

Fish Habitat & DREDGING

FACT
SHEET

I-1

Shoreline 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. If you own or lease waterfront property, you can help protect the fish populations in your lake or river by protecting fish habitat along your shoreline.

Dredging is the removal or displacement of any material from the bottom of a lake or stream. It can harmfully alter, disrupt or destroy the areas in which fish live, feed and reproduce and can also result in the re-suspension of contaminants affecting water quality.

Before deciding to dredge, consider the cost of the project, the cost of maintenance and whether alternatives to dredging exist. For example, could you drive your boat around obstacles such as shoals, stumps or rocks, or could you use an offshore mooring or swimming raft? If you decide to dredge, you will need to take special care to preserve fish habitat. The scale of the dredging project, its location, and the manner in which the activity is carried out will determine if it may be harmful to fish and fish habitat.

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 to dredging is outlined in the introductory Fact Sheet: *Working Around Water? What you should know about Fish Habitat.*

Contacts and approvals

If your project involves dredging, the table on the next page will help you to determine which agency you should contact. In some instances, you may have to contact more than one agency.



Keep in mind that approval from one government agency does not guarantee that you will be able to obtain approval from another agency. Remember you must obtain all approvals before starting work. Early consultation can save you from designing a dredging project that will not be approved.

Information you will need to submit

When seeking approvals or permits, you will need to submit the following information:

- ❖ Your name, address, telephone number, and if available, a fax number and e-mail address
- ❖ Rationale for the dredging project
- ❖ Waterbody name and location including lot and concession numbers, county, township, municipality, and if known, the latitude and longitude
- ❖ Proof of ownership for each of the properties where the work will be done and the most recent legal survey(s)
- ❖ Detailed description of the work site including a signed and dated map or sketch with dimensions indicating the location and distances to the average annual high-water mark of existing buildings, shoreline structures and property lines
- ❖ Plan view (top down) sketch or drawing of the total area to be dredged showing existing

shoreline length (m), proposed works and the distances to the average annual high-water mark. If you are doing this work in conjunction with your neighbour(s), your sketch should show the combined works

- ❖ Cross-sectional (side view) drawing (with dimensions) showing the existing and proposed depths, current water level and distances to the average annual high-water mark
- ❖ Description of the type of substrate being dredged indicating approximate percentages of sand, silt, clay, rock, gravel and aquatic vegetation, etc.
- ❖ Description of how and where the dredged material will be stabilized/disposed
- ❖ Proposed date(s) of dredging and the type of equipment to be used
- ❖ Description of type of aquatic plants, if any, to be removed
- ❖ Description of any measures to be used to avoid harmful impacts to fish and fish habitat during the dredging project
- ❖ Information on previous dredging at the site (e.g. date last dredged, area dredged, approvals for past dredging)
- ❖ Information you have about fish use of the site
- ❖ Indicate if the material to be dredged has a history suggesting it might be contaminated
- ❖ Photographs of the work site and surrounding shoreline
- ❖ Description of any proposed use of explosives
- ❖ Other agencies contacted

A site visit by agency staff may be necessary before your proposal can be approved.

Best practices

The following practices are intended to prevent or minimize any potential harmful impacts to fish and fish habitat that may result from your dredging project:

Dredging methods: Both manual and mechanical methods can be used during dredging operations. Preferred methods are those that minimize disturbance to the bottom and contain any sediment that is stirred-up.

How much to remove: Try to minimize the size and depth of the area to be dredged. Generally, those types of projects that pose a high risk to fish habitat will require approval.

Boat channels: Dredging for a single boat channel should be no wider than six metres. A boat channel can be shared among adjacent property owners. For safety reasons, shared or community boat channels need to be wider than single channels. In most cases, community channels should not exceed eight metres in width.

