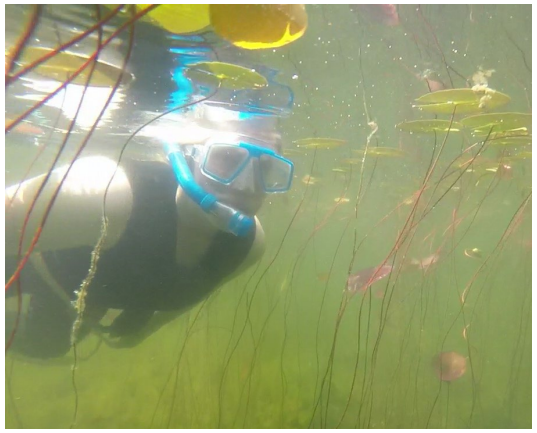
MiCorps

101



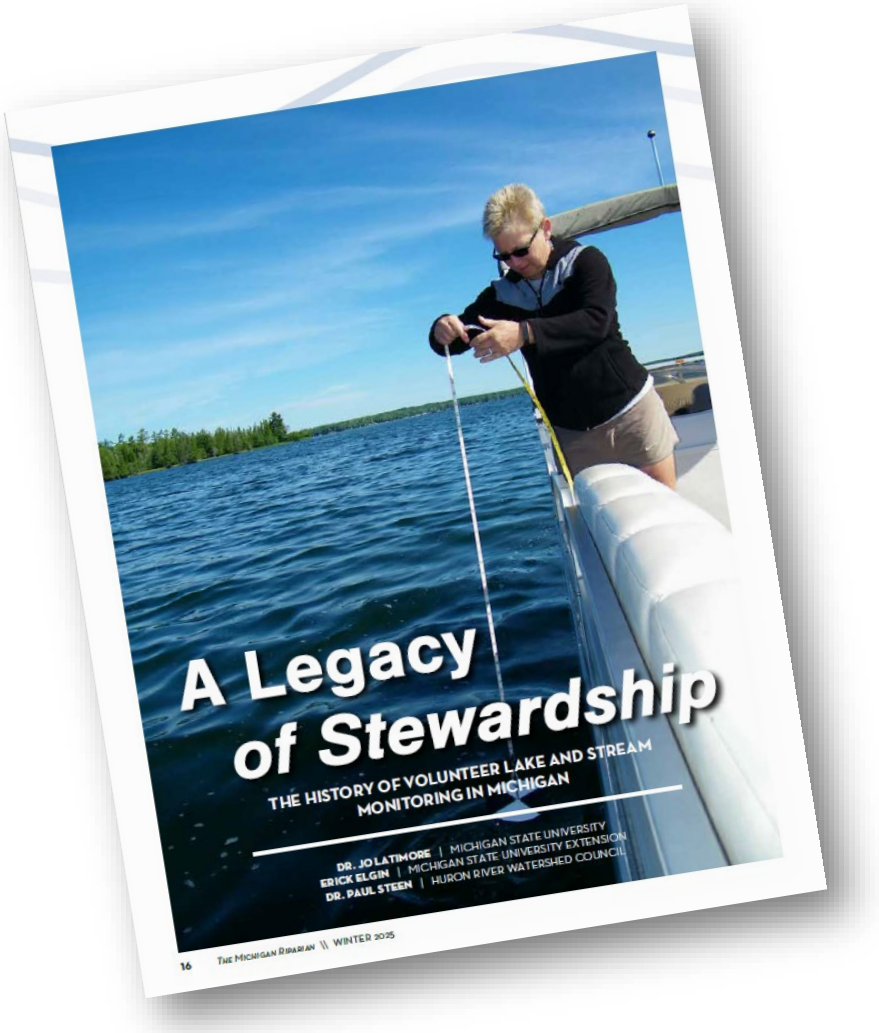
MICHIGAN STATE UNIVERSITY

Jo Latimore, Ph.D.
MiCorps Director
latimor1@msu.edu

MICHIGAN STATE UNIVERSITY | Extension
Center for Lakes and Streams

Brief history of MiCorps

- 1974
  - DNR launches Self-Help Program for lakes
- 1992
  - MLSA joins DNR to administer the program
- 1998
  - DEQ launches Volunteer Stream Monitoring Program
  - New name: Cooperative Lakes Monitoring Program
- 2004
  - MiCorps is born
- 2021
  - Current MiCorps structure established: EGLE oversees MiCorps via contract to MSU with HRWC and MLSA



