

## Chapter 29

# Environment—Preventing the Entry and Spread of Aquatic Invasive Species in Saskatchewan

### 1.0 MAIN POINTS

By August 2020, the Ministry of Environment implemented two of the four remaining recommendations made in our 2016 audit of its processes to prevent the entry and spread of aquatic invasive species (other than aquatic invasive plants) in Saskatchewan.

Since June 2018 (the timing of our last follow-up audit), the Ministry developed risk-based strategies for both watercraft inspections and waterbody sampling. These strategies help the Ministry focus its resources in areas of higher risk (e.g., water bodies or corridors where boats cross into Saskatchewan from neighbouring jurisdictions).

The Ministry assesses the effectiveness of its public education and awareness campaigns by reviewing comments on and views of social media posts and analyzing trends in watercraft owner's compliance (e.g., assesses the number of individuals not in compliance when inspected). In fall 2020, the Ministry plans to issue a targeted survey asking detailed questions about past advertising campaigns. It plans to use survey results to assess if its campaigns improved the public's knowledge and awareness of aquatic invasive species.

In addition, the Ministry has plans to test in fall 2020 its draft rapid response plan prior to its finalization and approval. Testing the plan helps confirm it operates as expected. Timely and appropriate responses are key to minimizing the impact of and spread of aquatic invasive species.

### 2.0 INTRODUCTION

The Ministry of Environment is responsible for preventing the introduction or spread of aquatic invasive species in Saskatchewan.

Aquatic invasive species are non-native animals (e.g., zebra and quagga mussels) or plants that usually spread through the water, and from one waterbody to another, by attaching to watercrafts, trailers, and related aquatic equipment. They pose a serious threat to lakes and waterways in Canada and can cause serious damage.

Once aquatic invasive species are established, they can cause significant economic impacts (i.e., direct costs to manage the particular invasive species). For example, Alberta estimated a cost of \$75 million if invasive mussels infest the province and Ontario spends \$75 to \$91 million annually. These include costs associated with impacts to power generation, drinking water systems, recreational fishing and water management structures.<sup>1</sup>

<sup>1</sup> *Saskatchewan Aquatic Invasive Species Strategy*, p.4. [pubsaskdev.blob.core.windows.net/pubsask-prod/115827/Aquatic%252BInvasive%252BSpecies%252BStrategy.pdf](https://pubsaskdev.blob.core.windows.net/pubsask-prod/115827/Aquatic%252BInvasive%252BSpecies%252BStrategy.pdf) (01 October 2020).



## 2.1 Focus of Follow-Up Audit

This chapter describes our second follow-up audit of management's actions on the recommendations we first made in 2016 on preventing the entry and spread of aquatic invasive species in Saskatchewan.

Our *2016 Report – Volume 1*, Chapter 7, concluded the Ministry of Environment had, other than matters reflected in our five recommendations, effective processes to prevent the entry and spread of aquatic invasive species in Saskatchewan (other than aquatic invasive plants). As of June 2018, the Ministry had implemented one of five recommendations.<sup>2</sup>

To conduct this audit engagement, we followed the standards for assurance engagements published in the *CPA Canada Handbook—Assurance* (CSAE 3001). To evaluate the Ministry's progress toward meeting our recommendations, we used the relevant criteria from the original audit. Management agreed with the criteria in the original audit.

In this follow-up audit, we interviewed Ministry staff responsible for aquatic invasive species prevention and detection programs. We reviewed various documents including watercraft inspection strategies, waterbody sampling strategies, and metrics of communications to educate the public about aquatic invasive species.

## 3.0 STATUS OF RECOMMENDATIONS

This section sets out each recommendation including the date on which the Standing Committee on Public Accounts agreed to the recommendation, the status at August 31, 2020 of the recommendation, and the Ministry of Environment's actions up to that date.

### 3.1 Formal Watercraft Inspection and Waterbody Sampling Strategies Implemented

#### Watercraft Inspections

***We recommended the Ministry of Environment formalize a risk-based watercraft inspection strategy related to aquatic invasive species.*** (*2016 Report*

– *Volume 1*, p. 65, Recommendation 3; Public Accounts Committee agreement September 15, 2016)

**Status**—Implemented

As of August 2020, the Ministry of Environment developed and follows a documented, risk-based watercraft inspection strategy. It focuses on intercepting high-risk watercrafts (i.e., watercrafts travelling from locations known to have aquatic invasive species) at inspection stations. It sets up inspections stations throughout the province at locations where aquatic invasive mussels have a high probability of survival. See **Figure 1** for the location of the Ministry's inspection stations in 2020.

**Figure 1—2020 Inspection Station Locations**

➤ Estevan on Highway 39	➤ Near Moosomin on Highway 1
➤ Hudson Bay on Highway 3	➤ Near Churchbridge on Highway 16

Source: Ministry of Environment records.

<sup>2</sup> We reported this work in our *2018 Report – Volume 2* (Chapter 31, pp. 225-230).

In May and June 2020, it intercepted two watercraft with invasive mussels visibly attached.

The Ministry's strategy will help it make informed decisions about where and when to focus its watercraft inspection activities and determine the resources needed. In addition, the risk-based inspection strategy helps the Ministry determine higher-risk geographical areas, and prioritize its placement of inspection resources.

