

Aquatic Invasive Species Program Saskatchewan

Jamie Bilash

Aquatic Invasive Species Ecologist

Fish, Wildlife & Lands Branch

Ministry of Environment

In Saskatchewan:

Tracking of aquatic invasive species from bordering Provinces and States has been done since 1992

- SK has been a member of the National Aquatic Invasive Species Committee since 2008.
- SK has been a member of the Saskatchewan Invasive Species Council in 2009 to provide Fact Sheets on AIS to their website <http://www.saskinvasives.ca/> and provide information requests to the public.
- In 2014 MoE appointed a member of the Fishery to be the AIS Coordinator to help out work on the strategy for the Education/Awareness and Prevention program for Government of Saskatchewan due to work done on AIS within the Fishery's Unit of the now Fish, Wildlife & Lands Branch within the Ministry of Environment.

Public Education, Awareness and Outreach

Stop Aquatic Invasive Species



CLEAN + DRAIN + DRY YOUR BOAT

Before returning home from out of province, coming to visit or moving between waters within the province make sure to:

CLEAN

remove all visible plants, animals and mud

DRAIN

drain all on-board water and leave plugs out during transport and storage

DRY

dry your watercraft, and all related gear completely



To report suspect invasive species, please contact the nearest Ministry of Environment office or call the TSP Line.

SaskPower
Powering the Future™



The Ministry of Environment continues to focus efforts on raising public awareness to address the threat of Aquatic Invasive Species and the importance of prevention.

Public Education, Awareness and Outreach 2016

- Angler's Guide
- Ministry's New Website as of June 2016
 - has had 6,600 hits on AIS at 3 minutes/hit
- Public Service Announcements
- Educational Materials (rack cards/key chains)
- AIS Awareness Week
- News Releases, media interviews, radio and television ads
- Highway and boat launch Signs have been put up along highways at Manitoba border crossings, cities and heavily used boat launches. A total of 11 highway signs and 105 boat launch signs put up in 2016
- Watercraft Inspections (89.5% knew of invasive mussels)
- Provincial Park survey (82.5% knew about invasive mussels)

saskatchewan.ca



Public Education and Awareness by the Communication's Branch in 2016

Event/Release

- May 10 Aquatic Invasive Species Awareness Week event/release
- June 6 AIS agreement partner release
- June 10 AIS inspection station event (CBC and Global)
- June 20 - North Dakota Game and Fish Department/Manitoba release

Media inquiries

- April 21, 2016 - CJYM Radio Rosetown called about AIS
- May 19, 2016 - Terry Pugh of Warman Gazette re: goldfish
- July 7, 2016 - CJ 1150 Radio Estevan called about AIS inspections
- Aug 15, 2016 - CJYM Radio Rosetown called about AIS

Proactive media

- Upper Souris Watershed Association Newsletter article (April/spring 2016)
- June 28 SWNA articles
 - U of S developing early-warning system for invasive zebra mussels
 - Leko AIS Column
- MBC Conservation Corner - AIS program (June/July)
- SUMA/SARM/SWF (Outdoor Edge) AIS Program article (July - Sept)

Aquatic Invasive Species Program Awareness, Education & Monitoring

In house activities and Businesses

In 2013 the entire Wildfire Management's air fleet along with Aircraft Companies:

- were provided with information on AIS for float planes.
- purchased a large trailer burner for decontaminating air craft that had been sent out of province.

In 2014 Consultants requiring Special Collection Permits for aquatic Sampling:

- were given documentation on requirements while working within waters in Saskatchewan so that gear was Clean + Drain + Dry and equipment was cleaned properly as well.
- all government agencies moving between water bodies were provided this same documentation for their field crews.

In 2015 Watercraft Dealers were notified as to what would be required to bring New or Used watercraft into the province:

- this was done to eliminate issues and speed up movement at inspection sites
- if required watercraft would be decontaminated if a used watercraft was purchased from a Province or State having mussels via the TIP line.

Irrigation Sector

- Currently working on a monitoring and assessment plan for AIS with both the Ministry of Agriculture and the Saskatchewan Irrigation Project Association Inc. (SIPA).
- They are very interested in getting information on AIS out to their public
 - They want to put AIS information onto their website.
 - I will be providing a talk this December with this group about AIS and the possible impacts to the irrigation sector.