Today's MiCorps Team

MiCorps Director: Dr. Jo Latimore, MSU

EGLE MiCorps Program Lead: Tamara Lipsey, EGLE

Lake Program Manager: Erick Elgin, MSU Extension

Lake Program Associate: Kate Laramie, HRWC

Stream Programs Manager: Dr. Paul Steen, HRWC

Technology Manager: Dylan Hoffner, MSU

Communications Support: Chelsea Cooper, MSU

MLSA Executive Director: Melissa DeSimone, MLSA

Today's partnership behind MiCorps

EGLE

MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

MICHIGAN STATE UNIVERSITY | Extension

Center for Lakes and Streams

Huron River Watershed Council

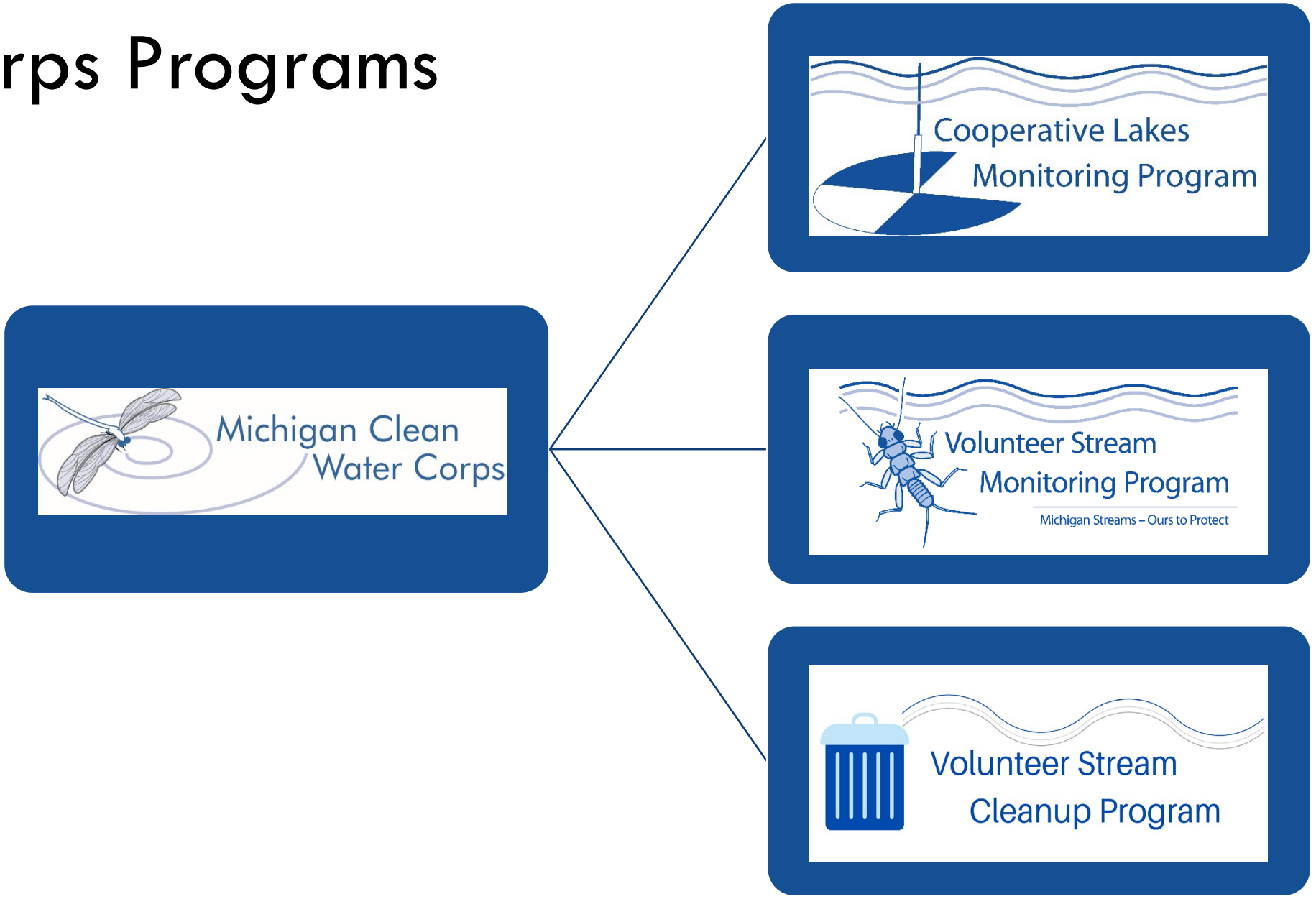
MLSA

Michigan Lakes and Streams Association

Our focus

- Educate Volunteers About Water Quality
- Provide Training and Technical Support
- Collect High Quality Data
- Establish Volunteer Network

MiCorps Programs

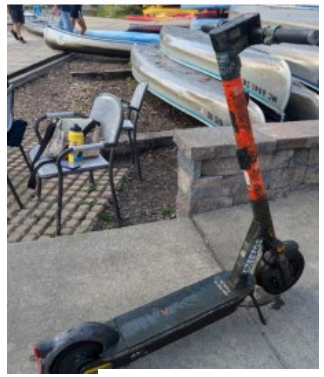


Volunteer Stream Cleanup Program

- Grants to municipalities
- Local events

Did you know… Stream Clean Ups!

- 8 Organizations in 2022
- 11 Organizations in 2023
- 12 Organizations in 2024



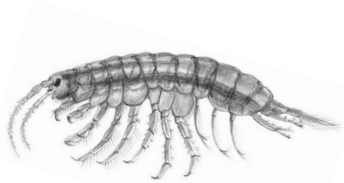
In 2024:
2,118 Volunteers
Total River Miles Cleaned: 297
Estimated Weight: 38 tons

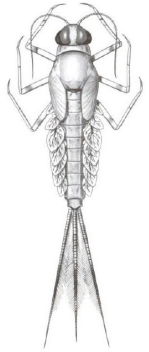
What are people finding? Tires, lawn chairs, construction barrels, carpeting, old boat docks, swing sets, cellphones, metal, ceramic, glass, cans, plastic, lumber, pvc pipes, bicycles, above ground pools, underwear, old boats, vapes, shopping carts, wooden pallets.

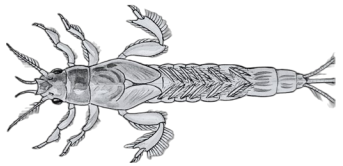
Volunteer Stream Monitoring Program

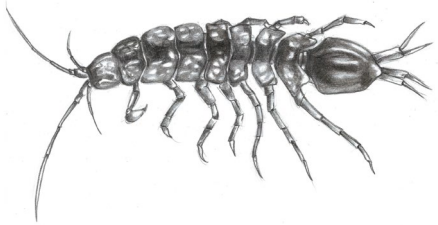
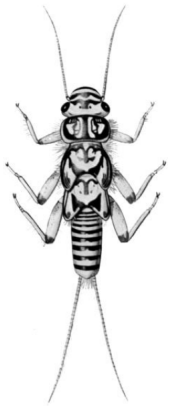
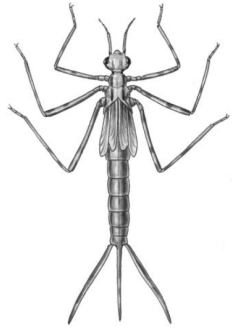
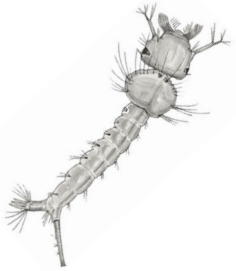
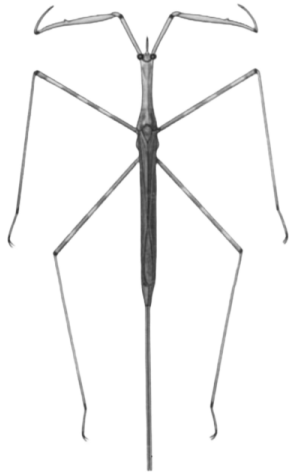
Michigan Streams – Ours to Protect

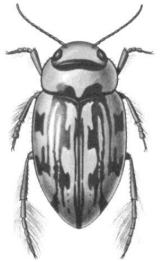
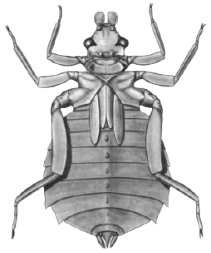
What do we monitor for and why?

