

Fish and Wildlife Special Purpose Account

Annual Report 2017-18



Cette publication hautement spécialisée Special Purpose Account Expenditure Report n'est disponible qu'en Anglais en vertu du Règlement 411/97 qui en exempte l'application de la Loi sur les services en français. Pour obtenir de l'aide en français, veuillez communiquer avec FLS Information Access Representative au ministère des Richesses naturelles et Forêts au outdoorscard.mnr@ontario.ca

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Submitted to the
LIEUTENANT GOVERNOR IN COUNCIL

Date: JANUARY 19, 2023

Introduction

The Ministry of Natural Resources and Forestry (MNRF) is responsible for fish and wildlife management in Ontario. This includes policy, planning, program development and delivery to sustain healthy fish and wildlife populations. In 1995, the MNRF established a separate account to serve as the financial mechanism to dedicate fish and wildlife revenue to fish and wildlife management.

All licence fees, fines and royalties collected under the *Fish and Wildlife Conservation Act, 1997* (FWCA) flow into the Fish and Wildlife Special Purpose Account (FW SPA) and are applied to fish and wildlife management.

Pursuant to section 85(4) of the FWCA, the Minister of Natural Resources and Forestry is required to ensure that a report is prepared annually on the financial affairs of the FW SPA. This annual report of the 2017-18 fiscal year provides an overview of the financial details and associated achievements delivered through the FW SPA.

Fish and Wildlife Heritage Commission

The Fish and Wildlife Heritage Commission (FWHC), established under the provisions of the *Heritage Hunting and Fishing Act, 2002*, provides recommendations on matters referred to it by the Minister of Natural Resources and Forestry.

The FWHC has a membership of eleven, including the commission chair, who represent a cross-section of key interests in the sustainable use of Ontario's fish and wildlife resources. During the 2017-18 fiscal year, the Minister had seven members and a chair appointed to the Commission. The FWHC members are appointed by Order-in-Council.

The membership for 2017-18 was as follows:

Position	Name	Location
Member/Chair	Reid, Kathleen (Kathy)	Norwood
Member	Dickinson, Leonard (Len)	Lanark
Member	McDonald, John	Sioux Lookout
Member	Mitchell, Gord	Field
Member	Morin, Conrad R.	Hearst
Member	Rivard, Deborah (Debbie)	Murillo
Member	Rivard, Glenn	Murillo
Member	Williamson, John C.	Inverary

The responsibilities of the FWHC include providing advice on:

- practices that will contribute to recreational hunting and fishing being valued by future generations;
- public participation in fish and wildlife conservation programs;
- youth participation in hunting, fishing and other fish and wildlife activities;
- tourism related to hunting, fishing and other fish and wildlife related activities;
- new opportunities for hunting, fishing and other fish and wildlife related activities; and
- the operation of the FW SPA.

The FWHC reviewed materials and provided input on a variety of initiatives including:

- Black Bear management and monitoring
- Ontario cage aquaculture guidelines
- Development of a Small Game and Furbearer Management Framework for Ontario
- Development of the White-tailed Deer Management Policy for Ontario
- Elk management and monitoring
- Federal Fisheries Act review
- Hunter education program modernization
- Landscape approach to wildlife management
- Learn to Fish
- Renewal of the fish and wildlife licensing service
- Moose management and monitoring
- Provincial Bait Policy Review
- Provincial Wildlife Management Strategy
- Status of Asian Carp in the Great Lakes
- Sustainability Strategy for the Fish and Wildlife Special Purpose Account
- Wolf and Coyote management approaches

In addition, the FWHC provided recommendations related to the marketing of fishing and hunting activities, and the management of the FW SPA.

Fish and Wildlife Program at a Glance

\$76.6 million

In 2017-18, the FW SPA contributed \$76.6M to fish and wildlife management in Ontario

100%

of all fishing and hunting licence fees, fines and royalties are deposited in the FW SPA

2/3

of fish and wildlife management is funded from the FW SPA

1/3 is funded by other Ontario Government funds

1.2 million

licensed anglers enjoy Ontario's recreational fisheries annually

2 million+

Outdoors Cards and fishing and hunting licences sold annually

\$63 million

Average annual revenue from fishing and hunting licences

\$1.6 billion¹

Anglers spend about \$1.6B per year on recreational fishing in Ontario

250,000

lakes in Ontario

145

fish species in Ontario

\$230 million

The commercial fishery contributes \$230M to the economy

\$563 million

Ontario residents spend \$563M on hunting activities per year

92.3 million

hectares of Crown Land in Ontario

1. Source: The 2010 Survey of Recreational Fishing in Canada: Selected Results for Ontario Fisheries

Financial Summary

Fish and Wildlife Expenditures

Fish and Wildlife related expenditures are funded through a combination of FW SPA and general revenues through the Consolidated Revenue Fund (CRF). Capital expenditures to support the program (i.e. vessels, vehicles, fish culture stations etc.) are funded solely through the CRF.

Fish and Wildlife expenditures, including enforcement, amounted to \$123.3 million in fiscal year 2017-18. Approximately 62% of these expenditures (\$76.6 million) were funded by the FW SPA. The remaining \$46.7 million in program expenditures were funded by the CRF. Over the last 10 years the Fish and Wildlife Program expenses have increased while the FW SPA funded portion of fish and wildlife management activities has remained relatively consistent. The following table summarizes the FW SPA and CRF contributions since 2008-09.

TABLE 1: FISH AND WILDLIFE PROGRAM EXPENDITURES (\$ in millions)

Fiscal Year	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
FW SPA Expenditures	\$ 61.6	\$ 64.2	\$ 64.5	\$ 67.6	\$ 68.6	\$ 65.8	\$ 69.8	\$ 70.8	\$ 71.0	\$ 76.6
FW CRF Expenditures	\$ 34.2	\$ 34.8	\$ 44.0	\$ 38.4	\$ 43.7	\$ 46.7	\$ 39.2	\$ 41.0	\$ 46.4	\$ 46.7
Total Expenditures	\$ 95.8	\$ 99.0	\$ 108.5	\$ 106.0	\$ 112.3	\$ 112.5	\$ 109.0	\$ 111.8	\$ 117.4	\$ 123.3

FW SPA Revenues and Expenditures

The *Fish and Wildlife Conservation Act, 1997* (FWCA) requires that revenues collected under that Act flow into the FW SPA. This includes all licence fees, royalties and fines paid under the FWCA and its regulations.

Money held in this account may only be spent on:

- the conservation or management of wildlife or fish populations or the ecosystems of which those populations are a part;

- matters related to the activities of people as they interact with or affect wildlife or fish populations, including any matter related to safety; or,
- a refund of all or part of a fee or royalty.

Annual recoveries from the FW SPA are planned based on a 3-year rolling average of expected revenues, due to significant annual fluctuations resulting from the Outdoors Card 3-year purchasing cycle. Treasury Board approves the FW SPA recovery level as part of the ministry's annual budget submission.

