



Program Summary Report
for
December 2009 – September 2014

Prepared by

The Great Lakes Commission
&
The Huron River Watershed Council

September 30, 2016

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 first awarded a contract in 2004 to assist the DEQ in establishing and administering the MiCorps program. Since then, the GLC has partnered with the Huron River Watershed Council to develop, implement, and administer the program, under the direction of the DEQ. 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.

The following is a summary of the program's administration from December 2009 through September 2014. Although the period of the support contract was ultimately extended an additional two years to allow the GLC and its partners to close out the remaining open grants awarded during the contract period and to complete several other discrete tasks, the bulk of the program administration from October 2014 onward occurred under a separate new contract between the DEQ and the GLC. Activities completed after September 2014 will be summarized through separate annual reports.

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

Great Lakes Commission (GLC):

- Laura Kaminski, MiCorps Program 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 Program Manager
- Jason Frenzel, MiCorps support staff

Department of Environmental Quality (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

*** Affiliation no longer current.**



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 (formerly a steering committee);
- 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 December 2009 – September 2014 timeframe.



Top left: CLMP volunteers practice their identification skills on aquatic plant specimens during the training for Aquatic Plant Identification and Mapping held in conjunction with the 2014 Michigan Inland Lakes Convention. Photo Credit: Angela DePalma-Dow

Top right: Volunteers proudly display some of the debris removed during the 10th annual “Healing the Bear” Bear River Cleanup in Petoskey, supported by a 2014 VRSCCP grant. Photo Credit: Tip of the Mitt Watershed Council

Bottom: Participants at the 2013 MiCorps Annual Conference network with other attendees from around 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 wadeable streams and rivers.
- MiCorps staff provide training and support to 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, and tips for volunteer retention.



Volunteers receive training from DNR staff to conduct road/stream crossing inventories within the Buck Creek watershed. Photo Credit: Timberland RC&D Area Council



The 2014 VSMP grant recipients practice their identification skills after collecting samples at the introductory training session held in July. Photo Credit: Laura Kaminski

- 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.
- Since 2007, MiCorps has set aside a portion of the annual VSMP funding as “seed money” for newly forming volunteer monitoring groups each year. 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.
- In 2014, MiCorps awarded a road/stream crossing inventory pilot grant to establish a volunteer stream monitoring program in which volunteers visit and assess the condition of road/stream crossings throughout a target watershed to protect and enhance local streams. MiCorps provided training, equipment, and support for volunteers, and their collected data will be entered into a publicly available database and used by various agencies as a screening tool. Based on the success of this pilot grant, MiCorps anticipates introducing this new funding area under future VSMP grant cycles.
- Since 2005, 39 full aquatic macroinvertebrate survey grants, 22 start-up grants, and one pilot road/stream crossing inventory grant have been awarded under the VSMP, totaling more than \$505,000 in grant funding to award recipients. A total of seven groups received grants under the VSMP during the 2014 grant cycle, including four full grants, three start-up grants, and one road/stream crossing inventory pilot grant (Appendix A).
- 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 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: MSU's Paige Filice works with a CLMP volunteer from Chippewa Lake (Mecosta Co.) to sort through a rake full of aquatic plants. Photo Credit: Angela DePalma-Dow

Right: Dr. Paul Steen, MiCorps staff, teaches CLMP volunteers to use a Dissolved Oxygen meter for monitoring at the Michigan Inland Lakes Convention. Photo Credit: Angela DePalma-Dow



- 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 2014, 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 2010-2014 results is located in Appendix C.
- All of the data are available in the CLMP annual reports found on the project webpage (<https://micorps.net/lake-monitoring/lake-data-reports/>) and are located in the web-based Data Exchange platform.

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.



Grayling Township, in partnership with Anglers of the Au Sable, hosted approximately 275 volunteers for their 20th annual cleanup, removing trash from roughly 75 miles of the main stream, south branch and north branch of the Au Sable River with support from a 2014 VRSCCP grant. Volunteer recruitment and participation is a critical part of the program. Photo Credit: Anglers of the Au Sable

- 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, 143 grants totaling greater than \$286,000 have been awarded to recipients around the state under the VRSCCP. During the 2014 grant cycle, 16 clean-up projects were awarded grants totaling \$32,797.00 in project funds (Appendix D).

MiCorps Annual Newsletter

- MiCorps staff write and distribute an annual newsletter: *The MiCorps Monitor*. The purpose of the newsletter is to highlight MiCorps successes, 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 2013-2014 program year was released in September 2014 (<https://micorps.net/resources/publications/newsletter/>).

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.
- In 2011, MiCorps staff assisted with the Deer Lake volunteers' development of two CLMP method instructional videos. The videos have been posted to the website <https://micorps.net/lake-monitoring/lake-training/>
- In 2014, program brochures were also developed (or updated) for the CLMP and VSMP programs.



Above: Fact sheets that describe the importance of each monitoring parameter are available via the program website.

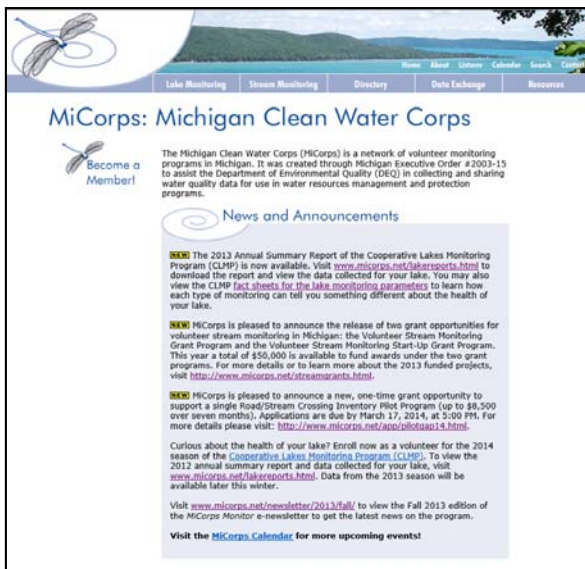


Left: The 2014 MiCorps Volunteer Stream Monitoring Program start-up and full grant recipients with their Certificates of Recognition at the 2014 MiCorps Annual Conference.

(From left: Paul Steen, Huron River Watershed Council (MiCorps staff); Michelle Beloskur, Ingham Conservation District; Colleen Forestier, Van Buren Conservation District; Kevin Haight, Two Rivers Coalition; Elan Lipschitz, Little Forks Conservancy; Paul Wiemerslage, Au Sable Institute of Environmental Studies; Bill Dimond, Michigan DEQ (MiCorps staff); Allyson Dale, Marquette County Conservation District; and Kristi Klomp, Timberland RC&D Area Council.) Photo Credit: Jason Frenzel

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.

MiCorps Data Exchange Network

Select from the search and display criteria below to view and download data from the MiCorps Data Exchange Network. If you have any questions about what these fields mean, please refer to the [field description](#) page. These data were collected by trained lake monitoring stewards following approved quality assurance procedures. Please contact MiCorps staff to see a copy of the Quality Assurance Project Plan (QAPP) for a specific organization. If you have any questions please email midata@glc.org or contact MiCorps staff at 734-971-9135.

Raw Data Search Criteria

1. Search by County, Watershed, Lake Name or All sites - Select County, Watershed, Lake Name, or All. Then, select the specific values you want displayed. Hold down the control key to select more than one value. There are no lake sites for counties, watersheds, or lake names which are not listed.

<input type="checkbox"/> County - View county reference map.	Alcona Alger Allegan Alpena Antrim
<input type="checkbox"/> Watershed / Hydrologic Unit Code (HUC) - View Map Lower Peninsula or Upper Peninsula .	Au Gres-Rifle(04080101) Au Sable(04070007) Bad-Montreal(04010302) Betsie-Platte(04060104) Betsy-Chocoma(04020201)
<input type="checkbox"/> Lake Name - Use official lake name found on USGS topographic maps; refer to www.topozone.com .	Ada Impoundment (Thornapple River) Algonquin Allen Angela Angelus

- 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 2013-2014 program year are provided in Appendix E.
- The project team maintains a separate website for the VRSCCP (<http://glc.org/projects/water-quality/streamclean/>).

MiCorps Annual Volunteer Monitoring Conference

- Every October from 2005 through 2014, 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.



Left: Amos Ziegler, Michigan State University, discusses the Midwest Invasive Species Information Network at the 2013 MiCorps Annual Conference. Photo Credit: Chauncey Moran



Right: 2013 MiCorps Annual Conference attendees learn about overcoming challenges to coordinating successful volunteer monitoring programs during a pre-conference training session led by Jason Frenzel, Huron River Watershed Council. 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.
- Since the program's inception, the various keynote speakers at the annual 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
 - 2014: Julie Vastine, Alliance for Aquatic Resource Monitoring (ALLARM) at Dickinson College
- 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 have included presentations from 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 comprised of VSMP and CLMP program leaders and volunteers, many of whom are water or science professionals.
- At the October 2012 MiCorps conference, the advisory panel session met with MiCorps staff and the program's DEQ representative. MiCorps staff presented a short list of proposed new monitoring parameters for the program and asked for feedback as to whether these parameters would work with the MiCorps program. The advisory group was comprised of 36 people, and was a mix of lake volunteers, stream volunteers, and leaders of stream groups (e.g. watershed council and conservation district employees).
- 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 provided an update on the proposed new lake monitoring parameter and asked for feedback prior to the development of training materials and procedures.
- Additionally, MiCorps conference attendees are asked to fill out evaluations of the annual conference, suggest possible conference topics for future years, and give their opinions on how MiCorps can be improved. A summary of feedback received for the program is 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: Bill Dimond, Michigan DEQ program representative, discusses the importance of volunteer feedback in ensuring the future success of the MiCorps program. Photo Credit: Chauncey Moran



The MiCorps Horizon - Future Directions

- As the 2014 program year came to an end, the MiCorps staff continued to work on developing and implementing a new monitoring parameter the CLMP, the lakeshore habitat assessment, with corresponding educational documents, training, and data exchange support. This parameter will be piloted during the 2015 monitoring season. The new road/stream crossing inventory parameter under the VSMP was piloted during the 2014 monitoring season. Staff anticipates incorporating this new funding area under the 2015 VSMP grant cycle.
- In the 2013-2014 program year, the MiCorps staff began work on the expansion 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.
- With the start of a new three-year MiCorps support contract to the Great Lakes Commission in October 2014, the MiCorps staff looks forward to many new enhancements to the program to be implemented over the coming years. Some of the highlights include the introduction of a social media presence for the program, new online training resources and opportunities, additional enhancements to the MDE and program website, and a new VSMP monitoring parameter.

Summary of Program Funding

From 2004 to 2014, DEQ has awarded funding to the GLC in the amount of \$2,347,683 to develop and implement MiCorps. By the end of September 2014, over \$607,000 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 grant recipients and other volunteers in sampling techniques to implement quality data collection programs for both lakes and streams. By the time the 2014 and 2015 projects are completed, it is expected that an additional \$112,000 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 ten years have leveraged an additional \$892,660 in resources to support the volunteer water quality activities in Michigan. Enrollment fees - also considered local match - in the amount of \$267,978, have also been contributed by CLMP participants during the last ten 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 during the contract period from December 2009 through September 2014 for each major program element, as outlined in this report.

MiCorps Support Contract Expenditures for the Period December 2009 – September 2014 ¹

Program Task	Estimated Cost
Volunteer Stream Monitoring Program (VSMP):	\$330,973
Cooperative Lakes Monitoring Program (CLMP):	\$248,035
Volunteer River, Stream, and Creek Cleanup Program (VRSCCP):	\$140,407
MiCorps Program Marketing and Promotion:	\$30,171
MiCorps Annual Newsletter:	\$32,604
Website and Data Exchange Platform:	\$84,767
MiCorps Annual Volunteer Monitoring Conference:	\$90,219
MiCorps Advisory Panel:	\$8,326
MiCorps Future Directions:	\$41,472
Total DEQ Program Cost:	\$1,006,974
Estimated Local Match Committed:	\$677,113 ²

¹ Excludes program funding expended during the two-year contract extension period from October 2014 – September 2016.

² Excludes match contributed by the GLC, HRWC, and MLSA.

Appendix A – VSMP Grants Awarded

VSMP Grants Awarded in 2014

Grant #: VSM2014-01 (Full)

Grantee: Marquette County Conservation District

Title: Upper Escanaba River Watershed Volunteer Stream Monitoring Project

Watershed: Escanaba River

Funding Amount: \$11,220.45

Project Duration: 2014-2016

Final Report: Available on MiCorps website.

The Marquette County Conservation District sought to generate water quality data and to foster stewardship in local citizens and partners through macroinvertebrate monitoring at eight sites along the Escanaba River, a coldwater trout stream that suffers from sediment deposition from degraded road-stream crossings.

Grant #: VSM2014-02 (Full)

Grantee: Jackson County Conservation District

Title: Jackson County Conservation District's Adopt-A-Stream Program

Watershed: Upper Grand River

Funding Amount: \$7,950

Project Duration: 2014-2016

Final Report: Available on MiCorps website.

The Jackson County Conservation District sought to expand their Adopt-a-Stream program to monitor macroinvertebrate populations at ten new sites within the Upper Grand River watershed and to recruit new volunteers to the program. The District used volunteer engagement to educate the public on water quality issues within the Jackson Urbanized Area and the Upper Grand River watershed.

Grant #: VSM2014-03 (Full)

Grantee: Au Sable Institute of Environmental Studies

Title: Upper Manistee River Watershed Volunteer Stream Monitoring Project

Watershed: Upper Manistee River

Funding Amount: \$11,651

Project Duration: 2014-2016

Final Report: Available on MiCorps website.

The Au Sable Institute of Environmental Studies sought to monitor macroinvertebrate populations and stream conditions at nine sites in the Upper Manistee River Watershed, while educating residents on water quality and protection. Data collected was intended to be used to identify degraded areas within the watershed where best management practices (BMPs) can be implemented.

Grant #: VSM2014-04 (Full)

Grantee: Timberland Resource Conservation & Development Area Council

Title: Coldwater River Watershed Monitoring

Watershed: Coldwater River

Funding Amount: \$11,623

Project Duration: 2014-2016 (Project closed out before completion)

Final Report: Available on MiCorps website.

The Timberland RC&D Area Council sought to monitor macroinvertebrate and habitat conditions at seven sites in the Coldwater River and its tributaries, including Tyler and Duck Creek and Messer Brook. The long-term dataset was intended to be used to benchmark changing conditions in the streams and to develop recommendations for long-term protection and enhancement of the river and its tributaries.

Grant #: VSM2014-05 (Start-up)
Grantee: Ingham Conservation District
Title: Ingham Conservation Stream Monitoring Program
Watersheds: Upper and Middle Grand River, Red Cedar River
Funding Amount: \$2,354
Project Duration: 2014-2015

This startup grant was intended to establish a macroinvertebrate monitoring program in the Upper and Middle Grand River and Red Cedar River watersheds within Ingham County.

