



Water lettuce and water hyacinth in a retail store.

# WDNR NR 40: Helping Prevent and Slow the Spread of Invasive Species in Wisconsin Wetlands

**Matt Wallrath** – Organisms in Trade Outreach Coordinator / Regulation Specialist

Wisconsin Department of Natural Resources – Bureau of Natural Heritage Conservation

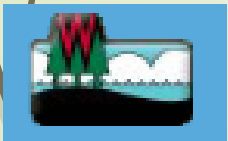
[Matthew.Wallrath@Wisconsin.gov](mailto:Matthew.Wallrath@Wisconsin.gov) / 608-266-8916

American Water Resources Association – Wisconsin Section 43<sup>rd</sup> Annual Meeting

Room: **Geneva III**

Session 1A: **Wetlands**

**2/28/2019**







What is OIT,  
anyways?



Water lettuce and water hyacinth in a retail store.

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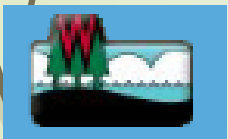
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## Presentation Topics

- Why we need a species rule?
  - Explanation of NR 40
  - How to use the rule
  - NR 40 in action
  - Resources for public involvement
  - The future of NR 40
- 



**Invasive Species** are non-native organisms that become established in natural communities, wild areas and water ways, and replace native species, causing ecological harm.







## Definition of “Invasive Species”

**Nonindigenous species whose introduction causes or is likely to cause economic or environmental harm or harm to human health.**

WI Statutes 23.22(1)(c)



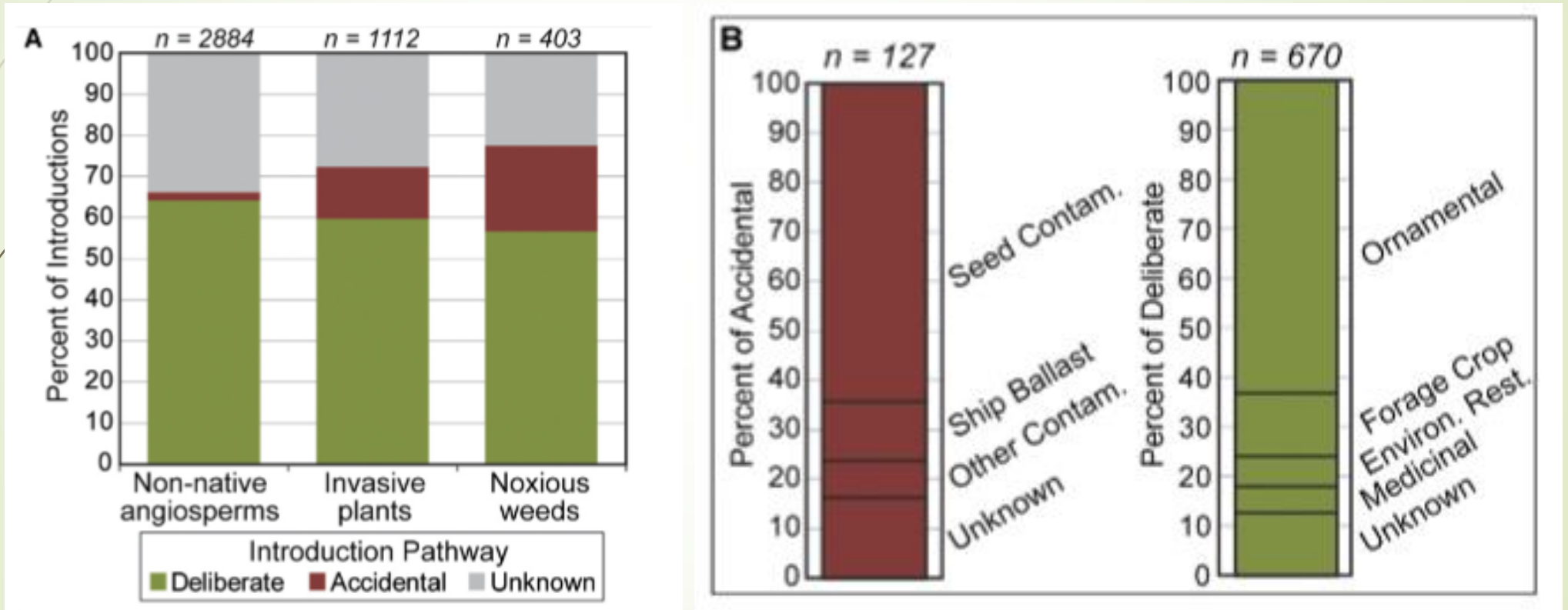


# Socio-Economic Impacts of Invasive Species

- Decreased natural beauty and tourism.
- Hunting/hiking in wetlands made impassable or unusable.
- Recreational boating and fish habitat disrupted.
- Human health concerns: toxic and allergenic species.
- Wild rice habitat risks loss of production.
- Pasturelands degraded.
- Negative water quality and flooding impacts.
- Lake and waterway infrastructure degraded.



# Deliberate introduction accounts for the majority of invasive plant species



Accidental introductions are an important source of invasive plants in the continental United States: [Lehan et. al 2013](#)

# Wisconsin Invasive Species Council

Working together to prevent the spread of invasive species

 Home

 Awareness Month

 Council

 Committees

 Initiatives

 Resources

 Links

## The Wisconsin Invasive Species Council

The Wisconsin Legislature created the Wisconsin Invasive Species Council to assist the Wisconsin Department of Natural Resources in establishing a statewide program to control invasive species. On this website, you can:

- Learn about the Council's [activities](#)
- Find out about [Invasive Species Action Month](#)
- Discover invasive species-related [events](#)





## Chapter NR 40

### INVASIVE SPECIES IDENTIFICATION, CLASSIFICATION AND CONTROL

NR 40.01	Purpose.	NR 40.05	Restricted category.
NR 40.02	Definitions.	NR 40.06	Invasive species permits.
NR 40.03	Classifications.	NR 40.07	Preventive measures.
NR 40.04	Prohibited category.	NR 40.08	Enforcement.
NR 40.045	Emergency additions to prohibited category.	NR 40.09	Interagency coordination.

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**NR 40.01 Purpose.** The purpose of this chapter is to identify, classify and control invasive species in Wisconsin as part of the department's statewide program required by s. 23.22 (2) (a), Stats.

**History:** CR 08-074: cr. Register August 2009 No. 644, eff. 9-1-09.

**NR 40.02 Definitions.** For purposes of this chapter:

(1) "Native" means a predominantly photomathetic organism.

(12) "DATCP" means the Wisconsin department of agriculture, trade and consumer protection.

(13) "Department" means the Wisconsin department of natural resources.

(14) "Disposal" means the lawful discharge, deposit, dumping or placing of any invasive species into or on any land or water in a manner that prevents the establishment, introduction or

Wisconsin Chapter NR 40:  
Invasive species rule for certain  
"viable organisms"



# Categories:

## **WISCONSIN CH. NR 40 INVASIVE SPECIES LIST**

EFFECTIVE LISTING DATE

September 1, 2009<sup>A</sup>

June 1, 2011<sup>B</sup>

May 1, 2015<sup>C</sup>

- PLANTS
- ALGAE AND CYANOBACTERIA
- FISH AND CRAYFISH
- AQUATIC INVERTEBRATES EXCEPT CRAYFISH
- TERRESTRIAL INVERTEBRATES AND PLANT DISEASE-CAUSING MICROORGANISMS
- TERRESTRIAL AND AQUATIC VERTEBRATES EXCEPT FISH
- FUNGUS



# Regulatory Categories:

## Prohibited Species:

- Not yet in the state or established in pioneer populations only
- High potential for environmental impacts
- It is still feasible to eradicate and prevent their spread statewide



Cannot possess, transport, transfer, or introduce

# Regulatory Categories:



## Restricted Species:

- Already established in the state
- High environmental impacts
- Complete eradication unlikely



