Joint Board of Management Agenda
Aylmer Area Secondary Water Supply System & Port Burwell Area Secondary Water Supply System
March 18, 2026 – 1:00p.m.

Malahide Council Chambers
51221 Ron McNeil Line, Springfield

The Joint Board of Management met at the Springfield & Area Community Services Building, at 51221 Ron McNeil Line, Springfield, at 1:00p.m. The following were present:

(1) Call to Order

_____ is appointed Chair and the meeting is called to order at _____p.m.

(2) Disclosure of Pecuniary Interest

(3) Adoption of Minutes of Previous Meeting(s)

Recommended Motion:

THAT the minutes of the Aylmer Area Secondary Water Supply System Joint Board of Management meeting held on December 17, 2025 be approved as presented**.**

Recommended Motion:

THAT the minutes of the Port Burwell Area Secondary Water Supply System Joint Board of Management meeting held on December 17, 2025 be approved as presented.

(4) Reports

- AASWSS-26-01 – 2025 Flow Consumption and Water Loss Report

Recommended Motion:

THAT Report No. AASWSS-26-01 entitled “2025 Flow Consumption and Water Loss Report” be received.

- PBASWSS-26-01 – 2025 Flow Consumption and Water Loss Report

Recommended Motion:

THAT Report No. PBASWSS-26-01 entitled “2025 Flow Consumption and Water Loss Report” be received.

- AASWSS-26-02 – DWQMS Element 20: 2025 Drinking Water Quality Trends Report

Recommended Motion:

THAT Report No. AASWSS-26-02 entitled “DWQMS Element 20: 2025 Drinking Water Quality Trends Report” be received.

- PBASWSS-26-02 – DWQMS Element 20: 2025 Drinking Water Quality Trends Report

Recommended Motion:

THAT Report No. PBASWSS-26-02 entitled “DWQMS Element 20: 2025 Drinking Water Quality Trends Report” be received.

- AASWSS-26-03 – 2025 Fourth Quarter Operations Report

Recommended Motion:

THAT Report No. AASWSS-26-03 entitled “2025 Fourth Quarter Operations Report” be received.

- PBASWSS-26-03 – 2025 Fourth Quarter Operations Report

Recommended Motion:

THAT Report No. PBASWSS-26-03 entitled “2025 Fourth Quarter Operations Report” be received.

- AASWSS-26-04 – 2025 Section 11 Annual Report and Schedule 22 Summary Report

Recommended Motion:

THAT Report No. AASWSS-26-04 entitled “2025 Section 11 Annual Report and Schedule 22 Summary Report” be received.

- PBASWSS-26-04 – 2025 Section 11 Annual Report and Schedule 22 Summary Report

Recommended Motion:

THAT Report No. PBASWSS-26-04 entitled “2025 Section 11 Annual Report and Schedule 22 Summary Report” be received.

- AASWSS-26-05 – APAM SCADA Central Server Replacement and Hardware and Software System Upgrades

Recommended Motion:

THAT Report No. AASWSS-26-05 entitled “APAM SCADA Central Server Replacement and Hardware and Software Upgrades” be received;

AND THAT the Aylmer Area Secondary Water Supply System Joint Board of Management does hereby support the Single Source acquisition of the APAM SCADA Central Server Replacement and Hardware and Software System Upgrades from Actemium Toronto Summa;

AND THAT the Director of Public Works be authorized to execute the required agreements with Actemium Toronto Summa on behalf of the Township of Malahide, Port Burwell Area Secondary Water Supply System and Aylmer Area Secondary Water Supply System for the SCADA upgrades further described in this report.

- PBASWSS-26-06 – APAM SCADA Central Server Replacement and Hardware and Software System Upgrades

Recommended Motion:

THAT Report No. PBASWSS-26-06 entitled “APAM SCADA Central Server Replacement and Hardware and Software Upgrades” be received;

AND THAT the Port Burwell Area Secondary Water Supply System Joint Board of Management does hereby support Single Source acquisition of the APAM SCADA Central Server Replacement and Hardware and Software System Upgrades from Actemium Toronto Summa;

AND THAT the Director of Public Works be authorized to execute the required agreements with Actemium Toronto Summa on behalf of the Township of Malahide, Port Burwell Area Secondary Water Supply System and Aylmer Area Secondary Water Supply System for the SCADA upgrades further described in this report.

- AASWSS-26-06 – PLC Replacement at Elgin Middlesex Pumping Station (EMPS)

Recommended Motion:

THAT Report No. AASWSS-26-06 entitled “Elgin Middlesex Pumping Station (EMPS) PLC Lifecycle Replacement – Single Source Procurement” be received;

AND THAT the Aylmer Area Secondary Water Supply System Joint Board of Management does hereby support Single Source acquisition for the replacement of the Programmable Logic Controller (PLC) at the Elgin Middlesex Pumping Station from Actemium Toronto Summa;

AND THAT the Director of Public Works be authorized to execute the required agreements with Actemium Toronto Summa on behalf of the Aylmer Area Secondary Water Supply System for the SCADA upgrades further described in this report.

- PBASWSS-26-05 – Port Burwell Water Tower Inspection

Recommended Motion:

THAT Report No. PBASWSS-26-05 entitled “Port Burwell Water Tower Inspection” be received;

AND THAT the Port Burwell Area Secondary Water Supply System Joint Board of Management does hereby support the Single Source acquisition of the Port Burwell Water Tower Inspection from Landmark Structures;

AND THAT the Director of Public Works be authorized to execute the required agreements with Landmark Structures for the undertaking and completion of a Water Tower Inspection for the Port Burwell Area Secondary Water Supply System as described in this report.

- PBASWSS-26-07 – Transmission Main Replacement Project Update

Recommended Motion:

THAT Report No. PBASWSS-26-07 entitled “Transmission Main Replacement Project Update” be received.

(5) Correspondence

EAPWSS – Response to Malahide Township, Administering Municipality for the PBASWSS and AASWSS Boards, regarding the EAPWSS Master Plan.

(6) New Business

7) Adjournment

Recommended Motion:

THAT the Aylmer Area Secondary Water Supply System Joint Board of Management adjourn at _____ p.m. to meet again on June 17, 2026 at 1:00 p.m.

Recommended Motion:

THAT the Port Burwell Secondary Water Supply System Joint Board of Management adjourn at _____ p.m. to meet again on June 17, 2026 at 1:00 p.m.

Joint Board of Management Minutes
Aylmer Area Secondary Water Supply System & Port Burwell Area Secondary Water Supply System
December 17, 2025 – 1:00p.m.

Malahide Council Chambers
51221 Ron McNeil Line, Springfield

The Joint Board of Management met at the Springfield & Area Community Services Building, at 51221 Ron McNeil Line, Springfield, at 1:00p.m. The following were present:

Board Members:
Municipality of Central Elgin – Norman Watson
Town of Aylmer – Pete Barbour
Township of Malahide – Chester Glinski

Absent:
Municipality of Bayham - Tim Emerson

Staff:
Township of Malahide – Sam Gustavson, Jason Godby, and Allison Adams
Municipality of Bayham – Thomas Thayer and Ed Roloson

(1) Call to Order

Pete Barbour is appointed Chair and the meeting is called to order at 1:12p.m.

(2) Disclosure of Pecuniary Interest

(3) Adoption of Minutes of Previous Meeting(s)

Moved by: Norman Watson
Seconded by: Chester Glinski

THAT the minutes of the Aylmer Area Secondary Water Supply System Joint Board of Management meeting held on September 17, 2025 be approved as presented**.**

Carried

Moved by: Tim Emerson
Seconded by: Chester Glinski

THAT the minutes of the Port Burwell Area Secondary Water Supply System Joint Board of Management meeting held on September 17, 2025 be approved as presented.

Carried

(4) Reports

- AASWSS-25-11 - 2025 AASWSS MECP Inspection Report

Moved by: Norman Watson
Seconded by: Chester Glinski

THAT Report No. AASWSS-25-11 entitled “2025 AASWSS MECP Inspection Report” be received.

Carried

- PBASWSS-25-11 - 2025 MECP Inspection Report

Moved by: Chester Glinski
Seconded by: Tim Emerson

THAT Report No. PBASWSS-25-11 entitled “PBASWSS 2025 MECP Inspection Report” be received.

Carried

- AASWSS-25-12 OCWA Third Quarter Operations

Moved by: Norman Watson
Seconded by: Chester Glinski

THAT Report No. AASWSS-25-12 entitled “OCWA Third Quarter Operations” be received.

Carried

- PBASWSS-25-12 OCWA Third Quarter Operations Report

Moved by: Tim Emerson
Seconded by: Norman Watson

THAT Report No. PBASWSS-25-12 entitled “OCWA Third Quarter Operations Report” be received.

Carried

(5) Correspondence

1. Elgin Area Primary Water Supply System - Yarmouth Yards Industrial Development (PowerCo et. al.), St. Thomas ONT
2. Town of Aylmer - Support for the “Yarmouth Yards” Industrial Development – St. Thomas, Ontario
3. Township of Malahide - Comments regarding the Elgin Area Primary Water Supply System Master Plan

(6) New Business

- 2026 Meeting Dates – March 18, 2026, June 17, 2026, September 16, 2026 and December 16, 2026

Moved by: Norman Watson
Seconded by: Chester Glinski

BE IT RESOLVED THAT the 2026 meeting dates for the Aylmer Area Secondary Water Supply System Joint Board of Management be scheduled for as March 18, June 17, September 16, and December 16, 2026.

Carried

Moved by: Tim Emerson
Seconded by: Norman Watson

BE IT RESOLVED THAT the 2026 meeting dates for the Port Burwell Secondary Water Supply System Joint Board of Management be scheduled as March 18, June 17, September 16, and December 16, 2026.

Carried

(7) Adjournment

Moved by: Chester Glinski
Seconded by: Norman Watson

THAT the Aylmer Area Secondary Water Supply System Joint Board of Management adjourn at 2:04 p.m. to meet again on March 18, 2026 at 1:00 p.m.

Carried

Moved by: Tim Emerson
Seconded by: Norman Watson

THAT the Port Burwell Secondary Water Supply System Joint Board of Management adjourn at 2:04 p.m. to meet again on March 18, 2026 at 1:00 p.m.

Carried

_____
Board Chair – P. Barbour

_____
Clerk – A. Adams

REPORT NO. **AASWSS-26-01**

TO: Aylmer Area Secondary Water Supply System - Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **2025 FLOW CONSUMPTION AND WATER LOSS REPORT**

RECOMMENDATION:

THAT Report No. AASWSS-26-01 entitled “2025 Flow Consumption and Water Loss Report” be received.

PURPOSE & BACKGROUND:

The AASWSS purchases water on an ongoing basis via the meter at the Elgin Middlesex Pumping Station (EMPS). All water conveyed through this meter is considered to be purchased water by the Secondary Board. From there, each municipality purchases water from the Secondary Board using various billing methods to supply its residents with potable water. The difference between the water purchased by the Board and that which was sold by the Secondary Board is known as non-revenue water.

As a distribution system that purchases potable water from the Primary Board, it is extremely important to closely monitor and record flows continuously. Not only is water loss management critical to achieving a sustainable water system, but it also protects residents' health by removing potential points of entry for contaminants into the system.

COMMENTS & ANALYSIS:

The purpose of this report is to outline the flow consumption purchased and sold over the past year on the (450mm) waterline for the Board’s review.

In 2025, the Aylmer Area Secondary Water Supply System purchased a total of 1,847,931 m3 of water at 1.0337 cents/m^3. In 2025, the secondary line used 496 m^3 more than the previous year. The Board was billed $1,910,206.26 in 2025 ($65,172.93 more than in 2024) by the Elgin Area Primary Water Supply System: Joint Board.

The 2025 summary of billable flows by each municipality is as follows:

- The Town of Aylmer purchased 1,766,260m^3 (flow through billing chamber 16). This is an increase of 48,718 m^3 comparing 2025 to 2024 flows. The total volume invoiced to Aylmer represents all the flow which entered the Town of Aylmer's Distribution System at chamber 16. No firefighting-related flows are required to be submitted by the Town of Aylmer, as these are included in their total volume purchased for all water entering their water system, as measured at the boundary meter at chamber 16.

- Malahide Township purchased 10,573m^3 of water. (The sum of all customer meter readings as provided by the Township of Malahide. The total flow submitted also includes 19 m^3 used by Malahide for Firefighting purposes). This is an increase of 259 m^3 comparing 2025 to 2024 flows.

- Central Elgin purchased 31,381m^3 of water. (The sum of all customer meter readings as provided by the Municipality of Central Elgin. The total flow submitted also includes 821m^3 used by Central Elgin for dust control and Firefighting purposes). This is an increase of 872 m^3 comparing 2025 to 2024 flows.

Standard Billing Practices:

For the Town of Aylmer, chamber 16 is used as the billing meter. Malahide and Central Elgin are billed using a different billing system. The sum of the residential meter readings, including fire hydrant usage and bulk water sales, is submitted to the Administering Municipality for billing purposes. For various reasons, both chambers 13 and 16 are not used as billing meters to bill back Malahide Township and Central Elgin.

2025 Water Loss Summary:

The 2025 overall summary is as follows:

- Total used from three Municipalities: 1,808,214m^3
- Total purchased from Primary Board: 1,847,931m^3
- Total non-revenue lost water: 39,717 m^3

Water loss in the distribution system can be grouped into two main categories: 1) real loss, which can be attributed to line leakage and service leakage, and 2) apparent loss, which is unauthorized consumption, inaccuracies of billing meters, data used for billing and theft of water. Non-revenue water is the sum of both real loss and apparent loss for which the Secondary Board does not receive compensation.

Based on the flows submitted by Malahide, Central Elgin, and the sum of chamber 16 equates to 1,808,214 m^3 of water. The Primary Board billed the Secondary Board for 1,847,931 m^3 of water. Therefore, the difference is a non-revenue loss of 39,717 m^3 or 2.15% in 2025. Water loss in 2024 was 89,070 m^3. When comparing flows with 2024, there has been a decrease in total water loss in 2025.

Acceptable Water Loss:

According to AWWA, if a water system has a water loss of 10% or less, it is considered acceptable. AWWA notes that although the loss is acceptable, continuous monitoring is necessary to ensure the system does not exceed 10%.

Water Loss Breakdown:

Water loss is allocated to each municipality based on the percentage of water purchased by that municipality. As an example, if Malahide Township uses 1% of the annual water volume conveyed through the system via the EMPS, then Malahide Township is responsible for paying for 1% of the lost water on the secondary waterline.

For 2025, each municipality's share of the water loss is as follows:

Formula: % of water purchased from the AASWSS X Total Non-Revenue Water = m3

- The Town of Aylmer: 97.68 X 39,717 m^3 = 38,795 m^3
- Malahide Township: 0.58% X 39,717 m^3 = 232 m^3
- Central Elgin: 1.74% X 39,717 m^3 = 689 m^3

SUMMARY:

Over the last year, the AASWSS has met the AWWA standard for water loss of less than 10%. Overall, the distribution system performed well in 2025.

Water loss management remains an important aspect of the AASWSS budget's operations and maintenance. Even though the systems within the AWWA standard have less than 10% loss, continual monitoring and leak-detection programs are essential tools that the Staff implement to keep water loss to a minimum.

ATTACHMENTS:

N/A

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

REPORT NO. **PBASWSS-26-01**

TO: Port Burwell Area Secondary Water Supply System - Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **2025 FLOW CONSUMPTION AND WATER LOSS REPORT**

RECOMMENDATION:

THAT Report No. PBASWSS-26-01 entitled “2025 Flow Consumption and Water Loss Report” be received.

PURPOSE & BACKGROUND:

The PBASWSS purchases water on an ongoing basis through the main metering chamber, MV1, located near the Elgin Area Water Treatment Plant. All water conveyed through this chamber is considered to be purchased water by the Secondary Board. From there, each municipality purchases water from the Secondary Board using various billing methods to supply its residents with potable water. The difference between the water purchased by the Board and that which was sold by the Secondary Board is known as non-revenue water.

As a distribution system that purchases potable water from the Primary Board, it is extremely important to closely monitor and record flows continuously. Not only is water loss management critical to achieving a sustainable water system, but it also protects residents' health by removing potential points of entry for contaminants into the system.

COMMENTS & ANALYSIS:

The purpose of this report is to outline the flow consumption purchased and sold over the past year on the (300 mm) waterline for the Board’s review.

In 2025, the Port Burwell Area Secondary Water Supply System purchased a total of 302,126m^3 of water for 1.0337 cents/m^3. In 2025, the secondary line used 26,167 m^3 more than the previous year. The PBASWSS was billed $312,307.65 in 2025 ($36,707.30 more than 2024) by the Elgin Area Primary Water Supply System: Joint Board.

The total volume purchased is determined as the annual sum of water conveyed through the billing meter at the MV1 chamber. This meter is owned and maintained by the Primary Board. Each municipality was billed by the Administering Authority for their usage.

The 2025 summary of billable flows by each municipality is as follows:

- Central Elgin submitted flows of 9,439 m^3 for 2025. This is an increase of 3 m^3 comparing 2025 to 2024 flows. No fire flows were reported by Central Elgin for Firefighting purposes.

- Malahide Township submitted flows of 104,038m^3 for 2025. This is an increase of 11,144m^3 compared 2025 to 2024 flows. Malahide reported 30m^3 used for firefighting purposes.

- Bayham submitted flows of 175,872m^3 for 2025. This is an increase of 18,524 m^3 comparing 2025 to 2024 flows. No firefighting-related flows are required to be submitted by Bayham Township, as these are included in their total volume purchased for all water entering their water system, measured at the boundary meters at V001 (water entering Vienna) and E038 (water entering Port Burwell).

Standard Billing Practices:

Flow breakdown for each municipality is determined by the following:

- Central Elgin flows are determined to be the total sum of all their water accounts. These flows are submitted annually.

- Malahide flows are determined to be the sum of all of their water accounts + the total annual volume of water conveyed through chambers at Dexter and Imperial Rd., P.B.01, P.B.02 and Copenhagen booster station. These flows are submitted annually.

- Bayham flows are historically determined to be the sum of all water conveyed through billing chambers V001 and EO38 + the sum of their water customers between EO34, V001 and EO38. These flows are submitted annually.

For various reasons, the boundary meter chambers at EO14 and EO34 are not typically used for billing purposes. Those chambers are used only when metering issues are found in tertiary chambers.

2025 Water Loss Summary:

The 2025 overall summary is as follows:

- Total used from the three municipalities: 289,349 Cubic Meters.
- Total purchased from the Primary Board: 302,126 Cubic Meters.
- Total non-revenue lost water: 12,777 Cubic Meters.

Water loss in the distribution system can be grouped into two main categories: 1) real loss, which can be attributed to line leakage and service leakage, and 2) apparent loss, which is unauthorized consumption, inaccuracies of billing meters, data used for billing and theft of water. Non-revenue water is the sum of both real loss and apparent loss for which the Secondary Board does not receive compensation.

Based on the flows submitted by Malahide and Central Elgin, and the sum of Bayham flows, the total is 289,349 m^3 of water. The Primary Board billed the Secondary Board for 302,126m^3 of water. Therefore, the difference is a non-revenue loss of 12,777 m^3 or 4.23% in 2025. Water loss in 2024 was 16,281 m^3. When comparing flows with 2024, there has been a decrease of approximately 3,504m^3 in total water loss in 2025.

Acceptable Water Loss:

According to AWWA, if a water system has a water loss of 10% or less, it is considered acceptable. AWWA notes that although the loss is acceptable, continuous monitoring is necessary to ensure the system does not exceed 10%.

Water Loss Breakdown:

Water loss is allocated to each municipality based on the percentage of water purchased by that municipality. As an example, if Malahide Township uses 1% of the annual volume of water conveyed through the secondary transmission, then Malahide Township is responsible for paying for 1% of the lost water on the secondary waterline.

For 2025, each municipality's share of the water loss is as follows:

Formula: % of water purchased from the PBASWSS X Total Non-Revenue Water = m^3

- Municipality of Bayham: 60.78% X 12,777m^3 = 7,766 m^3
- Malahide Township: 35.96% X 12,777m^3 = 4,595 m^3
- Central Elgin: 3.26% X 12,777m^3 = 417 m^3.

SUMMARY:

Over the last year, the PBASWSS met the AWWA standard for water loss of less than 10%. Overall, the distribution system performed well in 2025.

Water loss management remains an important aspect of the PBASWSS budget's operations and maintenance. Even though the systems within the AWWA standard have less than 10% loss, continual monitoring and leak-detection programs are essential tools that Staff implement to ensure water loss is kept to a minimum.

ATTACHMENTS:

N/A

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

REPORT NO. **AASWSS-26-02**

TO: Aylmer Area Secondary Water Supply System- Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **DWQMS ELEMENT 20: 2025 DRINKING WATER QUALITY TRENDS REPORT**

RECOMMENDATION:

THAT Report No. AASWSS-26-02 entitled “DWQMS Element 20: 2025 Drinking Water Quality Trends Report” be received.

PURPOSE & BACKGROUND:

On an annual basis, the Operating Authority, being the Ontario Clean Water Agency (OCWA), is required to submit to the owner a drinking water quality trends report for the Aylmer Area Secondary Water Supply System (AASWSS). This report is subsequently reviewed with the owner, which is a requirement of Element 20: Management Review of the DWQMS Operational Plan.

COMMENTS & ANALYSIS:

On January 20th, 2026, the Ontario Clean Water Agency (OCWA) provided the drinking water quality trends report to the Township of Malahide staff.

The attached report, as provided by OCWA, is a detailed summary of drinking water quality parameters monitored by the operators, including chlorine residuals, microbiological testing, and trihalomethanes and haloacetic acids (HAAs). The attached report charts the minimum and maximum values for these parameters over the last 10 years against the operational guidelines and adverse water quality limits set out in O. Reg. 170/03.

On May 20th, 2025, Township Staff met with OCWA to conduct the annual Management Review meeting for the Transmission main. Additionally, the EMPS Management review was conducted separately by the OCWA hub responsible for the EMPS facility on December 16th, 2025. The meeting minutes from both Management Reviews are also attached to this report for the Board's information. The purpose of the review is to evaluate the continuing suitability, adequacy and effectiveness of OCWA's Quality & Environmental Management System (QEMS).

SUMMARY:

The information provided to the Staff by OCWA is used to ensure that the Staff and Owners are aware of drinking water quality trends for the AASWSS. The report also helps the Owners make decisions to provide a continuous, safe supply of potable water for residents connected to the AASWSS.

ATTACHMENTS:

1. OCWA Drinking Water Quality Trends Report 2025
2. Elgin Middlesex Pumping Station Management Review Minutes
3. Aylmer Secondary Transmission Main Management Review Minutes

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Overview

As part of the DWQMS Element 20: Management Review it is required to review the drinking water quality trends for the facility. This report details the drinking water quality parameters that are monitored for the Aylmer Area Secondary Water Supply System (AASWSS). These parameters are:

- Distribution Free Chlorine Residuals
- Distribution Water E.coli, Total Coliform and Hetertrophic Plate Count
- Distribution Water Trihalomethanes
- Distribution Water Haloacetic Acids

Free Chlorine

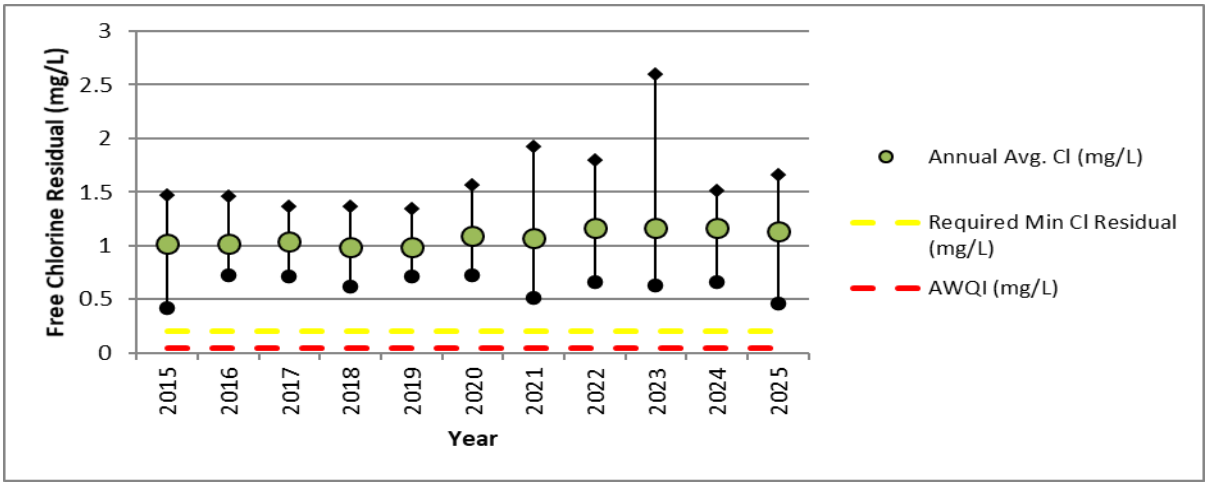
Each week seven residuals are taken on the system according to the regulations. The annual minimum and maximum chlorine residuals for the last ten years were:

Year	Minimum Free Chlorine Residual (mg/L)	Maximum Free Chlorine Residual (mg/L)
2015	0.42	1.47
2016	0.72	1.46
2017	0.71	1.37
2018	0.62	1.37
2019	0.71	1.35
2020	0.72	1.57
2021	0.51	1.92
2022	0.66	1.80
2023	0.63	2.60
2024	0.66	1.51
2025	**0.46**	**1.66**
Operational Guideline	**0.20**	**4.00**
AWQI Limit	**0.05**	**n/a**

The chart below depicts the minimum and maximum free chlorine residuals taken as grab samples in the Aylmer Area Secondary Water Supply System, comparing the last ten years (2015-2025) against the operational guideline and adverse water quality limits set by O. Reg. 170/03. The required minimum is 0.20mg/L, which is a guideline from the MECP for the drinking water system to achieve in all parts of the distribution system. If a residual is found below this requirement, action is required to increase this residual. The usual means of increasing the residual is by flushing in the area. An Adverse Drinking Water Quality Indicator (AWQI) occurs when the free chlorine residual taken as a grab sample is below 0.05mg/L, this residual is to be reported the MECP Spills Action Centre (SAC) and the local Medical Officer of Health. Immediate action is required to bring the residual above 0.2mg/L in the affected area and take any further action as directed by the Medical Officer of Health.

In 2025, the average free chlorine residual taken as a grab sample in the distribution system was 1.14mg/L. This is a 2.6% decrease from the 2024 average (1.17mg/L) for free chlorine residual. Refer to Chart 1.

Chart 1. Minimum and maximum free chlorine residuals throughout distribution system compared against the required minimum and the AWQI limit.



Microbiological Samples

The distribution water in the Aylmer Area Secondary Water Supply System is sampled weekly for E.coli, Total Coliform and Hetertrophic Plate Count (HPC), following O.Reg.170/03. Each week three samples are tested for E. coli and Total Coliform and one sample is tested for HPC. The Ontario Drinking Water Quality Standard for E.coli and Total Coliform is not detectable for both. Hetertrophic Plate Count is used as an operational tool to determine if there is an issue.

There were two samples that had detectable Total coliform in 2021. On June 23rd, 2021 SGS Laboratories reported an AWQI of 4 cfu/100mL of Total coliform from Sample Station 86. On August 11th, 2021 SGS Laboratories reported a second AWQI of 1 cfu/100mL of Total coliform from Sample Station 80. Re-samples were collected upstream, downstream and at the source as required. All re-sample results were satisfactory.

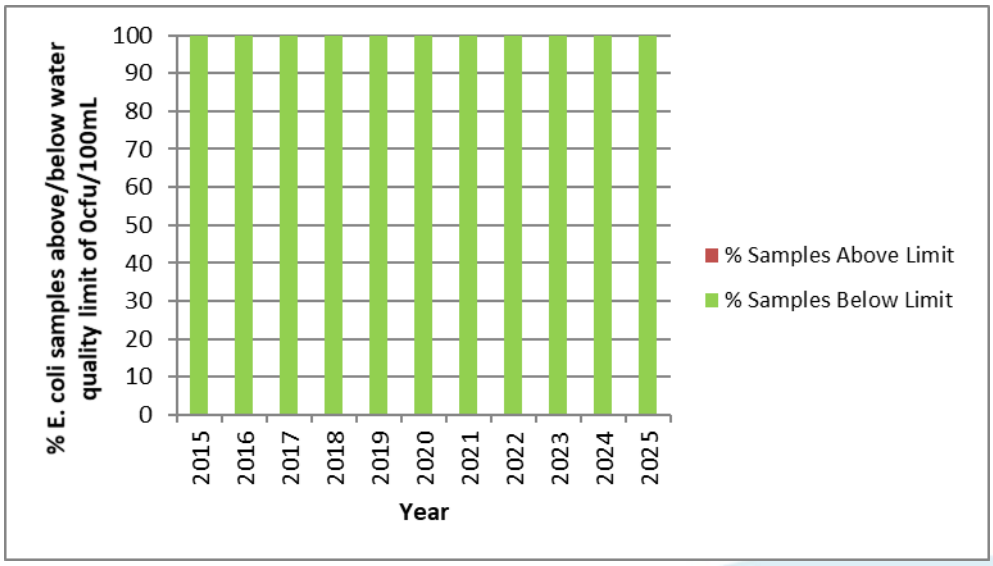
In 2025, the range of HPC was <10 to 40cfu/mL. The table below shows the sample results compared for the last ten years (2015-2025).

Year	# TC & EC Samples	E. coli Range (cfu/100mL)	Total Coliform Range (cfu/100mL)	# HPC Samples	Heterotrophic Plate Count Range (cfu/mL)
2015	162	0 – 0	0 – 0	58	0 - 10
2016	156	0 – 0	0 – 0	52	<10 – 20
2017	156	0 – 0	0 – 0	52	<10 – 110
2018	156	0 – 0	0 – 0	52	<10 – 30
2019	161	0 – 0	0 – 0	55	<10 – 20
2020	156	0 – 0	0 – 0	57	0 – 80
2021	164	0 – 0	0 – 4*	54	0 – 20
2022	157	0 – 0	0 – 0	52	<10 - <10
2023	160	0 – 0	0 – 0	56	<10 - <60
2024	159	0 – 0	0 – 0	53	<10 - <10
2025	**156**	**0 – 0**	**0 – 0**	**52**	**<10 - 40**

*There were two AWQIs report in 2021. The first was reported on June 23rd, 2021 and the second on August 11th, 2021.

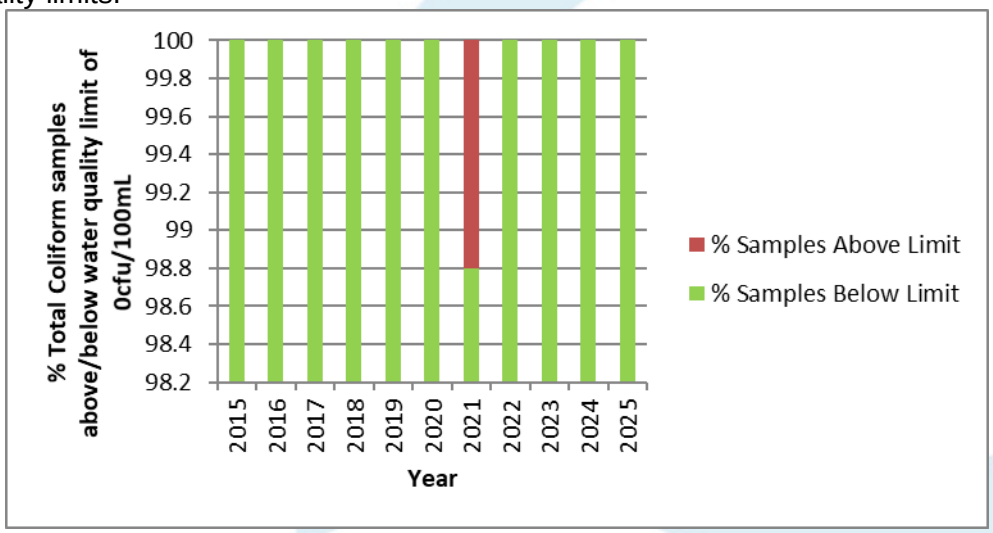
There have been no issues with E. coli in the last ten years, refer to Chart 2.

Chart 2. E. coli results from 2015 to 2025 as a percentage of samples below drinking water quality Limits.



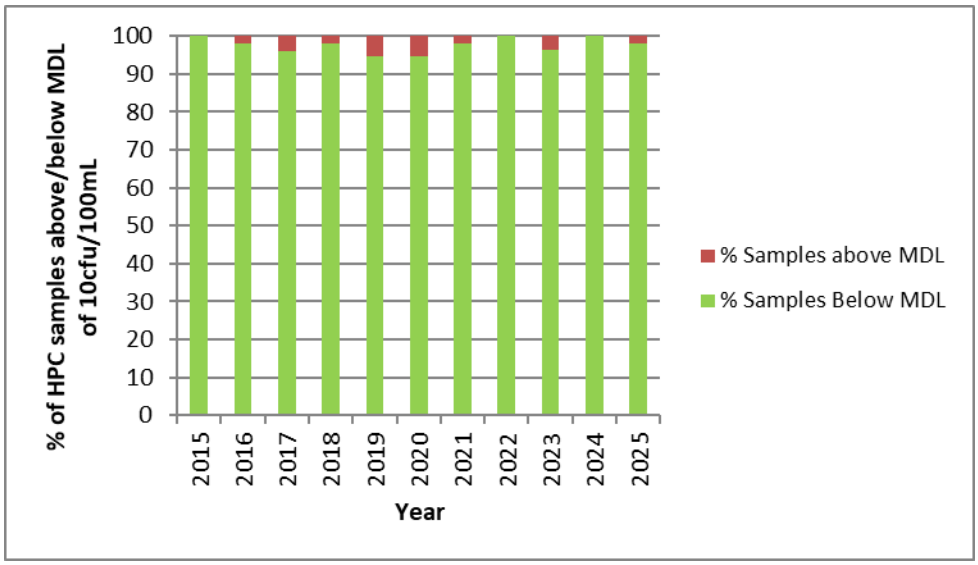
There were two issues with total coliform in 2021 but no other issues in the last ten years, refer to Chart 3.

Chart 3. Total coliform results from 2015 to 2025 as a percentage of samples below drinking water quality limits.



HPC results fluctuate, however, the majority of results show no issues (less than Method Detection Limit (MDL)), refer to chart 4 below. There is only a concern with high HPC results if they stay consistently high as this could indicate biofilm formation in the watermain.

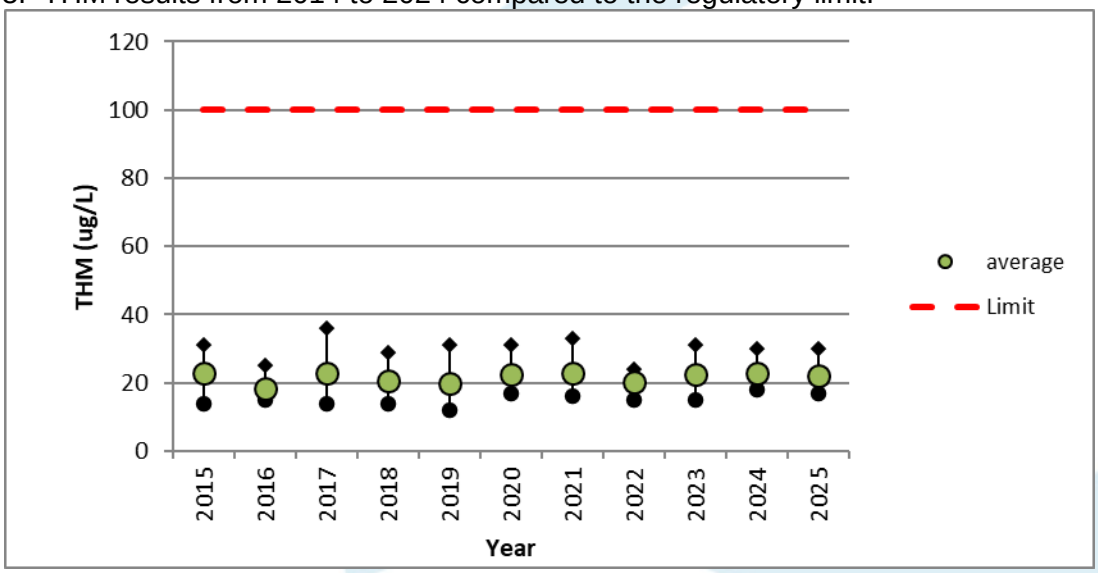
Chart 4. HPC results from 2015 to 2025 depicted as % below method detection limit (MDL) and % above MDL.



