September 29 respectively, each returning with a result of <10 CFU/mL. Omitting the NDOG results, the next highest HPC result in 2025 was 1370 CFU/mL

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)	NOTE: For continuous monitors use 8760 as the number of samples.
Chlorine (Grab Samples)	635	(0.17) - (1.58)	

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
NA	NA	NA	NA	NA

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
NA	NA	NA	NA	NA

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	Number of Samples	Range of Lead Results (min) – (max)	Number of Exceedances
Plumbing	NA	NA	NA
Distribution	NA	NA	NA

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
HAA5 (NOTE: show latest annual average)	Jan 14, 2025 Apr 15, 2025 July 15, 2025 Oct 16, 2025	5.6	ug/L	no
THM (NOTE: show latest annual average)	Jan 14, 2025 Apr 15, 2025 July 15, 2025 Oct 16, 2025	19.0	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
NA	NA	NA	NA

APPENDIX B

– St. Thomas WDS – 2025 Flows

Albert Roberts Booster Station

~ 2025 Water Supply Data ~

Month	Average Daily Flow Rate	Maximum Daily Flow Rate	Total Volume
	l/s	l/s	m ³
January	75.29	179.12	186,313
February	85.94	192.90	208,956
March	84.07	151.91	229,379
April	90.50	299.51	236,939
May	98.51	170.23	259,326
June	105.18	192.71	286,000
July	119.39	182.38	325,822
August	122.57	194.70	313,742
September	113.39	202.33	320,699
October	76.56	163.73	209,326
November	60.57	150.94	156,138
December	63.11	174.79	189,641
Average	91.26	187.94	243,523
Yearly Total			2,922,281

STASWSS - East Chamber

~ 2025 Water Supply Data ~

Month	Average Daily Flow Rate	Maximum Daily Flow Rate	Total Volume
	<i>l/s</i>	<i>l/s</i>	<i>m³</i>
January	42.60	133.17	104,855
February	49.11	149.63	109,885
March	48.34	158.41	119,051
April	46.00	128.05	113,238
May	43.72	151.83	108,261
June	48.29	161.34	139,153
July	67.21	94.39	130,206
August	46.05	110.85	120,747
September	46.84	175.61	119,634
October	68.43	164.63	182,142
November	46.71	139.02	133,210
December	43.33	136.46	115,479
Average	49.72	141.95	124,655
Total			1,495,861

STASWSS - West Chamber

~ 2025 Water Supply Data ~

Month	Average Daily Flow Rate	Maximum Daily Flow Rate	Total Volume
	<i>l/s</i>	<i>l/s</i>	<i>m³</i>
January	12.45	87.80	35,071
February	7.38	73.90	17,793
March	6.53	76.83	17,514
April	4.66	92.93	12,370
May	3.93	73.17	10,258
June	6.18	72.80	16,611
July	2.78	84.51	7,526
August	4.75	76.83	10,721
September	19.56	111.95	50,531
October	21.40	133.17	59,686
November	11.05	187.68	29,386
December	2.80	124.02	7,712
Average	8.62	99.63	22,932
Total			275,179

STASWSS - Wellington Chamber

~ 2025 Water Supply Data ~

Month	Total Volume
	<i>m³</i>
January	0
February	0
March	0
April	0
May	0
June	5
July	0
August	10
September	220
October	8
November	0
December	-8
Average	20
Yearly Total	235

STASWSS - Fingal Chamber

~ 2025 Water Supply Data ~

Month	Total Volume
	<i>m³</i>
January	85
February	92
March	454
April	76
May	132
June	139
July	203
August	124
September	149
October	179
November	80
December	97
Average	151
Yearly Total	1,810

South Edgeware Booster Station

~ 2025 Water Supply Data ~

Month	Volume
	<i>m</i> ³
January	0
February	0
March	0
April	0
May	0
June	0
July	0
August	0
September	0
October	0
November	64,000
December	110,000
Average	14,500
Yearly Total	174,000

