

Final Project Report

Central Upper Peninsula Volunteer Stream Monitoring

Upper Peninsula Resource Conservation and Development Council

Project goals and objectives

The first goal of the Central Upper Peninsula Volunteer Stream Monitoring Program is to foster public awareness, stewardship and surveillance of Upper Michigan surface waters and increase citizen participation in these efforts. The program recruits and trains a minimum of eight volunteer monitors (4 in each county). Program staff and volunteers attend meetings of local governments and service clubs to promote the program and recruit volunteers. Promotional work focuses on expanding the volunteer stream monitoring program to other UP watersheds.

Objectives:

- Publish informational materials reports in newspapers and newsletters, presentations and local broadcast news.
- Recruit and train at least 8 volunteer monitors (4 in each county).
- Attend meetings of local governments and service clubs to promote program and recruit volunteers
- Expand stream monitoring program to other UP watersheds.

Another goal is to generate baseline water quality data on at least two UP watersheds. To accomplish this, program staff and volunteers conduct spring and fall monitoring sessions in each watershed, monitoring a minimum of three sites in each watershed. The program furnishes the necessary equipment to sample benthic macroinvertebrates and conduct physical habitat assessments.

Objectives:

- Conduct two monitoring sessions in each watershed.
- Conduct habitat assessment and macroinvertebrate sampling at three sites on each watershed.
- Furnish the proper equipment to sample benthic macroinvertebrates and conduct habitat assessments .
- Enter data into the MiCorps database.
- Analyze monitoring results.

The next goal is to make results available to interested parties. Data are entered into the MiCorps database and results are analyzed using a statistical program (Microsoft Excel) and summarized for use by interested parties. Program staff and volunteers get the word out by making presentations to organizations and publishing informational brochures, reports in newspapers, newsletters and local broadcast news. The Central Upper Peninsula Volunteer Stream Monitoring Program is to host an annual meeting of volunteers to present the results to them and explain how to utilize the data to document water quality changes over time, measure impacts of nonpoint source pollution and influence policy and behavior changes.

Objectives:

- Presentations at 10 meetings (5 per county).
- Publish volunteer monitoring report in various media outlets.
- Participate in annual MiCorps conference.
- Hold annual meeting.

The final goal is to utilize the data.

Objectives:

- Document water quality changes over time.
- Measure impacts of nonpoint source pollution.

Analysis

Over thirty volunteers monitored five watersheds located in the counties of Alger, Marquette, Luce, Baraga and Mackinac. The project far exceeded the goals for the number of volunteers to be trained and the number of sites and watersheds monitored, expanding from two to five watersheds and from six to over twenty sites monitored during the grant period.

Volunteer recruitment was most successful for watersheds where the desire to monitor is stakeholder driven, which happened to be some of the most remote watersheds in the UP, while the more urbanized stream systems attracted the least volunteers, indicating greater interest in protecting the more pristine watersheds from future degradation.

After holding two not very well attended training sessions in the original watersheds, program managers focused in on the watersheds with the most stakeholder interest. The remoteness made strict adherence to the QAPP procedures for quality control/quality assurance difficult to achieve because returning to a site for follow-up means travelling over seventy-five miles of gravel or two track roads. To make up for this, after an initial eight hour training day subsequent monitoring events were scheduled to repeat the training each morning, divide into teams to monitor sites in the afternoon and then regroup with program managers and experts for indoor sorting and identification. It makes for one long day but produces trained teams instead of just a trained team leader. The result is that each of the current volunteers can be a qualified team leader for the future.

The program was promoted on local TV news and newspapers. Generally TV was more reliable than print for publishing the press releases in time to serve as a recruitment device. Response to the publicity was mainly from school teachers and Girl Scout leaders. Most of the actual volunteers were recruited by program managers making presentations at meetings of stakeholder groups such as Trout Unlimited and Superior Watershed Partnership, and by personal contacts, word of mouth and networking.

Data analysis was conducted for the Huron and Dead River sampling sites. Monitoring of the Anna sites did not meet the data quality objectives (incomplete) so it was not analyzed. Volunteer monitoring needs to be repeated at least two more years before the results can be interpreted to mean anything. Results were reported at the annual meetings of the conservation districts, the Superior Watershed Partnership and the

Huron River Watershed Steering Committee. Huron volunteers each received a letter which summarized the data, thanked the volunteers and invited them back for the next season.

Environmental and other benefits, lessons learned

In general most sites have rated good to excellent. After just four monitoring sessions during the grant period, lessons learned are mostly from a programmatic standpoint. There are many interested volunteers who volunteer for many different causes. The greatest challenge is scheduling the volunteer stream monitoring at a convenient time when the water level is not too high, the weather is not too cold, the leaves are not too large, bugs not too bad, and not too much else is going on that day. Experience proved that mid-September and after leaf off are mutually exclusive time periods for the Central U. P. If monitoring is not scheduled until after leaf-off it will be late October with little time before snowy weather shuts the very narrow window. Likewise, in the spring mid-April is way too early to even consider wading in a stream safely, and before leaf out is more likely to be late-May to early-June. It worked best for some people to do the sampling and identification the same day, while others, who maybe couldn't get out on the stream, enjoyed the special ID events in the science lab. Some volunteers expressed interest in conducting winter monitoring, and in forming a team that will monitor more than one watershed in a season.

