

# Tri-County Water Board of Management Agenda

March 17, 2026, 7:00 p.m.

Council Chambers

160 Main Street

West Lorne

This meeting will be held at West Elgin Council Chambers, 160 Main Street, West Lorne, with recording posted at [www.westelgin.net](http://www.westelgin.net) (pending any technical difficulties). Please contact the Clerk's Department if you require an alternate format or accessible communication support or wish to receive the link to this meeting at 519-785-0560 or by email at [clerk@westelgin.net](mailto:clerk@westelgin.net).

Zoom Link: <https://us02web.zoom.us/j/84099816571?pwd=n9hUw1bYkV5otFTY7yazAittErb0ib.1>

Pages

1. **Call to Order**

2. **Adoption of Agenda**

Recommendation:

That Tri-County Water Board hereby adopts the Agenda for March 17, 2026, as presented.

3. **Disclosure of Pecuniary Interest**

4. **Adoption of Previous Meeting Minutes**

Recommendation:

That the Tri-County Water Board hereby adopts the minutes of December 4 & 9, 2025, and January 13, 2026, as presented.

5. **Business Arising from Minutes**

6. **Staff Reports**

**6.1 Ontario Clean Water Agenda, Fourth Quarter 2025**

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Recommendation:

That Tri-County Water Board hereby acknowledge receipt of the Tri-County Drinking Water System Operations Report, Forth Quarter 2025, dated March 9, 2026, presented by Joe Daly, Sr. Operations Manager, Ontario Clean Water Agency.

**6.2 Ontario Clean Water Agency, 2025 Summary Report**

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Recommendation:

That Tri-County Water Board hereby acknowledge receipt of the Summary Report for the Tri-County Drinking Water System for January 1st to December 31st, 2025, in accordance with Section 11 and Schedule 22 of O. Reg. 170/03, under the *Safe Drinking Water Act*.

**7. Additional Business**

**8. Adjournment**

Recommendation:

That the Tri-County Water Board hereby adjourn at \_\_\_\_\_ pm, to meet again at 7:00pm, on Tuesday, June 16, 2026, or at the Call of the Chair.

# Tri-County Water Board of Management

## Minutes

**Date:** December 4, 2025, 7:00 p.m.

**Location:** West Elgin Community Complex - Hybrid Meeting  
160 Main St  
West Lorne  
Electronic Hybrid Meeting

**Present:** Allan Mayhew, Southwest Middlesex  
Mike Hentz, Dutton Dunwich  
Amarilis Drouillard, Dutton Dunwich  
Bill Denning, West Elgin  
Don McCallum, Southwest Middlesex  
Kevin Derbyshire, Newbury  
Mike Sholdice, Southwest Middlesex  
Ryan Statham, West Elgin  
Darren Galbraith, Chatham-Kent  
Philip Sousa, West Elgin

**Regrets:** Taraesa Tellier, West Elgin  
Corey Pemberton, Dutton Dunwich  
Richard Leatham, West Elgin

**Staff Present:** Cathy Case, Clerk/Treasurer, Newbury  
Robin Trepanier, OCWA  
Sam Smith, OCWA  
Terri Towstiuc, Recording Secretary/Clerk, West Elgin  
Robin Greenall, CAO, West Elgin  
Amanda Gubbels, CAO, Southwest Middlesex  
Joe Daly, OCWA

**Regrets:** Maegan Garber, OCWA  
Tony Houad, CAO, Dutton Dunwich

**This meeting was held in a Hybrid format**

### **1. Call to Order**

Chair Bill Denning called the meeting to order at 7:00 pm.

**2. Adoption of Agenda**

**Moved:** Mike Hentz, Dutton Dunwich

**Seconded:** Ryan Statham, West Elgin

That Tri-County Water Board hereby adopts the Agenda for December 9, 2025 as presented.

**Disposition: Carried**

**3. Disclosure of Pecuniary Interest**

No disclosures

**4. Adoption of Previous Meeting Minutes**

**Moved:** Ryan Statham, West Elgin

**Seconded:** Amarilis Drouillard, Dutton Dunwich

That the Tri-County Water Board hereby adopts the minutes of November 18, 2025, as presented.

**Disposition: Carried**

**5. Business Arising from Minutes**

None.

**6. Staff Reports**

**6.1 2026 Budget Modelling**

**Moved:** Mike Sholdice, Southwest Middlesex

**Seconded:** Mike Hentz, Dutton Dunwich

That the Tri County Water Board hereby receives the 2026 Draft Budget Modelling Report from Robin Greenall, Administrator, and

That the Tri – County Water Board direct the Administration to implement budget model option 3, and

That the Tri County Water Board approve the proposed 2026 budget.

**Disposition: Carried**

**7. Adjournment**

**Moved:** Allan Mayhew, Southwest Middlesex

**Seconded:** Ryan Statham, West Elgin

That the Tri-County Water Board hereby adjourn at 7:39 pm, to meet again at 6:00pm, on Tuesday, December 9, 2025, or at the Call of the Chair.

**Disposition: Carried**

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Bill Denning, Chair

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Terri Towstiuc, Recording Secretary

# **Tri-County Water Board of Management**

## **Minutes**

**Date: December 9, 2025, 6:00 p.m.**

**Location: Rodney Recreation Centre  
135 Queens Line  
Rodney, ON**

- Present:** Allan Mayhew, Southwest Middlesex  
Amarilis Drouillard, Dutton Dunwich  
Bill Denning, West Elgin  
Don McCallum, Southwest Middlesex  
Kevin Derbyshire, Newbury  
Mike Sholdice, Southwest Middlesex  
Ryan Statham, West Elgin  
Darren Galbraith, Chatham-Kent  
Philip Sousa, West Elgin
- Regrets:** Taraesa Tellier, West Elgin  
Mike Hentz, Dutton Dunwich  
Corey Pemberton, Dutton Dunwich  
Richard Leatham, West Elgin
- Staff Present:** Terri Towstiuc, Recording Secretary/Clerk, West Elgin  
Robin Greenall, CAO, West Elgin  
Amanda Gubbels, CAO, Southwest Middlesex  
Tony Houad, CAO, Dutton Dunwich
- Regrets:** Cathy Case, Clerk/Treasurer, Newbury
- Also Present:** Mary Ellen Bench, Municipal Lawyer, Bench Municipal Law  
and Governance  
Gord Quinton, CFO, Chatham-Kent

**The meeting was held in-person.**

**1. Call to Order**

Chair Bill Denning called the meeting to order at 6:15 pm. The Tri-County Water Board and supporting staff made round table introductions, prior to business discussion.

**2. Adoption of Agenda**

**Moved:** Ryan Statham, West Elgin

**Seconded:** Kevin Derbyshire, Newbury

That Tri-County Water Board hereby adopts the Agenda for December 9, 2025 as presented.

**Disposition: Carried**

**3. Disclosure of Pecuniary Interest**

No disclosures

**4. Delegations**

Mary Ellen Bench, Municipal Lawyer, Bench Municipal Law and Governance, attended the Tri-County Water Board meeting, to deliver an education and training session on Municipal Service Corporations. Ms. Bench advised this is a formal education session, to be treated as in-camera for purposes of MFIPPA.

Bill Denning, Chair, confirmed with the recording secretary/Clerk and members of the board that no issue arise from moving in-camera, for the purposes of education and training.

The following recommendation was made, to move in-camera:

**Moved:** Allan Mayhew, Southwest Middlesex

**Seconded:** Kevin Derbyshire, Newbury

That Tri-County Water Board hereby move In-Camera at 6:21pm, for the purpose of an Education and/or Training Session (*Municipal Act*, Section 239(3.1)).

**Disposition: Carried**

**4.1 Mary Ellen Bench Re: Consideration of a Municipal Service Corporation**

**4.1.1 MSC Discussion Primer**

**4.1.2 LAS Report Re: Feasibility of a Water and Wastewater Utility Model**

### 4.1.3 AMO Backgrounder Re: Water and Wastewater Municipal Service Corporations

#### 5. Report After Closed Session

Chair Denning thanked Ms. Bench and staff for attending and providing training information and walk-through of the MSC process.

#### 6. Adjournment

**Moved:** Amarilis Drouillard, Dutton Dunwich

**Seconded:** Kevin Derbyshire, Newbury

That the Tri-County Water Board hereby adjourn at 8:32 pm, to meet again at 7:00pm, on Tuesday, March 17, 2025, or at the Call of the Chair.

**Disposition: Carried**

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Bill Denning, Chair

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Terri Towstiuć, Recording Secretary

# Tri-County Water Board of Management

## Minutes

Date: January 13, 2026, 7:00 p.m.

Location: Electronic Participation Meeting via Zoom

**Present:** Allan Mayhew, Southwest Middlesex  
Taraesa Tellier, West Elgin  
Mike Hentz, Dutton Dunwich  
Amarilis Drouillard, Dutton Dunwich  
Bill Denning, West Elgin  
Corey Pemberton, Dutton Dunwich  
Mike Sholdice, Southwest Middlesex  
Ryan Statham, West Elgin  
Darren Galbraith, Chatham-Kent  
Philip Sousa, West Elgin

**Regrets:** Don McCallum, Southwest Middlesex  
Kevin Derbyshire, Newbury

**Staff Present:** Terri Towstiuc, Recording Secretary/Clerk, West Elgin  
Robin Greenall, CAO, West Elgin  
Amanda Gubbels, CAO, Southwest Middlesex  
Tony Houad, CAO, Dutton Dunwich  
Mary Ellen Bench, Bench Municipal Law & Governance

**Regrets:** Cathy Case, Clerk/Treasurer, Newbury  
Gord Quinton, CFO, Chatham-Kent

This meeting was held in a Hybrid format

**1. Call to Order**

Chair Amarilis Drouillard called the meeting to order at 7:00 pm.

**2. Adoption of Agenda**

**Moved:** Ryan Statham, West Elgin

**Seconded:** Allan Mayhew, Southwest Middlesex

That Tri-County Water Board hereby adopts the Agenda for January 13, 2026 as presented.

**Disposition: Carried**

**4. Follow-Up Discussion with Mary Ellen Bench Re: Municipal Service Corporation**

Mary Ellen Bench, Municipal Lawyer, Bench Municipal Law and Governance, attended the Tri-County Water Board (TCWB) meeting as a follow-up to meeting held on December 9, 2025, which was held for the purpose of a Municipal Service Corporation (MSC) Training and Education session.

Ms. Bench circled back, indicating that there was no consensus from the initial meeting, and that there was a large amount of information provided.

CAO R. Greenall encouraged the TCWB members to ask follow-up questions, and that her ask is a commitment from the board to hire a project manager, to see further guidance on the concept of a MSC, facilitate discussion and do a deeper dive into individual municipalities needs.

Members of the board asked about long term control options, timeline considerations with a Municipal Election in 2026, potential for low credit ratings and higher cost of borrowing, impacts of Bill 60, hybrid options with a dedicated TCWB Administrator, OCWA's consideration as a proponent, legislative requirements of a business case and public consultation,

Members also expressed concerns regarding the lack of cons versus the pros of an MSC, high start-up costs, the feeling of being pushed to a decision, debt capacity of individual municipalities and waiting until after the 2026 election to proceed.

The board was reminded that the ask at this meeting was to proceed with a Project Manager, with the intent to gather information to deliver safe and quality water effectively and efficiently, and as cost effective as possible.

