



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: June 25, 2024

Report Number: PWES-2024-31

Subject: Source Water Protection 2023 Annual Progress Report

Recommendations

It is recommended:

That Report PWES-2024-31 Source Water Protection 2023 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 2023 Source Protection Annual Progress Report and the 2023 Risk Management Official Annual Progress Report (Attachment 1) highlight the progress made toward implementation of the Essex Region SPP up to December 31, 2023 and actions taken from January 1 to December 31, 2023.

A representative from the Essex Region Conservation Authority will be in attendance at the June 25, 2024 Regular Council meeting to present the 2023 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,' up from twenty-nine, with only four policies considered 'in progress'. The remaining two policies have been reviewed and require no further action.

Policies respecting existing SDWTs meeting criteria defined in s.57, s.58 and existing large fuel tanks were implemented.

2. Municipal Progress: Addressing Risks on the Ground

Planning and building decisions must correspond with policies that address vulnerable areas within the municipalities in the Essex Region Source Protection Area (ERSPA) where SDWT have been identified. It is encouraged that municipalities review their process on an annual basis to validate its use and efficacy.

Of the 11 municipalities in the ERSPA, the Towns of Tecumseh, LaSalle, Essex and Kingsville in addition to the County of Essex have completed their required Official Plan conformity exercises. The remaining six municipalities remain in process of amending their respective Official Plans to comply with the policies outlined in the Essex Region SPP.

3. Septic Inspections

This is not applicable to 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 was 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.

In 2022, two RMPs were established to address the last remaining existing threats.

Four applications were reviewed in 2023 resulting in three RMPs being established for future (new) threat through Section 59 municipal screening processes.

Due to staffing changes, compliance reviews were not conducted in 2023.

5. Provincial Progress: Addressing Risks on the Ground

All policies in the Essex Region SPP that use Provincial Instruments (i.e. Environmental Compliance Approvals) are fully implemented and incorporate SWP into their processes.

In 2023, no new applications for SDWTs were reviewed by Provincial Ministries in vulnerable areas of the Essex Region.

6. Source Protection Awareness and Change in Behaviour

Road signs have been installed across the ERSPA to identify sections of road where accidental spills could contaminate our sources of drinking water. Signs continue to be replaced as needed.

If a spill is observed, residents are advised to contact the Spills Action Center at 1-800-268-6060.

7. Source Protection Plan Policies: Summary of Delays

There are no significant delays in the implementation of the Essex Region SPP.

8. Source Water Quality: Monitoring and Actions

Harmful algal blooms (HABs) occur annually in Lake Erie and Lake St. Clair, produced by blue-green algae that release the neurotoxin microcystin, a regulated drinking water contaminant. In 2014, the Essex Region SPC identified microcystin as a drinking water issue for Lake Erie intakes. In 2023, this designation was extended to all Essex Region intakes, including those in Lake St. Clair and the Detroit River. The Source Protection Plan and Assessment Report will be updated accordingly.

NOAA's 2023 assessment rated the Lake Erie HAB at 5.3 on a severity scale of 0-10, indicating a moderately severe bloom but less intense than in 2022. The peak bloom period has lengthened from 10 days in 2010 to 20-30 days in recent years. However, current models cannot predict bloom toxicity or establish trends.

The Source Protection Plan mandates ongoing phosphorus and microcystin monitoring and includes a regional education and outreach policy. Despite funding challenges in 2023 that reduced monitoring and outreach, ERCA remains a leader in phosphorus monitoring and HAB education. ERCA's Agricultural Stewardship program was paused due to funding gaps, though new grants may reinstate some programs in 2024.

In 2023, ERCA released two key reports:

- a) **Kingsville Leamington Nutrient Project Report:** Analyzes a decade of data, showing higher nutrient levels in greenhouse-influenced streams, with increasing concentrations in newly developed areas. ERCA is collaborating with provincial and federal agencies on further steps.
- b) **Essex Region Phosphorus Management Plan:** Details phosphorus levels, sources, knowledge gaps, and reduction strategies, with action items that will be updated as progress is made.

9. Science-based Assessment Reports: Works Plans

The update of the Essex Region SPP per Section 36 of the Clean Water Act (2006) is on track to be completed at the end of 2024. The formal consultation process on new and amended policies will begin mid-2024.

The process is delayed by about a year due to the late release of the 2021 Director Technical Rules by the Ministry of the Environment, Conservation and Parks (MECP), which were necessary for preparing new and updated

policies in the Source Protection Plan. Staffing shortages and increased workloads have also contributed to this delay.

10. More from the Watershed

Implementing Bodies are annually invited to share success stories related to Source Water Protection through the Annual Reporting process. The SPC highlights municipal actions that align with Source Water Protection goals. Since 2019, several municipalities have declared climate emergencies and approved Climate Change Adaptation Plans that include measures to protect water quality by reducing flooding and erosion.

Many municipalities offer subsidy programs for downspout disconnection, rain barrels, and backflow valves to mitigate high flow events and prevent basement flooding. They are updating sewer master plans to include riparian buffers and future flood mitigation planning.

Municipalities support community events like beach cleanups and tree plantings and are updating procedures for road salt application, sediment control, stormwater management, fire fighting, spill containment, and low-impact design.

Although some municipalities are behind in updating their Official Plans, they are actively protecting the environment and, consequently, drinking water sources. The SPC acknowledges and encourages these efforts, especially with increasing development pressures.

Consultations

Essex Region Conservation Authority

Financial Implications

There are no financial implications with 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:

Dana Reid
Public Works & Engineering Services Assistant

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	2023 Annual Progress Report
2	Essex Region Conservation Authority, Presentation to Council