# Development of a Statewide Volunteer Monitoring Program for Aquatic Invasive Species

## Challenges and Lessons Learned in Michigan

Michigan Clean Water Corps

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Department of Fisheries and Wildlife
Michigan State University

# MiCorps

- Cooperative Lakes Monitoring Program
- Volunteer Stream Monitoring Grants Program

DEQ

Great Lakes Commission des Grands Lacs

Huron River Watershed Council

Michigan Lake and Stream Associations

Michigan State University

# CLMP Monitoring Parameters

Secchi Transparency

Total Phosphorus

Exotic Aquatic Plant Watch

Chlorophyll a

Dissolved Oxygen and Temperature

Aquatic Plant Identification and Mapping

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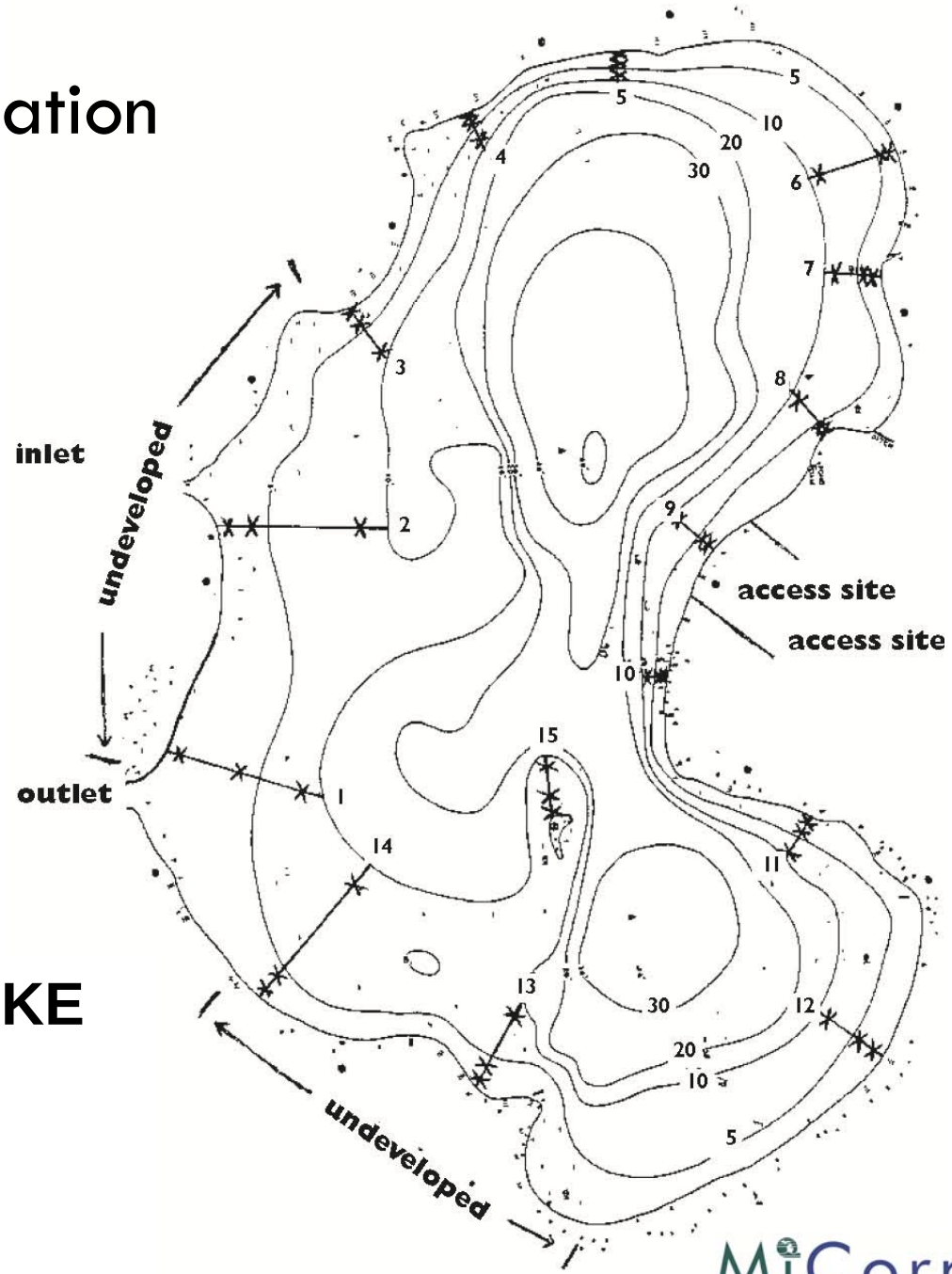
# Aquatic Plant Identification and Mapping:

## Transect approach




**IDEAL LAKE**
**135 acres**

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# Ideal Lake
# area 135 acres

