



The MiCorps Monitor: Fall 2013

The newsletter of the Michigan Clean Water Corps, Issue 11

Welcome!

Welcome to the Fall 2013 edition of the *MiCorps Monitor*! As always, this edition is full of updates and information on the activities and individuals of the Michigan Department of Environmental Quality's Michigan Clean Water Corps (MiCorps).

Please note: this PDF is a an archived version of the original, web-based newsletter. As such, some features (photos, captions, navigation) are not available, and links may be broken. We apologize for the inconvenience!

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Article 1:

Stream Muckin' and Bug Collectin'

The Volunteer Stream Monitoring Program (VSMP) is one of the two programs under MiCorps' umbrella (along with the Cooperative Lakes Monitoring Program). In the VSMP, volunteers from all ages and walks of life collect aquatic macroinvertebrates in order to monitor the health of rivers and creeks. In this article, the Huron River Watershed Council (HRWC), a MiCorps member organization, describes the why and how of insect collection.

Yes, they are Ugly and Scary

HRWC has been collecting aquatic insects and other wiggly creatures for so long that it is easy to lose perspective on how absolutely odd this activity actually is.... For the average person not familiar with bug hunting, it must seem very strange that anyone would voluntarily don fishing equipment, jump into a river, and push rocks and logs around with a net in order to find creatures that (let's face the truth here!) are often quite ugly or scary looking. Indeed, collecting stream bugs is certainly weird. However, it is definitely fun and interesting as well! Participants in HRWC's insect monitoring events get to see new and unusual places in the Huron River watershed, and meet old friends and new. Volunteers often report back, "I had no idea that there was so much living underneath the rocks in a river!" Yet, while there are many ugly bugs out in a creek, there is also great beauty - beauty that can be found in the artistic patterns on a stonefly's back, in the strength of a hellgrammite's pincers, and in the intricacies of a mayfly's gills. Searching for aquatic insects is a fascinating experience; many people are hooked from the first time they try it.

Learning from these Aquatic Critters

HRWC has been studying and cataloging the diversity of aquatic insects in its local streams since 1992. A higher diversity of insects indicates a healthier stream. This is because a diverse set of organisms will have a diverse set of food and habitat requirements, and a stream that meets these diverse requirements is a stream that is functioning normally. One of the most easily recognized signs that a stream is suffering is when it lacks diversity of organisms and habitats. A stream with only a few types of bugs, the same water depth throughout, the same-sized rocks in the streambed, and the same plants in the stream and on the stream bank likely has been harmed by human activities. Perhaps the stream was dredged or channelized in the past, or has extreme water flows that unnaturally rise and fall after storms. A healthy stream will have twists and turns, deep pools, shallow riffles and runs, and sand, gravel, silt, and boulders scattered throughout the streambed. Some types of bugs are also very useful in checking on the water quality of a stream - that is, whether or not the water is polluted.

Unlike other animals, aquatic insects are more or less stuck where they are; fish can

generally move from stream to stream when faced with environmental hardship, and mammals and birds can easily leave polluted water alone. Stoneflies and many types of mayflies, though, will not survive in a creek polluted by cow manure because they need very high oxygen levels to survive, and such pollution takes the oxygen out of the water. If you do find these bugs in a creek, then you know that the creek meets their requirements for survival.

How's It Done?

Through HRWC's programs, aquatic critters are studied from over 70 locations across Livingston, Oakland, Washtenaw, and Wayne counties. Each of these sites has its own unique history, problems, and features. Thankfully, a huge cadre of volunteers helps HRWC carry out these studies. Looking for these organisms is an ideal volunteer opportunity: the task is focused and can be done in a single day, it is fun and adventurous, and it is a great educational opportunity for all ages.

After signing up, a volunteer joins a team at HRWC's office on the day of the event. The team carpools to one of our study sites, where a trained team member collects bugs from the stream, and the rest of the team picks bugs from white sorting trays. Then, the team travels to another site and repeats the process. Normally teams are sent to a healthy stream as well as an impacted stream, so they can see the environmental consequences of unwise human decisions.

At the end of the day, the aquatic insects are brought back to HRWC. If our volunteers have an unexpected discovery (for example, if they found that a normally healthy creek seems to have an unusually poor insect population), HRWC follows up immediately by revisiting the site to make sure there is not a chemical emergency. Thankfully, this has only happened once since monitoring began. In Lett's Creek which flows through Chelsea (west of Ann Arbor), volunteers detected oil entering the creek and were able to track the spill to a business bordering the creek. Those responsible for the accidental pollution quickly fixed the problem.

The week after a monitoring event, volunteers work with HRWC staff to identify the bugs in order to learn how many different types were found, and HRWC tracks how the insect populations have changed over time. The long term data often reveals patterns of sustained degradation, such as fine sediment or nutrient accumulation or a slow loss of in-stream habitat.

