

Aquatic Invasive Species



Nicole Kimmel

Aquatic Invasive Species
Specialist

Alberta



1. Field Coordinator
2. 3 decontamination techs
3. 4 Station Supervisors
4. ~40 Inspectors (seasonal)
5. 3 Conservation K9



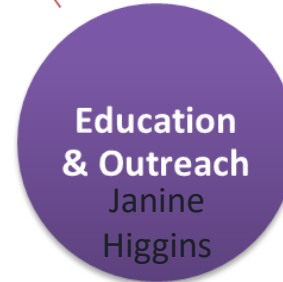
1. ASERT – emergency response
2. Any municipality willing to partner



1. Superintendent Miles Grove – Fish & Wildlife Enforcement Branch
2. Other agencies as required



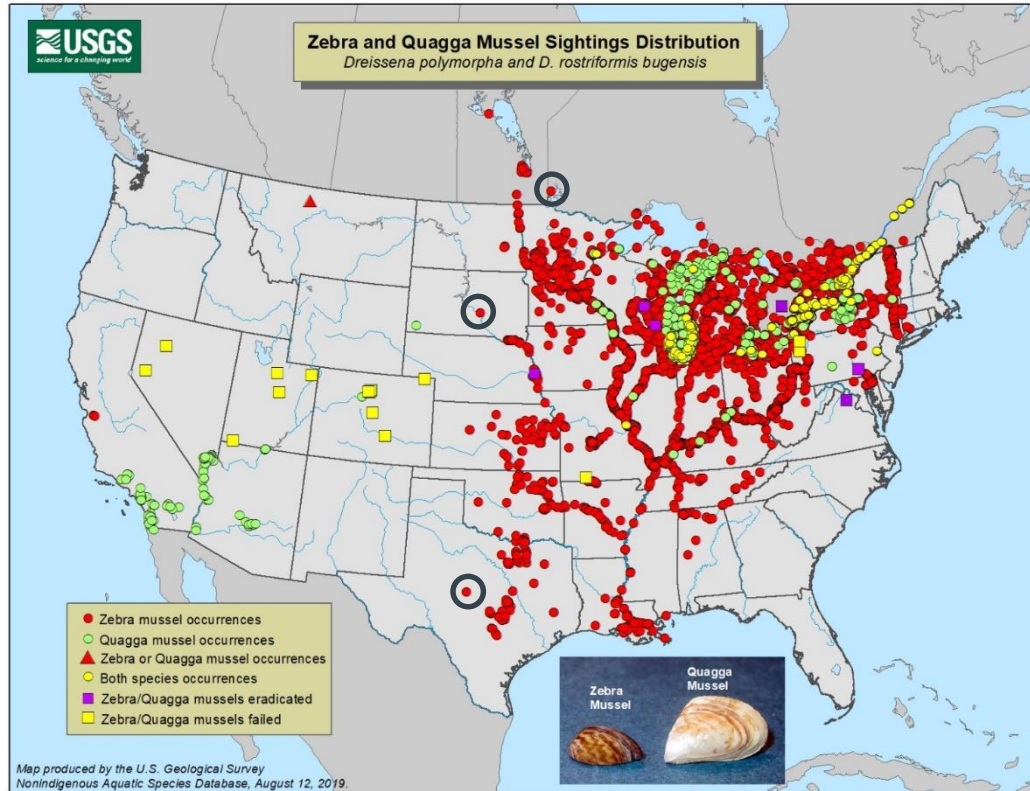
1. Environmental Monitoring and Science Division
2. Alberta Irrigation Projects Association
3. Alberta Lake Management Society



1. Andre Lemay –Graphic Designer
2. Communications

Zebra and Quagga Mussel Distribution

Dreissena polymorpha and *D. rostriformis bugensis*



Intentional/Accidental Release



Policy & Legislation

What changes have been made in the last 5 years?

Fisheries (Alberta) Act

Policy &
Legislation

2015

- Prohibited Species List
- Mandatory Inspection Stations
- Enhanced authority & quarantine provisions

2016

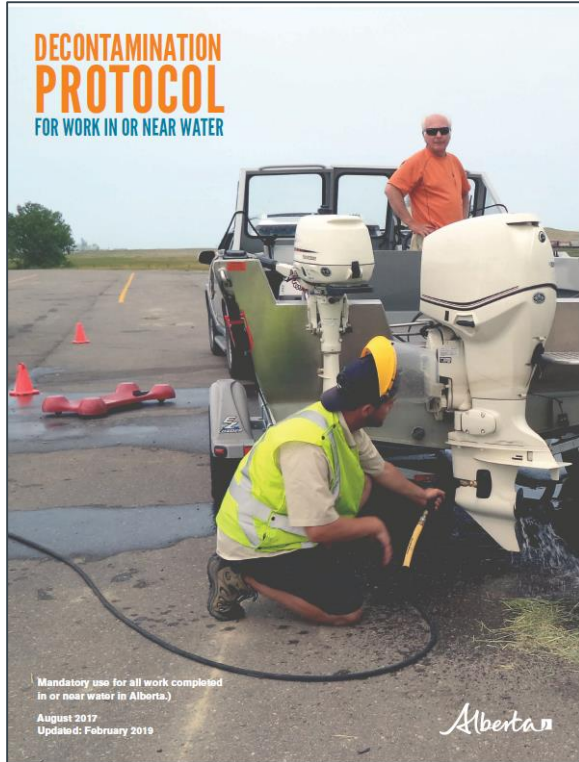
- Pull the Plug
- Mandatory reporting of AIS