Trihalomethanes

The distribution system is sampled for Total Trihalomethanes (THMs) on a quarterly basis, as per O. Reg. 170/03. The Ontario Drinking Water Quality Standard for THM is 100µg/L. The range of THM results for the AASWSS in 2025 was 17 to 30µg/L. Refer to the chart 5 for the THM results for the last ten years; the 2025 running average of 22.00µg/L has decreased 4.3% compared to 2024 (23.00µg/L).

Chart 5. THM results from 2014 to 2024 compared to the regulatory limit.

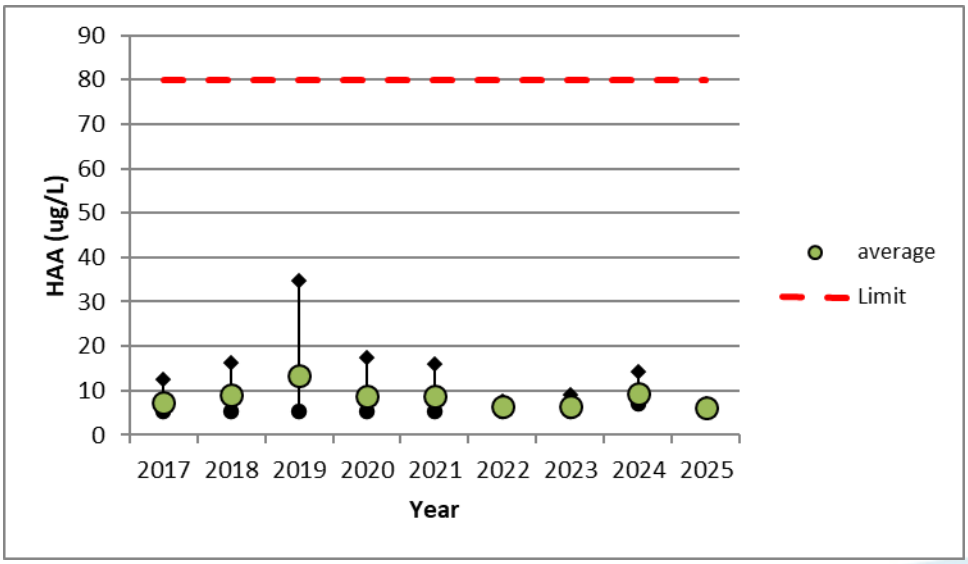


Haloacetic Acids

The distribution system is sampled for Total Haloacetic Acids (HAAs) on a quarterly basis, as per O. Reg. 170/03. The Ontario Drinking Water Quality Standard for HAAs is 80µg/L. The range of HAA results for the Aylmer Area Secondary Water Supply System in 2025 was 5.3 to 6.9µg/L. Refer to chart 6 for the HAA results for the last eight years (monitoring requirements

came into effect in 2017). The running average of 6.3µg/L for 2025 has decreased 32.3% since 2024 (9.3µg/L).

Chart 6. HAA results for the 2017-2025 compared against the regulatory limit.



Discussion

Overall the Aylmer Area Secondary Water Supply System provided quality water meeting all regulatory requirements.

Revision History

Date	Revision #	Reason for Revision	Revision By
2026-01-19	*0*	*Create Report*	*Matthew Belding*

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 1 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Drinking Water System Name:	**Owner and Location**:
Elgin Middlesex Pumping Station Portion of: *Aylmer Area Secondary Water Supply System* *St. Thomas Area Secondary Water Supply System* *City of London Distribution System*	*Aylmer Area Secondary Joint Board of Management* *St. Thomas Area Secondary Joint Board of Management* *City of London*

Review Period: *December 1, 2024 to December 1, 2025*

Meeting Information/Introduction

Date/Time:	December 16, 2025	**Location:**	St. Thomas City Hall

Attendees: Top Management: Nick Wilson (Senior Operations Manager), Jackie Muller (Regional Hub Manager) - Virtual, Courtney Miller (Regional Hub Business Manager)
QEMS Representative: Cindy Sigurdson (Safety, Process and Compliance Manager)
QEMS Representative Alternative: Mark MacKenzie (Process and Compliance Technician)
Owner Representatives: Shayne Reitsma (St. Thomas), Chris Tillaart (St. Thomas), Sam Gustavson (Aylmer), Connor Bailey (London)

Regrets: Chris Andrew (St. Thomas), Karel Kamerman (St. Thomas)

Distribution: All Invited Attendees

Minutes Taken By: Mark MacKenzie

Introduction: Purpose:
To evaluate the continuing suitability, adequacy and effectiveness of OCWA's QEMS.

Objectives:
The Management Review participants will review/discuss the standing agenda items and the data presented, identify deficiencies, make recommendations and/or initiate action plans to address identified deficiencies as appropriate.
The Management Review includes a review of the DWQMS operational plan, SAI/Intertek audit report(s), internal audit report(s) and other related operational documents/records as detailed in the meeting minutes.

This meeting covers the standing agenda items for the DWSs noted above. Details of the discussion, any deficiencies identified, decisions made and applicable action items related to each standing agenda item are described under the

appropriate item number within the following table. Additional comments/discussion items are described under section 2.

The minutes from the previous Management Review on December 17, 2024 are also reviewed. Any follow up on actions and/or additional actions required are detailed under item i.

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
1 [a]	**Incidents of regulatory non-compliance:** There were no incidents of regulatory non-compliance identified in the MECP Inspections or reported to the MECP by OCWA. There was one (1) non-compliance for the EAPWSS due to a missed sampling submission following a disinfection after repair. 2024-2025 MECP Inspection Ratings: 1. Aylmer - 100% 2. St. Thomas - 100% 3. London – 98.12% 4. EAPWSS - 95.52% 2025-2026 MECP Inspection Ratings: 1. Aylmer - 100% 2. St. Thomas – not completed 3. London – 100% 4. EAPWSS – not completed	None	NA	NA

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 3 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
[b]	**Incidents of adverse drinking water tests:** There were no incidents of adverse water tests at the EMPS. There was (1) AWQI reported at the EAPWSS for a fluoride grab sample exceeding 1.50 mg/L. An initial fluoride spike interlocked the high lift pumps and was not reportable under the MDWL regulatory relief. However, a grab sample was collected to verify the analyzer, which was reportable as the MDWL has no regulatory relief for grab samples. Flushing was completed and the fluoride residual was returned to normal. Downstream samples throughout the distribution system remained within normal ranges.	None	NA	NA
[c]	**Deviations from Critical Control Point limits and response actions:** Secondary Chlorination (Rechlorination) Free Chlorine Residual: Minimum 0.50 mg/L Maximum 2.50 mg/L Setpoints are requested within these defined limits to meet regulatory requirements and owner requirements. In 2025 (YTD) there was one (1) exceedance of critical control limits (CCL):	None	NA	On-going monthly basis

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 4 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	September 26, 2025 - London free chlorine dropped to 0.44 mg/L during pump 6 shut down. Below 0.50 mg/L for 2 minutes, 9 seconds.			
[d]	**Effectiveness of the risk assessment process**: Annual review completed August 26, 2025. Actions included adding cybersecurity threat to Table 4 of OP-08A.	None	NA	NA
[e]	**Internal and third-party Audit results:** **Third-party audit results:** External DWQMS Surveillance Audit results were received on September 10, 2025. NC's - (0) OFI's - (1) **Element 19 Internal Audit:** There is an opportunity to consider combining EMPS Internal Audits, for efficiency purposes. **External Re-Accreditation Audit** External Re-Accreditation Audit results were received on October 31, 2025. Certification was successfully achieved. NC's - (0) OFI's (5)	This will be addressed with proposal for combining Operational Plans (section k – Changes that could effect QEMS)	NA	NA

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 5 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	Element 5 Document and Records Control: There is an opportunity to: i) ensure document and record control, (e.g. a. hardcopy EAPWSS Control Room, EMPS 2019 Contingency and 2018 Operational Plans are out of date.	Hardcopies were removed from these locations. No further action required.	NA	NA
		OCWA to consider options for controlling work order checklists.	Cindy Sigurdson	31-Dec-26
	b. Weekly EMPS Checklists do not have document control.	OCWA to consider adding location of third-party reports to OP-05A.	Cindy Sigurdson	30-Jun-26
	c. include SharePoint external maintenance reports (e.g., Flowmetrix, Compressors and Surge Tank Inspections) and training certificates (e.g., OCWA Instrument Technician) locations within OP-05A.	This will be addressed with proposal for combining Operational Plans (section k – Changes that could effect QEMS)	NA	NA
	d. review applicability of chlorine feed inspections identified in OP-15.	This will be addressed with proposal for combining Operational Plans (section k – Changes that could effect QEMS)	NA	NA
	ii) reduce duplication and increase efficiency by: a. reviewing the value of OP-08 (duplication with OP-07 and OP-08A).	NA at this time as this is linked to the EAPWSS QMS.	NA	NA

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	b. merging documents (e.g., into tabs for Sample schedules, and separately, Emergency Testing Matrices). **Element 10 Competencies:** There is an opportunity to reflect EMPS CP-1 within EMC-4 Training and Testing within the Training Database, for due diligence purposes. **Element 15 Infrastructure Maintenance, Rehabilitation & Renewal:** There is an opportunity to: i) review the process for tracking maintenance changes for new and existing infrastructure (e.g., 5-Year Surge Tank). ii) ensuring completion of maintenance activity before closing Work Order (e.g., City of London managed surge tank 3-year TSSA / Insurance Audit reminder). iii) add annual Air Compressor Major Maintenance to Maximo.	OCWA to add tracking EMPS Contingency Plan test completion on their internal training matrix. Create a structured procedure for tracking new infrastructure. OCWA to update CMMS work orders to include awaiting reports before closing out WO. NA – Air compressor upgrades complete in 2025. Update Emergency testing matrix legend to clarify the various types of testing (eg. Actual event debrief, full-scale test, desktop)	Mark MacKenzie Cindy Sigurdson/ Nick Wilson Cindy Sigurdson/Asset Maintenance Specialist NA Mark MacKenzie	31-Mar-26 30-Jun-26 30-Jun-26 NA 31-Mar-26

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	Element 18 Emergency Management: There is an opportunity to define "full scale exercise" (actual emergency?) within the Emergency Testing Matrix. **Element 21 Continual Improvement:** There is an opportunity to: i) add a 'DWQMS Element #' column to CAF Tracking for trending purposes, and ii) review the documentation of the verification of effectiveness process.	Completed – Added DWQMS Element # to CAF tracking spreadsheet Completed – added "Verification of Effectiveness" column to CAF tracking spreadsheet	NA NA	NA NA
[f]	**Results of emergency response testing:** Completed review and testing of CP-01 Spill Response and CP-02 Critical Injury on September 23, 2025 with no recommended action items required.	On-the-job training records completed. No OFI's identified.	NA	NA
[g]	**Operational performance:** The operation of the facility meets all regulatory and contractual requirements. Water quality review is completed every 24 hours by duty Operator at the EAPWSS. Monthly O&M Reports are sent to the client. 1. Chlorine residuals 2. Flows	None	NA	NA

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	3. Microbiological test results 4. THM's and HAA's (quarterly) 5. Work order Summary			
[h]	**Raw water supply and drinking water quality trends:**			
	1. On May 2, 2025 updated source water raw characteristics using data from 2024.	Raw water characteristics table removed from OP-06 Drinking Water System in the proposed combined Operational Plan.	NA	NA
	2. Review trends in Geosmin-MIB results from 2025. Geosmin detected in nine (9) raw water samples ranging from 3-8 ng/L. PAC dosages at Elgin Area WTP increased as required. Extended Geosmin sampling until 2 consecutive raw water tests of ND were received (final samples collected November 25th).	NA – Noted, increased source water temperatures later in season contributed to extended Geosmin/MIB season.	NA	NA
	3. Annual Harmful Algal Bloom (HAB) sampling for microcystin (ELISA) at the Elgin Area WTP from June-October. For 2025, received one lab result for a detect of Microcystin in the raw water on October 7, 2025. Notifications made to Health Units as required under MDWL. Treated water results were all non-detectable.	NA	NA	NA
		NA – Noted, similar raw water quality results from neighbouring systems on Lake Erie.	NA	NA

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	4. Sharing water quality information with neighbouring systems (Chatham-Kent, West Elgin). 5. Additional sampling completed in partnership with NSERC research partners during high turbidity storm events at Elgin Area WTP. 6. There were no abnormal drinking water quality trends observed at the EMPS.	NA NA	NA NA	NA NA
[i]	**Follow-up on action items from previous Management Reviews:** No outstanding action items.	None	NA	NA
[j]	**Status of management action items identified between reviews:** CAF Tracking sheet updated with any noted action items along with responsible party and deadline.	None	NA	NA
[k	**Changes that could affect the QEMS**: Currently, each drinking water system has a separate operational plan. Based on discussions with the Ministry and the draft Director's Direction, it is proposed that the operational plans be combined into one operational plan. The systems are operated as one by OCWA and the procedures utilized are shared between the systems. While the	System owners to agree whether combining the Operational Plans into one is acceptable. Aylmer, London and St. Thomas in support of drafting a combined Operational Plan.	System Owners	December 31, 2025

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 10 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	Operational Plan will be combined, there will still be some elements that would be addressed in separate procedures. The separate elements would include element 3 (Commitment and Endorsement), 6 (Drinking Water System Description) and 8 (Risk Assessment Outcomes). OCWA will provide the new Operational Plan, new endorsements would have to be provided by each system. The proposal will then go to the Ministry for approval. This will allow for efficiencies in the auditing process and ultimately would offer a savings to each system.	Cindy to email system Owners noting plan to move ahead with draft of combined Operational Plan. Once draft OP is completed, submit to MECP for review.	Cindy Sigurdson System Owners	December 17, 2025 January 31, 2026
[I]	**Consumer feedback:** Two (2) Taste and Odour events for 2025: March 10-11, 2025 regarding “chemical” taste. No known issues at Elgin Area WTP. PAC system turned on and additional samples collected on March 10 to test for BTEX and Volatiles at Elgin WTP – all lab results well under the AO/OG/MAC (all results within normal baseline). October 1-3, 2025 – complaints received from various locations for “earthy/musty” taste and odour. Received three straight detects of MIB from seasonal sampling program. PAC dosage was increased accordingly based on internal T&O testing, external lab results and consumer complaints.	None	NA	NA

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 11 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
[m]	**Resources needed to maintain the QEMS:** The resources needed to maintain the QEMS are adequate with management and staff supporting the program. Added a second Senior Operations Manager position for EAPWSS.	None	NA	NA
[n]	**Results of the infrastructure review:** 1. Monthly O&M Reports- Maintenance Summary 2. Capital Plans submitted to Aylmer (June 9, 2025), St. Thomas (October 11, 2025) and London (October 11, 2025). 3. Quarterly Meetings – Capital update status Aylmer • SCADA programming updates for the new Aylmer tower were completed. • Aylmer pump 1 and 2 VFD replacements completed. • Aylmer pipe painting was completed. • Chlorination system third party service was not completed. • Non-identified major repairs: Aylmer sump pump replacement was completed.	None Additional SCADA programming ongoing to complete outstanding items. No additional actions required. Continue with internal PM's. Aylmer to consider future capital upgrades to chlorinator system based on OCWA's submission.	NA Nick Wilson	NA TBD

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 12 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	• Generator 2-year full load testing was not completed due to future Generator upgrades suggested for 2027. • Diesel fuel polishing was completed. St. Thomas • Generator 2-year full load testing was not completed due to future Generator upgrades suggested for 2027. • Electrical panel upgrades were not completed in 2025. Deferred to 2026. • Piping replacement for HLP discharge line was not completed in 2025. Deferred to 2026. • Chlorination system third party service was not completed. • Diesel fuel polishing was completed. London • Air compressor and air compressor MCC replacements were completed. • HLP 6 discharge valve replacement was completed. • HLP vibration analysis was completed. • Non-identified major repairs including: HLP 5 discharge valve rebuild.	Continue with internal PM's. St. Thomas to consider future capital upgrades to chlorinator system based on OCWA's submission. Final commissioning of ventilation system upcoming prior to end of year.	Nick Wilson NA	TBD NA

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 13 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
[o]	**Operational Plan currency, content and updates:** Operational Plans are updated in accordance with CAF findings.	None	NA	NA
[p]	**Staff suggestions:** None this past year.	None	NA	NA
[q]	**Review/consideration of any applicable Best Management Practices (BMPs):** Best Management Practices have been issued by the Ministry. There have been 24 items for consideration which are broken down by the following categories: treatment, water storage, distribution, contingency and security, planning and management, logbooks and record keeping. A tracking spreadsheet will be implemented to document implementation of the BMPs. This will be implemented in 2026 and reviewed at the next Management Review.	Implement Review and Consideration of BMPs tracking spreadsheet.	QEMS Representative	Dec 15, 2026
2.	**Roundtable/Other:**	Review September, October and November monthly OM reports. No further action required.	NA	NA 31-Mar-26

QEMS Ontario Clean Water Agency	**Management Review Minutes** Elgin Middlesex Pumping Station (EMPS)	Issue Date: 2025-12-16 Pages: 14 of 14
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
		Suggest Operations reports move from monthly to quarterly in 2026. OCWA to draft email suggesting this change and circulate to System Owners.	Cindy Sigurdson / System Owners	

Details of next Management Review meeting:

Next Meeting:	The next Management Review meeting will occur in 2026, date to be determined.

QEMS Ontario Clean Water Agency	**Management Review Minutes** Aylmer Area Secondary Supply System	Issue Date: 2025-05-20 Pages: 1 of 7
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Drinking Water System Name:	**Owner and Location**:
Aylmer Area Secondary Water Supply System	Aylmer Area Secondary Water Supply System Joint Board of Management, Administered by the Township of Malahide

Review Period: May 29th, 2024 to May 19th, 2025

Meeting Information/Introduction

Date/Time:	Location:
May 20th, 2025 13:00	Township of Malahide - 87 John Street South, Aylmer

Attendees:
Top Management: Maegan Garber, SPC Manager, Vitaliy Talashok, Senior Operations Manager, Meagan Lowden (Acting SPC Manager)
Owner Representative: Sam Gustavson, WWOM, Jason Godby, Director of Public Works
QEMS Representative: Matt Belding, PCT Aylmer Cluster
Operator(s) for the DWS(s): N/A
Other: N/A

Regrets: Josh Manneke, Capital Manager

Distribution: Sam Sianas, Sam Gustavson, Jason Godby, Vitaliy Talashok, Josh Manneke & Maegan Garber

Minutes Taken By: Maegan Garber

Introduction:

The purpose and objectives of the Management Review was reviewed as follows:

Purpose:
To evaluate the continuing suitability, adequacy and effectiveness of OCWA's QEMS.

Objectives:
The Management Review participants will review/discuss the standing agenda items and the data presented, identify deficiencies, make recommendations and/or initiate action plans to address identified deficiencies as appropriate.

The Management Review includes a review of the DWQMS operational plan, SAI audit report(s), OCWA internal audit report(s) and other related operational documents/records as detailed in the meeting minutes. The information reviewed during the Management Review was provided/made available to attendees through email correspondence.

This meeting covers *all* standing agenda items for the DWSs noted above. Details of the discussion, any deficiencies identified, decisions made and applicable action items related to each standing agenda item are described under the appropriate item number within the following table.

The minutes from the previous Management Review held on *May 29th, 2024* were also reviewed. Any follow up on actions and/or additional actions required are detailed under item i.

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
1 [a]	**Incidents of regulatory non-compliance:** An announced MECP Inspection was conducted on September 5th, 2024 by Angela Stroyberg. There were no incidents of regulatory non-compliance and no best management practices identified. The system received a 100% inspection rating.	N/A	N/A	N/A
[b]	**Incidents of adverse drinking water tests:** There were no AWQI to report in the review period.	N/A	N/A	N/A
[c]	**Deviations from Critical Control Point limits and response actions:** No CCPs identified for the system.	N/A	N/A	N/A
[d]	**Effectiveness of the risk assessment process**: As per OP-08A, the 36 month risk assessment was conducted on January 31st, 2025. The annual review will be completed as part of the management review.	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Aylmer Area Secondary Supply System	Issue Date: 2025-05-20 Pages: 3 of 7
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
[e]	**Internal and third-party Audit results:** An external systems audit was conducted by Sandra Tavares on June 24th, 2024. There were no non-conformances identified and two (2) opportunities for improvement. An internal audit was conducted on April 29th, 2025 by Maegan Garber. There were no non-conformances identified and ten (10) opportunities for improvement. The OFIs can be found on the Summary Table of Action Items.	See Summary Table of Action Items (#110-125).	See Summary Table of Action Items (#110-125)	See Summary Table of Action Items (#110-125)
[f]	**Results of emergency response testing:** On November 1st, 2024 the contingency plans CP-03 was reviewed and tested. Review all changes proposed by Corporate Compliance for CP-03. Completed walk-through scenario: A The Water Treatment Plant, which serves a mid-sized community, is facing a critical staffing shortage due to a tornado that has come through the area. Access to the water plant is blocked by police barricades due to down trees and power lines. Reviewed all applicable SOPs. Reviewed all related documents being proposed by Corporate Compliance.	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Aylmer Area Secondary Supply System	Issue Date: 2025-05-20 Pages: 4 of 7
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	The QEMS Representative maintains a tracking sheet to ensure the frequency of the CP reviews and tests is maintained.			
[g]	**Operational performance:** The AASWSS performed well over the past year. Maximo and PDM are review monthly by the PCT. Regular quarterly meetings occur with the client and Operations Reports are reviewed at this time.	N/A	N/A	N/A
[h]	**Raw water supply and drinking water quality trends:** The 2024 Drinking Water Quality Trends report was reviewed. There were no AWQIs reported in 2024. 2024 Annual report for the EAPWSS was reviewed. There were notable events to discuss however, maintenance was performed on the UV system and the filters.	N/A	N/A	N/A
[i]	**Follow-up on action items from previous Management Reviews:** The last Management Review was conducted on May 29th, 2024. A review of the Summary Table of Action Items did outline action items that were outstanding from the EA which have been discussed as part of this meeting. These items have been reviewed and an update provided where required.	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Aylmer Area Secondary Supply System	Issue Date: 2025-05-20 Pages: 5 of 7
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
[j]	**Status of management action items identified between reviews:** Action items identified between reviews were a result of internal and external audit results.	N/A	N/A	N/A
[k	**Changes that could affect the QEMS**: There has been significant staff turnover during the review period. The QEMS Representative is actively initiating DWQMS training at staff meetings and providing corporately lead training opportunities to staff as well. New Top Management Representative hired in June 2024 and the SPC Manager has changed in the interim as an acting position.	N/A	N/A	N/A
[l]	**Consumer feedback:** No complaints or concerns received.	N/A	N/A	N/A
[m]	**Resources needed to maintain the QEMS:** There are sufficient resources to maintain the QEMS.	N/A	N/A	N/A
[n]	**Results of the infrastructure review:** **<u>2024 Capital:</u>** - Chamber 13 UPS replacement (completed) - Chamber 16 UPS replacement (completed) - Sample station maintenance (as needed) - Hydrant replacement and repair (as needed)	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Aylmer Area Secondary Supply System	Issue Date: 2025-05-20 Pages: 6 of 7
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	- Spare PLC (maintained in the WWOM's office) - Summa Agreement **2025 Capital:** - -Sample station 81 replacement *(completed)* - -Hydrant maintenance and SS repair *(as needed)* - -Chamber condition assessment and asset ID review *(needs to be scheduled)* - -Summa Agreement			
[o]	**Operational Plan currency, content and updates:** The Operational Plan will be revised with the action items identified in the Summary Table of Action Items. The Operational Plan was endorsed in June, 2024 to represent changes to OCWA's Top Management and the Owners Top Management as well as the update to the QEMS Policy revisions and the changes to multiple procedures. MDWL Issue 4 was issued on May 7th, 2021. The DWWP Issue 3 was also issued on May 7th, 2021. The MDWL is required to be renewed in October, 2025. OCWA is able to provide all documentation to	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Aylmer Area Secondary Supply System	Issue Date: 2025-05-20 Pages: 7 of 7
Reviewed by: *QEMS Representative*	Approved by: *Operations Management*	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	support the application but does require a resolution, passing the Financial Plan.			
[p]	**Staff suggestions:** None	N/A	N/A	N/A
[q]	**Review/consideration of any applicable Best Management Practices (BMPs):** There were no best practice recommendations in the last MECP inspection report nor has the MECP or OCWA issued any BMPs. Should any BMPs be identified in the 2025 MECP Inspection report, they will be considered.	N/A	N/A	N/A
2.	**Roundtable/Other:** Improvements need to be made on the information being recorded and retained on the system maintenance records. The SPC Manager reviewed the new forms that were implemented for valve turning and discussion was had on the expectations of completing this work.	SOM to follow-up with staff on expectations for record keeping as it pertains to system maintenance (ie: valve turning, hydrant flushing and chamber inspections) See AI# 126 on the Summary Table of Action Items.	See AI# 126 on the Summary Table of Action Items.	See AI# 126 on the Summary Table of Action Items.

Details of next Management Review meeting:

Next Meeting:	The next Management Review meeting will occur in 2026, unless it is warranted to do so earlier.

REPORT NO. **PBASWSS-26-02**

TO: Port Burwell Area Secondary Water Supply System- Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **DWQMS ELEMENT 20: 2025 DRINKING WATER QUALITY TRENDS REPORT**

RECOMMENDATION:

THAT Report No. PBASWSS-26-02 entitled “DWQMS Element 20: 2025 Drinking Water Quality Trends Report” be received.

PURPOSE & BACKGROUND:

On an annual basis, the Operating Authority, being the Ontario Clean Water Agency (OCWA), is required to submit to the owner a drinking water quality trends report for the Aylmer Area Secondary Water Supply System (AASWSS). This report is subsequently reviewed with the owner, which is a requirement of Element 20: Management Review of the DWQMS Operational Plan.

COMMENTS & ANALYSIS:

On January 20th, 2026, the Ontario Clean Water Agency provided the drinking water quality trends report to the Township of Malahide Staff.

The attached report, as provided by OCWA, is a detailed summary of drinking water quality parameters monitored by the operators, including chlorine residuals, microbiological testing, and trihalomethanes. Haloacetic acids (HAAs) have also been included in sampling as a new requirement, which began in 2017. The attached report charts the minimum and maximum values for these parameters over the last 10 years against the operational guidelines and adverse water quality limits set out in O. Reg. 170/03.

On May 20th, 2025, Township Staff met with OCWA to conduct the annual Management Review meeting for the Secondary System. The meeting minutes from the Management Review are also attached to this report for the Board’s information. The purpose of the

review is to evaluate the continuing suitability, adequacy and effectiveness of OCWA's Quality & Environmental Management System (QEMS).

SUMMARY:

The information provided to the Staff by OCWA is used to ensure that the Staff and Owners are aware of drinking water quality trends for the PBASWSS. The report also helps the Owners make decisions to provide a continuous, safe supply of potable water for residents connected to the PBASWSS.

ATTACHMENTS:

1. Drinking Water Quality Trends Report 2025,
2. Port Burwell Secondary Management Review Minutes

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

QEMS Ontario Clean Water Agency	PBASWSS Drinking Water Quality Trends Report 2025	Issued: 2026-01-19 Rev.#: 0 Pages: 1 of 7
Reviewed by: SPC Manager	Approved by: Operations Management	

Overview

As part of the DWQMS Element 20: Management Review it is required to review the drinking water quality trends for the facility. This report details the drinking water quality parameters that are monitored for the Port Burwell Area Secondary Water Supply System (PBASWSS). These parameters are:

- Distribution Free Chlorine Residuals
- Distribution Water E.coli, Total Coliform and Hetertrophic Plate Count
- Distribution Water Trihalomethanes
- Distribution Water Haloacetic Acids

Free Chlorine

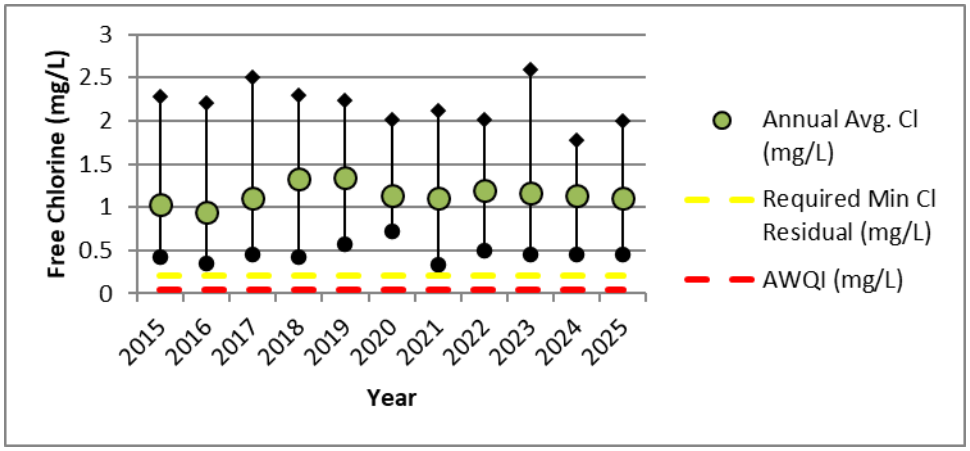
Each week seven residuals are taken on the system in accordance with O. Reg. 170/03. The annual minimum and maximum chlorine residuals for the last ten years were:

Year	Minimum Free Chlorine Residual (mg/L)	Maximum Free Chlorine Residual (mg/L)
2015	0.42	2.28
2016	0.35	2.21
2017	0.45	2.50
2018	0.43	2.30
2019	0.57	2.24
2020	0.72	2.01
2021	0.33	2.12
2022	0.50	2.02
2023	0.46	2.60
2024	0.45	1.78
2025	**0.46**	**2.00**
Operational Guideline	**0.20**	**4.00**
AWQI Limit	**0.05**	**n/a**

The chart below depicts the minimum and maximum free chlorine residuals taken as grab samples in the Port Burwell Area Secondary Water Supply System, comparing the last ten years (2015-2025) against the operational guideline and adverse water quality limits set by O. Reg. 170/03. The required minimum is 0.20mg/L, which is a guideline from the MECP for the drinking water system to achieve in all parts of the distribution system. If a residual is found below this requirement, action is required to increase this residual. The usual means of increasing the residual is by flushing in the area or by increasing the dosing set point at a re-chlorination facility. An Adverse Drinking Water Quality Indicator (AWQI) occurs when the free chlorine residual taken as a grab sample is below 0.05mg/L, this residual is to be reported the MECP Spills Action Centre (SAC) and the local Medical Officer of Health. Immediate action is required to bring the residual above 0.2mg/L in the affected area and take any further action as directed by the Medical Officer of Health.

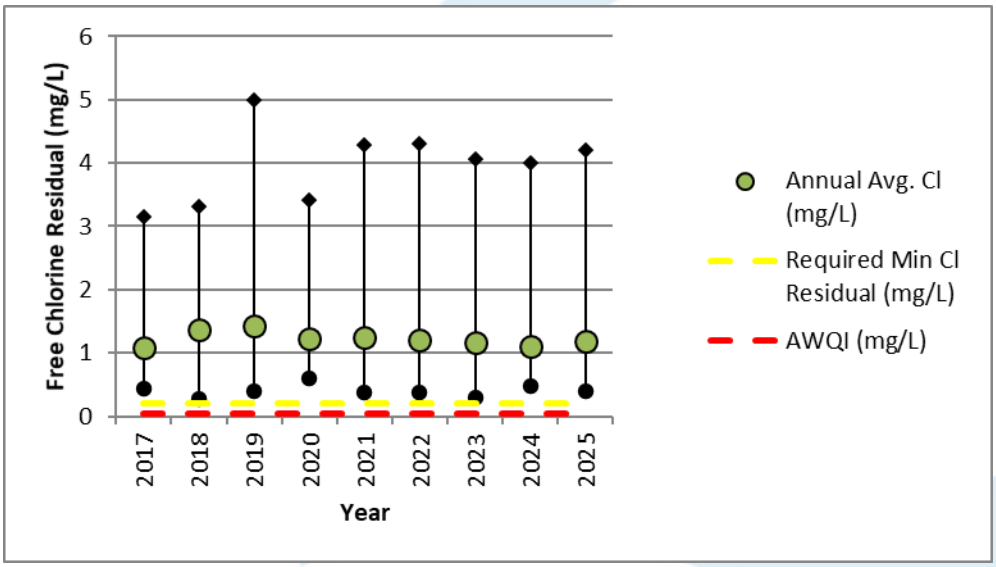
In 2025, the average free chlorine residual taken as a grab sample in the distribution system was 1.10mg/L. This is down 2.7% when comparing it to the 2024 average free chlorine residual (1.13mg/L). Refer to Chart 1.

Chart 1. Minimum and maximum free chlorine residuals throughout distribution system compared against the required minimum and the AWQI limit.



The free chlorine residual is continuously monitored at the Dexter Line Re-chlorination facility. The facility re-chlorinates only when the valve at the valve house is open to fill the Port Burwell Tower, which results in large fluctuations of residuals. Chart 2, shows the minimum, maximum and average free chlorine residuals at the Dexter Line Re-Chlorination Facility for 2017-2025.

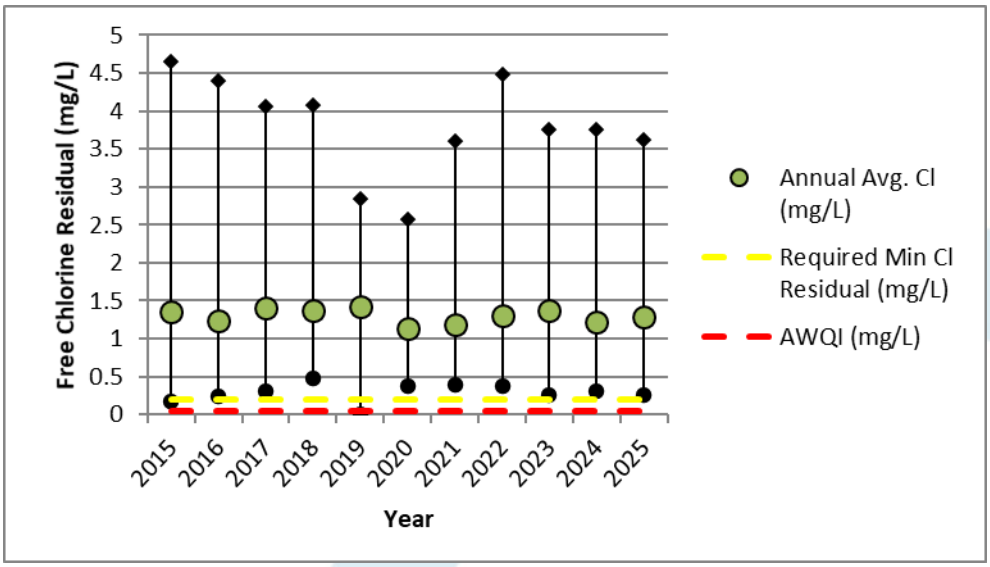
Chart 2. Minimum, maximum and average free chlorine residuals at the Dexter Line Re-chlorination Facility compared against the required minimum and the AWQI limit.



