

**THE FIRST MEETING OF THE ST. THOMAS AREA
SECONDARY WATER SUPPLY SYSTEM**

**COMMITTEE ROOM #309
CITY HALL**

MARCH 24, 2016

4:00 p.m. The meeting convened with Councillor J. Kohler, Chair, presiding.

ATTENDANCE

Members

Mayor G. Jones, Township of Southwold
Councillor L. Stevenson, City of St. Thomas
Councillor D. Crevits, Municipality of Central Elgin
Councillor J. Kohler, Chair, City of St. Thomas
Councillor G. Clarke, City of St. Thomas (Alternate)

Staff

D. Aristone, Director of Finance and City Treasurer
J. Lawrence, Director, Environmental Services
L. Perrin, Director of Physical Services, Municipality of Central Elgin
K. Grogan, Treasurer, Township of Southwold
N. Bokma, Manager of Operations and Compliance
M. Knapp, Corporate Administrative and Accessibility Clerk
C. Andrew, Water/Sewer Foreman

DISCLOSURES OF INTEREST

Nil.

MINUTES

Motion by Councillor Stevenson - Crevits:

THAT: The minutes of the meeting held on October 22, 2015 be confirmed.

Several members noted they may not have received the previous minutes.

Motion Lost.

UNFINISHED BUSINESS

NEW BUSINESS

Report SWB01-16, 2015 Secondary Annual Reports - Appendix "A"

Motion by Councillor Crevits - Stevenson:

THAT: Report SWB-01-16 relating to the 2015 Annual Reports for the St. Thomas Area Secondary Water Supply System be received for information.

Carried.

Report SWB-02-16, EMPS Ownership - Appendix "B"

Motion by Councillor Stevenson – Mayor Jones:

THAT: Report SWB-02-16 relating to the EMPS Ownership be received for information.

Carried.

The Director, Environmental Services stated that staff from both the Primary and the Secondary Water Supply System Boards would be meeting on April 11th, 2016 to negotiate terms and transfer assets and further, that direction is required from the Secondary Water Supply System

CONFIRMED _____ CHAIRMAN

Board.

The members discussed the fact that the debate of ownership relates to the common building itself and that nothing appears on title to the property except for the agreements between the Boards however, the land that the building sits on is owned by the Primary Board.

The Director, Environmental Services stated that the building is owned by the Elgin Area Primary Water Supply System, the City of London, the St. Thomas Area Secondary Water Supply System and the Aylmer Area Secondary Water Supply System and is required to be divided up.

The members asked that the Director, Environmental Services negotiate on behalf of the Secondary Board to transfer its ownership of the building and negotiate cost sharing of the building with the other three Boards and report back to the Secondary Board.

Meeting Schedule and Next Meeting

The members agreed that the Board should meet quarterly instead of semi annually.

The members suggested that meetings be held approximately one month after the Primary Board meetings.

Administrative Changes – Environmental Services Department – Update

The Director, Environmental Services informed the members that Mr. McCready was no longer with the City and that Mr. Andrew was now the legislative contact.

The members suggested having the next Board meeting at the Elgin Middlesex Pumping Station building.

Update on Operating Agreement with Ontario Clean Water Agency

The Director, Environmental Services stated that the Ontario Clean Water Agency would like to extend its agreement relating to the Elgin Middlesex Pumping Station. Further, discussion was still ongoing and a draft agreement would be brought back to this Board before anything was signed.

The members asked about the term of the agreement.

The Director, Environmental Services stated that the agreement would potentially be for another five years.

Minutes/Agendas

The Director reviewed and advised that all agendas and minutes for the Board are available on this website.

<http://www.stthomas.ca/content/secondary-water-supply-system>


ADJOURNMENT

Motion by Mayor Jones – Councillor Stevenson:

THAT: The Board adjourn at 4:30 p.m.

Carried.

APPENDIX "A"

| | |
|--|---|
|  <p style="margin: 0;">Corporation of the City of St. Thomas</p> | Report No. SWB01-16 |
| | File No. |
| Directed to: Mayor Grant Jones and the Members of The Board of Management for The St. Thomas Area Secondary Water Supply System | Date Authored: March 18, 2016 Meeting Date: March 24, 2016 |
| Department: Environmental Services | Attachment - 2015 Secondary Annual Report-Transmission mains - 2015 Secondary Annual Report- EMPS - 2015 Secondary Summary Report |
| Prepared By: Lynn Stafford, C.E.T. Compliance Coordinator | |
| Subject: 2015 Annual Reports for the St Thomas Area Secondary Water Supply System | |
| <p><u>Recommendation:</u></p> <p>THAT: Report SWB01-16, 2015 Annual Reports for the St. Thomas Area Secondary Water Supply System be received for information.</p> <p><u>Origin:</u></p> <p>The Safe Drinking Water Act, O. Reg.170/03, Section 11, requires that owners and administrators of drinking water systems prepare Annual Reports by February 28th of each year. In addition, the Safe Drinking Water Act, O. Reg.170/03, Schedule 22, requires the owners of a drinking water system to prepare a Summary Report, no later than March 31st of each year.</p> <p><u>Analysis:</u></p> <p>The St. Thomas Area Secondary Water Supply System, which includes a portion of the Elgin Middlesex Pumping Station, is administered by the City of St. Thomas on behalf of the owner, the St. Thomas Area Secondary Water Supply Board. The system transmits water to Southwold, Central Elgin, Dutton Dunwich and St. Thomas. The Ontario Water Clean Water Agency operates the pumping station on behalf of the board and the transmission main is operated by the City of St. Thomas. The system complies with the Safe Drinking Water Act, O. Reg. 170/03, and with the terms and conditions of the applicable Municipal Drinking Water Licences.</p> <p>The Annual Reports have been completed by the required date of February 28, 2016, on standard forms, provided by the Ministry, and have been filed as required. The Summary Reports have been completed prior to the required submission date of March 31, 2016. The Annual Reports are attached, there were no deficiencies meeting the requirements of O. Reg.170/03. A previous MOECC inspection, was carried out in June 2015, a rigorous and comprehensive program. The St. Thomas Area Water Supply System obtained an overall final inspection rating of 100%, indicating that the City is committed to excellence.</p> <p>As required by the regulations, arrangements have been made to post the reports are on the City's web site and copies have been sent to the drinking water systems that receive water from the St. Thomas Water Distribution System. Copies of the reports will be made available to the Public upon request at the Environmental Services Department.</p> <p><u>Financial Considerations:</u></p> <p>There are no financial implications associated with this report.</p> <p>Respectfully,</p> <p style="text-align: center;"><i>Lynn Stafford</i></p> <p>Lynn Stafford, C.E.T. Compliance Coordinator</p> <hr/> <p>Reviewed By: <i>[Signature]</i></p> <p style="text-align: center;"> Treasury Env. Services Planning City Clerk Human Resources Other </p> | |



OPTIONAL ANNUAL REPORT TEMPLATE

| | |
|--|--|
| Drinking-Water System Number: | 260078897 |
| Drinking-Water System Name: | St. Thomas Area Secondary Water Supply System |
| Drinking-Water System Owner: | Joint Board of Management of the St. Thomas Area Secondary Water Supply System |
| Drinking-Water System Category: | Large Municipal Residential |
| Period being reported: | January 1, 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 [] No [X]</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;"> <p>City of St. Thomas, City Hall Environmental Services 545 Talbot Street St Thomas, Ontario</p> </div> | <p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text"/></p> <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: <input type="text"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p> |
|---|---|