APPENDIX C

– St. Thomas WDS – 2025 MECP Inspection Report

**Ministry of the Environment,
Conservation and Parks**

Drinking Water and Environmental
Compliance Division

Southwest Region
733 Exeter Road
London, ON N6E 1L3
Phone: 519-873-5000

**Ministère de l'Environnement, de la
Protection de la nature et des Parcs**

Division de la conformité en matière d'eau
potable et d'environnement

Région Sud-Ouest
733 rue Exeter
London, ON N6E 1L3
Tél: 519-873-5000

November 17, 2025

The Corporation of the City of St Thomas
545 Talbot Street
St Thomas, ON N5P 3V7

Attention: Kevin De Leebeeck, Director of Environmental Services/City Engineer
Re: City of St. Thomas Distribution System Final Inspection Report (#260002187)

Enclosed is the report on the 2025-26 inspection of the City of St. Thomas Distribution System and the corresponding Inspection Rating Report (IRR) and Risk Methodology document.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils" on the Drinking Water Ontario website at <https://www.ontario.ca/environment-and-energy/taking-care-your-drinking-water-guide-members-municipal-councils>.

The IRR is a summarized quantitative measure of the drinking water system's annual inspection and is published in the Ministry's Chief Drinking Water Inspector's Annual Report. The Risk Methodology document describes the risk rating methodology which has been applied to the findings of the Ministry's municipal residential drinking water system inspection results.

If you have any questions or concerns regarding the rating, please contact Mark Smith, Water Compliance Supervisor, at 519-317-8116.

Sincerely,

M. Morgan

Meghan Morgan
Provincial Officer, Water Inspector
London District Office
Meghan.Morgan@ontario.ca

cc. Southwestern Public Health Unit
Kettle Creek Conservation Authority



CITY OF ST. THOMAS DISTRIBUTION SYSTEM
Physical Address: 490 SOUTH EDGEWARE RD,
ST. THOMAS, ON

INSPECTION REPORT

System Number: 260002187
Entity: CORPORATION OF THE CITY
OF ST THOMAS
Inspection Start Date: October 17, 2025
Site Inspection Date: October 22, 2025
Inspection End Date: November 17, 2025
Inspected By: Meghan Morgan
Badge #: 1315

M. Morgan

(signature)

INTRODUCTION

Purpose

This announced, focused inspection was conducted to confirm compliance with Ministry of the Environment, Conservation and Parks' (MECP) legislation and conformance with ministry drinking water policies and guidelines.

Scope

The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management and the operation of the system.

The inspection of the drinking water system included both the physical inspection of the component parts of the system listed in section 4 "Systems Components" of the report and the review of data and documents associated with the operation of the drinking water system during the review period.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

Facility Contacts and Dates

The drinking water system is owned and operated by The Corporation of the City of St. Thomas.

The system serves an estimated population of 43,000 and is categorized as a Large Municipal Residential System. Information reviewed for this inspection covered the time period of September 1, 2024 to September 30, 2025.

Systems/Components

The City of St Thomas Distribution System only provides distribution of water. Primary disinfection is undertaken by another regulated drinking water system which provides treated water to this drinking water system.

Treated water is received from the Elgin Area Primary Water Supply System and The City of St

Thomas Distribution System provides pressure boosting for the drinking water system.

The Elgin Area Primary Water Supply System is inspected separately from this drinking water system.

Permissions/Approvals

This drinking water system was subject to specific conditions contained within the following permissions and/or approvals (please note this list is not exhaustive) at the time of the inspection in addition to the requirements of the SDWA and its regulations:

Municipal Drinking Water Licence Number: 057-101, Issue 3, dated June 30, 2021

Drinking Water Works Permit Number: 057-201, Issue 4, dated Apr 30, 2024

NON-COMPLIANCE

The following item(s) have been identified as non-compliance, based on a "No" response captured for a legislative question(s).

For additional information on each question see the Inspection Details section of the report.

Ministry Program: DRINKING WATER | **Regulated Activity:** DW Municipal Residential

Item	Question	Compliance Response/Corrective Action(s)
NC-1	Question ID: DWMR1113001 Were changes to the system registration information provided to the ministry within ten (10) days of the change?	Changes to the system registration information were not provided within ten (10) days of the change. Changes to contact information for the drinking water system were not provided to the ministry within ten days of the change. The 'Operating Authority Alternate Contact' information was incorrect and out-of-date at the time of the inspection. It should be noted that prior to the issuance of this report the owner/operating authority submitted a DWIS profile update form to update the 'Operating Authority Alternate Contact' information. No further actions are required at this time.
NC-2	Question ID: DWMR1025001 Were all parts of the drinking water system that came in contact with drinking water disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?	All parts of the drinking water system were not disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit. The ministry's Watermain Disinfection Procedure details disinfection procedures for planned and emergency work on watermain and specifies the operating authority shall maintain records of the information listed as a minimum. As part of this inspection the owner/operating authority provided disinfection documents associated with new watermain installation work and watermain repair records. Upon review it was found that a number of these documents were missing information that is required to be documented in accordance

with the ministry's Watermain Disinfection Procedure and Ontario Regulation 128/04, Section 27 regarding record keeping requirements.

