



West Elgin Distribution System Operations Report Fourth Quarter 2020

Submitted by:
Ontario Clean Water Agency
Date: January 8, 2021

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.

FOURTH QUARTER:

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

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 MOL or MECP inspections for the second quarter.

THIRD QUARTER:

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

FOURTH QUARTER:

There were no MOL or MECP inspections for the fourth 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.

FOURTH QUARTER:

An external systems audit took place on October 6, 2020 by Sandra Tavares of SAI Global. 0 non-conformances and 1 Opportunities for improvement.

An external Re-accreditation audit took place November 25, 2020 by Sandra Tavares of SAI Global. 0 non-conformances and 6 opportunities for improvements.

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	16	0 - 0	0 - 0	8	<10 – 770
November	20	0 - 0	0 - 0	10	<10 – 1050
December	16	0 - 0	0 - 0	8	<10 – <10

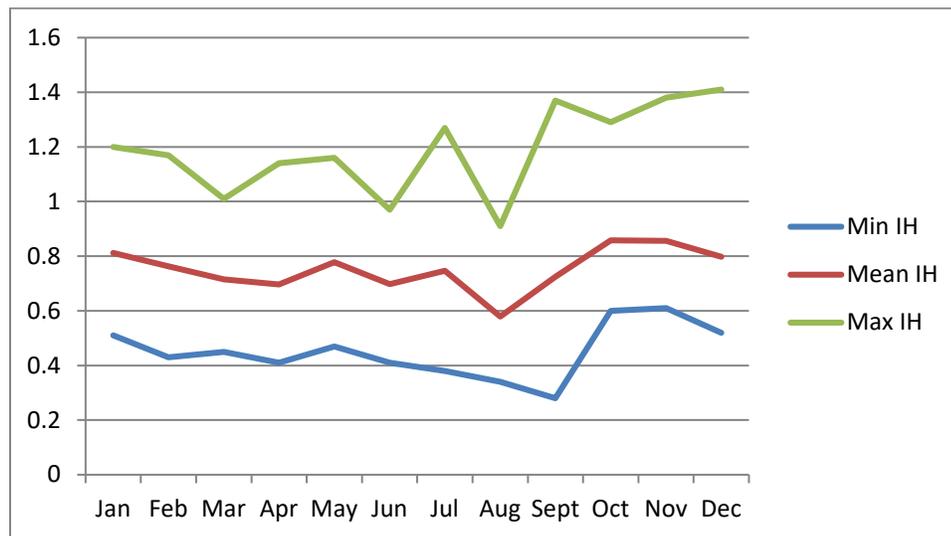
Trihalomethanes are sampled on a quarterly basis. The table below shows the current running average in 2020. The annual average in 2019 was 55 ug/L, therefore the current running average has increased 5.45% when compared to the annual average in 2019.

	Limit (ug/L)	THM Result (ug/L)
January 2020	-	48
April 2020	-	40
July 2020	-	45
October 2020	-	99
Running Average	100	58

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 ug/L, therefore the current running average has increased 30% when compared to the annual average in 2019.

	Limit (ug/L)	HAA Result (ug/L)
January 2020	-	23.9
April 2020	-	19.9
July 2020	-	27.3
October 2020	-	57.9
Running Average	80	32.25

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 2020.



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.

FOURTH QUARTER:

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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.

FOURTH QUARTER:

OCTOBER

- 01: Tried to repair hydrant 12 on corner of Graham and Talbot. Unable to displace as the valve box is misaligned from the valve. Notified SOM Sam Smith and municipality to vacuum out the hole and straighten.
- 01: Located blow-off valve and flushed at 25964 Warwick Line.
- 02: Turned valve off at Marsh and Angelo Drive, West Lorne. Notice given to residents for 09:00 a.m; cutting and capping old water main and hooking up temporary main. Old main cut off at valve, and 2" temporary service installed and attached to temporary above grade main. Penny plumbing tested backflow preventer. Water

back on at valve on north east corner of Marsh and Angelo Drive. Flushed line at first service to ensure everything is clean. Proper disinfection took place during cutting and installation

