



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

1266 West Elgin Distribution System
Operations Report
Fourth Quarter 2021

Ontario Clean Water Agency, Southwest Region
Sam Smith, Senior Operations Manager
Susan Budden, Business Development Manager
Issue Date: March 8, 2022

Facility Description

Facility Name: West Elgin Distribution System

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 1,200m³
- 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 this quarter.

SECOND QUARTER:

There were no compliance or exceedance issues reported for this quarter.

THIRD QUARTER:

There were no compliance or exceedance issues reported for this quarter.

FOURTH QUARTER

There were no compliance or exceedance issues reported for this quarter.

SECTION 2: INSPECTIONS

FIRST QUARTER:

On February 24th, 2021 a routine MECP inspection took place by Angela Stroyberg. A rating of 98.53% was received. One non-compliance was received for logbooks not being maintain and/or did not contain the required information. On March 29, 2020 the online chlorine analyzers at the tower had a read out of 0.00mg/L. A communication issue happened at the Tri-County Water Treatment Plant that resulted in loss of SCADA records. This issue was noted in the Tri-County logbook but not West Elgin.

SECOND QUARTER:

There were no MECP or MOL inspections this quarter.

THIRD QUARTER:

There were no MECP or MOL inspections this quarter.

FOURTH QUARTER

There were no MECP or MOL inspections this quarter.

SECTION 3: QEMS UPDATE

FIRST QUARTER:

There have been no updates to QEMS at this time.

SECOND QUARTER:

An internal audit took place on June 25, 2021 by Terri-Lynn Thomson. 5 opportunities for improvements and 0 non conformances were found.

THIRD QUARTER:

A Management review took place on July 22, 2021.

An external audit by Sandra Tavares of SAI Global took place on July 28, 2021, there were 0 non-conformances and 2 OFI's found.

FOURTH QUARTER

There have 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.

	# 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	16	0 - 0	0 - 0	8	<10 – <10
March	20	0 - 0	0 - 0	10	<10 – <10
April	16	0 - 0	0 - 0	8	<10 – 1030
May	20	0 - 0	0 - 0	10	<10 – <10
June	17	0 - 0	0 - 0	9	<10 – <10
July	16	0 - 0	0 - 0	8	<10 – <10
August	20	0 - 0	0 - 0	10	<10 – <10
September	16	0 - 0	0 - 0	8	<10 – <10
October	16	0 - 0	0 - 0	8	<10 – <10
November	20	0 - 0	0 - 0	10	<10 – <10
December	16	0 - 0	0 - 0	8	<10 – <10

Trihalomethanes are sampled on a quarterly basis. The table below shows the current running average in 2021. The annual average in 2020 was 58 ug/L, therefore the current running average has decreased 11.6% when compared to the annual average in 2020.

	Limit (ug/L)	THM Result (ug/L)
January 2021	-	42
April 2021	-	43
July 2021	-	47
October 2021	-	73
Running Average	100	51.25

Haloacetic Acids (HAAs) are sampled on a quarterly basis in accordance with O. Reg. 170/03. The table below shows the running average so far in 2021. The annual average in 2020 was 32.25 ug/L, therefore the current running average has decreased 18.2% when compared to the annual average in 2020.

	Limit (ug/L)	HAA Result (ug/L)
January 2021	-	22.2
April 2021	-	26.2
July 2021	-	21.6
October 2021	-	35.5
Running Average	80	26.4

The Rodney Tower continuously monitors the free chlorine residual of the water. The results fluctuate based on fill cycles. During the winter months the results are usually very good, however, once there is warmer weather the chlorine residuals dissipate. In spring of 2018 the Rodney tower installed a re-chlorination facility. Chlorine residuals are taken throughout the distribution system in accordance to O. Reg. 170/03 requirements. The graph below provides the minimum, maximum and average chlorine residuals throughout the distribution system in 2021.

