



Applying knowledge to improve water quality

Great Lakes

Regional Water Program

A Partnership of USDA CSREES
& Land Grant Colleges and Universities

Expanding Volunteer Monitoring in the Lake Superior Basin

GREAT LAKES
REGION



National Theme:
Drinking Water and Human Health

Project Description

The volunteer monitoring program in the Wisconsin portion of the Lake Superior basin was initiated in 2005 by UW-Extension in Superior. Between 2005 and 2007, a total of 60 volunteers were trained and 29 are actively monitoring 16 streams in the basin. This project expanded the Wisconsin pilot volunteer monitoring program to include Minnesota's north shore. To accomplish this, it supported the development of partnerships in two states in order to identify standard sampling protocols that would meet the needs of all the agencies involved and provide much needed stream water quality data for the basin.

The networks and partnerships established through this program have built capacity for establishing and maintaining a multi-state citizen volunteer monitoring effort in the Lake Superior basin.

Twenty-four volunteers were recruited and trained at two training workshops held in Wisconsin and Minnesota. Staff and students from the Lake Superior Research Institute participated in these workshops and provided assistance in the field during the initial sampling in order to increase the quality of the samples collected. This resulted in higher confidence levels and more consistent sampling methods among the volunteers. University staff are compiling volunteer data from the two states and developing links to a single site (Lake Superior Streams) in order to make data easily accessible.



Wisconsin volunteer MaryJo Gingras collects a dissolved oxygen sample on the West Fork of the Montreal River in Iron County. Photo by Amy Eliot.

PROJECT CONTACTS

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University of Wisconsin – Superior

Minnesota Pollution Control Agency

University of Minnesota – NRRI

Wisconsin Department of Natural Resources

City of Superior

Outcomes

There are currently nine volunteers from the 2007 training actively monitoring six streams, one in Minnesota and five in Wisconsin. We also are providing support for eight previously trained volunteers who are monitoring an additional six streams in Wisconsin. UW-Superior research staff from the Lake Superior Research Institute participated in training volunteers from each state in their state's management-level sampling techniques for macroinvertebrates: Wisconsin Department of Natural Resources and Minnesota Pollution Control Agency protocols. Volunteers sampled alongside research staff in order to learn sampling techniques and for comparison of sample quality. These samples were preserved and taken back to UW-Superior for analysis. Initial results show that there are some differences in sample quality between volunteers and research scientists. Although the volunteers used appropriate sampling techniques in the streams, they had difficulty identifying the various stream microhabitats. While the calculated biotic indices were similar, the actual counts of various organisms differed. We are working on refining our training to include techniques for sampling all habitats more effectively.

Through ongoing training, one-on-one assistance at the sampling site and support for basin volunteers, credible data will be collected and used to plan and develop future watershed management activities in the Lake Superior Basin.



Wisconsin volunteers Mike and Tammie Cramey measure stream depth on the Black River in Douglas County. Photo by Amy Eliot.

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