



Alberta Aquatic Invasive Species Program Year in Review 2023

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March 2024

Top threat – Invasive mussels



Zebra Mussel (*Dreissena polymorpha*)



Quagga Mussel (*Dreissena Bugensis*)



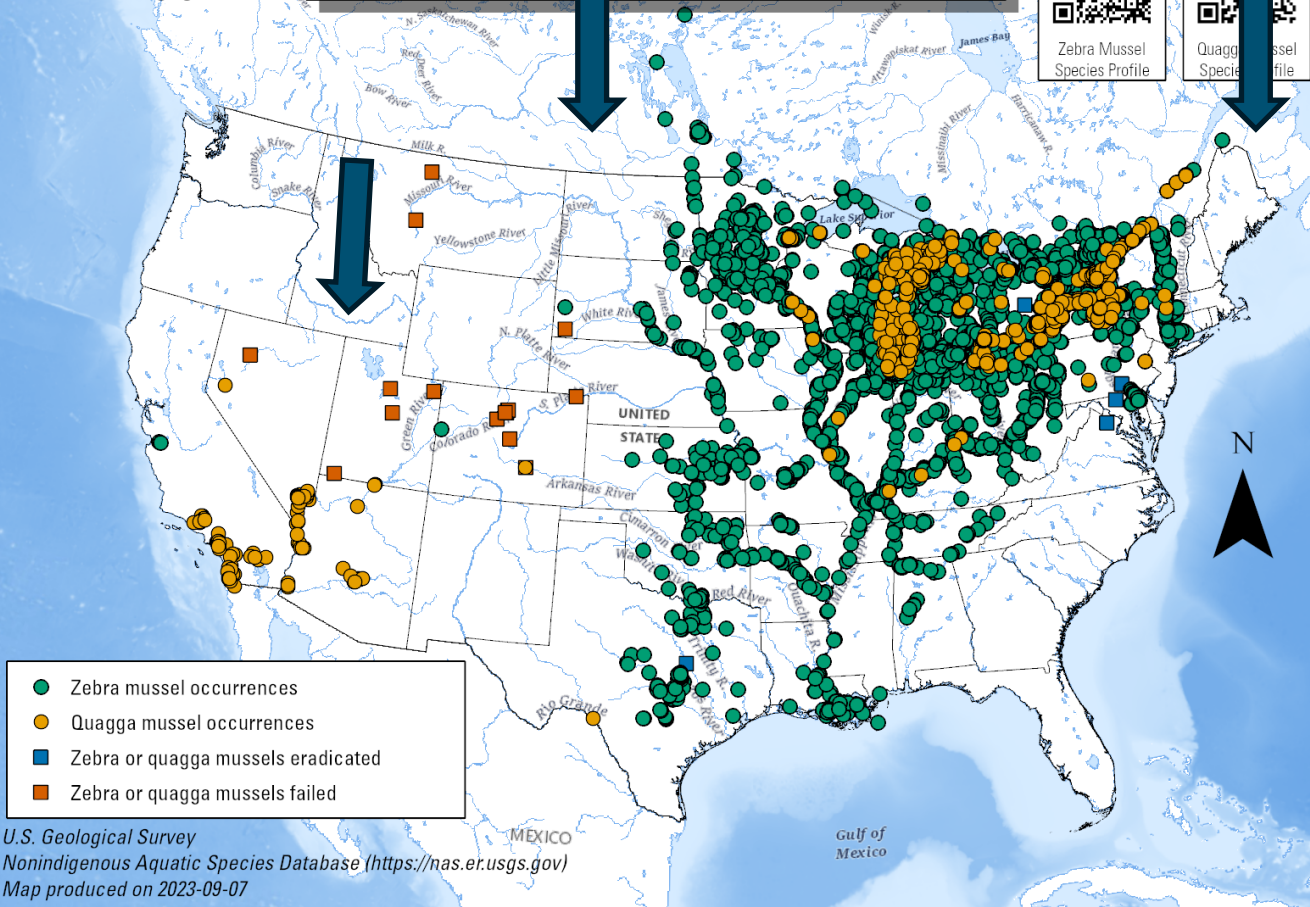
Zebra and Quagga Mussel Sightings Distribution
Dreissena polymorpha and *Dreissena bugensis*



