

Aquatic Invasive Species in Wisconsin Lakes

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What are AIS?

- Species that are known to cause substantial economic or environmental harm, or harm to human health.
- Aggressive, quick to reproduce, versatile
- Typically non-native



NR40 Prohibited/restricted

- **Prohibited:** Present in very low abundance or absent from WI. Law prohibits transfer, transport, introduction, **or possession.**
 - Hydrilla, yellow floating heart, starry stonewort...
 - Giant hogweed

NR40 Prohibited/restricted

- **Restricted:** Widespread across WI, but still a serious threat to lakes/streams/wetlands. Law prohibits transfer, transport, or introduction. Does not regulate possession.
 - Eurasian watermilfoil, curly-leaf pondweed, zebra mussels, Japanese knotweed...

Zebra Mussels

Restricted

Dreissena polymorpha



- Ballast water introduction to the Great Lakes in 1980s
- Known from 200+ WI inland lakes
- Attach to any hard surface - may reach tens of thousands per square meter!
- Female can produce 1 million eggs/season
- Filter feeders

Zebra Mussels

Dreissena polymorpha

Larvae are microscopic, free-floating

Can be attached to plants



Zebra Mussels

Dreissena polymorpha

Eaten on small scale by some animals

Currently no management options



Prohibited

**Starry Stonewort
(*Nitellopsis obtusa*)**



Origin

- Native to Europe and Asia
- Documented in St. Lawrence River in 1978
- Documented in Lake St. Clair in Michigan in 1983.
- Documented in inland Michigan lakes in 2000.
- Found in Waukesha (2014), Racine (2015), Washington (2015), and Door (2016) Counties

Identification

- Can be over 6 feet tall
- Whorls (rings) of “leaves” around the stem
- Asymmetrical forking
- Produces star-shaped bulbils in the sediments



Dispersal

- Probably moved by boats, trailers, anchors (NOT waterfowl)
- Only male starry stonewort has been found in North America. No sexual reproduction (seeds)



Impacts

- Largely unknown
- Most information available is based on anecdotal accounts
- Studies currently underway
 - Bulbil viability
 - Herbicide trials



