The MiCorps Monitor: Fall 2012

The newsletter of the Michigan Clean Water Corps, Issue 10

Welcome!

Welcome to the Fall 2012 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Please note: this PDF is a an archived version of the original, web-based newsletter.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!

MiCorps
Monitoring Michigan's Water Quality
www.micorps.net

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Article 1:
Finding the Elusive Volunteer
Finding volunteers comes before you can find any macroinvertebrates!

The stream component of the MiCorps program is centered on building teams of citizen volunteers and getting out to rivers and creeks to monitor benthic macroinvertebrates and habitat. However, many MiCorps groups report that volunteer recruitment is a challenge, and in many cases, is the main reason that their program cannot meet their water monitoring goals.

In this article, Jason Frenzel, stewardship coordinator at the Huron River Watershed Council in Ann Arbor, goes into some depth about core volunteer management principals, while using real world particulars as concrete examples. Knowing the folks at the Yellow Dog Watershed Preserve near Marquette, and that their recruitment locations and opportunities are particularly challenging (the Yellow Dog watershed is 98 square miles and has 400 residents), Jason worked through these volunteer management concepts with the executive director, Emily Whittaker. This article discusses six aspects of volunteer management. Each of the six sections starts with a review of some basic principles, followed by a conversation between Emily and Jason, and concludes with some further thoughts from Jason about the particular issues facing the Yellow Dog Preserve.

1. Understand your programmatic goals and needs

Understanding organizational goals is the first step in creating useful and meaningful programs. Similarly, understanding programmatic goals and needs is the first step in creating useful and meaningful volunteer positions. Ultimately, understanding goals and needs will aid in evaluating the effectiveness of programs, positions, and day-to-day work.

Let's talk:

Jason: What are some of the Yellow Dog Preserve's programmatic needs?

Emily: Our program needs to have more volunteers that take on a leadership role. We have plenty that like to help for the day and we certainly appreciate that. But the work load still sits on our shoulders. It would be great to have just one or two that really dive into the process and help coordinate other volunteers, send out announcements, etc.

Jason: What positions might meet those needs?

Emily: A volunteer coordinator and/or public relations volunteer would be very helpful.

Jason: Have you tried any methods of producing these positions?

Emily: Student Interns have been our most successful.

Jason: What other volunteer needs do you currently have?

Emily: What we have been aiming for is to have at least the same number of volunteers as there are sites. This has been difficult with the Yellow Dog, since there are 20 sites. The Salmon-Trout project will probably be easier to attain that goal, since there are only 8 sites. The needed skill set for each volunteer should include: willingness to work in the elements (insane mosquito/blackfly clouds, rain, heat), attention to detail (helpful in sorting and identifying), and a genuine care for the watershed.

Jason's thoughts:

The thing that I like about Emily's responses is that they are specific and discrete. She knows her programs and organization well enough to articulate acute needs for overall system improvements. This illustrates that she's thought through these programs and issues and understands them well. This will help her through the rest of the volunteer management analysis in this article and will likely help her evaluate the success of any development she undertakes. One potential pitfall to watch for in this situation is that existing knowledge sometimes acts as a blinder to alternatives that are not being considered.

2. Create job descriptions to fit your needs

The second step in creating useful and meaningful volunteer programming is to translate organizational and programmatic needs into useful and meaningful volunteer jobs. It is helpful to make "job descriptions;" sometimes a well fleshed out PR announcement is enough. When thinking of the dream volunteer, go through the items on a traditional job description: what are the job duties, what is the time commitment, what abilities do the volunteers need to have, what safety precautions will they need, are there any certifications needed, who will they be reporting to and when, and what will they get out of the experience?

Let's talk:

Jason: You identified a volunteer coordinator or public relations volunteer as potentially useful; do you have any positions descriptions for those?

Emily: See: www.yellowdogwatershed.org/blog/2012/05/22/salmon-trout-volunteer-stream-monitoring. Reading it now after the MiCorps training makes me realize there is not much info about what specific tasks the volunteers will be doing. Although I must say we did get a good response for this PR.

Jason's thoughts:

Kudos to Emily for a good response to her PR! But as she notes, there is some additional work that could be done here. For many folks the 'paperwork' side of the job finds its way to the bottom of the priority list. It prevents us from "getting our real work done," it's time

consuming, and for some (me!) it's boring. But we all know that crossing the i's and dotting the t's is important. What I find in developing a job description is that I routinely come up with one (or two, or three) other things that I wasn't considering. And in the end these are often very important details in the process of recruitment and retention. This part of the process is helpful to ensure the program needs are well thought out and articulated in a real-world way. And again, this portion of the process helps in future evaluation.

3. Find your volunteers!

The next step in recruiting is identifying where to find the individuals who match up with your needs (aka the job description). Here's where the big brainstorming comes in. These may be bricks and mortar locations, organizations, online groups, or "personality archetypes." An example archetype is Trout Unlimited (TU). It makes clear sense that many TU members would make great benthic macroinvertebrates collection volunteers. They love the water, know their bugs, want to know more about the bugs, and are interested in protecting the waterways. This archetype is a strong potential recruitment location.

Let's talk:

Jason: Where have you considered finding these advanced volunteers?

Emily: We have tried the university, our membership, press releases to the general public, and pitching it during our events. Recently I was able to find someone whose job provided them with paid volunteer time. I think that option is more common with big businesses, which of course are not too common around here. Retirees seem like a good bet, too. I have signed up with volunteer management groups around the area that match volunteers with opportunities. We have had limited luck with those, however.

Jason: Have you tried to foster these folks from your existing volunteer pool?

