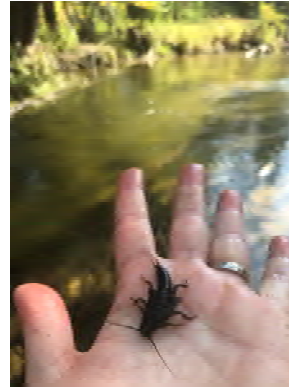
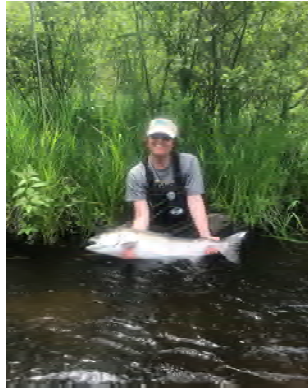




Cooperative Lakes Monitoring Program

Welcome and Introduction

Tamara Lipsey
Jo Latimore
Erick Elgin



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Tamara Lipsey

Aquatic Biology Specialist
and MiCorps Program Lead

Water Resources Division

517-342-4372

lipseyt@michigan.gov

Michigan Clean Water Corps (MiCorps)

- Executive Order-Created to assist EGLE in collecting and sharing water quality data for the use in carrying out its mission of protecting the states water resources
- Provides a way the public can have a needed, active role in the mission.



