

# ICE ON/OFF MONITORING

## WHY

The timing and duration of ice cover can provide **valuable information about the health of the watershed, particularly in the context of climate change**, as freeze-thaw cycles are tightly linked to changes in both air and water temperature.

Recording the date when a body of water becomes covered by a thick layer of ice (ice on) and the date that it becomes completely free of ice (ice off) is **crucial for understanding if these events are happening within a normal or expected range** in a given year.

Ice on/ice off cycles also affect sediment and nutrient delivery and serve as **important biological cues for some species**, with ice on triggering behaviours like hibernation (or hibernation-like behaviours), and ice off signaling the beginning of spawning and/or major foraging seasons.



## WHEN

**Ice on occurs in the winter**, when temperatures begin to remain below freezing for long periods. This often occurs in December, but can start in November in some smaller and more northern areas. **Ice off typically happens in the spring**, with the final thaw typically happening between late March and early May. Similar to Ice on, it can vary greatly depending on size, flow, and latitude of the given body of water.

## WHERE

**Any body of water in the watershed**, including lakes, streams, bays and sections of river, that has been known to freeze during the winter.



Ottawa RIVERKEEPER®  
GARDE-RIVIÈRE des Outaouais

# ICE ON/OFF MONITORING

## HOW

### Step 1: Observe

- At the beginning of winter (ice on) and spring (ice off), visit your body of water frequently (daily if possible) to check on ice conditions.
- Continue to monitor your location for several days after first noting ice on or ice off conditions, to ensure that those conditions persist. This is particularly important if temperatures are still somewhat variable.

### Step 2: Identify

- **Ice on** is the date that the body of water becomes completely covered by a cohesive sheet of ice that is approximately 6 inches thick.
  - For safety reasons, estimate ice thickness if you are unable to measure it. **DO NOT test ice thickness by attempting to stand or skate on it**
- **Ice off** is the date that the body of water becomes completely free of ice.
  - There may be small pieces of ice floating, but no sheets or chunks large enough to impede navigation should be present.



Ice on



Ice on/ice off conditions not met



Ice off

### Step 3: Report

- Record the first day that the conditions listed above have been met, and report that date along with the location (include GPS coordinates if possible) and a photo to Ottawa Riverkeeper through one of the following methods:
  - use the submission form at [ottawariverkeeper.ca/ice-observations](http://ottawariverkeeper.ca/ice-observations)
  - send an email to the contact below
- If an area freezes and thaws multiple times in a season before ice on or ice off conditions remain, please report all observations throughout the season and the dates they occurred.

## CONTACT

**cbm@ottawariverkeeper.ca**; include "Ice" in the email subject line