



1.0 About this code of practice

This code of practice outlines Fisheries and Oceans Canada (DFO)'s national best practices for ice bridges and snow fills. Ice bridges and snow fills are 2 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.

For the purposes of this code of practice, ice bridges and snow fills include their construction, maintenance and decommissioning.

You can protect fish and fish habitat (including [aquatic species at risk](#), their critical habitat and residences) when proceeding with your ice bridge or snow fill by following the measures listed below. When implemented correctly, this can mitigate risks to fish and fish habitat associated with ice bridges and snow fills, which can include:

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

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 that result in the [harmful alteration, disruption or destruction \(HADD\)](#) of fish habitat, or the death of fish, unless it has been authorized by DFO. 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.

The purpose of this code of practice is to describe the conditions under which the code 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 avoid contravention of the *Fisheries Act* and the *Species at Risk Act*. If you cannot meet all of the conditions and implement all of 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.

If you are uncertain about whether this code of practice is applicable to your project, it is recommended that you consult our [website](#) or a [qualified environmental professional](#) to determine if other [codes of practice](#) should also be implemented, or if further review by DFO may be necessary. For any remaining questions, please contact the [Fish and Fish Habitat Protection Program office](#) located in your area. It remains 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/harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to the Fish and Fish Habitat Protection Program office located in your area.

This code of practice does not remove or replace the obligation to comply with the requirements of any other federal, territorial, provincial or municipal regulatory agency including guidance regarding species and habitats managed by these jurisdictions.

It is good practice to notify nearby Indigenous communities of the works, undertakings and activities.

A project review by DFO is not required when the project activities meet the description in [section 1](#) and the conditions in [section 2](#); and when the 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. To do so, consult the recovery strategy (found on the [Species at risk public registry](#)) for each of the species identified.
- The work does not include:
 - realignment of the watercourse, dredging, grading, excavating or placing fill on the bed or banks of the watercourse
 - installation of a temporary culvert
- Ice bridges and snow fills do not interfere with fish passage or constrict the channel width.
- Water withdrawal for reinforcement of ice bridges does not exceed 10% of the actual (instantaneous) flow.
- 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 form \(PDF, 50 KB\)](#) to your [regional DFO office](#) 10 working days before starting work. Notification forms will inform the continuous improvement of the codes of practice over time.

You must download and save this PDF form to your computer before filling it out. [How to download and open a PDF form.](#)

3.0 Measures to protect fish and fish habitat

3.1 Protection of fish

- Plan in-water works, undertakings and activities to respect fish protection [timing windows](#).
- Screen intake pipes when pumping water to prevent entrainment or impingement of fish.
 - Use [interim Code of Practice for end-of-pipe fish protection screens for small water intakes in freshwater](#).

3.2 Protection of fish passage

- 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 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.
- Use methods to reduce soil compaction (e.g., swamp mats, pads).
- Limit vegetation removal, pruning and grubbing to the area required for accessing the site of the works, undertakings and activities.
- Construct roads, access points and approaches perpendicular to the watercourse if a new access point is required to reach the watercourse.
- Construct approaches using clean compacted snow and ice to a sufficient depth to protect the banks of the watercourse.
- Restore the banks and [riparian vegetation](#) affected by the works, undertakings and activities.



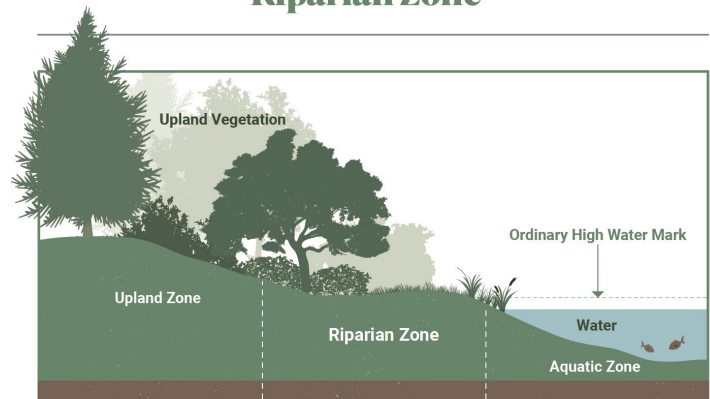
3.4 Protection of aquatic habitat

- Locate temporary crossing site where the watercourse is straight, banks are stable and where approaches have low slopes.
- Operate vehicles and machinery in a manner that minimizes disturbance to the watercourse bed and banks.