From herein the owner/operating authority shall ensure that the required information as a minimum will be documented in accordance with the ministry's Watermain Disinfection Procedure and O. Reg 128/04 Section 27. Compliance shall be assessed during next the inspection period.

RECOMMENDATIONS

This should not be construed as a confirmation of full conformance with all potential applicable BMPs. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

INSPECTION DETAILS

This section includes all questions that were assessed during the inspection.

Ministry Program: DRINKING WATER | **Regulated Activity:** DW Municipal Residential

Question ID	DWMR1018001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner ensured that equipment was installed as required. At the time of the site visit construction of the new South Edgeware Booster Pumping Station (SEBS), as authorized by the "Schedule C: Authorization to Alter the Drinking Water System", issued by the Ministry on May 23, 2024, had been completed and equipment was installed in accordance with the Permit. At the time of the site inspection this new booster pumping station was not yet distributing water to users.			

Question ID	DWMR1020001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were Form 1 documents prepared as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Form 1 documents were prepared as required. The owner completed ten (10) "Form 1 – Record of Watermains Authorized as a Future Alteration" documents for proposed new watermains or replacement of existing watermains.			

Question ID	DWMR1022001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were Form 3 and associated documents prepared as required?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Form 3 and associated documents were prepared as required.			

The owner completed one (1) "Form 3 – Record of Addition, Modification or Replacement of Equipment Discharging a Contaminant of Concern to the Atmosphere" document for the installation of a new permanent back-up generator at the Albert Roberts booster station.

Question ID	DWMR1025001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Were all parts of the drinking water system that came in contact with drinking water disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): All parts of the drinking water system were not disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit. The ministry's Watermain Disinfection Procedure details disinfection procedures for planned and emergency work on watermains and specifies the operating authority shall maintain records of the information listed as a minimum. As part of this inspection the owner/operating authority provided disinfection documents associated with new watermain installation work and watermain repair records. Upon review it was found that a number of these documents were missing information that is required to be documented in accordance with the ministry's Watermain Disinfection Procedure and Ontario Regulation 128/04, Section 27 regarding record keeping requirements. From herein the owner/operating authority shall ensure that the required information as a minimum will be documented in accordance with the ministry's Watermain Disinfection Procedure and O. Reg 128/04 Section 27. Compliance shall be assessed during next the inspection period.			

Question ID	DWMR1033001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4);			
Question: Was secondary disinfectant residual tested as required for the large municipal residential distribution system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Secondary disinfectant residual was tested as required. Ontario Regulation 170/03, Schedule 7-2 (3) requires the owner/operating authority of a large municipal residential system that provides secondary disinfection to ensure that at least seven distribution samples are taken each week and tested immediately for free chlorine			

residual. At least four of the samples must be taken on one day of the week, and at least three samples must be taken on a second day of the week, at least 48 hours after the samples taken on the first day.

Grab samples are collected during different days on the week and tested for free chlorine from different locations within the distribution system. The system also uses process chlorine analyzers located at the Albert Roberts Booster Station, the Southdale meter chamber panel and the Wellington Rd PRV panel to continuously monitor the free chlorine residual within the distribution system. These continuous chlorine analyzers have alarm set points to ensure the free chlorine residual is maintained above 0.05mg/L.

Records were reviewed of the grab samples taken in the distribution system by operators who collect manual samples to verify the secondary disinfectant residual was tested as required.

