

The Electricity Industry and the *Fisheries Act* (continued)

From Compliance to Stewardship

The electricity industry's compliance with the *Act* means the simple fulfillment of its legal duties, as it carries out activities in, near, or with fisheries water. Stewardship means something more: a voluntary commitment to conserve, protect, and, where reasonable and practicable, enhance the resources that the industry uses or affects as it generates and transmits electricity. Stewardship of fisheries resources implies a concern with the effectiveness of compliance in attaining its end – the protection of fish and fish habitat – as much as with compliance itself. Stewardship may also involve the development or support of projects that benefit fisheries resources, but that are not required under the *Act* – species-specific conservation programs, for example, the construction of new habitat or cooperative programs with local communities.

The electricity industry often develops or supports research and monitoring activities, because the ability to protect fish and fish habitat at any particular location depends on an understanding of the fish population and habitat in that location. And such understanding is not easy to attain because of the sheer complexity of a fish-bearing ecosystem, and the life-histories and behaviors of the fish it supports. Successful upstream or downstream passage at an obstacle on a watercourse, for example, may depend, among other things, on a fish's species, life-stage, and size, as well the characteristics of the water and physical structures through which it has to pass. Upstream and downstream of a generating facility, water level, flow velocity, temperature, turbidity, saturated gas levels, siltation, and substrate are some of the many factors affecting the survival of fish and the productivity of fish habitat. Research is often necessary to assess the status of a population or habitat, to track changes in it, to determine the source of threats to its survival, or to improve its survivability or productivity.

The electricity industry also supports projects designed to protect or restore a specific species or local population, as well as projects designed to create or restore fish habitat.

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The Future of the *Fisheries Act* and the Electricity Industry

Thriving fisheries resources, productive fish habitat, and safe, reliable, abundant electricity are not incompatible. And there is evidence of an abiding consensus in Canada that both are necessary to the nation's social and economic well-being. What is still needed is an ongoing effort to balance electricity production and fisheries protection in such a way that neither is compromised. The electricity industry is resolved to help protect, even develop, Canada's overall resource base in fish and fish habitat, and to work together with DFO and other federal and provincial agencies in attaining this objective. Through the implementation of the Memorandum of Understanding and similar agreements, the electricity industry and Fisheries and Oceans Canada will be working together to develop consistent standards in the interpretation and application of the *Fisheries Act*, and a program of cooperation in stewardship, research, and education.

Resources:

Memorandum of Understanding between the Canadian Electricity Association and Fisheries and Oceans Canada, July 2002
http://www.canelect.ca/connections_online/cea_activities/cea_documents.htm

Considering Fish and Fish Habitat in Existing Hydroelectric Operations and Maintenance: Electricity Industry Practices, July 2001
http://www.canelect.ca/connections_online/cea_activities/cea_documents.htm

Fisheries and Oceans Canada Web site
http://www.dfo-mpo.gc.ca/home-accueil_e.htm

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Many of the activities undertaken by Canadian electricity companies affect fish and fish habitat, in both positive and negative ways. Canada's *Fisheries Act* (the *Act*) is legislation dedicated in large part to the conservation and protection of fish and fish habitat. Electricity companies are constantly mindful of their obligations under the *Act*.

In this issue of *Perspectives*, the Canadian Electricity Association examines the *Act*, its impact on the electricity industry, the industry's commitment to ensuring compliance with the *Act*, and the many ways in which electricity producers surpass the *Act* in their efforts to conserve and protect fish and fish habitat.

The *Fisheries Act*: Resource Protection to Environmental Protection

The *Act* is nearly as old as Canada itself. Designed to conserve and protect a natural resource essential to the life and economy of the new nation, the *Act* received Royal Assent in 1868 just one year after the *Constitution Act* of 1867 established the Government of Canada's jurisdiction over coastal and inland fisheries. Fisheries and Oceans Canada ("DFO") is the federal department that is responsible for administration and enforcement of the *Act*.