Grant #: VSM2014-06 (Start-up)
Grantee: Van Buren Conservation District
Title: Paw Paw River Watershed Monitoring Project
Watershed: Paw Paw River
Funding Amount: \$2,923.25
Project Duration: 2014-2015

This startup grant was intended to establish a macroinvertebrate monitoring program along the middle section of the Paw Paw River watershed, which is a tributary to the St. Joseph River.

Grant #: VSM2014-07 (Start-up)
Grantee: The Little Forks Conservancy
Title: Cedar River Watershed Monitoring Program
Watershed: Cedar River
Funding Amount: \$2,276
Project Duration: 2014-2015

This startup grant was intended to establish a macroinvertebrate monitoring program in the upper section of the Cedar River, a blue ribbon trout stream within the Saginaw Bay watershed.

Grant #: 2014-08 (Road/Stream Crossing Inventory Pilot)
Grantee: Timberland Resource Conservation & Development Area Council
Title: Buck Creek Road/Stream Crossing Inventory
Watershed: Buck Creek
Funding Amount: \$8,500
Project Duration: 2014-2015 (Project closed out before completion)

Buck Creek, a subwatershed of the Lower Grand River, flows through Gaines Charter Township, Byron Township, and the cities of Kentwood, Wyoming, and Grandville, with an estimated 210 road/stream crossings. The data collected from this project was intended help to determine the current and potential impacts that road/stream crossings have on waters within the Buck Creek watershed, as well as prioritize placement of Best Management Practices (BMPs) to mitigate water quality, habitat, and contamination concerns for the watershed.

VSMP Grants Awarded in 2013

Grant #: VSM2013-01 (Full)
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
Final Report: Available on MiCorps website.

The Muskegon Conservation District, in partnership with the White River Watershed Partnership, sought 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.

Grant #: VSM2013-02 (Full)

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

Final Report: Available on MiCorps website.

The Grass River Natural Area sought 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.

Grant #: VSM2013-03 (Full)

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

Final Report: Available on MiCorps website.

The Alger Conservation District sought 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.

Grant #: VSM2013-04 (Full)

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

Final Report: Available on MiCorps website.

The Calhoun Conservation District sought 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.

Grant #: VSM2013-05 (Start-up)

Grantee: The Au Sable Institute

Title: Upper Manistee River Volunteer Stream Monitoring Program

Watershed(s): Manistee River

Funding Amount: \$2,965

Project Duration: 2013-2014

This startup grant was 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 fracturing, 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.

VSMP Grants Awarded in 2012

Grant #: VSM2012-01 (Full)

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

Final Report: Available on MiCorps website.

The Benzie Conservation District sought 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 monitored 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.

Grant #: VSM2012-02 (Full)

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

Final Report: Available on MiCorps website.

The Macatawa Area Coordinating Council sought to establish a long-term volunteer stream monitoring program to assess water quality trends over time in the Macatawa Watershed. The Council continued 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.

Grant #: VSM2012-03 (Full)

Grantee: Kalamazoo Nature Center

Title: Macroinvertebrate Monitoring in the Kalamazoo River Watershed

Watershed(s): Kalamazoo River

Funding Amount: \$11,997

Project Duration: 2012-2014

Final Report: Available on MiCorps website.

The primary goals of the project were to establish a volunteer water quality monitoring program that will connect students and citizens of Kalamazoo with the Kalamazoo River Watershed. This project also helped 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 monitored 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.

Grant #: VSM2012-04 (Full)

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

Final Report: Available on MiCorps website.

The Yellow Dog Watershed Preserve utilized this project to initiate a local volunteer monitoring project to 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.

Grant #: VSM2012-05 (Start-up)

Grantee: White River Watershed Partnership

Title: Upper White River Watershed

Watershed(s): Cobmossa Creek

Funding Amount: \$1,600

Project Duration: 2012-2013

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.

Grant #: VSM2012-06 (Start-up)

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: 2012-2013

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.

Grant #: VSM2012-07 (Start-up)

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.

Grant #: VSM2012-08 (Start-up)

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.

VSMP Grants Awarded in 2011

Grant #: VSM2011-01 (Full)
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.

Grant #: VSM2011-02 (Full)
Grantee: Tip of the Mitt Watershed Council
Title: Expanding Volunteer Monitoring to the Maple and Sturgeon Rivers
Watersheds: Maple and Sturgeon River Watersheds
Funding Amount: \$9,351.66
Project Duration: 2011-2013
Final Report: Available on MiCorps website.

The overall goal of this project was to protect the water quality and aquatic ecosystem integrity of the Maple and Sturgeon Rivers through biological monitoring of aquatic macroinvertebrate populations. The Tip of the Mitt Watershed Council Volunteer Stream Monitoring program will be expanded to include four additional sites on each of these rivers, which will result in the collection of baseline water quality data to assess impacts from known stressors, as well as continued monitoring to detect additional problems that emerge in these river systems. Monitoring will include macroinvertebrate collection identified to the family level and habitat assessment. The Miller Van Winkle chapter of Trout Unlimited has committed to provide volunteer support for monitoring these rivers.

Grant #: VSM2011-03 (Full)
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.

Grant #: VSM2011-04 (Full)
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.

Grant #: VSM2011-05 (Start-up)
Grantee: Macatawa Area Coordinating Council
Title: Developing a Volunteer Stream Monitoring Program in the Macatawa Watershed
Watershed: Macatawa Watershed
Funding Amount: \$2,980.48
Project Duration: 2011-2012

This startup grant was intended to develop a long term volunteer stream monitoring program to assess water quality based on the health of stream macroinvertebrates and stream habitat throughout the Macatawa Watershed.

Grant #: VSM2011-06 (Start-up)
Grantee: Cass River Greenway Committee
Title: Cass River Water Study
Watershed: Cass River
Funding Amount: \$1,033
Project Duration: 2011-2012

Funding for this startup project was intended to help improve the water quality of the Cass River through a long term study of the water quality through macroinvertebrate monitoring by volunteers.

Grant #: VSM2011-07 (Start-up)
Grantee: Lake Leelanau Lake Association
Title: Volunteer Stream Monitoring Program - Start-Up
Watershed: Lake Leelanau area streams
Funding Amount: \$2,500
Project Duration: 2011-2012

Startup funding was intended to be utilized to increase volunteer participation, educate volunteers on identification and the ecological significance of macroinvertebrates in determining stream quality, and measure the effectiveness of watershed improvement projects conducted under the group's watershed protection plan.

Grant #: VSM2011-08 (Start-up)
Grantee: Kalamazoo Nature Center
Title: Planning Benthic Macroinvertebrate Monitoring in the Kalamazoo River Watershed
Watershed: Kalamazoo River Basin
Funding Amount: \$3,000
Project Duration: 2011-2012

This startup project was intended to help plan for a stream monitoring program that will train volunteers to sample and

identify macroinvertebrates, make their data publicly available, and provide other information that is useful for citizens and scientists alike.

Grant #: VSM2011-09 (Start-up)

Grantee: Mason-Lake Conservation District

Title: Upper Hamlin Lake Watershed Stream Monitoring Project

Watershed: Hamlin Lake and the Big Sable River Basin streams

Funding Amount: \$2,988

Project Duration: 2011-2012

Funding of this project helped to support the development of a monitoring program for several creeks and small tributaries which flow into Hamlin Lake and the Big Sable River to document where there are known water quality problems and pinpoint areas with good water quality.

VSMP Grants Awarded in 2010

Grant #: VSM2010-01 (Full)

Grantee: Michigan Trout Unlimited

Project Title: Monitoring on the Kalamazoo, Rogue, AuSable, and Pilgrim River Watersheds

Watersheds: Kalamazoo, Rogue, AuSable, and Pilgrim River Watersheds

Funding Amount: \$17,562

Project Duration: 2010-2012

Final Report: Available on MiCorps website.

The overall goal of this project was to monitor the health of coldwater streams in Michigan by establishing baseline data and then monitoring the streams for changes. Monitoring was to involve 14 sites in the Kalamazoo, Rogue, AuSable, and Pilgrim River watersheds and will include habitat and macroinvertebrate assessments. Both negative and positive impacts will be portrayed in the data, reflecting effects of agriculture, CAFOs, development, stream improvement projects, and the implementation of best management practices. In addition, MITU has developed a coldwater database which will include MiCorps data and data from other MITU monitoring efforts.

Grant #: VSM2010-02 (Full)

Grantee: Branch County Conservation District

Title: Coldwater River Stream Monitoring Program

Watershed: Coldwater River

Funding Amount: \$15,403.81

Project Duration: 2010-2012

Final Report: Available on MiCorps website.

Ten sites were to be 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.

Grant #: VSM2010-03 (Full)

Grantee: Flint River Watershed Coalition

Title: Flint River Watershed Coalition 2010 Retraining, Recruitment, Retention, and Assessment Program

Watershed: Flint River (Michigan)

Funding Amount: \$10,111.55

Project Duration: 2010-2012

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.

Grant #: VSM2010-04 (Start-up)

Grantee: Cannon Township

Project Title: Bear Creek Stream Study Start-Up

Watershed: Bear Creek

Funding Amount: \$1,054.25

Project Duration: 2010-2011

This startup project was intended to fund the efforts of Cannon Township in setting up a monitoring program for Bear Creek in Kent County. Bear Creek is a small watershed (29 square miles) but has seen a large increase of population in the past 20 years. Increased population has introduced more development and higher volumes of runoff into Bear Creek and its tributaries. A stream monitoring group was started 6 months ago and has been taking basic stream measurements (pH, temperature, water clarity). The group is interested in expanding their knowledge and monitoring efforts with macroinvertebrate monitoring to better understand the health of the system so that the Township might use this information to make better planning decisions and prioritize stream projects.

Grant #: VSM2010-05 (Start-up)

Grantee: Midland Conservation District

Project Title: Midland County Adopt-a-Stream

Watershed: Sturgeon Creek

Funding Amount: \$866.37

Project Duration: 2010-2011

This startup grant helped to fund the formulation of monitoring plans for the Sturgeon Creek in Midland County. The Sturgeon is a tributary of the Tittabawasee River. The Sturgeon Creek watershed has not been highly affected by agricultural, unlike much of mid-Michigan, and possesses a high amount of state land. Midland County is largely industrialized with a large chemical industry presence. Thus, the grantee believes that educating the residents is important for long-term stream health. The primary goals of the project are to establish baseline data that can be used by environmental governing bodies, and introducing the general public to watershed quality. Individuals will learn about their local watershed quality, how it compares with other watersheds, and learn about how civilization impacts watershed quality.

Grant #: VSM2010-06 (Start-up)

Grantee: Gogebic Conservation District

Project Title: Presque Isle Watershed Volunteer Stream Monitoring Start-Up Program - Black River

Watershed: Black River

Funding Amount: \$2,000

Project Duration: 2010-2011

This startup grant helped to fund the formulation of monitoring plans for the Black River, a subwatershed of the Presque Isle watershed on the far western side of the Upper Peninsula. The Black River is a high quality trout stream and very little data has been collected on this stream. However, the healthy connectivity of the tributaries to the Black River is extremely valuable and important, and data collected through this monitoring program would be paramount to future aquatic habitat restoration projects. The Gogebic Conservation District plans on assembling a steering committee, assessing key conservation needs, building a monitoring strategy, and working closely with interested citizens.

Grant #: VSM2010-07 (Start-up)

Grantee: Muskegon River Watershed Assembly

Project Title: Hersey River Watershed Monitoring Program

Watershed: Hersey River

Funding Amount: \$3,000

Project Duration: 2010-2011

This startup grant was intended to fund the formulation of monitoring plans for the Hersey Watershed, a subwatershed of the Muskegon River. The Hersey River is a high quality trout stream and is one of the main urban centers in the Muskegon River watershed, flowing through Reed City. It provides scenic, recreational, and wildlife/fisheries benefits to the local community, but has also been historically impacted by local industry. A sustained water quality monitoring effort will provide valuable data that can be used by watershed managers to address potential issues within this critical watershed, identify changes in stream ecology, and promote stewardship of this important natural resource.

Appendix B – CLMP Participation

2014 CLMP Season: 218 Lakes Registered

Lake Name	County
Allen Lk.	Gogebic
Allen Lk.	Lenawee
Angelus	Oakland
Ann	Benzie
Arbutus	Grand Traverse
Arnold	Clare
Avery	Montmorency
Barlow	Barry
Barton	Kalamazoo
Baseline	Washtenaw
Bass (Big)	Lake
Bear	Kalkaska
Bear	Manistee
Bear (Big)	Otsego
Bear (Great)	Van Buren
Beatons	Geogebic
Beaver	Alpena
Bellaire	Antrim
Big Blue	Kalkaska
Big Lake	Osceola
Bills	Newaygo
Birch	Cass
Birch (Temple)	Cass
Blue (Chancellor)	Mason
Blue (north)	Kalkaska
Blue (Tri-Lakes)	Mecosta
Bradford (Big)	Otsego/Crawford
Bradford (Little)	Otsego
Brevoort	Mackinac
Brooks	Leelanau
Browns	Jackson
Bruin	Washtenaw
Byram	Genesee
Cedar	Alcona/Iosco
Center	Osceola
Chain	Iosco
Chemung	Livingston
Chippewa	Mecosta

Lake Name	County
Christiana (PJC)	Cass
Clam (Three Lk. Asn.)	Antrim
Clark	Jackson
Clear	Ogemaw
Clear	Jackson
Clifford	Montcalm
Cobb	Barry
Cora	Van Buren
Corey	St. Joseph
Cranberry	Oakland
Crockery	Ottawa
Crooked (Big)	Kent
Crooked (East & West)	Livingston
Crooked	Kalamazoo
Crooked	Kalkaska
Crooked (Upper)	Barry
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	Grand Traverse
Duck (North)	Gogebic
Duck (South)	Gogebic
Duncan	Barry
Eagle	Cass
Eagle	Allegan
Eagle	Kalkaska
Eagle	Kalamazoo

Lake Name	County
Earl	Livingston
Emerald	Kent
Emerald	Newaygo
Evans	Lenawee
Farwell	Jackson
Fawn	Hillsdale
Fenton	Genesee
Fish	Van Buren
Fisher's (Big)	Leelanau
Fisher's	St. Joseph
Freska	Kent
George	Clare
Glen	Leelanau
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
Herring (Upper)	Benzie
Hicks	Osceola
Higgins (North Basin)	Roscommon
Higgins (South Basin)	Roscommon
High	Kent
Horsehead	Mecosta
Houghton (Denton)	Roscommon
Hubbard	Alcona
Hunter	Gladwin
Hutchins	Allegan
Independence	Marquette
Indian	Kalamazoo
Indian	Kalkaska
Indian	Osceola

Lake Name	County
Isabella	Isabella
Island	Grand Traverse
Island (Little)	Iosco
Juno	Cass
Kelsey	Cass
Kelsey (Big)	Cass
Klinger	St. Joseph
Lakeville	Oakland
Lancer	Gladwin
Lancelot	Gladwin
Leelanau (North)	Leelanau
Leelanau (South)	Leelanau
Little Long	Barry/Kalamazoo
Little Long	Osceola
Long	Iosco
Long	Gogebic
Long	Oakland
Louise	Dickinson
Maceday/Lotus	Oakland
Magician	Cass
Manitou	Shiawassee
Margrethe	Crawford
Marl (Silver/Marl)	Genesee
Mary	Dickinson
Mary	Iron
Maston	Kent
Mecosta (Tri-Lakes Morton Twp)	Mecosta
Middle Straits	Oakland
Moon	Gogebic
Moon	Dickinson
Murray	Kent
Muskellunge	Kent
Nepessing	Lapeer
North	Washtenaw
Ore	Livingston
Orion	Oakland

