
# Annual Program Report
# for
# October 2012 – September 2013

Prepared by

The Great Lakes Commission
&
The Huron River Watershed Council

March 13, 2014

# What is MiCorps?

The Michigan Department of Environmental Quality (DEQ) is responsible for environmental monitoring of Michigan's surface water resources to assure that they meet Michigan's Water Quality Standards. The DEQ recognizes the potential for citizen volunteers to make a substantial contribution to the state's water quality monitoring program. Given the limitations of state resources dedicated to lake and stream monitoring, DEQ staff are increasingly relying on volunteer water quality monitoring data to support water resources management and protection programs decisions. The DEQ began a volunteer lake monitoring program in 1974 and a volunteer stream monitoring program in 1998.

Former Governor Jennifer Granholm formally recognized the need and importance for volunteer monitoring groups to assist DEQ's lakes and streams monitoring program. In September 2003, Michigan Executive Order #2003-15 was issued to create the Michigan Clean Water Corps (MiCorps), a statewide initiative to foster and support volunteer monitoring programs in Michigan.

MiCorps assists volunteers around the state in participating in water quality monitoring activities. Many volunteer groups are already monitoring Michigan rivers, creeks, and lakes at various levels of effort. These groups vary in their capacity and expertise, yet all have the potential to make valuable contributions to our understanding of Michigan's water quality. MiCorps has incorporated the state volunteer water monitoring programs and these other established volunteer monitoring programs into a volunteer monitoring network that encourages the use of standard quality assurance practices and monitoring procedures in order to ensure the collection of high quality, comparable data.

MiCorps supports volunteer monitoring in numerous ways, including:

- Providing funds, technical assistance, and resources to groups interested in developing stream monitoring programs.
- Leading a statewide lake volunteer monitoring program;
- Providing a forum for communication and support among volunteer monitoring groups in the state;
- Providing standard methods and training for accurate, comparable data collection; and
- Enforcing quality assurance practices both in sampling and reporting of data.

Furthermore, the MiCorps staff is committed to working with volunteer groups on a range of levels, including encouraging and cultivating leadership and stewardship, volunteer training, data compilation, assistance in meeting specific challenges, communicating findings to local stakeholders, and evaluating accuracy and reliability of data and performance.

Ultimately, MiCorps strives to work with volunteers and state agencies to broaden the scope of knowledge about our water resources.

# MiCorps Support

The Great Lakes Commission (GLC) was awarded the contract to assist the DEQ in establishing and administering the MiCorps program. The GLC has partnered with the Huron River Watershed Council to develop, implement, and administer the program, under the direction of the DEQ. The original three-year contract began in September 2004 and ended August 2007. At that time, the GLC received a two-year contract extension to continue the program through August 2009. Following the end of the initial contract and extension, a short-term extension grant was issued by the DEQ to the GLC in September 2009 to extend some of the remaining unexpended funds and award a small amount of new funds to continue the program until a new contract could be issued. Also, the short-term extension allowed GLC to close out the remaining open grants that were awarded during the initial contract period. Currently, the program is administered under a new five-year contract with the GLC that runs from December 2009 through September 2014 (pending fund availability from the DEQ each year).

MiCorps staff also partner with the Michigan Lake and Stream Associations and Michigan State University to implement the Cooperative Lakes Monitoring Program (CLMP) component of the program.

In this report, the following people are generically referred to as "MiCorps staff":

**Great Lakes Commission (GLC):**

- Laura Kaminski, MiCorps Project Administrator
- Anne Sturm, MiCorps support staff
- Laura Andrews, MiCorps support staff
- Jeff McAulay, MiCorps support staff

**Huron River Watershed Council (HRWC):**

- Paul Steen, Ph.D., MiCorps Project Manager
- Jason Frenzel, MiCorps support staff

**Department of Natural Resources and Environment (DEQ):**

- Bill Dimond, MiCorps Administrator, DEQ Representative and Project Lead, Water Bureau

**Other CLMP Staff:**

- Jean Roth, Michigan Lake and Stream Associations (MLSA), CLMP Administrator
- Scott Brown, Michigan Lake and Stream Associations (MLSA), MLSA President
- Jo Latimore, Ph.D., Michigan State University (MSU), Lake Specialist

MiCorps
Monitoring Michigan's Water Quality

# MiCorps Accomplishments

MiCorps contains two major programs:

- The Volunteer Stream Monitoring Program (VSMP), and
- The Cooperative Lakes Monitoring Program (CLMP).

These programs are supported by a number of essential components:

- An advisory panel;
- A website and data exchange platform;
- An annual conference;
- Program marketing and promotion; and
- An annual newsletter.

GLC staff also administer the Volunteer River, Stream, and Creek Cleanup Program (VRSCCP) as a separate program under the MiCorps contract.

In the following pages, this report gives a description of each of these parts of MiCorps and the accomplishments made during the October 2012 – September 2013 program year.


Top left: CLMP volunteers study aquatic plant specimens during training for Aquatic Plant Identification and Mapping at the 2013 Michigan Lake and Stream Associations (MLSA) Annual Conference. Photo Credit: Angela DePalma-Dow

Top right: Volunteers proudly display some of the debris removed during the annual Genesee County Parks and Recreation Commission Community Clean Up project in Genesee and Lapeer counties, supported by a 2013 VRSCCP grant. Photo Credit: Genesee Co. Parks and Recreation Comm.

Bottom: Participants at the 2013 MiCorps Annual Conference network with other attendees from their part of the state to share experiences, resources, and expertise. Photo Credit: Chauncey Moran

# Volunteer Stream Monitoring Program (VSMP)

- Each year, approximately $50,000 is made available to volunteer groups through a competitive grant application process for the purpose of monitoring habitat and aquatic macroinvertebrates in wadable streams and rivers. MiCorps staff review applications in consultation with DEQ staff and administer these grants.

- MiCorps staff provide training and support to these grant recipients to ensure that they are collecting high-quality data and running successful programs.

- Via the MiCorps website, the groups are given access to a wide array of resources on volunteer stream monitoring, including stream monitoring datasheets, guidance for developing a Quality Assurance Project Plan (QAPP), equipment lists, collection tips, monitoring procedures, relevant DEQ documents and publications, tips for publicity and volunteer retention, and other tools.

Volunteers with the Benzie Conservation District search for macroinvertebrates at a stream site in Benzie County. Photo Credit: Mike Jones

After braving the cold during their first monitoring day, volunteers with the Kalamazoo Nature Center gather inside to identify the collected critters. Photo Credit: Anna Kornoelje

- To ensure data quality, MiCorps requires all grant recipients to develop an approved QAPP, attend a full day training event at which MiCorps monitoring procedures are taught, and attend a one-on-one training event with MiCorps staff. In addition, further training opportunities are provided at the annual conference.

- MiCorps staff work closely with each group, encouraging leadership, offering technical advice, and providing assistance where possible. MiCorps staff visit each group at their offices and samples one of their streams with them.

- Beginning with the 2007 grant cycle, MiCorps has set aside a portion of the annual VSMP funding as “seed money” for newly forming volunteer monitoring groups each year. Under this initiative, applicants may apply for a one year “start-up” grant to receive a small amount of funding to allow them to begin the process of starting a monitoring program. Start-up groups are given full access to MiCorps training and MiCorps staff expertise and are encouraged to submit an application for a full grant the next year.

- Since 2005, a total of 35 full grants and 19 start-up grants have been awarded under the VSMP, totaling more than $446,000 in grant funding to award recipients. A total of five groups received grants under the VSMP during the 2013 grant cycle, including four full grants and one start-up grant (Appendix A).

- From a programmatic perspective, over 525 stream sites, each of which is 300 feet long, are being sampled by groups that have received VSMP funding since the program’s inception.

- All of the data obtained through the VSMP is available on MiCorps’ web-based Data Exchange platform (www.micorps.net).