The following motion was passed, with eight (8) members raising hands (in favour) and two (2) members not raising hands (opposed):

**Moved:** Corey Pemberton, Dutton Dunwich

**Seconded:** Mike Hentz, Dutton Dunwich

That Tri County Water Board direct Administration to hire a Project Manager, to provide options and various governance structures; And

Provides approval to seek opportunities for a Project Manager, and return to the board with options for a Project Manager; And

To Set clear deliverables for the Project Manager to achieve for the Tri-County Water System.

**Disposition: Carried**

**5. Adjournment**

**Moved:** Allan Mayhew, Southwest Middlesex

**Seconded:** Mike Hentz, Dutton Dunwich

That the Tri-County Water Board hereby adjourn at 8:03 pm, to meet again at 7:00pm, on Tuesday, March 17, 2026, or at the Call of the Chair.

**Disposition: Carried**

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Amarilis Drouillard, Chair

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Terri Towstiuc, Recording Secretary



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

Tri-County Drinking Water System  
Operations Report  
Fourth Quarter 2025

Ontario Clean Water Agency, Southwest Region  
Joe Daly, Sr. Operations Manager  
Date: March 09, 2026

## Facility Description

Facility Name: Tri-County Drinking Water System  
Regional Manager: Sam Smith (226) 377-1540  
Sr. Operations Manager: Joe Daly (226) 229-2995  
Business Development Manager: Robin Trepanier (519) 791-2922  
Facility Type: Municipal  
Classification: Class 2 Water Distribution, Class 2 Water Treatment  
Title Holder: Municipality

## Service Information

Area(s) Serviced: West Elgin, Dutton/Dunwich, Southwest Middlesex, Newbury and Bothwell  
Population Serviced: 9,985  
No. of Connections:  
Water Meters: Commercial / Residential  
In Service Date: 2009

## Capacity Information

Total Design Capacity: 12.160 (1000 m<sup>3</sup>/day)  
Total Annual Flow: 1,381 (1000 m<sup>3</sup>/year)  
Average Day Flow: 3.770 (1000 m<sup>3</sup>/day)  
Maximum Day Flow: 5.380 (1000 m<sup>3</sup>/day)

## Operational Description

Water treatment with intake in Lake Erie, 4 low lift pumps, lifting up to the treatment plant. Membrane filtration followed by injection with Sodium Hypochlorite for primary disinfection and into the 2 Storage Tanks. Pumping to tower and distribution system with 4 high lift pumps.

## **SECTION 1: COMPLIANCE SUMMARY**

### **FIRST QUARTER:**

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

### **SECOND QUARTER:**

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

### **THIRD QUARTER:**

On August 25th the Health Canada limit of 0.12mg/L for Manganese in drinking water was exceeded on treated water from the plant. The Ministry of Environment, Conservation and Parks (MECP) was notified. The sodium permanganate dosage was adjusted and the storage tanks were overflowed to flush out manganese from the system. The distribution system was also flushed. There were no other 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:**

On February 20th, a routine MECP inspection was conducted at the Tri-County Drinking Water System by Provincial Officer, Meghan Morgan. There were no non-compliances or best management practices identified.

### **SECOND QUARTER:**

On April 10<sup>th</sup> the finalized inspection report was received from the MECP inspection which occurred on February 20<sup>th</sup>. The inspection risk rating was 100%.

### **THIRD QUARTER:**

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

### **FOURTH QUARTER:**

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

## **SECTION 3: QEMS UPDATE**

### **FIRST QUARTER:**

On February 11<sup>th</sup>, the Essential/Emergency Service and Supply Contact List was updated to include changes to OCWA staff contacts as well as client contacts.

### **SECOND QUARTER:**

An internal audit was completed on May 12<sup>th</sup>, 2025 by Matt Belding. There was one opportunity for improvement (OFI) identified that will be considered at the management review which will be scheduled in accordance with OP-20.

### **THIRD QUARTER:**

On September 23<sup>rd</sup> the management review was held for the Tri-County WTP. The surveillance external audit occurred on October 10<sup>th</sup>. The report was received on October 15<sup>th</sup> and identified one OFI.

The Essential Emergency Service and Supplier Contact List was updated to reflect changes in the system.

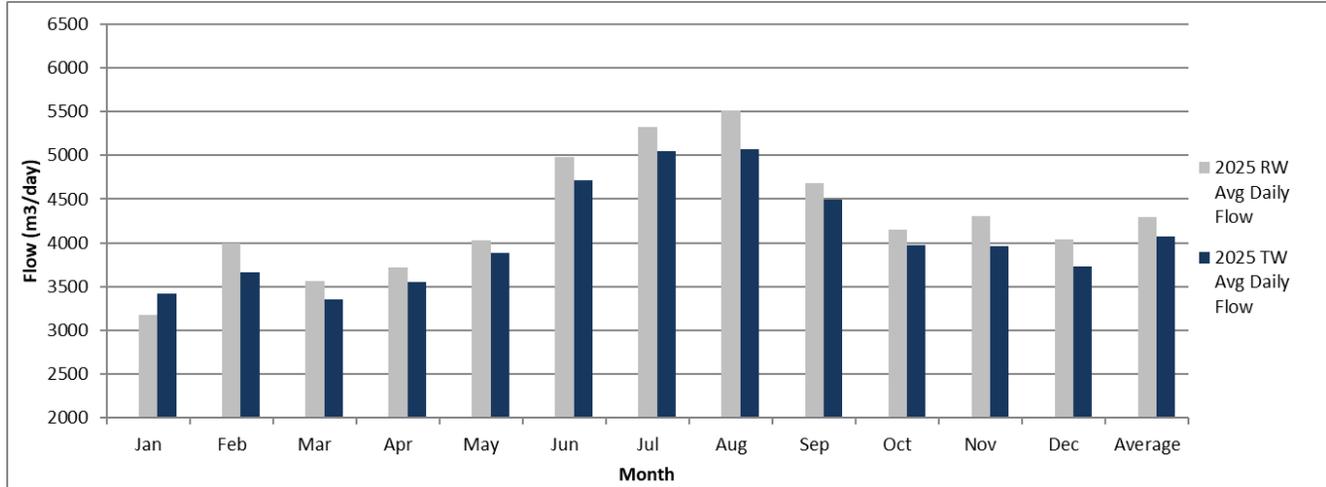
**FOURTH QUARTER:**

There are no QEMS updates for the fourth quarter.

**SECTION 4: PERFORMANCE ASSESSMENT REPORT**

The Tri-County Drinking Water System is currently operating at 94.8% efficiency with the water taken from Lake Erie that is treated and sent to the distribution systems. Chart 1 below shows the raw water takings compared to the treated water that was distributed to the distribution system in 2025.

Chart 1: Average daily water takings compared to treated water distributed to the distribution system



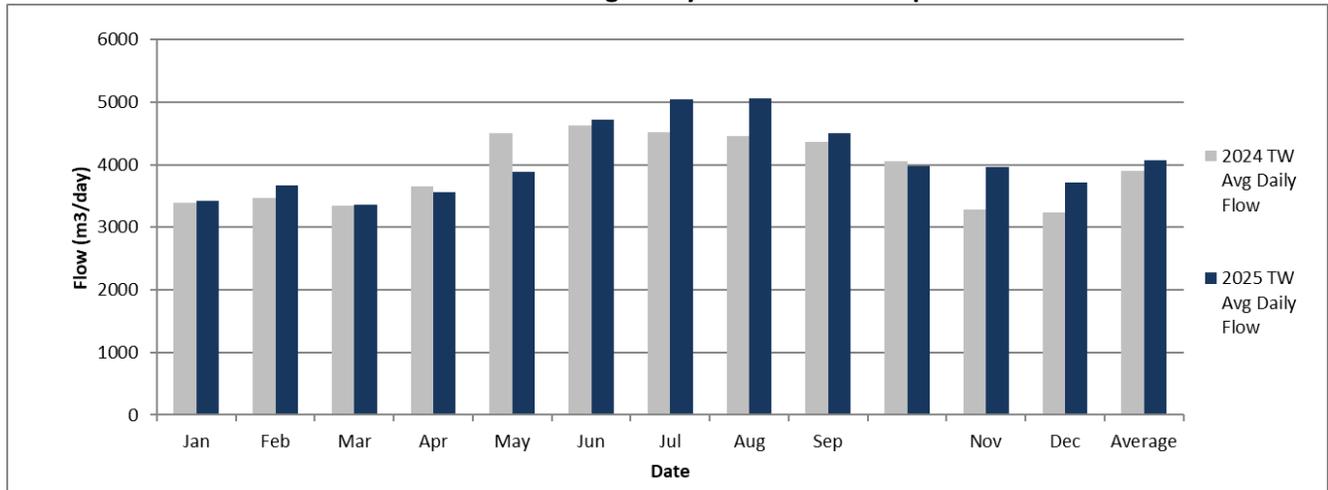
Raw water is sampled on a weekly basis and tested for E. coli and Total Coliforms as per regulatory requirements. There are no limits identified in the regulations for E. coli and Total Coliform found in the raw water source. Table 1 below identifies raw water sample results in 2025.

**Table 1: Raw water sample results 2025**

	# Samples	E. Coli Range (cfu/100mL)	Total Coliform Range (cfu/100mL)
January	4	2 - 50	6 - 700
February	4	<2 - <10	4 - 50
March	5	<10 - <100	210 - 2400
April	4	1 - 20	<2 - 1410
May	4	<2 - <2	2 - 70
June	5	<2 - <100	<2 - 1300
July	4	2 - 50	28 - 120
August	4	100 - 500	200 - 1800
September	5	<2 - <10	<2 - 90
October	4	<2 - 400	<2 - 900
November	4	<2 - <10	<2 - 60
December	5	<2 - 10	<2 - 490

The raw water is treated through membrane filtration and chlorine disinfection. The treated water is distributed to the systems it serves through the high lift pumps. The average daily treated water sent to the distribution in 2025 was 4,072.7 m<sup>3</sup>/d. The average treated water flow in 2025 is increased 4% compared to the average daily flow in 2024. The Tri-County Drinking Water System is currently at 31.8% of its rated capacity. Chart 2 below depicts the treated water flow for 2025 compared to 2024 average daily flows.

**Chart 2: Treated water average daily flow in 2025 compared to 2024**

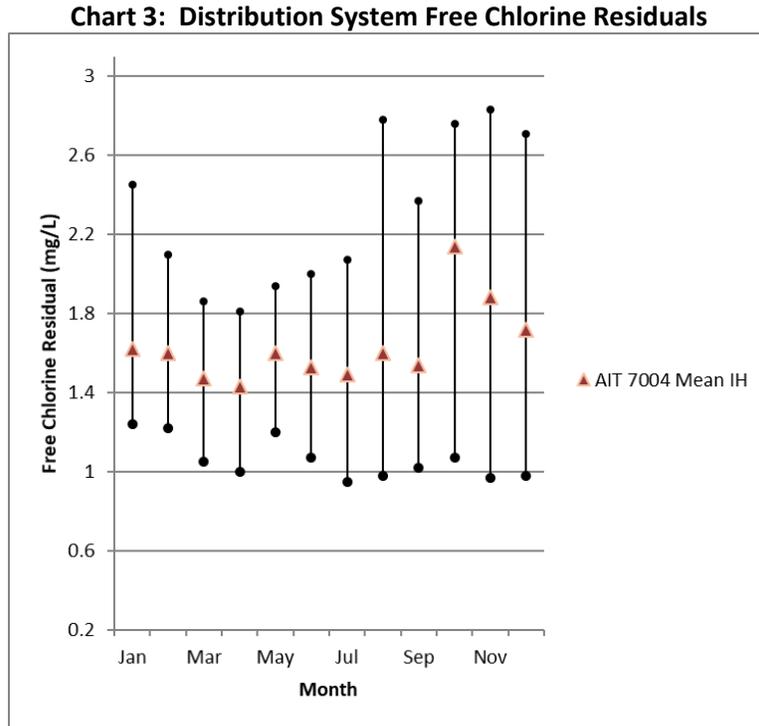


To ensure inactivation of viruses, bacteria and microorganisms, the membrane filtration system is required to meet performance criteria for filtered water turbidity of less than or equal to 0.1 NTU in 99% of the measurements each month. The Tri-County Water Treatment Plant met all regulatory requirements for inactivation in 2025. Table 2 below shows the performance of each filter rack and the overall filter rack performance.

