

West Elgin Distribution System Operations Report Fourth Quarter 2019

Submitted by:
Ontario Clean Water Agency
Date: February 10, 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 first quarter.

THIRD QUARTER:

July 15th an AWQI was received. 2 total coliform on a water sample taken in Port Glasgow. Upstream, downstream and at the source was resampled on July 17, and 18. Results received were clear of any adverse water quality.

FOURTH QUARTER:

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

SECTION 2: INSPECTIONS

FIRST QUARTER:

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

SECOND QUARTER:

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

THIRD QUARTER:

There were no MOL or MECP inspections for the second 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:

There have been no updates to QEMS at this time.

THIRD QUARTER:

The management review took place July 23, 2019.
DWQMS internal audit took place on July 26, 2019 by Cindy Sigurdson. There were 26 opportunities for improvement and 1 non-conformance was found.
DWQMS S2 Surveillance Audit took place by Sandra Tavares of SAI Global on August 7, 2019; two opportunities for improvement and zero non-conformances were found.

FOURTH QUARTER:

There have been no updates to QEMS this quarter.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

All sampling and testing have met O. Reg. 170/03 requirements with the exception of July as noted in the compliance section. 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	20	0 - 0	0 - 0	10	<10 – <10
February	16	0 - 0	0 - 0	8	<10 – <10
March	16	0 - 0	0 - 0	8	<10 – <10
April	20	0 - 0	0 - 0	10	<10 – 50
May	16	0 - 0	0 - 0	8	<10 – <10
June	16	0 - 0	0 - 0	8	<10 – <10
July	26	0 - 2	0 - 0	16	<10 – <10
August	16	0 - 0	0 - 0	8	<10 – <10
September	20	0 - 0	0 - 0	10	<10 – 20
October	16	0 - 0	0 - 0	8	<10 – 20
November	16	0 - 0	0 - 0	8	<10 – <10
December	20	0 - 0	0 - 0	10	<10 – <10

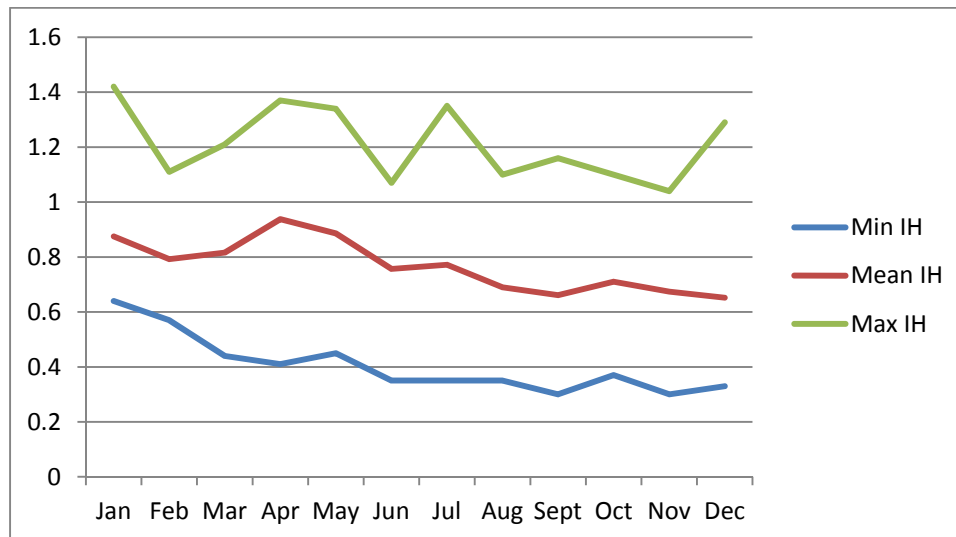
Trihalomethanes are sampled on a quarterly basis. The table below shows the current running average in 2019. The annual average in 2018 was 58.75 µg/L, therefore the current running average has decreased 6.4% when compared to the annual average in 2018.

	Limit (µg/L)	THM Result (µg/L)
January 2019	-	45
April 2019	-	48
July 2019	-	47
October 2019	-	80
Running Average	100	55

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 2019. The limit for HAAs is 80µg/L, however this isn't enforced until 2020.

	Limit (µg/L)	HAA Result (µg/L)
January 2019	-	25.4
April 2019	-	23.4
July 2019	-	18.5
October 2019	-	31.8
Running Average	80	24.8

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:

There were no hazards identified during the quarterly health and safety inspection conducted this quarter.

SECOND QUARTER:

There were no hazards identified during the quarterly health and safety inspection conducted this quarter.

THIRD QUARTER:

There were no hazards identified during the quarterly health and safety inspection conducted this quarter.

FOURTH QUARTER:

There were no hazards identified during the quarterly health and safety inspection conducted this quarter.

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

JANUARY:

- 17: Removed top piping of auto flusher at 21509 Hoskins Line for repair and isolated water to the auto flusher.
- 18: Isolated water to auto flusher at 21077 Marsh Line as auto flusher would not turn off.
- 23: Reinstalled auto flusher at 21509 Hoskins Line and verified it was operational.

