DFO's Asian Carp Program

Great Lakes Panel Meeting

June 25, 2024

The four species

1 **Bighead Carp**

2 **Silver Carp**

3 **Black Carp**

4 **Grass Carp**

The Program Pillars

1

Prevention

2

Early Warning

3

Response

4

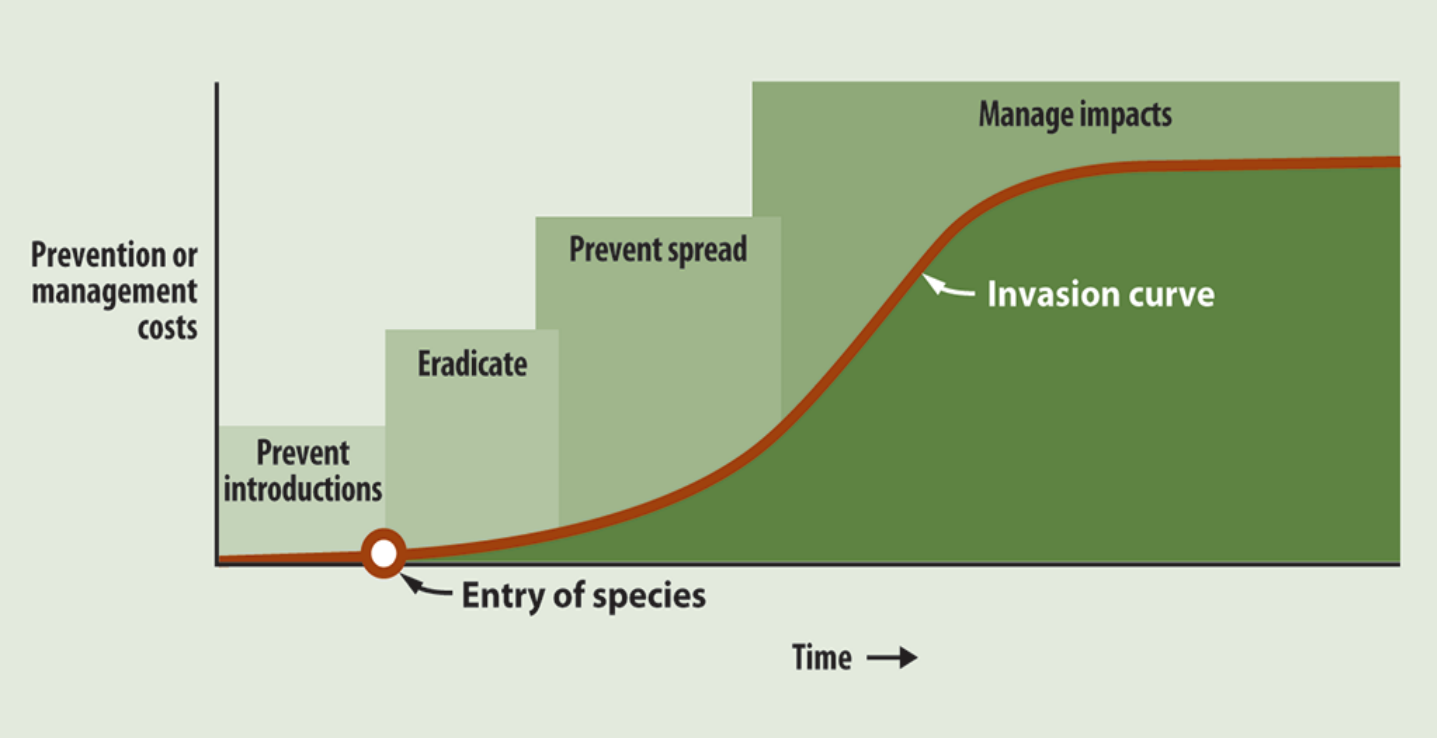
Management

Prevention

Prevent the threat from entering Canadian waters through public **outreach, education, and awareness**.