Zebra Mussel
Species Profile



Quagga Mussel
Species Profile



New
locations-
Invasive
mussels

Live Specimen Acquisitions

Central America Gulf Coast Toad

- Hitchhiker in suitcase from Belize
- Obtained March 5, 2023



American Bullfrog (requires AB permit)

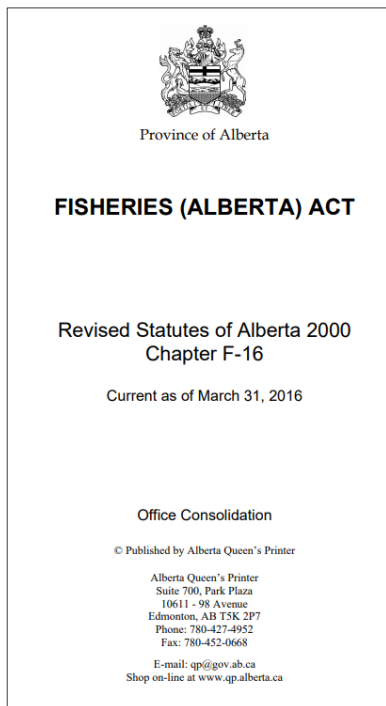
- Surrender from Edmonton teacher at end of school year, raised from an online tadpole
- Obtained June 29, 2023



Alberta Aquatic Invasive Species Program



Legislation



2015

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

2016

- Pull the Plug
- Mandatory reporting of AIS

2018


- Specified Penalties -
 - **\$324** Bypassing an OPEN Watercraft Inspection Station and **\$180** for Failing to Pull the Plug



Prussian Carp Management Plan

ENVIRONMENT AND PROTECTED AREAS

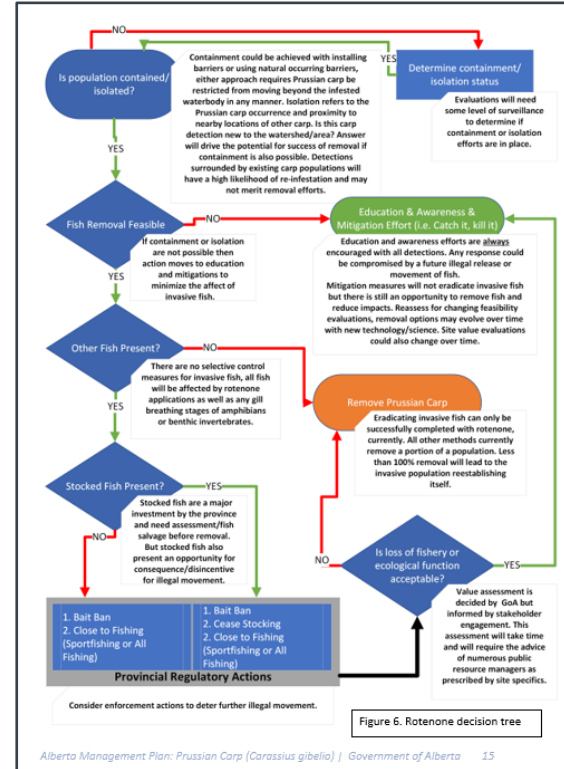
Alberta Management Plan: Prussian Carp (*Carassius gibelio*)



OCTOBER 2023

Alberta

Alberta Management Plan: Prussian Carp [*Carassius gibelio*] | Government of Alberta 1



