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**THIS MY SAD  
TALK**



# OVERVIEW:

What options do I have for lake improvement SADs?

What is the process?

Who oversees the project?

What else goes into a project?



\*Disclaimer: Theo is not a lawyer. This is a summary overview. If undertaking a project, consult with legal counsel and read the act(s) carefully multiple times



# SPECIAL ASSESSMENTS: MULTIPLE METHODS

**PA 188**  
Public  
Improvements  
(Township)

**PA 185**  
Board of Public  
Works

**PA 309**  
Inland Lake  
Improvements  
(Lake Board)

What I'm most familiar with



# OVERSIGHT



## 188: Township Board

## 185: Board of Public Works

- 5-15 members based on population and approved by BOC including:
- Drain Commissioner

## 309: Lake Board

- BOC member
- Municipal rep from each unit (2 if only 1 township)
- Drain Commissioner
- Member of public (landowner or potential owner)



# “ENABLING” IMPROVEMENTS:

188: Improvements can include: “The eradication or **control of aquatic weeds and plant**”

The construction, **improvement and maintenance of a lake...**”

185: **Can acquire** “water supply, sewage disposal or refuse system, or the **making of lake improvements** or erosion control systems or the improvement, enlargement, or extension of any of these may be financed...”



309: ...for the protection of the public health, welfare, and safety and the conservation of the natural resources of this state, or to preserve property values around a lake, **may provide for the improvement of a lake, or adjacent wetland...**



# INITIATING THRESHOLDS



188: Township resolution or if initiated by the property owners and the township requires a petition, must be signed by more than **50% of the total land area owners** to avoid blocking petitions

185: Township resolution with no legislated minimum petition requirement.

We recommend 2/3 approval by petition

309: “The local governing body of any local unit of government in which the whole or any part of the waters of any public inland lake is situated, upon **its own motion or by petition of 2/3** of the freeholders owning lands abutting the lake”



# APPROVAL PROCESS



188:

Petition (not required)  
Township(s) support by  
resolution

Two public hearings with 2x  
notice in newspaper and mailer  
10 days prior to hearings:

- First to approve the project
- Second to confirm the roll

Assessment goes on tax bill

185:

Petition (not required)  
Township(s) support by  
resolution

Board of Public Works approval  
Board of Commissioners  
approval

Two public hearings with 2x  
notice in newspaper and mailer  
10 days prior to hearing:

- First to approve the project
- Second to confirm the roll

Assessment goes on tax bill

309:

Petition (not required)  
Local governing body passes  
resolution  
Report and costs created and  
reviewed by Lake Board

Two public hearings with 2x  
notice in newspaper and mailer  
10 days prior to hearing:

- First to approve the project
- Publish resolution to  
proceed in newspaper
- Second to confirm the roll

Assessment goes on tax bill

\*more timebound deadlines  
under 309



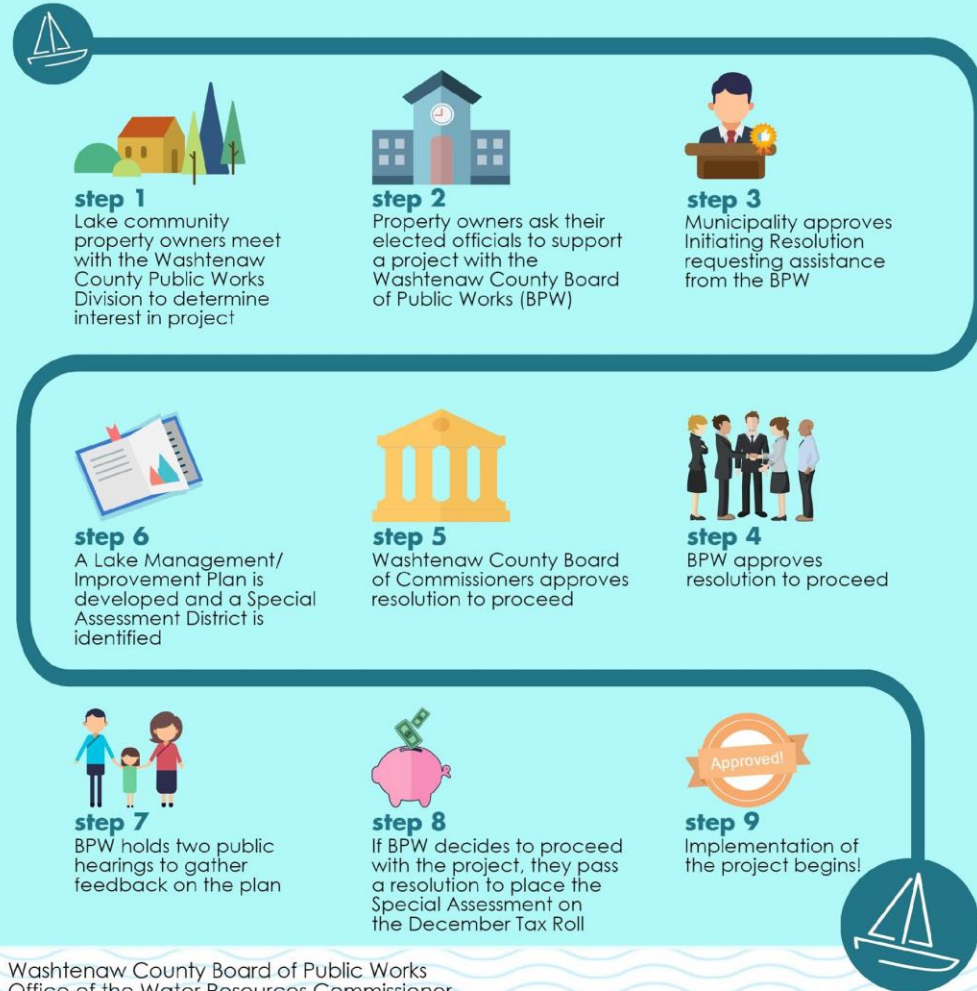
# PROCESS PA185:

<https://www.washtenaw.org/2475/Chain-of-Lakes-Project-Approval-Process>

## Implementing a Lake Management Program

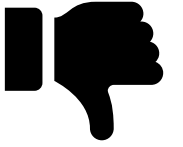
through Washtenaw County using Public Act 185

Lake management and improvement projects help control invasive and nuisance aquatic weeds - improving water quality, enhancing fishing habitats, protecting and increasing property values and expanding recreational opportunities.





# OBJECTING:



188:

“...all assessments on that assessment roll shall be final and conclusive unless an action contesting an assessment is filed in a court of competent jurisdiction **within 30 days** of the confirmation.”

But- you get a redo!

185:

“...all assessments thereon shall be final and conclusive unless attacked in a court of competent jurisdiction **within 30 days** after the confirmation of the roll.”

And you get a redo!

309:

“...determined final and conclusive unless attacked in a court of competent jurisdiction **within 30 days** after the notice of confirmation has been published...”

Everyone gets a redo!



# SO you've set up a SAD: Now what?

- Ongoing stakeholder engagement
- Contracts (if any)
- Communication strategy
- Budgeting
- Assessor communication (deadlines)
- Maintenance of roll (parcel splits, combinations)
- Reporting results back to residents
- Hazard mitigation strategy (i.e. HAB response)



# PA 185 WASHTENAW COUNTY EXAMPLES:

**Western Washtenaw Recycling Authority:** 5 townships, 1 city, over 8,000 HH

Debt: 15 years

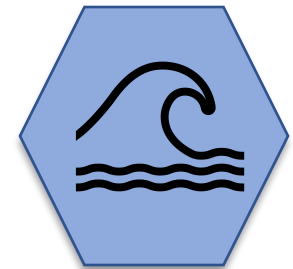
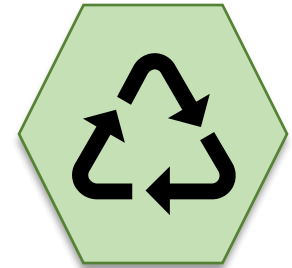
O&M: 5 year

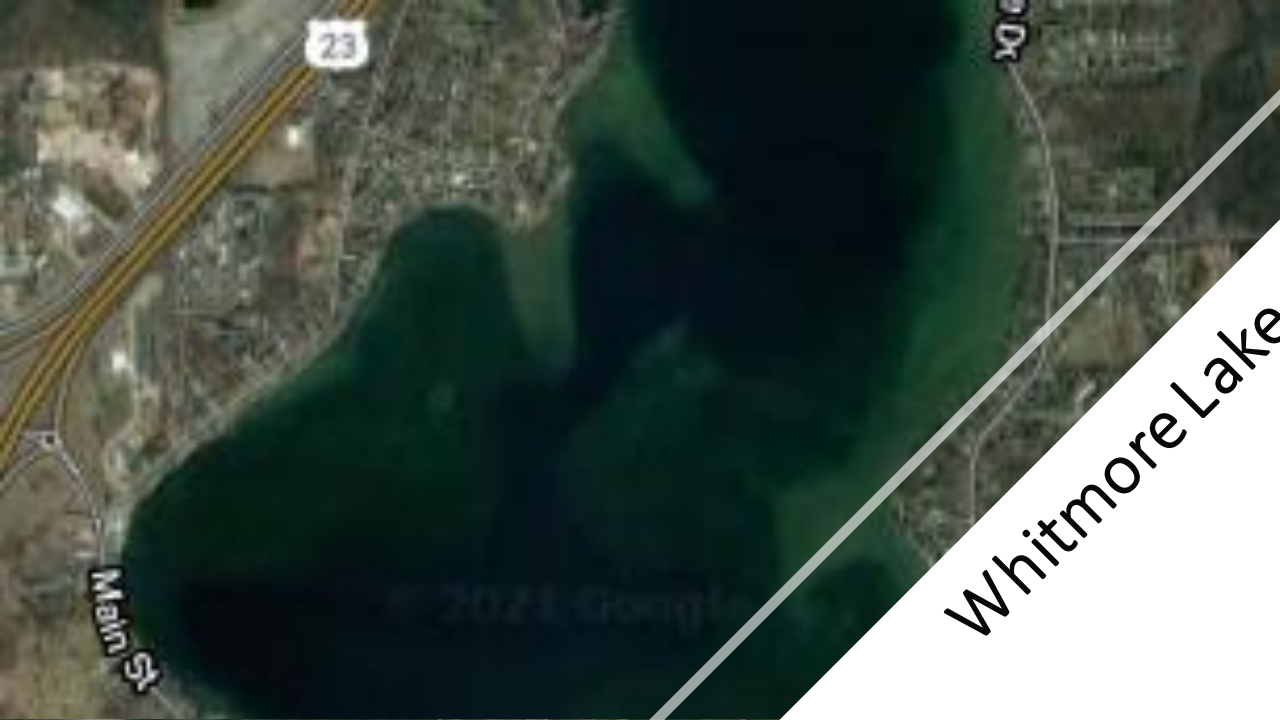
**Huron River Chain of Lakes:** 9 lakes, 5 years, 2,362 HH