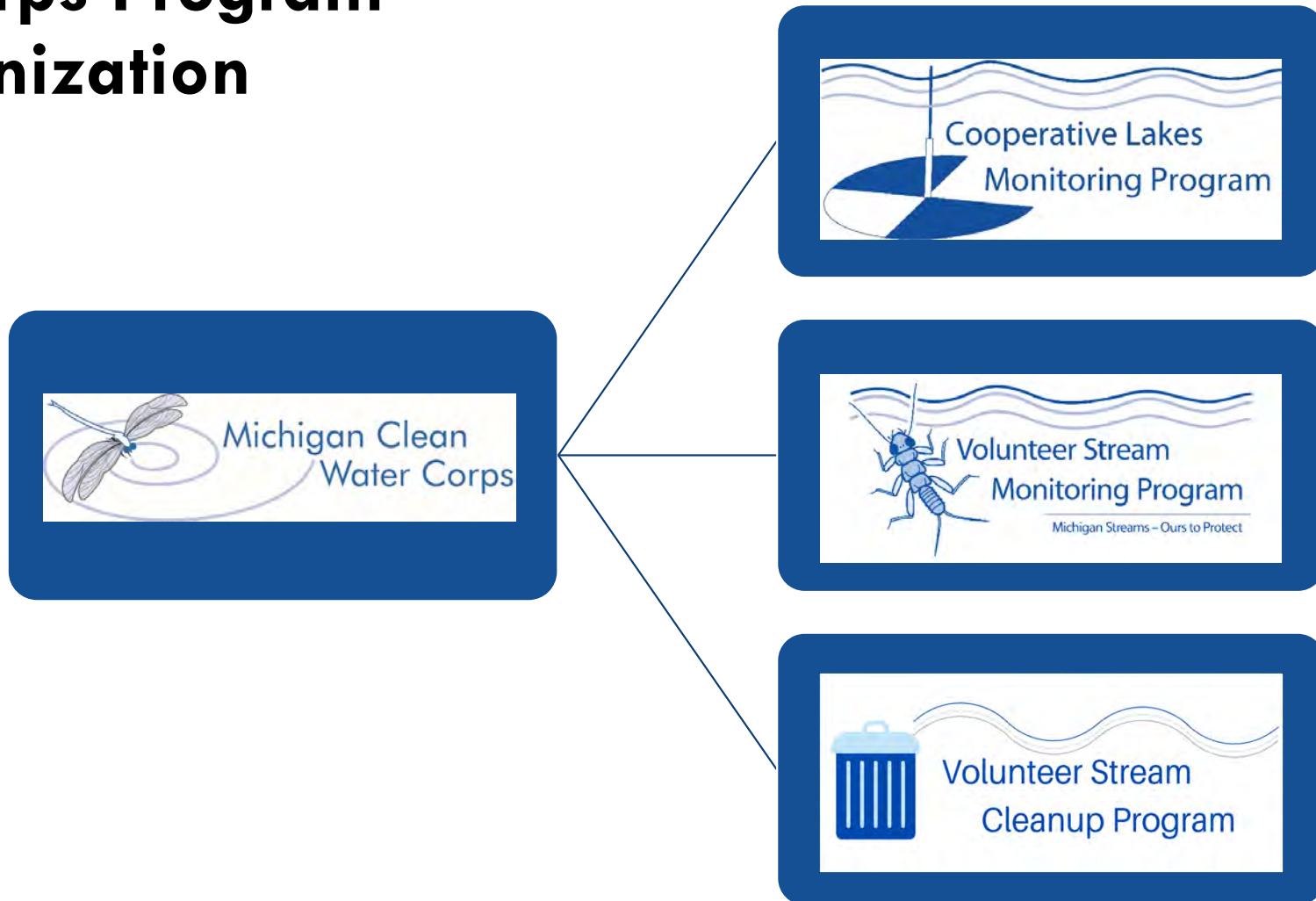
MICHIGAN STATE
UNIVERSITY



MiCorps Team

- Sponsored through EGLE
- Administered by Michigan State University Extension
- In Partnership with the Huron River Watershed Council and the Michigan Lakes and Stream Association

MiCorps Program Organization



Volunteer Stream Cleanup Program -2024

- Funded by License Plate Funds
- \$40,155 Awarded to 11 entities
- 43,760 pounds of trash removed
- 2,118 Volunteers
- 297 miles of river/streams cleaned
- Must be affiliated with a local unit of government
- Removal of human sources of trash from the water and along the banks.
- Can join existing group or organize your own clean up.
- Program Manager-Dr. Paul Steen (HRWC)



MiCorps Volunteer Stream Monitoring Program

- **\$75,000/year in Grants**
 - RENEW Michigan Funding State Restricted Funds
- Provide Training and Leadership to get volunteer monitoring groups started and to help them continue operating.
- Three types of grants
 - Start-up
 - Implementation
 - Maintenance Grants
- Collect Macroinvertebrate and Habitat data in May and October.
- Program Manager-Dr. Paul Steen (HRWC)





- Second oldest volunteer monitoring program in the country
- Online Database available
- Reliable data is used by many!!





Importance of CLMP data

- SO MUCH DATA!!!!
- In 2024 the CLMP collected:
 - 296 total phosphorus
 - 162 chlorophyll a
 - 320 Secchi disk
 - 105 Dissolved Oxygen
 - 43 Score the Shore
 - 82 Exotic Aquatic Plant Watch
 - 9 Aquatic Plant Mapping
- Additional CLMP strengths
 - Multiple measurements in a year
 - Long-term data



Slide credit: S. Holden

2024 Clean Water Act Reporting: ~ 250 lake updates based on CLMP data!



Jo Latimore
(MSU)



Erick Elgin
(MSU)



Paul Steen
(HRWC)



Tamara Lipsey
(EGLE)



Melissa
DeSimone
(MLSA)



Mike
Gallagher
(MLSA)



Jean Roth
(MLSA)



