

Coastal Flood Hazards Across the Great Lakes



Flooding is the leading cause of public emergencies in Ontario, and communities across the Great Lakes region are the most vulnerable to its impacts.

Coastal floods are worsened by periods of high water levels, wave uprush and overtopping, and ice spray. These hazards threaten homes, businesses, infrastructure, recreational areas, public safety, and access for first responders.

Coastal Conservation Authorities are local watershed experts who identify and monitor areas prone to flooding across the Great Lakes and regulate development in hazardous areas to reduce risks to communities.



Coastal Flooding can occur at any time of the year during extreme weather, high water levels, storm surges, heavy rainfall, and ice or snowmelt events.



Ice Spray occurs during winter storms when intense wind-driven waves cover infrastructure and homes in thick ice. The ice is often mixed with beach sediments, adding weight to the coating.



Wave Uprush and Overtopping occur when intense wind-driven waves hit the coastline, pushing lake water onto low-lying areas. This hazard is intensified during periods of high water levels, leading to destructive flood events.



High Water Levels occur when water levels rise significantly above the normal range due to heavy rainfall or snowmelt events, leading to the flooding of low-lying areas.



 Catfish Creek Conservation Authority

Conservation Authorities Reduce Risk to People and Property Across the Great Lakes

Ontario's 26 coastal Conservation Authorities are the first line of defence against coastal flooding and catastrophic loss. Working in partnership with local municipalities, our watershed experts conduct coastal hazard assessments to identify high-risk and problematic areas within coastal communities, ensuring decision-makers have access to the best available data to guide development away from hazardous areas.

Our proactive approach to coastal hazard management is one of the most effective and cost-efficient ways to build resilient communities, minimize damage, and reduce insured losses.

Conservation Authorities Keep Coastal Communities Informed

Each year, coastal Conservation Authorities issue flood forecasting messages and warnings to communities, informing watershed residents of the current flood status across the Great Lakes region.

Coastal Conservation Authorities and the Ministry of Natural Resources collaborate to forecast where and when flooding along the Great Lakes is likely to occur, and to issue timely flood messages that keep communities and emergency managers informed. By working together, Conservation Authorities and the Province are building resilient, flood-ready coastal communities.



 Lower Thames Conservation Authority

Visit www.conservationontario.ca to find your local Conservation Authority and learn more about flood hazards in your community.