**North Lake:** 5 years but likely increasing to 7 year, 365 HH

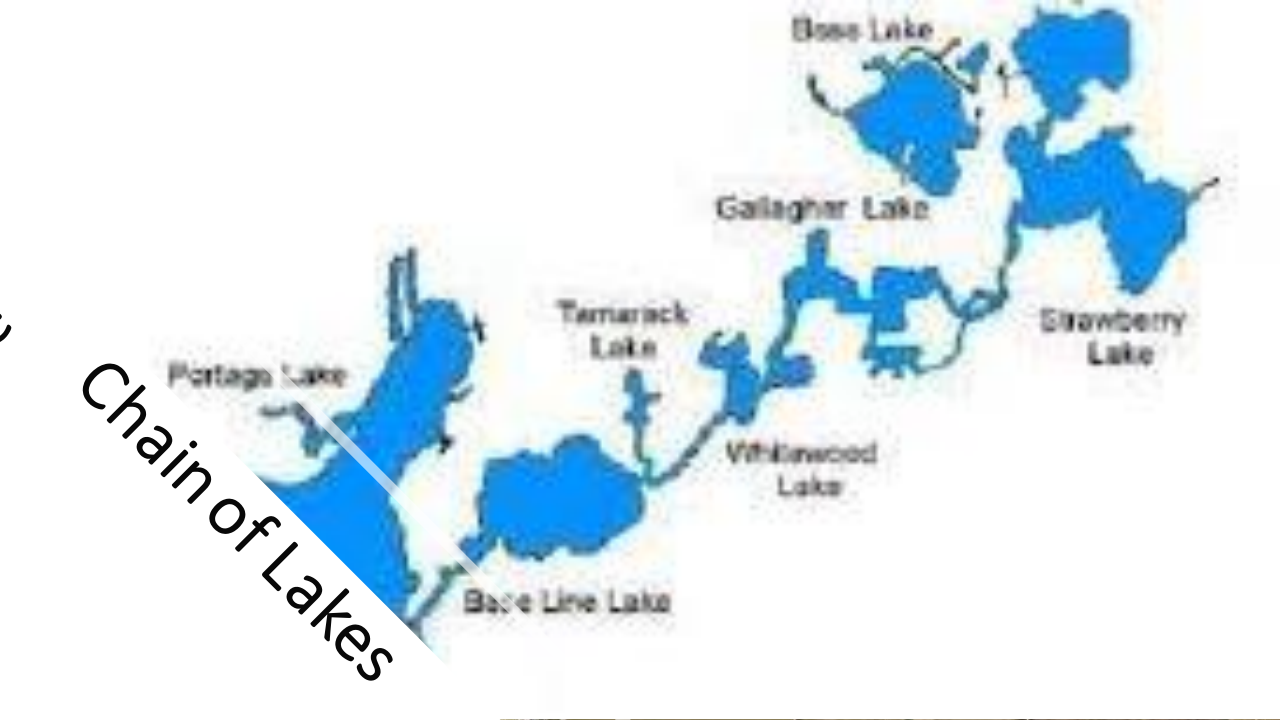
**Whitmore Lake:** 5 years, 937 HH

**Pleasant Lake:** 5 years, 239 HH





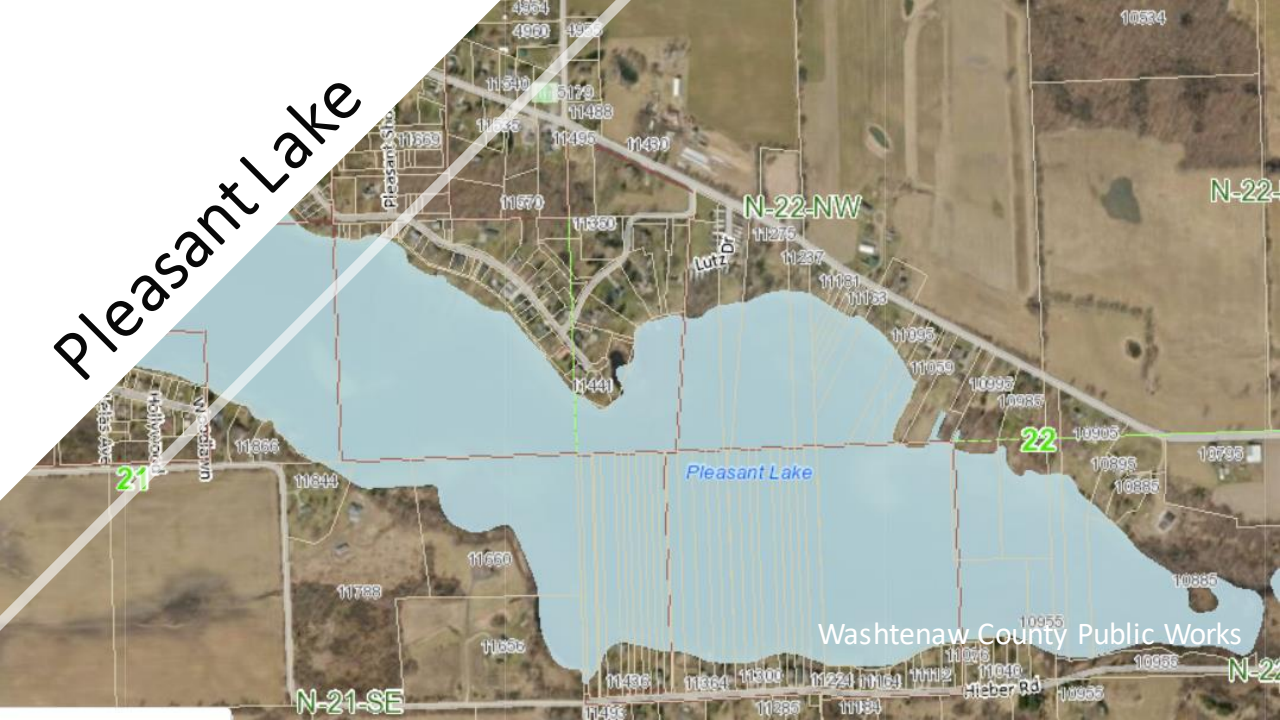
Whitmore Lake



Chain of Lakes

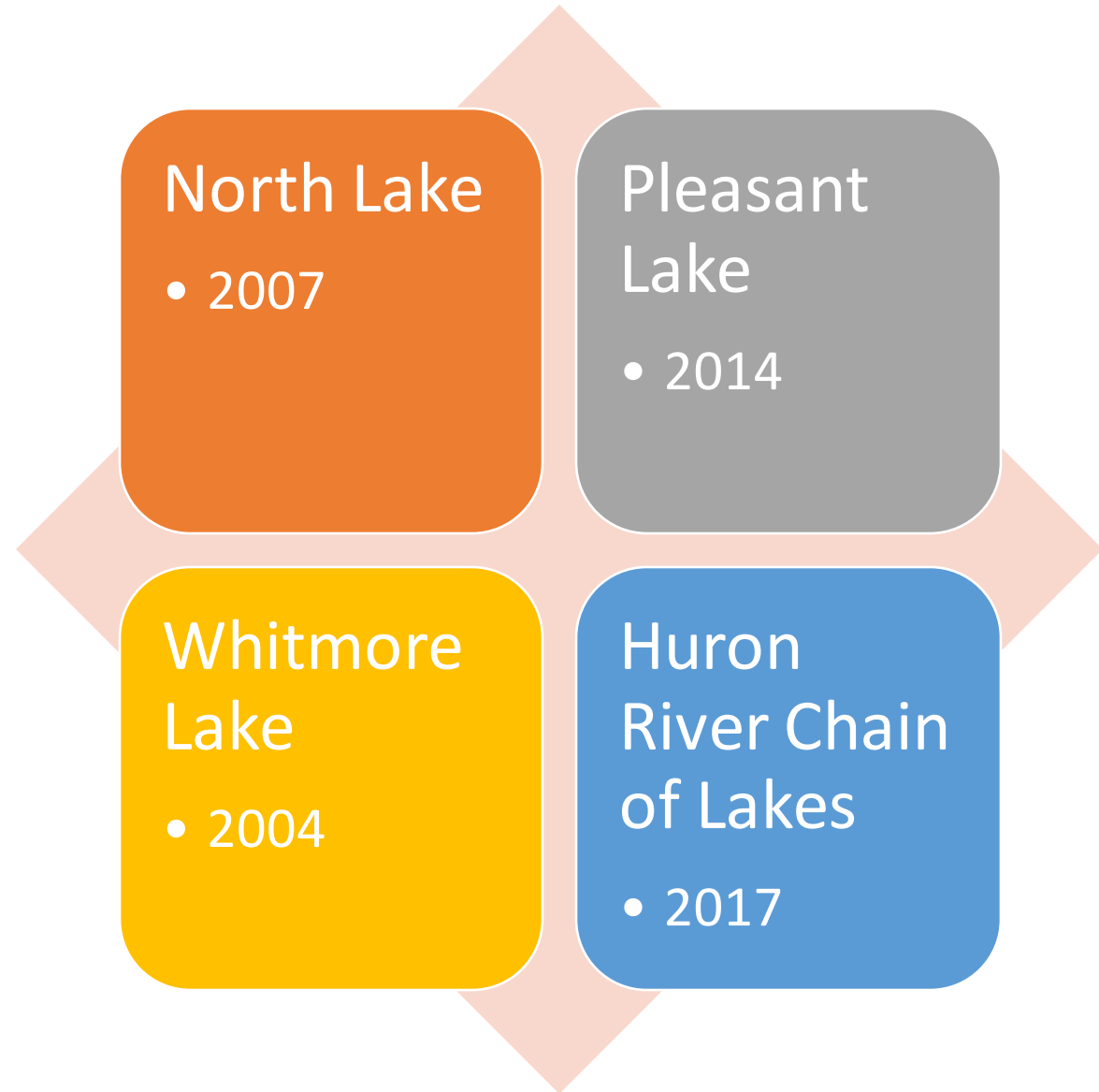


North Lake



Pleasant Lake

When was  
each SAD  
established?



