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ANNUAL REPORT TO PARLIAMENT

2018-2019

on the Administration and Enforcement of the Fisheries Protection and Pollution Prevention Provisions of the *Fisheries Act*

Canada

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1.0 Overview

1.1 Introduction

Fisheries and Oceans Canada (DFO) and Environment and Climate Change Canada (ECCC) are committed to protecting Canada's environment in ways that benefit future generations while supporting today's growing economy. More specifically, these departments actively work to achieve an integrated approach to the conservation and protection of fish and fish habitat across Canada and seek to empower Canadians to be more informed and effective in managing threats and impacts to Canada's aquatic ecosystems. This effort includes the support and collaboration of Indigenous groups, stakeholders, other governments and the international community.

In 2018-19, the Government continued to make significant progress in support of the Minister of Fisheries, Oceans and the Canadian Coast Guard's mandate letter commitment to review previous changes to the *Fisheries Act.* A key aspect of this was providing support for Parliament's review of, and proposed amendments to, Bill C-68, An Act to amend the *Fisheries Act* and other *Acts* in consequence. In support of this, the Government engaged with Indigenous groups, provinces and territories, as well as interested Canadians on ways to improve and modernize the *Fisheries Act*. This included public consultations on proposed changes to the Applications for Authorization under Paragraph 35(2) (b) of the *Fisheries Act* Regulations, which were necessary to align with other efforts to amend the Act.

In addition, the Department undertook a variety of activities to prepare for the implementation of the modernized Act, in order to ensure ongoing measures to conserve and protect fish and fish habitat in the period leading up to, and following, royal assent. These activities included the allocation of $284.2 million over five years (2018-19 to 2022-23) to undertake extensive program preparations, as well as the development of key policies, measures, and instruments to support implementation of an amended *Fisheries Act*, along with hiring and onboarding of new staff.

Upon introduction of Bill C-68, Canadians were informed of the proposed changes to the Act. The bill introduced modern safeguards to support the conservation and protection of fish and

fish habitat and supports reconciliation with Indigenous peoples. It aims to provide better certainty for Canadian industry and ensure the long-term sustainability of aquatic resources. Leading to the introduction of Bill C-68, the Government considered the recommendations of the Standing Committee on Fisheries and Oceans and input received during departmental consultations with Canadians including targeted consultation with provinces, territories, and Indigenous peoples.

This Annual Report summarizes the administration, enforcement, and other activities undertaken from April 1, 2018, to March 31, 2019, by the Minister of Fisheries, Oceans and the Canadian Coast Guard and the Minister of Environment and Climate Change to ensure compliance with the fisheries protection and pollution prevention provisions of the *Fisheries Act*. For the purposes of this report, the version of the Act referenced was in effect from April 5, 2016, to June 20, 2019.

1.2 Highlights

FISHERIES AND OCEANS CANADA ACTIVITIES

Fisheries and Oceans Canada (DFO) is the federal lead for managing Canada's fisheries, its oceans, and freshwater resources, and safeguarding its waters. The Department's programs and activities support economic growth in the marine and fisheries sectors, and healthy and sustainable aquatic ecosystems. This includes conservation and protection, compliance and enforcement, sustainability, and restoration activities.

Supporting Conservation and Protection

DFO's goal, to conserve and protect fish and fish habitat, is achieved by collaborating with a number of partners and by setting the frameworks, regulations, and policies for shared stewardship of freshwater ecosystems. This includes the Fisheries Protection Policy Statement and the Fisheries Protection Investment Policy.

The Fisheries Protection Policy Statement helps Canadians comply with the fisheries protection provisions of the *Fisheries Act*. It also strengthens the ability of the Fisheries Protection Program (FPP) to address key threats to the productivity and sustainability of fisheries by establishing standards and guidelines to avoid, mitigate and offset impacts to fisheries and to ensure compliance with these requirements. The Fisheries Productivity Investment Policy builds on the policy statement to help proponents of existing or proposed projects undertake effective measures to offset serious harm to fish that are part of or that support a commercial, recreational or Aboriginal fishery.

In 2018-19, the FPP continued to follow and implement the Fisheries Protection Policy Statement and the Fisheries Productivity Investment Policy. For example, to promote conservation and protection, the FPP helped regulated parties understand their responsibilities and comply with applicable laws and regulations by advising these parties throughout the year. The FPP also updated and maintained the Projects Near Water

website[1] so that proponents and stakeholders had access to best practices for avoiding harm to fish and fish habitat. In addition, the FPP participated in the Canadian Science Advisory Secretariat peer-review process to support the preparation of science advisory documents and operational policies.

FPP's activities are aligned with DFO's core responsibility of maintaining sustainable "Aquatic Ecosystems" as highlighted in the Departmental Results Report for 2018-19[2]. This is achieved, in part, by conducting site-specific reviews of projects where available best practices could not avoid or mitigate all impacts to fish and fish habitat. The FPP also gives standardized advice for low-risk projects, so proponents can apply measures to avoid and mitigate harm.

The FPP is also responsible for administering certain provisions of the *Species at Risk Act* with respect to aquatic species at risk.

Over the past year, it has undertaken these legislative duties in federal environmental assessment regimes, such as the *Canadian Environmental Assessment Act*, *2012*, as well as regimes in the territories and under land claims agreements.

Supporting Compliance and Enforcement

Compliance and enforcement activities are key to protecting Canada's fish and fish habitat. DFO fishery officers conduct habitat patrols in marine and freshwater areas, undertake inspections of sites where habitat may be impacted by works, undertakings or activities, and promote compliance by educating the public about regulations related to habitat protection. Where habitat violations are detected, fishery officers may issue warnings or directions to bring an individual back into compliance, or may undertake investigations and lay charges, if warranted. Fishery officers also work with DFO habitat biologists and other enforcement partners, such as ECCC, Parks Canada, and provincial and territorial agencies, to support habitat protection.

During 2018-19, DFO's Conservation and Protection Program dedicated a total of 20,628 hours to compliance and enforcement activities related to fish habitat protection.

Supporting Sustainability

Over 2018-19, DFO programs continued to implement frameworks, regulations, and policies to prevent aquatic invasive species from entering Canada's waterways where they can harm the natural ecosystems and pose significant risks to Canadian fish and the fisheries sector.

[1] www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html
[2] http://www.dfo-mpo.gc.ca/about-notre-sujet/publications/reports-rapports-eng.htm#performance

Supporting Restoration

FPP supports a non-regulatory partnership approach to habitat restoration through initiatives such as the Recreational Fisheries Conservation Partnerships Program (RFCPP) and the Coastal Restoration Fund (CRF). These programs, which support multi-partner projects at the local and regional level, are aimed at supporting fish and fish habitat to address the trend of aquatic habitat loss and degradation underway across many of Canada's watersheds that impact coastal and in-land as well as communities. Through the RFCPP's $53 million in contribution funding over six years, and the CRF's $75 million in contributions over five years, both programs enable recipients to plan and execute projects that restore compromised and/or threatened fish habitat.

ENVIRONMENT AND CLIMATE CHANGE CANADA ACTIVITIES

ECCC is the overall lead for the administration and enforcement of the pollution prevention provisions of the *Fisheries Act* except for aquaculture, aquatic invasive species and aquatic species that constitute a pest to fisheries. The Department administers these provisions through activities such as compliance promotion, regulations, water quality monitoring, response to environmental emergencies, and agreements with provinces and territories.

Compliance Promotion

ECCC engages in activities to increase the awareness and contribute to the understanding of the pollution prevention provisions of the *Fisheries Act* and related regulations to help ensure these achieve the desired environmental results.

ECCC personnel across Canada respond to enquiries and provide information to regulated communities on what is required to comply with the *Fisheries Act* and related regulations, the benefits of compliance, and the consequences of non-compliance.

Compliance promotion is achieved primarily through a collaborative and coordinated approach across ECCC's programs, including with regions and enforcement. The Department uses various tools and approaches to promote compliance such as website postings, letters, emails, brochures, site visits, responses to enquiries, and information sessions.

Administering Related Regulations

ECCC administers a number of regulations made under section 36(5) of the *Fisheries Act*, including the *Pulp and Paper Effluent Regulations*, *Metal and Diamond Mining Effluent Regulations*, and the *Wastewater Systems Effluent Regulations*. Administration includes promoting compliance and enforcement of these regulations, and oversight of the Environmental Effects Monitoring requirements. In addition, ECCC administers the *Deposit Out of the Normal Course of Events Notification Regulations*, which applies to verbal notification requirements for the unauthorized release of deleterious substances as per subsection 38(5) of the *Fisheries Act*.

Water Quality Monitoring

Under the Canadian Shellfish Sanitation Program, ECCC makes growing-area classification recommendations to DFO for the harvesting of species such as clams, oysters, mussels and scallops. DFO opens and closes shellfish harvesting areas based on these recommendations, as well as the recommendations of the Canadian Food Inspection Agency, through its authority under the *Management of Contaminated Fisheries Regulations*.

Enforcement

ECCC's enforcement activities under the *Fisheries Act* include inspections, investigations, and enforcement measures. Enforcement measures to address alleged violations of the *Fisheries Act* include warnings, directions, Ministerial orders, injunctions, and prosecutions.

Environmental Emergencies

ECCC's Environmental Emergencies Program protects Canadians and their environment from the effects of environmental emergencies by providing science-based expert advice and developing and administering regulations under both the *Fisheries Act* and the *Canadian Environmental Protection Act, 1999*. In the event of a significant pollution incident, the program oversees that response actions are taken by the responsible party to counteract, mitigate or remedy any adverse effects as per subsection 38(6) of the *Fisheries Act*.

Agreements with Provinces and Territories

The *Fisheries Act* allows the Ministers of Environment and Climate Change and of Fisheries, Oceans and the Canadian Coast Guard to enter into agreements with a province or territory in order to further the purposes of the Act. These agreements may facilitate co-operation, enhance communication, and streamline administration. An equivalency agreement may also be established to reduce regulatory duplication when provisions under provincial law has an equivalent effect to provisions of regulations made under the *Fisheries Act*.

Under an administrative agreement, both federal and provincial regulatory requirements remain in force, but provincial officials administer the federal regulations in that province on behalf of ECCC. Under an equivalency agreement, the Governor in Council decrees that the federal regulations do not apply to regulatees that are subject to a provincial or territorial regulatory regime, because it has been determined to be equivalent in effect to the federal regulations.

1.3 The *Fisheries Act*

About the Act

The *Fisheries Act* provides the Minister of Fisheries, Oceans and the Canadian Coast Guard and the Minister of Environment and Climate Change with powers and authorities to conserve and protect fish and fish habitat. The key provisions essential to sustaining freshwater and marine fish species are the 'fisheries protection provisions' and the 'pollution prevention provisions.'

Fisheries Protection Provisions

The fisheries protection provisions are considered to be sections 20, 21, and 35 and parts of sections 6, 6.1, 37, 38, 40 and 43 of the *Fisheries Act*. Sections 20, 21, and 35 are especially important:

- enabling powers for the Minister of Fisheries, Oceans and the Canadian Coast Guard to ensure the free passage of fish and to prevent harm to fish (i.e., request that obstructions be removed, fish guards be installed, fishways be constructed, and minimal flows of water be maintained, as per sections 20 and 21); and,
- prohibiting the carrying on of any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery, unless authorized by the Minister of Fisheries, Oceans and the Canadian Coast Guard, through regulations, or other mechanisms provided under section 35.

The purpose of section 6 and its provisions is to provide for the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries. It supports implementation of section 35 by requiring that the Minister of Fisheries, Oceans and the Canadian Coast Guard take into account four factors for consistent and transparent decision-making:

(a) the contribution of relevant fish to fisheries;
(b) fisheries management objectives;
(c) avoidance, mitigation and offsetting measures; and
(d) public interest.

