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2019 - 20
ANNUAL REPORT TO PARLIAMENT

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

Canada

Fisheries and Oceans Canada and Environment and Climate Change Canada 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.

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1 Introduction

Each year, the ministers of Fisheries and Oceans Canada (DFO) and Environment and Climate Change Canada (ECCC) report to Parliament on their efforts to administer and enforce the fish and fish habitat protection[1] and pollution prevention provisions of the *Fisheries Act*. This has been a legislative requirement since 1990.

This report covers activities from April 1, 2019 through March 31, 2020. During this time, Canada modernized its *Fisheries Act* to restore lost protections and bring in new measures to better protect our fish and fish habitat. This includes a new requirement to make information on project decisions public through an online registry. Many new provisions of the *Fisheries Act* came into effect on August 28, 2019.

With modernized legislation, we saw an opportunity to update this annual report. Communications have changed dramatically since we started publishing these reports and we wanted to find new ways to share the results of our work with Parliamentarians and other Canadians.

To do this, we moved detailed information about the legislation, and the way our departments are organized to administer its provisions, to an annex at the end. The body of the document is then presented in two sections to report on what we do to protect fish and fish habitat and to prevent pollution.

We also decided to present statistical information using infographics so we could share these results in a more reader-friendly format. The usual tables are still available, but they have also been moved

[1] Formerly, fisheries protection provisions.

to the annex. Finally, you will find a key result or success story highlighted throughout to help you better understand what we are accomplishing.

Welcome to the new *Annual Report to Parliament on the Administration and Enforcement of the Fish and Fish Habitat Protection and Pollution Prevention Provisions of the* Fisheries Act. We hope that you find this approach easier to read and learn about our activities.

1.1 Modernized *Fisheries Act*

The *Fisheries Act* is one of Canada's oldest pieces of environmental legislation. On June 21, 2019, Canada modernized the Act based on the feedback received from Canadians during extensive engagement activities.

The modernized *Fisheries Act*:

- restores protections for all fish and fish habitat;
- provides clarity about regulatory requirements placed on development projects and industry; and
- establishes a stronger role for Indigenous peoples in project reviews, monitoring and policy development, while recognizing rights, respect, co-operation and partnership.

1.2 Fish and Fish Habitat Protection Policy Statement

The modernized *Fisheries Act* includes new protections for fish and fish habitat from projects in or near water. Among other things, the provisions are set up to:

- protect all fish and fish habitat;
- restore the prohibition against 'harmful alteration, disruption or destruction of fish habitat';
- prohibit activities, other than fishing, that cause 'the death of fish';
- strengthen the role of Indigenous peoples in project reviews, monitoring, and policy development;
- promote restoration of degraded habitats;
- allow for better management of large and small projects impacting fish and fish habitat through a new permitting framework, standards and codes of practice;
- improve the protection of fish and/or fish habitats that are sensitive, highly productive, rare or unique;
- consider the cumulative effects of development activities on fish and fish habitat; and,
- require information on project decisions to be made public through an online registry.

The Fish and Fish Habitat Protection Policy Statement explains these provisions in more detail and how Fisheries and Oceans Canada will implement them by applying regulatory and non-regulatory tools. It also describes how these tools relate to the *Aquatic Invasive Species Regulations*, regulations with respect to aquaculture, the *Species at Risk Act*, and the *Oceans Act*.

1.3 Modernizing and Implementing the *Authorizations Concerning Fish and Fish Habitat Protection Regulations*

When the modernized *Fisheries Act* came into force, we replaced the *Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations* with the *Authorizations Concerning Fish and Fish Habitat Protection Regulations* to ensure our regulations were aligned with new and updated provisions of the Act. This includes:

- the prohibitions against the harmful alteration, disruption or destruction of fish habitat and the death of fish by means other than fishing;
- provisions that allow for the amendment, suspension, or cancellation of an authorization;
- using certified habitat credits in lieu of, or in addition to, offsetting plans;
- new forms of acceptable financial securities; and,
- requiring the geographic coordinates of proposed offsetting measures.

We consulted Canadians on proposed amendments between 2018 and 2019 using discussion papers. During 2019-20, for example, the second discussion paper, *Proposed modifications to the Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations*, was issued and received submissions from 52 respondents.

When the new regulations entered into force on August 28, 2019, we published the *Applicant's Guide Supporting the "Authorizations Concerning Fish and Fish Habitat Protection Regulations"* to help stakeholders understand and apply the regulations. Implementation of the new regulations has meant greater flexibility for proponents and DFO in managing projects and protecting fish and fish habitat.

1.4 Collaboration

Canada's fish and fish habitat are shared resources that provide social, economic and ecological benefits to many Canadians. Fish and fish habitat are also finite and vulnerable, so they must be protected and conserved for the benefit of future generations. These actions achieve the best outcomes when governments, partners, and stakeholders work together.

Fisheries and Oceans Canada (DFO) and Environment and Climate Change Canada (ECCC) collaborate each year to put this publication together. We also work together throughout the year to prevent pollution from harming fish and fish habitat. In addition, we partner with the Canada Energy Regulator and the Canadian Nuclear Safety Commission to reduce overlaps when they are reviewing the same projects to ensure fish and fish habitat are protected.

Provincial and territorial authorities across Canada, as well as boards established under land claims agreements, share a range of natural resource conservation responsibilities and initiatives under various provincial and territorial laws which complement federal legislation and regulations. For example, land-use decisions made by these authorities may have a significant bearing on the quality, quantity, and function of fish habitat in a given watershed.

We thus collaborate closely with provincial and territorial governments, including the jurisdictions with which we have entered into agreements to reduce regulatory duplication, streamline administration, facilitate co-operation, and enhance communications related to pollution prevention and fish and fish habitat conservation and protection. A key venue for this federal, provincial and territorial collaboration in the protection of fish and fish habitat is the Canadian Council of Fisheries and Aquaculture Ministers *Fisheries Act* Task Group. Formed in 2016 to support the review of the 2012 changes to the *Fisheries Act*, the Task Group shifted its focus in 2019 to support the implementation of the modernized Act and associated changes in policy and regulation.

The modernized *Fisheries Act* includes provisions to enter into an agreement with an Indigenous governing body, a co-management body established under land claims agreements, and a province or territory to advance the purpose of the legislation.[2] Co-operation and partnership with Indigenous peoples are key features of the new *Fisheries Act*. As per the amended Act, we must also now consider Indigenous knowledge that is shared with us when making certain decisions such as issuing authorizations, and creating certain regulations. In addition, we must consult Indigenous peoples when a decision may affect their rights and ensure that impacts to rights are accommodated, when necessary. We also enter into collaborations with industry and project proponents[3], as well as stakeholders, such as non-governmental organizations.

[2] Section 4.1.

[3] A person, company or corporation that has submitted, or plans to submit, a development proposal.

2 Protecting Fish and Fish Habitat

DFO conducts research, participates in environmental and impact assessments, and completes regulatory reviews of development projects to protect fish and fish habitat across Canada. We also educate and provide advice to help proponents follow the *Fisheries Act* and its regulations.

2.1 Educating, Engaging and Providing Advice

Between the introduction of Bill C-68 (*An Act to Amend the Fisheries Act and other Acts in Consequence*) in Parliament in February 2018 and the full coming into force of the modernized *Fisheries Act* in August 2019, we focused on giving our partners and stakeholders technical overviews of what to expect in the amended legislation.

At the same time, we worked internally to define how a revitalized Fish and Fish Habitat Protection Program would support the implementation of a modernized Act. As a result of this work, we published the new Fish and Fish Habitat Protection Policy Statement on August 28, 2019. The statement outlines how DFO interprets and will apply the regulatory and non-regulatory tools available in the *Fisheries Act* to support the effective and efficient conservation and protection of fish and fish habitat. In December 2019, we also published an update to our Offsetting Policy to align it to the fish and fish habitat protection provisions of the modernized *Fisheries Act*.

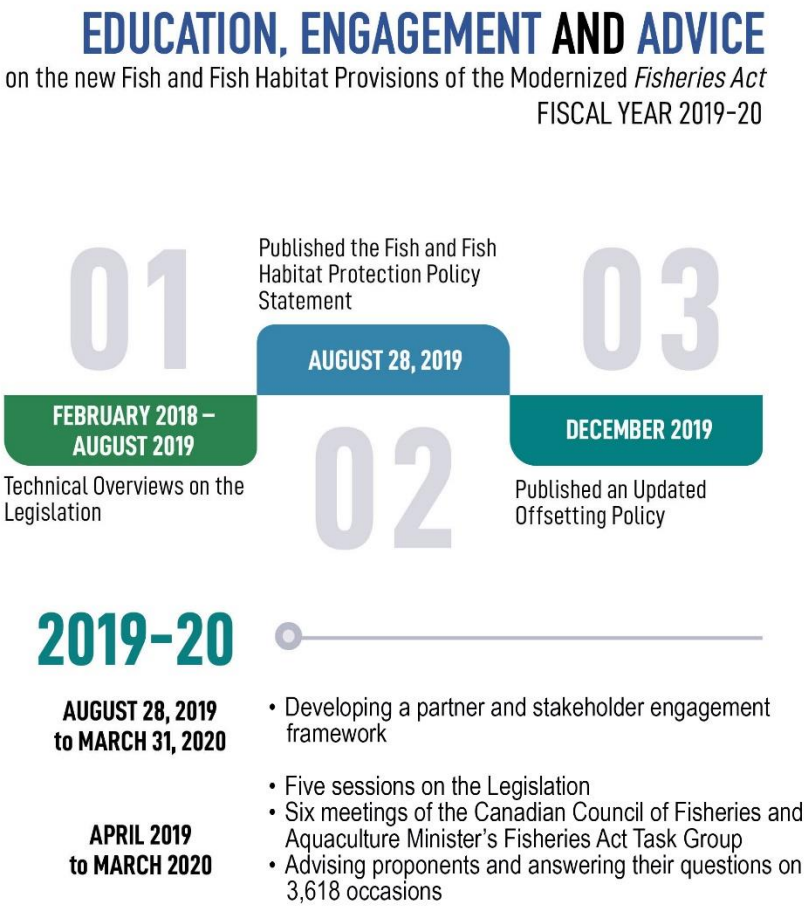
These policies are part of suite of guidance documents that help us protect fish and fish habitat. We also have interim codes of practice to advise proponents considering or implementing a project near water. The codes of practice cover how to avoid impacts to fish and fish habitat from:

- beaver dam removal;
- culvert maintenance;
- end of pipe fish protection screens for small water intakes in freshwater;
- routine maintenance dredging;

- temporary cofferdams and diversion channels; and,
- temporary stream crossings.

Following the coming into force of the modernized *Fisheries Act*, a two-phased national training strategy was developed for us to deliver to staff across our regions. The first phase of training took place over the summer of 2019 to raise awareness about the new legislation. The second phase helped staff understand the changes to the regulatory review process. It concluded in winter 2020.

