

Legislative  
Assembly  
of Ontario



Assemblée  
législative  
de l'Ontario

# STANDING COMMITTEE ON PUBLIC ACCOUNTS

## **VALUE-FOR-MONEY AUDIT: MANAGEMENT OF INVASIVE SPECIES**

(2022 ANNUAL REPORT OF THE OFFICE OF THE AUDITOR GENERAL OF  
ONTARIO)

1<sup>st</sup> Session, 43<sup>rd</sup> Parliament  
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The Honourable Ted Arnott, MPP  
Speaker of the Legislative Assembly

Sir,

Your Standing Committee on Public Accounts has the honour to present its Report and commends it to the House.

A handwritten signature in cursive script that reads "Tom Rakocevic".

Tom Rakocevic, MPP  
Chair of the Committee

Queen's Park  
October 2024



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1<sup>st</sup> Session, 43<sup>rd</sup> Parliament

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STANDING COMMITTEE ON PUBLIC ACCOUNTS  
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1<sup>st</sup> Session, 43<sup>rd</sup> Parliament

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## **INTRODUCTION**

On April 24, 2023, the Standing Committee on Public Accounts held public hearings on the value-for-money audit of the Management of Invasive Species (*2022 Annual Report* of the Auditor General of Ontario), overseen by the Ministry of Natural Resources and Forestry (Ministry).

The Committee thanks the Auditor for the audit. In this report, the Committee presents its own findings, views, and recommendations. The Committee requests that the Ministry provide the Clerk of the Committee with written responses to the recommendations within 120 calendar days of the tabling of this report with the Speaker of the Legislative Assembly, unless otherwise specified.

## **ACKNOWLEDGEMENTS**

The Committee extends its appreciation to officials from the Ministry of Natural Resources and Forestry. The Committee also acknowledges the assistance provided by the Office of the Auditor General, the Clerk of the Committee, and Legislative Research.

## **BACKGROUND**

Invasive species are non-native animals, plants, and other organisms that have been introduced (whether intentionally or not) to new ecosystems, environments or regions, and that cause considerable environmental, economic, social and/or physical harm to their new environment.

The latest available estimate, from 2002, suggests that the number of invasive species in Canada is at least 1,442. Ontario is estimated to have the most invasive species among the provinces, with at least 441 invasive plants and 191 non-native and invasive aquatic species in the Great Lakes. In a 2017 study commissioned by the Invasive Species Centre, the economic impact of invasive species on six economic sectors in Ontario (agriculture, forestry, fisheries, health care, tourism, and recreation) was estimated to be \$3.6 billion annually.

The spread of invasive species is mainly a result of human activities, such as travel and the shipping of goods over air, land and sea. Invasive species are transferred from one ecosystem to another through “pathways,” which are often human-assisted. One of the main aquatic species pathways involves ocean-going vessels that hold water in their ballast tank (a compartment at the base of the ship). When ships discharge ballast water at a given destination, they can introduce organisms from another part of the world. Other aquatic pathways include recreational and commercial boating; use of live bait; the aquarium and water garden trades; as well as canals and water diversions. Terrestrial species pathway examples include cargo containers becoming contaminated with living plants, animals, and insects; garden plants escaping the confines of a garden; and accidental releases of terrestrial species into the wild.

All three levels of government in Canada are involved in preventing and managing the spread of invasive species. The federal government is responsible for regulating key pathways (e.g., ship ballast water, fisheries) to prevent the entry of invasive species into Canada and the movement of these species from one province to another.

The Province, in turn, is responsible for the management of invasive species within its borders. To that end, the Ministry of Natural Resources and Forestry (Ministry) implements the 2012 Ontario Invasive Species Strategic Plan, which involves working with and providing guidance to ministries and other stakeholders to co-ordinate actions to address the issue of invasive species. The Ministry also administers the *Invasive Species Act, 2015* (the Act), which gives the Ministry inspection and enforcement powers to prevent and control the spread of invasive species. The Act also sets out the framework for the prohibition or restriction of possession, transfer, sale, release, and propagation of 33 invasive species that threaten Ontario's natural environment.