2018

- Specified Penalties - \$310 Bypassing an open Watercraft Inspection Station and \$172 for Failing to Pull the Plug



Decontamination Protocol



Condition for approvals/contracts
for work in or near water

CLEAN + DRAIN + DRY

*Whirling disease driven, but
addresses all aquatic invasive
species*

Education & Outreach

Campaigns directing “action” for Albertans

Education & Outreach

**CLEAN + DRAIN + DRY
YOUR GEAR**



**DON'T
LET IT
LOOSE**

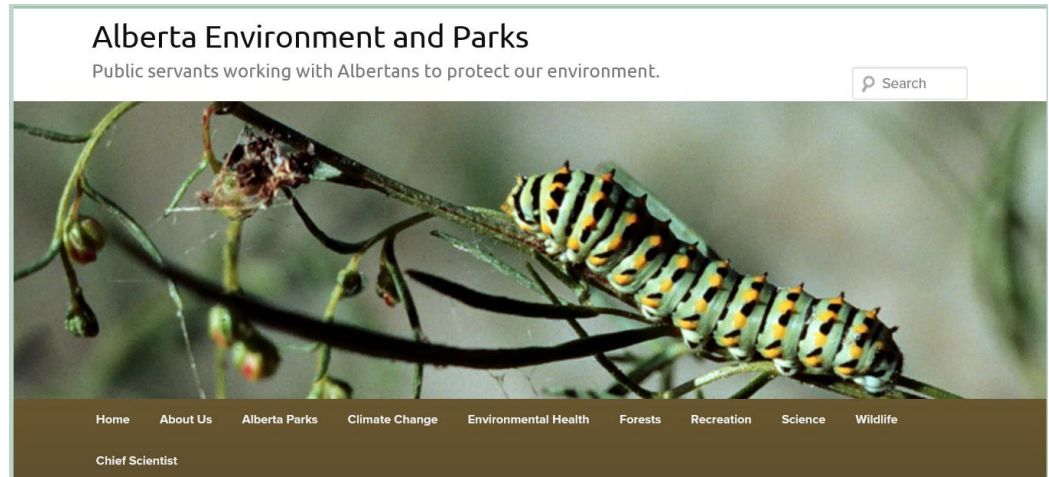
New Resources for 2019

- Videos
 - Invasive Mussels
 - Flowering Rush
 - Goldfish

- Infographics
 - Flowering Rush
 - Goldfish
 - Whirling Disease (in progress)

AEP Blog

- 4 Aquatic Invasive Species Stories showcased in the AEP Blog in September
- Access at <https://albertaep.wordpress.com/>



ALERT: AQUATIC INVASIVE SPECIES

Oriental Weather Loach

(*Misgurnus anguillicaudatus*)

REASON FOR ALERT:

This species was discovered to be listed "for sale" with a major aquarium retailer, that has numerous locations in Alberta. Since 2015, Oriental Weather Loach have been listed under the Fisheries (Alberta) Act as a prohibited species. It is illegal to possess, release, sell or transport this species within the province.

What's the threat?

Oriental Weather Loach:

- Are extremely hardy and adaptable, and can tolerate extreme conditions – including breathing air if necessary and surviving water temperatures as low as 2°C.
- Live up to 13 years and a single female can lay up to 100,000 eggs in a lifetime
- Can outcompete native fish populations by reducing habitat and food, as well as by preying on the offspring of other species
- Have been shown to reduce aquatic insect diversity
- Are capable of carrying pathogens and parasites that are harmful to humans, native fish and wildlife

How are they spread and where are they?

- Native to East Asia—often found in shallow, slow rivers and streams as well as swamps, canals and backwaters that are heavily vegetated with mud or silt bottoms
- Introductions are attributed to the live aquarium trade, commercial food industry and live bait where they escape or are purposely released.
- Have now spread to parts of Europe, Australia, Mexico, Brazil, the United States and British Columbia.
- As of 2019, there have been no reports of this fish in Alberta waters.



Description

Other names: Golden Dojo Loach, Dojo Loach, Oriental Weatherfish, Weather Loach, Pond Loach, Japanese Loach, Amur Weatherfish

- Yellow to brown in colour with greenish grey-brown markings on backside and a silver underside
- Slender eel-like body, commonly 15cm long but can reach up to 28cm
- Small, narrow mouth lined with up to 10 barbels
- Dark spot on upper caudal fin

How can you help?

