

Protecting Alberta's Water Resources: Updates from the Aquatic Invasive Species Program

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Invasive Species pose some of the greatest risk to biodiversity in the world. Aquatic invasive species (AIS) can harm native fish, invertebrates and aquatic plants by competing for limited resources, destroying habitat, and thriving in poor water quality/quantity conditions. These harmful AIS, such as zebra and quagga mussels, can also cause massive economic impacts to hydropower operators, irrigation districts and farmers, municipal water intakes (such as drinking and wastewater facilities), and even private property owners (damage to watercraft and equipment, decreases in property values).

With estimated economic impacts being more than \$75 million annually, including damage to infrastructure recreational properties, it is no wonder that AIS Programs have been springing up across western Canada in the past few years. There is a recognition that western provinces are just as vulnerable to high profile invaders as any other location. For example, the risk of an invasive mussel invasion has been determined to be very high to high from Manitoba all the way to BC. The most common means of spreading AIS, including mussels, is through watercraft that are used in contaminated waters outside of the province. Boats are moving all the time, and the risk of an introduction from eastern Canada is especially high. You'll now find mandatory watercraft inspections in BC, Alberta, Saskatchewan and Manitoba!

Watercraft inspection stations provide a face-to-face educational opportunity with boaters and anglers, but also provide us with the opportunity to intercept any aquatic invasive species. We commonly see aquatic plants, mud, standing water, and sometimes, illegal aquatic bait coming through the stations. In 2016, more than 19,000 inspections were completed in Alberta and 17 mussel-fouled boats were intercepted. Of these, 14 came from eastern provinces, and only three came from the United States. A similar trend was observed in 2015, with over 21,500 inspections, and 12 mussel fouled boats, most of which came from Ontario, Quebec and Manitoba. Alberta is also using three 'Conservation Canines,' dogs that are specially trained to detect mussels on watercraft.

Boats cannot leave the inspection station until they are CLEAN, DRAINED, and DRY, which addresses the spread of not only AIS of concern, but also fish diseases that can be spread by the movement of fish, mud or standing water. This year Alberta will be piloting the use of 24/7 night stations at key high traffic locations.

After the discovery of mussels in Manitoba in 2014, and in Montana in 2016, western provinces are facing a serious risk that is ever increasing in proximity. As a result of these risks and the growing AIS Programs, western provinces are working closely together to optimize efficacy and enhance collaboration. Last year, an Inter-Provincial and Territorial Invasive Species Agreement was signed between BC, Alberta, Saskatchewan, Manitoba and Yukon. This established a Working Group of AIS Coordinators, along with an annual work plan where we can prioritize issues and projects and work together to see them through. It also helps formalize our expectations of each other, as well as our ability to share information and resources.

Boaters can do their part to prevent the spread of aquatic invasive species by ensuring their watercraft and equipment is CLEAN (no plants, mud or organic debris), DRAINED (no standing water in the ballast, bilge or live wells), and DRY each time they use their boat. This provides an excellent education opportunity for Officers to engage with boaters – these steps encourage personal action and responsibility and also protect the treasured water resources across the west.

In addition to watercraft inspections, the AIS Program staff have been busy with new policies and regulations, monitoring Alberta waters for mussels, responding to existing threats, and preparing an 'Early Detection, Rapid Response Plan.' In 2016, over 70 waterbodies were monitored for the presence of invasive mussels; all results have come back negative to date. You can see if your lake has been monitored recently with this neat new online database: [Alberta Early Detection & Distribution Mapping System \(EDDMapS\)](https://www.eddmaps.org/alberta) (<https://www.eddmaps.org/alberta>). This database also offers an app that you can download on your smartphone and report either suspect AIS or, better yet, locations on your lake that you have checked and have NOT found AIS (especially mussels). We're encouraging to shoreline homeowners and municipalities to check docks and other in-water infrastructure for the attachment of invasive mussels, '*All Hands on Deck!*' ☺ Remember, any attached mussels in an invasive mussel; no native mussels can attach. You'll find native mussels burrowed in the mud (and they are much larger than zebra and quagga mussels). If you suspect invasive mussels anywhere (in your lake, on a boat, etc.), please report it right away to our 24/7 AIS hotline: **1-855-336-BOAT (2628)**!

Last year we also introduced some new AIS Regulations. In Alberta it is also now illegal to transport your boat with the drain plug in, as too many boats are coming into the stations with standing water that should have been drained and could be harbouring all kinds of nasty invasive species and aquatic diseases. Any prohibited AIS found in the wild must be reported, unless their presence is already known (e.g. goldfish, Prussian carp, flowering rush, etc.).

Finally, it has been an exciting year in that we have been able to focus more effort on the control of existing AIS in the province. In 2016 we worked on projects to eradicate or control goldfish (especially in high risk ponds with connectivity to flowing water) in several ponds across the province where they had been illegally introduced, flowering rush and our first detections of invasive phragmites. Prevention is a priority for our AIS Program, but response is as well; we must be prepared to address harmful AIS when we find them. Remember, it is illegal to release non-indigenous aquatic species into the wild; it is also

cruel to your pet and cause great harm to native fish and wildlife and the habitat they need to thrive. Be a responsible pet owner, and DON'T LET IT LOOSE!

Together we can be vigilant and protect our lakes, reservoirs and rivers from harmful aquatic invaders. The more eyes on the water, the more successful we will be. Find more information on [AIS in Alberta](http://aep.alberta.ca/fish-wildlife/invasive-species/aquatic-invasive-species/) at <http://aep.alberta.ca/fish-wildlife/invasive-species/aquatic-invasive-species/>. Thank you for your continued support and enthusiasm for protecting Alberta's water resources!

*All photos and graphics can be credited to the Alberta Environment & Parks



Photo 1: Clean Drain Dry to protect Alberta's waters!



Photo 2: New permanent highways signs are installed at borders on all numbered highways



Photo 3: Heather and Conservation Canine 'Diesel' inspecting a boat for invasive mussels at a demonstration at the Alberta Legislature



Photo 4: Inspectors check every nook and cranny for invasive species!



Photo 5: Expect to be inspected! Watercraft inspections are mandatory for all passing watercraft, including motorized, non-motorized and commercially hauled