Question ID	DWMR1099001	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records showed that not all water sample results met the Ontario Drinking Water Quality Standards. Two adverse water quality incidents (AWQI) occurred during this inspection period: - AWQI #166193 -- In September 2024 one test result of 87cfu/100ml total coliforms and 87cfu/100ml E.Coli was reported when taking routine bacteriological samples in the distribution system. All other samples taken the same day had a test result of zero total coliforms and E.Coli. The free chlorine residual at the time of sampling was satisfactory. Corrective actions were taken in accordance with Ontario Regulation 170/03. The Southwestern Public Health Unit issued a Boil Water Advisory (BWA) and advised to flush and take two sets of resamples 24hrs apart. Resample results came back with test results of zero total coliforms and E.Coli. After all corrective actions were completed the BWA Rescind Notice was provided to users. - AWQI #168947 -- In July 2025 one test result of 1cfu/100ml total coliforms and 1cfu/100ml E.Coli reported when taking routine bacteriological samples in the distribution system. All other samples taken the same day had a test result of zero total coliforms and zero E.Coli. The free chlorine residual at the time of sampling was satisfactory. Corrective actions were taken in accordance with Ontario Regulation 170/03. The Southwestern Public Health Unit issued a Boil Water Advisory (BWA) for a restricted area in St. Thomas and advised to flush and take two sets of resamples 24hrs apart. Resample results came back with test results of zero total coliforms and E.Coli. After all corrective actions were completed the BWA Rescind			

Notice was provided to users.

Question ID	DWMR1081001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10-2 (1); SDWA O. Reg. 170/03 10-2 (2); SDWA O. Reg. 170/03 10-2 (3);			
Question: Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Distribution microbiological sampling requirements were met. Ontario Regulation 170/03 – Schedule 10-2 stipulates that distribution water samples are required to be collected for testing every week within the frequency prescribed by the Regulation. Based on a service population of approximately 43,000 the owner/operating authority is required to take a minimum of 51 distribution samples every month. Every distribution system sample must be analyzed for: E.coli; total coliforms; and 25% of the required samples must be tested for general bacteria population expressed as colony counts on a heterotrophic plate count with the prescribed frequency stipulated in Schedule 6-1.1(1) of O.Reg 170/03. A review of the records for the inspection period indicate the number of microbiological samples collected ranged from 52-73. It is recommended that the municipality have a written policy describing how they determine the population served, how often and at what triggers they would reassess the current population in order to stay current with their Schedule 10-2 sampling requirements and then update the DWIS profile accordingly.			

Question ID	DWMR1096001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 6-3 (1);			
Question: Did records confirm that chlorine residual tests were conducted at the same time and location as microbiological samples?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records confirmed that chlorine residual tests were conducted as required.			

Question ID	DWMR1086001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-6.1 (1); SDWA O. Reg. 170/03 13-6.1 (2); SDWA O. Reg. 170/03 13-6.1 (3); SDWA O. Reg. 170/03 13-6.1 (4); SDWA O. Reg. 170/03 13-6.1 (5); SDWA O. Reg. 170/03 13-6.1 (6);			
Question: Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Haloacetic acid sampling requirements were met. Haloacetic Acid samples are required to be collected and tested each calendar quarter from the distribution system in accordance with Schedule 13-6.1 of O.Reg. 170/03 with the frequency stipulated in Schedule 6-1.1(4), and shall be taken from a point in the drinking water system's distribution system that is likely to have an elevated potential for the formation of haloacetic acids. A review of the records provided for the inspection review period indicate that this requirement has been met, and all sample results were below the standard.			

Question ID	DWMR1087001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 13-6 (1); SDWA O. Reg. 170/03 13-6 (2); SDWA O. Reg. 170/03 13-6 (3); SDWA O. Reg. 170/03 13-6 (4); SDWA O. Reg. 170/03 13-6 (5); SDWA O. Reg. 170/03 13-6 (6);			
Question: Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Trihalomethane sampling requirements were met. Trihalomethane samples are required to be collected and tested each calendar quarter from the distribution system in accordance with Schedule 13-6 of O.Reg. 170/03 with the frequency stipulated in Schedule 6-1.1(4), and shall be taken from a point in the drinking water system's distribution system that is likely to have an elevated potential for the formation of trihalomethanes. A review of the records provided for the inspection review period indicate that this requirement has been met, and all sample results were below the standard.			

Question ID	DWMR1104001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 16-6 (1); SDWA O. Reg. 170/03 16-6 (2); SDWA O. Reg. 170/03 16-6 (3); SDWA O. Reg. 170/03 16-6 (3.1); SDWA O. Reg. 170/03 16-6 (3.2); SDWA O. Reg. 170/03 16-6 (4); SDWA O. Reg. 170/03 16-6 (5); SDWA O. Reg. 170/03 16-6 (6);			

Question:

Were immediate verbal notification requirements for adverse water quality incidents met?

