What Can You Do To Protect Fish Habitat?

The combined effect of many small harmful alterations can degrade or destroy large areas of habitat and cause declines in fish populations. Here are some suggestions for protecting and maintaining fish habitat:

Maintain/Plant trees and shrubs on shorelines

Vegetation helps stabilize banks and keeps sediment from washing into the water where it suffocates eggs. The trees and shrubs also harbour insect life for food, shade water keeping temperatures cool, and trap contaminants that poison fish.

Keep contaminants out of the water

Keep water that runs off your land or work area free of fertilizers, herbicides, petroleum products, etc. that pollute the water. Dispose of wastes properly. Never use a storm drain for disposing of used motor oils, solvents or any chemical wastes. Storm drains funnel flows directly into rivers. Ensure your sewage is not seeping into any waterbody.

Leave a buffer zone

Leave a buffer zone between your activities and the high water line along streams and lakes.

Ensure fish passage

Don t block or restrict fish migration in streams and rivers. Keep passages clear of obstructions.

Leave fallen trees and branches in the water

Woody debris is important to lake and river ecosystems. Beneath the water it provides a home to tiny aquatic organisms that feed fish and a place for fish to hide from predators; above water, it provides a sunny platform for ducks and turtles.

Talk to us

If you see activities that affect fish habitat, or would like information on protecting habitat, talk to your local Fisheries and Oceans Canada or provincial biologist.

We're here to help

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

For further information or to obtain copies of other fact sheets in this series, contact Manitoba Conservation at (204) 945-6784 toll free 1-800-214-6497 or:

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Phone (204) 983-5163
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Federal and provincial offices are listed in your phone book under Government of Canada and Government of Manitoba.

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This fact sheet and others in the Working Around Water? series below can help you plan your project with fish habitat in mind:

- ***What you should know about fish habitat and docks, boathouses and boat launches***
- ***What you should know about fish habitat and building a beach***
- ***What you should know about fish habitat and building materials***
- ***What you should know about fish habitat and the effects of silt***
- ***What you should know about fish habitat and shoreline stabilization***

Version 2.0

Manitoba Fact Sheet 1

Working Around Water?

WHAT YOU SHOULD KNOW ABOUT FISH HABITAT

Contents:

What is fish habitat and why is it important?

Fish need healthy places to live, feed and reproduce. The places that supply fish with their requirements for food, shelter, water, reproduction and growth over their life cycle are called fish habitat. Lakes, reservoirs, rivers, streams, marshes, wetlands, canals, drains, and even hay meadows under water can sustain fish life. If you own waterfront property or are working on a project in or near water, your actions can affect fish, as well as the birds and wildlife that live along the shore.

Habitat requirements may change for each stage in a fish s life cycle, from egg to adult. If some fish requirements are not met due to loss of habitat, their numbers drop and in time the entire population may die out.

It s therefore important that we protect habitat that provides fish with clean water, spawning and rearing grounds, an adequate food supply and clear migration routes. In doing so, we safeguard sport and commercial fishing industries worth millions of dollars annually, provide aboriginal peoples a traditional source of food and income, and protect our financial investments by ensuring the waterbodies where we live are environmentally healthy and pleasant places to live, work and play.

Our actions threaten fish habitat

Unfortunately, fish habitat is vulnerable to a variety of threats from those that are obvious to those that become apparent only when the fish are gone.

Some threats, like the release of municipal wastewater high in ammonia, kill fish downstream in a matter of minutes. Other threats, like clearing trees and shrubs from shorelines, or spraying dandelions on a river-front property, damage habitat over several years, gradually depleting fish populations.

Poorly installed watercourse crossings of all kinds may block fish migrations and release sediment from construction and washouts. For example, at high flows undersized culverts can turn into water cannons that repel even the most powerful fish.

Clearing land for farming, forestry, and urban development, building drainage ditches, and straightening channels cause higher peak flows in spring. High flows can create obstacles to upstream fish movement and suspend more sediment in the water, making it more difficult for some fish, such as pike and trout, to find food. Peak flows are often followed by rapid declines in flow rate that can strand fish upstream and dry out recently spawned fish eggs.

