



Riverine (Fluvial) Flood Mapping Technical Definitions

The Government of Northwest Territories Department of Environment and Climate Change has adopted these technical definitions for the purposes of flood mapping and may update them if required. These definitions may differ from definitions used by other departments or jurisdictions.

Riverine (fluvial) flooding: Flooding that occurs when water flows outside a river, stream, or creek channel and inundates normally dry land. Causes may include ice jams or other blockages, heavy rainfall, and/or snowmelt.

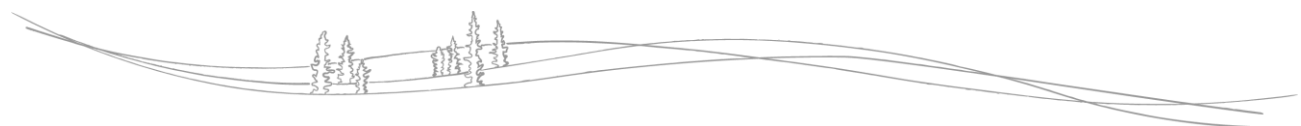
Flood inundation map: A map that displays the floodwater extent of historical or theoretical floods. These maps may be developed using one or a combination of approaches, such as high-water mark surveys, satellite imagery, aerial photos taken during a flood, community observations, and/or hydrologic and hydraulic investigations.

Flood hazard map: A map that displays the extent of a flood with a specified annual exceedance probability (AEP). These maps show the results of hydrologic and hydraulic investigations and may also delineate flood zones, such as the floodway and flood fringe.

Annual exceedance probability (AEP): The probability, expressed as a percentage, of a given flow or water level occurring or being exceeded in any given year. Floods are usually expressed as an AEP or return period. For example, a 1% AEP flood is equivalent to a 100-year flood, and both represent a flood with a 1% chance of occurring in any given year.

Flood hazard area: The entire floodwater extent shown on a flood hazard map, often separated into the floodway and flood fringe. The delineation between these two zones is based on water depth, velocity, or ice conditions, depending on the flood mechanism.

Ice-affected flooding: Flooding that occurs when river ice alters flow, causing water levels to rise. This is often the result of ice jams but may also be caused by other ice-related processes. The risk is highest during spring breakup.





Ice-affected floodway: The river channel and parts of the flood hazard area where the water depth is greater than 1 metre, or that are exposed to moving ice, during an ice-affected flood. If data regarding moving ice is unavailable, only water depth will be used to define the floodway.

Ice-affected flood fringe: Parts of the flood hazard area where the water depth is less than 1 metre, and that are not exposed to moving ice, during an ice-affected flood. If data regarding moving ice is unavailable, only water depth will be used to define the flood fringe.

Open water flooding: Flooding that occurs due to high streamflow when river ice does not alter flow, typically due to prolonged or intense rainfall, rapid snowmelt, or both.

Open water floodway: The river channel and parts of the flood hazard area where the water depth is greater than 1 metre and/or water velocity is greater than 1 metre per second during an open water flood .

Open water flood fringe: Parts of the flood hazard area where the water depth is less than 1 metre, and the water velocity is less than 1 metre per second, during an open water flood.