### Waterbody Sampling

***We recommended the Ministry of Environment establish a risk-based strategy for sampling Saskatchewan waters for aquatic invasive species.***

(2016 Report – Volume 1, p. 66, Recommendation 4; Public Accounts Committee agreement September 15, 2016)

#### Status—Implemented

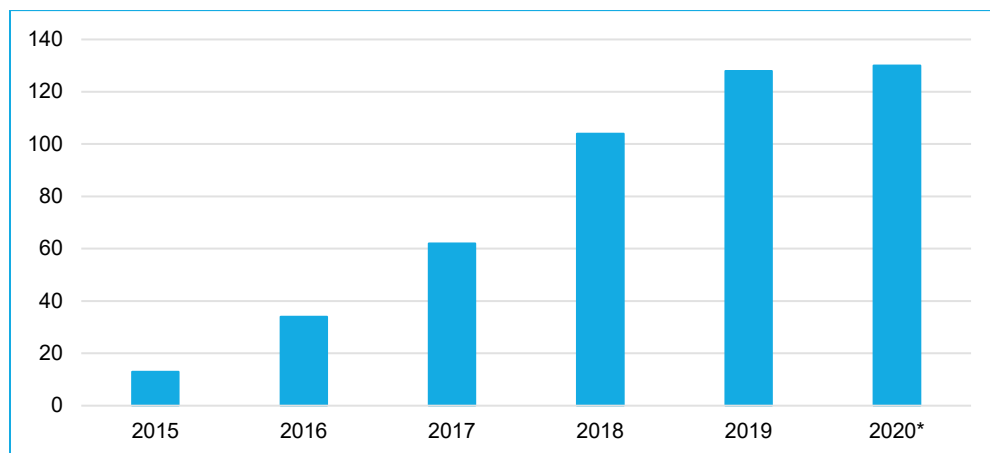
The Ministry established and follows a strategy for sampling Saskatchewan waters for the presence of aquatic invasive species. It prioritizes waterbodies for testing based on the likelihood of the survival of invasive species. The strategy involves working with other organizations, which draw test samples from Saskatchewan water bodies (e.g., Saskatchewan Association of Watersheds, SaskPower).

While the Ministry does not have a pre-determined listing of all sampling locations for the year, it aims to sample as many waterbodies as possible based on available funding and support from collaborating agencies. The Ministry has a list of the waterbodies that it assesses as high risk and where monitoring will occur.

As of August 2020, the Ministry sampled 100 waterbodies and plans to sample an additional 30 waterbodies by the end of 2020. The Ministry assessed 46 of the province's waterbodies to be high risk of contracting aquatic invasive species. During its 2020 sampling, the Ministry sampled 36 of the 46 (78 percent) high risk water bodies.

**Figure 2** shows the number of waterbodies the Ministry samples continues to increase annually.

**Figure 2—Number of Waterbodies Ministry of Environment sampled from 2015 to 2020**



Source: Ministry of Environment records.

\* Ministry staff have sampled 100 waters as of August 2020, expecting to sample 130 by the end of 2020.



Using a risk-based approach to determine which water bodies to sample, and increasing the extent of waterbody testing allows greater monitoring and prevention of aquatic invasive species within our province.

### 3.2 Evaluation of Education and Awareness Activities Occurring

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***We recommended the Ministry of Environment measure the effectiveness of its aquatic invasive species public education and awareness campaign regularly.*** (2016 Report – Volume 1, p. 64, Recommendation 2; Public Accounts Committee agreement September 15, 2016)

**Status**—Partially Implemented

The Ministry of Environment established an adequate aquatic invasive species communications strategy. The strategy outlines goals and objectives, approach, timelines, budget (i.e., approximately \$70,000 for 2019), and measurement and evaluation.

The Ministry's measures to evaluate the success of its education and awareness campaign include:

- Tracking individuals who viewed, commented or shared aquatic invasive species posts on social media.
- Comparing media calls, reports of aquatic invasive species through the Turn in Poachers and Polluters line, views on the Aquatic Invasive Species webpage, public inquires for the current year to prior years.
- Assessing compliance of watercraft users with legislation during watercraft inspections. For example, the Ministry uses inspections to assess if watercraft users remove boat plugs (as required by law). Its 2020 inspections showed a lack of compliance with the boat plug requirement. The Ministry is considering adding signage to highways to advertise this requirement to increase awareness of this requirement and in turn, compliance.

In fall 2020, the Ministry is collaborating with a company and using targeted surveys to better understand how knowledgeable the public is about aquatic invasive species. The Ministry plans to use this information to identify where knowledge gaps exist and improve its advertising campaigns.

Having adequate processes for measuring results would help the Ministry evaluate if its education and awareness efforts related to aquatic invasive species are successful, and whether it targeted resources on worthwhile activities.

### 3.3 Testing of Draft Rapid Response Plan In Progress

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***We recommended the Ministry of Environment complete and test a formal rapid response plan to mitigate the spread of aquatic invasive species in Saskatchewan waters.*** (2016 Report – Volume 1, p. 67, Recommendation 5; Public Accounts Committee agreement September 15, 2016)

**Status**—Partially Implemented

As of August 2020, the Ministry of Environment has a draft rapid response plan to address the immediate threat of the spread of aquatic invasive species in the province.

The draft plan includes the point of contact, response roles and responsibilities, and the process to activate a response management plan (e.g., incident classification, response steps).

The Ministry plans to begin testing the rapid response plan in fall 2020 and complete additional testing in 2021. This testing stage appropriately involves a collaborative test with the Department of Fisheries and Oceans Canada and other Western Canadian provinces. The Ministry plans to test the draft plan to confirm it operates as expected and is sufficiently comprehensive.

A finalized and tested rapid response plan aids in responding to the detection of aquatic invasive species in a formal and timely manner (i.e., before species become established). Timely and appropriate response is key to minimizing the impact of and spread of aquatic invasive species.

