Fisheries and Oceans Canada | Pêches et Océans Canada

FISHERIES AND OCEANS CANADA

# ANNUAL REPORT

April 1, 2003 to March 31, 2004

## ANNUAL REPORT TO PARLIAMENT on the Administration and Enforcement of the Fish Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act*

Canada

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Minister of
Fisheries and Oceans

Ministre des
Pêches et des Océans

Ottawa, Canada K1A 0E6

Mr. William Corbett
Clerk of the House of Commons
Room 228-N, Centre Block
House of Commons
Ottawa, Ontario
KlA OA6

Dear Mr. Corbett:

In accordance with the provisions of section 42.1 of the *Fisheries Act*, I have the honour to present, in both official languages, the Annual Report on the Administration and Enforcement of the Fish Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act* for the Fiscal Year 2003-2004.

In conformity with the requirements of the Act, these copies are for tabling in the House of Commons and for referral to the Standing Committee on Fisheries and Oceans.

Yours truly,

Geoff Regan

Attachments

Minister of
Fisheries and Oceans

Ministre des
Pêches et des Océans

Ottawa, Canada K1A 0E6

Mr. Paul C. Bélisle
Clerk of the Senate
Room 183-S, Centre Block
The Senate
Ottawa, Ontario
K1A 0A4

Dear Mr. Bélisle:

In accordance with the provisions of section 42.1 of the *Fisheries Act*, I have the honour to present, in both official languages, the Annual Report on the Administration and Enforcement of the Fish Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act* for the Fiscal Year 2003-2004.

In conformity with the requirements of the Act, these copies are for tabling in the Senate.

Yours truly,

Geoff Regan

Attachment

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# 1.0 Introduction

The federal government fulfils its constitutional responsibilities for coastline and inland fisheries through the administration and enforcement of the *Fisheries Act,* that provide Fisheries and Oceans Canada (DFO) and Environment Canada (EC) with powers and authorities to conserve and protect fish habitat which is essential to sustaining freshwater and marine fish species and populations that Canadians value.

Within DFO, administration and enforcement of the habitat protection provisions of the *Fisheries Act* and the application of the *Policy for the Management of Fish Habitat*[1] (Habitat Policy) is the responsibility of the Habitat Management Program (HMP) within the Oceans and Habitat Sector, with Fisheries and Aquaculture Management (FAM) Sector's Conservation and Protection (C&P) Program providing support for compliance and enforcement, and Science Sector's Science Program, providing scientific support.

The *Fisheries Act* contains provisions that prohibit harmful changes to fish habitat (habitat protection provisions) as well as discharges of deleterious substances into fisheries water (pollution prevention provisions). DFO is responsible for the administration and enforcement of the habitat protection provisions of the *Fisheries Act*, while responsibility for the administration and enforcement of the pollution prevention provisions has been assigned to EC. The Habitat Policy provides a comprehensive framework for the administration and enforcement of the habitat protection and pollution prevention provisions consistent with the goals of sustainable development.

Section 42.1 of the *Fisheries Act* requires the Minister of Fisheries and Oceans to table an annual report to Parliament on the administration and enforcement of the fish habitat protection and pollution prevention provisions.

*"42.1 (1) the Minister shall, as soon as possible after the end of the fiscal year, prepare and cause to be laid before Parliament a report on the administration and enforcement of the provisions of this Act relating to fish and fish habitat protection and pollution prevention for that year."*

*"42.1 (2) the annual report shall include a statistical summary of convictions under section 40 for that year."*

The *Annual Report to Parliament* (Annual Report) is only one of several reporting mechanisms used to assess and report on the contributions and successes of DFO's and EC's Programs in conserving and protecting fish habitat that sustain fish species and populations that Canadians value. Other reporting mechanisms such as the annual *Departmental*

[1] The full text of the *Policy for the Management of Fish Habitat* can be found at: <http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/policies-politique/operating-operation/fhm-policy/index_e.asp>.

*Performance Report* and the *Report on Plans and Priorities*, which are also produced by the Department, provide information about the performance of these programs to Parliamentarians and Canadians.

As part of the government-wide effort to report on results that are meaningful to Canadians, DFO is improving its performance measurement and evaluation process for the conservation and protection of fish habitat to ensure that it is achieving this objective when reporting to Parliament and Canadians. When this new performance measurement and evaluation structure is finalized, DFO and EC will be able to provide Parliamentarians and the public with meaningful and understandable results-based information on the administration and enforcement of the habitat protection and pollution prevention provisions of the *Fisheries Act*.

This report provides a summary of key activities undertaken by DFO and EC in conserving and protecting fish habitat during Fiscal Year 2003-2004 (April 1, 2003, to March 31, 2004).

Section 1.0 of the report presents:

- background on the legislation and policy for the conservation and protection of fish habitat;
- an overview of the mandate and operations of DFO and EC programs dedicated to the administration and enforcement of the fish habitat protection and pollution prevention provisions, respectively;
- an overview of the program activity architecture and for the performance measurement strategy for the conservation and protection of fish habitat; and
- a summary of priority initiatives for the coming year.

Section 2.0, 3.0 and 4.0 highlight regulatory activities of DFO and EC Programs in the Fiscal Year 2003-2004, at National Headquarters and in the regions. These activities include:

- the review of development proposals (referrals) that may affect fish habitat;
- the monitoring of compliance with the habitat protection and pollution prevention provisions of the *Fisheries Act* and enforcement actions as a result of violations;
- conducting Environmental Assessments (EA)s under the *Canadian Environmental Assessment Act* (CEAA), the *Mackenzie Valley Resource Management Act* (MVRMA), or under governing land claim agreements i.e. Inuvialuit Final Agreement or the Nunavut Land Claim prior to making decisions under section 35 of the *Fisheries Act* or prior to

issuing certain approvals under the *Navigable Waters Protection Act* (*NWPA*) or the *National Energy Board Act*[2]; and

- developing regulations, policies and guidelines related to the habitat protection and pollution prevention provisions of the *Fisheries Act.*

## 1.1 Legislative Basis for the Conservation and Protection of Fish Habitat

The *Fisheries Act* contains two types of provisions that can be applied for the conservation and protection of fish habitat[3] essential to sustaining freshwater and marine fisheries resources that Canadians value because of the significant economic, social, cultural, and environmental benefits they provide.

Section 35 is the key habitat protection provision of the *Fisheries Act*. This section prohibits any work or undertaking that would cause the harmful alteration, disruption or destruction (HADD) of fish habitat, unless authorized by the Minister of DFO or through regulations under the *Fisheries Act.*

(1) "No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat."

(2) "No person contravenes subsection (1) by causing the alteration, disruption or destruction of fish habitat by any means or under any conditions authorized by the Minister or under regulations made by the Governor in Council under this Act."

- Section 35, *Fisheries Act*.

DFO administers and enforces Section 35 and other related habitat protection provisions of the *Fisheries Act*, including sections 20, 21, 22, 26, 28, 30, and 32 (see Annex 1).

Section 36 is the key pollution prevention provision. It prohibits the deposit of deleterious substances into waters frequented by fish, unless authorized by regulation under the *Fisheries Act* or other federal legislation. Regulations to authorize deposits of certain deleterious substances have been established for key industry sectors pursuant to section 36 (e.g., pulp and paper and metal mining). The responsibility for the administration and enforcement of the pollution prevention provisions of the *Fisheries Act* is assigned to EC.

[2] Transport Canada's responsibilities regarding the NWPA will be transferred via Order in Council sometime in March 2004. There will then be a protocol agreement put in place for a transition period probably between March 2004 and October 1, 2004.)

[3] Fish habitat is defined under subsection 34(1) of the *Fisheries Act* as "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".

The *Fisheries Act* also contains provisions that support the administration and enforcement of the habitat protection and pollution prevention provisions. These include:

- powers for the Minister to request plans and specification for works and undertakings that might affect fish or fish habitat (section 37);
- authority for the Minister to appoint inspectors and analysts (subsection 38.1);
- a description of inspectors' powers (including entry, search, and direction of preventive, corrective or cleanup measures) (section 37.3);
- a description of offences and punishment (section 40); and
- a determination of liability when a deleterious substance has been deposited (subsection 42).

## 1.2 Policy for the Management of Fish Habitat

The *Policy for the Management of Fish Habitat* (the Habitat Policy), which was tabled in Parliament in 1986, and its supporting operational policies provide a comprehensive framework for the administration and enforcement of the habitat protection and pollution prevention provisions of the *Fisheries Act* consistent with the goal of sustainable development.

The Habitat Policy has an overall objective to "increase the natural productive capacity of habitat for the nation's fisheries resources" – that is, to achieve a "net gain" in fish habitat. This is to be achieved through the Habitat Policy's three goals of conservation, restoration, and development of fish habitat.

The Habitat Policy recognizes that habitat objectives must be linked and integrated with fish production objectives and with other sectors of the economy that make legitimate demands on water resources. As a result, the Habitat Policy identifies the need for integrated planning for habitat management as an approach to ensuring the conservation and protection of fish habitat that sustain fish production while providing for other uses.

The objective and goals of the Habitat Policy are to be achieved, through eight implementation strategies. These include Protection and Compliance; Integrated Resource Planning; Scientific Research; Public Consultation; Public Information and Education; Cooperative Action; and Habitat Improvement and Habitat Monitoring.

A key element of the Habitat Policy is the guiding principle of "no net loss of the productive capacity of fish habitat". This principle, which supports the conservation goal, is applied

when proposed works and undertakings may result in a HADD of fish habitat. Prior to issuing an authorization under subsection 35(2) of the *Fisheries Act*, DFO applies the "no net loss" guiding principle, so that unavoidable habitat losses as a result of development projects are balanced by newly created and/or restored fish habitat.

If unacceptable losses of fish habitat cannot be prevented by these measures, the Habitat Policy calls for an authorization not to be issued. Furthermore, where deleterious substances result in harm to fish or damage to fish habitat, compensation[4] is not an option.

## 1.3 National Habitat Management Program

The Oceans and Habitat Sector's, HMP plays a major role in delivery of the Department's responsibilities for fish habitat management. It is supported with scientific support from our Science Sector's Environmental Science Program and compliance and enforcement activities are carried out through FAM Sector's Conservation and Protection Program.

National Headquarters' staff is responsible for the overall coordination of the delivery of the HMP, providing national policy direction, strategic advice and liaison with other Departmental sectors, federal departments and national industries and non-governmental organizations (NGOs). Day-to-day delivery of the HMP is carried out by staff located in more than 65 departmental offices (see Map 1) in six regions. These regions are:

- Newfoundland and Labrador;
- Maritimes (parts of New Brunswick and Nova Scotia);
- Gulf (parts of New Brunswick and Nova Scotia, as well as all of Prince Edward Island);
- Quebec;
- Central and Arctic (Alberta, Saskatchewan, Manitoba, Ontario, the Northwest Territories and Nunavut); and
- Pacific (British Columbia, and the Yukon Territory).

In Fiscal Year 2003-2004, the HMP continued its on-going efforts to strengthen its organizational effectiveness. Priorities included:

- streamlining the development of the referral review and approval process;
- establishing greater national consistency in the delivery of the Program;
- achieving a more balanced approach between regulatory and proactive activities in implementing the Habitat Policy; and
- enhancing collaboration and accountability in the delivery of the Program through partnerships.

[4] See Glossary in the *Policy for the Management of Fish Habitat* for definition of compensation <http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/policies-politique/operating-operation/fhm-policy/page08_e.asp>.

**Scientific Support**

Timely, relevant science is a fundamental requirement for strengthening the foundation and credibility of the program in support of the objectives of DFO's Policy for the Management of Fish Habitat. Science Sector's, Science Program conducts research to address knowledge gaps related to habitat conservation, restoration and improvement. Research projects are conducted by Environmental Science staff in all Regions, addressing questions of importance to Habitat Managers. Among the areas of research pursued in Fiscal Year 2003-2004 are:

- developing empirical models for evaluating the productive capacity of fish habitat, linking fish biomass at specific habitats to total population production;
- assessing techniques for the remediation of contaminated sites;
- assessing the impacts of fishing gear on fish habitat;
- developing techniques for Environmental Effects Monitoring related to pulp and paper mill effluents;
- developing techniques to assess productive capacity and the value of specific habitats to fish, and to delineate 'critical habitat';
- assessing the effects of aquaculture on the environment;
- developing the knowledge necessary to make decisions regarding stream flows and water allocations, with regard to maintaining sufficient water for fish; and
- assessing the impacts of land use practices on aquatic habitat, with an aim to reducing the impacts of industries such as forestry, farming, and mining.

The results of these research projects are transferred to HMP staff in the form of peer reviewed advice, workshops, published reports, fact sheets, briefings, and personal consultations.

**Compliance and Enforcement Support**

The fish habitat protection and pollution prevention provisions of the *Fisheries Act* provide the legislative basis for protecting fish and fish habitat: however, they must be administered and enforced in a fair, predictable and coherent manner. The compliance monitoring and enforcement support for the habitat protection provisions of the *Fisheries Act* are provided by FAM's Sector C&P Program. Compliance and enforcement support for the pollution prevention provisions of the *Fisheries Act* are provided by EC's Environmental Emergencies Program and Enforcement Program.

## 1.4 Performance Measurement for the Habitat Management Program

Building on a government-wide effort to improve the measurement, evaluation and reporting on the performance of government programs, as referenced in the 2000 publication "Results for Canadians", federal departments must ensure that spending on their activities, programs and services is linked to actual outcomes achieved. Performance measurement is a critical tool for assessing these linkages in terms of the effectiveness and efficiency of a particular government program.

One of the tools used by the HMP to improve measurement, evaluation and reporting is the "Results-Based Management and Accountability Framework" (RMAF). The HMP is developing an RMAF that will be used to define outcomes, performance indicators, evaluation strategies, and reporting mechanisms needed to measure, evaluate, and report on the Program's success. An important part of this RMAF will be the development of performance indicators that are realistic, relevant, and affordable.

The Habitat Program's RMAF also includes an evaluation strategy that seeks to link back to the performance measurement strategy, and by answering basic questions about the success of the program, leads to any necessary adjustments or improvements.

The *Annual Report to Parliament* is only one of several performance-reporting mechanisms used to assess and report on the success of the HMP. The annual *Departmental Performance Report* and the *Report on Plans and Priorities* are two other reports produced by the Department that provide information about the performance of the HMP to Parliamentarians and Canadians.

## 1.5 A Five - Point Action Plan – Looking Ahead

DFO's regulatory responsibilities under the *Fisheries Act*, the CEAA and other pieces of legislation have an impact on a wide range of individuals, business of all sizes and communities.

Like other regulatory programs, HMP faces a number of challenges. As a result of, the Departmental Assessment and Alignment Program, which was an extensive review of its programs and expenditures, DFO launched an Environmental Process Modernization Plan (EPMP) to contribute to more efficient and effective delivery of its regulatory responsibilities and to support the federal smart regulation agenda.

The EPMP consists of the following five closely linked elements:

- a systematic, science-based risk management framework which allows staff to focus efforts on activities that pose the highest risk to fish habitat by rating activities by risk

(e.g. low, medium and high), and measuring those activities against the sensitivity of habitat and the severity of impact;

- streamlining measures to improve the efficiency and effectiveness of the review processes for low risk activities;

- improved coherent and predictable decision-making through the introduction of national operating policies, program governance structures, performance measurement and mandatory training for all staff;

- implementation of a new "management model" for handling EAs and major projects to enable more focussed attention on those projects which are particularly complex; and

- enhanced partnering arrangements with provinces, territories industry stakeholders, NGOs, Aboriginal groups, and others.

The EPMP provides an important opportunity to address concerns and make the HMP more relevant and credible for Canadians.

The EPMP promotes:

- more effective protection of fish habitat;

- more efficient use of resources;

- more transparent and understandable decision-making;

- definitive, up-front information for proponents on low risk activities;

- more meaningful partnering arrangements that reflect shared responsibility for the resource;

- improved management of EA projects, especially for major projects; and

- support for the "whole of government" smart regulation objectives which is putting in place processes that safeguard the health and safety of Canadians, ensure a healthy environment and create the conditions for an innovative and competitive economy.

# 2.0 Review of Development Proposals (Referrals)

With respect to reviews and assessment activities, staff of the HMP review information about development proposals (referrals) submitted to the Department to assess their potential

impacts on fish habitat. As a result of these reviews, HMP staff provides advice and requirements for the conservation and protection of fish habitat that allows proponents to comply with the *Fisheries Act*, mainly with respect to avoiding the HADD of fish habitat (section 35). These requirements are in the form of either a "Letter of Advice" or an authorization pursuant to subsection 35(2) of the Act.

It is important to note that the habitat protection provisions, including section 35 of the *Fisheries Act* do not create a mandatory obligation for proponents of development proposals to seek a "Letter of Advice" or an authorization from DFO, as there is no such authority in the section. However, to ensure that they are not in violation of the *Fisheries Act*, proponents voluntarily refer information about their projects to determine if the proposed development projects comply with the habitat protection provisions of the *Fisheries Act*. As part of this review, HMP staff must also verify that the proponents projects comply with the habitat protection requirements, under the *Species at Risk Act* (SARA) prior to issuing an authorization, and that the EA under the CEAA is completed. For development projects requiring such decisions, DFO becomes a responsible authority under the CEAA and HMP staff must conduct EAs that consider broader environmental issues than those directly associated with fish habitat.

## 2.1 Summary of Habitat Referrals

**Table 1 summarizes the number of referrals (by work category) submitted to DFO regions for review. It has been reviewed and updated by NHQ Information Management.**

**Table 1:**
**Summary of Habitat Referrals**
**Fiscal Year 2003-2004**

| REGION | Work Categories | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Aqua-culture | Forestry | Instream Works | Land Use | Mining | Oil & Gas | Roads | Shoreline Works | Water Mgmt | Other* | Total |
| **Newfoundland & Labrador** | 18 | 14 | 136 | 206 | 31 | 4 | 317 | 344 | 1 | 72 | **1,143** |
| **Maritimes** | 20 | 72 | 252 | 40 | 1 | 22 | 376 | 361 | 1 | 52 | **1,197** |
| **Gulf** | 41 | 15 | 209 | 8 | 7 | 1 | 164 | 188 | 2 | 20 | **655** |
| **Quebec** | 9 | 0 | 41 | 13 | 6 | 8 | 30 | 104 | 51 | 25 | **287** |
| **Central & Arctic** | 2 | 40 | 1,234 | 246 | 199 | 981 | 1,381 | 1,467 | 277 | 314 | **6,141** |
| **Pacific** | 32 | 488 | 658 | 898 | 252 | 27 | 437 | 669 | 137 | 213 | **3811** |
| **TOTAL** | **122** | **629** | **2,530** | **1,411** | **496** | **1,043** | **2,705** | **3,133** | **469** | **696** | **13,234** |

* "Other" includes referrals identified with Work Categories of Deleterious Substances, Hazardous Materials, Research, Ocean Management, Ocean Dumping, Offshore Shipping, Power Projects, Railways, Seismic Activities, and Class Screenings of Habitat Restoration Projects.

### 2.1.1. Newfoundland and Labrador Region

During the Fiscal Year 2003-2004, Newfoundland and Labrador Region received approximately 1,143 referrals describing a variety of proposed works or activities having the potential to impact on fish or fish habitat. These referrals with proposed mitigative measures were reviewed by Habitat Management staff. When appropriate, project relocation and/or re-design were also discussed with the respective proponent to minimize or avoid any adverse effects on fish and fish habitat.

Of the 1,143 referrals received by DFO's Newfoundland and Labrador Region, approximately 76% were related to land use, shoreline works and roads. Another 150 (or 13%) were related to instream works and forestry.

Although aquaculture represents only two percent (2%) of the referrals, harmonizing DFO's information requirements with the aquaculture industry and provincial licensing process has resulted in a significant improvement in the quality of aquaculture referrals being received. This has enabled more thorough and meaningful reviews such that fish habitat are being protected through the avoidance of sites that are assessed as high risk with respect to habitat impacts.

The small number of new referrals for Oil and Gas referrals (4) does not reflect the current workload associated with this sector. The fish/fish habitat aspects of the Strategic EA for the Orphan Basin involved a comprehensive review of the Strategic EA scoping document, coordination of a regional DFO workshop to identify Fiscal Year potential issues, attendance at meetings with the Canada Newfoundland Offshore Petroleum Board and consultants, and a comprehensive review of the Strategic EA draft document. The expansion of the White Rose project included a review of the scoping document and project description for the construction of a new glory hole and development well, which will be connected to the White Rose Floating Production Storage and Offloading infrastructure. This involved revisiting the original EA documents for the project, as well as attending meetings with the Canada Newfoundland Offshore Petroleum Board and the proponent regarding amendments to the Environmental Effects Monitoring program and the *Fisheries Act* authorization. Additionally, the review of the 2002 Newfoundland Transshipment Terminal Environmental Effects Monitoring program involved a review of the results of this program as well as recommendations proposed for future versions. Comments and advice were provided to both the proponent and consultant. Furthermore, Environmental Effects Monitoring programs for two other projects (Hibernia and Terra Nova) were submitted for review and comment; but these are captured under past referrals and are not reflected as new referrals.

### 2.1.2. Maritimes Region

During the Fiscal Year 2003-2004, Maritimes Region received approximately 1,197 referrals describing a variety of proposed works or activities having the potential to impact on fish or

fish habitat. Of the total number received by DFO's Maritimes Region, instream, road and shoreline works comprised the bulk of the referrals received accounting for 86%.

A significant amount of time and effort is routinely put into working with the proponents to look at ways to minimize any potential impacts. During the period of 2003-2004, staff provided responses in 602 cases where a HADD could be avoided, and 26 cases where a HADD was considered likely and an authorization under subsection 35(2) of the *Fisheries Act* was issued.

The Province of New Brunswick permitting process has for some time dealt with low risk projects and removed them from DFO's referral workload by using guidelines, certification training and provisional permits. Work was undertaken with the provincial agencies in Nova Scotia to implement a comparable process to remove low-risk referrals from the referral process. In spite of good progress on this initiative, the number of referrals remains at about the same overall level as in the previous year. While there are some small decreases in some categories, this reduction was balanced by a significant increase in referrals in the category of roads where the number of referrals has almost doubled.