Emily: Yes, however just maintaining their inclusion seems to be as much as we can do with them. The majority of the volunteers just want to come out for the day every now and then and we have not identified any that seem willing to take it a step further. Perhaps it would be helpful to make it clear at the very beginning, that our goal is to get more long term, advanced commitment from some volunteers. Not pointing to each individual, but just so that they can keep it in the back of their minds.

Jason does some research:

Emily brings up a great point that giving potential and new volunteers an accurate portrait of what the expectation is will set them on the course to fulfill that expectation. This gets back to the job description. By being specific about the position, two things happen. First, volunteers are more apt to self select into positions which will fit them well. Second, because they already know the constraints of the position they're more likely to stay within those constraints. Another way to say this is, if the organization is not articulate about what the volunteer's position is and is not, the volunteer is likely to determine this on his/her own, which very well may be divergent from the organization's version.

Now, back to the brainstorming (because I love that part)! After some quick internet research I understand that the Yellow Dog is in both Baraga and Marquette Counties. It looks like Marquette is the metropolis of the region, even if it isn't technically in the Yellow Dog watershed. And from my personal experience I know that many Marquette residents enjoy getting out of town and recreating in nearby nature, so recruiting from Marquette looks promising.

Marquette's Wikipedia page notes a few interesting tidbits… "In 2012, Marquette was listed among the 10 best places to retire in the U.S. by CBS Money Watch." As Emily noted, retirees seem like a good bet. They often have a bit of extra time on their hands, or are looking for good causes to get involved in. I wonder where we find the retirees who love water. Looking through the demographics, it appears that Marquette has twice the population density of Native Americans, compared to the US as a whole. There may be a natural connection to this group to explore. Wikipedia lists some interesting employers; think of why people work at certain jobs or what their talents are. These include Northern Michigan University, Marquette School System, and Marquette General Hospital. The two private companies listed are Pioneer Surgical Technology and Charter Communications. Have the human resources managers or the CEOs of these companies considered corporate volunteerism as a potential asset for their staffing and community? If not, starting this conversation may be fruitful.

Moving out of the City of Marquette, my internet research moves to Marquette County. It looks like the Health Department is fairly robust, and their five person Environmental Health Division is active. I wonder if any of the individuals on staff may be interested in the Yellow Dog's work. Moving to Baraga County, as expected, the internet has less information, as the county is more sparsely populated. I found a few crumbs to start the path. There is (or was) an MSU Extension office, there are a few manufacturing companies, and at least one guy who's really into Baraga County history. It will certainly be harder work here, but creating personal relationships with individuals fosters greater volunteer potential. Through my own history of spending time in the Yellow Dog area, I know that there is a large, very well to do, hunting club in the area. Which of the members are interested in the Yellow Dog's cause? However, perhaps this is a better path for the Development Director to go down. But maybe the members' grandchildren are active in environmental issues. Finally, I understand that everyone in our industry knows Chauncey Moran and his volunteer work with the Yellow Dog. I wonder what lessons can be learned from his amazing example that might be capitalized on in recruitment.

Certainly Emily's resources are tight but I'm an optimist. And I know that looking into all the leads just listed could take quite some time. Exploring is part of the fun (if it isn't fun for you, find someone who enjoys it and ask them to do that part of the work), and often every closed door reveals a couple open windows. Keeping eyes open for these opportunities is challenging, especially on a day-to-day basis. Evaluation, explored below, can help keep a fresh outlook on needs and opportunities.

4. Reach out to your our potential volunteers!

There are a number of avenues to correspond with each group, location, or archetype.

Which ways will create the highest possibility of success? Corresponding multiple times and through multiple avenues is more successful than a single approach. Also, creating a direct relationship is always more meaningful than an impersonal relationship, and thus has a higher potential for success. Social media, emails, internet, various forms of print media, the old fashioned phone, in person meetings and presentations, and word of mouth referrals are all important avenues to consider when developing a 'marketing plan' for a volunteer position.

Let's talk:

Jason: How have you tried to recruit these (soon to be) amazing advanced volunteers?

Emily: We have put postings up for internships (which would ideally be more of a leadership role). We have had several, but they never really step up.

Jason: Looking over your internship posting, it has the same issue you mentioned earlier; perhaps being direct in your recruitment materials that you're looking for leadership would be helpful here also. What other recruitment methods have you considered/tried?

Emily: Word of mouth is the main tool we use but we also use Facebook, email to members, press releases to local newspapers, and our website. We additionally target community groups such as Trout Unlimited to use as a pool of volunteers, but as a messaging avenue as well.

Jason's thoughts:

YAY, I knew we'd get TU into the article again!

It makes sense that interns may not quickly step into a leadership role. The internship itself is typically structured to help foster leadership and other abilities within the young professional, and they often leave after a couple of years, once those skills are starting to be honed. The allure of an easily attracted person shouldn't outweigh the need for the right person. Perhaps the interns should be doing intern work AND Emily should have advanced volunteers in long-term positions. I would suggest that the best course of action may be to list out all of the potential volunteers and recruitment avenues, develop a back of the envelope recruitment strategy for each, and prioritize this suite of opportunities. Working from this prioritization will help identify the next PR to send out or the next partnership to start fostering.

5. Tailor your messaging to appeal to your potential volunteers

Each potential recruitment location and each potential group or archetype deserves its own messaging. Better said, people are unlikely to help if not asked in a way that is meaningful to them. Additionally, the communication medium must be used appropriately. Recruitment on the internet, especially social media, is quite different from newspapers, which is different than asking in person.

Let's talk:

Jason: Can you share some recruitment materials, please?