Free chlorine residuals are monitored at the Port Burwell Tower. There is only one watermain feeding the tower for filling and draining. The free chlorine residuals fluctuate based on the fill cycles. The facility is equipped with re-chlorination equipment that operates during the fill cycle in manual mode and when the tower is draining it operates based on a set point residual on the SCADA system. In 2025, the annual average free chlorine residual was 1.10mg/L, this is down

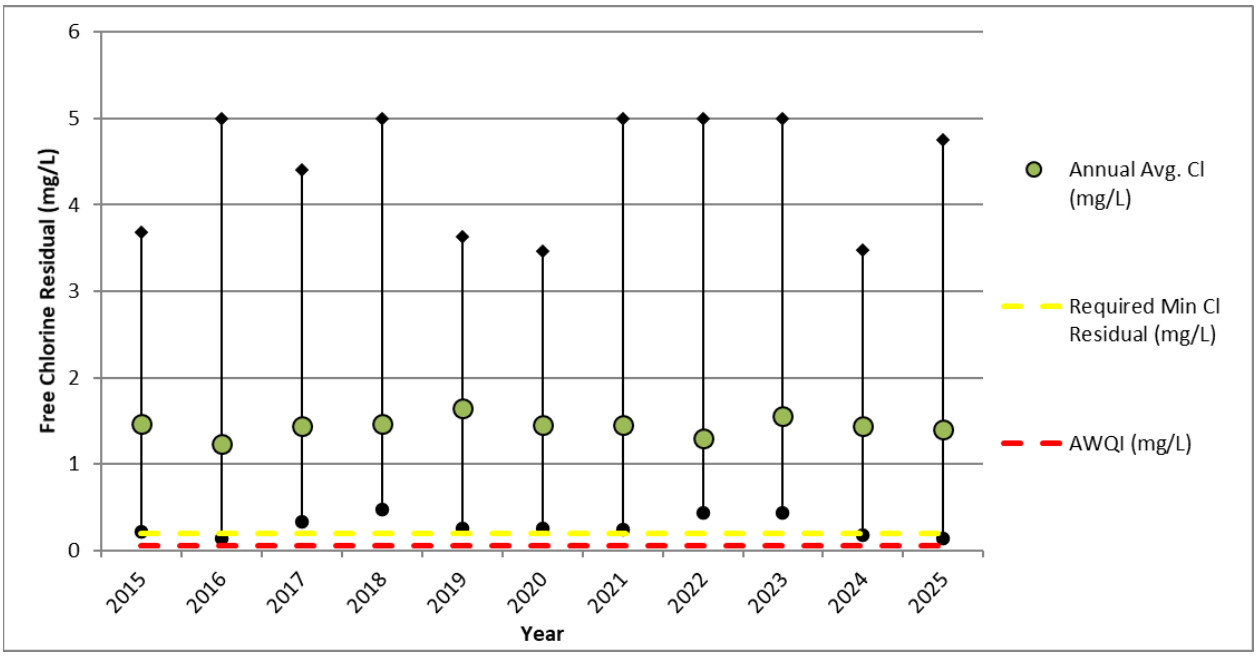
2.7% when compared to 2024 (1.13mg/L). Chart 3 below shows the annual minimum, maximum and average chlorine residuals for 2015 to 2025. When the tower is filling the free chlorine is generally lower, this water is from the Elgin Area Water Treatment Plant travels a great distance before getting to the tower. This is especially true during the summer months when chlorine demand is higher. In 2013 and 2015 the minimum residual was below the required free chlorine residual of 0.2mg/L. The operators of the system monitored the residual to ensure the system was adequately disinfected. Also, during these high chlorine demand seasons the operators will flush the system in order to rid the system of any residuals that don't meet the required 0.2mg/L. There were no Adverse Water Quality Incidents as a result of the lower residuals. The Dexter Line Re-Chlorination Facility was added to the system in 2017 to help improve the residuals in the system. In July of 2019 the chlorine system was temporally out of service due to panel work, which is the result of a chlorine residual reading of 0.0 mg/L, the residual was being monitored at both the Lakeview and Dexter Line facilities.

Chart 3. Minimum, maximum and average free chlorine residuals for 2015-2025 at the Port Burwell Tower.



The free chlorine residual is continuously monitored at the Lakeview Re-Chlorination facility where the incoming water is re-chlorinated in order to provide adequate residuals to the Bayham Distribution System. In 2025, the annual average free chlorine residual was 1.40mg/L. This is down 2.8% compared to 2024 (1.44mg/L).

Chart 4. Minimum, maximum and average free chlorine residuals at Lakeview Re-chlorination.



Microbiological Samples

The distribution water of the Port Burwell Area Secondary Water Supply System is sampled weekly for E.coli, Total Coliform and Heterotrophic Plate Count (HPC), following O. Reg.170/03. Each week three samples are tested for E. coli and Total Coliform and one sample is tested for HPC. The Ontario Drinking Water Quality Standard for E.coli and Total Coliform is non-detectable for both. Heterotrophic Plate Count is used as an operational tool to determine if there is an issue.

There was one sample that had a result of NDOGN (no data: over grown with non-target bacteria) in 2021. On October 15th, 2021 SGS Laboratories reported the AWQI from Sample Station 90. Samples were collected upstream, downstream and at the source as required. All re-sample results were satisfactory.

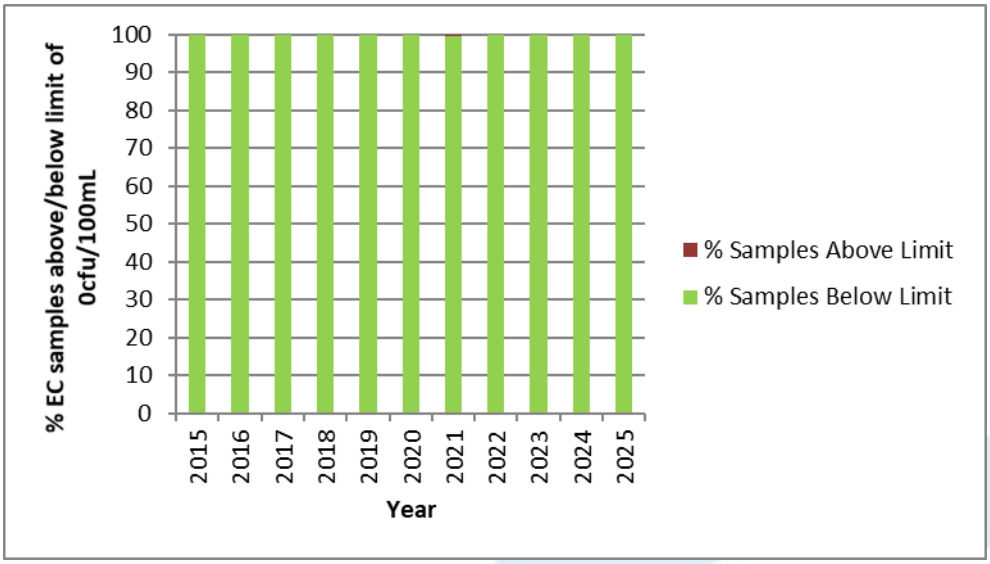
On October 18th, 2023 an AWQI was reported from SGS laboratories from sample station #94 for a Total Coliform result of 8cfu/100mL. Samples were collected upstream, downstream, and at the source as required. All resamples were satisfactory.

The table below shows the sample results compared for the last ten years (2014-2024).

Year	# TC & EC Samples	E. coli Range (cfu/100mL)	Total Coliform Range (cfu/100mL)	# HPC Samples	Heterotrophic Plate Count Range (cfu/mL)
2015	170	0 – 0	0 – 0	66	0 - 30
2016	174	0 – 0	0 – 0	71	<10 - >2000
2017	156	0 – 0	0 – 0	52	<10 - 170
2018	156	0 – 0	0 – 0	52	<10 - 560
2019	154	0 – 0	0 – 0	57	<10 - 170
2020	156	0 – 0	0 – 0	52	0 - 10

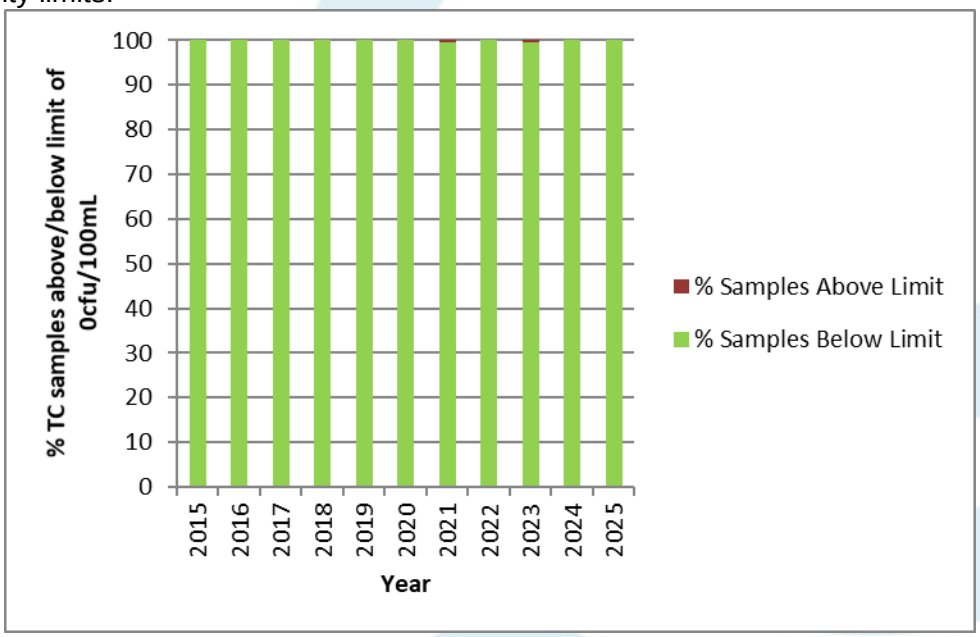
2021	159	0 – NDOG	0 – NDOG	52	0 - 80
2022	160	0 – 0	0 – 0	52	<10 -<220
2023	163	0 - 0	0 – 8	50	<10 - <10
2024	159	0 – 0	0 – 0	53	<10 - <20
2025	**156**	**0 – 0**	**0 – 0**	**52**	**<10 - 40**

Chart 5. E. coli results from 2015 to 2025 as a percentage of samples below drinking water quality limits.



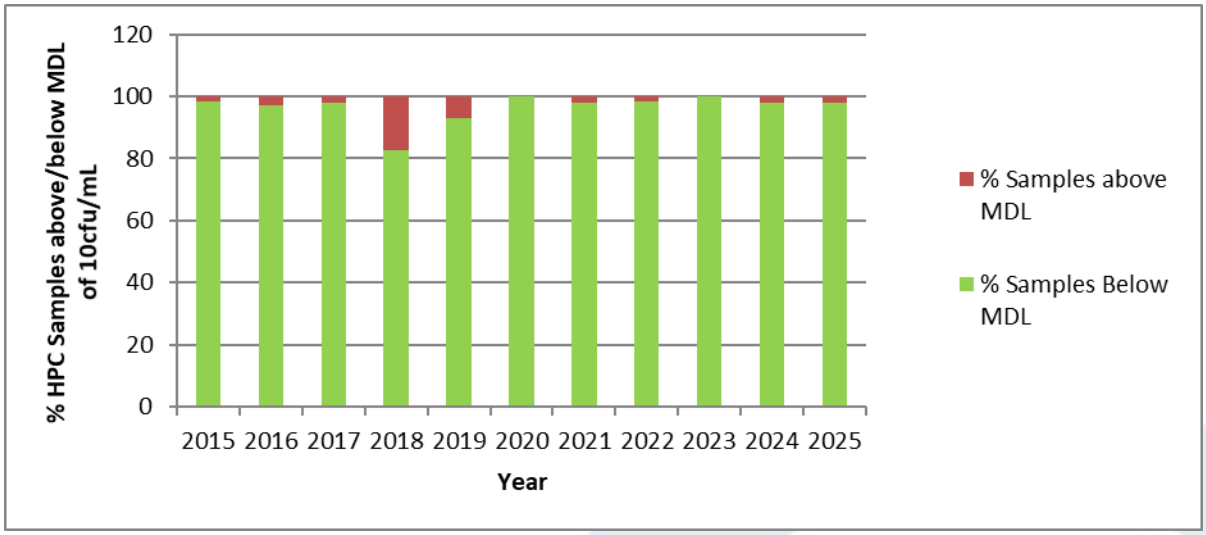
There was one result of NDOGN in 2021, and one in 2023 TC of 8cfu/100mL that was reported to MECP and MOH. Refer to Chart 6.

Chart 6. Total coliform results from 2015 to 2025 as a percentage of samples below drinking water quality limits.



HPC results fluctuate, however, the majority of results show no issues (less than Method Detection Limit (MDL)), refer to chart 7 below. There is only a concern with high HPC results if they stay consistently high as this could indicate biofilm formation in the watermains. There were elevated results in 2018, upon further investigation the results are coming from the Lakeview Re-chlorination facility. A new sampling location was constructed in 2019 and results have returned to normal.

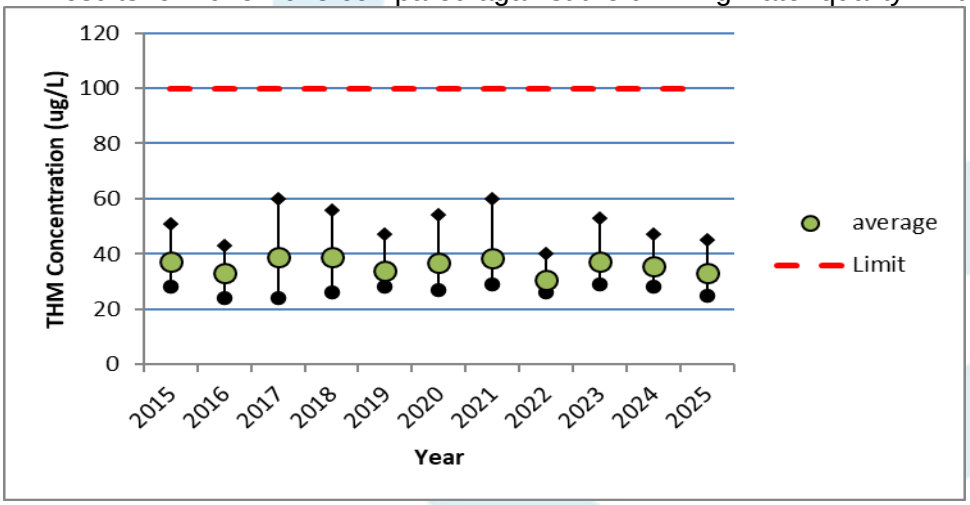
Chart 7. HPC results from 2015 to 2025 depicted as % below method detection limit (MDL) and % above MDL.



Trihalomethanes

The distribution system is sampled for Total Trihalomethanes (THMs) on a quarterly basis, as per O. Reg. 170/03. The Ontario Drinking Water Quality Standard for THMs is 100µg/L. The range of THM results for the Port Burwell Area Secondary Water Supply System in 2025 was 25 to 45µg/L compared to 2024 the range was 28 to 47µg/L. Refer to the chart 8 for the THM results compared for the last ten years. Overall, the running average of 33.25µg/L in 2025 has decreased by 7.0% compared to 2024 (35.75µg/L).

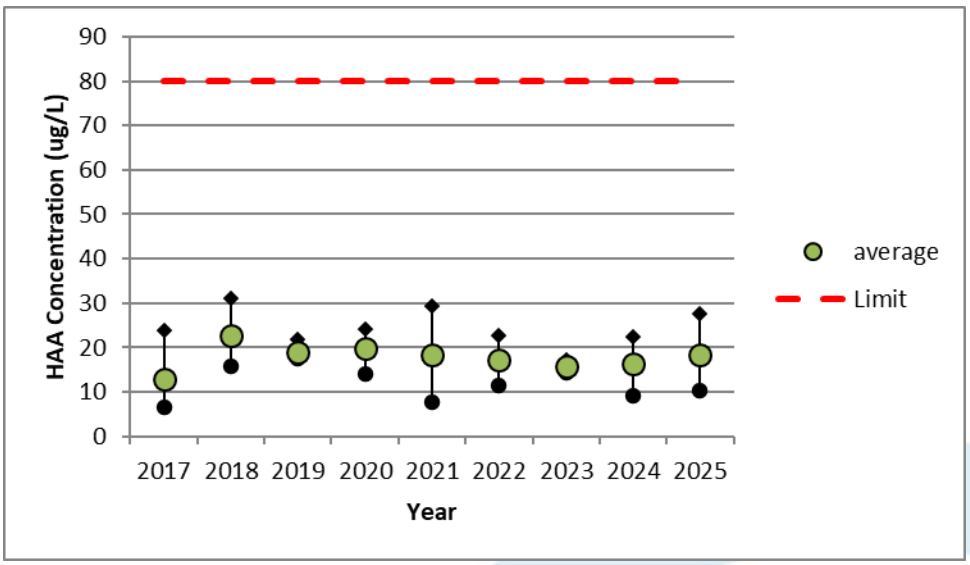
Chart 8. THM results for 2015-2025 compared against the drinking water quality limit.



Haloacetic Acids

The distribution system is sampled for Total Haloacetic Acids (HAAs) on a quarterly basis, as per O. Reg. 170/03. The Ontario Drinking Water Quality Standard for HAAs is 80µg/L. The range of HAA results for the Port Burwell Area Secondary Water Supply System in 2025 was 10.4 to 27.5µg/L compared to 9.2 to 22.5µg/L in 2024. Overall, the running average of 18.3µg/L in 2025 has increase by 12.6% compared to 2024 (16.2µg/L).

Chart 9. HAA results for 2017-2024 compared against the drinking water quality limit.



Discussion

Overall the Port Burwell Secondary Supply System provides quality water meeting all regulatory requirements.

Revision History

Date	Revision #	Reason for Revision	Revision By
2026-01-19	*0*	*Create Report*	*Matthew Belding*

QEMS Ontario Clean Water Agency	**Management Review Minutes** Port Burwell Area Water Supply System	Issue Date: 2025-05-20 Pages: 1 of 9
Reviewed by: QEMS Representative	Approved by: Operations Management	

Drinking Water System Name:	**Owner and Location**:
Port Burwell Area Water Supply System	Port Burwell Area Secondary Water Supply System Joint Board of Management

Review Period: May 28th, 2024 to May 19th, 2025

Meeting Information/Introduction

Date/Time:	May 20th, 2025	**Location:**	Township of Malahide - 87 John Street South, Aylmer

Attendees: Top Management: Vitaliy Talashok, Senior Operations Manager, Maegan Garber, SPC Manager, Meagan Lowden (Acting SPC Manager)
Owner Representative: Sam Gustavson, WWOM, Jason Godby, Director of Public Works
QEMS Representative: Matt Belding, PCT Aylmer Cluster
Operator(s) for the DWS(s): N/A
Other: N/A

Regrets: None

Distribution: *Sam Sianas, Jason Godby, Sam Gustavson, Vitaliy Talashok, Josh Manneke & Maegan Garber*

Minutes Taken By: Maegan Garber

Introduction:

Purpose:
To evaluate the continuing suitability, adequacy and effectiveness of OCWA's QEMS.

Objectives:
The Management Review participants will review/discuss the standing agenda items and the data presented, identify deficiencies, make recommendations and/or initiate action plans to address identified deficiencies as appropriate.

The Management Review includes a review of the DWQMS operational plan, SAI audit report(s), OCWA internal audit report(s) and other related operational documents/records as detailed in the meeting minutes. The information reviewed during the Management Review was provided/made available to attendees prior to the meeting by email, and as a powerpoint at the meeting.

This meeting covers *the* standing agenda items for the DWSs noted above. Details of the discussion, any deficiencies identified, decisions made and applicable action items related to each standing agenda item are described under the appropriate item number within the following table. Additional comments/discussion items are described under section 2.

The minutes from the previous Management Review held on *May 29th, 2024* were also reviewed. Any follow up on actions and/or additional actions required are detailed under item i.

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
1 [a]	**Incidents of regulatory non-compliance:** The last routine MECP inspection was conducted on July 16th, 2024 by Jim Miller. An inspection rating of 100% was received.	N/A	N/A	N/A
[b]	**Incidents of adverse drinking water tests:** There were no adverse drinking water tests during the review period.	N/A	N/A	N/A

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
[c]	**Deviations from Critical Control Point limits and response actions:** Critical control point limit exceedances were previously tracked using the critical control point limit reached tracking form. Since the implementation of the electronic logbooks, CCPs are now being tracked in the logbook using the Alarm-CCP label. There were five (5) CCP limit exceedances recorded in the logbook at the end of 2024. There were no CCP limits reported during the first quarter of 2025. Lakeview CCPs: 1. June 1: power failure, low chlorine alarm (not a true CCP) 2. October 3: low chlorine alarm, due to communication issue (not a true CCP) PB Tower: 1. August 15: low chlorine due to low tower level as repairs being completed at the plant 2. August 27: low chlorine, dosing check valve not functioning 3. October 1: low chlorine due to air bubbles (not a true CCP)	Review with staff the CCP limit reached SOP.	QEMS Representative	2025-12-31
[d]	**Effectiveness of the risk assessment process**: As per OP-08A, the 36 month risk assessment was conducted on May 29th, 2024. The 36 months review was conducted in advance of the required date due to scheduling and moving the assessment outside Q1. The	N/A	N/A	N/A

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	annual review will be completed as part of the management review.			
[e]	**Internal and third-party Audit results:** A systems audit was conducted on June 26th, 2024 by Sandra Tavares of SAI Global. There were no non-conformances and 2 Opportunities for Improvements (OFIs). The Internal Audit was conducted by Maegan Garber on March 25th, 2025. There were no non-conformances and 15 OFIs identified in the report. The reaccreditation audit is scheduled for September 2nd, 2025.	Refer to the Summary Table of Action Items (#128-145).	Refer to the Summary Table of Action Items (#128-145).	Refer to the Summary Table of Action Items (#128-145).
[f]	**Results of emergency response testing:** On November 1st, 2024 the contingency plans CP-03 was reviewed and tested. Review all changes proposed by Corporate Compliance for CP-03. Completed walk-through scenario: A The Water Treatment Plant, which serves a mid-sized community, is facing a critical staffing shortage due to a tornado that has come through the area. Access to the water plant is blocked by police barricades due to down trees and power lines. Reviewed all applicable SOPs. Reviewed all related documents being proposed by Corporate Compliance.	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Port Burwell Area Water Supply System	Issue Date: 2025-05-20 Pages: 5 of 9
Reviewed by: QEMS Representative	Approved by: Operations Management	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
[g]	**Operational performance:** The PBASWSS performed very well over the past year. Chlorine residuals throughout the system remain adequate. Maximo and PDM are reviewed monthly by the PCT. Regular quarterly meetings occur with the client and Operations Reports are reviewed at this time.	N/A	N/A	N/A
[h]	**Raw water supply and drinking water quality trends:** The 2024 Drinking Water Quality Trends Report was reviewed. 2024 Annual report for the EAPWSS was reviewed. There were no notable events to discuss however, maintenance was performed on the UV system and the filters.	N/A	N/A	N/A
[i]	**Follow-up on action items from previous Management Reviews:** The last Management Review was conducted on May 29th, 2024. A review of the Summary Table of Action Items did outline action items that were ongoing (EC101 Training). These items have been reviewed and an update provided where required.	N/A	N/A	N/A
[j]	**Status of management action items identified between reviews:**	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Port Burwell Area Water Supply System	Issue Date: 2025-05-20 Pages: 6 of 9
Reviewed by: QEMS Representative	Approved by: Operations Management	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	Action items identified between reviews were a result of internal and external audit results.			
[k	**Changes that could affect the QEMS**: There has been significant staff turnover during the review period. The QEMS Representative is actively initiating DWQMS training at staff meetings and providing corporately lead training opportunities to staff as well. New Top Management Representative hired in June 2024 and acting SPC Manager has been appointed.	N/A	N/A	N/A
[l]	**Consumer feedback:** July 12: Consumer filling hot tub and noticed red/black floaties. Occurred during routine flushing. WWOM followed up. Operator ceased flushing until home owner was done and then flushed. July 23: Reports of watermain/service leaks. Leaks confirmed and repairs completed.	N/A	N/A	N/A
[m]	**Resources needed to maintain the QEMS:** There are sufficient resources to maintain the QEMS.	N/A	N/A	N/A
[n]	**Results of the infrastructure review:** **<u>2024 Capital:</u>** <u>MV1 Valve house</u> - No items noted <u>Dexter Line</u> -Spare inventory purchase (as needed)	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Port Burwell Area Water Supply System	Issue Date: 2025-05-20 Pages: 7 of 9
Reviewed by: QEMS Representative	Approved by: Operations Management	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	- Replace PLC UPS batteries (complete) <u>Port Burwell Tower</u> -Spare PLC (maintained in the WWOM office) -Flap duckbill valve on overflow outlet (installed) - Surface prep and repaint valves and piping (completed) -Replace ladder rungs (completed) -Replace PLC UPS battery (complete) <u>Lakeview</u> -No items noted <u>Transmission Main</u> - Hydrant and SS maintenance *(as needed)* - Chamber maintenance *(as needed)* - Air release valve servicing/replacement *(carried over to 2025)* **<u>2025 Capital:</u>** <u>MV 1 Valvehouse</u> - Facility condition assessment *(needs to be scheduled)* *<u>Dexter</u>* - Spare inventory *(as needed)* <u>PB Tower</u> - Ladder inspection *(completed)* <u>Transmission Main</u> - Hydrant and SS maintenance *(as needed)*			N/A

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	- Chamber maintenance *(as needed)* - Air release valve servicing/replacement *(ongoing)*			
[o]	**Operational Plan currency, content and updates:** The Operational Plan was last revised June, 2024 with some procedures being updated. The Operational Plan will be revised with the action items identified in the Summary Table of Action Items. The Operational Plan was endorsed in June, 2024 to represent changes to OCWA's Top Management and the Owners Top Management. Re-endorsement was required due to the QEMS Policy revisions and the changes to multiple procedures. MDWL Issue 4 was issued on April 16th, 2021. The DWWP Issue 4 was also issued on April 16th, 2021. The MDWL requires renewal in 2025 and will be completed prior to the application renewal date. OCWA has all the necessary documents to prepare the application but requires a resolution passing the financial plan.	N/A	N/A	N/A
[p]	**Staff suggestions:** No suggestions.	N/A	N/A	N/A
[q]	**Review/consideration of any applicable Best Management Practices (BMPs):**	N/A	N/A	N/A

QEMS Ontario Clean Water Agency	**Management Review Minutes** Port Burwell Area Water Supply System	Issue Date: 2025-05-20 Pages: 9 of 9
Reviewed by: QEMS Representative	Approved by: Operations Management	

Meeting Minutes

Item #	Documentation Reviewed/Discussion Points/Issues Raised/Action Taken to Date /Decisions Made	Actions Identified during Management Review	Responsibility/ Assigned To	Target Date
	The MECP inspection report did not identify any BMPs. There have been no formal BMPs by OCWA's corporate office or the MECP at this time. Should any BMPs be identified in the 2025 MECP Inspection report, they will be considered.			
2.	**Roundtable/Other:** Improvements need to be made on the information being recorded and retained on the system maintenance records. The SPC Manager reviewed the new forms that were implemented for valve turning and discussion was had on the expectations of completing this work.	SOM to follow-up with staff on expectations for record keeping as it pertains to system maintenance (ie: valve turning, hydrant flushing and chamber inspections) See AI# 139 on the Summary Table of Action Items.	Operations Management	2025-12-31

Details of next Management Review meeting:

Next Meeting:	The next Management Review meeting will occur in 2026, unless it is warranted to do so earlier.

REPORT NO. **AASWSS-26-03**

TO: Aylmer Area Secondary Water Supply System- Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **2025 FOURTH QUARTER OPERATIONS REPORT**

RECOMMENDATION:

THAT Report No. AASWSS-26-03 entitled “2025 Fourth Quarter Operations Report” be received.

PURPOSE & BACKGROUND:

The Ontario Clean Water Agency (OCWA) and the Staff of the Administering Municipality (Township Staff) formally meet quarterly to review the operations and maintenance of the AASWSS. OCWA and the Township Staff discuss recommended lifecycle/capital work, bacteriological/chemical sample results, regulatory compliance, and possible emerging issues. OCWA provides detailed operations reports and performance assessment reports at these meetings.

COMMENTS & ANALYSIS:

This report is a summary of the operations and maintenance for the fourth quarter of 2025, as well as a condensed summary of the overall operations for the year. This report is submitted to the Joint Board of Management to satisfy specific requirements of the QEMS Operational Plan for the AASWSS. Additionally, this approach ensures that the Joint Board of Management is kept informed of the water system's operational performance on a continual basis by the Township Staff.

The Township Staff formally met with the OCWA on February 2nd, 2026, to review system operations for the third and fourth quarters. Some of the specific items that were discussed during these meetings are outlined below.

Compliance Summary:

No compliance issues were reported during the third and fourth quarters of 2025. Furthermore, no compliance or exceedance issues were reported in 2025.

Inspections:

The MECP conducted the annual inspection of the EMPS and transmission main on September 10, 2025. The final report from the MECP, received on November 13, 2025, identified no non-compliances and assigned an IRR of 100% for the inspection period.

QEMS Update:

An Internal audit was conducted by OCWA on April 7th, 2025. Nine Opportunities for Improvement (OFI) were identified. These OFIs were discussed during the Management Review held on May 20th. The operational plan was updated to reflect these changes on July 4th, 2025.

On September 4th, 2025, an External Re-accreditation Audit was conducted by Sandra Travares of Intertek. There were no non-conformances, and five (5) OFIs were identified during the audit. These items will be addressed at the 2026 Management Review.

The Essential/Emergency Service and Supply Contact List was updated on February 11th, 2025. Updates were made to Client Contacts as well as OCWA Staff.

Performance Assessment:

In 2025, the average daily flow to the secondary system from the Elgin Area Primary Water Supply System (recorded leaving EMPS) was 5,049.0 m^3/d. This is a 0.3% increase when compared to 2024 (5,034.4 m^3/d).

There were no adverse sample results in 2025. Weekly microbiological sample results were tested for E. coli, Total coliforms and HPC. Samples are shipped to SGS Laboratories, which is an accredited laboratory.

OCWA tested for free chlorine residuals throughout the distribution system two times per week. Quarterly samples were collected for Trihalomethanes (THMs) and Halo Acetic Acids (HAAs) in accordance with regulatory requirements. All sample results tested were well below the Maximum Allowable Concentrations (MAC) outlined in O.Reg. 170/03. OCWA continues to meet or exceed the Provincial Regulations pertaining to microbiological sampling requirements. Further information regarding sample results is outlined in the attached report.

Occupational Health & Safety:

OCWA completed the annual health and safety inspection on February 28th, 2025. No issues were identified during the inspection. No other concerns were identified in 2025.

General Maintenance:

OCWA conducted various maintenance activities in 2025. Activities include, but are not limited to, regular readings and checks, the inspection and pumping of all chambers, including air release chambers, and monthly alarm testing. Annual flow meter calibrations were completed. OCWA completed spring and fall hydrant flushing and winterization of hydrants. Annual valve exercising was also completed. Further information on maintenance completed in 2025 is available in the attached report.

Alarms:

There were some alarms reported in the third quarter and fourth quarter. These alarms were minor in nature. The SCADA system allows Staff to monitor and respond to alarms continuously. As the Operating Authority, OCWA responded to alarms as required, as outlined in the attached report.

Complaints & Concerns:

No complaints from the general public were received in 2025 that required a response from OCWA and Township Staff.

SUMMARY:

Quarterly meetings with OCWA are an effective way to keep the Township Staff well-informed about the operations and maintenance of the drinking water system. The information provided to the Board by OCWA helps the Joint Board of Management make well-thought-out decisions to provide a continuous, safe supply of potable water.

ATTACHMENTS:

1. 2025 OCWA Fourth Quarter Operations Report

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Aylmer Area Secondary Water Supply System Operations Report

Fourth Quarter 2025

Ontario Clean Water Agency, Southwest Region
Vitaliy Talashok, Sr. Operations Manager, Aylmer Cluster
Date: Jan 15, 2026

Facility Description

Facility Name:	Aylmer Area Secondary Water Supply System
Regional Manager:	Sam Sianas - (519) 319-2233
Sr. Operations Manager:	Vitaliy Talashok - (226) 378-8986
Business Development Manager:	Robin Trepanier - (519) 791-2922
Facility Type:	Municipal
Classification:	Class 2 Water Distribution
Drinking Water System Category:	Large Municipal Residential
Title Holder:	Municipality
Operation Status:	OCWA

Service Information

Area(s) Serviced:	Central Elgin, Malahide, and Aylmer
Population Serviced:	382
Malahide Direct Connections:	147
Central Elgin Connections:	101

Operational Description

This is an 18" watermain from St. Thomas to Aylmer with booster pumps at the Elgin Middlesex Pumping Station.

CLIENT CONNECTION MONTHLY CLIENT REPORT

Facility Name: Aylmer Area Secondary Water Supply System
ORG#: 6614

SECTION 1: COMPLIANCE SUMMARY

FIRST QUARTER:

There were no compliance issues to report for the first quarter.

SECOND QUARTER:

There were no compliance issues to report during the second quarter.

THIRD QUARTER:

There were no compliance issues to report during the third quarter.

FOURTH QUARTER:

There were no compliance issues to report during the fourth quarter.

SECTION 2: INSPECTIONS

FIRST QUARTER:

There were no MECP or MOL inspections conducted during the first quarter.

SECOND QUARTER:

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

THIRD QUARTER:

On September 10th an unannounced inspection was conducted by MECP Inspector Angela Stroyberg, for Aylmer Secondary DS, at the EMPS building. A rating of 100% was received.

FOURTH QUARTER:

There were no MECP or MOL inspections conducted during the fourth quarter.

SECTION 3: QEMS UPDATE

FIRST QUARTER:

On February 11th , the Essential/Emergency Service and Supply Contact List was updated to include changes to OCWA staff contacts as well as client contacts. The contact list is currently in its 38th revision and is reviewed annually.

SECOND QUARTER:

On April 7th an internal audit was completed for the Aylmer Secondary system. There were 9 OFI found that were discussed at the management review on May 20th. The operational plan was updated July 4th.

THIRD QUARTER:

On September 4th the External reaccreditation audit was held with Intertek's auditor Sandra Tavares. There were 5 opportunities for improvement to consider at the next management review in 2026.

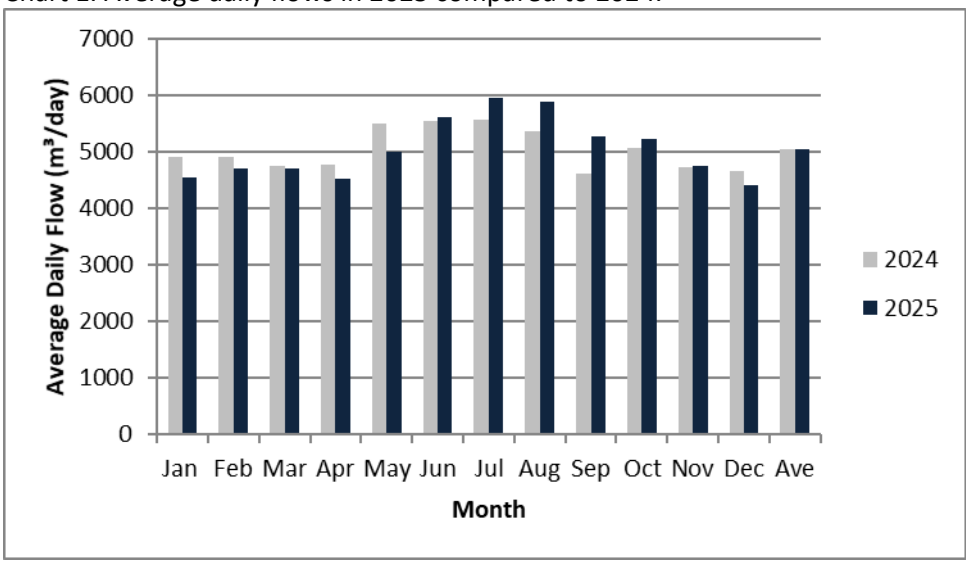
FOURTH QUARTER:

There were no QEMS updates to report on during the fourth quarter.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

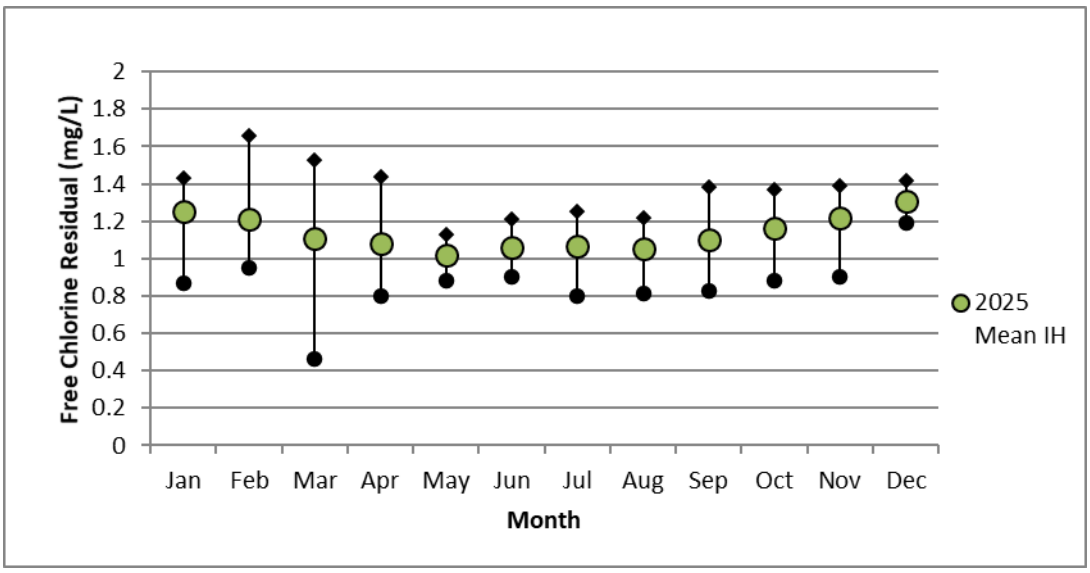
Flows are recorded at various points within the distribution system. The average daily flow to the system from the Elgin Area Primary Water Supply System in 2025 was 5,049.0m³/d which is up 0.3% when compared to 2024 (5,034.4m³/d). Chart 1 below depicts the average daily flows for 2025 compared to 2024.

