

# Fish Habitat & BUILDING MATERIALS

FACT  
SHEET

C-3

**S**horeline areas provide habitat for a variety of aquatic organisms including fish. The nearshore area is where many fish species lay their eggs, feed and seek protection from predators. Changes or disruptions to these areas can threaten their survival. Your choice of building materials used on your waterfront property can help protect the fish populations in your lake or river by protecting fish habitat along your shoreline.

## Be aware of the *Fisheries Act* and other legislation

The federal *Fisheries Act* provides for the protection of fish habitat. Under this Act, no one may carry out any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat (HADD), unless authorized by the Minister of Fisheries and Oceans Canada. The Act also states that no one is permitted to deposit a deleterious (harmful) substance into water containing fish. Violations to the *Fisheries Act* can result in substantial fines, and/or the risk of imprisonment. If found guilty, then the violator may also be required to cover the costs of restoring the habitat at the site and/or be required to fulfill other court ordered remedies. Other legislation that may also be relevant is outlined in the introductory Fact Sheet: *Working Around Water? What you should know about Fish Habitat.*

## Best practices

The following description of building materials are intended to guide you in choosing the most environmentally friendly products for your project.

### Bioengineering (Soft structures)

Bioengineering is an approach used to stabilize exposed soils by using soft structures, or natural materials (e.g. logs, rocks, live stakes, live brush bundles, etc.) in combination with plants. This approach is used to stabilize banks and shorelines. A bioengineered structure has a natural appearance and can provide additional habitat for fish. In general, any approach that uses natural materials when building structures in or near water is better than hard approaches using materials such as concrete, steel or plastics.

### Reused and recycled materials

While efforts to reduce, reuse and recycle materials can generally provide environmental



benefits, old materials (e.g. old metal drums, tires, car parts or old railway ties), are not permitted for any shoreline or in-water works. These materials may release poisons, oils, grease or other chemical substances that are toxic to humans, fish and other forms of wildlife.

### Untreated wood

If you are building a wooden structure in or near water, cedar or hemlock are good choices because they have natural preservatives. These preservatives protect the wood from rotting caused by repeated water exposure and air-drying. Less expensive types of wood can be used below the water where they will not be exposed to the air, reducing the risk of rot.

### Treated wood

All wood preservatives used today contain compounds that are poisonous to fungi and insects and should be used with care. If you use treated wood or apply preservatives yourself,

be sure to read the label carefully and take all precautions suggested by the manufacturer. Never apply wood preservatives above or near water.

The use of chemical wood preservatives is regulated by the Pest Management Regulatory Agency, Health Canada and your provincial regulatory authority(ies). For more information, please contact the Canadian Wood Council, the Canadian Institute of Treated Wood or your local building supply outlet.

### Metals

Steel structures are not recommended for certain uses in or near water, particularly in cases of solid vertical structures you may be planning such as retaining walls or other shoreline stabilization works. Solid vertical structures provide little in the way of habitat for fish and other aquatic organisms. In some situations however, they may be the only appropriate material to use.

Where steel is used, painted steel should be avoided in the water because paint flakes can be toxic to aquatic organisms such as fish and other species. Although unpainted steel can rust and detract from the appearance of your shoreline, it has little effect on water quality. Stainless steel, galvanized steel or bronze fittings are often more expensive than steel, but last longer. Where metal retaining walls extend below the average annual high-water mark, approvals are required. Contact your local provincial regulatory authority(ies) for more information on what is required.

For more information on shoreline stabilization, see Fact Sheet C-4: *Working Around Water? Fish Habitat & Shoreline Stabilization*.

## Concrete

Concrete structures are generally not recommended for use in or near water. Solid vertical structures provide little or no habitat for fish and other aquatic organisms. However, concrete may be the only appropriate material in some situations. If you must use concrete in your structures, you will find it difficult to get approvals. It is recommended that you get professional help during the planning and construction of concrete structures.

If concrete is used for walls in contact with water, watertight forms should be constructed so

that concrete is poured into a dry cavity and does not spill into the water. When it has set, concrete is not harmful to water quality. Concrete may be safely used for structures such as blocks for anchoring floating docks and swimming platforms. Any concrete rubble used as fill above the average annual high-water mark should be top dressed with soil and planted. Where concrete is covering areas below the average annual high-water mark of any waterbody, approvals are required. Contact your local provincial regulatory authority(ies) for more information on what is required.

For more information on shoreline stabilization, see Fact Sheet C-4: *Working Around Water? Fish Habitat & Shoreline Stabilization*.

## Plastic (used for floatation)

Most plastic materials will not affect water quality. They are tough and float well when sealed but plastic can deteriorate over time from exposure to wind, waves and ultraviolet light. Visit your local building supply outlet to determine the best type of plastic for your project. Plastic floatation materials are available in many shapes, sizes and colours and are ideal for making floating docks and swimming rafts.

## Polystyrene

Polystyrene (plastic foam) has little effect on water quality. However, some forms of polystyrene, particularly white expanded polystyrene, break down over time. This can be hazardous for fish and other aquatic organisms as they may try to ingest small pieces mistaking them for food.

For floatation devices in docks, boathouses or swimming rafts, the blue or pink closed-cell extruded polystyrene forms (billets) are recommended. The billets should be wrapped in polyethylene sheeting to protect them from accidental gasoline spills.

## Working together to protect fish habitat

Help maintain the quality and quantity of fish habitat in our lakes and streams. Please contact your local agency staff directly before beginning any work in or around water.

## Contact information – Ontario

If the proposed work is . . .

- is below the average annual high-water mark
- is in the Rideau Canal or Trent-Severn Waterway
- is in a federally owned small craft harbour
- is above the average annual high-water mark and within a flood plain area
- is above the average annual high-water mark, and entirely on your property

The provincial regulatory authority for chemical wood preservatives in Ontario is the Ontario Ministry of the Environment.

Your first contact should be . . .

- Your local Conservation Authority (CA). Where there is no designated CA contact your Ontario Ministry of Natural Resources office
- Parks Canada Agency
- Fisheries and Oceans Canada - Small Craft Harbours
- Your local CA
- Approvals may be required from your local CA if the structure is within the flood plain or fill regulated area.

## Contact information

[www.dfo-mpo.gc.ca/canwaters-eauxcan](http://www.dfo-mpo.gc.ca/canwaters-eauxcan)

Canada

Cette publication est également disponible en français.

Working together to protect and conserve Ontario's aquatic resources



Fisheries and Oceans Canada / Pêches et Océans Canada

[www.dfo-mpo.gc.ca/canwaters-eauxcan](http://www.dfo-mpo.gc.ca/canwaters-eauxcan)



Parks Canada / Parcs Canada

[www.pc.gc.ca](http://www.pc.gc.ca)

Ontario

[www.mnr.gov.on.ca](http://www.mnr.gov.on.ca)



[www.conservation-ontario.on.ca](http://www.conservation-ontario.on.ca)