Disposal of the dredged material: If the dredged materials are fine-grained (e.g. sand, silt, clay), then they must be disposed of well above the average annual high-water mark and outside any regulated flood plain area. Dredged material must be suitably stabilized to prevent it from washing back into the water. If allowed to enter the water, the fine-grained materials could blanket and suffocate sensitive fish habitat. Once the materials are suspended in the water, they can affect water quality as well as polluting or clogging nearby water intakes. A preferred option is to cover the trench or dredged area with clean and coarse material (e.g. gravel, cobble, rocks or boulders).

If the dredged material is coarse (e.g. clean gravel, rocks and boulders), it is preferred from a fish habitat perspective to return the material back into the water. When placing materials back into the water, avoid navigational hazards by placing

the material in water of equal or greater depth than it came from. This material is to be free of fine-grained materials and not to be placed in a wetland. Approval from a provincial regulatory authority(ies) will be required if materials are being placed back in the water.

When contamination is suspected: If the site has a history suggesting that the sediments to be dredged have the potential to be contaminated, consult with your local provincial regulatory authority(ies) to find out if chemical testing will be required.

Rocks and woody material: Rocks, stumps, logs and woody material provide good fish habitat and should not be removed from the water. If any materials need to be temporarily removed, they should be stockpiled and replaced to where they came from, or to an adjacent area of similar water depth.

Timing is critical: In-water dredging activity should not occur during local fish spawning and nursery periods since it could disturb spawning behaviour, smother eggs and kill young fish. Contact your local provincial regulatory authority(ies) for details on the timing of your project.

Maintain or preserve shoreline vegetation: Shrubs and trees growing adjacent to lakes and streams are important. This vegetation provides overhead cover for fish, shade to minimize warming of the water and a source of food for fish (e.g. insects fall off the vegetation into the water). Nearshore vegetation also provides benefits to wildlife in the form of nesting sites, cover from predators, etc. The removal of some vegetation adjacent to the waterbody may be necessary to allow for equipment access. Following completion of the project, all areas should be stabilized to prevent erosion and re-vegetated as soon as possible.

Avoid areas with aquatic plants: Aquatic plants play an important role in the ecology of shoreline areas. If you cannot avoid dredging in these areas, you may need additional approvals.

For more information, see Fact Sheet I-2: *Working Around Water? Fish Habitat & Controlling Aquatic Plants.*

Avoid spawning and nursery areas: If you suspect your property is adjacent to a fish spawning or nursery site, you are strongly advised to talk to agency staff before you dredge. Fish species may have only one spawning/nursery site in a waterbody and any in-water activity near these sites will result in a HADD.

Protect water quality: A sediment or silt screen should be installed around the entire work area prior to starting your dredging project. After the work is completed and the sediment has settled on the lake bottom, the screen should be carefully removed. Dredging should only occur on calm days. This will help to prevent the suspension of fine sediment particles into the water column and will ensure the silt screen is not disturbed by wave action. Sediment or silt screens should be inspected daily and maintained to prevent the spread of suspended sediments to adjacent water. Be aware, you may be required to continue monitoring the site once the work is completed to ensure there is no spread of suspended sediments.

Working together to protect fish habitat

Help maintain the quality and quantity of fish habitat in our lakes and streams. For more detailed advice on how to conduct dredging activities in an environmentally friendly manner, contact your local agency staff directly.

Contact information – Ontario

If the dredging proposal...

- is in the Rideau Canal or Trent-Severn Waterway
- is in a federally owned Small Craft Harbour
- is on public (Crown) land or a private water lot

- may affect boat navigation
- involves the use of explosives in or near water
- is a maintenance dredge and is on public (Crown) land or a private water lot
- is within a regulated floodplain

For details on the timing of your project, contact your local OMNR office.

Your first contact should be...

- Parks Canada (PCA)
- DFO - Small Craft Harbours
- Your local Conservation Authority (CA)
Where there is no designated CA, contact your local Ontario Ministry of Natural Resources (OMNR) office
- DFO-Canadian Coast Guard
- DFO-Ontario-Great Lakes Area
- Contact your local OMNR office
- Contact your local CA

Contact information

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



Parks Canada / Parcs Canada

www.pc.gc.ca

Ontario

www.mnr.gov.on.ca



www.conservation-ontario.on.ca