TABLE 2: SUMMARY OF REVENUES, RECOVERIES AND YEAR-END ACCOUNT BALANCES (\$ in millions)

Item	2015-16 Actual	2016-17 Actual	2017-18 Plan	2017-18 Actual	2018-19 Plan
Opening Balance	\$ 19.2	\$ 18.5	\$ 26.4	\$ 26.4	\$25.3
Revenues	\$ 70.1	\$ 78.9	\$ 71.3	\$ 75.5	\$68.7
Recoveries	(\$ 70.8)	(\$ 71.0)	(\$ 76.7)	(\$ 76.6)	(\$76.7)
Year End FW SPA Balance	\$ 18.5	\$ 26.4	\$ 21.0	\$ 25.3	\$17.3

In 2017-18 revenue was higher than planned by 4.3M, which may be due to changing licence renewal patterns and higher than expected sales of three year licences.

Financial Summary *continued*

TABLE 3: FW SPA REVENUES FOR THE LAST 3 FISCAL YEARS (\$ in millions)*

Source of Revenue	2015-16	2016-17	2017-18
Ontario Resident Angling and Hunting Licences and Permits	\$ 39.7	\$ 48.5	\$ 44.5
Non-Resident Angling and Hunting Licences and Permits	\$ 21.2	\$ 20.5	\$ 21.2
Commercial Fishing Licences and Royalties	\$ 1.2	\$ 1.6	\$ 2.0
Commercial Bait Licences	\$ 0.3	\$ 0.3	\$ 0.3
Furbearer Licences and Royalties	\$ 0.9	\$ 0.9	\$ 0.8
Rabies Vaccine Royalties	\$ 0.4	\$ 0.5	\$ 0.5
Fines and Penalties	\$ 0.7	\$ 0.6	\$ 0.7
Interest	\$ 0.2	\$ 0.2	\$ 0.4
Service Fee Revenue	\$ 4.3	\$ 4.5	\$ 4.3
Other Revenue	\$ 1.2	\$ 1.3	\$ 0.8
TOTAL REVENUE	\$ 70.1	\$ 78.9	\$ 75.5

* Since the introduction of 3-year license products, the FW SPA revenue cycle has traditionally reflected a high year of revenue followed by a medium and then low year.

TABLE 4: 2017-18 DETAILS OF EXPENSES BY SERVICE (\$ in millions)

Item	Expenditures
Planning, Policy and Regulatory	\$ 17.1
Species and Ecosystem Science	\$ 14.5
Conservation Officers and Enforcement	\$ 13.7
Outdoors Cards and Licensing	\$ 12.8
Population Health, Rehabilitation and Enhancement	\$ 12.4
Safety, Education and Promotion	\$ 6.1
TOTAL	\$ 76.6

TABLE 5: 2018-19 PLANNED EXPENDITURES BY SERVICE (\$ in millions)

Item	Planned Expenditures
Planning, Policy and Regulatory	\$ 18.5
Conservation Officers and Enforcement	\$ 13.6
Outdoors Cards and Licensing	\$ 13.2
Species and Ecosystem Science	\$ 13.2
Population Health, Rehabilitation and Enhancement	\$ 12.3
Safety, Education and Promotion	\$ 5.9
TOTAL	\$ 76.7

Services Funded by the Fish and Wildlife Special Purpose Account

The MNRF Fish and Wildlife Special Purpose Account (FW SPA) supports the management of fish and wildlife populations in many important ways, including the following highlights:

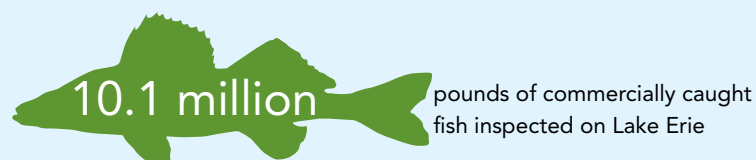
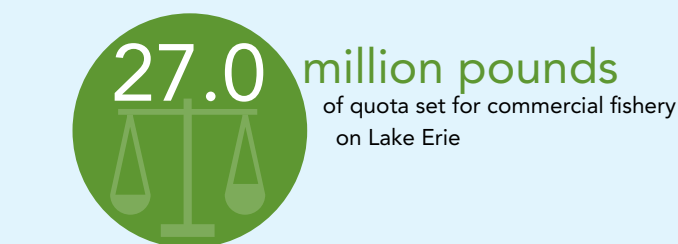
Planning, Policy and Regulatory Services

Planning, Policy and Regulatory Services includes development and implementation of resource management plans, policies, legislation, programs and standards related to recreational and commercial fisheries management and wildlife management in Ontario.

Regulations and policies outline where, when and how fishing, hunting and trapping is conducted in the province. FW SPA expenditures support staff costs to deliver fish and wildlife management activities including the review and allocation of aquaculture and commercial bait licences, commercial fishing regulatory compliance, and public planning and engagement opportunities such as Fisheries Management Zone (FMZ) Advisory Councils. Information technology costs for tools such as Fish ON-Line and the fish stocking database are also included.

2017-18 EXPENDITURES (\$ in millions)

Fish and Wildlife Legislation, Regulation and Policy Development	\$ 6.0
Commercial Fisheries Management (Regulatory)	\$ 2.7
Fisheries Management Plans and Allocations	\$ 1.8
Wildlife Habitat and Population Planning and Authorizations	\$ 1.7
Fish and Wildlife Information and Information Technology	\$ 1.5
Recreational Fisheries Management	\$ 1.2
Fish Habitat Management	\$ 0.7
Commercial Bait Management	\$ 0.6
Aquaculture Management	\$ 0.5
Provincial Committee and Zone Council Support	\$ 0.4
TOTAL	\$ 17.1



Planning, Policy and Regulatory Services *continued*

Legislation, Regulation and Policy Development

Fisheries Management:

- undertook public consultation and Indigenous engagement on the draft Strategic Policy for Bait Management in Ontario; and
- released Application Guidelines for Cage Aquaculture Facilities.

Wildlife Management:

- continued funding contributions to the Canadian Wildlife Health Cooperative (CWHC) to undertake wildlife disease diagnoses, provide maintenance of data/web-based information services and to provide the wildlife mortality reporting hotline;
- completed public consultation and engagement on enhancements and amendments to regulations designed to support the development of Ontario's fish and wildlife licensing service;
- finalized Ontario's White-tailed Deer management policy; and
- monitored the Black Bear spring hunting pilot.

Wetlands:

- released the final *A Wetland Conservation Strategy for Ontario, 2017-2030*; and
- continued strategic partnerships to support wetland conservation. Partners included:
 - Ducks Unlimited Canada
 - Eastern Habitat Joint Venture
 - Bird Studies Canada.

