

Eagle Spring Lake Meeting

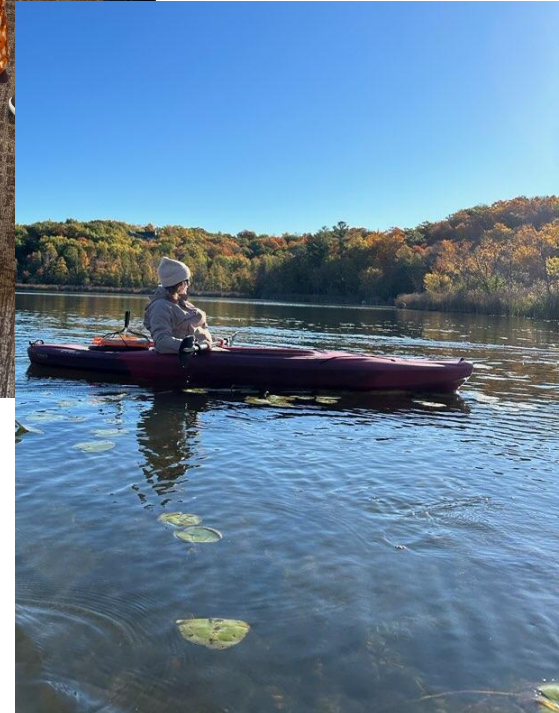
October 15, 2024

Patrick Siwula - WDNR Southeast Region AIS Biologist
Amanda Schmitz – Waukesha County AIS Coordinator



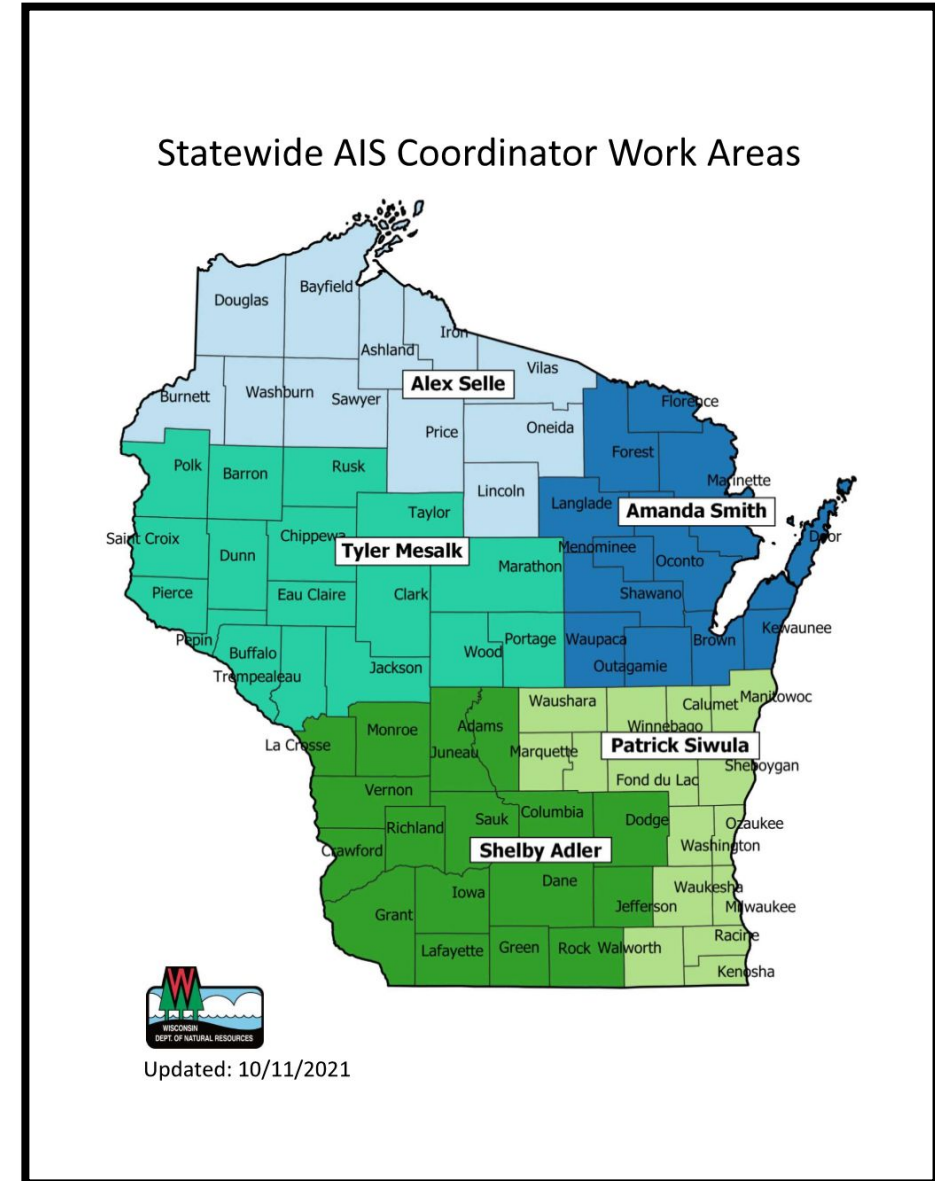
Aquatic Invasive Species Coordinator - Washington & Waukesha Counties

- AIS Reponse - Local Contact
- AIS Monitoring
- Education & Outreach
- Program Implementation - CLMN, CBCW, Snapshot Day, Project RED, Purple Loosestrife Biocontrol



Southeast Region Aquatic Invasive Species (AIS) Biologist

- AIS Response
 - Respond to new AIS findings in or near surface waters
 - High profile / prohibited species not yet present in WI or with low geographic footprint
- AIS Pathways management
 - Organisms in Trade – prevent the trade and introduction of regulated species
- Regional Point of Contact (SE)
 - AIS grant administration, technical assistance
 - Monitoring, research, data management
 - Outreach, education