While the *Act* is the oldest piece of resource protection legislation in Canada, it is often described as one of the strongest pieces of environmental legislation in the country. In 1868, the *Act* would not have been so described. Its authors were motivated by concern about the future of a particular resource (fisheries), not the all-encompassing biological, chemical, and physical system of which it was a part, a system that we have come to call "the environment." At its inception, the *Act* singled out a resource thought to require protection from certain kinds of human activity – e.g., industrial pollution and over-fishing, including foreign predation of Canadian stocks – so that it could be sustained indefinitely for subsistence and economic development.

Chronology: The *Fisheries Act* and the Electricity Industry



1868	Fisheries Act
1881	First hydroelectric generating station in Canada: Chaudière Falls
1891	Canadian Electricity Association founded
1978	Department of Fisheries and Oceans Act
1986	Policy for the Management of Fish Habitat
1997	Creation of the Electricity Commitment and Responsibility (ECR) Program
2002	Memorandum of Understanding between CEA and DFO

Today, the *Act* still serves the same objective, but it has also proved a useful, albeit sometimes controversial, legislative tool in the service of broader environmental conservation and protection goals. Legislation that can protect fish habitat affects much more than fish stocks – it affects water quality and the complex of organisms and elements that make up a thriving riverine, lacustrine, or marine ecosystem – and all human activity surrounding those ecosystems.

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The Scope of the Act

When it comes to the protection of fish and fish habitat, the *Act* leaves no stone unturned. The *Act* (Section 2) interprets "fish" as including "parts of fish; shellfish, crustaceans, marine animals and any parts of shellfish, crustaceans, or marine animals; and the eggs, sperm, spawn, larvae, spat, and juvenile stages of fish, shellfish, crustaceans, and marine animals." The definition of "fish habitat" (Section 34(1)) is similarly exhaustive: "spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes."

There are very few watercourses or bodies of water in Canada that are not subject to the *Act*. Even fish habitat in water bodies created by human activity can receive equal protection under the *Act*. Dry land, too, when it borders water or is periodically inundated, is protected, because of its possible contribution to fish habitat.

Just as the *Act* is broad, so too is the administrative process around it. DFO administers the *Act's* habitat protection provisions, and the Minister of Fisheries and Oceans must report to Parliament on administration and enforcement of them. However, inland provinces have been delegated certain fisheries management responsibilities, requiring a close working relationship between the two levels of government in several jurisdictions. In addition, Environment Canada has been delegated responsibilities for section 36 – the pollution prevention provisions.

Among Canada's major industrial and commercial sectors, the electricity industry is far from being alone in the extent to which its activities must be continually balanced against the requirements of the *Act* and related regulations. Consider, for example, the recreation, agriculture, livestock, forestry, oil and gas, chemical and mining industries, all of which regularly engage in activities in, near or with water that have the potential to adversely affect fish and fish habitat.

In summary, just about any human activity done in water, near water, or to water anywhere in Canada is subject to the provisions of the *Act*, administered by one or another government agency in Canada. The cottager building a dock or creating a beach, the farmer diverting a stream or draining a ditch, the municipality constructing a new water intake or discharging effluent, the forester crossing a stream with heavy equipment, the water control board adjusting the level

Some Key Sections of the Fisheries Act

Section 20: Construction of fish-ways at obstructions in a watercourse.

Section 22: Sufficient flow of water over and downstream from obstructions.

Section 30: Provision of fish screens at a water intake.

Section 32: Prohibition of the destruction of fish by means other than fishing.

Section 35: Prohibition of the harmful alteration, disruption, or destruction of fish habitat.

Section 36: Prohibition of the introduction of deleterious substances into the water (administered by Environment Canada).

of a reservoir, the utility discharging heated water or crossing streams – each of these is engaged in an activity regulated by the *Act*.

