

West Elgin Distribution System
Operations Report
Third Quarter 2020

Submitted by:
Ontario Clean Water Agency
Date: November 5, 2020

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 1,200m³
- 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 the first quarter.

SECOND QUARTER:

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

THIRD QUARTER:

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

SECTION 2: INSPECTIONS

FIRST QUARTER:

On January 21st, 2020 a routine MECP inspection took place by Angela Stroyberg. A rating of 100 % was received with a few recommended actions.

- 1- A bylaw or policy in place limiting access to hydrants.
- 2- Replace the air vent on the drain at the tower.
- 3- Insure abnormal conditions are recorded in the logbook. (ie. Communication fault with water plant)

SECOND QUARTER:

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

THIRD QUARTER:

There were no MOL or MECP inspections for the third quarter.

SECTION 3: QEMS UPDATE

FIRST QUARTER:

There have been no updates to QEMS at this time.

SECOND QUARTER:

An internal audit was completed April 24th by Cindy Sigurdson. 1 non-conformance and 25 Opportunities for Improvement were found.

On June 4th the management review took place.

The operational plan was also updated as per the internal Audit.

THIRD QUARTER:

The external systems audit scheduled for October and the reaccreditation audit scheduled for November.

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 – 20
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 – <10
May	16	0 - 0	0 - 0	8	<10 – <10
June	23	0 - 0	0 - 0	11	<10 – 30
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					
November					
December					

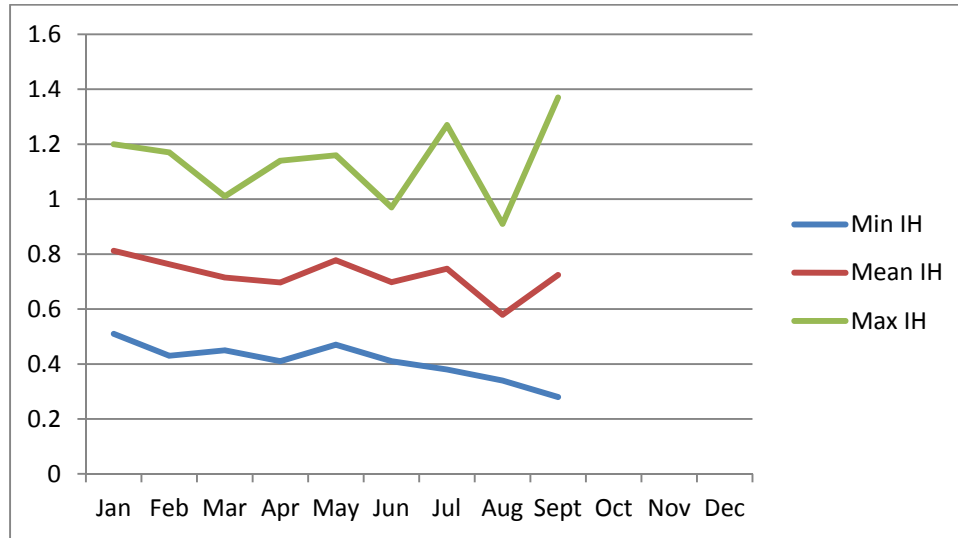
Trihalomethanes are sampled on a quarterly basis. The table below shows the current running average in 2020. The annual average in 2019 was 55 µg/L, therefore the current running average has decreased 3.18% when compared to the annual average in 2019.

	Limit (µg/L)	THM Result (µg/L)
January 2020	-	48
April 2020	-	40
July 2020	-	45
October 2019	-	80
Running Average	100	53.25

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 running average so far in 2020. The annual average in 2019 was 24.78 µg/L, therefore the current running average has increased 3.8% when compared to the annual average in 2019.

	Limit (µg/L)	HAA Result (µg/L)
January 2020	-	23.9
April 2020	-	19.9
July 2020	-	27.3
October 2019	-	31.8
Running Average	80	25.73

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 2019.



SECTION 5: OCCUPATIONAL HEALTH & SAFETY

FIRST QUARTER:

Due to the COVID-19 pandemic, which has been brought to the attention of all OCWA staff; 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:

The Covid-19 precautions still continue to ensure the protection of all staff and the public.