Municipalities are responsible for protecting public parks, municipal roadways, street trees, municipally designated forests, woodlands, and other natural areas from invasive species.

While preventing the introduction of invasive species into Ontario is largely a federal responsibility, the Ministry is still responsible for co-ordinating with the federal government, as well as other provinces, neighbouring states and other bodies, such as the Great Lakes Legislative Council, to prevent, detect and respond to invasive species that cross into or border Ontario's jurisdictional boundaries. The Ministry has 238 conservation officers to enforce various Acts (including the *Invasive Species Act, 2015*). The officers can perform inspections for the presence of invasive species and respond to non-compliance reports under the Act.

The Invading Species Awareness Program, established by a partnership between the Ministry and the Ontario Federation of Anglers and Hunters (OFAH), facilitates the early detection and monitoring of invasive species. The program allows individuals to get information and report sightings of suspected invasive species. The Ministry is also using environmental DNA (eDNA) monitoring, a tool that can allow scientists to detect invasive species in an environment even if they are present in low numbers. In 2018, the Ministry developed an Invasive Species Response Framework, which outlines the steps to be taken in response to the identification of a new invasive species in Ontario. In January 2022, the Ontario government added 13 more species to the previous list of 20 invasive species regulated under O.Reg. 354/16: General of the Act.

## **AUDIT OBJECTIVE AND SCOPE**

According to the Auditor General, the objective of the audit was “to assess whether the Ministry of Natural Resources and Forestry (Ministry) has a long-term strategy, and cost-effective and efficient systems and processes, to

- prevent introductions of harmful invasive species before they occur;
- promptly detect, identify, respond to and manage invasive species in Ontario;

- reduce the spread and harmful impacts of invasive species;
- oversee the use of funds by transfer payment recipients; and
- measure and publicly report on progress toward preventing, detecting, identifying, responding to, managing and reducing the spread and impact of invasive species.”

The Audit also assessed whether the Invasive Species Centre is appropriately using the funds it receives from the Province.

The audit was conducted between January and September 2022.

## **ISSUES RAISED IN THE AUDIT AND BEFORE THE COMMITTEE**

### **Management of Select Invasive Species**

The Committee was interested in the Ministry’s management of several invasive plant species, namely hydrilla (a water plant, also known as waterthymes), phragmites (a tall reed grass), and two animal species – spongy moths and wild pigs.

The Ministry said that, while hydrilla is an aggressive aquatic invasive plant that is widely established in the United States (including New York and Ohio), it has not been reported in Ontario. The Ministry regulated hydrilla in 2016 as a prohibited invasive species under the Act, which makes it illegal to buy, sell, release or possess the plant in Ontario. The Ministry also implemented a surveillance program in the fall of 2021 to search for the plant on the Canadian side of the Niagara River after it was found on the American side. To assess whether hydrilla was present in the water, the Ministry used environmental DNA (eDNA) analysis. The technique involves collecting samples and analysing them to detect microparticles released from living or dead organisms in the environment. eDNA analysis is also used to detect invasive carp species and forest pests such as the hemlock woolly adelgid (an insect). In January 2021, the Ministry introduced a regulation requiring watercraft to be free of aquatic plants, animals, and algae before they can be placed in an Ontario water body.

The Committee heard that phragmites present a challenge, as they have a significant impact on wetlands and beaches, and threaten over 25 percent of species at risk in wetlands. Phragmites crowd out native vegetation, provide poor habitat, diminish food supply for wildlife, and can cause lower water levels and increased fire hazards. The Committee heard that the management of phragmites is a cross-ministry effort – the Ministry of Natural Resources and Forestry regulated phragmites as an invasive species under the Act and is investing in education and awareness, while the Ministry of Transportation has invested over \$7 million since 2017 in efforts to reduce the presence of phragmites in provincial highway corridors. The Ministry of Natural Resources and Forestry has also led the control and management of phragmites in partnership with the Canadian Wildlife Services, resulting in the restoration of over 1,500 hectares of affected coastal wetland habitat over the past decade. Other initiatives include working with landowners in a collective effort to address phragmites in the Big Creek watershed in Norfolk county, funding a cost-benefit analysis for the prevention and management of phragmites in Ontario, and developing a strategic framework, which proposes targeted phragmites

management in key landscapes. The Committee heard that the Minister of Natural Resources and Forestry will be providing the Green Shovels Collaborative, a coalition of conservation organizations, with \$500,000 to initiate the implementation of the strategic framework.