The invasion curve

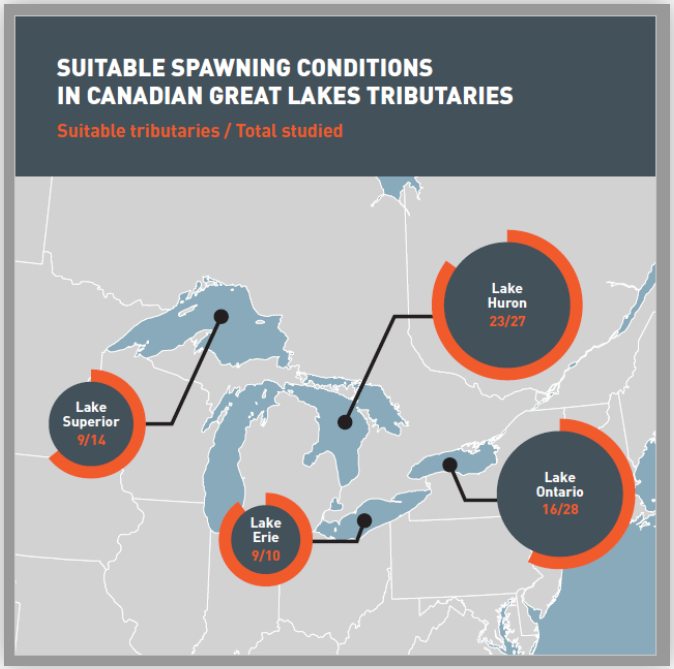
It costs far less to prevent the introduction of aquatic invasive species than to delay action and manage them once established

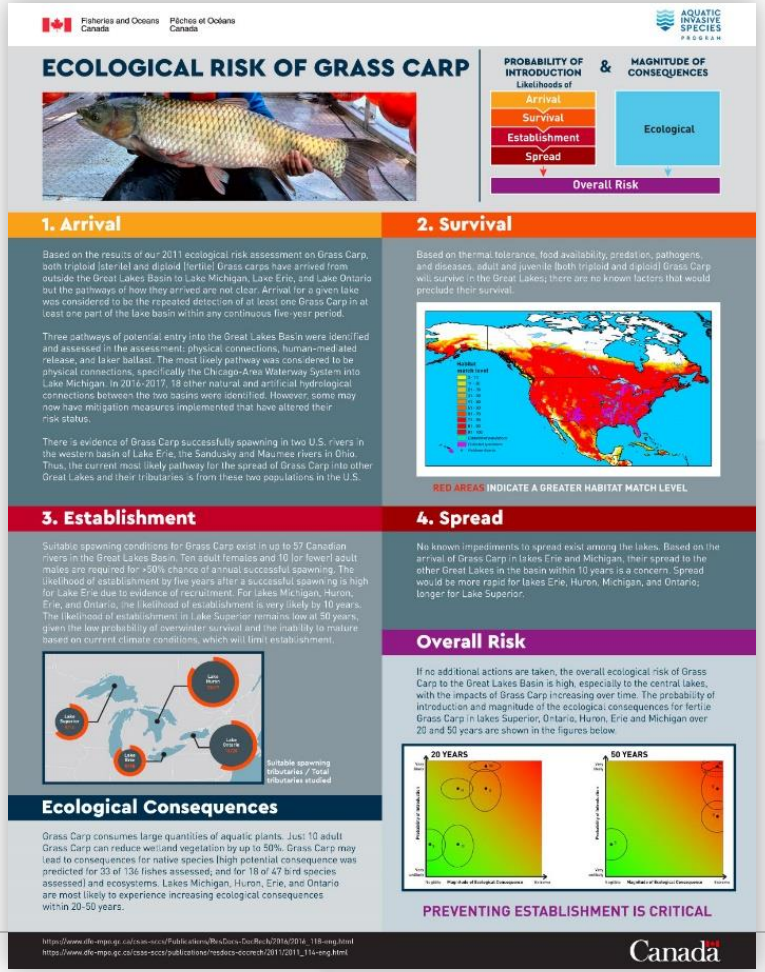


2019 Spring Reports of the Commissioner of the Environment and Sustainable Development to the Parliament of Canada
Report 1—Aquatic Invasive Species Source: Adapted from Invasive Plants and Animals Policy Framework, Department of Primary Industries (since changed to Department of Jobs, Precincts, and Regions), State of Victoria, Australia

Support Risk Assessments and Research

- DFO Science (GLLFAS)
- Risk Assessments





Why Collaborate?

