

Aquatic Invasive Species

Drew Rayner

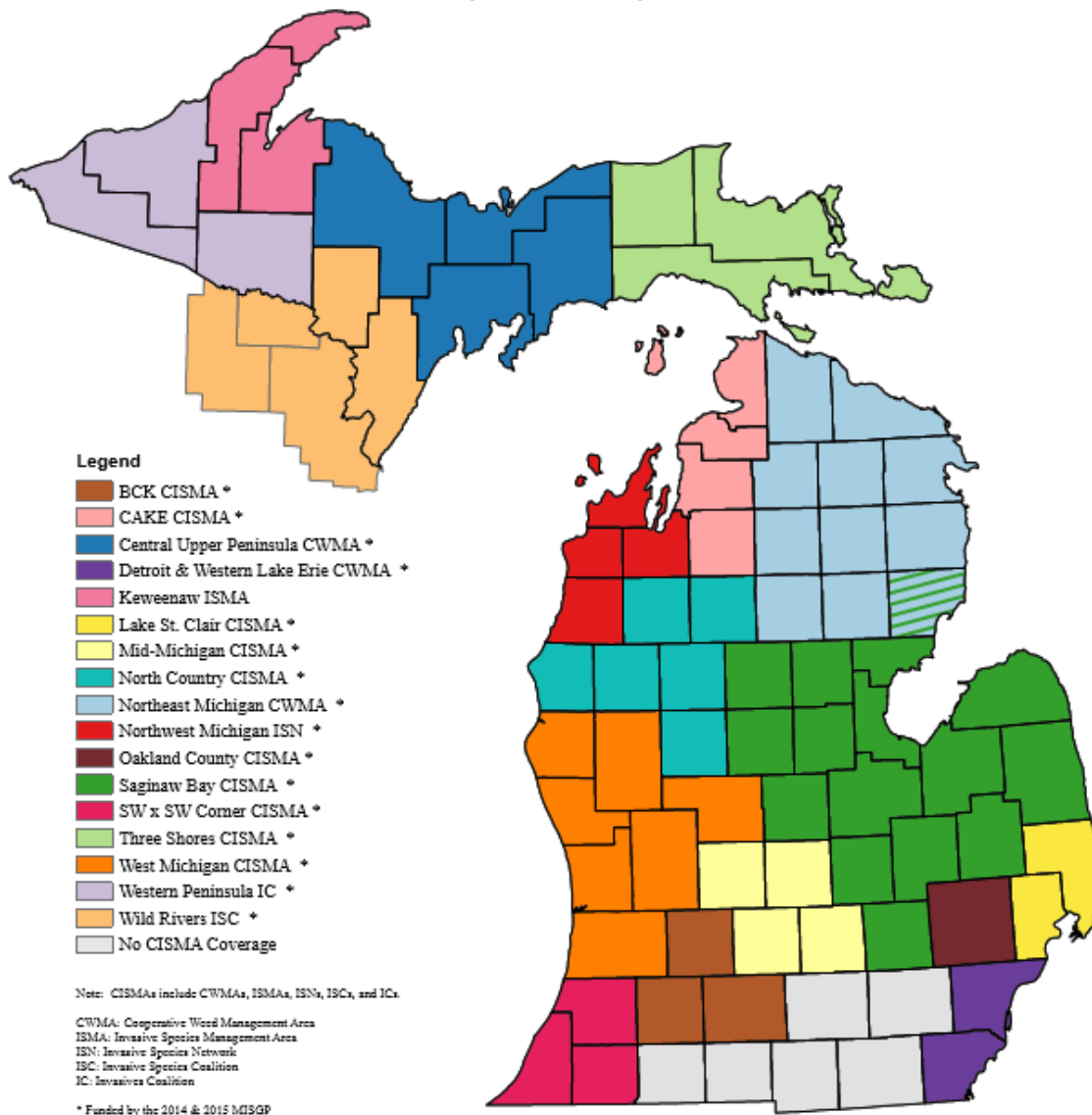
WMCISMA Coordinator

What is a CISMA?

- Cooperative Invasive Species Management Area
- Partnership of different Government Organizations, Non-Profits Organizations, West Michigan Stewardship Cluster, and other organizations working cooperatively to map and treat invasive plants
- Major goal us to facilitate cooperation and coordination across jurisdictional boundaries

West Michigan Cooperative
INVASIVE SPECIES
MANAGEMENT AREA

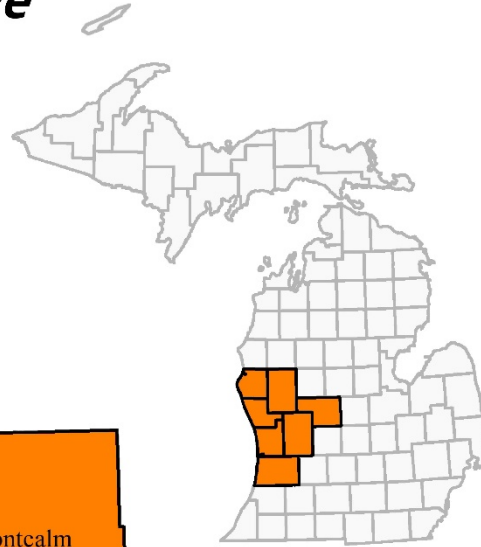
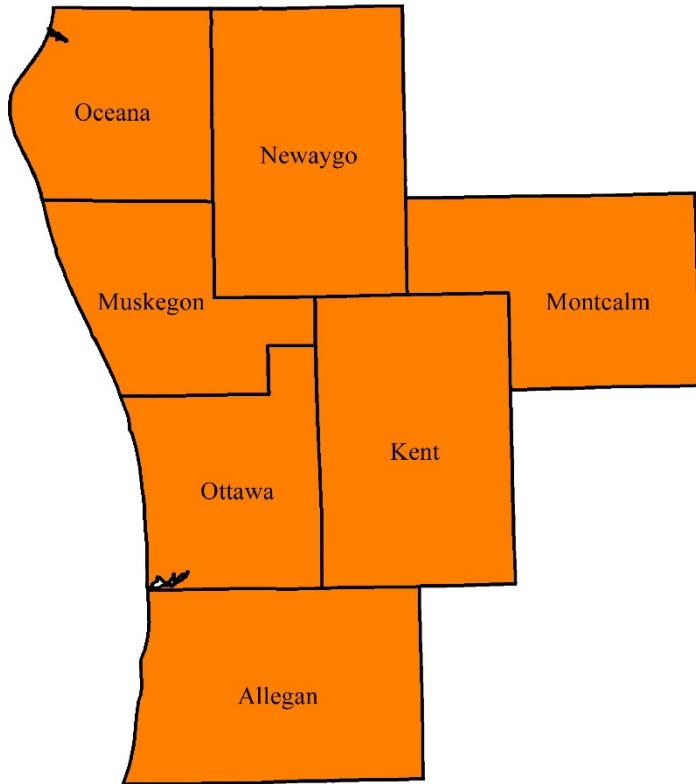
Michigan Cooperative Invasive Species Management Areas (CISMAs)



For more information on your local CISMA, visit the Michigan Invasive Species Coalition's website at www.michiganinvasives.org

