



Annual Summary Report

For The

Aylmer Distribution System

2024

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Aylmer Distribution System – 2024 Summary Report

January 2025

Overview

This Summary Report for the Aylmer Distribution System is generated in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation for the reporting period of January 1st, 2024, to December 31st, 2024. The Aylmer Distribution System (waterworks number 260002136) is categorized as Large Municipal Residential Drinking Water System. It is operated under the Municipal Drinking Water License (MDWL) #044-101 and Drinking Water Works Permit (DWWP) #044-201.

The Town of Aylmer is supplied water by the Aylmer Secondary System which delivers water from the Elgin Middlesex Pumping Station to the town limits by means of a 450mm water main.

Compliance

The annual audit of the Aylmer Distribution System's Drinking Water Quality Management Standard (DWQMS) was an off-site system audit conducted on August 20, 2024, by NSF auditor Rose Johnson. One minor nonconformity was identified. The minor nonconformity was identified for Risk Assessment – 36-month risk assessment was not done within 36 months from previous risk assessment. The most recent MECP system inspection was conducted on June 11th, 2024. There were no instances of non-compliance, resulting in an inspection rating of 100%.

Requirements

The 2024 Summary Report for the Aylmer Distribution System is submitted to satisfy Schedule 22 of Ontario Regulation 170/03. As described in O.Reg 170.03, the report must:

- a) List the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water license and any orders applicable to the system that were not met at any time during the reporting period and
- b) For each requirement not met in part a), specify the duration of the failure and the measures that were taken to correct the failures

The Summary Report must also include the following information to assist the owner in assessing the capability of the system to meet existing and future uses:

- 1) A summary of the quantities and flow rates of the water supplied during this period covered by the report, including monthly average and maximum daily flows
- 2) A comparison of the summary results to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water license or if the system is receiving all of its water from another system under an agreement, to the flow rates specified in that agreement

Table 1 lists the requirements that the system failed to meet, and the measures taken to correct the failure

Table 1

Drinking Water Legislation	List of requirements the system failed to meet	Duration of the failure	Measures that were taken to correct problem	Status: (complete or incomplete)
Safe Drinking Water Act	None	N/A	N/A	N/A
Ontario Regulations	None	N/A	N/A	N/A
DWL #044-101. Issue #4 DWWP #044-201 Issue #3	None	N/A	N/A	N/A
Provincial Officer's Order No.	None	N/A	N/A	N/A
Works permit/ License	None	N/A	N/A	N/A

Water Quantity Summary

Table 2 provides an overview of the quantity of water entering the Aylmer Distribution System at Chamber 16 as recorded by the SCADA system.

Table 2

	Total Flow (m3)	Average Daily Flow (m3/day)	Max Daily Flow (m3/day)	Min Daily Flow (m3/day)	Total Reverse Flow (m3)
January	144893.8	4674.0	5090.7	4266.2	5842.2
February	134609.3	4641.7	5094.4	4175.1	6640.7
March	138905.3	4480.8	4873.1	4074.2	7466.4
April	134525.2	4484.2	5398.6	2744.9	7561.0
May	160252.4	5169.4	6110.0	4423.7	6804.6
June	157951.0	5265.0	5837.8	4721.7	5626.2
July	166239.8	5362.6	6144.2	4529.6	4487.2
August	165006.5	5322.8	9869.5*	3821.3	4496.5
September	134575.7*	4485.9*	5384.2	1830.0	4404.8
October	151129.5	4875.1	5770.9	4288.8	4628.8
November	136199.7	4540.0	5258.7	4131.0	4929.4
December	137568.3	4437.0	8626.1	3522.5	5517.3
Total	1761856.5				68405.1

Flow data for the period January 1, 2024, to December 31, 2024

The maximum daily flow to the system occurred on December 21, 2024, with a daily total of 8626.1m³. Note asterisk beside August max daily flow. This ready was the result of a metering error. Asterisks are also listed for September data due to the metering error. September total and average were adjusted using 6 days of data from the meter at Chamber 13 as opposed to Chamber 16. The total flow from the EMPS to Aylmer averaged 4811.5m³/day. Total flow for the year 2024 was 1761856.5m³. The numbers change when one considers the reverse flow through the meter at Chamber 16. When the reverse flow is subtracted from the total flow, the annual flow drops to 1693451.4m³ for the year 2024. This also changes the average daily flow from 4811m³/day to 4639.6m³/day for 2024. Using the figure 130 l/sec as the EMPS pump capacity, the total daily flow capacity for the Aylmer Secondary line is 11232 m³/day. The current average daily flow (4639.6m³/day) uses 41.3% of the system's capacity. This number stayed the same as 2023. As expected, water usage was higher during the warmer months.

Table 3 compares the flows from 2023 to those of 2024. There were considerable variations in water usage on a month to month basis. High water consumption in the months of May to September are a common trend as people complete more outdoor tasks that require water usage. Irrigation and exterior cleaning of property always increase the total volume of water used. Colder months saw less water consumption.

Table 3

Month	Total Flow 2023 (m3)	Total Flow 2024 (m3)	Average Daily Flow 2023 (m3/day)	Average Daily Flow 2024 (m3/day)	Difference between 2023 and 2024 (%)
January	139502.9	144893.8	4500.1	4674.0	+3.9
February	122151.6	134609.3	4362.6	4641.7	+10.2
March	140523.9	138905.3	4533.0	4480.8	-1.2
April	124718.4	134525.2	4157.3	4484.2	+7.9
May	156541.7	160252.4	5049.7	5169.4	+2.4
June	165051.8	157951.0	5501.7	5265.0	-4.3
July	157148.8	166239.8	5069.3	5362.6	+5.8
August	157364.7	165006.5	5076.3	5322.8	+4.9
September	138513.8	134575.7*	4617.1	4485.9*	-2.8
October	149496.0	151129.5	4821.9	4875.1	+1.1
November	140605.8	136199.7	4686.9	4540.0	-3.1
December	143886.7	137568.3	4641.5	4437.0	-4.4
total flow (m3)	1735506.0	1761856.5			+1.5
Average (m3/day)	4754.8	4827.0	4751.5	4811.5	

Table 4 shows the various flow parameters for 2024 and compares the daily average flow rates for 2024 to those of 2023

Table 4: Flow Rates

Month	2024 Daily Average Flow Rate (L/s)	Max Flow Rate/Day (L/s)	Min. Flow Rate/Day (L/s)	Highest Hourly Average (L/s)	2023 Daily Average Flow Rate (L/s)
January	54.1	58.9	49.4	126.4	52.1
February	53.8	59.0	48.4	123.9	50.6
March	52.0	56.4	47.7	124.9	52.5
April	52.1	62.5	31.8	125.1	48.1
May	59.9	70.7	51.2	127.3	58.4
June	61.0	67.3	54.6	126.8	63.4
July	62.1	71.1	52.7	128.2	58.7
August	60.2	72.6	31.8	134.1	58.8
September	49.5	62.3	25.1	192.3*	54.0
October	56.5	66.8	49.7	129.2	55.8
November	52.4	55.9	47.8	127.8	54.2
December	51.4	99.9*	42.1	124.9	53.7

This information is collected in order to assist the owner in assessing the present capacity of the water system. A copy of this report shall be submitted to Council no later than March 31, 2024.