# Cooperative Lakes Monitoring Program (CLMP)

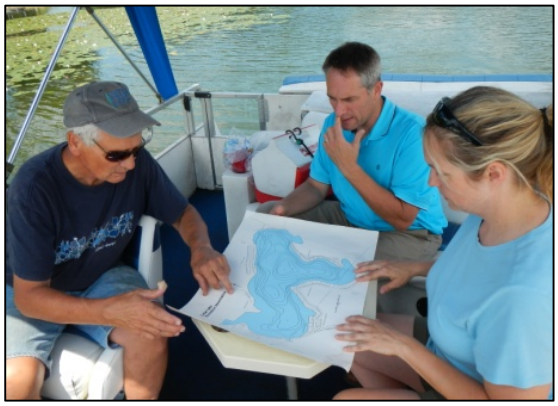
- The CLMP, formerly known as the Self-Help program, started in 1974 and is one of the nation's longest running lake monitoring programs. It was brought under the MiCorps umbrella upon creation of MiCorps in 2004.

- Administering and supporting the CLMP requires a combination of different skills. MLSA, under contract with GLC, is the public front for the CLMP and handles volunteer registration and equipment distribution. MiCorps staff from the DEQ, HRWC, and Michigan State University provide technical support, quality control, and training for the volunteers. The GLC maintains the MiCorps website, online registration, and the Data Exchange, where the data are stored.

- The CLMP enables volunteers to measure several parameters that indicate the trophic (a.k.a. nutrient or productivity) status of the lake: secchi disk transparency, total phosphorus, chlorophyll *a*, and dissolved oxygen and temperature.

- Total phosphorus and chlorophyll samples are sent to the DEQ water quality laboratory for analysis after volunteers collect them.

- The CLMP also offers training and field support in aquatic plant surveying and invasive aquatic plant monitoring and identification.



Left: CLMP volunteers on Cedar Lake (Van Buren County) discuss their sampling strategy for the Exotic Aquatic Plant Watch with MiCorps' Dr. Jo Latimore. Photo Credit: Angela DePalma-Dow

Right: Bill Dimond, Michigan DEQ, helps CLMP volunteers to gather chlorophyll samples at High Lake (Kent County). Photo Credit: Bob Schirado

- The CLMP strictly follows a QAPP (quality assurance project plan) that guides the program in maintaining consistent and accurate data collection.

- MiCorps staff hold a training event in CLMP monitoring procedures on an annual basis, prior to the beginning of the field season. The training is mandatory for all new participants in order to maintain the program's data quality standards.

- The Volunteer Mentor Program, an initiative started in 2009, matches up experienced volunteers with new volunteers who need additional assistance.

- DEQ Water Bureau staff randomly sample alongside ten CLMP volunteers each year to compare the trophic measurements made by limnology experts against volunteer measurements. Results have shown that there is a very high level of agreement between volunteer and expert measurements. Volunteer results agree closely with DEQ results for total phosphorus and for chlorophyll *a* samples. The difference is more reflective of a slight difference in methods than in volunteer sampling error.

- In 2013, 218 lakes were enrolled in the CLMP (Appendix B). This number has held steady over the past several years of monitoring. A short summary of 2013 results is located in Appendix C.

- All of the data are available in the CLMP annual reports found on the project webpage (www.micorps.net/lakereports) and are located in the web-based Data Exchange platform. The 2013 annual report for the CLMP is now available online at http://www.micorps.net/documents/CLMPFinalReport13.pdf.

# Volunteer River, Stream, and Creek Cleanup Program (VRSCCP)

- Each year, approximately $25,000 is made available to Volunteer River, Stream, and Creek Cleanup Program (VRSCCP) grant recipients through a competitive grant application process. The purpose of these grants is removal of trash and man-made debris from rivers and streams and along their banks. Local units of government are eligible to receive funding and may work with nonprofit organizations or other volunteer groups to implement volunteer cleanup efforts on water bodies around the state.

- The VRSCCP first began in 1998, and though it is not a direct part of the MiCorps initiative, the administration of this program was brought under the MiCorps support contract upon its creation in 2004.

- Funding for this program is provided by citizen donations collected from the sale of Michigan's Water Quality Protection License Plates under Public Act 74 of 2000 for water quality protection in Michigan Great Lakes, inland lakes, rivers, and streams.

The City of Grand Rapids deployed more than 775 volunteers and removed 12,000 pounds of trash from the Grand River and its tributaries during the 10th Anniversary Mayors' Grand River Clean Up in 2013. Photo Credit: West Michigan Environmental Action Council


VRSCCP grant recipients are encouraged to engage youth and community groups, such as the Kingsley High School Outdoor Adventure Challenge Group, who participated in the 2013 Boardman River Clean Sweep. Volunteer recruitment and participation is a critical part of the program. Photo Credit: Norman R. Fred

- GLC staff assist the DEQ in publicizing the grant program, hosting and maintaining the VRSCCP website (http://glc.org/projects/water-quality/streamclean/), maintaining an online grant application system, and providing additional resources and assistance for project coordinators. Each year, staff also review applications for the grant program - in consultation with DEQ staff - and administer these grants to the award recipients.

- Since 2005, 127 grants totaling greater than $253,000 have been awarded to recipients around the state under the VRSCCP. During the 2013 grant cycle, 20 clean-up projects were awarded grants totaling $39,015.31 in project funds (Appendix D).

# MiCorps Program Marketing and Promotion

- In order for the MiCorps program to succeed, the MiCorps staff needs to continually spread the word about what MiCorps does**.** Program promotion is an ongoing and essential component of the MiCorps program.

- The MiCorps webpage has a wealth of information explaining the program to newcomers, including a glossy program brochure which is available from the website and distributed at events.

- MiCorps staff regularly compose press releases and announcements of MiCorps events, products, and accomplishments.

- Certificates of recognition are presented to lake and stream volunteers each year to let them know that their contributions were appreciated. This recognition is important for volunteer retention as well as for recruiting new volunteers.

- MiCorps staff give presentations, lead discussions, and talk individually with a variety of groups and people in order to spread the word about MiCorps. Past events have included those hosted by the Michigan Association of Conservation Districts, the Stewardship Network, lake associations, Michigan Chapter of the North American Lake Management Society, DEQ staff, and other environmentally focused government and nonprofit groups.

- In 2010 and 2011, the CLMP team developed a series of fact sheets that give an overview of each parameter measured in the program.

- In 2011, MiCorps staff created two PowerPoint files (for VSMP and CLMP) that volunteer leaders can edit and use to make presentations of their own to their stakeholders and volunteers.


The 2013 MiCorps Volunteer Stream Monitoring Program start-up and full grant recipients with their Certificates of Recognition at the 2013 MiCorps Annual Conference.

From left: Paul Steen, Huron River Watershed Council (MiCorps staff); Harry Dittrich, Grass River Natural Area; Josh Forrester, Alger Conservation District; Tom Hamilton, White River Watershed Partnership; Suzanne Ebright, Calhoun Conservation District; Paul Wiemerslage, Au Sable Institute of Environmental Studies; and Bill Dimond, Michigan DEQ (MiCorps staff). Photo Credit: Chauncey Moran

# MiCorps Annual Newsletter

- MiCorps staff write and distribute an annual newsletter: *The MiCorps Monitor*. The purpose of the newsletter is to highlight MiCorps succ*esses,* member programs, exceptional volunteers, and important issues in the field of water monitoring.

- *The MiCorps Monitor* is an important part of program promotion. Specifically recognizing the successes of its member programs and highlighting volunteer commitments helps to earn program loyalty and attract new volunteers.

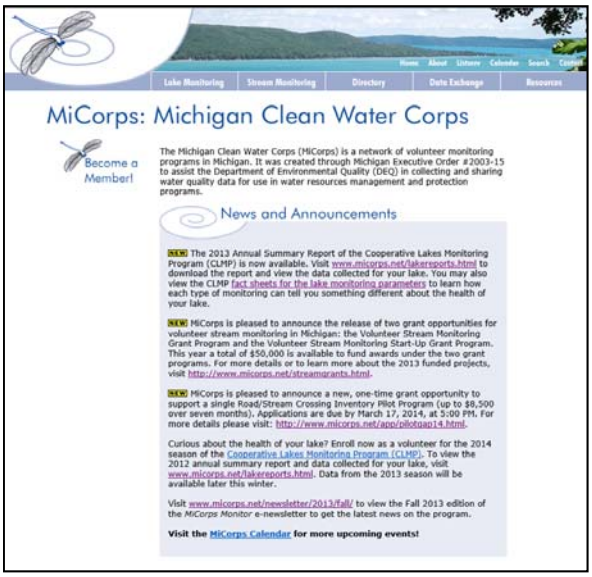
- The first issue, in paper format, was released in March 2005. Starting in April 2009, the paper newsletter was converted to an electronic web-based newsletter format that was distributed via email and housed on the MiCorps website.