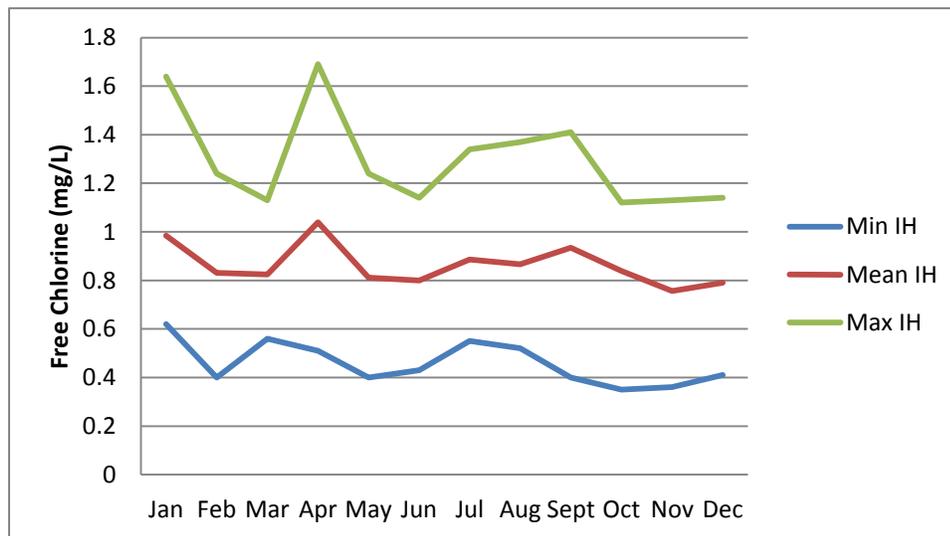


Figure 1. Free Chlorine Residuals in Distribution System

SECTION 5: OCCUPATIONAL HEALTH & SAFETY

FIRST QUARTER:

Due to the COVID-19 pandemic; precautionary protection measures have been implemented at all facilities. In addition to the mandatory PPE worn by all operational staff, the following additional steps were taken to assure safety:

- Additional PPE and supplies were sourced as applicable.
- The frequency of facility and vehicle cleaning and surface disinfection was increased and documented

- Staff re-organization was implemented to meet social distancing requirements where applicable.
- Facility access to essential contractors and/or delivery personal are closely monitored.

There were no additional Health & Safety issues identified during the first quarter.

SECOND QUARTER:

There have been no additional health and Safety concerns this quarter.

THIRD QUARTER:

There have been no additional health and Safety concerns this quarter.

FOURTH QUARTER:

There have been no additional health and Safety concerns this quarter.

SECTION 6: GENERAL MAINTENANCE:

FIRST QUARTER:

JANUARY

- 01- 31 Collected weekly bacti samples and residuals throughout distribution system
- 01-31: Collected week end residuals and auto flushers each week throughout distribution system
- 06: Rodney tower overflowing, Tri County operator informed and set points adjusted.
- 19: Sample station rounds completed.

FEBRUARY

- 01- 28: Collected weekly bacti samples and residuals throughout distribution system
- 01-31: Collected week end residuals and auto flushers each week throughout distribution system
- 01: Collected Schedule 15.1 samples for lead and alkalinity.
- 12: Called Prominent help desk to assist with clearing error code on chlorine analyzer.
- 17: Replaced broken parts on auto flusher at the west dead end of Gray line.
- 25: Sample station monthly rounds completed.
- 26: Verification on hand held colorimeter completed.

MARCH

- 01, 08, 15, 22, and 29: Weekly bacti samples obtained and sent to SGS lab.
- 01, 05, 08, 12, 15, 19, 22, 26, 29: Weekly residuals obtained and recorded.
- 10: Inspect Hydrant #97, on the corner of Graham Road and Monroe St. after fire department used it. Hydrant is an old Concord hydrant and operated a bit stiff but is operable. Nowhere to grease the hydrant. Notified SOM
- 18: Delivered 2 x 20L pails of chlorine to Rodney Tower.
- 29: Flowmetrix onsite for annual flow meter inspection.
- 30: Started to work on the hydrant located on the corner of Graham Road and #3 highway. Project is put on hold due to not being able to isolate the system, old restraints are attached and will not hold the secondary valve while hydrant being replaced as they are cables attached to the hydrant boot. Running along the valve to the 14" water main along the east side of Graham rd. Notified ORO/SOM a better plan of action is required to complete the work safely.
- 31: Increased chlorine dose from 0.90ppm to 1.10ppm to prep for flushing of the distribution system.