## 2.1.3. Gulf Region

Gulf Region Habitat staff reported a 9% increase in referrals in the 2003-2004 fiscal year with 655 received, compared to 636 referrals in the previous year. There was a noticeable increase in road works with 164 referrals compared to only 125 in Fiscal Year 2002-2003. This 23% increase in referrals for this category was in part due to repairs done to existing works caused by hurricane Juan.

Out of the 10 categories listed in Table 1, instream works, road and shoreline works still comprises the large majority of the 655 referrals at 85%. This is a 5% increase from the Fiscal Year 2003-2004. The majority of the proposals are referred through Memorandums of Understanding with provincial departments with the remainder being received from federal departments, agencies or directly from proponents.

There were three major projects in Fiscal Year 2003-2004: the Return of Boat Harbour to a Tidal Estuary, the Belledune Thermal Oxidizer Facility and Modification to the Petitcodiac River Causeway. Information in these projects may be found following the text below.

Details of the types of projects reviewed as referrals in each of the work categories in the Fiscal Year 2003-2004 are as follows.

**Aquaculture**
Aquaculture referrals were predominately related to marine suspended culture for commercial oyster and mussel facilities. The majority of the reviewed culture facilities, which were suspended, required an EA under the CEAA, and where triggered by

subsection 5(1) of the NWPA DFO was the lead responsible authority. During the course of these EA, the mitigation to protect fish and fish habitat was incorporated into project designs. Suspended aquaculture referrals were widely distributed in eastern New Brunswick including Lameque Bay, Caraquet Harbour, Saint Simon Bay, Shippagan Harbour, Miscou Harbour, Neguac Bay and Richibucto Harbour.

Other aquaculture referrals, for land based finfish rearing operations, were generally reviewed for water withdrawal requirements and concerns related to siltation.

**Forestry**
Forestry referrals were predominantly related to the installation of bridges, culverts and harvesting of timber within riparian zones. The number of referrals from the forestry sector has generally been low due to Memorandums of Understanding with provincial departments and private corporations relating to standards for process, methods, guidelines and operator certificate programs. It should be noted that follow-up monitoring in New Brunswick during the Fiscal Year 2003-2004 revealed a low level of compliance with existing standards. Based on these results, a process is being initiated to update existing guidelines and operator certification programs.

**Instream Works**
Instream works referrals were predominantly related to projects requiring works within the riparian zone and/or below the high-water mark of any watercourse. These projects generally included fish habitat enhancement, bank stabilization, fishway construction, dam decommissioning, debris removal, breakwater construction, silt removal, installation of beaver levellers, beaver dam removal, water withdrawal for irrigation purposes, pipelines, installation of silt traps, by-pass ponds and wetland enhancements works.

Dams and fishways account for a significant proportion of instream works. In the Fiscal Year 2003-2004, fourteen new fishways were approved under subsection 20(3) of the *Fisheries Act* and other existing fishways were upgraded. The review of existing impoundments and development of guidelines for operation, maintenance and decommissioning is ongoing. In Prince Edward Island alone there are an estimated 750 impoundments and in excess of 200 fishways.

**Land Use**
Land use referrals were varied and related to projects ranging from the construction of a soccer field to the development of cranberry growing operations.

**Mining**
Mining referrals were predominantly related to proposed peat moss operations, which require the drainage of large bog areas with the potential to affect base stream flows and release fine particulate matter to fish habitat. Assessment of these referrals required the proponent to provide and implement detailed planning to maintain drainage to the original watershed and

included the design and implementation of sediment control structures for the removal of peat material from runoff.

Other mining referrals included the expansion of a coal mine operation in Nova Scotia and a proposed barite mine in Cape Breton. The proposed barite mine did not proceed. Habitat Management also initiated a review of the proposed decommissioning of an ore mine in north-eastern New Brunswick.

**Oil and Gas**
Only one oil and gas referral was reviewed in Fiscal Year 2003-2004. It consisted of a shallow marine 2D seismic testing program in Bedeque Bay, Prince Edward Island. A letter of advice was provided to the proponent outlining mitigation measures and other environmental requirements recommended by our department to avoid potential impacts to fish and fish habitat. The project was cancelled in November 2003.

**Roads**
Road referrals were predominantly related to the installation, maintenance and repair of bridges and culverts associated with road infrastructure. The increased level of referrals in this category was associated with hurricane Juan in Nova Scotia as this extreme storm event resulted in damage to many existing works.

Other referrals related to the construction of temporary road structures for accessing work locations, were removed following project completion.

**Shoreline Works**
Shoreline works referrals related to works in marine, estuarine and freshwater habitat. Maintenance dredging comprised a large portion of these works relating to safe navigation in ports located in the southern Gulf of St. Lawrence. Generally, the works involved the periodic removal of mobile substrate (i.e. sand, silt) which accumulates in harbours and navigation channels.

A significant portion of shoreline works were also related to the construction, maintenance and expansion of breakwaters at harbour facilities. New construction and/or expansion of breakwaters generally requires an authorization under subsection 35(2) of the *Fisheries Act.* It should also be noted that proposals for the development of private marinas are increasing in the southern Gulf of St. Lawrence.

**Water Management**
Two referrals were reviewed under this category and consisted of assessing water withdrawal requirements for irrigation purposes and the restoration of a damaged dam associated with a Ducks Unlimited wetland. Both projects were in Nova Scotia.

**Other**
Referrals in this category were generally related to requests for the upgrade or installation of sewage treatment facilities. Expansion of communities and proposals for the development of shoreline properties reflects the types of proposals received.

Other referrals in this category included works associated with railway maintenance and the repair of a hydroelectric facility.

**Detailed Project Descriptions**

***Return of Boat Harbour to a Tidal Estuary, Nova Scotia***
Our Department is continuing to evaluate the proposed works and consult with both the public and the proponent to ensure there are no significant adverse impacts to the environment associated with this project. In 1967, the Boat Harbour estuary located in Pictou County, Nova Scotia, was converted into a wastewater effluent stabilization lagoon to process effluent from a local bleached kraft mill. With updated treatment processes now available, this portion of the treatment facility will be decommissioned, returning the waters back to a natural tidal estuary.

While issues surrounding the 142-hectare facility are longstanding, the fate of sediments, which accumulated within the Boat Harbour treatment facility during its 37 years of operation, has been the focus of the assessment of the proposed works. The issue of sediment remediation is also a key concern of the fishing community and members of a nearby Pictou Landing First Nation community.

In Fiscal Year 2003-2004, the proposed project was undergoing a review, which included consultations with the public, fishing industry and First Nations. The proponent is continuing the preparation of an environmental impact statement as well as effluent and sediment dispersion modeling. The proponent has also developed a sediment management plan for an estimated 75,000 $m^3$ of accumulated sediment within the harbour for which a pilot cleanup project will be initiated in August 2004.

***Belledune Thermal Oxidizer Facility, New Brunswick***
This project consisted of the construction and operation of a high temperature thermal oxidizer treatment facility for treating hydrocarbon and creosote-impacted soils and materials. The proposed facility was to be constructed on a 20-acre site located in the Belledune Industrial Park, in the Village of Belledune, New Brunswick. The project was initially reviewed through the provincial environmental impact assessment process where it was determined that the project would not likely result in any potential impacts to fish and fish habitat. Process water was to be obtained from an existing water pipeline and all site runoff and process water would be collected in a containment pond, filtered and be recycled in the plant. Discharge of any kind from the plant was not planned. Domestic wastewater was also going to be dealt with through a septic field and there were no existing water bodies within or immediately adjacent to the site. Subsequent to the provincial review process, a

petition to the Minister of the Environment prompted a federal review under trans-boundary effects. Our Department participated in this review.

In addition to projects listed above, several activities related to project referrals initially reported in the Annual Report to Parliament for the Fiscal Year 2002-2003 have also been completed and include the following.

***Corridor Resources Offshore Seismic Exploration, Nova Scotia***
In the Fiscal Year 2002-2003, DFO participated in the review of the proposed project and provided a letter of advice outlining mitigation measures to be implemented to ensure the protection of fish and fish habitat. In March 2003, the Canada Nova Scotia Offshore Petroleum Board, the regulatory approval agency for the project, indicated that the proponent would need to revise their proposal to reflect the ten conditions outlined by the board. In Fiscal Year 2003-2004, the revised project proposal was approved by the board. One of the ten conditions included the development and implementation of an environmental effects monitoring program. Effects monitoring of seismic activity on snow crab was conducted during the Fiscal Year 2003-2004 and data is currently incoming.

***Modifications to the Petitcodiac River Causeway, New Brunswick***
Many rivers in the Bay of Fundy had gates installed during the late 1960's and early 1970's, to control the flow of tidal waters beyond that point in the system. The Petitcodiac River Causeway and tidal gate facility has impacted tidal exchange, sediment transport and fish passage in the Petitcodiac River over time. The project is studying four options to restore fish passage for identified species including Tomcod, Rainbow Smelt, Gaspereau (Blueback Herring and Alewife), Brook Trout, American Shad, American Eel, Lamprey, Atlantic Sturgeon and Atlantic Salmon. The project options include replacing the fishway; gates open during peak migration; gates open permanently; or replacement of the causeway with a partial bridge.

The project is undergoing a joint review under the provincial Environmental Impact Assessment process (registered in July 2002) and the federal EA process pursuant to the CEAA with DFO as the lead federal responsible authority. It should be noted that the responsibility of the lead federal responsible authority will be transferred to Transport Canada on October 1, 2004. The federal EA, initiated in July 2002, will undergo a screening level assessment triggered by the NWPA and a possible authorization for the HADD of fish habitat under subsection 35(2) of the *Fisheries Act*. The Technical Review Committee for this project, composed of representatives from provincial and federal departments, will input into the Environmental Impact Assessment/EA process and ensure that guidelines developed for the joint review are followed.

Phase 1 (i.e. Scoping) was completed during the Fiscal Year 2003-2004 and Phase 2 (i.e. Data Gathering and Analysis) is nearing completion while Phase 3 (i.e. Environmental Effects Analysis) is close to commencement**.** In the Fiscal Year 2003-2004, the project underwent public consultations and collected input from various government agencies for the

preparation of the environmental impact statement required for the Environmental Impact Assessment process. Two workshops were held with the public, stakeholders and government agencies. They included the Hydrodynamic and Sediment Transport Modelling Workshop and the Socio-Economic Workshop.

The projected timeline for completion of the environmental impact statement and selection of a project option is spring 2005.

## 2.1.4. Quebec Region

During the 2003-2004 Fiscal Year, the Quebec Region received 287 project proposals, roughly the same number as in 2002-2003. This is merely an overview of the regulatory activities carried out, because measures were also taken regarding proposals received in previous Fiscal Years. In addition, resources in the Quebec Region are allocated primarily to the analysis of major projects with a significant impact on fish habitat. Road projects and shoreline works represented more than 50% of the 287 project proposals. Water management projects consisting of dredging and water clean up accounted for almost 18% of the proposals received, whereas no forestry-related proposals were submitted to the Quebec Region Fisheries Management Branch. In 2003-2004, several new major projects were submitted to DFO's Quebec Region, and a brief description of these follows.

***Construction of Four Hydroelectric Power Plants on the Romaine River***
In March 2004, Hydro-Québec submitted to DFO a proposal for a megaproject calling for construction of a hydroelectric complex on the Romaine River on the North Shore of the Gulf of St. Lawrence. The project consists of the construction of a complex of four hydroelectric power plants with a total output of approximately 1,500 MW. The reservoirs would cover a total surface area of 273 $km^2$ (with a length of 191 km), and would include four segments of river with reduced flow over a total length of 13 km. DFO collaborated with the proponent and provincial authorities, and tours of the site were conducted with a view to optimizing land work and the impact studies required for the environmental assessment, which is to begin in 2004.

***Expansion of Wharf 41, Pointe-Noire, Sept-Îles***
This project, which is linked to the expansion of the Alouette aluminum refinery, consists of capital dredging (675,000 $m^3$), filling in intertidal zone and subtidal zone (3.2 hectares), and underwater blasting. The project was submitted to DFO in July 2003 and an environmental assessment is in progress.

***Installation of a Gas Pipeline from Trois-Rivières to Bécancour***
In early 2003, the limited partnership Gaz Métropolitain submitted to DFO a proposal to install an underwater pipeline to link the Bécancour industrial park to the existing pipeline on the north side of the St. Lawrence River. DFO commenced the preliminary review required for authorization under the *Fisheries Act*. The Department also completed a preliminary

review required to authorize a seismic exploration campaign carried out in early 2004. The purpose of the campaign was to determine whether or not it is possible to drill under the river bed in order to run the gas pipeline.

***Vanadium Mine, Doré Lake, Chibougamau***
Resources Mckenzie Bay Ltée. submitted to DFO a proposal to operate an open-pit vanadium mine and processing complex. The project will affect a considerable area of land and water ecosystems. Since the project is also subject to assessment by the provincial government, DFO asked the Canadian Environmenal Assessment Agency (CEA Agency) to initiate federal coordination. A federal environmental assessment is in progress.

## 2.1.5. Central and Arctic Region

Central and Arctic Region received 6,141 referrals in Fiscal Year 2003-2004. The breakdown among the four Areas within the Region follows:

### 2.1.5.1. Ontario-Great Lakes Area

As reported on in previous Reports to Parliament, DFO – Ontario-Great Lakes Area (OGLA) has formal work-sharing agreements with 37 of Ontario's 38 Conservation Authorities and all seven Parks Canada Agency, park sites since 1998. These work-sharing agreements assist DFO in streamlining regulatory reviews and approvals under the habitat protection provisions of the *Fisheries Act*, and promote their capacity and competency to conduct excellent client service. Agreements with Conservation Authorities and Parks Canada Agency are based on reviews.

A total of 4,024 habitat referrals were received by DFO for review in the OGLA under the habitat provisions of the *Fisheries Act*. DFO reviewed 2,513, the Conservation Authorities reviewed 1,075 and Parks Canada Agency reviewed 437. In addition, DFO has working arrangements with Ontario Ministry of Natural Resources (OMNR) who complete habitat reviews for numerous forestry related projects and road projects proposed by the Ministry of Transportation. Statistics in these categories have not been reflected in Table 1.

Details of the types of projects reviewed as habitat referrals in Fiscal Year 2003-2004 have been outlined below:

**Forestry**
Forestry referrals were predominantly related to the installation of bridges, culverts and temporary crossing to access harvest blocks. The number of referrals from the forestry sector has generally been low due to an agreement DFO has with the OMNR who reviews these project types under the *Crown Forest Sustainability Act*. Provincial guidelines such as "Environmental Guidelines for Access Roads and Water Crossings", Timber Management Guidelines for the Protection of Fish Habitat", and "Code of Practices for Timber

Management Operations in Riparian Areas" provide mandatory standards and/or best management practices that protect water quality and fish habitat. OMNR will continue to review these types of projects under a protocol that is being developed entitled "Protocol for the Review of Water Crossings Proposed during the Forest Management Planning". This protocol will likely be released in 2005.

**Instream Works**

Projects in the Instream Works category typically include channel realignments and channel infilling. This Fiscal Year however DFO - OGLA was involved in the review of the twinning of the York Durham Sewer System, a 66 km long multi-Phased sanitary sewer project being undertaken by Regional Municipality of York. DFO continued to work with various municipal, provincial, and federal agencies on this project. At the time of this report, DFO was working within the provincial permitting process and as yet no fisheries authorization was required, therefore no CEAA has been triggered.

**Mining**

DFO – OGLA had approximately 28 mining related projects during this fiscal period. Two of the key mining projects for Ontario are: the Victor Diamond Mine in Attawapiskat, Ontario; and the Pamour Gold Mine Expansion in Porcupine, Ontario. They have been summarized below.

***Victor Diamond Mine – Attawapiskat, Ontario***

DeBeers Canada Inc. (DeBeers) proposes to develop a diamond mine in Northern Ontario on the James Bay lowlands within the traditional lands of the Attawapiskat First Nation (AFN). DFO, Natural Resources Canada, EC, Transport Canada, and Indian and Northern Affairs Canada are all responsible authorities pursuant to the CEAA, and Health Canada is providing expert advice. Components of the Victor project that will require a subsection 35(2) authorization under the *Fisheries Act* include the dewatering of approximately 30 km of the Nayshkootayou River, realignment of 3 km of South Granny Creek, dredging within the Attawapiskat River, and dredging within James Bay. Natural Resources Canada declared itself as the lead responsible authority in April 2003 for a comprehensive study under the CEAA. The federal government has committed to consultation with the AFN and meetings have been held to discuss the project with AFN, Fort Albany First Nation, the Kashechewan First Nation and the Moose Cree. The final Comprehensive Study Report guidelines were released by Natural Resources Canada and the responsible authorities in February 2004. Pursuant to subsection 17(1) of the CEAA, DeBeers is preparing the Comprehensive Study Report on behalf of the responsible authorities and it is expected to be completed in 2004.

***Pamour Gold Mine Expansion -Porcupine, Ontario***

Porcupine Joint Venture proposes to expand the existing Pamour open pit gold mine located along HWY 101, 5 km east of Porcupine, Ontario. The project will include the construction of a dam across Three Nations Lake, the infill of approximately one quarter of Three Nations Lake, the relocation of approximately 1.6 km of Three Nations Creek and the alteration of part of Three Nations Lake shoreline. These components will require a subsection 35(2)

*Fisheries Act* authorization from DFO and a NWPA permit from Transport Canada in order to proceed. Therefore DFO-OGLA and Transport Canada are responsible authorities for the project under the CEAA and Natural Resources Canada, EC and Health Canada have identified themselves as federal authorities. Because the open pit gold mine will increase its ore production capacity by approximately 1,200 tonnes per day, it is subject to a Comprehensive Study under the CEAA. DFO-OGLA and Porcupine Joint Venture met early in 2003 to discuss preliminary fish habitat compensation design. DFO advised Porcupine Joint Venture in December 2003 of the scope of the project for the purposes of conducting the Comprehensive Study. DFO-OGLA has been consulting with the other federal agencies on the guidelines for the preparation of the Comprehensive Study Report. Pursuant to subsection 17(1) of the CEAA, Porcupine Joint Venture will prepare the Comprehensive Study Report on behalf of the responsible authorities. A first draft of the Comprehensive Study Report is expected to be completed by summer 2004.

**Roads**

In Fiscal Year 2003-2004, DFO-OGLA reviewed approximately 530 road related habitat projects which ranged from water crossing replacements to road widening to twinning of major highways. Examples of the latter included three projects proposed by the Ministry of Transportation for the twinning of three sections along HWY 69 in the Parry Sound area including: Nobel to HWY 522; HWY 522 to HWY 64; HWY 64 to Estaire.

The latter two projects are being reviewed under the CEAA and a scoping guidance document has been created by the FEAC with contributions from DFO, Transport Canada, and National Defence, all of which are responsible authorities on this project. For DFO, the project is defined as the construction, operation, maintenance and decommissioning of all water crossings where *Fisheries Act* authorizations are anticipated, including temporary access roads, associated approaches, and other undertakings directly associated with the water crossings.

**Shoreline Works**

During Fiscal Year 2003-2004, the Habitat Management Division of the OGLA continued to work with various municipal, provincial, and federal agencies; Port Authorities and the Toronto Waterfront Corporation on EA and *Fisheries Act* reviews of major shoreline proposals to effectively promote sustainable development in a coordinated manner. Examples of the types of projects include the remediation of contaminated sediment of Randle Reef in Hamilton Harbour and Toronto Waterfront Revitalization projects, e.g. for projects such as shoreline enhancement works, waterfront trail and park development, floodplain management at the mouth of the Don River, Toronto Harbour dredging, dragon boat course and fish habitat restoration works around the Toronto Islands and Tommy Thompson Park. A number of these projects are receiving federal funding and thus require CEAA review with DFO–OGLA participating as a responsible and/or a federal authority.

### 2.1.5.2. Western Arctic Area

During Fiscal Year 2003-2004, a total of 135 new referrals were reviewed in the Western Arctic Area. These new referrals were dominated by developments in the following sectors: mining and mineral exploration, oil and gas, transportation as well as, municipal and general land use activities.

Most of the referrals reviewed were for exploratory mining operations and other related activities being undertaken by mining proponents as well as for exploratory drilling operations by oil and gas proponents in the Mackenzie Valley, Mackenzie Delta and the Beaufort Sea. The transportation sector remained active and is expected to increase over the next few years. In Fiscal Year 2003-2004, the Western Arctic Area office received 16 proposals for permanent bridges. Three were approved for construction following extensive involvement by Area staff into the design to minimize impacts to fish habitat. The remaining 13 proposals are still under review. Additional bridge proposals are expected as the Government of the Northwest Territories-Department of Transportation (GNWT-DoT) moves to establish a more permanent road access. This past year, GNWT-DoT began ice capping the winter road to support traffic associated with the oil and gas industry. DFO has been extensively involved in trying to mitigate the effects of the new transportation water demands that are being driven by oil and gas industry. The GNWT-DoT is expected to conduct geotechnical and design studies in 2004-2005 for a bridge to cross the Great Bear River.

The upgrade to HWY 3 is nearly completed. So far, one crossing required a subsection 35(2) *Fisheries Act* authorization before construction. GNWT-DoT focus has now shifted to upgrading HWY 4 in support of transportation to the diamond mines, and upgrades to HWY 1 to support the oil and gas industry.

In addition to the new referrals, the Western Arctic Area office continued to be involved with the review of numerous documents and compliance monitoring reports submitted by proponents of primarily mining projects. DFO continues to be a member of the Technical Committees utilized by the Mackenzie Valley, Sahtu and Gwich'in Land and Water Boards, which in turn were established as per the MVRMA. Through its membership, DFO provides technical advice and expertise, shares information with other federal agencies to assist in the assessment of projects, and ensures consistency between license and authorization requirements.

**Oil and Gas**

In Fiscal Year 2003-2004, Habitat Management staff in the Western Arctic Area reviewed 21 proposals for oil and gas related activities including seismic exploration programs. Overall, activity was reduced relative to 2002-2003 however, oil and gas activities continued throughout the territory, specifically in the Cameron Hills, Liard, Sahtu, Gwich'in and Mackenzie Delta / Beaufort Sea areas.

The Cameron Hills pipeline and gathering facility, in the southern portion of the territory encountered several problems with site erosion due to inadequate surface runoff contingencies and mitigation. DFO Habitat and C&P staff continued to be actively involved in following up on this project.

