



The Corporation of the Town of Tecumseh

Public Works & Engineering Services

To: Mayor and Members of Council

From: Phil Bartnik, Director Public Works & Engineering Services

Date to Council: Tuesday, June 10, 2025

Report Number: PWES-2025-39

Subject: Source Water Protection 2024 Annual Progress Report

Recommendations

It is recommended:

That Report PWES-2025-39 Source Water Protection 2024 Annual Progress Report **be received.**

Background

Source Protection Plans protect municipal wells and surface water intakes from specific activities that may pose a threat to drinking water. The Ontario government passed the *Clean Water Act* in 2006 to protect water because of the Walkerton E. coli outbreak tragedy in May 2000. The *Clean Water Act* established a process for developing local, watershed-based Source Protection Plans.

Lake St. Clair, the Detroit River and Lake Erie provide the Windsor-Essex Region with its municipal drinking water.

The Essex Region Source Protection Plan (SPP) contains policies to ensure that identified potential risks to the source water are prohibited or managed in a way that protects the municipal drinking water supply.

The Essex Region SPP was first developed in 2015 by a Source Protection Committee (SPC) in consultation with municipalities, community groups and residents, and is

supported by the Essex Region Conservation Authority's Board of Directors, which is the Source Protection Authority (SPA).

Source Protection Progress Reports are submitted to the Town on an annual basis. The 2024 Source Protection Annual Progress Report and the 2024 Risk Management Official Annual Progress Report (Attachment 1) highlight the progress made toward implementation of the Essex Region SPP up to December 31, 2024, and actions taken from January 1 to December 31, 2024.

A representative from the Essex Region Conservation Authority will attend the June 10, 2025, Regular Council meeting to present the 2024 Annual Progress Reports (Attachment 2) and answer any questions and/or provide additional information as requested.

Comments

The Source Protection Annual Progress Report is summarized below:

1. Source Protection Plan Policies and Addressing Significant Risks

There are 44 Essex Region SPP policies to address Significant Drinking Water Threats (SDWT). Thirty-eight policies are now fully implemented, four remain in progress, and the remaining two policies have been reviewed and do not require further action.

2. Municipal Progress: Addressing Risks on the Ground

All 11 municipalities in the ERSPA have vulnerable areas where SDWT policies apply. It is the responsibility of the municipality to ensure daily land-use planning and building permit decisions conform to policies in the Essex Region SPP. It is encouraged that municipalities review this annually to ensure use and efficacy. ERCA has been delegated by all local municipalities to implement Part IV policies. At the request of municipalities, ERSPA will deliver additional training to municipal staff in 2025.

The conformity to policies in the Essex Region SPP must also be demonstrated within each municipality's Official Plan. Of all 11 municipalities in the ERSPA, the County of Essex, the Towns of Essex, LaSalle, Tecumseh, Kingsville and Windsor have completed their Official Plan (OP) conformity exercise. Lakeshore completed their full OP update with pending approval from the County of Essex. The Towns of Leamington and Amherstburg have started the process for updating their OPs in 2024, with Townships of Pelee and Chatham-Kent contemplating updates in 2025.

3. Septic Inspections

This is not applicable in the Essex Region SPA. While mandatory septic inspections are not required, landowners are encouraged to have their septic systems inspected and maintained.

4. Risk Management Plans

In the ERSPA, the handling of storage for liquid fuel volumes greater than 15,000 litres is identified as a SDWT. As a form of mitigation, Risk Management Plans (RMPs) are established in consultation with a Risk Management Official (RMO/I) to show preventative actions are being taken against spills. Since the SPP took effect, a total of 22 RMPs for new threats have been established.

In 2024, four applications related to Section 59 were reviewed. One of those resulted in an RMP for new fuel threat, and one RMP was in progress as of the end of 2024 but has been completed at the time of this report. Two Notices to Proceed were issued in relation to applications that did not involve proposed SDWT activities.

Due to staffing changes, compliance reviews were not conducted in 2024. It is anticipated that several compliance reviews will be completed in 2025 as a second Risk Management Official has been appointed.

5. Provincial Progress: Addressing Risks on the Ground

The Essex Region SPP includes 17 policies that use Provincial Instruments (PI), i.e., Environmental Compliance Approvals, to address SDWTs. In 2024, two new applications for SDWTs were reviewed by Provincial Ministries in vulnerable areas of the Essex Region, specifically for wastewater/sewage works. No new SDWTs have been identified through this process and as a result, all the policies that use PIs in the Essex Region SPP are fully implemented.

