Aquatic Invasive Species: What's New?

Bill Keiper – EGLE
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Hydrilla in Michigan: Update

Michigan Inland Lake Partnership Meeting

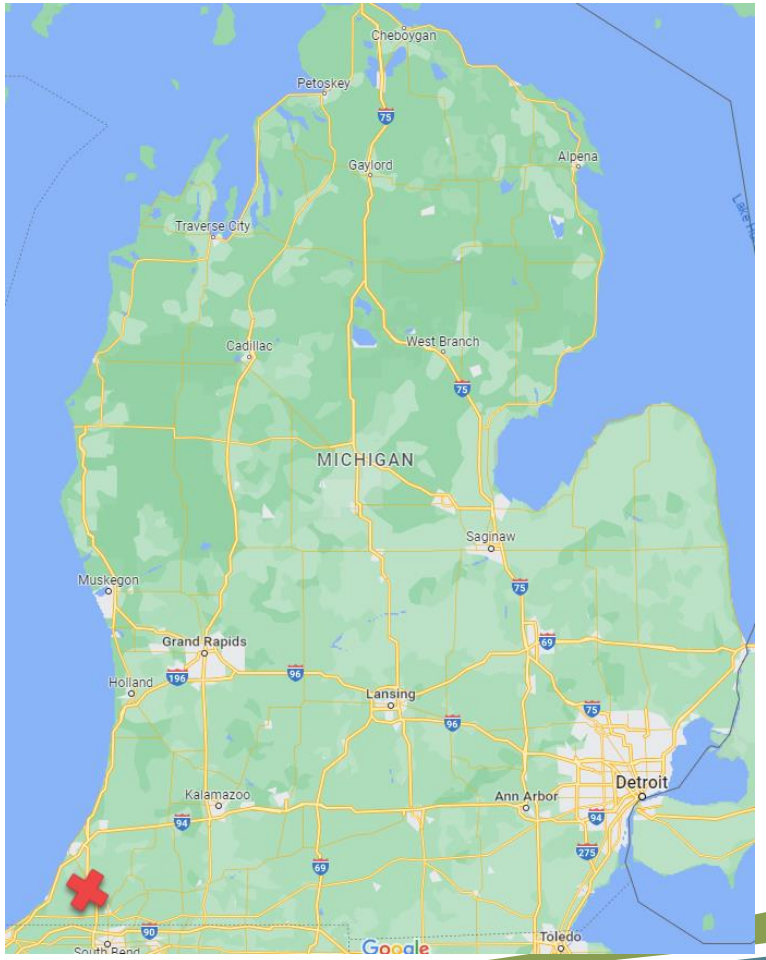
October 18, 2023

Billy Keiper, Sarah LeSage, Tom Alwin

EGLE Water Resources Division

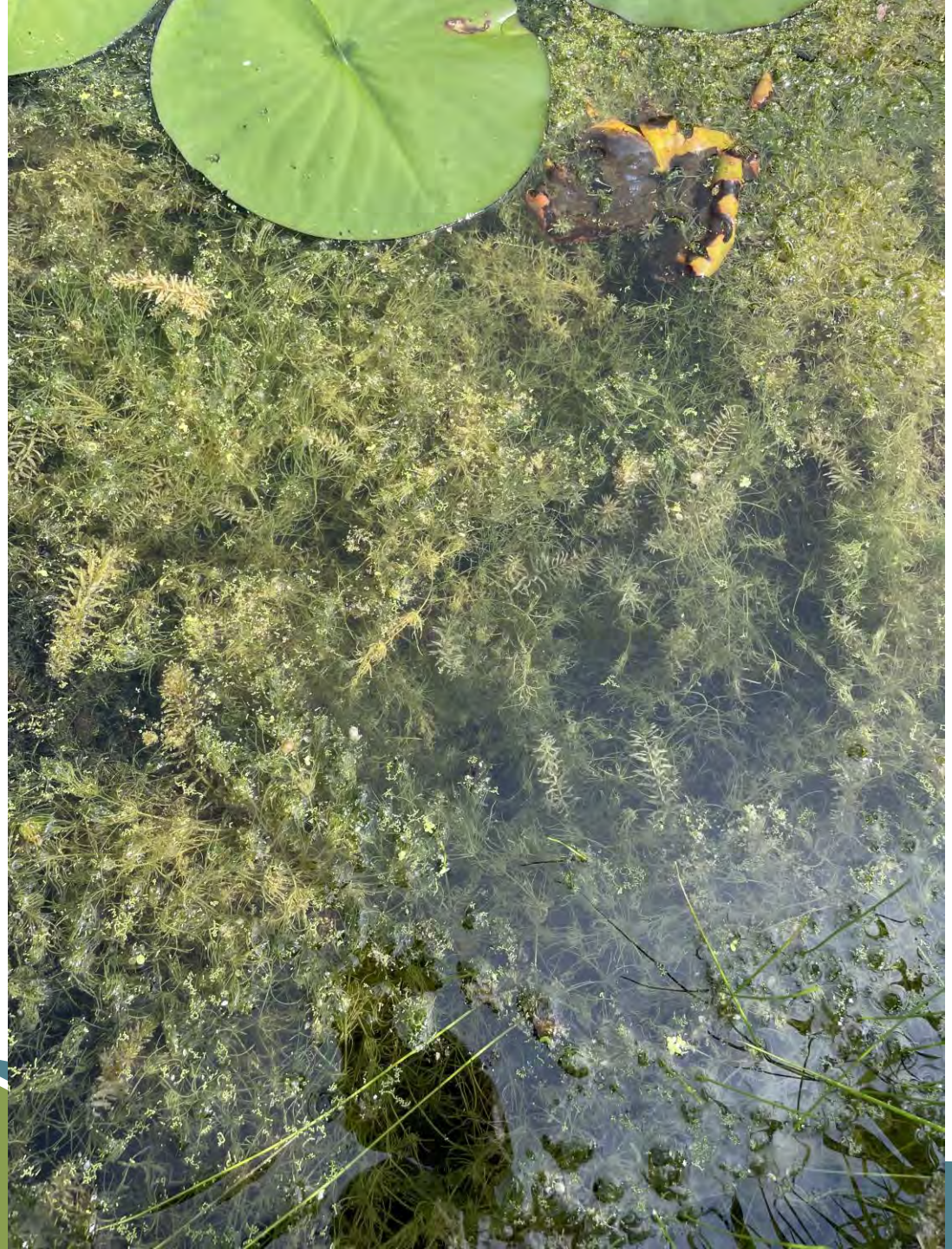
Report and timeline

- Ongoing response location since 2020 to eradicate parrot feather
- Monthly monitoring in growing season by EGLE and SW x SW Corner CISMA
- Sept 18 CISMA found a suspicious plant
  - Suspected Brazilian elodea
  - Pictures unclear
- Sept 20 EGLE follow up and specimens collected w/ tubers
- Sept 21 confirmed ID with MSUE and initiated conversation with regional experts




