

# An Introduction to the Great Lakes Hydrilla Collaborative

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GREAT LAKES HYDRILLA  
COLLABORATIVE



Great Lakes  
RESTORATION



# Outline

- Project Purpose and Overview
- Why is a Collaborative Needed?
- Background on Hydrilla: Its Impacts, Management, and Presence in the Great Lakes
- Next Steps: Needs Assessment Survey and Collaborative Website

# Collaborative Purpose and Overview

## Purpose

- To facilitate cooperation and the transfer of knowledge about monoclonal Hydrilla amongst Great Lakes stakeholders
- Connect the stakeholder community
- Share advances in science and management
- Provide Web-based resources

## Overview

- Needs of the collaborative will be identified through a needs assessment survey
- Website will serve as a platform for sharing information
- Webinar series focused on topics of interest as identified in a stakeholder survey

# Why is a Collaborative Needed?

- Growing urgency regarding the spread of Hydrilla with discoveries in Cayuga Lake Inlet and the Erie Canal in New York, as well as Pymatuning Reservoir in Pennsylvania/Ohio
- Recognition that prevention is one of the critical components of invasive species management



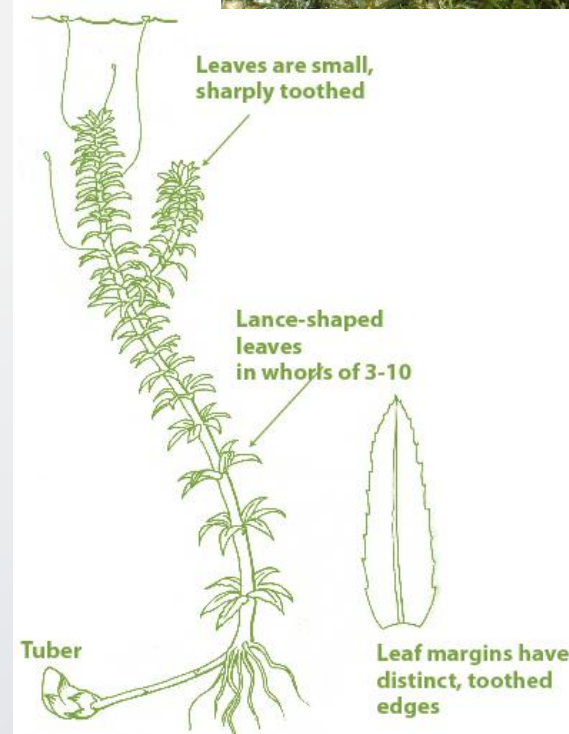
**The Collaborative will provide the platform for the most up-to-date research and best management practices to inform regional stakeholders and reduce redundancies in efforts.**

# What is Hydrilla?

- One of the world's most invasive aquatic plants
- Submerged aquatic plant typically rooted in shallow water (<25 feet)
- Branches at the water's surface form dense mats
- Tubers that store food and allow plants to overwinter and sprout in the spring
- Primary method of spread is through fragments on recreational boats/trailers



