



Quinte
CONSERVATION

Flood Forecasting and Warning



Quinte Conservation's Role

The province of Ontario delegates the responsibility for flood warning to the Conservation Authorities of Ontario. To fulfill this responsibility Quinte Conservation administers Flood Forecasting and Flood Message systems. Quinte Conservation acts in an advisory capacity only, providing continuous monitoring of flood conditions. Quinte Conservation is not responsible for flood fighting other than in the operation of its own dams. During a flooding situation, Quinte Conservation's office will be staffed appropriately to monitor water levels and weather conditions on a 24-hour basis if required.

Quinte Conservation maintains a flood warning system for the watersheds of the Moira, Napanee and Salmon Rivers as well as all of Prince Edward County and will alert its member municipalities and appropriate agencies regarding potential flood threats. Quinte Conservation's staff monitors watershed conditions carefully all year. They are on duty, ready to alert municipal flood coordinators, the media, the public,

police and other agencies of potential danger to lives or property. Quinte Conservation's experienced staff know the watersheds, their flooding history and how they respond under various conditions. Staff members use all the data and tools available in preparing forecasts and warnings.

What Causes Floods?

Floods usually occur as a result of excessive snowmelt, heavy rainfall, ice jams or a combination of these factors. Although flooding is more common in the spring, floods may occur at any time of year.

Flood Warning Program

Each fall Quinte Conservation updates the Flood Warning Program. This plan contains vital information for local municipalities whose responsibility it is to respond to a flood emergency. Quinte Conservation acts in an advisory capacity, providing continuous monitoring of flood conditions and issuing bulletins to municipal flood coordinators and the media when required.



Quinte
CONSERVATION
a member of
Conservation Ontario

For more information
www.quinteconservation.ca
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Flood Communications

At any time of the year, when there is flooding, Quinte Conservation will issue up to three levels of messages:

WATERSHED CONDITIONS STATEMENT: This is a general notice of potential flooding or other conditions that pose a safety risk. There are two kinds of statements:

- A **WATER SAFEY STATEMENT** indicates that high flows, unsafe banks, melting ice or other factors could be dangerous for users such as anglers, boaters, swimmers, children or pets. Flooding is not expected.
- A **FLOOD OUTLOOK STATEMENT** gives early notice of the potential for flooding based on weather forecasts calling for heavy rain, snow melt, high wind or other conditions that could lead to high runoff, cause ice jams, lakeshore flooding or erosion.

FLOOD WATCH: This level notifies that the potential for flooding exists within specific watercourses and municipalities. Municipalities, emergency services and individual landowners in flood-prone areas should prepare.

FLOOD WARNING: Flooding is imminent or already occurring in specific watercourses or municipalities. Municipalities and individuals should take action to deal with flood conditions. This may include road closures and evacuations.

Monitoring Water Levels

Water levels and precipitation data are checked regularly. Forecasts are diligently scrutinized. During the winter months snow cover and ground conditions are regularly assessed as are the ice conditions in local waterways. Forecasting and warning information is also provided to Quinte Conservation by the Ontario Surface Water Monitoring Centre. During a flood emergency Quinte Conservation supplies information on changing conditions to the public and, in particular, to municipalities, whose job it is to respond to the flood.

Rainfall

Quinte Conservation is interested in rainfall amounts for a number of reasons. Heavy rain may contribute to spring floods and the threat of flooding at other times during the year. Lack of rain during summer months may result in low flows in local waterways. Heavy downpours any time of year may result in concerns about stormwater runoff.

Snow Sampling



During winter, every two weeks Quinte Conservation staff sample snow conditions at 14 locations in the watershed area. At each snow sampling station the depth and weight of snow is carefully measured and recorded along with ground conditions. This information is used to calculate the amount of melt water or potential runoff contained in the snow. Snow sampling data is also submitted to the Ontario Surface Water Monitoring Centre, which collects the snow survey data from all Conservation Authorities in the province.

Monitoring Ice Conditions

Winter ice conditions in the Quinte Conservation watershed are also carefully monitored. There is a history of flooding due to ice jamming on local waterways. The thickness of the sheet ice is checked when conditions permit and checks are also made for frazil, or slush ice. Frazil ice is formed in areas of open water during periods of extreme cold. This sticky ice can cause flooding when it accumulates under the ice sheet, forming an underwater dam that backs up the water. Flooding due to ice jamming can be very unpredictable.

Water Control Structures

Quinte Conservation owns and operates 40 dams. Some, like the ice control dams in the City of Belleville, assist in reducing the threat of flooding. Other dams are lowered each fall to provide additional storage for spring melt-waters.

Where to Find Flooding Information?

For up to date flooding information visit our website,
www.quinteconservation.ca.