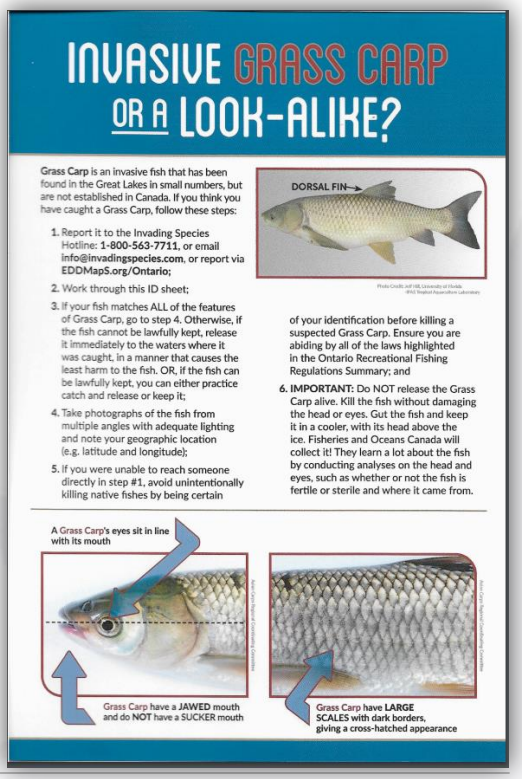
- Shared goals
- Non-government voices
- Efficient resource use, no overlap, consistent messaging
- Leverage strengths – well placed, established audience
- Engage the public (more eyes on the water)
- Allow for easy reporting – many tools, all feed together
- Faster notification to government to respond

Collaborators

- Federation of Ontario Cottagers' Associations
- Invasive Species Centre
- Magnetawan First Nation
- Mississauga First Nation
- Metis Nation of Ontario
- Ontario Federation of Anglers and Hunters
- Ontario Ministry of Natural Resources and Forestry
- Quebec Natural Resources and Forests
- Royal Ontario Museum
- Toronto and Region Conservation Authority
- Toronto Zoo

Ontario Federation of Anglers and Hunters

- AC billboards and signs
- Classroom Education: in-person/virtual
- Boater education/CDD, Trade Shows
- How to ID Grass Carp fact sheet
- Radio PSAs, magazines
- Social media campaigns
- **Invading Species Hotline + EDDMapS**



Invasive Species Centre

- www.AsianCarp.ca
- Coordinated social media campaigns
- Working with influencers
- Podcasts (Fish'n Canada)
- Webinars
- Public Information Sessions

Magnetawan First Nation

- Assisting with early detection surveillance of Grass Carp using environmental DNA (eDNA)
- Asian carp identification training
- Conducting Grass Carp outreach within the community

Magnetawan First Nation - Lands, Resources and Environment
December 24, 2023 ·

Call out to all MFN Community Members!

The Lands Department has acquired funding (2022-2025) through partnership with the Department of Fisheries and Oceans to monitor the Magnetawan River annually for the presence of Invasive Asian Carps. The monitoring is accomplished through the use of environmental DNA (eDNA). This non-invasive monitoring technique is an early detection tool for aquatic invasive species (Asian Carps) to detect early warnings of changes in population distribution. (i.e. invading populations).

