

Michigan Clean  
Water Corps

# MiCorps 101

Presented by Marcy Knoll Wilmes

MiCorps DEQ Biologist

# MiCorps Team



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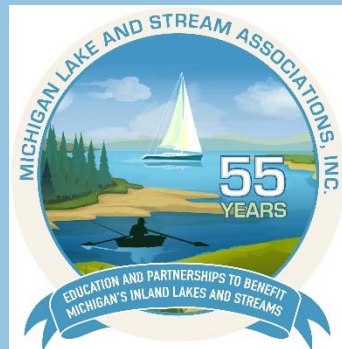
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“Together, we’ll create the nation’s most comprehensive and meaningful clean water monitoring system, building a water legacy for generations to come.”

Governor Jennifer Granholm

2003

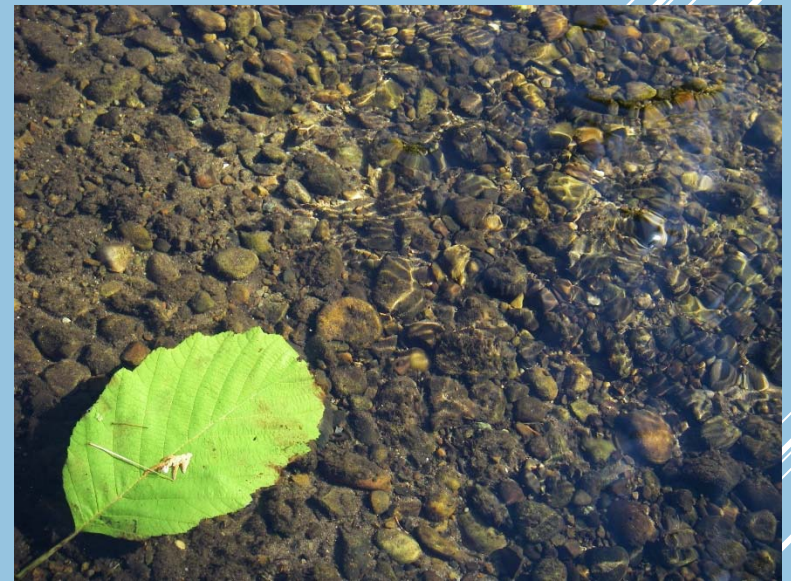


# Governor's Executive Order

MiCorps established  
September 30, 2003

A comprehensive statewide  
volunteer water quality  
monitoring network

- Pre-existing lake program
- A fledging stream program
- Pre-existing water cleanup program



# MiCorps Goals

## 1. Education

*Local Level:* **Educate residents** and interested citizens in collection of water quality data, ecology, and management practices.

*State Level:* Build a constituency of citizens to practice sound ecological management and **build public support** for water quality protection.



# MiCorps Goals

## 2. Data Collection

*Local Level:* Enable **collection** of standardized baseline information to document **trends** in water quality for lakes and streams so groups/people can make wise local **management** decisions.

*State Level:* Provide a cost-effective process for the DEQ to increase **baseline data** in Michigan. DEQ to use data as a **screening tool** for monitoring and management.



# MiCorps Goals

## 3. Support

Network monitoring organizations statewide.

Provide a platform for sharing consistently collected data.



# MiCorps Programs

- MiCorps consists of two main programs concentrating on volunteer stream and lake monitoring.
- Volunteer Stream Monitoring Program (VSMP)
- Cooperative Lakes Monitoring Program (CLMP)
- Other components of MiCorps that support the 2 main programs are:
  - Trainings
  - Annual Conference
  - Email ListServ for news
  - Web site and social media
  - Web-based, publicly available, searchable database





# MiCorps Concentrates on Quality Assurance

- Standard Procedures
- Quality Assurance Plans

Results in:

- Greater use by the DEQ and local managers in planning and management
- Continued funding of the program.



# Volunteer Stream Monitoring Program (VSMP)



# Volunteer Stream Monitoring Program (VSMP)



- A program for local groups to develop or enhance stream monitoring programs.
- This is a “train the trainer” program.



*The VSMP annual training day*

# What is a successful volunteer stream monitoring program?

- You collect data about your fresh water
- You use data and the monitoring process to educate and foster stewardship, & get people to independently take action.
- You continually are reaching new people.
- Human impacts to the watershed are alleviated.
- Committed volunteers to a long-term program
- Training and technical assistance
- Grants are springboards to get you started but are small and those interested in doing this need to be committed long-term.