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 |
|--|------------------------------|
| City of St. Thomas Water Distribution System | 260002187 |
| Municipality of Central Elgin | 260004761 |
| Township of Southwold | 210001362 |
| Dutton/Dunwich Distribution System | 220002967 |

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 []



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

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 Area Secondary Supply System was constructed to supply treated water to the City of St. Thomas, the Ford Motor Company Assembly Plant near Talbotville, and the Municipality of Central Elgin and Township of Southwold. The system consists of an Elevated Water Tower storage tank and trunk water mains to the Ford Plant. A 750 mm diameter watermain is connected to the Primary System at the Old St. Thomas water works site on South Edgeware Road. The pipeline then connects to the Elevated Storage Tank, a 0.76 ML (200,000 gallon) steel teardrop elevated tank that is located just off Water Tower Line Road near Waterworks Park in the City of St. Thomas. The pipeline then extends west for approximately 2.6 km along Edgeware Road to County Road 26 and then along Ford Road/Wonderland Road before turning northwesterly for approximately 3.6 km. to the Ford Chamber located at the northwest corner of Clinton Line (Concession Road 11) and Wonderland Road. At the intersection of Ford Road and Talbotville Road, the diameter of the pipeline is reduced to 500 mm.

List all water treatment chemicals used over this reporting period

| | |
|-------------------------|---------------------|
| 12% Sodium Hypochlorite | Chlorine Gas (EMPS) |
| Sodium Metabisulphite | |

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

| |
|--|
| Generator Fuel System \$92,000 |
| Surge Control Valve and Sump Pump \$15,000 |



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

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 30 2015 | Total Coliform | 1 | cfu/100ml | Flush and resample | August 04 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 | 212 | (0)-(0) | (0)-(1) | 212 | (<10)-(>670) |

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 | 8760 | (0.00)-(2.00) |
| Sample Collection Cl2 | 216 | (0.84)-(1.80) |
| Grab Cl2 | 890 | (0.22)-(1.97) |
| 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 | 0.13 | ug/l | No |
| Arsenic | October 20 2015 | 0.5 | ug/l | No |
| Barium | October 20 2015 | 18.9 | ug/l | No |
| Boron | October 20 2015 | 18.1 | ug/l | No |
| Cadmium | October 20 2015 | 0.006 | ug/l | No |
| Chromium | October 20 2015 | 0.06 | ug/l | No |
| *Lead | October 20 2015 | 0.21 | ug/l | No |
| Mercury | October 20 2015 | <0.01 MDL | ug/l | No |
| Selenium | October 20 2015 | 0.14 | ug/l | No |
| Sodium | October 20 2015 | 18.1 | mg/l | No |
| Uranium | October 20 2015 | 0.037 | 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 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 | | | |



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 | <0.05 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 |



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

| | | | | |
|--|-----------------|--------------|------|----|
| 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) | Oct. 20 2015 | 30.3 | 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 |
|-----------|--------------|-----------------|----------------|
| | | | |
| | | | |



| | |
|--|---|
| Drinking-Water System Number: | 260078897 |
| Drinking-Water System Name: | Elgin Middlesex Pumping Station - St. Thomas Area Secondary Water Supply System |
| Drinking-Water System Owner: | St. Thomas Area Secondary Water Supply System Joint Board of Management |
| Drinking-Water System Category: | Large Municipal Residential |
| Period being reported: | January 1, 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 <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></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;"> <p>City of St. Thomas, City Hall Environmental Services 545 Talbot Street St Thomas, ON. N5P 3V7 www.city.st-thomas.on.ca</p> <p>Elgin Area Water Treatment Plant 43665 Dexter Line, Union, ON</p> </div> | <p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Number of Interested Authorities you report to: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes <input type="checkbox"/> No <input type="checkbox"/></p> |
|---|---|

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:

| Drinking Water System Name | Drinking Water System Number |
|------------------------------------|------------------------------|
| 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 54,600m³. 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 services the municipalities on the Aylmer Area Secondary System.

List all water treatment chemicals used over this reporting period

Chlorine Gas



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

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

- Install guarding on generator - \$1K
- Replacement hot water tank - \$2.5K
- Pipe coupling pump #2 - \$3K
- Installed cooling unit for electrical room - \$10K
- Rebuild surge valve - \$4K

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 | 52 | 0 - 0 | 0 - 0 | 52 | (<10) – (620) |

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

| Parameter | Number of Grab Samples (Continuous Monitoring) | Min | Max | Avg |
|-------------------------------|--|------|------|------|
| Free Chlorine Residual (mg/L) | 8760 | 0.59 | 3.11 | 1.32 |

Note: The free chlorine residual spiked on occasion during 2015. 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 13, 2015 | 11 | µg/L | NO |
| | April 7, 2015 | 14 | µg/L | |
| | July 7, 2015 | 26 | µg/L | |
| | October 6, 2015 | 24 | µg/L | |

**ELGIN-MIDDLESEX PUMPING STATION
ST. THOMAS AREA SECONDARY WATER SUPPLY SYSTEM
2015 COMPLIANCE REPORT
(Schedule 22 Summary Report)**

Facility Name: Elgin-Middlesex Pumping Station -
St. Thomas Area Secondary Water Supply System

Mailing Address: Elgin Area Primary Water Supply System
P.O. Box 220
Port Stanley, ON N5L 1J4



Average Daily Flow 6,196 m³/day
Max. Daily Flow 9,928 m³/day
Source Water Elgin Area Primary Water Supply System

CONTACT INFO:

Contract Administration:
City of St. Thomas, City Hall
Environmental Services
545 Talbot Street, St. Thomas, ON N5P3V7
Contact: Mr. Justin Lawrence
Director of Environmental
Services and City Engineer

Operator:
Ontario Clean Water Agency.
P.O. Box 220, Port Stanley, Ontario N5L 1J4
Contact: Mr. Blair Tully - Senior Operations Manager (519) 782-3101

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System Approval:

The St.Thomas Area Water Supply System is supplied water through the Elgin-Middlesex Pump Station, which receives water from the Elgin Area Primary Water Supply System on Dexter Line, east of Port Stanley, Ontario. During the reporting period, The St.Thomas Area Secondary Water Supply System was operated pursuant to the approvals, licenses and permits listed below.

The supply and distribution of water to the system was governed by the following Municipal Drinking Water Licenses (MDWL) and Drinking Water Works Permits (DWWP):

St.Thomas Area Secondary Water Supply System

- o MDWL No. 190-101, issued on July 30, 2012
- o DWWP No. 190-201, issued on August 31, 2011

The DWWP and MDWL were issued in accordance with the *Safe Drinking Water Act (SDWA)*, 2002.



Treated Water Requirements:

Effective as of June 1, 2003 the Ontario government enacted new drinking water regulations under the *Safe Drinking Water Act*, 2002. The Drinking Water Systems Regulation (O.Reg. 170/03) replaced the Drinking Water Protection Regulation for Larger Waterworks (O. Reg. 459/00) and the Drinking Water Protection Regulation for Smaller Waterworks Serving Designated Facilities (O. Reg. 505/01).

