



West Elgin Distribution System  
Operations Report  
March 2018

Submitted by:  
Ontario Clean Water Agency  
Date: May 7, 2018

### Facility Description

**Facility Name:** West Elgin Distribution System

**Regional Manager:** Dale LeBritton (519) 476-5898

**Sr. Operations Manager:** Sam Smith (226) 377-1540

**Business Development Manager:** Susan Budden (519) 318-3271

**Facility Type:** Municipal

**Classification:** Class 1 Water Distribution

**Drinking Water System Category:** Large Municipal Residential

**Title Holder:** Municipality

### Service Information

**Area(s) Serviced:** The West Elgin Distribution System receives water from the Tri-County Drinking Water System and services the communities of West Lorne, Rodney, Eagle, New Glasgow and Rural areas within the municipality.

### Operational Description:

In addition to the watermains, valves, auto flushers, sample stations and fire hydrants, the West Elgin Distribution System has a water storage facility. The system is controlled at the Tri-County Water Treatment Plant by the SCADA system.

The Rodney Tower in conjunction with the West Lorne Standpipe (a part of the Tri-County Drinking Water System) provides water pressure to the distribution system. The highlift pumps at the Tri-County Water Treatment Plant start when the West Lorne Standpipe reaches the start set point and will continue to fill till the stop set point. Based on the elevations in the system, the Rodney Tower will only begin filling once the West Lorne Standpipe is full. There are four chambers located at Pioneer Line, Marsh Line, Silver Clay and Talbot Line West of Graham that control the flow to Rodney. These chambers contain automated valves so that when the Rodney Tower reaches the start set point the valves open up to allow water to be fed from the West Lorne distribution system. The highlift pumps stop set point of the West Lorne Standpipe will be overridden if the Rodney Tower has not reached its stop set point, and therefore will continue to run to fill up the Rodney Tower.

Key information on the Rodney Tower:

- Single fill/draw 300mm diameter pipe
- Constructed in 1994 by Landmark
- Volume of 1,200m<sup>3</sup>
- Base elevation: 210.8m; Storage elevations: 238.9m to 250.6m; therefore resulting water pressure 276-386kPa (40-56psi)
- Located at 192 Victoria Street in Rodney

Facility Name: West Elgin Distribution System  
ORG#: 1266

**SECTION 1: COMPLIANCE SUMMARY**

**FIRST QUARTER:**

There were no compliance or exceedance issues reported for the first quarter.

**SECTION 2: INSPECTIONS**

**FIRST QUARTER:**

There were no MOL or MOECC inspections during the first quarter.

**SECTION 3: QEMS UPDATE**

**FIRST QUARTER:**

There has been no updates to QEMS at this time.

**SECTION 4: PERFORMANCE ASSESSMENT REPORT**

All sampling and testing have met O. Reg. 170/03 requirements. The limit for Total Coliform and E. coli is zero, heterotrophic plate count (HPC) doesn't have a limit. This is an operational guide to initiate an action plan if results are continuously high in an area. Samples are taken at four different locations throughout the distribution system each week, see results below.

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	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)	# Samples	HPC (cfu/100mL)
January	16	0 - 0	0 - 0	8	<10 – 10
February	12	0 - 0	0 - 0	6	<10 – 20
March	12	0 - 0	0 - 0	6	<10 – 50
April					
May					
June					
July					
August					
September					
October					
November					
December					