Emily: Here is an example of our listings: www.yellowdogwatershed.org/blog/2010/11/22/new-listings-for-volunteer-opportunities. This was sent to our email listserv and we got a few replies. When I email the TU guy I more or less ask if they want to be involved because they already know about the program.

Jason's thoughts:

Emily's volunteer website is great! It's quick and easy – perfect for the web. I might consider splashing it up a tad with a photo or elegant graphic. The Yellow Dog's Facebook is also used extremely well. They post regularly with quick, witty information that is engaging for their audience, which is evidenced by the fact that their followers actively respond to their posts. This reminds me, make sure you Like the Yellow Dog Watershed Preserve on Facebook. Do it, now.

Developing audience-specific, and recruitment medium-specific language is critically important and often very nuanced. Asking for advice from peers and others who know the audience and medium can greatly hone one's skills.

6. Evaluate early and often!

Informal evaluation throughout a process, with more formal evaluation at specific times in the process, can lead to deep understanding of the organization, programs, volunteers, staff, and community. This knowledge, if acted upon, opens the door to much more productive and efficient organizations. Informal evaluation should be done continually. It's about being self-reflective in the process of work. Formal evaluation is important also; when setting out on a new program it is critically important to identify formal evaluation points.

Jason's thought:

I believe volunteer management to be a particularly iterative process. We need to continually evaluate what we are doing, why we are doing things, and how successful our work is. This evaluation doesn't always need to be formal, sit-down, fill out a form. Continual evaluation can lead us to increased idea generation and thus increased potential for future successes. As I was talking with Emily, I was continually amazed by her awareness of her programming, which indicates to me that she's doing that continual, informal evaluation. Here are a few examples…

Let's talk:

Emily: I have put postings up for internships (which would ideally be more of a leadership role) and we have had several, but they never really step up.

Jason: Here Emily illustrates the discontinuity between her goals and her actions, and thus the actions of her staff.

Emily: Well, now that it's all on paper, I see plenty of things we could do! Getting a small

brochure going seems like an easy way to get the info out. Other challenges that are not really covered are the small rural community aspect and driving distance to the monitoring sites.

Jason: In this second statement Emily owns her own mistakes, where she could have easily become defensive or evasive. She goes on to illustrate further challenges that we hadn't discussed earlier.

Emily: It would be best to have a long-term person but students are much easier to get a hold of.

Jason: Emily is dealing positively with reality, even when it comes in contrast with her desired outcome. This skill keeps her moving forward, and offers the opportunity for improvement in the future.

Jason's final thoughts:

While the six steps illustrated in this article aren't the be all, end all, to volunteer management, they're a solid start to good volunteer recruitment. A good plan and good recruitment can flow into meaningful volunteer retention. I also don't expect that the ideas that Emily and I generated are a cure all. They're simply a step along the path. As a mentor of mine says, "the process is the product." I believe he's right, and it's important to keep the entire process in mind as we do our daily tasks. It's also important to continually understand how well we're doing in the moment, in respect to the entire process. And in the end, our work is never really over, there's another step to take, and further improvements to implement.

I would like to thank Emily Whittaker for her time and patience in working on this article. I hope the process and our time will help the Yellow Dog in its important work.

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Article 2:
39 Years of the Cooperative Lakes Monitoring Program

One of keystone programs of MiCorps is the Cooperative Lakes Monitoring Program (CLMP). The CLMP has been around since 1974… that is an impressive length of time! Since that first year, the thousands of CLMP volunteers across Michigan have:

- Taken 92,185 secchi disk measurements,
- Grabbed 4,274 water samples for phosphorus analysis,
- Filtered 5,956 water samples for chlorophyll,
- Made 2,023 observations of the dates that ice melted off their lakes,
- Measured dissolved oxygen and temperature 52,290 times and created 3,486 dissolved oxygen and temperature lake profiles, and
- Searched 17 lakes for exotic plants and mapped out full plant communities on 12 lakes.

All of this data is entered by our volunteers and staff into a publicly accessible and searchable database!

In total, 827 inland lake basins have been monitored through one test or another through the CLMP. Michigan lake volunteers have contributed about 57,400 hours of work, not counting the time spent driving samples to State offices and going to trainings. Assuming field technicians across this time period would make an average of $9/hour, that means these volunteers have donated well over a half a million dollars in labor.

With 39 years of data comes a variety of ways to consider how Michigan lakes have changed over time. In this article, we will take a closer look at two issues that CLMP data can address: trends in trophic status, and the effects of zebra mussels on lakes.

Changes in lake trophic status

A lake's ability to support plant and animal life defines its level of productivity, or trophic status. Lakes are commonly put into categories based on their productivity. These categories range from oligotrophic, to mesotrophic, to eutrophic. Oligotrophic lakes are generally deep and clear and have little algae growth and consequently cannot support fish populations. By contrast, highly productive eutrophic lakes are generally shallow, turbid, and support abundant aquatic plant growth and fish, provided that they don't develop low dissolved oxygen levels. Lakes that fall between these two classifications are called mesotrophic lakes. All of these categories can be more truly understood as a continuum; for example, a mesotrophic lake may be bordering on oligotrophic while its neighbor lake may be mesotrophic but bordering on eutrophic. For more detail on trophic states, see CLMP's annual report.

The volunteers enrolled in the CLMP take water transparency, phosphorus, and chlorophyll measurements for their lakes, which are used to place that lake into one of the trophic categories. By taking these measurements year after year, we can track how individual lakes change as well get a sense of how the overall condition of lakes in the program are changing in time.

