



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

<b>Drinking-Water System Number:</b>	260078897
<b>Drinking-Water System Name:</b>	Elgin Middlesex Pumping Station - St. Thomas Area Secondary Water Supply System
<b>Drinking-Water System Owner:</b>	St. Thomas Area Secondary Water Supply System Joint Board of Management
<b>Drinking-Water System Category:</b>	Large Municipal Residential
<b>Period being reported:</b>	January 1, 2014 through December 31, 2014

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

**Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]**

**Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] 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, ON.  
N5P 3V7  
[www.city.st-thomas.on.ca](http://www.city.st-thomas.on.ca)

Elgin Area Water Treatment Plant  
43665 Dexter Line, Union, ON

**Complete for all other Categories.**

**Number of Designated Facilities served:**

N/A

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

Yes [ ] No [ ]

**Number of Interested Authorities you report to:**

N/A

**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:**

**Systems that receive their drinking water directly from the St. Thomas EMPS:**

Drinking Water System Name	Drinking Water System Number
St. Thomas Area Secondary Water Supply System	260078897



**Systems that receive their drinking water indirectly from the St. Thomas EMPS:**

<b>Drinking Water System Name</b>	<b>Drinking Water System Number</b>
St. Thomas Distribution System	260002187
Dutton/Dunwich Distribution System	220002967
Municipality of Central Elgin	260004761
Southwold Distribution Supply	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
- ☒ 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 Elgin Middlesex Pumping Station (EMPS) receives water from the Elgin Area Primary Water Supply System, which is located to the east of Port Stanley. Through various secondary water supply systems, the EMPS serves the Cities of London and St. Thomas, Town of Aylmer, and Municipalities of Central Elgin, Malahide, Dutton-Dunwich and Southwold.

The EMPS is a shared facility encompassing a twin celled reservoir with a total capacity of 54,600m<sup>3</sup>. Booster pumps are dedicated to directing water to the City of London, St. Thomas Secondary and/or Aylmer Secondary Water Supply Systems. A gas chlorine system is utilized to provide re-chlorination for water being directed to the St. Thomas and Aylmer Secondary Supply Systems. The facility also houses a 600kW standby diesel generator that provides emergency power to pump water into the St. Thomas and Aylmer systems during a power interruption.

Three pipelines exit the EMPS: one exits to the south of the EMPS property and extends west to service the St. Area Thomas Secondary System; the second services the City of London distribution system; the third pipeline services the municipalities on the Aylmer Area Secondary System.

**List all water treatment chemicals used over this reporting period**

Chlorine Gas





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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

- Concrete suction and discharger header inspection - \$15000.00
- Fuel system upgrade \$105000.00 in process
- Implementation of tower alarms to Elgin SCADA - \$1000.00
- Pump Guards - \$1500.00

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
N/A	N/A	N/A	N/A	N/A	N/A

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 Results (CFU/100 mL) (min #)-(max #)	Range of Total Coliform Results (CFU/100 mL) (min #)-(max #)	Number of Heterotrophic Plate Count (HPC) Samples	Range of HPC Results (CFU/1 mL) (min #)-(max #)
Distribution	53	0 - 0	0 - 0	53	(0) – (30)

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

Analyte	Number of Grab Samples (Continuous Monitoring)	Min	Max	Avg
Free Chlorine Residual (mg/L)	8760	0.61	2.89	1.33

*Note: The free chlorine residual spiked on occasion during 2014. Each spike corresponded with a pump start-up. None of the spikes lasted longer than 5 minutes after pump start-up.*

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
THM (NOTE: result value is based on latest annual average)	January 7, 2014 April 8, 2014 July 8, 2014 October 7, 2014	12 17 20 26	µg/L µg/L µg/L µg/L	NO

<b>APPENDIX E 2014 EMPS Treatment</b>	
<b>Month</b>	<b>Total Chlorine Gas Usage - Kg</b>
January	134.2
February	136.4
March	140.9
April	116.7
May	135.3
June	157.2
July	163.6
August	181.4
September	184.9
October	203.3
November	113.1
December	153.7
<b>Yearly Total</b>	<b>1820.7</b>

Please note: Aylmer and St.Thomas combined cl2 usage