The Challenge of Compliance

Most electricity generation in Canada depends on water at some stage in its generation cycle, and therefore has the potential to affect fish or fish habitat. One thinks immediately of hydroelectric generation, because it accounts for 61% of the electricity generated in Canada. Depending on the type of facility – and there is enormous variation across Canada's hydroelectric sites – hydroelectric generation can affect fish and fish habitat through the blockage or partial blockage of a watercourse, creation of a reservoir, fluctuation in the level of a reservoir, and changes in the water downstream from the site.

It should be noted that fossil-thermal facilities (26% of electricity generation), and nuclear-thermal facilities (12% of electricity generation) both use water (e.g. for cooling) in electricity generation. In cases in which a facility draws its water from a source supporting fisheries, there is the potential for effects on fish and fish habitat at the water intake and/or at the point where the water is released. Finally, certain activities associated with the transmission

and distribution of electricity are also subject to the *Act*: the construction of electricity lines and access roads across water courses, for example, as well as the control of riparian vegetation under or near power lines.

The challenge of compliance is explained, in large part, by the sheer scale of activities subject to the *Act*. But the challenge is exacerbated by the nature of the *Act* itself: the *Act* does not license acceptable activities, nor does it even require federal review of activities potentially in violation of the *Act*. Under the terms of the *Act*, the proponent has a duty to ensure that any activity in or near water is carried out in compliance with the *Act*, and a further duty to seek authorization for an activity that is not in compliance with the *Act*. While DFO can comment on proposed activities, the process and timeline for such comment is not standardized.

Compliance is made even more difficult by continuing uncertainty, even among federal regulators, about the proper or standard interpretation of key provisions of the *Act*, including those prohibiting destruction of fish (Section 32) and the harmful alteration, disruption, or destruction of fish habitat (Section 35). And finally, compliance is made difficult by the fact that creation of habitat is not effectively recognized under the *Act*. For the electricity industry, the challenge of compliance is sometimes no more and no less than the age-old challenge of hitting a moving target.

Meeting the Challenge

Given the scope and complexity of the *Act*, its successful implementation and enforcement depends on the cooperation of industries that work in, near, or with water. To say that it is logistically impossible for DFO to police the activities of every person, government, organization, and industry working in or around fisheries waters is simply a statement of fact. This is precisely why DFO's 1986 Policy for the Management of Fish Habitat calls for a mix of regulatory and proactive activities and why the Department currently cites "a balanced approach" and "enhanced collaboration" as two of the leading priorities of the National Habitat Management Program.

The Canadian electricity industry recognizes its responsibilities under the *Act*, and makes every effort to fulfill those responsibilities while, at the same time, fulfilling other social, economic, and environmental duties, including those stipulated in other federal and provincial/territorial laws and regulations.

Of course, a generalization such as this, accurate though it is, does not adequately depict the many ways in which the electricity industry answers the challenge of compliance. These are as varied as the companies that generate, transmit, and distribute electricity across Canada.

Electricity companies may provide reliable upstream and downstream passage for fish, regulate reservoir levels to maximize crucial fish habitat, monitor and regulate the water flowing downstream from a dam to protect fish and fish habitat, create new fish habitat, or carry out a combination of such efforts. In all these ways, and others not listed here, the industry ensures its compliance with the *Act*, in order to protect Canada's fisheries resources.

At the national level, the Canadian Electricity Association is working with DFO, under the terms of a bi-lateral Memorandum of Understanding, to develop a national compliance framework, a document that will articulate a consistent interpretation of the *Act* and describe standard requirements for compliance with it.

Elements of the CEA-DFO Memorandum of Understanding

- 1. Regular CONSULTATION between the electricity industry and DFO.**
- 2. Development of a national Fisheries Act COMPLIANCE framework.**
- 3. Joint support for STEWARDSHIP initiatives across the country.**
- 4. Coordinated development of programs and materials for EDUCATION AND TRAINING.**
- 5. Collaborative work on RESEARCH AND MONITORING.**