- Learn how to identify Oriental Weather Loach and other aquatic invasive species
- Report all sightings to the Aquatic Invasive Species Hotline at 1-855-336-BOAT (2628)
- Raise awareness to prevent the introduction of this species into Alberta waters
- Never import, own, sell or transport this species in Alberta

If you have seen an Oriental Weather Loach for sale or purchased one, report it immediately to the Aquatic Invasive Species hotline

1-855-336-BOAT

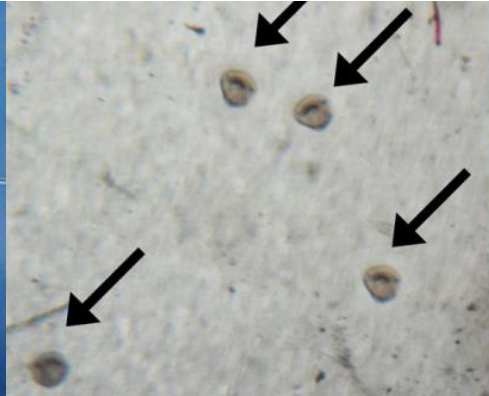
Monitoring

Actively looking for AIS in Alberta

Monitoring

Monitoring

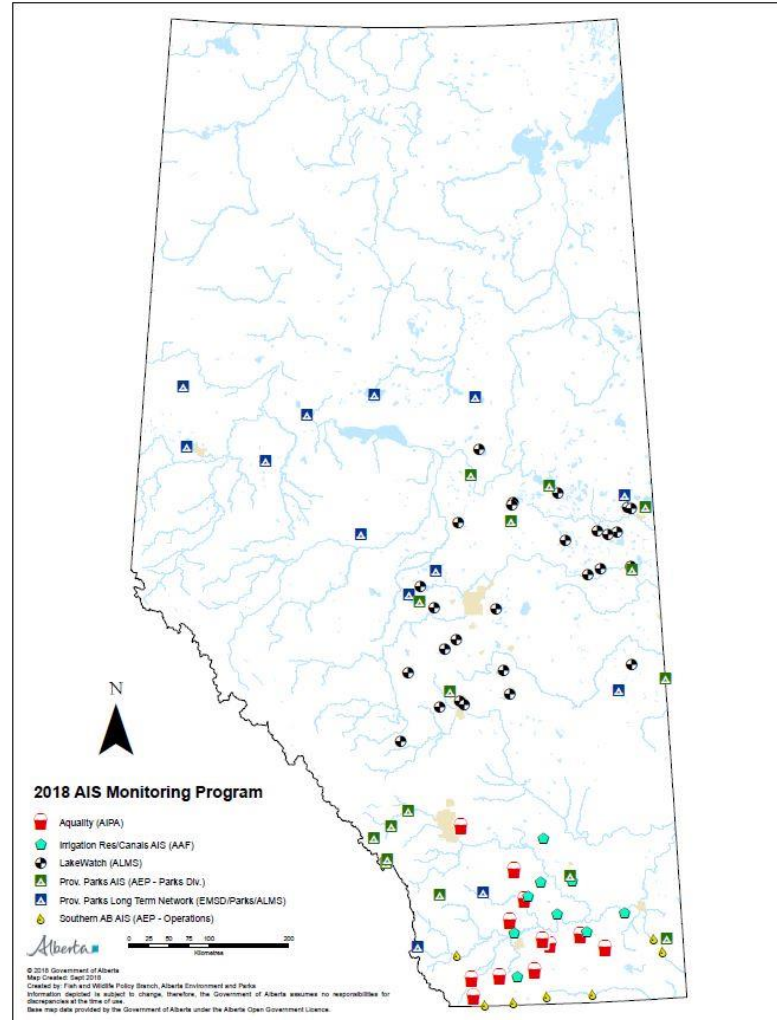
- Spiny Water Flea
- Zebra & Quagga Mussel
 - veligers
 - adults (substrate & infrastructure monitoring)



Monitoring

- 2013: 55 waterbodies
- 2014: 73 waterbodies
- 2015: 66 waterbodies
- 2016: 60 waterbodies
- 2017: 87 waterbodies
- 2018: 95 waterbodies
- 2019: 63 waterbodies