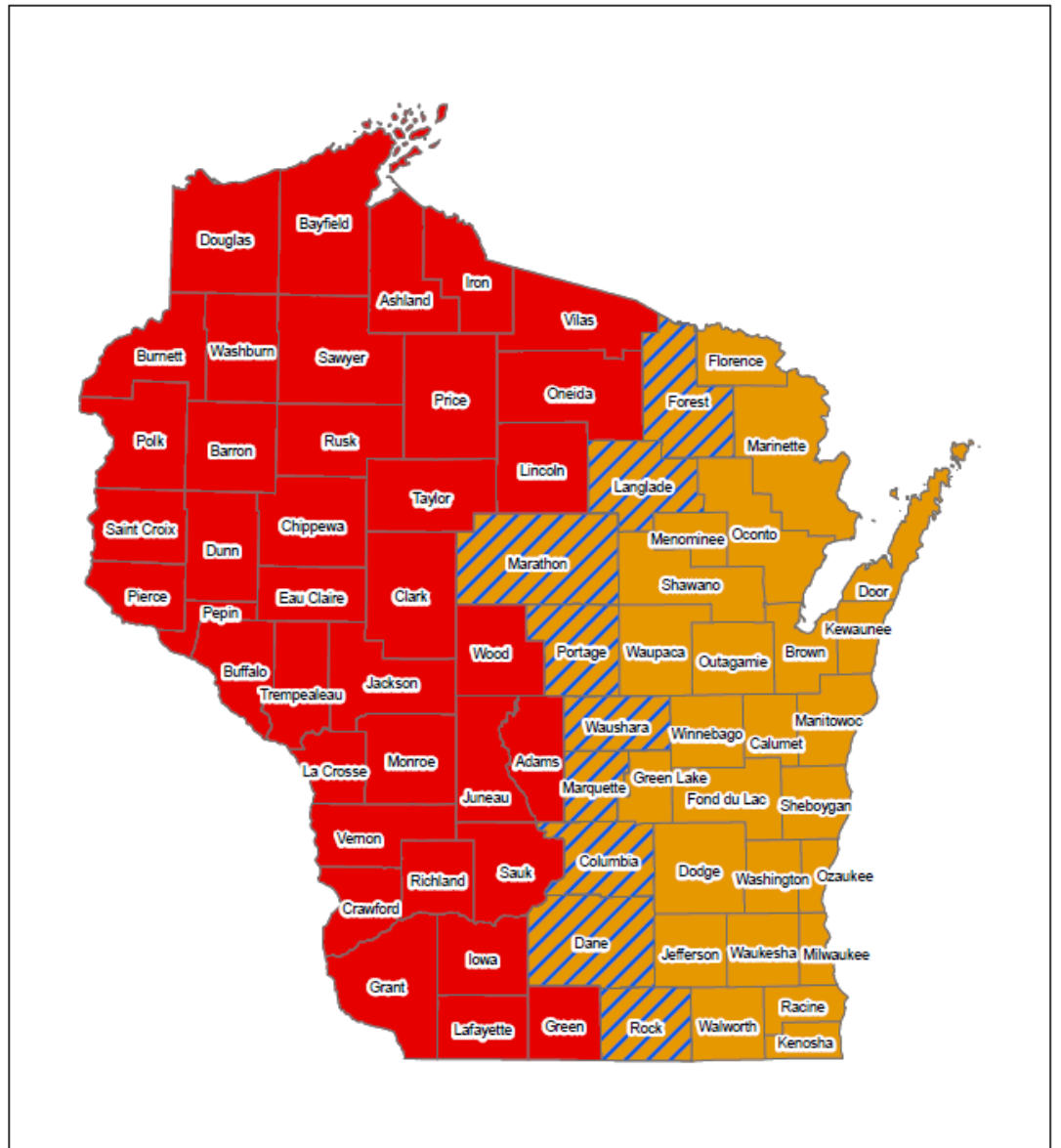
Cannot transport, transfer, or introduce