SECOND QUARTER:

APRIL

- 05, 12, 19, 26: Weekly bacti samples obtained and sent to SGS lab.
- 02, 09, 16, 23, 30: Weekly residuals obtained and recorded.
- 05-16: hydrant flushing
- 06: Completed 2nd quarter THM'S and HAA'S.
- 13: Completed blow off at 23973 Downie line. 0.86mg/L
- 20: Driving past auto-flusher at the dead end of line on Graham Rd. by the river. Noticed the auto flusher bubbling up and ditch full of water. Stopped and found the wires disconnected. Fixed the connection and turned off auto flusher. Called TCWTP operator and found trending of the broken wire from Friday. Approx. 1200-1400 m3 per day in north meter chamber. Notified them that it was caused by broken wires. Notified SOM via text.
- 20: Auto-flusher at the end of Carrol Line is having the drain re-routed to avoid flooding farmer's field. West Elgin completing work themselves. Auto-flusher will be off until tomorrow to allow for work to be completed.
- 22: Onsite at the dead end of Carrol Line to run the auto flusher so the municipality could ensure the new drainage system works properly. Turned the auto-flusher off after inspection.
- 23: Completed auto flusher rounds. Auto flusher at 20615 Gray Line was off, caused by the rain sensor wires being broken. Programmed unit that the rain sensor is off now. Dead end of Carrol auto flusher turned off as the new drain is flooding the roadway. Notified SOM and turn unit off till municipality finishes the ditching work.

MAY

- 03, 10, 17, 24, 31: Weekly Bacti samples obtained and sent to SGS.
- 07, 14, 21, 28: Distribution residuals obtained and recorded.
- 13: Exercise blow offs.
- 20: Greg Penny and Triton Group onsite of hydrant 8 to install back flow preventer for hydro seeding.
- 20: 24029 Stalker Line live tap new service.
- 25: Completed exercising blow offs.

JUNE

- 07, 14, 21, 28: Weekly bacti samples obtained and sent to SGS lab.
- 4, 11, 18, 25: Weekly residuals obtained and recorded.
- 01: 24801 Pioneer Line live tap.
- 05: Raised water line on Furnival Rd at Center street for new storm drain.
- 10: Called Prominent Tech support to assist with 4-20m amp signal adjustment on chlorine analyzer at Rodney Tower.
- 16: Assist VanBree Construction with moving a hydrant on Queens Line west of Furnival Rd for new storm drain.
- 22: Landmark completed ROV inspection of tower.

THIRD QUARTER:

JULY

- 05, 12, 19, 26: Weekly bacti samples obtained and sent to SGS lab.
- 02, 09, 16, 23, 30: Weekly residuals obtained and recorded.
- 27: 23088 Pioneer Line - live tap new service.
- 28: Fixed chlorine leak on chlorine panel at Rodney tower.
- 30: Blow offs completed.

AUGUST

- 02, 09, 16, 23, 30: Weekly bacti samples obtained and sent to SGS lab.
- 06, 13, 20, 27: Weekly residuals obtained and recorded.
- 27: Site meeting with VanBree to discuss off sets at Flora and Sanford along Queens.

SEPTEMBER

- 06, 13, 20, 27: Weekly bacti samples obtained and sent to SGS lab.
- 03, 10, 17, 24: Weekly residuals obtained and recorded.
- 02: VanBree completed offsets at Flora and Sanford along Queens.
- 08: ORO notes in log book Tri Country Water Treatment Plant experiencing colored water due to raw water quality.
- 16: VanBree onsite at end of water main on Queens Line by cemetery to complete offset.
- 20: Hydrant flushing started.

FOURTH QUARTER:

OCTOBER

- 04, 12, 18, 25: Weekly bacti samples obtained and sent to SGS lab.
- 01, 08, 15, 22, 29 : Weekly residuals obtained and recorded.
- 01: Fall Flushing completed
- 04: THM and HAA samples taken.
- 15: Straightened hydrant on corner of Queens Line and Padfield Lane.
- 27: Assessed hydrant on corner of Graham Road and Talbot Line; located isolation valves.