Invasive Species:

- continued work on the following:
 - implementation of the *Ontario Invasive Species Strategic Plan (2012)*, and the *Invasive Species Act, 2015*;
 - strategic partnerships to support education and outreach, research, monitoring/reporting, and prevention and control of high risk invasive species. Partners included:
 - Invasive Species Centre
 - Ontario Federation of Anglers and Hunters
 - Ontario Invasive Plant Council

PARTICIPATED IN AND SUPPORTED COMMITTEES SUCH AS:

- Bait Review Advisory Group
 - Big Game Management Advisory Committee
 - Canadian Wildlife Directors Committee
 - Fish and Wildlife Heritage Commission
 - Human-Wildlife Conflict Advisory Group and Steering Committee
 - Hunter Education Instructor Advisory Committee
 - International Hunter Education Association Canada
 - local citizens committees
 - local Fisheries Management Zone Advisory Councils
 - Ontario Moose-Bear Allocation Advisory Committee
 - Trapper Education Committee
-
- implementation of an innovative invasive species awareness campaign, including social media, printed products, and digital advertising with the objective of educating the public on how to identify and fight the spread of invasive species;
 - advancement of the work of inter-provincial and international working groups focused on reducing the threat and impacts of invasive species in Canada and specifically within the Great Lakes basin;
 - developed a new strategic partnership with the Federation of Ontario Cottager's Associations to support education, outreach, and management of aquatic invasive species by engaging cottage associations; and
 - conducted a project to validate the risk assessment tool to determine if changes to the tool, or to the use of the tool are required.

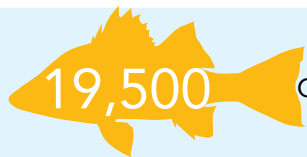
Species and Ecosystem Science

Species and Ecosystem Science includes monitoring and research programs to better understand the state of resources to guide management decisions.

FW SPA expenditures support analysis of hunter and angler surveys, Moose aerial inventory surveys, and broadscale and inland lake monitoring. State of the Resource reports are published to describe the condition, threats, trends and management response associated with specific issues, geographic areas, species, and habitats.

2017-18 EXPENDITURES (\$ in millions)

Fisheries Management Research and Monitoring	\$ 7.4
Game Wildlife Research	\$ 3.0
Great Lakes Fisheries Population and Habitat Monitoring	\$ 2.3
Commercial Fisheries Management	\$ 0.7
Moose Aerial Inventory	\$ 0.8
Hunter Surveys	\$ 0.3
TOTAL	\$ 14.5



Commercial fish Daily Catch Records validated



water samples were taken for Asian Carp surveillance from 99 locations in the Lake Erie Watershed

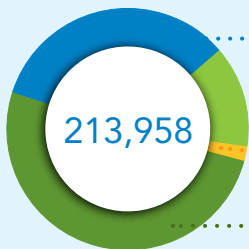


Lakes surveyed over the last five years to better understand the health of our lakes and fisheries resources



Ontario lakes surveyed in 2017-18 through angler surveys, water quality testing, netting surveys and invasive species surveillance to gather information and help manage fish populations

Surveys mailed to hunters for completion and submission to MNRF for compilation



72,305 Moose

28,793 bear

4,578 wolf/coyote

108,282 deer



Moose aerial inventories were completed

Conservation Officers and Enforcement

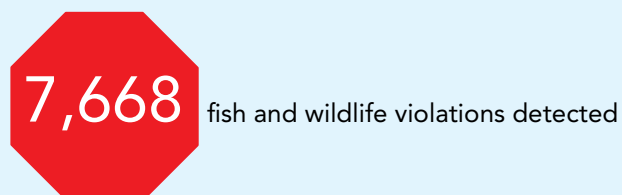
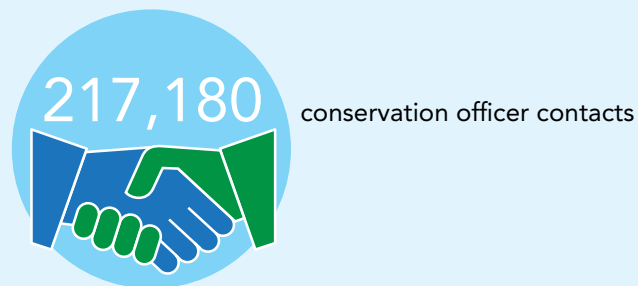
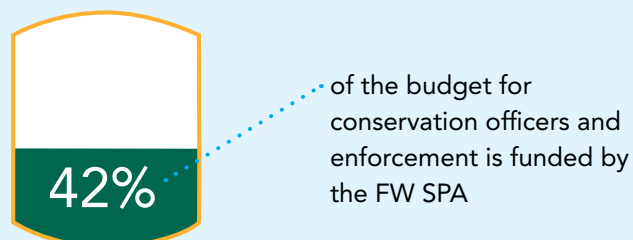
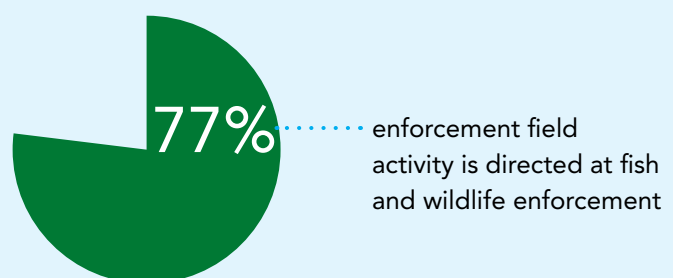


Conservation Officers provide regulatory enforcement for the protection of Ontario's natural resources and public safety. This includes specialized units and services to support field enforcement, including a canine program, intelligence and special investigations, and mobile offices in conservation officer vehicles. Officers conduct public outreach and education to increase awareness and knowledge and promote compliance with Ontario's *Fish and Wildlife Conservation Act, 1997*.

Expenditures funded through the FW SPA include officers' salaries and benefits, operational costs such as fuel, travel and patrol expenses, uniforms, forensics and special investigations. Information technology costs such as specialized enforcement software, mobile offices and staff safety watch and radio monitoring services are also included.

2017-18 EXPENDITURES (\$ in millions)

Salaries and Benefits	\$ 9.6
Field Operations	\$ 2.8
IT and Communications	\$ 0.8
Safety Watch	\$ 0.5
TOTAL	\$ 13.7



Outdoors Cards and Licensing

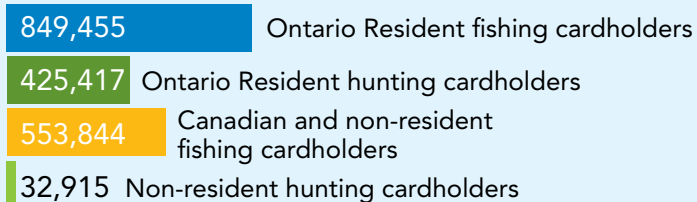
Outdoors Cards and Licensing includes the issuance of sport fishing and hunting licences, the administration of big game draws and public support through the Natural Resources Information and Support Centre.

FW SPA expenditures are related to licensing and draws and contact centre support. This includes staff costs, production of Outdoors Cards, licences, seals and tags, postage, the Licensing Automation System, and commission paid to private licence issuers to sell Outdoors Cards and licences.