Date sampled _____

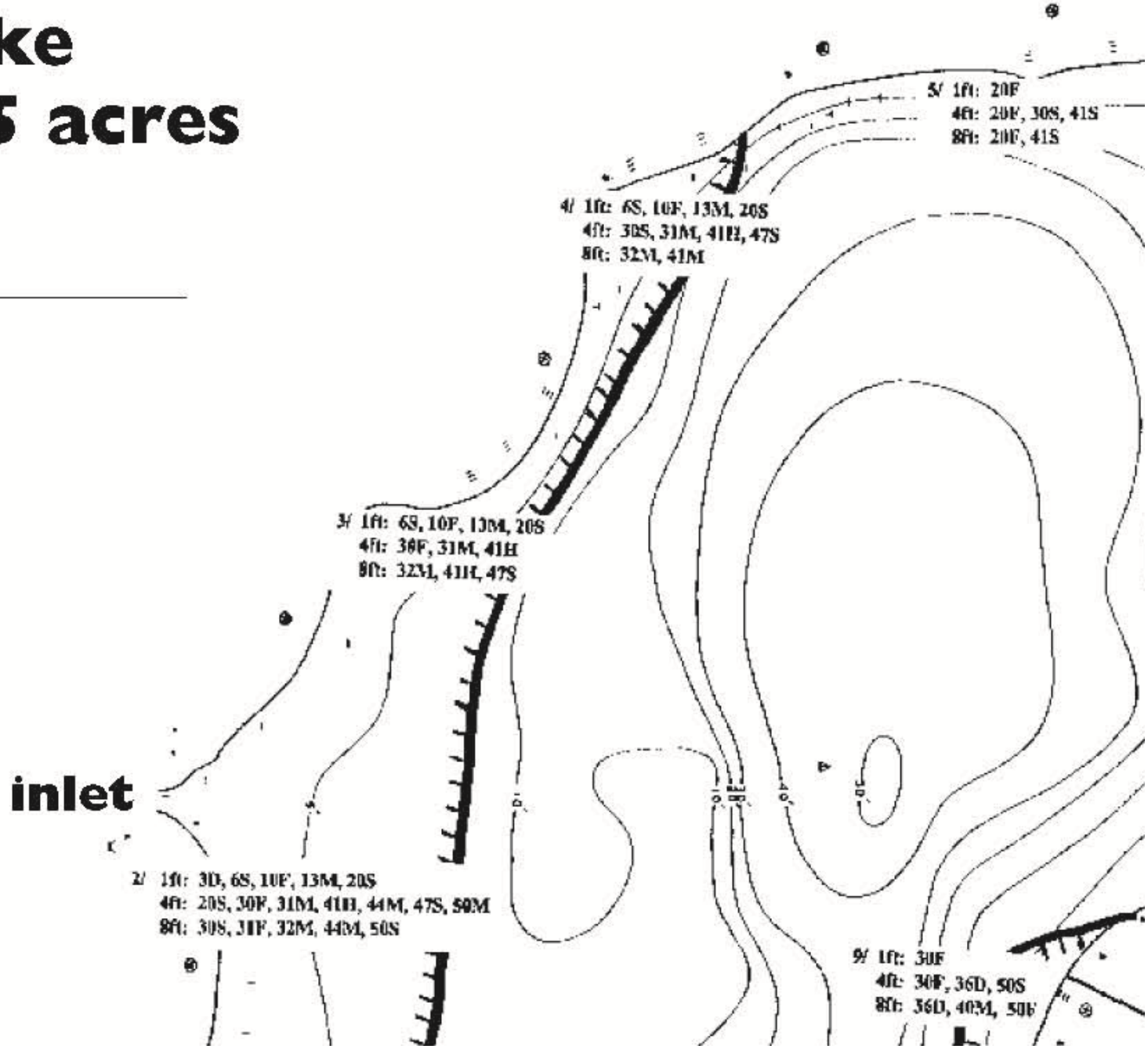

Figure 2

Survey of Rooted Aquatic Plants
August – September 2011
Duck Creek Watershed Assembly – Duck Lake Association

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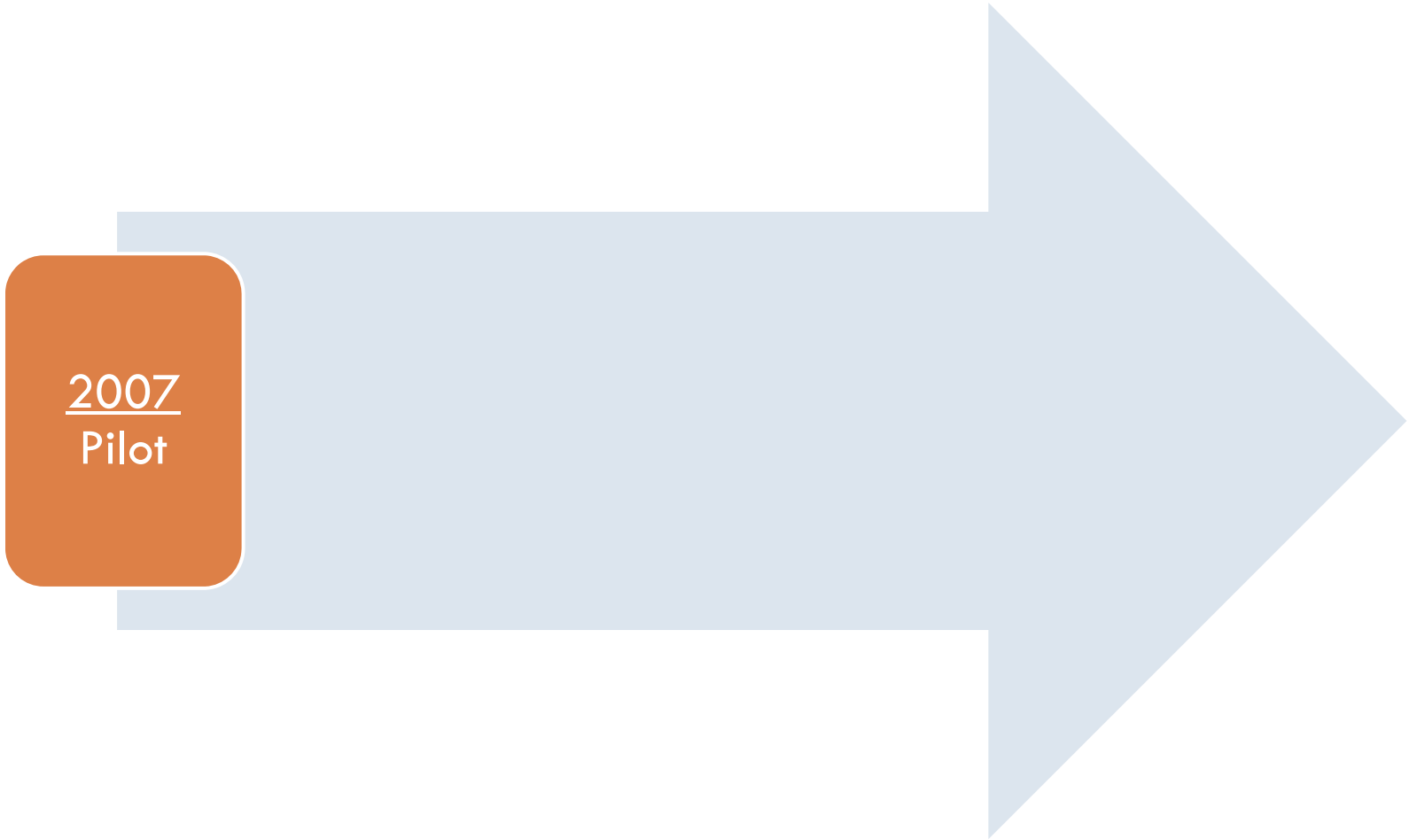
# Exotic Aquatic Plant Watch

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# Exotic Aquatic Plant Watch

- Eurasian Water Milfoil

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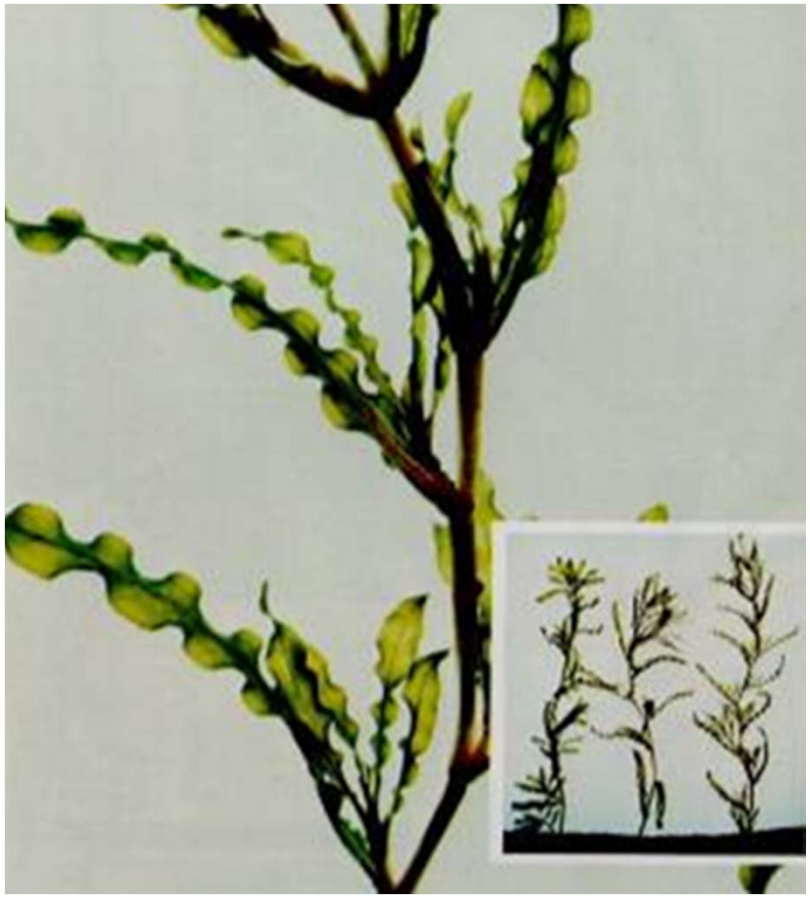
# Exotic Aquatic Plant Watch