Armed with this data about the aquatic insect populations, HRWC is better equipped to make smart management decisions, such as where to conduct a stream restoration project, what areas need to be managed to protect high quality streams, and which areas of the watershed need more attention from HRWC staff and local and state government.

Do You Want To Get Involved in a Stream Monitoring Program?

Forty groups have received grants from MiCorps since 2005 to help them start stream monitoring programs like the one described above. If you would like to be a volunteer and get in the water to find stream creatures, chances are there is a participating group near where

you live. You can find these groups by going to www.micorps.net/directorysearch.html, or ask Paul at psteen@hrwc.org.

If you are a leader of a non-profit organization or local government (county, city, village, township, etc.) and are interested in starting a water monitoring program yourself, now is the time to start thinking about it. The grant application for MiCorps' stream monitoring program is typically released in January or February each year. You can also contact Paul at psteen@hrwc.org for more information.

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Article 2:

Volunteer Stream Monitoring Grants Awarded for 2013

MiCorps is pleased to announce that five organizations have been selected to receive volunteer water quality monitoring grants in 2013 to further expand the existing network of volunteer-dependent monitoring groups and committed citizens who work to monitor water quality in Michigan. Since 2005, the Volunteer Stream Monitoring Program (VSMP) has provided financial and technical assistance in the form of competitive grants to local units of government and nonprofit entities to initiate or improve local volunteer monitoring programs around the state. Grantees are trained to collect reliable, high-quality benthic invertebrate and stream habitat data that is then used by the Michigan Department of Environmental Quality (DEQ) as a screening tool to focus and prioritize future work. Data collected under this program is also shared via the MiCorps Data Exchange (www.micorps.net/data/view/search/) for use by other resource professionals and interested parties.

Full grants are awarded to eligible monitoring programs to build upon an existing program over a period of 18-24 months. Smaller, one-year "start-up" grants are awarded to newly forming volunteer monitoring groups to assist them in developing a monitoring strategy for their community and to build capacity for their program so that they might be eligible to apply for a full grant in future years. Successful grant recipients are able to demonstrate a commitment to continuing the monitoring program in years to come.

This year, the VSMP has awarded four full grants and one start-up grant, totaling more than \$50,000 in funds, to support the recipients' volunteer monitoring work beginning in 2013.

Full grants:

Alger Conservation District

Project Title: Alger Waters Stream Team Monitoring Project

Watersheds: Anna River, Slapneck Creek, Bohemian Creek, Baker Creek, Werner Creek, and Dexter Creek

Funding Amount: \$14,083

Contact: Teri Grout, Ph: 906-387-2222 teri.grout@mi.nacdnet.net

The Alger Conservation District seeks to monitor benthic macroinvertebrates and habitat on six small waterbodies in the central Upper Peninsula, while educating and instilling stewardship in the population and collecting monitoring data that can be made available to local governments and stakeholders.

Calhoun Conservation District

Project Title: Kalamazoo Volunteer Stream Monitoring Project

Watersheds: Kalamazoo River, including Wilder Creek, tributaries to Buckthorn Lake, and Willow Creek

Funding Amount: \$14,083

Contact: Suzanne Ebright, Ph: 269-781-4867 suzanne.ebright@macd.org

The Calhoun Conservation District seeks to monitor benthic macroinvertebrates and habitat at eleven locations in the Kalamazoo River watershed, including Wilder Creek, tributaries to Buckthorn Lake, and the Willow Creek watershed, to collect data that can be used to assess the health of the stream habitat and aquatic macroinvertebrate population.

Muskegon Conservation District / White River Watershed Partnership

Project Title: Upper White River Volunteer Monitoring Project

Watersheds: White River, including Cobmoosa Creek, Carlton Creek, and the Main Branch

Funding Amount: \$10,463

Contact: Dr. Thomas Tissue, Ph: 231-421-4408, thomastissue@comcast.net

The Muskegon Conservation District, in partnership with the White River Watershed Partnership, seeks to study benthic macroinvertebrates and habitat at eleven locations in the White River watershed in Oceana County, including Cobmoosa Creek, Carlton Creek, and the Main Branch; engage stakeholders and elected officials in stream monitoring to advance environmental protection and the health of the watershed; and to understand where there is need for remedial action.

Grass River Natural Area

Project Title: Monitoring Benthic Macroinvertebrates in the Grass River Watershed

Watershed: Grass River

Funding Amount: \$9,411

Contact: Richard Hannan, Ph: 231-533-8314, rich@grassriver.org

The Grass River Natural Area seeks to study benthic macroinvertebrates and habitat throughout the Grass River Natural Area and its feeding tributaries in Antrim County between Lake Bellaire and Clam Lake, including high-quality wetlands and important ecosystems with surface water input into Grand Traverse Bay.

