

West Elgin Distribution System Operations Report Second Quarter 2020

Submitted by:
Ontario Clean Water Agency
Date: August 6, 2020

West Elgin Distribution System

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) Served: 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

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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:

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.

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.

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

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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					
August					
September					
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 2.3% when compared to the annual average in 2019.

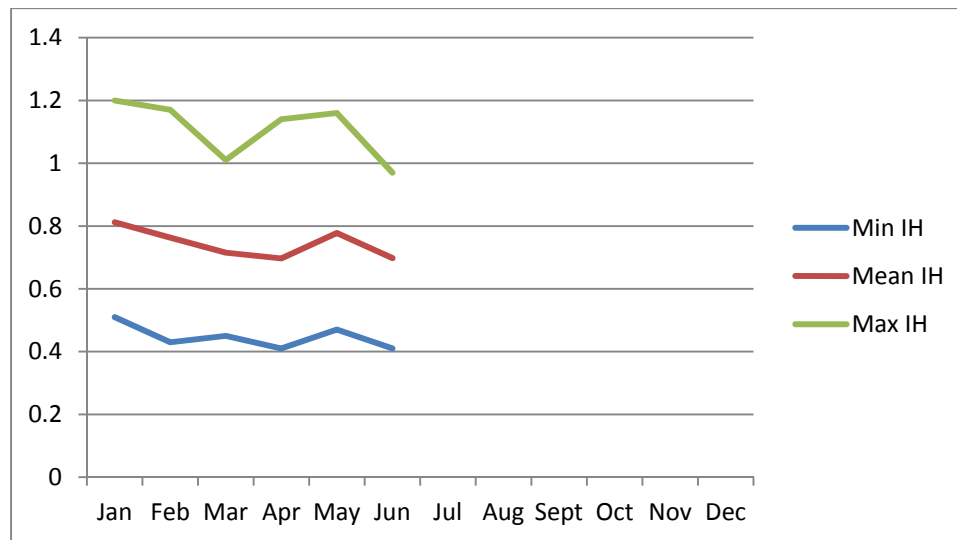
	Limit (µg/L)	THM Result (µg/L)
January 2020	-	48
April 2020	-	40
July 2019	-	47
October 2019	-	80
Running Average	100	53.75

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 2020. The annual average in 2019 was 24.78 µg/L, therefore the current running average has decreased 5% when compared to the annual average in 2019.

	Limit (µg/L)	HAA Result (µg/L)
January 2020	-	23.9
April 2020	-	19.9
July 2019	-	18.5
October 2019	-	31.8
Running Average	80	23.53

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.

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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 personnel is 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.

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

JANUARY:

Rodney tower rounds are performed every Monday, Wednesday and Friday which includes verifying residuals and tower levels, ensuring chlorine day tank has adequate dosing supply and general maintenance of the tower.

2: Monthly meter readings collected and recorded.

6: Quarterly samples for THM and HAAs collected.

15: Calibrated AIT-2 at Rodney Tower.

31: Autoflusher residuals measured every Friday for the month, run times also reviewed .

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FEBRUARY:

Rodney tower rounds are preformed every Monday, Wednesday and Friday which includes verifying residuals and tower levels, ensuring chlorine day tank has adequate dosing supply and general maintenance of the tower.

03: Schedule 15.1 samples for Lead, Alkalinity and pH collected.

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.

04: Monthly meter readings collected and recorded.

05: Service repair at 7 Todd Place.

28: Autoflusher residuals measured every Friday for the month, run times also reviewed.

MARCH:

Rodney tower rounds are preformed every Monday, Wednesday and Friday which includes verifying residuals and tower levels, ensuring chlorine day tank has adequate dosing supply and general maintenance of the tower.

03: Monthly meter readings collected and recorded.

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.

27: Autoflusher residuals measured every Friday for the month, run times also reviewed.

SECOND QUARTER:

APRIL

Rodney tower rounds are preformed every Monday, Wednesday and Friday which includes verifying residuals and tower levels, ensuring chlorine day tank has adequate dosing supply and general maintenance of the tower.

01: Monthly meter readings collected and recorded.

06: Quarterly samples for THM and HAAs collected.

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.

24: Autoflusher residuals measured every Friday for the month, run times reviewed.

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MAY

Rodney tower rounds are performed every Monday, Wednesday and Friday which includes verifying residuals and tower levels, ensuring chlorine day tank has adequate dosing supply and general maintenance of the tower.

- 01: Completed spring hydrant flushing.
- 05: Monthly meter readings collected and recorded.
- 12: Started valve turning – ongoing for the month.
- 27: Monthly blow-offs and sample station residuals measured and reviewed.
- 29: Autoflusher residuals measured every Friday for the month, run times reviewed.
- 29: Monthly hydrant maintenance checks performed and ongoing.

JUNE

Rodney tower rounds are performed every Monday, Wednesday and Friday which includes verifying residuals and tower levels, ensuring chlorine day tank has adequate dosing supply and general maintenance of the tower.

- 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.
- 02: Monthly meter readings collected and recorded.
- 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.
- 26: Autoflusher residuals measured every Friday for the month, run times reviewed and adjusted.
- 30: Valve turning ongoing for the month.
- 30: Monthly blow-offs and sample station residuals measured and reviewed.
- 30: Monthly hydrant maintenance checks performed and ongoing.

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

JANUARY:

No alarms this month.

FEBRUARY:

No alarms this month.

MARCH:

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- 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.

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)