The purpose of each of the other fisheries protection provisions is as follows:

- Section 37: Empowers the Minister to request plans and specifications for any work, undertaking or activity that may cause serious harm to fish or is proposed in an ecologically significant area (as defined in regulations);
- Subsection 38(1): Authorizes the Minister to appoint inspectors and analysts;
- Subsections 38(3), 38(7.1), and 38 (8): Outlines the powers of inspectors, including entry, search and direction of preventive, corrective or clean-up measures;

- Subsection 38(4): States the proponents' *Duty to Notify* an inspector, fishery officer or a prescribed authority of any works, undertakings or activities that result in serious harm to fish;
- Subsections 38(6) and 38(7): States the proponents' *Duty to Take Corrective Measures and Reporting*; and,
- Section 40: Outlines offences and punishment.

Pollution Prevention Provisions

The pollution prevention provisions are generally understood to describe section 36, subsections (3) to (6), of the *Fisheries Act.* In 2014, an *Order Designating the Minister of the Environment as the Minister Responsible for the Administration and Enforcement of Subsections 36(3)* to *(6)* of the *Fisheries Act* (referred to as the Designation Order) established the Minister of Environment and Climate Change legally responsible for administering and enforcing these subsections.

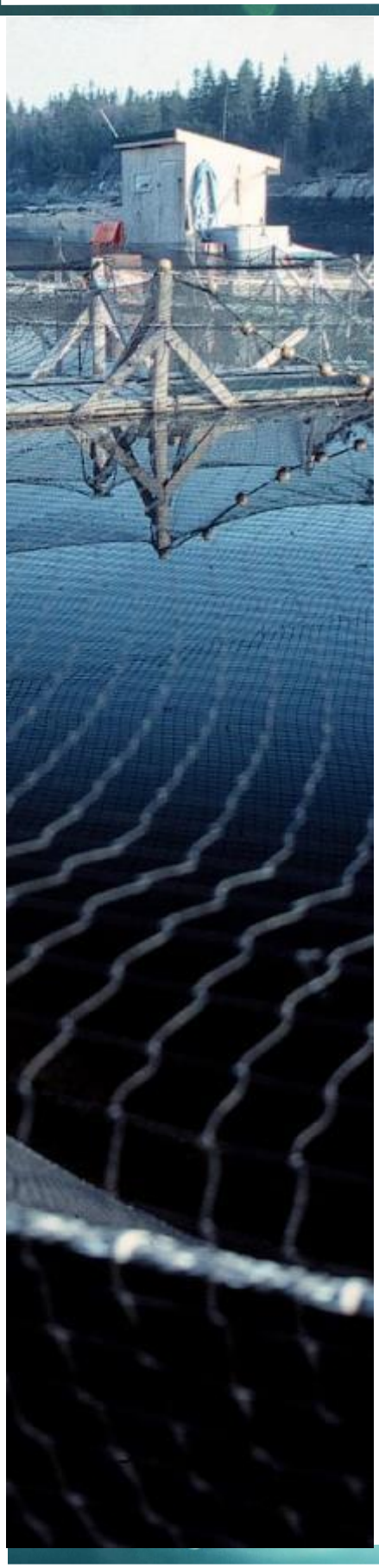
The Designation Order identifies a list of the following sections and subsections of the *Fisheries Act,* that contain a reference to the "Minister," where that reference should be read as the Minister of the Environment when used for the purpose of administering or enforcing subsections 36(3) to (6). This list contains the following:

- 4.1(1), (3) and (4), 4.2(4), 4.3, and 4.4;
- 5(1) and (2);
- Paragraph 37(1)(b), subsection 37(1.1) and (2), paragraphs 37(3)(a) and (b), and subsections 37(4) and (5);
- Subsections 38(1) and (2);
- Paragraphs 40(3)(a.1) and (d);
- Subsection 42.1(1);
- Subsections 71(2) to (4) and subsection 71.1(1);
- Section 73;
- Subsection 75(3);
- Section 76;
- Paragraphs 79.2(d) and (h), subsection 79.4(2) and (3), and subsection 79.7(4)(b);
- Subsections 89(1) to (3); and
- Section 91.

DFO administers the pollution prevention provisions for subject matters related to aquaculture facilities and any resulting effects of those activities on the waters frequented by fish, as well as control or eradication of any aquatic invasive or other species that constitute a pest to fisheries.

Annual Report to Parliament

The Minister of Fisheries, Oceans and the Canadian Coast Guard and the Minister of Environment and Climate Change share the legislative requirement under Section 42.1 of the *Fisheries Act* to annually report on their administration and enforcement of the fisheries protection and pollution preventions provisions.



2.0 Fisheries and Oceans Canada

The Department administers the *Fisheries Act* with respect to fisheries protection provisions as well as the pollution protection provisions as they relate to aquaculture, aquatic invasive species and aquatic species that constitute a pest to fisheries.

DFO's approach to the administration of the *Fisheries Act* is science-based, collaborative, and innovative. The Department undertakes research, participates in environmental assessments, and conducts regulatory reviews for development projects. It gives advice to guide proponents in complying with applicable laws and regulations that aim to respect Aboriginal or treaty rights and to prevent serious harm to commercial, recreational, and Aboriginal (CRA) fisheries. DFO also consults with Indigenous people when decisions may affect their rights and accommodates when necessary, and works with proponents to prevent serious harm to fish that are part of supporting CRA fisheries.

The following section summarizes DFO's legislative reporting requirements under the *Fisheries Act* and demonstrates the fulfillment of key commitments and investment into Canada's fisheries and oceans. This includes various program roles and responsibilities, as well as activities undertaken in 2018-19 to support the administration of the fisheries protection provisions and the pollution protection provisions that are under DFO's responsibility.

2.1 Fisheries and Habitat Protection

By protecting habitats, DFO supports the conditions that fish species need to live and thrive.

2.1.1 Fisheries Protection Program

The Fisheries Protection Program (FPP) seeks to maintain the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries. The Program is the departmental lead for the administration of the 'fisheries protection provisions' of the *Fisheries Act*. This responsibility includes:

- the review of proposed works;
- engaging partners and stakeholders;
- reviewing activities that may affect fish and fish habitat;
- issuing authorizations and permits, when appropriate, with

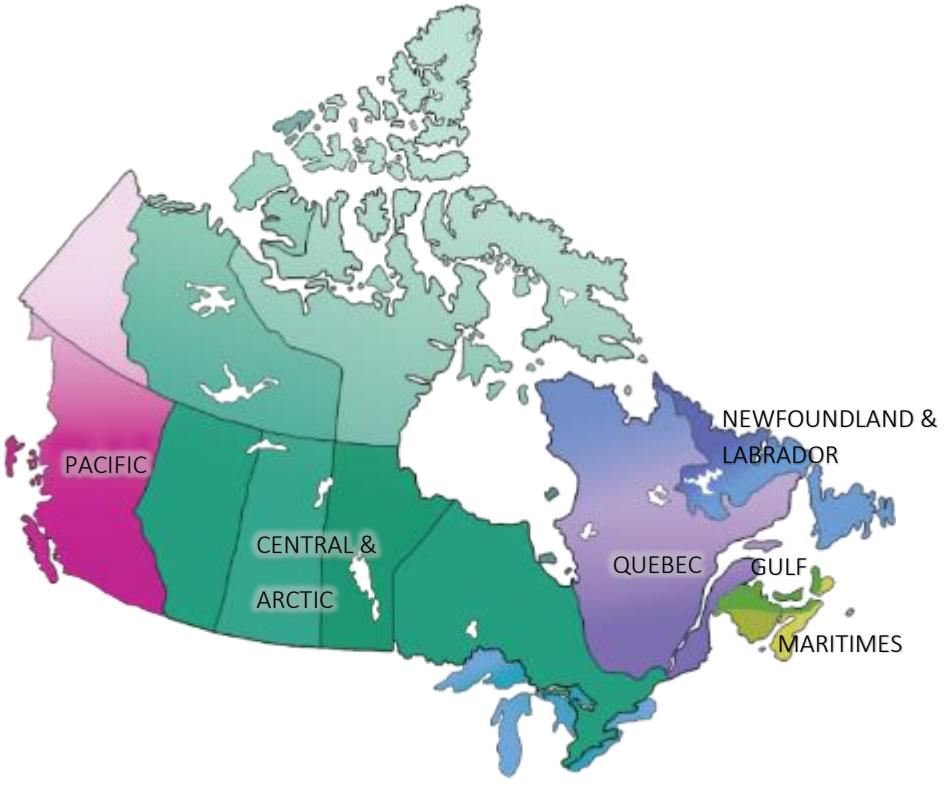
conditions for offsetting, monitoring and reporting;

- ensuring compliance with the *Fisheries Act* and the *Species at Risk Act*;
- administering certain provisions of the *Species at Risk Act*;
- providing scientific expertise to federal custodial departments to foster effective and cost-efficient contaminated site management according to goals of the Federal Contaminated Sites Action Plan; and,
- working collaboratively with others to manage impacts to commercial, recreational and Aboriginal fisheries resulting from habitat degradation or loss, alterations to fish passage and flow, and aquatic invasive species.

If an authorization may adversely affect Aboriginal or Treaty rights, the FPP consults potentially affected Indigenous peoples and, as appropriate, applies measures to accommodate.

The FPP has 16 service delivery points across the country with centralized regional headquarters in six DFO regions (Figure 1). Regulatory review assessors in the regions are divided into specialized industry sector-based units including: Triage; Mining, Oil and Gas; Linear Development; Marine and Coastal; and, Hydro and Flows. Each regional headquarters' office also has a Client Liaison, Partnerships, Standards and Guidelines team that is the focal point for developing partnership arrangements and clear requirements for complying with the Act.

Figure 1: Fisheries and Oceans Canada Regions in 2018-19



Staff located in National Headquarters are responsible for coordinating program delivery and giving national policy direction, strategic advice and liaison to other DFO sectors, federal departments, national industry, and non-governmental organizations.

The FPP also maintains the Projects Near Water website[3], which features best practices for proponents to emulate in order to avoid harming fish and fish habitat, and helps regulated parties understand their legal responsibilities for avoiding harm to fish and fish habitat. The best practices section is entitled, *Measures to Avoid Causing Harm to Fish and Fish Habitat*.[4]

When a proponent is unable to meet the self-assessment criteria and avoid serious harm to fish that are part of or support a commercial, recreational or Aboriginal fishery, they are to complete a *Request for Review* form[5] and submit it to DFO for review.

2.1.2 Collaborative Arrangements

DFO partners with other government departments to support consistent and efficient administration and enforcement of the fisheries protection provisions.

In 2013, DFO signed memoranda of understanding with the National Energy Board (NEB) and the Canadian Nuclear Safety Commission (CNSC) to reduce overlap between these parties when they review the same projects, while still ensuring the protection of fish and fish habitat.

The NEB regulates energy infrastructure projects under the *National Energy Board Act*. Projects reviewed by the NEB typically relate to the installation or maintenance of pipeline watercourse crossings. The CNSC regulates the use of nuclear energy and materials, including nuclear facilities under the *Nuclear Safety and Control Act*.

Under the memoranda, fisheries experts within the NEB and the CNSC review applications for projects submitted to them under their respective legislation. At the CNSC, fisheries experts also review licensee documentation to ensure appropriate measures are being applied to avoid and mitigate impacts to fish and fish habitat, including the aquatic species listed under the *Species at Risk Act* and their critical habitat. The FPP becomes involved in the review of these projects when impacts cannot be avoided.

The Minister of Fisheries, Oceans and the Canadian Coast Guard remains responsible for decisions on the issuance of *Fisheries Act* authorizations and conditions of authorization and permits under the *Species at Risk Act*.

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[3] www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html
[4] www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html
[5] www.dfo-mpo.gc.ca/pnw-ppe/reviews-revues/request-review-demande-d-examen-001-eng.html

In 2018-19, DFO continued to work closely with the NEB and the CNSC, including with ongoing support and communication to implement the memoranda of understanding.

