



Founded  
in *1940*



360-400 Member Families

Representing 2,600 Waterfront Properties  
and Backlots (water access properties)

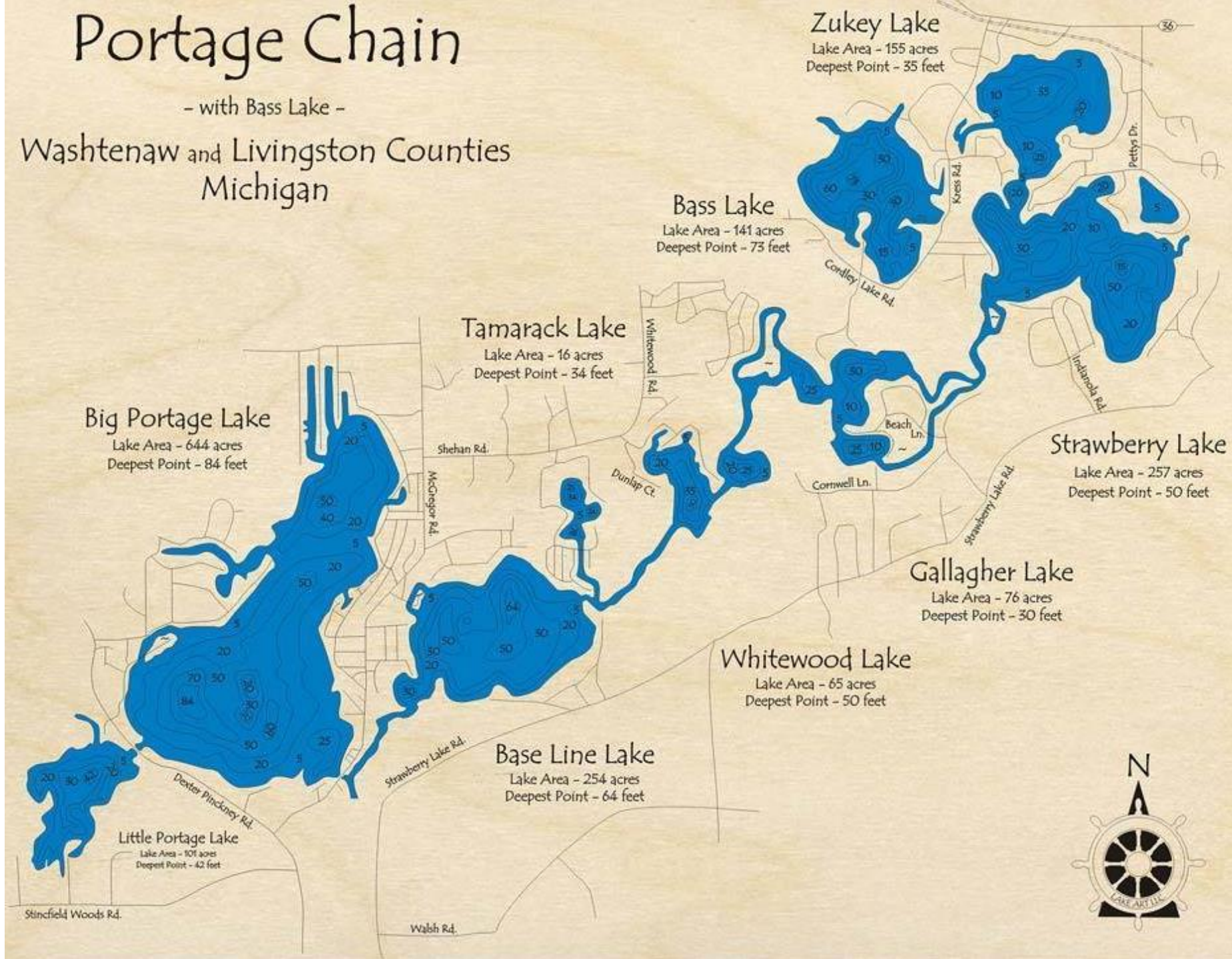
Hamburg Township  
Webster Township  
Putnam Township  
Dexter Township





Members from the  
**Huron Chain  
of Lakes**

Little Portage Lake  
Portage Lake  
Base Line Lake  
Tamarack Lake  
Whitewood  
Gallagher Lake  
Strawberry Lake  
Zukey Lake  
Ore Lake







## Major Accomplishments:

### John Fluke Dam + Court Set Water Levels

- Reduces Flooding
- Minimizes ice damage
- Optimizes recreational use

### Portage Base Lakes Sewer Authority

- Eliminates septic fields
- Eliminates damage to water from failed septic fields
- Allows more restrooms per building site
- Protects the ability to get a mortgages for lake front houses