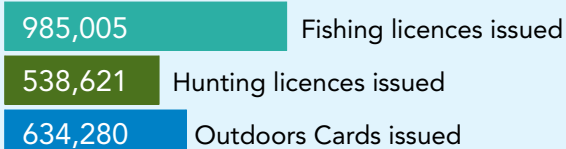
2017-18 EXPENDITURES (\$ in millions)

Licensing Automation System	\$ 7.7
Licensing and Client Services	\$ 1.6
Private Issuer Costs	\$ 1.4
Contact Centres	\$ 1.2
Outdoors Card Production	\$ 0.9
TOTAL	\$12.8

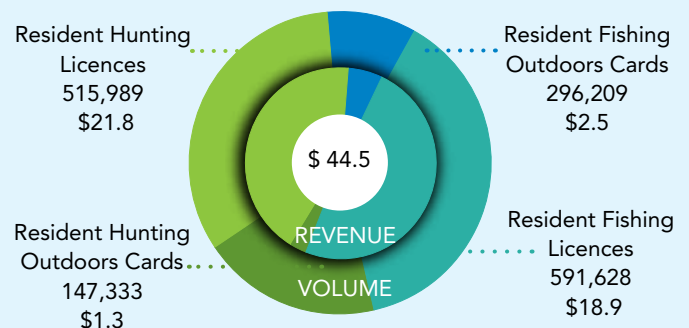
TOTAL CARDHOLDERS



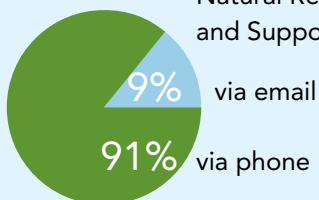
LICENCES and OUTDOORS CARDS ISSUED IN 2017-18



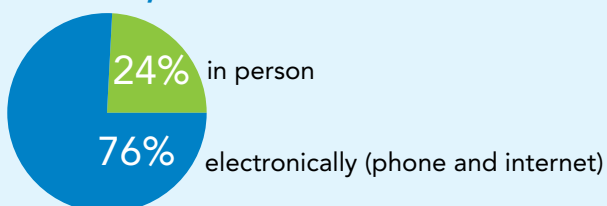
2017-18 ONTARIO RESIDENT ANGLING AND HUNTING LICENCE SALES – VOLUME/REVENUE (\$ in millions)



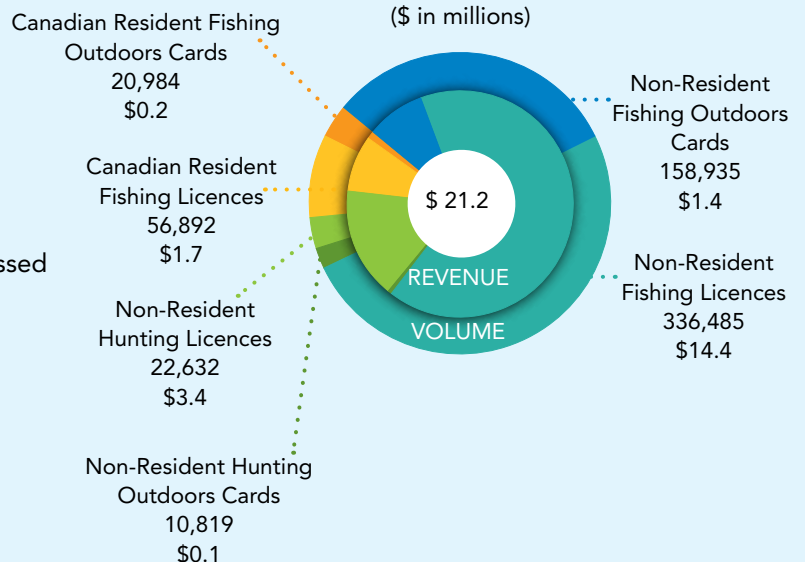
163,500 inquiries received through the Natural Resources Information and Support Centre



249,958 big game draw applications processed



2017-18 NON-RESIDENT ANGLING AND HUNTING LICENCE SALES – VOLUME/REVENUE (\$ in millions)



Population Health, Rehabilitation and Enhancement

Population Health, Rehabilitation and Enhancement protects the sustainability of native fish and wildlife populations. MNRF sets targets for fish produced for stocking including those for community hatchery programs; however, actual numbers depend on the availability and quality of fertilized eggs collected. FW SPA expenditures support fish stocking, data collection (inventory, monitoring), information management, analysis and assessment of data collection, and reporting.

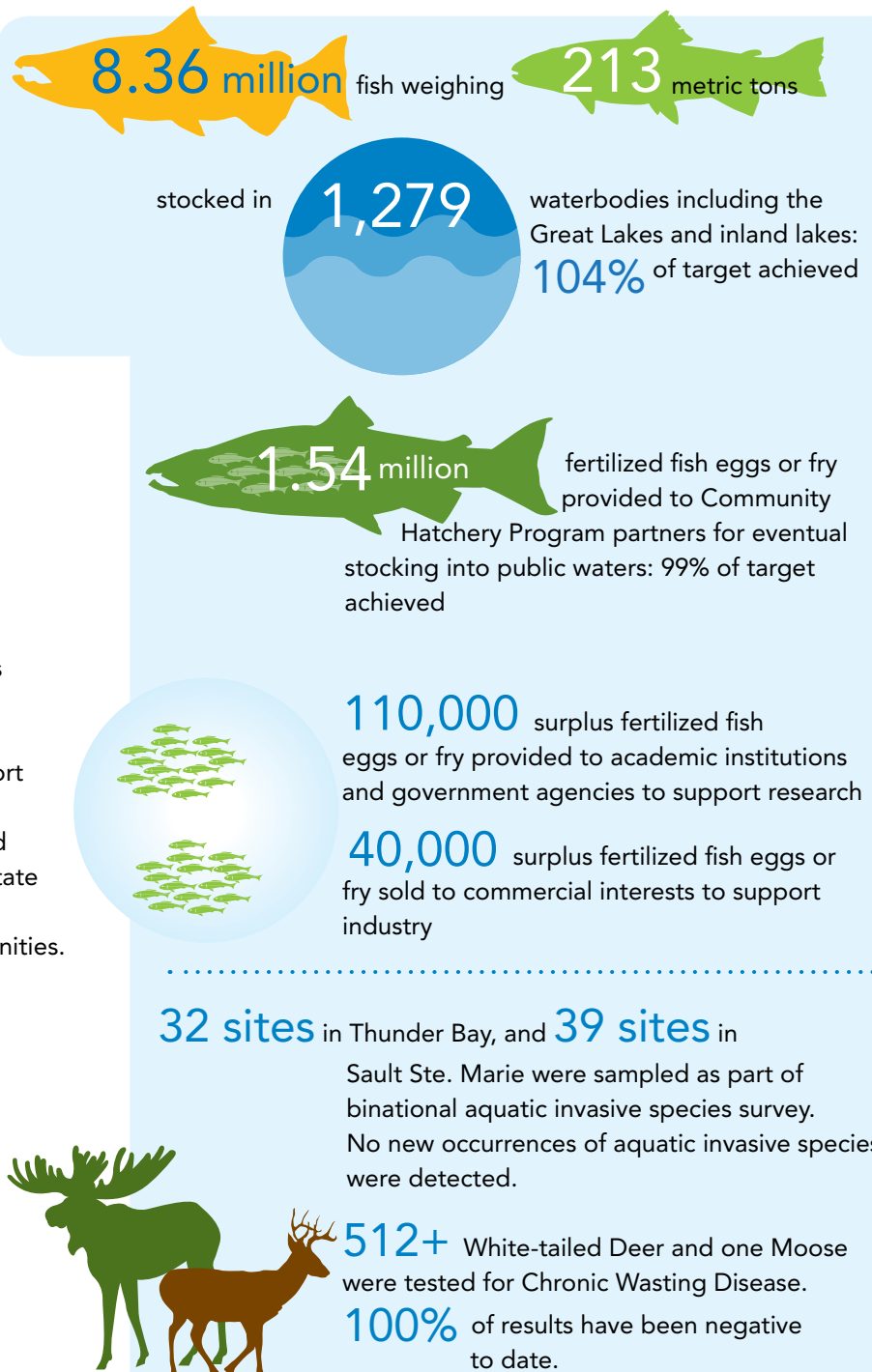
Expenditures also include invasive species monitoring, wild fur management including issuance of trapping licences, setting quotas and monitoring harvest, and fish and wildlife disease monitoring.

