

OPTIONAL ANNUAL REPORT TEMPLATE

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:	WD Large Municipal Residential
Period being reported:	January 01 2015 through December 31 2015

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [X] No []</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px;"> City of St. Thomas, City Hall Environmental Services 545 Talbot Street St Thomas, Ontario N5P 3V7 </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served:</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">N/A</div> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to:</p> <div style="border: 1px solid black; padding: 5px; text-align: center;">N/A</div> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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Note: For the following tables below, additional rows or columns may be added or an appendix may be attached to the report

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

Drinking Water System Name	Drinking Water System Number
St. Thomas Psychiatric Hospital Water Supply	260005255
Municipality of Central Elgin	260004761
Township of Southwold (Lynhurst Subdivision)	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 [x] 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

The St. Thomas Water Distribution System services over 14,500 customers including 831 customers within the Municipality of Central Elgin and 53 customers within the Township of Southwold (Lynhurst Subdivision). The system purchases its water from the Elgin Area Primary Water Supply System, which extends from Lake Erie to the City of London. The St. Thomas Distribution System consists of approximately 226,000 metres of water main ranging in size from 50 mm to 450 mm in diameter with the oldest installation in 1909. Material types include Asbestos Cement, Cast Iron, Concrete Ductile, Iron Polyethylene, and PVC.

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite 12% (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

Capital Improvements

Watermain replacement Erie St Ross to Smith \$ 192,000

Watermain Lining various Streets \$ 840,000

System Operations Maintenance Highlights

15 Valve Replacements, 6 Services Replaced, 64 Service Box Replacements,
2 Hydrants Installed, 17 Water Main Break Repairs \$68,000
Hydrant Flushing - \$24,000



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
September 18 2015	Total Coliform	1	cfu/100mL	Flush and resample	September 23 2015

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Or Fecal Results (min #)-(max #)	Range of Total Coliform Results (min #)-(max #)	Number of HPC Samples	Range of HPC Results (min #)-(max #)
Raw					
Treated					
Distribution	798	(0)-(0)	(0)-(1)	620	(<10)-(1860)
St. Thomas	700	(0)-(0)	(0)-(1)	544	(<10)-(1860)
Central Elgin	85	(0)-(0)	(0)-(0)	63	(<10)-(60)
Southwold	13	(0)-(0)	(0)-(0)	13	(<10)-(20)

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results (min #)-(max #)
Turbidity		
Chlorine on-line	8760	(0.0)-(2.00)
Sample Collection	802	(0.15)-(1.66)
Grab Cl2	1729	(0.19)-(1.98)
Fluoride (If the DWS provides fluoridation)	1	0.58

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

NOTE: Record the unit of measure if it is **not** milligrams per litre. The value of 0.0 was recorded in the continuous chlorine sampler as a result of equipment abnormality/SCADA issue/maintenance work or calibration.

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



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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	October 20 2015	0.12	ug/l	No
Arsenic	October 20 2015	0.7	ug/l	No
Barium	October 20 2015	19.1	ug/l	No
Boron	October 20 2015	28.2	ug/l	No
Cadmium	October 20 2015	0.005	ug/l	No
Chromium	October 20 2015	0.06	ug/l	No
*Lead	October 20 2015	0.58	ug/l	No
Mercury	October 20 2015	<0.01 MDL	ug/l	No
Selenium	October 20 2015	0.16	ug/l	No
Sodium	October 20 2015	18.3	mg/l	No
Uranium	October 20 2015	.031	ug/l	No
Fluoride	October 20 2015	0.58	mg/l	No
Nitrite				
Nitrate				

*only for drinking water systems testing under Schedule 15.2; this includes large municipal non-residential systems, small municipal non-residential systems, non-municipal seasonal residential systems, large non-municipal non-residential systems, and small non-municipal non-residential system.

