



1.0 About this code of practice

This code of practice outlines Fisheries and Oceans Canada's (DFO) national best practices for ice bridges and snow fills.

Ice bridges and snow fills are two methods used for temporary winter access to the other side of a watercourse in areas where an existing crossing is not available or practical to use.

An ice bridge is constructed by flooding the ice surface of a watercourse. By building up the ice thickness, vehicles can cross over the watercourse without disturbing the bed and banks or restricting water movement beneath the ice. Snow fills are crossings constructed with clean compacted snow on top of the ice or in a channel that is dry or frozen to the bottom. In some cases, interconnected logs are used to reinforce the ice bridge, snow fill or approaches.

You can protect fish and fish habitat during the construction, maintenance and decommissioning of ice bridges and snow fills by following the measures listed below. When implemented correctly, these measures can manage the risk of harmful impacts associated with the construction, maintenance and decommissioning of ice bridges and snow fills which can include:

- disturbance of watercourse or water body bed and banks
- release of sediments or other [deleterious substances](#)
- fish injury and mortality from [entrainment](#) and [impingement](#)

The purpose of this code of practice is to describe the conditions under which it can be applied to your project and the measures you are required to implement in order to prevent harmful impacts to fish and fish habitat and comply with the [Fisheries Act](#) and the [Species at Risk Act](#). If you cannot meet all the conditions and implement all the applicable measures listed below, your project may result in a violation of the *Fisheries Act* and the *Species at Risk Act* and you could be subject to enforcement action.

DFO is responsible for the conservation and protection of fish and fish habitat across Canada. Under the *Fisheries Act*, no one may carry out works, undertakings and activities in or near water that result in the [harmful alteration, disruption or destruction of fish habitat](#), or the death of fish, unless it has been authorized by DFO. Prohibitions in the [Aquatic Invasive Species Regulations](#) must also be followed unless authorized under federal or provincial law. DFO's approval under the *Species at Risk Act* is also required if an activity affects an [aquatic species at risk](#), any part of its critical habitat or the residences of its individuals.

If you are uncertain about whether this code of practice is applicable to your project, consult a [qualified environmental professional](#). You may need to use [other codes of practice](#) or submit a [request for project review](#). For any remaining questions, please contact the [Fish and Fish Habitat Protection Program office](#) in your area. It is your responsibility to comply with the *Fisheries Act* and the *Species at Risk Act*.

It is your [duty to notify](#) DFO if you have caused, or are about to cause, the unauthorized death of fish by means other than fishing, or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to the Fish and Fish Habitat Protection Program office found in your area.

This code of practice does not remove nor replace the obligation to comply with the requirements of any other federal, territorial, provincial or municipal regulatory agency including guidance about species and habitats



managed by these jurisdictions.

We strongly recommend that you notify Indigenous communities that may be affected by the project prior to starting the project.

A project review by DFO is not needed when the:

- project activities meet the description in [section 1](#) and the conditions in [section 2](#)
- measures to protect fish and fish habitat in [section 3](#) of this code of practice are applied

[Request a project review](#) if your project does not meet all of these requirements.

2.0 Conditions

The following conditions describe when this code of practice can be applied:

- you determine if there are aquatic species at risk within the [affected area](#) by consulting our [aquatic species at risk map](#) and you confirm that the work will not take place within:
 - a [riparian zone](#) identified as part of the critical habitat of an aquatic species at risk
- the work does not include:
 - realignment of the watercourse, dredging, grading, excavating or placing fill (not including snow) on the bed or banks of the watercourse
 - installation of a temporary culvert
- materials such as gravel, rock and loose woody materials are not used in the construction of ice bridges
- you implement the measures in [section 3](#) to protect fish and fish habitat when carrying out the works, undertakings and activities

As a condition of this code of practice, please submit a notification 10 working days before starting work. Notifications will inform the continuous improvement of the codes of practice over time.

[Submit a notification](#)

You can also submit using this [PDF version of the form](#) (50 KB). In the event you need to use the PDF form instead, you must:

1. download it to your computer
2. use PDF software to open it (such as, Adobe Reader or Foxit PDF)
3. fill out and save the form
4. email the completed form to your regional DFO office

For more information: [How to download and open a PDF form](#).



