



## Report to Council

Department: Office of the CAO  
Division: Office of the CAO  
Date: April 7, 2025  
Prepared by: Doug Sweet, Chief Administrative Office  
Report Number: Office of the CAO-2025-05  
Subject: Flooding Mitigation Initiatives and Plans  
Number of Pages: 8

### Recommendation(s)

**That** report CAO-2025-05 entitled Flooding Mitigation Initiatives and Plans prepared by Doug Sweet, Chief Administrative Officer dated April 7, 2025, **be received** for information.

### Purpose

The report provides an outline of the proactive operational, capital, and administrative steps that were undertaken in 2024 and the projects planned for 2025 to mitigate flooding risks in the Town of Essex.

### Background and Discussion

At the December 16, 2024, Regular Council Meeting, Council passed the following motion:

#### **R25-01-016**

*Moved by Mayor Bondy*

*Seconded by Councillor Hammond*

*"That Council request a report from Administration outlining initiatives and projects completed in 2024 and planned for in 2025 that help to address flooding in the municipality."*

The report below is broken down into five sections, providing a summary of the actions undertaken by Administration to mitigate flooding risks. The sections include:

1. **Operational Initiatives:** Routine maintenance and system enhancements to improve drainage and sewer management.
2. **Capital Projects:** Infrastructure improvements completed in 2024 and planned for 2025 to increase flood resilience.
3. **Climate Change Adaptation and Disaster Recovery Efforts:** Strategic actions related to climate emergencies, adaptation planning, and post-disaster recovery.
4. **Administrative and Public Engagement Initiatives:** Educational outreach, policy development, and emergency preparedness efforts.
5. **Key Projects and Policies for 2025:** A summary of upcoming projects and initiatives aimed at continuing flood mitigation efforts.

## 1. Operational Initiatives

- The following operational measures were completed in 2024 and will continue into 2025 to maintain and improve the municipality's drainage systems: **Regular Drainage Maintenance and Construction:**  
Ongoing brushing, ditching, and routine maintenance to prevent blockages and maintain efficient water flow.
- **Management of Drainage Pumpstations:**  
An expert contractor was procured to manage and monitor drainage pumpstations, ensuring optimal performance.
- **Installation of Alarms on Drainage Pumpstations:**  
All pumpstations are now equipped with alarm systems to provide real-time monitoring and immediate response to potential malfunctions.
- **Backup Power for Key Pumpstations:**  
Installation of backup power systems ensures uninterrupted operation during power outages.
- **Variable Frequency Drives (VFD) on Pumpstations:**

VFD installation enhances reliability and improves energy efficiency of pumpstations.

- **Urban Storm Sewer and Catch Basin Maintenance:**

Regular flushing and cleaning of urban storm sewers and catch basins to prevent sediment buildup and reduce the risk of urban flooding.

- **Phragmites Program**

Continue to maintain the internal phragmites program and continue with being an active member of the local phragmites user group to discuss current issues and utilize and share best practices.

- **Drainage Maintenance Map**

Regularly update the drainage maintenance map to show past maintenance work performed on each drain.

## **2. Capital Projects: 2024 Approved and 2025 Planned**

Several key infrastructure projects were undertaken in 2024, and additional projects are planned for 2025 to enhance the Town's flood resilience:

- **Completion of Comprehensive Servicing Master Plan (2024):**

The first-ever comprehensive plan to guide future infrastructure upgrades and improve water management.

- **Emergency Preparedness Generators:**

- Generator for Essex Public Works Building (Planned for 2025)
- Generator for the Harrow and Colchester South Community Centre (Planned for 2025)
- Generator for Harrow Public Works Building (Completed in 2024)
- Generator for the Essex Centre Sports Complex (Completed in 2024)

These installations will enhance the Town's ability to maintain services and provide shelter during emergency flood events.

- **Rush Catchment Area Improvements (2024):**

Council approved the design of a major urban stormwater outlet in Essex Centre to mitigate flooding in high-risk areas.

- **Harrow Lagoon Sanitary Pumpstation Upgrades (2025):**  
Planned upgrades will enhance the system’s capacity and reliability.
- **Harrow Lagoon Sanitary Pumpstation Replacement of Raw Water By-pass and Check Valve (2024):**  
Critical infrastructure improvements completed to enhance system efficiency.
- **Sanitary Collection System Repairs (2024):**  
Numerous repairs based on Inflow and Infiltration (I&I) inspections to reduce excess water entering the system.
- **Increased Inflow and Infiltration (I&I) Efforts (2024 & 2025):**
  - Installation of manhole rain catchers
  - Manhole inspections
  - Smoke testing
  - CCTV inspections of sewers
- **Green Space and Stormwater Retention:**
  - New sports field project added significant green space, trees, and two large stormwater retention ponds.
  - Conversion of 3,000 sq. ft. of old playground space at Stanton Park into grass areas to improve absorption and reduce runoff.