Updated Sept 9, 2016
 Michigan Invasive Species Coalition

West Michigan Cooperative Invasive Species Management Area



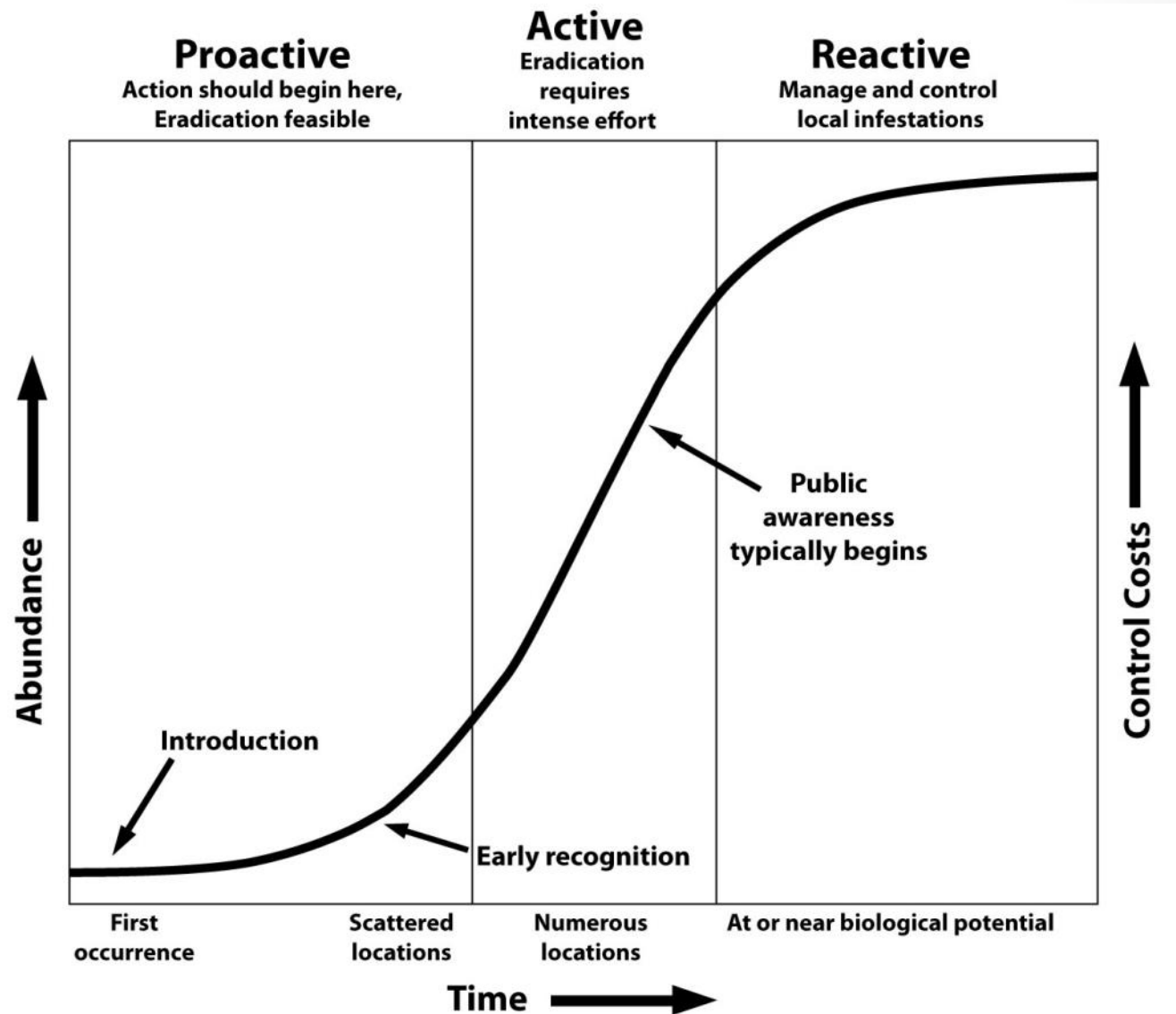
Drew Rayner
Coordinator

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What is an invasive species?

The state defines an invasive species as “one that is *not native* and whose introduction *causes harm*, or is likely to cause harm to Michigan's economy, environment or human health.”





Phases of Invasive Species Invasion and Control

SPECIES OF CONCERN

Watch List, Prohibited, Restricted

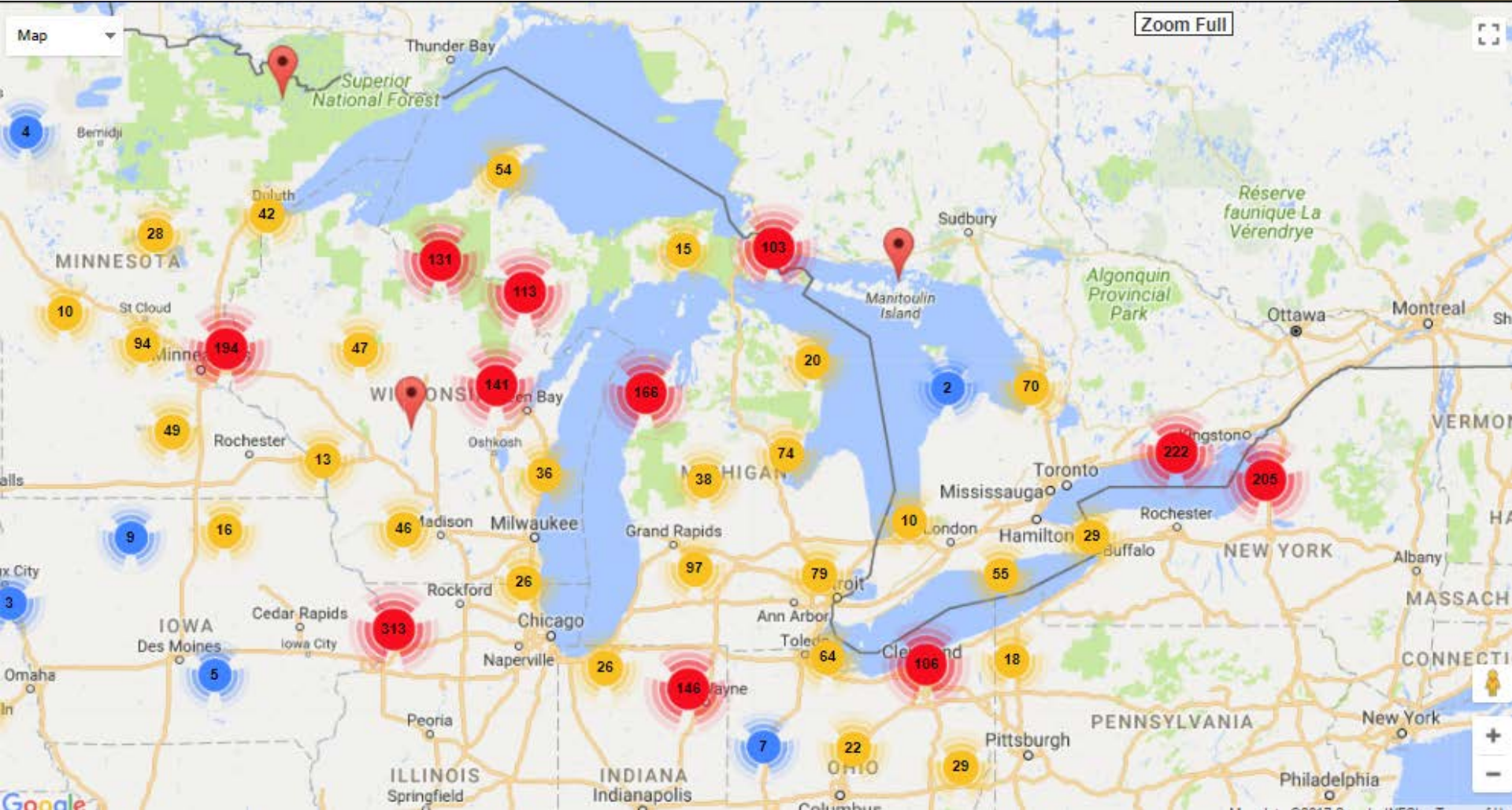
- Invasive species on the [watch list](#) have been identified as being an immediate and significant threat to Michigan's natural resources. These species either have never been confirmed in the wild in Michigan or have a limited known distribution.
- Some invasive species are legally designated by the State of Michigan as either “prohibited” or “restricted”. If a species is [prohibited or restricted](#), it is **unlawful to possess, introduce, import, sell or offer that species for sale as a live organism**, except under certain circumstances.
- The term “***prohibited***” is used for species that are not widely distributed in the state. Often, management or control techniques for prohibited species are not available.
- The term “***restricted***” is applied to species that are established in the state. Management and control practices are usually available for restricted species.

<http://www.michigan.gov/invasives>

Eurasian Water-milfoil

- Clogs water ways
- Makes recreation difficult
- Spreads by fragmentation
- Hybridizes with native plants
- ***Restricted in Michigan***





Purple Loosestrife

- Degrade wildlife habitat for many aquatic species including birds and fish
 - ***Restricted in Michigan***



