

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 1, 2013 to December 31, 2013

<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; width: 100px; margin: 0 auto;">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; width: 100px; margin: 0 auto;">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

Non Standard Water Service Program - \$30,000

East Pearl Watermain Replacement \$38,000

Rebuild Pump 3 ARBS \$17,000

Metcalf Queen St Watermain servicing \$18,000

Churchill Blvd Watermain Replacement \$132,000

Moore St Watermain Replacement \$58,000

Crocker Ave Watermain Replacement \$31,000

System Operations Maintenance Highlights

6 Valve Box Replacements, 1 Valve Replacements, 10 Services Replaced, 60 Service Box Replacements, 1 Hydrant Replacement, 29 Main Breaks – \$123,000
Hydrant Flushing - \$34,000

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
Sept 21 2013	Water Pressure	<20	psi	Flush hydrants and take chlorine residuals	Sept 21 2013
Dec 17 2013	TC and EC	1 and 1	cfu/100ml	Re-sample and flush	Dec 17 2013

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	816	0-1	0-1	640	<10 – >2000
St. Thomas	692	0-1	0-1	554	<10 – >2000
Central Elgin	111	0-0	0-0	73	<10 - 280
Southwold	13	0-0	0-0	13	<10 - 10

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 Sample Collection	8760 1850	(0.0)-(2.00) (0.12)-(2.05)
Fluoride (If the DWS provides fluoridation)		

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	November 04 2013	.05	ug/L	NO
Arsenic	November 04 2013	.4	ug/L	NO
Barium	November 04 2013	24.5	ug/L	NO
Boron	November 04 2013	18	ug/L	NO
Cadmium	November 04 2013	<.003 MDL	ug/L	NO
Chromium	November 04 2013	1.3	ug/L	NO
*Lead	November 04 2013	.54	ug/L	NO
Mercury	November 04 2013	<.01 MDL	ug/L	NO
Selenium	November 04 2013	<1 MDL	ug/L	NO
Sodium	May 27 2013	19.5	mg/L	NO
	August 06 2013	22.0	mg/L	YES
	November 04 2013	20.5	mg/L	YES
	November 06 2013	18.9	mg/L	NO
Uranium	November 04 2013	.031	ug/L	NO
Fluoride				
Nitrite				
Nitrate				

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

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing			
Distribution			

**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	Nov 04/13	<0.02 MDL	ug/L	NO
Aldicarb	Nov 04/13	<0.01 MDL	ug/L	NO
Aldrin + Dieldrin	Nov 04/13	<0.01 MDL	ug/L	NO
Atrazine + N-dealkylated metabolites	Nov 04/13	0.08	ug/L	NO
Azinphos-methyl	Nov 04/13	<0.02 MDL	ug/L	NO
Bendiocarb	Nov 04/13	<0.01 MDL	ug/L	NO
Benzene	Nov 04/13	<0.32 MDL	ug/L	NO
Benzo(a)pyrene	Nov 04/13	<0.004 MDL	ug/L	NO
Bromoxynil	Nov 04/13	<0.33 MDL	ug/L	NO
Carbaryl	Nov 04/13	<0.01 MDL	ug/L	NO
Carbofuran	Nov 04/13	<0.01 MDL	ug/L	NO
Carbon Tetrachloride	Nov 04/13	<0.16 MDL	ug/L	NO
Chlordane (Total)	Nov 04/13	<0.01 MDL	ug/L	NO
Chlorpyrifos	Nov 04/13	<0.02 MDL	ug/L	NO
Cyanazine	Nov 04/13	<0.03 MDL	ug/L	NO
Diazinon	Nov 04/13	<0.02 MDL	ug/L	NO
Dicamba	Nov 04/13	<0.20 MDL	ug/L	NO
1,2-Dichlorobenzene	Nov 04/13	<0.41 MDL	ug/L	NO
1,4-Dichlorobenzene	Nov 04/13	<0.36 MDL	ug/L	NO
Dichlorodiphenyltrichloroethane (DDT) + metabolites	Nov 04/13	<0.01 MDL	ug/L	NO
1,2-Dichloroethane	Nov 04/13	<0.35 MDL	ug/L	NO
1,1-Dichloroethylene (vinylidene chloride)	Nov 04/13	<0.33 MDL	ug/L	NO

Dichloromethane	Nov 04/13	<0.35 MDL	ug/L	NO
2-4 Dichlorophenol	Nov 04/13	<0.15 MDL	ug/L	NO
2,4-Dichlorophenoxy acetic acid (2,4-D)	Nov 04/13	<0.19 MDL	ug/L	NO
Diclofop-methyl	Nov 04/13	<0.40 MDL	ug/L	NO
Dimethoate	Nov 04/13	<0.03 MDL	ug/L	NO
Dinoseb	Nov 04/13	<0.36 MDL	ug/L	NO
Diquat	Nov 04/13	<1 MDL	ug/L	NO
Diuron	Nov 04/13	<0.03 MDL	ug/L	NO
Glyphosate	Nov 04/13	<1 MDL	ug/L	NO
Heptachlor + Heptachlor Epoxide	Nov 04/13	<0.01 MDL	ug/L	NO
Lindane (Total)	Nov 04/13	<0.01 MDL	ug/L	NO
Malathion	Nov 04/13	<0.02 MDL	ug/L	NO
Methoxychlor	Nov 04/13	<0.01 MDL	ug/L	NO
Metolachlor	Nov 04/13	0.02	ug/L	NO
Metribuzin	Nov 04/13	<0.02 MDL	ug/L	NO
Monochlorobenzene	Nov 04/13	<0.30 MDL	ug/L	NO
Paraquat	Nov 04/13	<1 MDL	ug/L	NO
Parathion	Nov 04/13	<0.02 MDL	ug/L	NO
Pentachlorophenol	Nov 04/13	<0.15 MDL	ug/L	NO
Phorate	Nov 04/13	<0.01 MDL	ug/L	NO
Picloram	Nov 04/13	<1 MDL	ug/L	NO
Polychlorinated Biphenyls(PCB)	Nov 04/13	<0.04 MDL	ug/L	NO
Prometryne	Nov 04/13	<0.03 MDL	ug/L	NO
Simazine	Nov 04/13	<0.01 MDL	ug/L	NO

THM (NOTE: show latest annual average)	Avg. 2013	19.2	ug/L	NO
Temephos	Nov 04/13	<0.01 MDL	ug/L	NO
Terbufos	Nov 04/13	<0.01 MDL	ug/L	NO
Tetrachloroethylene	Nov 04/13	<0.35 MDL	ug/L	NO
2,3,4,6-Tetrachlorophenol	Nov 04/13	<0.14 MDL	ug/L	NO
Triallate	Nov 04/13	<0.01 MDL	ug/L	NO
Trichloroethylene	Nov 04/13	<0.44 MDL	ug/L	NO
2,4,6-Trichlorophenol	Nov 04/13	<0.25 MDL	ug/L	NO
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	Nov 04/13	<0.22 MDL	ug/L	NO
Trifluralin	Nov 04/13	<0.02 MDL	ug/L	NO
Vinyl Chloride	Nov 04/13	<0.17 MDL	ug/L	NO