- 05: Bagged 2 hydrants out of service in subdivision as the main has been disconnected.
- 13: Replaced controller on auto flusher located at the 401 Enroute Service Center. Old controller would not operate valve anymore.
- 21: Met Dave from Triton Group at new water main commissioning on Angelo Drive and Todd place, West Lorne.
- 22: On site at Angelo and Todd Place for swabbing; could not get swab out. Contractor adding a valve that was not in original drawings to allow proper isolation and directional water flushing.
- 22: Attended site at Angelo and Todd Place, West Lorne. Lost swab 1 and 2; at around 16:30 swab one came out at dead end of Angelo. At approximately 18:30 swab two was found in the hydrant leg on Angelo Drive. The hydrant was gutted and swab was removed.
- 23: On site at Angelo and Todd Place. Ran five swabs, all swabs came out clean. Started pressure test but unable to build pressure. Contractor called and notified me that a suspected leak is between Angelo and the hydrant on the north section of Todd Place.
- 26: Contactors found leak on Todd Place; service line under road was cut. Flushed system and started pressure test at 13:40, 150 psi to start.
- 26: Todd and Angelo pressure test completed and passed. Super chlorination started at 17:00 and all appurtenances operated and hydrants tested for residual. Chlorine at 50 ppm.
- 27: At 17:00 tested residual of super chlorination and got 50 ppm. Started flushing and took samples once super chlor was flushed. Last sample of first set was taken at 17:35.
- 28: Completed second set of samples after 16 hours. Holding time on Angelo and Todd, delivered lab both sets
- 29: Tied in new water main after receiving results from lab. Angelo Drive tied in at Marsh Line, and live to hydrant on Angelo. Back flow re-installed and tested by Penny Plumbing and attached to temporary water lines to fee rest of the houses not on new water main yet.
- 30: Opened valves on Angelo Drive to allow Todd Place to be pressurized. Notified Sam Smith that all new hydrants are live and to tell the fire department.

NOVEMBER

- 05: Completed a live tap at 9532 Graham Rd, West Lorne.
- 20: Calibrated inlet and outlet chlorine analyzer at Rodney Tower
- 23: Calibrated inlet chlorine analyzer at Rodney Tower
- 25: Calibrated outlet chlorine analyzer at Rodney Tower
- 26: Worked on hydrant number 12 on corner of Graham and Highway 3. Unable to get guts out of the hydrant; everything spins free. Notified SOM Sam Smith we need to dig hydrant up to the boot.

DECEMBER

30: Completed Sample station residuals

08: Installed internal pipe duck bill on the over flow pipe for Rodney Tower. Tested duck bill to ensure it was fitted correctly by operating the tower drain valve for a few minutes. Notified SOM of the operations.

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

FOURTH QUARTER:

OCTOBER

30: Received call from Sam Smith about brown water complaint at 290 Graham Rd. Spoke with resident, she said that she has brown water within the house. Spoke with operator who had mentioned the blow-off on Graham Rd north of resident had been operated today. Arrived at 290 Graham Rd, resident said the kitchen tap and outside tap were now clear, instructed her to run all taps for 5 minutes. She then obtained clear water from all taps. Took chlorine residual from outside tap and obtained a reading of 1.27 ppm. Brown water most likely due to operation of blow-off earlier in the day.

NOVEMBER

No alarms to report this month.

DECEMBER

No alarms to report 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.

FOURTH QUARTER:

OCTOBER

- 30: Received call from Sam Smith about brown water complaint at 290 Graham Rd. Spoke with resident, she said that she has brown water within the house. Spoke with operator who had mentioned the blow-off on Graham Rd north of resident had been operated today. Arrived at 290 Graham Rd, resident said the kitchen tap and outside tap were now clear, instructed her to run all taps for 5minutes. She then obtained clear water from all taps. Took chlorine residual from outside tap and obtained a reading of 1.27 ppm. Brown water most likely due to operation of blow-off earlier in the day.

NOVEMBER

No complaints or concerns this month.

DECEMBER

- 28: Received call from Sam Smith to pump out water hydrant at 166 Graham Rd.