Eurasian Water-milfoil

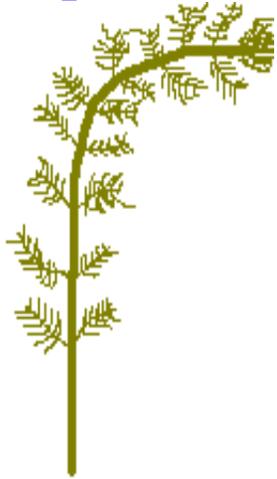
Restricted

Myriophyllum spicatum

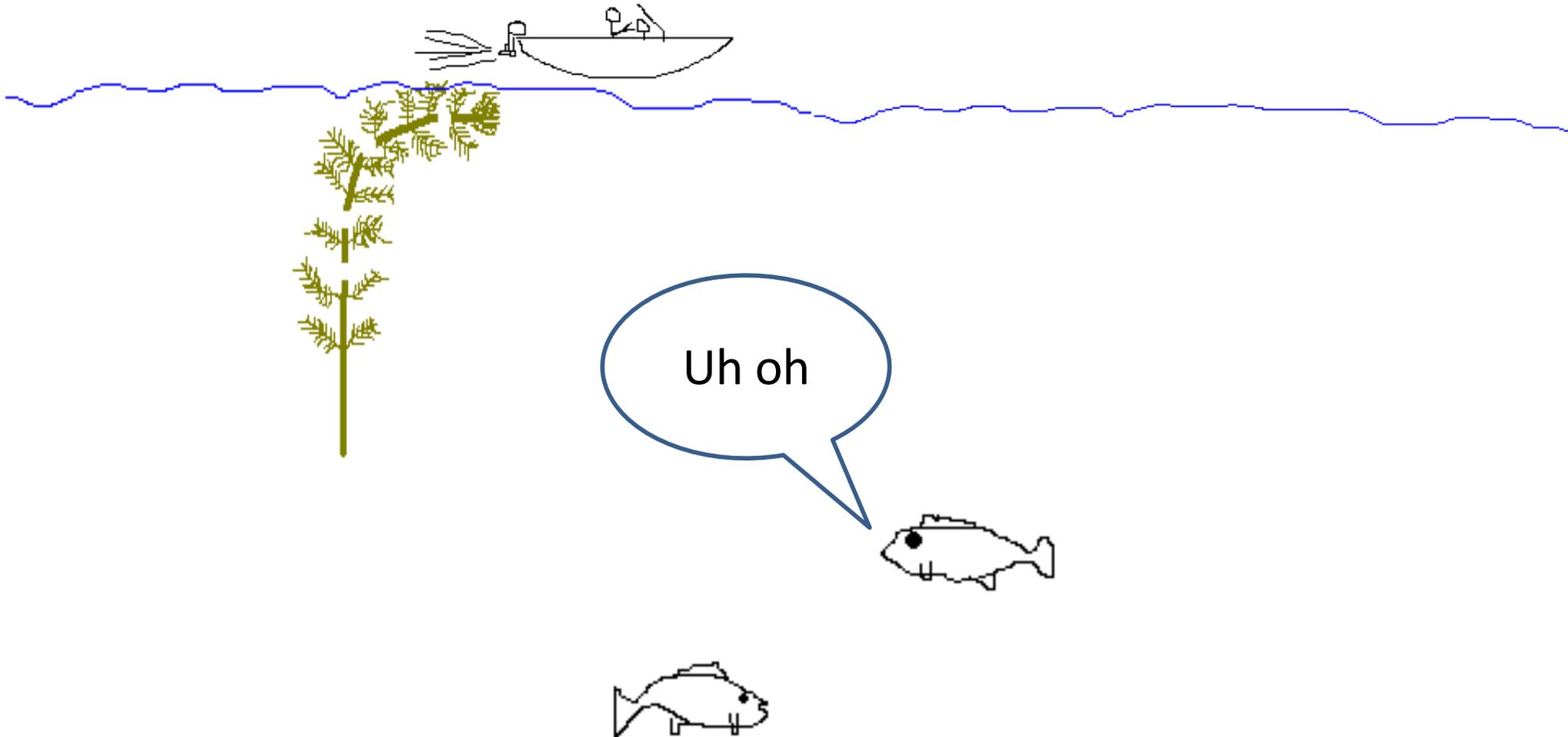


- First found in WI in 1960s
- Currently known in 821 WI lakes/streams (Sep 2018)
- Forms dense mats - interferes with water recreation
- Can spread from small fragments