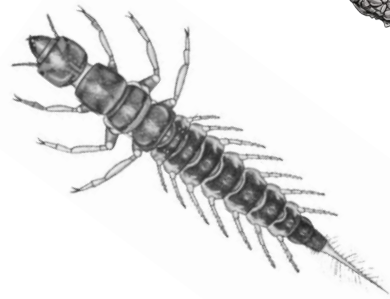


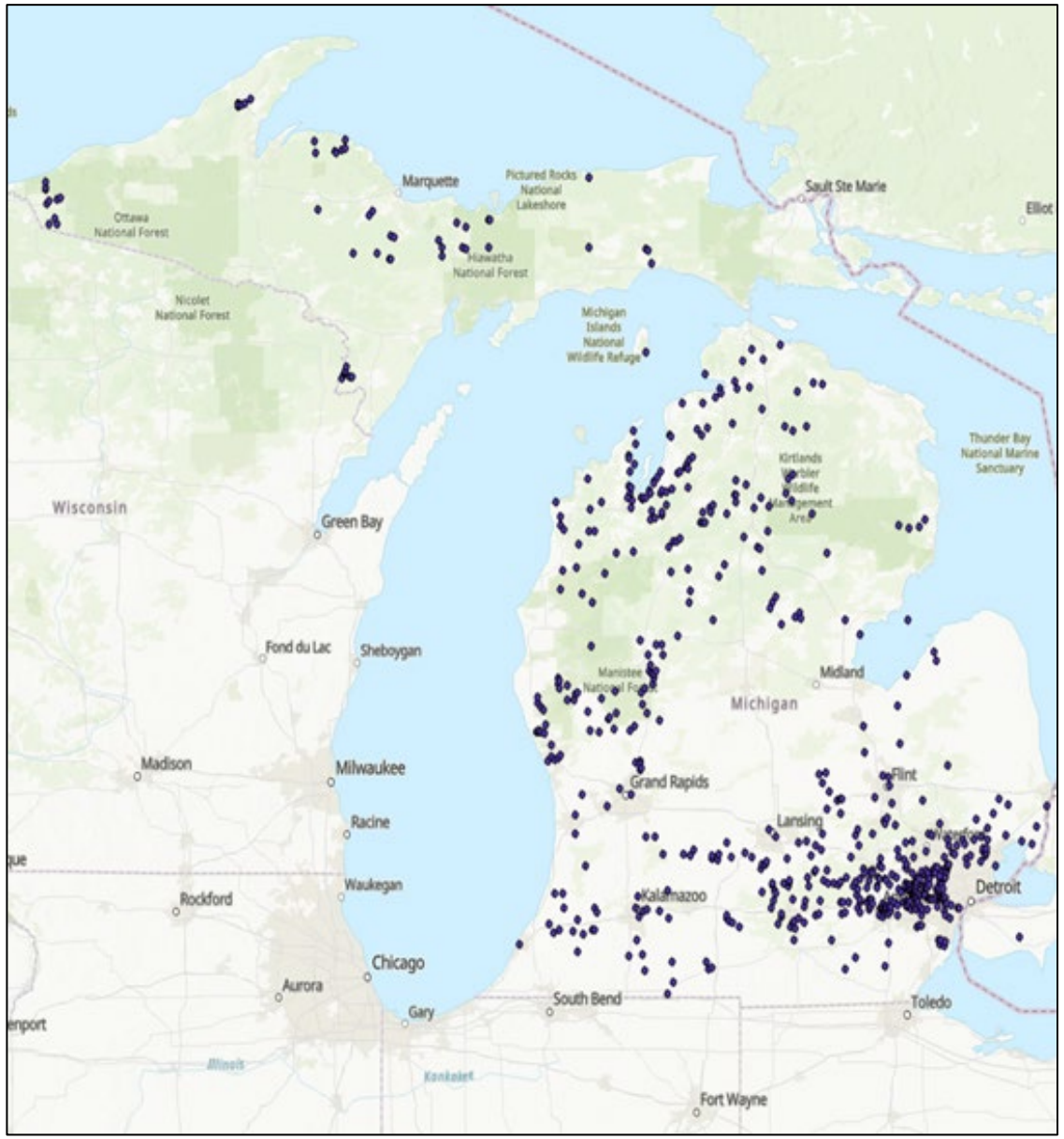








Volunteer Stream Monitoring Program

Michigan Streams – Ours to Protect

- In the past 20 years
  - 12,128 macroinvertebrate collections
  - 820 unique locations
  - Each location surveyed an average of 14.7 times
- In 2021-24
  - 1,184 collections
  - 446 unique locations
  - 183,370 individual invertebrates

2024 ADOPT-A-STREAM ANNUAL REPORT

The Watershed Center's Adopt-A-Stream program trains community members to monitor streams within the Grand Traverse Bay watershed using Michigan Clean Water Corps (MiCorps) procedures. MiCorps protocols were developed by state water resource professionals to gather valuable stream data on otherwise mostly unmonitored streams. Volunteers survey macroinvertebrate communities to determine stream health using a biotic index. This report reflects the high-quality data collected by nearly 100 Watershed Center volunteers in June and October of 2024 (numeric scores averaged).

To learn more, visit:
www.gtbay.org/adopt-a-stream

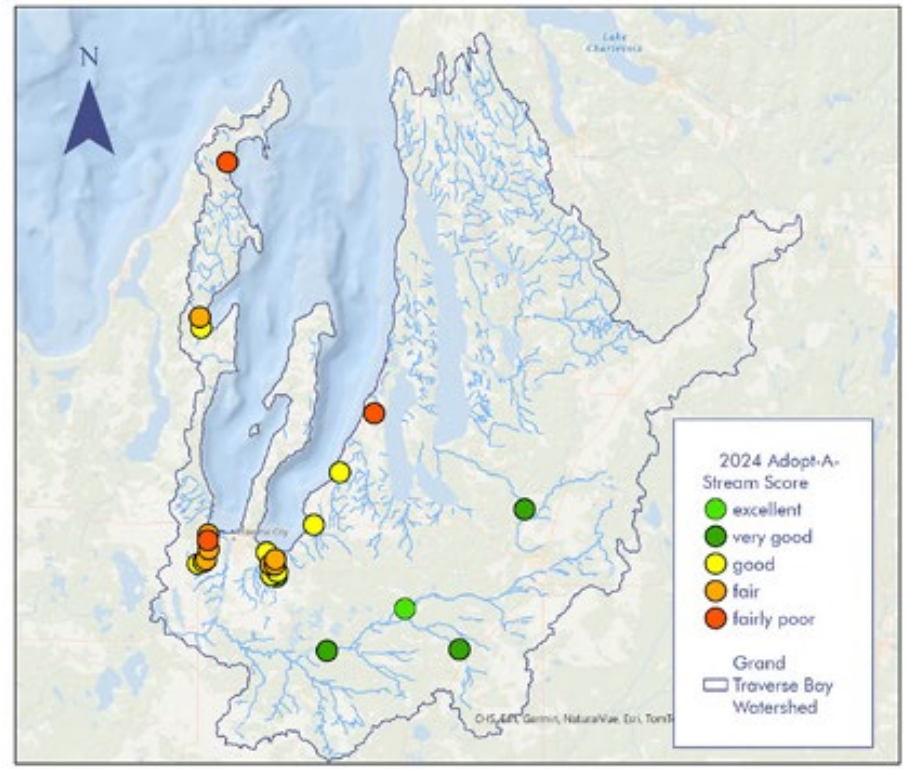



Photo By: M. Handke


Photo By: A. Goense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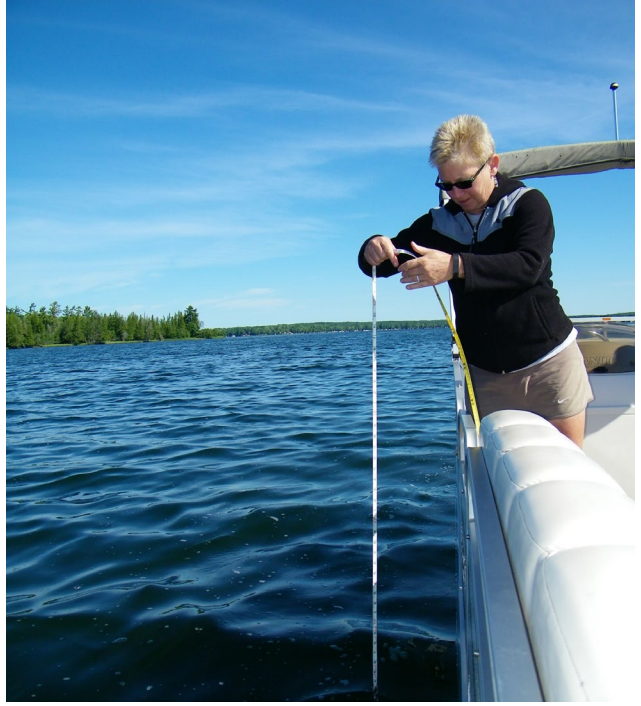