As for the management of spongy moths (also known as *Lymantria dispar dispar*, or LDD), the Ministry said that a spongy moth outbreak is a cyclical event occurring every seven to ten years, lasting for three to five years at a time. The recent outbreak started in 2017 and peaked in 2021, before declining in 2022. The Ministry conducts surveys to forecast the expected impact for each spring season, with observations showing that the decline in the spongy moth population in 2022 can be attributed to viral, fungal, and parasitic activity. A continued decline is expected in 2023, both in terms of the number of affected areas and the severity of the outbreak. The Ministry is focusing on public education and raising awareness of the issue, mainly through its website and fact sheets that it provides to municipalities. The Ministry also assisted the City of Toronto with an application to the Pest Management Regulatory Agency, a federal agency responsible for pesticide regulation, to get an emergency registration of an insecticide chemical. The application process was successful, and the new insecticide, BoVir, was used by the City of Toronto in High Park in 2022.

The last specific invasive species discussed was wild pigs, which are currently considered to be the most damaging mammal in the United States, and present an emergent issue in some of Canada's prairie provinces. The Committee heard that the term "wild pigs" refers to any pig outside of a fence that is not under the physical control of a person, which includes domestic pigs (including pot-bellied pigs), Eurasian wild boar, and hybrids of domestic pigs and Eurasian wild boar. In terms of the control and management of wild pigs, the Ministry said that it introduced a wild-pig-reporting campaign and is actively investigating sightings and removing wild pigs from the natural environment. The number of wild pig sightings in Ontario remains relatively small, and occurs mainly as a result of pigs escaping captivity. Wild pigs are a regulated invasive species under the Act, with the Ministry implementing Ontario's Strategy to Address the Threat of Invasive Wild Pigs as of October 2021. At the time of the hearing, there was no evidence to suggest that there is an established, self-sustaining breeding population of invasive wild pigs in Ontario.

## **Ministry Resources**

The adequacy of the Ministry's resources was a prominent topic of discussion, with Committee members asking whether the Ministry has determined if it has enough staff to administer the *Invasive Species Act, 2015*. The Ministry noted that it has to prioritize work based on the risk posed by specific invasive species, and focus on the highest-priority items. Generally, the focus is on preventing the introduction and establishment of new invasive species.

The recruitment of additional conservation officers was another topic of interest. Responding to Committee questions on the current number of conservation officers in the Ministry's employ, the Ministry indicated that it currently has 238 conservation officers, with 209 of these being "front-line" conservation officers, including "field officers," who are deployed in the field to conduct patrols, inspections and other work. Of these 209 field officer positions, 25 were created

two years ago, when the Ministry's budget was increased. In the past couple of years, the Ministry hired 50 conservation officers to fill the new positions, as well as other vacancies. With regard to conservation officers' training, the Ministry reported that, as the officers are recruited and on-boarded, they undergo a full suite of training on identification and detection of invasive species, as well as compliance requirements under the Act. Each officer is trained and equipped to enforce all 25 pieces of legislation falling under the Ministry's mandate. The Ministry mentioned that the management of invasive species is one of the Ministry's four key targeted compliance activities, with the others being hunting safety, compliance with moose hunting regulations, and addressing illegal commercialization of fish and wildlife.

### **Committee Recommendations**

The Standing Committee on Public Accounts recommends that:

1. The Ministry of Natural Resources and Forestry provide sufficient training to its conservation officers to enforce all Acts under the Ministry's mandate.
2. The Ministry of Natural Resources and Forestry ensure sufficient staffing levels to enforce all Acts under the Ministry's mandate.

### **Operations and Public Awareness**

The Committee was also interested in several aspects of the Ministry's operations, namely the review of the Ontario Invasive Species Strategic Plan, the timeliness of regulating invasive species under the *Invasive Species Act, 2015*, the lack of charges laid by the Ministry, and the monitoring of bait shops.

