



Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Township of West Elgin Distribution System
Operations Report
Third Quarter 2024

Ontario Clean Water Agency, Southwest Region
Sam Smith, Senior Operations Manager
Date: November 15, 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 1,200m³
- 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

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.

THIRD QUARTER:

A routine bacti sample taken on July 22, 2024 at sample station 10 @124 Queen st came back positive for 4 total coliform and 3 e.coli. AWQI was reported to The Southwestern Public Health, SAC and local MECP inspector Jim Miller. The MOH issued a boil water advisory in the area surrounding the sample. Subsequent testing was completed upstream, downstream and at the source on July 24th, 2024 and June 25, 2024. On July 26th, 2024 after sample results were received the boil water advisory was rescinded.

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.

THIRD QUARTER:

There were no MECP or MOL inspections during the third 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.

THIRD QUARTER:

On July 23, 2024 the Internal DWQMS audit was completed by Terri-Lynn Thomson. 16 OFI's were found.

The Management review was completed July 31, 2024. Action items identified during the Management review was to complete the action and analysis plan once the inspection risk rating report is received and to complete additional sampling training with all staff. The risk rating report was received on August 27, 2024. Additional Sampling training was completed August 22, 2024.

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

	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)	# Samples	HPC (cfu/100mL)
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	26	0 - 3	0 - 3	16	<10 – 10
August	16	0 - 0	0 - 0	8	<10 – 20
September	16	0 - 0	0 - 0	8	<10 – <10
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 13.8% when compared to the annual average in 2023.

	Limit (ug/L)	THM Result (ug/L)
January 2024	-	46
April 2024	-	45
July 2024	-	55
October 2023	-	102
Running Average	100	62

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 15.3% when compared to the annual average in 2023.

	Limit (ug/L)	HAA Result (ug/L)
January 2024	-	26.8
April 2024	-	25.2
July 2024	-	22.6
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.

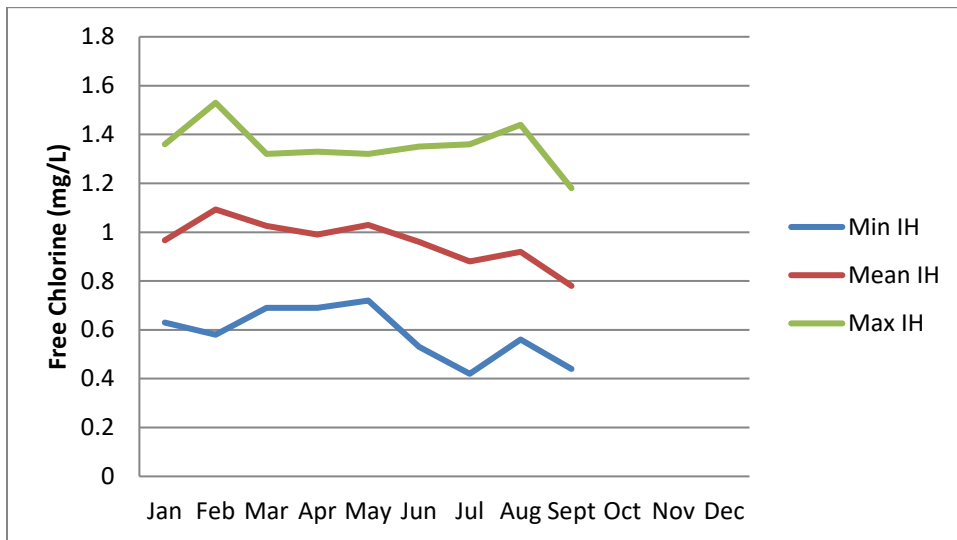


Figure 1. Free Chlorine Residuals in Distribution System

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.

THIRD QUARTER:

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

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

THIRD QUARTER

JULY:

16: Keith Douglas on site for annual back flow preventer testing.

17: Operators added a 6 inch riser to the hydrant in front of the Rodney Legion.

24: On site at 22432 Pioneer Line for 6" tap and valve install. Golding was contracted to complete the tap.

24: Adverse water quality incident at 124 Queen St in Rodney. Per standard operating procedure WEDS-01 and response to AWQI under O. Reg. 170/03, performed corrective actions by resampling per the definition at the same location, upstream location, and downstream location.

AUGUST:

12: Operator on site 22432 Pioneer Line for backflow preventer certification required for water main commissioning.

14: Operator on site at 22432 Pioneer Line for swabbing and pressure test of new water line. After completion the main was super chlorinated and chlorine was tested by operators.

15: Operator on site at 22432 Pioneer Line for testing of chlorine residual after waiting period (for super chlorination). Residuals passed commissioning standards. Main was flushed to normal residual at each sample point. Operator completed first set of sampling to commission line.

16: Operator on site at 22432 Pioneer Line for second set of samples for commissioning.

19: Operator on site at 22432 Pioneer Line for tie in of new water lines.

20: Operator replaced pH probe at Rodney tower for analyzer AIT1. Eramosa was on site to clear an alarm from the pH probe that would not go away.

SEPTEMBER:

Seasonal flushing was completed.

Chamber inspections were completed.

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.

THIRD QUARTER

JULY:

There were no alarms this month.

AUGUST:

There were no alarms this month.

SEPTEMBER:

11: Operator notified by Tricounty WTP that there was a chlorine alarm at Rodney Tower. Operator arrived on site and calibrated the analyzer as needed based on DPD grab sample and standard operating procedure.

SECTION 8: COMPLAINTS & CONCERNS

FIRST QUARTER:

Received no complaints or concerns this quarter.

SECOND QUARTER:

Received no complaints or concerns this quarter.

THIRD QUARTER

Received no complaints or concerns this quarter.