A wide range of partners and stakeholders are involved in or impacted by the protection and conservation of fish and fish habitat. Our partners include provinces and territories and Indigenous peoples. Our stakeholders include resource management boards, industry associations, and environmental and conservation organizations, among others. The insight of our partners and stakeholders helps us shape the future direction of regulations and policy. To that end, our revitalized program has increased its engagement capacity and, in 2019-20, we began developing a framework to allow us to engage in meaningful, consistent, and predictable ways.



Our engagement activities in 2019-20 focused on providing general overviews of the modernized *Fisheries Act* and the new policies and tools that would be needed in the short and long terms to effectively implement the fish and fish habitat provisions. In total, three different information sessions were given to our broad partner and stakeholder groups, followed by corresponding updates via email for those unable to attend. The topics of these three sessions were:

- Engagement on *Authorizations Concerning Fish and Fish Habitat Protection Regulations* (April 2019);
- Royal assent of Bill C-68 (*Fisheries Act* and other legislation) (June 2019); and,
- Coming into Force of the fish and fish habitat provisions of the *Fisheries Act* (August 2019)

We also routinely attended workshops and meetings held by partner and stakeholder groups throughout 2019-20 to share information and updates on our program, and to answer questions about the modernized Act. In addition, we updated the *Projects Near Water* website, which received almost three times the number of unique visitors after the amendments came into effect.

The Canadian Council of Fisheries and Aquaculture Ministers *Fisheries Act* Task Group[4] convened six meetings in 2019-20, enabling discussion amongst federal, provincial and territorial experts regarding specific regulatory and policy topics and information sharing about the fish and fish habitat priorities of different jurisdictions.

Over 2019-20, we provided advice to proponents and answered their questions on 3,427 occasions to help them stay compliant. These activities were documented and tracked on the national Program Activity Tracking for Habitat (PATH) system, including data on our regulatory review of referred projects.

KEY RESULT

Releasing Information on Authorizations in the Open Data Portal

This year, we began developing the online *Fisheries Act* Registry to make information about permit and authorization decisions accessible to Canadians through the Government of Canada's Open Data portal. Over 2019-20, a dataset of 177 records containing project-based information on issued authorizations was published and monthly updates will follow to ensure information is open by default. We are now working to develop enhanced usability and search functions for the Registry.

2.2 Reviewing Proposed Works and Activities

The *Projects Near Water* website includes our recommended best practices to avoid harming fish and fish habitat: *Measures to Avoid Causing Harm to Fish and Fish Habitat*[5]. There is also a project-specific self-assessment criteria tool[6], to help proponents determine if we need to review their project to avoid harming fish and fish habitat. The self-assessment criteria tool and related guidance help us focus our review process on the highest-risk projects for which site-specific review and advice are most beneficial.

When a proponent's project falls into certain categories, such as certain measures to combat invasive species, or the proponent is unable to follow guidance to avoid serious harm to fish[7] or harmful alteration, disruption or destruction[8] of fish habitat, or the death of fish (other than by

[4] Refer to Section 1.4.
[5] Measures to protect fish and fish habitat effective August 28, 2019.
[6] Applicable prior to the modernized *Fisheries Act* (pre-August 28, 2019).
[7] 'Serious harm to fish' applied prior to the modernized *Fisheries Act* (pre-August 28, 2019).
[8] "harmful alteration, disruption or destruction " applies effective August 28, 2019.

fishing), they must complete a Request for Review form and submit it to us. Also, any time a species at risk may be affected, a review must be requested. As part of the review process, our officials must assess potential impacts to fish and fish habitat under the *Fisheries Act*, and also verify whether the project 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.

The Minister may consider issuing an "authorization" pursuant to the *Fisheries Act* for a project if serious harm or the harmful alteration, disruption or destruction of fish habitat or death of fish cannot be avoided. However, if the project is subject to an environmental or impact assessment, an 'authorization' cannot be considered until the assessment has concluded and it has been determined that the project may proceed. If it is determined that a project can proceed, and certain effects to a species at risk or its critical habitat could result, a *Species at Risk Act*-compliant *Fisheries Act* authorization could be issued to set out the measures required for the project to be compliant with both Acts.

Avoid Harmful alteration, disruption or destruction of fish habitat or death of fish

Our preference is to conserve and protect fish and fish habitat by avoiding harmful impacts, whenever possible. Proponents are responsible for avoiding harmful impacts resulting from their works, undertakings or activities.

When applying for an authorization, the *Applicant's Guide Supporting the "Authorizations Concerning Fish and Fish Habitat Protection Regulations"* is available to guide proponents through the process.

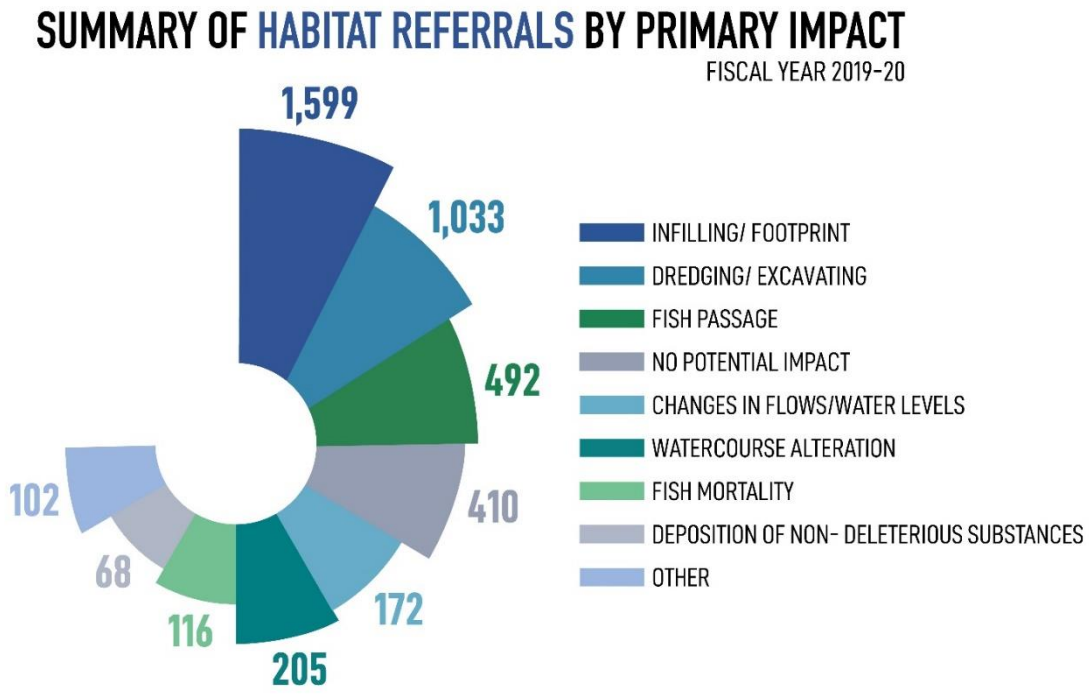
2.2.1 Transitional Provisions

During fiscal year 2019-20, the Bill to amend the *Fisheries Act* was making its way through the legislative process. To ensure the orderly transition of authorizations issued before the fish and fish habitat protection provisions came into force, and the management of applications for authorizations submitted before, on and after Royal assent (and the coming into force), the Bill included two transitional provisions:

- The first stipulated that any 'serious harm' authorization issued before the day on which provisions came into force would be treated as if it were issued under the modernized Act after coming into force.

- The second sets out how officials must process applications submitted before the day on which the provisions came into force to transition to the modernized Act. It also allows 180 days for applicants to provide required information if they submitted incomplete applications before the coming into force date.

Statistics on the review of referred development proposals (referrals) and the issuance of authorizations have been split between pre- and post-coming into force of the modernized *Fisheries Act:* April 1 to August 27, 2019 and August 28, 2019 to March 31, 2020. Pre-coming into force, we reviewed 1,687 referrals and issued 72 authorizations. Post-coming into force, we reviewed 2,510 referrals and issued 118 authorizations. A breakdown of the habitat referrals both pre- and post-coming into force by primary impact is shown in Table 3a and Table 3b, while Table 4a and 4b show the number of authorizations issued in each period by region. In terms of service delivery standards, in 2019-20, we achieved a 97 per cent compliance rate for processing applications for authorizations within the regulated 60-day time limit and 99 percent compliance rate for 90-day time limits.



KEY RESULT

Standardized Approaches and Regulatory Efficiency

Due to the scope and number of projects that could possibly affect fish or fish habitat, various tools are in place to make regulatory reviews of low-risk activities more efficient. For example:

- "Class" authorizations for agricultural municipal drains maintenance activities in southern Ontario are issued using a standard approach to eliminate site-specific reviews.
- "Class watershed" authorizations provide regulatory certainty by setting pre-determined standards, mitigation and offsetting for placer mining activities in certain types of habitat in the Yukon.

In addition to the project-specific authorizations reported above, class authorizations are tracked and reported because they authorize works, undertakings or activities which cause serious harm to fish[9] or harmful alteration, disruption or destruction of fish habitat, or the death of fish, by means other than by fishing. In 2019-20, our regional officials notified the use of 170 agricultural drains class authorizations by Central and Arctic Region and 44 reviews of placer mining applications by Pacific Region as shown in Table 5.

2.3 Environmental and Impact Assessments

Some projects that require an authorization under the *Fisheries Act* and/or a permit under the *Species at Risk Act* may also require that an impact assessment be conducted prior to the issuance of the authorization or permit. Assessments may be undertaken under the *Impact Assessment Act,* which entered into force in August 2019, or other federal legislation depending on the jurisdiction. There may also be situations where a project is undergoing an assessment under the *Canadian Environmental Assessment Act, 2012 (*which is the predecessor legislation to the *Impact Assessment Act).*

During the conduct of environmental or impact assessments, departmental advice from multiple sectors is collected to support the prediction of potential project impacts and potential effectiveness of mitigation in relation to our mandated responsibilities. This advice is based on our analysis of the project's impacts to fish and fish habitat, including any aquatic species at risk and their habitat, as well as its effects on the rights of Indigenous peoples.

Those projects requiring an impact assessment under the *Impact Assessment Act* are generally identified in its *Physical Activities Regulations* but also may be designated by the Minister of Environment and Climate Change. In addition, section 82 of the *Impact Assessment Act* requires an environmental assessment be conducted when a project is occurring on federal lands and for which the federal government is the project proponent, is providing financial assistance and/or would be required to issue an authorization or permit. The Fish and Fish Habitat Protection Program provides advice on potential impacts to fish and fish habitat and mitigation to federal partners who are required to undertake an assessment under section 82.

When projects require both an environmental or impact assessment and a regulatory approval, we coordinate with federal partners to consult Indigenous peoples as required by the Duty to Consult. These consultations are conducted during the impact assessment and through the regulatory phase. We are also prohibited from issuing an authorization under the *Fisheries Act* or a permit under the *Species at Risk Act* until the environmental or impact assessment has concluded and it has been determined that the project may proceed to the regulatory phase.

[9] 'Serious harm to fish' applied prior to the modernized *Fisheries Act* (pre-August 28, 2019).

