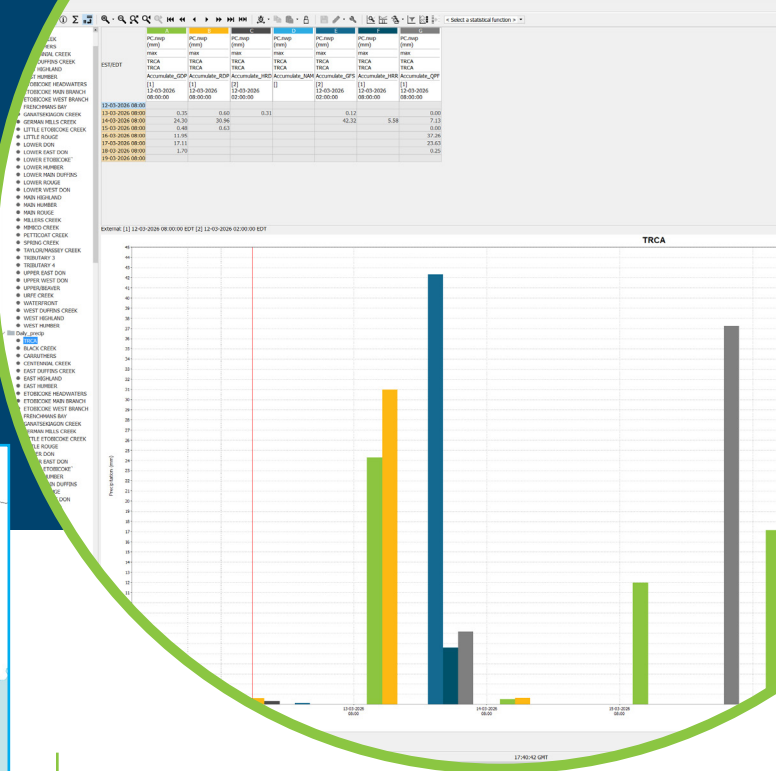




TRCA-WIDE FLOOD AND EROSION SERVICES

Flood Forecasting and Warning Modernization



OVERVIEW

Flood Forecasting and Warning is a service TRCA provides for all regional and local municipalities. Situational awareness can be critical when considering the potential magnitude of flood events and size of its jurisdiction.

An Emergency Operations Centre (EOC) dashboard will enable tracking and documenting flood response resources and site specific flood conditions for a jurisdictional wide and coordinated flood response. TRCA has already initiated the development of our Next Generation Flood Forecasting and Warning System. Further investments will accelerate the system development providing additional monitoring and reporting capabilities which will further streamline TRCA's flood forecasting and warning program and take advantage of modern real-time hydrology modeling.

OBJECTIVES

Modernizing TRCA's flood monitoring network is crucial as storms become more intense and localized. Upgrading gauges to real time and adding new stations will improve forecasting accuracy, modeling, and emergency response, reducing regional flood damage. The objective is to build a modern, dense real time network that supports advanced modeling, early alerts, and effective community warnings.

BENEFITING STAKEHOLDERS

- Residents in at risk communities
- Private land, properties, municipal infrastructure, and public utilities
- All of TRCA's municipal partners

EXPECTED IMPACT

Enhancements to TRCA's flood forecasting and warning situational awareness, targeted flood warning messages, and further support to municipal emergency management response.

BUDGET & FUNDING

Estimated Total Cost (\$000's): \$580

Dashboard - \$100

Early Warning Systems - \$480

Possible Funding Sources:

- TRCA
- Municipal Partners

OWNERSHIP

- TRCA



KEY PRIORITIES AND ACTIVITIES TO DATE

Modernize Forecasting Systems

High Priority



Advance TRCA's Next Generation Flood Forecasting and Warning System using the FEWS Decision Support System to deliver accurate, real-time data and targeted flood messaging across the jurisdiction.

Enhance Situational Awareness

High Priority



Develop an EOC Dashboard to provide real-time visibility of staff, resources, and flood conditions for faster, coordinated responses.

Improve Operational Efficiency

High Priority



Automate key processes to reduce errors, improve communication, and enhance operational effectiveness during emergencies.

FEWS - Phase 1 (2020) completed, pilot project.

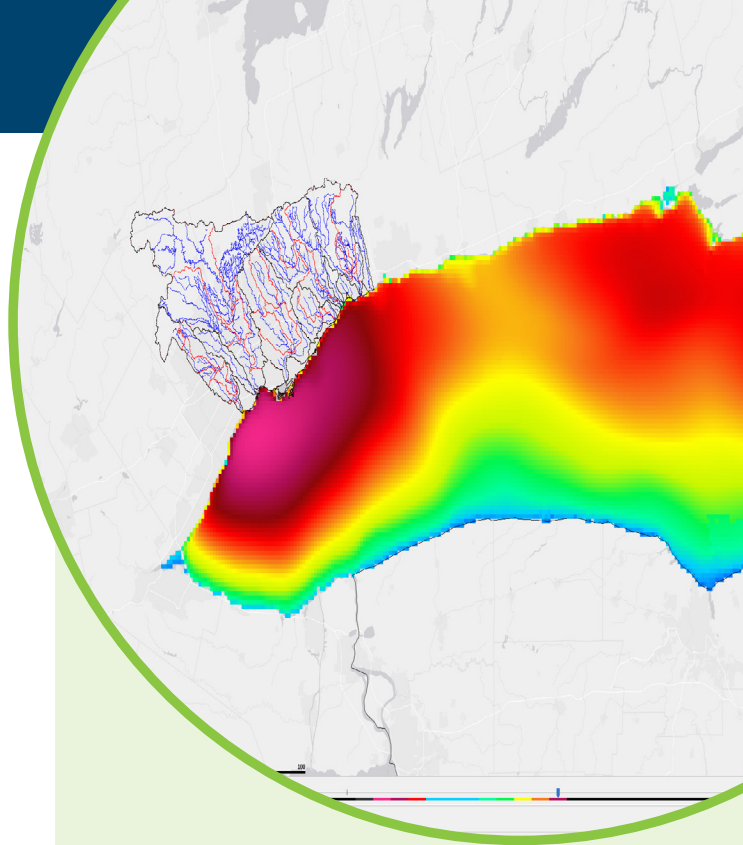
Phase 2 (2023) completed, DPC intergration. Currently FEWS is operational for Daily Planning (DP) purposes.

RISKS IF UNFUNDED

Social: Residential communities and businesses do not currently recieve site specific flood risk levels based on real time watershed conditions. Flood emergency support is not currently specific to locations, but jurisdictional wide. Flood messages will remain general for the entire jurisdiction.

Financial / Economic: Enhanced flood forecasting and warning systems + situational awareness can improve lead time which will lead to reduced flood impacts to life and property, reducing the costs associated with flood events.

Deferred Action Risk: Delayed action results in a higher probability of experiencing extreme floods and flood impacts.



KEY DATES

Possible Start: Q1 2026

Duration:

2 Years for Situational Awareness Tool

3-5 Years for Early Warning System

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