Devon Canada is planning to drill four exploratory gas wells over a four year period in the Beaufort Sea starting in 2005. The preliminary project description has been received. The drill platform utilized for the operations will likely be a modified and fortified submerged tanker hull, for which the impacts to fish habitat will have to be assessed and likely authorized pursuant to subsection 35(2). This project will be assessed as a Comprehensive Study under the CEAA and the report is expected in the spring of 2004.

A riverine airgun seismic program initially proposed for the Mackenzie River in 2002 has been deferred to the summer of 2005. DFO will be conducting a study in July 2004 to assess the impacts of airgun generated noise on the behaviour and physiology (specific to hearing) of northern riverine fish species. This study is intended to fill in information gaps relating to the potential impacts of air-gun seismic on fish.

A formal proposal for the Mackenzie Valley Pipeline linking the Mackenzie Delta gas reserves to southern markets is now anticipated in the summer of 2004. This nationally significant project will be reviewed under a joint MVRMA, CEAA and Inuvialuit Panel, and will require the commitment of considerable Departmental resources to contribute to the EA process and the regulatory process should the Panel review recommend that the pipeline proceed. Geotechnical investigation projects to support the Mackenzie Gas Project were conducted in areas throughout the pipeline and gathering line corridors and completed in the Inuvialuit, Gwich'in and half of the Sahtu settlement areas. The Deh Cho geotechnical project was referred to EA under the MVRMA due to public concerns.

## Mining

### *Diavik Diamond Mine Project*

The Diavik Diamond Mine, located approximately 300 km northeast of Yellowknife on Lac de Gras received *Fisheries Act* authorizations (subsection 35(2) and section 32) in August 2000, following the conclusion of a Comprehensive Study under the CEAA. The subsection 35(2) authorization requires the conduct of extensive monitoring and sampling programs, which commenced in the summer of 2001 and will continue for the 25-year life of the mine. Plans for lake and stream habitat compensation are in the approval stage and works will commence 2004.

### *BHPB Ekati Diamond Mine*

The BHPB Ekati Diamond Mine, located approximately 330 km northeast of Yellowknife near Lac de Gras, underwent an expansion to its initial mine plan and currently operates six open pits at the site. Several streams were impacted on site and a 3.2 km long stream compensation program and in 2004 will enter its 6$^{th}$ year of post construction monitoring for the success of habitat compensation works. This project will include a cooperative effort

with DFO-Science and University researchers. Compensation works for whole lake destruction continues to present challenges to HM staff in 2003-2004.

***DeBeers Snap Lake Diamond Project***
The EA under the MVRMA of the Snap Lake Diamond Project was completed in October 2003. A subsection 35(2) *Fisheries Act* authorization for impacts to fish habitat is anticipated to be issued by DFO in July 2004. Compensation works for lake and stream impacts will be required as part of that authorization.

***Dry Bone Bay/Wool Bay Diamond Exploration Projects***
The winter of 2003-2004 saw three exploration drilling programs being undertaken in Great Slave Lake, approximately 30 km from Yellowknife, NWT. Exploration for diamonds is likely to continue with the feasibility of full-scale diamond mining being determined over the next two years.

### 2.1.5.3. Eastern Arctic Area

The Eastern Arctic Area carried on its HMP in Fiscal Year 2003-2004, in light of several changes in staffing, concluding with the permanent staffing of habitat biologists.

During Fiscal Year 2003-2004, Eastern Arctic Area reviewed 128 new referrals. The majority of the referrals were related to mine development and exploration throughout the territory**.** In addition, DFO continues to be involved in the review of several major mining and linear development projects. The HMP continues to work co-operatively in the review of development projects with the Nunavut Water Board and the Nunavut Impact Review Board, as established under the *Nunavut Land Claims Agreement*.

**Mining**

***Jericho Diamond Project***
The Jericho Diamond Project, as proposed by Tahera Corporation is located 350 km southwest of Cambridge Bay in the Kitikmeot region. The project is a combined open pit and underground diamond mine capable of producing up to 900 tonnes of ore per day and has a predicted eight-year mine life. This project is being reviewed at a screening level and will require a subsection 35(2) *Fisheries Act* authorization for the construction of a water withdrawal causeway, channel diversion, and the use of Long Lake to store processed kimberlite. The Nunavut Impact Review Board held Final Hearings in January 2004 and subsequently produced a draft final hearing report, to which federal departments will decide whether it meet the needs of both the territorial and federal environmental review.

***Doris North Gold Project***
The Doris North Gold Project, as proposed by Miramar Mining Corporation, is located at Doris Lake in Nunavut, about 160 km southwest of Cambridge Bay in the West Kitikmeot Region. Miramar plans to construct and operate a small underground gold mine, processing

ore at a rate of 690 tonnes per day to yield 307,000 ounces of gold over a 24-month operating period short-life. It will be the first commercial mineral development proposed for the Hope Bay greenstone belt. A subsection 35(2) *Fisheries Act* authorization will likely be required prior to development of this project, due to a fish-bearing lake being modified with a control structure to allow for the controlled deposition of tailings and release of effluent. This project is being reviewed as a Comprehensive Study under the CEAA, in addition to a review by the Nunavut Impact Review Board.

***Meadowbank Gold Project***

The Meadowbank Gold Project, as proposed by Cumberland Resources Ltd., is located 70 km north of Baker Lake. Cumberland plans to construct and operate an open pit and underground gold mine with a 10-12 year life. A subsection 35(2) *Fisheries Act* authorization will likely be required for the construction of water retention dykes to allow the mining of the ore to occur beneath shallow lakes, the construction of a waste rock and tailings storage areas, a barge unloading facility and construction of an airstrip. In addition to DFO participating in the review by the Nunavut Impact Review Board, DFO will be a responsible authority for the Comprehensive study of this project under the CEAA.

***Polaris Mine Project***

Teck Cominco Ltd. operates the Polaris Mine Project located on Little Cornwallis Island, Nunavut which is the world's most northerly metal mine. Underground zinc-lead mining operations, which initially began in the early 1980s, permanently ceased on September 3, 2002. A section 35 *Fisheries Act* authorization was issued as part of the two-year reclamation and decommissioning phase, which is expected to conclude this fall.

***Nanisivik Mine***

CanZinco Ltd. operates the Nanisivik mine, which is located on the south side of the Strathcona Sound, on Baffin Island, Nunavut and linked to the community of Arctic Bay by a 32 km long all-weather road. Nanisivik was the first metal (lead-zinc) mine in the Canadian Arctic, which began operations in 1976. Mining activities ended in September 2002 at Nanisivik, and the mine has now entered its reclamation phase. DFO will complete the review of the final closure plan and participate in the Nunavut Water Board final hearings.

***High Lake Project***

The High Lake Project, as proposed by Wolfden Resources, is located west of Bathurst Inlet and south of the Coronation Gulf in the Kitikmeot Region of Nunavut. The High Lake Project includes base metal and gold deposits at the High Lake and Ulu properties respectively, with a likely 10 to 15 year mine life. The project includes transportation corridors between the Ulu and High Lake sites (to facilitate transportation of materials from Ulu to High Lake for processing) and a northerly route to a proposed deepwater port facility at Grays Bay on the Coronation Gulf. The project is currently in the early phases of development and baseline data collection.

***Bathurst Inlet Port and Road Project***

The Bathurst Inlet Port & Road Project, as proposed by Nuna Logistics and Kitikmeot Corporation, is located west of Bathurst Inlet in the Kitikmeot Region of Nunavut. The project involves construction of a port facility on the west shore of Bathurst Inlet and a 211 km one-lane all-weather road extending southwest to Contwoyto Lake. The port facility will include fuel tank farms, concentrate storage sheds, a camp, an airstrip, and a dock capable of handling 50,000 tonne freighters. The aim of the project is to supply fuel and equipment to mines and exploration sites in the Slave Geological Province, while handling shipping of freight from Yellowknife headed for Kitikmeot communities. DFO and Indian and Northern Affairs are responsible authorities under the CEAA. It is undetermined whether a comprehensive study review is required. Issues associated with this project include 111 stream crossings, the possible disruption of caribou migrations, the establishment of new Oceanic shipping routes with its associated risks of oil spills, and the increased traffic and impacts on migratory birds.

### 2.1.5.4. Prairies Area

During Fiscal Year 2003-2004, the Prairies Area received 3,361 project referrals. The majority of the 3,361 referrals received by the Prairies Area were for projects involving oil and gas activities like pipeline stream crossings (28%). Shoreline works and in-stream works combined accounted for 28% of the referrals received. Road-related projects were the next most common, at 24%.

There were 951 oil and gas related proposals reviewed in Fiscal Year 2003-2004. Projects included pipeline crossings, seismic activities, and well drilling activities. A large majority of the oil and gas activities were located in Alberta.

Prairies Area staff reviewed 815 referrals for road related activities. These included the installation, maintenance and repair of bridges, culverts and fords associated with road infrastructure. Many of these were referred by rural municipalities. Provincial transportation agencies were also involved in a large number.

In Fiscal Year 2003-2004, there were 493 instream works referrals reviewed in the Prairies Area. Instream works are projects requiring works within the riparian zone and/or below the high-water mark of a stream or river. These projects include fish habitat enhancement, bank stabilization, debris removal, beaver dam removal, water intake construction, berm construction and small scale dredging.

There were 439 shoreline works projects reviewed during this Fiscal Year. Most of the shorelines works involved the construction of shoreline stabilisation works or docks on highly used recreational lakes. These activities were common in all three Prairie Provinces but especially in Saskatchewan and Manitoba.

The Prairies Area reviewed 201 water management referrals in 2003-2004. Most were for small water taking projects for irrigation, road maintenance or oil and gas purposes. Many involved drainage projects or maintenance of drainage canals.

There were 26 forestry referrals reviewed in the Prairies Area. These referrals were predominantly related to the installation of bridges and culverts on roads associated with forestry operations or for the review of annual operating plans. The number of individual referrals from the forestry sector has generally been low since several activities are generally included in a single annual operating plan review.

Additional project referral types included land use (171 referrals), mining (99 referrals), aquaculture (1) and other (169). The 'other' category includes any projects that were not captured in the other nine project types.

Of particular note are the following major projects that were proceeding in 2003-2004:

***Wuskwatim Hydro Generation Project, Manitoba***
Manitoba Hydro is proposing to build a 200 Megawatt (MW) generating power station/dam on the Burntwood River at Taskinigup Falls. DFO is participating in a joint review of the project with the Province of Manitoba pursuant to the Canada-Manitoba Agreement on Environmental Assessment Cooperation. DFO is the lead responsible authority for the review of this project, which is subject to a comprehensive study under CEAA. DFO is also actively working with the proponent and the Nisichawayasihk Cree Nation in the development and review of appropriate mitigation and fish habitat compensation options. The comprehensive study is expected to be completed in early 2005. Habitat issues are related to increased erosion due to higher water levels in Wuskwatim Lake and water level fluctuations downstream of the proposed generating station. Downstream migration and turbine mortality are also issues. A joint federal-provincial Aboriginal consultation process has been undertaken and this information is being considered.

***Red River Floodway Expansion Project, Manitoba***
The Manitoba Floodway Authority, a crown corporation, is expanding the Red River Floodway to increase the flood protection for the City of Winnipeg from a 1 in 90 flood event to a 1 in 700 event. DFO is participating in a joint review of the project with the Province of Manitoba pursuant to the Canada-Manitoba Agreement on EA Cooperation. DFO is a responsible authority under the CEAA (Infrastructure Canada is the lead responsible authority) for this project which is undergoing a screening level of assessment. An Environmental Impact Statement was received from the proponent in August 2004 and a joint federal/provincial information deficiency statement was issued in November 2004. A Supplementary Filing submitted in December 2004 is currently being reviewed by DFO. Provincial public hearings are ongoing. Fish habitat will be impacted as a result of project construction. Fish passage and fish mortality are also issues.

***Cluff Lake Project Decommissioning, Saskatchewan***
COGEMA Resources Inc. proposed decommissioning the Cluff Lake Mine in northern Saskatchewan, requiring preparation of a comprehensive study report under the CEAA. DFO reviewed the revised report. The finalized report was completed in October 2003 and was referred for public review. Habitat issues are related to the decommissioning of a number of stream crossings that are within the mine surface lease site.

***Disposal of Cigar Lake Waste Rock Project and Upgrading of the Temporary Access Road, Saskatchewan***
DFO is a responsible authority for the review of this project, as a result of its regulatory responsibilities under the *Fisheries Act* and the NWPA. The Canadian Nuclear Safety Commission (CNSC) is the lead responsible authority for the federal assessment. The screening report for the disposal of Cigar Lake waste rock and upgrading of the temporary access road was prepared and a hearing before the CNSC was held in June 2003 to review the report and any public comments that have been submitted to the Commission. The CNSC concluded, in September 2003, that the project was not likely to have significant adverse environmental effects. DFO remains involved in the project for the review of numerous crossings of fish bearing streams.

***Box Mine Comprehensive Study, Saskatchewan***
Goldfields Operating Company is proposing to develop a small open pit gold mine 25 km east of Uranium City, near the old Goldfields town site. During the 1930's and 1940's mining operations of the original Box and Athona underground mines, approximately 1.2 million tonnes of tailings were generated and deposited at the north end of Vic Lake Box mine is expected to yield 180,000 ounces of gold over a four year period. The operation will include excavation and removal of 3.6 tonnes of ore, and 2.4 million tonnes of waste rock; and disposal of approximately 3.6 million tonnes of tailings (200,000 tonnes to be placed in Vic Lake). In addition, improvements will be made to road access, including several crossings of fish-bearing streams.

***TransCanada East Twinning Project, Saskatchewan***
Saskatchewan Highways and Transportation, with funding contributions from Transport Canada, is completing the twinning of HWY 1 for 132 km, from Wolsely to the Manitoba border. The project includes several watercourse crossings. DFO is a responsible authority for this project due to its regulatory responsibilities under the *Fisheries Act* and the NWPA. Transport Canada is the lead responsible authority for the federal assessment. Transport Canada concluded in July 2003 that the project is unlikely to cause significant adverse environmental effects, taking into account appropriate mitigation and compensation. DFO conducted seven site specific reviews of crossings of fish bearing waters under this project.

***UTS Energy and True North Fort Hills Oil Sands Project, Alberta***
True North Energy proposed construction of a 190,000 barrel per day oil sands mine on its leases located northeast of Fort McMurray. DFO was the sole responsible authority for the joint EA conducted pursuant to the Canada-Alberta Agreement for EA Cooperation. Fish

habitat concerns related to water quality and quantity, watercourse diversion and cumulative effects on the watershed. DFO made a written submission to the Alberta Energy Utility Board subsequent to a provincial hearing. The Board considered the information provided by the federal government in its October 2002 decision to approve the project. In December 2002, DFO determined that a screening level EA pursuant to the CEAA would be conducted for the removal of Fort Creek. Shortly after, True North indicated they would not be pursuing the Fort Hills Oil Sands Project at this time and closed their Alberta office. DFO's scoping decision was challenged by the Sierra Legal Defense Fund. The judicial review upheld DFO's scoping decision. The UTS Energy Corporation (UTS) acquired TrueNorth Energy from Flint Hills Resources on July 9, 2004 and owns 100% of the Fort Hills Oil Sands leases. UTS subsequently changed the name of TrueNorth Energy to Fort Hills Energy Corporation, general partner of Fort Hills Energy L.P., as operator on behalf of Fort Hills Energy L.P. and UTS Oil Sands Limited Partnership. The project remains unchanged from DFO's perspective and the screening level assessment and subsection 35(2) *Fisheries Act* authorization should be completed by the end of the 2004-2005 fiscal year.

***Shell Jackpine Oil Sands Mine Project, Alberta***

The proposed Shell Jackpine Mine Phase 1 Project is located in the Muskeg River watershed on the east side of the Athabasca River approximately 70 km north of Fort McMurray. The targeted production rate is 31,800 $m^3$ (200,000 barrels of bitumen per day) over the expected mine life of 20 years. Shell predicts site preparation will commence in late 2005, followed by facility and mine construction through to mid-2010 when full production is projected. The Shell Jackpine Mine Phase 1 Project underwent an Alberta - Canada EA and Joint Panel Review. The Joint Review Panel considered the Project at a public hearing held in Fort McMurray, Alberta, in October 2003. The Panel concluded that the Shell Jackpine Phase 1 Project is unlikely to result in significant negative environmental effects, provided that the appropriate measures proposed by Shell and the Panel's recommendations are implemented. Fish habitat concerns relate to habitat destruction, water quality and quantity, and cumulative effects. An authorization, under subsection 35(2) of the *Fisheries Act*, is pending for works and undertakings related to the Project.

***Imperial Oil Kearl Lake Mine Project, Alberta***

In late 2004, Imperial Oil Resources announced a proposed oil sands mining and bitumen upgrading project approximately 70 km north of Fort McMurray. The targeted production rate is 200,000 barrels of bitumen per day. The project will be subject to a Canada–Alberta joint EA. The level of EA has not been determined. At present DFO and Transport are the only identified Responsible Authorities for the CEAA assessment. The environmental impact assessment documents are expected in March 2005.

***Windmill Harbour Development-Inland Marina, Alberta***

A joint federal-provincial EA is being conducted for Jaymar Consulting Inc.'s proposed inland marina, the Windmill Harbour Development, at Lac Ste. Anne. DFO is the lead responsible authority under the CEAA. Provincial approvals are also required and as such, this assessment is being conducted under the Canada-Alberta Agreement for EA

Cooperation. The CEAA screening decision will be made shortly, pending approval by the province of Alberta of the proponent's environmental management plan to adequately address issues concerning a western grebe nesting colony located in close proximity to the proposed development. Pending the CEAA screening decision, a subsection 35(2) *Fisheries Act* authorization will be issued for the HADD associated with dredging required to create a boat access channel.

***Dunvegan Hydro Electric Project, Alberta***

DFO is the lead responsible authority under the CEAA for the EA of this proposed hydroelectric project on the Peace River at Dunvegan. The assessment is being conducted under the Canada-Alberta Agreement for EA Cooperation. DFO intervened at Provincial Board Hearings in the fall of 2002. The Project was not found to be in the public interest and was not approved by the Province. DFO's review is ongoing and DFO continues to work with the proponent, Glacier Power, to address outstanding fish passage issues.

***Brooks Power Plant Project, Alberta***

Luscar Ltd. is proposing to build a new surface coal mine and construct a two-unit 1000-MW power generating station near Brooks, Alberta. The first phase will include one 500-MW power plant, a surface coal mine, a cooling pond and power lines to connect to the Alberta Interconnected Electrical System. This project was initially submitted to DFO by Fording Coal Limited prior to Luscar acquiring their western Canada interests. The project will require an authorization pursuant to the *Fisheries Act*. Due to the potential environmental effects of the project, the project was referred to a panel review under section 28 of the CEAA. A Management Steering Committee, including representatives from DFO, CEA Agency, Alberta Environment, and the Alberta Energy and Utilities Board is meeting on a regular basis. A Terms of Reference for the EA was submitted, as well as a Supplementary Information Request. The project has now been withdrawn and resubmitted as Bow City Power. The Panel was cancelled in Fall 2004.

***Turner Valley Gas Plant Project, Alberta***

This is a major rehabilitation project for a contaminated site on the Bow River. The plant is the oldest sour gas processing facility in Canada and encompasses an area of approximately 12.5 hectares. The site was in operation from 1913 to 1985 and has since been acquired by the Alberta government for the purposes of historical preservation. DFO has been involved in a series of redesigns to minimize the potential impacts and loss of fish habitat.

***Pine Creek, Alberta***

DFO met with representatives and attended numerous meetings with the CEA Agency, EC, Health Canada, University of Calgary and the City of Calgary regarding the proposed Pine Creek Waste Water Treatment facility and the scope of the EA. DFO has been involved in the planning process and the mitigation of various effects and design of instream works. Work to begin in 2005

***City of Calgary Perimeter Ring Road, Alberta***
The City of Calgary has been planning the creation of a perimeter ring road around the City to facilitate increasing traffic demands. The overall project has been broken into NE, NW, SE and SW subprojects. The NW portion of the project was actively worked on with DFO's involvement in site selection, crossing locations, and crossing methods. Construction should ultimately start in 2005. Transport Canada will be conducting the CEAA screening.

***Baseline Mountain Quarry, Alberta***
Bakarat Resources is proposing to create an underground limestone quarry in the Rocky Mountain House area. DFO has been in correspondence with the CEA Agency about aspects of the project and will ultimately be a NWPA trigger due to a bridge crossing, over navigable water. This, combined with the need for an Alberta EIA (large mining operation), may lead to a joint Federal/Provincial review. DFO met and toured the proposed site with representatives from Bakarat, Alberta Environment, Alberta Natural Resources Conservation Board, and Alberta Sustainable Resources Development. Project has been put on hold.

***Bearberry Creek Fish Weir, Alberta***
DFO and Alberta Transportation have been working towards restoring fish passage at a weir on Bearberry Creek, near Sundre, Alberta. This weir was installed in the 1960's for a water supply and prevented the migration of Bull Trout and other fish native to the system. Many passage scenarios and fishway designs are presently being looked at.

***Lac Des Arc, Alberta***
DFO staff have been involved over the last few years in stabilizing the water levels in Lac Des Arcs near Canmore, Alberta. Increased sediment levels in the lake are exposed during heavy winter winds causing health concerns and property damage for area residents. Works involved the retrofitting of existing culverts to increase the water level in the lake to prevent wind from eroding the sediment deposits in winter. There have been no recent concerns raised from area residents regarding sediment erosion from the lake.

***Carseland Fish Ladder, Alberta***
Project involved the reconstruction of the existing fish ladder at Carseland Weir on the Bow River downstream of the city of Calgary. DFO Habitat and Science staff worked on design of the new structure in conjunction with Alberta Transportation, Sustainable Resource Development and Alberta Environment. DFO was also involved in an investigation after the proposed construction continued beyond the anticipated work window due to weather conditions. The project was brought to the attention of the media and several press statements were released from DFO. Work was completed during the spring and subsequent studies have since shown that rainbow trout, mountain whitefish and brown trout are now using the new structure during spring and fall spawning migrations.

## 2.1.6. Pacific Region

During the Fiscal Year 2003-2004, Pacific Region received approximately 3,821 referrals describing a variety of proposed works or activities having the potential to impact on fish or fish habitat. General land use, instream works and shoreline works comprised approximately 58% of the referrals reviewed, while forestry and road referrals were approximately 24% of the workload throughout British Columbia and the Yukon Territory. Examples of referral reviewed are listed below as well as in section 2.2.6 of this document since either an advice or an authorization, provided by the Department, typically starts as a referral review.