**Table 2: Filter Rack Performance in 2025**

	Rack 1 % Readings <0.1ntu	Rack 2 % Readings <0.1ntu	Rack 3 % Readings <0.1ntu	Rack 4 % Readings <0.1ntu	Overall Filter Performance (% readings <0.1ntu)
January	100.00	100.00	100.00	99.90	99.98
February	100.00	100.00	100.00	99.80	99.95
March	100.00	100.00	100.00	99.90	99.98
April	100.00	100.00	100.00	100.00	100.00
May	100.00	100.00	100.00	100.00	100.00
June	100.00	100.00	100.00	99.90	99.98
July	100.00	100.00	100.00	99.90	99.98
August	100.00	100.00	100.00	99.40	99.85
September	100.00	100.00	100.00	99.80	99.95
October	100.00	100.00	100.00	99.90	99.98
November	99.90	99.90	100.00	100.00	99.95
December	100.00	100.00	100.00	99.90	99.98

Along with turbidity, chlorine residuals are monitored throughout the treatment process by continuous online free chlorine analyzers. Residuals are maintained in order to provide adequate primary disinfection to meet inactivation of viruses, bacteria and microorganisms. The chlorine also provides adequate residuals in the distribution systems the treatment plant serves (secondary disinfection). Chart 3 below provides the online minimum, maximum and average readings of free chlorine provided to the distribution systems. All results have met regulatory requirements.



On a weekly basis the treated water is tested for E. coli, Total Coliforms and heterotrophic plate count (HPC). The limit for Total Coliform and E. coli is zero. There is no limit specified for heterotrophic plate count (HPC) as this is an operational guide to initiate an action plan if HPC results are continuously high. Table 3 below shows the number of samples taken each month along with the range of results. All samples have met regulatory requirements.

**Table 3: Treated water sample results for 2025**

	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)	HPC (cfu/100mL)
January	4	0 - 0	0 - 0	<10 - <10
February	6	0 - 0	0 - 0	<10 - 10
March	5	0 - 0	0 - 0	<10 - <10
April	5	0 - 0	0 - 0	<10 - 40
May	4	0 - 0	0 - 0	<10 - <10
June	5	0 - 0	0 - 0	<10 - <10
July	4	0 - 0	0 - 0	<10 - <10
August	4	0 - 0	0 - 0	<10 - <10
September	5	0 - 0	0 - 0	1 - 10
October	4	0 - 0	0 - 0	<10 - <10
November	4	0 - 0	0 - 0	<10 - <10
December	5	0 - 0	0 - 0	<10 - <10

The transmission main (distribution system) is sampled on a weekly basis at two locations for E. coli, Total Coliforms and heterotrophic plate count (HPC) to meet regulatory requirements. As with the treated water the limit for Total Coliform and E. coli is zero, heterotrophic plate count (HPC) doesn't have a limit. This is an operational guide to initiate an action plan if HPC results are continuously high. Table 4 below shows the number of samples taken each month along with the range of results. All samples have met regulatory requirements.

**Table 4: Distribution system sample results for 2025**

	# Samples	Total Coliform Range (cfu/100mL)	E. coli Range (cfu/100mL)	HPC (cfu/100mL)
January	8	0 - 0	0 - 0	<10 - <10
February	8	0 - 0	0 - 0	<10 - 10
March	10	0 - 0	0 - 0	<10 - <10
April	8	0 - 0	0 - 0	<10 - <10
May	8	0 - 0	0 - 0	<10 - 30
June	10	0 - 0	0 - 0	<10 - 10
July	8	0 - 0	0 - 0	<10 - 10
August	8	0 - 0	0 - 0	<10 - 10
September	10	0 - 0	0 - 0	<10 - <10
October	8	0 - 0	0 - 0	<10 - 10
November	8	0 - 0	0 - 0	<10 - <10
December	10	0 - 0	0 - 0	<10 - 30

On a quarterly basis trihalomethanes are tested at two locations in the system. The first location is at the treatment plant prior to the water leaving the facility. The second location is at the end of the system, at the West Lorne Standpipe. Sampling from both locations provides information on how the THMs are forming in the system with retention time. There is an issue with elevated THMs in the distribution systems that the Tri-County Drinking Water System provides water to. Table 5 below provides the running average quarterly results; the running average limit for THMs is 100µg/L. All results are within regulatory requirements. However, THMs increase with increased retention time therefore THMs in the distribution system the WTP serves can be much higher, even reaching the regulatory limit.

**Table 5: Trihalomethane sampling results**

	Limit (µg/L)	Treated Water THM Result (µg/L)	West Lorne Standpipe THM Result (µg/L)
January 2025		16	20
April 2025		22	26
July 2025		28	45
October 2025		61	70
Running Average	100	31.75	40.25

On a quarterly basis Haloacetic Acids (HAAs) are tested as per regulatory requirements. They are sampled at two locations in the system. The first location is at the treatment plant prior to the water leaving the facility. The second location is at the end of the system, at the West Lorne Standpipe. Sampling from both locations provides information on how the HAAs are forming in the system with retention time. Table 6 below provides the current running average quarterly results; the running average limit for HAAs is 80µg/L. All results are within regulatory requirements.

**Table 6: Haloacetic Acid sampling results**

	Limit (µg/L)	Treated Water HAA Result (µg/L)	West Lorne Standpipe HAA Result (µg/L)
January 2025		5.3	5.3
April 2025		15.2	19.4
July 2025		12.9	22.4
October 2025		26.0	29.7
Running Average	80	14.85	19.20

## **SECTION 5: OCCUPATIONAL HEALTH & SAFETY**

### **FIRST QUARTER:**

On March 3<sup>rd</sup> 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:**

8: Greatario repaired small leak on south storage tank T- 6020.

16: Gerber electric Fixed the caustic heater, eagle west panel heater, confirmed silver clay chamber and pioneer line chamber will need new heaters. Installed new limit switch in eagle east chamber.

27: Syntec onsite to investigate PRVs and demonstrate proper maintenance.

31: Southwest mechanical on site to replace PHC 4736 air regulator.

#### **FEBRUARY:**

5: Nevtro onsite to repair pin hole leaks on high lift line and RFR line.

10: Plasco Welding & Fabrication onsite to look at Caustic tank.

19: Martins lift truck service on site and completed service on forklift, WO #4353632 Vehicle Lift Truck Clar Insp/Service.

### MARCH:

- 4&5: Flowmetrix onsite for annual meter readings. The Pioneer meter failed the inspection and will be replaced later on.
- 13: Plasco on site to perform repair on Caustic Tank.
- 18: Levitt safety onsite for air pack inspection and fit testing.
- 18: Eramosa on site to Fix PDP pump.
- 19: Ontario Compressor on site to inspect compressors.
- 21: Southwest Mechanical onsite to see if they can get the low lift sample pumps pulling water again.
- 25: Gerber's onsite to look at faulting PDP-9010.
- 25: Waddick onsite for diesel delivery.

### SECOND QUARTER:

#### APRIL:

- 23: Nevtro onsite to begin fixing leak on high lift line.
- 25: Gerber onsite for heater and ac inspections
- 25: Hetek onsite for annual inspection on peroxide gas and CO2 sensors.
- 29: Gerber onsite for heat and ac inspections.

#### MAY:

- 22: Plasco on-site to fix leak on Caustic Tank.

#### JUNE:

- 17: Keith Douglas onsite for back flow preventer inspections.
- 18: Deilco onsite at West Elgin North panel to begin commissioning of new panel, did not get finished due to rain. Will come back later.
- 18: Flowmetrix onsite to replace flow meter in pioneer line chamber behind service center, install spare flow meter on chlorine transfer pump line and install a new purging fitting on cl gas ejector.
- 18: Southwest Mechanical onsite to repair leaking 4" PVC water line in basement of chlorine gas building.
- 18: Eramosa onsite to help with the commissioning of the new West Elgin North panel.
- 24: Ontario Compressor on site for compressor Insp/Maintenance.
- 25: Keith Douglas onsite for LL back flow preventer Insp/Maintenance.
- 25: Deilco on-site for commissioning Pioneer Panel (Not finish yet), Eramosa onsite to help with Pioneer panel & to resolve few SCADA alarms.
- 26: SOM from Eramosa on-site to help Deilco for commissioning west north chamber.
- 30: Trojan On-site for UV annual maintenance.
- 30: Eramosa on-site to look at Dialer CL alarm issue.

### THIRD QUARTER:

#### JULY:

- 02: Flowmetrix onsite to install new chlorine gas detector in chlorination room at low lift.
- 06: Received diesel for the generator.
- 08: Frank from Trojan onsite for membrane replacement on rack 1.
- 09: Frank from Trojan onsite for replacement membrane replacement on rack 1.
- 10: Frank from Trojan onsite to finish the install of rack 1.
- 22: Lavo onsite to deliver 12,800 L of sodium hypochlorite.
- 25: Dielco and Eramosa onsite to continue work on new West Elgin North panel.
- 28: Eramosa onsite to troubleshoot issues with West Lorne pressure reducing valve not opening for high lift pump 7010 & 7020.
- 30: Eramosa onsite to investigate loss of communications.

## AUGUST:

- 12: Manitoulin Transport delivered 8 chlorine gas cylinders.
- 13: Air Liquide delivered 2 carbon dioxide tanks.
- 13: Waddick fuels onsite to deliver diesel for the generator.

27: Air Liquide on site to deliver 2 carbon dioxide tanks.

## SEPTEMBER:

- 08: Hetek onsite for CO2 & peroxide sensor calibrations.
- 11: Ontario Compressor Supplies on-site for compressor maintenance. Oil filters changes, changed air filters, new cabinet filters, oil samples obtained on both compressors. Changed float drain in the inline filter.
- 12: Chubb on site, completed fire alarm inspection, back up lighting inspection and fire extinguisher inspection.
- 23: Gerber Electric on-site to fix the storage tank level issue. Checked input and output signal, entered simulated value for T-6020 and showing those levels on SCADA. Confirmed issue with actual level meter and suggested meter replacement.

## **FOURTH QUARTER:**

### OCTOBER:

- 03: Gerber Electric on site for Heaters and Boilers Inspection/Maintenance.
- 06: Air Liquide on site to deliver carbon dioxide tank.
- 07: Flowmetrix on site to replace chlorine gas sensor in the basement of the chlorine gas building.
- 07: Manitoulin on site for chlorine gas delivery; received 6 full chlorine gas cylinders, returned 8 empty cylinders.
- 15: SGS Flowmetrix on site to install new level transmitter for storage tank 6021.
- 16: Eramosa and Dielco Electric on site to resolve the Flow meter/Reader issue at West Elgin North Panel. Diagnosed flow meter to ensure the encoder can be replaced. Confirmed ability to read flow from the meter with a remote reader.
- 27: Univar Solutions on site for Hydrogen peroxide delivery.
- 30: Gerber Electric on site to install a new sc4500 unit for AIT-5001.