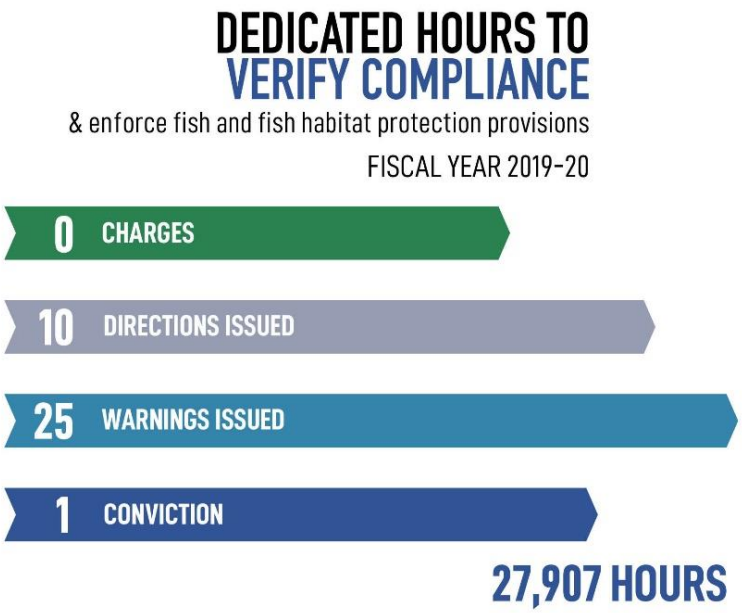
2.4 Monitoring and Enforcing Compliance

Monitoring to ensure compliance with the fish and fish habitat protection provisions of the *Fisheries Act* helps Canada conserve its aquatic resources, including aquatic species at risk. Enforcing compliance is also key.

Our fishery officers devote a lot of time to monitoring and enforcing compliance by:

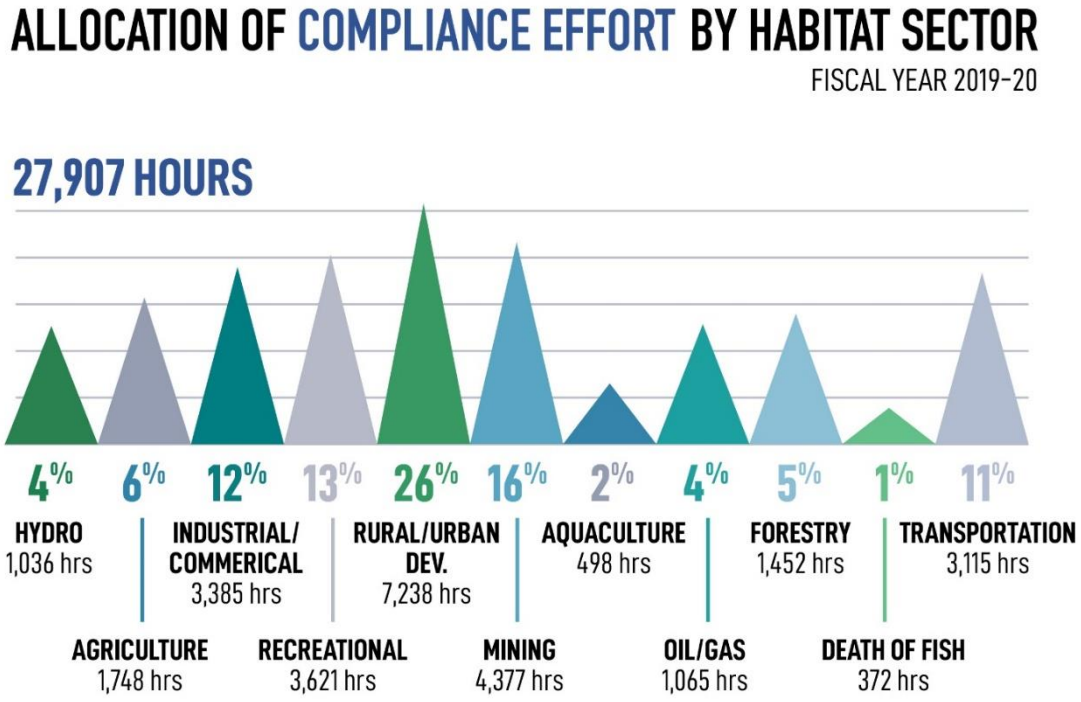
- conducting habitat patrols, inspections and investigations;
- working with habitat biologists on sites with authorized works, undertakings or activities;
- responding to reports of potential habitat violations from members of the public;
- assisting in the education of the public on habitat protection;
- working with other enforcement partners to support habitat protection;
- working with Crown counsel on prosecutions; and,
- other activities, as needed.

Where habitat violations are identified, fishery officers may issue warnings or directions to bring an individual into compliance or they may undertake investigations and lay charges, if warranted. These enforcement actions follow a three-pillar approach starting with education, shared stewardship, and stakeholder engagement. This is followed by monitoring, control and surveillance, and finally, major cases and special investigations.



During fiscal year 2019-20, fishery officers:

- spent 27,907 hours verifying compliance with and enforcing fish and fish habitat provisions
- issued 25 warnings related to these provisions;
- issued 10 directions;
- laid zero charges; and,
- had one conviction.



KEY RESULT

Increasing DFO's Capacity to Monitor and Enforce Compliance

With the modernization of the *Fisheries Act*, we decided to take a 'boots on the ground' approach to monitoring and enforcing the fish and fish habitat protection provisions. The hours spent by fishery officers doing this work in 2019-20 (Table 6) thus increased by 7,279 hours compared to the previous fiscal year. It also helped that we hired 35 new fishery officers—and at least 35 of our additional fish and fish habitat biologists became designated fishery guardians under the *Fisheries Act*. This designation enables holders to inspect sites such as dock construction, culvert installations or mining operations to verify compliance.

Success Story: Effective Enforcement and Corrective Measures Produce Positive Results for Fish and Fish Habitat

In May 2017, the Village of Lumby in British Columbia installed temporary emergency flood protection measures within the boundaries of their jurisdiction along Bessette Creek and Duteau Creek. The work included installation of berms, stream diversion, riparian vegetation removal and the removal of woody debris. Both creeks support vital spawning and rearing habitat for populations of Coho salmon, Chinook salmon, and Rainbow trout.

Our investigation of this work found an extent of destruction that included several kilometers of riparian vegetation removal and in-stream damage in excess of 10,000 square meters. As a result, the Village of Lumby had to produce and implement a complex corrective measures plan with a cost valued at approximately $2.1 million. The plan was completed with the guidance and knowledge of fish habitat of the Splatsin First Nation.

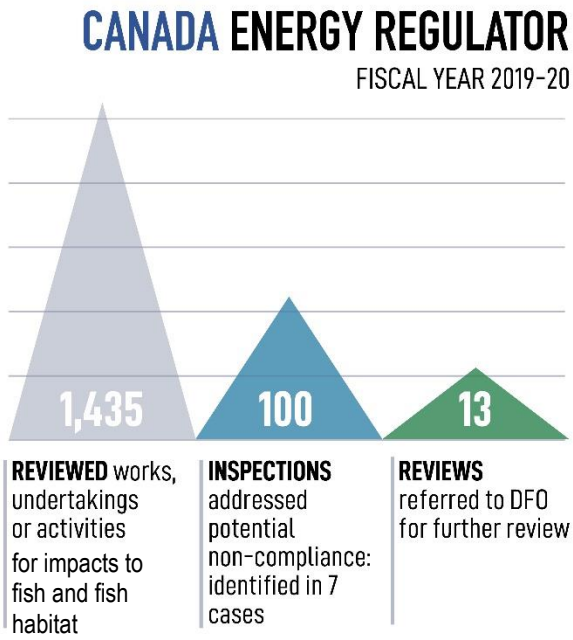
The Village of Lumby displayed diligence over the last four years in implementing these corrective measures and, in 2020, these actions recovered and produced positive results for fish and fish habitat. To complete the remediation, a 10-year monitoring plan will be used to ensure continued viability of the corrective measures.

2.5 Monitoring and Reviewing Energy Projects

DFO signed memoranda of understanding with the National Energy Board (NEB) and the Canadian Nuclear Safety Commission (CNSC) in 2013 to reduce overlap when these federal entities are reviewing the same projects, while still ensuring the protection of fish and fish habitat. Both of these entities have fisheries experts to review applications for projects under their respective legislation.

CNSC regulates the use of nuclear energy and materials, including nuclear facilities under the *Nuclear Safety and Control Act*. Under our MOU, CNSC fisheries experts can also review licensee documentation to ensure appropriate measures are being applied to avoid and mitigate impacts to fish and fish habitat, including aquatic species listed under the *Species at Risk Act* and their critical habitat.

On August 28, 2019, the *Canadian Energy Regulator Act* came into force and replaced the NEB with the Canada Energy Regulator (CER). The memorandum of understanding that we had with the NEB was effectively transferred to the CER, which means that potential impacts to fish and fish habitat of energy infrastructure projects captured under the *Canadian Energy Regulator Act* can be reviewed by CER. Typically, this means reviewing the installation or maintenance of pipeline watercourse crossings.



When impacts to fish and fish habitat cannot be avoided during these activities, DFO officials become involved. The Minister of Fisheries, Oceans and the Canadian Coast Guard also remains responsible for decisions on the issuance of *Fisheries Act* authorizations, and permits under the *Species at Risk Act*.

In 2019-20, the CER reviewed 1,435 works, undertakings or activities to determine whether appropriate mitigation measures were being

applied and whether impacts to fish and fish habitat were likely to occur. Thirteen of these reviews were referred to us for further review. CER also conducted 100 inspections during this time, and addressed the potential non-compliance with legislation that it identified in seven instances.

2.6 Protecting Aquatic Species at Risk

The *Species at Risk Act* was created to prevent wildlife species from becoming extirpated or extinct, to provide for the recovery of species that are extirpated, endangered or threatened as a result of human activity, and to manage those of special concern to keep them from becoming endangered or threatened. Among other things, the Act protects the most at risk species and their critical habitat. It also contains provisions to help manage species of special concern in order to prevent them from becoming endangered or threatened. Prohibitions within the *Species at Risk Act* make it illegal to do several things, including kill or harm species listed under the Act as Threatened, Endangered, or Extirpated or in most instances to destroy their critical habitats. The *Species at Risk Act* also imposes certain pre-conditions and requirements when someone wants to carry out an activity that causes an incidental affect on one of these species or its critical habitat.

Under the *Species at Risk Act*, we are responsible for protecting listed threatened, endangered and extirpated aquatic species at risk[10]. Our fishery officers dedicate time to protect the critical habitat which is key to the recovery of species at risk.

For example, in 2019-20, in fresh water areas, fishery officers:

- spent 4,420 hours protecting the habitat required for freshwater at risk species;
- issued two directions;
- issued one warning; and,
- three convictions were reached as a result of this work.

[10] Under the *Species at Risk Act* individuals of a species in or on federal lands administered by Parks Canada Agency are the responsibility of the Minister responsible for that agency

KEY RESULT

Establishing the Canada Nature Fund for Aquatic Species at Risk

Announced in Budget 2018, the Nature Legacy for Canada Initiative is a roadmap to protect Canada's biodiversity, including species at risk, using an approach that prioritizes investments and focuses on collaboration, multiple species, and ecosystems. These actions are supported by contributions made under the Initiative's Canada Nature Fund.