WI Invasive Species Management Plan and Response Framework

1800s-1900s: First introductions of AIS to WI

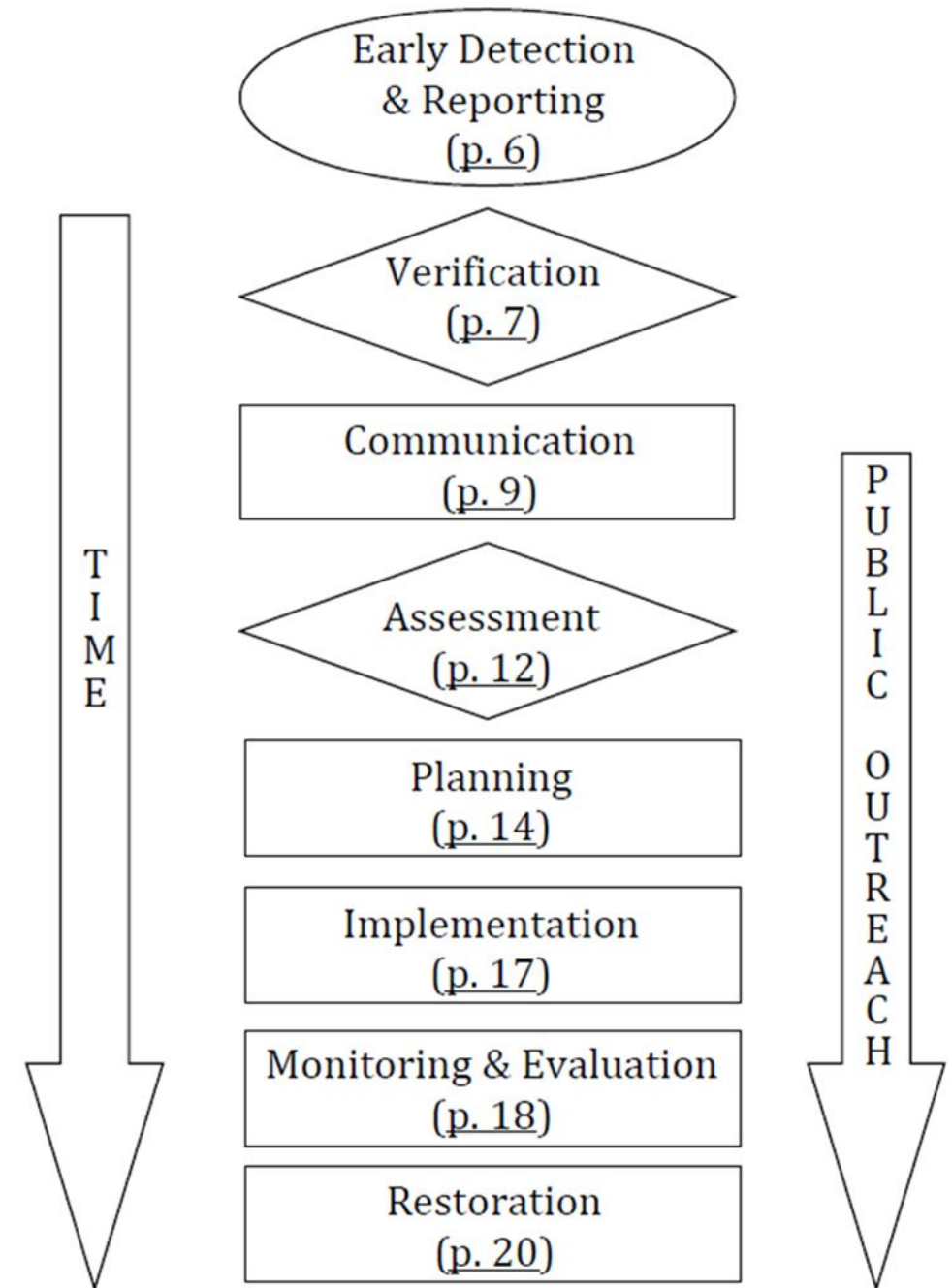
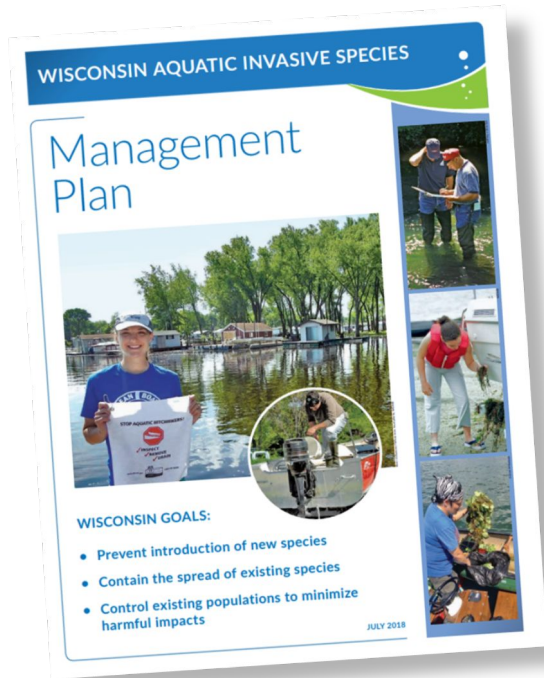
2003: First Statewide AIS Management Plan

2009: Creation of Invasive Species Rule (NR40)

2017-18: Invasive Species Response Framework

2018: Updated Statewide AIS Management Plan

2021: Full-time regional AIS staff throughout WI



WI AIS Management Plan – Pathways

AQUATIC INVASION PATHWAYS:

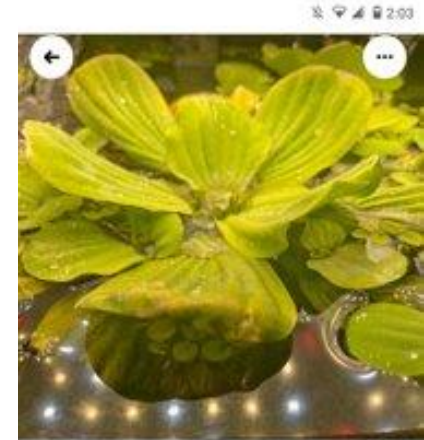
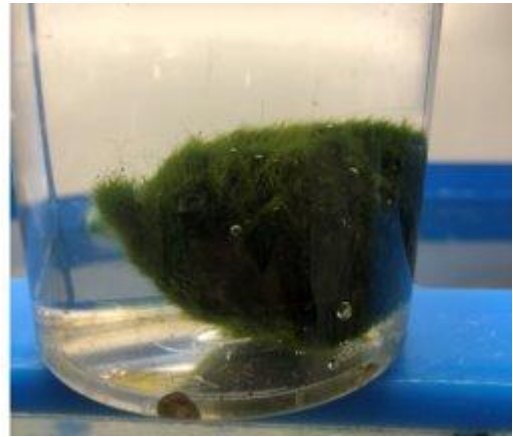


Organisms in Trade

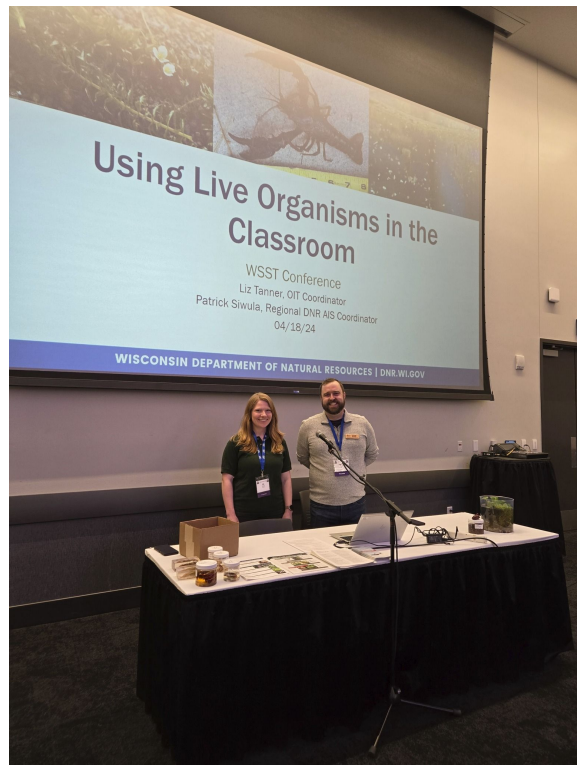
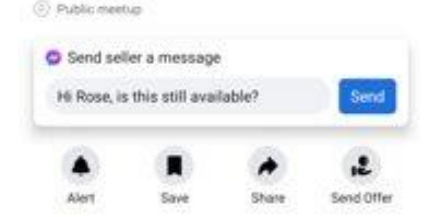
- Invasive plants and animals introduced through trade (sell, trade, give away)
- Desirable traits are similar to traits commonly found in invasive species
 - Quick to establish and spread
 - Fast growing
 - Resilient/easy to take care of
- Can be introduced to the environment
 - Unintentional escapes
 - Intentional releases



Organisms in Trade



Aquarium Water Lettuce
\$5 - In Stock



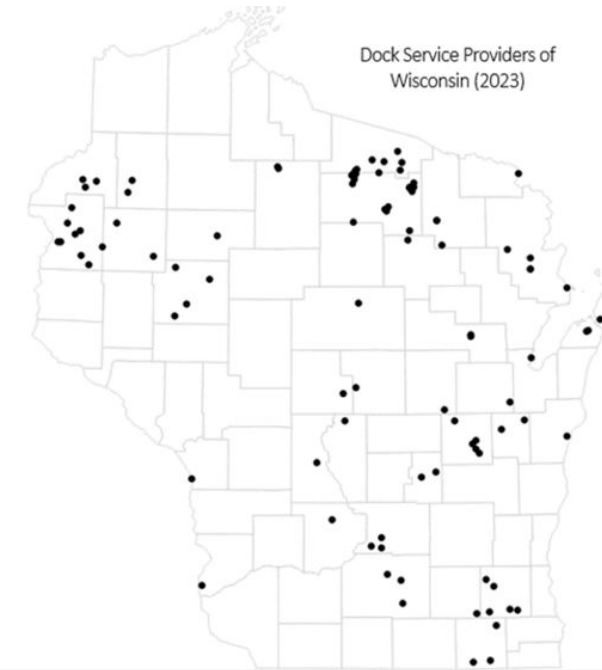
WI AIS Management Plan – Pathways

AQUATIC INVASION PATHWAYS:



Recreational Activities and Service Providers

Dock Service Providers (DSPs)



Your Customer's Lake & Rivers at Risk of Invasive Species

INVASIVE SPECIES cause the most significant damage over the near-shore areas of your customers dock space.

WHAT DOCK SERVICE PROVIDERS NEED TO KNOW ABOUT INVASIVES

- Invasive species are nonnative plants, animals, and diseases that can cause harm to the economy, environment, and human health.
- Invasive plants reproduce and grow quickly, easily invading natural areas. They often spread & reproduce in numerous ways, even by small plant fragments or microscopic eggs/larvae.
- Invasive species pose a threat to Wisconsin's waterbodies and waterfront properties that are critical for fishing, boating, and swimming.

WHAT YOU CAN DO

- Minimize the movement of invasive species to non-infested areas within a waterbody during work activities.
- Follow the mandatory prevention steps.
- Consider implementing at least one decontamination option.
- Work with your client to meet timelines/requests while prioritizing the resource.

More information on mandatory Prevention Steps and optional decontamination options can be found on the back of this document.