### NOVEMBER:

- Greatario - North Tank -Tank 1 - Storage Tank Maintenance cleaning, relining and exterior maintenance.
- Greatario - South Tank -Tank 2 - Storage Tank Maintenance cleaning, relining and exterior maintenance.
- 03: Nevro on site to fix roof drainpipe at low lift.
- 04: Gerber Electric on site to change heaters and ceiling fans at low lift.
- 10: SGS Flowmetrix on site to change diaphragm pump for captor. SGS Flowmetrix on-site for annual calibration of flow meters.
- 13: Air Liquide on site for carbon dioxide delivery.
- 14: Eramosa and Dielco Electric on site at West Elgin North Chamber to replace encoder.
- 17: Gerber Electric on site to inspect and install temperature probe on a caustic chemical tank.
- 19: Alterfine Masonry on site for brickwork at Low Lift.
- 27: Polaris Transportation delivery of valves.
- 27: Air Liquide on site for CO2 delivery.
- 28: Manitoulin transport on site chlorine cylinder delivery at Low Lift.

### DECEMBER

- Completed maintenance for relining/cleaning of tank 6020 throughout month.
- 03: Hach on site to replace AIT-5001
- 08: Greatario on site to seal leaking bolt on tank 6020 hatch after repairs.
- 09: Univar on site to deliver chemical totes for EFM/CIPs.

- 09: Nevro on site at Pioneer chamber to Dutton to replace check valve. Dutton Dunwich was on site as their valve had failed causing a "break" situation as piping for chamber was underwater and required sampling. Partnered with Dutton operators to ensure all sampling requirements were met for both sides.
- 11: Nevro on site to change high lift pump 3 check valve, and low lift pump 1010 check valve.
- 12: Air Liquide on site for CO2 delivery.
- 16: Ontario Compressors on site for regular maintenance
- 15: Lavo on site for chlorine delivery (NAOCL)
- 17: Air Liquide on site for CO2 delivery.
- 18: IESO Game Day generator run tests.
- 30: Air Liquide on site for CO2 delivery

## **SECTION 7: ALARM SUMMARY**

### **FIRST QUARTER:**

#### **JANUARY:**

- 03: Received call for main generator running, inlet valve fault now normal. All low lift pumps faulted and MV7041 stuck, blower A is faulted. Put MV7041 in manual and now normal. Arrived at the low lift building and reset all 4 pumps. Plant switched back to hydro power, Compressor A still faulted.
- 04: Faulted low lift pumps have been reset, LLP 1010 and 1030 are both running. Plant running on compressor B and running well.
- 16: Received alarm for HI-HI turbidity on AIT- 7003 most likely caused from opening cooling lines on UV and stirring up sediment in those lines.
- 21: received call from spectrums for storage tank fault now normal.
- 23: Received text from spectrums "FILTRATE STORAGE TANK FULL" logged on remotely to find tanks were filling and level at 7.24m. After reviewing trending at 11:13 the tank hit 3.09m and at 11:20 the tank was back up 7.21m most likely caused by ice forming in tank and falling into water causing ripples in the water affecting the transducer.
- 23: Received call from spectrums for storage tank fault. logged on remotely and level was normal at 8.00m. After reviewing trending at 1935 the tank hit 4.78m and at 19:41 the tank was back up 7.96m. most likely caused from ice forming in tank and falling into water causing ripples in the water affecting the transducer.
- 24: Received call from spectrums for Wallacetown Tower fault. Logged onsite and found Wallacetown Tower at 8.14m. Placed PRV-7051 into manual and changed manual set point. Flow now at 46 l/s. Wallacetown Tower now at 8.30m placed PRV-7051 back into auto and flow is now at 40 l/s, level now at 9.79m PRV-7051 still running normally with flow at FIT-7052 at 40 l/s. Syntec coming Monday to look at both PRVs.
- 25: Received call from spectrums for storage tank fault. Arrived onsite alarm most likely caused from freezing on the transducer, lo and lo lo alarms on LIT-6010 as tank 6020 and LIT-6021 are now in duty. Started plant back up and everything looks normal.
- 27: Received call from Spectrums for Rodney tower general alarm. found Rodney tower LIT2 HIHI Alarm; stop setpoint 9m but tank filled to 9.75m and holding. Received call for Wallacetown critical alarm, tower level at 8.09. Spoke with OIC, close the bypass valve on Wallacetown line. Rodney tower current level 9.66m and out of HIHI alarm. Level will continue to drop with consumption. Leaving site.
- 28: Received call from Spectrum for Rodney tower general alarm. Rodney tower appears to have filled after West Lorne and reached level greater than 9.60m. Tower back to 9.48m and alarm call now normal.
- 31: Received call from Spectrums for chemical containment high level or low temp for caustic tank. high level float tripped from ongoing leak. Will discuss with OIC/ORO.

## FEBRUARY:

- 01: Received alarm for caustic tank hi level or low temp. Arrived on site; containment float tripped due to high level. Spoke with OIC CR, was instructed to disable the alarm for the weekend due to the ongoing issue. Alarm now disabled.
- 01: Received call from Spectrums for caustic high temp. Arrived onsite, caustic tank temp 35.0 degrees and within setpoint range. Heater is disabled.
- 02: Received call for Rodney tower. Arrived on site, PRV7061 faulted several times. Stopped high lifts, put PRV 7061 into manual then back to auto. High lifts and low lifts are currently off. Rodney tower is now down to 9.68m and out of HIHI alarm. Rodney tower Isolation valve ISV301 failed to close and in HI alarm again. Switched to manual and closed valve. Spoke with ORO SS, changed West Lorne tower setpoints to start at 33m from 34m, and stop at 35m from 36m.
- 12: Received alarm call for storage fault, alarm was for storage tank LO level, tanks currently at 6.50 and 6.39, two high lifts currently running, shut one down to reduce flow leaving plant, storage tanks came out of LO level.
- 17: Received call for generator running and all low lift pumps are faulted. Reset progress drain pump, reset all four low lift pumps, plant now making water. Hydro is still out at WP and low lift, repaired at approx. 6pm. Utility power is now back to both buildings, generators are off, reset low lift pump faults and brought PALL system back online.
- 22: Received call from spectrums for high distribution turbidity. Arrived onsite and restarted high lifts turbidity now at 0.23. Collected sample from north tank overflow. Isolating tank until we have lab results back.
- 25: Received alarm call for PALL system critical failure and remotely saw alarm was for too few racks, plant is still currently making water, rack 2 was in idle state, no alarms as to why rack is shut down, placing into forward flow and now making water.
- 25: Received alarm call for turbidity analyzer fault, logged in remotely, distribution turbidity is bouncing around 0.65/0.70, increased Hi-Hi alarm to 0.85.

## MARCH:

- 08: Received alarm for Rodney tower general alarm PUC. Rodney tower in HIHI at 9.78, west Lorne standpipe at 36.45, HL still sending water. Changed HL set point from 36.5 to 36 as directed by ORO.
- 08: Received alarm for Rodney tower general alarm. Rodney tower in HI level, called out and began coming down, west Lorne tower is currently at 35.96. High lifts have stopped sending water, Rodney level coming down out of HI currently at 9.68, West Lorne standpipe at 35.50.
- 10: Received alarm for filtrate storage tank fault, found both storage tanks in LO alarm at 6.36m and 6.46m. Hit all 3 low lift page reset buttons. Low lifts duty 1 and 2 started and out of LO alarm.
- 13: Received alarm for less than 3 high lift pumps available, seems there was a CP2000 power loss and high lift pump 2 and low lift pump 2 are faulted. Arrived onsite, reset high lift pump 7020 and closed MV-7041 as it was stuck open. Reset low lift Pumps.
- 14: Received alarm call for filtrate storage, noticed alarms other than storage tanks LO, Communication failure alarm CP1000 – CP2000 Low lift PLC to PALL comms failure. storage tanks are at 6.31 and 6.41 with west Lorne train taking water. Hit all 3 low lift resets, cleared pall alarms, toggled low lift pumps in and out of auto, reset individual low lift pump alarm page. Two low lifts are now running and the storage tank out of LO alarm.
- 15: Received alarm for generator running, high lift 7010 fault, MV- 2002 faults, and CP2000 power fail most likely due to storm. All alarms are normal when logging on, all the PALL equipment is faulted and plant is not making water; plant is switching back to Utility power. Reset PALL equipment, hit low lift and HighLift

## SECOND QUARTER:

### APRIL:

- 07: Received call for Rodney tower alarm. Logged on remotely and found Rodney tower in high level at 9.73m. Found the high lift to West Lorne tower shut down at 23:24. Checked trending for Rodney tower and

found tower had hit high level around 23:24 and only hit a max of 9.73m. High lift is off, level should start coming down will continue to monitor.

- 09: Received call for process drain pump fault. Arrived onsite and found alarm for both processes drain pumps faulted, unsure of reason why both pumps faulted. Reset both pumps and currently watching 9020 runs. Pumps finished run cycle and appear to be operating normally. Will continue to monitor pumps during regular hours.
- 23: Received SCADA alarm for Distribution turbidity 7003 spiked (Max 1.77), HL shut off probably because of sample valves open and closed to collect bacti sample.
- 24: Received low Cl alarm on analyzer 7004. Because sample line connection was loose & leaking, tighten and Cl2 level went down up to 1mg/L and back up to 1.20.
- 24: Received alarm call for main generator and low lift generator running, logged on, reset LLP 1030 and MV-7021. Power is out for entire area. Arrived onsite, Wallace town is running on back up pressure mode. Will continue to monitor. Rodney tower and West Lorne standpipe both lost communications, notified on call operator. Hydro is still out but communications have returned. Received call for generator running now normal & the plant is back on hydro power and all communications have been restored.
- 30: Received alarm for West Elgin standpipe power loss. Everything appears normal on SCADA but was informed they are replacing a hydro pole nearby. Will continue to monitor.
- 30: received call for Wallace town tower low level. Logged on and found alarm for PRV-7061 for West Lorne faulted. PRV-7061 on SCADA appeared closed but its position set point was still saying 5.5% due to the system not thinking the valve was closed due to its position sensor being off. it continued to run a HLP but because the valve was closed all water was going through the surge relive valve and once Wallace town tried to start it wouldn't allow any water to go through it PRV because it was all going through the SRV. Manually opened PRV to Wallace town so it would start sending water. Arrived onsite and shut HLP down manually adjusted position set point on PRV - 7061 so it is now at 0.0% instead of 5.5%. Started HLP and started sending water to Wallace town. Started West Lorne train up and shut it down to make sure issue wasn't occurring again, everything appears normal.

#### MAY:

- 12: Received alarm from spectrums for cl tank loss of echo. Logged on remotely and found cl level transmitter LIT-8002 appeared to have had a spike level dropped down to 3.34m then back up to 3.83m. Will speak with SOM in morning about having unit inspected.
- 16: Received call from spectrums for main generator running. Logged on remotely, plant running on generator likely due to storm in the area everything seems to be operating normally will continue to monitor. Plant still on generator, Hydro one map says power is expected to come back at 05:45. Appears plant had switched back to normal power around 06:00.
- 16: Received alarm for main generator running. Logged on remotely and found plant back on main power. power flicker occurred. Generator has now turned off.
- 26: Received alarm call from Spectrum for standpipe comms loss, attempted to log in remotely and cannot establish connection. Arrived on-site, plant is running on pressure mode, comms is down from plant to West Lorne tower, Wallacetown and Rodney, internet is out area wide, will speak with provider to see when restoration is expected. Plant still operating on backup pressure mode, both trains are sending water, have not received a restoration time from NFTC yet.
- 27: Received alarm of Wallacetown tower going into high level from Dutton On-call, changed backup pressure mode setpoints to shut down feed to Wallacetown.