The $55-million Canada Nature Fund for Aquatic Species at Risk funded 57 projects over five years to support the recovery of aquatic species at risk in priority places and to mitigate the key threats to these species. The fund aims to build relationships with Indigenous peoples, provinces and territories, industry, and other partners for aquatic species at risk by supporting and encouraging stewardship actions using multi-species, threat, and place-based approaches to recovery and protection.

These projects target more than 75 aquatic at-risk species in seven priority freshwater places and more than 50 aquatic at-risk species affected by two marine threats. The freshwater places are:

- Fraser and Columbia watersheds (British Columbia);
- Rocky Mountains' eastern slopes (Alberta);
- Southern prairies (Manitoba);
- Lower Great Lakes watershed (Ontario);
- St. Lawrence lowlands (Quebec);
- Southern Gulf of St. Lawrence River (New Brunswick, Nova Scotia, Prince Edward Island); and
- Bay of Fundy and Southern Uplands watersheds (Nova Scotia, New Brunswick).

The Canada Nature Fund for Aquatic Species at Risk also works to address two marine priority threats along our three coasts related to fishing interactions, including entanglements and bycatch, and physical and acoustic disturbance, including vessel collisions and marine noise.

2.7 Undertaking Research and Providing Scientific Advice

Aquatic ecosystems include plants, animals and microbes that are interdependent. Our scientists help managers understand the impacts of human activities undertaken in and near an aquatic ecosystem by undertaking research and providing scientific advice. This advice covers a broad array of topics, including habitat science, species at risk and marine mammals, and the cumulative effects of multiple activities. The scope of science advice also ranges from informing policy development to advising on a specific project.

Promote Sound Decision-making

Our decisions are informed by the best available science, technical information and Indigenous knowledge. They are also guided by the application of the precautionary approach and a risk-based approach.

Examples of the research products and scientific advice our ecosystem scientists provided in 2019-20 included:

- Updated guidelines for the removal of aquatic vegetation within Spotted Gar critical habitat;
- Development and evaluation of the Habitat Ecosystem Assessment Tool; and,
- A review of the change in timing of impoundment for the Kayaks Generation Project.

The results of our scientific research are published and publically available and are also shared with officials responsible for the conservation and protection of fish and fish habitat.

DFO's Canadian Science Advisory Secretariat provides formal scientific advice related to our mandate, and maintains a publicly accessible website with its published reports. Many of our research projects also result in peer-reviewed articles published in primary literature.

In addition, our scientists and other technical officials advise persons responsible for federal contaminated sites about fish and fish habitat implications to help them minimize impacts to fish and fish habitat, and maximize the benefits of their site management activities. This includes:

- reviewing site classifications and technical documents to ensure that the potential risks and/or impacts to fish and fish habitat have been appropriately considered;
- developing guidance material and training on aquatic contaminated sites; and,
- promoting regulatory compliance with the *Fisheries Act* and *Species at Risk Act*.

KEY RESULT

Habitat Ecosystem Assessment Tool

The Habitat Ecosystem Assessment Tool (HEAT) is a way for our officials to assess losses, gains, and modifications to habitat that result from development, offsetting, and restoration activities. It can also be used to predict the response of fish communities to development activities and mitigation options. HEAT provides an evidence-based assessment supported by quantitative analyses. We are presently using the tool in the Great Lakes basin.

2.8 Restoring Fish and Fish Habitat

The goal of fish habitat restoration is to rebuild a healthy and functioning ecosystem that supports fish throughout its lifecycle. This includes healthy water levels and temperatures, aquatic plants, appropriate shade along the shore, and many other ecosystem factors. Fish habitat restoration projects occur along our coastlines, in estuaries, along riparian zones, and throughout our inland waterways.

We have a number of habitat restoration programs underway through the $1.5 billion Oceans Protection Plan. The $75-million Coastal Restoration Fund, for example, is supporting more than 60 collaborative projects that are:

- developing and implementing coastal restoration plans and projects;
- addressing threats and stressors to marine species; and
- building capacity of Indigenous groups and communities to undertake and monitor projects.

The Coastal Restoration Fund is also contributing to the biodiversity objectives set for the United Nations Decade on Ecological Restoration.

We also launched the (up-to) $50-million Indigenous Habitat Participation Program in June 2019 to increase the participation of Indigenous communities in the conservation and protection of fish and fish habitat, including in:

- consultations on *Fisheries Act* authorizations and *Species at Risk Act* permits related to potential adverse effects on Aboriginal and Treaty rights; and,
- engagement to provide guidance and advice for the implementation of the fish and fish habitat protection provisions of the *Fisheries Act.*

The program also supports Indigenous capacity building, including technical capacity, and collaborative activities in inland areas of Canada.

KEY RESULT

Partnerships, Capacity Building and Employment

While the Coastal Restoration Fund is underway for a few more years, it is anticipated the program will facilitate more than 1,300 partnerships (including 415 Indigenous partnerships), provide training for over 1,000 people, and create 936 new jobs. By the end of its mandate, the program will also leverage more than $19 million in additional support from other sources.

The program has also prioritized projects being led by, and involving, Indigenous groups and communities. Almost 100 per cent of projects involve Indigenous partners and 37 per cent of projects are Indigenous led.

RESTORING FISH AND FISH HABITAT

through the Coastal Restoration Fund

FISCAL YEAR 2019-20

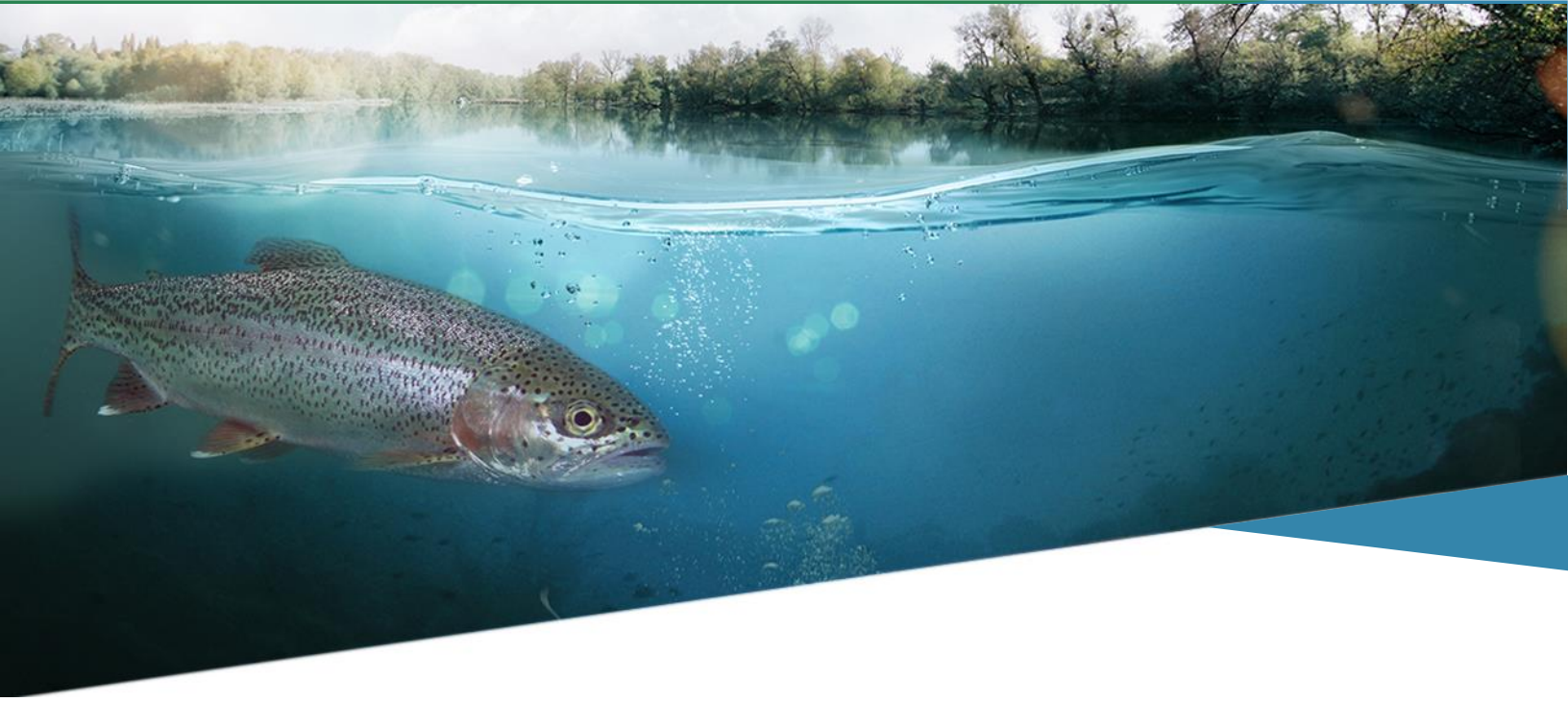
415 Indigenous Partnerships

37% Indigenous Led

TRAINING MORE THAN **1,000** PEOPLE

CREATING **936** NEW JOBS

LEVERAGING MORE THAN **19** MILLION from other sources



3 Preventing Pollution

The pollution prevention provisions serve to protect fish, fish habitat, and the use of fish by humans by prohibiting pollution that could be deleterious (harmful) to fish. Subsection 36(3) is the key pollution prevention provision as it prohibits the deposit of all deleterious substances into water frequented by fish, or to any place, under any conditions, where it may enter water frequented by fish. A deposit of a deleterious substance is only authorized under the requirements set out in regulations made under the *Fisheries Act* or by regulations made under another federal act.

Environment and Climate Change Canada (ECCC) is the overall lead for the administration and enforcement of the pollution prevention provisions. ECCC administers and enforces these provisions by promoting compliance with the subsection 36(3) prohibition, developing, administering and enforcing regulations, monitoring shellfish growing areas for pollution and responding to emergencies. 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 to control or eradicate any aquatic invasive or other species that constitute a pest to fisheries.

3.1 Educating and Promoting Compliance

We increase awareness and understanding about the importance of preventing pollution from entering waterways and the consequences of non-compliance among the industries and communities that we regulate, including:

- Pulp and paper sector;
- Metal and diamond mining sector; and,
- Wastewater systems run by federal, provincial and municipal governments and First Nations communities.

This information is shared via email and website postings, in letters, as brochures or other documents, and during site visits and information sessions.

We also worked directly with Indigenous communities and Tribal Councils, First Nations technical associations, Indigenous Services Canada, and Circuit Rider trainers to build awareness and understanding about the *Wastewater Systems Effluent Regulations* and to better understand their needs to achieve compliance.

In 2019-20, for example, we provided information to the mining industry to help them prepare for the assessment of alternatives when developing proposals to use water bodies to dispose mining waste. The assessment of alternatives is required prior to advancing amendments to the Tailings Impoundment Areas listed in the *Metal and Diamond Mining Effluent Regulations*. Two waterbodies were added to this list in 2019-20.