Michigan has a mix of oligotrophic, mesotrophic, and eutrophic lakes. From 1980 through 2000, about 65% of lakes in the CLMP were classified as mesotrophic, about 20% were oligotrophic and 20% were eutrophic. Hypereutrophic lakes, which are lakes on the very high end of the eutrophic category, are rare, but there are usually 2 or 3 of these lakes enrolled in the program at any one time.

In 2010, there were significantly more oligotrophic lakes in the program (34%), while the numbers of eutrophic (11%) and mesotrophic (54%) lakes dropped. This result can indicate one of two things: 1) more oligotrophic lakes joined the program and perhaps the other types lakes dropped out, or 2) lakes that were previously categorized as mesotrophic had an improvement of water quality and were reclassified as oligotrophic.

The results indicate that the second option above is indeed what is happening here. By only looking at lakes that were enrolled in the program throughout 1980-2010, we do see that many of them change from a mesotrophic to an oligotrophic state. Therefore, we do have evidence that some lakes are becoming less productive over time, probably due to improved lake management activities, or in some cases, zebra mussels.

A valid question to ask is whether this analysis can be applied to all of the lakes in Michigan. Certainly, the Upper Peninsula is very underrepresented and thus this analysis should not be thought to reflect conditions there. In addition, lakes enrolled in the CLMP are usually monitored because there are many people that live on those lakes and care for them. With this in mind, it is reasonable to argue that these results can be representative of residential lakes in the Lower Peninsula.

Changes in lakes in relation to zebra mussels invasions

Zebra mussels are an infamous creature throughout the United States, and the Great Lakes and inland lakes in the midwest in particular have had to struggle against these mollusk invaders. As filter feeders, zebra mussels can directly change the water quality of a lake as they consume algae from the water column. Since the CLMP measures water transparency, phosphorus, and chlorophyll, the program is well situated for studying how zebra mussels have affected these water quality parameters.

Through the help of CLMP volunteers throughout Michigan, I obtained the infestation years for 206 lakes enrolled in the CLMP. I more closely examined 30 lakes which had at least 6 years of secchi disk transparency data for both before and after the lake was infested. Where it was available, I also looked at the phosphorus and chlorophyll data for these 30 lakes. It was readily apparent that lakes respond in a huge variety of ways to the presence of zebra mussels.

Eleven of the 30 lakes showed the expected response with a noticeable increase in water

transparency after the zebra mussel invasion. For example, after the zebra mussels entered Van Etten Lake in 2001, the average transparency increased from around 5 feet to around 9 feet. The total phosphorus also decreased significantly, and the average chlorophyll measurements decreased slightly.

Fourteen of the 30 lakes did not seem to change at all after the zebra mussel invasions. The exact reason for this differs from lake to lake, and would be impossible to determine without a concentrated study of each of the lakes. One possible explanation is that the zebra mussel population was never able to flourish, perhaps because of the lack of suitable hard surfaces for the mussels to latch on to. Another possible explanation for this is that nutrient inputs increased to the lake and were able to nullify the effect of the mussels. Corey Lake in St. Joseph County is one example of a lake that did not change after zebra mussel invasion.

Five of the 30 lakes changed in a manner that is contradictory to the expected results of a zebra mussel invasion; the lakes had a reduction in water transparency. This rather confounding discovery makes it clear that in dealing with biological responses, the analysis is rarely cut and dried, and there are a myriad of environmental variables that are acting upon the system which are difficult to quantify or understand. Cedar Lake in Van Buren County is an example of this intricate issue. After the zebra mussel invasion, the average secchi transparency decreased from 16 feet to 12 feet, while both the phosphorus and chlorophyll also dropped. This is the expected response from phosphorus and chlorophyll, but the opposite response from water transparency.

Conclusions

Thirty-nine years is a long time for any program to run, and this should be a cause of celebration for the MiCorps community. However, lakes change over the course of decades and centuries, so we need to stay vigilant in monitoring and measuring. Collecting and analyzing water quality will continue to be an important part of understanding how human activities affect our lakes and will continue to inform planning and management decisions.

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Article 3:
Diving In: A MiCorps Grant Recipient's Account of the Bear Creek Stream Study

When I began working for Cannon Township as the Watershed Assistant in April 2011 I dove in with both feet, literally. Cannon Township had already received the Start-Up Grant through MiCorps (in 2010) and had just received the full Volunteer Stream Monitoring Program grant for a two-year macroinvertebrate study in Bear Creek beginning in 2011. I underwent my MiCorps training right here in Bear Creek with Paul Steen. Initially, I felt overwhelmed. If I were responsible for the study all by myself, that would have been one thing. I have a background in biology and I find the macroinvertebrate study fascinating. The hard part was learning the history of the grant, the history of Bear Creek, training for sampling and identification, writing the Quality Assurance Project Plan (QAPP), and being prepared to organize and train others (the clincher) as soon as possible.

Lucky for me our Township Clerk, Bonnie Blackledge, is very knowledgeable about Bear Creek. Also, she had already established a great volunteer base so I didn't have to start from scratch, as I know other grant recipients had to do. The prep work had been done for me. I just had to dive in!

While writing the QAPP initially seemed daunting, I quickly found it to be very educational and useful. Reading through it and editing it to fit the needs of our creek and our study really helped in my training. I felt much more confident by the time I was done.

Another thing I did that really helped me was to go down to Bear Creek and practice taking samples. I kept all my samples and practiced the ID as well. Once I had tried my hand at the identification, I had Paul confirm them during my side-by-side training (I am continually impressed by how accessible Paul is). I now keep the samples to compare to later samples and aid in the ID. Kids like to look at them too!

