

Michigan Clean
Water Corps

MiCorps 101

Presented by Marcy Knoll Wilmes

MiCorps DEQ Representative

MiCorps Team



Marcy Knoll Wilmes

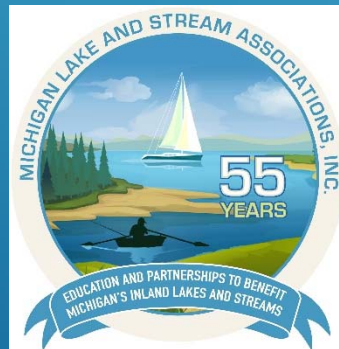
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**MICHIGAN STATE
UNIVERSITY**

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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:
 - Grants (Streams only)
 - Trainings
 - Annual Conference
 - Email ListServ for news
 - Web site and social media
 - Web-based, publically available, searchable database

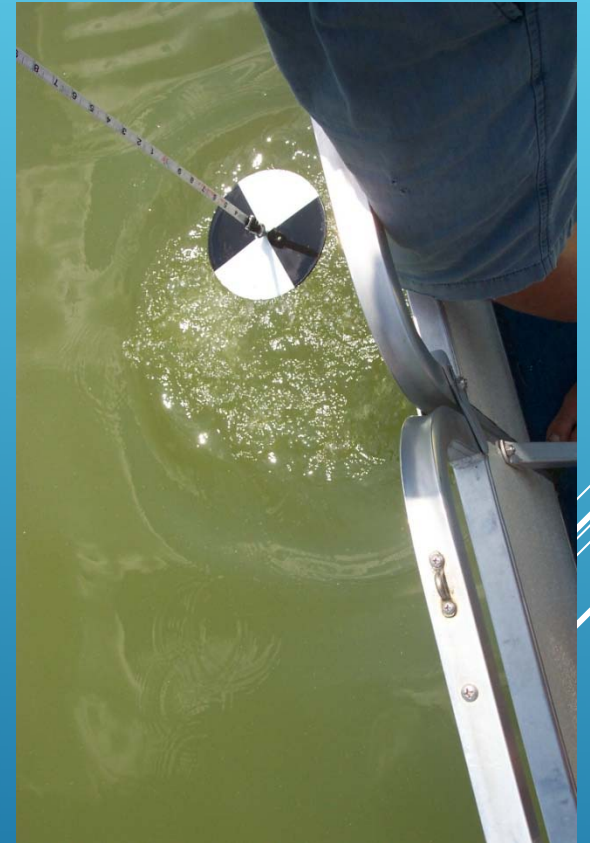


MiCorps concentrates on quality assurance

- 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 grant-based program for local groups to develop or enhance stream monitoring programs.
- Groups must be:
 - Non-profits (501c)
 - Academic
 - Local government.
- Groups must have proof of a successful financial audit no more than 24 months old.
- This is a “train the trainer” program.



The VSMP annual training day

Volunteer Stream Monitoring Program (VSMP)