Public Education and Inspection for the

CLEAN

Remove all visible plants, animals, and mud

DRAIN

Drain all water from the boat and remove the boat plug while transporting your boat. **Make sure the lowest portion of the boat is above the bilge plug drain hole.**

DRY

Your watercraft and all related gear – completely

Initiative was continued

Early Detection via Veliger Monitoring

- ❑ **AIMM (Adult Invasive Mussel Monitoring)** program receives information from Saskatchewan Watershed Associations, Resort Villages, individual volunteers, Ministry of Parks & Culture, Fisheries.
- ❑ To date 140 samples on 50 waters covering 9 of the 11 major watersheds have been sampled with more samples to be sent in by Fisheries, Parks & Culture and the Saskatchewan Association of Watersheds.
- ❑ **Veliger monitoring** continued and expanded in 2016 by MoE Staff, SaskPower, Water Security Agency and Saskatchewan Association of Watersheds.
- ❑ A total of 35 water bodies were sampled within 10 of the 11 major watersheds in 2016 with no positive results

saskatchewan.ca



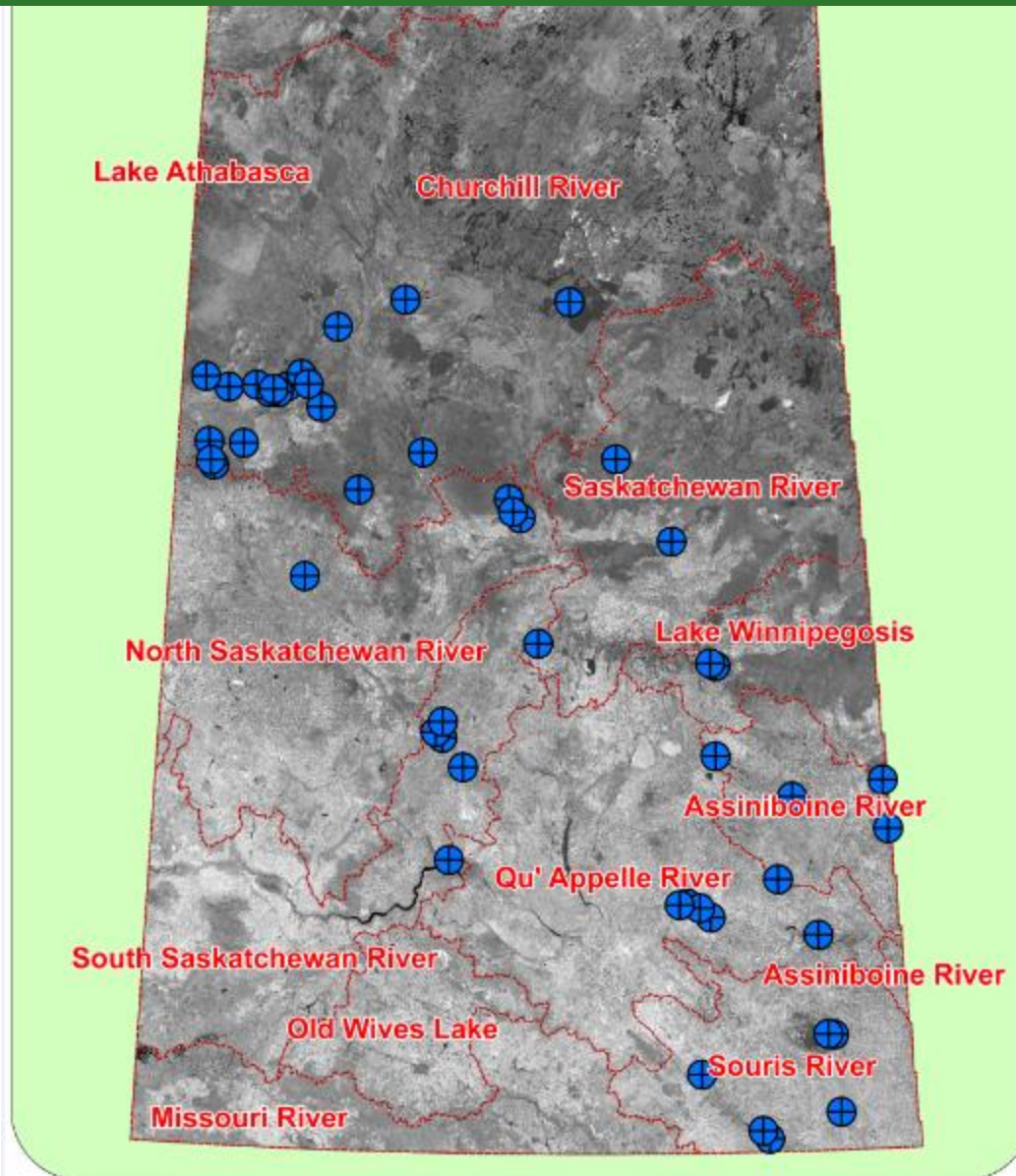
AIMM Sampling:

2015

- 43 waters were sampled

2016 (shown)

- 50 waters sampled in 9 of the 11 major water basins.