WHAT DOES THIS HAVE TO DO WITH DOCK SERVICE PROVIDERS?

- Invasives such as zebra mussels can be moved on equipment, sediment and plants, and other debris.
- Invasives can diminish customer base by interfering with recreational activities and the need for docks and other in-water structures.

Help prevent the spread of Aquatic Invasive Species (AIS)...

BEST MANAGEMENT PRACTICES FOR DOCK SERVICE PROVIDERS

<p>GOOD</p> <p>Wisconsin law requires all water users, including water-related businesses like Dock Service Providers, to take the following steps when leaving a public access:</p> <p>INSPECT boats, trailers, and equipment</p> <p>REMOVE all attached aquatic plants, animals, and sediment</p> <p>DRAIN all water from boats, vehicles, and equipment</p> <p>NEVER MOVE plants or live fish away from a waterbody</p>	<p>BEST</p> <p>To further minimize the risk of spreading AIS, your company could also consider decontaminating all equipment and gear. Some options for decontamination include:</p> <p>Have a dedicated set of equipment to use in waterbodies that you visit frequently</p> <p>Spray equipment with a bleach solution *Use a ratio of 2.5 Tablespoons/gallon of water</p> <p>Use a hot water pressure washer or steam cleaner to clean equipment *contact temperature of 140°F</p> <p>Allow equipment to dry for at least 5 days</p> <p>If working on multiple waterbodies within a day, plan to work from least to most infested to reduce risk of spread.</p>
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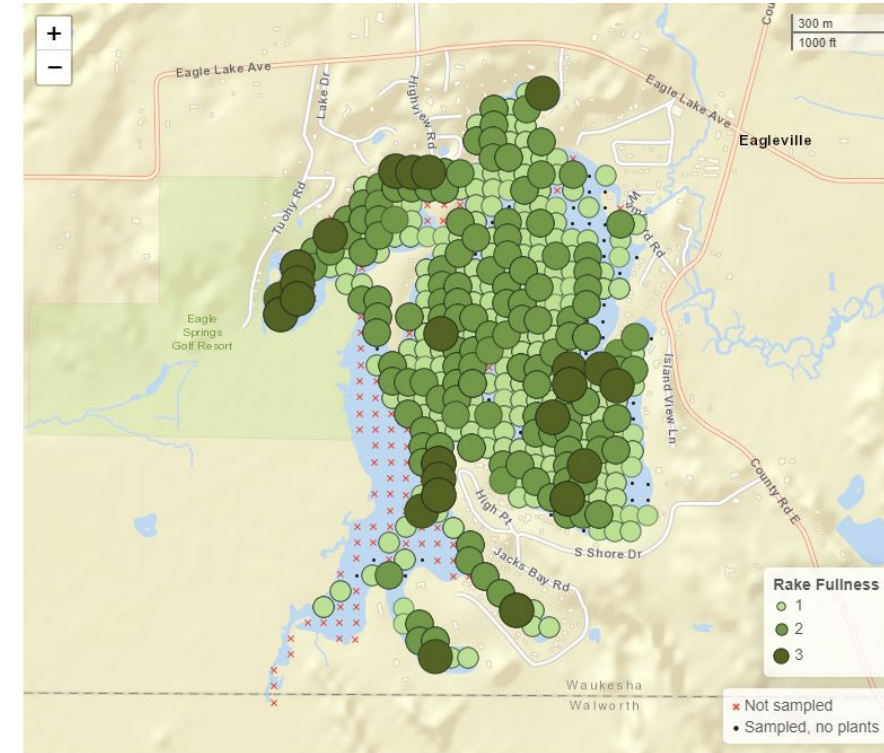


- DSP Database; Targeted outreach letters
- Social Science Survey
- Decon kits, 1:1 training module



Native Plants Documented in Eagle Spring Lake

Bullhead Pond Lily	Hard-Stem Bulrush	Small Bladderwort
Bur-Reed	Illinois Pondweed	Soft-Stem Bulrush
Common Bladderwort	Leafy Pondweed	Southern Naiad
Common Waterweed	Long-Leaf Pondweed	Variable-Leaf Pondweed
Coontail	Needle Spikerush	Various-Leaved Water-Milfoil
Chara	Nitella	Water Bulrush
Creeping Bladderwort	Northern Water-Milfoil	Water Star-Grass
Flat-Stem Pondweed	Richardson's Pondweed	Water Celery
Floating Leaf Pondweed	Sago Pondweed	White Water Lily
Forked Nitella	Slender Naiad	Whorled Water-Milfoil



30+ species

Native Plants Documented in Eagle Spring Lake



Sago Pondweed



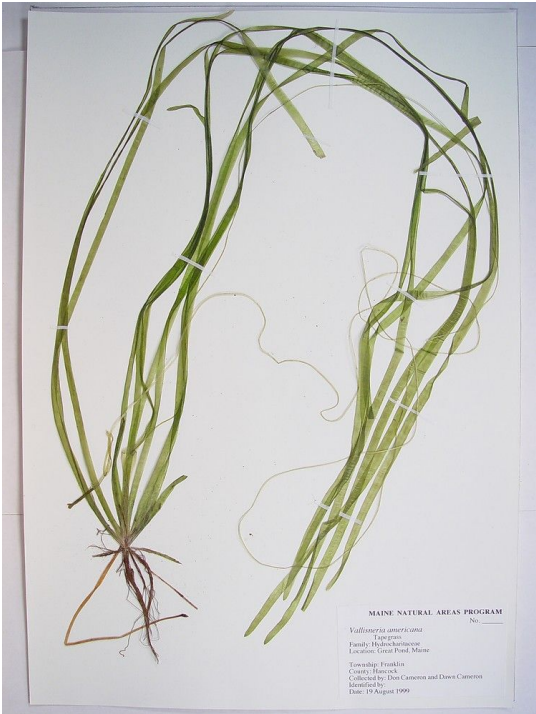
Common Bladderwort



Illinois Pondweed



Chara



Water Celery

AIS Documented in Eagle Spring Lake



Zebra Mussel (2005)