Start-up grant:

AuSable Institute of Environmental Studies

Project Title: Upper Manistee River Volunteer Stream Monitoring Program

Watershed: Manistee River

Funding Amount: \$2,965

Contact: Paul Wiemerslage, Ph: 231-587-8686, paul.w@ausable.org

This startup grant is intended to establish a macroinvertebrate and habitat monitoring program on the headwaters of the Manistee River, which faces a number of restoration challenges and future concerns, including heavy logging, water withdrawals associated with hydraulic facturing, agricultural lands, and new roadways. Despite its turbulent past, the Upper Manistee River is still recognized as a premier trout fishery and a valued waterway

for floating, canoeing, and camping. The goal of this project is to create the plans to implement a long-term sampling program that involves numerous project partners and the participation of community volunteers.

Volunteer River, Stream and Creek Cleanup Program

While not specifically funded under the MiCorps umbrella of programs, the DEQ also offers an additional grant program, the Volunteer River, Stream and Creek Cleanup Program (VRSCCP), that may be of interest to local units of government and other partnering entities looking to engage volunteers and promote stewardship through watershed activities. If you've never applied for a grant before or are interested in gauging the interest of potential volunteers in your area, this program might be a good "stepping stone" opportunity to consider before applying for a MiCorps Volunteer Stream Monitoring grant or to supplement existing volunteer programs already underway.

Since 1998, the VRSCCP program has provided small grants (\$5,000 or less per award) to support volunteer river cleanup efforts on rivers, streams and creeks throughout the state to improve the waters in Michigan. Funds for this program are generated by fees collected from the sale of the State's Water Quality Protection license plates (Public Act 74 of 2000). Awards under the program are intended to pay for trash removal and the clean-up of other anthropogenic debris, and can support equipment purchases for things like waders and other supplies and volunteer appreciation items to be used for the sponsored cleanup event and future cleanup activities.

The VRSCCP is managed by the DEQ and administered under contract by the Great Lakes Commission. To find out more about the program, the funding process, or to read about volunteer events in your area, please visit the program website at www.glc.org/streamclean.

2014 Grant Application Packages

Grant Application Packages (GAPs) for the 2014 grant cycle for the grant programs described above will be available later this winter. Please visit www.micorps.net/streamgrants and www.glc.org/streamclean for additional information and application instructions.

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Article 3:

MiCorps Cooperative Lakes Monitoring Program Volunteers and Staff Working to Enhance Exotic Aquatic Plant Detection

"*Knowledge is power.*" The old adage is true when it comes to citizen volunteer lake monitoring of exotic and invasive species. As CLMP volunteers know, identifying the physical and chemical state of your lake is very important when monitoring changes in your lake over time. Exotic or invasive aquatic plants can drastically change your lake by altering the aquatic ecosystem. Lakes participating in the [Exotic Aquatic Plant Watch \(EAPW\)](#) program are being proactive in monitoring for exotic species and, therefore, will quickly notice any change in their lakes' aquatic plant communities.

Aquatic plants, which intake carbon dioxide and expel much-needed oxygen, are also an essential part of your lake's biological integrity and proper lake function. In addition to providing oxygen, aquatic plants provide shelter for young fish, filter excess nutrients, provide food for waterfowl, prevent erosion by stabilizing shorelines, and keep water clean and clear by preventing sediments from being stirred up. Invasive aquatic plants, although they may provide oxygen and prevent erosion, can have serious negative effects on your lake. For example, invasive starry stonewort (*Nitellopsis obtusa*) looks very similar to the native muskgrass (*Chara spp.*) but it can grow taller, denser and will impede the ability of fish to spawn. Starry stonewort, much like other invasive plant species, can be seriously problematic to the overall health and ecological function of your lake, particularly when it grows unnoticed and unchecked.

Volunteers enrolled in the EAPW program are provided with training and knowledge to monitor troublesome exotic aquatic plants in order to detect early infestations of these disruptive species. If detected early, lake communities can employ [integrated pest management strategies](#) to reduce the probability that the exotic plant will fully establish into a large population that will be almost impossible to eradicate. In the EAPW program, volunteers learn to identify four target invasive aquatic plant species: Eurasian water milfoil (*Myriophyllum spicatum*), curly-leaf pondweed (*Potamogeton crispus*), Hydrilla (*Hydrilla verticillata*) and starry stonewort ([Nitellopsis obtusa](#)). Of these four species, Eurasian water milfoil is already widespread in a many of Michigan lakes, where it creates large mats that crowd and shade out other plants and interfere heavily with recreation. Curly-leaf pondweed is not always a nuisance, but in some lakes it can become a serious problem if not managed, forming thick beds that crowd out native plants. Hydrilla has not yet been found in Michigan, but this aggressive invader has caused serious problems in inland lakes from Florida to California and has been found as close to Michigan as northern Indiana and Ohio. Starry stonewort, the newest addition to the EAPW list, has already been found in some Michigan lakes and poses serious problems to native vegetation and fish populations if left undetected. The EAPW program is a perfect way for volunteers to efficiently and effectively keep an eye on the introduction and presence of these exotic plant species in their lakes.