The Ministry mentioned that it is initiating a review of the progress made under the Ontario Invasive Species Strategic Plan, launched in 2012. When asked about the expected timeline for the review of the plan, the Ministry noted that the review process is in its early stages, and timelines will have to be confirmed through engagement with the Ministry's partners.

In the audit, the Auditor found that it took the Ministry an average of 46 months to complete the process of regulating 12 of the 13 species that were added to the list of regulated invasive species in January 2022. Responding to Committee questions on the reasons behind the length of this process, the Ministry indicated that there are a lot of factors that go into the risk assessment for invasive species, and that the Ministry is continuing to assess the current process and looking for opportunities to shorten the time frame.

The Auditor also mentioned that, as of March 31, 2022, the Ministry has not laid any charges or requested any search warrants resulting from violations of the Act. Committee members inquired about this finding. The Ministry responded that, in the three months leading up to the hearing, the Ministry's conservation officers, in collaboration with federal colleagues at the Department of Fisheries and Oceans, has conducted 90 inspections across Southern Ontario, targeting fish retail markets. A number of violations were detected, and the Ministry is considering further enforcement and legal action in these instances.

As for the monitoring of bait shops, the Ministry said that conservation officers actively perform this function throughout the whole year. The officers monitor bait harvesting, enforce rules for invasive species, and ensure compliance with other applicable requirements.

Committee members were also interested in the public awareness efforts undertaken by the Ministry. The Ministry reported that it is working in partnership with the OFAH, who operate the Invasive Species Awareness Program. A part of the program is the Early Detection and Distribution Mapping System (EDDMapS), a system that allows the public to report sightings of invasive species either online or through a hotline. Additionally, the Ministry operates a website where the public can get more information, such as population reports and forecasts, on a variety of invasive species, such as the spongy moth.

### **Committee Recommendation**

The Standing Committee on Public Accounts recommends that:

3. The Ministry of Natural Resources and Forestry establish metrics for the hotline response time, and ensure that the information provided through the Early Detection and Distribution Mapping System hotline is consistent.

### **Program Partners and Funding**

The Committee was also interested in two of the Ministry's program partners, namely the Invasive Species Centre, and the Ontario Invasive Plant Council. Committee members were also interested in the timeliness of funding approvals for program partners.

The Ministry was asked about programs that resulted from the establishment of the Invasive Species Centre (Centre). The Committee heard that the Centre is running a number of programs, including the invasive species micro-grants program, which provides payment of up to \$1,000 to 27 organizations, resulting in the removal of various invasive species.

Committee members also commented on the work done by the Ontario Invasive Plant Council (Council), specifically its Grow Me Instead guides. The Council identified 30 terrestrial (land-based) plant species that could be considered for regulation under the Act, six of which are available for purchase at local garden centres and major retail stores. The Ministry noted that, in many cases, some of the invasive species identified by the Council have been sold and present in Ontario for many years, such that regulating them is not necessarily a solution. The focus has been shifted to education and outreach. The Ministry added that, over the last several years, it has worked in collaboration with the Council on individual projects.

The Auditor mentioned that “[t]he ministry is regularly delayed in approving annual funding for transfer payment recipients ... limiting the invasive species planning and work done in the crucial spring/summer months when many such species are best tackled.” Speaking to the timeliness of funding approvals for program partners, the Ministry indicated that it has implemented three-year transfer payment agreements with partners associated with the Invasive Species Centre and the OFAH, with the current agreements in effect until 2024-25.



## **CONSOLIDATED LIST OF COMMITTEE RECOMMENDATIONS**

The Standing Committee on Public Accounts recommends that:

1. The Ministry of Natural Resources and Forestry provide sufficient training to its conservation officers to enforce all Acts under the Ministry's mandate.
2. The Ministry of Natural Resources and Forestry ensure sufficient staffing levels to enforce all Acts under the Ministry's mandate.
3. The Ministry of Natural Resources and Forestry establish metrics for the hotline response time, and ensure that the information provided through the Early Detection and Distribution Mapping System hotline is consistent.