Monitoring



Monitoring

- New for 2019!!
- Eurasian Water Milfoil Sampling



Monitoring

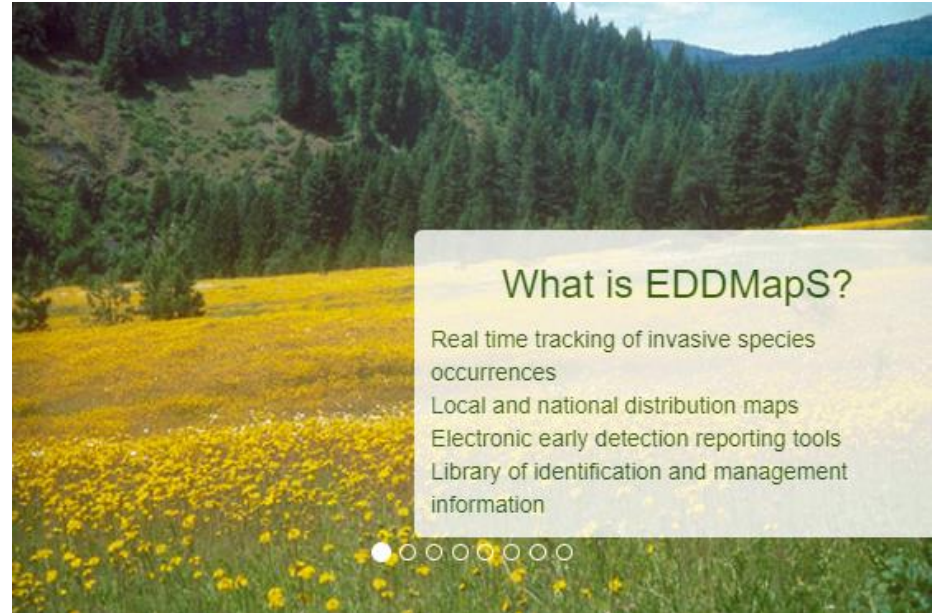
EDDMaps Alberta

Citizen Science – engaging with Albertans keen to show us what they find

40 states & 4 provinces participate

Capable of Positive, Negative and Controlled/Eradicated reports

In Alberta;
16 608 Point Reports
100 Species



zebra mussel

Dreissena polymorpha (Pallas)

[Species Information](#)

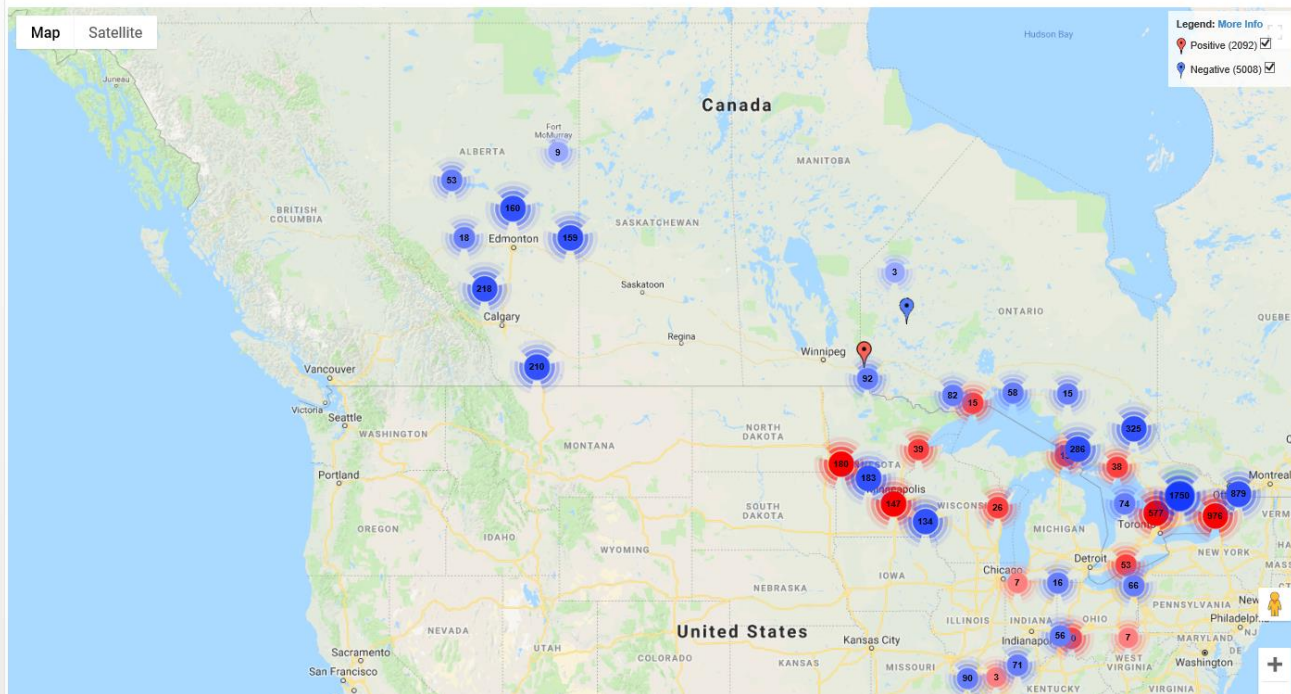
Points

Search by EDDMapS Record ID

[CSV](#) [KML](#) [Shapefile](#)

[Zoom to My Location](#) [Share](#) [Flag](#) [Fullscreen](#)

Map Satellite



flowering-rush *Butomus umbellatus* L.