KEY RESULT

Increasing awareness with publication of Frequently Asked Questions on pollution prevention provisions

In early 2020, Frequently Asked Questions (FAQs) were published on ECCC's website to provide answers to the questions most often seen in the context of the *Fisheries Act* pollution prevention provisions. The topics covered by the FAQs includes the *Fisheries Act* subsection 36(3) prohibition as well as notions of deleterious substances and water frequented by fish.

3.2 Modernizing and Developing Pollution Prevention Regulations

Environment and Climate Change Canada has been working to modernize the *Pulp and Paper Effluent Regulations* since it published an initial consultation document in September 2017. Based on stakeholder input on the initial document, a *Detailed Proposal for Consultation for the Modernization of the Pulp and Paper Effluent Regulations* was published in May 2019. We then held 19 stakeholder consultations between May and August 2019. The input of stakeholders is now being considered for the regulatory amendment.

Over 2019-20, we also worked to develop new regulations to manage the impact of effluent from coal mining and oil sands mines, and brine releases from the Alton Gas facility in Nova Scotia. At the same time, we re-initiated policy analysis to inform the development of a separate regulatory framework for wastewater systems in the North, which would include the Northwest Territories, Nunavut, and north of the 54th parallel in Quebec and Newfoundland and Labrador.

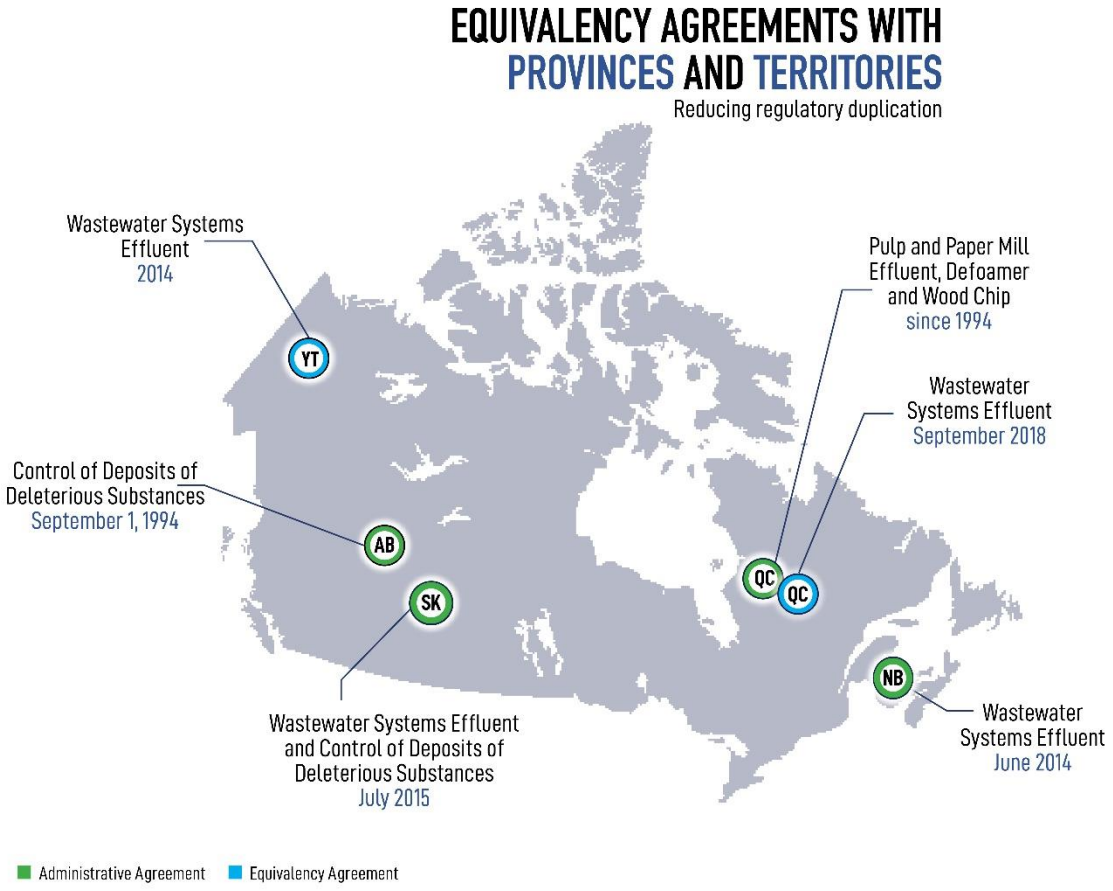
3.3 Equivalency and Administrative Agreements

Equivalency agreements with a province, territory or Indigenous governing body are permitted by the *Fisheries Act* when the provisions of a provincial, territorial or Indigenous law have been determined to be equivalent. This includes fish and fish habitat protection provisions and pollution

prevention provisions. These agreements reduce regulatory duplication, streamline administration, facilitate co-operation, and enhance communications amongst Canada's regulators.

Under an equivalency agreement, federal regulations do not apply to those who are subject to a provincial or territorial regulatory regime, because it has been determined to be equivalent in effect to the federal regulations. Under an administrative agreement, federal and provincial and/or territorial regulatory requirements both remain in force, but provincial or territorial officials administer the federal regulations in their province or territory.

Canada presently has equivalency agreements with Yukon, Alberta, Saskatchewan, Quebec and New Brunswick.



Yukon

In November 2014, the Governor in Council issued an Order declaring that the *Wastewater Systems Effluent Regulations* do not apply to the three wastewater systems that are subject to the *Agreement on the Equivalency of Laws Applicable to Wastewater Systems Located in Yukon*. In 2019, all three met the effluent quality standards that are equivalent to the federal standards. As part of our equivalency agreement, we conducted a joint five-year review (2014-2018) last year to report

on results. For example, Yukon Department of Environment conducted 32 inspections over the five past years of which five were in the 2019 calendar year under provincial law.

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 those regulated.

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 and was renewed in 2020. Under the agreement, provincial officials interact with the regulated community to promote and verify compliance, and they share information on these interactions with ECCC. The *Canada-Saskatchewan Administrative Agreement for the Control of Deposits of Deleterious Substances under the Fisheries Act* also 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.

Quebec

The Province of Quebec and the Government of Canada have been collaborating to protect and conserve fish and fish habitat and prevent pollution 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 regulated parties 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 *Wastewater Systems Effluent Regulations* do not apply to the 650 or so wastewater systems that are subject to the *Canada-Quebec Agreement on Acts and Regulations Applicable to the Municipal and Provincial Wastewater Systems in Quebec*. In 2019, approximately 86 per cent met the effluent quality standards that are equivalent to the federal standards. Quebec's *Ministère de l'Environnement et de la Lutte contre les changements climatiques* conducted 174 inspections in the 2019 calendar year and issued 175 notices of non-compliance and three administrative monetary penalties.

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 renewed agreement, provincial officials had 66 interactions with the regulated community to promote and verify compliance, and they shared information on these interactions with ECCC.

3.4 Analyzing Self-Reported Effluent Data

Every year, we analyze the effluent data reported by facilities under *Fisheries Act* regulations for pulp and paper mills, metal and diamond mines and wastewater facilities. The most recent year for which data has been pooled, tabulated and analyzed at an aggregate level is 2018.

Our analysis of the 2018 monitoring data self-reported by the 77 pulp and paper mills subject to regulations shows that facilities continue to report high rates of compliance with effluent quality limits:

- over 99 per cent for total suspended solids and biochemical oxygen demand; and,
- 98.3 per cent for the requirement that effluent not be lethal to rainbow trout.

The compliance rate for environmental effects monitoring in 2019-20 was also 96 per cent.

Our analysis of the 2018 data self-reported by 140 metal and five diamond mine facilities subject to regulations shows that companies continue to have high rates of compliance[11] with the monthly mean concentration limits:

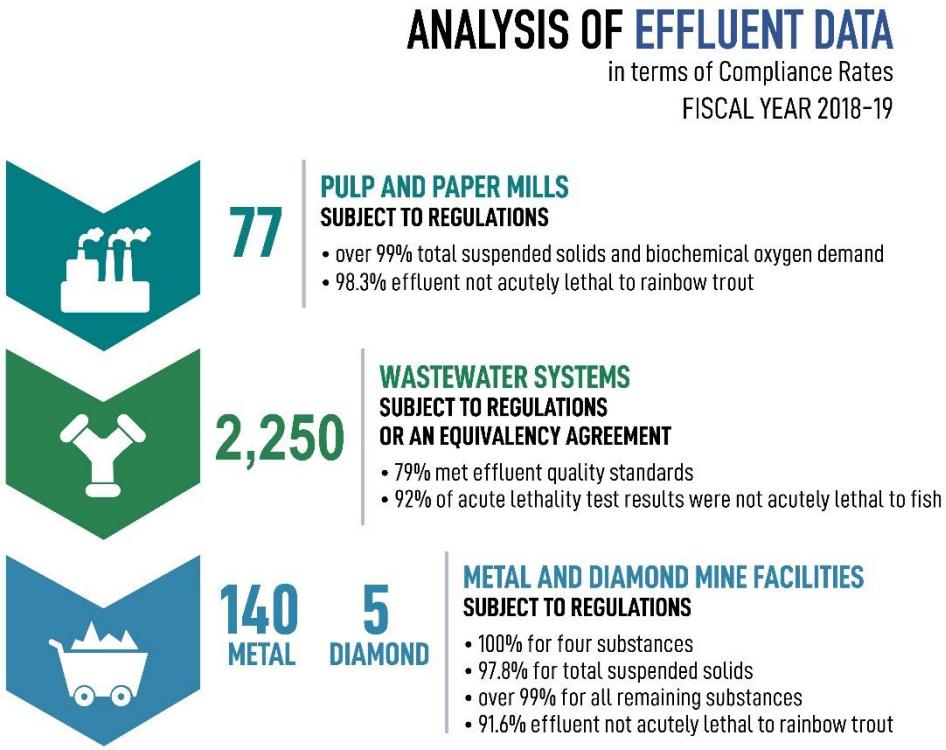
- 100 per cent for four substances;
- 97.8 per cent for total suspended solids; and,
- above 99 per cent for all remaining substances.

[11] https://www.canada.ca/en/environment-climate-change/services/environmental-indicators/metal-diamond-mining-effluent-quality.html#shr-pg0

The 2018 compliance rate for the requirement that effluent not be lethal to Rainbow trout was only 91.6 per cent due to a high number of failed tests at a mine located in Quebec. The compliance rate for environmental effects monitoring in 2019-20 was about 94 per cent.

We analyze data on effluent quality results and the volumes deposited by each of 2,250 wastewater systems[12] that are subject to regulations or are under an equivalency agreement. Medium and large wastewater systems are also required to conduct lethality tests. In 2019, our analysis shows that:

- 79 per cent met their effluent quality standards; and,
- 92 per cent of the lethality test results were not lethal to fish.



3.4.1 Transitional Authorizations

Under the *Wastewater Systems Effluent Regulations*, owners or operators of a wastewater system that is subject to regulations and not designed to achieve the national effluent quality standards were able to apply for a Transitional Authorization prior to June 30, 2014. These authorizations established the conditions under which the wastewater systems could continue to operate, while

[12] 26 owned by federal departments, 230 located in Indigenous communities, 650 in Quebec and Yukon.

setting a deadline to upgrade the system (end of 2020, 2030 or 2040) in order to meet the mandatory national effluent quality standards.