# North Lake



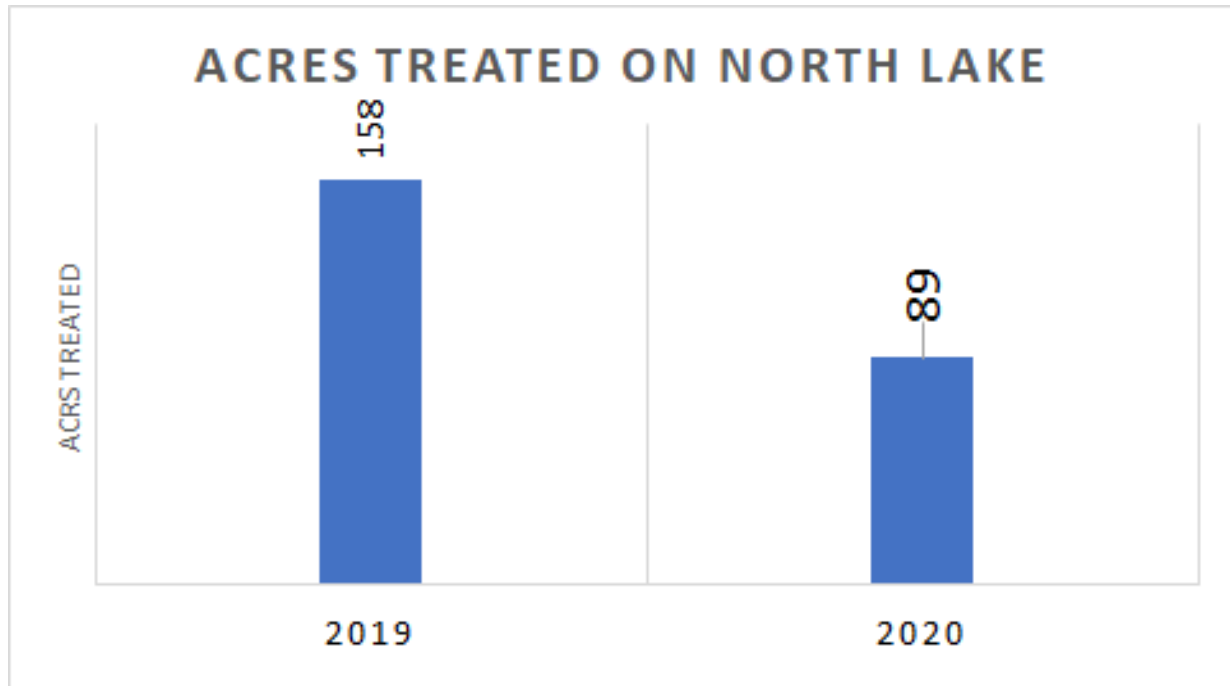
- 227 surface acres
- 365 Parcels
- Public Boat Launch
- 39.43% of total surface area treated in 2020
- 2020 about \$13,000 spent in herbicide treatment

## What makes this project go?



- Minimal Permit Restrictions
  - Standard permit from EGLE
- Very Active Lake Association
  - Small group of residents who are our eyes and ears
- Strong relationship between all involved parties
  - Lake Manager, Herbicide Applicator, County & Lake Association
- Well established project
  - The residents know what to expect

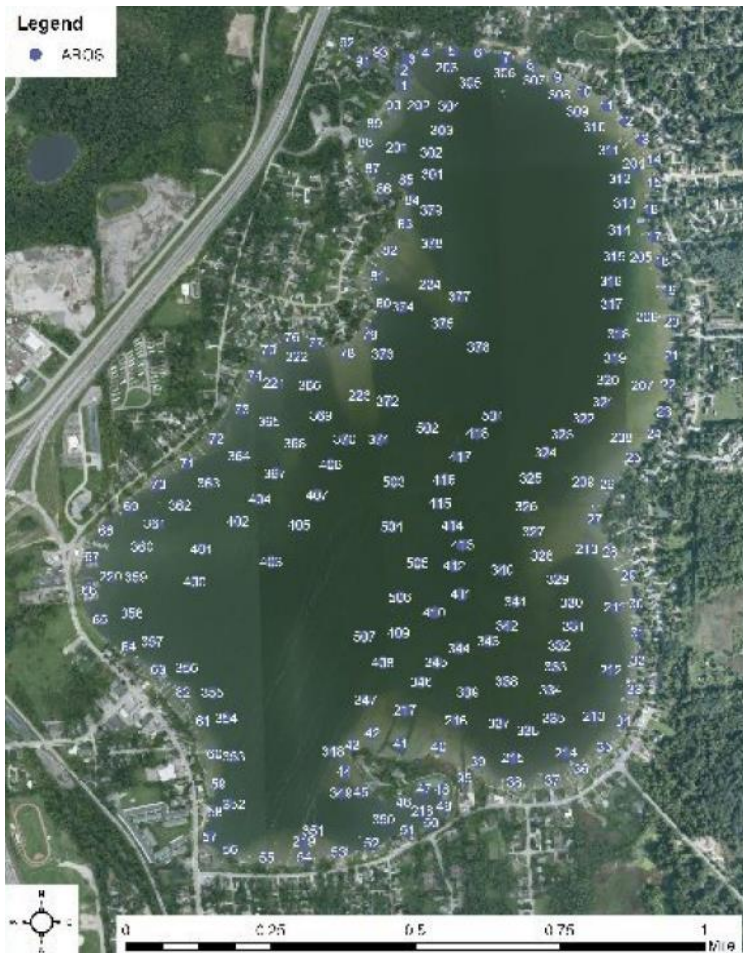
## What makes this project slow?



- Optimal opportunity for algae blooms
  - Undeveloped shoreline limits areas for treatment
  - Last 2 years has brought concern
- Public Boat Launch
- Lots of invasive weeds
  - Treatment changes year to year



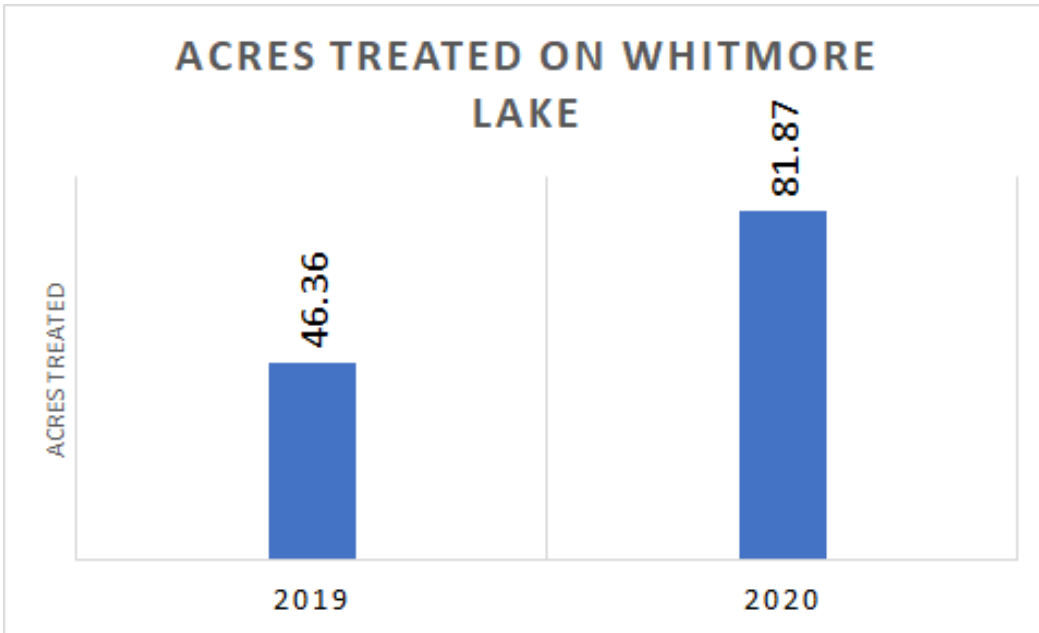
# Whitmore Lake



- 677 surface acres
- 937 Parcels
- Public Boat Launch
- 2020 12% of the lake surface area was treated
- 2020 about \$25,000 spent in herbicide treatment

## What makes this project go?

- Minimal Permit Restrictions
  - Standard permit from EGLE
- Strong relationship between all involved parties
  - Lake Manager, Herbicide Applicator, County
- Not a lot of resident input



## What makes this project slow?



- No Active Lake Association
  - 10 Residents
- Residents are not sure who to contact when they have a concerns
- Public Boat Launch

# Pleasant Lake

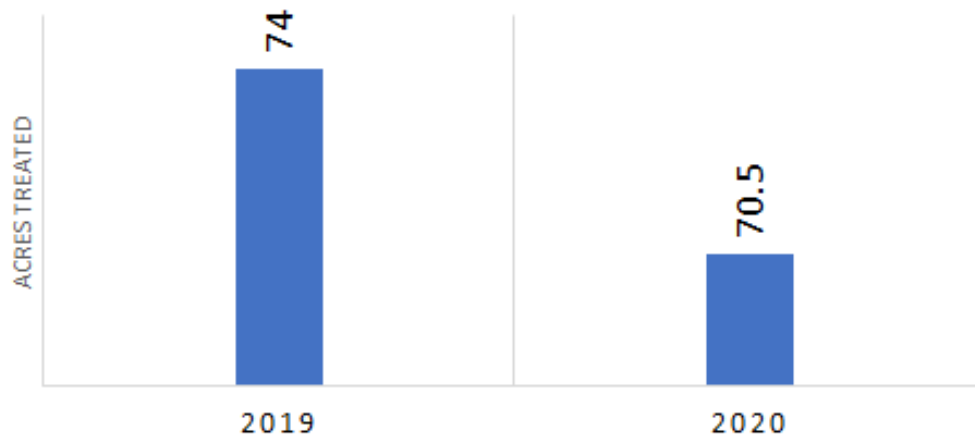


- 202 surface acres
- 239 Parcels
- % treated
- 2020 about \$24,000 spent in herbicide treatment

## What makes this project go?

- Minimal Permit Restrictions
  - Standard permit from EGLE
- Very Active Lake Association
  - Lon N.
- Strong relationship between all involved parties
  - Lake Manager, Herbicide Applicator, County & Lake Association
- No Public Boat Launch
  - Starry Stonewort

ACRES TREATED ON PLEASANT LAKE



## What makes this project slow?

- Residents who are not supportive of the project
- Dead Geese & HAB
- No Septic System
  - Point of sale inspection



# Huron River Chain of Lakes



- 1,602 surface acres
- 2,362 Parcels
- Public Boat Launch
- 2020 about \$215,000 spent in herbicide treatment & harvesting

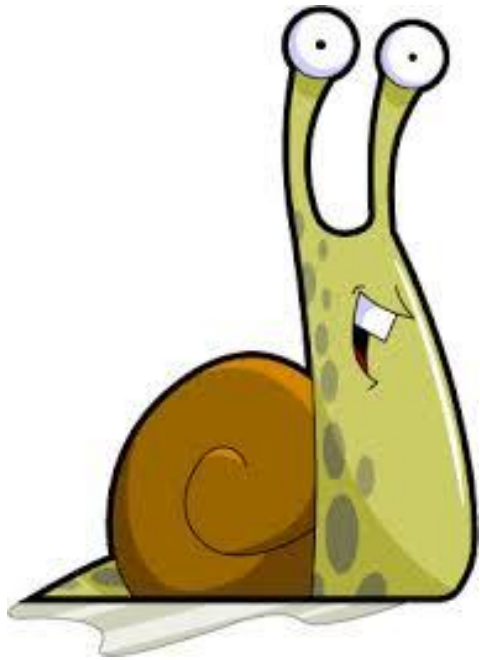
## What makes this project go?