- The annual edition for the 2012-2013 program year was released in September 2013 (http://www.micorps.net/newsletter/2013/fall/index.html).

# MiCorps Website and Data Exchange Platform

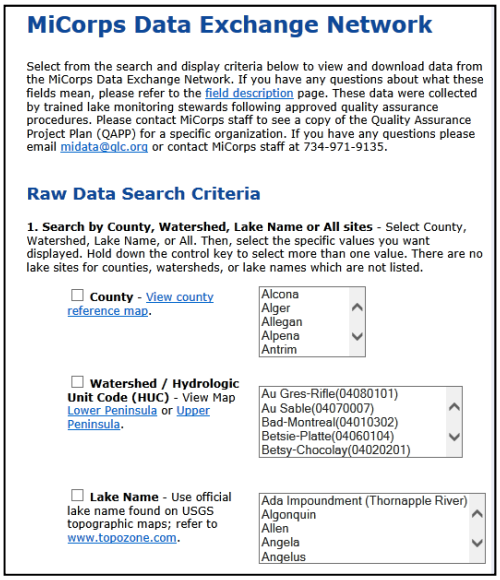
- The MiCorps website (www.micorps.net) is an essential tool used to support the work done through the VSMP and CLMP programs, and to provide resources to volunteer monitoring groups around the state.

- The website plays an important role in many ways as it:
    - Informs people about the MiCorps program and how they can become involved.
    - Serves as a location to place announcements and upcoming events.
    - Serves as a repository for a wide variety of educational resources, documents, and forms used by MiCorps staff and volunteer coordinators.
    - Allows volunteers to subscribe to one of two MiCorps listservs. These email lists allow MiCorps staff to send announcements quickly to a large group and facilitate broader email discussions on a variety of volunteer monitoring topics.
    - Holds a directory of MiCorps member organizations and volunteer monitoring groups statewide.
    - Serves as the data entry and data search interface for the MiCorps Data Exchange, the database used to store all volunteer collected data.
    - Facilitates online registration in the CLMP program and online MiCorps Conference registration.
    - Enables grant applicants to submit applications electronically via the VSMP and VRSCCP online application systems.




Left: A screen shot of the home page at **www.micorps.net**

Right: The MiCorps Data Exchange offers a variety of ways to search for volunteer collected lake and stream data.




- The MiCorps web-based Data Exchange platform (www.micorps.net/data/) provides online access to volunteer monitoring data through a searchable database. The Data Exchange houses monitoring data collected by MiCorps member organizations, which follow rigorous quality assurance standards and operating procedures criteria.

- The MiCorps Data Exchange holds all of the data collected by the CLMP and Self-Help program, from 1974 to the present.

- All stream groups that receive a grant through the VSMP are required to enter their habitat and macroinvertebrate data into the Data Exchange.

- An optional user survey in the Data Exchange allows program staff to better understand how MiCorps data are being used. The results from the 2012-2013 program year are provided in Appendix E.

- The project team maintains a separate website for the VRSCCP (www.glc.org/streamclean).

# MiCorps Annual Volunteer Monitoring Conference

- Every October from 2005 through 2013, MiCorps has held a two-day conference at the Ralph A. MacMullan Conference Center on Higgins Lake.

- The main purpose behind the annual conference is to bring volunteers and professionals together to share ideas, network, and learn about new innovations in monitoring. The conference is also a great way to attract new people and explain what MiCorps is and what it is doing.

- The MiCorps staff holds free training on advanced monitoring topics on the afternoon of the first day of the conference. Previous sessions have included workshops on aquatic macroinvertebrate collection and identification, stream flow measurements, mussel biology and identification, and aquatic plant identification. The purpose of these trainings is to give MiCorps volunteers more advanced exposure to methods than what they received at the introductory trainings earlier in the year.

Maggie Kronlein, Michigan State University graduate student, presents her research on the early detection of aquatic invasive species using eDNA Technology at the 2013 MiCorps Annual Conference. Photo Credit: Chauncey Moran

Beginners and advanced volunteers practice their aquatic macroinvertebrate identification skills with Dr. Paul Steen, MiCorps Project Manager, at a pre-conference training session offered at the MiCorps Annual Conference. Photo Credit: Chauncey Moran

- The second day of the conference is comprised of presentations and discussions led by MiCorps staff, an invited keynote speaker, leaders of volunteer monitor groups, and active volunteer monitors.

- Keynote speakers at the past conferences have been:
    - 2005: Gary Kohlhepp and Ralph Bednarz, Water Bureau, Michigan DEQ
    - 2006: Dr. Michael Wiley, Aquatic Ecology Professor, University of Michigan
    - 2007: Pete Jackson, Volunteer Monitoring Coordinator, U.S. EPA Midwest Region
    - 2008: Linda Green, USDA-Cooperative State Research, Education, and Extension Service, Volunteer Monitoring Network
    - 2009: Dr. Bryan Burroughs, Michigan Trout Unlimited
    - 2010: Dr. Alan Steinman, Annis Water Resources Institute
    - 2011: Michigan Natural Features Inventory (various staff members)
    - 2012: Steve Noble, Enbridge Response Unit, Michigan DEQ
    - 2013: Bob Sweet, Nonpoint Source Program, Michigan DEQ

- Participants always note in conference evaluations that they enjoy hearing from other volunteers. Starting with the 2008 conference and continuing since, most of the breakout sessions are led by MiCorps members rather than MiCorps staff. These breakout sessions involve volunteers and water professionals sharing monitoring results and data, as well as ideas they have used to enhance their monitoring programs.

# MiCorps Advisory Panel and Stakeholder Feedback

- The advisory panel is responsible for advising MiCorps staff and DEQ members on the development of the MiCorps program and suggesting improvements to make the program more effective and sustainable. The advisory panel is composed of VSMP and CLMP program leaders and volunteers, many of whom are water or science professionals.

- At the October 2013 MiCorps conference, the advisory panel session was comprised of numerous lake monitors, MiCorps staff, and the program's DEQ representative. MiCorps staff presented a brief update on the proposed new lake monitoring parameter for the program and asked for feedback as the trainings and procedures are being finalized over the coming months.

- Additionally, MiCorps conference attendees are asked to fill out evaluations of the conference, suggest possible conference topics for future years, and give their opinions on how MiCorps can be improved. A summary of these evaluations is also included in Appendix F.

Left: Dr. Jo Latimore, an Aquatic Ecologist and Outreach Specialist with the Michigan State University (MiCorps staff), leads a discussion among lake monitors on the proposed nearshore habitat monitoring parameter at the 2013 MiCorps advisory panel session. Photo Credit: Chauncey Moran

Right: Bob Sweet, Michigan DEQ, explains how watershed management planning can begin to address some of the issues identified through volunteer monitoring at the 2103 MiCorps Annual Conference. Photo Credit: Chauncey Moran

# The MiCorps Horizon - Future Directions

- The MiCorps staff is working on developing and implementing two new monitoring parameters, one for the VSMP and one for the CLMP, with corresponding educational documents, training, and data exchange support. Based on feedback from DEQ and MiCorps volunteers and program leaders, parameters selected are road/stream crossing inventory for the VSMP and a nearshore habitat analysis for the CLMP. MiCorps plans to pilot both parameters during the 2013-2014 program year.

- In the 2013-2014 program year, the MiCorps staff is planning on expanding the capabilities of the Michigan Data Exchange (MDE) to accept data collected by groups that do not have MiCorps approved quality assurance plans. This will be a "tiered" system in which the source of the data is clearly described, so that everyone accessing the data will know if they are using high quality MiCorps data or a lower tier source of data. This change will increase the total amount of data available on Michigan's freshwater systems while maintaining the integrity of the MDE system.