In the long run, the program will undoubtedly be a benefit to concerned citizens in the Huron watershed as they cope with the changes related to the new mining developments in the area. MiCorps monitoring in the upper Dead River (i.e. Connors Creek) could be the best way to evaluate the effectiveness of stream channel and habitat restoration activities there. The MiCorps protocol was utilized in the Two Hearted River Watershed management plan to help identify priority sites for implementation of Best Management Practices. The MiCorps protocol will also be incorporated into the updated Munising Bay Watershed Restoration Project and any future watershed management plan developed for Lake Superior's Huron River.

Evaluation

After each event program managers and experts underwent informal debriefing, usually during the long car ride home. The volunteers were given evaluation forms to complete at the end of training and monitoring events. Based on the responses, these forms of evaluation may have to be re-evaluated, as the volunteers' attention were pretty well spent by the end of the day. Yet those forms and the more casual comments were all taken into account to improve the planning, scheduling and implementation of each subsequent event. It takes so many resources to put on a large event (i.e. training 20 volunteers to do eleven sites) in a watershed so remote that all but a few volunteers travel over two hours to attend (Lake Superior's Huron River), it would be rather difficult to handle so much interest in each of the watersheds being monitored. That makes it quite alright that there's one trained team of volunteers monitoring one or two important sites in the Anna River, a few teams monitoring the Dead, and the new program getting started in the Millecoquins watershed will have their own funding.

Partners

The following organizations were key to the success of this project:

Anna River volunteers (6):

Alger Conservation District (event organizers, office space, equipment),

Northern Michigan University: (laboratory space, equipment)

Seaborg Science Center: equipment

Local landowners in Alger County

Dead River volunteers (8):

Marquette County Conservation District (event organizers, promotion, office space, equipment)

Fred Waara Trout Unlimited

Local landowners in Marquette County

Northern Michigan University (laboratory, equipment)

Seaborg Center (equipment)

Huron River volunteers (20):

Superior Watershed Partnership (Event organizers, promotion, equipment)

Marquette County Conservation District (Event organizers, equipment)

Lake Superior's Huron River Restoration Inc. (Event organizers, ID session hosts)

Yellow Dog Watershed Preserve (Event organizers, equipment)

Fred Waara Chapter Trout Unlimited

Copper Country Chapter Trout Unlimited (Equipment)

Alger County Conservation District (Equipment)

Baraga County Conservation District (News release)

Keweenaw Bay Indian Community Natural Resources Department

Keweenaw Land Trust

Arvon Township School

Local landowners and volunteers from Baraga, Marquette and Houghton counties

Two Hearted River volunteers (3):

Superior Watershed Partnership (Event organizers, equipment)

Alger County Conservation District (Event organizers, equipment)

Local volunteers from Luce County

Two Hearted Chapter Trout Unlimited (Event organizers: River Awareness Day)

Millecoquins River volunteers (7):

Superior Watershed Partnership (Event organizers, equipment)

Hiawatha Sportsman's Club (Mackinac County)

Two Hearted Chapter Trout Unlimited

Products List:

UP RC&D Council Newsletter Article – Spring 2007
WLUC TV6 Outdoor Report coverage (DVD)
Training Materials packet
WLUC TV6 news spot (DVD)
Volunteer Tracking Form
Front Page Article in Marquette Mining Journal – May 2008
“Volunteer Stream Monitoring Opportunity” Flyer – May 2008 & May 2009
Marquette County Conservation District 2008 Annual Report
MiCorps Newsletter – April 2009, Article 2
UP RC& D Council Newsletter Article – May 2009
Project Fact Sheet
Volunteer Monitoring Brochure
Volunteer Stream Monitoring Evaluation Form
Public Service Announcement/Press Release for Huron River Monitoring – May 2009
Public Service Announcement for Dead River Monitoring – May 2009
Thank you letter/monitoring results for Huron River volunteers – April 2009
Huron River Watershed Monitoring Report – June 2009
Lower Dead River Watershed Monitoring Report – June 2009
L’Anse Sentinel Article covering Huron River monitoring event – June 10, 2009
Marquette Mining Journal Article covering Huron River monitoring event – July 3, 2009
Photos – 3 pages labeled

Sustainability

Volunteer monitoring will continue in the Huron River Watershed as long as the stakeholder group maintains an interest, which should be a long time with a new mining industry threatening to take hold in the region. In Alger County stakeholder interest was not very high for the Anna River watershed so it is unlikely the program will continue there, however monitoring may begin in the AuTrain watershed once the newly-forming stakeholder committee is organized, and the protocols may be adopted by public schools for educational purposes which may lead to future stakeholder involvement. The future of volunteer monitoring in the Dead River watershed is also uncertain because the Marquette County Conservation District no longer employs a watershed manager to run the program, but Trout Unlimited has a vested interest in continuing to monitor their Connor’s Creek habitat restoration site. The regional nature of the Superior Watershed Partnership and UPRC&D means any stakeholder-led group around the UP will have access to resources for monitoring new watersheds, just as the Hiawatha Sportsman’s Club in Mackinac County has done with their 2009 MiCorps grant award for the Millecoquins River watershed. The monitoring equipment will be stored at the UP RC&D Council office and will be available for loan to interested persons or groups.