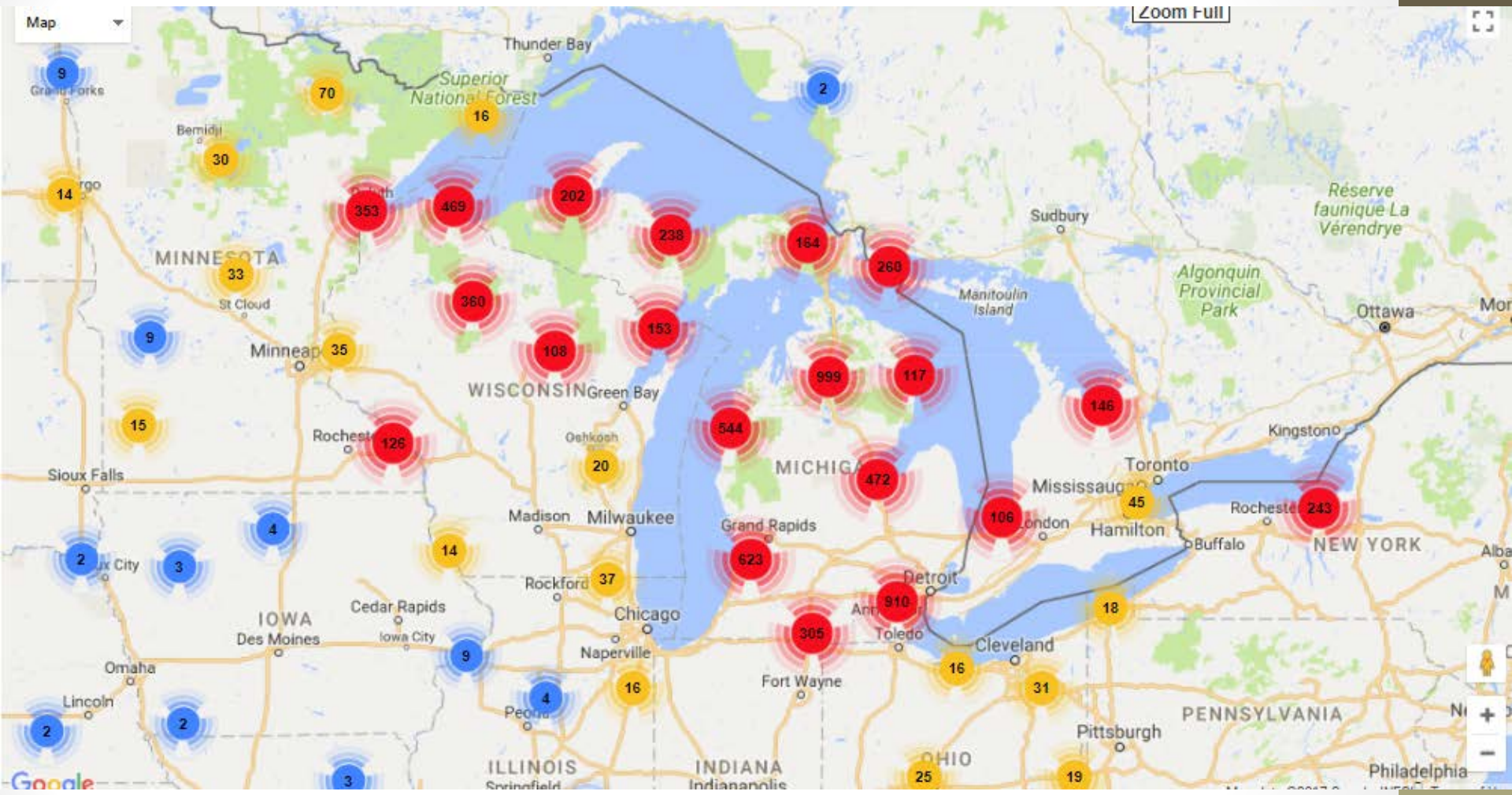
Rob Routledge, Sault College, Bugwood.org

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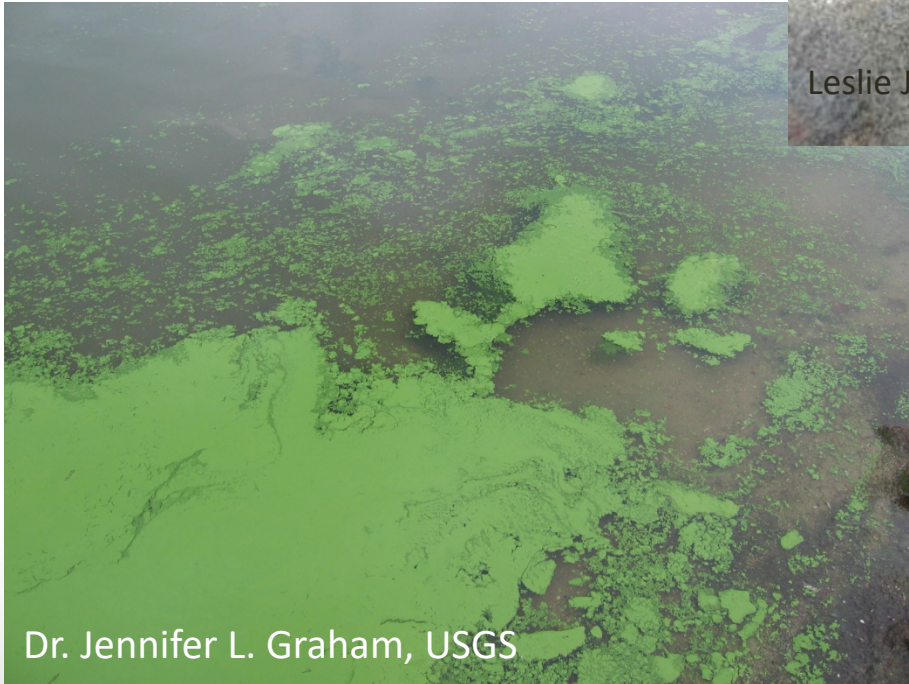
Linda Wilson, University of Idaho, Bugwood.org

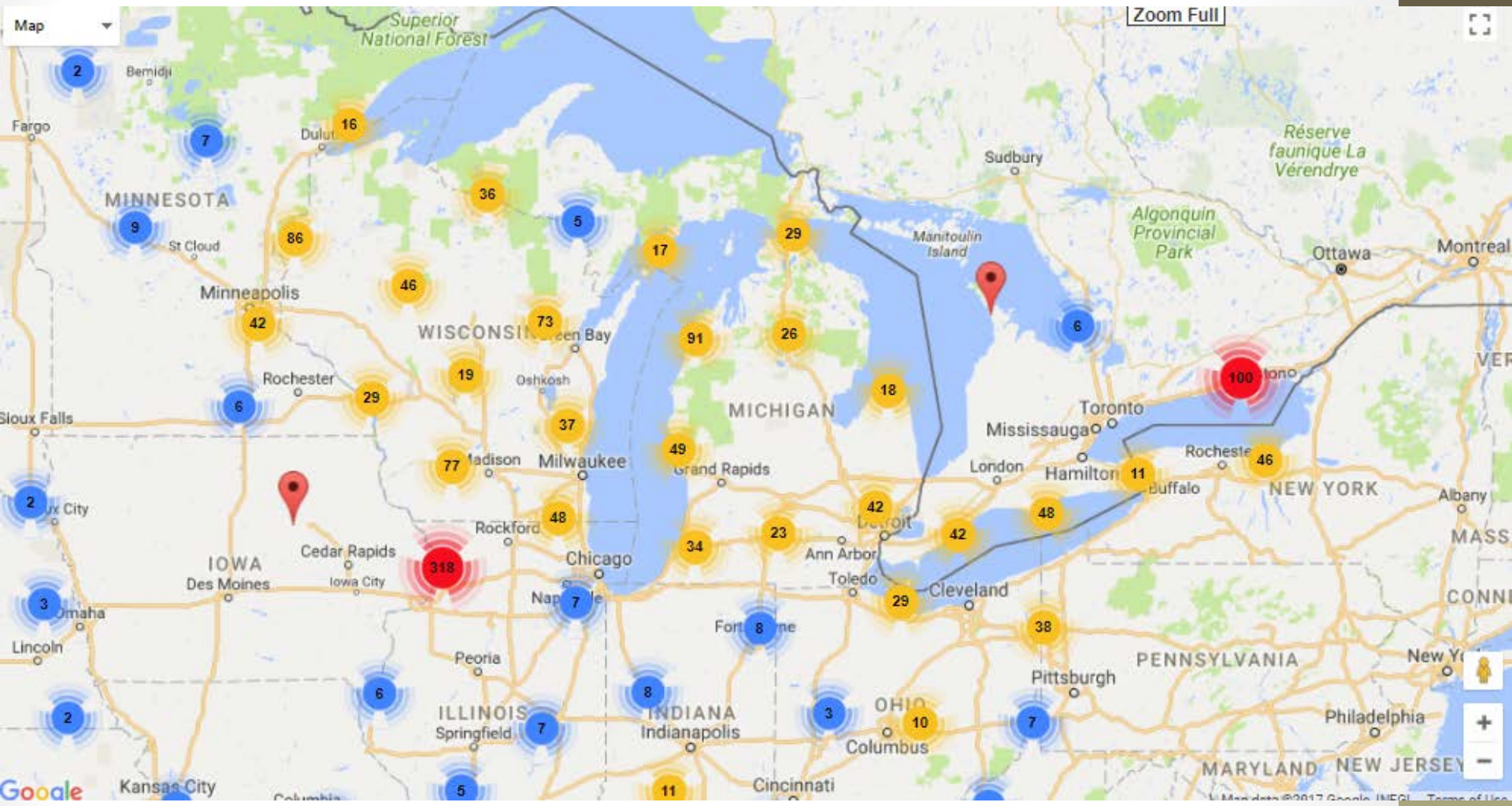
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Curly-leaf Pondweed