Celebrating 50 years

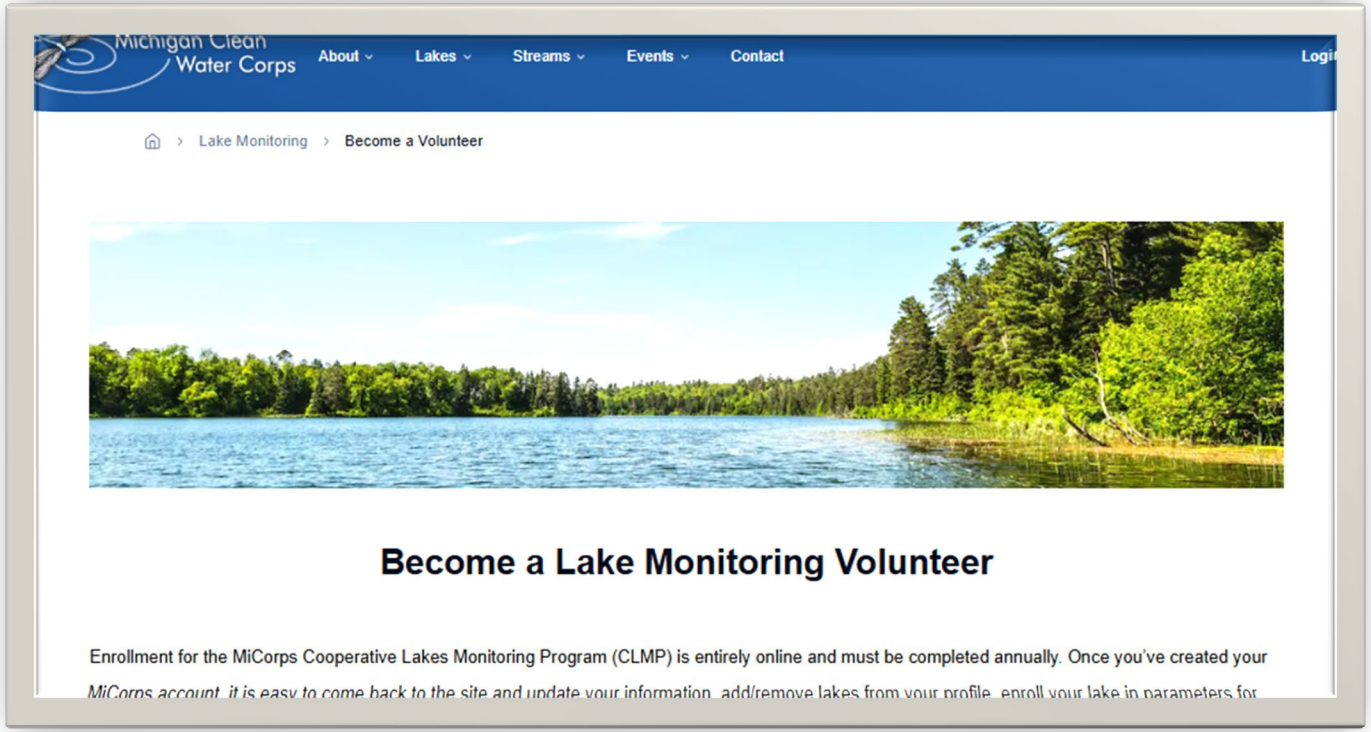
Cooperative Lakes Monitoring Program

1974 - 2024

- **Water quality**
- **Shoreline and nearshore habitat**
- **Aquatic invasive species**

CLMP – How it Works

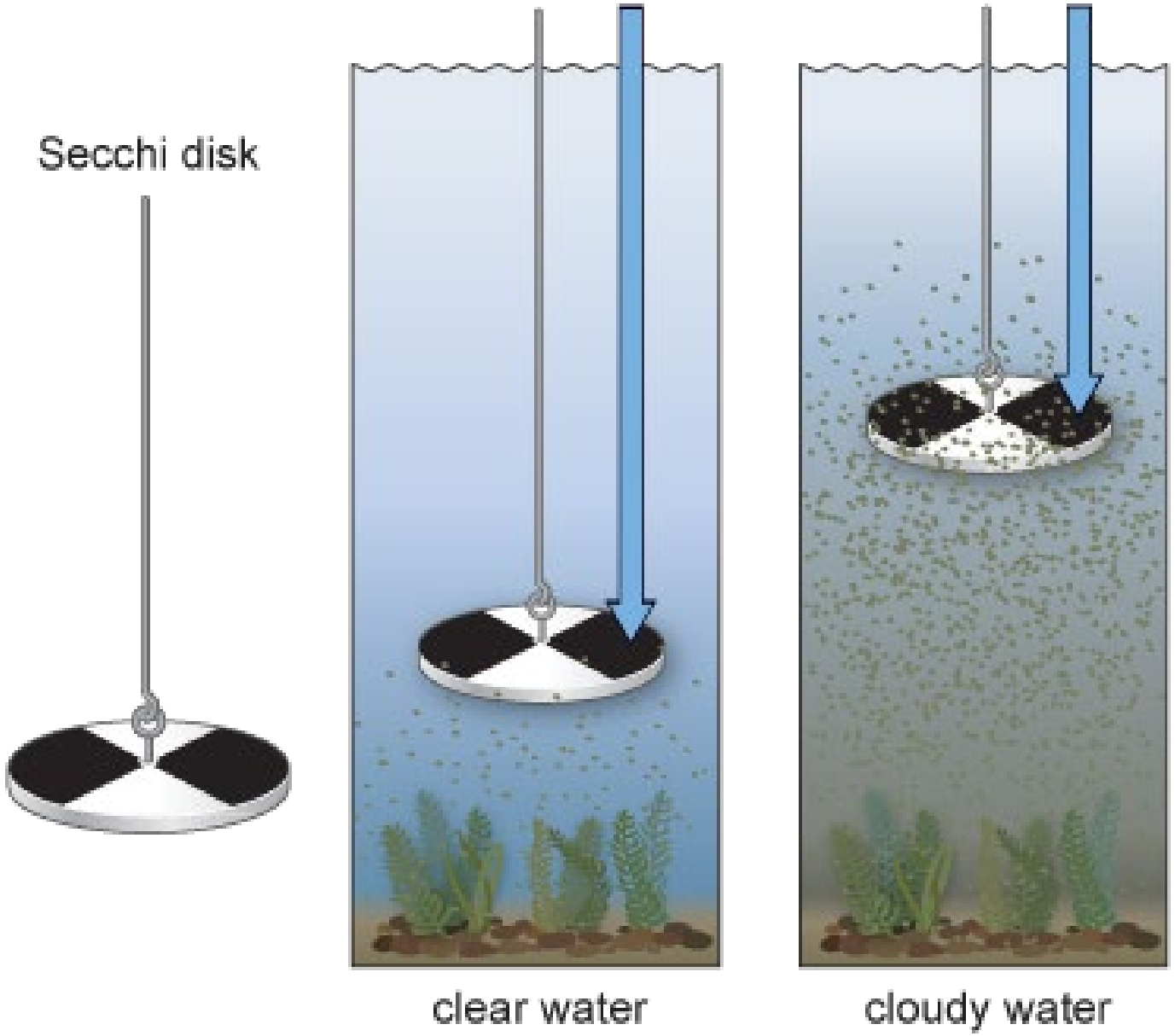
- Review monitoring options
- Create a MiCorps user account
- Enroll your lake and pay fees
- Get training
- Collect data
- Enter your data



Basic Parameters

- For NEW volunteers

Secchi Disk Transparency



How does it work?