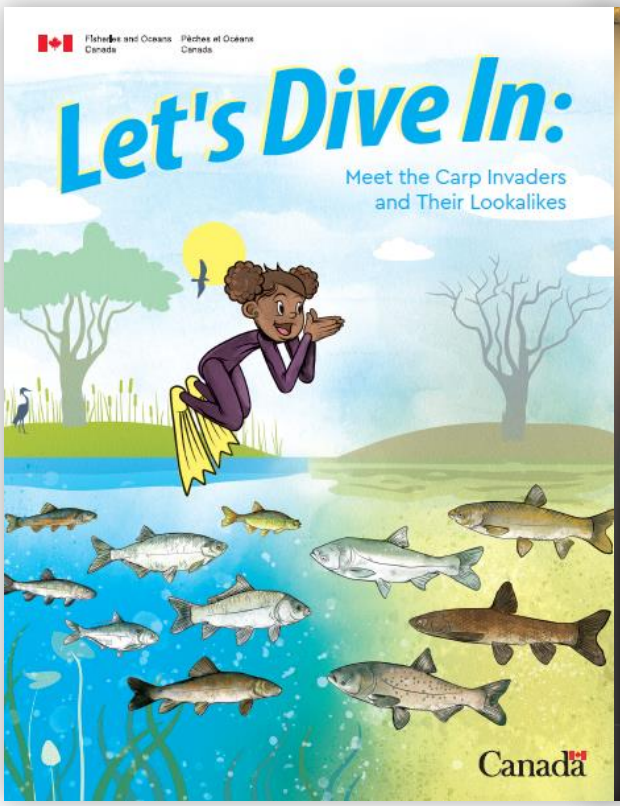
Why does monitoring for Asian Carps matter? The introduction of an invasive species to an aquatic ecosystem changes the relationships between the native species, creating an unbalanced food wed, generally posing negatively pressure native fish species. This loss of biodiversity is a recipe for an unhealthy river.

Toronto and Region Conservation Authority

- Surveillance for Asian carps across the Toronto Region (e.g., Humber, Rouge, and Toronto Islands)
- Hosted virtual engagement workshops with DFO for other Conservation Authorities
- Nature in your classroom: live virtual engagement
- Social Media campaigns

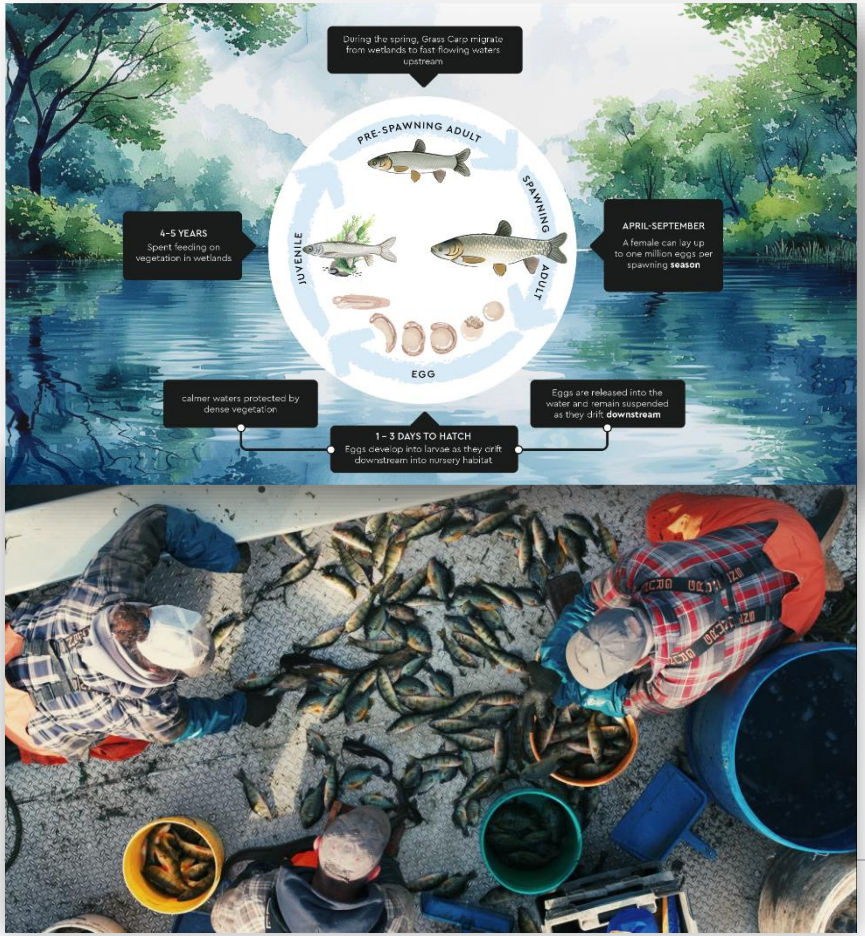
Some of our recent projects

- Colouring Books / Ripley's Exhibit / ID Cards



Some of our recent projects (cont.)