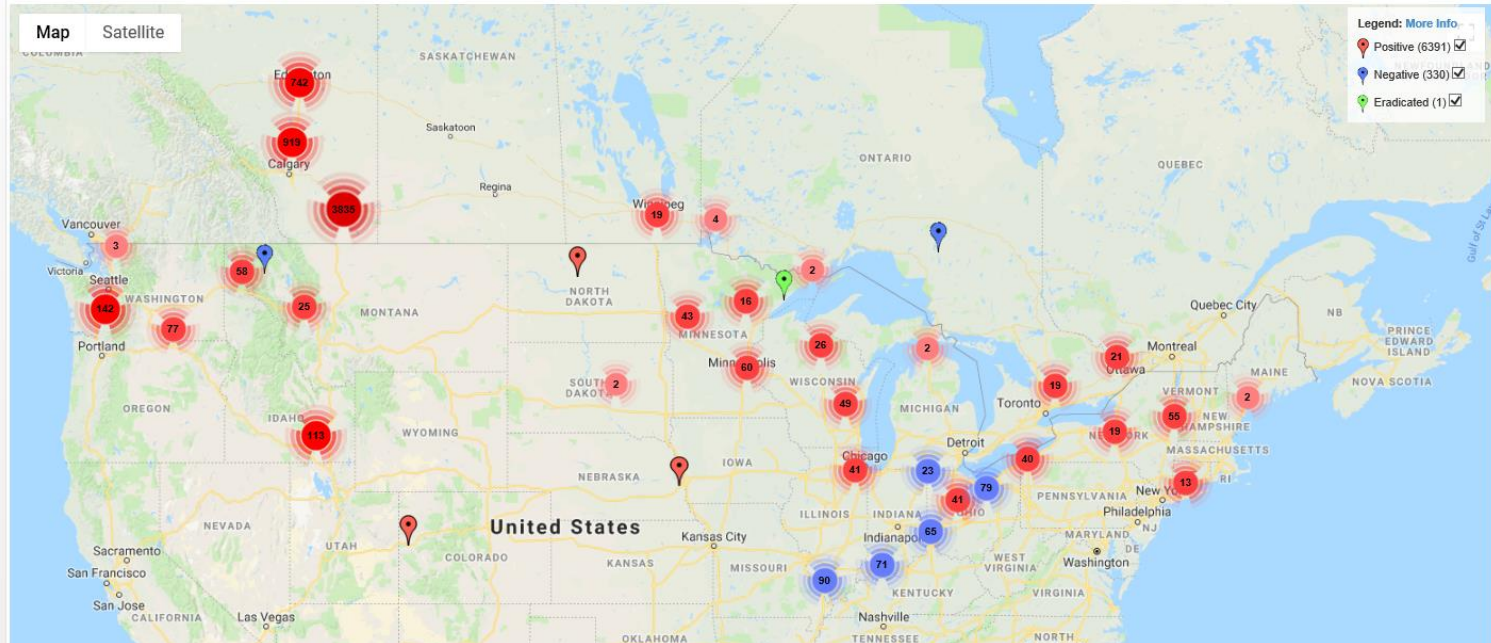
USDA PLANTS Symbol:BUUM
Invasive Plant Atlas
Species Information

Points

Search by EDDMapS Record ID

CSV KML Shapefile

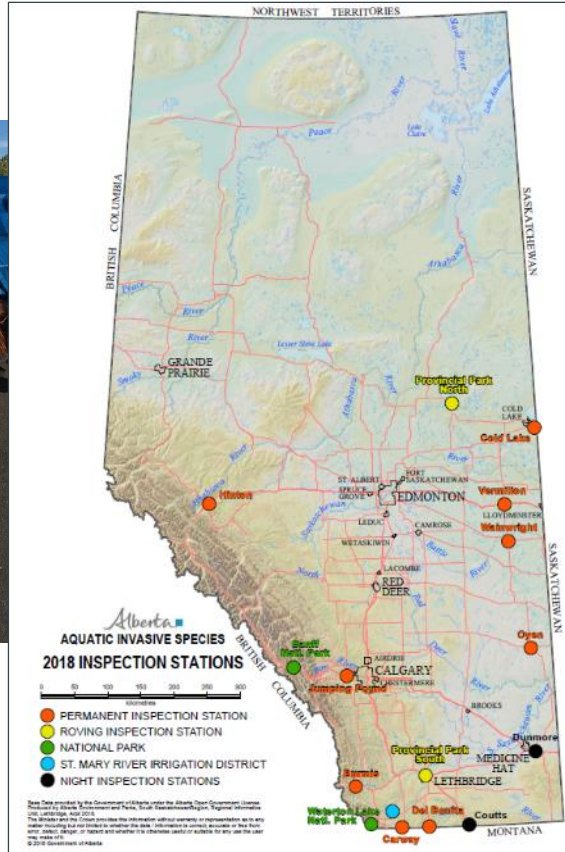
Zoom to My Location Share Flag Fullscreen