Staff Complement and Training:

In 2015, the St.Thomas facility at the Elgin-Middlesex Pump Station (EMPS) was operated and maintained under the operating authority, Ontario Clean Water Agency. The operational and maintenance staff are based at the Elgin Area Primary Water Supply System (EAPWSS) located east of Port Stanley, Ontario, and share their time between the two facilities.

Employees responsible for the operations and maintenance of the facility included one (1) Senior Operations Manager, (1) Compliance Manager, two (2) Team Leads, six (6) full time equivalent operations staff, four (4) full time equivalent maintenance staff and one (1) administrative assistant.

The Compliance Manager shares their work hours between the Lake Huron Primary Water Supply System (LHPWSS) and the Elgin Area Primary Water Supply System (EAPWSS).

In 2015, all employees received Director Approved and practical on-the-job training which contributed to annual MOE training requirements.

History of Facility:

The EMPS is occupied by three booster stations that comprise an integrated booster station consisting of two in-ground storage reservoirs, each having a capacity of 27.3 million liters. The site upon which the three booster stations is situated is owned by the Elgin Area Primary Water Supply System and includes the original St.Thomas pump station, constructed in 1970 that services St.Thomas, and sections of the Municipalities of Central Elgin and Southwold. Two additional pump stations were completed in 1994 and service the City of London, as well as the Municipality of Malahide, Town of Aylmer, and the Municipality of Central Elgin.

The St.Thomas pump station is comprised of three high-lift pumps that deliver water through a transmission main that services the St.Thomas Area Secondary Water Supply System. A gas re-chlorination system provides re-chlorination for water being directed to the St.Thomas Area Secondary Water Supply System.



In the event of a power failure, an on-site generator can provide sufficient standby power to operate the facility and run the St.Thomas pumps.

Remote monitoring and control of all three pump stations is performed by staff at the Elgin Area Primary Water Supply System (EAPWSS) near Port Stanley, Ontario. Remote monitoring and control capabilities are made possible via the EAPWSS and the EMPS SCADA systems.

Process Description:



The Elgin-Middlesex Pump Station (EMPS) receives treated water from the Elgin Area Primary Water Supply System, which treats water at the water treatment plant located on the shores of Lake Erie to the east of Port Stanley. Water from the plant is pumped into the EMPS site reservoirs where it is subsequently fed via a series of headers to each of the pumping stations serving the Aylmer Area Secondary Water Supply System, the City of London Distribution System, and the St. Thomas Area Secondary Water Supply System.

The St. Thomas pump station has two duty pumps and one standby pump, all three pumps being fixed speed, each being rated at 316 L/s.

Post-Treatment:

The St. Thomas Area and Aylmer Area Secondary Water Supply System pump stations both utilize a gas re-chlorination facility. The facility consists of two scaled 150 lb gas chlorine cylinders and three chlorinators equipped with booster pumps. The three chlorinators redundantly serve the Aylmer Area Secondary Water Supply System (AASWSS) and St. Thomas Area Secondary Water Supply System (STASWSS) and have a dosage capacity of 1kg/h.

High Lift Pump Station:

The three high lift pumps provide redundant pumping capacity into the St. Thomas Area Secondary Water Supply System. See Appendix B for 2015 Total Daily Flows and Appendix C for 2015 Daily Instantaneous Peak Flows.

Maintenance:

Site maintenance was carried out by Ontario Clean Water Agency field services staff based at the Elgin Area Primary Water Supply System located near Port Stanley. Specialty maintenance services are provided, on an as needed basis by external service providers. All maintenance scheduling is monitored through a computerized maintenance management system.

In addition to the routine preventative maintenance program, a number of maintenance projects were completed at the EMPS in 2015. A summary of non-routine maintenance is available in Appendix D, the 2015 Annual Report.

Sampling Procedures:

All samples collected by licensed OCWA personnel are submitted to CALA accredited laboratories for bacteriological and chemical analysis.

Distribution water samples are taken twice per week at the inlet to the reservoir and submitted for bacteriological analysis. The distribution water entering the St.Thomas Area Secondary Water Supply System is sampled weekly and submitted to an external laboratory for bacteriological analysis. Chlorine residual, for the water entering the St.Thomas Area Secondary Water Supply System, is monitored continuously from the Elgin Area Primary Water Supply System by means of the SCADA system.

On a quarterly basis the distribution water entering the reservoir, as well as the water entering the St.Thomas Area Secondary Water Supply System is sampled and submitted to an accredited laboratory for testing of Total Trihalomethanes (THMs), a disinfection by-product. Twice annually, the distribution water entering the reservoir is sampled and submitted to an accredited laboratory for testing of lead concentrations. All water quality sampling at the Elgin-Middlesex Pump Station is performed in accordance with Ontario Regulation 170/03.

Flow Measurement and Water Quality Monitoring:

Flow is measured in the process utilizing a flow measurement device. Chlorine residual levels are monitored by an on-line analyzer located at the point of entry into the St.Thomas Secondary Water Supply System. These devices were calibrated in 2015 by licensed OCWA staff and contractors. See Appendix A for a summary of 2015 water quality data.

Statement of Comparison:

The previous Certificate of Approval and new Municipal Drinking Water License for the St.Thomas Area Secondary Water Supply System does not identify a rated capacity for the system. The pumping station has an available capacity of 54,605 m³/day, whereby instantaneous peak flow is 632 L/s.

The maximum total daily flow witnessed by the system in 2015 was 9,928 m³/day, approximately 18% of the capacity. The average total daily flow witnessed by the system in 2015 was 6,196 m³/day, approximately 11% of the capacity.

The maximum instantaneous peak flow witnessed by the system in 2015 was 600 L/s, approximately 95% of the capacity. See Appendix B for 2015 total daily flow values and Appendix C for 2015 daily instantaneous peak flow rates.

Ministry of the Environment Inspections:

The Ontario Ministry of the Environment and Climate Change (MOECC) conducts an inspection of the St.Thomas portion of the Elgin-Middlesex Pumping Station annually along with the St Thomas Area Secondary Water System operated by the City of St Thomas. A MOECC inspection took place in June 2015. The final inspection report was issued on July 13, 2015. There were no non-compliances identified in the inspection report. The final inspection rating received for the 2015-2016 reporting year was 100.00%

Benefiting Municipalities:

Following the adoption of the Municipal Water and Sewer Transfer Act in 1997, the Ontario Ministry of the Environment transferred the ownership of the three booster stations from the Province of Ontario to the water systems' benefiting municipalities. As a result the Aylmer Area Secondary Water Supply System portion of the EMPS and associated equipment is owned by the Aylmer Area Secondary Water Supply System Joint Board of Management, the London portion of the EMPS is owned by the Corporation of the City of London, and the St.Thomas Area Secondary Water System portion of the EMPS and associated appurtenances are owned by the St.Thomas Area Secondary Water System Joint Board of Management. Jointly these water systems benefit, and are managed on behalf of, the communities of Aylmer, Central Elgin, London, Malahide, Southwold and St.Thomas. A list of municipalities that receive water directly and indirectly from the St.Thomas Area Secondary Water Supply System at the EMPS is provided in Appendix D. The Ontario Clean Water Agency operates and maintains the Elgin- Middlesex Pump Station, under contract to the Aylmer Area Secondary Water Supply System, The Corporation of the City of London and the St.Thomas Area Secondary Water Supply System, with these contracts being administered by the City of St.Thomas on behalf of the various water systems.