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	34	(.03)-(8.05)	0
Distribution	29	(.02)-(1.78)	0

**The City is on the reduced sampling program.*

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	Oct. 20 2015	<0.02 MDL	ug/l	No
Aldicarb	Oct. 20 2015	<0.01 MDL	ug/l	No



Aldrin + Dieldrin	Oct. 20 2015	<0.01 MDL	ug/l	No
Atrazine + N-dealkylated metabolites	Oct. 20 2015	0.09	ug/l	No
Azinphos-methyl	Oct. 20 2015	0.02 <MDL	ug/l	No
Bendiocarb	Oct. 20 2015	<0.01 MDL	ug/l	No
Benzene	Oct. 20 2015	<0.32 MDL	ug/l	No
Benzo(a)pyrene	Oct. 20 2015	<0.004 MDL	ug/l	No
Bromoxynil	Oct. 20 2015	<0.33 MDL	ug/l	No
Carbaryl	Oct. 20 2015	<0.05 MDL	ug/l	No
Carbofuran	Oct. 20 2015	<0.01 MDL	ug/l	No
Carbon Tetrachloride	Oct. 20 2015	<0.16 MDL	ug/l	No
Chlordane (Total)	Oct. 20 2015	<0.01 MDL	ug/l	No
Chlorpyrifos	Oct. 20 2015	<0.02 MDL	ug/l	No
Cyanazine	Oct. 20 2015	<0.03 MDL	ug/l	No
Diazinon	Oct. 20 2015	<0.02 MDL	ug/l	No
Dicamba	Oct. 20 2015	<0.20 MDL	ug/l	No
1,2-Dichlorobenzene	Oct. 20 2015	<0.41 MDL	ug/l	No
1,4-Dichlorobenzene	Oct. 20 2015	<0.36 MDL	ug/l	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Oct. 20 2015	<0.01 MDL	ug/l	No
1,2-Dichloroethane	Oct. 20 2015	<0.35 MDL	ug/l	No
1,1-Dichloroethylene (vinylidene chloride)	Oct. 20 2015	<0.33 MDL	ug/l	No
Dichloromethane	Oct. 20 2015	<0.35 MDL	ug/l	No
2-4 Dichlorophenol	Oct. 20 2015	<0.15 MDL	ug/l	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	Oct. 20 2015	<0.19 MDL	ug/l	No
Diclofop-methyl	Oct. 20 2015	<0.40 MDL	ug/l	No



Dimethoate	Oct. 20 2015	<0.03 MDL	ug/l	No
Dinoseb	Oct. 20 2015	<0.36 MDL	ug/l	No
Diquat	Oct. 20 2015	<1 MDL	ug/l	No
Diuron	Oct. 20 2015	<0.03 MDL	ug/l	No
Glyphosate	Oct. 20 2015	<1 MDL	ug/l	No
Heptachlor + Heptachlor Epoxide	Oct. 20 2015	<0.01 MDL	ug/l	No
Lindane (Total)	Oct. 20 2015	<0.01 MDL	ug/l	No
Malathion	Oct. 20 2015	<0.02 MDL	ug/l	No
Methoxychlor	Oct. 20 2015	<0.01 MDL	ug/l	No
Metolachlor	Oct. 20 2015	0.02	ug/l	No
Metribuzin	Oct. 20 2015	<0.02 MDL	ug/l	No
Monochlorobenzene	Oct. 20 2015	<0.30 MDL	ug/l	No
Paraquat	Oct. 20 2015	<1 MDL	ug/l	No
Parathion	Oct. 20 2015	<0.02 MDL	ug/l	No
Pentachlorophenol	Oct. 20 2015	<0.15 MDL	ug/l	No
Phorate	Oct. 20 2015	<0.01 MDL	ug/l	No
Picloram	Oct. 20 2015	<1 MDL	ug/l	No
Polychlorinated Biphenyls(PCB)	Oct. 20 2015	<0.04 MDL	ug/l	No
Prometryne	Oct. 20 2015	<0.03 MDL	ug/l	No
Simazine	Oct. 20 2015	<0.01 MDL	ug/l	No
THM (NOTE: show latest annual average)	Avg. 2015	21.3	ug/l	No
Temephos	Oct. 20 2015	<0.01 MDL	ug/l	No
Terbufos	Oct. 20 2015	<0.01 MDL	ug/l	No
Tetrachloroethylene	Oct. 20 2015	<0.35 MDL	ug/l	No



2,3,4,6-Tetrachlorophenol	Oct. 20 2015	<0.20 MDL	ug/l	No
Triallate	Oct. 20 2015	<0.01 MDL	ug/l	No
Trichloroethylene	Oct. 20 2015	<0.44 MDL	ug/l	No
2,4,6-Trichlorophenol	Oct. 20 2015	<0.25 MDL	ug/l	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Oct. 20 2015	<0.22 MDL	ug/l	No
Trifluralin	Oct. 20 2015	<0.02 MDL	ug/l	No
Vinyl Chloride	Oct. 20 2015	<0.17 MDL	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
Plumbing Lead	8.05	ug/l	March 16 2015