Watercraft Inspections

Priority is prevention

Watercraft Inspections



Inspections

Watercraft Inspections

- 2013: 395 inspections, 1 fouled
- 2014: 3,740 inspections, 14 fouled; 4 stations
- 2015: 21,449 inspections, 11 fouled; 9 stations (+3 roving)
- 2016: 19,028 inspections, 17 fouled; 9 stations (+2 roving)
- 2017: 30,957 inspections, 19 fouled; 11 stations (+2 roving)
- 2018: 31,799 inspections, 15 mussel fouled, 11 stations (+2 roving)
- 2019: 7,097 inspections, 14 mussel fouled, 8 stations (*August*)



K9 Unit

Inspections



2015: 606 canine watercraft inspections
2016: 970 canine watercraft inspections
2017: 734 canine watercraft inspections
2018: 279 canine watercraft & shoreline inspections
2019: 428 canine watercraft & shoreline inspections



Response

When prevention fails, or is overlooked

Response

24/7 Hotline (Report a Poacher); public, other jurisdictions, border, watercraft inspectors

Operators triage calls & dispatch Officer if needed

Calls/reports increasing – **443 calls in 2018**

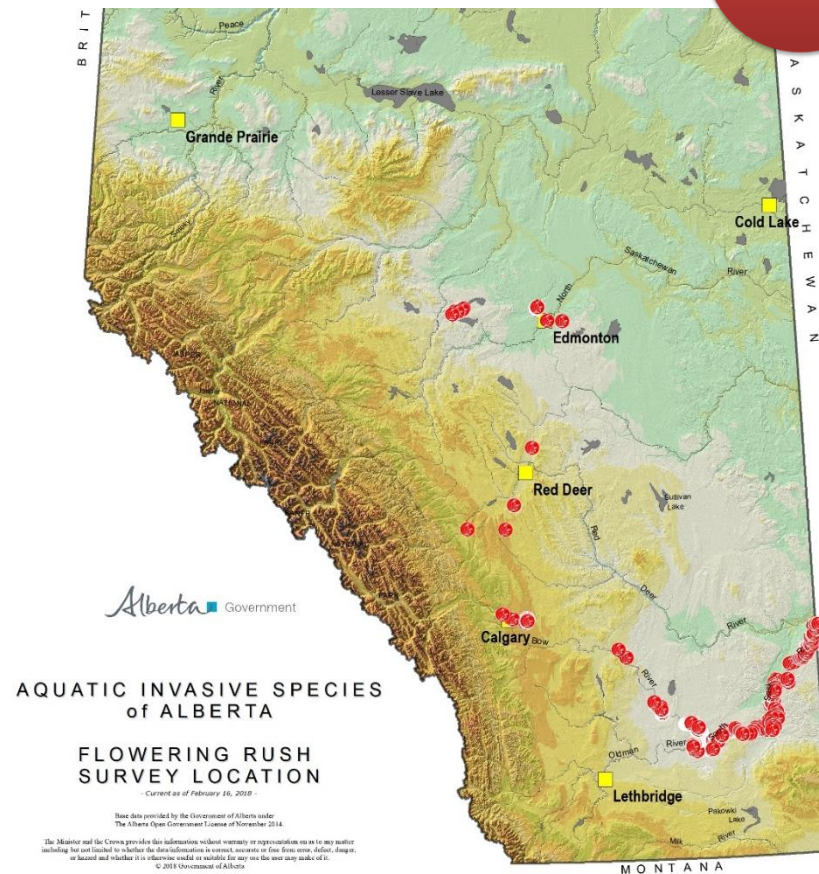
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Early Detection, Rapid Response