Table 1 lists the number of projects reviewed by the NEB between April 1, 2018 and March 31, 2019 and the outcome of those reviews. Table 2 summarizes the works, undertakings or activities that were monitored by the NEB.

Table 1: Projects Reviewed by the National Energy Board

Determination	2018-2019[6]
Deemed unlikely to result in serious harm to fish as company proposed to use DFO's "Measures to Avoid Harm"	284
Deemed unlikely to result in serious harm to fish after additional review/input from the NEB	5
Deemed likely to result in serious harm to fish and referred to DFO	1
Total	290

Table 2: Projects Monitored by the National Energy Board

Determination	2018 - 2019
Deemed to be compliant with the NEB Act and *Fisheries Act* requirements for fish and fish habitat protection	116
Non-compliance with the NEB Act requirements for fish and fish habitat protection addressed by the NEB	16
Non-compliance with *Fisheries Act* - notification/discussion with DFO	0
Total	132

With the support of DFO, the CNSC led the discussion with proponents on the preparations of the applications for authorizations under the *Fisheries Act*, and continued to facilitate and lead consultations with Indigenous peoples. In summary, during the 2018-2019 fiscal year, there were two applications for *Fisheries Act* authorization (one for new works and one for Operations and Maintenance activities); and three *Fisheries Act*

[6] Data includes both applications and operation and maintenance activities on which NEB completed a final determination in 2018-2019.

Authorizations also acting as a SARA permit for works referred by the NEB related to the Trans Mountain Expansion Project. No other notifications of potential serious harm to fish, or impacts on aquatic species at risk were reported by the NEB or CNSC during this reporting period.

2.1.3 Related Legislative Requirements, Policies and Guidance

DFO administers federal policies, guidance documents, and regulations under the *Fisheries Act* that deal with water pollution and protecting the quality of the natural environment.

Canadian Environmental Assessment Act, 2012

Under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), DFO must, if requested, provide specialist or expert information and knowledge to a responsible authority, a review panel or a province that has been deemed to have a CEAA 2012 substitute environmental assessment (EA) process. In these cases, the FPP gives specialist advice on fish and/or fish habitat or on aquatic species at risk. These EA's focus largely on major development projects such as metal mining, oil and gas facilities and pipelines, and hydroelectric and nuclear energy projects.

A section 35(2)(b) *Fisheries Act* authorization for works, undertakings or activities associated with a project subject to an environmental assessment under CEAA 2012 cannot be issued unless the following is determined:

- carrying out the project is not likely to cause significant adverse environmental effects; or
- carrying out the project is likely to cause significant adverse environmental effects but the Governor in Council decides that those effects are justified in the circumstances.

The Minister of Fisheries, Oceans and the Canadian Coast Guard has decision-making responsibilities related to the assessment of projects under the *Mackenzie Valley Resource Management Act,* the *Yukon Environmental and Socio-economic Assessment Act*, the *Nunavut Project Planning and Assessment Act*, and other EA regimes established under land claims agreements when DFO has jurisdictional responsibilities related to these projects.

DFO also advises and supports ECCC and other custodian departments concerning the impacts on fish habitats from federal contaminated sites through the Federal Contaminated Sites Action Plan program.

2.1.4 Review of Development Proposals (Referrals)

FPP activities contribute to the sustainability and ongoing productivity of Canada's commercial, recreational and Aboriginal fisheries by minimizing threats from works, undertakings and activities taking place in and near Canadian waters.

The FPP maintains the Projects Near Water website for project proponents to access DFO's recommended best practices to avoid harming fish and fish habitat as well as project-specific self-assessment criteria to help proponents determine if a DFO review is needed. Self-assessment criteria consist of lists of project activities and water body types for which a DFO review is not required if DFO best practices are followed.
When a proponent is unable to meet the self-assessment criteria and avoid serious harm to fish, they must complete a *Request for Review* form and submit it to DFO for review. As part of the review process, staff must verify whether the project under review has the potential to adversely affect aquatic species listed under the *Species at Risk Act*, or their critical habitat, so that appropriate measures can be taken. An "authorization" pursuant to paragraph 35(2)(b) of the *Fisheries Act* may be contemplated for issuance if serious harm to fish could not be avoided.

In 2018-19, DFO completed the following:

- reviewed 3,403 development proposals (referrals, Table 3);
- provided advice and program responses to proponents or others on 2,995 occasions (Table 4); and,
- issued 375 authorizations under paragraph 35 (2)(b) of the *Fisheries Act* (Table 4 and Table 5).

Program Activity Tracking for Habitat System

The Program Activity Tracking for Habitat (PATH) system is a national computer system designed, developed, supported and managed by the FPP for staff to have one national system to collect, share and report information on FPP activities. In addition to being a daily operational tool, the PATH system is used for reporting at the individual, office, area, region and national levels. This includes data recorded on review of referrals as presented in Tables 3 to 5.

Table 3 summarizes the number of referrals processed in 2018-19, by work category, for each DFO region.

Table 3
Summary of Habitat Referrals by Primary Impact
Fiscal Year 2018-19[7]

Region	Primary Impact									
	Changes in Flows/ Water Levels	Deposition of Non-Deleterious Substances	Dredging/ Excavating	Fish Mortality	Fish Passage	Infilling/ Footprint	Watercourse Alteration	No Potential Impact	Other[8]	Total
Newfoundland and Labrador	11	7	28	2	31	91	0	48	7	**225**
Maritimes	51	5	47	3	123	157	14	79	11	**490**
Gulf	11	0	39	0	79	77	8	74	0	**288**
Quebec	2	6	39	6	87	147	3	10	0	**300**
Central & Arctic	51	11	514	13	92	668	47	80	11	**1,487**
Pacific	36	4	65	15	12	373	75	31	0	**613**
Total	**162**	**33**	**732**	**39**	**424**	**1,513**	**147**	**322**	**31**	**3,403**

2.1.5 Advice Provided and Authorizations Issued

The FPP interacts with proponents in various circumstances with regards to proposed works, undertakings or activities that could affect fish and fish habitat. The support provided by the FPP helps proponents remain compliant with legislation. Table 4 presents the compliance continuum from the non-regulatory activities illustrated in the column "Advice/Response Provided" to the regulatory activities comprised in the column "Authorizations issued" per region.

The Department achieved a 100 per cent compliance rate for processing applications for authorizations under the *Fisheries Act* within the regulated 60 and 90-day time limits by which the Minister must abide when reviewing applications.

[7] Note: For reporting purposes, the receipt of a referral by DFO is accounted for in the statistics of the same year that event actually occurred; while any DFO decisions linked to the referral could occur in a subsequent year and be accounted for separately in the statistics for that year.

[8] "Other" includes referrals identified with the primary impact of "To be determined".

Table 4 shows the number of times that each DFO region gave advice, provided a program response or issued authorizations over 2018-19.

Table 4
Advice/Responses Given and Authorizations Issued
Fiscal Year 2018-19

REGION	Advice/Response Provided to Proponent or Others[9]	Authorizations Issued	TOTAL
Newfoundland and Labrador	261	0	**261**
Maritimes	420	16	**436**
Gulf	255	8	**263**
Quebec	437	23	**460**
Central and Arctic	1,037	38	**1,075**
Pacific	467	33	**500**
TOTAL	**2,877**	**118**	**2,995**

2.1.6 Notifications and Use of Regulatory Tools

Referrals are requests submitted to DFO either directly by a proponent or indirectly by a consultant, province or territory, or other agency about a proposed work, undertaking or activity that may affect fish, fish habitat or fisheries (see Section 2.1.4 for more details).

Due to the scope and number of projects that could possibly affect fish, fish habitat or fisheries, various tools are in place to make regulatory reviews of low-risk activities more efficient. One example is the "class" authorization process for agricultural municipal drains maintenance activities in southern Ontario. The issuance of authorizations under this class provides a standardized approach, which eliminates the requirement for a site-specific review process.

Another example of a regulatory tool to improve regulatory efficiency and compliance with section 35 of the *Fisheries Act* involves "class watershed" authorizations for works, undertakings and activities associated with placer mining in Yukon. This approach provides regulatory certainty by establishing pre-determined standards, mitigation and offsetting for specific activities in certain types of fish habitat. Placer mining activities, which cannot meet these standards, are subject to the site-specific review and authorization process.

[9] Advice given to others includes: written advice to federal agencies, provincial/territorial/other agencies and boards, letters of advice to proponents, and mitigation measures to permitting agencies. Program responses given through triage and other processes include: best management practices, no concerns/no potential effect to fish or fish habitat, partnership/other process in place, web self-assessment can be used, regulatory review not required, no specialist advice to provide, and Yukon Environmental and Socio-economic Assessment Board-DFO not a Decision Body.

The Projects Near Water website contains a proponent self-assessment process, which identifies activity and water body types for which a DFO review is not required if the *Measures to Avoid Causing Harm to Fish and Fish Habitat* are followed. These are general measures for preventing serious harm to fish. The self-assessment tool enables proponents to plan their projects to avoid harm and to determine the need for a DFO review before submitting their project. This allows the Department to focus the review process on the highest-risk projects for which site-specific review and advice are most beneficial.

In certain jurisdictions, DFO has arrangements with provincial governments so that certain low risk projects do not require a DFO review. Examples of such regional regulatory arrangements are in DFO's Maritimes and Gulf Regions where the provincial review process for specified low-risk activities incorporates DFO regulatory requirements.

Class authorizations are tracked and reported because they authorize works, undertakings or activities which cause serious harm to fish and are in addition to the project-specific authorizations reported in Table 4. Not all of the other "streamlining" tools mentioned above have notification processes, and tracking is not a mandatory requirement for those that do.

Table 5 summarizes the use of class authorizations in fiscal year 2018-19.

Table 5
Notifications of Use of Class Authorizations
Fiscal Year 2018-19

REGION	Class Authorizations Notifications
Newfoundland and Labrador	0
Maritimes	0
Gulf	0
Quebec	0
Central and Arctic	215
Pacific	42
TOTAL	**257**

2.2 Conservation and protection

Compliance with, and enforcement of, the fish and fish habitat protection provisions contributes to the conservation of Canada's aquatic resources and the protection of fish habitat and species at risk.

2.2.1 Conservation and Protection Program

DFO's 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, Oceans and the Canadian Coast Guard appoints fishery officers to enforce fisheries regulations, as well as the fish habitat protection provisions of the *Fisheries Act*. With regard to fisheries compliance and enforcement, fishery officers conduct at-sea and inland patrols in marine and freshwater areas.

In addition to their fisheries enforcement work, fishery officers also spend time on habitat issues. This effort may include working with habitat biologists on sites with authorized works, undertakings or activities, responding to reports of potential habitat violations from members of the public, conducting habitat patrols, inspections and investigations, working with Crown counsels on prosecutions, and assisting in the education of the public on habitat protection, as well as other activities, as needed. Fishery officers also work with other enforcement partners, such as ECCC, Parks Canada, and provincial and territorial agencies, to support habitat protection. Compliance and enforcement activities undertaken by fishery officers and the Department's enforcement partners are key to protecting Canada's fish and fish habitat.

