West Elgin Distribution System Operations Report First Quarter 2019

Submitted by:
Ontario Clean Water Agency
Date: May 2, 2019

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^3
- 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 for the first quarter.

SECTION 3: QEMS UPDATE

FIRST 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 with the exception of August 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	-	-	-	-	-
May	-	-	-	-	-
June	-	-	-	-	-
July	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-

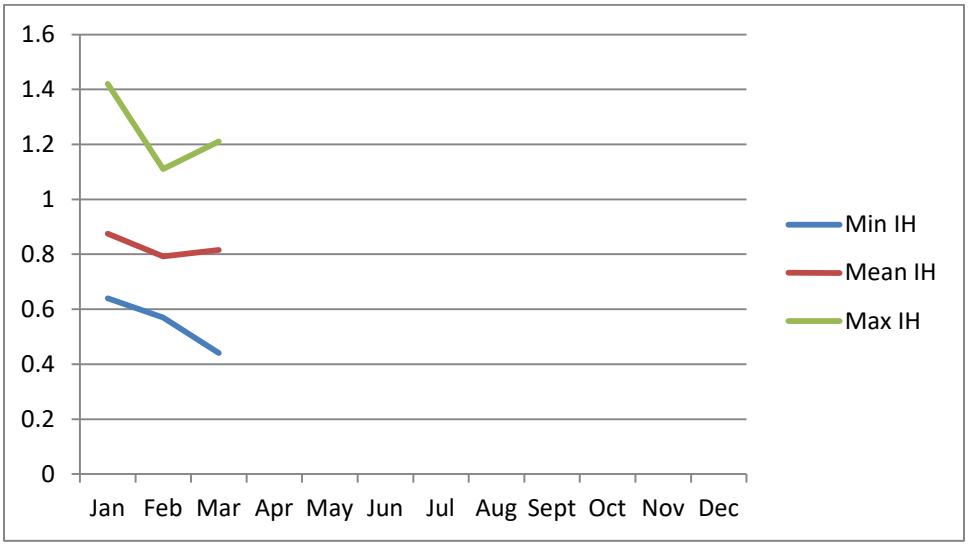
Trihalomethanes are sampled on a quarterly basis. The following table shows the current running average in 2019. The annual average in 2018 was 58.75 µg/L, therefore the current running average has decreased when compared to the annual average in 2018.

	Limit (µg/L)	THM Result (µg/L)
January 2019	-	45
April 2018	-	28
July 2018	-	56
October 2018	-	102
Running Average	100	57.75

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 2018	-	13.9
July 2018	-	14
October 2018	-	30.2
Running Average	80	20.88

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.

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

JANUARY:

17: Removed top piping of autoflusher at 21509 Hoskins Line for repair and isolated water to the autoflusher.
18: Isolated water to autoflusher at 21077 Marsh Line as autoflusher would not turn off.
23: Reinstalled autoflusher 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 autoflusher 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.

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

There were no alarms this quarter.

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.