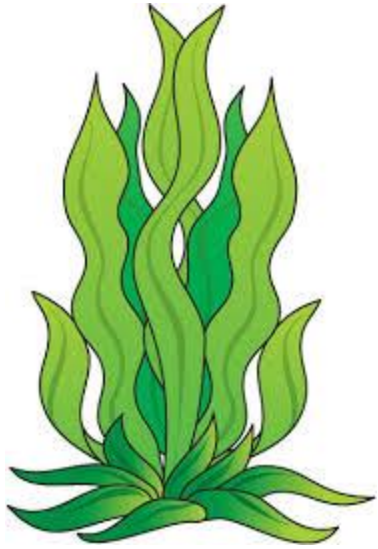
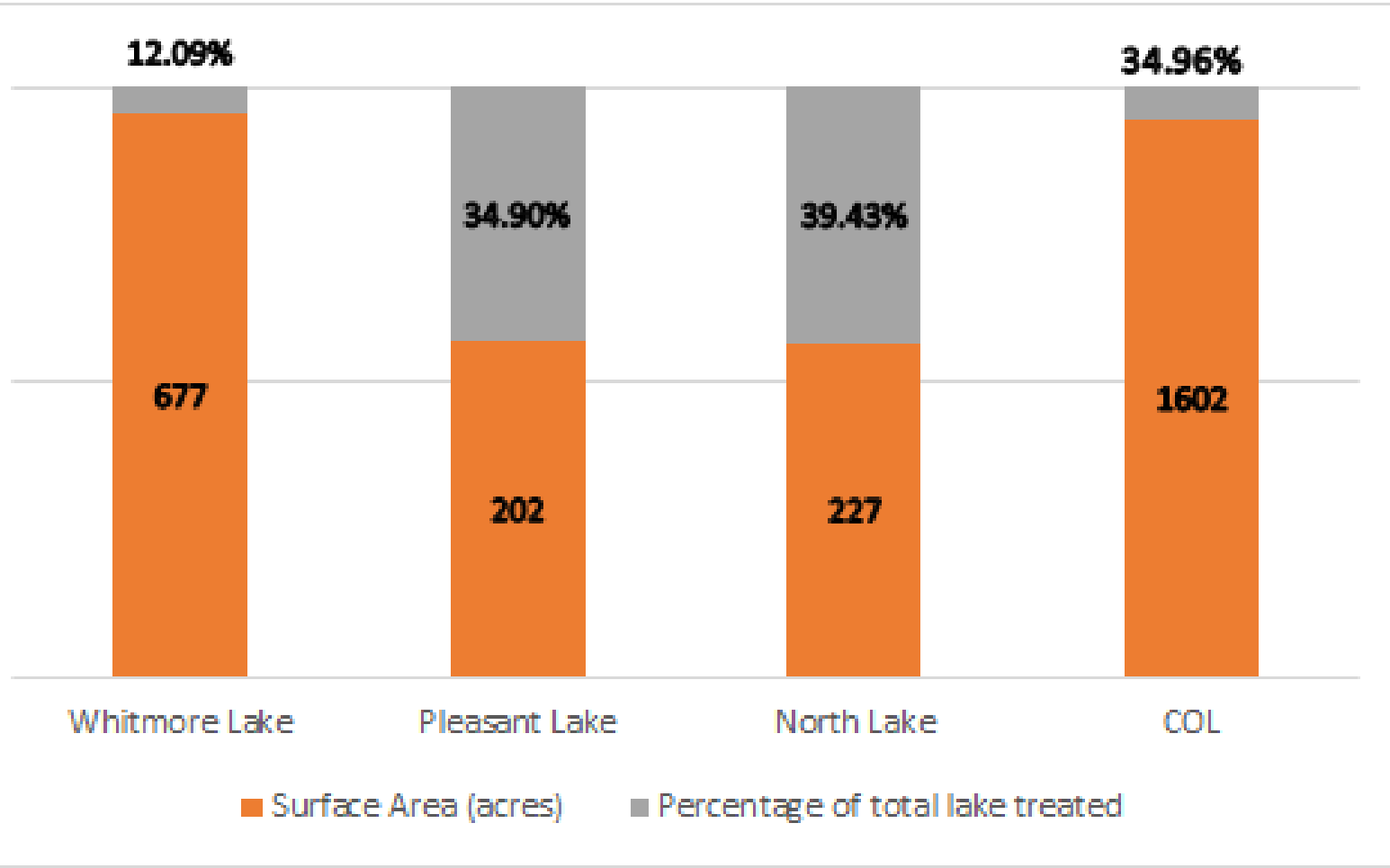
- Strong relationship between all involved parties
  - Lake Manager, Herbicide Applicator, Harvester, County & Lake Association
- Online Comment form
- Email list of residents who want to receive updates
- Mailing of Treatment Notice
  - Allows us to reach the participants 1x a year
- We have an engaged group of residents who are actively trying to educate other residents on the lake chain
- County hosts a yearly education meeting each year to get residents in front of the Management Team to learn about the project



## What makes this project slow?

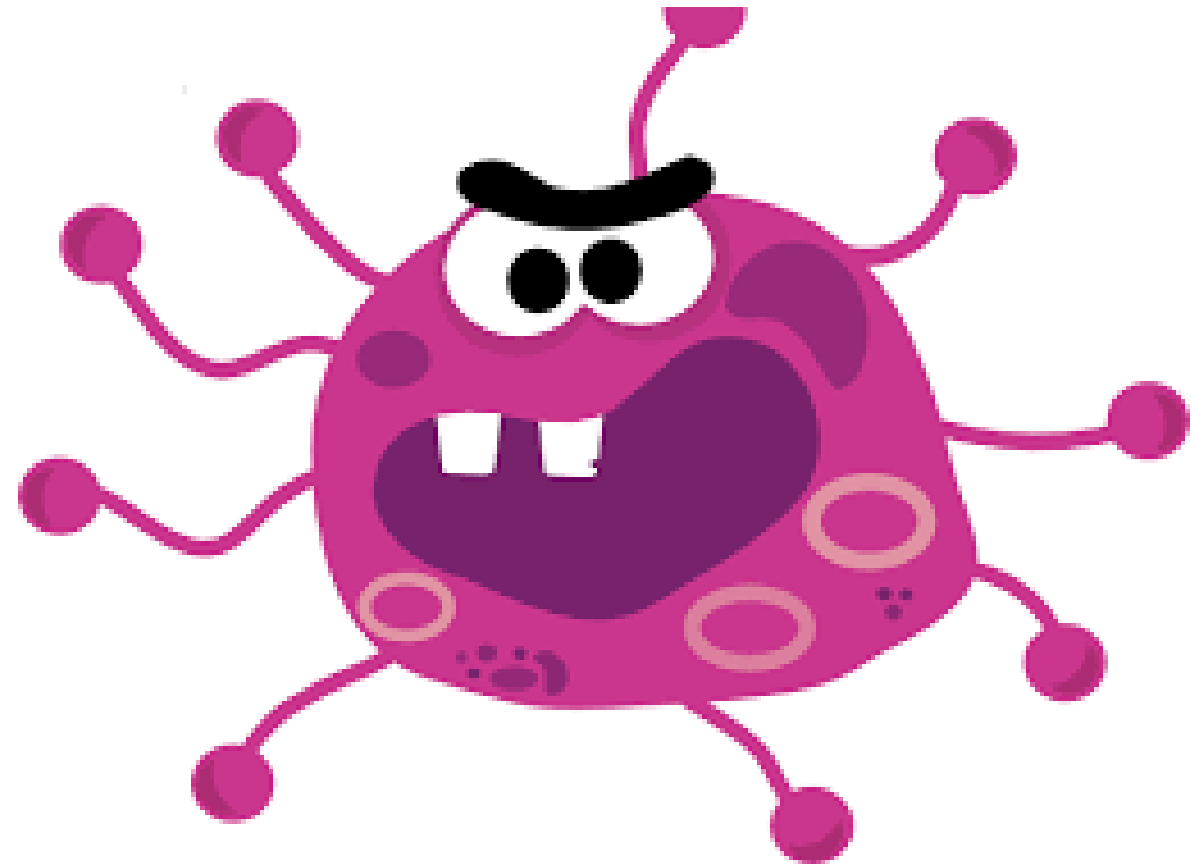
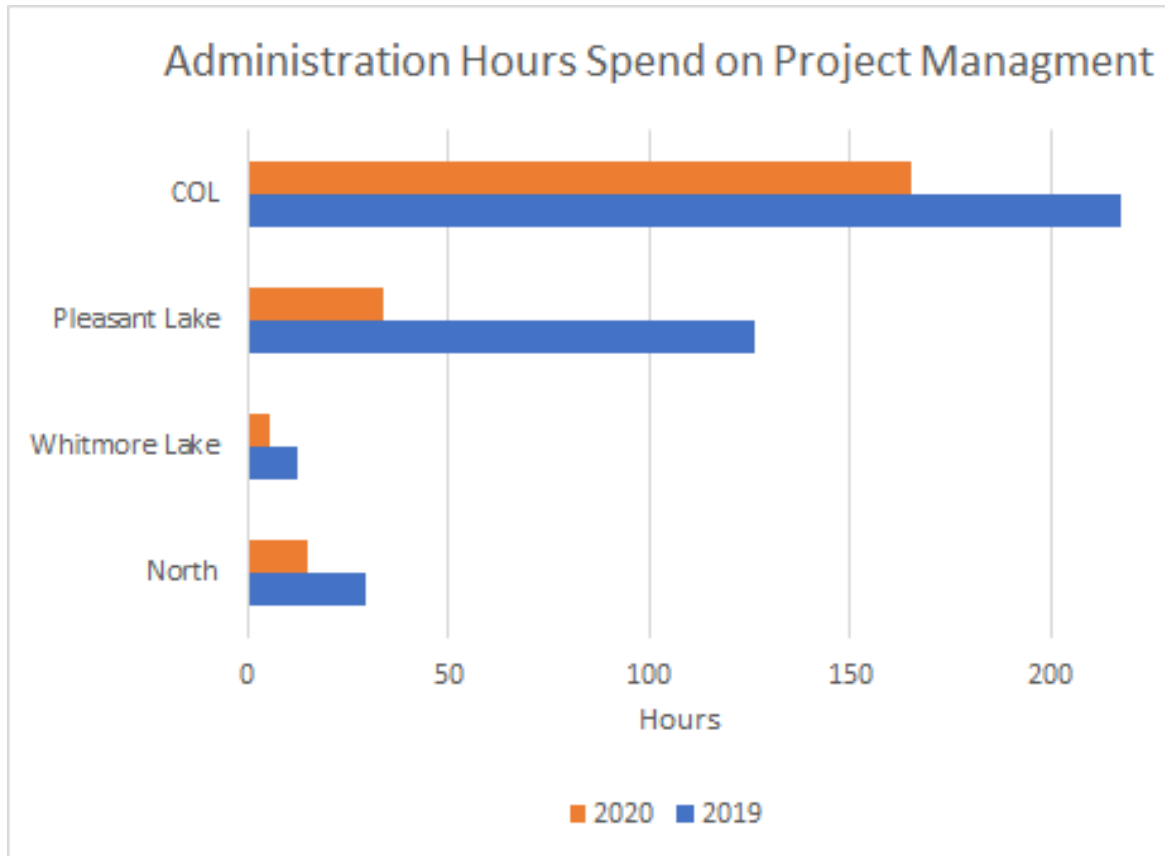