#### JUNE:

- 01: Received an alarm call for West Lorne standpipe, logged on remotely and saw that standpipe hollow level alarm, currently 28.9, not sending water. Arrived on-site, saw PRV 7061 was commanding to open but the position was not changing cycled power to unit, once back on PRV began to show that it was opening, will

continue to monitor. Flow to West Lorne now 75Lps; tower is filling currently at 28.30. West Lorne standpipe now out of low-level alarm, level 29 and continuing to increase, leaving site.

- 05: Received call in other area for high Wallacetown Tower logged on to inspect issues. Appears West Lorne train may be feeding Wallacetown Tower while filling West Lorne causing it to go into high level. Shut West Lorne train down for now and wait for it to start again to see if the issue continues.
- 09: Received alarm call for Pall critical failure, racks 1 & 2 are disabled due to high turbidity, tried resetting and ran air scrub on rack 1 and tried to bring back online but turbidity values appear frozen. Arrived on-site, removed power cord from turbidity unit in rack one to reset, once plugged back in turbidity readings immediately changed, bringing racks back online, Racks 1 and 2 now in steady water production state, turbidities down to normal level, leaving site.
- 11: Received alarm call for building intrusion. inspected all doors at main building and low lift building, ensured all were tight and fastened, did not find any issues, alarm has cleared will re arm alarm system.
- 14: Received alarm call for Pall critical failure, will log on remotely and inspect. Logged on remotely, found Pall failure was for strainer high differential pressure, strainers had faulted had to reset system modes, then brought filters back online, once online monitored operation, strainers went through backwash and plant is making water. Remotely checked on plant again, everything appears to be running normal, strainers are running good plant is making water.
- 15: Received alarm call for pump fault, logged on remotely, saw alarm is for too few high lifts available. Arrived on-site, reset VFD on high lift pumps 1 and 2, faults cleared, high lift pump 2 now running will continue to monitor. Plant lost utility power and switched to the generator then back to utility. utility power is showing 599/620/603. Power flickered again, leaving the generator running for now until peak demand drops. Shutting down high lifts, will switch back to utility power and see if power is stable. Utility power looks more stable at 597/617/603, leaving site.
- 16: Received alarm call from spectrums for main generator running. Logged on remotely and found the plant was switching back to normal power. Air compressor A & B both faulted, reset both compressors. Plant appears to be running normally.
- 16: Received call from spectrums for main generator running. ran generator until peak demand dropped to stop the generator from switching on and off causing hard stops on the plant. Switched the plant back to utility power.
- 16: Received call from spectrums for low lift basement gas alarm. Found a leak in the basement water line. shut cl gas off for the night.
- 22: Received alarm for main generator running. It appears the power has switched back and fourth multiple times. ORO suggest to leave generator on to minimize the amount of hard stops on the plant. switched power back to normal power and switched back to generator 2 times since running in normal power. Switched back to the generator for now. Arrived onsite and switched the plant back to normal power.
- 22: Received alarm for critical process alarm. found another power flicker and high lift pump 7020 faulted. Reset high lift 7020. power is still going back and forth between normal and generator. leaving in generator mode for a bit more and then will switch it back again. switched plant back to normal power & appears to be running fine on normal power.
- 25: Received alarm call for main generator running. Remotely reset high lift pump one, and the air compressors, plant is making water and still on generator power. Reset high lift pump 7020, both trains are filling and plants are making water. Switched plant back to Utility power, plant making water and one high lift going.
- 27: Received alarm call for main generator running, reset most equipment remotely, plant is making water, one high lift pump is faulted. Switched plant back to Utility power, starting Wallacetown train, and plant back up again. Plant running on Utility power, making and sending water fine.
- 28: Received call from SOM Sam smith to adjust West Lorne tower stop and start set points to help keep the tower full due to a large fire in town. Changed stop set point from 36m to 37m and start from 33m to 34m & return set point to previous state at 14:28.

- 28: Received alarm call for main generator running inlet strainer fault. Plant has switched back to Utility power, reset compressors and all faulted equipment, plant and high lifts started, received 2nd call that Plant running on generator power, transfer switch possibly faulted. Reset compressors and plant making water again, one high lift pump running. Arrived onsite to change the plant from generator power to normal power.
- 29: Received alarm call for inlet chlorine low alarm Called the dialer & all channels were normal. No alarm history on SCADA as well. The inlet chlorine reading has been above its low alarm set point all day, no alarms present, instructed answering service to hold the alarm until the morning and will fix during working hours as directed by ORO.

### **THIRD QUARTER:**

#### **JULY:**

- 01: Received alarm call for main generator running arrived onsite, switched plant back to utility power.
- 02: Received alarm call for main generator running, plant has switched back to utility power
- 03: Received alarm call for distribution chlorine residual analyzer 7004 LO alarm now normal. Prompted Wallacetown train to start to get fresh flow of water through analyzer. Alarm call most likely due to the high lifts not running in a while and water back feeding the analyzer.
- 03: Received alarm call for main generator running. Put plant back on utility power.
- 05: Received alarm call for main generator running. Arrived onsite to switch back to utility power
- 06: Received generator running alarm. Arrived onsite to switch plant back to utility power.
- 08: Received alarm for main generator running. Arrived onsite to switch plant back to utility power.
- 08: Received alarm for Wallacetown Tower low level due to high demand in the area and hydrant flushing due to community complaint.
- 09: Received alarm call for low discharge chlorine level. Highlifts starting to send water. Increased cl residual set point from 1.90 to 1.95.
- 09: Received call for main generator running. Logged on remotely, hydro back on utility power reset UV and plant appears to be running normally.
- 10: Power flickered multiple times between generator and normal power. Switched to generator power until peak demand is over. Arrived onsite and shut generator down.
- 11: Power flickered multiple times between generator and normal power. Switched to generator power until peak demand is over. Onsite to switch power back to generator.
- 12: Received alarm for main generator running. Leaving on generator power until peak demand is down. Onsite to switch power back to generator.
- 13: Received a now normal alarm on inlet strainer. Arrived onsite and found there had been a power flicker. Power switched over to generator and will change back after peak demand. Arrived onsite and switched power back to utility.
- 14: Power flickered from generator to normal power. Switched plant to generator power. Arrived on-site to switch back to utility power.
- 14: Received alarm call for chlorine tank fault, logged on remotely, alarm is for chlorine day tank 8002 loss of echo, tank is not in use, will disarm alarm and notify daytime operator.
- 23: Received call from spectrums for HHI distribution chlorine analyzer. Cleaned probe, probe housing and refilled electrolyte in probe cap.
- 24: Received alarm for Rodney Tower fault and high lift pump fault. Shut down high lifts feeding West Lorne Standpipe to stop flow to Rodney. Arrived onsite and reset both high lift pumps. Notified West Elgin on-call operator.
- 27: Received alarm for high lift pump fault. Arrived onsite and found HLP 7010 & 7020 faulted with input phase loss alarm. Reset both VFDs.
- 28: Received alarm for UV outlet chlorine analyzer fault. Chlorine pump diaphragm damaged.
- 28: Received alarm call for communication failure alarm cp2000- cp1000. Switched the plant back to utility power and communication was restored.

30: Received alarm call for main generator now normal. Duty one and two low lifts are operating.

#### AUGUST:

- 01: Received alarm call for discharge chlorine 7004 low chlorine, chlorine reading at 1.09, low set point is 1.10. Suspected due to less water going out of the plant because the Iona flow control valve is filling the Wallacetown Tower. Raised chlorine set point from 2.10-2.20.
- 01: Received alarm call for UV #2 fault. Unable to reset remotely. Duty storage tank is at 9m and plant will remain off.
- 02: Arrived onsite to perform extra testing to monitor conditions for a yellow water event.
- 03: Arrived onsite to perform extra testing to monitor conditions for a yellow water event.
- 03: Received alarm call for Rodney Tower LO chlorine alarm, sitting at 0.39 free chlorine. Alerted on call operator for West Elgin Distribution.
- 04: Received alarm call for main generator running and inlet strainer fault. Logged on, plant is back on utility power.
- 05: Received alarm for UV chlorine discharge fault and shut the plant down. Analyzer 5006 reading was at 0.00 started plant again and value began rising, watched pumps and monitored.
- 05: Received alarm call for UV chlorine analyzer fault. Took chlorine pump 8030 out of service and running again on chlorine pump 8040. Low chlorine possibly due to pumps switching to 8030.
- 05: Received alarm call for main generator running. Suspected power flicker. Plant back on utility power. Reset UV's, reset lowlift page.
- 05: Received alarm call for Rodney Tower low chlorine. Notified West Elgin Distribution on call operator. High lift pump started to send water to Tower.
- 08: Received alarm call for main generator running, strainer inlet fault now normal. Power flicker. Generator running.
- 09: Received alarm for power flicker, logged on and reset UV, reset low lifts and reset compressors and PALL system equipment, plant is still on generator and running. Arrived onsite, reset transfer switch, plant is now running on utility power, fuel level is at half.
- 10: Received alarm call for main generator running. Arrived onsite to switch plant back to utility power, reset transfer switch, reset UV's, reset low lifts. Plant now running on utility power
- 11: Received alarm for main generator running logged on and found there had been a power flicker and the transfer switch had failed. Arrived onsite and reset the transfer switch the plant switched back to utility. Reset both compressors and High lift 7020.
- 12: Received alarm for filtrate storage tank fault. Took apart and cleaned all 4 strainers. Plant now back online and doing well.
- 12: Received alarm for high lift pump fault and Wallacetown Tower fault. Logged on remotely and found high lift pump 7020 faulted and Wallacetown Tower in low level 8.18 causing the fault. Issue due to power flicker due to storm in the area.
- 13: Received alarm for main generator running. Leaving plant on generator power until peak demand is over.
- 14: Received alarm for main generator running. Logged on remotely and power was back on utility reset UVs and high lift pump 4 rotork valve.
- 16: Received alarm for main generator running leaving on until peak demand is over.
- 19: Received alarm call for low lift meter fault, logged on remotely and found alarm to be for FIT 1017 signal error, flow shows to be stuck at 64.24. Checked meter at low lift and was showing alarm for electronics fail. No flow going through meter and it's still reading 64 l/s. Switched line from west to east.
- 20: Received alarm call for Rodney Tower chlorine alarm, notified West Elgin Distribution on call operator.
- 21: Received alarm call for Rodney Tower chlorine alarm, notified West Elgin Distribution on call operator.
- 22: Received alarm call for Rodney Tower chlorine alarm, notified West Elgin Distribution on call operator.
- 23: Received alarm call for Rodney Tower chlorine alarm, notified West Elgin Distribution on call operator.
- 24: Received alarm call for dialer Channel 48, logged on remotely, found alarm was for raw water aquarium LOLO DO, sitting at 2.90 now, appears to have steadily dropped from normal reading.

- 25: Yellow water event
- 26: Yellow water event.
- 27: Yellow water event.
- 28: Yellow water event.
- 29: Yellow water event.
- 30: Yellow water event.
- 31: Yellow water event.