- Water clarity is affected by
  - Water color
  - Algae
  - Suspended solids (organic, sediment, etc…)

Spring and Summer Phosphorus

Phosphorus is an essential nutrient, but can cause…

Cultural Eutrophication Impacts

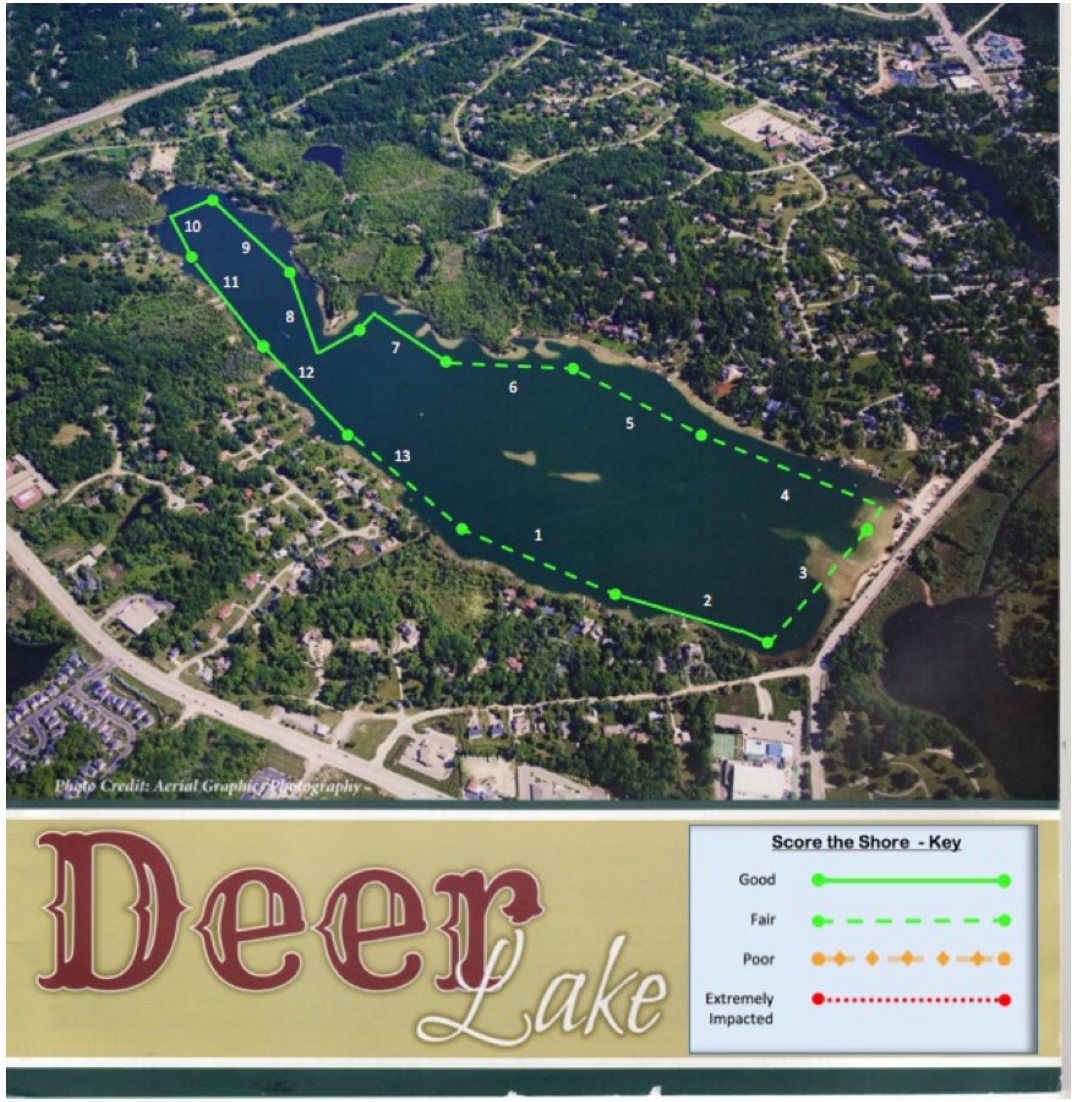
- More algae, possible HABS
- Green water
- Oxygen loss
- Decreased home values

Exotic Aquatic Plant Watch

Exotic Aquatic Plant Watch

Score the Shore

Score the Shore

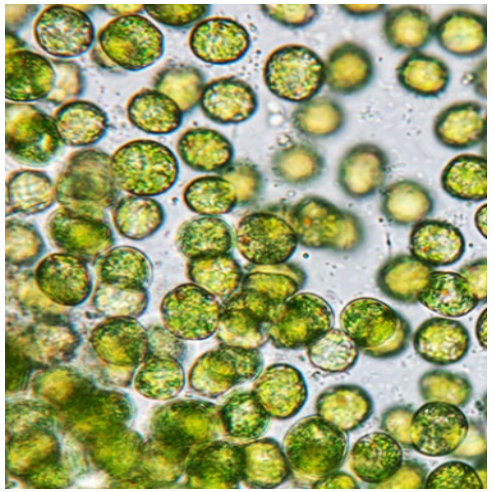


Advanced Parameters

- For volunteers with 1+ YEARS OF EXPERIENCE

Chlorophyll a

Chlorophyll-a



Dissolved Oxygen and Temperature

Temperature and Oxygen impacts…

- Physical
  - Density zones
- Chemical
  - Oxygen and Phosphorus
- Biological
  - Fish Habitat Availability