Lake Name	County
Osterhout	Allegan
Oxbow	Oakland
Painter (PJC Lk. Asn)	Cass
Papoose	Kalkaska
Park	Clinton
Payne	Barry
Paw Paw (Little)	Berrien
Pentwater	Oceana
Perch	Iron
Perrin	St. Joseph
Pickerel	Kalkaska
Pine Island (Big)	Kent
Platt (Big)	Benzie
Pleasant	Wexford
Pleasant	Washtenaw
Portage	Liv/Wash
Portage (Little)	Liv/Wash
Posey	Lenawee
Pretty	Mecosta
Puterbaugh	Cass
Rainbow	Kalkaska
Randall (N. Chain of Lks.)	Branch
Rifle	Ogemaw
Round (Tri-Lks. Asn.)	Mecosta
Round (Lks. Pres.)	Lenawee
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
South Bar	Leelanau

Lake Name	County
Spider	Grand Traverse
Squaw	Kalkaska
Star (Big)	Lake
Starvation	Kalkaska
Stony	Oceana
Stoneledge	Wexford
Straits (Upper)	Oakland
Strawberry	Livingston
Sylvan	Newaygo
Sweezey	Jackson
Tahoe (formerly Schmidt Lk.)	Oceana
Tamarack	Livingston
Taylor	Oakland
Thornapple Riv. Cas.	Kent
Thread	Genesee
Torch (North) (Three Lk. Asn.)	Antrim
Torch (South) (Three Lk. Asn.)	Antrim
Triangle	Livingston
East Twin	Montmorency
West Twin	Montmorency
Twin (Big)	Kalkaska
Twin (Little)	Kalkaska
Van Etten	Iosco
Vineyard	Jackson
Viking	Otsego
Voorheis	Oakland
Wall	Barry
White	Oakland
White (West)	Muskegon
White (East)	Muskegon
Whitewood	Washtenaw
Wildwood	Cheboygan
Windover	Clare
Wolf	Lake
Woods	Kalamazoo

2013 CLMP Season: 218 Lakes Registered

Lake Name	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 Name	County
Clifford	Montcalm
Cobb	Barry
Coldwater	Branch
Cora	Van Buren
Corey	St. Joseph
Cranberry	Oakland
Crockery	Ottawa
Crooked (Big)	Kent
Crooked (East &	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 Name	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)	Roscommon
Higgins (South)	Roscommon
High	Kent
Horsehead	Mecosta
Houghton	Roscommon
Houghton (Cut)	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 Name	County
Long	Oakland
Louise	Dickinson
Magician	Cass
Margrethe	Crawford
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 Name	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	Genesee
Silver (Green	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
Sweezy	Jackson
Tahoe	Oceana
Tamarack	Livingston
Taylor	Oakland
Thornapple Riv.	Kent
Torch (North)	Antrim

Lake Name	County
Torch (South)	Antrim
Triangle	Livingston
East Twin	Montmorency
West Twin	Montmorency
Twin - North	Cass
Twin - South	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

2012 CLMP Season: 223 Lakes Registered

Lake Name	County
Allen	Gogebic
Angelus	Oakland
Ann	Benzie
Antoine	Dickinson
Arbutus	Grand Traverse
Arnold	Clare
Barlow	Barry
Barton	Kalamazoo
Bass	Kalkaska
Beaton	Gogebic
Bear	Kalkaska
Bear	Manistee
Beaver	Alpena
Bellaire	Antrim
Big Lake	Osceola
Big Pine Island	Kent
Big Twin	Kalkaska
Bills	Newaygo
Bills (Waits)	Newaygo
Birch (Fallon)	Cass
Birch (Temple)	Cass
Blue	Mason
Blue	Kalkaska
Blue	Mecosta
Blue Herron	Wayne
Bostwick	Kent
Bradford (Big)	Otsego
Bradford (Little)	Otsego
Brevoort	Mackinaw
Brooks	Leelanau
Brown	Jackson
Bruin	Washtenaw
Byram	Genesee
Canadian	Mecosta
Canadian	Mecosta
Cedar	Alcona/Iosco
Cedar	Leelanau
Cedar	Van Buren
Center	Osceola
Chabenau	Marquette
Chain	Iosco

Lake Name	County
Clark	Jackson
Clear	Jackson
Clear	Ogemaw
Chemung	Livingston
Christiana	Cass
Clam	Antrim
Clifford	Montcalm
Cobb	Barry
Coldwater	Branch
Cora	Van Buren
Corey	St. Joseph
Cranberry	Oakland
Crockery	Ottawa
Crooked	Kalamazoo
Crooked	Kalkaska
Crooked (Big)	Kent
Crooked	Barry
Crystal	Benzie
Crystal	Montcalm
Crystal	Oceana
Cub	Kalkaska
Deer	Alger
Deer	Oakland
Derby	Montcalm
Devils	Lenawee
Diamond	Cass
Dinner	Gogebic
Duck	Calhoun
Duck	Gogebic
Duck	Muskegon
Duncan	Barry
Eagle	Allegan
Eagle	Cass
Eagle	Kalkaska
Earl	Livingston
Emerald	Kent
Emerald	Newaygo
Evans	Lenawee
Fair	Barry
Farwell	Jackson
Fenton	Genesee

Lake Name	County
Fish	Van Buren
Fisher (Big)	Leelanau
Fisher's	St. Joseph
Fremont	Newaygo
Freska	Kent
Gallagher	Livingston
George	Clare
Glen (Big)	Leelanau
Glen (Little)	Leelanau
Gratiot Lk. Con.	Keweenaw
Gravel	Van Buren
Gull	Kal/Barry
Hamburg	Livingston
Hamlin - Lower	Mason
Hamlin - Upper	Mason
Hannah Webb	Iron
Harper	Lake
Hawk	Oakland
Hicks	Osceola
High	Kent
Higgins (South)	Roscommon
Higgins (North)	Roscommon
Horsehead	Mecosta
Houghton (site)	Roscommon
Houghton (site)	Roscommon
Hubbard	Alcona
Hunter	Gladwin
Hutchins	Allegan
Independence	Marquette
Indian	Kalkaska
Indian	Kalamazoo
Indian	Osceola
Island	Grand Traverse
James	Roscommon
Juno	Cass
Kelsey	Cass
Kelsey (Big)	Cass
Kimball	Newaygo
Klinger	St. Joseph
Lakeville	Oakland
Lancer	Gladwin

Lake Name	County
Lancelot	Gladwin
Leelanau	Leelanau
Leelanau (South)	Leelanau
Little Island	Iosco
Little Long	Kalam/Barry
Little Twin	Kalkaska
Long	Gogebic
Long	Iosco
Long	Oakland
Maceday/Lotus	Oakland
Magician	Cass
Marl	Genesee
Mary	Iron
Mary	Dickinson
Margrethe	Crawford
Maston	Kent
Maynard	Alcona
Mecosta	Mecosta
Middle Straits	Oakland
Moon	Gogebic
Murray	Kent
Muskellunge	Kent
Muskellunge	Montcalm
Muskoday	Wayne
Nepessing	Lapeer
North Blue	Kalkaska
North Buckhorn	Oakland
Ore	Livingston
Orion	Oakland
Osterhout	Allegan
Oxbow	Oakland
Painter	Cass
Papoose	Kalkaska
Park	Clinton
Parke	Oakland
Paw Paw (Little)	Berrien

Lake Name	County
Payne	Barry
Pentwater	Oceana
Perch	Iron
Perrin	St. Joseph
Pickerel	Kalkaska
Pickerel	Newaygo
Platte (Big)	Benzie
Pleasant	St. Joseph
Pleasant	Washtenaw
Pleasant	Wexford
Portage	Livingston/Wash
Posey	Lenawee
Pretty	Mecosta
Puterbaugh	Cass
Randall	Branch
Rifle	Ogemaw
Robinson	Cass
Round	Lenawee
Round	Jackson
Round	Livingston
Round	Mecosta
Sand	Lenawee
Sanford	Benzie
Sanford	Midland
School Section	Mecosta
Sherman	Kalamazoo
Shinanguag	Genesee
Shingle	Clare
Silver	Genesee
Silver	Van Buren
Silver (Green)	Livingston
Silver	Oceana
South Bar	Leelanau
Spider	Grand Traverse
Squaw	Kalkaska
Starvation	Kalkaska

Lake Name	County
Stoneledge	Wexford
Stony	Oceana
Strawberry	Livingston
Sturgeon	St. Joseph
Sweezy	Jackson
Sylvan	Newaygo
Tahoe	Oceana
Taylor	Oakland
Torch (South)	Antrim
Cascade Imp.	Kent
Triangle	Livingston
Twin (Big-	Cass
Twin (Little-	Cass
Twin (East)	Montmorency
Twin (West)	Montmorency
Upper Herring	Benzie
Upper Long	Oakland
Van Etten	Iosco
Vaughn	Alcona
Viking	Otsego
Vineyard	Jackson
Webinguaw	Newaygo
White	Oakland
Wildwood	Cheboygan
Windover	Clare
Woods	Kalamazoo
Zukey	Livingston
Templene	St. Joseph

2011 CLMP Season: 225 Lakes Registered

Lake Name	County
Maynard	Alcona
Vaughn	Alcona
Hubbard	Alcona
Cedar	Alcona/Iosco
Deer	Alger
Eagle	Allegan
Hutchins	Allegan
Osterhout	Allegan
Scott (Upper)	Allegan
Wetmore	Allegan
Beaver	Alpena
Bellaire	Antrim
Clam	Antrim
Torch (North)	Antrim
Torch (South)	Antrim
Barlow	Barry
Cobb	Barry
Crooked	Barry
Duncan	Barry
Fair	Barry
Payne	Barry
Long (Little)	Barry/Kalamazoo
Ann	Benzie
Crystal	Benzie
Platte (Big)	Benzie
Sanford	Benzie
Paw Paw	Berrien
Coldwater	Branch
Randall	Branch
Duck	Calhoun
Birch (Fallon)	Cass
Christiana	Cass
Diamond	Cass
Eagle	Cass
Juno	Cass
Magician	Cass
Painter	Cass
Puterbaugh	Cass
Shavehead	Cass
Twin (Big-	Cass
Twin (Little-	Cass
Wildwood	Cheboygan
Arnold	Clare

Lake Name	County
George	Clare
Shingle	Clare
Windover	Clare
Margrethe	Crawford
Antoine	Dickinson
Louise	Dickinson
Byram	Genesee
Fenton	Genesee
Marl	Genesee
Shinangaug	Genesee
Silver	Genesee
Beatons	Geogebic
Hunter	Gladwin
Lancelot	Gladwin
Lancer	Gladwin
Bass	Gogebic
Dinner	Gogebic
Long	Gogebic
Moon	Gogebic
Arbutus	Grand Traverse
Island	Grand Traverse
Spider	Grand Traverse
Diane	Hillsdale
Lansing	Ingham
Chain	Iosco
Island (Little)	Iosco
Long	Iosco
Van Etten	Iosco
Mary	Iron
Perch	Iron
Gorr	Isabella
Brown	Jackson
Clark	Jackson
Clear	Jackson
Farwell	Jackson
Pleasant	Jackson
Portage (Big)	Jackson
Sweezy	Jackson
Vineyard	Jackson
Barton	Kalamazoo
Crooked	Kalamazoo
Gull	Kalamazoo
Indian	Kalamazoo

Lake Name	County
Sherman	Kalamazoo
Woods	Kalamazoo
Bear	Kalkaska
Blue	Kalkaska
Blue (Big)	Kalkaska
Blue (North)	Kalkaska
Crooked	Kalkaska
Cub	Kalkaska
Eagle	Kalkaska
Indian	Kalkaska
Papoose	Kalkaska
Pickarel	Kalkaska
Squaw	Kalkaska
Starvation	Kalkaska
Twin (Big)	Kalkaska
Twin (Little)	Kalkaska
Bostwick	Kent
Crooked (Big)	Kent
Emerald	Kent
Freska	Kent
High	Kent
Maston	Kent
Murry	Kent
Muskellunge	Kent
Pine Island	Kent
Gratiot	Keweenaw
Harper	Lake
Metamora	Lapeer
Nepessing	Lapeer
Brooks	Leelanau
Cedar	Leelanau
Fisher (Big)	Leelanau
Glen (Big)	Leelanau
Glen (Little)	Leelanau
Leelanau	Leelanau
Leelanau	Leelanau
South Bar	Leelanau
Devils	Lenawee
Evans	Lenawee
Posey	Lenawee
Round	Lenawee
Sand	Lenawee
Baetcke	Livingston

Lake Name	County
Chemung	Livingston
Earl	Livingston
Gallagher	Livingston
Green Oak	Livingston
Hamburg	Livingston
Ore	Livingston
Round	Livingston
Strawberry	Livingston
Triangle	Livingston
Portage	Livingston/ Washtenaw
Brevoort	Mackinaw
Bear	Manistee
Chabenau	Marquette
Independence	Marquette
Chancellor	Mason
Hamlin	Mason
Hamlin	Mason
Oxbow (North)	Mason
Blue	Mecosta
Canadian	Mecosta
Canadian	Mecosta
Horsehead	Mecosta
Mecosta	Mecosta
Pretty	Mecosta
Round	Mecosta
School Section	Mecosta
Sanford	Midland
Baldwin	Montcalm
Clifford	Montcalm
Crystal	Montcalm
Crystal	Montcalm
Derby	Montcalm

Lake Name	County
Muskellunge	Montcalm
Twin (East)	Montmorency
Twin (West)	Montmorency
Duck	Muskegon
Bills	Newaygo
Bills (Waits)	Newaygo
Emerald	Newaygo
Fremont	Newaygo
Kimball	Newaygo
Pickerel	Newaygo
Sylvan	Newaygo
Webinguaw	Newaygo
Angelus	Oakland
Buckhorn	Oakland
Cranberry	Oakland
Deer	Oakland
Hawk	Oakland
Lakeville	Oakland
Long	Oakland
Middle Straits	Oakland
Orion	Oakland
Ottawa	Oakland
Oxbow	Oakland
Parke	Oakland
Taylor	Oakland
Walled	Oakland
White	Oakland
Crystal	Oceana
Pentwater	Oceana
Stony	Oceana
Tahoe (formerly)	Oceana
Clear	Ogemaw