- Eurasian Water Milfoil
- Curly-leaf Pondweed



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# Exotic Aquatic Plant Watch

- Eurasian Water Milfoil
- Curly-leaf Pondweed
- Hydrilla

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# Exotic Aquatic Plant Watch

- Eurasian Water Milfoil
- Curly-leaf Pondweed
- Hydrilla
- Starry Stonewort

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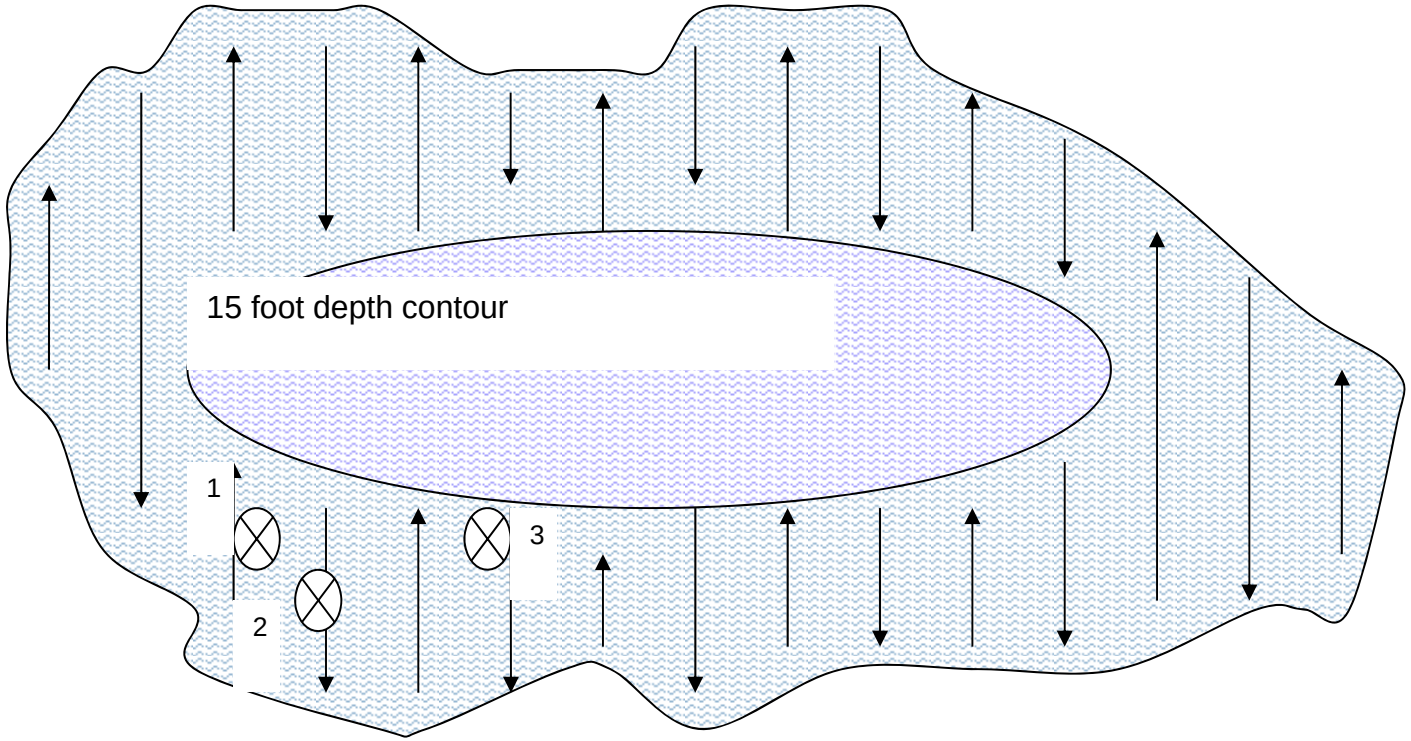
Select transects from shore out to the 15' depth contour.

Travel along the contours looking and using the sampling rake to find exotic species.

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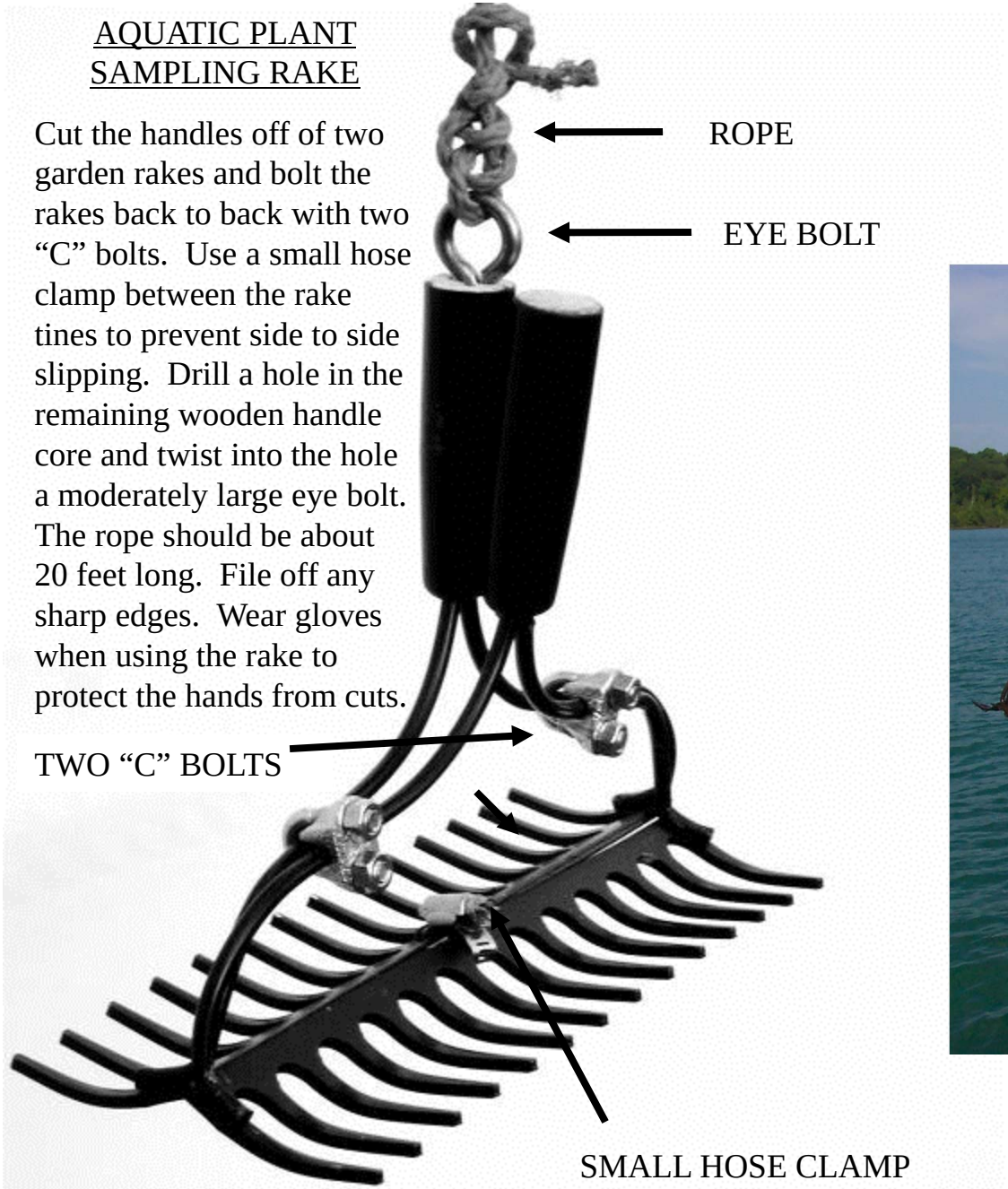
# AQUATIC PLANT SAMPLING RAKE