- Program Promotion: In 2013-2014, a new brochure will be developed for the VSMP.

# Summary of Program Funding

From 2004 to 2013, DEQ has awarded funding to the GLC in the amount of $2,114,683 to develop and implement MiCorps. By the end of September 2013, over $532,000 of these funds had been disbursed to local grant recipients in support of volunteer programs and cleanup activities around the State. A significant amount of additional funding was also spent to train these grant recipients and other volunteers in sampling techniques to implement quality data collection programs for both lakes and streams. As current open projects are completed over the next two years, it is expected that an additional $99,000 in grant funds from the current support contract will be paid out to grantees to complete their approved project work.

All VSMP and VRSCCP grants awarded under MiCorps, with the exception of VSMP start-up grants, require a local match of at least 25% of the total project cost. Yet grantees have often exceeded this requirement to fully achieve their project objectives. As a result, it is estimated that the grant funds provided by DEQ over the last nine years have leveraged an additional $774,569 in resources to support the volunteer water quality activities in Michigan. Enrollment fees - also considered local match - in the amount of $237,908, have also been contributed by CLMP participants during the last nine years. With these resources allocated toward the monitoring and improvement of Michigan's rivers and streams, MiCorps has made significant strides toward the preservation and protection of Michigan's water resources through volunteer action.

The following is an estimated summary of program costs supported by DEQ funding from October 2012 through September 2013 for each major program element, as outlined in this report. Not all program funds obligated to the GLC and its contractors for this contract period have been utilized to date, nor have all grant funds awarded to VSMP and VRSCCP grant recipients during this period been disbursed.

**MiCorps Support Contract Expenditures for the Period**
**October 2012 – September 2013**

| Program Task | Estimated Cost |
|---|---|
| Volunteer Stream Monitoring Program (VSMP): | $84,054 |
| Cooperative Lakes Monitoring Program (CLMP): | $64,159 |
| Volunteer River, Stream, and Creek Cleanup Program (VRSCCP): | $36,930 |
| MiCorps Program Marketing and Promotion: | $5,551 |
| MiCorps Annual Newsletter: | $7,900 |
| Website and Data Exchange Platform: | $13,772 |
| MiCorps Annual Volunteer Monitoring Conference: | $20,394 |
| MiCorps Advisory Panel: | $1,714 |
| MiCorps Future Directions: | $6,399 |
| **Total DEQ Program Cost:** | **$240,873** |
| **Estimated Local Match Committed:** | **$180,729 *** |

* Excludes match contributed by the GLC, HRWC, and MLSA.

# Appendix A – New, Ongoing, and Recently Closed VSMP Grants

## New Full Grants Awarded in 2013

**1**
**Grant #:** VSM2013-1
**Grantee:** Muskegon Conservation District / White River Watershed Partnership
**Title:** Upper White River Volunteer Monitoring Project
**Watershed(s):** White River, including Cobmoosa Creek, Carlton Creek, and the Main Branch
**Funding Amount:** $10,463
**Project Duration:** 2013-2015

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.

**2**
**Grant #:** VSM2013-2
**Grantee:** Grass River Natural Area
**Title:** Monitoring Benthic Macroinvertebrates in the Grass River Watershed
**Watershed(s):** Grass River
**Funding Amount:** $9,411
**Project Duration:** 2013-2015

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.

**3**
**Grant #:** VSM2013-3
**Grantee:** Alger Conservation District
**Title:** Alger Waters Stream Team Monitoring Project
**Watershed(s):** Anna River, Slapneck Creek, Bohemian Creek, Baker Creek, Werner Creek, and Dexter Creek
**Funding Amount:** $14,083
**Project Duration:** 2013-2015

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.

**4**
**Grant #:** VSM2013-4
**Grantee:** Calhoun Conservation District
**Title:** Kalamazoo Volunteer Stream Monitoring Project
**Watershed(s):** Kalamazoo River, including Wilder Creek, tributaries to Buckthorn Lake, and Willow Creek
**Funding Amount:** $14,083
**Project Duration:** 2013-2015

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.

## New Start-up Grants Awarded in 2013

**5**
**Grant #:** VSM2012-5
**Grantee:** The AuSable Institute
**Title:** Upper Manistee River Volunteer Stream Monitoring Program
**Watershed(s):** Manistee River
**Funding Amount:** $2,965
**Project Duration:** 2013-2014

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.

## Ongoing grants from past award cycles

**6**
**Grant #:** VSM2012-1
**Grantee:** Benzie Conservation District
**Title:** Benzie Watersheds Volunteer Stream Monitoring Project
**Watershed(s):** Betsie River, Platte River, and Herring Lakes
**Funding Amount:** $11,871
**Project Duration:** 2012-2014

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.

**7**
**Grant #:** VSM2012-2
**Grantee:** Macatawa Area Coordinating Council
**Title:** Volunteer Monitoring for Water Quality Improvement in the Macatawa Watershed
**Watershed(s):** Macatawa Watershed
**Funding Amount:** $12,236.46
**Project Duration:** 2012-2014

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.

**8**
**Grant #:** VSM2012-3
**Grantee:** Kalamazoo Nature Center
**Title:** Macroinvertebrate Monitoring in the Kalamazoo River Watershed
**Watershed(s):** Kalamazoo River
**Funding Amount:** $11,997
**Project Duration:** 2012-2014

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.

**9**
**Grant #:** VSM2012-4
**Grantee:** Yellow Dog Watershed Preserve
**Title:** Salmon-Trout River Volunteer Stream Monitoring Project
**Watershed(s):** Salmon-Trout River
**Funding Amount:** $7,465.50
**Project Duration:** 2012-2014

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 community, 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.

## Grants completed during the 2012-2013 Program Year

**1**
**Grant #:** VSM2010-3
**Grantee:** Flint River Watershed Coalition
**Title:** Flint River Watershed Coalition 2010 Retraining, Recruitment, Retention, and Assessment Program
**Watershed(s):** Flint River (Michigan)
**Funding Amount:** $10,111.55
**Project Duration:** 2010-2013
**Final Report:** Available on MiCorps website.

The ultimate goal of the MiCorps Volunteer Stream Monitoring Grant was to expand and strengthen the monitoring program to the point that comprehensive stream habitat data for the Flint River Watershed may be adequately collected. Funding was utilized to strengthen the Coalition's existing program and to coordinate monitoring at more than 30 sites within the Flint River watershed to track the long-term health of the system.

**2**
**Grant #: VSM2010-4**
**Grantee:** Branch County Conservation District
**Title:** Coldwater River Stream Monitoring Program
**Watershed(s):** Coldwater River
**Funding Amount:** $15,403.81
**Project Duration:** 2010-2013
**Final Report:** Available on MiCorps website.

Ten sites were to monitored within the Hodunk-Messenger Chain of Lakes watershed, a subwatershed of the Coldwater River, in order to document the extent and locations of possible threats and impairments in the watershed, establish a baseline for quantifying changes, and foster a stewardship ethic among watershed residents. The health of the Coldwater River watershed is a vital concern to all watershed stakeholders and partner organizations. Results from the proposed study served to inform the community and leverage further efforts to protect the watershed. Monitoring efforts are still ongoing.

**3**
**Grant #:** VSM2011-1
**Grantee:** Cannon Township
**Title:** Macroinvertebrate Study on Bear Creek
**Watershed(s):** Bear Creek, Grand River (Michigan)
**Funding Amount:** $13,556.81
**Project Duration:** 2011-2013
**Final Report:** Available on MiCorps website.

Cannon Township addressed macroinvertebrate stream health on Bear Creek for the purpose of comparing it to similar studies done in the early 1990s and to track any changes that may occur in the future related to increased development. Cannon Township and its volunteers sampled benthic macroinvertebrates and conducted a habitat survey at five sites on Bear Creek from Fall 2011 through Spring 2013. Grant funds assisted with the cost of implementing the volunteer-based stream study program.

**4**
**Grant #:** VSM2011-3
**Grantee:** Gogebic Conservation District
**Title:** Gogebic Conservation District Volunteer Stream Monitoring
**Watershed(s):** Presque Isle and Black River Watersheds (Michigan)
**Funding Amount:** $8,975
**Project Duration:** 2011-2013
**Final Report:** Grantee opted out of remaining grant funds and did not complete project. No report is available.