This report was prepared by Ontario Clean Water Agency, the Operating Authority for the St.Thomas portion of the EMPS, on behalf of the St.Thomas Area Secondary Water Supply System Joint Board of Management.

APPENDIX A – 2015 WATER QUALITY SUMMARY

| MONTH | POST TREATMENT | |
|------------------|------------------------------|--|
| | Free Cl ₂ mg/L | |
| January | | |
| Minimum | 0.59 | |
| Maximum | 2.35 | |
| Average | 1.29 | |
| February | | |
| Minimum | 0.77 | |
| Maximum | 1.85 | |
| Average | 1.27 | |
| March | | |
| Minimum | 0.89 | |
| Maximum | 1.82 | |
| Average | 1.36 | |
| April | | |
| Minimum | 0.82 | |
| Maximum | 1.86 | |
| Average | 1.36 | |
| May | | |
| Minimum | 0.87 | |
| Maximum | 1.70 | |
| Average | 1.23 | |
| June | | |
| Minimum | 0.73 | |
| Maximum | 1.70 | |
| Average | 1.22 | |
| July | | |
| Minimum | 0.73 | |
| Maximum | 2.11 | |
| Average | 1.27 | |
| August | | |
| Minimum | 0.73 | |
| Maximum | 2.05 | |
| Average | 1.38 | |
| September | | |
| Minimum | 0.78 | |
| Maximum | 2.70 | |
| Average | 1.43 | |
| October | | |
| Minimum | 0.82 | |
| Maximum | 3.11 | |
| Average | 1.59 | |
| November | | |
| Minimum | 0.74 | |
| Maximum | 2.83 | |
| Average | 1.37 | |
| December | | |
| Minimum | 0.62 | |
| Maximum | 1.74 | |
| Average | 1.10 | |
| Yearly Minimum | 0.59 | |
| Yearly Maximum | 3.11 | |
| Yearly Average | 1.32 | |

Note: Chlorine residuals obtained from SCADA.



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

| | |
|---------------------------------|---|
| Drinking-Water System Number: | 260078897 |
| Drinking-Water System Name: | Elgin Middlesex Pumping Station - St. Thomas Area Secondary Water Supply System |
| Drinking-Water System Owner: | St. Thomas Area Secondary Water Supply System Joint Board of Management |
| Drinking-Water System Category: | Large Municipal Residential |
| Period being reported: | January 1, 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 <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></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;"> <p>City of St. Thomas, City Hall Environmental Services 545 Talbot Street St Thomas, ON. N5P 3V7 www.city.st-thomas.on.ca</p> <p>Elgin Area Water Treatment Plant 43665 Dexter Line, Union, ON</p> </div> | <p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes <input type="checkbox"/> No <input type="checkbox"/></p> <p>Number of Interested Authorities you report to: <input type="text" value="N/A"/></p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes <input type="checkbox"/> No <input type="checkbox"/></p> |
|---|---|

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:

| Drinking Water System Name | Drinking Water System Number |
|------------------------------------|------------------------------|
| 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 54,600m³. 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 services the municipalities on the Aylmer Area Secondary System.

List all water treatment chemicals used over this reporting period

Chlorine Gas



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

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

- Install guarding on generator - \$1K
- Replacement hot water tank - \$2.5K
- Pipe coupling pump #2 - \$3K
- Installed cooling unit for electrical room - \$10K
- Rebuild surge valve - \$4K

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 | 52 | 0 - 0 | 0 - 0 | 52 | (<10) - (620) |

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

| Parameter | Number of Grab Samples (Continuous Monitoring) | Min | Max | Avg |
|-------------------------------|--|------|------|------|
| Free Chlorine Residual (mg/L) | 8760 | 0.59 | 3.11 | 1.32 |

Note: The free chlorine residual spiked on occasion during 2015. 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 13, 2015 | 11 | µg/L | NO |
| | April 7, 2015 | 14 | µg/L | |
| | July 7, 2015 | 26 | µg/L | |
| | October 6, 2015 | 24 | µg/L | |

| APPENDIX E | |
|----------------------------|--------------------------------------|
| 2015 EMPS Treatment | |
| Month | Total Chlorine Gas Usage - Kg |
| January | 130.8 |
| February | 135.6 |
| March | 137.1 |
| April | 102 |
| May | 147.6 |
| June | 126.8 |
| July | 197.8 |
| August | 229.3 |
| September | 214.9 |
| October | 195.5 |
| November | 172.4 |
| December | 228.8 |
| Yearly Total | 2018.6 |

Please note: Aylmer and St.Thomas combined cl2 usage

APPENDIX B

| | |
|---|--|
|  <p style="margin: 0;">Corporation of the City of St. Thomas</p> | <p style="margin: 0;">Report No. SWB02-16</p> <hr/> <p style="margin: 0;">File No.</p> |
| <p style="margin: 0;">Directed to: Mayor Grant Jones and the Members of The Board of Management for The St. Thomas Area Secondary Water Supply System</p> | <p style="margin: 0;">Date Authored: March 18, 2016</p> <p style="margin: 0;">Meeting Date: March 24, 2016</p> |
| <p style="margin: 0;">Department: Environmental Services</p> | <p style="margin: 0;">Attachment</p> <ul style="list-style-type: none"> - March 3/16 Excerpt from Primary Board Meeting - March 26, 2015 Secondary Report ES27-15 - March 5, 2015 Excerpt from Primary Board |
| <p style="margin: 0;">Prepared By: Justin Lawrence, Director of Environmental Services</p> | |
| <p style="margin: 0;">Subject: EMPS Ownership</p> | |
| <p><u>Recommendation:</u></p> <p>THAT: Report SWB02-16 relating to the Ownership of the EMPS be received for information.</p> <p><u>Origin:</u></p> <p>Ownership of the EMPS has been discussed regularly over the past decade due to a lack of clarity from the original orders to create the boards. Most of the assets have been reviewed and agreed on in terms of ownership however the building ownership remains unresolved. Recently the Elgin Primary Water Board discussed next steps. The purpose of this report is to communicate their report and an upcoming staff meeting on the topic.</p> <p><u>Analysis:</u></p> <p>The last reports on this topic are attached for information. The recent chronology is as follows:</p> <ul style="list-style-type: none"> Mar 5, 2015 Primary Board makes recommendation to transfer ownership of the EMPS building "at the concurrence of" the secondary boards Mar 6, 2015 Andrew Henry writes letter to John Dewancker and Rob Johnson forwarding the recommendation of the Primary Mar 26, 2015 Secondary Board reviews recommendation from Primary and suggests "a comprehensive evaluation and review to be undertaken and paid for by the (Primary)" Mar 3, 2016 Report to Primary suggesting transfer of EMPS building in trust to London. <p>The Mar 3, 2016 report was deferred by the Primary Board, however a staff meeting to discuss the topic was supported in principle. The tentative date for this discussion is set as April 11, 2016.</p> <p>On behalf of the Secondary Board, St.Thomas representatives can attend this meeting and report back at the next Secondary Board meeting.</p> <p>It would be beneficial to resolve this issue of ownership for both boards.</p> <p><u>Financial Considerations:</u></p> <p>There are no immediate financial implications associated with this report. Transfer of the EMPS building would transfer asset management costs of the building from the Primary Board to the Secondary's noting that water users via the secondary boards will pay those costs either way.</p> <p>Sincerely,</p>  <p>Justin Lawrence</p> | |
| <p>Reviewed By: _____</p> <p style="text-align: center; margin: 0;"> Treasury Env Services Planning City Clerk Human Resources Other </p> | |



| Agenda Item # | Page # |
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| | |

File No. E27/2016

- The pumps and associated equipment for the Aylmer Area Secondary Water Supply System acquired by the Province were transferred jointly to three (3) benefiting municipalities, and established the Aylmer Secondary Water Supply System Board of Management.