The EAPW program started in 2007, and although the number of participating lakes in the program has slowly since increased, numbers of enrolled lakes are still surprisingly low with currently only 13% of CLMP lakes enrolled in the EAPW program. Of the enrolled EAPW lakes, less than half have been reporting their findings. This raises some key questions: What motivates volunteers to enroll in this program? What might discourage enrollment? Why do many enrolled lakes not complete the survey? These are important questions for the CLMP staff and for the Michigan DEQ Aquatic Invasive Species program, which provided funding this year to support increased participation in the EAPW.

As a result of the DEQ support, during the summer of 2013, CLMP staff, including Dr. Jo Latimore and graduate student Angela DePalma-Dow, personally conducted one-on-one visits with EAPW volunteers during their lake surveys. These visits were conducted in order to aid in plant identification, clarify methods, and provide guidance and address the concerns of volunteers of EAPW participating lakes. Visits to EAPW lakes were not random, but selected based on the historical attendance of volunteers attending MiCorps training, years enrolled in EAPW or whole lake mapping, and physical lake parameters that indicated high probability of exotic introduction or establishment.

With only a little over half of the EAPW staff visits completed, results have been astounding! Volunteers are excited, prepared, and confident in their ability to conduct and complete an EAPW survey. When asked about their motivations for enrolling their lakes in the EAPW program, the top three reasons given to CLMP staff by volunteers are:

1. This is the logical next step in our citizen monitoring program when we are already monitoring the other things such as Secchi disk depth, phosphorous, chlorophyll, and DO.
2. There have been reports of neighboring and connecting lakes with invasive species, and we want to make sure our lake remains pristine and we keep the bad plants out.
3. It's too expensive to have a specialist or consulting company come out every year and monitor our [lake and] plants for us, especially when we can do it ourselves.

Volunteers on lakes that have completed a whole-lake plant map through the CLMP Aquatic Plant Identification and Mapping program also have stated that they use the EAPW program as a way to monitor their plant communities in between plant mapping years.

Also new this year for CLMP EAPW participants, Michigan State University Extension has produced a pocket field guide to the most noteworthy aquatic invasive plant species in Michigan called [A Boater's Guide to Selected Invasive Aquatic Plants \(Extension Bulletin E-3189\)](#). This guide, unlike most published aquatic plant manuals, is specific to Michigan, lightweight, spiral-bound, and printed on water resistant paper. This guide contains all four of the exotic target species mentioned above, as well as a few others that are species of concern to the Michigan DEQ and Department of Natural Resources (DNR). If you find a plant and don't know what it is, check [A Boater's Guide to Selected Invasive Aquatic Plants](#); if it's not in there, chances are it's not an exotic and you don't have to worry about it!

Beyond providing field visits and a new identification guide, CLMP staff is also looking outside of Michigan for ideas to maximize participation in the EAPW program. We are reviewing other states' volunteer aquatic plant monitoring programs for insight. Results from this program review will be available by the end of the year, and will help us make our EAPW even better in 2014.

If you have not yet enrolled your lake in the EAPW program, 2014 should be the year! You will gain knowledge of the invasive plants that threaten your lake, and how to survey your lake for them. This knowledge will give you the power to recognize future introductions of exotic species and to take the appropriate action, prevent damage, and further spread.

If you are interested in enrolling your lake in the 2014 Exotic Aquatic Plant Watch, or would like to learn more, visit the [CLMP pages](#) on the MiCorps web site, or contact Dr. Jo Latimore at Michigan State University (latimor1@msu.edu, 517-432-1491).

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Article 4:

Focus on the CLMP

What is the CLMP?

MiCorps is made of two main components - the Volunteer Stream Monitoring Program and the Cooperative Lakes Monitoring Program (CLMP). The CLMP is the second oldest volunteer lake monitoring program in the country and has been an important component of Michigan's inland lakes monitoring program for nearly 40 years. The primary purpose of the CLMP is to help citizen volunteers monitor the water quality of their lakes and document changes in lake quality over time. CLMP participants collect data on a variety of different parameters including: Secchi disk transparency, total phosphorus, chlorophyll a, dissolved oxygen, temperature, aquatic plant identification and mapping, and monitoring for exotic plants.