- Residents who are not supportive of the project
- Large amount of herbicide treatment restrictions when it comes to federally threatened and endangered species
- 9 Lakes grouped into one project
  - Water Retention
  - Connecting river not permitted
- Multiple permit revisions required
- Downriver drinking water notifications
- Offloading locations for Harvester
- Struggle to reach everyone in the SAD



# 2020 Was Rough....

Yet, it allowed us to re-evaluate how we were managing the projects!



# What typically goes into a project each year?

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## Permits to EGLE for herbicide treatment

- If permit restrictions are required additional planning is needed

## Sending treatment notifications to residents

- Typically the applicator completes this task

## Contracts

- If needed

## Payment and tracking of invoices

- Your Lake Manager may do this for you

## Notifying residents of upcoming surveys and treatments

- Can be difficult or easy depending on the involvement of your residents

## Renewal

- This can be very time consuming when you have public hearings and renewal of contracts

# Know your Lake



Lake Association



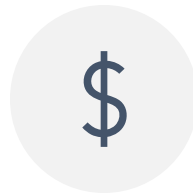
Size of  
Community



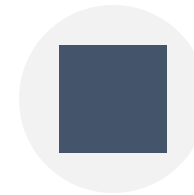
Community  
Engagement



Permit  
Restrictions



Cost



Ecological  
Impacts



# Vegetation Assessment Case Study: Pleasant Lake, Washtenaw County, Michigan

**Gabby Metzner-Gustafson**

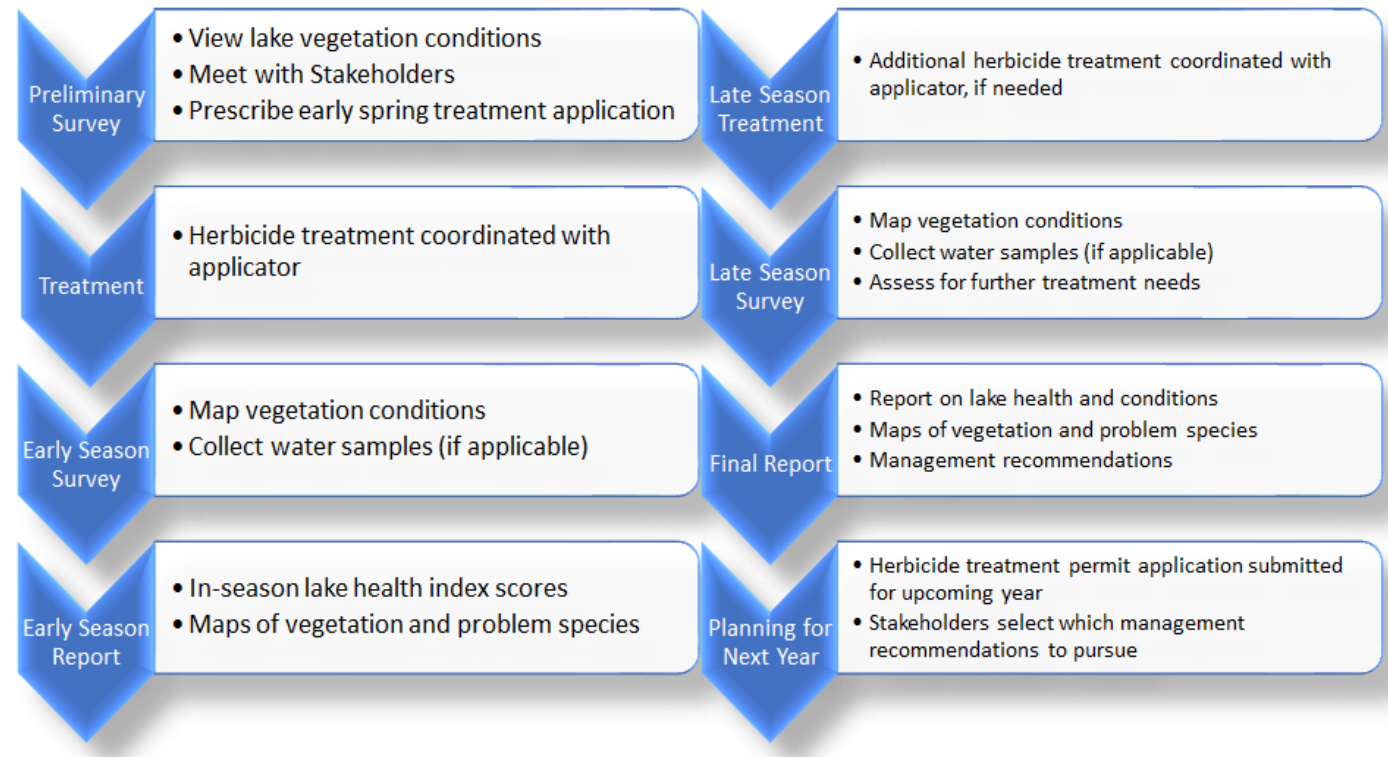
Project Scientist

Kieser & Associates, LLC

# Vegetation Assessment

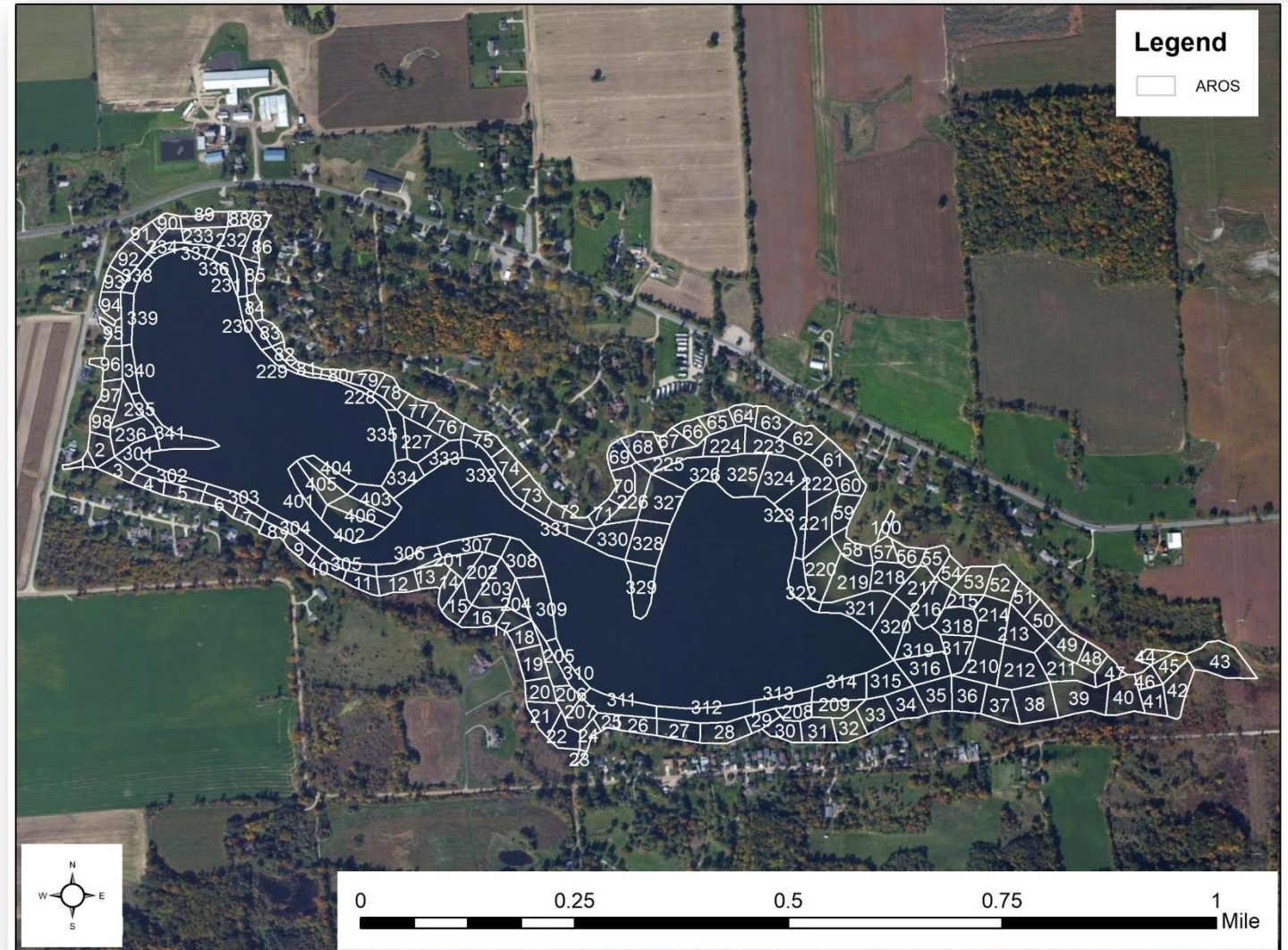
- Assess aquatic vegetation during summer recreational season:
  - Nuisance conditions
  - Ecological conditions
  - Management needs/outcomes
- Detailed field data collection
- Vegetation mapping
- Whole-lake analyses based on established scientific metrics
- Consistent data analysis and presentation
- Track changes