Transitional authorizations were issued for 65 wastewater systems, of which five have already completed the upgrades. Of the remaining 60:

- 13 must complete their upgrades by December 31, 2020;
- 16 by December 31, 2030; and,
- 31 by December 31, 2040.

KEY RESULT

Upgrades to Wastewater treatment facilities

Five wastewater systems completed upgrades prior to their WSER Transitional Authorization deadline. Of these, the cities of Owen Sound and Timmins in Ontario upgraded their existing primary treatment facilities to secondary treatment. These upgrades provide a significant reduction in the pollutants deposited to the local freshwater environments. The Town of Windsor, Nova Scotia constructed a new aerated lagoon that provides secondary treatment in advance of their 2040 deadline. Previously the system deposited untreated wastewater to the St. Croix River.

3.5 Enforcing the Pollution Prevention Provisions

Our enforcement officers inspect and investigate industry and community activities that are regulated to prevent pollution from entering waterways.

- An inspection involves gathering information to verify compliance, such as examining substances, products or containers, taking samples, and analyzing records. Inspections are directed at examining facilities, operations, and spills or other pollution occurrences, or may be used to obtain and examine documents off-site.
- An investigation involves gathering evidence and information relevant to a suspected violation. This may be from a number of sources. An investigation is undertaken when an enforcement officer has reasonable grounds to believe that an offence has occurred and evidence must be gathered to determine an appropriate enforcement response.

We also use appropriate enforcement measures to address alleged violations as guided by the Compliance and Enforcement Policy for Habitat Protection and Pollution Prevention Provisions of the *Fisheries Act*.

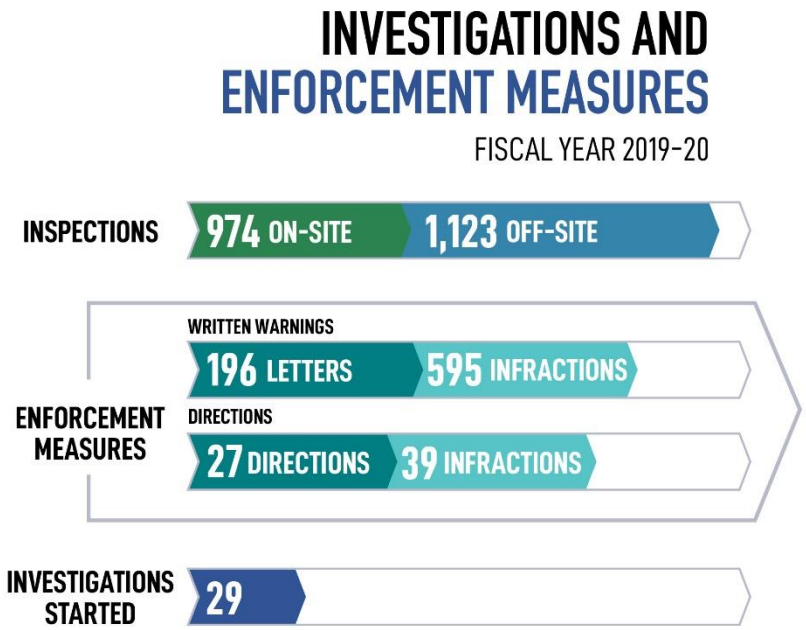
These measures follow a compliance continuum of increasing severity starting with warnings, followed by directions, Ministerial orders, and injunctions and, lastly, prosecutions. For example, a direction is issued when immediate action is necessary to prevent an unauthorized deposit of harmful substance into water frequented by fish.

During fiscal year 2019-20, our enforcement officers undertook the following measures to enforce the pollution prevention provisions of the *Fisheries Act*:[13]

- conducted 2,097 inspections (974 on-site and 1,123 off-site);
- started 29 investigations;
- issued 791 written warnings (196 letters, 595 infractions);
- issued 66 directions (27 directions and 39 infractions);
- laid three charges; and,
- had 11 conviction counts and eight convicted subjects.

The total number of our inspections has remained relatively consistent over the past three fiscal years at 1,803 in 2017-18, 1,738 in 2018-19 and 2,097 in 2019-20. Over the same timeframe, the number of prosecuted subjects was 14, 14 and three; while the number of convicted subjects was 11, eight, and eight.

Note that prosecutions often continue through multiple fiscal years so charges laid do not directly correspond to the number of convicted counts or subjects. Not all prosecuted subjects are convicted either.



KEY RESULT

Prevention of pollution and deterrence of non-compliance through the imposition of significant penalties in response to violations

In 2019, **Kirby Offshore Marine Operating LLC** was ordered to pay more than $2.7 million for depositing a deleterious substance into water frequented by fish when its tug boat, the *Nathan E. Stewart*, ran aground near Bella Bella, BC on October 13, 2016 and released 107,552 litres of diesel fuel and 2,240 litres of lubricants. This was the largest fine ever issued for this offence from a single spill. The penalty was directed to the Government of Canada's Environmental Damages Fund and, as a result of the

[13] Table 10 in the Annex details these enforcement activities and measure as they relate to the *General Prohibition* and specific regulations of the *Fisheries Act*.

conviction, the company's name was added to the Environmental Offenders Registry.

On June 21, 2019, the **University of British Columbia and CIMCO Refrigeration** were sentenced for discharging a mixture of water and ammonia into a storm drain while repairing a refrigeration system in September 2014. The substances flowed into a tributary of the Fraser River and killed approximately 70 fish. The University was fined $1.2 million after being found guilty of depositing or permitting the deposit of a deleterious substance into water frequented by fish, depositing or permitting the deposit of a deleterious substance into places that may enter waters frequented by fish, and failing to report the incident in a timely manner. CIMCO Refrigeration was fined $800,000 after pleading guilty to depositing or permitting the deposit of a deleterious substance into an area that may enter water frequented by fish.

The fines were directed to the Environmental Damages Fund and both organizations were added to the Environmental Offender's Registry.

On June 12, 2019, **Husky Oil Operations Limited** pleaded guilty to one count of violating the *Fisheries Act*, after an estimated 225,000 liters of blended heavy crude oil leaked from a pipeline operated by the company in July 2016 of which about 90,000 entered into the North Saskatchewan River. The company was ordered to pay a fine of $2.5 million which was directed to the Environmental Damages Fund. It will be used to support projects within the North Saskatchewan and/or Saskatchewan River and their associated watersheds related to the conservation and protection of fish. The company's name was added to the Environmental Offenders Registry.

On February 18, 2020, **Drever Agencies Inc.** was fined $1,250,000 in Wetaskiwin Provincial Court for an offence committed in 2017 when about 1,800 liters of Petrosol solvent leaked from a storage tank into a creek and killed a number of fish. The creek is connected to the Battle River, a watershed with significant existing threats. The fine was directed to the Environmental Damages Fund and the company's name was added to the Environmental Offenders Registry.

3.6 Monitoring and Enforcing Aquaculture Activities

The *Aquaculture Activities Regulations* provide 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 *Regulations* also set three classes of deleterious (harmful) substances that may be deposited in waters frequented by fish:

- biochemical oxygen demanding matter;
- drugs; and,
- pesticides.

What is a biochemical oxygen demanding matter?

If organic material such as unconsumed feed, fecal matter, shellfish drop-off, and other organisms accumulate, the decomposition process begins to use oxygen and change the chemical properties of the nearby sediment.

The deposit of these substances is restricted to avoid, minimize, and mitigate any potential detriments to fish and fish habitat. The *Regulations* also require the industry to annually report on the deposit of drugs and pesticides in terms of frequency and quantity. In addition, aquaculture owners/operators must consider alternatives to avoid needing to use substances and to minimize potential environmental impacts.

If morbidity or death of fish is observed within 96 hours after the deposit of drugs or pesticides, the owner/operator of the aquaculture facility must notify DFO immediately. Violation of the Regulations are subject to enforcement action.

Our fishery officers spent almost 500 hours monitoring aquaculture activities and enforcing regulations in 2019-20. Of the 219 aquaculture operations inspected in 2019:

- 67% did not identify any violations; and,
- 99% did not result in charges.

In 2019-20, we started the development of a post-deposit monitoring program to assess, mitigate and monitor potential impacts to fish and fish habitat resulting from the deposit of deleterious substances at marine finfish aquaculture sites. As part of this, we are taking a comprehensive approach to addressing these potential impacts by taking into account cumulative effects from repeated deposits.

In March 2020, a Canadian Science Advisory Secretariat peer-review process was undertaken to support DFO's efforts to assess potential options to further strengthen pesticide and drug environmental monitoring at aquaculture sites. We also continued to work with provincial and territorial partners to maintain alignment across aquaculture regulatory regimes via the Canadian Council of Fisheries and Aquaculture Ministers.

KEY RESULT

National Aquaculture Public Reporting Data

Consistent with our commitment to openness and transparency, we publish detailed drug and pesticide data that we collect each year, including contextual information.

3.7 Preventing Aquatic Invasive Species

Invasive species are plants and animals (including fish and invertebrates) that are introduced outside their natural habitats. These species can harm our environment and displace native species by competing for food, degrading habitats, and introducing diseases. Aquatic invasive species (AIS) also contribute to the increasing number of at-risk fish, molluscs and plants in Canada.

The *Aquatic Invasive Species Regulations* help us prevent the introduction and spread of aquatic invasive species, and manage the species that have already established in our waterways. These

Regulations also enable federal, provincial, and territorial officials to take prevention and enforcement actions. Collaboration across jurisdictions is thus a key component of our efforts.

In 2019-20, we established and began to implement a management action plan to better prevent, detect, respond to, and manage aquatic invasive species based on the recommendations of the Commissioner of the Environment and Sustainable Development. Our actions included:

- holding training sessions on the regulations with provinces and territories and working to clarify roles and responsibilities for more efficient implementation;
- collaborating with Canada Border Services Agency on roles and responsibilities to better address importation and other human-mediated movements of aquatic invasive species;
- drafting a national enforcement strategy; and,
- preparing a process to identify and nominate aquatic invasive species to be prohibited or controlled in Canada under the AIS Regulations.

In addition, we launched the AIS Regulations pilot project in May 2019 to test the procedures and tools used to authorize projects near water that have direct or indirect impacts on AIS. We also completed the "Don't Let it Loose" education tools and outreach guidelines in collaboration with provinces and territories.

KEY RESULT

Protecting the Great Lakes from Sea Lamprey Impacts (or Damage)

Working with federal, state, and tribal agencies in the United States and the Province of Ontario, we managed to protect all five Great Lakes by suppressing sea lamprey abundance and the damage they could cause to the $7 billion fishery-based economy through a comprehensive program with the Great Lakes Fishery Commission and the U.S. Fish and Wildlife Service. In addition, we continued our consultations with First Nations to enable the control of sea lamprey in streams within First Nation territorial waters.