MICHIGAN STATE
UNIVERSITY

Jo Latimore, Ph.D.
MiCorps Director
517-432-1491
latimor1@msu.edu

There are two steps to CLMP participation

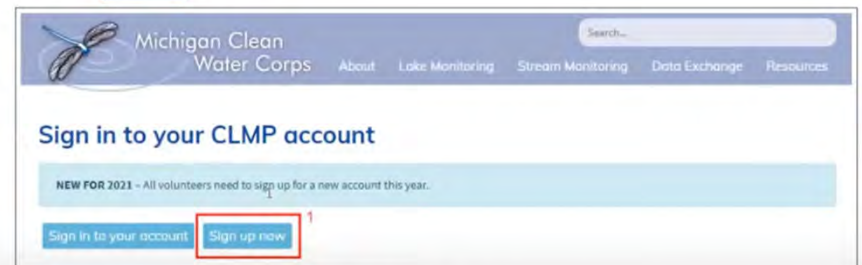
Training



Enrollment

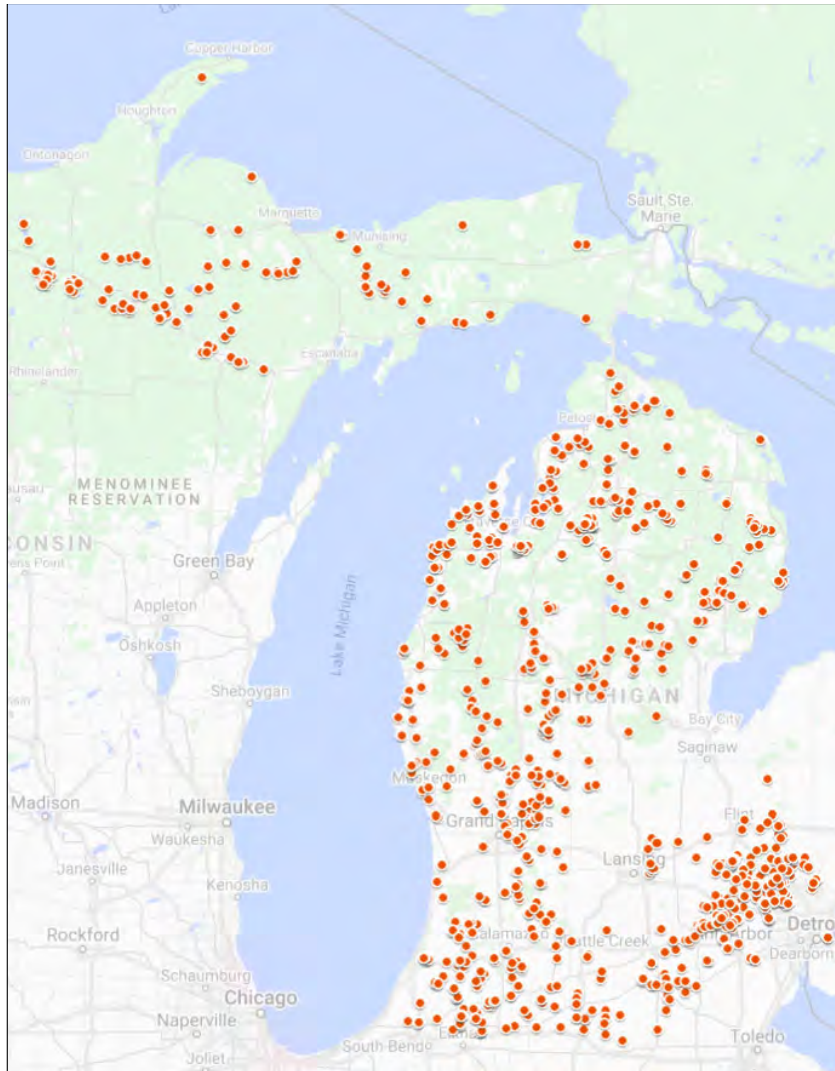
Step 1: Sign up for a new CLMP Account.

1. Go to: <https://data.micorps.net/clmp/>
 - Click the **Sign up now** button



2. Create a username and password and enter the requested personal information.
 - Note that the requested demographic information is voluntary, but very helpful. Where responses are required, you will have the option to select "Choose not to provide".
3. Choose your CLMP Role
 - Click **"Please select an option..."** and choose either "Lead Volunteer" or "Assisting Volunteer" from the dropdown menu. Refer to page 1 for descriptions of these roles.
4. Sign the liability waiver
 - Click the **View / Sign Waiver** button

Where are all the data?



Michigan Clean Water Corps

Search...

About Lake Monitoring Stream Monitoring Data Exchange Resources

MiCorps Data Exchange Search Results

Download in Excel New Search

Searched by county: Oakland

From January, 01 1970 to November, 12 2021

Sort by: County Watershed

Page 1 of 29

5, 10, 25 sites per page

County HUC and Watershed	Lake Name	STORETID
Oakland 4090005Huron Secchi	Angela	631121

Date	Time	Depth	Weather	
Sep 17, 2019	13:30:00	6 ft	Windy	View Graph
Sep 13, 2019	14:30:00	5 ft	Windy	View Graph
Sep 7, 2019	16:15:00	6 ft	Windy	View Graph
Aug 29, 2019	12:20:00	5 ft	Windy	View Graph
Aug 19, 2019	15:30:00	4 ft		View Graph