***BC Rail Fraser River Bank Erosion near Shelley, BC***

In August of 2003, BC Rail staff contacted DFO with a request to undertake emergency bank protection measures next to their rail grade on the Fraser River. The site is a known erosion area, on the outside bend of an extremely large river. BC Rail was concerned over an apparent accelerated rate of erosion, which was threatening the integrity of the track, and in their opinion, could lead to a derailment. The proposed 'emergency' solution, in absence of any survey or rate of erosion data, was to end dump large angular rock from the tracks, down a 50-80 m unstable bank, into the Fraser River thalweg, of unknown depth. DFO opposed this work, without further study of fisheries impacts, efficacy of the rock revetment, and rate of erosion. The matter was quickly elevated to managerial and legal levels, but BC Rail eventually conceded to study the site further, and provide DFO with the necessary data. It was soon learned that the rate of erosion was slower than initially thought, and BC Rail, on the advice of their consultants, chose to move the tracks away from the approaching river, as originally suggested by DFO.

BC Rail moved the tracks within 10 days to the edge of the right of way, and commenced planning and construction to move the tracks several hundred meters away. To date, the rail line remains at the edge of the original right of way, and has not yet eroded into the river. DFO continues to encourage BC Rail to more adequately plan and monitor their track near watercourses, and to proactively plan as opposed to reacting to emergencies.

***Canadian Pacific Railway – Migration Barrier to Endangered Coho Salmon in the Eagle River near Mile 16 of the Shuswap Subdivision***

In the spring of 2003, monitoring by local DFO staff identified obstructions to salmon migration at the Canadian Pacific Railway culvert at Mile 16.22 and on the Eagle River between Mile 16.22 and Mile 15.55. Approximately 12 km of Coho Salmon spawning and rearing habitat exists upstream of these obstructions. At the request of DFO, the Canadian Pacific Railway commissioned a consultant's report, which confirmed that the identified obstructions to migration were primarily the result of a track realignment that occurred between 1912 and 1914, but which has recently been worsened by drought conditions in the BC Interior. DFO and the Canadian Pacific Railway are now proceeding to development of detailed options for improvement of fish passage to the upper Eagle River watershed.

***Rock Bay Contaminated Site Remediation***

A shallow bay in Victoria's Inner Harbour has been subjected to the deposit of industrial wastes and coal tar for many decades. DFO, EC and Transport Canada have worked together with the City of Victoria and BC Hydro to achieve consensus in early 2004 on a site remediation plan that will remove contaminated sediments and sources of pollutants in a significant portion (nearly 6,000 $m^2$ of the bay). Coffer dams will be installed in two locations (Southeastern and Southwestern sections) of Rock Bay and contaminated soils will be excavated and replaced with clean sediment, gravel and rock. Portions of a hard substrate bank will be removed and replaced with intertidal saltmarsh and native backshore vegetation. The coffer dams will then be removed and tidal circulation will be returned to the bay to allow natural colonization by marine plants and animals. Boulder/cobble blankets will be placed at the outlets of stormwater culverts in two locations to stabilize the foreshore and provide attachment surfaces for marine animals. Monitoring of re-colonization of Rock Bay will continue for a period of five years post-construction.

***Alternative Measures Agreement BC Hydro***

A *Fisheries Act* investigation for a section 32 violation, which was initiated in July 2001, was successfully concluded in December 2003. DFO and BC Hydro agreed to an Alternative Measures Agreement whereby DFO agreed not to proceed with formal *Fisheries Act* charges against BC Hydro, in exchanges for an agreement to several measures. These measures include: improving communication between DFO and BC Hydro regarding operations on the Columbia River, conducting several studies on the impacts of flow changes on fish and fish habitat, providing $60,000 for community groups to conduct fish and fish habitat conservation and protection projects in the Columbia River basin, and providing $315,000 over 3 years to DFO to allow the Department to hire a hydro impact specialist to actively participate in the fisheries studies and community projects as well as provide improved communication between the parties.

***Pilot Water Allocation – Fish Habitat Mapping Project***

A Federal Youth Intern was employed by DFO, Habitat and Enhancement Branch in Nelson to work in partnership with the BC Ministry of Sustainable Resource Management to use the Geographic information systems technology to map several watersheds in the Columbia River basin. The fish and fish habitat values, natural stream flows and water license withdrawal information was collated and mapped to portray the potential fisheries and water withdrawal areas of concern in a graphic format. The pilot project, which was designed to test the value of the planning tool, was acknowledged by both resource agencies to be a very useful, in the identification of areas of mutual resource management concern. Plans are underway to add more partners and to continue the work to include several more streams in the Columbia River basin and a community water conservation outreach component.

***Kootenay Lake Foreshore Habitat Assessment***

The West Arm of Kootenay Lake, near Nelson, BC has seen significant foreshore recreational development over the last 30 years. The proliferation of docks, breakwaters, retaining walls and beach creation lead to concern by DFO staff that foreshore habitat types

such as boulder, cobble and coarse gravel were being converted to less productive habitat types such as sand and fine gravel. In the spring, summer and fall of 2003 DFO staff conducted a fish and fish habitat assessment to determine impacts of substrate conversion and foreshore structures on fish community structure. The work will continue in 2004 and the results will be presented to local foreshore landowners to demonstrate the potential impacts of development on Kootenay Lake foreshore on fish habitats and to refine local foreshore development guidelines.

***Tulsequah Chief Mine***

The BC/CEAA harmonized reconvened EA of the proposed Tulsequah Chief Mine has been terminated as the result of a Court of Appeal decision in January 2002. As directed by the court, provincial ministers have re-considered information and measures dated up to the original 1998 court submission and issued a provincial Project Approval Certificate in late 2002. A supplemental screening-level CEAA assessment initiated as part of the reconvened harmonized review is being completed. As lead responsible authority, DFO is anticipating a response early in 2004 from the proponent and province to a 2002 DFO information request.

***New Fraser River Crossing***

The Greater Vancouver Transportation Authority (Translink) proposes to build a new six-lane highway crossing of the Fraser River between Surrey and Maple Ridge. DFO is participating in a joint federal/ provincial review of this high-level bridge crossing project. Impacts to the Fraser River and several of its fish bearing tributaries were carefully considered during the review. A key component of this assessment is the Canadian Wildlife Services consideration of the impact of the project on the Pacific Water Shrew, a listed species under the SARA. This project triggered the requirement for a CEAA screening review as it requires *Fisheries Act* and NWPA approvals.

***Four Major Mining Proposals***

With the recent resurgence of mining activity in BC, DFO has initiated discussions with proponents of four separate large gold/copper open pit-mining proposals. These projects include Morrison Copper/Gold, Kemess North Gold/Copper, Galore Creek Gold/Copper and Red Chris Gold/Copper. Each of these projects will be subject to a joint federal/provincial assessment process and all will be Comprehensive Study level reviews under the CEAA. Key issues relate to acid rock waste management and the footprint impacts of the tailings impoundments areas on fisheries resources.

***Waneta Power plant Expansion***

DFO and the Province of BC initiated a harmonized EA of a 380 MW power plant addition to the Waneta Power plant, an existing dam and power facility. Modifications to the existing facility will include a tunnel and an adjacent power station. This has triggered a Comprehensive Study level of the CEAA review. DFO will be looking carefully at the impact that flow changes may have on endangered White Sturgeon.

***Nai Kun Wind Farm***

Preliminary plans for a large-scale offshore wind farm in Hecate Strait have been provided to DFO. The proposal involves the installation of as many as 150 tower supported wind generators between the northern tip of Graham Island and the mainland. Each of the 80 m tall towers will house a 2.5-4.0 MW wind powered generator. All of the power generated will be gathered through a network of submarine cables connected to a submarine transmission cable running to the mainland near Prince Rupert. An initial analysis indicates that the project will require authorizations and approvals that will trigger an EA under the CEAA. Serious concerns regarding the areas crab fishery and migratory birds will need to be addressed. DFO continues to work with the proponent during the pre-application phase of this review.

***Knob Hill and Holberg Wind Farms***

DFO has initiated harmonized reviews with the provincial government on two separate wind farm proposals on the north end of Vancouver Island. Each of these projects incorporates a network of towers supporting wind-powered generators (totalling up to 450 MW) as well as the associated roads and power lines. Key issues revolve around the impacts of access roads to fish streams as well as mortalities of migratory birds.

***Whistler Nordic Center Project***

As part of the 2010 Winter Olympic development, a joint federal/provincial assessment has commenced on venue sites proposed in the Callaghan Valley. These include ski jump, biathlon and cross country skiing events. Keys environmental issues relate to potential impacts from infrastructure development such as access roads and parking lots.

***Richmond, the Airport and Vancouver Line Transportation Project***

The Greater Vancouver Transportation Authority (Translink) proposes to build a rapid transit line between Richmond, the Airport and Vancouver. This project is currently in the pre-application stage and will be subject to a joint federal/provincial assessment. This project would result in numerous crossings of fish bearing waters including a tunnel under False Creek and two bridges over the Fraser River.

***Sea to Sky Highway***

A key component of the 2010 Winter Olympic infrastructure is the major upgrade of the Sea to Sky highway from Vancouver to Whistler. This proposal by the provincial Ministry of Transportation is currently being assessed as part of a joint federal/provincial review. This project crosses hundreds of watercourses, many of them fish bearing. Discussions with Ministry of Transportation have been initiated around conceptual fish habitat compensation proposals.

***Roberts Bank Container Development Proposals***

The Vancouver Port Authority proposes two container expansion projects at their existing Roberts Bank port facility. These projects are described as the Delta Port Expansion Project and the Terminal Two Project. Each of these projects would be Comprehensive Study level

reviews under the CEAA and would be joint federal/provincial assessments. Early discussion with the Vancouver Port Authority has taken place as part of a pre-application process. DFO has identified major concerns with the proposed level of impact to the sensitive Fraser River estuary and mudflats/eel grass beds. Other concerns have been raised about the potential impact to migratory birds. The Vancouver Port Authority is continuing with on-going studies.

## 2.2 Authorizations and Advice Reported

**Table 2:**
**Authorizations and Advice Reported**
**Fiscal Year 2003-2004**

| REGION | Authorizations | Advice Provided to Proponent or Others* | TOTAL |
|---|---|---|---|
| **Newfoundland & Labrador** | 3 | 918 | 921 |
| **Maritimes** | 26 | 602 | 628 |
| **Gulf** | 9 | 372 | 381 |
| **Quebec** | 31 | 187 | 218 |
| **Central & Arctic** | 515 | 4,747 | 5,262 |
| **Pacific** | 87 | 1,722 | 1,809 |
| **TOTAL** | **671** | **8,548** | **9,219** |

* Advice provided to others includes: written advice to federal agencies, provincial/territorial/other agencies, letters of advice to proponents, letters of approval to proponents, mitigation measures provided to permitting agencies, specialist advice to federal agencies and advice provided to the Canadian Coast Guard for the issuance of approvals under the NWPA.

### 2.2.1. Newfoundland and Labrador Region

During the Fiscal Year 2003-2004, DFO provided formal advice to proponents, provincial, and federal agencies regarding mitigation measures to implement to protect fish and fish habitat. Letters of advice and, where appropriate, DFO fact sheets were used to provide advice to the respective proponents in the majority of cases.

Authorizations were issued for the following projects, for which DFO was the lead responsible authority:

***Luce Pit Continuation of the Carol Mining Project***
The Iron Ore Company of Canada received a subsection 35(2) *Fisheries Act* authorization on October 14, 2003 associated with the development and operation of open pit mining facilities

within the Luce Pit in western Labrador. In order to access the iron ore reserves Iron Ore Company of Canada needed to dewater Hakim Lake and Hakim Brook and divert the outlet stream of White Lake around the pit. This resulted in a loss of 12.2 hectares of lacustrine habitat equivalent units and approximately 18 units of Type I and 27 units of Type II riverine habitat. The compensation plan consists of the relocation of fish from Hakim Lake and Hakim Brook to White Lake (a fishless lake) and the creation of spawning and rearing habitat via construction of a channel at the outlet of White Lake. The plan also provides for the creation and enhancement of salmonid spawning and rearing habitat at Tinto Brook, along with modifications of the Tinto Brook culvert to provide fish passage to Wabush Lake.

***South Feeder River Bridge Installation***
On September 10, 2003 DFO issued a subsection 35(2) *Fisheries Act* authorization to the provincial Department of Works and Transportation for the installation of a permanent 30 m steel girder bridge across the South Feeder River which is a tributary of the Paradise River. Paradise River is a scheduled salmon river, which is located approximately 100 km south of Cartwright, Labrador. The installation is required as part of the ongoing construction associated with Phase II of the Trans Labrador Highway. The construction of the abutments and in filled approaches will result in a loss of 7.3 units of Type II fish habitat (1 unit = 100 $m^2$). To compensate for the loss of productive fish habitat associated with the bridge installation, the Department of Works and Transportation will create/construct a minimum of 7.3 units of salmonid riverine rearing habitat.

***Voisey's Bay Mine/Mill Project***
On July 17, 2003 the Voisey's Bay Nickel Company was issued a subsection 35(2) *Fisheries Act* authorization for the HADD of fish habitat resulting from the construction and operation of a nickel-copper-cobalt mine/mill at Voisey's Bay located in northern Labrador. The potential impacts of the project on fish and fish habitat have been identified as the loss of 13 units (1 unit = 100 $m^2$) of Type I riverine habitat, 45 units of Type II riverine habitat, and 90 hectares of lacustrine habitat equivalent units. As compensation, the Voisey's Bay Nickel Company will establish a habitat restoration program, in consultation with the Innu Nation and the Labrador Inuit Association, and will also increase the productive capacity of Pond 61 (a fishless pond north of Reid Pond) by the transfer of fish from Headwater Pond.

Effectiveness monitoring activities addressing HADD and compensation were conducted for a variety of projects including the following:

***Star Lake Hydroelectric Development*** - a 15 MW hydroelectric project involving artificial propagation to supplement natural production and enhancement of riverine habitat as compensation (Environmental Effects Monitoring and Compensation Monitoring);

***Rose Blanche Hydroelectric Development*** - a 5.5 MW hydroelectric facility involving compensation in the form of habitat creation/enhancement of a natural channel located in the lower main stem of Rose Blanche Brook as well as the repair of an existing fishway and the

construction of two new fishways (Environmental Effects Monitoring and Compensation Monitoring);

***Granite Canal Hydroelectric Development*** - a 42 MW hydroelectric generating facility involving compensation in the form of creation of spawning and rearing habitat through the construction of a meandering stream with two side channels and a diversion channel which will be maintained with appropriate flow requirements (Environmental Effects Monitoring and Compensation Monitoring);

***Moose Pond Diversion Dyke*** - construction and operation of a diversion dyke at the secondary outflow of Moose Pond in the Pitman's Pond Hydroelectric Development. Compensation for this project included the construction of a fish habitat compensation channel in the same watershed near the primary outflow (Compensation Monitoring);

***Nugget Pond Gold Mine/Mill*** - tailings management system associated with gold mine/mill operations and compensation involving the construction of a rustic fish ladder offsite (Compensation Monitoring);

***Port au Port (Ronan) Barite Mine*** - construction and operation of a barite/celestite mine resulting in compensation involving the creation of salmonid spawning, rearing and over-wintering fish habitat as well as removal of obstructions to fish passage (Compensation Monitoring);

***Doyle's River Culvert Replacement*** - an existing culvert was replaced with a bridge, which resulted in widening and deepening of a portion of Doyle's River. Compensation for this project consisted of the construction of a low flow channel within the newly widened stream and subsequent creation of salmonid spawning/rearing habitat and refuge habitat (Compensation Monitoring);

***Trans Labrador Highway (Red Bay to Cartwright)*** - a two-lane all season gravel highway constructed between Red Bay and Cartwright along the South Coast of Labrador. Effectiveness monitoring was carried out on an opportunistic basis throughout the construction phase and a management plan was developed for this project in consultation with C&P staff;

***Terra Nova Offshore Oil Development*** - the Terra Nova Oilfield is being developed using a floating production, storage and offloading facility and a semi-submersible drilling rig. Compensation for the project includes the creation of near shore shell habitat to provide refuge and attachment sites for newly settled Iceland scallops (Environmental Effects Monitoring and Compensation Monitoring); and

***Newfoundland Transshipment Terminal*** – this terminal provides a temporary storage and transshipment facility for crude oil from the offshore and involved compensation in the form

of creation of adult and early benthic phase lobster habitat (Environmental Effects Monitoring and Compensation Monitoring).

In addition to the above:

***White Rose Offshore Oil Development*** - Husky Oil Operations Limited was issued a subsection 35(2) *Fisheries Act* authorization for the HADD of fish habitat resulting from the excavation of glory holes and associated deposition of dredge spoils in July 22, 2002. While compensation works are presently underway, i.e. creation / restoration of eel grass habitat and the creation of an artificial reef. Compensation monitoring and Environmental Effects monitoring have not yet commenced.

***Carol Project Tailings Management Plan*** – On April 11, 2002 the Iron Ore Company of Canada was issued a subsection 35(2) *Fisheries Act* authorization for the HADD of fish habitat associated with the construction and operation of a dyke system to confine tailings along the western shore of Wabush Lake. Compensation includes the creation of spawning habitat on the outside face of the dyke and the improvement of the lake habitat within the unconfined portion of Wabush Lake through the confinement of tailings, consolidation of discharges, and routing of all tailings to the confinement area. Baseline studies are ongoing however, compensation monitoring and Environmental Effects Monitoring have not yet commenced.

## 2.2.2. Maritimes

**Aquaculture**
In 2003, DFO - Maritimes Region completed 3 mussel shellfish, 4 Atlantic salmon finfish and 20 Atlantic salmon production increases pursuant to the NWPA, the *Fisheries Act* and the CEAA. Of significance to the department and industry was the establishment of St. Ann's Harbour shellfish farm in Cape Breton, Nova Scotia. The EA of St. Ann's Harbour was subject to a legal challenge, which resulted in an extended review process. Additionally, owing to the size of the proposed operation, environmental concerns at the site resulted in the creation of a detailed Environmental Management Plan based on monitoring, performance based standards and adaptive management principles.

Maritimes Region has directed concerted efforts towards the development of a regulatory framework based on performance based standards for the aquaculture industry. This goal has been facilitated through the development of harmonized application packages, a DFO environmental management plan and standardized monitoring requirements.

**Offshore Oil and Gas Projects**
Staff reviewed proposals received from the Canada Offshore Petroleum Board for 9 exploration wells, 10 seismic programs, 2 Vertical Seismic Profiles, and one Strategic EA for the Laurentian Subbasin. Most of the above projects were submitted prior to the Canada

Offshore Petroleum Board becoming a Federal Authority under the CEAA, and the actual work is likely to be conducted over the next few years.

***Cohasset Panuke Project***
A project description to decommission the Cohasset Panuke offshore project has been prepared and submitted to the Canada Offshore Petroleum Board. The project will require an EA under the CEAA.

***Sable Offshore Energy Project***
Phase two of the Sable Offshore Energy Project has been advanced from the initial timetable and a proposed hot-tap of the existing underwater pipeline to connect the South Venture field was reviewed. EC was the lead Department under the CEAA.

Annual Environmental Effects Monitoring Programs Reports continue to be prepared for the project. Data from the monitoring is being examined to increase efficiencies in data collection and provide critical feedback to the operators.

***Canso Liquid Natural Gas***
Access Northeast Energy Inc. has proposed a liquefied natural gas storage facility and marine unloading terminal to be located near Point Tupper, Nova Scotia. The proposal must undergo a provincial EA. There is also a requirement to conduct a federal EA, specifically a screening, because of the need for a NWPA approval. Transport Canada is the only Responsible Authority. DFO is conducting the EA on their behalf. The project, for the purposes of the federal EA, has been scoped to include only the marine unloading terminal.

An agreement was signed which outlines a harmonized federal and provincial EA process. This process allows the proponent to prepare one environmental impact statement for all regulatory authorities to review. The public review period for this document will end on June 9, 2004. All comments which have been received will be taken into consideration as the EA proceeds.

The EA screening for this project was completed and an agreement in principle was reached by the provincial and federal governments on the EA. When the results are released on July 21, 2004, the conclusion will be that the project will have no significant adverse environmental effects. The completed EA screening report will then be made available to the public for review with a thirty day review period to raise any new issues. It is anticipated that no new issues will be raised and therefore the EA screening report will probably be signed off in early August.

The project is currently undergoing the TERMPOL process, as requirement of the EA screening. At the end of this process the Proponent will apply for approval under the NWPA.

***Saint John Harbour / Irving - Liquefied Natural Gas Marine Terminal and Multi-Purpose Pier***
Irving Oil Ltd. proposed the construction of a Liquid Natural Gas Facility and Multi-Purpose Marine Terminal, near their existing Canaport site in Mispec, New Brunswick. A change in project design of the marine terminal will require the harmful alteration of the seabed. DFO, Habitat Management Division reviewed the change and requested the proponent to submit a *Fisheries Act* application. EC also requested the submission of an application for Ocean Disposal. An additional change in the project layout will require the diversion of a small watercourse. DFO also requested the proponent to submit an application for the stream diversion. In consideration of the size of the project, it will be subject to the Comprehensive Study Regulations of the CEAA. DFO is the lead responsible authority; EC and Transport Canada are also responsible authorities. Natural Resources Canada and the National Energy Board are federal authorities. DFO and the other responsible authorities have participated in the joint EA of the project with the New Brunswick Department of Environment and Local Government. At the end of the Fiscal Year, the final comprehensive study report is in preparation.

## Marine Terminal Projects

***Whites Point Quarry and Marine Terminal***
Global Quarry Products Inc. has proposed a basalt mining operation at Whites Point, Digby County, N.S. The project is planned on 150 hectares of Digby Neck which includes over 3 km of the Bay of Fundy shoreline. The quarry will be operated for a 50 year period with approximately 40,000 tons of aggregate to be shipped each week for the construction industry market, primarily in the New England States. The company applied for approval to operate a 3.9-hectare test quarry, within the project area in November 2003. The approval was issued by Nova Scotia Department of Environment and Labour pending a Department of DFO review of potential harmful affects on marine mammals. This review was being conducted when the project was registered with the Nova Scotia Department of Environment and Labour for a Provincial Class I EA in March 2003.