2013 MLSA Annual Conference and Training Event

Over 80 people gathered in Bay City along the Saginaw River this past April to learn about the CLMP and how to properly take lake water quality measurements. Held in conjunction with the Michigan Lake and Stream Associations (MLSA) conference, this annual training is a very important time for new lake monitors to become oriented to the program and also is a great social time to reconnect with Michiganders who love our lake resources.

This is the first time that the MLSA conference was held in Bay City. Next year we will be headed back to Boyne Mountain (like in 2011 and 2012) for more training. Adding to the excitement, in 2014 the training will be a part of a larger conference centered on Michigan's inland lakes. The first-ever Michigan Inland Lakes Convention will be hosted by the Michigan Inland Lakes Partnership, which includes MLSA, MSU Extension, DNR, DEQ, and the Michigan Chapter of the North American Lake Management Society (MCNALMS), among others. The convention will be held May 1-3, 2014. Registration is not yet open, but more details will be provided at michiganlakes.msue.msu.edu.

New to the CLMP!

We would like to welcome the following new lakes to the CLMP for the 2013 sampling season:

Lake Name	County
Fawn	Hillsdale

First Sister	Washtenaw
Second Sister	Washtenaw
Tamarack	Livingston
Voorheis	Oakland
Whitewood	Washtenaw/Livingston

The 2013 field season wraps up!

377 volunteers monitored 220 of Michigan's lakes this summer through the CLMP Program. We are continually impressed by the level of commitment and care these wonderful people show toward their lakes.

Parameter	# of Lakes Enrolled in 2013
Secchi Disk	220
Spring Total Phosphorus	169
Summer Total Phosphorus	199
Chlorophyll	144
Dissolved Oxygen	64
Exotic Aquatic Plant Watch	27
Aquatic Plant Identification and Mapping	8

Although data collection is now complete, it takes a bit of time and elbow grease to process all the data. Expect to see the 2013 report released by February 2014. However, the [2013 Spring Phosphorus data](#) is available now.

2012 CLMP Data

The 2012 CLMP annual report that was released last February can be [obtained online here](#). This document contains information on the parameters collected by CLMP volunteers and, in particular, why these parameters matter to the health of our lakes. The annual report also lists all of the data collected by our volunteers in 2012 in printed tables.

All the data collected through the CLMP program are available online on the searchable Michigan Data Exchange (www.micorps.net). The Michigan Data Exchange allows users to view the lake data online and also download it into Microsoft Excel files. Reports for specific years are also available at www.micorps.net/lakereports.html.

CLMP 2014 Online Enrollment

Enrollment for the 2014 season of the CLMP will begin on October 1st. You can [register online](#) or you can request a paper registration form from Jean Roth (link to: vroth@mlswa.org), Michigan Lake & Stream Associations, by calling 989-257-3715. Lake associations as well as dedicated individuals are welcome to participate in helping CLMP

monitor Michigan's inland lakes.

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Article 5:

**A Challenging Start to a Promising Future:
Telling the Story of the Kalamazoo River Watershed**

A big part of my job at the Kalamazoo Nature Center is introducing people to nature in a way that is fun and engaging. I've helped to coordinate bluebird nest box monitoring, environmental stewardship classes, birding trips, and rain garden workshops. When we learned about the MiCorps Volunteer Stream Monitoring grant program, we knew we could put those resources to good use.

We applied for and received a start-up grant to help us create a plan for future monitoring. Not many grant opportunities offer a planning grant, so we were really impressed by the foresight of the MiCorps program. Planning is not the most glamorous part of the process, but it makes a big difference in the end product!

The Kalamazoo Nature Center has been around for more than 50 years, and in that time we have gained a lot of really amazing friends and advisors. We drew on our resident experts as well as our colleagues from local universities to make up our advisory board. Our experts helped us choose relevant creeks and rivers to sample and they continue to inform how we think about the interconnected nature of the Kalamazoo River Watershed. We attended the MiCorps training and learned how to direct volunteers in the sampling process. During the second half of the training day, we were happy to finally jump in the creek to get some personal introductions to some cool aquatic creatures.

Our first water quality monitoring event for the Kalamazoo River Guardians was held in the middle of October. We had worked hard to create flyers, web, and Facebook invites, and we were happy to have 17 people signed up. The day dawned stormy with an icy rain and threats of lightning and thunder. We debated about cancelling but after all the work and excitement in organizing the day, we decided to take a chance and see how the weather would play out. We were stunned to see that everyone who had signed up actually showed up! Folks came dressed in waders and rain jackets, ready to jump in and dip some bugs! We watched the radar carefully and planned our training and travel times around a big storm cell that was on its way. We managed to divide up into groups and get everyone set with gear just as the heavy rain started to fall. Luck was with us though; by the time everyone had arrived at the sampling sites, the worst of the rain was over and the biggest threat was muddy stream banks. We met back at the Nature Center for hot coffee and pizza, and after admiring each other's war wounds (wet jeans and muddy hands), we got to work identifying our catch.