THIRD QUARTER:

The Covid-19 precaution’s still continue to ensure the protection of all staff and the public.

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

JANUARY:

15: Calibrated AIT-2 at Rodney Tower

FEBRUARY:

- 03: New service line at 26661 Silver Clay line, flushed and took non reportable bacti sample
- 03: Suspected service leak at 7 Todd Place; unable to locate leak, backfilled with gravel as per Municipal Staff
- 05: Service repair at 7 Todd Place

MARCH:

- 03: Turned on service at 26496 Silver Clay
- 04: PVR placed on hydrant 11 at Dunborough and Highway 3 for the day in order for work to be performed at the Wallacetown tower.
- 09: Western Fire Equipment on site for fire flow testing in Rodney; hydrants 167 and 177 were used for the work
- 09: Chlorine injector at Rodney tower was cleaned
- 10: Service leak at 5 Todd Place in West Lorne. Replaced from curb stop to tapping saddle
- 11: Opened valve at corner of Forest Line and Colley Road to allow for water to be distributed down Forest Line to hydrant at 23454 Forest Line.
- 13: Leak on chlorine board at Rodney Tower fixed.
- 17: Pumped out chamber at Pioneer Line and Wellington.

SECOND QUARTER:

APRIL

- 08: On site at 29392 Pioneer Line for suspected water main break. Once dug up no leak was found but excessive water from drainage tile was leaking. It is suspected that the tile is plugged downstream.
- 20: Started spring hydrant flushing

MAY

- 12: Started valve turning

JUNE

- 01: On site at 9811 Graham Road; drilling company hit service line. Municipality pinched line and installed new curb stop. Everything was disinfected with 12% NaOCl. Line beside house was flushed for 15 minutes after repair.
- 11: Chamber inspections completed.
- 17: On site on Gray Line for main break; water main hit by drainage company. Repairs disinfected with 12%NaOCl, blow-off at 24067 Gray Line downstream. Line was flushed for approximately 25 minutes and bacti sample was collected.
- 18: Collected second bacti sample from water main break.
- 23: Collected bacti sample from hydrant #123; corner of Graham and Crinan as per Sam Smith.

THIRD QUARTER:

JULY

- 08: Tested super chlorination at 155 Clarke Street, Rodney. Temporary water main being installed to replace existing main. Contractor installed new back flow preventer and had it tested by plumber.
- 08: Test the super chlorination, used slug method, for 3-hour hold time. Zero chlorine drop. Flushed line and took first set of samples. Super chlorination was de-chlorinated by pucks and tested.
- 09: Flushed temporary main at 155 Clarke Street, Rodney and obtained second bacti sample.
- 14: Isolated old water main between hydrant 160 and Clarke Street, Rodney.

- 15: On site across from 157 Clarke Street in Rodney to turn off valve.
- 16: Operator on site in Rodney to close valve, discovered valve was off and the cause of the water was from an old fire well that had been drilled through.
- 20: Swabbed and pressure test new water main in Rodney from Clarke Street to hydrant 160.
- 21: Super chlorinate water main in Rodney using the 3 hour slug method. Collected first bacti sample.
- 24: Completed tie-ins for new water main in Rodney. Isolated valve at Moriah and back alley; isolated valves at Stinson and Clarke, valve south of Clarke on Furnival. Flushed water main from hydrant 159; new main now in service.
- 27: Completed a live tap in front of 155 Clarke Street.

AUGUST

- 10: 22034 Downie Line, West of Furnival Road; Live tap 4" ABS water main, trench across road. Curb stop is 1m North West of hydro pole.
- 18: Valve exercising in Rodney and rural West Elgin.
- 19: Valve exercising in rural West Elgin and West Lorne.
- 21: Valve exercising in West Lorne.
- 26: Valve exercising in rural West Elgin.