This project was intended to provide an opportunity for the Gogebic Conservation District to initiate a program to collect meaningful data on habitat and macroinvertebrates in the Presque Isle Watershed (specifically the Black River and tributaries). The data collected were intended to enable regulatory agencies to make informed decisions when considering watershed management practices; create a baseline; track significant changes; and prioritize stream projects accordingly. In total, seven sites were to be monitored: six on Black River tributaries and one on the Black River main branch.

**5**
**Grant #:** VSM2011-4
**Grantee:** Clinton River Watershed Council
**Title:** Adopt-a-Stream Monitoring Expansion Project
**Watershed(s):** Clinton River Watershed
**Funding Amount:** $1,350
**Project Duration:** 2011-2013
**Final Report:** Available on MiCorps website.

The overall goal of this project was to add to the Clinton River Watershed Council's current efforts to develop and maintain a long term assessment of stream health, and increase stewardship and awareness of freshwater resources throughout our local communities. This funding supported the addition of six new monitoring locations to their existing Adopt-A-Stream program to gather information about stream habitat and macroinvertebrate communities, and enabled CRWC to recruit local civic and conservation groups to help monitor in the Clinton River Watershed.

**6**
**Grant #:** VSM2012-5
**Grantee:** White River Watershed Partnership
**Title:** Upper White River Watershed
**Watershed(s):** Cobmossa Creek
**Funding Amount:** $1,600
**Project Duration:** 2012-2014

This startup grant assisted in the development of a monitoring program to be piloted in Cobmossa Creek in Oceana County. Through this effort, the project team worked to train 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 included 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, helped to raise awareness of the need for habitat and water quality protection.

**7**
**Grant #:** VSM2012-6
**Grantee:** Coldwater River Watershed Council
**Title:** Coldwater River Monitoring Program
**Watershed(s):** Coldwater River (a tributary of the Thornapple River)
**Funding Amount:** $2,170
**Project Duration:** 2012-2014

This startup project funded the development of a monitoring plan for the Coldwater River, a tributary to the Thornapple River. Other project efforts included 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.

**8**
**Grant #:** VSM2012-7
**Grantee:** Calhoun Conservation District
**Title:** Wilder Creek Watershed Volunteer Stream Monitoring Program
**Watershed(s):** Wilder Creek (a tributary of the Kalamazoo River)
**Funding Amount:** $2,990
**Project Duration:** 2012-2013

This startup grant helped to initiate a monitoring program for the Wilder Creek watershed at several different locations from its headwaters to its drainage point. This effort included 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 gauged community interest in other area stream monitoring projects and plan for future volunteer training for those groups as well.

**9**
**Grant #:** VSM2012-8
**Grantee:** Alger Conservation District
**Title:** Alger Waters Monitoring Team Development Project
**Watershed(s):** Bohemian Creek and Slapneck Creek
**Funding Amount:** $2,929
**Project Duration:** 2012-2013

This startup grant funded the development of a monitoring plan for Bohemian Creek and Slapneck Creek in western Alger County in the Upper Peninsula. This project helped 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.

# Appendix B – CLMP Participation

The following 218 lakes were registered for the 2013 season of the CLMP.

| Lake | County |
|---|---|
| Allen Lk. | Gogebic |
| Angelus | Oakland |
| Ann | Benzie |
| Arbutus | Grand Traverse |
| Arnold | Clare |
| Barlow | Barry |
| Barton | Kalamazoo |
| Baseline | Washtenaw |
| Bear | Kalkaska |
| Bear | Manistee |
| Bear (Big) | Otsego |
| Beatons | Geogebic |
| Beaver | Alpena |
| Bellaire | Antrim |
| Big Blue | Kalkaska |
| Big Lake | Osceola |
| Bills | Newaygo |
| Bills (Reinhardt) | Newaygo |
| Birch | Cass |
| Birch (Temple) | Cass |
| Blue (Chancellor) | Mason |
| Blue (north) | Kalkaska |
| Blue (Tri-Lakes) | Mecosta |
| Bostwick | Kent |
| Bradford | Otsego/Crawford |
| Brevoort | Mackinac |
| Brooks | Leelanau |
| Browns | Jackson |
| Bruin | Washtenaw |
| Byram | Genesee |
| Cedar | Van Buren |
| Cedar | Alcona/Iosco |
| Cedar | Leelanau |
| Center | Osceola |
| Chabenau | Marquette |
| Chain | Iosco |
| Chemung | Livingston |
| Christiana | Cass |
| Clam | Antrim |
| Clark | Jackson |
| Clear | Ogemaw |
| Clear | Jackson |

| Lake | County |
|---|---|
| Clifford | Montcalm |
| Cobb | Barry |
| Coldwater | Branch |
| Cora | Van Buren |
| Corey | St. Joseph |
| Cranberry | Oakland |
| Crockery | Ottawa |
| Crooked (Big) | Kent |
| Crooked (East & West) | Livingston |
| Crooked | Kalamazoo |
| Crooked | Kalkaska |
| Crystal | Benzie |
| Crystal | Montcalm |
| Crystal | Oceana |
| Cub | Kalkaska |
| Deer | Alger |
| Deer | Oakland |
| Derby | Montcalm |
| Devils (Lk. Pres) | Lenawee |
| Diamond | Cass |
| Diane | Hillsdale |
| Dinner | Gogebic |
| Duck | Calhoun |
| Duck | Muskegon |
| Duck | Gogebic |
| Duncan | Barry |
| Eagle | Cass |
| Eagle | Allegan |
| Eagle | Kalkaska |
| Earl | Livingston |
| Emerald | Kent |
| Emerald | Newaygo |
| Evans | Lenawee |
| Farwell | Jackson |
| Fawn | Hillsdale |
| Fenton | Genesee |
| Fish | Van Buren |
| Fisher's | St. Joseph |
| Fremont | Newaygo |
| Freska | Kent |
| George | Clare |
| Glen | Leelanau |

| Lake | County |
|---|---|
| Glen (Little) | Leelanau |
| Gull | Kalamazoo |
| Gratiot | Keweenaw |
| Gravel | Van Buren |
| Hamburg | Livingston |
| Hamlin - Lower | Mason |
| Hamlin - Upper | Mason |
| Hamilton | Dickinson |
| Hannah Webb | Iron |
| Hawk | Oakland |
| Hicks | Osceola |
| Higgins (North Basin) | Roscommon |
| Higgins (South Basin) | Roscommon |
| High | Kent |
| Horsehead | Mecosta |
| Houghton (Denton) | Roscommon |
| Houghton (Cut River) | Roscommon |
| Hubbard | Alcona |
| Hunter | Gladwin |
| Hutchins | Allegan |
| Independence | Marquette |
| Indian | Kalamazoo |
| Indian | Kalkaska |
| Indian | Osceola |
| Isabella | Isabella |
| Island | Grand Traverse |
| Island (Little) | Iosco |
| James | Roscommon |
| Juno | Cass |
| Kelsey | Cass |
| Kelsey (Big) | Cass |
| Kimball | Newaygo |
| Klinger | St. Joseph |
| Lakeville | Oakland |
| Lancer | Gladwin |
| Lancelot | Gladwin |
| Leelanau (North) | Leelanau |
| Leelanau (South) | Leelanau |
| Leninger | Cass |
| Little Long | Barry/Kalamazoo |
| Long | Iosco |
| Long | Gogebic |

| Lake | County |
|---|---|
| Long | Oakland |
| Louise | Dickinson |
| Magician | Cass |
| Margrethe | Crawford |
| Marl (Silver/Marl) | Genesee |
| Mary | Dickinson |
| Mary | Iron |
| Maston | Kent |
| Mecosta | Mecosta |
| Middle Straits | Oakland |
| Moon | Gogebic |
| Murray | Kent |
| Muskellunge | Kent |
| Muskellunge | Montcalm |
| Nepessing | Lapeer |
| Ore | Livingston |
| Orion | Oakland |
| Osterhout | Allegan |
| Oxbow | Oakland |
| Painter | Cass |
| Papoose | Kalkaska |
| Park | Clinton |
| Payne | Barry |
| Paw Paw (Little) | Berrien |
| Pentwater | Oceana |
| Perch | Iron |
| Perrin | St. Joseph |
| Pickerel | Kalkaska |
| Pickerel | Newaygo |
| Pine Island (Big) | Kent |
| Platt (Big) | Benzie |
| Pleasant | St. Joseph |
| Pleasant | Wexford |
| Pleasant | Washtenaw |