Chart 1. Average daily flows in 2025 compared to 2024.



Chlorine residuals are obtained throughout the distribution system two times per week, with 4 residuals taken on sample days (usually Monday's) and three residuals taken at least 48 hours after the first set (usually on Friday's) to meet the regulatory requirements. The chart below depicts the minimum, maximum and average chlorine residuals taken in the distribution system for 2025. The concentration of free chlorine varies depending on the location that the sample taken (see chart below).

Chart 2. Free Chlorine Residual in the Distribution System in 2025.



Samples are obtained once per week at three locations along the transmission main. The following table summarizes the results of the microbiological sampling for 2025.

Month	# Samples	E. coli Range (cfu/100mL)	Total Coliform Range (cfu/100mL)	# Samples	Heterotrophic Plate Count Range (cfu/mL)
January	12	0 – 0	0 – 0	4	<10 - <10
February	12	0 – 0	0 – 0	4	<10 - <10
March	15	0 – 0	0 – 0	5	<10 - <10
April	12	0 – 0	0 – 0	4	<10 - 10
May	12	0 – 0	0 – 0	4	<10 - 40
June	15	0 – 0	0 – 0	5	<10 - <10
July	12	0 – 0	0 – 0	4	<10 - <10
August	12	0 – 0	0 – 0	4	<10 - <10
September	15	0 – 0	0 – 0	5	<10 - <10
October	12	0 – 0	0 – 0	4	<10 - <10
November	12	0 – 0	0 – 0	4	<10 - <10
December	15	0 – 0	0 – 0	5	<10 - <10

Trihalomethanes (THMs) are sampled on a quarterly basis; the 2025 current running average is 22.00µg/L. When comparing the current running average to the 2024 average (23.00µg/L) there has been a decrease of 4.3%. The results remain well below the limit of 100 µg/L.

January 2025	-	17
April 2025	-	17
July 2025	-	24
October 2025	-	30
Running Average	**100**	**22.00**

Haloacetic Acids (HAAs) are required to be sampled on a quarterly basis. The 2025 current running average is 6.28µg/L. When comparing the current running average to the 2024 average (9.30µg/L) there has been a decrease of 32.5%. The results remain well below the limit of 80µg/L.

	Limit (µg/L)	HAA Result (µg/L)
January 2025	-	6.9
April 2025	-	5.3
July 2025	-	6.5
October 2025	-	6.4
Running Average	80	**6.28**

SECTION 5: OCCUPATIONAL HEALTH & SAFETY

FIRST QUARTER:

On February 28th, the annual occupational health and safety inspection was completed. There were no issues identified. There were no additional Health & Safety issues identified in the first quarter.

SECOND QUARTER:

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

THIRD QUARTER:

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

FOURTH QUARTER:

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

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

JANUARY

2: Chamber inspections and meter reads.

5: Received emergency locate request at 08:36 for 44330 elm line. Arrived on site at 09:40. Received locate instructions from crew on site for water main repair. Completed all clear locate. Sent locate via email at 10:00. Left site at 10:10.

FEBRUARY

6: Hawkins Electric on site for replacement of cabinet heater
13: Tested flood and power failure alarms at chambers 13 and 16

MARCH

11: -On site at 47222 Talbot Line for leak repair.
OMEGA and CC dance on site and are beginning to excavate area. Disinfected new stainless steel repair saddle and new service line saddle with 3/4-inch port for installation. Leak now exposed and air gap being maintained. Leaky saddle the reason for leak. Positive pressure being maintained. Throttled down water pressure at site of repair by opening up the 3" bypass isolation valve and closing 18inch watermain. Omega will be sliding on the new repair clamp and service repair clamp while main is at about 30psi. Flushed hydrant on Talbot for 10 minutes to reduce mainline pressure for service repair

Pressure remained above 30 psi. Water leak now repaired.
Two repair clamps now installed, and all repair parts disinfected before being put into place.
Still waiting on live tap for new service line to be installed. Opened back up the isolation valve at chamber 16 and closed 3inch bypass valves. Live tap completed, 10 ft of new PVC service line installed from corporation stop to old curb stop. All parts disinfected before installation.
Obtained a residual through site of repair at 14:07-1.09ppm free.
Excavation area now being filled, everything now returned to normal operation. Refer to service repair form for more details.
-Flowmetrix completed flow meter calibrations at chamber 13, chamber 16 and Rogers Road
19: Completed monthly alarm testing for chamber 16 and 13. All working as intended.

SECOND QUARTER:

APRIL:

22: Completed Spring hydrant flushing.

25: Completed monthly alarm testing for chamber 13 and 16. Alarms received and acknowledged.

MAY:

6: Completed live tap on 46268 New Sarum line.

8: completed monthly chamber inspections and pumped down chambers accordingly.

9: Completed monthly alarm testing for chamber 13 and 16

14: completed sample station install at 45024 Talbot line

29: completed chamber inspections and pumped out chambers accordingly

JUNE

3: completed chambers inspections for the month along with meter reads
23: completed chambers 13 and 16 flood and power failure alarm tests. Alarms acknowledged.
26: completed air relief valve chamber inspections and pump outs accordingly. Pumped out tower road chamber to inspect for a leak. No leak was detected after returning to the site 3 hours later. Water in chamber is likely due to rainwater from leaky manhole lid.

THIRD QUARTER:

JULY:

11: Completed chamber 13 and 16 monthly critical alarm testing.
31: Completed monthly air relief chamber inspections.

AUGUST:

6: Completed monthly meter reads and quarterly chamber checks, pumped all chambers that required to be.
15: Completed chamber 13 and 16 monthly critical alarm testing.
19: Met with East Link at chamber 16 to look into comms issues, after trouble shooting they determined issue is not on their end.
20: East Link onsite at chamber 16 to replace modem.

SEPTEMBER:

2: Completed monthly meter reads.
9: Suma onsite for chamber 13 and chamber 16 UPS inspections.
18: Turned off curbstop at 48333 Talbot line as requested by S.Gustavson.
25: Completed chamber 13 monthly critical alarm testing.
26: Completed chamber 16 monthly critical alarm testing.

FOURTH QUARTER:

OCTOBER

1: Completed monthly meter readings
7: Worked on fall flushing down Talbot Line
9: Completed monthly Air Relief chamber inspections
: Exercised valves and completed chamber inspections
23: Completed monthly metering chamber inspections

NOVEMBER

4: Completed monthly meter readings
: Completed hydrant inspections for the season to ensure all were drained for the winter season
21: Completed chamber 13 monthly critical alarm testing.
: Completed chamber 16 monthly critical alarm testing.
26: Exercised Isolation valves at chambers 15A, 8, and 3. All with 18 turns and then returned to the open position

DECEMBER

2: Completed monthly meter reads
3: Completed chamber 13 and 16 monthly critical alarm testing.
15: Completed UPS tests at chambers 13 and 16 with a 5 minute run time
30: Completed monthly Air Relief chamber inspections

SECTION 7: ALARM SUMMARY

FIRST QUARTER:

JANUARY

5: Completed emergency locate request for 44330 Elm Line

FEBRUARY

No alarms to report for the month of February.

MARCH

No alarms to report for the month of March.

SECOND QUARTER:

APRIL:

No alarms for the month of April.

MAY:

11: Comm alarm for chamber 13, arrived onsite to ensure readings were normal. Monitored site and ensured communications were coming through. Communications returned to normal and all appears normal.

13: Comm alarm at Chamber 16, arrived onsite to ensure readings were normal. No readings are present on SCADA. Communicated with Execuline and problems are believed to be caused by third party maintenance. Cycled power to modem and no change. Readings eventually returned to SCADA, and all appears normal.

17: Power fail alarm at chamber 13 and flow meter fault alarm at 0151. SCADA readings show all readings are normal. Power outage reported on Hydro One website. Power restored to site at 0845. Readings monitored throughout and all readings and pressure stayed within regulatory standards.

JUNE:

4: Comm failure for chamber 13 and 16. Both sites reading on SCADA. Pressures and readings normal.

19: Comm failure alarm for chamber 13. Arrived onsite, all appears normal. Cycled power to modem. Problem did not reoccur.

THIRD QUARTER:

JULY:

6: Received alarm call for chamber 16 communication fault, logged on remotely to inspect, site still had all readings and recording trending.
13: Received call for emergency locate, arrived onsite and completed locate.

AUGUST:

16: Received alarm call for emergency locate, completed locate and sent to client.
17: Received alarm call for comms fail at chamber 16, logged into SCADA and found site had no communication, arrived onsite, attempted to reset modem, cycle power to cabinet several times and found no change in comms, spoke with ORO who will contact client to look into further.

SEPTEMBER:

7: Received chamber 13 communication alarm, logged on remote SCADA and found site still has comms suspect to be running on backup, arrived onsite and reset modem, alarm is cleared and everything is reading.
13: Received chamber 16 comms alarm, logged on remote SCADA and saw site still has readings, all appears normal.

21: Received comms fault alarm for chamber 16, logged on to remote SCADA, found site still has readings and trending, continued to monitor site.

30: Received alarm call for chamber 13 comms fault, logged on remote SCADA and found site still has readings and is populating trending.

FOURTH QUARTER:

OCTOBER

11: Received chamber 13 communications alarm. Logged on to SCADA IPad to find that comms had been restored. Continued to monitor site and all appeared normal.

18: Received chamber 13 power failure and flow transmitter failure alarms. Checked Hydro1 outage map and it appears the power loss is due to some work being done in the area. Continued to monitor to ensure is within normal operation.

NOVEMBER
No Alarms

DECEMBER
19: Received Communications alarm for chamber 16, logged on to SCADA IPad to find that comms had been restored

SECTION 8: COMMUNITY COMPLAINTS & CONCERNS

FIRST QUARTER:

There were no complaints or concerns reported during the first quarter.

SECOND QUARTER:

There were no complaints or concerns reported during the second quarter.

THIRD QUARTER:

There were no complaints or concerns reported during the third quarter.

FOURTH QUARTER:

There were no complaints or concerns reported during the fourth quarter.

AASWS01 Locates	
Month	**# of Locates Completed**
January	2
February	3
March	5
April	2
May	3
June	4
July	1
August	6

September	14
October	9
November	3
December	7

REPORT NO. **PBASWSS-26-03**

TO: Port Burwell Area Secondary Water Supply System - Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **2025 FOURTH QUARTER OPERATIONS REPORT**

RECOMMENDATION:

THAT Report No. PBASWSS-26-03 entitled “2025 Fourth Quarter Operations Report” be received.

PURPOSE & BACKGROUND:

The Ontario Clean Water Agency (OCWA) and Township Staff formally meet quarterly to review the operations and maintenance of the PBASWSS. OCWA and Township Staff discuss recommended lifecycle/capital work, bacteriological/chemical sample results, regulatory compliance, and possible emerging issues. OCWA provides detailed operations reports and performance assessment reports at these meetings.

COMMENTS & ANALYSIS:

This report is a summary of the operations and maintenance for the fourth quarter of 2025, as well as a condensed summary of the overall operations for the year. This report has been submitted to the Joint Board of Management to satisfy specific requirements of the QEMS Operational Plan for the PBASWSS. Additionally, this approach ensures that the Joint Board of Management is kept informed of the water system's operational performance on a continual basis by Township Staff.

The Township Staff formally met with the OCWA on February 2nd, 2026, to review system operations for the third and fourth quarters. Some of the specific items that were discussed during these meetings are outlined below.

Compliance Summary:

No compliance issues were reported during the third and fourth quarters of 2025. Furthermore, no compliance or exceedance issues were reported in 2025.

Inspections:

The MECP conducted an unannounced inspection of the PBASWSS on September 10th, 2025, during the second quarter. The final inspection report was received on October 27th, 2025. The report identified no non-compliances and received an IRR of 100% for the inspection period.

QEMS Update:

An Internal audit was conducted by OCWA on March 25th, 2025. 15 Opportunities for Improvement (OFI) were identified. These OFIs were discussed during the Management Review, which was held on May 20th. The operational plan has been updated to reflect these changes.

On July 4th, 2025, an External Audit was conducted. There were no non-conformances, and no OFIs were identified during the audit. The re-accreditation audit was held on September 3rd. There were six (6) OFIs identified, which will be considered at the 2026 Management Review.

The Essential/Emergency Service and Supply Contact List was updated on September 24th, 2025. Updates were made to Client Contacts as well as OCWA Staff.

Performance Assessment:

In 2025, the average daily flow to the secondary system from the Elgin Area Primary Water Supply System (recorded at MV1) was 822.1 m^3/d. This is a 9.4% increase when compared to 2024 (751.8 m^3/d).

There were no adverse sample results in 2025. Weekly microbiological sample results were tested for E. coli, Total coliforms and HPC. Samples are shipped to SGS Laboratories, which is an accredited laboratory.

OCWA tests free chlorine residuals in the distribution system twice per week. Quarterly samples were collected for Trihalomethanes (THMs) and Halo Acetic Acids (HAAs) in accordance with regulatory requirements. All sample results tested were well below the Maximum Allowable Concentrations (MAC) set forth in O.Reg. 170/03. OCWA continues to meet or exceed the Provincial Regulations pertaining to microbiological sampling requirements. Further information regarding sample results is outlined in the attached report.

Occupational Health & Safety:

OCWA completed the annual health and safety inspection on February 28th, 2025. No issues were identified during the inspection. No other concerns were identified in 2025.

General Maintenance:

OCWA conducted various maintenance activities in 2025. Activities include, but are not limited to, regular readings and checks, inspections and pumping of air-release chambers, and monthly alarm testing. Chemical feed system maintenance. Annual flow meter calibrations were completed. OCWA completed spring and fall hydrant flushing and winterization. Annual valve exercising was also completed. Further information on maintenance completed in 2025 is available in the attached report.

Alarms:

A variety of alarms were reported in the third and fourth quarters. Most of these alarms were minor. The SCADA system allows Staff to monitor and respond to alarms continuously. As the Operating Authority, OCWA responded to alarms as required, as outlined in the attached report.

Complaints & Concerns:

No complaints were received from the general public that required a response from OCWA and Township Staff in 2025.

SUMMARY:

Quarterly meetings with OCWA are an effective way to keep Township staff well-informed about the operations and maintenance of the drinking water system. The information provided to the Board by OCWA helps the Joint Board of Management make well-thought-out decisions to provide a continuous, safe supply of potable water.

ATTACHMENTS:

1. 2025 OCWA Fourth Quarter Operations Report

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Port Burwell Area Secondary Water Supply System Operations Report Fourth Quarter 2025

Ontario Clean Water Agency, Southwest Region
Vitaliy Talashok, Sr. Operations Manager, Aylmer Cluster
Date: Jan 15, 2026

Facility Description

Facility Name:	Port Burwell Area Secondary Water Supply System
Regional Manager:	Sam Sianas – 519-319-2233
Sr. Operations Manager:	Vitaliy Talashok – 226-378-8986
Business Development Manager:	Robin Trepanier – 519-791-2922
Facility Type:	Municipal
Classification:	Class 2 Water Distribution
Drinking Water System Category:	Large Municipal Residential
Title Holder:	Municipality
Operation Status:	OCWA

Service Information

Area(s) Serviced:	Municipality of Central Elgin, Malahide & Bayham
Population Serviced:	624
Malahide Direct Connections:	163
Central Elgin Connections:	61

Operational Description

This is a 12-inch watermain from the Elgin Area Water Treatment Plant to Port Burwell including an elevated tank west of Pt. Burwell. Includes re-chlorination at the tower, Dexter and at Lakeview Re-Chlorination Facility.

CLIENT CONNECTION MONTHLY CLIENT REPORT

Facility Name: Port Burwell Secondary - Lakeview, Dexter, Burwell tower, Valve house
ORG#: 5911

SECTION 1: COMPLIANCE SUMMARY

FIRST QUARTER:

There were no compliance issues to report for the first quarter.

SECOND QUARTER:

There were no compliance issues to report during the second quarter.

THIRD QUARTER:

There were no compliance issues to report during the third quarter.

FOURTH QUARTER:

There were no compliance issues to report during the fourth quarter.

SECTION 2: INSPECTIONS

FIRST QUARTER:

There were no MECP or MOL inspections conducted during the first quarter.

SECOND QUARTER:

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

THIRD QUARTER:

On September 10th MECP Inspector Jim Miller completed an unannounced inspection of the Port Burwell DS. A rating of 100% was received.

FOURTH QUARTER:

There were no MECP or MOL inspections conducted during the fourth quarter.

SECTION 3: QEMS UPDATE

FIRST QUARTER:

On March 25th the internal audit was completed by Maegan Garber. No non-conformities were identified and fifteen (15) opportunities for improvement (OFI's). The management review is scheduled to be completed in May, 2025.

SECOND QUARTER:

On May 20th the management review for Port Burwell Secondary was held. The operational plan was updated and documents have been sent to Intertek for the reaccreditation audit scheduled for August 4th.

THIRD QUARTER:

On July 4th the external audit was completed with no opportunities for improvement. The reaccreditation audit was held on September 3rd with 6 OFI's to consider at the next management review. On September 24th the Essential Emergency Service and Supplier Contact List was updated and is currently in its 40th revision.

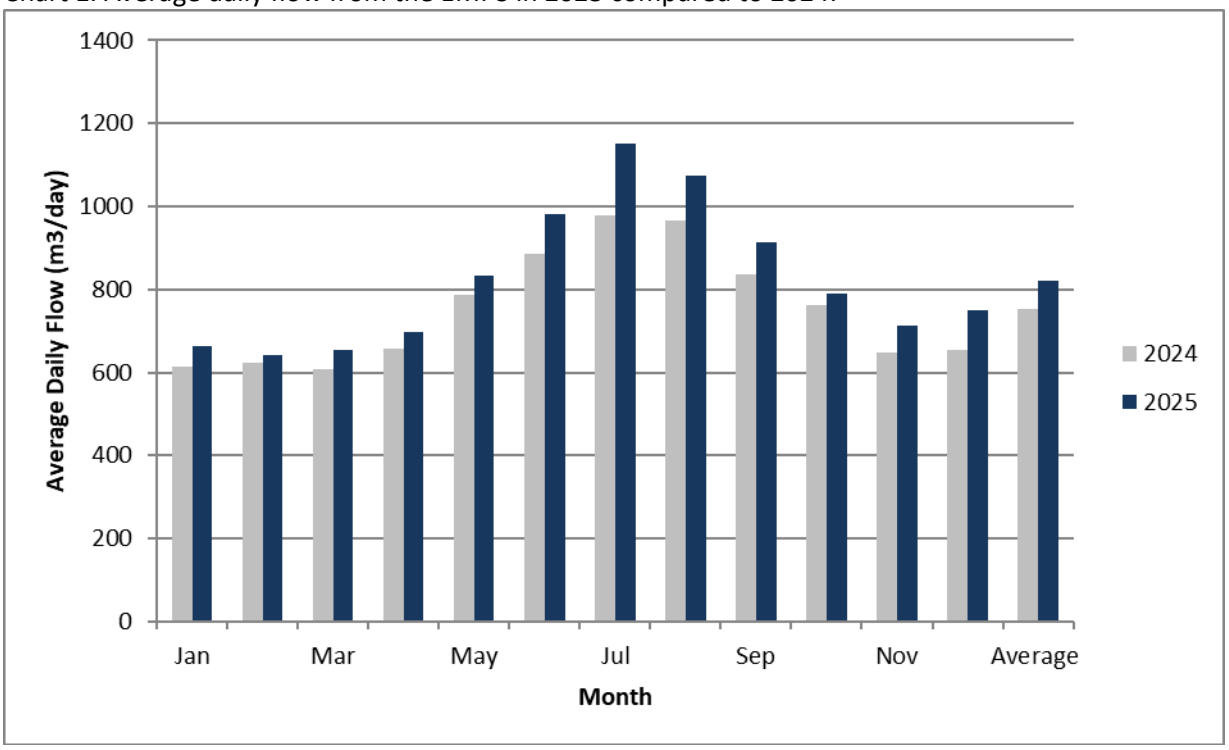
FOURTH QUARTER:

There were no QEMS updates to report on in the fourth quarter.

SECTION 4: PERFORMANCE ASSESSMENT REPORT

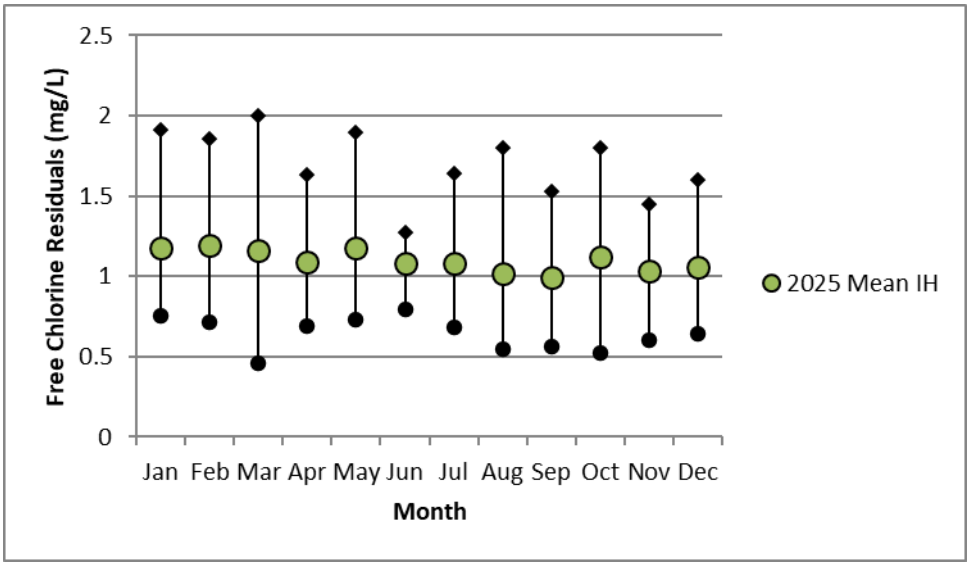
Flows are recorded at various points within the distribution system. The average daily flow to the system from the Elgin Area Primary Water Supply System (recorded at MV1) in 2025 was 822.1 m^3/d. This is up 9.4% when compared to 2024 (751.8 m^3/d). Chart 1 below depicts the average daily flow in 2025 compared to 2024.

Chart 1. Average daily flow from the EMPS in 2025 compared to 2024.



Chlorine residuals are obtained throughout the distribution system two times per week, with 4 residuals taken on sample days (usually Mondays) and three residuals taken at least 48 hours after the first set (usually on Fridays) to meet the regulatory requirements. Chart 2 below depicts the minimum, maximum and average chlorine residuals taken in the distribution system in 2025. The concentration of free chlorine varies depending on the location of sample taken. All results met regulatory requirements.

Chart 2. Minimum, maximum and average chlorine residuals in 2025.



The chlorine residuals are continuously monitored at the re-chlorination facilities at Dexter Line, the Tower and Lakeview. Chart 3 below provides the monthly average, minimum and maximum free chlorine residuals at the Dexter Line Re-Chlorination Facility in 2025.

Chart 3. Minimum, maximum and average chlorine residuals recorded at Dexter Line Re-chlorination in 2025.

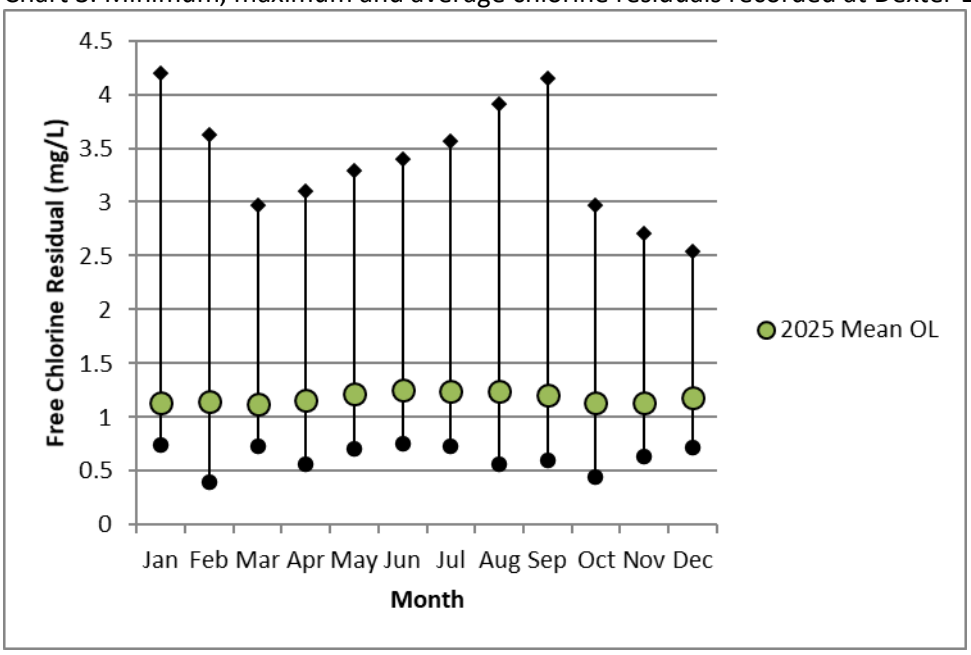


Chart 4 below provides the monthly average, minimum and maximum free chlorine residuals at the Port Burwell Tower in 2025. The residuals at the tower fluctuate depending on the fill cycles.

Chart 4. Minimum, maximum and average chlorine residuals recorded at Port Burwell Tower in 2025.

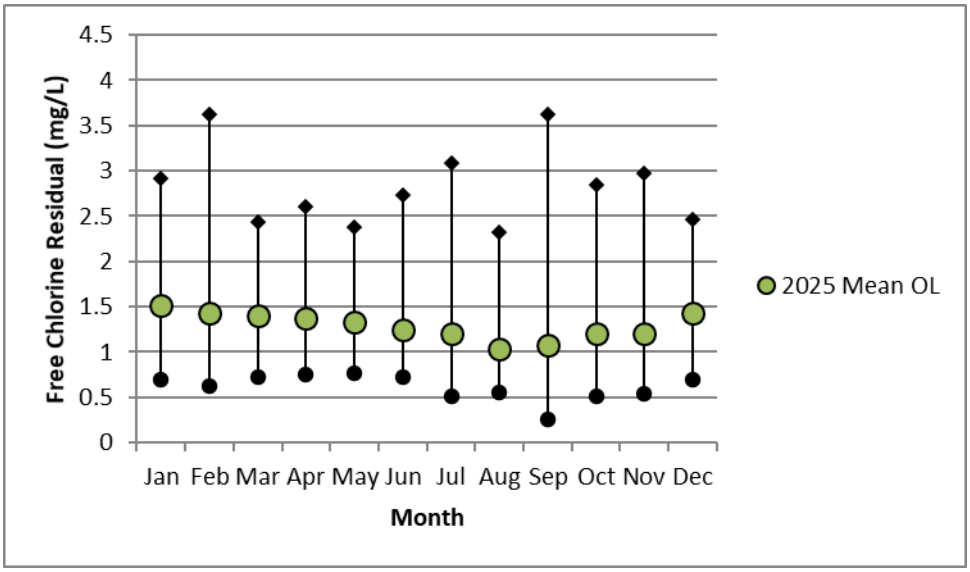
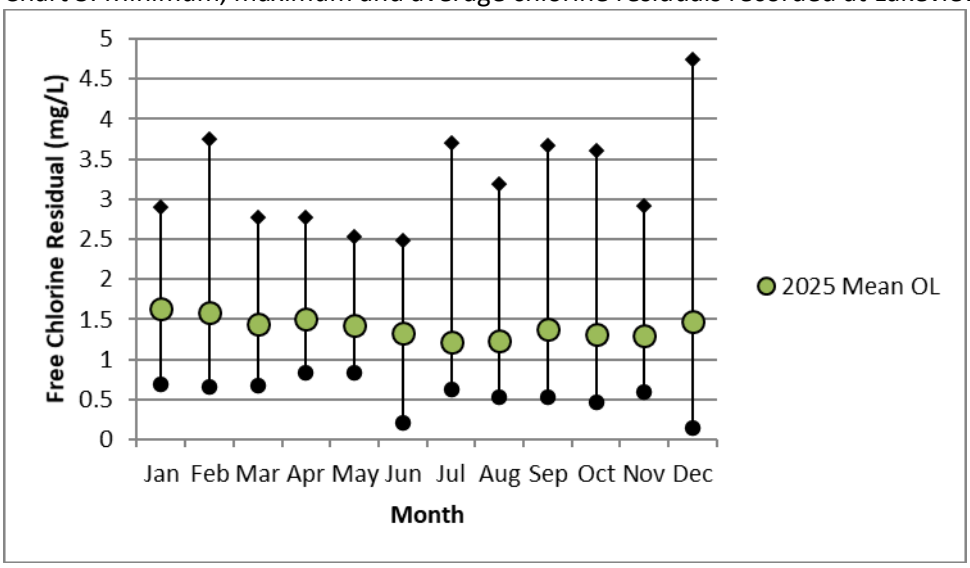


Chart 5 below provides the daily average, minimum and maximum free chlorine residuals at the Lakeview Re-chlorination Facility in 2025.

Chart 5. Minimum, maximum and average chlorine residuals recorded at Lakeview Re-chlorination in 2025.



Samples are obtained once per week at three locations in the distribution system. Table 1 summarizes the results of the microbiological sampling.

Table 1. Summary of microbiological sampling in 2025.

Month	# Samples	E. coli Range (cfu/100mL)	Total Coliform Range (cfu/100mL)	# Samples	Heterotrophic Plate Count Range (cfu/mL)
January	8	0 – 0	0 – 0	4	<10 - <10
February	8	0 – 0	0 – 0	4	<10 - <10
March	10	0 – 0	0 – 0	5	<10 - <10
April	8	0 – 0	0 – 0	4	<10 - <10

May	8	0 – 0	0 – 0	4	<10 - <10
June	10	0 – 0	0 – 0	5	<10 - 10
July	8	0 – 0	0 – 0	4	<10 - <10
August	8	0 – 0	0 – 0	4	<10 - 40
September	10	0 – 0	0 – 0	5	<10 - <10
October	8	0 – 0	0 – 0	4	<10 - <10
November	8	0 – 0	0 – 0	4	<10 - <10
December	10	0 – 0	0 – 0	5	<10 - <10

Trihalomethanes (THMs) are sampled on a quarterly basis; the current running average is 33.25µg/L. When comparing the current running average to the 2024 average (35.75µg/L) there has been a decrease of 7.0%. The results are well below the limit of 100 µg/L (refer to Table 2).

Table 2. Summary of THM sample results

	Limit (µg/L)	THM Result (µg/L)
January 2025		34
April 2025		25
July 2025		29
October 2025		45
Running Average	**100**	**33.25**

Haloacetic Acids (HAAs) are required to be sampled on a quarterly basis. The current 2025 running average is 18.28µg/L (refer to Table 3). When comparing the current running average to the 2024 average (16.23µg/L) there has been an increase of 12.6%. The results are well below the limit of 80µg/L.

Table 3. Summary of HAA sample results

	Limit (µg/L)	HAA Result (µg/L)
January 2025		18.6
April 2025		16.6
July 2025		27.5
October 2025		10.4
Running Average	80	**18.28**

SECTION 5: OCCUPATIONAL HEALTH & SAFETY

FIRST QUARTER:

On February 28th, the annual occupational health and safety inspection was completed. There were no issues identified. There were no additional Health & Safety issues identified in the first quarter.

SECOND QUARTER:

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

THIRD QUARTER:

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

FOURTH QUARTER:

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

SECTION 6: GENERAL MAINTENANCE

FIRST QUARTER:

JANUARY

2: Dexter rechlor - Chlorine pump trending appeared off on scada
Pump 2 was running but chlorine residual was not increase
When on site pump 2 was running but could not increase residual over 1.20
Switched pumps to duty manual and pump 1 increased residual to stop point 1.30
While off advanced pump 2 and opened air valve. Looked like large air bubble in line
Closed air valve and reset panel valves.
Allowed pump 1 to run again
When pump 2 ran took a long time to get residual to stopping point 1.30
Will continue to monitor pump

15: Port Burwell tower, Dexter, Lakeview rechlor – Tested critical alarms

17: Landmark on site for annual ladder Safety inspection.

: MV1, Dexter, Port Burwell tower and Lakeview rechlor – Tested flood alarms

23: MV1 – On site for chlorine delivery

FEBRUARY

05: Installed new chlorine tank at lakeview
11: Port Burwell tower, Dexter, Lakeview rechlor – Tested critical alarms
12: MV1 and Dexter rechlor – Tested flood alarms
25: Logged onto SCADA at 03:10. Tower discharging with level of 9.73. Opened valve to start filling tower upon request from oro due to water plant shutdown. Logged off SCADA 03:25
26: Port Burwell tower - Changed hose connection where panel goes to injection hose due to connection leaking
27: Lakeview - Changed out hose connection on panel where panel connects to injector hose due to old connection leaking

MARCH

5: Port Burwell tower - Changed start fill setpoint for port Burwell from 9.0 to 9.31M to start filling tower before today's shutdown at the waterplant.
Tower starting to fill at 4-5l/sec, valve opening at MV1. Returned fill setpoint for tower back to 9.0M.

: MV1 and Dexter rechlor – Tested flood alarms

6: MV1 - On site for chlorine delivery

7: Port Burwell tower, Dexter, Lakeview rechlor – Tested critical alarms
11: VO01, EO38, Lakeview and Port Burwell tower – Flowmetrix on site to calibrate flow meters
12: Dexter rechlor, PB02, Wanetta beach and Dexter and imperial meter chambers - Flowmetrix on site to calibrate flow meters
13: Port Burwell tower - Logged onto SCADA to check status of Port Burwell tower due to EAWTP shutdown scheduled for 05:00. Tower at 9.33 m and discharging. Altered tower fill set point at MV1 from 9.00 to 9.40m to call for tower to fill. Once in fill mode returned set point to 9.00m

14: Port Burwell tower - Received tower plc communication alarm at 14:43. On call operator confirmed on scada did not have communication. Cycled power at tower back booth at 15:15 and did not resolve issue. Cycled power for tower at Lakeview at 15:25 and communication resolved
:MV1 – On site for chlorine delivery

SECOND QUARTER:

APRIL:

01: Found GFCI for sump pump at E038 had failed, duty OIC notified

02: Onsite with Koolen electric to replace GFCI at E038, unit replaced and now working properly

02: Port Burwell Tower, Dexter, Lakeview rechlore – Tested Critical alarms

10: MV1- Received chlorine delivery

18: Repaired chlorine leak on fitting for chlorine board at Port Burwell tower, primed panel and returned back to normal operation

22: Completed spring hydrant flushing

24: Onsite at 47581 Dexter Line at chamber ARC01 with Farmington Mechanical to remove, refurbish and re-install air relief valve

MAY:

22: Onsite with Farmington mechanical at chamber E015 to remove existing ARV and install new unit, later at chamber E004 removed existing ARV and installed refurbished unit

22: MV1- received chlorine delivery

28: Completed monthly critical alarm testing of Port Burwell tower, Dexter and Lakeview rechlore

JUNE:

12: MV1- received chlorine delivery from Jutzi

18: Found leak on chlorine discharge line at Dexter rechlore, cut line and installed fittings to repair leak, re pressurised system, held under pressure

19: Koolen Electric onsite at MV1 to replace power fuses

19: Onsite at lakeview rechlore after utility power restored to site from power outage, had issue with no power to chlorine pumps or analyzer, after troubleshooting contacted Hawkins Electric who found the PLC power supply box had failed, replaced unit with new one, power than restored to pumps and analyzer

26: Port Burwell tower, Lakeview, Dexter rechlore- completed monthly alarm testing

THIRD QUARTER:

JULY

2: Flowmatrix at cabinet at rush creek to give access to pressure data collector as well at hydrant at 48209 rush creek. Hydrant unbagged and back in service. Caps put on hydrant after pressure gauge and data collector were removed by Flowmatrix.

