

Annual Meeting 2023

Presented by Rob Karner, Watershed Biologist

August 5, 2023

Monitoring

Around the Watershed

- Water Chemistry
- Inlets
- Plankton
- Aquatic Gardens
- Angler Reports



Monitoring

Around the Watershed

- Terrestrial Invasives
- Benthic Sediments
- Shoreline Surveys
- Septic Influences
- Phosphorus, Water Transparency, and Chlorophyll a
- Citizen Science Reports

Monitoring

TSI Scores Around the Region

- Torch Lake 28
- Crystal Lake 32
- North Lake Leelanau 36
- South Lake Leelanau 42
- Long Lake 32
- Brooks Lake 40
- Little Glen 39
- Big Fisher 33
- Big Glen 30
- State Average 44





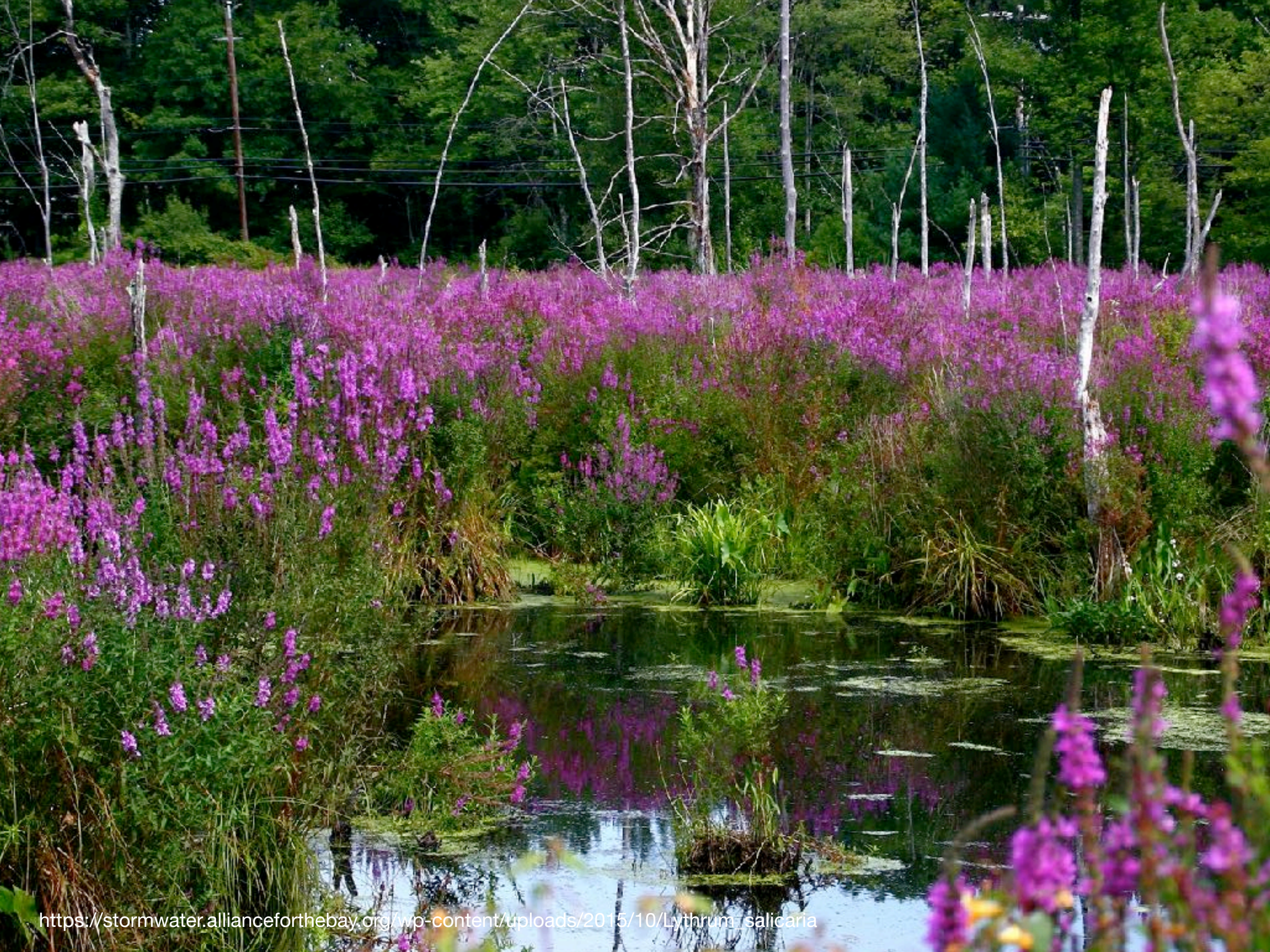


Terrestrial Invasives

Status Report

- Yellow Iris
- Purple Loosestrife
- Coltsfoot
- Phragmites







Aquatic Invasives

Status Report

- No Eurasian Watermilfoil
- No Starry Stonewort
- Curlyleaf Pondweed on Brooks Lake