Source: Chris Evans, River to River, CWMA, Bugwood.org



Source:  
Cayuga Lake  
Watershed  
Network  
2012

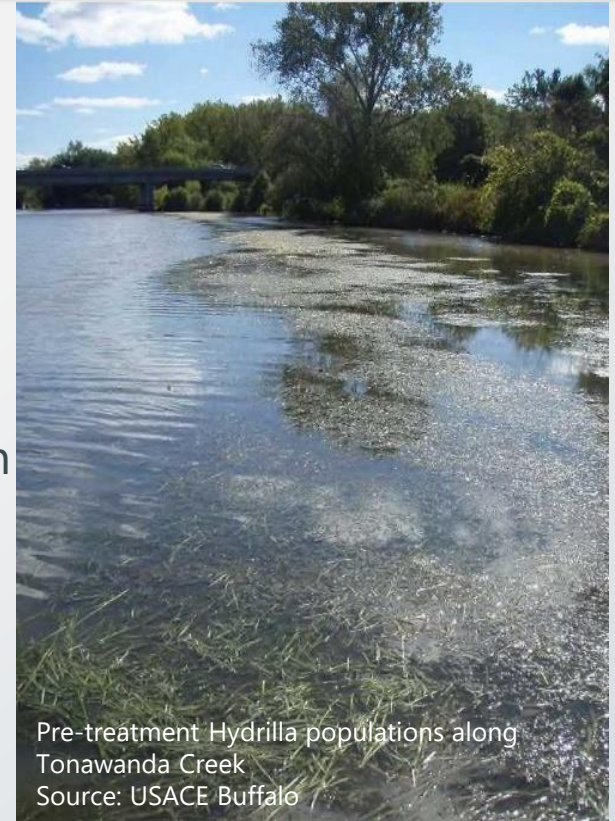
# Why Should We be Concerned?

## Ecological Impacts

- Degrades water quality ( $\uparrow$ BOD,  $\downarrow$ DO,  $\uparrow$ pH)
- Degrades habitat
- Alters hydrology - reduces flow and can lead to flooding
- Serves as host for a cyanobacteria that causes avian vacuolar myelinopathy (AVM)