4: Farmington mechanical on-site at chamber E009 to replace air release valve

18: Fixed chlorine pump issue at lakeview. Pump 2 is now in duty 1. Both pumps in auto. Hawkins electric onsite to replace phase in plc panel. Readings returned to SCADA. All appears normal. Setpoint for tower fill set back to 1.30 from 1.50. Decreasing pump stroke 2% from last night. All sites returned to normal.

21: Completed rounds and readings. All appears normal. Noticed leak discharge end of pump. Replace fitting and turn back to normal operation at Tower.

Completed rounds and readings. Replaced tubing on suction line for pump#2 and returned to normal operation at Lakeview.

28: Communication restored to Dexter Rechlor.
Summa reset the site on their server and now it's visible on APAM.

29: Removed chlorine injector after discovering abnormal trending on SCADA at site. Discovered large blockage of chlorine buildup and removed. Injector put back into place and working as intended. Increased stroke on pumps from 58% to 60% at Lakeview.

31: On-site with Farmington Mechanical to replace ARV in chamber E028

AUGUST

8: On-site with Farmington mechanical to replace ARV in chamber E036

22: Changed out check valve going from pump 1 to hose into panel at Tower

25: Changed check valve from chlorine tank to pump on pump 2 based on trending at Tower

Changed out injection hose due to small leaks close to where it connects to chlorine panel at Lakeview

26: Changed air purge valve on chlorine pump 1 at Tower

Changed out connection nut from hose to panel on pump 1 and 2 to correct panel pressure issues at Lakeview

27: trade tech completed annual back flow preventer inspection at Dexter, Tower and Lakeview.

29: replaced connector from the panel to injection line at the Tower.

SEPTEMBER

17: Logged into SCADA at 0625 to manually fill tower for Elgin Water Plant shutdown.

24: Upon arrival noticed 2 pinhole leaks in pump 2 chlorine line. Isolated line and put pump in stop. Ran to lake view to grab replacement line. Replaced line and used fittings from old line to connect. Ran pump in fast advance to fill cylinder. Built pressure in chlorine board and no longer leaks. All appears normal

29: Arrived at tower to no pressure in panel. Pump 2 attempting to run but air locked. Stopped pump and oscillated chlorine board to run tests. found that check valve was not functioning in chlorine line coming out of pump2. Switched valve piece and noticed leaking out of new piece. Tried a different piece with different rubber gaskets. Built pressure in panel and watched pump 2 chlorine line fill. Put chlorine board back online. Completed rounds and readings and watched pump 2 successfully dose for 20 min. All appears normal. Calibrated analyzer.

FOURTH QUARTER:

OCTOBER

7: Cleaned all chlorine injectors at all rechlors, completed workorder.

8: Dexter Line chlorine calibration and electrolyte fluid switch, as well as pH probe calibration.

15: Port Burwell Tower: . Pressure chlorine line 10 psi, leak in chlorine line connection. Change connection, run chlorine pump in manual mode until pressure became 55psi. Chlorine analyzer 0.92 ppm, handheld kit 0.75 ppm. Calibrated analyzer. Monitored chlorine line pressure. Completed rounds and readings. Secured station.

22: Cleaned check valve on pump 2 and replaced line from chlorine panel to injector. Put pump 2 in duty and watched dose properly. Panel held good pressure and calibrated analyzer.

NOVEMBER

3: Ensured all heaters were turned on in rechlor facilities for winter season.

4: Completed hydrant inspections for water within PB system. Possible leaky hydrant at Nova Scotia Line and Imperial.

6: Confirmed that hydrant was not leaking, just not fully closed after flushing season. Ensured was fully closed and winterized.

29: Was notified by contactor that SS90 was leaking and has iced up. On call operator arrived onsite to tighten valve shut. No more leakage detected but will monitor and report to main operator.

DECEMBER

3: Notified by on-call operator about abnormal trending at Dexter Line Rechlor. Cleaned fittings on pump 2 and built pressure in panel to ensure proper dosage. Also checked check valve in pump 1 to ensure no backflow is happening while pump 2 is struggling to reach maximum residual. All appears normal.

4: pump 2 still struggling to spike chlorine. Inspected diaphragm. Looks normal and in good working order. Once again built pressure in panel and purged air from system using air release valve on pump 2. Will continue monitoring.

5: Continued trying to maintenance pump 2 due to improper dosage. Believe to have fixed problem by purging all air out of feed line and into the injection point.

8: Shut off curb stop to SS90 due to leakage detected once again. Ring on valve may need to be replaced or shifted back into proper position. Client has been notified. SS91 will now be used during sampling under PCT instructions.

SECTION 7: ALARMS

FIRST QUARTER:

JANUARY

1: Received plc communication alarm at Port Burwell Tower 00:28. Logged into SCADA and alarm had already cleared. All appeared normal.

18: Received alert from call service for PLC communication failure at Port Burwell Tower. Logged onto SCADA. No alarms present in alarm banner. Phoned dialer and acknowledged alarm. All values present and refreshing. Reviewed trending. No loss of signal

19: Received alert from call service for PLC communication failure at Port Burwell Tower. Acknowledged alarm and logged onto SCADA. All values present and refreshing. Reviewed trending. No loss in communication

23: 02:10-Received notification of high Cl alarm at Dexter Re-Chlor. Residual spiked at end of chlorine pump cycle and briefly crossed 3.50mg/L from 01:43-01:47

27: At 18:43 received alarm for chlorine pump 1 lockout at Dexter. Logged onto SCADA at 18:46 and acknowledged alarm Reset chlorine pump 1 and alarm fault cleared Watched pump run through a few cycles

31: Received plc communication alarm at Port Burwell Tower 22:43

FEBRUARY

16: Received alert from call service for power failure at lakeview. Acknowledged alarm and logged onto SCADA. Observed hypochlorite pumps in operation. Site with power as pumps will not run on UPS power

19:12- Received alert from call service for UPS fault at dexter. Checked alarm banner on SCADA. Inactive. Alarm repopulated at 19:37. Hypochlorite feedback faults pump 1&2 @ 19:42. In contact with Hydro One. Team being dispatched to site. Estimated time of power restoration 22:00

19:18- Received alert from call service for power failure at port Burwell tower. Viewed site on SCADA. Level at 9.53 m and discharging at 8.19 l/s with a residual of 1.70ppm. In contact with Hydro One. Estimated time for power restoration 22:00

22:47- Received notification from call service (20:31) Port Burwell tower power now normal. Contacted by Hydro One power has been restored to Dexter Line (20:32) tower still in discharge mode. Checked on sites at 22:47. Tower now in discharge. Hypochlorite pumps running at both sites. Now normal

17:

05:25- Received alert from call service for power failure at Port Burwell tower as well as power failure and UPS fault alarms for Dexter. Logged onto SCADA. All alarms “out of alarm “ at 05:25:27

06:11- Received alert from call service for UPS fault at dexter. Reviewed SCADA alarm summary. Out of alarm. In alarm from 06:09:23 to 06:09:31. Continued power flickers due to inclement weather

12:42- Received alerts for power failure dexter and port Burwell tower. Checked sites via SCADA. Chlorine pumps in operation at both sites. Suspected power flushed due to inclement weather

20:

01:28-Received notification of Dexter Re-Chlor pump 2 fault @ 00:42. Reset fault from SCADA iPad and pump returned to function. Continued to monitor pump activity for 20 min - no further issues observed.

22: 07:44- Received notification of Port Burwell Tower PLC comm fault @ 07:41. Accessed Malahide SCADA @ 07:44

18:02- Received notification of PB Tower PLC comm fault @ 18:02.

23: Port Burwell tower - Received notification of PLC comm fault at 07:05 and 15:18. Trending reviewed each time. No loss of communication

MARCH

11: Received alert from call service for high level alarm at Port Burwell Tower. Acknowledged and logged onto SCADA. All values present and refreshing. Reviewed trending. No loss off signal. Repeat of earlier alarm. Tower at 10.37m and discharging.

14: Received tower plc communication alarm at Port Burwell Tower 14:43. On call operator confirmed on scada did not have communication. Cycled power at tower back booth at 15:15 and did not resolve issue. Cycled power for tower at Lakeview at 15:25 and communication resolved.

19: At 08:48 received port Burwell chamber panel failure alarm. Confirmed alarm was from water treatment plant testing their generator.

24: Received alert from call service for power failure at valve house. In contact with EAWTP. Site was running on generator power due to power failure. Site now back on utility power.

31: Received alert from call service for panel power failure at valve house. Acknowledged alarm. Now inactive. Re-entered facility. Operating as intended. In contact with EAWTP. Generator not being tested at this time. Alarm due to power flicker.

SECOND QUARTER:

APRIL:

24: Received alarm for utility power fail at Port Burwell Tower, Enbridge performing work near by that caused power outage, once power was restored ensured all equipment is operational.

27: Received alarm call or UPS fault at Dexter rechlore, logged into SCADA and acknowledged alarm which cleared it, everything appears normal.

28: Received notification of MV1 low inlet pressure alarm, accessed SCADA, pressure spiked before dropping to 0 PSI again, spoke with Port Stanley WTP operator and was informed they were performing pressure calibrations.

MAY:

10: Received Lakeview rechlore chamber panel power fail alarm, logged onto SCADA and acknowledged alarm, site still had comms and was reading, Hydro One app showed power outage in area, once hydro was restored inspected site all appears normal.

26: Received alarm for Lakeview chamber high level, arrived onsite and chamber had pumped down, sump pump working well, now out of alarm.

JUNE:

08: Received alarm call for Port Burwell tower communication alarm, logged on remote SCADA to inspect, site is showing that all items are reading, relayed information to S. Gustavson for possible SCADA issue.

19: Received Lakeview Rechlore power fail alarm, logged onto SCADA and called dialer to acknowledge, monitored SCADA and watched chlorine pump 1 go through run cycle, arrived onsite and site still had no power, UPS was running chlorine pumps and analyzer, at 04:00 UPS died, power restored to site at 13:00.

19: Received Port Burwell Tower PLC alarm, logged onto SCADA and acknowledged alarm which cleared it, site still had all readings.

23: Received alarm call for Port Burwell Tower PLC comm fault, accessed SCADA and found no readings for site, attempted to reset from PLC but was unsuccessful, arrived at Lakeview rechlore, cycled power to PB2 modem, checked SCADA and site has restored readings.

THIRD QUARTER:

JULY

11: Received a call for Lakeview Rechlor power failure alarm. Logged onto SCADA. Readings visible and active. 2 alarms received on SCADA. Power fail now normal and chlorine pump 1 fault now normal. Alarms acknowledged on SCADA

11: Call received for Communication fault alarm E034 at Lakeview. Acknowledged alarm by dialer. Opened SCADA and readings were present. Will continue monitoring

12: Call received for Lakeview communication fault. Logged on remotely to SCADA, acknowledged alarm. System has current readings, and all appears normal. Will continue to monitor remotely

15: Power fail received for back up dialer (ID #1). Call from spectrum a few seconds later for power failure at chamber E034 Lakeview. Log in to Malahide SCADA. Only alarm present on SCADA is communication failure alarm for lakeview. Likely from power flicker. Acknowledged alarm. Readings present. Current readings are Pressure: 311.8 kpa, Cl: 1.54 mg/L, Current flow: 6.27 l/s. A few minutes later I got through to the back up dialer and acknowledged power failure alarm. Continuing to monitor SCADA readings and trending. All appears normal. No more alarms coming through. Logging off SCADA.

17: Received a call for Port Burwell tower PLC comm fault alarm. Logged into Malahide SCADA, no readings were present. Alarm acknowledged. Departing for site. When I arrived at the tower, there was still no readings on SCADA. Residual is at 0.84 @ 1757. Then when I arrived at Lakeview, back up UPS had run out officially; no power to facility. Likely the reason for the communication failure at tower.
Increased pump stroke under OIC from 78% to 80% to ensure residual stays up overnight. Departing tower now.

20: Received PLC comms failure alarm for Lakeview. I logged onto SCADA to see present and populating readings for lakeview. Facility readings are as follows: Pressure: 318.9, Chlorine: 0.87, Flow: 10.26
Will continue monitoring to ensure populating readings. After monitoring for a while, all appears normal and readings are present. Logging off SCADA now

24: Received notification of Port Burwell Tower PLC Comm Failure alarm. Accessed Remote Desktop and attempted to open Malahide SCADA. System began to boot up as normal but froze during loading process at "loading command server". Reset Remote Desktop connection but issue persisted. I then contacted Execulink regarding these issues - DSL connection for tower has been showing intermittent connection during the day, Execulink recommended a reset of comms equipment at site, but no comment on SCADA fault. Reset SCADA server. SCADA system now functioned normally upon startup from Malahide office. I then cycled power to the iPad and SCADA connection booted up as normal. Confirmed all readings at Port Burwell Tower were normal and reviewed trending. No issues were observed.

24: Received notification of Dexter Re-Chlor UPS fault alarm. Accessed Malahide SCADA. UPS fault now cleared, but CHP02 showing general alarm/lockout status. Acknowledged all alarms and reset CHP02 alarm/lockout status from SCADA. Pump returned to service and appeared to be functioning normally. Readings at all sites remain normal. Acknowledged all alarms and logged out of Malahide SCADA.

27: Received notification of Dexter CHP02 general alarm. Accessed Malahide SCADA. Pump 2 currently running at 18% speed, residual 1.29. Reset CHP02 alarm from SCADA screen. Monitored SCADA for site and there was no recurrence of issue observed. All appears normal. Logged off from Malahide SCADA.

27: Received notification of Dexter re-chlor Comm fault. Accessed Malahide SCADA. No readings present for site. Acknowledged alarm and proceeded to the site. On arrival all equipment appears to be running as normal and chlorine pumps are currently dosing. Cycled power to comms equipment. Contacted Execulink, and the technician tested all connections and found no issues on their end.
As per conversation with ORO, I returned to Dexter re-chlor and attempted to cycle power to the hard-wired PLC unit. Upon attempt to cycle the power, PLC faulted out. Both Hypochlorite pumps now showing “input signal <4mA” errors and stopped dosing. Notified ORO of issue and contacted Hawkins Electric for assistance. Hawkins Electric arrived on site at 21:41. PLC fault was cleared and hypochlorite pumps returned to normal function. Comms remain down for site. Left site running without comms until issue can be rectified on Monday. Hawkins now departing site.

AUGUST

1: Received alarm call for Dexter high chlorine. Logged on remotely to SCADA. Acknowledged alarm. It is now out of alarm state but still reading high. There is no flow leaving the valve house going through Dexter rechlore. It appears the residual has climbed since flow stopped. It is likely the chlorine pump was dosing when the flow was stopped. Will continue to monitor. When flow resumed going past chamber again, chlorine residual came back down to normal operating level.

12: Received a call for hypochlorite pump 2 lock out. Logged onto SCADA and reset pump 2, and the alarm cleared. Watched pump 2 complete a pump cycle and continued to monitor site. Current residual was 1.26 mg/L. Left site after monitoring for about 30 minutes.

12: Received call for port Burwell chamber power failure alarm. Logged into SCADA and acknowledged alarm and alarm cleared. All values appeared normal. Called the Port Stanley water treatment plant and confirmed they had received a power flicker and were back on utility power. Logged off scada, as everything appeared normal.

14: Received E034 communication fault alarm. Logged into scada and acknowledged the alarm. Lakeview still had communications. Pressure was 308.5, flow was 8.82 and residual was 0.92 mg/L. Continued to monitor site. At 1723 pressure was 318.5, flow was 8.18 and residual was 0.93 mg/L. At 1733 pressure was 313.2, flow was 9.02 and residual was 0.94 mg/L. All appears normal and left site at 1740

17: Received Dexter high chlorine alarm at 1546. Logged into scada and acknowledged alarm. Residual was 3.44 mg/L at 1549 and out of alarm. Tower is discharging, so no flow through Dexter, and chlorine residual remained high. Continued to monitor site. Residual stayed under high alarm and at 1630 tower started to fill, flow started and residual dropped to normal levels. Logged off at 1640

20: Received Port Burwell tower plc communications fault alarm. Logged onto SCADA remotely to see readings populating. Flow: 5.86, Chlorine: 1.86, Level: 9.76. Will continue monitoring to ensure readings stay current. As readings continued populating. All appeared normal.

21: Received Port Burwell Lakeview Comm Fault alarm. L Logged into SCADA remotely. Readings present and updating. Current readings as follows: Flow: 4.59, Chlorine: 1.30, Pressure: 315.6. Will continue monitoring to ensure data stays current and continues populating. All appears normal, readings present and updating. Logging off SCADA now.

24: Received e034 communications alarm. Logged onto SCADA and acknowledged alarm. Still had communication to the site. Pressure was 307.7 while flow was 9.12. Continued to monitor site. At 1534 pressure was 314.2 and flow was 8.13. Continued to monitor site. At 1546 pressure was 314.4 and flow was 8.95. All appears normal and left SCADA

29: Received alarm call for Dexter chlorine pump fault. Will log on remotely. Acknowledged alarm on summary, on Dexter setpoint page. Cleared alarm for chlorine pump 2. Rotated pump duties back and forth, pump appeared to turn on and run fine, will inspect further on-site in the morning.

SEPTEMBER

4: Received a low chlorine alarm for Port Burwell Tower. Arrived at tower, flushed chlorine analyzer manifold after noting some air bubbles and reset back to normal flow rate. Chlorine analyzer currently reading 0.62ppm free, pressure in panel at 57psi. Ensured pumps are running properly after filling the cylinder on the panel. Currently set to 78% stroke, increased both to 80%.

6: Received low Chlorine at Tower. Arrived on site to find pump 1 which was running air locked, quickly removed air in diaphragm. Panel pressure at 54psi. Obtained a chlorine residual of 0.69ppm free from fire hydrant located at 52429 Nova Scotia Line. Tower residual currently showing 0.70ppm on analyzer and just started to fill. Will continue monitoring chlorine level through SCADA laptop.

10: Received call for e034 communication alarm. Logged into SCADA and acknowledged alarm. Still had readings at e034. At 2335 residual was 0.95 mg/L, pressure was 318.7 and flow was 4.99. Continued to monitor site. At 2345 residual was 1.39mg/L, pressure was 317.4 and flow was 3.83. Continued to monitor site. At 2355 residual was 1.14mg/L, pressure was 318.3 and flow was 4.20. All appears normal

12: Received low chlorine alarm for Port Burwell tower. At 1636 logged into SCADA and cl was 0.46mg/L with tower discharging and pump 1 running. Headed to site and continued to monitor via scada. Arrived on site at 1730 with cl at 0.51 mg/L. At 1731 tower stopped filling and started to discharge. Pressure in panel was 50 psi and panel didn't appear to have any leaks. Calibrated analyzer from 0.51mg/L to 0.69mg/L. Trending showed chlorine spiked after tower stopped filling and then started to trend downward. Confirmed pump 2 was working by filling cylinder. Pump 1 appeared to pump chlorine when in fast advance but not when in normal operation. Took off pump 1, pump to panel line and cleaned it out. Pump 1 appeared to be working properly after cleaning the line. Due to tower filling, going to leave pump 1 out of rotation. Contacted ORO about findings. At 1901 cl was 1.14mg/L with the tower still filling. Left site at 1920

20: Received comm failure for Port Burwell chamber e034 at lakeview. Opened SCADA remotely. Acknowledged alarm and all readings were present and updating accordingly. Current readings are as follows: Residual: 1.11mg/L, Flow: 7.72, Pressure: 307.5. Reviewed trending, all appears normal. Comm fault banner still present but readings populating. All appears normal. Logging off SCADA.

21: Received 3 alarms for communication failures at dexter line, PB tower, and Springfield SPS. Opened SCADA remotely and no readings present for any of the 3 sites. Checked trending and looked like they all dropped out around 0615. Continued monitoring to see if readings populate. Dexter line and tower are back online. Readings are as follows:
DEXTER-Pressure: 254.1, Flow1: 0.35, Flow2: 0.00, Residual: 1.09mg/L
TOWER-Level: 9.25, Residual: 1.71, Flow: 5.35
Checked readings for lakeview and none present. At 0700 lakeview readings started to populate. Readings are as follows: Pressure: 311.6, Residual: 1.38, Flow: 2.97. Continued monitoring to ensure readings are populating. All readings appear normal and within parameters. Logging off SCADA now.

FOURTH QUARTER:

OCTOBER

1: Low Chlorine Alarm: Arrived onsite in response to low chlorine alarm floating at 0.48-0.5 ppm. Pump 2 was pushing air into panel. Re-fitted valves on pump 2 and purged air out of system. Panel held pressure and dosed properly using pump 2. Pump 2 in duty for the day and monitored and confirmed with on-call operator at EOD that al was functioning normally.

2: Power Failure Alarm: Arrived onsite to respond to power failure alarm. Checked hydro outage map, outage due to work in the area. First alarm at 0930, kept eye on SCADA with on call operator. Numbers still populating and pumps running off UPS. residual stayed within parameters for entirety of outage. Power back at 1300. Trending on SCADA looked unusual. Noticed chlorine was dosing partly through degassing line. Cleaned check

valve on dosing line. Reattached fitting. Watched pressure build and dose successfully with pump 1. Trending back to normal with pump 1 in duty. Pumps back to alternating in auto on SCADA. All appears normal.

6: Lakeview Comm alarm: values present.

11: Two Lakeview Comm alarm: values present.

13: Two Lakeview Comm alarm: Values Present

15: Lakeview Comm alarm:. No readings present for the site. Looking like comms fell out just before 5AM. trending looks good until that point. Will continue monitoring.
0615: Comms back online, currently populating. Readings are as follows:
at1: 1.07
Ft1: 4.41
Pt1: 316.8
0620: All appears normal, trending looks good and system is operating as intended. logging off of SCADA now.

18: 9011: received 3 alarms - Chamber 13 power fail, chamber 13 flow transmitter F1 fail, and Port Burwell Chamber panel power fail.
0915: logged onto SCADA remotely, all readings populating for all PB sites and chamber 13. Likely due to power flicker. Continued monitoring on SCADA, system operating normally after the fact.

19: Received call from a Dexter Line low chlorine. Residual sitting at 0.50 mg/L left for site immediately
16:44: arrived on site to chlorine pump to running and residual at 0.85. Took apart pump 2 pump valves to clean because of small chlorine leak that could be impacting problem over time. Pump 1 able to reach a higher residual than pump 2 while pumping in duty, even after cleaning of pump 2 valves. Looked for check valve for pump 2 to replace but none to be found. Confirmed with ORO to leave pump 2 out of duty for night until repairs can be done with proper parts. Calibrated analyzer from 0.94 to 1.30 (confirmed twice) now leaving site.

22: Received alarm calls for ID#1 power fail, Lakeview panel power failure and Lakeview hypo pump fault, likely power outage in area, looked at online SCADA, site still currently has readings.

20:59: Checked Hydro one app, showing that there is a power outage in Lakeview area, current estimated time of repair is 21:30

21:21: While continuing to monitor SCADA alarms had cleared, assumed power has been restored, will call back up Dialer to acknowledge

NOVEMBER

9: Power failure alarm at Dexter and Tower at 1238. Trending indicated a flicker. Continued monitoring for 45 minutes and monitored outage map in area. No active outages and power restored to sites. All site readings normal. Logged off at 1305.

29: Copenhagen PLC comm fault. Logged om remotely and readings for site were normal.

DECEMBER

17: Com fault at E034. Trending unaffected.

18: Com fault at E034. Trending unaffected.

20: Multiple alarms for Port Burwell Tower, Dexter and Copenhagen booster, appears to be power outage in area by lake. Power restored and SCADA trending looks good for all sites.

22: Received alarm for high chlorine at Lakeview. Immediately calibrated analyzer from reading 1.92 to 0.64. Bled out air from pumps by fast advancing as pumps haven't been running much. Issue resolved.

26: Power Outage at Lakeview. Eventually received low chlorine alarm just as power was restoring. No further issues.

29: Power flicker at Lakeview. Confirmed with water plant. Alarm at E034. Utility power now restored to site.

SECTION 8: COMPLAINTS & CONCERNS

FIRST QUARTER:

There were no community complaints or concerns during the first quarter.

SECOND QUARTER:

There were no complaints or concerns reported during the second quarter.

THIRD QUARTER:

There were no complaints or concerns reported during the third quarter.

FOURTH QUARTER:

There were no complaints or concerns reported during the fourth quarter.

PBSW01 Locates	
Month	**# of Locates Completed**
January	5
February	4
March	9
April	2
May	0
June	0
July	1
August	2
September	2
October	3
November	1
December	5

REPORT NO. **AASWSS-26-04**

TO: Aylmer Area Secondary Water Supply System- Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **2025 SECTION 11 ANNUAL REPORT AND SCHEDULE 22 SUMMARY REPORT**

RECOMMENDATION:

THAT Report No. AASWSS-26-04 entitled "2025 Section 11 Annual Report and Schedule 22 Summary Report" be received.

PURPOSE & BACKGROUND:

Schedule 22 of O. Reg. 170/03 under the Safe Drinking Water Act requires that the Operating Authority prepare and submit a report to the Owner no later than March 31st of each calendar year. In addition, the Operating Authority, being the Ontario Clean Water Agency (OCWA), is required to complete Section 11 of O. Reg. 170/03 under the Safe Drinking Water Act. The Section 11 Annual Report must be made available to the public free of charge if requested.

The purpose of the two reports that are submitted by OCWA is to advise the Owner on the operation of the system, the quality of the water, and the quantity of water used throughout the drinking water system for the previous year.

COMMENTS & ANALYSIS:

OCWA has prepared and submitted the 2025 Ministry of the Environment, Conservation and Parks (MECP) Annual Summary report for the AASWSS. The Operating Authority is required to complete the Section 11 Annual report by February 28th of each calendar year. The members of the Joint Board of Management are to receive copies of the Schedule 22 report by March 31st of each calendar year. It should be noted that the Aylmer Secondary, Section 11 report combines pertinent information for both the Elgin Middlesex Pumping Station (EMPS) and the Transmission main. This is done to display all sampling for the system in a single document, providing a clearer interpretation of all samples collected across the system. There are two separate Schedule 22 reports which are

completed for the Aylmer Secondary. One report is for the EMPS, and the other is for the Transmission main. Copies of these reports for both the EMPS and the Transmission Main were provided to the members of the Joint Board of Management before the required dates by email. Reports are also submitted by the Elgin Area Primary Water Supply System - Joint Board of Management for the Elgin Area Water Treatment Plant and are available to Board members upon request.

The contents of the Schedule 22 reports prepared by OCWA include:

- Overview of system
- Compliance with Regulations
- Corrective Actions related to non-compliances
- Flow summary for the previous year.

The contents of the Section 11 report prepared by OCWA include:

- Description of the water system
- A summary of adverse water quality incidents
- Population served
- Expenses incurred
- A summary of microbiological and chemical testing over the year.

Attached to this report are the 2025 Section 11 Annual Report and the Schedule 22 Summary Reports for both the Elgin Middlesex Pumping Station (EMPS) as well as for the AASWSS Transmission Main (Watermain from EMPS to the Malahide/Aylmer Border). As the Board is aware, these are both components of the AASWSS. Both the EMPS and the Transmission Main are operated by two separate OCWA hubs. As such, reports are required for each component of the Secondary System.

Compliance with Regulations:

The MECP conducted the unannounced annual inspection of the Elgin Middlesex Pumping Station and the transmission main on September 25th, 2025.

The 2025 inspection report for the Aylmer Area Secondary Water Supply System received a mark of 100%. No non-compliances with regulatory requirements were identified during the inspection period.

Availability of Reports:

Copies of the Section 11 and 22 reports are to be made available for public inspection during normal working hours. Staff have posted the reports on the Township of Malahide's website, and they are available at the front desk upon request. If the general public requests a copy of the report, one must be made available free of charge.

SUMMARY:

The purpose of the report is to summarize compliance with the regulations, corrective actions and flow monitoring for the previous year's operation of the water system. It also promotes transparency between the MECP, the general public, and the municipal drinking water system. It is an effective tool to confirm to both the public and the MECP that municipal drinking water systems provide a safe supply of drinking water.

ATTACHMENTS:

1. Section 11 Annual Report (Combined report for EMPS and Transmission Main)
2. Schedule 22 AASWSS Annual Summary Report (Transmission Main)
3. Schedule 22 AASWSS EMPS Annual Summary Report

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Ontario **Drinking-Water Systems Regulation O. Reg. 170/03**

Drinking-Water System Number:	260004722
Drinking-Water System Name:	Aylmer Area Secondary Water Supply System
Drinking-Water System Owner:	Aylmer Area Secondary Water Supply System Joint Board of Management c/o Township of Malahide
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2025 through December 31, 2025

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Township of Malahide Office
87 John Street South
Aylmer, ON
N5H 2C3
www.malahide.ca

Elgin Area Primary Water Supply System
Treatment Plant
43665 Dexter Line, Union, ON

Complete for all other Categories.

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ]

Number of Interested Authorities you report to: N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [ ] No [ ]

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Systems that receive their drinking water directly from the Aylmer EMPS:

Drinking Water System Name	Drinking Water System Number
Aylmer Area Secondary Water Supply System	260004722

Systems that receive their drinking water indirectly from the Aylmer EMPS:

Drinking Water System Name	Drinking Water System Number
Municipality of Central Elgin	260004761
Malahide Distribution System	260004774
Aylmer Distribution System	260002136

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [X] No [ ]

Indicate how you notified system users that your annual report is available, and is free of charge.

- **[X] Public access/notice via the web**
- **[X] Public access/notice via Government Office**
- **[ ] Public access/notice via a newspaper**
- **[X] Public access/notice via Public Request**
- **[ ] Public access/notice via a Public Library**
- **[ ] Public access/notice via other method ____**

Describe your Drinking-Water System

The Elgin Middlesex Pumping Station (EMPS) receives water from the Elgin Area Primary Water Supply System (EAPWSS), which is located to the east of Port Stanley. Water from the EAPWSS is pumped into the EAPWSS site reservoirs located at the EMPS. The total capacity of the 2 reservoirs is 54,600$m^{3.}$ Through various secondary water supply systems, the EMPS serves the Cities of London, St. Thomas, Town of Aylmer, and Municipalities of Central Elgin, Malahide and Southwold.

The EMPS is a shared facility. Booster pumps are dedicated to directing water to the City of London, St. Thomas Secondary and/or Aylmer Secondary Water Supply Systems. A gas chlorine system is utilized to provide re-chlorination for water being directed to the St. Thomas and Aylmer Area Secondary Supply Systems. The facility also houses a 600kW standby diesel generator that provides emergency power to pump water into the St. Thomas and Aylmer systems during a power interruption.

Three pipelines exit the EMPS: one pipeline exits to the South, to Highway 3 and then runs in an Easterly direction to service the municipalities on the Aylmer Area Secondary System; the second pipeline exits to the south of the EMPS property and extends west to service the St. Thomas Area Secondary System; the third pipeline runs North along Highbury Avenue, servicing the City of London distribution system.

The transmission main consists of 13.8km of 450mm PVC watermain commencing at the EMPS and going easterly along Highway 3 and terminating at the municipal boundaries of the Town of Aylmer and the Township of Malahide. There are 19 inline chambers on the transmission main used for metering, draining, isolation and air relief. There are an additional five metering chambers, which are connected to tertiary municipal mains that are fed from the transmission main. There are 16 fire hydrants and 5 sampling stations along the transmission main.

List all water treatment chemicals used over this reporting period

- Gas Chlorine

Were any significant expenses incurred to?

[ ] Install required equipment
[X] Repair required equipment
[X] Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

EMPS

- Aylmer pumps 1 and 2 VFD replacements
- SCADA programming updates for Aylmer Water Tower
- DWQMS Reaccreditation Audit
- Generator diesel fuel and fuel polishing
- Chlorine cylinders
- Painting of Aylmer piping and pipe stands
- Aylmer sump pump replacement
- Chlorinator system maintenance
- Spare discharge valve rebuild kit, surge anticipator valve rebuild kit and 2 solenoids

Distribution

- Valve exercising
- Air valve chamber inspection
- SCADA server cleaned/Instrument Calibration as per Summa Agreement
- SCADA Maintenance, Summa updates PLC back-ups and verifies UPS health
- Replaced SS#81
- Replaced control panel heater
- Verification and calibration of flow meters and pressure transmitters
- Hydrant flushing

Notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre
Distribution System

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
N/A	N/A	N/A	N/A	N/A	N/A

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Results (CFU/100 mL)	Range of Total Coliform Results (CFU/100 mL)	Number of Heterotrophic Plate Count	Range of HPC Results (CFU/1 mL) (min #)-(max #)

		(min #)-(max #)	(min #)-(max #)	(HPC) Samples	
EMPS Aylmer	52	(0) – (0)	(0) – (0)	52	(<10) - (20)
Distribution	156	(0) – (0)	(0) – (0)	52	(<10) – (40)

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

EMPS Aylmer

Parameter	Number of Grab Samples (Continuous Monitoring)	Min	Max	Avg
Free Chlorine Residual (mg/L)	8760	0.60	2.15	1.06

Distribution System

Parameter	No. of Samples Collected for period being reported	Range of Results	
		Minimum	Maximum
Free Chlorine Residual (mg/L)	365	0.46	1.66

Summary of Organic parameters sampled during this reporting period or the most recent sample results

EMPS Aylmer

Parameter	Sample Date	Result Value	Unit of Measure	MAC	Exceedances	
					MAC	½ MAC
THM (NOTE: result value is based on one sample)	January 7, 2025 April 1, 2025 July 2, 2025 October 7, 2025	15 12 21 28	µg/L µg/L µg/L µg/L	–	–	–
THM Running Annual Average (RAA)	2025	19	µg/L	100	No	No
HAA (NOTE: result value is based on one sample)	January 7, 2025 April 1, 2025 July 2, 2025 October 7, 2025	ND ND 6.2 8.0	µg/L µg/L µg/L µg/L	–	–	–
HAA Running Annual Average (RAA)	2025	<6.2	µg/L	80	No	No

ND = Non-detect

Distribution System

Parameter	Sample Date	Sample Results	Unit of Measure	MAC	Exceedances	
					MAC	1/2 MAC
Trihalomethane: Total (ug/L)	January 6, 2025 April 7, 2025 July 7, 2025 October 6 , 2025	17 17 24 30	µg/L	-	-	-
THM Running Annual Average (RAA)	2025	22	µg/L	100.00	No	No
Haloacetic Acid: Total (ug/L)	January 6 2025 April 7, 2025 July 7, 2025 October 6, 2025	6.9 5.3 6.5 6.4	µg/L	-	-	-
HAA Running Annual Average	2025	6.3	µg/L	80.00	No	No

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

February 20th, 2026

Jason Godby
Director of Public Works
87 John Street South
Aylmer, ON N5H 2C3

Re: Safe Drinking Water Act, O. Reg. 170/03 Schedule 22 Summary Report

Dear Mr. Godby,

Attached is the 2025 Summary Report for the Aylmer Area Secondary Water Supply System. This report is completed in accordance with Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act.

This Summary Report is to be provided to the members of the Aylmer Area Secondary Water Supply System Joint Board of Management by March 31, 2026.

Section 12 of O. Reg. 170/03, requires the Annual Report required under Section 11 of O. Reg. 170/03 and the Summary Report be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the township, or at a location that is reasonably convenient to the users of the water system.

Please feel free to contact me should you require any additional information regarding these reports. I can be reached at 519-870-7841.

Sincerely,

Matthew Belding
Process and Compliance Technician

c.c. Sam Sianas, OCWA's Regional Hub Manager
Vitaliy Talashok, OCWA's Senior Operations Manager
Stephanie Simpson, Safety, OCWA's Process and Compliance Manager
Sam Gustavson, Malahide's Water/Wastewater Operations Manager

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Annual Summary Report

For the

Aylmer Area Secondary Water Supply System

2025

Prepared for the Township of Malahide,
Administering Municipality for the Aylmer Area
Secondary Water Supply System Joint Board of Management

By the Ontario Clean Water Agency

Table of Contents

SECTION 1: Overview

This summary report for the Aylmer Area Secondary Water Supply System is published in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation for the reporting period of January 1st, 2025 to December 31st, 2025. The Aylmer Area Secondary Water Supply System (waterworks number 260004722) is categorized as a Large Municipal Residential Drinking Water System.

The Aylmer Area Secondary Water Supply System is operated under the Municipal Drinking Water Licence (MDWL) 302-101 and Drinking Water Works Permit (DWWP) 302-201.

This report was prepared by the Ontario Clean Water Agency (OCWA) on behalf of the administering authority, the Township of Malahide.

SECTION 2: Compliance

The Aylmer Area Secondary Water Supply System was operated and maintained in such a manner that water supplied to the consumers satisfied the requirements in the Safe Drinking Water Act, Municipal Drinking Water License and Drinking Water Works Permit.