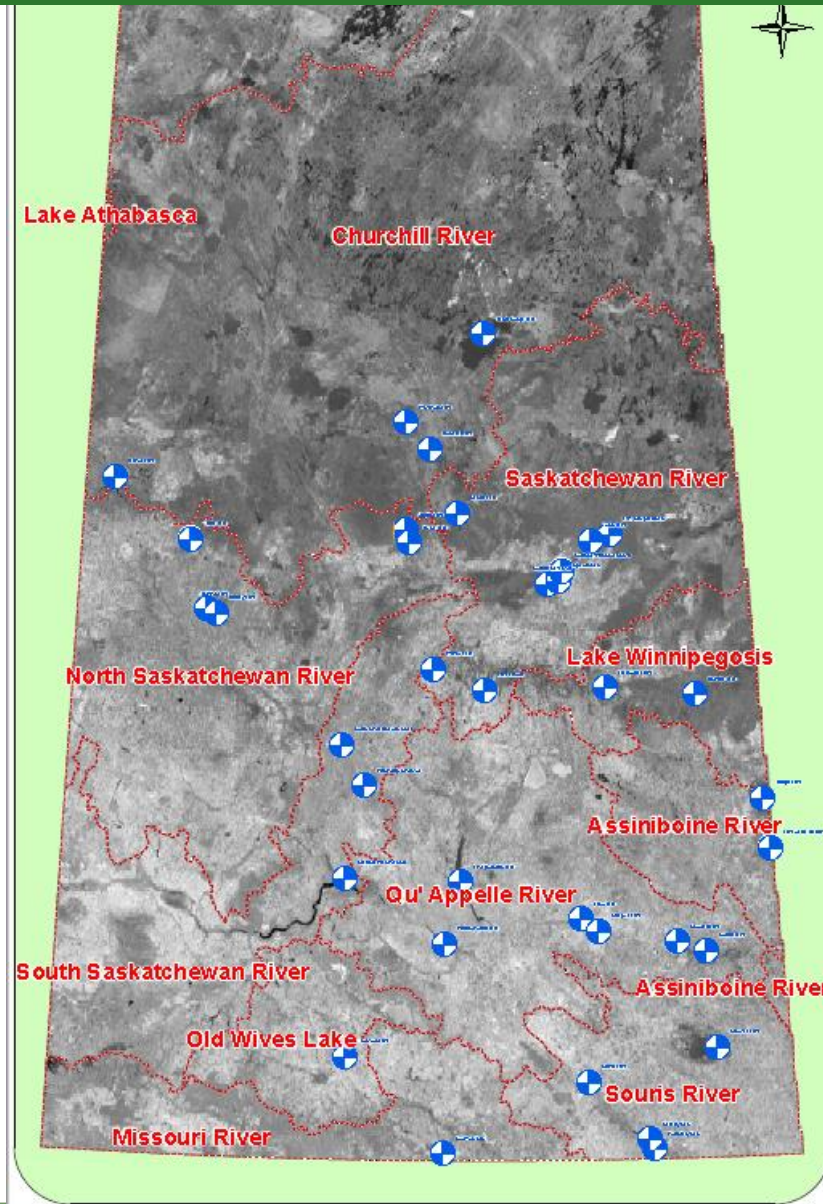
Veliger Sampling:

2015

- 15 waters were sampled

2016 (shown)

- 35 waters were sampled in 10 of the 11 major water basins.
 - high use lakes were taken into account
 - sampling took place to cover the upper and lower end of the basins
 - Lab results confirmed negative



Environmental DNA or eDNA

The University of Saskatchewan is working on using eDNA to provide a more effective and efficient way to monitor for many Aquatic invasive Species:



Water sample is collected at the waterbody being sampled and brought back to lab



or



Water can be collected at the waterbody and filtered on site



Aquatic Invasive Species Strategy

A framework containing actions intended to help the province prevent, respond to and manage aquatic invasive species has made it to the final draft and going out this early winter to get finalized.

