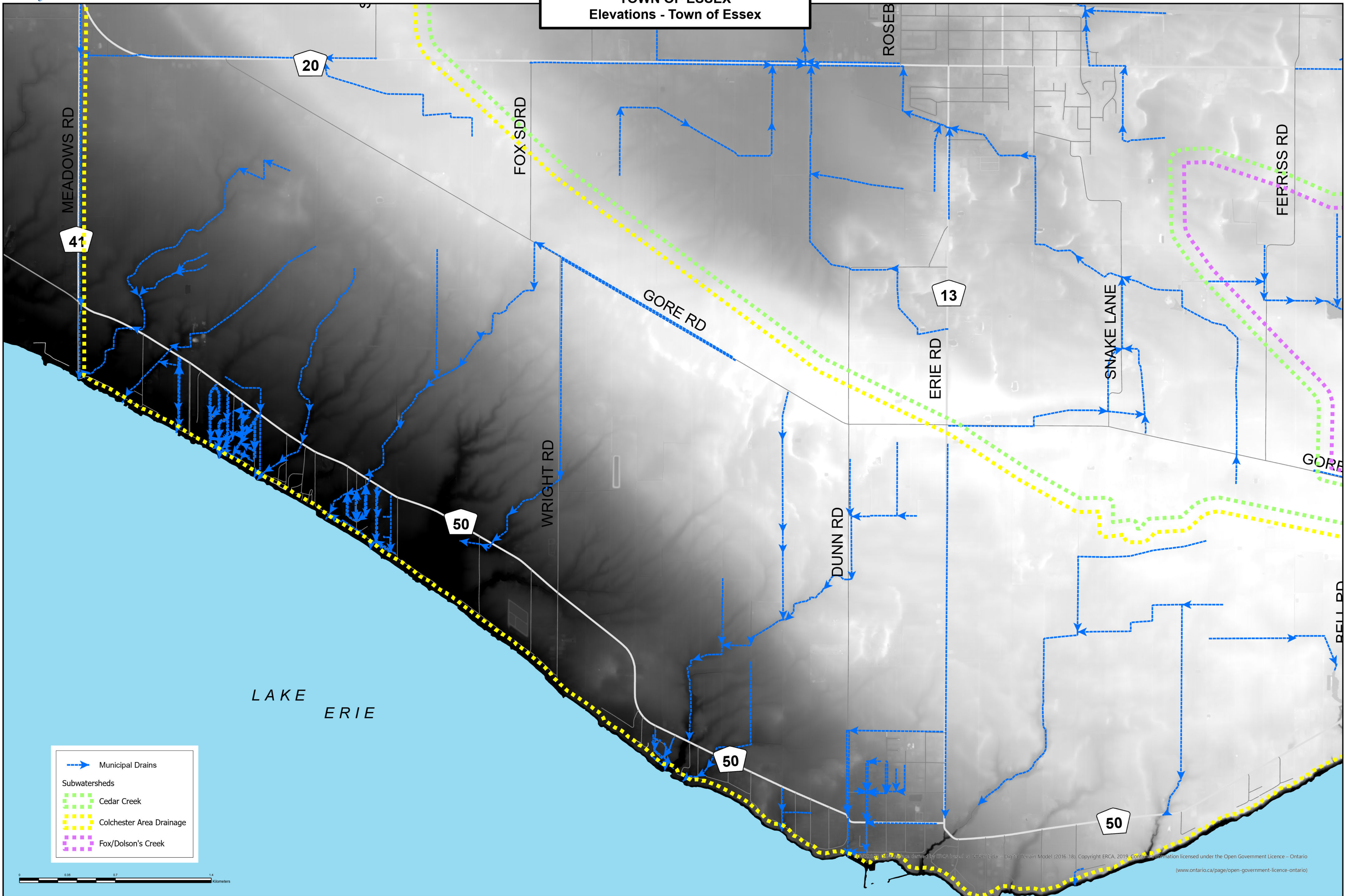


Appendix A
Colchester Municipal Drain Inventory

TOWN OF ESSEX Elevations - Town of Essex



- Municipal Drains
- Subwatersheds
 - Cedar Creek
 - Colchester Area Drainage
 - Fox/Dolson's Creek

0 0.35 0.7 1.4 Kilometers

Drain Name	Outlet	Drain Type	Year of Last Report adjacent or south of County Road 50	Estimated Design Capacity
West Townline Drain	Lake Erie	Open Ditch	1948	1:2 year
Langlois-Arner	Lake Erie	Enclosed Upper Portion Open Ditch with enclosed outlet	2011 2025 improvements underway	1:2 year 2025 improvements provide 1:100 year at outlet
Bondy No. 2	West Townline Drain	Enclosed Upper Portion Open Ditch	1965	1:2 year
Bondy No. 1	Lake Erie	Enclosed Upper Portion Open Ditch	1987 (outlet) 1968	1:2 year
Crystal Beach Drain (South and North)	Bondy No. 1 & Lake Erie	Enclosed	2020	1:2 year

Drain Name	Outlet	Drain Type	Year of Last Report adjacent or south of County Road 50	Estimated Design Capacity
Bellcreeft Beach Drainage System	Lake Erie	Enclosed 2 pumps	2011 1998	1:5 year
Bellcreeft Beach Diversion Drain	Lake Erie	Open Upper Portion Outlet portion enclosed	2016	1:2 year
William Cornwall	Lake Erie	Open Ditch Pump Enclosed Outlet	2013 (outlet) 1985	1:2 year
Seymour Beach Drain	William Cornwall	Enclosed	1990	1:2 year
Argyle Beach Drainage System	Lake Erie	Enclosed	1995	1:2 year

Drain Name	Outlet	Drain Type	Year of Last Report adjacent or south of County Road 50	Estimated Design Capacity
Potlake Road Drain	Non-municipal drain (wetland area)	Enclosed Upper Portion Open Ditch	1984	1:2 year
Colchester Country Club Drainage	Non-municipal drain	Enclosed Open Ditch outlet	2008	1:5
Palen Drain	Non-municipal drain	Open Ditch	2006	1:2 year
Star Subdivision Drain	Lake Erie	Open Ditch Enclosed outlet	1989	1:2 year
Herring Ave Drain	Lake Erie	Enclosed	1963	1:2 year
Murdoch St Outlet Drain	Lake Erie	Enclosed	2014	1:2 year

Drain Name	Outlet	Drain Type	Year of Last Report adjacent or south of County Road 50	Estimated Design Capacity
Murdoch St Outlet Drain No. 2	Murdoch St Outlet Drain	Enclosed	1975	1:2 year
Dunn Rd Drain	McWaters Drain	Enclosed	2014	1:2 year
McWaters Drain	Murdoch St Outlet Drain	Enclosed Open Upper Portion	2014	1:2 year
Sydenham, Harrison, & Jackson Street Drainage System	Murdoch St Outlet Drain No. 2	Enclosed	2000	1:5 year

Appendix B

Council Report on Flood Mitigation Initiatives



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.