Stovers Farm Market & U Pic
St Joseph River
St Joseph River
Andrews University
ORONOKO CHARTER TOWNSHIP
Howard Performing Arts Center
Wild Coyote Organic Farm
~4.5 river miles
Nursery
Hildebrand Fruit Farms

Infested ponds



Response Goals

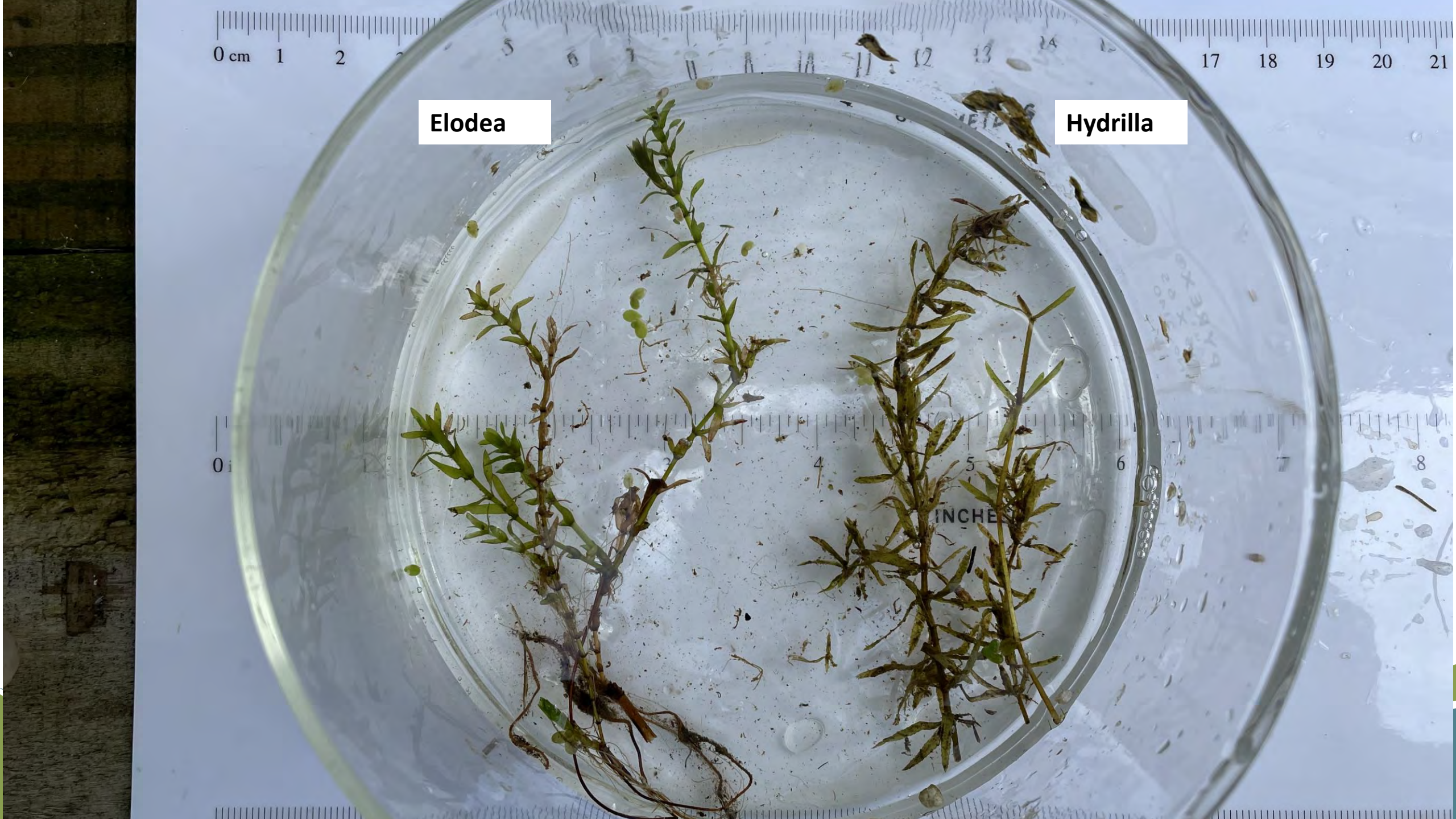
1. Chemically treat hydrilla in ponds to prevent off site spread and limit further tuber production

2. Monitor surrounding waterbodies for spread

Overall goal: Eradicate hydrilla

ID


160
180
190
200
210


Elodea
Hydrilla

Questions

Please report any suspicious aquatic plants

EGLE-WRD-AIP@MI.GOV

- Sept 20- Hydrilla found in Pond 1
- Sept 28- Intensive surveys on all ponds w/ MSUE
  - Hydrilla found in Pond 2
  - No hydrilla in Pond 3

Flower and Tubers

Site layout

- Private residential ponds
- ¼ acre in size each
- Connected through small outlet
- Flows north
- Discharge into Lemon Creek
- Lemon Creek flows 4.5 miles to St. Joseph River

Herbicide treatment

- Sept 29- Herbicide treatment in both hydrilla ponds
- Goal: Reduce hydrilla biomass to prevent spread and slow tuber production

- Aquathol K @ 3ppm
- ProcellaCOR @ 25 PDU
- Both max rates
- Whole pond treatments

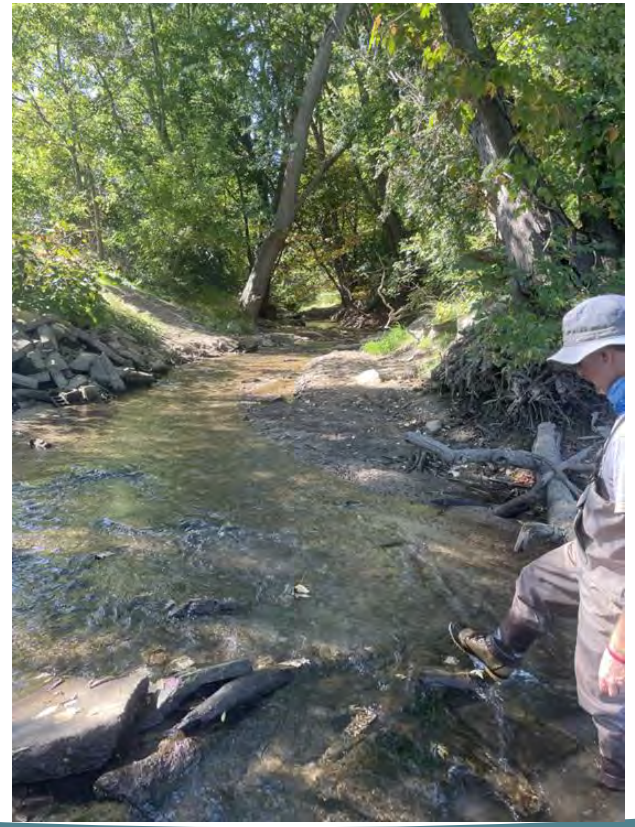
- Pre and post-treatment monitoring

Sediment Sampling for tubers

- Searching for tubers at depth
- Cores and ponar dredge
- Very few tubers in cores
- All near sediment surface