During fiscal year 2018-19, C&P:

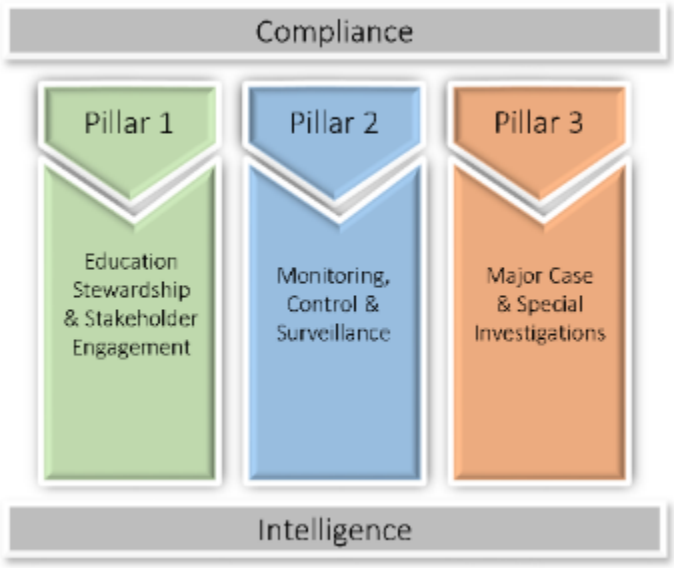
- dedicated a total of 20,628 hours to verifying compliance and enforcing fish habitat/fisheries protection provisions (Table 6);
- issued eleven warnings under the fish habitat/fisheries protection provisions (Table 7);
- issued three corrective measures (Table 7);
- laid zero charges (Table 7); and,
- had one conviction[10] under the fish habitat/fisheries protection and pollution prevention provisions (Table 8).

[10] Racehorse Creek

2.2.2 Compliance and Enforcement

C&P has adopted a three-pillar approach to deliver its enforcement program. This approach, as described under the Fisheries and Oceans Canada National Compliance Framework, guides the application of compliance tools as follows:

- Pillar 1: *Education, Shared Stewardship and Stakeholder Engagement* includes informal and formal education programs and co-management/partnership agreements;
- Pillar 2: *Monitoring, Control and Surveillance* includes activities such as land, sea and air patrols, inspections and compliance monitoring of third-party service providers, and enforcement response to non-compliance; and,
- Pillar 3: *Major Cases/Special Investigations* includes formal intelligence gathering and analysis, forensic audits and prosecutions.



For fiscal year 2018-19, fishery officers dedicated a total of 20,628 hours to fish habitat/fisheries protection compliance and enforcement activities, an increase of 3,471 hours from previous year. In 2018-19, the Department hired over 20 additional fishery officers to increase capacity, and more hiring is expected in 2019-20. Hiring new fishery officers requires a thorough recruitment and training process, followed by further training and field experience to bring new officers to full operational capacity.

In addition, in 2018-19, more than 25 departmental habitat biologists from across the country were designated as fishery guardians under the *Fisheries Act*. This designation enables holders to conduct inspections of sites (such as dock construction, culvert installation, or mining operations) in order to verify compliance with the *Fisheries Act*. This increases the capacity of the Department to monitor activities that may potentially affect fish habitat and to promote compliance with *Act*.

Table 6
Allocation of Compliance and Enforcement Effort
Fiscal Year 2018-19

Habitat Activities	Hours	Percentage
Agriculture	1,509	7%
Aquaculture	357	2%
Death of Fish	277	1%
Forestry	1,036	5%
Hydro	1,135	6%
Industrial/Commercial	1,575	8%
Mining	7,337	36%
Oil/Gas	315	2%
Recreational	825	4%
Rural/Urban Dev.	5,714	28%
Transportation	549	3%
TOTALS	**20,628**	**100%**

Table 7 summarizes C&P enforcement activities by DFO Region, while Table 8 summarizes convictions reported under the Fisheries Protection and Pollution Prevention Provisions of the Act.

Table 7
Summary of Fisheries Compliance and Enforcement Activities by Region
Fiscal Year 2018-19

Region	Warnings Issued	*Fisheries Act* Directions	Charges Laid	Alternatives to Prosecution[11]
Newfoundland and Labrador	0	1	0	0
Maritimes	0	0	0	0
Gulf	0	10	0	0
Quebec	2	0	0	0
Central and Arctic	4	0	0	0
Pacific	5	2	0	0
TOTAL	**11**	**13**	**0**	**0**

[11] Alternatives to prosecution include out-of-court settlements aimed at restoring serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or that support such a fishery. Please see the Species At Risk Annual Report for more information about the Department's work on aquatic species at risk. Note that this report contains information by calendar year.

Table 8
Convictions Reported under the Fisheries Protection and Pollution Prevention Provisions
Fiscal Year 2018-19

Region	Section 35(1)
Newfoundland and Labrador	0
Maritimes	0
Gulf	0
Quebec	0
Central and Arctic	1
Pacific	0
TOTAL	**1**

2.2.3 Additional Habitat Effort

In addition to the fishery officer effort that is captured under the *Fisheries Act* Habitat Activity categories, officers also spend time protecting the habitat of aquatic species identified under the *Species At Risk Act* (SARA). For many of these species, especially freshwater species, habitat protection is a key priority to support their recovery. Critical habitat may be identified for species listed under the Act, and is described as habitat that is necessary for the survival or recovery of a listed wildlife species. In 2018-19, fishery officers spent a total of 3,198 hours on habitat-related effort for SARA freshwater species. In addition, one Inspector's Direction and one warning was issued, and one conviction reached in relation to a SARA freshwater species.

The threat of aquatic invasive species is another important area that can impact fish habitat, and as such requires fishery officer effort. The *Aquatic Invasive Species Regulations* help protect waterbodies across Canada by preventing the spread and introduction of aquatic invasive species in Canadian waters, and managing them once introduced.

2.2.4 Habitat Enforcement Highlights

First conviction related to Critical Habitat
The first conviction for destroying the critical habitat of an aquatic species listed under the *Species At Risk Act* was confirmed on November 22, 2018. While this is not a conviction under the *Fisheries Act*, it is an important milestone in both habitat protection and the protection of species at risk in Canada.

In April 2018, two individuals dredged the shoreline adjacent to their properties, unknowingly destroying critical habitat for the Spotted Gar. This species of fish was listed as Threatened under *the Species at Risk Act* in 2003 and its critical habitat is now legally protected from

destruction. The Spotted Gar primarily lives in quiet, clear pools, and backwaters of creeks, rivers, and lakes. It is mainly found in Lake Erie within Long Point Bay, Point Pelee National Park, and Rondeau Bay.

Following an investigation by fishery officers, the two property owners pleaded guilty in the Ontario Court of Justice to destroying critical habitat of a threatened species of fish in Rondeau Bay, a violation of the *Species at Risk Act*. On November 22, 2018, the court ordered both of the two property owners to each pay a fine of $3,500. Of the total $7,000 fine, $6,000 will be directed to the Environmental Damages Fund where it can be allocated specifically for recovery activities to benefit the Spotted Gar.

Prior to undertaking any work on the water, proponents should review Fisheries and Oceans Canada's online guidelines on projects near water and aquatic species at risk maps.

Racehorse Creek Conviction

In August 2014, approximately 100 riders crossed Racehorse Creek during an organized motocross event in Crowsnest Pass, Alberta. This creek is home to the Westslope Cutthroat trout, an aquatic species listed as Threatened under the *Species at Risk Act*.

Following a multi-year investigation led by Fisheries and Oceans Canada, and supported by Alberta Fish and Wildlife, the defendants were each found guilty on December 17, 2018 of violating section 32 (1) of the *Species at Risk Act*, which prohibits the killing or harming of a threatened species, and section 35 (1) of the *Fisheries Act*, which prohibits an activity that results in serious harm to fish.

On June 24, 2019, the court ordered the defendants to pay a total of $70,000. Of the total fines, $64,000 will be directed to the Environmental Damages Fund where it can be allocated towards recovery activities to benefit Aquatic Species at Risk in Alberta.

Additionally, both parties are ordered to publish an article in a relevant publication or website explaining the environmental consequences of the incident.

Riders of off-highway vehicles, including motocross bikes, should only cross watercourses at designated crossings, such as bridges, and avoid putting their wheels in the water.

The Environmental Damages Fund is administered by Environment and Climate Change Canada and was created in 1995 to provide a mechanism for directing funds received as a result of monetary penalties to priority projects that will benefit our environment.

2.3 Sustaining Ecosystems and Oceans

Ocean ecosystems feature interdependent plant and animal life that may be impacted by one or more human activity taking place in the same area. This includes fishing, aquaculture, transportation, and oil and gas exploration. Ecosystem science offers scientific evidence and tools to better manage and understand how these activities interact with one another and affect aquatic ecosystems.

2.3.1 Ecosystems and Oceans Science Sector

Aquatic ecosystems include plants, animals and microbes that support one another and are interdependent in order to thrive. Ecosystem science supports the management of human activities that are undertaken in the same areas – such as fishing, aquaculture, transportation, and oil and gas exploration – and provides scientific evidence and tools to better manage and understand how these activities interact with one another and affect aquatic ecosystems.

Examples of the research products and scientific advice provided in 2018-19 included:

- the effectiveness of various restoration techniques for substrate spawning fish;
- assessment of instream flow needs for fish in the Saskatchewan River below the E.B. Campbell Hydroelectric Station; and
- evaluation of monitoring approaches for placer mining in the Yukon.

Research results are transferred to the Fisheries Protection Program and Aquaculture Management staff in various ways, including in the form of peer-reviewed scientific advice, scientific workshops, briefings, factsheets and personal consultations. Information provided can range from informal, one-on-one discussions to regional peer-reviewed advice sessions and large-scale National Advisory Process workshops that follow a formal process to produce peer-reviewed, published advisory documents. DFO's Canadian Science Advisory Secretariat (CSAS) within DFO's Ecosystems and Oceans Science Sector is the vehicle for the provision of formal scientific advice, and maintains a website where published reports are available to Canadians. Many DFO research projects also result in peer-reviewed articles published in the primary literature.

2.4 Aquatic Invasive Species and Aquaculture

The administration of the pollution prevention provisions is primarily under the scope of ECCC, with the exception of aquatic invasive species and aquaculture, and aquatic pests. These remain the responsibility of DFO because they relate to pests to fisheries.

2.4.1 Aquatic Invasive Species

The Department works with federal, provincial and territorial partners to administer and enforce the *Aquatic Invasive Species Regulations* that came into force on May 29, 2015. The National Aquatic Invasive Species Committee serves as a collaboration forum for these federal, provincial and territorial partners, under the Canadian Council of Fisheries and Aquaculture Ministers.

The *Aquatic Invasive Species Regulations* establish the species to be prohibited and offer a suite of regulatory tools, such as powers to prevent introductions and the establishment and spread of aquatic invasive species and powers to control existing species. Administration of these regulations continues to be supported by ongoing scientific activities, such as research on pathways of invasion, methodologies to detect new invasions, risk assessments and control measures, as well as by policies and guidelines.

2.4.2 Aquaculture

The *Fisheries Act* sets out authorities in sections 35 and 36 regarding fisheries protection and pollution prevention. DFO's environmental management objective for aquaculture is to ensure that fish and fish habitat are protected using mitigation, monitoring and compliance approaches that are efficient, effective and appropriate with respect to the potential risk to the environment. These approaches are consistent with fisheries management approaches.

The *Aquaculture Activities Regulations* (AAR), pursuant to sections 35 and 36 of the *Fisheries Act*, came into force on June 29, 2015[12] and clarify the conditions under which aquaculture operators may install, operate, maintain or remove an aquaculture facility, deposit organic matter or undertake measures to treat their fish for disease and parasites. The AAR prescribe three classes of deleterious substances that may be deposited in waters frequented by fish: biochemical oxygen demanding matter; pesticides; and, drugs. The regulations allow aquaculture operators to do so only within specific restrictions to avoid, minimize, and mitigate any potential detriments to fish and fish habitat. The regulations require annual reporting to DFO on the above measures and any deposits of deleterious substances.

[12] http://laws-lois.justice.gc.ca/eng/regulations/SOR-2015-177/

AAR requirements of the various sectors are shown in Table 9.

