



# MiCorps 101

Presented by Paul Steen

& MiCorps Staff



# MiCorps Team



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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.”

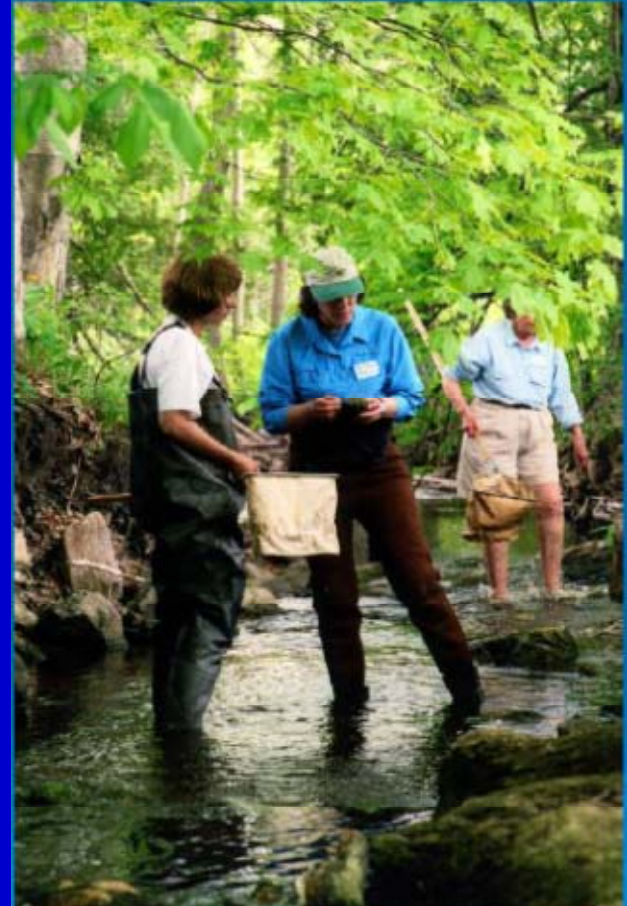
Governor Jennifer Granholm  
2003





# Governor's Executive Order

- MiCorps established September 30, 2003
- Comprehensive statewide volunteer water quality monitoring network
- Pre-existing lake program, a fledging stream program, and pre-existing water cleanup program





# MiCorps Mission

- Network and expand volunteer water quality monitoring organizations statewide
- Collecting, share, and use reliable data
- Educate and inform the public about water quality issues
- Foster water resources stewardship to facilitate the preservation and protection of Michigan's water resources





# More specifically...

- 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
  - Newsletter
  - Email ListServ for discussion and news
  - Web site
  - Web-based, publically available, searchable database





# MiCorps concentration in quality assurance gives us...

## More reliable data

Which gives us:

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





# Volunteer Stream Monitoring Program (VSMP)





# What would a successful volunteer stream monitoring program look like?

- You collect data about your fresh water
- You use it to 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, training, and assistance. And gives money to help with recruiting volunteers.**
- **The next three bullets require further dedication and elbow grease that go beyond a MiCorps grant.**



