Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Municipality of West Elgin Distribution System Operations Report

Second Quarter 2024

Ontario Clean Water Agency, Southwest Region
Sam Smith, Senior Operations Manager
Date: August 12, 2024

Facility Description

Name:	West Elgin Distribution System
Hub Name:	Southwest Region – SWM/Alvinston Cluster
Regional Hub Manager:	Sam Sianas (519) 319-2233
Senior Operations Manager:	Sam Smith (226) 377-1540
Business Development Manager:	Robin Trepanier (519) 791-2922
Facility Type:	Municipal
Classification:	Class 1 Water Distribution
Drinking Water System Category:	Large Municipal Residential

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

SECTION 1: COMPLIANCE SUMMARY

FIRST QUARTER:

There were no compliances or adverse results reported in the first quarter.

SECOND QUARTER:

There were no compliances or adverse results reported in the second quarter.

SECTION 2: INSPECTIONS

FIRST QUARTER:

On January 17th, 2024 a routine MECP inspection was conducted by Provincial Officer, Meghan Morgan. The inspection report was received with no non-compliances identified and thus the system received a 100% Inspection Rating.

SECOND QUARTER:

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

SECTION 3: QEMS UPDATE

FIRST QUARTER:

No updates were required to the QEMS during the first quarter.

SECOND QUARTER:

No updates were required to the QEMS during the second quarter.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

All sampling and testing results for the system have met O. Reg. 170/03 requirements. The limit for Total Coliform and E. coli is zero, heterotrophic plate count (HPC) does not 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 – <10
May	16	0 - 0	0 - 0	8	<10 – 40
June	16	0 - 0	0 - 0	8	<10 – 20
July	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-

Trihalomethanes are sampled on a quarterly basis. The table below shows the current running average in 2024. The annual average in 2023 was 54.5 ug/L, therefore the current running average has increased 5.5% when compared to the annual average in 2023.

	Limit (ug/L)	THM Result (ug/L)
January 2024	-	46
April 2024	-	45
July 2023	-	37
October 2023	-	102
Running Average	100	57.5

Haloacetic Acids (HAAs) are sampled on a quarterly basis in accordance with O. Reg. 170/03. The table below shows the running average so far in 2024. The annual average in 2023 was 23 ug/L, therefore the current running average has increased 8.5% when compared to the annual average in 2023.

	Limit (ug/L)	HAA Result (ug/L)
January 2024	-	26.8
April 2024	-	25.2
July 2023	-	16.3
October 2023	-	31.5
Running Average	80	24.95

The Rodney Tower continuously monitors the free chlorine residual of the water and in the Spring of 2018, a re-chlorination system was added to the facility. The chlorine residuals fluctuate based on fill cycles. During the winter months, the results are usually very good, however, during the warmer months the chlorine residuals do tend to dissipate. 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 2024.

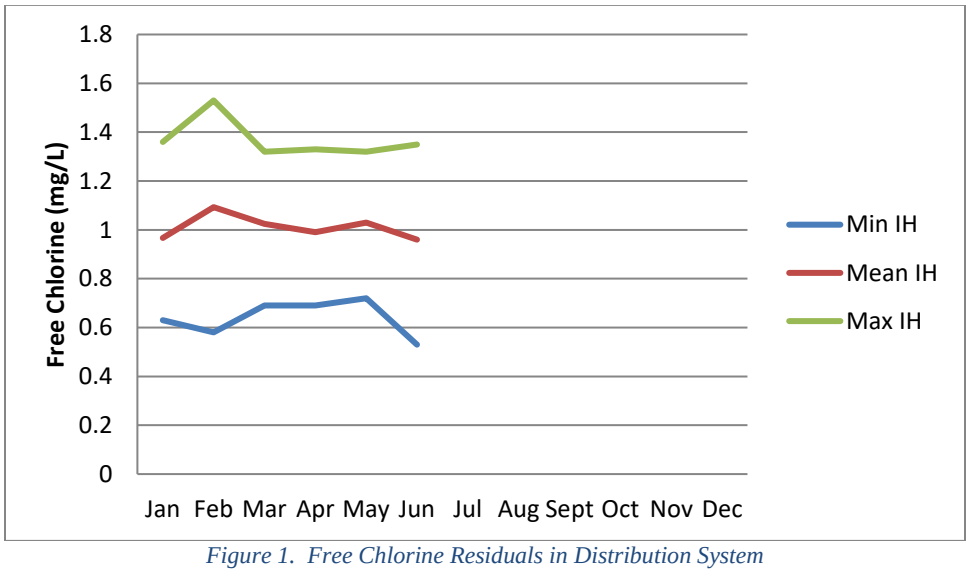

Figure 1. Free Chlorine Residuals in Distribution System

SECTION 5: OCCUPATIONAL HEALTH & SAFETY

FIRST QUARTER

There were no Health & Safety issues identified during the first quarter.

SECOND QUARTER:

On May 24, 2024 the annual Health and Safety Inspection was completed. No corrective actions were required.

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

JANUARY

All sampling, monitoring and testing completed as required.

FEBRUARY

All sampling, monitoring and testing completed as required.

MARCH

05: Completed pH probe calibration and chlorine probe electrolyte replacement. Calibrated analyzer.
07: Added chlorine to pump tank to level 36. Checked chlorine pumps integrity.
11: On-site for the commissioning of new watermain on Finney Street, West Lorne. Completed back flow preventer test (Pennys Plumbing), pressure test and began super chlor. See water main commissioning for more information.
12: Completed super chlor of new watermain. Passed test.
Completed first set of samples at 1458.
20: On-site at Finney Street, watermain commissioning for last tie in from the existing water main to the new watermain. Watermain now in service. See commissioning form for more information.
28: On-site at Jane Street to witness live taps for new builds, refer to new service install forms

SECOND QUARTER:

APRIL

03-29: Flushing hydrants in area.
03: All 12 live taps complete on Jane St. in West Lorne; refer to new service installation sheets
29: Dan from Flowmetrix on site to inspect and calibrate flow meters in system.

MAY

07: Hydrant replaced at 10797 Graham Road by Triton.
31: West Elgin valve exercising has been ongoing throughout the month.

JUNE

All sampling, monitoring and testing completed as required.
Valve exercising has been ongoing throughout the month

SECTION 7: ALARMS

FIRST QUARTER:

JANUARY

There were no alarms this month.

FEBRUARY

There were no alarms this month.

MARCH

05: On-site at 27714 Pioneer Line due to sample station copper line splitting and causing a leak. Turned off curb stop and notified ORO that it needs repair.

SECOND QUARTER:

There were no alarms this quarter.

SECTION 8: COMPLAINTS & CONCERNS

FIRST QUARTER:

Received no complaints or concerns this quarter.

SECOND QUARTER:

Received no complaints or concerns this quarter.