# Prohibited/Restricted Split listed and Restricted Frontier



Phragmites australis NR40 Map



## Legend

<all other values> Counties

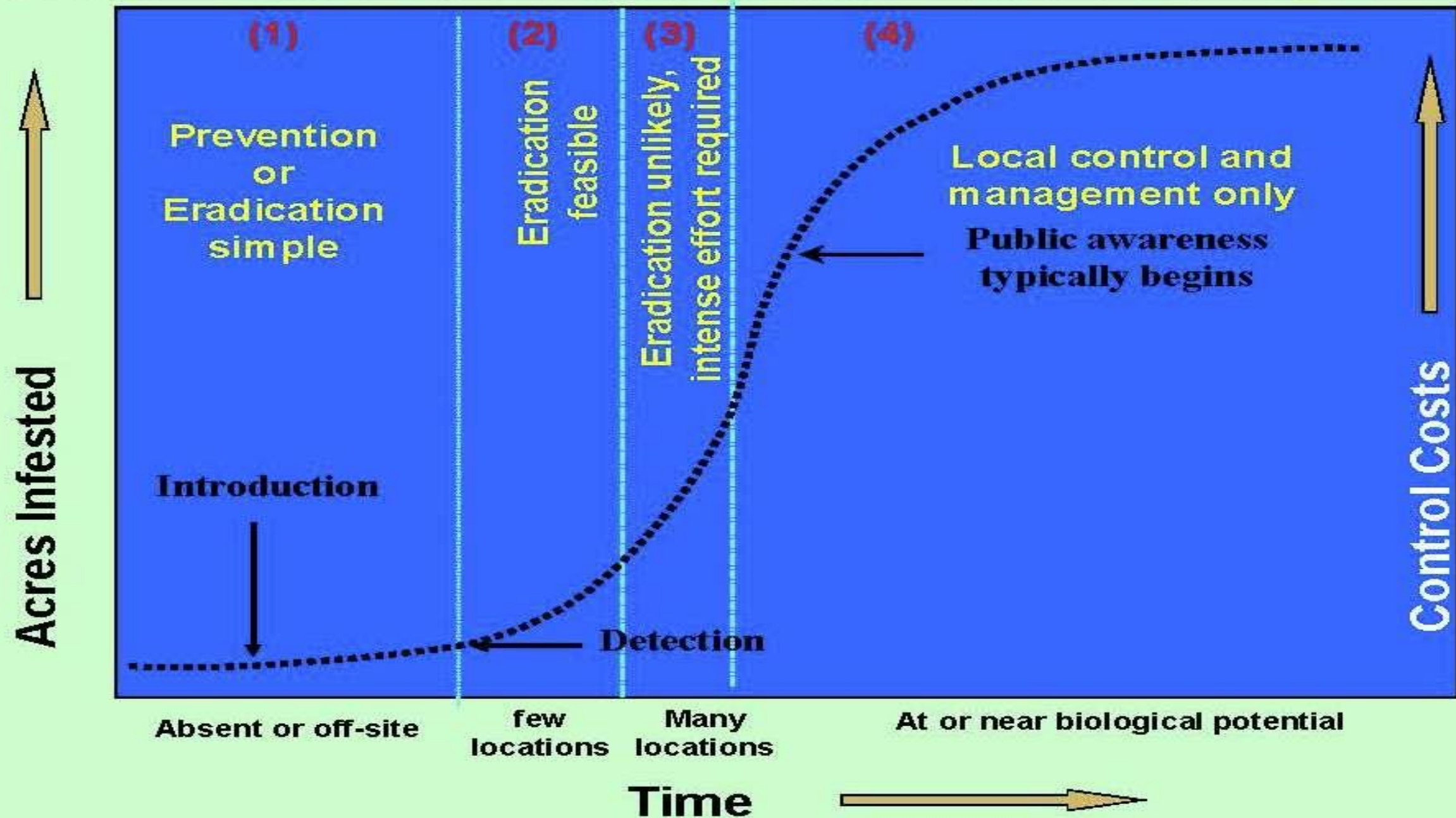
## NR40\_Classification

- Prohibited
- Restricted
- Restricted Frontier

1:2,667,829

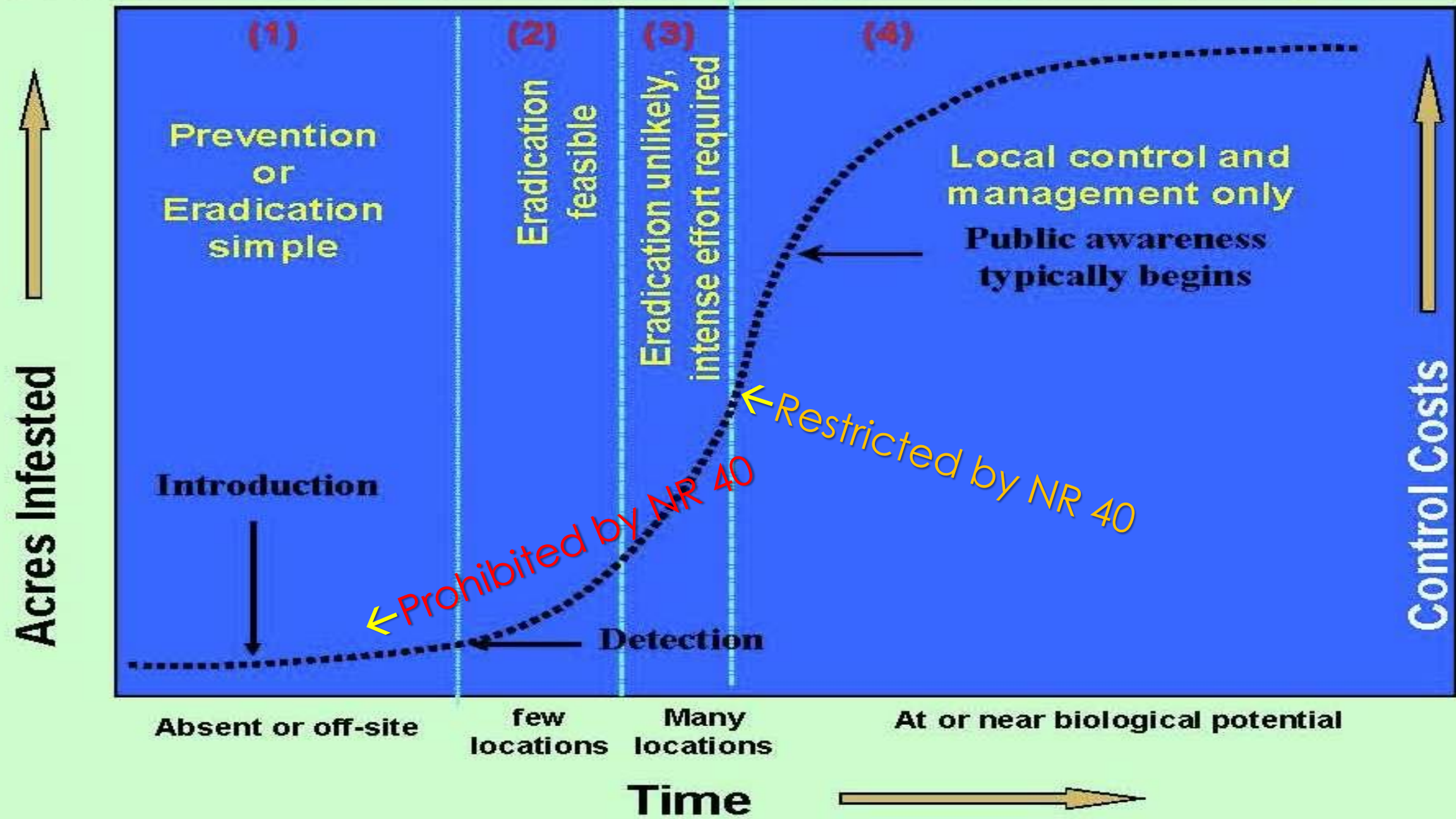


# Invasives Increase Over Time and Control Potential





# Invasives Increase Over Time and Control Potential



# NR 40 in action:





Name this plant:



# Name this plant:



[Business](#)

[Licenses & Regulations](#)

[Recreation](#)

[Env. Protection](#)

[Contact](#)

[Join DNR](#)





# Nymphoides peltata

## Yellow floating heart (*Nymphoides peltata*)

Perennial, water lily-like plant with long-stalked, heart-shaped leaves. It is sometimes used as a water garden plant and can threaten waterbodies if spread to natural areas.



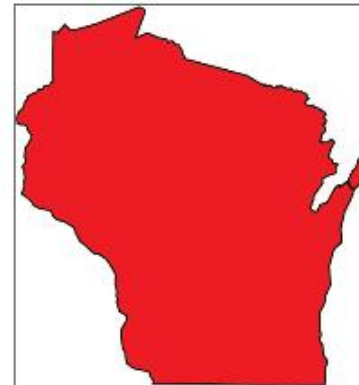
Overview	Identification	Distribution	Control	Photos	Resources
----------	----------------	--------------	---------	--------	-----------

Other names for this plant include:

- Common names: floating heart, fringed water lily, entire marshwort
- Scientific names: *N. natans*; *N. nymphaeoides*; *Limnanthemum petlatum*

Ecological threat:

- Invades lakes, riparian zones, water courses, wetlands.
- Grows in dense patches, excluding native species and even creating stagnant areas with low oxygen levels underneath the floating mats.
- Makes recreational activities like fishing, water skiing, swimming, and canoeing difficult, if not impossible.

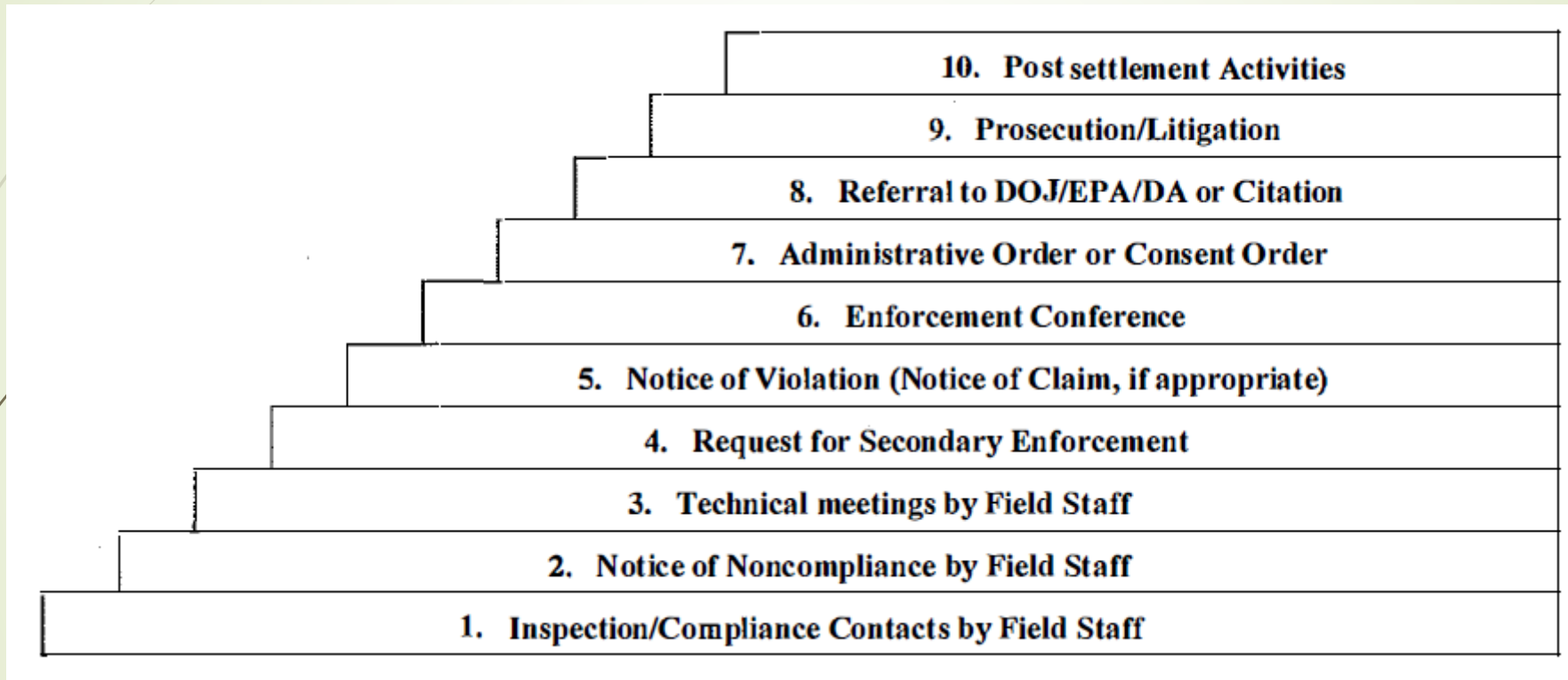


Yellow floating heart is Prohibited (Red counties)

**Classification in Wisconsin:** [Prohibited](#)



# Stepped Enforcement



0. Education and Outreach



## Yellow Floating Heart: Eradication plan and BMP





# Porcelain berry (*Ampelopsis brevipedunculata*)



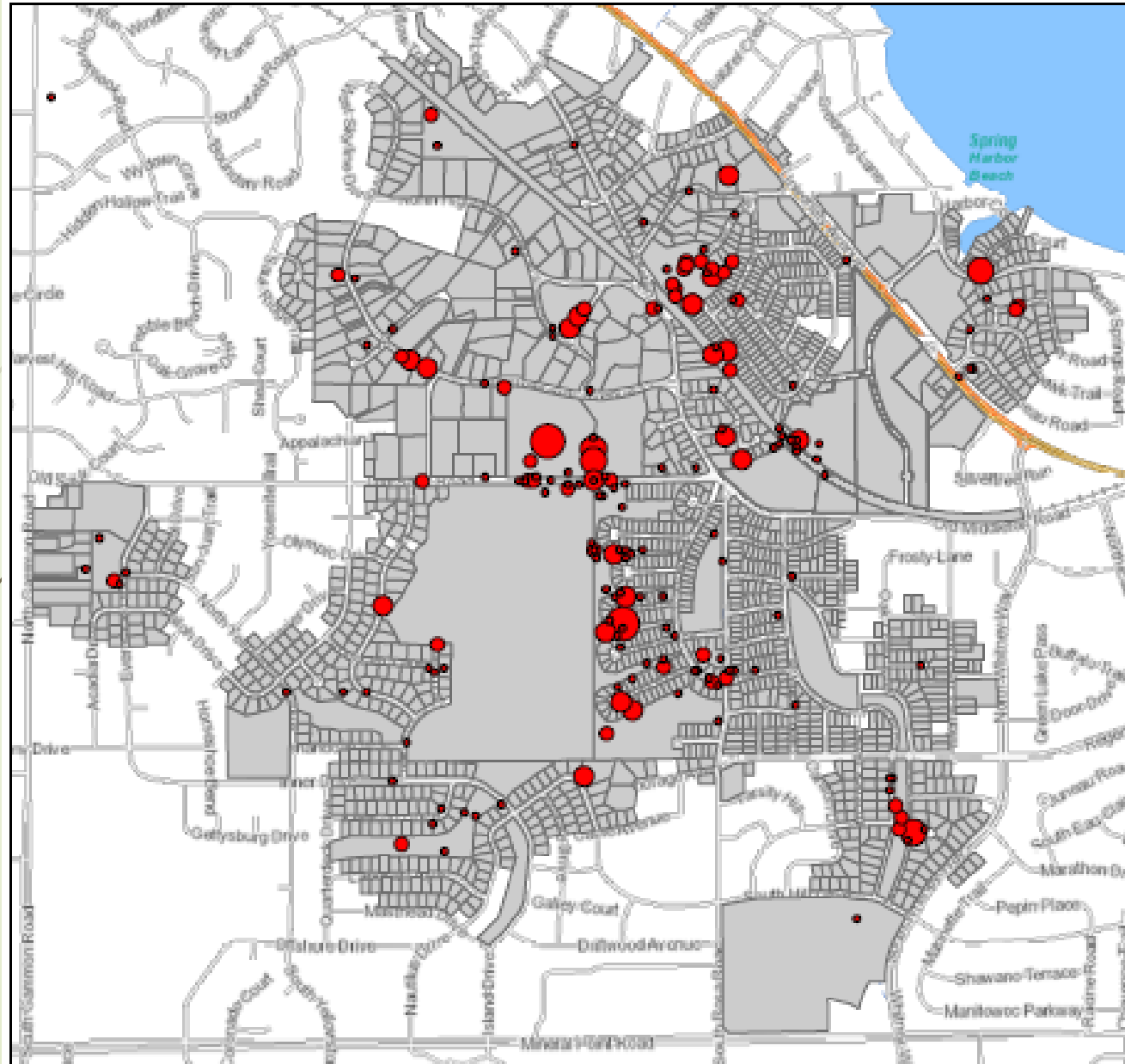
## Ecological threat:

- Shades out native vegetation by forming a dense blanket.
- Also climbs up trees and shrubs increasing the possibility for downing during storms.
- Prefers moist woods, floodplains, stream banks, and woodland edges.





## Porcelain berry control project, Madison WI



Regional map of Dane County with Porcelain Berry control area

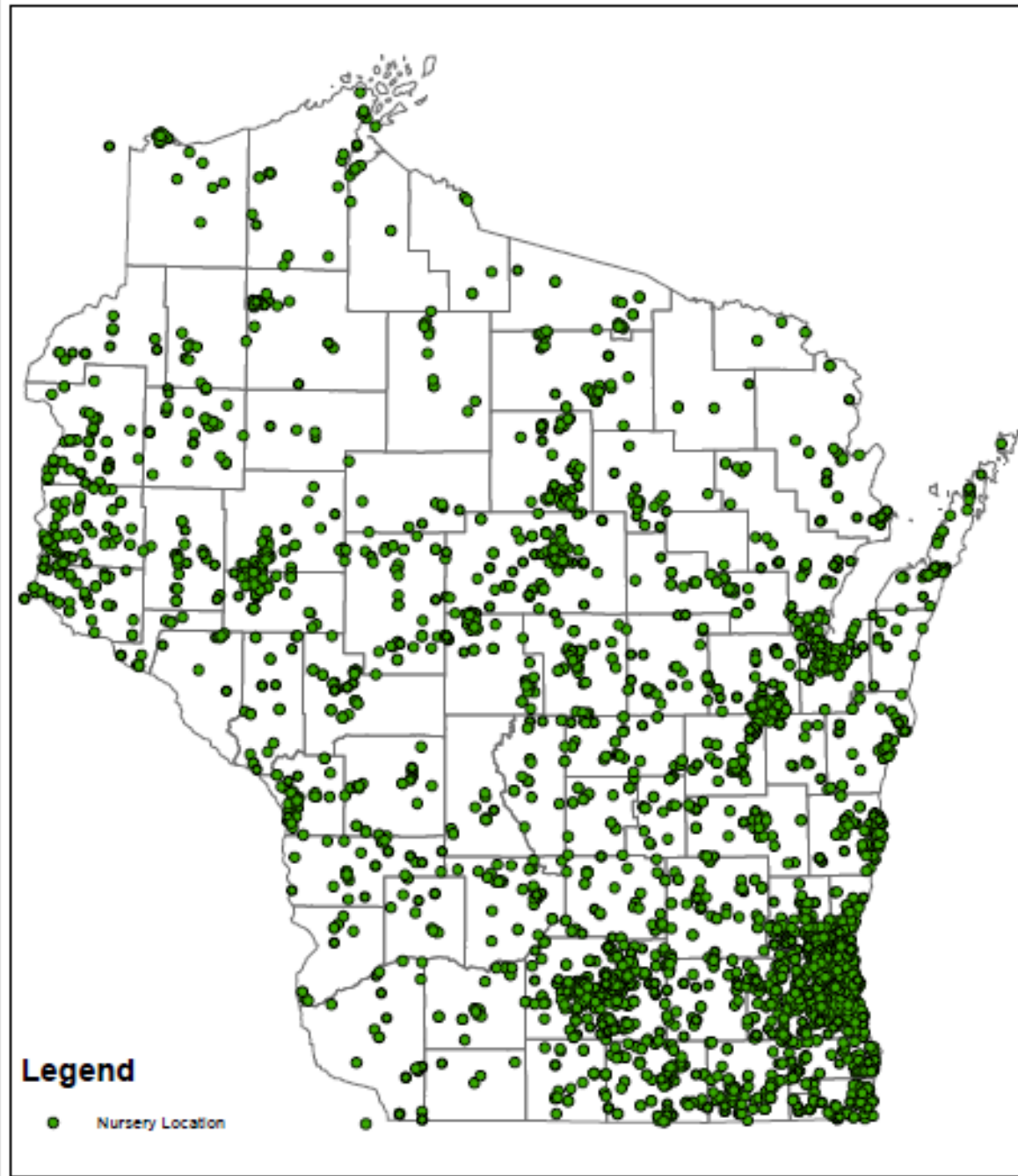
### Legend

Porcelain berry sq footage

- 1.000000 - 180.000000
- 180.000001 - 500.000000
- 500.000001 - 1200.000000
- 1200.000001 - 2200.000000
- 2200.000001 - 5000.000000