Cut the handles off of two garden rakes and bolt the rakes back to back with two "C" bolts. Use a small hose clamp between the rake tines to prevent side to side slipping. Drill a hole in the remaining wooden handle core and twist into the hole a moderately large eye bolt. The rope should be about 20 feet long. File off any sharp edges. Wear gloves when using the rake to protect the hands from cuts.



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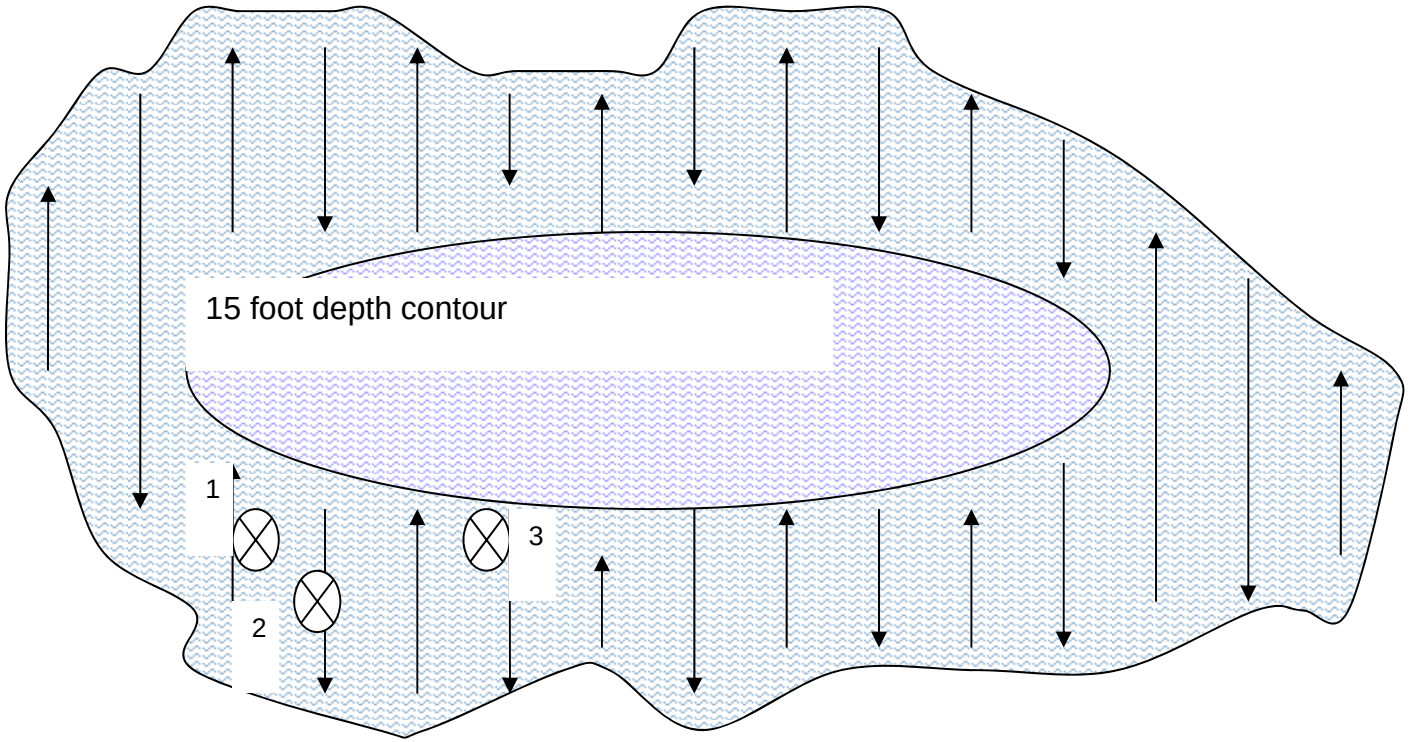


**Did you find some?**

**Not sure??**

- **Mark the site on your map with a number.**
- **Use GPS to identify coordinates.**
- **Record invasive species names found at each site.**