We are fortunate enough to have a lot of volunteers with environmental backgrounds on our team. Some of them had participated in similar studies before. They were easy to train and I was very confident in their abilities to lead teams by themselves. One thing I found is that, even with our backgrounds, inconsistencies in sampling technique were found when we mixed the teams up at the next sampling. It does help avoid consistent errors!

It has been fun watching our volunteers hone in on their skills with each sampling. I'm getting to know them better and we are even getting volunteers from other stream studies. It is definitely a bonding experience for the community. We had four kids join us (two were mine). They had a ball and are quite good at the ID. It is my hope that we can continue to draw people young and old to mix together and have such a good time. It's valuable data, it's good for our creek, and it's fun for us!

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Article 4:
Volunteer Corner: Ten Questions with Dr. Thomas Tisue

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 2012 installment of the Volunteer Corner, the MiCorps team caught up with lake and stream monitor Dr. Thomas Tisue, a volunteer with the Duck Creek Watershed Assembly (DCWA) and White River Watershed Partnership (WRWP), to learn about his experiences as a volunteer and leader of ongoing volunteer monitoring programs.

MiCorps Monitor: *How long have you been a volunteer with the Cooperative Lakes Monitoring Program (CLMP) for Duck Lake and what is your connection with the lake?*

Tisue: This is the program's second year. I live near, and am a frequent user of, the lake. I also serve as technical committee chair of DCWA.

MiCorps Monitor: *What is your role as a lake monitor? Is your monitoring team comprised of the same volunteers each time you sample? How do you engage new volunteers?*

Tisue: Because of professional expertise, I have a role as leader of the volunteer monitoring. It's a small dedicated team; some are retired, others are active professionals. Many team members have been involved with the lake and its watershed for a number of years. We use DCWA to involve others, but could be doing more to expand participation. Duck Lake is small (270 acres) and does not require a large crew. We are fortunate to have the long-standing involvement of people like Tom Hamilton and Glenn Hayden, who played a large role in getting the DCWA organized and who have continued to take part in volunteer work and provide knowledgeable leadership and community outreach.

MiCorps Monitor: *Why did you decide to become a volunteer with this monitoring program, and what keeps you involved year after year?*

Tisue: As an environmental chemist, my research and teaching has emphasized natural water systems since 1970; the CLMP allows me to remain active professionally now that I am largely retired, while performing work that benefits the community. The high quality of the people who operate the program is an attractive feature, as is knowing that the data are properly archived in a database.

MiCorps Monitor: *What is your favorite part about monitoring on the lake or the lake, itself?*

Tisue: Because of Duck Lake State Park, the lake gets a lot of use by non-riparians. CLMP serves the interests of these users (even though they mostly are not aware of it). This public

service role holds a lot of appeal for me. Also, I like the inter-personal interactions that take place within the volunteer group, not to mention the actual time spent on the lake, which is a lovely place in all seasons.

MiCorps Monitor: *You are also a volunteer with the White River Watershed Partnership and just received a 2012 Volunteer Stream Monitoring start-up grant from MiCorps to start a monitoring program on Cobmoosa Creek. What made you decide to get involved with stream monitoring in addition to monitoring on Duck Lake?*

Tisue: The DCWA also conducts macroinvertebrate monitoring on Duck Creek, continuing a program that was begun by the Muskegon Area Conservation District (MACD) under a MiCorps grant. Thanks to the training provided by MACD through their grant, the DCWA was able to take over what is now a 100% volunteer effort. When I joined the WRWP, I saw an opportunity to put what I had learned from working on Duck Creek to use in a second watershed where no such monitoring was taking place. The WRWP includes several individuals with degrees and experience in ecology, including the ever-present Tom Hamilton, so the monitoring idea fell on fertile ground. The start-up grant will help us mobilize community support and form the basis for expanding to other parts of the watershed.

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

Tisue: Participation by volunteers, including educators and community leaders, will raise awareness of the need for habitat and water quality protection. Over time, the monitoring will provide evidence of improvements to habitats and macroinvertebrate populations following culvert replacements and in-stream restoration work, for example. It will also provide early warning of any degradation resulting from land and water use changes.

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?*

Tisue: In starting and sustaining a program, I think a key thing is to make sure one reaches out to all parts of the community, including industry, educators, sportspersons' groups, service organizations, non-governmental organizations, and public sector organizations whose missions intersect the work of the volunteers. The people who started the programs I'm involved with, as well as others such as the Muskegon River Watershed Council, seem to have followed this path; they serve as instructive models. And don't forget the retired professionals in your area! We retired folks are an often under-utilized community resource.

As for the individual who is thinking about volunteering: it's a great way to get involved in environmental protection efforts without the need for a lot of specialized training or experience; you'll get the training you need to make a real contribution. With the MiCorps programs, one knows that the methods are sound and that the data will be properly archived. These are not just feel-good outlets for dilettantes!

MiCorps Monitor: *In your years of volunteer monitoring, what has been your most interesting "find" or observation?*

Tisue: As a chemist, I never had a chance to learn much about the biological side of the dynamics of natural water systems. Getting involved with stream monitoring gave me that opportunity. Now, I get a charge out of learning to distinguish between mayfly and stonefly larvae, for example, or telling the difference between native and Eurasian milfoil.

MiCorps Monitor: *What is your favorite part of being a volunteer monitor?*

Tisue: Getting out in the stream and on the water to see what's going on there. I also like to back up the standard study methods with scuba-based observations of in-lake conditions.

MiCorps Monitor: *In what new directions do you hope to take these programs in the future?*

Tisue: I'm working with Dr. Sherwood Hall at the U.S. Food & Drug Administration to introduce in-the-field sampling and identification of common phytoplankton into both the lake and stream work. Dr. Hall has worked out protocols for doing this that do not require elaborate or expensive microscopy equipment, and which can be conducted by trained volunteers on the spot.