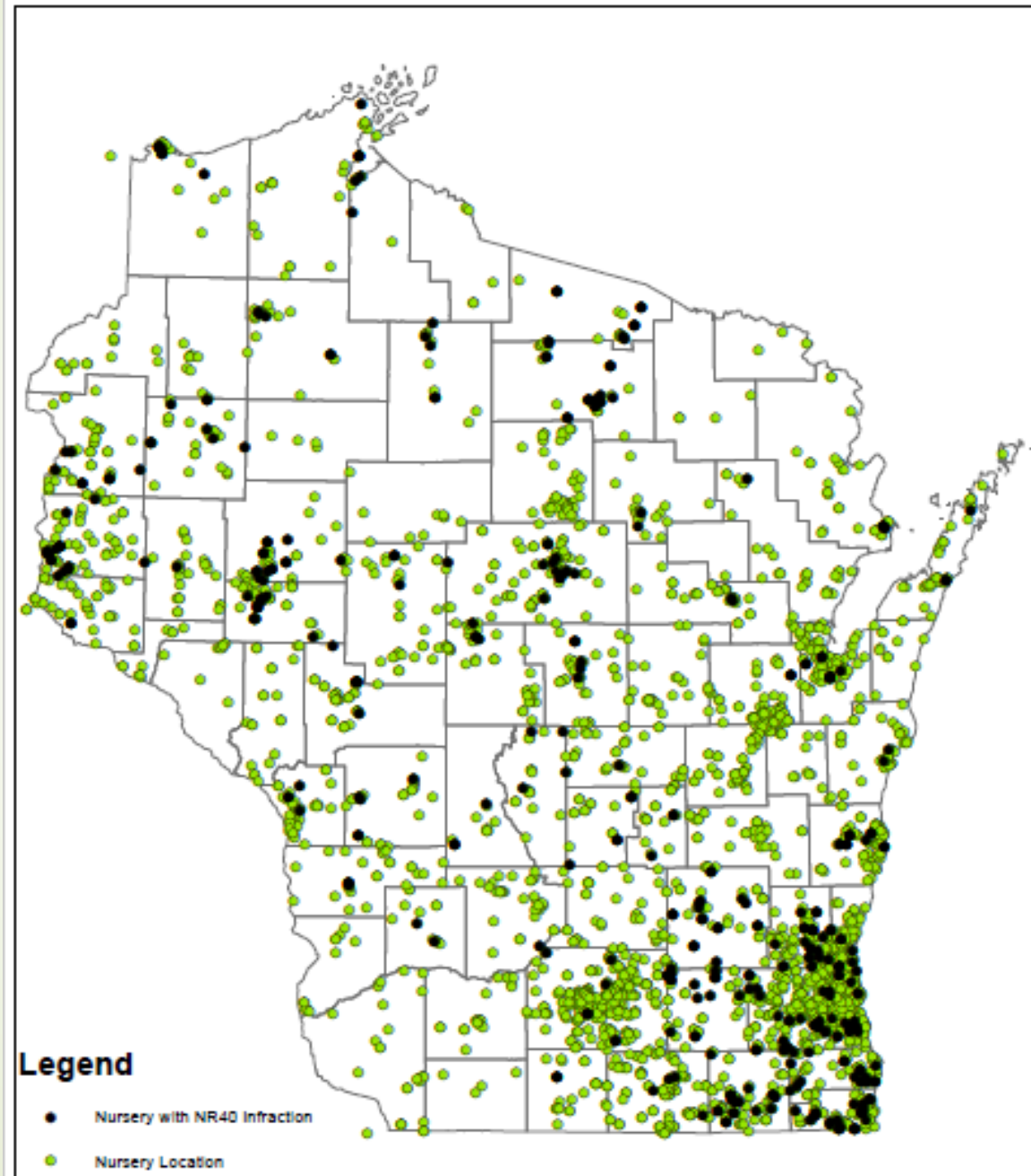
Landowner parcels of interest

## DATCP Currently Licensed Nurseries, 2019

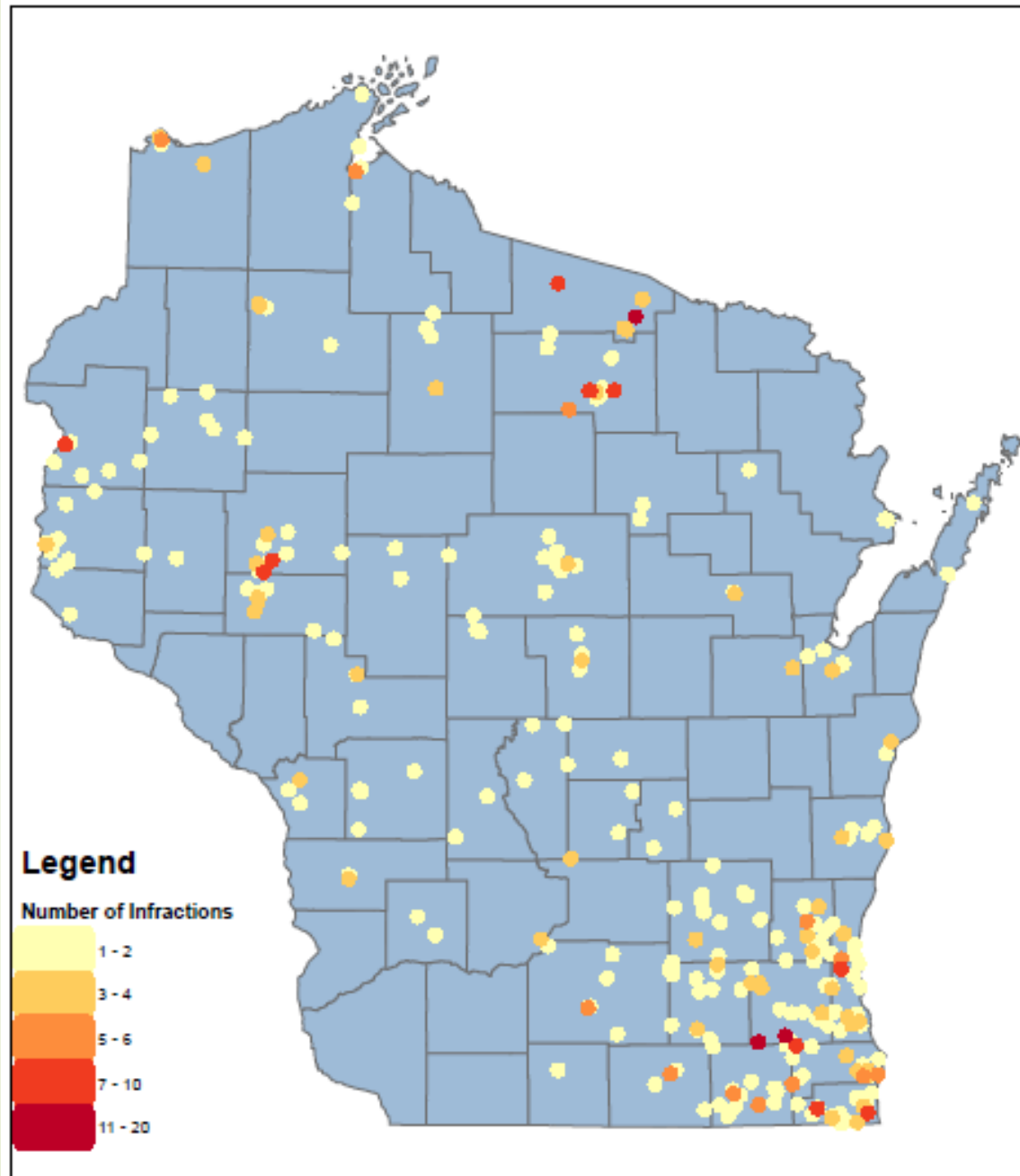




# DATCP Currently Licensed Nurseries and NR40 infractions 2019

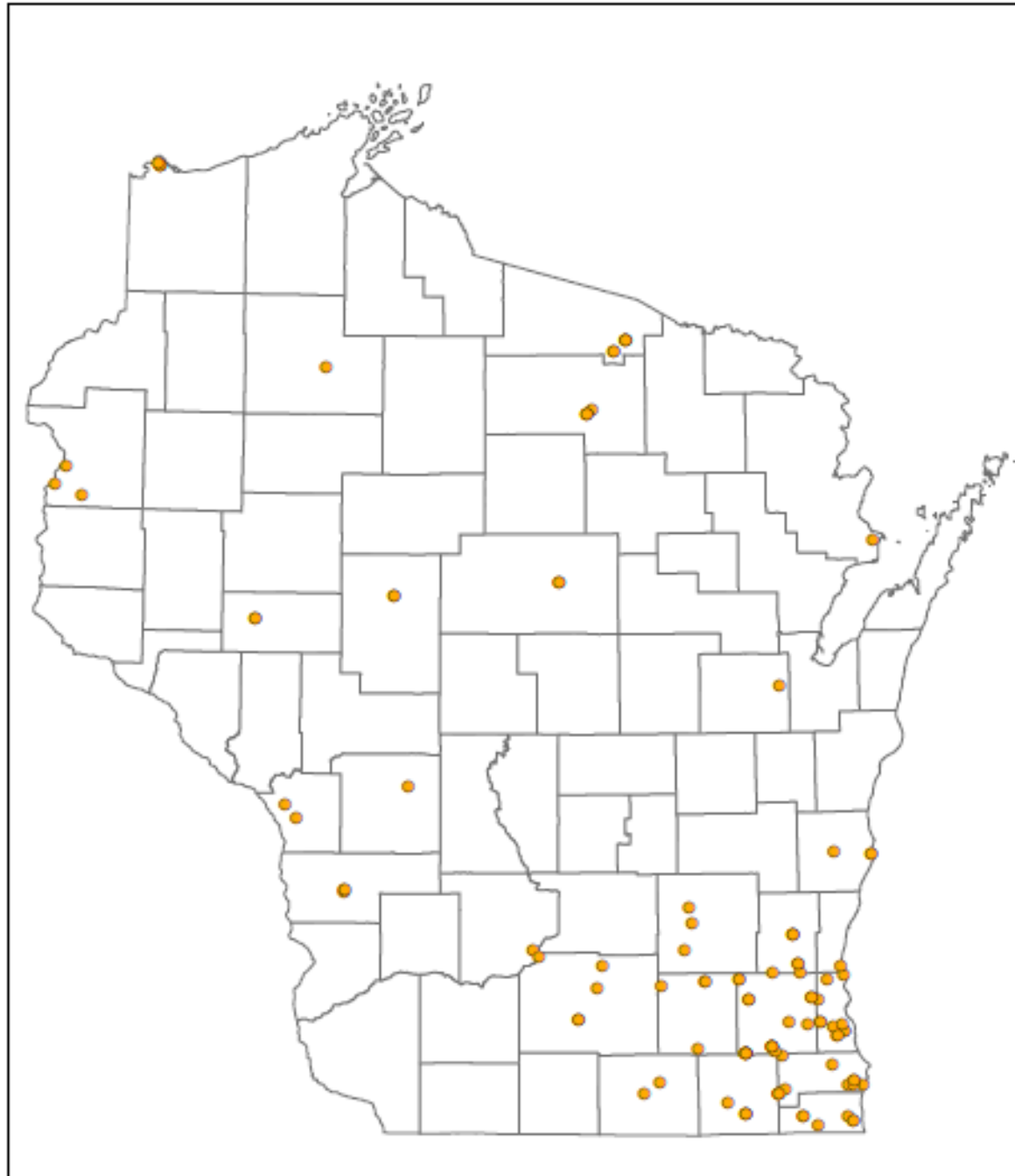


# Nurseries with NR40 infractions reported during DATCP inspections (2015 to 2018)

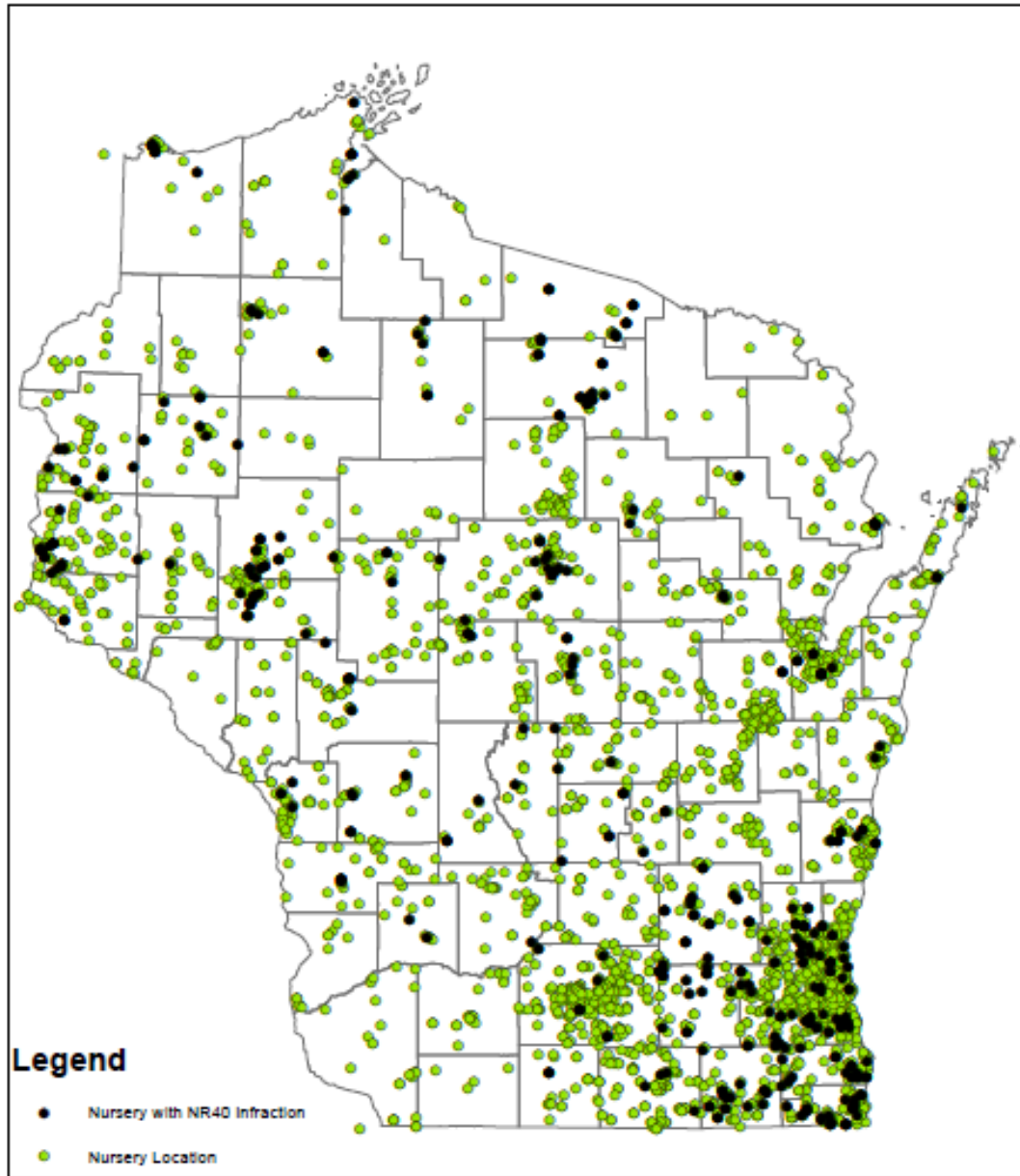




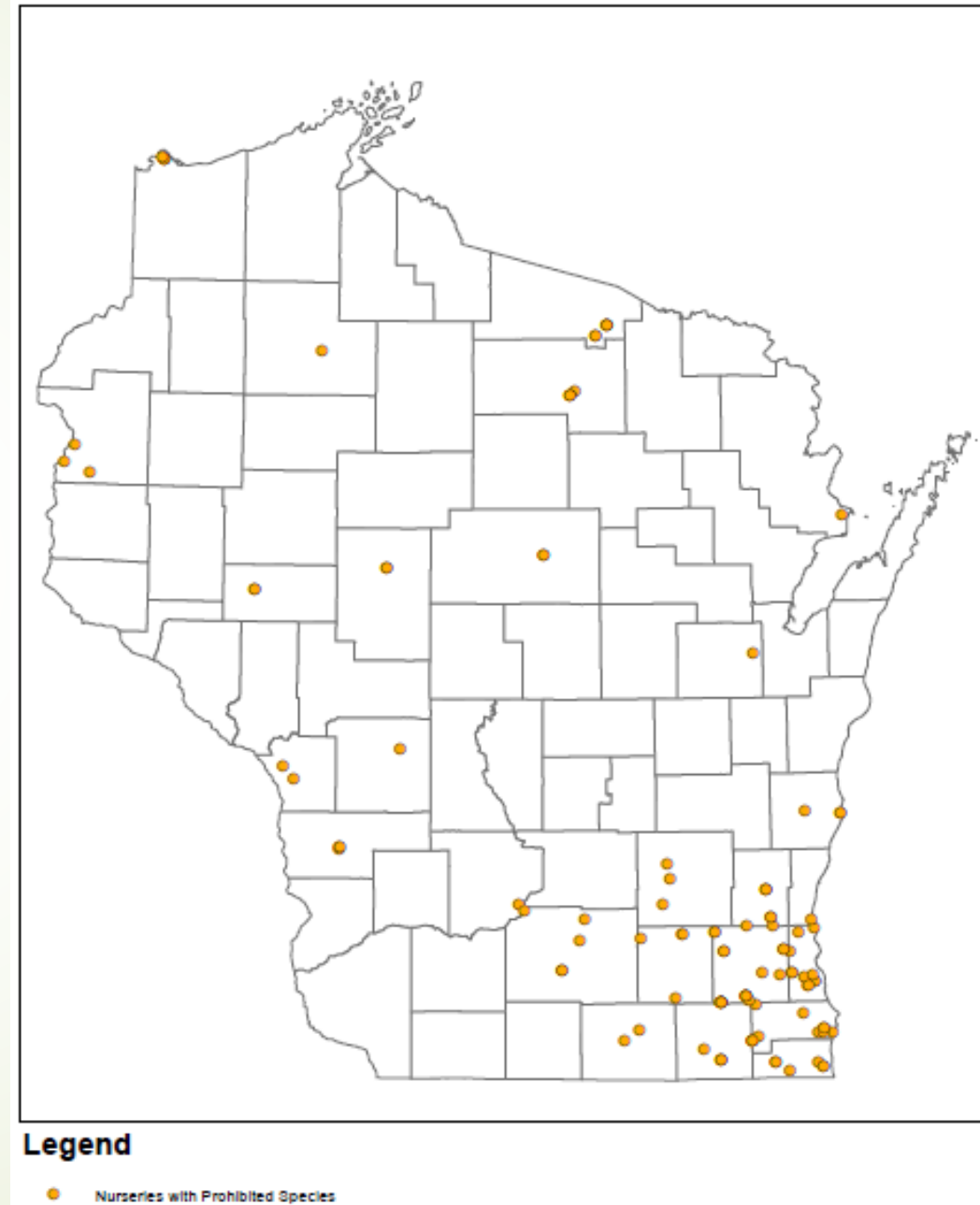
## Nurseries with Prohibited Species



DATCP Currently Licensed Nurseries  
and NR40 infractions 2019

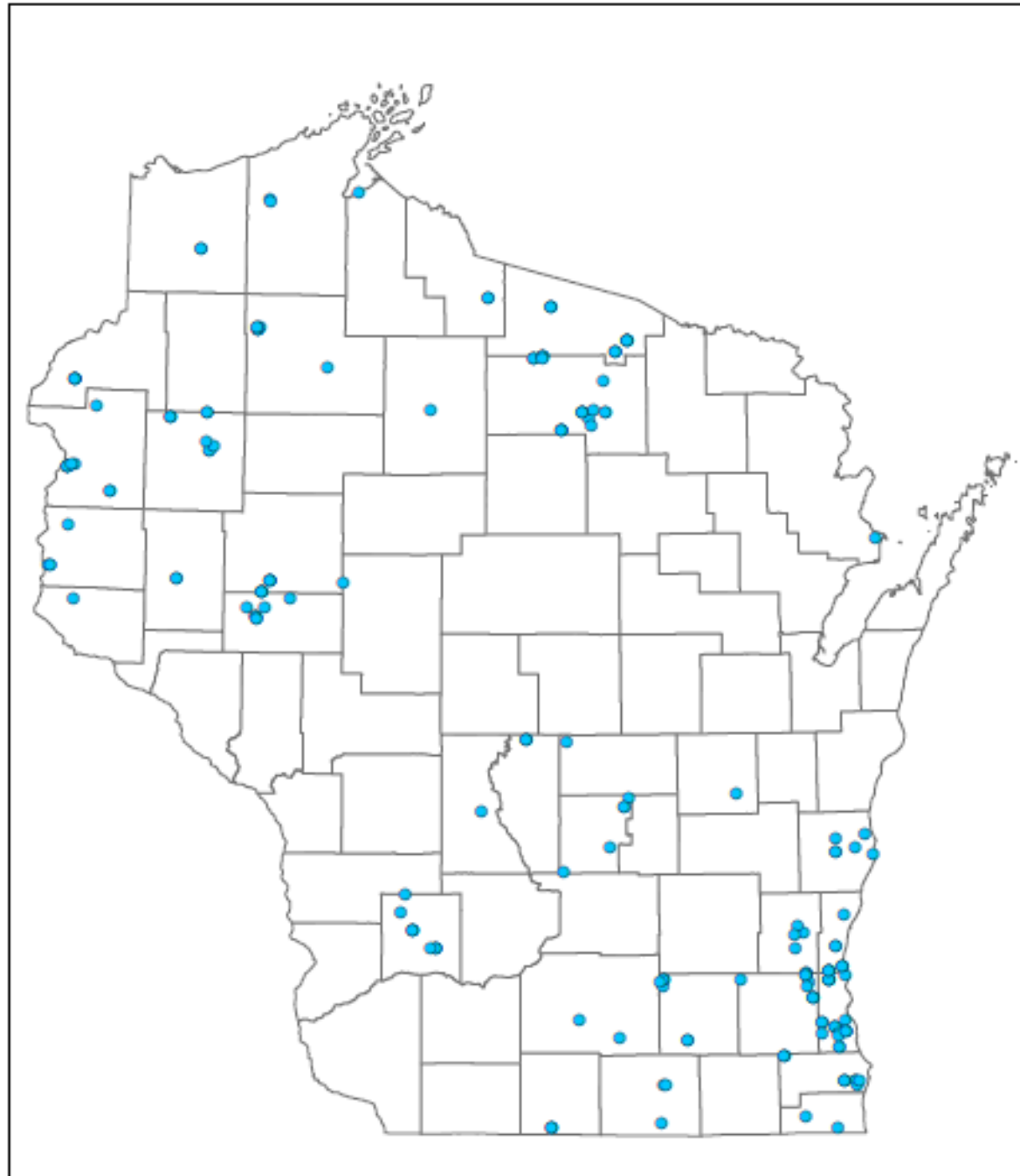


Nurseries with Prohibited Species





## Nurseries with Phase Out Species





## Best management practices (BMP) to prevent and minimize the spread of invasives

To minimize the spread of invasive species, interested stakeholders have met to develop voluntary Best Management Practices for Invasive Species. These guidelines will help Wisconsin residents and visitors to limit the likelihood of moving invasive species around.

- [BMPs for boat, gear, and equipment decontamination and disinfection](#)
- [Bait & Forage Importation BMP's \[PDF\]](#)
- [AIS BMP Guidelines for Fire Suppression \[PDF\]](#)