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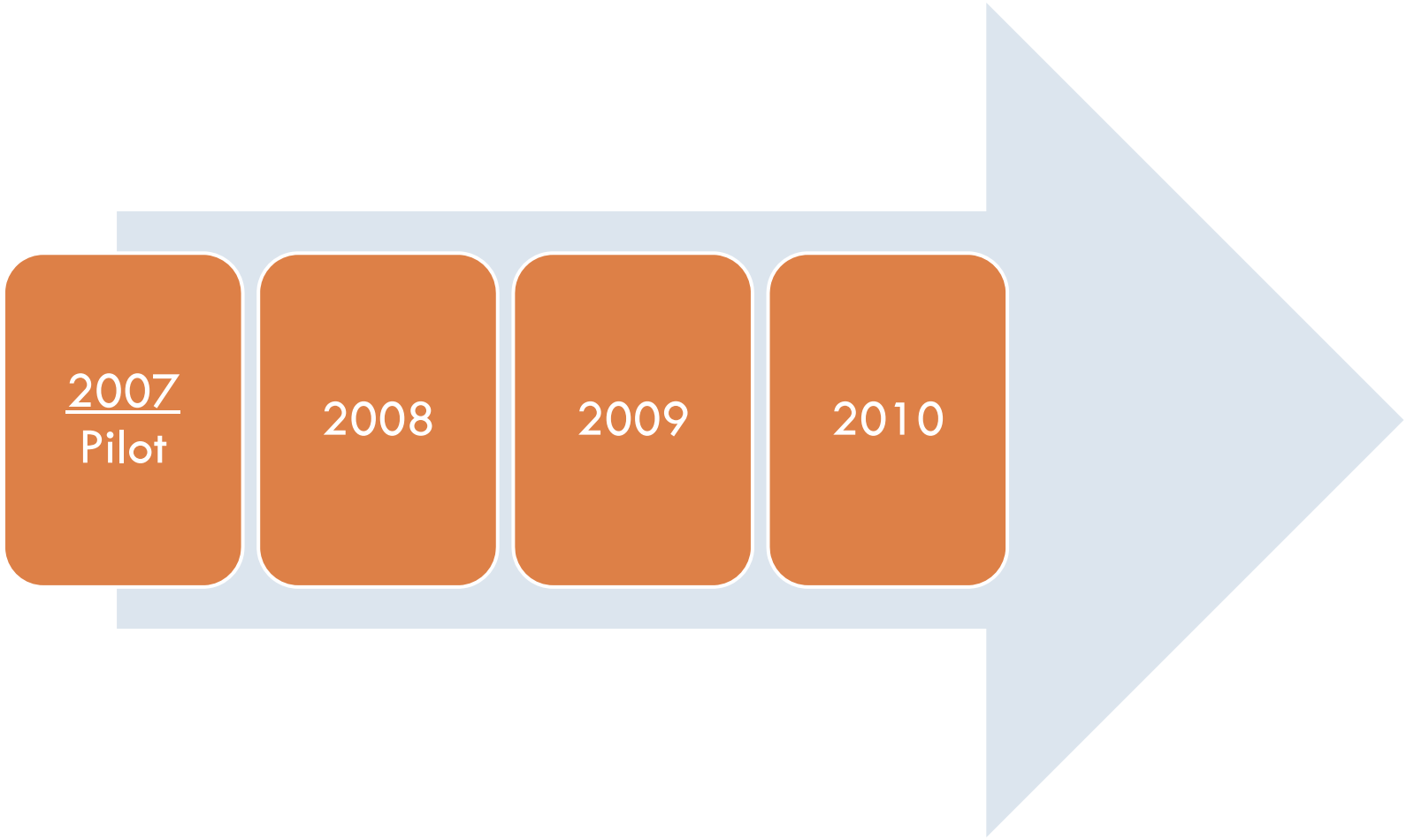
# Exotic Aquatic Plant Watch

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# Challenge: Identification Materials

- No appropriate Michigan materials
- Borrow some, create others
- MSU Extension publication in the works

University of Wisconsin Extension

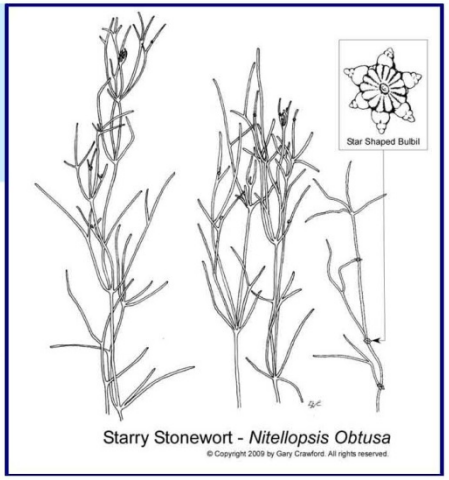
Michigan Sea Grant

**Starry Stonewort**

***Nitellopsis obtusa***

**(harmful exotic)**

Long, uneven-length branches. Ragged appearance; forms mats. May have tiny, star-shaped "bulbils".

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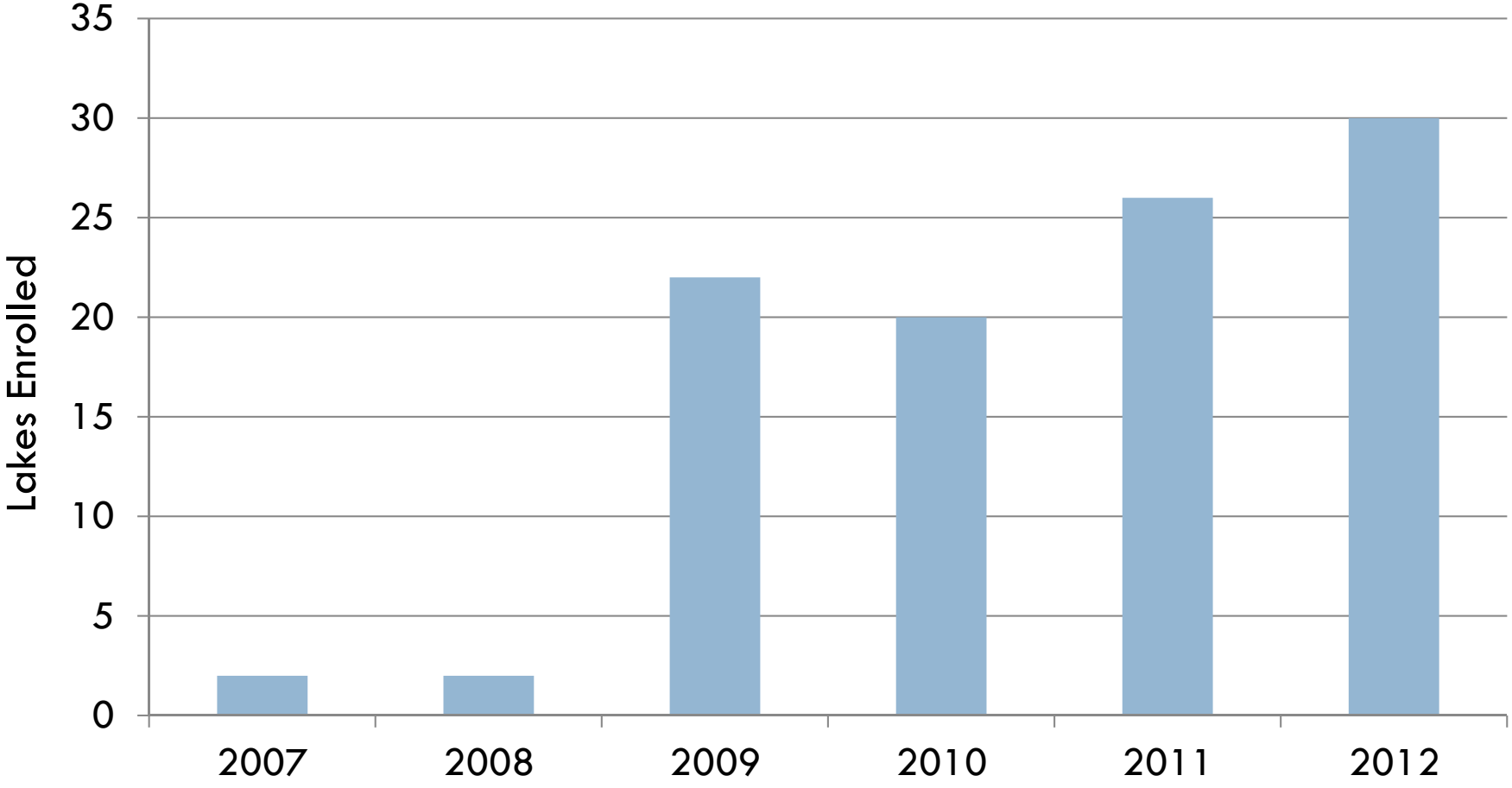
# Challenge: Low Enrollment