## LakeScan™ Assessment Process



# Vegetation Survey Methods

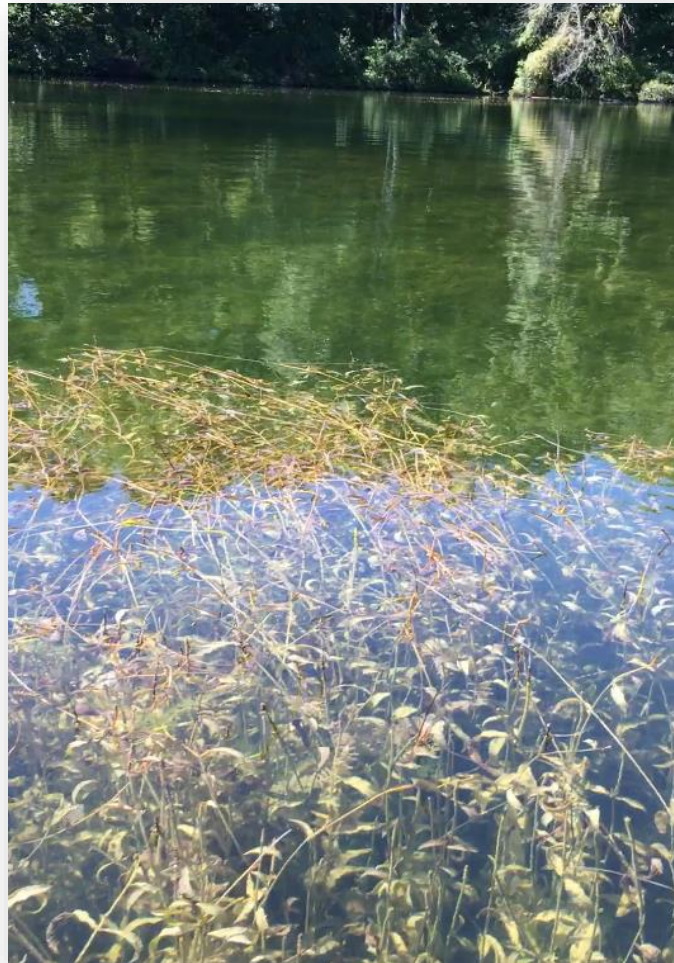
- Use AROS
  - Aquatic Resource Observation Site
  - Sample Area



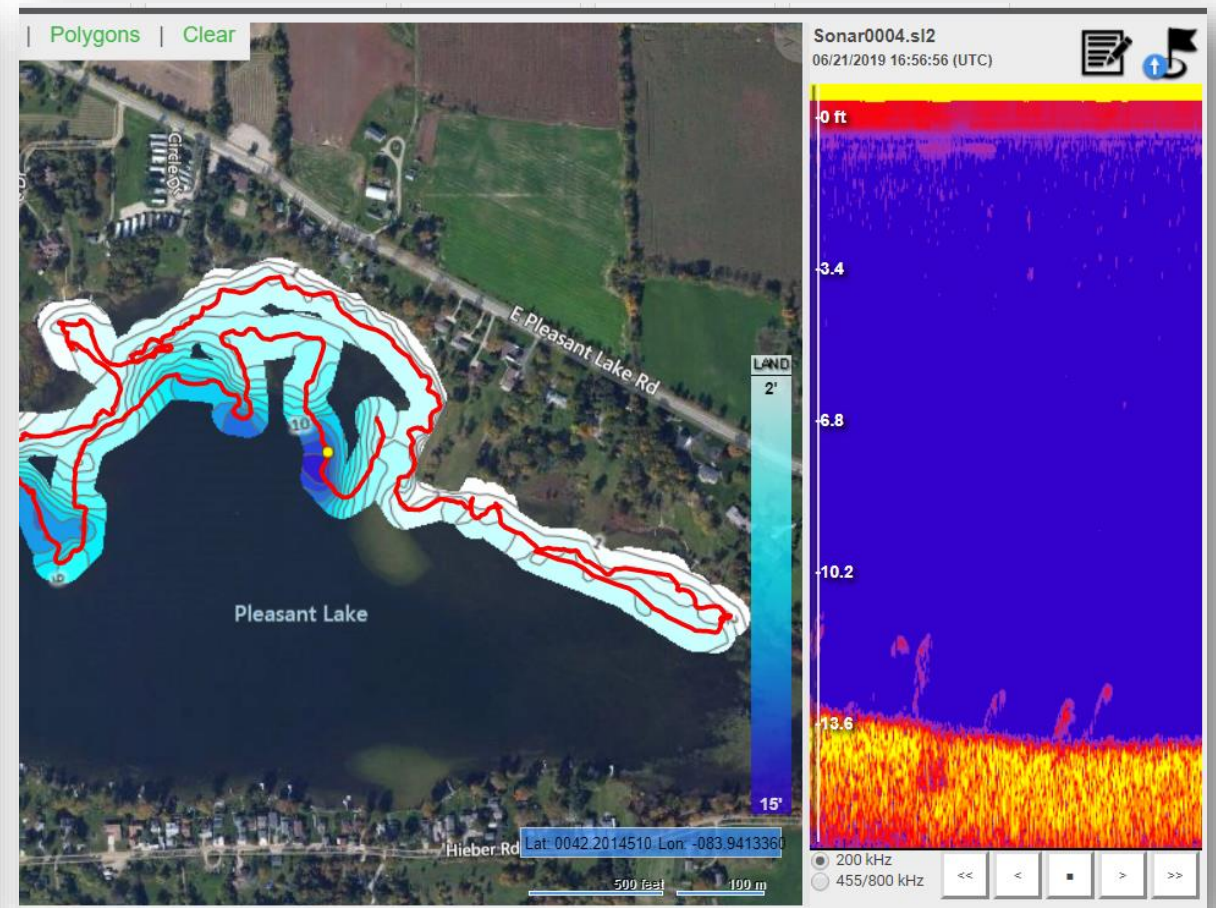
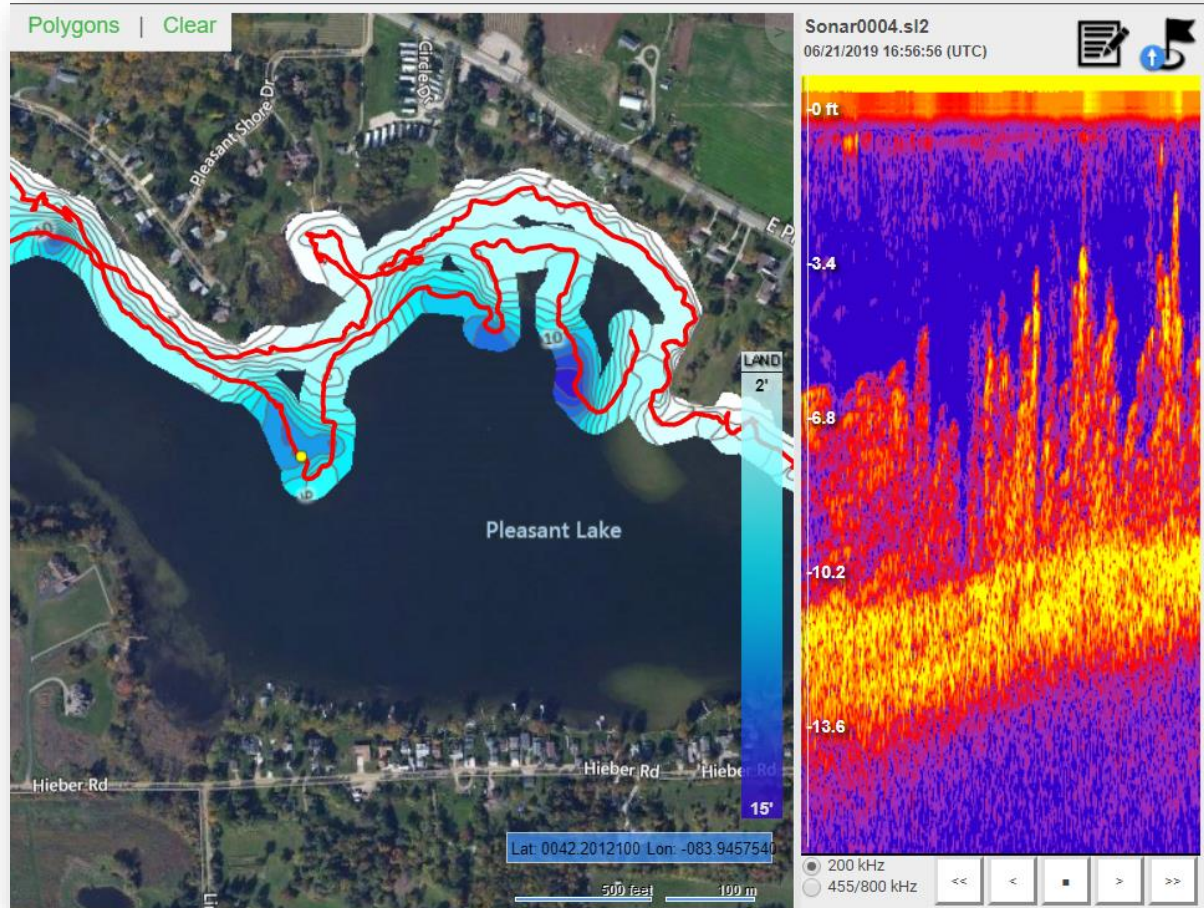


# Vegetation Survey Methods

- Use AROS
  - Aquatic Resource Observation Site
  - Sample Area
- Rake tows, visual observations, sonar



# Sonar Comparisons



# Early Season Survey

- June 1, 2020
- Abundant vegetation growth
- Water lily and water shield dominated shallows
- Ecological nuisance species detected:
  - Eurasian Watermilfoil Hybrid
  - Curly-Leaf Pondweed
  - Starry Stonewort



# Late Season Survey

- August 6, 2020
- Abundant vegetation growth
- Water lily and wild celery densities increased
- Ecological nuisance species detected:
  - Eurasian Watermilfoil Hybrid
  - Curly Leaf Pondweed
  - Starry Stonewort