3.8 Monitoring Marine Water Quality for Shellfish

We survey the quality of the water in shellfish growing areas to identify actual and potential sources of pollution so we can minimize the potential health risks associated with eating shellfish. Following our surveys, we classify shellfish harvesting areas according to their suitability for harvesting. This is based on accepted water quality standards and general sanitary conditions. Our classification recommendations are then used by DFO to close and open shellfish harvesting areas under the *Management of Contaminated Fisheries Regulations*.

In 2019-20, we collected more than 26,500 marine water quality samples from nearly 6,380 marine sites to classify shellfish harvest areas along the coasts of the Atlantic and Pacific Ocean and the St. Lawrence Estuary.

We also continued to redefine established classifications of shellfish harvesting areas that are located close to wastewater treatment plants using leading-edge three-dimensional hydrodynamic modeling technology. As a result, 33 comprehensive assessments of wastewater systems have been completed as of 2019 and the harvesting limits have been revised in some locations.

KEY RESULT

Protecting Canadians from Consuming Contaminated Shellfish

Federal partners in the Canadian Shellfish Sanitation Program have been working together to raise the awareness among wastewater treatment plant operators about the importance of timely reporting when an unexpected discharge event occurs to prevent Canadians from consuming contaminated shellfish harvested in the area. As a result of these efforts, 2,907 environmental incidents with potential impacts to shellfish areas were reported in 2019-20, including discharges from wastewater treatment plants and their associated collection systems.

3.9 Streamlining Environmental Notifications

In an environmental emergency or occurrence which is likely to negatively impact fish and fish habitat, the person responsible for the incident or who has control of the activity that resulted in the emergency, must immediately notify an inspector, a fishery officer, or an authority listed in the *Deposit Out of the Normal Course of Events Notification Regulations*.

In most cases, provincial and territorial laws also require notification of an environmental emergency or occurrence. To reduce duplication, we have entered into environmental occurrences notification agreements with the governments of Alberta, British Columbia, Manitoba, the Northwest Territories, Ontario, Saskatchewan, and Yukon. These are in effect until March 2021.

Notification agreements enable us to streamline the process for persons who are required to verbally notify one or more governments about an environmental emergency. Under the agreements, the person can notify the 24-hour authority operating for the province or territory and they will transfer the information to us so we can provide timely and effective oversight, possible scientific support, compliance verification, and appropriate enforcement response.

KEY RESULT

Implementing Notification Agreements

In 2019-20, we continued to work with our provincial and territorial counterparts to implement notification agreements. This includes establishing management committees and developing standard operating procedures for collecting and processing notifications of environmental occurrences.

3.10 Responding to Environmental Emergencies

In the event of a significant pollution incident, we oversee the response actions taken by the responsible party to counteract, mitigate or remedy any adverse effects. We also give science-based expert advice 24 hours a day, seven days a week through the National Environmental Emergencies Centre to inform these response actions to reduce the consequence of environmental emergencies. This is done in collaboration with other federal, provincial and territorial governments, municipalities, and stakeholders.

Our environmental emergencies officers are authorized to:

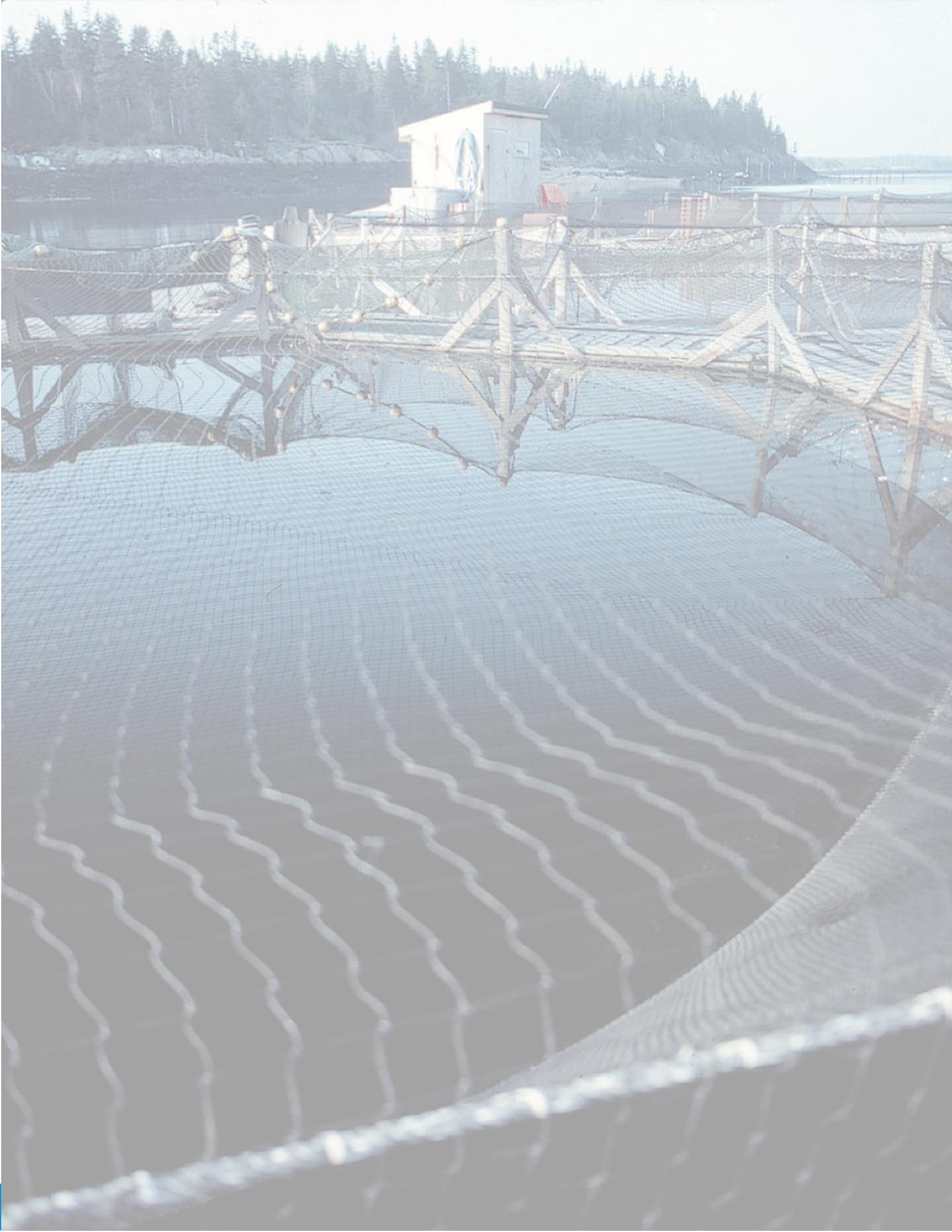
- receive notifications of deposits of deleterious substances into the environment;
- access and inspect the site of the deposits or any related documents in order to observe or to carry out spill response activities;
- collect relevant information and samples for the purpose of establishing the fate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

In 2019-20, the National Environmental Emergencies Centre recorded 5,518 notifications involving the unauthorized deposit, or the likelihood thereof, of a deleterious (harmful) substance.

KEY RESULT

Notification Incidents Increased Slightly

From 2016-2017 to 2019-2020, we observed a slight increase in the number of notifications of incidents involving the *Fisheries Act*. This increase appears to be connected to the increase in total number of notifications received at the National Environmental Emergency Centre.



4 Annex

4.1 Annual Report

This annual report fulfills the legislative requirements on the Minister of Fisheries, Oceans and the Canadian Coast Guard, and the Minister of Environment and Climate Change, to report on their efforts to administer and enforce the provisions of the *Fisheries Act* that help us protect fish and fish habitat and prevent pollution. It demonstrates the commitment of both Ministers to fulfill their responsibilities and enables readers to learn more about Canada's investments in healthy and sustainable fisheries and oceans.

4.2 *Fisheries 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 'fish and fish habitat protection' and the 'pollution prevention provisions.'

Fish and Fish Habitat Provisions

The fish and fish habitat protection provisions include:

- a prohibition against causing the death of fish, by means other than fishing (section 34.4)
- a prohibition against causing the harmful alteration, disruption or destruction of fish habitat (section 35);
- a framework of considerations to guide the Minister's decision-making functions (section 34.1); and,
- ministerial powers to ensure the free passage of fish or the protection of fish or fish habitat with respect to existing obstructions (section 34.3).

When applying these provisions, we employ a risk-based approach to determine the likelihood and severity of potential impacts to fish and fish habitat that could result from a given work, undertaking or activity.

Pollution Prevention Provisions

The pollution prevention provisions serve to protect fish by prohibiting pollution that could be deleterious (harmful) to fish. They are found in sections 34 to 40 of the *Fisheries Act* with subsection 36(3) considered to be the key pollution prevention provision as it prohibits the deposit of all deleterious substances:

- into water frequented by fish, or
- to any place, under any conditions, where it may enter water frequented by fish.

This provision applies to all deposits, whether they are made directly into water frequented by fish or indirectly, such as a roadside ditch that flows into water frequented by fish.

A deposit of a deleterious substance is only authorized pursuant to, and in a manner consistent with, a *Fisheries Act* regulation or by a regulation made under another federal legislation.

ECCC administers and enforces key regulations made under the pollution prevention provisions for a number of sectors including pulp and paper, metal and diamond mining and wastewater. DFO administers the pollution prevention provisions and regulations for subject matters related to aquaculture facilities and any resulting effects of those activities on the waters frequented by fish, as well as to control or eradication of any aquatic invasive or other species that constitute a pest to fisheries.

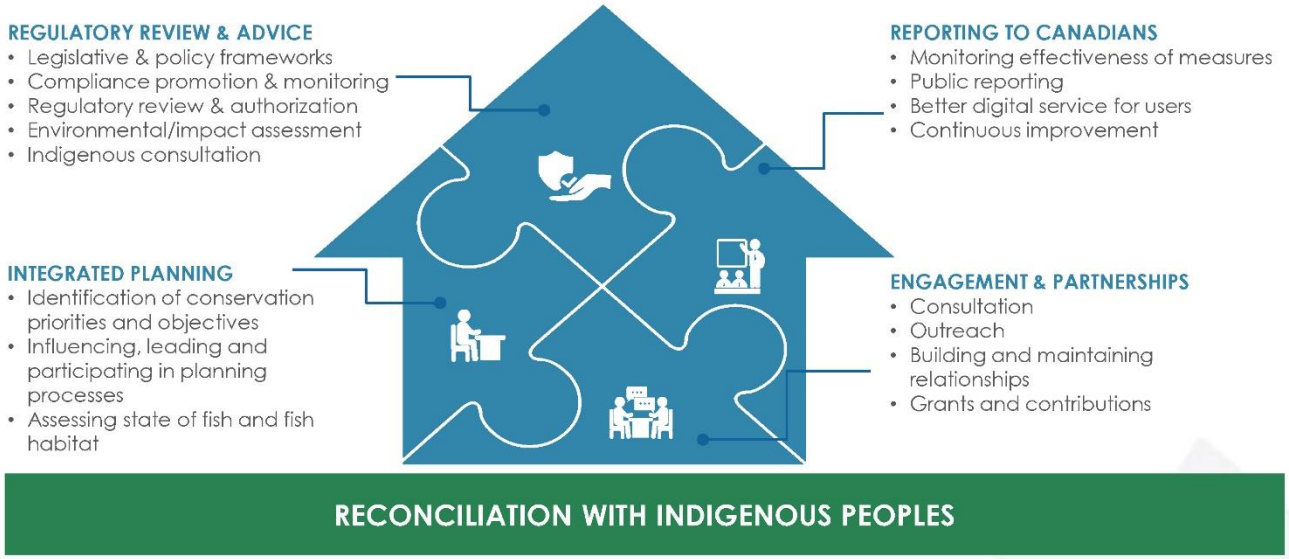
4.3 Responsible Programs

Fish and Fish Habitat Protection Program

We work to conserve and protect fish and fish habitat for future generations, while supporting economic growth, by administering the fish and fish habitat protection provisions of the *Fisheries Act*. This contributes to the broader DFO mandate of ensuring that Canada's oceans and other aquatic ecosystems are protected from the negative impacts to ensure healthy biodiversity, prevent the spread of invasive species, protect species at risk and promote sustainable fisheries.