The "Elgin-Middlesex Pumping Station" (EMPS) property, located at 490 South Edgeware Road in the Municipality of Central Elgin, contains three pumping station (London, St. Thomas Secondary, and Aylmer Secondary), a terminal reservoir comprised of two storage cells, a surge facility and various process equipment, all of which are owned by one or more of the four water systems noted above.

Since the Transfer Orders were issued in 2000 to the various municipalities and respective Boards of Management, there has been difficulty clearly delineating ownership at the EMPS site due to conflicting language in the various Transfer Orders, previous Certificates of Approval issued by the Province of Ontario, and the new Municipal Drinking Water Licences. The EAPWSS is proposing that some historical ownership issues be reconciled to clearly outline ownership, and apply more consistent ownership policies for assets that benefit either multiple EAPWSS member municipalities, or secondary distribution systems.

The clarification of ownership is most significantly necessary to ensure responsibilities are clearly delineated for regulatory purposes and inspections by the Ministry of the Environment and Climate Change. At a meeting with the local Ministry of the Environment and Climate Change (MOECC) office on June 29, 2011, the MOECC agreed that if all parties affected by the proposed ownership reconciliation submitted signed documentation agreeing to the clarification, the MOECC will reconcile this on the various affected system's Municipal Drinking Water Licence (MDWL) and associated Drinking Water Works Permit (DWWP).

DISCUSSION

Under the original Transfer Orders, a number of assets were transferred to the Elgin-Middlesex Secondary Water Supply System (City of London) that would have been more appropriately transferred to the EAPWSS. Generally speaking, assets that benefit multiple municipal water systems, and are of "primary treatment and supply" in nature, are typically owned by the primary water system.

Reservoir, Valvehouse, and Overflow Settling Pond

At the March 5, 2015 Board meeting, the Board accepted and endorsed the clarification of ownership of the second of two reservoir cells, and the overflow settling pond at the Elgin-Middlesex Pump Station and Reservoir site as being owned by the EAPWSS, subject to the concurrence of the City of London. The council resolution from City of London is still pending.

The property, the first of the two reservoir cells, and the valvehouse are already listed as owned by the EAPWSS and no further changes are required with regard to these assets.

Backup Generator and Rechlorination System

With regard to the backup generator and the rechlorination system, municipal staff and Board staff have agreed that, although they were implemented to benefit more than one municipality (Aylmer Secondary Water System and St. Thomas Secondary Water System), these systems are more "distribution-related" and ownership of those two components should be between the two benefiting secondary water systems. The emergency backup generator is designed to supply electricity, other than instrumentation and general lighting, to only the pumps of the Aylmer Secondary and St. Thomas Secondary water systems and not the pumps owned by London. Similarly, the rechlorination system is distribution related ("tops up" and maintains chlorine levels in the water) and only benefits the Aylmer Secondary and St. Thomas Secondary water systems and not London.



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| | |

File No. E27/2016

Common Pump Station Building (including 1996 addition)

With regard to the reconciliation of the buildings themselves (physical/structural envelop), extensive discussions between the municipalities were undertaken, however an agreement could not be reached. Under the Transfer Orders issued, the newer portion of the building (1996 addition) was transferred to the City of London (but is occupied by the Aylmer Area Secondary System, St. Thomas Area Secondary System, and London) whereas the older original portion (occupied by the St. Thomas Area Secondary System) was transferred to the EAPWSS.

Initial discussions related to the common building were centred on the building and associated support systems (HVAC, electrical system, septic system, etc.). It was initially recommended that the buildings be transferred to the EAPWSS, acting as a "landlord", and the secondary systems would act as a "tenant" in its occupancy within. Unfortunately, an agreement to this arrangement could not be reached.

As no agreement was reached with regard to the common building, it was then recommended that the original portion of the building (constructed about 1967) currently listed as "owned" by the EAPWSS be transferred jointly to the City of London, the Aylmer Secondary Water Supply System, and the St. Thomas Secondary Water System.

Still no agreement was reached. Therefore as an interim measure it is now recommended that the ownership of the original 1967 portion of the building (which is currently and incorrectly listed as "owned" by the EAPWSS) be transferred to the City of London. This will ensure that the entire building complex (1967 building, 1996 building expansion, and associated building services) are managed by one entity. The City of London would then be responsible for apportioning the associated building costs to the Aylmer Secondary Water System and St. Thomas Secondary Water System as appropriate, which was previously undertaken by Board staff. This interim measure is dependent on the concurrence of the City of London.

If endorsed and the ownership of the 1967 building is transferred to the City of London, it would then be up to the City of London, the Aylmer Secondary Water System, and the St. Thomas Secondary Water System to enter into any further agreements related to joint ownership, operation, maintenance and repair of the common building and associated assets (including septic system, building environmental system, electrical system, etc.).

The following table summarizes the current ownership of the assets and works at the EMPS, and the proposed changes.

| Drinking Water System (Current Ownership) | Description of Works (Summary) as Identified by the Transfer Order | Recommended Clarification (Proposed Ownership) |
|---|--|---|
| Elgin-Middlesex Secondary Water Supply System (City of London) | Elgin-Middlesex pumping station (the newer pumping station building addition built in 1996) including 3 pumps, overflow settling pond and re-chlorination facilities, excluding 2 pumps, associated piping and controls servicing the Aylmer Area Secondary Water Supply System <i>NOTE: The re-chlorination facility was upgraded in 2010, and is no longer applicable to the City of London.</i> | Transfer the overflow settling pond to the EAPWSS as it benefits only the primary system (eg. used for EAPWSS transmission main flushing). No change to the ownership of the 1996 pumping station building addition (remains owned by City of London). |
| | Elgin-Middlesex reservoir (the newer reservoir cell built in 1996) including a 27,300 m ³ concrete in-ground reservoir (cell #2) | Transfer the second reservoir cell to the EAPWSS, as it benefits several member municipalities. The original cell of the reservoir is already owned by the primary water system, and the two cells are operationally integrated. |
| | Elgin-Middlesex surge facility consisting of a surge tank and associated controls | No change |
| | A transmission pipeline from the Elgin-Middlesex Pump Station to the City of London. | No change |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | No change |