- [AIS BMPs for Dry Hydrant Maintenance \[PDF\]](#)
- [Reasonable precautions for emerald ash borer \[PDF\]](#)
- [Reasonable precautions to reduce the spread of gypsy moth \[PDF\]](#)
- [Reasonable precautions to reduce the spread of Amyntas \(jumping worm\) \[PDF\]](#)
- [Wetland Invasives Best Management Practices \[PDF\]](#)

For more information on the following Forestry BMPs for minimizing the spread of terrestrial plants and forest pests, visit the [Wisconsin Forestry](#) website:

- [Forestry BMPs](#)
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- [Urban Forestry BMPs](#)
- [Transportation and Utility Rights-of-way BMPs](#)



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## Best Management Practices for Preventing the Spread of Invasive Species in Wetlands



**STOP AQUATIC  
HITCHHIKERS!**

Be A Good Steward. Clean. Drain. Dry.



Vilas County volunteers participating in the Landing Blitz





## BMP outreach

### Printable color handouts

Interested user groups and groups have developed a one page handouts summarizing the BMPs.

- [Anglers \[PDF\]](#)
- [Arborists \[PDF\]](#)
- [ATV Users \[PDF\]](#)
- [Bicyclists \[PDF\]](#)
- [Campers \[PDF\]](#)
- [Equipment Operators \[PDF\]](#)
- [Gardeners \[PDF\]](#)
- [Growers & Sellers \[PDF\]](#)
- [Hikers \[PDF\]](#)
- [Hunters & Trappers \[PDF\]](#)
- [Jeep Users \[PDF\]](#)
- [Landscape Architects & Designers \[PDF\]](#)
- [Landscapers \[PDF\]](#)
- [Mobility Device Users \[PDF\]](#)
- [Off-Road Motorcycles \[PDF\]](#)
- [Snowmobilers Users \[PDF\]](#)



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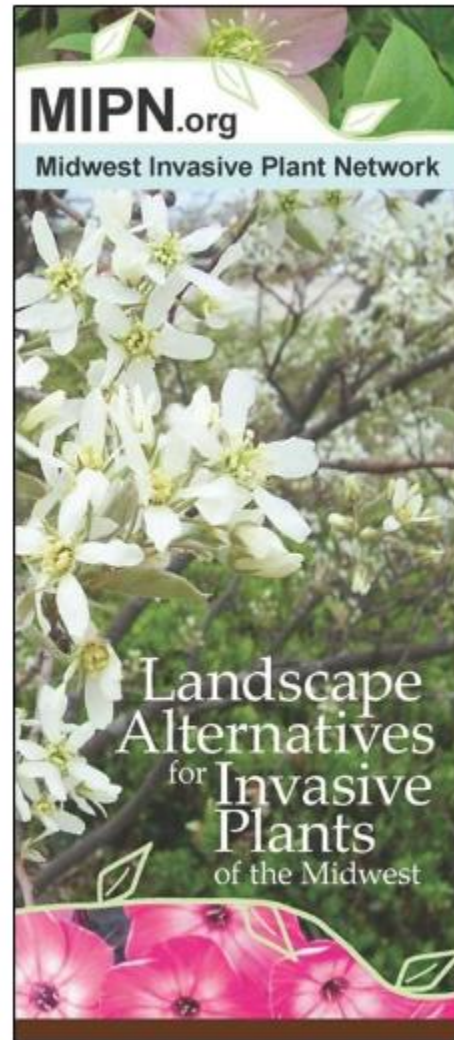
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#### HOW YOU CAN HELP

- Learn to recognize invasive species.
- Be aware of seeds that stick to your clothing and shoes.
- Inspect and clean hair, clothing, shoes, and gear before and after recreating.
- Clean your equipment before and after use.
- Properly dispose of soil, seeds, or plant parts from cleaning.
- Stay on designated trails, roads, and other developed areas.
- Avoid areas that are infested with invasive species; "When in doubt, stay out!"
- Dispose of unused live bait (worms) in garbage containers or home compost.
- Educate others how to limit the spread of invasive species.
- Volunteer to help control invasive species.