# Volunteer Stream Monitoring Program (VSMP)

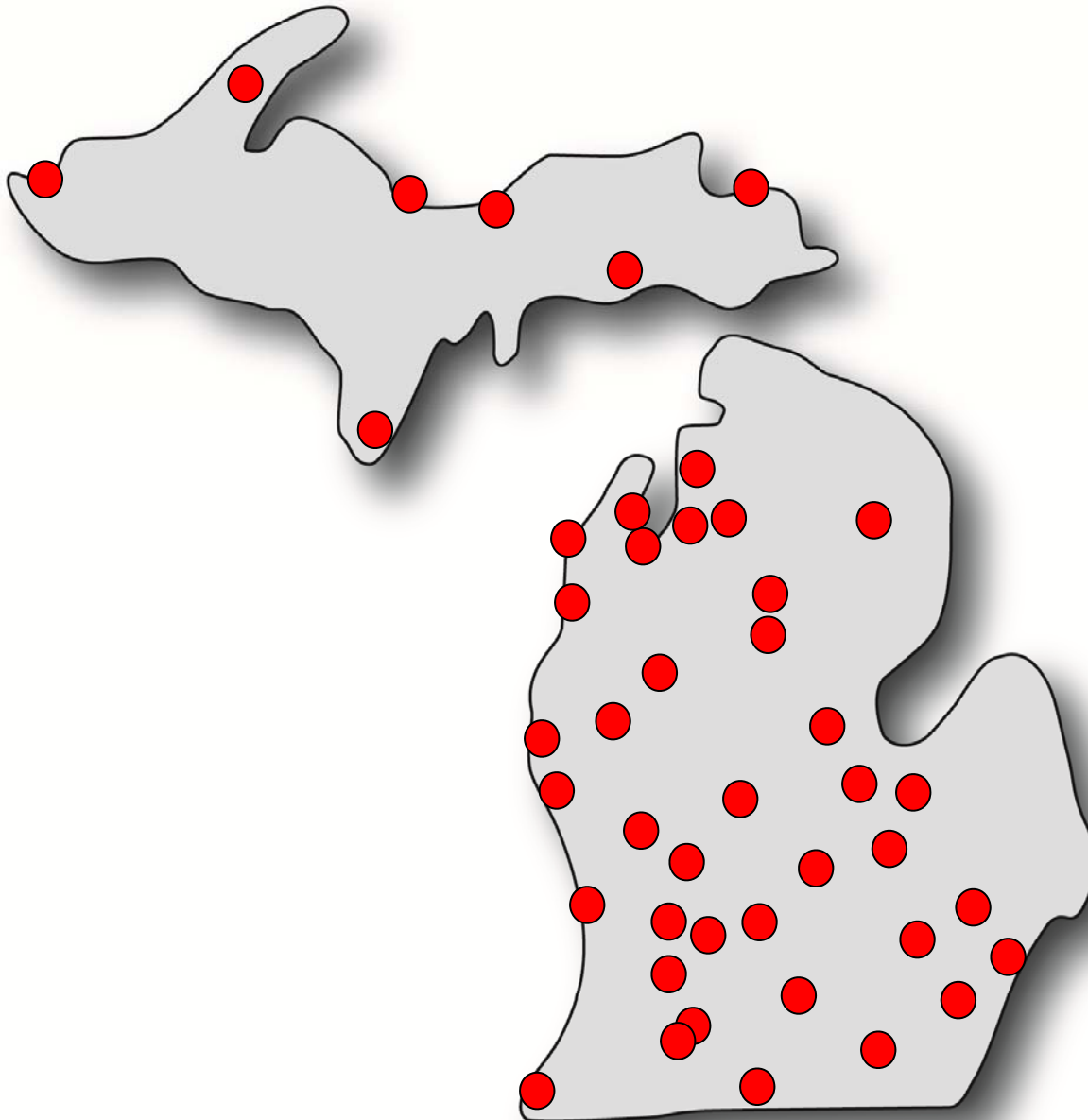
- A grant-based program for local groups to develop or enhance stream monitoring programs. Groups must be non-profits, academic, or local government.
- \$50,000 is available every year
  - Full grant: \$10-15k
  - Startup grant: \$1 – 3k
- Full grants last 2 years
- Start-up grants last 1 year.



*The VSMP annual training day*



# Volunteer Stream Monitoring Program



- Since 2005, 40 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



# Stream Program Components

Groups who receive grants are expected to:

- Find, engage, train volunteers
- Collect and identify macroinvertebrates
- Monitor habitat
- Build Databases (MDE, Volunteer)
- Verify & interpret the data
- Follow up as needed with relevant authorities based on the results of monitoring.





# 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

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

## Great for Volunteers

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





# How do MiCorps groups collect bugs?

- Each team member gets a job- collector, picker, runner, leader.
- Collector works upstream collecting along ~300 foot reach. Collector samples a variety of microhabitats.
- Some groups dump everything into a bucket and “pick” later. Some groups “pick” on stream bank.
- Store in ethanol or isopropanol until identification and for long term storage.
- Groups hold identification events.





# How do MiCorps groups collect bugs?

- The goal is to find as many different types as possible.
- Time limits: Generally, one collector samples between 35-45 minutes, and strives for around 100 organisms.
- Collectors needed to be trained, but other volunteers can come in cold. Volunteer accessibility is key.





# Questions on the Volunteer Stream Monitoring Program?





# Cooperative Lakes Monitoring Program (CLMP)





# CLMP Goals

- Provide baseline information and document trends in water quality for individual lakes.
- Educate lake residents and interested citizens in collection of water quality data, lake ecology, and lake management practices.