Monitoring- Lemon Creek

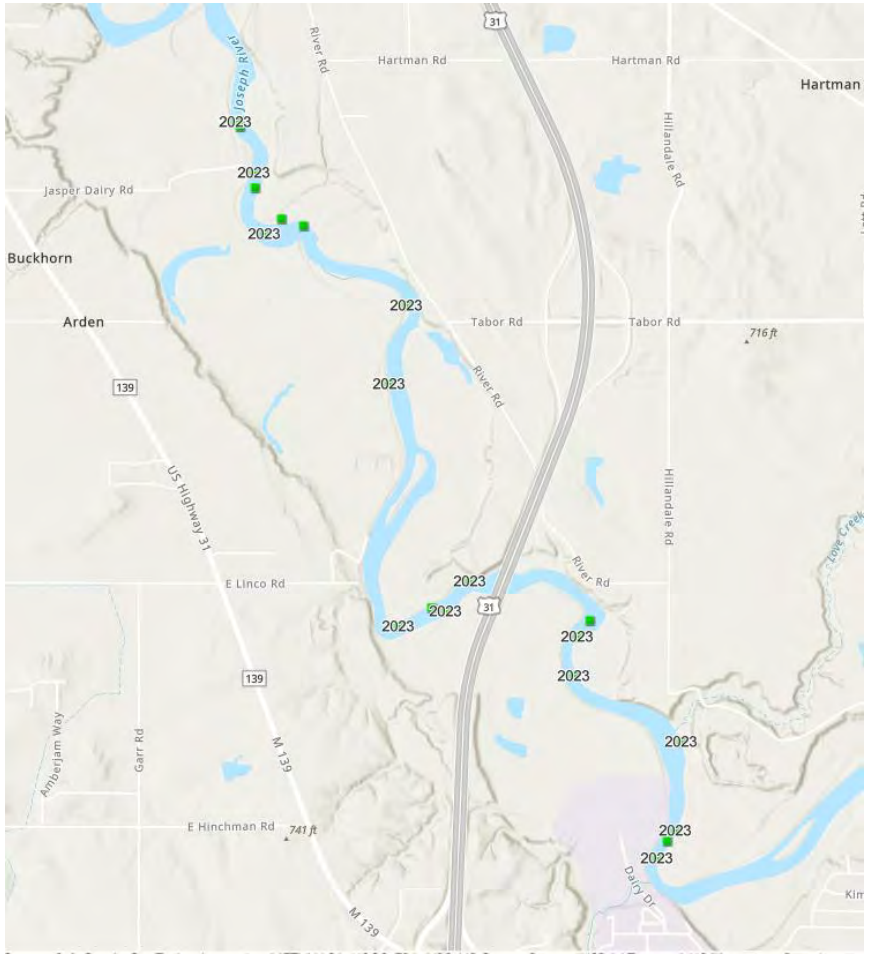
- Very few plants found
- Not favorable habitat/substrate for aquatic plant growth



Monitoring- St. Joseph River

- Surveyed 5-mile stretch from Lemon Creek confluence
- Mapped aquatic plant beds
- Focus on depositional areas
- Most river habitat not favorable for aquatic plants