- Crowds out native plants
- Summer die offs can lead to unsightly algal blooms
- ***Restricted in Michigan***





Phragmites

- Chokes out other vegetation
- Ruins beach-front beauty
- Can go through concrete
- *Restricted in Michigan*



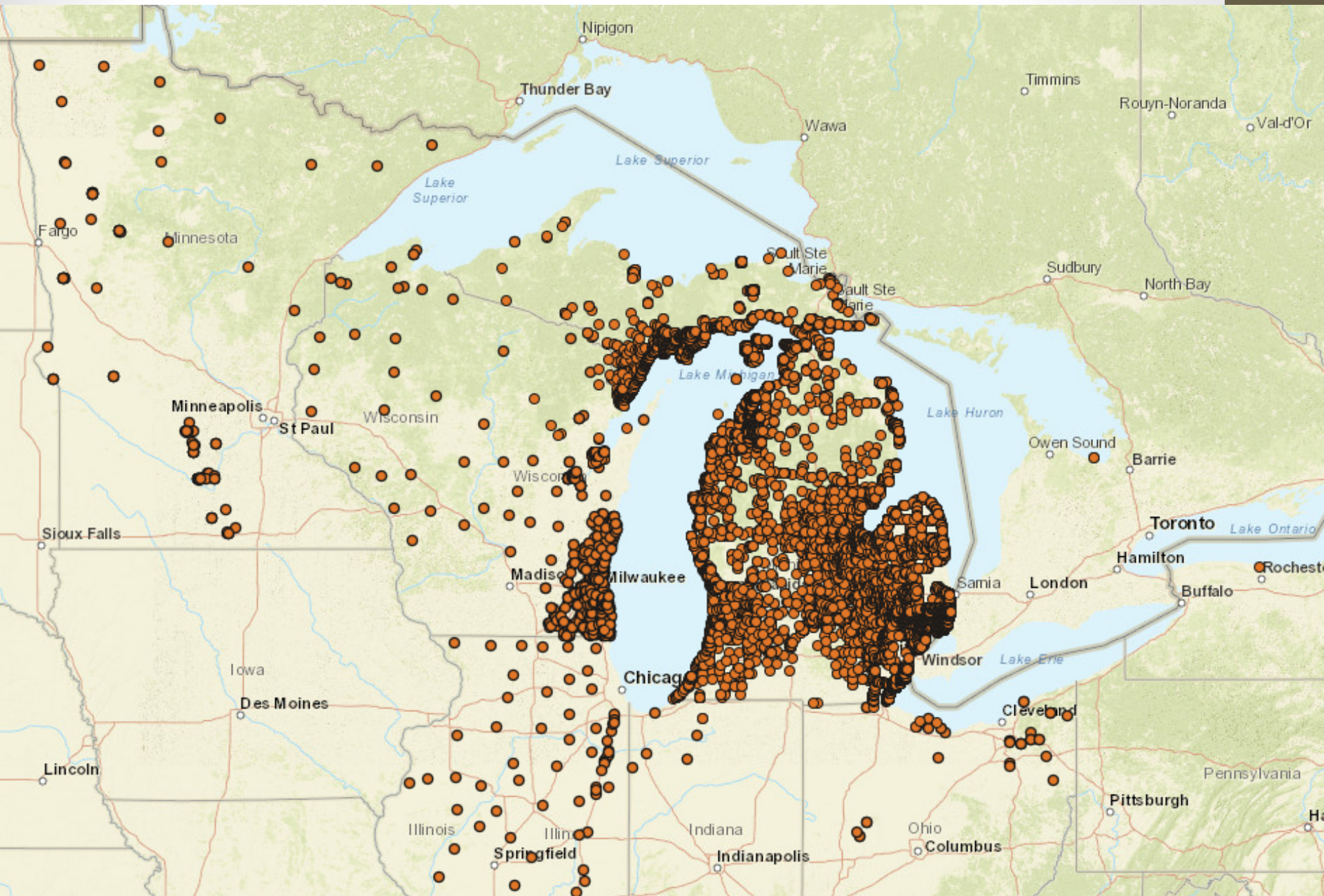
Leslie J. Mehrhoff, University of Connecticut,
Bugwood.org



Invasive Phragmites

Native Phragmites





Flowering Rush

- More easily identified when it flowers in June-August
 - Triangular stem
- 2 confirmed locations in West Michigan
 - ***Restricted in Michigan***



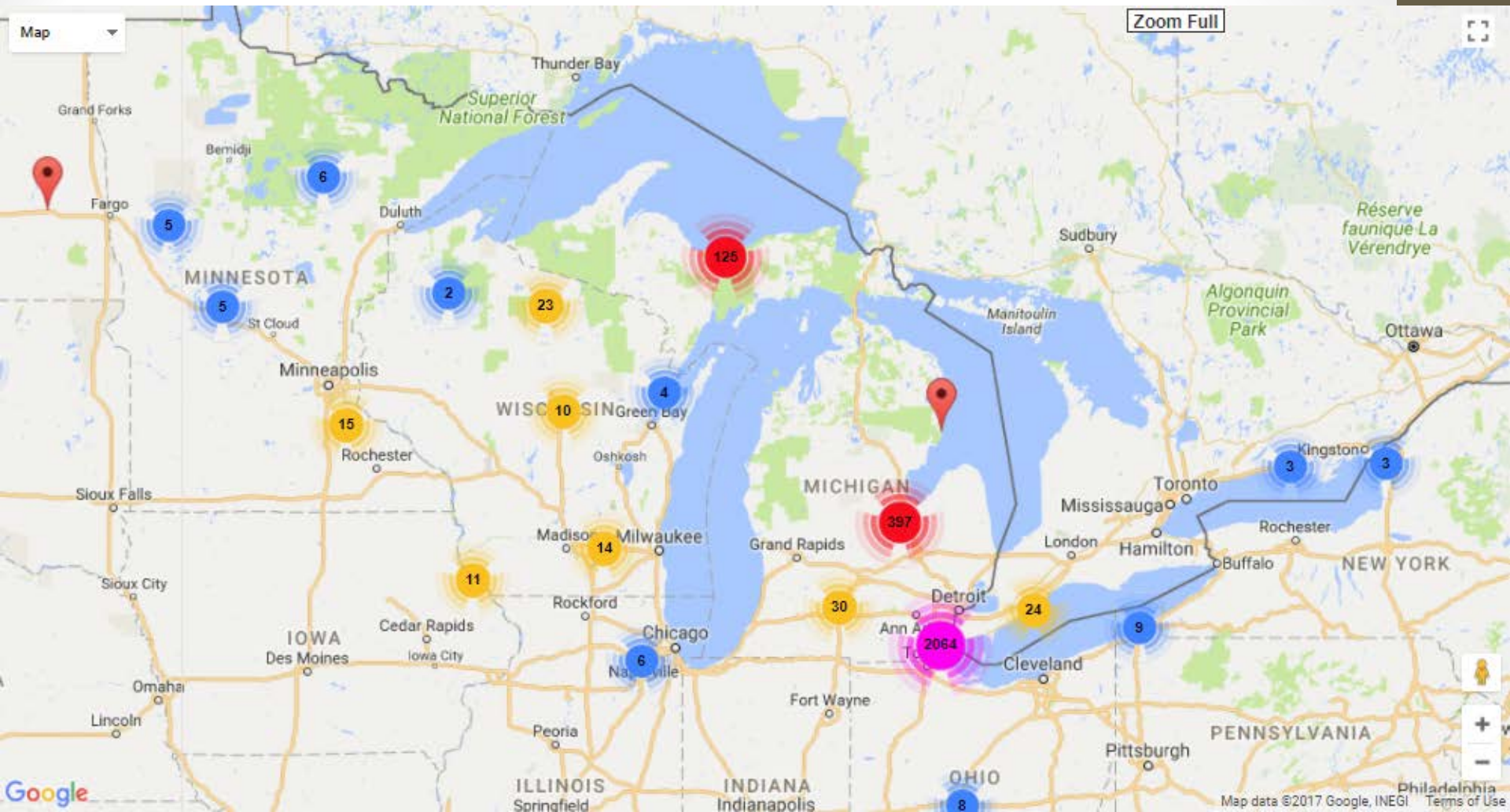
Ben Legler



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European Frog-bit

- Creates dense mats on the water's surface
- Discourages waterfowl from using a water body
 - Changes water composition and disrupts fish habitat
 - Tangles in boat equipment
 - ***Watch List and Prohibited in Michigan***





Christian Fischer
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Jiří Kameníček