Education & Outreach

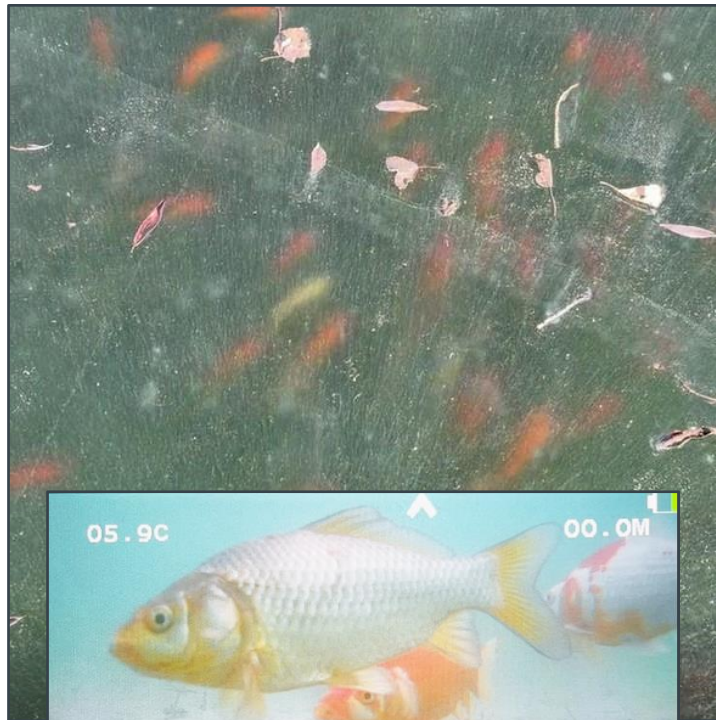


Tank – Goldfish Mascot

Education
& Outreach



Goldfish under Ice



Target Audience Presentation

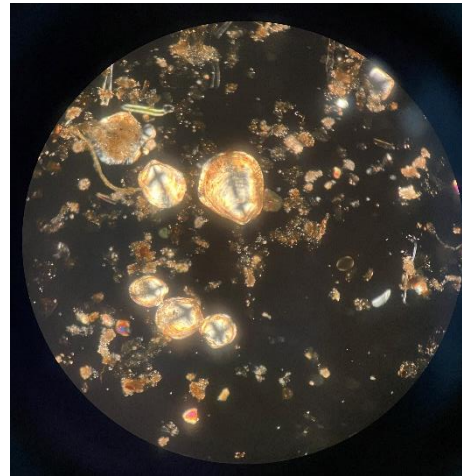


Monitoring

- Collaboration with partners to monitor AIS across Alberta
- Citizen science reports through AIS Hotline & EDDMapS app