Table 9
Aquaculture Activities Regulations Requirements by Sector

Marine Finfish	Freshwater Cage and Land-Based	Shell Fish
Characterization of local fish and fish habitat (new sites)	N/A	N/A
Mitigation measures to reduce impact to fish and fish habitat	Mitigation measures to reduce impact to fish and fish habitat	Mitigation measures to reduce impact to fish and fish habitat
BOD[13] monitoring data in surrounding aquatic environment	N/A	N/A
Consideration of alternatives to use of drugs or pesticides	Consideration of alternatives to use of drugs or pesticides	N/A
Amounts of pesticides and drugs deposited in waters used to treat pests and diseases	Amounts of pesticides and drugs deposited in waters used to treat pests and diseases	N/A
Incident of fish morbidity or mortality caused by pesticide use	Incident of fish morbidity or mortality caused by pesticide use	N/A

The administration of the AAR is supported by a robust set of policies, standards, and guidelines. DFO, ECCC, and Health Canada (HC) are also undertaking a science review to support implementation of these regulations and potential options for strengthening pesticide and drug environmental monitoring related to pest and pathogen treatments at aquaculture sites. Further, in partnership with the Public Health Agency of Canada (PHAC), DFO assesses and monitors the impact from antimicrobial resistance (AMR) in the environment near finfish farms. **Canada is the only major aquaculture producing country in the world to publically report on the farm-level usage of antibiotics**.[14] DFO also continues to work with provincial and territorial partners to maintain alignment with each other's aquaculture regulatory regimes via the Canadian Council of Fisheries and Aquaculture Ministers.

Consistent with the Government of Canada's commitment to openness and transparency, DFO publishes detailed drug and pesticide data collected under the AAR, including contextual information.[15]

2.5 Habitat Restoration

The goal of habitat restoration is to rebuild a healthy, functioning ecosystem that works as it did before it was degraded, damaged or destroyed.

[13] Biochemical, Oxygen Demanding Matter
[14] https://www.canada.ca/en/public-health/services/publications/drugs-health-products/canadian-antimicrobial-resistance-surveillance-system-2018-report-executive-summary.html
[15] www.dfo-mpo.gc.ca/aquaculture/management-gestion/apr-rpa-reporting-eng.htm

2.5.1 Recreational Fisheries Conservation Partnerships Program

Fisheries and Oceans Canada launched the Recreational Fisheries Conservation Partnerships Program (RFCPP) in 2013 to bring like-minded partners and their resources together with the common long-term goal of enhancing the sustainability and ongoing productivity of recreational fisheries. This six-year contribution program sought partners to restore, rebuild and rehabilitate Canada's recreational fisheries habitat by providing support to recreational fishing and angling groups, as well as conservation organizations, and Indigenous groups to undertake projects that supported these objectives. The RFCPP was a nationally competitive process with calls for proposals issued on an annual basis, which ended in Fiscal Year 2018-19.

While the regulatory regime administered by the FPP helps mitigate current and future activities that are detrimental to the health of fish and fish habitat, regulations are not able to address previous damage or impacts on the ecosystem related to other factors (e.g., climate change, onshore development and other anthropogenic factors). Over the years, fisheries have faced multiple and interacting threats, including pollution, invasive species, and habitat loss and degradation. Of these, the issue of habitat loss is the most commonly identified threat to freshwater fish, the target of many food, social and ceremonial fisheries, and much of Canada's recreational fishing activities. Common forms of fish habitat loss include habitat degradation and erosion, barriers to fish migration, and water flow alterations.

There is, however, potential to address these impacts through restorative action and partnerships. With government, recreational fishing/angling groups, Indigenous groups and others in the fisheries conservation field working together toward common goals, tangible progress can be made. Groups at the local and community level provide important knowledge and capacity that can be used to help improve recreational fisheries across Canada.

To meet that potential, the Recreational Fisheries Conservation Partnerships Program (RFCPP) was established in June 2013 as a non-regulatory FPP initiative. It supports multi-partner projects at the local level aimed at restoring compromised and/or threatened recreational fisheries habitat through contribution funding.

In 2018-19, RFCPP provided over $5.7 million for 104 projects taking place across Canada. Among the results achieved:

- 318 partners directly supported the projects;
- Over $7.6 million was leveraged by the program;
- More than 2,000 volunteers donated their time or support toward the projects; and,
- Over two million square meters of fish habitat was restored.

These results illustrate continued success and interest in the program, as well as its continued capacity to increase the amount of fish habitat being restored.

2.5.2 Restoration Success Stories

British Columbia

The Nicola River is the largest tributary to the Thompson River downstream of Kamloops Lake. It is a major spawning tributary for Chinook, Coho, and Steelhead trout; however, Pink, Kokanee, and Rainbow trout also spawn in the area. As the Nicola River flows predominantly through agricultural and rangeland, it experiences significant land use pressures, which has led to habitat degradation in many areas.

A main concern is an increase in sediment deposition, which can cause reductions in critical spawning habitat, decreased water quality and decreased visibility for feeding. With funding from the Recreational Fisheries Conservation Partnerships Program, the British Columbia Conservation Foundation set out to reduce sediment deposition by stabilizing eroding banks on the Nicola River, adjacent to Merritt, British Columbia (BC). Spawning and rearing habitat was also improved by adding in-stream features made of rock and wood debris, which created cover and opportunities to feed for fish.

Since project completion, habitat quality has remarkably improved and sediment deposition has been substantially reduced. Partners that helped to achieve these results include the Steelhead Society of British Columbia, the River Ranch of Merritt, BC and the Kingfishers Angling Club.

Site 1 before restoration

Site 1 post-construction: Rock, woody debris and riparian planting have been used to stabilize the stream bank.

Alberta

Bow Valley, located near Calgary, Alberta, contains a series of cold, mountain-fed rivers that support many sought-after recreational fish such as Rainbow and Brown Trout. However, the absence of riparian vegetation along these banks has led to increased water temperatures and a reduction in water quality. The Bow Valley Habitat Development (BVHD) has been working to increase fish productivity of the Bow Valley for almost 30 years.

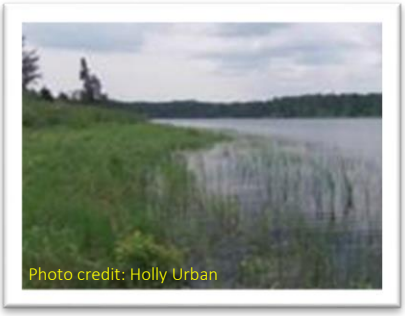
With funding from the Recreational Fisheries Conservation Partnerships Program, the BVHD planted 14,600 native plants along 13.8 kilometres of stream bank in 2015. This brings the total to over 24,000 native species planted on 25 kilometers of stream bank. Water temperature and water quality will both improve over time as the native plants re-establish themselves along the banks, enhancing the habitat for trout and other recreational fish species. The BVHD continues to bring together many like-minded partners including volunteers from local businesses, schools and recreational groups to continue the restoration of recreational fish habitat through various projects.

Before: Pre-planting

After: Riparian planting (1-year old willows)

Manitoba

Beaver Lake, located within Duck Mountain Provincial Park, has been managed for its recreational fishing potential by Swan Valley Sport Fishery Enhancement Inc. (SVSFE) since the late 1980s. One of the limiting factors in the lake's recreational fisheries potential was inadequate amounts of spawning habitat for recently transferred juvenile and adult walleye. SVSFE developed and implemented the installation of walleye's preferred habitat by creating spawning shoals of rocky substrate in Beaver Lake. In the winter of 2014, a team of volunteers installed over 400 cubic yards of rocky material creating 1,050 square metres of spawning habitat. SVSFE continues to monitor recruitment with small but positive increments of success. As the walleye population matures, fish utilizing the spawning shoals should increase, and in turn, should provide a sustainable walleye fishery for anglers to enjoy. SVSFE partnered with Manitoba Conservation Water Stewardship and



Before: Limited spawning habitat

After: Spawning shoal and walleye

Fisheries and Oceans Canada through the Recreational Fisheries Conservation Partnerships Program to complete this project.

Ontario

The Jock River is a popular recreational destination near Ottawa. The Jock River Embayment Project, managed by the Rideau Valley Conservation Authority (RVCA) aimed to increase the amount of spawning, nursery, rearing and feeding habitat for the various recreational fish species that can be found in the Jock River. A small grassland area was reclaimed as an embayment along the Jock River. In addition to creating over 1,000 square metres of fish habitat, the project also resulted in the creation of wetland habitat that will provide food and shelter for fish and other aquatic life.

Construction was completed in October 2014 and sampling in the summer of 2015 revealed that recreational fish species such as Walleye, Smallmouth bass and Northern pike are already making use of this new fish habitat. The RVCA accomplished this task with the help of Muskies Canada, the National Defense Fish and Game Club, Ottawa Fly Fisher Society and funding from the Recreational Fisheries Conservation Partnerships Program.

Before: Prior to creation of fish habitat

After: Embayment

Quebec

In the summer of 2013, the Réserve Faunique Rouge-Matawin (Société des établissements de plein air du Québec) started work to develop habitat for Brook trout in eight of its watercourses. The project, supported by the Recreational Fisheries Conservation Partnerships Program, was completed over two years.

Before: Lac des Jésuites before the watercourse

After: Stream cleanup, construction of spawning grounds and a wood weir

Fish passage was also restored in the streams between certain bodies of water, where several sites with natural potential were previously inaccessible.

Before: Lac Higginson outlet before habitat development

After: Outlet after fish channel construction

New Brunswick

A section of MacDonald Brook, in the Canaan River watershed, was at one time dammed to create a head pond and an access road for a sawmill operation. With no continual upkeep after the mill closed, the dam eventually failed; debris and the culverts that controlled the flow through the dam ended up strewn in the channel interfering with fish

Before: unstable bank

After: bank stabilized with erosion control blankets

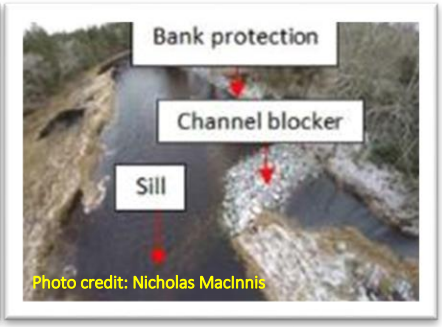
passage. The final resting location of the debris and culverts also directed the flow of the brook towards the west bank, which then eroded and became highly unstable, leading to increased sediment loads in the brook. As the brook is an important refuge and rearing habitat for Brook trout and Atlantic salmon, Recreational Fisheries Conservation Partnerships Program funding was used by the Canaan River Fish and Game Association to help reconstruct the banks, creating a more stable slope and a floodplain along the east bank, and to remove the debris and culverts from the channel. The project is expected to significantly improve fish migration and spawning.

Nova Scotia

The St. Mary's River Association implemented a restoration project that focused on the area impacted by both past and present land use (farming and forestry) which has caused the river to become wide and shallow in many places, reducing migration and spawning for Atlantic salmon and sea-run trout. These deteriorated conditions create excessive ice production, contributing to further widening of the channel downstream. In the summertime, water temperatures rise to levels not suitable for fish survival. Restoration work included the installation of rock sills, deflectors, groynes, channel blockers and bank rocking. As a result of funding from the Recreational Fisheries Conservation Partnerships Program, positive results are already being seen since the commencement of work in 2014, with the channel beginning to narrow and deepen, cool water pools being formed and increased spawning at restoration sites.

Before installation of a rock sill

After installation of a rock sill



After restoration work

Newfoundland and Labrador

In the early-1900s, dams were created on sections of the Exploits River watershed to facilitate log driving by the pulp and paper industry. These water control practices stopped in the 1950s, but many of the structures remain. These dams and structures deteriorated over time, creating obstructions to fish migration and causing debris to accumulate which impacted fish habitat. In 2013, with funding from the Recreational Fisheries Conservation Partnerships Program, the Environmental Resources Management Association, based in Grand Falls-Windsor, removed obstructions and debris at 12 sites. Now, salmonids are

Before: obstructions near Grand Falls-Windsor

able to freely migrate upstream and downstream and natural riverine habitat, for spawning and rearing, has been restored.

