Volunteer Monitoring in Rural and Underserved Communities

NEED
Many states have been focusing on training volunteers to assume a role in their states’ water quality monitoring efforts to expand data collection and resource assessment. Volunteer water monitors help build community awareness of local pollution problems and often have first-hand knowledge as to where critical sites are located. Volunteers also can become advocates for their watersheds, and alert others to problems that need to be addressed. However, many rural and underserved communities, such as tribal groups or low-income economically-challenged areas, are often excluded from these efforts for a variety of reasons, including:

• A lack of awareness on the part of volunteer monitoring program coordinators about potential volunteers within these communities, as well as members of these communities being unaware of existing volunteer monitoring opportunities.
• These communities not having funds available for taking part in the activities, or
• Lack of leadership in the community.

In many cases these audiences lack permanent trained staff needed to monitor environmental conditions and report problems to state and federal agencies. Knowledgeable volunteers are critical in these situations.

In Appalachian Ohio counties there is a 150-year history of coal mining and poor forestry and farming practices, and in Michigan and Wisconsin, inner city, rural and tribal groups are traditionally underserved audiences who face unique challenges related to identifying and addressing environmental concerns.

RESPONSE
In this project, initiative leaders partnered with educators and program leaders who worked in or with rural and underserved communities to identify and train audiences in Appalachian Ohio (29 counties), and inner city, rural and tribal group teachers/leaders in Wisconsin and Michigan. Over the course of 12 months, community leaders from these communities or that work with these communities were trained to effectively implement volunteer water monitoring activities locally and/or to empower others to participate. A second purpose of this initiative was to have this regional network of teachers and community leaders exchange ideas, programs and successes with other traditionally underserved communities in Michigan, Ohio and Wisconsin. Events included two volunteer stream monitoring training sessions per state, four webinars and an all-participant gathering and training in Michigan.
OUTCOMES

There were six to eight participants initially trained per state, who then trained over 350 underserved community members in volunteer monitoring methods. The multi-state webinars were successful in increasing awareness of water quality issues (63 percent of participants reported increased awareness). A final project survey showed an increase in knowledge of water monitoring technique(s) and 75 percent of survey respondents felt the hands-on training sessions were the most useful part of the overall project. Participants cited being able to perform monitoring with skill and confidence:

• “Regarding the field work, I most appreciated being able to use some methods of study with which I had limited experience (flow monitoring, fish shocking, and vegetation surveying). I feel more confident than I did in using these methods in my current work.”
• “We have successfully gone to our stream and collected data.”
• “I have more resources and information to share with my students and we now have a better understanding of the health of our stream on-site.”

The impact of the initiative is further demonstrated by the following two quotes:

• “Peer exchange provided me with the opportunity to discuss questions that had emerged for me in the context of my monitoring. It also helped me realize how different states are in their regulations/practices, which gave me some perspective on my own state’s regulations/practices. I also found it affirming to talk with other people who do and think about monitoring.”

• “The greatest benefit to me was the introduction to new people from different backgrounds, becoming aware of the challenges they face, and learning new water monitoring techniques. By participating with the diversity of people in this project, I am better able to extend my help to people from backgrounds different than my own, with greater sensitivity to the needs, challenges and perspectives faced by different people.”

One of the major challenges encountered was participation in the webinars. During these sessions, various subjects were addressed, and each state had the opportunity to feature their participants’ work in volunteer stream monitoring. However, overall attendance dropped throughout the four sessions, due to time constraints, technical problems, and their “lecture”-oriented nature. One participant mentioned that meeting participants from other states before the webinars would have helped. While PowerPoint presentations were posted on the website, recording the webinars may have provided more opportunity for participants to become more engaged in learning.

Other watershed coordinators have been informed about the program through volunteer leaders, and additional volunteers have been called upon to assist in watershed work. Volunteers indicated that they would likely incorporate monitoring into their own programs. One of the participants in the program, Menominee Indian High School, received a $10,000 grant from Vernier Technology to increase student participation in volunteer stream monitoring.

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PARTNERS

A close partnership has formed between the three land-grant universities and volunteer stream monitoring efforts in Michigan, Ohio and Wisconsin. The participants in the project represent Clinton River Watershed Council (MI); Water Sentinels Program, Sierra Club Michigan Chapter; New Lothrop (MI) High School; Great Lakes Naval Memorial and Museum; Wittenbach/Wege Agriscience and Environmental Education Center (MI); Detroit Zoological Society (MI); Menominee Indian High School, Keshena, WI; Oneida Nation High School, Oneida, WI; American Indian Science and Engineering Program, Madison Metropolitan School District; Shalom High School, Milwaukee, WI; Harborside Academy, Kenosha, WI; Alils Elementary School, Madison, WI; Monday Creek Restoration Project, OH; Sunday Creek Associates, OH; and Franklin County Soil and Water Conservation District, OH. Each of these organizations had one or more representatives take part in workshops, webinars, and training sessions. Their participation helped to build capacity in the network of trained professionals that could work with rural and underserved communities in comprehensive volunteer monitoring programs.

WEBSITE

http://greatlakeswater.uwex.edu/
drinking-water-and-human-health

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