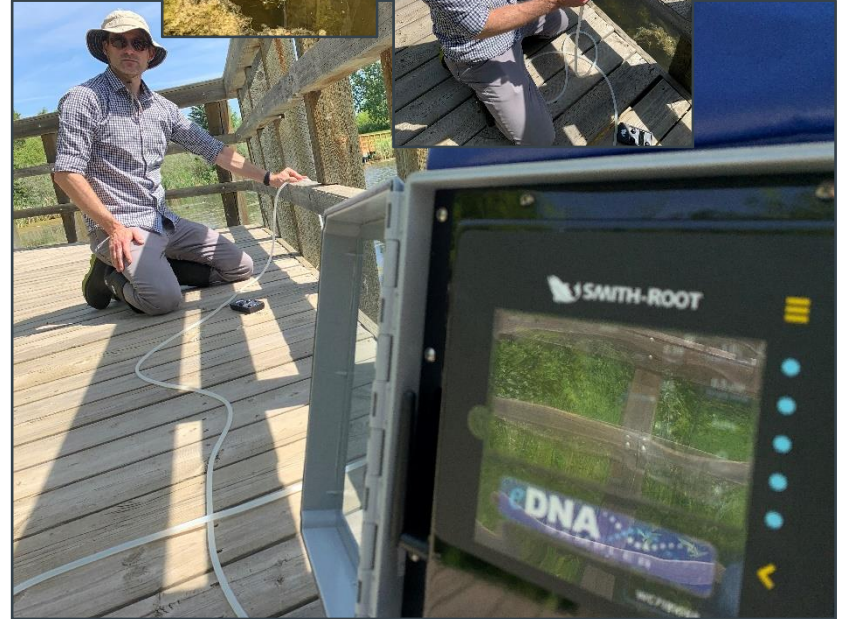


EDDMapS
find • map • track



eDNA Monitoring Project with U of A

Monitoring



10 Year Anniversary



Watercraft Inspections

Inspections

Year	# of Inspections	Fouled Boat Interceptions	# of Stations
2013	395	1	1
2014	3,740	14	4
2015	21,449	11	9 (3 Roving)
2016	19,028	17	9 (2 Roving)
2017	30,957	19	11 (2 Roving)
2018	31,799	15	11 (2 Roving)
2019	10,819	19	8
2020	7,276	30	3
2021	7,871	22	4
2022	8,032	19	5
2023	8,780	19	5
2024			8(1 Roving)



Watercraft Inspections

Total Summary 2023-11-01	
Total Inspections	8780
High Risk Inspections	5564
Percent High Risk	63.4%
Commercially-hauled Inspections	197
K9 Inspections	84
Night Inspections (19:00-06:00)	880
Late Night Inspections (22:00-06:00)	120
Mussel Fouled	19
Hot Washes	1313
% of High Risk Hot Washed	23.6%
Weeds Found	273
Passport Registrations	60

Skipper Summary 2023-11-01	
Total Skippers	1485
Station Bypass Rate (% of total traffic)	16.9%
Total non-motorized Skippers*	936
Non-motorized Skipper %	63.0%
Skippers Returned By Officer	79
% Skippers Returned	5.3%