Lake Name	County
Rifle	Ogemaw
Center (Kettunen)	Osceola
Hicks	Osceola
Indian	Osceola
Viking	Otsego
Bradford (Big)	Otsego/Crawford
Crockery	Ottawa
Higgins (N. Basin)	Roscommon
Higgins (S. Basin)	Roscommon
Houghton	Roscommon
Corey	St. Joseph
Fishers	St. Joseph
Klinger	St. Joseph
Perrin	St. Joseph
Pleasant	St. Joseph
Sturgeon	St. Joseph
Templene	St. Joseph
Cedar	VanBuren
Cora	VanBuren
Crooked (Big)	VanBuren
Crooked (Little)	VanBuren
Fish	VanBuren
Gravel	VanBuren
Silver	VanBuren
Bridgeway	Washtenaw
Bruin	Washtenaw
Greenook	Washtenaw
Pleasant	Washtenaw
Blue Heron Lagoon	Wayne
Muskoday	Wayne
Pleasant	Wexford
Stoneledge	Wexford

2010 CLMP Season: 219 Lakes Registered

Lake Name	County
Ann	Benzie
Arbutus	Grand Traverse
Arnold	Clare
Badger	Alcona
Baldwin	Montcalm
Barlow	Barry
Barton	Kalamazoo
Baseline	Livingston/Wash
Bass	Kalkaska
Bear	Kalkaska
Bear	Alcona
Bear	Manistee
Beatons	Geogebic
Beaver	Alpena
Big Blue	Kalkaska
Big Crooked	Van Buren
Little Crooked	Van Buren
Big Fisher	Leelanau
Big Glen	Leelanau
Big Lake	Osceola
Big Pine	Kent
Big Platte	Benzie
Big Portage	Jackson
Big Twin	Kalkaska
Bills	Newaygo
Birch	Cass
Blue Herron Lagoon	Wayne
Blue (Chancellor)	Mason
Blue	Mecosta
Bostwick	Kent
Bradford	Otsego/Crawford
Brevoort	Mackinac
Brooks	Leelanau
Brown	Jackson
Byram	Genesee
Canadian	Mecosta
Cedar	Van Buren
Cedar	Alcona/Iosco
Center	Osceola
Chain	Iosco

Lake Name	County
Christiana	Cass
Clam	Antrim
Clark	Jackson
Clear	Ogemaw
Clear	Jackson
Clear	St. Joseph
Clifford	Montcalm
Cobb	Barry
Corey	St. Joseph
Coldwater	Branch
Cranberry	Oakland
Crockery	Ottawa
Crooked	Kalamazoo
Crooked	Kalkaska
Crystal	Benzie
Crystal	Montcalm
Crystal	Oceana
Cub	Kalkaska
Deer	Alger
Deer	Oakland
Derby	Montcalm
Devils	Lenawee
Diamond	Cass
Dinner	Gogebic
Duck	Calhoun
Duncan	Barry
Eagle	Cass
Eagle	Allegan
Eagle	Kalkaska
Earl	Livingston
Emerald	Kent
Emerald	Newaygo
Evans	Lenawee
Fair	Barry
Farwell	Jackson
Fish	Van Buren
Five Lakes	Otsego
Fremont	Newaygo
Freska	Kent
Gallagher	Livingston
Gull	Kalamazoo

Lake Name	County
Goshorn	Allegan
Gourdneck	Kalamazoo
Gratiot	Keweenaw
Gravel	Van Buren
Hamburg	Livingston
Hamlin - Lower	Mason
Hamlin - Upper	Mason
Hamilton	Dickinson
Hawk	Oakland
Hess	Newaygo
Hicks	Osceola
High	Kent
Higgins	Roscommon
Horsehead	Mecosta
Houghton	Roscommon
Hubbard	Alcona
Hunter	Gladwin
Hutchins	Allegan
Indian	Kalamazoo
Indian	Kalkaska
Indian	Osceola
Island	Grand Traverse
Keeler	Van Buren
Kimball	Newaygo
Kirkwood	Oakland
Klinger	St. Joseph
Lake Antoine	Dickinson
Lake Bellaire	Antrim
Lake Chemung	Livingston
Lake Diane	Hillsdale
Lake Fenton	Genesee
Lake George	Clare
Lake Independence	Marquette
Lake Isabella	Isabella
Lake Lansing	Ingham
Lake Mary	Iron
Lake Nepessing	Lapeer
Lake Okanoka	Wayne
Lake Orion	Oakland
Lake Templene	St. Joseph

Lake Name	County
Lake Wahbememe	St. Joseph
Lakeville	Oakland
Lancer	Gladwin
Lancelot	Gladwin
Little Bradford	Otsego
Little Glen	Leelanau
Little Long Lake	Barry/Kalamazoo
Little Paw Paw	Berrien
Little Twin	Kalkaska
Lily	Clare
Long	Iosco
Long	Gogebic
Long	Oakland
Loon	Iosco
Lower Brace	Calhoun
Magician	Cass
Margrethe	Crawford
Marl (Silver/Marl)	Genesee
Maston	Kent
Maynard	Alcona
Mecosta	Mecosta
Middle Straits	Oakland
Mirror	Jackson
Moon	Gogebic
Mud	Jackson
Murray	Kent
Muskellunge	Kent
Muskellunge	Montcalm
North Blue	Kalkaska
North Buckhorn	Oakland
North Oxbow	Mason
Opal	Otsego

Lake Name	County
Ore	Livingston
Osterhout	Allegan
Oxbow	Oakland
Papoose	Kalkaska
Parks	Oakland
Payne	Barry
Pentwater	Oceana
Perch	Otsego
Perch	Iron
Perrin	St. Joseph
Pickerel	Newaygo
Pickerel	Kalkaska
Pleasant	Wexford
Pleasant	Jackson
Portage	Liv/Wash
Portage	St. Joseph
Pretty	Mecosta
Puterbaugh	Cass
Randall	Branch
Reeds	Kent
Rifle	Ogemaw
Round	Clinton
Round	Mecosta
Round	Lenawee
Round	Livingston
Sand	Lenawee
Sanford	Midland
Sanford	Benzie
School Section	Mecosta
Shavehead	Cass
Shingle	Clare
Silver (of Silver/Marl)	Genesee
Silver (Green Oak)	Livingston

Lake Name	County
Silver	Van Buren
Sherman	Kalamazoo
Shinanguag	Genesee
Spider	Grand Traverse
Squaw	Kalkaska
Starvation	Kalkaska
Stony	Oceana
Stoneledge	Wexford
Strawberry	Livingston
Sylvan	Newaygo
Sweezy	Jackson
Taylor	Oakland
Thornapple River Cas. Imp.	Kent
Torch (North)	Antrim
Torch (South)	Antrim
Triangle	Livingston
East Twin	Montmorency
West Twin	Montmorency
Twin - North (Big)	Cass
Twin - South (Little)	Cass
Upper Brace	Calhoun
Upper Crooked	Barry
Van Etten	Iosco
Vaughn	Alcona
Vineyard	Jackson
Viking	Otsego
Wamplers	Jackson/Lenawee
Webinguaw	Newaygo
Wetmore	Allegan
Wildwood	Cheboygan
Windover	Clare
Wolf	Lake
Woods	Kalamazoo

Appendix C – CLMP Data Collection Summaries

Summary Data from the 2014 CLMP Field Season

Secchi Disk Transparency

- 196 basins were sampled.
- Total number of measurements = 3,070
- Transparency data summary:
 - Transparency range: 2-50 feet
 - Mean: 12.9 feet
 - TSI_{SD}*: 27-65 (average: 41)

*For more information on TSI measurements, please see the CLMP annual reports at: <https://micorps.net/lake-monitoring/lake-data-reports/>

Spring Total Phosphorus

- 160 lakes were sampled
- Data summary:
 - range: <3-77 ug/l
 - mean: 13.3 ug/l

Summer Total Phosphorus

- 176 lakes were sampled
- Data summary:
 - range: <3-62 ug/l
 - mean: 13.4 ug/l
 - TSI_{TP}: <27 - 64 (40 average)

Chlorophyll *a*

- 122 lakes were sampled
- 608 volunteer samples were analyzed.
- Data Summary:
 - range: <1-47.0 ug/l
 - mean: 3.1 ug/l
 - TSI_{CHL}: <31-59 (average: 39)

Dissolved Oxygen/Temperature

- 52 lakes were sampled throughout the summer.
- A total of 318 oxygen/temperature profiles were taken.
- Between 5-27 measurements were made for each profile.
- In total, about 5,083 oxygen/temperature measurements were taken in 2014.

Aquatic Plant ID and Mapping

6 lakes conducted surveys

- Crystal Lake (Montcalm Co.)
- South Bar Lake (Leelanau Co.)

Continued survey efforts from previous years:

- Earl Lake (Livingston Co.)
- Park Lake (Clinton Co.)
- Pleasant Lake (Washtenaw Co.)
- White Lake (Muskegon Co.)

Exotic Aquatic Plant Watch

32 lakes enrolled

- 20 lakes submitted reports

Summary Data from 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: <https://micorps.net/lake-monitoring/lake-data-reports/>

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

Summary Data from the 2012 CLMP Field Season

Secchi Disk Transparency

- 221 basins were sampled.
- Total number of measurements = 2,986
- Transparency data summary:
 - Transparency range: 2-46 feet
 - Mean: 13.1 feet
 - TSI_{SD}*: 27-59 (average: 41)

*For more information on TSI measurements, please see the CLMP annual reports at: <https://micorps.net/lake-monitoring/lake-data-reports/>

Spring Total Phosphorus

- 150 lakes were sampled
- Data summary:
 - range: <5-46 ug/l
 - mean: 11.0 ug/l
- 25 QA/QC samples were taken.
 - 19 replicate samples
 - 2 side-by-side samples
 - 1 field blank
 - 1 equipment blank

Summer Total Phosphorus

- 191 lakes were sampled
- Data summary:
 - range: <5-74 ug/l
 - mean: 13.9 ug/l
 - TSI_{TP}: <27 - 70 (40.0 average)

- 31 QA/QC samples
 - 24 replicate samples
 - 3 side-by-side sample
 - 2 field blanks
 - 2 equipment blanks

Chlorophyll *a*

- 128 lakes were sampled
- 511 volunteer samples were analyzed.
- Data Summary:
 - range: <1-43.0 ug/l
 - mean: 3.8 ug/l
 - TSI_{CHL}: <24-60 (average: 41.0)
- 28 QA/QC samples
 - 14 replicate samples
 - 3 side-by-side samples

Dissolved Oxygen/Temperature

- 59 lakes were sampled throughout the summer.
- A total of 328 oxygen/temperature profiles were taken.
- Between 5-27 measurements were made for each profile.
- In total, 5152 oxygen/temperature measurements were taken in 2012.

Aquatic Plant ID and Mapping

9 lakes enrolled

Exotic Aquatic Plant Watch

25 lakes enrolled

Summary Data from the 2011 CLMP Field Season

Secchi Disk Transparency

- 198 lakes (219 basins) were sampled.
- Total number of measurements = 3,047
- Transparency data summary:
 - Transparency range: 1-57 feet
 - Mean: 12.2 feet
 - Median: 11 feet
 - TSI_{SD}*: 27-66 (average: 42.1)

*For more information on TSI measurements, please see the CLMP annual reports at: <https://micorps.net/lake-monitoring/lake-data-reports/>

Spring Total Phosphorus

- 145 lakes were sampled
- Data summary:
 - range: <5-113 ug/l
 - mean: 14.4 ug/l

- median: 9.0 ug/l
- 26 QA/QC samples were taken.
 - 18 replicate samples
 - 3 side-by-side samples
 - 3 side-by-side replicates
 - 1 field blanks
 - 1 equipment blanks

Summer Total Phosphorus

- 186 lakes were sampled
- Data summary:
 - range: <5-74 ug/l
 - mean: 13.0 ug/l
 - median: 10 ug/l
 - TSI_{TP}: <27 - 66 (40.0 average)
- 27 QA/QC samples
 - 22 replicate samples
 - 1 side-by-side sample
 - 2 field blanks
 - 2 equipment blanks

Chlorophyll a

- 125 lakes were sampled
- 571 volunteer samples were analyzed.
- Data Summary:
 - range: <1-37.0 ug/l
 - mean: 3.4 ug/l
 - median: 2.3 ug/l
 - TSI_{CHL}: <24-60 (average: 38.7)
- 28 QA/QC samples
 - 14 replicate samples
 - 5 side-by-side samples

Dissolved Oxygen/Temperature

- 44 lakes were sampled throughout the summer.
- A total of 302 oxygen/temperature profiles were taken.
- Between 5-27 measurements were made for each profile.
- In total, 4,939 oxygen/temperature measurements were taken in 2011.

Aquatic Plant ID and Mapping

5 lake enrolled

Exotic Aquatic Plant Watch

26 lakes enrolled

Summary Data from the 2010 CLMP Field Season

Secchi Disk Transparency

- 197 lakes (215 basins) were sampled.
- Total number of measurements = 3,049
- Transparency data summary:
 - Transparency range: 1-46 feet
 - Mean: 12.8 feet
 - Median: 11 feet
 - TSI_{SD}*: 27-65 (average: 41.7)

*For more information on TSI measurements, please see the CLMP annual reports at: <https://micorps.net/lake-monitoring/lake-data-reports/>

Spring Total Phosphorus

- 152 lakes were sampled
- Data summary:
 - range: <5-125 ug/l
 - mean: 14.1 ug/l
 - mean: 11.0 ug/l
- 25 QA/QC samples were taken.
 - 18 replicate samples
 - 4 side-by-side samples
 - 1 side-by-side replicate
 - 1 field blank
 - 1 equipment blank

Summer Total Phosphorus

- 178 lakes were sampled
- Data summary:
 - range: <5-90 ug/l
 - mean: 14.5 ug/l
 - median: 11 ug/l
 - TSI_{TP}: <27 - 69 (39.4 average)
- 31 QA/QC samples
 - 23 replicate samples
 - 4 side-by-side sample
 - 2 field blanks
 - 2 equipment blanks

Chlorophyll *a*

- 609 volunteer samples were collected/analyzed
- 125 lakes (128 basins) were sampled
- Data Summary:
 - range: <1-160.0 ug/l
 - mean: 4.8 ug/l
 - median: 2.8 ug/l
 - TSI_{CHL}: <31-63 (average: 43)
- 62 QA/QC samples
 - 13 replicate samples

- 7 side-by-side samples (SOP field filtered)
- 7 side-by-side sample reps (SOP field filtered)

Dissolved Oxygen/Temperature

- 44 lakes (46 basins) were sampled throughout the summer.
- A total of 421 oxygen/temperature profiles were taken.
- Between 5-27 measurements were made for each profile.
- In total, 4,834 oxygen/temperature measurements were taken in 2010.

Aquatic Plant ID and Mapping

1 lake enrolled

Exotic Aquatic Plant Watch

21 lakes enrolled

Appendix D – VRSCCP Grants Awarded

Final reports for all grants are available upon request.

VRSCCP Grants Awarded in 2014

Grant #: VRSCCP2014-01

Grantee: City of Charlotte

Title: 10th Annual River Cleanup Day

Watersheds: Butternut Creek, Battle Creek River

Funding Amount: \$720

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.

Grant #: VRSCCP2014-02

Grantee: St. Joseph County Conservation District

Title: River Cleanup 2014

Watersheds: Prairie, Pigeon, Nottawa Creek, Rocky, Fawn Rivers

Funding Amount: \$1,388

To implement the fourth stage of a 5-year plan to clean all 150 miles of the county's rivers, cleaning roughly 19.5 miles in 2014.

