



## MUNICIPALITY OF **West Elgin**

### Staff Report

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**Report To:** Tri-County Water Board  
**From:** Magda Badura, Manager of Corporate Services/Treasurer  
**Date:** 2025-07-15  
**Subject:** West Elgin Water Consumption Adjustment

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#### **Recommendation:**

That the Tri-County Water Board hereby receives the report from M. Badura, Manager of Corporate Services – Treasurer;

And further that the Tri-County Water Board approves the calculation adjustment and its inclusion in the preliminary audited financial statements.

#### **Purpose:**

The purpose of this report is to update the Board on the financial impact of water costs paid by West Elgin to the Tri-County Water Board from 2021 to 2024 and to outline the adjustments implemented following the findings of the recent water modeling study.

#### **Background:**

In response to concerns regarding the accuracy of water consumption reporting, Dillon Consulting Limited (Dillon) was retained to conduct an assessment of the Municipality of West Elgin's water consumption calculation methodology. The purpose of the assessment was to document both historical and current methods used to calculate water consumption; and to provide recommendations for a more representative and accurate methodology.

West Elgin is part of the Tri-County Water System, which also includes the Municipality of Southwest Middlesex, the Village of Newbury, the Municipality of Chatham-Kent, and the Municipality of Dutton/Dunwich. West Elgin is located at the upstream end of the water supply network, with treated water conveyed from a Lake Erie shoreline Water Treatment Plant (WTP) through approximately 12 km of trunk watermain. This infrastructure is owned and operated by the Tri-County Water Board, with meter chambers located at the connection points to other member municipalities.

Historically, until 2021, West Elgin's water consumption was calculated using the sum of metered flows for Rodney and customer meter readings for West Lorne. However, this method was found to underestimate actual consumption, as it excluded system losses such as leakage and flushing and relied on older, potentially inaccurate customer meters.

In 2021, a revised calculation method was adopted. Rather than using localized readings, West Elgin's consumption was calculated by subtracting the metered flows to the other four Tri-County members from the total flow supplied by the WTP. This method resulted in significantly higher consumption values for West Elgin because it attributed any unmeasured flow in the Tri-County system—such as water losses, inaccuracies in flow measurement and unaccounted leaks and flushing.

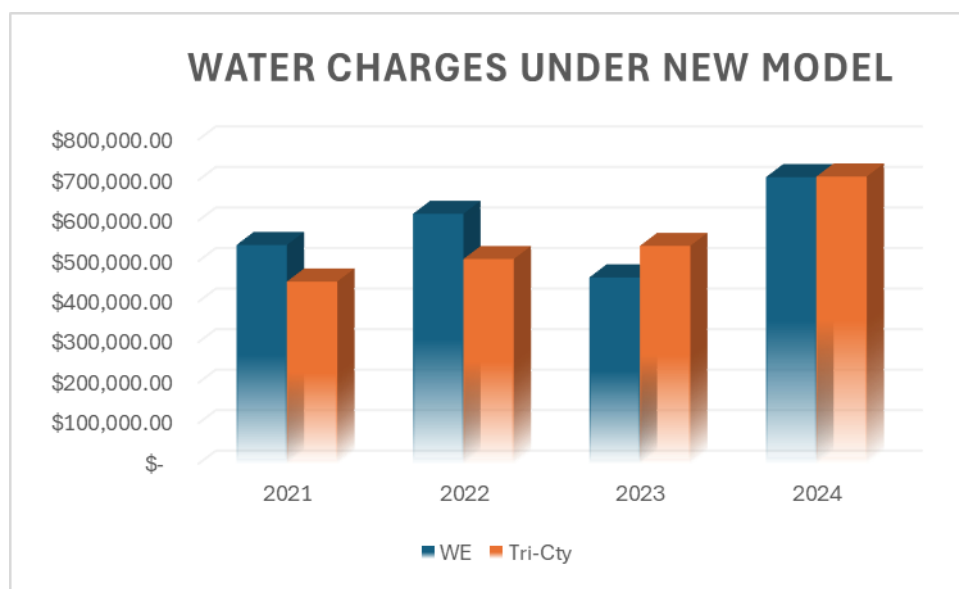
Dillon's review highlighted that the revised methodology overstates West Elgin's water usage. An annual flow deficit—averaging 17% of the total flow from the WTP—was identified when comparing the total water supplied to the sum of all measured consumption by Tri-County members. The causes of this discrepancy may have been related to measurement inaccuracies at Tri-County meter chambers, leakage from the trunk watermain, undetected losses in West Lorne's distribution system not captured by the previous method, under-readings from aging customer meters, and water used during system flushing operations.