We learned later that a sewage spill had happened that same day and we have since made contact with city officials so that we have up-to-date information to pass on to our volunteers for future events. After the event, we sent notes and hand-made buttons to say

thank you to our volunteers and team leaders who braved icy rain, storms, and sewage to make our event a success.

After that dramatic first event, we were looking forward to the spring event and feeling confident that we could handle whatever challenges sprang up. However, we didn't expect the massive floods that southwest Michigan experienced during the spring of 2013. The event day was cancelled twice due to dangerously high waters and we decided to postpone the spring event until next year. We've used the time off to contact new volunteers and restock our equipment and supplies. We are planning for another October event this year and are looking forward to getting back to the creeks and rivers that will tell us the story of water quality in the Kalamazoo River Watershed.

Thanks to the MiCorps team for the funding and support that have made this effort possible. They not only provide grant dollars; they have also been indispensable in helping keep our budgets straight, guiding us through data entry, and offering friendly advice on avoiding floods! We are glad to be working with MiCorps on water quality monitoring and look forward to continuing this work into the future.

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Article 6:

Volunteer Corner:

Ten Questions with Dr. Elizabeth Hill

Wanting to learn from and recognize the volunteers who give of their time and energy to monitor the health and quality of our lakes and streams, the MiCorps team has dedicated a section of the MiCorps Monitor to these inspiring individuals. For the Fall 2013 installment of the Volunteer Corner, the MiCorps team caught up with stream monitor, Dr. Elizabeth Hill, a volunteer with the [Benzie Conservation District](#), to learn about her experiences as a lead volunteer in their recently formed volunteer stream monitoring program. Their work is currently supported, in part, by a [2012 MiCorps Volunteer Stream Monitoring Program grant](#).

***MiCorps Monitor:** How long have you been a volunteer with the Benzie Conservation District and what is your role with their volunteer stream monitoring program?*

Hill: I've been a volunteer for just a year or two as a "leader" in the stream monitoring program. Prior to volunteering with the Conservation District, I was also involved with the Crystal Lake Watershed Association and the Benzie Audubon Club. So I was able to help recruit volunteers from some of my prior connections for the first stream sampling event last fall.

On each sampling date, four to six sites are monitored in each of the three watersheds (Betsie River, Platte River, and Herring Lakes) in a single day. The group starts in Beulah near the Conservation District office and then splits into teams to branch out to the various watersheds and sampling sites. I also help with the identification of our samples and filling in the data sheets for the program. The Benzie Central High School lets us use their biology lab and microscopes to identify our samples down to order and sometimes to family. Eventually, it is our goal to begin to recruit some of the high school students to volunteer with our group.

***MiCorps Monitor:** Can you tell me a little bit about your background and how you first became a volunteer with the Benzie Conservation District?*

Hill: I was an avid insect collector beginning at about the age of 11, and found biology and painting to be my favorite classes in high school. I majored in art in college, then returned to my interest in nature as a graduate student in the Biology Department at Washington University in St. Louis where I finished my Ph.D. in 1975. I spent a fabulous summer at the University of Michigan Biological Station ("Bug Camp"), taking both Limnology and Phytoplankton Ecology. Upon finishing graduate school, I took a job with the Tennessee Valley Authority in Alabama where I worked with a small group on the effects of elevated water temperatures on aquatic organisms. My part of that study dealt with the

macroinvertebrates.

I later transferred to NASA's Marshall Space Flight Center in Huntsville, Alabama, where I worked in a small laboratory on the microbial ecology of water reclamation systems. In 2000, I retired from NASA, married for the first time, and moved to Michigan, bringing with me my love of natural systems and a desire to protect them.

When Mike Jones at the Benzie Conservation District said that he needed volunteers to help review the MiCorps proposal and to be leaders in the project, I was excited about helping.

MiCorps Monitor: *Why stream monitoring in particular?*

Hill: I've always loved the "bugs" and thought that I could re-learn some of what I've forgotten about these critters, plus, perhaps offer a little bit of expertise.

MiCorps Monitor: *What is your favorite part of being a volunteer monitor? What keeps you involved year after year?*

Hill: I like the people at the Benzie Conservation District. They are committed to protecting our natural resources and base their work on good scientific expertise. It is also fun to work with the other volunteers who are equally passionate about keeping our beautiful streams and lakes as pristine as possible. I think that the idea of "citizen scientists" is a really great one. When volunteers are invested in their own environment, they learn to love and protect it.