# Resources for alternatives: Midwest Invasive Species Network (MIPN.org)



# Emerging Pathways:

Farmers Markets

Grocery live tanks

Floral wreaths/displays





# Emerging Pathways:

## Online vendors

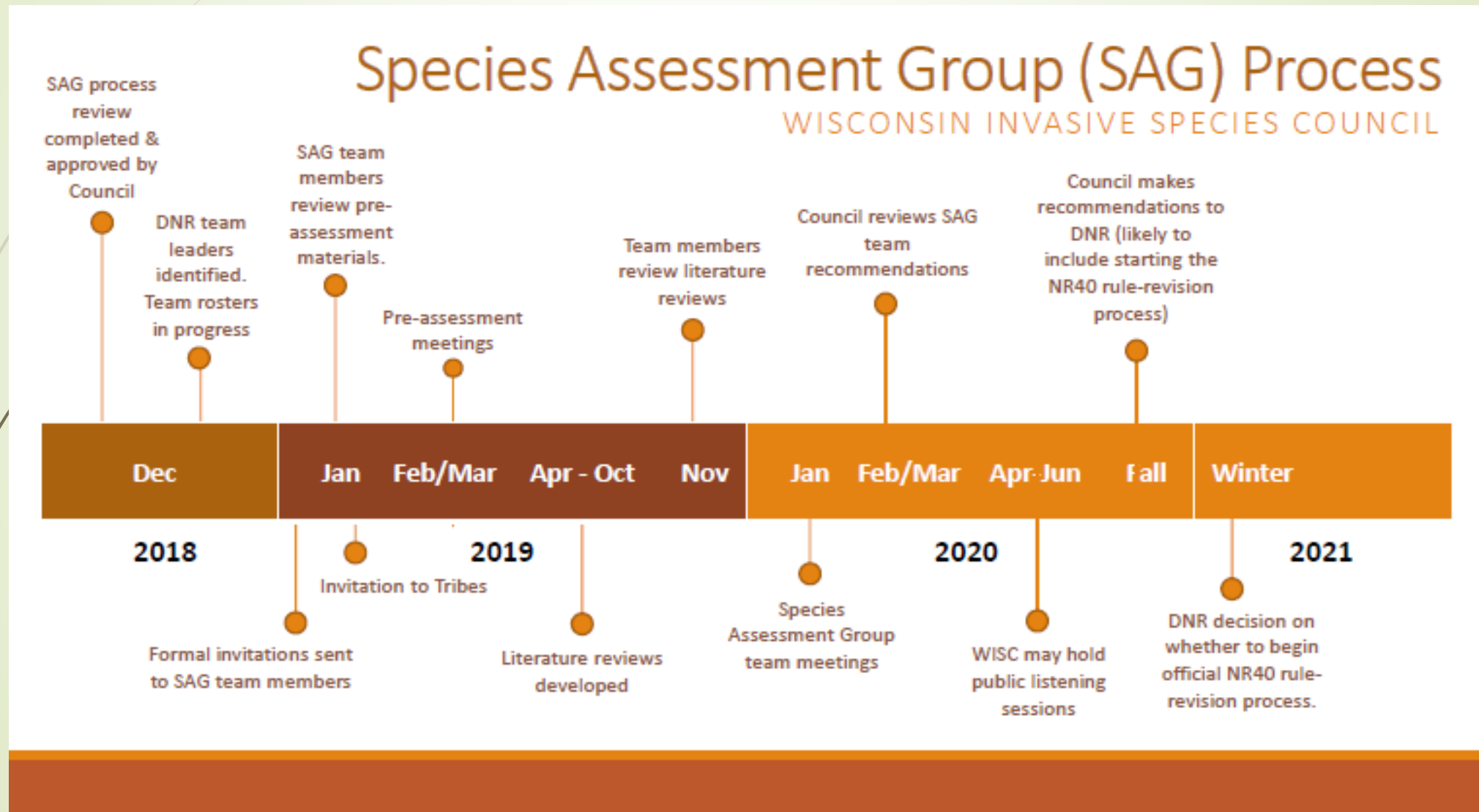
- Issues with regulation, synonyms, raw scale
- GLDRITOR pending, but not yet ready.



*Ipomoea aquatic*  
(water spinach) seeds

B Vendor name:	C Sub-vendor	D Vendor physical location: (mailing)	E Species detected: (genus species)	F Site sold organism as: (name on page)	G Plant part (seed/whole plant?)	H Confirmed shipping to WI?
Amazon	Kuting		<i>Ipomoea aquatic</i>	Aquatica Garden Vegetable	Seeds	YES

# Updates to NR 40 coming in ~2022...





### Updates by email

- ▶ Invasive species rules
- ▶ Aquatic invasives
- ▶ Forest insects and diseases
- ▶ Terrestrial invasives



### Contact information

[DNR invasive species staff](#)

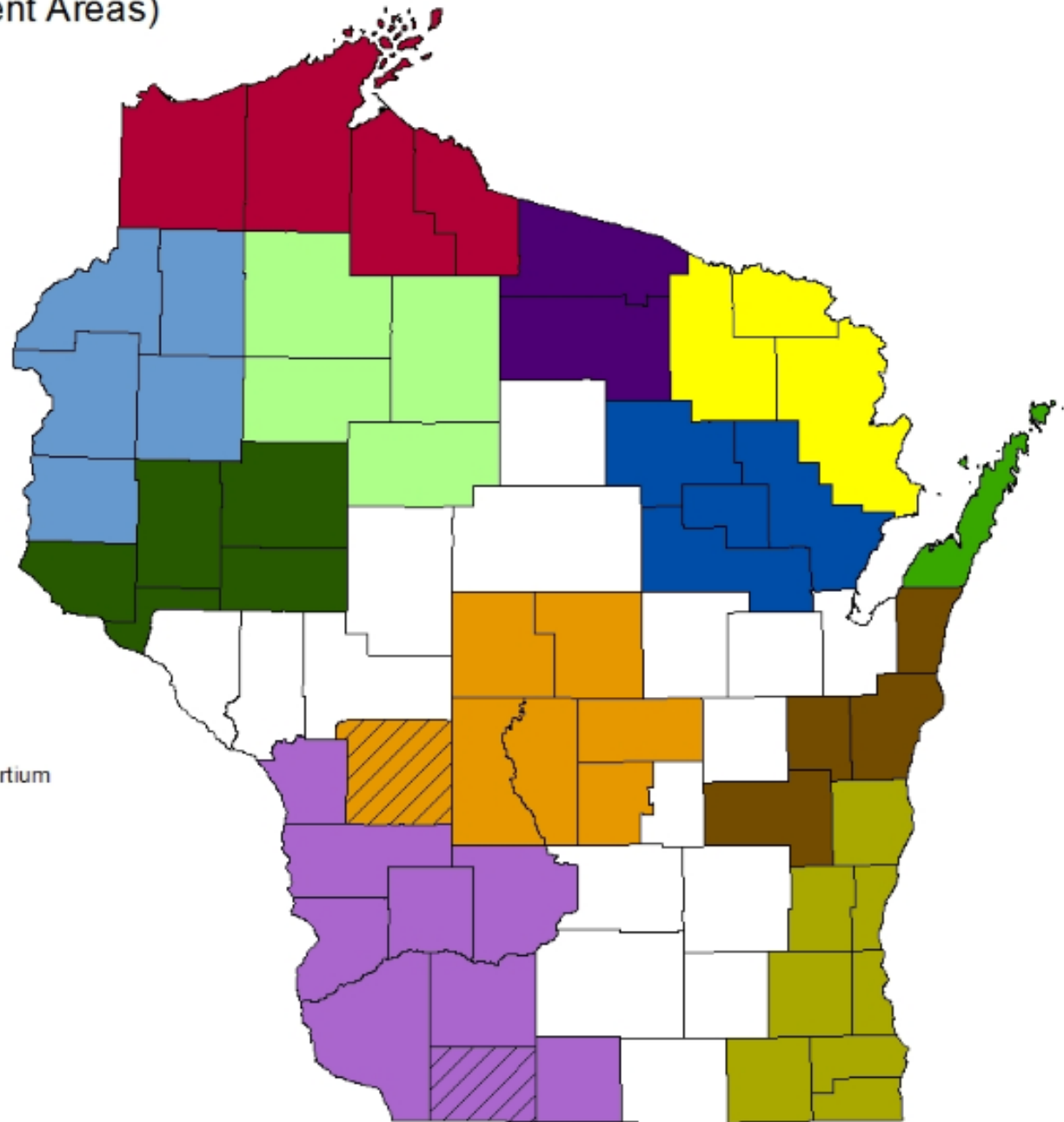
1. Sign up to get emails on public hearings, emerging threats, rule updates, and more.

2. Call or email DNR. **We are here to help!**

Regional Invasive Plant Groups in Wisconsin  
(Cooperative Weed Management Areas)  
As of January, 2019

**Regional Group Names**

-  Central Sands Invasives Group
-  Monroe County Invasive Species Working Group
-  Door County Invasive Species Team
-  Lakeshore Invasive Species Management Area
-  Lower Chippewa Invasives Partnership
-  Northwoods CWMA
-  Southeastern Wisconsin Invasive Species Consortium
-  Southwest WI Weed Management Area
-  Lafayette Environmental Action Group
-  St. Croix Red Cedar CWMA
-  Timberland Invasives Partnership
-  Upper Chippewa CWMA
-  Wild Rivers Invasive Species Coalition
-  Wisconsin Headwaters Invasives Partnership
-  No Regional Invasive Plant Group



# Please report new populations of prohibited species!

Email: [invasive.species@Wisconsin.gov](mailto:invasive.species@Wisconsin.gov)

Visit: <https://dnr.wi.gov/topic/Invasives/report.html>

Call the anonymous tip line: 1-800-847-9367



**Prohibited Invasive Species** cannot be possessed, transferred, transported or introduced.



## Prohibited Aquatic Plants

- Australian swamp crop, *Crassula helmsii*
- Brazilian waterweed, *Egeria densa*
- Brittle naiad, *Najas minor*
- European Frogbit, *Hydrocharis morsus-ranae*
- Fanwort, *Cabomba caroliniana*
- Hydrilla, *Hydrilla verticillata*
- Oxygen-weed, *Lagarosiphon major*
- Parrot feather, *Myriophyllum aquaticum*
- Water chestnut, *Trapa natans*
- Yellow floating heart, *Nymphoides peltata*

**Restricted Invasive Species** cannot be transferred, transported or introduced.



## Restricted Aquatic Plants

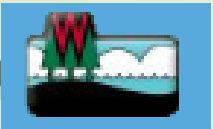
- Curly-leaf pondweed, *Potamogeton crispus*
- Eurasian watermilfoil, *Myriophyllum spicatum*
- Flowering rush, *Butomus umbellatus*
- Narrow-leaf cattail, *Typha angustifolia*
- Purple loosestrife, *Lythrum salicaria*

For assistance on control efforts for any of these invasive aquatic plants contact the aquatic plants management specialist for your region.

Find them at [dnr.wi.gov](http://dnr.wi.gov) keyword: "APM contacts"



# Thank you, AWRA!



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