After: Restored flow and salmonid habitat

2.5.3 Coastal Restoration Fund

DFO's commitment to working with Canadians on habitat restoration has continued under the Coastal Restoration Fund (CRF) which was announced in May 2017 as a part of the $1.5 billion Oceans Protection Plan – the largest investment ever made to protect Canada's coasts and waterways. In collaboration with Indigenous peoples, local stakeholders and coastal communities, the Government of Canada is creating a world-leading marine safety system that provides economic opportunities for Canadians today, while protecting our coasts and waterways for generations to come.

The CRF, with its $75 million in contributions, facilitates collaborations that contribute to the development and implementation of coastal restoration plans, identify restoration priorities, implement projects, and address threats to marine species located on Canada's coasts. The program also contributes to the mitigation of stressors affecting aquatic habitats and marine life, engages Indigenous groups, resource users, and local groups and communities in undertaking planning, restoration, capacity building, monitoring, and reporting activities.

Since the launch of the Coastal Restoration Fund, a total of 39 projects worth approximately $55 million have been funded on all Canadian Coasts, all of which were announced by the Minister and can be found on the CRF website.[16] Currently, the program's 39 projects have developed or are in the midst of developing coastal restoration plans on all Canada's coasts. It has also facilitated community engagement across the country involving all orders of government, including Indigenous governments and organizations, industry, conservation groups and academia in the development of these plans. Currently, many of these initiatives have also begun physical restoration based on these plans.

[16] https://www.dfo-mpo.gc.ca/oceans/crf-frc/index-eng.html

3.0 Environment and Climate Change Canada

Environment and Climate Change Canada (ECCC) administers and enforces the pollution prevention provisions of the *Fisheries Act.*

The pollution prevention provisions are generally understood to describe section 36, subsections (3) to (6), of the *Fisheries Act.* In 2014, these responsibilities became the legal responsibility of the Minister of the Environment and Climate Change for all purposes and subject matters with the exception of aquaculture and aquatic invasive species or aquatic species that constitute a pest to fisheries. These exceptions remain the responsibility of the Minister of Fisheries, Oceans and the Canadian Coast Guard.

A key provision of the pollution prevention requirements is subsection 36(3), which prohibits the deposit of deleterious substances in water frequented by fish, or in any place under any conditions where the deleterious substance or any other deleterious substance that results from the deposit of the deleterious substance may enter any such water, unless the deposit is authorized by regulations under the Act or other federal legislation.

Deleterious substances include any substance that, if added to water, would degrade, alter or form part of a process of degradation or alteration of the quality of water so that it is rendered deleterious (harmful) to fish or fish habitat or for human consumption of any fish from that water.

ECCC administers and enforces the pollution prevention provisions through compliance promotion, regulations, environmental effects monitoring, water quality monitoring, emergencies management, and administrative agreements. The Department's 2018-19 activities may be summarized as follows:

Administration:

- Administered, promoted compliance, and enforced existing regulations made under subsection 36(5) for the pulp and paper sector and for metal and diamond mines, including the environmental effects monitoring elements of those regulations.

- Administered, promoted compliance, and enforced regulations made under subsection 36(5) for the wastewater sector (including federal, provincial, municipal and First Nations wastewater systems).
- Administered and promoted compliance for the *Experimental Lakes Area Research Activities Regulations* made under subsection 36(5.2).
- Contributed to environmental emergency management activities by managing ECCC's pollution incident notification system and responding to significant pollution incidents related to the deposit of deleterious substances not authorized under the Act, as per subsections 38(5) and 38(7).
- Conducted sanitary and bacteriological water quality surveys in shellfish harvest areas for the Canadian Shellfish Sanitation Program.
- Implemented administrative and notification agreements with provinces that support the effective administration of the pollution prevention provisions and associated regulations.
- Administered, promoted compliance, and enforced the subsection 36(3) general prohibition against the deposit of deleterious substances in water frequented by fish as well as subsections 38(5), 38(6) and 38(7), which require notification and preventive and remediation measures and reporting in the event of an unauthorized deposit.

Regulatory Amendments:

- Developed a Detailed Proposal for Consultation for the Modernization of the *Pulp and Paper Effluent Regulations*.
- Amended the *Metal Mining Effluent Regulations* to expand their scope to include diamond mines and to reduce threats to fish and their habitat by improving the management of harmful substances in metal and diamond mining effluent[17].
- In 2018-19, nine waterbodies were added to Schedule 2 of the *Metal and Diamond Mining Effluent Regulations*, which lists Tailings Impoundment Areas.

Regulatory Development:

- Worked on the development of regulations for the coal mining and oil sands sectors as well as for the Alton Natural Gas storage facility.

[17] The final amendments to the Metal Mining Effluent Regulations were published in May 2018 and are now the Metal and Diamond Mining Effluent Regulations (MDMER)

3.1 Compliance Promotion

The goal of compliance promotion is to increase awareness and contribute to the understanding of the pollution prevention provisions in the *Fisheries Act* and related regulations. ECCC personnel across Canada respond to enquiries and provides information to regulated communities about the benefits of compliance and the consequences of non-compliance.

The approach to compliance promotion is collaborative and coordinated across the Department's programs and regions and with enforcement activities. It is achieved using various tools and approaches such as website postings, letters, emails, brochures, site visits, responses to enquiries, and information sessions. These activities are aimed at increasing the voluntary compliance, thereby mitigating consequential enforcement actions.

In 2018-19, ECCC undertook compliance promotion activities across the country for a number of sectors. Activities included group meetings, phone calls, emails, and letters. They primarily focused on the EA process (i.e., by making organizations aware of their regulatory requirements when they submit their projects for an EA) and in response to specific enquiries.

In addition:

- ECCC participated in the reviews of 369 project proposals undergoing EA. These included transitional comprehensive studies, standard EA's, EA's on federals lands, and those conducted by a review panel, the NEB, and northern boards, provincially and provincially substituted EA's, and Offshore Petroleum Board reviews.
- Reviews were used to identify issues related to the pollution prevention provisions and related regulations. Reviews also encouraged regulatees, through proactive planning of their projects, to ensure that they would meet all regulatory requirements. The reviews focused largely on metal mining, oil and gas facilities and pipelines, and hydroelectric and nuclear energy projects.
- ECCC gave scientific and technical advice related to federal contaminated sites and potential *Fisheries Act* pollution prevention provisions implications through various avenues, including the Federal Contaminated Sites Action Plan.

3.2 Administering Regulations

ECCC administers a number of regulations made under the pollution prevention provisions, including the *Pulp and Paper Effluent Regulations* (PPER), the *Metal and Diamond Mining Effluent Regulations* (MDMER), the *Wastewater Systems Effluent Regulations* (WSER) and the *Deposit Out of the Normal Course of Events Notification Regulations* (DONCENR).

3.2.1 Pulp and Paper

ECCC's analysis of the self-reported effluent data generated during 2017[18] by Canadian pulp and paper mills concluded that these facilities continued to have high rates of compliance with the effluent quality limits prescribed in the PPER. In 2017, 77 pulp and paper mills across the country were subject to these regulations and were depositing effluent directly into water frequented by fish. Compliance rates calculated from self-reported data were over 99 per cent for total suspended solids and biochemical oxygen demand, and 97.5 per cent for the requirement that effluent not be acutely lethal to rainbow trout. The compliance rate for environmental effects monitoring (EEM) requirements during fiscal year 2018-19 was 100 per cent.

ECCC continued to provide guidance and advice to the pulp and paper sector on the EEM requirements under regulations. To promote compliance with regulations under the *Fisheries Act*, ECCC also continued to provide information to the pulp and paper sector respecting the requirements of the PPER. Compliance promotion activities included sending emails to Regulatees and continued support of electronic reporting of data by pulp and paper mills through the Regulatory Information Submission System for pulp and paper mills. The information system is a web-based reporting tool used by industry to report mandatory data as required under PPER.

In September 2017, ECCC launched a process to modernize the PPER with the publication of a consultation document to inform interested parties of the key areas where ECCC sees the need for modernization and to seek feedback. ECCC received a number of comments from various stakeholders, which were considered throughout the development of a detailed proposal for the modernization of the PPER.

3.2.2 Metal and Diamond Mines

ECCC's analysis of the self-reported effluent data generated during 2017[19] by Canadian metal mines showed that these companies continued to report having high rates of compliance with the effluent quality limits prescribed in the Metal Mining Effluent Regulations (MMER). In 2017, these regulations applied to 137 mining facilities across the country. The compliance rate of the self-reported data with the monthly mean concentration limits was 99.9 per cent for metals and pH, 98 per cent for total suspended solids and 100 per cent for cyanide.

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[18] Reporting data for the *Pulp and Paper Effluent Regulations* are submitted through one of three electronic- and/or paper-based systems across Canada. This depends on which province a given mill is located. The most recent year for which data have been pooled, tabulated and analyzed at an aggregate level is 2017.

[19] The most recent year for which data have been pooled, tabulated and analyzed at an aggregate level is 2017. Data submitted in 2017 was reported under the *Metal Mining Effluent Regulations*, prior to the amendments.

The MMER also required that effluent not be acutely lethal to Rainbow trout. In 2017, the compliance rate of the self-reported data for this requirement was 98.6 per cent. The compliance rate for EEM requirements during fiscal year 2018-19 was approximately 88 per cent.

Amendments to the MMER were published in May 2018 and expanded application of the regulations to include diamond mines. ECCC provided information to the metal and diamond mining sectors on the *Metal and Diamond Mining Effluent Regulations* (MDMER) and promoted compliance by publishing a Regulatory Impact Analysis Statement[20], updating its webpage[21], and speaking with mining companies across Canada in person or by telephone/conference call to explain the requirements of these amended regulations.

Information was also provided to the mining industry related to preparing the assessment of alternatives when developing proposals to use water bodies for the purposes of disposing of mine waste. The assessment of alternatives is a prerequisite for moving forward with proposed amendments to Schedule 2 of the MDMER, which lists Tailings Impoundment Areas. In 2018-19, nine waterbodies were added to Schedule 2 of the MDMER.

DFO continued to assist ECCC by providing expertise, as needed, on fish and fish habitat and evaluating and administering compensation plans submitted under section 27.1 of the MDMER.

3.2.3 Wastewater

The *Wastewater Systems Effluent Regulations* (WSER) include minimum mandatory effluent quality standards achievable through secondary-level wastewater treatment. They apply to wastewater systems with 100m^3 of daily influent or more. Municipalities own/operate most of these systems; however, some are located in Indigenous communities or owned by federal departments, provincial governments and other entities.

In 2018-19, ECCC continued to strengthen working relationships with Indigenous and rural communities to increase awareness and understanding of WSER requirements and better understand their needs in working towards compliance. Discussions also continued with provinces and territories on the development of agreements to reduce regulatory duplication for the wastewater sector. For instance, ECCC informed Quebec

[20] http://gazette.gc.ca/rp-pr/p2/2018/2018-05-30/html/sor-dors99-eng.html
[21] https://www.canada.ca/en/environment-climate-change/services/managing-pollution/sources-industry/mining/amendments-metal-diamond-mining-effluent-regulations.html

regulatees that an equivalency agreement had been achieved with Quebec. More information on the status of WSER agreements is included in section 3.7.

An estimated 1,700 wastewater systems are subject to the WSER throughout Canada, with 239 located in Indigenous communities and 26 owned by federal departments. In addition, there are approximately 650 wastewater treatment systems in Quebec and Yukon that would otherwise be subject to the WSER, covered by equivalency agreements.