Eurasian Water-Milfoil (1994)



Starry Stonewort (2024)



Curly-Leaf Pondweed (2005)



Hybrid Water-Milfoil (2019)



Corbicula (2013)

Chinese Mystery Snail (2014)



Purple Loosestrife (2010)

Eurasian Water-Milfoil
Myriophyllum spicatum



Coontail
Ceratophyllum demersum



Northern Watermilfoil
Myriophyllum sibiricum



Whorled Watermilfoil
Myriophyllum verticillatum



Curly Leaf Pondweed
Look-alikes



Curly-Leaf Pondweed
(*Potamogeton crispus*)



Clasp Leaf Pondweed
(*Potamogeton Richardsonii*)



Illinois Pondweed
(*Potamogeton illinoensis*)

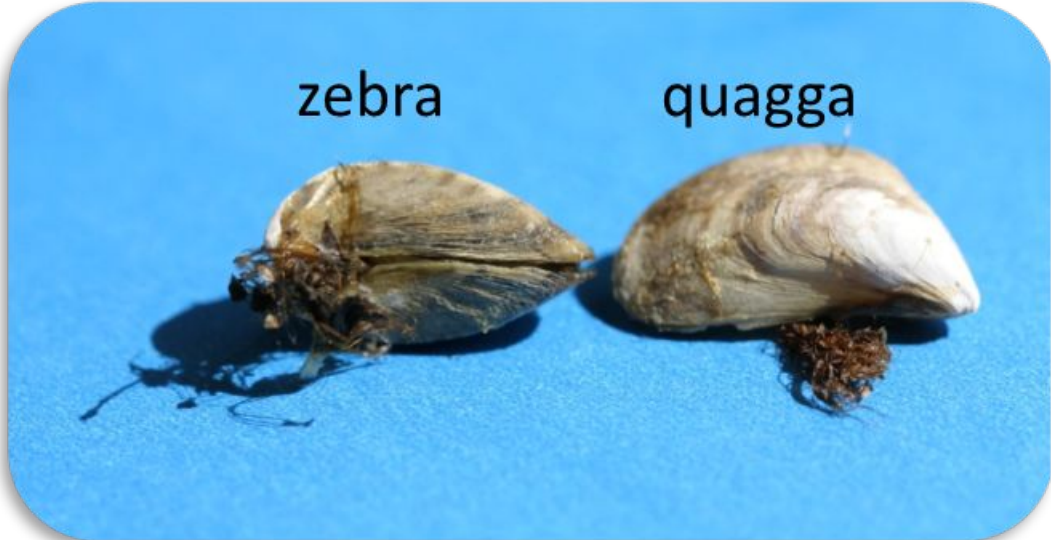


White Stem Pondweed (2013)
(*Potamogeton praelongus*)

Variable Pondweed
(*Potamogeton gramineus*)



Dreissenid mussels



Shell shape comparison of zebra mussel (*D. polymorpha*) on left and quagga mussel (*D. bugensis*) on right. USGS

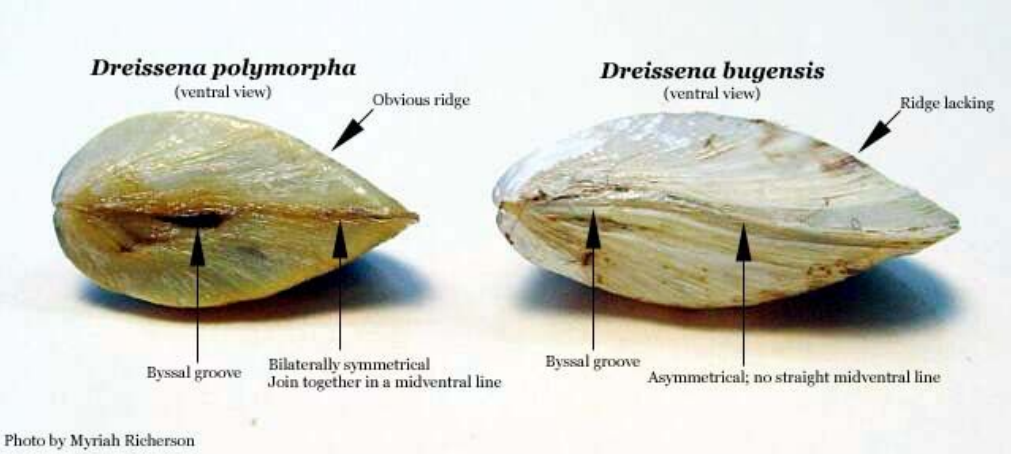
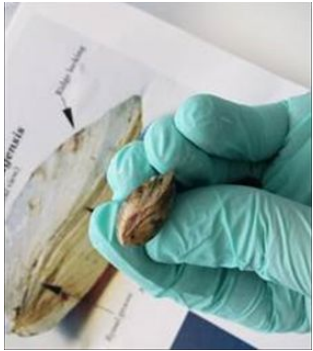


Photo by Myriah Richerson

Dreissenid Mussels in WI



2024 — First inland detection of quagga mussels in WI

Lake Geneva, Walworth Co.; based on age/size of specimens collected, it is likely they have been present at least 2-3 years, but have gone undetected