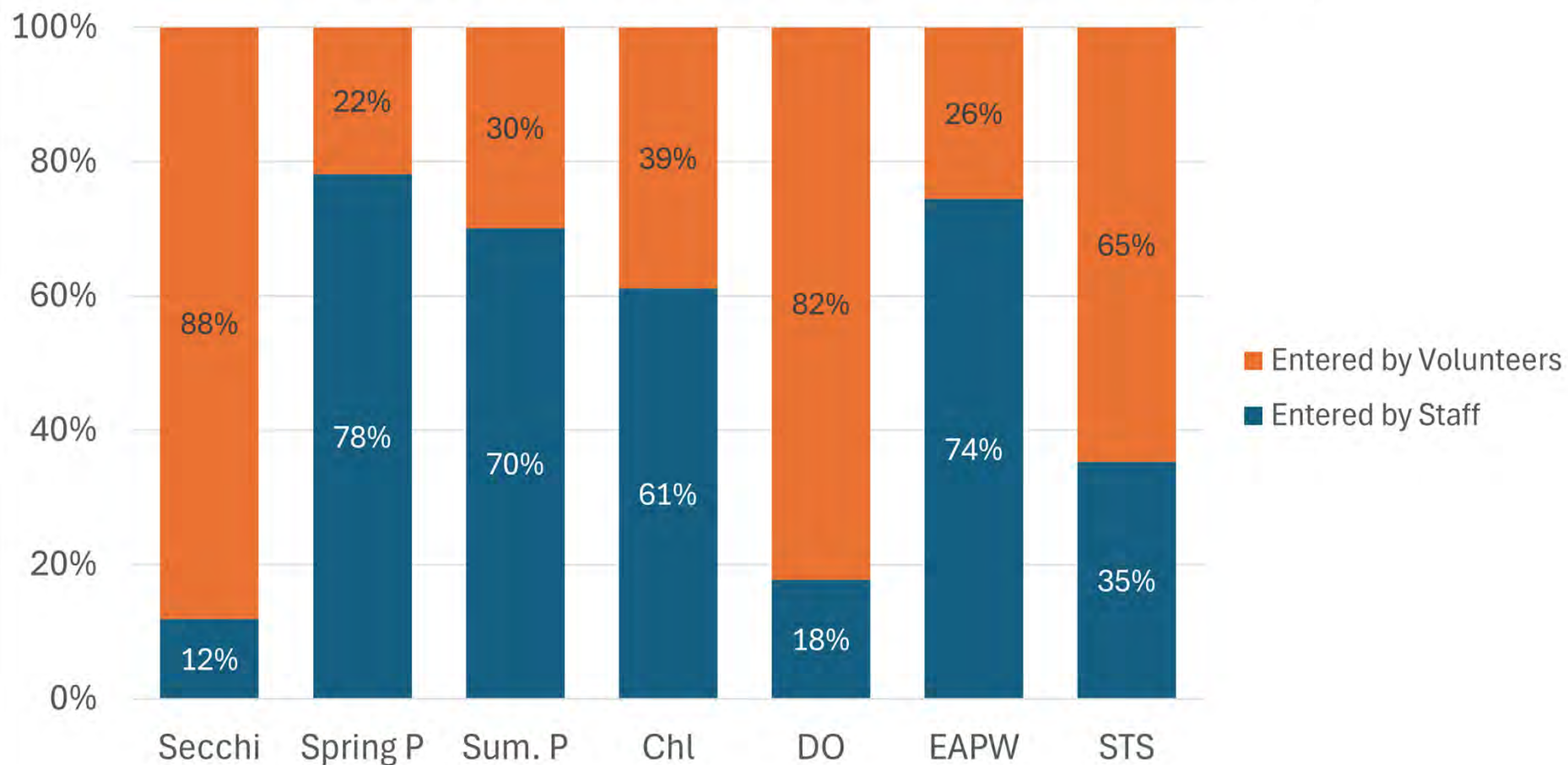
You can enter your data

Enter a New Sample

Click a button to enter information from the corresponding data sheet. You will be given a chance to return to this page if you would like to enter more data.