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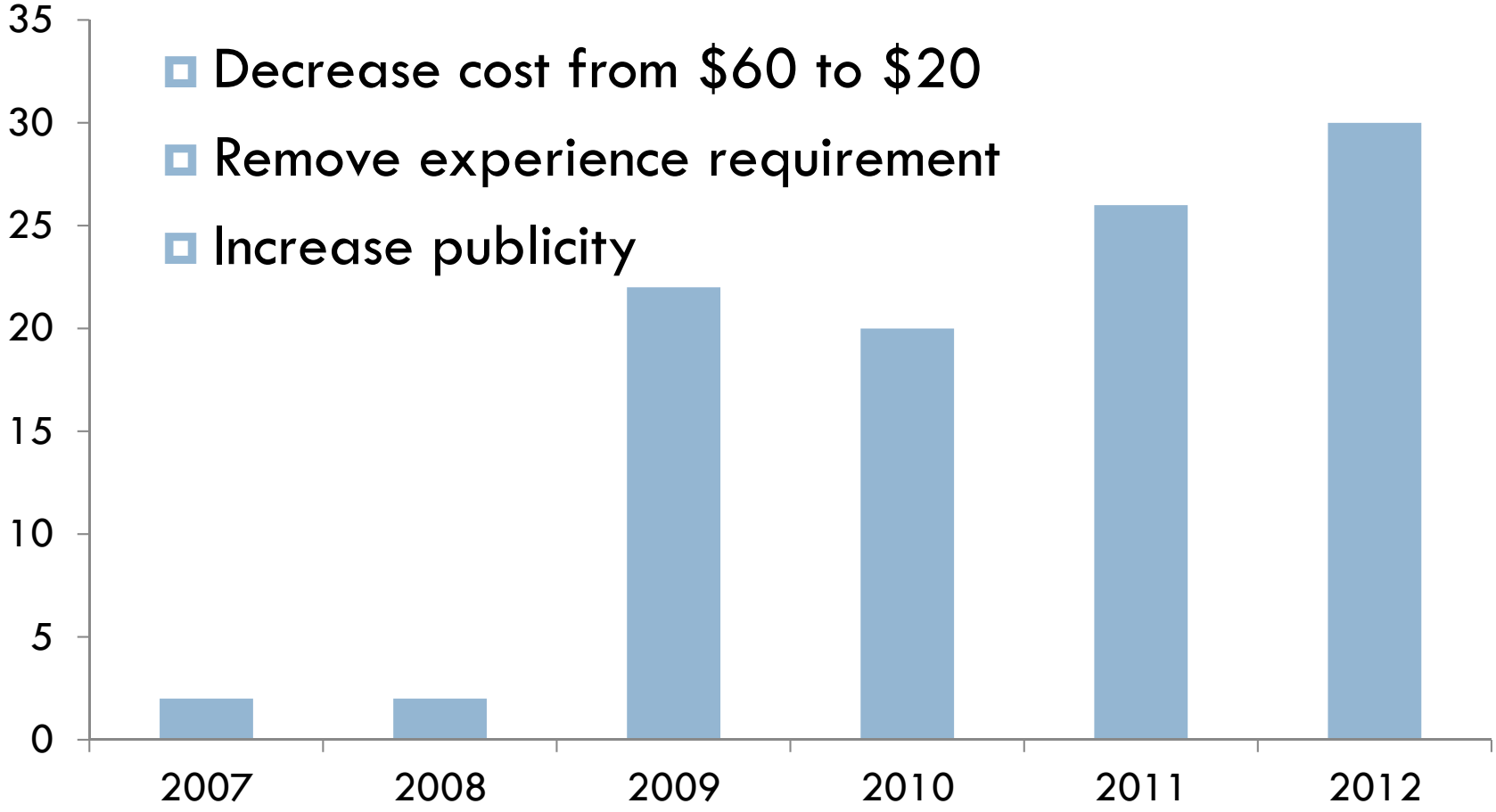
# Challenge: Low Enrollment

- Solutions:
  - Decrease cost from $60 to $20
  - Remove experience requirement
  - Increase publicity

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# Challenge: Non-reporting

Monitoring Not Done

No Invasives Found

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# Challenge: Non-reporting

Monitoring Not Done

- Personal/logistical conflicts
- Private company manages "weeds"
- Solutions:
  - Mid-season follow-up
  - Encourage continued monitoring

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# Challenge: Non-reporting

- Solutions:
  - Data form
  - Emphasize reporting

No Invasives Found

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# EXOTIC AQUATIC PLANT WATCH

Data Form - 2012

Cooperative Lakes Monitoring Program

Michigan Clean Water Corps

Lake Name:_____ County:_____

Township:_____

Lake Sampling Site (Field ID) Number:_____

Volunteer Monitor Name(s):_____

Date(s) of Survey :_____ Time:_____

Comments (unusual conditions, recent weed treatments, etc.): _____

_____

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……

- If *no exotic aquatic plants were found* during the survey, check here: ☐ ★
  Your report is complete!

- If exotic plants were found, check the species found below:
  - ☐ Eurasian milfoil
  - ☐ Curly-leaf pondweed
  - ☐ Hydrilla
  - ☐ Starry Stonewort
  - ☐ Other _____

Attach the following items to this data form:

- ☐ Copy of lake map with numbered locations
- ☐ List of exotic plant species found at each numbered location
- ☐ List of GPS coordinates for each numbered location

**Send your complete report to the CLMP contact listed in the project procedures. Keep a copy of the report for your records.**

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# Challenge: Mapping Technology

- Widely varying volunteer comfort levels with GPS and mapping software
- Solutions:
  - Encourage, but not require, GPS coordinates
  - Allow variety of map formats
  - Convert all maps to PDF format for database