Japanese Koi

Future Plans

- **Assessment**
- **Trapping**
- **Archery**
- **Bounty**

Japanese Koi

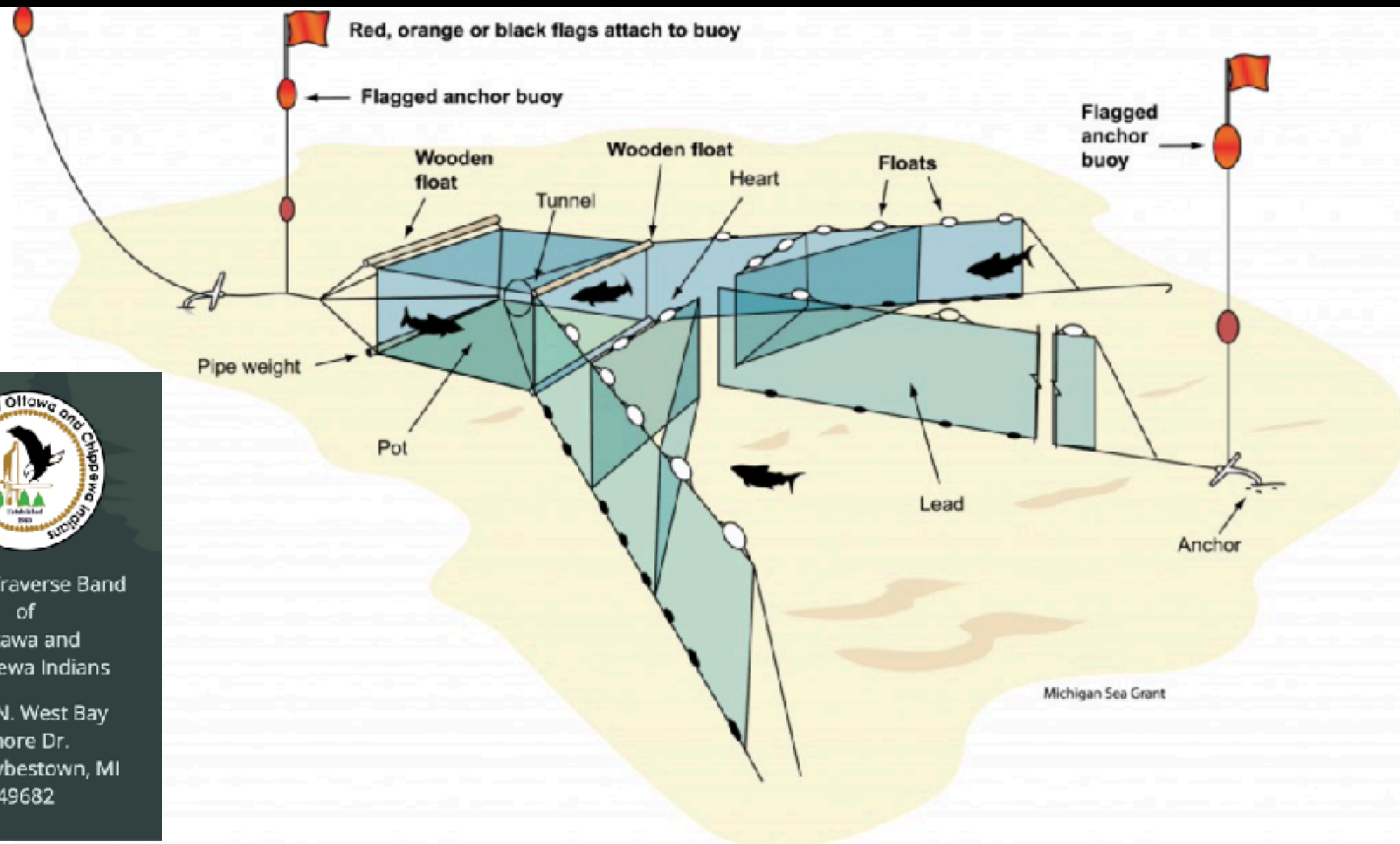
Eradication Plans



- Set up an ad-hoc committee
- Formalize an eradication program with the Band of Ottawa/Chippewa Indians
- Review strategies for eradication and make recommendations to GLA Board
- Gain GLA support for recommendations
- Implement approved plans in early September