Watercraft Inspections

Mussel Fouled Watercraft 2023-11-01

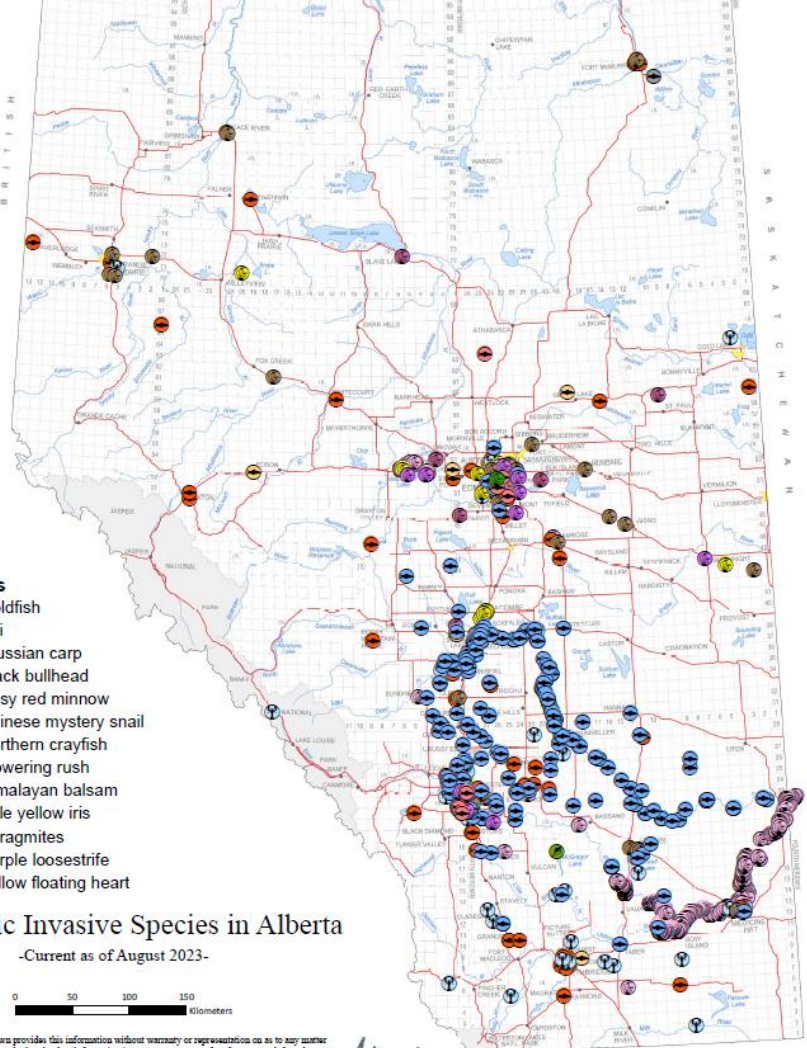
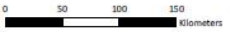
#	Origin/Destination	Commercially Hauled	Watercraft Type	Station	Date	Tracking #
1	Burlington, ON to Vancouver, BC	No	Cabin Cruiser	Dunmore	25-May-23	AIS2023-010
2	Ottawa River, ON to Sorrento, BC	Yes	Cabin Cruiser	Dunmore	10-Jun-23	AIS2023-017
3	Lake Winnipeg, MB to Nelson, BC	No	Cabin Cruiser	Dunmore	13-Jun-23	AIS2023-022
4	Cleveland, OH to Anchorage, AK	No	Sailboat	Coutts	20-Jun-23	AIS2023-027
5	Barrie, ON to Kelowna, BC	Yes	Cabin Cruiser	Dunmore	24-Jun-23	AIS2023-029
6	Ste-Anne-des-Plaines, QC to Vancouver, BC	Yes	Cabin Cruiser	Vermilion	7-Jul-23	AIS2023-035
7	Lake Erie, ON to Leslieville, AB	No	Pleasure Craft	Dunmore	15-Jul-23	AIS2023-041
8	Malo, MB to Kelowna, BC	No	Pontoon Boat	Dunmore	15-Jul-23	AIS2023-042
9	Odessa, ON to Kelowna, BC	Yes	Cabin Cruiser	Dunmore	21-Jul-23	AIS2023-045
10	Duluth, MN to Cranbrook, BC	No	Cabin Cruiser	Dunmore	2-Aug-23	AIS2023-052
11	Winnipeg, MB to Calgary, AB	No	Pleasure Craft	Dunmore	10-Aug-23	AIS2023-055
12	Beaver Lake, ON to Lethbridge, AB	No	Pleasure Craft	Dunmore	17-Aug-23	AIS2023-058
13	Lake Winnipeg, MB to Olds, AB	No	Cabin Cruiser	Dunmore	19-Aug-23	AIS2023-059
14	Russel, ON to Grande Prairie, AB	No	Pleasure Craft	Vermilion	25-Aug-23	AIS2023-062
15	Lake Huron, ON to Southbank, BC	No	Pilothouse (cabin cruiser/fishing boat)	Dunmore	10-Sep-23	AIS2023-066
16	Lake Winnipeg, MB to Kelowna, BC	Yes	Cabin Cruiser	Dunmore	11-Oct-23	AIS2023-073
17	Michigan to Calgary, AB	No	Pontoon Boat	Dunmore	20-Oct-23	AIS2023-075
18	Lake Huron, ON to Ardrossan, AB	No	Wakeboard Boat	Vermilion	20-Oct-23	AIS2023-076
19	Kars, ON to Campbell, BC	Yes	Houseboat	Dunmore	23-Oct-23	AIS2023-077

Known Alberta Aquatic Invasive Species Locations

- Species**
-  Goldfish
 -  Koi
 -  Prussian carp
 -  Black bullhead
 -  Rosy red minnow
 -  Chinese mystery snail
 -  Northern crayfish
 -  Flowering rush
 -  Himalayan balsam
 -  Pale yellow iris
 -  Phragmites
 -  Purple loosestrife
 -  Yellow floating heart