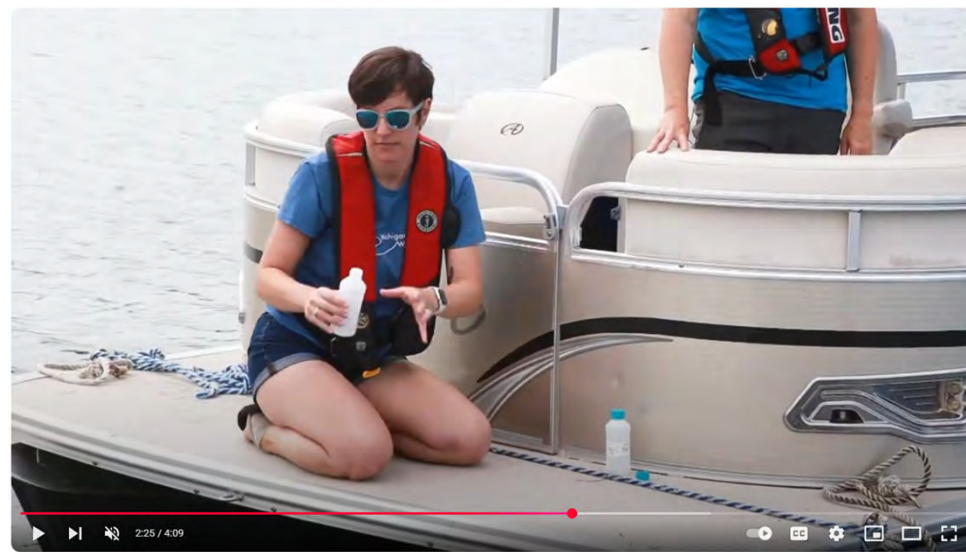
[Secchi](#)[Phosphorus](#)[Chlorophyll](#)[Dissolved Oxygen and Temperature](#)[Exotic Aquatic Plant Watch](#)[Plant Mapping](#)[Score The Shore](#)

Who entered 2024 CLMP data into the MiCorps Data Exchange?



Resources for you

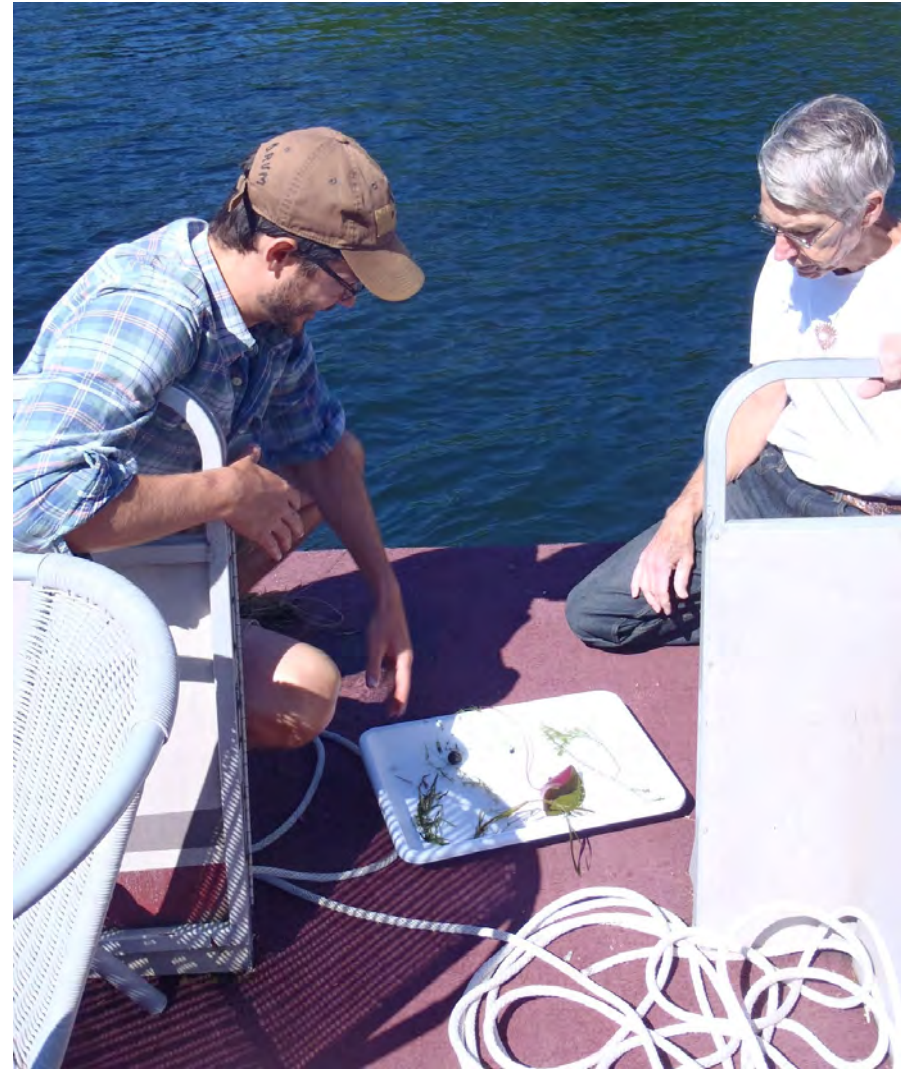
- Fact sheets about each CLMP parameter
- Instructions (protocols)
- Blank data forms
- Sampling and turn-in schedules
- Summary data reports
- Training videos
 - *Including some excellent new ones*