- Focus: **Aquatic** Invasive Species
- Proactive Approach
- Expectations - to be completed by the spring of 2017 and implemented and the EDRR tested in 2017.



Awareness and Education through Watercraft Inspections

- Watercraft inspections: great tool to provide education and awareness and help prevent AIS
- Unless run 24/7 and placed at every road entering a Province/State there is a chance for AIS to be transported and Enter these areas.
 - BC intercepted 15 watercraft with mussels in 2016
 - AB intercepted 13 watercraft with mussels in 2016
 - SK intercepted 2 watercraft with mussels in 2016
- Watercraft Industry has been doing a lot to help out with building watercraft that can be drained; however, there are still older watercraft that will have issues.

The Public is Aware that Inspections do not catch all mussel bound watercraft

County concerned about aquatic invasive species

Christina Martens/Wetaskiwin Times
Wednesday, September 7, 2016 10:21:38 MDT AM

The Province has been working on boat inspections at Alberta's borders, but the Association of Pigeon Lake Municipalities believes there is always a chance some boats will slip past the inspection points and end up at Pigeon Lake.

The Aquatic Invasive Species Committee, which is a pilot project for all of Alberta, wants to develop a project specific to Pigeon Lake to combat the increasing threat Aquatic Invasive Species pose to the lake. They will be focusing on boat launches at Mulhurst Bay and the Provincial Park because they are the busiest launches on the lake.

The committee wants to add signage at key points on the highways coming to the boat launches and review or add signage at the launches, add garbage cans for weeds at the launches and plan for a small portable wash station at each boat launch to help encourage boaters to get in the habit of washing boats as they are launched or pulled from the lake.

AIS instances/occurrences during 2016

Snakehead being sold from Regina on kijiji

Why we listed certain aquarium fish species!

Showing 21 - 40 of 47 Ads Sort by Price: lowest first

Get an alert with the newest ads for "fish" in Regina. Register for Kijiji Alerts [?] [Sign Up](#)

Sponsored Links:

Regina Beach Fishing Trips - saskatchewanoutdoors.ca
The walleye and pike bite is on Any skill level-guaranteed fish
www.saskatchewanoutdoors.ca/

120 Gal Fish Tank For Sale \$120.00
Regina | 14/10/2016
REDUCED to \$120.00 that's \$1 per gal .. We have a 120 Gal fish tank for sale. Tank only. No leaks. Can include a small tank for use as a sump or fish hospital. May have a few ornaments to include...

Giant snakehead \$140.00
Regina | 17/10/2016
Around 12-13" at the moment. Eats frozen shrimp and frozen fish. Super cool rare fish.

Aquarium and Internet Trade

Angler catches Zebra mussel on Diefenbaker Reservoir and puts it onto Facebook on August 31, 2016