3.0 Measures to protect fish and fish habitat

3.1 Protection of fish

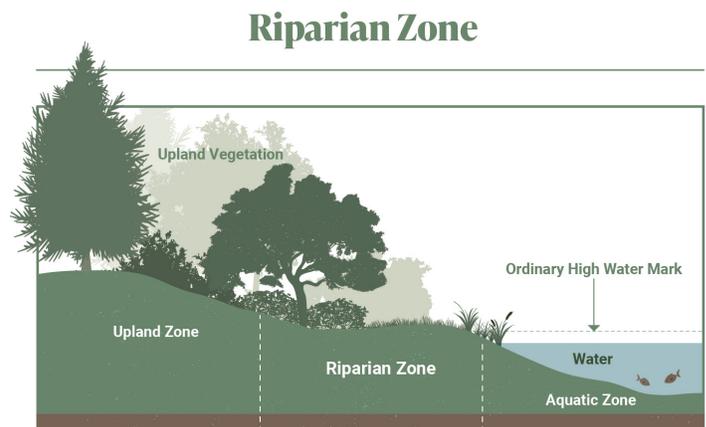
- Carry out the project in accordance with [timing windows](#).
- Screen intake pipes during all phases of the project.
 - Use the [interim code of practice for end-of-pipe fish protection screens](#) for small water intakes in freshwater.

3.2 Protection of fish passage

- Maintain fish passage during all phases of the project:
 - Where interconnected logs are used to stabilize the ice bridge, snow fill or approaches:
 - Do not leave logs or woody debris within the watercourse or on the banks where they can wash back into the watercourse.
 - Ensure that the logs are clean and securely bound together, and are removed before the spring freshet.
 - Place a v-notch in the center of the ice bridge when crossing season is over (and it is safe to do so) to prevent blocking fish passage, channel erosion and flooding.
 - Remove compacted snow from the snow fills prior to the spring freshet.

3.3 Protection of the riparian zone

- Use existing trails, roads, access points or cut lines.
- Limit vegetation removal, pruning and grubbing to the area required for accessing the project site.
 - Use methods to reduce soil compaction (for example, swamp mats, pads).
 - Construct approaches using clean compacted snow and ice to a sufficient depth to protect the banks of the watercourse.
- Reinststate stream banks and slopes of the affected riparian zone.



3.4 Protection of aquatic habitat

- Ensure that equipment and machinery are clean and free of aquatic invasive species prior to arriving on the project site:
 - Operate vehicles and machinery in a manner that minimizes disturbance to the watercourse bed and banks.



- Locate temporary crossing site where the watercourse is straight, banks are stable and where approaches have low slopes.

3.5 Protection of fish and fish habitat from sediment

- Manage sediment laden water flowing onto or through the site during all phases of the project.
 - Install erosion and sediment controls prior to beginning the project.
 - Develop and implement an erosion and sediment control plan for all phases of the project.
 - » Regularly observe the watercourse or water body for signs of suspended sediment during all phases of the project and take corrective action when and where required.
 - » Inspect the erosion and sediment controls regularly during all phases of the project.
 - Repair the sediment controls during all phases of the project.
 - » Operate machinery on land in stable areas.
 - » Use biodegradable erosion and sediment control materials whenever possible.
 - » Remove all non-biodegradable erosion and sediment controls once the site has been stabilized.
 - » Use only clean materials.
 - Use only clean ice or snow.
 - Keep the erosion and sediment control measures in place until all disturbed ground has been stabilized and suspended sediments have settled.

3.6 Protection of fish and fish habitat from other deleterious substances

3.6.1 Develop a prevention plan

- Develop a plan to prevent deleterious substances from entering a watercourse or water body.
 - Maintain all machinery on site in a clean condition and free of fluid leaks.
 - Wash, refuel and service machinery in such a way as to prevent any deleterious substances from entering a watercourse or water body.
 - Store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering a watercourse or water body.

3.6.2 Implement a response plan

- Implement a response plan immediately in the event of a spill of a deleterious substance (including sediment).
 - Stop all works, undertakings and activities.
 - [Report spill](#) immediately when a deleterious substance enters a watercourse or water body.
 - Contain water with deleterious substances.
 - Clean up and dispose of water contaminated with deleterious substances.
 - Use an emergency spill kit.



4.0 Glossary

Affected area: The area within which all the proposed project impacts are likely to occur, either directly (meaning, project footprint) or indirectly (for example, downstream or other surrounding areas).

Aquatic invasive species: Fish, invertebrate or plant species that have been introduced into a new aquatic environment, outside of their natural range.