micorps.net → Lake Monitoring → CLMP Documents

CLMP: Monitoring First

- Today: Monitoring Training
- Have questions about lake management?
 - CLMP data will be a valuable resource
 - We're here for you (*but not today*)





June 28th-July 6th 2025

Help Track Aquatic Invasive Species Across Michigan- Your Observations Make a Difference!



MiCorps AIS Detection Blitz

A statewide community science effort inviting volunteers of all experience levels to help track aquatic invasive species in Michigan's lakes, rivers, and streams by snapping photos with the iNaturalist app.



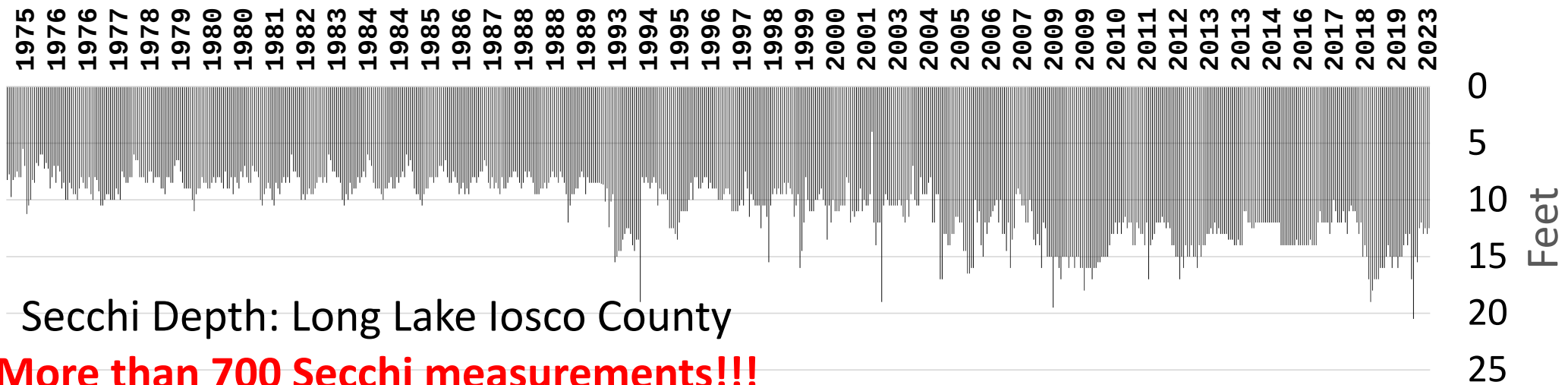


Introduction to Lake Monitoring

Erick Elgin

Long Term Lake Monitoring Program

Consistency in protocol and collections are very important to maintain data quality and reliability