#### SEPTEMBER:

- 07: Received alarm call for UV reactor 1 faulted. Found UV reactor 1 faulted. Reset low lift pumps and UV fault reset. Onsite reset the UV reactor 1 from HMI panel. Continuing monitor the plant.
- 08: Received alarm call for Rodney Tower general alarm. Logged on remotely and found alarm for Rodney Tower HHI level. Informed West Elgin Distribution on-call operator. Changed set-points to stop flow to the Tower.
- 21: Received alarm for treated water storage tank fault. Logged on remotely and found the signal for storage tank 9020 had dropped and reading was showing 0.00. Duty storage tank still reading. Call to Eramosa required.
- 28: Received alarm call for UV 1 fault. Logged in remotely, UV 1 was still in fault, fault reset.

#### **FOURTH**

#### OCTOBER:

- 04: Received alarm call for Raw water LOLO pH, will log on remotely and inspect. Noticed Low lift Raw pH dropped to 6.95 for less than 2 minutes between 03:54 and 03:56, inlet chlorine AIT-1401 spiked observed during same time as well, max was 4.96mg/L at 03:58.  
Raw Temp- 20.50C , DO- 11.45 now Raw pH out of LoLo and LO alarm. Will continue monitor the pH.
- 06: Received alarm for UV 1 fault. The operator found UV 1 faulted, LLP 4 had faulted, and alarm banner for lost connection to CP-1000 and CP-2000. Reset everything and the plant appears normal. Possible power flicker had occurred.
- 07: Received alarm for low low treated water storage tank. The operator logged on and found system requesting water but no low lift pumps on UV system requesting start but no UVs started. Switched UV system bypass and low lift duty 1 and 2 started. While looking at HMI on UV 2 it said the UV was in a cooling state with a lamp 7 failure alarm but did not fault out the UV. Reset the lamp alarm on UV 2 and system started its warmup procedure. Switched duty to UV 1. UV 1 now on. Confirmed with CT calculator on SCADA computer we were and still are well over our safety level.
- 22: Received Distribution Turbidity HI and HHI Alarm, Checked the AIT-7003 Trend and noticed a turbidity spike between 10:35am and 10:43am, Max turbidity was 7.53NTU @10:36.  
High lifts pumps were off before and during this event and there was no flow to FIT-7062 or FIT-705, it seems like some clogged particulate just flushed through meter and that's spiked the turbidity for a while. Notified SOM Joe Daly, suggested to flush the turbidity meter.
- 29: Received alarm for high outlet cl on analyzer 7001, Arrived onsite and monitored analyzers. Tested analyzer 7001 handheld and got reading of 2.08, was able to calibrate unit up from 1.40. Analyzers appear to be holding steady out of alarm.

#### NOVEMBER:

- 02: Operator responded to UV reactor 2 fault. Reset and monitored.
- 06: Operator responded to Low lift High chlorine alarm. Pre-chlorinator was off. No further plant processes effected. Operator monitored as chlorine residual returned to normal and ensured proper operation.
- 08: Operator responded to a power flicker Alarm; reset effected equipment. Processes and alarms were inspected.
- 08: Operator responded to High Lift Pump fault. Reset, plant processes normal.

- 16: Operator responded to multiple Power failures/ flickers. Reset Plant equipment and processes and plant returned to normal operation.
- 17: Operator responded to Filter Alarm. Reset filter racks 1 and 2 due to high turbidity reading. Reset turbidity monitor and returned filters / plant back to normal operation.
- 20: Operator responded to Filter Alarm. Reset filters and monitored plant until all processes were back to normal.
- 20: Operator responded to Rodney Tower high level alarm. Operator adjusted set points and monitored levels.

## DECEMBER

- 05: After hours alarm call for process drain pump faults. The operator arrived on site and reset the MCC contacts. Monitored for further issues and none found.
- 06: After hours call for Pall failure alarms. Operator arrived on site and found racks 1 and 2 disabled. Racks were stuck in a state of high “NTU” readings. The operator reset turbidity controllers for racks and the NTU reading thawed (ongoing issues with Claros). Racks were put back into service with no issues.
- 10: After hours call for low distribution chlorine alarm. The operator reviewed SCADA and found AIT-7004 dipped below to 1.1mg/l. The operator found the analyzer required calibration. Completed and reviewed plant processes. Started plant back up and monitored for issues. Recorded all findings.
- 13: After hours alarm call for pall failure. The operator arrived on site and found rack 2 failed an IT sequence. The operator attempted to complete ITs but kept failing. Visually inspected membranes and ensured there were no leaks. Completed some flux maintenance and IT passed. Monitored for further issues while rack was in forward flow.
- 14: After hours call for IT fail on rack 2. Operators inspected racks again with no issues. After flux maintenance, the rack passed an IT. Monitored in forward flow and no issues observed.
- 15: After hours call for Wallacetown low level. The operator inspected SCADA and ensured all setpoints were correct. MV7021 was stuck open and no high lifts were running. Reset MV7021 for Wallacetown train. Restarted high lifts and observed valve open and high lifts start up. At 19:00 high lift 1 faulted, however 2 and 4 were on sending water to both trains. Reset VFD for high lift 1. Possibly due to electrical overload from supply power.
- 17: After hours call for critical fault at Tri County. High strainer differential pressure faults. Operator attempted to restart and perform backwashes. Unsuccessful so strainers were removed and manually cleaned of silty residues due to high turbidity.
- 21: Alarm for channel 32 after hours. Operators reset high lifts and plant processes.
- 27: After hours call for power failure. Operator arrived on site and ensured generators were running and reset all faulted equipment. Power outage was prolonged and West Lorne tower UPS died. Tri County went into backup pressure control. Operators monitored pressures. Power was restored around 09:00 and communications were restored to West Lorne standpipe. Inspected all facility processes to ensure normal operation.
- 29: After hours call for multiple alarms – generators etc. Operator arrived on site and reset equipment. Valve MV-7021 was stuck open. Reset and high lifts restarted.
- 30: After hours call for critical failure alarm due to strainer high pressure/high turbidity. The operator attempted to restart the plant and perform backwashes, but was unsuccessful. Strainers had to be pulled and washed. The operator placed everything back into “auto” once completed and tested the strainers. Plant ran successfully.

## **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:**

**JULY:**

8: Multiple community complaints received in West Elgin for taste and odour concerns, customers indicating their water tastes like dirt. Suspected Geosmin/MIB in water which was confirmed with sampling. AOP system brought online. Flushing at storage tanks and in the distribution system. Complaints logged in OPEX.

**FOURTH QUARTER:**

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

**SECTION 9: GENERATOR RUNTIMES**

**Table 7: Tri-County Generator Run Time Breakdown Totals:**

	Generator	Maintenance (hrs)	Brown Out or Power Outage (hrs)	IESO Demand Response (hrs)	Monthly Totals (hrs)
January	Main	1.1	3.5	0	4.6
	LLPS	1.1	3.1	0	4.2
February	Main	1.1	3.3	0	4.4
	LLPS	1	3.4	0	4.4
March	Main	2.2	0.3	0	2.5
	LLPS	2.2	0	0	2.2
April	Main	1.2	4.6	0	5.8
	LLPS	1.1	4.5	0	5.6
May	Main	1	3.5	0	4.5
	LLPS	.9	3.3	0	4.2
June	Main	0	0	5	5
	LLPS	0	0	5	4.9
July	Main	0	97.8	8	105.8
	LLPS	1.3	0	8	6.7
August	Main	0	21.4	8	29.4
	LLPS	0	0	8	5.5
September	Main	1.1	14.3	0	15.4
	LLPS	1.1	4.8	0	5.9
October	Main	1	0	0	1
	LLPS	1	0	0	1
November	Main	1	0	0	1
	LLPS	1	0	0	1
December	Main	0.9	0	4	4.9
	LLPS	0.9	0	4	4.9
YTD Totals	Main	10.6	148.7	25	184.3
	LLPS	11.6	19.1	25	53.1
YTD Total Combined	-	<b>22.2</b>	<b>167.8</b>	<b>50</b>	<b>240</b>



February 25, 2026

Tri-County Water Board

c/o: Robin Greenall  
22413 Hoskins Line  
Rodney, ON N0L 2C0

Re: Requirement under the Safe Drinking Water Act for a Summary Report

Dear Robin Greenall,

Attached is the 2025 Summary Report for the Tri-County Drinking Water System for January 1<sup>st</sup> to December 31<sup>st</sup>, 2025. 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 Tri-County Water Board by March 31<sup>st</sup>, 2026.

Section 12 of O. Reg. 170/03, requires the Annual Report required under Section 11 of O. Reg. 170/03 to 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 Municipality, 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 519-274-5695.

Sincerely,

A handwritten signature in black ink, appearing to read "H Wharram", is positioned above the typed name.

Heather Wharram  
Process and Compliance Technician  
Midwest Region  
Ontario Clean Water Agency

cc. Sam Smith, OCWA Regional Hub Manager  
Joe Daly, OCWA Senior Operations Manager  
Maegan Garber, OCWA Safety, Process and Compliance Manager  
Terri Towstiuc, Municipality of West Elgin

# Tri-County Drinking Water System

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Waterworks # 260091117  
System Category – Large Municipal Residential

## Annual Water Report

Prepared For: The Tri-County Water Board

Reporting Period of January 1<sup>st</sup> – December 31<sup>st</sup> 2025

Issued: February 25, 2026

Revision: 0

Operating Authority:



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

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## Revision History

Date	Revision #	Revision Notes
2026-02-25	0	Report Issued

## Report Availability

This system does not serve more than 10,000 residence. The annual report will be available to residents at the West Elgin Municipal Office. Notification will be at the Municipal Office and copies provided free of charge, if requested. The West Elgin Municipal Office is located at 22413 Hoskins Line in the Town of Rodney. The Table below lists the Drinking Water Systems that receive all their drinking water from the Tri-County Drinking Water System:

Drinking Water System Name	Drinking Water System Number	Copy provided
West Elgin Distribution System	260094627	Yes
Southwest Middlesex Distribution System	260005502	Yes

## Compliance Report Card

Compliance Event	Date	# of Events
Ministry of Environment Inspections	February 18 <sup>th</sup> , 2025*	1
Ministry of Labour Inspections	N/A	0
QEMS External Audit	October 10, 2025	1
AWQI's/BWA	N/A	0
Non-Compliance	N/A	0
Community Complaints	July 8, 2025	1
Spills	N/A	0
Watermain Breaks	December 9, 2025	1

\*The 2025/2026 inspection has not yet been completed.

## System Process Description

### Raw Source

The Tri-County Drinking Water System consists of the Tri-County Water Treatment Plant (WTP), the Tri-County Transmission Main and a standpipe. The Tri-County WTP is a membrane filtration surface water treatment facility with a total design capacity of 12,160 m<sup>3</sup>/day, located at 9210 Graham Road in the Municipality of West Elgin. The low lift pumping station is located south of the WTP at 8662 Graham Road, on the shores of Lake Erie.

#### Intake:

The intake consists of one 700 mm diameter polyethylene pipe extending approximately 610 m into Lake Erie at a depth of 5.7 m. A zebra mussel chemical control system is used seasonally. There is a second intake located at the shoreline, this is used only as a backup if required due to water quality or a blockage. The raw water is screened by two coarse screens.

