



Flood Hazard Mapping Frequently Asked Questions

1. What is flood hazard mapping?

Riverine flooding occurs when water levels in rivers and streams rise and overflow their banks. This type of flooding is commonly caused by increased river flows resulting from heavy rainfall, snowmelt, or a combination of both.

SNC undertakes flood hazard mapping studies with the support of qualified engineers and technical specialists, following standards and guidelines established by the Ontario Ministry of Natural Resources.

These studies use detailed information about watershed characteristics, including topography, land use, precipitation, streamflow, and surveys of watercourses and hydraulic structures, such as bridges and culverts.

This information is used to develop models that simulate how water moves through a watershed during flood events. The resulting flood elevations and flood extents are used to map different types of flood events.

2. What is the 1 in 100 year flood?

A 1-in-100-year flood has a 1% chance of occurring or being exceeded in any given year. In comparison, a 1-in-2-year flood has a 50% chance of occurring or being exceeded in any given year, making it much more likely. These terms describe the probability of flooding, not how often floods will occur. For example, a 1-in-100-year flood could occur more than once within a short period.

3. What is a floodplain?

A floodplain is an area of land next to a river, stream, or other watercourse that may become flooded when water levels rise above the riverbanks. Floodplains are typically dry under normal conditions but become covered by water during periods of high flow.

The size of a floodplain depends on the magnitude of the flood. Smaller, more frequent floods, such as a 1-in-2-year flood (50% chance of occurring in any given year), generally cover a smaller area. Larger, less frequent floods, such as a 1-in-100-year flood (1% chance of occurring in any given year), typically reach higher water levels and cover a larger area of land.





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4. What is the regulatory floodplain?

In Ontario, development within floodplains is governed by provincial legislation and policies. The *Conservation Authorities Act* provides the legal framework for South Nation Conservation (SNC) to deliver programs and services that help reduce risks to people and property from natural hazards, including flooding and erosion.

Under the Act and Ontario Regulation 41/24, SNC regulates certain activities within floodplains and other natural hazard areas.

The regulatory floodplain is the area of land that would be flooded during a specified flood event, based on provincial standards established by the Ontario Ministry of Natural Resources. Within SNC's jurisdiction, the regulatory floodplain for rivers and streams is determined using the 1-in-100-year flood, which has a 1% chance of occurring or being exceeded in any given year.