- Videos / Animated Graphics



Early Warning

Detect the threat early through **surveillance** alongside partners and the efforts of key organizations.

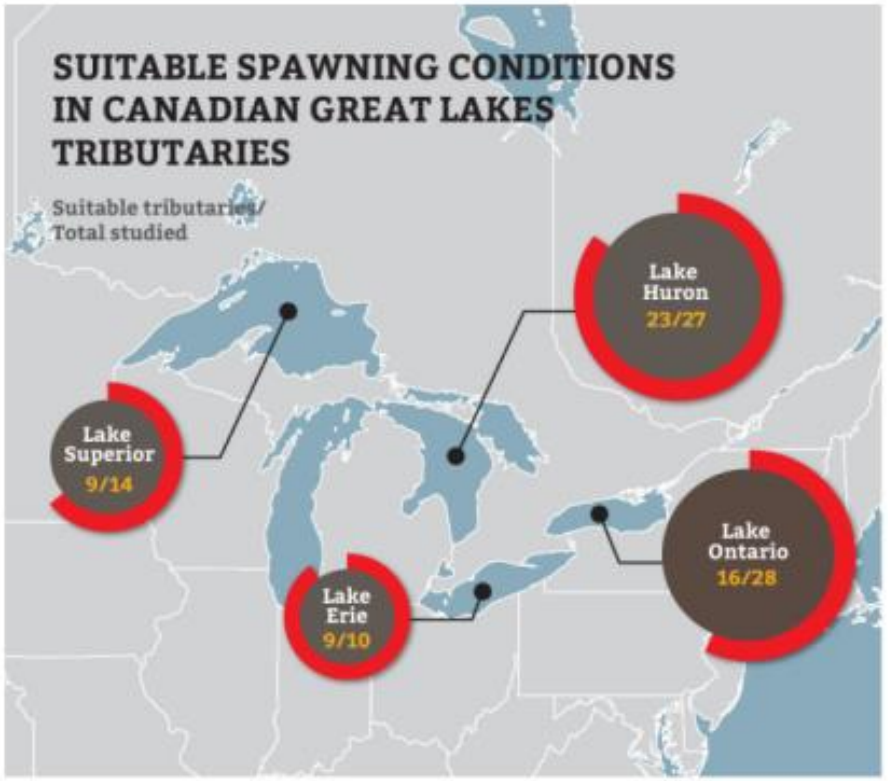
Early Detection Field Program

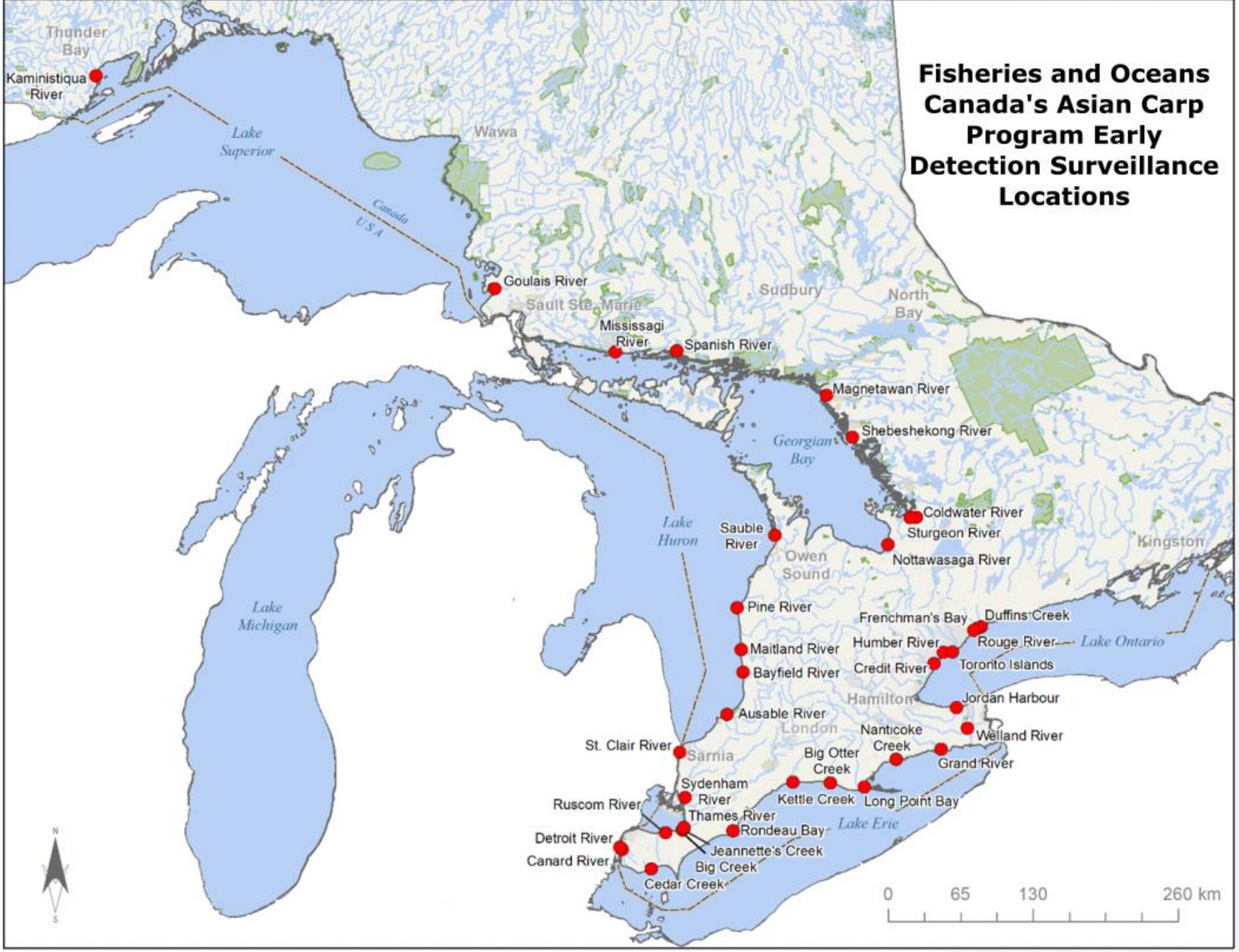
Early detection of Grass Carp

Pre-impact baseline fish community

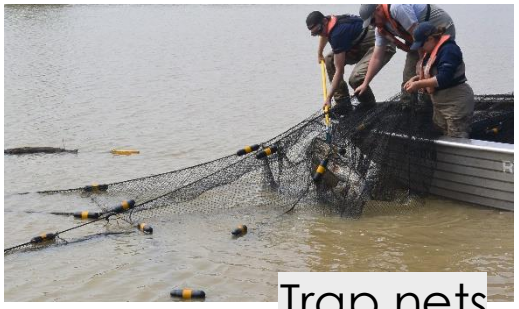
Surveillance Site Selection

- Started in 2013
- May to November
- 37 locations in lakes Superior, Huron, Erie, Ontario
- Sites selected based on modelling of suitable spawning habitat
- Large wetlands included in monitoring