This year, we initiated a longitudinal study of the colonization rates of zebra mussels in Duck Lake, where the population, after years at nuisance levels, has recently declined to near undetectability. While the mussels are hardly missed, we would like to know what caused the decline, whether the population is on the rebound, and whether native mollusk populations show similar changes.

I am hoping to strengthen ongoing collaborations with other groups in the area that share similar interests, including conservation districts, the Great Lakes Stewardship Initiative, local colleges and university research institutes, and nearby watershed organizations.

As a life-long educator, I would like to see internships for high school juniors and seniors become a regular feature of the MiCorps lake and stream monitoring programs.

About the Duck Creek Watershed Assembly: The DCWA is composed of volunteers who have an interest in working on water quality issues, and was first established in the 1990s after a storm washed out a bridge adjacent to Duck Lake, allowing sediment and debris to clog Duck Creek. This and other concerns led to meetings of citizens and officials, which eventually led to the formation of the DCWA. Since then, this 100% volunteer organization has been involved with a number of projects, including: monitoring temperature, water chemistry, and macroinvertebrates in Duck Creek; charting the depths of Duck Lake; introducing weevils to control Eurasian milfoil and beetles to address purple loosestrife; conducting a stream-bank erosion survey; and implementing ongoing education efforts. The DCWA works closely with the Muskegon Conservation District, and is currently collaborating with the District on a comprehensive watershed management plan for the Duck Creek drainage.

About the White River Watershed Partnership: The WRWP applied for and received a one-year start-up grant through the MiCorps program in 2012, which provides grants for

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. The WRWP startup grant will assist in the development of a monitoring program to be piloted in Cobmossa Creek in Oceana County. Through this effort, the project team intends to train enough volunteers to initially monitor one tributary for a period of three years and then begin to build the necessary expertise and community interest and support to expand the monitoring program to other parts of the watershed over time. Goals for the project include the establishment of benchmarks and the evaluation of changes to habitats and macroinvertebrate populations over time following culvert replacements and other habitat improvements, or degradation from land and water use changes.

The WRWP was formed in 2003 to protect the unique characteristics and the natural resources of the White River Watershed by promoting education, conservation, restoration, and preservation activities. For more information on the WRWP, visit: www.wrwp.org.

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.

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Article 5:
Volunteer Stream Monitoring
Grants Awarded for 2012

MiCorps is pleased to announce that eight organizations have been selected to receive volunteer water quality monitoring grants in 2012 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 Department of Environmental Quality 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 four start-up grants, totaling nearly $54,000 in funds, to support the recipients' volunteer monitoring work beginning in 2012.

Full grants:

Macatawa Area Coordinating Council
Project Title: Volunteer Monitoring for Water Quality Improvement in the Macatawa Watershed
Watershed: Macatawa Watershed
Funding Amount: $12,236.46
Contact: Steve Bulthuis, Ph: 616-395-2688 sbulthuis@the-macc.org

The Macatawa Area Coordinating Council wishes to establish a long-term volunteer stream monitoring program to assess water quality trends over time in the Macatawa Watershed. The Council will continue its training and water quality data collection with volunteers at their seven established stream locations to assess the effects of sedimentation, flashiness, temperature extremes, and excessive nutrients on macroinvertebrates and stream habitat. With this project, the Council hopes to achieve a solid stream quality data set for the Macatawa Watershed and establish a long-term local volunteer effort to protect and manage

water resources in their watershed.

Kalamazoo Nature Center
Project Title: Macroinvertebrate Monitoring in the Kalamazoo River Watershed
Watersheds: Kalamazoo River
Funding Amount: $11,997
Contact: Anna Kornoelje, Ph: 269-381-1574 akornoelje@naturecenter.org

The primary goals of the project are to establish a volunteer water quality monitoring program that will connect students and citizens of Kalamazoo with the Kalamazoo River Watershed. This project will also help educate the public about local water issues and create a greater number of committed clean water stewards. The Kalamazoo Nature Center hopes to reach new community members each year to continually grow the number of citizens interested in the health of their watershed while improving and alleviating human impacts. Volunteers will be monitoring seven sites that will cover a diverse habitat spectrum in both rural and urban settings and assist in tracking improvements or pollution that may exist.

Benzie Conservation District
Project Title: Benzie Watersheds Volunteer Stream Monitoring Project
Watersheds: Betsie River, Platte River, and Herring Lakes
Funding Amount: $11,871
Contact: Michael Jones, Ph: 231-882-4391 mike@benziecd.org

The Benzie Conservation District seeks to continue its leading role in the critical job of monitoring and protecting its precious water resources by educating and engaging Benzie County residents in monitoring activities, while giving them a greater sense of stewardship. Specifically, volunteers will monitor stream health in the three major watersheds of Benzie County, establish baseline conditions, and monitor deterioration or improvements over time. The District also plans to identify or verify problem areas where degradation has occurred and remediation or best management practices can be implemented.

Yellow Dog Watershed Preserve
Project Title: Salmon-Trout River Volunteer Stream Monitoring Project
Watersheds: Salmon-Trout River
Funding Amount: $7,465.50
Contact: Emily Whittaker, Ph: 906-345-9223 emily@yellowdogwatershed.org

The Yellow Dog Watershed Preserve will utilize this project to initiate a local volunteer monitoring project that will generate data for the Salmon-Trout River in the Upper Peninsula that can be used to address environmental issues that are important to the community and to the State of Michigan. By establishing a trained monitoring team, the aquatic resources and the community will have better capacity to mitigate negative impacts from point and non-point sources of contaminants. The YDWP also hopes to increase awareness about the project and engage the c ommunity, generate high quality data from eight sites along the watershed that can be added to the existing baseline data, and reduce potential impacts for contaminants through informed decision making.