### Yearly boat safety class

- 40 Attendees per year
- Certificate for operating motorized water vehicles

### Water Quality Monitoring

- Provide data to state about key water quality measurements

### Clean Boats/Clean Waters

- Signage and cleaning station at Portage Lake Launch site to prevent spread of invasive species

### Invasive Species/Weed Control Programs – more on these later



### Secchi Disk





# Ongoing Issues: *Algae*

- Algal Blooms
- HABs – Hazardous Algal Blooms



## HABs – Hazardous Algal Blooms

- Dangerous for humans and animals



## Algal Blooms:

- Smelly
- Unattractive
- Limit Recreational Use



# Ongoing Issues: Invasive Species (in the water)

## Huron Chain of Lakes **Invasive Species**

### In the Water Invasives

- Zebra Mussels
- Eurasian Watermilfoil
- Starry Stonewort
- More and More Coming







## PBWOA Response: Algae, Invasive Species and Weeds

Advocated for and now supports/monitors program to manage algae, invasive species (in the water) and weeds.

Lower Chain SAD managed by Washtenaw County

- Little Portage to Whitewood Lakes

Upper Chain SAD Managed by Hamburg Township

- Gallagher to Zukey Lakes

Programs both include

- Weed harvesting
- Chemical treatment for weed control
- Chemical treatment for algae control

The programs are permitted by EGLE. EGLE **limits** what can be done both to protect endangered species and humans/pets/wildlife.

This program can help **MANAGE**, but not eliminate invasives and algae.



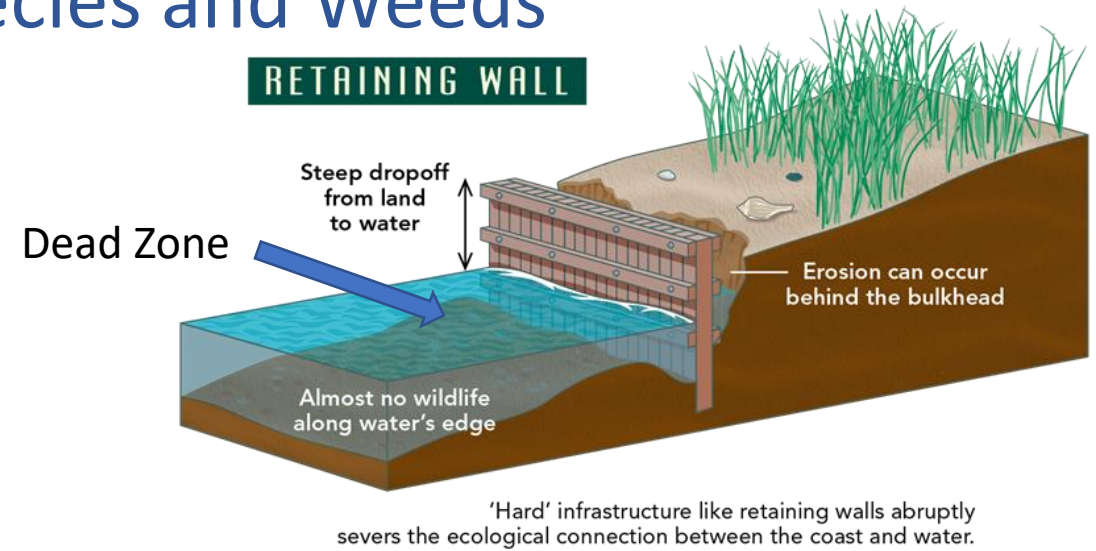
Nothing can be done about the zebra mussels.





# PBWOA Response: Algae, Invasive Species and Weeds

- Encourage Participation in Michigan Shorelines Partnership Program
- Shoreline Garden Tours
- Shoreline Garden Initial Consultation
- Distribute Shoreline Living Magazine
- Support Natural Shorelines Forever shoreline conservation and placement of woody structures to the shoreline



Spawning Area  
Supports range of wildlife  
Deep plant roots hold the shoreline







# PBWOA Response: Algae, Invasive Species and Weeds

Encourage Townships to Consider  
Impact on Water Quality of:

## Zoning

- Lakefront and Adjacent  
Development

- Lot Area Coverage

- Setbacks from Shoreline

- Storm water retention

- Naturalizing Shorelines

## Fertilizer

- Prohibition adjacent to waterfront

- Require plant buffer at waterfront

## Shoreline Hardening

- Prohibit Seawalls (EGLE)

Naturalized  
Shoreline on Base  
Line Lake





# Ongoing Issues: Wake Boats

## Wake boats

- stir up the muck and sediments including phosphorous and heavy metals from the bottom of the lake
- feed algal blooms
- harm fish nurseries
- erode shorelines
- endanger other boaters



## PBWOA Response: Wake Boats

Encouraging Operation of Wake Boats as recommended by DNR\*

- Operate in water more than 15' deep.
- Operate at least 500 feet from shore.