Grant #: VRSCCP2014-03

Grantee: Petoskey Department of Parks and Recreation

Title: Healing the Bear River Cleanup

Watershed: Bear River

Funding Amount: \$1,726

To maintain ecological and aesthetic integrity of the Bear River by involving the community in keeping it clean and healthy and by removing trash from at least the three highest priority areas along the river.

Grant #: VRSCCP2014-04

Grantee: Grand Traverse Conservation District

Title: 10th Annual Boardman River Clean Sweep 2014

Watershed: Boardman River

Funding Amount: \$1,590

To conduct the 10th annual community-wide cleanup of the Boardman River in conjunction with the American Rivers' National River Cleanup 2014 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.

Grant #: VRSCCP2014-05

Grantee: Shiawassee County Health Department

Title: 17th Annual Shiawassee River Cleanup

Watershed: Shiawassee River

Funding Amount: \$1,800

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

Grant #: VRSCCP2014-06
Grantee: Huron River Watershed Council
Title: Huron River Coordinated Cleanups
Watershed: Huron River
Funding Amount: \$4,500

Aid in collaboration and coordination of numerous existing river cleanups and the creation of new cleanups, while engaging volunteers to maintain the cleanliness of the Ann Arbor and Milford stretches of the river and increase the cleanliness of the downriver stretches of the river.

Grant #: VRSCCP2014-07
Grantee: Jackson County Conservation District
Title: Upper Grand River Watershed 24th Annual Cleanup
Watershed: Upper Grand River
Funding Amount: \$3,787

To clean 25 miles of the Upper Grand and its tributaries to improve the quality of the waters in Jackson and the Upper Grand River watershed as well as create and improve residents' relationship with the rivers.

Grant #: VRSCCP2014-08
Grantee: River Raisin Watershed Council
Title: River Raisin Rescue
Watershed: River Raisin
Funding Amount: \$1,545

To remove anthropogenic debris from approximately seven miles on three different sections of the River Raisin throughout the summer.

Grant #: VRSCCP2014-09
Grantee: Van Buren Conservation District
Title: River Rescue in the Black and Paw Paw River Watershed
Watersheds: Paw Paw River, Black River
Funding Amount: \$2,174

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 24.5 miles of waterway, while raising environmental concerns and water quality issues with participants on a personal level.

Grant #: VRSCCP2014-10
Grantee: City of Battle Creek
Title: 2014 Krazy for the Kazoo
Watersheds: Kalamazoo River, Battle Creek River
Funding Amount: \$1,350

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 a watershed-wide cleanup effort on the same day through the removal of trash and debris from the water and along the river's banks.

Grant #: VRSCCP2014-11
Grantee: Barry Conservation District
Title: 19th Annual Thornapple River Cleanup
Watersheds: Thornapple River, Coldwater River
Funding Amount: \$2,200

To remove all safely accessible trash from the water and along the banks along 80 river miles while recruiting volunteers from at least seven watershed communities.

Grant #: VRSCCP2014-12
Grantee: Grayling Charter Township
Title: Au Sable River Annual River Cleanup
Watersheds: Au Sable River, Main, North and South Branches
Funding Amount: \$2,592

To clean approximately 75 miles of the mainstem, south branch and north branch of the Au Sable River, removing an estimated eight cubic yards of trash from the river.

Grant #: VRSCCP2014-13
Grantee: Allegan Conservation District
Title: Krazy for the Kazoo River Cleanup
Watersheds: Kalamazoo River, Bush Creek
Funding Amount: \$945

To conduct a volunteer cleanup of a segment of the Kalamazoo River and a segment of a smaller tributary named Bush Creek to remove accumulated trash in order to make the waterways healthier and more aesthetically pleasing.

Grant #: VRSCCP2014-14
Grantee: City of Grand Rapids
Title: 11th Annual Mayors Grand River Cleanup
Watersheds: Grand River, Plaster Creek
Funding Amount: \$4,500

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.

Grant #: VRSCCP2014-15
Grantee: City of Marshall
Title: Krazy for the Kazoo
Watersheds: Kalamazoo River, Rice Creek
Funding Amount: \$1,350

To conduct in-river and river bank collection of trash at nine different area designations along roughly three miles of the Kalamazoo River, and to work together as a community towards the mission of preserving, protecting, and enhancing Marshall's natural resources.

Grant #: VRSCCP2014-16
Grantee: Tuscola Conservation District
Title: 6th Annual Cass River Cleanup
Watershed: Cass River
Funding Amount: \$630

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

VRSCCP Grants Awarded in 2013

Grant #: VRSCCP2013-01
Grantee: City of Charlotte
Title: 9th Annual River Cleanup Day
Watersheds: Butternut Creek, Battle Creek River
Funding Amount: \$838.65

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.

Grant #: VRSCCP2013-02
Grantee: Germfask Township
Title: Manistique River Clean Up
Watershed: Manistique River
Funding Amount: \$845

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.

Grant #: VRSCCP2013-03
Grantee: City of Ann Arbor Parks and Recreation Services
Title: A2 Keeping the River Clean
Watershed: 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.

Grant #: VRSCCP2013-04
Grantee: Tuscola Conservation District
Title: 5th Annual Cass River Cleanup
Watershed: 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.

Grant #: VRSCCP2013-05
Grantee: Barry Conservation District
Title: 18th Annual Thornapple River Clean Up
Watersheds: 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.

Grant #: VRSCCP2013-06
Grantee: Macatawa Area Coordinating Council
Title: Macatawa River Volunteer Cleanup
Watershed: 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.

Grant #: VRSCCP2013-07
Grantee: City of Ewart
Title: Muskegon River Cleanup
Watershed: 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 Ewart to a landing near Benzing Road in Osceola County.

Grant #: VRSCCP2013-08

Grantee: St. Joseph County Conservation District

Title: River Clean Up Project 2013

Watersheds: 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.

Grant #: VRSCCP2013-09

Grantee: City of Grand Rapids

Title: 10th Annual Mayors' Grand River Cleanup

Watersheds: 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.

Grant #: VRSCCP2013-10

Grantee: Hillsdale Conservation District

Title: Headwaters River Clean-up Project

Watersheds: 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.

Grant #: VRSCCP2013-11

Grantee: Van Buren Conservation District

Title: River Rescue 2013

Watersheds: 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.

Grant #: VRSCCP2013-12

Grantee: Shiawassee County Health Department

Title: 16th Annual Shiawassee River Clean-up

Watershed: 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.

Grant #: VRSCCP2013-13
Grantee: City of Battle Creek
Title: 2013 Global Citizens River Conservation Day
Watersheds: 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.

Grant #: VRSCCP2013-14
Grantee: Calhoun Conservation District
Title: Klean the Kazoo
Watershed: 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.

Grant #: VRSCCP2013-15
Grantee: Jackson County Drain Commissioner
Title: Portage River Volunteer Cleanup
Watershed: 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.

Grant #: VRSCCP2013-16
Grantee: Monroe Conservation District
Title: River Raisin Rubbish Removal
Watershed: 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.

Grant #: VRSCCP2013-17
Grantee: Kent Conservation District
Title: Rogue River Cleanup
Watershed: 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.

Grant #: VRSCCP2013-18
Grantee: Genesee County Parks and Recreation Commission
Title: Flint River Clean Up
Watersheds: 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.

Grant #: VRSCCP2013-19
Grantee: Grand Traverse Conservation District
Title: 9th Annual Boardman River Clean Sweep 2013
Watershed: 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.

Grant #: VRSCCP2013-20
Grantee: Mason-Lake Conservation District
Title: Pere Marquette Paddle Down-River Cleanup
Watershed: 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.

VRSCCP Grants Awarded in 2012

Grant #: VRSCCP2012-01
Grantee: City of Charlotte
Title: 8th Annual River Cleanup Day
Watersheds: Butternut Creek, Battle Creek River
Funding Amount: \$756

To clean up and improve approximately 1.5 miles along Butternut Creek and 1 mile along the Battle Creek River within the City of Charlotte and to educate the public about the importance of such efforts.

Grant #: VRSCCP2012-02
Grantee: Missaukee Conservation District
Title: Missaukee/Muskegon Project
Watershed: Muskegon River
Funding Amount: \$2,130

To clean up approximately 20 miles of the Muskegon River by removing trash and debris from the water and along the banks.

Grant #: VRSCCP2012-03
Grantee: City of Ann Arbor
Title: A2 Huron River Cleanups
Watershed: Huron River
Funding Amount: \$2,985

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.

Grant #: VRSCCP2012-04
Grantee: Tuscola Conservation District
Title: 4th Annual Cass River Cleanup
Watershed: Cass River
Funding Amount: \$1,010

To clean a 3-5 mile section of the river from the Bray Road Bridge to the dam in Vassar, removing trash, tires, and scrap metal.

Grant #: VRSCCP2012-05
Grantee: St. Joseph County Conservation District
Title: River Cleanup 2012
Watersheds: Rocky, St. Joseph, Fawn, Prairie, Portage, and White Pigeon rivers
Funding Amount: \$5,000

To implement the second year of a 5-year plan to clean 150 miles along the Rocky, St. Joseph, Fawn, Prairie, Portage, and White Pigeon rivers, cleaning roughly 35 miles in 2012.

Grant #: VRSCCP2012-06
Grantee: City of Battle Creek
Title: 2012 Global Citizens River Conservation Day
Watershed: Kalamazoo River
Funding Amount: \$1,500

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 discarded tires.

Grant #: VRSCCP2012-07
Grantee: Ingham Conservation District
Title: Sycamore Creek Cleanup
Watershed: Sycamore Creek
Funding Amount: \$1,250

To carry out a cleanup along a 2-mile stretch of Sycamore Creek where it passes through the City of Mason, using canoes, kayaks, and waders during the fall of 2012.

Grant #: VRSCCP2012-08
Grantee: Shiawassee County Health Department
Title: 15th Annual Friends of the Shiawassee River Cleanup
Watershed: Shiawassee River
Funding Amount: \$1,970

To remove anthropogenic sources of trash and debris from the mainstem of the Shiawassee River from Byron to Oakley, targeting rural areas and road/stream crossings for tires and large debris items.

Grant #: VRSCCP2012-09
Grantee: Hillsdale Conservation District
Title: The Maumee Watershed Monitoring Project - St. Joseph River System
Watershed: St. Joseph River
Funding Amount: \$1,790

To target the Maumee's four primary river systems and 71 miles of flowing main stream water within Hillsdale County for a community cleanup to improve the quality of the waters and have a lasting positive impact on both them and their habitats.

Grant #: VRSCCP2012-10
Grantee: Barry Conservation District
Title: 17th Annual Thornapple River Cleanup
Watershed: Thornapple River
Funding Amount: \$1,750

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.

Grant #: VRSCCP2012-11
Grantee: Van Buren Conservation District
Title: River Rescue in the Paw Paw River
Watershed: Paw Paw River
Funding Amount: \$1,795

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 20-39.5 miles of waterway, while raising environmental concerns and water quality issues with participants on a personal level.

Grant #: VRSCCP2012-12
Grantee: Grand Traverse Conservation District
Title: 8th Annual Boardman River Clean Sweep
Watershed: Boardman River
Funding Amount: \$1,281

To conduct the 8th annual community-wide cleanup of the Boardman River in conjunction with the American Rivers' National River Cleanup 2012 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 20 miles.

Grant #: VRSCCP2012-13
Grantee: City of Grand Rapids
Title: Mayors' Grand River Cleanup
Watershed: Grand River
Funding Amount: \$3,300

To remove waste from the Grand River, promote water quality, and increase the region'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.

VRSCCP Grants Awarded in 2011

Grant #: VRSCCP2011-01
Grantee: South Branch Township
Title: Au Sable River Annual River Cleanup
Watershed: Au Sable River
Funding Amount: \$2,692

To clean up approximately 75 miles of the mainstream, south branch and north branch of the Au Sable River.

Grant #: VRSCCP2011-02
Grantee: City of Ann Arbor
Title: Cleanup the Huron River
Watershed: Huron River
Funding Amount: \$3,419

To keep the Ann Arbor area section 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.

Grant #: VRSCCP2011-03
Grantee: City of Battle Creek
Title: 2011 Global Citizens River Conservation Day
Watershed: Kalamazoo River
Funding Amount: \$1,500

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 tires.

Grant #: VRSCCP2011-04
Grantee: City of Cedar Springs
Title: Cedar Creek Cleanup
Watershed: Cedar Creek
Funding Amount: \$1,222

To publicize, educate, and inform the watershed's citizens of the need to protect and maintain its natural resources through the removal of trash from Cedar Creek.

Grant #: VRSCCP2011-05
Grantee: Saginaw Conservation District
Title: Cass River 3rd Annual Clean-Up
Watershed: Cass River
Funding Amount: \$2,450

To clean a 3-5 mile section of the river from the Dixie Highway to the Bridgeport Township Park.

Grant #: VRSCCP2011-06
Grantee: City of Charlotte
Title: 7th Annual River Cleanup
Watersheds: Butternut Creek and Battle Creek River
Funding Amount: \$739.61

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

Grant #: VRSCCP2011-07
Grantee: Barry Conservation District
Title: 16th Annual Thornapple River Cleanup
Watershed: Thornapple River
Funding Amount: \$1,680

To remove all safely accessible trash from 80 river miles while recruiting volunteers from at least five watershed communities.

Grant #: VRSCCP2011-08
Grantee: Chippewa/East Mackinac Conservation District
Title: 1st Annual Munuscong River Cleanup Project
Watershed: Munuscong River
Funding Amount: \$2,846

To engage the Munuscong River Watershed Association, Pickford High School, and the Conservation District in the first annual Munuscong River Cleanup Project to clean the lower eight miles of the navigable river channel and six historic water trail sites.

Grant #: VRSCCP2011-09 (*Declined Award*)
Grantee: Tuscarora Township
Title: 2011 Big Splash Clean Up
Watersheds: Indian and Sturgeon Rivers
Funding Amount: \$1,345

To provide for the physical and biological enhancement of the Indian and Sturgeon Rivers through the clean-up of approximately two one-mile stretches of each river system, removing both trash and debris.

Grant #: VRSCCP2011-10
Grantee: City of Marshall
Title: Marshall Area River Clean Up & Conservation Day
Watershed: Kalamazoo River
Funding Amount: \$1,760

To work together as a community to preserve, protect, and enhance Marshall's natural resources through in-river and river bank collection of trash at nine different area sites.

Grant #: VRSCCP2011-11
Grantee: St. Joe County Conservation District
Title: St. Joe County River Cleanup 2011
Watersheds: Rocky, St. Joseph, Fawn, Prairie, and White Pigeon Rivers
Funding Amount: \$3,910

To implement the first year of a three-year plan to clean 150 miles along the Rocky, St. Joseph, Fawn, Prairie, and White Pigeon rivers, cleaning roughly 37.5 miles in 2011.

Grant #: VRSCCP2011-12
Grantee: Van Buren Conservation District
Title: River Rescue in Black and Paw Paw River and Hickory Creek Watersheds
Watersheds: Black River, Paw Paw River, and Hickory Creek
Funding Amount: \$4,098

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 nine different river branches.