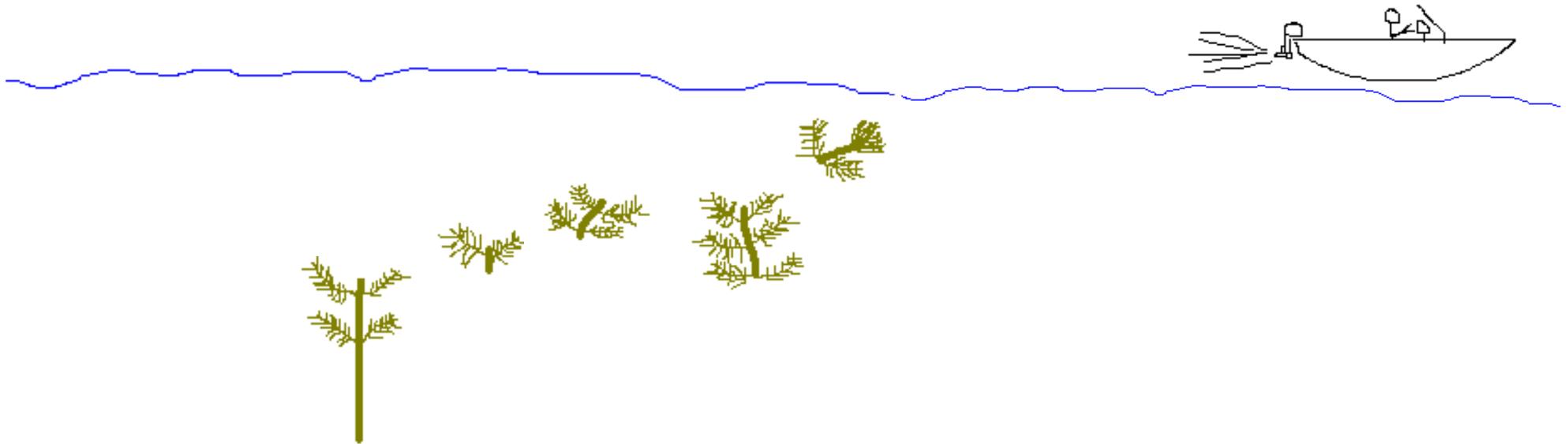
Eurasian Watermilfoil Spread



Eurasian Watermilfoil Spread



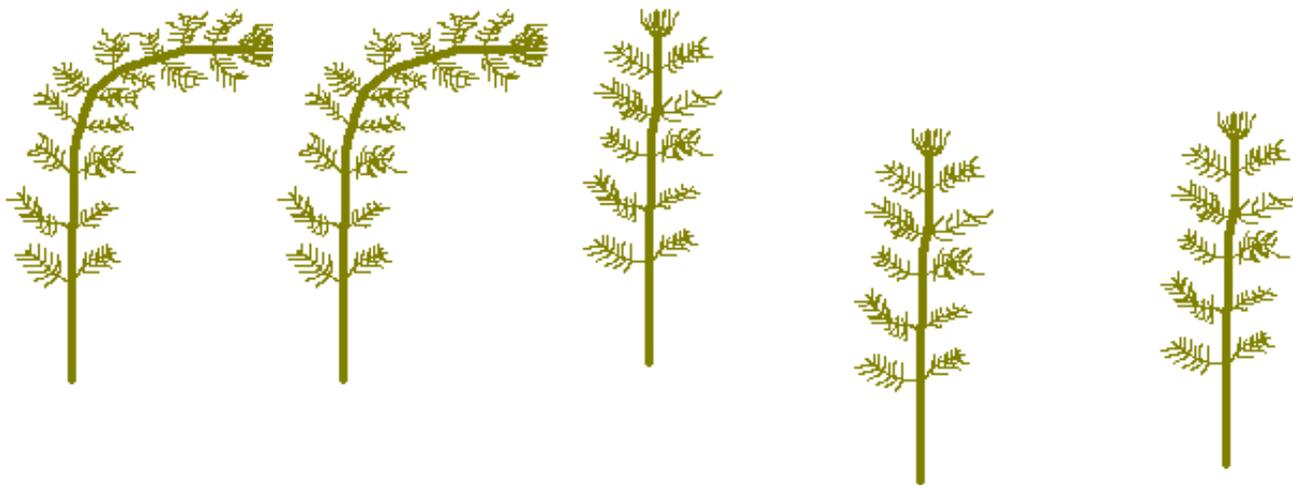
Eurasian Watermilfoil Spread



Eurasian Watermilfoil Spread



Eurasian Watermilfoil Spread





Adventitious roots





Northern watermilfoil
Myriophyllum sibiricum

Eurasian watermilfoil
Myriophyllum spicatum

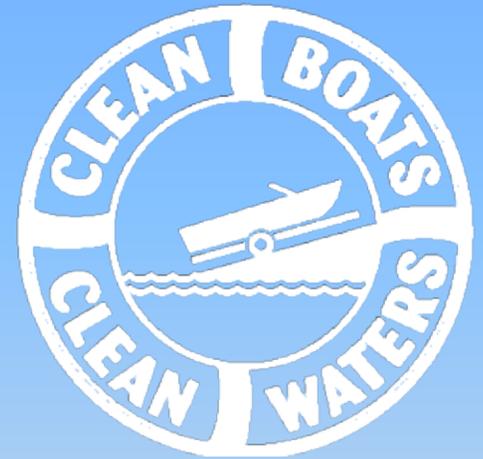


So what can I do to help?