2000s — Quagga mussels displace zebra mussels in Lake Michigan

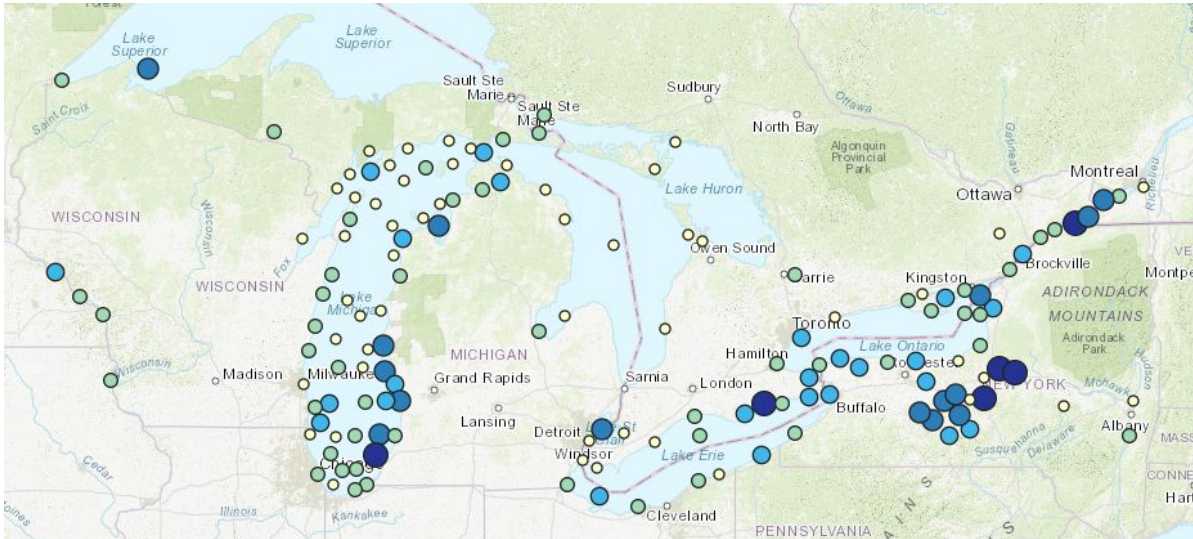
Due to competitive advantages, quagga mussels entirely displace zebra mussels in offshore areas; zebra mussels continue to persist in nearshore / shallow areas

1990s — Zebra mussels move inland, first Quagga mussel finding in Lake Michigan

First inland WI Lakes to get zebra mussels: Elkhart Lake, Geneva Lake, Green Lake

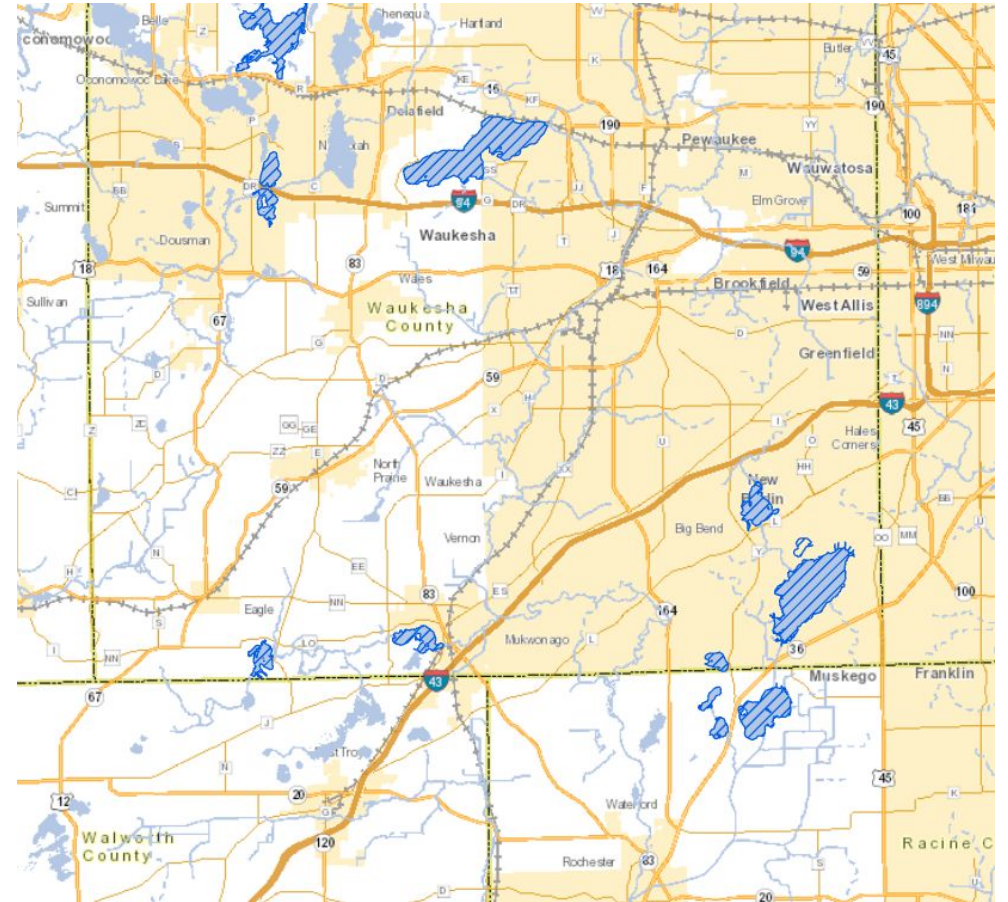
1980s — Zebra mussels found in Lake St. Claire

Transported via ballast water of a transatlantic freighter, establishing a population in Lake St. Claire. Within 10 years, zebra mussels will have spread to all five Great Lakes



Starry Stonewort

- Invasive Macroalgae from Eurasia (not a true plant)
 - Requires high concentrations of calcium
- Spreads vegetatively as well as via small reproductive structures called bulbils
- Present in 33 other lakes in WI and Lake Michigan / Green Bay



Muskgrass

vs.