Wild Celery

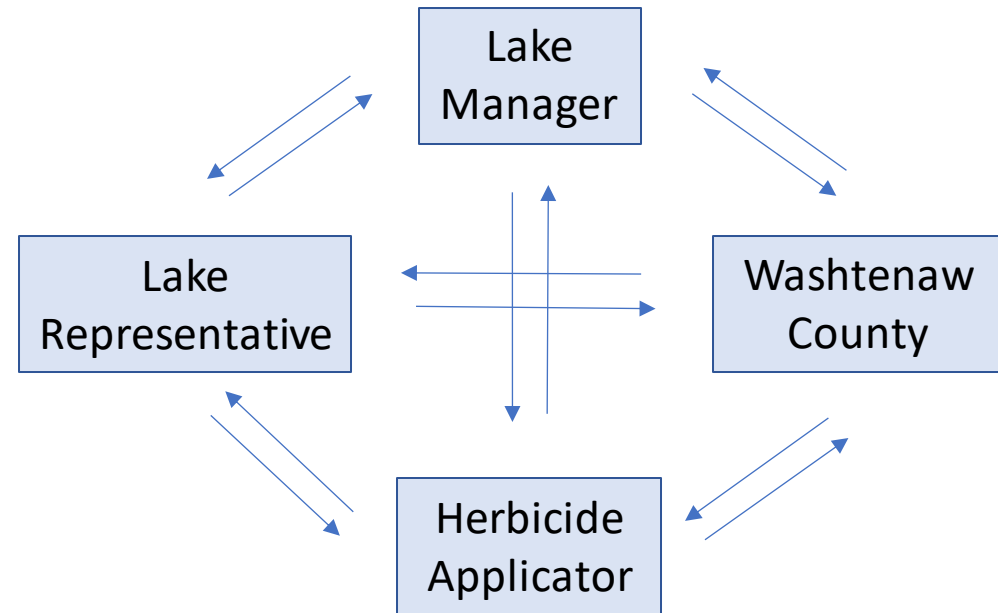


Starry Stonewort



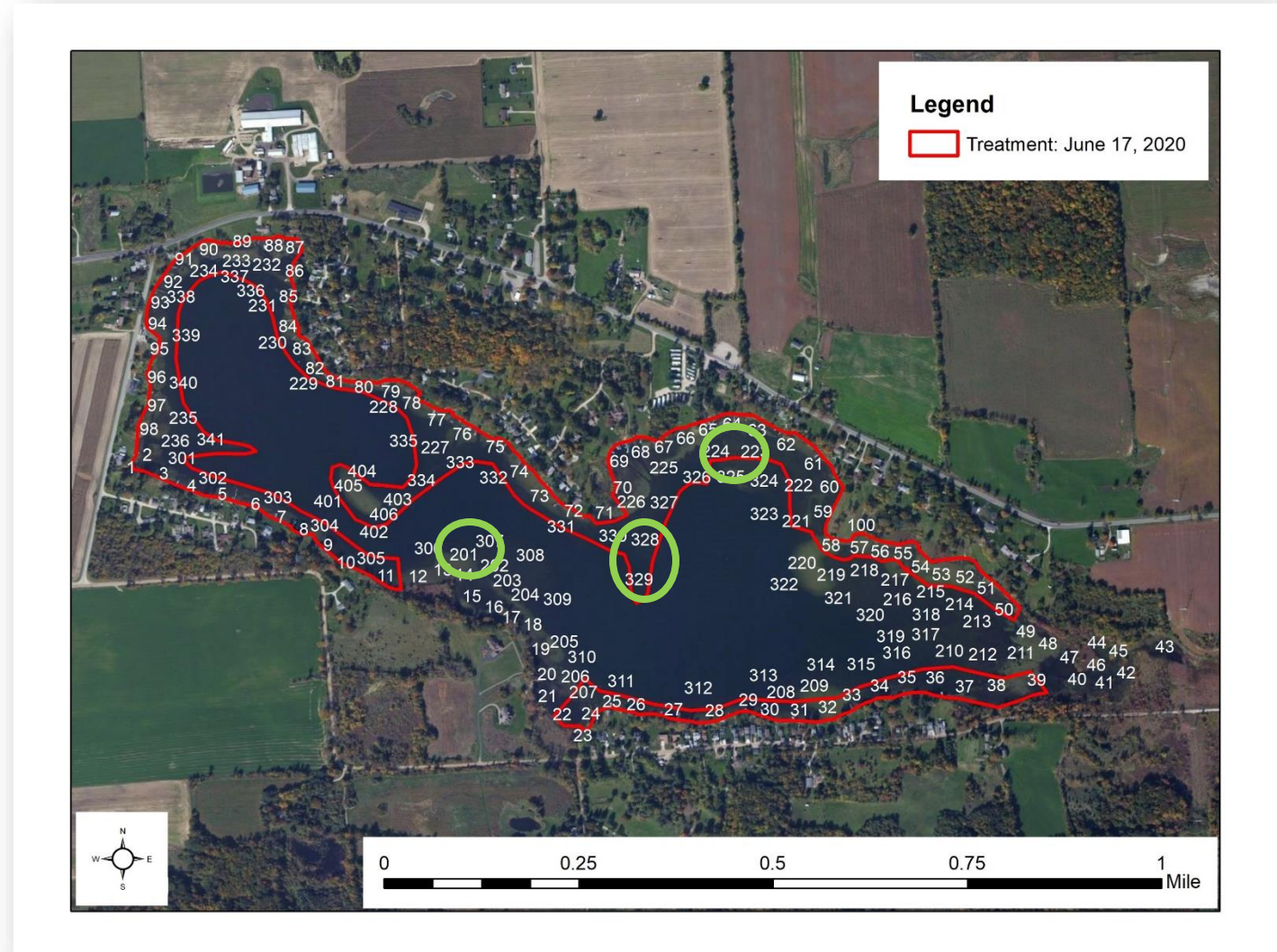
# Treatment Considerations

- Optimal Lake Improvement Considerations
  - Ecological
  - Recreational/Navigational
  - Overall Cost
- Communication is Key



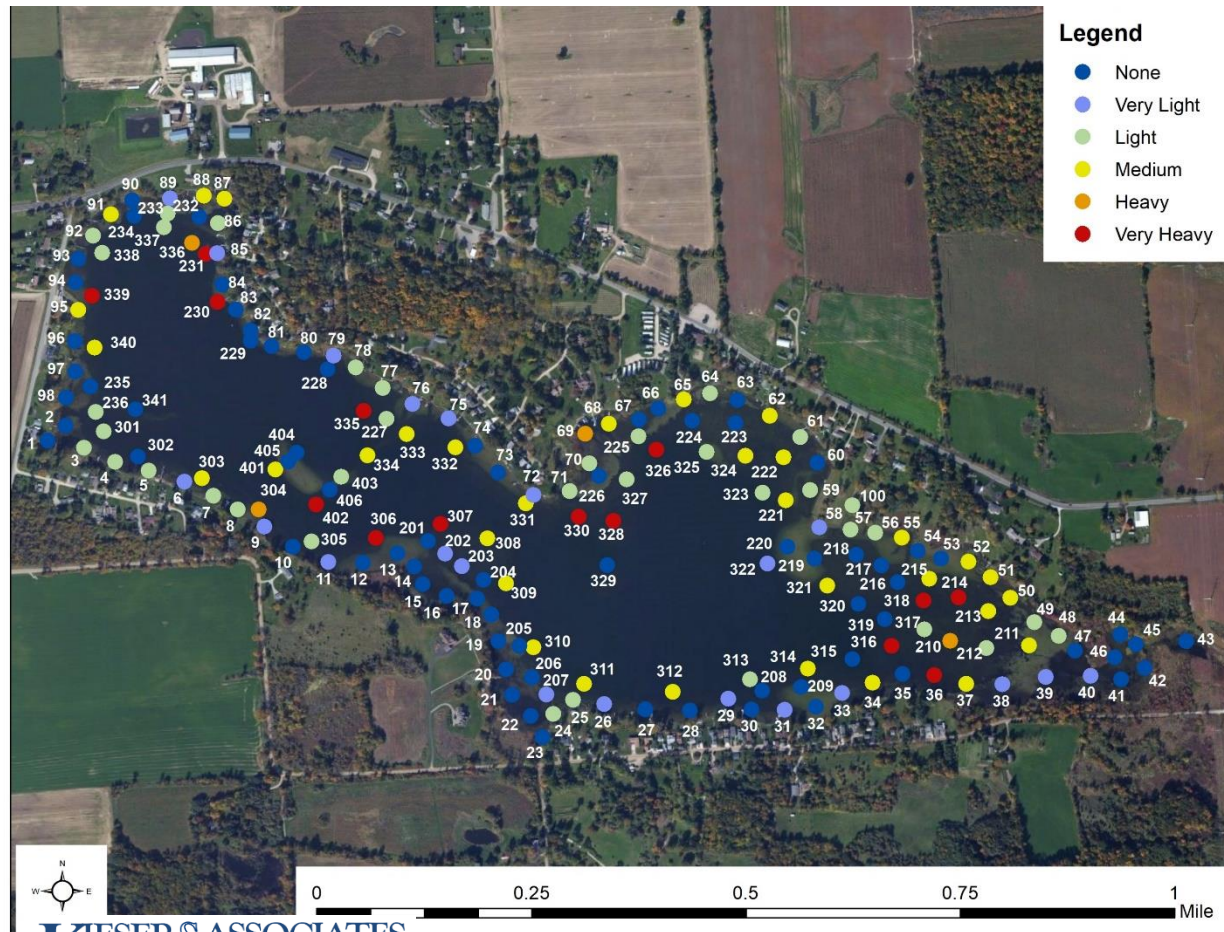
# 2020 Treatment

- June 17, 2020
  - Target species: Ebrid Milfoil and Curly Leaf Pondweed
  - Treatment outcome was successful
- September 21, 2020
  - Target species: Starry Stonewort and \*Water Lilies
  - Treatment outcome will be assessed in 2021

