

# Update on the Alberta Aquatic Invasive Species Program

## **Background**

Aquatic invasive species pose one of the greatest threats to Alberta's freshwater resources. Impacts from harmful aquatic species range from outcompeting native species, to negatively impacting the economy by deterring recreation opportunities, decreasing property values, and changing native fisheries important to Alberta.

Alberta is invested in aquatic invasive species (AIS) prevention through the development of the Aquatic Invasive Species Program with five elements: 1) policy and legislation, 2) education and outreach, 3) monitoring of water bodies, 4) watercraft inspections and decontaminations, and 5) response.

The Alberta program is the result of a collaboration of many creative partnerships between ministries including, Environment and Parks (Policy, Operations, and Parks Divisions), Agriculture and Forestry and Justice and Solicitor General.

Numerous municipal governments have entered collaborative programs with the department in prevention and response to aquatic invasive species that threaten Alberta waters.

Many non-government groups and industries are participating in program elements, including: Alberta Summer Villages Association, Alberta Irrigation Projects Association, Alberta Invasive Species Council, Alberta Lake Management Society, and the Alberta Fish and Game Association. These groups sometimes support initiatives with funding or capacity.

The aquatic invasive species program has numerous individuals that carry messaging further than the dedicated staff could leverage in isolation.

## **Status**

### **Watercraft Inspections**

Alberta is exposed to the highest risk of an AIS introduction (mussels and plants) from surrounding jurisdictions through the movement of watercraft. Therefore, watercraft inspections continue to be an important element of the AIS Program, with 31,799 inspections completed in 2018. A total of 17 mussel-fouled watercraft have been intercepted to date in 2019, and 55 had plants attached. In order to focus resources at the areas of highest risk for entry, 2019 watercraft stations were operated only at the southern and eastern borders. The three western stations were closed in 2019.

### **Conservation Canine Program**

In 2019, the Conservation Canine Program continued to support response and monitoring by completing shoreline inspections, while also maintaining a presence at watercraft inspection stations. No evidence of invasive mussels was found at any lakes in Alberta.

Monitoring

The Environmental Monitoring and Science Division of Alberta Environment and Parks (AEP) coordinated monitoring for invasive Dreissenid (zebra and quagga) mussel veligers and spiny water flea in 2019. With the cooperation of several partners including the Alberta Lake Management Society, Alberta Irrigation Projects Association, Parks Division (AEP), Operations Division (AEP), and Alberta Agriculture and Forestry, 63 lakes and reservoirs across the province were monitored. Alberta remains free from invasive mussel and spiny water flea.

Education and Outreach

The educational efforts in 2019 continued focusing on behavior change of specific audiences with two main educational campaigns: “Clean, Drain, Dry Your Gear” and “Don’t let it Loose”. Both campaigns have an overall goal of educating Albertans about threats to our ecosystems and what they can do to protect Alberta’s water. Program has shifted to social media for sharing messaging and continues to get opportunities to share messaging through interview requests.

Response

While Alberta remains mussel free, prevention remains our best defense. Similar to other jurisdictions who tried to prevent their introduction, we may not prevent them forever and need to be prepared in the event that mussels are found in Alberta. Given our aquatic ecosystems and irrigation infrastructure may be at risk, we want to have a method of control available for invasive mussels. Alberta is currently leading the process of registering potash (normally used as a fertilizer) for use as a pesticide. Using potash against adult mussels has been found to be 100% effective. We are still finalizing the data required to submit the package for registration to Pest Management Regulatory Agency (PMRA). Submission to PMRA does not guarantee registration for Potash as a control agent, and there is still a period of time post submission for PMRA to review the information.

Flowering rush continues to be found in Alberta water bodies. Herbicide application and hand pulling isolated occurrences has been determined to be effective. Where possible, new isolated plants are being targeted with hand pulling. This requires training so that the removal is conducted with minimal disturbance to not break off pieces that could float downstream and start new populations. Where feasible, populations are being addressed through Reward (diquat) or hand removal.

Invasive phragmites also continues to be found along major transportation routes, highway and rail lines. Alberta is diligently staying on top of these occurrences as we have seen the devastation in eastern Canada if it is not controlled. An effective method of eradication, if completed early on, is to cut stands in combination with a herbicide application of Imazapyr, a pesticide currently acquired under an emergency use registration from the federal government. While creative partnerships with CN, CP, municipalities and Alberta Transportation have eradicated many populations, there are still some populations to address in 2019.

Pale yellow iris has been found in a few isolated locations but amounts have stretched the capacity of volunteers to dig the plants up. Currently there are no registered herbicides for use for this species, and no immediate interest by companies to register this use. This leaves all occurrences at a minimum to stop seed production and if possible hand remove plants. We are currently researching the effectiveness of installing mats, as it has been shown elsewhere that a barrier installed for 3 months can kill pale yellow iris. We will monitor effects from 2018 where mats were used and continue to install them in 2019 for more assessment of the technique.

Prussian Carp was commonly reported in spring of 2019, as flood waters receded, often leaving Prussian carp behind. No new locations were reported in 2019. Prussian carp is commonly found from the Red Deer River watershed all the way to the Montana border. There are no control measures available for response given the scale of the infestation in numerous watersheds, other

than encouraging a catch and kill it response from anglers who encounter it. It can be eaten and there are no limit restrictions.

Goldfish and Koi also continue to be reported all across Alberta, predominantly in storm water management ponds where they have been intentionally released. AEP currently knows about 50 storm water management ponds, but also has some reports from golf course ponds, park ponds, lakes and creeks. We continue to help support any municipality that is interested in launching control efforts through approvals and appropriate training, to ensure control efforts protect other fish and wildlife, as well as humans.

**Further Information**

Further information can be found at <https://www.alberta.ca/Aquatic-invasive-species.aspx>

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