Flowering Rush

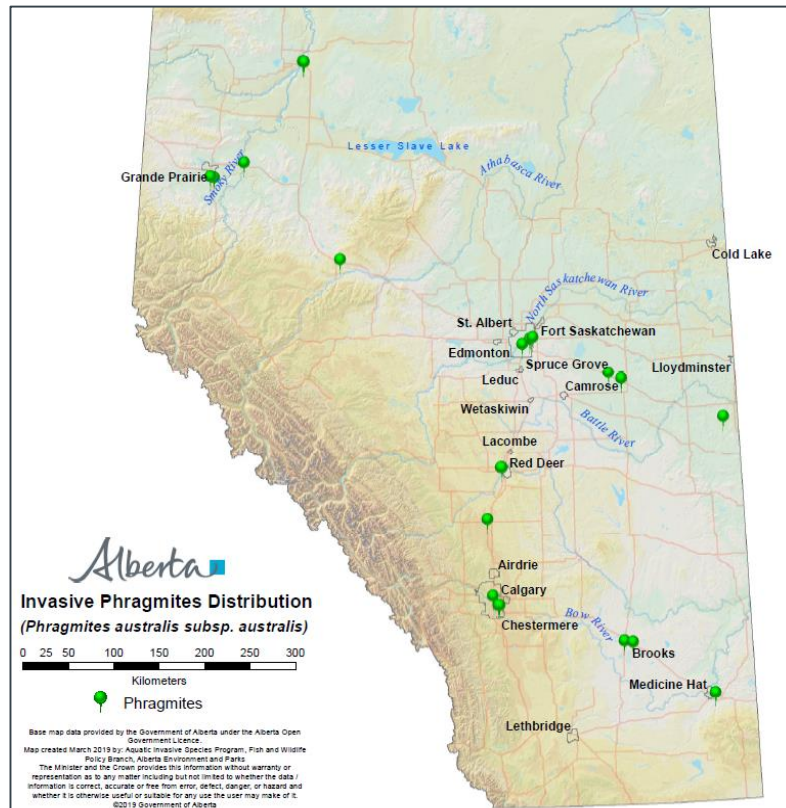


Response



Phragmites

Response



Pale Yellow Iris

Response



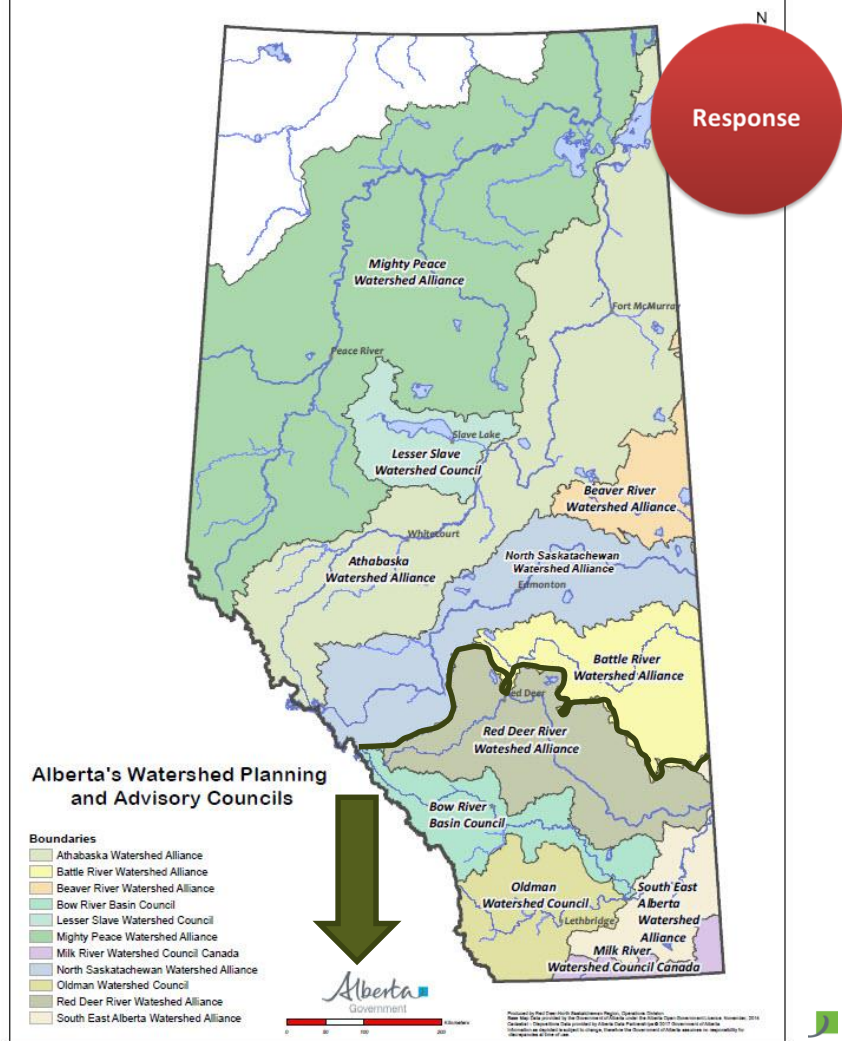
Himalayan Balsam



Purple Loosestrife

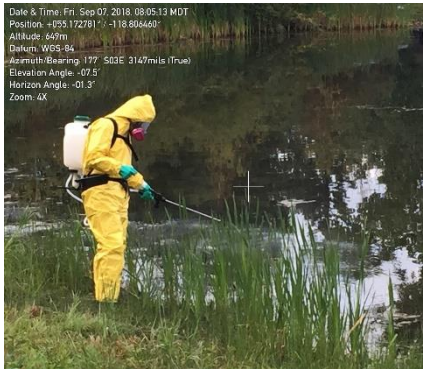


Prussian Carp



Goldfish

Date & Time: Fri, Sep 07, 2018, 09:05:13 MDT
Position: +055.1722781° / -118.806460°
Altitude: 647m
Datum: WGS-84
Azimuth/Bearing: 177° S03E 3147mils (True)
Elevation Angle: -07.5°
Horizon Angle: -01.3°
Zoom: 6X



Date & Time: Sat, Sep 08, 2018, 15:02:36 MDT
Position: +055.1722339° / -118.8064228°
Altitude: 647m
Datum: WGS-84
Azimuth/Bearing: 353° N07W 6276mils (True)
Elevation Angle: -72.2°
Horizon Angle: +15.2°
Zoom: 6X