#### Low Lift Pumping Station:

Raw water is pumped from the low lift wet wells by four low lift pumps to the Water Treatment Plant. The WTP has experienced short term episodes where the discoloured water is released to the distribution system causing aesthetic issues. The WTP continuously monitors for dissolved oxygen as an early detection that a problem may be experienced. As well, increased sampling of manganese is conducted during possible episodes. Operations can switch to the standby intake if the dissolved oxygen levels are greater there. A sodium permanganate dosing system is available to covert dissolved manganese in the raw water to particulate form, which can then be removed by the membrane filtration system.

### Treatment

#### Filtration:

At the water treatment plant the water is pre-filtered by four automatic strainers to protect the filter membranes from coarser particles and algae in the raw water. The raw water pH is lowered if required by the use of carbon dioxide.

After the water has been strained it enters the membrane filtration system which removes fine particles, sediment, algae, protozoa and bacteria. Filtered water can be directed through the UV advanced oxidation process (AOP) unit to the treated water storage tanks.

#### Disinfection:

Disinfection is achieved by the use of sodium hypochlorite for primary disinfection. Note that UV is intended for use with hydrogen peroxide (AOP) for taste and odor control. The treated water is stored in treated water storage tanks where it is pumped into the distribution network by the high lift pumps. Post chlorination of the treated water is done at two points. The first dosing point is upstream of the treated water storage tanks and the second dosing point is downstream of the four high lift pumps before the distribution header.

Process Drain Water:

Waste water from the floor drains and online analyzers are directed to the process water handling facilities that include a settling basin and constructed wetlands. Flush water that cleans the pre-strainers and the membranes is also sent to the process water handling facilities.

Treatment Chemicals

Table 1 below provides a list of water treatment chemicals used by the system during the period covered by the report.

**Table 1: Treatment Chemicals Used During Reporting Year**

Chemical Name	Use	Supplier
Chlorine Gas	Zebra Mussel Treatment	Lavo
Sodium Hypochlorite 12%	Primary Disinfection	Lavo
Hydrogen Peroxide 50%	Advanced Oxidation	FloChem
Citric Acid 50%*	Cleaning of Membranes	FloChem
Caustic Soda 50%*	Cleaning of Membranes	FloChem
Calcium Thiosulfate (Captor) 30%*	Cleaning of Membranes	FloChem
Carbon Dioxide	pH Control/Adjustment	Air Liquide
Sodium Permanganate	Iron and Manganese control	Brenntag

\*chemicals used in the cleaning process of membranes

Distribution

The Tri-County Drinking Water System consists of the Tri-County Water Treatment Plant (WTP), the Tri-County Transmission Main and a standpipe. The Tri-County Drinking Water System serves the following systems: Southwest Middlesex, West Elgin, Dutton-Dunwich, Newbury and Bothwell Distribution Systems. The Southwest Middlesex and West Elgin Distribution Systems receive all their water directly from the Tri-County Drinking Water System. Newbury and Bothwell Distribution Systems receive water indirectly from the Tri-County Drinking Water System via the Southwest Middlesex Distribution System.

Summary of Non-ComplianceAdverse Water Quality Incidents

Under the Safe Drinking Water Act, O. Reg 170/03, any adverse water quality incidents (AWQI) are required to be reported to the Ministry of the Environment, Conservation and Parks (MECP) and corrective action taken. Refer to Table 2 below for a summary of AWQI incidents in 2025.

**Table 2: Adverse Water Quality Incidents**

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

## Non-Compliance

Under the Safe Drinking Water Act, O. Reg 170/03, any events where legislative requirements were not met are required to be reported to the MECP and corrective actions taken. Refer to Table 3 below for a summary of non-compliance incidents in 2025.

**Table 3: Non-Compliances**

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

## Non-Compliance Identified in a Ministry Inspection:

The routine MECP Inspections have an Inspection Rating Record. This record 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 Tri-County Drinking Water System were: Certification and Training, Distribution System, Logbooks, Operations Manuals, Reporting and Corrective Actions, Treatment Processes, and Water Quality Monitoring. The Tri-County Drinking Water System inspection was conducted on February 20, 2025 by Meghan Morgan of the Ministry of the Environment, Conservation and Parks (MECP). The inspection review period was January 1, 2024 to December 31, 2024. An inspection rating of 100% was received. Refer to Table 4 below for non-compliances identified in the report. The 2025 routine MECP inspection was conducted on February 25<sup>th</sup>, 2026. The report has not yet been received.

**Table 4: Non-Compliances during a Ministry Inspection**

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
There were no non-compliances identified during this period.				

## **Flows**

The Tri-County Drinking Water System is classified as a Large Municipal Residential System that operates under Municipal Drinking Water License (MDWL) #043-101, Issue 7, Drinking Water Works Permit #043-201, Issue 8, and Permit to Take Water #5062-C4UG4R. The Permit to Take Water (PTTW) specifies flow rates and total water takings permitted from Lake Erie. For the Tri-County DWS, the maximum flow rate limit is 9,400 L/min. The total daily water taking is 13,500 m<sup>3</sup>/day. The rated capacity of the plant, as specified in the MDWL, is 12,160 m<sup>3</sup>/day of treated water.

In accordance with Schedule 22-2(3) 1, below is a summary and discussion of the quantity of water supplied during the reporting period.

## Raw Water Flows

The raw water flows are regulated under Permit to Take Water #5062-C4UG4R. The 2025 raw flow data was submitted to the Ministry of Environment, Conservation and Parks electronically. The confirmation and a copy of the data that was submitted are attached in Appendix A.

The following table (Table 5) is a summary of the raw flows including total, average, maximum daily, and peak flow rates for the reporting period. As well, the table compares flows to the Permit to Take Water limit. The overall daily taking of water was not exceeded during the reporting period. The Tri-County Drinking Water System is at 31.8% capacity for the average daily water-taking limit, which is an increase of 1.13% from 2024.

**Table 5: Raw Flows Compared to the PTTW Limit**

Month	Total Flow (m <sup>3</sup> )	Average Day Flow (m <sup>3</sup> /day)	% of PTTW Limit	Max Day Flow (m <sup>3</sup> /day)	% of PTTW Limit	Max Day Flow Rates (L/s)	% of PTTW Limit
January	98,316.50	3,175.50	24	4,587.90	34	130.71	84
February	111,864.90	3,995.18	30	6,740.70	50	133.39	85
March	110,401.50	3,561.34	26	4,235.70	31	119.36	76
April	111,705.60	3,723.52	28	4,903.70	36	121.09	77
May	125,032.10	4,033.29	30	5,846.40	43	132.84	85
June	149,400.60	4,980.02	37	6,315.00	47	133.21	85
July	165,153.50	5,327.53	39	6,442.70	48	133.38	85
August	170,946.70	5,514.41	41	7,352.90	54	133.59	85
September	140,291.80	4,676.39	35	6,005.90	44	130.83	84
October	128,512.20	4,145.55	31	5,457.50	40	132.55	85
November	131,702.80	4,390.09	33	6,845.60	51	131.73	84
December	125,142.70	4,036.86	30	4,979.80	37	136.3	87
Total	1,568,470.90	-	-	-	-	-	-
Average	-	4,926.31	32	-	-	-	-
Maximum	-	-	-	7,352.90	51	136.3	87

### Treated Water Flows

The treated water flows are regulated under the Municipal Drinking Water Licence. The design capacity specified in the MDWL is 12,160 m<sup>3</sup>/day.

The following table (Table 6) is a summary of treated water flows including total, average, and maximum daily flows for the reporting period. A comparison of flows to the MDWL rated capacity is also provided. The average daily flow for 2025 was 4,072.72 m<sup>3</sup>/day, which is a 1% decrease when compared to the 2024 average daily flows. The maximum daily flow for the reporting period was 7,235.30 m<sup>3</sup>/day. The plant is operating at 31.8% of its rated capacity. The Tri-County Drinking Water System is capable of meeting its current uses for the system. It is operating at well below the limits set out in the Permit to Take Water and the design capacity for the plant, as specified in the MDWL.

**Table 6: Treated Flows Compared to Rated Capacity**

Month	Total Flow (m <sup>3</sup> )	Average Day Flow (m <sup>3</sup> /day)	% of Rated Capacity	Max Day Flow (m <sup>3</sup> /day)	% of Rated Capacity
January	106,117.20	3,423.14	28.2	4,543.30	37.4
February	102,646.70	3,665.95	30.1	4,651.40	38.3
March	104,058.90	3,356.74	27.6	4,195.10	34.5
April	106,678.90	3,555.96	29.2	4,587.50	37.7
May	120,441.40	3,885.21	32	5,194.90	42.7
June	141,439.50	4,714.65	38.8	5,859.10	48.2
July	156,331.50	5,042.95	41.5	6,328.00	52.0
August	156,997.00	5,064.42	41.6	7,235.30	59.5
September	134,939.50	4,497.98	37.0	5,417.70	44.6
October	123,324.20	3,978.20	32.7	5,098.90	41.9
November	118,908.40	3,963.61	32.6	6,193.90	50.9
December	115,440.20	3,723.88	30.6	5,004.70	41.2
<b>Total</b>	1,487,323.40	-	-	-	-
<b>Average</b>	-	4072.72	33.5	-	-
<b>Maximum</b>	-	-	-	7,235.30	59.5

## Regulatory Sample Results Summary

### Microbiological Testing

The Tri-County Drinking Water System was operated and maintained in such a manner that the treated water supplied to the consumers serviced by the system satisfied the Ontario Drinking Water Quality Standards. Refer to Table 7 below.

**Table 7: Microbiological Testing Summary**

	No. of Samples Collected	Range of E.Coli Results		Range of Total Coliform Results		Range of HPC Results	
		Min	Max	Min	Max	Min	Max
Raw Water	52	1	500	2	2400		
Treated Water	55	0	0	0	0	1	40
Distribution Water	104	0	0	0	0	0	30

### Operational Testing

To ensure inactivation of viruses, bacteria and microorganisms, the membrane filtration system is required to meet performance criteria for filtered water turbidity of less than or equal to 0.1 NTU in 99% of the measurements each month. The Tri-County Water Treatment Plant met all regulatory requirements for inactivation in 2025. Table 8 shows the number of turbidity samples obtained and the performance of each filter rack in 2025.

**Table 8: Filter Rack Turbidity Samples and Results**

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
Turbidity (Rack 1)	8760	0.00	0.39
Turbidity (Rack 2)	8760	0.00	0.57
Turbidity (Rack 3)	8760	0.00	0.74
Turbidity (Rack 4)	8760	0.00	9.64

NOTE: Spikes recorded by on-line instrumentation were the result of air bubbles and/or various maintenance/calibration activities. All spikes are reviewed for compliance with O.Reg 170/03.

Free chlorine residuals are monitored for primary and secondary disinfection as well as throughout the distribution system to meet regulatory requirements and ensure adequate secondary disinfection is provided. Table 9 below details the operational testing completed in the system during the reporting period.

**Table 9: Free Chlorine Residuals**

	No. of Samples Collected	Range of Results	
		Minimum	Maximum
<b>Free Chlorine</b> (Primary Disinfection)	8760	1.03	2.39
<b>Free Chlorine</b> (Secondary Disinfection)	8760	0.67	3.43
<b>Free Chlorine</b> (Distribution—Grab)	416	0.82	2.19

## Inorganic Parameters

Inorganic parameters are tested as a requirement under O. Reg. 170/03. Sodium and Fluoride are required to be tested every 60 months. Nitrate and Nitrite's are tested quarterly and the metals are tested annually as required under O. Reg. 170/03. In the event any of the parameters exceed half of the maximum allowable concentration the parameter is required to be sampled quarterly.