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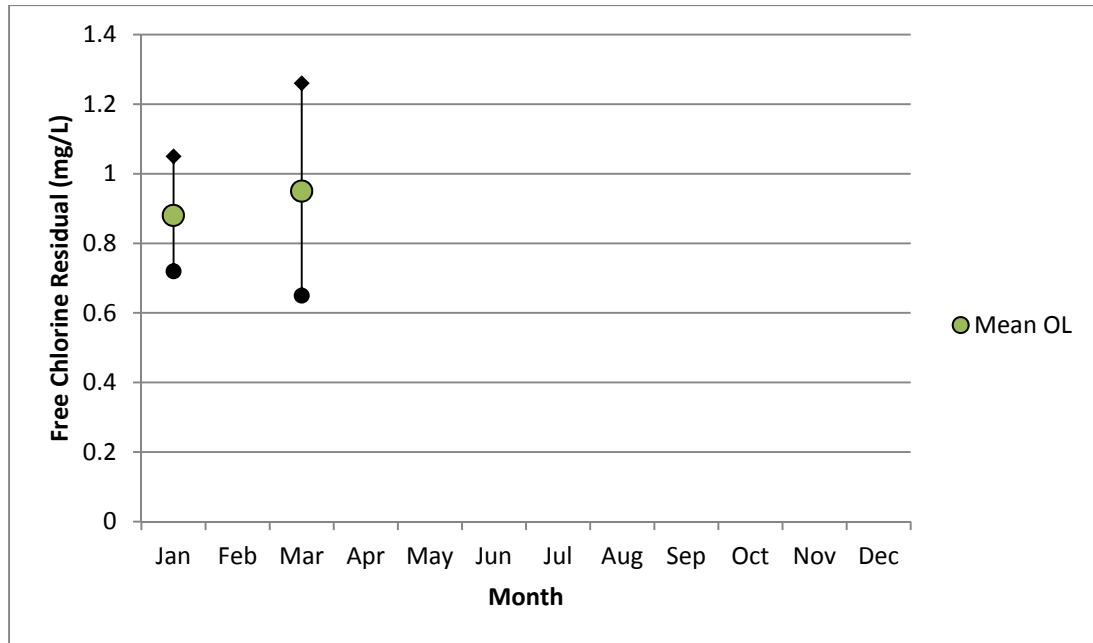
Trihalomethanes are sampled on a quarterly basis. The table below shows the current running average in. The annual average in 2017 was 52.5µg/L, therefore the current running average has decreased 10% when compared to the annual average in 2017.

	<b>Limit (µg/L)</b>	<b>THM Result (µg/L)</b>
<b>April 2017</b>	-	43
<b>July 2017</b>	-	40
<b>October 2017</b>	-	57
<b>January 2018</b>	-	49
<b>Running Average</b>	100	47.25

Haloacetic Acids (HAAs) are now required to be sampled on a quarterly basis in accordance with O. Reg. 170/03. The table below shows the current running average. The limit for HAAs is 80µg/L, however this isn't enforced until 2018.

	<b>Limit (µg/L)</b>	<b>HAA Result (µg/L)</b>
<b>April 2017</b>	-	20.7
<b>July 2017</b>	-	10.2
<b>October 2017</b>	-	25.3
<b>January 2018</b>	-	24.6
<b>Running Average</b>	80	20.2

The Rodney Tower continuously monitors the free chlorine residual of the water. The results fluctuate based on fill cycles. The chart below shows the minimum, maximum and average daily free chlorine residuals. During the winter months the results are usually very good, however, once there is warmer weather the chlorine residuals dissipate. It is required to maintain 0.2mg/L of free chlorine in the distribution system. Therefore, the residual leaving the tower must be above this 0.2mg/L. An adverse reportable event occurs when the chlorine residuals drops below 0.05mg/L. During the 1<sup>st</sup> quarter the tower was upgraded to be able to rechlorinate.



## [SECTION 5: OCCUPATIONAL HEALTH & SAFETY](#)

### FIRST QUARTER:

#### JANUARY:

There were no health and safety issues identified during the quarterly inspection completed in January.

## [SECTION 6: GENERAL MAINTENANCE](#)

### FIRST QUARTER:

#### JANUARY:

09: Auto flusher at Crinan and Colley Line damaged and leaking water. Snowplow ran into auto flusher while operator was on site taking bacti sample. Operator was able to isolate auto flusher, using shut off valve 3ft east. All as directed by OIC.

16: Operator on site with H2Ontario for construction of future chemical room.

17: Selectra Electrical and H2Ontario on site for construction

18: Selectra on site to install conduit for new electrical.

19: Operator turned off auto flushers located at Gray Line, Marsh Line, and Hoskins Line in preparation for Rodney Tower repairs/upgrades.

22: 1515: Operator opened bypasses located in Eagle east chamber, Eagle west Chamber, Silver Clay Line, This was due to Rodney Tower being offline.