Trapping Koi

Fyke Net

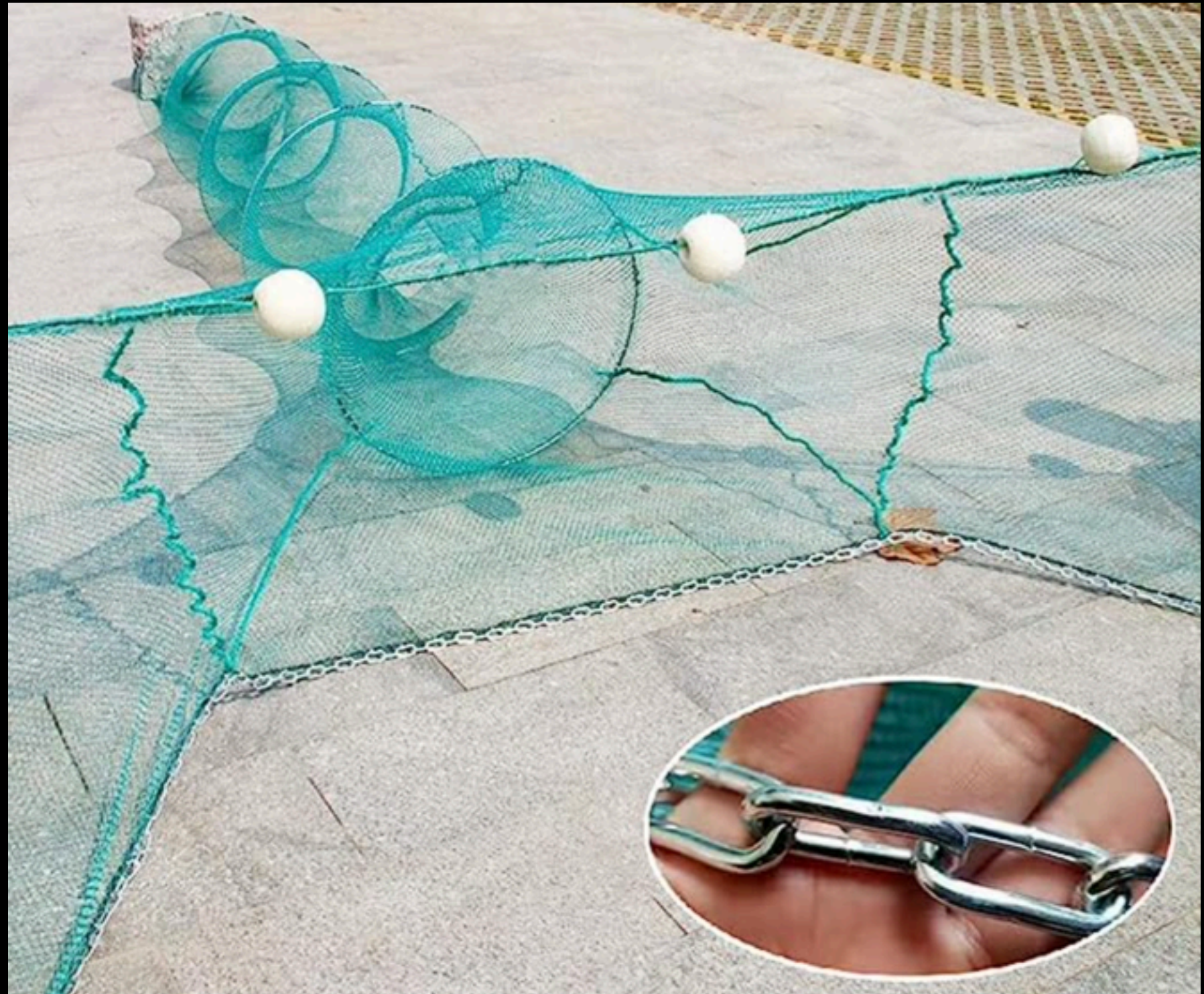


Grand Traverse Band
of
Ottawa and
Chippewa Indians

2605 N. West Bay
Shore Dr.
Peshawbestown, MI
49682

Trapping Koi

Trap Net



Grand Traverse Band
Natural Resources Department

Trapping Koi

Seine



Grand Traverse Band
Natural Resources Department

Electrofishing Koi

Electrofishing boat



Grand Traverse Band
Natural Resources Department



Electrofishing Koi

Electrofishing boat



Grand Traverse Band
Natural Resources Department



Septic Study Report

- The more use and abuse of septic means more positive septic influences in well water
- Public records of age of septic are poor (oldest in GL was 1975)
- Same number of positives were found in both well and surface for HF183 bacteria
- Education alone is impactful
- Final publication is expected in September 2023
- Results of drone fly overs of drain fields were inconclusive

eDNA

Future Studies

- Biological pollution is a top threat along with excess nutrient loading
- Early detection - rapid response
- eDNA closes the gap between hit or miss
- Accurately knowing what is in our water is critical