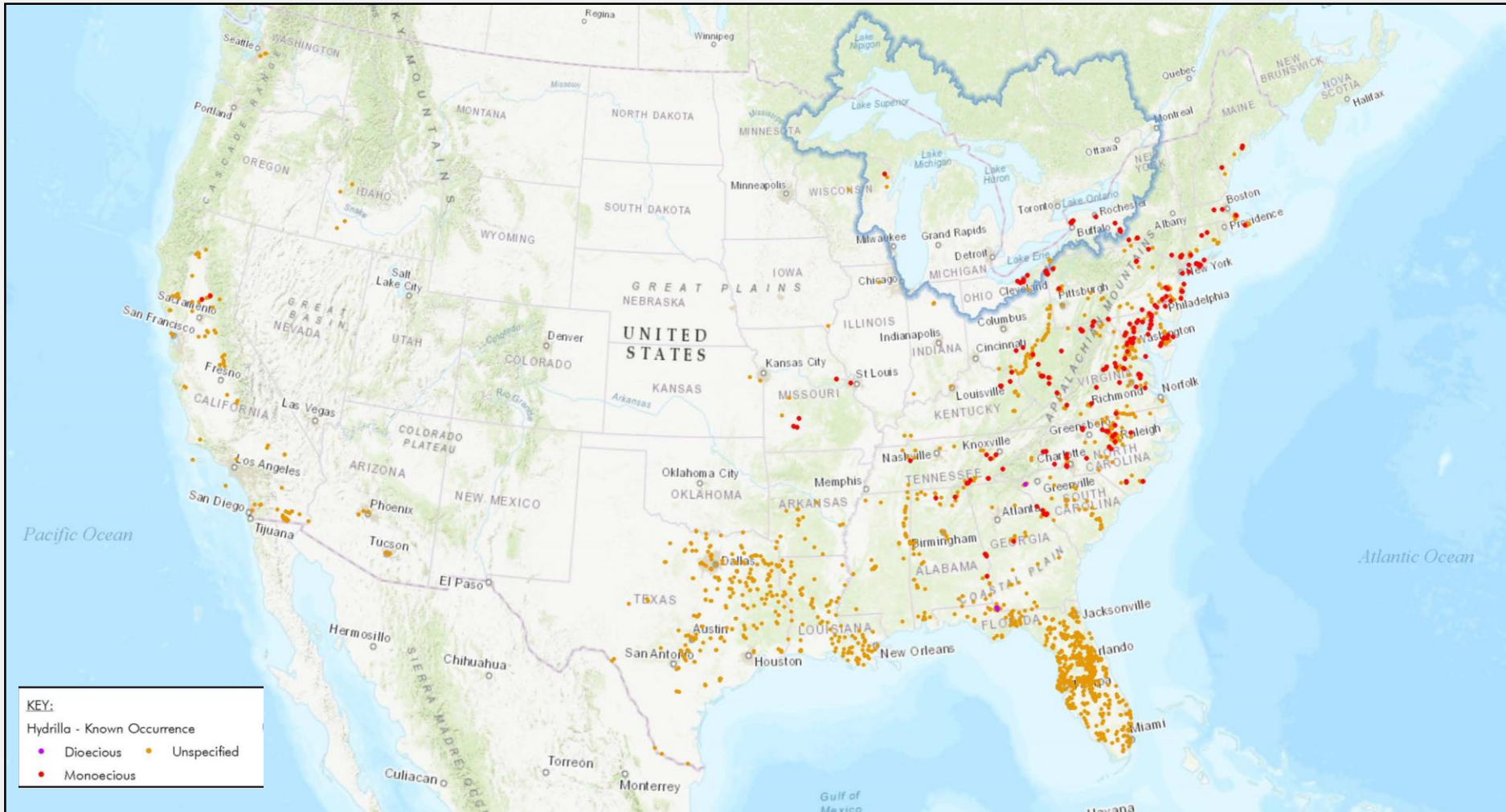
## Economic Impacts

- Decreases quality and number of recreation days
- Increased cost to maintain navigation system due to upland disposal of sediment contaminated with Hydrilla
- Increased operating costs resulting from reduced flow and clogging of water intakes, water cribs, hydroelectric turbines