| Lake | County |
|---|---|
| Portage | Liv/Wash |
| Posey | Lenawee |
| Pretty | Mecosta |
| Puterbaugh | Cass |
| Randall | Branch |
| Rifle | Ogemaw |
| Round | Mecosta |
| Round | Lenawee |
| Round | Livingston |
| Sand | Lenawee |
| Sanford | Midland |
| Sanford | Benzie |
| School Section | Mecosta |
| Sherman | Kalamazoo |
| Shingle | Clare |
| Silver (of Silver/Marl) | Genesee |
| Silver (Green Oak) | Livingston |
| Silver | Van Buren |
| Sister (First) | Washtenaw |
| Sister (Second) | Washtenaw |
| Spider | Grand Traverse |
| Squaw | Kalkaska |
| Star (Big) | Lake |
| Starvation | Kalkaska |
| Stony | Oceana |
| Stoneledge | Wexford |
| Strawberry | Livingston |
| Sylvan | Newaygo |
| Sweezey | Jackson |
| Tahoe | Oceana |
| Tamarack | Livingston |
| Taylor | Oakland |
| Thornapple Riv. Cas. | Kent |
| Torch (North) | Antrim |

| Lake | County |
|---|---|
| Torch (South) | Antrim |
| Triangle | Livingston |
| East Twin | Montmorency |
| West Twin | Montmorency |
| Twin - North (Big) | Cass |
| Twin - South (Little) | Cass |
| Twin (Big) | Kalkaska |
| Twin (Little) | Kalkaska |
| Upper Crooked | Barry |
| Upper Herring | Benzie |
| Upper Straits | Oakland |
| Van Etten | Iosco |
| Vineyard | Jackson |
| Viking | Otsego |
| Voorheis | Oakland |
| White | Oakland |
| White (1) | Muskegon |
| White (2) | Muskegon |
| Whitewood | Washtenaw |
| Wildwood | Cheboygan |
| Windover | Clare |
| Winans | Livingston |
| Wolf | Lake |
| Woods | Kalamazoo |

# Appendix C – CLMP Data Summary

The following data are a summary of the measurements taken during the 2013 CLMP field season.

**Secchi Disk Transparency**

- 220 basins were sampled.
- Total number of measurements = 3,098
- Transparency data summary:
    - Transparency range: 2-49 feet
    - Mean: 12.7 feet
    - $TSI_{SD}$*: 29-59 (average: 41)

*For more information on TSI measurements, please see the CLMP annual reports at: http://www.micorps.net/lakereports.html

**Spring Total Phosphorus**

- 151 lakes were sampled
- Data summary:
    - range: <3-150 ug/l
    - mean: 16.9 ug/l

**Summer Total Phosphorus**

- 170 lakes were sampled
- Data summary:
    - range: <3-80 ug/l
    - mean: 13.2 ug/l
    - $TSI_{TP}$: <27 - 67 (39.0 average)

**Chlorophyll *a***

- 144 lakes were sampled
- 608 volunteer samples were analyzed.
- Data Summary:
    - range: <1-58.0 ug/l
    - mean: 5.0 ug/l
    - $TSI_{CHL}$: <31-60 (average: 41.0)

**Dissolved Oxygen/Temperature**

- 54 lakes were sampled throughout the summer.
- A total of 366 oxygen/temperature profiles were taken.
- Between 5-27 measurements were made for each profile.
- In total, about 5,100 oxygen/temperature measurements were taken in 2013.

**Aquatic Plant ID and Mapping**

6 lakes conducted surveys

- Crockery Lake (Ottawa Co.)
- Gull Lake (Kalamazoo Co.)
- Kelsey Lake (Cass Co.)

- Park Lake (Ingham Co.)
- Pleasant Lake (Washtenaw Co.)
- White Lake (Muskegon Co.)

**Exotic Aquatic Plant Watch**

26 lakes enrolled

- 2 lakes delayed their sampling until 2014
- 17 lakes submitted reports

# Appendix D – New VRSCCP Grants

## New Grants Awarded in 2013

**1**
**Grant #:** VRSCCP2013-01
**Grantee:** City of Charlotte
**Title:** 9th Annual River Cleanup Day
**Watershed(s):** Butternut Creek, Battle Creek River
**Funding Amount:** $838.65
**Final Report:** Available upon request

To clean up and improve approximately 1.5 miles along Butternut Creek and 2 miles along the Battle Creek River within the City of Charlotte and to educate the public about the importance of such efforts.

**2**
**Grant #:** VRSCCP2013-02
**Grantee:** Germfask Township
**Title:** Manistique River Clean Up
**Watershed(s):** Manistique River
**Funding Amount:** $845
**Final Report:** Available upon request

To clean high use areas where wildlands and people interact; raise awareness of the river, its recreational opportunities, and the need to maintain these areas; and increase the appeal of Germfask and the Seney National Wildlife Refuge as a destination.

**3**
**Grant #:** VRSCCP2013-03
**Grantee:** City of Ann Arbor Parks and Recreation Services
**Title:** A2 Keeping the River Clean
**Watershed(s):** Huron River
**Funding Amount:** $3,254
**Final Report:** Available upon request

To keep a 7-mile stretch of the Huron River free of trash throughout the summer season while building knowledge and understanding of the river and its ecosystem among groups of volunteers who will become stewards of the river now and in the future.

**4**
**Grant #:** VRSCCP2013-04
**Grantee:** Tuscola Conservation District
**Title:** 5th Annual Cass River Cleanup
**Watershed(s):** Cass River
**Funding Amount:** $600
**Final Report:** Available upon request

To clean a 5-7 mile section of the river from the dam in the City of Vassar to M-46, removing trash, tires, and scrap metal.

**5**
**Grant #:** VRSCCP2013-05
**Grantee:** Barry Conservation District
**Title:** 18th Annual Thornapple River Clean Up
**Watershed(s):** Thornapple and Coldwater Rivers
**Funding Amount:** $1,800
**Final Report:** Available upon request

To remove all safely accessible trash from the water and along the banks along 85 river miles while recruiting volunteers from at least six watershed communities.

**6**
**Grant #:** VRSCCP2013-06
**Grantee:** Macatawa Area Coordinating Council
**Title:** Macatawa River Volunteer Cleanup
**Watershed(s):** Macatawa River
**Funding Amount:** $1,000
**Final Report:** Available upon request

To clean 2 miles of stream by removing trash, polystyrene, old tires, construction materials, and assorted plastics, while educating volunteers on water quality issues.

**7**
**Grant #:** VRSCCP2013-07
**Grantee:** City of Evart
**Title:** Muskegon River Cleanup
**Watershed(s):** Muskegon River
**Funding Amount:** $2,175
**Final Report:** Available upon request

To conduct a river cleanup day along 9 river miles through the City of Evart to a landing near Benzing Road in Osceola County.

**8**
**Grant #:** VRSCCP2013-08
**Grantee:** St. Joseph County Conservation District
**Title:** River Clean Up Project 2013
**Watershed(s):** Prairie, Fawn, Rocky, and White Pigeon Rivers, and Nottawa Creek
**Funding Amount:** $2,750
**Final Report:** Available upon request

To implement the third stage of a 5-year plan to clean all 150 miles of the county's rivers, cleaning roughly 29 miles in 2013.

**9**
**Grant #:** VRSCCP2013-09
**Grantee:** City of Grand Rapids
**Title:** 10th Annual Mayors' Grand River Cleanup
**Watershed(s):** Grand River and tributaries
**Funding Amount:** $4,500
**Final Report:** Available upon request

To remove waste from the Grand River, promote water quality, and increase West Michigan's aesthetic appeal, making the Grand River and its tributaries a safer and cleaner place for West Michigan residents and an inviting place for visitors.