Aquatic Invasive Species in Alberta

-Current as of August 2023-

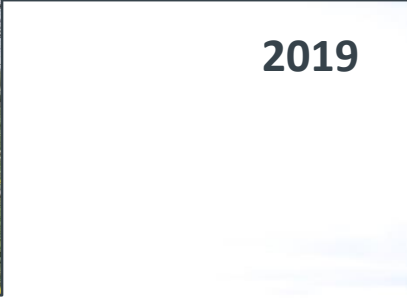


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Purple Loosestrife - MD Wainwright

Response



Antler Lake - Himalayan Balsam

Response



Confederation Park – Himalayan Balsam

Response



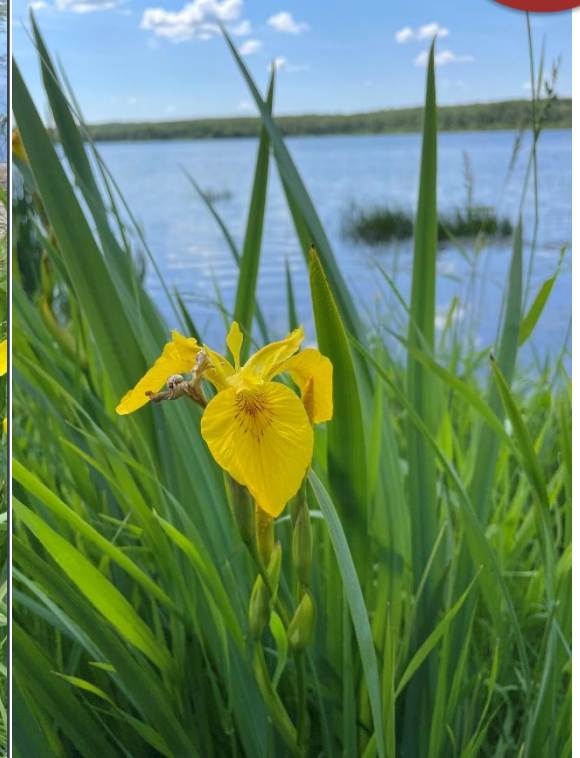
Lacombe Lake – Pale Yellow Iris

Response



Lake Isle - Pale Yellow Iris

Response



Sherwood Park - Pale Yellow Iris

Response



Legislature Grounds – Pale Yellow Iris

Response



Lake Isle: Herbicide Progress

Response

2018



2022



2023



Len Thompson Pond – Flowering rush

Response

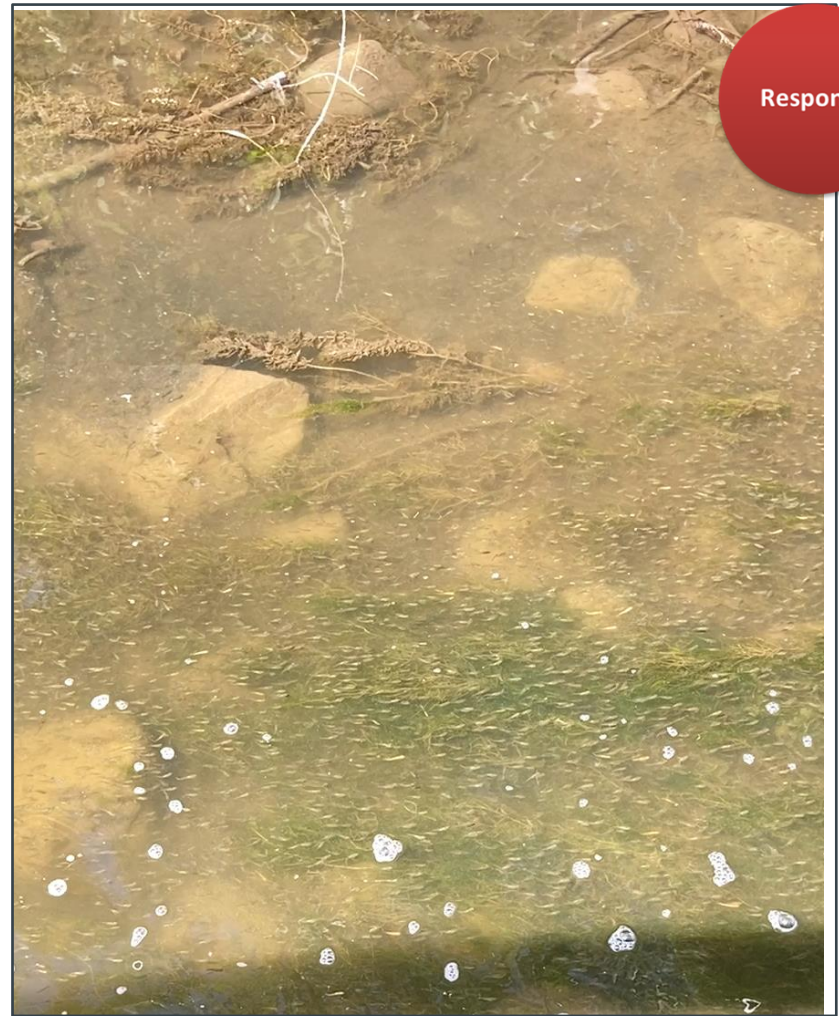


Alberta – Invasive Phragmites

Response



Goldfish in Storm Ponds



Response

Blood Indian Reservoir – Prussian Carp

Response



Blood Indian Reservoir - Prussian Carp

Carp Removal Project 2020-2022

- 2020: July 11-28th
350,529 removed
- 2021: July 12-20th
30,055 removed
- 2022: July 4-15th
522 removed



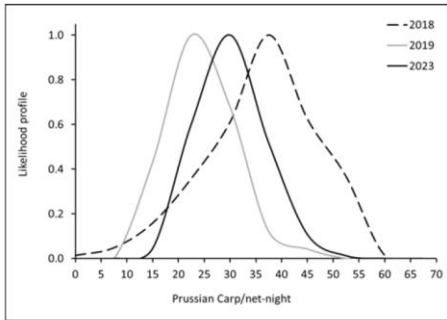