An unannounced MECP Inspection of the Aylmer Area Secondary Water Supply System was conducted on September 25th, 2025, by Provincial Officer, Angela Stroyberg. The final inspection report identified no non-compliances with regulatory requirements.

SECTION 3: Corrective Action

The routine MECP Inspections have an Inspection Rating Record, which evaluates the system to provide information for the owner/operator on areas that need to be improved. The particular areas that were evaluated for the Aylmer Area Secondary Water Supply System were: Certification and Training, Logbooks, Operation Manuals, Reporting and Corrective Actions, Treatment Processes, and Water Quality Monitoring. This system received 0 out of 189 non-compliance ratings and as such received 100% for the Final Inspection Rating.

SECTION 4: Summary and Discussion of Quantity of Water Supplied

In accordance with Schedule 22-2(3) 1, a summary and discussion of the quantity of water supplied during the reporting period is outlines below. There is no rated capacity specified in the Municipal Drinking Water Licence.

Attached as Appendix A is a summary of flow from the Elgin Middlesex Pumping Station which supplies all of the water to the Aylmer Area Secondary Water Supply System. This data is collected at the Elgin Middlesex Pump Station.

The average daily flow supplied to the Aylmer Area Secondary Water Supply System was 5,063 m^3/day, which is the same as the previous year. The maximum daily flow for 2025 was 8,546 m^3/day, which is a 5.6% decrease from the previous year.

Attached as Appendix B are the flow totals for all meters that are located in the Aylmer Area Secondary Water Supply System.

APPENDIX A

The table below is a summary of quantities and flow rates from the Elgin Middlesex Booster Pumping Station meter for 2025 compared to 2024 values.

Month	2025 Total Flow (m^3)	2024 Total Flow (m^3)	2025 Average Day Flow (m^3)	2024 Average Day Flow (m^3)	% Difference between 2025 and 2024	2025 Max Day Flow (m^3)	2024 Max Day Flow (m^3)	% Difference Between 2025 and 2024
January	147,450	143,327	4,756	4,623	2.9	4,961	5,379	-7.8
February	130,586	146,901	4,664	5,246	-11.1	5,326	5,403	-1.4
March	145,255	153,849	4,686	4,963	-5.6	5,067	5,179	-2.2
April	146,092	138,398	4,870	4,613	5.6	5,271	5,831	-9.6
May	126,332	165,442	4,075	5,337	-23.6	5,784	6,507	-11.1
June	178,368	176,384	5,946	5,879	1.1	6,621	6,154	7.6
July	183,860	169,080	5,931	5,454	8.7	6,702	6,755	-0.8
August	192,329	153,097	6,204	4,939	25.6	7,281	6,087	19.6
September	142,760	153,760	4,759	5,125	-7.1	8,546	5,960	43.4
October	183,346	157,734	5,914	5,088	16.2	6,851	6,061	13.0
November	132,507	146,074	4,417	4,869	-9.3	5,445	5,027	8.3
December	139,046	143,389	4,485	4,625	-3.0	5,092	9,053	-43.8
Total Flow	1,847,931	1,847,435	-	-	-	-	-	-
Average	-	-	5,063	5,064	0.0	-	-	-
Maximum	-	-	-	-	-	8,546	9,053	-5.6

APPENDIX B

The table below is a summary of quantities and flow rates from the meters on the system for 2025 compared to 2024 values.

Meter	2025 Total Flow (m^3)	2024 Total Flow (m^3)	% Difference between 2025 and 2024
Chamber 13	1,822,419	1,808,352	0.8
Chamber 16	1,766,260	1,717,542	2.8
Tower Rd.	4,826	2,994	61.2
Belmont Rd.	2,733	2,536	7.8
Springwater Rd.	378	287	31.7
Norton/Church	2,413	2,114	14.1
Rogers Rd.	3,026	3,488	-13.2

ELGIN-MIDDLESEX PUMPING STATION
AYLMER AREA SECONDARY WATER SUPPLY SYSTEM
2025 COMPLIANCE REPORT
(Schedule 22 Summary Report)

Facility Name: Elgin-Middlesex Pumping Station -
Aylmer Area Secondary Water Supply System

Mailing Address: Elgin Area Primary Water Supply System
P.O. Box 220
Port Stanley, ON N5L 1J4

Max. Daily Flow	5, 012 m³/day
Daily Flow	7, 282 m³/day
Source Water	Elgin Area Primary Water Supply System

CONTACT INFO:

Contract Administration: Township of Malahide Office
87 John Street South, Aylmer, ON N5H 3C2
Contact: Mr. Jason Godby
Director of Public Works

Operating Authority:
Ontario Clean Water Agency
P.O. Box 220, Port Stanley, Ontario N5L 1J4
Contact: Mr. Nick Wilson - Senior Operations Manager
(226) 545-0849

Table of Contents

System Approvals:

The Aylmer Area Secondary Water Supply System (AASWSS) is supplied water through the Elgin Middlesex Pump Station (EMPS), which receives water from the Elgin Area Primary Water Supply System (EAPWSS) on Dexter Line, east of Port Stanley, Ontario. During the reporting period, the Aylmer Area Secondary Water Supply System EMPS portion was operated in accordance with the approvals, licences and permits listed below.

The supply and distribution of water to the system was governed by the following Municipal Drinking Water Licenses (MDWL) and Drinking Water Works Permits (DWWP):

- MDWL No. 302-101, issue 4, on May 7, 2021
- DWWP No. 302-201, issue 3, on May 7, 2021

The DWWP and MDWL are issued under the Safe Drinking Water Act (SDWA), 2002.

Regulatory Requirements:

The drinking water system was operated in accordance with the Drinking Water Systems Regulation (O.Reg.170/03), Certification of Drinking Water System Operators and Water Quality Analysts (O. Reg. 128/04) and the Ontario Drinking Water Quality Standards (O.Reg.169/03) under the Safe Drinking Water Act, 2002.

Staff Complement and Training:

In 2025, the Aylmer facility at the EMPS was operated and maintained under the operating authority, Ontario Clean Water Agency. The operational and maintenance staff responsible for the system are managed from the EAPWSS.

In 2025, all certified operators received Director Approved and practical on-the-job training to meet the Ministry of the Environment, Conservation and Parks (MECP) training requirements.

History of Facility:

The EMPS is an integrated booster station occupied by three systems, which are fed from two in-ground storage reservoirs, each having a capacity of 27.3 million liters. The two storage reservoirs and the site upon which the three booster stations are situated are owned by the EAPWSS. The original station was constructed in 1966 and serviced the areas of St. Thomas, sections of the Municipalities of Central Elgin and Southwold. In 1994, upgrades occurred to service the Town of Aylmer, Township of Malahide, and the City of London.

Today, the Aylmer Area Secondary Water Supply System (AASWSS) portion of the EMPS is comprised of two high-lift pumps that deliver water through a transmission main that services the AASWSS. A gas chlorination system maintains secondary disinfection

for water being directed to the AASWSS. This gas chlorination system is a shared resource with the St. Thomas Area Secondary Water Supply System (STASWSS).

In the event of a power failure, an on-site generator provides sufficient standby power to provide uninterrupted service to the AASWSS.

Remote monitoring and control of the EMPS is performed by onsite SCADA system. Certified Operators at the EAPWSS monitor the SCADA and deploy the appropriate response should alarm conditions exist.

Process Description:

The EMPS receives treated water from the EAPWSS, which treats water at the water treatment plant located on the shores of Lake Erie to the east of Port Stanley. Water from the plant is pumped into the Elgin terminal reservoir located at the EMPS where it is subsequently fed via a series of headers to each of the pumping stations serving the AASWSS, the City of London Distribution System, and the STASWSS.

Post-Treatment:

The AASWSS and STASWSS utilize a shared gas chlorination system for secondary disinfection. The system consists of two scaled 68 kg gas chlorine cylinders and three chlorinators equipped with booster pumps and a dosing capacity of 1-60kg/h.

High Lift Pumping Station:

The two high lift pumps provide redundant pumping capacity into the AASWSS. The Aylmer pumps are equipped with variable frequency drives (VFD) with each pump having a rated capacity of 130 L/sec.

Maintenance:

Site maintenance was carried out by Ontario Clean Water Agency (OCWA) maintenance operators based at the EAPWSS. Specialty maintenance services are provided, on an as needed basis by external service providers.

All maintenance scheduling is monitored through a computerized maintenance management system (Maximo).

In addition to the routine preventative maintenance program, several maintenance projects were completed at the EMPS in 2025. A summary of non-routine maintenance is available in Appendix D, of the 2025 Annual Report.

Sampling Procedures:

All samples collected by certified operators are submitted to a Canadian Association for Laboratory Accreditation (CALA) accredited laboratory for both bacteriological and chemical analysis.

The distribution water entering the AASWSS is sampled weekly and submitted to an external laboratory for bacteriological analysis. Free chlorine residuals for the water entering AASWSS are monitored continuously by onsite analyzers and the SCADA system.

On a quarterly basis, the water entering the AASWSS is sampled and submitted to an accredited laboratory for the testing of disinfection by-products - total trihalomethanes (THM) and haloacetic acids (HAA).

All water quality sampling at the EMPS was performed in accordance with Ontario Regulation 170/03.

Water Quality Monitoring and Flow Measurement:

Water quality is monitored remotely by means of a free chlorine analyzer that is verified by certified operators. See Appendix A for a summary of 2025 water quality data. Flow leaving the EMPS directed to the AASWSS is measured utilizing a magnetic flow measuring device. See Appendix B for 2025 total daily flow values and Appendix C for 2025 daily instantaneous peak flow rates.

Statement of Comparison:

The Municipal Drinking Water License for the AASWSS does not identify a rated capacity for the system. Each pump for the AASWSS is rated for 130L/s.

The maximum total daily flow in 2025 was 7,282 m³/day. The maximum instantaneous peak flow in 2025 was 152 L/s. The average total daily flow in 2025 was 5,012 m³/day, a decrease of 1.2% from the previous year.

Ministry of the Environment Conservation and Parks Inspections:

The MECP conducts an inspection of the Aylmer portion of the EMPS annually along with the rest of the AASWSS operated by the Ontario Clean Water Agency. A MECP inspection took place September 25, 2025 and the final inspection report was issued on November 13, 2025. There were no non-compliances identified in the inspection report. The final inspection rating received for the 2025-2026 fiscal year was 100%.

Benefiting Municipalities:

Following the adoption of the Municipal Water and Sewer Transfer Act in 1997, the Ontario Ministry of the Environment and Conservation and Parks transferred the ownership of the three booster stations from the Province of Ontario to the water systems' benefiting municipalities. As a result, the AASWSS portion of the EMPS and associated equipment is owned by the Aylmer Area Secondary Water Supply System Joint Board of Management, the London portion of the EMPS is owned by the Corporation of the City of London, and the St. Thomas Area Secondary Water System portion of the EMPS and associated appurtenances are owned by the St. Thomas Area Secondary Water System Joint Board of Management. Jointly these water systems benefit, and are managed on behalf of, the communities of Aylmer, Central Elgin, London, Malahide, Southwold and St. Thomas. A list of municipalities that receive water directly and indirectly from the AASWSS at the EMPS is provided in Appendix D.

The Ontario Clean Water Agency operates and maintains the EMPS, under contracts with the AASWSS Joint Board of Management, The Corporation of the City of London and the STASWSS Joint Board of Management.

This report was prepared by Ontario Clean Water Agency, the Operating Authority for the Aylmer portion of the EMPS, on behalf of the Aylmer Area Secondary Water Supply System Joint Board of Management.

APPENDIX A – 2025 EMPS AYLMER
WATER QUALITY SUMMARY

MONTH	POST TREATMENT Free Cl_2 mg/L
January	
Minimum	0.87
Maximum	1.54
Average	1.13
February	
Minimum	0.84
Maximum	1.35
Average	1.06
March	
Minimum	0.69
Maximum	1.38
Average	1.03
April	
Minimum	0.70
Maximum	1.37
Average	1.03
May	
Minimum	0.64
Maximum	1.32
Average	1.02
June	
Minimum	0.70
Maximum	2.15
Average	1.03
July	
Minimum	0.68
Maximum	1.38
Average	1.05
August	
Minimum	0.66
Maximum	1.49
Average	1.04
September	
Minimum	0.56
Maximum	1.53
Average	1.00
October	
Minimum	0.60
Maximum	1.44
Average	1.06
November	
Minimum	0.65
Maximum	1.45
Average	1.10
December	
Minimum	0.76
Maximum	1.46
Average	1.12
Yearly Minimum	0.56
Yearly Maximum	2.15
Yearly Average	1.06

Note: Chlorine residuals obtained from SCADA.

APPENDIX B

EMPS AYLMER TOTAL DAILY FLOW - 2025

Date	January m^3	February m^3	March m^3	April m^3	May m^3	June m^3	July m^3	August m^3	September m^3	October m^3	November m^3	December m^3	
1	4,170	4,749	4,652	4,619	4,430	4,996	6,032	5,514	4,857	4,915	4,599	4,332	
2	4,524	4,570	4,705	4,332	4,748	5,167	6,449	5,198	5,062	5,213	4,458	4,814	
3	4,302	4,655	4,609	4,699	4,473	5,967	6,086	5,289	5,162	5,563	5,445	4,528	
4	4,464	4,342	5,028	4,738	4,557	6,023	6,195	5,346	5,688	5,632	5,214	3,987	
5	4,388	4,817	4,733	4,599	4,972	5,354	6,356	6,126	5,509	5,546	4,839	4,798	
6	4,511	4,822	4,907	4,470	4,707	5,864	6,134	6,014	5,603	6,157	4,604	5,094	
7	4,700	4,423	4,371	4,345	4,500	6,248	6,211	6,311	5,029	4,357	5,061	4,292	
8	4,485	5,075	5,067	3,889	4,938	5,831	6,326	5,816	4,724	5,686	4,937	4,749	
9	4,544	4,233	4,342	3,004	4,675	5,637	5,213	6,038	5,960	6,407	4,237	4,668	
10	4,933	4,475	5,018	2,243	5,147	5,459	5,750	5,906	5,562	4,767	5,148	3,893	
11	4,160	5,222	4,946	3,324	4,839	6,100	5,883	5,344	5,414	5,493	4,933	4,761	
12	4,460	4,861	4,651	4,097	5,473	5,925	5,924	6,991	5,201	3,507	4,492	4,272	
13	4,795	5,326	4,733	4,333	5,213	5,735	5,679	6,042	5,609	6,056	4,554	4,182	
14	4,535	4,816	4,576	4,798	5,441	6,083	6,399	5,853	4,541	5,710	5,442	4,295	
15	4,743	4,935	5,058	4,932	5,789	5,772	6,702	6,954	3,275	5,432	4,164	3,809	
16	4,633	4,174	4,486	4,791	5,177	6,437	6,108	6,055	2,682	5,882	5,294	4,126	
17	4,938	4,028	4,439	5,003	4,869	6,621	5,473	4,505	2,943	4,973	3,900	4,508	
18	4,533	4,550	4,752	4,605	5,387	5,522	6,032	6,362	2,274	5,472	5,032	4,925	
19	4,282	4,705	4,901	4,815	5,336	5,247	5,724	6,651	3,123	5,365	4,319	4,729	
20	4,605	4,479	4,641	4,555	5,557	5,478	5,513	7,275	3,464	4,998	4,239	3,661	
21	4,462	4,854	4,828	4,677	4,716	5,773	6,365	6,841	4,404	4,662	5,135	5,094	
22	4,302	4,741	4,622	4,770	4,941	6,026	6,101	7,282	4,225	5,490	4,886	3,952	
23	4,475	4,956	4,543	5,106	4,788	6,159	6,579	5,710	4,738	4,672	4,183	4,651	
24	4,846	4,910	4,493	5,277	4,896	5,875	6,118	5,990	4,949	4,484	4,864	4,719	
25	4,554	5,053	4,620	5,015	4,793	5,512	5,506	5,472	4,842	5,202	5,394	3,641	
26	4,324	4,741	4,498	4,843	5,235	5,673	5,037	5,549	5,290	4,445	4,453	4,841	
27	4,962	4,697	4,710	4,427	5,352	5,659	5,481	5,405	4,768	4,653	4,424	4,282	
28	4,494	4,785	4,861	5,136	5,159	5,918	5,426	5,191	5,361	5,365	5,184	3,904	
29	4,649		4,818	5,201	4,790	5,955	6,290	5,130	4,572	6,855	3,856	4,105	
30	4,790		4,666	4,989	4,994	5,262	5,776	4,996	4,902	4,675	5,277	4,156	
31	4,736		4,480		4,841		5,436	5,219		4,859		4,761	
Total	141,298	131,994	145,755	135,631	154,732	173,276	184,303	182,375	139,731	162,491	142,568	136,528	1,830,682
Minimum	4,160	4,028	4,342	2,243	4,430	4,996	5,037	4,505	2,274	3,507	3,856	3,641	2,243
Maximum	4,962	5,326	5,067	5,277	5,789	6,621	6,702	7,282	5,960	6,855	5,445	5,094	7,282
Average	4,558	4,714	4,702	4,521	4,991	5,776	5,945	5,883	4,658	5,242	4,752	4,404	5,012

APPENDIX C

EMPS AYLMER DAILY INSTANTANEOUS PEAK FLOW - 2025

Date	January L/s	February L/s	March L/s	April L/s	May L/s	June L/s	July L/s	August L/s	September L/s	October L/s	November L/s	December L/s	
1	129	119	129	120	129	121	123	132	131	126	124	126	
2	128	120	128	129	133	125	131	131	130	143	132	121	
3	129	121	129	129	129	128	132	131	143	126	122	120	
4	128	120	129	129	130	129	132	131	130	125	122	113	
5	128	119	126	129	130	130	131	132	123	126	115	113	
6	128	119	120	130	134	130	131	131	123	126	115	113	
7	129	120	120	129	129	130	130	131	123	129	113	113	
8	129	120	121	129	130	130	131	123	123	129	115	112	
9	127	120	120	126	138	131	141	123	124	119	114	117	
10	120	120	133	120	130	129	145	123	125	118	114	112	
11	120	120	120	120	130	131	131	140	132	118	117	113	
12	120	129	129	120	130	130	130	123	131	117	123	112	
13	121	128	129	121	129	137	131	131	131	118	122	112	
14	121	127	130	121	129	131	131	131	131	134	123	112	
15	129	130	128	121	126	131	131	137	130	120	122	112	
16	128	129	128	120	121	130	144	134	131	119	122	112	
17	128	129	120	120	122	129	135	131	130	114	123	120	
18	128	129	121	120	121	130	137	135	131	115	129	122	
19	128	130	129	121	121	151	130	132	131	115	123	122	
20	128	120	130	121	121	130	130	131	123	122	122	120	
21	128	120	129	121	130	130	137	122	124	126	118	120	
22	128	120	129	121	130	131	138	132	123	125	114	121	
23	129	121	129	121	131	131	137	131	123	124	114	121	
24	128	120	152	121	129	150	137	131	124	121	114	123	
25	128	121	130	121	130	140	137	151	131	115	113	112	
26	129	128	127	120	129	122	130	147	131	114	123	112	
27	129	127	124	121	130	122	131	131	132	113	122	113	
28	129	129	120	125	136	121	131	123	130	115	122	113	
29	127		121	121	130	122	136	122	131	126	122	112	
30	121		120	130	123	143	136	122	131	122	122	113	
31	121		120		121		132	122		123		122	
Minimum	120	119	120	120	121	121	123	122	123	113	113	112	112
Maximum	129	130	152	130	138	151	145	151	143	143	132	126	152
Average	127	123	126	123	128	131	134	131	129	122	120	116	126

Appendix D: 2025 Annual Report

Ontario **Drinking-Water Systems Regulation O. Reg. 170/03**

Drinking-Water System Number:	260004722
Drinking-Water System Name:	Aylmer Area Secondary Water Supply System
Drinking-Water System Owner:	Aylmer Area Secondary Water Supply System Joint Board of Management c/o Township of Malahide
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2025 through December 31, 2025

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [X] No [ ]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No [ ]

Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.

Township of Malahide Office
87 John Street South
Aylmer, ON
N5H 2C3
www.malahide.ca

Elgin Area Primary Water Supply System
Treatment Plant
43665 Dexter Line, Union, ON

Complete for all other Categories.

Number of Designated Facilities served:

N/A

Did you provide a copy of your annual report to all Designated Facilities you serve?
Yes [ ] No [ ]

Number of Interested Authorities you report to: N/A

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?
Yes [ ] No [ ]

List all Drinking-Water Systems (if any), which receive all of their drinking water from your system:

Systems that receive their drinking water directly from the Aylmer EMPS:

Drinking Water System Name	Drinking Water System Number
Aylmer Area Secondary Water Supply System	260004722

Systems that receive their drinking water indirectly from the Aylmer EMPS:

Drinking Water System Name	Drinking Water System Number
Municipality of Central Elgin	260004761
Malahide Distribution System	260004774
Aylmer Distribution System	260002136

Did you provide a copy of your annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

Yes [X] No [ ]

Indicate how you notified system users that your annual report is available, and is free of charge.

- **[X] Public access/notice via the web**
- **[X] Public access/notice via Government Office**
- **[ ] Public access/notice via a newspaper**
- **[X] Public access/notice via Public Request**
- **[ ] Public access/notice via a Public Library**
- **[ ] Public access/notice via other method ____**

Describe your Drinking-Water System

The Elgin Middlesex Pumping Station (EMPS) receives water from the Elgin Area Primary Water Supply System (EAPWSS), which is located to the east of Port Stanley. Water from the EAPWSS is pumped into the EAPWSS site reservoirs located at the EMPS. The total capacity of the 2 reservoirs is 54,600$m^{3.}$ Through various secondary water supply systems, the EMPS serves the Cities of London, St. Thomas, Town of Aylmer, and Municipalities of Central Elgin, Malahide and Southwold.

The EMPS is a shared facility. Booster pumps are dedicated to directing water to the City of London, St. Thomas Secondary and/or Aylmer Secondary Water Supply Systems. A gas chlorine system is utilized to provide re-chlorination for water being directed to the St. Thomas and Aylmer Area Secondary Supply Systems. The facility also houses a 600kW standby diesel generator that provides emergency power to pump water into the St. Thomas and Aylmer systems during a power interruption.

Three pipelines exit the EMPS: one pipeline exits to the South, to Highway 3 and then runs in an Easterly direction to service the municipalities on the Aylmer Area Secondary System; the second pipeline exits to the south of the EMPS property and extends west to service the St. Thomas Area Secondary System; the third pipeline runs North along Highbury Avenue, servicing the City of London distribution system.

The transmission main consists of 13.8km of 450mm PVC watermain commencing at the EMPS and going easterly along Highway 3 and terminating at the municipal boundaries of the Town of Aylmer and the Township of Malahide. There are 19 inline chambers on the transmission main used for metering, draining, isolation and air relief. There are an additional five metering chambers, which are connected to tertiary municipal mains that are fed from the transmission main. There are 16 fire hydrants and 5 sampling stations along the transmission main.

List all water treatment chemicals used over this reporting period

- Gas Chlorine

Were any significant expenses incurred to?

[ ] Install required equipment
[X] Repair required equipment
[X] Replace required equipment

Please provide a brief description and a breakdown of monetary expenses incurred

EMPS

- Aylmer pumps 1 and 2 VFD replacements
- SCADA programming updates for Aylmer Water Tower
- DWQMS Reaccreditation Audit
- Generator diesel fuel and fuel polishing
- Chlorine cylinders
- Painting of Aylmer piping and pipe stands
- Aylmer sump pump replacement
- Chlorinator system maintenance
- Spare discharge valve rebuild kit, surge anticipator valve rebuild kit and 2 solenoids

Distribution

- Valve exercising
- Air valve chamber inspection
- SCADA server cleaned/Instrument Calibration as per Summa Agreement
- SCADA Maintenance, Summa updates PLC back-ups and verifies UPS health
- Replaced SS#81
- Replaced control panel heater
- Verification and calibration of flow meters and pressure transmitters
- Hydrant flushing

Notices submitted in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre

Distribution System

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
N/A	N/A	N/A	N/A	N/A	N/A

Microbiological testing done under the Schedule 10, 11 or 12 of Regulation 170/03, during this reporting period.

	Number of Samples	Range of E.Coli Results (CFU/100 mL) (min #)-(max #)	Range of Total Coliform Results (CFU/100 mL) (min #)-(max #)	Number of Heterotrophic Plate Count (HPC) Samples	Range of HPC Results (CFU/1 mL) (min #)-(max #)
EMPS Aylmer	52	(0) – (0)	(0) – (0)	52	(<10) - (20)
Distribution	156	(0) – (0)	(0) – (0)	52	(<10) – (40)

Operational testing done under Schedule 7, 8 or 9 of Regulation 170/03 during the period covered by this Annual Report.

EMPS Aylmer

Parameter	Number of Grab Samples (Continuous Monitoring)	Min	Max	Avg
Free Chlorine Residual (mg/L)	8760	0.60	2.15	1.06

Distribution System

Parameter	No. of Samples Collected for period being reported	Range of Results	
		Minimum	Maximum
Free Chlorine Residual (mg/L)	365	0.46	1.66

Summary of Organic parameters sampled during this reporting period or the most recent sample results

EMPS Aylmer

Parameter	Sample Date	Result Value	Unit of Measure	MAC	Exceedances	
					MAC	½ MAC
THM (NOTE: result value is based on one sample)	January 7, 2025 April 1, 2025 July 2, 2025 October 7, 2025	15 12 21 28	µg/L µg/L µg/L µg/L	–	–	–
THM Running Annual Average (RAA)	2025	19	µg/L	100	No	No
HAA (NOTE: result value is based on one sample)	January 7, 2025 April 1, 2025 July 2, 2025 October 7, 2025	ND ND 6.2 8.0	µg/L µg/L µg/L µg/L	–	–	–
HAA Running Annual Average (RAA)	2025	<6.2	µg/L	80	No	No

ND = Non-detect

Distribution System

Parameter	Sample Date	Sample Results	Unit of Measure	MAC	Exceedances	
					MAC	1/2 MAC
Trihalomethane: Total (ug/L)	January 6, 2025 April 7, 2025 July 7, 2025 October 6 , 2025	17 17 24 30	µg/L	-	-	-
THM Running Annual Average (RAA)	2025	22	µg/L	100.00	No	No
Haloacetic Acid: Total (ug/L)	January 6 2025 April 7, 2025 July 7, 2025 October 6, 2025	6.9 5.3 6.5 6.4	µg/L	-	-	-
HAA Running Annual Average	2025	6.3	µg/L	80.00	No	No

APPENDIX E EMPS Chemical Consumption - 2025	
Month	**Total Chlorine Gas Usage - Kg**
January	224
February	185
March	227
April	174
May	186
June	231
July	237
August	246
September	279
October	347
November	265
December	194
Annual Total	**2795**

Please note: Aylmer and St.Thomas combined cl2 usage

REPORT NO. **PBASWSS-26-04**

TO: Port Burwell Area Secondary Water Supply System - Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **2025 SECTION 11 ANNUAL REPORT AND SCHEDULE 22 SUMMARY REPORT**

RECOMMENDATION:

THAT Report No. PBASWSS-26-04 entitled “2025 Section 11 Annual Report and Schedule 22 Summary Report” be received.

PURPOSE & BACKGROUND:

Schedule 22 of O. Reg. 170/03 under the Safe Drinking Water Act requires that the Operating Authority prepare and submit a report to the Owner by no later than March 31st of each calendar year. In addition, the Operating Authority, being the Ontario Clean Water Agency (OCWA), is required to complete Section 11 of O. Reg. 170/03 under the Safe Drinking Water Act. The Section 11 Annual Report must be made available to the public free of charge if requested.

The purpose of the two reports that are submitted by OCWA is to advise the Owner on the operation of the system, the quality of the water, and the quantity of water used throughout the system for the previous year. These reports have been combined into a single report that satisfies the regulatory requirements under Section 11 and Schedule 22.

COMMENTS & ANALYSIS:

OCWA has prepared and submitted the 2025 Ministry of the Environment, Conservation and Parks (MECP) Annual Summary report for the PBASWSS. The Operating Authority is required to complete the Section 11 Annual report by February 28th of each calendar year. The members of the Joint Board of Management are to receive copies of the Schedule 22 report by March 31st of each calendar year. Copies of the combined report were emailed to the members of the Joint Board of Management before the required date. Reports are also submitted by the Elgin Area Primary Water Supply System- Joint Board

of Management for the Elgin Area Water Treatment Plant and are available to Board members upon request.

The contents of the Schedule 22 report prepared by OCWA include:

- Overview of system
- Compliance with Regulations
- Corrective Actions related to non-compliances
- Flow summary for the previous year.

The contents of the Section 11 report prepared by OCWA include:

- Description of the water system
- A summary of adverse water quality incidents
- Population served
- Expenses incurred
- A summary of microbiological and chemical testing over the year.

Attached for the Joint Board of Management's review is a copy of the combined Section 11 and Schedule 22 Report.

Compliance with Regulations:

The MECP conducted a physical inspection of the PBASWSS on September 10th, 2025. The 2025 inspection report for the Port Burwell Area Secondary Water Supply System received a mark of 100%. No non-compliances with regulatory requirements were identified during the inspection period.

Availability of Reports:

Copies of the Section 11 and Schedule 22 reports are to be made available for public inspection during normal working hours. The Staff have posted the combined Section 11 and Schedule 22 report on the Township of Malahide's website, and it is available at the front desk upon request. If the general public requests a copy of the report, one must be made available free of charge.

SUMMARY:

The purpose of the reports is to summarize compliance with the regulations, corrective actions and flow monitoring for the previous year's operation of the water system. It also guarantees transparency between the MECP, the general public and the municipal drinking water system. It is an effective tool to confirm to both the public and the MECP that municipal drinking water systems are providing a safe supply of potable water.

ATTACHMENTS:

1. OCWA 2025 Combined Section 11 and Schedule 22 Report

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

February 20th, 2026

Jason Godby
Director of Public Works
87 John Street South
Aylmer, ON N5H 2C3

Re: Safe Drinking Water Act, O. Reg. 170/03 Section 11 and Schedule 22 Summary Report

Dear Mr. Godby,

Attached is the 2025 Summary Report for the Port Burwell Area Secondary Water Supply System. This report is completed in accordance with Section 11 and Schedule 22 of O. Reg. 170/03, under the Safe Drinking Water Act.

This Summary Report is to be provided to the members of the Port Burwell Area Secondary Water Supply System Joint Board of Management by March 31, 2026.

Section 12 of O. Reg. 170/03, requires the Annual Report required under Section 11 of O. Reg. 170/03 and the Summary Report be made available for inspection by any member of the public during normal business hours, without charge. The reports should be made available for inspection at the office of the township, or at a location that is reasonably convenient to the users of the water system.

Please feel free to contact me should you require any additional information regarding these reports. I can be reached at 519-870-7841.

Sincerely,

Matthew Belding
Process and Compliance Technician

c.c. Sam Sianas, OCWA's Regional Hub Manager
Vitaliy Talashok, OCWA's Senior Operations Manager
Stephanie Simpson, Safety, Process and Compliance Manager
Sam Gustavson, Malahide's Water/Wastewater Operations Manager

Port Burwell Area Secondary Water Supply System

Waterworks # 260004735
System Category – Large Municipal Residential

Annual Water Report

Prepared For: Port Burwell Area Secondary Water Supply System Joint Board of Management

Reporting Period of January 1st – December 31st 2025

Issued: February 20th, 2026

Revision: 0

Operating Authority:

OCWA
ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

This report has been prepared to satisfy the annual reporting requirements in O.Reg 170/03 Section 11 and Schedule 22

Table of Contents

Revision History

Date	Revision #	Revision Notes
2026-02-20	0	Report issued

Report Availability

This system does not serve more than 10,000 residence and the annual reports will be available to residents at the Township of Malahide Municipal Office who the administering Municipality of the system. The report will also be made available on the Township of Malahide's Municipal website. Notification will be at the Municipal Office and copies provided free of charge, if requested. The Township of Malahide is located at, 87 John Street South, Aylmer ON.

The Port Burwell Area Secondary System supplies water to the following systems:

Drinking Water System Name	Drinking Water System #	Copy of Annual Report Provided
Bayham Distribution System	260004748	Yes

Compliance Report Card

Compliance Event	Date	# of Events
Ministry of Environment Inspections	September 10th, 2025	1
Ministry of Labour Inspections	N/A	0
QEMS External Audit	July 4th, 2025 September 3rd, 2025	2
AWQI's/BWA	N/A	0
Non-Compliance	N/A	0
Community Complaints	N/A	0
Spills	N/A	0
Watermain Breaks	N/A	0

System Process Description

Distribution:

The Port Burwell Area Secondary Water Supply System transmission main extends from the Elgin Area Water Treatment Plant servicing Central Elgin, Malahide and Bayham. The watermain serves approximately 240 direct connections to the system (service population estimated at 624). Tertiary lines are connected to the system through metering chambers. The entire system services approximately 3992 people (included population of connected drinking water systems). The system has 50 sub-surface chambers for isolation, metering, air relief and draining. Along the main there are sample stations and hydrants for monitoring and flushing.

The Port Burwell Area Secondary Water System is controlled and monitored by the SCADA system. There is an elevated storage facility located on Nova Scotia Line, which is controlled by the valve house on Dexter Line. This Tower (Port Burwell Tower) has a capacity of 1518m3. The system is re-chlorinated at three locations: the Dexter Line Re-Chlorination Facility, the Port Burwell Tower and Lakeview Re-Chlorination Facility. The re-chlorination facilities contain sodium hypochlorite dosing pumps connected to a Programmable Logic Controller (PLC), with a flow paced signal from the flow meter and chlorine analyzer for residual control by the PLC.

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Secondary Disinfection	Jutzi

Summary of Non-Compliance

Adverse Water Quality Incidents:

Date	AWQI #	Parameter	Result	Details	Legislation	Corrective Action Taken	Corrective Action Date
There were no adverse water quality incidents reported during the reporting period.							

Non-Compliance:

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There was no non-compliance issues reported during the reporting period.				

Non-Compliance Identified in a Ministry Inspection:

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There was no non-compliances identified in the inspection report.				

The Port Burwell System was inspected on September 10th, 2025 by Provincial Officer, Jim Miller of the Ministry of Environment, Conservation and Parks (MECP). The routine MECP inspections have an Inspection Rating Record, which evaluates the system to provide information for the owner/operator on areas that need to be improved. The particular areas that were evaluated for the Port Burwell System were: Treatment Processes, Operations Manuals, Logbooks, Certification and Training, and Water Quality Monitoring. The 2025 inspection report identified no non-compliances and thus received an Inspection Rating Record of 100%.

Flows

The current Municipal Drinking Water Licence does not specify a rated capacity for this system. There are several metering sites throughout the system to capture flows.

The flow entering the Port Burwell Area Secondary Water Supply System is monitored at the Port Burwell Valve House (MV1). Refer to Table 1 for the flows through MV1 during the reporting period. The average daily flow for 2025 was 828 m^3/day, which is an increase of 9.5% from 2024 average day flows. The maximum daily flow for 2025 was 1,410 m^3/day, which is an increase of 19.0% from the previous year.

Table 1: Flows to the PBASWSS from the Port Burwell Valve House Meter (MV1)

Month	2025 Total Flow (m^3)	2024 Total Flow (m^3)	2025 Average Daily Flow (m^3/day)	2024 Average Daily Flow (m^3/day)	% Difference between 2025 and 2024	2025 Max Daily Flow (m^3/day)	2024 Max Daily Flow (m^3/day)	% Difference Between 2025 and 2024
January	21,252	17,647	686	569	20.6	842	783	7.5
February	18,192	18,676	650	667	-2.5	721	764	-5.6
March	19,873	19,459	641	628	2.1	825	798	3.4
April	22,952	19,110	765	637	20.1	889	813	9.3
May	20,932	23,728	675	765	-11.8	1,081	1,109	-2.5
June	31,528	28,364	1,051	945	11.2	1,174	1,165	0.8
July	35,886	29,707	1,158	958	20.9	1,410	1,165	21.0
August	35,415	27,274	1,142	880	29.8	1,265	1,185	6.8
September	24,730	27,842	824	928	-11.2	1,266	1,009	25.5
October	27,743	23,784	895	767	16.7	1,010	922	9.5
November	19,823	19,890	661	663	-0.3	890	809	10.0
December	23,800	20,478	768	661	16.2	887	850	4.4
Total Flow	302,126	275,959	-	-	-	-	-	-
Average	-	-	828	756	9.5	-	-	-
Max	-	-	-	-	-	1,410	1,185	19.0

There are various flow meters within the PBASWSS. These assist with providing flow data for billing purposes, chlorine dosing and line loss studies. Table 2 provides the monthly meter flows for each of these meters. The table below is a summary of flow volumes from the various flow meters in the PBASWSS.