FW SPA expenditures contribute to the operation of the Canadian Wildlife Health Cooperative, a cooperative of provincial/territorial, federal and private agencies that provides access to specialized wildlife health expertise and services such as disease diagnoses, veterinary lab capacity, and research and academic collaboration that benefits the public, government/non-government agencies and the private sector.

The FW SPA provides funding to support operating costs for the province's nine fish culture stations, which produce and stock fish into public waters to rehabilitate degraded fish stocks and to create, maintain and enhance angling opportunities.

2017-18 EXPENDITURES (\$ in millions)

Fish Culture	\$ 6.6
Fish and Wildlife Ecosystem Maintenance and Reporting	\$ 3.1
Invasive Species Management and Control	\$ 1.3
Wild Furbearer Management	\$ 0.7
Fish and Wildlife Disease Monitoring	\$ 0.4
Rabies Management	\$ 0.3
TOTAL	\$ 12.4



Safety, Education and Promotion

Safety, Education and Promotion increases public awareness of fish and wildlife resources, and the social, economic, health and lifestyle benefits of them, including fishing and hunting activities that build a strong recreational fishing and hunting heritage. These initiatives also increase awareness of the threat of invasive species and encourage positive actions by the public to prevent, detect, respond, manage and adapt to invasive species.

FW SPA expenditures include the Kids' Fish Art Contest, the Hunter Education Program, trapper education, the Learn to Fish Program, public outreach and education at community events. Responding to fish die-off events, conducting site visits to inspect wildlife damage to agricultural crops and to make recommendations to prevent further wildlife damage, and promoting compliance with the *Fish and Wildlife Conservation Act, 1997* are also included.

2017-18 EXPENDITURES (\$ in millions)

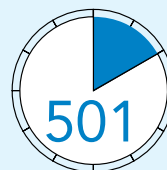
Wildlife Education and Communication	\$ 2.1
Marketing and Operating Costs	\$ 1.0
Prevention and Management of Human/Wildlife Conflict	\$ 1.0
Public Outreach	\$ 1.0
Hunter Education	\$ 0.5
Fisheries Local Incident Management	\$ 0.3
Wildlife Compliance Promotion and Incident Management	\$ 0.2
TOTAL	\$ 6.1

20,000

Number of students that completed Hunter Education in 2017

7,900+

Adults and children that participated in [Learn to Fish](#)



501

[Learn to Fish](#) 2 hour sessions delivered across Southern and Central Ontario

STRATEGIC PARTNERSHIPS AND BUSINESS AGREEMENTS

Ontario
Fur Managers
Federation

Grand Council
Treaty #3

Trapper education and administration
of trapper licensing

Union of
Ontario Indians

Nishnawbe
Aski Nation

449,000

Fish ON-Line website hits

18,000

Number of lakes Fish ON-Line provides information on



485

Entries in Kids' Fish Art Contest

Initiatives in the Spotlight

Each year the MNRF manages fish and wildlife populations and their habitats for long-term sustainability and recreational opportunities for angling, hunting and trapping. The following achievements section provides detailed examples of a few initiatives undertaken by the ministry in 2017-18, that were supported by the FW SPA.

Determining Black Bear Population Stability

Black Bears are a vital part of Ontario's biodiversity and maintaining a healthy population is important.

Monitoring the Black Bear population is identified as a science priority in MNRF's Integrated Science Action Plan, the guiding document that aligns MNRF science activities with resource management needs.

To study bear populations, staff set up barbed-wire hair trap (BWHT) survey stations. The stations are baited with a small amount of sardines – just enough to encourage bears to investigate the station. Surveys are conducted over five weeks, from late May to the end of June, before bears begin to move more broadly across the forest to forage for food.

As a bear comes to the station, it will rub up against the barbed wire. The traps do not harm the bear. The hair collected undergoes DNA analysis to determine how many of the bears who visit BWHT are new or have visited previously. This information helps the MNRF estimate the density of bears for the area surrounding the BWHT survey line. That number is extrapolated for the Wildlife Management Unit (WMU) and more broadly at a landscape level.

Black Bears can be very difficult to survey and this standard method of collecting Black Bear data is considered the best means available. Similar methods are used in British Columbia, the United States and Japan.



Black Bear inside a wire hair trap

The data collected from 2017-2020 will allow the ministry to assess the Black Bear population and determine its stability. Most WMUs in Ontario will be surveyed over the four-year period.

The design of these surveys has been modified slightly from those used previously in Ontario, including the addition of more survey stations over a larger area for each BWHT survey line. This approach is aimed at determining more precise bear density estimates in Ontario.

Learn to fish

Getting hooked on fishing:

- an angler's first catch;
- the sudden realization of something unknown going on beneath the water;
- cheers of friends, family and a friendly instructor.

These are some of the memories of Learn to Fish participants.

Learn to Fish is an opportunity for anyone new to fishing to take the first cast on their way to a lifelong activity and a connection with the outdoors.

Learn to Fish teaches anglers of all ages the skills they need before they take their first cast. Fish identification, rigging a rod, casting, regulations, invasive species information and more are part of the two hour instructed fishing experience provided across Southern and Central Ontario.

In 2017, Learn to Fish was offered at seven locations at least five days per week. Heart Lake Conservation Area, a new program location for 2017 in partnership with the Toronto and Region Conservation Authority, reeled in 1,577 new anglers in their first season!

Learn to Fish is MNRF's flagship angler recruitment tool to encourage new anglers to catch the angling bug. Since the inception of the program in 2013, Learn to Fish has taught over 28,000 anglers the skills they need. Along with inspiring Ontarians to get outdoors and do so sustainably and responsibly, Learn to Fish intends to help fund fish and wildlife management and sustainable conservation activities through the FW SPA. Every new Learn to Fish participant learns the importance of fish and wildlife conservation and management which can result in decades of fishing licence sales contributing to the FW SPA as well as building more stewards for the resource.

The Learn to Fish mobile unit tours the province to deliver the program, attend events, festivals and tradeshows to reach a wider audience. In 2017, the Learn to Fish team had more than 33,500 one-on-one conversations about recreational fishing during 43 total event days.



A young angler's first catch

In 2017, 99% of participants were satisfied with the program and 93% stated that they were likely to continue fishing over the next five years. Thanks to the program, 97% of participants reported improved fishing skills.

Using the MNRF's fish and wildlife social media accounts, branded promotional materials, and other media efforts, this program is becoming more recognized and widespread. People are really getting hooked on fishing!