NOVEMBER

- 01, 08, 15, 22, 29 : Weekly bacti samples obtained and sent to SGS lab.
- 05, 12, 19, 26 : Weekly residuals obtained and recorded.
- 04: Repaired hydrant at Graham Road and Talbot Line.
- 16: Monthly sample point completed.
- 18: Water main commissioning at Gray Line and McColl Road.
- 19: Obtained 2nd sample from commissioning.
- 23: Tie in of new water main at Gray Line and McColl Road.

DECEMBER

- 06, 13, 20, 29: Weekly bacti samples obtained and sent to SGS lab.
- 03, 10, 17, 23, 27, 31: Weekly residuals obtained and recorded.
- 06: Swabbed and pressure tested new water main along Gray Line from McColl Road to new subdivision east.
- 07: Super Chlorination took place at new water main.
- 08: First set of samples obtain at new water main commissioning.
- 09: Second set of samples at new water main commissioning.
- 14: New water main tie-ins completed.
- 27: On-call operator took residual.
- 30: Operators shut off auto flusher at Dymock Line as it was broken in the open position and had been flowing since the 27th.

SECTION 7: ALARMS:

FIRST QUARTER:

No alarms this quarter.

SECOND QUARTER:

No alarms this quarter.

THIRD QUARTER:

JULY

No alarms this month.

AUGUST

No alarms this month.

SEPTEMBER

17: William at Wood Street; leak caused by contractors digging in the area looking for the sanitary for a new house being built. They pulled the service from the main. Reviewed locates; it was not marked as it's an old abandoned service. Throttled down the water main at the intersection of Wood and William St. and notified the 2 houses of the potential of low water pressure. Repaired with a repair sleeve and flushed hydrant at the cemetery. Obtained 1.90mg/L residual. Notified ORO of all operations.

FOURTH QUARTER:

No alarms this quarter.

SECTION 8: COMPLAINTS & CONCERNS:

FIRST QUARTER:

JANUARY

07: Pumped hydrant at Elgin International Hall after call was received by West Elgin Fire Chief, post fire operations.

21: Received call from Tri County WTP high flows on North Meter Chamber, investigated issue and found the controller for the auto flusher at Dymock Line had malfunctioned in the open position. Replaced controller.

FEBRUARY

No community complaints this month.

MARCH

20: Received call from SOM Sam Smith in regards to water leaking out ground at 215 Gilbert Street in West Lorne. Arrived onsite, confirmed complaint and found that service line for factory was leaking on property side of isolation valve. Throttled down valve to slow down flow as property owner could not schedule repair until tomorrow (March 21st, 2021). Notified SOM of issues and actions taken.

21: Onsite today @ 215 Gilbert Street to monitor contractors repairs to leaking service line to building. Once excavated down to leaking pipe, isolated valve to stop positive pressure flow to complete repairs. Contractor used 8" repair clamp to fix blow out hole in 8" cast iron pipe. Once repaired, opened valve slowly, flushed slowly thru building to release air from piping etc. Flushed for 25 minutes. Checked for leaks once fully re opened and all appears ok. See water main repair form for further details

SECOND QUARTER:

No community complaints this quarter.

THIRD QUARTER:

JULY

No community complaints this month.

AUGUST

27: 208 James Street - high chlorination complaint. Operator attended site and tested water got 0.50mg/l residual. Asked home owners to call asap if the chlorine goes high again so we can figure out the issue.

SEPTEMBER

07: 9532 Graham Rd yellow water complaint.

27: 210 Elm St. - colored water complaint - flushed hydrant and notified home owner.

27: 24173 Gray Line - colored water complaint. Flushed blow off at 24067 Gray Line.

FOURTH QUARTER:

OCTOBER

08: Flushed blow off on Grey Line as per request of SOM

NOVEMBER

04: Flushed blow off on Queens Line west of town at the cemetery at municipality's request.

Complaints had been received about air in the lines, likely caused by construction in the area.

DECEMBER

No complaints this month.