- No hydrilla found

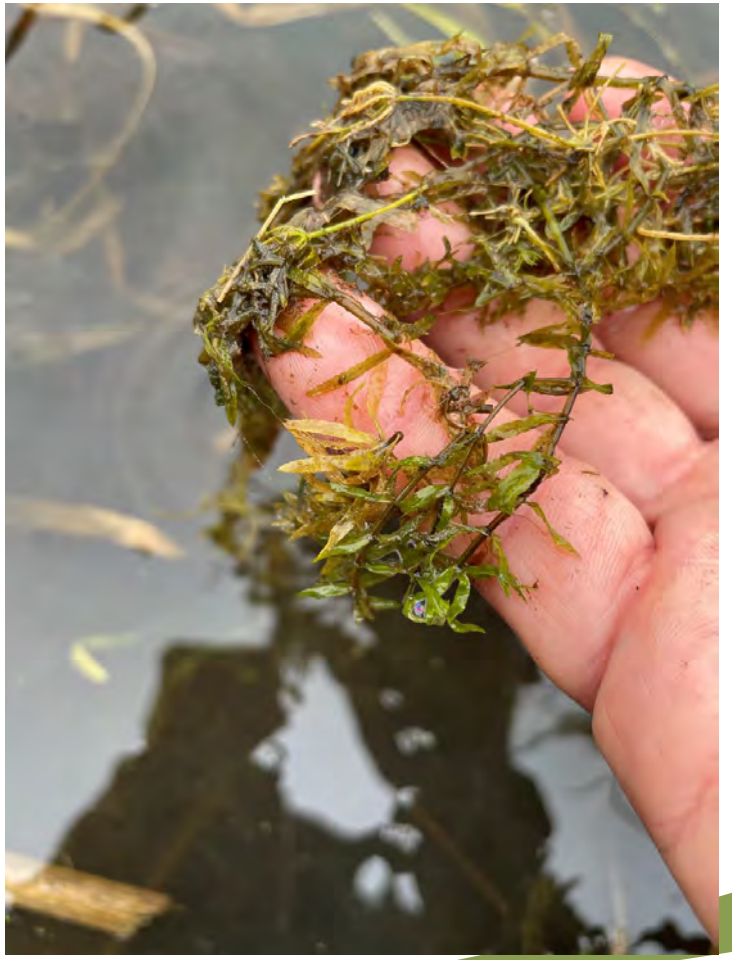


2 weeks post-treatment

- Hydrilla mostly dead
- Stems brown and falling apart
- A few green meristems

- Additional treatment not recommended at this point

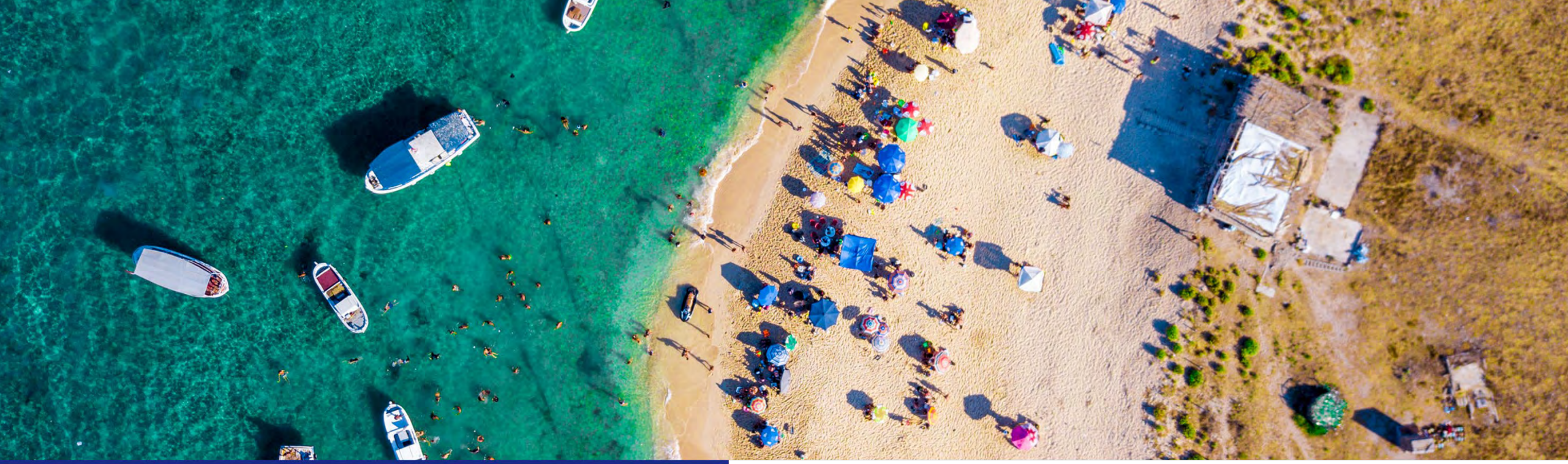
- Additional monitoring planned



Next steps

- Continued monitoring
- Treatment if needed
- Genetic testing to determine type (Monecious or Dioecious)

- Develop long term plan for containment and eradication



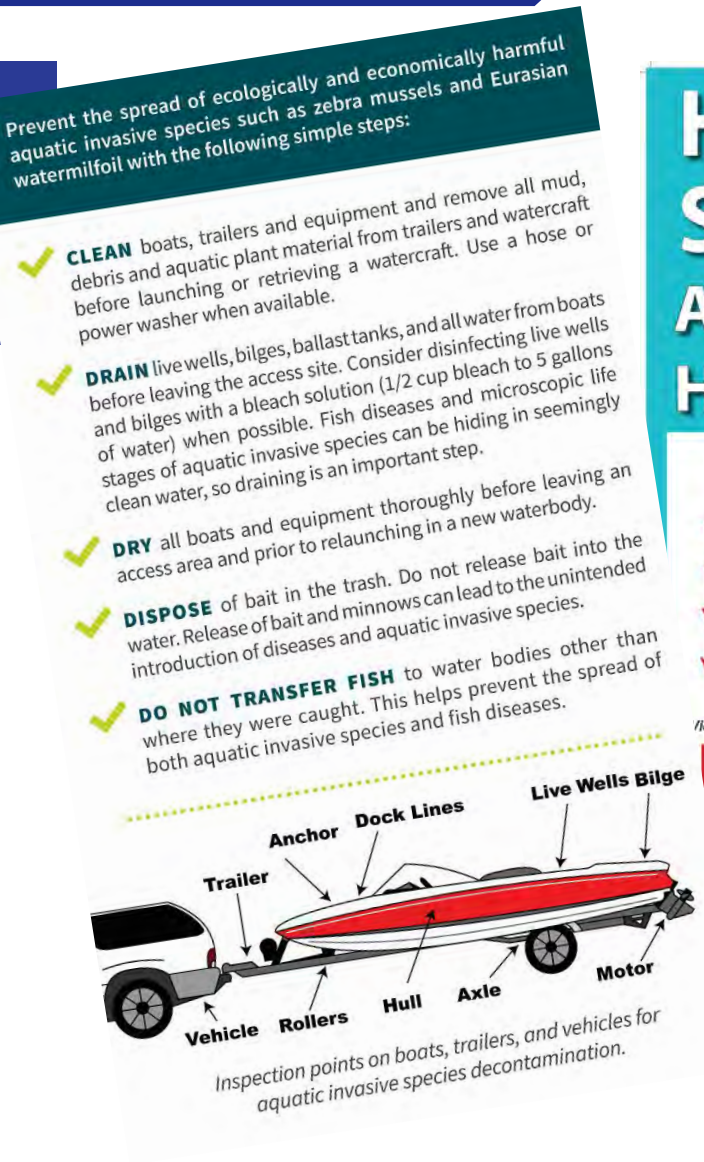
CLEAN BOATS CLEAN WATERS

Focuses on AIS Prevention education and outreach directed at boating pathways in Michigan through:

- Educational Programs and Presentations
- Communication and Resources
- Funding Opportunities

CONSISTENT MESSAGING IS KEY!

- Regulatory information
- Recommended practices



MOBILE BOAT WASH

- Trailer mounted high pressure cleaning station
- Raise awareness of boat cleaning practices
- Includes two staff who operate the washer and assist with outreach
- Provide on-site outreach materials (rack cards, towels, coozies, etc.)

WWW.MICBCW.ORG

BOAT CLEANING GUIDANCE

- **CLEAN** boats, trailers and equipment and remove all mud, debris and aquatic plants from trailers and watercraft. Use a hose or power washer when available.
- **DRAIN** live wells, bilges, ballast tanks, and all water from boats before leaving the access site. Consider disinfecting live wells and bilges with a bleach solution (1/2 cup bleach to 5 gallons of water) when possible.
- **DRY** all boats and equipment thoroughly before leaving an access area and prior to relaunching in a new waterbody.
- **DISPOSE** of bait in the trash, never release into the water.

GRANTS

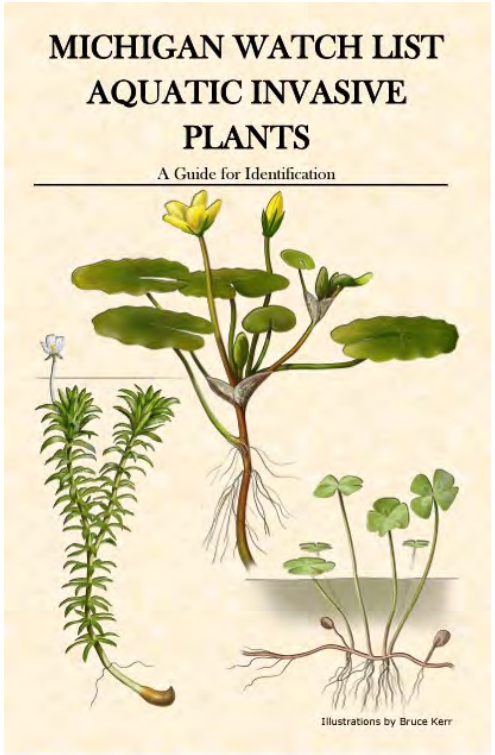
Provide $1K-$3K grants to local organizations to conduct boater outreach and develop educational materials