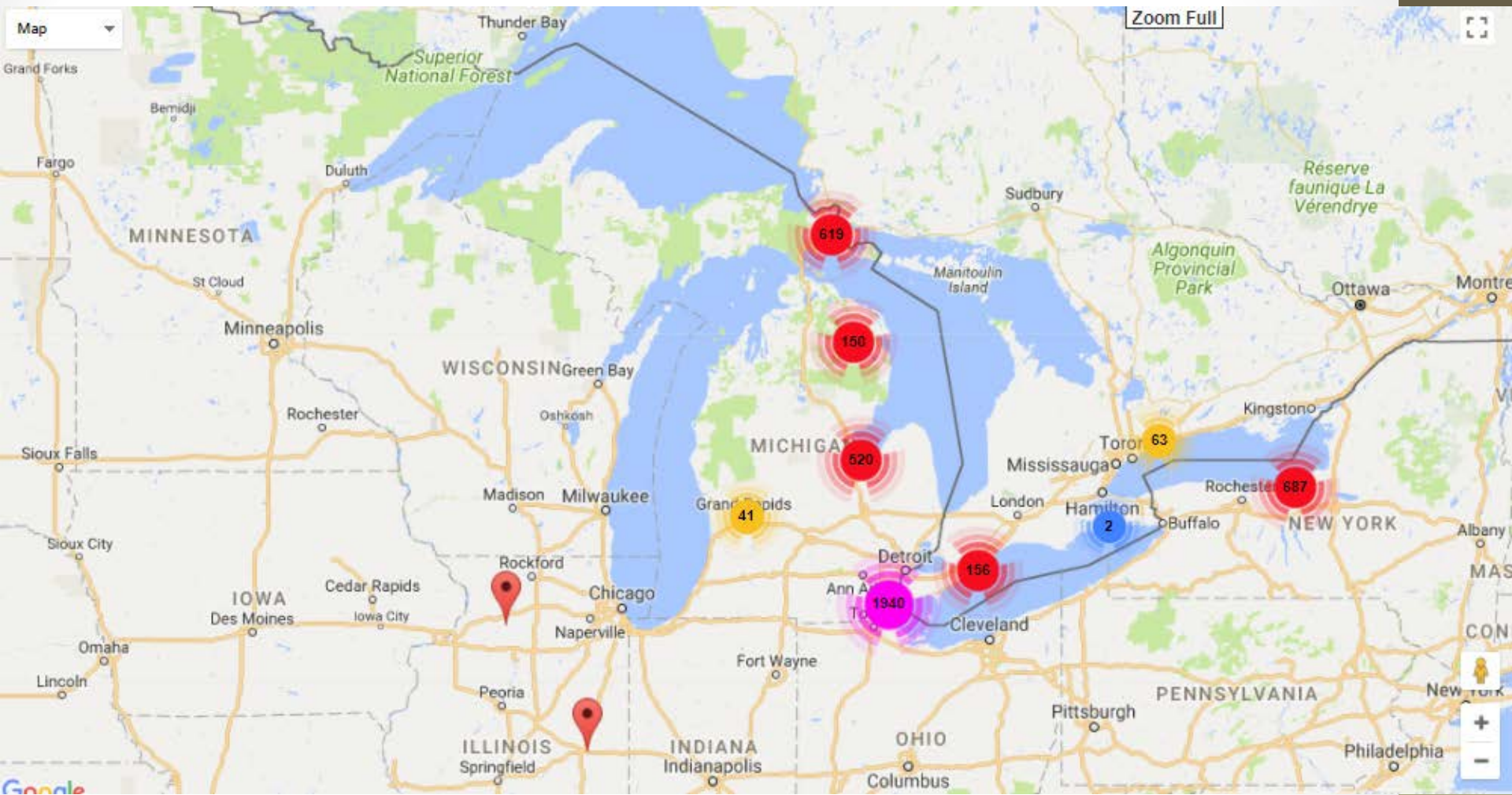
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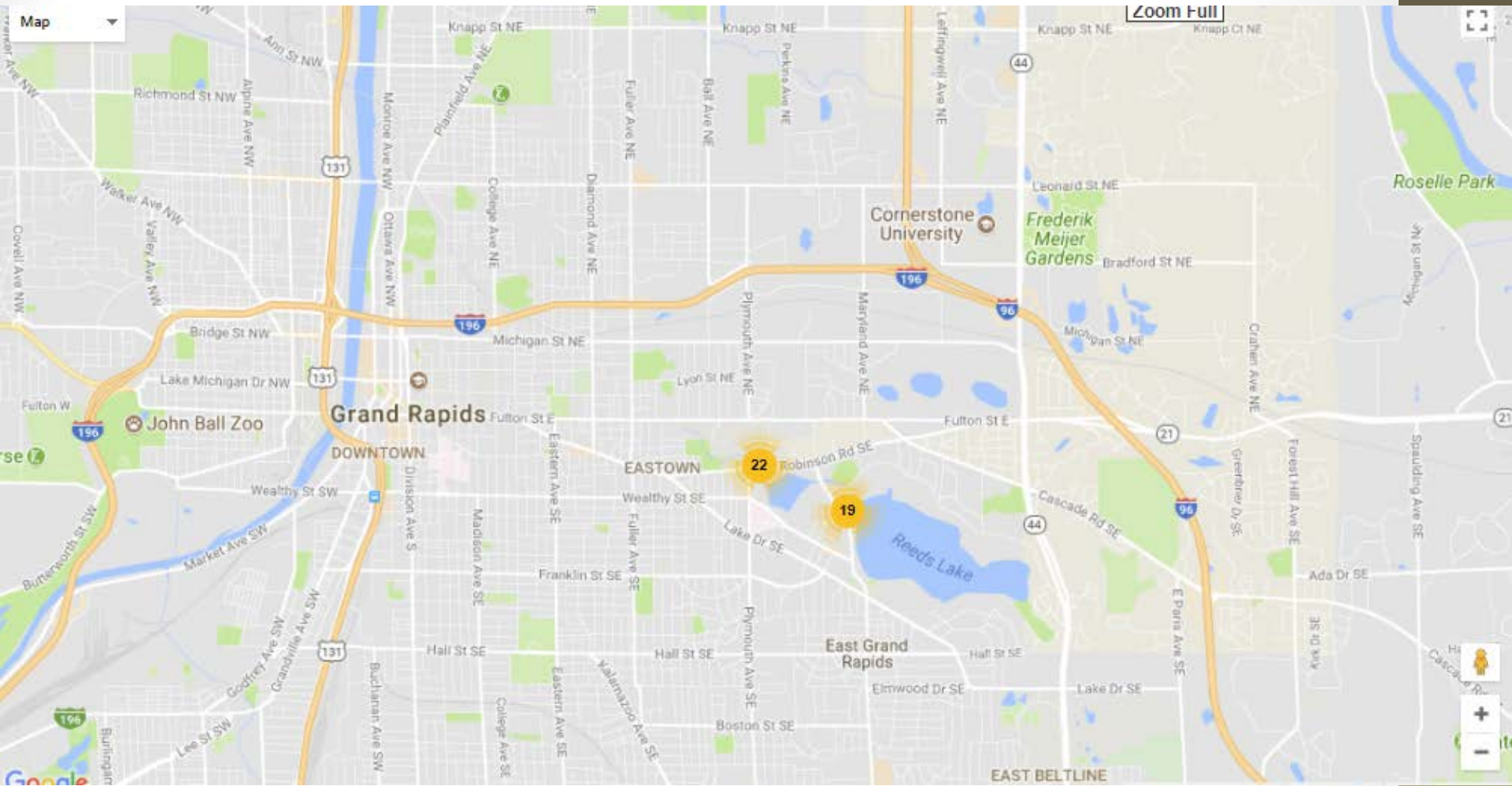


Christian Fischer
Wikimedia Commons



Kristian Peters





Map

Zoom Full



Roselle Park

Cornerstone University

Frederik Meijer Gardens

John Ball Zoo

Grand Rapids

DOWNTOWN

EASTOWN

East Grand Rapids

EAST BELTLINE

22

19



Yellow Floating Heart

- Aggressively spreads
- Distinctive 5-petal flower

Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



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*With a **prohibited** species it is unlawful to possess, introduce, import, sell or offer that species for sale as a live organism.*