Slide Credit E. Elgin

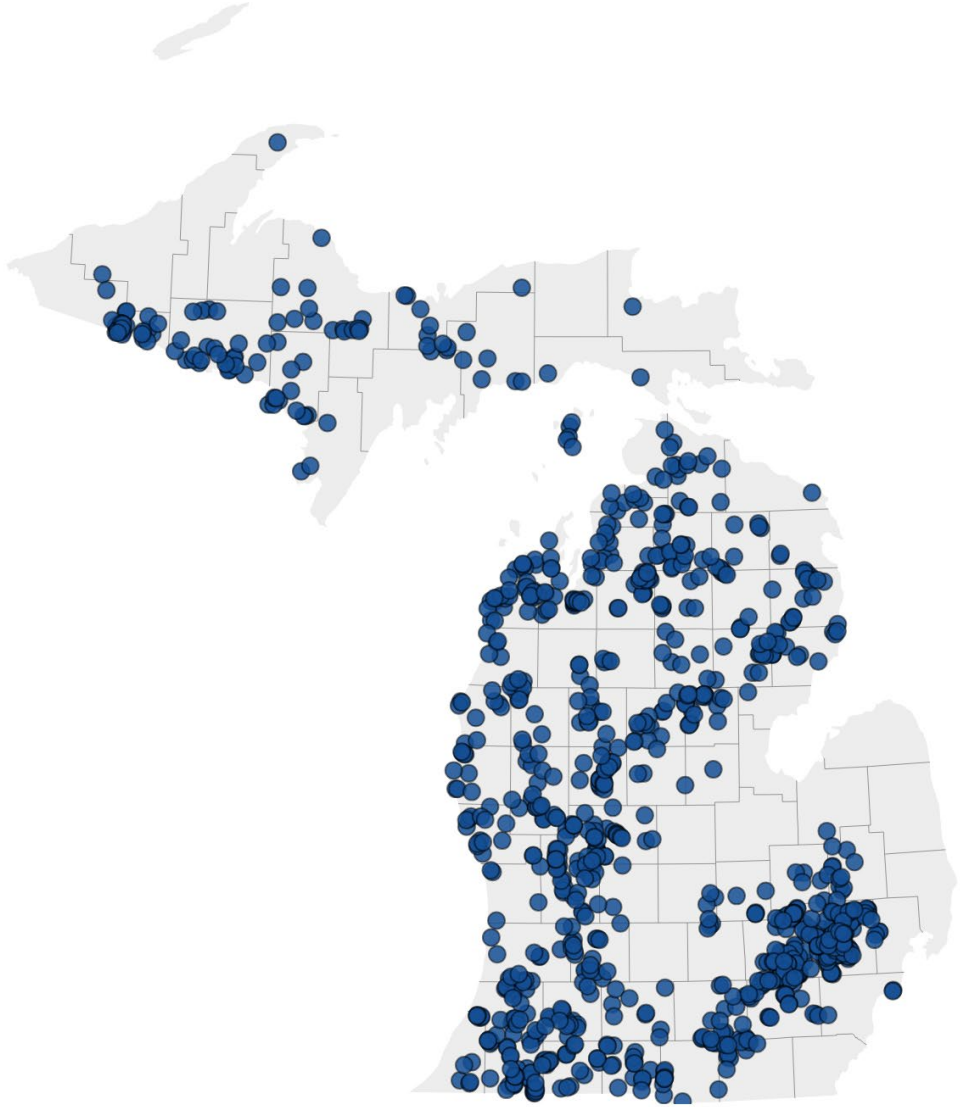
Aquatic Plant Mapping

Importance of aquatic plants

- Absorb wave energy
- Provide habitat
- Compete with algae
- Produce oxygen
- Support water quality
- Compete with invasive species
- Beauty

CLMP Lakes

Locations of all 1,072 lakes lake monitored by volunteers in the CLMP, 1974-2024.