**Do not believe
everything you see on Facebook
or the Web!!!**

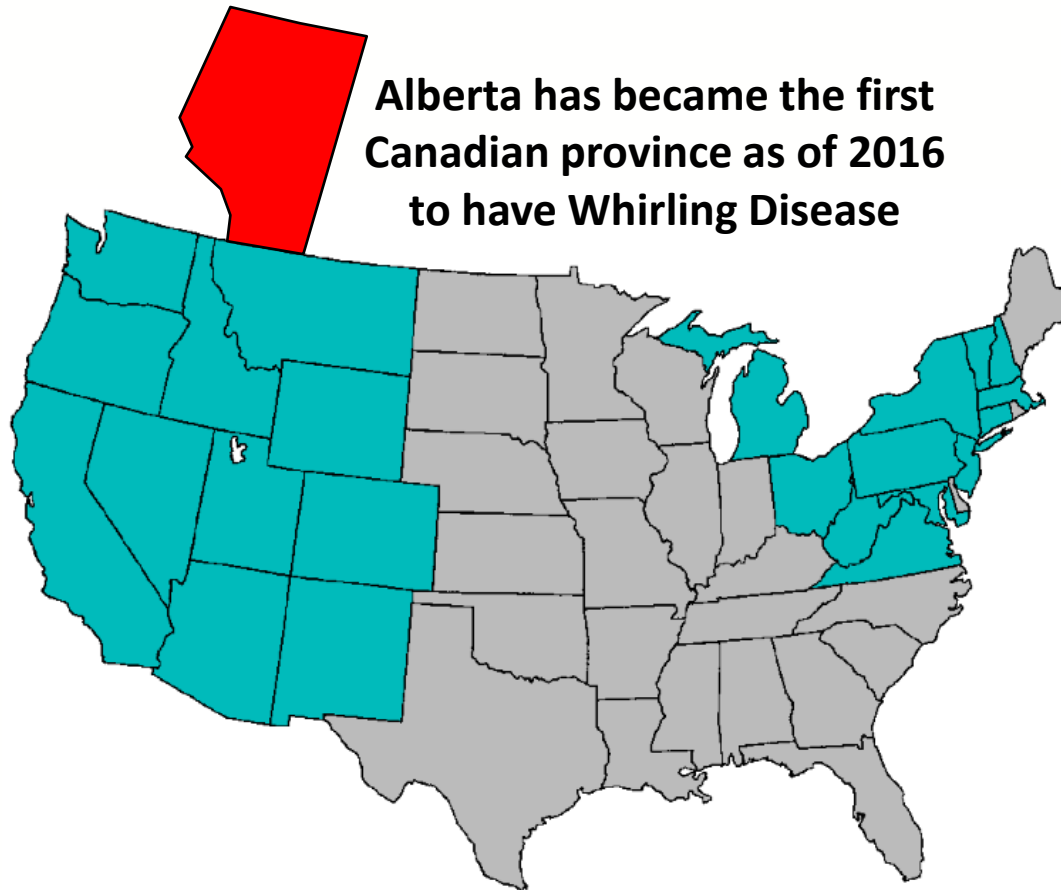


Flowering Rush initiative by the SISC

- Three years ago a site of Flowering Rush was found south of Saskatoon
 - 4 – 5 tons of flowering rush were removed in the first 2 years
 - This took 6 people about a week each time
 - This year it was down to 2 tons
- Since then 1 other site was found on a dugout on Mosaic Potash's property, which they took care of.
- Recently one other site was noted along the AB/SK border, which we hope to get at next year to assess.



Whirling Disease in Canada



Saskatchewan Ministry of Environment Watercraft Inspections 2016



Resources – what have we put in our toolbox?

- In 2015 the ministry acquired two mobile decontamination units – trained 5 staff to operate them.
- In the spring of 2016, 123 field conservation officers; a summer student and 4 CBSA officers were trained on how to do inspections
- In 2016 we trained 12 conservation officers; one summer student and one contract operator to operate the decontamination units.
- One conservation officer was assigned as the inspection coordinator.
- An operator for one of the decontamination units was hired and stationed in Moose Jaw.
- The 2016 inspection strategy was based on risk and resources.



Resources – what have we put in our toolbox?

- In June 2016 an electronic program was developed and implemented to report and track watercraft inspections
 - this will be used to analyze findings and support future recommendations
- Tags to tag watercraft requiring quarantine until decontamination were purchased.
- Inspection/Decontamination Forms were created to provide watercraft owner.
- Public can use the TIP line as a mechanism to report suspicious watercraft



Risk Assessment

- Target areas of highest threat – where are we at risk?
- Define what makes a watercraft a high risk
- Decontaminate boats found to be in the high risk category



Inspection Strategy

- The province's prevention and educational efforts include increased watercraft inspections and decontaminating high-risk watercraft found entering the province. These inspections focus on watercraft being brought into the province from southern and eastern jurisdictions.
- Road-side inspections were conducted in the southeast areas of the province in 2016 including provincial parks and at organized watercraft events.
- The Clean, Drain, Dry initiative launched in 2015 is the main public focus at inspection stations and events, to demonstrate the importance of making this critical practice a habit for all watercraft operators in the province.
- Clean, Drain, Dry is a common message in many North American jurisdictions and is the focal point of ministry educational and advertising efforts.

- **High Risk Boats that come from Manitoba and East?**
 1. Plan to leverage the contamination containment process Manitoba has in place to guide us in where we want to do watercraft inspections on highways coming from Manitoba to Saskatchewan.
 2. CFS will target roadside inspections in 2016 on main highways .
 3. CFS-PCS plans will identify AIS and boat inspections as a high priority. Inspection at boat launches particularly in the east will be done by CFS-PCS staff.
 4. Information will be disseminated by PCS staff – entry gates, etc.