Table 2: Flow Volumes from Various Flow Meters In the PBASWSS

Month	VC02 FWD (m^3)	VC02 REV (m^3)	VC03 (m^3)	Tower Inlet (m^3)	Tower Outlet (m^3)	Lakeview (m^3)	EO38 (m^3)	VO01 (m^3)
January	18,076	44	4,219	10,722	10,715	12,275	6,249	4,532
February	14,911	30	3,473	9,678	9,801	10,657	5,544	3,912
March	15,182	19	3,528	10,785	10,781	10,822	5,647	4,296
April	17,818	44	4,172	10,272	10,419	12,709	7,023	4,101
May	21,681	40	5,119	11,020	10,912	15,807	9,294	5,261
June	24,570	37	5,846	9,416	10,092	17,798	10,625	5,912
July	29,731	41	7,097	9,263	9,055	22,733	13,338	7,518
August	24,281	51	5,791	10,076	10,065	19,663	11,208	6,985
September	21,083	53	4,998	10,364	10,257	16,104	9,427	5,329
October	20,294	36	4,773	11,023	11,060	15,201	8,774	5,226
November	16,965	22	3,957	10,662	10,685	12,781	6,894	4,751
December	18,161	23	4,203	11,316	11,331	13,527	7,262	4,913
Total Flow	242,753	440	57,176	124,598	125,172	180,077	101,285	62,736

Regulatory Sample Results Summary

Microbiological Testing:

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		No. of HPC Samples	Range of HPC Results	
		Min	Max	Min	Max		Min	Max
Distribution Water	156	0	0	0	0	52	<10	40

Operational Testing:

	No. of Grab Samples Collected	Range of Results	
		Minimum	Maximum
Free Chlorine Residual, DW Field (mg/L)	377	0.46	2.00

Summary of Lead Testing:

Schedule 15.1 Sampling:

The Port Burwell System is exempt from Schedule 15.1 sampling due to the customers on the PBASWSS belonging to each Municipality and are covered under their sampling program.

Organic Parameters:

These parameters are tested quarterly as a requirement under O.Reg 170/03.

	Sample Date (yyyy/mm/dd)	Sample Result	MAC	Number of Exceedances	
				MAC	1/2 MAC
Distribution Water					
Trihalomethane: Total (ug/L) Annual Average - DW	2025	33.25	100	0	0
Haloacetic Acids: Total (ug/L) Annual Average- DW	2025	18.28	80	0	0

MAC = Maximum Allowable Concentration as per O.Reg 169/03

Additional Legislated Samples:

There was no additional sampling required.

Major Maintenance Summary

Distribution Maintenance:

Details
- Air valve chamber inspection - SCADA server cleaned/Instrument Calibration as per Summa Agreement - SCADA Maintenance, Summa updates PLC back-ups and verify UPS health - Service/Refurbished Air Relief Valves at ARC-01, ARC-02, E004, E009, E015, E020, E028, and E036 - New PRV installed at PB01 - Balanced PRV pressures between PB02 and Dexter/Imperial stations - MV1 PLC replaced - Electrical inspection and fuse upgrade at MV1 - Installed new chlorine day tank at Lakeview - Chlorine panel hoses and fittings replaced at Rechlor stations - Replaced GFCI at E038 for sump pump - Replaced PLC power supply at Lakeview - Replaced check valve and air purge valve on chlorine pump#1 at Tower. - Ladder Inspection for Tower - Cathodic Inspection in Tower - Hydrant flushing and valve exercising - Verification and calibration of flow meters, pressure transmitters at all sites

REPORT NO. **AASWSS-26-05**

TO: Aylmer Area Secondary Water Supply System- Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **APAM SCADA Central Server Replacement and Hardware and Software System Upgrades**

RECOMMENDATION:

THAT Report No. AASWSS-26-05 entitled “APAM SCADA Central Server Replacement and Hardware and Software Upgrades” be received;

AND THAT the Aylmer Area Secondary Water Supply System Joint Board of Management does hereby support the Single Source acquisition of the APAM SCADA Central Server Replacement and Hardware and Software System Upgrades from Actemium Toronto Summa;

AND THAT the Director of Public Works be authorized to execute the required agreements with Actemium Toronto Summa on behalf of the Township of Malahide, Port Burwell Area Secondary Water Supply System and Aylmer Area Secondary Water Supply System for the SCADA upgrades further described in this report.

PURPOSE & BACKGROUND:

As the Board is aware, the Aylmer Area Secondary Water Supply System (AASWSS) utilizes a Supervisory Control and Data Acquisition System (SCADA) to provide continuous monitoring, operational control, alarm notification, historical data retention, trending, and to generate regulatory reports required for annual inspection by the MECP.

In 2020, the APAM (Aylmer, Port Burwell, and Malahide) SCADA Central Server and associated hardware and software underwent a significant lifecycle upgrade, as approved under Report No. AASWSS-20-05. That project addressed aging infrastructure and ensured continued regulatory compliance, system reliability, and compatibility with evolving industry standards at that time.

The APAM SCADA system remains a shared, integrated platform supporting the water and wastewater systems it comprises. As with all critical technology assets, SCADA infrastructure requires ongoing lifecycle upgrades to maintain compatibility with manufacturer-supported software, cybersecurity standards, evolving field hardware, and regulatory expectations.

COMMENTS & ANALYSIS:

The SCADA system is a highly specialized, standalone system originally designed, built, and integrated by Summa Engineering Ltd., now known as Acemium Toronto Summa. They continue to provide ongoing support, maintenance, and advisory services. The system has been customized for each connected site and expanded over time to accommodate system growth and operational needs.

Since completion of the 2020 Central Server upgrade, further advancements in SCADA software, operating systems, cybersecurity standards, and manufacturer support requirements have occurred. In addition, ongoing lifecycle considerations for server infrastructure, SCADA applications, data management, and system performance necessitate a subsequent upgrade to ensure the long-term sustainability and reliability of the APAM SCADA system.

Actemium Toronto Summa has advised that certain components of the SCADA software environment are approaching the limits of manufacturer support and compatibility. Without proactive upgrades, the system may face increasing operational risk, reduced vendor support, and limitations in accommodating future PLC replacements, system expansions, or regulatory reporting requirements.

As the original system integrator, Actemium possesses unique system knowledge and historical understanding of the APAM SCADA architecture. They have demonstrated a consistent record of successfully implementing SCADA upgrades with minimal operational disruption and have provided responsive support to Staff throughout the system's life, including remote troubleshooting and 24-hour emergency support.

Given the complexity of the system, the need to maintain uninterrupted operation of critical water infrastructure, and the importance of ensuring continued compliance with MECP requirements, Staff requested a proposal from Actemium Toronto Summa to complete the recommended SCADA Central Server and software upgrades. The proposed work addresses current system limitations, improves performance and reliability, and positions the SCADA system to support future lifecycle replacements and expansions.

Receipt of the proposal from Actemium Toronto Summa avoids the additional costs associated with third-party design, tendering, and contract administration, while ensuring continuity of service and technical consistency with the existing system.

Staff of the Administering Municipality recommends that the Aylmer Area Secondary Water Supply System Joint Board of Management, along with the PBASWSS Joint Board of Management, and the Township of Malahide, accept the SCADA System Upgrade, as proposed by Actemium Toronto Summa, for the replacement of the central server and corresponding software and hardware upgrades as outlined in the attached proposal.

FINANCIAL IMPLICATIONS:

Consistent with historical practice, the capital cost of the APAM SCADA Central Server and Software Upgrade is proposed to be shared among the APAM partners based on an established cost apportionment that reflects the number of connected SCADA sites each member has.

It should be noted that the Township of Malahide added the new OPC sewage pump station to the SCADA system after the 2020 server upgrades were completed. This site has been included in their shared cost for the project.

Based on the proposed project costs, the apportionment is as follows:

- Aylmer Area Secondary: 4/11 or 36.36%=$70,874.73
- Port Burwell Area Secondary: 4/11 or 36.36%= $70,874.73
- Township of Malahide (Water): 1-11 or 9.09%=$17,718.68
- Township of Malahide (Sewer): 2/11 or 18.1%= $35,281.43

The recommendation to award the single source acquisition of Actemium Toronto Summa for this project aligns with Procurement Policy Section 11.4.iii) for Non-Competitive Purchases, where there is a need for compatibility with goods and/or services previously acquired or the required goods and/or services will be additional to similar goods and/or services being supplied under an existing contract.

This required work is included in the 2026 Budget, which was adopted by the Joint Board on September 17, 2025. The 2026 budget allocated $54,000.00 for this project, which is less than the apportioned cost to the Secondary for this work. Any costs which exceed the budgeted amount will be drawn from reserves for this project.

SUMMARY:

To ensure the long-term sustainability and useful function of the SCADA system, it is essential that lifecycle replacements are completed at scheduled intervals. This also allows capital upgrades to be scheduled appropriately and ensures future budgets plan for lifecycle replacements. Keeping the Owners informed ensures they are aware of the SCADA system's maintenance needs and enables effective long-term planning of required maintenance and upgrades, enabling a proactive approach.

ATTACHMENTS:

1. Actemium Toronto Summa Quotation APAM Central Server Replacement and Hardware and Software Upgrades

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Actemium Toronto Summa
401-1875 Buckhorn Gate | Mississauga | ON | L4W 5P1 Office: 905-678-3388 Web: www.actemium.ca

Quotation Reference : Q.0985867.1.01

To: **Town of Malahide**

Date: FEB 3, 2026
Prepared By: CAMERON CHONG
Related Project: *N/A*
Project Number: *N/A*

Attn: Sam Gustavson

REFERENCE: MALAHIDE 2026 SCADA UPGRADES

ACTEMIUM IS PLEASED TO OFFER THE FOLLOWING PROPOSAL SUBJECT TO THETERMS & CONDITIONS OF SALE HEREIN

TERMS: Negoitated prior to the order	VALID: For 30 Days Only	F.O.B.: Mississauga, ON

DELIVERABLES

1. **Server upgrade including VMs, OS, CALS, Office**
2. **Ethernet switch upgrade**
3. **OPC computer upgrade**
4. **HMI software upgrades including Rockwell, AVEAVA Reports, WIN911**
5. **Hardware, software configuration, testing, installation, commissioning**

NOTES

ALL PURCHASE ORDERS are to be made out to: McRae Integration Ltd

1. This quotation is based on information in our possession on the day of preparation. We reserve the right to revise this quotation, should ACTEMIUM receive additional information.
2. The price has been calculated based on current costs for labour and material. McRae Integration will agree to use best material pricing strategies where possible to control costs escalations.
3. In the event of any unexpected changes in tariffs, duties, or import/export regulations that impact costs, Actemium reserves the right to adjust pricing accordingly.
4. **PAYMENT TERMS (net 30-days):**
   25% on issuing of Purchase Order to McRae Integration Ltd.
   70% ready to ship
   5% installation, commissioning

EXCLUSIONS / ASSUMPTIONS

1. Excluded: Server rack - to be reused
2. Excluded: Graphics screen updates unless stated below
3. Excluded: UPS - to be reused
4. Excluded: NAS - to be reused - firware to be updated
5. Excluded: Network cabling & equipment to be reused

ITEM	QTY	DESCRIPTION	PRICE
1	LOT	**SCADA System Upgrade:**	
		As part of Actemium's on-going support and maintenance of the Township of Malahide SCADA system, we have identified the following upgrade requirements: **Hardware:** SCADA server was upgraded in 2020 is at the end of its reliable service life. During design for the 2020 upgrade, the value engineering decision was made to reuse the existing virtual machines (VMs) and server software. These VMs and software are now out of support and or not compatible with the new HMI software.	
		The Ethernet switch, and UPS that were installed in 2016. In 2020, they were approximately at 50% life and reused for the upgrade project. The Ethernet switch is now at the end of its reliable service life. The UPS is tested annually and can be replaced once the backup time start to deteriorate.	
		The NAS was replaced in 2023 and is current. The existing workstation is current. **Misc:** The OPC SPS panel computer was replaced in 2024 with a spare computer and new panel monitor to be able reuse the existing HMI application. Both the computer and existing HMI are not current and not compatible with current HMI software.	
		Software: HMI software versions are not current and not compatible with current operating system versions. WIN911 was under vendor support in 2020 which included free ugprades. Support expired due to the age of the software. The existing voice modem is not compatible with new WIN911 versions	
		Upgrade Proposal: To maintain a reliable SCADA system and data backups for the Township, Actemium recommends the following upgrade proposal:	

Actemium Toronto Summa
401-1875 Buckhorn Gate | Mississauga | ON | L4W 5P1 Office: 905-678-3388 Web: www.actemium.ca

Quotation Reference : Q.0985867.1.01

		Scope of Work:	
		Hardware and software upgrade design: Review HMI software requirements, versions, serial numbers, licensing models Select server and server software (VMs, backup software, CALS, OS, Office) to meet HMI software requirements Research Hyper-V VM compatibility with Rockwell HMI software Select Ethernet switch Confirm compatibility and lifecycle of existing NAS Confirm UPS lifecycle Confirm compatibility and lifecycle of existing workstation Confirm OPC panel computer upgrade version **Upgrade deployment:** Hardware and software procurement, configuration, testing Site installation, teseting, commissioning, training **Hardware and software supply:** Rack mount server and server software (VMs, backup software, CALS, OS, Office) Ethernet switch NAS firmware update UPS to be reused Workstation - to reused OPC panel computer - monitor to be reused AVEVA Report perpetual license (formerly Dream Report) WIN911 modem upgrade	$ 168,700.00
		Rockwell subscription (*First year subscription cost*) FT server FT RSView SE Station Historian Client, Remote Access Asset Centre, Tansaction Manager RSLinx Enterprise	$ 19,592.00
		WIN911 subscription *(three year subscription cost*)	$ 6,633.00
		NOTE: WIN911 has reported issues with some HMI software. There have been no issues reported to Actemium for Rockwell HMI software Should there be an issue that WIN911 cannot resolve, a replacement solution may be required at an additional cost	
		TOTAL PRICE (Taxes Extra) Canadian Dollars	$ 194,925.00

ACTEMIUM

Actemium Toronto Summa
401-1875 Buckhorn Gate | Mississauga | ON | L4W 5P1 Office: 905-678-3388 Web: www.actemium.ca

Quotation Reference : Q.0985867.1.01

Terms and Conditions

1. **Full Agreement.** The agreement between McRae Integration Ltd. ("McRae") and the buyer ("Buyer") with respect to the goods and services specified on the McRae proposal, quotation, or similar document (the "Proposal") will be subject to these Terms and Conditions ("Terms"), together with the Proposal collectively referred to as the "Agreement". McRae shall not be bound by any additional or different terms whether printed or otherwise contained in Buyer's purchase order, unless specifically agreed to by McRae in writing. In the absence of a written acceptance of these Terms by Buyer, placement of an order for any of the goods or services covered by the Proposal shall constitute an acceptance of these Terms. McRae's failure to object to provisions contained in the purchase order or other communication shall not negate or be deemed a waiver of these Terms. This Agreement supersedes all prior agreements and understandings (whether oral or written), with respect to the subject matter hereof.
2. **Warranty.** Providing that the goods or services subject to the Agreement have not been modified or put to improper use after same were delivered to and accepted by Buyer, McRae expressly guarantees for a period of twelve (12) months, from the date of Buyer receiving the goods or services, to repair or replace any defective McRae manufactured goods or services at McRae's discretion. Any defective goods which are manufactured by McRae may be returned, carriage paid to McRae's premises. Goods not manufactured by McRae shall only carry the relevant manufacturer's warranty if such manufacturer maintains a warranty program.
3. **Force Majeure.** The Parties shall not be held responsible for the non-performance or the poor performance of their contractual obligations when they are due to a force majeure event. Force majeure is understood hereunder as any event of any nature whatsoever, beyond the control of one of the Parties, which cannot be reasonably foreseen at the time of concluding the contract signed by the Parties. The Party invoking the case of force majeure shall inform the other Party as soon as possible and undertakes to take appropriate steps to mitigate or limit the consequences. If the performance of the contractual obligations is temporarily impossible, such performance will be suspended. No compensation can be claimed by a Party in this context.
4. **Government-Imposed Restrictions.** The Parties acknowledge that, if extraordinary events arise, government-imposed restrictions on travel or in-person site visits may require conducting activities related to services or delivery of work product under circumstances where in-person representation of the Parties is limited or impossible. Under such circumstances and notwithstanding the Parties' remedies and obligations concerning Force Majeure, the Parties will use reasonable efforts to allow virtual observation of the activities related to services or delivery of work product as relevant. Under such circumstances, the rights and obligations of the Parties concerning performance of services and delivery of work product under the scope of work shall remain unaffected.
5. **Cancellation of Work.** Any purported cancellation of the Agreement by Buyer, prior to the completion of the provision of goods or services, shall be effective only: 1) if made in writing, 2) if accepted by McRae, and 3) on payment by Buyer of a minimum of 25 % of the price of the goods or services stated in the Agreement and such expenses as McRae may have incurred in connection with the Agreement. McRae is under no obligation to issue credit on returned goods or services if it believes such goods or services were delivered reasonably.
6. **Liability.** McRae shall not be liable for loss of use, revenue, profit, or for any other consequential or incidental damages. Without prejudice to the foregoing, McRae's liability shall, in any event, be limited to the price of the particular goods or services under the Agreement. Buyer assumes liability for patent and copyright infringement when goods are made to Buyer's specifications.
7. **Drawings & Specifications.** All drawings, specifications, data, or other information supplied to Buyer by McRae may contain proprietary design information belonging to McRae. They may not be copied in whole or in part, nor disclosed to third parties, without the express written consent of an officer of McRae Integration. All said information must be returned immediately upon demand.
8. **Engineering Survey.** The parameters and/or field measurements utilized in formulating the prices for equipment and services supplied herein, in total or in part, have been supplied by Buyer or their representative. Any failure of the equipment to operate satisfactorily that is caused by incorrect data and/or field measurements being supplied to McRae, is the responsibility of Buyer, regardless of whether the actual measurements or technical specifications were taken by Buyer's personnel or a McRae representative. Further, it is Buyer's responsibility to ensure correctness and accuracy of all dimensions and information provided to Buyer by McRae for approval. Buyer is to take all technical and/or organizational measures in order to enable service delivery by McRae and Buyer shall be responsible for any delays or expenses resulting from its failure to provide accurate information. This shall include any changes in operating procedures, types of equipment being serviced, or any changes to the physical surroundings which cause conditions to be outside the parameters and/or field measurements represented. All costs associated with such changes, additions, deletions, or modifications shall be borne by Buyer.
9. **Delivery.** McRae shall in good faith attempt to complete delivery of goods or services ("Deliverables") by the date specified but shall not be responsible or liable for delays due to unexpected circumstances. Agreed deadlines and completion dates shall be extended accordingly if McRae is prevented from providing Deliverables as required as a result of circumstances for which McRae is not responsible. Upon receipt of Deliverables, Buyer will have a 30-day period to confirm acceptance of the Deliverables. Buyer will be deemed to have accepted the Deliverables if it fails to notify McRae in the 30-day period, that such Deliverables are not acceptable, or if Buyer has used such Deliverables in a way a reasonable person would consider consistent with ownership. McRae shall retain title to and property in all products delivered hereunder and any replacements, substitutions, additions, products and proceeds thereof to secure payment of Buyer's obligations. This title will be retained until Buyer's obligations to McRae are paid in full. Buyer agrees that McRae will have the right to file financing statements or other documentation pursuant to applicable law, to secure, evidence or perfect McRae's title in the equipment. Upon failure to make any payment as provided in the Agreement, McRae may exercise any rights or remedies it may have to collect such amounts at statute or common law without affecting any further or other claims which it may have against Buyer. Notwithstanding the preceding, McRae shall retain all intellectual property rights in all Deliverables and the provision of Deliverables or payment for same shall not result in a transfer of intellectual property rights from McRae to Buyer.
10. **Buyer Obligations.** Buyer shall only use Deliverables for its own internal use and not for the purposes of competing with McRae. Buyer shall ensure that the physical and technical environments in its facilities are appropriate in the context of McRae providing the Deliverables.
11. **Payment Terms.** Unless provided to the contrary, Buyer shall pay McRae the full invoiced amount within thirty (30) days from the date of invoice. Invoices are issued per the payment terms noted in the Proposal or bi-weekly for time and materials-based work. McRae reserves the right to assess a 2% per month interest charge on all overdue accounts. In addition, McRae retains the right to commence proceedings against Buyer to recover all monies owing. The title of the goods and services will not be deemed to have passed to Buyer until the full purchase price, and any interest due, is paid to McRae Integration in full. Unless otherwise noted, the quoted price herein excludes any provincial, federal, or other taxes which may be levied on McRae's services.
12. **Applicable Law.** The Agreement shall be governed by the laws of the Province of Ontario.
13. **Liens/Security.** McRae reserves the right to lien or take other security it deems necessary and will provide final lien or security waivers only after payment has been received in full.
14. **Arbitration.** If any dispute or controversy shall occur between McRae and Buyer relating to the interpretation or implementation of any of the provisions of this Agreement, such dispute shall be resolved by arbitration. Such arbitration shall be conducted by a single arbitrator. The arbitrator shall be appointed by agreement between the parties, or, in default of agreement, such arbitrator shall be appointed pursuant to the procedures set out under the Arbitrations Act, 1991 *(Ontario)*. *The arbitration shall be held in the City of Toronto.* The procedure to be followed shall be agreed by the parties or, in default of agreement, determined by the arbitrator. The arbitration shall proceed in accordance with the provisions of the Arbitration Act, 1991 (Ontario).

REPORT NO. **PBASWSS-26-06**

TO: Port Burwell Area Secondary Water Supply System - Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **APAM SCADA Central Server Replacement and Hardware and Software System Upgrades**

RECOMMENDATION:

THAT Report No. PBASWSS-26-06 entitled “APAM SCADA Central Server Replacement and Hardware and Software Upgrades” be received;

AND THAT the Port Burwell Area Secondary Water Supply System Joint Board of Management does hereby support Single Source acquisition of the APAM SCADA Central Server Replacement and Hardware and Software System Upgrades from Actemium Toronto Summa;

AND THAT the Director of Public Works be authorized to execute the required agreements with Actemium Toronto Summa on behalf of the Township of Malahide, Port Burwell Area Secondary Water Supply System and Aylmer Area Secondary Water Supply System for the SCADA upgrades further described in this report.

PURPOSE & BACKGROUND:

As the Board is aware, the Port Burwell Area Secondary Water Supply System (PBASWSS) utilizes a Supervisory Control and Data Acquisition System (SCADA) to provide continuous monitoring, operational control, alarm notification, historical data retention, trending, and the generation of regulatory reports required for annual inspection by the MECP.

In 2020, the APAM (Aylmer, Port Burwell, and Malahide) SCADA Central Server and associated hardware and software underwent a significant lifecycle upgrade, as approved under Report No. PBASWSS-20-05. That project addressed aging infrastructure and ensured continued regulatory compliance, system reliability, and compatibility with evolving industry standards at that time.

The APAM SCADA system remains a shared, integrated platform supporting the water and wastewater systems it comprises. As with all critical technology assets, SCADA infrastructure requires ongoing lifecycle upgrades to maintain compatibility with manufacturer-supported software, cybersecurity standards, evolving field hardware, and regulatory expectations.

COMMENTS & ANALYSIS:

The SCADA system is a highly specialized, standalone system originally designed, built, and integrated by Summa Engineering Ltd., now known as Acemium Toronto Summa. They continue to provide ongoing support, maintenance, and advisory services. The system has been customized for each connected site and expanded over time to accommodate system growth and operational needs.

Since the completion of the 2020 Central Server upgrade, further advancements have occurred in SCADA software, operating systems, cybersecurity standards, and manufacturer support requirements. In addition, ongoing lifecycle considerations for server infrastructure, SCADA applications, data management, and system performance necessitate a subsequent upgrade to ensure the long-term sustainability and reliability of the APAM SCADA system.

Actemium Toronto Summa has advised that certain components of the SCADA software environment are approaching the limits of manufacturer support and compatibility. Without proactive upgrades, the system may face increasing operational risk, reduced vendor support, and limitations in accommodating future PLC replacements, system expansions, or regulatory reporting requirements.

As the original system integrator, Actemium possesses unique system knowledge and historical understanding of the APAM SCADA architecture. They have demonstrated a consistent record of successfully implementing SCADA upgrades with minimal operational disruption and have provided responsive support to Staff throughout the system's life, including remote troubleshooting and 24-hour emergency support.

Given the complexity of the system, the need to maintain uninterrupted operation of critical water infrastructure, and the importance of ensuring continued compliance with MECP requirements, Staff requested a proposal from Actemium Toronto Summa to complete the recommended SCADA Central Server and software upgrades. The proposed work addresses current system limitations, improves performance and reliability, and positions the SCADA system to support future lifecycle replacements and expansions.

Receipt of the proposal from Actemium Toronto Summa avoids the additional costs associated with third-party design, tendering, and contract administration, while ensuring continuity of service and technical consistency with the existing system.

Staff of the Administering Municipality recommends that the Port Burwell Area Secondary Water Supply System Joint Board of Management, along with the AASWSS Joint Board of Management, and the Township of Malahide, accept the SCADA System Upgrade, as proposed by Actemium Toronto Summa, for the replacement of the central server and corresponding software and hardware upgrades as outlined in the attached proposal.

FINANCIAL IMPLICATIONS:

Consistent with historical practice, the capital cost of the APAM SCADA Central Server and Software Upgrade is proposed to be shared among the APAM partners based on an established cost apportionment that reflects the number of connected SCADA sites each member has.

It should be noted that the Township of Malahide added the new OPC sewage pump station to the SCADA system after the 2020 server upgrades were completed. This site has been included in their shared cost for the project.

Based on the proposed project costs, the apportionment is as follows:

- Aylmer Area Secondary: 4/11 or 36.36%=$70,874.73
- Port Burwell Area Secondary: 4/11 or 36.36%= $70,874.73
- Township of Malahide (Water): 1-11 or 9.09%=$17,718.68
- Township of Malahide (Sewer): 2/11 or 18.1%= $35,281.43

The recommendation to award the single-source acquisition of Actemium Toronto Summa for this project aligns with Township Procurement Policy Section 11.4. (iii) for Non-Competitive Purchases, where there is a need for compatibility with goods and/or services previously acquired or the required goods and/or services will be additional to similar goods and/or services being supplied under an existing contract.

This required work is included in the 2026 Budget, which was adopted by the Joint Board on September 17, 2025, being less than the $72,000.00 allocated in the 2026 Budget for the Port Burwell Area Secondary’s portion of this work.

SUMMARY:

To ensure the long-term sustainability and useful function of the SCADA system, it is essential that lifecycle replacements are completed at scheduled intervals. This also allows capital upgrades to be scheduled appropriately and ensures future budgets plan for lifecycle replacements. Keeping the Owners informed ensures they are aware of the SCADA system's maintenance needs and enables effective long-term planning of required maintenance and upgrades, enabling a proactive approach.

ATTACHMENTS:

1. Actemium Toronto Summa Quotation APAM SCADA Central Server Replacement and Hardware and Software Upgrades

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Actemium Toronto Summa
401-1875 Buckhorn Gate | Mississauga | ON | L4W 5P1 Office: 905-678-3388 Web: www.actemium.ca

Quotation Reference : Q.0985867.1.01

To: **Town of Malahide**

Date: FEB 3, 2026
Prepared By: CAMERON CHONG
Related Project: *N/A*
Project Number: *N/A*

Attn: Sam Gustavson

REFERENCE: MALAHIDE 2026 SCADA UPGRADES

ACTEMIUM IS PLEASED TO OFFER THE FOLLOWING PROPOSAL SUBJECT TO THETERMS & CONDITIONS OF SALE HEREIN

TERMS: Negoitated prior to the order	VALID: For 30 Days Only	F.O.B.: Mississauga, ON

DELIVERABLES

1. **Server upgrade including VMs, OS, CALS, Office**
2. **Ethernet switch upgrade**
3. **OPC computer upgrade**
4. **HMI software upgrades including Rockwell, AVEAVA Reports, WIN911**
5. **Hardware, software configuration, testing, installation, commissioning**

NOTES

ALL PURCHASE ORDERS are to be made out to: McRae Integration Ltd

1. This quotation is based on information in our possession on the day of preparation. We reserve the right to revise this quotation, should ACTEMIUM receive additional information.
2. The price has been calculated based on current costs for labour and material. McRae Integration will agree to use best material pricing strategies where possible to control costs escalations.
3. In the event of any unexpected changes in tariffs, duties, or import/export regulations that impact costs, Actemium reserves the right to adjust pricing accordingly.
4. **PAYMENT TERMS (net 30-days):**
   25% on issuing of Purchase Order to McRae Integration Ltd.
   70% ready to ship
   5% installation, commissioning

EXCLUSIONS / ASSUMPTIONS

1. Excluded: Server rack - to be reused
2. Excluded: Graphics screen updates unless stated below
3. Excluded: UPS - to be reused
4. Excluded: NAS - to be reused - firware to be updated
5. Excluded: Network cabling & equipment to be reused

ITEM	QTY	DESCRIPTION	PRICE
1	LOT	**SCADA System Upgrade:**	
		As part of Actemium's on-going support and maintenance of the Township of Malahide SCADA system, we have identified the following upgrade requirements: **Hardware:** SCADA server was upgraded in 2020 is at the end of its reliable service life. During design for the 2020 upgrade, the value engineering decision was made to reuse the existing virtual machines (VMs) and server software. These VMs and software are now out of support and or not compatible with the new HMI software.	
		The Ethernet switch, and UPS that were installed in 2016. In 2020, they were approximately at 50% life and reused for the upgrade project. The Ethernet switch is now at the end of its reliable service life. The UPS is tested annually and can be replaced once the backup time start to deteriorate.	
		The NAS was replaced in 2023 and is current. The existing workstation is current. **Misc:** The OPC SPS panel computer was replaced in 2024 with a spare computer and new panel monitor to be able reuse the existing HMI application. Both the computer and existing HMI are not current and not compatible with current HMI software.	
		Software: HMI software versions are not current and not compatible with current operating system versions. WIN911 was under vendor support in 2020 which included free ugprades. Support expired due to the age of the software. The existing voice modem is not compatible with new WIN911 versions	
		Upgrade Proposal: To maintain a reliable SCADA system and data backups for the Township, Actemium recommends the following upgrade proposal:	

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401-1875 Buckhorn Gate | Mississauga | ON | L4W 5P1 Office: 905-678-3388 Web: www.actemium.ca

Quotation Reference : Q.0985867.1.01

		Scope of Work:	
		Hardware and software upgrade design: Review HMI software requirements, versions, serial numbers, licensing models Select server and server software (VMs, backup software, CALS, OS, Office) to meet HMI software requirements Research Hyper-V VM compatibility with Rockwell HMI software Select Ethernet switch Confirm compatibility and lifecycle of existing NAS Confirm UPS lifecycle Confirm compatibility and lifecycle of existing workstation Confirm OPC panel computer upgrade version **Upgrade deployment:** Hardware and software procurement, configuration, testing Site installation, teseting, commissioning, training **Hardware and software supply:** Rack mount server and server software (VMs, backup software, CALS, OS, Office) Ethernet switch NAS firmware update UPS to be reused Workstation - to reused OPC panel computer - monitor to be reused AVEVA Report perpetual license (formerly Dream Report) WIN911 modem upgrade	$ 168,700.00
		Rockwell subscription (*First year subscription cost*) FT server FT RSView SE Station Historian Client, Remote Access Asset Centre, Tansaction Manager RSLinx Enterprise	$ 19,592.00
		WIN911 subscription *(three year subscription cost*)	$ 6,633.00
		NOTE: WIN911 has reported issues with some HMI software. There have been no issues reported to Actemium for Rockwell HMI software Should there be an issue that WIN911 cannot resolve, a replacement solution may be required at an additional cost	
		TOTAL PRICE (Taxes Extra) Canadian Dollars	$ 194,925.00

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Terms and Conditions

1. **Full Agreement.** The agreement between McRae Integration Ltd. ("McRae") and the buyer ("Buyer") with respect to the goods and services specified on the McRae proposal, quotation, or similar document (the "Proposal") will be subject to these Terms and Conditions ("Terms"), together with the Proposal collectively referred to as the "Agreement". McRae shall not be bound by any additional or different terms whether printed or otherwise contained in Buyer's purchase order, unless specifically agreed to by McRae in writing. In the absence of a written acceptance of these Terms by Buyer, placement of an order for any of the goods or services covered by the Proposal shall constitute an acceptance of these Terms. McRae's failure to object to provisions contained in the purchase order or other communication shall not negate or be deemed a waiver of these Terms. This Agreement supersedes all prior agreements and understandings (whether oral or written), with respect to the subject matter hereof.
2. **Warranty.** Providing that the goods or services subject to the Agreement have not been modified or put to improper use after same were delivered to and accepted by Buyer, McRae expressly guarantees for a period of twelve (12) months, from the date of Buyer receiving the goods or services, to repair or replace any defective McRae manufactured goods or services at McRae's discretion. Any defective goods which are manufactured by McRae may be returned, carriage paid to McRae's premises. Goods not manufactured by McRae shall only carry the relevant manufacturer's warranty if such manufacturer maintains a warranty program.
3. **Force Majeure.** The Parties shall not be held responsible for the non-performance or the poor performance of their contractual obligations when they are due to a force majeure event. Force majeure is understood hereunder as any event of any nature whatsoever, beyond the control of one of the Parties, which cannot be reasonably foreseen at the time of concluding the contract signed by the Parties. The Party invoking the case of force majeure shall inform the other Party as soon as possible and undertakes to take appropriate steps to mitigate or limit the consequences. If the performance of the contractual obligations is temporarily impossible, such performance will be suspended. No compensation can be claimed by a Party in this context.
4. **Government-Imposed Restrictions.** The Parties acknowledge that, if extraordinary events arise, government-imposed restrictions on travel or in-person site visits may require conducting activities related to services or delivery of work product under circumstances where in-person representation of the Parties is limited or impossible. Under such circumstances and notwithstanding the Parties' remedies and obligations concerning Force Majeure, the Parties will use reasonable efforts to allow virtual observation of the activities related to services or delivery of work product as relevant. Under such circumstances, the rights and obligations of the Parties concerning performance of services and delivery of work product under the scope of work shall remain unaffected.
5. **Cancellation of Work.** Any purported cancellation of the Agreement by Buyer, prior to the completion of the provision of goods or services, shall be effective only: 1) if made in writing, 2) if accepted by McRae, and 3) on payment by Buyer of a minimum of 25 % of the price of the goods or services stated in the Agreement and such expenses as McRae may have incurred in connection with the Agreement. McRae is under no obligation to issue credit on returned goods or services if it believes such goods or services were delivered reasonably.
6. **Liability.** McRae shall not be liable for loss of use, revenue, profit, or for any other consequential or incidental damages. Without prejudice to the foregoing, McRae's liability shall, in any event, be limited to the price of the particular goods or services under the Agreement. Buyer assumes liability for patent and copyright infringement when goods are made to Buyer's specifications.
7. **Drawings & Specifications.** All drawings, specifications, data, or other information supplied to Buyer by McRae may contain proprietary design information belonging to McRae. They may not be copied in whole or in part, nor disclosed to third parties, without the express written consent of an officer of McRae Integration. All said information must be returned immediately upon demand.
8. **Engineering Survey.** The parameters and/or field measurements utilized in formulating the prices for equipment and services supplied herein, in total or in part, have been supplied by Buyer or their representative. Any failure of the equipment to operate satisfactorily that is caused by incorrect data and/or field measurements being supplied to McRae, is the responsibility of Buyer, regardless of whether the actual measurements or technical specifications were taken by Buyer's personnel or a McRae representative. Further, it is Buyer's responsibility to ensure correctness and accuracy of all dimensions and information provided to Buyer by McRae for approval. Buyer is to take all technical and/or organizational measures in order to enable service delivery by McRae and Buyer shall be responsible for any delays or expenses resulting from its failure to provide accurate information. This shall include any changes in operating procedures, types of equipment being serviced, or any changes to the physical surroundings which cause conditions to be outside the parameters and/or field measurements represented. All costs associated with such changes, additions, deletions, or modifications shall be borne by Buyer.
9. **Delivery.** McRae shall in good faith attempt to complete delivery of goods or services ("Deliverables") by the date specified but shall not be responsible or liable for delays due to unexpected circumstances. Agreed deadlines and completion dates shall be extended accordingly if McRae is prevented from providing Deliverables as required as a result of circumstances for which McRae is not responsible. Upon receipt of Deliverables, Buyer will have a 30-day period to confirm acceptance of the Deliverables. Buyer will be deemed to have accepted the Deliverables if it fails to notify McRae in the 30-day period, that such Deliverables are not acceptable, or if Buyer has used such Deliverables in a way a reasonable person would consider consistent with ownership. McRae shall retain title to and property in all products delivered hereunder and any replacements, substitutions, additions, products and proceeds thereof to secure payment of Buyer's obligations. This title will be retained until Buyer's obligations to McRae are paid in full. Buyer agrees that McRae will have the right to file financing statements or other documentation pursuant to applicable law, to secure, evidence or perfect McRae's title in the equipment. Upon failure to make any payment as provided in the Agreement, McRae may exercise any rights or remedies it may have to collect such amounts at statute or common law without affecting any further or other claims which it may have against Buyer. Notwithstanding the preceding, McRae shall retain all intellectual property rights in all Deliverables and the provision of Deliverables or payment for same shall not result in a transfer of intellectual property rights from McRae to Buyer.
10. **Buyer Obligations.** Buyer shall only use Deliverables for its own internal use and not for the purposes of competing with McRae. Buyer shall ensure that the physical and technical environments in its facilities are appropriate in the context of McRae providing the Deliverables.
11. **Payment Terms.** Unless provided to the contrary, Buyer shall pay McRae the full invoiced amount within thirty (30) days from the date of invoice. Invoices are issued per the payment terms noted in the Proposal or bi-weekly for time and materials-based work. McRae reserves the right to assess a 2% per month interest charge on all overdue accounts. In addition, McRae retains the right to commence proceedings against Buyer to recover all monies owing. The title of the goods and services will not be deemed to have passed to Buyer until the full purchase price, and any interest due, is paid to McRae Integration in full. Unless otherwise noted, the quoted price herein excludes any provincial, federal, or other taxes which may be levied on McRae's services.
12. **Applicable Law.** The Agreement shall be governed by the laws of the Province of Ontario.
13. **Liens/Security.** McRae reserves the right to lien or take other security it deems necessary and will provide final lien or security waivers only after payment has been received in full.
14. **Arbitration.** If any dispute or controversy shall occur between McRae and Buyer relating to the interpretation or implementation of any of the provisions of this Agreement, such dispute shall be resolved by arbitration. Such arbitration shall be conducted by a single arbitrator. The arbitrator shall be appointed by agreement between the parties, or, in default of agreement, such arbitrator shall be appointed pursuant to the procedures set out under the Arbitrations Act, 1991 *(Ontario)*. *The arbitration shall be held in the City of Toronto.* The procedure to be followed shall be agreed by the parties or, in default of agreement, determined by the arbitrator. The arbitration shall proceed in accordance with the provisions of the Arbitration Act, 1991 (Ontario).