MiCorps Monitor: *Please tell me about your monitoring team and how often you sample. Is the team comprised of the same group of volunteers each time? How do you engage new volunteers?*

Hill: The team is comprised of a few retired people and a few who are still working, some who have done this kind of monitoring a number of times, and others who are new to it. The composition of the team varies from time to time. The greatest source of interested volunteers came from the membership of the Benzie Audubon Club, fellow nature lovers. When we sampled this past spring, I recruited my husband, a retired cardiologist. He had a wonderful time!

MiCorps Monitor: *Describe the river or stream setting where you monitor. Are there specific issues or trends that you're looking to identify or address through this monitoring?*

Hill: My team is responsible for monitoring three or four sites on the Betsie River and its tributaries, which are in rural settings. In repeating the sampling, we may begin to see any trends. During about an hour of sampling at each site, we try to collect at least 100 individual macroinvertebrates. The types and diversity of the organisms are indicative of the health of the stream. Any change through time, either negative or positive, will be recorded.

MiCorps Monitor: *In your opinion, how healthy are the rivers and streams that you monitor?*

Hill: We are fortunate to live in an area where the streams have been isolated from degradation on the whole. They still support quite diverse communities of aquatic organisms and, in general, their riparian zones are well-vegetated and protective of the streams.

MiCorps Monitor: What do you see as possible outcomes from this monitoring effort? How will the watershed and surrounding community benefit from this work?

Hill: Not only should we be able to recognize any changes in water quality, but the residents of Benzie County should, through publicity of the project, become more aware of the incredible streams we have in this area and be motivated to be good stewards of them, and maybe even volunteer to help.

MiCorps Monitor: What words of wisdom do you have for others who might be interested in volunteering as a lake or stream monitor, or starting a volunteer monitoring program?

Hill: I think that my main message is that this is really fun to do. It's fun working with other people, being outdoors, and learning something new each time. It is a wonderful experience to see how complex these stream ecosystems are and how amazing the critters are that live in them.

MiCorps Monitor: What has been your most memorable moment or experience to date as a volunteer monitor?

Hill: I've been doing this for only a short time and don't know that I have a most memorable moment. But I do have feelings about being out collecting that are about being at peace, feeling free from daily stressors, and a connection with the biological systems that support all life. It is really these feelings as well as an interest in the science of biology that led me to pursue academic studies. I love the quotation by Henri Poincare, "The scientist does not study nature because it is useful. He studies it because he delights in it. He delights in it because it is beautiful." So, for me, all moments in nature are memorable and restorative and also increase my knowledge.

What would you ask our next volunteer lake or stream monitor? Please be creative and send your suggestions for future Volunteer Corner questions to Laura Kaminski, MiCorps Program Administrator, at laurak@glc.org.

Author:

[Laura Kaminski](#)

MiCorps Staff

Great Lakes Commission



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Article 7:

MiCorps Sends out Thousands!

The MiCorps Volunteer Stream Monitoring Program (VSMP) monetarily supports groups around the state who are interested in using volunteer labor to collect benthic macroinvertebrates as a way of monitoring stream health. The VSMP is based around a "train the trainer" design. Member organizations receive training, and then go to back to their homes to train their own local volunteers.

VSMP creates an effective relationship between the state, member organizations, and their volunteers. The state benefits from having a large network of stream watchdogs looking for environmental problems, the stream groups benefit because they receive financial help in establishing and building their programs, and the volunteers benefit because they are able to participate in a unique and fun outdoor experience.

However, the level of available financial support provided to member organizations is limited. A full-grant lasts two years and is typically close to \$10,000, which is enough to kick-start new monitoring programs by providing money for travel, equipment, training, and staff time. Yet one of the stipulations of receiving MiCorps grant money is a good faith promise that the group will continue to run the monitoring program after the grant period ends. This begs the question: are MiCorps member organizations able to continue running their program even after the original grant money is gone?

In July of 2013, MiCorps sent a survey to every group who had received a grant since the program was begun in 2005. Of the 41 groups who were invited to respond to the survey, 36 of them replied. 88% of the groups reported that their program is still sending out volunteers and collecting data.

In the spring of 2013, some groups were not able to send out volunteers because of high water. But those that did sent out an average of 38 people, for a total of 997 volunteers. Similarly, in the fall of 2012, some groups did not hold an event; but those that did, sent out an average of 43 people, for a total of 1,085 volunteers. Finally, the groups reported that 307 other volunteers participated in other MiCorps related events, like winter stonefly collection, habitat assessment, and insect identification.

The survey indicates that the MiCorps model for kick-starting groups has been very effective, with almost all groups continuing on past the initial grant period, and continuing to bring in large numbers of volunteers. Though MiCorps would never dare to take too much credit; these groups continue on because of dedicated staff who keep things going on shoestring budgets, volunteers who are willing to travel miles and miles on their own dime, and a tremendous amount of dedication and love for Michigan's rivers and creeks.