22: H2Ontario on site for installation of chlorine panel, construction of chlorine room and prep for system install. Rodney tower isolated from distribution system, and valve opened for draining tower. Prepared tower for pipe removal, and installation of new pipes. Inlet valve to Rodney tower isolated at road. Added de-chlor pucks to chamber for draining tower.

23: Rodney tower still isolated, and drained for upgrades. H2Ontario contractors on site for removal of current piping.

24: H2Ontario on site for installation of new piping. 12% hypo used for disinfection, on all new equipment installed.

25: H2Ontario on site to install new chlorine injector, and work on new chlorine room. Rodney tower remains empty and offline since January 22, 2017.

30: Selectra on site to replace PLC panel with new upgraded panel.

31: Selectra on site to wire milltronics, pressure transmitters, and also to finish PLC upgrades.

#### FEBRUARY:

01: Eromosa and Selectra contacted to ensure SCADA is working properly, and to prep for filling of tower. Operator opened valve to begin filling tower, maintaining pressure in distribution of 40psi as per pressure gauge on hydrant just east of water tower. Operator took grab sample to calculate grab sample to calibrate outlet chlorine. Eromosa adjusted scaling on SCADA so numbers are accurate. Inlet chlorine analyzer offline. Valve fully open to fill tower, Distribution pressure is reading 45psi from same hydrant.

06: H2Ontario onsite to repair small leaks on new piping. Metcon on site to begin placing chlorine system online.

06: Metcon, Stantec, Eromosa and Selectra all onsite for set-up and testing of new chlorine system, including SCADA upgrades. Chlorine system still offline. Alarms tested for tower level, and chlorine level.

13: Selectra and Eromosa onsite. Chlorine spike occurred during priming of chlorine system, over 5.00ppm for less than 15min. Operator to flush nearby hydrant to remove slug.

Operator on site to flush hydrant due to high chlorine. Started flushing at 1045, grab sample free chlorine at 2.1mg/L for 10min. Flushed for another 30min, and chlorine level went back to normal, took grab sample 0.74ppm free. Went to another hydrant, flushed for 20min and took grab sample: 0.89ppm. Operator manually shut down chlorine system due to issues with spiking, to be tested for the next week.

15: Operator onsite to start chlorine system for daily test; shut off after test.

#### MARCH:

06: Operator on site to troubleshoot pressure gauge reading problems, and clean up facility. Shut off feed line to chlorine analyzer, and opened tower drain valve to bring down tower level, closed drain valve, and set flow rate to chlorine analyzer. Chlorine analyzer reading 0.18ppm, due to calibration and troubleshooting feed line, all as directed by OIC.

Analyzer currently reading 0.0ppm, related to turning off power supply to reset reading of 0.38ppm. Changed measuring settings back to 0-10ppm, now reading accurately on analyzer, all systems now appear to be operating normally.

28: H2Ontario onsite today to finish duct work on chemical room ventilation.

## **SECTION 7: ALARM SUMMARY**

### **FIRST QUARTER:**

#### **JANUARY:**

08: 1713: Operator received page for level reading error at Rodney Tower, related to quick temperature change, causing false reading from transducer. Operator switched to pressure mode on control panel. All as directed by OIC

09: 1810: Operator on site at 254 Graham Road for service leak. Operator turned off curb stop after locating in snow bank. Received a second page from laundry mat in Rodney, located on Furnival road for service leak. Attended site, and found meter split and damaged from temperature. Water service was shut off to residents before operator arrived.

#### **FEBRUARY:**

There were no alarms this month.

#### **MARCH:**

There were no alarms this month.

## **SECTION 8: COMMUNITY COMPLAINTS & CONCERNS**

### **FIRST QUARTER:**

#### **JANUARY:**

22: Complaint received of moldy water in tap, from resident at 220 Sandford Street, Rodney. Operator arrived on site shortly after and flushed closest hydrant, obtained a free chlorine reading of 0.71ppm. All as directed by OIC.

#### **FEBRUARY:**

No complaints or concerns.

#### **MARCH:**

No complaints or concerns.