Compliance Response(s)/Corrective Action(s)/Observation(s):

Immediate verbal notification requirements for adverse water quality incidents were met.

Question ID	DWMR1101001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 17-1; SDWA O. Reg. 170/03 17-10 (1); SDWA O. Reg. 170/03 17-11; SDWA O. Reg. 170/03 17-12; SDWA O. Reg. 170/03 17-13; SDWA O. Reg. 170/03 17-14; SDWA O. Reg. 170/03 17-2; SDWA O. Reg. 170/03 17-3; SDWA O. Reg. 170/03 17-4; SDWA O. Reg. 170/03 17-5; SDWA O. Reg. 170/03 17-6; SDWA O. Reg. 170/03 17-9;			
Question: For large municipal residential systems, were corrective actions, including any steps directed by the Medical Officer of Health, taken to address adverse conditions?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Corrective actions were taken to address adverse conditions.			

Question ID	DWMR1113001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 10.1 (3);			
Question: Were changes to the system registration information provided to the ministry within ten (10) days of the change?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Changes to the system registration information were not provided within ten (10) days of the change. Changes to contact information for the drinking water system were not provided to the ministry within ten days of the change. The 'Operating Authority Alternate Contact' information was incorrect and out-of-date at the time of the inspection. It should be noted that prior to the issuance of this report the owner/operating authority submitted a DWIS profile update form to update the 'Operating Authority Alternate Contact' information. No further actions are required at this time.			

Question ID	DWMR1114001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner have evidence that, when required, all legal owners associated with the drinking water system were notified of the requirements of the Municipal Drinking Water Licence and Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had evidence that the required notifications were made. Requirements of the MDWL and the DWWP are provided to legal owners within the municipal office. The owner is reminded that these requirements also need to be shared with developers that own subdivisions that have not yet been transferred to the municipality.			

Question ID	DWMR1045001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the owner update the document describing the distribution components within 12 months of completion of alterations to the system in accordance with the Drinking Water Works Permit?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had up-to-date documents describing the distribution components.			

Question ID	DWMR1054001	Question Type	Information
Legislative Requirement(s): Not Applicable			
Question: Was an agreement in place that satisfied the requirements prescribed by subsection 5(4) of O. Reg. 170/03?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The agreement in place satisfied the requirements. A copy of the document was provided to the Inspector. A review of the document confirmed the donor has agreed in writing.			

Question ID	DWMR1055001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 5 (5);			

Question:

If there were standalone distribution systems connected to this donor system, was the owner of the donor system in compliance with all agreements made under subsection 5(4) of O. Reg. 170/03?

Compliance Response(s)/Corrective Action(s)/Observation(s):

The owner of the donor system was in compliance with all agreements.

Question ID	DWMR1060001	Question Type	Legislative
Legislative Requirement(s): SDWA 31 (1);			
Question: Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manual(s) met the requirements of the Municipal Drinking Water Licence. Municipal Drinking Water Licence Number: 057-101, Issue 3, Section 16 of Schedule B specifies the requirements for the Operations and Maintenance Manual. The manual for the City of St. Thomas Distribution System contained the required information. A review of the Operation and Maintenance Manual submitted by the operating authority indicate that the manual contains the required information including but not limited to; contingency plans, procedures to deal with emergencies and procedures for dealing with complaints associated with the drinking water system.			

Question ID	DWMR1062001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 170/03 7-5;			
Question: Did records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was done by a certified operator, water quality analyst, or person who met the requirements of Schedule 7-5 of O. Reg. 170/03.			

Question ID	DWMR1071001	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Did the owner provide security measures to protect components of the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): The owner provided security measures to protect components of the drinking water system. The Albert Roberts Booster Pumping Station remains locked at all times and is equipped with a security alarm which is connected to the SCADA system to alert the operating authority of unauthorized entry. The new SEBS remains locked at all times and will be equipped with a security alarm. Each chamber panel is kept locked with entry alarms. All stations are visited regularly by operators.			

Question ID	DWMR1073001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1);			
Question: Was an overall responsible operator designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): An overall responsible operator was designated for all subsystem.			

Question ID	DWMR1074001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 25 (1);			
Question: Were operators-in-charge designated for all subsystems which comprise the drinking water system?			
Compliance Response(s)/Corrective Action(s)/Observation(s): Operators-in-charge were designated for all subsystems.			