On-going monitoring reports include data on effluent quality results and the volumes deposited by each subject wastewater system. In addition, medium and large systems are required to conduct acute lethality tests. In 2018, 80 per cent of systems subject to the WSER or under an equivalency agreement met their effluent quality standards. For the acute lethality test results submitted to ECCC, 88 per cent of the test results were not acutely lethal to fish.

Transitional authorizations were issued for 65 wastewater systems to provide time to meet the effluent quality standards. Holders of transitional authorizations have until 2020, 2030 or 2040 to meet the standards. The deadline for upgrading a given system depends on the level of risk associated with the wastewater effluent and the sensitivity of the receiving environment.

Five of the 65 systems for which transitional authorizations were issued have completed upgrades to meet the WSER effluent quality standards and no longer hold a transitional authorization.

In 2018-19, presentations at workshops and site visits to First Nations in Alberta and Ontario took place to increase awareness of their obligations to comply with the WSER. These activities focused on improving compliance rates for system identification. In Ontario alone, compliance rates for the identification of wastewater systems has gone from 30 per cent to 98 per cent after compliance promotion efforts.

3.2.4 Notification of Unauthorized Releases of Deleterious Substances

In the event of an unauthorized deposit of a deleterious substance, such as an oil or chemical spill, under subsection 38(5) of the *Fisheries Act,* a person who owns or has charge, management or control of the substance or a work, undertaking or activity that resulted in the deposit, must without delay notify an inspector, a fishery officer, or an authority prescribed by regulations. *The Deposit Out of the Normal Course of Events Notification Regulations* sets out authorities who can be notified of unauthorized deposits. This notification enables federal and provincial/territorial authorities to coordinate adequate oversight of the response.

In order to reduce notification duplication, the regulations provide regulatees and the public with the name and telephone number of the 24-hour authorities operating in the province or territory to which notifications can be made. This means that the polluter need only call one, well-known federal, provincial or territorial number.

The 24-hour operating centre that receives a call transfers the information to ECCC to enable timely and effective oversight, possible scientific support, compliance verification, and appropriate enforcement response.

3.3 Regulatory Development

ECCC undertook work in 2018-19 towards development of new regulations as follows:

- worked on the development of *Coal Mining Effluent Regulations*. The proposed regulations would include national baseline effluent quality standards for coalmines and environmental monitoring provisions. Pre-consultations on the proposed approach were held in spring 2017, fall 2017 and fall 2018. The regulations are targeted for publication in *Canada Gazette*, Part I, in the fall of 2020 for a 60-day public comment period;
- worked on the development of a regulatory approach that would authorize the release of treated effluent from oil sands mines under strict conditions that are protective of the environment. Initial information sessions were held with Indigenous groups and interested parties in 2018. The proposed regulations are targeted for publication in *Canada Gazette,* Part I in 2022; and,
- worked on the development of *Alton Natural Gas Storage Cavern Development Activities Regulations*. The objective of the regulation is to manage the risks to fish, fish habitat and human health from fish consumption by establishing conditions on brine releases from the Alton Gas facility to the Shubenacadie River.

3.4 Water Quality Monitoring

Under the Canadian Shellfish Sanitation Program (CSSP), ECCC is responsible for recommending harvesting area classification based on monitoring marine water quality for sanitary conditions and identified sources of local waste discharge.

3.4.1 Canadian Shellfish Sanitation Program

Under the CSSP, ECCC surveys bivalve molluscan shellfish growing areas in order to classify areas for harvesting species such as clams, oysters, mussels and scallops. ECCC then makes growing-area classification recommendations to DFO and the Canadian Food Inspection Agency, pursuant to its responsibilities under CSSP Memorandum of Understanding, which are used by DFO to close and open shellfish harvesting areas under the *Management of Contaminated Fisheries Regulations*. In 2018-19, over 29,200 marine water quality samples were collected from nearly 6,800 marine sites to support shellfish

harvest area classification along the coastlines of the Atlantic, Pacific and St. Lawrence Estuary regions of Canada.

In addition to temporary closures from unpredicted spills, ECCC continues to redefine established classifications of harvesting areas in the immediate vicinity to wastewater treatment plants. ECCC has adopted a world-leading, three-dimensional hydrodynamic modeling technology to support its wastewater treatment plant assessment work. As of 2018-19, 14 comprehensive assessments of wastewater systems have been completed resulting in revised harvesting limits for some locations.

In 2018-19, there were 2,363 environmental incidents reported with potential impacts to shellfish areas, including discharges from wastewater treatment plants and their associated collection systems. ECCC and its CSSP partners continued work in 2018-19 to build the awareness of wastewater treatment plant operators about the importance of timely reporting pursuant to subsection 38(5) of the *Fisheries Act*, which contributes to protecting the public from the consumption of contaminated shellfish.

3.5 Enforcement

ECCC is responsible for enforcing the pollution prevention provisions of the *Fisheries Act* and its associated regulations. In carrying out their duties, enforcement officers are guided by the Compliance and Enforcement Policy for Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act*.[22]

3.5.1 Enforcement Activities and Measures

Enforcement activities undertaken during 2018-19 include inspections, investigations, and other enforcement measures.

An inspection is the process of gathering information to verify compliance with legislation. This may include site visits, examining substances, products or containers, taking samples and analyzing records. An on-site inspection involves visiting a site to verify compliance, while an off-site inspection is normally undertaken at the officer's place of work or in another location that is not the regulated site. Off-site inspections are usually limited to document verification.

An investigation involves gathering evidence and information relevant to a suspected violation from a variety of sources. Enforcement officers will conduct an investigation when they have reasonable grounds to believe that an offence has occurred under the Act and prosecution is contemplated.

[22] http://ec.gc.ca/alef-ewe/default.asp?lang=en&xml=D6B74D58-C75B-4BE5-B353-146F066A094C.

Enforcement measures that may be taken to address alleged violations of the pollution prevention provisions of the *Fisheries Act* are warnings, directions, Ministerial orders, injunctions, and prosecutions. Enforcement officers designated as fishery officers or inspectors may issue a direction when immediate action is necessary to prevent an unauthorized deposit of a deleterious substance into water frequented by fish or to counteract, remedy or mitigate any adverse effects that result from it or might reasonably be expected to result from it.

Table 10 presents inspections conducted during 2018-19, as well as investigations begun during the fiscal year as a result of inspections or information obtained, and any enforcement measures taken.

Table 10 – Enforcement Activities and Measures taken during Fiscal Year 2018-19[23]

	INSPECTIONS[24]				Enforcement Measures[26] from Inspections and Investigations			
					Written Warnings		Directions	
Instrument	TOTAL	ON-SITE	OFF-SITE	INVESTIGATIONS STARTED[25]	No. of letters	No. of infractions[27]	No. of directions	No. of infractions
Fisheries Act (Grand Total)	1738	777	961	28	186	465	20	42
General Prohibition[28]	786	453	333	24	86	189	20	42
Deposit Out of Normal Course of Events Notification Regulations	9	3	6	-	1	1	-	-

[23] Only those regulations under which an inspection and/or investigation occurred during the time period are listed in this table.

[24] The total number of inspections relates to the number of times a regulation was inspected for compliance under the applicable Act or Regulation, using the start date of the inspection for the reference period. Only inspections started between April 1, 2018 and March 31, 2019 are tabulated here.

[25] Investigations are tabulated by the number of investigation files that took place during 2018-19.

[26] Enforcement measures are tabulated by number of measures issued at the regulation level. For example, if one warning was issued for two different regulations the number of warnings would be two. This is different from previous years where it was tabulated by the number of files closed during the year that show at least one infraction for which the measure was taken.

[27] Infractions are found at the section, subsection or paragraph level of an Act or Regulation. For example, if a written warning is sent to one person, but the alleged violations relate to three sections of the *Fisheries Act*; the number of written warnings in this column would be three, even though just one letter was sent.

[28] Includes all inspections and violations under the pollution prevention provisions of the *Fisheries Act*.

Instrument	INSPECTIONS[24]			INVESTIGATIONS STARTED[25]	Enforcement Measures[26] from Inspections and Investigations			
					Written Warnings		Directions	
	TOTAL	ON-SITE	OFF-SITE		No. of letters	No. of infractions[27]	No. of directions	No. of infractions
Metal (and Diamond) Mining Effluent Regulations[29]	509	150	359	2	31	95	-	-
Petroleum Refinery Liquid Effluent Regulations	9	2	7	-	-	-	-	-
Pulp and Paper Effluent Regulations	216	33	183	2	17	29	-	-
Wastewater Systems Effluent Regulations	209	136	73	-	51	151	-	-

Table 11 illustrates the number of investigations conducted during the reporting period. As investigations often extend over more than one fiscal year, the table below reflects the fact that at the beginning of the year, there are a number of investigations carried over from previous years (A), there are a number of investigations begun throughout the reporting year (B), and from all these, a certain number are closed and concluded in the reporting year (C).

Table 11 – Investigations Breakdown for Fiscal Year 2018-19

	No. of Investigations
(A) Started before the fiscal year and ongoing after the fiscal year	117
(B) Started in the fiscal year	28
(C) Ended in the fiscal year	31

[29] The *Metal Mining Effluent Regulations* were amended in June 2018 and the title was changed to the *Metal and Diamond Mining Effluent Regulations*. For this year's annual report, the entries for enforcement activities and measures reflect a seamless transition but the change in the Regulations is acknowledged by the use of brackets so that the title is presented in the table as *Metal (and Diamond) Mining Effluent Regulations*.

Table 12 illustrates prosecutions. It outlines charges and convictions in 2018-19. When reviewing the data, it should be noted that prosecutions often continue through multiple fiscal years so the number of convicted counts in a fiscal year may not be the same as actual charges laid.

Table 12 – Prosecutions in Fiscal Year 2018-19

	Prosecutions[30]			
	Charges Laid		Concluded	
Instrument	Prosecuted Subjects[31]	Charges[32]	Convicted Subjects[33]	Counts[34]
Fisheries Act (Grand Total)	14	29	8	10
General Prohibition[35]	13	24	7	9
Meat and Poultry Products Plant Liquid Effluent Regulations	-	-	-	-
Metal (and Diamond)Mining Effluent Regulations[36]	1	5	1	1
Petroleum Refinery Liquid Effluent Regulations	-	-	-	-
Potato Processing Plant Liquid Effluent Regulations	-	-	-	-
Pulp and Paper Effluent Regulations	-	-	-	-
Wastewater Systems Effluent Regulations	-	-	-	-

[30] As prosecutions may involve charges relating to violations of both laws and regulations, column totals may not add up. For example, see the "prosecuted subjects" column. If a prosecution file contains one subject, and the subject was prosecuted under both the general prohibition AND a regulation, one subject is counted for the grand total. However, in the rows below it, a subject will be counted under both the general prohibition and the regulation.

[31] The number of prosecuted subjects is tabulated by the number of defendants to the court action.

[32] Charges are tabulated based on the actual number of charges laid within the reporting period, at the section/subsection/paragraph level of the regulation. For example, a regulatee violating ss. 36(1) and 36(3) of the *Fisheries Act* may be charged with one count in relation to ss. 36(1) and two counts in ss. 36(3). This is considered three charges.

[33] Convicted subjects are the number of persons (individuals or organizations) sentenced during the reporting period.

[34] Counts are the number of sections of legislation or regulations for which there was a conviction during the reporting period. For example, in a case where a regulatee is found guilty of one count of violating ss. 36(1) and two counts of violating ss. 36(3), this is considered one conviction against the subject and three counts.

[35] Includes all prosecutions under the pollution prevention provisions of the *Fisheries Act*.

[36] The *Metal Mining Effluent Regulations* were amended in June 2018 and the title was changed to the *Metal and Diamond Mining Effluent Regulations*. For this year's annual report, entries for enforcement activities and measures reflect a seamless transition but the change in the Regulations is acknowledged by the use of brackets so that the title is presented in the table as *Metal (and Diamond) Mining Effluent Regulations*.