Wisconsin's Aquatic Invasive Species Program

- Watercraft Inspection

- DNR inspection program places staff at high-traffic boat landings
- ‘Clean Boats, Clean Waters’ trains volunteers to monitor landings and educate boaters



- **Contact:** *Erin McFarlane*

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Wisconsin's Aquatic Invasive Species Program

- Volunteer Monitoring

- Volunteers collect measurements of lake health, including aquatic invasives
- Early detection = cheaper, less damage to ecosystem

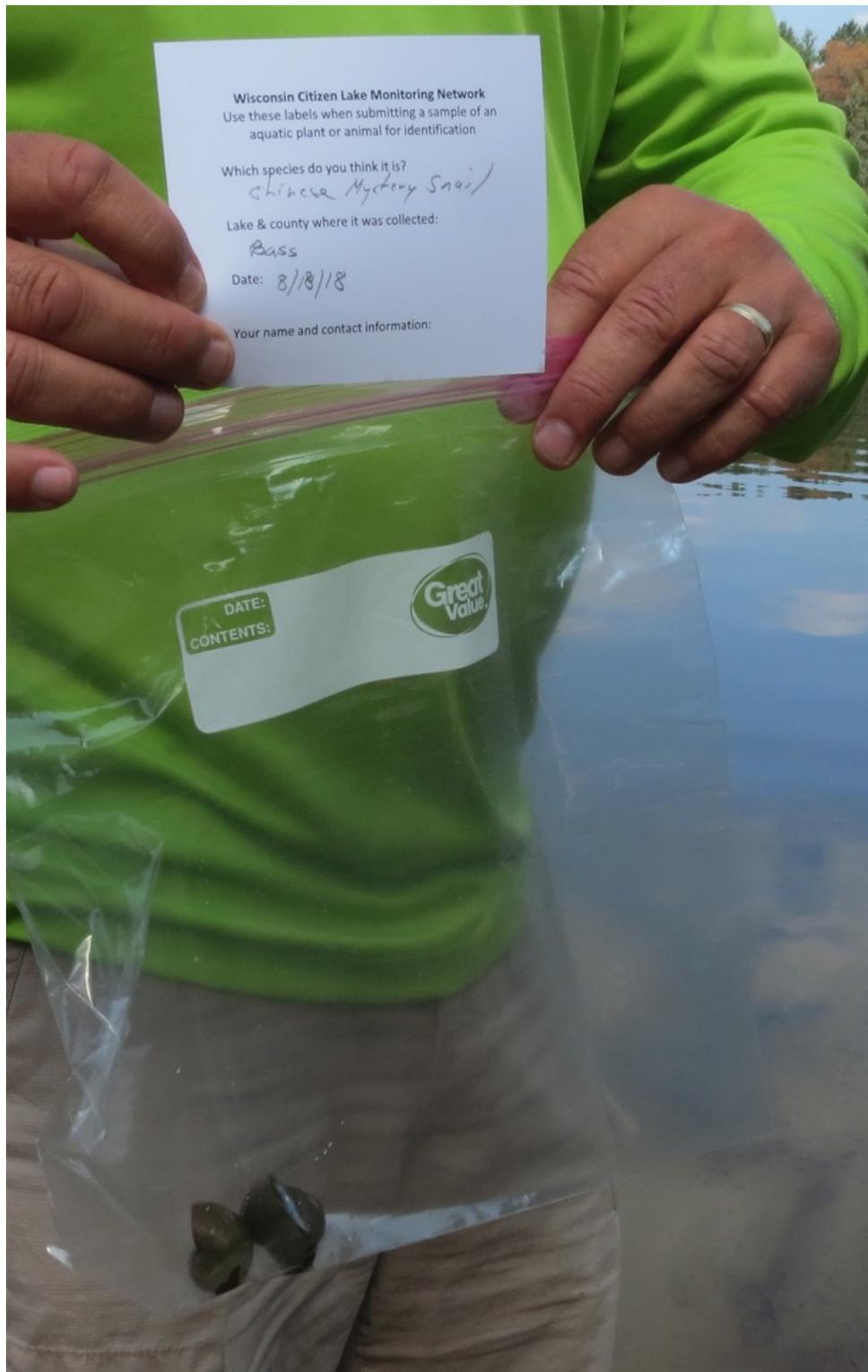
- **Contact:** *Paul Skawinski*
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Reduce disturbance and nutrient pollution
along your shoreline