SEPTEMBER

- 11: On site at Eagle East chamber, trying to obtain isolation in chamber. Closed valve at southeast corner of highway 3 and graham road, closed 4 valves in chamber. Cannot isolate valve in chamber. Will have to investigate further. Opened valve at corner of Highway 3 and Graham and all 4 valves in chamber.
- 14-25: Fall hydrant flushing/maintenance.
- 16: Completed live tap at 9260 Graham rd. On high press con pipe. Mike Golding contracting completed task.
- 21: Backflow preventer installed on hydrant 60 at 187 Angelo Street. Titon Group Construction replaced ball valve on backflow preventer to pass test.
- 24: On site at corner of Angelo and Todd Place. Drilling company hit water main. Throttled valve at corner of Angelo and Marsh to maintain positive pressure. Repair made with clamp, 12% sodium hypo used to disinfect around break. Opened valve at corner of Angelo and Marsh to obtain full pressure. Flushed hydrant on Todd place for 5 minutes and obtained a residual of 1.92ppm.
- 29: Swabbing and super chlorinating temporary water main in the subdivision of Todd Place and Angelo Drive in West Lorne.
- 29: Testing temporary main after the holding time for the super chlorination, collected first set of bacti samples at 5 dead ends of the main.
- 30: Collected second set of bacti samples off the temporary water main in the subdivision of Todd Place and Angelo Drive in West Lorne. Contractor started to flush main.

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

JANUARY:

No alarms this month.

FEBRUARY:

No alarms this month.

MARCH:

- 07: Operator received call for water shutoff at 26492 Talbot Line. Upon arrival, the plumber was leaving residence and informed operator that the water had been shut off and back on and repairs to the house had been completed.
- 16: Operator received call for Rodney tower chlorine alarm. Arrived at the TC WTP at 00:10 and reviewed Rodney tower trends. Chlorine analyzer AIT-1 had chlorine levels above the high alarm (2.10ppm for 600 seconds) from 11:18 to 11:30, with a max spike of 2.95ppm. The chlorine level spike started after tower flow was reduced. Rodney tower chlorine stabilized around 1.0ppm.

SECOND QUARTER:

APRIL

- 04: Operator received call from Senior Operations Manager about leaking groundwater at 27392 Pioneer Line. Operator arrived at residence and spoke with Sam Smith about leak; decision was to fix on Monday.
- 12: Operator received call from spectrum for Rodney tower chlorine alarm. Logged onto SCADA and observed nothing in alarm; trended and found a spike to a max of 2.43ppm.

MAY

- 24: Operator received call from resident at 272 Chestnut Street about low water pressure from hot water; cold water pressure was normal. Operator informed resident the issue was probably due to a plumbing issue and to call a plumber for assistance.

JUNE

No alarms to report this month.

THIRD QUARTER:

JULY

- 15: Operator received a call from Sam Smith to open valve at 211 Furnival Road, Rodney. Arrived on site and called contractor who said the valve had already been opened by the municipality.

AUGUST

No alarms for the month

SEPTEMBER

No alarms this month

SECTION 8: COMMUNITY COMPLAINTS & CONCERNS

FIRST QUARTER:

There were no complaints or concerns to report this quarter.

SECOND QUARTER:

MAY

- 24: Operator received call from resident at 272 Chestnut Street about low water pressure from hot water; cold water pressure was normal. Operator informed resident the issue was probably due to a plumbing issue and to call a plumber for assistance. (SAME AS ABOVE)

THIRD QUARTER:

AUGUST

31: Received community complaint, 25399 Silver Clay Line regarding coloured water. Flushed hydrant 16 across the road and slightly east of residence; Clear water, free chlorine residual of 1.71mg/L. Flushed hydrant at 26046 Silver Clay; residual of 1.42mg/L. Flushed blow off at 26661 Silver Clay Line to chase any coloured water to dead end; Free chlorine residual of 0.66mg/L after 30 minutes of flushing.

SEPTEMBER

- 09: Responded to community complaint at 180 Furnival Road in regards to greenish/brown water for the past week. Took sample from outside tap, residual was 0.82ppm. Operator flushed the two hydrants to the north and south of her residence, but she then said her water was now crystal clear. Operator mentioned flushing will take place from September 14-25; she will contact municipality again if any more issues arise.
- 14: Responded to a community complaint at 171 Queen Street, Rodney. Resident had gray water in toilets. Concluded it had been the result of the home owner changing the salt in water softener the day before.