*Environmental DNA monitoring of the invasive freshwater diatom, *Didymosphenia geminata*, in Mid-Atlantic waters*



Dboat

2023 Report

- **Picture perfect weather**
- **8 sessions**
- **Sell out crowd**
- **64 participants**
- **Inter generational**
- **Northwest Michigan College**

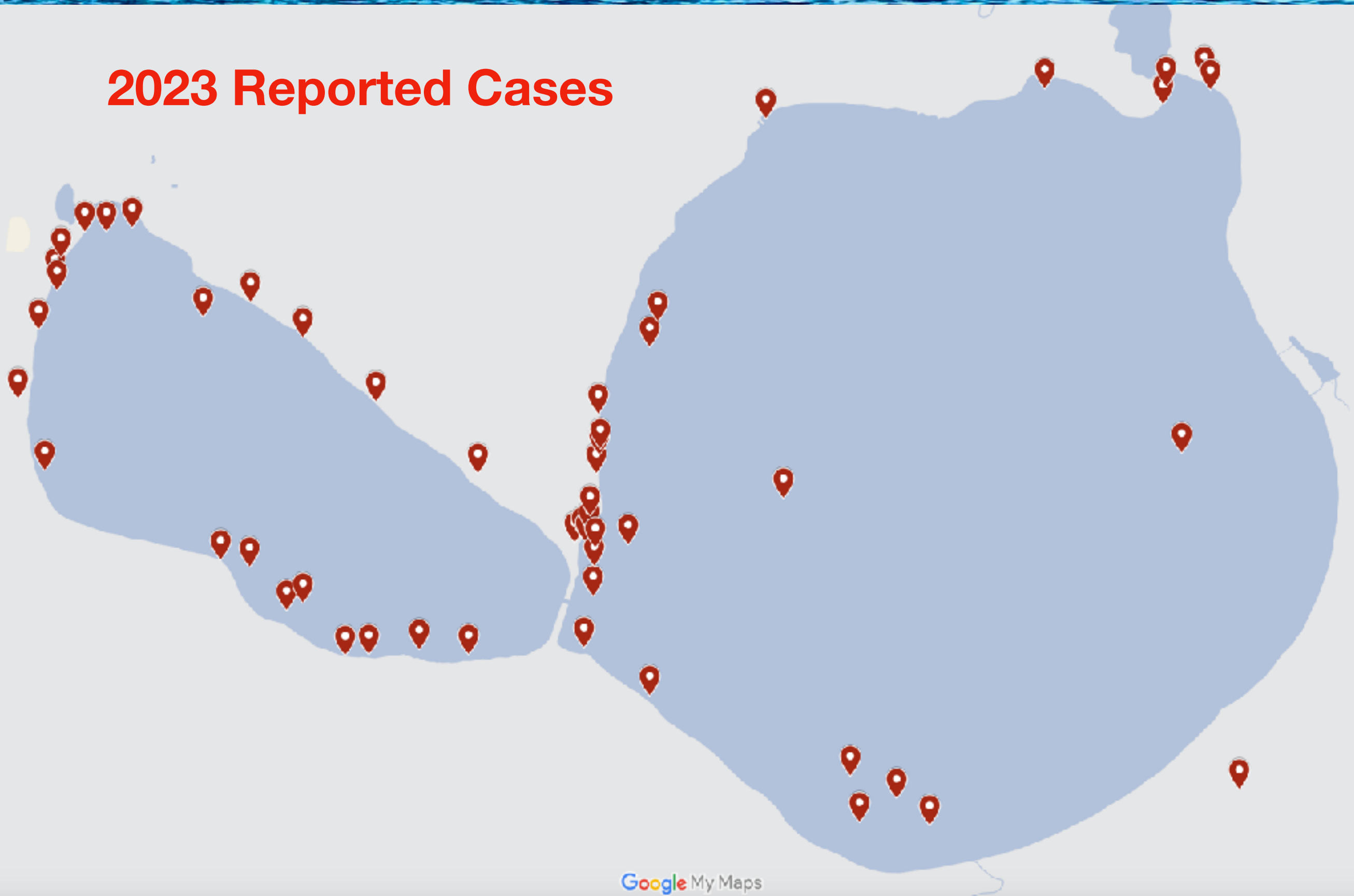


Swimmers Itch

Status Report

- Reported cases are up from previous years
- Working with Dr. Hanington at the University of Alberta
- Itch cases up in the region
- Focus of SI remains prevention
- Copper sulfate is illegal

2023 Reported Cases



Thank Yous

- **Blondia Family**
- **CLMP Volunteers**
- **WQ Committee**
- **Tribe**
- **Zero Gravity, LLC**
- **Glencraft Marina Inc**
- **Staff - Laura, Joe, Victoria, Loral V., Josh**