

Final Project Report
MiCorps Volunteer Stream Monitoring Grant # 3003-VSM2009-3

Project Name:

Millecoquins River Watershed MiCorps Volunteer Stream Monitoring Program

Grantee Name:

Superior Watershed Partnership and Land Trust. 2 Peter White Drive, Marquette, Michigan 49855. (906) 228-6095.

Project Goals and Objectives:

The goals and objectives of the Millecoquins River Watershed Volunteer Stream Monitoring Program included the following:

Goal #1: Foster landowner and citizen awareness, stewardship and surveillance of Michigan surface waters and increased participation in these efforts.

Objectives:

- Recruit and train at least 4 project volunteers during Year 1 and additional volunteers during Year 2.
- Attend meetings of local governments and service clubs to promote the program and recruit volunteers.
- Publish program information and reports in local newspapers and newsletters, websites, and other media
- Expand stream monitoring program to additional sites as volunteer interest grows.

Goal #2: Produce quality-assured data that can be used by DEQ biologists as a screening tool to identify sites where more detailed assessment is needed. Generate baseline water quality data in the Millecoquins River watershed.

Objectives:

- Conduct spring/fall monitoring at a minimum of 6 representative sites
- Furnish the proper field and safety equipment to sample benthic macroinvertebrates and conduct habitat assessments.
- Enter data into the MiCorps database.
- Analyze monitoring results.

Goal #3: Make results available to interested parties.

Objectives:

- Present results at meetings of the HSC and other public events
- Provide results to interested agencies/organizations (DEQ, Michigan DNR Fisheries Division, USFWS Sea Lamprey (*Petromyzon marinus*) Management Program, University researchers, etc.)

- Publish volunteer monitoring report on the SWP (www.superiorwatersheds.org) website and in various media outlets.
- Participate in annual MiCorps conference.

Goal #4: Utilize the data.

Objectives:

- Document water quality changes over time.
- Document existing and potential sources of impact.

Project Analysis:

During 2009, MiCorps funding provided the equipment and technical resources to establish 6 water quality monitoring sites in the Millecoquins River Watershed located in Mackinac County, Michigan. With assistance from the Superior Watershed Partnership (SWP), project volunteers monitored these sites during the spring and fall of 2009 and 2010, and the spring of 2011.

The project met the goals for the number of volunteers to be trained and the number of sites monitored during the grant period with the exception of the spring 2011 when only 3 sites were monitored. These sites were not sampled as water levels were high and the streams were extremely turbid. Two of these sites (Site 3: South Branch Cold Creek and Site 6: Milk Creek) will be replaced with new sites prior to the fall of 2011 monitoring event due to difficult sampling conditions.

On-site training sessions were held before each monitoring event for returning and new volunteers. Outdoor macroinvertebrate training/identification sessions were held after each monitoring event during the first year of monitoring. For the remainder of the project, identification sessions were held indoors at the Hiawatha Sportsman's Club (HSC) Community Center. Following each sampling event, an informal debriefing session was held between SWP staff and project volunteers. These discussions resulted in improved understanding of project goals, increased efficiency in sampling methods, and improved performance of project volunteers. A report summarizing project results was presented at meetings of the HSC Fish and Wildlife Committee each year.

One of the primary goals of the project was to train interested volunteers to be proficient with the protocols and achieve a level of confidence so that they can manage and sustain the stream monitoring program beyond the duration of this project. By the end of the project, volunteers expressed confidence in collection methods however felt they could use additional assistance with macroinvertebrate identification. As such, identification of future samples will be verified by the SWP prior to entry into the MiCorps database. The SWP will continue to verify samples until volunteers feel proficient and/or they obtain assistance through university interns or other partners. The SWP will also assist with future site selection and maintain communication with project volunteers regarding interpretation of data as well as implementation of best management practices (habitat improvements, culvert replacements, etc.).

The program was promoted through the Fish and Wildlife Committee of the HSC, word of mouth, the SWP website and meetings, and networking with partners such as Trout Unlimited, Michigan Department of Environmental Quality, and U.S. Fish and Wildlife Service. The SWP will also provide a summary of project results and lessons learned during the 2011 Annual MiCorps Conference.

Data was entered into the MiCorps database and was analyzed following each monitoring event. An annual project summary report was prepared and presented to the HSC Fish and Wildlife Committee.

Environmental and Other Benefits of the Project:

In general, site ratings improved with each monitoring event, indicating improved proficiency in collection methods by project volunteers. Sampling was difficult at most sites due to sand and silt substrates and required practice to gather clean collections for sorting.

Another goal of the project was to monitor the effects of chemical treatments of tributaries to control sea lampreys (*Petromyzon marinus*) on the macroinvertebrate community. This was accomplished by setting up sites in both stream reaches that are treated and not treated for sea lampreys. No measurable impact was observed between treated and non-treated streams or in treated streams following a treatment.

In addition, the SWP contacted the U.S. Fish and Wildlife Service (FWS) Sea Lamprey Management Program to inform them of the project. The FWS responded with concurrent studies and agreed to present results jointly at a meeting of the HSC. This joint coordination, along with results from both projects, addressed the concerns of local landowners and resulted in a decision by the HSC to continue to allow the FWS to conduct treatments in tributaries on their property.

The project was also successful in identifying stream impacts from two perched culverts. The HSC was informed that these culverts should be replaced in order to restore fish passage. However, these projects should be completed in close coordination with the FWS Sea Lamprey Program. The SWP also informed the HSC about invasive plant infestations on their property and methods for control.

Project Partners

- Superior Watershed Partnership (project manager)
- Hiawatha Sportman's Club (landowners/volunteers)
- MiCorps Program (technical support – site selection, QAPP development, side-by-side evaluation, etc.)
- Michigan Department of Environmental Quality (technical support – site selection and previous studies)
- Michigan Department of Natural Resources (technical support – previous studies)
- Two Heart Chapter Trout Unlimited (landowners/volunteers)
- MI Trout Unlimited (technical support - study design and data analysis)
- U.S. Fish and Wildlife Service Sea Lamprey Management Program (independent project cooperator)

Project volunteers

- John MacFarland
- Jim Rutledge
- Al Knox
- Jim Timmons
- Phil Dennis
- Mandy Magno
- Terry Thomson
- Lester Livermore
- Marshall Bergacker
- Jim MacMeekin
- Ivan Darling
- Greg from Ohio

Products Completed

- Quality Assurance Project Plan (QAPP)
- MiCorps Habitat and Macroinvertebrate datasheets
- Data entry into MiCorps database (www.micorps.net)
- Quarterly financial/progress reports
- Final Project Report
- Annual report to HSC (updated with new data each year)
- Project Fact Sheet
- Photographic documentation