\*recommendations based on results of study prepared by University of Minnesota





# Michigan DNR Fisheries **Wake Boat** **Operation Recommendations\***

- Operate wake boats in water greater than 15' deep
- Operate boats at least 500' from the shoreline

## Lakes that can accommodate wake boats:

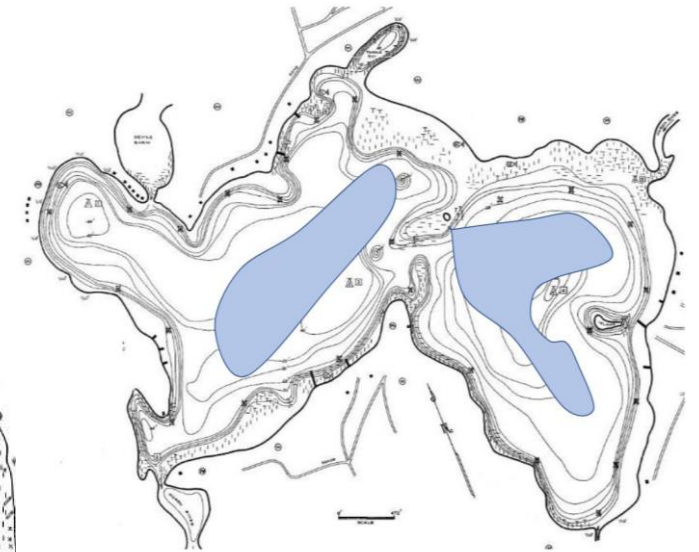
- Portage Lake
- Base Line Lake
- Strawberry Lake (small area)
- Zukey Lake (small area)

## Lakes too small for wake boats:

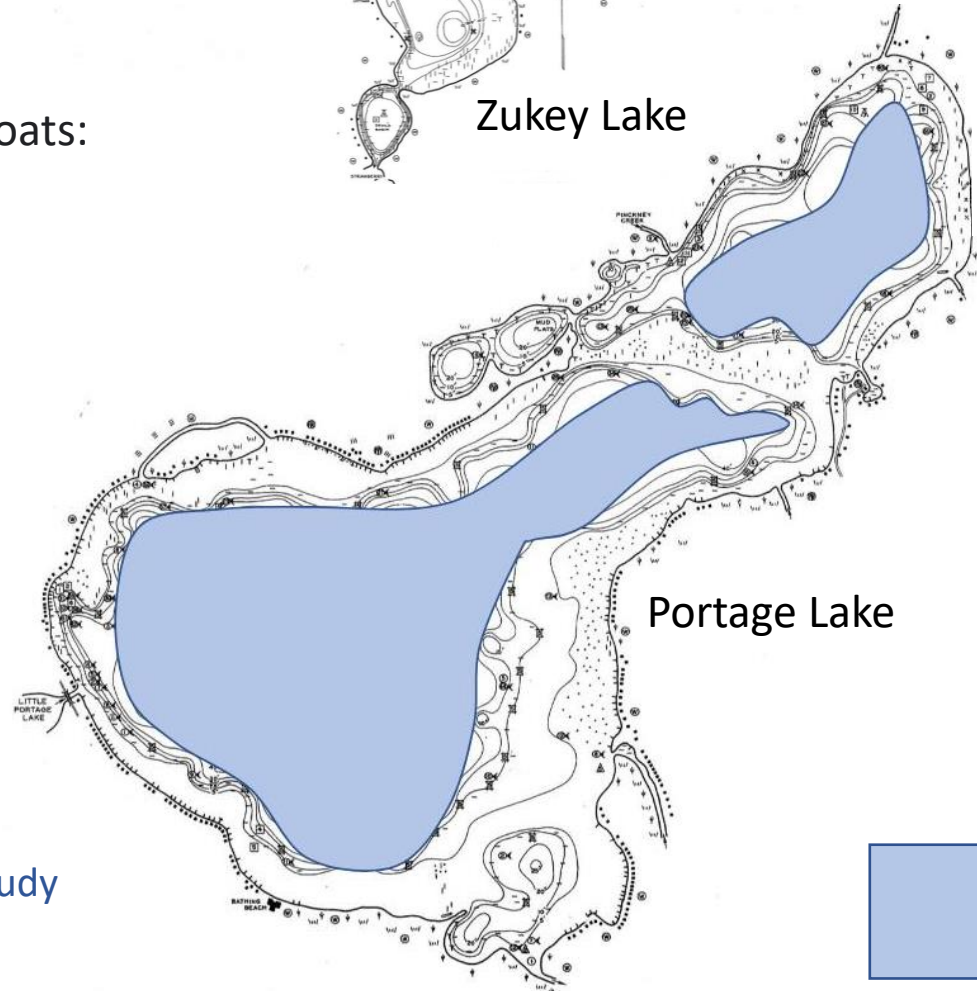
- Little Portage Lake
- Tamarack Lake
- Whitewood Lake
- Gallagher Lake



