



# Spring Flooding

*Don't be scared, be prepared.*

Snow accumulation during the winter season can lead to flooding during the early spring if conditions are right. When temperatures rise, snow melts and turns to runoff. Ice jams that have accumulated in rivers also start to move with the melt. This can be a gradual or very quick process depending on temperatures. When this process combines with precipitation events and frozen ground, the spring thaw can become a serious flood event.

## Need to know

- In the spring **ice is not safe**, even thick ice. During the spring melt, lines of impurities in the ice melt very quickly, creating weak spots.
- During the spring, riverbanks thaw and may collapse when someone walks on them. Snow and ice overhangs also form in these areas and may present an additional danger as it is difficult to tell that you are not walking on solid ground. As a general rule, do not walk along riverbanks.
- The rivers in TRCA are 'flashy' which means that small amounts of precipitation or warm weather causing snowmelt can cause the water levels to rise very quickly. Do not walk or play near water bodies.

## 6 Factors of Snow Melt Flooding

1. **High soil moisture conditions prior to snowmelt.**
2. **Ground frost/frozen soil.**  
If the soil is already saturated or the ground is frozen, water from snowmelt cannot be absorbed. Instead this water travels directly to rivers and streams and can cause water levels to rise very quickly, potentially causing flooding.
3. **Heavy winter snow cover.** More snow = more water stored for snowmelt.
4. **Widespread heavy rains during the melt period.** Heavy rain can warm up cold snowpacks, causing them to begin melting earlier than they would otherwise. "Rain-on-snow" events are watched carefully for this reason.
5. **Rapid snow melt.** Normal snowmelt rates are comparable to light or moderate rainfall, but high temperatures can cause runoff rates to increase drastically.
6. **Ice jams** in rivers can act as dams on the river potentially causing flooding.

## Ice Jamming

- Long cold spells can cause the surface of rivers to freeze. When a rise in the water level or a thaw breaks the ice into large chunks, these chunks can become jammed at man-made and natural obstructions. With no way past the obstruction, the river will become backed up and can overflow its banks causing flooding. This can also happen when debris and fallen tree limbs become tangled causing a debris jam.



1 cubic metre  
of compacted snow  
(approximately the size  
of your dishwasher)



Up to 1,000 litres of water or over 83  
twenty-four packs of 500ml water bottles

# Warnings, Watches, Statements?

## Environment Canada Weather Messages

**Special Weather Statements** are the least urgent type of alert and are issued to let people know that conditions are unusual and could cause concern.

**Watches** alert you about weather conditions that are favourable for a storm or severe weather, which could cause safety concerns.

As certainty increases about the path and strength of a storm system, a watch may be upgraded to a **Warning**, which is an urgent message that severe weather is either occurring or will occur.



Sign up for EC Alert Me to receive Environment Canada alerts straight to your email or mobile phone.

[ecalertme.weather.gc.ca](http://ecalertme.weather.gc.ca)

## TRCA Flood Messages

**Watershed Conditions Statements** are the least urgent type of alert. They consist of **Water Safety Statements** which are issued to let people know that high flows, unsafe banks, melting ice, or other factors could be dangerous for recreational users, and **Flood Outlook Statements** which provide 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.

**Flood Watches** alert you that flooding is possible in specific watercourses and municipalities, those in flood prone areas should prepare.

As certainty increases about the path and strength of a storm system, a watch may be upgraded to a **Flood Warning**, which is an urgent message that flooding is either occurring or will occur. Some severe weather can occur rapidly, with less than a half hour's notice.

Normal

Flood  
Watch



Watershed  
Conditions  
Statement

Flood  
Warning



### IS YOUR FAMILY PREPARED?

In the event of a disaster, you need to be able to provide for your family for **72 hours** (3 days). Emergency responders will be helping the most needy (those trapped by fallen buildings, in burning homes, crushed cars, etc.) first. In order to meet that goal they need to be able to count on all those who are not in imminent danger to fend for themselves. Your well-prepared family could help save the lives of others, not just yourselves. For more information on how to create your emergency plan and stock your emergency kit, visit [www.getprepared.gc.ca](http://www.getprepared.gc.ca)



## Driving in Flood Waters

- DON'T DRIVE THROUGH FLOOD WATER. Find another route.
- When approaching a flooded area, you can't be sure of the depth of the water or the condition of the road beneath it, which may be broken up or washed away. There may be no road left under the water.
- 15 cm (6 inches) of standing water – sometimes less – can be enough to cause engine stalling.
- In 30 cm (1 foot) of water, a typical car can begin to float and, as traction is lost, so is steering control. If the water is moving, your vehicle could literally float away.
- At 60 cm (two feet) of water, larger vehicles such as pickup trucks and SUVs are in danger of floating away.
- NEVER try driving through fast-moving water, such as an overflowing river—your vehicle could be swept away!

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