**10**
**Grant #:** VRSCCP2013-10
**Grantee:** Hillsdale Conservation District
**Title:** Headwaters River Clean-up Project
**Watershed(s):** St. Joseph River, Kalamazoo River, Grand River, and the River Raisin
**Funding Amount:** $2,653
**Final Report:** Available upon request

To target the St. Joseph River, Kalamazoo River, Grand River, and River Raisin watersheds for trash removal, including 12 of the 18 townships, 264 square miles of land, and 70 miles of flowing main stream water from their heads to their exit of the county.

**11**
**Grant #:** VRSCCP2013-11
**Grantee:** Van Buren Conservation District
**Title:** River Rescue 2013
**Watershed(s):** Black and Paw Paw River, adjoining creeks/streams, and Hickory Creek
**Funding Amount:** $2,360
**Final Report:** Available upon request

To improve the water quality and vitality of local creeks, stream banks, and the health and biodiversity of critical wildlife populations and habitats by removing anthropogenic sources of trash and debris from approximately 13-25 miles of waterway, while raising environmental concerns and water quality issues with participants on a personal level.

**12**
**Grant #:** VRSCCP2013-12
**Grantee:** Shiawassee County Health Department
**Title:** 16th Annual Shiawassee River Clean-up
**Watershed(s):** Shiawassee River
**Funding Amount:** $1,875
**Final Report:** Available upon request

To remove trash and debris from the mainstem of the Shiawassee River from Byron to Oakley, targeting rural areas for tires and large debris items.

**13**
**Grant #:** VRSCCP2013-13
**Grantee:** City of Battle Creek
**Title:** 2013 Global Citizens River Conservation Day
**Watershed(s):** Battle Creek and Kalamazoo Rivers, and Brickyard Creek
**Funding Amount:** $1,500
**Final Report:** Available upon request

To promote the protection of the water resources within the Kalamazoo River watershed, promote the beauty of the water resource, encourage continued stewardship of the resource, and participate in an international cleanup effort through the removal of trash and debris from the water and along the river's banks.

**14**
**Grant #:** VRSCCP2013-14
**Grantee:** Calhoun Conservation District
**Title:** Klean the Kazoo
**Watershed(s):** Kalamazoo River
**Funding Amount:** $2,570
**Final Report:** Available upon request

To carry out a cleanup along a 2.5-4 mile section of the Kalamazoo River from the Whitehouse Nature Center at Albion College to the City of Albion's Rieger Park, while increasing volunteer participation for the event.

**15**
**Grant #:** VRSCCP2013-15
**Grantee:** Jackson County Drain Commissioner
**Title:** Portage River Volunteer Cleanup
**Watershed(s):** Portage River
**Funding Amount:** $1,145
**Final Report:** Available upon request

To restore the Portage River, and the Upper Grand River which it feeds into, to meet Michigan Water Quality Standards, while removing trash and debris from approximately 10 miles and increasing public awareness of the issues affecting the Upper Grand River and improving recreational opportunities on the Portage River.

**16**
**Grant #:** VRSCCP2013-16
**Grantee:** Monroe Conservation District
**Title:** River Raisin Rubbish Removal
**Watershed(s):** River Raisin
**Funding Amount:** $2,538.91
**Final Report:** Available upon request

To clean a 10 mile section of the River Raisin and collect and dispose of tires.

**17**
**Grant #:** VRSCCP2013-17
**Grantee:** Kent Conservation District
**Title:** Rogue River Cleanup
**Watershed(s):** Rogue River
**Funding Amount:** $1,615.75
**Final Report:** Available upon request

To improve the quality of the Rogue River by conducting a cleanup along approximately 3-5 miles of the river between the City of Rockford and Plainfield Township, and to engage the community and local media about cleanup efforts.

**18**
**Grant #:** VRSCCP2013-18
**Grantee:** Genesee County Parks and Recreation Commission
**Title:** Flint River Clean Up
**Watershed(s):** Flint River and tributaries
**Funding Amount:** $2,900
**Final Report:** Available upon request

To remove unsightly debris from the banks of the Flint River at 17-20 sites across the Flint River watershed with the help of volunteers.

**19**
**Grant #:** VRSCCP2013-19
**Grantee:** Grand Traverse Conservation District
**Title:** 9th Annual Boardman River Clean Sweep 2013
**Watershed(s):** Boardman River
**Funding Amount:** $1,150
**Final Report:** Available upon request

To conduct the 9th annual community-wide cleanup of the Boardman River in conjunction with the American Rivers' National River Cleanup 2013 and the National Cherry Festival, including river and bank trash pick-up of human induced trash along all navigable segments of the River totaling approximately 30 miles.

**20**
**Grant #:** VRSCCP2013-20
**Grantee:** Mason-Lake Conservation District
**Title:** Pere Marquette Paddle Down-River Cleanup
**Watershed(s):** Pere Marquette River
**Funding Amount:** $945
**Final Report:** Grantee opted out of remaining grant funds and did not complete project. No report is available.

To pick up all litter along a 17 mile stretch of the Pere Marquette River and on the banks within sight of the river, instill a conservation ethic in tourists who use the upper reaches of the river, and promote the use of the lower reach for tourists who seek a more challenging paddle along the river.

# Appendix E – Data Exchange User Survey Data

Results from an optional user survey in the Michigan Data Exchange (for 2013). These results show the different ways that MiCorps data is being used.

159 entries.

Academia or Educational: 31
Business: 7
Federal Agency: 4
Individual: 36
Lake Association and CLMP volunteers: 44
Media: 2
Non-government Organizations and Conservation Districts (VSMP Primarily): 22
State Agency: 13

Highlights:

| **Affiliation** | **Organization** | **Comment / Data Use** |
|---|---|---|
| State Agency | Michigan DEQ | Looking for water quality of Lake Fenton, Genessee County |
| State Agency | Michigan DNR | Survey evaluation for correlation with fisheries survey data |
| State Agency | Michigan DEQ | Watershed planning |
| State Agency | Michigan Film Office | For a production inquiring about the depth of a certain lake |
| Academia | Grand Valley State University - AWRI | Background data for a Watershed Management Plan |
| Academia | University of Michigan | Looking up secchi depth data as a part of building fish habitat models for Higgins Lake |
| Academia | Michigan State University | To identify lakes in MI with EWM + other exotic plant species |
| Academia | Notre Dame Preparatory School | I am using this data to compare lakes in Oakland county for my International Baccalaureate Extended Essay topic |
| Academia | East Rockford Middle School | Showing our 6th grade students the data and teaching them about how our activities in our community can affect the watershed |
| Business | Solutions Consulting Services, LLC | Double check of water quality data to nuisance septic system along shoreline where recent MiCorps testing boat was sighted |
| Business | Public Sector Consultants | Help complete the Boardman River Watershed Prosperity Plan |
| Business | Tri-County Regional Planning Commission | Inclusion in a watershed management plan with consent from Mid-MEAC |
| Federal Agency | Illinois RiverWatch | I'm just comparing how various volunteer monitoring programs store data |

| | | |
|---|---|---|
| Individual | | To experiment with different interactive web map interfaces that might be used to make data more available to the general public |
| Individual | | Recreational boating |
| Individual | | Discussing river quality monitoring programs with local residents who are interested in evaluating the river's quality |
| Lake Association, Volunteer | Lake Orion Lake Association | Constructing comparative charts for annual meeting showing our lake in comparison to others participating nearby |
| Lake Association, Volunteer | Duck Lake Riparian Association | Monitoring the health of our lake and to feed our data into a general database for long-term observations |
| Lake Association, Volunteer | Lake Orion Lake Association | Providing data to provide our lake information as part of state wide monitoring process. Use it in membership newsletters and meetings. |
| Media | AnnArbor.com | Newspaper |
| NGO | Yellowdog Watershed Preserve | Present to Lake Independence Association |
| NGO | Grass River Natural Area | To see what the baseline data is from Three Lakes Associations |

# Appendix F – Stakeholder Feedback

## Summary of Feedback from the 2013 MiCorps Annual Conference (October 2013)

46 respondents.