Zukey Lake

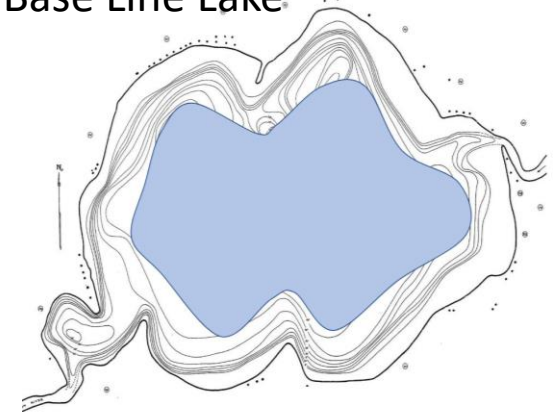


Strawberry Lake



Portage Lake

Base Line Lake



Areas that meet wake boat operation recommendations are approximate.

\*recommendations based on results of study prepared by University of Minnesota



# Ongoing Issues: Invasive Species

## Land and Wetland Species

- Phragmites
- Purple Loose Strife

## Both damage wetlands by

- Replacing cattails
- Not filtering the water
- Not providing food for wildlife



## PBWOA Response: Invasive Species

Exploring control programs



Purple Loosestrife is now beginning to infest Little Portage Lake wetlands



# Ongoing Issues: Invasive Species

- Mute Swan

Mute swan control program is having a positive impact with fewer mute swans and more other aquatic birds seen on the Chain of Lakes



Native Trumpeter Swan: Making a come back from near extinction



## Invasive Mute Swan:

- Drives out other aquatic birds
- Destroys native plants
- Spreads disease
- Aggressive towards humans
- Abundant droppings over-fertilize the water



## PBWOA Response: Invasive Species

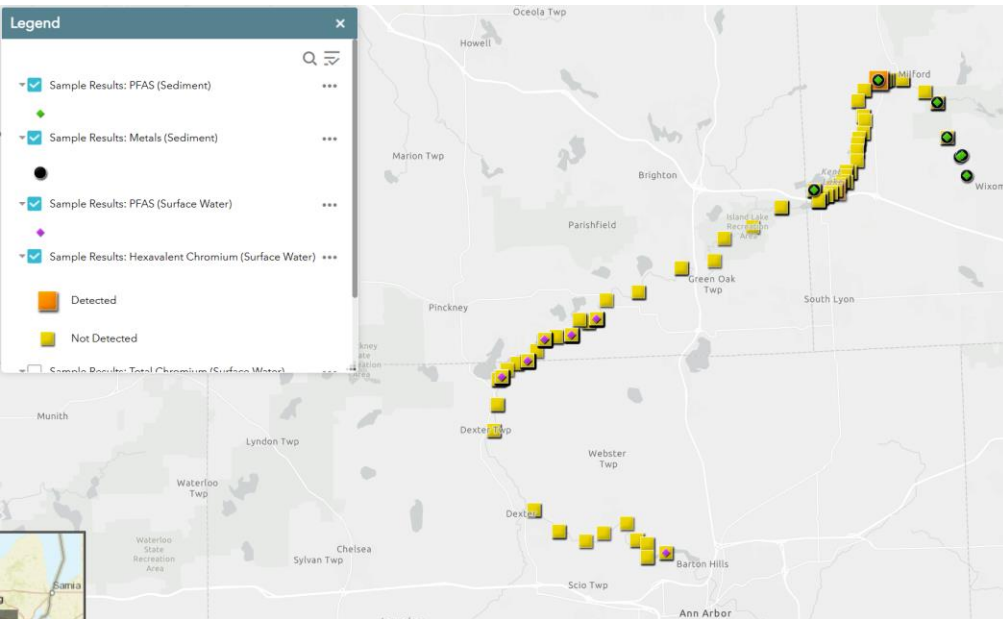
Supporting existing Township program that limits mute swans.