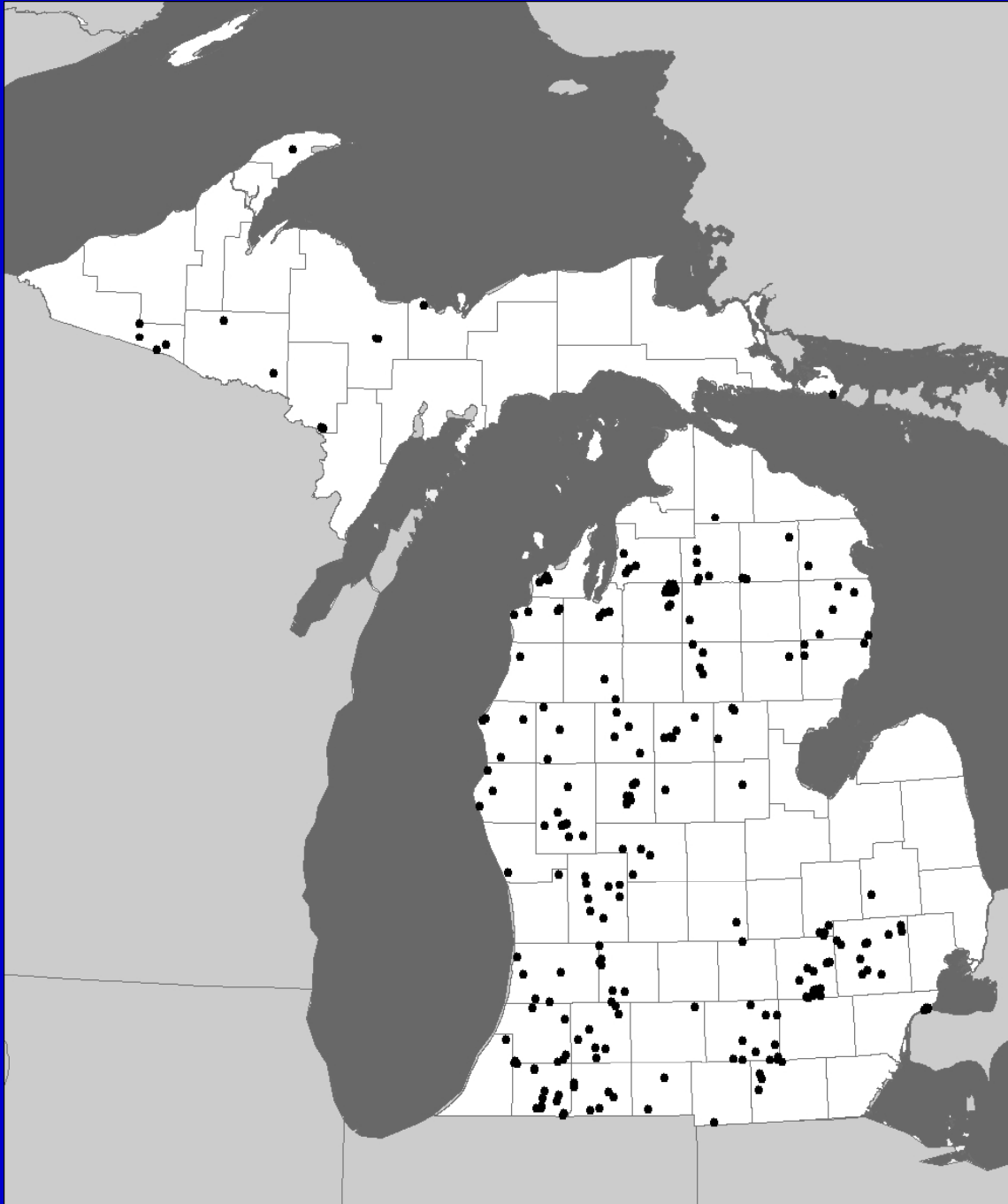


# CLMP Goals

- Build a constituency of citizens to practice sound lake management at the local level and build public support for lake quality protection.
- Provide a cost-effective process for the DEQ to increase baseline data for lakes in Michigan.







## CLMP Membership

2013 number:  
~225 Lakes  
monitored by  
lake  
associations or  
individuals





# What do we measure in the CLMP?

- Transparency
- Total Phosphorus
- Chlorophyll *a*
- Dissolved Oxygen and Temperature
- Aquatic Plants





# What is expected of volunteers?

- A slight enrollment fee (\$20-60, depending on parameter, plus one time equipment costs...  
[www.micorps.net/lakevolunteer.html](http://www.micorps.net/lakevolunteer.html) for details)
- Weekly or biweekly transparency measurements. Other measurements are taken monthly.
- Attend an annual training
- Follow directions carefully.
- Sample turn in: two-three times during the sampling season volunteers bring their samples into a local DEQ office.





# And what does the CLMP provide in return?

- The potential for long term data on your lake (the program has been operating since 1974).
- Training
- Analyzes your water samples at the State of Michigan lab for long-term data consistency
- Excellent quality assurance procedures
- A volunteer mentor program to get you help if you need it.





# Can the CLMP fix my lake?

- Not really. The CLMP only provides a way for you 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.
- Additional lake management resources are available on the MiCorps web site at <http://www.micorps.net/lakeresources.html>



# Watch out for eutrophication!

- 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.
- 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





# What do dissolved oxygen and temperature profiles tell us about a lake?

Define the temperature and density zones of lakes.

Thermally classify lakes (warm or cold water)

Determine bottom water oxygen depletion.

Sediment phosphorus release- phosphorus is released from bottom sediments in anoxic (no oxygen) conditions.

Fishery status indicator- what kind of fish can this lake support?



# 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.





Questions on the CLMP?



# MiCorps Website and Data Exchange Platform

- [www.micorps.net](http://www.micorps.net)
  - Registry of water monitoring groups
  - Various information on water monitoring
  - Details specific to the VSMP and CLMP.
- Data exchange platform
  - Searchable database of all of the information collected by MiCorps volunteers.
  - Data entry is required for both CLMP and VSMP



# MiCorps Conference and Newsletter

- These items provide a way for MiCorps members to speak to each other and share their news and experiences.
- This is a major part of creating a “network” of monitors across the state.
- Newsletters are electronic and can be found on our website.





# Volunteer River, Stream, and Creek Cleanup Program

- \$25,000 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 \$240,000 have been awarded to recipients around the state of Michigan under the VRSCCP.





# Contact information

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# Questions for MiCorps staff?