Effort

- 150 seine hauls, 113 fyke traps, 110 short gill net sets, 12 NAG nets
- 158 seine hauls, 54 fyke traps, 51 short gill net sets
- 62 seine hauls, 62 fyke traps, 94 short net sets

Blood Indian Reservoir – Prussian Carp



Index Netting Data: 2018, 2019, 2023



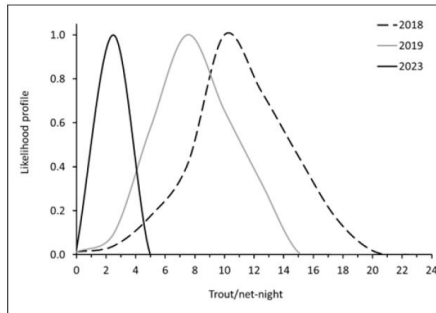
Carp Catch Rates

- 2018: 32.0 carp/net
- 2019: 21.2 carp/net
- 2023: 26.5 carp/net



3 year netting efforts took place in 2020, 2021 and 2022.

Index Netting Data: 2018, 2019, 2023



Trout Catch Rates


- 2018: 10.0 trout/net
- 2019: 7.0 trout/net
- 2023: 0.4 trout/net



Rotenone training

Response



A scenic view of a river flowing through a forested area. The river is filled with large, smooth, grey rocks of various sizes, creating a rocky stream bed. The water is clear and reflects the surrounding greenery. The banks are lined with dense evergreen and deciduous trees. In the background, rolling hills are visible under a clear sky. A semi-transparent grey banner with white text is overlaid at the top of the image.