Question ID	DWMR1075001	Question Type	Legislative
Legislative Requirement(s): SDWA O. Reg. 128/04 22;			

Question:

Were all operators certified as required?

Compliance Response(s)/Corrective Action(s)/Observation(s):

All operators were certified as required.



Stakeholder References

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater



PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web



Ministry of the Environment, Conservation and Parks
Drinking Water System Inspection Report Appendix B

Inspection Rating Record and Inspection Risk Methodology

APPLICATION OF THE RISK METHODOLOGY USED FOR MEASURING MUNICIPAL RESIDENTIAL DRINKING WATER SYSTEM INSPECTION RESULTS



The Ministry of the Environment (MOE) has a rigorous and comprehensive inspection program for municipal residential drinking water systems (MRDWS). Its objective is to determine the compliance of MRDWS with requirements under the Safe Drinking Water Act and associated regulations. It is the responsibility of the municipal residential drinking water system owner to ensure their drinking water systems are in compliance with all applicable legal requirements.

This document describes the risk rating methodology, which has been applied to the findings of the Ministry's MRDWS inspection results since fiscal

year 2008-09. The primary goals of this assessment are to encourage ongoing improvement of these systems and to establish a way to measure this progress.

MOE reviews the risk rating methodology every three years.

The Ministry's Municipal Residential Drinking Water Inspection Protocol contains up to 14 inspection modules and consists of approximately 120 regulatory questions. Those protocol questions are also linked to definitive guidance that ministry inspectors use when conducting MRDWS inspections.

ontario.ca/drinkingwater

The questions address a wide range of regulatory issues, from administrative procedures to drinking water quality monitoring. The inspection protocol also contains a number of non-regulatory questions.

A team of drinking water specialists in the ministry assessed each of the inspection protocol regulatory questions to determine the risk (not complying with the regulation) to the delivery of safe drinking water. This assessment was based on established provincial risk assessment principles, with each question receiving a risk rating referred to as the Question Risk Rating. Based on the number of areas where a system is deemed to be non-compliant during the inspection, and the significance of these areas to administrative, environmental, and health consequences, a risk-based inspection rating is calculated by the ministry for each drinking water system.

It is important to be aware that an inspection rating less than 100 per cent does not mean the drinking water from the system is unsafe. It shows areas where a system’s operation can improve. The ministry works with owners and operators of systems to make sure they know what they need to do to achieve full compliance.

The inspection rating reflects the inspection results of the specific drinking water system for the reporting year. Since the methodology is applied consistently over a period of years, it serves as a comparative measure both provincially and in relation to the individual system. Both the drinking water system and the public are able to track the performance over time, which encourages continuous improvement and allows systems to identify specific areas requiring attention.

The ministry’s annual inspection program is an important aspect of our drinking water safety net. The ministry and its partners share a common commitment to excellence and we continue to work toward the goal of 100 per cent regulatory compliance.

Determining Potential to Compromise the Delivery of Safe Water

The risk management approach used for MRDWS is aligned with the Government of Ontario’s Risk Management Framework. Risk management is a systematic approach to identifying potential hazards, understanding the likelihood and consequences of the hazards, and taking steps to reduce their risk if necessary and as appropriate.

The Risk Management Framework provides a formula to be used in the determination of risk:

RISK = LIKELIHOOD × CONSEQUENCE
(of the consequence)

Every regulatory question in the inspection protocol possesses a likelihood value (L) for an assigned consequence value (C) as described in **Table 1** and **Table 2**.

TABLE 1:	
Likelihood of Consequence Occurring	Likelihood Value
0% - 0.99% (Possible but Highly Unlikely)	L = 0
1 – 10% (Unlikely)	L = 1
11 – 49% (Possible)	L = 2
50 – 89% (Likely)	L = 3
90 – 100% (Almost Certain)	L = 4

TABLE 2:	
Consequence	Consequence Value
Medium Administrative Consequence	C = 1
Major Administrative Consequence	C = 2
Minor Environmental Consequence	C = 3
Minor Health Consequence	C = 4
Medium Environmental Consequence	C = 5
Major Environmental Consequence	C = 6
Medium Health Consequence	C = 7
Major Health Consequence	C = 8

The consequence values (0 through 8) are selected to align with other risk-based programs and projects currently under development or in use within the ministry as outlined in **Table 2**.