There are 2 components to the project, a 150 hectare quarry and a marine terminal. The CEAA was triggered by the requirement for an approval under NWPA subsection 5(1) and an authorization under the *Fisheries Act* subsection 35(2) for the marine terminal. A *Fisheries Act* section 32 trigger was also found to be likely during the review of the 3.9-hectare test quarry. The project will use shipping vessels larger than 25,000 dead weight tons; therefore, is subject to a comprehensive study. There is very significant public concern for this project and the Minister of DFO has asked that the Minister of Environment refer the project to a review panel. In August 2003, it was announced by the CEA Agency that they would be entering into an agreement with the Province of Nova Scotia to establish a Joint Review Panel for the Whites Point Quarry Project. A draft agreement has been reached but has not yet been signed.

An Agreement was signed between the provincial and federal governments to establish a Joint Review Panel November, 2004. The Proponent is now Bilcon of Nova Scotia Corp., following a corporate restructuring and withdrawal of the 3.9 hectare test quarry.

The Joint Panel has been selected and the EIS Guideline has been drafted, The draft EIS Guideline, which will include the scoping for the project, was reviewed by provincial and federal departments and was made available to the public for comment. Public hearings to gather input for the guidelines are to be held in January , 2005.

The Panel will use all comments to provide the Proponent with final EIS Guidelines. Once the Proponent has completed their EIS, public hearings will be arranged to discuss the contents.

***Point Tupper Marine Terminal and Coal Unloading Facility***

Nova Scotia Power Inc. has proposed a marine coal unloading facility project at Point Tupper, Cape Breton, N.S. DFO, Habitat Management Division reviewed the project and determined a *Fisheries Act* authorization would be required before the project could proceed. Navigable Waters Protection Program also determined that a subsection 5(1) permit would be required under the NWPA. The marine terminal is designed for vessels over 25,000 dead weight tons. Marine terminals over this limit are on the CEAA's Comprehensive Study List. However, this marine terminal will be located on lands that are designated for such use in a land-use plan that has been the subject of public consultation. On this basis, the CEA Agency advised DFO that the required federal assessment type for this project is a screening rather than a comprehensive study.

DFO is the sole responsible authority for this project. The province of Nova Scotia determined that the project would be required to undergo a provincial EA. An agreement was signed which committed DFO to provincially legislated timelines. The Habitat Management Division came to a decision on the environmental assessment within 60 days after the EA was registered with the province and the project has been completed.

**Small Craft Harbour Branch**

The Small Craft Harbours Branch of Maritimes DFO proposed a dredging and wharf construction project at their Dipper Harbour facility, in Charlotte County, NB. Habitat Management determined the work would result in HADD and requested the proponent to submit an application for a *Fisheries Act* authorization. Public Works and Government Services took the lead on the preparation of the EA. The authorization was issued in February 2004. Fish habitat compensation measures will be re-directed to another location.

The Small Craft Harbours Branch of DFO also proposed a dredging and wharf construction project at its North Head Harbour facility, Charlotte County, Grand Manan, NB. Habitat Management were advised of the project in November 2002, determined a HADD authorization was required and shared in the preparation of the CEAA screening with PWGSC. The effects of the work on fish habitat were authorized in July 2003. The work proceeded in Fiscal Year 2003-2004 although implementation of the fish habitat compensation measures was deferred until Fiscal Year 2004-2005.

**Linear Developments, Nova Scotia**
During Fiscal Year 2003-2004, the Habitat Management Division continued to work with the Nova Scotia Department of Transportation and Public Works and with other provincial and federal regulators, on the EA and *Fisheries Act* review to 50% funding from Transport Canada. The larger of these projects includes twinning on four sections of HWY 101, three sections of HWY 103 and two sections of HWY 125.

**Infrastructure Projects, Nova Scotia**
During Fiscal Year 2003-2004, the Habitat Management Division continued to work with the Nova Scotia Department of Environment and Labour, various provincial municipalities and Infrastructure Canada on the EA and *Fisheries Act* reviews of numerous infrastructure projects with Nova Scotia. Examples of these projects include water supply upgrades for the communities of Springhill, Windsor, Arichat and Hammonds Plains as well as sewage treatment projects for the communities of Tusket, Bras D'Or, West Bay and Digby. In addition during Fiscal Year 2003-2004 the Habitat Management Division continued to work with Infrastructure Canada in an effort to develop the "Water and Wastewater Model Class Screening Report – Atlantic Canada" under the CEAA of major 100 series (four-lane) highway projects.

**Linear Developments, New Brunswick**
During Fiscal Year 2003-2004, the Habitat Management Division continued to work with the New Brunswick Department of Transportation and with other provincial and federal regulators, on the EA and *Fisheries Act* review of upgrade of sections of the Trans-Canada Highway between Fredericton and the Quebec border. Each of these projects receives up to 50% funding from Transport Canada. The larger of these projects includes the construction of 70 km of new 4-lane highway between the communities of Perth-Andover and Woodstock, 33 km between the communities of Grand Falls and Aroostook, and 31 km from the Pokiok /Nackawic and Longs Creek.

**Infrastructure Projects, New Brunswick**
During Fiscal Year 2003-2004, the Habitat Management Division continued to work with the New Brunswick Department of Environment and Local Government various provincial municipalities and Infrastructure Canada on the EA and *Fisheries Act* reviews of numerous infrastructure projects in New Brunswick. Examples of these projects include wastewater treatment upgrades for the communities of Edmundston, Woodstock, Petitcodiac, Salisbury, and New Maryland.

The City of Edmundston (community of St. Jacques) submitted an application for a HADD authorization to allow the diversion of a watercourse. The unnamed watercourse was a tributary of the Madawaska River. The diversion was necessary to allow an industrial expansion of a commercial facility on land owned by the city. The project was completed in the fall of 2003. The proponent also provided a letter of credit to ensure the fish habitat compensation measures are implemented to the satisfaction of DFO in the summer of 2004.

The Town of Woodstock proposed an upgrade of its wastewater treatment infrastructure and registered the project with the New Brunswick Department of Environment and Local Government, Environmental Impact Assessment process. The project was approved by the province in the summer of 2003. The project will require the diversion of a small section of an unnamed tributary of the Saint John River and be subject to the requirements of a HADD authorization. The project also requested federal funding assistance through the Office of Infrastructure and Public Works and Government Services took the lead on the EA. DFO accepted the CEAA screening report prepared by PWGSC in March 2004. Construction is scheduled to proceed in the summer of 2004. Fish habitat compensation will be implemented on tributaries of the Saint John River in 2004.

**Mining**

***New Brunswick Coal - Mining Through the Lower Reaches of Ghost Hollow Brook***
The New Brunswick Coal Limited, a subsidiary of the New Brunswick Power Corporation submitted an application for a *Fisheries Act* authorization to allow the diversion of a section of Ghost Hollow Brook on January 20, 2003. The diversion was required to allow completion of an open pit coal mine at the Salmon Harbour mine site, near Minto, New Brunswick. DFO, Habitat Management Division completed a CEAA screening of the project and issued *Fisheries Act* authorization in April 2003. Fish habitat compensation for the project will entail the reconstruction of several kilometres of stream across a former open pit coal mine site. The project commenced in 2003 and is expected to require several years to complete.

The New Brunswick Coal Ltd also submitted an application for a HADD authorization to allow the infill of a manmade pond on one of their mine sites. The work was required in support of their open pit mine reclamation project. Habitat management assessed the project, prepared a CEAA screening report and issued an authorization. Fish habitat compensation will be provided through a stream re-construction at another location.

## 2.2.3. Gulf Region

The Gulf Region provided 360 letters of advice to proponents during Fiscal Year 2003-2004 compared to only 316 the previous year. This is a 12 % increase from the previous year.

The Region also authorized the harmful alteration, disruption or destruction of fish habitat for 9 projects during the fiscal year 2003 - 2004. An increase of 2 from the previous year. These 9 authorizations accounted for just over 1% of the total number of authorizations issued by the Department. These projects can generally be categorized as follows: pool restoration projects (2); breakwater/dredging projects (4); Harbour infilling projects (2); and sewage treatment plant upgrade project (1). Compensation for these authorizations varied from crustacean and shellfish habitat enhancement in marine ecosystems to the improvement of fish passage and habitat in riverine ecosystems. All are described in the project descriptions that follow.

***Gilman Brook Pool Restoration Project***
DFO authorized the HADD of fish habitat, which included: the excavation of a sandbar (410 $m^2$) in the main channel of the Southwest Miramichi River, the installation of rock deflectors, and stabilization works at the mouth of Gilman Brook. These works were completed in the Fiscal Year 2003-2004. Compensation to offset the harmful alteration of habitat was developed at a ratio of 2:1 (compensation area : impacted area) and includes the removal of 13 obstructions to fish passage in Gilman Brook providing access to approximately 1,172 $m^3$ of fish habitat, including spawning grounds. Compensation works are to be completed in June 2004 and salmonid movement in the brook will be monitored for a period of three years.

***Slate Island Pool Restoration***
DFO authorized the HADD of fish habitat, which included the excavation of approximately 2,000 $m^2$ of deposited bed material in Slate Island Pool and the placement of large boulders in the channel to adjust local hydraulic conditions. These works were completed in the Fiscal Year 2003-2004.

Compensation to offset the HADD of fish habitat was developed at a ratio of 1.5:1 (compensation area : impacted area) and includes the improvement of fish passage and enhancement of fish habitat on a 1.5 km stretch of Slate Island Brook near the Slate Island Lodge. The compensation works are to be completed between June 1 and September 30, 2004, and will be monitored for a period of three years.

***Grande-Anse Breakwater Repairs and Basin Dredging***
Authorized the harmful destruction associated with the replacement of an old wharf with the construction of a breakwater resulting in a net loss of approximately 1,797 $m^2$ of marine habitat. These works were completed in the Fiscal Year 2003-2004. Compensation for the destruction of fish habitat was developed at a ratio of 1:1 (compensation area : impacted area) and includes the creation of crustacean habitat along the edges of the breakwater and the enhancement of an additional 1,000 $m^2$ of crustacean habitat on the seabed near the wharf. The compensation works will be completed before December 31, 2004, and will be monitored for a period of one year.

***Neguac Harbour Breakwater/Dredging***
Authorized destruction of fish habitat included the construction of a breakwater resulting in the infilling of approximately 785 $m^2$ of marine habitat within Neguac Bay. These works were completed in the Fiscal Year 2003-2004. Compensation for the destruction of fish habitat was developed at a ratio of 2:1 (compensation area : impacted area) and included the reclamation of an old containment cell by re-establishing tidal flow to create approximately 5,000 $m^2$ of new marine habitat. The compensation works are complete and will be monitored for a period of five years.

***Inverness Harbour Breakwater Improvements and Dredging***
Authorized the destruction of fish habitat associated with the dredging of the harbour entrance and the construction of two new breakwaters resulting in a permanent loss of approximately 16,148 $m^2$ of seabed habitat. These works were completed in the Fiscal Year 2003-2004. Compensation for the destruction of fish habitat was developed at a ratio of 1:1 for the breakwater and 0.5:1 for dredging (compensation area : impacted area) and includes the enhancement of crustacean habitat in Mabou Harbour and the enhancement of brook trout and smelt spawning habitat in nearby Broad Cove River. The compensation works will be completed before December 31, 2004, and will be monitored for a period of one year.

***Pictou Island Harbour Improvements***
Authorized the HADD of fish habitat associated with the replacement of the existing harbour wharf and breakwater with larger structures resulting in a net loss of 5,088 $m^2$ of seabed habitat in the Northumberland Strait. These works were completed in the Fiscal Year 2003-2004. Compensation for the destruction of fish habitat was developed at a 1.2:1 ratio (compensation area : impacted area) and includes fish habitat enhancement works in the East Pictou River including the installation of digger logs, log deflectors and bank stabilization works. Compensation works have been completed and will be monitored for a minimum period of one year.

***Baie de Lameque Infilling***
Authorized the HADD of fish habitat associated with stabilization works in an area of approximately 2,100 $m^2$ of intertidal habitat to facilitate the removal of decomposing sea lettuce. These works were completed in the Fiscal Year 2003-2004. Compensation for the alteration of fish habitat included the harvesting of sea lettuce by boat (i.e. on the seabed) and mechanically on the infill area to restore the natural tidal area where decomposing organic debris is impacting fish habitat. Compensation works were completed in the Fiscal Year 2003-2004 and will likely continue on a yearly basis, as required. Monitoring of compensation works will also be completed on a yearly basis.

***Cheticamp Co-Op Harbour Infill***
Authorized the destruction of fish habitat associated with the infill of approximately 1,200 $m^2$ of seabed in Cheticamp Harbour for the expansion of an existing Co-Op store. These works were completed in the Fiscal Year 2003-2004. Compensation for the destruction of fish habitat was developed at a 3:1 ratio and included the creation of approximately 2,400 $m^2$ of rock/boulder reef marine habitat and the enhancement of salmonid habitat in a nearby freshwater tributary. Compensation works were completed in the Fiscal Year 2003-2004 and will be monitored for a period of three years.

***Charlottetown Sewage Treatment Plant Expansion***
Authorized the destruction of fish habitat associated with the infill of approximately 1.2 hectares of intertidal habitat in the Hillsborough River. These works were to be completed in the spring of 2004. Compensation for the destruction of fish habitat includes the enhancement of shellfish habitat at the mouth of Fullerton's Creek and the surrounding

area. Compensation works will be completed by December 31, 2004, and will be monitored for one year.

In addition, works associated with the completion of the Miramichi By-Pass Route 425 to Route 430 is ongoing (i.e. two crossings at Stations 51+270 and 35+790 are to be completed by September 30, 2004). The majority of the off-site compensation works, primarily salmonid habitat and riparian enhancement works, have been completed to date. Outstanding compensation should be completed by December 31, 2004.

## 2.2.4. Quebec Region

DFO staff in Quebec Region issued 187 letters of advice and 31 authorizations to proponents and government agencies during Fiscal Year 2003-2004, which represents an increase of 16% in the number of files processed compared with Fiscal Year 2002-2003. The analysis of several projects submitted in previous years continued in 2003-2004; a brief summary follows.

***Eastmain - 1A Hydroelectric Power Plant and Diversion of Rupert River***
This Hydro-Québec project consists of building a hydroelectric power plant with a maximum installed power of 770 MW on the Eastmain River and of diverting a portion of the water from the Rupert River to the Eastmain. This project will affect large areas of fish habitat. In 2003-2004, DFO participated in the development of a joint (Canada – Quebec) instruction for the assessment of the project and attended meetings with the proponent and the federal environmental assessment panel.

***Regulation of High Water Levels in Kénogami Lake Watershed***
The Quebec Department of Natural Resources submitted a proposal for development in the Kénogami reservoir watershed. The project aims to regulate exceptionally high water levels and maintain the water level in the reservoir in summer. The project consists of the construction of a dam on the Pikauba River that would create a reservoir with a surface area of 15.6 $km^2$, consolidation of nine existing dikes, construction of four new dikes, and excavation of the Sables River over a length of 600 m to improve flow capacity. The proposed project will result in lost fish habitat. In 2003-2004, this project was reviewed by a joint Canada – Quebec commission. Quebec Region continued the analysis of the project under the *Fisheries Act*, taking into consideration the recommendations in the commission's report. DFO will prepare the government's response to the commission recommendations in collaboration with the federal authorities concerned.

***Construction of Dam and HydroelectricPower plant on Péribonka River***
Hydro-Québec wants to utilize the undeveloped potential of the Péribonka River and plans to build new facilities including a generating station with an output estimated at 385 MW. The project will result in a loss of fish habitat, which requires authorization under the *Fisheries Act.* In 2003-2004 DFO completed the comprehensive study report, which

included public consultation. DFO is currently awaiting the decision of the Minister of the Environment on the follow-up to the assessment process.

***Construction of McConnell – Laramée Autoroute, Gatineau***
This project, proposed by the Quebec Department of Transport and funded in part by Transport Canada, consists of the construction of the McConnell–Laramée autoroute over a distance of 3 km in Gatineau (Hull sector). A 1.6 km section runs through Gatineau Park (federal land) from the Lac-des-Fées Parkway to Mountain Road. The road will cross several fish habitats and wetlands in the park, including des Fées Creek and the adjacent flood plain. The environmental assessment was completed in 2003-2004 and authorization was issued under the *Fisheries Act*.

***Upgrades to Highway 175 Between Quebec City and Saguenay***
This project, which was proposed by the Quebec Department of Transport and funded in part by Transport Canada, consists of rehabilitation and widening to four lanes of highway 175, which runs from Saguenay – Lac Saint-Jean to Quebec City. The work, which covers a distance of 174 km and encompasses part of autoroute 73, is divided into four major projects, which should be completed by 2009. All the projects were subject to separate environmental assessments under the CEAA because they require authorization under the *Fisheries Act* and are funded by the federal government.

***Partial Diversion of Portneuf River, Bersimis Complex***
This Hydro-Québec project includes the construction of a dike to divert some of the water from the Portneuf River to the Bersimis complex in order to increase its energy production by 262 GWh. The project was authorized in August 2002 under subsection 35(2) of the *Fisheries Act*. At the request of DFO, a fishway for brook trout was built at the outlet of Portneuf Lake. The Department developed objectives and follow-up procedures for the fishway. The objectives of the compensation projects include evaluation of the fish production associated with this work. In 2003-2004, DFO received and analysed the follow-up reports filed by the proponent, including on the effectiveness of the fishway.

***Partial Diversion of Sault Aux Cochons River, Bersimis Complex***
This Hydro-Québec project consists of the rehabilitation of a dam and a dike to hold back water and the construction of a diversion canal to divert some of the water in the Sault aux cochons River to the Bersimis complex to increase its energy production by 149 GWh. The project was authorized under subsection 35(2) of the *Fisheries Act* in August 2002. The objectives of the compensation projects include evaluation of the production of fish (kg/ha) associated with the work. In 2003-2004, DFO received and analyzed the follow-up reports from the proponent.

***Partial Diversion of Manouane River, Bersimis Complex***
This Hydro-Québec project consists of the construction of dikes and canals to divert some of the water from the Manouane River to the Bersimis complex in order to increase its energy production by 318 GWh. The project will affect a 97 km section of the Manouane River

where the only Atlantic salmon spawning ground confirmed in this area is located. The reconstruction of the spawning ground, creation of new spawning sites (3,000 $m^2$), and the temporary production of fish (incubators) until the new areas are functional, will ensure that this resource is preserved. In March 2003, the project was authorized under subsection 35(2) of the *Fisheries Act*. In 2003-2004, DFO jointly developed with the proponent a follow-up and adaptation management program.

***Raising Brook Trout in Sea Cages in Gaspé Bay***

The Centre spécialisé des pêches advised DFO of its intention to implement an experimental brook trout raising project in Gaspé Bay. Issuance of an approval under subsection 5(1) of the NWPA triggered the CEAA. At the request of DFO and the Quebec Department of Agriculture, Fisheries and Food, the proponent held a public consultation on 11 March 2003. Members of the public voiced their concerns and submissions were filed with DFO and Quebec Department of Agriculture, Fisheries and Food. These submissions will be taken into account in the federal environmental assessment, which is now in progress.

***Seismic Exploration for Oil and Gas in Three Areas of Estuary and Gulf of St. Lawrence***

In September 2002, Geophysical Service Incorporated advised DFO that it wished to take seismic readings in three areas of the Gulf of St. Lawrence, namely the Laurentian channel near Newfoundland, the western part of the gulf, and west of Anticosti Island. The first two projects were subject to an environmental assessment under the CEAA, which was triggered by issuance of permits by the National Energy Board (NEB). The third project to the west of Anticosti Island is in provincial territory, and is therefore not subject to NEB procedures. DFO (Quebec and Newfoundland regions) issued an expert opinion for the first project, which was authorized by the NEB in 2002. As for the other two projects, the Department advised the NEB and the proponent that it did not have enough information to make a ruling. In 2003-2004, DFO contributed to the assessments of the two projects not implemented, which were finally abandoned by the proponent.

***Expansion of Grande-Entrée Harbour, Îles-de-la-Madeleine***

The Grande-Entrée harbour serves a large part of the lobster fishing fleet based on Îles-de-la-Madeleine. Since the expansion project will destroy approximately 2 hectares of a turtle grass flat that is a major habitat for several species of fish, it is subject to authorization under subsection 35(2) of the *Fisheries Act*. The environmental assessment was completed and the losses of habitat were authorized further to an undertaking by the proponent to implement a compensation project designed to improve the reproduction habitat of the rainbow smelt. In 2003-2004, DFO received and analyzed the results of the improvements made for the rainbow smelt, which are positive. Measures to make them even more effective were nonetheless proposed.

***Construction of Marine Facilities in Two Nunavik Communities, Salluit and Kangirsuk, Northern Quebec***

These two projects are part of a federal program to provide safe marine facilities for 14 Inuit communities in Nunavut. The analysis of the marine facility projects for Salluit and

Kangirsuk started in early 2003. Both cases triggered the CEAA due to federal funding and the issuance of authorization under subsection 35(2) of the *Fisheries Act*.

These projects are also subject to an environmental assessment by the federal review panel under the James Bay and Northern Quebec Agreement; DFO Quebec Region is represented on the panel. DFO has ensured that the construction will cause minimum losses of fish habitat and that any losses will be compensated.

***Scuttling of the Frigate Nipigon as an Artificial Reef for Diving, Sainte-Luce***
This project has been under assessment by DFO since 1998. In 2002-2003 the proponent, Société des récifs artificiels de l'Estuaire, provided the Department with the missing information to complete the analysis of the project. The proponent implemented a compensation project consisting in the restoration of a coastal habitat in the St. Lawrence near Rimouski. The environmental assessment was completed in 2003-2004, and the vessel was scuttled in July 2003 after the proponent met all DFO requirements.

## 2.2.5. Central and Arctic Region

Central and Arctic Region issued 515 *Fisheries Act* authorizations during Fiscal Year 2003-2004. In addition, advice was provided to 4,747 proponents or government agencies on specific projects. The breakdown among the four Areas of the Region follows.