**1) What is your overall rating of the conference?**
Excellent: 26
Good: 15
Fair: 2
Poor: 0

**2) How often do you attend this conference?**
Every year: 14
Often: 6
Rarely: 2
First Time: 24

**3) Will you be back next year?**
Yes / I hope to: 34
No: 0
Undecided: 12

**4) Did you have enough time to interact and network with other participants?**
Yes: 41
No: 4

Additional Comments:

- Some/More time in the field.
- More networking with board rep needed. Didn't like "geographic networking."
- Really like the time spent with others in our area of the state.
- Liked geographic networking.
- Only came for Tuesday.
- Busy schedule didn't allow me to attend the whole conference.
- I would plan to stay overnight next year to mingle.
- The Michigan regional networking session went well. Would've been nice to mix-up too though!
- There is never enough time!

**5) Were the conference facilities comfortable and appropriate?**
Yes: 46
No: 0

**6) Is the MacMullan Conference Center on Higgins Lake convenient for you?**
Yes: 41
No: 5

Additional Comments/Suggestions for Other Meeting Locations:

- 3.5 hour drive, however, no true "Middle" of MI, so RAM is fine.
- 4 hour drive, but I would do it again.
- Upper Peninsula?
- 3.5 hours, but OK.
- Beautiful facility.
- Kettunen Center (Tustin, near Cadillac) more "professional" staff to work with still central-ish, way better food, still on a lake, range of accommodations. RAM is pretty good though!
- Kettunen Center.

**7) For future conferences and training, do you prefer:**
Weekday: 32
Weekend: 2
Doesn't matter: 12

**8) How did you hear about the conference?**
Letter: 0
Email: 32 (from: Tom Hamilton – 1, GLC/Laura/MiCorps listserv – 17, Lake association – 1, Jo Latimore and Paul Sniadecki - 1, Colleagues – 1, Boss – 1, Barry County Drain Commissioner – 1, MSU Outreach – 1, NACD/GLIN – 1)
Postcard: 1
Other: 9 (website)

**9) Were the conference presentations clear and relevant to your needs?**
Yes: 41
No: 4

Additional Comments:

- Breakout session 2A was very redundant – not a lot of take away lessons.
- Much more than expected.
- Most were! Phragmites task force – very basic outreach, not the best example of a good program: very limited focus came across as no one is doing this but us? Rambling.
- Some presentations especially breakout session 1A tried to present too much information and not enough application.
- It was great to hear about the state AIS program and updates to MISIN. The eDNA topic was very interesting even though AIS are not a priority in our watershed management plan.
- More than I expected.
- Volunteer recruitment not relevant to lake associations.
- One of the best slates of presenters to date. Not exclusively monitoring, but all tied to it.
- Bob Sweet's was good for next steps.
- I felt there was some confusion the first day between lake owner outreach & stream/classic MiCorps outreach. There were both citizens and professionals in the audience, but the presentations didn't really address that. Last presentation was a bit too technical.

**10) Which topics were of greatest interest to you, or best responded to your needs?**

- Early Detection of Aquatic Invasive Species using eDNA Technology (15)
- Non-native Aquatic Plant Identification, Monitoring, and Management (Monday training) (9)
- Adding Monitoring and Educational Tools to the Volunteer Monitoring "Toolkit" (8)
- Overcoming Challenges to Coordinating Successful Volunteer Monitoring Programs: Volunteer Recruitment and Retention, and Program Evaluation (Monday training) (6)
- MiCorps 101 (5)
- Stream Monitoring Programs Presented by Past and Present MiCorps Grantees (5)
- Supporting Lake Monitoring and Management through Outreach (5)
- All topics – I like the variety of subjects and concerns. (4)
- Improving Water Quality of Lakes and Streams through the Use of Zoning Ordinances (evening presentation) (4)
- From Volunteer Monitoring to Nonpoint Source Program Resolution: Watershed Management Plans for Restoration and Protection (3)
- Geographic Networking (1)

**11) If you attended a Monday training session, why did you choose the one session over the other?**

- Wanted one I hadn't attended.
- Relevant to my monitoring parameter.
- I choose invasive species because I wanted to learn more about the topic.
- I would have liked to attend both.
- Others from my lake are more involved in the science. I need to focus on recruiting volunteers.
- Tough call, but needed more experience with plant ID, so chose that.
- Lake water quality was most important to me.

- Most interested in Plant identification. Volunteers not an issue right now.
- More relevance to issues I'm dealing with.
- I stood in for a member who was unable to attend the session.
- Chose "B" to get info on volunteers for CLMP program, but it didn't pertain.
- Two of us from same lake. One attended one, the other the other.
- More in-depth information.
- I did lakes because I do streams.
- Structured towards my degree.
- About volunteers more relevant to our program.
- It was more applicable to what my needs are.
- Relevance to my interests.
- I already have a strong background in AIS. But I felt like the session I went to was a bit confusing due to the audience mixture. Might've been helpful to break into "professionals" and "citizens." Overall, good presentation!
- My main interest or concern is aquatic invasive plants.
- Can never know enough about invasives!

**12) What topics would you like to see addressed in future MiCorps conferences or newsletters?**

- ***Current topics of concern:*** Distribution of AIS in Michigan, Starry Stonewort information, chloride pollution (road salt vs fertilizer sources), E. coli monitoring, safety of fracking (i.e., horizontal fracking: When will we know when a bad event will happen, like the Kalamazoo Enbridge oil (tar sand) spill?), water withdrawal.
- ***Training sessions:*** training volunteers; volunteer retention and recruitment (how to institute changes while keeping core volunteers); educating riparian property owners on good water quality practices (beneficial landscapes, fertilizer use, boating); data collection and sharing; achiving, searching and comparing historic data; interpretation of CLMP results, including reporting qualitative results to our lake community; bug identification and sampling strategies; what lakes can do with plant survey data – both exotic watch and all species mapping.
- Continue to emphasize interactive workshops. 3 hours are best used engaging participants rather than talking at them, thus "work" shop.
- Sharing tips and tricks for monitoring (e.g. using washing machine pans & knee pads, etc.). We could write them down on slips of paper and then build a list from them together. It would be very helpful for new groups to have a complete list of everything they might need for their events. This could really help prepare for a better experience for everyone and help keep volunteers coming back.
- More about new tools and technology, outreach/education program success stories, lake and stream research (academic).
- Engaging / using school groups for monitoring.
- More networking opportunities.
- Please continue with stream monitoring programs. Include input from successful teams on what worked, what did not and improvement techniques.
- Partnering with the organizations and resources in your area (seems to be what some are struggling with).
- Watershed management plans simplified (beyond the DEQ perspective) – maybe a panel of groups that have developed and are implementing plans and how MiCorps monitoring fits in.
- I'd love to see more U.P. involvement and topics that relate more to the U.P.
- Funding opportunities to lakes/streams.
- Example outreach materials developed by larger organization. Outreach events/education day – how did you organized these? Where did you start? Who did you bring to the table?
- Would love to have had the intro to MiCorps repeated – Missed it!

**13) General Comments:**

- You are all doing a great job. Keep on doing what you are doing.
- Overall great conference – thank you!!
- Would have expected the food to be a little less generic – not a green vegetable in sight. Don't expect gourmet, but with all the emphasis on locally sourced food, would think there is some way to offer fresher non-processed food.
- Keep up the great work!!

- I really appreciated the punctuality of the event. Every session started right on time.
- A good portion of some of the sessions was spent on grants and how to get them. As a CLMP volunteer, this was of limited interest.
- The “New MiCorps Members” award (agenda item) should have been titled “Awards for New Grant Recipients.”
- I was not impressed with the meat selection for the Monday evening meal. Real turkey would have been appreciated more.
- How about a “focus group /advisory council” session more generally about the Future directions of MiCorps? Probably best timed when a new contract is being developed. How could MiCorps best serve the organizations & individuals that are doing the monitoring?
- Insist on filtered tap water vs spring water for bottled water.
- The dinner menu wasn’t as good a before.
- Many stream programs not represented – would like to see more programs.
- I know people love their bottled water but not a bad idea to put a sign up & say take a cup instead! Excellent conference!
- Handouts from the presenters would be helpful but if their info is made available online that would work!
- Thanks for an excellent educational and networking opportunity.