Following the modernization of the *Fisheries Act*, our team was structured into four areas of work:

- regulatory review and advice;
- integrated planning;
- engagement and partnerships; and,
- reporting to Canadians.



Advancing reconciliation with Indigenous peoples is a foundational theme for our work. Integrated planning has also been re-introduced to address a recommendation from the Standing Committee on Fisheries and Oceans: *"that Fisheries and Oceans Canada take an ecosystem approach to protection and restoration of fish habitats so that the entire food web is preserved for fish by:*

1. *Adopting key sustainability principles.*
2. *Protecting the ecological integrity of fish habitat.*
3. *Protecting key areas of fish habitat."*

Our Integrated Planning unit is working in collaboration with provinces and territories, Indigenous peoples, and stakeholders to establish management priorities, identify sensitive habitats, and understand the needs and objectives of resources users.

Conservation and Protection Program

We are responsible for monitoring compliance with legislation and regulations set up to conserve and protect fish and fish habitat. Our fishery officers are authorized by the Minister to enforce fisheries regulations, including the fish and fish habitat protection provisions of the *Fisheries Act*. To complete the work, we conduct at-sea and inland patrols in marine and freshwater areas, monitor catches, conduct investigations and give information to fish harvesters about relevant regulations and conditions of licence. Our fishery officers also devote a lot of time to conserve and protect habitat, as described in Section 2.3 above.

Conservation and Protection's compliance and enforcement activities are delivered based on an intelligence-led three pillar approach:

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

4.4 Tables

Fisheries and Oceans Canada

Table 1
Projects Reviewed by the National Energy Board and the Canada Energy Regulator[14]
Fiscal Year 2019-20

Determination	2019-20
Deemed unlikely to result in serious harm to fish as company proposed to use DFO's "Measures to Avoid Harm"	1219
Deemed unlikely to result in serious harm to fish after additional review/input from the NEB	203
Deemed likely to result in serious harm to fish and referred to DFO	13
Total	**1435**

Table 2
Projects Monitored by the National Energy Board
Fiscal Year 2019-20

Determination	2019 - 20
Deemed to be compliant with the NEB Act and *Fisheries Act* requirements for fish and fish habitat protection	93%
Non-compliance with the NEB Act requirements for fish and fish habitat protection addressed by the NEB	7%
Non-compliance with *Fisheries Act* - notification/discussion with DFO	0
Total	**100%**

[14] The Canada Energy Regulator replaced the National Energy Board on August 28, 2019.

Table 3a
Summary of Habitat Referrals by Primary Impact
Fiscal Year 2019-20 (April 1 – August 27, 2019*)[15]

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[16]	Total
Newfoundland and Labrador	2	17	11	0	14	36	0	27	5	**112**
Maritimes	19	0	22	10	46	81	21	28	0	**227**
Gulf	8	3	27	5	46	52	10	38	1	**190**
Quebec	5	1	10	8	26	42	5	21	0	**118**
Central & Arctic	34	7	369	7	62	217	17	48	12	**773**
Pacific	17	2	52	6	1	149	27	11	2	**267**
Total	**85**	**30**	**491**	**36**	**195**	**577**	**80**	**173**	**20**	**1,687**

* Before coming into force of the amended *Fisheries Act,* (August 28, 2019)

Table 3b
Summary of Habitat Referrals by Primary Impact
Fiscal Year 2019-20 (August 28 – March 31, 2020*)

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	Total
Newfoundland and Labrador	4	1	8	0	18	20	0	33	5	**89**
Maritimes	16	0	19	3	41	76	11	35	2	**203**
Gulf	4	1	27	2	48	61	4	65	0	**212**
Quebec	9	1	16	5	38	73	1	30	0	**173**
Central & Arctic	38	26	381	64	145	437	49	66	70	**1,276**
Pacific	16	9	91	6	7	355	60	8	5	**557**
Total	**87**	**38**	**542**	**80**	**297**	**1,022**	**125**	**237**	**82**	**2,510**

* After coming into force of the amended *Fisheries Act,* (August 28, 2019)

[15] 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.

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

Table 4a
Advice/Responses Given and Authorizations Issued
Fiscal Year 2019-20 (April 1 – August 27, 2019*)

Region	Advice/Response Provided to Proponent or Others[17]	Authorizations Issued	Total
Newfoundland and Labrador	151	0	**151**
Maritimes	227	7	**234**
Gulf	181	6	**187**
Quebec	158	21	**179**
Central and Arctic	587	25	**612**
Pacific	249	13	**262**
Total	**1,553**	**72**	**1,625**

* Before Coming into Force of the Amended *Fisheries Act,* (August 28, 2019)

Table 4b
Advice/Responses Given and Authorizations Issued
Fiscal Year 2019-20 (August 28 – March 31, 2020*)

Region	Advice/Response Provided to Proponent or Others	Authorizations Issued[18]	Total
Newfoundland and Labrador	104	0	**104**
Maritimes	158	10	**168**
Gulf	235	10	**245**
Quebec	219	26	**245**
Central and Arctic	845	46	**891**
Pacific	312	26	**338**
Total	**1,874**	**118**	**1,991**

* After Coming into Force of the Amended *Fisheries Act*, (August 28, 2019)

[17] 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, measures to protect fish and fish habitat (website) 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.

[18] The total number of authorizations includes both new and amended authorizations issued under the *Fisheries Act*. NOTE: this number does not include any Class Authorization (see table 5).

Table 5
Notifications of Use of Class Authorizations
Fiscal Year 2019-20

Region	Class Authorizations Notifications		Total
	April 1 – August 27, 2019*	August 28, 2019 – March 31, 2020**	
Newfoundland and Labrador	0	0	**0**
Maritimes	0	0	**0**
Gulf	0	0	**0**
Quebec	0	0	**0**
Central and Arctic	57	113	**170**
Pacific[19]	24	20	**44**
Total	**81**	**133**	**214**

* Before Coming into Force of the Amended *Fisheries Act,* (August 28, 2019)
** After Coming into Force of the Amended *Fisheries Act*, (August 28, 2019)

Table 6
Allocation of Compliance Effort and Fishery Officer Effort by Fisheries Habitat Sectors
Fiscal Year 2019-20

Habitat Activities	Hours	Percentage
Agriculture	1748	6%
Aquaculture	498	2%
Death of Fish	372	1%
Forestry	1452	5%
Hydro	1036	4%
Industrial/Commercial	3385	12%
Mining	4377	16%
Oil/Gas	1065	4%
Recreational	3621	13%
Rural/Urban Dev.	7238	26%
Transportation	3115	11%
Total	**27,907**	**100%**

[19] Number of placer mining applications reviewed for compliance with the watershed class authorizations issued in 2010 for specific watersheds in the Yukon. Site specific authorizations issued for placer mines, outside of the class authorization system, are counted in Table 4b.

Table 7
Summary of Fisheries Compliance and Enforcement Activities by Region
Fiscal Year 2019-20

Region	Warnings Issued	*Fisheries Act* Direction	Charges Laid	Alternatives to Prosecution[20]
Newfoundland and Labrador	0	0	0	0
Maritimes	0	1	0	0
Gulf	2	2	0	0
Quebec	11	0	0	0
Central and Arctic	2	2	0	0
Pacific	10	5	0	0
Total	**25**	**10**	**0**	**0**

[20] Alternatives to prosecution include finding out-of-court settlements to correct serious harm caused to fish affected by commercial, recreational or Aboriginal fisheries, or to fish on which such fisheries depend. Please see the Species at Risk Annual Report for more information on the Department's work on aquatic species at risk. Please note that the information in this report is categorized by calendar year.

Table 8

Enforcement Activities and Measures taken during Fiscal Year 2019-20[21]

Instrument	Inspections[22]				Enforcement Measures[23] from Inspections and Investigations			
					Written Warnings		Directions	
	Total	On-Site	Off-Site	Investigation Started[24]	No. of letters	No. of infractions[25]	No. of directions	No. of infractions
Fisheries Act (Grand Total)	2097	974	1123	29	196	595	27	39
General Prohibition[26]	1098	657	441	22	93	249	26	30
Deposit Out of Normal Course of Events Notification Regulations	2	2	-	-	-	-	-	-
Metal and Diamond Mining Effluent Regulations[27]	542	125	417	4	34	102	1	9
Petroleum Refinery Liquid Effluent Regulations	3	-	3	-	-	-	-	-
Pulp and Paper Effluent Regulations	256	49	207	-	13	22	-	-
Wastewater Systems Effluent Regulations	196	141	55	3	56	222	-	-

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

[22] 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, 2019 and March 31, 2020 are tabulated here.

[23] 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.

[24] Investigations are tabulated by the number of investigation files started during 2019-2020.

[25] 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.

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

[27] The *Metal Mining Effluent Regulations* were amended in May 2018 and became the *Metal and Diamond Mining Effluent Regulations*.

Table 9
Investigations Breakdown for Fiscal Year 2019-20

	No. of Investigations
(A) Started before the fiscal year and ongoing after the fiscal year	74
(B) Started in the fiscal year	29
(C) Ended in the fiscal year	68

Table 10
Prosecutions for Fiscal Year 2019-20

	Prosecutions[28]			
	Charges Laid		Concluded	
Instruments	Prosecuted Subjects[29]	Charges[30]	Convicted Subjects[31]	Counts[32]
Fisheries Act (Grand Total)	3	3	8	11
General Prohibition[33]	3	3	7	10
Meat and Poultry Products Plant Liquid Effluent Regulations	-	-	-	-
Metal and Diamond Mining Effluent Regulations[34]	-	-	1	1
Petroleum Refinery Liquid Effluent Regulations	-	-	-	-
Potato Processing Plant Liquid Effluent Regulations	-	-	-	-
Pulp and Paper Effluent Regulations	-	-	-	-
Wastewater Systems Effluent Regulations	-	-	-	-

[28] 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.

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

[30] 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.

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

[32] 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.

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

[34] The *Metal Mining Effluent Regulations* were amended in May 2018 and became the *Metal and Diamond Mining Effluent Regulations*.