### 2.2.5.1. Ontario–Great Lakes Area

OGLA issued 332 *Fisheries Act* authorizations and provided advice to 1,724 proponents or government agencies. Of the 332 authorizations, 118 of these were issued under the Class Authorization Process for agricultural municipal drain maintenance works. This classification initiative started in 1999 in southwestern Ontario and expanded to eastern Ontario in 2000. As of March 2004, the drain classification project has been completed in southern Ontario and approximately 12,300 drains have been classified. Efforts continued on the development of a Geographic information system constructed drain layer which involves developing a web-based constructed drain layer that will depict the location of all constructed drains and provide information about fisheries, fish habitat and the drain classification type (i.e. Type A, B, C, D, E, or F). Over the last six months, a new data model has been developed to ensure the standardized and efficient management of the drains data. In the coming months, all digital maps and databases produced by the Conservation Authorities will be sent to the Ontario Ministry of Agriculture and Food to be merged with a provincial drains map layer. The Ontario Ministry of Agriculture and Food will coordinate the completion of the constructed drains layer, which is anticipated to be completed sometime in 2005. This information will be readily available to all the parties involved in the project including the Conservation Authorities, Ontario Ministry of Agriculture and Food, municipalities and the drainage superintendents.

The remaining Authorizations that were issued this fiscal year included project types such as water crossings, channel realignments, and infilling projects associated with shoreline stabilization projects to name a few. One of the projects authorized in 2003, was Leitrim Stormwater Management Facility for the HADD of fish habitat on Findlay Creek and its tributaries associated with the construction of the Leitrim External Storm System. The proposed fish habitat compensation included: the re-construction of Findlay Creek, including fish habitat features such pools, riffles and riparian vegetation between Bank Street and Blais Road (total length 400 m); construction of a new section of Findlay Creek (the high level swale), including fish habitat features (approximate length 600 m); and enhancement to a section of Findlay Creek by installing riffles to provide fish habitat (total length to be enhanced 1,100 m). The authorization required extensive monitoring of the project from the start of construction until 2010. Monitoring of water temperature, plant survival, water flows, wetland water levels, channel stability was to be recorded in a photographic record and written reports to be provided to DFO. A technical advisory committee was to be established to oversee the implementation of an environmental management plan to manage the Leitrim Wetland.

#### 2.2.5.2. Western Arctic Area

Eight *Fisheries Act* authorizations were issued in Fiscal Year 2003-2004. These authorizations were issued for culvert works, stream realignment, road works, infilling and docking facilities. Advice was provided to proponents and to other regulatory agencies on a total of 141 occasions, as well as, for at least 50 technical documents submitted to DFO for review.

Habitat Management staff were extremely busy and proactive, conducting approximately 22 site visits/inspections in Fiscal Year 2003-2004 related to a wide variety of projects and issues. The site visits/inspections were conducted for the following primary reasons: efforts to establish or strengthen a DFO presence with project proponents; pre-approval inspections of the proposed project, location and mitigation; post-authorization site assessment; and, general inspection of operations to ensure compliance or mitigation of fish habitat impacts. The outcome of these site visits/inspections included the issuance of letters of advice to proponents, identification of problem areas requiring immediate attention and confirmation of adequate mitigation measures being implemented.

In the Western Arctic Area, DFO works co-operatively with the various regulatory boards established under Land Claims and the MVRMA to ensure habitat provisions of the *Fisheries Act* are met.

Other regulators and industry were engaged in the development of two protocols for the Northwest Territories; namely the Winter Water Withdrawal Protocol and the Watercourse Crossing protocol. These protocols were developed with the input from regulators and industry to ensure that fish and fish habitat is protected, that industry needs are met, and that regulatory requirements are met.

The Water Withdrawal Protocol was developed for use by oil and gas exploration / development proponents and will likely be updated in 2004 to be applicable to all industry sectors operating it the Western Arctic Area. Thus far, proponents in the oil and gas industry have accepted the protocol as reasonable and proactive and are adhering to the requirements contained therein. As well, other regulators have acknowledged the usefulness of the protocol and have incorporated the requirements into their permits. A proposal to conduct more focussed studies on the effects of water withdrawal is being planned for 2004 to enable the department to set defensible and demonstrable limits for water withdrawal.

Based on a review of the seismic activity that occurred in the northern NWT from 2000 to 2003, a report documenting the adaptive approach to regulating seismic operations in the NWT was produced (Cott, P. A., Hanna, B. W., and J.A. Dahl. 2003. Discussion on Seismic Exploration in the Northwest Territories 2000–2003. Can. Man. Rep. of Fish. and Aquat. Sci. 2648:vi +36).

Program monitoring data from winter seismic exploration projects conducted during 2000-2001 and 2001-2002 under the lakes, river channels, and the near shore in the Beaufort Sea was analyzed and recommendations for subsequent regulation of these activities developed. This information was presented in the Offshore Oil and Gas Environmental Effects Monitoring Workshop at the Bedford Institute Oceanography, Nova Scotia May 2003 and will be published in a book of proceedings [Cott, Pete and Bruce Hanna. 2004. *Monitoring Explosive-based Winter Seismic Exploration In Waterbodies, NWT 2000-2002*. In: *Proceedings of the Offshore Oil and Gas Environmental Effects Monitoring Workshop: Approaches and Technologies, Bedford Institute of Oceanography, May 26 - 30, 2003*. Armsworthy, S.L., P.J. Cranford, and K. Lee (Eds.), Battelle Press (*in press*)].

DFO staff were involved with the June 2003 Petroleum Show held in Inuvik NWT. This two-day event is the largest trade show in the NWT and attracts representatives from the oil & gas industry, government, special interest groups, community agencies and the general public. This is an effective forum to support DFO's presence and inform all stakeholders of DFO's role in the north.

DFO developed a manual for internal use entitled **"***Working Near Water: Considerations for Fish and Fish Habitat Reference and Workshop Manual – Northwest Territories***"** (Cott, P. and Moore, J.P. 2003. *Working Near Water: Considerations for Fish and Fish Habitat. Northwest Territories, Reference and Workshop Manual, Inuvik, NWT.* 92pp. + appendices) which was made available April 2003. The purpose of this manual is to be a plain language general reference document on considerations for fish habitat that should be taken prior to doing work in or around water in the NWT.

An idea initiated in December 2002 to embark on the development of a habitat compensation database, whereby communities could bring forth habitat related issues that could possibly be addressed through enhancement or restoration activities, was moved forward in the fall of

2003. The intent was for these opportunities to then be utilized by proponents requiring habitat gains for authorized impacts, or by DFO when utilizing the Habitat Compensation Fund or any other appropriate DFO funding mechanism. The results of the community visits and the Habitat Works Database development are expected in early 2004-2005.

### 2.2.5.3. Eastern Arctic Area

DFO continues to be involved in the EA of several major projects, and works co-operatively with the Nunavut Impact Review Board. Two *Fisheries Act* authorizations were issued and 96 Letters of Advice were provided to proponents and regulatory agencies in Fiscal Year 2003-2004. The *Fisheries Act* authorizations were issued under subsection 35(2) for a marine facility and a bridge crossing.

**Infrastructure Projects**

The Kugluktuk Marine Resupply Dock, as proposed by Nunavut Department of Community Government and Transportation, involved the construction of a new Marine Resupply site in the Hamlet of Kugluktuk. DFO issued a section 35 authorization for the construction of the breakwater and causeway/docking facility on July 28, 2003.

The Char River Bridge, in Rankin Inlet, was replaced by the Nunavut Department of Community Government and Transportation, due to frequent wash outs. DFO issued a section 35 Authorization on August 1, 2003 for the works associated with the bridge replacement.

**Mining Projects**

***Jericho Diamond Project***

The Jericho Diamond Project, as proposed by Tahera Corporation is located 350 km southwest of Cambridge Bay in the Kitikmeot region. The project is a combined open pit and underground diamond mine capable of producing up to 900 tonnes of ore per day and has a predicted 8-year mine life. This project is being reviewed at a screening level and will require a subsection 35(2) *Fisheries Act* authorization for the construction of a water withdrawal causeway, channel diversion, and the use of Long Lake to store processed kimberlite. The Nunavut Impact Review Board held Final Hearings in January 2004 and subsequently produced a draft final hearing report, to which federal departments will decide whether it meet the needs of both the territorial and federal environmental review.

***Doris North Gold Project***

The Doris North Gold Project, as proposed by Miramar Mining Corporation, is located at Doris Lake in Nunavut, about 160 km southwest of Cambridge Bay in the West Kitikmeot Region. Miramar plans to construct and operate a small underground gold mine, processing ore at a rate of 690 tonnes per day to yield 307,000 ounces of gold over a 24-month operating period short-life. It will be the first commercial mineral development proposed for the Hope Bay greenstone belt. A subsection 35(2) *Fisheries Act* authorization will likely be required

prior to development of this project, due to a fish-bearing lake being modified with a control structure to allow for the controlled deposition of tailings and release of effluent. This project is being reviewed as a Comprehensive Study under the CEAA, in addition to a review by the Nunavut Impact Review Board.

***Meadowbank Gold Project***
The Meadowbank Gold Project, as proposed by Cumberland Resources Ltd., is located 70 km north of Baker Lake. Cumberland plans to construct and operate an open pit and underground gold mine with a 10-12 year life. A subsection 35(2) *Fisheries Act* authorization will likely be required for the construction of water retention dykes to allow the mining of the ore to occur beneath shallow lakes, the construction of a waste rock and tailings storage areas, a barge unloading facility and construction of an airstrip. In addition to DFO participating in the review by the Nunavut Impact Review Board, DFO will be a responsible authority for the Comprehensive study of this project under the CEAA.

***Linear Developments***
The Bathurst Inlet Port & Road Project, as proposed by Nuna Logistics and Kitikmeot Corporation, is located west of Bathurst Inlet in the Kitikmeot Region of Nunavut. The project involves construction of a port facility on the west shore of Bathurst Inlet and a 211 km one-lane all-weather road extending southwest to Contwoyto Lake. The port facility will include fuel tank farms, concentrate storage sheds, a camp, an airstrip, and a dock capable of handling 50,000 tonne freighters. The project is meant to supply fuel and equipment to mines and exploration sites in the Slave Geological Province, while handling shipping of freight from Yellowknife headed for Kitikmeot communities. DFO, and Indian and Northern Affairs are responsible authorities under the CEAA. It is undetermined whether a comprehensive study review is required. Issues associated with this project include, 111 stream crossings, possible disruption of caribou migrations, establishment of new Oceanic shipping routes and the associated risks of oil spills, increased traffic and impacts on migratory birds.

### 2.2.5.4. Prairies Area

During Fiscal Year 2003-2004, Prairies Area staff issued 173 *Fisheries Act* authorizations and provided advice to 2,756 proponents or government agencies.

***St. Albert West Regional Road Project***
A joint federal-provincial EA was conducted for the City of St. Albert's proposed regional roadway. DFO was the lead responsible authority under the CEAA. Provincial approvals were also required and as such, this assessment was conducted under the Canada-Alberta Agreement for EA Cooperation. The CEAA screening decision was made in August 2004, and a subsection 35(2) *Fisheries Act* authorization was issued in October 2004 for the HADD associated with the bridge construction. To date, works have been initiated on the instream piers for the bridge.

***CNRL Horizon Oil Sands Mine Project***
In March 2001, CNRL announced its proposal for the Horizon mining project to be located about 70 km north of Fort McMurray, consisting of an oil sands mine, bitumen extraction plant, bitumen upgrader and ancillary facilities. The targeted production rate is 270,000 barrels of bitumen per day over the expected mine life of forty two years. The CNRL Horizon Project underwent a joint Alberta-Canada EA. Fish habitat concerns relate to habitat destruction, water quality and quantity, watercourse diversion and cumulative effects. The Minister of DFO referred the EA to a review panel. The Joint Review Panel considered the Project at a public hearing held in Fort McMurray, Alberta, during September 15-19, 22-26, and 29, 2003 and identified their recommendations. On March 26, 2004, the Government of Canada announced that it accepted the recommendations of the Joint EA Panel Report for the proposed CNRL Horizon Project and the way was cleared for the issuance of regulatory approvals. DFO issued subsection 35(2) and section 32 *Fisheries Act* Authorizations to allow CNRL to proceed with their project. CNRL commenced site preparation in 2004, and expects to commence mining by late 2007.

***Wascana Lake Enhancement Project***
Wascana Lake is a reservoir on Wascana Creek in the City of Regina. In July 2003, the Wascana Centre Authority proposed to enhance the lake for recreational purposes by excavating it to a depth of five meters. DFO is a responsible authority due to its regulatory responsibilities under the *Fisheries Act* and the NWPA. DFO is the lead responsible authority for this project. Other federal authorities include EC and Western Economic Diversification. Following public review of the proposal, DFO concluded that the project is unlikely to cause significant adverse environmental effects, taking into account appropriate mitigation and compensation. Regulatory approvals were provided to allow the project to proceed during the winter of 2003-2004.

## 2.2.6. Pacific Region

In Pacific Region, staff issued 87 authorizations in Fiscal Year 2003-2004 as well as provided advice (as recorded in the Habitat Referral Tracking System) on, 1722 projects. Some of the examples include the following:

***Penticton Lakeside Resort, Convention Centre & Casino - Restaurant and Marina Project***
The Penticton Lakeside Resort, Convention Centre & Casino applied to the Province of BC to install a pile-supported restaurant and associated marina on Okanogan Lake. In accordance with local working agreements, the Province determined that the project would cause a HADD of resident fish habitat and negotiated a lake-based habitat compensation package with the project proponent. Local First Nations presented concerns with the compensation proposal and suggested that restoration works should instead be located in Penticton Creek, a nearby watercourse historically channelized within a concrete flume. In response, the Penticton Lakeside Resort, Convention Centre & Casino will now contribute funding toward the restoration of Penticton Creek, for the production of Kokanee salmon, in cooperation with the Penticton Flyfishers Club. This project was identified by local staff

where off-site compensation would better meet the no net loss objective of the Department's Policy for the Management of Fish Habitat.

***Canadian Pacific Railway - Lubrication Station Relocation and Rail Tie Removal Programs (B.C. Interior Area)***

In the spring of 2003, DFO monitoring identified water quality and fish habitat concerns from the location of railway lubrication stations and tie storage/disposal areas adjacent to endangered coho salmon habitat. DFO subsequently provided advice to CPR managers from western Canada on the location of fisheries resources impacts of treated wood and rail lubricants on fish and fish habitat. CPR quickly took action to increase inspections and improve railway tie management procedures along rights-of-ways adjacent to fish habitat in the Shuswap, Thompson, Windermere, Cranbrook, Moyie and Cascade Mountain subdivisions. Thousands of treated railway ties, many deposited in past decades, have been removed from fish habitat. In conjunction with a CPR lubrication station study, the number of lubrication stations have been reduced by 40-50%; lubrication stations have been relocated away from fish habitat; and lubrication station refilling procedures and equipment have been changed to prevent spillage.

***BC Ministry of Transportation Fraser River Crossing at Hansard***

The BC Ministry of Transport worked cooperatively with DFO to plan a new crossing of the Fraser River near Hansard, BC, approximately one hour east of Prince George. This project required a *Fisheries Act* authorization and a NWPA review. Of five potential crossing sites, the site with the least environmental impacts was selected, despite less expensive options elsewhere. This project became particularly challenging due to uncertain instream work windows. Various populations and age classes of chinook and sockeye salmon migrate downstream through this area from April through July, while adult spawners are returning as early as June. For this reason, selecting appropriate mitigation measures for pile driving became particularly difficult. Through consultation with DFO and environmental consultants, custom instream enclosures with bubble curtains were constructed and tested in situ, to confirm that the impacts to out-migrating juveniles and in-migrating adults would be minimized. Sampling and testing continues even after DFO requirements were met, such that a scientific paper can be generated for reference on future in-river pile driving projects. The proponent also constructed a custom floating barge, as opposed to the higher impact temporary work bridge. The new crossing is expected to be completed in the fall of 2004.

***Cruise Ship Terminal – Indian Reserve No. 11 - Campbell River***

This project includes the upgrading of an existing ore loading terminal operated by Boliden Westmin (Canada) Ltd. to accommodate cruise ships up to 300 m in length. The four to five million dollar project will be funded by the Government of Canada with contributions from the District of Campbell River. An EA was completed in December 2003 and submitted to DFO for review and a CEAA level screening.

The proposed works will include the construction of a platform dock and trestle for passenger access and additional mooring dolphins to accommodate larger ships. Habitat impact associated with the project will be dredging adjacent to the facility, compaction of substrate

in the intertidal zone and installation of additional pilings. The compensation works will include the creation of 1,920 $m^2$ of eelgrass habitat in the Campbell River estuary. The development of the compensation works for the project is to commence in July 2004 and project construction is expected to start in November 2004.

***Skidegate Sewerage Treatment Plant Project***

Habitat staff worked cooperatively with the Skidegate Band Council on the Queen Charlotte Islands/ Haida Gwaii to offset the disruption of an unnamed fish stream located on the proposed Skidegate Sewerage Treatment Plant site. Various habitat compensation options were assessed as to viability. Recognizing both the stream's relative productive capacity and the length of stream affected, we agreed that the most practical solution was to create a new 70-m channel. Compensation measures outlined in the authorization included habitat complexing of the channel, as well as the capture of additional groundwater with upslope perimeter trenching around the treatment site. The works are scheduled for completion in 2004-2005, and should result in an overall improvement in both spawning and rearing habitats for coho salmon and other fish species.

***Yukon Contaminated Sites***

There are four major contaminated sites in the Yukon. Each is a mine site originally licensed under Federal legislation and therefore subject to the Federal Contaminated Sites Accelerated Action Plan. Potential effects to fish and fish habitat vary with site conditions. In 2002, the abandoned Clinton Creek asbestos mine was in imminent danger of a catastrophic release of more than 4 million cubic meters of water from Hudgeon Lake. Recognizing the emergency nature of the situation, staff moved quickly to assist Indian and Northern Affairs Canada in the restoration of the outlet of Hudgeon Lake. This was largely completed in the summer of 2003 and significantly reduced risks at the site. The Faro lead-zinc mine is a very large site. A major instream reservoir was located upstream of the acid producing valley bottom tailings facility. Failure of the reservoir dam would have resulted in the consequential failure of the tailings facility and in significant effects to downstream fish habitat. The dam on the reservoir was in poor condition, but was not in imminent danger of collapse. A section 32 and subsection 35(2) authorization was negotiated with Indian and Northern Affairs Canada to breach the dam, create a new channel in the area of the breach, and to restore the pre-reservoir drainage patterns. Fish were salvaged from the reservoir. The work was largely completed in the winter of 2003-2004.

***McNair Creek Run of the River Hydro Project***

In December 2002, DFO received an application from Renewable Power Corp to construct an 8 MW run of the river hydro project on McNair Creek near Port Mellon on the Sunshine Coast. The project consisted of an intake weir capable of diverting up to 3.3 $m^3/s$ of water from the stream. From the intake weir, flows are diverted 3.1 km downstream to a powerhouse located approximately 4 km upstream from the confluence of McNair Creek and Howe Sound. A minimum of 10% of the Mean Annual Discharge is to be maintained at all time in the stream. In addition, two four-day pulses of 100% Mean Annual Discharge is to be provided in the spring for steelhead migration, and 30 days of 40% Mean Annual

Discharge is to be provided in June for resident trout spawning. The project required authorizations pursuant to subsection 35(2) of the *Fisheries Act* and subsection 5(1) of the NWPA.

***Aquaculture Renewals and Relocations***

The DFO-HMP is responsible for managing impacts of aquaculture operations on fish habitat, and for conducting EA triggered through requirements for NWPA permits and/or authorizations pursuant to the *Fisheries Act* for both finfish and shellfish operations. To augment existing habitat reviews, and screenings under the CEAA for finfish aquaculture applications, a range of tools are being used under the *Fisheries Act* including authorizations and the building of compensatory habitat as well as site specific monitoring where required. Both the section 35 authorization and the monitoring require financial security. Considerable work has taken place over this past year with British Columbia to harmonize regulatory requirements as well as improve coordination between both level of government on key issues such as fish health and management of waste, in particular that related to benthic deposition. A model is being piloted and tested in Pacific Region (DEPOMOD) on a collaborative basis with DFO Science, industry and British Columbia. This model is being used as a planning tool to avoid critical habitats and SARA listed species, HADDs, and ensure optimal siting to mitigate benthic deposition.

A pilot habitat compensation bank project was initiated in collaboration with industry and British Columbia this last year as a streamlining tool. Further streamlining tools developed this past year include a standardised CEAA screening template, standardised decision-making framework for both subsection 35(2) and CEAA screening decisions, a staff reference manual, and a Habitat Information Requirements document that clarifies regulatory information requirements for industry. In addition, DFO has undertaken an internal review of the regulatory approach to aquaculture and is planning to implement changes in the new fiscal year aimed at strengthening our referral process.

In addition to the aquaculture referrals which were triggered by CEAA and captured in the previous statistics, DFO received and completed over 20 shellfish referrals which were reviewed pursuant to the *Fisheries Act* and through the DFO internal referral process. DFO continues to work with British Columbia, the aquaculture industry, First Nations and other stakeholders regarding regulatory issues and aquaculture in collaborative efforts to harmonize and streamline referral processes.

***Tuck Road Upgrade Project***

The Tuck Road Upgrade Project began in June 2002 as a three-way funding partnership between the Lax Kw'Alaams Band Council, Indian and Northern Affairs Canada and the BC Ministry of Transportation. The project involved upgrade of 10 km of existing road and construction of 8.5 km of new road; upgrade of two existing bridges and installation of two new bridges; and the installation of 44 stream culverts, 29 of which were fish-bearing and utilized embedded or open-bottom culverts to ensure fish passage.

During the planning process, Habitat staff successfully negotiated the relocation of the road away from the marine shoreline, thus avoiding infill of a known herring spawning area. Terrain instability forced additional changes to plans for inland road alignment sections in March 2003. An authorization for works or undertakings affecting fish habitat and two amendments were issued in 2003-2004. During the 2003-2004 construction period, sedimentation, fry dewatering and blasting "overachievement" problems during construction required on-site investigations and issuance of an Inspector's Direction and Warning Letters. On the positive side, the minimum compensation ratios of 2:1 specified for habitat creation in the authorization were significantly exceeded by an actual "as-built" ratio of 5:1.

***Brilliant Powerplant Expansion***
DFO and the Province of BC completed a harmonized EA of a 120 MW addition to the Brilliant Powerplant. The development of a *Fisheries Act* authorization for the construction of the power plant has been completed. Follow-up monitoring through the initial stages of construction is ongoing.