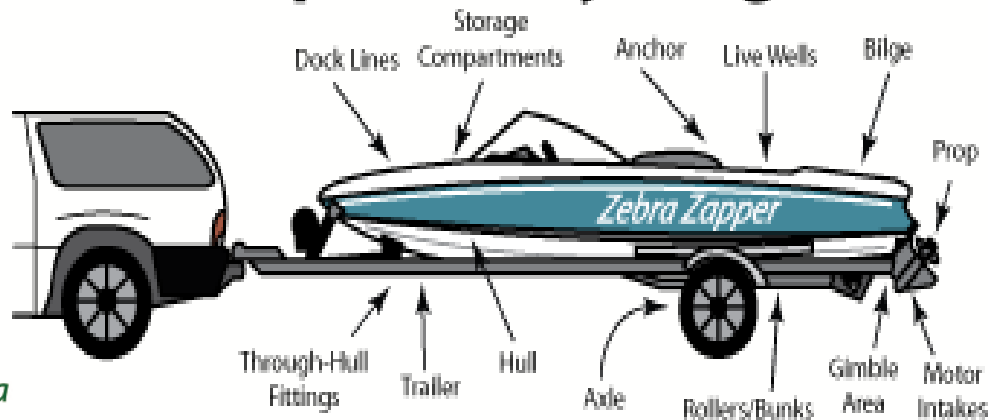
- **High Risk Boats at the US\Saskatchewan Border?**
 1. Utilize CBSA at the border to screen and identify high risk watercraft coming from the US.
 2. Asking CBSA to deny entry to any US owned high risk watercraft until it is no longer high risk.
 3. Asking CBSA to issue an order to any Canadian watercraft that they determine to be high risk.
 - Keep watercraft out of the water; go directly to inspection station; quarantine at residence until it can be examined and properly cleaned (decontaminated) to MOE satisfaction.

Inspection Results

So what did we inspect and what did we find?

1. Ministry staff conducted approx. 800 watercraft inspections.
2. Watercraft identified as high risk – 25
3. Watercraft with visible mussels – 2 of the 25
4. Decontaminations - 25

Before Leaving & Before Launching...
Inspect Everything!



Inspection Results

So what did we inspect and what did we find?

- work focused along Manitoba and US borders along with going to lakes along those borders and informing of Clean + Drain + Dry using CO operated decontamination trailer.

Where did the high risk watercraft come from?

- United States purchased watercraft coming through International Border to owner in Saskatchewan,
- an Alberta Resident hauling pontoon boat up to a northern lake stopped by a Conservation Officer in Lloydminster.
- Another watercraft put through the TIP line that came through both Idaho and Alberta was stopped at Shell Lake in central Saskatchewan. Non-verifiable water found in bilge, about 5 gallons.