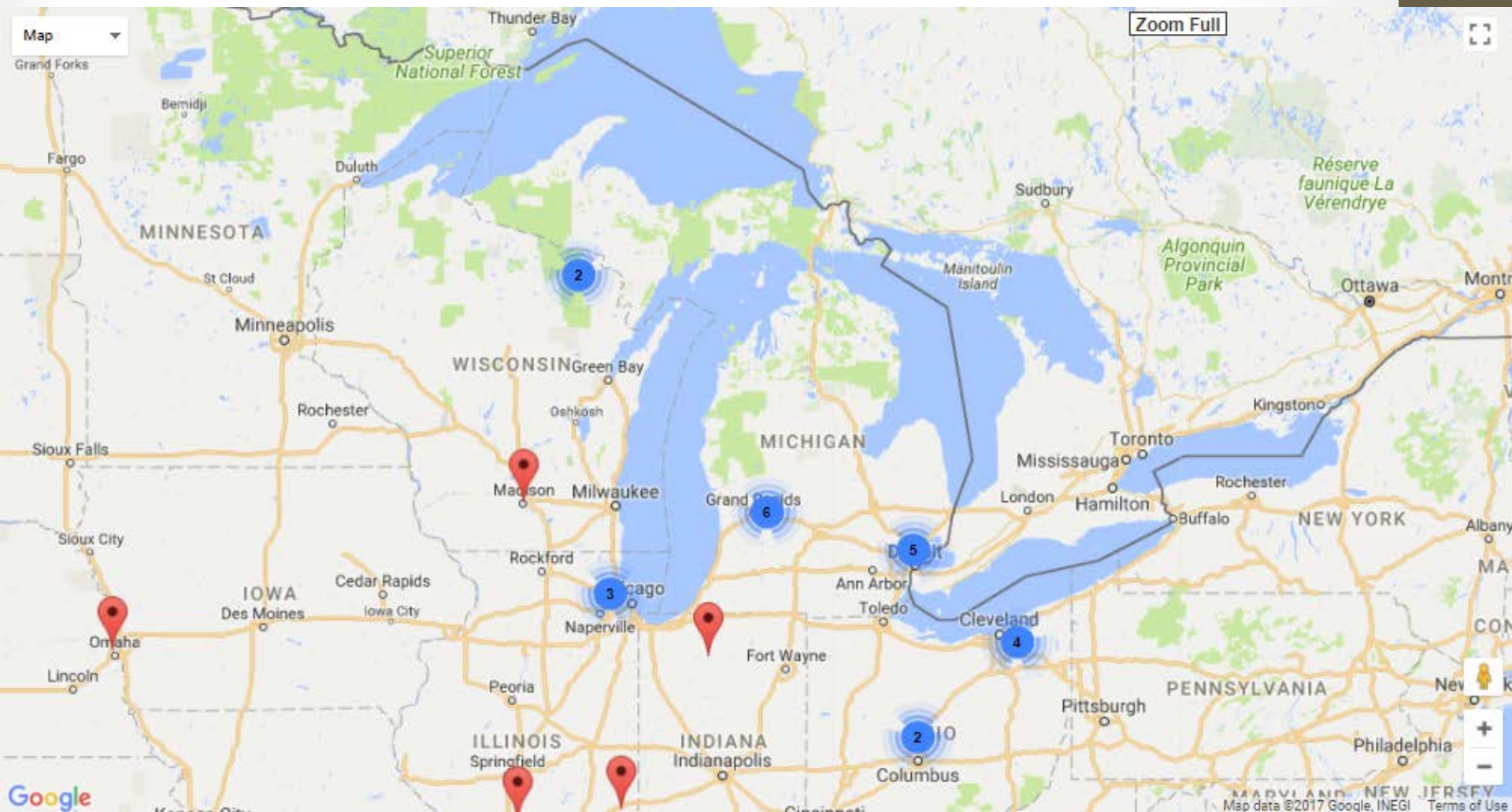


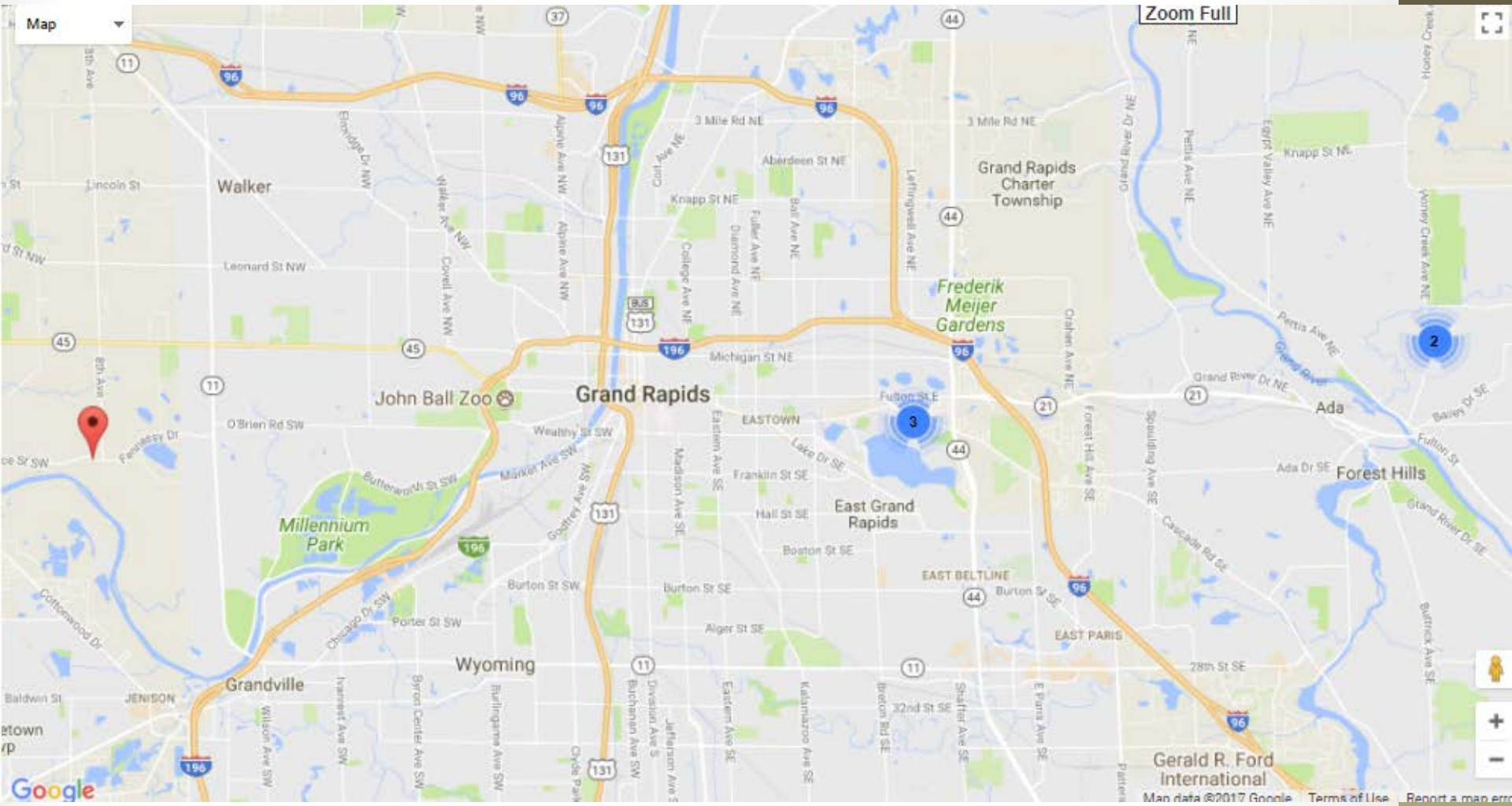
Rob Andress, Department of Conservation & Natural Resources, Bugwood.org

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Map

Zoom Full

Walker

Grand Rapids

East Grand Rapids

Wyoming

Grandville

Grand Rapids Charter Township

Frederik Meijer Gardens

John Ball Zoo

Millennium Park

Forest Hills

Ada

Gerald R. Ford International

Google

Map data ©2017 Google Terms of Use Report a map error



Water Lettuce

- Can form dense mats that clog docking areas for boats
- *Allowable for sale and possession in Michigan, only report outside of cultivation*