| Drinking Water System (Current Ownership) | Description of Works (Summary) as Identified by the Transfer Order | Recommended Clarification (Proposed Ownership) |
|---|---|---|
| Elgin Area Primary Water Supply System (EAPWSS) | St. Thomas Reservoir (the original reservoir cell built in the late 1960's) having a storage capacity of approx. 27,300 m ³ (cell #1) | No change |
| | St. Thomas Booster Pumping Station (the original pumping station building built in the late 1960's) - building only | As an interim measure, transfer the pumping station building to the City of London. This transfer would include the associated building support systems, such as the septic system, building environmental system (HVAC), and electrical system. Any further ownership reconciliation and agreements would then take place solely between the City of London, Aylmer Secondary Water System and St. Thomas Secondary Water System. |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | Site works, piping, controls etc. as related to the terminal reservoir cells remain under the ownership of the EAPWSS. As an interim measure, transfer the site works, piping, electrical, mechanical and instrumentation controls related to the buildings to the City of London. |
| St. Thomas Area Secondary Water Supply System | Pumping facilities including 3 pumps located at the St. Thomas Reservoir and Booster Pumping Station site | No change |
| | A transmission pipeline from the Elgin-Middlesex Pump Station to the Municipality of Southwold. | No change |
| | An elevated storage tank | No change |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | No change |

| Drinking Water System (Current Ownership) | Description of Works (Summary) as Identified by the Transfer Order | Recommended Clarification (Proposed Ownership) |
|---|---|---|
| Aylmer Area Secondary Water Supply System | Pumping facilities including 2 pumps located at the Elgin-Middlesex Pumping Station | No change |
| | A transmission pipeline from the Elgin-Middlesex Pump Station to the Town of Aylmer. | No change |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | No change |
| Shared Assets | An emergency backup generator having shared ownership between the Aylmer Secondary Water Supply System and the St. Thomas Secondary Water Supply System | No change (the generator does not benefit the London pump station) |
| | A secondary chlorination system having shared ownership between the St. Thomas Secondary Water System, and the Aylmer Secondary Water System | No change <i>NOTE: The re-chlorination facility was upgraded in 2010, and is no longer applicable to the City of London.</i> |

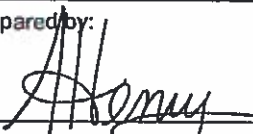

It is the opinion of Board staff that the proposed "changes" are a clarification and reconciliation of the Transfer Orders, previous Certificates of Approval, Municipal Drinking Water Licences and Drinking Water Works Permits issued by the Ministry of the Environment and Climate Change.

CONCLUSION

The reconciliation of the ownership of the reservoir cell #2 and overflow settling pond, as previously endorsed by the Board, will result in more clear delineation of ownership at the EMPS site and address the confusion encountered during inspections by the Ministry of the Environment and Climate Change, and reconcile contract operations and operational accreditation issues.

The reconciliation and clarification of the building ownership is important to ensure the sustainability of assets within the secondary water systems and local distribution systems, as well as for the purposes of delineating health and safety issues, and general "housekeeping". As the assets after the terminal reservoir, physically, tends to relate entirely to the distribution systems of the secondary water systems and not the primary system treatment and transmission, it was previously recommended that these elements be jointly owned by the City of London, the Aylmer Secondary Water System, and the St. Thomas Secondary Water System. However, as full agreement regarding the ownership of the pump station building could not be reached, it is now recommended that the ownership of the original 1967 portion of the building (which is currently listed as "owned" by the EAPWSS) be transferred to the City of London as an interim measure. This will ensure that the entire building complex (1967 building, 1996 building expansion, and associated building services) are managed by one entity. London would then be responsible for apportioning the associated building costs as appropriate.

Information for this report was provided by Erin McLeod, Quality Assurance & Compliance Manager.

| | |
|--|--|
| Report Prepared by:  <hr style="border: 0; border-top: 1px solid black;"/> Andrew Henry, P. Eng. Division Manager, Regional Water Supply | Recommended by:  <hr style="border: 0; border-top: 1px solid black;"/> John Braam, P. Eng. Chief Administrative Officer |
|--|--|

Attachments:
Map – Existing Ownership



Corporation of the
City of St. Thomas

Report No.
ES27-15

File No.
06-117

Directed to: Chairperson and the Members of the Board of Management for the St. Thomas Area Secondary Water Supply System

Meeting Date: March 26, 2015
Date Authored: March 13, 2015

Department: Environmental Services

Attachments

Prepared By: John Dewancker

- EAPWSS report on EMPS ownership reconciliation

Subject: EMPS Building ownership reconciliation

Recommendation:

THAT: Report ES27-15, be received as information; and

THAT: The issue of the EMPS building ownership and associated responsibilities be addressed through a comprehensive evaluation and review between all involved parties (EAPWSS, City of London, St. Thomas ASWSS, Aylmer ASWSS).

Origin:

At the meeting of March 5, 2015 of the Elgin Area Primary Water Supply System Board of Management, the issue of ownership of the EMPS building (the 1967 original building + 1996 addition) was raised through the attached report (consent agenda item #6, pages 64-71). Also, Councillor Stevenson has asked that this matter be pursued in further detail before a final decision can be made in this regard.

Analysis:

The EAPWSS report recommends an endorsement of a suggested transfer of ownership of the building to a joint ownership that would involve the City of London, the Aylmer ASWSS and the St. Thomas ASWSS. In this regard the attached report (pg. 3 of 8) states that an agreement could not be reached between the involved municipalities. The issue, however, needs to be concluded between the parties that are accommodated by this building and these are the EAPWSS, City of London, the Aylmer ASWSS and the St. Thomas ASWSS.

The report, prepared by the Regional water staff of the EAPWSS recommends that the building ownership be transferred to the City of London, the Aylmer ASWSS and the St. Thomas ASWSS.

With ownership of an asset comes the need to take responsibility for the maintenance and capital renewal of the asset, as required.

In this regard, it would be important that a Building Condition and Needs Assessment be completed and be circulated to all involved parties. Also, the apportionment of the responsibilities (financial & otherwise), between the parties would need to be confirmed and documented in a joint agreement. Finally, all financial needs would need to be included in the respective Financial Plans of each water supply system.

Respectfully Submitted,

John Dewancker, P. Eng.
Director, Environmental Services & City Engineer

Reviewed By: Treasury Env Services Planning City Clerk HR Other

To: Chair and Members
Elgin Area Primary Water Supply System Board of Management

From: John Braam, P.Eng.
Chief Administrative Officer

Meeting Date: March 5, 2015

Subject: Elgin-Middlesex Pumping Station Ownership Reconciliation

RECOMMENDATION

That the Board of Management for the Elgin Area Primary Water Supply System take the following actions regarding the clarification of ownership at the Elgin-Middlesex Pumping Station site:

- a) The Board of Management for the Elgin Area Primary Water Supply System ACCEPT and ENDORSE the clarification of ownership of the reservoir cells, swab pond at the Elgin-Middlesex Pump Station and Reservoir site as being owned by the Elgin Area Primary Water Supply System, subject to the concurrence of the City of London; and,
- b) The Board of Management for the Elgin Area Primary Water Supply System ENDORSE the clarification of ownership of the common building, as being jointly owned by the City of London, the Ayimer Secondary Water System, and the St. Thomas Secondary Water System; it being noted that the common building includes the 1998 building addition, as well as the building services such as the HVAC, septic, and electrical systems.