# Ongoing Issues: Chemical Contaminants

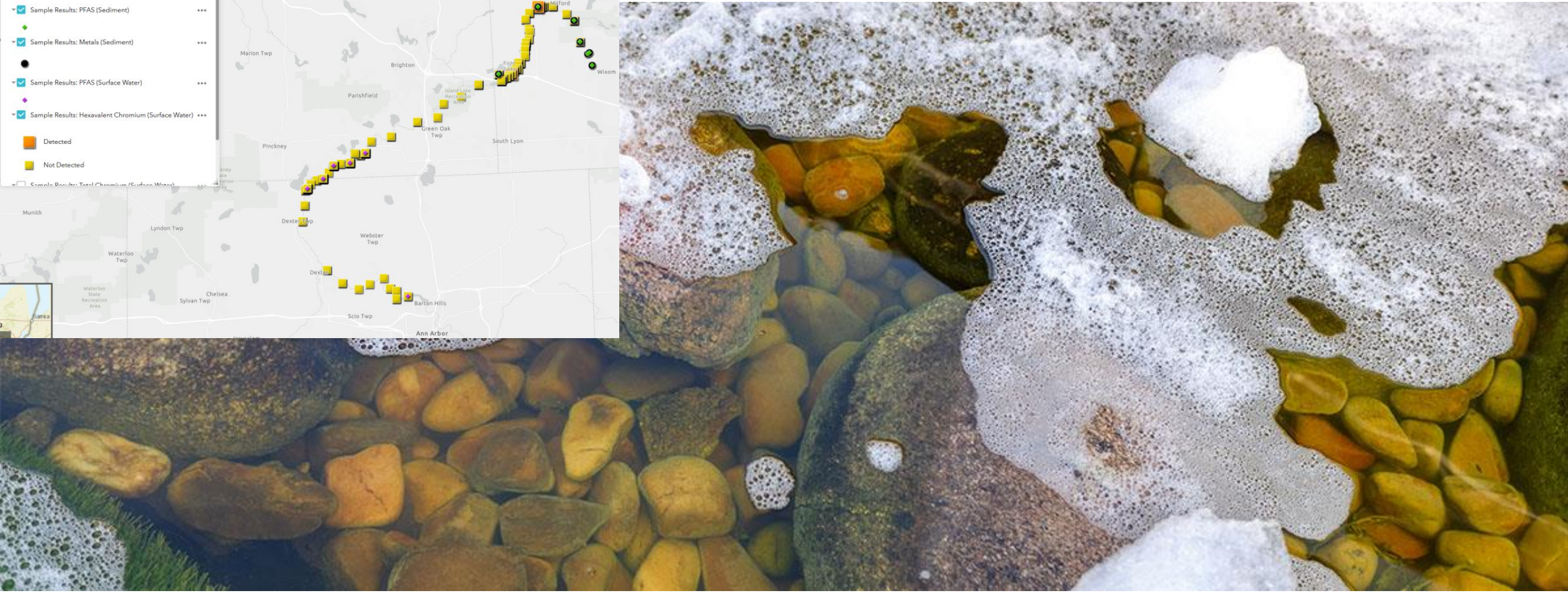
PFAS

Hexavalent Chromium



# PBWOA Response: Chemical Contaminants

- Monitoring governmental responses and recommendations
- Educating our members





# Ongoing Issues: Sandbar Parties

100s of Boats

No trash or restroom facilities



**PBWOA Response:**  
**Sandbar Parties**

Monitor the situation



# What can the Township Boards Do?

Continued support for invasives control project

Provide political and financial support for control of phragmites and purple loosestrife.

Continued support of swan control project

Enact legislation limiting fertilization within 15' of shore line

Enact legislation limiting wake boats to 500' from shore and 15' minimum depth

Reichert  
Nature  
Preserve

Portage Lake

Base Line Lake

Chickadee  
Airport



## Join PBWOA (at [PBWOA.org](http://PBWOA.org))

- Receive PBWOA Newsletters
- Receive PBWOA updates concerns issues that impact the Chain of Lakes
- Receive Riparian magazine
- Support PBWOA efforts to improve water quality in the Chain of Lakes



Thank you for your time

QUESTIONS?

Reichert  
Nature  
Preserve

Portage Lake

Base Line Lake

Cackleberry  
Airport