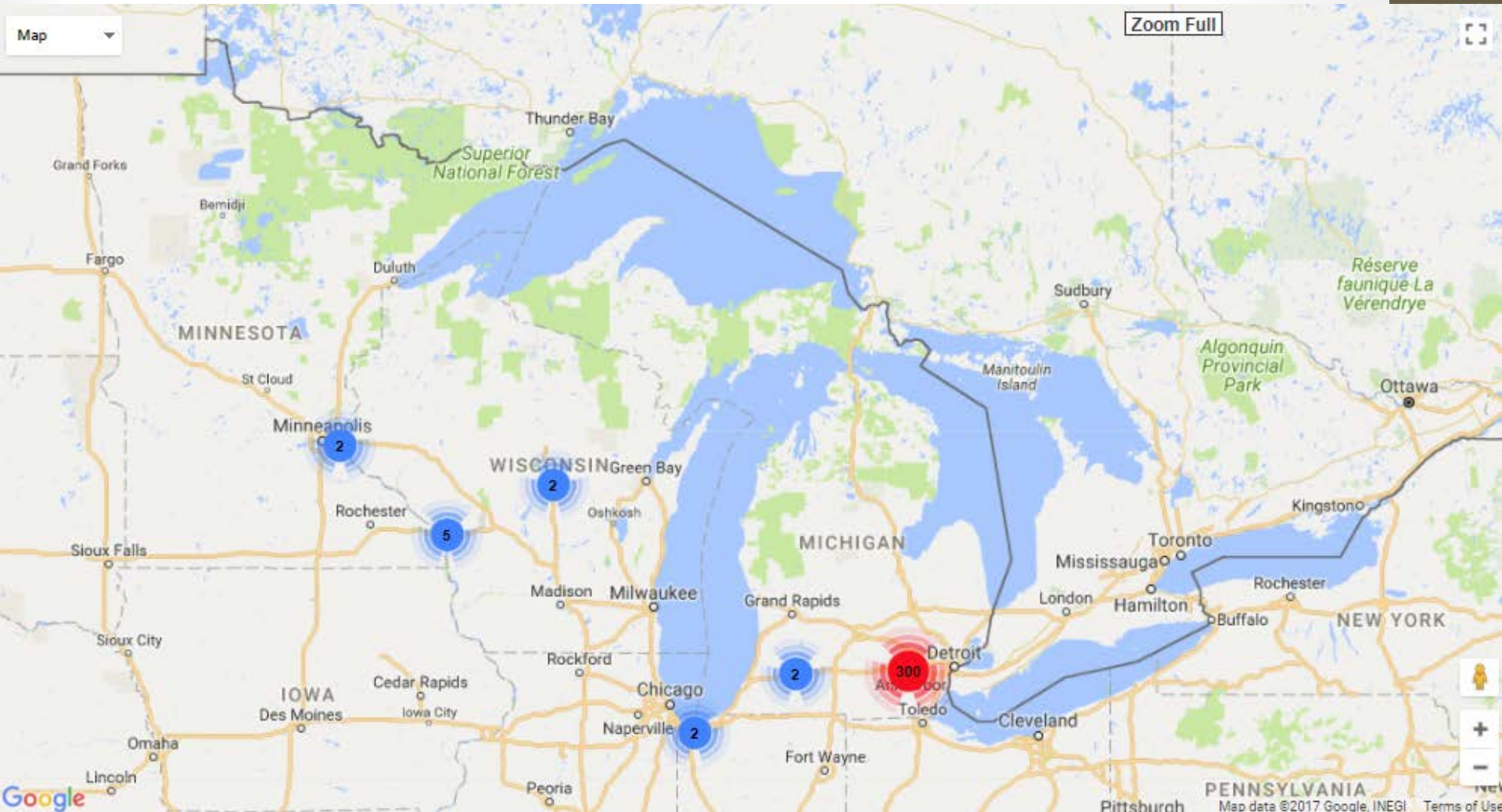
Leslie J. Mehrhoff, University of Connecticut,
Bugwood.org

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Graves Lovell, Alabama Department of Conservation and
Natural Resources, Bugwood.org

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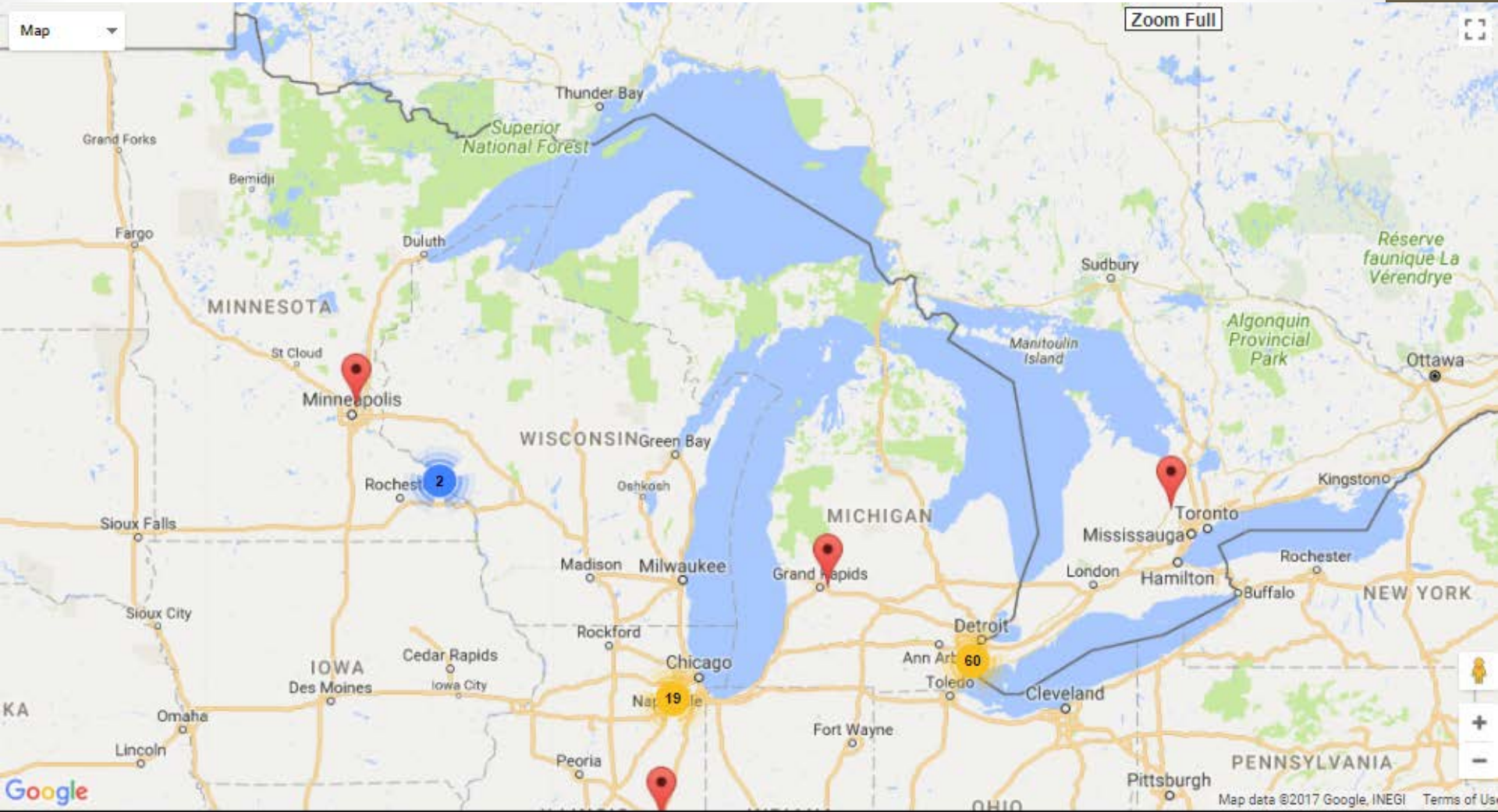


Water Hyacinth

- Although beautiful, can form dense mats and disrupt boating as well as other recreational activities
- *Allowable for sale and possession in Michigan, only report outside of cultivation*



Leslie J. Mehrhoff, University of Connecticut, Bugwood.org



HELP STOP THE SPREAD



- **CLEAN** boats, trailers and equipment (remove plant material or other aquatic organisms)
- **DRAIN** live wells, bilges and all water
- **DRY** boats and equipment

- **DISPOSE** of unwanted bait in the trash, don't release unused bait into the water

Dispose of bait in the trash

Bait and non-native plants and animals hitchhiking in bait can harm our lakes and rivers.

**PROTECT OUR
WATERS...**



Sea Grant
Great Lakes Network

For more ways to
protect our waters, visit
www.ProtectYourWaters.net

Developed by Illinois-Indiana Sea Grant, Illinois Natural History Survey,
Illinois Department of Natural Resources and U.S. Fish and Wildlife Service, ISG-05-17

RIPPLE

- **Reduce Invasive Pet and Plant Escapes**
 - **How to prevent escapes:**
 - Inspect and rinse any new plants to rid them of seeds, plant fragments, snails and fish.
 - Build water gardens well away from other waters.
 - Seal aquatic plants for disposal in a plastic bag in the trash. Do not compost.
 - Give or trade unwanted fish or plants with another hobbyist, environmental learning center, aquarium or zoo.
 - Contact a veterinarian or pet retailer for guidance on humane disposal of animals.

DON'T LET IT LOOSE!

It's bad for your pets. It's bad for the environment.

DISPOSE OF CLASSROOM PLANTS AND ANIMALS PROPERLY!



WHY SHOULDN'T I RELEASE CLASSROOM PLANTS AND ANIMALS INTO THE WILD?