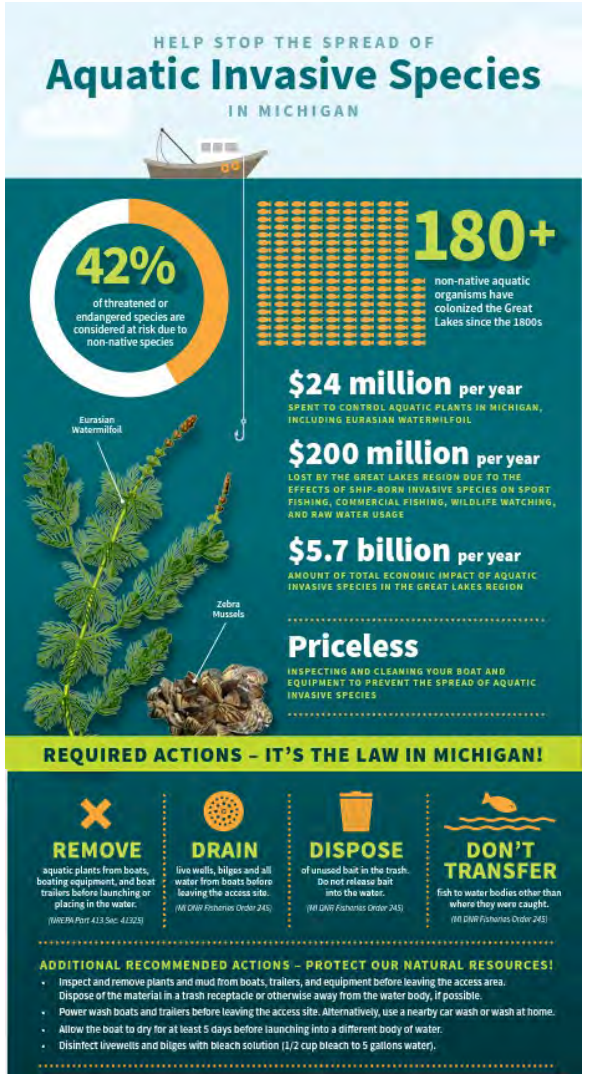
For the 2023 season, we had 13 grantees across Michigan

WWW.MICBCW.ORG

CBCW Resources

- Handouts, CBCW goodies like lures or towels, and current regulation brochures
- Boat launch and decontamination signs
- Communication resources and social media





Decontamination signs and EGLE boat launch signs are all available through CBCW!

CONNECT WITH CLEAN BOATS, CLEAN WATERS

www.micbcw.org

@michigancbcw

@michigan_cbcw

2023 changes to the AIS Watchlist

- Off the list: European frog-bit


P. Filice

- On the list: Water-primrose


A. Zharkikh

Hybrid watermilfoil

MICHIGAN STATE UNIVERSITY | Extension

For additional information, visit extension.msu.edu

December 2022

Identifying and managing invasive Eurasian and hybrid watermilfoils in Michigan lakes: A response to differential sensitivity to herbicides

Jo Latimore[1], Erick Elgin[2], James McNair[3], Syndell Parks[3], and Ryan Thum[4]

[1]Michigan State University, [2]Michigan State University Extension, [3]Grand Valley State University, [4]Montana State University

Summary

We genetically analyzed hybrid watermilfoil collected from lakes across Michigan and tested the hybrid plants' susceptibility to a common herbicide, fluridone. We made two important determinations. First, there are many different genetic strains of hybrid watermilfoil in Michigan lakes. Second, these strains respond differently to fluridone, and some are highly resistant to it. Therefore, knowledge of what strain(s) of watermilfoil are present in a lake is very important when developing a management plan that includes control with herbicides.

Background

include herbicide application, biological control, and physical removal. Recently, lake managers and scientists observed that traditionally effective herbicides were failing to control invasive watermilfoil in some lakes (Berger et al. 2012, Cherak et al. 2020, Thum et al. 2012). Genetic