The Question Risk Rating for each regulatory inspection question is derived from an evaluation of every identified consequence and its corresponding likelihood of occurrence:

- All levels of consequence are evaluated for their potential to occur
- Greatest of all the combinations is selected.

The Question Risk Rating quantifies the risk of non-compliance of each question relative to the others. Questions with higher values are those with a potentially more significant impact on drinking water safety and a higher likelihood of occurrence. The highest possible value would be 32 (4×8) and the lowest would be 0 (0×1).

Table 3 presents a sample question showing the risk rating determination process.

TABLE 3:							
Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated?							
Risk = Likelihood × Consequence							
C=1	C=2	C=3	C=4	C=5	C=6	C=7	C=8
Medium Administrative Consequence	Major Administrative Consequence	Minor Environmental Consequence	Minor Health Consequence	Medium Environmental Consequence	Major Environmental Consequence	Medium Health Consequence	Major Health Consequence
L=4 (Almost Certain)	L=1 (Unlikely)	L=2 (Possible)	L=3 (Likely)	L=3 (Likely)	L=1 (Unlikely)	L=3 (Likely)	L=2 (Possible)
R=4	R=2	R=6	R=12	R=15	R=6	R=21	R=16

Application of the Methodology to Inspection Results

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions related to regulatory compliance and input their “yes”, “no” or “not applicable” responses into the Ministry’s Laboratory and Waterworks Inspection System (LWIS) database. A “no” response indicates non-compliance. The maximum number of regulatory questions asked by an inspector varies by: system (i.e., distribution, stand-alone); type of inspection (i.e., focused, detailed); and source type (i.e., groundwater, surface water).

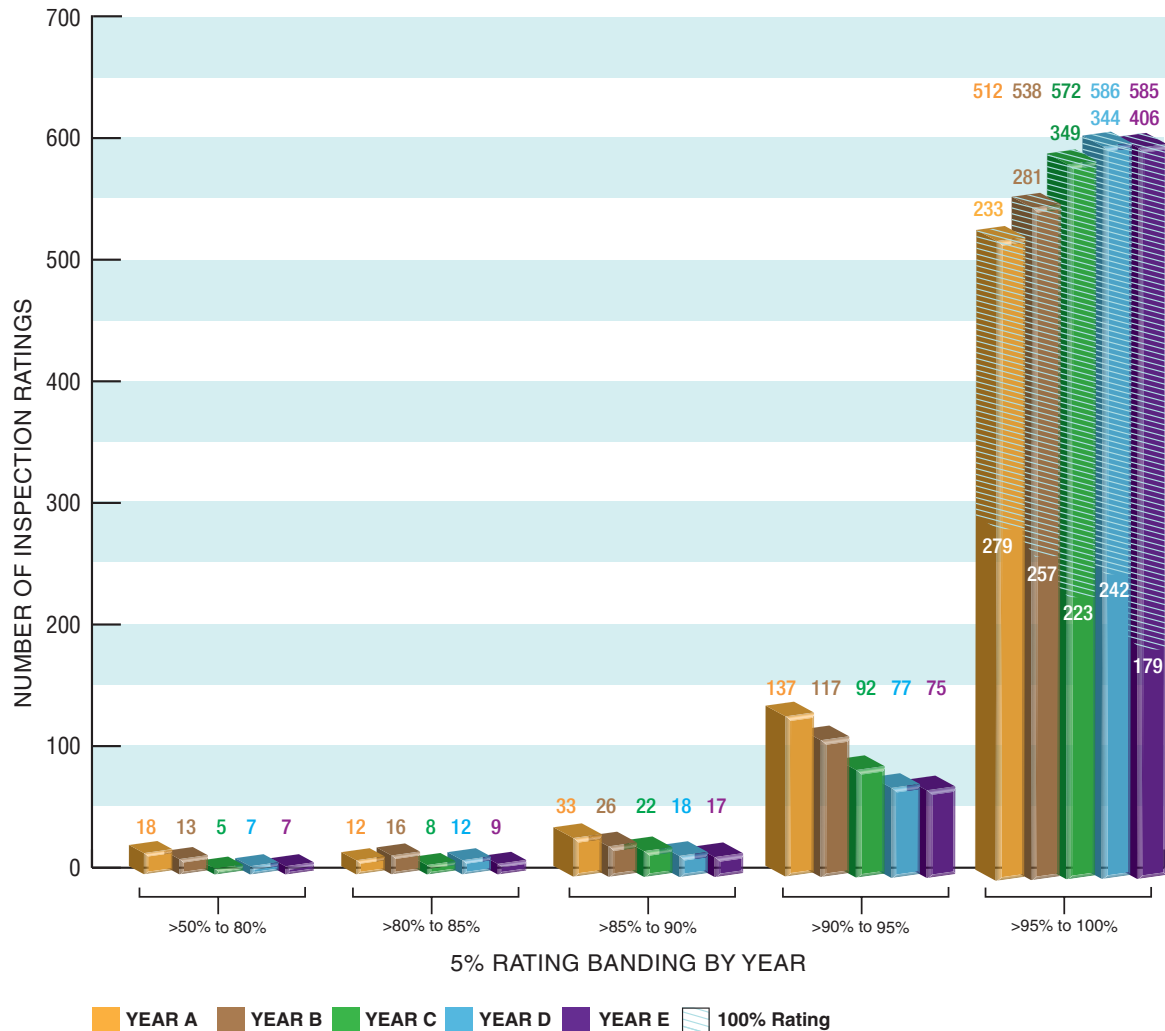
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