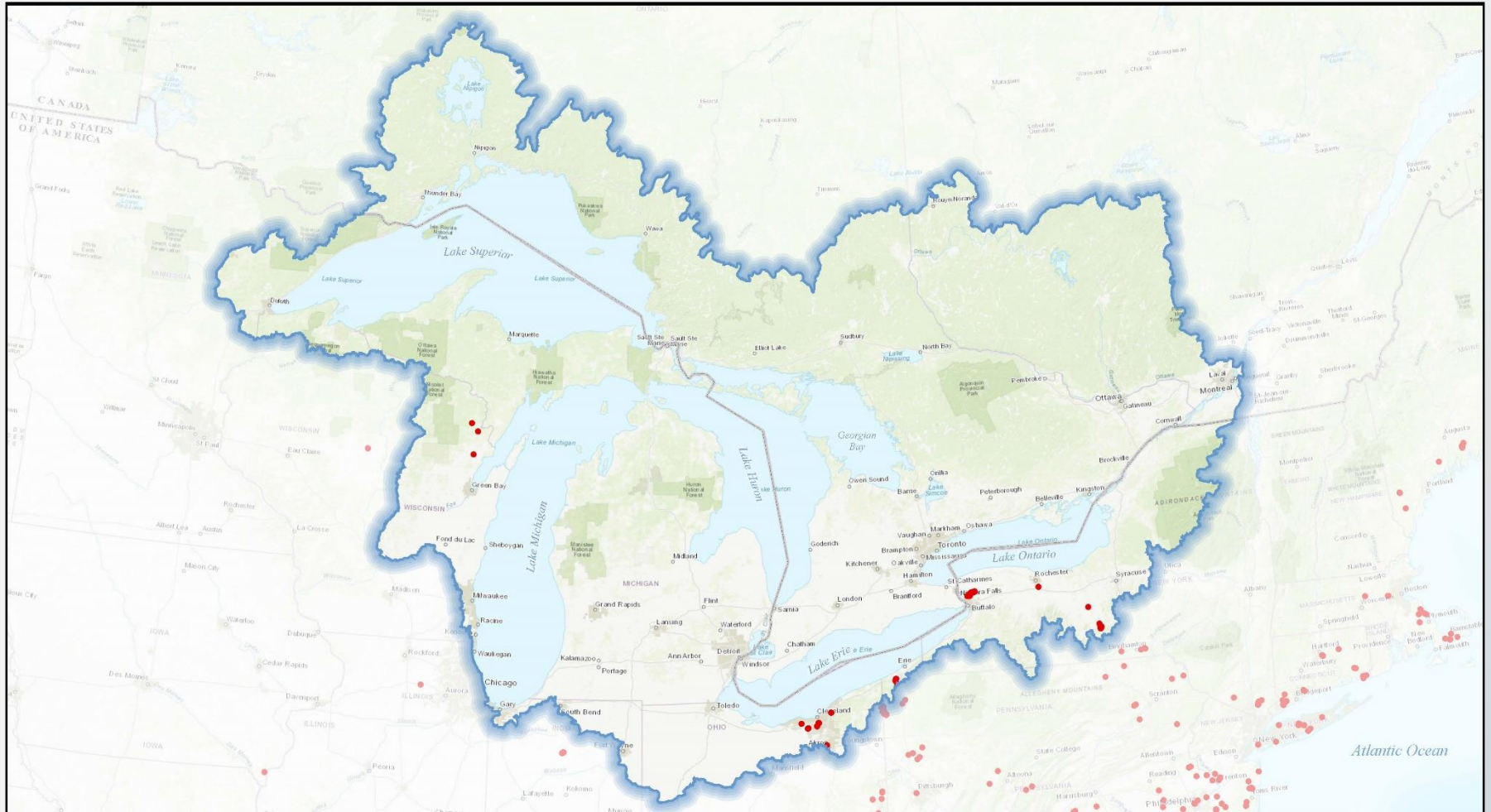




# Where is it in the United States?

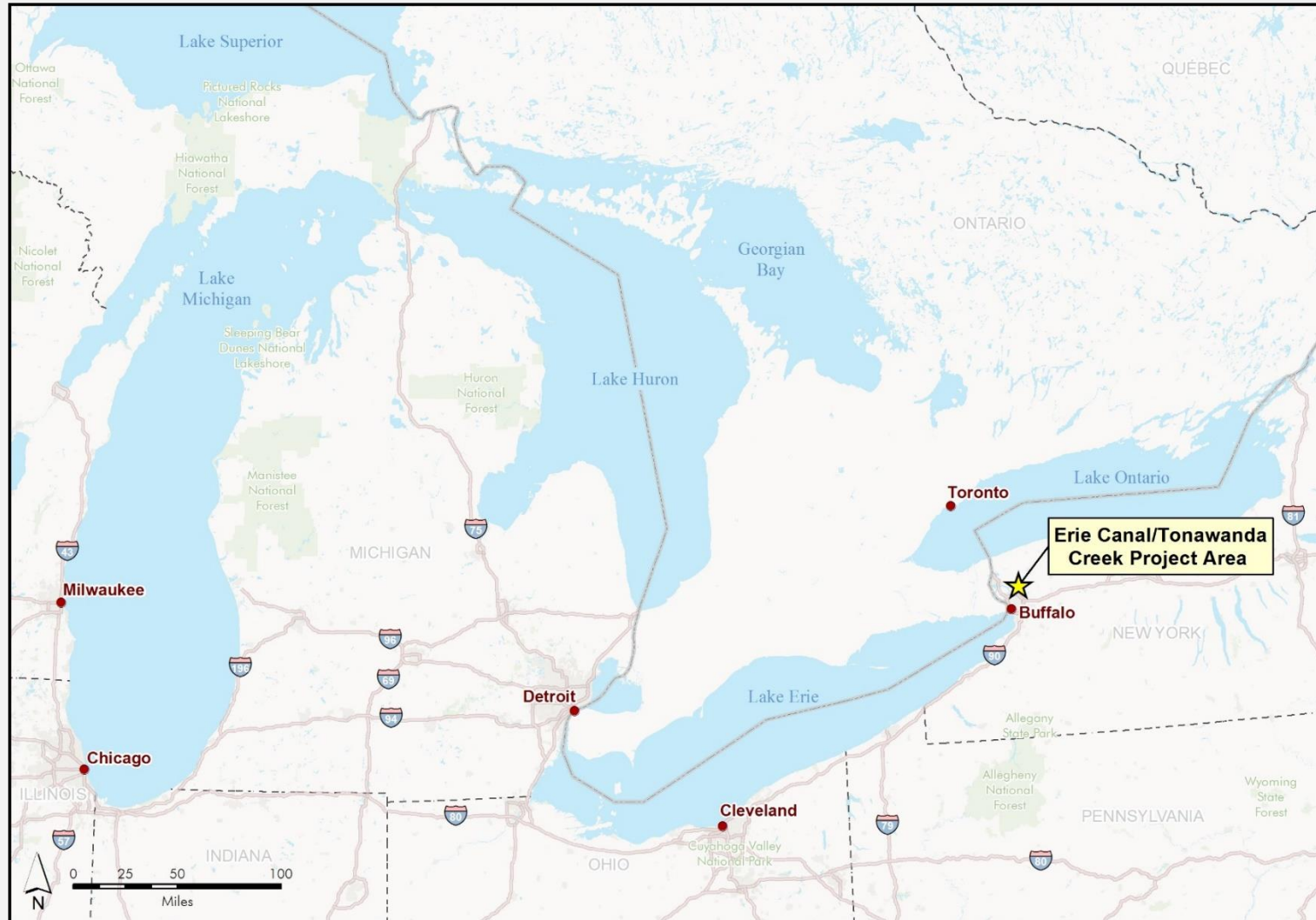


# Where is it in the Great Lakes so far?





# Within the Great Lakes Basin: Tonawanda Creek (New York)



# Adjacent to the Great Lakes Basin: Lake Manitou (Indiana)



Source: Source: 2016 Lake Manitou Aquatic Vegetation Management Plan Update, Fulton County, IN, December 19, 20161003025.0025.03.02

Lake Manitou Hydrilla Sightings, 2006-2011 (SePRO et al. 2012)

# What Else is Happening in the Basin?

- Development of a Great Lakes Hydrilla Risk Assessment
- Management of ongoing infestations:
  - Cayuga Lake/Inlet, Ithaca, NY
  - Tonawanda Creek/Erie Canal, NY
  - Cleveland Metroparks, OH
  - Five ponds in Erie County, PA



Herbicide treatment on  
Tonawanda Creek  
Source: E & E



# Current Management Techniques

- Chemical: EPA-registered herbicides
- Mechanical Harvesting: Hand pulling and diver suction dredge
- Physical Control: Benthic mats
- Selective Biocontrol: Grass carp and insects





# Management Challenges

- Successful eradication programs require multi-year efforts – and labor-intensive annual monitoring of Hydrilla vegetation and tubers
- Recovery of Hydrilla occurs in isolated patches
- Keeping the public/stakeholders aware and engaged over the course of multi-year efforts can be time-intensive
- Minimizing long-term impacts to native submerged aquatic vegetation

# Next Steps: Needs Assessment Survey

Watch your emails for a link to the survey and complete it by January 5, 2018!



## Great Lakes Hydrilla Collaborative Introductory Survey

1. What is your role in Hydrilla management or other invasive species management?

- Researcher
- Policy maker
- Education and outreach
- Regulator
- Practitioner/applicator

Other (please specify)

# Next Steps: Needs Assessment Survey

## Your input will help to:

- Gauge interest in the development of the collaborative
- Provide input regarding the issues of greatest need for the collaborative
- Inform the content of the website and the webinar series



# Next Steps: Collaborative Website

## Website: [Hydrillacollaborative.com](http://Hydrillacollaborative.com)

- An interactive platform to:
  - Centralize information on management/prevention techniques, research, resources, and other topics you identify
  - Connect stakeholders





# Questions?