Koi Fish

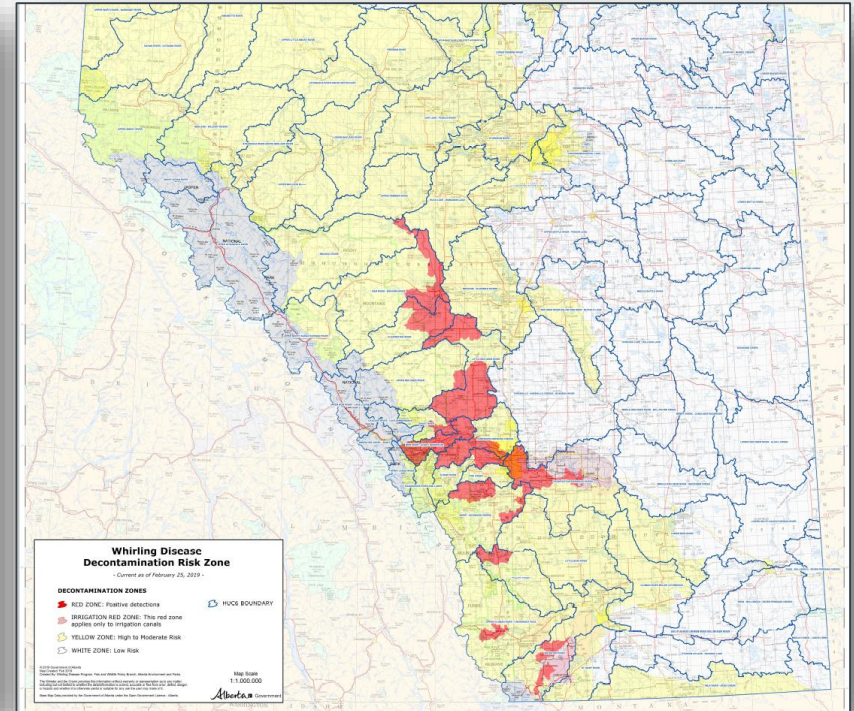
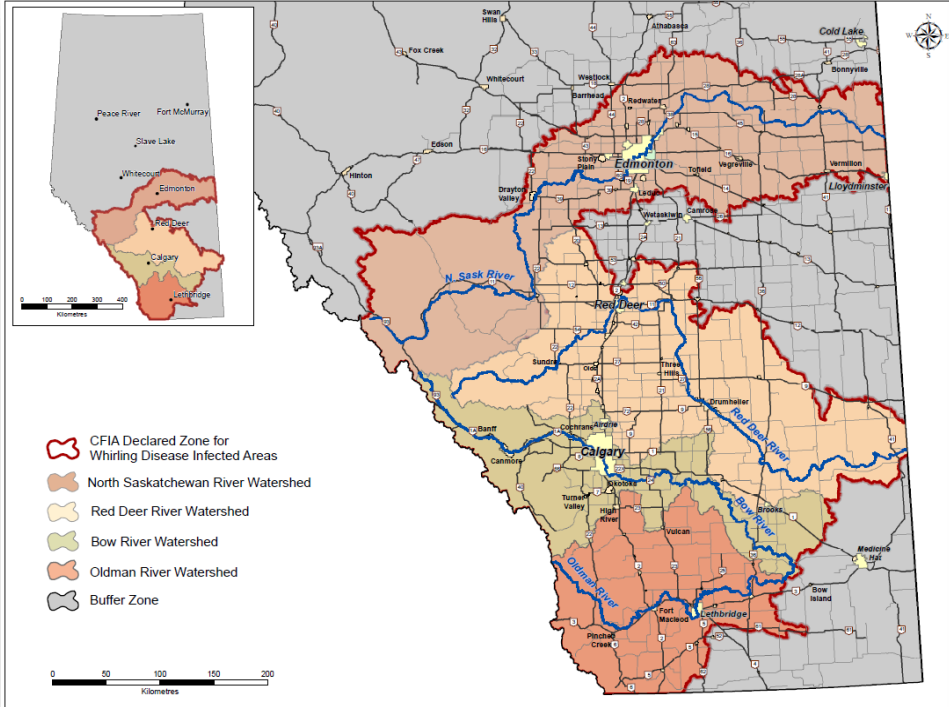
Response

 **SONIC 102.9**
6 hrs · 🌐

Earlier this week 11 year old Luke caught a 16 pound koi fish in St. Albert using a HOT DOG AS BAIT!! MY MAN!! 🍌🍌🍌 <https://bit.ly/2C9WjEe>
- Brooklyn



Whirling Disease



2019 Highlight Response Efforts

ASERT RESPONSE



Kinbrook Island Provincial Park



Yellow Floating Heart



Creative Partnerships



Other AIS stories

Chinese Mitten Crabs



Other AIS stories

Map Turtles



Other AIS stories

Tilapia



Creative partnerships tackle aquatic invasive species in Alberta



Flowering Rush Tour

- Water garden plant
- Initially brought into Alberta at Garden Centers









THANK YOU! Questions?

Nicole Kimmel

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