Common aquatic plants and animals can become invasive when released into the wild, including:

- ✓ goldfish and other aquarium fish
- ✓ Chinese mystery snail
- ✓ elodea, hydrilla, and other aquarium plants
- ✓ crayfish
- ✓ red-eared slider turtle

WHAT DAMAGE DO INVASIVE SPECIES CAUSE?

- ✓ Degrade aquatic habitats
- ✓ Outcompete desirable native species
- ✓ Decrease biodiversity
- ✓ Alter food chains
- ✓ Introduce diseases
- ✓ Limit recreation
- ✓ Damage infrastructure
- ✓ Contaminate water resources
- ✓ Necessitate expensive controls



Bullfrog
©David H. Spivey/istockphoto.com

WHAT IF MY CLASSROOM PLANT OR ANIMAL IS NATIVE TO MY REGION?

Even if your plant or animal is native to your region, it may carry diseases and should never be released into the wild.



Chinese mystery snail



Red-eared slider turtle

WHAT SHOULD I DO WITH UNWANTED CLASSROOM PLANTS AND ANIMALS?

PLANTS: Completely dry or freeze aquatic plants, then put them in your garbage. Composting should be avoided, as seeds can still sprout.

FISH, INVERTEBRATES, AND REPTILES: Return to the seller or find them a home with a friend or another classroom. Ask the new owner to take a pledge* not to release. If you cannot find a new home for your animal and you want to consider euthanasia as an option, consult a veterinarian.

WATER: The water that contained your aquatic plant or animal could be contaminated and should be sterilized. To sterilize, add 5 drops of bleach for each quart (about 1 liter) of water, 1/4 teaspoon for each gallon, or 5 teaspoons for 10 gallons of water. Put the sterilized water down the toilet or sink—never down a storm drain.



PACKAGING: Invaders can also hitchhike on packaging. Inspect packaging and remove any visible plants or animals. Rinse containers with a bleach solution that contains 2 fluid ounces of bleach per quart of water (or 1/4 cup bleach per gallon of water). Dispose of it in your garbage.

LEARN HOW YOU CAN TAKE ACTION ON THESE WEBSITES!

Fun ways for teachers and students to learn about aquatic invaders:

www.iiseagrant.org/NabInvader

Educational Toolkit on Aquatic Invasive Species:
<http://iiseagrant.oregonstate.edu/invasive-species/toolkit>

*Classroom animal adoption pledge:
www.iiseagrant.org/NabInvader/Lakes/invasion/classroom.html

**Aquatic species regulations database:
www.iiseagrant.org/speciesregs

Ways you can prevent invasions:
www.protectyourwaters.net/prevention

The Urban Ocean Program at USC Sea Grant:
<http://www.usc.edu/org/seagrant>

Information from Canada about invasive species:
www.invadingSpecies.com

THINKING OF GETTING A CLASSROOM PLANT OR ANIMAL?

- ✓ Plan ahead and research the best species to use in your classroom. Select species that are native or non-invasive.
- ✓ Use the aquatic species regulations database** as a resource.
- ✓ Develop a plan for future care or disposition of the animal or plant in case it can no longer be held in your classroom.



Illinois-Indiana Sea Grant
University of Southern California Sea Grant
Oregon Sea Grant
Washington Sea Grant



REPORTING INVASIVES



The Midwest Invasive Species Information Network (MISIN) is a regional effort to develop and provide an early detection and rapid response (EDRR) resource for invasive species.

The goal of this regional resource is to assist both experts and citizen scientists in the detection and identification of invasive species in support of the successful management of invasive species.

This effort is being led by researchers with Michigan State University's [Applied Spatial Ecology and Technical Services Laboratory](#) in conjunction with a growing consortium of [Supporting Partners](#).

Report Sightings



Report invasive species in your area. Your sightings are an important part of any successful control effort.

MISIN Alerts



Create custom email alerts for new observations in your area of interest.

Species Distribution



Browse the distribution of reported invasive species. Search by common name and geography.

DEALING WITH AN INFESTATION

Current Work

- MISGP Grants
- Sustain Our Great Lakes (SOGL) Grant Sub Award
- U.S. Forest Service Grants
- HWA Grants



Treatment Options

- The West Michigan CISMA has funds to cover all or some of the treatment of certain invasive plants; contact the CISMA for more information



2016 Accomplishments

9,216-ACRES SURVEYED

610-SURVEYS COMPLETED

1,176-DETECTIONS MAPPED

45-MI WATCH LIST DETECTIONS

459-CHEMICAL TREATMENTS

5-WATCH LIST SPECIES TREATMENTS

78.05-ACRES TREATED

16-MECHANICAL TREATMENTS

21-ACRES MECHANICALLY TREATED

7,398.5-POUNDS REMOVED

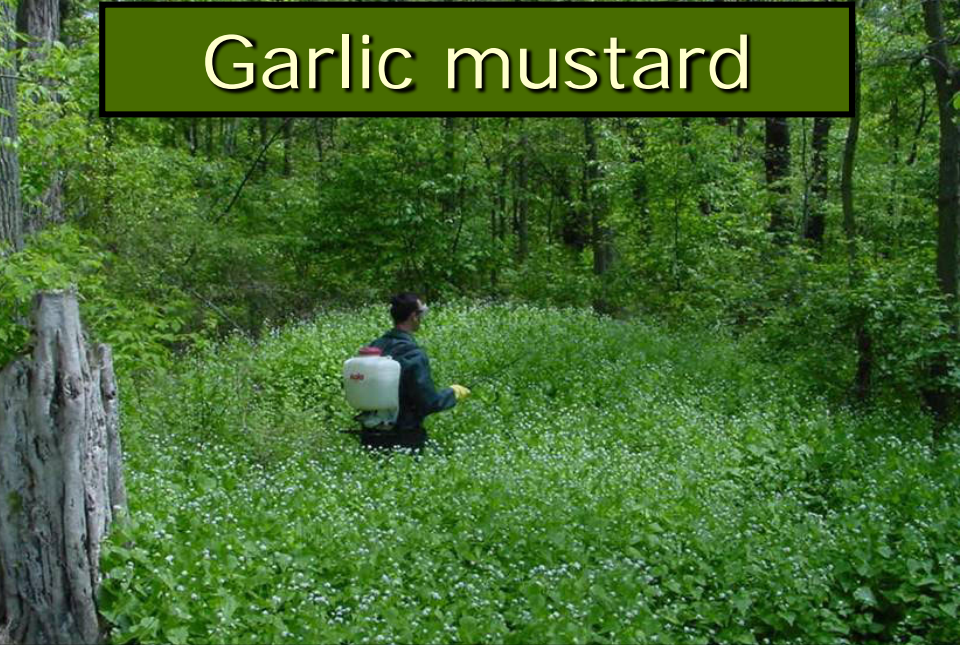
53-OUTREACH ACTIVITIES

2,380-EVENT PARTICIPANTS

Invasive phragmites



Garlic mustard



We're not talking about dandelions!
Focus on species with big impacts.

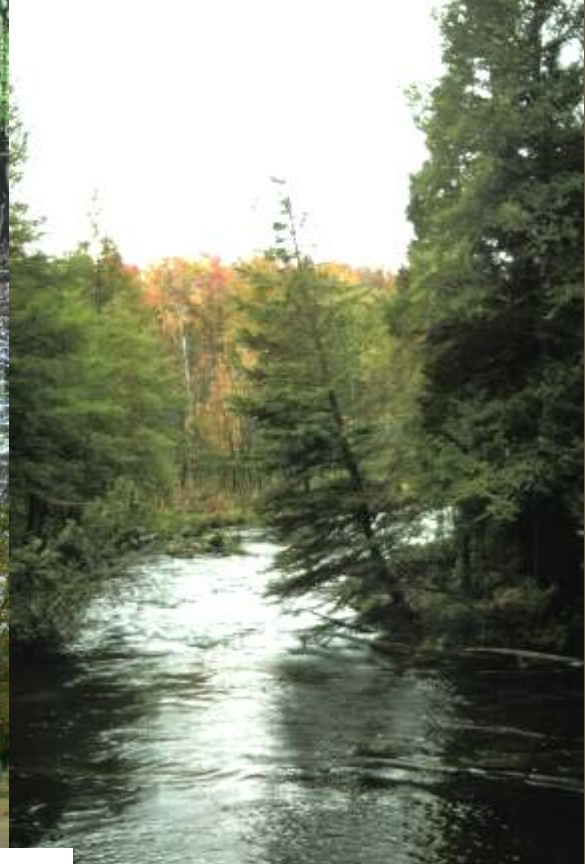
Japanese knotweed

Phyllis Higman, Michigan Natural Features Inventory



Swallow-wort





Protect what you love!



THANK YOU!

Like us on Facebook now for more news and information on
invasive species:

www.Facebook.com/wmcisma

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