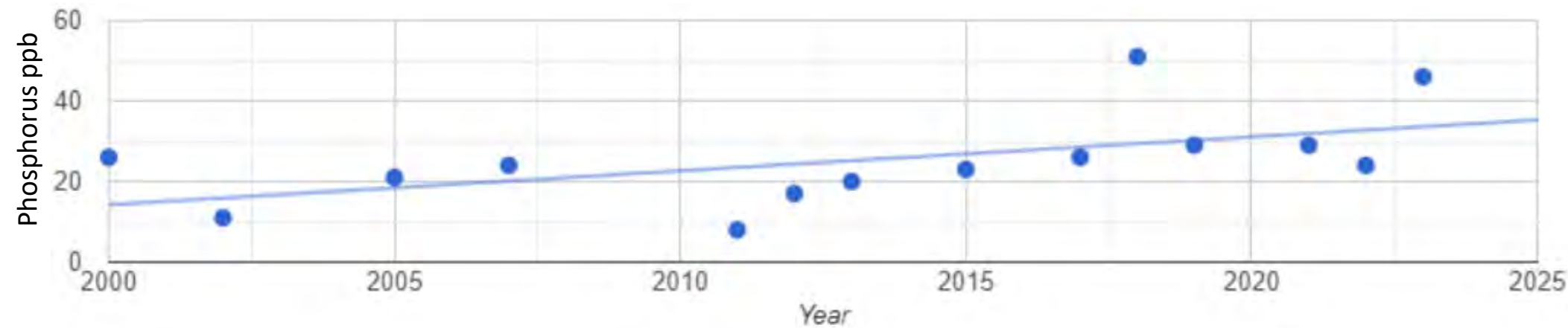
Measuring a lake's condition

- **Water quality**
 - Secchi
 - Phosphorus
 - Algae
 - Dissolved Oxygen/Temp
- **Shoreline and nearshore habitat**
 - Score the Shore
 - Aquatic Plant Mapping
 - Dissolved Oxygen/Temp
- **Aquatic invasive plant**
 - Exotic Aquatic Plant Watch

Evaluating individual data and trends

2023 phosphorus sample: 46 ppb

Average phosphorus concentration for CLMP lakes: 17.4 ppb



Classifying lakes: Trophic status

- Water transparency
- Total phosphorus
- Chlorophyll a



Carlson's Trophic Index

Oligotrophic

Clear water | Oxygen throughout water column | Low plant biomass



> 15 feet
Secchi

<0.010 mg/L
Summer P

<2.2 ug/L
Chla

Mesotrophic

In the Middle | Home to many sport fish | Can have abundant plant growth



7.5 – 15 feet
Secchi

0.01 – 0.02 mg/L
Summer P

2.2 - 6 ug/L
Chla

Eutrophic

Low water clarity | Loss of oxygen in hypolimnion | Can support dense aquatic plant beds

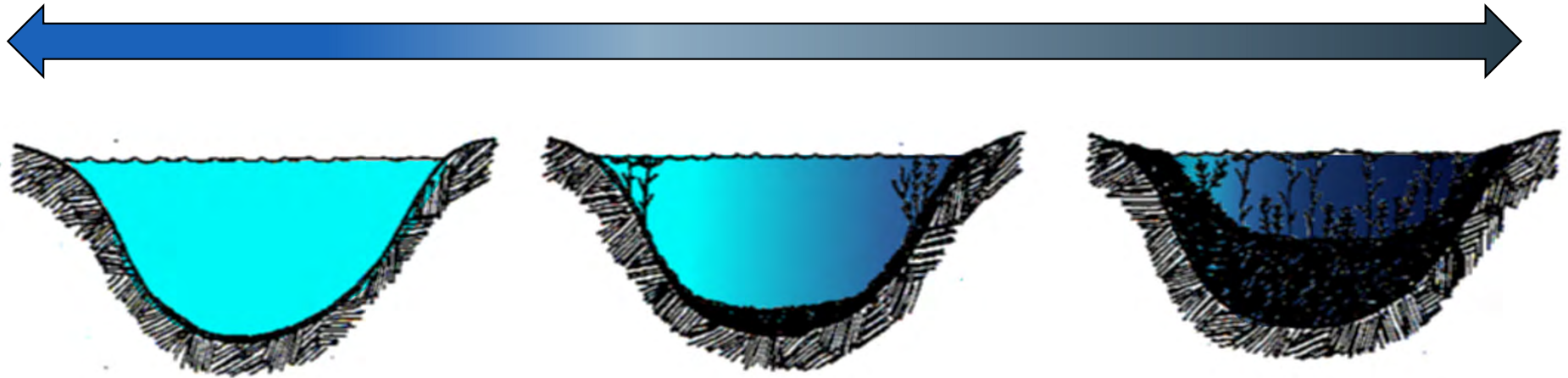


3 - 7.5 feet
Secchi

0.021-0.05 mg/L
Summer P

6.1 - 22 ug/L
Chla

Changes in Trophic Status



- Eutrophication (cultural)– Becoming more eutrophic
- Oligotrophication- Becoming more oligotrophic