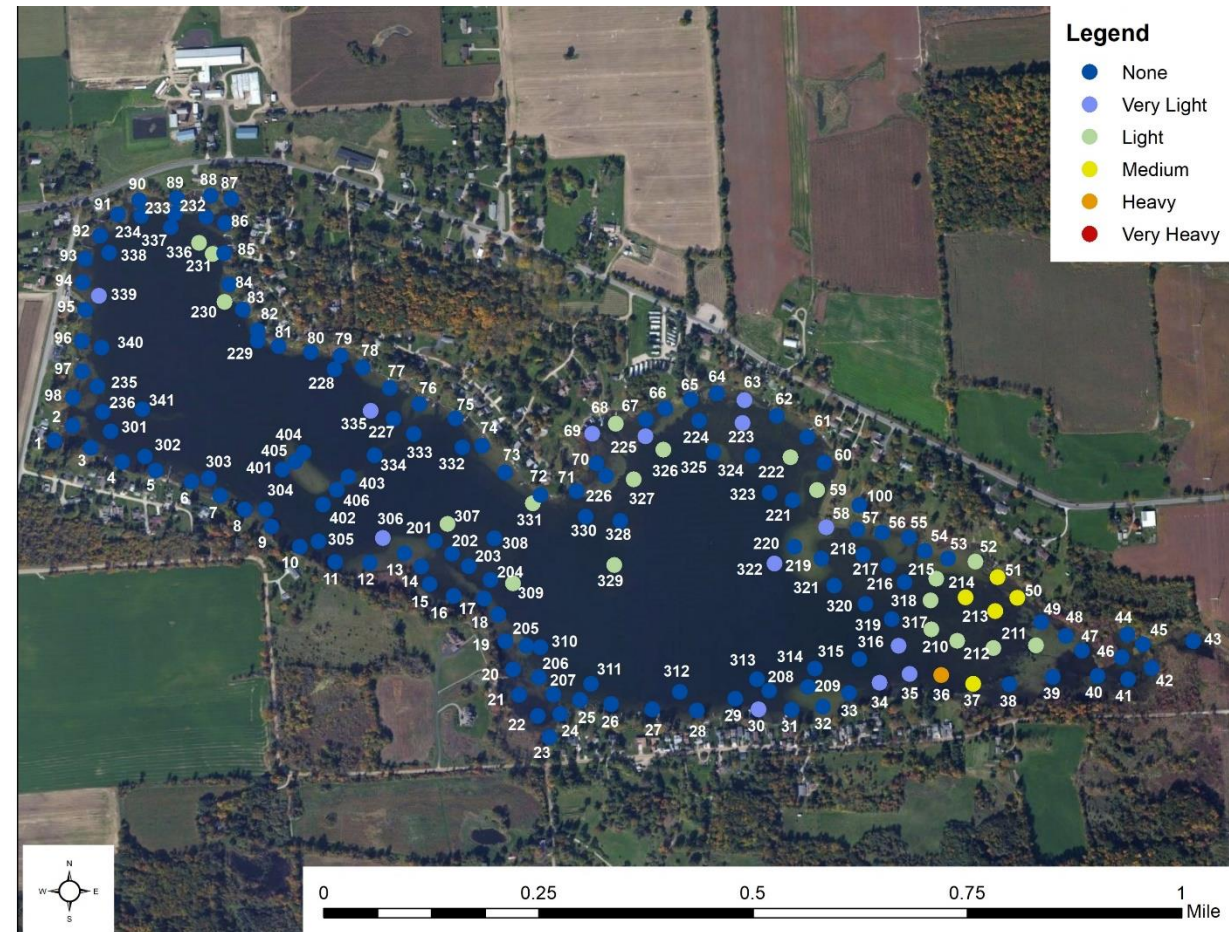


# Eurasian Watermilfoil Hybrid

## Early Season Survey



## Late Season Survey



# 2020 Summary

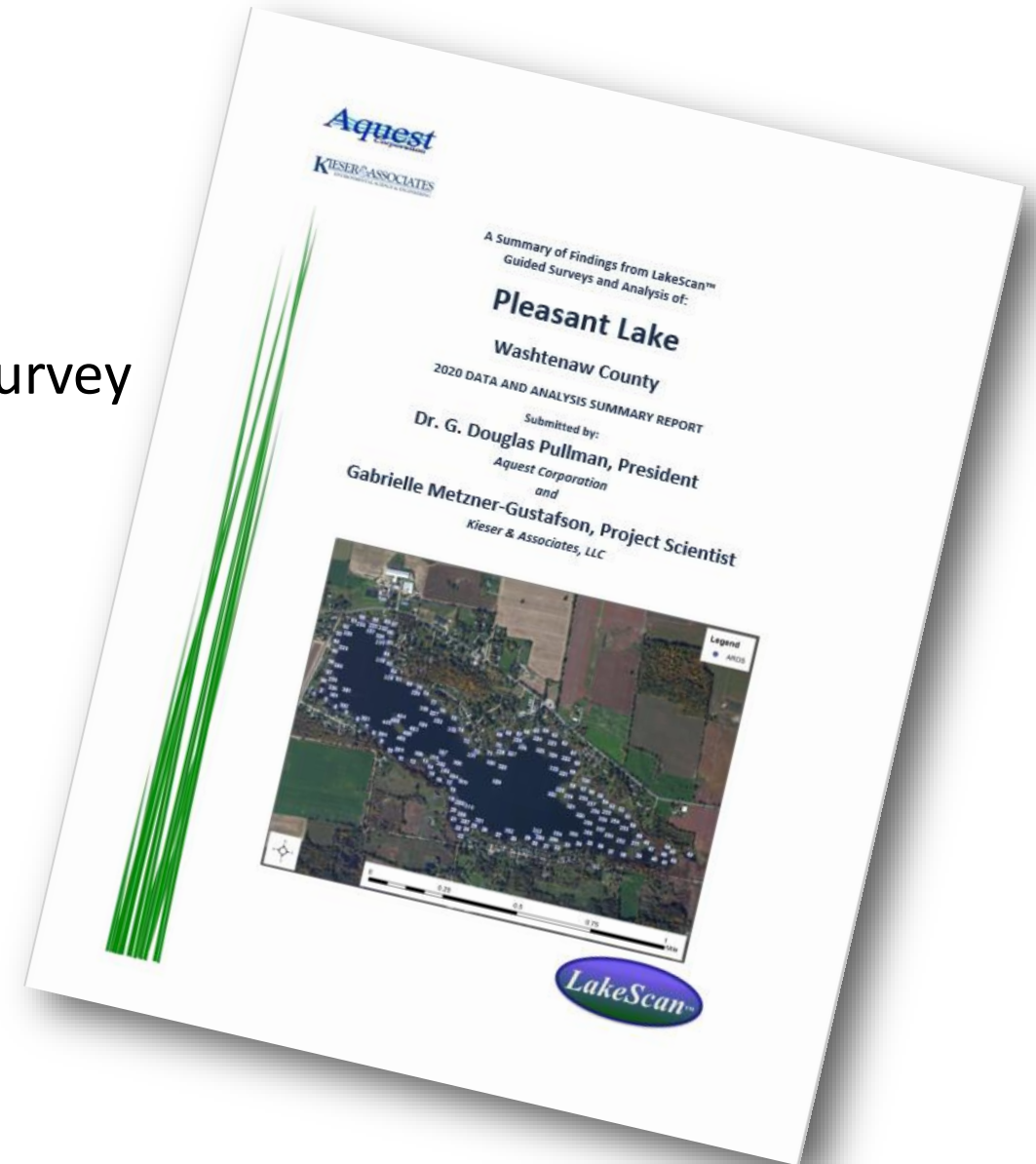
- Ebrid milfoil decreased
- Curly-Leaf Pondweed decreased significantly
- Starry Stonewort was detected in the same location as last year, spread to other locations





# Reporting

- Mid-Season Interim Report
  - Vegetation conditions after Early-Season Survey
- Final Report
  - Includes
    - Vegetation conditions throughout the year
    - Historical comparisons
    - Efficacy of management
    - Future recommendations



# References

- Kipp, R.M., M. McCarthy, A. Fusaro, and I.A. Pfingsten, 2019, *Nitellopsis obtusa* (Desvaux in Loiseleur) J. Groves, (1919): U.S. Geological Survey, Nonindigenous Aquatic Species Database, Gainesville, FL, <https://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=1688>, Revision Date: 6/27/2019, Peer Review Date: 11/12/2015, Access Date: 9/17/2019 <https://nas.er.usgs.gov/queries/FactSheet.aspx?SpeciesID=1688>
- Larkin, Daniel J., et al. "Biology, ecology, and management of starry stonewort (*Nitellopsis obtusa*; Characeae): A Red-listed Eurasian green alga invasive in North America." *Aquatic botany* 148 (2018): 15-24.
- Pullman, G. Douglas, and Gary Crawford. "A decade of starry stonewort in Michigan." *Lakeline, summer* (2010): 36-42.

# Picture Sources

- Illinois Pondweed - [https://michiganflora.net/species\\_images/m/99373.jpg](https://michiganflora.net/species_images/m/99373.jpg)
- Sago pondweed: [https://agriflitedn.tamu.edu/aquaplant/files/2010/06/sago\\_pondweed\\_index.jpg](https://agriflitedn.tamu.edu/aquaplant/files/2010/06/sago_pondweed_index.jpg)
- Ebrid 1 - <https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwiEuLijwtXkAhV0OX0KHR-MB4IQjRx6BAGBEAQ&url=https%3A%2F%2Fwww.invasive.org%2Fbrowse%2Fdetail.cfm%3Fimgnum%3D1624031&psig=AOvVaw02jxVyVddKCUCbCfr1WsZ6&ust=1568729250379424>
- Chara - <https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwiTuvqDxdXkAhVxMH0KHQBQCjsQjRx6BAGBEAQ&url=%2Furl%3Fsa%3Di%26source%3Dimages%26cd%3D%26ved%3D%26url%3Dhttps%253A%252F%252Faquaplant.tamu.edu%252Fmanagement-options%252Fmuskgrass%252F%26psig%3DAOvVaw3IVkcn3KxWfGjIVx16BL-Y%26ust%3D1568729815854205&psig=AOvVaw3IVkcn3KxWfGjIVx16BL-Y&ust=1568729815854205>
- Ebrid 2 - <https://fwwa.org/new/wp-content/uploads/2018/08/EWM3.jpg>
- Bottom picture of curly-leaf pondweed - <https://discoverycenter.net/wp-content/uploads/2018/01/CLP-ID2-243x300.jpg>
- Water lily- <https://www.michiganflora.net/species.aspx?id=1730>
- Water shield - [https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwjw4\\_mWyNXkAhXMPn0KHfFKBPUQjRx6BAGBEAQ&url=http%3A%2F%2Fwww.eattheweeds.com%2Fbrasenia-schreberi-palatable-pond-weed-2%2F&psig=AOvVaw3gJO3SRc3p8-hS5wWPh3jN&ust=1568730910477189](https://www.google.com/url?sa=i&source=images&cd=&ved=2ahUKEwjw4_mWyNXkAhXMPn0KHfFKBPUQjRx6BAGBEAQ&url=http%3A%2F%2Fwww.eattheweeds.com%2Fbrasenia-schreberi-palatable-pond-weed-2%2F&psig=AOvVaw3gJO3SRc3p8-hS5wWPh3jN&ust=1568730910477189)
- Wild celery – <http://www.minnesotawildflowers.info/udata/r9ndp23q/pd3/vallisneria-americana-081517-2.jpg>
- Starry - [https://vtinvasives.org/sites/default/files/styles/invasives\\_flexslider\\_wide/public/images/invasives/Nitellopsis%20obtusata%20habit%20-Paul%20Skawinski%20UW%20Extension%20Lakes%20Program.jpg?itok=hHyZp8sg](https://vtinvasives.org/sites/default/files/styles/invasives_flexslider_wide/public/images/invasives/Nitellopsis%20obtusata%20habit%20-Paul%20Skawinski%20UW%20Extension%20Lakes%20Program.jpg?itok=hHyZp8sg)



**Questions?**

**Thank you!**