Other threats include effluent leaking from septic tanks, and runoff containing fertilizers from fields and gardens, all of which add nutrients to lakes and streams, stimulating algal blooms and aquatic plant growth. Later, as algae and vegetation die, they consume dissolved oxygen, leaving fish to suffocate.

Removing gravel and rocks from shorelines destroys potential spawning habitat. Clearing aquatic "weeds" and vegetation near shore removes protective cover for fish and the invertebrates they eat.

Poorly installed culverts are barriers to fish passage.

Working Around Water?

WHAT YOU SHOULD KNOW ABOUT FISH HABITAT

Working together to protect fish habitat

The federal Fisheries Act provides for the protection of fish habitat. Under this Act, no one may carry out any work that harmfully alters, disrupts or destroys fish habitat unless authorized by Fisheries and Oceans Canada. Also, no one may deposit a deleterious (harmful) substance in water frequented by fish. Violations can result in substantial fines, the risk of imprisonment, and a requirement to cover the costs of returning the site to its original state.

For projects that could harmfully alter, disrupt or destroy fish habitat (e.g. spawning grounds, nursery and rearing areas, areas of food supply, migration routes), your project must first be authorized by the Minister of Fisheries and Oceans, as required under the Fisheries Act. For more details, please see the brochures *What the Law Requires* and *Guidelines for Attaining No Net Loss* prepared by the department. These brochures provide information about the Fisheries Act, Authorizations, the department s fish habitat policy, as well as your responsibilities under this law. Authorizations may also be required if your project involves killing fish by means other than fishing (e.g. using explosives in water), or if it creates a barrier to fish migration. Only the Minister of Fisheries and Oceans can authorize these activities.

In Manitoba there are also several provincial acts which may apply when planning your project (Manitoba Crown Lands Act, Water Rights Act, Provincial Parks Act and the Environment Act). In addition, other federal approvals may be required. For instance, in-water structures may require approval by Fisheries and Oceans Canada - Navigation Protection Program due to navigation requirements.

If your project involves work in or near water, you will likely require an approval from both the provincial government and from Fisheries and Oceans Canada. These approvals to proceed with your project may or may not be granted simultaneously and can take some time, so you should apply for approvals early!

To learn which activities around water are prohibited or require a permit or government approval, call your local Fisheries and Oceans Canada office, listed on the back of this fact sheet.

The *Working Around Water?* series of fact sheets was prepared to help you plan your project with fish habitat protection in mind. They outline the best management practices for common projects such as constructing boathouses and docks, building beaches and stabilizing shorelines. Fact sheets also provide information about building materials and erosion control.

Whatever your project, our fact sheets can help by explaining how to undertake it in a way that is environmentally sound. A list of available fact sheets is included (see page four).

A goal of fisheries management programs in Manitoba is to achieve a net gain in fish habitat. You can help accomplish this goal by working with agency staff to protect fish habitat in our lakes, rivers and streams, thereby ensuring healthy fish populations for future generations.

Information you'll need to provide

When applying for federal or provincial approvals or permits, your proposed project can be assessed and approved more quickly when accurate and detailed information is provided. Therefore, always be sure to include with your application at least the following basic information:

- Your name, address, telephone number and fax number (if available).
- Name and location of the affected body of water, including applicable lot and block numbers, or the section, township, range and municipality, along with latitude and longitude, if known.
- Detailed description of the work site, including a signed and dated site map, survey plan or sketch indicating location of existing buildings, property lines, proposed works, and the high water level.
- A copy of your plans and a description of construction methods, timing and materials. Also describe any alternative designs considered.
- Photographs of the work site and the surrounding shoreline.
- A description of existing aquatic habitat and names of fish species at or near the site.

Removal of shoreline vegetation can result in serious erosion of the banks.

Biologists measure stream flow as part of a habitat assessment.

For larger or more complicated projects, you may be asked to provide an evaluation of potential impacts on fish and fish habitat and how you intend to reduce or compensate for any harmful alteration, disruption or destruction of fish habitat.

It s a good idea to talk to local contractors, engineers, building suppliers, and regulators to be certain all aspects of your project are planned properly.

A site visit by Fisheries and Oceans Canada or by provincial government staff may be necessary to assess your application. If Fisheries and Oceans Canada approves your project, you must still make certain you obtain any necessary permits required by the province.