Grant #: VRSCCP2011-13
Grantee: City of Grand Rapids Environmental Services Department
Title: Mayors' Grand River Clean Up
Watershed: Grand River
Funding Amount: \$3,094

To remove waste from the Grand River, promote water quality, and increase the region'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.

Grant #: VRSCCP2011-14

Grantee: Shiawassee County Health Department Environmental Health Division

Title: 14th Annual Shiawassee River Cleanup

Watershed: Shiawassee River

Funding Amount: \$1,935

To remove anthropogenic sources of trash and debris from the mainstem of the Shiawassee River from Byron to Oakley, targeting rural areas and road/stream crossings for tires and large debris items.

Grant #: VRSCCP2011-15

Grantee: Grand Traverse Conservation District

Title: Boardman River Clean Sweep 2011

Watershed: Boardman River

Funding Amount: \$1,457.50

To conduct the 7th annual community-wide cleanup of the Boardman River in conjunction with the American Rivers' National River Cleanup 2011 and the National Cherry Festival.

VRSCCP Grants Awarded in 2010

Grant #: VRSCCP2010-01

Grantee: City of Battle Creek

Title: Global Citizens River Conservation Day

Watershed: Kalamazoo River

Funding Amount: \$1,500

To promote the protection of the water resources within the Kalamazoo River watershed through the removal of trash and tires.

Grant #: VRSCCP2010-02

Grantee: City of Charlotte

Title: 6th Annual River Cleanup

Watersheds: Butternut Creek, Battle Creek River

Funding Amount: \$739.61

To clean up and improve approximately 2.5 miles along Butternut Creek and Battle Creek River within the City of Charlotte.

Grant #: VRSCCP2010-03

Grantee: Grand Traverse Conservation District

Title: Boardman River Clean Sweep 2010

Watershed: Boardman River

Funding Amount: \$1,513

To conduct the 6th annual community-wide cleanup of the Boardman River in conjunction with the National River Cleanup Week and the National Cherry Festival.

Grant #: VRSCCP2010-04

Grantee: Chesaning Area Parks and Recreation Commission

Title: Annual Shiawassee River Clean-Up

Watershed: Shiawassee River

Funding Amount: \$1,700

To clean up approximately 4.5 miles of the Shiawassee River in Chesaning Township, Saginaw County, by removing trash and debris from the water and along the river banks.

Grant #: VRSCCP2010-05
Grantee: Muskegon Conservation District
Title: Muskegon River (Milliron Road) Cleanup Project
Watershed: Muskegon River
Funding Amount: \$970

To clean trash and other debris to improve the water quality along a 2-mile stretch of river near Muskegon, Michigan.

Grant #: VRSCCP2010-06
Grantee: Saginaw Conservation District
Title: 2nd Annual Cass River Clean-Up
Watershed: Cass River
Funding Amount: \$943

To clean a 3-4 mile section of the river from the Frankenmuth Dam to Dixie Highway to better showcase the river trail and attract new visitors to the area.

Grant #: VRSCCP2010-07
Grantee: Shiawassee County Health Department Environmental Health Division
Title: 13th Annual Shiawassee River Cleanup
Watershed: Shiawassee River
Funding Amount: \$1,800

To remove trash and debris from the river along 8 miles of stream, targeting rural areas and urban concentrations for tire collection.

Grant #: VRSCCP2010-08
Grantee: Missaukee Conservation District
Title: Missaukee/Muskegon Cleanup
Watershed: Muskegon River
Funding Amount: \$2,145

To clean up two sections of the Muskegon River by removing trash and debris from the water and along the banks.

Grant #: VRSCCP2010-09
Grantee: Barry Conservation District
Title: 15th Annual Thornapple River Cleanup
Watershed: Thornapple River
Funding Amount: \$1,825

To remove all safely accessible trash from 80 river miles while recruiting volunteers from at least five watershed communities.

Grant #: VRSCCP2010-10
Grantee: City of Ann Arbor
Title: Ann Arbor Canoe Liveries Keep the River Clean
Watershed: Huron River
Funding Amount: \$3,204

To keep the Ann Arbor area section of the Huron River clean throughout the warm weather season while building knowledge and understanding of the river and its ecosystem among groups of volunteers who will become stewards of the river in years to come.

Grant #: VRSCCP2010-11

Grantee: Van Buren Conservation District

Title: Community Creek Cleanup in the Paw Paw and Black Watersheds

Watersheds: Paw Paw River, Black River

Funding Amount: \$3,715

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.

Grant #: VRSCCP2010-12

Grantee: Macomb County Public Works Office

Title: Conservation Easement River Cleanup in the North Branch Subwatershed

Watershed: Clinton River

Funding Amount: \$1,281

To clean up along one major river site in the conservation easement along the North Branch of the Clinton River, in preparation for public use through recreation, nature trails and an outdoor education area.

Appendix E – Data Exchange User Survey Data

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

2014 Michigan Data Exchange User Survey Results

136 entries.

Academia or Educational: 30

Business: 4

Federal Agency: 3

Individual: 42

Local/County Government: 4

Lake Association and CLMP volunteers: 29

Non-government Organizations and Conservation Districts (VSMP Primarily): 17

State Agency: 7

Highlights:

Affiliation	Organization	Comment / Data Use
State Agency	MDEQ	To plan biomonitoring
Other, Volunteer Organization	Ketchum Park Advisory Committee (KPAC)	Monitor RICE CREEK that runs through the park, we participate in the monitoring there
Other, Metro Council	Grand Valley Metro Council	I am using the data to gain a better understanding of the state of the Lower Grand River Watershed as well as discover the deficiencies in data availability.
Other, local government	City of Ann Arbor	Keeping track of what is happening in local waters
Other, Environmental Contractor	SNRT, Inc	I am writing a watershed management plan for the Fawn River watershed for the LaGrange County, IN SWCD and would like to see what kind of data has been collected in the Fawn watershed to compare with the data our team is currently collecting.
Other, Engineering Firm	Fleis & VandenBrink	For a preliminary engineering report for sanitary sewer service for the community
Other, Conservation District	Ingham Conservation District	To verify sites where data has already been collected and help choose new additions to our sampling regimen.
NGO	Shedd Aquarium	Research (rusty crayfish food web effects)
NGO	Huron Pines	For background and recommendations in a watershed management plan.
NGO	North Lake Protection Association	Compare our local data to that from other lakes.
Individual		I am a graduate student at Indiana University performing an evaluation of the MiCorps program as part of a paper

		for my Water Policy and Economics course.
Individual		Fishing research.
Individual		To learn about the stream and lake by my house and any toxin issues.
Individual	n/a	I'm using this information to gauge if I want to do a triathlon in this lake.
Individual	Purdue University	Part of a research paper for a grad class
Individual	Bills Lake Association	I'm trying to ascertain the recent history of "ice out" on our lake to compare it with this spring
Individual	Hamlin Lake Preservation Society	Understanding of trends in the lake.
Federal Agency	US Forest Service	Potentially contributing to the Great Lakes Restoration Initiative
Academia	Ball State University	Proposal to Michigan Invasive Species Program
Academia	Oregon State University	thesis
Academia	Michigan State University	I am using it for research evaluating stream health within the Saginaw Bay Watershed.
Academia	The Urban School of San Francisco	I teach environmental science and I'd like to have my students analyze your data as they learn about eutrophication.
Academia	Interlochen arts academy	I may use it in my high school science classes
Academia	Lyman Briggs college	To educate students about biodiversity metrics
Academia	Michigan Sea Grant	to enter into a database for an online educational mapping tool called Great Lakes FieldScope focused on water quality of the Great Lakes region
Academia	GVSU-AWRI	Educational use and to compare with a local lake.
Academia	Michigan State University	Fisheries Research (field site background information)
Academia	University of Utah	National Water Quality Study

2013 Michigan Data Exchange User Survey Results

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

2012 Michigan Data Exchange User Survey Results

161 entries.

Academia or Educational: 44

Business: 10

Federal Agency: 1

Individual: 42

Lake Association or Homeowners Association: 40

Media: 1

Non-government Organizations: 8

Other Government: 3

State Agency: 12

Highlights:

Affiliation	Organization	Data Use
Academia	Annis Water Resources Institute - GVSU	To compare with in house data and other sources for the Duck Creek Watershed. Preparation of a 319 Watershed Management Plan.
Academia	Geography and Planning, Grand Valley State University	Just looking to see what's available on lake water quality
Academia	Indiana University Northwest	For Science Olympiad Water Quality event
Academia	Michigan State University	Outreach
Academia	Michigan Tech University	Working with high school students to analyze local stream data.
Academia	MSU Geography	Research
Academia	Ohio State University	Graduate research
Academia	Oregon State University	Graduate student research
Academia	Siena Heights University	Reference for labs
Academia	St. Cloud State University	Zebra Mussel Research Report
Academia	University of Michigan-Dearborn	Research project
Academia	United States Military Academy	Capstone Lab Project
Academia	University of Michigan	SNRE Master's Project
Academia	University of Michigan	Development of land use/TSI model
Academia	University of Washington	Graduate Research Project
Academia	University of Wisconsin-Stevens Point	Zebra mussel research
Academia	Western Michigan University	Master's Thesis
Business	CH2M HILL	To assist in performing a conceptual design of a new outfall to the Thornapple River.
Business	ECT	Reports
Business	Kieser & Associates	Research
Business	Lumenistics, LLC	Researching lakes in Michigan to understand their algae and muck status.
Business	Progressive AE	Providing water quality information to our clients
Business	Savin Lake Services	Trend Spotting
Business	West Michigan Shoreline Regional Development Committee	To develop sustainable/partnership/multi-disciplinary natural resource restoration and protection plans and projects in the Lake Michigan watershed.
Business	White Water Associates	Water Quality Report

Federal Agency	US Army Corps of Engineers	Supporting information for an environmental assessment
Individual		Monitoring lake quality and trends in response to concerns regarding stormwater runoff.
Individual		We want to see the quality of our streams thrive, and would like to monitor should events change the quality of the water....for example the recent exploratory mining on the shores of the Menominee River.
Individual		Checking for water quality before swimming
Individual		I live on Baseline Lake. Curiosity.
Individual		Personal fishing
Individual		To get a baseline for the Kalamazoo River prior to and during
Lake Assoc.	Blue Lake Association	Manage Blue Lake
Lake Assoc.	Blue Lake-Coldsprings Lake	Historical data to analyze health of lake
Lake Assoc.	Clifford Lake Improvement Assoc	Private information only
Lake Assoc.	Duck Lake Riparian Association	Checking on our sampling results and how we compare to other lakes
Lake Assoc.	Freska Lake Association	Historical records of lake quality
Lake Assoc.	Friends of Silver Lake	Monitoring Lake Quality
Lake Assoc.	Hamilton Lakes Association	To track the quality of our lakes.
Lake Assoc.	Indian Lake Association of Vicksburg	Report to membership
Lake Assoc.	Klinger Lake Association	Checking clarity of the lake
Lake Assoc.	Muskellunge lake Association	To present data at annual meeting.
Lake Assoc.	Sanford Lake Association	To compare Sanford Lake phosphorus levels over several years.
Lake Assoc.	Taylor Lake Homeowners Association	Checking the evolvement of the lake over time
Media	Mrgreatlakes.com	For a report on the monitoring program.
NGO	Indian Lake Association	Presentation to the Board of Directors
NGO	Marinette County Land & Water Conservation Division	Educational/informative purposes for schools
NGO	Mid-Michigan Environmental Action Council	Reviewing data with new interns
Other Gov't	Hamburg Township	General interest, water quality monitoring
Other Gov't	Ingham Conservation District	Research
Other Gov't	Jackson County Conservation District	Historical Data
State Agency	Department of Environmental Quality	Monitor for non-native and invasive species

2011 Michigan Data Exchange User Survey Results

136 entries.

Academia or Educational: 20

Business: 5

Federal Agency: 2

Individual: 35

Lake Association: 36

Non-government Organizations: 15

Other Government: 4

State Agency: 19

Highlights:

Affiliation	Organization	Data Use
Academia	Delta College	I conduct stream monitoring with my students and would like to create/join a stream monitoring group. I would also like to have students aware of existing data that can be used to develop a comprehensive plan for state wide improvement of water quality.
Academia	Main Street School	We are doing research on the Great Lakes hydrology.
Academia	Michigan State University	Teaching concepts, civic engagement, monitoring, science
Academia	University of Michigan	I am a grad student performing a "hypothetical" ecological risk assessment on the Clinton River.
Academia	University of Maryland	Investigating use of satellite data for monitoring.
Academia	New Lothrop Area Public Schools	Education
Academia	Michigan state	Research project
Academia	South Arbor Academy	Student report
Academia		Looking for info to include in Research project about the Flint River Watershed.
Business	Progressive AE	Reporting and interpreting the data for a lake association.
Business	Public Sector Consultants	Develop watershed plan
Business	Keller Williams	Details on cottage listing
Business	Public Sector Consultants	Watershed planning
Federal Agency	USGS	Report
Individual	Self	Looking to buy lakefront property for retirement life and fishing.
Individual		Scuba diving information
Lake Association	Indian Lake Association of Vicksburg	Education of lake residents
Lake Association	Van Etten lake Association	For membership meeting report
Lake Association	Round Lake Preservation	Monitoring lake quality

Lake Association	Crockery Lake Assn	Publish in newsletter
Lake Association	Pleasant Lake Wexford County	To determine the overall water quality of the lake.
Lake Association	Sanford Lake Association	Monitor weed control program
NGO	Upper Manistee River Association	Monitoring water quality of the Upper Manistee River
NGO	Clinton River Watershed Council	Would like to see if data exists for Lake Orion.
NGO	ODCMG	Merely curious
NGO	Duck Creek Watershed Assembly	As an aid in developing a watershed management plan
NGO	Duck Creek Watershed Assembly	Planning and management
NGO	Bear Lake Property Owners Assoc.	Help prepare watershed plan
NGO	Sierra Club Michigan Chapter	Checking the progress of a group I helped to get started in water monitoring under the MiCorps program in 2006. It looks like they're doing great!
NGO	Gratiot Lake Conservancy	Lake monitoring
NGO	Southeast Michigan Land Conservancy	Organizational strategic planning and conservation planning
Other Gov	Benzie Conservation District	We work with lake associations in our county on monitoring, and want to collect the same data with the same parameters as MiCorps.
Other Gov	Hamburg Township	Reviewing lake water quality.
State Agency	DEQ	Plan 2011 watershed monitoring.
State Agency	Institute for Fisheries Research	To make predictions of lake temperature in other lakes throughout the state, to help with fisheries management.
State Agency	DEQ/Aquatic Nuisance Control	Look at past and current lake conditions
State Agency	DEQ	Historical data record for a report
State Agency; NGO	Midwest Glacial Lakes Partnership	We are looking for water quality data to use as a response variable in an assessment of lakes across 8 states, including MI.

2010 Michigan Data Exchange User Survey Results

141 entries.