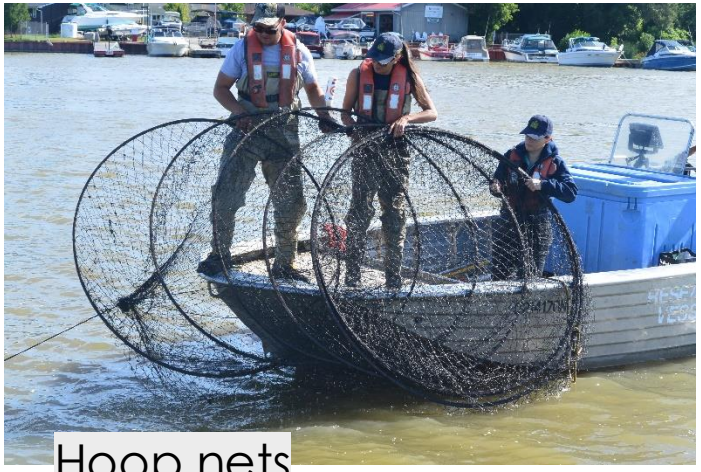



Fisheries and Oceans Canada's Asian Carp Program Early Detection Surveillance Locations
Thunder Bay
Kaministiqua River
Lake Superior
Canada
USA
Wawa
Goulais River
Sault Ste. Marie
Sudbury
North Bay
Mississagi River
Spanish River
Magnetawan River
Shebeshekong River
Georgian Bay
Coldwater River
Sturgeon River
Nottawasaga River
Lake Huron
Sauble River
Owen Sound
Kingston
Lake Michigan
Pine River
Frenchman's Bay
Duffins Creek
Humber River
Rouge River
Lake Ontario
Maitland River
Credit River
Toronto Islands
Bayfield River
Hamilton
Jordan Harbour
Ausable River
London
Nanticoke Creek
Welland River
St. Clair River
Sarnia
Big Otter Creek
Grand River
Sydenham River
Kettle Creek
Long Point Bay
Ruscom River
Thames River
Lake Erie
Rondeau Bay
Detroit River
Jeannette's Creek
Canard River
Big Creek
Cedar Creek
N
S
0
65
130
260 km