3.5.2 Enforcement Highlights

British Columbia

On April 19, 2018, the Mackenzie Pulp Mill Corporation pleaded guilty, in the Provincial Court of British Columbia, to depositing a deleterious substance into water frequented by fish, in violation of the pollution prevention provisions of the *Fisheries Act*. The company was ordered to pay a penalty of $900,000, which was directed to the Environmental Damages Fund. These funds are being used for the conservation of fish or fish habitat in the Omineca region of British Columbia. The company was also ordered to complete an independent audit of its operations to prevent future incidents of this kind.

New Brunswick

On November 5, 2018, Irving Pulp & Paper Limited was sentenced in the New Brunswick Provincial Court in Saint John and ordered to pay a $3.5 million penalty in connection with three offences under the pollution prevention provisions of the *Fisheries Act*. The company pleaded guilty on October 9, 2018.

The charges stem from several incidents that occurred between June 2014 and August 2016, when improperly treated and deleterious effluent was released from one of three outfall structures, all of which deposit into the Saint John River. The discharges were reported to ECCC by the company, as is required under the *Pulp and Paper Effluent Regulations*.

The fine is **one of the largest penalties to be levied in Canada as a result of an environmental violation**. Of the total fine, $2.34 million was directed to the Environmental Damages Fund. The remaining $1.16 million was directed to the University of New Brunswick, with the funds to be used by the University's Canadian Rivers Institute to conduct scientific research and support projects related to the conservation, protection, and restoration of Atlantic salmon in New Brunswick.

In addition to the penalty, the company is now under a direction pursuant to the *Fisheries Act*. Under the direction, the company was required to provide a plan that clearly identified the interim measures to be taken and describe how the company will work toward the commissioning of a new effluent treatment system. Irving Pulp & Paper Limited provided the five-year plan to ECCC, committed to a major investment in constructing the new effluent treatment facility, and is providing progress reports twice per year.

Nunavut

On August 20, 2018, Lupin Mines Incorporated was ordered in the Nunavut Court of Justice to pay $100,000 after pleading guilty to a violation under the *Fisheries Act* related to the *Metal and Diamond Mining Effluent Regulations*. Of the total penalty, $80,000 was directed to the Environmental Damages Fund.

An investigation launched by ECCC enforcement officers revealed that Lupin Mines Incorporated did not carry out an environmental effects monitoring study within the prescribed period, contrary to the requirements of the *Metal and Diamond Mining Effluent Regulations*. Lupin Mines Incorporated has since completed the required study.

Quebec

On April 24, 2018, Rio Tinto Alcan Inc. pleaded guilty, in the Court of Quebec in Saguenay, to violating subsection 36(3) of the *Fisheries Act*. The company was fined $100,000. ECCC's investigation revealed that, between December 13 and 15, 2016, the Arvida plant (at the Rio Tinto Alcan Inc. Jonquière complex) released 1.7 m^3 of hydrochloric acid into the Saguenay River, contrary to subsection 36(3) of the *Fisheries Act*, thereby committing an offence under subsection 40(2) of the Act. The amount was directed to the Environmental Damages Fund.

3.6 Environmental Emergencies

ECCC contributes to the protection of Canadians during environmental emergencies by giving science-based expert advice and developing and administering regulations and agreements under both the *Fisheries Act* and the *Canadian Environmental Protection Act*, 1999.

3.6.1 Environmental Emergencies Program

The Environmental Emergencies Program (EEP) implements the departmental pollution incident notification system. In the event of a significant pollution incident, the program oversees that response actions are taken by the responsible party to counteract, mitigate or remedy any adverse effects of an unauthorized deposit of deleterious substances, as per subsection 38(6) of the *Fisheries Act*.

The EEP is also able to give science-based expert advice 24 hours a day, seven days a week, in collaboration with other federal, provincial and territorial governments, municipalities, and stakeholders to inform actions that reduce the consequence of environmental emergencies. This is done via the National Environmental Emergencies Centre (NEEC).

In 2018-19, NEEC recorded 4,852 notifications involving the unauthorized deposit, or the likelihood thereof, of a deleterious substance as per subsection 38(5) under the *Fisheries Act*.

NEEC's environmental emergencies officers are designated as inspectors under the *Fisheries Act*. This means the officers may:

- receive notifications of deposits of deleterious substances into the environment;
- access and inspect the site of the deposits or any related documents in order to observe or to carry out spill response activities;
- collect relevant information and samples for the purpose of establishing the fate

and effects of the pollutant, and determine environmental damage;
- evaluate that reasonable measures are taken to protect the environment and human health, and are able to take or direct reasonable measures as per subsection 38(7.1); and
- support enforcement activities.

3.7 Agreements

The *Fisheries Act* allows the Minister of Environment and Climate Change and the Minister of Fisheries, Oceans and the Canadian Coast Guard to enter into agreements with a province or territory in order to further the purposes of the Act. These agreements may facilitate co-operation, enhance communication, and streamline administration. An equivalency agreement may also be established to reduce regulatory duplication when a provision under provincial law has an equivalent effect to a provision of regulations made under the *Fisheries Act*.

Alberta

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 co-operative administration of ss. 36(3) and the related provisions of the *Fisheries Act*, regulations under the Act, and the Alberta Environmental Protection and Enhancement Act. The agreement also streamlines and coordinates the regulatory activities of ECCC and Alberta Environment and Sustainable Resource Development to protect fisheries and reduces duplication of regulatory requirements for regulatees.

New Brunswick

In June 2014, the *Administrative Agreement between the Government of New Brunswick and the Government of Canada Regarding the Administration of the Wastewater Systems Effluent Regulations* in New Brunswick came into effect. This agreement was renewed in February 2018. Under the 2018 agreement, provincial officials conducted 66 interactions with the regulated community related to compliance promotion, verification and shared information on these interactions with ECCC.

Quebec

The Province of Quebec and the Government of Canada have been collaborating since 1994. The parties currently co-operate through a memorandum of understanding for data collection, renewed in April 2018, whereby Quebec provides a single data-entry portal for regulatees for the following federal regulations:

- *Pulp and Paper Mill Effluent Chlorinated Dioxins and Furans Regulations* made pursuant to the *Canadian Environmental Protection Act, 1999*;
- *Pulp and Paper Mill Defoamer and Wood Chip Regulations* made pursuant to the *Canadian Environmental Protection Act, 1999*; and

- *Pulp and Paper Effluent Regulations* made pursuant to the *Fisheries Act*.

Under the memorandum of understanding, pulp and paper mills continue to report their data for these regulations using the electronic reporting system administered by Quebec. Both orders of government retain full responsibility for carrying out inspections and investigations and for taking appropriate enforcement measures in order to ensure compliance with their respective legislation.

In September 2018, the Governor in Council issued an Order declaring that the WSER do not apply to wastewater systems that are subject to the *Canada-Quebec Agreement on Acts and Regulations Applicable to the Municipal and Provincial Wastewater Systems in Quebec.* There are 648 municipal and provincial wastewater systems covered by the equivalency agreement. In 2018, 597 of 648 systems (92 per cent) met the effluent quality standards that are equivalent to the federal standards established under the WSER, thereby contributing to limit the amount and concentration of deleterious substances released to Canadian surface waters. As the regulator of these wastewater systems covered by the equivalency agreement, Quebec's Ministère de l'Environnement et de la Lutte contre les changements climatiques conducted 223 inspections in the 2018 calendar year and issued 106 notices of non-compliance and one administrative monetary penalty.

Saskatchewan

In July 2015, the *Administrative Agreement between the Government of Saskatchewan and the Government of Canada Regarding the Administration of the Wastewater Systems Effluent Regulations in Saskatchewan* came into effect. In the 2018 calendar year, under the agreement, provincial officials conducted interactions with the regulated community related to compliance promotion, verification and shared information on these interactions with ECCC.

In addition, the *Canada-Saskatchewan Administrative Agreement for the Control of Deposits of Deleterious Substances under the Fisheries Act* sets out the principles for co-operation and identifies a preliminary list of activities where detailed collaborative arrangements could be developed. Existing collaborative arrangements are described in the five annexes to this agreement.

Yukon

In November 2014, the Governor in Council issued an Order declaring that the *Wastewater Systems Effluent Regulations* do not apply to wastewater systems that are subject to the *Agreement on the Equivalency of Laws Applicable to Wastewater Systems Located in Yukon*. Three wastewater systems are covered under this equivalency agreement. In 2018, all three met the effluent quality standards that are equivalent to the federal standards established under the WSER, thereby contributing to limit the amount and concentration of deleterious substances released to Canadian surface waters. As the regulator of the three wastewater systems covered by the equivalency

agreement, Yukon Department of Environment conducted five inspections in the 2018 calendar year under provincial law. Since the WSER do not apply to the wastewater systems covered by the equivalency agreement, no enforcement measures are issued under them.

3.7.1 Environmental Occurrences Notification Agreements

In most cases, federal, provincial and territorial laws require notification of the same environmental emergency or environmental occurrence, such as an oil or chemical spill. To reduce duplication, ECCC entered into Environmental Occurrences Notification Agreements (Notification Agreements) with the governments of Alberta, British Columbia, Manitoba, the Northwest Territories, Ontario, Saskatchewan, and Yukon.

These Notification Agreements facilitate administration of the verbal reporting requirements under the *Fisheries Act* and the *Canadian Environmental Protection Act, 1999.*

The purpose of the Notification Agreements is to establish a streamlined notification system for persons required to verbally notify federal or provincial/territorial governments of an environmental emergency or environmental occurrence. Under these agreements, 24-hour authorities operating for the provinces/territories receive notifications of environmental emergencies or occurrences on behalf of ECCC. Once received, this information is then transferred to ECCC.

In 2018-19, ECCC continued to work with its provincial and territorial counterparts to implement the Notification Agreements. This work advanced the establishment of management committees and the development of standard operating procedures for the collection and processing of notifications of environmental occurrences. The current Notification Agreements with the governments of Alberta, British Columbia, Manitoba, the Northwest Territories, Ontario, Saskatchewan, and Yukon, are effective until March 2021.

List of Acronyms and Abbreviations

AAR	*Aquaculture Activities Regulations*
AESRD	Alberta Environment and Sustainable Resource Development
Agency	Impact Assessment Agency of Canada
AIS	Aquatic Invasive Species
AIRS	*Aquatic Invasive Species Regulations*
AP	Aquaculture Policy
BOD	Biochemical, Oxygen Demanding Matter
C&P	Conservation & Protection Program
CCFAM	Canadian Council of Fisheries and Aquaculture
CEPA	*Canadian Environmental Protection Act*
CEAA	*Canadian Environmental Assessment Act*
CESD	Commissioner foe Environment and Sustainable Development
CFIA	Canadian Food Inspection Agency
CNSC	Canadian Nuclear Safety Commission
CSAS	Canadian Science Advisory Secretariat
CSSP	Canadian Shellfish Sanitation Program
DFO	Fisheries and Oceans Canada
EA	Environmental Assessment
ECCC	Environment and Climate Change Canada
EEM	Environmental Effects Monitoring
EEP	Environmental Emergencies Program
EOSS	Ecosystems and Oceans Science Sector
FCSAP	Federal Contaminated Sites Action Plan
FPP	Fisheries Protection Program
HC	Health Canada
MMER	*Metal Mining Effluent Regulations*
MOU	Memorandum of Understanding
NEB	National Energy Board
NGO	Non-Government Organization
NSCA	*Nuclear Safety and Control Act*
PATH	Program Activity Tracking System for Habitat
PPER	*Pulp and Paper Effluent Regulations*
RFCPP	Recreational Fisheries Conservation Partnerships Program
SARA	*Species at Risk Act*
SMEs	Small and Medium-sized Enterprises
WSER	*Wastewater System Effluent Regulations*