- MAC = Maximum Allowable Concentration as per O. Reg 169/03
- MDL = Method Detection Limit

Inorganic sampling results are summarized in Table 10.

**Table 10: Inorganic Parameter Sample Results**

	Sample Date (yyyy/mm/dd)	Sample Result	MAC (ug/L)	No. of Exceedances	
				MAC	1/2 MAC
<b>Treated Water</b>					
Antimony: Sb (ug/L) - TW	2025/01/20	<MDL 0.6	6.0	0	0
Arsenic: As (ug/L) - TW	2025/01/20	0.9	10.0	0	0
Barium: Ba (ug/L) - TW	2025/01/20	22.9	1000.0	0	0
Boron: B (ug/L) - TW	2025/01/20	19	5000.0	0	0
Cadmium: Cd (ug/L) - TW	2025/01/20	0.006	5.0	0	0
Chromium: Cr (ug/L) - TW	2025/01/20	<MDL 0.08	50.0	0	0
Mercury: Hg (ug/L) - TW	2025/01/20	<MDL 0.01	1.0	0	0
Selenium: Se (ug/L) - TW	2025/01/20	0.17	50.0	0	0

	Sample Date (yyyy/mm/dd)	Sample Result	MAC (ug/L)	No. of Exceedances	
				MAC	1/2 MAC
Uranium: U (ug/L) - TW	2025/01/20	0.354	20.0	0	0
<b>Additional Inorganics</b>					
Fluoride (mg/L) - TW	N/A	N/A	N/A	N/A	N/A
Nitrite (mg/L) - TW	2025/01/20	<MDL 0.003	1.0	0	0
Nitrite (mg/L) - TW	2025/01/20	<MDL 0.003	1.0	0	0
Nitrite (mg/L) - TW	2025/01/20	<MDL 0.003	1.0	0	0
Nitrite (mg/L) - TW	2025/01/20	<MDL 0.003	1.0	0	0
Nitrate (mg/L) - TW	2025/01/20	0.347	10.0	0	0
Nitrate (mg/L) - TW	2025/01/20	0.380	10.0	0	0
Nitrate (mg/L) - TW	2025/01/20	<MDL 0.006	10.0	0	0
Nitrate (mg/L) - TW	2025/01/20	0.026	10.0	0	0
Sodium: Na (mg/L) - TW	N/A	N/A	N/A	N/A	N/A

\*There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L.

### Schedule 15.1 Sampling:

Schedule 15.1 sampling is required under O.Reg 170/03. The Tri-County Drinking Water system is under reduced sampling. No plumbing samples are required to be collected. Schedule 15.1 sample results for 2025 are summarized in Table 11 below.

**Table 11: Schedule 15.1 Sample Results**

Distribution System	Number of Sampling Points	Number of Samples	Range of Results		MAC (ug/L)	Number of Exceedances
			Minimum	Maximum		
Alkalinity (mg/L)	4	8	96	115	N/A	N/A
pH	4	8	7.24	7.86	N/A	N/A
Lead (ug/l)	N/A	N/A	N/A	N/A	N/A	N/A

### Organic Parameters

Organic parameters are tested annually as a requirement under O. Reg 170/03. In the event that any of the parameters exceed half of the maximum allowable concentration, the parameter is then required to be sampled quarterly. Organic parameter sampling results are summarized in Table 12.

**Table 12: Organic Parameter Sampling Results**

	Sample Date (yyyy/mm/dd)	Sample Result	MAC (ug/L)	Number of Exceedances	
				MAC	1/2 MAC
<b>Treated Water</b>					
Alachlor (ug/L) - TW	2025/01/20	<MDL 0.02	5.0	0	0
Atrazine + N-dealkylated metabolites (ug/L) - TW	2025/01/20	0.06	5.0	0	0
Azinphos-methyl (ug/L) - TW	2025/01/20	<MDL 0.05	20.0	0	0
Benzene (ug/L) - TW	2025/01/20	<MDL 0.32	1.0	0	0
Benzo(a)pyrene (ug/L) - TW	2025/01/20	<MDL 0.004	0.01	0	0
Bromoxynil (ug/L) - TW	2025/01/20	<MDL 0.33	5.0	0	0

	Sample Date (yyyy/mm/dd)	Sample Result	MAC (ug/L)	Number of Exceedances	
				MAC	1/2 MAC
Carbaryl (ug/L) - TW	2025/01/20	<MDL 0.05	90.0	0	0
Carbofuran (ug/L) - TW	2025/01/20	<MDL 0.01	90.0	0	0
Carbon Tetrachloride (ug/L) - TW	2025/01/20	<MDL 0.17	2.0	0	0
Chlorpyrifos (ug/L) - TW	2025/01/20	<MDL 0.02	90.0	0	0
Diazinon (ug/L) - TW	2025/01/20	<MDL 0.02	20.0	0	0
Dicamba (ug/L) - TW	2025/01/20	<MDL 0.2	120.0	0	0
1,2-Dichlorobenzene (ug/L) - TW	2025/01/20	<MDL 0.41	200.0	0	0
1,4-Dichlorobenzene (ug/L) - TW	2025/01/20	<MDL 0.36	5.0	0	0
1,2-Dichloroethane (ug/L) - TW	2025/01/20	<MDL 0.35	5.0	0	0
1,1-Dichloroethylene (ug/L) - TW	2025/01/20	<MDL 0.33	14.0	0	0
Dichloromethane (Methylene Chloride) (ug/L) - TW	2025/01/20	<MDL 0.35	50.0	0	0
2,4-Dichlorophenol (ug/L) - TW	2025/01/20	<MDL 0.15	900.0	0	0
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2025/01/20	<MDL 0.19	100.0	0	0
Diclofop-methyl (ug/L) - TW	2025/01/20	<MDL 0.4	9.0	0	0
Dimethoate (ug/L) - TW	2025/01/20	<MDL 0.06	20.0	0	0
Diquat (ug/L) - TW	2025/01/20	<MDL 1.0	70.0	0	0
Diuron (ug/L) - TW	2025/01/20	<MDL 0.03	150.0	0	0
Glyphosate (ug/L) - TW	2025/01/20	<MDL 1.0	280.0	0	0
Malathion (ug/L) - TW	2025/01/20	<MDL 0.02	190.0	0	0
2-Methyl-4chlorophenoxyacetic Acid (MCPA) (ug/L)	2025/01/20	<MDL 0.12	100.0	0	0
Metolachlor (ug/L) - TW	2025/01/20	0.02	50.0	0	0
Metribuzin (ug/L) - TW	2025/01/20	<MDL 0.02	80.0	0	0
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	2025/01/20	<MDL 0.3	80.0	0	0
Paraquat (ug/L) - TW	2025/01/20	<MDL 1.0	10.0	0	0
PCB (ug/L) - TW	2025/01/20	<MDL 0.04	60.0	0	0
Pentachlorophenol (ug/L) - TW	2025/01/20	<MDL 0.15	3.0	0	0
Phorate (ug/L) - TW	2025/01/20	<MDL 0.01	2.0	0	0
Picloram (ug/L) - TW	2025/01/20	<MDL 1.0	190.0	0	0
Prometryne (ug/L) - TW	2025/01/20	<MDL 0.03	1.0	0	0
Simazine (ug/L) - TW	2025/01/20	<MDL 0.01	10.0	0	0
Terbufos (ug/L) - TW	2025/01/20	<MDL 0.01	1.0	0	0
Tetrachloroethylene (ug/L) - TW	2025/01/20	<MDL 0.35	10.0	0	0
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2025/01/20	<MDL 0.20	100.0	0	0
Triallate (ug/L) - TW	2025/01/20	<MDL 0.01	230.0	0	0
Trichloroethylene (ug/L) - TW	2025/01/20	<MDL 0.44	5.0	0	0
2,4,6-Trichlorophenol (ug/L) - TW	2025/01/20	<MDL 0.25	5.0	0	0
Trifluralin (ug/L) - TW	2025/01/20	<MDL 0.02	45.0	0	0
Vinyl Chloride (ug/L) - TW	2025/01/20	<MDL 0.17	1.0	0	0

	Sample Date (yyyy/mm/dd)	Sample Result	MAC (ug/L)	Number of Exceedances	
				MAC	1/2 MAC
<b>Distribution Water</b>					
Trihalomethane: Total (ug/L) Annual Average - DW	2025	40.25	100	0	0
HAA Total (ug/L) Annual Average - DW	2025	19.20	80	0	0

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

MDL = Method Detection Limit

### Additional Legislated Samples

The Tri-County Municipal Drinking Water License requires that monthly samples be obtained from the settling lagoons outlet weir and tested for Total Suspended Solids. This is to ensure that the effluent discharged into the natural environment from the settling basin and constructed wetlands does not cause an adverse effect. Sampling results for Total Suspend Solids are summarized in Table 13.

**Table 13:** Total Suspend Solids Sample Results

Date of legal instrument issued	Parameter	Date Sampled	Result	Maximum Annual Average	Unit of Measure
2024-06-13	Total Suspended Solids	2025-01-10	11	25	mg/L
		2025-02-05	33		
		2025-03-13	9		
		2025-04-11	12		
		2025-05-09	6		
		2025-06-05	3		
		2025-07-11	6		
		2025-08-05	23		
		2025-09-05	5		
		2025-10-06	3		
		2025-11-03	5		
		2025-12-15	19		

### Major Maintenance Summary

The Tri-County Drinking Water System completed a number of repairs, installations, and replacement projects as listed below in Table 14. These represent the major expenses incurred in 2025.

Table 14: Major Maintenance Summary

Details
<p><b><u>Tri-County Water Treatment Plant</u></b></p> <ul style="list-style-type: none"> <li>- Scada/PLC and cyber security upgrades</li> <li>- Chemical transfer pump replacement</li> <li>- Process analyzer replacement</li> <li>- UV system annual inspection/start up</li> <li>- Storage tanks – interior resealing and inspection</li> <li>- Naturalized settling ponds – phragmites control</li> <li>- Replaced PALL membranes Rack #3</li> <li>- High lift pump #3 replacement</li> <li>- Process check valve replacements</li> <li>- HVAC repairs/upgrades</li> <li>- Lowlift building repairs</li> <li>- Leak repair – Tank 6010; High-Lift Line and RFR Line</li> <li>- Caustic tank repair</li> <li>- Commissioning Pioneer panel</li> <li>- Purchased spare level transmitter for storage tank 6021</li> <li>- Purchased critical spare parts for strainers</li> <li>- Purchased critical spare parts for membrane filters</li> <li>- Flow meter maintenance – West Elgin North Chamber</li> <li>- Check valve replacement – Pioneer East Chamber</li> </ul> <p><b><u>West Lorne Standpipe</u></b></p> <ul style="list-style-type: none"> <li>- UPS replacement –West Lorne Standpipe</li> </ul>

# Appendix A

## WTRS Data Submission Confirmation

**Ontario**   **Ministry of the Environment,  
Conservation and Parks**

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Location: [WTR](#) [Change](#) [Password](#) [Submit WT Record](#) WTRS-WT-008

**Water Taking Data submitted successfully.**

**Confirmation:**

Thank you for submitting your water taking data online.

Permit Number: 5062-C4UG4R  
Permit Holder: TRI COUNTY WATER BOARD.  
Received on: Feb 20, 2026 3:05 PM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

[Print Confirmation](#)   [Return to Main Page](#)

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