Start-up grants:

Calhoun Conservation District
Project Title: Wilder Creek Watershed Volunteer Stream Monitoring Program
Watershed: Wilder Creek (a tributary of the Kalamazoo River)
Funding Amount: $2,990
Contact: Tracy Bronson, Ph: 269-781-4867, tracy.bronson@macd.org

This startup grant is intended to help initiate a monitoring program for the Wilder Creek watershed at several different locations from its headwaters to its drainage point. This effort will include meetings with the principal investigators, attending an established group's monitoring event, developing an outreach plan, and developing a full stream grant proposal for a future funding cycle. In addition, the project team plans to further gauge community interest in other area stream monitoring projects and plan for future volunteer training for those groups as well.

Alger Conservation District
Project Title: Alger Waters Monitoring Team Development Project
Watersheds: Bohemian Creek and Slapneck Creek
Funding Amount: $2,929
Contact: Teri Grout, Ph: 906-387-2222 teri.grout@mi.nacdnet.net

This startup grant will fund the development of a monitoring plan for Bohemian Creek and Slapneck Creek in western Alger County in the Upper Peninsula. This project will help to: fill a void that exists in monitoring data for western Alger County streams; build a sustainable and dedicated volunteer base that will not only gather baseline data but provide a consistent and credible data stream in the future; and provide a workable volunteer program template which can be transferred for use in other key watersheds in the county. In addition, this effort will help prioritize future restoration activities within the watershed.

Coldwater River Watershed Council
Project Title: Coldwater River Monitoring Program
Watershed: Coldwater River (a tributary of the Thornapple River)
Funding Amount: $2,170
Contact: Dick Smith, Ph: 616-897-8709 dielsmith@yahoo.com

This startup project is intended to fund the development of a monitoring plan for the Coldwater River, a tributary to the Thornapple River. Other project efforts will include leading an educational program on the benefits of and improvements to the River, involving schools, parents, teachers and riparian landowners; and the completion of a detailed inventory of erosion sites along the riparian corridor of the Coldwater River mainstream, as well as Duck and Tyler Creeks. Over time, the project team hopes to recover and restore the River to a safe and functional recreational asset for the burgeoning West Michigan population.

White River Watershed Partnership
Project Title: Upper White River Watershed

Watershed: Cobmossa Creek
Funding Amount: $1,600
Contact: Thomas Tisue, Ph.D., Ph: 231-421-4408 thomastisue@comcast.net

This startup grant will assist in the development of a monitoring program to be piloted in Cobmossa Creek in Oceana County. Through this effort, the project team intends to train enough volunteers to initially monitor one tributary for a period of three years and then begin to build the necessary expertise and community interest and support to expand the monitoring program to other parts of the watershed over time. Goals for the project include the establishment of benchmarks and the evaluation of changes to habitats and macroinvertebrate populations over time following culvert replacements and other habitat improvements, or degradation from land and water use changes. Participation by volunteers, including educators and community leaders, will help to raise awareness of the need for habitat and water quality protection.

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.

2013 Grant Application Packages

Grant Application Packages (GAPs) for the 2013 grant cycle for the grant programs

described above will be available later this fall or early winter. Please visit www.micorps.net/streamgrants and www.glc.org/streamclean for additional information and application instructions.

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Article 6:
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.

2012 MLSA Annual Conference and Training Event

Over 80 people gathered at the foot of Boyne Mountain 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 second year in a row that the MLSA conference was held at Boyne Mountain. Next year we will be headed to Bay City for more training and another fun conference.

A Fond Farewell to a Terrific Volunteer

Ralph Vogel, resident of Corey Lake in St. Joseph County, was honored at the annual MLSA conference for his 37 years of volunteering with the CLMP. In addition to a beautiful topographic plaque of Corey Lake, Ralph was given a Certificate of Recognition signed by Governor Snyder. Ralph has now officially retired from the CLMP, and we are sad to see him go. You can learn more about Ralph’s contributions to the CLMP program in the Fall 2009 MiCorps Monitor.

2011 CLMP Data

The 2011 CLMP annual report can be obtained online here. This document contains information on the parameters collected by CLMP volunteers and in particular, why those parameters matter to the health of our lakes. The annual report also lists all of the data collected by our volunteers in 2011 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, including the Spring 2012 Total Phosphorus data, are available at www.micorps.net/lakereports.html.

New to the CLMP!

We would like to welcome the following new lakes to the CLMP for the 2012 sampling season:

Lake Name	County
Allen	Gogebic
Duck	Gogebic
Hammell	Montcalm
Hannah Webb	Iron
James	Roscommon
Kelsey (and Kelsey Big)	Cass
Lotus/Maceday	Oakland
Park	Clinton
Round	Jackson
Silver	Oceana
Upper Herring	Benzie

CLMP Adds New Monitoring Program: The Exotic Aquatic Plant Watch

The Exotic Aquatic Plant Watch – an aquatic invasive plant monitoring program for inland lakes – is the newest addition to MiCorps' CLMP. The Exotic Watch is the first new program added to the CLMP in a decade.