Want to read more about the program? Visit: ontario.ca/learntofish for more information.



Young anglers participating in Learn to Fish instruction

Conservation Officers Celebrate 125th Anniversary

In 2017, staff from the ministry's Enforcement Branch proudly celebrated 125 years protecting Ontario's natural resources.

In 1892, protecting the province's natural resources was the responsibility of the Ontario Game and Fish Commission. It appointed a chief warden, four part-time game wardens, and 392 deputy wardens to enforce the rules and laws in place at the time. The wardens took their jobs very seriously. They were paid only a commission on the fines they handed out.

Much has changed over the last 125 years. One thing that hasn't changed, is the dedication and passion conservation officers have in protecting Ontario's natural resources.

Today, the Enforcement Branch is recognized around the world. Its' conservation officers are respected ambassadors for the ministry. Many play important roles in communities, making people aware of current rules and laws that set out how the province's natural resources are managed.

Enforcement Branch staff are proud of their history. They are proud of their commitment to their jobs. And they are proud of the important work they do every day so people will be able to use and enjoy Ontario's natural resources for years to come.



Rescuing a fawn



Performing enforcement activities via helicopter



Inspecting beaver pelts



Inspecting muskies

Kids' Fish Art Contest

Fish are beautiful creatures; the iridescent glimmer of their scales in the sunlight; the brilliant colours; the spots and stripes and patterns that mark each species.

For 15 years, MNRF has helped kids appreciate the beauty of fish and instill knowledge of Ontario's natural resources with our Kids' Fish Art Contest. It's fun, and the children receive fisheries education at the same time.

Every autumn, MNRF chooses two Ontario fish species to showcase for students in grades four to 12. Bluegill and Muskellunge were this year's featured fish. Students could study the species and their habitat with a series of lessons provided online. To add a competitive edge a wildlife artist and a biologist were asked to decide which artwork showed the greatest understanding of the fish and its habitat, along with the skill to depict it accurately.

For the 15th annual contest we received 485 submissions! The overall winner was **Jory Seath** from the Grade 10-12 category. Other winners included **Natalie Pak** (Grade 7-9 category) and **Jennifer Yang** (Grade 4-6 category). The winning artwork from each grade group will be featured on the Young Angler's Licence for a year.

For more information visit: ontario.ca/fishartcontest.



Jennifer Yang (Grade 4-6 winner), Natalie Pak (Grade 7-9 winner), Jory Seath (Grade 10-12 and overall winner).

Wetland Conservation Strategy

Wetlands are among the earth's most diverse habitats and are an important part of Ontario's landscape. They are a vital element of biodiversity and provide essential ecosystem services. These services include:

- reducing the effects of floods;
- improving water quality;
- providing habitat for fish and wildlife; and
- offering recreational opportunities.

Ontario has put in place a variety of policies, programs and partnerships to conserve wetlands. However, without continued actions wetlands will face increasingly serious threats.

In July 2017, the provincial government released *A Wetland Conservation Strategy for Ontario, 2017-2030*. This was an important step in the conservation of Ontario's wetlands. The strategy includes a vision, goals and desired outcomes for wetlands in Ontario. It identifies actions necessary to improve wetland conservation. The strategy also establishes strong targets to stop the loss of wetlands and see a gain in areas where loss has been the greatest. These targets are ambitious, but they are achievable. They will advance wetland conservation across the province.

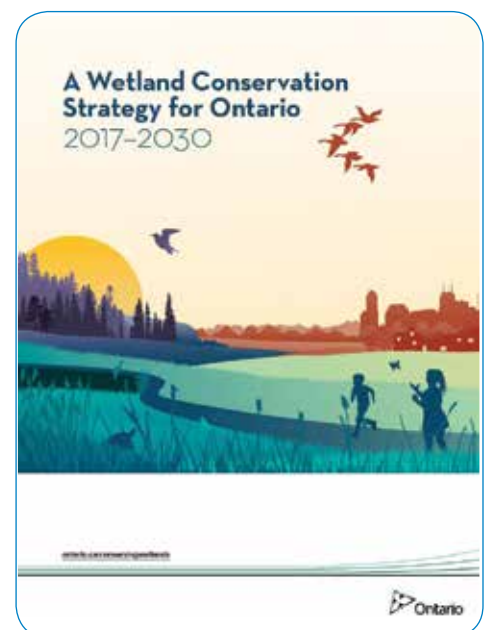
In addition to launching the strategy, the MNRF, together with the federal government, has invested in a long-standing partnership with Ducks Unlimited Canada to restore and enhance wetlands. Projects being completed with these funds will:

- support improvement in Lake Erie water quality;
- support the Eastern Habitat Joint Venture to benefit migratory waterfowl through habitat creation and improvement;
- contribute to meeting actions under the Canada – Ontario Agreement on Great Lakes Water Quality and Ecosystem Health; and
- support the targets in *A Wetland Conservation Strategy for Ontario*.

This investment in wetland conservation will support healthy environments now and into the future.



Great Blue Heron



Supporting a Modern Fishing and Hunting Licensing Service

Hunting and fishing have long been popular activities that Ontarians enjoy. To make it easier for people to buy licences, the ministry reviewed the existing regulations under the *Fish and Wildlife Conservation Act, 1997 (FWCA)* and consulted on and finalized a number of new regulation changes to support a new licensing service. The new service will be efficient, improve customer service and continue to support fish and wildlife management.

Input from the public, stakeholders and Indigenous communities when proposing to change regulations and management approaches is very important. One way the ministry seeks feedback is through Ontario's Environmental Registry. The registry provides the public with information on the proposed changes and the opportunity to comment on the proposed changes. When the ministry proposed significant changes to the fish and wildlife licensing approach in 2017, the ministry also wanted to give those who could be impacted an opportunity to share their opinions in person.

During the summer of 2017, the ministry worked with local fish and game associations to host 10 information sessions across the province. The sessions included a presentation to share information about the proposed changes, followed by a discussion period, allowing an opportunity for participants to ask questions and to provide their insights. These sessions were very successful in collecting feedback on the proposed changes. Participants told the ministry they appreciated that we met in person to collect feedback and perspectives.

The comments and concerns received at the information sessions were considered along with the feedback received via the Environmental Registry. All of the input was considered and used to help inform the finalization of the regulation changes.



Environmental Registry

The regulation changes support a modernized licensing approach that will lead to a more efficient and straightforward process for our clients while ensuring the sustainable management of Ontario's fish and wildlife. The ministry will continue to engage and communicate the upcoming changes to anglers, hunters, licence issuers and stakeholders prior to the launch of new fish and wildlife licensing service in November 2018. For more information on the regulation changes and their effective dates visit ontario.ca/outdoorscard.



Photo: iStock.com/johnrandallalves

White-tailed Deer alert for predators

Engaging Ontario Hunters and Anglers on Social Media

Social media is an effective and inexpensive way to reach fish and wildlife enthusiasts and the general public throughout the province. Joining social media supports the Fish and Wildlife Program Marketing Strategy. It offers opportunities to share the ministry's conservation messages about fish and wildlife management and educational messages on how FW SPA dollars are put to work. We also use it to highlight updates to the *Fish and Wildlife Conservation Act, 1997*.