# What support do stream groups get from MiCorps?

- Training, procedures, technical assistance
- Data entered into a publicly available database
- Plugged into the MiCorps network



# Why collect bugs?



## Scientifically Useful

1. Good indicators of stream conditions
2. Diversity = Healthy stream
3. A scarcity of bugs may indicate:
  - Sedimentation
  - Habitat loss
  - Chemical pollution
  - Hydrology problems

## Great for Volunteers

1. Easy sampling techniques- great for volunteers
2. Generally abundant communities- volunteers find them quickly.



# Why conduct a road/stream crossing inventory?

- Crossings are often sources of stream degradation
  - Erosion
  - Undersized culverts
  - Flooding
  - Blocks fish passage
- Groups develop a prioritization list that is useful for getting restoration grants.
- Uses a MDNR & MDOT approved methodology.



# Questions on the Volunteer Stream Monitoring Program?





# Cooperative Lakes Monitoring Program (CLMP)



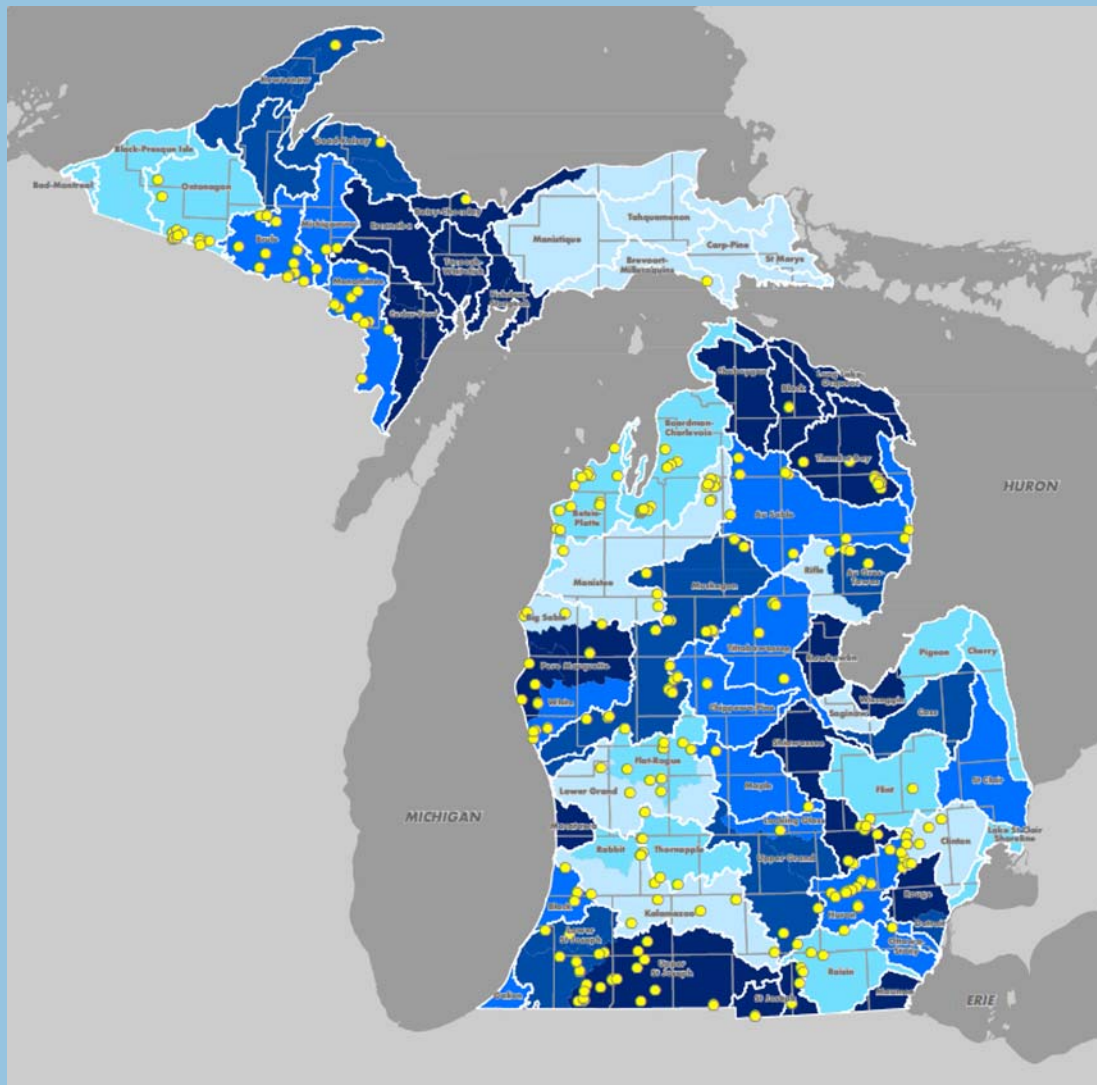
# The CLMP follows a different structure than the VSMP.