Academia or Educational: 25

Business: 5

Federal Agency: 4

Individual: 45

Lake Association: 41

Non-government Organizations: 7

Other Government: 2

State Agency: 12

Highlights:

Affiliation	Organization	Data Use
Academia	Chapman University	I study common loon territorial behavior and am looking at the correlation between the size and shape of a loon's natal lake and the breeding territory it settles on. My study area is in Wisconsin, but a Michigan-banded loon chick settled as an adult in W
Academia	Eastern Michigan University	I am a graduate student in the Master of Science in GIS program. I am doing a project that may lead to my masters project in tracking water quality change over time for Orchard lake in Oakland County.
Academia	University of Wisconsin	Investigating the Distribution of Aquatic Invasive Species in Northern Wisconsin and the Upper Peninsula of Michigan
Academia	University of Cantabria	I'm just interested in the biochemical cycles of the lake
Academia	Michigan State University	I am using the data in a study to help refine remote sensing detecting of algae in lakes.
Academia	Grand Valley State University Annis Water Resource	Write a watershed management plan.
Academia	Montclair State University	To calibrate remote sensing assessments
Federal Agency	USGS	Predictive models
Federal Agency	US Forest Service	I'm curious about your total phosphorus data for local lakes.
Individual	Greater Lake Shinaguag Association	Chemical control, Water quality
Individual		To decide whether to purchase a home.
Individual		Trying to find a comprehensive, searchable database of inland lakes in Michigan
Individual		Checking clean water for recreation
Individual	MSU (student)	Working on a restoration project
Individual	rapid river cleanup	Help in the dredging or placement of sand traps in RAPID RIVER.
Individual, Other, County	Marinette County Land and Water Conservation	Baseline to measure against potential future water quality changes.
NGO	Sierra Club Michigan Chapter	Comparing Menominee County data to other stream data in U.P.

Other, Civil Engineering	Prein&Newhof	To study water quality for wastewater collection system planning
Other, Consulting Firm	Tetra Tech	To acquire an understanding for the normal levels of dissolved trace metal concentrations in Upper Peninsula Michigan water.
Other, lake consultant	Progressive AE	For submittal to MDNRE for lake management plan
State Agency	MDNRE	NDPES-related
State Agency	MDNRE	Shoreline assessment
State Agency	Utah Division of Water Quality	We are forming our own volunteer monitoring program and are using your program as an example!

Appendix F – Stakeholder Feedback

Summary of Feedback from the 2014 MiCorps Annual Conference

36 respondents.

63% rated conference as excellent, 37% good, 0% fair, 0% poor

36% regular attenders, 44% first time attenders, 11% occasional attenders

96% of attendees stated that the conference presentations were clear and relevant to their needs, 4% (1 person) said "somewhat"

Topics that were liked

- Bug id
- Using/disseminating data
- Presenting data to audiences
- Lessons learned from past grantees
- New "tools"- fish mapping tool, AIS resources
- Boat wash/AIS
- Watershed management planning
- What chemicals are used in AIS
- Various data software to be used
- Tools to assess ecosystem health

Suggested topics

- Aquatic plant strategy in lakes
- Flow assessment
- How to utilize Google maps tools to our benefit in mapping or the "How to" of other beneficial apps.
- Volunteer monitoring used within specific watershed management plans
- More on how to minimize non-point source pollution discharge
- Using Arc GIS for data Management,
- Measuring effects of BMP implementation
- What are the politics of monitoring, e.g. Lake Associations, streams with CAFOS.
- restoration sessions
- Physical surveys. Flow estimations/measurements. TDMLs for drainage lakes.

Summary of Feedback from the 2013 MiCorps Annual Conference

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; archiving, 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 organize 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 as 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.

Summary of Feedback from the 2012 Advisory Panel Session

After a short introduction of each new monitoring parameter, the group was subdivided into teams to discuss the pros and cons of the proposed parameters. The teams were asked the following questions:

Breakout Team Questions
1. Can volunteers reliably collect this data?
2. Would this parameter engage volunteers? Does it seem fun and/or feel important?
3. Would the data produced from this parameter be useful for your management activities on a lake or stream? How?
4. Do you have any negative reactions against this parameter?
5. How would you change the proposed protocol so that it would work more effectively?

Following the team discussions, the teams reconvened into the larger group to give their reports to the MiCorps staff.

1) Bank erosion hazard index (BEHI) (Stream parameter)

The participants felt that this index would be helpful for their management of their stream resources. They liked how this is a parameter that the DEQ currently measures themselves, and how BEHI results could possibly be used to help them get additional grant monies from other sources. However, BEHI was criticized for being overly complex. It would require extensive training, and there was a valid concern that volunteers may not come back after being trained, thus wasting a lot of time and resources. There was agreement in the group that although the parameter had merit, it was not best suited for volunteer use.

2) Road/stream crossing inventory (Stream parameter)

The participants agreed that this parameter was straightforward, required little training, and could be performed by a wide variety of volunteers. The data was seen as useful for planning restoration projects. No negatives were raised by the group. The majority of the feedback from the participants was related to how they would like to see this parameter operate.

3) Nearshore temperature (Lake parameter)

The participants felt this parameter would be useful for the DNR to help formulate stocking rules and understand fish growth, but for lake homeowners the data would not provide value for lake management. Finally, because the protocol calls for a temperature logger to simply be put in the lake and later removed, the participants all agreed that the parameter was not very exciting and therefore would not engage volunteers.

4) Lake shoreline habitat assessment (Lake parameter)

Some participants believed the information developed for the parameter could potentially turn neighbors against each other, since some property owners would feel "judged" based on the assessment of their shoreline. However, most of the participants liked this parameter since it would produce valuable information for lake management goals. There seemed to be a high level of enthusiasm for this parameter among the participants who lived on lakes.

At the end of the advisory group meeting, MiCorps staff took a poll by show of hands as to which parameters were

preferred overall. The road/stream crossing inventory (stream parameter) and the lake shoreline habitat assessment (lake parameter) were the clear winners.

Summary of Feedback from the 2012 MiCorps Annual Conference

42 respondents.

1) What is your overall rating of the conference?

Excellent: 20

Good: 17

Fair: 0

Poor: 0

2) How often do you attend this conference?

Every year: 13

Often: 5

Rarely: 3

First Time: 19

3) Will you be back next year?

Yes / I hope to: 30

No: 1

Undecided: 9

4) Did you have enough time to interact and network with other participants?

Yes: 33

No: 4

Additional Comments:

- Like the small group discussions and panels. Social time was valuable and gained a lot.
- So many new successes and comments.
- 1 hour after lunch for networking.
- Building in a little more networking time would be useful! So many questions.
- After-dinner meeting followed by networking is a good idea.
- Wish I had registration materials with contact info and bios on the first day when I attended workshops.
- Break us into regional groups for open discussion and collaboration opportunities.
- Perfect.

5) Were the conference facilities comfortable and appropriate?

Yes: 41

No: 1

Additional Comments:

- All okay except no heat in room so froze and didn't sleep Monday night.
- The rooms were cold (overnight lodging).
- Yes absolutely, the atmosphere maintains sense of place.

6) Is the MacMullan Conference Center on Higgins Lake convenient for you?

Yes: 40

No: 0

Additional Comments:

- Timing is good to counter MLSA Spring meeting.

Suggestions for other meeting locations:

- Somewhere in the Central UP: 2
- Ket Center
- Nice to be closer to UP than Lansing
- Kellogg Biological Station a possibility

7) For future conferences and training, do you prefer:

Weekday: 24

Weekend: 4

Doesn't matter: 14

8) How did you hear about the conference?

Letter: 2

Email: 30 (from: Paul and Laura - 1, MiCorps - 16, Kevin Cronk - 1, MACD - 1, Jo Latimore - 1, Heidi Frei - 1)

Postcard: 2

Other: 8

9) Were the conference presentations clear and relevant to your needs?

Yes: 35

No: 2

Additional Comments:

- The presentations were clear the speakers were easy to understand and I'm interested in accessing some of the power points online if possible.
- Nice variety. Useful to hear stories of other lakes.
- For the most part, some sessions were not as relevant considering we have not yet (we hope to) receive a monitoring grant. The introduction to MiCorps was most useful for my needs.
- Many were, but some highly specific details in presentations are of little use. Topics were interesting.
- Mark Janeczko: good information but presenter/presentation hard to follow. Are presenters vetted?
- Clear, often not relevant. Of course, I'm not sure how you would make these unique programs relevant to all.
- I personally prefer a smaller conference where the participants have genuine real-world problems and concerns.

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

- Monitoring the Effects of Human Impacts on Watersheds (13)
- Perspectives of Past and Present Stream Monitoring Grantees (12)
- Lake Monitoring for Human Disturbances (8)
- Enbridge/Kalamazoo River Update (8)
- National Lakes Assessment Survey in Michigan (7)
- MiCorps 101 (4)
- Insect ID (Monday training) (4)
- New Parameters Discussion (Monday evening) (3)
- Plants of Michigan's Lakes and Streams (Monday training) (3)
- All were interesting. Great speakers. People with passion, people that volunteer, are the best. They love what they are doing.

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

- Attended both (2)
- I do benthic testing.
- The plant session was attractive but I'm still struggling with bugs.
- Because I already do the stream monitoring and ID macroinverts to family well, I chose the plants.
- Aquatic plants presentation and invasive species.
- Very comfortable with invertebrate (bugs), not so much with plants. What about mollusks?
- I thought that plant ID would be most useful for me as a lake volunteer.
- We have two employees from our office. We each went to one session.

- Insect ID because I'm new to the program and only participate in stream monitoring at this point.
- We are a stream monitoring grant recipient, so I wanted to learn about beetle ID.
- I chose bugs because I want to learn more about detailed ID.
- To specifically learn about aquatic vegetation.
- Weeds are a massive problem on local lakes, and identifying them is critical for determining eradication or control.
- Aquatic plant ID – refresher and information on completing a lake inventory of aquatic plants.
- I feel invasive plants are a leading reason for the deterioration of lake/stream habitat.
- I forgot which one I signed up for and went to the other by error.
- Interest.
- Beetle ID applied more to streams.
- Beetle Mania – New to stream monitoring & wanted to learn more about bug ID.
- Refresh plant ID.
- Macroinvertebrates I know – wanted to increase my aquatic plant knowledge – desired more technical.
- I needed a better aquatic plant understanding.
- Keep a fix of a focus theme and current events and inputs from volunteer groups.
- I chose plants but I'm an advanced master gardener.
- The plant identification was more relevant to our business.

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

- Current topics of concern: fracking (3), endangered species, invasives of concern (3), dam removal (2), DEQ monitoring update, DNR fisheries update, pipeline use and condition, blue green algae, water quality impacts/monitoring related to mining, what to be concerned with across the state right now related to water, sedimentation concerns, human impacts in relation to volunteer monitoring.
- More lake topics: natural shoreline restoration techniques, remediation management projects, buffer zone, integrated lakes management, aeration, comparisons of lake quality results among lakes and/or year to year.
- Training sessions: another bug ID class (e.g., to order) (4), more on plant ID, other appropriate monitoring, techniques and tools used by groups when monitoring (e.g., meter use, logger installation and data).
- Data analysis, presentation, and usage (2).
- Volunteer recruitment: How to build your volunteer base, how to inform lake residents (and public) about water issues so that they become motivated to work on issues and then motivate others (2).
- Follow-up on new parameters (2).
- More about grant-funded projects, success stories, work being done by “typical volunteers” (not just PhD scientists).
- Information about other events and grant opportunities with groups in our regions around the state.
- Watershed connections: linking individuals from similar watersheds or with similar issues (i.e., Shallow, warm surfaced streams, facing dam removal, etc.).
- Additional contacts and assistance to expand the study portions of our programs.
- Intro to monitoring and watershed management (for the non-science folks!)
- More advanced sessions: many are natural resource professionals so sessions geared toward volunteers with different backgrounds are somewhat frustrating.

13) General Comments:

- You have not had a heavy academic since the fellow from GVSU. I like the presentations, but if one gets technical they must define all terms used.
- Seems MiCorp's expanding. Several new faces.
- A data heavy presentation might not be best for the last session!
- Some problem hearing presentations until I moved to front of room. Some spoke too fast, mumbled or moved away from mic. Good slides and good presentations.
- As lake association leaders we bring information to our residents, but they then must decide what to do with it. Dealing with individuals to change their behaviors can be difficult. We have limited resources regarding behavior change. What can we do? What can groups such as MiCorps, MLSA, etc. do or advise? As a public health professional I am used to learning about studies where groups must change behaviors to prevent diseases, improve health, etc. and many individuals here are unwilling to do so. But social marketing techniques are used by professionals. The primary scenario here is smoking: after many years smoking

prevalence has decreased due to social marketing, despite activities by the tobacco industry who use their own techniques to lobby and advertise. Conclusion: we have gathered knowledge about water quality, but how can we apply this when few residents show the required enthusiasm to form coalitions that will produce change?

- Very nice conference. Great topics and all the presenters were well versed.
- If possible, use more environmentally friendly provisions for snacks, beverages, etc. For example: no bottled water: suggest participants use tap water with the travel mugs that were given (thanks, very nice gift). Recycled napkins and biodegradable snack plates or reusable plates.
- Good conference.
- Very well done.
- Overall the conference was good. I really don't have an answer to address the differences in skill/background level unless different tracks are made available with advanced and intermediate (I wouldn't want to call anyone a beginner!)
- Possibly add a session for marketing programs, recruiting volunteers, more tools for volunteer management from media releases. Volunteer hours tracking, training, engaging for retention, etc.
- Funding opportunities to supplement monitoring activities? In speaking with some programs and groups, they are having difficulty making match or paying for the portion of the monitoring programs that are not funded by MiCorps.
- I found the lake monitoring for human disturbances the most interesting even if it was not directly relevant – learning is always good!
- It would be helpful to have contacts listed and an idea of potential costs for some of the chemical, biological testing. Where are groups going to and what test methods (or equipment) are reliable?
- I liked the evening session on parameter expansion/evaluation. The Paint Creek dam removal talk by Jeremy Geist was most cogent!
- For the conservation stewardship program (MSU Ext) my final project was a power point presentation named "A Citizen's Guide to Greening City Hall." This was a "How to" guide to using zoning to protect the environment. I've been a Township planning commissioner for 20 years and am a master citizen planner (MSU Ext). Also, check www.mywatersheds.org under publications and our ordinance manual.

Summary of Feedback from the 2011 MiCorps Annual Conference

1) What is your overall rating of the conference?

Excellent: 16

Good: 17

Fair: 0

Poor: 0

2) How often do you attend this conference?

Every year:

Often: 6

Rarely: 0

First Time: 18

Second Time: 1

3) Will you be back next year?

Yes: 25

No: 0

Undecided: 7

4) Please comment on what you liked or did not like about the conference:

- Great information – maybe more options would be good?
- Like the mix of presenters, presentation, & attendees + mussel workshop
- Lack of choices in breakout sessions.