***Coursier Dam Decommissioning***
DFO and the Province of BC completed a harmonized EA of a project to decommission a failing hydro storage dam near Revelstoke and submitted recommendations to provincial ministers to render a decision. Follow-up monitoring and the development of a *Fisheries Act* authorization for the construction of the dam breach are completed.

***New Fraser River Crossing***
The Greater Vancouver Transportation Authority (Translink) proposed to build a new 6-lane highway crossing of the Fraser River between Surrey and Maple Ridge. DFO is participating in a joint federal/ provincial review of this high level bridge crossing project. Impacts to the Fraser River and several of its fish bearing tributaries were carefully considered during the review. A key component of this assessment is the Canadian Wildlife Services consideration of the impact of the project on the Pacific Water Shrew, a listed species under the SARA. This project triggered the requirement for a CEAA screening review as it requires *Fisheries Act* and NWPA approvals.

***Vancouver Convention Center***
Vancouver Convention Center Expansion Ltd. proposes to construct a new 490,000 square feet convention center on the shoreline of Coal Harbour in Vancouver. This $495 million project is jointly funded by Canada, the Province of BC and the city of Vancouver. As the project proposes a convention center extending outward from the current shoreline over the waters of Coal Harbour there will be fisheries issues related to the construction and operation of this facility requiring *Fisheries Act* approvals for the project to proceed. The key fisheries issues relate to the destruction or covering of productive foreshore marine habitat and the impact of the project on juvenile salmon migration. The project is subject to review under both the CEAA and BCEAA and will be assessed under a joint federal/provincial review process as previously described. This review is nearing completion. As part of the fish habitat compensation plan, the proponent has proposed an innovative louvered habitat skirt around the perimeter of the project.

# 3.0 Compliance and Enforcement

The DFO, Conservation and Protection Program (C&P) is responsible for monitoring compliance with legislation and regulations regarding the conservation of fisheries resources and fish habitat. The Minister of Fisheries and Oceans appoints Fishery Officers to enforce fisheries regulations and management plans as well as the habitat provisions of the *Fisheries Act*.

## 3.1 Legislative Basis and Application of the Compliance and Enforcement

In addition to protecting fish habitat, Fishery Officers conduct at-sea patrols in coastal and inshore areas, monitor catches, conduct forensic investigations and audits, conduct inland patrols and provide information to fishers regarding government policies and regulations. The enforcement and compliance monitoring activities of Fishery Officers are key to protecting Canada's fish and fish habitat.

Measures to *promote compliance* include the following: communication of information; public education; consultation with parties affected by the habitat protection provisions of the *Fisheries Act*; and technical assistance as required.

*Enforcement* is achieved through the exercise or application of powers granted under legislation. Enforcement of habitat protection provisions is carried out through: inspections to monitor or verify compliance; investigations of alleged violations; the issuance of warnings, Inspector's Directions, Ministerial Orders, etc. without resorting to court action; and court actions such as injuctions, prosecution, court orders upon conviction and suits for recovery of costs.

The six Guiding Principles that govern the application of the *Fisheries Act* are identified in the *Compliance and Enforcement Policy for the Habitat Protection and Pollution Prevention Provisions of the Fisheries Act*[5]. The Policy, which was published in November 2001, was co-developed by DFO and EC.

The Guiding Principles are as follows:

- compliance with the habitat protection and pollution prevention provisions and their accompanying regulations is mandatory.

[5] < http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/policies-politique/operating-operation/fhm-policy/index_e.asp>

- compliance will be encouraged through communication with parties affected by the habitat protection and pollution prevention provisions.
- enforcement personnel will administer the provisions and regulations in a manner that is fair, predictable, and consistent. Rules, sanctions and processes securely founded in law will be used.
- enforcement personnel will administer the provisions and accompanying regulations with an emphasis on preventing harm to fish, fish habitat or human use of fish caused by physical alteration of fish habitat or pollution of waters frequented by fish. Priority for action to deal with suspected violations will be guided by:
  - the degree of harm to fish, fish habitat or human use of fish caused by physical alteration of fish habitat or pollution of waters frequented by fish, or the risk of that harm; and/or
  - whether or not the alleged offence is a repeat occurrence.
- enforcement personnel will take action consistent with this *Compliance and Enforcement Policy*.
- The public will be encouraged to report suspected violations of the habitat protection and pollution prevention provisions of the *Fisheries Act*.

## 3.2 Looking Ahead

A comprehensive review of the DFO compliance program will be undertaken as part of the Fisheries Management Renewal initiative.

The objectives of the review will include:

- re-define and modernize the compliance program,
- integrate cross-sectional compliance issues and needs into a comprehensive strategy and response, and
- ensure innovation and optimal use of resources.

The review will begin in early 2005 and will continue into the 2005-2006 Fiscal Year.

## 3.3 Summary of DFO Habitat Enforcement Activities

| Table 3: Summary of DFO Habitat Enforcement Activities Fiscal Year 2003-2004 | | |
|---|---|---|
| **REGION** | **Warnings Issued** | **Charges Laid** |
| **Newfoundland & Labrador** | 5 | 9 |
| **Maritimes** | 7 | 0 |
| **Gulf** | 13 | 15 |
| **Quebec** | 1 | 0 |
| **Central & Arctic** | 110 | 15 |
| **Pacific** | 93 | 8 |
| **TOTAL** | 229 | 47 |

## 3.4 Convictions Reported Under the Habitat Protection Provisions of the *Fisheries Act*

| Table 4: Convictions Reported under the Habitat Protection Provisions of the *Fisheries Act* Fiscal Year 2003-2004 | | | | |
|---|---|---|---|---|
| **DFO REGIONS** | **35(1)** | **36(3)** | **38(6)** | **TOTAL** |
| **Newfoundland & Labrador** | 1 | 1 | 0 | 2 |
| **Maritimes** | 2 | 0 | 0 | 2 |
| **Gulf** | 4 | 0 | 0 | 4 |
| **Quebec** | 0 | 0 | 0 | 0 |
| **Central & Arctic** | 16 | 2 | 1 | 19 |
| **Pacific** | 4 | 2 | 0 | 6 |
| **TOTAL** | 27 | 5 | 1 | 33 |

# 3.5 Highlights of Enforcement Activity and Convictions

## 3.5.1. Newfoundland and Labrador Region

Habitat Management staff provided technical advice and support with regard to potential habitat violations and related enforcement actions. They also assisted C&P staff in the investigation of several potential habitat violations under the *Fisheries Act,* collected evidence as appropriate, and provided expert witness testimony in court.

During 2003, the prosecution of a violation that occurred at Indian Pond Brook near Twillingate in 2001 was concluded. Two contractors involved in the maintenance of a road and installation of a culvert had each been charged in Fiscal Year 2002-2003 with violations of subsections 35(1) and 36(3) of the *Fisheries Act* as a result of the siltation of a brook and pond near Twillingate, Newfoundland. One contractor had pled guilty to the charges in Fiscal Year 2002-2003. After much deliberation and negotiation, the second contractor pled guilty to the same offences in January 2004, for a penalty of $2,500 on each charge.

## 3.5.2. Maritimes Region

In 2003-2004, there was a shift in emphasis from the laying of charges to the use of Inspector's Orders as a remediation tool wherever possible. Fifteen officers were trained and designated as habitat inspectors with more to follow in 2004-2005. The process has already paid a dividend. For example, Inspector's Orders were issued to the proponents of a development project in Saint John, N.B. to reverse damage to several streams. The developer has invested over $200K in remediation to date while DFO has avoided the expense and uncertainty of a court action.

On October 20, 2003, a Colchester County N.S. logging contractor was found guilty of causing damage to Salt Spring Brook and fined $1,000. The original violation took place in September 2002. The judge rejected a penalty recommendation that included a restoration plan and felt that natural processes would eventually repair the damage.

On February 26, 2004, the Master of a groundfish vessel pled guilty to fishing inside the *Coral Conservation Area* near Georges Bank and was fined $5000. The incidents that lead to this conviction occurred in August 2003. Of special note, the officer who investigated the case seized a box of coral that was found aboard the vessel.

### 3.5.3. Gulf Region

Nine investigations were concluded during the 2003-2004 fiscal year, with a total of four convictions. The convictions were reported under subsection 35(1) of the *Fisheries Act*.

In 2003, the owner of a cottage along the Aboujagane River, Westmorland County, New Brunswick pled guilty to excavating a portion of the river. In 2001, the individual had excavated an area of approximately 950 $m^2$ to create a pond in front of his property. The person was found guilty of destroying fish habitat and fined $3,000.

In 2003, a Westmorland County, New Brunswick logging contractor pled guilty and was fined $9,000 as a result of damage to the Shediac River during the autumn of 2000. The forestry operation resulted in a considerable quantity of sediment deposited on the river bed as far as one kilometer from the source

In 2004, an individual pled guilty to infilling a portion of Mattatal Lake, Cumberland County, Nova Scotia. The individual was fined $5,000 and was further ordered to restore the site.

In 2004, a logging contractor was found guilty of damage to Mattatal Brook, Cumberland County, Nova Scotia. The contractor was fined $2,000 and ordered to restore the site.

### 3.5.4. Quebec Region

No convictions were reported in Quebec in 2003-2004 for *Fisheries Act* infractions related to fish habitat protection.

During this timeframe, however, DFO received a considerable number of complaints from the public regarding alleged offences under subsection 35(1) of the *Fisheries Act*, committed in freshwater largely in the Montreal and Quebec City regions. This is a considerable change from 2002-2003, when there were no public complaints submitted to the Department. The deterioration, destruction or disturbance of fish habitat was confirmed by expert Fisheries Management Branch staff. C&P staff referred fifteen of the complaints to the appropriate FAPAQ regional office where provincial wildlife officers have the authority to enforce the habitat protection provisions of the *Fisheries Act*. DFO will closely monitor the progress of these investigations.

## 3.5.5. Central and Arctic Region

A total number of 68 Inspector's Directions were issued pursuant to subsection 38(6) of the *Fisheries Act*. These directions require proponents to take action to prevent or contain a deleterious substance from spreading beyond where a concern may or potentially exist. Following are some regional highlights:

### 3.5.5.1. Prairies Area

Three offenders from Alberta each pled guilty to a charge of harmful alteration of fish habitat, under subsection 35(1) of the *Fisheries Act*, along Sylvan Lake in Alberta. Two of the offenders were each fined $300 and paid an additional $2,700 to a Sylvan Lake Fund, pursuant to Creative Sentencing. The third offender was fined $400 and paid an additional $3,600 to a Sylvan Lake fund, pursuant to Creative Sentencing.

An offender was convicted of a charge of harmful alteration of fish habitat and a charge of failure to undertake an Inspector's Direction along Last Mountain Lake, Saskatchewan Beach, Saskatchewan. The offender was fined $5,000 for the harmful alteration of fish habitat, under subsection 35(1) of the *Fisheries Act*, and $1,000 for failure to comply with an Inspector's Direction, under subsection 38(6) of the *Fisheries Act*.

### 3.5.5.2. Ontario – Great-Lakes Area

An offender pled guilty to a charge of harmful alteration of fish habitat, under subsection 35(1) of the *Fisheries Act*, along Evans Creek, Ontario, and was fined $13,000.

An offender was convicted of a charge of harmful alteration of fish habitat, under subsection 35(1) of the *Fisheries Act*, and one charge of deposit of a deleterious substance, under subsection 36(3) of the *Fisheries Act*, along Junction Creek, Ontario. The offender was fined $5,000 for each charge for a total of $10,000 of which $9,800 went toward Creative Sentencing.

An offender pled guilty to a charge of harmful alteration of fish habitat under subsection 35(1) of the *Fisheries Act*, along an unnamed creek to Lake Huron in Gore Bay, Ontario. The offender was fined $2,500.

An offender was convicted of a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Dog Lake, Frontenac County in Ontario. The offender was issued a court order to restore the habitat and pay a fine of $2,500 which was directed to the Cataraqui Conservation pursuant to Creative Sentencing.

An offender pled guilty to a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Neebing River, Township of McIntyre, City of Thunder Bay. The

offender was fined $1,500 which was directed toward Lakehead Region Conservation Authority pursuant to Creative Sentencing.

An offender was convicted of a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Black Sturgeon Lake, Township of Pettypiece, District of Kenora. The offender was fined $2,000, which was directed to Creative Sentencing.

An offender pled guilty to a charge of alteration of fish habitat under subsection 35(1) of the *Fisheries Act*, along Thunder Lake in the Township of Zealand, City of Dryden. The funds from the fine were directed to the Dryden District Conservation Club Inc. pursuant to Creative Sentencing.

An offender pled guilty to a charge of permitting the deposit of a deleterious substance, under subsection 36(3) of the *Fisheries Act*, into a tributary of East Holland River, near Peterborough, Ontario. The offender was fined $20,000 which was directed to Creative Sentencing.

An offender was convicted of a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Lake Muskoka in Bracebridge, Ontario. The offender was fined $5,000, which was directed to the Muskoka Heritage Foundation pursuant to Creative Sentencing.

An offender pled guilty to a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Gibson Lake, Severn Sound, Bracebridge, Ontario. The Offender was fined $5,000, which was directed to the Muskoka Heritage Foundation pursuant to Creative Sentencing.

An offender was convicted of a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Lake Huron, Providence Bay, Ontario. The offender was fined $5,000, which was directed to Blue Jay Creek Restoration Fund pursuant to Creative Sentencing.

An offender pled guilty to a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Lake Muskoka, Bracebridge, Ontario. The offender was fined $2,500, which was directed to the Muskoka Heritage Foundation pursuant to Creative Sentencing.

An offender was convicted of a charge of destruction of fish habitat under subsection 35(1) of the *Fisheries Act*, along Dunkers Creek in South River, Ontario. The offender was fined $15,000, which was directed to Eagle Lake Conservation Association pursuant to Creative Sentencing.

## 3.5.6. Pacific Region

Six convictions were reported in Pacific Region in 2003-2004 for *Fisheries Act* infractions related to fish habitat protection.

An offender was charged under subsection 35(1) of the *Fisheries Act*. The offence occurred in Upper Pitt Lake and has been ongoing since 1999. In 2003 a guilty plea was handed down, with fines totalling $15,000 and a court ordered restoration plan.

A November 2000 offence involving the filling of property, resulted in the laying of charges under subsection 35(1) of the *Fisheries Act*. The owners of the property were fined $3,000.

A company was found guilty, under subsection 36(3) of the *Fisheries Act,* and fined $200 with an additional $800 directed to remedial compensation and $3,800 going to DFO for the publication of education materials regarding concrete pumping or the protection of Serpentine River habitat.

An offence on Haggard Creek in 2000 resulted in two September 2003 convictions under subsection 35(1) of the Fisheries Act. A general fine of $500 was imposed with an additional $14,000 in creative sentencing pursuant to Section 79.2(f) of the Fisheries Act.

A logging offence on Dacres Point (Goliath Bay) in 2002 resulted in a conviction under subsection 36(3) of the Fisheries Act. The offender had failed to install the required culverts which resulted in a portion of the road and ditch entering a marine environment. A fine of $2,500 was imposed.

*Alternative Measures*
A *Fisheries Act* investigation for a *Fisheries Act* Section 32 violation, which was initiated in July 2001, was successfully concluded in December 2003. DFO and the offender agreed to an Alternative Measures Agreement whereby DFO agreed not to proceed with formal *Fisheries Act* charges in exchange for an agreement to several measures including: improving communication between DFO and the offender on their operations on the Columbia River, conducting several studies on the impacts of flow changes on fish and fish habitat, providing $60,000 for community groups to conduct fish and fish habitat conservation and protection projects in the Columbia River basin and providing $315,000 over 3 years to DFO to allow the department to hire a specialist to actively participate in the fisheries studies and community projects as well as provide improved communication between the parties.

# 4.0 Pollution Prevention Provisions

**The Administration and Enforcement of the Pollution Prevention Provisions**
In 1978, the Prime Minister confirmed the assignment, to the Minister of the Environment, of the responsibility for the enforcement of the pollution prevention provisions of the *Fisheries Act* – namely section 34 and sections 36 to 42 of the *Fisheries Act*. These sections of the Act deal with the deposit of deleterious substances to waters frequented by fish. In addition, a 1985 Memorandum of Understanding between DFO and EC outlines the responsibilities of DFO and EC with respect to the administration and enforcement of the pollution prevention provisions of the *Fisheries Act*, and creates several mechanisms to facilitate information sharing and cooperation.

EC develops sector-based strategies and activities to enhance the pollution prevention provisions of the *Fisheries Act*. It also examines how best to secure consistent compliance with the *Fisheries Act* and its regulations.

This section of the annual report provides an overview of two main programs that EC uses to fulfill its *enforcement* mandate. It also includes an update on the status of three bilateral agreements that involve the administration and enforcement of the pollution prevention provisions of the *Fisheries Act*, and a brief review of some of the major issues, developments, and activities of Fiscal Year 2003-2004.

**EC Programs**
In order to fulfill its obligations with respect to the pollution prevention provisions of the *Fisheries Act*, EC has implemented two major national programs: the Environmental Emergencies Program, and the Environmental Protection Enforcement Program. Both programs operate within EC's five administrative regions (Atlantic, Quebec, Ontario, Prairie and Northern, and Pacific and Yukon). The National Programs Directorate in the National Capital Region co-ordinates the regional activities of the Enforcement and Environmental Emergencies Programs.

**The Environmental Emergencies Program**
EC's Environmental Emergencies Program plays a fundamental role in preventing the deposit of deleterious substances into fish-bearing waters. When an illegal deposit of a deleterious substance occurs, Environmental Emergencies personnel take steps to ensure that the appropriate remedial measures are taken. Subsection 38(5) of the *Fisheries Act* states that persons who own or are responsible for a deleterious substance that is deposited into water frequented by fish, or who caused or contributed to that deposit must "take all reasonable measures consistent with safety and with the conservation of fish and fish habitat" to prevent the deposit or, if the harmful deposit does occur, "to counteract, mitigate or remedy any adverse effects that result". If a spill or abnormal deposit does occur, environmental emergencies personnel provide environmental and technical advice to

polluters, response organizations and other levels of government. In addition, environmental emergencies personnel:

- receive notifications and reports of spills, leaks and other abnormal deposits of harmful substances into waters frequented by fish;
- visit the site of abnormal deposits of deleterious substances into waters frequented by fish, in order to observe or to carry out spill response activities;
- collect and analyze relevant information at the site of the deposit; and
- issue inspector's directions requiring polluters to take remedial or preventative measures, should they fail to take all reasonable measures to prevent the harmful deposit, or to counteract, mitigate, or remedy any adverse effects that result from the deposit.

Once the environmental emergencies officers have carried out their primary emergency responsibilities, they may also collect/preserve evidence if the delay in the arrival on scene of an EC fishery officer/fishery inspector will result in the loss or destruction of evidence.

In fiscal year 2003-2004, the Environmental Emergencies Program received 3,195 reports of abnormal deposits of a deleterious substance into water frequented by fish, and conducted 211 on-scene inspections to verify that the polluter was in compliance with subsection 38(5) of the Act.

The scope of on-scene inspections conducted by environmental emergency officers who are also fishery inspectors varies across regions, depending on administrative agreements and working arrangements that exist with provincial and territorial governments. Effort is taken to minimize duplication of effort while also ensuring that the environment is adequately protected against abnormal deposits of deleterious substances into water frequented by fish.

The Environmental Emergencies Program also coordinates the activities of the Regional Environmental Emergencies Teams (REET) in EC's five administrative regions. These are interdisciplinary, interdepartmental, multi-stakeholder teams that provide agencies involved in an environmental emergency response with consolidated, *one-stop* procedural advice and scientific information on environmental protection, environmental damage assessment, clean-up measures and disposals of wastes resulting from clean-up.

**The Environmental Protection Enforcement Program**

EC's enforcement program works to secure compliance with the *Fisheries Act*, Canadian Environmental Protection Act, 1999 (CEPA 1999), and with any regulations made under those Acts. EC fishery inspectors and fishery officers in the Department's five administrative regions conduct inspections and investigations, and, in the event of alleged violations, issue written warnings or directions, and lay charges in order to secure compliance with subsection 36(3) of the *Fisheries Act* and with any regulations made under

subsection 36(5) of that Act. EC fishery inspectors and fishery officers record, track, and analyze enforcement activities and data using an electronic database called the National Enforcement Management Information System and Intelligence System (NEMISIS). The table below summarizes some key enforcement data for Fiscal Year 2003-2004[6].

6 Notes on the Enforcement Statistics:

- The number of inspections relates to the number of regulatees inspected for compliance under each of the applicable regulations and under subsection 36(3) of the Act, referred to above as the "general prohibition".
- Investigations are tabulated by number of investigation files. An investigation file may include activities relating to more than one piece of legislation or regulation. Therefore, the total number of investigations at the regulatory level does not equal the total at the legislation level.
- All measures (except for prosecutions) are tabulated at the section level of a regulation or for subsection 36 (3). For example, if the outcome of an inspection is the issuance of a written warning which relates to three sections of a given regulation, the number of written warnings is three. The number of prosecutions is represented by the number of regulatees that were prosecuted, regardless of the number of regulations involved.

**Table 5: Enforcement Activities carried out under the *Fisheries Act* Fiscal Year 2003-2004**

| | Total Inspec-tions | On-site Inspections | Off-Site Inspections | Investiga-tions* | Prosecu-tions** | Charges | Convic-tions | Inspector's Directions | Warnings |
|---|---|---|---|---|---|---|---|---|---|
| **FISHERIES ACT** | | | | | | | | | |
| Chlor-Alkali Mercury Liquid Effluent and Guidelines | 12 | 1 | 11 | - | - | - | - | - | - |
| General Prohibition | 1,564 | 716 | 848 | 48 | 14 | 10 | 1 | 29 | 112 |
| Guidelines for Effluent Quality and Wastewater Treatment at Federal Establishments | 4 | 4 | - | - | - | - | - | - | - |
| Meat and Poultry Products Plant Liquid Effluent and Guidelines | 94 | 4 | 90 | - | - | - | - | - | - |
| Metal Mining Effluent Regulations | 515 | 84 | 431 | 4 | - | - | - | 5 | 98 |
| Metal Mining Liquid Effluent and Guidelines | 2 | - | 2 | - | - | - | - | - | - |
| Petroleum Refinery Liquid Effluent and Guidelines | 180 | 10 | 170 | - | - | - | - | - | 3 |
| Port Alberni Pulp and Paper Effluent | 1 | - | 1 | - | - | - | - | - | - |
| Potato Processing Plant Liquid Effluent and Guidelines | 59 | 4 | 55 | - | - | - | - | - | - |
| Pulp and Paper Effluent Regulations | 1,798 | 90 | 1,708 | 7 | - | - | - | 13 | 38 |
| Total | 4,229 | 913 | 3,316 | 59 | 14 | 10 | 1 | 47 | 251 |

* Of the 51 investigations started in Fiscal Year 2003-2004, 14 ended in Fiscal Year 2003-2004; 37 are on-going. In addition, 139 investigations started before Fiscal Year 2003-2004; 57 were completed in Fiscal Year 2003-2004; and 82 are on-going investigations are tabulated by number of investigation files. An investigation file may include activities relating to more than one piece of legislation or regulation. Therefore, the total number of investigations at the regulatory level does not equal the total at the legislation level.