## **VSMP:**

- **MiCorps staff work with program leaders, who train and manage their own volunteers.**

## **CLMP:**

- **MiCorps staff work directly with volunteers (usually lake residents).**



# CLMP Membership

2016 number:

241 Lakes  
monitored by  
lake associations  
or individuals



# What do we measure and assess in the CLMP?

1. Transparency
2. Total Phosphorus
3. Chlorophyll *a*
4. Dissolved Oxygen and Temperature
5. Aquatic Plants
6. Shoreline Habitat



# What is expected of volunteers?

- A slight enrollment fee. \$20-60 per parameter, plus equipment costs.
- Weekly or biweekly transparency measurements. Other measurements are taken monthly.
- Attend an annual training
- Follow directions carefully.
- Sample turn in: Two times during the sampling season volunteers bring their samples into a collection site.





# What support do volunteers get from CLMP?

- About 90% of the costs of the program are paid for by the State
  - Parameter fees cover mail and postage, various monitoring supplies, and some staff time.
  - DEQ money covers more staff time, the Data Exchange and all other MiCorps support, and all of the lab fees.
- The potential for long term data on your lake (the program has been operating since 1974).
- Training and standard procedures
- Analyzes your water samples at the State of Michigan lab for long-term data consistency.
- Excellent quality assurance procedures



# What the CLMP does and doesn't do

- The CLMP only provides a way for volunteers to collect the baseline data that is needed to make proper management decisions. CLMP staff can answer questions but time is very limited.
- It takes further effort, further resources, and committed riparian owners and state and local governments to carry out these management decisions.
- MiCorps staff can put volunteers in touch with additional resources.



# Why does the CLMP monitor these parameters?

- High phosphorus, high chlorophyll, and low transparency can be signs of:
  - Undesirable algae blooms
  - Poor boating and swimming
  - Low dissolved oxygen which can cause fish kills
- Observing long-term trends of the CLMP parameters can help us understand if the amount of algae (lake eutrophication) is increasing in the lake over time.





# What do Dissolved Oxygen and Temperature profiles tell us about a lake?

DO and Temperature is basic information about the lake system that have implications for the lake's nutrients and aquatic life.

- Does this lake turn-over, or remain mixed year round?
- Does the bottom water become depleted in oxygen, and when in the summer does this happen?
- Fishery status indicator- what kind of fish can this lake support? Where will they live?

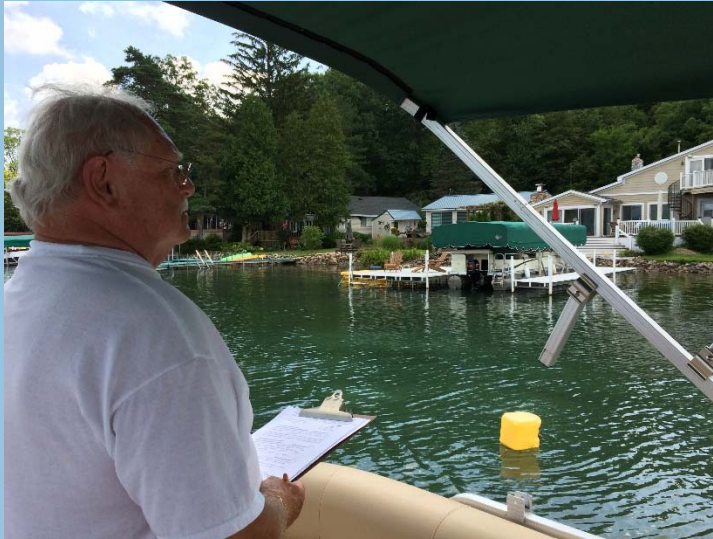


# Aquatic Plants- Full Surveys and Exotic Plant Watch

- CLMP offers two versions of plant monitoring
- The full survey program provides training and technical assistance to map out all of the plants in a lake (native and exotic).
- The Exotic Plant Watch is dedicated to early detection of incoming exotic plants, concentration on 4 species (E. milfoil, hydrilla, curly leaf pondweed, starry stonewort)



# Score the Shore Procedure



- To what extent is your lake developed vs. natural?
- Where are problematic erosion areas?
- Learn where to target educational materials or what local ordinances to consider.

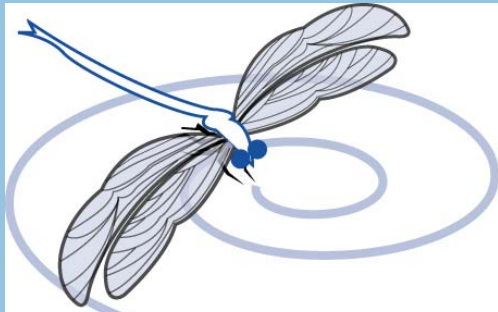
# Volunteer River, Stream, and Creek Cleanup Program

- \$25,000 total is available annually through a competitive grant application process.
- Compared to other grants out there, it is a simple application.
- Began in 1998
- In 2017, eight grants were awarded to groups across the state to complete stream clean-ups.

Contact Laura, [laurak@glc.org](mailto:laurak@glc.org)







Michigan Clean  
Water Corps

## QUESTIONS FOR MICORPS STAFF?

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