The Exotic Aquatic Plant Watch program is open to all lakes, regardless of their previous experience within the CLMP. Volunteers from enrolled lakes attend a training session during the annual CLMP Training held each April in conjunction with Michigan Lake and Stream Associations' annual conference. During the training, volunteers learn to identify invasive plants, and how to differentiate between the invaders and similar native species. Volunteers also learn how to methodically search their lakes for the invaders and how to record and report their findings. After the volunteers complete their lake survey, MiCorps staff can provide expert identification of suspected invasive species at the volunteer's request. Data from the lake surveys are added to the MiCorps database and new discoveries of invasive

species are reported to the Department of Environmental Quality's Aquatic Nuisance Control program.

The Exotic Aquatic Plant Watch currently focuses on four introduced (exotic) invasive plants of particular conservation importance: Eurasian water milfoil (*Myriophyllum spicatum*), curly-leaf pondweed (*Potamogeton crispus*), starry stonewort (Nitellopsis obtusa) and Hydrilla (*Hydrilla verticillata*).Eurasian water milfoil already is widespread in many Michigan lakes, where it creates large mats that crowd and shade out other plants and interfere with recreation. It is difficult to eradicate because it spreads easily. Curly-leaf pondweed is not always a nuisance where it is found, but in some lakes can become a serious problem if not managed, forming thick beds that crowd out other plants. Starry stonewort, which is actually a large type of algae, rather than a true plant, can form deep, thick masses across large areas of lake bottom, crowding out native plants and eliminating fish habitat. 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 as northern Indiana.

CLMP 2013 Online Enrollment

Enrollment for the 2013 season of the CLMP will begin on October 1st. You can register online or you can request a paper registration form from Jean Roth, with Michigan Lake and 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 7:
MiCorps Updates

2012 MiCorps Stream Training Event

The 8th annual MiCorps Volunteer Stream Monitoring introductory training session was held on June 27, 2012 at the Fruitland Township Hall and just a couple of stone throws away from Lake Michigan. Nineteen participants joined three MiCorps staff members in learning more about how the Volunteer Stream Monitoring Program works, volunteer recruitment and retention, event planning, and macroinvertebrate collection and identification. The training participants came from a variety of places and represented a variety of organizations across Michigan. About half of these organizations are 2012 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:

- Alger Conservation District
- Benzie Conservation District
- Calhoun Conservation District
- Center for Environmental Study
- Coldwater River Watershed Council
- Pine River-Van Etten Lake Watershed
- West Michigan Environmental Action Council
- Yellow Dog Watershed Preserve

The Volunteer Stream Monitoring program 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. Thousands of people across Michigan have worked with a MiCorps partner organization since MiCorps began giving grants in 2005.

2012 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 29-30, 2012, 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, many of our sessions will focus on monitoring the effects of human impacts on Michigan’s freshwater systems, including presentations on monitoring activities associated with the 2010 Kalamazoo River oil spill, dam removal, mining, nutrient and wastewater management, and invasive species, as well as lakeshore habitat and human

disturbance indicators in Michigan Lakes. 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 late September or early October.

Upcoming Conferences

Some additional upcoming events of interest include:

- Michigan Chapter, North American Lake Management Society (or McNALMS) Third Annual Conference: Aquatic Invasive Species and Other Current Lake Research
  September 21, 2012
  Tustin, MI
  http://www.mcnalms.org

  Additionally, a pre-conference homeowner's workshop and tour on natural shorelines will be held on September 20th, hosted by the Muskegon River Watershed Assembly and Michigan Natural Shoreline Partnership.

- Michigan Natural Shoreline Educator Training: A Training for Professionals
  October 25, 2012
  Oakland County MSUE Office
  https://sites.google.com/site/mishorelinepartnership/mnsp-calendar

- 32nd International Symposium of the North American Lake Management Society (NALMS): Lakes in the Landscape
  November 7-9, 2012
  Madison, WI
  http://www.nalms.org/nalmsnew

- Michigan Natural Shoreline Educator Training: A Training for Professionals
  November 8, 2012
  Roscommon County, R.A. MacMullan Center
  https://sites.google.com/site/mishorelinepartnership/mnsp-calendar

- 52nd Annual Conference of the Michigan Lake and Stream Associations: Celebrating and Exploring Michigan's Magnificent Inland Fisheries
  April 26-27, 2013
  Bay City, MI
  http://www.mymlsa.org/mlsa-52nd-annual-conference

- River Network's River Rally 2013
  May 17-20, 2013
  St. Louis, MO
  http://www.rivernetwork.org/programs/national-river-rally

CLMP Training Goes Prime Time

MiCorps is pleased to announce the availability of two new lake monitoring training videos produced in association with the Deer Lake Property Owner's Association, Michigan DEQ, and Independence Township Clarkston Public Access Center. You can view these videos and other information for Cooperative Lakes Monitoring Program (CLMP) volunteers at http://micorps.net/CLMPdocuments.html.

The first 12-minute video was filmed by Deer Lake (Oakland County) volunteers on a beautiful sunny day last fall. It demonstrates CLMP methods for taking secchi disk and dissolved oxygen and temperature measurements, collecting phosphorus and chlorophyll samples, and conducting chlorophyll sample filtration.

The second video, which is 21 minutes in length, was filmed this summer on Deer Lake, as well. This video features Dr. Jo Latimore of the Michigan State University Department of Fisheries and Wildlife, Rick Gutowski and other members of the Deer Lake Water Quality Committee, and Ken Elwert from Independence Township, as they demonstrate onsite identification and mapping of aquatic plants for the CLMP and discuss the benefits of these types of monitoring activities.

These videos will give you a sense of the steps involved with these types of monitoring, but are not intended to replace the hands-on training offered each spring for new volunteers at the Michigan Lake and Stream Associations annual conference.

MiCorps wishes to extend a special thanks to all who were involved with the making of both videos!

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