- Like: guest speakers, field trips to boat wash & state park, attendees, location of conference
- Dislike: Construction, not enough contact info for lake applicators registration
- Too bad one couldn't attend all break-out sessions – choosing wasn't easy.
- Focus – invasives
- Rooms were cold – everything else was good
- Real-life experiences related by real people
- Like being able to take home so many materials
- Construction was the big issue. Understand this was a surprise to the organizers! Too bad – RAM center should have been forthcoming. Heat, lights, accessibility . . .
- Enjoyed the speakers, food, & facility
- I wish I could have attended all the sessions.
- The mussel workshop was very informative
- Well organized; knowledgeable speakers
- All information is valuable
- No free internet access in hotel rooms. I especially like to fireside chat in the evening of the first day.
- Everything was liked.

5) Were the conference presentations clear and relevant to your needs?

Yes: 32

No: 0

- Can always learn something new
- Mostly; needs vary

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

- Panel of Stream Monitory Grantees
- Lake water testing, stream monitoring
- Invasive Species
- The talks of MiCorps programs from across the state very helpful. More of that would be good
- Exotic plants, control and bio remediation – Monday's course on mussels
- Stream volunteer session
- Mussel workshop, starry stonewort
- Lake management programs, status of starry stonewort, clean boats, clean waters
- Jo Latimore, Mike & Sarah Litch
- Hands on mussel ID & discussion wlgrouop
- Invasive Species
- Protecting native species in lakes & streams, mussels
- Invasive species – stream health monitoring
- Stream monitoring, clean lakes program
- MNFL talks – raised my awareness of their activities and lots of volunteer opportunities/connections for MiCorps data/volunteers.
- Afternoon plenary, stream monitoring session
- Mussels, invasive plants
- The stream monitoring past & present – gave new ideas & perspectives to try. Loved invasive species presentation
- Mussels – DLMP program reports; new volunteer opportunities
- Information on aquatic weeds – herbicides
- Mussel workshop

7) Was the mix of presentations, training, and discussion adequate?

Yes: 31

No: 0

- Need more on prevention efforts
- More I.D. tools maybe someone could talk about sensitive species (macro invertabrates)
- Tho more time needed for conversation/discussion

- Like the “new: material – conference seemed “fresh”
- Didn’t know that there was such a thing as a “frog & Toad” survey – (You cover it all.)

8) Was the conference the right length?

Yes: 31

Too long: 0

Too short: 1

9) What topics would you like to hear about at future conferences?

- Success stories that are volunteer based
- More specific AIS info for species in MI or on border
- How are lakes being treated – data on Impact of lake treatments
- Talks about related work are great – what state programs are doing to support related programs – example was Mike & Sarah Litch – all the work they’re doing – some are MiCorps, some are clean boats. Water, but also other projects
- H2O chemistry, preserving interesting spp. Like freshwater jellies
- River sedimentation mechanisms
- More examples of state/local partnerships, like the Higgins Lake boat launch. . . maybe examples that make direct use of MiCorps data.
- Land water interactions
- Different effects Re: herbicides/aquatic chemicals have on lakes etc.

10) How can we better publicize future events and MiCorps announcements?

- Communicate with watershed organizations, lake/stream associations, & others & encourage to publicize on web sites & in newsletters.
- Advertise in Riparian magazine www.mi-riparian.org
- Listservs, ask all MiCorps groups/I-divisions do PR through their own connections.
- Be sure to email all available lake associations
- Unsure – Newspapers?
- Send to lake associations
- Did you advertise in the Riparian/MLSA Newsletter? Local media/pres?
- Postcard
- Have conference attendees contact at least one person from another lake association etc. by e-mail or form letter passed out at a conference.

11) If you came to the conference with little or no prior knowledge or experience with the MiCorps program, did this event give you a better sense of what the MiCorps program is and how it might be of interest to your volunteers?

- Yes -5
- Yes, good mix of info & more advanced!
- N/A we are participants
- Yes, it gave me an idea as to how my students can/cannot contribute

12) Please describe how the MiCorps program can best meet your needs and facilitate the collection and use of high-quality data by volunteer monitors:

- Localized training
- Continue to maintain solid collection database
- Funding
- Access to database
- I have a 10th grader who is focusing his research project on fresh water jellyfish. Any help IDing lakes that those are located on would be great! lforsbes@moisd.org
- be there as a resource
- I don’t know yet.
- Working well; more parameters?
- Continue to provide technical trainings

13) How can we help you to use your data locally?

- Multiple reports summarizing data
- Provide guidance on interpretation
- Give examples of how other groups use/show their data
- Need guidance on establishing nutrient loading targets

14) Would you like more opportunities to interact with other volunteer monitoring organizations? If so, what format do you prefer?

- Yes, Panel Presentations
- Can each group have a description and contact on the web site?
- Yes! Have MiCorps members use group email.
- Blog, enewsletter
- Listing of vol. monitoring events on web site.
- Ample opportunities – as long as this conference continues!
- List of regional groups
- Email!

15) What more would you like to know about working with and managing your data?

- How and what data can we add
- Working up charts now – want to share on our website.
- Discussion/session on what info/data is significant, why certain data/types of data collections have been decided on/are used.
- Available for downloading?
- Family organism datasheets
- OK for now
- Perhaps a workshop on appropriate statistical analyses

16) What more would you like to know about recruiting and working successfully with volunteers?

- We need affordable measurements of toxic (STEG) E.coli
- Covered well during conference
- Ditto (OK for now)

17) What is it you need to make your program successful and sustainable

- Shared trained volunteers to motivate new volunteers
- Money 😊
- Future MiCorps funding from state/other org. to MiCorps program
- Time! & Funding for additional employers
- New volunteers to replace those lost to age/retirement.
- Better outreach and education

18) General Comments:

- Thank you
- Just beginning a VSMP startup. Are uncertain about engaging volunteers. Will be better informed and knowledgeable next year.
- Would be nice to see a comprehensive report listing all volunteer monitoring organizations & comparisons of programs and /or results.
- Overall, great work, time well spent.
- It would be very helpful to have excellent pictures of what we are looking for.
- Your questions are valid, but my experience is not yet sufficient to give meaningful answers.
- Good conferences, speakers and panelists did a great job!
- Great work! Thanks!
- So much stuff, so little time
- Especially, interested in lake monitoring TLE: options A: Dr. Huberty gave and excellent presentation on these subjs

Summary of Feedback from the 2010 MiCorps Annual Conference

1) What is your overall rating of the conference?

Excellent: 19

Good: 10

Fair: 0

Poor: 0

2) Please comment on what you liked and did not like about the conference:

- The training on identifying the families of insects
- I liked the variety of topics
- I liked the diversity of the presentations – I liked it all
- Nice to make connections w/other stream/water stewards. The travelogue from Peru was not relevant; should have saved that for last so that people who need to drive 3 hours can enjoy the relevant presentation
- “Speaking Mountains” was waste of time. Liked discussion of P. although not relevant to MI monitoring
- Enjoyed the Sessions, especially the Sunday Identification Presentation, resources, and Tuesday’s Morning’s Apt 2 Session
- Very good speakers, excellent venue
- Good topics & speakers
- I liked the structure of the conference, nice mix of presentations, and discussion. Very knowledgeable and nice folks!
- Some of the speakers could use coaching on speaking/projecting to an audience
- Good variety of topics
- Presentations did adhere to the “Beyond the Basics” theme, which I appreciated (and I suspect many of the usual folks did, too. . .), but will be interesting to see if any attendees felt they really needed “the basics”.
- Very interesting topics and presentations. Excellent job of staying on time!
- Very informative. More space at desks - cramped.
- Wonderful place, interesting topics, Great People, and bugs!

3) How would you suggest improving the conference in coming years?

- A site visit or hands on for new endeavors & teachings
- Change up location once in awhile – focus on diff. local programs based on location of conference info. On continuing/funding programs after MiCorps grants over.
- Possible to have it down state? Is very expensive to drive & stay.
- More content
- This year’s format good. Like alternatives of breakout and other sessions
- 1) Invite other community groups that have a relative interest (if not done already) 2) Keep the cost low so many can afford to attend.
- More info. On funding/project sustainability – ideas of where to turn for funding beyond the MiCorps grant
- I would like more of a troubleshooting theme – the volunteer one was nice, but one for all topics with monitoring would be helpful.

4) Were the conference presentations clear and relevant to your needs?

Yes: 25

Somewhat: 3

No: 0

5) Which topics were of greatest interest to you, or best responded to your needs:

- The explanation of why better & more in-depth identification
- More on becoming financially secure.
- Stream monitoring
- I got good ideas from all the presentations
- Al Steinman – phosphorus
- Phosphorous – CLMP

- Phosphorous, stormwater monitoring
- Stream monitoring, past and present
- Patrick Ertel's, Paul Steen's Monday Presentation
- Phosphorous presentation, good panelists
- Bug ID & work beyond Bugs. PO4 talk
- MiCorps examples
- Family bug ID, adding new volunteers
- I particularly enjoyed the session on "Beyond Macroinvertebrates" and how to use water quality data for other types of monitoring "before & after" dam removal" etc.
- Afternoon stream monitoring experience breakout session Dr. Steiners phosphorus presentation
- Huron Pines/culvert study was interesting & gave me some ideas
- Lessons learned
- Steinman. . .
- 9 AM (B) Projects beyond the Bugs and keynote (Steinman)
- Bugs on Monday, stream monitoring, beyond macroinverts Great
- Talks about what other groups are doing and how they are running their programs.

6) Was the mix of presentations and discussion adequate? Would you prefer more training? More discussion?

- Really liked seeing the identification cards. Very good idea.
- Yes. The mix was fine
- Mix was adequate – might be nice to have some training sessions available as choices on the 2nd day.
- Yes. Yes. Yes.
- Yes. No. yes
- Seems like 2-3 days is more appropriate.
- Yes
- Ability to have training as alternative to some presentations on Tuesday, better option for those not coming for 2 days.
- Just right
- I liked the mix, but please err on the training side.
- Yes
- Yes, just the right mix.
- Would be nice to have access to tools such as the web-based stream monitoring tool described by Kristi Klomp.
- Would like more detail / training on E.Coli sampling (even though it's not MiCorps funded).
- Cool mix.
- I didn't attend the "lunchtime presentation" by the RAM educator. Seemed off-topic and even more importantly, eliminated as excellent opportunity for informal networking which is often the most beneficial part of conference. . .
- Yes. No. Just Right
- More training options
- Just perfect

7) Was the conference the right length?

Yes: 25

Too long: 1

Too short: 2

8) Strengthening the Michigan Clean Water Corps program

If you came to the conference with little or no prior knowledge or experience with the MiCorps program, did this event give you a better sense of what the MiCorps program is and how it might be of interest to your volunteers? Please describe.

- Yes. This is my 1st year monitoring. Monday afternoon was very helpful with learning identifiers.
- I gained knowledge. Volunteer training critical.
- Yes. This was my first conference. I hope to network with people I met to work on aquatic & terrestrial invasive sp. Projects that I am working on.

- Yes.
- Yes.
- Yes. It was interesting to learn how other organizations used their grant funding.
- I would not have known how widespread this study is and the importance

9) Please describe how the MiCorps program can best meet your needs and facilitate the collection and use of high-quality data by volunteer monitors:

- Connect with ideas from other coordinators at conf. but also at other times. Lets' try Facebook!
- I want to see us produce simple graphs of data thru the website that lakes/streams can present & use to explain results & importance of monitoring.
- I need to sign up so I can access the MiCorps CLMP database.
- It helps to have more people who are out on lakes & streams aware of invasive sp. So they can report occurrences. Also would be useful if we could do a presentation on rare sp. That volunteers have potential to encounter (i.e. mussels, snails, dragonflies, turtles, cricket, frogs, etc.) we could provide some training potentially.
- Provide instructor and training
- Keep the data on the website current. I love to access the resources.
- Training in smaller groups
- Provide a microscope loan service
- Provide success stories as to how collected data made a difference
- I'd like to see more training specifically on "bug" identification. Maybe by experience level
- The importance of consistency
- You already have!

10) How can we help you to use your data locally?

- New ideas; stories from other groups
- Tips for presenting data to public – what format & how to interpret it
- Association presentations
- When I establish access it should meet our needs
- Need 1 or 2 more test parameters added to CLMP. Make the effort more robust
- With news releases/training re P.R.
- Costs for publication & brochures to residents. How to statistically review the data. Fall to fall. Spring to spring ways to use this data to educate communities
- We're not there yet.
- The best way to present to the general public

11) Would you like more opportunities to interact with other volunteer monitoring organizations? If so, what format do you prefer?

- Yes – email or web forum
- Yes. Maybe visit in a regional group for social & discussion or visit another group to experience their monitoring event & then have supper & social time.
- I didn't hear the listserve being promoted today. List serves are old news. How 'bout a Facebook page? I would "like" MiCorps! (Would even consider running it . . .)
- Yes, access to a list-serve w/MiCorps program coordinator contacts
- Sharing session about marketing ideas/promotional items
- It could be useful to try one of the online programs, e.g. "Go to Meeting" or teleconferences via e.g. skype
- Yes, at conferences
- Yes, don't know
- Yes. Summarize the data from everyone
- Facebook?
- Yes. Meetings. conferences
- Yes. Maybe another one day conference in a central area, more focused on round table discussions.

12) What more would you like to know about working with and managing your data?

- How other groups are making use of their data.
- How can DNRE be persuaded to use data
- Yes
- I still need to enter data in the MiCorps database
- Ways to use the data to education communities
- Not sure
- How to use data collected – why is it important

13) What more would you like to know about recruiting and working successfully with volunteers?

- How to convince more vols. To take a leadership role
- Yes
- Time & staff support – We are working on this.
- More example organizations, success stories
- Maybe that could be a focus on a presentation next year. A panel made up of those who have successful programs.

14) What is it you need to make your program successful and sustainable?

- Continued volunteer participation & leadership
- Money and staff
- Additional volunteers, training
- We do need to recruit new volunteers as some of our current ones are getting old enough to be ready to “pass the baton” to younger folks.
- More visibility
- P. R. help
- Slowly progress us quick implementation
- Continued funding, continued volunteer involvement
- Connecting with more permanent funding
- More funds to replace equipment

15) General Comments:

- I really appreciate Laura and other staff creating an excellent conference and addressing the detail right to the end.
- Encourage roommate connections so attendees can save & by sharing lodging. Could be as simple as starting the idea on the listserv; or posting a list of current registrants, or encouraging on conference website.
- Excellent program
- Thank you! Maybe next year a presentation on how to identify aquatic invasives & also some of the associated natural commonplace plants and animals.
- Perhaps state the conference on midday Monday and end it midday Tuesday.
- How do we ensure MiCorps and CLMP continue with the new government elect (to be) in Mich? Please make this a webform for data collection about the conference. I would have more time to fill out.
- Great Program
- Thanks!
- I have attended 4 or 5 of these meetings. From my standpoint, I appreciate some of the variability shown in this years meeting. I would not be afraid to have 2 or 3 alternative sessions.
- The hands-on presentations of various groups was very informative. Asking the presenters to highlight the nuts and bolts of one specific aspect of their work they are most proud of would be helpful.
- Great first conference for me. I’ll be back.
- I’m glad I attended this. Also I liked hearing about certain tools that different watershed groups use when doing their monitoring like the white pail and the floating tube.
- Very nice overall.
- Its great to see people from the past year.
- Great conference