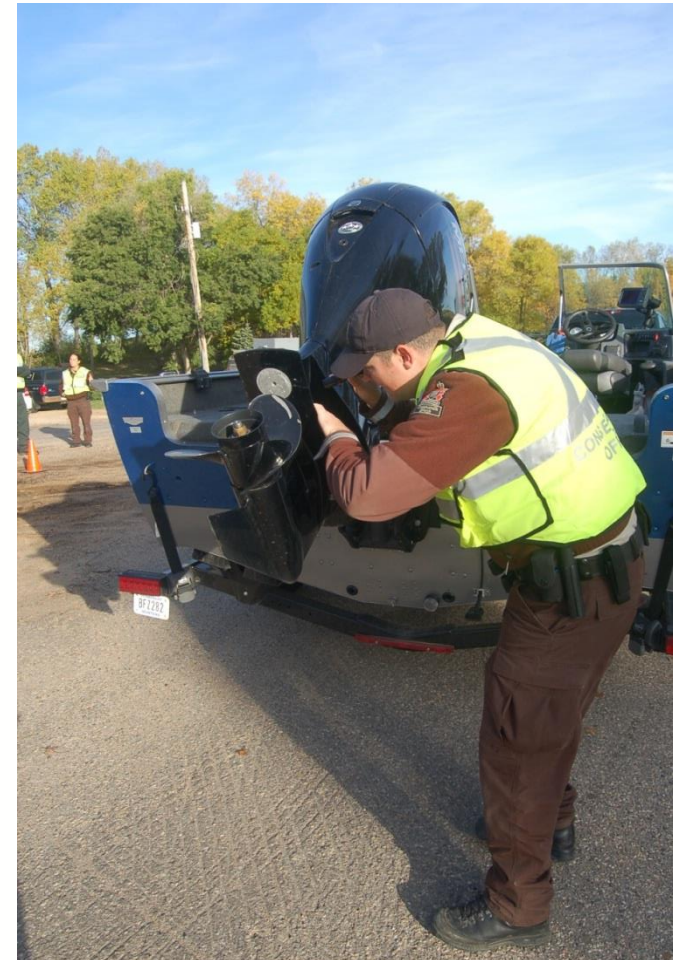


AIS Inspection Results – High Risk Watercraft

Boat origin	Decon date	Decon location	Source of Info	Visible Mussels Found?
Arizona	April 26/16	Spiritwood	TIP	No
Maryland	June 12/16	Saskatoon	CBSA	YES
Manitoba	May 19/16	Mainprize	Officer Inspection	No
Alberta	May 21/16	Alberta	Officer Inspection	YES
Minnesota	May 29/16	Alameda	CBSA	No
North Dakota	May 29/16	Alameda	CBSA	No
North Dakota	May 29/16	Alameda	CBSA	No
North Dakota	June 2/16	Estevan	CBSA/TIP	No
Manitoba	June 3/16	Marchwell	RSI	No
Manitoba	June 3/16	Marchwell	RSI	No
Manitoba	June 9/16	Corrine	RSI	No
Colorado	June 9/16	Corrine	RSI	No
South Dakota	June 9/16	Corrine	CBSA/RSI	No
Texas	June 15/16	Regina Beach	CBSA	No
Manitoba	June 19/16	Hwy 10	RSI	No
Ontario	June 30/16	Flemming	RSI	No
Manitoba	June 30/16	Flemming	RSI	No
Manitoba	June 30/16	Flemming	RSI	No
Manitoba	June 30/16	Flemming	RSI	No
Montana	July 4/16	Moose Jaw	CBSA	No
Manitoba	Aug 3/16	MB Border	RSI	No

Inspection Strategy – Where to from here?

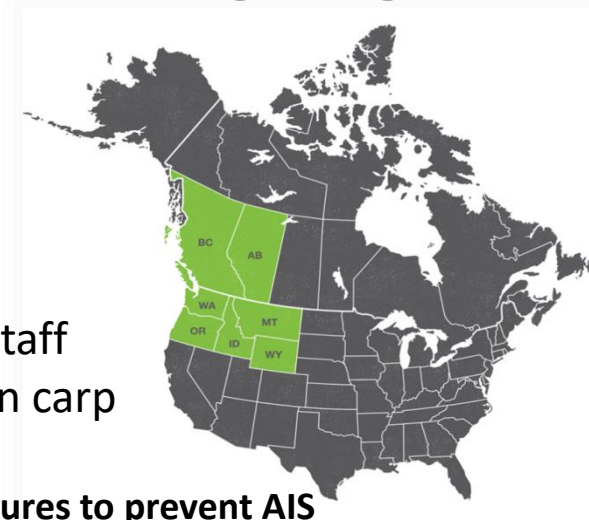
1. Review and analyze information from inspections this year.
2. Review partnership opportunities – What about SAW and PARCS?
3. Review opportunity for other jurisdictions to increase effort to keep AIS out of the province. This includes AB checking east bound watercraft and DFO and CBSA coordinate at International Border.
4. Preferable to put in 24/7 watercraft inspection station at a Manitoba location to eliminate eastern watercraft with mussels.
5. Establish and Implement the AIS inspection strategy for 2017.