Aquatic species at risk: Any aquatic species listed under schedule 1 of the *Species at Risk Act* as endangered, threatened, or extirpated.

Deleterious substance: Any substance that, if added to any water, would degrade, alter or form part of a process of degradation/alteration to the quality of that water so that it is possibly rendered deleterious to fish, fish habitat, or to the human use of fish that frequent that water. For example, fuel, lubricants, paint, primers, rust, solvents, degreasers, antifreeze, uncured concrete, foam, creosote, chlorinated water, herbicides, etc.

Entrainment: Occurs when a fish is drawn into a water intake and cannot escape.

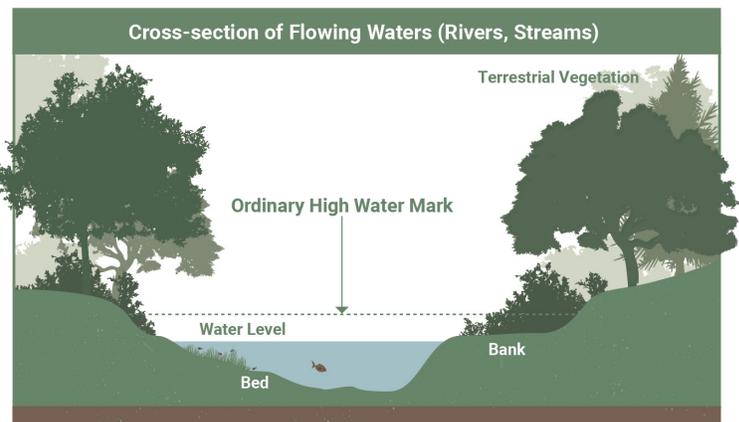
Harmful alteration, disruption or destruction -

Policy Interpretation: Any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes of fish.

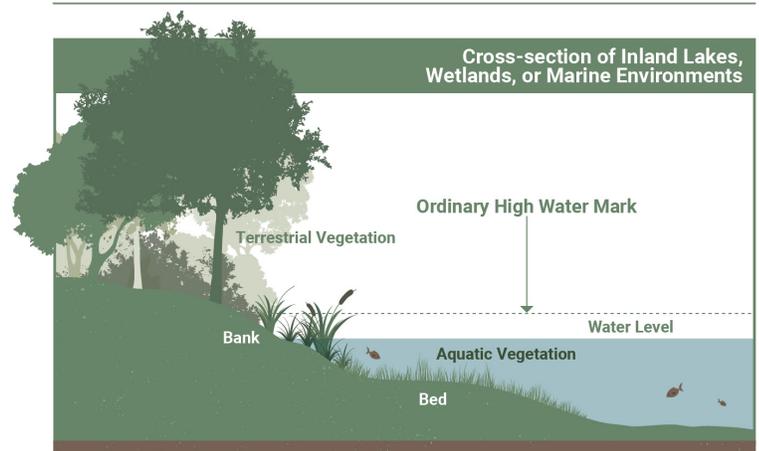
Impingement: Occurs when a trapped fish is held in contact with an intake screen and is unable to free itself.

Ordinary high water mark: The usual or average level to which a body of water rises at its highest point and remains for sufficient time to change the characteristics of the land. In flowing waters (for example, rivers and streams) this refers to the 'active channel/bank-full level' which is often the 1:2 year flood flow return level. In inland lakes, wetlands or marine environments, it refers to those parts of the water body, bed and banks that are frequently flooded by water, leaving a mark on the land. It's where the natural vegetation changes from mostly aquatic vegetation to terrestrial vegetation (excepting water tolerant species). For reservoirs this refers to normal high operating levels (meaning, full supply level).

Ordinary High Water Mark



Ordinary High Water Mark





Qualified environmental professional: A person experienced in identifying and analyzing risks to fish and fish habitat generated from various works, undertakings or activities conducted in or near water, and implementing management measures to avoid and mitigate those risks. They possess a post-secondary degree or diploma in biological, geophysical or environmental sciences and are referred to as:

- applied scientists
- aquatic biologists
- environmental consultants
- fisheries biologists
- fisheries technicians
- fluvial geomorphologists
- natural resource consultants

Riparian vegetation: Occurs adjacent to the water body and directly contributes to fish habitat by providing shade, cover and areas for spawning and food production.

Riparian zone: Area located between a watercourse or water body's [ordinary high water mark](#) and upland area. The width of the riparian zone may be further defined by provincial, territorial or municipal regulations or guidelines.