FEBRUARY:

- 16: Installed new sump pump in Glencoe chamber.
- 19: Turned water off at 09:45 and back on at 11:00 at Beattie Manor.
- 22: Repaired auto flusher at 21077 Marsh Line
- 25: Turned off water at 09:00 and back on at 09:45 at 169 Furnival Road, Rodney for homeowner.

MARCH:

- 11: Replaced hydrant barrel and lower seat gasket on hydrant #185 on Beattie Line
- 15: Operators tested chlorine system and primed lines.

SECOND QUARTER:

APRIL:

- 08: Spring flushing began.
- 18: Spring flushing complete.
- 29: Operators completed monthly blow offs for the start of the season.

MAY:

- 02: Packetworks on site to install fiber optic equipment
- 08: Operators completed quarterly calibrations on chlorine analyzers

JUNE:

- 30: Call out for chlorine analyzer. Operator changed dosing set points, as per the ORO, and calibrated the analyzer. No charge

THIRD QUARTER:

JULY:

- 17: Completed bacti resampling and flushing of hydrant #36
- 18: Completed bacti resampling
- 26: Farmington on site to re-adjust altitude valve

AUGUST:

- 01: Chamber inspection
- 02: Calibrate pH probe on AIT2. Probe would not calibrate; placed in manual until replaced
- 07: Fixed connection to pH probe at AIT2
- 14: Chamber inspections
- 15: Chamber inspections
- 30: Cleaned injection point on chlorine pump

SEPTEMBER:

- 13: Completed 2 service leaks on Chestnut St. in West Lorne
- 17: Completed repairs to hydrant #185 on Beattie Line
- 23: Completed live tap at 142 Chestnut
- 23: Turned off auto-flusher at 401 service center as per Sam Smith
- 23: Added chlorine at Rodney tower
- 24: Completed live tap at 9355 McKillop Road at Hwy#3
- 30: Added chlorine at Rodney tower
- 30: Calibrated AIT1 and AIT2 at Rodney tower

FOURTH QUARTER:

OCTOBER:

- 01-03: Fall hydrant flushing
- 07: Wood Street to observe plumber testing backflow preventer for flushing and commissioning of new water main
- 07: Live tap on corner of Graham and Moore Street
- 07: Complete pressure test and super chlorination of new water main on Chestnut Street
- 08: Collected first set of samples for Chestnut Street commissioning
- 09: Completed second set of samples for Chestnut Street commissioning
- 15: Completed tie-ins for commissioning at 142 Chestnut Street and Sexton at Wood Street
- 17: Main break at 149 Chestnut Street; repair clamp used, break now repaired and back in service
- 25: New main tie-in at Wood Street and McGregor Street

NOVEMBER:

- 01: Cut and cap 8" ac pipe in the back of Rockland Flooring's yard. Water shut down and pressure relieved via hydrant 78. Cement block installed at end of cap to act as thrust block. Water main that went under cemetery and through school yard now fully abandoned. Services to factory back on at 10:15 a.m.
- 01: Remove hydrant 140 on William Street at McGregor..

- 06: Hydrant winterization
- 14: Live tap at corner of Furnival Road and Thomson Line. New service for 22581 Thomson Line
- 15: Tie in to water main at Graham and Chestnut Street complete
- 20: Live tap at 26073 Elgin County Road 2, east of West Lorne.
- 25: Completed live tap on Forest line, north of West Lorne
- 28: Flushed hydrant 129, Stalker Line at Dunborough.

DECEMBER:

- 06: Marsh line auto-flusher controller repaired.
- 17: Exercised distribution valves in Eagle area.
- 20: Exercised distribution valves in West Lorne.
- 24: Exercised distribution valves in rural West Elgin.
- 27: Exercised distribution valves in rural West Elgin.

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

There were no alarms this quarter.

SECOND QUARTER:

JUNE:

- 28: Call out for chlorine analyzer. Operator had to reset slope on analyzer and top up electrolyte. Operator verified proper reading before leaving site.

THIRD QUARTER:

There were no alarms this quarter.

FOURTH QUARTER:

OCTOBER:

- 10: Operator received call from Sam Smith about water main break on Chestnut Street. Operator arrived on site to oversee repair of break.

NOVEMBER:

- 02: Operator received call from Sam Smith to investigate a main break at Eagle West Line. Operator on site to close the valve in the chamber 90% and valve that is in front of the break 50% until able to repair the next morning. Operator also deposited dechlorinating pucks into the ditch.

DECEMBER:

There were no alarms this month.

SECTION 8: COMMUNITY COMPLAINTS & CONCERNS

FIRST QUARTER:

JANUARY:

22: Received complaint at 20860 Talbot Line as they could smell chlorine in the drinking water. The hydrant at Talbot Line and Black's Line was flushed, hydrant #41, free residual was 1.00mg\L and total was 1.18mg\L.

SECOND QUARTER:

There were no complaints to report this quarter.

THIRD QUARTER:

There were no complaints to report this quarter.

FOURTH QUARTER:

There were no complaints to report this quarter.