In March 2016, the ministry's Fish and Wildlife Services Branch launched a Twitter channel in both official languages. The channel has grown to 6,500 followers in under two years. Twitter has been a great avenue to get information out quickly and share news, updates and important safety messages. The channel is currently averaging over 300,000 content views and gaining 200-300 followers per month.

In March 2018 the Fish and Wildlife Program launched a Facebook page, also available in both official languages. Anglers, hunters and trappers across Ontario were quick to spread the word and within a month the page had over 6,000 followers. Facebook offers a way for us to communicate with anglers, hunters and trappers in real time and share more detailed information. This channel has opened up a new way to engage the hunting, angling and trapping communities and offers a customer service opportunity to better serve the public. In January 2017, the MNRF launched a new service standard to ensure social media inquiries are answered within 1-4 hours during normal business hours.

The goal for 2018 is to showcase how licence dollars are being reinvested into Ontario's fishing and hunting resources. Help spread the word so that more anglers, hunters and trappers will use these channels to find the information they need. Follow us on social media in English @FishWildlifeON and French @PêcheFauneON.



Lynx and Bobcat Research: Impacts of Climate Change On Ranges

MNRF researchers are exploring the relationship between bobcat and lynx to see if climate change or other factors are impacting their ranges.

The iconic Canada lynx is a cold-adapted carnivore whose large feet are well suited to travel in deep snow. When changes occur in their environment, such as the availability of their favourite meal, the snowshoe hare, lynx populations go up or down in response.

The range of lynx in Ontario has been shrinking. Since the 1970s, the southern edge of this species' range has moved about 175 km northward. While the lynx range has decreased, the range of bobcat has crept northward from the U.S. Great Lakes states into Ontario. A warming climate has seen snow depth also reduced, suggesting a connection worth a closer look.

In order to better understand shrinking lynx range, MNRF researchers are testing two scenarios. Either lynx are avoiding areas with reduced snow depth which leaves an opening that bobcats are taking advantage of, or, bobcats are moving in first and lynx are pulling away in response to competition with bobcats.

Possible interbreeding of lynx and bobcat could further jeopardize lynx, the more vulnerable of the two cats, through the resulting lack of genetic diversity.

Scientists are currently testing areas along the north shore of Lake Huron between Sault Ste. Marie and Sudbury, one area where lynx and bobcat ranges currently overlap. They have several approaches in their toolbox, including:

- Models based on fur harvest data: Results to date show that the number of lynx harvested has contracted north in Ontario over the last few decades, and the number of bobcats harvested has expanded.
- Genetic analysis: Researchers are analyzing genetic samples to determine which routes bobcats are taking to expand into Ontario.
- Models based on snow track surveys: Researchers are using data on tracks left in the snow by both cat species. The tracks show how each is distributed across the study area and the role of factors such as snow depth.



Lynx kittens

- GPS tracking of both species: Researchers are live-capturing both species and outfitting each animal with a GPS transmitter. The transmitter records the location every few hours.

This research is made possible partly through FW SPA funds and will help inform future management decisions about lynx and bobcat.



Photo: Garry Stewart

Bobcat



Photo: Kevin Coombs

Lynx

Distribution Of Lake-Dwelling Brook Trout

The Brook Trout thrives in cold, clean water. It is a prized angling fish as well as a species that is an indicator of healthy lakes and rivers. Unfortunately, Brook Trout survival is threatened by several factors. These factors include habitat loss, warmer water temperatures and increased sedimentation. Brook Trout are poor competitors. Many introduced fish species can out-compete them for shared resources.

The first step in protecting Brook Trout is to know where they are. MNRF researchers have redefined the list of lakes in the Bancroft area where Brook Trout naturally occur. Past lists were developed using different criteria, and were not consistent. Only two lakes from the historical lists had natural populations according to the 2017 Aquatic Resource Area inventory.

A new study used the historical records and two classification keys to show how this species is distributed in Bancroft District. The first key was used to classify all records of Brook Trout for a lake. Records were identified as describing natural Brook Trout, stocked Brook Trout or "source undetermined". The second key classified each lake based on the group of information found with the first key. Catch records were used to determine whether Brook Trout were observed and whether other species, which out-compete Brook Trout, were present.

MNRF is now using this method to classify all Brook Trout lakes in Ontario. This well-documented, and defined process will help ensure that future lists are based on consistent standards.

Work like this, funded in part through the Fish and Wildlife Special Purpose Account, adds to the ministry's understanding of what lakes support Brook Trout, and helps to manage this important resource.



Brook Trout

Natural Resources Information and Support Centre

The Natural Resources Information and Support Centre (NRISC) was formed when the Outdoors Card Centre and the Natural Resources Information Centre merged in 2017. The centre is located at the Ontario government building in Peterborough.

The NRISC is the main point of contact for fish and wildlife and other questions related to the MNRF. These include:

- Outdoors Card and licensing;
- hunting and fishing regulations;
- hunting accreditation;
- big game draws;
- wildlife conflicts;
- land use and other MNRF topics of interest.

Services are provided to:

- Ontarians, Canadians, and visitors from around the world;
- ServiceOntario centres that sell fishing and hunting licence products;
- private licence issuers.

Quality customer service and a positive customer experience guide the work of the NRISC. The centre handles approximately 160,000 calls and 15,000 emails per year with a peak in spring and summer.

Services are provided in English and French, and Mandarin is available upon request. NRISC staff receive comprehensive training when they start, and additional regular training to keep pace with the latest natural resource topics. Any questions that are beyond the expertise of the staff are referred to the appropriate program area.

Hours of operation are Monday to Friday 8:30 am to 5:00 pm except statutory holidays. The NRISC may be contacted Toll-free at: 1-800-667-1940 or 1-800-387-7011, Tel TTY: 1-866-686-6072 or by email NRISC@ontario.ca.



NRISC staff member

Stocking Walleye

MNRF's Fish Culture Program has been producing Walleye for stocking into Ontario lakes for over 40 years. Until recently, all of the Walleye that were produced and stocked were grown in outdoor ponds at White Lake and Blue Jay Creek fish culture stations. While this approach worked well and offered the advantage of requiring relatively little labour, it had two disadvantages:

- it required large amounts of land to produce relatively small numbers of fish; and,
- the inability to control environmental conditions meant that production levels could vary dramatically with weather conditions.

For a number of years, the ministry has had difficulty meeting its Walleye fingerling stocking targets. In order to enhance our ability to meet these targets and improve fishing opportunities, the ministry decided to develop expertise in the culture of newly-hatched Walleye fry in indoor tanks rather than in outdoor ponds. This technology, once mastered, offers the advantage of much greater production potential per unit of rearing space than ponds, and much greater control over environmental conditions.

MNRF's Fish Culture Program has expertise in rearing many different species of fish under indoor conditions. However, Walleye present some significant challenges. For example, they are voracious eaters and will resort to cannibalism within a few days of hatch if rearing conditions aren't perfect. They are also extremely sensitive to light and, if lighting is too bright, they will cling to the sides of tanks and not feed properly, often leading to heavy losses within a few days.



