

Project Title:	Michigan Sulfide Ore Mining Project - Menominee Component a.k.a. The Shakey River Sentinels
Grant Amount	\$18,426
Grantee Match Funds	\$35,765.77
Project Duration	June 2006 through November 2008
Applicant name, address, phone and contact person.	The Sierra Club Foundation 109 E. Grand River Avenue Lansing, MI 48906 517-484-2372 Contact: Rita Jack, Water Sentinels Project Director
Project county & watershed	Menominee River watershed Stephenson, Menominee County, Michigan
Project Partners	Sierra Club Michigan Chapter: Rita Jack, Water Sentinels Project Front Forty: Mike Boerner, Ron & Carol Henriksen UW-Marinette Department of Geography: Dr. Keith West

Project Summary

Utilizing generous grant funding from the Michigan Clean Water Corps, the **Michigan Sierra Club Water Sentinels Project and 45 volunteers** began a new water monitoring project in Menominee County, in the Menominee River watershed west of Stephenson, MI. The project was conceived in response to a mine exploration company that is prospecting for zinc and gold in sulfide ore deposits there, because there is little water quality information. With only a few homes and “camps”, much of the land next to the Menominee River is zoned “recreation.” A mine would be a significant shift in land use, bringing heavy industry, truck traffic, fewer trees, more roads and more people. Continued long-term monitoring would help determine if any changes in water quality may be associated with mining activity or any other change in land use.

Goals

Assure long-term viability of the project with motivated volunteers. Assess the status and track water quality trends in several small Menominee River tributaries. Develop Data Quality Goals and a Quality Assurance Project Plan in order to produce unbiased valid results. Send data quarterly to MiCorps, the Michigan Department of Environmental Quality (MDEQ) and the public. Increase public participation in public comment periods for water quality discharge or other permits by encouraging project participants to engage in these opportunities.

Project Accomplishments

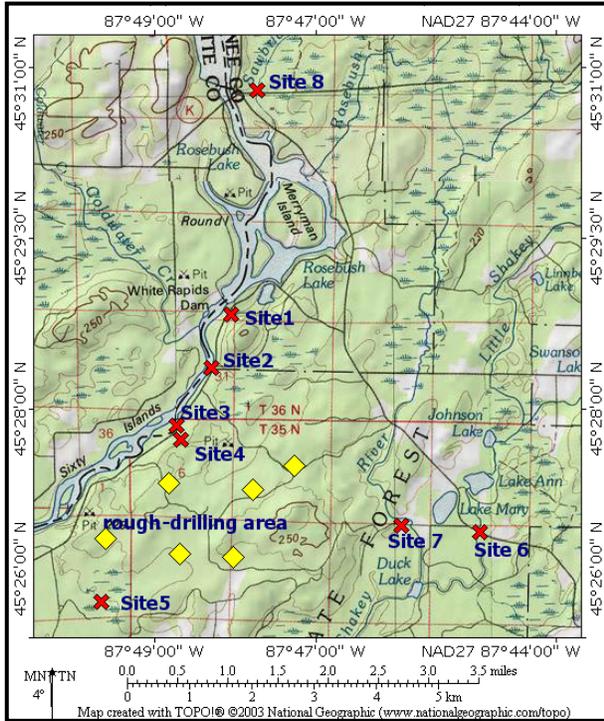
Since 2006, 45 trained volunteers have monitored 7 sites in the Menominee River watershed west of Stephenson, MI. All teams successfully met the Data Quality Goals, and adhered to the Quality Assurance Project Plan, and produced scientifically valid data (see <http://micorps.net>.) The project volunteer leaders managed the monitoring event in the fall of 2008, with the Sierra Club acting only as an advisor. The next monitoring event is set for spring of 2009, with assistance by Dr. Keith West of the University of Wisconsin-Marinette. Dr. West has assumed the scientific investigation aspects of the project, and Front Forty leaders will handle all recruiting, media outreach, and volunteer management, assuring this project will remain active many years. We have not yet responded to permit applications, because the mine prospectors have not applied for permits. The Sierra Club produced several newsletter articles, and developed a website to recruit volunteers, at <http://michigan.sierraclub.org/issues/greatlakes/articles/shakeysentinels.html>.

Monitoring activities & general costs

Staffing & Indirect costs (to provide the volunteer training & field work)	\$ 9,801.26
Field supplies	2,127.74
Staff travel	5113.68
Local match provided	49,009.32
Total cost of project	\$ 66,052.00

Significant measurable results

The data collected by the Shaky Water Sentinels shows that each of the 7 monitoring sites ranks as either “Excellent” or “Good” water quality, based on results over the first 5 monitoring sessions. Specimens were identified according to “Order”, and several of the samples had as many as 17 different taxa, and several more had 15 or 16, showing good diversity of aquatic organisms.



The map on the left shows the 7 monitoring sites in Menominee County. The map the on the right shows the Menominee River in Michigan’s Upper Peninsula, with the area of interest circled in red.



Shaky River Sentinels in training in October 2006, next to Schonecks Creek.



Volunteers sort and pick out macroinvertebrates from stream samples.