



Annual Summary Report

For The

Aylmer Distribution System

2018

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Aylmer Distribution System – 2018 Summary Report

January 2019

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, 2018 to December 31st, 2018. 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 450 mm water main.

Compliance

The annual audit of the Aylmer Distribution System's Drinking Water Quality Management Standard (DWQMS) was conducted off site, on October 19, 2018 by NSF auditor Rose Johnson.

The most recent **MECP** system inspection was conducted on June 18, 2018. No non-compliance issues were identified resulting in an inspection rating of 100%.

Requirements

The 2018 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				
Ontario Regulations				
DWL #044-101. DWWP #044-201 (as of June 7/16)				
Provincial Officer's Order No.				
Works permit/ License				

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	108410	3497	4036	3154	2545
February	97222	3472	3870	2993	2266
March	107074	3454	3692	3142	2696
April	95929	3197	3880	2272	2670
May	124551	4017	5108	3275	2465
June	131537	4384	5396	3538	2243
July	137186	4425	5644	3408	2855
August	117808	3800	4434	3256	3054
September	112293	3743	5255	2196	2767
October	137238	4427	5356	3522	2884
November	123474	4115	4563	3268	2862
December	126334	4075	4342	3629	2856
Total	1419056	3888			32163

Flow data for the period Jan 1, 2018 to Dec 31, 2018

The maximum daily flow to the system occurred on July 9, 2018 with a daily total of 5644 m³. The total flow from the EMPS to Aylmer averaged 3888 m³/day. The numbers change when one takes into account the reverse flow through the meter at Chamber 16. When the reverse flow is subtracted from the total flow, the annual flow drops to 1386893 m³ for the year 2018. This also changes the average daily flow from 3888 to 3800 m³/day for 2018.

Using the figure 130 l/sec as the EMPS pump capacity, the total daily flow for the Aylmer Secondary line is 11232 m³/day. The current average daily flow (3888 m³/day) uses only 34.6 % of the system's capacity. This number is slightly higher than the previous year's total of 32% capacity.

Table 3 compares the flows from 2018 to those of 2017. There were considerable variations on a month to month basis with the expected increases in June and July due to customer lawn watering. The biggest anomaly occurred during the last three months of the year when flows increased dramatically. Most, if not all of the increase in flow can be attributed to the expansion of IGPC. After more than a year of construction, the ethanol plant commissioned its' new addition in October of 2018, resulting in the plant doubling its' production.

Table 3

Month	Total Flow 2018 (m3)	Total Flow 2017 (m3)	Average Daily Flow 2018 (m3/day)	Average Daily Flow 2017 (m3/day)	Difference between 2018 and 2017 (%)
January	108410	105519	3497	3403	+2.8
February	97222	94721	3472	3382	+2.7
March	107074	99170	3454	3199	+8.1
April	95929	100161	3197	3339	-4.3
May	124551	113317	4017	3655	+9.9
June	131537	116875	4384	3895	+12.5
July	137186	128342	4425	4140	+6.9
August	117808	131268	3800	4234	-10.3
September	112293	122617	3743	4087	-8.4
October	137238	103114	4427	3326	+33.1
November	123474	102551	4115	3418	+20.4
December	126334	98497	4075	3177	+28.3
total flow (m3)	1419056	1316152			
Average (m3/day)			3888	3605	+7.8

Table 4 shows the various flow parameters for 2018 and compares the daily average flow rates for 2018 to those of 2017

Table 4: Flow Rates

Month	2018 Daily Average Flow Rate (L/s)	Max Flow Rate/Day (L/s)	Min. Flow Rate/Day (L/s)	Highest Hourly Average	2017 Daily Average Flow Rate (L/s)
January	40.4	46.8	36.6	133.1	39.4
February	40.1	44.8	34.7	143.8	39.2
March	39.9	42.7	36.1	133.2	37.1
April	37.1	44.8	26.5	133.4	38.7
May	46.4	59.1	37.9	137.1	42.3
June	46.4	62.5	40.7	132.3	45.1
July	51.2	65.5	39.6	135.6	47.9
August	44.0	51.1	37.7	134.3	49.0
September	43.4	61.4	25.7	132.0	47.3
October	51.2	61.9	40.6	132.1	38.5
November	47.6	52.7	39.2	155.1	39.5
December	47.1	50.3	41.8	131.8	36.8
	44.9	65.5	25.7	155.1	41.7

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, 2019.