3.5 Protection of fish and fish habitat from sediment

- Operate machinery on land in stable dry areas.
- Use only clean materials (i.e., water, ice, snow) to construct ice bridge.
- Install erosion and sediment control measures prior to the beginning of the works, undertakings and activities.
 - Develop and implement an erosion and sediment control plan to prevent the introduction of sediment into any water body during all phases of the works, undertakings and activities.
 - Inspect erosion and sediment control measures and structures regularly during all phases of the works, undertakings and activities.
 - Maintain the erosion and sediment control measures and structures regularly during all phases of the works, undertakings and activities.
 - Monitor the watercourse regularly for signs of sedimentation during all phases of the works, undertakings and activities and take corrective action if required.
 - Use biodegradable erosion and sediment control materials whenever possible.
 - Keep the erosion and sediment control measures in place until all disturbed ground has been stabilized.
 - Remove all erosion and sediment control materials (unless biodegradable) once site has been stabilized.

Riparian Zone



3.6 Protection of fish and fish habitat from other deleterious substances

3.6.1 Develop a prevention plan

- Do not allow the deposit of deleterious substances in any water body.
 - Develop a plan to prevent deleterious substances from entering a 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 water body.
 - Store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering a 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 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 of the proposed project impacts are likely to occur either directly (i.e., project footprint) or indirectly (i.e., downstream or other surrounding areas).

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 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, creosote, chlorinated water, herbicides, etc.

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

Harmful alteration, disruption or destruction (HADD): 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 an entrapped fish is held in contact with the 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 (e.g., rivers, 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 so as to leave a mark on the land and where the natural vegetation changes from predominately aquatic vegetation to terrestrial vegetation (excepting water tolerant species). For reservoirs this refers to normal high operating levels (i.e., full supply level).

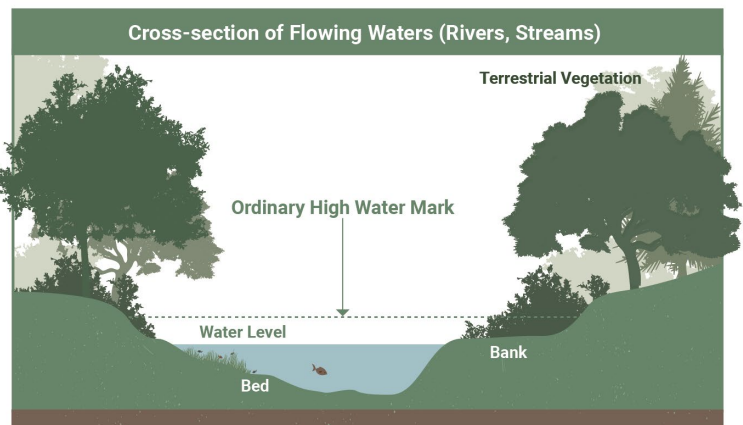
Riparian vegetation: Occurs adjacent to the water body and directly contributes to fish habitat by providing shade, cover and areas for spawning and food production.

Riparian zone: Area located between a water body's ordinary high water mark and upland area.

Qualified Environmental Professional (QEP): A person who is experienced in identifying and assessing potential impacts 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 them. QEPs possess a post-secondary degree or diploma in biological, geophysical or environmental sciences and are often referred to as:

- aquatic biologist
- fisheries biologist
- fluvial geomorphologist
- applied scientist
- fisheries technician
- environmental consultant or
- natural resource consultant

Ordinary High Water Mark



Ordinary High Water Mark