Author:

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Article 8:

MiCorps Updates

2013 MiCorps Stream Training Event

The 9th annual MiCorps Volunteer Stream Monitoring introductory training session was held on June 24, 2013 at the AuSable Institute of Environmental Studies, which is located near Mancelona. Eleven participants joined Paul Steen, MiCorps Program Manager, in learning more about how the Volunteer Stream Monitoring Program works, how to plan an insect monitoring event, and how to collect and identify macroinvertebrates. Following indoor training, the group headed to a beautiful section of the Manistee River to practice macroinvertebrate collection and habitat assessment.

The training participants came from a variety of places and represented a variety of organizations across Michigan. Most of these organizations were 2013 recipients of a one- or two-year Volunteer Stream Monitoring Program grant to help launch their volunteer stream monitoring programs. This year's participants included representatives from:

- AuSable Institute of Environmental Studies
- Alger Conservation District
- Grass River Natural Area
- Huron Pines
- Ionia Conservation District
- Kalamazoo Nature Center
- White River Watershed Partnership

Thousands of people across Michigan have volunteered with a MiCorps partner organization since MiCorps began giving grants in 2005.

2013 Annual MiCorps Conference and Training - Save the Date!

The MiCorps conference and training is an annual event featuring afternoon training sessions (free of charge) for interested volunteer coordinators on Day 1, and presentations and dialogue on lake and stream monitoring activities in Michigan on Day 2. This year's event will take place on October 28-29, 2013, at the R.A. MacMullan Conference Center at Higgins Lake (Roscommon, MI). Volunteer monitoring program leaders, citizen volunteers (both new and experienced), water resource professionals, and others interested in the health and protection of Michigan's rivers, lakes and streams are encouraged to attend.

At this year's conference, we will hear from regional experts on monitoring associated with dam removal efforts around Michigan, adding tools to the volunteer monitoring toolkit, and

opportunities to address watershed needs through watershed management planning. We will also be celebrating the amazing work being done by MiCorps volunteers and grantees through presentations from volunteers from across the state of Michigan covering both lake and stream topics of interest and success stories from their volunteer efforts. More information will be released as it becomes available, so please visit the conference website at www.micorps.net/conference. Online registration will be available starting in early October.

Upcoming Conferences and Events of Interest

Some additional upcoming events of interest include:

- **33rd International Symposium of the North American Lake Management Society (NALMS): Lake Management in an Era of Uncertainty**
October 30 - November 1, 2013
San Diego, CA
www.nalms.org/home/conferences-and-events/nalms-upcoming-symposium/nalms-symposium.cmsx
- **NWQMC 9th National Monitoring Conference: Working Together for Clean Water**
April 28 - May 2, 2014
Cincinnati, OH
acwi.gov/monitoring/conference/2014/index.html
- **2014 Michigan Lakes Convention**
(brought to you by the Michigan Inland Lakes Partnership as a collaborative effort of the Michigan DEQ, the Michigan Natural Shoreline Partnership, the Michigan Chapter of the North American Lake Management Society, and the Michigan Lake and Stream Associations)
May 1-3, 2014
Boyne Falls, MI
michiganlakes.msue.msu.edu/
- **River Network's River Rally 2014**
May 30 - June 2, 2014
Pittsburgh, PA
www.rivernetwork.org/programs/national-river-rally

In Case You Missed It: Aquatic Plant Monitoring Receives Statewide Media Attention

Our MiCorps partner, Dr. Jo Latimore, whom many of you know is an Aquatic Ecologist

and Outreach Specialist with the Michigan State University, has been in the news a lot in the last few months sharing the story of the Cooperative Lakes Monitoring Program and the collective work of our many volunteers. If you missed her interviews the first time around, we encourage you to take a look (or listen) to learn about all of the great work being done under the program and its statewide impact and applicability. We are thrilled with the growing statewide interest in these efforts as well as the opportunity to share these stories with others around the state. So please help us to continue to spread the word and share these stories within your own communities. And, of course, thank you to Jo for her efforts and to all of our CLMP volunteers around the state. Keep up the great work!

- On the Lookout for Invasive Plants, by Tom Oswald, MSU Today, July 12: msutoday.msu.edu/news/2013/on-the-lookout-for-invasive-plants/
- Wait... something just touched you?, by Rina Miller, Michigan Radio, July 15: michiganradio.org/post/wait-something-just-touched-you
- Invasive plant species are threatening the Great Lakes, on Stateside with Cynthia Canty, Michigan Radio, July 29: www.michiganradio.org/post/invasive-plant-species-are-threatening-great-lakes

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