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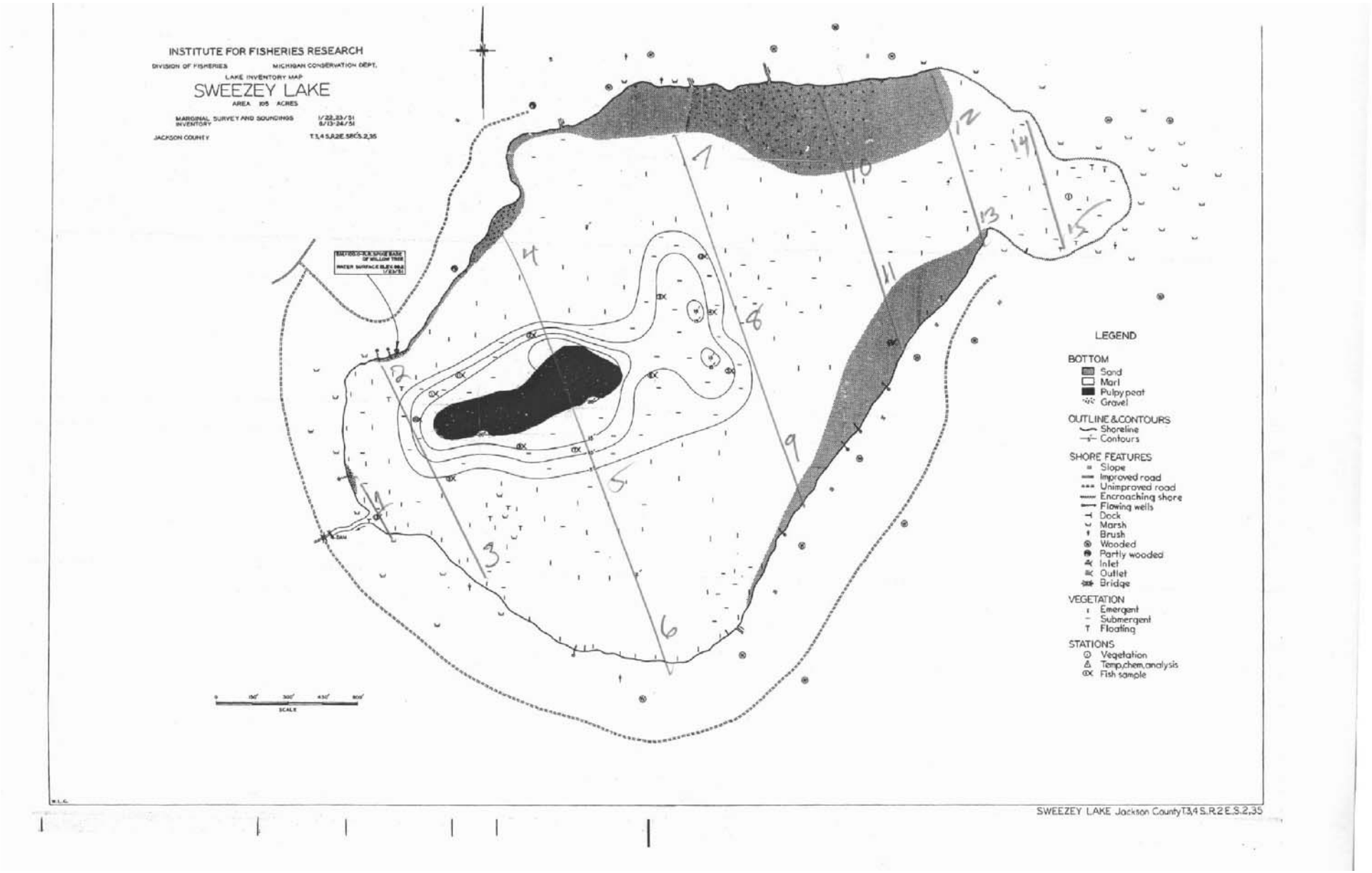
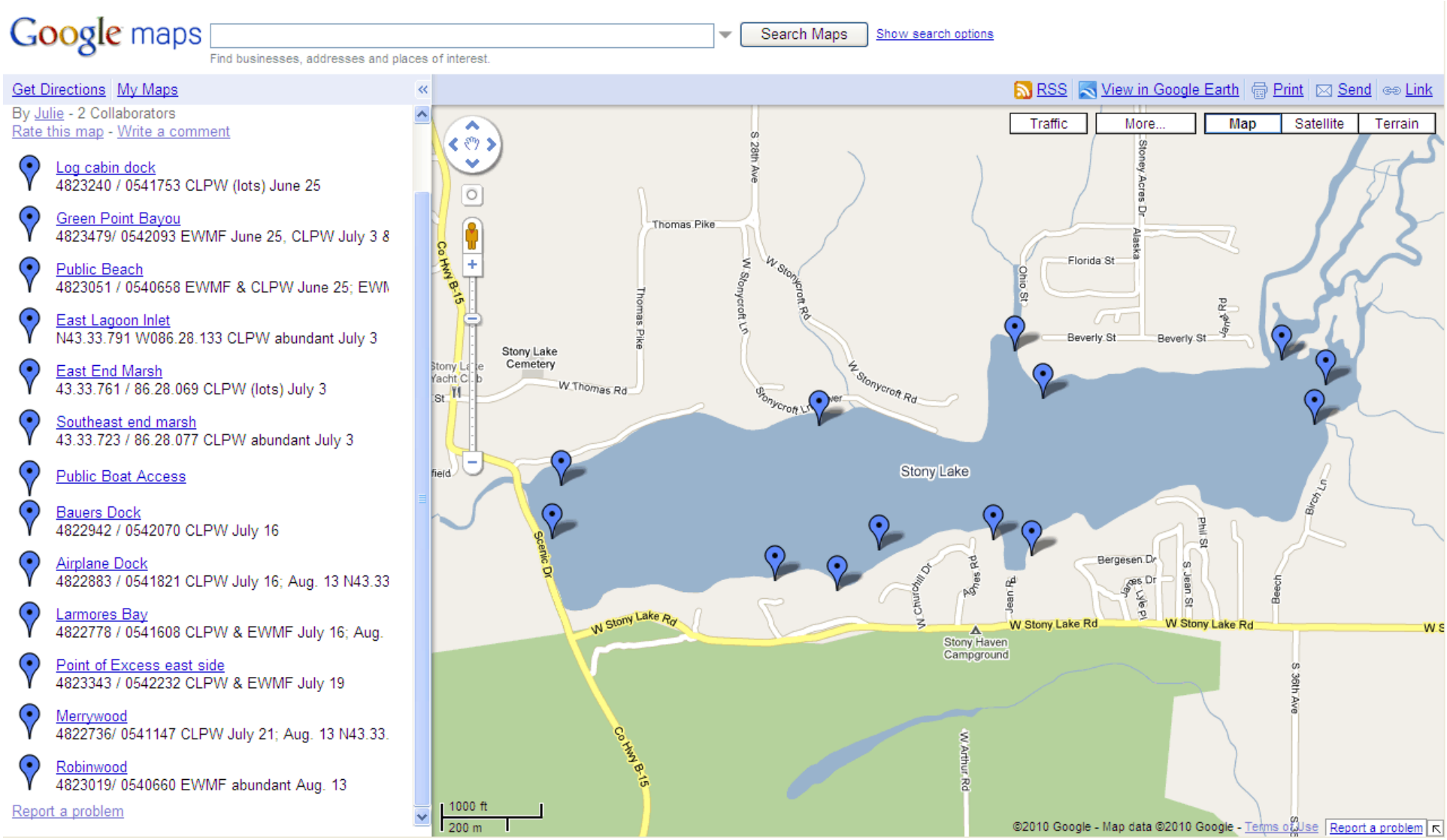
# Mapping Options: By Hand

