

VOLUNTEER MONITORING: THE INTEGRATED APPROACH

Jinnieth J. Woodward, ALLARM
Dickinson College
P.O. Box 1773
Carlisle, PA 17013-2896

ABSTRACT

By monitoring biological, chemical, and physical aspects of a stream, volunteers experience the stream in three different settings, allowing them to grasp the overall complexity of the system. Using three monitoring methods is crucial when assessing impacts from multiple sources, and data become more credible when results from multiple approaches are consistent. Sampling protocols for chemical, biological, and physical monitoring approaches have been tailored specifically for volunteers to collect quality data easily, inexpensively, and without the need for highly specialized equipment or training. As a result, volunteer data may not be refined for every indicator, and it is therefore important for volunteers to use an integrated monitoring approach in order to capture as much detail about their stream as possible.

Studies have shown that properly trained volunteers, equipped with quality assurance/quality control plans, can collect quality data. Service providers can assist volunteers in maintaining these requirements and can supply them with step-by-step protocols for monitoring biological, chemical, and physical parameters, resulting in credible, holistic watershed data.

The Alliance for Aquatic Resource Monitoring (ALLARM), a Pennsylvania-based service provider, has suggested a holistic monitoring approach to volunteer watershed groups for twelve years and has witnessed positive results. One case study highlights a seven year effort of monitoring biological, chemical, and physical parameters, in which credible baseline data were collected. Since multiple monitoring methods were used, the PA Department of Environmental Protection requested and used the volunteer data in reviewing a stream upgrade proposal.

KEYWORDS

Volunteer monitoring, service provider, sampling protocols, ALLARM