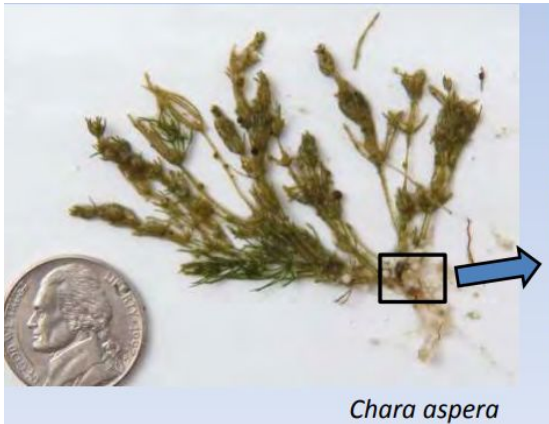
Starry Stonewort



Native charophytes



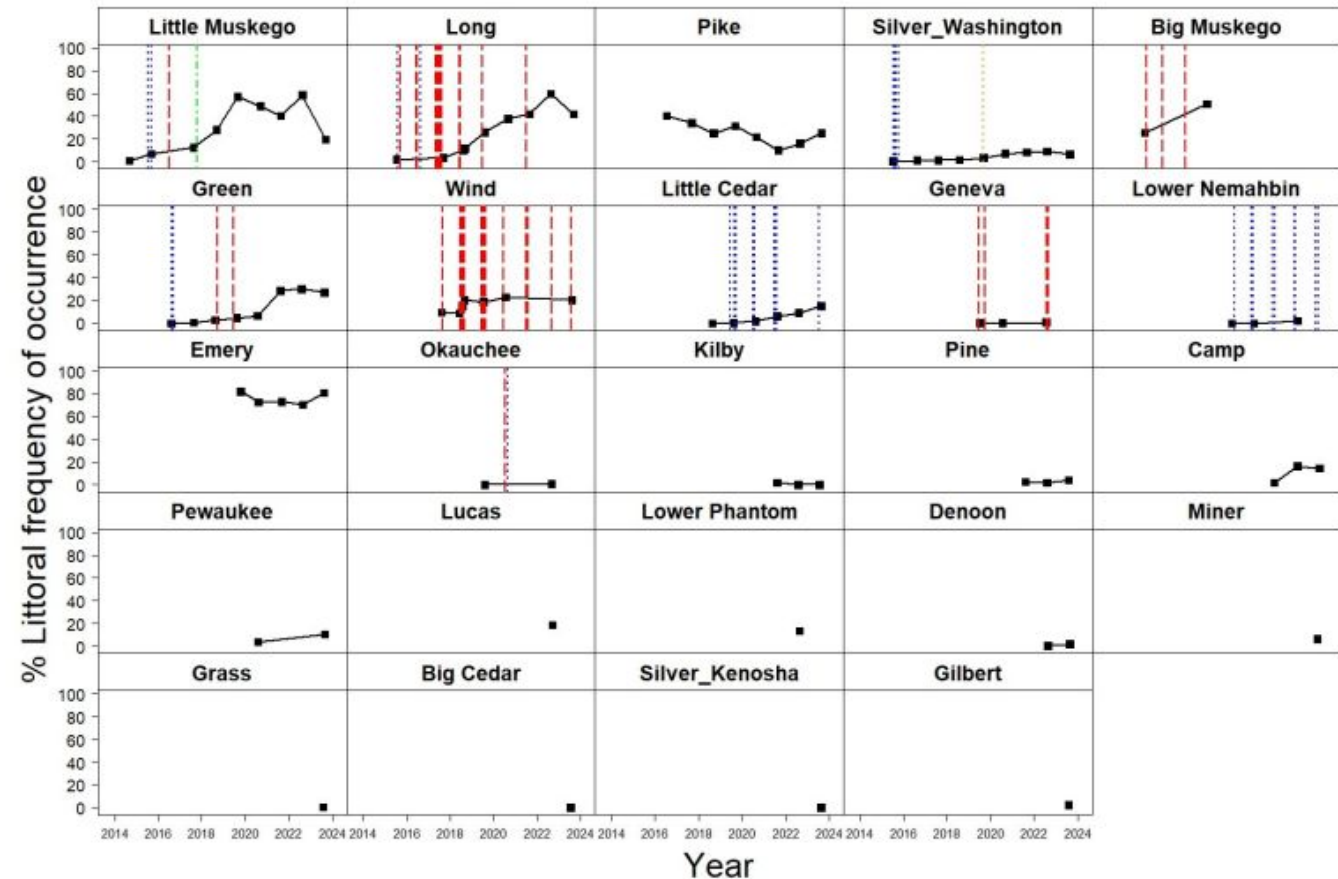
Lychnothamnus barbatus
'Bearded Stonewort'



Starry Stonewort in WI

- Thus far, no management techniques have been effective long-term in Wisconsin lakes
 - Some management attempts have increased SSW FOO or height of patches
- Pike Lake, Kilby Lake → no active SSW management
- Ideal scenario → SSW integrates into plant community without causing nuisance conditions
- Current WDNR policy → focus on monitoring, containment and prevention
 - Only attempt management in certain situations