Michigan Clean Water Corps

MilfoilMapper

Map Instructions

Pick a State *(Delete 'All' First)*
Michigan

Pick A County *(Delete 'All' First)*
All

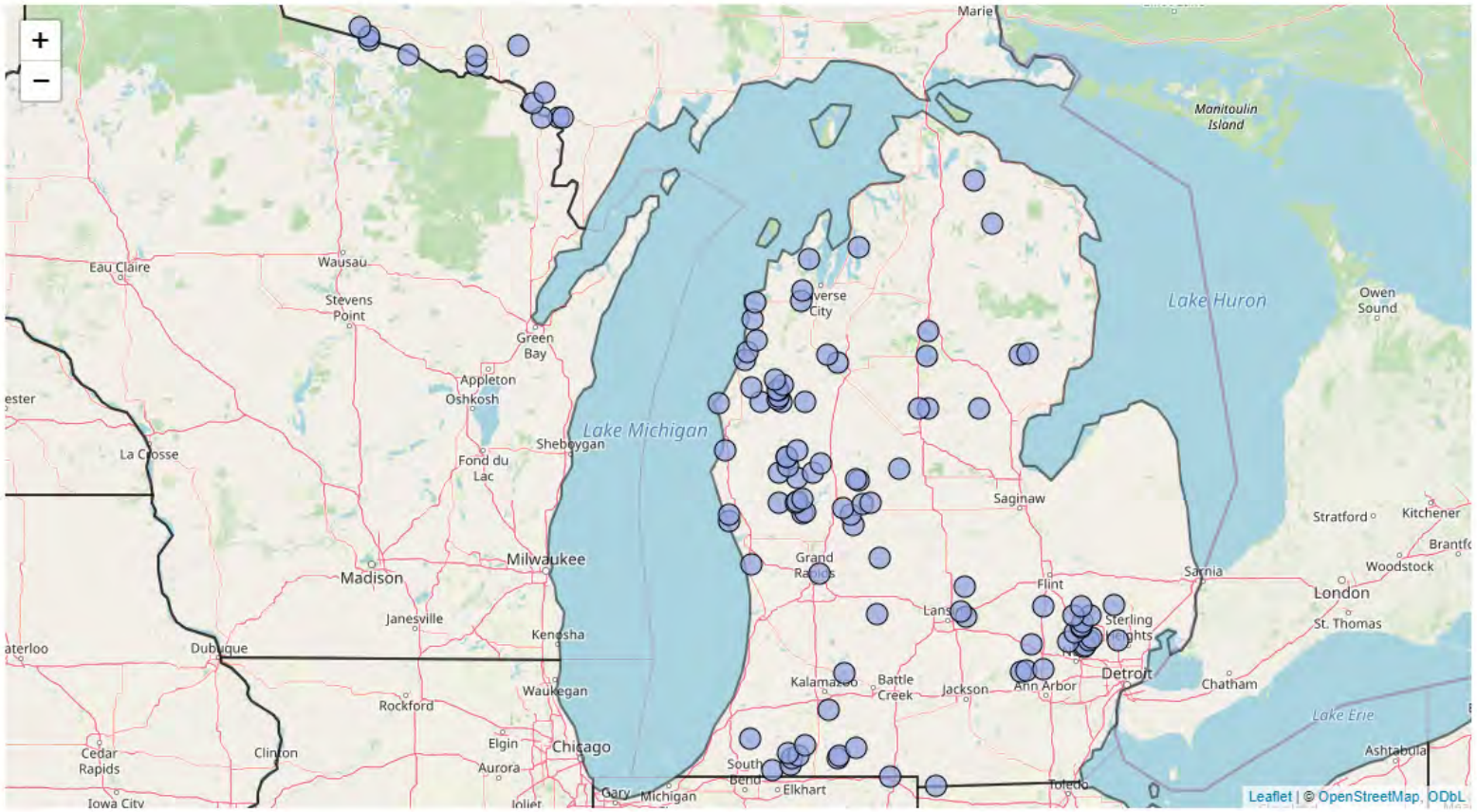
Pick A Lake *(Delete 'All' First)*
All

Pick A Known Taxon *(Delete 'All' First)*
All

Strain Nomenclature

➔ The first letter in the strain ID referrers to the taxon, distinguishing between Eurasian (*Myriophyllum spicatum*), northern (*M. sibiricum*) or hybrid (*M. spicatum* × *M. sibiricum*) watermilfoil.

➔ Additionally, 'MISGP' or 'MYR' in the ID represents the original database this sample is from, primarily for in-house purposes, but it is included for cross referencing convenience.

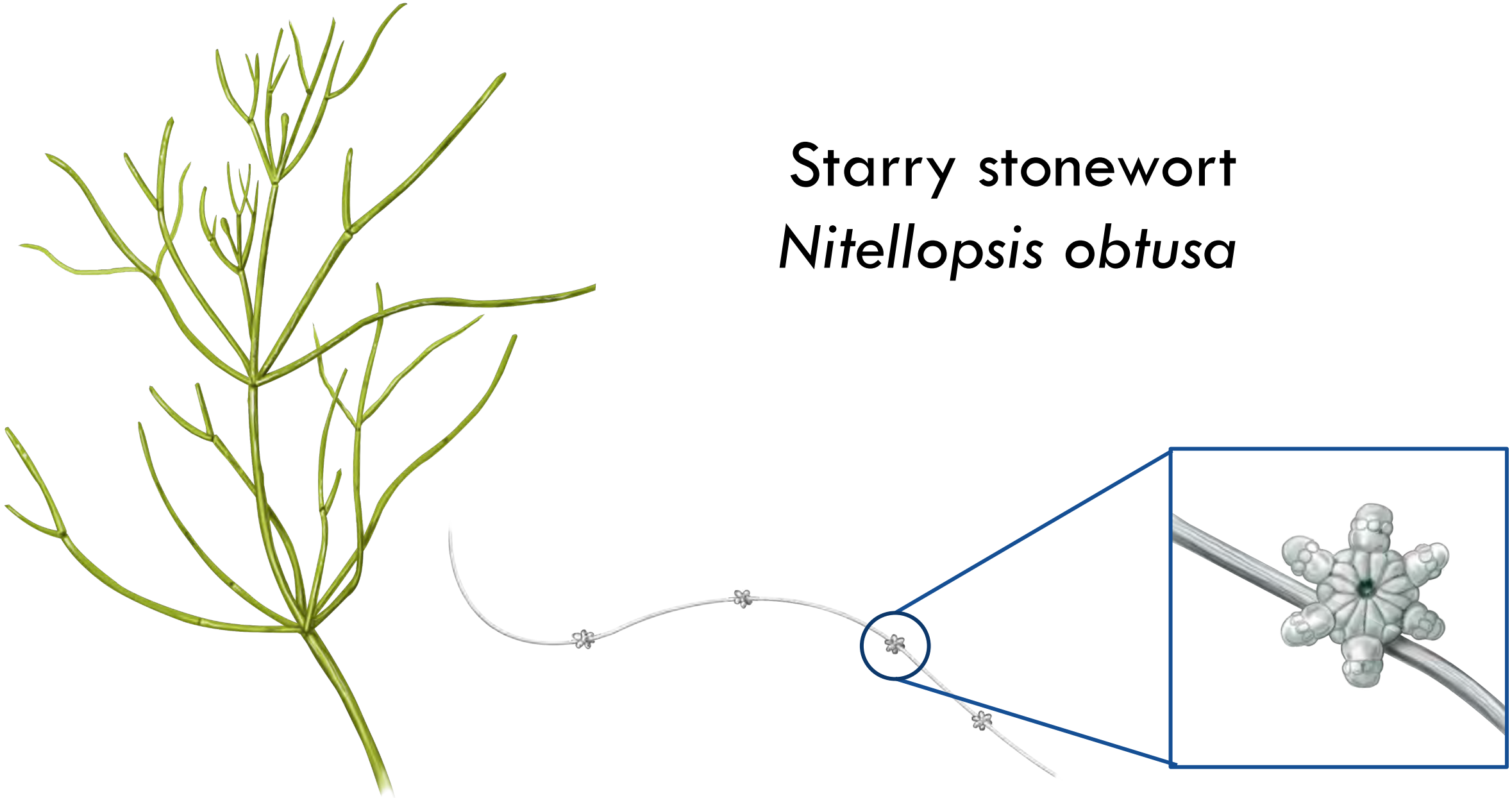


Questions, suggestions or bugs? Please email them to Ashley at ashley.wolfe3@montana.edu.
The data on this website was last updated 10/1/2023
Version 1 published 9/20/2023