** All measures (except for prosecutions) are tabulated at the section level of a regulation or for subsection 36(3). For example, if the outcome of an inspection is the issuance of a

written warning, which relates to three sections of a given regulation, the number of written warnings is three. The number of prosecutions is represented by the number of regulatees that were prosecuted, regardless of the number of regulations involved.

**Bilateral Agreements**

In order to facilitate the cooperative administration of subsection 36(3) of the *Fisheries Act* and its accompanying regulations, EC maintains bilateral agreements with Alberta, Saskatchewan, and Québec.

The *Canada-Alberta Administrative Agreement for the Control of Deposits of Deleterious Substances under the Fisheries Act* entered into force on September 1, 1994. The Agreement, establishes the terms and conditions for the cooperative administration of subsection 36(3) and the related provisions of the *Fisheries Act*, as well as regulations under the *Fisheries Act* and the Alberta *Environmental Protection and Enhancement Act*. The Agreement streamlines and coordinates the regulatory activities of Canada and Alberta in relation to the protection of fisheries, and reduces duplication of regulatory requirements for regulatees. During Fiscal Year 2003-2004 the Alberta Environment reported 252 incidents to EC, 113 of which were related to the *Fisheries Act*. This collaboration led to 16 on-site inspections and four investigations. In addition, there were 117 incidents that required a joint response. These joint initiatives resulted in nine inspections and two investigations.

On March 31, 2000, the *Canada-Quebec Bilateral Agreement* regarding *Pulp and Paper Effluent Regulations* under the *Fisheries Act* expired. EC and the Quebec Ministry of Environment worked collaboratively, in the spirit of the expired agreement, during the period of negotiations for a new bilateral agreement, which was signed on September 16, 2003. The new *Canada-Quebec Bilateral Agreement* focuses on regulations pertaining to the pulp and paper sector, which include the *Pulp and Paper Effluent Regulations* under the *Fisheries Act*, and two regulations under CEPA 1999 related to the pulp and paper sector, namely the *Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations* and the *Pulp and Paper Mill Defoamer and Wood Chip Regulations*, to prevent the release of chlorinated dioxins and furans in mill effluent, above detectable levels.

The *Canada-Saskatchewan Administrative Agreement for the Control of Deposits of Deleterious Substances under the Fisheries Act* sets out the principles for cooperation and identifies a preliminary list of activities where detailed collaborative arrangements could be developed. Existing collaborative arrangements are described in the five annexes to the Agreement. In Fiscal Year 2003-2004, Saskatchewan Environment conducted 10 inspections under the *Pulp and Paper Effluent Regulations* on behalf of EC. In addition, Saskatchewan Environment and EC worked cooperatively on two joint investigations. In both cases a written warning letter was issued and the investigation was closed.

Although there is no formal expiry date in the Canada-Saskatchewan Administrative Agreement, it was signed over ten years ago. Since that time there have been a variety of

developments at both the federal and provincial levels of government, including the amendment and creation of legislation, regulations, and policies, and changes to the organizational structure of different government departments. As a result both Saskatchewan Environment and EC have begun to review the need to update the administrative agreement.

The possibility of expanding the *Canada-Saskatchewan Administrative Agreement for the Control of Deposits of Deleterious Substances under the Fisheries Act* to include the *Metal Mining Effluent Regulations* is an important consideration for both sides. These discussions are at a preliminary stage and may come to fruition during Fiscal Year 2004-2005.

**Pulp and Paper**

On June 28, 2003, the Minister of Fisheries and Oceans published proposed amendments to the *Pulp and Paper Effluent Regulations* in Part I of the *Canada Gazette,* following preparation of the required amendments by EC. Following a 60-day review period, all comments were considered and the final version of the amendments was developed. The final amendments to the *Pulp and Paper Effluent Regulations* are scheduled to be published in Part II of the *Canada Gazette* in May 2004.

The amendments are designed to streamline and clarify the *Pulp and Paper Effluent Regulations*, and will maintain the stringency of the requirements for quality of the effluent discharged by pulp and paper mills. For example, the amendments remove the provisions for transitional authorizations (existing transitional authorizations expired on December 31, 1995). They also eliminate the *Port Alberni Pulp and Paper Effluent Regulations*, and incorporate the stricter allowable discharges and most of the specific requirements of the *Port Alberni Pulp and Paper Effluent Regulations* into the amended the *Pulp and Paper Effluent Regulations*.

In order to smoothly implement the amended regulations, a number of information sessions are planned for the fall of 2004. These compliance promotion sessions will inform mills of the new requirements under the amended regulations.

Under the both the former and amended the *Pulp and Paper Effluent Regulations*, pulp and paper mills are required to implement an Environmental Effects Monitoring program. The Environmental Effects Monitoring program requires pulp and paper mills to conduct site-specific monitoring of the receiving environment, as well as scientific evaluations of the effects of mill effluent on fish, fish habitat, and the use of fishery resources. The Environmental Effects Monitoring program is structured in three or four-year sequences of monitoring and interpretation phases known as “Cycles”. On April 1, 2004, the reports for Cycle 3 were submitted to EC, and the Department is currently reviewing the results of the Cycle 3 data.

**Metal Mines**
The *Metal Mining Effluent Regulations* officially came into force on December 6, 2002. They impose limits on the release of cyanide, metals, and suspended solids, and prohibit the discharge of any effluent that is acutely lethal to fish.

Throughout Fiscal Year 2003-2004, EC took several steps to incorporate the *Metal Mining Effluent Regulations* into its overall approach to the administration and enforcement of the pollution prevention provisions of the *Fisheries Act*. A nationally consistent approach to compliance promotion and enforcement activities was considered a crucial part of implementing the *Metal Mining Effluent Regulations*. As a result, in Fiscal Year 2003-2004, EC focused on four major objectives: compliance promotion among the regulated community, training of program officers and EC fishery inspectors and fishery officers on the key requirements of the regulations, enforcement action to verify and ensure compliance with the new regulations, and the assessment of the initial Environmental Effects Monitoring study designs submitted by mine owners and operators.

The Department is currently developing the first national summary report on performance by mines with respect to key requirements of the *Metal Mining Effluent Regulations*. The first report is expected to be completed in early 2005 (annual performance reports will follow thereafter).

**Municipal Wastewater Effluent**
Both the Minister of Fisheries and Oceans and the Minister of Environment recognise that municipal waste water effluent can cause impacts on fish habitat and are initiating a national wastewater management strategy to address the issue. In support of the strategy, DFO intends to put in place a regulation under subsection 36(5) of the *Fisheries Act* with EC's assistance. This regulation will prescribe deleterious substance limits for MWWE and contain the requirement of non-acutely lethal effluent from municipal wastewater facilities. EC is also using provisions under Part 4 of CEPA 1999 to address three toxic substances found in municipal wastewater effluents, namely inorganic chlormines, ammonia dissolved in water, and chlorinated wastewater effluents, through a notice requiring the preparation and implementation of pollution prevention plans for specific facilities.

**Shellfish Water Quality Protection**
EC, DFO and the Canadian Food Inspection Agency are responsible for the Canadian Shellfish Sanitation Program. EC assesses the water quality of shellfish harvesting areas. DFO classifies areas as approved, conditionally approved, or closed on the basis of EC's evaluation. Canadian Food Inspection Agency carries out biotoxin monitoring at the shellfish harvesting areas, to ensure that dangerous toxins are not present in the shellfish above specified threshold levels. In Fiscal Year 2003-2004, the total area assessed increased from 20,260 $km^2$ to 21,013 $km^2$, the total area approved for harvest increased from 14,795 $km^2$ to 15,375 $km^2$, the total area conditionally approved increased from 462 $km^2$ to 545 $km^2$, and the total area closed for harvest increased from 5,003 $km^2$ to 5,093 $km^2$. It is

important to note that the increase in the total area assessed accounts for almost all of the change in approved, conditionally approved, and closed areas.

In addition to its area classification activities, EC meets its responsibility to promote pollution prevention, remediation and restoration of shellfish growing areas through co-operative arrangements and other initiatives.

**Deleterious Substances**
Many activities occurred relating to the management of deleterious substances. An example includes the "Clean-feather" program in which ports in Newfoundland and Nova Scotia were visited by an EC staff member who provided information on the effects of oil on seabirds and the Canadian laws associated with discharges of oil in the marine environment. Plans to expand this program to other provinces and ports and collaborate with other agencies in order to deliver the information and promote compliance with the various laws and protocols dealing with oil releases in the marine environment are currently underway.

**Contaminated Sites**
Contaminated Site programs work to mitigate, reduce, and/or eliminate negative impacts from contaminated sites on the environment and on human health. Throughout Fiscal Year 2003-2004, EC provided ongoing advice and recommendations on the adequacy of ecological risk-based remediation and/or assessment of contaminated sites with respect to *Fisheries Act* compliance. As part of the Federal Contaminated Sites Accelerated Action Plan, and in conjunction with Health Canada, the Atlantic region of EC held a workshop on ecological risk assessment for federal and provincial environment departments.

**Pollution Prevention**
EC pursues several pollution prevention initiatives that focus on avoiding the creation of pollutants, rather than trying to manage them after they have been created. In 2003-2004, several regional activities yielded encouraging results. The Atlantic region implemented the "Clean Boating" initiative to identify and encourage the use of boat pump-out stations in the Maritimes. In the Pacific and Yukon Region, program staff provided advice to the Pest Management Regulatory Agency on the development of regional Codes of Practice on pesticide use.

**Agriculture**
Agriculture related complaints increased substantially in 2003-2004. Although EC believes that stewardship, best management practices, and pollution prevention activities are important steps towards a *Fisheries Act* compliant agricultural industry, the deposit of livestock urine and feces into fish-bearing waters remains a potential violation of subsection 36(3) of the Act, as these are deleterious substances whose deposit is not authorized by federal regulation. Throughout Fiscal Year 2003-2004, EC worked with Agriculture and Agri-Food Canada, DFO, and the agricultural industry to share information, provide technical assistance, and promote compliance with the *Fisheries Act*.

**Looking Ahead - EC's Goals for Fiscal Year 2004-2005**

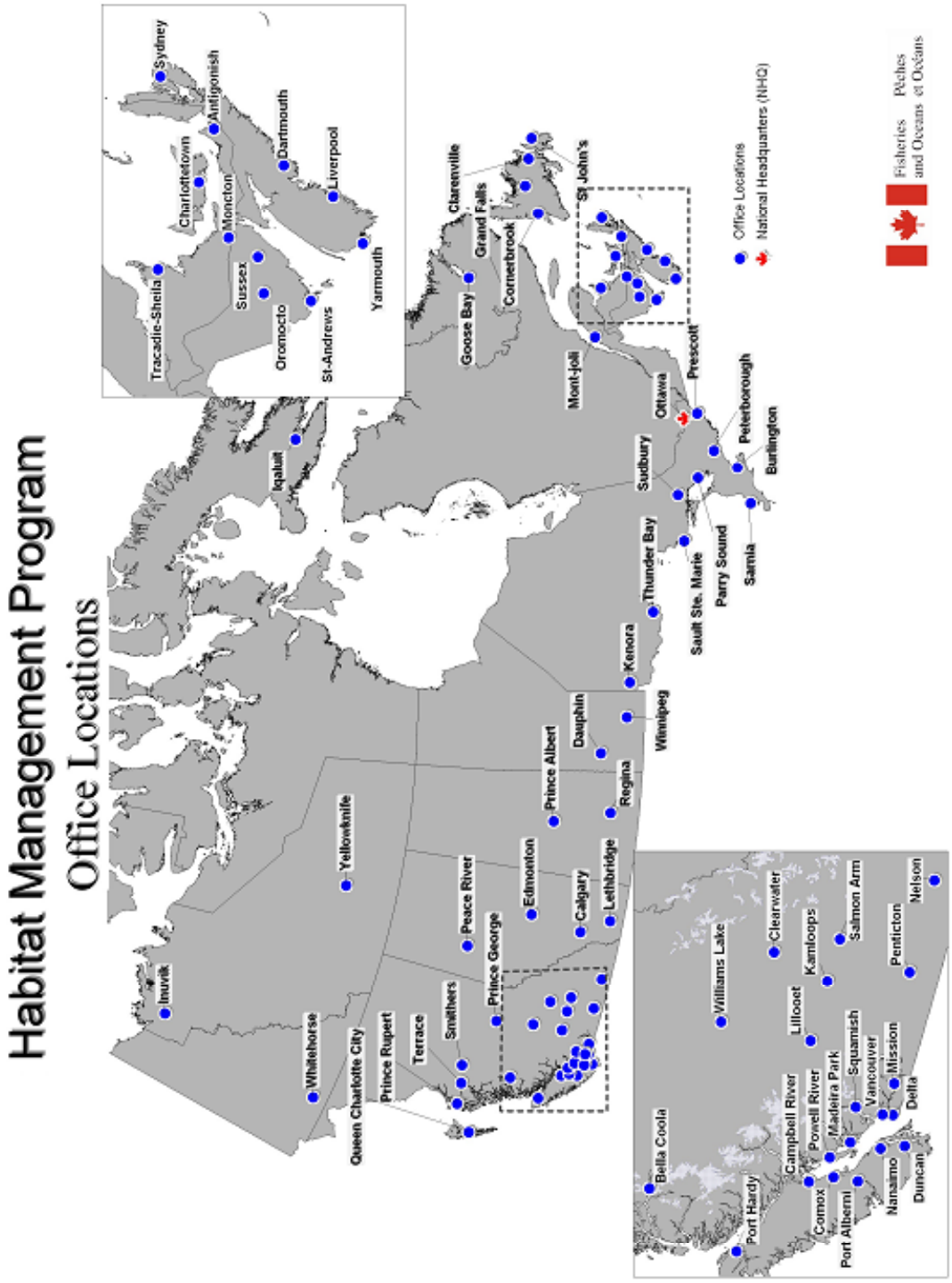
In 2003-2004, EC will pursue its enforcement activities with respect to the pollution prevention provisions of the *Fisheries Act* and will maintain its working relationship with other federal, provincial and territorial bodies. The Department will also continue to seek cooperation from provincial and territorial counterparts, in order to ensure fair and consistent enforcement, reliable and efficient reporting of spills and other uncontrolled releases into fish-bearing waters, and training and exchange of information.

**Some of the more significant projects identified for Fiscal Year 2004-2005 include:**

1. The Minister of Environment is working to finalize the amendments to the *Pulp and Paper Effluent Regulation* by May 2004. The amendments will streamline the existing regulatory process and will incorporate the *Port Alberni Pulp and Paper Effluent Regulation*. To inform the mills and other stakeholders of the regulatory changes, a series of compliance promotion activities are planned for the fall of 2004.
2. In response to a considerable increase in agriculture related complaints, EC and DFO will work in conjunction with Agriculture and Agri-Food Canada on the Environmental Components of the Agriculture Policy Framework**.** In addition, EC will develop a risk-based approach with respect to alleged violations of the *Fisheries Act* in the agricultural industry. This approach will include consideration of the potential for deposit (based on the number of animals, duration and frequency of access, and other criteria), and the extent to which preventative measures have been taken to discourage livestock access to waterways.
3. In the coming Fiscal Year, EC plans to issue a final notice requiring the preparation and implementation of P2 plans for the release of Ammonia Dissolved in Water, Inorganic Chloramines, and Chlorinated Wastewater under CEPA 1999. In addition, EC and DFO will continue discussions regarding the potential Municipal Wastewater Effluent Regulations under subsection 36(5) of the *Fisheries Act.*
4. During the summer of 2002, Ontario Region began an effluent quality assessment project involving nine metal mines. The study conducts effluent characterization from these nine metal mines during the first three years of the *Metal Mining Effluent Regulations*, and endeavours to determine whether or not there is improvement in effluent quality from those mines. The receiving water into which five of these mines release their effluent is also being sampled to determine receiving water quality. This project is scheduled to continue until the 2005-2006 Fiscal Year. In addition, Ontario Region is tracking all alleged violations of the *Metal Mining Effluent Regulations* by Ontario mines in order to determine the nature of the alleged violations by these mines, and their success in returning to and maintaining compliance with the *Metal Mining Effluent Regulations* requirements. Because the amended *Metal Mining Effluent Regulations* are as stringent as existing provincial mining regulations, no metal mines in Ontario were granted transitional authorizations under the *Metal Mining Effluent Regulations*.

5. In Fiscal Year 2003-2004, the Atlantic Region's Environmental Emergencies Division worked with three DFO regions, and the four Atlantic Provinces to update the "Natural and Pollution Related Fish Kill Response Procedures for the Atlantic Provinces". The new procedures document will replace and expand upon the existing document. It will be finalized in Fiscal Year 2004-2005.
6. Currently, data related to the administration and enforcement of the *Fisheries Act* is managed through two independent databases: the NEMISIS, and the National Environmental Emergences System. In order to facilitate more integrated data management, these databases are being merged. The new database will manage both enforcement and emergencies data, and will be completed in Fiscal Year 2004-2005. In addition, work is continuing to expand the Regulatory Information Submission System, developed as a pilot project by EC's Ontario Region. The intention is to have a single portal for electronic submission by regulatees of information that is required by *Fisheries Act* regulations to be submitted to EC. This initiative will not require changes to the reporting arrangement under *Canada-Quebec Bilateral Agreement regarding Pulp and Paper Effluent Regulations*.
7. In Fiscal Year 2003-2004 the Pacific and Yukon Region initiated a joint project with DFO to address marine pollution problems associated with Boat Haul Marina Maintenance Yards. Preliminary studies indicate that waste water from these facilities is acutely toxic to fish (LC50 0.56%). The region has launched a three year compliance promotion and enforcement initiative to promote conformance with the Best Management Practices for Ship and Boat Building and Repair Industry developed by the Environmental Protection Branch and DFO. The compliance promotion program for 2004-2005 will target over 100 boat repair facilities in the province. Inspections will be conducted over the following two years to verify compliance with the *Fisheries Act*.

**Map 1: Habitat Management Program Offices**



## Annex 1:
## Habitat Protection and Pollution Prevention Provisions, *Fisheries Act*

| Section | Intent |
|---|---|
| 20 | The Minister may require fishways to be constructed. |
| 21 | The Minister may authorize payment, order construction or removal or require fish stops or diverters for fishways. |
| 22 | The Minister may require sufficient flow of water for the safety of fish and flooding of spawning grounds as well as free passage of fish during construction. |
| 26 | Prohibits obstruction of fish passage through channels, rivers and streams. Also, the Minister may authorize devices to prevent the escape of fish. |
| 27 | Prohibits the damage or obstruction of fishways, the impediment of fish to fishways and nearby fishing. |
| 28 | Prohibits the use of explosives to hunt or kill fish. |
| 30 | The Minister may require fish guards or screens to prevent the entrainment of fish at any water diversion or intake. |
| 32 | Prohibits the destruction of fish by any means other than fishing. |
| 34 | Definitions used throughout sections 35 to 42. |
| 35 | Prohibits works or undertakings that may result in harmful alteration, disruption or destruction of fish habitat, unless authorized by the Minister or under regulations. |
| 36 | Prohibits the deposit of deleterious substances into waters frequented by fish, unless authorized under regulations. |
| 37 | The Minister may request plans and specifications for works or undertakings that might affect fish or fish habitat. The Minister may, by regulations or with Governor-in-Council approval, make orders to restrict or close works or undertakings that may harmfully alter fish habitat or lead to the deposit of deleterious substances. |
| 38 | Gives the Minister the authority to appoint inspectors and analysts and describes inspectors' powers, including entry, search and the power to direct preventive, corrective or cleanup measures. Provides for regulations that require reporting of abnormal deposits of a deleterious substance or substances that occur in contravention of the general prohibition, regulations or site-specific authorizations. |
| 40 | Sets out penalties in case of a contravention of: sections 35 or 36; failing to provide information or to undertake a project in compliance with section 37; or failing to make a report or to otherwise comply with section 38. |
| 42 | Those causing the deposit of deleterious substances in waters frequented by fish are liable for costs incurred by Her Majesty. Also, the Minister shall prepare an annual report on administration and enforcement of the fish habitat protection and pollution prevention provisions of the *Fisheries Act* as well as a statistical summary of convictions under section 42.1. |
| 43 | The Governor in Council may make regulations for carrying out the purposes and provisions of the *Fisheries Act*, including habitat protection and pollution prevention. |

# 5.0 List of Abbreviations

| | |
|---|---|
| C&P | Conservation and Protection |
| CEAA | Canadian Environmental Assessment Act |
| CEA Agency | Canadian Environmental Assessment Agency |
| CEPA 1999 | Canadian Environmental Protection Act, 1999 |
| DFO | Fisheries and Oceans Canada |
| EA | Environmental Assessment |
| EC | Environment Canada |
| GNWT-DoT | Government of the Northwest Territories-Department of Transportation |
| HADD | Harmful alteration, disruption or destruction |
| HMP | Habitat Management Program |
| HWY | highway |
| km | kilometres |
| $km^2$ | kilometres square |
| m | metres |
| $m^2$ | metres square |
| $m^3$ | metres cubed |
| MVRMA | Mackenzie Valley Resource Management Act |
| MW | Megawatt |
| NEMISIS | National Enforcement Management Information System and Intelligence System |
| NWPA | Navigable Waters Protection Act |
| OMNR | Ontario Ministry of Natural Resources |
| RMAF | Results-Based Management and Accountability Framework |
| SARA | Species at Risk Act |