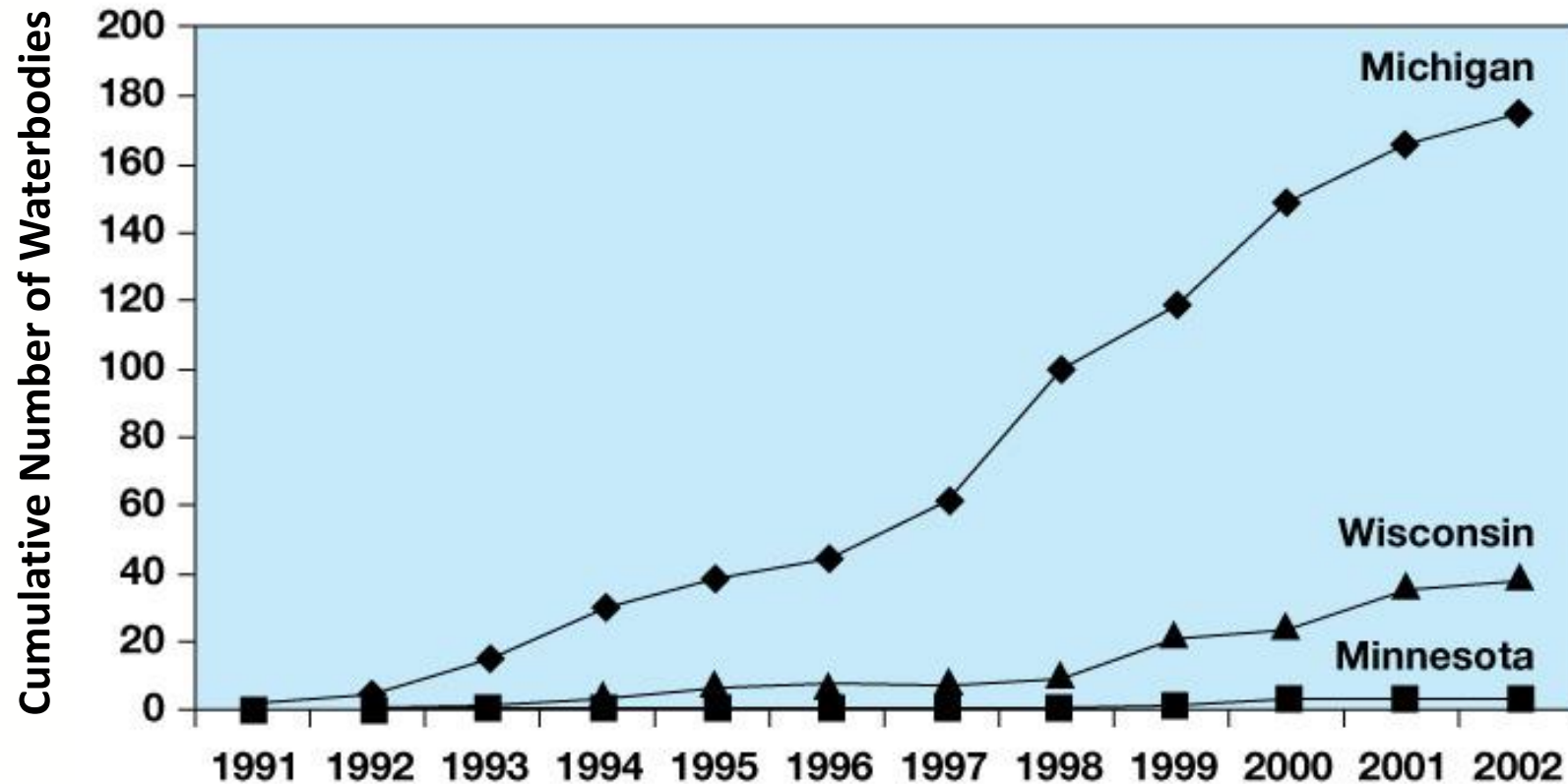
Need to provide positive messaging throughout our region/not negative messaging

Alberta AIS Program Messaging

- Education: Two high profile campaigns
 - [CLEAN DRAIN DRY](#) (boaters)
 - [DON'T LET IT LOOSE](#) (intentional release)
 - Mainstream media (TV, social media, print)
- Resourcing: ~\$2.2 Million annually; 2 FTEs, ~40 seasonal staff
- AIS Risk to Western Canada: Focus on zebra mussels, Asian carp
- Mussel risk: Eastern provinces/states, SW United States
 - **“Friendly green zone”** denotes jurisdictions taking strong measures to prevent AIS
- Federal Fisheries Act: AIS Regulations (July 2015)
 - Working with Canadian Border Services Agency to increase coordination
 - Delegated authority to deposit ‘deleterious substances’ for control of AIS
- Western AIS Agreement: BC, AB, SK, MB, YK
- **As noted Saskatchewan along with Manitoba have been working at AIS prevention since 1990’s, not 2013 as in Alberta. Both provinces have strong measures in place to try and control AIS – including enforcement at inspection stations as they are operated by Conservation Officers.**



Saskatchewan Educates and makes Public aware of AIS - which becomes important once here!!!



✓ Spread much more where not emphasized

* more water accesses in Michigan and Wisconsin, but Minnesota has just as many boaters and more water