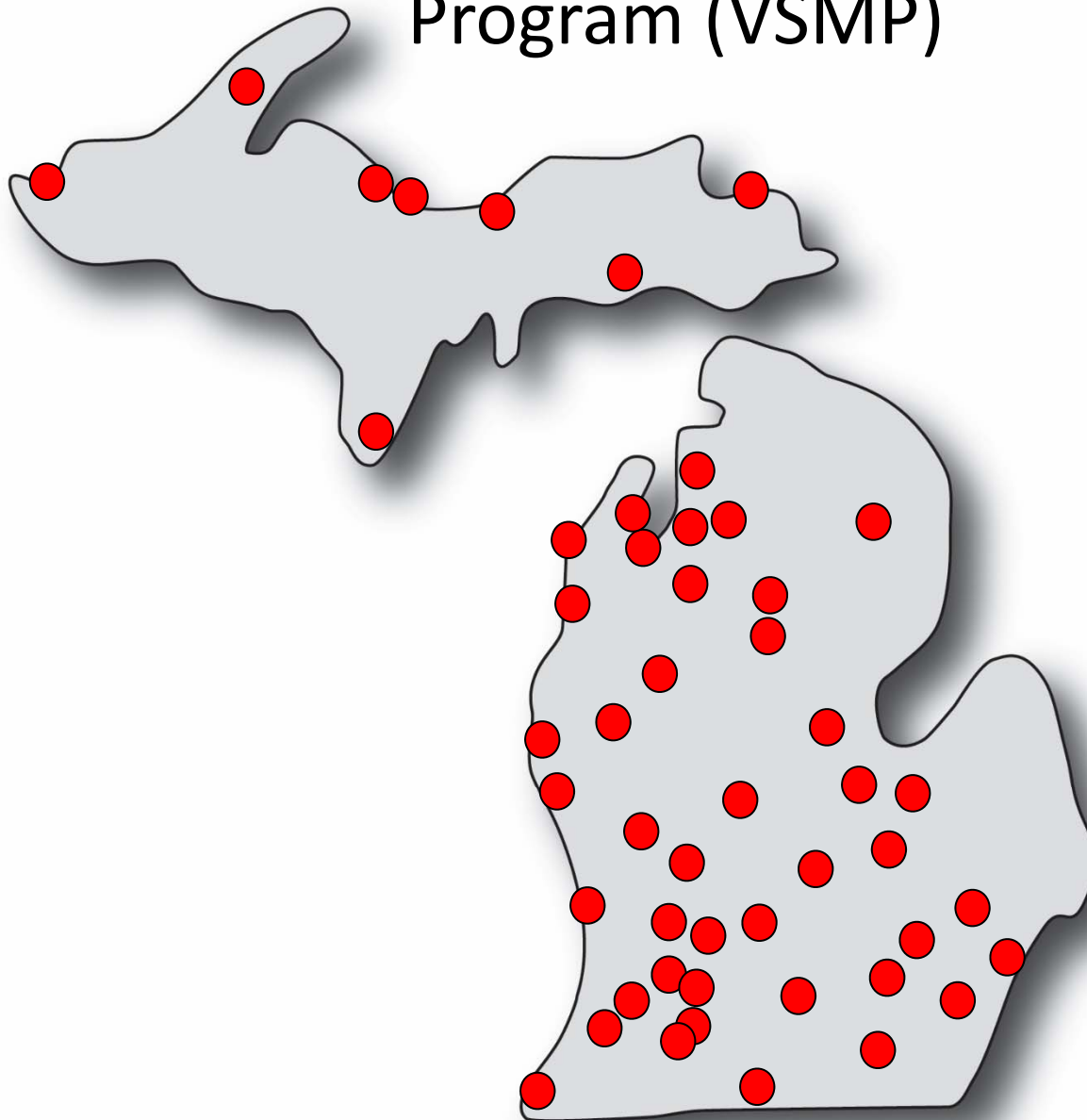
Grant Types and Amounts

- \$50,000 total is available every year, RFP released Jan-Feb.
- Macroinvertebrate full grants last 2 years (\$10-15k).
- Macroinvertebrate start-up grants last 1 year (\$1-3k).
- R/S Crossing grants last 1 year (\$5-10k).
- In 2016: 2 stream flow pilot projects lasting 1 year (~10k)

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.
- MiCorps helps you with the first bullet with money for a maximum of two years, 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.

Volunteer Stream Monitoring Program (VSMP)



Since 2005, 48 Groups have received grants.

Including:

Cannon Township

Tip of the Mitt Watershed Council

Friends of the St. Clair River

Muskegon River Watershed Assembly

Branch County Conservation District

Upper Peninsula Resource Conservation and Development Council

About 32 are still actively monitoring.

Volunteer Stream Monitoring Program (VSMP)



Groups who receive grants are expected to:

- Find, engage, & train volunteers
- Conduct Monitoring
 - Macroinvertebrates
 - Road/Stream Crossings
 - Stream Flow
- Submit Data to the MDE
- Interpret the data
- Follow up as needed with relevant authorities based on the results of monitoring
- Use data to improve watershed management



What support do grantees get from MiCorps?

- Money
- Training, procedures, technical assistance
- A solid reputation
- 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.



Why measure stream flow?

- Helps to determine:
 - basic ecological function of a stream
 - potential disruptions to biota and habitat
 - nutrient loading
- The monitoring data will be used to identify locations where additional data may be needed to verify or modify the stream index flows used in the Water Withdrawal Assessment Tool.
- This was run as a pilot program in 2016



Questions on the Volunteer Stream Monitoring Program?



Cooperative Lakes Monitoring Program (CLMP)

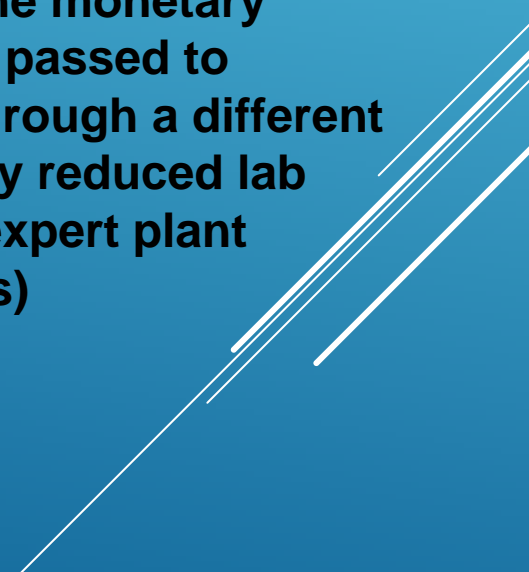


The CLMP follows a different structure than the VSMP.