STATEWIDE
AQUATIC INVASIVE SPECIES
SNAPSHOT DAY

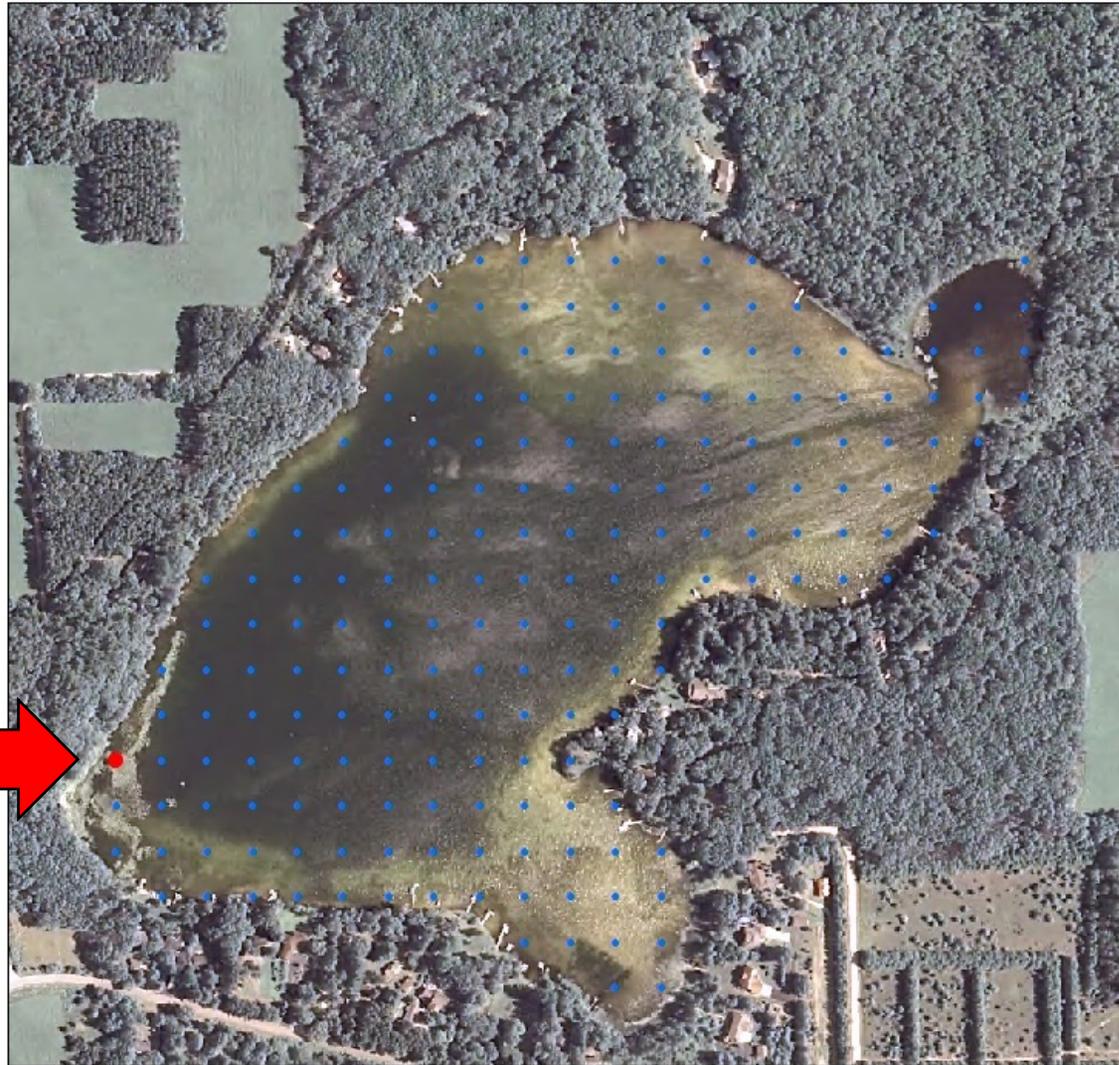
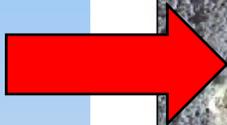