Measuring a lake's condition

- **Water quality**

- Secchi
- Phosphorus
- Algae
- Dissolved Oxygen/Temp

- **Shoreline and nearshore habitat**

- Score the Shore
- Aquatic Plant Mapping
- Dissolved Oxygen/Temp

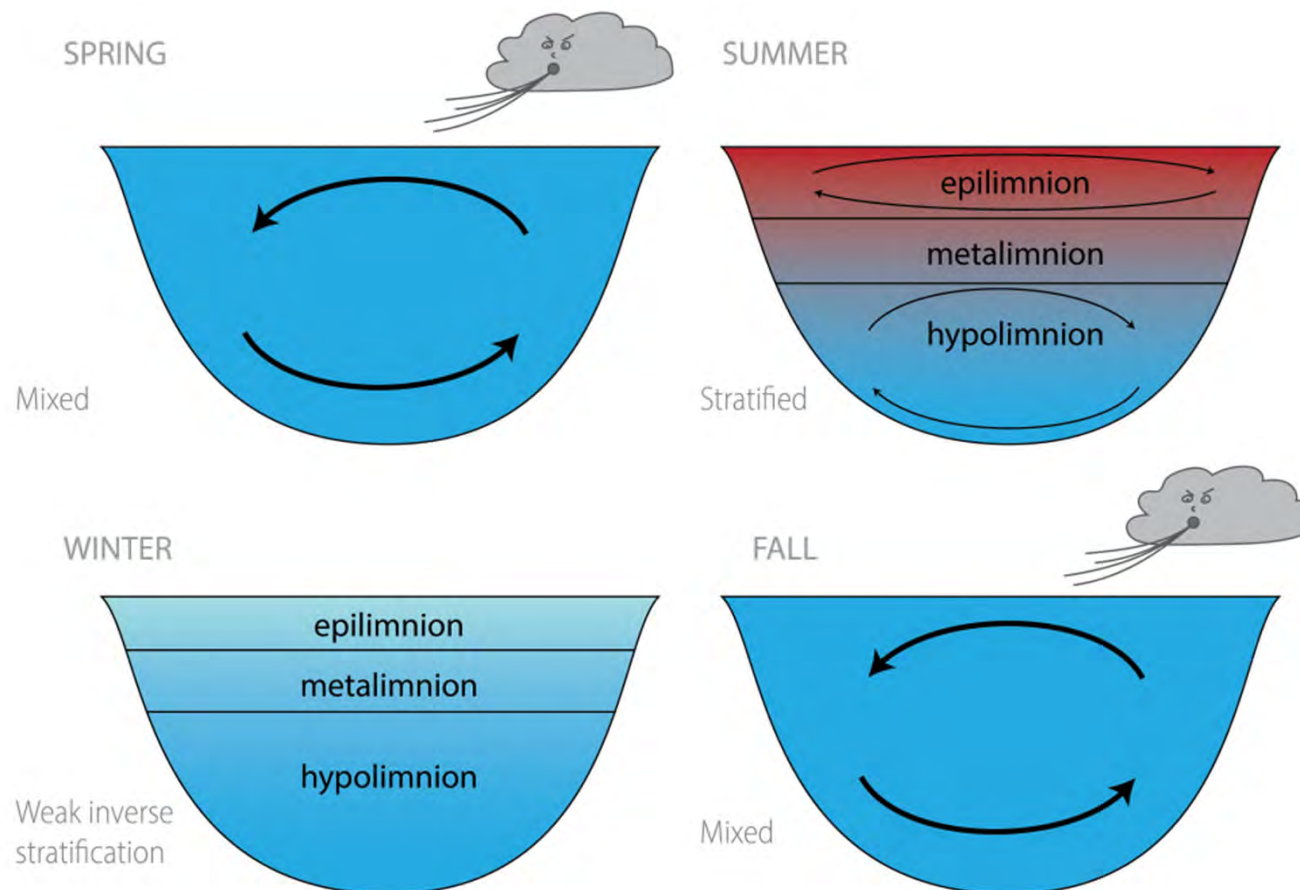
- **Aquatic invasive plant**

- Exotic Aquatic Plant Watch



NATURAL SHORELINE (1938)
TO
DEVELOPED SHORELINE (2014)

Dissolved Oxygen/Temp





Questions?

To learn more about the Cooperative Lakes Monitoring Program, visit:

MiCorps.net



Working Together to Protect Lakes