PREVIOUS AND RELATED REPORTS

June 7, 2012 Elgin-Middlesex Pumping Station Ownership Reconciliation

BACKGROUND

The Board of Management for the Elgin Area Primary Water Supply System (EAPWSS) was established under a Transfer Order issued by the Minister of the Environment, pursuant to the *Municipal Water and Sewage Transfer Act, 1997*.

Under the Transfer Order, the EAPWSS works, properties, and assets acquired by the Province were transferred jointly to seven (7) municipalities on November 29, 2000, each having an undivided interest in the Primary Water Supply System and its assets, and established the Board of Management which represents that ownership and governs the system. Similarly:

- The pumps and associated equipment for the Elgin-Middlesex Secondary Water Supply System (City of London pump station) acquired by the Province were transferred to the City of London;
- The pumps and associated equipment for the St. Thomas Area Secondary Water Supply System acquired by the Province were transferred jointly to the three (3) benefiting municipalities, and established the St. Thomas Secondary Water Supply System Board of Management;

- The pumps and associated equipment for the Aylmer Area Secondary Water Supply System acquired by the Province were transferred jointly to three (3) benefiting municipalities, and established the Aylmer Secondary Water Supply System Board of Management.

The "Elgin-Middlesex Pumping Station" (EMPS) property, located at 480 South Edgeware Road in the Municipality of Central Elgin, contains three pumping station (London, St. Thomas Secondary, and Aylmer Secondary), reservoir comprised of two storage cells, a surge facility and various process equipment, all of which are owned by one or more of the four water systems noted above.

Since the Transfer Orders were issued in 2000 to the various municipalities and respective Boards of Management, there has been difficulty clearly delineating ownership at the EMPS site due to conflicting language in the various Transfer Orders, previous Certificates of Approval issued by the Province of Ontario, and the new Municipal Drinking Water Licences. The EAPWSS is proposing that some historical ownership issues be reconciled to clearly outline ownership, and apply more consistent ownership policies for assets that benefit multiple EAPWSS member municipalities.

The clarification of ownership is most significantly necessary to ensure responsibilities are clearly delineated for regulatory purposes and inspections by the Ministry of the Environment and Climate Change. At a meeting with the local Ministry of the Environment and Climate Change (MOECC) office on June 29, 2011, the MOECC agreed that if all parties affected by the proposed ownership reconciliation submitted signed documentation agreeing to the clarification, the MOECC will reconcile this on the various affected system's Municipal Drinking Water Licence (MDWL) and associated Drinking Water Works Permit (DWWP).

DISCUSSION

Under the original Transfer Orders, a number of assets were transferred to the Elgin-Middlesex Secondary Water Supply System (City of London) that would have been more appropriately transferred to the EAPWSS. Generally speaking, assets that benefit multiple municipal water systems, and are of "primary treatment and supply" in nature, are typically owned by the primary system.

Reservoir, Valvehouse, and overflow pond

At the July 7, 2012 meeting of the Board, it was agreed that the overflow settling pond, along with the second of the two reservoir cells be transferred from the City of London to the Elgin Area Primary Water Supply System, contingent on the concurrence of the City of London. The property, the first of the two reservoir cells, and the valvehouse are already listed as owned by the Elgin Area Primary Water Supply System and no further changes are required with regard to these assets.

Backup Generator and Rechlorination System

With regard to the backup generator and the rechlorination system, municipal staff and Board staff have agreed that, although they were implemented to benefit more than one municipality (Aylmer Secondary Water System and St. Thomas Secondary Water System), these systems are more "distribution-related" and ownership of those two components should be between the two benefiting secondary water systems. The emergency backup generator is designed to supply electricity, other than instrumentation and general lighting, to only the pumps of the Aylmer Secondary and St. Thomas Secondary water systems and not the pumps owned by London. Similarly, the rechlorination system is distribution related ("tops up" and maintains chlorine levels in the water) and only benefits the Aylmer Secondary and St. Thomas Secondary water systems and not London.



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Common Pump Station Building (including 1996 addition)

With regard to the reconciliation of the buildings themselves (physical/structural envelop), extensive discussions between the municipalities were undertaken, however an agreement could not be reached. Under the Transfer Orders issued, the newer portion of the building (1996 addition) was transferred to the City of London (occupied by the Aylmer Area Secondary System, St. Thomas Area Secondary System, and London) whereas the older original portion (occupied by the St. Thomas Area Secondary System) was transferred to the EAPWSS.

Initial discussions related to the common building were centred on the building and associated support systems (HVAC, electrical system, septic system, etc.) be transferred to the primary water system, acting as a "landlord", and the secondary systems (pumps and equipment) would act as a "tenant" in its occupancy within. Unfortunately, an agreement to this arrangement could not be reached.

As no agreement was reached with regard to the common building, it is recommended that the original portion of the building (constructed about 1967) currently listed as "owned" by the Elgin Area Primary Water System be transferred jointly to the City of London, the Aylmer Secondary Water Supply System, and the St. Thomas Secondary Water System. As the common building, including 1996 building addition, benefits all three of the secondary water systems, it is the recommendation of staff that the City of London, the Aylmer Secondary Water System, and the St. Thomas Secondary Water System enter into an agreement for the joint ownership, operation, maintenance and repair of the common building and associated assets (septic system, building environmental system, electrical system, etc.).

The 1996 building addition is currently listed as "owned" by the City of London, even though it additionally benefits the Aylmer Secondary Water System and the St. Thomas Secondary Water System.

The following table summarizes the current ownership of the assets and works at the EMPS, and the proposed changes.

| Drinking Water System (Current Ownership) | Description of Works (Summarized as Identified by the Transfer of Ownership) | Reconciliation/Reconciliation (Proposed Ownership) |
|---|---|--|
| Elgin-Middlesex Secondary Water Supply System (City of London) | Elgin-Middlesex pumping station (the newer pumping station building addition built in 1996) including 3 pumps, overflow settling pond and re-chlorination facilities, excluding 2 pumps, associated piping and controls servicing the Aylmer Area Secondary Water Supply System <i>NOTE: The re-chlorination facility was upgraded in 2010, and is no longer applicable to the City of London.</i> | Transfer the overflow settling pond to the EAPWSS as it benefits only the primary system (eg. used for EAPWSS transmission main flushing). Jointly own the common buildings, including the original 1967 building and 1996 building addition, with the Aylmer and St. Thomas secondary systems. |
| | Elgin-Middlesex reservoir (the newer reservoir cell built in 1996) including a 27,300 m ³ concrete in-ground reservoir (cell #2) | Transfer the reservoir cell to the EAPWSS, as it benefits several member municipalities. The original cell of the reservoir is already owned by the primary water system, and the two cells are operationally integrated. |
| | Elgin-Middlesex surge facility consisting of a surge tank and associated controls | No change |
| | A transmission pipeline from the Elgin-Middlesex Pump Station to the City of London. | No change |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | No change |
| Elgin Area Primary Water Supply System (EAPWSS) | St. Thomas Reservoir (the original reservoir cell built in the late 1960's) having a storage capacity of approx. 27,300 m ³ (cell #1) | No change |
| | St. Thomas Booster Pumping Station (the original pumping station building built in the late 1960's) - building only | Transfer to the City of London, Aylmer Secondary Water System and St. Thomas Secondary Water System (to be owned jointly) |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | No change |