REPORT NO. **AASWSS-26-06**

TO: Aylmer Area Secondary Water Supply System- Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **PLC Replacement at Elgin Middlesex Pumping Station (EMPS)**

RECOMMENDATION:

THAT Report No. AASWSS-26-06 entitled “Elgin Middlesex Pumping Station (EMPS) PLC Lifecycle Replacement – Single Source Procurement” be received;

AND THAT the Aylmer Area Secondary Water Supply System Joint Board of Management does hereby support Single Source acquisition for the replacement of the Programmable Logic Controller (PLC) at the Elgin Middlesex Pumping Station from Actemium Toronto Summa;

AND THAT the Director of Public Works be authorized to execute the required agreements with Actemium Toronto Summa on behalf of the Aylmer Area Secondary Water Supply System for the SCADA upgrades further described in this report.

PURPOSE & BACKGROUND:

The purpose of this report is to seek authorization for a single source procurement to replace the existing Programmable Logic Controller (PLC) at the Elgin Middlesex Pumping Station (EMPS) located in the City of St. Thomas, Ontario. EMPS is a critical facility that pumps treated water to the Town of Aylmer and is an essential component of the APAM (Aylmer, Port Burwell, and Malahide) SCADA network.

The PLC currently in operation at EMPS is original equipment and has reached the end of its recommended lifecycle. The PLC is a highly critical component responsible for the reliable operation, control, and monitoring of the pumps. Failure or malfunction of this PLC would pose a significant risk to system reliability and water supply operations. Lifecycle replacement is therefore required to ensure continued operational integrity, regulatory compliance, and manufacturer support.

COMMENTS & ANALYSIS:

The APAM SCADA system is a custom-designed, integrated system developed, programmed, and commissioned by Actemium Toronto Summa. The EMPS PLC is integral to this network and must remain fully compatible with existing hardware, software, communications architecture, and SCADA standards.

Actemium Toronto Summa replaced all PLCs associated with the Aylmer Area Secondary Water Supply System in 2022, with the exception of the EMPS PLC. This PLC has now reached the same lifecycle stage and requires replacement. Actemium's continued involvement ensures consistency in programming standards, minimizes operational risk, and significantly reduces engineering and design costs.

The Township currently holds a SCADA maintenance contract with Actemium, providing standby and emergency support. Actemium's in-depth knowledge of the system, combined with their proven track record of successfully completing similar PLC lifecycle replacements with minimal operational disruption, makes them uniquely qualified to perform this work.

Furthermore, Actemium installed the original PLC at EMPS and is the original system integrator for the APAM SCADA network. Actemium continues to provide SCADA network support, maintenance, and emergency standby services. They have also recently designed and completed a new SCADA network for the Town of Aylmer and support similar systems for Central Elgin. In 2025, they completed all required programming to integrate the new Aylmer Water Tower into the APAM and SCADA networks for the EAWTP (Elgin Area Water Treatment Plant). They worked closely with multiple stakeholders (Aylmer Staff, Malahide Staff, IT Staff from EAWTP, OCWA) to successfully integrate the new Aylmer Tower with the Aylmer Secondary PLC at EMPS, which is part of the EAWTP SCADA network. This was a highly complex project with no room for error.

Engaging an alternative vendor would require extensive system investigation, re-engineering, and testing, introducing unnecessary risk to a critical pumping facility and increasing costs. As the original integrator, Actemium already possesses all the required system documentation, programming logic, and network configurations, allowing the work to be completed efficiently and successfully.

The replacement PLC is expected to provide approximately 12 years of reliable service before the next recommended lifecycle replacement. This work aligns with industry best practices and long-term asset management planning.

Staff of the Administering Municipality recommends that the AASWSS Joint Board of Management accept the quotation received from Actemium Toronto Summa to replace the PLC at EMPS as outlined in the attached proposal.

FINANCIAL IMPLICATIONS:

This project has been included in the approved 2026 Capital Budget.

Section 11.4 of the Township's Procurement Policy, specifically subsection (iii), permits single source procurement where there is a requirement for compatibility with goods or services previously acquired. Given that the EMPS PLC is a critical component of a highly specialized SCADA system originally designed and integrated by Actemium, compatibility and successful execution of this work are imperative to maintaining reliable pump operation and uninterrupted water service.

This project was approved by the Joint Board in the 2026 budget for $70,000.00. The quoted amount for this project exceeds the amount that was included in the 2026 budget by $13,600.00 plus HST. Surplus costs above the budgeted amount will be drawn from reserves.

CONSULTATION:

Consultation has occurred internally with operations and technical staff responsible for water system operations and SCADA infrastructure for the APAM SCADA, the Town of Aylmer SCADA network and the EAWTP SCADA network. Staff of the Administering Municipality have also consulted with Actemium Toronto Summa to provide them with the necessary information required to develop a comprehensive quotation which reflects the required scope and deliverables for this project.

ATTACHMENTS:

1. Actemium Toronto Summa Quotation EMPS Aylmer PLC Upgrade

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

ACTEMIUM

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401-1875 Buckhorn Gate | Mississauga | ON | L4W 5P1 Office: 905-678-3388 Web: www.actemium.ca

Quotation Reference : Q.0989980.1.01

To: **Town of Malahide**

Date: Jan 28, 2026
Prepared By: CAM CHONG
Related Project: *N/A*
Project Number: *N/A*

Attn: Sam Gustavson

REFERENCE: MALAHIDE EMPS SCP02 AYLMER PLC UPGRADE

ACTEMIUM IS PLEASED TO OFFER THE FOLLOWING PROPOSAL SUBJECT TO THETERMS & CONDITIONS OF SALE HEREIN

TERMS: Negoitated prior to the order	VALID: For 30 Days Only	F.O.B.: Mississauga, ON

DELIVERABLES

1. **Upgrade design, scope coordination with EMPS, Aylmer, Malahide**
2. **PLC component procurement, testing**
3. **Site coordination, installation, testing, commissioning**
4. **As commissioned panel drawings update**

NOTES

ALL PURCHASE ORDERS are to be made out to: McRae Integration Ltd

1. This quotation is based on information in our possession on the day of preparation. We reserve the right to revise this quotation, should ACTEMIUM receive additional information.
2. The price has been calculated based on current costs for labour and material. McRae Integration will agree to use best material pricing strategies where possible to control costs escalations.
3. Any price escalations that cannot be mitigated will be calculated and added to the price as follows:
   (a) Labour: Consumer Price Index (CPI) rate the beginning of each calendar year where applicable
   (b) Material: Vendor price increases at the time of purchase
4. In the event of any unexpected changes in tariffs, duties, or import/export regulations that impact costs, Actemium reserves the right to adjust pricing accordingly.
5. **PAYMENT TERMS (net 30-days):**
   25% on issuing of Purchase Order to McRae Integration Ltd.
   70% ready to ship
   5% balance on shipment

EXCLUSIONS / ASSUMPTIONS

1. Excluded: Modifications to logic and or graphics
2. Excluded: Upgrades to IO modules and or St Thomas System equipment
3. Excluded: Network cabling & equipment

ITEM	QTY	DESCRIPTION	PRICE
1	LOT	**EMPS Panel SCP02: ControlLogix PLC upgrade to address the aging ControlNet communications and processor for the Aylmer section** Experience with the EMPS, APAM, and Aylmer systems are essential for this upgrade due to the coordination and system knowledge required to provide detailed design and seamless site work. Actemium have been involved in the initial deployment all three systems and have a working understand of the coordination requirements and technical background to propose upgrading the SCP02 Aylmer section without interrupting the St Thomas section. Upgrade to include replacing ControlLogix rack and components and Flex IO communication modules (IO modules will not be upgraded - current Rockwell status is Active Mature) **The scope of work:** **Detailed design:** ControlNet to Ethernet upgrade component selection review Panel installation details Work plan development coordinating EMPS, Aylmer, and Malahide roles and responsibilities Site installation and commissioning strategy **Preliminary Work:** PLC component procurement Migrate PLC application to the new processor, testing Review work plan with EMPS, APAM, Aylmer personnel to define roles and responsibilities **Site Work:** Check system readiness for ugprade work Replace ControlLogix rack and Flex IO communication modules Test communications to EMPS, APAM systems Commission system	$ 83,600.00

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Quotation Reference : Q.0989980.1.01

		Post upgrade: Check system functionality Update SCP02 drawings Project close out	
		Contignecy for meterial price increases required for project start after March 15, 2026	$ 3,500.00
		TOTAL PRICE (Taxes Extra) Canadian Dollars	$ 87,100.00

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7. **Drawings & Specifications.** All drawings, specifications, data, or other information supplied to Buyer by McRae may contain proprietary design information belonging to McRae. They may not be copied in whole or in part, nor disclosed to third parties, without the express written consent of an officer of McRae Integration. All said information must be returned immediately upon demand.
8. **Engineering Survey.** The parameters and/or field measurements utilized in formulating the prices for equipment and services supplied herein, in total or in part, have been supplied by Buyer or their representative. Any failure of the equipment to operate satisfactorily that is caused by incorrect data and/or field measurements being supplied to McRae, is the responsibility of Buyer, regardless of whether the actual measurements or technical specifications were taken by Buyer's personnel or a McRae representative. Further, it is Buyer's responsibility to ensure correctness and accuracy of all dimensions and information provided to Buyer by McRae for approval. Buyer is to take all technical and/or organizational measures in order to enable service delivery by McRae and Buyer shall be responsible for any delays or expenses resulting from its failure to provide accurate information. This shall include any changes in operating procedures, types of equipment being serviced, or any changes to the physical surroundings which cause conditions to be outside the parameters and/or field measurements represented. All costs associated with such changes, additions, deletions, or modifications shall be borne by Buyer.
9. **Delivery.** McRae shall in good faith attempt to complete delivery of goods or services ("Deliverables") by the date specified but shall not be responsible or liable for delays due to unexpected circumstances. Agreed deadlines and completion dates shall be extended accordingly if McRae is prevented from providing Deliverables as required as a result of circumstances for which McRae is not responsible. Upon receipt of Deliverables, Buyer will have a 30-day period to confirm acceptance of the Deliverables. Buyer will be deemed to have accepted the Deliverables if it fails to notify McRae in the 30-day period, that such Deliverables are not acceptable, or if Buyer has used such Deliverables in a way a reasonable person would consider consistent with ownership. McRae shall retain title to and property in all products delivered hereunder and any replacements, substitutions, additions, products and proceeds thereof to secure payment of Buyer's obligations. This title will be retained until Buyer's obligations to McRae are paid in full. Buyer agrees that McRae will have the right to file financing statements or other documentation pursuant to applicable law, to secure, evidence or perfect McRae's title in the equipment. Upon failure to make any payment as provided in the Agreement, McRae may exercise any rights or remedies it may have to collect such amounts at statute or common law without affecting any further or other claims which it may have against Buyer. Notwithstanding the preceding, McRae shall retain all intellectual property rights in all Deliverables and the provision of Deliverables or payment for same shall not result in a transfer of intellectual property rights from McRae to Buyer.
10. **Buyer Obligations.** Buyer shall only use Deliverables for its own internal use and not for the purposes of competing with McRae. Buyer shall ensure that the physical and technical environments in its facilities are appropriate in the context of McRae providing the Deliverables.
11. **Payment Terms.** Unless provided to the contrary, Buyer shall pay McRae the full invoiced amount within thirty (30) days from the date of invoice. Invoices are issued per the payment terms noted in the Proposal or bi-weekly for time and materials-based work. McRae reserves the right to assess a 2% per month interest charge on all overdue accounts. In addition, McRae retains the right to commence proceedings against Buyer to recover all monies owing. The title of the goods and services will not be deemed to have passed to Buyer until the full purchase price, and any interest due, is paid to McRae Integration in full. Unless otherwise noted, the quoted price herein excludes any provincial, federal, or other taxes which may be levied on McRae's services.
12. **Applicable Law.** The Agreement shall be governed by the laws of the Province of Ontario.
13. **Liens/Security.** McRae reserves the right to lien or take other security it deems necessary and will provide final lien or security waivers only after payment has been received in full.
14. **Arbitration.** If any dispute or controversy shall occur between McRae and Buyer relating to the interpretation or implementation of any of the provisions of this Agreement, such dispute shall be resolved by arbitration. Such arbitration shall be conducted by a single arbitrator. The arbitrator shall be appointed by agreement between the parties, or, in default of agreement, such arbitrator shall be appointed pursuant to the procedures set out under the Arbitrations Act, 1991 (Ontario). The arbitration shall be held in the City of Toronto. The procedure to be followed shall be agreed by the parties or, in default of agreement, determined by the arbitrator. The arbitration shall proceed in accordance with the provisions of the Arbitration Act, 1991 (Ontario).

REPORT NO. **PBASWSS-26-05**

TO: Port Burwell Area Secondary Water Supply System - Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 18, 2026
SUBJECT: **Port Burwell Water Tower Inspection**

RECOMMENDATION:

THAT Report No. PBASWSS-26-05 entitled “Port Burwell Water Tower Inspection” be received;

AND THAT the Port Burwell Area Secondary Water Supply System Joint Board of Management does hereby support the Single Source acquisition of the Port Burwell Water Tower Inspection from Landmark Structures;

AND THAT the Director of Public Works be authorized to execute the required agreements with Landmark Structures for the undertaking and completion of a Water Tower Inspection for the Port Burwell Area Secondary Water Supply System as described in this report.

PURPOSE & BACKGROUND:

The purpose of this report is to seek approval to accept a single-source quote from Landmark Structures for required maintenance and inspection work on the Port Burwell Water Tower in 2026.

The Port Burwell Water Tower was refurbished in 2016. The interior and exterior coatings applied at that time are expected to provide approximately 30 years of protection, provided regular maintenance, inspection and repairs are routinely made. Following the refurbishment, the tower was fully drained and inspected in 2017 and again in 2018. The 2018 inspection served as the two-year warranty inspection. At that time, outstanding deficiencies were addressed, and interior and exterior coating touch-ups were completed.

Since the 2018 warranty inspection and associated touch-up work, the water tower has not been fully drained. The only interior inspection completed since that time was a remotely operated vehicle (ROV) inspection conducted by Landmark Structures in 2023.

The 2018 warranty inspection was completed by Misco, which experienced scheduling inefficiencies due to limited staffing and resources. These challenges reinforced the importance of retaining a contractor with sufficient capacity, experience, and technical expertise to complete water tower work safely and efficiently.

COMMENTS & ANALYSIS:

The proposed scope of work includes draining and cleaning the tank, conducting a full interior inspection, completing interior coating touch-ups, and performing a cathodic protection survey, including replacing the reference electrodes within the tank. Landmark's quote also includes Corrosion Services as a subcontractor to complete the cathodic protection components of the work.

This project is considered high risk because draining the water tower removes the reserve water storage and impacts the community's fire protection. As a result, the work must be completed in a carefully coordinated and timely manner to minimize service disruption and operational risk.

Successful execution of this project requires close coordination between two specialized contractors while the tank is empty. Landmark has demonstrated its ability to manage this coordination effectively. During the 2023 ROV inspection, Landmark retained Corrosion Services as a subcontractor, and the work proceeded smoothly, allowing multiple inspection activities to be completed efficiently without requiring a full shutdown.

Landmark is a recognized leader in the water tower industry, with more experience than any competitor in Ontario and possibly North America. Their familiarity with the Port Burwell Water Tower, combined with their technical expertise, staffing capacity, and proven project management abilities, significantly reduces risk for this high-impact project.

In addition, the Town of Aylmer, a neighbouring community, selected Landmark Structures as the contractor to construct its new water tower, which was successfully commissioned in 2025. This further demonstrates Landmark's qualifications, reliability, and standing within the regional municipal water sector.

Section 11.4 of the Township's Procurement Policy, specifically subsection (iii), permits single-source procurement where there is a need for compatibility with goods or services previously acquired.

Given the risks associated with draining the tower, the requirement for specialized coordination, and Landmark's prior knowledge of the structure gained through the 2023 ROV inspection, staff recommend accepting Landmark's quote as a single-source

procurement to ensure the project is completed in 2026 and to protect the investment made during the 2016 refurbishment.

FINANCIAL IMPLICATIONS:

This required work was included in the 2026 budget, which was adopted by the Joint Board on September 17, 2025. The budget included $10,600 for the proposed cathodic protection system inspection, survey and anode replacements. It also includes $40,000 for the tower inspection to drain, clean, inspect and touch up interior coatings.

The quote from Landmark, at a total of $55,492, excluding HST, slightly exceeds the budgeted amount for this project by approximately $5,000.00. If approved by the Board, the unbudgeted funds for this work will be drawn from the 2026 System Repairs and Maintenance
Budget.

CONSULTATION:

Consultation occurred with Landmark Structures and Corrosion Services during the 2023 ROV inspection of the Port Burwell Water Tower to confirm scope requirements and coordination considerations. Staff have continued to work with Landmark in 2025 to begin preparing for this project in 2026.

ATTACHMENTS:

1. Landmark Structures Quote #23090 REV 2

Prepared by: S. Gustavson, Water/Waste Water Operations Manager

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Landmark Municipal Services

3091 Harrison Court
Burlington, ON CAN L7M 0W4
905.319.7700 Phone
905.319.7706 Fax

www.teamlandmark.com

January 12, 2026

Township of Malahide
980 Major Street
Welland, ON L3B 6J2

Attn: **Sam Gustavson**
Water/Wastewater Operations Manager
SGustavson@malahide.ca

Tel: 519-773-5344 Ext. 226

Re: **LMS Job #40-25-0007**
Safety Inspection and Report (SIR) – Port Burwell Multi-Legged Tank (ML)
Recommended Upgrades – Quote #23090 REV 3

Dear Sam,

Landmark Municipal Services is pleased to provide budgetary pricing for the following repairs & upgrades at the above-mentioned potable water storage facility. *Please note that HST is not included.*

Please note some recommendations are carried over from the 2023 ROV Inspection.

2026 Budget: Tank interior clean and disinfection: $4,850 + HST

1. To Conduct a Survey and repair Cathodic protection noted in last Inspection **$ 10,642**
2. Interior coatings touch up **$ 40,000**

Total **$ 55,492 plus HST**

Should you have any questions or comments regarding the content of this proposal, please contact us at 905-319-7700. We look forward to the opportunity to continue building the successful partnership with the Township of Malahide and we thank you for your interest.

Regards,

Landmark Municipal Services

Geoff Quan
Service Account Manager
Email: gquan@teamlandmark.com | Phone: 905-220-9295 | Web: www.teamlandmark.com

REPORT NO. **PBASWSS-26-07**

TO: Port Burwell Area Secondary Water Supply System- Joint Board of Management
DEPARTMENT: Public Works
MEETING DATE: March 11, 2026
SUBJECT: **Transmission Main Replacement Project Update**

RECOMMENDATION:

THAT Report No. PBASWSS-26-07 entitled “Transmission Main Replacement Project Update” be received.

PURPOSE & BACKGROUND:

The Port Burwell Area Secondary Water Supply System (PBASWSS) is a secondary transmission main supplied by the Elgin Area Water Treatment Plant on Dexter Line in Central Elgin. The system is jointly owned by the Municipality of Central Elgin, the Township of Malahide, and the Municipality of Bayham, and provides essential fire protection and potable water to residents. Maintaining the long-term integrity of the pipeline is vital to ensuring a reliable water supply that meets Public Health standards.

The original 12-inch AC transmission main, installed in the late 1960s, spans approximately 24 km. In the late 1970s, an additional 7 km was constructed from the Nova Scotia Line Water Tower to service Vienna and Port Burwell. Maintenance records show that this extension lacked proper bedding materials and pipe restraint hardware, leaving it vulnerable to breaks caused by pressure fluctuations.

In 2023, the Joint Board of Management directed staff to engage Pure Technologies to complete a desktop condition assessment of the transmission main. Pure Technologies reviewed available documentation and recommended pursuing provincial and federal funding opportunities to support future replacement. In 2024, the Joint Board of Management directed staff to begin the process of having the detailed engineering design developed to guide capital planning and ensure readiness should funding opportunities arise.

In 2025 opportunities for funding became available with the Province of Ontario introducing the Municipal Housing Infrastructure Program – Health and Safety Water Stream (MHIP-HSWS). This application-based program supports projects that address

critical health and safety needs through investments in essential water, wastewater, stormwater, and related infrastructure. The Government of Canada also introduced funding for both capital and planning projects that provide the infrastructure needed to support growing communities under the Canada Housing Infrastructure Fund (CHIF). The administering municipality made applications to both funding programs and began preparations for the replacement of the most vulnerable 7KM section of transmission line.

In May 2025, the Administering Municipality issued a request for proposals for engineering services for the PBASWSS Transmission Watermain Replacement. Stantec Consulting Ltd. was selected as the successful proponent and was awarded the engineering design contract at the June 2025 Board meeting. With engineering design underway, this report will serve as an update on the project for the Board's information.

COMMENTS & ANALYSIS:

The following is a summary of the anticipated project timeline. Additional project updates will be provided to the PBASWSS Joint Board in a timely manner to ensure that all parties have the most up-to-date information for planning purposes.

The third-party services required to undertake this project include engineering design, project management, construction services, geotechnical services. Engineering design services have been awarded and are 60% complete at this time. This project is large in scope and will require project management services from an engineering firm to complete. Project management services are expected to be awarded in summer 2026, followed by issuance of the construction tender in fall 2026. It is anticipated that the construction services will be awarded in December 2026 and construction will commence in spring 2027. With construction substantially completed by year-end 2027, additional site restoration would take place in spring 2028, and a one-year warranty period will follow completion. The following chart is a visual representation of the project timeline, as it is currently forecasted.

Activities	2025				2026				2027				2028			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Engineering Design																
Project Management																
Construction Tender																
Construction																
Restoration																

FINANCIAL IMPLICATIONS:

The Township of Malahide, in partnership with the Municipality of Bayham, submitted an application to the MHIP-HSWS for this project and on January 16, 2026, the Province announced that the joint application was successful, committing to fund 73% of eligible

project costs for the two municipalities, up to $15.33 million. An application was also submitted to CHIF for project funding. Decisions regarding funding for this program have not yet been announced, and it is unknown at this time whether the application has been successful.

Estimated project costs were incorporated into the 2026 PBASWSS Budget adopted in December 2025. The engineering design cost of $1,097,000 was known at that time and included in the 2026 capital budget. The remaining project expenses, estimated at $19,903,000 in the 2028 capital forecast, reflect all additional services required to complete the project, bringing the total estimated cost to $21 million. The 2026 budget also outlined the anticipated funding sources: 48% grant funding, 17% PBASWSS reserve contributions, and 35% debt financing. With the confirmation of partial grant funding, a revised funding model has been developed based on the projected MHIP-HSWS grant and updated project timelines.

PBASWSS Member Project Allocations

PBASWSS joint board members will share project costs according to established relative flow proportions. These same proportions will be used to determine the allocation of reserves for project funding. The MHIP-HSWS program prohibits recipients from combining funding from multiple applications. As the Municipality of Central Elgin has already secured funding through a separate application, only the project costs allocated to the Township of Malahide and the Municipality of Bayham are eligible for grant funding for this project. The following chart outlines the cost, reserve, and grant allocations that will be used to develop the project's funding model.

PBASWSS Members	Cost Allocation	Reserve Allocation	MHIP-HSWS Grant Allocation
Municipality of Bayham	60.59%	60.59%	62.86%
Township of Malahide	35.78%	35.78%	37.14%
Municipality of Central Elgin	3.63%	3.63%	0.00%
Total	**100.00%**	**100.00%**	**100.00%**

MHIP-HSWS Grant Schedule

Four milestone grant payments are forecasted for this project. The first payment, representing up to 25% of total grant funding, will be issued upon execution of the Transfer Payment Agreement and is anticipated in the second quarter of this year. The second payment, another 25%, will be released once the construction tender is awarded, expected in the first quarter of 2027. The third payment, up to 35%, will follow submission of an 85% expenditure report to the province, anticipated in the third quarter of 2027. The final 15% will be paid upon submission of the final project report, within 60 days of project completion. As construction is expected to conclude at the end of the third quarter of 2027, the final payment may be received before year-end. An updated timeline will be

provided once the construction tender and project management services have been awarded. The following chart outlines the MHIP-HSWS grant milestone payments.

Payments	Grant Percentage	Grant Amount	Year
Milestone Payment #1	25% of Total Grant Funds	$3.83 million	2026
Milestone Payment #2	25% of Total Grant Funds	$3.83 million	2027
Milestone Payment #3	35% of Total Grant Funds	$5.37 million	2027
Milestone Payment #4	15% of Total Grant Funds	$2.30 million	2027
Total	**100%**	**$15.33 million**	

Project Costs

Project costs have been estimated by year and by service, with total costs reflecting service expenses before HST. Eligible costs represent 96.37% of total costs without HST, corresponding to the cost allocations for the Township of Malahide and the Municipality of Bayham. Design costs are confirmed, while project management and construction cost estimates remain preliminary. The following chart outlines the project costs as they are currently estimated, with updated values to be provided to the Board once the construction and project management contracts have been awarded.

Services	Total Costs	MHIP-HSWS Grant Eligible Costs	Year
Design	$ 0.21 million	$ 0.20 million	2025
Design & Project Management	$ 0.76 million	$ 0.73 million	2026
Project Management & Construction	$20.18 million	$19.45 million	2027
Project Management & Restoration	$ 0.64 million	$ 0.62 million	2028
Total	**$21.79 million**	**$21.00 million**	

Draft Funding Model

The draft funding model aims to balance funding sources with affordability for PBASWSS member municipalities. The MHIP-HSWS grant will provide 70% of total project costs, reflecting the 73% funding of eligible costs allocated to the Township of Malahide and the Municipality of Bayham. Contributions to PBASWSS reserves are forecasted to continue to be made at the levels indicated within the 2026 Budget. As such, PBASWSS reserves are expected to fund approximately 24% of total costs over the course of the project, leaving a 6% shortfall. To close this gap, the model recommends a reserve top-up from member municipalities.

The reserve top-up of approximately $1.26 million would be billed directly to members over the duration of the project to maintain PBASWSS reserve balances in accordance with established allocation percentages. The reserve top-up amounts for members

represent 3% of total project costs for the Municipality of Bayham and the Township of Malahide, and 76% of total project costs for the Municipality of Central Elgin. It is important to note that these amounts are preliminary estimates and will be updated once all services have been awarded. The following chart depicts the proportion of reserve funding and reserve top-ups required from each PBASWSS member municipality.

PBASWSS Members	MHIP-HSWS Grant Funding	PBASWSS Reserve Funding	Reserve Top-Up	Total Project Cost
Municipality of Bayham	$9.64 million	$3.15 million	$0.41 million	$13.20 million
Township of Malahide	$5.69 million	$1.86 million	$0.25 million	$7.80 million
Municipality of Central Elgin	$0.00 million	$0.19 million	$0.60 million	$0.79 million
Total	**15.33 million**	**$5.20 million**	**$1.26 million**	**$21.79 million**

This funding model optimizes the use of board reserves without a resulting rate impact, limiting the burden on member municipalities. As this project remains in its early planning stages, several variables may still significantly impact the funding model. The construction services contract represents approximately 95% of total project costs, as such the tender results will impact the additional contributions required from member municipalities. The results of the additional grant funding application made to the CHIF funding program are anticipated to be announced in the coming months and will also significantly impact the funding model. This project represents a meaningful step towards securing the long-term availability of reliable drinking water to PBASWSS members.

ATTACHMENTS:

None.

Prepared by: T. Jones, Manager of Strategic Initiatives

Reviewed by: J. Godby, Director of Public Works

Approved by: N. Dias, Chief Administrative Officer

Elgin Area
Primary Water Supply System

SENT VIA EMAIL ONLY

December 17, 2025

Township of Malahide, Administering Municipality for the PBASWSS and AASWSS
87 John Street South
Aylmer, Ontario
N5H 2C3

Subject: Elgin Area Primary Water Supply System Master Plan

To Jason Godby:

Thank you for your letter dated November 28, 2025, commenting on the Elgin Area Primary Water Supply System Master Plan. We have reviewed your comments and offer the following response.

As the timelines for certain upgrades shift based on updated water demand information for the region, including the Yarmouth Yards development, the EAPWSS is committed to revisiting the current Master Plan, as warranted, through either a Master Plan Addendum or a new Master Plan. As more information becomes available to address any changing conditions, the EAPWSS will revisit timing of infrastructure improvements and identify funding opportunities.

As shared at the December 4, 2025 board meeting, the EAPWSS Board Chair has already reached out to applicable Ontario ministries to advocate for funding.

Storage at the Elgin terminal reservoir is not provided to meet distribution needs for any member municipalities, and is provided for operational flexibility of the primary system. There is no allocation of regional storage to any member municipalities/communities.

Office 519.930.3505 ext. 1324
Fax 519.474.0451
general@huronelginwater.ca
www.huronelginwater.ca

Elgin Area Primary Water Supply System
235 North Centre Road, Suite 200
London, ON N5X 4E7

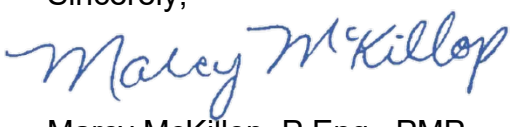
The Joint Occupancy and Use Agreement for the Elgin-Middlesex Pumping Station is not affected by a proposed expansion of the Elgin terminal reservoir.

We appreciate your concerns regarding the sharing of the cost associated the recommended system upgrades. The intent of the Master Plan is to inform future utility system improvements, including timing and potential costs, over the planning horizon (2046). While high-level cost estimates are evaluated in the Master Plan, the financing of any improvement is fully assessed through the EAPWSS Financial Plan (and any future updates), which establishes the utility's water rates to maintain levels of service.

The recommissioning of the Transmission A-Line is not required under current conditions. The recommissioning will be planned and implemented in the future to meet increased demands, with consideration of system hydraulics.

Thank you for providing your comments to us. We have included your letter and this response letter in the consultation section (Appendix A) of the Master Plan report.

Sincerely,



Marcy McKillop, P.Eng., PMP
Environmental Services Engineer
Elgin Area Primary Water Supply System

87 John Street South
Aylmer ON N5H 2C3
Phone: 519-773-5344
Fax: 519-773-5334
Website: www.malahide.ca

November 28, 2025

Elgin Area Primary Water Supply System Master Plan

Sent via email:

Marcy McKillop, P.Eng., Environmental Service Engineer
Regional Water Supply
Lake Huron and Elgin Area Primary Water Supply Systems
mmckillop@huronelginwater.ca

Benny Wan, P.Eng., Consultant Project Manager
AECOM ULC
Benny.Wan@aecom.com

RE: Comments regarding the Elgin Area Primary Water Supply System Master Plan

We have reviewed the Elgin Area Primary Water Supply System Water Master Plan prepared by AECOM, dated October 2025 and offer the following comments:

As a small member municipality which represents a minor share of treated water flows from the EAPWSS, the capital expansions contemplated by this master plan are of significant concern to the Township of Malahide and the member municipalities whom we represent as the Administering Municipality for the Aylmer Area Secondary Water Supply System and the Port Burwell Area Secondary Water Supply System. Collectively, these Boards include the Municipality of Central Elgin, the Municipality of Bayham, the Town of Aylmer and the Township of Malahide.

The potential for drastic increase of purchased water rates by these secondary water boards from the primary water board will represent a significant financial hardship to all the water customers relying on water from these systems.

The capital costs associated with these capital expansions may further burden our collective municipalities by significantly and negatively impacting our municipal debt capacities. The potential negative impacts on our municipal debt capacity may be crippling.

Through review of the Master Plan document and associated appendices, it is concerning that the required expansions at the Elgin Terminal Reservoir and the Elgin Area Water Treatment Plant are both primarily, if not exclusively, required as a direct result of the needs of the City of St Thomas in order to support the provincially-sponsored development of the Yarmouth Yards Industrial Development.

Based on the review of AECOM's Technical Memorandum – Flow Projections Analysis for the Elgin Area Primary Water Supply System, in conjunction with correspondence between the City of St Thomas and Regional Water Supply staff, it is undeniable that the majority of these upgrades are required primarily to support local development contained within the City of St Thomas.

While the Township of Malahide, AASWSS and PBASWSS are supportive of the growth and development in our area, we remain concerned with the significant financial burden that will accompany this growth, and how a seemingly disproportionate share of these costs will be applied to our municipalities.

We respectfully request:

- That this letter be formally filed within the Master Plan documentation
- In light of the very low growth projections for the majority of the member municipalities, that a detailed explanation be provided as to how these proposed upgrades will positively benefit the AASWSS, PBASWSS and our member municipalities
- The EAPWSS complete a detail financial analysis of the future impacts on the water rates and associated debt capacities of each member municipality affected
- The EAPWSS advocate to the Province on behalf of its member municipalities to receive the required funding for these projects from a Provincial and/or Federal source

Additionally, we seek clarity on the following questions:

- If water storage is a responsibility of the local municipalities, will the Elgin Terminal Reservoir expansion be an expense to the City of St Thomas rather than the EAPWSS? How will this affect the existing joint occupancy and use agreement at the reservoir?
- 9.1.3.1 states that the Transmission A-Line Re-commissioning will result in lower operating pressure to the customers on both the A and B lines. How is this quantified? What is the extent of the decreased operating pressure? How will it be mitigated? What will the impacts be on the secondary boards and customers directly serviced by these lines?
- Recognizing that there has been uncertainty and inconsistency surrounding the overall water demands for the Yarmouth Yards Industrial Development, have these needs been finalized in order to ensure absolute confidence in the design and recommendations being contemplated in this study?

Sincerely,

Township of Malahide
Administering Municipality for the PBASWSS and AASWSS

Cc: AASWSS Joint Board of Management Members
PBASWSS Joint Board of Management Members