In 2024, Project Managers have noted some issues with the province's approach for addressing SDWTs using Prescribed Instruments. Two municipalities have approached the Essex Region Project Manager seeking support with the new requirements for Prescribed Instruments, particular to Consolidated Linear Infrastructure Environmental Compliance Approvals (sewage) and Municipal Drinking Water Licenses. Both PIs now require independent Source Water Risk Assessments and a strategy for managing or avoiding threats to drinking water which could be audited by the Ministry. The Committee was approached for guidance by a municipality (Tecumseh) for support. It is noted that Project Managers were not consulted on this content by the Ministry and given their intimacy with Source Protection, found the instructions to be ambiguous. Contrary to RMPs, the assessments are not reviewed by the Implementing Body and are to be made available upon request.

6. Source Protection Awareness and Change in Behaviour

Road signs have been installed across the ERSPA as part of a provincial awareness initiative, with the Ontario Ministry of Transportation installing five signs in the Essex Region on Highway 401, Highway 77, and Highway 3. More than 60 signs have been installed on local municipal and county roads through coordination with municipalities. In 2024, the Town of Essex installed 3 new signs.

7. Source Protection Plan Policies: Summary of Delay

No significant delays in the implementation of the Essex Region SPP were identified.

8. Source Water Quality: Monitoring and Actions

Harmful algal blooms (HABs) are an annual occurrence in Lake Erie and Lake St. Clair. HABs are formed by blue-green algae (or cyanobacteria) that produce a neurotoxin called microcystin, which is a parameter listed on Schedule 2 of the Ontario Drinking Water Quality Standards. The Essex Region SPC determined that microcystin was a drinking water issue for Lake Erie intakes in 2014. The data were reviewed for all of the intakes in the Essex Region in 2023, including those in Lake St. Clair, the Detroit River and Lake Erie. The Source Protection Committee (SPC) recommended that microcystin be identified as a drinking water issue for all intakes based on that review.

MECP technical staff had advised that data for intakes in the Detroit River do not support the identification of microcystin as an issue. This was anticipated as the concentrations are typically below the half maximum allowable concentration. The SPC reviewed updated data in 2024 in which microcystin was found in Amherstburg above the maximum allowable concentration. It was ultimately decided to continue with the recommendation that microcystin is a drinking water issue for both intakes in the Detroit River. This updated analysis will be finalized in a report upon further consultation with MECP and the public.

NOAA's 2024 Assessment rated the Lake Erie HAB at 6.6, classifying it as a moderately severe bloom. It was both more severe and larger than the bloom in 2023 and was more like the bloom in 2022.

The SPP identifies a policy to monitor phosphorus and microcystin as a drinking water issue and algae blooms, including regional education and outreach. In 2024, ERCA staff were able to secure new sources of funding for monitoring. This includes \$6.3 million in grant funding from the Canada Water Agency.

9. Science-based Assessment Reports: Work Plans

The update to the Essex Region SPP as per Section 36 of the *Clean Water Act* (2006) remains in progress. The updated timeline for completion is by end of 2025, which was delayed by about a year in part due to the late release of the 2021 Director Technical Rules by MECP. There have been other factors contributing to this delay, including staffing shortages and increased workload in other areas.

10. More from the Watershed

The Committee highlighted upcoming projects in the Detroit River. ERCA received \$5.2 million dollars from the Great Lakes Freshwater Ecosystem Initiative (GLFEI) from the Canadian government to build two habitat projects. The first, planned for Summer 2025, is the restoration of a finger dike, which has been breached due to high water levels and strong river currents, at a wetland complex located north of where the Canard River flows into the Detroit River.

The Committee stressed the importance of consistent, ongoing funding that supports monitoring of current and emerging threats. Given the restrictions under the *Conservation Authorities Act*, it is necessary for CAs to seek out external sources of funding through competitive grant applications, which carries a heavy administrative burden.

Consultations

Essex Region Conservation Authority

Financial Implications

There are no financial implications arising from this report.

Link to Strategic Priorities

Applicable	2023-2026 Strategic Priorities
<input type="checkbox"/>	Sustainable Growth: Achieve prosperity and a livable community through sustainable growth.
<input checked="" type="checkbox"/>	Community Health and Inclusion: Integrate community health and inclusion into our places and spaces and everything we do.
<input type="checkbox"/>	Service Experience: Enhance the experience of Team Tecumseh and our citizens through responsive and respectful service.

Communications

Not applicable ☒

Website ☐ Social Media ☐ News Release ☐ Local Newspaper ☐

This report has been reviewed by Senior Administration as indicated below and recommended for submission by the Chief Administrative Officer.

Prepared by:

Joseph Lappalainen, E.I.T.
Project Technician

Reviewed by:

Brad Dupuis, C. Tech.
Manager Water Services

Reviewed by:

Phil Bartnik, P.Eng.
Director Public Works & Engineering Services

Recommended by:

Margaret Misek-Evans, MCIP, RPP
Chief Administrative Officer

Attachment Number	Attachment Name
1	2024 Annual Progress Report
2	Essex Region Conservation Authority Presentation to Council