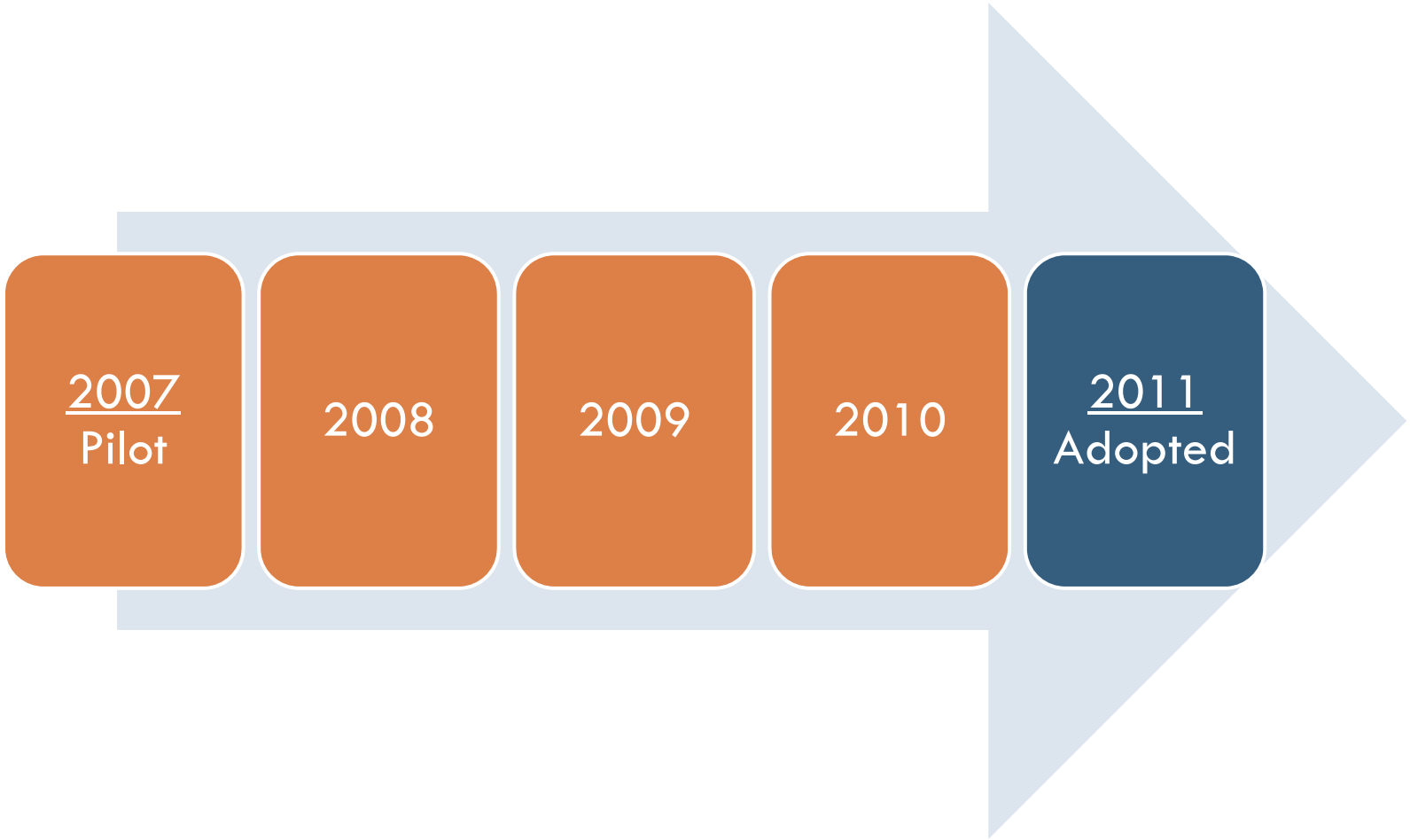


# Mapping Options: Google Maps



# Mapping Options: Google Earth

# Exotic Aquatic Plant Watch

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# Challenge: Quality Control

- Selected lakes asked to submit samples
- Low response rate
- Solutions:
  - Mid-season follow-up
  - Photographs?
  - Side-by-side sampling?

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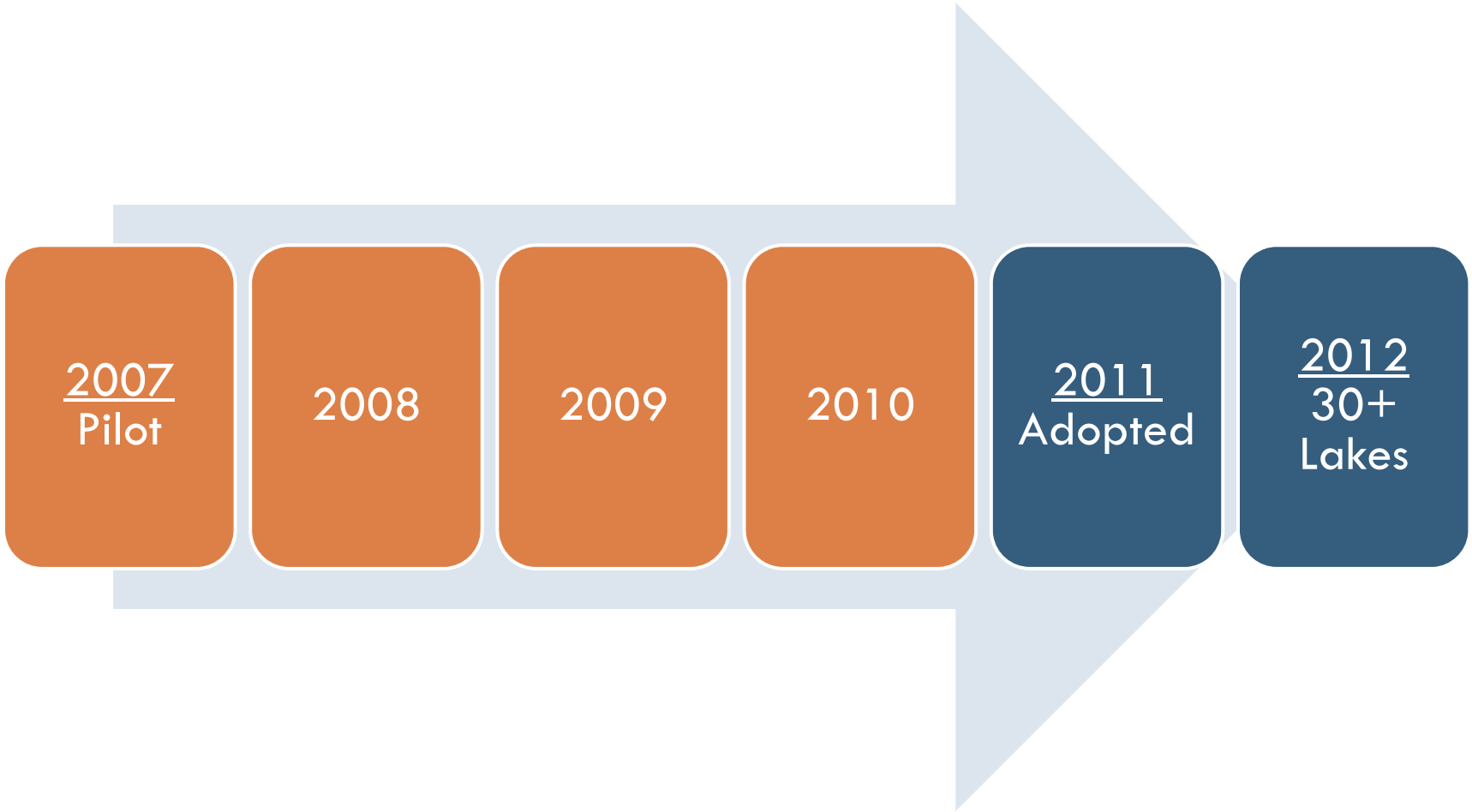
# Exotic Aquatic Plant Watch

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# Check us out online!

## www.micorps.net

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