Given the magnitude of the flow deficit, Dillon concluded that it is unlikely the discrepancy can be attributed solely to West Elgin's system. A significant portion of the unmeasured flow is likely due to losses or measurement issues within the Tri-County water network itself.

The method used for calculating West Elgin's water consumption significantly overestimated actual usage by assigning all unaccounted-for flow within the Tri-County Water System to West Elgin alone. Dillon Consulting recommended adopting a revised calculation method (Equation 4 attached to this report on pg. 5) that more accurately reflects West Elgin's true consumption, although some uncertainties remain—particularly with data from the West Lorne area.

Based on the revised methodology (Equation 4), West Elgin's water consumption for the years 2021 to 2024 was recalculated, with the results summarized in the table below. The updated figures indicate that West Elgin overpaid for water in 2021 and 2022, and underpaid in 2023 and 2024. Following consultation with the auditors, it was confirmed that there is no need to reopen the financial records for 2021 to 2023. Instead, the net adjustment can be processed in the 2024 fiscal year.

	West Elgin	Tri-County	Difference
2021	\$ 539,668.18	\$ 449,462.57	\$ 90,205.61
2022	\$ 616,572.39	\$504,969.98	\$ 111,602.41
2023	\$ 459,795.91	\$537,429.33	\$ (77,633.42)
2024	\$ 707,107.15	\$708,585.27	\$ (1,478.12)
Total			\$ 122,696.47



Dillon recommends that the Tri-County Water Board investigate the system-wide flow discrepancies by verifying the accuracy of flow meters and conducting leak detection testing on the trunk watermains.

### **Financial Implications:**

As the administering body for the Tri-County Water Board, the Municipality of West Elgin maintains and records all related financial transactions. The identified overpayment will be recorded through an adjusting journal entry in the 2024 fiscal year. This entry will increase the Tri-County's overall deficit by \$122,696.47, ensuring the financial statements accurately reflect the revised water consumption calculations and related costs.

The adjustment was initially reported to the Board on February 6, 2024, during the presentation of the preliminary financials as of December 31, 2023. At that time, the Board was advised that the year-end had not yet been finalized due to manual calculations required for West Elgin. It was noted that the reconciliation would be completed and brought back for acknowledgment at the next scheduled meeting.

The adjustment was subsequently acknowledged again by the municipal auditors on June 25, 2024, when the audited financial statements were presented to the Board for approval. Ms. Christene Scrimgeour confirmed that West Elgin's water consumption figures were inaccurate and would be corrected in the future.

Respectfully submitted by,

Magda Badura

Manager of Corporate Services - Treasurer

**Report Approval Details**

Document Title:	West Elgin Water Consumption Adjustments - 2025-13-Corporate Services Finance.docx
Attachments:	<ul style="list-style-type: none"><li>- Tri-Cty Financials as of December 31, 2024.pdf</li><li>- Tri-Cty Financials as of May 31 2025.pdf</li><li>- Bardura_West Elgin Water Consumption Calculations_January 2025.pdf</li></ul>
Final Approval Date:	Jun 27, 2025

This report and all of its attachments were approved and signed as outlined below:

Robin Greenall