Saturday, August 17th, 2019

Porters Lake 2012 Aquatic Plant Survey:
Eurasian water-milfoil (*Myriophyllum spicatum*)

**EWM
Detected**

June 23rd,
2012



0 0.025 0.05 0.1 0.15 0.2 Miles

Occurrence of Eurasian water-milfoil
(*Myriophyllum spicatum*)



- 0
- 1



EWM Targeted Visual Survey 8/23/12



Emergency District Meeting - Dec. 2012

Meeting called to discuss options to target EWM

Consensus:

Apply for WDNR Rapid Response Grant

Granular 2,4-D application in spring 2013

Manually remove “leftovers”

Intense monitoring and continued removal as necessary

Granular 2,4-D application – May 15th, 2013

Results

Treatment was effective at killing most of the remaining EWM

Some plants remained and were removed by hand in June 2013



No EWM found for 3 years, 3 months

~20 plants found in September 2015
All were manually removed



No EWM found for another 11 months

~20 plants found in August 2016
Again, all were manually removed

2017 – ~50 plants found, removed

2018 – ~50 plants found, removed

If you suspect that you found an invasive species in a new location, report it!

Early detection and response is the key

DNR AIS Coordinator

County AIS Coordinator

Citizen Lake Monitoring Network Coordinator

Many Species to Watch For

Eurasian watermilfoil

Curly-leaf pondweed

Zebra mussels

Starry stonewort

Banded mystery snail

Chinese mystery snail

Asian clam

Spiny water flea

Hydrilla

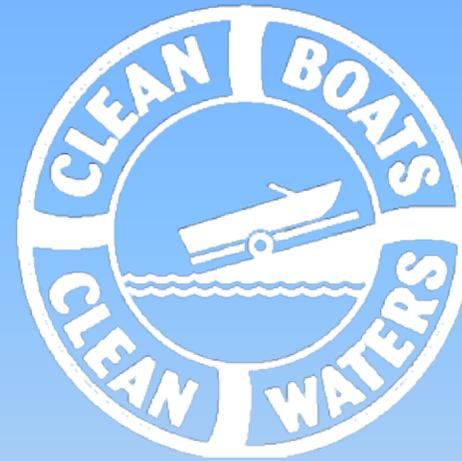
Yellow floating heart

Carolina fanwort

Brazilian waterweed...

One Set of Prevention Steps

Eurasian watermilfoil
Curly-leaf pondweed
Zebra mussels
Starry stonewort
Banded mystery snail
Chinese mystery snail
Asian clam
Spiny water flea
Hydrilla
Yellow floating heart
Carolina fanwort
Brazilian waterweed...



Inspect boat, trailer, equipment

Remove vegetation, animals, mud

Drain all water

Never move live fish



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