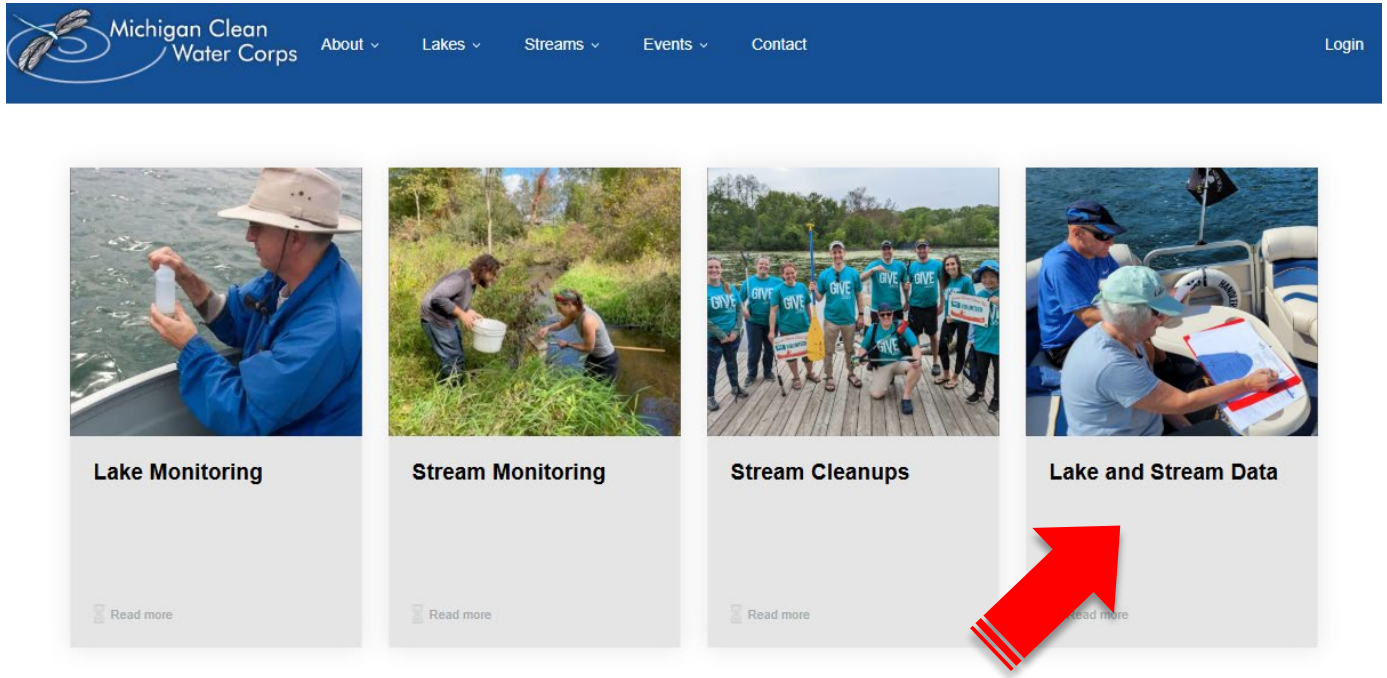
Created with Datawrapper

Cooperative Lakes Monitoring Program

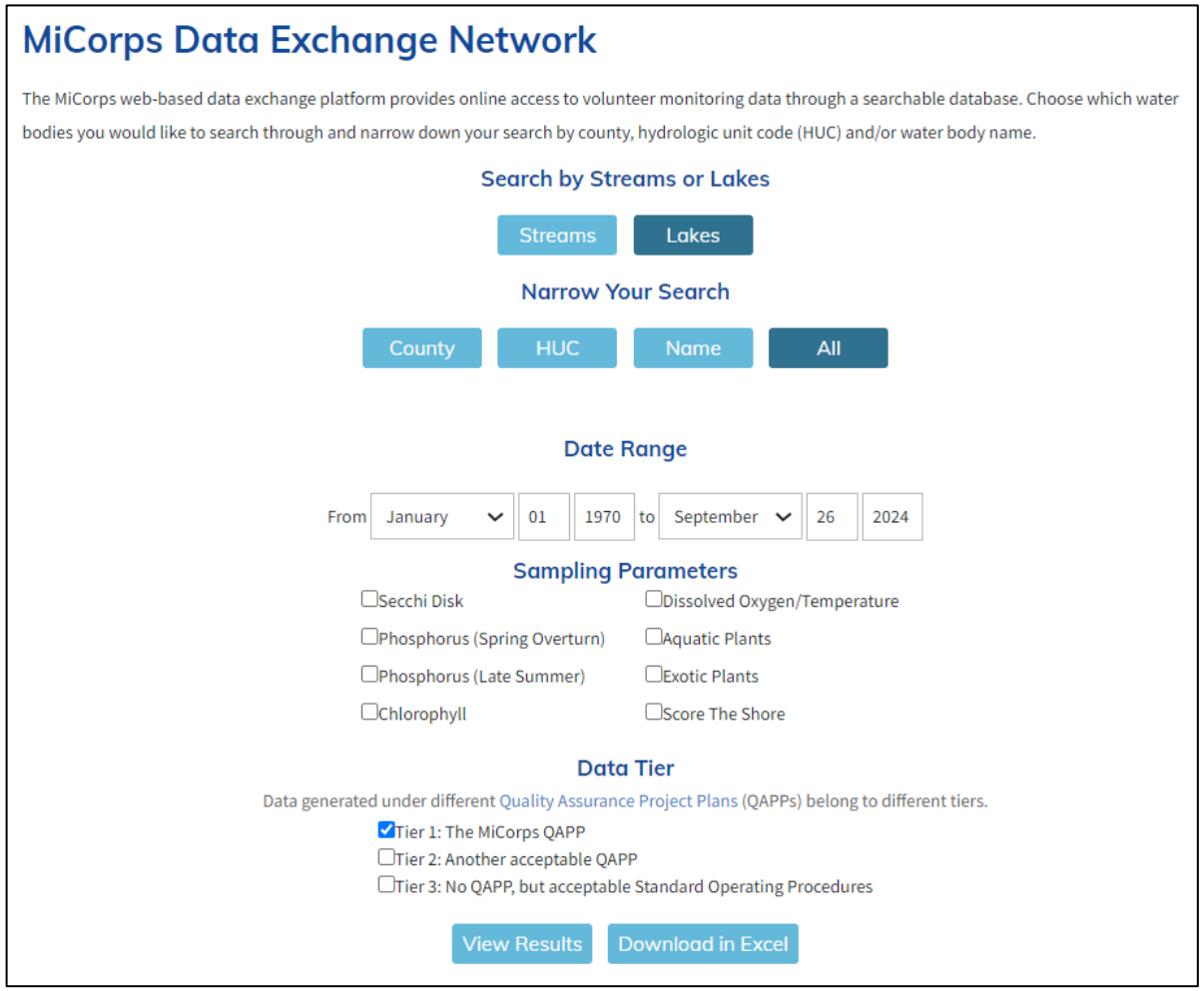
- Since 1974
  - Data collected on 1072 lakes
  - 100,000+ transparency measurements
  - 13,000+ algae samples
  - 332 invasive plant detections
- In the last 5 years
  - Data collected on 455 lakes
  - 63 counties
- 2025 record enrollment: 337 lakes

Updated website

- Contact info
- Monitoring protocols
- Data forms
- CLMP enrollment
- Stream monitoring organizations
- Reports
- Conference information
- Enter data
- View data



Access data in our online database



MiCorps Data Exchange Network

The MiCorps web-based data exchange platform provides online access to volunteer monitoring data through a searchable database. Choose which water bodies you would like to search through and narrow down your search by county, hydrologic unit code (HUC) and/or water body name.

Search by Streams or Lakes

Streams | Lakes

Narrow Your Search

County | HUC | Name | All

Date Range

From January 01 1970 to September 26 2024

Sampling Parameters

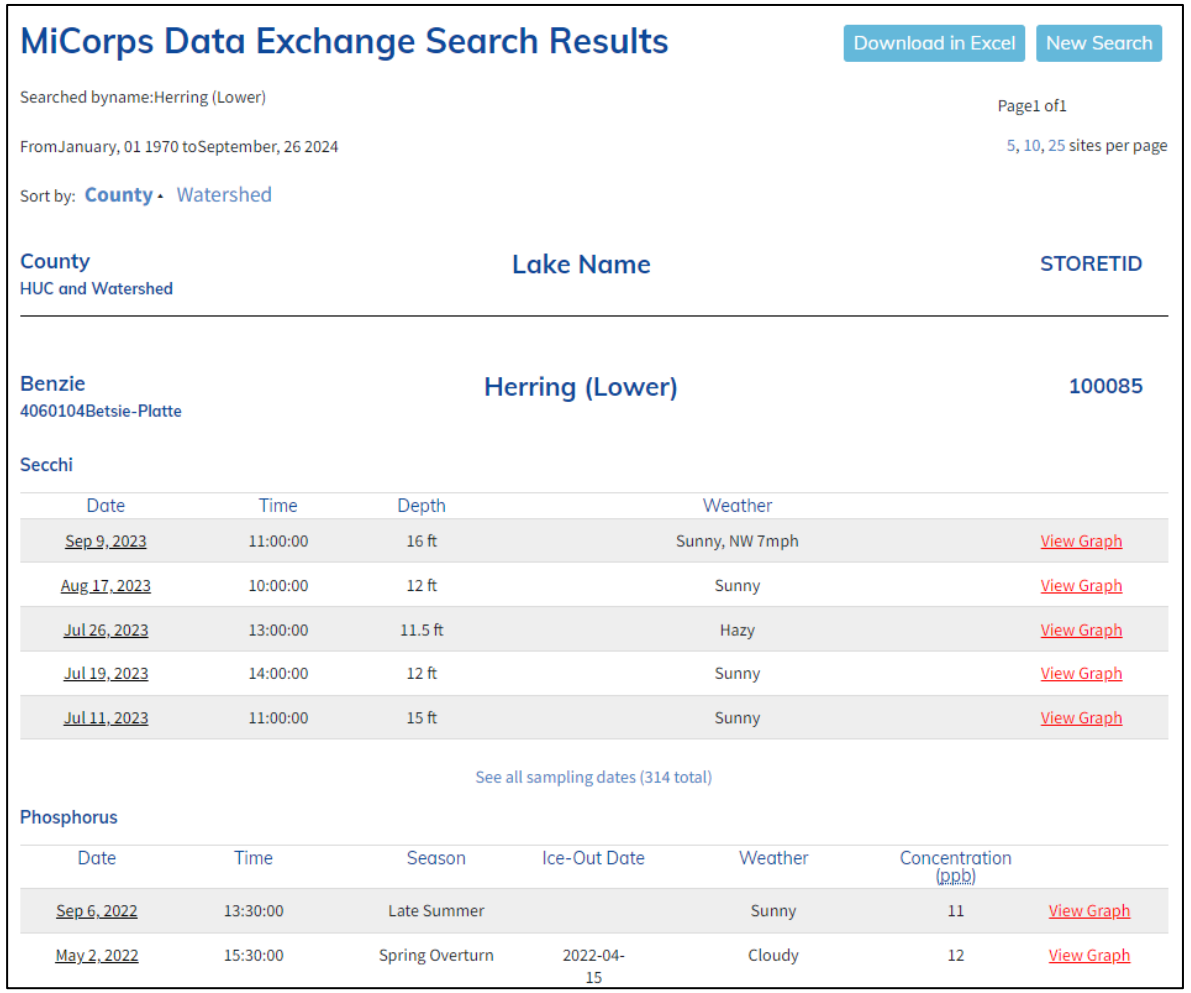
- ☐ Secchi Disk
- ☐ Dissolved Oxygen/Temperature
- ☐ Phosphorus (Spring Overturn)
- ☐ Aquatic Plants
- ☐ Phosphorus (Late Summer)
- ☐ Exotic Plants
- ☐ Chlorophyll
- ☐ Score The Shore

Data Tier

Data generated under different Quality Assurance Project Plans (QAPPs) belong to different tiers.