Application of the Methodology for Public Reporting

The individual MRDWS Total Inspection Ratings are published with the ministry’s Chief Drinking Water Inspector’s Annual Report.

Figure 1 presents the distribution of MRDWS ratings for a sample of annual inspections. Individual drinking water systems can compare against all the other inspected facilities over a period of inspection years.

Figure 1: Year Over Year Distribution of MRDWS Ratings



Reporting Results to MRDWS Owners/Operators

A summary of inspection findings for each system is generated in the form of an Inspection Rating Record (IRR). The findings are grouped into the 14 possible modules of the inspection protocol,

which would provide the system owner/operator with information on the areas where they need to improve. The 14 modules are:

- | | | | |
|-------------------------|------------------------|---------------------------------------|--|
| 1. Source | 5. Process Wastewater | 9. Contingency and Emergency Planning | 12. Water Quality Monitoring |
| 2. Permit to Take Water | 6. Distribution System | 10. Consumer Relations | 13. Reporting, Notification and Corrective Actions |
| 3. Capacity Assessment | 7. Operations Manuals | 11. Certification and Training | 14. Other Inspection Findings |
| 4. Treatment Processes | 8. Logbooks | | |

For further information, please visit www.ontario.ca/drinkingwater

DWS Name:	CITY OF ST. THOMAS DISTRIBUTION SYSTEM
DWS Number:	260002187
DWS Owner:	CORPORATION OF THE CITY OF ST THOMAS
Municipal Location:	ST. THOMAS
Regulation:	O.REG. 170/03
DWS Category:	DW Municipal Residential
Type of Inspection:	Focused
Compliance Assessment Start Date:	Oct-17-2025
Ministry Office:	London District Office

Maximum Risk Rating: 242

Inspection Module	Non Compliance Risk (X out of Y)
Certification and Training	0/28
Distribution System	0/18
Logbooks	0/14
Operations Manuals	0/14
Reporting & Corrective Actions	4/53
Treatment Processes	21/64
Water Quality Monitoring	0/51
Overall - Calculated	25/242

Inspection Risk Rating:	10.33%
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Final Inspection Rating:	89.67%
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Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2025-26)

DWS Name: CITY OF ST. THOMAS DISTRIBUTION SYSTEM
DWS Number: 260002187
DWS Owner Name: CORPORATION OF THE CITY OF ST THOMAS
Municipal Location: ST. THOMAS

Regulation: O.REG. 170/03

DWS Category: DW Municipal Residential

Type of Inspection: Focused

Compliance Assessment Start Date: Oct-17-2025

Ministry Office: London District Office

Non-Compliance Question(s)	Non Compliance Risk
Reporting & Corrective Actions	
Were changes to the system registration information provided to the ministry within ten (10) days of the change?	4
Treatment Processes	
Were all parts of the drinking water system that came in contact with drinking water disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?	21
Overall - Total	25

Maximum Question Rating: 242

Inspection Risk Rating:	10.33%
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FINAL INSPECTION RATING:	89.67%
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