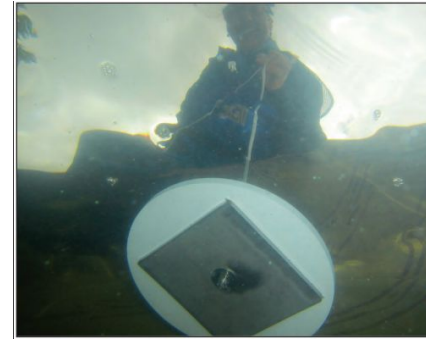
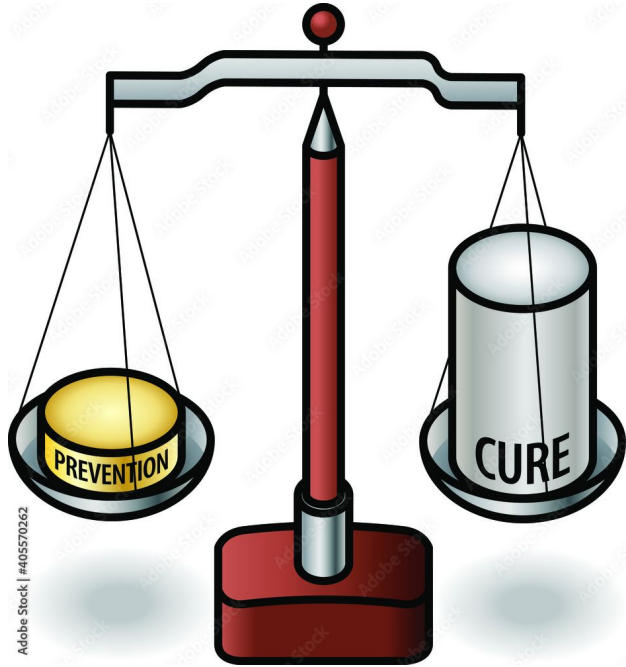
Starry Stonewort % Frequency







The Big Picture

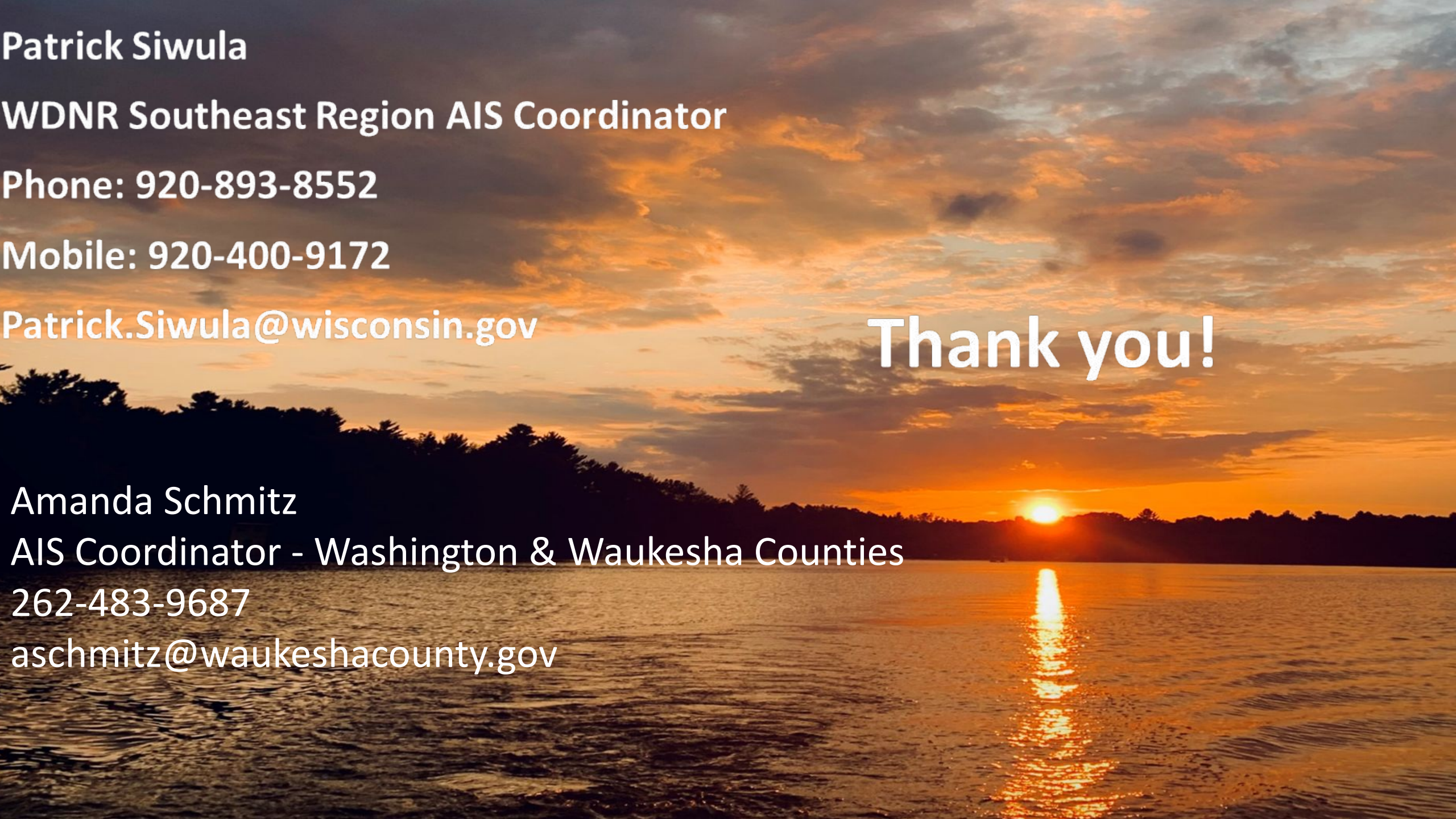


Maintaining and restoring our waters and landscapes can reduce impacts even when we don't have other management options to an invasive species.

It Takes a Village

- Wisconsin Lakes Partnership
 - DNR, UW Extension, Citizens
- Citizen / Volunteer Programs
 - Citizen Lake Monitoring Network
 - Clean Boats Clean Waters
 - Snapshot Day
 - Project RED
 - Purple Loosestrife Biocontrol
 - WAV monitoring
- **Over half of WI AIS monitoring data comes from citizen programs!**
- Lake Monitoring and Protection Network (Amanda Schmitz, Waukesha County)



A scenic sunset over a body of water. The sun is low on the horizon, creating a bright orange glow and a long, shimmering reflection on the water's surface. The sky is filled with soft, orange and yellow clouds. In the background, a dark silhouette of a forest line is visible against the bright sky.

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Thank you!

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