Walleye fry cannibalism

Photo: Julie Marentette, Environment Canada



Stocked Walleye caught in Hamilton Harbour

While the methodology for successfully culturing newly-hatched Walleye fry in indoor tanks has been available in the U.S. for nearly 20 years, only two or three U.S. agencies have been able to apply it successfully. In 2012, the MNRF began collaborating with the few experts in the U.S. who have had success applying the methodology. This led to the design and construction of pilot-scale indoor culture facilities at White Lake and Blue Jay Creek fish culture stations, and several years of effort aimed at mastering (and in some cases, modifying) the methodology.

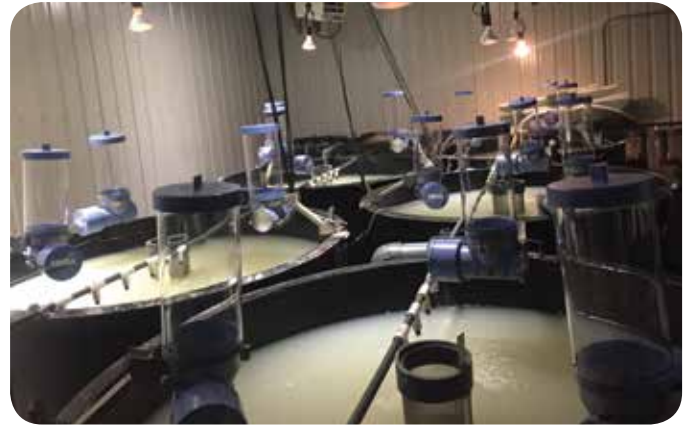
Stocking Walleye *continued*



Aerial view of outdoor Walleye ponds at Blue Jay Creek Fish Culture Station

The system developed at White Lake fish culture station is a flow-through system, much like those used by U.S. experts. In contrast, the system at Blue Jay Creek fish culture station was based on Recirculating Aquaculture System (RAS) technology, where the source water is circulated through the hatchery and filtered many times. Since then, staff have spent many long hours trying to apply the techniques developed by U.S. experts and, in the case of Blue Jay Creek fish culture station, trying to adapt those techniques to RAS technology. Sometimes these efforts led to success and other times to disappointment. One of the key things learned is that newly-hatched Walleye fry are much more fragile than salmon and trout fry, and getting even the smallest detail wrong can turn what appeared to be success into disappointment in a matter of hours.

Each year, Walleye production results are improving and MNRF is now within reach of achieving stocking targets.



Indoor culture system for newly-hatched Walleye at White Lake Fish Culture Station

Invading Species Awareness Program

For over 25 years the MNRF has been working with the Ontario Federation of Anglers and Hunters to deliver the Invading Species Awareness Program (ISAP). The ISAP helps to address the threat of invasive species in Ontario. The program promotes education and awareness, monitors for invasive species, and works to slow or stop their spread. Over the past 25 years, the ISAP has continued to grow, reach more people, and provide cutting edge education and outreach for invasive species.

What are invasive species, and why are they a problem?

Invasive species are plants, animals, and even diseases that have moved outside their native range and have negative impacts. They harm native species. They decrease recreational opportunities. And they hurt the economy by impacting natural resource-based industries. Once they are established, they are nearly impossible to eradicate. That's why preventing their introduction is the best way to deal with them.

What can you do?

Be on the lookout for the ISAP! You may see ISAP staff at one of many tradeshows and community events across Ontario. Visit the booth, view the displays and bring your invasive species questions. Follow the ISAP online, listen for ISAP event information on the radio, and look for an article in your local newspaper.

Learn how to prevent the introduction or spread of invasive species. For example, if you are a boater, learn to Clean, Drain, and Dry your boat to ensure you do not transport invasive species to your favourite fishing spot.

Report invasive species sightings to the ISAP. The ISAP collects records of invasive species through the toll-free Invading Species Hotline, 1-800-563-7711. The program also operates EDDMapS Ontario, an interactive online invasive species mapping tool, where you can report sightings online, or with your smartphone.



Key ISAP Programs

Working with many partners, the ISAP hires over 20 summer students every year to promote awareness of invasive species. They attend local festivals and events, deliver outreach to the public, and monitor local areas for invasive species.

The ISAP also helps control invasive species. This includes involvement in the water soldier eradication project. Water soldier is an invasive plant found only in two wild places of North America, both in Ontario. In addition, the program is working on eradicating European water chestnut from Ontario, and teaches people how to control invasive species in their own backyard.

The ISAP has grown tremendously and continues to be a leader in invasive species awareness and management. The MNRF is proud of the many successes and accomplishments of the ISAP over the past 25 years.



Captain Carp, spreading awareness of Asian Carp at the Canadian National Exhibition

Fish and Wildlife Additional Internet Resources

The 2017-18 FW SPA Annual Report provides information regarding how fishing and hunting licence fees are used. The following references highlight some of the additional fish and wildlife information that is available on the internet:

REPORTS AND ACT

- Historical Fish and Wildlife Special Purpose Account annual reports [ontario.ca](#) search "how fishing and hunting fees are used"
- Sustainability Strategy for the FW SPA [ebr.on.ca](#) search "Sustainability Strategy for the Fish and Wildlife Special Purpose Account"
- *Fish and Wildlife Conservation Act* [ontario.ca/laws](#) search "Fish and Wildlife Conservation Act"

FISHERIES MANAGEMENT INFORMATION

[ontario.ca/fishing](#)

- Fishing Regulations Summary
- Outdoors Cards and licences
- FMZ maps
- Fish ON-Line
- Eating Ontario Fish

[ontario.ca/page/ontarios-fish-stocking-program](#)

- How to find a stocked lake
- Stocking Strategy
- Visit a fish culture station

Other fisheries management resources

- Learn to Fish – [ontario.ca/learntofish](#)
- 2016 Annual Report of the Lake Ontario Management Unit [glfc.org/lakecom/loc/mgmt_unit/index.html](#)
- Ontario's Great Lakes Strategy [ontario.ca/document/ontarios-great-lakes-strategy](#)
- Canada-Ontario Agreement on Great Lakes Water Quality and Ecosystem Health [ontario.ca/page/canada-ontario-great-lakes-agreement](#)

[ontario.ca](#) search "fisheries in Ontario"

- Provincial fish strategy
- Recreational fishing including Fisheries Management Zones (FMZ)
- Commercial Bait
- Commercial Fishing
- Aquaculture

WILDLIFE MANAGEMENT INFORMATION

[ontario.ca](#) search "Wildlife"

- Biodiversity
- Laws for wildlife protection
- Moose
- Black Bear
- White-tailed Deer
- Elk
- Small game
- Wolf/Coyote
- Other species

[ontario.ca/hunting](#)

- Outdoors Cards and licences
- Hunting Regulations Summary
- Harvest results
- Hunter Education
- Wildlife Management Unit Maps

[ontario.ca](#) search "Trapping"

- What you need to know
- Types of trapping licences
- Apply for a licence
- Humane trapping

INVASIVE SPECIES

[ontario.ca/invasivespecies](#)

[invadingspecies.com](#)

[invasivespeciescentre.ca](#)

[ontarioinvasiveplants.ca](#)