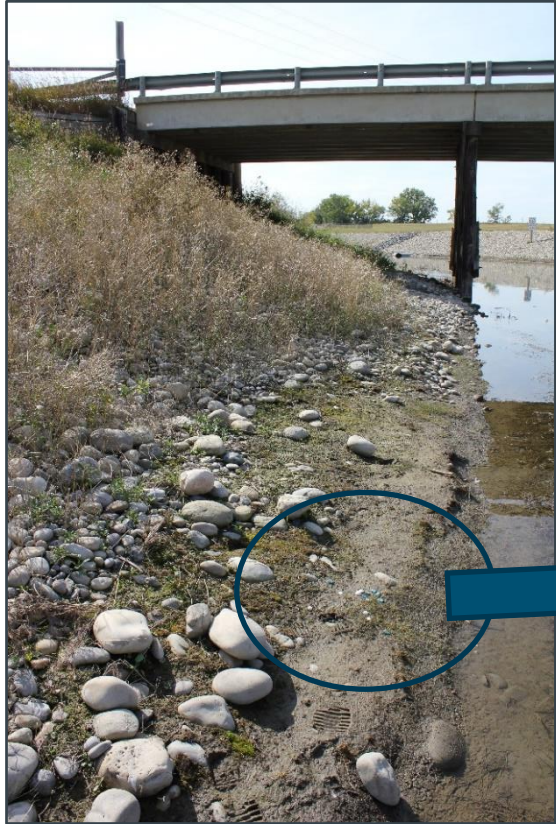
Collaboration is essential to tackling aquatic invasive species in Alberta

Behaviors we're still looking to change

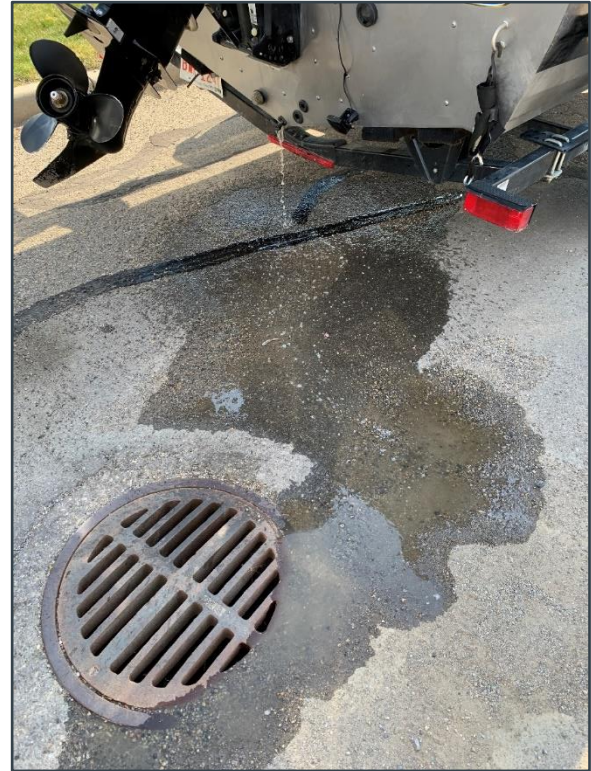
Live Transfer



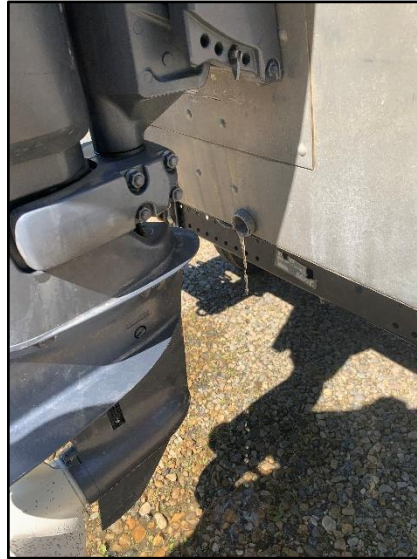
Intentional release



Lack of or Poor Clean, Drain, Dry Practices



Failing to Pull the Plug in Transport





Questions?