Michigan Clean Water Corps

https://thumlab-msu-watermilfoilapp.shinyapps.io/milfoil_app/

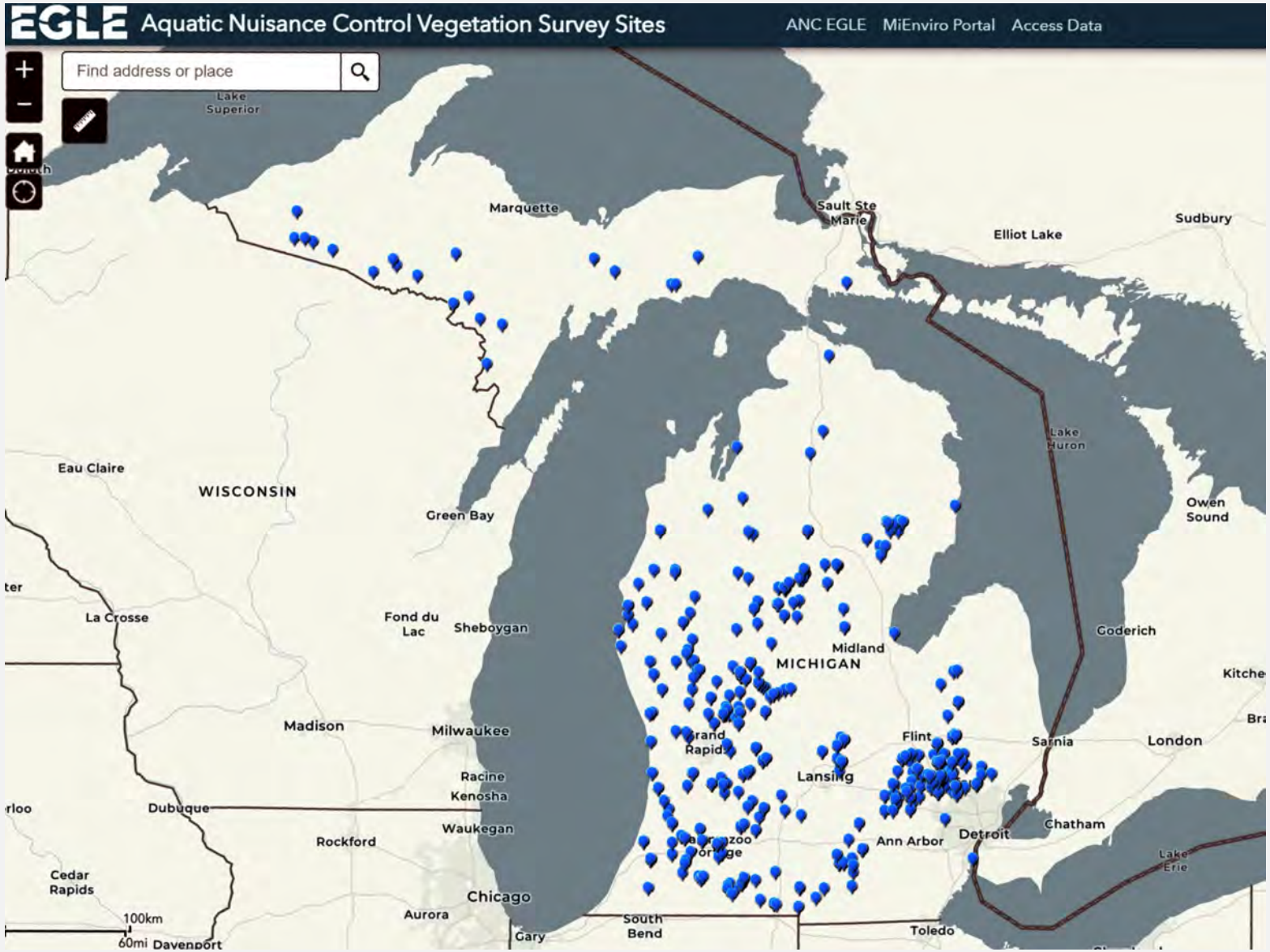
Starry stonewort
Nitellopsis obtusa



P. Skawinski

THE NEED FOR A STANDARDIZED, STATEWIDE PROTOCOL

lacking data across the state



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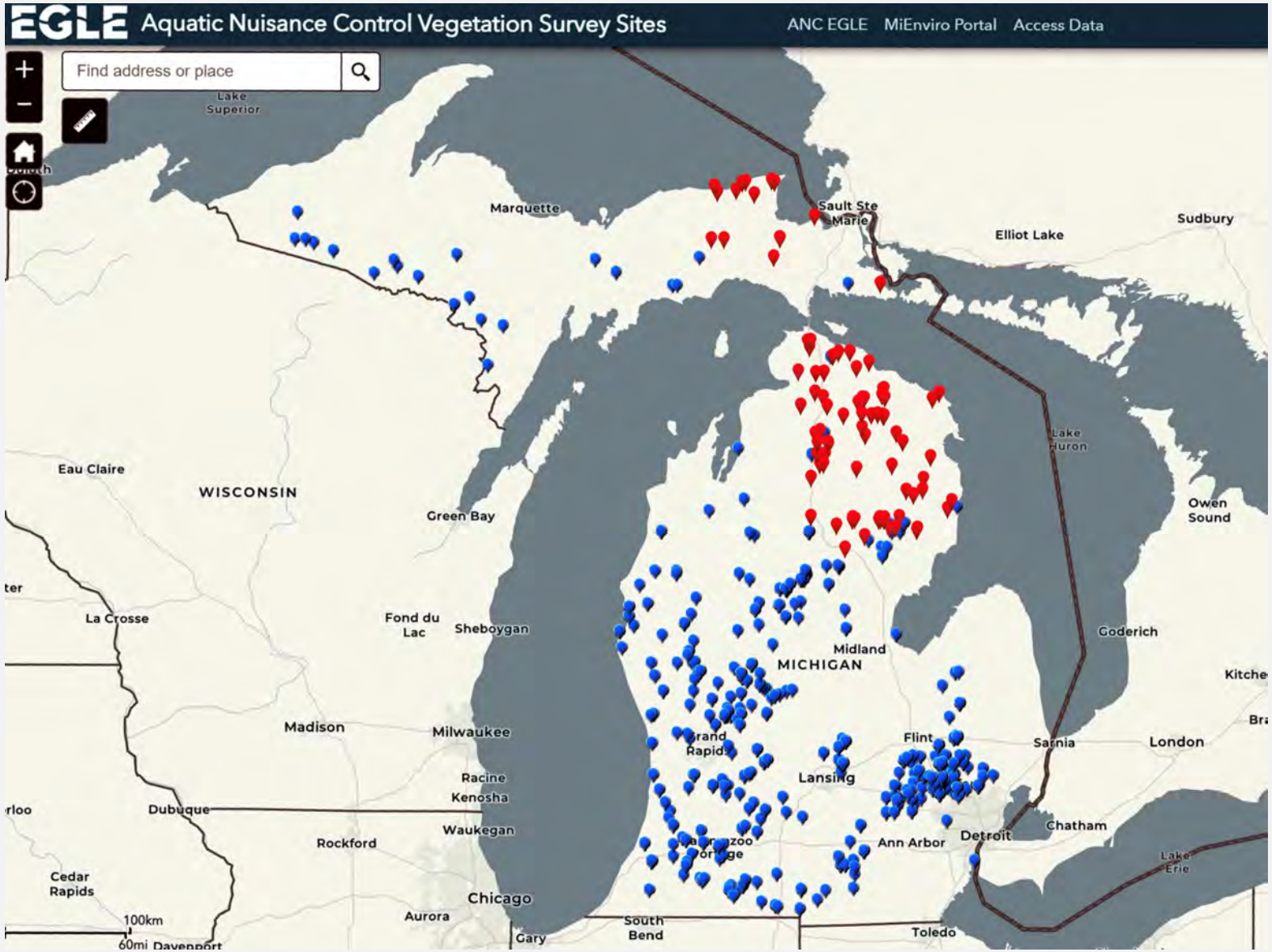

