Clear Span Bridges

September 2022

1.0 About this code of practice

This code of practice outlines Fisheries and Oceans Canada (DFO)'s national best practices for temporary and permanent clear span bridges in freshwater. Temporary clear span bridges are typically employed for short term seasonal access by construction vehicles to the other side of a watercourse when an existing crossing is not available or practical to use. Permanent clear span bridges are typically small in scale and used for long term vehicle access across a watercourse. Clear span bridges are designed to completely span a watercourse without interfering with the channel bed and banks.

For the purposes of this code of practice, temporary and permanent clear span bridges include:

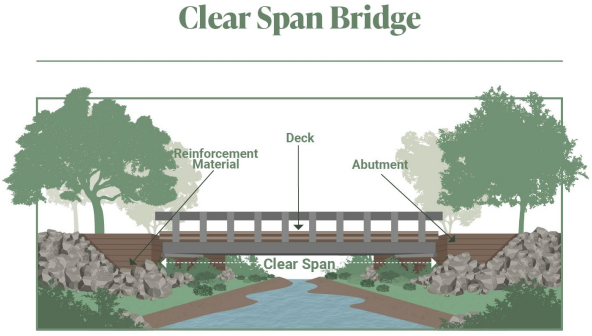
- the construction, maintenance and decommissioning of temporary clear span bridges
- the construction of permanent clear span bridges

You can protect fish and fish habitat (including aquatic species at risk, their critical habitat and residences) when proceeding with a clear span bridge by following the measures listed below. When implemented correctly, this can mitigate risks to fish and fish habitat associated with clear span bridge, which can include:

- disturbance of watercourse beds and banks
- release of sediments or other deleterious substances
- loss of, or damage to, riparian vegetation

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 nor 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 set out in section 3 of this code of practice are applied. Request a project review if your project does not meet all of these requirements.

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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 does 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 or excavating the bed or banks of the watercourse
  - placement of fill or other temporary or permanent structures (e.g., scaffoldings, abutments, footings, rock) below the ordinary high water mark
  - installation of a temporary culvert
  - pile driving
- 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.

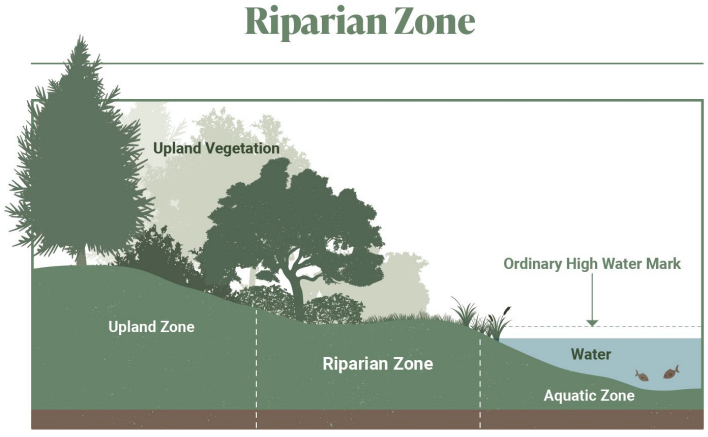
3.0 Measures to protect fish and fish habitat

3.1 Protection of the riparian zone

- Use existing trails, roads, access points or cut lines.
- Use methods to prevent 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.
- Restore the banks and riparian vegetation affected by the works, undertakings and activities.
- Re-vegetate the disturbed areas with native species suitable for the site.

3.2 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.



3.3 Protection of fish and fish habitat from sediment

- Ensure approach grades are kept to a minimum.
- 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.
  - Dispose of, and stabilize, all excavated material on land in a designated area away from the ordinary high water mark of any water body.
- Remove temporary bridge crossing prior to the spring freshet, unless the crossing has been constructed above the annual spring high water level.

3.4 Protection of fish and fish habitat from other deleterious substances

3.4.1 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.
  - Dispose of all waste materials on land in a designated area away from the ordinary high water mark of any water body.
- Design the bridge so that storm water runoff from the bridge deck, side slopes and approaches directly run off into a retention pond or vegetated area.

3.4.2 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

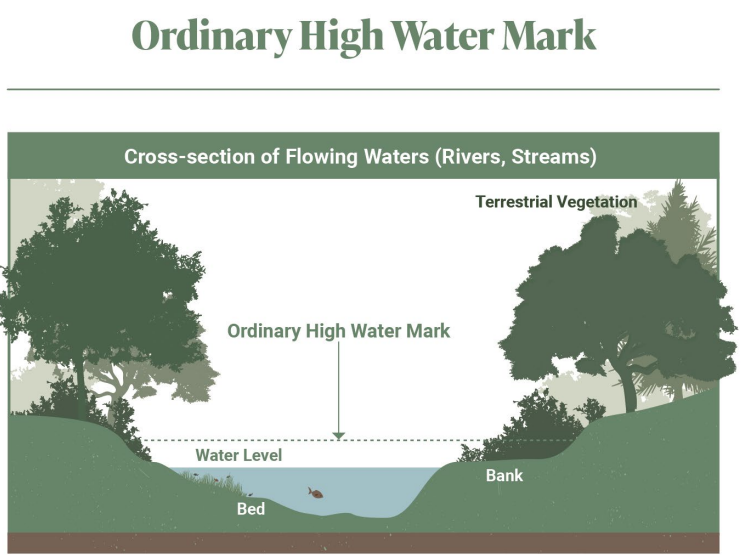
Affected area: The area within which all of the proposed project impacts are likely to occur either directly (i.e., project footprint) or indirectly (i.e., downstream or other surrounding areas).

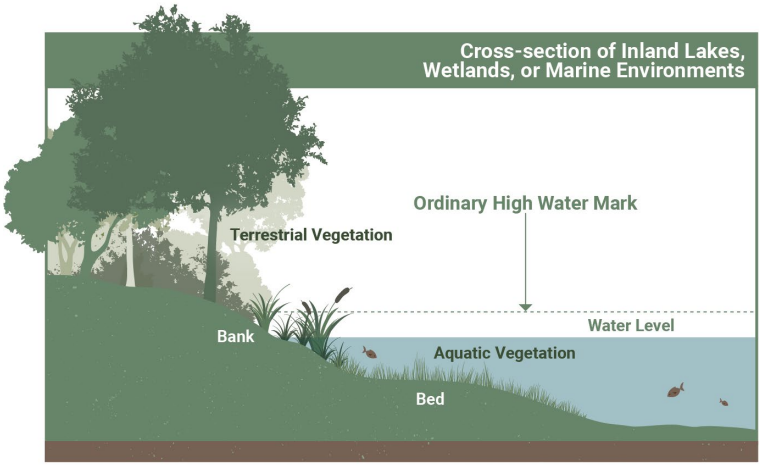
Aquatic species at risk: Any aquatic species listed under schedule 1 of the Species at Risk Act as endangered, threatened, or extirpated.

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.

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.

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