Bag Seines



Trap nets

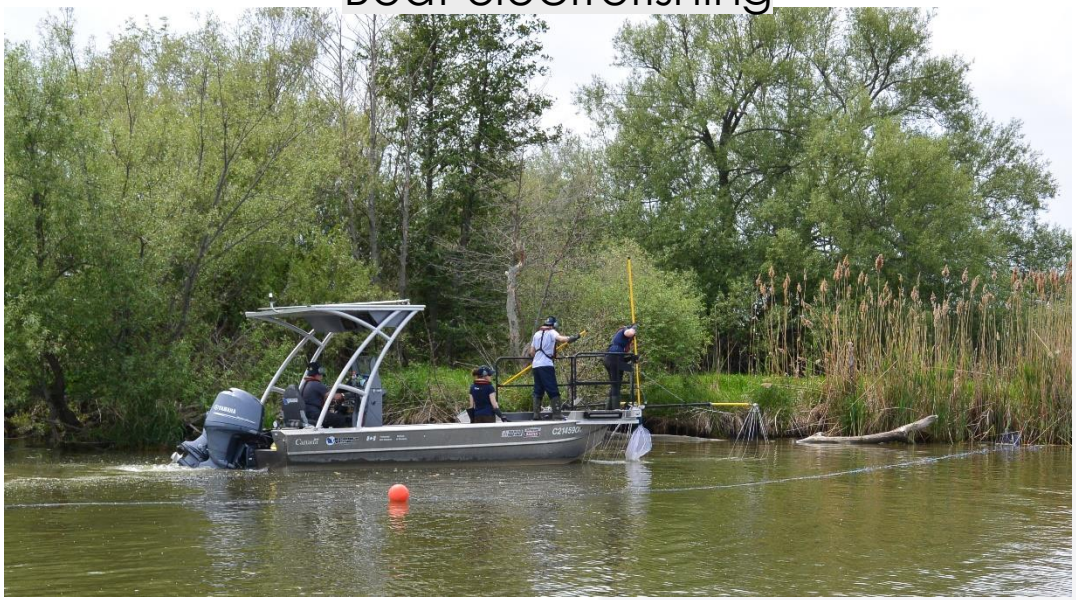


Hoop nets

Fyke nets

Boat electrofishing

Gill and trammel nets



Light traps

Bongo nets

Early Detection Surveillance Summary

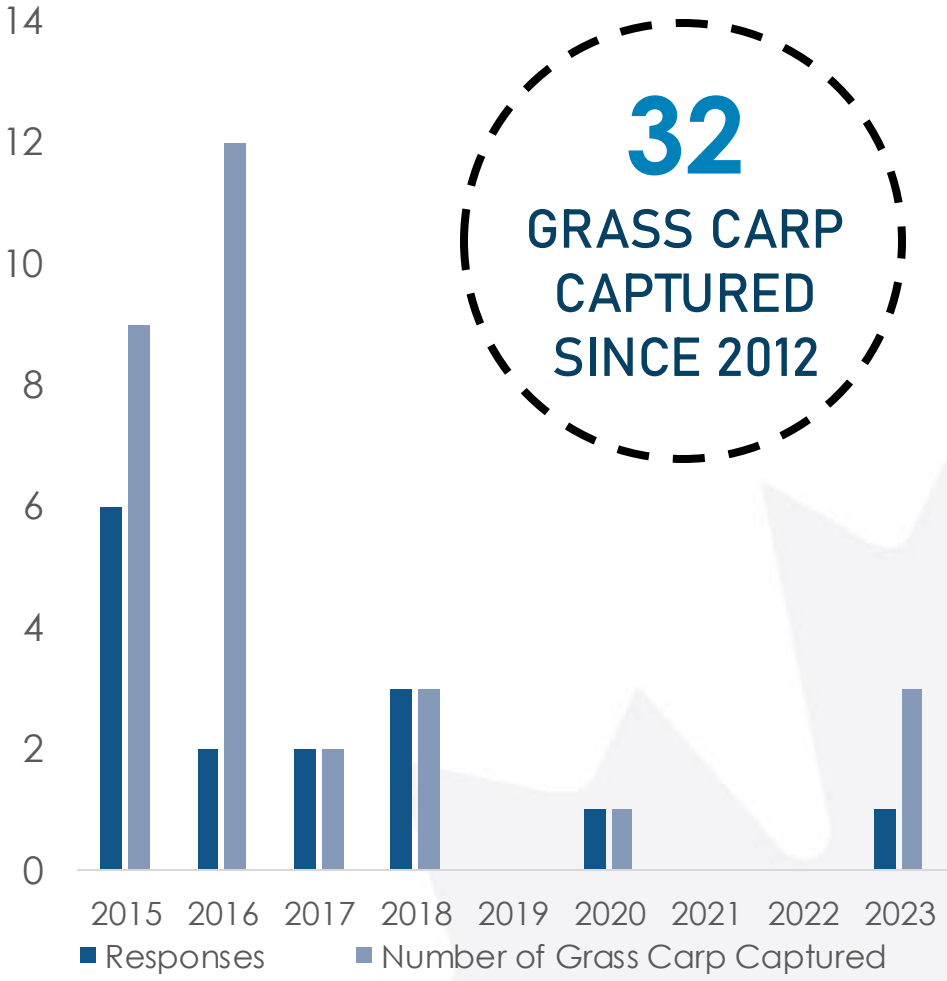
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of Sites	743	1056	1333	1211	1145	1197	984	699	1014	1167
Number of Waterbodies	37	36	40	34	36	36	30	28	33	38
Total Number of Fish	47,188	61,765	79,834	67,862	64,169	57,027	61,247	46,044	62,839	45,561
Number of Species	93	98	100	89	90	86	84	77	86	84
Number of Buffalo	346	762	1157	887	914	864	434	117	443	481
Number of Common Carp	1774	3200	2661	2024	2576	1876	995	915	1082	1230
Number of Grass Carp (Captured by Asian Carp Program)	0	1	0	0	0	0	1	0	0	1

ALL GRASS CARP DETECTED BY TRAMMEL/GILL NETS

Response

Ensure a **unified** and **coordinated team** can respond to incidents.

Grass Carp Captures



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GRASS CARP CAPTURED SINCE 2012

Response video

Thank you!