



ANNUAL REPORT

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| Drinking-Water System Number: | 260005502 |
| Drinking-Water System Name: | Southwest Middlesex Distribution System |
| Drinking-Water System Owner: | Corporation of the Municipality of Southwest Middlesex |
| Drinking-Water System Category: | Large Municipal Residential |
| Period being reported: | January 1 st to December 31 st , 2017 |

| | |
|--|---|
| <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; margin-top: 10px;"> <p>153 McKellar St. Glencoe, ON N0L 1M0</p> </div> | <p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <input style="width: 100px; height: 20px;" 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 style="width: 100px; height: 20px;" 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> |
|--|---|

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 |
|------------------------------|------------------------------|
| Newbury Distribution System | 260005463 |
| Bothwell Distribution System | 260002551 |

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

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 Southwest Middlesex Distribution System services the communities of Melbourne, Appin, Glencoe, Wardsville and rural areas of Southwest Middlesex receiving water from the West Elgin Distribution System.

In addition to the watermains, valves, and fire hydrants, the Southwest Middlesex Distribution System consists of a reservoir, a high lift pumping station, re-chlorination facilities and elevated storage facilities.

The following are significant features on the system:

Southwest Middlesex Booster Pumping Station:

Reservoir

-One two-celled ground reservoir located on Graham Road in the Village of West Lorne which has an approximate volume of 1893 m³.

High Lift Pumping Station

-Four fixed speed horizontal split-case pumps: 2 pumps rated for 2943m³/d and 2 emergency backup pumps rated for 1226m³/d, with a firm pumping capacity of 5395m³/d.

-One flow meter installed on the common outlet pipe

Re-chlorination

-Sodium hypochlorite re-chlorination system, equipped with two chemical metering pumps to feed either to the inlet of the reservoir or discharge outlet line from the pump station

-SCADA controls for supplying water to the Southwest Middlesex Distribution System along with monitoring and alarms

Glencoe Tower:

-Two chemical metering pumps for sodium hypochlorite discharging to the outlet of the tower

-One 200L chemical solution storage tank with secondary containment

-Capacity of 3600m³

-SCADA for monitoring and alarms



Melbourne Chamber:

-flow control valve operated by the SCADA system to maintain levels and pressure in the Melbourne and Glencoe distribution systems.

Melbourne Standpipe:

- Two chemical metering pumps for sodium hypochlorite discharging to the standpipe outlet
- One 200L chemical solution storage tank with secondary containment
- Capacity 1589m³
- SCADA for monitoring and alarms

List all water treatment chemicals used over this reporting period

Sodium Hypochlorite 12%

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

- Hydrant and secondary valve repairs
- Watermain and service repairs
- Repaired Chlorine injection Line –SWM Reservoir
- High Efficiency motors purchased for SWM Reservoir pumps
- replaced Sodium Hypochlorite pump at Melbourne Standpipe

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 |
|---------------|---------------|--------|-----------------|-------------------|------------------------|
| Feb 13, 2017 | Lead | 29.8 | ug/L | Resample | Feb 28, 2017 |
| May 11, 2017 | Free Chlorine | >4 | mg/L | Flushed | May 11, 2017 |



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

| | No. of Samples Collected for period being reported | Range of E.Coli Results | | Range of Total Coliform Results | | Number of HPC Samples | Range of HPC Results | |
|--------------|--|-------------------------|-----------|---------------------------------|-----------|-----------------------|----------------------|-----------|
| | | Minimum # | Maximum # | Minimum # | Maximum # | | Minimum # | Maximum # |
| Distribution | 311 | 0 | 0 | 0 | 0 | 156 | <10 | 2000 |

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

| | No. of Samples Collected for period being reported | Range of Results | |
|-------------------------------|--|------------------|---------|
| | | Minimum | Maximum |
| Free Chlorine Residual (mg/L) | 454 | 0.36 | 2.13 |

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

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 |
|---------------------------------|-----------|--------------|--------|-----------------|
| n/a | n/a | n/a | n/a | n/a |

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 Results | | MAC (ug/L) | Number of Exceedances |
|------------------------------------|-------------------|------------------|---------|------------|-----------------------|
| | | Minimum | Maximum | | |
| Distribution - Lead Results (µg/L) | 7 | 0.03 | 29.8 | 10 | 1 |
| Distribution - Alkalinity (mg/L) | 7 | 94 | 98 | n/a | n/a |
| Distribution - pH | 7 | 6.60 | 7.85 | n/a | n/a |



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

| DISTRIBUTION WATER | Sample Date (mm/dd/yyyy) | Sample Result | MAC | Number of Exceedances | |
|----------------------------------|-----------------------------|------------------|--------|--------------------------|---------|
| | | | | MAC | 1/2 MAC |
| Trihalomethane: Total (µg/L) | Running Average | 90.0 | 100.00 | No | Yes |
| Haloacetic Acid: Total (ug/L) | Running Average | 34.1 | n/a | n/a | n/a |

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 |
|-----------|--------------|-----------------|---------------------------|
| THM | 90.0 | µg/L | Running Annual Average |