VSMP:

- 1. MiCorps staff work with program leaders, who train and manage their own volunteers.**
- 2. Grants (for paying program leaders primarily).**

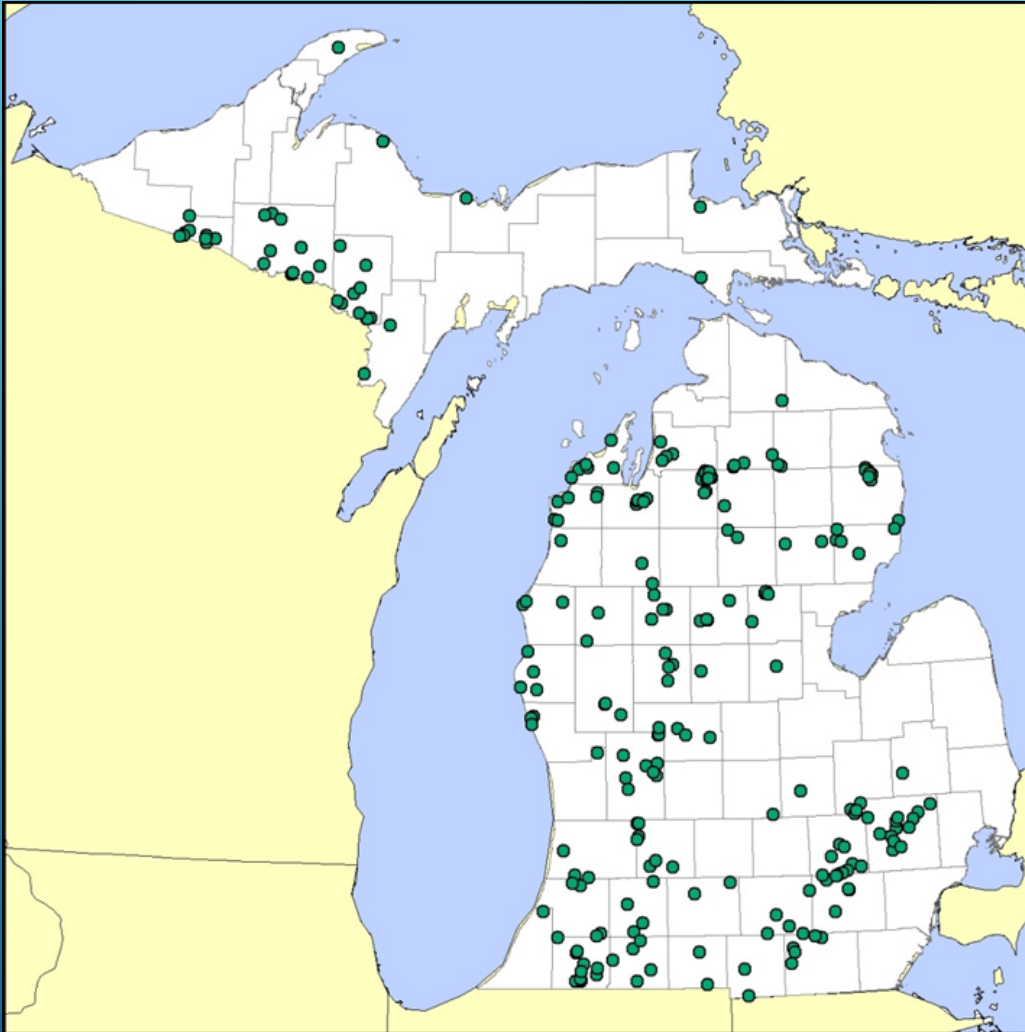
CLMP:

- 1. MiCorps staff work directly with volunteers (usually lake residents).**
 - 2. No grants. The monetary support gets passed to volunteers through a different means (highly reduced lab fees, cheap expert plant consultations)**
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CLMP Membership

2015 number:

~230 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 local DEQ office.



What support do volunteers get from MiCorps?

- 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)



Lakeshore Habitat Assessment



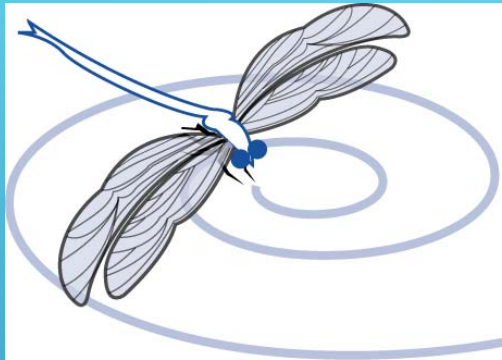
- To what extent is your lake developed vs. natural?
- Where are problematic erosion areas?
- Learn where to target educational materials or what local ordinances to consider.

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
- Since 2005, 115 grants totaling nearly \$275,000 have been awarded to recipients around the state of Michigan under the VRSCCP.

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Michigan Clean
Water Corps

QUESTIONS FOR MICORPS STAFF?

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