

SECTION 12.0. HABITAT MANAGEMENT AND ENHANCEMENT

THIS SECTION CONTAINS:

- Role of habitat professionals
- Overview of government policies
- Current enhancement activities

12.1. The Habitat Manager

DFO staff are responsible for delivering excellence in service to Canadians to ensure the sustainable development and safe use of Canadian waters. To ensure healthy and productive aquatic ecosystems, habitat managers in Nova Scotia:

- Provide advice on proposals which could impact fish or fish habitat
- Protect fish habitat from being altered or destroyed
- Rehabilitate habitats that have been degraded in some way
- Create new habitat
- Enhance existing habitat
- work with other regulatory authorities to prevent the deposit of deleterious substances into waters frequented by fish

All of these responsibilities involve a strong scientific background as a basis for practical activity. For example, habitat managers must be knowledgeable about:

- Fish population dynamics and natural history
- The physical, chemical, and biological nature of water environments
- The sensitivity of fish and their supporting habitats to natural and man-made changes
- Methods for predicting the effects of habitat changes

As you can see, a habitat manager is a key resource for your Adopt-A-Stream program.

For the name and contact information for a habitat manager in your area who can help you contact;

NSSA / Adopt-A-Stream Program

R.R. 2 581 Stanburne Road

Barss Corner NS B0R 1A0

Tel: (902) 644-1276

Fax: (902) 644-1279

e-mail: amy.weston@ns.sympatico.ca

12.2. Habitat Management Issues

Offshore Issues: offshore oil and gas projects, bottom debris, closure of fishing areas due to pollution from ships, oil tanker disasters, ocean dumping, and ocean contaminants, over-fishing, harvesting methodology.

Coastal and Estuary Issues: shipping disasters (such as the Kurdistan); contamination of oyster beds, lobster grounds, and other fish in general, by sewage, mine tailings, contaminants (e.g. cadmium) and other industrial wastes, destruction of nursery and fish rearing areas caused by causeway construction, tidal power, thermal plumes from electrical generating stations, port dredging and dumping, and shipping activities.

Each part of Nova Scotia has unique problems determined by the types and locations of fish in relation to pollutant sources, and competing uses of the ocean fishing grounds, coastal zones, estuaries, rivers and lakes.

River and Stream Issues: industrial pollution, stream alterations (1500 per year), acid rain, chemical spraying, agricultural and forestry practices, hydroelectric installations, watershed development projects, silt and sand input and high peak flows from poor land use, and gravel removal. These problems are covered in more detail in earlier sections of the manual.

12.3. Federal Department of Fisheries and Oceans Policy

Managing the overall fish habitat (conserving, restoring, enhancing) is a complex task. The Federal Department of Fisheries and Oceans has developed a comprehensive fish habitat management policy to meet this challenge. The Department's general approach to management is an integrated one that involves many different sectors including the general public.

http://www.dfo-mpo.gc.ca/canwaters-eauxcan/infocentre/legislation-lois/policies/fhm-policy/index_e.asp

The Policy Objective is a net gain of habitat for Canada's fisheries resources. The intent is to increase the natural productive capacity of habitats for the nations fisheries resources, to benefit present and future generations of Canadians. The Guiding Principle is the no net loss of the productive capacity of habitats. This principle can be broken down into three main goals:

- **Fish Habitat Conservation.** Maintain the current capacity of fish habitats supporting Canada's fisheries resources, such that fish suitable for human consumption may be produced.
- **Fish Habitat Restoration.** Rehabilitate the productive capacity of fish habitats in selected areas where economic or social benefits can be achieved through the fisheries resource.
- **Fish Habitat Development.** Improve and create fish habitats in selected areas where the production of fisheries resources can be increased for the social or economic benefit of Canadians.

In order to achieve these goals the Department has developed the following implementation strategies:

- **Protection and Compliance** Protect fish habitats by administering the Fisheries Act and incorporating fish habitat protection requirements into land and water use activities and projects.
- **Integrated Resource Planning** Participate in and encourage resource planning and management to incorporate fish habitat priorities into air, land, and water use plans.
- **Scientific Research** Conduct scientific research to provide the information and

technology necessary for the conservation, restoration, and development of fish habitats.

- **Public Consultation** Consult the public on major or controversial fish habitat issues and on the development of new policies and legislation for fish habitat management.
- **Public Information and Education** Promote public awareness in the conservation, restoration, and development of fish habitats.
- **Cooperative Action** Encourage and support involvement by government agencies, public interest groups and the private sector to conserve, restore and develop fish habitats.
- **Habitat Improvement** Initiate projects and provide advice to other interested groups to restore and develop fish habitats, in support of the net gain objective.
- **Habitat Monitoring** Evaluate the effectiveness of decisions taken and techniques used to conserve, restore and develop fish habitats.

By participating in the Adopt-A-Stream program you will play an important role in this integrated and cooperative approach.

12.4. The Nova Scotia Department of Agriculture and Fisheries and the Nova Scotia Department of Environment and Labour.

These two provincial government departments also participate in fish habitat protection and enhancement. The Nova Scotia Department of Agriculture and Fisheries is involved in:

- Hatchery rearing of trout
- The stocking of lakes
- Egg implantation
- Streamside incubators
- Scientific research and management
- Public education and awareness about habitats and populations

Hatcheries

The Province has administered a hatchery program since 1982, when a federal-provincial agreement delegated responsibility for the production and distribution of trout to Nova Scotia. Hatcheries are used on a limited basis to supplement stocks where spawning has been reduced due to loss of good spawning habitat and not yet restored. They are also used to stock streams and lakes that have been over-fished and for “put and take” fisheries. Some of the fish produced in hatcheries are sold to the commercial aquaculture industry.

Atlantic salmon hatcheries help to support a fish species that is under pressure due to acid rain, low survival at sea, and other habitat pressures. These hatcheries maintain and augment stocks to counter-act over-fishing, poaching, or low productivity habitats. Currently the majority of the salmon hatchery capacity is directed toward maintaining the Inner Bay of Fundy (IBoF) Atlantic salmon gene pool. The populations of these salmon are on the verge of extinction due to unknown causes resulting in low returns from the oceans. Hatcheries have not traditionally been used to bypass the at-sea component of the life cycle, but it is being done in this case through an innovative program in the DFO biodiversity facilities. It is critical that this program continue to keep the diversity in the salmon stocks and maintain the unique genetic population of as many watersheds as possible until a solution to the problems is found and implemented.

The Department of Environment and Labour is responsible for delivering effective and efficient regulatory management for the protection of our environment and the health and safety of Nova Scotians. Any persons or persons who wish to use or alter a *watercourse* or a *water resource* or any natural body of water require an approval administered by this department. This includes restoration and enhancement projects.