| Drinking Water System (Current Ownership) | Description of Works (Summary as certified by the Transfer Order) | Recommended Clarification (Proposed Ownership) |
|---|--|---|
| St. Thomas Area Secondary Water Supply System | Pumping facilities including 3 pumps located at the St. Thomas Reservoir and Booster Pumping Station site | No change |
| | A transmission pipeline from the Elgin-Middlesex Pump Station to the Town of Aylmer. | No change |
| | An elevated storage tank | No change |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | No change |
| Aylmer Area Secondary Water Supply System | Pumping facilities including 2 pumps located at the Elgin-Middlesex Pumping Station | No change |
| | A transmission pipeline from the Elgin-Middlesex Pump Station to the Municipality of Southwold. | No change |
| | Associated site works, piping, electrical, mechanical and instrumentation controls | No change |
| Shared Assets | An emergency backup generator having shared ownership between the Aylmer Secondary Water Supply System and the St. Thomas Secondary Water Supply System | No change (the generator does not benefit the London pump station) |
| | | The common buildings, including the original 1967 building and the 1998 building addition, jointly owned between the City of London, the Aylmer and St. Thomas secondary systems. This includes the associated building support system, such as the septic system, building environmental system (HVAC), and electrical system. |
| | A secondary chlorination system having shared ownership between the City of London, the St. Thomas Secondary Water System, and the Aylmer Secondary Water System | A secondary chlorination system having shared ownership between the St. Thomas Secondary Water System, and the Aylmer Secondary Water System |

It is the opinion of Board staff that the proposed "changes" are a clarification and reconciliation of the Transfer Orders, previous Certificates of Approval, Municipal Drinking Water Licences and Drinking Water Works Permits issued by the Ministry of the Environment and Climate Change.

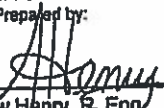
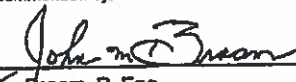
CONCLUSION

The reconciliation of the ownership of the reservoir cell #2, and overflow settling pond will result in more clear delineation of ownership at the EMPS site and address the confusion encountered during inspections by the Ministry of the Environment and Climate Change, and reconcile contract operations and operational accreditation issues.

The reconciliation of the building ownership is important for the purposes of delineating health and safety issues as well as general "housekeeping". As the assets after the terminal reservoir, physically, tends to relate entirely to the distribution systems of the secondary water systems and not the primary system treatment and transmission, it is recommended that these elements be jointly owned by the City of London, the Aylmer Secondary Water System, and the St. Thomas Secondary Water System.

Should the Aylmer Secondary Water System and the St. Thomas Secondary Water System not agree with the joint ownership of the pump station building, it is recommended that the ownership of the original 1967 portion of the building (which is currently listed as "owned" by the primary water supply system) be transferred to the City of London as an interim measure. This will ensure that the entire building complex (1967 building, 1998 building expansion, and associated building services) are managed by one entity. London would then be responsible for apportioning the associated building costs as appropriate.

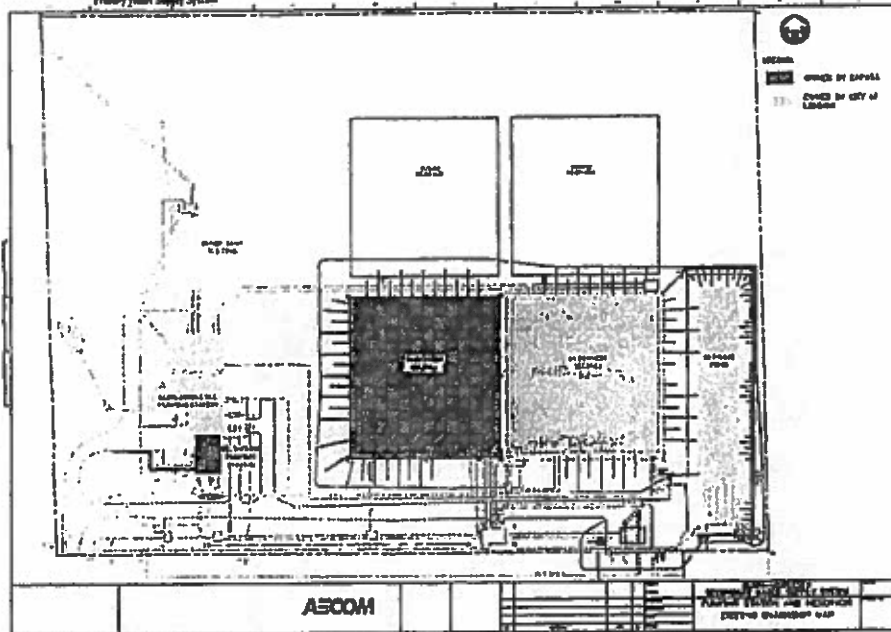
Information for this report was provided by Erin McLeod, Quality Assurance & Compliance Manager.

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| Report Prepared by:  Andrew Henry, P. Eng. Division Manager, Regional Water Supply | Recommended by:  John Braam, P. Eng. Chief Administrative Officer |
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Attachments:
Maps – Existing and Proposed Ownership

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Elgin Area
 Public Water Supply System

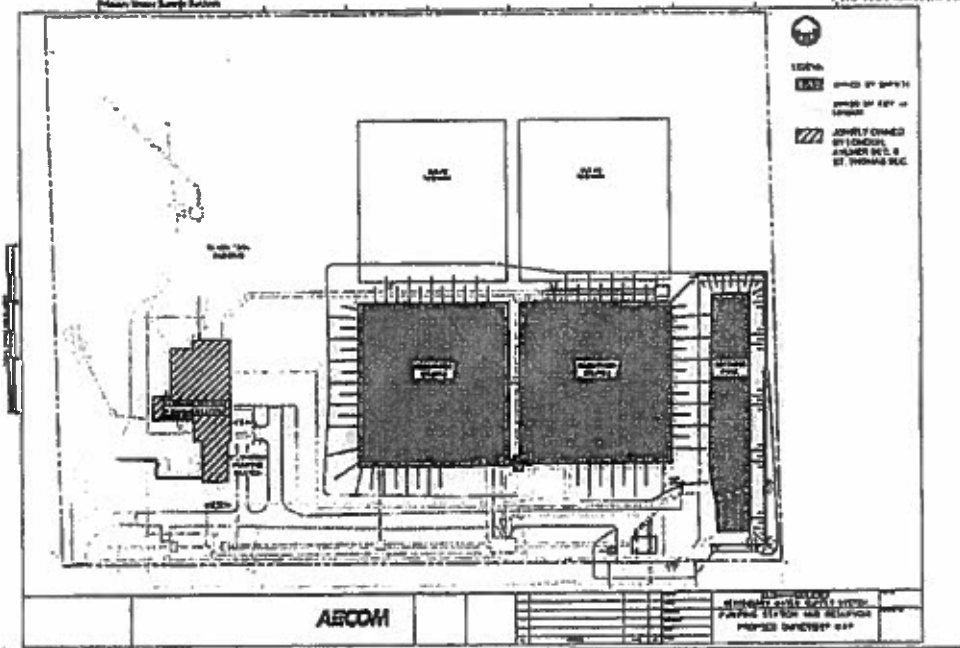
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