- ☑ Tier 1: The MiCorps QAPP
- ☐ Tier 2: Another acceptable QAPP
- ☐ Tier 3: No QAPP, but acceptable Standard Operating Procedures

View Results | Download in Excel



MiCorps Data Exchange Search Results

Download in Excel | New Search

Searched byname:Herring (Lower)

Page1 of1

FromJanuary, 01 1970 toSeptember, 26 2024

5, 10, 25 sites per page

Sort by: County ▲ Watershed

County / HUC and Watershed	Lake Name	STORETID
Benzie 4060104Betsie-Platte	Herring (Lower)	100085

Secchi

Date	Time	Depth	Weather	
Sep 9, 2023	11:00:00	16 ft	Sunny, NW 7mph	View Graph
Aug 17, 2023	10:00:00	12 ft	Sunny	View Graph
Jul 26, 2023	13:00:00	11.5 ft	Hazy	View Graph
Jul 19, 2023	14:00:00	12 ft	Sunny	View Graph
Jul 11, 2023	11:00:00	15 ft	Sunny	View Graph

See all sampling dates (314 total)

Phosphorus

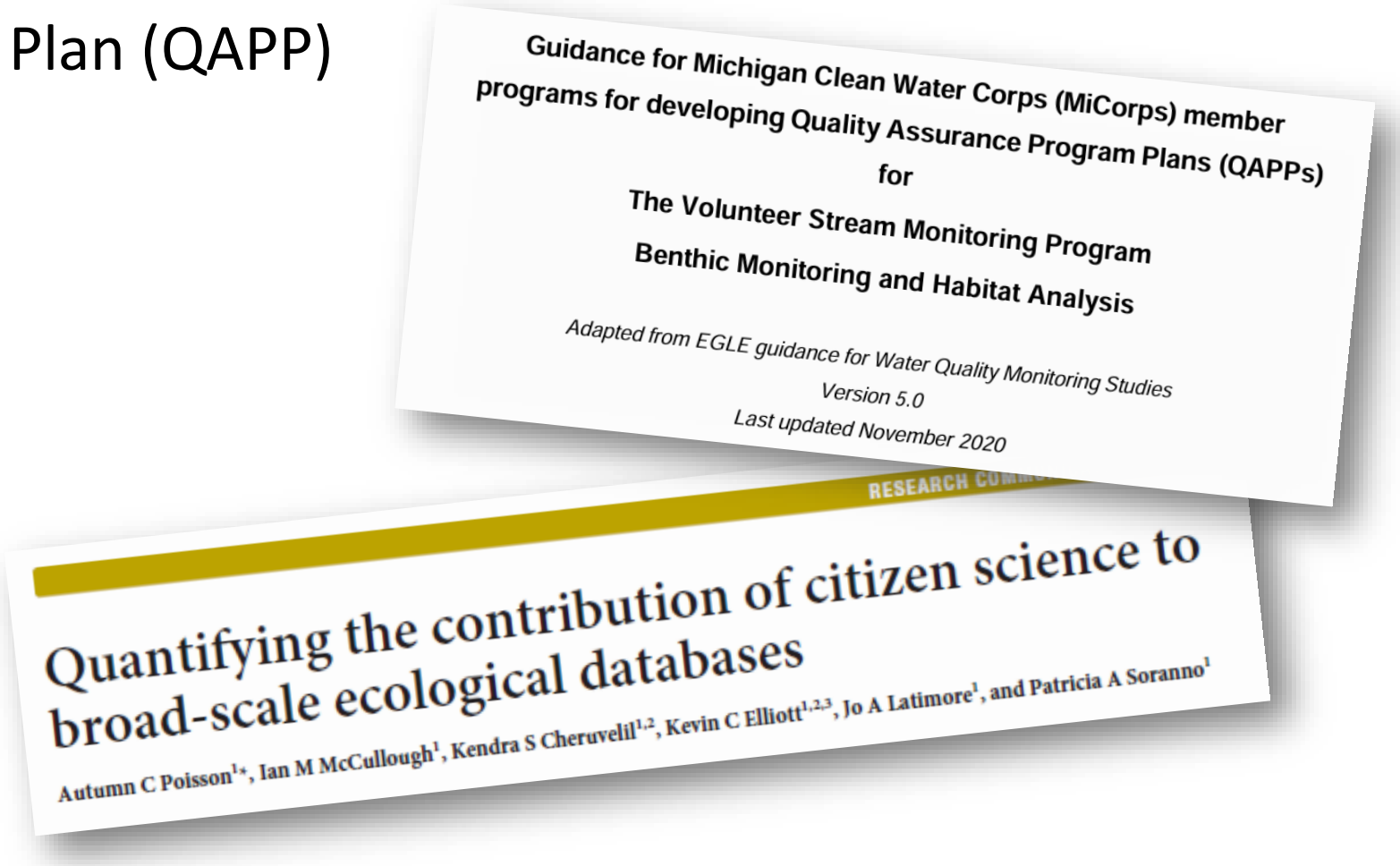
Date	Time	Season	Ice-Out Date	Weather	Concentration (ppb)	
Sep 6, 2022	13:30:00	Late Summer		Sunny	11	View Graph
May 2, 2022	15:30:00	Spring Overturn	2022-04-15	Cloudy	12	View Graph

Challenge: Volunteer Recruitment & Retention

- Recruit through partners
- Communicate value
- Keep volunteers informed
- Offer many roles

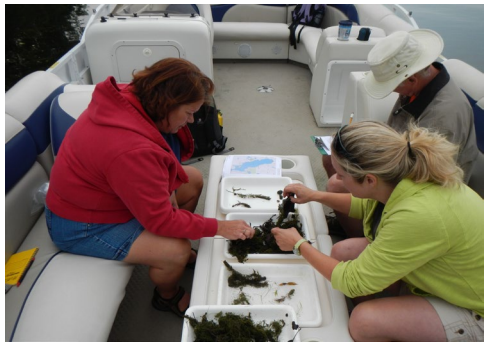
Challenge: Data Credibility

- Quality Assurance Project Plan (QAPP)
  - Protocols
  - Training
  - Data reporting
  - Data rejection
- Engage professionals
  - In the program
  - Using the data



A community science model for water protection

- Data
  - Support action by individuals, communities, and agencies
- Public understanding
  - Environmental conditions
  - Scientific and management processes
- Relationships
  - Between participants and agencies/organizations
- Public support
  - For science-based conservation
  - Funding



MiCorps

Monitoring Michigan's Water Quality

www.micorps.net

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