### **3. Climate Change Adaptation and Disaster Recovery Efforts**

#### **Town-wide Climate Emergency Declaration (2021)**

In 2021, the Town of Essex declared a Town-wide climate emergency, aligning with the County of Essex’s declaration. This declaration highlighted the urgency of addressing climate change and reinforced the Town’s commitment to mitigating the impacts of extreme weather events, including flooding.

#### **Climate Change Adaptation Plan (2021–2026)**

Following the climate emergency declaration, the Town adopted a Climate Change Adaptation Plan (2021–2026), which includes a number of recommendations aimed at mitigating climate-related risks, including flooding. The plan provides a framework for enhancing community

resilience and guiding future actions. Annual reports on the progress of each item identified in the plan are presented to Council, ensuring transparency and accountability in implementing climate adaptation measures.

### **Promotion of Disaster Recovery Assistance for Ontarians (DRAO) Program**

Following the severe wide-spread flooding in August 2023, the Town of Essex actively promoted the Disaster Recovery Assistance for Ontarians (DRAO) program administered by the Province of Ontario. The program offered potential financial assistance to residents affected by the disaster.

In a recent update, the Province reported that:

- A total of \$90,000 was paid out to 22 applicants.
- However, a number of residents were deemed ineligible for the program due to a range of factors, such as:
  - Already receiving an insurance payout.
  - Ineligible costs not covered under the program.
  - Damage caused by sewer backup rather than stormwater flooding.

These efforts reflect the Town's commitment to supporting residents and ensuring that available resources are utilized to help mitigate the impact of flooding events.

## **4. Administrative and Public Engagement Initiatives**

Significant efforts were made in 2024 to engage the public, educate residents, and implement administrative policies that strengthen flood mitigation:

- **Emergency Planning Resources:**
  - Development of an Emergency Planning webpage
  - Printable Emergency Preparedness Guidebook
  - Media releases and promotional efforts during Emergency Preparedness Week, including emergency kit giveaways.
- **Testing of Emergency Alert System:**
  - Regular tests of the Everbridge Emergency Alert System to ensure rapid communication during emergencies.

- **Public Education and Awareness:**
  - Essex Fire conducted public education on emergency management, and the importance of 72-hour kits.
  - Use of the Legacy Oil and Gas Well grant to acquire public education tents and banners with flooding prevention messages distributed county-wide.
- **Subsidy Programs to Reduce Flood Risks:**
  - Rain barrel subsidy to encourage water retention.
  - Sump pump overflow subsidy to manage excess water.
  - Increased basement flooding subsidy amounts to assist residents in protecting their properties.
- **Policy and Planning Approvals:**
  - Adoption of a Buffer Strip Policy to protect vulnerable areas from erosion and runoff.
  - Council adoption of Regional Stormwater Guidelines to standardize best practices across the region.
  - Adoption of a 5-year Infrastructure Capital Forecast to guide future sewer improvements and long-term planning.
- **Advocacy for Rivard Canard Maintenance**
  - Continue collaborating with ERCA to advocate for provincial funding to support Essex, Kingsville, and Amherstburg in maintaining the River Canard drain, ensuring that this critical outlet operates as designed.

## **5. Key Projects and Policies for 2025**

Looking ahead to 2025, the Town of Essex remains committed to advancing flood mitigation through these key initiatives:

- Completion of Harrow Lagoon Sanitary Pumpstation Upgrades.
- Installation of Backup Power at the Essex Public Works Building for Emergency Preparedness.
- Installation of Backup Power at the Harrow and Colchester South Community Centre for

emergency shelter.

- Continued Inspection and Rehabilitation of Sanitary and Stormwater Infrastructure.
- Ongoing Public Education Campaigns and Emergency Preparedness Initiatives.

## **Conclusion**

The Town of Essex has taken a proactive and multifaceted approach to address flooding risks through infrastructure improvements, operational diligence, climate adaptation measures, and public engagement. The 2021 declaration of a climate emergency and the implementation of the Climate Change Adaptation Plan (2021–2026) demonstrate the Town’s commitment to long-term resilience. These ongoing efforts, combined with strategic planning and capital investments, ensure that the municipality remains well-prepared to mitigate flooding and protect the community in the years ahead.

## **Financial Impact**

Funding for the actions outlined in this report has been included in approved operating and capital budgets for 2024 and 2025. Any additional or enhanced actions identified as necessary to further mitigate flooding risks will be presented and discussed during future budget deliberations to ensure adequate resources are allocated to maintain and enhance flood protection measures.

## **Consultations**

Director of Community Services

Director of Corporate Services

Director of Development Services

Director of Infrastructure

Director of Legal and Legislative Services

Manager of Corporate Communications

### **Link to Strategic Priorities**

- Embrace asset management best practices to build, maintain, and continuously improve our municipally owned infrastructure.
- Leverage our Town's competitive advantages to promote jobs and economic investment.
- Take care of our natural environment and strengthen the sense of belonging to everyone who makes Essex "home".
- Deliver friendly customer service in an efficient, effective, and transparent manner while providing an exceptional working environment for our employees.
- Build corporate-level and community-level climate resilience through community engagement and partnership and corporate objectives.