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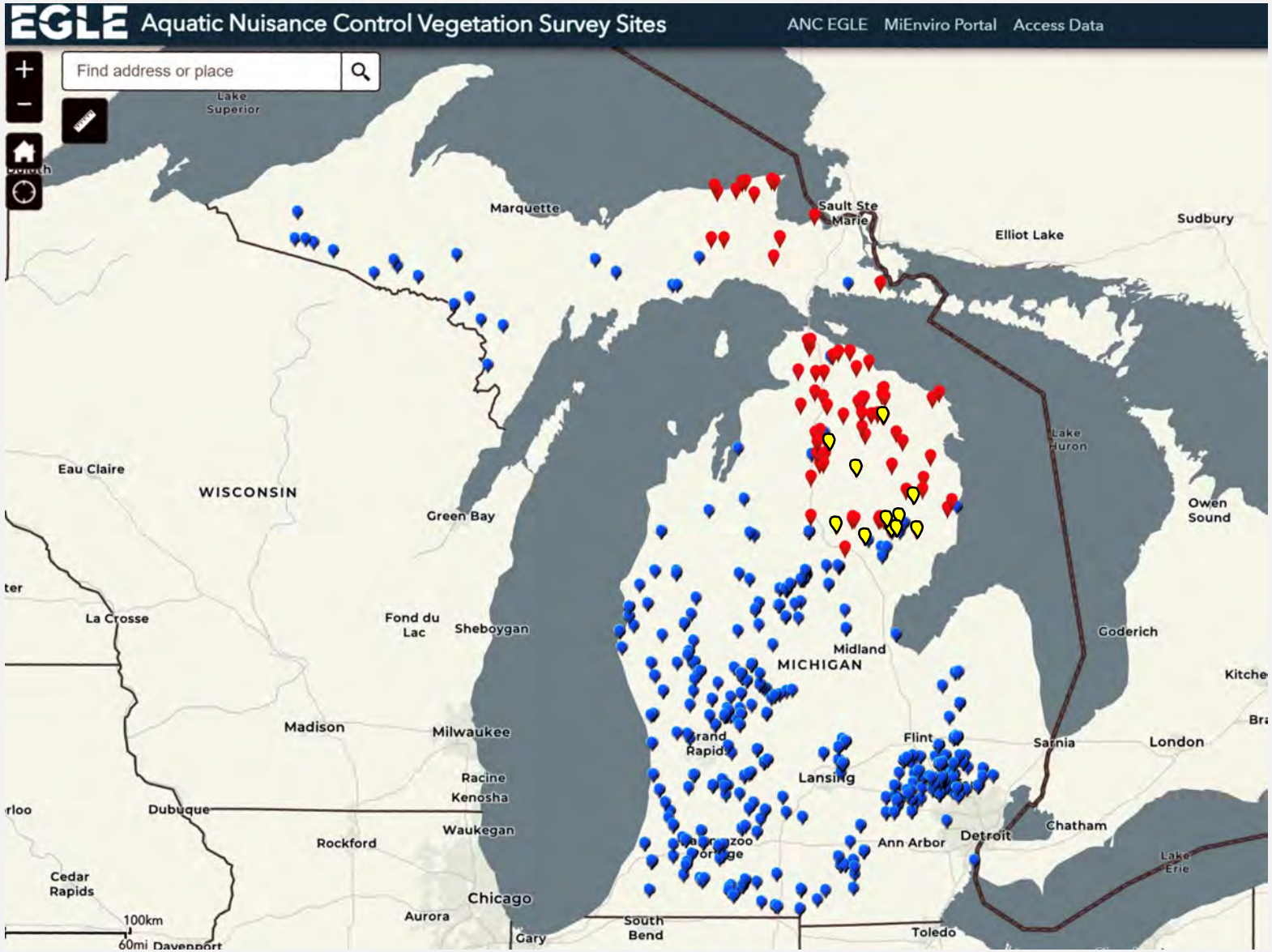

- AuSable Lake – Ogemaw Co.
- Peach Lake – Ogemaw Co.
- North Lake – Ogemaw Co.
- Sage Lake – Ogemaw Co.
- Rifle Lake – Ogemaw Co.
- Long Lake – Ogemaw Co.
- Lake George – Ogemaw Co.
- Lake St. Helen – Roscommon Co.
- Fletcher Pond – Montmorency Co.
- Big Lake – Otsego Co.
- Little Bass Lake – Otsego Co.
- East Lake – Luce Co.*
- Trout Lake – Luce Co.*
- *Needs identification confirmation

Didymo (rock snot)

- Locations
  - Boardman River (2022)
  - Upper Manistee River (2021)
  - St. Marys River (2015)

New Zealand Mudsnail

- Locations
  - Pere Marquette River
    - 2015 – 1st discovery
  - Au Sable River
  - Boardman River
  - Grass River
  - Pine River
  - Upper Manistee River
  - Mitchell Creek (Gr. Traverse Bay)
    - 2023

Michigan EGLE

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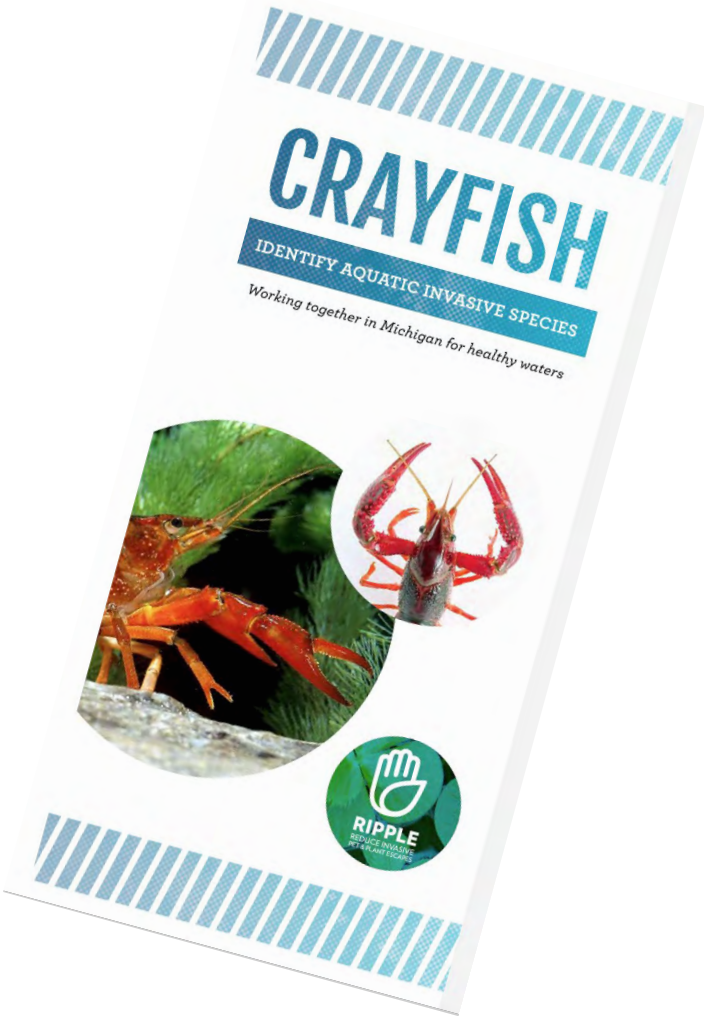

RIPPLE (Reduce Invasive Pet and Plant Escapes)